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ANALYTICAL REPORT

PREPARED FOR

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Generated 8/15/2023 2:41 PM

JOB DESCRIPTION

RFAAP, Radford HWMU16

JOB NUMBER

410-136514-1

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster PA 17601

See page two for job notes and contact information.

myEOL

Eurofins Lancaster Laboratories Environment Testing, LLC

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization

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Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.
· QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
· Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
· Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
cn	Refer to Case Narrative for further detail
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
^3+	Reporting Limit Check Standard is outside acceptance limits, high biased
^5-	Linear Range Check (LRC) is outside acceptance limits, low biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job Narrative
410-136514-1

Receipt
The samples were received on 7/28/2023 9:25 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.9°C and 1.8°C

Receipt Exceptions
The container count for the following sample did not match what was listed on the Chain-of-Custody (COC): Trip Blank 2 (410-136514-7). The laboratory received 6 total containers, while the COC lists 2 total containers.

The container count for the following sample did not match what was listed on the Chain-of-Custody (COC): Trip Blank 1 (410-136514-6). The laboratory received 3 total containers, while the COC lists 2 total containers.

GC/MS VOA
Method 8260D: The continuing calibration verification (CCV) associated with batch 410-404928 recovered outside acceptance criteria, low biased, for 2-Propanol. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Non-detections of the affected analytes are reported. Any detections are considered estimated.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC/MS Semi VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Detection Summary

Client: TRC, Engineers, Inc.
Job ID: 410-136514-1
Project/Site: RFAAP, Radford HWMU16

Client Sample ID: 16-2 — Lab Sample ID: 410-136514-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	240		10		ug/L	1		6020B	Total Recoverable

Client Sample ID: 16-3 — Lab Sample ID: 410-136514-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	800		10		ug/L	1		6020B	Total Recoverable

Client Sample ID: 16-5 — Lab Sample ID: 410-136514-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	180		10		ug/L	1		6020B	Total Recoverable

Client Sample ID: 16WC2B — Lab Sample ID: 410-136514-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	120		10		ug/L	1		6020B	Total Recoverable

Client Sample ID: 16SPRING — Lab Sample ID: 410-136514-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	220		10		ug/L	1		6020B	Total Recoverable

Client Sample ID: Trip Blank 1 — Lab Sample ID: 410-136514-6

No Detections.

Client Sample ID: Trip Blank 2 — Lab Sample ID: 410-136514-7

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: 16-2
Lab Sample ID: 410-136514-1
Date Collected: 07/26/23 09:30
Matrix: Water
Date Received: 07/28/23 09:25

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			08/03/23 18:37	1
1,1-Dichloroethane	ND		1.0		ug/L			08/03/23 18:37	1
1,1-Dichloroethene	ND		1.0		ug/L			08/03/23 18:37	1
2-Butanone	ND		10		ug/L			08/03/23 18:37	1
Benzene	ND		1.0		ug/L			08/03/23 18:37	1
Carbon tetrachloride	ND		1.0		ug/L			08/03/23 18:37	1
Chloroethane	ND		1.0		ug/L			08/03/23 18:37	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/03/23 18:37	1
Diethyl ether	ND		10		ug/L			08/03/23 18:37	1
Ethylbenzene	ND		1.0		ug/L			08/03/23 18:37	1
Methylene Chloride	ND		1.0		ug/L			08/03/23 18:37	1
Tetrachloroethene	ND		1.0		ug/L			08/03/23 18:37	1
Tetrahydrofuran	ND		25		ug/L			08/03/23 18:37	1
Toluene	ND		1.0		ug/L			08/03/23 18:37	1
Trichloroethene	ND		1.0		ug/L			08/03/23 18:37	1
Trichlorofluoromethane	ND		1.0		ug/L			08/03/23 18:37	1
Vinyl chloride	ND		1.0		ug/L			08/03/23 18:37	1
Xylenes, Total	ND		3.0		ug/L			08/03/23 18:37	1
Chloromethane	ND		1.0		ug/L			08/03/23 18:37	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0		ug/L			08/03/23 18:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*80 - 120*		*08/03/23 18:37*	*1*
Dibromofluoromethane (Surr)	*110*		*80 - 120*		*08/03/23 18:37*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*08/03/23 18:37*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*08/03/23 18:37*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrotoluene	ND		10		ug/L		08/02/23 15:28	08/03/23 06:12	1
2,6-Dinitrotoluene	ND		10		ug/L		08/02/23 15:28	08/03/23 06:12	1
Diethyl phthalate	ND		5.0		ug/L		08/02/23 15:28	08/03/23 06:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*68*		*13 - 138*	*08/02/23 15:28*	*08/03/23 06:12*	*1*
2-Fluorobiphenyl (Surr)	*65*		*44 - 120*	*08/02/23 15:28*	*08/03/23 06:12*	*1*
2-Fluorophenol (Surr)	*38*		*10 - 120*	*08/02/23 15:28*	*08/03/23 06:12*	*1*
Nitrobenzene-d5 (Surr)	*66*		*31 - 120*	*08/02/23 15:28*	*08/03/23 06:12*	*1*
p-Terphenyl-d14 (Surr)	*73*		*30 - 125*	*08/02/23 15:28*	*08/03/23 06:12*	*1*
Phenol-d5 (Surr)	*26*		*10 - 120*	*08/02/23 15:28*	*08/03/23 06:12*	*1*

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		10		ug/L		08/03/23 03:28	08/10/23 13:25	1
Barium	**240**		10		ug/L		08/03/23 03:28	08/10/23 13:25	1
Beryllium	ND		1.0		ug/L		08/03/23 03:28	08/10/23 13:25	1
Cadmium	ND		1.0		ug/L		08/03/23 03:28	08/10/23 13:25	1
Chromium	ND		5.0		ug/L		08/03/23 03:28	08/10/23 13:25	1
Cobalt	ND		5.0		ug/L		08/03/23 03:28	08/10/23 13:25	1
Copper	ND		5.0		ug/L		08/03/23 03:28	08/10/23 13:25	1

Client Sample ID: 16-2 — Lab Sample ID: 410-136514-1

Date Collected: 07/26/23 09:30 — **Matrix: Water**
Date Received: 07/28/23 09:25

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		3.0		ug/L		08/03/23 03:28	08/10/23 13:25	1
Nickel	ND		10		ug/L		08/03/23 03:28	08/10/23 13:25	1
Zinc	ND		30		ug/L		08/03/23 03:28	08/10/23 13:25	1
Vanadium	ND		10		ug/L		08/03/23 03:28	08/10/23 13:25	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		2.0		ug/L		08/03/23 05:59	08/04/23 10:09	1

Client Sample ID: 16-3 — Lab Sample ID: 410-136514-2

Date Collected: 07/26/23 11:15 — **Matrix: Water**
Date Received: 07/28/23 09:25

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			08/03/23 18:58	1
1,1-Dichloroethane	ND		1.0		ug/L			08/03/23 18:58	1
1,1-Dichloroethene	ND		1.0		ug/L			08/03/23 18:58	1
2-Butanone	ND		10		ug/L			08/03/23 18:58	1
Benzene	ND		1.0		ug/L			08/03/23 18:58	1
Carbon tetrachloride	ND		1.0		ug/L			08/03/23 18:58	1
Chloroethane	ND		1.0		ug/L			08/03/23 18:58	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/03/23 18:58	1
Diethyl ether	ND		10		ug/L			08/03/23 18:58	1
Ethylbenzene	ND		1.0		ug/L			08/03/23 18:58	1
Methylene Chloride	ND		1.0		ug/L			08/03/23 18:58	1
Tetrachloroethene	ND		1.0		ug/L			08/03/23 18:58	1
Tetrahydrofuran	ND		25		ug/L			08/03/23 18:58	1
Toluene	ND		1.0		ug/L			08/03/23 18:58	1
Trichloroethene	ND		1.0		ug/L			08/03/23 18:58	1
Trichlorofluoromethane	ND		1.0		ug/L			08/03/23 18:58	1
Vinyl chloride	ND		1.0		ug/L			08/03/23 18:58	1
Xylenes, Total	ND		3.0		ug/L			08/03/23 18:58	1
Chloromethane	ND		1.0		ug/L			08/03/23 18:58	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0		ug/L			08/03/23 18:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*80 - 120*		*08/03/23 18:58*	*1*
Dibromofluoromethane (Surr)	*108*		*80 - 120*		*08/03/23 18:58*	*1*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*08/03/23 18:58*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*08/03/23 18:58*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrotoluene	ND		10		ug/L		08/02/23 15:28	08/03/23 06:33	1
2,6-Dinitrotoluene	ND		10		ug/L		08/02/23 15:28	08/03/23 06:33	1
Diethyl phthalate	ND		5.0		ug/L		08/02/23 15:28	08/03/23 06:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*80*		*13 - 138*	*08/02/23 15:28*	*08/03/23 06:33*	*1*
2-Fluorobiphenyl (Surr)	*73*		*44 - 120*	*08/02/23 15:28*	*08/03/23 06:33*	*1*

Client Sample ID: 16-3 — Lab Sample ID: 410-136514-2

Date Collected: 07/26/23 11:15 — **Matrix: Water**
Date Received: 07/28/23 09:25

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol (Surr)	*46*		*10 - 120*	*08/02/23 15:28*	*08/03/23 06:33*	*1*
Nitrobenzene-d5 (Surr)	*75*		*31 - 120*	*08/02/23 15:28*	*08/03/23 06:33*	*1*
p-Terphenyl-d14 (Surr)	*92*		*30 - 125*	*08/02/23 15:28*	*08/03/23 06:33*	*1*
Phenol-d5 (Surr)	*32*		*10 - 120*	*08/02/23 15:28*	*08/03/23 06:33*	*1*

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		10		ug/L		08/07/23 20:15	08/09/23 15:03	1
Barium	**800**		10		ug/L		08/07/23 20:15	08/09/23 15:03	1
Beryllium	ND		1.0		ug/L		08/07/23 20:15	08/09/23 15:03	1
Cadmium	ND		1.0		ug/L		08/07/23 20:15	08/09/23 15:03	1
Chromium	ND		5.0		ug/L		08/07/23 20:15	08/09/23 15:03	1
Cobalt	ND		5.0		ug/L		08/07/23 20:15	08/09/23 15:03	1
Copper	ND		5.0		ug/L		08/07/23 20:15	08/09/23 15:03	1
Lead	ND		3.0		ug/L		08/07/23 20:15	08/09/23 15:03	1
Nickel	ND		10		ug/L		08/07/23 20:15	08/09/23 15:03	1
Zinc	ND		30		ug/L		08/07/23 20:15	08/09/23 15:03	1
Vanadium	ND		10		ug/L		08/07/23 20:15	08/09/23 15:03	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		2.0		ug/L		08/03/23 05:59	08/04/23 09:45	1

Client Sample ID: 16-5 — Lab Sample ID: 410-136514-3

Date Collected: 07/26/23 07:45 — **Matrix: Water**
Date Received: 07/28/23 09:25

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			08/03/23 19:19	1
1,1-Dichloroethane	ND		1.0		ug/L			08/03/23 19:19	1
1,1-Dichloroethene	ND		1.0		ug/L			08/03/23 19:19	1
2-Butanone	ND		10		ug/L			08/03/23 19:19	1
Benzene	ND		1.0		ug/L			08/03/23 19:19	1
Carbon tetrachloride	ND		1.0		ug/L			08/03/23 19:19	1
Chloroethane	ND		1.0		ug/L			08/03/23 19:19	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/03/23 19:19	1
Diethyl ether	ND		10		ug/L			08/03/23 19:19	1
Ethylbenzene	ND		1.0		ug/L			08/03/23 19:19	1
Methylene Chloride	ND		1.0		ug/L			08/03/23 19:19	1
Tetrachloroethene	ND		1.0		ug/L			08/03/23 19:19	1
Tetrahydrofuran	ND		25		ug/L			08/03/23 19:19	1
Toluene	ND		1.0		ug/L			08/03/23 19:19	1
Trichloroethene	ND		1.0		ug/L			08/03/23 19:19	1
Trichlorofluoromethane	ND		1.0		ug/L			08/03/23 19:19	1
Vinyl chloride	ND		1.0		ug/L			08/03/23 19:19	1
Xylenes, Total	ND		3.0		ug/L			08/03/23 19:19	1
Chloromethane	ND		1.0		ug/L			08/03/23 19:19	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0		ug/L			08/03/23 19:19	1

Client Sample ID: 16-5 — Lab Sample ID: 410-136514-3

Date Collected: 07/26/23 07:45 — **Matrix: Water**
Date Received: 07/28/23 09:25

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*80 - 120*		*08/03/23 19:19*	*1*
Dibromofluoromethane (Surr)	*109*		*80 - 120*		*08/03/23 19:19*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*08/03/23 19:19*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*08/03/23 19:19*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrotoluene	ND		10		ug/L		08/02/23 15:28	08/03/23 06:54	1
2,6-Dinitrotoluene	ND		10		ug/L		08/02/23 15:28	08/03/23 06:54	1
Diethyl phthalate	ND		5.0		ug/L		08/02/23 15:28	08/03/23 06:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*86*		*13 - 138*	*08/02/23 15:28*	*08/03/23 06:54*	*1*
2-Fluorobiphenyl (Surr)	*75*		*44 - 120*	*08/02/23 15:28*	*08/03/23 06:54*	*1*
2-Fluorophenol (Surr)	*43*		*10 - 120*	*08/02/23 15:28*	*08/03/23 06:54*	*1*
Nitrobenzene-d5 (Surr)	*74*		*31 - 120*	*08/02/23 15:28*	*08/03/23 06:54*	*1*
p-Terphenyl-d14 (Surr)	*86*		*30 - 125*	*08/02/23 15:28*	*08/03/23 06:54*	*1*
Phenol-d5 (Surr)	*29*		*10 - 120*	*08/02/23 15:28*	*08/03/23 06:54*	*1*

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		10		ug/L		08/02/23 10:20	08/10/23 18:21	1
Barium	**180**		10		ug/L		08/02/23 10:20	08/10/23 18:21	1
Beryllium	ND		1.0		ug/L		08/02/23 10:20	08/10/23 18:21	1
Cadmium	ND		1.0		ug/L		08/02/23 10:20	08/10/23 18:21	1
Chromium	ND		5.0		ug/L		08/02/23 10:20	08/10/23 18:21	1
Cobalt	ND		5.0		ug/L		08/02/23 10:20	08/10/23 18:21	1
Copper	ND		5.0		ug/L		08/02/23 10:20	08/10/23 18:21	1
Lead	ND		3.0		ug/L		08/02/23 10:20	08/10/23 18:21	1
Nickel	ND		10		ug/L		08/02/23 10:20	08/10/23 18:21	1
Zinc	ND	^3+	30		ug/L		08/02/23 10:20	08/10/23 18:21	1
Vanadium	ND		10		ug/L		08/02/23 10:20	08/10/23 18:21	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		2.0		ug/L		08/03/23 05:59	08/04/23 09:47	1

Client Sample ID: 16WC2B — Lab Sample ID: 410-136514-4

Date Collected: 07/26/23 08:40 — **Matrix: Water**
Date Received: 07/28/23 09:25

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			08/03/23 19:40	1
1,1-Dichloroethane	ND		1.0		ug/L			08/03/23 19:40	1
1,1-Dichloroethene	ND		1.0		ug/L			08/03/23 19:40	1
2-Butanone	ND		10		ug/L			08/03/23 19:40	1
Benzene	ND		1.0		ug/L			08/03/23 19:40	1
Carbon tetrachloride	ND		1.0		ug/L			08/03/23 19:40	1
Chloroethane	ND		1.0		ug/L			08/03/23 19:40	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/03/23 19:40	1

Client Sample ID: 16WC2B
Date Collected: 07/26/23 08:40
Date Received: 07/28/23 09:25

Lab Sample ID: 410-136514-4
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diethyl ether	ND		10		ug/L			08/03/23 19:40	1
Ethylbenzene	ND		1.0		ug/L			08/03/23 19:40	1
Methylene Chloride	ND		1.0		ug/L			08/03/23 19:40	1
Tetrachloroethene	ND		1.0		ug/L			08/03/23 19:40	1
Tetrahydrofuran	ND		25		ug/L			08/03/23 19:40	1
Toluene	ND		1.0		ug/L			08/03/23 19:40	1
Trichloroethene	ND		1.0		ug/L			08/03/23 19:40	1
Trichlorofluoromethane	ND		1.0		ug/L			08/03/23 19:40	1
Vinyl chloride	ND		1.0		ug/L			08/03/23 19:40	1
Xylenes, Total	ND		3.0		ug/L			08/03/23 19:40	1
Chloromethane	ND		1.0		ug/L			08/03/23 19:40	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0		ug/L			08/03/23 19:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*80 - 120*		*08/03/23 19:40*	*1*
Dibromofluoromethane (Surr)	*110*		*80 - 120*		*08/03/23 19:40*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*08/03/23 19:40*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*08/03/23 19:40*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrotoluene	ND		10		ug/L		08/02/23 15:28	08/03/23 07:15	1
2,6-Dinitrotoluene	ND		10		ug/L		08/02/23 15:28	08/03/23 07:15	1
Diethyl phthalate	ND		5.0		ug/L		08/02/23 15:28	08/03/23 07:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*69*		*13 - 138*	*08/02/23 15:28*	*08/03/23 07:15*	*1*
2-Fluorobiphenyl (Surr)	*72*		*44 - 120*	*08/02/23 15:28*	*08/03/23 07:15*	*1*
2-Fluorophenol (Surr)	*37*		*10 - 120*	*08/02/23 15:28*	*08/03/23 07:15*	*1*
Nitrobenzene-d5 (Surr)	*69*		*31 - 120*	*08/02/23 15:28*	*08/03/23 07:15*	*1*
p-Terphenyl-d14 (Surr)	*74*		*30 - 125*	*08/02/23 15:28*	*08/03/23 07:15*	*1*
Phenol-d5 (Surr)	*25*		*10 - 120*	*08/02/23 15:28*	*08/03/23 07:15*	*1*

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		10		ug/L		08/02/23 10:20	08/10/23 18:19	1
Barium	**120**		10		ug/L		08/02/23 10:20	08/10/23 18:19	1
Beryllium	ND		1.0		ug/L		08/02/23 10:20	08/10/23 18:19	1
Cadmium	ND		1.0		ug/L		08/02/23 10:20	08/10/23 18:19	1
Chromium	ND		5.0		ug/L		08/02/23 10:20	08/10/23 18:19	1
Cobalt	ND		5.0		ug/L		08/02/23 10:20	08/10/23 18:19	1
Copper	ND		5.0		ug/L		08/02/23 10:20	08/10/23 18:19	1
Lead	ND		3.0		ug/L		08/02/23 10:20	08/10/23 18:19	1
Nickel	ND		10		ug/L		08/02/23 10:20	08/10/23 18:19	1
Zinc	ND	^3+	30		ug/L		08/02/23 10:20	08/10/23 18:19	1
Vanadium	ND		10		ug/L		08/02/23 10:20	08/10/23 18:19	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		2.0		ug/L		08/03/23 05:59	08/04/23 10:07	1

Client Sample ID: 16SPRING
Lab Sample ID: 410-136514-5

Date Collected: 07/26/23 08:00
Matrix: Water
Date Received: 07/28/23 09:25

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			08/03/23 20:01	1
1,1-Dichloroethane	ND		1.0		ug/L			08/03/23 20:01	1
1,1-Dichloroethene	ND		1.0		ug/L			08/03/23 20:01	1
2-Butanone	ND		10		ug/L			08/03/23 20:01	1
Benzene	ND		1.0		ug/L			08/03/23 20:01	1
Carbon tetrachloride	ND		1.0		ug/L			08/03/23 20:01	1
Chloroethane	ND		1.0		ug/L			08/03/23 20:01	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/03/23 20:01	1
Diethyl ether	ND		10		ug/L			08/03/23 20:01	1
Ethylbenzene	ND		1.0		ug/L			08/03/23 20:01	1
Methylene Chloride	ND		1.0		ug/L			08/03/23 20:01	1
Tetrachloroethene	ND		1.0		ug/L			08/03/23 20:01	1
Tetrahydrofuran	ND		25		ug/L			08/03/23 20:01	1
Toluene	ND		1.0		ug/L			08/03/23 20:01	1
Trichloroethene	ND		1.0		ug/L			08/03/23 20:01	1
Trichlorofluoromethane	ND		1.0		ug/L			08/03/23 20:01	1
Vinyl chloride	ND		1.0		ug/L			08/03/23 20:01	1
Xylenes, Total	ND		3.0		ug/L			08/03/23 20:01	1
Chloromethane	ND		1.0		ug/L			08/03/23 20:01	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0		ug/L			08/03/23 20:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*80 - 120*		*08/03/23 20:01*	*1*
Dibromofluoromethane (Surr)	*110*		*80 - 120*		*08/03/23 20:01*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*08/03/23 20:01*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*08/03/23 20:01*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrotoluene	ND		10		ug/L		08/02/23 15:28	08/03/23 07:37	1
2,6-Dinitrotoluene	ND		10		ug/L		08/02/23 15:28	08/03/23 07:37	1
Diethyl phthalate	ND		5.1		ug/L		08/02/23 15:28	08/03/23 07:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*72*		*13 - 138*	*08/02/23 15:28*	*08/03/23 07:37*	*1*
2-Fluorobiphenyl (Surr)	*68*		*44 - 120*	*08/02/23 15:28*	*08/03/23 07:37*	*1*
2-Fluorophenol (Surr)	*39*		*10 - 120*	*08/02/23 15:28*	*08/03/23 07:37*	*1*
Nitrobenzene-d5 (Surr)	*67*		*31 - 120*	*08/02/23 15:28*	*08/03/23 07:37*	*1*
p-Terphenyl-d14 (Surr)	*86*		*30 - 125*	*08/02/23 15:28*	*08/03/23 07:37*	*1*
Phenol-d5 (Surr)	*27*		*10 - 120*	*08/02/23 15:28*	*08/03/23 07:37*	*1*

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		10		ug/L		08/03/23 03:28	08/10/23 13:47	1
Barium	**220**		10		ug/L		08/03/23 03:28	08/10/23 13:47	1
Beryllium	ND		1.0		ug/L		08/03/23 03:28	08/10/23 13:47	1
Cadmium	ND		1.0		ug/L		08/03/23 03:28	08/10/23 13:47	1
Chromium	ND		5.0		ug/L		08/03/23 03:28	08/10/23 13:47	1
Cobalt	ND		5.0		ug/L		08/03/23 03:28	08/10/23 13:47	1
Copper	ND		5.0		ug/L		08/03/23 03:28	08/10/23 13:47	1

Client Sample ID: 16SPRING — Lab Sample ID: 410-136514-5

Date Collected: 07/26/23 08:00 — **Matrix: Water**
Date Received: 07/28/23 09:25

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		3.0		ug/L		08/03/23 03:28	08/10/23 13:47	1
Nickel	ND		10		ug/L		08/03/23 03:28	08/10/23 13:47	1
Zinc	ND		30		ug/L		08/03/23 03:28	08/10/23 13:47	1
Vanadium	ND		10		ug/L		08/03/23 03:28	08/10/23 13:47	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		2.0		ug/L		08/03/23 06:08	08/04/23 12:23	1

Client Sample ID: Trip Blank 1 — Lab Sample ID: 410-136514-6

Date Collected: 07/26/23 00:00 — **Matrix: Water**
Date Received: 07/28/23 09:25

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Propanol	ND	cn	100		ug/L			08/06/23 13:54	1
1,1,1-Trichloroethane	ND		1.0		ug/L			08/03/23 14:45	1
1,1-Dichloroethane	ND		1.0		ug/L			08/03/23 14:45	1
1,1-Dichloroethene	ND		1.0		ug/L			08/03/23 14:45	1
2-Butanone	ND		10		ug/L			08/03/23 14:45	1
Benzene	ND		1.0		ug/L			08/03/23 14:45	1
Carbon tetrachloride	ND		1.0		ug/L			08/03/23 14:45	1
Chloroethane	ND		1.0		ug/L			08/03/23 14:45	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/03/23 14:45	1
Diethyl ether	ND		10		ug/L			08/03/23 14:45	1
Ethylbenzene	ND		1.0		ug/L			08/03/23 14:45	1
Methylene Chloride	ND		1.0		ug/L			08/03/23 14:45	1
Tetrachloroethene	ND		1.0		ug/L			08/03/23 14:45	1
Tetrahydrofuran	ND		25		ug/L			08/03/23 14:45	1
Toluene	ND		1.0		ug/L			08/03/23 14:45	1
Trichloroethene	ND		1.0		ug/L			08/03/23 14:45	1
Trichlorofluoromethane	ND		1.0		ug/L			08/03/23 14:45	1
Vinyl chloride	ND		1.0		ug/L			08/03/23 14:45	1
Xylenes, Total	ND		3.0		ug/L			08/03/23 14:45	1
Chloromethane	ND		1.0		ug/L			08/03/23 14:45	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0		ug/L			08/03/23 14:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*		*08/06/23 13:54*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*08/06/23 13:54*	*1*
4-Bromofluorobenzene (Surr)	*91*		*80 - 120*		*08/06/23 13:54*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*08/06/23 13:54*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*80 - 120*		*08/03/23 14:45*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 120*		*08/03/23 14:45*	*1*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*08/03/23 14:45*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*08/03/23 14:45*	*1*

Client Sample ID: Trip Blank 2
Lab Sample ID: 410-136514-7

Date Collected: 07/26/23 00:00
Matrix: Water
Date Received: 07/28/23 09:25

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Propanol	ND	cn	100		ug/L			08/06/23 14:14	1
1,1,1-Trichloroethane	ND		1.0		ug/L			08/03/23 15:06	1
1,1-Dichloroethane	ND		1.0		ug/L			08/03/23 15:06	1
1,1-Dichloroethene	ND		1.0		ug/L			08/03/23 15:06	1
2-Butanone	ND		10		ug/L			08/03/23 15:06	1
Benzene	ND		1.0		ug/L			08/03/23 15:06	1
Carbon tetrachloride	ND		1.0		ug/L			08/03/23 15:06	1
Chloroethane	ND		1.0		ug/L			08/03/23 15:06	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/03/23 15:06	1
Diethyl ether	ND		10		ug/L			08/03/23 15:06	1
Ethylbenzene	ND		1.0		ug/L			08/03/23 15:06	1
Methylene Chloride	ND		1.0		ug/L			08/03/23 15:06	1
Tetrachloroethene	ND		1.0		ug/L			08/03/23 15:06	1
Tetrahydrofuran	ND		25		ug/L			08/03/23 15:06	1
Toluene	ND		1.0		ug/L			08/03/23 15:06	1
Trichloroethene	ND		1.0		ug/L			08/03/23 15:06	1
Trichlorofluoromethane	ND		1.0		ug/L			08/03/23 15:06	1
Vinyl chloride	ND		1.0		ug/L			08/03/23 15:06	1
Xylenes, Total	ND		3.0		ug/L			08/03/23 15:06	1
Chloromethane	ND		1.0		ug/L			08/03/23 15:06	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0		ug/L			08/03/23 15:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 120*		*08/06/23 14:14*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*08/06/23 14:14*	*1*
4-Bromofluorobenzene (Surr)	*90*		*80 - 120*		*08/06/23 14:14*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*08/06/23 14:14*	*1*
1,2-Dichloroethane-d4 (Surr)	*108*		*80 - 120*		*08/03/23 15:06*	*1*
Dibromofluoromethane (Surr)	*108*		*80 - 120*		*08/03/23 15:06*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*08/03/23 15:06*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*08/03/23 15:06*	*1*

Default Detection Limits

Client: TRC, Engineers, Inc.
Job ID: 410-136514-1
Project/Site: RFAAP, Radford HWMU16

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	RL	MDL	Units
1,1,1-Trichloroethane	1.0	0.080	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	0.080	ug/L
1,1-Dichloroethane	1.0	0.10	ug/L
1,1-Dichloroethene	1.0	0.10	ug/L
2-Butanone	10	1.0	ug/L
2-Propanol	100	50	ug/L
Benzene	1.0	0.10	ug/L
Carbon tetrachloride	1.0	0.10	ug/L
Chloroethane	1.0	0.10	ug/L
Chloromethane	1.0	0.10	ug/L
Dichlorodifluoromethane	1.0	0.10	ug/L
Diethyl ether	10	0.10	ug/L
Ethylbenzene	1.0	0.080	ug/L
Methylene Chloride	1.0	0.20	ug/L
Tetrachloroethene	1.0	0.20	ug/L
Tetrahydrofuran	25	0.80	ug/L
Toluene	1.0	0.080	ug/L
Trichloroethene	1.0	0.080	ug/L
Trichlorofluoromethane	1.0	0.10	ug/L
Vinyl chloride	1.0	0.10	ug/L
Xylenes, Total	3.0	0.070	ug/L

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Prep: 3510C

Analyte	RL	MDL	Units
2,4-Dinitrotoluene	10	1.0	ug/L
2,6-Dinitrotoluene	10	0.50	ug/L
Diethyl phthalate	5.0	2.0	ug/L

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Prep: 3005A

Analyte	RL	MDL	Units
Arsenic	10	2.0	ug/L
Barium	10	1.3	ug/L
Beryllium	1.0	0.30	ug/L
Cadmium	1.0	0.20	ug/L
Chromium	5.0	1.0	ug/L
Cobalt	5.0	1.0	ug/L
Copper	5.0	1.7	ug/L
Lead	3.0	1.0	ug/L
Nickel	10	2.0	ug/L
Vanadium	10	2.5	ug/L
Zinc	30	7.3	ug/L

Method: 7470A - Mercury (CVAA)

Prep: 7470A

Analyte	RL	MDL	Units
Mercury	2.0	0.20	ug/L

Surrogate Summary

Client: TRC, Engineers, Inc.
Job ID: 410-136514-1
Project/Site: RFAAP, Radford HWMU16

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Water
Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	DBFM	BFB	TOL
Lab Sample ID	Client Sample ID	(80-120)	(80-120)	(80-120)	(80-120)
410-136514-1	16-2	110	110	94	95
410-136514-2	16-3	109	108	95	95
410-136514-3	16-5	109	109	94	96
410-136514-4	16WC2B	110	110	94	96
410-136514-5	16SPRING	109	110	94	95
410-136514-6	Trip Blank 1	107	107	95	96
410-136514-6	Trip Blank 1	105	105	91	97
410-136514-7	Trip Blank 2	108	108	96	96
410-136514-7	Trip Blank 2	103	105	90	96
LCS 410-404020/5	Lab Control Sample	103	102	101	98
LCS 410-404928/4	Lab Control Sample	99	98	93	100
LCSD 410-404020/6	Lab Control Sample Dup	102	102	101	98
LCSD 410-404928/5	Lab Control Sample Dup	101	97	93	100
MB 410-404020/11	Method Blank	109	106	95	94
MB 410-404928/7	Method Blank	103	103	93	96

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
DBFM = Dibromofluoromethane (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water
Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	TPHd14	PHL
Lab Sample ID	Client Sample ID	(13-138)	(44-120)	(10-120)	(31-120)	(30-125)	(10-120)
410-136514-1	16-2	68	65	38	66	73	26
410-136514-2	16-3	80	73	46	75	92	32
410-136514-3	16-5	86	75	43	74	86	29
410-136514-4	16WC2B	69	72	37	69	74	25
410-136514-5	16SPRING	72	68	39	67	86	27
LCS 410-403666/2-A	Lab Control Sample	79	78	53	74	83	39
LCSD 410-403666/3-A	Lab Control Sample Dup	79	80	50	76	90	38
MB 410-403666/1-A	Method Blank	85	82	43	73	86	30

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
TPHd14 = p-Terphenyl-d14 (Surr)
PHL = Phenol-d5 (Surr)

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 410-404020/11
Matrix: Water
Analysis Batch: 404020

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			08/03/23 14:25	1
1,1-Dichloroethane	ND		1.0		ug/L			08/03/23 14:25	1
1,1-Dichloroethene	ND		1.0		ug/L			08/03/23 14:25	1
2-Butanone	ND		10		ug/L			08/03/23 14:25	1
Benzene	ND		1.0		ug/L			08/03/23 14:25	1
Carbon tetrachloride	ND		1.0		ug/L			08/03/23 14:25	1
Chloroethane	ND		1.0		ug/L			08/03/23 14:25	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/03/23 14:25	1
Diethyl ether	ND		10		ug/L			08/03/23 14:25	1
Ethylbenzene	ND		1.0		ug/L			08/03/23 14:25	1
Methylene Chloride	ND		1.0		ug/L			08/03/23 14:25	1
Tetrachloroethene	ND		1.0		ug/L			08/03/23 14:25	1
Tetrahydrofuran	ND		25		ug/L			08/03/23 14:25	1
Toluene	ND		1.0		ug/L			08/03/23 14:25	1
Trichloroethene	ND		1.0		ug/L			08/03/23 14:25	1
Trichlorofluoromethane	ND		1.0		ug/L			08/03/23 14:25	1
Vinyl chloride	ND		1.0		ug/L			08/03/23 14:25	1
Xylenes, Total	ND		3.0		ug/L			08/03/23 14:25	1
Chloromethane	ND		1.0		ug/L			08/03/23 14:25	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0		ug/L			08/03/23 14:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*80 - 120*		*08/03/23 14:25*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*		*08/03/23 14:25*	*1*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*08/03/23 14:25*	*1*
Toluene-d8 (Surr)	*94*		*80 - 120*		*08/03/23 14:25*	*1*

Lab Sample ID: LCS 410-404020/5
Matrix: Water
Analysis Batch: 404020

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1-Trichloroethane	5.00	4.50		ug/L		90	78 - 126
1,1,2-Trichloroethane	5.00	4.72		ug/L		94	80 - 120
1,1-Dichloroethane	5.00	4.63		ug/L		93	74 - 120
1,1-Dichloroethene	5.00	4.35		ug/L		87	80 - 131
2-Butanone	62.5	58.8		ug/L		94	59 - 141
Benzene	5.00	4.86		ug/L		97	80 - 120
Carbon tetrachloride	5.00	4.62		ug/L		92	64 - 141
Chloroethane	5.00	4.01		ug/L		80	63 - 120
Dichlorodifluoromethane	5.00	3.62		ug/L		72	43 - 123
Diethyl ether	5.01	3.60	J	ug/L		72	72 - 121
Ethylbenzene	5.00	4.40		ug/L		88	80 - 120
Methylene Chloride	5.00	4.70		ug/L		94	80 - 120
Tetrachloroethene	5.00	4.21		ug/L		84	80 - 120
Tetrahydrofuran	25.0	21.8	J	ug/L		87	67 - 137
Toluene	5.00	4.45		ug/L		89	80 - 120
Trichloroethene	5.00	4.55		ug/L		91	80 - 120

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 410-404020/5
Matrix: Water
Analysis Batch: 404020

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Trichlorofluoromethane			5.00	4.17		ug/L		83	62 - 136		
Vinyl chloride			5.00	3.74		ug/L		75	60 - 125		
Xylenes, Total			15.0	13.2		ug/L		88	80 - 120		
Chloromethane			5.00	3.72		ug/L		74	56 - 124		
1,1,2-Trichloro-1,2,2-trifluoroethane			5.00	4.38		ug/L		88	75 - 133		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*102*		*80 - 120*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*
Toluene-d8 (Surr)	*98*		*80 - 120*

Lab Sample ID: LCSD 410-404020/6
Matrix: Water
Analysis Batch: 404020

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane			5.00	4.95		ug/L		99	78 - 126	9	30
1,1,2-Trichloroethane			5.00	5.15		ug/L		103	80 - 120	9	30
1,1-Dichloroethane			5.00	5.20		ug/L		104	74 - 120	12	30
1,1-Dichloroethene			5.00	4.84		ug/L		97	80 - 131	11	30
2-Butanone			62.5	65.5		ug/L		105	59 - 141	11	30
Benzene			5.00	5.26		ug/L		105	80 - 120	8	30
Carbon tetrachloride			5.00	5.03		ug/L		101	64 - 141	9	30
Chloroethane			5.00	4.32		ug/L		86	63 - 120	8	30
Dichlorodifluoromethane			5.00	3.95		ug/L		79	43 - 123	9	30
Diethyl ether			5.01	4.03	J	ug/L		81	72 - 121	11	30
Ethylbenzene			5.00	4.90		ug/L		98	80 - 120	11	30
Methylene Chloride			5.00	5.20		ug/L		104	80 - 120	10	30
Tetrachloroethene			5.00	4.69		ug/L		94	80 - 120	11	30
Tetrahydrofuran			25.0	23.8	J	ug/L		95	67 - 137	8	30
Toluene			5.00	4.95		ug/L		99	80 - 120	11	30
Trichloroethene			5.00	5.06		ug/L		101	80 - 120	10	30
Trichlorofluoromethane			5.00	4.42		ug/L		88	62 - 136	6	30
Vinyl chloride			5.00	4.16		ug/L		83	60 - 125	11	30
Xylenes, Total			15.0	14.7		ug/L		98	80 - 120	11	30
Chloromethane			5.00	4.18		ug/L		84	56 - 124	12	30
1,1,2-Trichloro-1,2,2-trifluoroethane			5.00	4.84		ug/L		97	75 - 133	10	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*
Dibromofluoromethane (Surr)	*102*		*80 - 120*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*
Toluene-d8 (Surr)	*98*		*80 - 120*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 410-404928/7
Matrix: Water
Analysis Batch: 404928

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Propanol	ND		100		ug/L			08/06/23 12:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 120*		*08/06/23 12:54*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*08/06/23 12:54*	*1*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*		*08/06/23 12:54*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*08/06/23 12:54*	*1*

Lab Sample ID: LCS 410-404928/4
Matrix: Water
Analysis Batch: 404928

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
2-Propanol			150	118		ug/L		78	52 - 144		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 120*
Dibromofluoromethane (Surr)	*98*		*80 - 120*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*

Lab Sample ID: LCSD 410-404928/5
Matrix: Water
Analysis Batch: 404928

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-Propanol			150	116		ug/L		77	52 - 144	2	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*97*		*80 - 120*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 410-403666/1-A
Matrix: Water
Analysis Batch: 403788

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 403666

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrotoluene	ND		10		ug/L		08/02/23 15:28	08/02/23 23:30	1
2,6-Dinitrotoluene	ND		10		ug/L		08/02/23 15:28	08/02/23 23:30	1
Diethyl phthalate	ND		5.0		ug/L		08/02/23 15:28	08/02/23 23:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*85*		*13 - 138*	*08/02/23 15:28*	*08/02/23 23:30*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 410-403666/1-A
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 403788
Prep Batch: 403666

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	82		44 - 120	08/02/23 15:28	08/02/23 23:30	1
2-Fluorophenol (Surr)	43		10 - 120	08/02/23 15:28	08/02/23 23:30	1
Nitrobenzene-d5 (Surr)	73		31 - 120	08/02/23 15:28	08/02/23 23:30	1
p-Terphenyl-d14 (Surr)	86		30 - 125	08/02/23 15:28	08/02/23 23:30	1
Phenol-d5 (Surr)	30		10 - 120	08/02/23 15:28	08/02/23 23:30	1

Lab Sample ID: LCS 410-403666/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 403788
Prep Batch: 403666

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4-Dinitrotoluene	50.0	50.4		ug/L		101	66 - 131
2,6-Dinitrotoluene	50.0	51.6		ug/L		103	66 - 129
Diethyl phthalate	50.0	47.6		ug/L		95	46 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	79		13 - 138
2-Fluorobiphenyl (Surr)	78		44 - 120
2-Fluorophenol (Surr)	53		10 - 120
Nitrobenzene-d5 (Surr)	74		31 - 120
p-Terphenyl-d14 (Surr)	83		30 - 125
Phenol-d5 (Surr)	39		10 - 120

Lab Sample ID: LCSD 410-403666/3-A
Client Sample ID: Lab Control Sample Dup
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 403788
Prep Batch: 403666

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,4-Dinitrotoluene	50.0	52.3		ug/L		105	66 - 131	4	30
2,6-Dinitrotoluene	50.0	49.3		ug/L		99	66 - 129	4	30
Diethyl phthalate	50.0	51.9		ug/L		104	46 - 123	9	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	79		13 - 138
2-Fluorobiphenyl (Surr)	80		44 - 120
2-Fluorophenol (Surr)	50		10 - 120
Nitrobenzene-d5 (Surr)	76		31 - 120
p-Terphenyl-d14 (Surr)	90		30 - 125
Phenol-d5 (Surr)	38		10 - 120

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 410-403519/1-A
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total Recoverable
Analysis Batch: 407005
Prep Batch: 403519

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		10		ug/L		08/02/23 10:20	08/10/23 17:03	1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 410-403519/1-A
Matrix: Water
Analysis Batch: 407005

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 403519

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	ND		10		ug/L		08/02/23 10:20	08/10/23 17:03	1
Beryllium	ND		1.0		ug/L		08/02/23 10:20	08/10/23 17:03	1
Cadmium	ND		1.0		ug/L		08/02/23 10:20	08/10/23 17:03	1
Chromium	ND		5.0		ug/L		08/02/23 10:20	08/10/23 17:03	1
Cobalt	ND		5.0		ug/L		08/02/23 10:20	08/10/23 17:03	1
Copper	ND		5.0		ug/L		08/02/23 10:20	08/10/23 17:03	1
Lead	ND		3.0		ug/L		08/02/23 10:20	08/10/23 17:03	1
Nickel	ND		10		ug/L		08/02/23 10:20	08/10/23 17:03	1
Zinc	ND	^3+	30		ug/L		08/02/23 10:20	08/10/23 17:03	1
Vanadium	ND		10		ug/L		08/02/23 10:20	08/10/23 17:03	1

Lab Sample ID: LCS 410-403519/2-A
Matrix: Water
Analysis Batch: 407005

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 403519

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	104		ug/L		104	80 - 120
Arsenic	500	502		ug/L		100	85 - 120
Barium	500	520		ug/L		104	80 - 120
Beryllium	50.0	46.8		ug/L		94	90 - 112
Cadmium	50.0	51.5		ug/L		103	86 - 113
Chromium	500	479		ug/L		96	90 - 115
Cobalt	500	483		ug/L		97	90 - 113
Copper	500	470		ug/L		94	80 - 120
Lead	50.0	51.8		ug/L		104	90 - 115
Nickel	500	487		ug/L		97	90 - 114
Selenium	100	98.7		ug/L		99	80 - 120
Silver	50.0	50.1		ug/L		100	88 - 113
Thallium	100	103		ug/L		103	80 - 120
Zinc	500	497	^3+	ug/L		99	90 - 115
Vanadium	500	503		ug/L		101	90 - 115

Lab Sample ID: MB 410-403837/1-A
Matrix: Water
Analysis Batch: 407006

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 403837

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		10		ug/L		08/03/23 03:28	08/10/23 13:03	1
Barium	ND		10		ug/L		08/03/23 03:28	08/10/23 13:03	1
Beryllium	ND		1.0		ug/L		08/03/23 03:28	08/10/23 13:03	1
Cadmium	ND		1.0		ug/L		08/03/23 03:28	08/10/23 13:03	1
Chromium	ND		5.0		ug/L		08/03/23 03:28	08/10/23 13:03	1
Cobalt	ND		5.0		ug/L		08/03/23 03:28	08/10/23 13:03	1
Copper	ND		5.0		ug/L		08/03/23 03:28	08/10/23 13:03	1
Lead	ND		3.0		ug/L		08/03/23 03:28	08/10/23 13:03	1
Nickel	ND		10		ug/L		08/03/23 03:28	08/10/23 13:03	1
Zinc	ND		30		ug/L		08/03/23 03:28	08/10/23 13:03	1
Vanadium	ND		10		ug/L		08/03/23 03:28	08/10/23 13:03	1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 410-403837/2-A
Matrix: Water
Analysis Batch: 407006

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 403837

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	106		ug/L		106	80 - 120
Arsenic	500	511		ug/L		102	85 - 120
Barium	500	522		ug/L		104	80 - 120
Beryllium	50.0	47.2		ug/L		94	90 - 112
Cadmium	50.0	54.1		ug/L		108	86 - 113
Chromium	500	523		ug/L		105	90 - 115
Cobalt	500	522		ug/L		104	90 - 113
Copper	500	523		ug/L		105	80 - 120
Lead	50.0	52.8		ug/L		106	90 - 115
Nickel	500	523		ug/L		105	90 - 114
Selenium	100	103		ug/L		103	80 - 120
Silver	50.0	53.3		ug/L		107	88 - 113
Thallium	100	106		ug/L		106	80 - 120
Zinc	500	514		ug/L		103	90 - 115
Vanadium	500	521		ug/L		104	90 - 115

Lab Sample ID: MB 410-404119/1-A
Matrix: Water
Analysis Batch: 406500

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 404119

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		10		ug/L		08/07/23 20:15	08/09/23 14:34	1
Barium	ND		10		ug/L		08/07/23 20:15	08/09/23 14:34	1
Beryllium	ND		1.0		ug/L		08/07/23 20:15	08/09/23 14:34	1
Cadmium	ND		1.0		ug/L		08/07/23 20:15	08/09/23 14:34	1
Chromium	ND		5.0		ug/L		08/07/23 20:15	08/09/23 14:34	1
Cobalt	ND		5.0		ug/L		08/07/23 20:15	08/09/23 14:34	1
Copper	ND		5.0		ug/L		08/07/23 20:15	08/09/23 14:34	1
Lead	ND		3.0		ug/L		08/07/23 20:15	08/09/23 14:34	1
Nickel	ND		10		ug/L		08/07/23 20:15	08/09/23 14:34	1
Zinc	ND		30		ug/L		08/07/23 20:15	08/09/23 14:34	1
Vanadium	ND		10		ug/L		08/07/23 20:15	08/09/23 14:34	1

Lab Sample ID: LCS 410-404119/2-A
Matrix: Water
Analysis Batch: 406500

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 404119

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	101		ug/L		101	80 - 120
Arsenic	500	498		ug/L		100	85 - 120
Barium	500	510		ug/L		102	80 - 120
Beryllium	50.0	51.4		ug/L		103	90 - 112
Cadmium	50.0	50.6		ug/L		101	86 - 113
Chromium	500	480		ug/L		96	90 - 115
Cobalt	500	488		ug/L		98	90 - 113
Copper	500	476		ug/L		95	80 - 120
Lead	50.0	51.0		ug/L		102	90 - 115
Nickel	500	493		ug/L		99	90 - 114
Selenium	100	96.8		ug/L		97	80 - 120

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 410-404119/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total Recoverable
Analysis Batch: 406500
Prep Batch: 404119

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Silver	50.0	49.6		ug/L		99	88 - 113
Thallium	100	101		ug/L		101	80 - 120
Zinc	500	501		ug/L		100	90 - 115
Vanadium	500	498		ug/L		100	90 - 115

Lab Sample ID: LRC 410-406500/10
Client Sample ID: Lab Control Sample
Matrix: Water
Analysis Batch: 406500

Analyte	Spike Added	LRC Result	LRC Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	2000	2050		ug/L		102	90 - 110
Arsenic	2000	1960		ug/L		98	90 - 110
Barium	2000	1920		ug/L		96	90 - 110
Beryllium	2000	1810		ug/L		91	90 - 110
Cadmium	2000	1860		ug/L		93	90 - 110
Chromium	2000	1850		ug/L		92	90 - 110
Cobalt	2000	1790	^5-	ug/L		90	90 - 110
Copper	2000	1840		ug/L		92	90 - 110
Lead	2000	2020		ug/L		101	90 - 110
Nickel	2000	1910		ug/L		96	90 - 110
Selenium	2000	1960		ug/L		98	90 - 110
Silver	2000	1840		ug/L		92	90 - 110
Thallium	2000	2020		ug/L		101	90 - 110
Zinc	2000	1920		ug/L		96	90 - 110
Vanadium	2000	1910		ug/L		96	90 - 110

Lab Sample ID: LRC 410-407005/9
Client Sample ID: Lab Control Sample
Matrix: Water
Analysis Batch: 407005

Analyte	Spike Added	LRC Result	LRC Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	2000	2030		ug/L		101	90 - 110
Arsenic	2000	2000		ug/L		100	90 - 110
Barium	2000	1920		ug/L		96	90 - 110
Beryllium	2000	1790	^5-	ug/L		90	90 - 110
Cadmium	2000	1870		ug/L		93	90 - 110
Chromium	2000	1810		ug/L		90	90 - 110
Cobalt	2000	1770	^5-	ug/L		88	90 - 110
Copper	2000	1910		ug/L		96	90 - 110
Lead	2000	2040		ug/L		102	90 - 110
Nickel	2000	1930		ug/L		97	90 - 110
Selenium	2000	2000		ug/L		100	90 - 110
Silver	2000	1900		ug/L		95	90 - 110
Thallium	2000	2030		ug/L		101	90 - 110
Zinc	2000	1980		ug/L		99	90 - 110
Vanadium	2000	1880		ug/L		94	90 - 110

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LRC 410-407006/9
Client Sample ID: Lab Control Sample
Matrix: Water
Analysis Batch: 407006

Analyte	Spike Added	LRC Result	LRC Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	2000	2090		ug/L		105	90 - 110
Arsenic	2000	2030		ug/L		101	90 - 110
Barium	2000	2100		ug/L		105	90 - 110
Beryllium	2000	1960		ug/L		98	90 - 110
Cadmium	2000	2060		ug/L		103	90 - 110
Chromium	2000	2040		ug/L		102	90 - 110
Cobalt	2000	2020		ug/L		101	90 - 110
Copper	2000	1970		ug/L		99	90 - 110
Lead	2000	2160		ug/L		108	90 - 110
Nickel	2000	1980		ug/L		99	90 - 110
Selenium	2000	2060		ug/L		103	90 - 110
Silver	2000	2010		ug/L		101	90 - 110
Thallium	2000	2190		ug/L		109	90 - 110
Zinc	2000	2020		ug/L		101	90 - 110
Vanadium	2000	2070		ug/L		104	90 - 110

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 410-403849/1-A
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 404633
Prep Batch: 403849

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		2.0		ug/L		08/03/23 05:59	08/04/23 09:28	1

Lab Sample ID: LCS 410-403849/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 404633
Prep Batch: 403849

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	1.00	1.00	J	ug/L		100	80 - 118

Lab Sample ID: MB 410-403851/1-A
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 404633
Prep Batch: 403851

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		2.0		ug/L		08/03/23 06:08	08/04/23 11:44	1

Lab Sample ID: LCS 410-403851/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 404633
Prep Batch: 403851

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	1.00	0.990	J	ug/L		99	80 - 118

GC/MS VOA

Analysis Batch: 404020

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136514-1	16-2	Total/NA	Water	8260D	
410-136514-2	16-3	Total/NA	Water	8260D	
410-136514-3	16-5	Total/NA	Water	8260D	
410-136514-4	16WC2B	Total/NA	Water	8260D	
410-136514-5	16SPRING	Total/NA	Water	8260D	
410-136514-6	Trip Blank 1	Total/NA	Water	8260D	
410-136514-7	Trip Blank 2	Total/NA	Water	8260D	
MB 410-404020/11	Method Blank	Total/NA	Water	8260D	
LCS 410-404020/5	Lab Control Sample	Total/NA	Water	8260D	
LCSD 410-404020/6	Lab Control Sample Dup	Total/NA	Water	8260D	

Analysis Batch: 404928

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136514-6	Trip Blank 1	Total/NA	Water	8260D	
410-136514-7	Trip Blank 2	Total/NA	Water	8260D	
MB 410-404928/7	Method Blank	Total/NA	Water	8260D	
LCS 410-404928/4	Lab Control Sample	Total/NA	Water	8260D	
LCSD 410-404928/5	Lab Control Sample Dup	Total/NA	Water	8260D	

GC/MS Semi VOA

Prep Batch: 403666

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136514-1	16-2	Total/NA	Water	3510C	
410-136514-2	16-3	Total/NA	Water	3510C	
410-136514-3	16-5	Total/NA	Water	3510C	
410-136514-4	16WC2B	Total/NA	Water	3510C	
410-136514-5	16SPRING	Total/NA	Water	3510C	
MB 410-403666/1-A	Method Blank	Total/NA	Water	3510C	
LCS 410-403666/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 410-403666/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 403788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136514-1	16-2	Total/NA	Water	8270D	403666
410-136514-2	16-3	Total/NA	Water	8270D	403666
410-136514-3	16-5	Total/NA	Water	8270D	403666
410-136514-4	16WC2B	Total/NA	Water	8270D	403666
410-136514-5	16SPRING	Total/NA	Water	8270D	403666
MB 410-403666/1-A	Method Blank	Total/NA	Water	8270D	403666
LCS 410-403666/2-A	Lab Control Sample	Total/NA	Water	8270D	403666
LCSD 410-403666/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	403666

Metals

Prep Batch: 403519

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136514-3	16-5	Total Recoverable	Water	3005A	
410-136514-4	16WC2B	Total Recoverable	Water	3005A	
MB 410-403519/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-403519/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Metals

Prep Batch: 403837

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136514-1	16-2	Total Recoverable	Water	3005A	
410-136514-5	16SPRING	Total Recoverable	Water	3005A	
MB 410-403837/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-403837/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 403849

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136514-1	16-2	Total/NA	Water	7470A	
410-136514-2	16-3	Total/NA	Water	7470A	
410-136514-3	16-5	Total/NA	Water	7470A	
410-136514-4	16WC2B	Total/NA	Water	7470A	
MB 410-403849/1-A	Method Blank	Total/NA	Water	7470A	
LCS 410-403849/2-A	Lab Control Sample	Total/NA	Water	7470A	

Prep Batch: 403851

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136514-5	16SPRING	Total/NA	Water	7470A	
MB 410-403851/1-A	Method Blank	Total/NA	Water	7470A	
LCS 410-403851/2-A	Lab Control Sample	Total/NA	Water	7470A	

Prep Batch: 404119

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136514-2	16-3	Total Recoverable	Water	3005A	
MB 410-404119/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-404119/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 404633

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136514-1	16-2	Total/NA	Water	7470A	403849
410-136514-2	16-3	Total/NA	Water	7470A	403849
410-136514-3	16-5	Total/NA	Water	7470A	403849
410-136514-4	16WC2B	Total/NA	Water	7470A	403849
410-136514-5	16SPRING	Total/NA	Water	7470A	403851
MB 410-403849/1-A	Method Blank	Total/NA	Water	7470A	403849
MB 410-403851/1-A	Method Blank	Total/NA	Water	7470A	403851
LCS 410-403849/2-A	Lab Control Sample	Total/NA	Water	7470A	403849
LCS 410-403851/2-A	Lab Control Sample	Total/NA	Water	7470A	403851

Analysis Batch: 406500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136514-2	16-3	Total Recoverable	Water	6020B	404119
MB 410-404119/1-A	Method Blank	Total Recoverable	Water	6020B	404119
LCS 410-404119/2-A	Lab Control Sample	Total Recoverable	Water	6020B	404119
LRC 410-406500/10	Lab Control Sample		Water	6020B	

Analysis Batch: 407005

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136514-3	16-5	Total Recoverable	Water	6020B	403519
410-136514-4	16WC2B	Total Recoverable	Water	6020B	403519
MB 410-403519/1-A	Method Blank	Total Recoverable	Water	6020B	403519
LCS 410-403519/2-A	Lab Control Sample	Total Recoverable	Water	6020B	403519

Metals (Continued)

Analysis Batch: 407005 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LRC 410-407005/9	Lab Control Sample		Water	6020B	

Analysis Batch: 407006

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136514-1	16-2	Total Recoverable	Water	6020B	403837
410-136514-5	16SPRING	Total Recoverable	Water	6020B	403837
MB 410-403837/1-A	Method Blank	Total Recoverable	Water	6020B	403837
LCS 410-403837/2-A	Lab Control Sample	Total Recoverable	Water	6020B	403837
LRC 410-407006/9	Lab Control Sample		Water	6020B	

Client Sample ID: 16-2 — Lab Sample ID: 410-136514-1

Date Collected: 07/26/23 09:30 **Matrix: Water**
Date Received: 07/28/23 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	404020	DVW2	ELLE	08/03/23 18:37
Total/NA	Prep	3510C			403666	T9CY	ELLE	08/02/23 15:28
Total/NA	Analysis	8270D		1	403788	SJ89	ELLE	08/03/23 06:12
Total Recoverable	Prep	3005A			403837	HUH3	ELLE	08/03/23 03:28
Total Recoverable	Analysis	6020B		1	407006	UCIG	ELLE	08/10/23 13:25
Total/NA	Prep	7470A			403849	HUH3	ELLE	08/03/23 05:59
Total/NA	Analysis	7470A		1	404633	UEFS	ELLE	08/04/23 10:09

Client Sample ID: 16-3 — Lab Sample ID: 410-136514-2

Date Collected: 07/26/23 11:15 **Matrix: Water**
Date Received: 07/28/23 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	404020	DVW2	ELLE	08/03/23 18:58
Total/NA	Prep	3510C			403666	T9CY	ELLE	08/02/23 15:28
Total/NA	Analysis	8270D		1	403788	SJ89	ELLE	08/03/23 06:33
Total Recoverable	Prep	3005A			404119	UAMX	ELLE	08/07/23 20:15
Total Recoverable	Analysis	6020B		1	406500	UCIG	ELLE	08/09/23 15:03
Total/NA	Prep	7470A			403849	HUH3	ELLE	08/03/23 05:59
Total/NA	Analysis	7470A		1	404633	UEFS	ELLE	08/04/23 09:45

Client Sample ID: 16-5 — Lab Sample ID: 410-136514-3

Date Collected: 07/26/23 07:45 **Matrix: Water**
Date Received: 07/28/23 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	404020	DVW2	ELLE	08/03/23 19:19
Total/NA	Prep	3510C			403666	T9CY	ELLE	08/02/23 15:28
Total/NA	Analysis	8270D		1	403788	SJ89	ELLE	08/03/23 06:54
Total Recoverable	Prep	3005A			403519	UAMX	ELLE	08/02/23 10:20
Total Recoverable	Analysis	6020B		1	407005	UCIG	ELLE	08/10/23 18:21
Total/NA	Prep	7470A			403849	HUH3	ELLE	08/03/23 05:59
Total/NA	Analysis	7470A		1	404633	UEFS	ELLE	08/04/23 09:47

Client Sample ID: 16WC2B — Lab Sample ID: 410-136514-4

Date Collected: 07/26/23 08:40 **Matrix: Water**
Date Received: 07/28/23 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	404020	DVW2	ELLE	08/03/23 19:40
Total/NA	Prep	3510C			403666	T9CY	ELLE	08/02/23 15:28
Total/NA	Analysis	8270D		1	403788	SJ89	ELLE	08/03/23 07:15
Total Recoverable	Prep	3005A			403519	UAMX	ELLE	08/02/23 10:20
Total Recoverable	Analysis	6020B		1	407005	UCIG	ELLE	08/10/23 18:19

Lab Chronicle

Client: TRC, Engineers, Inc.
Job ID: 410-136514-1
Project/Site: RFAAP, Radford HWMU16

Client Sample ID: 16WC2B
Lab Sample ID: 410-136514-4
Date Collected: 07/26/23 08:40
Matrix: Water
Date Received: 07/28/23 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	7470A			403849	HUH3	ELLE	08/03/23 05:59
Total/NA	Analysis	7470A		1	404633	UEFS	ELLE	08/04/23 10:07

Client Sample ID: 16SPRING
Lab Sample ID: 410-136514-5
Date Collected: 07/26/23 08:00
Matrix: Water
Date Received: 07/28/23 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	404020	DVW2	ELLE	08/03/23 20:01
Total/NA	Prep	3510C			403666	T9CY	ELLE	08/02/23 15:28
Total/NA	Analysis	8270D		1	403788	SJ89	ELLE	08/03/23 07:37
Total Recoverable	Prep	3005A			403837	HUH3	ELLE	08/03/23 03:28
Total Recoverable	Analysis	6020B		1	407006	UCIG	ELLE	08/10/23 13:47
Total/NA	Prep	7470A			403851	HUH3	ELLE	08/03/23 06:08
Total/NA	Analysis	7470A		1	404633	UEFS	ELLE	08/04/23 12:23

Client Sample ID: Trip Blank 1
Lab Sample ID: 410-136514-6
Date Collected: 07/26/23 00:00
Matrix: Water
Date Received: 07/28/23 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	404020	DVW2	ELLE	08/03/23 14:45
Total/NA	Analysis	8260D		1	404928	TQ4J	ELLE	08/06/23 13:54

Client Sample ID: Trip Blank 2
Lab Sample ID: 410-136514-7
Date Collected: 07/26/23 00:00
Matrix: Water
Date Received: 07/28/23 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	404020	DVW2	ELLE	08/03/23 15:06
Total/NA	Analysis	8260D		1	404928	TQ4J	ELLE	08/06/23 14:14

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: TRC, Engineers, Inc.
Job ID: 410-136514-1
Project/Site: RFAAP, Radford HWMU16

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Virginia	NELAP	460182	06-14-25

Method Summary

Client: TRC, Engineers, Inc. Job ID: 410-136514-1
Project/Site: RFAAP, Radford HWMU16

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	ELLE
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	ELLE
6020B	Metals (ICP/MS)	SW846	ELLE
7470A	Mercury (CVAA)	SW846	ELLE
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	ELLE
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	ELLE
5030C	Purge and Trap	SW846	ELLE
7470A	Preparation, Mercury	SW846	ELLE

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: TRC, Engineers, Inc.
Job ID: 410-136514-1
Project/Site: RFAAP, Radford HWMU16

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-136514-1	16-2	Water	07/26/23 09:30	07/28/23 09:25
410-136514-2	16-3	Water	07/26/23 11:15	07/28/23 09:25
410-136514-3	16-5	Water	07/26/23 07:45	07/28/23 09:25
410-136514-4	16WC2B	Water	07/26/23 08:40	07/28/23 09:25
410-136514-5	16SPRING	Water	07/26/23 08:00	07/28/23 09:25
410-136514-6	Trip Blank 1	Water	07/26/23 00:00	07/28/23 09:25
410-136514-7	Trip Blank 2	Water	07/26/23 00:00	07/28/23 09:25

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136514-1

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 355532

Lab Sample ID: IC 410-355532/12 Client Sample ID:

Date Analyzed: 03/21/23 04:01 Lab File ID: IM21X11.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methyl acetate	3.87	Incomplete Integration	K4WN	03/21/23 15:38
1,4-Dioxane	8.53	Incomplete Integration	K4WN	03/21/23 15:38

Lab Sample ID: ICIS 410-355532/13 Client Sample ID:

Date Analyzed: 03/21/23 04:22 Lab File ID: IM21X12.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.90	Incomplete Integration	K4WN	03/21/23 15:43
Methyl acetate	3.88	Incomplete Integration	K4WN	03/21/23 15:43

Lab Sample ID: IC 410-355532/14 Client Sample ID:

Date Analyzed: 03/21/23 04:42 Lab File ID: IM21X13.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.49	Incomplete Integration	K4WN	03/21/23 16:13
Methyl acetate	3.89	Incomplete Integration	K4WN	03/21/23 15:46
t-Butyl alcohol-d10 (IS)	4.14	Incomplete Integration	K4WN	03/21/23 16:12
t-Butyl alcohol	4.27	Incomplete Integration	K4WN	03/21/23 15:47
Acrylonitrile	4.43	Incomplete Integration	K4WN	03/21/23 15:47
1,2-Dichloroethane	7.24	Incomplete Integration	K4WN	03/21/23 15:48
1,4-Dioxane	8.53	Incomplete Integration	K4WN	03/21/23 15:48

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136514-1

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 355532

Lab Sample ID: IC 410-355532/15 Client Sample ID:

Date Analyzed: 03/21/23 05:02 Lab File ID: IM21X14.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.48	Incomplete Integration	K4WN	03/21/23 15:49
t-Butyl alcohol-d10 (IS)	4.14	Incomplete Integration	K4WN	03/21/23 16:08

Lab Sample ID: IC 410-355532/16 Client Sample ID:

Date Analyzed: 03/21/23 05:22 Lab File ID: IM21X15.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.50	Incomplete Integration	K4WN	03/21/23 15:52
Methyl acetate	3.89	Incomplete Integration	K4WN	03/21/23 15:52
trans-1,4-Dichloro-2-butene	12.19	Incomplete Integration	K4WN	03/21/23 16:27

Lab Sample ID: IC 410-355532/17 Client Sample ID:

Date Analyzed: 03/21/23 05:42 Lab File ID: IM21X16.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methyl acetate	3.89	Incomplete Integration	K4WN	03/21/23 15:54
Acrylonitrile	4.46	Incomplete Integration	K4WN	03/21/23 15:55
t-Amyl methyl ether	7.37	Incomplete Integration	K4WN	03/21/23 15:55
n-Butanol	7.99	Incomplete Integration	K4WN	03/21/23 16:07
1,4-Dioxane	8.52	Incomplete Integration	K4WN	03/21/23 15:56

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136514-1

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 355532

Lab Sample ID: IC 410-355532/18 Client Sample ID:

Date Analyzed: 03/21/23 06:02 Lab File ID: IM21X17.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.50	Incomplete Integration	K4WN	03/21/23 16:02
Methyl acetate	3.94	Incomplete Integration	K4WN	03/21/23 15:57
t-Butyl alcohol	4.25	Incomplete Integration	K4WN	03/21/23 15:57
Propionitrile	6.08	Incomplete Integration	K4WN	03/21/23 15:57
n-Butanol	8.17	Incomplete Integration	K4WN	03/21/23 15:57
Methyl methacrylate	8.48	Incomplete Integration	K4WN	03/21/23 15:58
Dibromomethane	8.49	Incomplete Integration	K4WN	03/21/23 15:58
1,4-Dioxane	8.56	Incomplete Integration	K4WN	03/21/23 15:58

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136514-1

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 388102

Lab Sample ID: IC 410-388102/3 Client Sample ID:

Date Analyzed: 06/19/23 14:49 Lab File ID: IU19X02.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methoxymethane	1.92	Incomplete Integration	DVW2	06/21/23 08:18
Acetonitrile	3.82	Incomplete Integration	DVW2	06/21/23 08:19
t-Butyl alcohol-d10 (IS)	3.94	Incomplete Integration	DVW2	06/21/23 08:19
Vinyl acetate	5.06	Incomplete Integration	DVW2	06/21/23 08:19
Ethyl acetate	5.95	Incomplete Integration	DVW2	06/21/23 08:20
cis-1,4-Dichloro-2-butene	11.91	Incomplete Integration	DVW2	06/21/23 08:32

Lab Sample ID: IC 410-388102/4 Client Sample ID:

Date Analyzed: 06/19/23 15:10 Lab File ID: IU19X03.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetonitrile	3.77	Incomplete Integration	DVW2	06/21/23 16:08
t-Butyl alcohol-d10 (IS)	3.96	Incomplete Integration	DVW2	06/21/23 16:08

Lab Sample ID: IC 410-388102/5 Client Sample ID:

Date Analyzed: 06/19/23 15:31 Lab File ID: IU19X04.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetonitrile	3.78	Incomplete Integration	DVW2	06/21/23 14:56
cis-1,4-Dichloro-2-butene	11.91	Incomplete Integration	DVW2	06/21/23 08:32

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136514-1

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 388102

Lab Sample ID: IC 410-388102/6 Client Sample ID:

Date Analyzed: 06/19/23 15:52 Lab File ID: IU19X05.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetonitrile	3.83	Incomplete Integration	DVW2	06/21/23 14:55
Vinyl acetate	5.01	Incomplete Integration	DVW2	06/21/23 08:25
Ethyl acetate	5.90	Incomplete Integration	DVW2	06/21/23 08:25
cis-1,4-Dichloro-2-butene	11.91	Incomplete Integration	DVW2	06/21/23 08:32

Lab Sample ID: IC 410-388102/7 Client Sample ID:

Date Analyzed: 06/19/23 16:13 Lab File ID: IU19X06.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetonitrile	3.81	Incomplete Integration	DVW2	06/21/23 14:55
t-Butyl alcohol-d10 (IS)	4.05	Incomplete Integration	DVW2	06/21/23 08:26

Lab Sample ID: IC 410-388102/8 Client Sample ID:

Date Analyzed: 06/19/23 16:34 Lab File ID: IU19X07.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetonitrile	3.79	Incomplete Integration	DVW2	06/21/23 14:54
t-Butyl alcohol-d10 (IS)	4.03	Incomplete Integration	DVW2	06/21/23 08:14

Lab Sample ID: IC 410-388102/9 Client Sample ID:

Date Analyzed: 06/19/23 16:55 Lab File ID: IU19X08.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetonitrile	3.75	Incomplete Integration	DVW2	06/21/23 14:54
t-Butyl alcohol-d10 (IS)	4.00	Incomplete Integration	DVW2	06/21/23 08:27
cis-1,4-Dichloro-2-butene	11.90	Incomplete Integration	DVW2	06/21/23 08:32

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136514-1

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 388102

Lab Sample ID: ICV 410-388102/11 Client Sample ID:

Date Analyzed: 06/19/23 17:37 Lab File ID: IU19X10.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chlorodifluoromethane	1.87	Incomplete Integration	DVW2	06/21/23 08:27
Acetonitrile	3.75	Incomplete Integration	DVW2	06/21/23 14:58
cis-1,4-Dichloro-2-butene	11.90	Incomplete Integration	DVW2	06/21/23 08:32

Lab Sample ID: IC 410-388102/13 Client Sample ID:

Date Analyzed: 06/19/23 18:19 Lab File ID: IU19X12.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.85	Incomplete Integration	DVW2	06/21/23 07:45
1,3-Butadiene	2.14	Incomplete Integration	DVW2	06/21/23 07:45
Dichlorofluoromethane	2.75	Incomplete Integration	DVW2	06/21/23 07:46
Acetone	3.38	Incomplete Integration	DVW2	06/21/23 07:47
Methyl acetate	3.77	Incomplete Integration	DVW2	06/21/23 07:47
Allyl chloride	3.78	Incomplete Integration	DVW2	06/21/23 07:48
t-Butyl alcohol-d10 (IS)	3.96	Incomplete Integration	DVW2	06/21/23 07:48
t-Butyl alcohol	4.08	Incomplete Integration	DVW2	06/21/23 07:48
n-Butanol	8.01	Incomplete Integration	DVW2	06/21/23 07:48
2-Nitropropane	8.89	Incomplete Integration	DVW2	06/21/23 07:49
1,4-Dioxane		Invalid Compound ID	DVW2	06/21/23 07:49
1-Chlorohexane	11.01	Peak assignment corrected	DVW2	06/22/23 07:47
Ethylbenzene	11.10	Incomplete Integration	DVW2	06/21/23 15:33
N-Propylbenzene	12.19	Incomplete Integration	DVW2	06/21/23 07:50
2-Chlorotoluene	12.27	Incomplete Integration	DVW2	06/21/23 15:33

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136514-1

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 388102

Lab Sample ID: IC 410-388102/14 Client Sample ID:

Date Analyzed: 06/19/23 18:40 Lab File ID: IU19X13.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.86	Incomplete Integration	DVW2	06/21/23 07:51
1,3-Butadiene	2.15	Incomplete Integration	DVW2	06/21/23 07:52
Dichlorofluoromethane	2.76	Incomplete Integration	DVW2	06/21/23 07:52
Acetone	3.37	Incomplete Integration	DVW2	06/21/23 07:52
Methyl acetate	3.77	Incomplete Integration	DVW2	06/21/23 07:52
t-Butyl alcohol-d10 (IS)	3.98	Incomplete Integration	DVW2	06/21/23 07:53
Isobutyl alcohol	6.95	Incomplete Integration	DVW2	06/21/23 07:53
1-Chlorohexane	11.01	Peak assignment corrected	DVW2	06/22/23 07:47
Ethylbenzene	11.10	Incomplete Integration	DVW2	06/21/23 15:33
2-Chlorotoluene	12.26	Incomplete Integration	DVW2	06/21/23 15:34

Lab Sample ID: IC 410-388102/15 Client Sample ID:

Date Analyzed: 06/19/23 19:01 Lab File ID: IU19X14.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.85	Incomplete Integration	DVW2	06/21/23 07:54
1,3-Butadiene	2.15	Incomplete Integration	DVW2	06/21/23 07:54
Acetone	3.37	Incomplete Integration	DVW2	06/21/23 07:55
Methyl acetate	3.77	Incomplete Integration	DVW2	06/21/23 07:55
t-Butyl alcohol-d10 (IS)	3.98	Incomplete Integration	DVW2	06/21/23 07:55
1-Chlorohexane	11.00	Peak assignment corrected	DVW2	06/22/23 07:47
Ethylbenzene	11.10	Incomplete Integration	DVW2	06/21/23 15:34
2-Chlorotoluene	12.26	Incomplete Integration	DVW2	06/21/23 15:34

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136514-1

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 388102

Lab Sample ID: IC 410-388102/16 Client Sample ID:

Date Analyzed: 06/19/23 19:22 Lab File ID: IU19X15.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methyl acetate	3.76	Incomplete Integration	DVW2	06/21/23 08:04
t-Butyl alcohol-d10 (IS)	3.97	Incomplete Integration	DVW2	06/21/23 08:04
1,4-Dioxane	8.37	Incomplete Integration	DVW2	06/21/23 08:04
1-Chlorohexane	11.00	Peak assignment corrected	DVW2	06/22/23 07:47
Ethylbenzene	11.10	Incomplete Integration	DVW2	06/21/23 15:35
2-Chlorotoluene	12.26	Incomplete Integration	DVW2	06/21/23 15:35

Lab Sample ID: IC 410-388102/17 Client Sample ID:

Date Analyzed: 06/19/23 19:42 Lab File ID: IU19X16.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methyl acetate	3.76	Incomplete Integration	DVW2	06/21/23 08:06
t-Butyl alcohol-d10 (IS)	3.98	Incomplete Integration	DVW2	06/21/23 08:06
1,4-Dioxane	8.36	Incomplete Integration	DVW2	06/21/23 08:06
1-Chlorohexane	11.00	Peak assignment corrected	DVW2	06/22/23 07:48
Ethylbenzene	11.10	Incomplete Integration	DVW2	06/21/23 15:38
2-Chlorotoluene	12.26	Incomplete Integration	DVW2	06/21/23 15:38

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136514-1

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 388102

Lab Sample ID: ICIS 410-388102/18 Client Sample ID:

Date Analyzed: 06/19/23 20:03 Lab File ID: IU19X17.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloromethane	2.05	Incomplete Integration	DVW2	06/21/23 07:36
1,3-Butadiene	2.16	Incomplete Integration	DVW2	06/21/23 08:07
1,1-Dichloroethene	3.34	Incomplete Integration	DVW2	06/21/23 07:36
Acetone	3.36	Incomplete Integration	DVW2	06/21/23 07:36
1,1,2-Trichloro-1,2,2-trifluoroethane	3.39	Incomplete Integration	DVW2	06/21/23 07:36
Methyl iodide	3.53	Incomplete Integration	DVW2	06/21/23 07:37
Carbon disulfide	3.63	Incomplete Integration	DVW2	06/21/23 07:37
Methyl acetate	3.76	Incomplete Integration	DVW2	06/21/23 07:37
Allyl chloride	3.78	Incomplete Integration	DVW2	06/21/23 07:37
Methylene Chloride	3.96	Incomplete Integration	DVW2	06/21/23 07:37
t-Butyl alcohol-d10 (IS)	3.98	Incomplete Integration	DVW2	06/21/23 07:35
t-Butyl alcohol	4.09	Incomplete Integration	DVW2	06/21/23 07:37
Acrylonitrile	4.28	Incomplete Integration	DVW2	06/21/23 07:37
Methyl tertiary butyl ether	4.34	Incomplete Integration	DVW2	06/21/23 07:38
trans-1,2-Dichloroethene	4.36	Incomplete Integration	DVW2	06/21/23 07:38
n-Hexane	4.78	Incomplete Integration	DVW2	06/21/23 07:38
1,1-Dichloroethane	5.01	Incomplete Integration	DVW2	06/21/23 07:38
di-Isopropyl ether	5.07	Incomplete Integration	DVW2	06/21/23 07:38
2-Chloro-1,3-butadiene	5.12	Incomplete Integration	DVW2	06/21/23 07:38
Ethyl t-butyl ether	5.62	Incomplete Integration	DVW2	06/21/23 07:38
2-Butanone	5.81	Incomplete Integration	DVW2	06/21/23 07:38
cis-1,2-Dichloroethene	5.85	Incomplete Integration	DVW2	06/21/23 07:38
2,2-Dichloropropane	5.87	Incomplete Integration	DVW2	06/21/23 07:38
Propionitrile	5.89	Incomplete Integration	DVW2	06/21/23 07:38
Methacrylonitrile	6.11	Incomplete Integration	DVW2	06/21/23 07:38
Bromochloromethane	6.19	Incomplete Integration	DVW2	06/21/23 07:38
Tetrahydrofuran	6.20	Incomplete Integration	DVW2	06/21/23 07:38
Chloroform	6.34	Incomplete Integration	DVW2	06/21/23 07:38
Dibromofluoromethane (Surr)	6.56	Peak assignment corrected	DVW2	06/21/23 07:35

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136514-1

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 388102

Lab Sample ID: ICIS 410-388102/18 Client Sample ID:

Date Analyzed: 06/19/23 20:03 Lab File ID: IU19X17.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,1,1-Trichloroethane	6.57	Incomplete Integration	DVW2	06/21/23 07:38
Cyclohexane	6.67	Incomplete Integration	DVW2	06/21/23 07:38
1,1-Dichloropropene	6.78	Incomplete Integration	DVW2	06/21/23 07:39
Carbon tetrachloride	6.78	Incomplete Integration	DVW2	06/21/23 07:39
Isobutyl alcohol	6.94	Incomplete Integration	DVW2	06/21/23 07:39
1,2-Dichloroethane-d4 (Surr)	7.01	Peak assignment corrected	DVW2	06/21/23 07:35
Benzene	7.04	Incomplete Integration	DVW2	06/21/23 07:39
1,2-Dichloroethane	7.12	Incomplete Integration	DVW2	06/21/23 07:39
t-Amyl methyl ether	7.24	Incomplete Integration	DVW2	06/21/23 07:39
Fluorobenzene (IS)	7.45	Peak assignment corrected	DVW2	06/21/23 07:35
n-Heptane	7.47	Incomplete Integration	DVW2	06/21/23 07:39
n-Butanol	7.84	Incomplete Integration	DVW2	06/21/23 07:39
Trichloroethene	7.93	Incomplete Integration	DVW2	06/21/23 07:39
Methylcyclohexane	8.24	Incomplete Integration	DVW2	06/21/23 07:39
1,2-Dichloropropane	8.27	Incomplete Integration	DVW2	06/21/23 07:39
Methyl methacrylate	8.35	Incomplete Integration	DVW2	06/21/23 07:39
1,4-Dioxane	8.37	Incomplete Integration	DVW2	06/21/23 07:40
Dibromomethane	8.38	Incomplete Integration	DVW2	06/21/23 07:40
Bromodichloromethane	8.62	Incomplete Integration	DVW2	06/21/23 07:40
1-Bromo-2-chloroethane	9.01	Incomplete Integration	DVW2	06/21/23 07:40
Toluene-d8 (Surr)	9.50	Incomplete Integration	DVW2	06/21/23 07:35
1-Chlorohexane	11.00	Peak assignment corrected	DVW2	06/22/23 07:48
Ethylbenzene	11.10	Incomplete Integration	DVW2	06/21/23 15:39
4-Bromofluorobenzene (Surr)	12.00	Incomplete Integration	DVW2	06/21/23 07:35
2-Chlorotoluene	12.26	Incomplete Integration	DVW2	06/21/23 15:39
4-Chlorotoluene	12.35	Incomplete Integration	DVW2	06/21/23 07:40
1,2,4-Trimethylbenzene	12.61	Incomplete Integration	DVW2	06/21/23 07:41
Benzyl chloride	12.98	Incomplete Integration	DVW2	06/21/23 07:41
Naphthalene	14.43	Incomplete Integration	DVW2	06/21/23 07:41

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136514-1

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 388102

Lab Sample ID: IC 410-388102/19 Client Sample ID:

Date Analyzed: 06/19/23 20:25 Lab File ID: IU19X18.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3-Butadiene	2.15	Incomplete Integration	DVW2	06/21/23 08:08
Methyl acetate	3.75	Incomplete Integration	DVW2	06/21/23 08:09
t-Butyl alcohol-d10 (IS)	3.98	Incomplete Integration	DVW2	06/21/23 08:09
1,4-Dioxane	8.37	Incomplete Integration	DVW2	06/21/23 08:09
1-Chlorohexane	11.00	Peak assignment corrected	DVW2	06/22/23 07:48
Ethylbenzene	11.10	Incomplete Integration	DVW2	06/21/23 15:39
2-Chlorotoluene	12.26	Incomplete Integration	DVW2	06/21/23 15:39
4-Chlorotoluene	12.35	Incomplete Integration	DVW2	06/21/23 08:09

Lab Sample ID: ICV 410-388102/21 Client Sample ID:

Date Analyzed: 06/19/23 21:07 Lab File ID: IU19X20.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3-Butadiene	2.15	Incomplete Integration	DVW2	06/21/23 08:10
Methyl acetate	3.76	Incomplete Integration	DVW2	06/21/23 08:11
1,4-Dioxane	8.37	Incomplete Integration	DVW2	06/21/23 08:11
1-Chlorohexane	11.00	Peak assignment corrected	DVW2	06/22/23 07:49
Ethylbenzene	11.10	Incomplete Integration	DVW2	06/21/23 15:40
2-Chlorotoluene	12.26	Incomplete Integration	DVW2	06/21/23 15:40

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136514-1

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 404020

Lab Sample ID: CCVIS 410-404020/3 Client Sample ID:

Date Analyzed: 08/03/23 11:36 Lab File ID: IG03X02.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methyl acetate	3.78	Incomplete Integration	DVW2	08/03/23 12:03
1,4-Dioxane	8.37	Incomplete Integration	DVW2	08/03/23 12:04

Lab Sample ID: 410-136514-2 Client Sample ID: 16-3

Date Analyzed: 08/03/23 18:58 Lab File ID: IG03X23.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Butanone		Invalid Compound ID	kaewrungr ueangp	08/04/23 11:06

Lab Sample ID: 410-136514-3 Client Sample ID: 16-5

Date Analyzed: 08/03/23 19:19 Lab File ID: IG03X24.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,1-Dichloroethane	5.05	Incomplete Integration	kaewrungr ueangp	08/04/23 11:07

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136514-1

SDG No.:

Instrument ID: 26285 Analysis Batch Number: 395004

Lab Sample ID: ICIS 410-395004/16 Client Sample ID:

Date Analyzed: 07/10/23 15:53 Lab File ID: 5U10X16.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	2.85	Incomplete Integration	K4WN	07/10/23 21:39
Carbon disulfide	3.07	Incomplete Integration	K4WN	07/10/23 19:26
1,4-Dioxane	7.72	Incomplete Integration	K4WN	07/10/23 19:18

Lab Sample ID: IC 410-395004/17 Client Sample ID:

Date Analyzed: 07/10/23 16:13 Lab File ID: 5U10X17.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Carbon disulfide	3.08	Incomplete Integration	K4WN	07/11/23 00:46
1,4-Dioxane	7.74	Incomplete Integration	K4WN	07/11/23 00:46

Lab Sample ID: IC 410-395004/18 Client Sample ID:

Date Analyzed: 07/10/23 16:33 Lab File ID: 5U10X18.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.58	Incomplete Integration	K4WN	07/10/23 19:29
Acetone	2.85	Incomplete Integration	K4WN	07/10/23 21:40
Carbon disulfide	3.08	Incomplete Integration	K4WN	07/10/23 19:29
1,4-Dioxane	7.73	Incomplete Integration	K4WN	07/10/23 19:30

Lab Sample ID: IC 410-395004/14 Client Sample ID:

Date Analyzed: 07/10/23 18:59 Lab File ID: 5U10X24.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Carbon disulfide	3.07	Incomplete Integration	K4WN	07/10/23 19:33
Tetrahydrofuran	5.50	Incomplete Integration	K4WN	07/10/23 19:33
1,4-Dioxane	7.73	Incomplete Integration	K4WN	07/10/23 19:33

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136514-1

SDG No.:

Instrument ID: 26285 Analysis Batch Number: 395004

Lab Sample ID: IC 410-395004/15 Client Sample ID:

Date Analyzed: 07/10/23 19:19 Lab File ID: 5U10X25.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.59	Incomplete Integration	K4WN	07/10/23 20:13
Carbon disulfide	3.07	Incomplete Integration	K4WN	07/10/23 20:13
1,4-Dioxane	7.73	Incomplete Integration	K4WN	07/10/23 20:13

Lab Sample ID: IC 410-395004/12 Client Sample ID:

Date Analyzed: 07/10/23 20:46 Lab File ID: 5U10X26.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Freon 123a	2.63	Incomplete Integration	K4WN	07/10/23 21:25
Carbon disulfide	3.04	Incomplete Integration	K4WN	07/10/23 21:25
t-Butyl alcohol	3.46	Incomplete Integration	K4WN	07/10/23 21:25
Trichloroethene	7.24	Incomplete Integration	K4WN	07/10/23 21:26
1,4-Dioxane	7.72	Incomplete Integration	K4WN	07/10/23 21:25
2-Chloroethyl vinyl ether	8.35	Incomplete Integration	K4WN	07/10/23 21:25
Styrene	11.13	Incomplete Integration	K4WN	07/10/23 21:26

Lab Sample ID: IC 410-395004/13 Client Sample ID:

Date Analyzed: 07/10/23 21:06 Lab File ID: 5U10X27.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.57	Incomplete Integration	K4WN	07/10/23 21:27
Acetone	2.85	Incomplete Integration	K4WN	07/10/23 21:38
Carbon disulfide	3.06	Incomplete Integration	K4WN	07/10/23 21:28
t-Butyl alcohol	3.52	Incomplete Integration	K4WN	07/10/23 21:28
1,4-Dioxane	7.71	Incomplete Integration	K4WN	07/10/23 21:28

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136514-1

SDG No.:

Instrument ID: 26285 Analysis Batch Number: 395004

Lab Sample ID: ICV 410-395004/20 Client Sample ID:

Date Analyzed: 07/10/23 22:34 Lab File ID: 5U10X28.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Carbon disulfide	3.04	Incomplete Integration	K4WN	07/10/23 22:59
1,4-Dioxane	7.67	Incomplete Integration	K4WN	07/10/23 23:00

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136514-1

SDG No.:

Instrument ID: 26285 Analysis Batch Number: 404928

Lab Sample ID: CCVIS 410-404928/3 Client Sample ID:

Date Analyzed: 08/06/23 11:33 Lab File ID: 5G06X05.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	2.82	Incomplete Integration	DVW2	08/06/23 11:54
1,4-Dioxane	7.73	Incomplete Integration	DVW2	08/06/23 11:55

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136514-1

SDG No.:

Instrument ID: HP23264 Analysis Batch Number: 397829

Lab Sample ID: ICIS 410-397829/2 Client Sample ID:

Date Analyzed: 07/18/23 07:41 Lab File ID: JG1801a.D GC Column: DB-5MS 30m 0.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,4,6-Tetrachlorophenol	7.53	Baseline	SJ89	07/18/23 11:03

Lab Sample ID: IC 410-397829/3 Client Sample ID:

Date Analyzed: 07/18/23 08:07 Lab File ID: JG1802.D GC Column: DB-5MS 30m 0.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dinitrobenzene	6.94	Baseline	SJ89	07/18/23 11:02
Disulfoton	8.63	Baseline	SJ89	07/18/23 11:04
1,4-phenylenediamine		Invalid Compound ID	SJ89	07/18/23 11:02
N,N-dimethylformamide		Invalid Compound ID	SJ89	07/18/23 11:01
N-Nitrosodi-n-butylamine		Invalid Compound ID	SJ89	07/18/23 11:02
N-Nitrosomethylethylamine		Invalid Compound ID	SJ89	07/18/23 11:02
Dibenz[a,j]acridine	14.41	Baseline	SJ89	07/18/23 11:04

Lab Sample ID: IC 410-397829/4 Client Sample ID:

Date Analyzed: 07/18/23 08:28 Lab File ID: JG1803.D GC Column: DB-5MS 30m 0.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Chloronaphthalene	6.69	Baseline	SJ89	07/18/23 11:05
1-Chloronaphthalene	6.71	Baseline	SJ89	07/18/23 11:05
2,3,4,6-Tetrachlorophenol	7.54	Baseline	SJ89	07/18/23 11:06

Lab Sample ID: IC 410-397829/5 Client Sample ID:

Date Analyzed: 07/18/23 08:49 Lab File ID: JG1804.D GC Column: DB-5MS 30m 0.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,4,6-Tetrachlorophenol	7.54	Baseline	SJ89	07/18/23 11:07

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136514-1

SDG No.:

Instrument ID: HP23264 Analysis Batch Number: 397829

Lab Sample ID: IC 410-397829/6 Client Sample ID:

Date Analyzed: 07/18/23 09:10 Lab File ID: JG1805.D GC Column: DB-5MS 30m 0.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
N,N-dimethylformamide	2.26	Baseline	SJ89	07/18/23 11:08
2,3,4,6-Tetrachlorophenol	7.53	Baseline	SJ89	07/18/23 11:09

Lab Sample ID: IC 410-397829/7 Client Sample ID:

Date Analyzed: 07/18/23 09:31 Lab File ID: JG1806.D GC Column: DB-5MS 30m 0.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,4,6-Tetrachlorophenol	7.53	Baseline	SJ89	07/18/23 11:11

Lab Sample ID: IC 410-397829/8 Client Sample ID:

Date Analyzed: 07/18/23 09:52 Lab File ID: JG1807.D GC Column: DB-5MS 30m 0.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,4,6-Tetrachlorophenol	7.53	Peak assignment corrected	SJ89	07/18/23 11:22

Lab Sample ID: IC 410-397829/9 Client Sample ID:

Date Analyzed: 07/18/23 10:14 Lab File ID: JG1808.D GC Column: DB-5MS 30m 0.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isosafrole Peak 1	6.43	Peak assignment corrected	SJ89	07/18/23 11:27
2,3,4,6-Tetrachlorophenol	7.54	Peak assignment corrected	SJ89	07/18/23 11:27
trans-Diallate	8.21	Peak assignment corrected	SJ89	07/18/23 11:28
N,N-dimethylformamide		Invalid Compound ID	SJ89	07/18/23 11:27

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136514-1

SDG No.:

Instrument ID: HP23264 Analysis Batch Number: 397829

Lab Sample ID: ICV 410-397829/12 Client Sample ID:

Date Analyzed: 07/18/23 11:17 Lab File ID: JG1811.D GC Column: DB-5MS 30m 0.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
N,N-dimethylformamide	2.26	Peak assignment corrected	SJ89	07/18/23 15:00
Methyl methanesulfonate	2.92	Peak assignment corrected	SJ89	07/18/23 15:00
Ethyl methanesulfonate	3.59	Peak assignment corrected	SJ89	07/18/23 15:00
Hexachloropropene	5.65	Peak assignment corrected	SJ89	07/18/23 15:00
Isosafrole Peak 1	6.43	Peak assignment corrected	SJ89	07/18/23 15:01
Isosafrole Peak 2	6.64	Peak assignment corrected	SJ89	07/18/23 15:01
1-Chloronaphthalene	6.71	Peak assignment corrected	SJ89	07/18/23 15:01
1,4-Naphthoquinone	6.86	Peak assignment corrected	SJ89	07/18/23 15:01
Pentachlorobenzene	7.37	Peak assignment corrected	SJ89	07/18/23 15:02
Dinoseb	8.62	Peak assignment corrected	SJ89	07/18/23 15:02
Isodrin	9.62	Peak assignment corrected	SJ89	07/18/23 15:02
Benzoic acid		Invalid Compound ID	SJ89	07/18/23 15:11
Indene		Invalid Compound ID	SJ89	07/18/23 15:00
Chlorobenzilate	10.33	Peak assignment corrected	SJ89	07/18/23 15:02
7,12-Dimethylbenz(a)anthracene	12.60	Peak assignment corrected	SJ89	07/18/23 15:02

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136514-1

SDG No.:

Instrument ID: HP23264 Analysis Batch Number: 403788

Lab Sample ID: MB 410-403666/1-A Client Sample ID:

Date Analyzed: 08/02/23 23:30 Lab File ID: JH0259.D GC Column: DB-5MS 30m 0.2 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,6-Dinitrotoluene		Invalid Compound ID	N5QU	08/03/23 07:34

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
Hg_0.1Control_00157	08/08/23	08/01/23	0.15% HNO3, Lot 4344656	10 mL	Hg_1Control_00150	1 mL	Mercury	0.1 ug/mL
.Hg_1Control_00150	08/08/23	08/01/23	0.15% HNO3, Lot 4344656	10 mL	MT_10Hg_2%HCl_00007	1 mL	Mercury	1 ug/mL
..MT_10Hg_2%HCl_00007	04/30/24	High Purity Standards, Lot 2308711-100			(Purchased Reagent)		Mercury	10 ug/mL
Hg_1Cal_00145	08/08/23	08/01/23	0.15% HNO3, Lot 4344656	10 mL	MT_S_10Hg_IV_00019	1 mL	Mercury	1 ug/mL
.MT_S_10Hg_IV_00019	02/27/24	Inorganic Ventures, Lot R2-Hg700202			(Purchased Reagent)		Mercury	10 ug/mL
Hg_1Control_00150	08/08/23	08/01/23	0.15% HNO3, Lot 4344656	10 mL	MT_10Hg_2%HCl_00007	1 mL	Mercury	1 ug/mL
.MT_10Hg_2%HCl_00007	04/30/24	High Purity Standards, Lot 2308711-100			(Purchased Reagent)		Mercury	10 ug/mL
Hg_5%KMnO4_00200	01/28/24	07/28/23	DI Water, Lot DI07282023	2000 mL	MT_KMnO4_FI_00107	100.17 g	Potassium Permanganate	4.97845 %
.MT_KMnO4_FI_00107	07/20/24	Fisher, Lot 218618			(Purchased Reagent)		Potassium Permanganate	99.4 %
MP_1:1HCl_00029	01/10/24	07/10/23	DI Water, Lot DI07102023	20000 mL	MT_HCl_JT_00011	10000 mL	Hydrogen Chloride	188000 ug/mL
.MT_HCl_JT_00011	04/11/24	J.T.Baker, Lot 22L0562004			(Purchased Reagent)		Hydrogen Chloride	37.6 %
MP_1:1HNO3_00045	01/27/24	07/27/23	DI Water, Lot DI07272023	20000 mL	MT_HNO3_Fishe_00009	2500 mL	Nitric acid	340000 ug/mL
					MT_HNO3_Fishe_00010	7500 mL	Nitric acid	340000 ug/mL
.MT_HNO3_Fishe_00009	06/15/24	Fisher, Lot 226243			(Purchased Reagent)		Nitric acid	68 %
.MT_HNO3_Fishe_00010	06/15/24	Fisher, Lot 230664			(Purchased Reagent)		Nitric acid	68 %
MP_40Hg_IV_00164	08/03/23	07/27/23	DI Water, Lot DI07272023	200 mL	MT_HNO3_JT_00003	0.3 mL	Nitric acid	1047 ug/mL
					MT_S_10Hg_IV_00014	0.8 mL	Mercury	0.04 ug/mL
.MT_HNO3_JT_00003	06/09/24	J.T.Baker, Lot 0000234822			(Purchased Reagent)		Nitric acid	69.8 %
.MT_S_10Hg_IV_00014	06/15/24	Inorganic Ventures, Lot R2-Hg700202			(Purchased Reagent)		Mercury	10 ug/mL
MP_5%KMnO4_00362	01/28/24	07/28/23	DI Water, Lot DI07282023	2000 mL	MT_KMnO4_FI_00107	100.04 g	Potassium Permanganate	4.97199 %
.MT_KMnO4_FI_00107	07/20/24	Fisher, Lot 218618			(Purchased Reagent)		Potassium Permanganate	99.4 %
MP_5K2S2O8_00091	01/06/24	07/06/23	DI Water, Lot DI07062023	2000 mL	MT_K2S2O8_JT_00029	100.14 g	Potassium persulfate	4.98196 %
.MT_K2S2O8_JT_00029	05/05/24	J.T.Baker, Lot 22A3061007			(Purchased Reagent)		Potassium persulfate	99.5 %
MP_5K2S2O8_00092	01/20/24	07/20/23	DI Water, Lot DI07202023	2000 mL	MT_K2S2O8_JT_00025	35 g	Potassium persulfate	4.97749 %
					MT_K2S2O8_JT_00029	65.05 g	Potassium persulfate	4.97749 %
.MT_K2S2O8_JT_00025	07/20/24	J.T.Baker, Lot 22A3061007			(Purchased Reagent)		Potassium persulfate	99.5 %
.MT_K2S2O8_JT_00029	05/05/24	J.T.Baker, Lot 22A3061007			(Purchased Reagent)		Potassium persulfate	99.5 %
MP_NaClHNO_00195	01/14/24	07/14/23	DI Water, Lot DI07142023	2000 mL	MT_H3NO_Fishe_00015	240.19 g	Hydroxylamine hydrochloride	11.9735 %
					MT_NaCl_JT_00028	240.23 1/cm	Sodium Chloride	1201150 %
.MT_H3NO_Fishe_00015	07/14/24	Fisher, Lot 222401			(Purchased Reagent)		Hydroxylamine hydrochloride	99.7 %
.MT_NaCl_JT_00028	07/20/24	J.T.Baker, Lot 22K1561075			(Purchased Reagent)		Sodium Chloride	100 %
MP_NaClHNO_00200	01/27/24	07/27/23	DI Water, Lot DI07272023	2000 mL	MT_H3NO_Fishe_00024	240.06 g	Hydroxylamine hydrochloride	11.967 %
					MT_NaCl_JT_00025	240.31 g	Sodium Chloride	12.0155 %
.MT_H3NO_Fishe_00024	02/14/24	Fisher, Lot 222401			(Purchased Reagent)		Hydroxylamine hydrochloride	99.7 %
.MT_NaCl_JT_00025	10/14/25	J.T.Baker, Lot 22K1561075			(Purchased Reagent)		Sodium Chloride	100 %

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
MSS_RV8270_1_00029	07/24/23	06/08/23	MeCl2, Lot 226055	1 mL	MSS_FV8270_1_00033	250 uL	Benzidine	0.375 ppm
							1,3,5-Trinitrobenzene	0.125 ppm
							1,4-Dinitrobenzene	0.125 ppm
							1-Naphthylamine	0.125 ppm
							2-Acetylaminofluorene	0.125 ppm
							2-Naphthylamine	0.125 ppm
							2-Picoline	0.125 ppm
							2-Toluidine	0.125 ppm
							3,3'-Dimethylbenzidine	0.125 ppm
							4,4'-Methylene bis(2-chloroaniline)	0.125 ppm
							4-Aminobiphenyl	0.125 ppm
							4-Nitroquinoline-1-oxide	0.125 ppm
							Dibenz[a,h]acridine	0.125 ppm
							N-Nitro-o-toluidine	0.125 ppm
							N-Nitrosodi-n-butylamine	0.125 ppm
							N-Nitrosodiethylamine	0.125 ppm
							N-Nitrosomethylethylamine	0.125 ppm
							N-Nitrosomorpholine	0.125 ppm
							N-Nitrosopiperidine	0.125 ppm
							N-Nitrosopyrrolidine	0.125 ppm
							p-Dimethylamino azobenzene	0.125 ppm
							p-Phenylene diamine	0.125 ppm
							Pentachloronitrobenzene	0.125 ppm
							Phenacetin	0.125 ppm
							Pronamide	0.125 ppm
							Quinoline	0.125 ppm
							1,4-Naphthoquinone	0.125 ppm
							1-Chloronaphthalene	0.125 ppm
							7,12-Dimethylbenz(a)anthracene	0.125 ppm
							Chlorobenzilate	0.125 ppm
							Dinoseb	0.125 ppm
							Ethyl methanesulfonate	0.125 ppm
							Hexachloropropene	0.125 ppm
							Isodrin	0.125 ppm
							Isosafrole Peak 1	0.02 ppm
							Isosafrole Peak 2	0.105 ppm
							Methyl methanesulfonate	0.125 ppm
							Pentachlorobenzene	0.125 ppm
							3-Methylcholanthrene	0.125 ppm
							6-Methylchrysene	0.125 ppm
							cis-Diallate	0.0925 ppm
							Dimethoate	0.125 ppm
							Disulfoton	0.125 ppm
							Ethyl Parathion	0.125 ppm
							Methyl parathion	0.125 ppm
							o,o',o''-Triethylphosphorothioate	0.125 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phorate	0.125 ppm
							Safrole, Total	0.125 ppm
							Sulfotepp	0.125 ppm
							Thionazin	0.125 ppm
							trans-Diallate	0.0325 ppm
							2,4,6-Tribromophenol (Surr)	0.25 ppm
							2-Fluorobiphenyl (Surr)	0.25 ppm
							2-Fluorophenol (Surr)	0.25 ppm
							Nitrobenzene-d5 (Surr)	0.25 ppm
							p-Terphenyl-d14 (Surr)	0.25 ppm
							Phenol-d5 (Surr)	0.25 ppm
							Dibenz[a,j]acridine	0.125 ppm
							1,1'-Biphenyl	0.125 ppm
							1,2,4,5-Tetrachlorobenzene	0.125 ppm
							1,2,4-Trichlorobenzene	0.125 ppm
							1,2-Dichlorobenzene	0.125 ppm
							1,2-Diphenylhydrazine	0.125 ppm
							1,3-Dichlorobenzene	0.125 ppm
							1,3-Dinitrobenzene	0.125 ppm
							1,4-Dichlorobenzene	0.125 ppm
							1,4-Dioxane	0.125 ppm
							1-Methylnaphthalene	0.125 ppm
							2,2'-oxybis[1-chloropropane]	0.125 ppm
							2,3,4,6-Tetrachlorophenol	0.125 ppm
							2,4,5-Trichlorophenol	0.125 ppm
							2,4,6-Trichlorophenol	0.125 ppm
							2,4-Dichlorophenol	0.125 ppm
							2,4-Dimethylphenol	0.125 ppm
							2,4-Dinitrophenol	1.25 ppm
							2,4-Dinitrotoluene	0.125 ppm
							2,6-Dichlorophenol	0.125 ppm
							2,6-Dinitrotoluene	0.125 ppm
							2-Chloronaphthalene	0.125 ppm
							2-Chlorophenol	0.125 ppm
							2-Methylnaphthalene	0.125 ppm
							2-Methylphenol	0.125 ppm
							2-Nitroaniline	0.125 ppm
							2-Nitrophenol	0.125 ppm
							3-Nitroaniline	0.125 ppm
							4,6-Dinitro-2-methylphenol	0.75 ppm
							4-Bromophenyl phenyl ether	0.125 ppm
							4-Chloro-3-methylphenol	0.125 ppm
							4-Chloroaniline	0.125 ppm
							4-Chlorophenyl phenyl ether	0.125 ppm
							4-Methylphenol	0.125 ppm
							4-Nitroaniline	0.125 ppm
							4-Nitrophenol	0.75 ppm
							Acenaphthene	0.125 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acenaphthylene	0.125 ppm
							Acetophenone	0.125 ppm
							Aniline	0.125 ppm
							Anthracene	0.125 ppm
							Benzo[a]anthracene	0.125 ppm
							Benzo[a]pyrene	0.125 ppm
							Benzo[b]fluoranthene	0.125 ppm
							Benzo[g,h,i]perylene	0.125 ppm
							Benzo[k]fluoranthene	0.125 ppm
							Benzyl alcohol	0.125 ppm
							Bis(2-chloroethoxy)methane	0.125 ppm
							Bis(2-chloroethyl)ether	0.125 ppm
							Bis(2-ethylhexyl) phthalate	0.125 ppm
							Butyl benzyl phthalate	0.125 ppm
							Carbazole	0.125 ppm
							Chrysene	0.125 ppm
							Di-n-butyl phthalate	0.125 ppm
							Di-n-octyl phthalate	0.125 ppm
							Dibenz(a,h)anthracene	0.125 ppm
							Dibenzofuran	0.125 ppm
							Diethyl phthalate	0.125 ppm
							Dimethyl phthalate	0.125 ppm
							Fluoranthene	0.125 ppm
							Fluorene	0.125 ppm
							Hexachlorobenzene	0.125 ppm
							Hexachlorobutadiene	0.125 ppm
							Hexachlorocyclopentadiene	0.125 ppm
							Hexachloroethane	0.125 ppm
							Indeno[1,2,3-cd]pyrene	0.125 ppm
							Isophorone	0.125 ppm
							N-Nitrosodi-n-propylamine	0.125 ppm
							N-Nitrosodimethylamine	0.125 ppm
							N-Nitrosodiphenylamine	0.10625 ppm
							Naphthalene	0.125 ppm
							Nitrobenzene	0.125 ppm
							Pentachlorophenol	0.625 ppm
							Phenanthrene	0.125 ppm
							Phenol	0.125 ppm
							Pyrene	0.125 ppm
							Pyridine	0.25 ppm
							3,3'-Dichlorobenzidine	0.125 ppm
							Alpha-Terpineol	0.125 ppm
							Dimethylformamide	0.125 ppm
							Octachlorostyrene	0.125 ppm
							Phenyl ether	0.125 ppm
							1,4-Dichlorobenzene-d4	5 ppm
							Acenaphthene-d10	5 ppm
							Naphthalene-d8	5 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perylene-d12	5 ppm
							Phenanthrene-d10	5 ppm
							Pyrene-d10 (IS)	5 ppm
.MSS_FV8270_1_00033	07/24/23	06/08/23	MeCl2, Lot 226055	2 mL	MSS_FV8270_2_00030	1000 uL	Benzidine	1.5 ppm
							1,3,5-Trinitrobenzene	0.5 ppm
							1,4-Dinitrobenzene	0.5 ppm
							1-Naphthylamine	0.5 ppm
							2-Acetylaminofluorene	0.5 ppm
							2-Naphthylamine	0.5 ppm
							2-Picoline	0.5 ppm
							2-Toluidine	0.5 ppm
							3,3'-Dimethylbenzidine	0.5 ppm
							4,4'-Methylene bis(2-chloroaniline)	0.5 ppm
							4-Aminobiphenyl	0.5 ppm
							4-Nitroquinoline-1-oxide	0.5 ppm
							Dibenz[a,h]acridine	0.5 ppm
							N-Nitro-o-toluidine	0.5 ppm
							N-Nitrosodi-n-butylamine	0.5 ppm
							N-Nitrosodiethylamine	0.5 ppm
							N-Nitrosomethylethylamine	0.5 ppm
							N-Nitrosomorpholine	0.5 ppm
							N-Nitrosopiperidine	0.5 ppm
							N-Nitrosopyrrolidine	0.5 ppm
							p-Dimethylamino azobenzene	0.5 ppm
							p-Phenylene diamine	0.5 ppm
							Pentachloronitrobenzene	0.5 ppm
							Phenacetin	0.5 ppm
							Pronamide	0.5 ppm
							Quinoline	0.5 ppm
							1,4-Naphthoquinone	0.5 ppm
							1-Chloronaphthalene	0.5 ppm
							7,12-Dimethylbenz(a)anthracene	0.5 ppm
							Chlorobenzilate	0.5 ppm
							Dinoseb	0.5 ppm
							Ethyl methanesulfonate	0.5 ppm
							Hexachloropropene	0.5 ppm
							Isodrin	0.5 ppm
							Isosafrole Peak 1	0.08 ppm
							Isosafrole Peak 2	0.42 ppm
							Methyl methanesulfonate	0.5 ppm
							Pentachlorobenzene	0.5 ppm
							3-Methylcholanthrene	0.5 ppm
							6-Methylchrysene	0.5 ppm
							cis-Diallate	0.37 ppm
							Dimethoate	0.5 ppm
							Disulfoton	0.5 ppm
							Ethyl Parathion	0.5 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Methyl parathion	0.5 ppm
							o,o',o''-Triethylphosphorothioate	0.5 ppm
							Phorate	0.5 ppm
							Safrole, Total	0.5 ppm
							Sulfotepp	0.5 ppm
							Thionazin	0.5 ppm
							trans-Diallate	0.13 ppm
							2,4,6-Tribromophenol (Surr)	1 ppm
							2-Fluorobiphenyl (Surr)	1 ppm
							2-Fluorophenol (Surr)	1 ppm
							Nitrobenzene-d5 (Surr)	1 ppm
							p-Terphenyl-d14 (Surr)	1 ppm
							Phenol-d5 (Surr)	1 ppm
							Dibenz[a,j]acridine	0.5 ppm
							1,1'-Biphenyl	0.5 ppm
							1,2,4,5-Tetrachlorobenzene	0.5 ppm
							1,2,4-Trichlorobenzene	0.5 ppm
							1,2-Dichlorobenzene	0.5 ppm
							1,2-Diphenylhydrazine	0.5 ppm
							1,3-Dichlorobenzene	0.5 ppm
							1,3-Dinitrobenzene	0.5 ppm
							1,4-Dichlorobenzene	0.5 ppm
							1,4-Dioxane	0.5 ppm
							1-Methylnaphthalene	0.5 ppm
							2,2'-oxybis[1-chloropropane]	0.5 ppm
							2,3,4,6-Tetrachlorophenol	0.5 ppm
							2,4,5-Trichlorophenol	0.5 ppm
							2,4,6-Trichlorophenol	0.5 ppm
							2,4-Dichlorophenol	0.5 ppm
							2,4-Dimethylphenol	0.5 ppm
							2,4-Dinitrophenol	5 ppm
							2,4-Dinitrotoluene	0.5 ppm
							2,6-Dichlorophenol	0.5 ppm
							2,6-Dinitrotoluene	0.5 ppm
							2-Chloronaphthalene	0.5 ppm
							2-Chlorophenol	0.5 ppm
							2-Methylnaphthalene	0.5 ppm
							2-Methylphenol	0.5 ppm
							2-Nitroaniline	0.5 ppm
							2-Nitrophenol	0.5 ppm
							3-Nitroaniline	0.5 ppm
							4,6-Dinitro-2-methylphenol	3 ppm
							4-Bromophenyl phenyl ether	0.5 ppm
							4-Chloro-3-methylphenol	0.5 ppm
							4-Chloroaniline	0.5 ppm
							4-Chlorophenyl phenyl ether	0.5 ppm
							4-Methylphenol	0.5 ppm

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Nitroaniline	0.5 ppm
							4-Nitrophenol	3 ppm
							Acenaphthene	0.5 ppm
							Acenaphthylene	0.5 ppm
							Acetophenone	0.5 ppm
							Aniline	0.5 ppm
							Anthracene	0.5 ppm
							Benzo[a]anthracene	0.5 ppm
							Benzo[a]pyrene	0.5 ppm
							Benzo[b]fluoranthene	0.5 ppm
							Benzo[g,h,i]perylene	0.5 ppm
							Benzo[k]fluoranthene	0.5 ppm
							Benzyl alcohol	0.5 ppm
							Bis(2-chloroethoxy)methane	0.5 ppm
							Bis(2-chloroethyl)ether	0.5 ppm
							Bis(2-ethylhexyl) phthalate	0.5 ppm
							Butyl benzyl phthalate	0.5 ppm
							Carbazole	0.5 ppm
							Chrysene	0.5 ppm
							Di-n-butyl phthalate	0.5 ppm
							Di-n-octyl phthalate	0.5 ppm
							Dibenz(a,h)anthracene	0.5 ppm
							Dibenzofuran	0.5 ppm
							Diethyl phthalate	0.5 ppm
							Dimethyl phthalate	0.5 ppm
							Fluoranthene	0.5 ppm
							Fluorene	0.5 ppm
							Hexachlorobenzene	0.5 ppm
							Hexachlorobutadiene	0.5 ppm
							Hexachlorocyclopentadiene	0.5 ppm
							Hexachloroethane	0.5 ppm
							Indeno[1,2,3-cd]pyrene	0.5 ppm
							Isophorone	0.5 ppm
							N-Nitrosodi-n-propylamine	0.5 ppm
							N-Nitrosodimethylamine	0.5 ppm
							N-Nitrosodiphenylamine	0.425 ppm
							Naphthalene	0.5 ppm
							Nitrobenzene	0.5 ppm
							Pentachlorophenol	2.5 ppm
							Phenanthrene	0.5 ppm
							Phenol	0.5 ppm
							Pyrene	0.5 ppm
							Pyridine	1 ppm
							3,3'-Dichlorobenzidine	0.5 ppm
							Alpha-Terpineol	0.5 ppm
							Dimethylformamide	0.5 ppm
							Octachlorostyrene	0.5 ppm
							Phenyl ether	0.5 ppm

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,4-Dichlorobenzene-d4	20 ppm
							Acenaphthene-d10	20 ppm
							Naphthalene-d8	20 ppm
							Perylene-d12	20 ppm
							Phenanthrene-d10	20 ppm
							Pyrene-d10 (IS)	20 ppm
					MSS_FV8270_IS_00005	20 uL	1,4-Dichlorobenzene-d4	20 ppm
							Acenaphthene-d10	20 ppm
							Naphthalene-d8	20 ppm
							Perylene-d12	20 ppm
							Phenanthrene-d10	20 ppm
							Pyrene-d10 (IS)	20 ppm
..MSS_FV8270_2_00030	07/24/23	06/08/23	MeCl2, Lot 226055	5 mL	MSS_8270_APWS_00015	20 uL	Benzidine	3 ppm
							1,3,5-Trinitrobenzene	1 ppm
							1,4-Dinitrobenzene	1 ppm
							1-Naphthylamine	1 ppm
							2-Acetylaminofluorene	1 ppm
							2-Naphthylamine	1 ppm
							2-Picoline	1 ppm
							2-Toluidine	1 ppm
							3,3'-Dimethylbenzidine	1 ppm
							4,4'-Methylene bis(2-chloroaniline)	1 ppm
							4-Aminobiphenyl	1 ppm
							4-Nitroquinoline-1-oxide	1 ppm
							Dibenz[a,h]acridine	1 ppm
							N-Nitro-o-toluidine	1 ppm
							N-Nitrosodi-n-butylamine	1 ppm
							N-Nitrosodiethylamine	1 ppm
							N-Nitrosomethylethylamine	1 ppm
							N-Nitrosomorpholine	1 ppm
							N-Nitrosopiperidine	1 ppm
							N-Nitrosopyrrolidine	1 ppm
							p-Dimethylamino azobenzene	1 ppm
							p-Phenylene diamine	1 ppm
							Pentachloronitrobenzene	1 ppm
							Phenacetin	1 ppm
							Pronamide	1 ppm
							Quinoline	1 ppm
							1,4-Naphthoquinone	1 ppm
							1-Chloronaphthalene	1 ppm
							7,12-Dimethylbenz(a)anthracene	1 ppm
							Chlorobenzilate	1 ppm
							Dinoseb	1 ppm
							Ethyl methanesulfonate	1 ppm
							Hexachloropropene	1 ppm
							Isodrin	1 ppm
							Isosafrole Peak 1	0.16 ppm

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Isosafrole Peak 2	0.84 ppm
							Methyl methanesulfonate	1 ppm
							Pentachlorobenzene	1 ppm
							3-Methylcholanthrene	1 ppm
							6-Methylchrysene	1 ppm
							cis-Diallate	0.74 ppm
							Dimethoate	1 ppm
							Disulfoton	1 ppm
							Ethyl Parathion	1 ppm
							Methyl parathion	1 ppm
							o,o',o''-Triethylphosphorothioate	1 ppm
							Phorate	1 ppm
							Safrole, Total	1 ppm
							Sulfotepp	1 ppm
							Thionazin	1 ppm
							trans-Diallate	0.26 ppm
					MSS_8270_WS_00016	20 uL	2,4,6-Tribromophenol (Surr)	2 ppm
							2-Fluorobiphenyl (Surr)	2 ppm
							2-Fluorophenol (Surr)	2 ppm
							Nitrobenzene-d5 (Surr)	2 ppm
							p-Terphenyl-d14 (Surr)	2 ppm
							Phenol-d5 (Surr)	2 ppm
							Dibenz[a,j]acridine	1 ppm
							1,1'-Biphenyl	1 ppm
							1,2,4,5-Tetrachlorobenzene	1 ppm
							1,2,4-Trichlorobenzene	1 ppm
							1,2-Dichlorobenzene	1 ppm
							1,2-Diphenylhydrazine	1 ppm
							1,3-Dichlorobenzene	1 ppm
							1,3-Dinitrobenzene	1 ppm
							1,4-Dichlorobenzene	1 ppm
							1,4-Dioxane	1 ppm
							1-Methylnaphthalene	1 ppm
							2,2'-oxybis[1-chloropropane]	1 ppm
							2,3,4,6-Tetrachlorophenol	1 ppm
							2,4,5-Trichlorophenol	1 ppm
							2,4,6-Trichlorophenol	1 ppm
							2,4-Dichlorophenol	1 ppm
							2,4-Dimethylphenol	1 ppm
							2,4-Dinitrophenol	10 ppm
							2,4-Dinitrotoluene	1 ppm
							2,6-Dichlorophenol	1 ppm
							2,6-Dinitrotoluene	1 ppm
							2-Chloronaphthalene	1 ppm
							2-Chlorophenol	1 ppm
							2-Methylnaphthalene	1 ppm
							2-Methylphenol	1 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Nitroaniline	1 ppm
							2-Nitrophenol	1 ppm
							3-Nitroaniline	1 ppm
							4,6-Dinitro-2-methylphenol	6 ppm
							4-Bromophenyl phenyl ether	1 ppm
							4-Chloro-3-methylphenol	1 ppm
							4-Chloroaniline	1 ppm
							4-Chlorophenyl phenyl ether	1 ppm
							4-Methylphenol	1 ppm
							4-Nitroaniline	1 ppm
							4-Nitrophenol	6 ppm
							Acenaphthene	1 ppm
							Acenaphthylene	1 ppm
							Acetophenone	1 ppm
							Aniline	1 ppm
							Anthracene	1 ppm
							Benzo[a]anthracene	1 ppm
							Benzo[a]pyrene	1 ppm
							Benzo[b]fluoranthene	1 ppm
							Benzo[g,h,i]perylene	1 ppm
							Benzo[k]fluoranthene	1 ppm
							Benzyl alcohol	1 ppm
							Bis(2-chloroethoxy)methane	1 ppm
							Bis(2-chloroethyl)ether	1 ppm
							Bis(2-ethylhexyl) phthalate	1 ppm
							Butyl benzyl phthalate	1 ppm
							Carbazole	1 ppm
							Chrysene	1 ppm
							Di-n-butyl phthalate	1 ppm
							Di-n-octyl phthalate	1 ppm
							Dibenz(a,h)anthracene	1 ppm
							Dibenzofuran	1 ppm
							Diethyl phthalate	1 ppm
							Dimethyl phthalate	1 ppm
							Fluoranthene	1 ppm
							Fluorene	1 ppm
							Hexachlorobenzene	1 ppm
							Hexachlorobutadiene	1 ppm
							Hexachlorocyclopentadiene	1 ppm
							Hexachloroethane	1 ppm
							Indeno[1,2,3-cd]pyrene	1 ppm
							Isophorone	1 ppm
							N-Nitrosodi-n-propylamine	1 ppm
							N-Nitrosodimethylamine	1 ppm
							N-Nitrosodiphenylamine	0.85 ppm
							Naphthalene	1 ppm
							Nitrobenzene	1 ppm
							Pentachlorophenol	5 ppm

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenanthrene	1 ppm
							Phenol	1 ppm
							Pyrene	1 ppm
							Pyridine	2 ppm
							3,3'-Dichlorobenzidine	1 ppm
							Benzidine	3 ppm
							Alpha-Terpineol	1 ppm
							Dimethylformamide	1 ppm
							Octachlorostyrene	1 ppm
							Phenyl ether	1 ppm
					MSS_AB_24DNP_00007	40 uL	2,4-Dinitrophenol	10 ppm
					MSS_AB_46D2MP_00004	20 uL	4,6-Dinitro-2-methylphenol	6 ppm
					MSS_AB_4NP_00003	20 uL	4-Nitrophenol	6 ppm
					MSS_AB_PCP_00004	15 uL	Pentachlorophenol	5 ppm
					MSS_FV8270_IS_00005	100 uL	1,4-Dichlorobenzene-d4	20 ppm
							Acenaphthene-d10	20 ppm
							Naphthalene-d8	20 ppm
							Perylene-d12	20 ppm
							Phenanthrene-d10	20 ppm
							Pyrene-d10 (IS)	20 ppm
...MSS_8270_APWS_00015	12/08/23	06/08/23	MeCl2, Lot 226055	10 mL	MSS_AB_BZIDIN_00011	1000 uL	Benzidine	500 ppm
					OP_RES_APPX1_00010	2500 uL	1,3,5-Trinitrobenzene	250 ppm
							1,4-Dinitrobenzene	250 ppm
							1-Naphthylamine	250 ppm
							2-Acetylaminofluorene	250 ppm
							2-Naphthylamine	250 ppm
							2-Picoline	250 ppm
							2-Toluidine	250 ppm
							3,3'-Dimethylbenzidine	250 ppm
							4,4'-Methylene bis(2-chloroaniline)	250 ppm
							4-Aminobiphenyl	250 ppm
							4-Nitroquinoline-1-oxide	250 ppm
							Dibenz[a,h]acridine	250 ppm
							N-Nitro-o-toluidine	250 ppm
							N-Nitrosodi-n-butylamine	250 ppm
							N-Nitrosodiethylamine	250 ppm
							N-Nitrosomethylethylamine	250 ppm
							N-Nitrosomorpholine	250 ppm
							N-Nitrosopiperidine	250 ppm
							N-Nitrosopyrrolidine	250 ppm
							p-Dimethylamino azobenzene	250 ppm
							p-Phenylene diamine	250 ppm
							Pentachloronitrobenzene	250 ppm
							Phenacetin	250 ppm
							Pronamide	250 ppm
							Quinoline	250 ppm
					OP_RES_APPX2_00011	2500 uL	1,4-Naphthoquinone	250 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1-Chloronaphthalene	250 ppm
							7,12-Dimethylbenz(a)anthracene	250 ppm
							Chlorobenzilate	250 ppm
							Dinoseb	250 ppm
							Ethyl methanesulfonate	250 ppm
							Hexachloropropene	250 ppm
							Isodrin	250 ppm
							Isosafrole Peak 1	40 ppm
							Isosafrole Peak 2	210 ppm
							Methyl methanesulfonate	250 ppm
							Pentachlorobenzene	250 ppm
					OP_RES_APPX3_00007	1250 uL	3-Methylcholanthrene	250 ppm
							6-Methylchrysene	250 ppm
					OP_RES_APPX4_00008	2500 uL	cis-Diallate	185 ppm
							Dimethoate	250 ppm
							Disulfoton	250 ppm
							Ethyl Parathion	250 ppm
							Methyl parathion	250 ppm
							o,o',o''-Triethylphosphorothioate	250 ppm
							Phorate	250 ppm
							Safrole, Total	250 ppm
							Sulfotepp	250 ppm
							Thionazin	250 ppm
							trans-Diallate	65 ppm
....MSS_AB_BZIDIN_00011	10/27/25		Absolute, Lot 102722		(Purchased Reagent)		Benzidine	5000 ug/mL
....OP_RES_APPX1_00010	02/29/24		Restek, Lot A0194294		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,4-Dinitrobenzene	1000 ug/mL
							1-Naphthylamine	1000 ug/mL
							2-Acetylaminofluorene	1000 ug/mL
							2-Naphthylamine	1000 ug/mL
							2-Picoline	1000 ug/mL
							2-Toluidine	1000 ug/mL
							3,3'-Dimethylbenzidine	1000 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	1000 ug/mL
							4-Aminobiphenyl	1000 ug/mL
							4-Nitroquinoline-1-oxide	1000 ug/mL
							Dibenz[a,h]acridine	1000 ug/mL
							N-Nitro-o-toluidine	1000 ug/mL
							N-Nitrosodi-n-butylamine	1000 ug/mL
							N-Nitrosodiethylamine	1000 ug/mL
							N-Nitrosomethylethylamine	1000 ug/mL
							N-Nitrosomorpholine	1000 ug/mL
							N-Nitrosopiperidine	1000 ug/mL
							N-Nitrosopyrrolidine	1000 ug/mL
							p-Dimethylamino azobenzene	1000 ug/mL
							p-Phenylene diamine	1000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Pentachloronitrobenzene	1000 ug/mL
							Phenacetin	1000 ug/mL
							Pronamide	1000 ug/mL
							Quinoline	1000 ug/mL
....OP_RES_APPX2_00011	01/31/24		Restek, Lot A0193498		(Purchased Reagent)		1,4-Naphthoquinone	1000 ug/mL
							1-Chloronaphthalene	1000 ug/mL
							7,12-Dimethylbenz(a)anthracene	1000 ug/mL
							Chlorobenzilate	1000 ug/mL
							Dinoseb	1000 ug/mL
							Ethyl methanesulfonate	1000 ug/mL
							Hexachloropropene	1000 ug/mL
							Isodrin	1000 ug/mL
							Isosafrole Peak 1	160 ug/mL
							Isosafrole Peak 2	840 ug/mL
							Methyl methanesulfonate	1000 ug/mL
							Pentachlorobenzene	1000 ug/mL
....OP_RES_APPX3_00007	01/31/24		Restek, Lot A0193475		(Purchased Reagent)		3-Methylcholanthrene	2000 ug/mL
							6-Methylchrysene	2000 ug/mL
....OP_RES_APPX4_00008	01/31/25		Restek, Lot A0193163		(Purchased Reagent)		cis-Diallate	740 ug/mL
							Dimethoate	1000 ug/mL
							Disulfoton	1000 ug/mL
							Ethyl Parathion	1000 ug/mL
							Methyl parathion	1000 ug/mL
							o,o',o''-Triethylphosphorothioate	1000 ug/mL
							Phorate	1000 ug/mL
							Safrole, Total	1000 ug/mL
							Sulfotepp	1000 ug/mL
							Thionazin	1000 ug/mL
							trans-Diallate	260 ug/mL
...MSS_8270_WS_00016	10/31/23	06/08/23	MeCl2, Lot 226055	10 mL	MSS_8270_SURR_00004	1250 uL	2,4,6-Tribromophenol (Surr)	500 ppm
							2-Fluorobiphenyl (Surr)	500 ppm
							2-Fluorophenol (Surr)	500 ppm
							Nitrobenzene-d5 (Surr)	500 ppm
							p-Terphenyl-d14 (Surr)	500 ppm
							Phenol-d5 (Surr)	500 ppm
					OP_RES_APPX6_00005	1250 uL	Dibenz[a,j]acridine	250 ppm
					OP_RES_LCS1_00011	2500 uL	1,1'-Biphenyl	250 ppm
							1,2,4,5-Tetrachlorobenzene	250 ppm
							1,2,4-Trichlorobenzene	250 ppm
							1,2-Dichlorobenzene	250 ppm
							1,2-Diphenylhydrazine	250 ppm
							1,3-Dichlorobenzene	250 ppm
							1,3-Dinitrobenzene	250 ppm
							1,4-Dichlorobenzene	250 ppm
							1,4-Dioxane	250 ppm
							1-Methylnaphthalene	250 ppm
							2,2'-oxybis[1-chloropropane]	250 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,3,4,6-Tetrachlorophenol	250 ppm
							2,4,5-Trichlorophenol	250 ppm
							2,4,6-Trichlorophenol	250 ppm
							2,4-Dichlorophenol	250 ppm
							2,4-Dimethylphenol	250 ppm
							2,4-Dinitrophenol	500 ppm
							2,4-Dinitrotoluene	250 ppm
							2,6-Dichlorophenol	250 ppm
							2,6-Dinitrotoluene	250 ppm
							2-Chloronaphthalene	250 ppm
							2-Chlorophenol	250 ppm
							2-Methylnaphthalene	250 ppm
							2-Methylphenol	250 ppm
							2-Nitroaniline	250 ppm
							2-Nitrophenol	250 ppm
							3-Nitroaniline	250 ppm
							4,6-Dinitro-2-methylphenol	500 ppm
							4-Bromophenyl phenyl ether	250 ppm
							4-Chloro-3-methylphenol	250 ppm
							4-Chloroaniline	250 ppm
							4-Chlorophenyl phenyl ether	250 ppm
							4-Methylphenol	250 ppm
							4-Nitroaniline	250 ppm
							4-Nitrophenol	500 ppm
							Acenaphthene	250 ppm
							Acenaphthylene	250 ppm
							Acetophenone	250 ppm
							Aniline	250 ppm
							Anthracene	250 ppm
							Benzo[a]anthracene	250 ppm
							Benzo[a]pyrene	250 ppm
							Benzo[b]fluoranthene	250 ppm
							Benzo[g,h,i]perylene	250 ppm
							Benzo[k]fluoranthene	250 ppm
							Benzyl alcohol	250 ppm
							Bis(2-chloroethoxy)methane	250 ppm
							Bis(2-chloroethyl)ether	250 ppm
							Bis(2-ethylhexyl) phthalate	250 ppm
							Butyl benzyl phthalate	250 ppm
							Carbazole	250 ppm
							Chrysene	250 ppm
							Di-n-butyl phthalate	250 ppm
							Di-n-octyl phthalate	250 ppm
							Dibenz(a,h)anthracene	250 ppm
							Dibenzofuran	250 ppm
							Diethyl phthalate	250 ppm
							Dimethyl phthalate	250 ppm
							Fluoranthene	250 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Fluorene	250 ppm
							Hexachlorobenzene	250 ppm
							Hexachlorobutadiene	250 ppm
							Hexachlorocyclopentadiene	250 ppm
							Hexachloroethane	250 ppm
							Indeno[1,2,3-cd]pyrene	250 ppm
							Isophorone	250 ppm
							N-Nitrosodi-n-propylamine	250 ppm
							N-Nitrosodimethylamine	250 ppm
							N-Nitrosodiphenylamine	212.5 ppm
							Naphthalene	250 ppm
							Nitrobenzene	250 ppm
							Pentachlorophenol	500 ppm
							Phenanthrene	250 ppm
							Phenol	250 ppm
							Pyrene	250 ppm
							Pyridine	500 ppm
					OP_RES_LCS2_00009	1250 uL	3,3'-Dichlorobenzidine	250 ppm
							Benzidine	250 ppm
					OP_RES_LCSadd_00003	1250 uL	Alpha-Terpineol	250 ppm
							Dimethylformamide	250 ppm
							Octachlorostyrene	250 ppm
							Phenyl ether	250 ppm
....MSS_8270_SURR_00004	10/31/23	Sigma- Aldrich, Lot LRAC8467			(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	4000 ug/mL
							2-Fluorobiphenyl (Surr)	4000 ug/mL
							2-Fluorophenol (Surr)	4000 ug/mL
							Nitrobenzene-d5 (Surr)	4000 ug/mL
							p-Terphenyl-d14 (Surr)	4000 ug/mL
							Phenol-d5 (Surr)	4000 ug/mL
....OP_RES_APPX6_00005	05/31/25	Restek, Lot A0184892			(Purchased Reagent)		Dibenz[a,j]acridine	2000 ug/mL
....OP_RES_LCS1_00011	04/30/24	Restek, Lot A0190414			(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envir Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	850 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
....OP_RES_LCS2_00009	02/29/24		Restek, Lot A0188589		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
....OP_RES_LCSadd_00003	02/28/26		Restek, Lot A0194427		(Purchased Reagent)		Alpha-Terpineol	2000 ug/mL
							Dimethylformamide	2000 ug/mL
							Octachlorostyrene	2000 ug/mL
							Phenyl ether	2000 ug/mL
...MSS_AB_24DNP_00007	12/09/25		Absolute, Lot 120920		(Purchased Reagent)		2,4-Dinitrophenol	1000 ug/mL
...MSS_AB_46D2MP_00004	11/19/24		Absolute, Lot 111919		(Purchased Reagent)		4,6-Dinitro-2-methylphenol	1000 ug/mL
...MSS_AB_4NP_00003	07/24/23		Absolute, Lot 072418		(Purchased Reagent)		4-Nitrophenol	1000 ug/mL
...MSS_AB_PCP_00004	06/22/27		Absolute, Lot 062222		(Purchased Reagent)		Pentachlorophenol	1000 ug/mL
...MSS_FV8270_IS_00005	11/30/23		Restek, Lot A0166482		(Purchased Reagent)		1,4-Dichlorobenzene-d4	1000 ug/mL
							Acenaphthene-d10	1000 ug/mL
							Naphthalene-d8	1000 ug/mL
							Perylene-d12	1000 ug/mL
							Phenanthrene-d10	1000 ug/mL
							Pyrene-d10 (IS)	1000 ug/mL
							1,4-Dichlorobenzene-d4	1000 ug/mL
							Acenaphthene-d10	1000 ug/mL
							Naphthalene-d8	1000 ug/mL
							Perylene-d12	1000 ug/mL
							Phenanthrene-d10	1000 ug/mL
							Pyrene-d10 (IS)	1000 ug/mL
MSS_RV8270_2_00030	07/24/23	06/08/23	MeCl2, Lot 226055	3 mL	MSS_BAS_WS_00012	7.5 uL	Atrazine	0.25 ppm
							Benzaldehyde	0.25 ppm
							Caprolactam	0.25 ppm
					MSS_FV8270_2_00030	750 uL	Benzidine	0.75 ppm
							1,3,5-Trinitrobenzene	0.25 ppm
							1,4-Dinitrobenzene	0.25 ppm
							1-Naphthylamine	0.25 ppm
							2-Acetylaminofluorene	0.25 ppm
							2-Naphthylamine	0.25 ppm
							2-Picoline	0.25 ppm
							2-Toluidine	0.25 ppm
							3,3'-Dimethylbenzidine	0.25 ppm
							4,4'-Methylene bis(2-chloroaniline)	0.25 ppm
							4-Aminobiphenyl	0.25 ppm
							4-Nitroquinoline-1-oxide	0.25 ppm

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dibenz[a,h]acridine	0.25 ppm
							N-Nitro-o-toluidine	0.25 ppm
							N-Nitrosodi-n-butylamine	0.25 ppm
							N-Nitrosodiethylamine	0.25 ppm
							N-Nitrosomethylethylamine	0.25 ppm
							N-Nitrosomorpholine	0.25 ppm
							N-Nitrosopiperidine	0.25 ppm
							N-Nitrosopyrrolidine	0.25 ppm
							p-Dimethylamino azobenzene	0.25 ppm
							p-Phenylene diamine	0.25 ppm
							Pentachloronitrobenzene	0.25 ppm
							Phenacetin	0.25 ppm
							Pronamide	0.25 ppm
							Quinoline	0.25 ppm
							1,4-Naphthoquinone	0.25 ppm
							1-Chloronaphthalene	0.25 ppm
							7,12-Dimethylbenz(a)anthracene	0.25 ppm
							Chlorobenzilate	0.25 ppm
							Dinoseb	0.25 ppm
							Ethyl methanesulfonate	0.25 ppm
							Hexachloropropene	0.25 ppm
							Isodrin	0.25 ppm
							Isosafrole Peak 1	0.04 ppm
							Isosafrole Peak 2	0.21 ppm
							Methyl methanesulfonate	0.25 ppm
							Pentachlorobenzene	0.25 ppm
							3-Methylcholanthrene	0.25 ppm
							6-Methylchrysene	0.25 ppm
							cis-Diallate	0.185 ppm
							Dimethoate	0.25 ppm
							Disulfoton	0.25 ppm
							Ethyl Parathion	0.25 ppm
							Methyl parathion	0.25 ppm
							o,o',o''-Triethylphosphorothioate	0.25 ppm
							Phorate	0.25 ppm
							Safrole, Total	0.25 ppm
							Sulfotepp	0.25 ppm
							Thionazin	0.25 ppm
							trans-Diallate	0.065 ppm
							2,4,6-Tribromophenol (Surr)	0.5 ppm
							2-Fluorobiphenyl (Surr)	0.5 ppm
							2-Fluorophenol (Surr)	0.5 ppm
							Nitrobenzene-d5 (Surr)	0.5 ppm
							p-Terphenyl-d14 (Surr)	0.5 ppm
							Phenol-d5 (Surr)	0.5 ppm
							Dibenz[a,j]acridine	0.25 ppm
							1,1'-Biphenyl	0.25 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,4,5-Tetrachlorobenzene	0.25 ppm
							1,2,4-Trichlorobenzene	0.25 ppm
							1,2-Dichlorobenzene	0.25 ppm
							1,2-Diphenylhydrazine	0.25 ppm
							1,3-Dichlorobenzene	0.25 ppm
							1,3-Dinitrobenzene	0.25 ppm
							1,4-Dichlorobenzene	0.25 ppm
							1,4-Dioxane	0.25 ppm
							1-Methylnaphthalene	0.25 ppm
							2,2'-oxybis[1-chloropropane]	0.25 ppm
							2,3,4,6-Tetrachlorophenol	0.25 ppm
							2,4,5-Trichlorophenol	0.25 ppm
							2,4,6-Trichlorophenol	0.25 ppm
							2,4-Dichlorophenol	0.25 ppm
							2,4-Dimethylphenol	0.25 ppm
							2,4-Dinitrophenol	2.5 ppm
							2,4-Dinitrotoluene	0.25 ppm
							2,6-Dichlorophenol	0.25 ppm
							2,6-Dinitrotoluene	0.25 ppm
							2-Chloronaphthalene	0.25 ppm
							2-Chlorophenol	0.25 ppm
							2-Methylnaphthalene	0.25 ppm
							2-Methylphenol	0.25 ppm
							2-Nitroaniline	0.25 ppm
							2-Nitrophenol	0.25 ppm
							3-Nitroaniline	0.25 ppm
							4,6-Dinitro-2-methylphenol	1.5 ppm
							4-Bromophenyl phenyl ether	0.25 ppm
							4-Chloro-3-methylphenol	0.25 ppm
							4-Chloroaniline	0.25 ppm
							4-Chlorophenyl phenyl ether	0.25 ppm
							4-Methylphenol	0.25 ppm
							4-Nitroaniline	0.25 ppm
							4-Nitrophenol	1.5 ppm
							Acenaphthene	0.25 ppm
							Acenaphthylene	0.25 ppm
							Acetophenone	0.25 ppm
							Aniline	0.25 ppm
							Anthracene	0.25 ppm
							Benzo[a]anthracene	0.25 ppm
							Benzo[a]pyrene	0.25 ppm
							Benzo[b]fluoranthene	0.25 ppm
							Benzo[g,h,i]perylene	0.25 ppm
							Benzo[k]fluoranthene	0.25 ppm
							Benzyl alcohol	0.25 ppm
							Bis(2-chloroethoxy)methane	0.25 ppm
							Bis(2-chloroethyl)ether	0.25 ppm
							Bis(2-ethylhexyl) phthalate	0.25 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Butyl benzyl phthalate	0.25 ppm
							Carbazole	0.25 ppm
							Chrysene	0.25 ppm
							Di-n-butyl phthalate	0.25 ppm
							Di-n-octyl phthalate	0.25 ppm
							Dibenz(a,h)anthracene	0.25 ppm
							Dibenzofuran	0.25 ppm
							Diethyl phthalate	0.25 ppm
							Dimethyl phthalate	0.25 ppm
							Fluoranthene	0.25 ppm
							Fluorene	0.25 ppm
							Hexachlorobenzene	0.25 ppm
							Hexachlorobutadiene	0.25 ppm
							Hexachlorocyclopentadiene	0.25 ppm
							Hexachloroethane	0.25 ppm
							Indeno[1,2,3-cd]pyrene	0.25 ppm
							Isophorone	0.25 ppm
							N-Nitrosodi-n-propylamine	0.25 ppm
							N-Nitrosodimethylamine	0.25 ppm
							N-Nitrosodiphenylamine	0.2125 ppm
							Naphthalene	0.25 ppm
							Nitrobenzene	0.25 ppm
							Pentachlorophenol	1.25 ppm
							Phenanthrene	0.25 ppm
							Phenol	0.25 ppm
							Pyrene	0.25 ppm
							Pyridine	0.5 ppm
							3,3'-Dichlorobenzidine	0.25 ppm
							Alpha-Terpineol	0.25 ppm
							Dimethylformamide	0.25 ppm
							Octachlorostyrene	0.25 ppm
							Phenyl ether	0.25 ppm
							1,4-Dichlorobenzene-d4	5 ppm
							Acenaphthene-d10	5 ppm
							Naphthalene-d8	5 ppm
							Perylene-d12	5 ppm
							Phenanthrene-d10	5 ppm
							Pyrene-d10 (IS)	5 ppm
.MSS_BAS_WS_00012	12/08/23	06/08/23	MeCl2, Lot 226055	5 mL	OP_LCSmix2stk_00007	250 uL	Atrazine	100 ppm
							Benzaldehyde	100 ppm
							Caprolactam	100 ppm
..OP_LCSmix2stk_00007	07/31/24		Restek, Lot A0193487		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
.MSS_FV8270_2_00030	07/24/23	06/08/23	MeCl2, Lot 226055	5 mL	MSS_8270_APWS_00015	20 uL	Benzidine	3 ppm
							1,3,5-Trinitrobenzene	1 ppm
							1,4-Dinitrobenzene	1 ppm
							1-Naphthylamine	1 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Acetylaminofluorene	1 ppm
							2-Naphthylamine	1 ppm
							2-Picoline	1 ppm
							2-Toluidine	1 ppm
							3,3'-Dimethylbenzidine	1 ppm
							4,4'-Methylene bis(2-chloroaniline)	1 ppm
							4-Aminobiphenyl	1 ppm
							4-Nitroquinoline-1-oxide	1 ppm
							Dibenz[a,h]acridine	1 ppm
							N-Nitro-o-toluidine	1 ppm
							N-Nitrosodi-n-butylamine	1 ppm
							N-Nitrosodiethylamine	1 ppm
							N-Nitrosomethylethylamine	1 ppm
							N-Nitrosomorpholine	1 ppm
							N-Nitrosopiperidine	1 ppm
							N-Nitrosopyrrolidine	1 ppm
							p-Dimethylamino azobenzene	1 ppm
							p-Phenylene diamine	1 ppm
							Pentachloronitrobenzene	1 ppm
							Phenacetin	1 ppm
							Pronamide	1 ppm
							Quinoline	1 ppm
							1,4-Naphthoquinone	1 ppm
							1-Chloronaphthalene	1 ppm
							7,12-Dimethylbenz(a)anthracene	1 ppm
							Chlorobenzilate	1 ppm
							Dinoseb	1 ppm
							Ethyl methanesulfonate	1 ppm
							Hexachloropropene	1 ppm
							Isodrin	1 ppm
							Isosafrole Peak 1	0.16 ppm
							Isosafrole Peak 2	0.84 ppm
							Methyl methanesulfonate	1 ppm
							Pentachlorobenzene	1 ppm
							3-Methylcholanthrene	1 ppm
							6-Methylchrysene	1 ppm
							cis-Diallate	0.74 ppm
							Dimethoate	1 ppm
							Disulfoton	1 ppm
							Ethyl Parathion	1 ppm
							Methyl parathion	1 ppm
							o,o',o''-Triethylphosphorothioate	1 ppm
							Phorate	1 ppm
							Safrole, Total	1 ppm
							Sulfotepp	1 ppm
							Thionazin	1 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							trans-Diallate	0.26 ppm
					MSS_8270_WS_00016	20 uL	2,4,6-Tribromophenol (Surr)	2 ppm
							2-Fluorobiphenyl (Surr)	2 ppm
							2-Fluorophenol (Surr)	2 ppm
							Nitrobenzene-d5 (Surr)	2 ppm
							p-Terphenyl-d14 (Surr)	2 ppm
							Phenol-d5 (Surr)	2 ppm
							Dibenz[a,j]acridine	1 ppm
							1,1'-Biphenyl	1 ppm
							1,2,4,5-Tetrachlorobenzene	1 ppm
							1,2,4-Trichlorobenzene	1 ppm
							1,2-Dichlorobenzene	1 ppm
							1,2-Diphenylhydrazine	1 ppm
							1,3-Dichlorobenzene	1 ppm
							1,3-Dinitrobenzene	1 ppm
							1,4-Dichlorobenzene	1 ppm
							1,4-Dioxane	1 ppm
							1-Methylnaphthalene	1 ppm
							2,2'-oxybis[1-chloropropane]	1 ppm
							2,3,4,6-Tetrachlorophenol	1 ppm
							2,4,5-Trichlorophenol	1 ppm
							2,4,6-Trichlorophenol	1 ppm
							2,4-Dichlorophenol	1 ppm
							2,4-Dimethylphenol	1 ppm
							2,4-Dinitrophenol	10 ppm
							2,4-Dinitrotoluene	1 ppm
							2,6-Dichlorophenol	1 ppm
							2,6-Dinitrotoluene	1 ppm
							2-Chloronaphthalene	1 ppm
							2-Chlorophenol	1 ppm
							2-Methylnaphthalene	1 ppm
							2-Methylphenol	1 ppm
							2-Nitroaniline	1 ppm
							2-Nitrophenol	1 ppm
							3-Nitroaniline	1 ppm
							4,6-Dinitro-2-methylphenol	6 ppm
							4-Bromophenyl phenyl ether	1 ppm
							4-Chloro-3-methylphenol	1 ppm
							4-Chloroaniline	1 ppm
							4-Chlorophenyl phenyl ether	1 ppm
							4-Methylphenol	1 ppm
							4-Nitroaniline	1 ppm
							4-Nitrophenol	6 ppm
							Acenaphthene	1 ppm
							Acenaphthylene	1 ppm
							Acetophenone	1 ppm
							Aniline	1 ppm
							Anthracene	1 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[a]anthracene	1 ppm
							Benzo[a]pyrene	1 ppm
							Benzo[b]fluoranthene	1 ppm
							Benzo[g,h,i]perylene	1 ppm
							Benzo[k]fluoranthene	1 ppm
							Benzyl alcohol	1 ppm
							Bis(2-chloroethoxy)methane	1 ppm
							Bis(2-chloroethyl)ether	1 ppm
							Bis(2-ethylhexyl) phthalate	1 ppm
							Butyl benzyl phthalate	1 ppm
							Carbazole	1 ppm
							Chrysene	1 ppm
							Di-n-butyl phthalate	1 ppm
							Di-n-octyl phthalate	1 ppm
							Dibenz(a,h)anthracene	1 ppm
							Dibenzofuran	1 ppm
							Diethyl phthalate	1 ppm
							Dimethyl phthalate	1 ppm
							Fluoranthene	1 ppm
							Fluorene	1 ppm
							Hexachlorobenzene	1 ppm
							Hexachlorobutadiene	1 ppm
							Hexachlorocyclopentadiene	1 ppm
							Hexachloroethane	1 ppm
							Indeno[1,2,3-cd]pyrene	1 ppm
							Isophorone	1 ppm
							N-Nitrosodi-n-propylamine	1 ppm
							N-Nitrosodimethylamine	1 ppm
							N-Nitrosodiphenylamine	0.85 ppm
							Naphthalene	1 ppm
							Nitrobenzene	1 ppm
							Pentachlorophenol	5 ppm
							Phenanthrene	1 ppm
							Phenol	1 ppm
							Pyrene	1 ppm
							Pyridine	2 ppm
							3,3'-Dichlorobenzidine	1 ppm
							Benzidine	3 ppm
							Alpha-Terpineol	1 ppm
							Dimethylformamide	1 ppm
							Octachlorostyrene	1 ppm
							Phenyl ether	1 ppm
					MSS_AB_24DNP_00007	40 uL	2,4-Dinitrophenol	10 ppm
					MSS_AB_46D2MP_00004	20 uL	4,6-Dinitro-2-methylphenol	6 ppm
					MSS_AB_4NP_00003	20 uL	4-Nitrophenol	6 ppm
					MSS_AB_PCP_00004	15 uL	Pentachlorophenol	5 ppm
					MSS_FV8270_IS_00005	100 uL	1,4-Dichlorobenzene-d4	20 ppm
							Acenaphthene-d10	20 ppm

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Naphthalene-d8	20 ppm
							Perylene-d12	20 ppm
							Phenanthrene-d10	20 ppm
							Pyrene-d10 (IS)	20 ppm
..MSS_8270_APWS_00015	12/08/23	06/08/23	MeCl2, Lot 226055	10 mL	MSS_AB_BZIDIN_00011	1000 uL	Benzidine	500 ppm
					OP_RES_APPX1_00010	2500 uL	1,3,5-Trinitrobenzene	250 ppm
							1,4-Dinitrobenzene	250 ppm
							1-Naphthylamine	250 ppm
							2-Acetylaminofluorene	250 ppm
							2-Naphthylamine	250 ppm
							2-Picoline	250 ppm
							2-Toluidine	250 ppm
							3,3'-Dimethylbenzidine	250 ppm
							4,4'-Methylene bis(2-chloroaniline)	250 ppm
							4-Aminobiphenyl	250 ppm
							4-Nitroquinoline-1-oxide	250 ppm
							Dibenz[a,h]acridine	250 ppm
							N-Nitro-o-toluidine	250 ppm
							N-Nitrosodi-n-butylamine	250 ppm
							N-Nitrosodiethylamine	250 ppm
							N-Nitrosomethylethylamine	250 ppm
							N-Nitrosomorpholine	250 ppm
							N-Nitrosopiperidine	250 ppm
							N-Nitrosopyrrolidine	250 ppm
							p-Dimethylamino azobenzene	250 ppm
							p-Phenylene diamine	250 ppm
							Pentachloronitrobenzene	250 ppm
							Phenacetin	250 ppm
							Pronamide	250 ppm
							Quinoline	250 ppm
					OP_RES_APPX2_00011	2500 uL	1,4-Naphthoquinone	250 ppm
							1-Chloronaphthalene	250 ppm
							7,12-Dimethylbenz(a)anthracene	250 ppm
							Chlorobenzilate	250 ppm
							Dinoseb	250 ppm
							Ethyl methanesulfonate	250 ppm
							Hexachloropropene	250 ppm
							Isodrin	250 ppm
							Isosafrole Peak 1	40 ppm
							Isosafrole Peak 2	210 ppm
							Methyl methanesulfonate	250 ppm
							Pentachlorobenzene	250 ppm
					OP_RES_APPX3_00007	1250 uL	3-Methylcholanthrene	250 ppm
							6-Methylchrysene	250 ppm
					OP_RES_APPX4_00008	2500 uL	cis-Diallate	185 ppm
							Dimethoate	250 ppm
							Disulfoton	250 ppm

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Ethyl Parathion	250 ppm
							Methyl parathion	250 ppm
							o,o',o''-Triethylphosphorothioate	250 ppm
							Phorate	250 ppm
							Safrole, Total	250 ppm
							Sulfotepp	250 ppm
							Thionazin	250 ppm
							trans-Diallate	65 ppm
...MSS_AB_BZIDIN_00011	10/27/25		Absolute, Lot 102722		(Purchased Reagent)		Benzidine	5000 ug/mL
...OP_RES_APPX1_00010	02/29/24		Restek, Lot A0194294		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,4-Dinitrobenzene	1000 ug/mL
							1-Naphthylamine	1000 ug/mL
							2-Acetylaminofluorene	1000 ug/mL
							2-Naphthylamine	1000 ug/mL
							2-Picoline	1000 ug/mL
							2-Toluidine	1000 ug/mL
							3,3'-Dimethylbenzidine	1000 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	1000 ug/mL
							4-Aminobiphenyl	1000 ug/mL
							4-Nitroquinoline-1-oxide	1000 ug/mL
							Dibenz[a,h]acridine	1000 ug/mL
							N-Nitro-o-toluidine	1000 ug/mL
							N-Nitrosodi-n-butylamine	1000 ug/mL
							N-Nitrosodiethylamine	1000 ug/mL
							N-Nitrosomethylethylamine	1000 ug/mL
							N-Nitrosomorpholine	1000 ug/mL
							N-Nitrosopiperidine	1000 ug/mL
							N-Nitrosopyrrolidine	1000 ug/mL
							p-Dimethylamino azobenzene	1000 ug/mL
							p-Phenylene diamine	1000 ug/mL
							Pentachloronitrobenzene	1000 ug/mL
							Phenacetin	1000 ug/mL
							Pronamide	1000 ug/mL
							Quinoline	1000 ug/mL
...OP_RES_APPX2_00011	01/31/24		Restek, Lot A0193498		(Purchased Reagent)		1,4-Naphthoquinone	1000 ug/mL
							1-Chloronaphthalene	1000 ug/mL
							7,12-Dimethylbenz(a)anthracene	1000 ug/mL
							Chlorobenzilate	1000 ug/mL
							Dinoseb	1000 ug/mL
							Ethyl methanesulfonate	1000 ug/mL
							Hexachloropropene	1000 ug/mL
							Isodrin	1000 ug/mL
							Isosafrole Peak 1	160 ug/mL
							Isosafrole Peak 2	840 ug/mL
							Methyl methanesulfonate	1000 ug/mL
							Pentachlorobenzene	1000 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...OP_RES_APPX3_00007	01/31/24		Restek, Lot A0193475		(Purchased Reagent)		3-Methylcholanthrene	2000 ug/mL
							6-Methylchrysene	2000 ug/mL
...OP_RES_APPX4_00008	01/31/25		Restek, Lot A0193163		(Purchased Reagent)		cis-Diallate	740 ug/mL
							Dimethoate	1000 ug/mL
							Disulfoton	1000 ug/mL
							Ethyl Parathion	1000 ug/mL
							Methyl parathion	1000 ug/mL
							o,o',o''-Triethylphosphorothioate	1000 ug/mL
							Phorate	1000 ug/mL
							Safrole, Total	1000 ug/mL
							Sulfotepp	1000 ug/mL
							Thionazin	1000 ug/mL
							trans-Diallate	260 ug/mL
..MSS_8270_WS_00016	10/31/23	06/08/23	MeCl2, Lot 226055	10 mL	MSS_8270_SURR_00004	1250 uL	2,4,6-Tribromophenol (Surr)	500 ppm
							2-Fluorobiphenyl (Surr)	500 ppm
							2-Fluorophenol (Surr)	500 ppm
							Nitrobenzene-d5 (Surr)	500 ppm
							p-Terphenyl-d14 (Surr)	500 ppm
							Phenol-d5 (Surr)	500 ppm
					OP_RES_APPX6_00005	1250 uL	Dibenz[a,j]acridine	250 ppm
					OP_RES_LCS1_00011	2500 uL	1,1'-Biphenyl	250 ppm
							1,2,4,5-Tetrachlorobenzene	250 ppm
							1,2,4-Trichlorobenzene	250 ppm
							1,2-Dichlorobenzene	250 ppm
							1,2-Diphenylhydrazine	250 ppm
							1,3-Dichlorobenzene	250 ppm
							1,3-Dinitrobenzene	250 ppm
							1,4-Dichlorobenzene	250 ppm
							1,4-Dioxane	250 ppm
							1-Methylnaphthalene	250 ppm
							2,2'-oxybis[1-chloropropane]	250 ppm
							2,3,4,6-Tetrachlorophenol	250 ppm
							2,4,5-Trichlorophenol	250 ppm
							2,4,6-Trichlorophenol	250 ppm
							2,4-Dichlorophenol	250 ppm
							2,4-Dimethylphenol	250 ppm
							2,4-Dinitrophenol	500 ppm
							2,4-Dinitrotoluene	250 ppm
							2,6-Dichlorophenol	250 ppm
							2,6-Dinitrotoluene	250 ppm
							2-Chloronaphthalene	250 ppm
							2-Chlorophenol	250 ppm
							2-Methylnaphthalene	250 ppm
							2-Methylphenol	250 ppm
							2-Nitroaniline	250 ppm
							2-Nitrophenol	250 ppm
							3-Nitroaniline	250 ppm

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4,6-Dinitro-2-methylphenol	500 ppm
							4-Bromophenyl phenyl ether	250 ppm
							4-Chloro-3-methylphenol	250 ppm
							4-Chloroaniline	250 ppm
							4-Chlorophenyl phenyl ether	250 ppm
							4-Methylphenol	250 ppm
							4-Nitroaniline	250 ppm
							4-Nitrophenol	500 ppm
							Acenaphthene	250 ppm
							Acenaphthylene	250 ppm
							Acetophenone	250 ppm
							Aniline	250 ppm
							Anthracene	250 ppm
							Benzo[a]anthracene	250 ppm
							Benzo[a]pyrene	250 ppm
							Benzo[b]fluoranthene	250 ppm
							Benzo[g,h,i]perylene	250 ppm
							Benzo[k]fluoranthene	250 ppm
							Benzyl alcohol	250 ppm
							Bis(2-chloroethoxy)methane	250 ppm
							Bis(2-chloroethyl)ether	250 ppm
							Bis(2-ethylhexyl) phthalate	250 ppm
							Butyl benzyl phthalate	250 ppm
							Carbazole	250 ppm
							Chrysene	250 ppm
							Di-n-butyl phthalate	250 ppm
							Di-n-octyl phthalate	250 ppm
							Dibenz(a,h)anthracene	250 ppm
							Dibenzofuran	250 ppm
							Diethyl phthalate	250 ppm
							Dimethyl phthalate	250 ppm
							Fluoranthene	250 ppm
							Fluorene	250 ppm
							Hexachlorobenzene	250 ppm
							Hexachlorobutadiene	250 ppm
							Hexachlorocyclopentadiene	250 ppm
							Hexachloroethane	250 ppm
							Indeno[1,2,3-cd]pyrene	250 ppm
							Isophorone	250 ppm
							N-Nitrosodi-n-propylamine	250 ppm
							N-Nitrosodimethylamine	250 ppm
							N-Nitrosodiphenylamine	212.5 ppm
							Naphthalene	250 ppm
							Nitrobenzene	250 ppm
							Pentachlorophenol	500 ppm
							Phenanthrene	250 ppm
							Phenol	250 ppm
							Pyrene	250 ppm

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Pyridine	500 ppm
					OP_RES_LCS2_00009	1250 uL	3,3'-Dichlorobenzidine	250 ppm
							Benzidine	250 ppm
					OP_RES_LCSadd_00003	1250 uL	Alpha-Terpineol	250 ppm
							Dimethylformamide	250 ppm
							Octachlorostyrene	250 ppm
							Phenyl ether	250 ppm
...MSS_8270_SURR_00004	10/31/23	Sigma- Aldrich, Lot LRAC8467			(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	4000 ug/mL
							2-Fluorobiphenyl (Surr)	4000 ug/mL
							2-Fluorophenol (Surr)	4000 ug/mL
							Nitrobenzene-d5 (Surr)	4000 ug/mL
							p-Terphenyl-d14 (Surr)	4000 ug/mL
							Phenol-d5 (Surr)	4000 ug/mL
...OP_RES_APPX6_00005	05/31/25	Restek, Lot A0184892			(Purchased Reagent)		Dibenz[a,j]acridine	2000 ug/mL
...OP_RES_LCS1_00011	04/30/24	Restek, Lot A0190414			(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	850 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
...OP_RES_LCS2_00009	02/29/24		Restek, Lot A0188589		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
...OP_RES_LCSadd_00003	02/28/26		Restek, Lot A0194427		(Purchased Reagent)		Alpha-Terpineol	2000 ug/mL
							Dimethylformamide	2000 ug/mL
							Octachlorostyrene	2000 ug/mL
							Phenyl ether	2000 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..MSS_AB_24DNP_00007	12/09/25		Absolute, Lot 120920		(Purchased Reagent)		2,4-Dinitrophenol	1000 ug/mL
..MSS_AB_46D2MP_00004	11/19/24		Absolute, Lot 111919		(Purchased Reagent)		4,6-Dinitro-2-methylphenol	1000 ug/mL
..MSS_AB_4NP_00003	07/24/23		Absolute, Lot 072418		(Purchased Reagent)		4-Nitrophenol	1000 ug/mL
..MSS_AB_PCP_00004	06/22/27		Absolute, Lot 062222		(Purchased Reagent)		Pentachlorophenol	1000 ug/mL
..MSS_FV8270_IS_00005	11/30/23		Restek, Lot A0166482		(Purchased Reagent)		1,4-Dichlorobenzene-d4	1000 ug/mL
							Acenaphthene-d10	1000 ug/mL
							Naphthalene-d8	1000 ug/mL
							Perylene-d12	1000 ug/mL
							Phenanthrene-d10	1000 ug/mL
							Pyrene-d10 (IS)	1000 ug/mL
MSS_RV8270_3_00027	07/24/23	06/08/23	MeCl2, Lot 226055	1 mL	MSS_BAS_WS_00012	12.5 uL	Atrazine	1.25 ppm
							Benzaldehyde	1.25 ppm
							Caprolactam	1.25 ppm
					MSS_FV8270_3_00031	250 uL	Benzidine	3.75 ppm
							1,3,5-Trinitrobenzene	1.25 ppm
							1,4-Dinitrobenzene	1.25 ppm
							1-Naphthylamine	1.25 ppm
							2-Acetylaminofluorene	1.25 ppm
							2-Naphthylamine	1.25 ppm
							2-Picoline	1.25 ppm
							2-Toluidine	1.25 ppm
							3,3'-Dimethylbenzidine	1.25 ppm
							4,4'-Methylene bis(2-chloroaniline)	1.25 ppm
							4-Aminobiphenyl	1.25 ppm
							4-Nitroquinoline-1-oxide	1.25 ppm
							Dibenz[a,h]acridine	1.25 ppm
							N-Nitro-o-toluidine	1.25 ppm
							N-Nitrosodi-n-butylamine	1.25 ppm
							N-Nitrosodiethylamine	1.25 ppm
							N-Nitrosomethylethylamine	1.25 ppm
							N-Nitrosomorpholine	1.25 ppm
							N-Nitrosopiperidine	1.25 ppm
							N-Nitrosopyrrolidine	1.25 ppm
							p-Dimethylamino azobenzene	1.25 ppm
							p-Phenylene diamine	1.25 ppm
							Pentachloronitrobenzene	1.25 ppm
							Phenacetin	1.25 ppm
							Pronamide	1.25 ppm
							Quinoline	1.25 ppm
							1,4-Naphthoquinone	1.25 ppm
							1-Chloronaphthalene	1.25 ppm
							7,12-Dimethylbenz(a)anthracene	1.25 ppm
							Chlorobenzilate	1.25 ppm
							Dinoseb	1.25 ppm
							Ethyl methanesulfonate	1.25 ppm
							Hexachloropropene	1.25 ppm
							Isodrin	1.25 ppm

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Isosafrole Peak 1	0.2 ppm
							Isosafrole Peak 2	1.05 ppm
							Methyl methanesulfonate	1.25 ppm
							Pentachlorobenzene	1.25 ppm
							3-Methylcholanthrene	1.25 ppm
							6-Methylchrysene	1.25 ppm
							cis-Diallate	0.925 ppm
							Dimethoate	1.25 ppm
							Disulfoton	1.25 ppm
							Ethyl Parathion	1.25 ppm
							Methyl parathion	1.25 ppm
							o,o',o''-Triethylphosphorothioate	1.25 ppm
							Phorate	1.25 ppm
							Safrole, Total	1.25 ppm
							Sulfotepp	1.25 ppm
							Thionazin	1.25 ppm
							trans-Diallate	0.325 ppm
							2,4,6-Tribromophenol (Surr)	2.5 ppm
							2-Fluorobiphenyl (Surr)	2.5 ppm
							2-Fluorophenol (Surr)	2.5 ppm
							Nitrobenzene-d5 (Surr)	2.5 ppm
							p-Terphenyl-d14 (Surr)	2.5 ppm
							Phenol-d5 (Surr)	2.5 ppm
							Dibenz[a,j]acridine	1.25 ppm
							1,1'-Biphenyl	1.25 ppm
							1,2,4,5-Tetrachlorobenzene	1.25 ppm
							1,2,4-Trichlorobenzene	1.25 ppm
							1,2-Dichlorobenzene	1.25 ppm
							1,2-Diphenylhydrazine	1.25 ppm
							1,3-Dichlorobenzene	1.25 ppm
							1,3-Dinitrobenzene	1.25 ppm
							1,4-Dichlorobenzene	1.25 ppm
							1,4-Dioxane	1.25 ppm
							1-Methylnaphthalene	1.25 ppm
							2,2'-oxybis[1-chloropropane]	1.25 ppm
							2,3,4,6-Tetrachlorophenol	1.25 ppm
							2,4,5-Trichlorophenol	1.25 ppm
							2,4,6-Trichlorophenol	1.25 ppm
							2,4-Dichlorophenol	1.25 ppm
							2,4-Dimethylphenol	1.25 ppm
							2,4-Dinitrophenol	5 ppm
							2,4-Dinitrotoluene	1.25 ppm
							2,6-Dichlorophenol	1.25 ppm
							2,6-Dinitrotoluene	1.25 ppm
							2-Chloronaphthalene	1.25 ppm
							2-Chlorophenol	1.25 ppm
							2-Methylnaphthalene	1.25 ppm

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Methylphenol	1.25 ppm
							2-Nitroaniline	1.25 ppm
							2-Nitrophenol	1.25 ppm
							3-Nitroaniline	1.25 ppm
							4,6-Dinitro-2-methylphenol	3.75 ppm
							4-Bromophenyl phenyl ether	1.25 ppm
							4-Chloro-3-methylphenol	1.25 ppm
							4-Chloroaniline	1.25 ppm
							4-Chlorophenyl phenyl ether	1.25 ppm
							4-Methylphenol	1.25 ppm
							4-Nitroaniline	1.25 ppm
							4-Nitrophenol	3.75 ppm
							Acenaphthene	1.25 ppm
							Acenaphthylene	1.25 ppm
							Acetophenone	1.25 ppm
							Aniline	1.25 ppm
							Anthracene	1.25 ppm
							Benzo[a]anthracene	1.25 ppm
							Benzo[a]pyrene	1.25 ppm
							Benzo[b]fluoranthene	1.25 ppm
							Benzo[g,h,i]perylene	1.25 ppm
							Benzo[k]fluoranthene	1.25 ppm
							Benzyl alcohol	1.25 ppm
							Bis(2-chloroethoxy)methane	1.25 ppm
							Bis(2-chloroethyl)ether	1.25 ppm
							Bis(2-ethylhexyl) phthalate	1.25 ppm
							Butyl benzyl phthalate	1.25 ppm
							Carbazole	1.25 ppm
							Chrysene	1.25 ppm
							Di-n-butyl phthalate	1.25 ppm
							Di-n-octyl phthalate	1.25 ppm
							Dibenz(a,h)anthracene	1.25 ppm
							Dibenzofuran	1.25 ppm
							Diethyl phthalate	1.25 ppm
							Dimethyl phthalate	1.25 ppm
							Fluoranthene	1.25 ppm
							Fluorene	1.25 ppm
							Hexachlorobenzene	1.25 ppm
							Hexachlorobutadiene	1.25 ppm
							Hexachlorocyclopentadiene	1.25 ppm
							Hexachloroethane	1.25 ppm
							Indeno[1,2,3-cd]pyrene	1.25 ppm
							Isophorone	1.25 ppm
							N-Nitrosodi-n-propylamine	1.25 ppm
							N-Nitrosodimethylamine	1.25 ppm
							N-Nitrosodiphenylamine	1.0625 ppm
							Naphthalene	1.25 ppm
							Nitrobenzene	1.25 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Pentachlorophenol	2.5 ppm
							Phenanthrene	1.25 ppm
							Phenol	1.25 ppm
							Pyrene	1.25 ppm
							Pyridine	2.5 ppm
							3,3'-Dichlorobenzidine	1.25 ppm
							Alpha-Terpineol	1.25 ppm
							Dimethylformamide	1.25 ppm
							Octachlorostyrene	1.25 ppm
							Phenyl ether	1.25 ppm
							1,4-Dichlorobenzene-d4	5 ppm
							Acenaphthene-d10	5 ppm
							Naphthalene-d8	5 ppm
							Perylene-d12	5 ppm
							Phenanthrene-d10	5 ppm
							Pyrene-d10 (IS)	5 ppm
.MSS_BAS_WS_00012	12/08/23	06/08/23	MeCl2, Lot 226055	5 mL	OP_LCSmix2stk_00007	250 uL	Atrazine	100 ppm
							Benzaldehyde	100 ppm
							Caprolactam	100 ppm
..OP_LCSmix2stk_00007	07/31/24		Restek, Lot A0193487		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
.MSS_FV8270_3_00031	07/24/23	06/08/23	MeCl2, Lot 226055	2 mL	MSS_8270_APWS_00015	40 uL	Benzidine	15 ppm
							1,3,5-Trinitrobenzene	5 ppm
							1,4-Dinitrobenzene	5 ppm
							1-Naphthylamine	5 ppm
							2-Acetylaminofluorene	5 ppm
							2-Naphthylamine	5 ppm
							2-Picoline	5 ppm
							2-Toluidine	5 ppm
							3,3'-Dimethylbenzidine	5 ppm
							4,4'-Methylene bis(2-chloroaniline)	5 ppm
							4-Aminobiphenyl	5 ppm
							4-Nitroquinoline-1-oxide	5 ppm
							Dibenz[a,h]acridine	5 ppm
							N-Nitro-o-toluidine	5 ppm
							N-Nitrosodi-n-butylamine	5 ppm
							N-Nitrosodiethylamine	5 ppm
							N-Nitrosomethylethylamine	5 ppm
							N-Nitrosomorpholine	5 ppm
							N-Nitrosopiperidine	5 ppm
							N-Nitrosopyrrolidine	5 ppm
							p-Dimethylamino azobenzene	5 ppm
							p-Phenylene diamine	5 ppm
							Pentachloronitrobenzene	5 ppm
							Phenacetin	5 ppm
							Pronamide	5 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Quinoline	5 ppm
							1,4-Naphthoquinone	5 ppm
							1-Chloronaphthalene	5 ppm
							7,12-Dimethylbenz(a)anthracene	5 ppm
							Chlorobenzilate	5 ppm
							Dinoseb	5 ppm
							Ethyl methanesulfonate	5 ppm
							Hexachloropropene	5 ppm
							Isodrin	5 ppm
							Isosafrole Peak 1	0.8 ppm
							Isosafrole Peak 2	4.2 ppm
							Methyl methanesulfonate	5 ppm
							Pentachlorobenzene	5 ppm
							3-Methylcholanthrene	5 ppm
							6-Methylchrysene	5 ppm
							cis-Diallate	3.7 ppm
							Dimethoate	5 ppm
							Disulfoton	5 ppm
							Ethyl Parathion	5 ppm
							Methyl parathion	5 ppm
							o,o',o''-Triethylphosphorothioate	5 ppm
							Phorate	5 ppm
							Safrole, Total	5 ppm
							Sulfotepp	5 ppm
							Thionazin	5 ppm
							trans-Diallate	1.3 ppm
					MSS_8270_WS_00016	40 uL	2,4,6-Tribromophenol (Surr)	10 ppm
							2-Fluorobiphenyl (Surr)	10 ppm
							2-Fluorophenol (Surr)	10 ppm
							Nitrobenzene-d5 (Surr)	10 ppm
							p-Terphenyl-d14 (Surr)	10 ppm
							Phenol-d5 (Surr)	10 ppm
							Dibenz[a,j]acridine	5 ppm
							1,1'-Biphenyl	5 ppm
							1,2,4,5-Tetrachlorobenzene	5 ppm
							1,2,4-Trichlorobenzene	5 ppm
							1,2-Dichlorobenzene	5 ppm
							1,2-Diphenylhydrazine	5 ppm
							1,3-Dichlorobenzene	5 ppm
							1,3-Dinitrobenzene	5 ppm
							1,4-Dichlorobenzene	5 ppm
							1,4-Dioxane	5 ppm
							1-Methylnaphthalene	5 ppm
							2,2'-oxybis[1-chloropropane]	5 ppm
							2,3,4,6-Tetrachlorophenol	5 ppm
							2,4,5-Trichlorophenol	5 ppm
							2,4,6-Trichlorophenol	5 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4-Dichlorophenol	5 ppm
							2,4-Dimethylphenol	5 ppm
							2,4-Dinitrophenol	20 ppm
							2,4-Dinitrotoluene	5 ppm
							2,6-Dichlorophenol	5 ppm
							2,6-Dinitrotoluene	5 ppm
							2-Chloronaphthalene	5 ppm
							2-Chlorophenol	5 ppm
							2-Methylnaphthalene	5 ppm
							2-Methylphenol	5 ppm
							2-Nitroaniline	5 ppm
							2-Nitrophenol	5 ppm
							3-Nitroaniline	5 ppm
							4,6-Dinitro-2-methylphenol	15 ppm
							4-Bromophenyl phenyl ether	5 ppm
							4-Chloro-3-methylphenol	5 ppm
							4-Chloroaniline	5 ppm
							4-Chlorophenyl phenyl ether	5 ppm
							4-Methylphenol	5 ppm
							4-Nitroaniline	5 ppm
							4-Nitrophenol	15 ppm
							Acenaphthene	5 ppm
							Acenaphthylene	5 ppm
							Acetophenone	5 ppm
							Aniline	5 ppm
							Anthracene	5 ppm
							Benzo[a]anthracene	5 ppm
							Benzo[a]pyrene	5 ppm
							Benzo[b]fluoranthene	5 ppm
							Benzo[g,h,i]perylene	5 ppm
							Benzo[k]fluoranthene	5 ppm
							Benzyl alcohol	5 ppm
							Bis(2-chloroethoxy)methane	5 ppm
							Bis(2-chloroethyl)ether	5 ppm
							Bis(2-ethylhexyl) phthalate	5 ppm
							Butyl benzyl phthalate	5 ppm
							Carbazole	5 ppm
							Chrysene	5 ppm
							Di-n-butyl phthalate	5 ppm
							Di-n-octyl phthalate	5 ppm
							Dibenz(a,h)anthracene	5 ppm
							Dibenzofuran	5 ppm
							Diethyl phthalate	5 ppm
							Dimethyl phthalate	5 ppm
							Fluoranthene	5 ppm
							Fluorene	5 ppm
							Hexachlorobenzene	5 ppm
							Hexachlorobutadiene	5 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Hexachlorocyclopentadiene	5 ppm
							Hexachloroethane	5 ppm
							Indeno[1,2,3-cd]pyrene	5 ppm
							Isophorone	5 ppm
							N-Nitrosodi-n-propylamine	5 ppm
							N-Nitrosodimethylamine	5 ppm
							N-Nitrosodiphenylamine	4.25 ppm
							Naphthalene	5 ppm
							Nitrobenzene	5 ppm
							Pentachlorophenol	10 ppm
							Phenanthrene	5 ppm
							Phenol	5 ppm
							Pyrene	5 ppm
							Pyridine	10 ppm
							3,3'-Dichlorobenzidine	5 ppm
							Benzidine	15 ppm
							Alpha-Terpineol	5 ppm
							Dimethylformamide	5 ppm
							Octachlorostyrene	5 ppm
							Phenyl ether	5 ppm
					MSS_AB_24DNP_00007	20 uL	2,4-Dinitrophenol	20 ppm
					MSS_AB_46D2MP_00004	10 uL	4,6-Dinitro-2-methylphenol	15 ppm
					MSS_AB_4NP_00003	10 uL	4-Nitrophenol	15 ppm
					MSS_FV8270_IS_00005	40 uL	1,4-Dichlorobenzene-d4	20 ppm
							Acenaphthene-d10	20 ppm
							Naphthalene-d8	20 ppm
							Perylene-d12	20 ppm
							Phenanthrene-d10	20 ppm
							Pyrene-d10 (IS)	20 ppm
..MSS_8270_APWS_00015	12/08/23	06/08/23	MeCl2, Lot 226055	10 mL	MSS_AB_BZIDIN_00011	1000 uL	Benzidine	500 ppm
					OP_RES_APPX1_00010	2500 uL	1,3,5-Trinitrobenzene	250 ppm
							1,4-Dinitrobenzene	250 ppm
							1-Naphthylamine	250 ppm
							2-Acetylaminofluorene	250 ppm
							2-Naphthylamine	250 ppm
							2-Picoline	250 ppm
							2-Toluidine	250 ppm
							3,3'-Dimethylbenzidine	250 ppm
							4,4'-Methylene bis(2-chloroaniline)	250 ppm
							4-Aminobiphenyl	250 ppm
							4-Nitroquinoline-1-oxide	250 ppm
							Dibenz[a,h]acridine	250 ppm
							N-Nitro-o-toluidine	250 ppm
							N-Nitrosodi-n-butylamine	250 ppm
							N-Nitrosodiethylamine	250 ppm
							N-Nitrosomethylethylamine	250 ppm
							N-Nitrosomorpholine	250 ppm

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Nitrosopiperidine	250 ppm
							N-Nitrosopyrrolidine	250 ppm
							p-Dimethylamino azobenzene	250 ppm
							p-Phenylene diamine	250 ppm
							Pentachloronitrobenzene	250 ppm
							Phenacetin	250 ppm
							Pronamide	250 ppm
							Quinoline	250 ppm
					OP_RES_APPX2_00011	2500 uL	1,4-Naphthoquinone	250 ppm
							1-Chloronaphthalene	250 ppm
							7,12-Dimethylbenz(a)anthracene	250 ppm
							Chlorobenzilate	250 ppm
							Dinoseb	250 ppm
							Ethyl methanesulfonate	250 ppm
							Hexachloropropene	250 ppm
							Isodrin	250 ppm
							Isosafrole Peak 1	40 ppm
							Isosafrole Peak 2	210 ppm
							Methyl methanesulfonate	250 ppm
							Pentachlorobenzene	250 ppm
					OP_RES_APPX3_00007	1250 uL	3-Methylcholanthrene	250 ppm
							6-Methylchrysene	250 ppm
					OP_RES_APPX4_00008	2500 uL	cis-Diallate	185 ppm
							Dimethoate	250 ppm
							Disulfoton	250 ppm
							Ethyl Parathion	250 ppm
							Methyl parathion	250 ppm
							o,o',o''-Triethylphosphorothioate	250 ppm
							Phorate	250 ppm
							Safrole, Total	250 ppm
							Sulfotepp	250 ppm
							Thionazin	250 ppm
							trans-Diallate	65 ppm
...MSS_AB_BZIDIN_00011	10/27/25		Absolute, Lot 102722		(Purchased Reagent)		Benzidine	5000 ug/mL
...OP_RES_APPX1_00010	02/29/24		Restek, Lot A0194294		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,4-Dinitrobenzene	1000 ug/mL
							1-Naphthylamine	1000 ug/mL
							2-Acetylaminofluorene	1000 ug/mL
							2-Naphthylamine	1000 ug/mL
							2-Picoline	1000 ug/mL
							2-Toluidine	1000 ug/mL
							3,3'-Dimethylbenzidine	1000 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	1000 ug/mL
							4-Aminobiphenyl	1000 ug/mL
							4-Nitroquinoline-1-oxide	1000 ug/mL
							Dibenz[a,h]acridine	1000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Nitro-o-toluidine	1000 ug/mL
							N-Nitrosodi-n-butylamine	1000 ug/mL
							N-Nitrosodiethylamine	1000 ug/mL
							N-Nitrosomethylethylamine	1000 ug/mL
							N-Nitrosomorpholine	1000 ug/mL
							N-Nitrosopiperidine	1000 ug/mL
							N-Nitrosopyrrolidine	1000 ug/mL
							p-Dimethylamino azobenzene	1000 ug/mL
							p-Phenylene diamine	1000 ug/mL
							Pentachloronitrobenzene	1000 ug/mL
							Phenacetin	1000 ug/mL
							Pronamide	1000 ug/mL
							Quinoline	1000 ug/mL
...OP_RES_APPX2_00011	01/31/24		Restek, Lot A0193498		(Purchased Reagent)		1,4-Naphthoquinone	1000 ug/mL
							1-Chloronaphthalene	1000 ug/mL
							7,12-Dimethylbenz(a)anthracene	1000 ug/mL
							Chlorobenzilate	1000 ug/mL
							Dinoseb	1000 ug/mL
							Ethyl methanesulfonate	1000 ug/mL
							Hexachloropropene	1000 ug/mL
							Isodrin	1000 ug/mL
							Isosafrole Peak 1	160 ug/mL
							Isosafrole Peak 2	840 ug/mL
							Methyl methanesulfonate	1000 ug/mL
							Pentachlorobenzene	1000 ug/mL
...OP_RES_APPX3_00007	01/31/24		Restek, Lot A0193475		(Purchased Reagent)		3-Methylcholanthrene	2000 ug/mL
							6-Methylchrysene	2000 ug/mL
...OP_RES_APPX4_00008	01/31/25		Restek, Lot A0193163		(Purchased Reagent)		cis-Diallate	740 ug/mL
							Dimethoate	1000 ug/mL
							Disulfoton	1000 ug/mL
							Ethyl Parathion	1000 ug/mL
							Methyl parathion	1000 ug/mL
							o,o',o''-Triethylphosphorothioate	1000 ug/mL
							Phorate	1000 ug/mL
							Safrole, Total	1000 ug/mL
							Sulfotepp	1000 ug/mL
							Thionazin	1000 ug/mL
							trans-Diallate	260 ug/mL
..MSS_8270_WS_00016	10/31/23	06/08/23	MeCl2, Lot 226055	10 mL	MSS_8270_SURR_00004	1250 uL	2,4,6-Tribromophenol (Surr)	500 ppm
							2-Fluorobiphenyl (Surr)	500 ppm
							2-Fluorophenol (Surr)	500 ppm
							Nitrobenzene-d5 (Surr)	500 ppm
							p-Terphenyl-d14 (Surr)	500 ppm
							Phenol-d5 (Surr)	500 ppm
					OP_RES_APPX6_00005	1250 uL	Dibenz[a,j]acridine	250 ppm
					OP_RES_LCS1_00011	2500 uL	1,1'-Biphenyl	250 ppm
							1,2,4,5-Tetrachlorobenzene	250 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,4-Trichlorobenzene	250 ppm
							1,2-Dichlorobenzene	250 ppm
							1,2-Diphenylhydrazine	250 ppm
							1,3-Dichlorobenzene	250 ppm
							1,3-Dinitrobenzene	250 ppm
							1,4-Dichlorobenzene	250 ppm
							1,4-Dioxane	250 ppm
							1-Methylnaphthalene	250 ppm
							2,2'-oxybis[1-chloropropane]	250 ppm
							2,3,4,6-Tetrachlorophenol	250 ppm
							2,4,5-Trichlorophenol	250 ppm
							2,4,6-Trichlorophenol	250 ppm
							2,4-Dichlorophenol	250 ppm
							2,4-Dimethylphenol	250 ppm
							2,4-Dinitrophenol	500 ppm
							2,4-Dinitrotoluene	250 ppm
							2,6-Dichlorophenol	250 ppm
							2,6-Dinitrotoluene	250 ppm
							2-Chloronaphthalene	250 ppm
							2-Chlorophenol	250 ppm
							2-Methylnaphthalene	250 ppm
							2-Methylphenol	250 ppm
							2-Nitroaniline	250 ppm
							2-Nitrophenol	250 ppm
							3-Nitroaniline	250 ppm
							4,6-Dinitro-2-methylphenol	500 ppm
							4-Bromophenyl phenyl ether	250 ppm
							4-Chloro-3-methylphenol	250 ppm
							4-Chloroaniline	250 ppm
							4-Chlorophenyl phenyl ether	250 ppm
							4-Methylphenol	250 ppm
							4-Nitroaniline	250 ppm
							4-Nitrophenol	500 ppm
							Acenaphthene	250 ppm
							Acenaphthylene	250 ppm
							Acetophenone	250 ppm
							Aniline	250 ppm
							Anthracene	250 ppm
							Benzo[a]anthracene	250 ppm
							Benzo[a]pyrene	250 ppm
							Benzo[b]fluoranthene	250 ppm
							Benzo[g,h,i]perylene	250 ppm
							Benzo[k]fluoranthene	250 ppm
							Benzyl alcohol	250 ppm
							Bis(2-chloroethoxy)methane	250 ppm
							Bis(2-chloroethyl)ether	250 ppm
							Bis(2-ethylhexyl) phthalate	250 ppm
							Butyl benzyl phthalate	250 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Carbazole	250 ppm
							Chrysene	250 ppm
							Di-n-butyl phthalate	250 ppm
							Di-n-octyl phthalate	250 ppm
							Dibenz(a,h)anthracene	250 ppm
							Dibenzofuran	250 ppm
							Diethyl phthalate	250 ppm
							Dimethyl phthalate	250 ppm
							Fluoranthene	250 ppm
							Fluorene	250 ppm
							Hexachlorobenzene	250 ppm
							Hexachlorobutadiene	250 ppm
							Hexachlorocyclopentadiene	250 ppm
							Hexachloroethane	250 ppm
							Indeno[1,2,3-cd]pyrene	250 ppm
							Isophorone	250 ppm
							N-Nitrosodi-n-propylamine	250 ppm
							N-Nitrosodimethylamine	250 ppm
							N-Nitrosodiphenylamine	212.5 ppm
							Naphthalene	250 ppm
							Nitrobenzene	250 ppm
							Pentachlorophenol	500 ppm
							Phenanthrene	250 ppm
							Phenol	250 ppm
							Pyrene	250 ppm
							Pyridine	500 ppm
					OP_RES_LCS2_00009	1250 uL	3,3'-Dichlorobenzidine	250 ppm
							Benzidine	250 ppm
					OP_RES_LCSadd_00003	1250 uL	Alpha-Terpineol	250 ppm
							Dimethylformamide	250 ppm
							Octachlorostyrene	250 ppm
							Phenyl ether	250 ppm
...MSS_8270_SURR_00004	10/31/23		Sigma- Aldrich, Lot LRAC8467		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	4000 ug/mL
							2-Fluorobiphenyl (Surr)	4000 ug/mL
							2-Fluorophenol (Surr)	4000 ug/mL
							Nitrobenzene-d5 (Surr)	4000 ug/mL
							p-Terphenyl-d14 (Surr)	4000 ug/mL
							Phenol-d5 (Surr)	4000 ug/mL
...OP_RES_APPX6_00005	05/31/25		Restek, Lot A0184892		(Purchased Reagent)		Dibenz[a,j]acridine	2000 ug/mL
...OP_RES_LCS1_00011	04/30/24		Restek, Lot A0190414		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dimethyl phthalate	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	850 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
...OP_RES_LCS2_00009	02/29/24		Restek, Lot A0188589		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
...OP_RES_LCSadd_00003	02/28/26		Restek, Lot A0194427		(Purchased Reagent)		Alpha-Terpineol	2000 ug/mL
							Dimethylformamide	2000 ug/mL
							Octachlorostyrene	2000 ug/mL
							Phenyl ether	2000 ug/mL
..MSS_AB_24DNP_00007	12/09/25		Absolute, Lot 120920		(Purchased Reagent)		2,4-Dinitrophenol	1000 ug/mL
..MSS_AB_46D2MP_00004	11/19/24		Absolute, Lot 111919		(Purchased Reagent)		4,6-Dinitro-2-methylphenol	1000 ug/mL
..MSS_AB_4NP_00003	07/24/23		Absolute, Lot 072418		(Purchased Reagent)		4-Nitrophenol	1000 ug/mL
..MSS_FV8270_IS_00005	11/30/23		Restek, Lot A0166482		(Purchased Reagent)		1,4-Dichlorobenzene-d4	1000 ug/mL
							Acenaphthene-d10	1000 ug/mL
							Naphthalene-d8	1000 ug/mL
							Perylene-d12	1000 ug/mL
							Phenanthrene-d10	1000 ug/mL
							Pyrene-d10 (IS)	1000 ug/mL
MSS_RV8270_4_00027	10/31/23	06/08/23	MeCl2, Lot 226055	3 mL	MSS_BAS_WS_00012	112.5 uL	Atrazine	3.75 ppm
							Benzaldehyde	3.75 ppm
							Caprolactam	3.75 ppm
					MSS_FV8270_4_00029	750 uL	Benzidine	11.25 ppm
							1,3,5-Trinitrobenzene	3.75 ppm
							1,4-Dinitrobenzene	3.75 ppm
							1-Naphthylamine	3.75 ppm
							2-Acetylaminofluorene	3.75 ppm
							2-Naphthylamine	3.75 ppm
							2-Picoline	3.75 ppm
							2-Toluidine	3.75 ppm
							3,3'-Dimethylbenzidine	3.75 ppm
							4,4'-Methylene bis(2-chloroaniline)	3.75 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Aminobiphenyl	3.75 ppm
							4-Nitroquinoline-1-oxide	3.75 ppm
							Dibenz[a,h]acridine	3.75 ppm
							N-Nitro-o-toluidine	3.75 ppm
							N-Nitrosodi-n-butylamine	3.75 ppm
							N-Nitrosodiethylamine	3.75 ppm
							N-Nitrosomethylethylamine	3.75 ppm
							N-Nitrosomorpholine	3.75 ppm
							N-Nitrosopiperidine	3.75 ppm
							N-Nitrosopyrrolidine	3.75 ppm
							p-Dimethylamino azobenzene	3.75 ppm
							p-Phenylene diamine	3.75 ppm
							Pentachloronitrobenzene	3.75 ppm
							Phenacetin	3.75 ppm
							Pronamide	3.75 ppm
							Quinoline	3.75 ppm
							1,4-Naphthoquinone	3.75 ppm
							1-Chloronaphthalene	3.75 ppm
							7,12-Dimethylbenz(a)anthracene	3.75 ppm
							Chlorobenzilate	3.75 ppm
							Dinoseb	3.75 ppm
							Ethyl methanesulfonate	3.75 ppm
							Hexachloropropene	3.75 ppm
							Isodrin	3.75 ppm
							Isosafrole Peak 1	0.6 ppm
							Isosafrole Peak 2	3.15 ppm
							Methyl methanesulfonate	3.75 ppm
							Pentachlorobenzene	3.75 ppm
							3-Methylcholanthrene	3.75 ppm
							6-Methylchrysene	3.75 ppm
							cis-Diallate	2.775 ppm
							Dimethoate	3.75 ppm
							Disulfoton	3.75 ppm
							Ethyl Parathion	3.75 ppm
							Methyl parathion	3.75 ppm
							o,o',o''-Triethylphosphorothioate	3.75 ppm
							Phorate	3.75 ppm
							Safrole, Total	3.75 ppm
							Sulfotepp	3.75 ppm
							Thionazin	3.75 ppm
							trans-Diallate	0.975 ppm
							2,4,6-Tribromophenol (Surr)	7.5 ppm
							2-Fluorobiphenyl (Surr)	7.5 ppm
							2-Fluorophenol (Surr)	7.5 ppm
							Nitrobenzene-d5 (Surr)	7.5 ppm
							p-Terphenyl-d14 (Surr)	7.5 ppm
							Phenol-d5 (Surr)	7.5 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dibenz[a,j]acridine	3.75 ppm
							1,1'-Biphenyl	3.75 ppm
							1,2,4,5-Tetrachlorobenzene	3.75 ppm
							1,2,4-Trichlorobenzene	3.75 ppm
							1,2-Dichlorobenzene	3.75 ppm
							1,2-Diphenylhydrazine	3.75 ppm
							1,3-Dichlorobenzene	3.75 ppm
							1,3-Dinitrobenzene	3.75 ppm
							1,4-Dichlorobenzene	3.75 ppm
							1,4-Dioxane	3.75 ppm
							1-Methylnaphthalene	3.75 ppm
							2,2'-oxybis[1-chloropropane]	3.75 ppm
							2,3,4,6-Tetrachlorophenol	3.75 ppm
							2,4,5-Trichlorophenol	3.75 ppm
							2,4,6-Trichlorophenol	3.75 ppm
							2,4-Dichlorophenol	3.75 ppm
							2,4-Dimethylphenol	3.75 ppm
							2,4-Dinitrophenol	11.25 ppm
							2,4-Dinitrotoluene	3.75 ppm
							2,6-Dichlorophenol	3.75 ppm
							2,6-Dinitrotoluene	3.75 ppm
							2-Chloronaphthalene	3.75 ppm
							2-Chlorophenol	3.75 ppm
							2-Methylnaphthalene	3.75 ppm
							2-Methylphenol	3.75 ppm
							2-Nitroaniline	3.75 ppm
							2-Nitrophenol	3.75 ppm
							3-Nitroaniline	3.75 ppm
							4,6-Dinitro-2-methylphenol	7.5 ppm
							4-Bromophenyl phenyl ether	3.75 ppm
							4-Chloro-3-methylphenol	3.75 ppm
							4-Chloroaniline	3.75 ppm
							4-Chlorophenyl phenyl ether	3.75 ppm
							4-Methylphenol	3.75 ppm
							4-Nitroaniline	3.75 ppm
							4-Nitrophenol	7.5 ppm
							Acenaphthene	3.75 ppm
							Acenaphthylene	3.75 ppm
							Acetophenone	3.75 ppm
							Aniline	3.75 ppm
							Anthracene	3.75 ppm
							Benzo[a]anthracene	3.75 ppm
							Benzo[a]pyrene	3.75 ppm
							Benzo[b]fluoranthene	3.75 ppm
							Benzo[g,h,i]perylene	3.75 ppm
							Benzo[k]fluoranthene	3.75 ppm
							Benzyl alcohol	3.75 ppm
							Bis(2-chloroethoxy)methane	3.75 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Bis(2-chloroethyl)ether	3.75 ppm
							Bis(2-ethylhexyl) phthalate	3.75 ppm
							Butyl benzyl phthalate	3.75 ppm
							Carbazole	3.75 ppm
							Chrysene	3.75 ppm
							Di-n-butyl phthalate	3.75 ppm
							Di-n-octyl phthalate	3.75 ppm
							Dibenz(a,h)anthracene	3.75 ppm
							Dibenzofuran	3.75 ppm
							Diethyl phthalate	3.75 ppm
							Dimethyl phthalate	3.75 ppm
							Fluoranthene	3.75 ppm
							Fluorene	3.75 ppm
							Hexachlorobenzene	3.75 ppm
							Hexachlorobutadiene	3.75 ppm
							Hexachlorocyclopentadiene	3.75 ppm
							Hexachloroethane	3.75 ppm
							Indeno[1,2,3-cd]pyrene	3.75 ppm
							Isophorone	3.75 ppm
							N-Nitrosodi-n-propylamine	3.75 ppm
							N-Nitrosodimethylamine	3.75 ppm
							N-Nitrosodiphenylamine	3.1875 ppm
							Naphthalene	3.75 ppm
							Nitrobenzene	3.75 ppm
							Pentachlorophenol	7.5 ppm
							Phenanthrene	3.75 ppm
							Phenol	3.75 ppm
							Pyrene	3.75 ppm
							Pyridine	7.5 ppm
							3,3'-Dichlorobenzidine	3.75 ppm
							Alpha-Terpineol	3.75 ppm
							Dimethylformamide	3.75 ppm
							Octachlorostyrene	3.75 ppm
							Phenyl ether	3.75 ppm
							1,4-Dichlorobenzene-d4	5 ppm
							Acenaphthene-d10	5 ppm
							Naphthalene-d8	5 ppm
							Perylene-d12	5 ppm
							Phenanthrene-d10	5 ppm
							Pyrene-d10 (IS)	5 ppm
.MSS_BAS_WS_00012	12/08/23	06/08/23	MeCl2, Lot 226055	5 mL	OP_LCSmix2stk_00007	250 uL	Atrazine	100 ppm
							Benzaldehyde	100 ppm
							Caprolactam	100 ppm
..OP_LCSmix2stk_00007	07/31/24		Restek, Lot A0193487		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
.MSS_FV8270_4_00029	10/31/23	06/08/23	MeCl2, Lot 226055	2 mL	MSS_8270_APWS_00015	120 uL	Benzidine	45 ppm
							1,3,5-Trinitrobenzene	15 ppm

Lab Name: Eurofins Lancaster Laboratories Envir Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,4-Dinitrobenzene	15 ppm
							1-Naphthylamine	15 ppm
							2-Acetylaminofluorene	15 ppm
							2-Naphthylamine	15 ppm
							2-Picoline	15 ppm
							2-Toluidine	15 ppm
							3,3'-Dimethylbenzidine	15 ppm
							4,4'-Methylene bis(2-chloroaniline)	15 ppm
							4-Aminobiphenyl	15 ppm
							4-Nitroquinoline-1-oxide	15 ppm
							Dibenz[a,h]acridine	15 ppm
							N-Nitro-o-toluidine	15 ppm
							N-Nitrosodi-n-butylamine	15 ppm
							N-Nitrosodiethylamine	15 ppm
							N-Nitrosomethylethylamine	15 ppm
							N-Nitrosomorpholine	15 ppm
							N-Nitrosopiperidine	15 ppm
							N-Nitrosopyrrolidine	15 ppm
							p-Dimethylamino azobenzene	15 ppm
							p-Phenylene diamine	15 ppm
							Pentachloronitrobenzene	15 ppm
							Phenacetin	15 ppm
							Pronamide	15 ppm
							Quinoline	15 ppm
							1,4-Naphthoquinone	15 ppm
							1-Chloronaphthalene	15 ppm
							7,12-Dimethylbenz(a)anthracene	15 ppm
							Chlorobenzilate	15 ppm
							Dinoseb	15 ppm
							Ethyl methanesulfonate	15 ppm
							Hexachloropropene	15 ppm
							Isodrin	15 ppm
							Isosafrole Peak 1	2.4 ppm
							Isosafrole Peak 2	12.6 ppm
							Methyl methanesulfonate	15 ppm
							Pentachlorobenzene	15 ppm
							3-Methylcholanthrene	15 ppm
							6-Methylchrysene	15 ppm
							cis-Diallate	11.1 ppm
							Dimethoate	15 ppm
							Disulfoton	15 ppm
							Ethyl Parathion	15 ppm
							Methyl parathion	15 ppm
							o,o',o''-Triethylphosphorothioate	15 ppm
							Phorate	15 ppm
							Safrole, Total	15 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Sulfotepp	15 ppm
							Thionazin	15 ppm
							trans-Diallate	3.9 ppm
					MSS_8270_WS_00016	120 uL	2,4,6-Tribromophenol (Surr)	30 ppm
							2-Fluorobiphenyl (Surr)	30 ppm
							2-Fluorophenol (Surr)	30 ppm
							Nitrobenzene-d5 (Surr)	30 ppm
							p-Terphenyl-d14 (Surr)	30 ppm
							Phenol-d5 (Surr)	30 ppm
							Dibenz[a,j]acridine	15 ppm
							1,1'-Biphenyl	15 ppm
							1,2,4,5-Tetrachlorobenzene	15 ppm
							1,2,4-Trichlorobenzene	15 ppm
							1,2-Dichlorobenzene	15 ppm
							1,2-Diphenylhydrazine	15 ppm
							1,3-Dichlorobenzene	15 ppm
							1,3-Dinitrobenzene	15 ppm
							1,4-Dichlorobenzene	15 ppm
							1,4-Dioxane	15 ppm
							1-Methylnaphthalene	15 ppm
							2,2'-oxybis[1-chloropropane]	15 ppm
							2,3,4,6-Tetrachlorophenol	15 ppm
							2,4,5-Trichlorophenol	15 ppm
							2,4,6-Trichlorophenol	15 ppm
							2,4-Dichlorophenol	15 ppm
							2,4-Dimethylphenol	15 ppm
							2,4-Dinitrophenol	45 ppm
							2,4-Dinitrotoluene	15 ppm
							2,6-Dichlorophenol	15 ppm
							2,6-Dinitrotoluene	15 ppm
							2-Chloronaphthalene	15 ppm
							2-Chlorophenol	15 ppm
							2-Methylnaphthalene	15 ppm
							2-Methylphenol	15 ppm
							2-Nitroaniline	15 ppm
							2-Nitrophenol	15 ppm
							3-Nitroaniline	15 ppm
							4,6-Dinitro-2-methylphenol	30 ppm
							4-Bromophenyl phenyl ether	15 ppm
							4-Chloro-3-methylphenol	15 ppm
							4-Chloroaniline	15 ppm
							4-Chlorophenyl phenyl ether	15 ppm
							4-Methylphenol	15 ppm
							4-Nitroaniline	15 ppm
							4-Nitrophenol	30 ppm
							Acenaphthene	15 ppm
							Acenaphthylene	15 ppm
							Acetophenone	15 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Aniline	15 ppm
							Anthracene	15 ppm
							Benzo[a]anthracene	15 ppm
							Benzo[a]pyrene	15 ppm
							Benzo[b]fluoranthene	15 ppm
							Benzo[g,h,i]perylene	15 ppm
							Benzo[k]fluoranthene	15 ppm
							Benzyl alcohol	15 ppm
							Bis(2-chloroethoxy)methane	15 ppm
							Bis(2-chloroethyl)ether	15 ppm
							Bis(2-ethylhexyl) phthalate	15 ppm
							Butyl benzyl phthalate	15 ppm
							Carbazole	15 ppm
							Chrysene	15 ppm
							Di-n-butyl phthalate	15 ppm
							Di-n-octyl phthalate	15 ppm
							Dibenz(a,h)anthracene	15 ppm
							Dibenzofuran	15 ppm
							Diethyl phthalate	15 ppm
							Dimethyl phthalate	15 ppm
							Fluoranthene	15 ppm
							Fluorene	15 ppm
							Hexachlorobenzene	15 ppm
							Hexachlorobutadiene	15 ppm
							Hexachlorocyclopentadiene	15 ppm
							Hexachloroethane	15 ppm
							Indeno[1,2,3-cd]pyrene	15 ppm
							Isophorone	15 ppm
							N-Nitrosodi-n-propylamine	15 ppm
							N-Nitrosodimethylamine	15 ppm
							N-Nitrosodiphenylamine	12.75 ppm
							Naphthalene	15 ppm
							Nitrobenzene	15 ppm
							Pentachlorophenol	30 ppm
							Phenanthrene	15 ppm
							Phenol	15 ppm
							Pyrene	15 ppm
							Pyridine	30 ppm
							3,3'-Dichlorobenzidine	15 ppm
							Benzidine	45 ppm
							Alpha-Terpineol	15 ppm
							Dimethylformamide	15 ppm
							Octachlorostyrene	15 ppm
							Phenyl ether	15 ppm
					MSS_AB_24DNP_00007	30 uL	2,4-Dinitrophenol	45 ppm
					MSS_FV8270_IS_00005	40 uL	1,4-Dichlorobenzene-d4	20 ppm
							Acenaphthene-d10	20 ppm
							Naphthalene-d8	20 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perylene-d12	20 ppm
							Phenanthrene-d10	20 ppm
							Pyrene-d10 (IS)	20 ppm
..MSS_8270_APWS_00015	12/08/23	06/08/23	MeCl2, Lot 226055	10 mL	MSS_AB_BZIDIN_00011	1000 uL	Benzidine	500 ppm
					OP_RES_APPX1_00010	2500 uL	1,3,5-Trinitrobenzene	250 ppm
							1,4-Dinitrobenzene	250 ppm
							1-Naphthylamine	250 ppm
							2-Acetylaminofluorene	250 ppm
							2-Naphthylamine	250 ppm
							2-Picoline	250 ppm
							2-Toluidine	250 ppm
							3,3'-Dimethylbenzidine	250 ppm
							4,4'-Methylene bis(2-chloroaniline)	250 ppm
							4-Aminobiphenyl	250 ppm
							4-Nitroquinoline-1-oxide	250 ppm
							Dibenz[a,h]acridine	250 ppm
							N-Nitro-o-toluidine	250 ppm
							N-Nitrosodi-n-butylamine	250 ppm
							N-Nitrosodiethylamine	250 ppm
							N-Nitrosomethylethylamine	250 ppm
							N-Nitrosomorpholine	250 ppm
							N-Nitrosopiperidine	250 ppm
							N-Nitrosopyrrolidine	250 ppm
							p-Dimethylamino azobenzene	250 ppm
							p-Phenylene diamine	250 ppm
							Pentachloronitrobenzene	250 ppm
							Phenacetin	250 ppm
							Pronamide	250 ppm
							Quinoline	250 ppm
					OP_RES_APPX2_00011	2500 uL	1,4-Naphthoquinone	250 ppm
							1-Chloronaphthalene	250 ppm
							7,12-Dimethylbenz(a)anthracene	250 ppm
							Chlorobenzilate	250 ppm
							Dinoseb	250 ppm
							Ethyl methanesulfonate	250 ppm
							Hexachloropropene	250 ppm
							Isodrin	250 ppm
							Isosafrole Peak 1	40 ppm
							Isosafrole Peak 2	210 ppm
							Methyl methanesulfonate	250 ppm
							Pentachlorobenzene	250 ppm
					OP_RES_APPX3_00007	1250 uL	3-Methylcholanthrene	250 ppm
							6-Methylchrysene	250 ppm
					OP_RES_APPX4_00008	2500 uL	cis-Diallate	185 ppm
							Dimethoate	250 ppm
							Disulfoton	250 ppm
							Ethyl Parathion	250 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Methyl parathion	250 ppm
							o,o',o''-Triethylphosphorothioate	250 ppm
							Phorate	250 ppm
							Safrole, Total	250 ppm
							Sulfotepp	250 ppm
							Thionazin	250 ppm
							trans-Diallate	65 ppm
...MSS_AB_BZIDIN_00011	10/27/25		Absolute, Lot 102722		(Purchased Reagent)		Benzidine	5000 ug/mL
...OP_RES_APPX1_00010	02/29/24		Restek, Lot A0194294		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,4-Dinitrobenzene	1000 ug/mL
							1-Naphthylamine	1000 ug/mL
							2-Acetylaminofluorene	1000 ug/mL
							2-Naphthylamine	1000 ug/mL
							2-Picoline	1000 ug/mL
							2-Toluidine	1000 ug/mL
							3,3'-Dimethylbenzidine	1000 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	1000 ug/mL
							4-Aminobiphenyl	1000 ug/mL
							4-Nitroquinoline-1-oxide	1000 ug/mL
							Dibenz[a,h]acridine	1000 ug/mL
							N-Nitro-o-toluidine	1000 ug/mL
							N-Nitrosodi-n-butylamine	1000 ug/mL
							N-Nitrosodiethylamine	1000 ug/mL
							N-Nitrosomethylethylamine	1000 ug/mL
							N-Nitrosomorpholine	1000 ug/mL
							N-Nitrosopiperidine	1000 ug/mL
							N-Nitrosopyrrolidine	1000 ug/mL
							p-Dimethylamino azobenzene	1000 ug/mL
							p-Phenylene diamine	1000 ug/mL
							Pentachloronitrobenzene	1000 ug/mL
							Phenacetin	1000 ug/mL
							Pronamide	1000 ug/mL
							Quinoline	1000 ug/mL
...OP_RES_APPX2_00011	01/31/24		Restek, Lot A0193498		(Purchased Reagent)		1,4-Naphthoquinone	1000 ug/mL
							1-Chloronaphthalene	1000 ug/mL
							7,12-Dimethylbenz(a)anthracene	1000 ug/mL
							Chlorobenzilate	1000 ug/mL
							Dinoseb	1000 ug/mL
							Ethyl methanesulfonate	1000 ug/mL
							Hexachloropropene	1000 ug/mL
							Isodrin	1000 ug/mL
							Isosafrole Peak 1	160 ug/mL
							Isosafrole Peak 2	840 ug/mL
							Methyl methanesulfonate	1000 ug/mL
							Pentachlorobenzene	1000 ug/mL
...OP_RES_APPX3_00007	01/31/24		Restek, Lot A0193475		(Purchased Reagent)		3-Methylcholanthrene	2000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							6-Methylchrysene	2000 ug/mL
...OP_RES_APPX4_00008	01/31/25		Restek, Lot A0193163		(Purchased Reagent)		cis-Diallate	740 ug/mL
							Dimethoate	1000 ug/mL
							Disulfoton	1000 ug/mL
							Ethyl Parathion	1000 ug/mL
							Methyl parathion	1000 ug/mL
							o,o',o''-Triethylphosphorothioate	1000 ug/mL
							Phorate	1000 ug/mL
							Safrole, Total	1000 ug/mL
							Sulfotepp	1000 ug/mL
							Thionazin	1000 ug/mL
							trans-Diallate	260 ug/mL
..MSS_8270_WS_00016	10/31/23	06/08/23	MeCl2, Lot 226055	10 mL	MSS_8270_SURR_00004	1250 uL	2,4,6-Tribromophenol (Surr)	500 ppm
							2-Fluorobiphenyl (Surr)	500 ppm
							2-Fluorophenol (Surr)	500 ppm
							Nitrobenzene-d5 (Surr)	500 ppm
							p-Terphenyl-d14 (Surr)	500 ppm
							Phenol-d5 (Surr)	500 ppm
					OP_RES_APPX6_00005	1250 uL	Dibenz[a,j]acridine	250 ppm
					OP_RES_LCS1_00011	2500 uL	1,1'-Biphenyl	250 ppm
							1,2,4,5-Tetrachlorobenzene	250 ppm
							1,2,4-Trichlorobenzene	250 ppm
							1,2-Dichlorobenzene	250 ppm
							1,2-Diphenylhydrazine	250 ppm
							1,3-Dichlorobenzene	250 ppm
							1,3-Dinitrobenzene	250 ppm
							1,4-Dichlorobenzene	250 ppm
							1,4-Dioxane	250 ppm
							1-Methylnaphthalene	250 ppm
							2,2'-oxybis[1-chloropropane]	250 ppm
							2,3,4,6-Tetrachlorophenol	250 ppm
							2,4,5-Trichlorophenol	250 ppm
							2,4,6-Trichlorophenol	250 ppm
							2,4-Dichlorophenol	250 ppm
							2,4-Dimethylphenol	250 ppm
							2,4-Dinitrophenol	500 ppm
							2,4-Dinitrotoluene	250 ppm
							2,6-Dichlorophenol	250 ppm
							2,6-Dinitrotoluene	250 ppm
							2-Chloronaphthalene	250 ppm
							2-Chlorophenol	250 ppm
							2-Methylnaphthalene	250 ppm
							2-Methylphenol	250 ppm
							2-Nitroaniline	250 ppm
							2-Nitrophenol	250 ppm
							3-Nitroaniline	250 ppm
							4,6-Dinitro-2-methylphenol	500 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Bromophenyl phenyl ether	250 ppm
							4-Chloro-3-methylphenol	250 ppm
							4-Chloroaniline	250 ppm
							4-Chlorophenyl phenyl ether	250 ppm
							4-Methylphenol	250 ppm
							4-Nitroaniline	250 ppm
							4-Nitrophenol	500 ppm
							Acenaphthene	250 ppm
							Acenaphthylene	250 ppm
							Acetophenone	250 ppm
							Aniline	250 ppm
							Anthracene	250 ppm
							Benzo[a]anthracene	250 ppm
							Benzo[a]pyrene	250 ppm
							Benzo[b]fluoranthene	250 ppm
							Benzo[g,h,i]perylene	250 ppm
							Benzo[k]fluoranthene	250 ppm
							Benzyl alcohol	250 ppm
							Bis(2-chloroethoxy)methane	250 ppm
							Bis(2-chloroethyl)ether	250 ppm
							Bis(2-ethylhexyl) phthalate	250 ppm
							Butyl benzyl phthalate	250 ppm
							Carbazole	250 ppm
							Chrysene	250 ppm
							Di-n-butyl phthalate	250 ppm
							Di-n-octyl phthalate	250 ppm
							Dibenz(a,h)anthracene	250 ppm
							Dibenzofuran	250 ppm
							Diethyl phthalate	250 ppm
							Dimethyl phthalate	250 ppm
							Fluoranthene	250 ppm
							Fluorene	250 ppm
							Hexachlorobenzene	250 ppm
							Hexachlorobutadiene	250 ppm
							Hexachlorocyclopentadiene	250 ppm
							Hexachloroethane	250 ppm
							Indeno[1,2,3-cd]pyrene	250 ppm
							Isophorone	250 ppm
							N-Nitrosodi-n-propylamine	250 ppm
							N-Nitrosodimethylamine	250 ppm
							N-Nitrosodiphenylamine	212.5 ppm
							Naphthalene	250 ppm
							Nitrobenzene	250 ppm
							Pentachlorophenol	500 ppm
							Phenanthrene	250 ppm
							Phenol	250 ppm
							Pyrene	250 ppm
							Pyridine	500 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					OP_RES_LCS2_00009	1250 uL	3,3'-Dichlorobenzidine	250 ppm
							Benzidine	250 ppm
					OP_RES_LCSadd_00003	1250 uL	Alpha-Terpineol	250 ppm
							Dimethylformamide	250 ppm
							Octachlorostyrene	250 ppm
							Phenyl ether	250 ppm
...MSS_8270_SURR_00004	10/31/23	Sigma- Aldrich, Lot LRAC8467			(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	4000 ug/mL
							2-Fluorobiphenyl (Surr)	4000 ug/mL
							2-Fluorophenol (Surr)	4000 ug/mL
							Nitrobenzene-d5 (Surr)	4000 ug/mL
							p-Terphenyl-d14 (Surr)	4000 ug/mL
							Phenol-d5 (Surr)	4000 ug/mL
...OP_RES_APPX6_00005	05/31/25	Restek, Lot A0184892			(Purchased Reagent)		Dibenz[a,j]acridine	2000 ug/mL
...OP_RES_LCS1_00011	04/30/24	Restek, Lot A0190414			(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	850 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
...OP_RES_LCS2_00009	02/29/24		Restek, Lot A0188589		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
...OP_RES_LCSadd_00003	02/28/26		Restek, Lot A0194427		(Purchased Reagent)		Alpha-Terpineol	2000 ug/mL
							Dimethylformamide	2000 ug/mL
							Octachlorostyrene	2000 ug/mL
							Phenyl ether	2000 ug/mL
..MSS_AB_24DNP_00007	12/09/25		Absolute, Lot 120920		(Purchased Reagent)		2,4-Dinitrophenol	1000 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..MSS_FV8270_IS_00005	11/30/23		Restek, Lot A0166482		(Purchased Reagent)		1,4-Dichlorobenzene-d4	1000 ug/mL
							Acenaphthene-d10	1000 ug/mL
							Naphthalene-d8	1000 ug/mL
							Perylene-d12	1000 ug/mL
							Phenanthrene-d10	1000 ug/mL
							Pyrene-d10 (IS)	1000 ug/mL
MSS_RV8270_5_00037	10/31/23	06/08/23	MeCl2, Lot 226055	3 mL	MSS_BAS_WS_00012	225 uL	Atrazine	7.5 ppm
							Benzaldehyde	7.5 ppm
							Caprolactam	7.5 ppm
					MSS_FV8270_5_00036	750 uL	Benzidine	22.5 ppm
							1,3,5-Trinitrobenzene	7.5 ppm
							1,4-Dinitrobenzene	7.5 ppm
							1-Naphthylamine	7.5 ppm
							2-Acetylaminofluorene	7.5 ppm
							2-Naphthylamine	7.5 ppm
							2-Picoline	7.5 ppm
							2-Toluidine	7.5 ppm
							3,3'-Dimethylbenzidine	7.5 ppm
							4,4'-Methylene bis(2-chloroaniline)	7.5 ppm
							4-Aminobiphenyl	7.5 ppm
							4-Nitroquinoline-1-oxide	7.5 ppm
							Dibenz[a,h]acridine	7.5 ppm
							N-Nitro-o-toluidine	7.5 ppm
							N-Nitrosodi-n-butylamine	7.5 ppm
							N-Nitrosodiethylamine	7.5 ppm
							N-Nitrosomethylethylamine	7.5 ppm
							N-Nitrosomorpholine	7.5 ppm
							N-Nitrosopiperidine	7.5 ppm
							N-Nitrosopyrrolidine	7.5 ppm
							p-Dimethylamino azobenzene	7.5 ppm
							p-Phenylene diamine	7.5 ppm
							Pentachloronitrobenzene	7.5 ppm
							Phenacetin	7.5 ppm
							Pronamide	7.5 ppm
							Quinoline	7.5 ppm
							1,4-Naphthoquinone	7.5 ppm
							1-Chloronaphthalene	7.5 ppm
							7,12-Dimethylbenz(a)anthracene	7.5 ppm
							Chlorobenzilate	7.5 ppm
							Dinoseb	7.5 ppm
							Ethyl methanesulfonate	7.5 ppm
							Hexachloropropene	7.5 ppm
							Isodrin	7.5 ppm
							Isosafrole Peak 1	1.2 ppm
							Isosafrole Peak 2	6.3 ppm
							Methyl methanesulfonate	7.5 ppm
							Pentachlorobenzene	7.5 ppm

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							3-Methylcholanthrene	7.5 ppm
							6-Methylchrysene	7.5 ppm
							cis-Diallate	5.55 ppm
							Dimethoate	7.5 ppm
							Disulfoton	7.5 ppm
							Ethyl Parathion	7.5 ppm
							Methyl parathion	7.5 ppm
							o,o',o''-Triethylphosphorothioate	7.5 ppm
							Phorate	7.5 ppm
							Safrole, Total	7.5 ppm
							Sulfotepp	7.5 ppm
							Thionazin	7.5 ppm
							trans-Diallate	1.95 ppm
							2,4,6-Tribromophenol (Surr)	15 ppm
							2-Fluorobiphenyl (Surr)	15 ppm
							2-Fluorophenol (Surr)	15 ppm
							Nitrobenzene-d5 (Surr)	15 ppm
							p-Terphenyl-d14 (Surr)	15 ppm
							Phenol-d5 (Surr)	15 ppm
							Dibenz[a,j]acridine	7.5 ppm
							1,1'-Biphenyl	7.5 ppm
							1,2,4,5-Tetrachlorobenzene	7.5 ppm
							1,2,4-Trichlorobenzene	7.5 ppm
							1,2-Dichlorobenzene	7.5 ppm
							1,2-Diphenylhydrazine	7.5 ppm
							1,3-Dichlorobenzene	7.5 ppm
							1,3-Dinitrobenzene	7.5 ppm
							1,4-Dichlorobenzene	7.5 ppm
							1,4-Dioxane	7.5 ppm
							1-Methylnaphthalene	7.5 ppm
							2,2'-oxybis[1-chloropropane]	7.5 ppm
							2,3,4,6-Tetrachlorophenol	7.5 ppm
							2,4,5-Trichlorophenol	7.5 ppm
							2,4,6-Trichlorophenol	7.5 ppm
							2,4-Dichlorophenol	7.5 ppm
							2,4-Dimethylphenol	7.5 ppm
							2,4-Dinitrophenol	17.5 ppm
							2,4-Dinitrotoluene	7.5 ppm
							2,6-Dichlorophenol	7.5 ppm
							2,6-Dinitrotoluene	7.5 ppm
							2-Chloronaphthalene	7.5 ppm
							2-Chlorophenol	7.5 ppm
							2-Methylnaphthalene	7.5 ppm
							2-Methylphenol	7.5 ppm
							2-Nitroaniline	7.5 ppm
							2-Nitrophenol	7.5 ppm
							3-Nitroaniline	7.5 ppm

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4,6-Dinitro-2-methylphenol	15 ppm
							4-Bromophenyl phenyl ether	7.5 ppm
							4-Chloro-3-methylphenol	7.5 ppm
							4-Chloroaniline	7.5 ppm
							4-Chlorophenyl phenyl ether	7.5 ppm
							4-Methylphenol	7.5 ppm
							4-Nitroaniline	7.5 ppm
							4-Nitrophenol	15 ppm
							Acenaphthene	7.5 ppm
							Acenaphthylene	7.5 ppm
							Acetophenone	7.5 ppm
							Aniline	7.5 ppm
							Anthracene	7.5 ppm
							Benzo[a]anthracene	7.5 ppm
							Benzo[a]pyrene	7.5 ppm
							Benzo[b]fluoranthene	7.5 ppm
							Benzo[g,h,i]perylene	7.5 ppm
							Benzo[k]fluoranthene	7.5 ppm
							Benzyl alcohol	7.5 ppm
							Bis(2-chloroethoxy)methane	7.5 ppm
							Bis(2-chloroethyl)ether	7.5 ppm
							Bis(2-ethylhexyl) phthalate	7.5 ppm
							Butyl benzyl phthalate	7.5 ppm
							Carbazole	7.5 ppm
							Chrysene	7.5 ppm
							Di-n-butyl phthalate	7.5 ppm
							Di-n-octyl phthalate	7.5 ppm
							Dibenz(a,h)anthracene	7.5 ppm
							Dibenzofuran	7.5 ppm
							Diethyl phthalate	7.5 ppm
							Dimethyl phthalate	7.5 ppm
							Fluoranthene	7.5 ppm
							Fluorene	7.5 ppm
							Hexachlorobenzene	7.5 ppm
							Hexachlorobutadiene	7.5 ppm
							Hexachlorocyclopentadiene	7.5 ppm
							Hexachloroethane	7.5 ppm
							Indeno[1,2,3-cd]pyrene	7.5 ppm
							Isophorone	7.5 ppm
							N-Nitrosodi-n-propylamine	7.5 ppm
							N-Nitrosodimethylamine	7.5 ppm
							N-Nitrosodiphenylamine	6.375 ppm
							Naphthalene	7.5 ppm
							Nitrobenzene	7.5 ppm
							Pentachlorophenol	15 ppm
							Phenanthrene	7.5 ppm
							Phenol	7.5 ppm
							Pyrene	7.5 ppm

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Pyridine	15 ppm
							3,3'-Dichlorobenzidine	7.5 ppm
							Alpha-Terpineol	7.5 ppm
							Dimethylformamide	7.5 ppm
							Octachlorostyrene	7.5 ppm
							Phenyl ether	7.5 ppm
							1,4-Dichlorobenzene-d4	5 ppm
							Acenaphthene-d10	5 ppm
							Naphthalene-d8	5 ppm
							Perylene-d12	5 ppm
							Phenanthrene-d10	5 ppm
							Pyrene-d10 (IS)	5 ppm
.MSS_BAS_WS_00012	12/08/23	06/08/23	MeCl2, Lot 226055	5 mL	OP_LCSmix2stk_00007	250 uL	Atrazine	100 ppm
							Benzaldehyde	100 ppm
							Caprolactam	100 ppm
..OP_LCSmix2stk_00007	07/31/24		Restek, Lot A0193487		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
.MSS_FV8270_5_00036	10/31/23	06/08/23	MeCl2, Lot 226055	5 mL	MSS_8270_APWS_00015	600 uL	Benzidine	90 ppm
							1,3,5-Trinitrobenzene	30 ppm
							1,4-Dinitrobenzene	30 ppm
							1-Naphthylamine	30 ppm
							2-Acetylaminofluorene	30 ppm
							2-Naphthylamine	30 ppm
							2-Picoline	30 ppm
							2-Toluidine	30 ppm
							3,3'-Dimethylbenzidine	30 ppm
							4,4'-Methylene bis(2-chloroaniline)	30 ppm
							4-Aminobiphenyl	30 ppm
							4-Nitroquinoline-1-oxide	30 ppm
							Dibenz[a,h]acridine	30 ppm
							N-Nitro-o-toluidine	30 ppm
							N-Nitrosodi-n-butylamine	30 ppm
							N-Nitrosodiethylamine	30 ppm
							N-Nitrosomethylethylamine	30 ppm
							N-Nitrosomorpholine	30 ppm
							N-Nitrosopiperidine	30 ppm
							N-Nitrosopyrrolidine	30 ppm
							p-Dimethylamino azobenzene	30 ppm
							p-Phenylene diamine	30 ppm
							Pentachloronitrobenzene	30 ppm
							Phenacetin	30 ppm
							Pronamide	30 ppm
							Quinoline	30 ppm
							1,4-Naphthoquinone	30 ppm
							1-Chloronaphthalene	30 ppm
							7,12-Dimethylbenz(a)anthracene	30 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chlorobenzilate	30 ppm
							Dinoseb	30 ppm
							Ethyl methanesulfonate	30 ppm
							Hexachloropropene	30 ppm
							Isodrin	30 ppm
							Isosafrole Peak 1	4.8 ppm
							Isosafrole Peak 2	25.2 ppm
							Methyl methanesulfonate	30 ppm
							Pentachlorobenzene	30 ppm
							3-Methylcholanthrene	30 ppm
							6-Methylchrysene	30 ppm
							cis-Diallate	22.2 ppm
							Dimethoate	30 ppm
							Disulfoton	30 ppm
							Ethyl Parathion	30 ppm
							Methyl parathion	30 ppm
							o,o',o''-Triethylphosphorothioate	30 ppm
							Phorate	30 ppm
							Safrole, Total	30 ppm
							Sulfotepp	30 ppm
							Thionazin	30 ppm
							trans-Diallate	7.8 ppm
					MSS_8270_WS_00016	600 uL	2,4,6-Tribromophenol (Surr)	60 ppm
							2-Fluorobiphenyl (Surr)	60 ppm
							2-Fluorophenol (Surr)	60 ppm
							Nitrobenzene-d5 (Surr)	60 ppm
							p-Terphenyl-d14 (Surr)	60 ppm
							Phenol-d5 (Surr)	60 ppm
							Dibenz[a,j]acridine	30 ppm
							1,1'-Biphenyl	30 ppm
							1,2,4,5-Tetrachlorobenzene	30 ppm
							1,2,4-Trichlorobenzene	30 ppm
							1,2-Dichlorobenzene	30 ppm
							1,2-Diphenylhydrazine	30 ppm
							1,3-Dichlorobenzene	30 ppm
							1,3-Dinitrobenzene	30 ppm
							1,4-Dichlorobenzene	30 ppm
							1,4-Dioxane	30 ppm
							1-Methylnaphthalene	30 ppm
							2,2'-oxybis[1-chloropropane]	30 ppm
							2,3,4,6-Tetrachlorophenol	30 ppm
							2,4,5-Trichlorophenol	30 ppm
							2,4,6-Trichlorophenol	30 ppm
							2,4-Dichlorophenol	30 ppm
							2,4-Dimethylphenol	30 ppm
							2,4-Dinitrophenol	70 ppm
							2,4-Dinitrotoluene	30 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,6-Dichlorophenol	30 ppm
							2,6-Dinitrotoluene	30 ppm
							2-Chloronaphthalene	30 ppm
							2-Chlorophenol	30 ppm
							2-Methylnaphthalene	30 ppm
							2-Methylphenol	30 ppm
							2-Nitroaniline	30 ppm
							2-Nitrophenol	30 ppm
							3-Nitroaniline	30 ppm
							4,6-Dinitro-2-methylphenol	60 ppm
							4-Bromophenyl phenyl ether	30 ppm
							4-Chloro-3-methylphenol	30 ppm
							4-Chloroaniline	30 ppm
							4-Chlorophenyl phenyl ether	30 ppm
							4-Methylphenol	30 ppm
							4-Nitroaniline	30 ppm
							4-Nitrophenol	60 ppm
							Acenaphthene	30 ppm
							Acenaphthylene	30 ppm
							Acetophenone	30 ppm
							Aniline	30 ppm
							Anthracene	30 ppm
							Benzo[a]anthracene	30 ppm
							Benzo[a]pyrene	30 ppm
							Benzo[b]fluoranthene	30 ppm
							Benzo[g,h,i]perylene	30 ppm
							Benzo[k]fluoranthene	30 ppm
							Benzyl alcohol	30 ppm
							Bis(2-chloroethoxy)methane	30 ppm
							Bis(2-chloroethyl)ether	30 ppm
							Bis(2-ethylhexyl) phthalate	30 ppm
							Butyl benzyl phthalate	30 ppm
							Carbazole	30 ppm
							Chrysene	30 ppm
							Di-n-butyl phthalate	30 ppm
							Di-n-octyl phthalate	30 ppm
							Dibenz(a,h)anthracene	30 ppm
							Dibenzofuran	30 ppm
							Diethyl phthalate	30 ppm
							Dimethyl phthalate	30 ppm
							Fluoranthene	30 ppm
							Fluorene	30 ppm
							Hexachlorobenzene	30 ppm
							Hexachlorobutadiene	30 ppm
							Hexachlorocyclopentadiene	30 ppm
							Hexachloroethane	30 ppm
							Indeno[1,2,3-cd]pyrene	30 ppm
							Isophorone	30 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Nitrosodi-n-propylamine	30 ppm
							N-Nitrosodimethylamine	30 ppm
							N-Nitrosodiphenylamine	25.5 ppm
							Naphthalene	30 ppm
							Nitrobenzene	30 ppm
							Pentachlorophenol	60 ppm
							Phenanthrene	30 ppm
							Phenol	30 ppm
							Pyrene	30 ppm
							Pyridine	60 ppm
							3,3'-Dichlorobenzidine	30 ppm
							Benzidine	90 ppm
							Alpha-Terpineol	30 ppm
							Dimethylformamide	30 ppm
							Octachlorostyrene	30 ppm
							Phenyl ether	30 ppm
					MSS_AB_24DNP_00007	50 uL	2,4-Dinitrophenol	70 ppm
					MSS_FV8270_IS_00005	100 uL	1,4-Dichlorobenzene-d4	20 ppm
							Acenaphthene-d10	20 ppm
							Naphthalene-d8	20 ppm
							Perylene-d12	20 ppm
							Phenanthrene-d10	20 ppm
							Pyrene-d10 (IS)	20 ppm
..MSS_8270_APWS_00015	12/08/23	06/08/23	MeCl2, Lot 226055	10 mL	MSS_AB_BZIDIN_00011	1000 uL	Benzidine	500 ppm
					OP_RES_APPX1_00010	2500 uL	1,3,5-Trinitrobenzene	250 ppm
							1,4-Dinitrobenzene	250 ppm
							1-Naphthylamine	250 ppm
							2-Acetylaminofluorene	250 ppm
							2-Naphthylamine	250 ppm
							2-Picoline	250 ppm
							2-Toluidine	250 ppm
							3,3'-Dimethylbenzidine	250 ppm
							4,4'-Methylene bis(2-chloroaniline)	250 ppm
							4-Aminobiphenyl	250 ppm
							4-Nitroquinoline-1-oxide	250 ppm
							Dibenz[a,h]acridine	250 ppm
							N-Nitro-o-toluidine	250 ppm
							N-Nitrosodi-n-butylamine	250 ppm
							N-Nitrosodiethylamine	250 ppm
							N-Nitrosomethylethylamine	250 ppm
							N-Nitrosomorpholine	250 ppm
							N-Nitrosopiperidine	250 ppm
							N-Nitrosopyrrolidine	250 ppm
							p-Dimethylamino azobenzene	250 ppm
							p-Phenylene diamine	250 ppm
							Pentachloronitrobenzene	250 ppm
							Phenacetin	250 ppm

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Pronamide	250 ppm
							Quinoline	250 ppm
					OP_RES_APPX2_00011	2500 uL	1,4-Naphthoquinone	250 ppm
							1-Chloronaphthalene	250 ppm
							7,12-Dimethylbenz(a)anthracene	250 ppm
							Chlorobenzilate	250 ppm
							Dinoseb	250 ppm
							Ethyl methanesulfonate	250 ppm
							Hexachloropropene	250 ppm
							Isodrin	250 ppm
							Isosafrole Peak 1	40 ppm
							Isosafrole Peak 2	210 ppm
							Methyl methanesulfonate	250 ppm
							Pentachlorobenzene	250 ppm
					OP_RES_APPX3_00007	1250 uL	3-Methylcholanthrene	250 ppm
							6-Methylchrysene	250 ppm
					OP_RES_APPX4_00008	2500 uL	cis-Diallate	185 ppm
							Dimethoate	250 ppm
							Disulfoton	250 ppm
							Ethyl Parathion	250 ppm
							Methyl parathion	250 ppm
							o,o',o''-Triethylphosphorothioate	250 ppm
							Phorate	250 ppm
							Safrole, Total	250 ppm
							Sulfotepp	250 ppm
							Thionazin	250 ppm
							trans-Diallate	65 ppm
...MSS_AB_BZIDIN_00011	10/27/25		Absolute, Lot 102722		(Purchased Reagent)		Benzidine	5000 ug/mL
...OP_RES_APPX1_00010	02/29/24		Restek, Lot A0194294		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,4-Dinitrobenzene	1000 ug/mL
							1-Naphthylamine	1000 ug/mL
							2-Acetylaminofluorene	1000 ug/mL
							2-Naphthylamine	1000 ug/mL
							2-Picoline	1000 ug/mL
							2-Toluidine	1000 ug/mL
							3,3'-Dimethylbenzidine	1000 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	1000 ug/mL
							4-Aminobiphenyl	1000 ug/mL
							4-Nitroquinoline-1-oxide	1000 ug/mL
							Dibenz[a,h]acridine	1000 ug/mL
							N-Nitro-o-toluidine	1000 ug/mL
							N-Nitrosodi-n-butylamine	1000 ug/mL
							N-Nitrosodiethylamine	1000 ug/mL
							N-Nitrosomethylethylamine	1000 ug/mL
							N-Nitrosomorpholine	1000 ug/mL
							N-Nitrosopiperidine	1000 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Nitrosopyrrolidine	1000 ug/mL
							p-Dimethylamino azobenzene	1000 ug/mL
							p-Phenylene diamine	1000 ug/mL
							Pentachloronitrobenzene	1000 ug/mL
							Phenacetin	1000 ug/mL
							Pronamide	1000 ug/mL
							Quinoline	1000 ug/mL
...OP_RES_APPX2_00011	01/31/24		Restek, Lot A0193498		(Purchased Reagent)		1,4-Naphthoquinone	1000 ug/mL
							1-Chloronaphthalene	1000 ug/mL
							7,12-Dimethylbenz(a)anthracene	1000 ug/mL
							Chlorobenzilate	1000 ug/mL
							Dinoseb	1000 ug/mL
							Ethyl methanesulfonate	1000 ug/mL
							Hexachloropropene	1000 ug/mL
							Isodrin	1000 ug/mL
							Isosafrole Peak 1	160 ug/mL
							Isosafrole Peak 2	840 ug/mL
							Methyl methanesulfonate	1000 ug/mL
							Pentachlorobenzene	1000 ug/mL
...OP_RES_APPX3_00007	01/31/24		Restek, Lot A0193475		(Purchased Reagent)		3-Methylcholanthrene	2000 ug/mL
							6-Methylchrysene	2000 ug/mL
...OP_RES_APPX4_00008	01/31/25		Restek, Lot A0193163		(Purchased Reagent)		cis-Diallate	740 ug/mL
							Dimethoate	1000 ug/mL
							Disulfoton	1000 ug/mL
							Ethyl Parathion	1000 ug/mL
							Methyl parathion	1000 ug/mL
							o,o',o''-Triethylphosphorothioate	1000 ug/mL
							Phorate	1000 ug/mL
							Safrole, Total	1000 ug/mL
							Sulfotepp	1000 ug/mL
							Thionazin	1000 ug/mL
							trans-Diallate	260 ug/mL
..MSS_8270_WS_00016	10/31/23	06/08/23	MeCl2, Lot 226055	10 mL	MSS_8270_SURR_00004	1250 uL	2,4,6-Tribromophenol (Surr)	500 ppm
							2-Fluorobiphenyl (Surr)	500 ppm
							2-Fluorophenol (Surr)	500 ppm
							Nitrobenzene-d5 (Surr)	500 ppm
							p-Terphenyl-d14 (Surr)	500 ppm
							Phenol-d5 (Surr)	500 ppm
					OP_RES_APPX6_00005	1250 uL	Dibenz[a,j]acridine	250 ppm
					OP_RES_LCS1_00011	2500 uL	1,1'-Biphenyl	250 ppm
							1,2,4,5-Tetrachlorobenzene	250 ppm
							1,2,4-Trichlorobenzene	250 ppm
							1,2-Dichlorobenzene	250 ppm
							1,2-Diphenylhydrazine	250 ppm
							1,3-Dichlorobenzene	250 ppm
							1,3-Dinitrobenzene	250 ppm
							1,4-Dichlorobenzene	250 ppm

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,4-Dioxane	250 ppm
							1-Methylnaphthalene	250 ppm
							2,2'-oxybis[1-chloropropane]	250 ppm
							2,3,4,6-Tetrachlorophenol	250 ppm
							2,4,5-Trichlorophenol	250 ppm
							2,4,6-Trichlorophenol	250 ppm
							2,4-Dichlorophenol	250 ppm
							2,4-Dimethylphenol	250 ppm
							2,4-Dinitrophenol	500 ppm
							2,4-Dinitrotoluene	250 ppm
							2,6-Dichlorophenol	250 ppm
							2,6-Dinitrotoluene	250 ppm
							2-Chloronaphthalene	250 ppm
							2-Chlorophenol	250 ppm
							2-Methylnaphthalene	250 ppm
							2-Methylphenol	250 ppm
							2-Nitroaniline	250 ppm
							2-Nitrophenol	250 ppm
							3-Nitroaniline	250 ppm
							4,6-Dinitro-2-methylphenol	500 ppm
							4-Bromophenyl phenyl ether	250 ppm
							4-Chloro-3-methylphenol	250 ppm
							4-Chloroaniline	250 ppm
							4-Chlorophenyl phenyl ether	250 ppm
							4-Methylphenol	250 ppm
							4-Nitroaniline	250 ppm
							4-Nitrophenol	500 ppm
							Acenaphthene	250 ppm
							Acenaphthylene	250 ppm
							Acetophenone	250 ppm
							Aniline	250 ppm
							Anthracene	250 ppm
							Benzo[a]anthracene	250 ppm
							Benzo[a]pyrene	250 ppm
							Benzo[b]fluoranthene	250 ppm
							Benzo[g,h,i]perylene	250 ppm
							Benzo[k]fluoranthene	250 ppm
							Benzyl alcohol	250 ppm
							Bis(2-chloroethoxy)methane	250 ppm
							Bis(2-chloroethyl)ether	250 ppm
							Bis(2-ethylhexyl) phthalate	250 ppm
							Butyl benzyl phthalate	250 ppm
							Carbazole	250 ppm
							Chrysene	250 ppm
							Di-n-butyl phthalate	250 ppm
							Di-n-octyl phthalate	250 ppm
							Dibenz(a,h)anthracene	250 ppm
							Dibenzofuran	250 ppm

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Diethyl phthalate	250 ppm
							Dimethyl phthalate	250 ppm
							Fluoranthene	250 ppm
							Fluorene	250 ppm
							Hexachlorobenzene	250 ppm
							Hexachlorobutadiene	250 ppm
							Hexachlorocyclopentadiene	250 ppm
							Hexachloroethane	250 ppm
							Indeno[1,2,3-cd]pyrene	250 ppm
							Isophorone	250 ppm
							N-Nitrosodi-n-propylamine	250 ppm
							N-Nitrosodimethylamine	250 ppm
							N-Nitrosodiphenylamine	212.5 ppm
							Naphthalene	250 ppm
							Nitrobenzene	250 ppm
							Pentachlorophenol	500 ppm
							Phenanthrene	250 ppm
							Phenol	250 ppm
							Pyrene	250 ppm
							Pyridine	500 ppm
					OP_RES_LCS2_00009	1250 uL	3,3'-Dichlorobenzidine	250 ppm
							Benzidine	250 ppm
					OP_RES_LCSadd_00003	1250 uL	Alpha-Terpineol	250 ppm
							Dimethylformamide	250 ppm
							Octachlorostyrene	250 ppm
							Phenyl ether	250 ppm
...MSS_8270_SURR_00004	10/31/23		Sigma- Aldrich, Lot LRAC8467		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	4000 ug/mL
							2-Fluorobiphenyl (Surr)	4000 ug/mL
							2-Fluorophenol (Surr)	4000 ug/mL
							Nitrobenzene-d5 (Surr)	4000 ug/mL
							p-Terphenyl-d14 (Surr)	4000 ug/mL
							Phenol-d5 (Surr)	4000 ug/mL
...OP_RES_APPX6_00005	05/31/25		Restek, Lot A0184892		(Purchased Reagent)		Dibenz[a,j]acridine	2000 ug/mL
...OP_RES_LCS1_00011	04/30/24		Restek, Lot A0190414		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	850 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
...OP_RES_LCS2_00009	02/29/24		Restek, Lot A0188589		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
...OP_RES_LCSadd_00003	02/28/26		Restek, Lot A0194427		(Purchased Reagent)		Alpha-Terpineol	2000 ug/mL
							Dimethylformamide	2000 ug/mL
							Octachlorostyrene	2000 ug/mL
							Phenyl ether	2000 ug/mL
..MSS_AB_24DNP_00007	12/09/25		Absolute, Lot 120920		(Purchased Reagent)		2,4-Dinitrophenol	1000 ug/mL
..MSS_FV8270_IS_00005	11/30/23		Restek, Lot A0166482		(Purchased Reagent)		1,4-Dichlorobenzene-d4	1000 ug/mL
							Acenaphthene-d10	1000 ug/mL
							Naphthalene-d8	1000 ug/mL
							Perylene-d12	1000 ug/mL
							Phenanthrene-d10	1000 ug/mL
							Pyrene-d10 (IS)	1000 ug/mL
MSS_RV8270_6_00045	10/31/23	06/08/23	MeCl2, Lot 226055	5 mL	MSS_BAS_WS_00012	625 uL	Atrazine	12.5 ppm
							Benzaldehyde	12.5 ppm
							Caprolactam	12.5 ppm
					MSS_FV8270_6_00053	1250 uL	Benzidine	37.5 ppm
							1,3,5-Trinitrobenzene	12.5 ppm
							1,4-Dinitrobenzene	12.5 ppm
							1-Naphthylamine	12.5 ppm
							2-Acetylaminofluorene	12.5 ppm
							2-Naphthylamine	12.5 ppm
							2-Picoline	12.5 ppm
							2-Toluidine	12.5 ppm
							3,3'-Dimethylbenzidine	12.5 ppm
							4,4'-Methylene bis(2-chloroaniline)	12.5 ppm
							4-Aminobiphenyl	12.5 ppm
							4-Nitroquinoline-1-oxide	12.5 ppm
							Dibenz[a,h]acridine	12.5 ppm
							N-Nitro-o-toluidine	12.5 ppm
							N-Nitrosodi-n-butylamine	12.5 ppm
							N-Nitrosodiethylamine	12.5 ppm
							N-Nitrosomethylethylamine	12.5 ppm
							N-Nitrosomorpholine	12.5 ppm

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Nitrosopiperidine	12.5 ppm
							N-Nitrosopyrrolidine	12.5 ppm
							p-Dimethylamino azobenzene	12.5 ppm
							p-Phenylene diamine	12.5 ppm
							Pentachloronitrobenzene	12.5 ppm
							Phenacetin	12.5 ppm
							Pronamide	12.5 ppm
							Quinoline	12.5 ppm
							1,4-Naphthoquinone	12.5 ppm
							1-Chloronaphthalene	12.5 ppm
							7,12-Dimethylbenz(a)anthracene	12.5 ppm
							Chlorobenzilate	12.5 ppm
							Dinoseb	12.5 ppm
							Ethyl methanesulfonate	12.5 ppm
							Hexachloropropene	12.5 ppm
							Isodrin	12.5 ppm
							Isosafrole Peak 1	2 ppm
							Isosafrole Peak 2	10.5 ppm
							Methyl methanesulfonate	12.5 ppm
							Pentachlorobenzene	12.5 ppm
							3-Methylcholanthrene	12.5 ppm
							6-Methylchrysene	12.5 ppm
							cis-Diallate	9.25 ppm
							Dimethoate	12.5 ppm
							Disulfoton	12.5 ppm
							Ethyl Parathion	12.5 ppm
							Methyl parathion	12.5 ppm
							o,o',o''-Triethylphosphorothioate	12.5 ppm
							Phorate	12.5 ppm
							Safrole, Total	12.5 ppm
							Sulfotepp	12.5 ppm
							Thionazin	12.5 ppm
							trans-Diallate	3.25 ppm
							2,4,6-Tribromophenol (Surr)	25 ppm
							2-Fluorobiphenyl (Surr)	25 ppm
							2-Fluorophenol (Surr)	25 ppm
							Nitrobenzene-d5 (Surr)	25 ppm
							p-Terphenyl-d14 (Surr)	25 ppm
							Phenol-d5 (Surr)	25 ppm
							Dibenz[a,j]acridine	12.5 ppm
							1,1'-Biphenyl	12.5 ppm
							1,2,4,5-Tetrachlorobenzene	12.5 ppm
							1,2,4-Trichlorobenzene	12.5 ppm
							1,2-Dichlorobenzene	12.5 ppm
							1,2-Diphenylhydrazine	12.5 ppm
							1,3-Dichlorobenzene	12.5 ppm
							1,3-Dinitrobenzene	12.5 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,4-Dichlorobenzene	12.5 ppm
							1,4-Dioxane	12.5 ppm
							1-Methylnaphthalene	12.5 ppm
							2,2'-oxybis[1-chloropropane]	12.5 ppm
							2,3,4,6-Tetrachlorophenol	12.5 ppm
							2,4,5-Trichlorophenol	12.5 ppm
							2,4,6-Trichlorophenol	12.5 ppm
							2,4-Dichlorophenol	12.5 ppm
							2,4-Dimethylphenol	12.5 ppm
							2,4-Dinitrophenol	25 ppm
							2,4-Dinitrotoluene	12.5 ppm
							2,6-Dichlorophenol	12.5 ppm
							2,6-Dinitrotoluene	12.5 ppm
							2-Chloronaphthalene	12.5 ppm
							2-Chlorophenol	12.5 ppm
							2-Methylnaphthalene	12.5 ppm
							2-Methylphenol	12.5 ppm
							2-Nitroaniline	12.5 ppm
							2-Nitrophenol	12.5 ppm
							3-Nitroaniline	12.5 ppm
							4,6-Dinitro-2-methylphenol	25 ppm
							4-Bromophenyl phenyl ether	12.5 ppm
							4-Chloro-3-methylphenol	12.5 ppm
							4-Chloroaniline	12.5 ppm
							4-Chlorophenyl phenyl ether	12.5 ppm
							4-Methylphenol	12.5 ppm
							4-Nitroaniline	12.5 ppm
							4-Nitrophenol	25 ppm
							Acenaphthene	12.5 ppm
							Acenaphthylene	12.5 ppm
							Acetophenone	12.5 ppm
							Aniline	12.5 ppm
							Anthracene	12.5 ppm
							Benzo[a]anthracene	12.5 ppm
							Benzo[a]pyrene	12.5 ppm
							Benzo[b]fluoranthene	12.5 ppm
							Benzo[g,h,i]perylene	12.5 ppm
							Benzo[k]fluoranthene	12.5 ppm
							Benzyl alcohol	12.5 ppm
							Bis(2-chloroethoxy)methane	12.5 ppm
							Bis(2-chloroethyl)ether	12.5 ppm
							Bis(2-ethylhexyl) phthalate	12.5 ppm
							Butyl benzyl phthalate	12.5 ppm
							Carbazole	12.5 ppm
							Chrysene	12.5 ppm
							Di-n-butyl phthalate	12.5 ppm
							Di-n-octyl phthalate	12.5 ppm
							Dibenz(a,h)anthracene	12.5 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dibenzofuran	12.5 ppm
							Diethyl phthalate	12.5 ppm
							Dimethyl phthalate	12.5 ppm
							Fluoranthene	12.5 ppm
							Fluorene	12.5 ppm
							Hexachlorobenzene	12.5 ppm
							Hexachlorobutadiene	12.5 ppm
							Hexachlorocyclopentadiene	12.5 ppm
							Hexachloroethane	12.5 ppm
							Indeno[1,2,3-cd]pyrene	12.5 ppm
							Isophorone	12.5 ppm
							N-Nitrosodi-n-propylamine	12.5 ppm
							N-Nitrosodimethylamine	12.5 ppm
							N-Nitrosodiphenylamine	10.625 ppm
							Naphthalene	12.5 ppm
							Nitrobenzene	12.5 ppm
							Pentachlorophenol	25 ppm
							Phenanthrene	12.5 ppm
							Phenol	12.5 ppm
							Pyrene	12.5 ppm
							Pyridine	25 ppm
							3,3'-Dichlorobenzidine	12.5 ppm
							Alpha-Terpineol	12.5 ppm
							Dimethylformamide	12.5 ppm
							Octachlorostyrene	12.5 ppm
							Phenyl ether	12.5 ppm
							1,4-Dichlorobenzene-d4	5 ppm
							Acenaphthene-d10	5 ppm
							Naphthalene-d8	5 ppm
							Perylene-d12	5 ppm
							Phenanthrene-d10	5 ppm
							Pyrene-d10 (IS)	5 ppm
.MSS_BAS_WS_00012	12/08/23	06/08/23	MeCl2, Lot 226055	5 mL	OP_LCSmix2stk_00007	250 uL	Atrazine	100 ppm
							Benzaldehyde	100 ppm
							Caprolactam	100 ppm
..OP_LCSmix2stk_00007	07/31/24		Restek, Lot A0193487		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
.MSS_FV8270_6_00053	10/31/23	06/08/23	MeCl2, Lot 226055	5 mL	MSS_8270_APWS_00015	1000 uL	Benzidine	150 ppm
							1,3,5-Trinitrobenzene	50 ppm
							1,4-Dinitrobenzene	50 ppm
							1-Naphthylamine	50 ppm
							2-Acetylaminofluorene	50 ppm
							2-Naphthylamine	50 ppm
							2-Picoline	50 ppm
							2-Toluidine	50 ppm
							3,3'-Dimethylbenzidine	50 ppm

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4,4'-Methylene bis(2-chloroaniline)	50 ppm
							4-Aminobiphenyl	50 ppm
							4-Nitroquinoline-1-oxide	50 ppm
							Dibenz[a,h]acridine	50 ppm
							N-Nitro-o-toluidine	50 ppm
							N-Nitrosodi-n-butylamine	50 ppm
							N-Nitrosodiethylamine	50 ppm
							N-Nitrosomethylethylamine	50 ppm
							N-Nitrosomorpholine	50 ppm
							N-Nitrosopiperidine	50 ppm
							N-Nitrosopyrrolidine	50 ppm
							p-Dimethylamino azobenzene	50 ppm
							p-Phenylene diamine	50 ppm
							Pentachloronitrobenzene	50 ppm
							Phenacetin	50 ppm
							Pronamide	50 ppm
							Quinoline	50 ppm
							1,4-Naphthoquinone	50 ppm
							1-Chloronaphthalene	50 ppm
							7,12-Dimethylbenz(a)anthracene	50 ppm
							Chlorobenzilate	50 ppm
							Dinoseb	50 ppm
							Ethyl methanesulfonate	50 ppm
							Hexachloropropene	50 ppm
							Isodrin	50 ppm
							Isosafrole Peak 1	8 ppm
							Isosafrole Peak 2	42 ppm
							Methyl methanesulfonate	50 ppm
							Pentachlorobenzene	50 ppm
							3-Methylcholanthrene	50 ppm
							6-Methylchrysene	50 ppm
							cis-Diallate	37 ppm
							Dimethoate	50 ppm
							Disulfoton	50 ppm
							Ethyl Parathion	50 ppm
							Methyl parathion	50 ppm
							o,o',o''-Triethylphosphorothioate	50 ppm
							Phorate	50 ppm
							Safrole, Total	50 ppm
							Sulfotepp	50 ppm
							Thionazin	50 ppm
							trans-Diallate	13 ppm
					MSS_8270_WS_00016	1000 uL	2,4,6-Tribromophenol (Surr)	100 ppm
							2-Fluorobiphenyl (Surr)	100 ppm
							2-Fluorophenol (Surr)	100 ppm
							Nitrobenzene-d5 (Surr)	100 ppm

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							p-Terphenyl-d14 (Surr)	100 ppm
							Phenol-d5 (Surr)	100 ppm
							Dibenz[a,j]acridine	50 ppm
							1,1'-Biphenyl	50 ppm
							1,2,4,5-Tetrachlorobenzene	50 ppm
							1,2,4-Trichlorobenzene	50 ppm
							1,2-Dichlorobenzene	50 ppm
							1,2-Diphenylhydrazine	50 ppm
							1,3-Dichlorobenzene	50 ppm
							1,3-Dinitrobenzene	50 ppm
							1,4-Dichlorobenzene	50 ppm
							1,4-Dioxane	50 ppm
							1-Methylnaphthalene	50 ppm
							2,2'-oxybis[1-chloropropane]	50 ppm
							2,3,4,6-Tetrachlorophenol	50 ppm
							2,4,5-Trichlorophenol	50 ppm
							2,4,6-Trichlorophenol	50 ppm
							2,4-Dichlorophenol	50 ppm
							2,4-Dimethylphenol	50 ppm
							2,4-Dinitrophenol	100 ppm
							2,4-Dinitrotoluene	50 ppm
							2,6-Dichlorophenol	50 ppm
							2,6-Dinitrotoluene	50 ppm
							2-Chloronaphthalene	50 ppm
							2-Chlorophenol	50 ppm
							2-Methylnaphthalene	50 ppm
							2-Methylphenol	50 ppm
							2-Nitroaniline	50 ppm
							2-Nitrophenol	50 ppm
							3-Nitroaniline	50 ppm
							4,6-Dinitro-2-methylphenol	100 ppm
							4-Bromophenyl phenyl ether	50 ppm
							4-Chloro-3-methylphenol	50 ppm
							4-Chloroaniline	50 ppm
							4-Chlorophenyl phenyl ether	50 ppm
							4-Methylphenol	50 ppm
							4-Nitroaniline	50 ppm
							4-Nitrophenol	100 ppm
							Acenaphthene	50 ppm
							Acenaphthylene	50 ppm
							Acetophenone	50 ppm
							Aniline	50 ppm
							Anthracene	50 ppm
							Benzo[a]anthracene	50 ppm
							Benzo[a]pyrene	50 ppm
							Benzo[b]fluoranthene	50 ppm
							Benzo[g,h,i]perylene	50 ppm
							Benzo[k]fluoranthene	50 ppm

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzyl alcohol	50 ppm
							Bis(2-chloroethoxy)methane	50 ppm
							Bis(2-chloroethyl)ether	50 ppm
							Bis(2-ethylhexyl) phthalate	50 ppm
							Butyl benzyl phthalate	50 ppm
							Carbazole	50 ppm
							Chrysene	50 ppm
							Di-n-butyl phthalate	50 ppm
							Di-n-octyl phthalate	50 ppm
							Dibenz(a,h)anthracene	50 ppm
							Dibenzofuran	50 ppm
							Diethyl phthalate	50 ppm
							Dimethyl phthalate	50 ppm
							Fluoranthene	50 ppm
							Fluorene	50 ppm
							Hexachlorobenzene	50 ppm
							Hexachlorobutadiene	50 ppm
							Hexachlorocyclopentadiene	50 ppm
							Hexachloroethane	50 ppm
							Indeno[1,2,3-cd]pyrene	50 ppm
							Isophorone	50 ppm
							N-Nitrosodi-n-propylamine	50 ppm
							N-Nitrosodimethylamine	50 ppm
							N-Nitrosodiphenylamine	42.5 ppm
							Naphthalene	50 ppm
							Nitrobenzene	50 ppm
							Pentachlorophenol	100 ppm
							Phenanthrene	50 ppm
							Phenol	50 ppm
							Pyrene	50 ppm
							Pyridine	100 ppm
							3,3'-Dichlorobenzidine	50 ppm
							Benzidine	150 ppm
							Alpha-Terpineol	50 ppm
							Dimethylformamide	50 ppm
							Octachlorostyrene	50 ppm
							Phenyl ether	50 ppm
					MSS_FV8270_IS_00005	100 uL	1,4-Dichlorobenzene-d4	20 ppm
							Acenaphthene-d10	20 ppm
							Naphthalene-d8	20 ppm
							Perylene-d12	20 ppm
							Phenanthrene-d10	20 ppm
							Pyrene-d10 (IS)	20 ppm
..MSS_8270_APWS_00015	12/08/23	06/08/23	MeCl2, Lot 226055	10 mL	MSS_AB_BZIDIN_00011	1000 uL	Benzidine	500 ppm
					OP_RES_APPX1_00010	2500 uL	1,3,5-Trinitrobenzene	250 ppm
							1,4-Dinitrobenzene	250 ppm
							1-Naphthylamine	250 ppm
							2-Acetylaminofluorene	250 ppm

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Naphthylamine	250 ppm
							2-Picoline	250 ppm
							2-Toluidine	250 ppm
							3,3'-Dimethylbenzidine	250 ppm
							4,4'-Methylene bis(2-chloroaniline)	250 ppm
							4-Aminobiphenyl	250 ppm
							4-Nitroquinoline-1-oxide	250 ppm
							Dibenz[a,h]acridine	250 ppm
							N-Nitro-o-toluidine	250 ppm
							N-Nitrosodi-n-butylamine	250 ppm
							N-Nitrosodiethylamine	250 ppm
							N-Nitrosomethylethylamine	250 ppm
							N-Nitrosomorpholine	250 ppm
							N-Nitrosopiperidine	250 ppm
							N-Nitrosopyrrolidine	250 ppm
							p-Dimethylamino azobenzene	250 ppm
							p-Phenylene diamine	250 ppm
							Pentachloronitrobenzene	250 ppm
							Phenacetin	250 ppm
							Pronamide	250 ppm
							Quinoline	250 ppm
					OP_RES_APPX2_00011	2500 uL	1,4-Naphthoquinone	250 ppm
							1-Chloronaphthalene	250 ppm
							7,12-Dimethylbenz(a)anthracene	250 ppm
							Chlorobenzilate	250 ppm
							Dinoseb	250 ppm
							Ethyl methanesulfonate	250 ppm
							Hexachloropropene	250 ppm
							Isodrin	250 ppm
							Isosafrole Peak 1	40 ppm
							Isosafrole Peak 2	210 ppm
							Methyl methanesulfonate	250 ppm
							Pentachlorobenzene	250 ppm
					OP_RES_APPX3_00007	1250 uL	3-Methylcholanthrene	250 ppm
							6-Methylchrysene	250 ppm
					OP_RES_APPX4_00008	2500 uL	cis-Diallate	185 ppm
							Dimethoate	250 ppm
							Disulfoton	250 ppm
							Ethyl Parathion	250 ppm
							Methyl parathion	250 ppm
							o,o',o''-Triethylphosphorothioate	250 ppm
							Phorate	250 ppm
							Safrole, Total	250 ppm
							Sulfotepp	250 ppm
							Thionazin	250 ppm
							trans-Diallate	65 ppm

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...MSS_AB_BZIDIN_00011	10/27/25		Absolute, Lot 102722		(Purchased Reagent)		Benzidine	5000 ug/mL
...OP_RES_APPX1_00010	02/29/24		Restek, Lot A0194294		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,4-Dinitrobenzene	1000 ug/mL
							1-Naphthylamine	1000 ug/mL
							2-Acetylaminofluorene	1000 ug/mL
							2-Naphthylamine	1000 ug/mL
							2-Picoline	1000 ug/mL
							2-Toluidine	1000 ug/mL
							3,3'-Dimethylbenzidine	1000 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	1000 ug/mL
							4-Aminobiphenyl	1000 ug/mL
							4-Nitroquinoline-1-oxide	1000 ug/mL
							Dibenz[a,h]acridine	1000 ug/mL
							N-Nitro-o-toluidine	1000 ug/mL
							N-Nitrosodi-n-butylamine	1000 ug/mL
							N-Nitrosodiethylamine	1000 ug/mL
							N-Nitrosomethylethylamine	1000 ug/mL
							N-Nitrosomorpholine	1000 ug/mL
							N-Nitrosopiperidine	1000 ug/mL
							N-Nitrosopyrrolidine	1000 ug/mL
							p-Dimethylamino azobenzene	1000 ug/mL
							p-Phenylene diamine	1000 ug/mL
							Pentachloronitrobenzene	1000 ug/mL
							Phenacetin	1000 ug/mL
							Pronamide	1000 ug/mL
							Quinoline	1000 ug/mL
...OP_RES_APPX2_00011	01/31/24		Restek, Lot A0193498		(Purchased Reagent)		1,4-Naphthoquinone	1000 ug/mL
							1-Chloronaphthalene	1000 ug/mL
							7,12-Dimethylbenz(a)anthracene	1000 ug/mL
							Chlorobenzilate	1000 ug/mL
							Dinoseb	1000 ug/mL
							Ethyl methanesulfonate	1000 ug/mL
							Hexachloropropene	1000 ug/mL
							Isodrin	1000 ug/mL
							Isosafrole Peak 1	160 ug/mL
							Isosafrole Peak 2	840 ug/mL
							Methyl methanesulfonate	1000 ug/mL
							Pentachlorobenzene	1000 ug/mL
...OP_RES_APPX3_00007	01/31/24		Restek, Lot A0193475		(Purchased Reagent)		3-Methylcholanthrene	2000 ug/mL
							6-Methylchrysene	2000 ug/mL
...OP_RES_APPX4_00008	01/31/25		Restek, Lot A0193163		(Purchased Reagent)		cis-Diallate	740 ug/mL
							Dimethoate	1000 ug/mL
							Disulfoton	1000 ug/mL
							Ethyl Parathion	1000 ug/mL
							Methyl parathion	1000 ug/mL
							o,o',o''-Triethylphosphorothioate	1000 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phorate	1000 ug/mL
							Safrole, Total	1000 ug/mL
							Sulfotepp	1000 ug/mL
							Thionazin	1000 ug/mL
							trans-Diallate	260 ug/mL
..MSS_8270_WS_00016	10/31/23	06/08/23	MeCl2, Lot 226055	10 mL	MSS_8270_SURR_00004	1250 uL	2,4,6-Tribromophenol (Surr)	500 ppm
							2-Fluorobiphenyl (Surr)	500 ppm
							2-Fluorophenol (Surr)	500 ppm
							Nitrobenzene-d5 (Surr)	500 ppm
							p-Terphenyl-d14 (Surr)	500 ppm
							Phenol-d5 (Surr)	500 ppm
					OP_RES_APPX6_00005	1250 uL	Dibenz[a,j]acridine	250 ppm
					OP_RES_LCS1_00011	2500 uL	1,1'-Biphenyl	250 ppm
							1,2,4,5-Tetrachlorobenzene	250 ppm
							1,2,4-Trichlorobenzene	250 ppm
							1,2-Dichlorobenzene	250 ppm
							1,2-Diphenylhydrazine	250 ppm
							1,3-Dichlorobenzene	250 ppm
							1,3-Dinitrobenzene	250 ppm
							1,4-Dichlorobenzene	250 ppm
							1,4-Dioxane	250 ppm
							1-Methylnaphthalene	250 ppm
							2,2'-oxybis[1-chloropropane]	250 ppm
							2,3,4,6-Tetrachlorophenol	250 ppm
							2,4,5-Trichlorophenol	250 ppm
							2,4,6-Trichlorophenol	250 ppm
							2,4-Dichlorophenol	250 ppm
							2,4-Dimethylphenol	250 ppm
							2,4-Dinitrophenol	500 ppm
							2,4-Dinitrotoluene	250 ppm
							2,6-Dichlorophenol	250 ppm
							2,6-Dinitrotoluene	250 ppm
							2-Chloronaphthalene	250 ppm
							2-Chlorophenol	250 ppm
							2-Methylnaphthalene	250 ppm
							2-Methylphenol	250 ppm
							2-Nitroaniline	250 ppm
							2-Nitrophenol	250 ppm
							3-Nitroaniline	250 ppm
							4,6-Dinitro-2-methylphenol	500 ppm
							4-Bromophenyl phenyl ether	250 ppm
							4-Chloro-3-methylphenol	250 ppm
							4-Chloroaniline	250 ppm
							4-Chlorophenyl phenyl ether	250 ppm
							4-Methylphenol	250 ppm
							4-Nitroaniline	250 ppm
							4-Nitrophenol	500 ppm
							Acenaphthene	250 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acenaphthylene	250 ppm
							Acetophenone	250 ppm
							Aniline	250 ppm
							Anthracene	250 ppm
							Benzo[a]anthracene	250 ppm
							Benzo[a]pyrene	250 ppm
							Benzo[b]fluoranthene	250 ppm
							Benzo[g,h,i]perylene	250 ppm
							Benzo[k]fluoranthene	250 ppm
							Benzyl alcohol	250 ppm
							Bis(2-chloroethoxy)methane	250 ppm
							Bis(2-chloroethyl)ether	250 ppm
							Bis(2-ethylhexyl) phthalate	250 ppm
							Butyl benzyl phthalate	250 ppm
							Carbazole	250 ppm
							Chrysene	250 ppm
							Di-n-butyl phthalate	250 ppm
							Di-n-octyl phthalate	250 ppm
							Dibenz(a,h)anthracene	250 ppm
							Dibenzofuran	250 ppm
							Diethyl phthalate	250 ppm
							Dimethyl phthalate	250 ppm
							Fluoranthene	250 ppm
							Fluorene	250 ppm
							Hexachlorobenzene	250 ppm
							Hexachlorobutadiene	250 ppm
							Hexachlorocyclopentadiene	250 ppm
							Hexachloroethane	250 ppm
							Indeno[1,2,3-cd]pyrene	250 ppm
							Isophorone	250 ppm
							N-Nitrosodi-n-propylamine	250 ppm
							N-Nitrosodimethylamine	250 ppm
							N-Nitrosodiphenylamine	212.5 ppm
							Naphthalene	250 ppm
							Nitrobenzene	250 ppm
							Pentachlorophenol	500 ppm
							Phenanthrene	250 ppm
							Phenol	250 ppm
							Pyrene	250 ppm
							Pyridine	500 ppm
					OP_RES_LCS2_00009	1250 uL	3,3'-Dichlorobenzidine	250 ppm
							Benzidine	250 ppm
					OP_RES_LCSadd_00003	1250 uL	Alpha-Terpineol	250 ppm
							Dimethylformamide	250 ppm
							Octachlorostyrene	250 ppm
							Phenyl ether	250 ppm
...MSS_8270_SURR_00004	10/31/23		Sigma- Aldrich, Lot LRAC8467		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	4000 ug/mL
							2-Fluorobiphenyl (Surr)	4000 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Fluorophenol (Surr)	4000 ug/mL
							Nitrobenzene-d5 (Surr)	4000 ug/mL
							p-Terphenyl-d14 (Surr)	4000 ug/mL
							Phenol-d5 (Surr)	4000 ug/mL
...OP_RES_APPX6_00005	05/31/25		Restek, Lot A0184892		(Purchased Reagent)		Dibenz[a,j]acridine	2000 ug/mL
...OP_RES_LCS1_00011	04/30/24		Restek, Lot A0190414		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	850 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
...OP_RES_LCS2_00009	02/29/24		Restek, Lot A0188589		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
...OP_RES_LCSadd_00003	02/28/26		Restek, Lot A0194427		(Purchased Reagent)		Alpha-Terpineol	2000 ug/mL
							Dimethylformamide	2000 ug/mL
							Octachlorostyrene	2000 ug/mL
							Phenyl ether	2000 ug/mL
..MSS_FV8270_IS_00005	11/30/23		Restek, Lot A0166482		(Purchased Reagent)		1,4-Dichlorobenzene-d4	1000 ug/mL
							Acenaphthene-d10	1000 ug/mL
							Naphthalene-d8	1000 ug/mL
							Perylene-d12	1000 ug/mL
							Phenanthrene-d10	1000 ug/mL
							Pyrene-d10 (IS)	1000 ug/mL
MSS_RV8270_7_00030	10/31/23	06/08/23	MeCl2, Lot 226055	1 mL	MSS_BAS_WS_00012	200 uL	Atrazine	20 ppm
							Benzaldehyde	20 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Caprolactam	20 ppm
					MSS_FV8270_7_00033	250 uL	Benzidine	60 ppm
							1,3,5-Trinitrobenzene	20 ppm
							1,4-Dinitrobenzene	20 ppm
							1-Naphthylamine	20 ppm
							2-Acetylaminofluorene	20 ppm
							2-Naphthylamine	20 ppm
							2-Picoline	20 ppm
							2-Toluidine	20 ppm
							3,3'-Dimethylbenzidine	20 ppm
							4,4'-Methylene bis(2-chloroaniline)	20 ppm
							4-Aminobiphenyl	20 ppm
							4-Nitroquinoline-1-oxide	20 ppm
							Dibenz[a,h]acridine	20 ppm
							N-Nitro-o-toluidine	20 ppm
							N-Nitrosodi-n-butylamine	20 ppm
							N-Nitrosodiethylamine	20 ppm
							N-Nitrosomethylethylamine	20 ppm
							N-Nitrosomorpholine	20 ppm
							N-Nitrosopiperidine	20 ppm
							N-Nitrosopyrrolidine	20 ppm
							p-Dimethylamino azobenzene	20 ppm
							p-Phenylene diamine	20 ppm
							Pentachloronitrobenzene	20 ppm
							Phenacetin	20 ppm
							Pronamide	20 ppm
							Quinoline	20 ppm
							1,4-Naphthoquinone	20 ppm
							1-Chloronaphthalene	20 ppm
							7,12-Dimethylbenz(a)anthracene	20 ppm
							Chlorobenzilate	20 ppm
							Dinoseb	20 ppm
							Ethyl methanesulfonate	20 ppm
							Hexachloropropene	20 ppm
							Isodrin	20 ppm
							Isosafrole Peak 1	3.2 ppm
							Isosafrole Peak 2	16.8 ppm
							Methyl methanesulfonate	20 ppm
							Pentachlorobenzene	20 ppm
							3-Methylcholanthrene	20 ppm
							6-Methylchrysene	20 ppm
							cis-Diallate	14.8 ppm
							Dimethoate	20 ppm
							Disulfoton	20 ppm
							Ethyl Parathion	20 ppm
							Methyl parathion	20 ppm

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							o,o',o''-Triethylphosphorothioate	20 ppm
							Phorate	20 ppm
							Safrole, Total	20 ppm
							Sulfotepp	20 ppm
							Thionazin	20 ppm
							trans-Diallate	5.2 ppm
							2,4,6-Tribromophenol (Surr)	40 ppm
							2-Fluorobiphenyl (Surr)	40 ppm
							2-Fluorophenol (Surr)	40 ppm
							Nitrobenzene-d5 (Surr)	40 ppm
							p-Terphenyl-d14 (Surr)	40 ppm
							Phenol-d5 (Surr)	40 ppm
							Dibenz[a,j]acridine	20 ppm
							1,1'-Biphenyl	20 ppm
							1,2,4,5-Tetrachlorobenzene	20 ppm
							1,2,4-Trichlorobenzene	20 ppm
							1,2-Dichlorobenzene	20 ppm
							1,2-Diphenylhydrazine	20 ppm
							1,3-Dichlorobenzene	20 ppm
							1,3-Dinitrobenzene	20 ppm
							1,4-Dichlorobenzene	20 ppm
							1,4-Dioxane	20 ppm
							1-Methylnaphthalene	20 ppm
							2,2'-oxybis[1-chloropropane]	20 ppm
							2,3,4,6-Tetrachlorophenol	20 ppm
							2,4,5-Trichlorophenol	20 ppm
							2,4,6-Trichlorophenol	20 ppm
							2,4-Dichlorophenol	20 ppm
							2,4-Dimethylphenol	20 ppm
							2,4-Dinitrophenol	40 ppm
							2,4-Dinitrotoluene	20 ppm
							2,6-Dichlorophenol	20 ppm
							2,6-Dinitrotoluene	20 ppm
							2-Chloronaphthalene	20 ppm
							2-Chlorophenol	20 ppm
							2-Methylnaphthalene	20 ppm
							2-Methylphenol	20 ppm
							2-Nitroaniline	20 ppm
							2-Nitrophenol	20 ppm
							3-Nitroaniline	20 ppm
							4,6-Dinitro-2-methylphenol	40 ppm
							4-Bromophenyl phenyl ether	20 ppm
							4-Chloro-3-methylphenol	20 ppm
							4-Chloroaniline	20 ppm
							4-Chlorophenyl phenyl ether	20 ppm
							4-Methylphenol	20 ppm
							4-Nitroaniline	20 ppm

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Nitrophenol	40 ppm
							Acenaphthene	20 ppm
							Acenaphthylene	20 ppm
							Acetophenone	20 ppm
							Aniline	20 ppm
							Anthracene	20 ppm
							Benzo[a]anthracene	20 ppm
							Benzo[a]pyrene	20 ppm
							Benzo[b]fluoranthene	20 ppm
							Benzo[g,h,i]perylene	20 ppm
							Benzo[k]fluoranthene	20 ppm
							Benzyl alcohol	20 ppm
							Bis(2-chloroethoxy)methane	20 ppm
							Bis(2-chloroethyl)ether	20 ppm
							Bis(2-ethylhexyl) phthalate	20 ppm
							Butyl benzyl phthalate	20 ppm
							Carbazole	20 ppm
							Chrysene	20 ppm
							Di-n-butyl phthalate	20 ppm
							Di-n-octyl phthalate	20 ppm
							Dibenz(a,h)anthracene	20 ppm
							Dibenzofuran	20 ppm
							Diethyl phthalate	20 ppm
							Dimethyl phthalate	20 ppm
							Fluoranthene	20 ppm
							Fluorene	20 ppm
							Hexachlorobenzene	20 ppm
							Hexachlorobutadiene	20 ppm
							Hexachlorocyclopentadiene	20 ppm
							Hexachloroethane	20 ppm
							Indeno[1,2,3-cd]pyrene	20 ppm
							Isophorone	20 ppm
							N-Nitrosodi-n-propylamine	20 ppm
							N-Nitrosodimethylamine	20 ppm
							N-Nitrosodiphenylamine	17 ppm
							Naphthalene	20 ppm
							Nitrobenzene	20 ppm
							Pentachlorophenol	40 ppm
							Phenanthrene	20 ppm
							Phenol	20 ppm
							Pyrene	20 ppm
							Pyridine	40 ppm
							3,3'-Dichlorobenzidine	20 ppm
							Alpha-Terpineol	20 ppm
							Dimethylformamide	20 ppm
							Octachlorostyrene	20 ppm
							Phenyl ether	20 ppm
							1,4-Dichlorobenzene-d4	5 ppm

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acenaphthene-d10	5 ppm
							Naphthalene-d8	5 ppm
							Perylene-d12	5 ppm
							Phenanthrene-d10	5 ppm
							Pyrene-d10 (IS)	5 ppm
.MSS_BAS_WS_00012	12/08/23	06/08/23	MeCl2, Lot 226055	5 mL	OP_LCSmix2stk_00007	250 uL	Atrazine	100 ppm
							Benzaldehyde	100 ppm
							Caprolactam	100 ppm
..OP_LCSmix2stk_00007	07/31/24		Restek, Lot A0193487		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
.MSS_FV8270_7_00033	10/31/23	06/08/23	MeCl2, Lot 226055	2 mL	MSS_8270_APWS_00015	640 uL	Benzidine	240 ppm
							1,3,5-Trinitrobenzene	80 ppm
							1,4-Dinitrobenzene	80 ppm
							1-Naphthylamine	80 ppm
							2-Acetylaminofluorene	80 ppm
							2-Naphthylamine	80 ppm
							2-Picoline	80 ppm
							2-Toluidine	80 ppm
							3,3'-Dimethylbenzidine	80 ppm
							4,4'-Methylene bis(2-chloroaniline)	80 ppm
							4-Aminobiphenyl	80 ppm
							4-Nitroquinoline-1-oxide	80 ppm
							Dibenz[a,h]acridine	80 ppm
							N-Nitro-o-toluidine	80 ppm
							N-Nitrosodi-n-butylamine	80 ppm
							N-Nitrosodiethylamine	80 ppm
							N-Nitrosomethylethylamine	80 ppm
							N-Nitrosomorpholine	80 ppm
							N-Nitrosopiperidine	80 ppm
							N-Nitrosopyrrolidine	80 ppm
							p-Dimethylamino azobenzene	80 ppm
							p-Phenylene diamine	80 ppm
							Pentachloronitrobenzene	80 ppm
							Phenacetin	80 ppm
							Pronamide	80 ppm
							Quinoline	80 ppm
							1,4-Naphthoquinone	80 ppm
							1-Chloronaphthalene	80 ppm
							7,12-Dimethylbenz(a)anthracene	80 ppm
							Chlorobenzilate	80 ppm
							Dinoseb	80 ppm
							Ethyl methanesulfonate	80 ppm
							Hexachloropropene	80 ppm
							Isodrin	80 ppm
							Isosafrole Peak 1	12.8 ppm
							Isosafrole Peak 2	67.2 ppm

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Methyl methanesulfonate	80 ppm
							Pentachlorobenzene	80 ppm
							3-Methylcholanthrene	80 ppm
							6-Methylchrysene	80 ppm
							cis-Diallate	59.2 ppm
							Dimethoate	80 ppm
							Disulfoton	80 ppm
							Ethyl Parathion	80 ppm
							Methyl parathion	80 ppm
							o,o',o''-Triethylphosphorothioate	80 ppm
							Phorate	80 ppm
							Safrole, Total	80 ppm
							Sulfotepp	80 ppm
							Thionazin	80 ppm
							trans-Diallate	20.8 ppm
					MSS_8270_WS_00016	640 uL	2,4,6-Tribromophenol (Surr)	160 ppm
							2-Fluorobiphenyl (Surr)	160 ppm
							2-Fluorophenol (Surr)	160 ppm
							Nitrobenzene-d5 (Surr)	160 ppm
							p-Terphenyl-d14 (Surr)	160 ppm
							Phenol-d5 (Surr)	160 ppm
							Dibenz[a,j]acridine	80 ppm
							1,1'-Biphenyl	80 ppm
							1,2,4,5-Tetrachlorobenzene	80 ppm
							1,2,4-Trichlorobenzene	80 ppm
							1,2-Dichlorobenzene	80 ppm
							1,2-Diphenylhydrazine	80 ppm
							1,3-Dichlorobenzene	80 ppm
							1,3-Dinitrobenzene	80 ppm
							1,4-Dichlorobenzene	80 ppm
							1,4-Dioxane	80 ppm
							1-Methylnaphthalene	80 ppm
							2,2'-oxybis[1-chloropropane]	80 ppm
							2,3,4,6-Tetrachlorophenol	80 ppm
							2,4,5-Trichlorophenol	80 ppm
							2,4,6-Trichlorophenol	80 ppm
							2,4-Dichlorophenol	80 ppm
							2,4-Dimethylphenol	80 ppm
							2,4-Dinitrophenol	160 ppm
							2,4-Dinitrotoluene	80 ppm
							2,6-Dichlorophenol	80 ppm
							2,6-Dinitrotoluene	80 ppm
							2-Chloronaphthalene	80 ppm
							2-Chlorophenol	80 ppm
							2-Methylnaphthalene	80 ppm
							2-Methylphenol	80 ppm
							2-Nitroaniline	80 ppm

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Nitrophenol	80 ppm
							3-Nitroaniline	80 ppm
							4,6-Dinitro-2-methylphenol	160 ppm
							4-Bromophenyl phenyl ether	80 ppm
							4-Chloro-3-methylphenol	80 ppm
							4-Chloroaniline	80 ppm
							4-Chlorophenyl phenyl ether	80 ppm
							4-Methylphenol	80 ppm
							4-Nitroaniline	80 ppm
							4-Nitrophenol	160 ppm
							Acenaphthene	80 ppm
							Acenaphthylene	80 ppm
							Acetophenone	80 ppm
							Aniline	80 ppm
							Anthracene	80 ppm
							Benzo[a]anthracene	80 ppm
							Benzo[a]pyrene	80 ppm
							Benzo[b]fluoranthene	80 ppm
							Benzo[g,h,i]perylene	80 ppm
							Benzo[k]fluoranthene	80 ppm
							Benzyl alcohol	80 ppm
							Bis(2-chloroethoxy)methane	80 ppm
							Bis(2-chloroethyl)ether	80 ppm
							Bis(2-ethylhexyl) phthalate	80 ppm
							Butyl benzyl phthalate	80 ppm
							Carbazole	80 ppm
							Chrysene	80 ppm
							Di-n-butyl phthalate	80 ppm
							Di-n-octyl phthalate	80 ppm
							Dibenz(a,h)anthracene	80 ppm
							Dibenzofuran	80 ppm
							Diethyl phthalate	80 ppm
							Dimethyl phthalate	80 ppm
							Fluoranthene	80 ppm
							Fluorene	80 ppm
							Hexachlorobenzene	80 ppm
							Hexachlorobutadiene	80 ppm
							Hexachlorocyclopentadiene	80 ppm
							Hexachloroethane	80 ppm
							Indeno[1,2,3-cd]pyrene	80 ppm
							Isophorone	80 ppm
							N-Nitrosodi-n-propylamine	80 ppm
							N-Nitrosodimethylamine	80 ppm
							N-Nitrosodiphenylamine	68 ppm
							Naphthalene	80 ppm
							Nitrobenzene	80 ppm
							Pentachlorophenol	160 ppm
							Phenanthrene	80 ppm

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenol	80 ppm
							Pyrene	80 ppm
							Pyridine	160 ppm
							3,3'-Dichlorobenzidine	80 ppm
							Benzidine	240 ppm
							Alpha-Terpineol	80 ppm
							Dimethylformamide	80 ppm
							Octachlorostyrene	80 ppm
							Phenyl ether	80 ppm
					MSS_FV8270_IS_00005	40 uL	1,4-Dichlorobenzene-d4	20 ppm
							Acenaphthene-d10	20 ppm
							Naphthalene-d8	20 ppm
							Perylene-d12	20 ppm
							Phenanthrene-d10	20 ppm
							Pyrene-d10 (IS)	20 ppm
..MSS_8270_APWS_00015	12/08/23	06/08/23	MeCl2, Lot 226055	10 mL	MSS_AB_BZIDIN_00011	1000 uL	Benzidine	500 ppm
					OP_RES_APPX1_00010	2500 uL	1,3,5-Trinitrobenzene	250 ppm
							1,4-Dinitrobenzene	250 ppm
							1-Naphthylamine	250 ppm
							2-Acetylaminofluorene	250 ppm
							2-Naphthylamine	250 ppm
							2-Picoline	250 ppm
							2-Toluidine	250 ppm
							3,3'-Dimethylbenzidine	250 ppm
							4,4'-Methylene bis(2-chloroaniline)	250 ppm
							4-Aminobiphenyl	250 ppm
							4-Nitroquinoline-1-oxide	250 ppm
							Dibenz[a,h]acridine	250 ppm
							N-Nitro-o-toluidine	250 ppm
							N-Nitrosodi-n-butylamine	250 ppm
							N-Nitrosodiethylamine	250 ppm
							N-Nitrosomethylethylamine	250 ppm
							N-Nitrosomorpholine	250 ppm
							N-Nitrosopiperidine	250 ppm
							N-Nitrosopyrrolidine	250 ppm
							p-Dimethylamino azobenzene	250 ppm
							p-Phenylene diamine	250 ppm
							Pentachloronitrobenzene	250 ppm
							Phenacetin	250 ppm
							Pronamide	250 ppm
							Quinoline	250 ppm
					OP_RES_APPX2_00011	2500 uL	1,4-Naphthoquinone	250 ppm
							1-Chloronaphthalene	250 ppm
							7,12-Dimethylbenz(a)anthracene	250 ppm
							Chlorobenzilate	250 ppm
							Dinoseb	250 ppm
							Ethyl methanesulfonate	250 ppm

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Hexachloropropene	250 ppm
							Isodrin	250 ppm
							Isosafrole Peak 1	40 ppm
							Isosafrole Peak 2	210 ppm
							Methyl methanesulfonate	250 ppm
							Pentachlorobenzene	250 ppm
					OP_RES_APPX3_00007	1250 uL	3-Methylcholanthrene	250 ppm
							6-Methylchrysene	250 ppm
					OP_RES_APPX4_00008	2500 uL	cis-Diallate	185 ppm
							Dimethoate	250 ppm
							Disulfoton	250 ppm
							Ethyl Parathion	250 ppm
							Methyl parathion	250 ppm
							o,o',o''-Triethylphosphorothioate	250 ppm
							Phorate	250 ppm
							Safrole, Total	250 ppm
							Sulfotepp	250 ppm
							Thionazin	250 ppm
							trans-Diallate	65 ppm
...MSS_AB_BZIDIN_00011	10/27/25		Absolute, Lot 102722		(Purchased Reagent)		Benzidine	5000 ug/mL
...OP_RES_APPX1_00010	02/29/24		Restek, Lot A0194294		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,4-Dinitrobenzene	1000 ug/mL
							1-Naphthylamine	1000 ug/mL
							2-Acetylaminofluorene	1000 ug/mL
							2-Naphthylamine	1000 ug/mL
							2-Picoline	1000 ug/mL
							2-Toluidine	1000 ug/mL
							3,3'-Dimethylbenzidine	1000 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	1000 ug/mL
							4-Aminobiphenyl	1000 ug/mL
							4-Nitroquinoline-1-oxide	1000 ug/mL
							Dibenz[a,h]acridine	1000 ug/mL
							N-Nitro-o-toluidine	1000 ug/mL
							N-Nitrosodi-n-butylamine	1000 ug/mL
							N-Nitrosodiethylamine	1000 ug/mL
							N-Nitrosomethylethylamine	1000 ug/mL
							N-Nitrosomorpholine	1000 ug/mL
							N-Nitrosopiperidine	1000 ug/mL
							N-Nitrosopyrrolidine	1000 ug/mL
							p-Dimethylamino azobenzene	1000 ug/mL
							p-Phenylene diamine	1000 ug/mL
							Pentachloronitrobenzene	1000 ug/mL
							Phenacetin	1000 ug/mL
							Pronamide	1000 ug/mL
							Quinoline	1000 ug/mL
...OP_RES_APPX2_00011	01/31/24		Restek, Lot A0193498		(Purchased Reagent)		1,4-Naphthoquinone	1000 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1-Chloronaphthalene	1000 ug/mL
							7,12-Dimethylbenz(a)anthracene	1000 ug/mL
							Chlorobenzilate	1000 ug/mL
							Dinoseb	1000 ug/mL
							Ethyl methanesulfonate	1000 ug/mL
							Hexachloropropene	1000 ug/mL
							Isodrin	1000 ug/mL
							Isosafrole Peak 1	160 ug/mL
							Isosafrole Peak 2	840 ug/mL
							Methyl methanesulfonate	1000 ug/mL
							Pentachlorobenzene	1000 ug/mL
...OP_RES_APPX3_00007	01/31/24		Restek, Lot A0193475		(Purchased Reagent)		3-Methylcholanthrene	2000 ug/mL
							6-Methylchrysene	2000 ug/mL
...OP_RES_APPX4_00008	01/31/25		Restek, Lot A0193163		(Purchased Reagent)		cis-Diallate	740 ug/mL
							Dimethoate	1000 ug/mL
							Disulfoton	1000 ug/mL
							Ethyl Parathion	1000 ug/mL
							Methyl parathion	1000 ug/mL
							o,o',o''-Triethylphosphorothioate	1000 ug/mL
							Phorate	1000 ug/mL
							Safrole, Total	1000 ug/mL
							Sulfotepp	1000 ug/mL
							Thionazin	1000 ug/mL
							trans-Diallate	260 ug/mL
..MSS_8270_WS_00016	10/31/23	06/08/23	MeCl2, Lot 226055	10 mL	MSS_8270_SURR_00004	1250 uL	2,4,6-Tribromophenol (Surr)	500 ppm
							2-Fluorobiphenyl (Surr)	500 ppm
							2-Fluorophenol (Surr)	500 ppm
							Nitrobenzene-d5 (Surr)	500 ppm
							p-Terphenyl-d14 (Surr)	500 ppm
							Phenol-d5 (Surr)	500 ppm
					OP_RES_APPX6_00005	1250 uL	Dibenz[a,j]acridine	250 ppm
					OP_RES_LCS1_00011	2500 uL	1,1'-Biphenyl	250 ppm
							1,2,4,5-Tetrachlorobenzene	250 ppm
							1,2,4-Trichlorobenzene	250 ppm
							1,2-Dichlorobenzene	250 ppm
							1,2-Diphenylhydrazine	250 ppm
							1,3-Dichlorobenzene	250 ppm
							1,3-Dinitrobenzene	250 ppm
							1,4-Dichlorobenzene	250 ppm
							1,4-Dioxane	250 ppm
							1-Methylnaphthalene	250 ppm
							2,2'-oxybis[1-chloropropane]	250 ppm
							2,3,4,6-Tetrachlorophenol	250 ppm
							2,4,5-Trichlorophenol	250 ppm
							2,4,6-Trichlorophenol	250 ppm
							2,4-Dichlorophenol	250 ppm
							2,4-Dimethylphenol	250 ppm

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4-Dinitrophenol	500 ppm
							2,4-Dinitrotoluene	250 ppm
							2,6-Dichlorophenol	250 ppm
							2,6-Dinitrotoluene	250 ppm
							2-Chloronaphthalene	250 ppm
							2-Chlorophenol	250 ppm
							2-Methylnaphthalene	250 ppm
							2-Methylphenol	250 ppm
							2-Nitroaniline	250 ppm
							2-Nitrophenol	250 ppm
							3-Nitroaniline	250 ppm
							4,6-Dinitro-2-methylphenol	500 ppm
							4-Bromophenyl phenyl ether	250 ppm
							4-Chloro-3-methylphenol	250 ppm
							4-Chloroaniline	250 ppm
							4-Chlorophenyl phenyl ether	250 ppm
							4-Methylphenol	250 ppm
							4-Nitroaniline	250 ppm
							4-Nitrophenol	500 ppm
							Acenaphthene	250 ppm
							Acenaphthylene	250 ppm
							Acetophenone	250 ppm
							Aniline	250 ppm
							Anthracene	250 ppm
							Benzo[a]anthracene	250 ppm
							Benzo[a]pyrene	250 ppm
							Benzo[b]fluoranthene	250 ppm
							Benzo[g,h,i]perylene	250 ppm
							Benzo[k]fluoranthene	250 ppm
							Benzyl alcohol	250 ppm
							Bis(2-chloroethoxy)methane	250 ppm
							Bis(2-chloroethyl)ether	250 ppm
							Bis(2-ethylhexyl) phthalate	250 ppm
							Butyl benzyl phthalate	250 ppm
							Carbazole	250 ppm
							Chrysene	250 ppm
							Di-n-butyl phthalate	250 ppm
							Di-n-octyl phthalate	250 ppm
							Dibenz(a,h)anthracene	250 ppm
							Dibenzofuran	250 ppm
							Diethyl phthalate	250 ppm
							Dimethyl phthalate	250 ppm
							Fluoranthene	250 ppm
							Fluorene	250 ppm
							Hexachlorobenzene	250 ppm
							Hexachlorobutadiene	250 ppm
							Hexachlorocyclopentadiene	250 ppm
							Hexachloroethane	250 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Indeno[1,2,3-cd]pyrene	250 ppm
							Isophorone	250 ppm
							N-Nitrosodi-n-propylamine	250 ppm
							N-Nitrosodimethylamine	250 ppm
							N-Nitrosodiphenylamine	212.5 ppm
							Naphthalene	250 ppm
							Nitrobenzene	250 ppm
							Pentachlorophenol	500 ppm
							Phenanthrene	250 ppm
							Phenol	250 ppm
							Pyrene	250 ppm
							Pyridine	500 ppm
					OP_RES_LCS2_00009	1250 uL	3,3'-Dichlorobenzidine	250 ppm
							Benzidine	250 ppm
					OP_RES_LCSadd_00003	1250 uL	Alpha-Terpineol	250 ppm
							Dimethylformamide	250 ppm
							Octachlorostyrene	250 ppm
							Phenyl ether	250 ppm
...MSS_8270_SURR_00004	10/31/23		Sigma- Aldrich, Lot LRAC8467		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	4000 ug/mL
							2-Fluorobiphenyl (Surr)	4000 ug/mL
							2-Fluorophenol (Surr)	4000 ug/mL
							Nitrobenzene-d5 (Surr)	4000 ug/mL
							p-Terphenyl-d14 (Surr)	4000 ug/mL
							Phenol-d5 (Surr)	4000 ug/mL
...OP_RES_APPX6_00005	05/31/25		Restek, Lot A0184892		(Purchased Reagent)		Dibenz[a,j]acridine	2000 ug/mL
...OP_RES_LCS1_00011	04/30/24		Restek, Lot A0190414		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	850 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
...OP_RES_LCS2_00009	02/29/24		Restek, Lot A0188589		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
...OP_RES_LCSadd_00003	02/28/26		Restek, Lot A0194427		(Purchased Reagent)		Alpha-Terpineol	2000 ug/mL
							Dimethylformamide	2000 ug/mL
							Octachlorostyrene	2000 ug/mL
							Phenyl ether	2000 ug/mL
..MSS_FV8270_IS_00005	11/30/23		Restek, Lot A0166482		(Purchased Reagent)		1,4-Dichlorobenzene-d4	1000 ug/mL
							Acenaphthene-d10	1000 ug/mL
							Naphthalene-d8	1000 ug/mL
							Perylene-d12	1000 ug/mL
							Phenanthrene-d10	1000 ug/mL
							Pyrene-d10 (IS)	1000 ug/mL
MSS_RV8270_8_00030	10/31/23	06/08/23	MeCl2, Lot 226055	1 mL	MSS_BAS_WS_00012	300 uL	Atrazine	30 ppm
							Benzaldehyde	30 ppm
							Caprolactam	30 ppm
					MSS_FV8270_8_00030	250 uL	Benzidine	90 ppm
							1,3,5-Trinitrobenzene	30 ppm
							1,4-Dinitrobenzene	30 ppm
							1-Naphthylamine	30 ppm
							2-Acetylaminofluorene	30 ppm
							2-Naphthylamine	30 ppm
							2-Picoline	30 ppm
							2-Toluidine	30 ppm
							3,3'-Dimethylbenzidine	30 ppm
							4,4'-Methylene bis(2-chloroaniline)	30 ppm
							4-Aminobiphenyl	30 ppm
							4-Nitroquinoline-1-oxide	30 ppm
							Dibenz[a,h]acridine	30 ppm
							N-Nitro-o-toluidine	30 ppm
							N-Nitrosodi-n-butylamine	30 ppm
							N-Nitrosodiethylamine	30 ppm
							N-Nitrosomethylethylamine	30 ppm
							N-Nitrosomorpholine	30 ppm
							N-Nitrosopiperidine	30 ppm
							N-Nitrosopyrrolidine	30 ppm
							p-Dimethylamino azobenzene	30 ppm
							p-Phenylene diamine	30 ppm
							Pentachloronitrobenzene	30 ppm
							Phenacetin	30 ppm
							Pronamide	30 ppm
							Quinoline	30 ppm
							1,4-Naphthoquinone	30 ppm

Lab Name: Eurofins Lancaster Laboratories Envir Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1-Chloronaphthalene	30 ppm
							7,12-Dimethylbenz(a)anthracene	30 ppm
							Chlorobenzilate	30 ppm
							Dinoseb	30 ppm
							Ethyl methanesulfonate	30 ppm
							Hexachloropropene	30 ppm
							Isodrin	30 ppm
							Isosafrole Peak 1	4.8 ppm
							Isosafrole Peak 2	25.2 ppm
							Methyl methanesulfonate	30 ppm
							Pentachlorobenzene	30 ppm
							3-Methylcholanthrene	30 ppm
							6-Methylchrysene	30 ppm
							cis-Diallate	22.2 ppm
							Dimethoate	30 ppm
							Disulfoton	30 ppm
							Ethyl Parathion	30 ppm
							Methyl parathion	30 ppm
							o,o',o''-Triethylphosphorothioate	30 ppm
							Phorate	30 ppm
							Safrole, Total	30 ppm
							Sulfotepp	30 ppm
							Thionazin	30 ppm
							trans-Diallate	7.8 ppm
							2,4,6-Tribromophenol (Surr)	60 ppm
							2-Fluorobiphenyl (Surr)	60 ppm
							2-Fluorophenol (Surr)	60 ppm
							Nitrobenzene-d5 (Surr)	60 ppm
							p-Terphenyl-d14 (Surr)	60 ppm
							Phenol-d5 (Surr)	60 ppm
							Dibenz[a,j]acridine	30 ppm
							1,1'-Biphenyl	30 ppm
							1,2,4,5-Tetrachlorobenzene	30 ppm
							1,2,4-Trichlorobenzene	30 ppm
							1,2-Dichlorobenzene	30 ppm
							1,2-Diphenylhydrazine	30 ppm
							1,3-Dichlorobenzene	30 ppm
							1,3-Dinitrobenzene	30 ppm
							1,4-Dichlorobenzene	30 ppm
							1,4-Dioxane	30 ppm
							1-Methylnaphthalene	30 ppm
							2,2'-oxybis[1-chloropropane]	30 ppm
							2,3,4,6-Tetrachlorophenol	30 ppm
							2,4,5-Trichlorophenol	30 ppm
							2,4,6-Trichlorophenol	30 ppm
							2,4-Dichlorophenol	30 ppm
							2,4-Dimethylphenol	30 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4-Dinitrophenol	60 ppm
							2,4-Dinitrotoluene	30 ppm
							2,6-Dichlorophenol	30 ppm
							2,6-Dinitrotoluene	30 ppm
							2-Chloronaphthalene	30 ppm
							2-Chlorophenol	30 ppm
							2-Methylnaphthalene	30 ppm
							2-Methylphenol	30 ppm
							2-Nitroaniline	30 ppm
							2-Nitrophenol	30 ppm
							3-Nitroaniline	30 ppm
							4,6-Dinitro-2-methylphenol	60 ppm
							4-Bromophenyl phenyl ether	30 ppm
							4-Chloro-3-methylphenol	30 ppm
							4-Chloroaniline	30 ppm
							4-Chlorophenyl phenyl ether	30 ppm
							4-Methylphenol	30 ppm
							4-Nitroaniline	30 ppm
							4-Nitrophenol	60 ppm
							Acenaphthene	30 ppm
							Acenaphthylene	30 ppm
							Acetophenone	30 ppm
							Aniline	30 ppm
							Anthracene	30 ppm
							Benzo[a]anthracene	30 ppm
							Benzo[a]pyrene	30 ppm
							Benzo[b]fluoranthene	30 ppm
							Benzo[g,h,i]perylene	30 ppm
							Benzo[k]fluoranthene	30 ppm
							Benzyl alcohol	30 ppm
							Bis(2-chloroethoxy)methane	30 ppm
							Bis(2-chloroethyl)ether	30 ppm
							Bis(2-ethylhexyl) phthalate	30 ppm
							Butyl benzyl phthalate	30 ppm
							Carbazole	30 ppm
							Chrysene	30 ppm
							Di-n-butyl phthalate	30 ppm
							Di-n-octyl phthalate	30 ppm
							Dibenz(a,h)anthracene	30 ppm
							Dibenzofuran	30 ppm
							Diethyl phthalate	30 ppm
							Dimethyl phthalate	30 ppm
							Fluoranthene	30 ppm
							Fluorene	30 ppm
							Hexachlorobenzene	30 ppm
							Hexachlorobutadiene	30 ppm
							Hexachlorocyclopentadiene	30 ppm
							Hexachloroethane	30 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Indeno[1,2,3-cd]pyrene	30 ppm
							Isophorone	30 ppm
							N-Nitrosodi-n-propylamine	30 ppm
							N-Nitrosodimethylamine	30 ppm
							N-Nitrosodiphenylamine	25.5 ppm
							Naphthalene	30 ppm
							Nitrobenzene	30 ppm
							Pentachlorophenol	60 ppm
							Phenanthrene	30 ppm
							Phenol	30 ppm
							Pyrene	30 ppm
							Pyridine	60 ppm
							3,3'-Dichlorobenzidine	30 ppm
							Alpha-Terpineol	30 ppm
							Dimethylformamide	30 ppm
							Octachlorostyrene	30 ppm
							Phenyl ether	30 ppm
							1,4-Dichlorobenzene-d4	5 ppm
							Acenaphthene-d10	5 ppm
							Naphthalene-d8	5 ppm
							Perylene-d12	5 ppm
							Phenanthrene-d10	5 ppm
							Pyrene-d10 (IS)	5 ppm
.MSS_BAS_WS_00012	12/08/23	06/08/23	MeCl2, Lot 226055	5 mL	OP_LCSmix2stk_00007	250 uL	Atrazine	100 ppm
							Benzaldehyde	100 ppm
							Caprolactam	100 ppm
..OP_LCSmix2stk_00007	07/31/24		Restek, Lot A0193487		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
.MSS_FV8270_8_00030	10/31/23	06/08/23	MeCl2, Lot 226055	2 mL	MSS_8270_APWS_00015	960 uL	Benzidine	360 ppm
							1,3,5-Trinitrobenzene	120 ppm
							1,4-Dinitrobenzene	120 ppm
							1-Naphthylamine	120 ppm
							2-Acetylaminofluorene	120 ppm
							2-Naphthylamine	120 ppm
							2-Picoline	120 ppm
							2-Toluidine	120 ppm
							3,3'-Dimethylbenzidine	120 ppm
							4,4'-Methylene bis(2-chloroaniline)	120 ppm
							4-Aminobiphenyl	120 ppm
							4-Nitroquinoline-1-oxide	120 ppm
							Dibenz[a,h]acridine	120 ppm
							N-Nitro-o-toluidine	120 ppm
							N-Nitrosodi-n-butylamine	120 ppm
							N-Nitrosodiethylamine	120 ppm
							N-Nitrosomethylethylamine	120 ppm
							N-Nitrosomorpholine	120 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Nitrosopiperidine	120 ppm
							N-Nitrosopyrrolidine	120 ppm
							p-Dimethylamino azobenzene	120 ppm
							p-Phenylene diamine	120 ppm
							Pentachloronitrobenzene	120 ppm
							Phenacetin	120 ppm
							Pronamide	120 ppm
							Quinoline	120 ppm
							1,4-Naphthoquinone	120 ppm
							1-Chloronaphthalene	120 ppm
							7,12-Dimethylbenz(a)anthracene	120 ppm
							Chlorobenzilate	120 ppm
							Dinoseb	120 ppm
							Ethyl methanesulfonate	120 ppm
							Hexachloropropene	120 ppm
							Isodrin	120 ppm
							Isosafrole Peak 1	19.2 ppm
							Isosafrole Peak 2	100.8 ppm
							Methyl methanesulfonate	120 ppm
							Pentachlorobenzene	120 ppm
							3-Methylcholanthrene	120 ppm
							6-Methylchrysene	120 ppm
							cis-Diallate	88.8 ppm
							Dimethoate	120 ppm
							Disulfoton	120 ppm
							Ethyl Parathion	120 ppm
							Methyl parathion	120 ppm
							o,o',o''-Triethylphosphorothioate	120 ppm
							Phorate	120 ppm
							Safrole, Total	120 ppm
							Sulfotepp	120 ppm
							Thionazin	120 ppm
							trans-Diallate	31.2 ppm
					MSS_8270_WS_00016	960 uL	2,4,6-Tribromophenol (Surr)	240 ppm
							2-Fluorobiphenyl (Surr)	240 ppm
							2-Fluorophenol (Surr)	240 ppm
							Nitrobenzene-d5 (Surr)	240 ppm
							p-Terphenyl-d14 (Surr)	240 ppm
							Phenol-d5 (Surr)	240 ppm
							Dibenz[a,j]acridine	120 ppm
							1,1'-Biphenyl	120 ppm
							1,2,4,5-Tetrachlorobenzene	120 ppm
							1,2,4-Trichlorobenzene	120 ppm
							1,2-Dichlorobenzene	120 ppm
							1,2-Diphenylhydrazine	120 ppm
							1,3-Dichlorobenzene	120 ppm
							1,3-Dinitrobenzene	120 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,4-Dichlorobenzene	120 ppm
							1,4-Dioxane	120 ppm
							1-Methylnaphthalene	120 ppm
							2,2'-oxybis[1-chloropropane]	120 ppm
							2,3,4,6-Tetrachlorophenol	120 ppm
							2,4,5-Trichlorophenol	120 ppm
							2,4,6-Trichlorophenol	120 ppm
							2,4-Dichlorophenol	120 ppm
							2,4-Dimethylphenol	120 ppm
							2,4-Dinitrophenol	240 ppm
							2,4-Dinitrotoluene	120 ppm
							2,6-Dichlorophenol	120 ppm
							2,6-Dinitrotoluene	120 ppm
							2-Chloronaphthalene	120 ppm
							2-Chlorophenol	120 ppm
							2-Methylnaphthalene	120 ppm
							2-Methylphenol	120 ppm
							2-Nitroaniline	120 ppm
							2-Nitrophenol	120 ppm
							3-Nitroaniline	120 ppm
							4,6-Dinitro-2-methylphenol	240 ppm
							4-Bromophenyl phenyl ether	120 ppm
							4-Chloro-3-methylphenol	120 ppm
							4-Chloroaniline	120 ppm
							4-Chlorophenyl phenyl ether	120 ppm
							4-Methylphenol	120 ppm
							4-Nitroaniline	120 ppm
							4-Nitrophenol	240 ppm
							Acenaphthene	120 ppm
							Acenaphthylene	120 ppm
							Acetophenone	120 ppm
							Aniline	120 ppm
							Anthracene	120 ppm
							Benzo[a]anthracene	120 ppm
							Benzo[a]pyrene	120 ppm
							Benzo[b]fluoranthene	120 ppm
							Benzo[g,h,i]perylene	120 ppm
							Benzo[k]fluoranthene	120 ppm
							Benzyl alcohol	120 ppm
							Bis(2-chloroethoxy)methane	120 ppm
							Bis(2-chloroethyl)ether	120 ppm
							Bis(2-ethylhexyl) phthalate	120 ppm
							Butyl benzyl phthalate	120 ppm
							Carbazole	120 ppm
							Chrysene	120 ppm
							Di-n-butyl phthalate	120 ppm
							Di-n-octyl phthalate	120 ppm
							Dibenz(a,h)anthracene	120 ppm

Lab Name: Eurofins Lancaster Laboratories Envir Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dibenzofuran	120 ppm
							Diethyl phthalate	120 ppm
							Dimethyl phthalate	120 ppm
							Fluoranthene	120 ppm
							Fluorene	120 ppm
							Hexachlorobenzene	120 ppm
							Hexachlorobutadiene	120 ppm
							Hexachlorocyclopentadiene	120 ppm
							Hexachloroethane	120 ppm
							Indeno[1,2,3-cd]pyrene	120 ppm
							Isophorone	120 ppm
							N-Nitrosodi-n-propylamine	120 ppm
							N-Nitrosodimethylamine	120 ppm
							N-Nitrosodiphenylamine	102 ppm
							Naphthalene	120 ppm
							Nitrobenzene	120 ppm
							Pentachlorophenol	240 ppm
							Phenanthrene	120 ppm
							Phenol	120 ppm
							Pyrene	120 ppm
							Pyridine	240 ppm
							3,3'-Dichlorobenzidine	120 ppm
							Benzidine	360 ppm
							Alpha-Terpineol	120 ppm
							Dimethylformamide	120 ppm
							Octachlorostyrene	120 ppm
							Phenyl ether	120 ppm
					MSS_FV8270_IS_00005	40 uL	1,4-Dichlorobenzene-d4	20 ppm
							Acenaphthene-d10	20 ppm
							Naphthalene-d8	20 ppm
							Perylene-d12	20 ppm
							Phenanthrene-d10	20 ppm
							Pyrene-d10 (IS)	20 ppm
..MSS_8270_APWS_00015	12/08/23	06/08/23	MeCl2, Lot 226055	10 mL	MSS_AB_BZIDIN_00011	1000 uL	Benzidine	500 ppm
					OP_RES_APPX1_00010	2500 uL	1,3,5-Trinitrobenzene	250 ppm
							1,4-Dinitrobenzene	250 ppm
							1-Naphthylamine	250 ppm
							2-Acetylaminofluorene	250 ppm
							2-Naphthylamine	250 ppm
							2-Picoline	250 ppm
							2-Toluidine	250 ppm
							3,3'-Dimethylbenzidine	250 ppm
							4,4'-Methylene bis(2-chloroaniline)	250 ppm
							4-Aminobiphenyl	250 ppm
							4-Nitroquinoline-1-oxide	250 ppm
							Dibenz[a,h]acridine	250 ppm
							N-Nitro-o-toluidine	250 ppm

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Nitrosodi-n-butylamine	250 ppm
							N-Nitrosodiethylamine	250 ppm
							N-Nitrosomethylethylamine	250 ppm
							N-Nitrosomorpholine	250 ppm
							N-Nitrosopiperidine	250 ppm
							N-Nitrosopyrrolidine	250 ppm
							p-Dimethylamino azobenzene	250 ppm
							p-Phenylene diamine	250 ppm
							Pentachloronitrobenzene	250 ppm
							Phenacetin	250 ppm
							Pronamide	250 ppm
							Quinoline	250 ppm
					OP_RES_APPX2_00011	2500 uL	1,4-Naphthoquinone	250 ppm
							1-Chloronaphthalene	250 ppm
							7,12-Dimethylbenz(a)anthracene	250 ppm
							Chlorobenzilate	250 ppm
							Dinoseb	250 ppm
							Ethyl methanesulfonate	250 ppm
							Hexachloropropene	250 ppm
							Isodrin	250 ppm
							Isosafrole Peak 1	40 ppm
							Isosafrole Peak 2	210 ppm
							Methyl methanesulfonate	250 ppm
							Pentachlorobenzene	250 ppm
					OP_RES_APPX3_00007	1250 uL	3-Methylcholanthrene	250 ppm
							6-Methylchrysene	250 ppm
					OP_RES_APPX4_00008	2500 uL	cis-Diallate	185 ppm
							Dimethoate	250 ppm
							Disulfoton	250 ppm
							Ethyl Parathion	250 ppm
							Methyl parathion	250 ppm
							o,o',o''-Triethylphosphorothioate	250 ppm
							Phorate	250 ppm
							Safrole, Total	250 ppm
							Sulfotepp	250 ppm
							Thionazin	250 ppm
							trans-Diallate	65 ppm
...MSS_AB_BZIDIN_00011	10/27/25		Absolute, Lot 102722		(Purchased Reagent)		Benzidine	5000 ug/mL
...OP_RES_APPX1_00010	02/29/24		Restek, Lot A0194294		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,4-Dinitrobenzene	1000 ug/mL
							1-Naphthylamine	1000 ug/mL
							2-Acetylaminofluorene	1000 ug/mL
							2-Naphthylamine	1000 ug/mL
							2-Picoline	1000 ug/mL
							2-Toluidine	1000 ug/mL
							3,3'-Dimethylbenzidine	1000 ug/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4,4'-Methylene bis(2-chloroaniline)	1000 ug/mL
							4-Aminobiphenyl	1000 ug/mL
							4-Nitroquinoline-1-oxide	1000 ug/mL
							Dibenz[a,h]acridine	1000 ug/mL
							N-Nitro-o-toluidine	1000 ug/mL
							N-Nitrosodi-n-butylamine	1000 ug/mL
							N-Nitrosodiethylamine	1000 ug/mL
							N-Nitrosomethylethylamine	1000 ug/mL
							N-Nitrosomorpholine	1000 ug/mL
							N-Nitrosopiperidine	1000 ug/mL
							N-Nitrosopyrrolidine	1000 ug/mL
							p-Dimethylamino azobenzene	1000 ug/mL
							p-Phenylene diamine	1000 ug/mL
							Pentachloronitrobenzene	1000 ug/mL
							Phenacetin	1000 ug/mL
							Pronamide	1000 ug/mL
							Quinoline	1000 ug/mL
...OP_RES_APPX2_00011	01/31/24		Restek, Lot A0193498		(Purchased Reagent)		1,4-Naphthoquinone	1000 ug/mL
							1-Chloronaphthalene	1000 ug/mL
							7,12-Dimethylbenz(a)anthracene	1000 ug/mL
							Chlorobenzilate	1000 ug/mL
							Dinoseb	1000 ug/mL
							Ethyl methanesulfonate	1000 ug/mL
							Hexachloropropene	1000 ug/mL
							Isodrin	1000 ug/mL
							Isosafrole Peak 1	160 ug/mL
							Isosafrole Peak 2	840 ug/mL
							Methyl methanesulfonate	1000 ug/mL
							Pentachlorobenzene	1000 ug/mL
...OP_RES_APPX3_00007	01/31/24		Restek, Lot A0193475		(Purchased Reagent)		3-Methylcholanthrene	2000 ug/mL
							6-Methylchrysene	2000 ug/mL
...OP_RES_APPX4_00008	01/31/25		Restek, Lot A0193163		(Purchased Reagent)		cis-Diallate	740 ug/mL
							Dimethoate	1000 ug/mL
							Disulfoton	1000 ug/mL
							Ethyl Parathion	1000 ug/mL
							Methyl parathion	1000 ug/mL
							o,o',o''-Triethylphosphorothioate	1000 ug/mL
							Phorate	1000 ug/mL
							Safrole, Total	1000 ug/mL
							Sulfotepp	1000 ug/mL
							Thionazin	1000 ug/mL
							trans-Diallate	260 ug/mL
..MSS_8270_WS_00016	10/31/23	06/08/23	MeCl2, Lot 226055	10 mL	MSS_8270_SURR_00004	1250 uL	2,4,6-Tribromophenol (Surr)	500 ppm
							2-Fluorobiphenyl (Surr)	500 ppm
							2-Fluorophenol (Surr)	500 ppm
							Nitrobenzene-d5 (Surr)	500 ppm

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							p-Terphenyl-d14 (Surr)	500 ppm
							Phenol-d5 (Surr)	500 ppm
					OP_RES_APPX6_00005	1250 uL	Dibenz[a,j]acridine	250 ppm
					OP_RES_LCS1_00011	2500 uL	1,1'-Biphenyl	250 ppm
							1,2,4,5-Tetrachlorobenzene	250 ppm
							1,2,4-Trichlorobenzene	250 ppm
							1,2-Dichlorobenzene	250 ppm
							1,2-Diphenylhydrazine	250 ppm
							1,3-Dichlorobenzene	250 ppm
							1,3-Dinitrobenzene	250 ppm
							1,4-Dichlorobenzene	250 ppm
							1,4-Dioxane	250 ppm
							1-Methylnaphthalene	250 ppm
							2,2'-oxybis[1-chloropropane]	250 ppm
							2,3,4,6-Tetrachlorophenol	250 ppm
							2,4,5-Trichlorophenol	250 ppm
							2,4,6-Trichlorophenol	250 ppm
							2,4-Dichlorophenol	250 ppm
							2,4-Dimethylphenol	250 ppm
							2,4-Dinitrophenol	500 ppm
							2,4-Dinitrotoluene	250 ppm
							2,6-Dichlorophenol	250 ppm
							2,6-Dinitrotoluene	250 ppm
							2-Chloronaphthalene	250 ppm
							2-Chlorophenol	250 ppm
							2-Methylnaphthalene	250 ppm
							2-Methylphenol	250 ppm
							2-Nitroaniline	250 ppm
							2-Nitrophenol	250 ppm
							3-Nitroaniline	250 ppm
							4,6-Dinitro-2-methylphenol	500 ppm
							4-Bromophenyl phenyl ether	250 ppm
							4-Chloro-3-methylphenol	250 ppm
							4-Chloroaniline	250 ppm
							4-Chlorophenyl phenyl ether	250 ppm
							4-Methylphenol	250 ppm
							4-Nitroaniline	250 ppm
							4-Nitrophenol	500 ppm
							Acenaphthene	250 ppm
							Acenaphthylene	250 ppm
							Acetophenone	250 ppm
							Aniline	250 ppm
							Anthracene	250 ppm
							Benzo[a]anthracene	250 ppm
							Benzo[a]pyrene	250 ppm
							Benzo[b]fluoranthene	250 ppm
							Benzo[g,h,i]perylene	250 ppm
							Benzo[k]fluoranthene	250 ppm

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzyl alcohol	250 ppm
							Bis(2-chloroethoxy)methane	250 ppm
							Bis(2-chloroethyl)ether	250 ppm
							Bis(2-ethylhexyl) phthalate	250 ppm
							Butyl benzyl phthalate	250 ppm
							Carbazole	250 ppm
							Chrysene	250 ppm
							Di-n-butyl phthalate	250 ppm
							Di-n-octyl phthalate	250 ppm
							Dibenz(a,h)anthracene	250 ppm
							Dibenzofuran	250 ppm
							Diethyl phthalate	250 ppm
							Dimethyl phthalate	250 ppm
							Fluoranthene	250 ppm
							Fluorene	250 ppm
							Hexachlorobenzene	250 ppm
							Hexachlorobutadiene	250 ppm
							Hexachlorocyclopentadiene	250 ppm
							Hexachloroethane	250 ppm
							Indeno[1,2,3-cd]pyrene	250 ppm
							Isophorone	250 ppm
							N-Nitrosodi-n-propylamine	250 ppm
							N-Nitrosodimethylamine	250 ppm
							N-Nitrosodiphenylamine	212.5 ppm
							Naphthalene	250 ppm
							Nitrobenzene	250 ppm
							Pentachlorophenol	500 ppm
							Phenanthrene	250 ppm
							Phenol	250 ppm
							Pyrene	250 ppm
							Pyridine	500 ppm
					OP_RES_LCS2_00009	1250 uL	3,3'-Dichlorobenzidine	250 ppm
							Benzidine	250 ppm
					OP_RES_LCSadd_00003	1250 uL	Alpha-Terpineol	250 ppm
							Dimethylformamide	250 ppm
							Octachlorostyrene	250 ppm
							Phenyl ether	250 ppm
...MSS_8270_SURR_00004	10/31/23		Sigma- Aldrich, Lot LRAC8467		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	4000 ug/mL
							2-Fluorobiphenyl (Surr)	4000 ug/mL
							2-Fluorophenol (Surr)	4000 ug/mL
							Nitrobenzene-d5 (Surr)	4000 ug/mL
							p-Terphenyl-d14 (Surr)	4000 ug/mL
							Phenol-d5 (Surr)	4000 ug/mL
...OP_RES_APPX6_00005	05/31/25		Restek, Lot A0184892		(Purchased Reagent)		Dibenz[a,j]acridine	2000 ug/mL
...OP_RES_LCS1_00011	04/30/24		Restek, Lot A0190414		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	850 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
...OP_RES_LCS2_00009	02/29/24		Restek, Lot A0188589		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
...OP_RES_LCSadd_00003	02/28/26		Restek, Lot A0194427		(Purchased Reagent)		Alpha-Terpineol	2000 ug/mL
							Dimethylformamide	2000 ug/mL
							Octachlorostyrene	2000 ug/mL
							Phenyl ether	2000 ug/mL
..MSS_FV8270_IS_00005	11/30/23		Restek, Lot A0166482		(Purchased Reagent)		1,4-Dichlorobenzene-d4	1000 ug/mL
							Acenaphthene-d10	1000 ug/mL
							Naphthalene-d8	1000 ug/mL
							Perylene-d12	1000 ug/mL
							Phenanthrene-d10	1000 ug/mL
							Pyrene-d10 (IS)	1000 ug/mL
MSS_RV8270_IS_00059	09/28/23	03/28/23	MeCl2, Lot 226679	25 mL	MSS_FV8270_IS_00005	6250 uL	1,4-Dichlorobenzene-d4	250 ppm
							Acenaphthene-d10	250 ppm
							Naphthalene-d8	250 ppm
							Perylene-d12	250 ppm
							Phenanthrene-d10	250 ppm
							Pyrene-d10 (IS)	250 ppm
.MSS_FV8270_IS_00005	11/30/23		Restek, Lot A0166482		(Purchased Reagent)		1,4-Dichlorobenzene-d4	1000 ug/mL
							Acenaphthene-d10	1000 ug/mL
							Naphthalene-d8	1000 ug/mL
							Perylene-d12	1000 ug/mL
							Phenanthrene-d10	1000 ug/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Pyrene-d10 (IS)	1000 ug/mL
MSS_RV8270ICV_00022	07/31/23	07/18/23	MeCl2, Lot 232230	2 mL	MSS_FV8270ICV_00027	750 uL	1,4-Dichlorobenzene-d4	7.5 ppm
							Acenaphthene-d10	7.5 ppm
							Naphthalene-d8	7.5 ppm
							Perylene-d12	7.5 ppm
							Phenanthrene-d10	7.5 ppm
							Pyrene-d10 (IS)	7.5 ppm
.MSS_FV8270ICV_00027	07/31/23	07/18/23	MeCl2, Lot 232230	5 mL	MSS_FV8270_IS_00005	100 uL	1,4-Dichlorobenzene-d4	20 ppm
							Acenaphthene-d10	20 ppm
							Naphthalene-d8	20 ppm
							Perylene-d12	20 ppm
							Phenanthrene-d10	20 ppm
							Pyrene-d10 (IS)	20 ppm
..MSS_FV8270_IS_00005	11/30/23		Restek, Lot A0166482		(Purchased Reagent)		1,4-Dichlorobenzene-d4	1000 ug/mL
							Acenaphthene-d10	1000 ug/mL
							Naphthalene-d8	1000 ug/mL
							Perylene-d12	1000 ug/mL
							Phenanthrene-d10	1000 ug/mL
							Pyrene-d10 (IS)	1000 ug/mL
MSS_RV8270ICV_00022	07/31/23	07/18/23	MeCl2, Lot 232230	2 mL	MSS_FV8270ICV_00027	750 uL	2,4-Dinitrotoluene	18.75 ppm
							2,6-Dinitrotoluene	18.75 ppm
							Diethyl phthalate	18.75 ppm
.MSS_FV8270ICV_00027	07/31/23	07/18/23	MeCl2, Lot 232230	5 mL	MS_RES_ICV1_00005	250 uL	2,4-Dinitrotoluene	50 ppm
							2,6-Dinitrotoluene	50 ppm
							Diethyl phthalate	50 ppm
..MS_RES_ICV1_00005	07/31/23		Restek, Lot A0180323		(Purchased Reagent)		2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
MSS_RVBAS_ICV_00013	09/28/23	07/06/23	MeCl2, Lot 214960	2 mL	MSS_ICV_BAcS_00006	500 uL	1,4-Dichlorobenzene-d4	5 ppm
							Acenaphthene-d10	5 ppm
							Naphthalene-d8	5 ppm
							Perylene-d12	5 ppm
							Phenanthrene-d10	5 ppm
							Pyrene-d10 (IS)	5 ppm
.MSS_ICV_BAcS_00006	09/28/23	03/28/23	MeCl2, Lot 226679	5 mL	MSS_FV8270_IS_00005	100 uL	1,4-Dichlorobenzene-d4	20 ppm
							Acenaphthene-d10	20 ppm
							Naphthalene-d8	20 ppm
							Perylene-d12	20 ppm
							Phenanthrene-d10	20 ppm
							Pyrene-d10 (IS)	20 ppm
..MSS_FV8270_IS_00005	11/30/23		Restek, Lot A0166482		(Purchased Reagent)		1,4-Dichlorobenzene-d4	1000 ug/mL
							Acenaphthene-d10	1000 ug/mL
							Naphthalene-d8	1000 ug/mL
							Perylene-d12	1000 ug/mL
							Phenanthrene-d10	1000 ug/mL
							Pyrene-d10 (IS)	1000 ug/mL
MSS_RVDFTPP_00013							4,4'-DDD	

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4,4'-DDE	
							Aramite, Total	
							Diallate	
							Isosafrole	
							m&p-Methylphenol	
							Tentatively Identified Compound	
							Total Cresols	
					MSS_AB_DFTPP_00016	650 uL	4,4'-DDT	13 ppm
							Benzidine_T	13 ppm
							DFTPP	13 ppm
							Pentachlorophenol_T	13 ppm
.MSS_AB_DFTPP_00016	07/20/25		Absolute, Lot 072022		(Purchased Reagent)		4,4'-DDT	500 ug/mL
							Benzidine_T	500 ug/mL
							DFTPP	500 ug/mL
							Pentachlorophenol_T	500 ug/mL
MSV_4ppbEE_00541	07/10/23	07/10/23	DI Water, Lot DI 07032023	500 mL	MSV_CCV_2CEVE_00128	2 uL	2-Chloroethyl vinyl ether	0.004 ug/mL
					MSV_CCV_CYC_00006	16 uL	Cyclohexanone	0.199992 ug/mL
					MSV_CCV_EE_00005	2 uL	Diethyl ether	0.00400054 ug/mL
					MSV_CCV_GASES_00520	1 uL	1,2-Dichloro-1,1,2-trifluoroethane	0.004 ug/mL
							Bromomethane	0.004 ug/mL
							Butadiene	0.004 ug/mL
							Chloroethane	0.004 ug/mL
							Chloromethane	0.004 ug/mL
							Dichlorodifluoromethane	0.004 ug/mL
							Dichlorofluoromethane	0.004 ug/mL
							Trichlorofluoromethane	0.004 ug/mL
							Vinyl chloride	0.004 ug/mL
					MSV_CCV_VOC#1_00134	2 uL	1,1,1,2-Tetrachloroethane	0.004 ug/mL
							1,1,1-Trichloroethane	0.004 ug/mL
							1,1,2,2-Tetrachloroethane	0.004 ug/mL
							1,1,2-Trichloroethane	0.004 ug/mL
							1,1-Dichloroethane	0.004 ug/mL
							1,1-Dichloroethene	0.004 ug/mL
							1,1-Dichloropropene	0.004 ug/mL
							1,2,3-Trichlorobenzene	0.004 ug/mL
							1,2,3-Trichloropropane	0.004 ug/mL
							1,2,4-Trichlorobenzene	0.004 ug/mL
							1,2,4-Trimethylbenzene	0.004 ug/mL
							1,2-Dibromo-3-Chloropropane	0.004 ug/mL
							1,2-Dichlorobenzene	0.004 ug/mL
							1,2-Dichloroethane	0.004 ug/mL
							1,2-Dichloropropane	0.004 ug/mL
							1,3,5-Trimethylbenzene	0.004 ug/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,3-Dichlorobenzene	0.004 ug/mL
							1,3-Dichloropropane	0.004 ug/mL
							1,4-Dichlorobenzene	0.004 ug/mL
							2,2-Dichloropropane	0.004 ug/mL
							2-Chlorotoluene	0.004 ug/mL
							4-Chlorotoluene	0.004 ug/mL
							4-Isopropyltoluene	0.004 ug/mL
							Benzene	0.004 ug/mL
							Bromobenzene	0.004 ug/mL
							Bromoform	0.004 ug/mL
							Carbon tetrachloride	0.004 ug/mL
							Chlorobenzene	0.004 ug/mL
							Chlorobromomethane	0.004 ug/mL
							Chlorodibromomethane	0.004 ug/mL
							Chloroform	0.004 ug/mL
							cis-1,2-Dichloroethene	0.004 ug/mL
							cis-1,3-Dichloropropene	0.004 ug/mL
							Dibromomethane	0.004 ug/mL
							Dichlorobromomethane	0.004 ug/mL
							Ethylbenzene	0.004 ug/mL
							Ethylene Dibromide	0.004 ug/mL
							Hexachlorobutadiene	0.004 ug/mL
							Isopropylbenzene	0.004 ug/mL
							m-Xylene & p-Xylene	0.008 ug/mL
							Methylene Chloride	0.004 ug/mL
							n-Butylbenzene	0.004 ug/mL
							N-Propylbenzene	0.004 ug/mL
							Naphthalene	0.004 ug/mL
							o-Xylene	0.004 ug/mL
							sec-Butylbenzene	0.004 ug/mL
							Styrene	0.004 ug/mL
							tert-Butylbenzene	0.004 ug/mL
							Tetrachloroethene	0.004 ug/mL
							Toluene	0.004 ug/mL
							trans-1,2-Dichloroethene	0.004 ug/mL
							trans-1,3-Dichloropropene	0.004 ug/mL
							Trichloroethene	0.004 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	0.004 ug/mL
							1,2,3-Trimethylbenzene	0.004 ug/mL
							1,3,5-Trichlorobenzene	0.004 ug/mL
							1,3-Diethylbenzene	0.004 ug/mL
							1,4-Dioxane	0.05 ug/mL
							1-Chlorohexane	0.004 ug/mL
							2-Chloro-1,3-butadiene	0.004 ug/mL
							2-ethoxy-2-methyl butane	0.004 ug/mL
							2-Methyl-2-propanol	0.02 ug/mL
							2-Methylnaphthalene	0.004 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Nitropropane	0.02 ug/mL
							2-Propanol	0.02 ug/mL
							3-Chloro-1-propene	0.004 ug/mL
							Acrylonitrile	0.01 ug/mL
							Benzyl chloride	0.004 ug/mL
							Carbon disulfide	0.004 ug/mL
							Cyclohexane	0.004 ug/mL
							Ethyl methacrylate	0.004 ug/mL
							Hexane	0.004 ug/mL
							Iodomethane	0.004 ug/mL
							Isobutyl alcohol	0.05 ug/mL
							Isopropyl ether	0.004 ug/mL
							Methacrylonitrile	0.01 ug/mL
							Methyl acetate	0.004 ug/mL
							Methyl methacrylate	0.004 ug/mL
							Methyl tert-butyl ether	0.004 ug/mL
							Methylcyclohexane	0.004 ug/mL
							n-Butanol	0.05 ug/mL
							n-Heptane	0.004 ug/mL
							o-diethylbenzene	0.004 ug/mL
							p-Diethylbenzene	0.004 ug/mL
							Pentane	0.004 ug/mL
							Propionitrile	0.02 ug/mL
							Tert-amyl methyl ether	0.004 ug/mL
							Tert-butyl ethyl ether	0.004 ug/mL
							Tetrahydrofuran	0.02 ug/mL
							trans-1,4-Dichloro-2-butene	0.01 ug/mL
					MSV_CCV_VOC#3_00133	1.6 uL	Acrolein	0.0400013 ug/mL
							2-Butanone	0.008 ug/mL
							2-Hexanone	0.008 ug/mL
							4-Methyl-2-pentanone (MIBK)	0.008 ug/mL
							Acetone	0.008 ug/mL
.MSV_CCV_2CEVE_00128	08/01/23	07/09/23	Methanol, Lot EG095	5 mL	MSV_V_2CLEVE_00134	1 mL	2-Chloroethyl vinyl ether	1000 ug/mL
..MSV_V_2CLEVE_00134	04/30/25		Restek, Lot A0184487		(Purchased Reagent)		2-Chloroethyl vinyl ether	5000 ug/mL
.MSV_CCV_CYC_00006	07/23/23	01/23/23	50/50 MeOH/Water, Lot EB679	200 mL	MSV_VCYC_STK_00009	9.615 mL	Cyclohexanone	6249.75 ug/mL
..MSV_VCYC_STK_00009	07/23/23	01/23/23	50/50 MeOH/Water, Lot EB679	10 mL	MSV_CYC_00008	1.3 g	Cyclohexanone	130000 ug/mL
...MSV_CYC_00008	06/30/25		Chem Service, Lot 13529800		(Purchased Reagent)		Cyclohexanone	1 g/g
.MSV_CCV_EE_00005	11/10/23	05/10/23	Methanol, Lot EG095	50 mL	MSV_EE_MISCSK_00012	1.686 mL	Diethyl ether	1000.14 ug/mL
..MSV_EE_MISCSK_00012	11/10/23	05/10/23	Methanol, Lot EG095	10 mL	MSV_EE_Neat_00009	0.2966 g	Diethyl ether	29660 ug/mL
...MSV_EE_Neat_00009	05/30/27		Chem Service, Lot 14084700		(Purchased Reagent)		Diethyl ether	1 g/g
.MSV_CCV_GASES_00520	07/17/23		Restek, Lot A0197586		(Purchased Reagent)		1,2-Dichloro-1,1,2-trifluoroethane	2000 ug/mL
							Bromomethane	2000 ug/mL
							Butadiene	2000 ug/mL
							Chloroethane	2000 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chloromethane	2000 ug/mL
							Dichlorodifluoromethane	2000 ug/mL
							Dichlorofluoromethane	2000 ug/mL
							Trichlorofluoromethane	2000 ug/mL
							Vinyl chloride	2000 ug/mL
.MSV_CCV_VOC#1_00134	08/08/23	07/09/23	Methanol, Lot EG095	5 mL	MSV_MegaMIX#1_00133	1 mL	1,1,1,2-Tetrachloroethane	1000 ug/mL
							1,1,1-Trichloroethane	1000 ug/mL
							1,1,2,2-Tetrachloroethane	1000 ug/mL
							1,1,2-Trichloroethane	1000 ug/mL
							1,1-Dichloroethane	1000 ug/mL
							1,1-Dichloroethene	1000 ug/mL
							1,1-Dichloropropene	1000 ug/mL
							1,2,3-Trichlorobenzene	1000 ug/mL
							1,2,3-Trichloropropane	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2,4-Trimethylbenzene	1000 ug/mL
							1,2-Dibromo-3-Chloropropane	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Dichloroethane	1000 ug/mL
							1,2-Dichloropropane	1000 ug/mL
							1,3,5-Trimethylbenzene	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dichloropropane	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							2,2-Dichloropropane	1000 ug/mL
							2-Chlorotoluene	1000 ug/mL
							4-Chlorotoluene	1000 ug/mL
							4-Isopropyltoluene	1000 ug/mL
							Benzene	1000 ug/mL
							Bromobenzene	1000 ug/mL
							Bromoform	1000 ug/mL
							Carbon tetrachloride	1000 ug/mL
							Chlorobenzene	1000 ug/mL
							Chlorobromomethane	1000 ug/mL
							Chlorodibromomethane	1000 ug/mL
							Chloroform	1000 ug/mL
							cis-1,2-Dichloroethene	1000 ug/mL
							cis-1,3-Dichloropropene	1000 ug/mL
							Dibromomethane	1000 ug/mL
							Dichlorobromomethane	1000 ug/mL
							Ethylbenzene	1000 ug/mL
							Ethylene Dibromide	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Isopropylbenzene	1000 ug/mL
							m-Xylene & p-Xylene	2000 ug/mL
							Methylene Chloride	1000 ug/mL
							n-Butylbenzene	1000 ug/mL
							N-Propylbenzene	1000 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Naphthalene	1000 ug/mL
							o-Xylene	1000 ug/mL
							sec-Butylbenzene	1000 ug/mL
							Styrene	1000 ug/mL
							tert-Butylbenzene	1000 ug/mL
							Tetrachloroethene	1000 ug/mL
							Toluene	1000 ug/mL
							trans-1,2-Dichloroethene	1000 ug/mL
							trans-1,3-Dichloropropene	1000 ug/mL
							Trichloroethene	1000 ug/mL
					MSV_MegaMix#2_00141	1 mL	1,1,2-Trichloro-1,2,2-trifluoroethane	1000 ug/mL
							1,2,3-Trimethylbenzene	1000 ug/mL
							1,3,5-Trichlorobenzene	1000 ug/mL
							1,3-Diethylbenzene	1000 ug/mL
							1,4-Dioxane	12500 ug/mL
							1-Chlorohexane	1000 ug/mL
							2-Chloro-1,3-butadiene	1000 ug/mL
							2-ethoxy-2-methyl butane	1000 ug/mL
							2-Methyl-2-propanol	5000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Nitropropane	5000 ug/mL
							2-Propanol	5000 ug/mL
							3-Chloro-1-propene	1000 ug/mL
							Acrylonitrile	2500 ug/mL
							Benzyl chloride	1000 ug/mL
							Carbon disulfide	1000 ug/mL
							Cyclohexane	1000 ug/mL
							Ethyl methacrylate	1000 ug/mL
							Hexane	1000 ug/mL
							Iodomethane	1000 ug/mL
							Isobutyl alcohol	12500 ug/mL
							Isopropyl ether	1000 ug/mL
							Methacrylonitrile	2500 ug/mL
							Methyl acetate	1000 ug/mL
							Methyl methacrylate	1000 ug/mL
							Methyl tert-butyl ether	1000 ug/mL
							Methylcyclohexane	1000 ug/mL
							n-Butanol	12500 ug/mL
							n-Heptane	1000 ug/mL
							o-diethylbenzene	1000 ug/mL
							p-Diethylbenzene	1000 ug/mL
							Pentane	1000 ug/mL
							Propionitrile	5000 ug/mL
							Tert-amyl methyl ether	1000 ug/mL
							Tert-butyl ethyl ether	1000 ug/mL
							Tetrahydrofuran	5000 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..MSV_MegaMIX#1_00133	08/08/23		Restek, Lot A0184527		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	5000 ug/mL
							1,1,1-Trichloroethane	5000 ug/mL
							1,1,2,2-Tetrachloroethane	5000 ug/mL
							1,1,2-Trichloroethane	5000 ug/mL
							1,1-Dichloroethane	5000 ug/mL
							1,1-Dichloroethene	5000 ug/mL
							1,1-Dichloropropene	5000 ug/mL
							1,2,3-Trichlorobenzene	5000 ug/mL
							1,2,3-Trichloropropane	5000 ug/mL
							1,2,4-Trichlorobenzene	5000 ug/mL
							1,2,4-Trimethylbenzene	5000 ug/mL
							1,2-Dibromo-3-Chloropropane	5000 ug/mL
							1,2-Dichlorobenzene	5000 ug/mL
							1,2-Dichloroethane	5000 ug/mL
							1,2-Dichloropropane	5000 ug/mL
							1,3,5-Trimethylbenzene	5000 ug/mL
							1,3-Dichlorobenzene	5000 ug/mL
							1,3-Dichloropropane	5000 ug/mL
							1,4-Dichlorobenzene	5000 ug/mL
							2,2-Dichloropropane	5000 ug/mL
							2-Chlorotoluene	5000 ug/mL
							4-Chlorotoluene	5000 ug/mL
							4-Isopropyltoluene	5000 ug/mL
							Benzene	5000 ug/mL
							Bromobenzene	5000 ug/mL
							Bromoform	5000 ug/mL
							Carbon tetrachloride	5000 ug/mL
							Chlorobenzene	5000 ug/mL
							Chlorobromomethane	5000 ug/mL
							Chlorodibromomethane	5000 ug/mL
							Chloroform	5000 ug/mL
							cis-1,2-Dichloroethene	5000 ug/mL
							cis-1,3-Dichloropropene	5000 ug/mL
							Dibromomethane	5000 ug/mL
							Dichlorobromomethane	5000 ug/mL
							Ethylbenzene	5000 ug/mL
							Ethylene Dibromide	5000 ug/mL
							Hexachlorobutadiene	5000 ug/mL
							Isopropylbenzene	5000 ug/mL
							m-Xylene & p-Xylene	10000 ug/mL
							Methylene Chloride	5000 ug/mL
							n-Butylbenzene	5000 ug/mL
							N-Propylbenzene	5000 ug/mL
							Naphthalene	5000 ug/mL
							o-Xylene	5000 ug/mL
							sec-Butylbenzene	5000 ug/mL
							Styrene	5000 ug/mL
							tert-Butylbenzene	5000 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Tetrachloroethene	5000 ug/mL
							Toluene	5000 ug/mL
							trans-1,2-Dichloroethene	5000 ug/mL
							trans-1,3-Dichloropropene	5000 ug/mL
							Trichloroethene	5000 ug/mL
..MSV_MegaMix#2_00141	08/08/23		Restek, Lot A0197578		(Purchased Reagent)		1,1,2-Trichloro-1,2,2-trifluoroethane	5000 ug/mL
							1,2,3-Trimethylbenzene	5000 ug/mL
							1,3,5-Trichlorobenzene	5000 ug/mL
							1,3-Diethylbenzene	5000 ug/mL
							1,4-Dioxane	62500 ug/mL
							1-Chlorohexane	5000 ug/mL
							2-Chloro-1,3-butadiene	5000 ug/mL
							2-ethoxy-2-methyl butane	5000 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							2-Methylnaphthalene	5000 ug/mL
							2-Nitropropane	25000 ug/mL
							2-Propanol	25000 ug/mL
							3-Chloro-1-propene	5000 ug/mL
							Acrylonitrile	12500 ug/mL
							Benzyl chloride	5000 ug/mL
							Carbon disulfide	5000 ug/mL
							Cyclohexane	5000 ug/mL
							Ethyl methacrylate	5000 ug/mL
							Hexane	5000 ug/mL
							Iodomethane	5000 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropyl ether	5000 ug/mL
							Methacrylonitrile	12500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl methacrylate	5000 ug/mL
							Methyl tert-butyl ether	5000 ug/mL
							Methylcyclohexane	5000 ug/mL
							n-Butanol	62500 ug/mL
							n-Heptane	5000 ug/mL
							o-diethylbenzene	5000 ug/mL
							p-Diethylbenzene	5000 ug/mL
							Pentane	5000 ug/mL
							Propionitrile	25000 ug/mL
							Tert-amyl methyl ether	5000 ug/mL
							Tert-butyl ethyl ether	5000 ug/mL
							Tetrahydrofuran	25000 ug/mL
							trans-1,4-Dichloro-2-butene	12500 ug/mL
.MSV_CCV_VOC#3_00133	07/30/23	07/09/23	Methanol, Lot EG095	5 mL	MSV_CCV_ACR_00011	0.5 mL	Acrolein	12500.4 ug/mL
					MSV_V_Ketones_00128	1 mL	2-Butanone	2500 ug/mL
							2-Hexanone	2500 ug/mL
							4-Methyl-2-pentanone (MIBK)	2500 ug/mL
							Acetone	2500 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..MSV_CCV_ACR_00011	07/30/23	05/31/23	Methanol, Lot EG095	10 mL	MSV_VACR_STK_00033	9.259 mL	Acrolein	125004 ug/mL
...MSV_VACR_STK_00033	07/30/23	05/31/23	Methanol, Lot EG095	10 mL	MSV_ACROLEIN_00026	1.4564 g	Acrolein	135008 ug/mL
....MSV_ACROLEIN_00026	11/30/23	Chem Service, Lot 13910600			(Purchased Reagent)		Acrolein	0.927 g/g
..MSV_V_Ketones_00128	06/30/25	Restek, Lot A0186508			(Purchased Reagent)		2-Butanone	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
MSV_CCV_2CEVE_00128	08/01/23	07/09/23	Methanol, Lot EG095	5 mL	MSV_V_2CLEVE_00134	1 mL	2-Chloroethyl vinyl ether	1000 ug/mL
.MSV_V_2CLEVE_00134	04/30/25	Restek, Lot A0184487			(Purchased Reagent)		2-Chloroethyl vinyl ether	5000 ug/mL
MSV_CCV_CYC_00005	06/23/23	01/23/23	50/50 MeOH/Water, Lot EB679	200 mL	MSV_VCYC_STK_00009	9.615 mL	Cyclohexanone	6249.75 ug/mL
.MSV_VCYC_STK_00009	07/23/23	01/23/23	50/50 MeOH/Water, Lot EB679	10 mL	MSV_CYC_00008	1.3 g	Cyclohexanone	130000 ug/mL
..MSV_CYC_00008	06/30/25	Chem Service, Lot 13529800			(Purchased Reagent)		Cyclohexanone	1 g/g
MSV_CCV_CYC_00006	07/23/23	01/23/23	50/50 MeOH/Water, Lot EB679	200 mL	MSV_VCYC_STK_00009	9.615 mL	Cyclohexanone	6249.75 ug/mL
.MSV_VCYC_STK_00009	07/23/23	01/23/23	50/50 MeOH/Water, Lot EB679	10 mL	MSV_CYC_00008	1.3 g	Cyclohexanone	130000 ug/mL
..MSV_CYC_00008	06/30/25	Chem Service, Lot 13529800			(Purchased Reagent)		Cyclohexanone	1 g/g
MSV_CCV_EE_00005	11/10/23	05/10/23	Methanol, Lot EG095	50 mL	MSV_EE_MISCSK_00012	1.686 mL	Diethyl ether	1000.14 ug/mL
.MSV_EE_MISCSK_00012	11/10/23	05/10/23	Methanol, Lot EG095	10 mL	MSV_EE_Neat_00009	0.2966 g	Diethyl ether	29660 ug/mL
..MSV_EE_Neat_00009	05/30/27	Chem Service, Lot 14084700			(Purchased Reagent)		Diethyl ether	1 g/g
MSV_CCV_GASES_00520	07/17/23	Restek, Lot A0197586			(Purchased Reagent)		1,2-Dichloro-1,1,2-trifluoroethane	2000 ug/mL
							Bromomethane	2000 ug/mL
							Butadiene	2000 ug/mL
							Chloroethane	2000 ug/mL
							Chloromethane	2000 ug/mL
							Dichlorodifluoromethane	2000 ug/mL
							Dichlorofluoromethane	2000 ug/mL
							Trichlorofluoromethane	2000 ug/mL
							Vinyl chloride	2000 ug/mL
MSV_CCV_V5ACE_00025	07/07/23	06/08/23	Methanol, Lot EG095	10 mL	MSV_AcetatesV_00029	1 mL	Acetonitrile	5000 ug/mL
							Ethyl acetate	1000 ug/mL
							Vinyl acetate	1000 ug/mL
.MSV_AcetatesV_00029	10/31/23	Restek, Lot A0184542			(Purchased Reagent)		Acetonitrile	50000 ug/mL
							Ethyl acetate	10000 ug/mL
							Vinyl acetate	10000 ug/mL
MSV_CCV_VOC#1_00134	08/08/23	07/09/23	Methanol, Lot EG095	5 mL	MSV_MegaMIX#1_00133	1 mL	1,1,1,2-Tetrachloroethane	1000 ug/mL
							1,1,1-Trichloroethane	1000 ug/mL
							1,1,2,2-Tetrachloroethane	1000 ug/mL
							1,1,2-Trichloroethane	1000 ug/mL
							1,1-Dichloroethane	1000 ug/mL
							1,1-Dichloroethene	1000 ug/mL
							1,1-Dichloropropene	1000 ug/mL
							1,2,3-Trichlorobenzene	1000 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3-Trichloropropane	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2,4-Trimethylbenzene	1000 ug/mL
							1,2-Dibromo-3-Chloropropane	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Dichloroethane	1000 ug/mL
							1,2-Dichloropropane	1000 ug/mL
							1,3,5-Trimethylbenzene	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dichloropropane	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							2,2-Dichloropropane	1000 ug/mL
							2-Chlorotoluene	1000 ug/mL
							4-Chlorotoluene	1000 ug/mL
							4-Isopropyltoluene	1000 ug/mL
							Benzene	1000 ug/mL
							Bromobenzene	1000 ug/mL
							Bromoform	1000 ug/mL
							Carbon tetrachloride	1000 ug/mL
							Chlorobenzene	1000 ug/mL
							Chlorobromomethane	1000 ug/mL
							Chlorodibromomethane	1000 ug/mL
							Chloroform	1000 ug/mL
							cis-1,2-Dichloroethene	1000 ug/mL
							cis-1,3-Dichloropropene	1000 ug/mL
							Dibromomethane	1000 ug/mL
							Dichlorobromomethane	1000 ug/mL
							Ethylbenzene	1000 ug/mL
							Ethylene Dibromide	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Isopropylbenzene	1000 ug/mL
							m-Xylene & p-Xylene	2000 ug/mL
							Methylene Chloride	1000 ug/mL
							n-Butylbenzene	1000 ug/mL
							N-Propylbenzene	1000 ug/mL
							Naphthalene	1000 ug/mL
							o-Xylene	1000 ug/mL
							sec-Butylbenzene	1000 ug/mL
							Styrene	1000 ug/mL
							tert-Butylbenzene	1000 ug/mL
							Tetrachloroethene	1000 ug/mL
							Toluene	1000 ug/mL
							trans-1,2-Dichloroethene	1000 ug/mL
							trans-1,3-Dichloropropene	1000 ug/mL
							Trichloroethene	1000 ug/mL
					MSV_MegaMix#2_00141	1 mL	1,1,2-Trichloro-1,2,2-trifluoroethane	1000 ug/mL
							1,2,3-Trimethylbenzene	1000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envir Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,3,5-Trichlorobenzene	1000 ug/mL
							1,3-Diethylbenzene	1000 ug/mL
							1,4-Dioxane	12500 ug/mL
							1-Chlorohexane	1000 ug/mL
							2-Chloro-1,3-butadiene	1000 ug/mL
							2-ethoxy-2-methyl butane	1000 ug/mL
							2-Methyl-2-propanol	5000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Nitropropane	5000 ug/mL
							2-Propanol	5000 ug/mL
							3-Chloro-1-propene	1000 ug/mL
							Acrylonitrile	2500 ug/mL
							Benzyl chloride	1000 ug/mL
							Carbon disulfide	1000 ug/mL
							Cyclohexane	1000 ug/mL
							Ethyl methacrylate	1000 ug/mL
							Hexane	1000 ug/mL
							Iodomethane	1000 ug/mL
							Isobutyl alcohol	12500 ug/mL
							Isopropyl ether	1000 ug/mL
							Methacrylonitrile	2500 ug/mL
							Methyl acetate	1000 ug/mL
							Methyl methacrylate	1000 ug/mL
							Methyl tert-butyl ether	1000 ug/mL
							Methylcyclohexane	1000 ug/mL
							n-Butanol	12500 ug/mL
							n-Heptane	1000 ug/mL
							o-diethylbenzene	1000 ug/mL
							p-Diethylbenzene	1000 ug/mL
							Pentane	1000 ug/mL
							Propionitrile	5000 ug/mL
							Tert-amyl methyl ether	1000 ug/mL
							Tert-butyl ethyl ether	1000 ug/mL
							Tetrahydrofuran	5000 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
.MSV_MegaMIX#1_00133	08/08/23		Restek, Lot A0184527		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	5000 ug/mL
							1,1,1-Trichloroethane	5000 ug/mL
							1,1,2,2-Tetrachloroethane	5000 ug/mL
							1,1,2-Trichloroethane	5000 ug/mL
							1,1-Dichloroethane	5000 ug/mL
							1,1-Dichloroethene	5000 ug/mL
							1,1-Dichloropropene	5000 ug/mL
							1,2,3-Trichlorobenzene	5000 ug/mL
							1,2,3-Trichloropropane	5000 ug/mL
							1,2,4-Trichlorobenzene	5000 ug/mL
							1,2,4-Trimethylbenzene	5000 ug/mL
							1,2-Dibromo-3-Chloropropane	5000 ug/mL
							1,2-Dichlorobenzene	5000 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dichloroethane	5000 ug/mL
							1,2-Dichloropropane	5000 ug/mL
							1,3,5-Trimethylbenzene	5000 ug/mL
							1,3-Dichlorobenzene	5000 ug/mL
							1,3-Dichloropropane	5000 ug/mL
							1,4-Dichlorobenzene	5000 ug/mL
							2,2-Dichloropropane	5000 ug/mL
							2-Chlorotoluene	5000 ug/mL
							4-Chlorotoluene	5000 ug/mL
							4-Isopropyltoluene	5000 ug/mL
							Benzene	5000 ug/mL
							Bromobenzene	5000 ug/mL
							Bromoform	5000 ug/mL
							Carbon tetrachloride	5000 ug/mL
							Chlorobenzene	5000 ug/mL
							Chlorobromomethane	5000 ug/mL
							Chlorodibromomethane	5000 ug/mL
							Chloroform	5000 ug/mL
							cis-1,2-Dichloroethene	5000 ug/mL
							cis-1,3-Dichloropropene	5000 ug/mL
							Dibromomethane	5000 ug/mL
							Dichlorobromomethane	5000 ug/mL
							Ethylbenzene	5000 ug/mL
							Ethylene Dibromide	5000 ug/mL
							Hexachlorobutadiene	5000 ug/mL
							Isopropylbenzene	5000 ug/mL
							m-Xylene & p-Xylene	10000 ug/mL
							Methylene Chloride	5000 ug/mL
							n-Butylbenzene	5000 ug/mL
							N-Propylbenzene	5000 ug/mL
							Naphthalene	5000 ug/mL
							o-Xylene	5000 ug/mL
							sec-Butylbenzene	5000 ug/mL
							Styrene	5000 ug/mL
							tert-Butylbenzene	5000 ug/mL
							Tetrachloroethene	5000 ug/mL
							Toluene	5000 ug/mL
							trans-1,2-Dichloroethene	5000 ug/mL
							trans-1,3-Dichloropropene	5000 ug/mL
							Trichloroethene	5000 ug/mL
.MSV_MegaMix#2_00141	08/08/23		Restek, Lot A0197578		(Purchased Reagent)		1,1,2-Trichloro-1,2,2-trifluoroethane	5000 ug/mL
							1,2,3-Trimethylbenzene	5000 ug/mL
							1,3,5-Trichlorobenzene	5000 ug/mL
							1,3-Diethylbenzene	5000 ug/mL
							1,4-Dioxane	62500 ug/mL
							1-Chlorohexane	5000 ug/mL
							2-Chloro-1,3-butadiene	5000 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-ethoxy-2-methyl butane	5000 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							2-Methylnaphthalene	5000 ug/mL
							2-Nitropropane	25000 ug/mL
							2-Propanol	25000 ug/mL
							3-Chloro-1-propene	5000 ug/mL
							Acrylonitrile	12500 ug/mL
							Benzyl chloride	5000 ug/mL
							Carbon disulfide	5000 ug/mL
							Cyclohexane	5000 ug/mL
							Ethyl methacrylate	5000 ug/mL
							Hexane	5000 ug/mL
							Iodomethane	5000 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropyl ether	5000 ug/mL
							Methacrylonitrile	12500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl methacrylate	5000 ug/mL
							Methyl tert-butyl ether	5000 ug/mL
							Methylcyclohexane	5000 ug/mL
							n-Butanol	62500 ug/mL
							n-Heptane	5000 ug/mL
							o-diethylbenzene	5000 ug/mL
							p-Diethylbenzene	5000 ug/mL
							Pentane	5000 ug/mL
							Propionitrile	25000 ug/mL
							Tert-amyl methyl ether	5000 ug/mL
							Tert-butyl ethyl ether	5000 ug/mL
							Tetrahydrofuran	25000 ug/mL
							trans-1,4-Dichloro-2-butene	12500 ug/mL
MSV_CCV_VOC#1_00137	08/29/23	07/30/23	Methanol, Lot EG095	5 mL	MSV_MegaMix#2_00131	1 mL	2-Propanol	5000 ug/mL
.MSV_MegaMix#2_00131	08/29/23		Restek, Lot A0193406		(Purchased Reagent)		2-Propanol	25000 ug/mL
MSV_CCV_VOC#3_00133	07/30/23	07/09/23	Methanol, Lot EG095	5 mL	MSV_CCV_ACR_00011	0.5 mL	Acrolein	12500.4 ug/mL
					MSV_V_Ketones_00128	1 mL	2-Butanone	2500 ug/mL
							2-Hexanone	2500 ug/mL
							4-Methyl-2-pentanone (MIBK)	2500 ug/mL
							Acetone	2500 ug/mL
.MSV_CCV_ACR_00011	07/30/23	05/31/23	Methanol, Lot EG095	10 mL	MSV_VACR_STK_00033	9.259 mL	Acrolein	125004 ug/mL
..MSV_VACR_STK_00033	07/30/23	05/31/23	Methanol, Lot EG095	10 mL	MSV_ACROLEIN_00026	1.4564 g	Acrolein	135008 ug/mL
...MSV_ACROLEIN_00026	11/30/23		Chem Service, Lot 13910600		(Purchased Reagent)		Acrolein	0.927 g/g
.MSV_V_Ketones_00128	06/30/25		Restek, Lot A0186508		(Purchased Reagent)		2-Butanone	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
MSV_Cent_ISSS_00016	08/07/23	02/07/23	Methanol, Lot EB679	50 mL	MSV_8260_SS_00841	1 mL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Toluene-d8 (Surr)	50 ug/mL
					MSV_Cus826_IS_00535	1 mL	1,4-Dichlorobenzene-d4	50 ug/mL
							Chlorobenzene-d5 (IS)	50 ug/mL
							Fluorobenzene (IS)	50 ug/mL
							t-Butyl alcohol-d10 (IS)	250 ug/mL
.MSV_8260_SS_00841	03/31/25		Restek, Lot A0183565		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
.MSV_Cus826_IS_00535	04/30/25		Restek, Lot A0184225		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL
							Chlorobenzene-d5 (IS)	2500 ug/mL
							Fluorobenzene (IS)	2500 ug/mL
							t-Butyl alcohol-d10 (IS)	12500 ug/mL
MSV_Cent_ISSS_00021	01/30/24	07/31/23	Methanol, Lot EG095	50 mL	MSV_Cus826_IS_00594	1 mL	1,4-Dichlorobenzene-d4	50 ug/mL
							Chlorobenzene-d5 (IS)	50 ug/mL
							Fluorobenzene (IS)	50 ug/mL
							t-Butyl alcohol-d10 (IS)	250 ug/mL
.MSV_Cus826_IS_00594	01/30/24		Restek, Lot A0197488		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL
							Chlorobenzene-d5 (IS)	2500 ug/mL
							Fluorobenzene (IS)	2500 ug/mL
							t-Butyl alcohol-d10 (IS)	12500 ug/mL
MSV_Cent_ISSS_00021	01/30/24	07/31/23	Methanol, Lot EG095	50 mL	MSV_8260_SS_00973	1 mL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
.MSV_8260_SS_00973	01/30/24		Restek, Lot A0195060		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
MSV_DME_00046	06/24/23		Restek, Lot A0190883		(Purchased Reagent)		Dimethyl ether	1000 ug/mL
MSV_LCS_EE_00007	11/10/23	05/10/23	Methanol, Lot EG095	50 mL	MSV_QEE_MiscS_00011	0.077 mL	Diethyl ether	40.04 ug/mL
.MSV_QEE_MiscS_00011	11/10/23	05/10/23	Methanol, Lot EG095	10 mL	MSV_EE_Neat_00009	0.26 g	Diethyl ether	26000 ug/mL
..MSV_EE_Neat_00009	05/30/27		Chem Service, Lot 14084700		(Purchased Reagent)		Diethyl ether	1 g/g
MSV_LCS_VOC#1_00115	07/18/23	06/18/23	Methanol, Lot EG095	25 mL	MSV_M_MIX1SEC_00130	1 mL	1,1,1-Trichloroethane	40 ug/mL
							1,1,2-Trichloroethane	40 ug/mL
							1,1-Dichloroethane	40 ug/mL
							1,1-Dichloroethene	40 ug/mL
							Benzene	40 ug/mL
							Carbon tetrachloride	40 ug/mL
							Ethylbenzene	40 ug/mL
							Methylene Chloride	40 ug/mL
							Tetrachloroethene	40 ug/mL
							Toluene	40 ug/mL
							Trichloroethene	40 ug/mL
					MSV_M_MIX2SEC_00134	1 mL	Tetrahydrofuran	200 ug/mL
					MSV_Q_Ketones_00136	1 mL	2-Butanone	500 ug/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MSV_M_MIX1SEC_00130	04/30/25		Restek, Lot A0184354		(Purchased Reagent)		1,1,1-Trichloroethane	1000 ug/mL
							1,1,2-Trichloroethane	1000 ug/mL
							1,1-Dichloroethane	1000 ug/mL
							1,1-Dichloroethene	1000 ug/mL
							Benzene	1000 ug/mL
							Carbon tetrachloride	1000 ug/mL
							Ethylbenzene	1000 ug/mL
							Methylene Chloride	1000 ug/mL
							Tetrachloroethene	1000 ug/mL
							Toluene	1000 ug/mL
							Trichloroethene	1000 ug/mL
.MSV_M_MIX2SEC_00134	04/30/25		Restek, Lot A0184412		(Purchased Reagent)		Tetrahydrofuran	5000 ug/mL
.MSV_Q_Ketones_00136	04/30/25		Restek, Lot A0184721		(Purchased Reagent)		2-Butanone	12500 ug/mL
MSV_LCS_VOC#1_00118	08/08/23	07/09/23	Methanol, Lot EG095	25 mL	MSV_M_MIX2SEC_00138	1 mL	2-Propanol	300 ug/mL
.MSV_M_MIX2SEC_00138	04/30/25		Restek, Lot A0184412		(Purchased Reagent)		2-Propanol	7500 ug/mL
MSV_LCS_VOC#1_00123	08/29/23	07/30/23	Methanol, Lot EG095	25 mL	MSV_M_MIX1SEC_00145	1 mL	1,1,1-Trichloroethane	40 ug/mL
							1,1,2-Trichloroethane	40 ug/mL
							1,1-Dichloroethane	40 ug/mL
							1,1-Dichloroethene	40 ug/mL
							Benzene	40 ug/mL
							Carbon tetrachloride	40 ug/mL
							Ethylbenzene	40 ug/mL
							Methylene Chloride	40 ug/mL
							Tetrachloroethene	40 ug/mL
							Toluene	40 ug/mL
							Trichloroethene	40 ug/mL
					MSV_M_MIX2SEC_00141	1 mL	1,1,2-Trichloro-1,2,2-trifluoroethane	40 ug/mL
							2-Propanol	300 ug/mL
							Tetrahydrofuran	200 ug/mL
					MSV_Q_Ketones_00143	1 mL	2-Butanone	500 ug/mL
.MSV_M_MIX1SEC_00145	04/30/25		Restek, Lot A0184354		(Purchased Reagent)		1,1,1-Trichloroethane	1000 ug/mL
							1,1,2-Trichloroethane	1000 ug/mL
							1,1-Dichloroethane	1000 ug/mL
							1,1-Dichloroethene	1000 ug/mL
							Benzene	1000 ug/mL
							Carbon tetrachloride	1000 ug/mL
							Ethylbenzene	1000 ug/mL
							Methylene Chloride	1000 ug/mL
							Tetrachloroethene	1000 ug/mL
							Toluene	1000 ug/mL
							Trichloroethene	1000 ug/mL
.MSV_M_MIX2SEC_00141	04/30/25		Restek, Lot A0184412		(Purchased Reagent)		1,1,2-Trichloro-1,2,2-trifluoroethane	1000 ug/mL
							2-Propanol	7500 ug/mL
							Tetrahydrofuran	5000 ug/mL
.MSV_Q_Ketones_00143	04/30/25		Restek, Lot A0184721		(Purchased Reagent)		2-Butanone	12500 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
MSV_LL_#1_826_00068	03/25/23	02/27/23	Methanol, Lot EB679	1 mL	MSV_CCV_VOC#1_00112	50 uL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromoform	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chlorobromomethane	50 ug/mL
							Chlorodibromomethane	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromomethane	50 ug/mL
							Dichlorobromomethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Ethylene Dibromide	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	100 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butylbenzene	50 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,2,3-Trimethylbenzene	50 ug/mL
							1,3,5-Trichlorobenzene	50 ug/mL
							1,4-Dioxane	2500 ug/mL
							1-Chlorohexane	50 ug/mL
							2-Chloro-1,3-butadiene	50 ug/mL
							2-Methyl-2-propanol	1000 ug/mL
							2-Nitropropane	250 ug/mL
							3-Chloro-1-propene	50 ug/mL
							Acrylonitrile	125 ug/mL
							Benzyl chloride	50 ug/mL
							Carbon disulfide	50 ug/mL
							Cyclohexane	50 ug/mL
							Ethyl methacrylate	50 ug/mL
							Hexane	50 ug/mL
							Iodomethane	50 ug/mL
							Isobutyl alcohol	2500 ug/mL
							Isopropyl ether	50 ug/mL
							Methacrylonitrile	500 ug/mL
							Methyl acetate	50 ug/mL
							Methyl methacrylate	50 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylcyclohexane	50 ug/mL
							n-Butanol	4375 ug/mL
							n-Heptane	50 ug/mL
							Propionitrile	1000 ug/mL
							Tert-amyl methyl ether	50 ug/mL
							Tert-butyl ethyl ether	50 ug/mL
							Tetrahydrofuran	250 ug/mL
							trans-1,4-Dichloro-2-butene	500 ug/mL
					MSV_CCV_VOC#3_00113	200 uL	Acrolein	2499.84 ug/mL
							2-Butanone	500 ug/mL
							2-Hexanone	500 ug/mL
							4-Methyl-2-pentanone (MIBK)	500 ug/mL
							Acetone	500 ug/mL
					MSV_V_VOA2_00182	150 uL	1,4-Dioxane	2500 ug/mL
							2-Methyl-2-propanol	1000 ug/mL
							Isobutyl alcohol	2500 ug/mL
							Methacrylonitrile	500 ug/mL
							n-Butanol	4375 ug/mL
							Propionitrile	1000 ug/mL
							trans-1,4-Dichloro-2-butene	500 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MSV_CCV_VOC#1_00112	03/25/23	02/23/23	Methanol, Lot EB679	5 mL	MSV_MegaMIX#1_00113	1 mL	1,1,1,2-Tetrachloroethane	1000 ug/mL
							1,1,1-Trichloroethane	1000 ug/mL
							1,1,2,2-Tetrachloroethane	1000 ug/mL
							1,1,2-Trichloroethane	1000 ug/mL
							1,1-Dichloroethane	1000 ug/mL
							1,1-Dichloroethene	1000 ug/mL
							1,1-Dichloropropene	1000 ug/mL
							1,2,3-Trichlorobenzene	1000 ug/mL
							1,2,3-Trichloropropane	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2,4-Trimethylbenzene	1000 ug/mL
							1,2-Dibromo-3-Chloropropane	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Dichloroethane	1000 ug/mL
							1,2-Dichloropropane	1000 ug/mL
							1,3,5-Trimethylbenzene	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dichloropropane	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							2,2-Dichloropropane	1000 ug/mL
							2-Chlorotoluene	1000 ug/mL
							4-Chlorotoluene	1000 ug/mL
							4-Isopropyltoluene	1000 ug/mL
							Benzene	1000 ug/mL
							Bromobenzene	1000 ug/mL
							Bromoform	1000 ug/mL
							Carbon tetrachloride	1000 ug/mL
							Chlorobenzene	1000 ug/mL
							Chlorobromomethane	1000 ug/mL
							Chlorodibromomethane	1000 ug/mL
							Chloroform	1000 ug/mL
							cis-1,2-Dichloroethene	1000 ug/mL
							cis-1,3-Dichloropropene	1000 ug/mL
							Dibromomethane	1000 ug/mL
							Dichlorobromomethane	1000 ug/mL
							Ethylbenzene	1000 ug/mL
							Ethylene Dibromide	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Isopropylbenzene	1000 ug/mL
							m-Xylene & p-Xylene	2000 ug/mL
							Methylene Chloride	1000 ug/mL
							n-Butylbenzene	1000 ug/mL
							N-Propylbenzene	1000 ug/mL
							Naphthalene	1000 ug/mL
							o-Xylene	1000 ug/mL
							sec-Butylbenzene	1000 ug/mL
							Styrene	1000 ug/mL
							tert-Butylbenzene	1000 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Tetrachloroethene	1000 ug/mL
							Toluene	1000 ug/mL
							trans-1,2-Dichloroethene	1000 ug/mL
							trans-1,3-Dichloropropene	1000 ug/mL
							Trichloroethene	1000 ug/mL
					MSV_MegaMix#2_00109	1 mL	1,1,2-Trichloro-1,2,2-trifluoroethane	1000 ug/mL
							1,2,3-Trimethylbenzene	1000 ug/mL
							1,3,5-Trichlorobenzene	1000 ug/mL
							1,4-Dioxane	12500 ug/mL
							1-Chlorohexane	1000 ug/mL
							2-Chloro-1,3-butadiene	1000 ug/mL
							2-Methyl-2-propanol	5000 ug/mL
							2-Nitropropane	5000 ug/mL
							3-Chloro-1-propene	1000 ug/mL
							Acrylonitrile	2500 ug/mL
							Benzyl chloride	1000 ug/mL
							Carbon disulfide	1000 ug/mL
							Cyclohexane	1000 ug/mL
							Ethyl methacrylate	1000 ug/mL
							Hexane	1000 ug/mL
							Iodomethane	1000 ug/mL
							Isobutyl alcohol	12500 ug/mL
							Isopropyl ether	1000 ug/mL
							Methacrylonitrile	2500 ug/mL
							Methyl acetate	1000 ug/mL
							Methyl methacrylate	1000 ug/mL
							Methyl tert-butyl ether	1000 ug/mL
							Methylcyclohexane	1000 ug/mL
							n-Butanol	12500 ug/mL
							n-Heptane	1000 ug/mL
							Propionitrile	5000 ug/mL
							Tert-amyl methyl ether	1000 ug/mL
							Tert-butyl ethyl ether	1000 ug/mL
							Tetrahydrofuran	5000 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
..MSV_MegaMIX#1_00113	03/25/23		Restek, Lot A0184527		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	5000 ug/mL
							1,1,1-Trichloroethane	5000 ug/mL
							1,1,2,2-Tetrachloroethane	5000 ug/mL
							1,1,2-Trichloroethane	5000 ug/mL
							1,1-Dichloroethane	5000 ug/mL
							1,1-Dichloroethene	5000 ug/mL
							1,1-Dichloropropene	5000 ug/mL
							1,2,3-Trichlorobenzene	5000 ug/mL
							1,2,3-Trichloropropane	5000 ug/mL
							1,2,4-Trichlorobenzene	5000 ug/mL
							1,2,4-Trimethylbenzene	5000 ug/mL
							1,2-Dibromo-3-Chloropropane	5000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dichlorobenzene	5000 ug/mL
							1,2-Dichloroethane	5000 ug/mL
							1,2-Dichloropropane	5000 ug/mL
							1,3,5-Trimethylbenzene	5000 ug/mL
							1,3-Dichlorobenzene	5000 ug/mL
							1,3-Dichloropropane	5000 ug/mL
							1,4-Dichlorobenzene	5000 ug/mL
							2,2-Dichloropropane	5000 ug/mL
							2-Chlorotoluene	5000 ug/mL
							4-Chlorotoluene	5000 ug/mL
							4-Isopropyltoluene	5000 ug/mL
							Benzene	5000 ug/mL
							Bromobenzene	5000 ug/mL
							Bromoform	5000 ug/mL
							Carbon tetrachloride	5000 ug/mL
							Chlorobenzene	5000 ug/mL
							Chlorobromomethane	5000 ug/mL
							Chlorodibromomethane	5000 ug/mL
							Chloroform	5000 ug/mL
							cis-1,2-Dichloroethene	5000 ug/mL
							cis-1,3-Dichloropropene	5000 ug/mL
							Dibromomethane	5000 ug/mL
							Dichlorobromomethane	5000 ug/mL
							Ethylbenzene	5000 ug/mL
							Ethylene Dibromide	5000 ug/mL
							Hexachlorobutadiene	5000 ug/mL
							Isopropylbenzene	5000 ug/mL
							m-Xylene & p-Xylene	10000 ug/mL
							Methylene Chloride	5000 ug/mL
							n-Butylbenzene	5000 ug/mL
							N-Propylbenzene	5000 ug/mL
							Naphthalene	5000 ug/mL
							o-Xylene	5000 ug/mL
							sec-Butylbenzene	5000 ug/mL
							Styrene	5000 ug/mL
							tert-Butylbenzene	5000 ug/mL
							Tetrachloroethene	5000 ug/mL
							Toluene	5000 ug/mL
							trans-1,2-Dichloroethene	5000 ug/mL
							trans-1,3-Dichloropropene	5000 ug/mL
							Trichloroethene	5000 ug/mL
..MSV_MegaMix#2_00109	03/25/23		Restek, Lot A0186885		(Purchased Reagent)		1,1,2-Trichloro-1,2,2-trifluoroethane	5000 ug/mL
							1,2,3-Trimethylbenzene	5000 ug/mL
							1,3,5-Trichlorobenzene	5000 ug/mL
							1,4-Dioxane	62500 ug/mL
							1-Chlorohexane	5000 ug/mL
							2-Chloro-1,3-butadiene	5000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Methyl-2-propanol	25000 ug/mL
							2-Nitropropane	25000 ug/mL
							3-Chloro-1-propene	5000 ug/mL
							Acrylonitrile	12500 ug/mL
							Benzyl chloride	5000 ug/mL
							Carbon disulfide	5000 ug/mL
							Cyclohexane	5000 ug/mL
							Ethyl methacrylate	5000 ug/mL
							Hexane	5000 ug/mL
							Iodomethane	5000 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropyl ether	5000 ug/mL
							Methacrylonitrile	12500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl methacrylate	5000 ug/mL
							Methyl tert-butyl ether	5000 ug/mL
							Methylcyclohexane	5000 ug/mL
							n-Butanol	62500 ug/mL
							n-Heptane	5000 ug/mL
							Propionitrile	25000 ug/mL
							Tert-amyl methyl ether	5000 ug/mL
							Tert-butyl ethyl ether	5000 ug/mL
							Tetrahydrofuran	25000 ug/mL
							trans-1,4-Dichloro-2-butene	12500 ug/mL
.MSV_CCV_VOC#3_00113	03/25/23	02/23/23	Methanol, Lot EB679	5 mL	MSV_CCV_ACR_00009	0.5 mL	Acrolein	12499.2 ug/mL
					MSV_V_Ketones_00101	1 mL	2-Butanone	2500 ug/mL
							2-Hexanone	2500 ug/mL
							4-Methyl-2-pentanone (MIBK)	2500 ug/mL
							Acetone	2500 ug/mL
..MSV_CCV_ACR_00009	04/10/23	02/09/23	Methanol, Lot EB679	10 mL	MSV_VACR_STK_00031	9.205 mL	Acrolein	124992 ug/mL
...MSV_VACR_STK_00031	04/10/23	02/09/23	Methanol, Lot EB679	10 mL	MSV_ACROLEIN_00024	1.4648 g	Acrolein	135787 ug/mL
....MSV_ACROLEIN_00024	11/30/23	Chem Service, Lot 13910600			(Purchased Reagent)		Acrolein	0.927 g/g
..MSV_V_Ketones_00101	01/31/25	Restek, Lot A0180742			(Purchased Reagent)		2-Butanone	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MSV_V_VOA2_00182	03/25/23	02/23/23	Methanol, Lot EB679	5 mL	MSV_V#2B_00310	1 mL	1,4-Dioxane	12500 ug/mL
							2-Methyl-2-propanol	5000 ug/mL
							Isobutyl alcohol	12500 ug/mL
							Methacrylonitrile	2500 ug/mL
							n-Butanol	25000 ug/mL
							Propionitrile	5000 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
..MSV_V#2B_00310	04/30/24	Restek, Lot A0184378			(Purchased Reagent)		1,4-Dioxane	62500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Methacrylonitrile	12500 ug/mL
							n-Butanol	125000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Propionitrile	25000 ug/mL
							trans-1,4-Dichloro-2-butene	12500 ug/mL
MSV_LL_#1_826_00081	07/11/23	06/18/23	Methanol, Lot EG095	1 mL	MSV_CCV_VOC#1_00130	50 uL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromoform	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chlorobromomethane	50 ug/mL
							Chlorodibromomethane	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromomethane	50 ug/mL
							Dichlorobromomethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Ethylene Dibromide	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	100 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,2,3-Trimethylbenzene	50 ug/mL
							1,3,5-Trichlorobenzene	50 ug/mL
							1,4-Dioxane	2500 ug/mL
							1-Chlorohexane	50 ug/mL
							2-Chloro-1,3-butadiene	50 ug/mL
							2-Methyl-2-propanol	1000 ug/mL
							2-Nitropropane	250 ug/mL
							3-Chloro-1-propene	50 ug/mL
							Acrylonitrile	125 ug/mL
							Benzyl chloride	50 ug/mL
							Carbon disulfide	50 ug/mL
							Cyclohexane	50 ug/mL
							Ethyl methacrylate	50 ug/mL
							Hexane	50 ug/mL
							Iodomethane	50 ug/mL
							Isobutyl alcohol	2500 ug/mL
							Isopropyl ether	50 ug/mL
							Methacrylonitrile	500 ug/mL
							Methyl acetate	50 ug/mL
							Methyl methacrylate	50 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylcyclohexane	50 ug/mL
							n-Butanol	4375 ug/mL
							n-Heptane	50 ug/mL
							Propionitrile	1000 ug/mL
							Tert-amyl methyl ether	50 ug/mL
							Tert-butyl ethyl ether	50 ug/mL
							Tetrahydrofuran	250 ug/mL
							trans-1,4-Dichloro-2-butene	500 ug/mL
					MSV_CCV_VOC#3_00130	200 uL	Acrolein	2500.08 ug/mL
							2-Butanone	500 ug/mL
							2-Hexanone	500 ug/mL
							4-Methyl-2-pentanone (MIBK)	500 ug/mL
							Acetone	500 ug/mL
					MSV_V_VOA2_00194	150 uL	1,4-Dioxane	2500 ug/mL
							2-Methyl-2-propanol	1000 ug/mL
							Isobutyl alcohol	2500 ug/mL
							Methacrylonitrile	500 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							n-Butanol	4375 ug/mL
							Propionitrile	1000 ug/mL
							trans-1,4-Dichloro-2-butene	500 ug/mL
.MSV_CCV_VOC#1_00130	07/18/23	06/18/23	Methanol, Lot EG095	5 mL	MSV_MegaMIX#1_00130	1 mL	1,1,1,2-Tetrachloroethane	1000 ug/mL
							1,1,1-Trichloroethane	1000 ug/mL
							1,1,2,2-Tetrachloroethane	1000 ug/mL
							1,1,2-Trichloroethane	1000 ug/mL
							1,1-Dichloroethane	1000 ug/mL
							1,1-Dichloroethene	1000 ug/mL
							1,1-Dichloropropene	1000 ug/mL
							1,2,3-Trichlorobenzene	1000 ug/mL
							1,2,3-Trichloropropane	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2,4-Trimethylbenzene	1000 ug/mL
							1,2-Dibromo-3-Chloropropane	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Dichloroethane	1000 ug/mL
							1,2-Dichloropropane	1000 ug/mL
							1,3,5-Trimethylbenzene	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dichloropropane	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							2,2-Dichloropropane	1000 ug/mL
							2-Chlorotoluene	1000 ug/mL
							4-Chlorotoluene	1000 ug/mL
							4-Isopropyltoluene	1000 ug/mL
							Benzene	1000 ug/mL
							Bromobenzene	1000 ug/mL
							Bromoform	1000 ug/mL
							Carbon tetrachloride	1000 ug/mL
							Chlorobenzene	1000 ug/mL
							Chlorobromomethane	1000 ug/mL
							Chlorodibromomethane	1000 ug/mL
							Chloroform	1000 ug/mL
							cis-1,2-Dichloroethene	1000 ug/mL
							cis-1,3-Dichloropropene	1000 ug/mL
							Dibromomethane	1000 ug/mL
							Dichlorobromomethane	1000 ug/mL
							Ethylbenzene	1000 ug/mL
							Ethylene Dibromide	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Isopropylbenzene	1000 ug/mL
							m-Xylene & p-Xylene	2000 ug/mL
							Methylene Chloride	1000 ug/mL
							n-Butylbenzene	1000 ug/mL
							N-Propylbenzene	1000 ug/mL
							Naphthalene	1000 ug/mL
							o-Xylene	1000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							sec-Butylbenzene	1000 ug/mL
							Styrene	1000 ug/mL
							tert-Butylbenzene	1000 ug/mL
							Tetrachloroethene	1000 ug/mL
							Toluene	1000 ug/mL
							trans-1,2-Dichloroethene	1000 ug/mL
							trans-1,3-Dichloropropene	1000 ug/mL
							Trichloroethene	1000 ug/mL
					MSV_MegaMix#2_00125	1 mL	1,1,2-Trichloro-1,2,2-trifluoroethane	1000 ug/mL
							1,2,3-Trimethylbenzene	1000 ug/mL
							1,3,5-Trichlorobenzene	1000 ug/mL
							1,4-Dioxane	12500 ug/mL
							1-Chlorohexane	1000 ug/mL
							2-Chloro-1,3-butadiene	1000 ug/mL
							2-Methyl-2-propanol	5000 ug/mL
							2-Nitropropane	5000 ug/mL
							3-Chloro-1-propene	1000 ug/mL
							Acrylonitrile	2500 ug/mL
							Benzyl chloride	1000 ug/mL
							Carbon disulfide	1000 ug/mL
							Cyclohexane	1000 ug/mL
							Ethyl methacrylate	1000 ug/mL
							Hexane	1000 ug/mL
							Iodomethane	1000 ug/mL
							Isobutyl alcohol	12500 ug/mL
							Isopropyl ether	1000 ug/mL
							Methacrylonitrile	2500 ug/mL
							Methyl acetate	1000 ug/mL
							Methyl methacrylate	1000 ug/mL
							Methyl tert-butyl ether	1000 ug/mL
							Methylcyclohexane	1000 ug/mL
							n-Butanol	12500 ug/mL
							n-Heptane	1000 ug/mL
							Propionitrile	5000 ug/mL
							Tert-amyl methyl ether	1000 ug/mL
							Tert-butyl ethyl ether	1000 ug/mL
							Tetrahydrofuran	5000 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
..MSV_MegaMIX#1_00130	07/18/23		Restek, Lot A0184527		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	5000 ug/mL
							1,1,1-Trichloroethane	5000 ug/mL
							1,1,2,2-Tetrachloroethane	5000 ug/mL
							1,1,2-Trichloroethane	5000 ug/mL
							1,1-Dichloroethane	5000 ug/mL
							1,1-Dichloroethene	5000 ug/mL
							1,1-Dichloropropene	5000 ug/mL
							1,2,3-Trichlorobenzene	5000 ug/mL
							1,2,3-Trichloropropane	5000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,4-Trichlorobenzene	5000 ug/mL
							1,2,4-Trimethylbenzene	5000 ug/mL
							1,2-Dibromo-3-Chloropropane	5000 ug/mL
							1,2-Dichlorobenzene	5000 ug/mL
							1,2-Dichloroethane	5000 ug/mL
							1,2-Dichloropropane	5000 ug/mL
							1,3,5-Trimethylbenzene	5000 ug/mL
							1,3-Dichlorobenzene	5000 ug/mL
							1,3-Dichloropropane	5000 ug/mL
							1,4-Dichlorobenzene	5000 ug/mL
							2,2-Dichloropropane	5000 ug/mL
							2-Chlorotoluene	5000 ug/mL
							4-Chlorotoluene	5000 ug/mL
							4-Isopropyltoluene	5000 ug/mL
							Benzene	5000 ug/mL
							Bromobenzene	5000 ug/mL
							Bromoform	5000 ug/mL
							Carbon tetrachloride	5000 ug/mL
							Chlorobenzene	5000 ug/mL
							Chlorobromomethane	5000 ug/mL
							Chlorodibromomethane	5000 ug/mL
							Chloroform	5000 ug/mL
							cis-1,2-Dichloroethene	5000 ug/mL
							cis-1,3-Dichloropropene	5000 ug/mL
							Dibromomethane	5000 ug/mL
							Dichlorobromomethane	5000 ug/mL
							Ethylbenzene	5000 ug/mL
							Ethylene Dibromide	5000 ug/mL
							Hexachlorobutadiene	5000 ug/mL
							Isopropylbenzene	5000 ug/mL
							m-Xylene & p-Xylene	10000 ug/mL
							Methylene Chloride	5000 ug/mL
							n-Butylbenzene	5000 ug/mL
							N-Propylbenzene	5000 ug/mL
							Naphthalene	5000 ug/mL
							o-Xylene	5000 ug/mL
							sec-Butylbenzene	5000 ug/mL
							Styrene	5000 ug/mL
							tert-Butylbenzene	5000 ug/mL
							Tetrachloroethene	5000 ug/mL
							Toluene	5000 ug/mL
							trans-1,2-Dichloroethene	5000 ug/mL
							trans-1,3-Dichloropropene	5000 ug/mL
							Trichloroethene	5000 ug/mL
..MSV_MegaMix#2_00125	07/18/23	Restek, Lot A0186885			(Purchased Reagent)		1,1,2-Trichloro-1,2,2-trifluoroethane	5000 ug/mL
							1,2,3-Trimethylbenzene	5000 ug/mL
							1,3,5-Trichlorobenzene	5000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,4-Dioxane	62500 ug/mL
							1-Chlorohexane	5000 ug/mL
							2-Chloro-1,3-butadiene	5000 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							2-Nitropropane	25000 ug/mL
							3-Chloro-1-propene	5000 ug/mL
							Acrylonitrile	12500 ug/mL
							Benzyl chloride	5000 ug/mL
							Carbon disulfide	5000 ug/mL
							Cyclohexane	5000 ug/mL
							Ethyl methacrylate	5000 ug/mL
							Hexane	5000 ug/mL
							Iodomethane	5000 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropyl ether	5000 ug/mL
							Methacrylonitrile	12500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl methacrylate	5000 ug/mL
							Methyl tert-butyl ether	5000 ug/mL
							Methylcyclohexane	5000 ug/mL
							n-Butanol	62500 ug/mL
							n-Heptane	5000 ug/mL
							Propionitrile	25000 ug/mL
							Tert-amyl methyl ether	5000 ug/mL
							Tert-butyl ethyl ether	5000 ug/mL
							Tetrahydrofuran	25000 ug/mL
							trans-1,4-Dichloro-2-butene	12500 ug/mL
.MSV_CCV_VOC#3_00130	07/18/23	06/18/23	Methanol, Lot EG095	5 mL	MSV_CCV_ACR_00011	0.5 mL	Acrolein	12500.4 ug/mL
					MSV_V_Ketones_00125	1 mL	2-Butanone	2500 ug/mL
							2-Hexanone	2500 ug/mL
							4-Methyl-2-pentanone (MIBK)	2500 ug/mL
							Acetone	2500 ug/mL
..MSV_CCV_ACR_00011	07/30/23	05/31/23	Methanol, Lot EG095	10 mL	MSV_VACR_STK_00033	9.259 mL	Acrolein	125004 ug/mL
...MSV_VACR_STK_00033	07/30/23	05/31/23	Methanol, Lot EG095	10 mL	MSV_ACROLEIN_00026	1.4564 g	Acrolein	135008 ug/mL
....MSV_ACROLEIN_00026	11/30/23	Chem Service, Lot 13910600			(Purchased Reagent)		Acrolein	0.927 g/g
..MSV_V_Ketones_00125	01/31/25	Restek, Lot A0186508			(Purchased Reagent)		2-Butanone	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MSV_V_VOA2_00194	07/11/23	06/11/23	Methanol, Lot EG095	5 mL	MSV_V#2B_00323	1 mL	1,4-Dioxane	12500 ug/mL
							2-Methyl-2-propanol	5000 ug/mL
							Isobutyl alcohol	12500 ug/mL
							Methacrylonitrile	2500 ug/mL
							n-Butanol	25000 ug/mL
							Propionitrile	5000 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
..MSV_V#2B_00323	05/31/25	Restek, Lot A0197599			(Purchased Reagent)		1,4-Dioxane	62500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Isobutyl alcohol	62500 ug/mL
							Methacrylonitrile	12500 ug/mL
							n-Butanol	125000 ug/mL
							Propionitrile	25000 ug/mL
							trans-1,4-Dichloro-2-butene	12500 ug/mL
MSV_LL_#1_826_00087	08/22/23	07/31/23	Methanol, Lot EG095	1 mL	MSV_CCV_VOC#1_00137	50 uL	1,1,1-Trichloroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							Benzene	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Ethylbenzene	50 ug/mL
							Methylene Chloride	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							Trichloroethene	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							Tetrahydrofuran	250 ug/mL
					MSV_CCV_VOC#3_00136	200 uL	2-Butanone	500 ug/mL
.MSV_CCV_VOC#1_00137	08/29/23	07/30/23	Methanol, Lot EG095	5 mL	MSV_MegaMIX#1_00136	1 mL	1,1,1-Trichloroethane	1000 ug/mL
							1,1,2-Trichloroethane	1000 ug/mL
							1,1-Dichloroethane	1000 ug/mL
							1,1-Dichloroethene	1000 ug/mL
							Benzene	1000 ug/mL
							Carbon tetrachloride	1000 ug/mL
							Ethylbenzene	1000 ug/mL
							Methylene Chloride	1000 ug/mL
							Tetrachloroethene	1000 ug/mL
							Toluene	1000 ug/mL
							Trichloroethene	1000 ug/mL
					MSV_MegaMix#2_00131	1 mL	1,1,2-Trichloro-1,2,2-trifluoroethane	1000 ug/mL
							Tetrahydrofuran	5000 ug/mL
..MSV_MegaMIX#1_00136	08/29/23	Restek, Lot A0184527			(Purchased Reagent)		1,1,1-Trichloroethane	5000 ug/mL
							1,1,2-Trichloroethane	5000 ug/mL
							1,1-Dichloroethane	5000 ug/mL
							1,1-Dichloroethene	5000 ug/mL
							Benzene	5000 ug/mL
							Carbon tetrachloride	5000 ug/mL
							Ethylbenzene	5000 ug/mL
							Methylene Chloride	5000 ug/mL
							Tetrachloroethene	5000 ug/mL
							Toluene	5000 ug/mL
							Trichloroethene	5000 ug/mL
..MSV_MegaMix#2_00131	08/29/23	Restek, Lot A0193406			(Purchased Reagent)		1,1,2-Trichloro-1,2,2-trifluoroethane	5000 ug/mL
							Tetrahydrofuran	25000 ug/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MSV_CCV_VOC#3_00136	08/29/23	07/30/23	Methanol, Lot EG095	5 mL	MSV_V_Ketones_00131	1 mL	2-Butanone	2500 ug/mL
..MSV_V_Ketones_00131	01/31/25		Restek, Lot A0186508		(Purchased Reagent)		2-Butanone	12500 ug/mL
MSV_LL_#2_826_00077	03/29/23	03/20/23	Methanol, Lot EB679	1 mL	MSV_BCE_00053	25 uL	1-Bromo-2-chloroethane	50 ug/mL
					MSV_CCV_EE_00004	50 uL	Diethyl ether	49.9996 ug/mL
					MSV_V_PentaCL_00030	10 uL	Pentachloroethane	50 ug/mL
.MSV_BCE_00053	03/29/23		Restek, Lot A0177627		(Purchased Reagent)		1-Bromo-2-chloroethane	2000 ug/mL
.MSV_CCV_EE_00004	05/17/23	11/17/22	Methanol, Lot EB679	50 mL	MSV_EE_MISCSK_00011	1.067 mL	Diethyl ether	999.992 ug/mL
..MSV_EE_MISCSK_00011	05/17/23	11/17/22	Methanol, Lot EB679	10 mL	MSV_EE_Neat_00008	0.4686 g	Diethyl ether	46860 ug/mL
...MSV_EE_Neat_00008	12/31/25		Chem Service, Lot 1326900		(Purchased Reagent)		Diethyl ether	1 g/g
.MSV_V_PentaCL_00030	04/01/23		Restek, Lot A0184174		(Purchased Reagent)		Pentachloroethane	5000 ug/mL
MSV_LL_#2_826_00093	07/18/23	06/18/23	Methanol, Lot EG095	1 mL	MSV_BCE_00057	25 uL	1-Bromo-2-chloroethane	50 ug/mL
					MSV_CCV_EE_00005	50 uL	Diethyl ether	50.0068 ug/mL
					MSV_V_PentaCL_00034	10 uL	Pentachloroethane	50 ug/mL
.MSV_BCE_00057	07/18/23		Restek, Lot A0177627		(Purchased Reagent)		1-Bromo-2-chloroethane	2000 ug/mL
.MSV_CCV_EE_00005	11/10/23	05/10/23	Methanol, Lot EG095	50 mL	MSV_EE_MISCSK_00012	1.686 mL	Diethyl ether	1000.14 ug/mL
..MSV_EE_MISCSK_00012	11/10/23	05/10/23	Methanol, Lot EG095	10 mL	MSV_EE_Neat_00009	0.2966 g	Diethyl ether	29660 ug/mL
...MSV_EE_Neat_00009	05/30/27		Chem Service, Lot 14084700		(Purchased Reagent)		Diethyl ether	1 g/g
.MSV_V_PentaCL_00034	07/18/23		Restek, Lot A0184174		(Purchased Reagent)		Pentachloroethane	5000 ug/mL
MSV_LL_#2_826_00097	08/08/23	07/23/23	Methanol, Lot EG095	1 mL	MSV_CCV_EE_00005	50 uL	Diethyl ether	50.0068 ug/mL
.MSV_CCV_EE_00005	11/10/23	05/10/23	Methanol, Lot EG095	50 mL	MSV_EE_MISCSK_00012	1.686 mL	Diethyl ether	1000.14 ug/mL
..MSV_EE_MISCSK_00012	11/10/23	05/10/23	Methanol, Lot EG095	10 mL	MSV_EE_Neat_00009	0.2966 g	Diethyl ether	29660 ug/mL
...MSV_EE_Neat_00009	05/30/27		Chem Service, Lot 14084700		(Purchased Reagent)		Diethyl ether	1 g/g
MSV_LL_GAS826_00141	03/27/23	03/20/23	Methanol, Lot EB679	1 mL	MSV_CCV_GASES_00421	25 uL	1,2-Dichloro-1,1,2-trifluoroethane	50 ug/mL
							Bromomethane	50 ug/mL
							Butadiene	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Dichlorofluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
.MSV_CCV_GASES_00421	03/27/23		Restek, Lot A0184815		(Purchased Reagent)		1,2-Dichloro-1,1,2-trifluoroethane	2000 ug/mL
							Bromomethane	2000 ug/mL
							Butadiene	2000 ug/mL
							Chloroethane	2000 ug/mL
							Chloromethane	2000 ug/mL
							Dichlorodifluoromethane	2000 ug/mL
							Dichlorofluoromethane	2000 ug/mL
							Trichlorofluoromethane	2000 ug/mL
							Vinyl chloride	2000 ug/mL
MSV_LL_GAS826_00156	06/25/23	06/18/23	Methanol, Lot EG095	1 mL	MSV_CCV_GASES_00496	25 uL	1,2-Dichloro-1,1,2-trifluoroethane	50 ug/mL
							Bromomethane	50 ug/mL
							Butadiene	50 ug/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Dichlorofluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
.MSV_CCV_GASES_00496	06/25/23		Restek, Lot A0197586		(Purchased Reagent)		1,2-Dichloro-1,1,2-trifluoroethane	2000 ug/mL
							Bromomethane	2000 ug/mL
							Butadiene	2000 ug/mL
							Chloroethane	2000 ug/mL
							Chloromethane	2000 ug/mL
							Dichlorodifluoromethane	2000 ug/mL
							Dichlorofluoromethane	2000 ug/mL
							Trichlorofluoromethane	2000 ug/mL
							Vinyl chloride	2000 ug/mL
MSV_LL_GAS826_00162	08/06/23	07/30/23	Methanol, Lot EG095	1 mL	MSV_CCV_GASES_00531	25 uL	Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
.MSV_CCV_GASES_00531	08/06/23		Restek, Lot A0197586		(Purchased Reagent)		Chloroethane	2000 ug/mL
							Chloromethane	2000 ug/mL
							Dichlorodifluoromethane	2000 ug/mL
							Trichlorofluoromethane	2000 ug/mL
							Vinyl chloride	2000 ug/mL
MSV_LLcentISO_00006	10/05/23	04/05/23	Methanol, Lot EB679	50 mL	MSV_Cus826_IS_00552	1 mL	1,4-Dichlorobenzene-d4	50 ug/mL
							Chlorobenzene-d5 (IS)	50 ug/mL
							Fluorobenzene (IS)	50 ug/mL
							t-Butyl alcohol-d10 (IS)	250 ug/mL
.MSV_Cus826_IS_00552	04/30/25		Restek, Lot A0184225		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL
							Chlorobenzene-d5 (IS)	2500 ug/mL
							Fluorobenzene (IS)	2500 ug/mL
							t-Butyl alcohol-d10 (IS)	12500 ug/mL
MSV_LLcentISS_00006	04/27/23	10/27/22	Methanol, Lot EB679	50 mL	MSV_8260_SS_00779	1 mL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
					MSV_Cus826_IS_00505	1 mL	1,4-Dichlorobenzene-d4	50 ug/mL
							Chlorobenzene-d5 (IS)	50 ug/mL
							Fluorobenzene (IS)	50 ug/mL
							t-Butyl alcohol-d10 (IS)	250 ug/mL
.MSV_8260_SS_00779	03/31/25		Restek, Lot A0183565		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
.MSV_Cus826_IS_00505	04/30/25		Restek, Lot A0184225		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chlorobenzene-d5 (IS)	2500 ug/mL
							Fluorobenzene (IS)	2500 ug/mL
							t-Butyl alcohol-d10 (IS)	12500 ug/mL
MSV_LLcentISS_00007	10/05/23	04/05/23	Methanol, Lot EG095	50 mL	MSV_8260_SS_00879	1 mL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
					MSV_Cus826_IS_00552	1 mL	1,4-Dichlorobenzene-d4	50 ug/mL
							Chlorobenzene-d5 (IS)	50 ug/mL
							Fluorobenzene (IS)	50 ug/mL
							t-Butyl alcohol-d10 (IS)	250 ug/mL
.MSV_8260_SS_00879	03/31/25		Restek, Lot A0183565		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
.MSV_Cus826_IS_00552	04/30/25		Restek, Lot A0184225		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL
							Chlorobenzene-d5 (IS)	2500 ug/mL
							Fluorobenzene (IS)	2500 ug/mL
							t-Butyl alcohol-d10 (IS)	12500 ug/mL
MSV_LLcentISS_00009	01/06/24	07/06/23	Methanol, Lot EG095	50 mL	MSV_Cus826_IS_00582	1 mL	1,4-Dichlorobenzene-d4	50 ug/mL
							Chlorobenzene-d5 (IS)	50 ug/mL
							Fluorobenzene (IS)	50 ug/mL
							t-Butyl alcohol-d10 (IS)	250 ug/mL
.MSV_Cus826_IS_00582	04/30/26		Restek, Lot A0197488		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL
							Chlorobenzene-d5 (IS)	2500 ug/mL
							Fluorobenzene (IS)	2500 ug/mL
							t-Butyl alcohol-d10 (IS)	12500 ug/mL
MSV_LLcentISS_00009	01/06/24	07/06/23	Methanol, Lot EG095	50 mL	MSV_8260_SS_00953	1 mL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
.MSV_8260_SS_00953	02/29/28		Restek, Lot A0195060		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
MSV_Q_QDME_00032	06/23/23	05/24/23	Methanol, Lot EB679	1 mL	MSV_DME_00046	100 uL	Dimethyl ether	100 ug/mL
.MSV_DME_00046	06/24/23		Restek, Lot A0190883		(Purchased Reagent)		Dimethyl ether	1000 ug/mL
MSV_QC_Gas826_00145	06/25/23	06/18/23	Methanol, Lot EG095	1 mL	MSV_QC_2K_GAS_00148	20 uL	Chloroethane	40 ug/mL
							Chloromethane	40 ug/mL
							Dichlorodifluoromethane	40 ug/mL
							Trichlorofluoromethane	40 ug/mL
							Vinyl chloride	40 ug/mL
.MSV_QC_2K_GAS_00148	06/25/23		Restek, Lot A0184924		(Purchased Reagent)		Chloroethane	2000 ug/mL
							Chloromethane	2000 ug/mL
							Dichlorodifluoromethane	2000 ug/mL
							Trichlorofluoromethane	2000 ug/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Vinyl chloride	2000 ug/mL
MSV_QC_Gas826_00153	08/06/23	07/31/23	Methanol, Lot EG095	1 mL	MSV_QC_2K_GAS_00168	20 uL	Chloroethane	40 ug/mL
							Chloromethane	40 ug/mL
							Dichlorodifluoromethane	40 ug/mL
							Trichlorofluoromethane	40 ug/mL
							Vinyl chloride	40 ug/mL
.MSV_QC_2K_GAS_00168	08/06/23	Restek, Lot A0184924			(Purchased Reagent)		Chloroethane	2000 ug/mL
							Chloromethane	2000 ug/mL
							Dichlorodifluoromethane	2000 ug/mL
							Trichlorofluoromethane	2000 ug/mL
							Vinyl chloride	2000 ug/mL
MSV_V_BFB_00012							1,2-Dichloroethene, Total	
							1,3-Dichloropropene, Total	
							divinyl benzene	
							Tentatively Identified Compound	
							Total BTEX	
							Total Diethylbenzene	
							Xylenes, Total	
					MSV_VBFB_STK_00010	0.096 mL	BFB	49.7971 ug/mL
.MSV_VBFB_STK_00010	12/13/23	06/13/23	Methanol, Lot EG095	10 mL	MSV_4BFB_NEAT_00010	1.2968 g	BFB	129680 ug/mL
..MSV_4BFB_NEAT_00010	05/31/25	Chem Service, Lot 13775500			(Purchased Reagent)		BFB	1 g/g
MSV_V_SMRV4_00059	06/19/23	06/12/23	Methanol, Lot EG095	1 mL	MSV_CCV_2CEVE_00124	200 uL	2-Chloroethyl vinyl ether	200 ug/mL
					MSV_CCV_LKB_00005	400 uL	cis-1,4-Dichloro-2-butene	400.029 ug/mL
					MSV_V_SMFreon_00047	100 uL	Chlorodifluoromethane	200 ug/mL
.MSV_CCV_2CEVE_00124	07/11/23	06/11/23	Methanol, Lot EG095	5 mL	MSV_V_2CLEVE_00130	1 mL	2-Chloroethyl vinyl ether	1000 ug/mL
..MSV_V_2CLEVE_00130	04/30/25	Restek, Lot A0184487			(Purchased Reagent)		2-Chloroethyl vinyl ether	5000 ug/mL
.MSV_CCV_LKB_00005	06/19/23	02/08/23	Methanol, Lot EB679	50 mL	MSV_Vc14d_STK_00008	0.946 mL	cis-1,4-Dichloro-2-butene	1000.07 ug/mL
..MSV_Vc14d_STK_00008	06/19/23	02/08/23	Methanol, Lot EB679	10 mL	MSV_c14dcb_Nt_00004	0.5564 g	cis-1,4-Dichloro-2-butene	52858 ug/mL
...MSV_c14dcb_Nt_00004	08/16/27	Aldrich, Lot SHBH4584V			(Purchased Reagent)		cis-1,4-Dichloro-2-butene	0.95 g/g
.MSV_V_SMFreon_00047	06/29/23	Restek, Lot A0184508			(Purchased Reagent)		Chlorodifluoromethane	2000 ug/mL
MT_HNO3_Fishe_00007	05/25/24	Fisher, Lot 225038			(Purchased Reagent)		Nitric acid	68 %
MT_HNO3_Fishe_00008	06/11/24	Fisher, Lot 222846			(Purchased Reagent)		Nitric acid	68 %
MT_LCS-SPK-A_00030	07/17/24	Inorganic Ventures, Lot U2-MEB728825			(Purchased Reagent)		Al	1250 mg/L
							Arsenic	125 mg/L
							B	125 mg/L
							Barium	125 mg/L
							Beryllium	12.5 mg/L
							Ca	1250 mg/L
							Cadmium	12.5 mg/L
							Chromium	125 mg/L
							Cobalt	125 mg/L
							Copper	125 mg/L
							Fe	1250 mg/L
							K	1250 mg/L
							Lead	12.5 mg/L

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Li	125 mg/L
							Mg	1250 mg/L
							Mn	125 mg/L
							Na	1250 mg/L
							Nickel	125 mg/L
							P	125 mg/L
							Selenium	25 mg/L
							Silver	12.5 mg/L
							Sr	12.5 mg/L
							Sulfur	1250 mg/L
							Th	125 mg/L
							Thallium	25 mg/L
							U	12.5 mg/L
							Vanadium	125 mg/L
							Zinc	125 mg/L
MT_LCS-SPK-B_00029	07/17/24	Inorganic Ventures, Lot U2-MEB728826			(Purchased Reagent)		Antimony	25 mg/L
							Mo	12.5 mg/L
							Si	1250 mg/L
							Sn	25 mg/L
							Ti	125 mg/L
							W	125 mg/L
							Zr	125 mg/L
MT_MJ_CCV_00168	08/26/23	07/27/23	DI Water, Lot DI07272023	5 L	MT_S_MSSPK-A_00001	5 mL	Arsenic	499.9 ppb
							Barium	500 ppb
							Beryllium	49.98 ppb
							Cadmium	49.99 ppb
							Chromium	499.9 ppb
							Cobalt	500.2 ppb
							Copper	500 ppb
							Lead	50 ppb
							Nickel	499.9 ppb
							Selenium	50.01 ppb
							Silver	50 ppb
							Thallium	50.02 ppb
							Vanadium	500 ppb
							Zinc	500.1 ppb
					MT_S_MSSPK-B_00002	5 mL	Antimony	49.97 ppb
.MT_S_MSSPK-A_00001	12/27/23	Inorganic Ventures, Lot T2-MEB716952			(Purchased Reagent)		Arsenic	499.9 ug/mL
							Barium	500 ug/mL
							Beryllium	49.98 ug/mL
							Cadmium	49.99 ug/mL
							Chromium	499.9 ug/mL
							Cobalt	500.2 ug/mL
							Copper	500 ug/mL
							Lead	50 ug/mL
							Nickel	499.9 ug/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Selenium	50.01 ug/mL
							Silver	50 ug/mL
							Thallium	50.02 ug/mL
							Vanadium	500 ug/mL
							Zinc	500.1 ug/mL
.MT_S_MSSPK-B_00002	12/27/23	Inorganic Ventures, Lot T2-MEB716953			(Purchased Reagent)		Antimony	49.97 ug/mL
MT_MJ_CRI-V_00151	08/24/23	07/25/23	J, Lot 4170412	1 L	MT_MJ_1V_IV_00020	1.5 mL	Vanadium	2.0025 ug/L
					MT_S_MWLLC_SC_00005	1 mL	Antimony	1.01 ug/L
							Arsenic	2.02 ug/L
							Barium	1.99 ug/L
							Beryllium	0.499 ug/L
							Cadmium	0.496 ug/L
							Chromium	2 ug/L
							Cobalt	0.504 ug/L
							Copper	0.999 ug/L
							Lead	0.503 ug/L
							Nickel	1 ug/L
							Selenium	1 ug/L
							Silver	0.496 ug/L
							Thallium	0.5 ug/L
							Vanadium	2.0025 ug/L
							Zinc	10 ug/L
.MT_MJ_1V_IV_00020	09/23/23	06/23/23	J, Lot 4458890	100 mL	MT_1KV_PIV_00007	0.1 mL	Vanadium	1.001 mg/L
..MT_1KV_PIV_00007	09/14/24	Inorganic Ventures, Lot R2-V696167			(Purchased Reagent)		Vanadium	1001 mg/L
.MT_S_MWLLC_SC_00005	09/30/23	SCP Science, Lot S220721047			(Purchased Reagent)		Antimony	1.01 ug/mL
							Arsenic	2.02 ug/mL
							Barium	1.99 ug/mL
							Beryllium	0.499 ug/mL
							Cadmium	0.496 ug/mL
							Chromium	2 ug/mL
							Cobalt	0.504 ug/mL
							Copper	0.999 ug/mL
							Lead	0.503 ug/mL
							Nickel	1 ug/mL
							Selenium	1 ug/mL
							Silver	0.496 ug/mL
							Thallium	0.5 ug/mL
							Vanadium	0.501 ug/mL
							Zinc	10 ug/mL
MT_MJ_CRI-V_00152	09/03/23	08/04/23	J, Lot 4170412	1 L	MT_MJ_1V_IV_00020	1.5 mL	Vanadium	2.0025 ug/L
					MT_S_MWLLC_SC_00005	1 mL	Antimony	1.01 ug/L
							Arsenic	2.02 ug/L
							Barium	1.99 ug/L
							Beryllium	0.499 ug/L
							Cadmium	0.496 ug/L
							Chromium	2 ug/L
							Cobalt	0.504 ug/L

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Copper	0.999 ug/L
							Lead	0.503 ug/L
							Nickel	1 ug/L
							Selenium	1 ug/L
							Silver	0.496 ug/L
							Thallium	0.5 ug/L
							Vanadium	2.0025 ug/L
							Zinc	10 ug/L
.MT_MJ_1V_IV_00020	09/23/23	06/23/23	J, Lot 4458890	100 mL	MT_1KV_PIV_00007	0.1 mL	Vanadium	1.001 mg/L
..MT_1KV_PIV_00007	09/14/24	Inorganic Ventures, Lot R2-V696167			(Purchased Reagent)		Vanadium	1001 mg/L
.MT_S_MWLLC_SC_00005	09/30/23	SCP Science, Lot S220721047			(Purchased Reagent)		Antimony	1.01 ug/mL
							Arsenic	2.02 ug/mL
							Barium	1.99 ug/mL
							Beryllium	0.499 ug/mL
							Cadmium	0.496 ug/mL
							Chromium	2 ug/mL
							Cobalt	0.504 ug/mL
							Copper	0.999 ug/mL
							Lead	0.503 ug/mL
							Nickel	1 ug/mL
							Selenium	1 ug/mL
							Silver	0.496 ug/mL
							Thallium	0.5 ug/mL
							Vanadium	0.501 ug/mL
							Zinc	10 ug/mL
MT_MJ_ICSA_00104	09/07/23	08/08/23	J, Lot 3094411	500 mL	MT_S_ICS2A_IV_00011	50 mL	Al	100 ug/mL
							Antimony	0.00012 ug/mL
							Arsenic	0.0077 ug/mL
							Barium	0.0004 ug/mL
							Beryllium	0.000011 ug/mL
							Ca	298.8 ug/mL
							Cadmium	0.00045 ug/mL
							Chromium	0.0036 ug/mL
							Cobalt	0.00028 ug/mL
							Copper	0.00044 ug/mL
							Fe	260.1 ug/mL
							K	100 ug/mL
							Lead	0.000093 ug/mL
							Mg	100 ug/mL
							Mn	0.0006 ug/mL
							Mo	2.001 ug/mL
							Na	260.1 ug/mL
							Nickel	0.0012 ug/mL
							Selenium	0.000072 ug/mL
							Silver	0.0003 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envir Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Sn	0.00017 ug/mL
							Sr	0.0018 ug/mL
							Thallium	0.000062 ug/mL
							Ti	2.001 ug/mL
							U	0.00011 ug/mL
							Vanadium	0.00031 ug/mL
							Zinc	0.0011 ug/mL
.MT_S_ICS2A_IV_00011	07/22/25	Inorganic Ventures, Lot T2-MEB714677			(Purchased Reagent)		Al	1000 ug/mL
							Antimony	0.0012 ug/mL
							Arsenic	0.077 ug/mL
							Barium	0.004 ug/mL
							Beryllium	0.00011 ug/mL
							Ca	2988 ug/mL
							Cadmium	0.0045 ug/mL
							Chromium	0.036 ug/mL
							Cobalt	0.0028 ug/mL
							Copper	0.0044 ug/mL
							Fe	2601 ug/mL
							K	1000 ug/mL
							Lead	0.00093 ug/mL
							Mg	1000 ug/mL
							Mn	0.006 ug/mL
							Mo	20.01 ug/mL
							Na	2601 ug/mL
							Nickel	0.012 ug/mL
							Selenium	0.00072 ug/mL
							Silver	0.003 ug/mL
							Sn	0.0017 ug/mL
							Sr	0.018 ug/mL
							Thallium	0.00062 ug/mL
							Ti	20.01 ug/mL
							U	0.0011 ug/mL
							Vanadium	0.0031 ug/mL
							Zinc	0.011 ug/mL
MT_MJ_ICSAB_00081	09/07/23	08/08/23	J, Lot 4224585	500 mL	MT_S_ICS2A_IV_00011	50 mL	Al	100 ug/mL
							Antimony	0.00012 ug/mL
							Arsenic	0.1077 ug/mL
							Barium	0.0004 ug/mL
							Beryllium	0.000011 ug/mL
							Ca	298.8 ug/mL
							Cadmium	0.10045 ug/mL
							Chromium	0.2037 ug/mL
							Cobalt	0.20038 ug/mL
							Copper	0.20054 ug/mL
							Fe	260.1 ug/mL
							K	100 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Lead	0.000093 ug/mL
							Mg	100 ug/mL
							Mn	0.2007 ug/mL
							Mo	2.001 ug/mL
							Na	260.1 ug/mL
							Nickel	0.2013 ug/mL
							Selenium	0.100072 ug/mL
							Silver	0.05032 ug/mL
							Sn	0.00017 ug/mL
							Sr	0.0018 ug/mL
							Thallium	0.000062 ug/mL
							Ti	2.001 ug/mL
							U	0.00011 ug/mL
							Vanadium	0.20041 ug/mL
							Zinc	0.1011 ug/mL
					MT_S_ICS2B_IV_00011	5 mL	Arsenic	0.1077 ug/mL
							Cadmium	0.10045 ug/mL
							Chromium	0.2037 ug/mL
							Cobalt	0.20038 ug/mL
							Copper	0.20054 ug/mL
							Mn	0.2007 ug/mL
							Nickel	0.2013 ug/mL
							Selenium	0.100072 ug/mL
							Silver	0.05032 ug/mL
							Vanadium	0.20041 ug/mL
							Zinc	0.1011 ug/mL
.MT_S_ICS2A_IV_00011	07/22/25	Inorganic Ventures, Lot T2-MEB714677			(Purchased Reagent)		Al	1000 ug/mL
							Antimony	0.0012 ug/mL
							Arsenic	0.077 ug/mL
							Barium	0.004 ug/mL
							Beryllium	0.00011 ug/mL
							Ca	2988 ug/mL
							Cadmium	0.0045 ug/mL
							Chromium	0.036 ug/mL
							Cobalt	0.0028 ug/mL
							Copper	0.0044 ug/mL
							Fe	2601 ug/mL
							K	1000 ug/mL
							Lead	0.00093 ug/mL
							Mg	1000 ug/mL
							Mn	0.006 ug/mL
							Mo	20.01 ug/mL
							Na	2601 ug/mL
							Nickel	0.012 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Selenium	0.00072 ug/mL
							Silver	0.003 ug/mL
							Sn	0.0017 ug/mL
							Sr	0.018 ug/mL
							Thallium	0.00062 ug/mL
							Ti	20.01 ug/mL
							U	0.0011 ug/mL
							Vanadium	0.0031 ug/mL
							Zinc	0.011 ug/mL
.MT_S_ICS2B_IV_00011	10/25/23	Inorganic Ventures, Lot S2-MEB711470			(Purchased Reagent)		Arsenic	10 ug/mL
							Cadmium	10 ug/mL
							Chromium	20.01 ug/mL
							Cobalt	20.01 ug/mL
							Copper	20.01 ug/mL
							Mn	20.01 ug/mL
							Nickel	20.01 ug/mL
							Selenium	10 ug/mL
							Silver	5.002 ug/mL
							Vanadium	20.01 ug/mL
							Zinc	10 ug/mL
MT_MJ_ICV_00088	08/21/23	07/22/23	J, Lot 4170412	1 L	MT_S_ICVSPK-A_00005	2 mL	Arsenic	500 ppb
							Barium	500 ppb
							Beryllium	50 ppb
							Cadmium	50 ppb
							Chromium	500 ppb
							Cobalt	500 ppb
							Copper	500 ppb
							Lead	50 ppb
							Nickel	500 ppb
							Selenium	50 ppb
							Silver	50 ppb
							Thallium	50 ppb
							Vanadium	500 ppb
							Zinc	500 ppb
					MT_S_ICVSPK-B_00003	2 mL	Antimony	50 ppb
.MT_S_ICVSPK-A_00005	04/03/24	High-Purity Standards, Lot U2-MEB728821			(Purchased Reagent)		Arsenic	250 ug/mL
							Barium	250 ug/mL
							Beryllium	25 ug/mL
							Cadmium	25 ug/mL
							Chromium	250 ug/mL
							Cobalt	250 ug/mL
							Copper	250 ug/mL
							Lead	25 ug/mL
							Nickel	250 ug/mL
							Selenium	25 ug/mL
							Silver	25 ug/mL
							Thallium	25 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Vanadium	250 ug/mL
							Zinc	250 ug/mL
.MT_S_ICVSPK-B_00003	04/03/24	High-Purity Standards, Lot U2-MEB728822			(Purchased Reagent)		Antimony	25 ug/mL
MT_MJ_LRC_00094	09/03/23	08/04/23	J, Lot 4119918	0.5 L	MT_I_CCVSPK-A_00005	10 mL	Arsenic	2000 ppb
							Barium	2000 ppb
							Beryllium	2000 ppb
							Cadmium	2000 ppb
							Chromium	2000 ppb
							Cobalt	2000 ppb
							Copper	2000 ppb
							Lead	2000 ppb
							Nickel	2000 ppb
							Selenium	2000 ppb
							Silver	2000 ppb
							Thallium	2000 ppb
							Vanadium	2000 ppb
							Zinc	2000 ppb
					MT_I_CCVSPK-B_00004	10 mL	Antimony	2000 ppb
.MT_I_CCVSPK-A_00005	04/12/24	Inorganic Ventures, Lot T2-MEB720690			(Purchased Reagent)		Arsenic	100 mg/L
							Barium	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Cobalt	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Nickel	100 mg/L
							Selenium	100 mg/L
							Silver	100 mg/L
							Thallium	100 mg/L
							Vanadium	100 mg/L
							Zinc	100 mg/L
.MT_I_CCVSPK-B_00004	04/12/24	Inorganic Ventures, Lot T2-MEB720691			(Purchased Reagent)		Antimony	100 mg/L
MT_MJ_S1_00109	09/07/23	08/08/23	J, Lot 4072374	500 mL	MT_S_MSSPK-A_00001	1 mL	Arsenic	999.8 ppb
							Barium	1000 ppb
							Beryllium	99.96 ppb
							Cadmium	99.98 ppb
							Chromium	999.8 ppb
							Cobalt	1000.4 ppb
							Copper	1000 ppb
							Lead	100 ppb
							Nickel	999.8 ppb
							Selenium	100.02 ppb
							Silver	100 ppb
							Thallium	100.04 ppb
							Vanadium	1000 ppb
							Zinc	1000.2 ppb

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					MT_S_MSSPK-B_00002	1 mL	Antimony	99.94 ppb
.MT_S_MSSPK-A_00001	12/27/23	Inorganic Ventures, Lot T2-MEB716952			(Purchased Reagent)		Arsenic	499.9 ug/mL
							Barium	500 ug/mL
							Beryllium	49.98 ug/mL
							Cadmium	49.99 ug/mL
							Chromium	499.9 ug/mL
							Cobalt	500.2 ug/mL
							Copper	500 ug/mL
							Lead	50 ug/mL
							Nickel	499.9 ug/mL
							Selenium	50.01 ug/mL
							Silver	50 ug/mL
							Thallium	50.02 ug/mL
							Vanadium	500 ug/mL
							Zinc	500.1 ug/mL
.MT_S_MSSPK-B_00002	12/27/23	Inorganic Ventures, Lot T2-MEB716953			(Purchased Reagent)		Antimony	49.97 ug/mL
MT_SULF_FI_00019	05/24/24	ThermoFisher Scientific, Lot 222369			(Purchased Reagent)		Sulfuric acid	96.3 %
OP_MINIBNA_SS_00094	01/06/24	07/25/23	Methanol, Lot 221032	1000 mL	OP_BNA_SS_00056	250 mL	1-Methylnaphthalene-d10	250 ppb
							2,4,6-Tribromophenol (Surr)	50000 ppb
							2-Fluorobiphenyl (Surr)	25000 ppb
							2-Fluorophenol (Surr)	50000 ppb
							Benzo(a)pyrene-d12 (Surr)	250 ppb
							Fluoranthene-d10 (Surr)	250 ppb
							Nitrobenzene-d5 (Surr)	25000 ppb
							p-Terphenyl-d14 (Surr)	25000 ppb
							Phenol-d5 (Surr)	50000 ppb
.OP_BNA_SS_00056	01/06/24	07/05/23	Methanol, Lot 221032	2000 mL	OP_BNA_STK_00055	2000 mL	1-Methylnaphthalene-d10	1000 ppb
							2,4,6-Tribromophenol (Surr)	200000 ppb
							2-Fluorobiphenyl (Surr)	100000 ppb
							2-Fluorophenol (Surr)	200000 ppb
							Benzo(a)pyrene-d12 (Surr)	1000 ppb
							Fluoranthene-d10 (Surr)	1000 ppb
							Nitrobenzene-d5 (Surr)	100000 ppb
							p-Terphenyl-d14 (Surr)	100000 ppb
							Phenol-d5 (Surr)	200000 ppb
..OP_BNA_STK_00055	03/31/25	Agilent, Lot 0006730540			(Purchased Reagent)		1-Methylnaphthalene-d10	1 ug/mL
							2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl (Surr)	100 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Benzo(a)pyrene-d12 (Surr)	1 ug/mL
							Fluoranthene-d10 (Surr)	1 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							p-Terphenyl-d14 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
OP_MINLCS1_MS_00178	08/22/23	07/28/23	ACETONE, Lot EG397-US	100 mL	OP_LCS1_MS_00059	25 mL	1,1'-Biphenyl	12500 ppb
							1,2,4,5-Tetrachlorobenzene	12500 ppb
							1,2,4-Trichlorobenzene	12500 ppb

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dichlorobenzene	12500 ppb
							1,2-Diphenylhydrazine	12500 ppb
							1,3-Dichlorobenzene	12500 ppb
							1,3-Dinitrobenzene	12500 ppb
							1,4-Dichlorobenzene	12500 ppb
							1,4-Dioxane	12500 ppb
							1-Methylnaphthalene	12500 ppb
							2,2'-oxybis[1-chloropropane]	12500 ppb
							2,3,4,6-Tetrachlorophenol	12500 ppb
							2,4,5-Trichlorophenol	12500 ppb
							2,4,6-Trichlorophenol	12500 ppb
							2,4-Dichlorophenol	12500 ppb
							2,4-Dimethylphenol	12500 ppb
							2,4-Dinitrophenol	25000 ppb
							2,4-Dinitrotoluene	12500 ppb
							2,6-Dichlorophenol	12500 ppb
							2,6-Dinitrotoluene	12500 ppb
							2-Chloronaphthalene	12500 ppb
							2-Chlorophenol	12500 ppb
							2-Methylnaphthalene	12500 ppb
							2-Methylphenol	12500 ppb
							2-Nitroaniline	12500 ppb
							2-Nitrophenol	12500 ppb
							3-Nitroaniline	12500 ppb
							4,6-Dinitro-2-methylphenol	25000 ppb
							4-Bromophenyl phenyl ether	12500 ppb
							4-Chloro-3-methylphenol	12500 ppb
							4-Chloroaniline	12500 ppb
							4-Chlorophenyl phenyl ether	12500 ppb
							4-Methylphenol	12500 ppb
							4-Nitroaniline	12500 ppb
							4-Nitrophenol	25000 ppb
							Acenaphthene	12500 ppb
							Acenaphthylene	12500 ppb
							Acetophenone	12500 ppb
							Aniline	12500 ppb
							Anthracene	12500 ppb
							Benzo[a]anthracene	12500 ppb
							Benzo[a]pyrene	12500 ppb
							Benzo[b]fluoranthene	12500 ppb
							Benzo[g,h,i]perylene	12500 ppb
							Benzo[k]fluoranthene	12500 ppb
							Benzyl alcohol	12500 ppb
							Bis(2-chloroethoxy)methane	12500 ppb
							Bis(2-chloroethyl)ether	12500 ppb
							Bis(2-ethylhexyl) phthalate	12500 ppb
							Butyl benzyl phthalate	12500 ppb
							Carbazole	12500 ppb

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chrysene	12500 ppb
							Di-n-butyl phthalate	12500 ppb
							Di-n-octyl phthalate	12500 ppb
							Dibenz(a,h)anthracene	12500 ppb
							Dibenzofuran	12500 ppb
							Diethyl phthalate	12500 ppb
							Dimethyl phthalate	12500 ppb
							Fluoranthene	12500 ppb
							Fluorene	12500 ppb
							Hexachlorobenzene	12500 ppb
							Hexachlorobutadiene	12500 ppb
							Hexachlorocyclopentadiene	12500 ppb
							Hexachloroethane	12500 ppb
							Hexadecane	12500 ppb
							Indeno[1,2,3-cd]pyrene	12500 ppb
							Isophorone	12500 ppb
							n-Decane	12500 ppb
							N-Nitrosodi-n-propylamine	12500 ppb
							N-Nitrosodimethylamine	12500 ppb
							N-Nitrosodiphenylamine	10625 ppb
							n-Octadecane	12500 ppb
							Naphthalene	12500 ppb
							Nitrobenzene	12500 ppb
							Pentachlorophenol	25000 ppb
							Phenanthrene	12500 ppb
							Phenol	12500 ppb
							Pyrene	12500 ppb
							Pyridine	25000 ppb
							3,3'-Dichlorobenzidine	25000 ppb
							Benzidine	25000 ppb
							Benzoic acid	12500 ppb
							Indene	12500 ppb
							1-Methylphenanthrene	12500 ppb
							2,3-Dichlorobenzenamine	12500 ppb
							Alpha Methyl Styrene	12500 ppb
							Alpha-Terpineol	12500 ppb
							Dimethylformamide	12500 ppb
							icosane	12500 ppb
							n-Docosane	12500 ppb
							n-Tetradecane	12500 ppb
							Octachlorostyrene	12500 ppb
							Phenyl ether	12500 ppb
.OP_LCS1_MS_00059	08/22/23	07/21/23	Acetone, Lot EG397-US	400 mL	OP_RES_LCS1_00013	20 mL	1,1'-Biphenyl	50000 ppb
							1,2,4,5-Tetrachlorobenzene	50000 ppb
							1,2,4-Trichlorobenzene	50000 ppb
							1,2-Dichlorobenzene	50000 ppb
							1,2-Diphenylhydrazine	50000 ppb
							1,3-Dichlorobenzene	50000 ppb

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,3-Dinitrobenzene	50000 ppb
							1,4-Dichlorobenzene	50000 ppb
							1,4-Dioxane	50000 ppb
							1-Methylnaphthalene	50000 ppb
							2,2'-oxybis[1-chloropropane]	50000 ppb
							2,3,4,6-Tetrachlorophenol	50000 ppb
							2,4,5-Trichlorophenol	50000 ppb
							2,4,6-Trichlorophenol	50000 ppb
							2,4-Dichlorophenol	50000 ppb
							2,4-Dimethylphenol	50000 ppb
							2,4-Dinitrophenol	100000 ppb
							2,4-Dinitrotoluene	50000 ppb
							2,6-Dichlorophenol	50000 ppb
							2,6-Dinitrotoluene	50000 ppb
							2-Chloronaphthalene	50000 ppb
							2-Chlorophenol	50000 ppb
							2-Methylnaphthalene	50000 ppb
							2-Methylphenol	50000 ppb
							2-Nitroaniline	50000 ppb
							2-Nitrophenol	50000 ppb
							3-Nitroaniline	50000 ppb
							4,6-Dinitro-2-methylphenol	100000 ppb
							4-Bromophenyl phenyl ether	50000 ppb
							4-Chloro-3-methylphenol	50000 ppb
							4-Chloroaniline	50000 ppb
							4-Chlorophenyl phenyl ether	50000 ppb
							4-Methylphenol	50000 ppb
							4-Nitroaniline	50000 ppb
							4-Nitrophenol	100000 ppb
							Acenaphthene	50000 ppb
							Acenaphthylene	50000 ppb
							Acetophenone	50000 ppb
							Aniline	50000 ppb
							Anthracene	50000 ppb
							Benzo[a]anthracene	50000 ppb
							Benzo[a]pyrene	50000 ppb
							Benzo[b]fluoranthene	50000 ppb
							Benzo[g,h,i]perylene	50000 ppb
							Benzo[k]fluoranthene	50000 ppb
							Benzyl alcohol	50000 ppb
							Bis(2-chloroethoxy)methane	50000 ppb
							Bis(2-chloroethyl)ether	50000 ppb
							Bis(2-ethylhexyl) phthalate	50000 ppb
							Butyl benzyl phthalate	50000 ppb
							Carbazole	50000 ppb
							Chrysene	50000 ppb
							Di-n-butyl phthalate	50000 ppb
							Di-n-octyl phthalate	50000 ppb

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dibenz(a,h)anthracene	50000 ppb
							Dibenzofuran	50000 ppb
							Diethyl phthalate	50000 ppb
							Dimethyl phthalate	50000 ppb
							Fluoranthene	50000 ppb
							Fluorene	50000 ppb
							Hexachlorobenzene	50000 ppb
							Hexachlorobutadiene	50000 ppb
							Hexachlorocyclopentadiene	50000 ppb
							Hexachloroethane	50000 ppb
							Hexadecane	50000 ppb
							Indeno[1,2,3-cd]pyrene	50000 ppb
							Isophorone	50000 ppb
							n-Decane	50000 ppb
							N-Nitrosodi-n-propylamine	50000 ppb
							N-Nitrosodimethylamine	50000 ppb
							N-Nitrosodiphenylamine	42500 ppb
							n-Octadecane	50000 ppb
							Naphthalene	50000 ppb
							Nitrobenzene	50000 ppb
							Pentachlorophenol	100000 ppb
							Phenanthrene	50000 ppb
							Phenol	50000 ppb
							Pyrene	50000 ppb
							Pyridine	100000 ppb
					OP_RES_LCS2_00009	10 mL	3,3'-Dichlorobenzidine	100000 ppb
							Benzidine	100000 ppb
					OP_RES_LCS2_00010	10 mL	3,3'-Dichlorobenzidine	100000 ppb
							Benzidine	100000 ppb
					OP_RES_LCS3_00007	10 mL	Benzoic acid	50000 ppb
							Indene	50000 ppb
					OP_RES_LCSadd_00003	10 mL	1-Methylphenanthrene	50000 ppb
							2,3-Dichlorobenzenamine	50000 ppb
							Alpha Methyl Styrene	50000 ppb
							Alpha-Terpineol	50000 ppb
							Dimethylformamide	50000 ppb
							icosane	50000 ppb
							n-Docosane	50000 ppb
							n-Tetradecane	50000 ppb
							Octachlorostyrene	50000 ppb
							Phenyl ether	50000 ppb
..OP_RES_LCS1_00013	09/30/24		Restek, Lot A0195772		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envir Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	850 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
..OP_RES_LCS2_00009	02/29/24		Restek, Lot A0188589		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..OP_RES_LCS2_00010	08/31/24		Restek, Lot A0194453		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..OP_RES_LCS3_00007	07/31/24		Restek, Lot A0193718		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..OP_RES_LCSadd_00003	02/28/26		Restek, Lot A0194427		(Purchased Reagent)		1-Methylphenanthrene	2000 ug/mL
							2,3-Dichlorobenzenamine	2000 ug/mL
							Alpha Methyl Styrene	2000 ug/mL
							Alpha-Terpineol	2000 ug/mL
							Dimethylformamide	2000 ug/mL
							icosane	2000 ug/mL
							n-Docosane	2000 ug/mL
							n-Tetradecane	2000 ug/mL
							Octachlorostyrene	2000 ug/mL
							Phenyl ether	2000 ug/mL
OP_MINLCS2_MS_00102	08/14/23	07/24/23	ACETONE, Lot EG397-US	100 mL	OP_LCS 2_MS_00047	25 mL	Atrazine	12500 ppb
							Benzaldehyde	12500 ppb
							Caprolactam	12500 ppb
.OP_LCS 2_MS_00047	08/14/23	07/13/23	ACETONE, Lot EG397-US	400 mL	OP_LCSmix2stk_00007	10 mL	Atrazine	50000 ppb
							Benzaldehyde	50000 ppb
							Caprolactam	50000 ppb
..OP_LCSmix2stk_00007	07/31/24		Restek, Lot A0193487		(Purchased Reagent)		Atrazine	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL

Reagent

MS_RES_ICV1_00005

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Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 5719965.SEC **Lot No.:** A0180323

Description : 8270 List 1 / Std #1 MegaMix (2017)
8270 List 1 / Std #1 MegaMix (2017) 500-2000 µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : July 31, 2023 **Storage:** 0°C or colder

Handling: Carcinogen/reproductive toxin. **Ship:** Ambient
Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound		Gray. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	1,4-Dioxane		1,005.5	µg/mL	+/- 5.8596	µg/mL	Gravimetric
	CAS #	123-91-1.SEC	(Lot KLE2K)		+/- 12.0264	µg/mL	Unstressed
	Purity	99%			+/- 19.1335	µg/mL	Stressed
2	N-Nitrosodimethylamine		1,008.0	µg/mL	+/- 5.8741	µg/mL	Gravimetric
	CAS #	62-75-9.SEC	(Lot 71L89)		+/- 12.0563	µg/mL	Unstressed
	Purity	99%			+/- 19.1811	µg/mL	Stressed
3	Pyridine		2,001.5	µg/mL	+/- 11.6638	µg/mL	Gravimetric
	CAS #	110-86-1.SEC	(Lot QN8DK)		+/- 23.9391	µg/mL	Unstressed
	Purity	99%			+/- 38.0862	µg/mL	Stressed
4	Phenol		1,002.8	µg/mL	+/- 5.8435	µg/mL	Gravimetric
	CAS #	108-95-2.SEC	(Lot EDPYN)		+/- 11.9935	µg/mL	Unstressed
	Purity	99%			+/- 19.0811	µg/mL	Stressed
5	Aniline		1,005.8	µg/mL	+/- 5.8610	µg/mL	Gravimetric
	CAS #	62-53-3.SEC	(Lot ZCD3N)		+/- 12.0294	µg/mL	Unstressed
	Purity	99%			+/- 19.1382	µg/mL	Stressed
6	Bis(2-chloroethyl)ether		1,005.8	µg/mL	+/- 5.8610	µg/mL	Gravimetric
	CAS #	111-44-4.SEC	(Lot FA01043)		+/- 12.0294	µg/mL	Unstressed
	Purity	99%			+/- 19.1382	µg/mL	Stressed
7	n-Decane (C10)		1,004.3	µg/mL	+/- 5.8523	µg/mL	Gravimetric
	CAS #	124-18-5.SEC	(Lot UCVNN)		+/- 12.0114	µg/mL	Unstressed
	Purity	99%			+/- 19.1097	µg/mL	Stressed

Reagent

MSS_8270_SURR_00004

Certificate of Analysis

EPA 8270 Surrogate Standard

Certified Reference Material

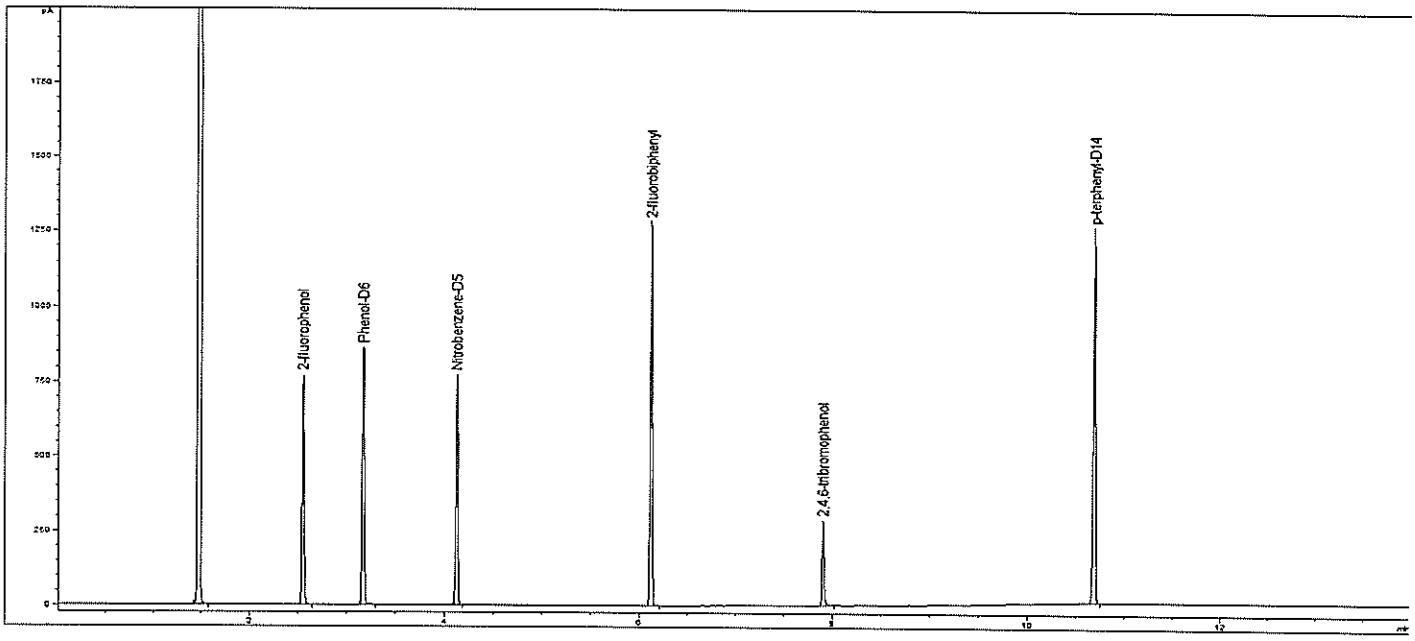
Description

Product ID CRM47960
Lot LRAC8467
Expiration Date October 2023
Manufacturing Date October 2020
Storage Conditions Refrigerate
Solvent/Matrix DICHLOROMETHANE

Certified Values

Analyte	*Certified Value* [1,4]	*Units*	*Raw Material Purity,%*	*Elution order*	*Raw Material Lot*	*CAS*
2-FLUOROPHENOL	4003 ± 110	µg/mL	99.9	01	LB92543	367-12-4
PHENOL-D6	4002 ± 75	µg/mL	99.5	02	MBBC6771	13127-88-3
NITROBENZENE-D5	4001 ± 50	µg/mL	99.9	03	LB83753	4165-60-0
2-FLUOROBIPHENYL	4001 ± 79	µg/mL	99.9	04	MKCK0527	321-60-8
2,4,6-TRIBROMOPHENOL	4004 ± 92	µg/mL	99.7	05	LB81262	118-79-6
P-TERPHENYL-D14	4047 ± 131	µg/mL	99.5	06	PR-27278/121715	1718-51-0

Informational Values



Additional Information:

Analytical Method Parameters:
Column: SPB-5, 30 m × 0.53 mm I.D., 1.5 µm film thickness (Column #214)
Carrier Gas: H2, Flow: 4.5 mL/min
Inlet Temperature: 270 °C, Injection Volume: 1.0 µL
Injection Mode: Split, Split Ratio: 40: 1
Temperature Program: 100 °C (Hold 1 min) @ 20 °C/min to 280 °C (Hold 4 min)

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Reagent

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08/15/2023

CERTIFIED WEIGHT REPORT

Part Number: 70159
Lot Number: 120920
Description: 2,4-Dinitrophenol

Expiration Date: 120925
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 1000
NIST Test ID#: 23060

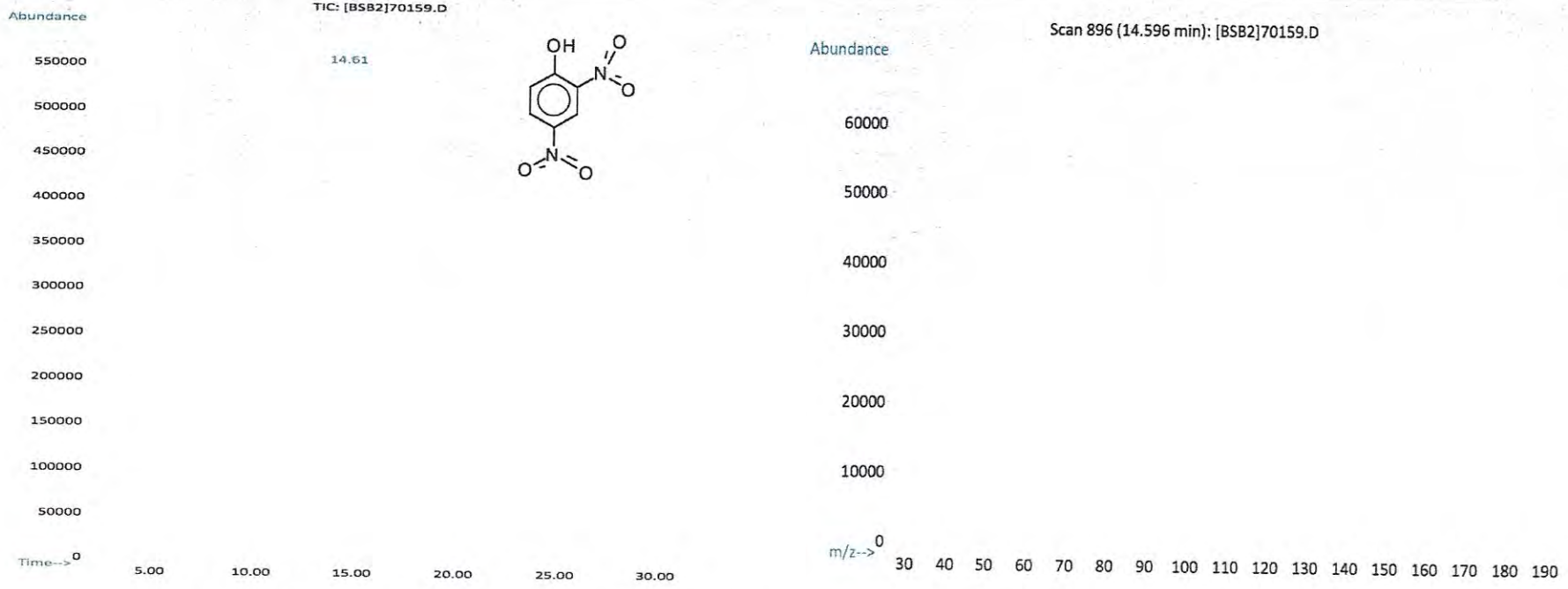
Solvent(s): **Lot#**
Methanol DY186-US

5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 100.0 0.012 Flask Uncertainty

		120920
Formulated By:	Prashant Chauhan	DATE
		120920
Reviewed By:	Pedro L. Rentas	DATE

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight (g)	Actual Weight (g)	Actual Conc(µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. 2,4-Dinitrophenol	159	011719	1000	98	0.2	0.10205	0.10225	1002.0	4.2	51-28-5	N/A	orl-rat 30mg/kg

Method GC8MSD-3.M: Column: (30m X 0.25mm ID X 0.25µm film thickness), Temp 1 = 50°C (1min.), Temp 2 = 300°C (4 min.), Rate = 10°C/min., Injector B= 200°C, Detector B = 300°C. Analysis performed by Melissa Stonier.



- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

Reagent

MSS_AB_46D2MP_00004

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08/15/2023

CERTIFIED WEIGHT REPORT

Part Number: 70158
Lot Number: 111919
Description: 4,6-Dinitro-2-methylphenol

Solvent(s): **Lot#**
Methanol DV182-US

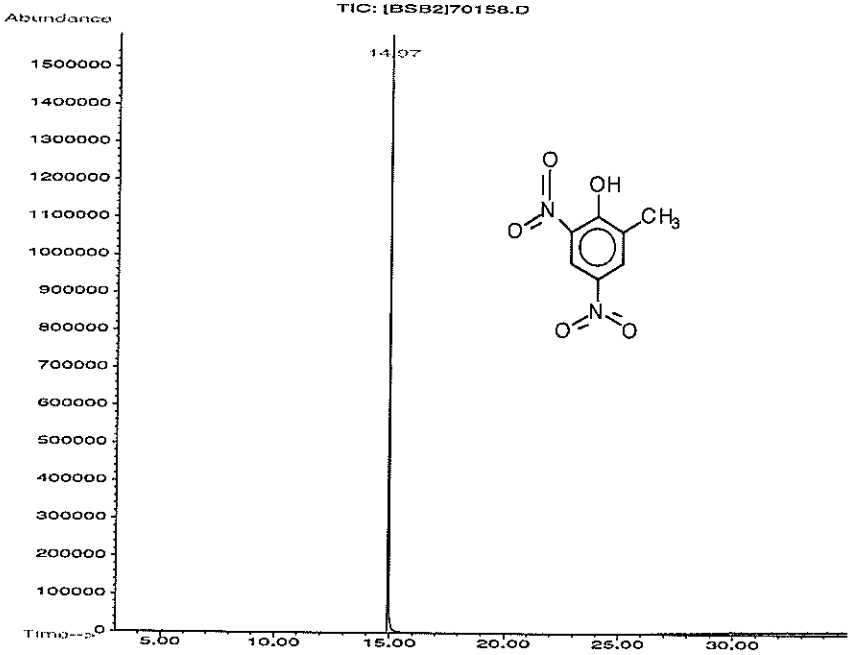
Expiration Date: 111924
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 1000
NIST Test ID#: 6UTB

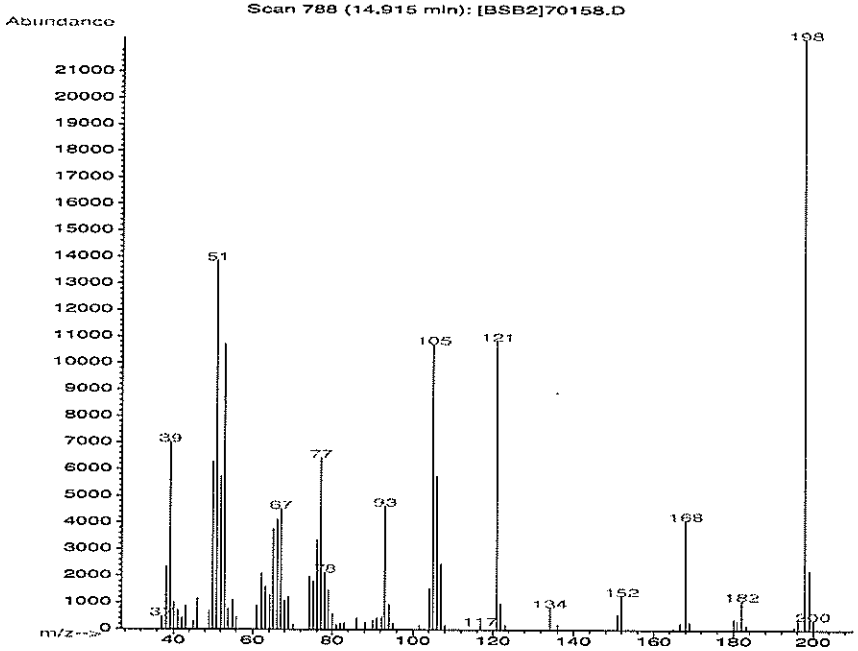
Weight(s) shown below were combined and diluted to (mL): 50.0 | 5E-05 Balance Uncertainty | 0.007 Flask Uncertainty

		111919
Formulated By:	Justin Dippold	DATE
		111919
Reviewed By:	Pedro L. Rentas	DATE

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight (g)	Actual Weight (g)	Actual Conc(µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. 4,6-Dinitro-2-methylphenol	158	052097	1000	98	0.2	0.05102	0.05110	1001.6	4.5	534-52-1	0.2mg/m3/8H (skin)	orl-rat 10mg/kg

Method GC8MSD-3.M: Column:SPB-5 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (9min.), Rate = 10°C/min., Injector B= 200°C, Detector B = 275°C, Split Ratio = 100:1, Scan Rate = 2. Analysis performed by: Gina McLane.





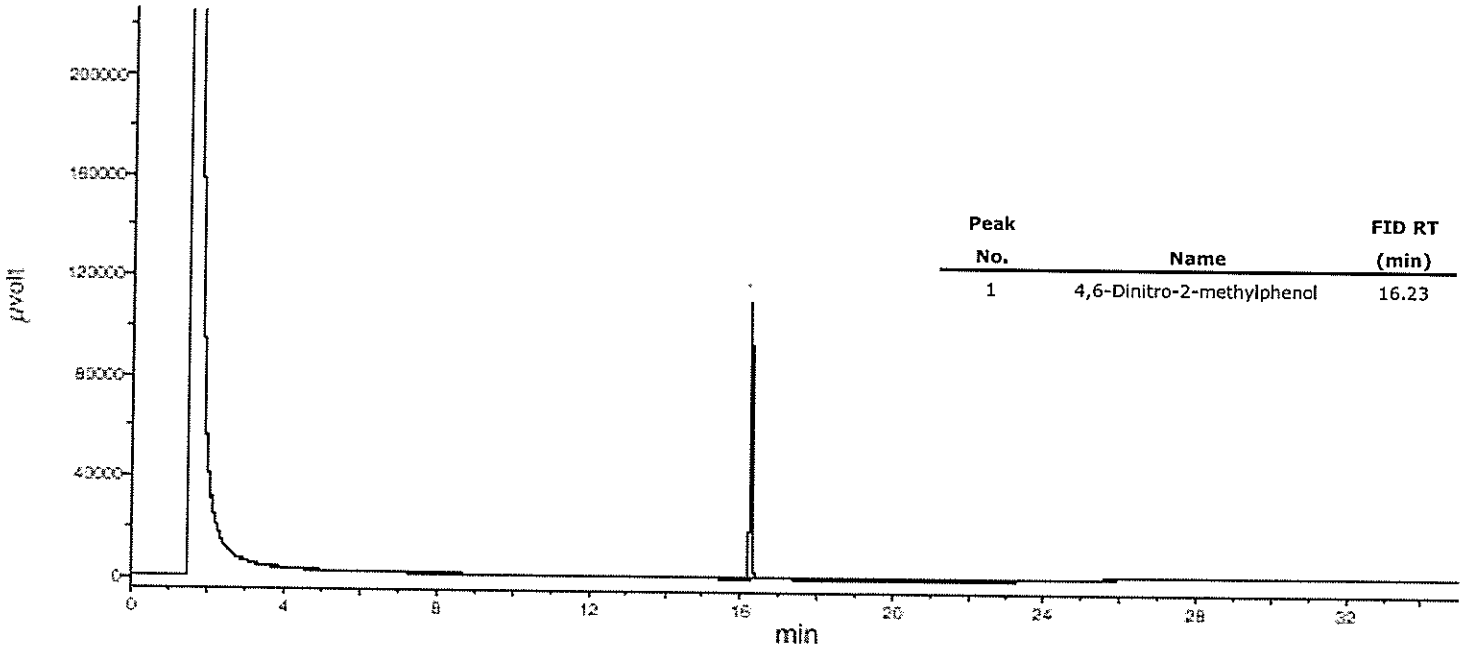
- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

Run 40, "P70158 L111919 [1000µg/mL in methanol]"

Run Length: 35.00 min, 20999 points at 10 points/second.
Created: Thu, Jan 9, 2020 at 3:51:34 PM.
Sampled: Sequence "010720-GC9M1", Method "GC9-M1".
Analyzed using Method "GC9-M1".

Comments

GC9-M1 Analysis by Melissa Stonier
Column ID Rtx-5 30 meter x 0.53mm x .5um Film Thickness
Flow rates; Total Flow = 300 ml/min, Helium (carrier) = 6.5 mL, Helium (make-up) = 25 mL, Hydrogen (detector) = 30 mL, Air (detector) =360 mL
Oven Temp 1 = 50°C (1 min), Rate = 10°C/min, Oven Temp 2 = 300°C (9 min), Total Run Time = 35 Minutes.
Injector Temp = 200°C, FID Temp = 300°C, FID Signal = eDaq Channel 1.
Gas Chromatograph = HP 5890, Auto Sampler = HP 7673, Standard Injection = 0.5 uL, Range = 3



Peak No.	Name	FID RT (min)
1	4,6-Dinitro-2-methylphenol	16.23

Reagent

MSS_AB_4NP_00003

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CERTIFIED WEIGHT REPORT

Part Number: 70231
Lot Number: 072418
Description: 4-Nitrophenol

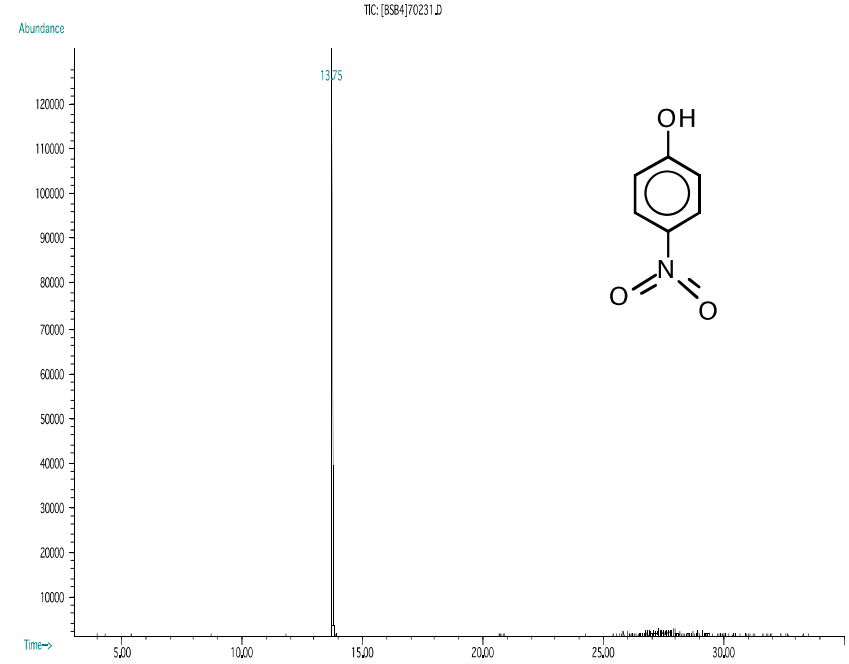
Solvent(s): Methanol **Lot#** DS526

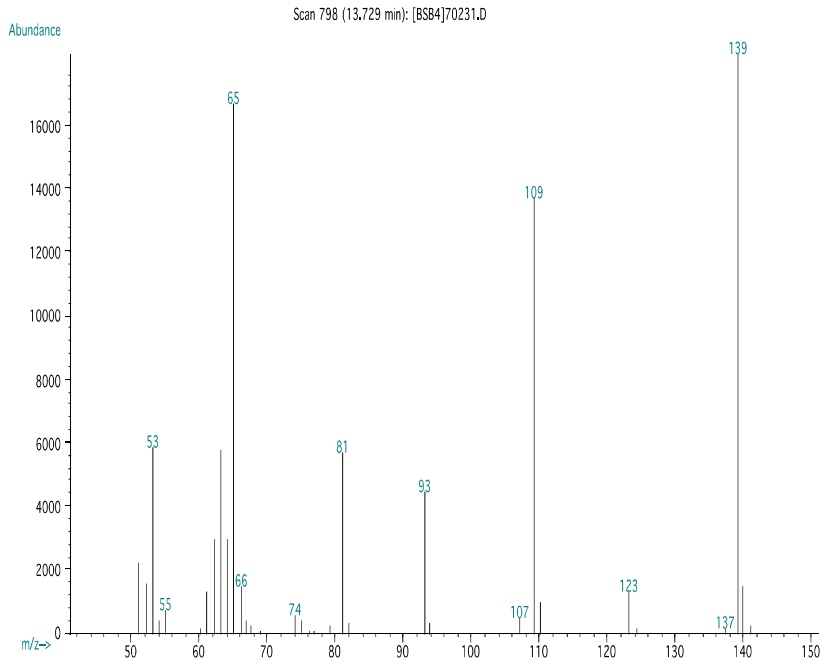
Expiration Date: 072423
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 1000
NIST Test ID#: 2684186 5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 100.0 0.001 Flask Uncertainty

Eli Aliaga	072418
Formulated By: Eli Aliaga	DATE
Pedro Rentas	072418
Reviewed By: Pedro L. Rentas	DATE

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. 4-Nitrophenol	231	FGM01	1000	99	0.2	0.10102	0.10109	1000.7	4.2	100-02-7	N/A	orl-rat 250mg/kg

Method GC8MSD-3.M: Column:SPB-5 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (9min.), Rate = 10°C/min., Injector B= 200°C, Detector B = 275°C, Split Ratio = 100:1, Scan Rate = 2. Analysis performed by: Candice Warren.





- **The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.**
- **Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).**
- **Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.**
- **All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.**
- **Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).**

Reagent

MSS_AB_BZIDIN_00011

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CERTIFIED WEIGHT REPORT

Part Number: 43124
Lot Number: 102722
Description: Benzidine

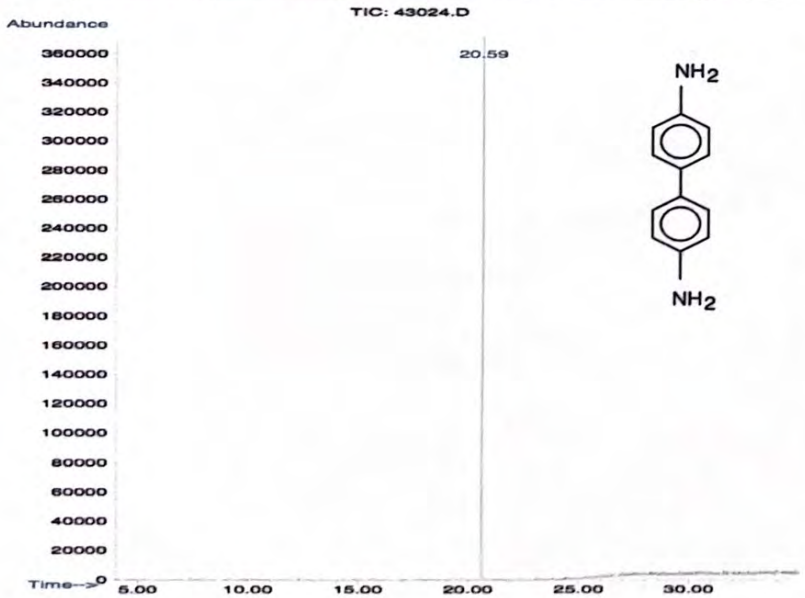
Solvent: Lot#
Methylene chloride C21F09CAS0000DCM

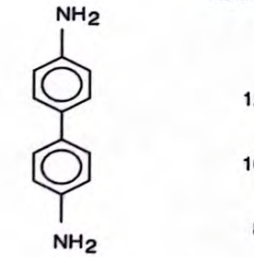
Expiration Date: 102725
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 5000
NIST Test ID#: 6UTB 5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 30.0 0.0003 Flask Uncertainty

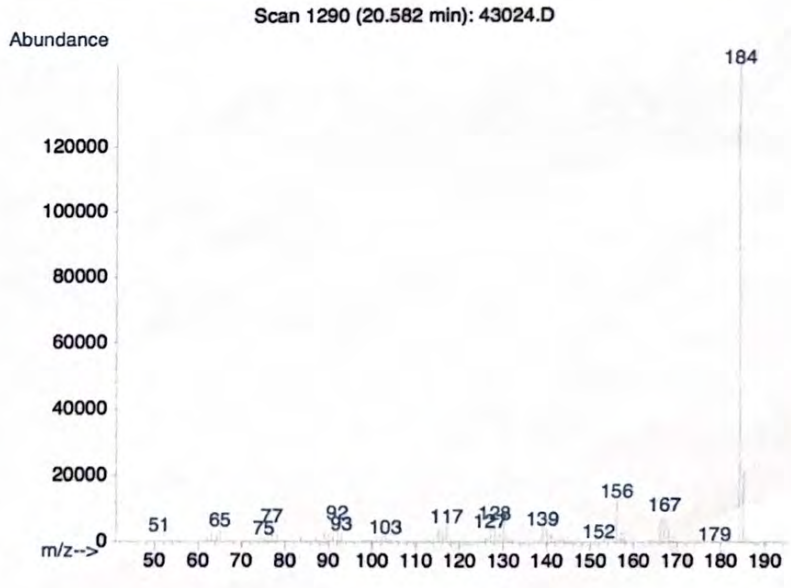
Formulated By:	Prashant Chauhan	102722 DATE
Reviewed By:	Pedro L. Rentas	102722 DATE

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity (%)	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) µg/mL	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. Benzidine	27	SLBH5327V	5000	98	0.2	0.15314	0.15324	5003.1	20.7	92-87-5	N/A	orl-rat 309mg/kg

Method GC8MSD-3.M: Column:SPB-5 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (9min.), Rate = 10°C/min., Injector B= 200°C, Detector B = 275°C, Split Ratio = 100:1, Scan Rate = 2. Analysis performed by Nicole Davis.







- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

Reagent

MSS_AB_DFTPP_00016

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

08/15/2023

CERTIFIED WEIGHT REPORT

Part Number: 43030
Lot Number: 072022
Description: CLP Semi-Volatile Tuning Standard
4 components
Expiration Date: 072025
~~Recommended Storage:~~ ~~Refrigerate (4 °C)~~
Nominal Concentration (µg/mL): 500
NIST Test ID#: 6UTB

Solvent(s): Methylene chloride **Lot#** 105345

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Weight(s) shown below were combined and diluted to (mL): 200.0

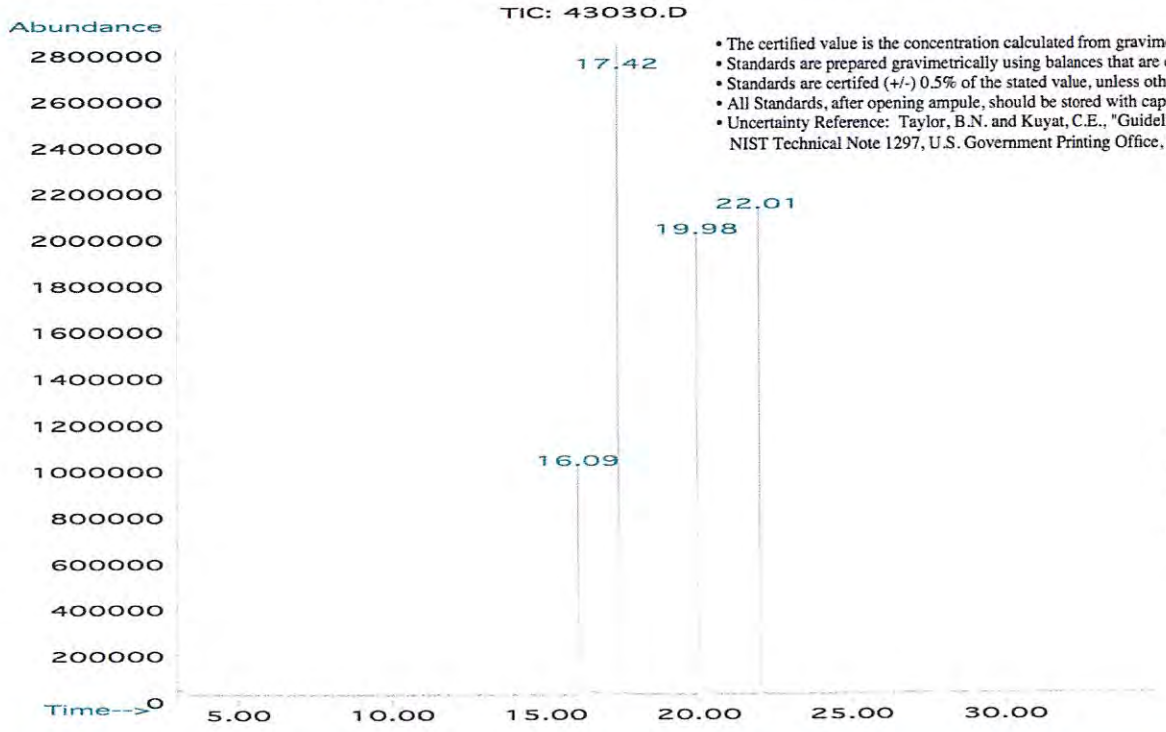
CAUTION: Sonicate Before Use

Gabriel Helland 072022
Formulated By: Gabriel Helland DATE

Pedro Rentas 072022
Reviewed By: Pedro L. Rentas DATE

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	CAS#	SDS Information (Solvent Safety Info. On Attached pg.) OSHA PEL (TWA)	LD50
1. Benzidine	27	SLBH5327V	500	98	0.2	0.10205	0.10215	500.5	2.1	92-87-5	N/A	orl-rat 309mg/kg
2. 4,4'-DDT	101	04029MM	500	99	0.2	0.10102	0.10106	500.2	2.1	50-29-3	N/A	orl-rat 87mg/kg
3. Decafluorotriphenylphosphine	105	10220909	500	97	0.2	0.10311	0.10327	500.8	2.1	5074-71-5	N/A	N/A
4. Pentachlorophenol	243	06324ED	500	98	0.2	0.10205	0.10222	500.8	2.1	87-86-5	0.5mg/m3/8H (skin)	orl-rat 27mg/kg

Method GC8MSD-3.M: Column:SPB-5 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (9min.), Rate = 10°C/min., Injector B= 200°C, Detector B = 275°C, Split Ratio = 100:1, Scan Rate = 2. Analysis performed by: Gina McLane.



- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

Retention Time (min.)

Pentachlorophenol	16.09
Decafluorotriphenylphosphine	17.42
Benzidine	19.98
4,4'-DDT	22.01

Reagent

MSS_AB_PCP_00004

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

08/15/2022

CERTIFIED WEIGHT REPORT

Part Number: 79261
Lot Number: 062222
Description: Pentachlorophenol

Solvent(s): Acetone **Lot#** 81025

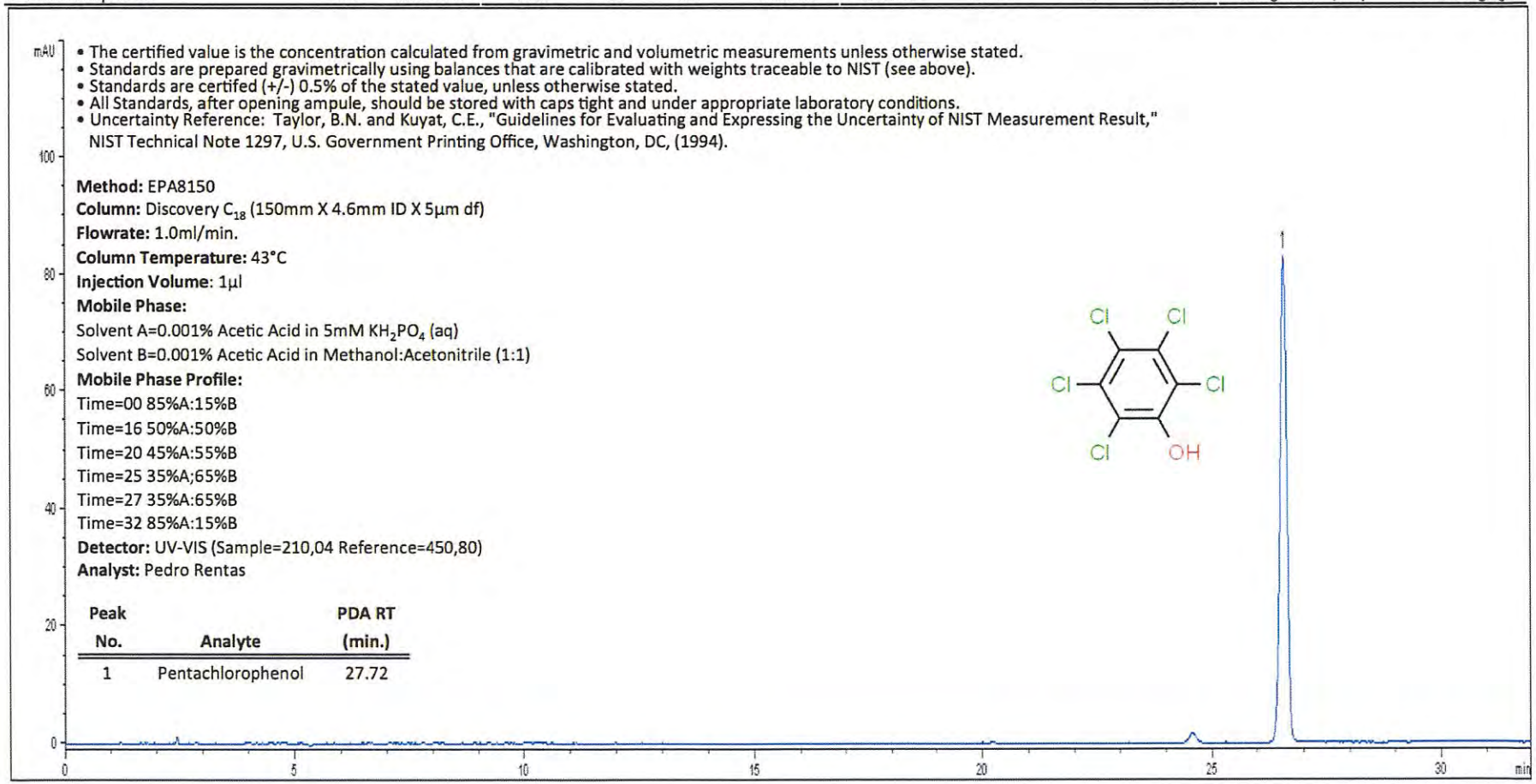
Expiration Date: 062227
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 1000
NIST Test ID#: 6UTB 5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 50.0 0.006 Flask Uncertainty

	062222
Formulated By: Benson Chan	DATE
	062222
Reviewed By: Pedro L. Rentas	DATE

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) µg/mL	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. Pentachlorophenol	243	06324ED	1000	98	0.2	0.05106	0.05112	1001.1	4.5	87-86-5	0.5mg/m3/8H (skin)	orl-rat 27mg/kg

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

Method: EPA8150
Column: Discovery C_{18} (150mm X 4.6mm ID X 5µm df)
Flowrate: 1.0ml/min.
Column Temperature: 43°C
Injection Volume: 1µl
Mobile Phase:
Solvent A=0.001% Acetic Acid in 5mM KH_2PO_4 (aq)
Solvent B=0.001% Acetic Acid in Methanol:Acetonitrile (1:1)
Mobile Phase Profile:
Time=00 85%A:15%B
Time=16 50%A:50%B
Time=20 45%A:55%B
Time=25 35%A;65%B
Time=27 35%A:65%B
Time=32 85%A:15%B
Detector: UV-VIS (Sample=210,04 Reference=450,80)
Analyst: Pedro Rentas



Peak No.	Analyte	PDA RT (min.)
1	Pentachlorophenol	27.72

Reagent

MSS_FV8270_IS_00005

RESTEK
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Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Composition

ACCREDITED
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Certificate #3222.01

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 576940 **Lot No.:** A0166482

Description : Custom Internal Standard

Custom Internal Standard 1,000µg/mL, Methylene chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2023 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive. **Ship:** Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,4-Dichlorobenzene-d4	1,001.3 µg/mL	+/- 5.8215	µg/mL	Gravimetric
	CAS # 3855-82-1 (Lot PR-30447)		+/- 45.0977	µg/mL	Unstressed
	Purity 99%		+/- 50.0414	µg/mL	Stressed
2	Naphthalene-d8	1,003.7 µg/mL	+/- 5.8358	µg/mL	Gravimetric
	CAS # 1146-65-2 (Lot M-1452)		+/- 45.2087	µg/mL	Unstressed
	Purity 99%		+/- 50.1647	µg/mL	Stressed
3	Acenaphthene-d10	1,005.7 µg/mL	+/- 5.8474	µg/mL	Gravimetric
	CAS # 15067-26-2 (Lot PR-30913)		+/- 45.2988	µg/mL	Unstressed
	Purity 99%		+/- 50.2646	µg/mL	Stressed
4	Phenanthrene-d10	1,006.9 µg/mL	+/- 5.8540	µg/mL	Gravimetric
	CAS # 1517-22-2 (Lot PR-29119)		+/- 45.3499	µg/mL	Unstressed
	Purity 99%		+/- 50.3213	µg/mL	Stressed
5	Pyrene-d10	1,008.7 µg/mL	+/- 5.8649	µg/mL	Gravimetric
	CAS # 1718-52-1 (Lot PR-30304)		+/- 45.4340	µg/mL	Unstressed
	Purity 99%		+/- 50.4146	µg/mL	Stressed
6	Perylene-d12	1,004.0 µg/mL	+/- 5.8373	µg/mL	Gravimetric
	CAS # 1520-96-3 (Lot PR-30020)		+/- 45.2208	µg/mL	Unstressed
	Purity 99%		+/- 50.1780	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

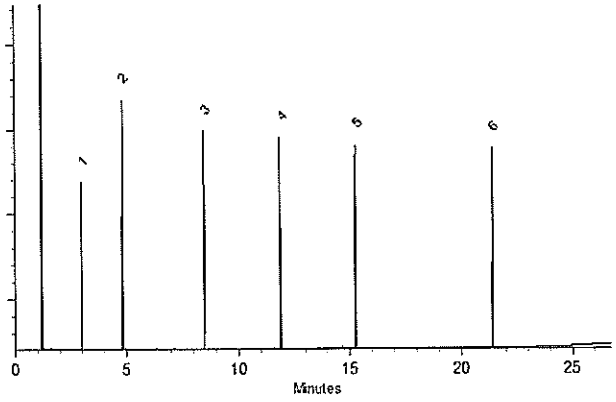
Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

Inj. Temp:
250°C

Det. Temp:
340°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 18-Nov-2020 **Balance:** B442140311

Justine Albertson - Operations Tech-ARM QC

Date Passed: 19-Nov-2020

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

MSV_8260_SS_00779

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 55671 **Lot No.:** A0183565

Description : 8260A Surrogate Mix

8260A Surrogate Mix 2,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2025 **Storage:** 0°C or colder

Ship: Ambient

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dibromofluoromethane **CAS #** 1868-53-7 (Lot 012021) **Purity** 99%	2,500.5 µg/mL	+/- 14.5381 µg/mL +/- 140.2006 µg/mL +/- 143.4811 µg/mL	Gravimetric Unstressed Stressed
2	1,2-Dichloroethane-d4 **CAS #** 17060-07-0 (Lot PR-32845) **Purity** 99%	2,500.5 µg/mL	+/- 14.5381 µg/mL +/- 140.2006 µg/mL +/- 143.4811 µg/mL	Gravimetric Unstressed Stressed
3	Toluene-d8 **CAS #** 2037-26-5 (Lot PR-31958) **Purity** 99%	2,500.5 µg/mL	+/- 14.5381 µg/mL +/- 140.2006 µg/mL +/- 143.4811 µg/mL	Gravimetric Unstressed Stressed
4	1-Bromo-4-fluorobenzene (BFB) **CAS #** 460-00-4 (Lot 20401KO) **Purity** 99%	2,502.0 µg/mL	+/- 14.5468 µg/mL +/- 140.2847 µg/mL +/- 143.5671 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

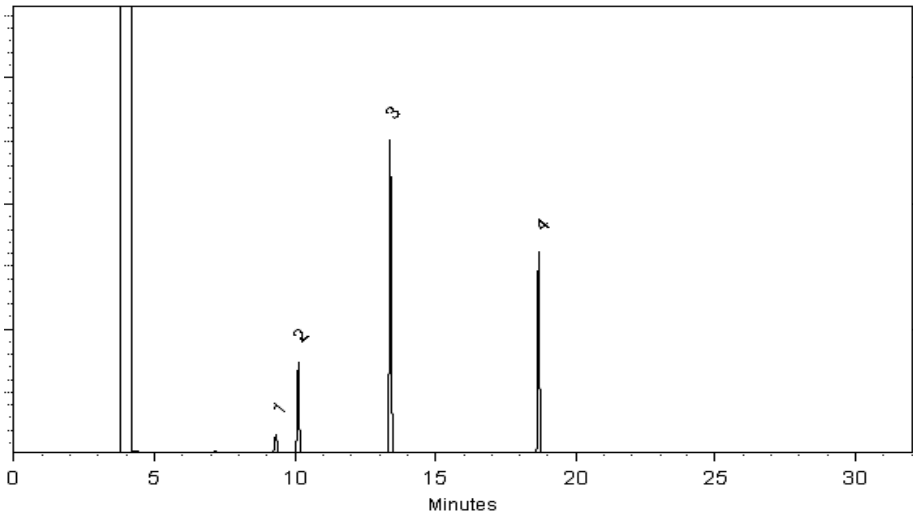
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Russ Bookhamer - Operations Technician I

Date Mixed: 31-Mar-2022 **Balance:** 1127510105

Fang-Yun Lo - QC Analyst

Date Passed: 04-Apr-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Reagent

MSV_AcetatesV_00029

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 577489 **Lot No.:** A0184542

Description : Custom Acetates Standard

Custom Acetates Standard 10,000-50,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2023 **Storage:** -20°C or colder

Ship: On Ice

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetonitrile	50,150.0 µg/mL	+/- 293.6393 µg/mL	Gravimetric
	CAS # 75-05-8 (Lot SHBH6233)		+/- 2,481.0559 µg/mL	Unstressed
	Purity 99%		+/- 2,542.7375 µg/mL	Stressed
2	Vinyl acetate	10,064.0 µg/mL	+/- 59.0612 µg/mL	Gravimetric
	CAS # 108-05-4 (Lot RD210830)		+/- 497.9092 µg/mL	Unstressed
	Purity 99%		+/- 510.2869 µg/mL	Stressed
3	Ethyl acetate	10,082.2 µg/mL	+/- 59.1682 µg/mL	Gravimetric
	CAS # 141-78-6 (Lot SHBN3179)		+/- 498.8116 µg/mL	Unstressed
	Purity 98%		+/- 511.2118 µg/mL	Stressed
4	Isopropyl acetate	10,082.0 µg/mL	+/- 59.1668 µg/mL	Gravimetric
	CAS # 108-21-4 (Lot BCBZ4645)		+/- 498.7997 µg/mL	Unstressed
	Purity 99%		+/- 511.1996 µg/mL	Stressed
5	Propyl acetate	10,062.0 µg/mL	+/- 59.0495 µg/mL	Gravimetric
	CAS # 109-60-4 (Lot TFFKL)		+/- 497.8102 µg/mL	Unstressed
	Purity 99%		+/- 510.1855 µg/mL	Stressed
6	Butyl acetate	10,070.0 µg/mL	+/- 59.0964 µg/mL	Gravimetric
	CAS # 123-86-4 (Lot SHBN3806)		+/- 498.2060 µg/mL	Unstressed
	Purity 99%		+/- 510.5911 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:
Vinyl acetate is a volatile organic ester included in the target lists of several US EPA and other methods . Under acidic conditions, esters react with alcohols to form new esters (transesterification). Methanol-based mixes containing halogenated compounds are slightly acidic, so it is important to minimize exposure of vinyl acetate to mixes of halogenated compounds in methanol. For this reason, we offer vinyl acetate in individual solution, and suggest that it be introduced into the working level calibration solution immediately before use. This will minimize problems and ensure more consistent results.

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

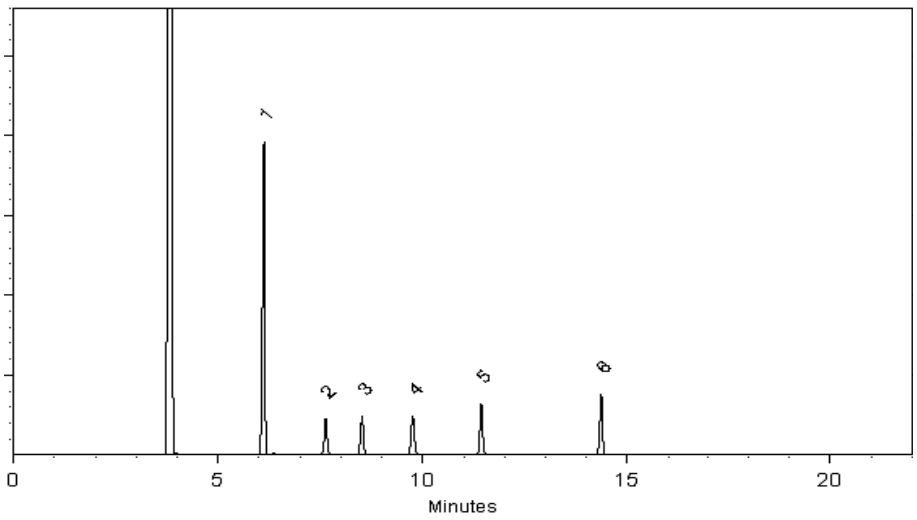
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 26-Apr-2022 **Balance:** B707717271

Fang-Yun Lo - QC Analyst

Date Passed: 05-May-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Reagent

MSV_BCE_00053

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30469 **Lot No.:** A0177627

Description : 1-Bromo-2-chloroethane Standard

1-Bromo-2-Chloroethane Std, 2000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2026 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L., K=2)		
1	1-Bromo-2-chloroethane	2,001.3 µg/mL	+/- 11.8868	µg/mL	Gravimetric
	CAS # 107-04-0 (Lot BCCC1146)		+/- 112.2344	µg/mL	Unstressed
	Purity 99%		+/- 114.8594	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

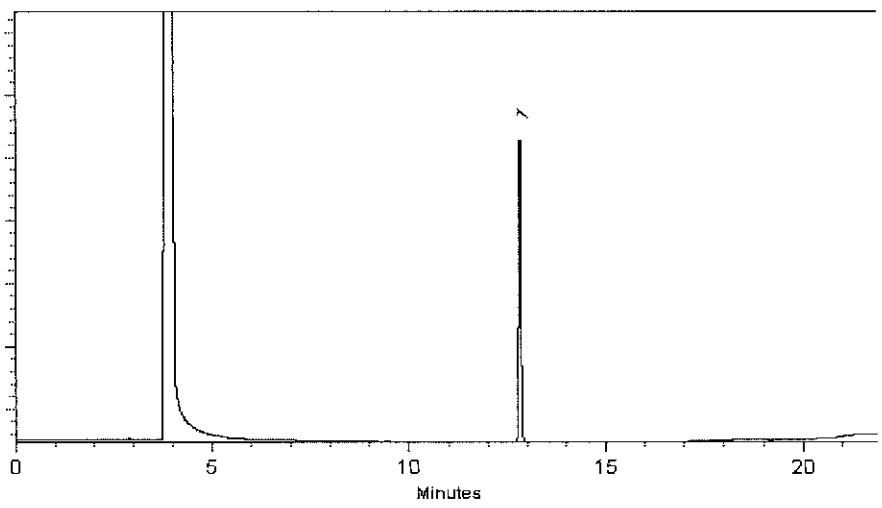
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cathleen Soltis - Mix Technician

Date Mixed: 20-Oct-2021 **Balance:** B251644995

Alexis Shelow - Operations Tech I

Date Passed: 22-Oct-2021

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Reagent

MSV_BCE_00057

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30469 **Lot No.:** A0177627

Description : 1-Bromo-2-chloroethane Standard

1-Bromo-2-Chloroethane Std, 2000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2026 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L., K=2)		
1	1-Bromo-2-chloroethane	2,001.3 µg/mL	+/- 11.8868	µg/mL	Gravimetric
	CAS # 107-04-0 (Lot BCCC1146)		+/- 112.2344	µg/mL	Unstressed
	Purity 99%		+/- 114.8594	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

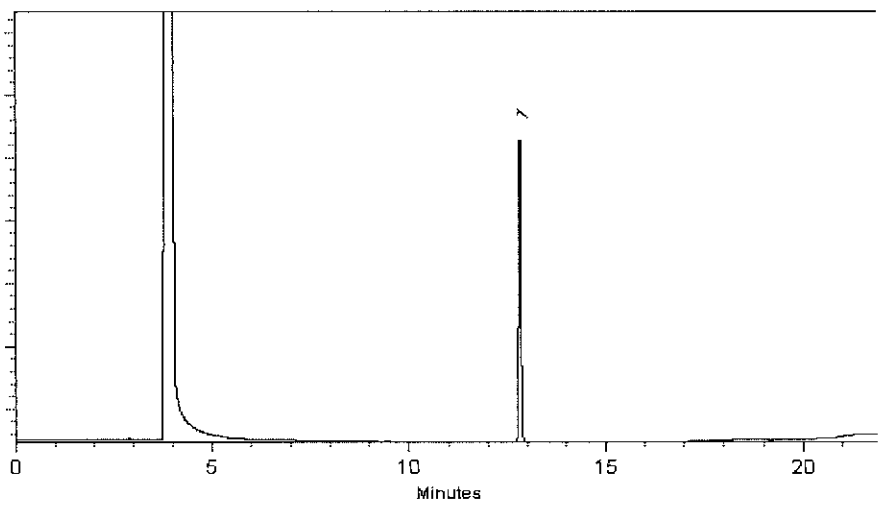
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cathleen Soltis - Mix Technician

Date Mixed: 20-Oct-2021 **Balance:** B251644995

Alexis Shelow - Operations Tech I

Date Passed: 22-Oct-2021

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
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k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

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- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

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Handling Notes:

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Reagent

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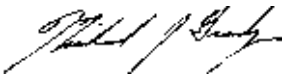
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:
cis-1,4-Dichloro-2-butene - 95%

Product Number:	**195707**
Batch Number:	**SHBH4584V**
Brand:	ALDRICH
CAS Number:	1476-11-5
MDL Number:	MFCD00062950
Formula:	C4H6Cl2
Formula Weight:	125.00 g/mol
Storage Temperature:	Store at 2 - 8 °C
Quality Release Date:	30 AUG 2016

Test	Specification	Result
Appearance (Color)	Colorless to Light Yellow	Very Faint Yellow
Appearance (Form)	Liquid	Liquid
Infrared Spectrum	Conforms to Structure	Conforms
Purity (GC)	≥ 94.5 %	98.0 %



Michael Grady, Manager
Quality Control
Sheboygan Falls, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Reagent

MSV_CYC_00008

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1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Cyclohexanone

CATALOG NUMBER	N-11531-1G
LOT NUMBER	13529800
DATE CERTIFIED	06/20/22
EXPIRATION DATE	06/30/27
CAS NUMBER	108-94-1
MOLECULAR FORMULA	C6H10O
MOLECULAR WEIGHT	98.16
STORAGE	Store at room temperature (20 - 25 °C).
HANDLING	See Safety Data Sheet
INTENDED USE	For laboratory use only.

Analytical Test	Value
% PURITY (GC/FID)	99.5
FT-IR SPECTROSCOPY	CONFORMS TO STRUCTURE
PHYSICAL APPEARANCE	COLORLESS LIQUID
GC/MS SPECTRA ID	MATCHES NIST

Chem Service, Inc. is accredited to ISO 17034:2016, ISO/IEC 17025:2017 and certified to ISO 9001:2015.

PJLA Testing

PJLA Reference Material Producer

COA Form
Revision 3 (3/2015)

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Chem Service, Inc. guarantees the purity to be +/- 0.5% deviation prior to the expiration date shown on the label and exclusive of any customer contamination.

Certified By:

Kristin R Jones

Chem Service, Inc. is accredited to ISO 17034:2016, ISO/IEC 17025:2017 and certified to ISO 9001:2015.

PJLA Testing

PJLA Reference Material Producer

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CERTIFICATE OF ANALYSIS

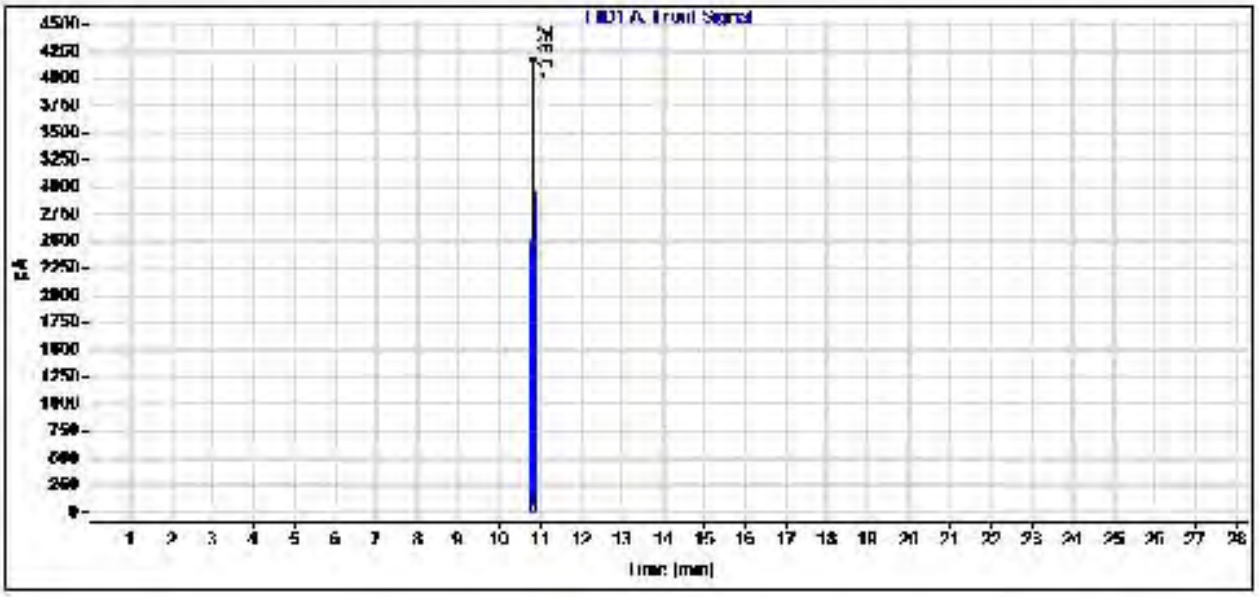
Gas Chromatography / Flame Ionization Detector (GC/FID)

Data file: C:\CHEM32\1\DATA\2022 DATA\0622\FID010695.D

Sample name: N-11531

Instrument: GC 1
Injection date: 6/17/2022 1:49:46 PM
Acq. method: SCREEN NEAT-FRANNY.M
Column name: DB-624 (30m x 0.53mm x 3.0um)

Sample type: Sample
Location: Vial 51
Injection volume: 1.0uL



Signal: FID1 A, Front Signal

RT [min]	Type	Width [min]	Area	Height	Area%
10.835	BB	0.0350	9220.0693	4132.2539	100.0000
		Sum	9220.0693		

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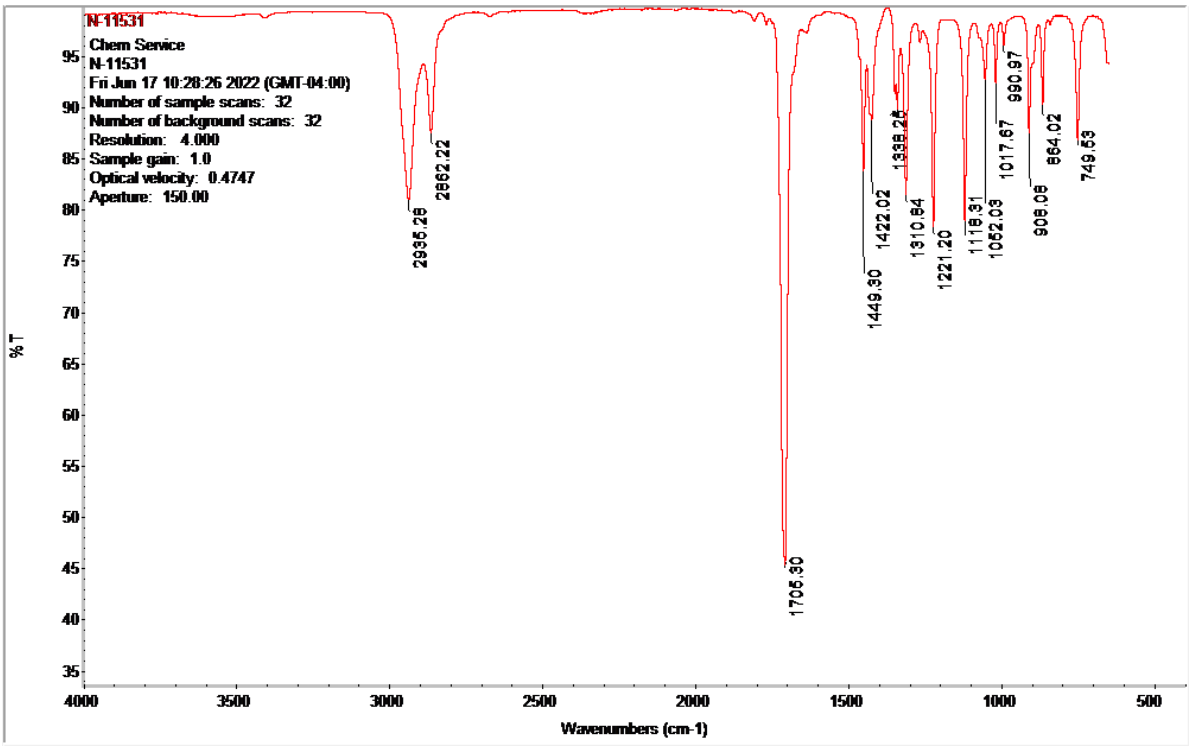
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

Catalog Number: N-11531-1G
Description: Cyclohexanone
Lot Number: 13529800
Expiration Date: 06/30/27



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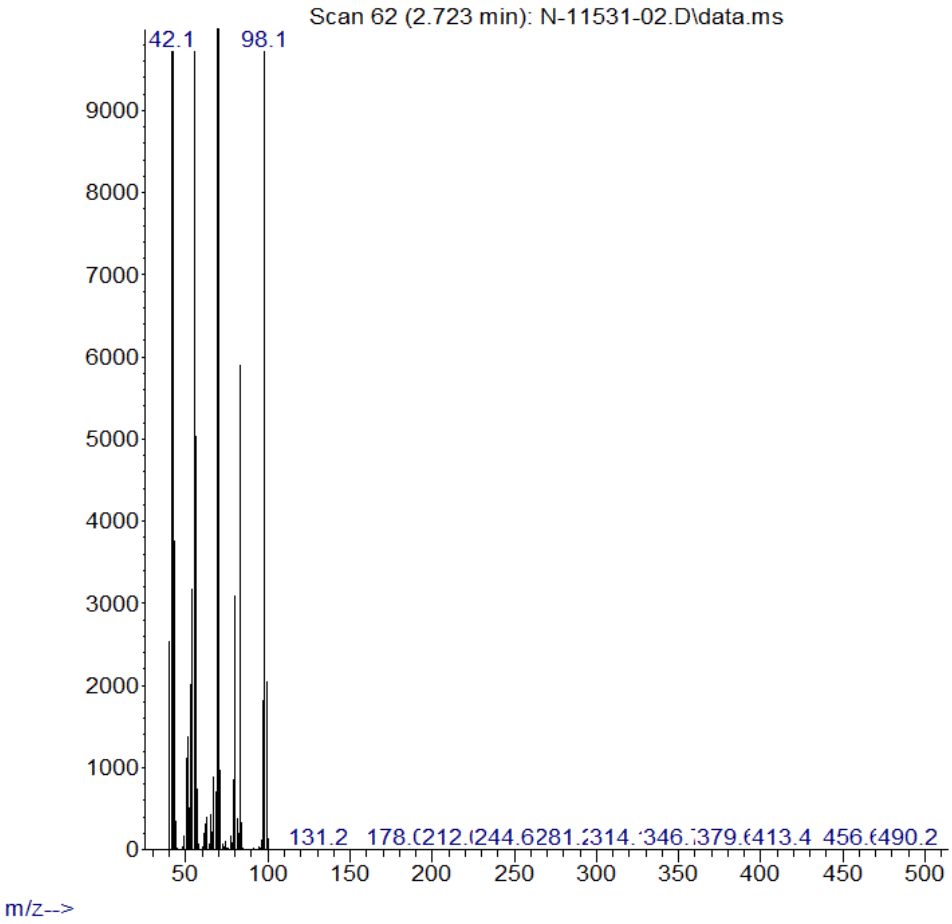
CERTIFICATE OF ANALYSIS

Analysis Method:

Catalog Number:	N-11531-1G
Description:	Cyclohexanone
Lot Number:	13529800
Expiration Date:	06/30/27



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CERTIFICATE OF ANALYSIS

Analysis Method:

Catalog Number: N-11531-1G
Description: Cyclohexanone
Lot Number: 13529800
Expiration Date: 06/30/27

ChemService Area Percent Report

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 Data Path : D:\MassHunter\GCMS\1\data\2022\0622\
 Data File : N-11531-02.D
 Acq On    : 17 Jun 2022  12:40
 Operator  :
 Sample    : N-11531
 Misc      :
 ALS Vial  : 16   Sample Multiplier: 1

 Integration Parameters: autoint1.e
 Integrator: ChemStation

 Method    : D:\MassHunter\GCMS\1\methods\SCREEN NO SD.M
 Title     :

 Signal     : TIC: N-11531-02.D\data.ms
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peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	2.723	58	62	80	BV 2	106211218	1767870280	100.00%	100.000%

Sum of corrected areas: 1767870280

SCREEN NO SD.M Fri Jun 17 13:13:05 2022

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CERTIFICATE OF ANALYSIS

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Catalog Number: N-11531-1G
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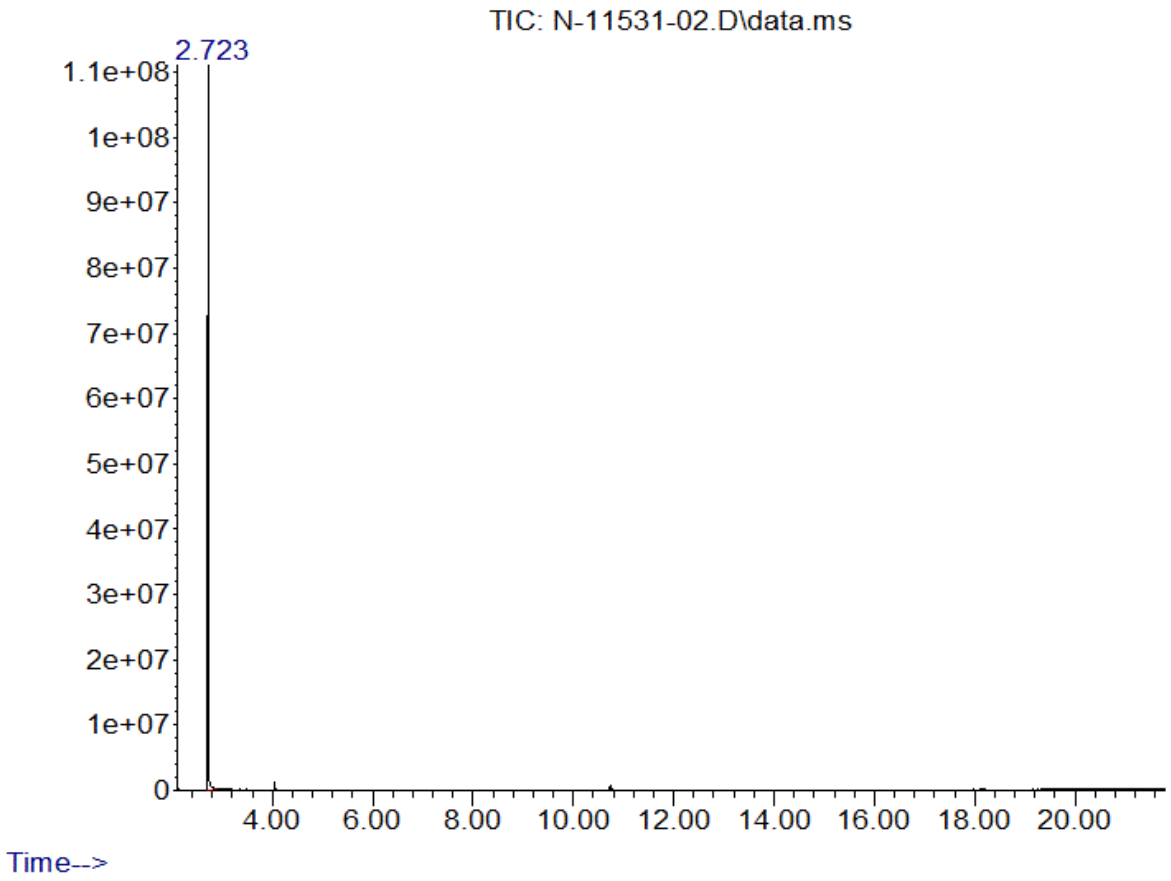

Chem Service, Inc. is accredited to ISO 17034:2016, ISO/IEC 17025:2017 and certified to ISO 9001:2015.
PJLA Testing
PJLA Reference Material Producer

Reagent

MSV_MegaMix#2_00109

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Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 577487 **Lot No.:** A0186885

Description : Custom VOC MegaMix® #2 Standard

Custom VOC MegaMix® #2 Standard 5000-62500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2025 **Storage:** 0°C or colder

Ship: Ambient

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	n-Pentane (C5)	5,031.0 µg/mL	+/- 35.9016 µg/mL	Gravimetric
	CAS # 109-66-0 (Lot SHBN6009)		+/- 249.7418 µg/mL	Unstressed
	Purity 99%		+/- 255.9092 µg/mL	Stressed
2	2-Propanol (isopropanol)	25,031.0 µg/mL	+/- 146.5620 µg/mL	Gravimetric
	CAS # 67-63-0 (Lot SHBN6065)		+/- 1,238.3511 µg/mL	Unstressed
	Purity 99%		+/- 1,269.1379 µg/mL	Stressed
3	1,1,2-Trichlorotrifluoroethane (CFC-113)	5,009.5 µg/mL	+/- 35.7482 µg/mL	Gravimetric
	CAS # 76-13-1 (Lot 00016133)		+/- 248.6745 µg/mL	Unstressed
	Purity 99%		+/- 254.8156 µg/mL	Stressed
4	tert-Butanol (TBA)	25,112.0 µg/mL	+/- 147.0363 µg/mL	Gravimetric
	CAS # 75-65-0 (Lot 101619K21F-1)		+/- 1,242.3584 µg/mL	Unstressed
	Purity 99%		+/- 1,273.2448 µg/mL	Stressed
5	Methyl acetate	5,011.0 µg/mL	+/- 35.7589 µg/mL	Gravimetric
	CAS # 79-20-9 (Lot SHBM1320)		+/- 248.7490 µg/mL	Unstressed
	Purity 99%		+/- 254.8919 µg/mL	Stressed
6	Iodomethane (methyl iodide)	5,012.0 µg/mL	+/- 35.7660 µg/mL	Gravimetric
	CAS # 74-88-4 (Lot RD220125)		+/- 248.7986 µg/mL	Unstressed
	Purity 99%		+/- 254.9428 µg/mL	Stressed
7	Allyl chloride (3-chloropropene)	5,021.7 µg/mL	+/- 35.8350 µg/mL	Gravimetric
	CAS # 107-05-1 (Lot RP220405A)		+/- 249.2785 µg/mL	Unstressed
	Purity 99%		+/- 255.4345 µg/mL	Stressed

8	Carbon disulfide		5,017.2	µg/mL	+/-	35.8029	µg/mL	Gravimetric
	CAS # 75-15-0	(Lot N28F701)			+/-	249.0551	µg/mL	Unstressed
	Purity 99%				+/-	255.2056	µg/mL	Stressed
9	Acrylonitrile		12,534.0	µg/mL	+/-	73.3893	µg/mL	Gravimetric
	CAS # 107-13-1	(Lot SHBK4954)			+/-	620.0908	µg/mL	Unstressed
	Purity 99%				+/-	635.5069	µg/mL	Stressed
10	Methyl-tert-butyl ether (MTBE)		5,014.5	µg/mL	+/-	35.7839	µg/mL	Gravimetric
	CAS # 1634-04-4	(Lot SHBN6497)			+/-	248.9227	µg/mL	Unstressed
	Purity 99%				+/-	255.0699	µg/mL	Stressed
11	n-Hexane (C6)		5,014.7	µg/mL	+/-	35.7850	µg/mL	Gravimetric
	CAS # 110-54-3	(Lot STBG6381)			+/-	248.9310	µg/mL	Unstressed
	Purity 99%				+/-	255.0784	µg/mL	Stressed
12	Diisopropyl ether (DIPE)		5,021.0	µg/mL	+/-	35.8302	µg/mL	Gravimetric
	CAS # 108-20-3	(Lot STBK3450)			+/-	249.2454	µg/mL	Unstressed
	Purity 99%				+/-	255.4006	µg/mL	Stressed
13	Chloroprene (2-chloro-1,3-butadiene)		5,026.3	µg/mL	+/-	35.8683	µg/mL	Gravimetric
	CAS # 126-99-8	(Lot 220304JEAN)			+/-	249.5101	µg/mL	Unstressed
	Purity 99%				+/-	255.6718	µg/mL	Stressed
14	Ethyl-tert-butyl ether (ETBE)		5,009.2	µg/mL	+/-	35.7458	µg/mL	Gravimetric
	CAS # 637-92-3	(Lot MKCN9957)			+/-	248.6580	µg/mL	Unstressed
	Purity 99%				+/-	254.7986	µg/mL	Stressed
15	Propionitrile		25,070.0	µg/mL	+/-	146.7904	µg/mL	Gravimetric
	CAS # 107-12-0	(Lot BCCF4167)			+/-	1,240.2806	µg/mL	Unstressed
	Purity 99%				+/-	1,271.1153	µg/mL	Stressed
16	Methacrylonitrile		12,539.0	µg/mL	+/-	73.4186	µg/mL	Gravimetric
	CAS # 126-98-7	(Lot 1012014)			+/-	620.3382	µg/mL	Unstressed
	Purity 99%				+/-	635.7604	µg/mL	Stressed
17	Isobutanol (2-Methyl-1-propanol)		62,525.0	µg/mL	+/-	366.0976	µg/mL	Gravimetric
	CAS # 78-83-1	(Lot SHBM4836)			+/-	3,093.2805	µg/mL	Unstressed
	Purity 99%				+/-	3,170.1827	µg/mL	Stressed
18	Tetrahydrofuran		25,065.0	µg/mL	+/-	146.7611	µg/mL	Gravimetric
	CAS # 109-99-9	(Lot SHBP0039)			+/-	1,240.0332	µg/mL	Unstressed
	Purity 99%				+/-	1,270.8617	µg/mL	Stressed
19	Cyclohexane		5,008.5	µg/mL	+/-	35.7410	µg/mL	Gravimetric
	CAS # 110-82-7	(Lot EA003-US)			+/-	248.6249	µg/mL	Unstressed
	Purity 99%				+/-	254.7647	µg/mL	Stressed
20	1-Butanol		62,524.0	µg/mL	+/-	366.0918	µg/mL	Gravimetric
	CAS # 71-36-3	(Lot SHBN6854)			+/-	3,093.2311	µg/mL	Unstressed
	Purity 99%				+/-	3,170.1320	µg/mL	Stressed
21	tert-Amyl methyl ether (TAME)		5,009.2	µg/mL	+/-	35.7458	µg/mL	Gravimetric
	CAS # 994-05-8	(Lot HMBG7745V)			+/-	248.6580	µg/mL	Unstressed
	Purity 99%				+/-	254.7986	µg/mL	Stressed
22	n-Heptane (C7)		5,016.7	µg/mL	+/-	35.7993	µg/mL	Gravimetric
	CAS # 142-82-5	(Lot SGBL9221)			+/-	249.0303	µg/mL	Unstressed
	Purity 99%				+/-	255.1801	µg/mL	Stressed
23	tert-Amyl ethyl ether (TAEE)		5,010.8	µg/mL	+/-	35.7577	µg/mL	Gravimetric
	CAS # 919-94-8	(Lot 76U3A)			+/-	248.7407	µg/mL	Unstressed
	Purity 99%				+/-	254.8834	µg/mL	Stressed

24	Methylcyclohexane		5,022.3	µg/mL	+/-	35.8398	µg/mL	Gravimetric
	CAS # 108-87-2	(Lot SHBL0078)			+/-	249.3116	µg/mL	Unstressed
	Purity 99%				+/-	255.4684	µg/mL	Stressed
25	Methyl methacrylate		5,011.5	µg/mL	+/-	35.7625	µg/mL	Gravimetric
	CAS # 80-62-6	(Lot MKCQ2755)			+/-	248.7738	µg/mL	Unstressed
	Purity 99%				+/-	254.9173	µg/mL	Stressed
26	1,4-Dioxane		62,598.0	µg/mL	+/-	366.5251	µg/mL	Gravimetric
	CAS # 123-91-1	(Lot SHBN5929)			+/-	3,096.8920	µg/mL	Unstressed
	Purity 99%				+/-	3,173.8840	µg/mL	Stressed
27	2-Nitropropane		25,086.1	µg/mL	+/-	146.8849	µg/mL	Gravimetric
	CAS # 79-46-9	(Lot BCCB9352)			+/-	1,241.0791	µg/mL	Unstressed
	Purity 97%				+/-	1,271.9336	µg/mL	Stressed
28	Ethyl methacrylate		5,017.7	µg/mL	+/-	35.8065	µg/mL	Gravimetric
	CAS # 97-63-2	(Lot MKCL0907)			+/-	249.0799	µg/mL	Unstressed
	Purity 99%				+/-	255.2310	µg/mL	Stressed
29	1-Chlorohexane		5,022.3	µg/mL	+/-	35.8398	µg/mL	Gravimetric
	CAS # 544-10-5	(Lot BCBS3368V)			+/-	249.3117	µg/mL	Unstressed
	Purity 98%				+/-	255.4685	µg/mL	Stressed
30	trans-1,4-dichloro-2-butene		12,586.6	µg/mL	+/-	73.6970	µg/mL	Gravimetric
	CAS # 110-57-6	(Lot RD220405A)			+/-	622.6906	µg/mL	Unstressed
	Purity 95%				+/-	638.1714	µg/mL	Stressed
31	1,2,3-Trimethylbenzene		5,012.4	µg/mL	+/-	35.7687	µg/mL	Gravimetric
	CAS # 526-73-8	(Lot 8776.10-36)			+/-	248.8172	µg/mL	Unstressed
	Purity 98%				+/-	254.9617	µg/mL	Stressed
32	1,3-Diethylbenzene		5,012.0	µg/mL	+/-	35.7664	µg/mL	Gravimetric
	CAS # 141-93-5	(Lot BCBT8967)			+/-	248.8009	µg/mL	Unstressed
	Purity 98%				+/-	254.9451	µg/mL	Stressed
33	Benzyl chloride		5,020.8	µg/mL	+/-	35.8291	µg/mL	Gravimetric
	CAS # 100-44-7	(Lot SHBH2102V)			+/-	249.2371	µg/mL	Unstressed
	Purity 99%				+/-	255.3921	µg/mL	Stressed
34	1,4-Diethylbenzene		5,011.7	µg/mL	+/-	35.7636	µg/mL	Gravimetric
	CAS # 105-05-5	(Lot 1135.72-1)			+/-	248.7821	µg/mL	Unstressed
	Purity 99%				+/-	254.9258	µg/mL	Stressed
35	1,2-Diethylbenzene		5,011.3	µg/mL	+/-	35.7613	µg/mL	Gravimetric
	CAS # 135-01-3	(Lot ECH2970181)			+/-	248.7655	µg/mL	Unstressed
	Purity 99%				+/-	254.9088	µg/mL	Stressed
36	1,3,5-Trichlorobenzene		5,013.2	µg/mL	+/-	35.7743	µg/mL	Gravimetric
	CAS # 108-70-3	(Lot 11319AS)			+/-	248.8565	µg/mL	Unstressed
	Purity 99%				+/-	255.0021	µg/mL	Stressed
37	2-Methylnaphthalene		5,013.1	µg/mL	+/-	35.7740	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBK0259)			+/-	248.8542	µg/mL	Unstressed
	Purity 96%				+/-	254.9997	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

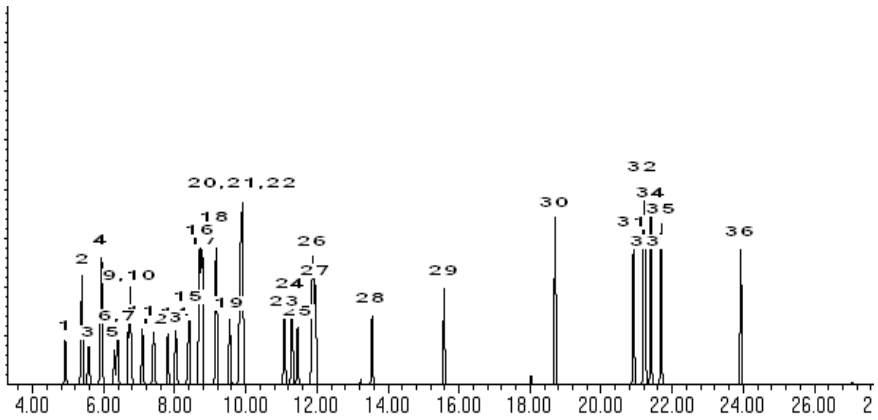
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Miranda Kline - Operations Technician I

Date Mixed: 30-Jun-2022 **Balance:** B707717271

Christie Mills - Operations Tech II - ARM QC

Date Passed: 07-Jul-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 577488.SEC **Lot No.:** A0184924

Description : Custom Gases.SEC Standard

Custom Gases.SEC Standard 2,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2025 **Storage:** 0°C or colder

Ship: Ambient

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dichlorodifluoromethane (CFC-12)	2,000.3 µg/mL	+/- 17.8749 µg/mL	Gravimetric
	CAS # 75-71-8.SEC (Lot 27545)		+/- 112.9722 µg/mL	Unstressed
	Purity 99%		+/- 115.5779 µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,002.3 µg/mL	+/- 19.9305 µg/mL	Gravimetric
	CAS # 74-87-3.SEC (Lot 18343)		+/- 113.4254 µg/mL	Unstressed
	Purity 99%		+/- 116.0260 µg/mL	Stressed
3	Vinyl chloride	2,002.4 µg/mL	+/- 21.8874 µg/mL	Gravimetric
	CAS # 75-01-4.SEC (Lot MKBK6872V)		+/- 113.7916 µg/mL	Unstressed
	Purity 99%		+/- 116.3843 µg/mL	Stressed
4	1,3-Butadiene	2,003.4 µg/mL	+/- 24.0683 µg/mL	Gravimetric
	CAS # 106-99-0.SEC (Lot 26996)		+/- 114.2862 µg/mL	Unstressed
	Purity 99%		+/- 116.8705 µg/mL	Stressed
5	Bromomethane (methyl bromide)	2,007.9 µg/mL	+/- 17.0860 µg/mL	Gravimetric
	CAS # 74-83-9.SEC (Lot 00017022)		+/- 113.2712 µg/mL	Unstressed
	Purity 99%		+/- 115.8898 µg/mL	Stressed
6	Chloroethane (ethyl chloride)	2,002.2 µg/mL	+/- 20.1773 µg/mL	Gravimetric
	CAS # 75-00-3.SEC (Lot 00004202)		+/- 113.4619 µg/mL	Unstressed
	Purity 98%		+/- 116.0614 µg/mL	Stressed
7	Dichlorofluoromethane (CFC-21)	2,000.0 µg/mL	+/- 11.7371 µg/mL	Gravimetric
	CAS # 75-43-4 * (Lot 12841600)		+/- 112.1494 µg/mL	Unstressed
	Purity 99%		+/- 114.7730 µg/mL	Stressed

8	Trichlorofluoromethane (CFC-11)		2,000.0	µg/mL	+/-	11.7371	µg/mL	Gravimetric
	CAS # 75-69-4.SEC	(Lot 00010739)			+/-	112.1494	µg/mL	Unstressed
	Purity 99%				+/-	114.7730	µg/mL	Stressed
9	1,2-Dichloro-1,1,2-trifluoroethane (CFC-123a)		2,000.5	µg/mL	+/-	25.4843	µg/mL	Gravimetric
	CAS # 354-23-4 *	(Lot Q9B-64)			+/-	114.4324	µg/mL	Unstressed
	Purity 99%				+/-	117.0060	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

*** Restek is unable to identify a reliable and/or acceptable second source for this material - the same batch of neat material may have been used to produce both the primary and secondary standard. The primary and secondary standards were prepared using different equipment and personnel.**

Tech Tips:
Raw material may contain trace amounts of tert-Butanol.

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

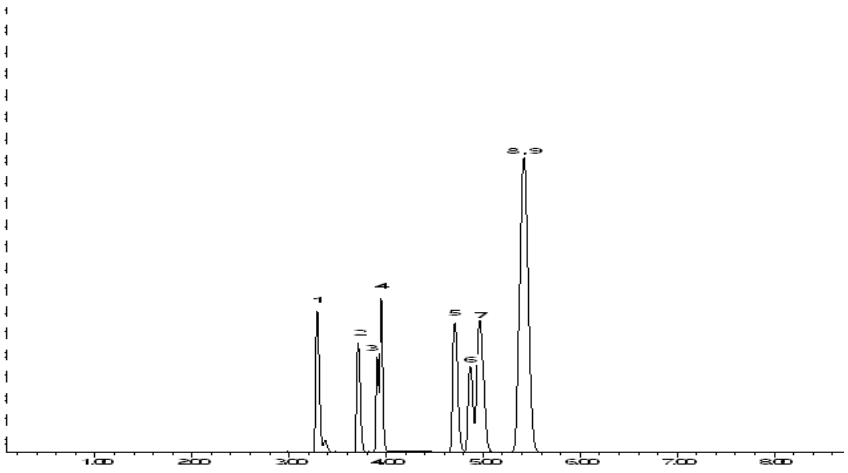
Carrier Gas:
helium-constant flow 2.0 mL/min.

Temp. Program:
40°C (hold 6 min.) to 100°C
@ 6°C/min.

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Brandon Reish - Mix Technician

Date Mixed: 05-May-2022 **Balance:** 1127510105

Marlina Cowan - Operations Tech I

Date Passed: 10-May-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

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k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
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0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ISO 17034 Accredited
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Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 577488.SEC **Lot No.:** A0184924

Description : Custom Gases.SEC Standard

Custom Gases.SEC Standard 2,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2025 **Storage:** 0°C or colder

Ship: Ambient

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dichlorodifluoromethane (CFC-12)	2,000.3 µg/mL	+/- 17.8749 µg/mL	Gravimetric
	CAS # 75-71-8.SEC (Lot 27545)		+/- 112.9722 µg/mL	Unstressed
	Purity 99%		+/- 115.5779 µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,002.3 µg/mL	+/- 19.9305 µg/mL	Gravimetric
	CAS # 74-87-3.SEC (Lot 18343)		+/- 113.4254 µg/mL	Unstressed
	Purity 99%		+/- 116.0260 µg/mL	Stressed
3	Vinyl chloride	2,002.4 µg/mL	+/- 21.8874 µg/mL	Gravimetric
	CAS # 75-01-4.SEC (Lot MKBK6872V)		+/- 113.7916 µg/mL	Unstressed
	Purity 99%		+/- 116.3843 µg/mL	Stressed
4	1,3-Butadiene	2,003.4 µg/mL	+/- 24.0683 µg/mL	Gravimetric
	CAS # 106-99-0.SEC (Lot 26996)		+/- 114.2862 µg/mL	Unstressed
	Purity 99%		+/- 116.8705 µg/mL	Stressed
5	Bromomethane (methyl bromide)	2,007.9 µg/mL	+/- 17.0860 µg/mL	Gravimetric
	CAS # 74-83-9.SEC (Lot 00017022)		+/- 113.2712 µg/mL	Unstressed
	Purity 99%		+/- 115.8898 µg/mL	Stressed
6	Chloroethane (ethyl chloride)	2,002.2 µg/mL	+/- 20.1773 µg/mL	Gravimetric
	CAS # 75-00-3.SEC (Lot 00004202)		+/- 113.4619 µg/mL	Unstressed
	Purity 98%		+/- 116.0614 µg/mL	Stressed
7	Dichlorofluoromethane (CFC-21)	2,000.0 µg/mL	+/- 11.7371 µg/mL	Gravimetric
	CAS # 75-43-4 * (Lot 12841600)		+/- 112.1494 µg/mL	Unstressed
	Purity 99%		+/- 114.7730 µg/mL	Stressed

8	Trichlorofluoromethane (CFC-11)		2,000.0	µg/mL	+/-	11.7371	µg/mL	Gravimetric
	CAS # 75-69-4.SEC	(Lot 00010739)			+/-	112.1494	µg/mL	Unstressed
	Purity 99%				+/-	114.7730	µg/mL	Stressed
9	1,2-Dichloro-1,1,2-trifluoroethane (CFC-123a)		2,000.5	µg/mL	+/-	25.4843	µg/mL	Gravimetric
	CAS # 354-23-4 *	(Lot Q9B-64)			+/-	114.4324	µg/mL	Unstressed
	Purity 99%				+/-	117.0060	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

*** Restek is unable to identify a reliable and/or acceptable second source for this material - the same batch of neat material may have been used to produce both the primary and secondary standard. The primary and secondary standards were prepared using different equipment and personnel.**

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Raw material may contain trace amounts of tert-Butanol.

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

Carrier Gas:
helium-constant flow 2.0 mL/min.

Temp. Program:
40°C (hold 6 min.) to 100°C
@ 6°C/min.

Inj. Temp:
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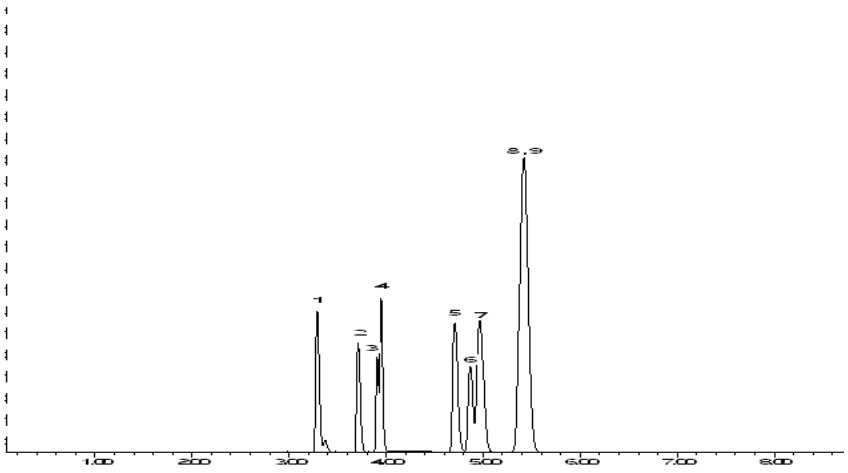
Det. Temp:
250°C

Det. Type:
MSD



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Brandon Reish - Mix Technician

Date Mixed: 05-May-2022 **Balance:** 1127510105

Marlina Cowan - Operations Tech I

Date Passed: 10-May-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
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Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
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10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

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Handling Notes:

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569721 **Lot No.:** A0180742

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500µg/mL, P&T Methanol/Water (90:10), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2025 **Storage:** 0°C or colder

Ship: Ambient

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetone	12,524.0 µg/mL	+/- 73.3308 µg/mL	Gravimetric
	CAS # 67-64-1 (Lot MKCP0755)		+/- 755.6782 µg/mL	Unstressed
	Purity 99%		+/- 757.4721 µg/mL	Stressed
2	2-Butanone (MEK)	12,529.5 µg/mL	+/- 73.3630 µg/mL	Gravimetric
	CAS # 78-93-3 (Lot SHBN2844)		+/- 756.0101 µg/mL	Unstressed
	Purity 99%		+/- 757.8048 µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)	12,541.5 µg/mL	+/- 73.4332 µg/mL	Gravimetric
	CAS # 108-10-1 (Lot SHBN3601)		+/- 756.7342 µg/mL	Unstressed
	Purity 99%		+/- 758.5305 µg/mL	Stressed
4	2-Hexanone	12,548.0 µg/mL	+/- 73.4713 µg/mL	Gravimetric
	CAS # 591-78-6 (Lot MKCL1599)		+/- 757.1264 µg/mL	Unstressed
	Purity 99%		+/- 758.9237 µg/mL	Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

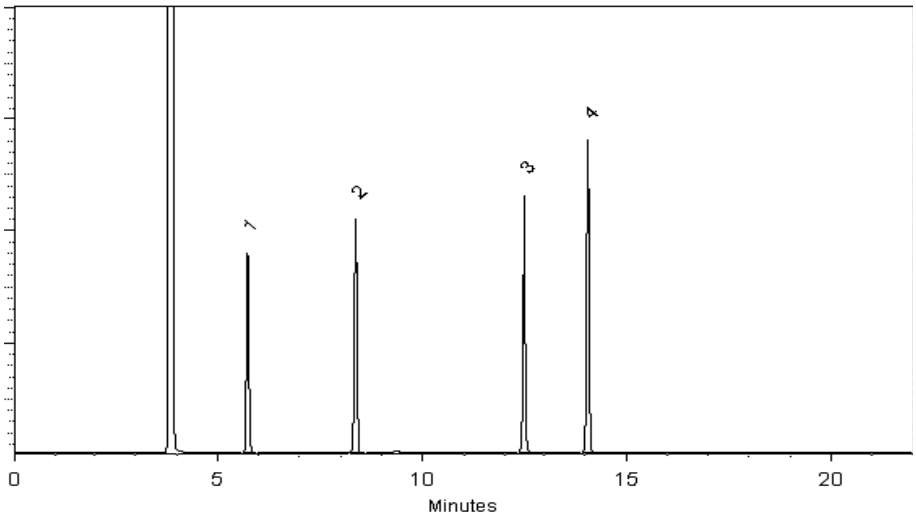
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Penelope Riglin - Operations Tech I

Date Mixed: 18-Jan-2022 **Balance:** B707717271

Marlina Cowan - Operations Tech I

Date Passed: 20-Jan-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Reagent

MSV_V_PentaCL_00030

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 577491 **Lot No.:** A0184174

Description : Custom Pentachloroethane Standard

Custom Pentachloroethane Standard 5,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2025 **Storage:** 0°C or colder

Ship: Ambient

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Pentachloroethane	5,022.0 µg/mL	+/- 29.4719 µg/mL	Gravimetric
	CAS # 76-01-7 (Lot 10518800)		+/- 281.6071 µg/mL	Unstressed
	Purity 99%		+/- 288.1950 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

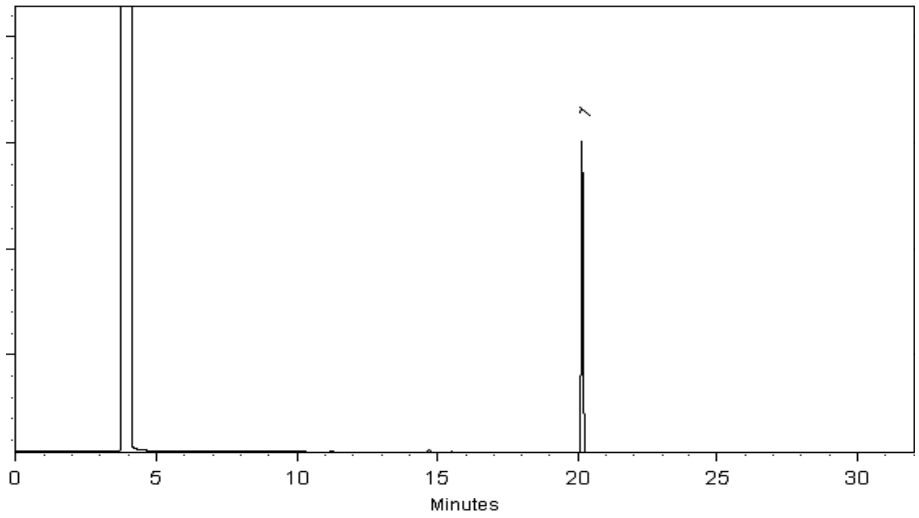
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Nick Yaw - Operations Tech I

Date Mixed: 15-Apr-2022 **Balance:** B707717271

Christie Mills - Operations Technician II

Date Passed: 20-Apr-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

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0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Reagent

MSV_V_PentaCL_00034

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Catalog No. : 577491 **Lot No.:** A0184174

Description : Custom Pentachloroethane Standard

Custom Pentachloroethane Standard 5,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2025 **Storage:** 0°C or colder

Ship: Ambient

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Pentachloroethane	5,022.0 µg/mL	+/- 29.4719 µg/mL	Gravimetric
	CAS # 76-01-7 (Lot 10518800)		+/- 281.6071 µg/mL	Unstressed
	Purity 99%		+/- 288.1950 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

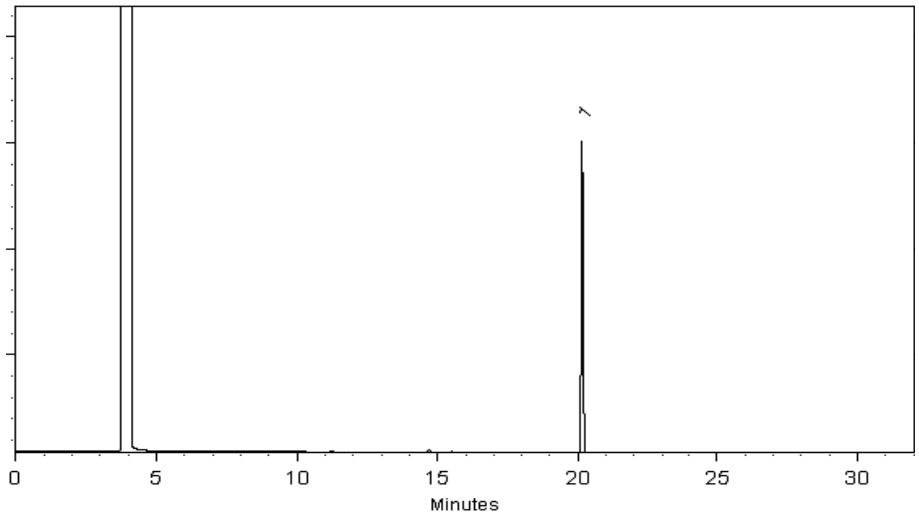
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Nick Yaw - Operations Tech I

Date Mixed: 15-Apr-2022 **Balance:** B707717271

Christie Mills - Operations Technician II

Date Passed: 20-Apr-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

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- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Reagent

MT_10Hg_2%HCl_00007

7221 Investment Drive • North Charleston, SC 29418
843.767.7900 • info@highpuritystandards.com • www.highpuritystandards.com

Certificate of Analysis

Certified Reference Material

ANAB ANSI National Accreditation Board ACCREDITED ISO17034 REFERENCE MATERIAL PRODUCER
ISO 17034:2016 (RMP) Accreditation Certificate Number AR-1436

Product Description: Mercury

Product Number: **10-33-2-100**
Lot Number: **2308711-100**
Matrix: 2% HCl

Certified Value:

Element	µg/mL	SRM ID
Hg	10.0 ± 0.2	3133

The Certified value is based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor k is about 2.
* Refer to Traceability Information, Section 4

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for one year from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: April 2023
Expiration Date: April 30, 2024
Certificate Issue Date: March 28, 2023

Moven Mutuvari

Moven Mutuvari, Ph. D, VP Manufacturing

Reagent

MT_1KV_PIV_00007

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGV1
Lot Number:	R2-V696167
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Vanadium
Starting Material:	Vanadium pentoxide
Starting Material Lot#:	1782
Starting Material Purity:	99.9907%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1001 ± 4 µg/mL

Density: 1.016 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **1003 ± 7 µg/mL**
ICP Assay NIST SRM 3165 Lot Number: 160906

Assay Method #2 **1001 ± 3 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **1000 ± 3 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000510	M	Eu	<	0.000110	M	Na		0.010317	M	Se	<	0.002300	M	Zn		0.000966
O	Al		0.005538	O	Fe		0.038010	M	Nb	<	0.000710	O	Si		0.028236	M	Zr	<	0.002500
M	As	<	0.000410	M	Ga	<	0.007100	M	Nd	<	0.000210	M	Sm	<	0.000110				
M	Au	<	0.000410	M	Gd	<	0.000110	M	Ni		0.001194	M	Sn	<	0.003300				
M	B	<	0.006000	M	Ge	<	0.000110	M	Os	<	0.000410	M	Sr		0.000152				
M	Ba		0.000195	M	Hf	<	0.000110	O	P	<	0.120000	M	Ta	<	0.000110				
M	Be	<	0.000110	M	Hg	<	0.000310	M	Pb	<	0.002300	M	Tb	<	0.000110				
M	Bi	<	0.000610	M	Ho	<	0.000110	M	Pd	<	0.000610	M	Te	<	0.000610				
M	Ca		0.019548	M	In	<	0.000110	M	Pr	<	0.000110	M	Th	<	0.000210				
M	Cd	<	0.000410	M	Ir	<	0.000110	M	Pt	<	0.000410	M	Ti	<	0.021000				
M	Ce	<	0.000310	M	K		0.043440	M	Rb	<	0.000410	M	Tl	<	0.000110				
M	Co	<	0.001100	M	La	<	0.000110	M	Re	<	0.000110	M	Tm	<	0.000110				
O	Cr		0.020634	M	Li	<	0.001400	M	Rh	<	0.000110	M	U	<	0.000310				
M	Cs		0.000619	M	Lu	<	0.000110	M	Ru	<	0.000410	s	V	<					
M	Cu	<	0.001800	M	Mg		0.000999	n	S	<		M	W	<	0.003100				
M	Dy	<	0.000110	M	Mn		0.000944	M	Sb		0.008253	M	Y	<	0.000110				
M	Er	<	0.000110	M	Mo		0.009339	M	Sc	<	0.000310	M	Yb	<	0.000110				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 50.94 +5 6 $H_2V_{10}O_{28}^{4-}$

Chemical Compatibility -Soluble in HCl, HNO_3, H_2SO_4, HF, H_3PO_4 and strong basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

V Containing Samples (Preparation and Solution) -Metal (Fusion with NaOH or KOH in Ni0 or Na_2CO_3 / KNO_3); Oxides (V_2O_3 - use HCl, V_2O_4 - use HCl or HNO_3, V_2O_5 - use concentrated acids); Ores (Na_2CO_3 / KNO_3 in Pt0 caution - nitrates attack Pto followed by water extraction of fuseate); Organic Matrices (Ash at 450 EC followed by dissolving according to V_2O_5 above) .

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 51 amu	4 ppt	N/A	34S16O1H, 35Cl16O, 38Ar13C, 36Ar15N, 36Ar14N1H, 37Cl14N,36S15N, 33S18O, 34S17O, 102Ru+2,02Pd+2
ICP-OES 290.882 nm	0.008 / 0.0008 µg/mL	1	Hf, Nb
ICP-OES 292.402 nm	0.006 / 0.001 µg/mL	1	Th
ICP-OES 309.311 nm	0.005 / 0.001 µg/mL	1	Mg, U, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 14, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **September 14, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_H3NO_Fishe_00015

Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120632

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Catalog Number	H330	Quality Test / Release Date	05/31/2022
Lot Number	222401		
Description	HYDROXYLAMINE HYDROCHLORIDE, A.C.S.		
Country of Origin	India	Suggested Retest Date	May/2027

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Colorless to white crystals
AMMONIUM (NH4)	PASS/FAIL	= PASS TEST	PASS TEST
ASSAY	%	>= 96	99.7
CLARITY OF ALCOHOL SOLUTION	PASS/FAIL	= PASS TEST	PASS TEST
HEAVY METALS BY ICP-OES	ppm	<= 5	3.085
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
IGNITION RESIDUE	%	<= 0.05	<0.05
IRON (Fe)	ppm	<= 5	<5
MERCURY (Hg)	ppm	<= 0.05	<0.05
SULFUR COMPOUNDS	%	<= 0.005	<0.005
TITRATABLE FREE ACID	MEQ/G	<= 0.25	<0.25

Ira Marootian - Quality Control Manager - Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

Reagent

MT_H3NO_Fishe_00024

Certificate of Analysis

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201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120632

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Catalog Number	H330	Quality Test / Release Date	05/31/2022
Lot Number	222401		
Description	HYDROXYLAMINE HYDROCHLORIDE, A.C.S.		
Country of Origin	India	Suggested Retest Date	May/2027

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Colorless to white crystals
AMMONIUM (NH4)	PASS/FAIL	= PASS TEST	PASS TEST
ASSAY	%	>= 96	99.7
CLARITY OF ALCOHOL SOLUTION	PASS/FAIL	= PASS TEST	PASS TEST
HEAVY METALS BY ICP-OES	ppm	<= 5	3.085
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
IGNITION RESIDUE	%	<= 0.05	<0.05
IRON (Fe)	ppm	<= 5	<5
MERCURY (Hg)	ppm	<= 0.05	<0.05
SULFUR COMPOUNDS	%	<= 0.005	<0.005
TITRATABLE FREE ACID	MEQ/G	<= 0.25	<0.25

Ira Marootian - Quality Control Manager - Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

Reagent

MT_HCl_JT_00011

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

Material No.: 9530-33
Batch No.: 22L0562004
Manufactured Date: 2022-10-25
Retest Date: 2027-10-24
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS - Assay (as HCl) (by acid-base titrn)	36.5 - 38.0 %	37.6 %
ACS - Color (APHA)	≤ 10	5
ACS - Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS - Specific Gravity at 60°/60°F	1.185 - 1.192	1.190
ACS - Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS - Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS - Free Chlorine (as Cl_2)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO_4)	≤ 0.05 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO_3)	≤ 0.8 ppm	0.5 ppm
Ammonium (NH_4)	≤ 3 ppm	< 1 ppm
Trace Impurities - Arsenic (As)	≤ 0.010 ppm	< 0.010 ppm
Trace Impurities - Aluminum (Al)	≤ 10.0 ppb	0.3 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities - Barium (Ba)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Beryllium (Be)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Bismuth (Bi)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Boron (B)	≤ 20.0 ppb	2.3 ppb
Trace Impurities - Cadmium (Cd)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	43.0 ppb
Trace Impurities - Chromium (Cr)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities - Cobalt (Co)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities - Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities - Gallium (Ga)	≤ 1.0 ppb	0.4 ppb
Trace Impurities - Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities - Gold (Au)	≤ 4.0 ppb	0.2 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities - Iron (Fe)	≤ 15 ppb	1 ppb

>>> Continued on page 2 >>>

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

Material No.: 9530-33
Batch No.: 22L0562004

Test	Specification	Result
Trace Impurities - Lead (Pb)	≤ 1.0 ppb	< 0.5 ppb
Trace Impurities - Lithium (Li)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Magnesium (Mg)	≤ 10.0 ppb	4.7 ppb
Trace Impurities - Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities - Mercury (Hg)	≤ 0.5 ppb	< 0.1 ppb
Trace Impurities - Molybdenum (Mo)	≤ 10.0 ppb	< 3.0 ppb
Trace Impurities - Nickel (Ni)	≤ 4.0 ppb	0.5 ppb
Trace Impurities - Niobium (Nb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Potassium (K)	≤ 9.0 ppb	< 2.0 ppb
Trace Impurities - Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities - Silicon (Si)	≤ 100.0 ppb	2.0 ppb
Trace Impurities - Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities - Sodium (Na)	≤ 100.0 ppb	6.5 ppb
Trace Impurities - Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Tantalum (Ta)	≤ 1.0 ppb	< 0.9 ppb
Trace Impurities - Thallium (Tl)	≤ 5.0 ppb	2.0 ppb
Trace Impurities - Tin (Sn)	≤ 5.0 ppb	< 0.8 ppb
Trace Impurities - Titanium (Ti)	≤ 1.0 ppb	0.3 ppb
Trace Impurities - Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Zinc (Zn)	≤ 5.0 ppb	< 0.3 ppb
Trace Impurities - Zirconium (Zr)	≤ 1.0 ppb	< 0.1 ppb

>>> Continued on page 3 >>>

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

Material No.: 9530-33
Batch No.: 22L0562004

Test	Specification	Result

For Laboratory,Research,or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications
Storage Condition: Store below 25 °C.

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

Reagent

MT_HNO3_Fishe_00007

ThermoFisher SCIENTIFIC

Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120633

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Catalog Number	A200	Quality Test / Release Date	11/14/2022
Lot Number	225038		
Description	NITRIC ACID, CERTIFIED ACS		
Country of Origin	United States	Suggested Retest Date	Nov/2027
Chemical Origin	Inorganic-non animal		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

N/A

Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Clear, colorless liquid free from suspended matter.
ALUMINUM	ppm	<= 0.2	<0.2
ARSENIC (As)	ppm	<= 0.004	<0.004
ASSAY	w/w %	Inclusive Between 68.0 - 70.0	69.8
BORON (B)	ppm	<= 0.1	<0.1
CALCIUM (Ca)	ppm	<= 0.2	<0.2
CHLORIDE	ppm	<= 0.08	<0.08
CHROMIUM (Cr)	ppm	<= 0.1	<0.1
COLOR	APHA	<= 10	<10
COPPER (Cu)	ppm	<= 0.05	<0.05
GOLD (Au)	ppm	<= 0.3	<0.3
HEAVY METALS (as Pb)	ppm	<= 0.2	<0.2
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
IRON (Fe)	ppm	<= 0.2	<0.2
LEAD (Pb)	ppm	<= 0.1	<0.1
MAGNESIUM (Mg)	ppm	<= 0.3	<0.3
NICKEL (Ni)	ppm	<= 0.05	<0.05
PHOSPHATE (PO4)	ppm	<= 0.2	<0.2
POTASSIUM (K)	ppm	<= 0.3	<0.3
RESIDUE AFTER IGNITION	ppm	<= 2	<2
SODIUM (Na)	ppm	<= 0.3	<0.3
SULFATE (SO4)	ppm	<= 0.5	<0.5
TIN (Sn)	ppm	<= 0.3	<0.3
TITANIUM (Ti)	ppm	<= 0.3	<0.3

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

Certificate of Analysis

1 Reagent Lane
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201.796.7100 tel
201.796.1329 fax

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ZINC (Zn)	ppm	<= 0.3	<0.3

Chetan Dudhatra - Quality Control Supervisor - Bridgewater

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

Reagent

MT_HNO3_Fishe_00009

Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

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Catalog Number	A200	Quality Test / Release Date	02/01/2023
Lot Number	226243		
Description	NITRIC ACID, CERTIFIED ACS		
Country of Origin	Canada	Suggested Retest Date	Jan/2028
Chemical Origin	Inorganic-non animal		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Clear, colorless free from suspended matter
ALUMINUM	ppm	<= 0.2	<0.2
ARSENIC (As)	ppm	<= 0.004	<0.004
ASSAY	w/w %	Inclusive Between 68.0 - 70.0	69.6
BORON (B)	ppm	<= 0.1	<0.1
CALCIUM (Ca)	ppm	<= 0.2	<0.2
CHLORIDE	ppm	<= 0.08	<0.08
CHROMIUM (Cr)	ppm	<= 0.1	<0.1
COLOR	APHA	<= 10	<10
COPPER (Cu)	ppm	<= 0.05	<0.05
GOLD (Au)	ppm	<= 0.3	<0.3
HEAVY METALS (as Pb)	ppm	<= 0.2	<0.2
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
IRON (Fe)	ppm	<= 0.2	<0.2
LEAD (Pb)	ppm	<= 0.1	<0.1
MAGNESIUM (Mg)	ppm	<= 0.3	<0.3
NICKEL (Ni)	ppm	<= 0.05	<0.05
PHOSPHATE (PO4)	ppm	<= 0.2	<0.2
POTASSIUM (K)	ppm	<= 0.3	<0.3
RESIDUE AFTER IGNITION	ppm	<= 2	<2
SODIUM (Na)	ppm	<= 0.3	<0.3
SULFATE (SO4)	ppm	<= 0.5	<0.5
TIN (Sn)	ppm	<= 0.3	<0.3
TITANIUM (Ti)	ppm	<= 0.3	<0.3

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

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ZINC (Zn)	ppm	<= 0.3	<0.3

Dudhatra chetan.

Chetan Dudhatra - Quality Control Supervisor - Bridgewater

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

Reagent

MT_HNO3_Fishe_00010

ThermoFisher SCIENTIFIC

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Catalog Number	A200	Quality Test / Release Date	04/20/2023
Lot Number	230664		
Description	NITRIC ACID, CERTIFIED ACS		
Country of Origin	Canada	Suggested Retest Date	Apr/2028
Chemical Origin	Inorganic-non animal		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Clear, colorless free from suspended matter
ALUMINUM	ppm	<= 0.2	<0.2
ARSENIC (As)	ppm	<= 0.004	<0.004
ASSAY	w/w %	Inclusive Between 68.0 - 70.0	69.5
BORON (B)	ppm	<= 0.1	<0.1
CALCIUM (Ca)	ppm	<= 0.2	<0.2
CHLORIDE	ppm	<= 0.08	<0.08
CHROMIUM (Cr)	ppm	<= 0.1	<0.1
COLOR	APHA	<= 10	<10
COPPER (Cu)	ppm	<= 0.05	<0.05
GOLD (Au)	ppm	<= 0.3	<0.3
HEAVY METALS (as Pb)	ppm	<= 0.2	<0.2
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
IRON (Fe)	ppm	<= 0.2	<0.2
LEAD (Pb)	ppm	<= 0.1	<0.1
MAGNESIUM (Mg)	ppm	<= 0.3	<0.3
NICKEL (Ni)	ppm	<= 0.05	<0.05
PHOSPHATE (PO4)	ppm	<= 0.2	<0.2
POTASSIUM (K)	ppm	<= 0.3	<0.3
RESIDUE AFTER IGNITION	ppm	<= 2	<2
SODIUM (Na)	ppm	<= 0.3	<0.3
SULFATE (SO4)	ppm	<= 0.5	<0.5
TIN (Sn)	ppm	<= 0.3	<0.3
TITANIUM (Ti)	ppm	<= 0.3	<0.3

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

Certificate of Analysis

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Fair Lawn, NJ 07410
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ZINC (Zn)	ppm	<= 0.3	<0.3

Chetan Dudhatra - Quality Control Supervisor - Bridgewater

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

Reagent

MT_HNO3_JT_00003

Nitric Acid, 69.0-70.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

Material No.: 9598-34
Batch No.: 0000234822
Manufactured Date: 2019/06/11
Retest Date: 2024/06/09
Revision No: 1

Certificate of Analysis

Test	Specification	Result
ACS - Assay (HNO_3)	69.0 - 70.0 %	69.8
Appearance	Passes Test	PT
ACS - Color (APHA)	<= 10	5
ACS - Residue after Ignition	<= 2 ppm	< 1
Chloride (Cl)	<= 0.04 ppm	< 0.03
Phosphate (PO_4)	<= 0.1 ppm	<0.01
Sulfate (SO_4)	<= 0.4 ppm	< 0.2
Trace Impurities - Aluminum (Al)	<= 30.0 ppb	1.0
Arsenic and Antimony (as As)	<= 5 ppb	< 2
Trace Impurities - Barium (Ba)	<= 1.0 ppb	< 0.2
Trace Impurities - Beryllium (Be)	<= 1.0 ppb	< 0.2
Trace Impurities - Bismuth (Bi)	<= 1.0 ppb	< 1.0
Trace Impurities - Boron (B)	<= 4.0 ppb	1.0
Trace Impurities - Cadmium (Cd)	<= 1.0 ppb	< 0.3
Trace Impurities - Calcium (Ca)	<= 50.0 ppb	3.0
Trace Impurities - Chromium (Cr)	<= 10.0 ppb	4.0
Trace Impurities - Cobalt (Co)	<= 1.0 ppb	< 0.3
Trace Impurities - Copper (Cu)	<= 1.0 ppb	< 0.1
Trace Impurities - Gallium (Ga)	<= 20.0 ppb	0.2
Trace Impurities - Germanium (Ge)	<= 4.0 ppb	< 2.0
Trace Impurities - Gold (Au)	<= 4.0 ppb	0.2
Heavy Metals (as Pb)	<= 100 ppb	< 50
Trace Impurities - Iron (Fe)	<= 10.0 ppb	0.7
Trace Impurities - Lead (Pb)	<= 0.5 ppb	< 0.5

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

Test	Specification	Result
Trace Impurities - Lithium (Li)	<= 1.0 ppb	< 0.2
Trace Impurities - Magnesium (Mg)	<= 7.0 ppb	0.2
Trace Impurities - Manganese (Mn)	<= 1.0 ppb	< 0.4
Trace Impurities - Mercury (Hg)	<= 0.5 ppb	< 0.1
Trace Impurities - Molybdenum (Mo)	<= 5.0 ppb	< 3.0
Trace Impurities - Nickel (Ni)	<= 1.0 ppb	< 0.3
Trace Impurities - Niobium (Nb)	<= 1.0 ppb	< 0.2
Trace Impurities - Potassium (K)	<= 5.0 ppb	< 2.0
Trace Impurities - Silicon (Si)	<= 20.0 ppb	1.0
Trace Impurities - Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities - Sodium (Na)	<= 200.0 ppb	2.0
Trace Impurities - Strontium (Sr)	<= 1.0 ppb	< 0.2
Trace Impurities - Tantalum (Ta)	<= 2.0 ppb	< 0.9
Trace Impurities - Thallium (Tl)	<= 5.0 ppb	< 2.0
Trace Impurities - Tin (Sn)	<= 5.0 ppb	< 0.8
Trace Impurities - Vanadium (V)	<= 1.0 ppb	< 0.2
Trace Impurities - Zinc (Zn)	<= 5.0 ppb	0.4
Trace Impurities - Zirconium (Zr)	<= 1.0 ppb	0.1

For Laboratory, Research or Manufacturing Use
Meets ACS Specifications

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

Receipt Date in TALs Based off of Product Manufacture Date

Expiration Date in TALs Based off of Manufacture Suggested Retest Date

For Receipt, Open, and Expiration date; refer to individual bottle.

ELLE QA

ELLE Dept. 4022 Management

Reagent

MT_I_CCVSPK-A_00005

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	35-TSPEURF-CCV-A
Lot Number:	T2-MEB720690
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea:

Aluminum, Calcium,
Iron, Potassium,
Magnesium, Sodium,
Sulfur,

100 µg/mL ea:

Selenium, Strontium,
Thorium, Thallium,
Vanadium, Zinc,
Silver, Nickel,
Phosphorus, Lead,
Manganese, Lithium,
Cadmium, Cobalt,
Chromium, Copper,
Arsenic, Boron,
Barium, Beryllium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	5 000 ± 18 µg/mL	Arsenic, As	100.0 ± 0.9 µg/mL
Barium, Ba	100.0 ± 0.5 µg/mL	Beryllium, Be	100.0 ± 0.7 µg/mL
Boron, B	100.0 ± 0.6 µg/mL	Cadmium, Cd	100.0 ± 0.4 µg/mL
Calcium, Ca	4 999 ± 22 µg/mL	Chromium, Cr	100.0 ± 0.8 µg/mL
Cobalt, Co	100.0 ± 0.6 µg/mL	Copper, Cu	100.0 ± 0.5 µg/mL
Iron, Fe	5 000 ± 21 µg/mL	Lead, Pb	100.0 ± 0.6 µg/mL
Lithium, Li	100.0 ± 0.4 µg/mL	Magnesium, Mg	5 000 ± 20 µg/mL
Manganese, Mn	100.0 ± 0.5 µg/mL	Nickel, Ni	100.0 ± 0.6 µg/mL
Phosphorus, P	100.0 ± 0.4 µg/mL	Potassium, K	5 000 ± 22 µg/mL
Selenium, Se	100.0 ± 0.6 µg/mL	Silver, Ag	100.0 ± 0.4 µg/mL
Sodium, Na	5 000 ± 22 µg/mL	Strontium, Sr	100.1 ± 0.4 µg/mL
Sulfur, S	5 000 ± 25 µg/mL	Thallium, Tl	100.0 ± 0.7 µg/mL
Thorium, Th	100.0 ± 0.5 µg/mL	Vanadium, V	100.0 ± 0.6 µg/mL
Zinc, Zn	100.0 ± 0.5 µg/mL		

Density: 1.127 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
B	ICP Assay	3107	190605
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
S	Acidimetric	84L	84L
S	ICP Assay	traceable to 3154	P2-S680745
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Th	EDTA	928	928
Tl	ICP Assay	3158	151215
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 27, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 27, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

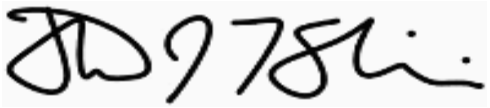
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_I_CCVSPK-B_00004

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Certificate of Analysis

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Christiansburg, VA 24073 USA
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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	35-TSPEURF-CCV-B
Lot Number:	T2-MEB720691
Matrix:	5% (v/v) HNO3 2.9% (v/v) HF
Value / Analyte(s):	5 000 µg/mL ea: Silicon, 100 µg/mL ea: Tin, Titanium, Tungsten, Zirconium, Molybdenum, Antimony

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	**100.0 ± 0.8 µg/mL**	**Molybdenum, Mo**	**100.0 ± 0.6 µg/mL**
Silicon, Si	**5 000 ± 28 µg/mL**	**Tin, Sn**	**100.0 ± 0.6 µg/mL**
Titanium, Ti	**100.0 ± 0.7 µg/mL**	**Tungsten, W**	**100.0 ± 0.6 µg/mL**
Zirconium, Zr	**100.0 ± 0.6 µg/mL**		

Density: 1.049 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Sb	ICP Assay	3102a	140911
Si	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925
W	ICP Assay	3163	140606
W	Calculated		See Sec. 4.2
Zr	ICP Assay	3169	130920
Zr	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 24, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 24, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

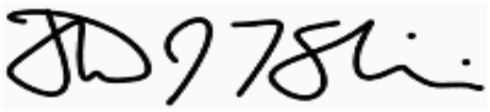
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_K2S2O8_JT_00025

Potassium Persulfate
BAKER ANALYZED® Reagent
(potassium peroxydisulfate)

Material No.: 3238-01
Batch No.: 22A3061007
Manufactured Date: 2021-07-28
Retest Date: 2028-07-26
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS - Assay ($K_2S_2O_8$) (by gravimetry)	≥ 99.0 %	99.5 %
Trace Impurities - Iron (Fe)	≤ 0.001 %	< 0.001 %
Trace Impurities - ACS - Heavy Metals (as Pb)	≤ 5 ppm	< 5 ppm
Trace Impurities - Manganese (Mn)	≤ 2.000 ppm	< 2.000 ppm

For Laboratory,Research,or Manufacturing Use
Country of Origin: USA
Packaging Site: Paris Mfg Ctr & DC

Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

Reagent

MT_K2S2O8_JT_00029

Potassium Persulfate
BAKER ANALYZED® Reagent
(potassium peroxydisulfate)

Material No.: 3238-01
Batch No.: 22A3061007
Manufactured Date: 2021-07-28
Retest Date: 2028-07-26
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS - Assay ($K_2S_2O_8$) (by gravimetry)	≥ 99.0 %	99.5 %
Trace Impurities - Iron (Fe)	≤ 0.001 %	< 0.001 %
Trace Impurities - ACS - Heavy Metals (as Pb)	≤ 5 ppm	< 5 ppm
Trace Impurities - Manganese (Mn)	≤ 2.000 ppm	< 2.000 ppm

For Laboratory,Research,or Manufacturing Use
Country of Origin: USA
Packaging Site: Paris Mfg Ctr & DC

Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

Reagent

MT_KMnO4_FI_00107

Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120632

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	P279	Quality Test / Release Date	01/28/2022
Lot Number	218618		
Description	POTASSIUM PERMANGANATE, A.C.S.		
Country of Origin	United States	Suggested Retest Date	Jan/2027

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Dark purple to purple green crystals
ASSAY	%	>= 99	99.4
CHLORIDE & CHLORATE	%	<= 0.005	<0.005
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
INSOLUBLE MATTER	%	<= 0.2	<0.2
MERCURY (Hg)	ppm	<= 0.05	<0.004
SULFATE (SO4)	%	<= 0.02	<0.02

Julian Burton

Julian Burton - Quality Control Manager – Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

Reagent

MT_LCS-SPK-A_00030

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

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Christiansburg, VA 24073 USA
inorganicventures.com

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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-62801-A
Lot Number:	U2-MEB728825
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	1 250 µg/mL ea:

Aluminum, Calcium,
Iron, Potassium,
Magnesium, Sodium,
Sulfur,

125 µg/mL ea:

Thorium, Vanadium,
Zinc, Nickel,
Phosphorus, Manganese,
Lithium, Cobalt,
Chromium, Copper,
Arsenic, Boron,
Barium,

25 µg/mL ea:

Thallium, Selenium,

12.5 µg/mL ea:

Strontium, Uranium,
Silver, Beryllium,
Cadmium, Lead

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	1 250 ± 4 µg/mL	Arsenic, As	125.0 ± 1.0 µg/mL
Barium, Ba	125.0 ± 0.6 µg/mL	Beryllium, Be	12.50 ± 0.08 µg/mL
Boron, B	125.0 ± 0.7 µg/mL	Cadmium, Cd	12.51 ± 0.05 µg/mL
Calcium, Ca	1 250 ± 6 µg/mL	Chromium, Cr	125.0 ± 0.9 µg/mL
Cobalt, Co	125.0 ± 0.6 µg/mL	Copper, Cu	125.0 ± 0.5 µg/mL
Iron, Fe	1 250 ± 5 µg/mL	Lead, Pb	12.50 ± 0.05 µg/mL
Lithium, Li	125.0 ± 0.5 µg/mL	Magnesium, Mg	1 250 ± 5 µg/mL
Manganese, Mn	125.0 ± 0.5 µg/mL	Nickel, Ni	125.0 ± 0.6 µg/mL
Phosphorus, P	125.0 ± 0.6 µg/mL	Potassium, K	1 250 ± 5 µg/mL
Selenium, Se	25.00 ± 0.16 µg/mL	Silver, Ag	12.50 ± 0.05 µg/mL
Sodium, Na	1 250 ± 6 µg/mL	Strontium, Sr	12.50 ± 0.05 µg/mL
Sulfur, S	1 250 ± 6 µg/mL	Thallium, Tl	25.00 ± 0.18 µg/mL
Thorium, Th	125.0 ± 0.6 µg/mL	Uranium, U	12.50 ± 0.06 µg/mL
Vanadium, V	125.0 ± 0.6 µg/mL	Zinc, Zn	125.0 ± 0.6 µg/mL

Density: 1.057 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
B	ICP Assay	3107	190605
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
S	Acidimetric	84L	84L
S	ICP Assay	traceable to 3154	P2-S680745
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Th	EDTA	928	928
Tl	ICP Assay	3158	151215
U	ICP Assay	traceable to 3164	R2-U689597
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.19 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Low Silver Note: This solution contains “LOW” levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 25, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 25, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

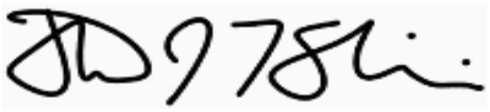
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_LCS-SPK-B_00029

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-62801-B
Lot Number:	U2-MEB728826
Matrix:	5% (v/v) HNO3 1.5% (v/v) HF
Value / Analyte(s):	1 250 µg/mL ea: Silicon, 125 µg/mL ea: Titanium, Tungsten, Zirconium, 25 µg/mL ea: Tin, Antimony, 12.5 µg/mL ea: Molybdenum

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	**25.04 ± 0.19 µg/mL**	**Molybdenum, Mo**	**12.51 ± 0.07 µg/mL**
Silicon, Si	**1 252 ± 8 µg/mL**	**Tin, Sn**	**25.03 ± 0.16 µg/mL**
Titanium, Ti	**125.2 ± 0.9 µg/mL**	**Tungsten, W**	**125.2 ± 0.7 µg/mL**
Zirconium, Zr	**125.2 ± 1.0 µg/mL**		

Density: 1.033 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Sb	ICP Assay	3102a	140911
Si	ICP Assay	Traceable to 3150	S2-SI702546
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925
W	ICP Assay	3163	140606
Zr	ICP Assay	3169	130920

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

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X_a = mean of Assay Method A with

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$u_{char\ a}$ = the errors from characterization

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- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

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5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

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- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 25, 2023

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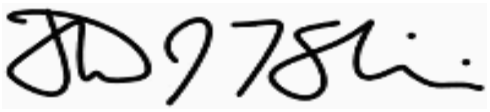
Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_NaCl_JT_00025

Sodium Chloride, Crystal
Ultrapure Bioreagent
For Liquid Chromatography and Molecular Biology applications

Material No.: 4058-02
Batch No.: 22K1561075
Manufactured Date: 2020-10-15
Retest Date: 2025-10-14
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (NaCl)	≥ 99.0 %	99.6 %
DNase Activity	Passes Test	Passes Test
RNase Activity	Passes Test	Passes Test
Protease Activity	Passes Test	Passes Test
pH of 5% Solution at 25°C	5.5 - 7.5	6.1
Bromide (Br)	≤ 0.01 %	< 0.01 %
Chlorate and Nitrate (as NO_3)	≤ 0.003 %	< 0.001 %
Iodide (I)	≤ 0.002 %	< 0.002 %
ACS - Sulfate (SO_4)	≤ 0.003 %	< 0.003 %
Barium (Ba)	≤ 0.001 %	< 0.001 %
Calcium, Magnesium, and R_2O_3 Precipitate	≤ 0.005 %	< 0.005 %
Potassium (K)	≤ 0.005 %	0.002 %
Nitrogen Compounds (as N)	≤ 5 ppm	< 5 ppm
Phosphate (PO_4)	≤ 5 ppm	< 5 ppm
Heavy Metals (as Pb)	≤ 2 ppm	< 2 ppm
Trace Impurities - Iron (Fe)	≤ 1 ppm	< 1 ppm

Sodium Chloride, Crystal
Ultrapure Bioreagent
For Liquid Chromatography and Molecular Biology applications

Material No.: 4058-02
Batch No.: 22K1561075

Test	Specification	Result

For Laboratory,Research,or Manufacturing Use

Country of Origin: USA
Packaging Site: Paris Mfg Ctr & DC

Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

Reagent

MT_NaCl_JT_00028

Sodium Chloride, Crystal
Ultrapure Bioreagent
For Liquid Chromatography and Molecular Biology applications

Material No.: 4058-02
Batch No.: 22K1561075
Manufactured Date: 2020-10-15
Retest Date: 2025-10-14
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Certificate of Analysis

Test	Specification	Result
Assay (NaCl)	≥ 99.0 %	99.6 %
DNase Activity	Passes Test	Passes Test
RNase Activity	Passes Test	Passes Test
Protease Activity	Passes Test	Passes Test
pH of 5% Solution at 25°C	5.5 - 7.5	6.1
Bromide (Br)	≤ 0.01 %	< 0.01 %
Chlorate and Nitrate (as NO_3)	≤ 0.003 %	< 0.001 %
Iodide (I)	≤ 0.002 %	< 0.002 %
ACS - Sulfate (SO_4)	≤ 0.003 %	< 0.003 %
Barium (Ba)	≤ 0.001 %	< 0.001 %
Calcium, Magnesium, and R_2O_3 Precipitate	≤ 0.005 %	< 0.005 %
Potassium (K)	≤ 0.005 %	0.002 %
Nitrogen Compounds (as N)	≤ 5 ppm	< 5 ppm
Phosphate (PO_4)	≤ 5 ppm	< 5 ppm
Heavy Metals (as Pb)	≤ 2 ppm	< 2 ppm
Trace Impurities - Iron (Fe)	≤ 1 ppm	< 1 ppm

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Sodium Chloride, Crystal
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For Liquid Chromatography and Molecular Biology applications

Material No.: 4058-02
Batch No.: 22K1561075

Test	Specification	Result

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Country of Origin: USA
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Jamie Ethier
Vice President Global Quality

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Reagent

MT_S_10Hg_IV_00014

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Mass Spec Solution
Catalog Number:	MSHG-10PPM
Lot Number:	R2-HG700202
Matrix:	10% (v/v) HCl
Value / Analyte(s):	10 µg/mL ea: Mercury
Starting Material:	Hg metal
Starting Material Lot#:	1959
Starting Material Purity:	99.9994%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10.000 ± 0.052 µg/mL

Density: 1.020 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Hg	ICP Assay	3133	160921
Hg	EDTA	928	928
Hg	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

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k = coverage factor = 2

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CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

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$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

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u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag		0.000011	M	Eu	<	0.000201	O	Na		0.000004	M	Se	<	0.015915	O	Zn	<	0.001510
O	Al		0.000001	O	Fe		0.000001	M	Nb	<	0.000201	O	Si		0.000005	M	Zr	<	0.000201
M	As	<	0.000402	M	Ga	<	0.000201	M	Nd	<	0.000201	M	Sm	<	0.000201				
M	Au	<	0.003631	M	Gd	<	0.000201	M	Ni	<	0.000402	M	Sn	<	0.001007				
M	B	<	0.001208	M	Ge	<	0.000201	M	Os	<	0.000605	M	Sr	<	0.000201				
M	Ba	<	0.000201	M	Hf	<	0.000201	O	P	<	0.032370	M	Ta	<	0.000201				
M	Be	<	0.000201	s	Hg	<		M	Pb	<	0.000201	M	Tb	<	0.000201				
M	Bi	<	0.000201	M	Ho	<	0.000201	M	Pd	<	0.000403	M	Te	<	0.002216				
O	Ca		0.000007	M	In	<	0.000201	M	Pr	<	0.000201	M	Th	<	0.000201				
M	Cd	<	0.000201	M	Ir	<	0.000201	M	Pt	<	0.000402	M	Ti	<	0.000402				
M	Ce	<	0.000201	O	K		0.000020	M	Rb	<	0.000201	O	Tl	<	0.016508				
M	Co	<	0.000201	M	La	<	0.000201	M	Re	<	0.000201	M	Tm	<	0.000201				
O	Cr	<	0.003021	O	Li	<	0.000107	M	Rh	<	0.000201	M	U	<	0.008058				
M	Cs	<	0.001208	M	Lu	<	0.000201	M	Ru	<	0.000201	M	V	<	0.000201				
M	Cu	<	0.000402	O	Mg		0.000001	O	S	<	0.053950	M	W	<	0.000604				
M	Dy	<	0.000201	M	Mn	<	0.000604	M	Sb	<	0.001208	M	Y	<	0.000201				
M	Er	<	0.000201	M	Mo		0.000009	M	Sc	<	0.000201	M	Yb	<	0.000201				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 200.59 +2 4 Hg(OH)(aq) 1+
Chemical Compatibility - Stable in HNO3. Avoid basic media forming insoluble carbonate. The sulfide, basic carbonate, oxalate, phosphate, arsenite, arsenate and iodide are insoluble in water.
Stability - 2-100 ppb levels not stable in 1% HNO3 / LDPE container, stable in 10% HNO3 packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO3 packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO3 / LDPE container.
Hg Containing Samples (Preparation and Solution) - Metal (soluble in HNO3); Oxide (Soluble in HNO3); Ores and Organic based (The literature has more references to the preparation of Hg containing samples than any other element. Please consult the literature for your specific sample type, since such preparations are prone to error. Or e-mail our technical staff and we will contact you to discuss your particular sample preparation questions in further detail.).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 202 amu	9 ppt	n/a	186W16O
ICP-OES 184.950 nm	0.03 / 0.005 µg/mL	1	
ICP-OES 194.227 nm	0.03 / 0.005 µg/mL	1	V
ICP-OES 253.652 nm	0.1 / 0.03 µg/mL	1	Ta, Co, Th ,Rh , Fe, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 19, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 19, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_S_10Hg_IV_00019

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Mass Spec Solution
Catalog Number:	MSHG-10PPM
Lot Number:	R2-HG700202
Matrix:	10% (v/v) HCl
Value / Analyte(s):	10 µg/mL ea: Mercury
Starting Material:	Hg metal
Starting Material Lot#:	1959
Starting Material Purity:	99.9994%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10.000 ± 0.052 µg/mL

Density: 1.020 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Hg	ICP Assay	3133	160921
Hg	EDTA	928	928
Hg	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag		0.000011	M	Eu	<	0.000201	O	Na		0.000004	M	Se	<	0.015915	O	Zn	<	0.001510
O	Al		0.000001	O	Fe		0.000001	M	Nb	<	0.000201	O	Si		0.000005	M	Zr	<	0.000201
M	As	<	0.000402	M	Ga	<	0.000201	M	Nd	<	0.000201	M	Sm	<	0.000201				
M	Au	<	0.003631	M	Gd	<	0.000201	M	Ni	<	0.000402	M	Sn	<	0.001007				
M	B	<	0.001208	M	Ge	<	0.000201	M	Os	<	0.000605	M	Sr	<	0.000201				
M	Ba	<	0.000201	M	Hf	<	0.000201	O	P	<	0.032370	M	Ta	<	0.000201				
M	Be	<	0.000201	s	Hg	<		M	Pb	<	0.000201	M	Tb	<	0.000201				
M	Bi	<	0.000201	M	Ho	<	0.000201	M	Pd	<	0.000403	M	Te	<	0.002216				
O	Ca		0.000007	M	In	<	0.000201	M	Pr	<	0.000201	M	Th	<	0.000201				
M	Cd	<	0.000201	M	Ir	<	0.000201	M	Pt	<	0.000402	M	Ti	<	0.000402				
M	Ce	<	0.000201	O	K		0.000020	M	Rb	<	0.000201	O	Tl	<	0.016508				
M	Co	<	0.000201	M	La	<	0.000201	M	Re	<	0.000201	M	Tm	<	0.000201				
O	Cr	<	0.003021	O	Li	<	0.000107	M	Rh	<	0.000201	M	U	<	0.008058				
M	Cs	<	0.001208	M	Lu	<	0.000201	M	Ru	<	0.000201	M	V	<	0.000201				
M	Cu	<	0.000402	O	Mg		0.000001	O	S	<	0.053950	M	W	<	0.000604				
M	Dy	<	0.000201	M	Mn	<	0.000604	M	Sb	<	0.001208	M	Y	<	0.000201				
M	Er	<	0.000201	M	Mo		0.000009	M	Sc	<	0.000201	M	Yb	<	0.000201				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 200.59 +2 4 Hg(OH)(aq) 1+
Chemical Compatibility - Stable in HNO3. Avoid basic media forming insoluble carbonate. The sulfide, basic carbonate, oxalate, phosphate, arsenite, arsenate and iodide are insoluble in water.
Stability - 2-100 ppb levels not stable in 1% HNO3 / LDPE container, stable in 10% HNO3 packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO3 packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO3 / LDPE container.
Hg Containing Samples (Preparation and Solution) - Metal (soluble in HNO3); Oxide (Soluble in HNO3); Ores and Organic based (The literature has more references to the preparation of Hg containing samples than any other element. Please consult the literature for your specific sample type, since such preparations are prone to error. Or e-mail our technical staff and we will contact you to discuss your particular sample preparation questions in further detail.).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 202 amu	9 ppt	n/a	186W16O
ICP-OES 184.950 nm	0.03 / 0.005 µg/mL	1	
ICP-OES 194.227 nm	0.03 / 0.005 µg/mL	1	V
ICP-OES 253.652 nm	0.1 / 0.03 µg/mL	1	Ta, Co, Th ,Rh , Fe, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 19, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 19, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

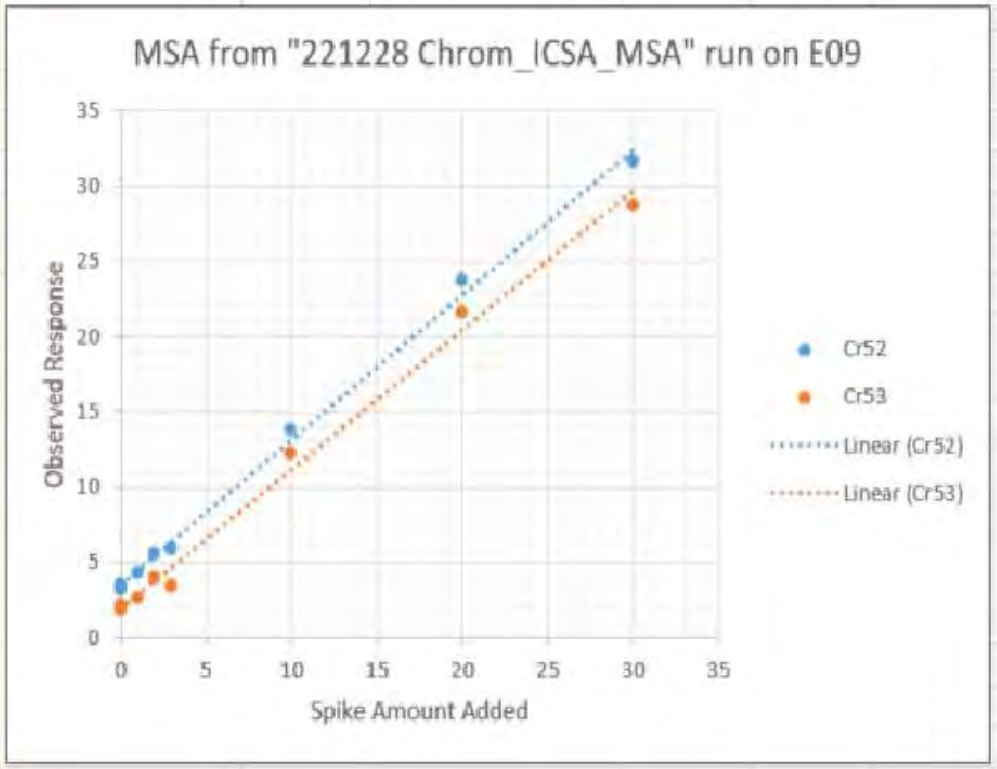
Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_S_ICS2A_IV_00011

	MSA CALC (Cr52) 3.618		MSA CALC (Cr53) 2.045
	ISOTOPE RATIO CALCULATION		
AVG CCB	180		503
AVG ICSA	2477		725
NET CPS	2297		223
RATIO 53/52		**0.10**	
NA 53/52		**0.11**	

The Chromium 53/52 ratio is close to the observed Natural Abundance (NA) ratio of 0.11
This suggests that Cr contaminant is real Cr and not due to anomalous interference on mass 52 alone.



INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	6020ICS-9A
Lot Number:	T2-MEB714677
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	21 215 µg/mL ea: Chloride,
	3 000 µg/mL ea: Calcium,
	2 500 µg/mL ea: Iron, Sodium,
	2 000 µg/mL ea: Carbon,
	1 000 µg/mL ea: Aluminum, Phosphorus, Sulfur, Potassium, Magnesium,
	20 µg/mL ea: Molybdenum, Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	**1 000 ± 3 µg/mL**	**Calcium, Ca**	**3 001 ± 13 µg/mL**
Carbon, C	**2 001 ± 4 µg/mL**	**Chloride, Cl**	**21 230.0 ± 100.0 µg/mL**
Iron, Fe	**2 501 ± 11 µg/mL**	**Magnesium, Mg**	**1 000 ± 4 µg/mL**
Molybdenum, Mo	**20.01 ± 0.11 µg/mL**	**Phosphorus, P**	**1 000 ± 4 µg/mL**
Potassium, K	**1 000 ± 4 µg/mL**	**Sodium, Na**	**2 501 ± 11 µg/mL**
Sulfur, S	**1 001 ± 4 µg/mL**	**Titanium, Ti**	**20.01 ± 0.12 µg/mL**

Density: 1.051 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
C	Acidimetric	84L	84L
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cl	Acidimetric	84L	84L
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
S	Acidimetric	84L	84L
S	ICP Assay	traceable to 3154	P2-S680745
Ti	ICP Assay	3162a	130925
Ti	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.003300	M	Eu	<	0.000110	s	Na	<		M	Se	<	0.000720	O	Zn		0.011000
s	Al	<		s	Fe	<		M	Nb	<	0.000110	n	Si	<		M	Zr	<	0.002100
M	As		0.077000	M	Ga		0.016000	M	Nd	<	0.000420	M	Sm	<	0.000110				
M	Au	<	0.000410	M	Gd	<	0.000110	M	Ni		0.012000	M	Sn	<	0.001700				
M	B	<	0.006200	M	Ge	<	0.002500	M	Os	<	0.000110	M	Sr		0.018000				
M	Ba		0.004000	M	Hf	<	0.000110	s	P	<		M	Ta	<	0.000210				
O	Be	<	0.000110	M	Hg	<	0.000620	M	Pb		0.000930	M	Tb	<	0.000110				
M	Bi	<	0.001300	M	Ho	<	0.000110	M	Pd	<	0.000110	M	Te	<	0.003300				
s	Ca	<		M	In	<	0.000210	M	Pr	<	0.000110	M	Th	<	0.000210				
M	Cd		0.004500	M	Ir	<	0.000110	M	Pt	<	0.000110	s	Ti	<					
M	Ce	<	0.000620	s	K	<		M	Rb		0.027000	M	Tl	<	0.000620				
M	Co		0.002800	M	La	<	0.000830	M	Re	<	0.000110	M	Tm	<	0.000110				
M	Cr		0.029000	O	Li		0.001900	M	Rh	<	0.000110	M	U	<	0.001100				
M	Cs		0.001900	M	Lu	<	0.000110	M	Ru	<	0.000110	M	V	<	0.003100				
O	Cu	<	0.004400	s	Mg	<		s	S	<		M	W		0.001600				
M	Dy	<	0.000110	M	Mn		0.006000	M	Sb		0.001200	M	Y		0.000420				
M	Er	<	0.000110	s	Mo	<		M	Sc	<	0.000620	M	Yb	<	0.000110				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 30, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 30, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

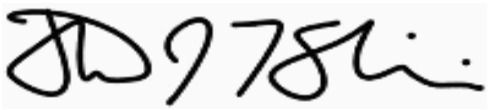
12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_S_ICVSPK-A_00005

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Certificate of Analysis

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inorganicventures.com

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F: 540-585-3012
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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-69496
Lot Number:	U2-MEB728821
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	2 500 µg/mL ea:

Aluminum, Calcium,
Iron, Potassium,
Magnesium, Sodium,

250 µg/mL ea:

Nickel, Manganese,
Cobalt, Chromium,
Copper, Arsenic,
Barium, Vanadium,
Zinc,

25 µg/mL ea:

Silver, Beryllium,
Cadmium, Lead,
Selenium, Strontium,
Thallium, Uranium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	2 500 ± 9 µg/mL	Arsenic, As	250.0 ± 2.1 µg/mL
Barium, Ba	250.0 ± 1.2 µg/mL	Beryllium, Be	25.00 ± 0.16 µg/mL
Cadmium, Cd	25.00 ± 0.10 µg/mL	Calcium, Ca	2 500 ± 11 µg/mL
Chromium, Cr	250.0 ± 1.8 µg/mL	Cobalt, Co	250.0 ± 1.2 µg/mL
Copper, Cu	250.0 ± 1.0 µg/mL	Iron, Fe	2 500 ± 10 µg/mL
Lead, Pb	25.00 ± 0.11 µg/mL	Magnesium, Mg	2 500 ± 11 µg/mL
Manganese, Mn	250.0 ± 1.0 µg/mL	Nickel, Ni	250.0 ± 1.1 µg/mL
Potassium, K	2 500 ± 11 µg/mL	Selenium, Se	24.99 ± 0.20 µg/mL
Silver, Ag	25.00 ± 0.13 µg/mL	Sodium, Na	2 500 ± 11 µg/mL
Strontium, Sr	25.01 ± 0.10 µg/mL	Thallium, Tl	25.00 ± 0.13 µg/mL
Uranium, U	25.01 ± 0.15 µg/mL	Vanadium, V	250.0 ± 1.1 µg/mL
Zinc, Zn	250.0 ± 1.1 µg/mL		

Density: 1.074 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	EDTA	928	928
Co	ICP Assay	traceable to 3113	M2-CO661665
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	3153a	990906
Tl	ICP Assay	3158	151215
U	ICP Assay	3164	891509
U	Calculated		See Sec. 4.2
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.6 ± 0.1
Uranium 235U	0.42 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 25, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 25, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

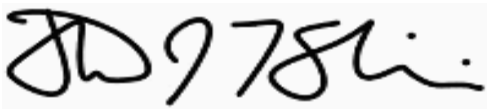
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_S_ICVSPK-B_00003

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-69497
Lot Number:	U2-MEB728822
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	2 500 µg/mL ea: Titanium, 25 µg/mL ea: Molybdenum, Antimony, Tin

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	**25.01 ± 0.19 µg/mL**	**Molybdenum, Mo**	**25.00 ± 0.15 µg/mL**
Tin, Sn	**25.00 ± 0.13 µg/mL**	**Titanium, Ti**	**2 500 ± 18 µg/mL**

Density: 1.033 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Sb	ICP Assay	3102a	140911
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

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10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 25, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 25, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

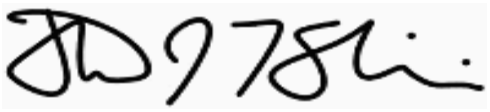
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_S_MSSPK-A_00001

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-66048-A
Lot Number:	T2-MEB716952
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea:

Aluminum, Calcium,
Iron, Potassium,
Magnesium, Sodium,

500 µg/mL ea:

Nickel, Manganese,
Cobalt, Chromium,
Copper, Arsenic,
Barium, Vanadium,
Zinc,

50 µg/mL ea:

Silver, Beryllium,
Cadmium, Lead,
Selenium, Strontium,
Thallium, Uranium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	5 000 ± 18 µg/mL	Arsenic, As	499.9 ± 4.1 µg/mL
Barium, Ba	500.0 ± 2.3 µg/mL	Beryllium, Be	49.98 ± 0.26 µg/mL
Cadmium, Cd	49.99 ± 0.22 µg/mL	Calcium, Ca	4 998 ± 22 µg/mL
Chromium, Cr	499.9 ± 3.7 µg/mL	Cobalt, Co	500.2 ± 2.4 µg/mL
Copper, Cu	500.0 ± 2.0 µg/mL	Iron, Fe	5 000 ± 21 µg/mL
Lead, Pb	50.00 ± 0.22 µg/mL	Magnesium, Mg	5 000 ± 20 µg/mL
Manganese, Mn	500.2 ± 2.0 µg/mL	Nickel, Ni	499.9 ± 2.2 µg/mL
Potassium, K	5 001 ± 19 µg/mL	Selenium, Se	50.01 ± 0.35 µg/mL
Silver, Ag	50.00 ± 0.22 µg/mL	Sodium, Na	5 000 ± 18 µg/mL
Strontium, Sr	49.97 ± 0.22 µg/mL	Thallium, Tl	50.02 ± 0.32 µg/mL
Uranium, U	50.00 ± 0.25 µg/mL	Vanadium, V	500.0 ± 2.2 µg/mL
Zinc, Zn	500.1 ± 2.2 µg/mL		

Density: 1.128 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Cd	Calculated		See Sec. 4.2
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Pb	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Sr	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	151215
Tl	Calculated		See Sec. 4.2
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2
V	IC Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.19 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 24, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 24, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

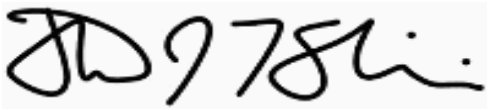
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_S_MSSPK-B_00002

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

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Christiansburg, VA 24073 USA
inorganicventures.com

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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-66048-B
Lot Number:	T2-MEB716953
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	5 000 µg/mL ea: Titanium, 50 µg/mL ea: Molybdenum, Antimony, Tin

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	**49.97 ± 0.40 µg/mL**	**Molybdenum, Mo**	**50.03 ± 0.24 µg/mL**
Tin, Sn	**49.97 ± 0.27 µg/mL**	**Titanium, Ti**	**5 000 ± 37 µg/mL**

Density: 1.040 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
Sn	ICP Assay	3161a	140917
Sn	Calculated		See Sec. 4.2
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 24, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 24, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

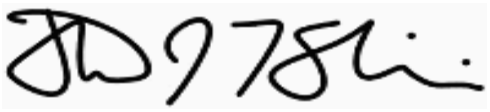
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_S_MWLLC_SC_00005

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Certificate of Analysis

1.0 DESCRIPTION : ***Plasma*** **CAL – Custom Standard**

Catalogue Number : **AQ0-154-615** **MW-LLC**

Lot Number : **S220721047**

Matrix: **2.0% HNO3 Tr. HF**

Expiration Date (End of month): **September 2023**

2.0 CERTIFIED VALUES AND ASSOCIATED UNCERTAINTY:

Method of Analysis: Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES)

Traceability: Applicable NIST Standard Reference Materials (see list below):

3101a	Al	3109a	Ca	3117a	Eu	3126a	Fe	3134	Mo	3142a	Pr	3151	Ag	3159	Th	3167a	Y
3102a	Sb	3110	Ce	3118a	Gd	3127a	La	3135a	Nd	3143	Re	3152a	Na	3160a	Tm	3168a	Zn
3103a	As	3111a	Cs	3119a	Ga	3128	Pb	3136	Ni	3144	Rh	3153a	Sr	3161a	Sn	3169	Zr
3104a	Ba	3112a	Cr	3120a	Ge	3129a	Li	3137	Nb	3145a	Rb	3154	S	3162a	Ti		
3105a	Be	3113	Co	3121	Au	3130a	Lu	3138	Pd	3147a	Sm	3155	Ta	3163	W		
3106	Bi	3114	Cu	3122	Hf	3131a	Mg	3139a	P	3148a	Sc	3156	Te	3164	U		
3107	B	3115a	Dy	3123a	Ho	3132	Mn	3140	Pt	3149	Se	3157a	Tb	3165	V		
3108	Cd	3116a	Er	3124a	In	3133	Hg	3141a	K	3150	Si	3158	Tl	3166a	Yb		

Certified Concentrations:

Ag*	0.496 ± 1%	µg/ml	K	199.5 ± 1.5	µg/ml	Ti	10.05 ± 0.06	µg/ml
Al	24.81 ± 0.14	µg/ml	Mg	50.3 ± 0.4	µg/ml	Tl*	0.500 ± 1%	µg/ml
As*	2.02 ± 0.01	µg/ml	Mn*	2.00 ± 0.02	µg/ml	U*	1.01 ± 0.01	µg/ml
Ba*	1.99 ± 0.01	µg/ml	Mo*	0.497 ± 1%	µg/ml	V*	0.501 ± 1%	µg/ml
Be*	0.499 ± 1%	µg/ml	Na	198.6 ± 1.9	µg/ml	Zn	10.00 ± 0.06	µg/ml
Ca	100.3 ± 1.0	µg/ml	Ni*	1.00 ± 0.01	µg/ml			
Cd*	0.496 ± 1%	µg/ml	Pb*	0.503 ± 1%	µg/ml			
Co*	0.504 ± 1%	µg/ml	Sb*	1.01 ± 0.01	µg/ml			
Cr*	2.00 ± 0.01	µg/ml	Se*	1.00 ± 0.01	µg/ml			
Cu*	0.999 ± 1%	µg/ml	Sn*	2.00 ± 0.02	µg/ml			
Fe	49.92 ± 0.28	µg/ml	Sr*	0.992 ± 1%	µg/ml			

ACCREDITED
Reference Material Producer
CERTIFICATE #2885.02

*Concentration value derived from v/v dilutions of certified, NIST-traceable starting materials

Note: The uncertainty of the certified value has been calculated from applicable uncertainty contributors (u_i) such as the SRM inherited uncertainty, weighing and dilution errors and instrument variability. The combined uncertainty ($uc= v\Sigma u_i^2$) has been multiplied by a coverage factor (k) of 2 to provide a 95% confidence interval.

3.0 REFERENCE VALUES:

Density: **1.010 g/ml @ 23.0 °C**

4.0 APPROVAL AND DATE OF CERTIFICATION:

Certification Approval: Yaling Sui, Chemist

Certification Date: **August 23, 2022**

Yaling Sui

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5.0 INTENDED USE:

- ICP Standards: For the calibration of, including but not limited to: ICP-AES, ICP-MS, FAAS, GFAA, XRF and DCP.
- AA Standards: For the calibration of Flame (FAAS) and Graphite Furnace (GFAA) Atomic Absorption Spectrometers.
- Matrix Modifiers: For the optimization of analytical conditions to provide better Graphite Furnace Atomic Absorption (GFAA) instrument response and improved detection limits.
- pH Standards: For the calibrating pH meters or for other wet chemistry applications.
- Conductivity Standards: For electrolytic conductivity measurement as a calibration standard.
- IC Standards: for calibration of, but not limited to IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS or other wet chemistry applications.

For any inquiries, please contact **SCP SCIENCE**.

6.0 INSTRUCTIONS FOR USE:

Handling and Storage: Keep product tightly capped when not in use. The solution should be opened for a minimum amount of time necessary to dispense the amount required. Do not pipet or use directly from container. Do not return unused portions back to container. Store under normal laboratory conditions. Avoid exposure to excessive sources of heat and humidity or direct sunlight.

Stability: This Standard is guaranteed to be stable and accurate to within the specified uncertainty of measurement up to the unopened expiry date, if sealed, or up to the opened expiry date (when indicated), whichever comes first, provided the solution is kept tightly capped and stored under the indicated storage conditions. Purchasers will be notified of any significant changes resulting in re-certification or withdrawal of the product prior to the expiration date.

7.0 HAZARDOUS INFORMATION :

Please refer to the associated Material Safety Data Sheet (MSDS) for information regarding this product (available at www.SCPSCIENCE.com).

8.0 HOMOGENEITY:

This solution has been blended according to an in-house procedure and its homogeneity is guaranteed to be fit for purpose when a sample size sufficient for the intended method of analysis is used.

9.0 TRACEABILITY:

This CRM (Certified Reference Material) is traceable to the NIST SRM (Standard Reference Material) indicated in section 2 through an unbroken chain of comparisons. In addition, balances used are regularly calibrated using weights which are traceable to NIST (National Institute of Standards and Technology) or NRC (National Research Council of Canada) standards. All conductivity meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable Thermometer and standards. All pH meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable thermometer and pH/MV simulator.

10.0 PREPARATION*:*

For the preparation of these solutions, 18 meghom/cm double deionized water, high-purity acids and glassware calibrated to ASTM Class A specifications are used.

11.0 QUALITY SYSTEM CERTIFICATIONS*:*

ISO 9001 Certification: This standard was produced in a facility which operates a **registered** ISO 9001 Quality Management System. Please consult our web site for a copy of the most recent revision of our certificate of registration.

ISO 17025 Accreditation: SCP SCIENCE (Corporate Headquarters) operates an ISO 17025 **accredited** laboratory. Please consult our web site for a copy of the most recent revision of our certificate and scope of accreditation.

ISO 17034 Accreditation: SCP SCIENCE (Corporate Headquarters) is an ISO 17034 accredited Reference Material Producer. Please consult our website for a copy of our most recent certificate and scope of accreditation.

Corporate Headquarters:

CORPORATE HEADQUARTERS	USA	FRANCE	GERMANY
21800 Clark Graham	3rd Party Distribution Center	12 Ave. de Québec, Bat. IRIS	Alte Marktoberdorfer Straße 14,
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Fax: +1 (800) 253-5549	Fax: +1 (800) 253-5549	Fax: +33 (0) 1 60 92 05 67	Fax: +49 (0) 8342-89560-69

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PC-FRM005-CERT-8.0-B

Reagent

MT_SULF_FI_00019

ThermoFisher SCIENTIFIC

Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120632

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	A300	Quality Test / Release Date	08/10/2022
Lot Number	222369		
Description	SULFURIC ACID, CERTIFIED ACS		
Country of Origin	United States	Suggested Retest Date	Aug/2027
Chemical Origin	Inorganic-non animal		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Colorless and free from suspended or insoluble matter
ALUMINUM	ppm	<= 0.2	<0.1
AMMONIUM (NH4)	ppm	<= 1	<1
ARSENIC (As)	ppm	<= 0.004	<0.001
ASSAY	w/w %	Inclusive Between 95.0 - 98.0	96
BORON (B)	ppm	<= 0.05	<0.05
CALCIUM (Ca)	ppm	<= 0.3	<0.1
CHLORIDE	ppm	<= 0.1	<0.1
CHROMIUM (Cr)	ppm	<= 0.2	<0.1
COLOR	APHA	<= 10	<10
COPPER (Cu)	ppm	<= 0.1	<0.100
GOLD (Au)	ppm	<= 0.3	<0.1
HEAVY METALS (as Pb)	ppm	<= 0.8	<0.8
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
IRON (Fe)	ppm	<= 0.2	<0.2
LEAD (Pb)	ppm	<= 0.3	<0.1
MAGNESIUM (Mg)	ppm	<= 0.3	<0.1
MANGANESE (Mn)	ppm	<= 0.2	<0.1
MERCURY (Hg)	ppb	<= 5	<5
NICKEL (Ni)	ppm	<= 0.1	<0.1
NITRATE (NO3)	ppm	<= 0.2	<0.1
PHOSPHATE (PO4)	ppm	<= 0.5	<0.1
POTASSIUM (K)	ppm	<= 0.3	<0.1

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120632

RESIDUE AFTER IGNITION	ppm	<= 3	<3
SODIUM (Na)	ppm	<= 0.3	<0.1
SUBSTANCES REDUCING KMNO4	ppm	<= 2	<2
TIN (Sn)	ppm	<= 0.2	<0.1
TITANIUM (Ti)	ppm	<= 0.3	<0.1
ZINC (Zn)	ppm	<= 0.2	<0.1

Ira Marootian - Quality Control Manager - Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

Reagent

OP_LCSmix2stk_00007

OP-LCSmix2STK-00007

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

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CERTIFIED REFERENCE MATERIAL

ilac-MRA A2LA ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ilac-MRA A2LA ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

Certificate of Analysis

chromatographic plus

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569732 **Lot No.:** A0193487

Description : 8270 List 1 / Std #11

8270 List 1 / Std #11 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : July 31, 2024 **Storage:** 10°C or colder

Handling: This product is photosensitive. **Ship:** Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L., K=2)
1	Benzaldehyde	100-52-7	RDA102822RSR	99%	2,000.0 µg/mL	+/- 58.7396
2	epsilon-Caprolactam	105-60-2	I16X016	99%	2,000.3 µg/mL	+/- 58.7469
3	Atrazine	1912-24-9	PI8FG	99%	2,000.3 µg/mL	+/- 58.7494

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Quality Confirmation Test

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

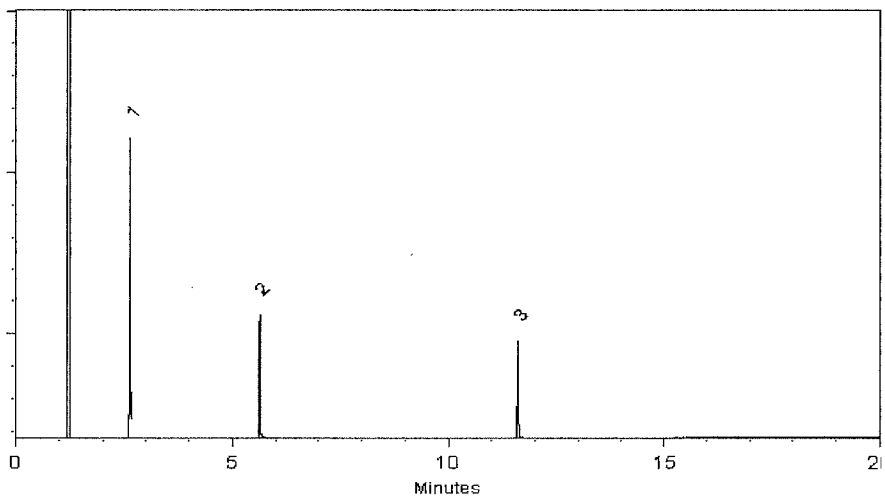
Inj. Temp:
250°C

Det. Temp:
340°C

Det. Type:
FID

Split Vent:
100 ml/min.

Inj. Vol
1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Russ Bookhamer - Operations Technician I

Date Mixed: 12-Jan-2023 **Balance Serial #** B442140311

Christie Mills - Operations Tech II - ARM QC

Date Passed: 16-Jan-2023

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

OP_RES_APPX1_00010

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ilac-MRA A2LA ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ilac-MRA A2LA ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570667 **Lot No.:** A0194294

Description : 8270 Supplemental Standard #1

8270 Supplemental Standard #1 1,000µg/mL, Methylene chloride, 1mL/ampul
Also described as 8270 List 2 / Std #1

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 29, 2024 **Storage:** 10°C or colder

Handling: Contains carcinogen/reproductive toxin. **Ship:** Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L., K=2)
1	2-Picoline	109-06-8	STBJ3945	99%	1,010.0 µg/mL	+/- 18.7008
2	N-Nitrosomethylethylamine	10595-95-6	14026600	99%	1,010.0 µg/mL	+/- 18.7008
3	Acrylamide	79-06-1	01402JA	99%	1,010.0 µg/mL	+/- 18.7008
4	N-Nitrosodiethylamine	55-18-5	UT2EJ	99%	1,010.0 µg/mL	+/- 18.7008
5	N-Nitrosopyrrolidine	930-55-2	21-JPO-19-1	99%	1,008.7 µg/mL	+/- 18.6761
6	o-Toluidine	95-53-4	03417PZ	99%	1,008.7 µg/mL	+/- 18.6761
7	N-Nitrosomorpholine	59-89-2	GOJNI	99%	1,008.0 µg/mL	+/- 18.6638
8	N-Nitrosopiperidine	100-75-4	13638800	99%	1,008.7 µg/mL	+/- 18.6761
9	Phentermine (a,a-Dimethylphenethylamine)	122-09-8	S221011RSR	99%	1,009.3 µg/mL	+/- 18.6884
10	Quinoline	91-22-5	UU6EC	99%	1,009.3 µg/mL	+/- 18.6884
11	N-Nitrosodi-n-butylamine	924-16-3	7BSAG	99%	1,009.3 µg/mL	+/- 18.6884
12	1,4-Phenylenediamine	106-50-3	13950700	99%	1,010.0 µg/mL	+/- 18.7008
13	1,4-Dinitrobenzene	100-25-4	STBF8844V	99%	1,009.3 µg/mL	+/- 18.6884
14	1-Naphthylamine (1-aminonaphthalene)	134-32-7	R7NAN-IP	99%	1,005.3 µg/mL	+/- 18.6144
15	2-Naphthylamine (2-aminonaphthalene)	91-59-8	811345	99%	1,004.7 µg/mL	+/- 18.6020

16	5-Nitro-o-toluidine	99-55-8	H67GL	99%	1,009.3	µg/mL	+/- 18.6884
17	1,3,5-Trinitrobenzene	99-35-4	A6TDK	99%	1,008.7	µg/mL	+/- 18.6761
18	Phenacetin	62-44-2	88F0225	99%	1,010.0	µg/mL	+/- 18.7008
19	4-Aminobiphenyl	92-67-1	SLCD6545	99%	1,006.7	µg/mL	+/- 18.6391
20	Propyzamide	23950-58-5	13721600	99%	1,010.0	µg/mL	+/- 18.7008
21	Pentachloronitrobenzene (quintozene)	82-68-8	14011000	98%	1,008.7	µg/mL	+/- 18.6776
22	4-Nitroquinoline-N-oxide	56-57-5	WXBD7133V	99%	1,010.0	µg/mL	+/- 18.7008
23	p-Dimethylaminoazobenzene	60-11-7	BCBP8840V	98%	990.5	µg/mL	+/- 18.3389
24	3,3'-Dimethylbenzidine (o-tolidine)	119-93-7	ELVJM	99%	1,009.3	µg/mL	+/- 18.6884
25	2-Acetylaminofluorene	53-96-3	WZDQE	99%	1,007.3	µg/mL	+/- 18.6514
26	4,4'-Methylene-bis(2-chloroaniline)	101-14-4	RP230106	97%	1,009.4	µg/mL	+/- 18.6905
27	Dibenz(a,h)acridine	226-36-8	012016	99%	1,010.0	µg/mL	+/- 18.7008

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Quality Confirmation Test

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

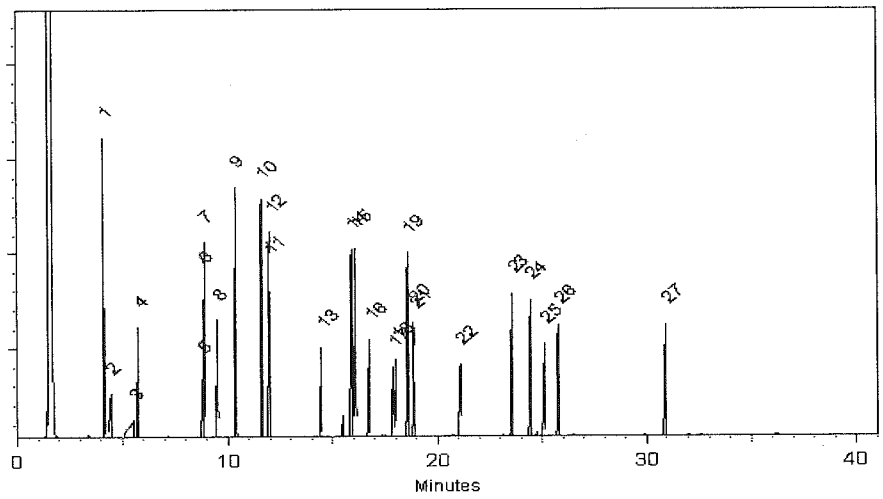
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
2 ml/min.

Inj. Vol
1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Brittany Federinko - Operations Tech I

Date Mixed: 03-Feb-2023 **Balance Serial #** 1128360905

Christie Mills - Operations Tech II - ARM QC

Date Passed: 15-Mar-2023

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ uncertainty} = k\sqrt{u^2_{gravimetric} + u^2_{homogeneity} + u^2_{storage\ stability} + u^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

OP_RES_APPX2_00011

OP-RES-APPX2-00011

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www.restek.com

CERTIFIED REFERENCE MATERIAL

ilac-MRA A2LA ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3223.01

ilac-MRA A2LA ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

Certificate of Analysis

chromatographic plus

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569733 **Lot No.:** A0193498

Description : 8270 List 2 / Std #2 (2015)

8270 List 2 / Std #2 (2015) 1,000µg/mL, Methylene chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2024 **Storage:** -20°C or colder

Handling: Sonication required. Mix is photosensitive. **Ship:** Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L., K=2)
1	Methyl methanesulfonate	66-27-3	MKCM5645	99%	1,001.3 µg/mL	+/- 22.9875
2	Ethyl methanesulfonate	62-50-0	H6VUB	99%	1,002.7 µg/mL	+/- 23.0181
3	Pentachloroethane	76-01-7	13550700	97%	999.7 µg/mL	+/- 22.9511
4	Hexachloropropene	1888-71-7	44391/3	99%	1,007.3 µg/mL	+/- 23.1253
5	Isosafrole (cis & trans) 16% cis; 84% trans	120-58-1	MKBZ0058V	97%	1,001.7 µg/mL	+/- 22.9956
6	1-Chloronaphthalene	90-13-1	K2OBC	99%	1,000.0 µg/mL	+/- 22.9569
7	1,4-Naphthoquinone	130-15-4	13230700	99%	1,006.0 µg/mL	+/- 23.0947
8	Pentachlorobenzene	608-93-5	MKCD4132	99%	1,006.7 µg/mL	+/- 23.1100
9	2,3,5,6-Tetrachlorophenol	935-95-5	012016	99%	1,005.3 µg/mL	+/- 23.0794
10	Dinoseb	88-85-7	50001	99%	1,000.0 µg/mL	+/- 22.9569
11	Isodrin	465-73-6	13728400	98%	1,000.3 µg/mL	+/- 22.9627
12	Chlorobenzilate	510-15-6	13562500	97%	1,003.6 µg/mL	+/- 23.0402
13	7,12-Dimethylbenz(a)anthracene	57-97-6	QXLNC	99%	1,000.0 µg/mL	+/- 22.9569

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Quality Confirmation Test

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

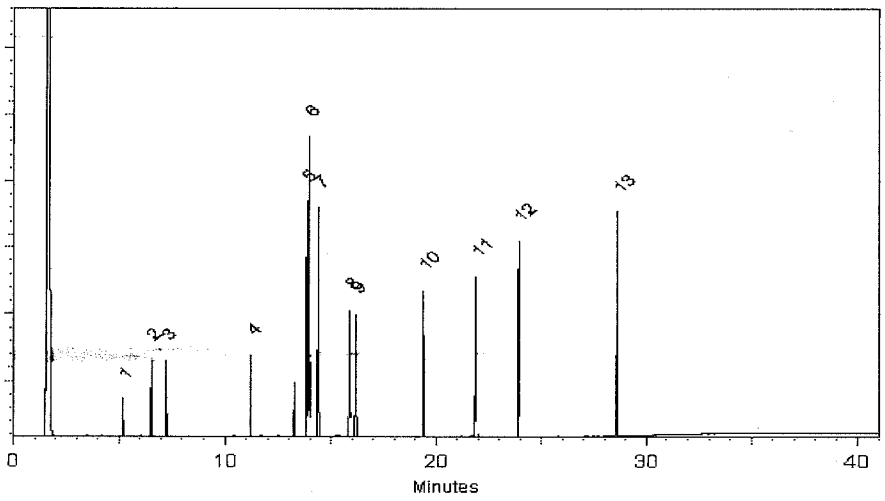
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
2 ml/min.

Inj. Vol
0.2µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Russ Bookhamer - Operations Technician I **Date Mixed:** 12-Jan-2023 **Balance Serial #** B442140311

Christie Mills - Operations Tech II - ARM QC **Date Passed:** 16-Jan-2023

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ uncertainty} = k\sqrt{u^2_{gravimetric} + u^2_{homogeneity} + u^2_{storage\ stability} + u^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

OP_RES_APPX4_00008

OP_RES-APX4-00008

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CERTIFIED REFERENCE MATERIAL

ilac-MRA A2LA ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ilac-MRA A2LA ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

Certificate of Analysis

chromatographic plus

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567681 **Lot No.:** A0193163

Description : 8270 List 2 / Std #4

8270 List 2 / Std #4 1,000µg/mL, Methylene chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2025 **Storage:** 10°C or colder

Handling: This product is photosensitive. **Ship:** Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	o,o,o-Triethyl phosphorothioate	126-68-1	2-KRR-57-1	98%	1,007.1 µg/mL	+/- 45.9677
2	Safrole	94-59-7	322225/11292	99%	1,001.7 µg/mL	+/- 45.7191
3	Zinophos (thionazine)	297-97-2	13866700	99%	1,009.3 µg/mL	+/- 46.0690
4	Sulfotepp	3689-24-5	13969000	96%	1,003.5 µg/mL	+/- 45.8037
5	Diallate (cis and trans) 74% cis-Diallate; 26% trans-Diallate	2303-16-4	13469800	98%	1,001.6 µg/mL	+/- 45.7142
6	Phorate	298-02-2	13939400	99%	1,000.0 µg/mL	+/- 45.6430
7	Dimethoate	60-51-5	13597200	99%	1,003.3 µg/mL	+/- 45.7952
8	Disulfoton	298-04-4	13839400	98%	1,002.9 µg/mL	+/- 45.7739
9	Methyl parathion	298-00-0	13855300	99%	1,008.3 µg/mL	+/- 46.0234
10	Parathion (Ethyl parathion)	56-38-2	13836200	99%	1,007.3 µg/mL	+/- 45.9778
11	Aramite 6% Isomer 1; 6% Isomer 2; 42% Isomer 3; 46% Isomer 4	140-57-8	13721500	76%	1,004.5 µg/mL	+/- 45.8469
12	Famphur	52-85-7	13419800	98%	1,007.4 µg/mL	+/- 45.9826

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Quality Confirmation Test

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

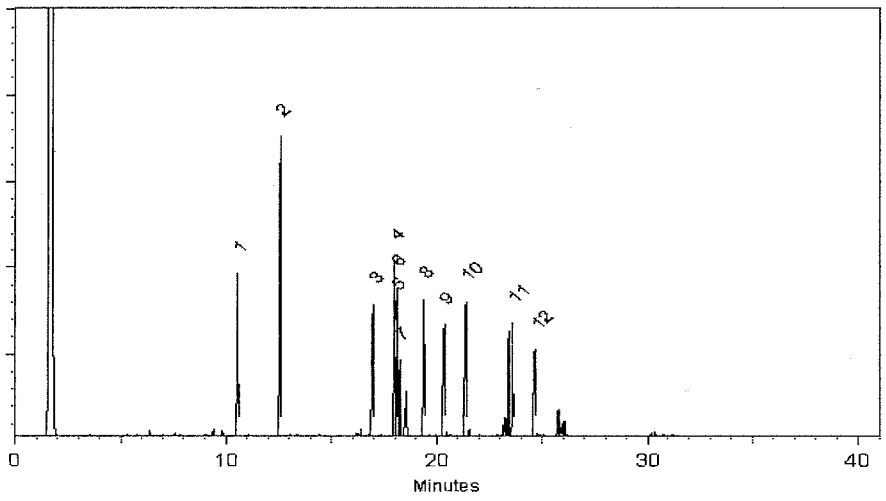
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
2 ml/min.

Inj. Vol
1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Morgan Craighead - Mix Technician

Date Mixed: 03-Jan-2023 **Balance Serial #** B442140311

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 06-Jan-2023

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ uncertainty} = k\sqrt{u^2_{gravimetric} + u^2_{homogeneity} + u^2_{storage\ stability} + u^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

OP_RES_APPX6_00005

OP-RES-APPX6-00005

RESTEK® CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
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Certificate #3222.01

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Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568727 **Lot No.:** A0184892

Description : 8270 List 2/ Std #8 Dibenz(a,j)acridine

8270 List 2/ Std #8 Dibenz(a,j)acridine 2,000µg/mL, Methylene chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2025 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive. **Ship:** Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Dibenz(a,j)acridine	2,015.9 µg/mL	+/- 11.8302	µg/mL	Gravimetric
	CAS # 224-42-0 (Lot 0012019)		+/- 90.8098	µg/mL	Unstressed
	Purity 98%		+/- 100.7617	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

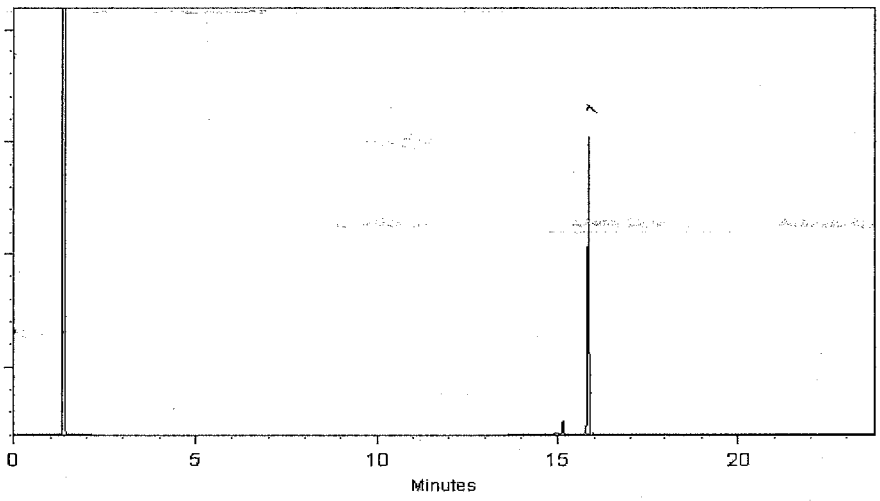
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Nick Yaw - Operations Tech I

Date Mixed: 04-May-2022 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 06-May-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Reagent

OP_RES_LCS1_00011

OP-RES-LC51-00011

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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Certificate #3222.01

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571995 **Lot No.:** A0190414

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2000 µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : April 30, 2024 **Storage:** 0°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate. **Ship:** Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (k=2)	
1	1,4-Dioxane	1,003.3 µg/mL	+/- 5.8469 µg/mL	Gravimetric
	CAS # 123-91-1 (Lot SHBN3770)		+/- 12.0005 µg/mL	Unstressed
	Purity 99%		+/- 19.0922 µg/mL	Stressed
2	N-Nitrosodimethylamine	1,006.7 µg/mL	+/- 5.8664 µg/mL	Gravimetric
	CAS # 62-75-9 (Lot 220624JLM)		+/- 12.0403 µg/mL	Unstressed
	Purity 99%		+/- 19.1557 µg/mL	Stressed
3	Pyridine	2,011.7 µg/mL	+/- 11.6960 µg/mL	Gravimetric
	CAS # 110-86-1 (Lot SHBN7324)		+/- 24.0476 µg/mL	Unstressed
	Purity 99%		+/- 38.2714 µg/mL	Stressed
4	Phenol	1,006.3 µg/mL	+/- 5.8644 µg/mL	Gravimetric
	CAS # 108-95-2 (Lot MKCK1120)		+/- 12.0364 µg/mL	Unstressed
	Purity 99%		+/- 19.1493 µg/mL	Stressed
5	Aniline	1,004.7 µg/mL	+/- 5.8547 µg/mL	Gravimetric
	CAS # 62-53-3 (Lot X22F726)		+/- 12.0164 µg/mL	Unstressed
	Purity 99%		+/- 19.1176 µg/mL	Stressed
6	Bis(2-chloroethyl)ether	1,004.0 µg/mL	+/- 5.8508 µg/mL	Gravimetric
	CAS # 111-44-4 (Lot SHBL6942)		+/- 12.0084 µg/mL	Unstressed
	Purity 99%		+/- 19.1049 µg/mL	Stressed
7	n-Decane (C10)	1,007.2 µg/mL	+/- 5.8693 µg/mL	Gravimetric
	CAS # 124-18-5 (Lot SHBN8619)		+/- 12.0463 µg/mL	Unstressed
	Purity 99%		+/- 19.1652 µg/mL	Stressed

8	2-Chlorophenol		1,005.3	µg/mL	+/-	5.8586	µg/mL	Gravimetric
	CAS # 95-57-8	(Lot STBH7290)			+/-	12.0244	µg/mL	Unstressed
	Purity 99%				+/-	19.1303	µg/mL	Stressed
9	1,3-Dichlorobenzene		1,003.0	µg/mL	+/-	5.8450	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCCD5315)			+/-	11.9965	µg/mL	Unstressed
	Purity 99%				+/-	19.0859	µg/mL	Stressed
10	1,4-Dichlorobenzene		1,005.3	µg/mL	+/-	5.8586	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS4401V)			+/-	12.0244	µg/mL	Unstressed
	Purity 99%				+/-	19.1303	µg/mL	Stressed
11	Benzyl alcohol		1,003.3	µg/mL	+/-	5.8469	µg/mL	Gravimetric
	CAS # 100-51-6	(Lot SHBK5943)			+/-	12.0005	µg/mL	Unstressed
	Purity 99%				+/-	19.0922	µg/mL	Stressed
12	1,2-Dichlorobenzene		1,005.3	µg/mL	+/-	5.8586	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot SHBN3835)			+/-	12.0244	µg/mL	Unstressed
	Purity 99%				+/-	19.1303	µg/mL	Stressed
13	2-Methylphenol (o-cresol)		1,005.2	µg/mL	+/-	5.8576	µg/mL	Gravimetric
	CAS # 95-48-7	(Lot SHBN7598)			+/-	12.0224	µg/mL	Unstressed
	Purity 99%				+/-	19.1271	µg/mL	Stressed
14	2,2'-oxybis(1-chloropropane)		1,006.7	µg/mL	+/-	5.8664	µg/mL	Gravimetric
	CAS # 108-60-1	(Lot 12549200)			+/-	12.0403	µg/mL	Unstressed
	Purity 99%				+/-	19.1557	µg/mL	Stressed
15	Acetophenone		1,005.0	µg/mL	+/-	5.8567	µg/mL	Gravimetric
	CAS # 98-86-2	(Lot STBH8205)			+/-	12.0204	µg/mL	Unstressed
	Purity 99%				+/-	19.1240	µg/mL	Stressed
16	3-Methylphenol (m-cresol)		503.7	µg/mL	+/-	2.9351	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot STBJ0710)			+/-	6.0242	µg/mL	Unstressed
	Purity 99%				+/-	9.5842	µg/mL	Stressed
17	4-Methylphenol (p-cresol)		503.0	µg/mL	+/-	2.9312	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot SHBN1151)			+/-	6.0162	µg/mL	Unstressed
	Purity 99%				+/-	9.5715	µg/mL	Stressed
18	N-Nitroso-di-n-propylamine		1,002.7	µg/mL	+/-	5.8431	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot 2D5VJ)			+/-	11.9925	µg/mL	Unstressed
	Purity 99%				+/-	19.0796	µg/mL	Stressed
19	Hexachloroethane		1,003.3	µg/mL	+/-	5.8469	µg/mL	Gravimetric
	CAS # 67-72-1	(Lot QTORH)			+/-	12.0005	µg/mL	Unstressed
	Purity 99%				+/-	19.0922	µg/mL	Stressed
20	Nitrobenzene		1,005.8	µg/mL	+/-	5.8615	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot 10224044)			+/-	12.0304	µg/mL	Unstressed
	Purity 99%				+/-	19.1398	µg/mL	Stressed
21	Isophorone		1,004.3	µg/mL	+/-	5.8528	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKCC9506)			+/-	12.0124	µg/mL	Unstressed
	Purity 99%				+/-	19.1113	µg/mL	Stressed
22	2-Nitrophenol		1,003.2	µg/mL	+/-	5.8460	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCCB2407)			+/-	11.9985	µg/mL	Unstressed
	Purity 99%				+/-	19.0891	µg/mL	Stressed
23	2,4-Dimethylphenol		1,002.8	µg/mL	+/-	5.8440	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot XW5GK)			+/-	11.9945	µg/mL	Unstressed
	Purity 99%				+/-	19.0827	µg/mL	Stressed

24	Bis(2-chloroethoxy)methane		1,007.5	µg/mL	+/-	5.8712	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 13670200)			+/-	12.0503	µg/mL	Unstressed
	Purity 99%				+/-	19.1715	µg/mL	Stressed
25	2,4-Dichlorophenol		1,002.2	µg/mL	+/-	5.8401	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBZ6787)			+/-	11.9865	µg/mL	Unstressed
	Purity 99%				+/-	19.0700	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,003.7	µg/mL	+/-	5.8489	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBM0526)			+/-	12.0045	µg/mL	Unstressed
	Purity 99%				+/-	19.0986	µg/mL	Stressed
27	Naphthalene		1,003.3	µg/mL	+/-	5.8469	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKCH0219)			+/-	12.0005	µg/mL	Unstressed
	Purity 99%				+/-	19.0922	µg/mL	Stressed
28	2,6-Dichlorophenol		1,007.7	µg/mL	+/-	5.8722	µg/mL	Gravimetric
	CAS # 87-65-0	(Lot MKCP7682)			+/-	12.0523	µg/mL	Unstressed
	Purity 99%				+/-	19.1747	µg/mL	Stressed
29	4-Chloroaniline		1,007.7	µg/mL	+/-	5.8722	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot H24K)			+/-	12.0523	µg/mL	Unstressed
	Purity 99%				+/-	19.1747	µg/mL	Stressed
30	Hexachlorobutadiene		1,004.0	µg/mL	+/-	5.8508	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot X05J)			+/-	12.0084	µg/mL	Unstressed
	Purity 99%				+/-	19.1049	µg/mL	Stressed
31	4-Chloro-3-methylphenol		1,002.3	µg/mL	+/-	5.8411	µg/mL	Gravimetric
	CAS # 59-50-7	(Lot BCCD4461)			+/-	11.9885	µg/mL	Unstressed
	Purity 99%				+/-	19.0732	µg/mL	Stressed
32	2-Methylnaphthalene		1,009.1	µg/mL	+/-	5.8807	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBK0259)			+/-	12.0697	µg/mL	Unstressed
	Purity 96%				+/-	19.2024	µg/mL	Stressed
33	1-Methylnaphthalene		1,004.2	µg/mL	+/-	5.8518	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 5234.00-3)			+/-	12.0104	µg/mL	Unstressed
	Purity 99%				+/-	19.1081	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,007.3	µg/mL	+/-	5.8703	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot 13278000)			+/-	12.0483	µg/mL	Unstressed
	Purity 99%				+/-	19.1684	µg/mL	Stressed
35	Hexachlorocyclopentadiene		1,003.3	µg/mL	+/-	5.8469	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 0012019)			+/-	12.0005	µg/mL	Unstressed
	Purity 99%				+/-	19.0922	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,004.7	µg/mL	+/-	5.8547	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot STBJ5914)			+/-	12.0164	µg/mL	Unstressed
	Purity 99%				+/-	19.1176	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,006.8	µg/mL	+/-	5.8671	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot FHN01)			+/-	12.0418	µg/mL	Unstressed
	Purity 98%				+/-	19.1580	µg/mL	Stressed
38	2-Chloronaphthalene		1,007.0	µg/mL	+/-	5.8683	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot RPN7O)			+/-	12.0443	µg/mL	Unstressed
	Purity 99%				+/-	19.1620	µg/mL	Stressed
39	Biphenyl		1,003.7	µg/mL	+/-	5.8489	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot MKCL6515)			+/-	12.0045	µg/mL	Unstressed
	Purity 99%				+/-	19.0986	µg/mL	Stressed

40	2-Nitroaniline		1,003.7	µg/mL	+/-	5.8489	µg/mL	Gravimetric
	CAS # 88-74-4	(Lot MKCJ8895)			+/-	12.0045	µg/mL	Unstressed
	Purity 99%				+/-	19.0986	µg/mL	Stressed
41	Acenaphthylene		1,004.2	µg/mL	+/-	5.8518	µg/mL	Gravimetric
	CAS # 208-96-8	(Lot Q24W)			+/-	12.0104	µg/mL	Unstressed
	Purity 96%				+/-	19.1080	µg/mL	Stressed
42	1,3-Dinitrobenzene		1,002.7	µg/mL	+/-	5.8431	µg/mL	Gravimetric
	CAS # 99-65-0	(Lot 1-DXX-24-1)			+/-	11.9925	µg/mL	Unstressed
	Purity 99%				+/-	19.0796	µg/mL	Stressed
43	Dimethylphthalate		1,008.0	µg/mL	+/-	5.8741	µg/mL	Gravimetric
	CAS # 131-11-3	(Lot 10117699)			+/-	12.0563	µg/mL	Unstressed
	Purity 99%				+/-	19.1811	µg/mL	Stressed
44	2,6-Dinitrotoluene		1,005.3	µg/mL	+/-	5.8586	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot BCCG1833)			+/-	12.0244	µg/mL	Unstressed
	Purity 99%				+/-	19.1303	µg/mL	Stressed
45	3-Nitroaniline		1,008.7	µg/mL	+/-	5.8780	µg/mL	Gravimetric
	CAS # 99-09-2	(Lot MKCH5457)			+/-	12.0643	µg/mL	Unstressed
	Purity 99%				+/-	19.1937	µg/mL	Stressed
46	Acenaphthene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 83-32-9	(Lot MKCQ4733)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
47	2,4-Dinitrophenol		2,016.3	µg/mL	+/-	11.7231	µg/mL	Gravimetric
	CAS # 51-28-5	(Lot STBK5145-DR3)			+/-	24.1034	µg/mL	Unstressed
	Purity 99%				+/-	38.3602	µg/mL	Stressed
48	Dibenzofuran		1,002.0	µg/mL	+/-	5.8392	µg/mL	Gravimetric
	CAS # 132-64-9	(Lot MKCN1772)			+/-	11.9845	µg/mL	Unstressed
	Purity 99%				+/-	19.0669	µg/mL	Stressed
49	4-Nitrophenol		2,007.5	µg/mL	+/-	11.6718	µg/mL	Gravimetric
	CAS # 100-02-7	(Lot MKCN1089)			+/-	23.9978	µg/mL	Unstressed
	Purity 99%				+/-	38.1921	µg/mL	Stressed
50	2,4-Dinitrotoluene		1,003.8	µg/mL	+/-	5.8499	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)			+/-	12.0065	µg/mL	Unstressed
	Purity 99%				+/-	19.1018	µg/mL	Stressed
51	2,3,4,6-Tetrachlorophenol		1,002.7	µg/mL	+/-	5.8431	µg/mL	Gravimetric
	CAS # 58-90-2	(Lot PR-30126)			+/-	11.9925	µg/mL	Unstressed
	Purity 99%				+/-	19.0796	µg/mL	Stressed
52	Fluorene		1,006.8	µg/mL	+/-	5.8673	µg/mL	Gravimetric
	CAS # 86-73-7	(Lot 094650L18G)			+/-	12.0423	µg/mL	Unstressed
	Purity 99%				+/-	19.1588	µg/mL	Stressed
53	n-Hexadecane (C16)		1,004.8	µg/mL	+/-	5.8556	µg/mL	Gravimetric
	CAS # 544-76-3	(Lot SHBM4146)			+/-	12.0183	µg/mL	Unstressed
	Purity 98%				+/-	19.1207	µg/mL	Stressed
54	Diethylphthalate		1,008.2	µg/mL	+/-	5.8751	µg/mL	Gravimetric
	CAS # 84-66-2	(Lot BCCD3396)			+/-	12.0583	µg/mL	Unstressed
	Purity 99%				+/-	19.1842	µg/mL	Stressed
55	4-Chlorophenyl phenyl ether		1,005.2	µg/mL	+/-	5.8576	µg/mL	Gravimetric
	CAS # 7005-72-3	(Lot MKCQ0984)			+/-	12.0224	µg/mL	Unstressed
	Purity 99%				+/-	19.1271	µg/mL	Stressed

56	4-Nitroaniline		1,005.5	µg/mL	+/-	5.8596	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot RP220906)			+/-	12.0264	µg/mL	Unstressed
	Purity 99%				+/-	19.1335	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,012.0	µg/mL	+/-	11.6979	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot RP220915)			+/-	24.0516	µg/mL	Unstressed
	Purity 99%				+/-	38.2777	µg/mL	Stressed
58	Diphenylamine		853.5	µg/mL	+/-	4.9738	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKCH1042)			+/-	10.2084	µg/mL	Unstressed
	Purity 99%				+/-	16.2411	µg/mL	Stressed
59	Azobenzene		1,001.8	µg/mL	+/-	5.8382	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot BCCC9136)			+/-	11.9825	µg/mL	Unstressed
	Purity 99%				+/-	19.0637	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,007.2	µg/mL	+/-	5.8693	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBH6361)			+/-	12.0463	µg/mL	Unstressed
	Purity 99%				+/-	19.1652	µg/mL	Stressed
61	Hexachlorobenzene		1,006.0	µg/mL	+/-	5.8625	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot 13562400)			+/-	12.0324	µg/mL	Unstressed
	Purity 99%				+/-	19.1430	µg/mL	Stressed
62	Pentachlorophenol		2,016.7	µg/mL	+/-	11.7251	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 211229RSR)			+/-	24.1074	µg/mL	Unstressed
	Purity 99%				+/-	38.3665	µg/mL	Stressed
63	n-Octadecane (C18)		1,007.4	µg/mL	+/-	5.8709	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot UE5NG)			+/-	12.0496	µg/mL	Unstressed
	Purity 98%				+/-	19.1704	µg/mL	Stressed
64	Phenanthrene		1,002.0	µg/mL	+/-	5.8392	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKCQ2033)			+/-	11.9845	µg/mL	Unstressed
	Purity 99%				+/-	19.0669	µg/mL	Stressed
65	Anthracene		1,004.2	µg/mL	+/-	5.8518	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKCP3968)			+/-	12.0104	µg/mL	Unstressed
	Purity 99%				+/-	19.1081	µg/mL	Stressed
66	Carbazole		1,002.8	µg/mL	+/-	5.8440	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 13058900)			+/-	11.9945	µg/mL	Unstressed
	Purity 99%				+/-	19.0827	µg/mL	Stressed
67	Di-n-butylphthalate		1,001.2	µg/mL	+/-	5.8343	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKCN4337)			+/-	11.9746	µg/mL	Unstressed
	Purity 99%				+/-	19.0510	µg/mL	Stressed
68	Fluoranthene		1,005.8	µg/mL	+/-	5.8615	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKCQ4728)			+/-	12.0304	µg/mL	Unstressed
	Purity 99%				+/-	19.1398	µg/mL	Stressed
69	Pyrene		1,006.7	µg/mL	+/-	5.8664	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCCG7845)			+/-	12.0403	µg/mL	Unstressed
	Purity 99%				+/-	19.1557	µg/mL	Stressed
70	Benzyl butyl phthalate		1,008.5	µg/mL	+/-	5.8771	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot MKCN9008)			+/-	12.0623	µg/mL	Unstressed
	Purity 99%				+/-	19.1906	µg/mL	Stressed
71	Benz(a)anthracene		1,001.9	µg/mL	+/-	5.8387	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot RP220209)			+/-	11.9836	µg/mL	Unstressed
	Purity 96%				+/-	19.0654	µg/mL	Stressed

72	Chrysene		1,007.0	µg/mL	+/- 5.8683	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot 468677L08C)			+/- 12.0443	µg/mL	Unstressed
	Purity 99%				+/- 19.1620	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,004.7	µg/mL	+/- 5.8547	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKCQ3468)			+/- 12.0164	µg/mL	Unstressed
	Purity 99%				+/- 19.1176	µg/mL	Stressed
74	Di-n-octyl phthalate		1,006.5	µg/mL	+/- 5.8654	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 13651900)			+/- 12.0383	µg/mL	Unstressed
	Purity 99%				+/- 19.1525	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,001.3	µg/mL	+/- 5.8353	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot 012022B)			+/- 11.9765	µg/mL	Unstressed
	Purity 99%				+/- 19.0542	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,005.7	µg/mL	+/- 5.8605	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot 012022K)			+/- 12.0284	µg/mL	Unstressed
	Purity 99%				+/- 19.1367	µg/mL	Stressed
77	Benzo(a)pyrene		1,004.7	µg/mL	+/- 5.8547	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot Z8BKF)			+/- 12.0164	µg/mL	Unstressed
	Purity 99%				+/- 19.1176	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,002.5	µg/mL	+/- 5.8421	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot 8-URV-39-3)			+/- 11.9905	µg/mL	Unstressed
	Purity 99%				+/- 19.0764	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,007.3	µg/mL	+/- 5.8703	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/- 12.0483	µg/mL	Unstressed
	Purity 99%				+/- 19.1684	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,003.4	µg/mL	+/- 5.8471	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot PMEVE)			+/- 12.0008	µg/mL	Unstressed
	Purity 98%				+/- 19.0927	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Specific Reference Material Notes:

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.
This lot was approved even though the %D for 4,6-DN-2-MP was greater than 10%.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

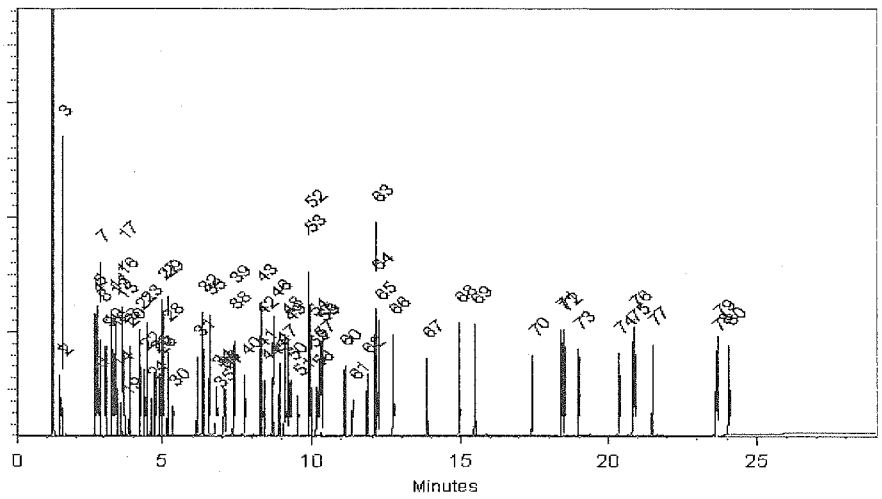
Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

Inj. Temp:
250°C

Det. Temp:
340°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 10-Oct-2022 **Balance:** B442140311

Marlina Cowan -- Operations Tech II ARM QC

Date Passed: 17-Oct-2022

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Reagent

OP_RES_LCS1_00013

OP-RESLCS1-00013

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571995 **Lot No.:** A0195772

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000 µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : September 30, 2024 **Storage:** 0°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate. **Ship:** Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L., K=2)
1	1,4-Dioxane	123-91-1	SHBN3770	99%	1,005.4 µg/mL	+/- 18.5755
2	N-Nitrosodimethylamine	62-75-9	230209JLM	99%	1,005.2 µg/mL	+/- 18.5718
3	Pyridine	110-86-1	SHBN7324	99%	2,010.1 µg/mL	+/- 37.1374
4	Phenol	108-95-2	MKCK1120	99%	1,005.1 µg/mL	+/- 18.5706
5	Aniline	62-53-3	X22F726	99%	1,005.2 µg/mL	+/- 18.5718
6	Bis(2-chloroethyl)ether	111-44-4	SHBL6942	99%	1,005.0 µg/mL	+/- 18.5681
7	n-Decane (C10)	124-18-5	SHBN8619	99%	1,004.9 µg/mL	+/- 18.5669
8	2-Chlorophenol	95-57-8	STBJ3909	99%	1,005.1 µg/mL	+/- 18.5706
9	1,3-Dichlorobenzene	541-73-1	BCCD5315	99%	1,004.9 µg/mL	+/- 18.5669
10	1,4-Dichlorobenzene	106-46-7	MKBS4401V	99%	1,005.1 µg/mL	+/- 18.5706
11	Benzyl alcohol	100-51-6	SHBK5943	99%	1,004.9 µg/mL	+/- 18.5669
12	1,2-Dichlorobenzene	95-50-1	SHBN3835	99%	1,005.1 µg/mL	+/- 18.5706
13	2-Methylphenol (o-cresol)	95-48-7	SHBN7598	99%	1,005.3 µg/mL	+/- 18.5743
14	2,2'-oxybis(1-chloropropane)	108-60-1	2-KMW-57-8	99%	1,005.3 µg/mL	+/- 18.5730
15	Acetophenone	98-86-2	STBH8205	99%	1,005.4 µg/mL	+/- 18.5755
16	3-Methylphenol (m-cresol)	108-39-4	STBJ0710	99%	502.3 µg/mL	+/- 9.2831

17	4-Methylphenol (p-cresol)	106-44-5	SHBN1151	99%	502.7	µg/mL	+/- 9.2893
18	N-Nitroso-di-n-propylamine	621-64-7	2D5VJ	99%	1,005.1	µg/mL	+/- 18.5706
19	Hexachloroethane	67-72-1	QTORH	99%	1,004.9	µg/mL	+/- 18.5656
20	Nitrobenzene	98-95-3	10224044	99%	1,004.9	µg/mL	+/- 18.5656
21	Isophorone	78-59-1	MKCC9506	99%	1,005.1	µg/mL	+/- 18.5706
22	2-Nitrophenol	88-75-5	BCCB2407	99%	1,004.9	µg/mL	+/- 18.5669
23	2,4-Dimethylphenol	105-67-9	XW5GK	99%	1,005.2	µg/mL	+/- 18.5718
24	Bis(2-chloroethoxy)methane	111-91-1	13670200	99%	1,004.9	µg/mL	+/- 18.5669
25	2,4-Dichlorophenol	120-83-2	BCBZ6787	99%	1,005.4	µg/mL	+/- 18.5755
26	1,2,4-Trichlorobenzene	120-82-1	SHBM0526	99%	1,005.2	µg/mL	+/- 18.5718
27	Naphthalene	91-20-3	MKCH0219	99%	1,004.7	µg/mL	+/- 18.5619
28	2,6-Dichlorophenol	87-65-0	MKCP7682	99%	1,005.0	µg/mL	+/- 18.5681
29	4-Chloroaniline	106-47-8	H24K	99%	1,004.9	µg/mL	+/- 18.5669
30	Hexachlorobutadiene	87-68-3	664800	99%	1,004.9	µg/mL	+/- 18.5669
31	4-Chloro-3-methylphenol	59-50-7	BCCD4461	99%	1,004.9	µg/mL	+/- 18.5656
32	2-Methylnaphthalene	91-57-6	STBK0259	96%	1,005.0	µg/mL	+/- 18.5680
33	1-Methylnaphthalene	90-12-0	5234.00-3	99%	1,005.1	µg/mL	+/- 18.5706
34	1,2,4,5-Tetrachlorobenzene	95-94-3	MKCS1444	99%	1,005.2	µg/mL	+/- 18.5718
35	Hexachlorocyclopentadiene	77-47-4	0012019	99%	1,005.2	µg/mL	+/- 18.5718
36	2,4,6-Trichlorophenol	88-06-2	STBJ5914	99%	1,004.9	µg/mL	+/- 18.5656
37	2,4,5-Trichlorophenol	95-95-4	FHN01	98%	1,005.1	µg/mL	+/- 18.5697
38	2-Chloronaphthalene	91-58-7	RPN7O	99%	1,004.9	µg/mL	+/- 18.5669
39	Biphenyl	92-52-4	MKCJ6240	99%	1,005.3	µg/mL	+/- 18.5743
40	2-Nitroaniline	88-74-4	MKCK7278	99%	1,005.0	µg/mL	+/- 18.5681
41	Acenaphthylene	208-96-8	U25W	96%	1,005.0	µg/mL	+/- 18.5680
42	1,3-Dinitrobenzene	99-65-0	1-DXX-24-1	99%	1,005.3	µg/mL	+/- 18.5743
43	Dimethylphthalate	131-11-3	10117699	99%	1,005.1	µg/mL	+/- 18.5706
44	2,6-Dinitrotoluene	606-20-2	BCCG1833	99%	1,005.0	µg/mL	+/- 18.5681
45	3-Nitroaniline	99-09-2	MKCH5457	99%	1,005.1	µg/mL	+/- 18.5706
46	Acenaphthene	83-32-9	MKCR7169	99%	1,004.7	µg/mL	+/- 18.5619
47	2,4-Dinitrophenol	51-28-5	DR221221RSR	99%	2,010.0	µg/mL	+/- 37.1362
48	Dibenzofuran	132-64-9	MKCN1772	99%	1,005.3	µg/mL	+/- 18.5743
49	4-Nitrophenol	100-02-7	MKCN1089	99%	2,009.8	µg/mL	+/- 37.1325
50	2,4-Dinitrotoluene	121-14-2	MKAA0690V	99%	1,005.2	µg/mL	+/- 18.5718
51	2,3,4,6-Tetrachlorophenol	58-90-2	PR-30126	99%	1,004.8	µg/mL	+/- 18.5644
52	Fluorene	86-73-7	10217947	99%	1,005.3	µg/mL	+/- 18.5743

53	n-Hexadecane (C16)	544-76-3	SHBQ0897	99%	1,004.9	µg/mL	+/- 18.5669
54	Diethylphthalate	84-66-2	BCCD3396	99%	1,005.2	µg/mL	+/- 18.5718
55	4-Chlorophenyl phenyl ether	7005-72-3	MKCQ0984	99%	1,005.1	µg/mL	+/- 18.5693
56	4-Nitroaniline	100-01-6	RP230111	99%	1,005.0	µg/mL	+/- 18.5681
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)	534-52-1	221221JIM	99%	2,010.3	µg/mL	+/- 37.1411
58	Diphenylamine	122-39-4	MKCH1042	99%	854.3	µg/mL	+/- 15.7844
59	Azobenzene	103-33-3	BCCC9136	99%	1,004.9	µg/mL	+/- 18.5656
60	4-Bromophenyl phenyl ether	101-55-3	STBB9729V	99%	1,004.8	µg/mL	+/- 18.5644
61	Hexachlorobenzene	118-74-1	13994200	99%	1,004.9	µg/mL	+/- 18.5669
62	Pentachlorophenol	87-86-5	RP221012	99%	2,010.1	µg/mL	+/- 37.1374
63	n-Octadecane (C18)	593-45-3	UE5NG	98%	1,005.0	µg/mL	+/- 18.5685
64	Phenanthrene	85-01-8	MKCQ2033	99%	1,004.9	µg/mL	+/- 18.5669
65	Anthracene	120-12-7	MKCP3968	99%	1,005.4	µg/mL	+/- 18.5755
66	Carbazole	86-74-8	13058900	99%	1,005.1	µg/mL	+/- 18.5693
67	Di-n-butylphthalate	84-74-2	MKCN4337	99%	1,005.3	µg/mL	+/- 18.5730
68	Fluoranthene	206-44-0	MKCQ4728	99%	1,005.1	µg/mL	+/- 18.5693
69	Pyrene	129-00-0	BCCG7845	99%	1,005.1	µg/mL	+/- 18.5706
70	Benzyl butyl phthalate	85-68-7	MKCN9008	99%	1,005.1	µg/mL	+/- 18.5693
71	Benz(a)anthracene	56-55-3	0012022BAA	99%	1,005.1	µg/mL	+/- 18.5706
72	Chrysene	218-01-9	468677R25M	99%	1,004.9	µg/mL	+/- 18.5669
73	Bis(2-ethylhexyl)phthalate	117-81-7	MKCQ3468	99%	1,005.0	µg/mL	+/- 18.5681
74	Di-n-octyl phthalate	117-84-0	13651900	99%	1,005.3	µg/mL	+/- 18.5743
75	Benzo(b)fluoranthene	205-99-2	012022B	99%	1,004.9	µg/mL	+/- 18.5669
76	Benzo(k)fluoranthene	207-08-9	012022K	99%	1,005.1	µg/mL	+/- 18.5693
77	Benzo(a)pyrene	50-32-8	J6IUE	99%	1,005.1	µg/mL	+/- 18.5706
78	Indeno(1,2,3-cd)pyrene	193-39-5	12-JKL-118-9	99%	1,005.3	µg/mL	+/- 18.5730
79	Dibenz(a,h)anthracene	53-70-3	ER032211-01	99%	1,005.1	µg/mL	+/- 18.5706
80	Benzo(g,h,i)perylene	191-24-2	PMEVE	98%	1,005.2	µg/mL	+/- 18.5721

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Specific Reference Material Notes:

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.
This lot was approved even though the %D for 4,6-DN-2-MP was greater than 10%.

Quality Confirmation Test

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

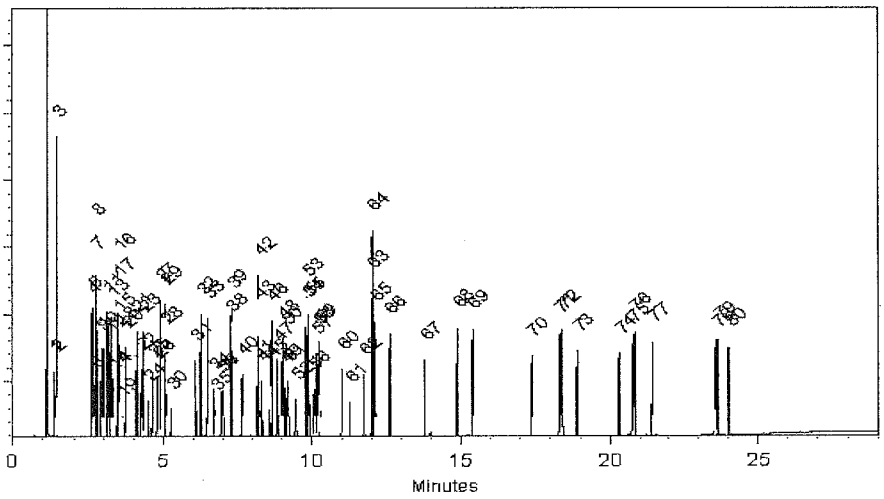
Inj. Temp:
250°C

Det. Temp:
340°C

Det. Type:
FID

Split Vent:
100 ml/min.

Inj. Vol
1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Nick Yaw - Operations Tech I

Date Mixed: 10-Mar-2023 **Balance Serial #** B442140311

Christie Mills - Operations Tech II - ARM QC

Date Passed: 05-Apr-2023

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ uncertainty} = k\sqrt{u^2_{gravimetric} + u^2_{homogeneity} + u^2_{storage\ stability} + u^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

OP_RES_LCS2_00009

OP-RPS-LCS2-00009

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569730 **Lot No.:** A0188589

Description : 8270 List 1 / Std #9

8270 List 1 / Std #9 2000 µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : February 29, 2024 **Storage:** 10°C or colder

Handling: Contains carcinogen/reproductive toxin. **Ship:** Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L. ; K=2)		
1	Benzidine	2,002.5 µg/mL	+/- 11.6427	µg/mL	Gravimetric
	CAS # 92-87-5 (Lot 220511RSR)		+/- 23.9380	µg/mL	Unstressed
	Purity 99%		+/- 38.0970	µg/mL	Stressed
2	3,3'-Dichlorobenzidine	2,002.9 µg/mL	+/- 11.6449	µg/mL	Gravimetric
	CAS # 91-94-1 (Lot 220223RSR)		+/- 23.9425	µg/mL	Unstressed
	Purity 99%		+/- 38.1041	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

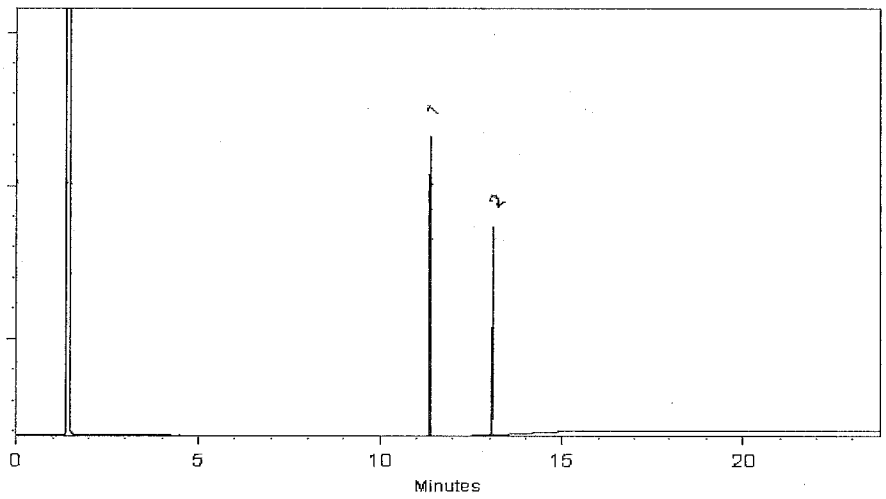
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cathleen Soltis - Mix Technician

Date Mixed: 16-Aug-2022 **Balance:** B442140311

Christie Mills - Operations Tech II - ARM QC

Date Passed: 23-Aug-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Reagent

OP_RES_LCSadd_00003

OP-RES-LCsdd-00003

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 576938 **Lot No.:** A0194427

Description : Custom 8270/625 Add-in Standard

Custom 8270/625 Add-ins Standard 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : February 28, 2026 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	N,N-Dimethylformamide	68-12-2	SHBM2285	99%	2,002.5 µg/mL	+/- 89.4802
2	alpha-Methylstyrene	98-83-9	MKBS2502V	99%	2,003.0 µg/mL	+/- 89.5026
3	a-Terpineol	98-55-5	RP221122N	96%	2,008.6 µg/mL	+/- 89.7510
4	2,3-Dichloroaniline	608-27-5	11518TI	99%	2,002.5 µg/mL	+/- 89.4802
5	n-Tetradecane (C14)	629-59-4	STBK2282	99%	2,002.6 µg/mL	+/- 89.4825
6	Diphenyl ether	101-84-8	SHBP8623	99%	2,002.7 µg/mL	+/- 89.4892
7	1-Methylphenanthrene	832-69-9	14026400	99%	2,003.3 µg/mL	+/- 89.5149
8	n-Eicosane (C20)	112-95-8	MKCN8767	97%	2,004.3 µg/mL	+/- 89.5611
9	Octachlorostyrene	29082-74-4	803929	99%	2,001.5 µg/mL	+/- 89.4333
10	n-Docosane (C22)	629-97-0	MKCQ3882	99%	2,002.6 µg/mL	+/- 89.4813

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Quality Confirmation Test

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

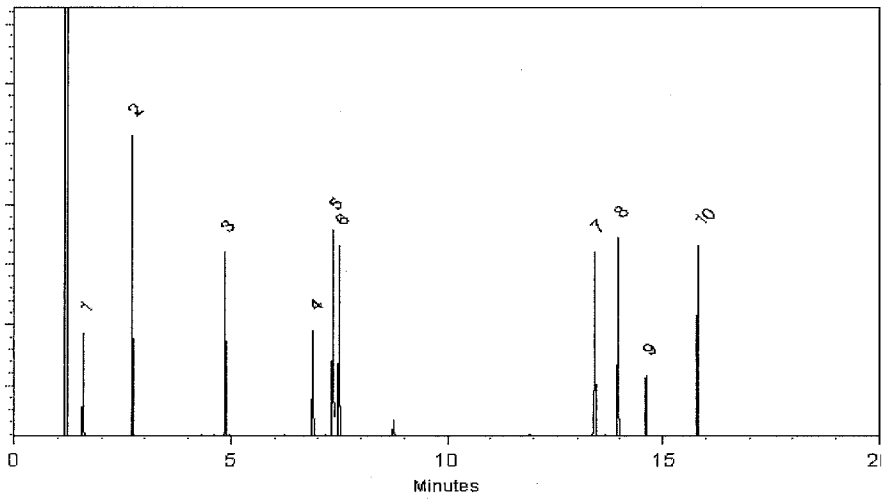
Inj. Temp:
250°C

Det. Temp:
340°C

Det. Type:
FID

Split Vent:
100 ml/min.

Inj. Vol
1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Penelope Riglin - Operations Tech I

Date Mixed: 07-Feb-2023 **Balance Serial #** 1128360905

Christie Mills - Operations Tech II - ARM QC

Date Passed: 15-Feb-2023

REVIEWED

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ uncertainty} = k\sqrt{u^2_{gravimetric} + u^2_{homogeneity} + u^2_{storage\ stability} + u^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Sample Container Check Report

Client: TRC, Engineers, Inc.
Job ID: 410-136514-1
Project/Site: RFAAP, Radford HWMU16

Sample Container Checks and Verifications

Lab Sample ID: 410-136514-1 — Client Sample ID: 16-2

Bottle Code	Check Performed	By Employee	Date	Check Result	Expected Result	Adjusted Date	Reagent Lot #	Reagent Expires	Re-check Result	Re-check Date
F	pH Check, 24hr Adjustment Confirmation Required	T7ZN	08/02/2023	<2	<2	N/A	N/A	N/A	N/A	N/A

Lab Sample ID: 410-136514-2 — Client Sample ID: 16-3

Bottle Code	Check Performed	By Employee	Date	Check Result	Expected Result	Adjusted Date	Reagent Lot #	Reagent Expires	Re-check Result	Re-check Date
F	pH Check, 24hr Adjustment Confirmation Required	T7ZN	08/02/2023	<2	<2	N/A	N/A	N/A	N/A	N/A

Lab Sample ID: 410-136514-3 — Client Sample ID: 16-5

Bottle Code	Check Performed	By Employee	Date	Check Result	Expected Result	Adjusted Date	Reagent Lot #	Reagent Expires	Re-check Result	Re-check Date
F	pH Check, 24hr Adjustment Confirmation Required	T7ZN	08/02/2023	<2	<2	N/A	N/A	N/A	N/A	N/A

Lab Sample ID: 410-136514-4 — Client Sample ID: 16WC2B

Bottle Code	Check Performed	By Employee	Date	Check Result	Expected Result	Adjusted Date	Reagent Lot #	Reagent Expires	Re-check Result	Re-check Date
F	pH Check, 24hr Adjustment Confirmation Required	T7ZN	08/02/2023	<2	<2	N/A	N/A	N/A	N/A	N/A

Lab Sample ID: 410-136514-5 — Client Sample ID: 16SPRING

Bottle Code	Check Performed	By Employee	Date	Check Result	Expected Result	Adjusted Date	Reagent Lot #	Reagent Expires	Re-check Result	Re-check Date
F	pH Check, 24hr Adjustment Confirmation Required	T7ZN	08/02/2023	<2	<2	N/A	N/A	N/A	N/A	N/A

Method 8260D

Volatile Organic Compounds (GC/MS) by Method 8260D

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories En Job No.: 410-136514-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): R-624SilMS 3 ID: 0.25 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
Trip Blank 1	410-136514-6	105	105	97	91
Trip Blank 2	410-136514-7	105	103	96	90
	MB 410-404928/7	103	103	96	93
	LCS 410-404928/4	98	99	100	93
	LCSD 410-404928/5	97	101	100	93

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	80-120
DCA = 1,2-Dichloroethane-d4 (Surr)	80-120
TOL = Toluene-d8 (Surr)	80-120
BFB = 4-Bromofluorobenzene (Surr)	80-120

Column to be used to flag recovery values

FORM II 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 5G06X06.D

Lab ID: LCS 410-404928/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
2-Propanol	150	118	78	52-144	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 5G06X07.D

Lab ID: LCSD 410-404928/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2-Propanol	150	116	77	2	30	52-144	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1

SDG No.:

Lab File ID: 5G06X09.D Lab Sample ID: MB 410-404928/7

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: 26285 Date Analyzed: 08/06/2023 12:54

GC Column: R-624SilMS 30m ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 410-404928/4	5G06X06.D	08/06/2023 11:53
	LCSD 410-404928/5	5G06X07.D	08/06/2023 12:13
Trip Blank 1	410-136514-6	5G06X12.D	08/06/2023 13:54
Trip Blank 2	410-136514-7	5G06X13.D	08/06/2023 14:14

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1

SDG No.:

Lab File ID: 5U10T01.D BFB Injection Date: 07/10/2023

Instrument ID: 26285 BFB Injection Time: 10:47

Analysis Batch No.: 395004

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.9	
75	30.0 - 60.0 % of mass 95	49.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	1.0	(1.3) 1
174	Greater than 50% of mass 95	79.0	
175	5.0 - 9.0 % of mass 174	6.0	(7.6) 1
176	95.0 - 101.0 % of mass 174	77.1	(97.6) 1
177	5.0 - 9.0 % of mass 176	5.2	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	ICIS 410-395004/16	5U10X16.D	07/10/2023	15:53
	IC 410-395004/17	5U10X17.D	07/10/2023	16:13
	IC 410-395004/18	5U10X18.D	07/10/2023	16:33
	IC 410-395004/14	5U10X24.D	07/10/2023	18:59
	IC 410-395004/15	5U10X25.D	07/10/2023	19:19
	IC 410-395004/12	5U10X26.D	07/10/2023	20:46
	IC 410-395004/13	5U10X27.D	07/10/2023	21:06
	ICV 410-395004/20	5U10X28.D	07/10/2023	22:34

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1

SDG No.:

Lab File ID: 5G06T01.D BFB Injection Date: 08/06/2023

Instrument ID: 26285 BFB Injection Time: 10:00

Analysis Batch No.: 404928

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.7	
75	30.0 - 60.0 % of mass 95	48.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	1.0	(1.1) 1
174	Greater than 50% of mass 95	91.0	
175	5.0 - 9.0 % of mass 174	7.0	(7.7) 1
176	95.0 - 101.0 % of mass 174	87.8	(96.5) 1
177	5.0 - 9.0 % of mass 176	5.8	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 410-404928/3	5G06X05.D	08/06/2023	11:33
	LCS 410-404928/4	5G06X06.D	08/06/2023	11:53
	LCSD 410-404928/5	5G06X07.D	08/06/2023	12:13
	MB 410-404928/7	5G06X09.D	08/06/2023	12:54
Trip Blank 1	410-136514-6	5G06X12.D	08/06/2023	13:54
Trip Blank 2	410-136514-7	5G06X13.D	08/06/2023	14:14

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1

SDG No.:

Sample No.: ICIS 410-395004/16 Date Analyzed: 07/10/2023 15:53

Instrument ID: 26285 GC Column: R-624SilMS 30m ID: 0.25(mm)

Lab File ID (Standard): 5U10X16.D Heated Purge: (Y/N) N

Calibration ID: 51796

		TBAd10		FB		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		574041	3.42	1286783	6.78	918889	10.52
UPPER LIMIT		1148082	3.92	2573566	7.28	1837778	11.02
LOWER LIMIT		287021	2.92	643392	6.28	459445	10.02
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 410-395004/20		580948	3.39	1275368	6.73	890463	10.50
CCVIS 410-404928/3		478611	3.35	1288233	6.77	923817	10.57

TBAd10 = t-Butyl alcohol-d10 (IS)
FB = Fluorobenzene (IS)
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1

SDG No.:

Sample No.: ICIS 410-395004/16 Date Analyzed: 07/10/2023 15:53

Instrument ID: 26285 GC Column: R-624SilMS 30m ID: 0.25(mm)

Lab File ID (Standard): 5U10X16.D Heated Purge: (Y/N) N

Calibration ID: 51796

		DCBd4					
		AREA #	RT #	#	RT #	#	RT #
INITIAL CALIBRATION MID-POINT		553355	12.51				
UPPER LIMIT		1106710	13.01				
LOWER LIMIT		276678	12.01				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 410-395004/20		521723	12.50				
CCVIS 410-404928/3		560053	12.58				

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1

SDG No.:

Sample No.: CCVIS 410-404928/3 Date Analyzed: 08/06/2023 11:33

Instrument ID: 26285 GC Column: R-624SilMS 30m ID: 0.25(mm)

Lab File ID (Standard): 5G06X05.D Heated Purge: (Y/N) N

Calibration ID: 51796

		TBAd10		FB		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		478611	3.35	1288233	6.77	923817	10.57
UPPER LIMIT		957222	3.85	2576466	7.27	1847634	11.07
LOWER LIMIT		239306	2.85	644117	6.27	461909	10.07
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 410-404928/4		470861	3.37	1259409	6.77	879593	10.57
LCSD 410-404928/5		474639	3.37	1284102	6.77	902588	10.57
MB 410-404928/7		403562	3.35	1101652	6.77	760269	10.57
410-136514-6	Trip Blank 1	335598	3.37	947358	6.77	656435	10.57
410-136514-7	Trip Blank 2	316706	3.37	932448	6.77	652370	10.57

TBAd10 = t-Butyl alcohol-d10 (IS)
TBAd10 = t-Butyl alcohol-d10 (IS)
FB = Fluorobenzene (IS)
FB = Fluorobenzene (IS)
Area Limit = 50%-200% of internal standard area
CBZd5 = Chlorobenzene-d5 (IS)
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1

SDG No.:

Sample No.: CCVIS 410-404928/3 Date Analyzed: 08/06/2023 11:33

Instrument ID: 26285 GC Column: R-624SilMS 30m ID: 0.25(mm)

Lab File ID (Standard): 5G06X05.D Heated Purge: (Y/N) N

Calibration ID: 51796

		DCBd4					
		AREA #	RT #	#	RT #	#	RT #
12/24 HOUR STD		560053	12.58				
UPPER LIMIT		1120106	13.08				
LOWER LIMIT		280027	12.08				
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 410-404928/4		548296	12.58				
LCSD 410-404928/5		560643	12.58				
MB 410-404928/7		487202	12.58				
410-136514-6	Trip Blank 1	424782	12.58				
410-136514-7	Trip Blank 2	418139	12.58				

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136514-1

SDG No.:

Client Sample ID: Trip Blank 1
Lab Sample ID: 410-136514-6

Matrix: Water
Lab File ID: 5G06X12.D

Analysis Method: 8260D
Date Collected: 07/26/2023 00:00

Sample wt/vol: 5(mL)
Date Analyzed: 08/06/2023 13:54

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 5.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 404928
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-63-0	2-Propanol	ND	cn	100	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	105		80-120
1868-53-7	Dibromofluoromethane (Surr)	105		80-120
460-00-4	4-Bromofluorobenzene (Surr)	91		80-120
2037-26-5	Toluene-d8 (Surr)	97		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\26285\20230806-90734.b\5G06X12.D
Lims ID: 410-136514-B-6
Client ID: Trip Blank 1
Sample Type: Client
Inject. Date: 06-Aug-2023 13:54:30 ALS Bottle#: 12 Worklist Smp#: 10
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090734-010
Operator ID: knk41612 Instrument ID: 26285

Method: \\chromfs\Lancaster\ChromData\26285\20230806-90734.b\MSVoa_26285a.m
Limit Group: MSV - 8260C_D
Last Update: 07-Aug-2023 09:04:40 Calib Date: 10-Jul-2023 21:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X27.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1655

First Level Reviewer: TQ4J Date: 07-Aug-2023 08:59:38

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
21 Isopropyl alcohol	45		2.969				ND	
* 28 t-Butyl alcohol-d10 (IS)	65	3.366	3.347	0.019	55	335598	250.0	
$ 50 Dibromofluoromethane (Surr)	113	5.841	5.835	0.006	93	281538	52.6	
$ 57 1,2-Dichloroethane-d4 (Surr)	102	6.316	6.310	0.006	52	59031	52.3	
* 62 Fluorobenzene (IS)	96	6.773	6.767	0.006	99	947358	50.0	
$ 80 Toluene-d8 (Surr)	98	8.919	8.919	0.000	94	833534	48.3	
* 131 Chlorobenzene-d5 (IS)	117	10.572	10.572	0.000	85	656435	50.0	
$ 144 4-Bromofluorobenzene (Surr)	95	11.657	11.651	0.006	97	312895	45.6	
* 160 1,4-Dichlorobenzene-d4	152	12.577	12.577	0.000	94	424782	50.0	

QC Flag Legend

Processing Flags

Reagents:

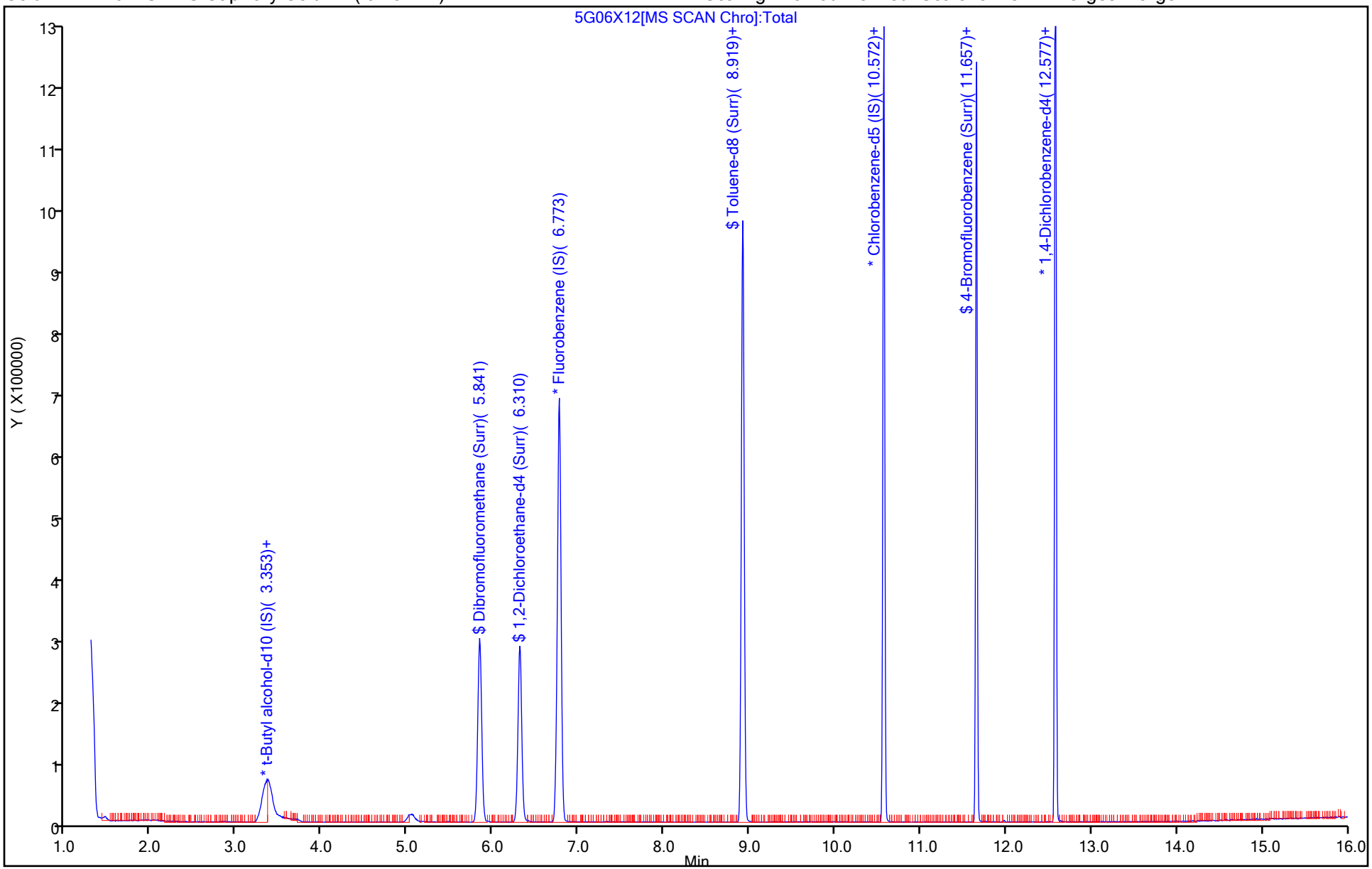
MSV_Cent_ISSS_00021 Amount Added: 5.00 Units: uL Run Reagent

Report Date: 07-Aug-2023 09:07:49 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\26285\20230806-90734.b\5G06X12.D				
Injection Date:	06-Aug-2023 13:54:30	Instrument ID:	26285	Operator ID:	knk41612
Lims ID:	410-136514-B-6	Lab Sample ID:	410-136514-6	Worklist Smp#:	10
Client ID:	Trip Blank 1				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	MSVoa_26285a	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\26285\20230806-90734.b\5G06X12.D				
Lims ID:	410-136514-B-6				
Client ID:	Trip Blank 1				
Sample Type:	Client				
Inject. Date:	06-Aug-2023 13:54:30	ALS Bottle#:	12	Worklist Smp#:	10
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0090734-010				
Operator ID:	knk41612	Instrument ID:	26285		
Method:	\\chromfs\Lancaster\ChromData\26285\20230806-90734.b\MSVoa_26285a.m				
Limit Group:	MSV - 8260C_D				
Last Update:	07-Aug-2023 09:04:40	Calib Date:	10-Jul-2023 21:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X27.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1655				

First Level Reviewer: TQ4J Date: 07-Aug-2023 08:59:38

Compound	Amount Added	Amount Recovered	% Rec.
$ 50 Dibromofluoromethane (Surr)	50.0	52.6	105.24
$ 57 1,2-Dichloroethane-d4 (Surr)	50.0	52.3	104.55
$ 80 Toluene-d8 (Surr)	50.0	48.3	96.57
$ 144 4-Bromofluorobenzene (Surr)	50.0	45.6	91.30

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136514-1

SDG No.:

Client Sample ID: Trip Blank 2
Lab Sample ID: 410-136514-7

Matrix: Water
Lab File ID: 5G06X13.D

Analysis Method: 8260D
Date Collected: 07/26/2023 00:00

Sample wt/vol: 5(mL)
Date Analyzed: 08/06/2023 14:14

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 5.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 404928
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-63-0	2-Propanol	ND	cn	100	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		80-120
1868-53-7	Dibromofluoromethane (Surr)	105		80-120
460-00-4	4-Bromofluorobenzene (Surr)	90		80-120
2037-26-5	Toluene-d8 (Surr)	96		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\26285\20230806-90734.b\5G06X13.D
Lims ID: 410-136514-B-7
Client ID: Trip Blank 2
Sample Type: Client
Inject. Date: 06-Aug-2023 14:14:30 ALS Bottle#: 13 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090734-011
Operator ID: knk41612 Instrument ID: 26285

Method: \\chromfs\Lancaster\ChromData\26285\20230806-90734.b\MSVoa_26285a.m
Limit Group: MSV - 8260C_D
Last Update: 07-Aug-2023 09:04:40 Calib Date: 10-Jul-2023 21:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X27.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1655

First Level Reviewer: TQ4J Date: 07-Aug-2023 08:59:57

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
21 Isopropyl alcohol	45		2.969				ND	
* 28 t-Butyl alcohol-d10 (IS)	65	3.366	3.347	0.019	55	316706	250.0	
$ 50 Dibromofluoromethane (Surr)	113	5.841	5.835	0.006	93	277211	52.6	
$ 57 1,2-Dichloroethane-d4 (Surr)	102	6.316	6.310	0.006	52	57380	51.6	
* 62 Fluorobenzene (IS)	96	6.774	6.767	0.007	99	932448	50.0	
$ 80 Toluene-d8 (Surr)	98	8.920	8.919	0.001	94	819604	47.8	
* 131 Chlorobenzene-d5 (IS)	117	10.572	10.572	0.000	85	652370	50.0	
$ 144 4-Bromofluorobenzene (Surr)	95	11.657	11.651	0.006	97	305551	44.9	
* 160 1,4-Dichlorobenzene-d4	152	12.577	12.577	0.000	94	418139	50.0	

QC Flag Legend
Processing Flags

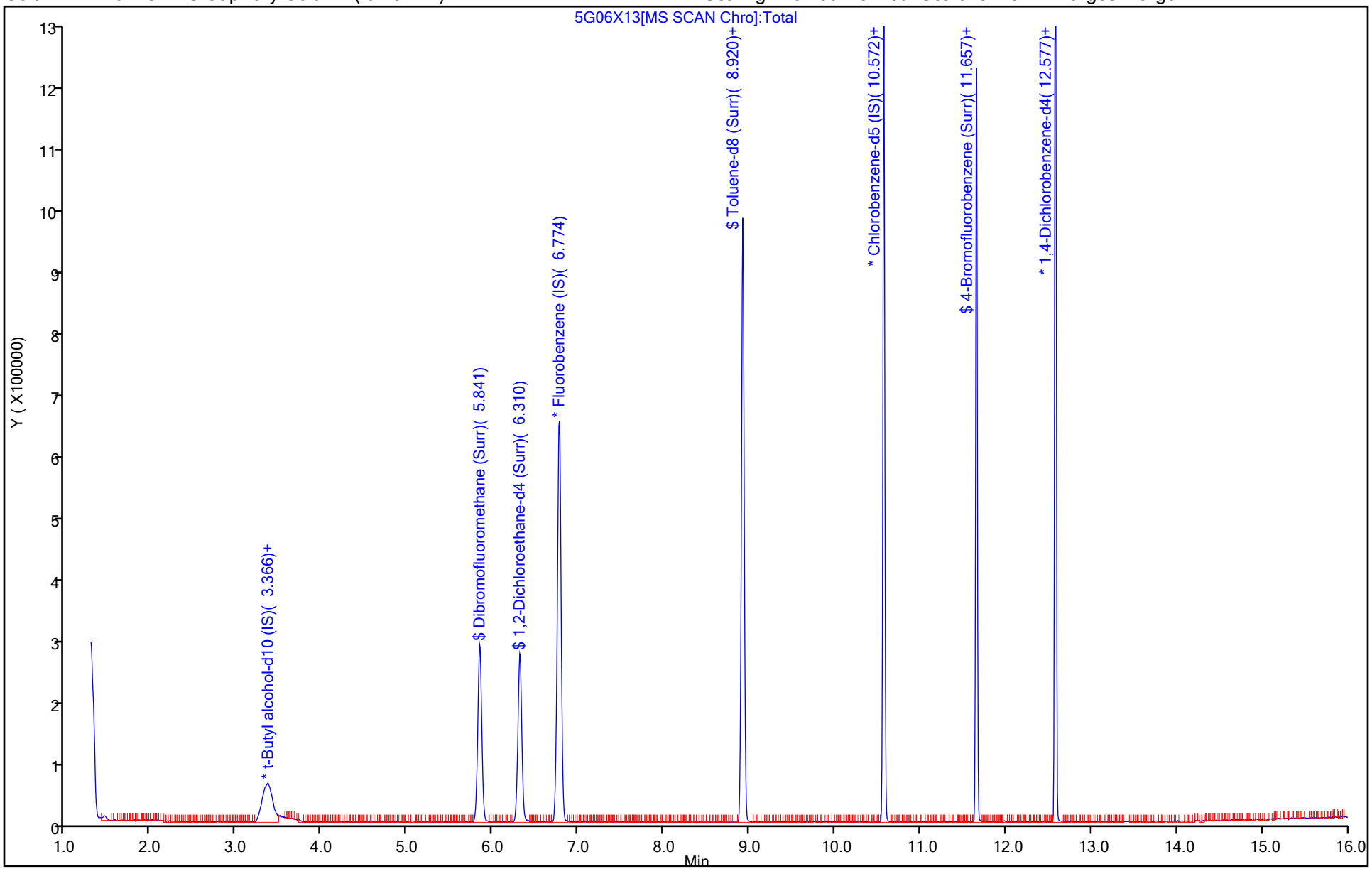
Reagents:
MSV_Cent_ISSS_00021 Amount Added: 5.00 Units: uL Run Reagent

Report Date: 07-Aug-2023 09:07:51 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\26285\20230806-90734.b\5G06X13.D				
Injection Date:	06-Aug-2023 14:14:30	Instrument ID:	26285	Operator ID:	knk41612
Lims ID:	410-136514-B-7	Lab Sample ID:	410-136514-7	Worklist Smp#:	11
Client ID:	Trip Blank 2				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	MSVoa_26285a	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\26285\20230806-90734.b\5G06X13.D
Lims ID: 410-136514-B-7
Client ID: Trip Blank 2
Sample Type: Client
Inject. Date: 06-Aug-2023 14:14:30 ALS Bottle#: 13 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090734-011
Operator ID: knk41612 Instrument ID: 26285

Method: \\chromfs\Lancaster\ChromData\26285\20230806-90734.b\MSVoa_26285a.m
Limit Group: MSV - 8260C_D
Last Update: 07-Aug-2023 09:04:40 Calib Date: 10-Jul-2023 21:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X27.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1655

First Level Reviewer: TQ4J Date: 07-Aug-2023 08:59:57

Compound	Amount Added	Amount Recovered	% Rec.
$ 50 Dibromofluoromethane (Surr)	50.0	52.6	105.28
$ 57 1,2-Dichloroethane-d4 (Surr)	50.0	51.6	103.25
$ 80 Toluene-d8 (Surr)	50.0	47.8	95.55
$ 144 4-Bromofluorobenzene (Surr)	50.0	44.9	89.71

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1 Analy Batch No.: 395004

SDG No.:

Instrument ID: 26285 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 15:53 Calibration End Date: 07/10/2023 21:06 Calibration ID: 51796

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-395004/12	5U10X26.D
Level 2	IC 410-395004/13	5U10X27.D
Level 3	IC 410-395004/14	5U10X24.D
Level 4	IC 410-395004/15	5U10X25.D
Level 5	ICIS 410-395004/16	5U10X16.D
Level 6	IC 410-395004/17	5U10X17.D
Level 7	IC 410-395004/18	5U10X18.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.3870 0.3719	0.4689 0.3983	0.4919	0.4484	0.4422	Ave		0.4298			0.1000	10.4		20.0			
Chloromethane	0.6006 0.4346	0.5088 0.4563	0.5956	0.5320	0.5020	Ave		0.5186			0.1000	12.2		20.0			
Vinyl chloride	0.4650 0.3782	0.4626 0.3985	0.5123	0.4603	0.4343	Ave		0.4445			0.1000	10.1		20.0			
1,3-Butadiene	0.6599 0.4498	0.5563 0.4775	0.6150	0.5502	0.5210	Ave		0.5471				13.4		20.0			
Bromomethane	0.3330 0.2521	0.3026 0.2394	0.3359	0.3035	0.2845	Ave		0.2930			0.1000	12.7		20.0			
Chloroethane	0.2735 0.2142	0.2711 0.2091	0.2844	0.2583	0.2450	Ave		0.2508			0.1000	11.8		20.0			
Dichlorofluoromethane	0.8372 0.6457	0.7796 0.6635	0.8602	0.7690	0.7373	Ave		0.7561			0.1000	10.7		20.0			
Trichlorofluoromethane	0.4963 0.4442	0.5567 0.4620	0.5878	0.5284	0.5142	Ave		0.5128			0.1000	9.9		20.0			
n-Pentane	0.6228 0.4510	0.4953 0.5092	0.5145	0.5071	0.4694	Ave		0.5099				10.8		20.0			
Ethyl ether	0.2277 0.2134	0.2078 0.2217	0.2692	0.2490	0.2181	Ave		0.2295				9.5		20.0			
Freon 123a	0.4053 0.3319	0.4071 0.3429	0.4426	0.4018	0.3759	Ave		0.3868				10.1		20.0			
Acrolein	1.3516 1.2288	1.1590 1.1537	1.5246	1.3614	1.1323	Ave		1.2731				11.4		20.0			
1,1-Dichloroethene	0.2514 0.2311	0.2493 0.2525	0.2794	0.2651	0.2458	Ave		0.2535			0.1000	6.0		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1 Analy Batch No.: 395004

SDG No.:

Instrument ID: 26285 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 15:53 Calibration End Date: 07/10/2023 21:06 Calibration ID: 51796

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Acetone	0.7929 0.5907	0.5916 0.5836	0.7882	0.6883	0.5870	Ave		0.6603			0.1000	14.6		20.0			
Freon 113	0.2587 0.2497	0.2850 0.2751	0.2988	0.2914	0.2745	Ave		0.2762			0.1000	6.3		20.0			
Methyl iodide	0.5423 0.4610	0.5006 0.4945	0.5589	0.5244	0.4843	Ave		0.5094				6.7		20.0			
2-Propanol	+++++ 0.5816	0.6569 0.6243	0.7477	0.6535	0.6632	Ave		0.6545				8.4		20.0			
Carbon disulfide	1.2504 1.0134	1.1141 1.0998	1.2298	1.1620	1.0614	Ave		1.1330			0.1000	7.6		20.0			
Methyl acetate	0.4554 0.4067	0.4254 0.4425	0.4818	0.4775	0.4198	Ave		0.4441			0.1000	6.5		20.0			
Allyl chloride	0.5773 0.4599	0.4579 0.4987	0.5375	0.5104	0.4578	Ave		0.4999				9.2		20.0			
Methylene Chloride	0.3736 0.2744	0.3167 0.2914	0.3352	0.3216	0.2875	Ave		0.3143			0.1000	10.8		20.0			
t-Butyl alcohol	1.3997 0.9303	1.0704 0.9442	1.1902	1.0450	1.0724	Ave		1.0931				14.7		20.0			
Acrylonitrile	0.2436 0.2007	0.2131 0.2133	0.2460	0.2384	0.2075	Ave		0.2232				8.4		20.0			
trans-1,2-Dichloroethene	0.2870 0.2531	0.2695 0.2626	0.3067	0.2866	0.2588	Ave		0.2749			0.1000	7.0		20.0			
Methyl tertiary butyl ether	0.8228 0.7360	0.7511 0.7951	0.8859	0.8488	0.7473	Ave		0.7981			0.1000	7.2		20.0			
n-Hexane	0.3147 0.3366	0.3102 0.3612	0.3328	0.3476	0.3346	Ave		0.3339				5.3		20.0			
1,1-Dichloroethane	0.5322 0.4965	0.5310 0.5204	0.6042	0.5720	0.5070	Ave		0.5376			0.2000	7.0		20.0			
Isopropyl ether	0.9536 0.8895	0.8526 0.9620	1.0137	0.9855	0.8868	Ave		0.9348				6.3		20.0			
2-Chloro-1,3-butadiene	0.3873 0.4152	0.3929 0.4505	0.4585	0.4606	0.4137	Ave		0.4255				7.2		20.0			
Ethyl t-butyl ether	0.7285 0.7567	0.6916 0.8265	0.8488	0.8215	0.7350	Ave		0.7727				7.7		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1 Analy Batch No.: 395004

SDG No.:

Instrument ID: 26285 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 15:53 Calibration End Date: 07/10/2023 21:06 Calibration ID: 51796

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
2-Butanone	0.3185 0.2862	0.2836 0.3106	0.3276	0.3231	0.2661	Ave		0.3023			0.1000	7.8		20.0			
cis-1,2-Dichloroethene	0.3359 0.2787	0.3043 0.2893	0.3382	0.3167	0.2833	Ave		0.3066			0.1000	8.0		20.0			
2,2-Dichloropropane	0.4023 0.3879	0.3926 0.4258	0.4565	0.4368	0.3935	Ave		0.4136				6.4		20.0			
Propionitrile	1.1039 1.0183	0.9970 1.0075	1.2124	1.1372	1.0385	Ave		1.0735				7.5		20.0			
Methacrylonitrile	0.1728 0.1750	0.1614 0.1879	0.1994	0.1959	0.1757	Ave		0.1812				7.6		20.0			
Bromochloromethane	0.1681 0.1397	0.1498 0.1431	0.1718	0.1601	0.1431	Ave		0.1537				8.4		20.0			
Tetrahydrofuran	0.7969 0.8229	0.7316 0.8071	0.9098	0.8743	0.8139	Ave		0.8224				6.9		20.0			
Chloroform	0.5719 0.4872	0.5185 0.5059	0.5966	0.5598	0.5029	Ave		0.5347			0.2000	7.7		20.0			
1,1,1-Trichloroethane	0.4588 0.4164	0.4471 0.4526	0.4976	0.4706	0.4319	Ave		0.4536			0.1000	5.8		20.0			
Cyclohexane	0.4222 0.4566	0.4309 0.5202	0.4893	0.4915	0.4659	Ave		0.4681			0.1000	7.5		20.0			
Carbon tetrachloride	0.4164 0.3829	0.4012 0.4140	0.4406	0.4287	0.3918	Ave		0.4108			0.1000	4.9		20.0			
1,1-Dichloropropene	0.3513 0.3644	0.3586 0.3981	0.4063	0.4023	0.3639	Ave		0.3778				6.2		20.0			
Isobutyl alcohol	0.3876 0.3491	0.3416 0.3571	0.4228	0.3760	0.4048	Ave		0.3770				8.0		20.0			
Benzene	1.1640 1.0622	1.0812 1.1416	1.2468	1.1836	1.0715	Ave		1.1359			0.5000	6.0		20.0			
1,2-Dichloroethane	0.5140 0.3950	0.4154 0.4096	0.4749	0.4524	0.4001	Ave		0.4373			0.1000	10.2		20.0			
t-Amyl methyl ether	0.6720 0.7292	0.6287 0.8003	0.7909	0.7720	0.7051	Ave		0.7283				8.8		20.0			
n-Heptane	0.3888 0.4006	0.3734 0.4350	0.3734	0.4034	0.3833	Ave		0.3940				5.5		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1 Analy Batch No.: 395004

SDG No.:

Instrument ID: 26285 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 15:53 Calibration End Date: 07/10/2023 21:06 Calibration ID: 51796

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
n-Butanol	0.1900 0.2356	0.1783 0.2577	0.2402	0.2277	0.2674	Ave		0.2281				14.5		20.0			
Trichloroethene	0.2947 0.2834	0.2780 0.3065	0.3289	0.3154	0.2863	Ave		0.2990			0.2000	6.2		20.0			
Methylcyclohexane	0.3448 0.4354	0.3686 0.4801	0.4009	0.4303	0.4278	Ave		0.4126			0.1000	11.0		20.0			
1,2-Dichloropropane	0.3028 0.2925	0.2883 0.3176	0.3324	0.3169	0.2921	Ave		0.3061			0.1000	5.4		20.0			
t-Amyl ethyl ether	0.2822 0.3651	0.2821 0.3984	0.3695	0.3777	0.3478	Ave		0.3461				13.4		20.0			
Dibromomethane	0.2185 0.1853	0.1933 0.1985	0.2173	0.2049	0.1872	Ave		0.2007				6.7		20.0			
1,4-Dioxane	0.0444 0.0532	0.0520 0.0565	0.0642	0.0608	0.0576	Ave		0.0555			0.0050	11.6		20.0			
Methyl methacrylate	0.2064 0.2404	0.1882 0.2761	0.2458	0.2400	0.2301	Ave		0.2324				12.2		20.0			
Bromodichloromethane	0.4039 0.3741	0.3523 0.4060	0.4186	0.3959	0.3675	Ave		0.3883			0.2000	6.2		20.0			
2-Nitropropane	1.4923 1.6414	1.3422 1.6446	1.7389	1.6416	1.5963	Ave		1.5854				8.2		20.0			
2-Chloroethyl vinyl ether	0.1447 0.1970	0.1298 0.2154	0.1875	0.1777	0.1785	Ave		0.1758				16.8		20.0			
cis-1,3-Dichloropropene	0.4033 0.4476	0.3602 0.5091	0.4509	0.4384	0.4202	Ave		0.4328			0.2000	10.6		20.0			
4-Methyl-2-pentanone	0.4469 0.5563	0.4584 0.5855	0.5947	0.5908	0.5176	Ave		0.5357			0.1000	11.7		20.0			
Toluene	0.9557 0.8790	0.8478 0.9484	0.9952	0.9646	0.8799	Ave		0.9244			0.4000	5.9		20.0			
trans-1,3-Dichloropropene	0.5388 0.5448	0.4555 0.6147	0.5636	0.5521	0.5224	Ave		0.5417			0.1000	8.8		20.0			
Ethyl methacrylate	0.4223 0.5584	0.4170 0.6031	0.5644	0.5536	0.5462	Ave		0.5236				14.0		20.0			
1,1,2-Trichloroethane	0.3687 0.3274	0.3223 0.3473	0.3852	0.3577	0.3317	Ave		0.3486			0.1000	6.7		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1 Analy Batch No.: 395004

SDG No.:

Instrument ID: 26285 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 15:53 Calibration End Date: 07/10/2023 21:06 Calibration ID: 51796

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Tetrachloroethene	0.4326 0.3999	0.4009 0.4241	0.4641	0.4471	0.4065	Ave		0.4250			0.2000	5.8		20.0			
1,3-Dichloropropane	0.5887 0.5300	0.4907 0.5739	0.6086	0.5746	0.5240	Ave		0.5558				7.5		20.0			
2-Hexanone	0.4245 0.5399	0.4315 0.5522	0.5724	0.5723	0.5189	Ave		0.5160			0.1000	12.2		20.0			
Dibromochloromethane	0.3993 0.4047	0.3780 0.4279	0.4507	0.4303	0.4065	Ave		0.4139				5.8		20.0			
1,2-Dibromoethane	0.4058 0.3430	0.3183 0.3678	0.3871	0.3755	0.3425	Ave		0.3628			0.1000	8.3		20.0			
Chlorobenzene	1.1215 1.0157	0.9780 1.0567	1.1582	1.0937	1.0180	Ave		1.0631			0.5000	6.1		20.0			
1-Chlorohexane	0.4121 0.4684	0.4551 0.5059	0.4961	0.4862	0.4624	Ave		0.4695				6.7		20.0			
1,1,1,2-Tetrachloroethane	0.4036 0.3943	0.3700 0.4027	0.4466	0.4328	0.4064	Ave		0.4081				6.2		20.0			
Ethylbenzene	1.6265 1.8202	1.6252 1.8948	1.9543	1.9421	1.8188	Ave		1.8117			0.1000	7.6		20.0			
m&p-Xylene	0.5800 0.6842	0.5847 0.7098	0.7505	0.7327	0.6871	Ave		0.6756			0.1000	10.1		20.0			
o-Xylene	0.5512 0.6920	0.5726 0.7227	0.7248	0.7366	0.6940	Ave		0.6706			0.3000	11.4		20.0			
Styrene	0.8508 1.0997	0.8239 1.1540	1.1283	1.1176	1.0877	Ave		1.0374			0.3000	13.4		20.0			
Bromoform	0.3875 0.3280	0.3128 0.3407	0.3773	0.3529	0.3361	Ave		0.3479			0.1000	7.7		20.0			
Isopropylbenzene	1.4442 1.8909	1.5463 1.9169	1.9723	1.9664	1.8788	Ave		1.8022			0.1000	11.9		20.0			
Cyclohexanone	0.2754 0.3310	0.2815 0.3457	0.3406	0.3417	0.3081	Ave		0.3177				9.3		20.0			
Bromobenzene	0.8047 0.7331	0.7076 0.7858	0.8078	0.7743	0.7298	Ave		0.7633				5.2		20.0			
1,1,2,2-Tetrachloroethane	1.2604 1.0998	1.0376 1.1786	1.2659	1.1993	1.1258	Ave		1.1668			0.3000	7.2		20.0			

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FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1 Analy Batch No.: 395004

SDG No.:

Instrument ID: 26285 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 15:53 Calibration End Date: 07/10/2023 21:06 Calibration ID: 51796

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
trans-1,4-Dichloro-2-butene	0.3407 0.3352	0.2986 0.3652	0.3698	0.3498	0.3297	Ave		0.3413				7.0		20.0			
1,2,3-Trichloropropane	0.3450 0.2934	0.2884 0.3034	0.3445	0.3273	0.3090	Ave		0.3159				7.4		20.0			
N-Propylbenzene	3.3101 3.8899	3.2465 3.6666	4.0778	3.9821	3.7999	Ave		3.7104				8.7		20.0			
2-Chlorotoluene	0.7228 0.7584	0.6629 0.8013	0.8174	0.7728	0.7450	Ave		0.7544				6.8		20.0			
1,3,5-Trimethylbenzene	2.0092 2.7450	2.0172 2.9800	2.6768	2.6593	2.6748	Ave		2.5375				14.8		20.0			
4-Chlorotoluene	0.6464 0.7251	0.6356 0.7766	0.7955	0.7751	0.7109	Ave		0.7236				8.8		20.0			
tert-Butylbenzene	0.3222 0.5060	0.3259 0.5563	0.4446	0.4690	0.4680	Ave		0.4417				19.9		20.0			
1,2,4-Trimethylbenzene	1.9482 2.8115	2.0569 2.9960	2.7392	2.7637	2.7112	Ave		2.5752				15.7		20.0			
sec-Butylbenzene	2.4312 3.4048	2.5956 3.4816	3.2470	3.2761	3.2472	Ave		3.0976				13.3		20.0			
1,3-Dichlorobenzene	1.6303 1.4249	1.3272 1.4877	1.6003	1.4985	1.4024	Ave		1.4816			0.6000	7.3		20.0			
p-Isopropyltoluene	1.8821 2.9068	2.0789 3.0561	2.7407	2.7627	2.7825	Ave		2.6014				17.0		20.0			
1,4-Dichlorobenzene	1.6206 1.3551	1.3530 1.4155	1.5698	1.4499	1.3470	Ave		1.4444			0.5000	7.7		20.0			
1,2,3-Trimethylbenzene	2.3487 2.8637	2.2680 3.0659	2.9396	2.8996	2.8067	Ave		2.7417				11.2		20.0			
Benzyl chloride	1.8876 2.1205	1.6548 2.2837	2.2105	2.1731	2.1036	Ave		2.0620				10.6		20.0			
1,3-Diethylbenzene	1.2353 1.6674	1.2109 1.7939	1.6222	1.6135	1.6174	Ave		1.5372				14.5		20.0			
1,4-Diethylbenzene	1.2673 1.7204	1.2821 1.8348	1.7229	1.6983	1.6825	Ave		1.6012				14.3		20.0			
n-Butylbenzene	1.1650 1.4309	1.1737 1.5497	1.4660	1.4317	1.4051	Ave		1.3746				10.7		20.0			

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CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1 Analy Batch No.: 395004

SDG No.:

Instrument ID: 26285 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 15:53 Calibration End Date: 07/10/2023 21:06 Calibration ID: 51796

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dichlorobenzene	1.6815 1.4449	1.4011 1.5069	1.6686	1.5656	1.4623	Ave		1.5330			0.4000	7.2		20.0			
1,2-Diethylbenzene	1.0197 1.3914	1.0235 1.5141	1.3683	1.3394	1.3458	Ave		1.2860				14.8		20.0			
1,2-Dibromo-3-Chloropropane	0.3517 0.3238	0.3040 0.3526	0.3592	0.3560	0.3428	Ave		0.3414			0.0500	5.9		20.0			
1,3,5-Trichlorobenzene	1.1394 0.9689	0.8681 1.0129	1.0820	0.9938	0.9590	Ave		1.0034				8.8		20.0			
1,2,4-Trichlorobenzene	1.0272 0.8770	0.7261 0.9154	0.9395	0.8968	0.8770	Ave		0.8942			0.2000	10.1		20.0			
Hexachlorobutadiene	0.4342 0.3428	0.2900 0.3598	0.3548	0.3397	0.3289	Ave		0.3500				12.5		20.0			
Naphthalene	3.0970 3.4935	2.4111 3.4251	3.5227	3.5171	3.6244	Ave		3.2987				12.9		20.0			
1,2,3-Trichlorobenzene	1.0834 0.8632	0.7760 0.9126	0.9967	0.9139	0.8951	Ave		0.9201				10.6		20.0			
2-Methylnaphthalene	1.4504 1.7494	0.8938 1.8930	1.3853	1.4919	1.7148	Ave		1.5112				21.7	*	20.0			
Dibromofluoromethane (Surr)	0.2944 0.2763	0.2922 0.2636	0.2891	0.2837	0.2776	Ave		0.2824				3.8		20.0			
1,2-Dichloroethane-d4 (Surr)	0.0602 0.0579	0.0606 0.0569	0.0610	0.0608	0.0598	Ave		0.0596				2.7		20.0			
Toluene-d8 (Surr)	1.3034 1.3094	1.3042 1.3066	1.3229	1.3292	1.3285	Ave		1.3149				0.9		20.0			
4-Bromofluorobenzene (Surr)	0.5134 0.5172	0.5367 0.5178	0.5294	0.5278	0.5124	Ave		0.5221				1.8		20.0			

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FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 395004

SDG No.:

Instrument ID: 26285 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 15:53 Calibration End Date: 07/10/2023 21:06 Calibration ID: 51796

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-395004/12	5U10X26.D
Level 2	IC 410-395004/13	5U10X27.D
Level 3	IC 410-395004/14	5U10X24.D
Level 4	IC 410-395004/15	5U10X25.D
Level 5	ICIS 410-395004/16	5U10X16.D
Level 6	IC 410-395004/17	5U10X17.D
Level 7	IC 410-395004/18	5U10X18.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	9393 1043580	46608 3286928	117598	218947	569063	1.00 100	4.00 300	10.0	20.0	50.0
Chloromethane	FB	Ave	14578 1219646	50572 3765961	142396	259778	645957	1.00 100	4.00 300	10.0	20.0	50.0
Vinyl chloride	FB	Ave	11286 1061340	45981 3289073	122465	224767	558826	1.00 100	4.00 300	10.0	20.0	50.0
1,3-Butadiene	FB	Ave	16018 1262370	55293 3940599	147031	268645	670477	1.00 100	4.00 300	10.0	20.0	50.0
Bromomethane	FB	Ave	8083 707455	30079 1975522	80300	148212	366102	1.00 100	4.00 300	10.0	20.0	50.0
Chloroethane	FB	Ave	6638 601074	26951 1725474	67991	126104	315298	1.00 100	4.00 300	10.0	20.0	50.0
Dichlorofluoromethane	FB	Ave	20320 1812011	77489 5475669	205657	375519	948721	1.00 100	4.00 300	10.0	20.0	50.0
Trichlorofluoromethane	FB	Ave	12045 1246626	55329 3812734	140524	258039	661666	1.00 100	4.00 300	10.0	20.0	50.0
n-Pentane	FB	Ave	15117 1265648	49235 4202409	122996	247631	604009	1.00 100	4.00 300	10.0	20.0	50.0
Ethyl ether	FB	Ave	5527 598889	20656 1829716	64362	121612	280710	1.00 100	4.00 300	10.0	20.0	50.0
Freon 123a	FB	Ave	9838 931419	40462 2830111	105800	196191	483745	1.00 100	4.00 300	10.0	20.0	50.0
Acrolein	TBAd 10	Ave	29337 2965860	107561 9114172	312417	594772	1300057	10.0 1000	40.0 3000	100	200	500
1,1-Dichloroethene	FB	Ave	6102 648549	24780 2083590	66787	129444	316283	1.00 100	4.00 300	10.0	20.0	50.0

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SDG No.:

Instrument ID: 26285 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 15:53 Calibration End Date: 07/10/2023 21:06 Calibration ID: 51796

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Acetone	TBAd10	Ave	3442 285126	10981 922122	32302	60142	134786	2.00 200	8.00 600	20.0	40.0	100
Freon 113	FB	Ave	6278 700748	28326 2270099	71442	142266	353241	1.00 100	4.00 300	10.0	20.0	50.0
Methyl iodide	FB	Ave	13162 1293821	49757 4081207	133613	256066	623188	1.00 100	4.00 300	10.0	20.0	50.0
2-Propanol	TBAd10	Ave	+++++ 701924	30480 2465753	76610	142752	380691	+++++ 500	20.0 1500	50.0	100	250
Carbon disulfide	FB	Ave	30350 2843947	110737 9076397	294007	567384	1365850	1.00 100	4.00 300	10.0	20.0	50.0
Methyl acetate	FB	Ave	11053 1141413	42281 3651727	115173	233147	540243	1.00 100	4.00 300	10.0	20.0	50.0
Allyl chloride	FB	Ave	14012 1290743	45509 4115373	128508	249241	589117	1.00 100	4.00 300	10.0	20.0	50.0
Methylene Chloride	FB	Ave	9069 770053	31480 2404854	80129	157048	369893	1.00 100	4.00 300	10.0	20.0	50.0
t-Butyl alcohol	TBAd10	Ave	15190 1122649	49667 3729342	121940	228255	615587	5.00 500	20.0 1500	50.0	100	250
Acrylonitrile	FB	Ave	14781 1407824	52951 4400184	147021	291012	667674	2.50 250	10.0 750	25.0	50.0	125
trans-1,2-Dichloroethene	FB	Ave	6966 710295	26787 2167579	73317	139944	333082	1.00 100	4.00 300	10.0	20.0	50.0
Methyl tertiary butyl ether	FB	Ave	19972 2065478	74654 6561618	211785	414454	961578	1.00 100	4.00 300	10.0	20.0	50.0
n-Hexane	FB	Ave	7638 944466	30830 2980545	79568	169722	430526	1.00 100	4.00 300	10.0	20.0	50.0
1,1-Dichloroethane	FB	Ave	12917 1393184	52781 4294581	144447	279314	652463	1.00 100	4.00 300	10.0	20.0	50.0
Isopropyl ether	FB	Ave	23146 2496057	84747 7939283	242354	481228	1141150	1.00 100	4.00 300	10.0	20.0	50.0
2-Chloro-1,3-butadiene	FB	Ave	9401 1165114	39056 3717692	109609	224914	532296	1.00 100	4.00 300	10.0	20.0	50.0
Ethyl t-butyl ether	FB	Ave	17682	68738	202933	401156	945742	1.00	4.00	10.0	20.0	50.0

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RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 395004

SDG No.:

Instrument ID: 26285 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 15:53 Calibration End Date: 07/10/2023 21:06 Calibration ID: 51796

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
			2123505	6821069				100	300			
2-Butanone	FB	Ave	15462 1606322	56382 5126644	156648	315550	684933	2.00 200	8.00 600	20.0	40.0	100
cis-1,2-Dichloroethene	FB	Ave	8153 782187	30250 2387344	80844	154634	364564	1.00 100	4.00 300	10.0	20.0	50.0
2,2-Dichloropropane	FB	Ave	9765 1088642	39018 3513837	109132	213312	506292	1.00 100	4.00 300	10.0	20.0	50.0
Propionitrile	TBAd 10	Ave	11980 1228878	46262 3979513	124221	248396	596127	5.00 500	20.0 1500	50.0	100	250
Methacrylonitrile	FB	Ave	10485 1227906	40107 3876796	119167	239146	565178	2.50 250	10.0 750	25.0	50.0	125
Bromochloromethane	FB	Ave	4079 392021	14893 1181111	41073	78190	184152	1.00 100	4.00 300	10.0	20.0	50.0
Tetrahydrofuran	TBAd 10	Ave	8648 993041	33949 3187960	93217	190974	467223	5.00 500	20.0 1500	50.0	100	250
Chloroform	FB	Ave	13882 1367240	51537 4175458	142639	273343	647062	1.00 100	4.00 300	10.0	20.0	50.0
1,1,1-Trichloroethane	FB	Ave	11136 1168541	44444 3734915	118949	229810	555780	1.00 100	4.00 300	10.0	20.0	50.0
Cyclohexane	FB	Ave	10248 1281322	42833 4292728	116972	240017	599529	1.00 100	4.00 300	10.0	20.0	50.0
Carbon tetrachloride	FB	Ave	10107 1074553	39880 3416816	105322	209347	504130	1.00 100	4.00 300	10.0	20.0	50.0
1,1-Dichloropropene	FB	Ave	8527 1022544	35648 3285094	97124	196423	468215	1.00 100	4.00 300	10.0	20.0	50.0
Isobutyl alcohol	TBAd 10	Ave	10515 1053203	39631 3526556	108309	205317	580949	12.5 1250	50.0 3750	125	250	625
Benzene	FB	Ave	28253 2980938	107470 9421201	298068	577959	1378772	1.00 100	4.00 300	10.0	20.0	50.0
1,2-Dichloroethane	FB	Ave	12476 1108443	41293 3380311	113525	220890	514812	1.00 100	4.00 300	10.0	20.0	50.0
t-Amyl methyl ether	FB	Ave	16311 2046373	62494 6604609	189085	376941	907340	1.00 100	4.00 300	10.0	20.0	50.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 395004

SDG No.:

Instrument ID: 26285 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 15:53 Calibration End Date: 07/10/2023 21:06 Calibration ID: 51796

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
n-Heptane	FB	Ave	9438 1124125	37117 3589780	89258	196964	493218	1.00 100	4.00 300	10.0	20.0	50.0
n-Butanol	TBAd 10	Ave	5154 710855	20689 2545113	61524	124331	383761	12.5 1250	50.0 3750	125	250	625
Trichloroethene	FB	Ave	7153 795331	27635 2529396	78640	154029	368417	1.00 100	4.00 300	10.0	20.0	50.0
Methylcyclohexane	FB	Ave	8368 1221829	36635 3962561	95838	210101	550521	1.00 100	4.00 300	10.0	20.0	50.0
1,2-Dichloropropane	FB	Ave	7350 820859	28652 2620912	79455	154748	375806	1.00 100	4.00 300	10.0	20.0	50.0
t-Amyl ethyl ether	FB	Ave	6850 1024681	28040 3287926	88326	184413	447589	1.00 100	4.00 300	10.0	20.0	50.0
Dibromomethane	FB	Ave	5303 520083	19214 1637959	51939	100039	240935	1.00 100	4.00 300	10.0	20.0	50.0
1,4-Dioxane	TBAd 10	Ave	1206 160634	6034 557741	16454	33214	82657	12.5 1250	50.0 3750	125	250	625
Methyl methacrylate	FB	Ave	5009 674504	18707 2278625	58773	117206	296141	1.00 100	4.00 300	10.0	20.0	50.0
Bromodichloromethane	FB	Ave	9803 1049785	35019 3350552	100075	193301	472852	1.00 100	4.00 300	10.0	20.0	50.0
2-Nitropropane	TBAd 10	Ave	16196 1980864	62282 6496017	178167	358574	916341	5.00 500	20.0 1500	50.0	100	250
2-Chloroethyl vinyl ether	FB	Ave	3513 552970	12903 1777833	44820	86767	229719	1.00 100	4.00 300	10.0	20.0	50.0
cis-1,3-Dichloropropene	FB	Ave	9790 1255954	35807 4201437	107805	214070	540732	1.00 100	4.00 300	10.0	20.0	50.0
4-Methyl-2-pentanone	FB	Ave	21696 3122505	91125 9664626	284334	576949	1332002	2.00 200	8.00 600	20.0	40.0	100
Toluene	CBZd 5	Ave	16282 1810438	59770 5876693	167896	331541	808541	1.00 100	4.00 300	10.0	20.0	50.0
trans-1,3-Dichloropropene	CBZd 5	Ave	9180	32113	95088	189765	479996	1.00	4.00	10.0	20.0	50.0

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 395004

SDG No.:

Instrument ID: 26285 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 15:53 Calibration End Date: 07/10/2023 21:06 Calibration ID: 51796

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
			1122017	3808666				100	300			
Ethyl methacrylate	CBZd 5	Ave	7195 1150177	29403 3736675	95223	190269	501940	1.00 100	4.00 300	10.0	20.0	50.0
1,1,2-Trichloroethane	CBZd 5	Ave	6282 674322	22726 2152265	64984	122960	304794	1.00 100	4.00 300	10.0	20.0	50.0
Tetrachloroethene	CBZd 5	Ave	7370 823611	28262 2627683	78303	153691	373574	1.00 100	4.00 300	10.0	20.0	50.0
1,3-Dichloropropane	CBZd 5	Ave	10030 1091560	34593 3555774	102670	197487	481510	1.00 100	4.00 300	10.0	20.0	50.0
2-Hexanone	CBZd 5	Ave	14465 2223887	60845 6843755	193123	393435	953701	2.00 200	8.00 600	20.0	40.0	100
Dibromochloromethane	CBZd 5	Ave	6803 833499	26649 2651626	76031	147917	373492	1.00 100	4.00 300	10.0	20.0	50.0
1,2-Dibromoethane	CBZd 5	Ave	6913 706501	22438 2279031	65302	129068	314685	1.00 100	4.00 300	10.0	20.0	50.0
Chlorobenzene	CBZd 5	Ave	19107 2091860	68954 6547740	195386	375932	935452	1.00 100	4.00 300	10.0	20.0	50.0
1-Chlorohexane	CBZd 5	Ave	7021 964678	32089 3134405	83689	167119	424888	1.00 100	4.00 300	10.0	20.0	50.0
1,1,1,2-Tetrachloroethane	CBZd 5	Ave	6876 812153	26088 2495347	75347	148778	373447	1.00 100	4.00 300	10.0	20.0	50.0
Ethylbenzene	CBZd 5	Ave	27711 3748874	114581 11740887	329704	667548	1671256	1.00 100	4.00 300	10.0	20.0	50.0
m&p-Xylene	CBZd 5	Ave	19762	82443	253227	503681	1262787	2.00	8.00	20.0	40.0	100

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 395004

SDG No.:

Instrument ID: 26285 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 15:53 Calibration End Date: 07/10/2023 21:06 Calibration ID: 51796

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
			2818555	8796645				200	600			
o-Xylene	CBZd 5	Ave	9391 1425330	40369 4477759	122275	253193	637741	1.00 100	4.00 300	10.0	20.0	50.0
Styrene	CBZd 5	Ave	14495 2265060	58085 7150503	190346	384156	999495	1.00 100	4.00 300	10.0	20.0	50.0
Bromoform	CBZd 5	Ave	6601 675648	22055 2111098	63658	121297	308877	1.00 100	4.00 300	10.0	20.0	50.0
Isopropylbenzene	CBZd 5	Ave	24605 3894597	109015 11877314	332740	675878	1726383	1.00 100	4.00 300	10.0	20.0	50.0
Cyclohexanone	TBAd 10	Ave	29884 998670	130637 3413690	174489	373122	442152	50.0 1250	200 3750	250	500	625
Bromobenzene	DCBd 4	Ave	8286 885576	31480 2718194	85111	162726	403864	1.00 100	4.00 300	10.0	20.0	50.0
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	12979 1328516	46160 4077042	133381	252053	622976	1.00 100	4.00 300	10.0	20.0	50.0
trans-1,4-Dichloro-2-butene	DCBd 4	Ave	8771 1012128	33213 3158494	97408	183794	456157	2.50 250	10.0 750	25.0	50.0	125
1,2,3-Trichloropropane	DCBd 4	Ave	3553 354407	12832 1049583	36297	68785	170966	1.00 100	4.00 300	10.0	20.0	50.0
N-Propylbenzene	DCBd 4	Ave	34086 4698837	144432 12683767	429652	836923	2102715	1.00 100	4.00 300	10.0	20.0	50.0
2-Chlorotoluene	DCBd 4	Ave	7443 916134	29493 2771878	86129	162428	412231	1.00 100	4.00 300	10.0	20.0	50.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	20690	89744	282036	558914	1480130	1.00	4.00	10.0	20.0	50.0

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 395004

SDG No.:

Instrument ID: 26285 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 15:53 Calibration End Date: 07/10/2023 21:06 Calibration ID: 51796

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
			3315797	10308615				100	300			
4-Chlorotoluene	DCBd 4	Ave	6656 875934	28276 2686528	83812	162910	393405	1.00 100	4.00 300	10.0	20.0	50.0
tert-Butylbenzene	DCBd 4	Ave	3318 611273	14499 1924505	46842	98566	258968	1.00 100	4.00 300	10.0	20.0	50.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	20062 3396146	91507 10364033	288617	580856	1500249	1.00 100	4.00 300	10.0	20.0	50.0
sec-Butylbenzene	DCBd 4	Ave	25036 4112824	115476 12043707	342113	688545	1796862	1.00 100	4.00 300	10.0	20.0	50.0
1,3-Dichlorobenzene	DCBd 4	Ave	16788 1721216	59044 5146281	168616	314950	776041	1.00 100	4.00 300	10.0	20.0	50.0
p-Isopropyltoluene	DCBd 4	Ave	19381 3511229	92487 10572064	288768	580637	1539694	1.00 100	4.00 300	10.0	20.0	50.0
1,4-Dichlorobenzene	DCBd 4	Ave	16688 1636911	60193 4896611	165400	304717	745395	1.00 100	4.00 300	10.0	20.0	50.0
1,2,3-Trimethylbenzene	DCBd 4	Ave	24186 3459192	100903 10605773	309726	609407	1553101	1.00 100	4.00 300	10.0	20.0	50.0
Benzyl chloride	DCBd 4	Ave	19438 2561493	73621 7899998	232903	456719	1164029	1.00 100	4.00 300	10.0	20.0	50.0
1,3-Diethylbenzene	DCBd 4	Ave	12721 2014110	53872 6205680	170920	339118	894974	1.00 100	4.00 300	10.0	20.0	50.0
1,4-Diethylbenzene	DCBd 4	Ave	13050 2078152	57038 6347207	181536	356936	930995	1.00 100	4.00 300	10.0	20.0	50.0
n-Butylbenzene	DCBd 4	Ave	11997	52216	154468	300898	777540	1.00	4.00	10.0	20.0	50.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 395004

SDG No.:

Instrument ID: 26285 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 15:53 Calibration End Date: 07/10/2023 21:06 Calibration ID: 51796

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
			1728454	5360969				100	300			
1,2-Dichlorobenzene	DCBd 4	Ave	17315 1745352	62333 5212831	175814	329047	809186	1.00 100	4.00 300	10.0	20.0	50.0
1,2-Diethylbenzene	DCBd 4	Ave	10500 1680704	45534 5237864	144167	281503	744717	1.00 100	4.00 300	10.0	20.0	50.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	3622 391089	13526 1219612	37847	74812	189691	1.00 100	4.00 300	10.0	20.0	50.0
1,3,5-Trichlorobenzene	DCBd 4	Ave	11733 1170420	38622 3503835	113999	208858	530687	1.00 100	4.00 300	10.0	20.0	50.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	10578 1059371	32304 3166760	98993	188489	485267	1.00 100	4.00 300	10.0	20.0	50.0
Hexachlorobutadiene	DCBd 4	Ave	4471 414128	12901 1244530	37387	71391	181986	1.00 100	4.00 300	10.0	20.0	50.0
Naphthalene	DCBd 4	Ave	31892 4219981	107269 11848336	371166	739198	2005571	1.00 100	4.00 300	10.0	20.0	50.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	11156 1042724	34523 3157031	105015	192077	495299	1.00 100	4.00 300	10.0	20.0	50.0
2-Methylnaphthalene	DCBd 4	Ave	14936 2113161	39766 6548529	145957	313545	948889	1.00 100	4.00 300	10.0	20.0	50.0
Dibromofluoromethane (Surr)	FB	Ave	357238 387667	363030 362547	345565	346265	357166	50.0 50.0	50.0 50.0	50.0	50.0	50.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	73107 81283	75351 78207	72895	74194	76902	50.0 50.0	50.0 50.0	50.0	50.0	50.0
Toluene-d8 (Surr)	CBZd 5	Ave	1110300 1348454	1149337 1349333	1115918	1142144	1220705	50.0 50.0	50.0 50.0	50.0	50.0	50.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 395004

SDG No.:

Instrument ID: 26285 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 15:53 Calibration End Date: 07/10/2023 21:06 Calibration ID: 51796

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	437380 532582	472983 534737	446545	453517	470807	50.0 50.0	50.0 50.0	50.0	50.0	50.0

Curve Type Legend
Ave = Average ISTD

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 395004

SDG No.:

Instrument ID: 26285 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 15:53 Calibration End Date: 07/10/2023 21:06 Calibration ID: 51796

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-395004/12	5U10X26.D
Level 2	IC 410-395004/13	5U10X27.D
Level 3	IC 410-395004/14	5U10X24.D
Level 4	IC 410-395004/15	5U10X25.D
Level 5	ICIS 410-395004/16	5U10X16.D
Level 6	IC 410-395004/17	5U10X17.D
Level 7	IC 410-395004/18	5U10X18.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Dichlorodifluoromethane	-10.0 -7.3	9.1	14.4	4.3	2.9	-13.5	50 30	30	30	30	30	30
Chloromethane	15.8 -12.0	-1.9	14.9	2.6	-3.2	-16.2	50 30	30	30	30	30	30
Vinyl chloride	4.6 -10.3	4.1	15.3	3.6	-2.3	-14.9	50 30	30	30	30	30	30
1,3-Butadiene	20.6 -12.7	1.7	12.4	0.6	-4.8	-17.8	50 30	30	30	30	30	30
Bromomethane	13.7 -18.3	3.3	14.6	3.6	-2.9	-14.0	50 30	30	30	30	30	30
Chloroethane	9.0 -16.6	8.1	13.4	3.0	-2.3	-14.6	50 30	30	30	30	30	30
Dichlorofluoromethane	10.7 -12.2	3.1	13.8	1.7	-2.5	-14.6	50 30	30	30	30	30	30
Trichlorofluoromethane	-3.2 -9.9	8.6	14.6	3.1	0.3	-13.4	50 30	30	30	30	30	30
n-Pentane	22.1 -0.1	-2.9	0.9	-0.5	-7.9	-11.6	50 30	30	30	30	30	30
Ethyl ether	-0.8 -3.4	-9.5	17.3	8.5	-5.0	-7.0	50 30	30	30	30	30	30
Freon 123a	4.8 -11.3	5.2	14.4	3.9	-2.8	-14.2	50 30	30	30	30	30	30
Acrolein	6.2 -9.4	-9.0	19.8	6.9	-11.1	-3.5	50 30	30	30	30	30	30
1,1-Dichloroethene	-0.8 -0.4	-1.7	10.2	4.6	-3.0	-8.8	50 30	30	30	30	30	30
Acetone	20.1 -11.6	-10.4	19.4	4.2	-11.1	-10.6	50 30	30	30	30	30	30

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 395004

SDG No.:

Instrument ID: 26285 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 15:53 Calibration End Date: 07/10/2023 21:06 Calibration ID: 51796

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Freon 113	-6.3 -0.4	3.2	8.2	5.5	-0.6	-9.6	50 30	30	30	30	30	30
Methyl iodide	6.4 -2.9	-1.7	9.7	2.9	-4.9	-9.5	50 30	30	30	30	30	30
2-Propanol	+++++ -4.6	0.4	14.2	-0.2	1.3	-11.1	 30	50	30	30	30	30
Carbon disulfide	10.4 -2.9	-1.7	8.5	2.6	-6.3	-10.6	50 30	30	30	30	30	30
Methyl acetate	2.5 -0.4	-4.2	8.5	7.5	-5.5	-8.4	50 30	30	30	30	30	30
Allyl chloride	15.5 -0.3	-8.4	7.5	2.1	-8.4	-8.0	50 30	30	30	30	30	30
Methylene Chloride	18.9 -7.3	0.8	6.6	2.3	-8.6	-12.7	50 30	30	30	30	30	30
t-Butyl alcohol	28.0 -13.6	-2.1	8.9	-4.4	-1.9	-14.9	50 30	30	30	30	30	30
Acrylonitrile	9.1 -4.5	-4.5	10.2	6.8	-7.0	-10.1	50 30	30	30	30	30	30
trans-1,2-Dichloroethene	4.4 -4.5	-2.0	11.6	4.3	-5.8	-7.9	50 30	30	30	30	30	30
Methyl tertiary butyl ether	3.1 -0.4	-5.9	11.0	6.3	-6.4	-7.8	50 30	30	30	30	30	30
n-Hexane	-5.8 8.2	-7.1	-0.3	4.1	0.2	0.8	50 30	30	30	30	30	30
1,1-Dichloroethane	-1.0 -3.2	-1.2	12.4	6.4	-5.7	-7.7	50 30	30	30	30	30	30
Isopropyl ether	2.0 2.9	-8.8	8.4	5.4	-5.1	-4.9	50 30	30	30	30	30	30
2-Chloro-1,3-butadiene	-9.0 5.9	-7.7	7.7	8.2	-2.8	-2.4	50 30	30	30	30	30	30
Ethyl t-butyl ether	-5.7 7.0	-10.5	9.9	6.3	-4.9	-2.1	50 30	30	30	30	30	30
2-Butanone	5.4 2.8	-6.2	8.4	6.9	-11.9	-5.3	50 30	30	30	30	30	30
cis-1,2-Dichloroethene	9.5 -5.7	-0.7	10.3	3.3	-7.6	-9.1	50 30	30	30	30	30	30
2,2-Dichloropropane	-2.7 2.9	-5.1	10.4	5.6	-4.9	-6.2	50 30	30	30	30	30	30

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 395004

SDG No.:

Instrument ID: 26285 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 15:53 Calibration End Date: 07/10/2023 21:06 Calibration ID: 51796

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Propionitrile	2.8 -6.2	-7.1	12.9	5.9	-3.3	-5.1	50 30	30	30	30	30	30
Methacrylonitrile	-4.6 3.7	-10.9	10.1	8.1	-3.0	-3.4	50 30	30	30	30	30	30
Bromochloromethane	9.4 -6.9	-2.5	11.8	4.2	-6.9	-9.1	50 30	30	30	30	30	30
Tetrahydrofuran	-3.1 -1.9	-11.0	10.6	6.3	-1.0	0.1	50 30	30	30	30	30	30
Chloroform	7.0 -5.4	-3.0	11.6	4.7	-6.0	-8.9	50 30	30	30	30	30	30
1,1,1-Trichloroethane	1.2 -0.2	-1.4	9.7	3.8	-4.8	-8.2	50 30	30	30	30	30	30
Cyclohexane	-9.8 11.1	-7.9	4.5	5.0	-0.5	-2.5	50 30	30	30	30	30	30
Carbon tetrachloride	1.4 0.8	-2.3	7.2	4.4	-4.6	-6.8	50 30	30	30	30	30	30
1,1-Dichloropropene	-7.0 5.4	-5.1	7.5	6.5	-3.7	-3.6	50 30	30	30	30	30	30
Isobutyl alcohol	2.8 -5.3	-9.4	12.2	-0.3	7.4	-7.4	50 30	30	30	30	30	30
Benzene	2.5 0.5	-4.8	9.8	4.2	-5.7	-6.5	50 30	30	30	30	30	30
1,2-Dichloroethane	17.5 -6.3	-5.0	8.6	3.4	-8.5	-9.7	50 30	30	30	30	30	30
t-Amyl methyl ether	-7.7 9.9	-13.7	8.6	6.0	-3.2	0.1	50 30	30	30	30	30	30
n-Heptane	-1.3 10.4	-5.2	-5.2	2.4	-2.7	1.7	50 30	30	30	30	30	30
n-Butanol	-16.7 13.0	-21.8	5.3	-0.2	17.2	3.3	50 30	30	30	30	30	30
Trichloroethene	-1.5 2.5	-7.0	10.0	5.5	-4.3	-5.2	50 30	30	30	30	30	30
Methylcyclohexane	-16.4 16.4	-10.7	-2.8	4.3	3.7	5.5	50 30	30	30	30	30	30
1,2-Dichloropropane	-1.1 3.8	-5.8	8.6	3.5	-4.6	-4.4	50 30	30	30	30	30	30
t-Amyl ethyl ether	-18.5 15.1	-18.5	6.7	9.1	0.5	5.5	50 30	30	30	30	30	30

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 395004

SDG No.:

Instrument ID: 26285 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 15:53 Calibration End Date: 07/10/2023 21:06 Calibration ID: 51796

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Dibromomethane	8.9 -1.1	-3.7	8.2	2.1	-6.7	-7.7	50 30	30	30	30	30	30
1,4-Dioxane	-20.0 1.7	-6.4	15.6	9.5	3.7	-4.2	50 30	30	30	30	30	30
Methyl methacrylate	-11.2 18.8	-19.0	5.8	3.3	-1.0	3.4	50 30	30	30	30	30	30
Bromodichloromethane	4.0 4.6	-9.3	7.8	1.9	-5.4	-3.7	50 30	30	30	30	30	30
2-Nitropropane	-5.9 3.7	-15.3	9.7	3.5	0.7	3.5	50 30	30	30	30	30	30
2-Chloroethyl vinyl ether	-17.7 22.5	-26.2	6.6	1.1	1.5	12.1	50 30	30	30	30	30	30
cis-1,3-Dichloropropene	-6.8 17.6	-16.8	4.2	1.3	-2.9	3.4	50 30	30	30	30	30	30
4-Methyl-2-pentanone	-16.6 9.3	-14.4	11.0	10.3	-3.4	3.8	50 30	30	30	30	30	30
Toluene	3.4 2.6	-8.3	7.7	4.3	-4.8	-4.9	50 30	30	30	30	30	30
trans-1,3-Dichloropropene	-0.5 13.5	-15.9	4.1	1.9	-3.6	0.6	50 30	30	30	30	30	30
Ethyl methacrylate	-19.3 15.2	-20.3	7.8	5.7	4.3	6.7	50 30	30	30	30	30	30
1,1,2-Trichloroethane	5.8 -0.4	-7.5	10.5	2.6	-4.9	-6.1	50 30	30	30	30	30	30
Tetrachloroethene	1.8 -0.2	-5.7	9.2	5.2	-4.3	-5.9	50 30	30	30	30	30	30
1,3-Dichloropropane	5.9 3.3	-11.7	9.5	3.4	-5.7	-4.6	50 30	30	30	30	30	30
2-Hexanone	-17.7 7.0	-16.4	10.9	10.9	0.6	4.6	50 30	30	30	30	30	30
Dibromochloromethane	-3.5 3.4	-8.7	8.9	4.0	-1.8	-2.2	50 30	30	30	30	30	30
1,2-Dibromoethane	11.8 1.4	-12.3	6.7	3.5	-5.6	-5.5	50 30	30	30	30	30	30
Chlorobenzene	5.5 -0.6	-8.0	8.9	2.9	-4.2	-4.5	50 30	30	30	30	30	30
1-Chlorohexane	-12.2 7.8	-3.0	5.7	3.6	-1.5	-0.2	50 30	30	30	30	30	30

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 395004

SDG No.:

Instrument ID: 26285 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 15:53 Calibration End Date: 07/10/2023 21:06 Calibration ID: 51796

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
1,1,1,2-Tetrachloroethane	-1.1 -1.3	-9.3	9.4	6.1	-0.4	-3.4	50 30	30	30	30	30	30
Ethylbenzene	-10.2 4.6	-10.3	7.9	7.2	0.4	0.5	50 30	30	30	30	30	30
m&p-Xylene	-14.2 5.1	-13.5	11.1	8.5	1.7	1.3	50 30	30	30	30	30	30
o-Xylene	-17.8 7.8	-14.6	8.1	9.9	3.5	3.2	50 30	30	30	30	30	30
Styrene	-18.0 11.2	-20.6	8.8	7.7	4.8	6.0	50 30	30	30	30	30	30
Bromoform	11.4 -2.1	-10.1	8.5	1.4	-3.4	-5.7	50 30	30	30	30	30	30
Isopropylbenzene	-19.9 6.4	-14.2	9.4	9.1	4.2	4.9	50 30	30	30	30	30	30
Cyclohexanone	-13.3 8.8	-11.4	7.2	7.5	-3.0	4.2	50 30	30	30	30	30	30
Bromobenzene	5.4 2.9	-7.3	5.8	1.4	-4.4	-4.0	50 30	30	30	30	30	30
1,1,2,2-Tetrachloroethane	8.0 1.0	-11.1	8.5	2.8	-3.5	-5.7	50 30	30	30	30	30	30
trans-1,4-Dichloro-2-butene	-0.2 7.0	-12.5	8.4	2.5	-3.4	-1.8	50 30	30	30	30	30	30
1,2,3-Trichloropropane	9.2 -3.9	-8.7	9.1	3.6	-2.2	-7.1	50 30	30	30	30	30	30
N-Propylbenzene	-10.8 -1.2	-12.5	9.9	7.3	2.4	4.8	50 30	30	30	30	30	30
2-Chlorotoluene	-4.2 6.2	-12.1	8.4	2.4	-1.2	0.5	50 30	30	30	30	30	30
1,3,5-Trimethylbenzene	-20.8 17.4	-20.5	5.5	4.8	5.4	8.2	50 30	30	30	30	30	30
4-Chlorotoluene	-10.7 7.3	-12.2	9.9	7.1	-1.7	0.2	50 30	30	30	30	30	30
tert-Butylbenzene	-27.1 25.9	-26.2	0.6	6.2	5.9	14.6	50 30	30	30	30	30	30
1,2,4-Trimethylbenzene	-24.3 16.3	-20.1	6.4	7.3	5.3	9.2	50 30	30	30	30	30	30
sec-Butylbenzene	-21.5 12.4	-16.2	4.8	5.8	4.8	9.9	50 30	30	30	30	30	30

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 395004

SDG No.:

Instrument ID: 26285 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 15:53 Calibration End Date: 07/10/2023 21:06 Calibration ID: 51796

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
1,3-Dichlorobenzene	10.0 0.4	-10.4	8.0	1.1	-5.3	-3.8	50 30	30	30	30	30	30
p-Isopropyltoluene	-27.7 17.5	-20.1	5.4	6.2	7.0	11.7	50 30	30	30	30	30	30
1,4-Dichlorobenzene	12.2 -2.0	-6.3	8.7	0.4	-6.7	-6.2	50 30	30	30	30	30	30
1,2,3-Trimethylbenzene	-14.3 11.8	-17.3	7.2	5.8	2.4	4.4	50 30	30	30	30	30	30
Benzyl chloride	-8.5 10.8	-19.7	7.2	5.4	2.0	2.8	50 30	30	30	30	30	30
1,3-Diethylbenzene	-19.6 16.7	-21.2	5.5	5.0	5.2	8.5	50 30	30	30	30	30	30
1,4-Diethylbenzene	-20.9 14.6	-19.9	7.6	6.1	5.1	7.4	50 30	30	30	30	30	30
n-Butylbenzene	-15.2 12.7	-14.6	6.7	4.2	2.2	4.1	50 30	30	30	30	30	30
1,2-Dichlorobenzene	9.7 -1.7	-8.6	8.8	2.1	-4.6	-5.7	50 30	30	30	30	30	30
1,2-Diethylbenzene	-20.7 17.7	-20.4	6.4	4.2	4.6	8.2	50 30	30	30	30	30	30
1,2-Dibromo-3-Chloropropane	3.0 3.3	-11.0	5.2	4.3	0.4	-5.2	50 30	30	30	30	30	30
1,3,5-Trichlorobenzene	13.5 0.9	-13.5	7.8	-1.0	-4.4	-3.4	50 30	30	30	30	30	30
1,2,4-Trichlorobenzene	14.9 2.4	-18.8	5.1	0.3	-1.9	-1.9	50 30	30	30	30	30	30
Hexachlorobutadiene	24.0 2.8	-17.2	1.4	-3.0	-6.0	-2.1	50 30	30	30	30	30	30
Naphthalene	-6.1 3.8	-26.9	6.8	6.6	9.9	5.9	50 30	30	30	30	30	30
1,2,3-Trichlorobenzene	17.7 -0.8	-15.7	8.3	-0.7	-2.7	-6.2	50 30	30	30	30	30	30
2-Methylnaphthalene	-4.0 25.3	-40.9 *	-8.3	-1.3	13.5	15.8	50 30	30	30	30	30	30
Dibromofluoromethane (Surr)	4.2 -6.7	3.5	2.4	0.4	-1.7	-2.2	50 30	30	30	30	30	30
1,2-Dichloroethane-d4 (Surr)	1.1 -4.6	1.8	2.3	2.0	0.3	-2.8	50 30	30	30	30	30	30

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 395004

SDG No.:

Instrument ID: 26285 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 15:53 Calibration End Date: 07/10/2023 21:06 Calibration ID: 51796

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Toluene-d8 (Surr)	-0.9 -0.6	-0.8	0.6	1.1	1.0	-0.4	50 30	30	30	30	30	30
4-Bromofluorobenzene (Surr)	-1.7 -0.8	2.8	1.4	1.1	-1.9	-0.9	50 30	30	30	30	30	30

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X26.D
Lims ID: IC v1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 10-Jul-2023 20:46:30 ALS Bottle#: 25 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 410-0088512-012
Misc. Info.: IC STD1 1
Operator ID: CLM27445 Instrument ID: 26285
Sublist: chrom-MSVoa_26285a*sub38

Method: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\MSVoa_26285a.m
Limit Group: MSV - 8260C_D
Last Update: 11-Jul-2023 00:49:00 Calib Date: 10-Jul-2023 21:06:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X27.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1619

First Level Reviewer: K4WN Date: 10-Jul-2023 21:26:09

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
3 Dichlorodifluoromethane	85	1.561	1.579	-0.018	94	9393	1.00	0.9004	
4 Chloromethane	50	1.720	1.738	-0.018	98	14578	1.00	1.16	
5 Vinyl chloride	62	1.817	1.823	-0.006	75	11286	1.00	1.05	
6 Butadiene	39	1.817	1.829	-0.012	96	16018	1.00	1.21	
8 Bromomethane	94	2.085	2.091	-0.006	94	8083	1.00	1.14	
9 Chloroethane	64	2.140	2.146	-0.006	94	6638	1.00	1.09	
10 Dichlorofluoromethane	67	2.335	2.354	-0.019	97	20320	1.00	1.11	
11 Trichlorofluoromethane	101	2.402	2.402	0.000	65	12045	1.00	0.9677	
12 Pentane	43	2.390	2.408	-0.018	95	15117	1.00	1.22	
13 Ethyl ether	59	2.543	2.573	-0.030	92	5527	1.00	0.99	
15 1,2-Dichloro-1,1,2-trifluoroetha	67	2.628	2.664	-0.036	89	9838	1.00	1.05	M
16 Acrolein	56	2.683	2.707	-0.024	98	29337	10.0	10.6	
17 1,1-Dichloroethene	96	2.805	2.829	-0.024	94	6102	1.00	0.99	
18 Acetone	58	2.841	2.847	-0.006	95	3442	2.00	2.40	
19 1,1,2-Trichloro-1,2,2-trifluoroe	101	2.835	2.872	-0.037	58	6278	1.00	0.9366	
20 Iodomethane	142	2.957	2.994	-0.037	98	13162	1.00	1.06	
21 Isopropyl alcohol	45	2.969	3.012	-0.043	30	11821	5.00	8.32	
22 Carbon disulfide	76	3.036	3.073	-0.037	100	30350	1.00	1.10	M
25 Methyl acetate	43	3.152	3.177	-0.025	96	11053	1.00	1.03	
26 3-Chloro-1-propene	41	3.164	3.195	-0.031	89	14012	1.00	1.15	
27 Methylene Chloride	84	3.323	3.359	-0.036	67	9069	1.00	1.19	
* 28 t-Butyl alcohol-d10 (IS)	65	3.366	3.402	-0.036	55	542635	250.0	250.0	
29 2-Methyl-2-propanol	59	3.457	3.500	-0.043	56	15190	5.00	6.40	M
30 Acrylonitrile	53	3.579	3.615	-0.036	98	14781	2.50	2.73	
31 trans-1,2-Dichloroethene	96	3.634	3.676	-0.042	92	6966	1.00	1.04	
32 Methyl tert-butyl ether	73	3.664	3.695	-0.031	82	19972	1.00	1.03	
33 Hexane	57	4.006	4.054	-0.048	94	7638	1.00	0.9424	
34 1,1-Dichloroethane	63	4.225	4.274	-0.049	90	12917	1.00	0.9899	
36 Isopropyl ether	45	4.298	4.347	-0.049	96	23146	1.00	1.02	
37 2-Chloro-1,3-butadiene	53	4.347	4.384	-0.037	92	9401	1.00	0.9102	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
39 Tert-butyl ethyl ether	59	4.847	4.908	-0.061	93	17682	1.00	0.9428	
40 2-Butanone (MEK)	43	5.085	5.121	-0.036	90	15462	2.00	2.11	
41 cis-1,2-Dichloroethene	96	5.091	5.133	-0.042	81	8153	1.00	1.10	
42 2,2-Dichloropropane	77	5.103	5.152	-0.049	58	9765	1.00	0.9727	
44 Propionitrile	54	5.158	5.213	-0.055	97	11980	5.00	5.14	
46 Methacrylonitrile	67	5.377	5.426	-0.049	89	10485	2.50	2.38	
47 Chlorobromomethane	128	5.438	5.475	-0.037	95	4079	1.00	1.09	
48 Tetrahydrofuran	71	5.451	5.493	-0.042	92	8648	5.00	4.84	
49 Chloroform	83	5.597	5.639	-0.042	94	13882	1.00	1.07	
$ 50 Dibromofluoromethane (Surr)	113	5.816	5.865	-0.049	93	357238	50.0	52.1	
51 1,1,1-Trichloroethane	97	5.822	5.871	-0.049	65	11136	1.00	1.01	
52 Cyclohexane	56	5.914	5.969	-0.055	70	10248	1.00	0.9020	
53 Carbon tetrachloride	117	6.030	6.078	-0.048	80	10107	1.00	1.01	
54 1,1-Dichloropropene	75	6.048	6.091	-0.043	95	8527	1.00	0.9298	
S 55 1,2-Dichloroethene, Total	100				0			2.14	
56 Isobutyl alcohol	41	6.280	6.310	-0.030	54	10515	12.5	12.8	
$ 57 1,2-Dichloroethane-d4 (Surr)	102	6.286	6.328	-0.042	66	73107	50.0	50.5	
58 Benzene	78	6.310	6.353	-0.043	94	28253	1.00	1.02	
59 1,2-Dichloroethane	62	6.389	6.432	-0.043	97	12476	1.00	1.18	
61 Tert-amyl methyl ether	73	6.517	6.578	-0.061	91	16311	1.00	0.9227	
* 62 Fluorobenzene (IS)	96	6.737	6.780	-0.043	98	1213596	50.0	50.0	
63 n-Heptane	43	6.774	6.816	-0.042	89	9438	1.00	0.9870	
64 n-Butanol	56	7.188	7.225	-0.037	73	5154	12.5	10.4	
65 Trichloroethene	95	7.243	7.279	-0.036	95	7153	1.00	0.9855	a
67 Methylcyclohexane	83	7.542	7.584	-0.042	87	8368	1.00	0.8357	
68 1,2-Dichloropropane	63	7.584	7.615	-0.031	49	7350	1.00	0.9894	
69 2-ethoxy-2-methyl butane	87	7.609	7.651	-0.042	89	6850	1.00	0.8154	
70 Dibromomethane	93	7.688	7.724	-0.036	95	5303	1.00	1.09	
72 1,4-Dioxane	88	7.718	7.724	-0.006	26	1206	12.5	10.0	M
71 Methyl methacrylate	69	7.700	7.737	-0.037	85	5009	1.00	0.8879	
75 Dichlorobromomethane	83	7.944	7.980	-0.036	96	9803	1.00	1.04	
76 2-Nitropropane	41	8.231	8.267	-0.036	98	16196	5.00	4.71	
77 2-Chloroethyl vinyl ether	63	8.346	8.377	-0.031	87	3513	1.00	0.8232	M
78 cis-1,3-Dichloropropene	75	8.523	8.560	-0.037	92	9790	1.00	0.9319	
79 4-Methyl-2-pentanone (MIBK)	43	8.730	8.767	-0.037	98	21696	2.00	1.67	
$ 80 Toluene-d8 (Surr)	98	8.865	8.901	-0.036	94	1110300	50.0	49.6	
81 Toluene	92	8.956	8.986	-0.030	98	16282	1.00	1.03	
82 trans-1,3-Dichloropropene	75	9.273	9.303	-0.030	95	9180	1.00	0.99	
83 Ethyl methacrylate	69	9.364	9.395	-0.031	88	7195	1.00	0.8066	
84 1,1,2-Trichloroethane	97	9.499	9.529	-0.030	93	6282	1.00	1.06	
85 Tetrachloroethene	166	9.590	9.614	-0.024	95	7370	1.00	1.02	
86 1,3-Dichloropropane	76	9.675	9.706	-0.031	94	10030	1.00	1.06	
88 2-Hexanone	43	9.761	9.785	-0.024	98	14465	2.00	1.65	
90 Chlorodibromomethane	129	9.907	9.937	-0.030	93	6803	1.00	0.9647	
130 Ethylene Dibromide	107	10.017	10.047	-0.030	91	6913	1.00	1.12	
S 129 1,3-Dichloropropene, Total	100				0			1.93	
* 131 Chlorobenzene-d5 (IS)	117	10.504	10.523	-0.019	87	851847	50.0	50.0	
132 Chlorobenzene	112	10.529	10.553	-0.024	96	19107	1.00	1.05	
133 1-Chlorohexane	91	10.535	10.553	-0.018	60	7021	1.00	0.8778	
134 1,1,1,2-Tetrachloroethane	131	10.626	10.645	-0.019	90	6876	1.00	0.9890	
135 Ethylbenzene	91	10.639	10.657	-0.018	98	27711	1.00	0.8978	
136 m-Xylene & p-Xylene	106	10.767	10.779	-0.012	99	19762	2.00	1.72	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
137 o-Xylene	106	11.114	11.126	-0.012	96	9391	1.00	0.8220	
138 Styrene	104	11.132	11.145	-0.012	95	14495	1.00	0.8201	a
S 139 Xylenes, Total	106				0			2.54	
140 Bromoform	173	11.285	11.303	-0.018	94	6601	1.00	1.11	
141 Isopropylbenzene	105	11.437	11.449	-0.012	96	24605	1.00	0.8013	
143 Cyclohexanone	55	11.504	11.516	-0.012	95	29884	50.0	43.3	
$ 144 4-Bromofluorobenzene (Surr)	95	11.577	11.596	-0.019	90	437380	50.0	49.2	
145 Bromobenzene	156	11.693	11.711	-0.018	96	8286	1.00	1.05	
146 1,1,2,2-Tetrachloroethane	83	11.699	11.711	-0.012	94	12979	1.00	1.08	
147 trans-1,4-Dichloro-2-butene	53	11.724	11.742	-0.018	89	8771	2.50	2.50	
148 1,2,3-Trichloropropane	110	11.736	11.754	-0.018	84	3553	1.00	1.09	
149 N-Propylbenzene	91	11.785	11.797	-0.012	99	34086	1.00	0.8921	
150 2-Chlorotoluene	126	11.858	11.870	-0.012	96	7443	1.00	0.9581	
151 1,3,5-Trimethylbenzene	105	11.931	11.943	-0.012	93	20690	1.00	0.7918	
152 4-Chlorotoluene	126	11.955	11.968	-0.013	98	6656	1.00	0.8933	
154 tert-Butylbenzene	134	12.175	12.193	-0.018	94	3318	1.00	0.7294	
156 1,2,4-Trimethylbenzene	105	12.224	12.236	-0.012	97	20062	1.00	0.7565	
157 sec-Butylbenzene	105	12.346	12.358	-0.012	95	25036	1.00	0.7849	
158 1,3-Dichlorobenzene	146	12.443	12.455	-0.012	98	16788	1.00	1.10	
159 4-Isopropyltoluene	119	12.468	12.474	-0.006	95	19381	1.00	0.7235	
* 160 1,4-Dichlorobenzene-d4	152	12.498	12.510	-0.012	96	514881	50.0	50.0	
161 1,4-Dichlorobenzene	146	12.516	12.528	-0.012	94	16688	1.00	1.12	
162 1,2,3-Trimethylbenzene	105	12.535	12.547	-0.012	97	24186	1.00	0.8566	
163 Benzyl chloride	91	12.602	12.614	-0.012	98	19438	1.00	0.9154	
164 1,3-Diethylbenzene	119	12.675	12.681	-0.006	96	12721	1.00	0.8036	
168 p-Diethylbenzene	119	12.748	12.754	-0.006	92	13050	1.00	0.7915	
166 n-Butylbenzene	92	12.766	12.772	-0.006	97	11997	1.00	0.8475	
167 1,2-Dichlorobenzene	146	12.785	12.797	-0.012	97	17315	1.00	1.10	
165 o-diethylbenzene	119	12.815	12.827	-0.012	96	10500	1.00	0.7929	
169 1,2-Dibromo-3-Chloropropane	75	13.345	13.351	-0.006	76	3622	1.00	1.03	
171 1,3,5-Trichlorobenzene	180	13.473	13.479	-0.006	96	11733	1.00	1.14	
172 1,2,4-Trichlorobenzene	180	13.906	13.912	-0.006	92	10578	1.00	1.15	
173 Hexachlorobutadiene	225	13.992	14.004	-0.012	95	4471	1.00	1.24	
174 Naphthalene	128	14.083	14.089	-0.006	98	31892	1.00	0.9389	
175 1,2,3-Trichlorobenzene	180	14.229	14.235	-0.006	95	11156	1.00	1.18	
176 2-Methylnaphthalene	142	14.821	14.827	-0.006	93	14936	1.00	0.9598	
S 187 Total Diethylbenzene	1				0			2.39	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_4ppbEE_00541	Amount Added: 12.50	Units: mL	
MSV_Cent_ISSS_00016	Amount Added: 5.00	Units: uL	Run Reagent

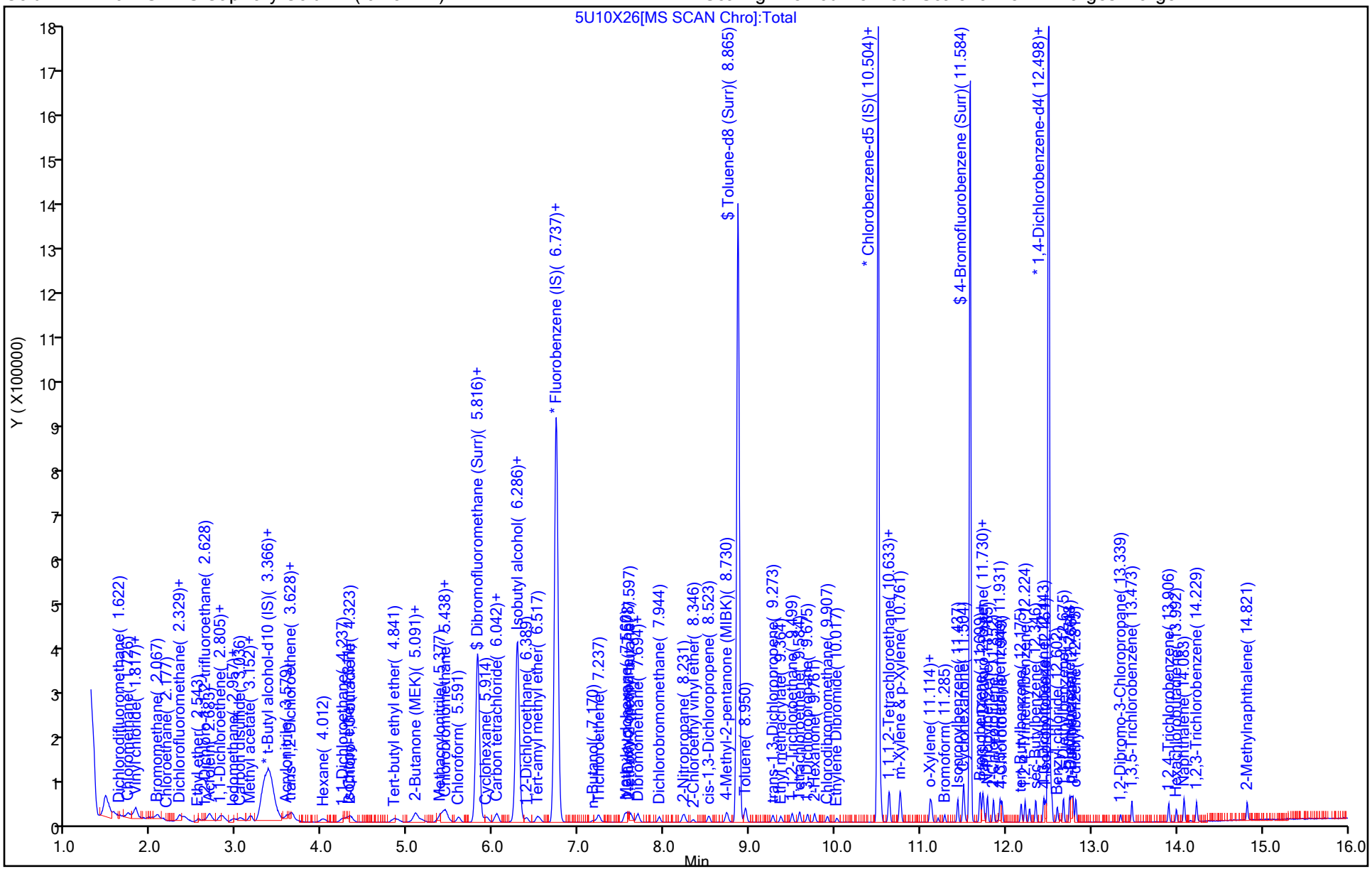
Report Date: 11-Jul-2023 00:49:01 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X26.D

Injection Date:	10-Jul-2023 20:46:30	Instrument ID:	26285	Operator ID:	CLM27445
Lims ID:	IC v1			Worklist Smp#:	12
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	MSVoa_26285a	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

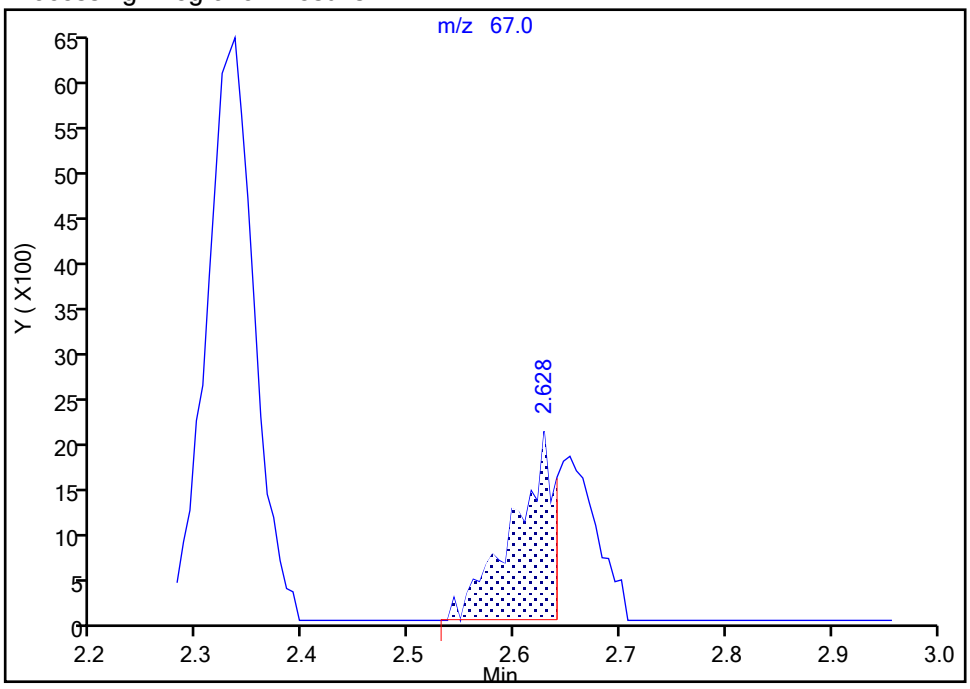
Data File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X26.D
Injection Date: 10-Jul-2023 20:46:30 Instrument ID: 26285
Lims ID: IC v1
Client ID:
Operator ID: CLM27445 ALS Bottle#: 25 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVoa_26285a Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

15 1,2-Dichloro-1,1,2-trifluoroetha, CAS: 354-23-4

Signal: 1

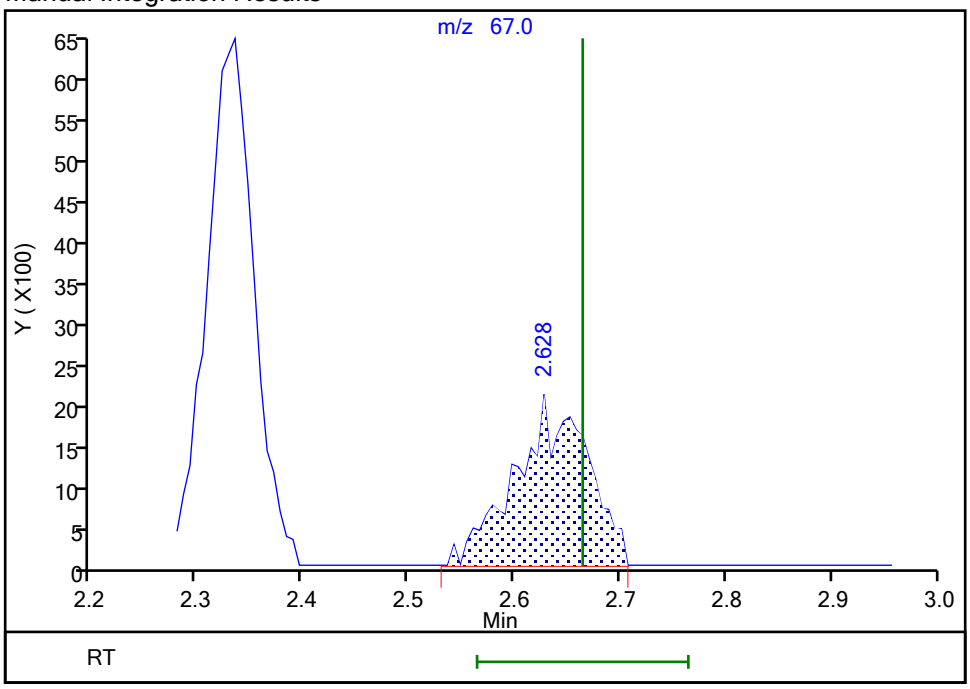
Processing Integration Results

RT: 2.63
Area: 5633
Amount: 1.000000
Amount Units: ug/l



Manual Integration Results

RT: 2.63
Area: 9838
Amount: 1.047928
Amount Units: ug/l



Reviewer: K4WN, 10-Jul-2023 21:25:04 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

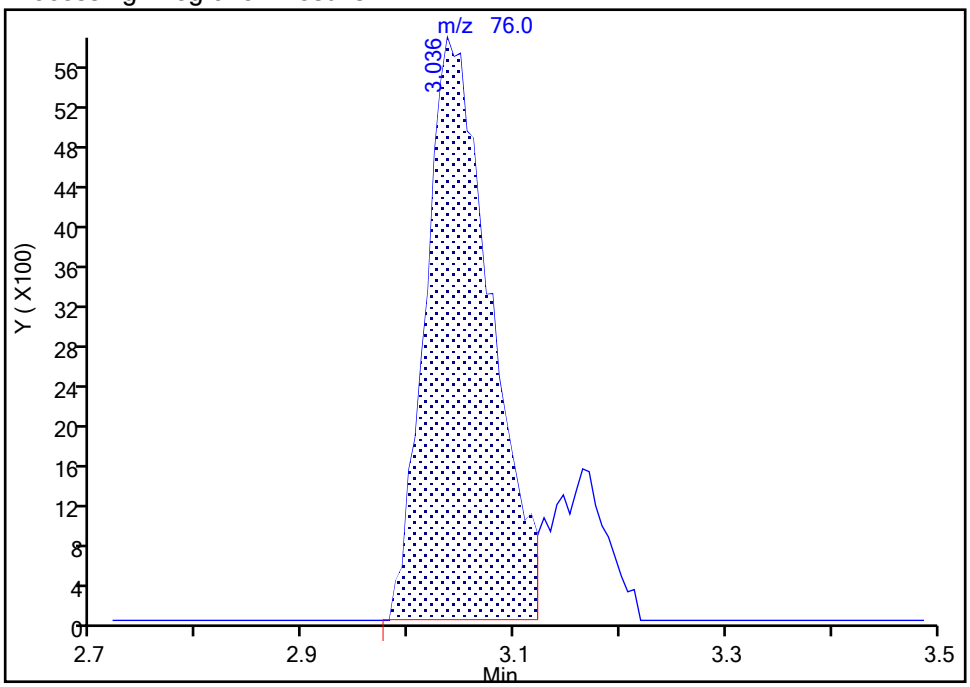
Data File:	\\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X26.D				
Injection Date:	10-Jul-2023 20:46:30	Instrument ID:	26285		
Lims ID:	IC v1				
Client ID:					
Operator ID:	CLM27445	ALS Bottle#:	25	Worklist Smp#:	12
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVoa_26285a	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

22 Carbon disulfide, CAS: 75-15-0

Signal: 1

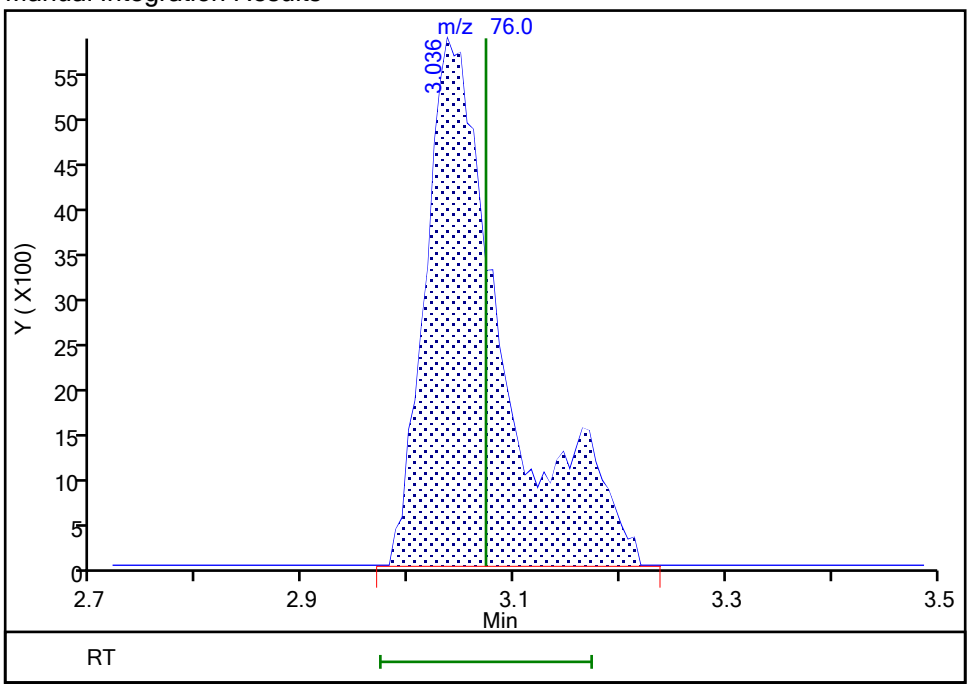
Processing Integration Results

RT: 3.04
Area: 25088
Amount: 1.000000
Amount Units: ug/l



Manual Integration Results

RT: 3.04
Area: 30350
Amount: 1.103641
Amount Units: ug/l



Reviewer: K4WN, 10-Jul-2023 21:25:16 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

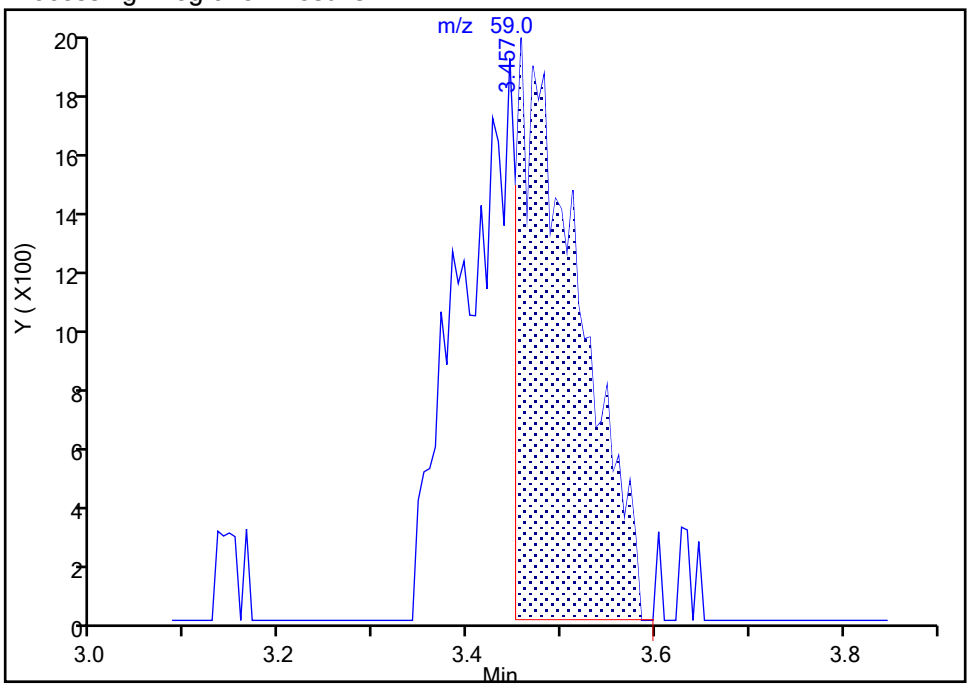
Data File:	\\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X26.D				
Injection Date:	10-Jul-2023 20:46:30	Instrument ID:	26285		
Lims ID:	IC v1				
Client ID:					
Operator ID:	CLM27445	ALS Bottle#:	25	Worklist Smp#:	12
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVoa_26285a	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

29 2-Methyl-2-propanol, CAS: 75-65-0

Signal: 1

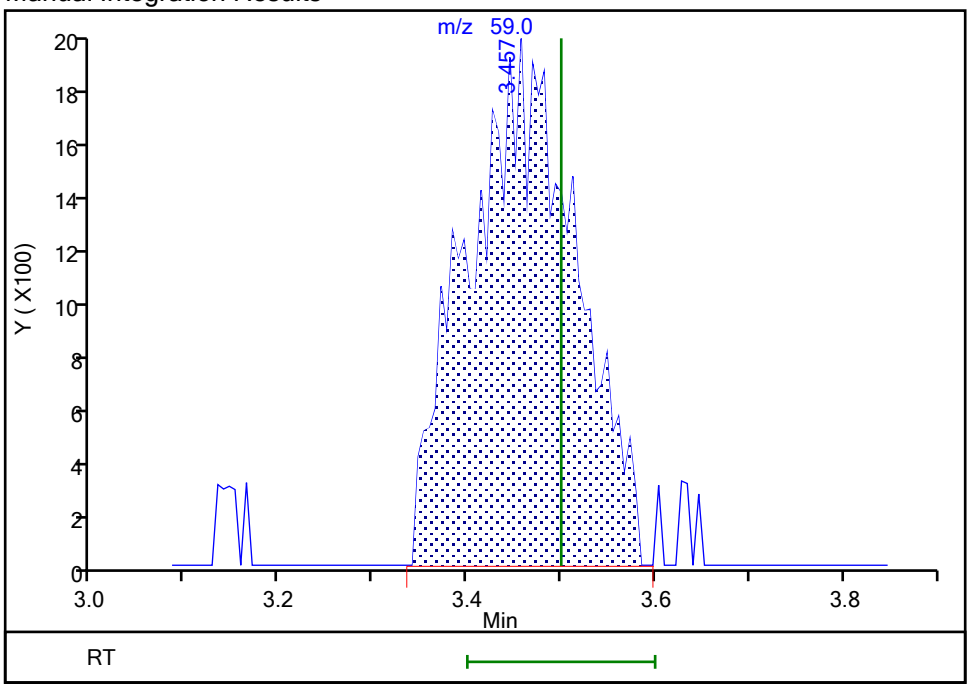
Processing Integration Results

RT: 3.46
Area: 8585
Amount: 5.000000
Amount Units: ug/l



Manual Integration Results

RT: 3.46
Area: 15190
Amount: 6.401963
Amount Units: ug/l



Reviewer: K4WN, 10-Jul-2023 21:25:23 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

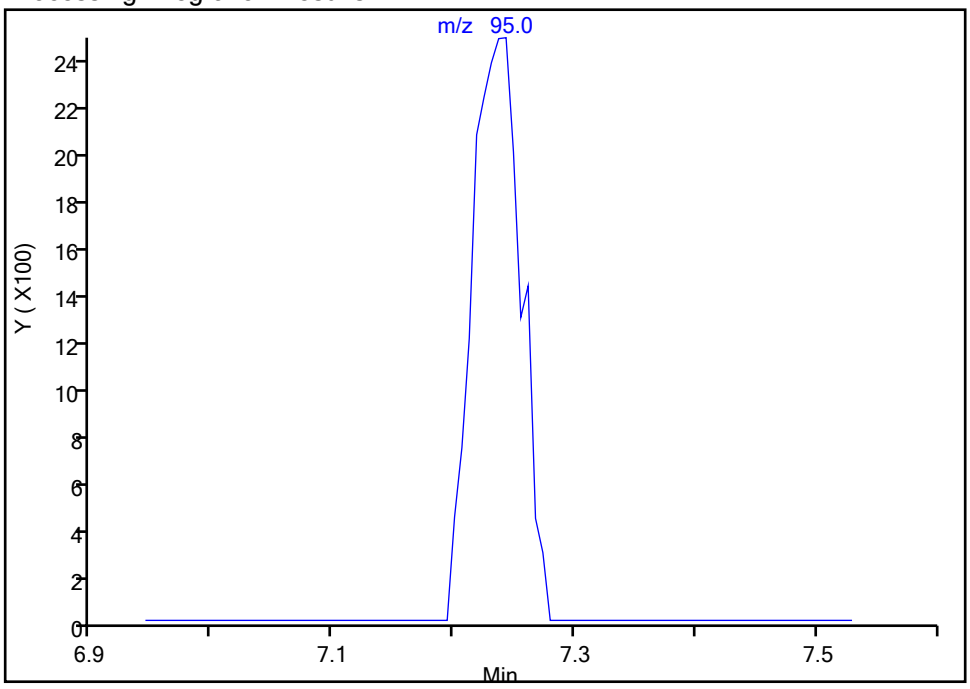
Data File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X26.D
Injection Date: 10-Jul-2023 20:46:30 Instrument ID: 26285
Lims ID: IC v1
Client ID:
Operator ID: CLM27445 ALS Bottle#: 25 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVoa_26285a Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

65 Trichloroethene, CAS: 79-01-6

Signal: 1

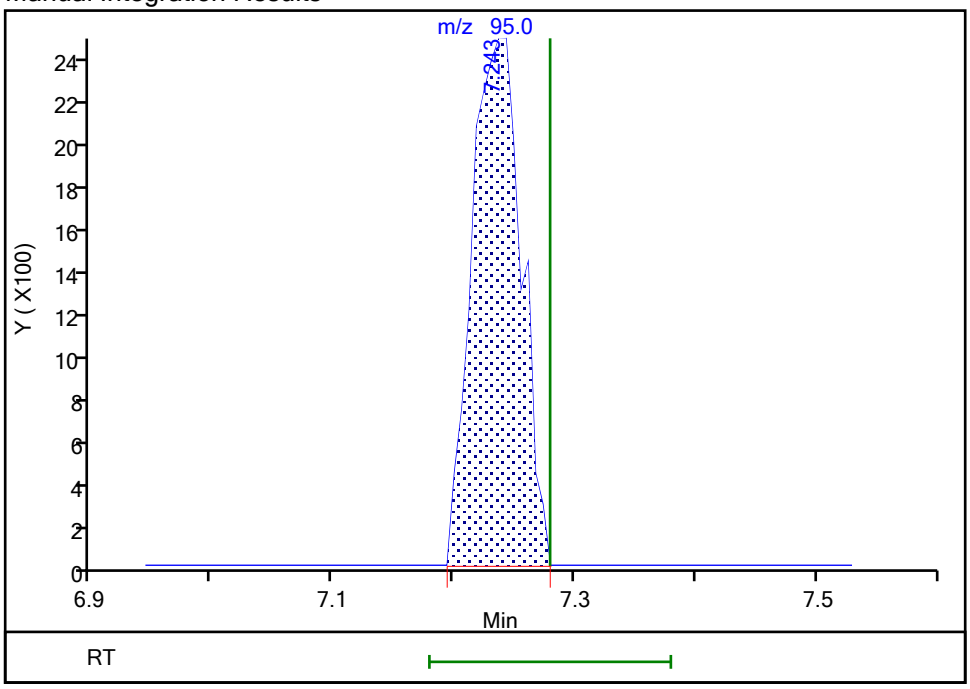
Not Detected
Expected RT: 7.28

Processing Integration Results



Manual Integration Results

RT: 7.24
Area: 7153
Amount: 0.985475
Amount Units: ug/l



Reviewer: K4WN, 10-Jul-2023 21:26:02 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

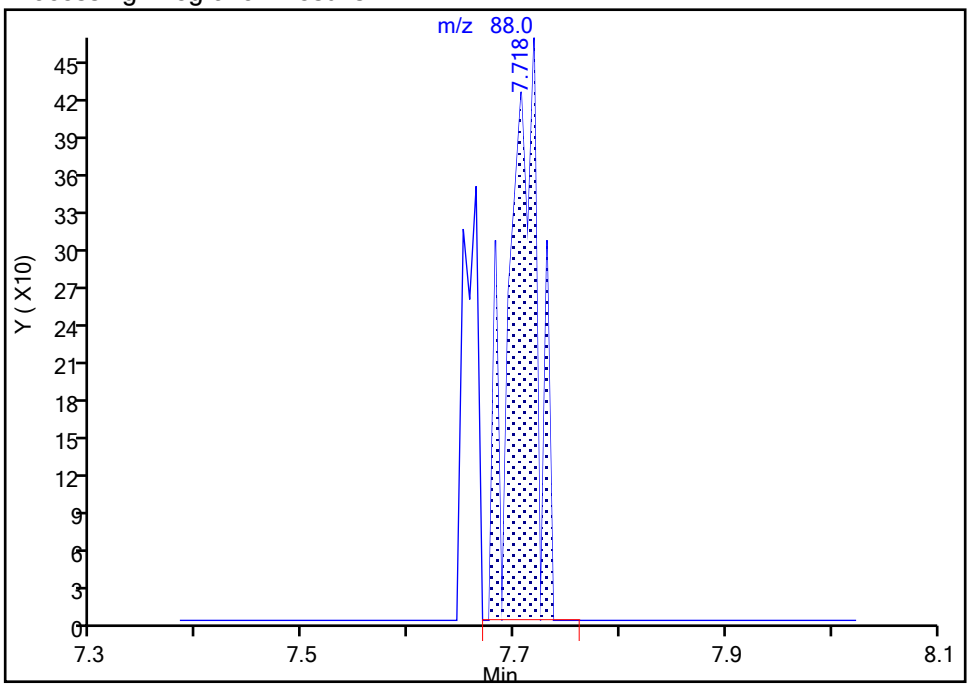
Data File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X26.D
Injection Date: 10-Jul-2023 20:46:30 Instrument ID: 26285
Lims ID: IC v1
Client ID:
Operator ID: CLM27445 ALS Bottle#: 25 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVoa_26285a Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

72 1,4-Dioxane, CAS: 123-91-1

Signal: 1

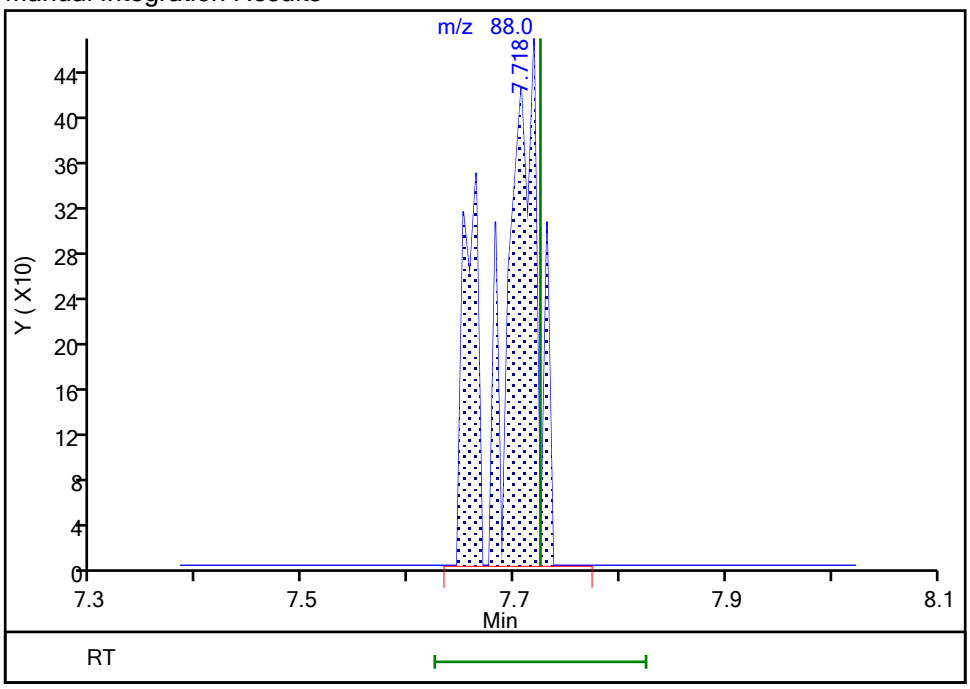
Processing Integration Results

RT: 7.72
Area: 873
Amount: 12.500000
Amount Units: ug/l



Manual Integration Results

RT: 7.72
Area: 1206
Amount: 10.002225
Amount Units: ug/l



Reviewer: K4WN, 10-Jul-2023 21:25:38 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

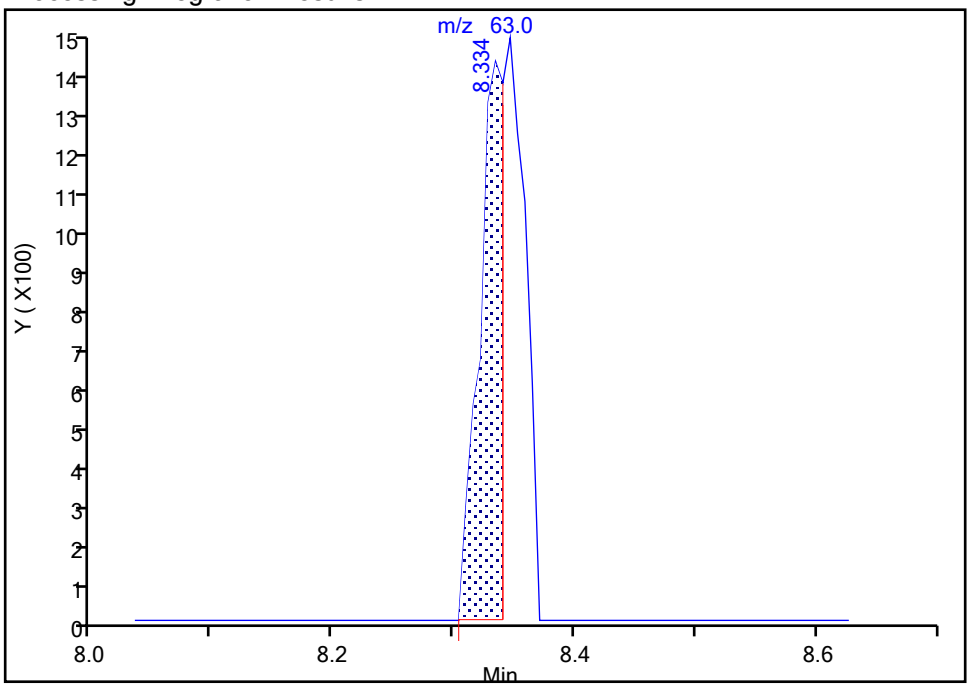
Data File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X26.D
Injection Date: 10-Jul-2023 20:46:30 Instrument ID: 26285
Lims ID: IC v1
Client ID:
Operator ID: CLM27445 ALS Bottle#: 25 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVoa_26285a Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

77 2-Chloroethyl vinyl ether, CAS: 110-75-8

Signal: 1

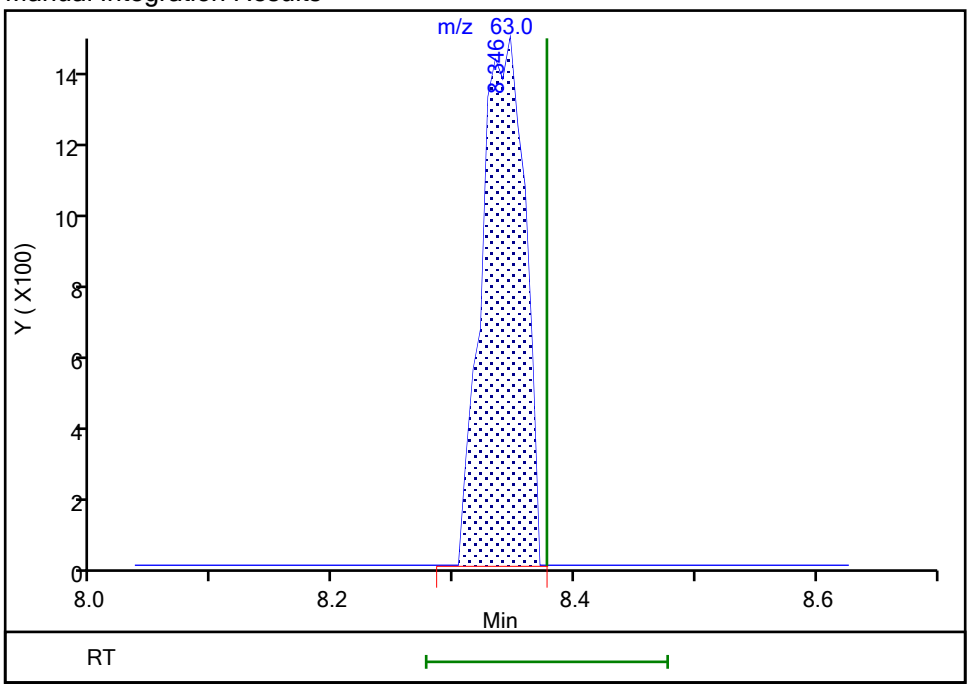
Processing Integration Results

RT: 8.33
Area: 1972
Amount: 1.000000
Amount Units: ug/l



Manual Integration Results

RT: 8.35
Area: 3513
Amount: 0.823221
Amount Units: ug/l



Reviewer: K4WN, 10-Jul-2023 21:25:42 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

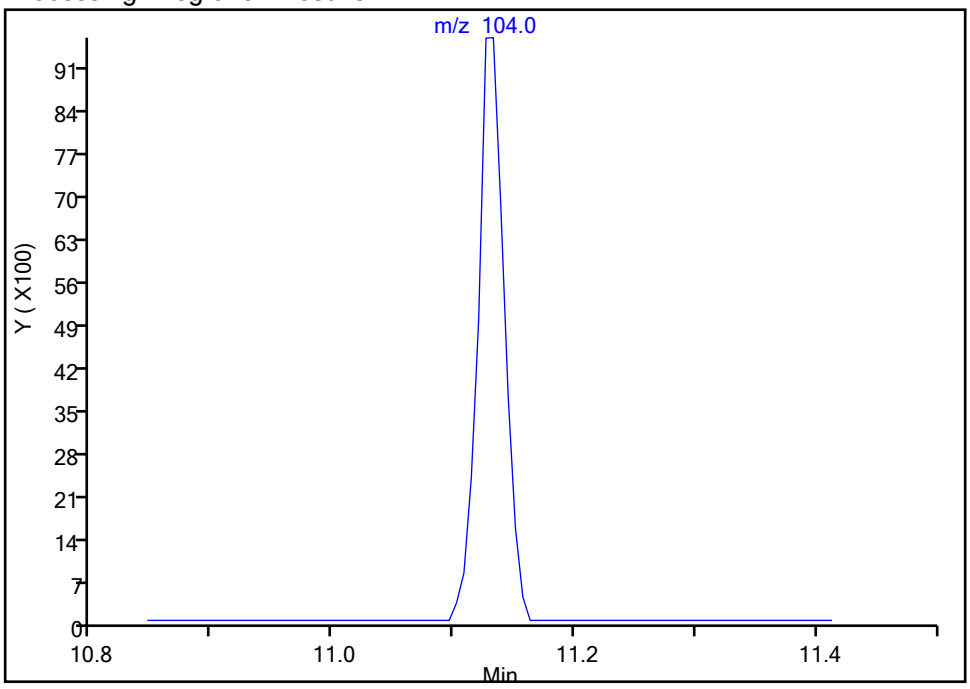
Data File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X26.D
Injection Date: 10-Jul-2023 20:46:30 Instrument ID: 26285
Lims ID: IC v1
Client ID:
Operator ID: CLM27445 ALS Bottle#: 25 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVoa_26285a Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

138 Styrene, CAS: 100-42-5

Signal: 1

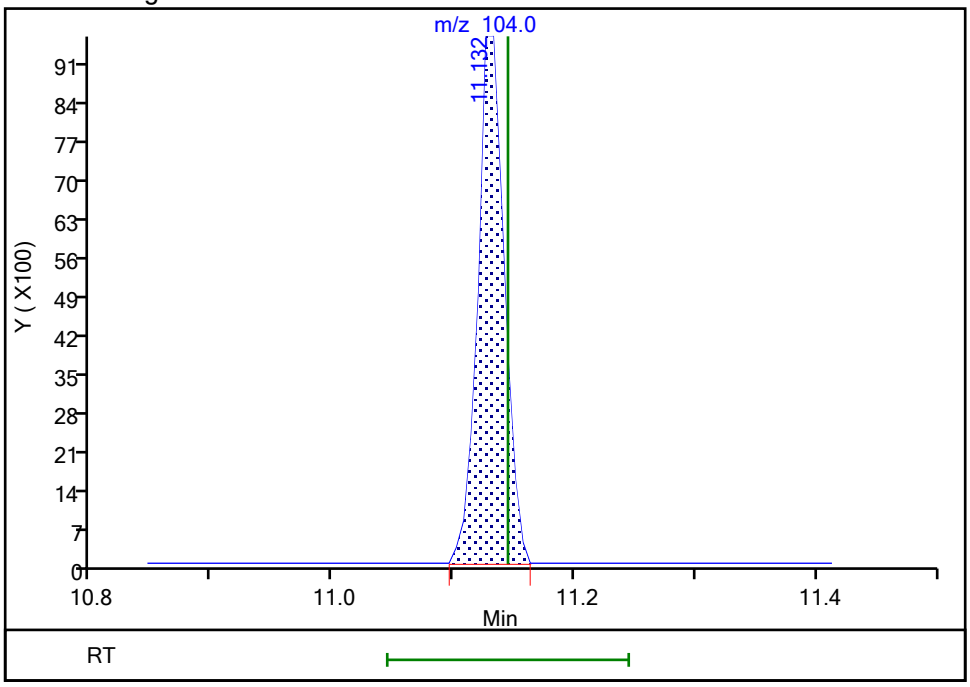
Not Detected
Expected RT: 11.14

Processing Integration Results



Manual Integration Results

RT: 11.13
Area: 14495
Amount: 0.820095
Amount Units: ug/l



Reviewer: K4WN, 10-Jul-2023 21:26:04 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X27.D
Lims ID: IC v4
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 10-Jul-2023 21:06:30 ALS Bottle#: 26 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 410-0088512-013
Misc. Info.: IC STD2 4
Operator ID: CLM27445 Instrument ID: 26285
Sublist: chrom-MSVoa_26285a*sub38

Method: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\MSVoa_26285a.m
Limit Group: MSV - 8260C_D
Last Update: 11-Jul-2023 00:49:08 Calib Date: 10-Jul-2023 21:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X27.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1619

First Level Reviewer: K4WN Date: 10-Jul-2023 21:30:59

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
3 Dichlorodifluoromethane	85	1.567	1.579	-0.012	99	46608	4.00	4.36	M
4 Chloromethane	50	1.726	1.738	-0.012	99	50572	4.00	3.92	
5 Vinyl chloride	62	1.805	1.823	-0.018	69	45981	4.00	4.16	
6 Butadiene	39	1.817	1.829	-0.012	98	55293	4.00	4.07	
8 Bromomethane	94	2.085	2.091	-0.006	93	30079	4.00	4.13	
9 Chloroethane	64	2.140	2.146	-0.006	98	26951	4.00	4.32	
10 Dichlorofluoromethane	67	2.335	2.354	-0.019	97	77489	4.00	4.12	
11 Trichlorofluoromethane	101	2.384	2.402	-0.018	65	55329	4.00	4.34	
12 Pentane	43	2.390	2.408	-0.018	96	49235	4.00	3.89	
13 Ethyl ether	59	2.561	2.573	-0.012	93	20656	4.00	3.62	
15 1,2-Dichloro-1,1,2-trifluoroetha	67	2.652	2.664	-0.012	96	40462	4.00	4.21	
16 Acrolein	56	2.701	2.707	-0.006	98	107561	40.0	36.4	
17 1,1-Dichloroethene	96	2.817	2.829	-0.012	96	24780	4.00	3.93	
18 Acetone	58	2.847	2.847	0.000	96	10981	8.00	7.17	M
19 1,1,2-Trichloro-1,2,2-trifluoroe	101	2.860	2.872	-0.012	91	28326	4.00	4.13	
20 Iodomethane	142	2.969	2.994	-0.025	99	49757	4.00	3.93	
21 Isopropyl alcohol	45	3.049	3.012	0.037	29	30480	20.0	20.1	
22 Carbon disulfide	76	3.061	3.073	-0.012	99	110737	4.00	3.93	M
25 Methyl acetate	43	3.171	3.177	-0.006	98	42281	4.00	3.83	
26 3-Chloro-1-propene	41	3.183	3.195	-0.012	89	45509	4.00	3.66	
27 Methylene Chloride	84	3.335	3.359	-0.024	98	31480	4.00	4.03	
* 28 t-Butyl alcohol-d10 (IS)	65	3.408	3.402	0.006	78	580019	250.0	250.0	
29 2-Methyl-2-propanol	59	3.524	3.500	0.024	98	49667	20.0	19.6	M
30 Acrylonitrile	53	3.597	3.615	-0.018	97	52951	10.0	9.55	
31 trans-1,2-Dichloroethene	96	3.670	3.676	-0.006	95	26787	4.00	3.92	
32 Methyl tert-butyl ether	73	3.664	3.695	-0.031	92	74654	4.00	3.76	
33 Hexane	57	4.042	4.054	-0.012	95	30830	4.00	3.72	
34 1,1-Dichloroethane	63	4.256	4.274	-0.018	96	52781	4.00	3.95	
36 Isopropyl ether	45	4.323	4.347	-0.024	94	84747	4.00	3.65	
37 2-Chloro-1,3-butadiene	53	4.372	4.384	-0.012	93	39056	4.00	3.69	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
39 Tert-butyl ethyl ether	59	4.890	4.908	-0.018	97	68738	4.00	3.58	
40 2-Butanone (MEK)	43	5.109	5.121	-0.012	87	56382	8.00	7.51	
41 cis-1,2-Dichloroethene	96	5.121	5.133	-0.012	85	30250	4.00	3.97	
42 2,2-Dichloropropane	77	5.140	5.152	-0.012	92	39018	4.00	3.80	
44 Propionitrile	54	5.195	5.213	-0.018	98	46262	20.0	18.6	
46 Methacrylonitrile	67	5.420	5.426	-0.006	94	40107	10.0	8.91	
47 Chlorobromomethane	128	5.463	5.475	-0.012	96	14893	4.00	3.90	
48 Tetrahydrofuran	71	5.481	5.493	-0.012	94	33949	20.0	17.8	
49 Chloroform	83	5.627	5.639	-0.012	95	51537	4.00	3.88	
$ 50 Dibromofluoromethane (Surr)	113	5.847	5.865	-0.018	93	363030	50.0	51.7	
51 1,1,1-Trichloroethane	97	5.847	5.871	-0.024	40	44444	4.00	3.94	
52 Cyclohexane	56	5.950	5.969	-0.019	95	42833	4.00	3.68	
53 Carbon tetrachloride	117	6.072	6.078	-0.006	89	39880	4.00	3.91	
54 1,1-Dichloropropene	75	6.072	6.091	-0.019	92	35648	4.00	3.80	
S 55 1,2-Dichloroethene, Total	100				0			7.89	
56 Isobutyl alcohol	41	6.304	6.310	-0.006	33	39631	50.0	45.3	
$ 57 1,2-Dichloroethane-d4 (Surr)	102	6.310	6.328	-0.018	69	75351	50.0	50.9	
58 Benzene	78	6.335	6.353	-0.018	97	107470	4.00	3.81	
59 1,2-Dichloroethane	62	6.420	6.432	-0.012	97	41293	4.00	3.80	
61 Tert-amyl methyl ether	73	6.548	6.578	-0.030	95	62494	4.00	3.45	
* 62 Fluorobenzene (IS)	96	6.767	6.780	-0.013	98	1242450	50.0	50.0	
63 n-Heptane	43	6.810	6.816	-0.006	95	37117	4.00	3.79	
64 n-Butanol	56	7.212	7.225	-0.013	91	20689	50.0	39.1	
65 Trichloroethene	95	7.255	7.279	-0.024	97	27635	4.00	3.72	
67 Methylcyclohexane	83	7.572	7.584	-0.012	89	36635	4.00	3.57	
68 1,2-Dichloropropane	63	7.603	7.615	-0.012	96	28652	4.00	3.77	
69 2-ethoxy-2-methyl butane	87	7.633	7.651	-0.018	89	28040	4.00	3.26	
70 Dibromomethane	93	7.706	7.724	-0.018	95	19214	4.00	3.85	
72 1,4-Dioxane	88	7.712	7.724	-0.012	29	6034	50.0	46.8	M
71 Methyl methacrylate	69	7.725	7.737	-0.012	95	18707	4.00	3.24	
75 Dichlorobromomethane	83	7.974	7.980	-0.006	98	35019	4.00	3.63	
76 2-Nitropropane	41	8.255	8.267	-0.012	98	62282	20.0	16.9	
77 2-Chloroethyl vinyl ether	63	8.365	8.377	-0.012	92	12903	4.00	2.95	
78 cis-1,3-Dichloropropene	75	8.541	8.560	-0.019	93	35807	4.00	3.33	
79 4-Methyl-2-pentanone (MIBK)	43	8.755	8.767	-0.012	98	91125	8.00	6.84	
$ 80 Toluene-d8 (Surr)	98	8.883	8.901	-0.018	95	1149337	50.0	49.6	
81 Toluene	92	8.968	8.986	-0.018	97	59770	4.00	3.67	
82 trans-1,3-Dichloropropene	75	9.291	9.303	-0.012	96	32113	4.00	3.36	
83 Ethyl methacrylate	69	9.383	9.395	-0.012	91	29403	4.00	3.19	
84 1,1,2-Trichloroethane	97	9.511	9.529	-0.018	92	22726	4.00	3.70	
85 Tetrachloroethene	166	9.602	9.614	-0.012	95	28262	4.00	3.77	
86 1,3-Dichloropropane	76	9.694	9.706	-0.012	97	34593	4.00	3.53	
88 2-Hexanone	43	9.773	9.785	-0.012	98	60845	8.00	6.69	
90 Chlorodibromomethane	129	9.925	9.937	-0.012	90	26649	4.00	3.65	
130 Ethylene Dibromide	107	10.035	10.047	-0.012	98	22438	4.00	3.51	
S 129 1,3-Dichloropropene, Total	100				0			6.69	
* 131 Chlorobenzene-d5 (IS)	117	10.517	10.523	-0.006	87	881281	50.0	50.0	
132 Chlorobenzene	112	10.547	10.553	-0.006	93	68954	4.00	3.68	
133 1-Chlorohexane	91	10.547	10.553	-0.006	69	32089	4.00	3.88	
134 1,1,1,2-Tetrachloroethane	131	10.639	10.645	-0.006	94	26088	4.00	3.63	
135 Ethylbenzene	91	10.651	10.657	-0.006	99	114581	4.00	3.59	
136 m-Xylene & p-Xylene	106	10.773	10.779	-0.006	100	82443	8.00	6.92	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
137 o-Xylene	106	11.120	11.126	-0.006	98	40369	4.00	3.42	
138 Styrene	104	11.138	11.145	-0.006	96	58085	4.00	3.18	
S 139 Xylenes, Total	106				0			10.3	
140 Bromoform	173	11.291	11.303	-0.012	96	22055	4.00	3.60	
141 Isopropylbenzene	105	11.443	11.449	-0.006	97	109015	4.00	3.43	
143 Cyclohexanone	55	11.510	11.516	-0.006	95	130637	200.0	177.2	
$ 144 4-Bromofluorobenzene (Surr)	95	11.590	11.596	-0.006	90	472983	50.0	51.4	
145 Bromobenzene	156	11.705	11.711	-0.006	95	31480	4.00	3.71	
146 1,1,2,2-Tetrachloroethane	83	11.705	11.711	-0.006	95	46160	4.00	3.56	
147 trans-1,4-Dichloro-2-butene	53	11.736	11.742	-0.006	89	33213	10.0	8.75	
148 1,2,3-Trichloropropane	110	11.748	11.754	-0.006	85	12832	4.00	3.65	
149 N-Propylbenzene	91	11.791	11.797	-0.006	99	144432	4.00	3.50	
150 2-Chlorotoluene	126	11.864	11.870	-0.006	96	29493	4.00	3.52	
151 1,3,5-Trimethylbenzene	105	11.937	11.943	-0.006	93	89744	4.00	3.18	
152 4-Chlorotoluene	126	11.962	11.968	-0.006	98	28276	4.00	3.51	
154 tert-Butylbenzene	134	12.187	12.193	-0.006	93	14499	4.00	2.95	
156 1,2,4-Trimethylbenzene	105	12.230	12.236	-0.006	98	91507	4.00	3.19	
157 sec-Butylbenzene	105	12.358	12.358	0.000	95	115476	4.00	3.35	
158 1,3-Dichlorobenzene	146	12.449	12.455	-0.006	98	59044	4.00	3.58	
159 4-Isopropyltoluene	119	12.468	12.474	-0.006	97	92487	4.00	3.20	
* 160 1,4-Dichlorobenzene-d4	152	12.504	12.510	-0.006	96	556111	50.0	50.0	
161 1,4-Dichlorobenzene	146	12.522	12.528	-0.006	95	60193	4.00	3.75	
162 1,2,3-Trimethylbenzene	105	12.541	12.547	-0.006	98	100903	4.00	3.31	
163 Benzyl chloride	91	12.608	12.614	-0.006	99	73621	4.00	3.21	
164 1,3-Diethylbenzene	119	12.681	12.681	0.000	94	53872	4.00	3.15	
168 p-Diethylbenzene	119	12.748	12.754	-0.006	94	57038	4.00	3.20	
166 n-Butylbenzene	92	12.772	12.772	0.000	97	52216	4.00	3.42	
167 1,2-Dichlorobenzene	146	12.791	12.797	-0.006	98	62333	4.00	3.66	
165 o-diethylbenzene	119	12.821	12.827	-0.006	96	45534	4.00	3.18	
169 1,2-Dibromo-3-Chloropropane	75	13.345	13.351	-0.006	86	13526	4.00	3.56	
171 1,3,5-Trichlorobenzene	180	13.480	13.479	0.001	97	38622	4.00	3.46	
172 1,2,4-Trichlorobenzene	180	13.906	13.912	-0.006	95	32304	4.00	3.25	
173 Hexachlorobutadiene	225	13.998	14.004	-0.006	97	12901	4.00	3.31	
174 Naphthalene	128	14.089	14.089	0.000	97	107269	4.00	2.92	
175 1,2,3-Trichlorobenzene	180	14.235	14.235	0.000	96	34523	4.00	3.37	
176 2-Methylnaphthalene	142	14.827	14.827	0.000	92	39766	4.00	2.37	
S 187 Total Diethylbenzene	1				0			9.54	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

MSV_CCV_CYC_00006	Amount Added:	16.00	Units: uL	
MSV_CCV_GASES_00520	Amount Added:	1.00	Units: uL	
MSV_CCV_VOC#3_00133	Amount Added:	1.60	Units: uL	
MSV_CCV_2CEVE_00128	Amount Added:	2.00	Units: uL	
MSV_CCV_EE_00005	Amount Added:	2.00	Units: uL	
MSV_CCV_VOC#1_00134	Amount Added:	2.00	Units: uL	
MSV_Cent_ISSS_00016	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 11-Jul-2023 00:49:09 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X27.D

Injection Date: 10-Jul-2023 21:06:30 Instrument ID: 26285 Operator ID: CLM27445

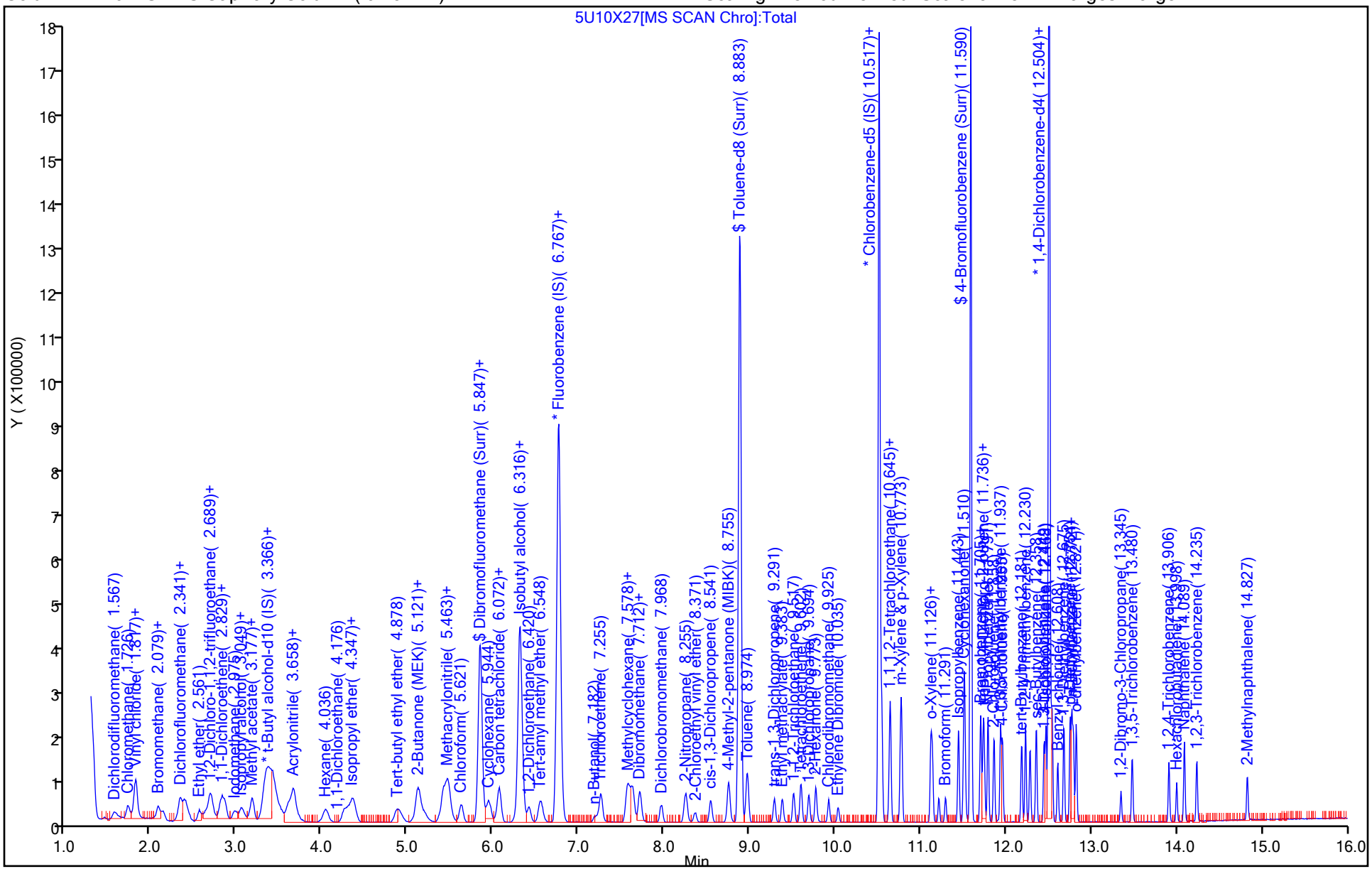
Lims ID: IC v4 Worklist Smp#: 13

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 26

Method: MSVoa_26285a Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

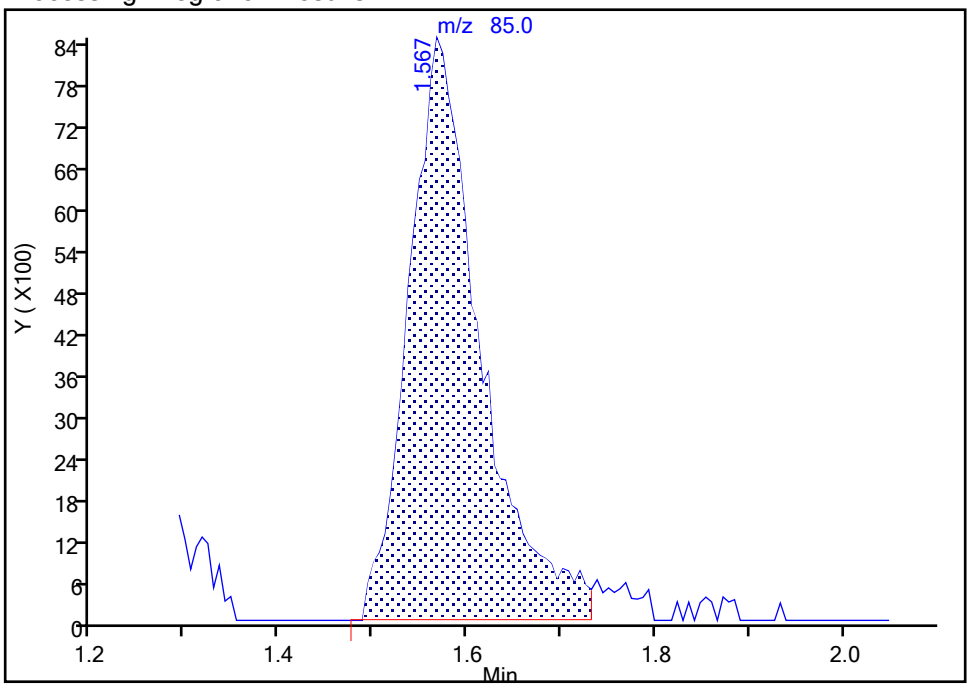
Data File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X27.D
Injection Date: 10-Jul-2023 21:06:30 Instrument ID: 26285
Lims ID: IC v4
Client ID:
Operator ID: CLM27445 ALS Bottle#: 26 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVoa_26285a Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

3 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

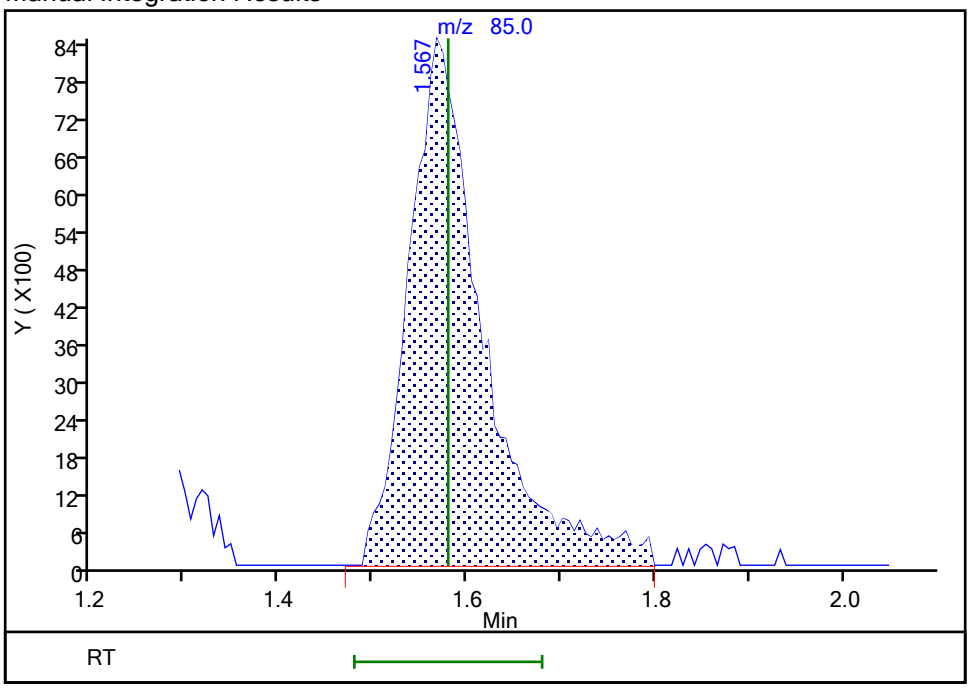
Processing Integration Results

RT: 1.57
Area: 45040
Amount: 4.149395
Amount Units: ug/l



Manual Integration Results

RT: 1.57
Area: 46608
Amount: 4.364032
Amount Units: ug/l



Reviewer: K4WN, 10-Jul-2023 21:27:48 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

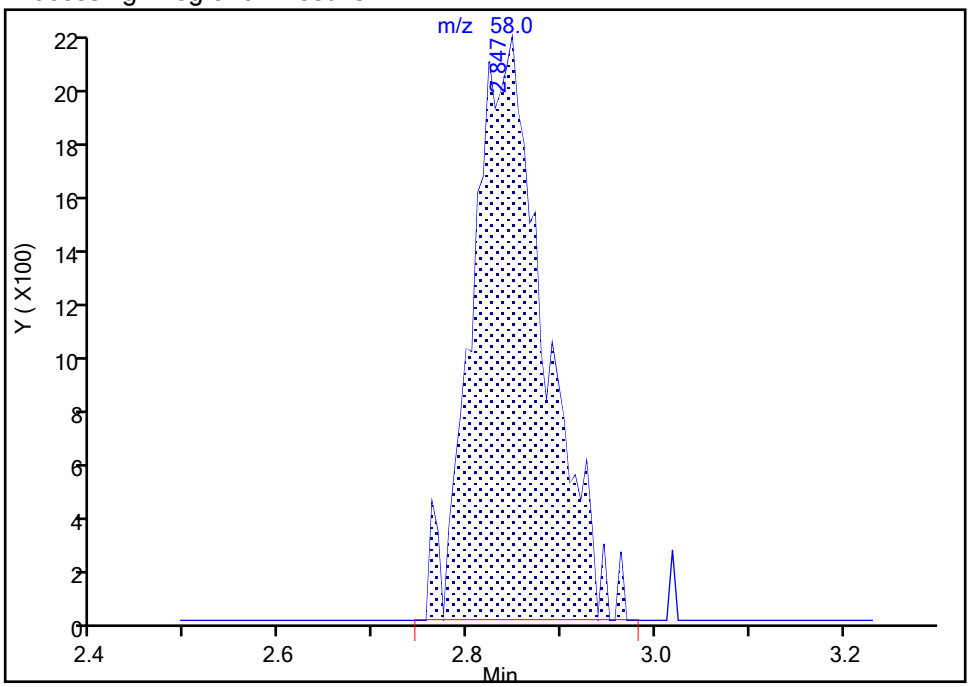
Data File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X27.D
Injection Date: 10-Jul-2023 21:06:30 Instrument ID: 26285
Lims ID: IC v4
Client ID:
Operator ID: CLM27445 ALS Bottle#: 26 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVoa_26285a Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

18 Acetone, CAS: 67-64-1

Signal: 1

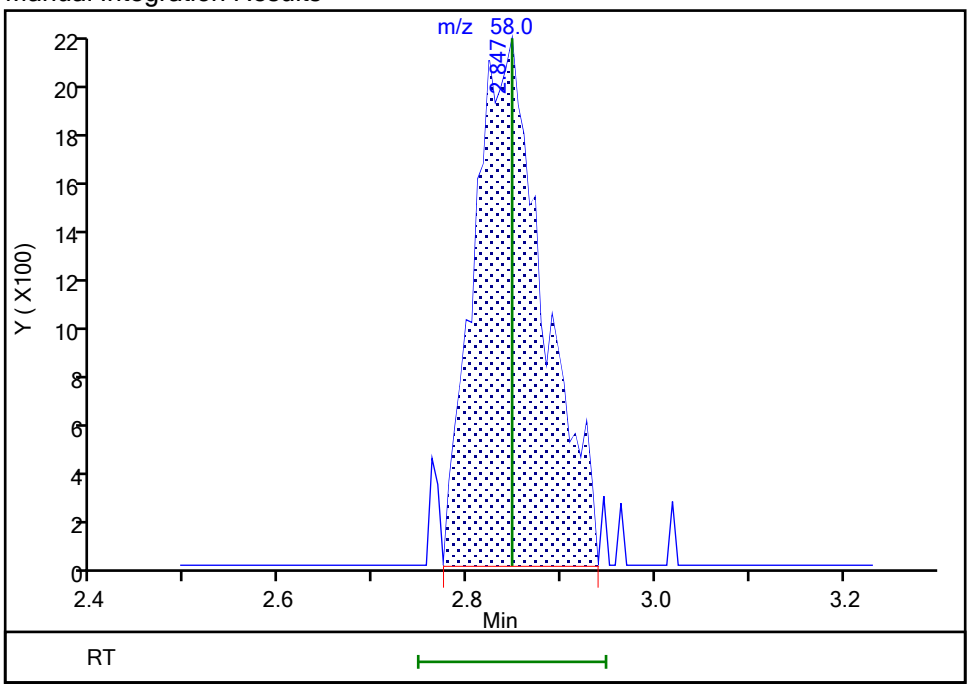
Processing Integration Results

RT: 2.85
Area: 11452
Amount: 7.203427
Amount Units: ug/l



Manual Integration Results

RT: 2.85
Area: 10981
Amount: 7.167583
Amount Units: ug/l



Reviewer: K4WN, 10-Jul-2023 21:38:35 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

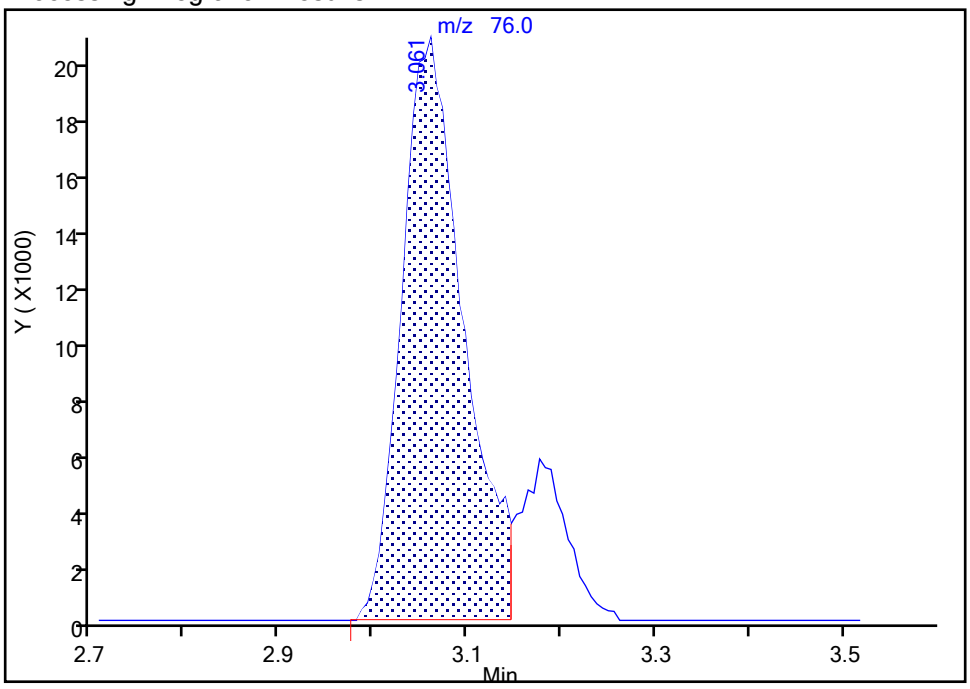
Data File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X27.D
Injection Date: 10-Jul-2023 21:06:30 Instrument ID: 26285
Lims ID: IC v4
Client ID:
Operator ID: CLM27445 ALS Bottle#: 26 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVoa_26285a Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

22 Carbon disulfide, CAS: 75-15-0

Signal: 1

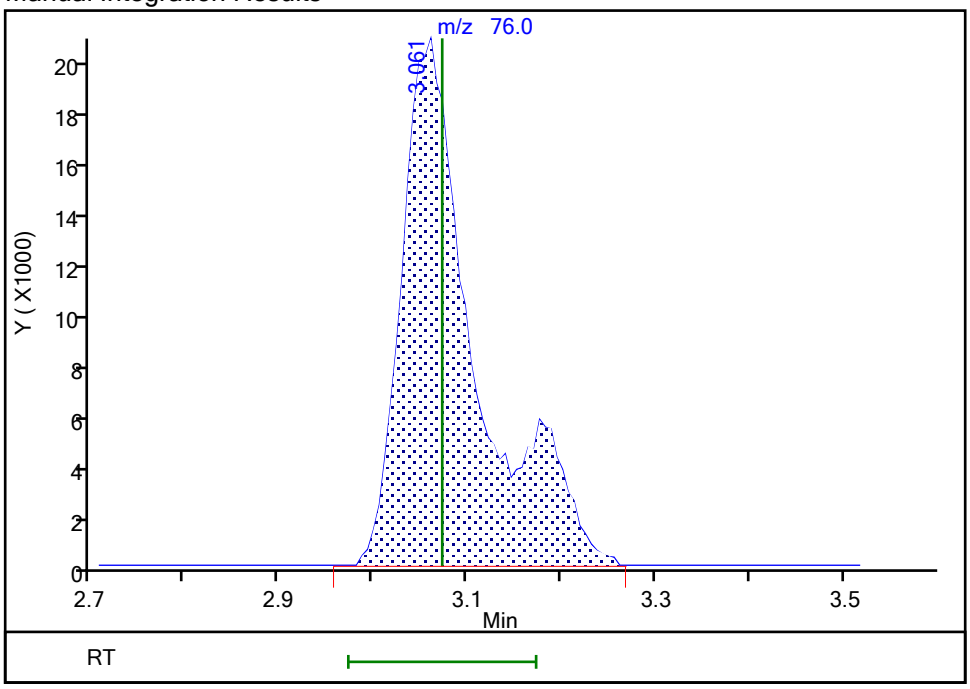
Processing Integration Results

RT: 3.06
Area: 92242
Amount: 3.308740
Amount Units: ug/l



Manual Integration Results

RT: 3.06
Area: 110737
Amount: 3.933301
Amount Units: ug/l



Reviewer: K4WN, 10-Jul-2023 21:28:00 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

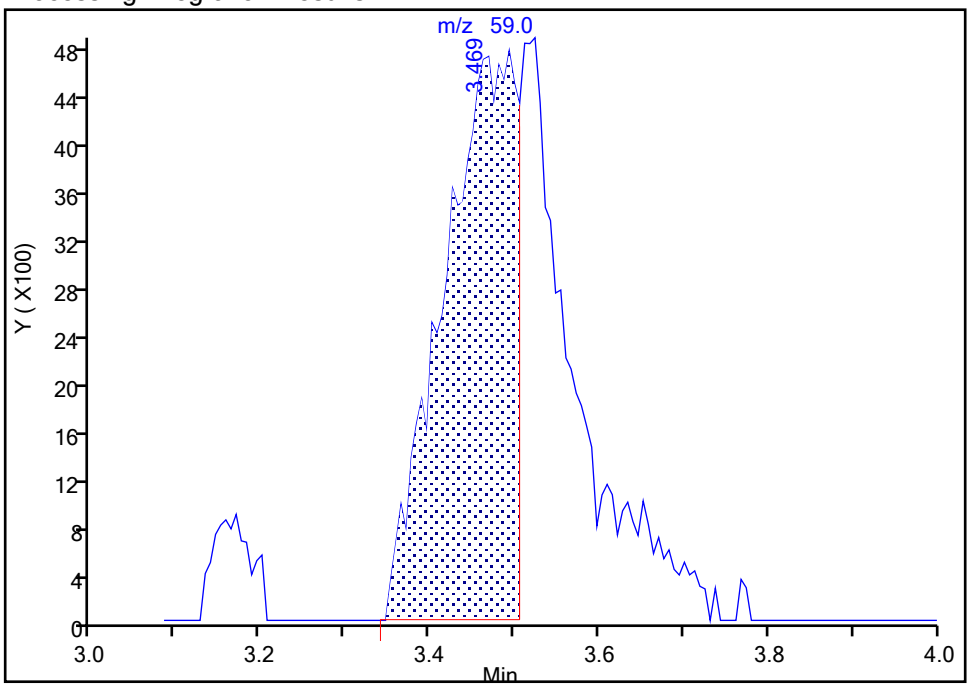
Data File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X27.D
Injection Date: 10-Jul-2023 21:06:30 Instrument ID: 26285
Lims ID: IC v4
Client ID:
Operator ID: CLM27445 ALS Bottle#: 26 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVoa_26285a Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

29 2-Methyl-2-propanol, CAS: 75-65-0

Signal: 1

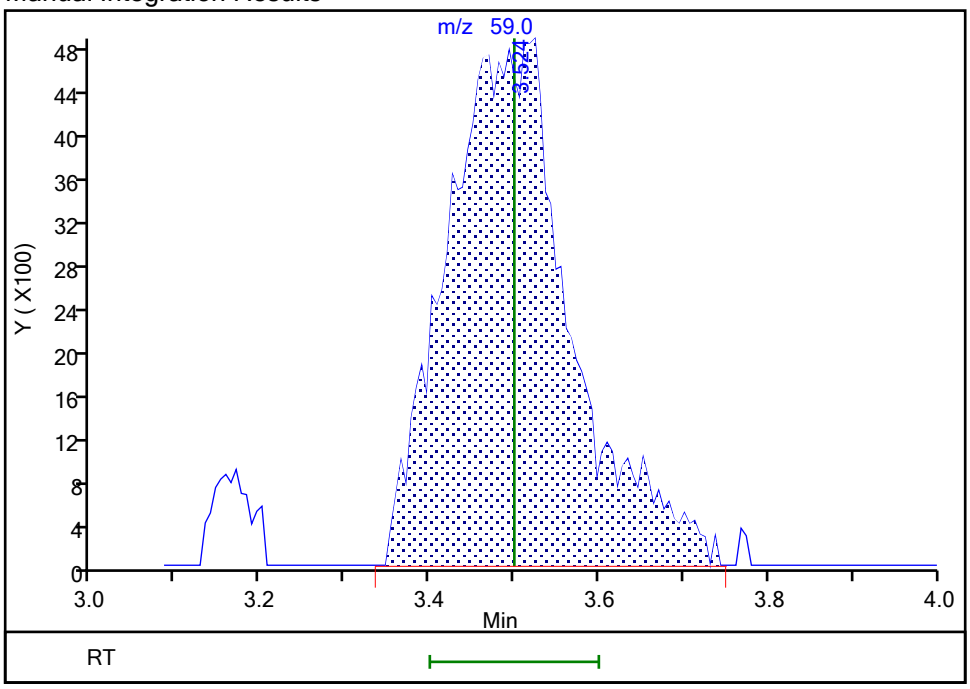
Processing Integration Results

RT: 3.47
Area: 28736
Amount: 11.851246
Amount Units: ug/l



Manual Integration Results

RT: 3.52
Area: 49667
Amount: 19.583435
Amount Units: ug/l



Reviewer: K4WN, 10-Jul-2023 21:28:07 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

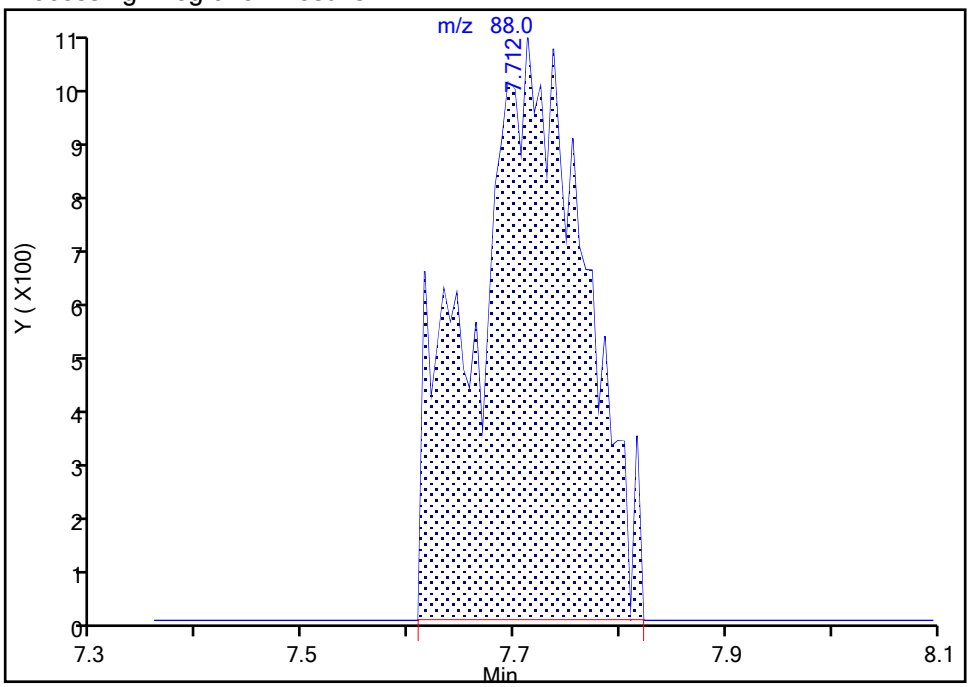
Data File:	\\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X27.D				
Injection Date:	10-Jul-2023 21:06:30	Instrument ID:	26285		
Lims ID:	IC v4				
Client ID:					
Operator ID:	CLM27445	ALS Bottle#:	26	Worklist Smp#:	13
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVoa_26285a	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

72 1,4-Dioxane, CAS: 123-91-1

Signal: 1

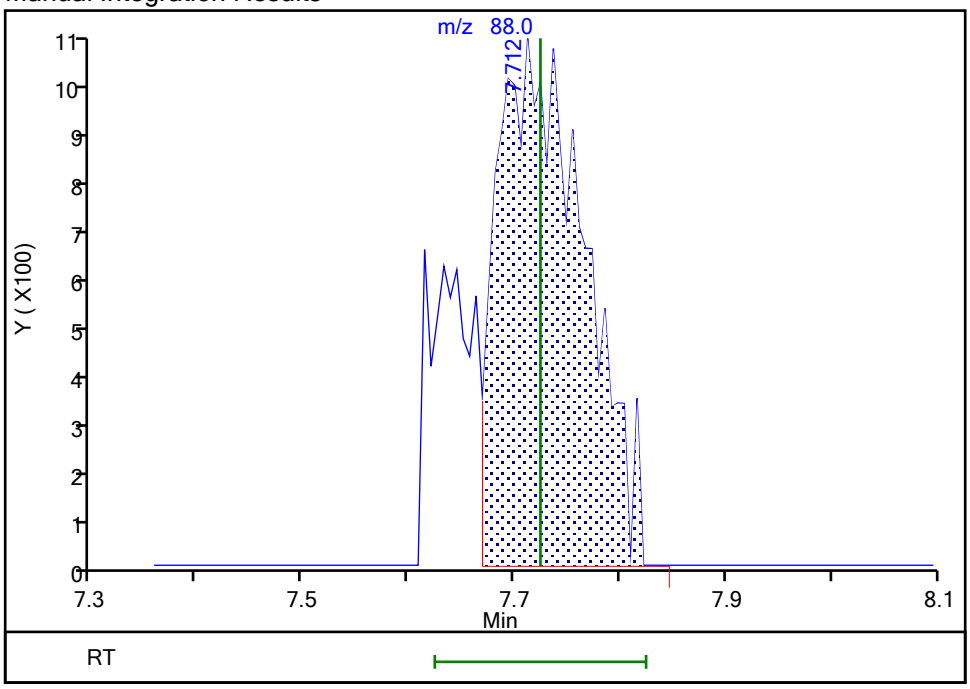
Processing Integration Results

RT: 7.71
Area: 7730
Amount: 57.079583
Amount Units: ug/l



Manual Integration Results

RT: 7.71
Area: 6034
Amount: 46.818794
Amount Units: ug/l



Reviewer: K4WN, 10-Jul-2023 21:28:29 -04:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X24.D
Lims ID: IC v10
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 10-Jul-2023 18:59:30 ALS Bottle#: 23 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 410-0088512-014
Misc. Info.: IC STD3 10
Operator ID: CLM27445 Instrument ID: 26285
Sublist: chrom-MSVoa_26285a*sub38

Method: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\MSVoa_26285a.m
Limit Group: MSV - 8260C_D
Last Update: 11-Jul-2023 00:49:34 Calib Date: 10-Jul-2023 21:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X27.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1619

First Level Reviewer: K4WN Date: 10-Jul-2023 19:37:21

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
3 Dichlorodifluoromethane	85	1.580	1.579	0.001	99	117598	10.0	11.4	
4 Chloromethane	50	1.738	1.738	0.000	99	142396	10.0	11.5	
5 Vinyl chloride	62	1.830	1.823	0.007	98	122465	10.0	11.5	
6 Butadiene	39	1.830	1.829	0.001	99	147031	10.0	11.2	
8 Bromomethane	94	2.092	2.091	0.001	91	80300	10.0	11.5	
9 Chloroethane	64	2.153	2.146	0.007	98	67991	10.0	11.3	
10 Dichlorofluoromethane	67	2.354	2.354	0.000	97	205657	10.0	11.4	
11 Trichlorofluoromethane	101	2.396	2.402	-0.006	66	140524	10.0	11.5	
12 Pentane	43	2.409	2.408	0.001	97	122996	10.0	10.1	
13 Ethyl ether	59	2.579	2.573	0.006	94	64362	10.0	11.7	
15 1,2-Dichloro-1,1,2-trifluoroetha	67	2.659	2.664	-0.005	95	105800	10.0	11.4	
16 Acrolein	56	2.713	2.707	0.006	99	312417	100.0	119.8	
17 1,1-Dichloroethene	96	2.835	2.829	0.006	95	66787	10.0	11.0	
18 Acetone	58	2.860	2.847	0.013	99	32302	20.0	23.9	
19 1,1,2-Trichloro-1,2,2-trifluoroe	101	2.878	2.872	0.006	91	71442	10.0	10.8	
20 Iodomethane	142	3.000	2.994	0.006	99	133613	10.0	11.0	
21 Isopropyl alcohol	45	3.055	3.012	0.043	38	76610	50.0	57.1	
22 Carbon disulfide	76	3.073	3.073	0.000	100	294007	10.0	10.9	M
25 Methyl acetate	43	3.189	3.177	0.012	86	115173	10.0	10.8	
26 3-Chloro-1-propene	41	3.207	3.195	0.012	89	128508	10.0	10.8	
27 Methylene Chloride	84	3.360	3.359	0.001	99	80129	10.0	10.7	
* 28 t-Butyl alcohol-d10 (IS)	65	3.421	3.402	0.019	77	512285	250.0	250.0	
29 2-Methyl-2-propanol	59	3.518	3.500	0.018	98	121940	50.0	54.4	
30 Acrylonitrile	53	3.622	3.615	0.007	99	147021	25.0	27.6	
31 trans-1,2-Dichloroethene	96	3.683	3.676	0.007	95	73317	10.0	11.2	
32 Methyl tert-butyl ether	73	3.689	3.695	-0.006	96	211785	10.0	11.1	
33 Hexane	57	4.055	4.054	0.001	95	79568	10.0	9.97	
34 1,1-Dichloroethane	63	4.280	4.274	0.006	97	144447	10.0	11.2	
36 Isopropyl ether	45	4.353	4.347	0.006	94	242354	10.0	10.8	
37 2-Chloro-1,3-butadiene	53	4.390	4.384	0.006	93	109609	10.0	10.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
39 Tert-butyl ethyl ether	59	4.908	4.908	0.000	98	202933	10.0	11.0	
40 2-Butanone (MEK)	43	5.128	5.121	0.007	93	156648	20.0	21.7	
41 cis-1,2-Dichloroethene	96	5.140	5.133	0.007	84	80844	10.0	11.0	
42 2,2-Dichloropropane	77	5.158	5.152	0.006	90	109132	10.0	11.0	
44 Propionitrile	54	5.213	5.213	0.000	98	124221	50.0	56.5	
46 Methacrylonitrile	67	5.432	5.426	0.006	97	119167	25.0	27.5	
47 Chlorobromomethane	128	5.481	5.475	0.006	96	41073	10.0	11.2	
48 Tetrahydrofuran	71	5.500	5.493	0.007	95	93217	50.0	55.3	a
49 Chloroform	83	5.652	5.639	0.013	94	142639	10.0	11.2	
$ 50 Dibromofluoromethane (Surr)	113	5.865	5.865	0.000	92	345565	50.0	51.2	
51 1,1,1-Trichloroethane	97	5.871	5.871	0.000	49	118949	10.0	11.0	
52 Cyclohexane	56	5.969	5.969	0.000	96	116972	10.0	10.5	
53 Carbon tetrachloride	117	6.085	6.078	0.007	96	105322	10.0	10.7	
54 1,1-Dichloropropene	75	6.097	6.091	0.006	92	97124	10.0	10.8	
S 55 1,2-Dichloroethene, Total	100				0			22.2	
56 Isobutyl alcohol	41	6.323	6.310	0.013	45	108309	125.0	140.2	
$ 57 1,2-Dichloroethane-d4 (Surr)	102	6.329	6.328	0.001	69	72895	50.0	51.2	
58 Benzene	78	6.359	6.353	0.006	96	298068	10.0	11.0	
59 1,2-Dichloroethane	62	6.438	6.432	0.006	97	113525	10.0	10.9	
61 Tert-amyl methyl ether	73	6.572	6.578	-0.006	96	189085	10.0	10.9	
* 62 Fluorobenzene (IS)	96	6.780	6.780	0.000	98	1195341	50.0	50.0	
63 n-Heptane	43	6.822	6.816	0.006	96	89258	10.0	9.48	
64 n-Butanol	56	7.237	7.225	0.012	96	61524	125.0	131.6	
65 Trichloroethene	95	7.280	7.279	0.001	98	78640	10.0	11.0	
67 Methylcyclohexane	83	7.584	7.584	0.000	92	95838	10.0	9.72	
68 1,2-Dichloropropane	63	7.615	7.615	0.000	97	79455	10.0	10.9	
69 2-ethoxy-2-methyl butane	87	7.652	7.651	0.001	90	88326	10.0	10.7	
70 Dibromomethane	93	7.731	7.724	0.007	88	51939	10.0	10.8	
72 1,4-Dioxane	88	7.731	7.724	0.007	28	16454	125.0	144.5	M
71 Methyl methacrylate	69	7.737	7.737	0.000	92	58773	10.0	10.6	
75 Dichlorobromomethane	83	7.981	7.980	0.001	98	100075	10.0	10.8	
76 2-Nitropropane	41	8.267	8.267	0.000	99	178167	50.0	54.8	
77 2-Chloroethyl vinyl ether	63	8.377	8.377	0.000	93	44820	10.0	10.7	
78 cis-1,3-Dichloropropene	75	8.560	8.560	0.000	93	107805	10.0	10.4	
79 4-Methyl-2-pentanone (MIBK)	43	8.767	8.767	0.000	99	284334	20.0	22.2	
$ 80 Toluene-d8 (Surr)	98	8.901	8.901	0.000	95	1115918	50.0	50.3	
81 Toluene	92	8.987	8.986	0.001	98	167896	10.0	10.8	
82 trans-1,3-Dichloropropene	75	9.304	9.303	0.001	96	95088	10.0	10.4	
83 Ethyl methacrylate	69	9.395	9.395	0.000	92	95223	10.0	10.8	
84 1,1,2-Trichloroethane	97	9.529	9.529	0.000	92	64984	10.0	11.0	
85 Tetrachloroethene	166	9.608	9.614	-0.006	96	78303	10.0	10.9	
86 1,3-Dichloropropane	76	9.706	9.706	0.000	95	102670	10.0	11.0	
88 2-Hexanone	43	9.785	9.785	0.000	99	193123	20.0	22.2	
90 Chlorodibromomethane	129	9.938	9.937	0.001	90	76031	10.0	10.9	
130 Ethylene Dibromide	107	10.047	10.047	0.000	99	65302	10.0	10.7	
S 129 1,3-Dichloropropene, Total	100				0			20.8	
* 131 Chlorobenzene-d5 (IS)	117	10.523	10.523	0.000	87	843523	50.0	50.0	
132 Chlorobenzene	112	10.553	10.553	0.000	93	195386	10.0	10.9	
133 1-Chlorohexane	91	10.553	10.553	0.000	92	83689	10.0	10.6	
134 1,1,1,2-Tetrachloroethane	131	10.645	10.645	0.000	93	75347	10.0	10.9	
135 Ethylbenzene	91	10.657	10.657	0.000	99	329704	10.0	10.8	
136 m-Xylene & p-Xylene	106	10.785	10.779	0.006	100	253227	20.0	22.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
137 o-Xylene	106	11.126	11.126	0.000	98	122275	10.0	10.8	
138 Styrene	104	11.145	11.145	0.001	95	190346	10.0	10.9	
S 139 Xylenes, Total	106				0			33.0	
140 Bromoform	173	11.303	11.303	0.000	96	63658	10.0	10.8	
141 Isopropylbenzene	105	11.450	11.449	0.001	97	332740	10.0	10.9	
143 Cyclohexanone	55	11.517	11.516	0.001	95	174489	250.0	268.0	
$ 144 4-Bromofluorobenzene (Surr)	95	11.596	11.596	0.000	92	446545	50.0	50.7	
145 Bromobenzene	156	11.712	11.711	0.001	97	85111	10.0	10.6	
146 1,1,2,2-Tetrachloroethane	83	11.712	11.711	0.001	95	133381	10.0	10.8	
147 trans-1,4-Dichloro-2-butene	53	11.736	11.742	-0.006	90	97408	25.0	27.1	
148 1,2,3-Trichloropropane	110	11.754	11.754	0.000	84	36297	10.0	10.9	
149 N-Propylbenzene	91	11.797	11.797	0.000	99	429652	10.0	11.0	
150 2-Chlorotoluene	126	11.864	11.870	-0.006	96	86129	10.0	10.8	
151 1,3,5-Trimethylbenzene	105	11.943	11.943	0.000	93	282036	10.0	10.5	
152 4-Chlorotoluene	126	11.962	11.968	-0.006	98	83812	10.0	11.0	
154 tert-Butylbenzene	134	12.187	12.193	-0.006	94	46842	10.0	10.1	
156 1,2,4-Trimethylbenzene	105	12.236	12.236	0.000	98	288617	10.0	10.6	
157 sec-Butylbenzene	105	12.358	12.358	0.000	95	342113	10.0	10.5	
158 1,3-Dichlorobenzene	146	12.449	12.455	-0.006	98	168616	10.0	10.8	
159 4-Isopropyltoluene	119	12.474	12.474	0.000	97	288768	10.0	10.5	
* 160 1,4-Dichlorobenzene-d4	152	12.510	12.510	0.000	95	526818	50.0	50.0	
161 1,4-Dichlorobenzene	146	12.529	12.528	0.001	96	165400	10.0	10.9	
162 1,2,3-Trimethylbenzene	105	12.547	12.547	0.000	99	309726	10.0	10.7	
163 Benzyl chloride	91	12.608	12.614	-0.006	99	232903	10.0	10.7	
164 1,3-Diethylbenzene	119	12.681	12.681	0.000	94	170920	10.0	10.6	
168 p-Diethylbenzene	119	12.754	12.754	0.000	93	181536	10.0	10.8	
166 n-Butylbenzene	92	12.772	12.772	0.000	98	154468	10.0	10.7	
167 1,2-Dichlorobenzene	146	12.791	12.797	-0.006	97	175814	10.0	10.9	
165 o-diethylbenzene	119	12.827	12.827	0.000	96	144167	10.0	10.6	
169 1,2-Dibromo-3-Chloropropane	75	13.352	13.351	0.001	80	37847	10.0	10.5	
171 1,3,5-Trichlorobenzene	180	13.480	13.479	0.001	97	113999	10.0	10.8	
172 1,2,4-Trichlorobenzene	180	13.913	13.912	0.000	95	98993	10.0	10.5	
173 Hexachlorobutadiene	225	14.004	14.004	0.000	97	37387	10.0	10.1	
174 Naphthalene	128	14.089	14.089	0.000	97	371166	10.0	10.7	
175 1,2,3-Trichlorobenzene	180	14.236	14.235	0.001	96	105015	10.0	10.8	
176 2-Methylnaphthalene	142	14.827	14.827	0.000	92	145957	10.0	9.17	
S 187 Total Diethylbenzene	1				0			32.0	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_CCV_CYC_00006	Amount Added:	8.00	Units: uL	
MSV_CCV_GASES_00520	Amount Added:	1.00	Units: uL	
MSV_CCV_VOC#3_00133	Amount Added:	1.60	Units: uL	
MSV_CCV_2CEVE_00128	Amount Added:	2.00	Units: uL	
MSV_CCV_EE_00005	Amount Added:	2.00	Units: uL	
MSV_CCV_VOC#1_00134	Amount Added:	2.00	Units: uL	
MSV_Cent_ISSS_00016	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 11-Jul-2023 00:49:35 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X24.D

Injection Date: 10-Jul-2023 18:59:30 Instrument ID: 26285 Operator ID: CLM27445

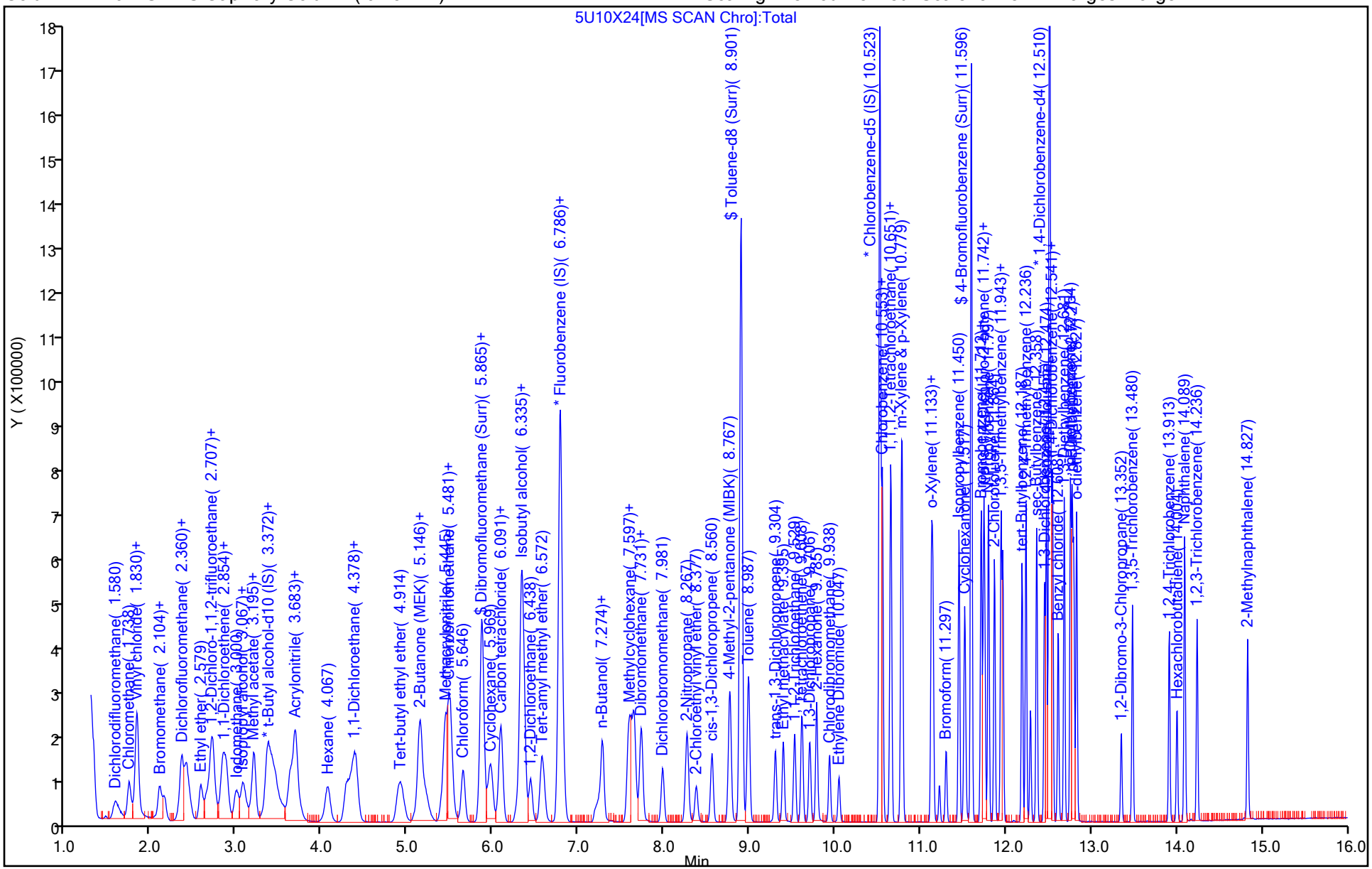
Lims ID: IC v10 Worklist Smp#: 14

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 23

Method: MSVoa_26285a Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

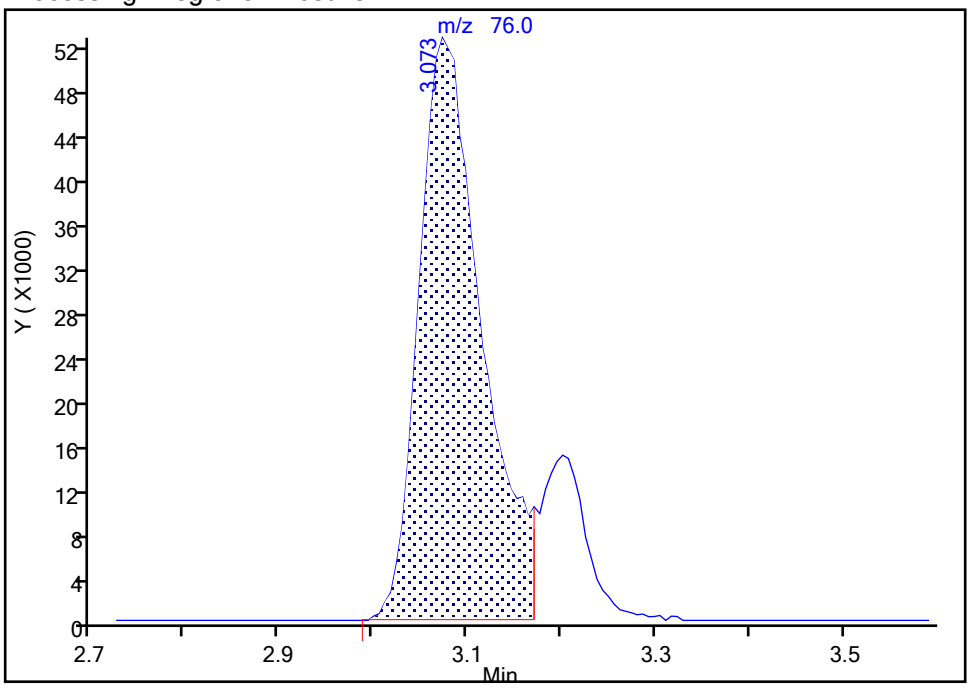
Data File:	\\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X24.D				
Injection Date:	10-Jul-2023 18:59:30	Instrument ID:	26285		
Lims ID:	IC v10				
Client ID:					
Operator ID:	CLM27445	ALS Bottle#:	23	Worklist Smp#:	14
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVoa_26285a	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

22 Carbon disulfide, CAS: 75-15-0

Signal: 1

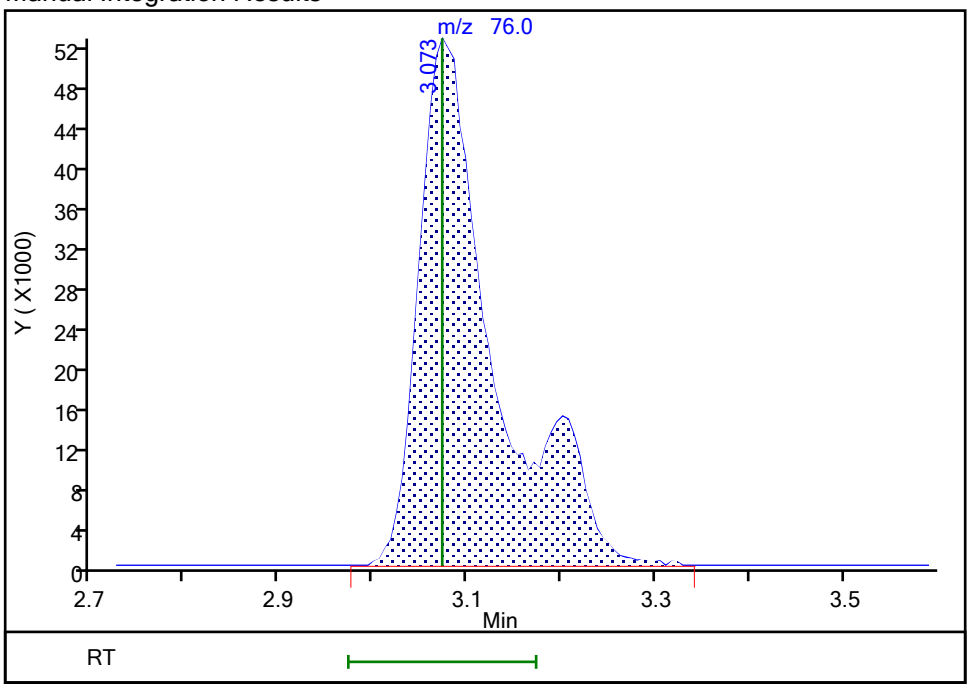
Processing Integration Results

RT: 3.07
Area: 246083
Amount: 9.878776
Amount Units: ug/l



Manual Integration Results

RT: 3.07
Area: 294007
Amount: 10.854485
Amount Units: ug/l



Reviewer: K4WN, 10-Jul-2023 19:33:14 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

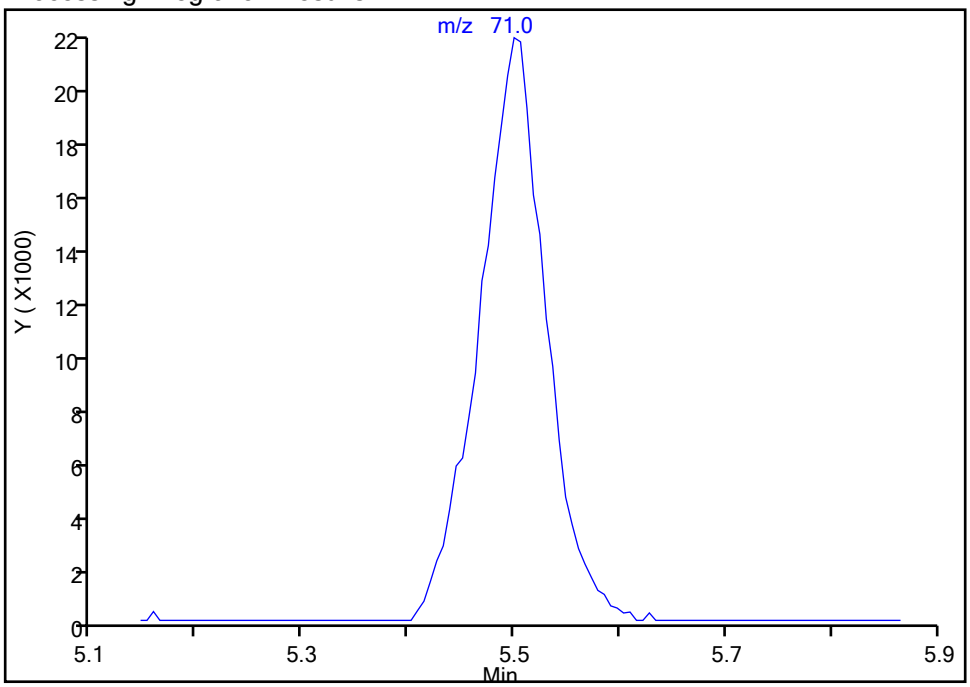
Data File:	\\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X24.D				
Injection Date:	10-Jul-2023 18:59:30	Instrument ID:	26285		
Lims ID:	IC v10				
Client ID:					
Operator ID:	CLM27445	ALS Bottle#:	23	Worklist Smp#:	14
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVoa_26285a	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

48 Tetrahydrofuran, CAS: 109-99-9

Signal: 1

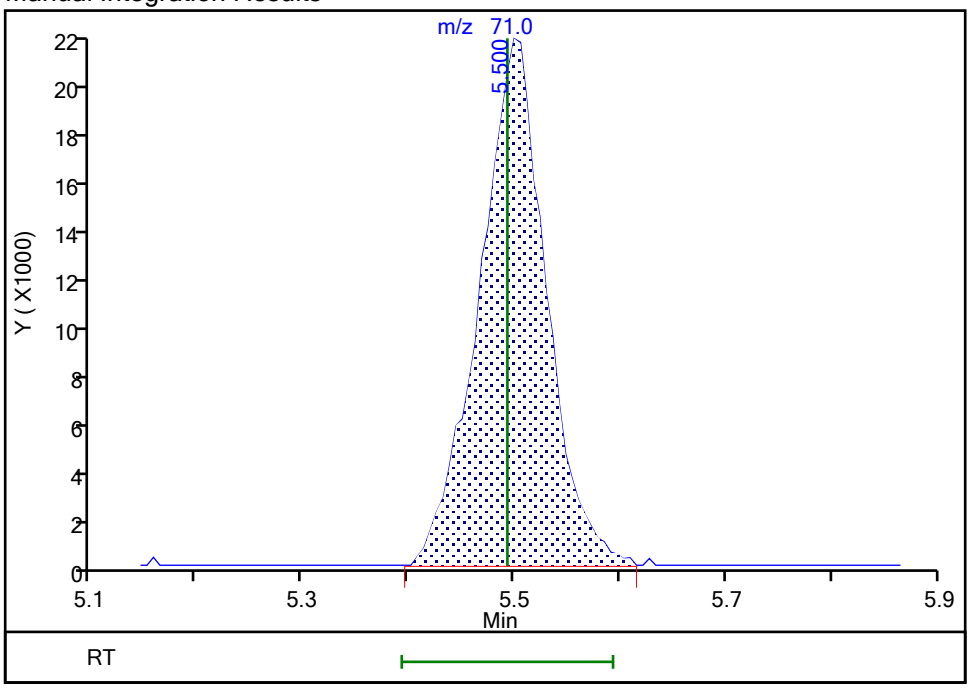
Not Detected
Expected RT: 5.49

Processing Integration Results



RT: 5.50
Area: 93217
Amount: 55.317353
Amount Units: ug/l

Manual Integration Results



Reviewer: K4WN, 10-Jul-2023 19:33:22 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

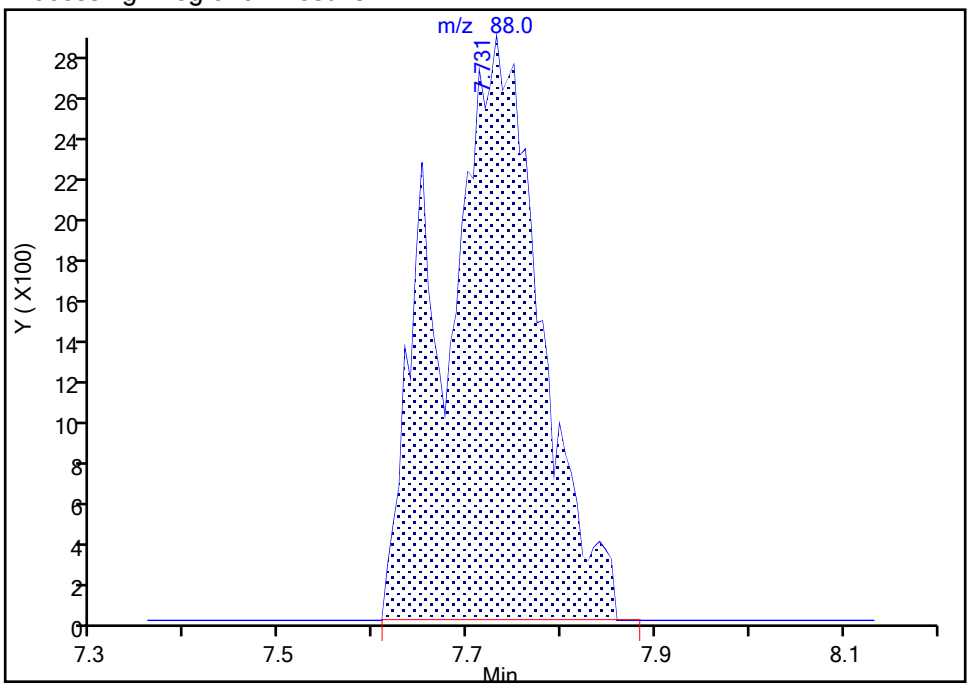
Data File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X24.D
Injection Date: 10-Jul-2023 18:59:30 Instrument ID: 26285
Lims ID: IC v10
Client ID:
Operator ID: CLM27445 ALS Bottle#: 23 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVoa_26285a Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

72 1,4-Dioxane, CAS: 123-91-1

Signal: 1

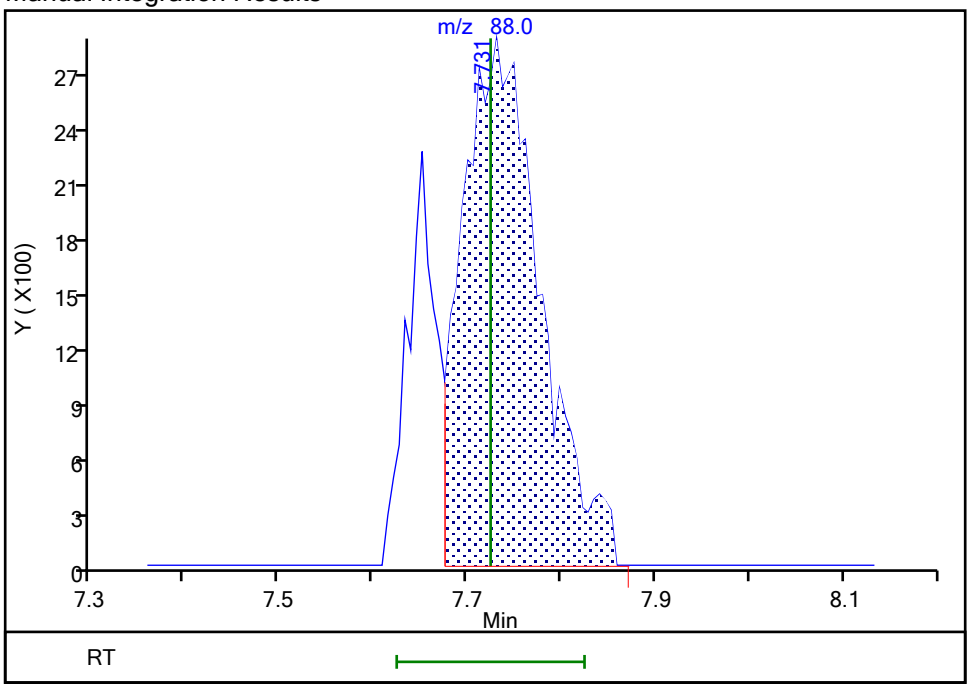
Processing Integration Results

RT: 7.73
Area: 20883
Amount: 197.8861
Amount Units: ug/l



Manual Integration Results

RT: 7.73
Area: 16454
Amount: 144.5496
Amount Units: ug/l



Reviewer: K4WN, 10-Jul-2023 19:33:45 -04:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X25.D
Lims ID: IC v20
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 10-Jul-2023 19:19:30 ALS Bottle#: 24 Worklist Smp#: 15
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 410-0088512-015
Misc. Info.: IC STD4 20
Operator ID: CLM27445 Instrument ID: 26285
Sublist: chrom-MSVoa_26285a*sub38

Method: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\MSVoa_26285a.m
Limit Group: MSV - 8260C_D
Last Update: 11-Jul-2023 00:49:43 Calib Date: 10-Jul-2023 21:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X27.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1619

First Level Reviewer: K4WN Date: 10-Jul-2023 20:14:05

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
3 Dichlorodifluoromethane	85	1.586	1.579	0.007	99	218947	20.0	20.9	M
4 Chloromethane	50	1.738	1.738	0.000	99	259778	20.0	20.5	
5 Vinyl chloride	62	1.829	1.823	0.006	66	224767	20.0	20.7	
6 Butadiene	39	1.829	1.829	0.000	99	268645	20.0	20.1	
8 Bromomethane	94	2.098	2.091	0.007	93	148212	20.0	20.7	
9 Chloroethane	64	2.153	2.146	0.006	98	126104	20.0	20.6	
10 Dichlorofluoromethane	67	2.354	2.354	0.000	97	375519	20.0	20.3	
11 Trichlorofluoromethane	101	2.415	2.402	0.013	57	258039	20.0	20.6	
12 Pentane	43	2.409	2.408	0.001	96	247631	20.0	19.9	
13 Ethyl ether	59	2.573	2.573	0.000	96	121612	20.0	21.7	
15 1,2-Dichloro-1,1,2-trifluoroetha	67	2.665	2.664	0.001	94	196191	20.0	20.8	
16 Acrolein	56	2.713	2.707	0.006	98	594772	200.0	213.9	
17 1,1-Dichloroethene	96	2.835	2.829	0.006	95	129444	20.0	20.9	
18 Acetone	58	2.847	2.847	0.000	98	60142	40.0	41.7	
19 1,1,2-Trichloro-1,2,2-trifluoroe	101	2.872	2.872	0.000	93	142266	20.0	21.1	
20 Iodomethane	142	2.994	2.994	0.000	99	256066	20.0	20.6	
21 Isopropyl alcohol	45	3.036	3.012	0.024	96	142752	100.0	99.8	
22 Carbon disulfide	76	3.073	3.073	0.000	100	567384	20.0	20.5	M
25 Methyl acetate	43	3.183	3.177	0.006	99	233147	20.0	21.5	
26 3-Chloro-1-propene	41	3.195	3.195	0.000	88	249241	20.0	20.4	
27 Methylene Chloride	84	3.360	3.359	0.001	99	157048	20.0	20.5	
* 28 t-Butyl alcohol-d10 (IS)	65	3.414	3.402	0.012	68	546074	250.0	250.0	
29 2-Methyl-2-propanol	59	3.512	3.500	0.012	99	228255	100.0	95.6	
30 Acrylonitrile	53	3.622	3.615	0.007	98	291012	50.0	53.4	
31 trans-1,2-Dichloroethene	96	3.683	3.676	0.007	94	139944	20.0	20.9	
32 Methyl tert-butyl ether	73	3.689	3.695	-0.006	92	414454	20.0	21.3	
33 Hexane	57	4.061	4.054	0.007	95	169722	20.0	20.8	
34 1,1-Dichloroethane	63	4.274	4.274	0.000	96	279314	20.0	21.3	
36 Isopropyl ether	45	4.353	4.347	0.006	95	481228	20.0	21.1	
37 2-Chloro-1,3-butadiene	53	4.390	4.384	0.006	93	224914	20.0	21.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
39 Tert-butyl ethyl ether	59	4.902	4.908	-0.006	99	401156	20.0	21.3	
40 2-Butanone (MEK)	43	5.128	5.121	0.007	97	315550	40.0	42.8	
41 cis-1,2-Dichloroethene	96	5.140	5.133	0.007	86	154634	20.0	20.7	
42 2,2-Dichloropropane	77	5.152	5.152	0.000	91	213312	20.0	21.1	
44 Propionitrile	54	5.219	5.213	0.006	98	248396	100.0	105.9	
46 Methacrylonitrile	67	5.432	5.426	0.006	96	239146	50.0	54.1	
47 Chlorobromomethane	128	5.481	5.475	0.006	96	78190	20.0	20.8	
48 Tetrahydrofuran	71	5.493	5.493	0.000	93	190974	100.0	106.3	
49 Chloroform	83	5.646	5.639	0.007	94	273343	20.0	20.9	
$ 50 Dibromofluoromethane (Surr)	113	5.865	5.865	0.000	93	346265	50.0	50.2	
51 1,1,1-Trichloroethane	97	5.871	5.871	0.000	62	229810	20.0	20.8	
52 Cyclohexane	56	5.969	5.969	0.000	96	240017	20.0	21.0	
53 Carbon tetrachloride	117	6.079	6.078	0.001	97	209347	20.0	20.9	
54 1,1-Dichloropropene	75	6.091	6.091	0.000	95	196423	20.0	21.3	
S 55 1,2-Dichloroethene, Total	100				0			41.5	
56 Isobutyl alcohol	41	6.322	6.310	0.012	86	205317	250.0	249.3	
$ 57 1,2-Dichloroethane-d4 (Surr)	102	6.329	6.328	0.001	81	74194	50.0	51.0	
58 Benzene	78	6.353	6.353	0.000	97	577959	20.0	20.8	
59 1,2-Dichloroethane	62	6.438	6.432	0.006	97	220890	20.0	20.7	
61 Tert-amyl methyl ether	73	6.566	6.578	-0.012	96	376941	20.0	21.2	
* 62 Fluorobenzene (IS)	96	6.780	6.780	0.000	98	1220742	50.0	50.0	
63 n-Heptane	43	6.816	6.816	0.000	97	196964	20.0	20.5	
64 n-Butanol	56	7.231	7.225	0.006	96	124331	250.0	249.5	
65 Trichloroethene	95	7.273	7.279	-0.006	98	154029	20.0	21.1	
67 Methylcyclohexane	83	7.584	7.584	0.000	93	210101	20.0	20.9	
68 1,2-Dichloropropane	63	7.609	7.615	-0.006	97	154748	20.0	20.7	
69 2-ethoxy-2-methyl butane	87	7.645	7.651	-0.006	90	184413	20.0	21.8	
70 Dibromomethane	93	7.725	7.724	0.001	95	100039	20.0	20.4	
72 1,4-Dioxane	88	7.731	7.724	0.007	30	33214	250.0	273.7	M
71 Methyl methacrylate	69	7.737	7.737	0.000	95	117206	20.0	20.7	
75 Dichlorobromomethane	83	7.981	7.980	0.001	98	193301	20.0	20.4	
76 2-Nitropropane	41	8.267	8.267	0.000	100	358574	100.0	103.5	
77 2-Chloroethyl vinyl ether	63	8.377	8.377	0.000	93	86767	20.0	20.2	
78 cis-1,3-Dichloropropene	75	8.560	8.560	0.000	93	214070	20.0	20.3	
79 4-Methyl-2-pentanone (MIBK)	43	8.767	8.767	0.000	99	576949	40.0	44.1	
$ 80 Toluene-d8 (Surr)	98	8.895	8.901	-0.006	94	1142144	50.0	50.5	
81 Toluene	92	8.987	8.986	0.001	97	331541	20.0	20.9	
82 trans-1,3-Dichloropropene	75	9.304	9.303	0.001	96	189765	20.0	20.4	
83 Ethyl methacrylate	69	9.395	9.395	0.000	92	190269	20.0	21.1	
84 1,1,2-Trichloroethane	97	9.529	9.529	0.000	92	122960	20.0	20.5	
85 Tetrachloroethene	166	9.614	9.614	0.000	96	153691	20.0	21.0	
86 1,3-Dichloropropane	76	9.706	9.706	0.000	95	197487	20.0	20.7	
88 2-Hexanone	43	9.785	9.785	0.000	99	393435	40.0	44.4	
90 Chlorodibromomethane	129	9.938	9.937	0.001	90	147917	20.0	20.8	
130 Ethylene Dibromide	107	10.041	10.047	-0.006	98	129068	20.0	20.7	
S 129 1,3-Dichloropropene, Total	100				0			40.6	
* 131 Chlorobenzene-d5 (IS)	117	10.523	10.523	0.000	87	859296	50.0	50.0	
132 Chlorobenzene	112	10.553	10.553	0.000	93	375932	20.0	20.6	
133 1-Chlorohexane	91	10.553	10.553	0.000	95	167119	20.0	20.7	
134 1,1,1,2-Tetrachloroethane	131	10.645	10.645	0.000	94	148778	20.0	21.2	
135 Ethylbenzene	91	10.657	10.657	0.000	99	667548	20.0	21.4	
136 m-Xylene & p-Xylene	106	10.779	10.779	0.000	100	503681	40.0	43.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
137 o-Xylene	106	11.126	11.126	0.000	97	253193	20.0	22.0	
138 Styrene	104	11.145	11.145	0.001	95	384156	20.0	21.5	
S 139 Xylenes, Total	106				0			65.4	
140 Bromoform	173	11.297	11.303	-0.006	96	121297	20.0	20.3	
141 Isopropylbenzene	105	11.449	11.449	0.000	96	675878	20.0	21.8	
143 Cyclohexanone	55	11.517	11.516	0.001	96	373122	500.0	537.6	
$ 144 4-Bromofluorobenzene (Surr)	95	11.596	11.596	0.000	92	453517	50.0	50.5	
145 Bromobenzene	156	11.706	11.711	-0.005	97	162726	20.0	20.3	
146 1,1,2,2-Tetrachloroethane	83	11.712	11.711	0.001	94	252053	20.0	20.6	
147 trans-1,4-Dichloro-2-butene	53	11.736	11.742	-0.006	91	183794	50.0	51.2	
148 1,2,3-Trichloropropane	110	11.754	11.754	0.000	85	68785	20.0	20.7	
149 N-Propylbenzene	91	11.797	11.797	0.000	99	836923	20.0	21.5	
150 2-Chlorotoluene	126	11.864	11.870	-0.006	96	162428	20.0	20.5	
151 1,3,5-Trimethylbenzene	105	11.943	11.943	0.000	93	558914	20.0	21.0	
152 4-Chlorotoluene	126	11.968	11.968	0.000	98	162910	20.0	21.4	
154 tert-Butylbenzene	134	12.187	12.193	-0.006	94	98566	20.0	21.2	
156 1,2,4-Trimethylbenzene	105	12.236	12.236	0.000	98	580856	20.0	21.5	
157 sec-Butylbenzene	105	12.358	12.358	0.000	95	688545	20.0	21.2	
158 1,3-Dichlorobenzene	146	12.449	12.455	-0.006	98	314950	20.0	20.2	
159 4-Isopropyltoluene	119	12.474	12.474	0.000	97	580637	20.0	21.2	
* 160 1,4-Dichlorobenzene-d4	152	12.510	12.510	0.000	95	525425	50.0	50.0	
161 1,4-Dichlorobenzene	146	12.529	12.528	0.001	96	304717	20.0	20.1	
162 1,2,3-Trimethylbenzene	105	12.547	12.547	0.000	99	609407	20.0	21.2	
163 Benzyl chloride	91	12.608	12.614	-0.006	99	456719	20.0	21.1	
164 1,3-Diethylbenzene	119	12.681	12.681	0.000	95	339118	20.0	21.0	
168 p-Diethylbenzene	119	12.754	12.754	0.000	93	356936	20.0	21.2	
166 n-Butylbenzene	92	12.772	12.772	0.000	98	300898	20.0	20.8	
167 1,2-Dichlorobenzene	146	12.791	12.797	-0.006	97	329047	20.0	20.4	
165 o-diethylbenzene	119	12.827	12.827	0.000	96	281503	20.0	20.8	
169 1,2-Dibromo-3-Chloropropane	75	13.345	13.351	-0.006	81	74812	20.0	20.9	
171 1,3,5-Trichlorobenzene	180	13.480	13.479	0.001	97	208858	20.0	19.8	
172 1,2,4-Trichlorobenzene	180	13.912	13.912	0.000	94	188489	20.0	20.1	
173 Hexachlorobutadiene	225	14.004	14.004	0.000	97	71391	20.0	19.4	
174 Naphthalene	128	14.089	14.089	0.000	97	739198	20.0	21.3	
175 1,2,3-Trichlorobenzene	180	14.236	14.235	0.001	96	192077	20.0	19.9	
176 2-Methylnaphthalene	142	14.827	14.827	0.000	92	313545	20.0	19.7	
S 187 Total Diethylbenzene	1				0			63.0	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

MSV_CCV_CYC_00006	Amount Added:	16.00	Units: uL	
MSV_CCV_GASES_00520	Amount Added:	2.00	Units: uL	
MSV_CCV_VOC#3_00133	Amount Added:	3.20	Units: uL	
MSV_CCV_2CEVE_00128	Amount Added:	4.00	Units: uL	
MSV_CCV_EE_00005	Amount Added:	4.00	Units: uL	
MSV_CCV_VOC#1_00134	Amount Added:	4.00	Units: uL	
MSV_Cent_ISSS_00016	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 11-Jul-2023 00:49:44 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X25.D

Injection Date: 10-Jul-2023 19:19:30 Instrument ID: 26285 Operator ID: CLM27445

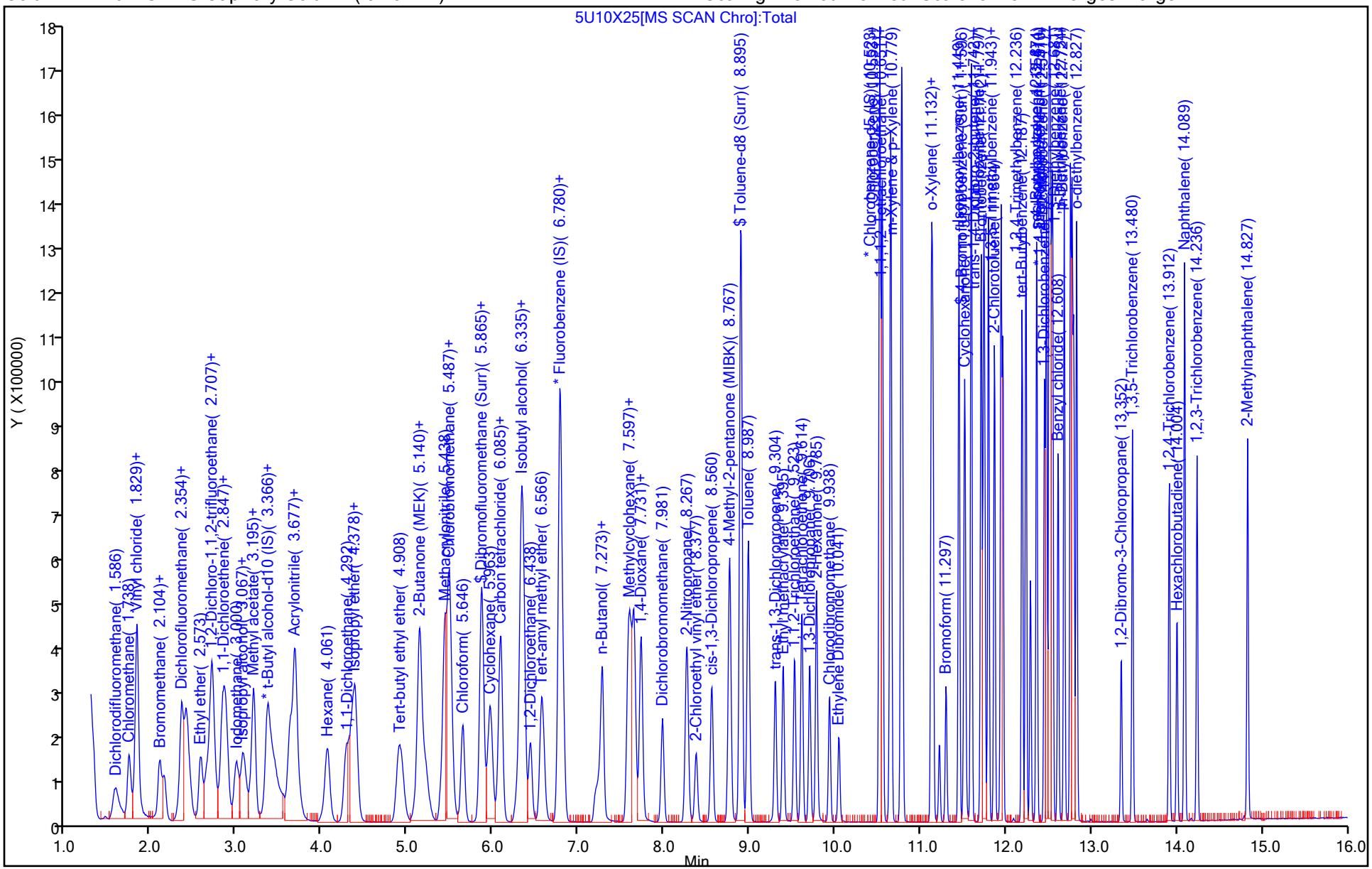
Lims ID: IC v20 Worklist Smp#: 15

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 24

Method: MSVoa_26285a Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

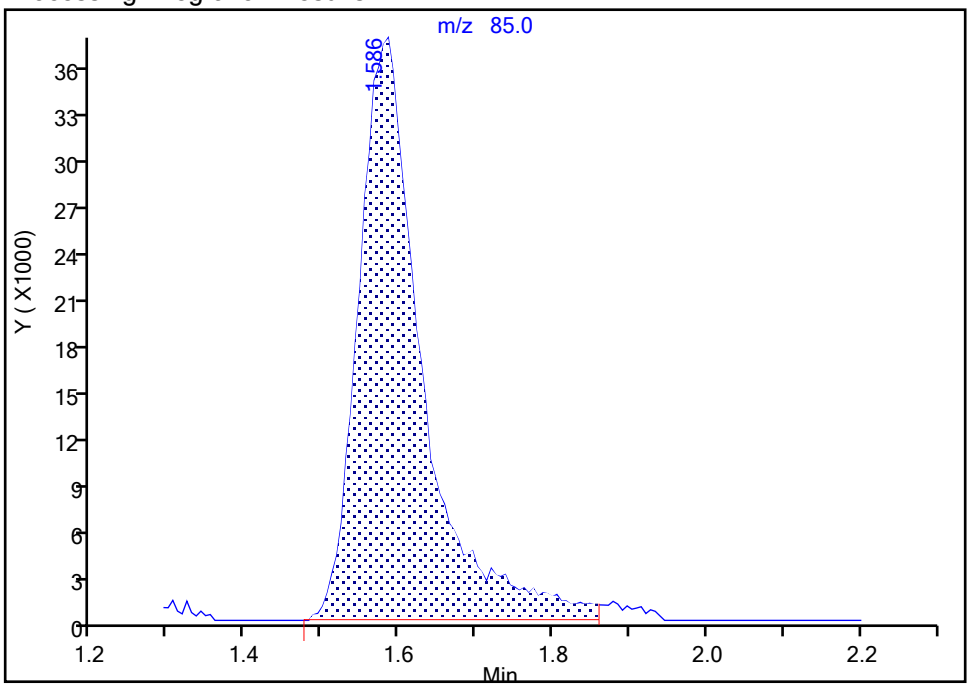
Data File:	\\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X25.D				
Injection Date:	10-Jul-2023 19:19:30	Instrument ID:	26285		
Lims ID:	IC v20				
Client ID:					
Operator ID:	CLM27445	ALS Bottle#:	24	Worklist Smp#:	15
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVoa_26285a	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

3 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

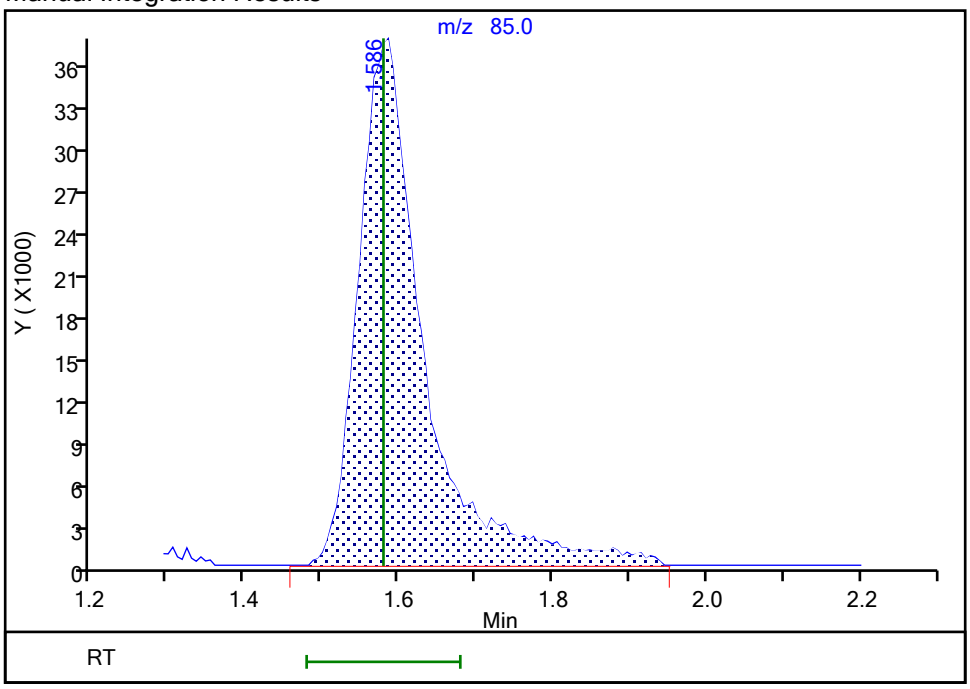
Processing Integration Results

RT: 1.59
Area: 215252
Amount: 21.126769
Amount Units: ug/l



Manual Integration Results

RT: 1.59
Area: 218947
Amount: 20.865149
Amount Units: ug/l



Reviewer: K4WN, 10-Jul-2023 20:13:21 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

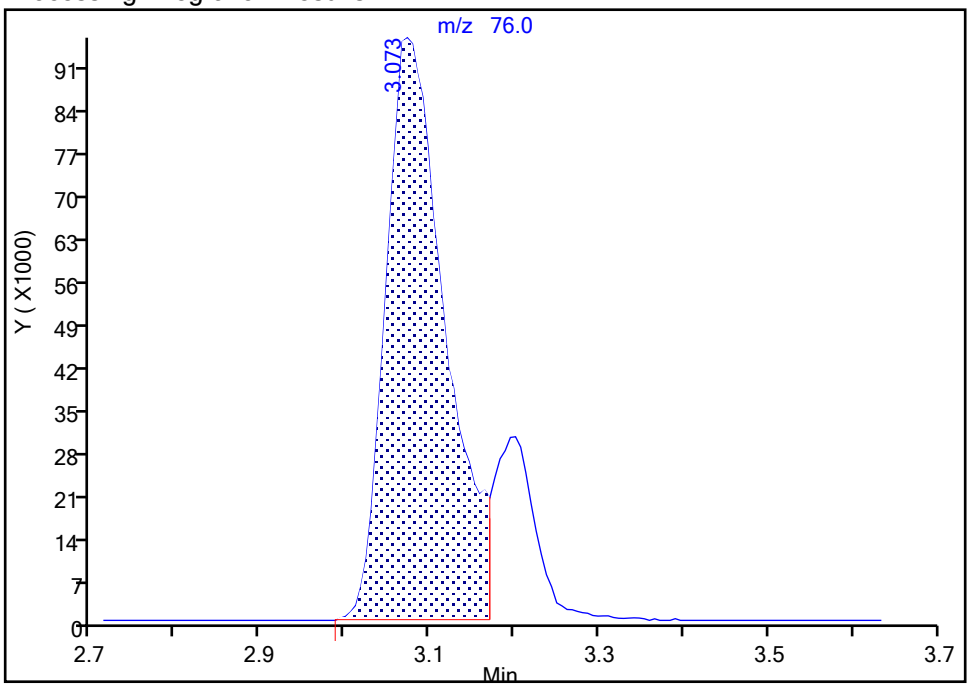
Data File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X25.D
Injection Date: 10-Jul-2023 19:19:30 Instrument ID: 26285
Lims ID: IC v20
Client ID:
Operator ID: CLM27445 ALS Bottle#: 24 Worklist Smp#: 15
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVoa_26285a Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

22 Carbon disulfide, CAS: 75-15-0

Signal: 1

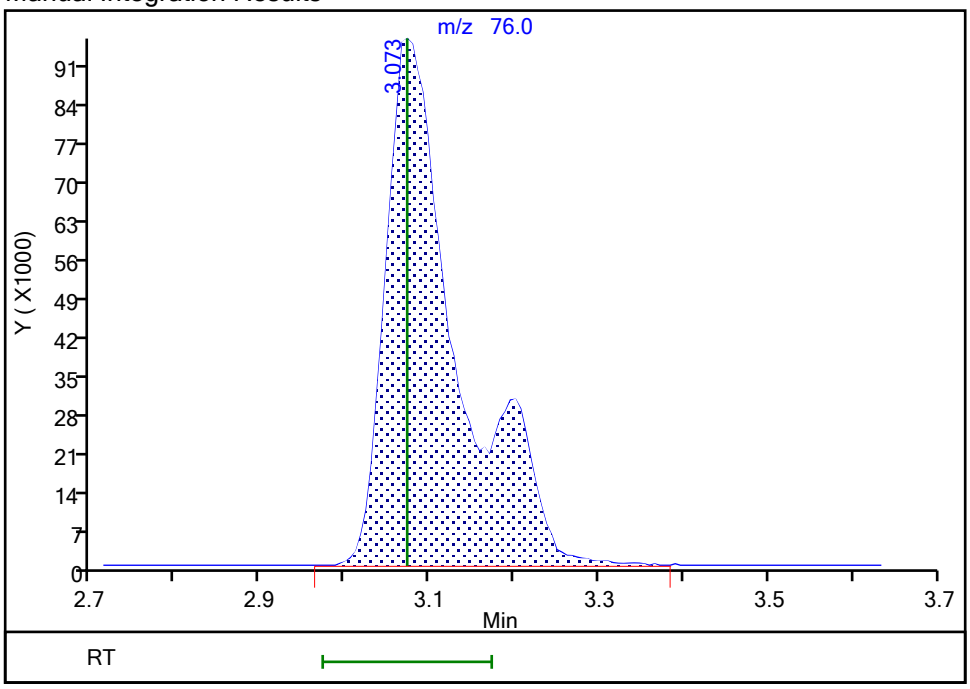
Processing Integration Results

RT: 3.07
Area: 469917
Amount: 18.170797
Amount Units: ug/l



Manual Integration Results

RT: 3.07
Area: 567384
Amount: 20.511459
Amount Units: ug/l



Reviewer: K4WN, 10-Jul-2023 20:13:31 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

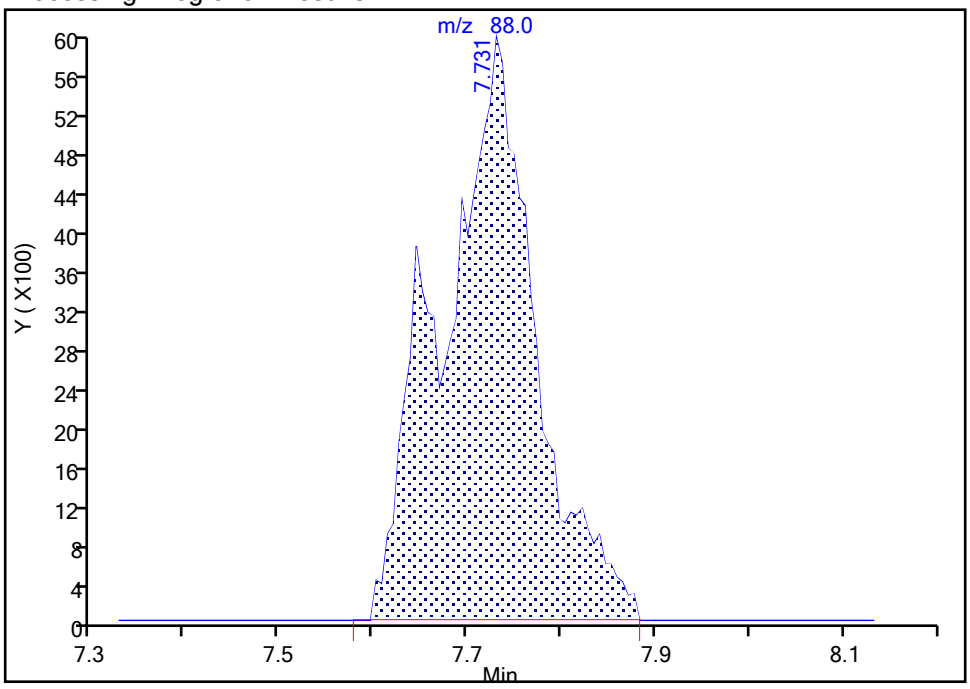
Data File:	\\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X25.D				
Injection Date:	10-Jul-2023 19:19:30	Instrument ID:	26285		
Lims ID:	IC v20				
Client ID:					
Operator ID:	CLM27445	ALS Bottle#:	24	Worklist Smp#:	15
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVoa_26285a	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

72 1,4-Dioxane, CAS: 123-91-1

Signal: 1

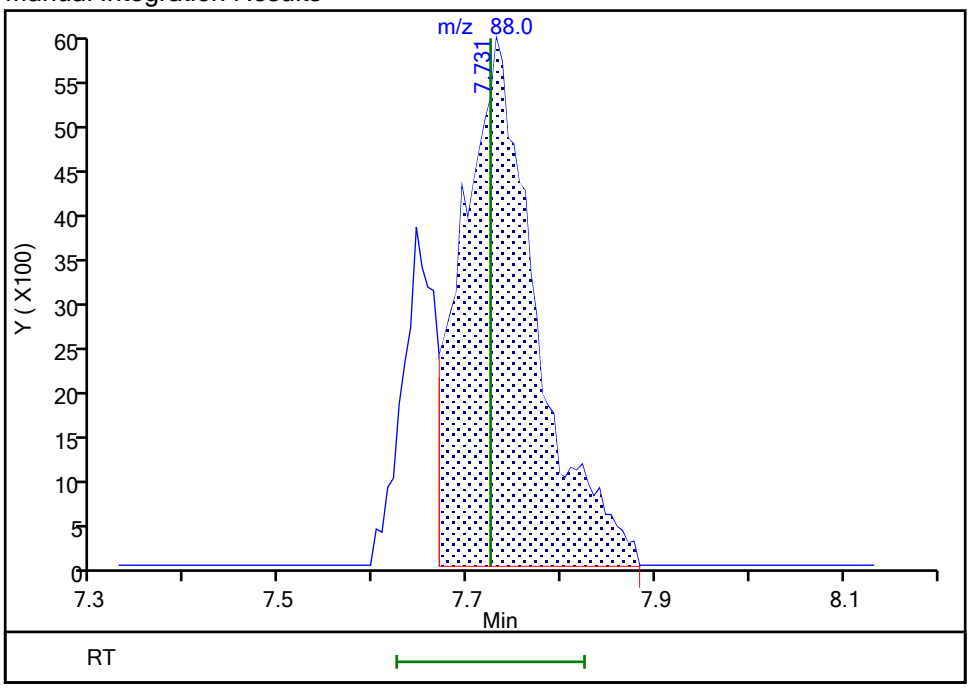
Processing Integration Results

RT: 7.73
Area: 41641
Amount: 362.6631
Amount Units: ug/l



Manual Integration Results

RT: 7.73
Area: 33214
Amount: 273.7328
Amount Units: ug/l



Reviewer: K4WN, 10-Jul-2023 20:13:47 -04:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X16.D
Lims ID: ICIS v50
Client ID:
Sample Type: ICIS Calib Level: 5
Inject. Date: 10-Jul-2023 15:53:30 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 410-0088512-016
Misc. Info.: ICIS 50
Operator ID: CLM27445 Instrument ID: 26285
Sublist: chrom-MSVoa_26285a*sub38

Method: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\MSVoa_26285a.m
Limit Group: MSV - 8260C_D
Last Update: 11-Jul-2023 00:49:51 Calib Date: 10-Jul-2023 21:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X27.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1619

First Level Reviewer: K4WN Date: 10-Jul-2023 19:07:46

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
3 Dichlorodifluoromethane	85	1.579	1.579	0.000	99	569063	50.0	51.4	
4 Chloromethane	50	1.738	1.738	0.000	99	645957	50.0	48.4	
5 Vinyl chloride	62	1.823	1.823	0.000	65	558826	50.0	48.9	
6 Butadiene	39	1.829	1.829	0.000	99	670477	50.0	47.6	
8 Bromomethane	94	2.091	2.091	0.000	93	366102	50.0	48.6	
9 Chloroethane	64	2.146	2.146	0.000	98	315298	50.0	48.8	
10 Dichlorofluoromethane	67	2.354	2.354	0.000	97	948721	50.0	48.8	
11 Trichlorofluoromethane	101	2.402	2.402	0.000	95	661666	50.0	50.1	
12 Pentane	43	2.408	2.408	0.000	96	604009	50.0	46.0	
13 Ethyl ether	59	2.573	2.573	0.000	96	280710	50.0	47.5	
15 1,2-Dichloro-1,1,2-trifluoroetha	67	2.664	2.664	0.000	94	483745	50.0	48.6	
16 Acrolein	56	2.707	2.707	0.000	98	1300057	500.0	444.7	
17 1,1-Dichloroethene	96	2.829	2.829	0.000	96	316283	50.0	48.5	
18 Acetone	58	2.847	2.847	0.000	100	134786	100.0	88.9	M
19 1,1,2-Trichloro-1,2,2-trifluoroe	101	2.872	2.872	0.000	93	353241	50.0	49.7	
20 Iodomethane	142	2.994	2.994	0.000	99	623188	50.0	47.5	
21 Isopropyl alcohol	45	3.012	3.012	0.000	91	380691	250.0	253.3	
22 Carbon disulfide	76	3.073	3.073	0.000	100	1365850	50.0	46.8	M
25 Methyl acetate	43	3.177	3.177	0.000	99	540243	50.0	47.3	
26 3-Chloro-1-propene	41	3.195	3.195	0.000	89	589117	50.0	45.8	
27 Methylene Chloride	84	3.359	3.359	0.000	98	369893	50.0	45.7	
* 28 t-Butyl alcohol-d10 (IS)	65	3.420	3.420	0.000	77	574041	250.0	250.0	
29 2-Methyl-2-propanol	59	3.500	3.500	0.000	98	615587	250.0	245.3	
30 Acrylonitrile	53	3.615	3.615	0.000	98	667674	125.0	116.2	
31 trans-1,2-Dichloroethene	96	3.676	3.676	0.000	95	333082	50.0	47.1	
32 Methyl tert-butyl ether	73	3.695	3.695	0.000	97	961578	50.0	46.8	
33 Hexane	57	4.054	4.054	0.000	96	430526	50.0	50.1	
34 1,1-Dichloroethane	63	4.274	4.274	0.000	96	652463	50.0	47.2	
36 Isopropyl ether	45	4.347	4.347	0.000	95	1141150	50.0	47.4	
37 2-Chloro-1,3-butadiene	53	4.384	4.384	0.000	93	532296	50.0	48.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
39 Tert-butyl ethyl ether	59	4.908	4.908	0.000	98	945742	50.0	47.6	
40 2-Butanone (MEK)	43	5.121	5.121	0.000	99	684933	100.0	88.1	
41 cis-1,2-Dichloroethene	96	5.133	5.133	0.000	85	364564	50.0	46.2	
42 2,2-Dichloropropane	77	5.152	5.152	0.000	93	506292	50.0	47.6	
44 Propionitrile	54	5.213	5.213	0.000	98	596127	250.0	241.8	
46 Methacrylonitrile	67	5.426	5.426	0.000	96	565178	125.0	121.2	
47 Chlorobromomethane	128	5.475	5.475	0.000	96	184152	50.0	46.6	
48 Tetrahydrofuran	71	5.493	5.493	0.000	95	467223	250.0	247.4	
49 Chloroform	83	5.639	5.639	0.000	95	647062	50.0	47.0	
$ 50 Dibromofluoromethane (Surr)	113	5.865	5.865	0.000	93	357166	50.0	49.1	
51 1,1,1-Trichloroethane	97	5.871	5.871	0.000	98	555780	50.0	47.6	
52 Cyclohexane	56	5.969	5.969	0.000	95	599529	50.0	49.8	
53 Carbon tetrachloride	117	6.078	6.078	0.000	96	504130	50.0	47.7	
54 1,1-Dichloropropene	75	6.091	6.091	0.000	96	468215	50.0	48.2	
56 Isobutyl alcohol	41	6.310	6.310	0.000	92	580949	625.0	671.1	
$ 57 1,2-Dichloroethane-d4 (Surr)	102	6.328	6.328	0.000	87	76902	50.0	50.1	
58 Benzene	78	6.353	6.353	0.000	98	1378772	50.0	47.2	
59 1,2-Dichloroethane	62	6.432	6.432	0.000	97	514812	50.0	45.7	
61 Tert-amyl methyl ether	73	6.578	6.578	0.000	96	907340	50.0	48.4	
* 62 Fluorobenzene (IS)	96	6.780	6.780	0.000	98	1286783	50.0	50.0	
63 n-Heptane	43	6.816	6.816	0.000	97	493218	50.0	48.6	
64 n-Butanol	56	7.225	7.225	0.000	94	383761	625.0	732.6	
65 Trichloroethene	95	7.279	7.279	0.000	98	368417	50.0	47.9	
67 Methylcyclohexane	83	7.584	7.584	0.000	93	550521	50.0	51.9	
68 1,2-Dichloropropane	63	7.615	7.615	0.000	97	375806	50.0	47.7	
69 2-ethoxy-2-methyl butane	87	7.651	7.651	0.000	90	447589	50.0	50.2	
70 Dibromomethane	93	7.724	7.724	0.000	95	240935	50.0	46.6	
72 1,4-Dioxane	88	7.724	7.724	0.000	29	82657	625.0	648.0	M
71 Methyl methacrylate	69	7.737	7.737	0.000	93	296141	50.0	49.5	
75 Dichlorobromomethane	83	7.980	7.980	0.000	98	472852	50.0	47.3	
76 2-Nitropropane	41	8.267	8.267	0.000	99	916341	250.0	251.7	
77 2-Chloroethyl vinyl ether	63	8.377	8.377	0.000	92	229719	50.0	50.8	
78 cis-1,3-Dichloropropene	75	8.560	8.560	0.000	93	540732	50.0	48.5	
79 4-Methyl-2-pentanone (MIBK)	43	8.767	8.767	0.000	98	1332002	100.0	96.6	
$ 80 Toluene-d8 (Surr)	98	8.901	8.901	0.000	94	1220705	50.0	50.5	
81 Toluene	92	8.986	8.986	0.000	97	808541	50.0	47.6	
82 trans-1,3-Dichloropropene	75	9.303	9.303	0.000	96	479996	50.0	48.2	
83 Ethyl methacrylate	69	9.395	9.395	0.000	91	501940	50.0	52.2	
84 1,1,2-Trichloroethane	97	9.529	9.529	0.000	92	304794	50.0	47.6	
85 Tetrachloroethene	166	9.614	9.614	0.000	96	373574	50.0	47.8	
86 1,3-Dichloropropane	76	9.706	9.706	0.000	96	481510	50.0	47.1	
88 2-Hexanone	43	9.785	9.785	0.000	99	953701	100.0	100.6	
90 Chlorodibromomethane	129	9.937	9.937	0.000	90	373492	50.0	49.1	
130 Ethylene Dibromide	107	10.047	10.047	0.000	99	314685	50.0	47.2	
* 131 Chlorobenzene-d5 (IS)	117	10.523	10.523	0.000	88	918889	50.0	50.0	
132 Chlorobenzene	112	10.553	10.553	0.000	93	935452	50.0	47.9	
133 1-Chlorohexane	91	10.553	10.553	0.000	97	424888	50.0	49.2	
134 1,1,1,2-Tetrachloroethane	131	10.645	10.645	0.000	94	373447	50.0	49.8	
135 Ethylbenzene	91	10.657	10.657	0.000	99	1671256	50.0	50.2	
136 m-Xylene & p-Xylene	106	10.779	10.779	0.000	100	1262787	100.0	101.7	
137 o-Xylene	106	11.126	11.126	0.000	98	637741	50.0	51.8	
138 Styrene	104	11.145	11.145	0.000	95	999495	50.0	52.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
140 Bromoform	173	11.303	11.303	0.000	97	308877	50.0	48.3	
141 Isopropylbenzene	105	11.449	11.449	0.000	96	1726383	50.0	52.1	
143 Cyclohexanone	55	11.516	11.516	0.000	95	442152	625.0	606.1	
$ 144 4-Bromofluorobenzene (Surr)	95	11.596	11.596	0.000	91	470807	50.0	49.1	
145 Bromobenzene	156	11.711	11.711	0.000	97	403864	50.0	47.8	
146 1,1,2,2-Tetrachloroethane	83	11.711	11.711	0.000	94	622976	50.0	48.2	
147 trans-1,4-Dichloro-2-butene	53	11.742	11.742	0.000	90	456157	125.0	120.8	
148 1,2,3-Trichloropropane	110	11.754	11.754	0.000	86	170966	50.0	48.9	
149 N-Propylbenzene	91	11.797	11.797	0.000	99	2102715	50.0	51.2	
150 2-Chlorotoluene	126	11.870	11.870	0.000	97	412231	50.0	49.4	
151 1,3,5-Trimethylbenzene	105	11.943	11.943	0.000	93	1480130	50.0	52.7	
152 4-Chlorotoluene	126	11.968	11.968	0.000	98	393405	50.0	49.1	
154 tert-Butylbenzene	134	12.193	12.193	0.000	93	258968	50.0	53.0	
156 1,2,4-Trimethylbenzene	105	12.236	12.236	0.000	98	1500249	50.0	52.6	
157 sec-Butylbenzene	105	12.358	12.358	0.000	95	1796862	50.0	52.4	
158 1,3-Dichlorobenzene	146	12.455	12.455	0.000	98	776041	50.0	47.3	
159 4-Isopropyltoluene	119	12.474	12.474	0.000	97	1539694	50.0	53.5	
* 160 1,4-Dichlorobenzene-d4	152	12.510	12.510	0.000	95	553355	50.0	50.0	
161 1,4-Dichlorobenzene	146	12.528	12.528	0.000	95	745395	50.0	46.6	
162 1,2,3-Trimethylbenzene	105	12.547	12.547	0.000	99	1553101	50.0	51.2	
163 Benzyl chloride	91	12.614	12.614	0.000	99	1164029	50.0	51.0	
164 1,3-Diethylbenzene	119	12.681	12.681	0.000	95	894974	50.0	52.6	
168 p-Diethylbenzene	119	12.754	12.754	0.000	93	930995	50.0	52.5	
166 n-Butylbenzene	92	12.772	12.772	0.000	98	777540	50.0	51.1	
167 1,2-Dichlorobenzene	146	12.797	12.797	0.000	98	809186	50.0	47.7	
165 o-diethylbenzene	119	12.827	12.827	0.000	97	744717	50.0	52.3	
169 1,2-Dibromo-3-Chloropropane	75	13.351	13.351	0.000	82	189691	50.0	50.2	
171 1,3,5-Trichlorobenzene	180	13.479	13.479	0.000	98	530687	50.0	47.8	
172 1,2,4-Trichlorobenzene	180	13.912	13.912	0.000	94	485267	50.0	49.0	
173 Hexachlorobutadiene	225	14.004	14.004	0.000	97	181986	50.0	47.0	
174 Naphthalene	128	14.089	14.089	0.000	97	2005571	50.0	54.9	
175 1,2,3-Trichlorobenzene	180	14.235	14.235	0.000	96	495299	50.0	48.6	
176 2-Methylnaphthalene	142	14.827	14.827	0.000	92	948889	50.0	56.7	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

MSV_CCV_CYC_00006	Amount Added:	10.00	Units: uL	
MSV_CCV_GASES_00520	Amount Added:	2.50	Units: uL	
MSV_CCV_VOC#3_00133	Amount Added:	4.00	Units: uL	
MSV_CCV_2CEVE_00128	Amount Added:	5.00	Units: uL	
MSV_CCV_EE_00005	Amount Added:	5.00	Units: uL	
MSV_CCV_VOC#1_00134	Amount Added:	5.00	Units: uL	
MSV_Cent_ISSS_00016	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 11-Jul-2023 00:49:52 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X16.D

Injection Date: 10-Jul-2023 15:53:30 Instrument ID: 26285 Operator ID: CLM27445

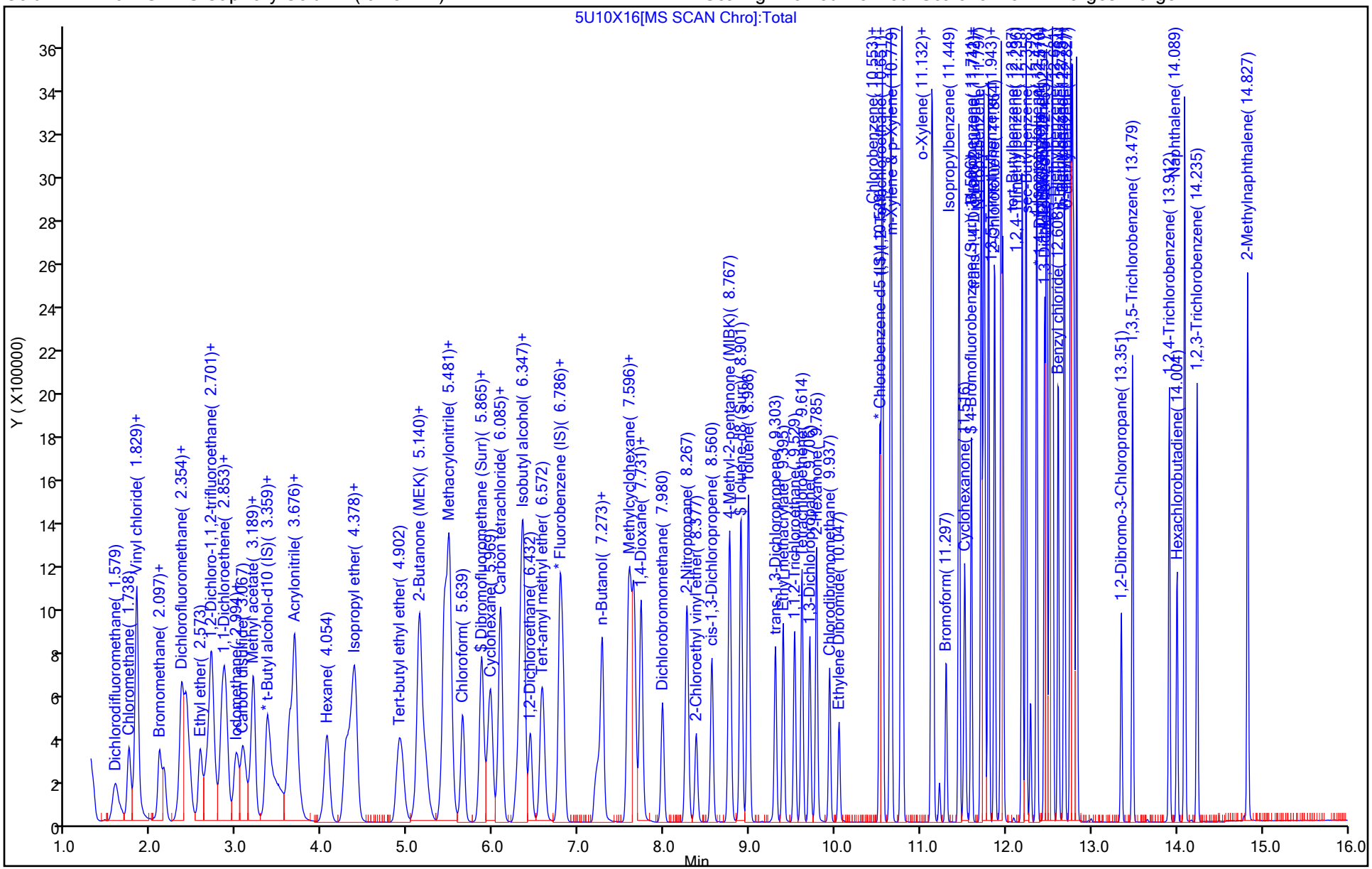
Lims ID: ICIS v50 Worklist Smp#: 16

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 15

Method: MSVoa_26285a Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

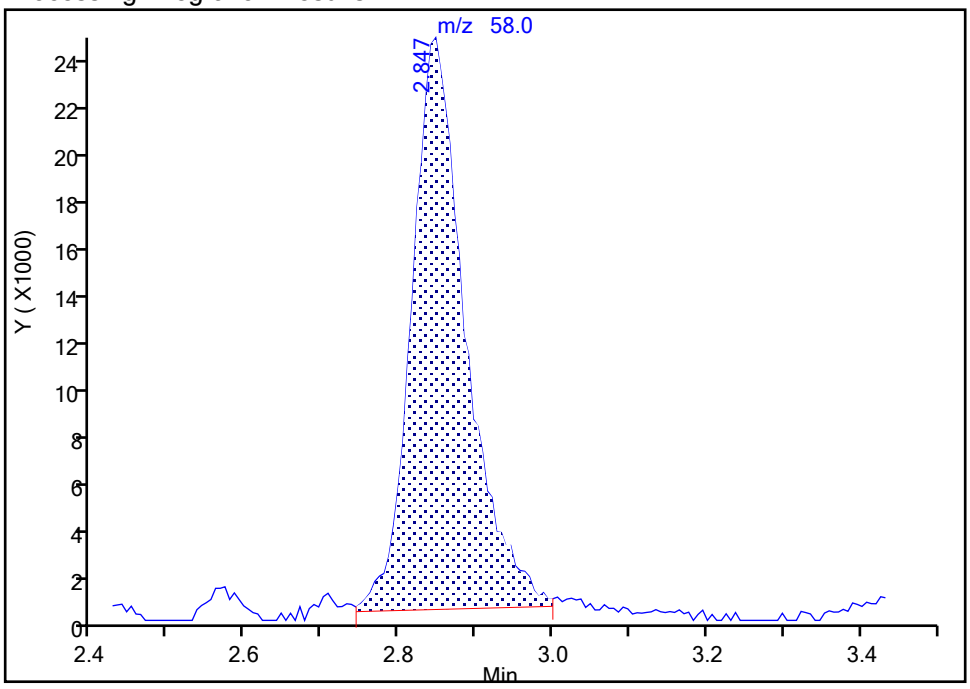
Data File:	\\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X16.D				
Injection Date:	10-Jul-2023 15:53:30	Instrument ID:	26285		
Lims ID:	ICIS v50				
Client ID:					
Operator ID:	CLM27445	ALS Bottle#:	15	Worklist Smp#:	16
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVoa_26285a	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

18 Acetone, CAS: 67-64-1

Signal: 1

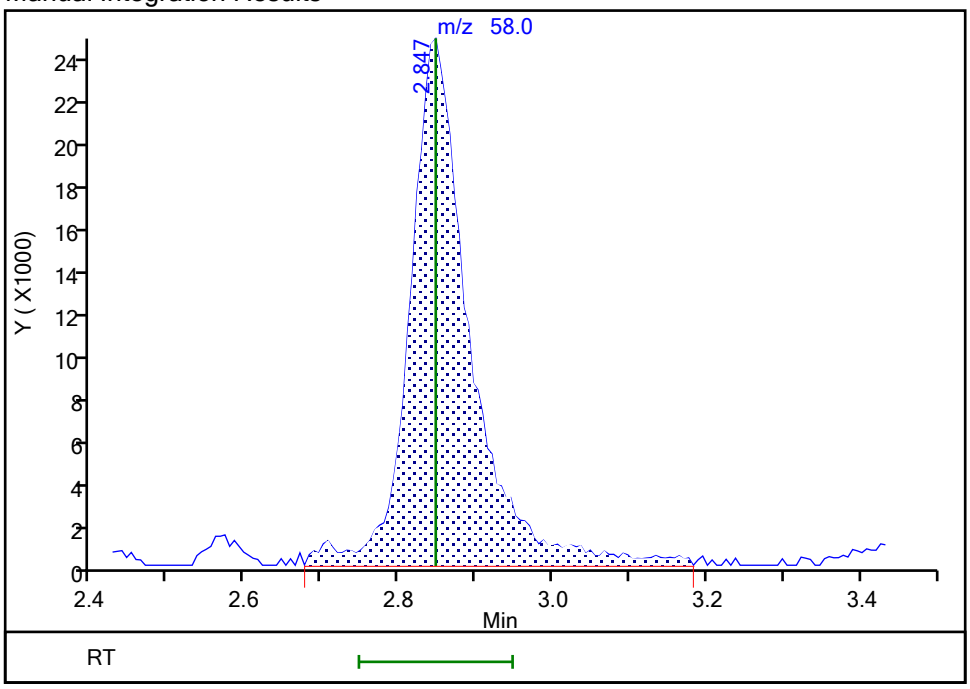
Processing Integration Results

RT: 2.85
Area: 118806
Amount: 82.196957
Amount Units: ug/l



Manual Integration Results

RT: 2.85
Area: 134786
Amount: 88.894502
Amount Units: ug/l



Reviewer: K4WN, 10-Jul-2023 21:39:19 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

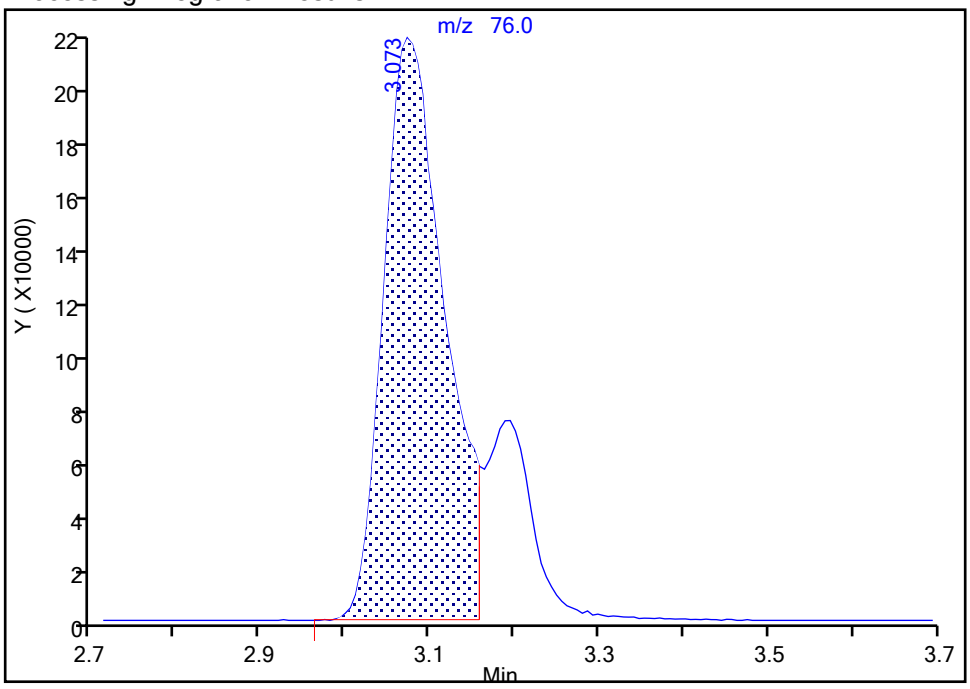
Data File:	\\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X16.D				
Injection Date:	10-Jul-2023 15:53:30	Instrument ID:	26285		
Lims ID:	ICIS v50				
Client ID:					
Operator ID:	CLM27445	ALS Bottle#:	15	Worklist Smp#:	16
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVoa_26285a	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

22 Carbon disulfide, CAS: 75-15-0

Signal: 1

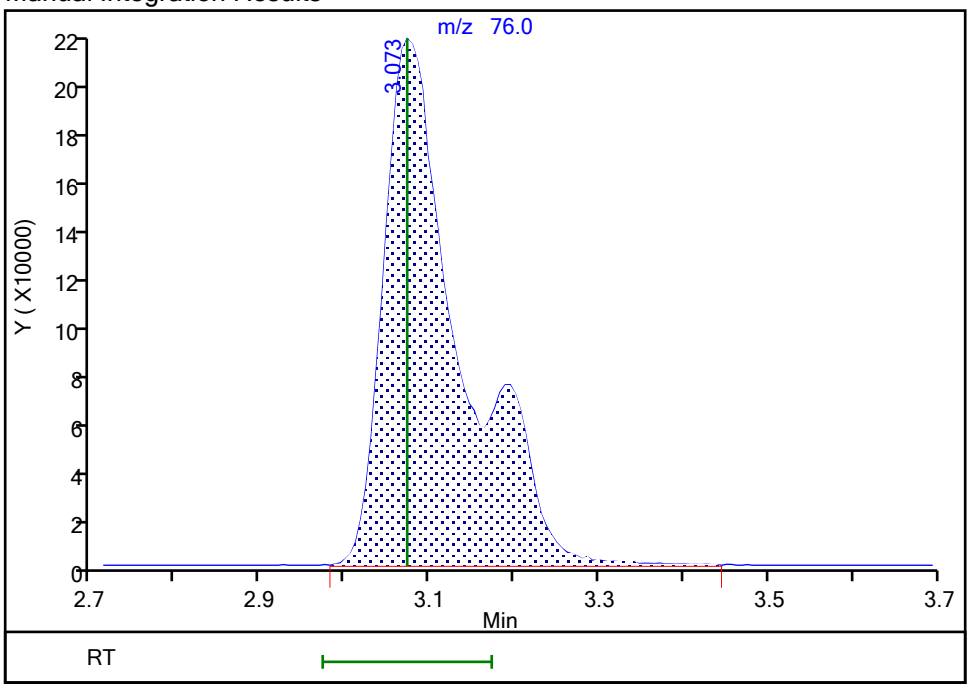
Processing Integration Results

RT: 3.07
Area: 1085693
Amount: 47.582133
Amount Units: ug/l



Manual Integration Results

RT: 3.07
Area: 1365850
Amount: 46.842606
Amount Units: ug/l



Reviewer: K4WN, 10-Jul-2023 19:26:56 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

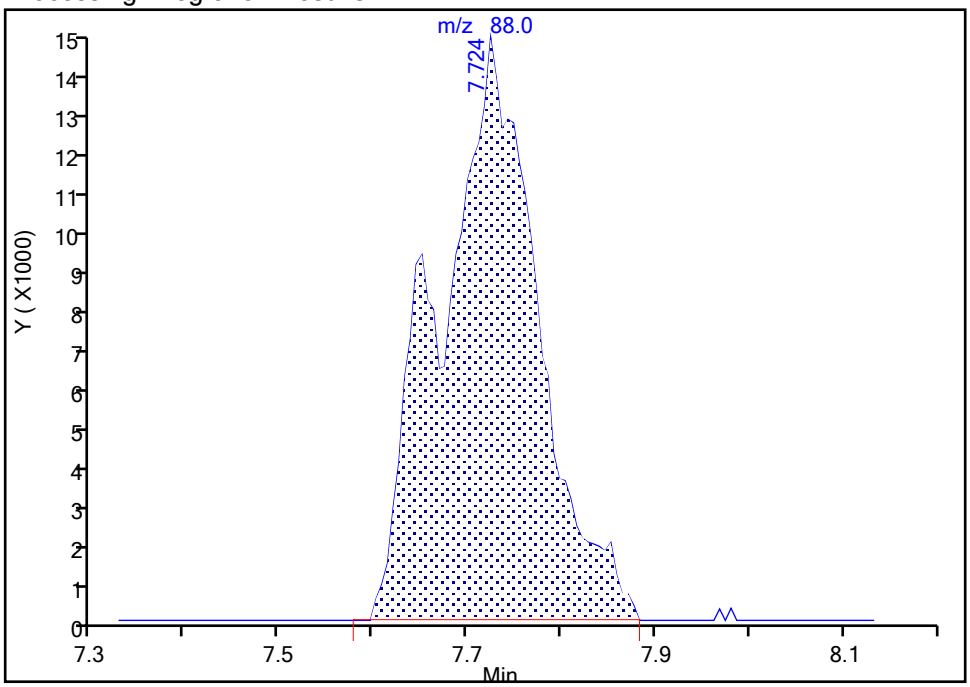
Data File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X16.D
Injection Date: 10-Jul-2023 15:53:30 Instrument ID: 26285
Lims ID: ICIS v50
Client ID:
Operator ID: CLM27445 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVoa_26285a Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

72 1,4-Dioxane, CAS: 123-91-1

Signal: 1

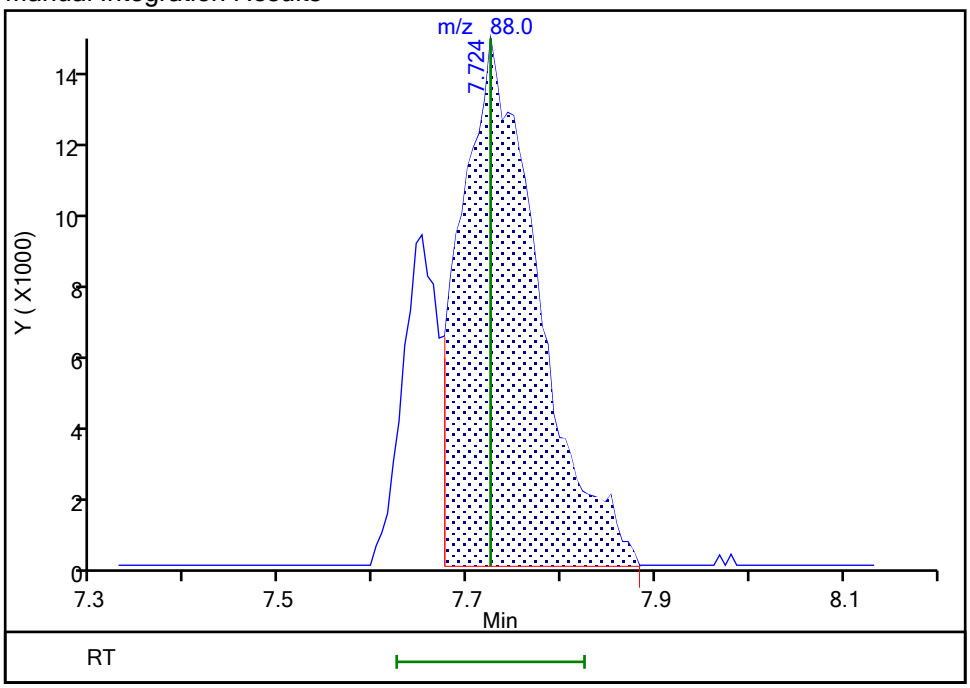
Processing Integration Results

RT: 7.72
Area: 105314
Amount: 625.0000
Amount Units: ug/l



Manual Integration Results

RT: 7.72
Area: 82657
Amount: 648.0281
Amount Units: ug/l



Reviewer: K4WN, 10-Jul-2023 19:18:33 -04:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X17.D
Lims ID: IC v100
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 10-Jul-2023 16:13:30 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 410-0088512-017
Misc. Info.: IC STD6 100
Operator ID: CLM27445 Instrument ID: 26285
Sublist: chrom-MSVoa_26285a*sub38

Method: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\MSVoa_26285a.m
Limit Group: MSV - 8260C_D
Last Update: 11-Jul-2023 00:50:00 Calib Date: 10-Jul-2023 21:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X27.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1619

First Level Reviewer: K4WN Date: 10-Jul-2023 19:29:03

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
3 Dichlorodifluoromethane	85	1.586	1.579	0.007	99	1043580	100.0	86.5	
4 Chloromethane	50	1.738	1.738	0.000	99	1219646	100.0	83.8	
5 Vinyl chloride	62	1.829	1.823	0.006	98	1061340	100.0	85.1	
6 Butadiene	39	1.835	1.829	0.006	99	1262370	100.0	82.2	
8 Bromomethane	94	2.098	2.091	0.007	92	707455	100.0	86.0	
9 Chloroethane	64	2.159	2.146	0.013	98	601074	100.0	85.4	
10 Dichlorofluoromethane	67	2.354	2.354	0.000	97	1812011	100.0	85.4	
11 Trichlorofluoromethane	101	2.409	2.402	0.007	80	1246626	100.0	86.6	
12 Pentane	43	2.409	2.408	0.001	97	1265648	100.0	88.4	
13 Ethyl ether	59	2.579	2.573	0.006	97	598889	100.0	93.0	
15 1,2-Dichloro-1,1,2-trifluoroetha	67	2.671	2.664	0.007	94	931419	100.0	85.8	
16 Acrolein	56	2.713	2.707	0.006	99	2965860	1000.0	965.3	
17 1,1-Dichloroethene	96	2.835	2.829	0.006	95	648549	100.0	91.2	
18 Acetone	58	2.847	2.847	0.000	98	285126	200.0	178.9	
19 1,1,2-Trichloro-1,2,2-trifluoroe	101	2.878	2.872	0.006	93	700748	100.0	90.4	
20 Iodomethane	142	2.994	2.994	0.000	99	1293821	100.0	90.5	
21 Isopropyl alcohol	45	3.018	3.012	0.006	98	701924	500.0	444.3	
22 Carbon disulfide	76	3.079	3.073	0.006	100	2843947	100.0	89.4	M
25 Methyl acetate	43	3.183	3.177	0.006	99	1141413	100.0	91.6	
26 3-Chloro-1-propene	41	3.201	3.195	0.006	89	1290743	100.0	92.0	
27 Methylene Chloride	84	3.360	3.359	0.001	98	770053	100.0	87.3	
* 28 t-Butyl alcohol-d10 (IS)	65	3.421	3.420	0.000	91	603392	250.0	250.0	
29 2-Methyl-2-propanol	59	3.506	3.500	0.006	98	1122649	500.0	425.5	
30 Acrylonitrile	53	3.622	3.615	0.007	98	1407824	250.0	224.7	
31 trans-1,2-Dichloroethene	96	3.683	3.676	0.007	95	710295	100.0	92.1	
32 Methyl tert-butyl ether	73	3.695	3.695	0.000	98	2065478	100.0	92.2	
33 Hexane	57	4.061	4.054	0.007	96	944466	100.0	100.8	
34 1,1-Dichloroethane	63	4.280	4.274	0.006	96	1393184	100.0	92.3	
36 Isopropyl ether	45	4.353	4.347	0.006	96	2496057	100.0	95.1	
37 2-Chloro-1,3-butadiene	53	4.396	4.384	0.012	93	1165114	100.0	97.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
39 Tert-butyl ethyl ether	59	4.914	4.908	0.006	99	2123505	100.0	97.9	
40 2-Butanone (MEK)	43	5.121	5.121	0.000	99	1606322	200.0	189.4	
41 cis-1,2-Dichloroethene	96	5.140	5.133	0.007	85	782187	100.0	90.9	
42 2,2-Dichloropropane	77	5.164	5.152	0.012	94	1088642	100.0	93.8	
44 Propionitrile	54	5.219	5.213	0.006	99	1228878	500.0	474.3	
46 Methacrylonitrile	67	5.432	5.426	0.006	97	1227906	250.0	241.5	
47 Chlorobromomethane	128	5.481	5.475	0.006	95	392021	100.0	90.9	
48 Tetrahydrofuran	71	5.499	5.493	0.006	92	993041	500.0	500.3	
49 Chloroform	83	5.646	5.639	0.007	95	1367240	100.0	91.1	
$ 50 Dibromofluoromethane (Surr)	113	5.865	5.865	0.000	93	387667	50.0	48.9	
51 1,1,1-Trichloroethane	97	5.871	5.871	0.000	99	1168541	100.0	91.8	
52 Cyclohexane	56	5.975	5.969	0.006	95	1281322	100.0	97.5	
53 Carbon tetrachloride	117	6.091	6.078	0.013	95	1074553	100.0	93.2	
54 1,1-Dichloropropene	75	6.097	6.091	0.006	95	1022544	100.0	96.4	
S 55 1,2-Dichloroethene, Total	100				0			183.0	
56 Isobutyl alcohol	41	6.316	6.310	0.006	93	1053203	1250.0	1157.4	
$ 57 1,2-Dichloroethane-d4 (Surr)	102	6.335	6.328	0.007	87	81283	50.0	48.6	
58 Benzene	78	6.359	6.353	0.006	98	2980938	100.0	93.5	
59 1,2-Dichloroethane	62	6.438	6.432	0.006	97	1108443	100.0	90.3	
61 Tert-amyl methyl ether	73	6.578	6.578	0.000	97	2046373	100.0	100.1	
* 62 Fluorobenzene (IS)	96	6.786	6.780	0.006	98	1403142	50.0	50.0	
63 n-Heptane	43	6.822	6.816	0.006	97	1124125	100.0	101.7	
64 n-Butanol	56	7.225	7.225	0.000	95	710855	1250.0	1291.0	
65 Trichloroethene	95	7.280	7.279	0.001	98	795331	100.0	94.8	
67 Methylcyclohexane	83	7.584	7.584	0.000	94	1221829	100.0	105.5	
68 1,2-Dichloropropane	63	7.615	7.615	0.000	97	820859	100.0	95.6	
69 2-ethoxy-2-methyl butane	87	7.657	7.651	0.006	91	1024681	100.0	105.5	
70 Dibromomethane	93	7.731	7.724	0.007	95	520083	100.0	92.3	
72 1,4-Dioxane	88	7.737	7.724	0.013	28	160634	1250.0	1198.1	M
71 Methyl methacrylate	69	7.737	7.737	0.000	93	674504	100.0	103.4	
75 Dichlorobromomethane	83	7.987	7.980	0.007	98	1049785	100.0	96.3	
76 2-Nitropropane	41	8.267	8.267	0.000	99	1980864	500.0	517.7	
77 2-Chloroethyl vinyl ether	63	8.377	8.377	0.000	92	552970	100.0	112.1	
78 cis-1,3-Dichloropropene	75	8.560	8.560	0.000	93	1255954	100.0	103.4	
79 4-Methyl-2-pentanone (MIBK)	43	8.773	8.767	0.006	98	3122505	200.0	207.7	
$ 80 Toluene-d8 (Surr)	98	8.901	8.901	0.000	94	1348454	50.0	49.8	
81 Toluene	92	8.993	8.986	0.007	97	1810438	100.0	95.1	
82 trans-1,3-Dichloropropene	75	9.304	9.303	0.001	96	1122017	100.0	100.6	
83 Ethyl methacrylate	69	9.395	9.395	0.000	92	1150177	100.0	106.7	
84 1,1,2-Trichloroethane	97	9.529	9.529	0.000	92	674322	100.0	93.9	
85 Tetrachloroethene	166	9.614	9.614	0.000	96	823611	100.0	94.1	
86 1,3-Dichloropropane	76	9.706	9.706	0.000	95	1091560	100.0	95.4	
88 2-Hexanone	43	9.785	9.785	0.000	99	2223887	200.0	209.3	
90 Chlorodibromomethane	129	9.938	9.937	0.001	90	833499	100.0	97.8	
130 Ethylene Dibromide	107	10.047	10.047	0.000	98	706501	100.0	94.5	
S 129 1,3-Dichloropropene, Total	100				0			204.0	
* 131 Chlorobenzene-d5 (IS)	117	10.529	10.523	0.006	86	1029809	50.0	50.0	
132 Chlorobenzene	112	10.553	10.553	0.000	92	2091860	100.0	95.5	
133 1-Chlorohexane	91	10.559	10.553	0.006	95	964678	100.0	99.8	
134 1,1,1,2-Tetrachloroethane	131	10.651	10.645	0.006	95	812153	100.0	96.6	
135 Ethylbenzene	91	10.657	10.657	0.000	99	3748874	100.0	100.5	
136 m-Xylene & p-Xylene	106	10.785	10.779	0.006	100	2818555	200.0	202.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
137 o-Xylene	106	11.132	11.126	0.006	97	1425330	100.0	103.2	
138 Styrene	104	11.145	11.145	0.001	95	2265060	100.0	106.0	
S 139 Xylenes, Total	106				0			305.8	
140 Bromoform	173	11.303	11.303	0.000	97	675648	100.0	94.3	
141 Isopropylbenzene	105	11.449	11.449	0.000	96	3894597	100.0	104.9	
143 Cyclohexanone	55	11.516	11.516	0.000	95	998670	1250.0	1302.3	
$ 144 4-Bromofluorobenzene (Surr)	95	11.596	11.596	0.000	90	532582	50.0	49.5	
145 Bromobenzene	156	11.712	11.711	0.001	97	885576	100.0	96.0	
146 1,1,2,2-Tetrachloroethane	83	11.712	11.711	0.001	94	1328516	100.0	94.3	
147 trans-1,4-Dichloro-2-butene	53	11.742	11.742	0.000	89	1012128	250.0	245.5	
148 1,2,3-Trichloropropane	110	11.754	11.754	0.000	83	354407	100.0	92.9	
149 N-Propylbenzene	91	11.797	11.797	0.000	99	4698837	100.0	104.8	
150 2-Chlorotoluene	126	11.870	11.870	0.000	96	916134	100.0	100.5	
151 1,3,5-Trimethylbenzene	105	11.943	11.943	0.000	94	3315797	100.0	108.2	
152 4-Chlorotoluene	126	11.968	11.968	0.000	98	875934	100.0	100.2	
154 tert-Butylbenzene	134	12.193	12.193	0.000	94	611273	100.0	114.6	
156 1,2,4-Trimethylbenzene	105	12.236	12.236	0.000	98	3396146	100.0	109.2	
157 sec-Butylbenzene	105	12.358	12.358	0.000	95	4112824	100.0	109.9	
158 1,3-Dichlorobenzene	146	12.455	12.455	0.000	98	1721216	100.0	96.2	
159 4-Isopropyltoluene	119	12.474	12.474	0.000	97	3511229	100.0	111.7	
* 160 1,4-Dichlorobenzene-d4	152	12.510	12.510	0.000	95	603978	50.0	50.0	
161 1,4-Dichlorobenzene	146	12.528	12.528	0.000	94	1636911	100.0	93.8	
162 1,2,3-Trimethylbenzene	105	12.547	12.547	0.000	99	3459192	100.0	104.4	
163 Benzyl chloride	91	12.614	12.614	0.000	99	2561493	100.0	102.8	
164 1,3-Diethylbenzene	119	12.681	12.681	0.000	95	2014110	100.0	108.5	
168 p-Diethylbenzene	119	12.754	12.754	0.000	93	2078152	100.0	107.4	
166 n-Butylbenzene	92	12.772	12.772	0.000	97	1728454	100.0	104.1	
167 1,2-Dichlorobenzene	146	12.797	12.797	0.000	98	1745352	100.0	94.3	
165 o-diethylbenzene	119	12.827	12.827	0.000	97	1680704	100.0	108.2	
169 1,2-Dibromo-3-Chloropropane	75	13.352	13.351	0.001	83	391089	100.0	94.8	
171 1,3,5-Trichlorobenzene	180	13.480	13.479	0.001	97	1170420	100.0	96.6	
172 1,2,4-Trichlorobenzene	180	13.912	13.912	0.000	94	1059371	100.0	98.1	
173 Hexachlorobutadiene	225	14.004	14.004	0.000	97	414128	100.0	97.9	
174 Naphthalene	128	14.089	14.089	0.000	97	4219981	100.0	105.9	
175 1,2,3-Trichlorobenzene	180	14.235	14.235	0.000	96	1042724	100.0	93.8	
176 2-Methylnaphthalene	142	14.827	14.827	0.000	92	2113161	100.0	115.8	
S 187 Total Diethylbenzene	1				0			324.1	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

MSV_CCV_CYC_00006	Amount Added:	10.00	Units: uL	
MSV_CCV_GASES_00520	Amount Added:	2.50	Units: uL	
MSV_CCV_VOC#3_00133	Amount Added:	4.00	Units: uL	
MSV_CCV_2CEVE_00128	Amount Added:	5.00	Units: uL	
MSV_CCV_EE_00005	Amount Added:	5.00	Units: uL	
MSV_CCV_VOC#1_00134	Amount Added:	5.00	Units: uL	
MSV_Cent_ISSS_00016	Amount Added:	5.00	Units: uL	Run Reagent

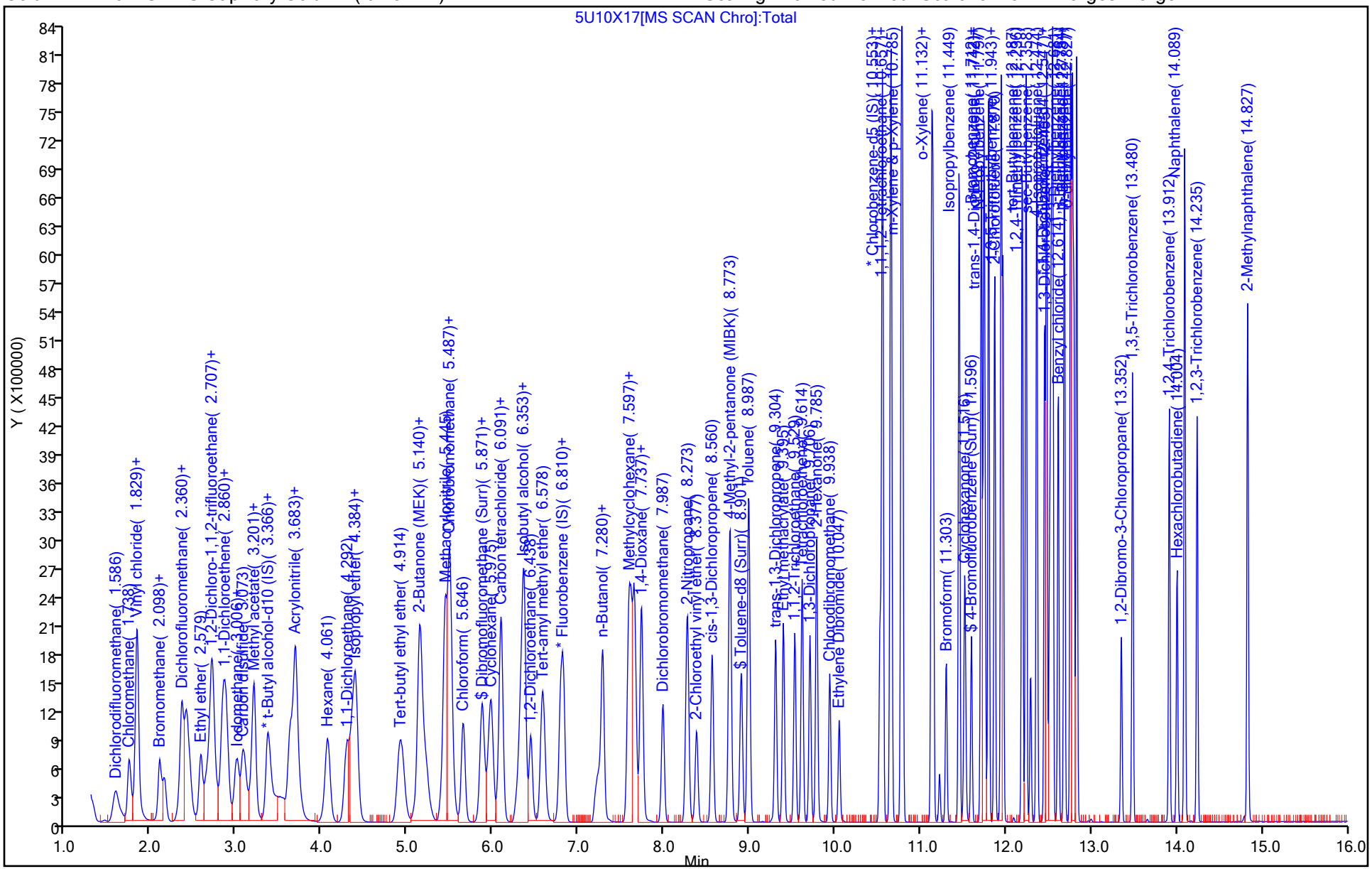
Report Date: 11-Jul-2023 00:50:01 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X17.D

Injection Date:	10-Jul-2023 16:13:30	Instrument ID:	26285	Operator ID:	CLM27445
Lims ID:	IC v100			Worklist Smp#:	17
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MSVoa_26285a	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

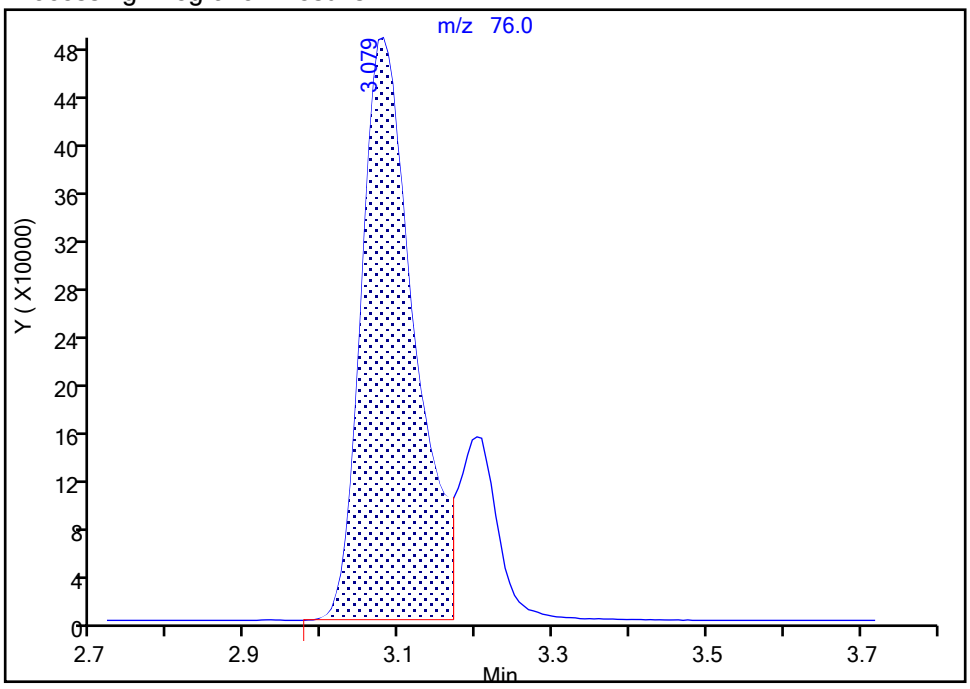
Data File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X17.D
Injection Date: 10-Jul-2023 16:13:30 Instrument ID: 26285
Lims ID: IC v100
Client ID:
Operator ID: CLM27445 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVoa_26285a Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

22 Carbon disulfide, CAS: 75-15-0

Signal: 1

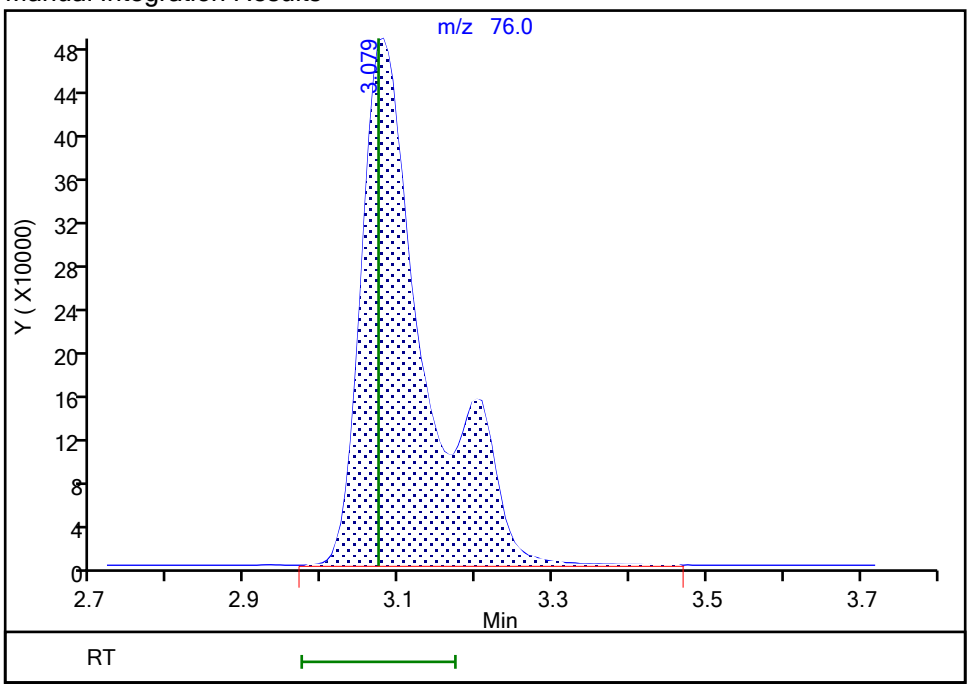
Processing Integration Results

RT: 3.08
Area: 2325356
Amount: 74.880770
Amount Units: ug/l



Manual Integration Results

RT: 3.08
Area: 2843947
Amount: 89.446475
Amount Units: ug/l



Reviewer: K4WN, 11-Jul-2023 00:46:42 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

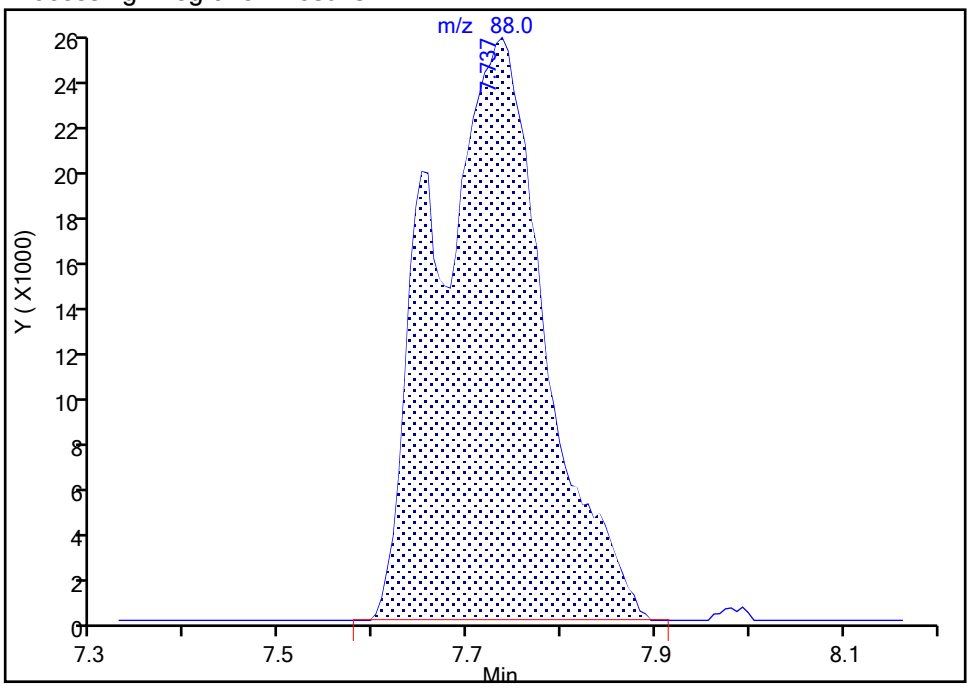
Data File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X17.D
Injection Date: 10-Jul-2023 16:13:30 Instrument ID: 26285
Lims ID: IC v100
Client ID:
Operator ID: CLM27445 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVoa_26285a Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

72 1,4-Dioxane, CAS: 123-91-1

Signal: 1

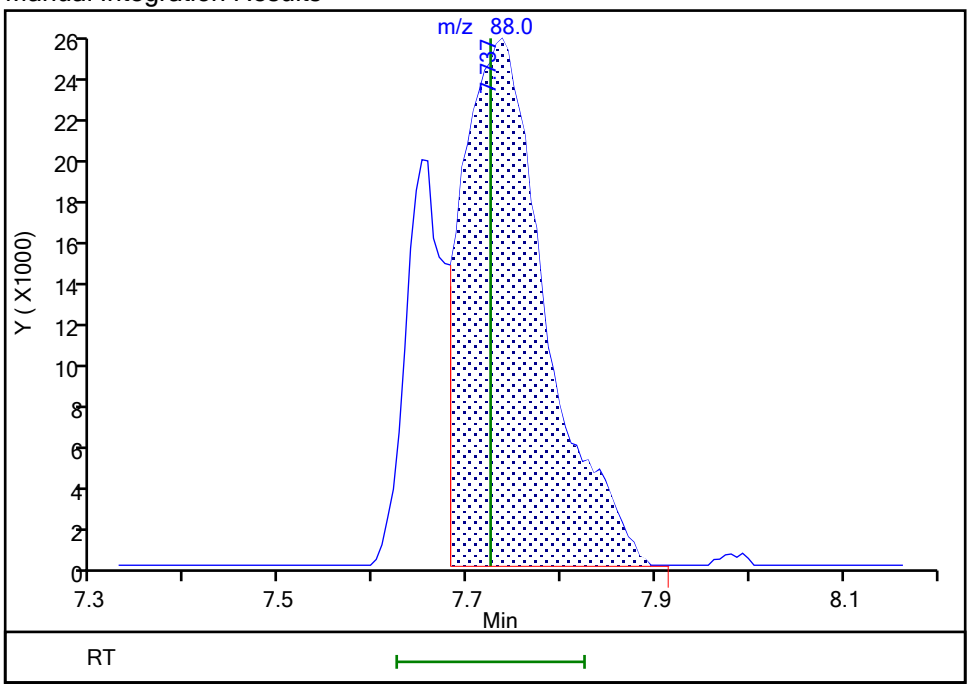
Processing Integration Results

RT: 7.74
Area: 213368
Amount: 1522.9685
Amount Units: ug/l



Manual Integration Results

RT: 7.74
Area: 160634
Amount: 1198.1055
Amount Units: ug/l



Reviewer: K4WN, 11-Jul-2023 00:46:58 -04:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X18.D
Lims ID: IC v300
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 10-Jul-2023 16:33:30 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 410-0088512-018
Misc. Info.: IC STD7 300
Operator ID: CLM27445 Instrument ID: 26285
Sublist: chrom-MSVoa_26285a*sub38

Method: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\MSVoa_26285a.m
Limit Group: MSV - 8260C_D
Last Update: 11-Jul-2023 00:50:09 Calib Date: 10-Jul-2023 21:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X27.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1619

First Level Reviewer: K4WN Date: 10-Jul-2023 19:30:28

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
3 Dichlorodifluoromethane	85	1.579	1.579	0.000	99	3286928	300.0	278.0	M
4 Chloromethane	50	1.732	1.738	-0.006	99	3765961	300.0	264.0	
5 Vinyl chloride	62	1.823	1.823	0.000	98	3289073	300.0	269.0	
6 Butadiene	39	1.829	1.829	0.000	100	3940599	300.0	261.8	
8 Bromomethane	94	2.091	2.091	0.000	92	1975522	300.0	245.1	
9 Chloroethane	64	2.146	2.146	0.000	98	1725474	300.0	250.1	
10 Dichlorofluoromethane	67	2.348	2.354	-0.006	97	5475669	300.0	263.3	
11 Trichlorofluoromethane	101	2.408	2.402	0.006	98	3812734	300.0	270.3	
12 Pentane	43	2.408	2.408	0.000	97	4202409	300.0	299.6	
13 Ethyl ether	59	2.567	2.573	-0.006	97	1829716	300.0	289.8	
15 1,2-Dichloro-1,1,2-trifluoroetha	67	2.671	2.664	0.007	95	2830111	300.0	266.0	
16 Acrolein	56	2.707	2.707	0.000	99	9114172	3000.1	2718.8	
17 1,1-Dichloroethene	96	2.835	2.829	0.006	95	2083590	300.0	298.8	
18 Acetone	58	2.847	2.847	0.000	98	922122	600.0	530.3	M
19 1,1,2-Trichloro-1,2,2-trifluoroe	101	2.872	2.872	0.000	94	2270099	300.0	298.8	
20 Iodomethane	142	3.000	2.994	0.006	100	4081207	300.0	291.2	
21 Isopropyl alcohol	45	3.000	3.012	-0.012	96	2465753	1500.0	1430.6	
22 Carbon disulfide	76	3.079	3.073	0.006	100	9076397	300.0	291.2	M
25 Methyl acetate	43	3.171	3.177	-0.006	99	3651727	300.0	298.9	
26 3-Chloro-1-propene	41	3.195	3.195	0.000	91	4115373	300.0	299.2	
27 Methylene Chloride	84	3.366	3.359	0.007	99	2404854	300.0	278.1	
* 28 t-Butyl alcohol-d10 (IS)	65	3.414	3.420	-0.006	78	658306	250.0	250.0	
29 2-Methyl-2-propanol	59	3.512	3.500	0.012	100	3729342	1500.0	1295.6	
30 Acrylonitrile	53	3.609	3.615	-0.006	97	4400184	750.0	716.6	
31 trans-1,2-Dichloroethene	96	3.677	3.676	0.001	94	2167579	300.0	286.6	
32 Methyl tert-butyl ether	73	3.689	3.695	-0.006	97	6561618	300.0	298.8	
33 Hexane	57	4.055	4.054	0.000	96	2980545	300.0	324.5	
34 1,1-Dichloroethane	63	4.274	4.274	0.000	96	4294581	300.0	290.4	
36 Isopropyl ether	45	4.347	4.347	0.000	96	7939283	300.0	308.7	
37 2-Chloro-1,3-butadiene	53	4.384	4.384	0.000	93	3717692	300.0	317.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
39 Tert-butyl ethyl ether	59	4.914	4.908	0.006	99	6821069	300.0	320.9	
40 2-Butanone (MEK)	43	5.127	5.121	0.006	99	5126644	600.0	616.6	
41 cis-1,2-Dichloroethene	96	5.134	5.133	0.001	84	2387344	300.0	283.0	
42 2,2-Dichloropropane	77	5.164	5.152	0.012	91	3513837	300.0	308.8	
44 Propionitrile	54	5.213	5.213	0.000	99	3979513	1500.0	1407.7	
46 Methacrylonitrile	67	5.432	5.426	0.006	97	3876796	750.0	777.9	
47 Chlorobromomethane	128	5.481	5.475	0.006	94	1181111	300.0	279.4	
48 Tetrahydrofuran	71	5.493	5.493	0.000	92	3187960	1500.0	1472.2	
49 Chloroform	83	5.646	5.639	0.007	95	4175458	300.0	283.9	
$ 50 Dibromofluoromethane (Surr)	113	5.865	5.865	0.000	93	362547	50.0	46.7	
51 1,1,1-Trichloroethane	97	5.871	5.871	0.000	99	3734915	300.0	299.3	
52 Cyclohexane	56	5.975	5.969	0.006	95	4292728	300.0	333.4	
53 Carbon tetrachloride	117	6.085	6.078	0.007	95	3416816	300.0	302.3	
54 1,1-Dichloropropene	75	6.085	6.091	-0.006	95	3285094	300.0	316.1	
S 55 1,2-Dichloroethene, Total	100				0			569.6	
56 Isobutyl alcohol	41	6.316	6.310	0.006	94	3526556	3750.0	3552.3	
$ 57 1,2-Dichloroethane-d4 (Surr)	102	6.322	6.328	-0.006	73	78207	50.0	47.7	
58 Benzene	78	6.359	6.353	0.006	98	9421201	300.0	301.5	
59 1,2-Dichloroethane	62	6.438	6.432	0.006	97	3380311	300.0	281.0	
61 Tert-amyl methyl ether	73	6.578	6.578	0.000	98	6604609	300.0	329.6	
* 62 Fluorobenzene (IS)	96	6.780	6.780	0.000	99	1375475	50.0	50.0	
63 n-Heptane	43	6.816	6.816	0.000	97	3589780	300.0	331.2	
64 n-Butanol	56	7.225	7.225	0.000	93	2545113	3750.0	4236.7	
65 Trichloroethene	95	7.279	7.279	0.000	98	2529396	300.0	307.5	
67 Methylcyclohexane	83	7.590	7.584	0.006	93	3962561	300.0	349.2	
68 1,2-Dichloropropane	63	7.615	7.615	0.000	97	2620912	300.0	311.3	
69 2-ethoxy-2-methyl butane	87	7.657	7.651	0.006	90	3287926	300.0	345.3	
70 Dibromomethane	93	7.731	7.724	0.007	93	1637959	300.0	296.7	
72 1,4-Dioxane	88	7.731	7.724	0.007	29	557741	3750.0	3813.0	M
71 Methyl methacrylate	69	7.737	7.737	0.000	93	2278625	300.0	356.4	
75 Dichlorobromomethane	83	7.987	7.980	0.007	98	3350552	300.0	313.7	
76 2-Nitropropane	41	8.273	8.267	0.006	98	6496017	1500.0	1556.1	
77 2-Chloroethyl vinyl ether	63	8.383	8.377	0.006	92	1777833	300.0	367.6	
78 cis-1,3-Dichloropropene	75	8.560	8.560	0.000	93	4201437	300.0	352.9	
79 4-Methyl-2-pentanone (MIBK)	43	8.767	8.767	0.000	98	9664626	600.0	655.8	
$ 80 Toluene-d8 (Surr)	98	8.901	8.901	0.000	94	1349333	50.0	49.7	
81 Toluene	92	8.993	8.986	0.007	97	5876693	300.0	307.8	
82 trans-1,3-Dichloropropene	75	9.303	9.303	0.000	96	3808666	300.0	340.4	
83 Ethyl methacrylate	69	9.395	9.395	0.000	92	3736675	300.0	345.5	
84 1,1,2-Trichloroethane	97	9.529	9.529	0.000	92	2152265	300.0	298.9	
85 Tetrachloroethene	166	9.614	9.614	0.000	96	2627683	300.0	299.3	
86 1,3-Dichloropropane	76	9.706	9.706	0.000	95	3555774	300.0	309.8	
88 2-Hexanone	43	9.785	9.785	0.000	99	6843755	600.0	642.2	
90 Chlorodibromomethane	129	9.938	9.937	0.001	90	2651626	300.0	310.2	
130 Ethylene Dibromide	107	10.047	10.047	0.000	98	2279031	300.0	304.1	
S 129 1,3-Dichloropropene, Total	100				0			693.3	
* 131 Chlorobenzene-d5 (IS)	117	10.529	10.523	0.006	86	1032710	50.0	50.0	
132 Chlorobenzene	112	10.553	10.553	0.000	90	6547740	300.0	298.2	
133 1-Chlorohexane	91	10.559	10.553	0.006	94	3134405	300.0	323.3	
134 1,1,1,2-Tetrachloroethane	131	10.651	10.645	0.006	95	2495347	300.0	296.1	
135 Ethylbenzene	91	10.657	10.657	0.000	99	11740887	300.0	313.8	
136 m-Xylene & p-Xylene	106	10.779	10.779	0.000	97	8796645	600.0	630.4	e

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
137 o-Xylene	106	11.132	11.126	0.006	98	4477759	300.0	323.3	
138 Styrene	104	11.151	11.145	0.007	95	7150503	300.0	333.7	
S 139 Xylenes, Total	106				0			953.7	
140 Bromoform	173	11.303	11.303	0.000	96	2111098	300.0	293.8	
141 Isopropylbenzene	105	11.456	11.449	0.007	97	11877314	300.0	319.1	
143 Cyclohexanone	55	11.523	11.516	0.007	95	3413690	3749.9	4080.3	
$ 144 4-Bromofluorobenzene (Surr)	95	11.596	11.596	0.000	89	534737	50.0	49.6	
145 Bromobenzene	156	11.712	11.711	0.001	97	2718194	300.0	308.8	
146 1,1,2,2-Tetrachloroethane	83	11.718	11.711	0.007	94	4077042	300.0	303.0	
147 trans-1,4-Dichloro-2-butene	53	11.742	11.742	0.000	89	3158494	750.0	802.6	
148 1,2,3-Trichloropropane	110	11.754	11.754	0.000	86	1049583	300.0	288.2	
149 N-Propylbenzene	91	11.797	11.797	0.000	97	12683767	300.0	296.5	e
150 2-Chlorotoluene	126	11.870	11.870	0.000	95	2771878	300.0	318.7	
151 1,3,5-Trimethylbenzene	105	11.943	11.943	0.000	94	10308615	300.0	352.3	
152 4-Chlorotoluene	126	11.968	11.968	0.000	99	2686528	300.0	322.0	
154 tert-Butylbenzene	134	12.193	12.193	0.000	93	1924505	300.0	377.8	
156 1,2,4-Trimethylbenzene	105	12.236	12.236	0.000	99	10364033	300.0	349.0	
157 sec-Butylbenzene	105	12.358	12.358	0.000	96	12043707	300.0	337.2	e
158 1,3-Dichlorobenzene	146	12.455	12.455	0.000	97	5146281	300.0	301.2	
159 4-Isopropyltoluene	119	12.480	12.474	0.006	96	10572064	300.0	352.4	
* 160 1,4-Dichlorobenzene-d4	152	12.510	12.510	0.000	96	576548	50.0	50.0	
161 1,4-Dichlorobenzene	146	12.528	12.528	0.000	93	4896611	300.0	294.0	
162 1,2,3-Trimethylbenzene	105	12.547	12.547	0.000	99	10605773	300.0	335.5	
163 Benzyl chloride	91	12.614	12.614	0.000	99	7899998	300.0	332.3	
164 1,3-Diethylbenzene	119	12.687	12.681	0.006	94	6205680	300.0	350.1	
168 p-Diethylbenzene	119	12.754	12.754	0.000	92	6347207	300.0	343.8	
166 n-Butylbenzene	92	12.778	12.772	0.006	98	5360969	300.0	338.2	
167 1,2-Dichlorobenzene	146	12.797	12.797	0.000	97	5212831	300.0	294.9	
165 o-diethylbenzene	119	12.827	12.827	0.000	98	5237864	300.0	353.2	
169 1,2-Dibromo-3-Chloropropane	75	13.351	13.351	0.000	83	1219612	300.0	309.8	
171 1,3,5-Trichlorobenzene	180	13.486	13.479	0.007	97	3503835	300.0	302.8	
172 1,2,4-Trichlorobenzene	180	13.912	13.912	0.000	94	3166760	300.0	307.1	
173 Hexachlorobutadiene	225	14.004	14.004	0.000	97	1244530	300.0	308.4	
174 Naphthalene	128	14.089	14.089	0.000	98	11848336	300.0	311.5	e
175 1,2,3-Trichlorobenzene	180	14.242	14.235	0.007	96	3157031	300.0	297.6	
176 2-Methylnaphthalene	142	14.827	14.827	0.000	92	6548529	300.0	375.8	
S 187 Total Diethylbenzene	1				0			1047.1	

QC Flag Legend

Processing Flags

e - Potential Peak Saturated

Review Flags

M - Manually Integrated

Reagents:

MSV_CCV_CYC_00006	Amount Added:	30.00	Units: uL	
MSV_CCV_GASES_00520	Amount Added:	7.50	Units: uL	
MSV_CCV_VOC#3_00133	Amount Added:	12.00	Units: uL	
MSV_CCV_2CEVE_00128	Amount Added:	15.00	Units: uL	
MSV_CCV_EE_00005	Amount Added:	15.00	Units: uL	
MSV_CCV_VOC#1_00134	Amount Added:	15.00	Units: uL	
MSV_Cent_ISSS_00016	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 11-Jul-2023 00:50:10 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X18.D

Injection Date: 10-Jul-2023 16:33:30 Instrument ID: 26285 Operator ID: CLM27445

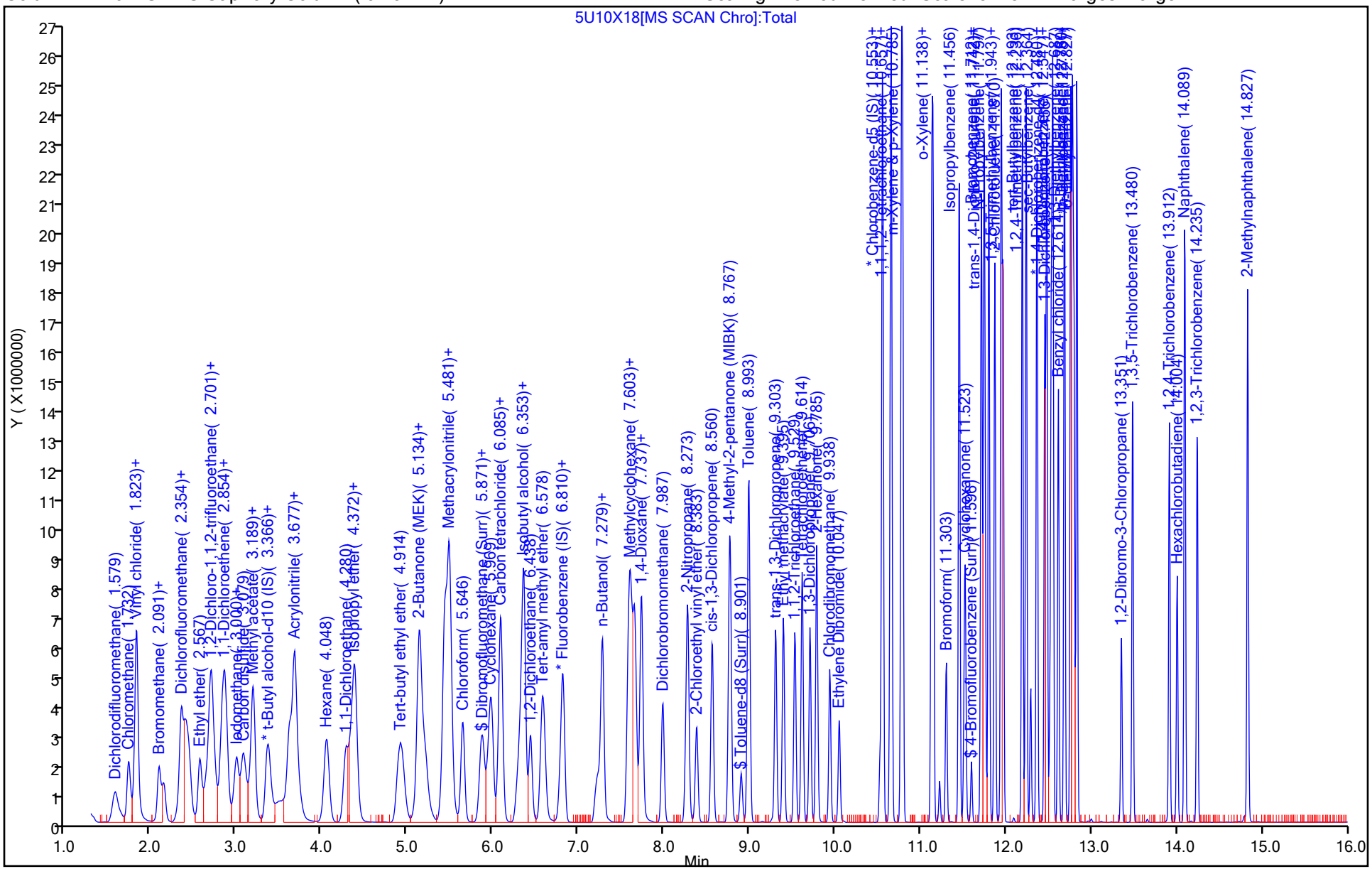
Lims ID: IC v300 Worklist Smp#: 18

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 17

Method: MSVoa_26285a Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

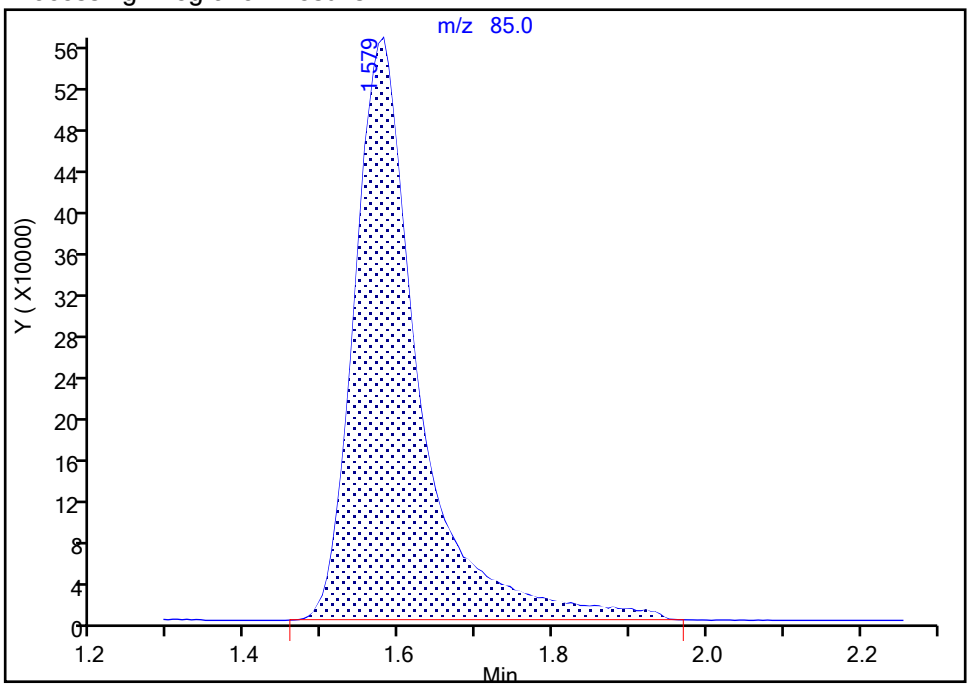
Data File:	\\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X18.D				
Injection Date:	10-Jul-2023 16:33:30	Instrument ID:	26285		
Lims ID:	IC v300				
Client ID:					
Operator ID:	CLM27445	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVoa_26285a	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

3 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

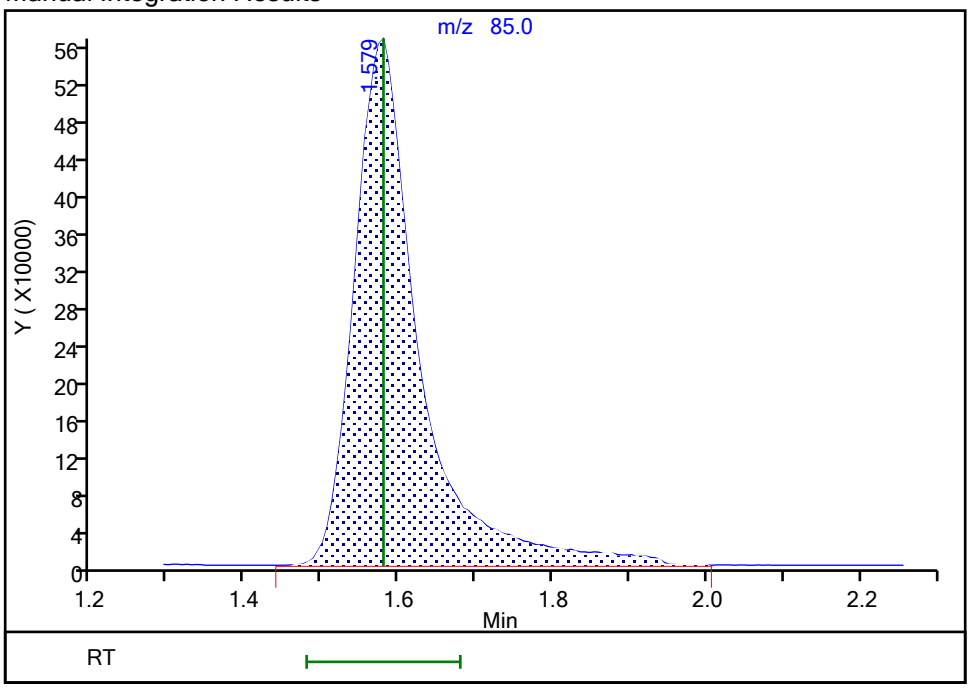
Processing Integration Results

RT: 1.58
Area: 3281637
Amount: 300.0557
Amount Units: ug/l



Manual Integration Results

RT: 1.58
Area: 3286928
Amount: 277.9994
Amount Units: ug/l



Reviewer: K4WN, 10-Jul-2023 19:29:24 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

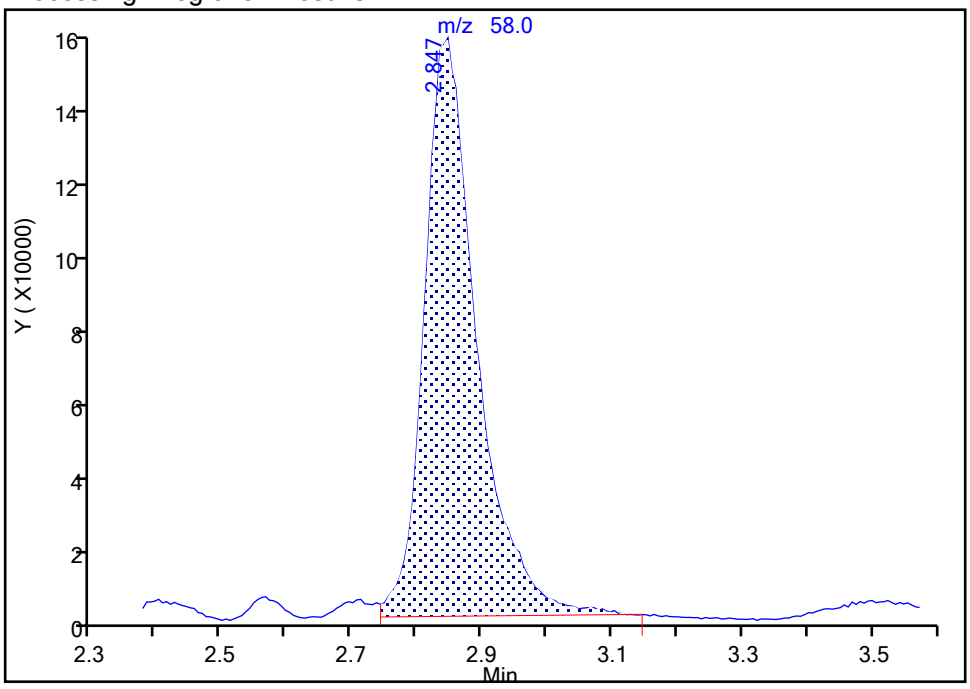
Data File:	\\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X18.D				
Injection Date:	10-Jul-2023 16:33:30	Instrument ID:	26285		
Lims ID:	IC v300				
Client ID:					
Operator ID:	CLM27445	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVoa_26285a	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

18 Acetone, CAS: 67-64-1

Signal: 1

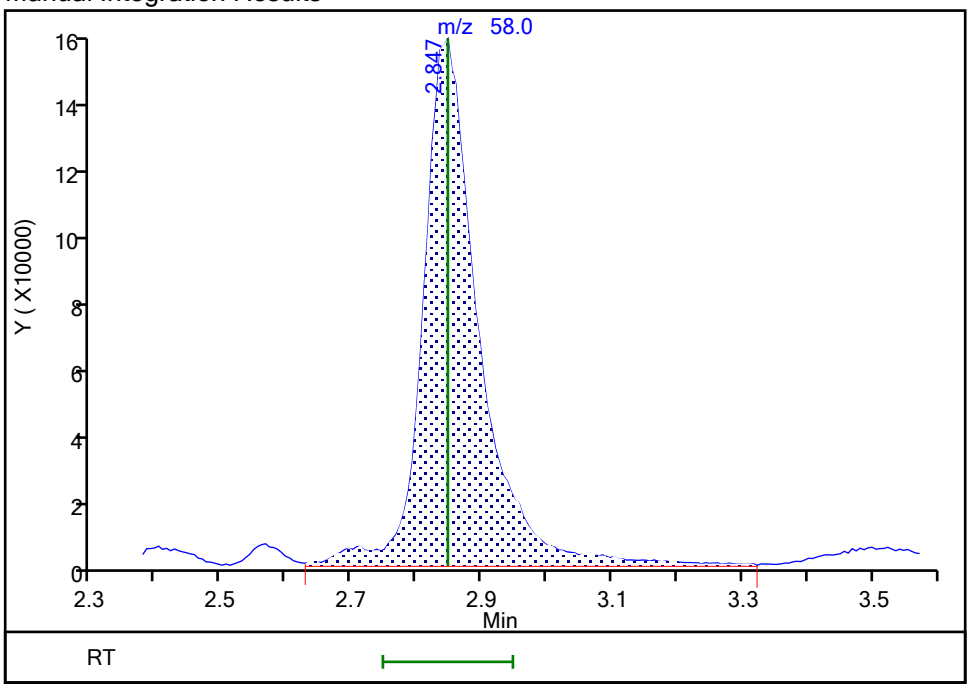
Processing Integration Results

RT: 2.85
Area: 864367
Amount: 497.3046
Amount Units: ug/l



Manual Integration Results

RT: 2.85
Area: 922122
Amount: 530.3146
Amount Units: ug/l



Reviewer: K4WN, 10-Jul-2023 21:40:30 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

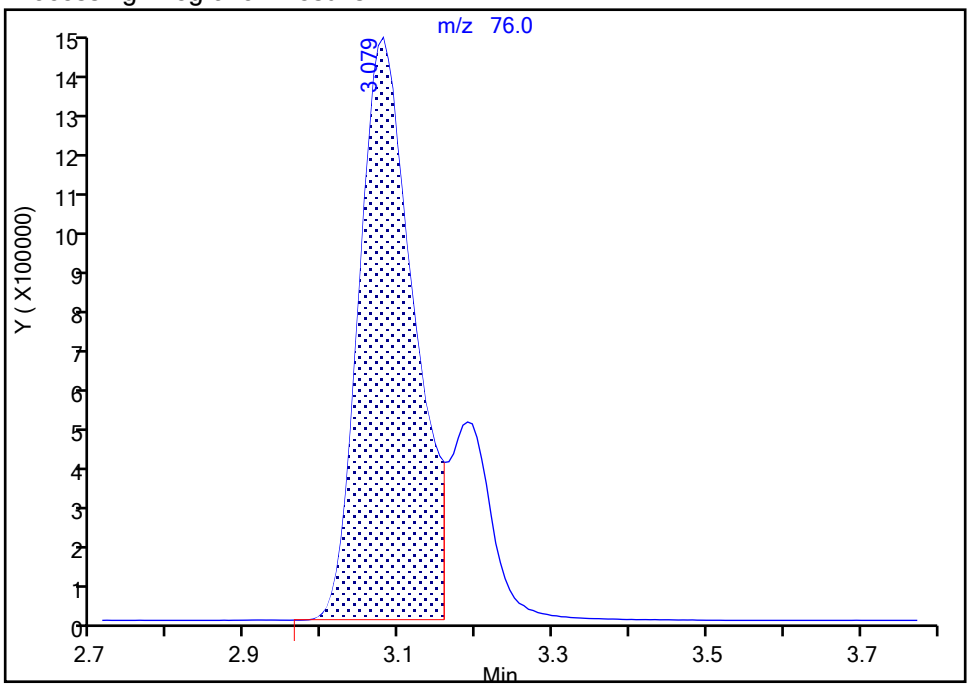
Data File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X18.D
Injection Date: 10-Jul-2023 16:33:30 Instrument ID: 26285
Lims ID: IC v300
Client ID:
Operator ID: CLM27445 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVoa_26285a Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

22 Carbon disulfide, CAS: 75-15-0

Signal: 1

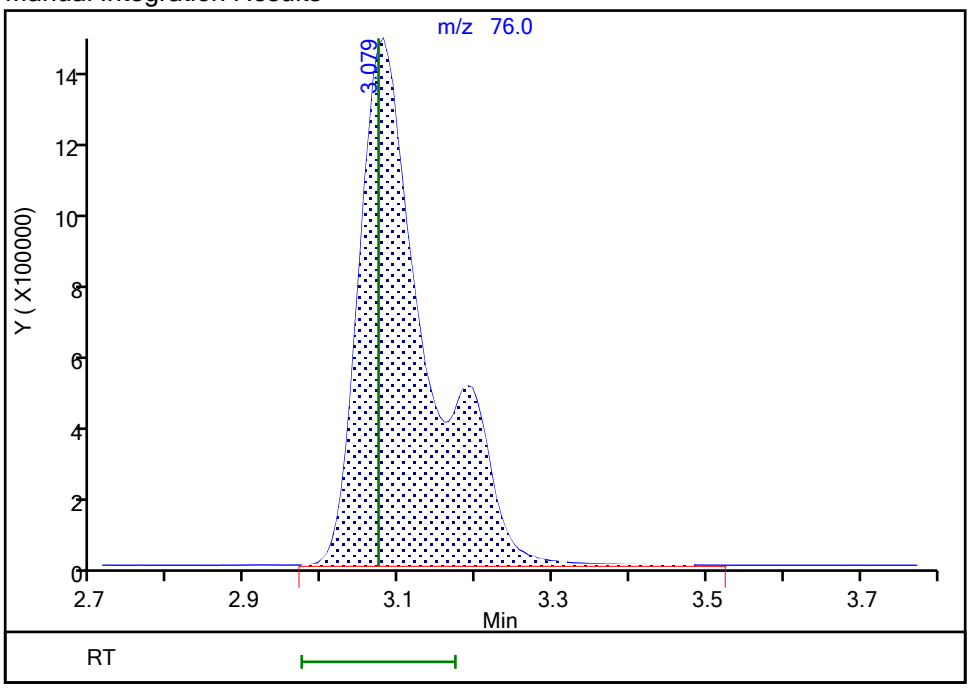
Processing Integration Results

RT: 3.08
Area: 7215791
Amount: 262.4567
Amount Units: ug/l



Manual Integration Results

RT: 3.08
Area: 9076397
Amount: 291.2086
Amount Units: ug/l



Reviewer: K4WN, 10-Jul-2023 19:29:43 -04:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

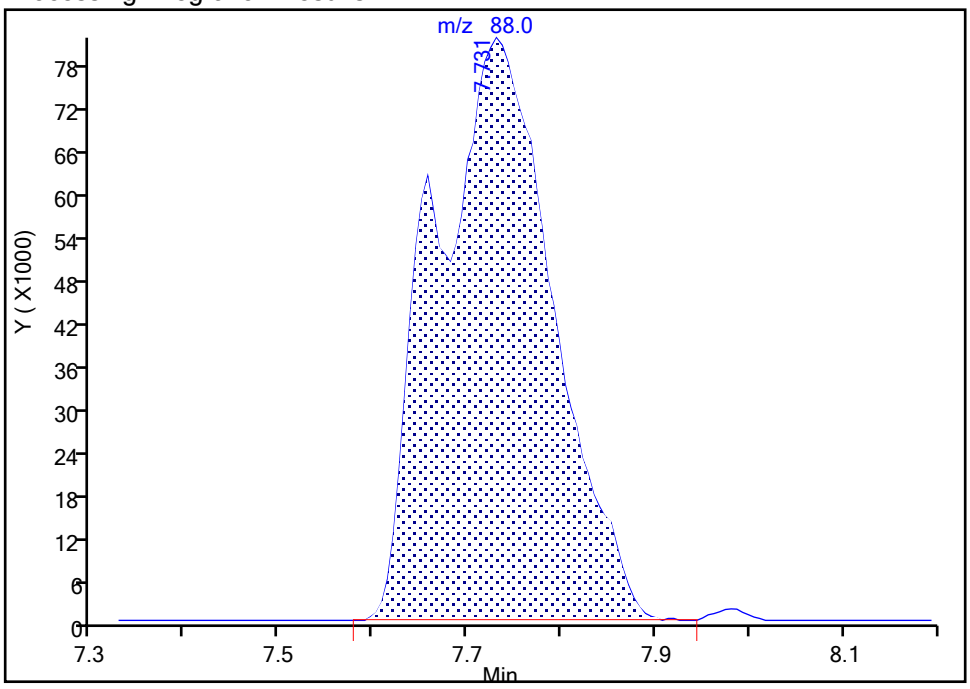
Data File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X18.D
Injection Date: 10-Jul-2023 16:33:30 Instrument ID: 26285
Lims ID: IC v300
Client ID:
Operator ID: CLM27445 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVoa_26285a Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

72 1,4-Dioxane, CAS: 123-91-1

Signal: 1

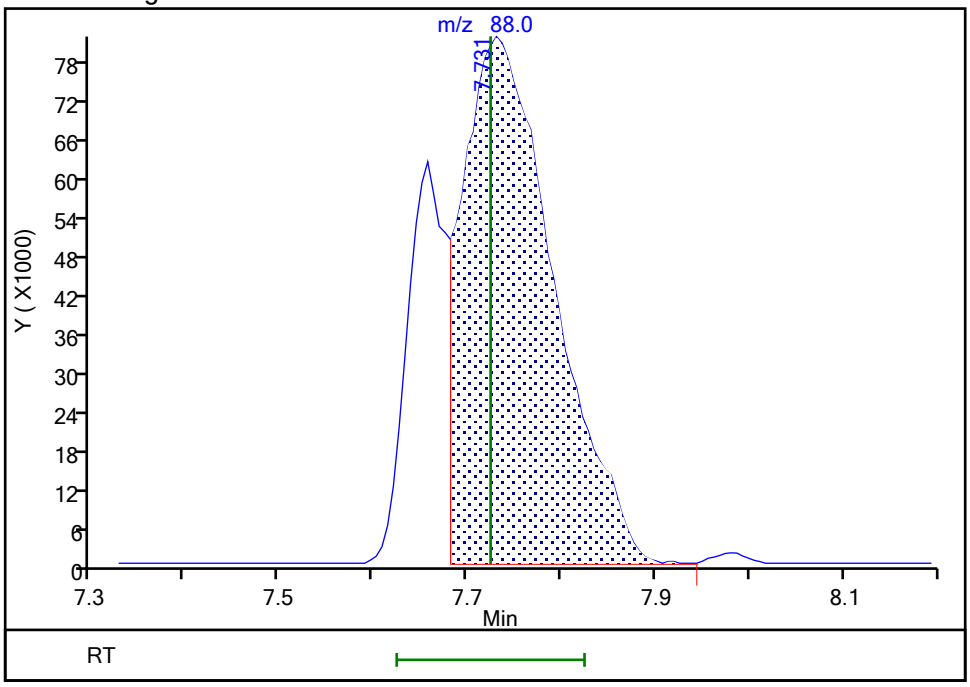
Processing Integration Results

RT: 7.73
Area: 724113
Amount: 5627.7113
Amount Units: ug/l



Manual Integration Results

RT: 7.73
Area: 557741
Amount: 3812.9569
Amount Units: ug/l



Reviewer: K4WN, 10-Jul-2023 19:30:05 -04:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Calibration / Dichlorodifluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

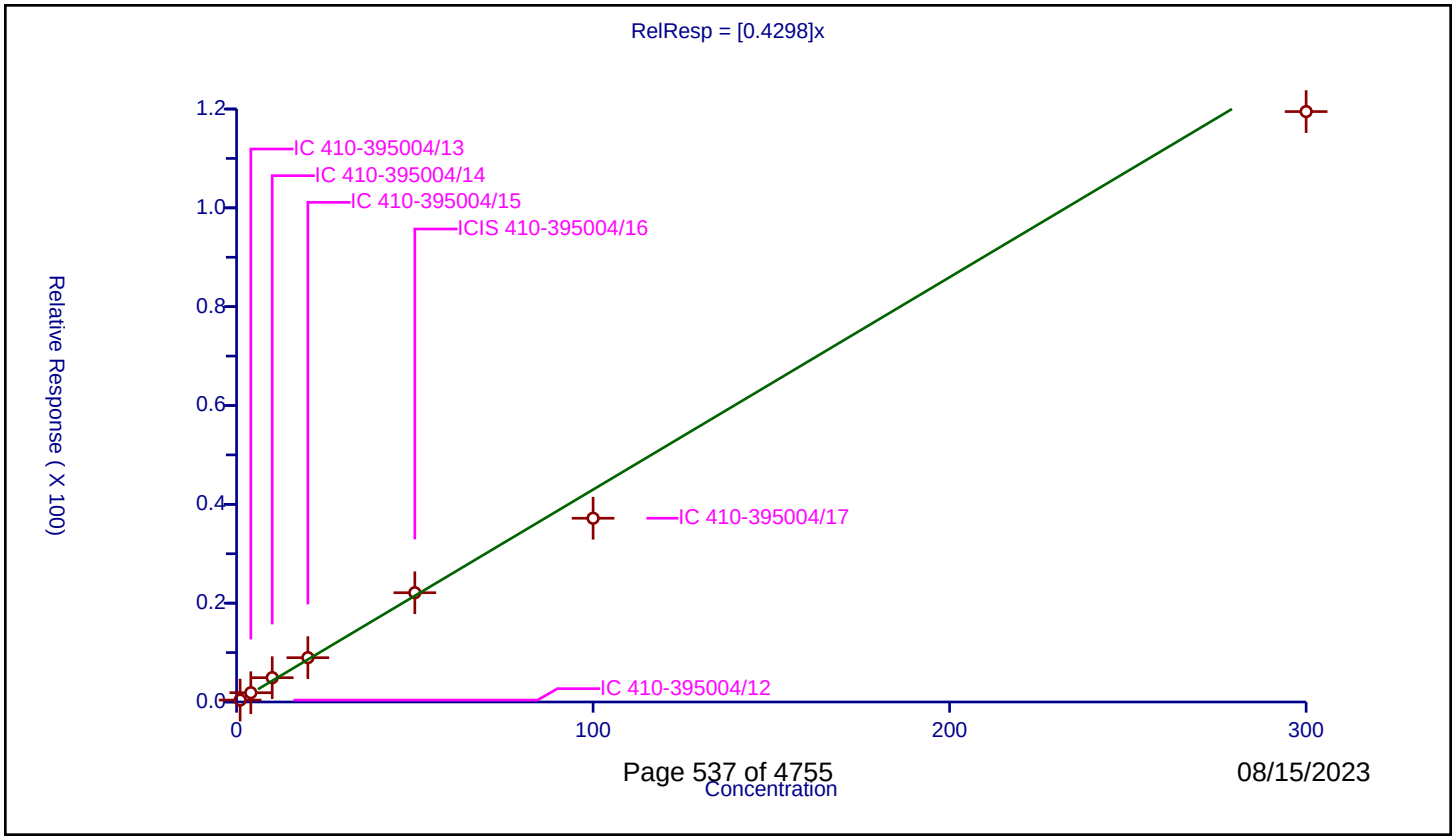
Curve Coefficients

Intercept:	0
Slope:	0.4298

Error Coefficients

Standard Error:	1430000
Relative Standard Error:	10.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.38699	50.0	1213596.0	0.38699	Y
2	IC 410-395004/13	4.0	1.875649	50.0	1242450.0	0.468912	Y
3	IC 410-395004/14	10.0	4.919015	50.0	1195341.0	0.491901	Y
4	IC 410-395004/15	20.0	8.967784	50.0	1220742.0	0.448389	Y
5	ICIS 410-395004/16	50.0	22.111848	50.0	1286783.0	0.442237	Y
6	IC 410-395004/17	100.0	37.187255	50.0	1403142.0	0.371873	Y
7	IC 410-395004/18	300.0	119.483378	50.0	1375475.0	0.398278	Y



Calibration / Chloromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

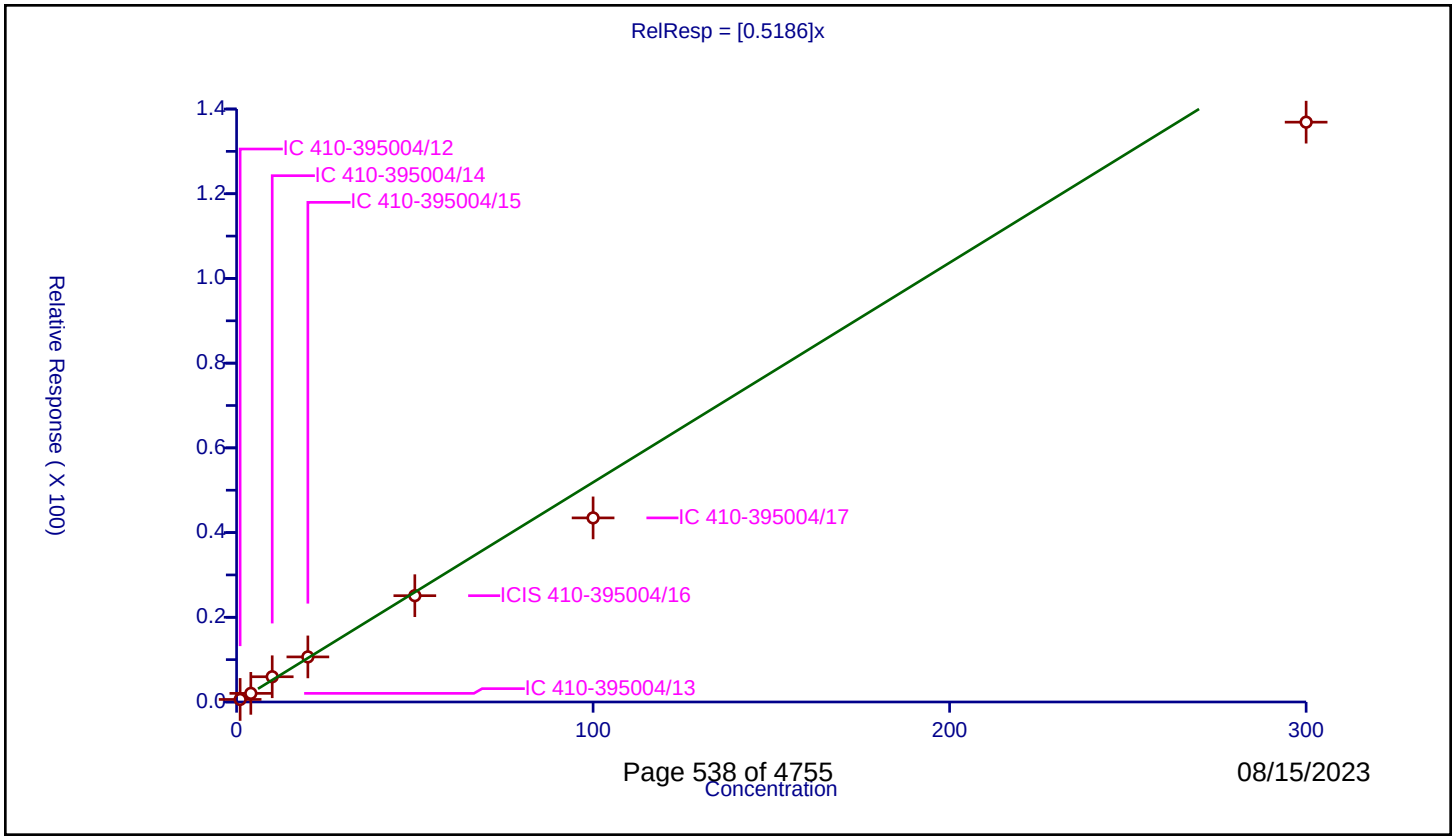
Curve Coefficients

Intercept:	0
Slope:	0.5186

Error Coefficients

Standard Error:	1640000
Relative Standard Error:	12.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.981

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.600612	50.0	1213596.0	0.600612	Y
2	IC 410-395004/13	4.0	2.035172	50.0	1242450.0	0.508793	Y
3	IC 410-395004/14	10.0	5.956292	50.0	1195341.0	0.595629	Y
4	IC 410-395004/15	20.0	10.640168	50.0	1220742.0	0.532008	Y
5	ICIS 410-395004/16	50.0	25.099687	50.0	1286783.0	0.501994	Y
6	IC 410-395004/17	100.0	43.461246	50.0	1403142.0	0.434612	Y
7	IC 410-395004/18	300.0	136.896745	50.0	1375475.0	0.456322	Y



Calibration / Vinyl chloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

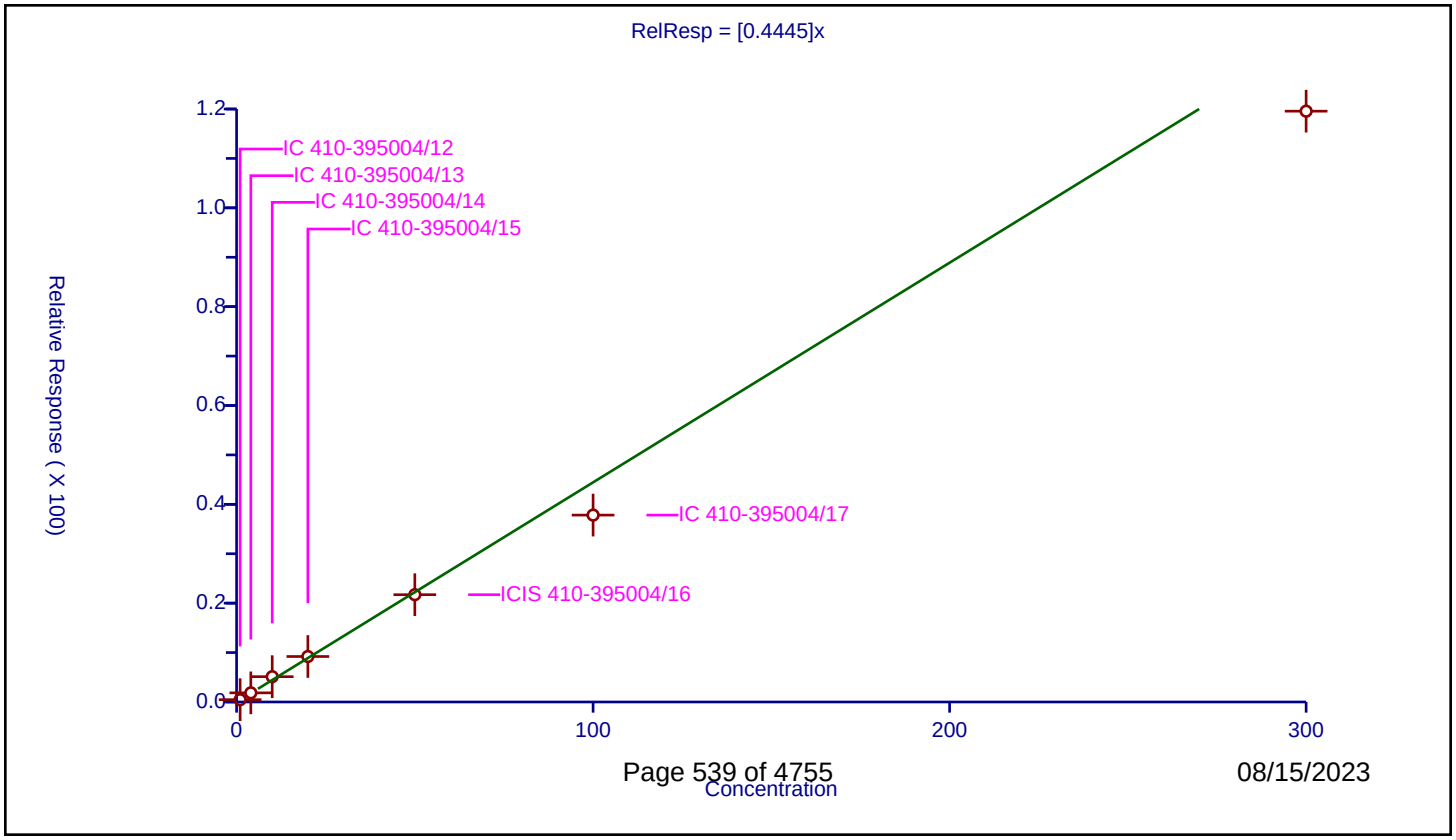
Curve Coefficients

Intercept:	0
Slope:	0.4445

Error Coefficients

Standard Error:	1430000
Relative Standard Error:	10.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.464982	50.0	1213596.0	0.464982	Y
2	IC 410-395004/13	4.0	1.850417	50.0	1242450.0	0.462604	Y
3	IC 410-395004/14	10.0	5.122597	50.0	1195341.0	0.51226	Y
4	IC 410-395004/15	20.0	9.206163	50.0	1220742.0	0.460308	Y
5	ICIS 410-395004/16	50.0	21.714073	50.0	1286783.0	0.434281	Y
6	IC 410-395004/17	100.0	37.820121	50.0	1403142.0	0.378201	Y
7	IC 410-395004/18	300.0	119.561352	50.0	1375475.0	0.398538	Y



Calibration / Butadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

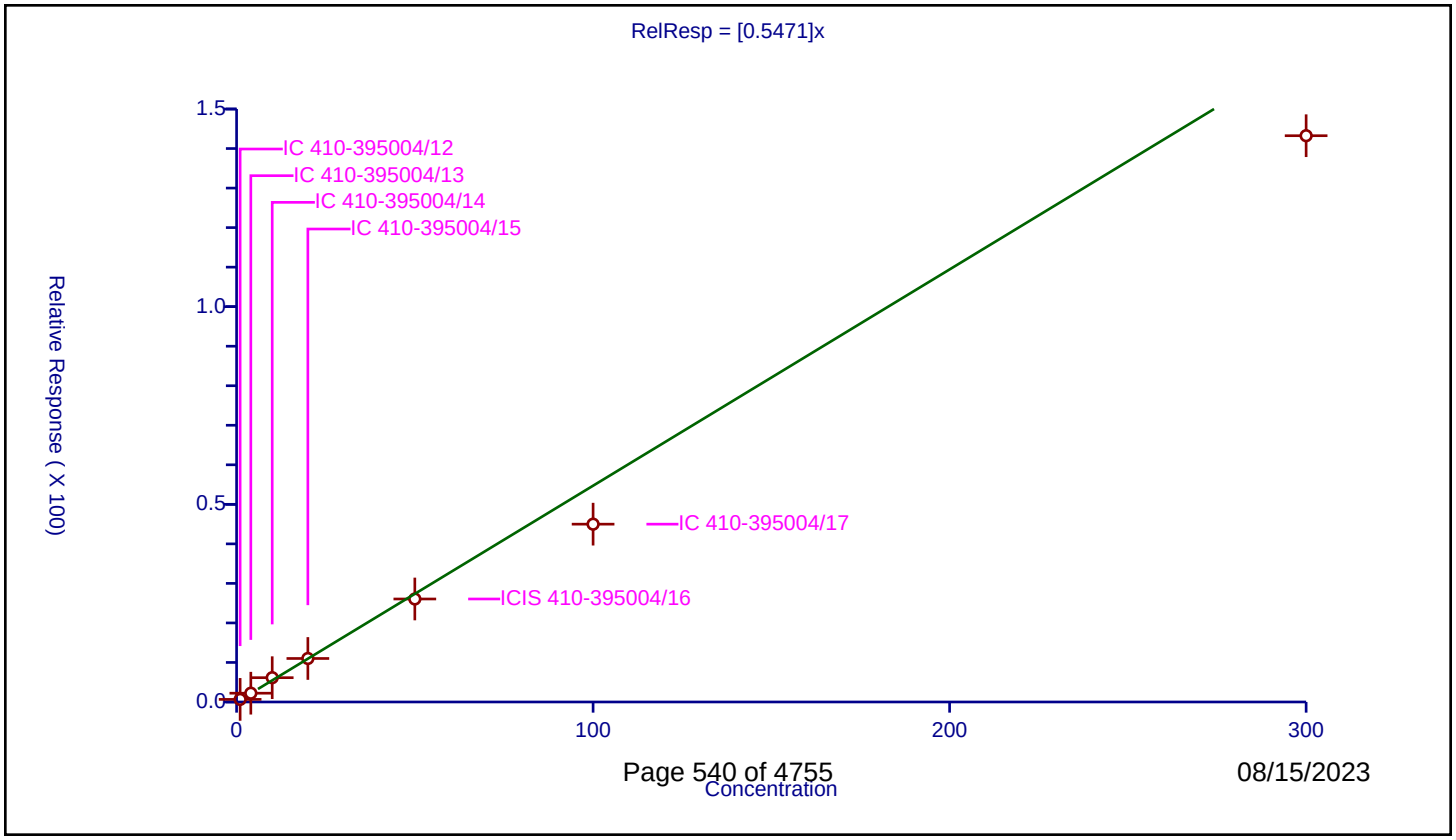
Curve Coefficients

Intercept:	0
Slope:	0.5471

Error Coefficients

Standard Error:	1720000
Relative Standard Error:	13.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.976

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.65994	50.0	1213596.0	0.65994	Y
2	IC 410-395004/13	4.0	2.22516	50.0	1242450.0	0.55629	Y
3	IC 410-395004/14	10.0	6.15017	50.0	1195341.0	0.615017	Y
4	IC 410-395004/15	20.0	11.003349	50.0	1220742.0	0.550167	Y
5	ICIS 410-395004/16	50.0	26.05245	50.0	1286783.0	0.521049	Y
6	IC 410-395004/17	100.0	44.983687	50.0	1403142.0	0.449837	Y
7	IC 410-395004/18	300.0	143.245024	50.0	1375475.0	0.477483	Y



Calibration / Bromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

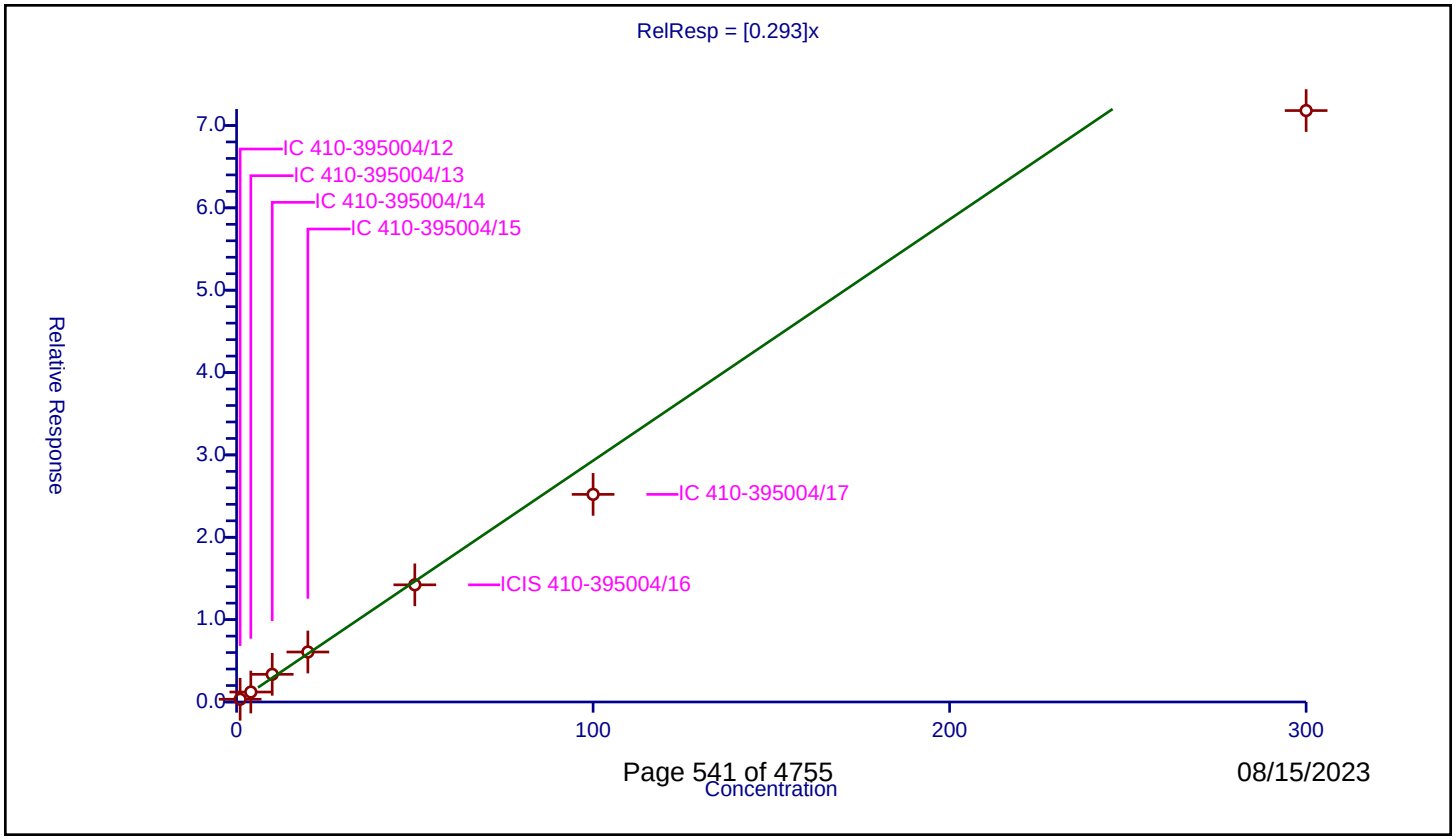
Curve Coefficients

Intercept:	0
Slope:	0.293

Error Coefficients

Standard Error:	872000
Relative Standard Error:	12.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.980

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.333019	50.0	1213596.0	0.333019	Y
2	IC 410-395004/13	4.0	1.210471	50.0	1242450.0	0.302618	Y
3	IC 410-395004/14	10.0	3.358874	50.0	1195341.0	0.335887	Y
4	IC 410-395004/15	20.0	6.07057	50.0	1220742.0	0.303529	Y
5	ICIS 410-395004/16	50.0	14.225475	50.0	1286783.0	0.28451	Y
6	IC 410-395004/17	100.0	25.209672	50.0	1403142.0	0.252097	Y
7	IC 410-395004/18	300.0	71.812356	50.0	1375475.0	0.239375	Y



Calibration / Chloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

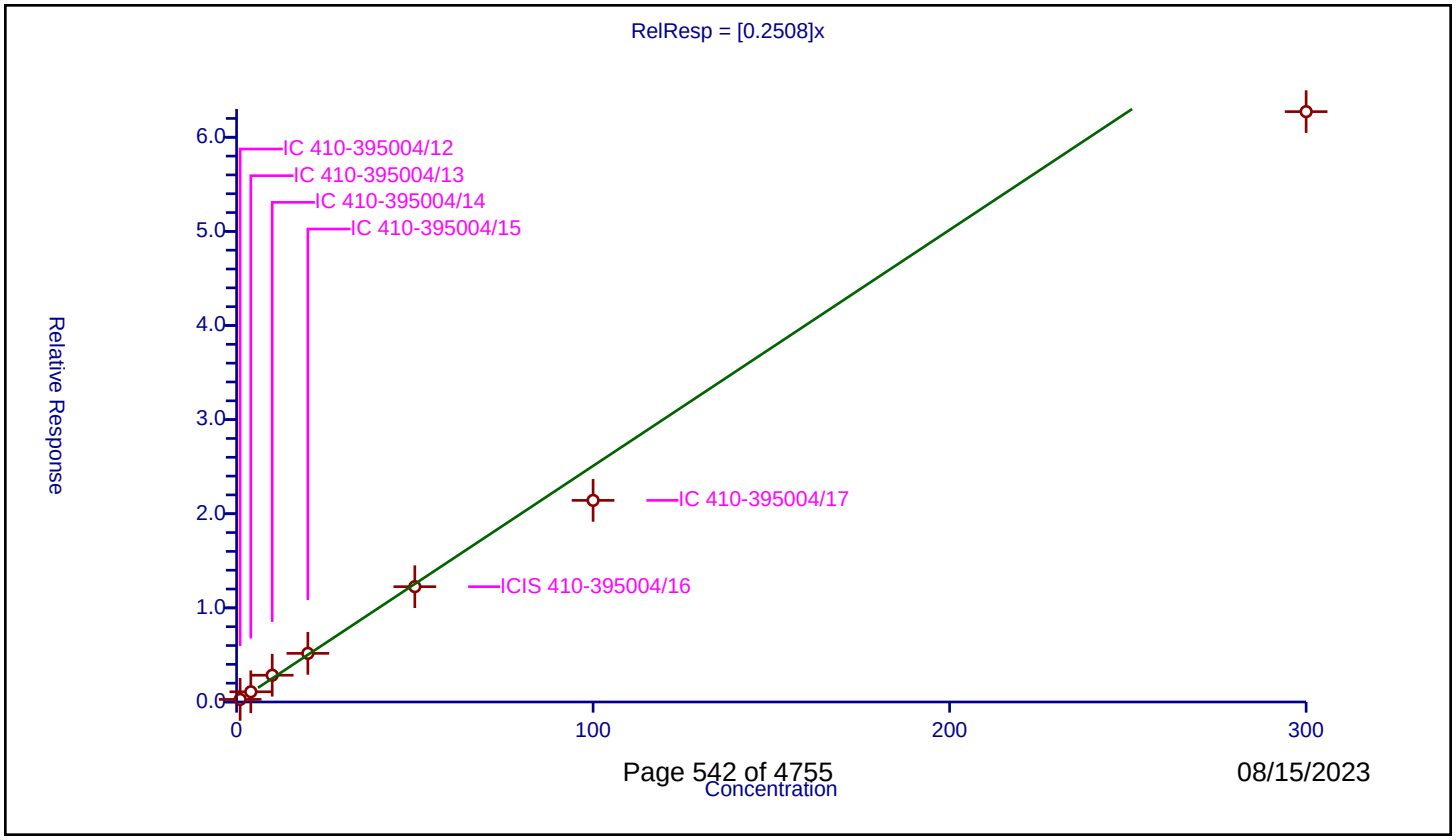
Curve Coefficients

Intercept:	0
Slope:	0.2508

Error Coefficients

Standard Error:	759000
Relative Standard Error:	11.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.983

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.273485	50.0	1213596.0	0.273485	Y
2	IC 410-395004/13	4.0	1.084591	50.0	1242450.0	0.271148	Y
3	IC 410-395004/14	10.0	2.844	50.0	1195341.0	0.2844	Y
4	IC 410-395004/15	20.0	5.165055	50.0	1220742.0	0.258253	Y
5	ICIS 410-395004/16	50.0	12.251405	50.0	1286783.0	0.245028	Y
6	IC 410-395004/17	100.0	21.418859	50.0	1403142.0	0.214189	Y
7	IC 410-395004/18	300.0	62.722841	50.0	1375475.0	0.209076	Y



Calibration / Dichlorofluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

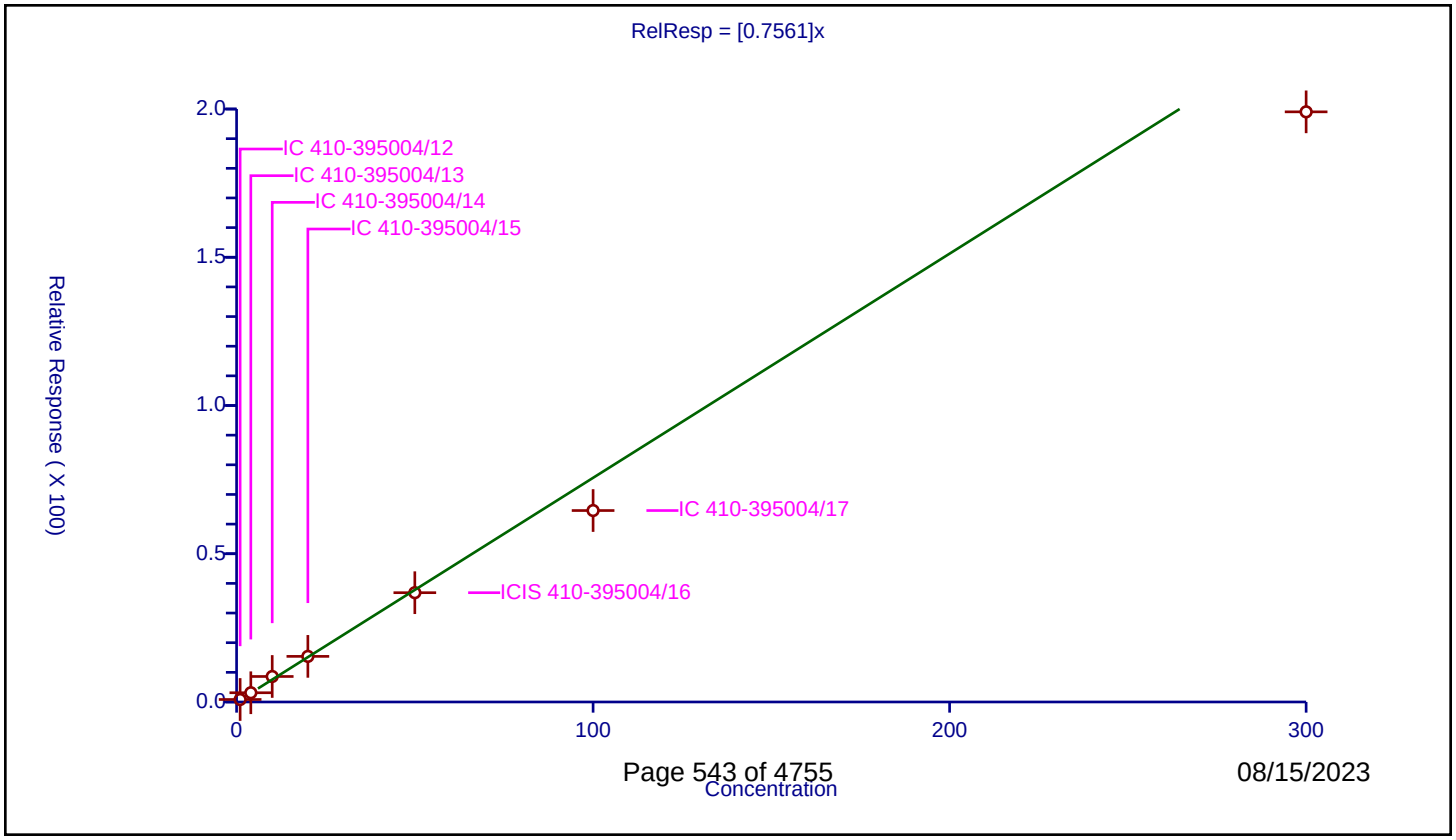
Curve Coefficients

Intercept:	0
Slope:	0.7561

Error Coefficients

Standard Error:	2390000
Relative Standard Error:	10.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.837181	50.0	1213596.0	0.837181	Y
2	IC 410-395004/13	4.0	3.118395	50.0	1242450.0	0.779599	Y
3	IC 410-395004/14	10.0	8.602441	50.0	1195341.0	0.860244	Y
4	IC 410-395004/15	20.0	15.380768	50.0	1220742.0	0.769038	Y
5	ICIS 410-395004/16	50.0	36.864063	50.0	1286783.0	0.737281	Y
6	IC 410-395004/17	100.0	64.569766	50.0	1403142.0	0.645698	Y
7	IC 410-395004/18	300.0	199.046475	50.0	1375475.0	0.663488	Y



Calibration / Trichlorofluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

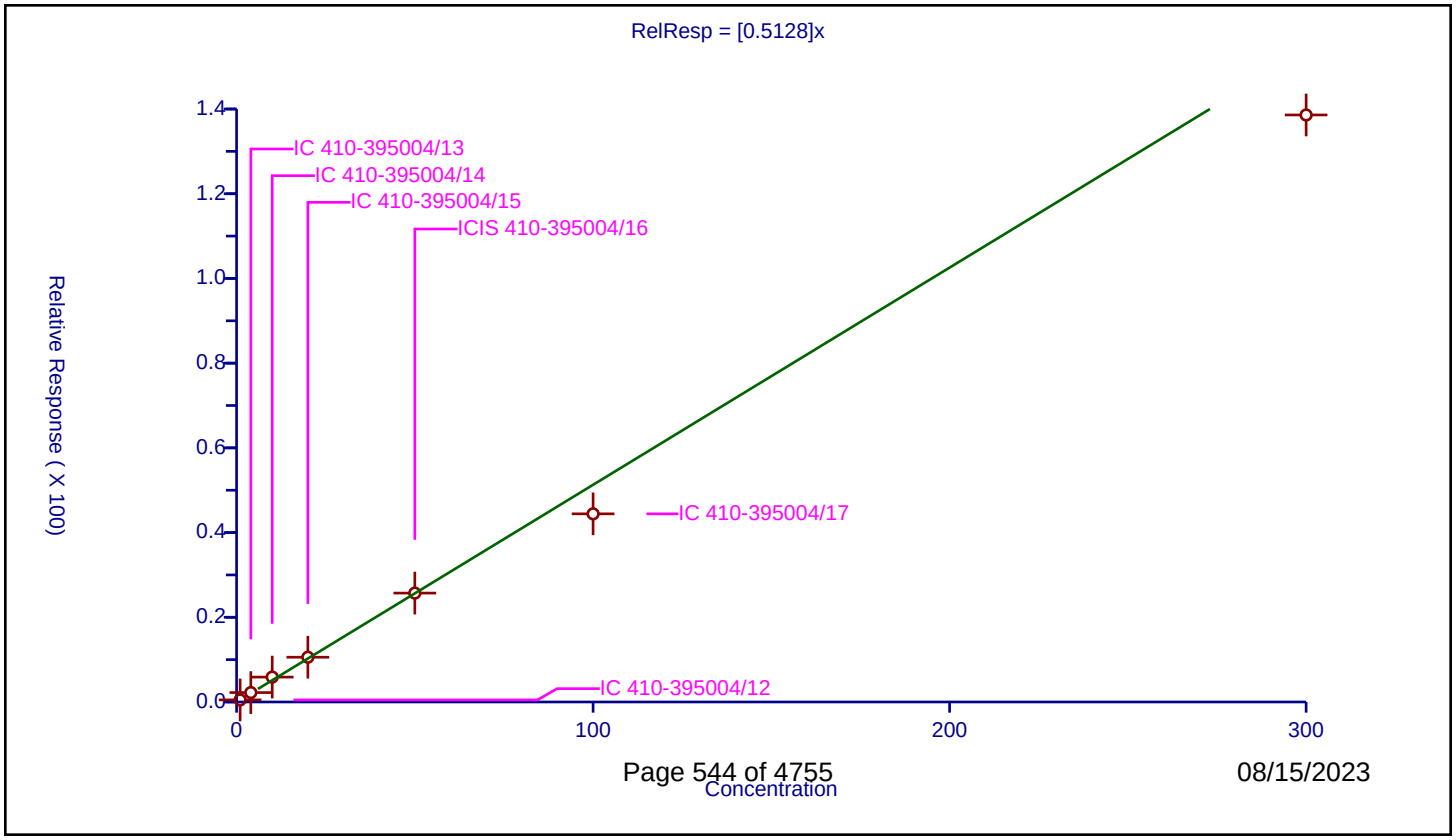
Curve Coefficients

Intercept:	0
Slope:	0.5128

Error Coefficients

Standard Error:	1660000
Relative Standard Error:	9.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.496252	50.0	1213596.0	0.496252	Y
2	IC 410-395004/13	4.0	2.226609	50.0	1242450.0	0.556652	Y
3	IC 410-395004/14	10.0	5.877988	50.0	1195341.0	0.587799	Y
4	IC 410-395004/15	20.0	10.568941	50.0	1220742.0	0.528447	Y
5	ICIS 410-395004/16	50.0	25.710085	50.0	1286783.0	0.514202	Y
6	IC 410-395004/17	100.0	44.42266	50.0	1403142.0	0.444227	Y
7	IC 410-395004/18	300.0	138.596994	50.0	1375475.0	0.46199	Y



Calibration / Pentane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

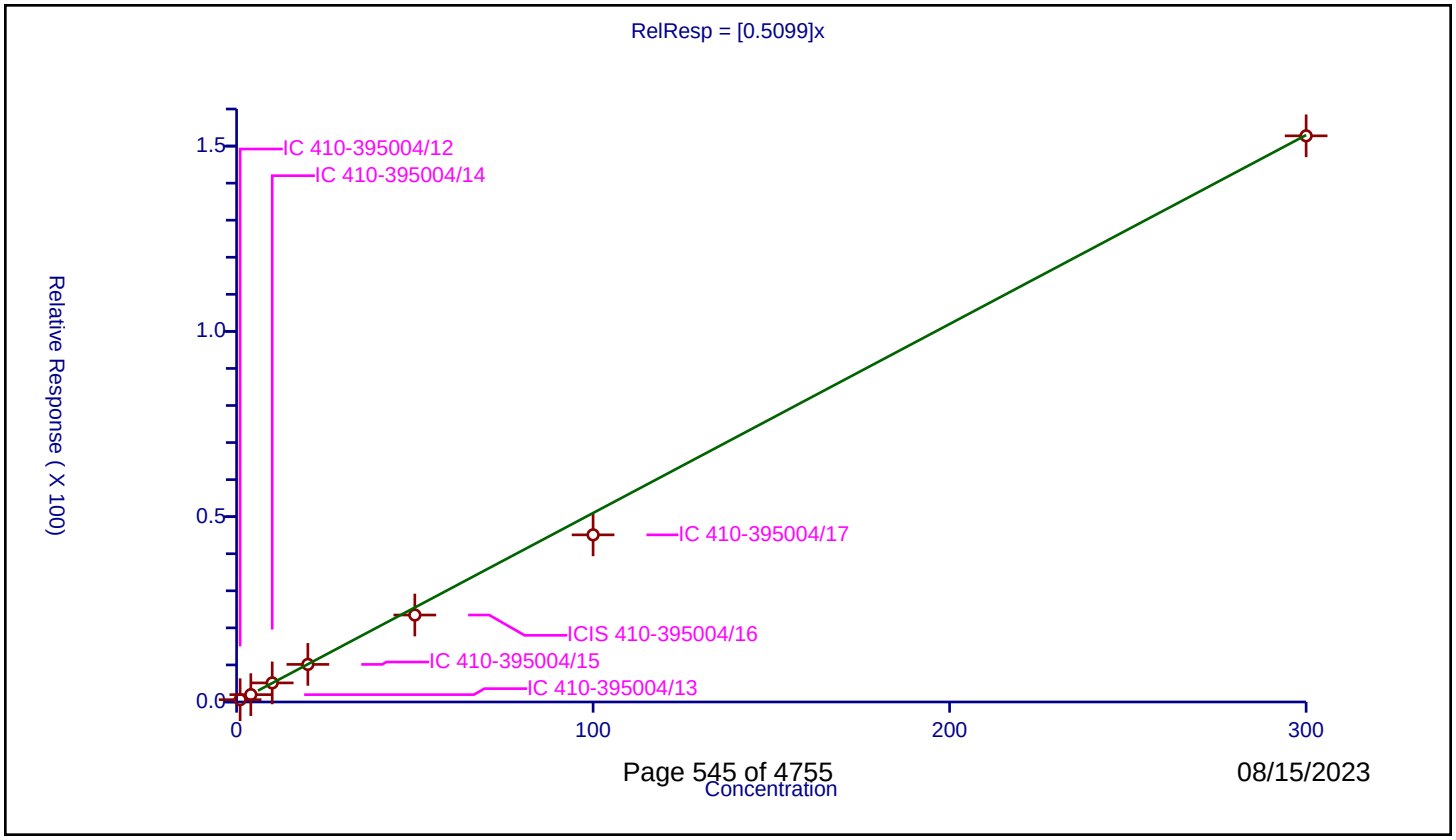
Curve Coefficients

Intercept:	0
Slope:	0.5099

Error Coefficients

Standard Error:	1810000
Relative Standard Error:	10.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.622818	50.0	1213596.0	0.622818	Y
2	IC 410-395004/13	4.0	1.981367	50.0	1242450.0	0.495342	Y
3	IC 410-395004/14	10.0	5.144808	50.0	1195341.0	0.514481	Y
4	IC 410-395004/15	20.0	10.142643	50.0	1220742.0	0.507132	Y
5	ICIS 410-395004/16	50.0	23.46973	50.0	1286783.0	0.469395	Y
6	IC 410-395004/17	100.0	45.100496	50.0	1403142.0	0.451005	Y
7	IC 410-395004/18	300.0	152.7621	50.0	1375475.0	0.509207	Y



Calibration / Ethyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

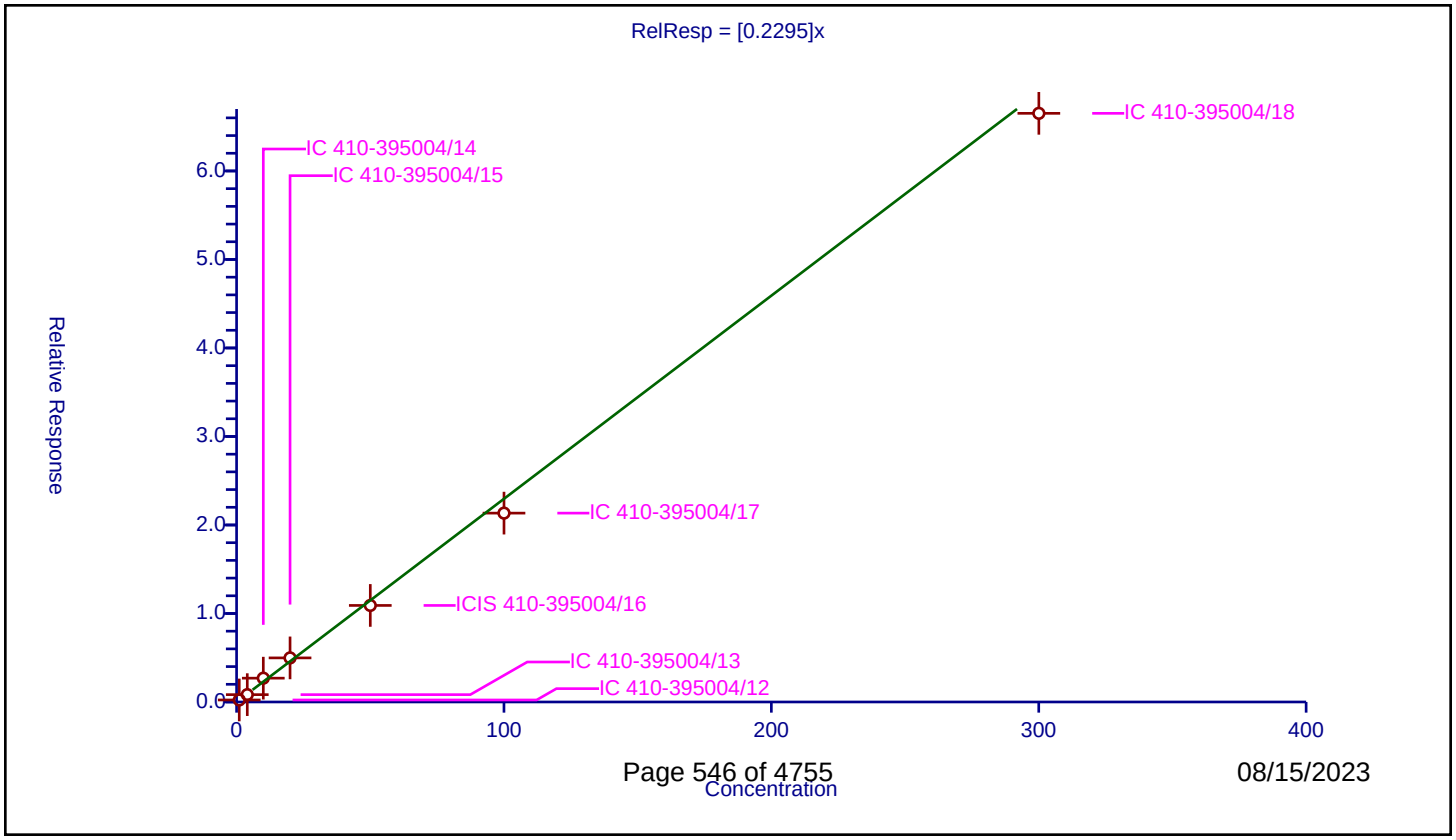
Curve Coefficients

Intercept:	0
Slope:	0.2295

Error Coefficients

Standard Error:	796000
Relative Standard Error:	9.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.000135	0.227712	50.0	1213596.0	0.227681	Y
2	IC 410-395004/13	4.000541	0.831261	50.0	1242450.0	0.207787	Y
3	IC 410-395004/14	10.001352	2.692202	50.0	1195341.0	0.269184	Y
4	IC 410-395004/15	20.002704	4.981069	50.0	1220742.0	0.24902	Y
5	ICIS 410-395004/16	50.00676	10.907433	50.0	1286783.0	0.218119	Y
6	IC 410-395004/17	100.01352	21.340998	50.0	1403142.0	0.213381	Y
7	IC 410-395004/18	300.04056	66.51215	50.0	1375475.0	0.221677	Y



Calibration / 1,2-Dichloro-1,1,2-trifluoroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

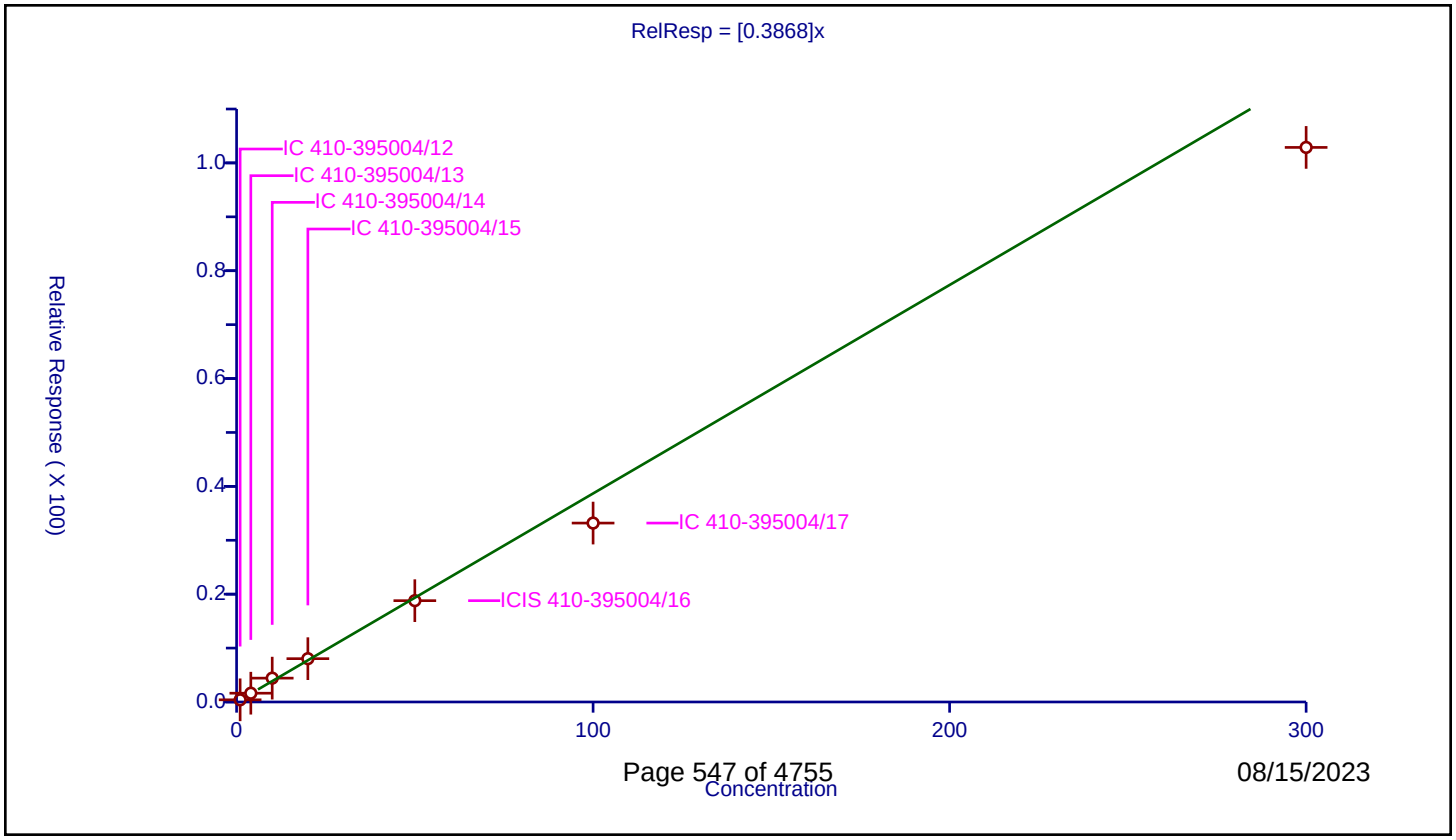
Curve Coefficients

Intercept:	0
Slope:	0.3868

Error Coefficients

Standard Error:	1240000
Relative Standard Error:	10.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.405324	50.0	1213596.0	0.405324	Y
2	IC 410-395004/13	4.0	1.628315	50.0	1242450.0	0.407079	Y
3	IC 410-395004/14	10.0	4.425515	50.0	1195341.0	0.442552	Y
4	IC 410-395004/15	20.0	8.035727	50.0	1220742.0	0.401786	Y
5	ICIS 410-395004/16	50.0	18.796681	50.0	1286783.0	0.375934	Y
6	IC 410-395004/17	100.0	33.190475	50.0	1403142.0	0.331905	Y
7	IC 410-395004/18	300.0	102.877588	50.0	1375475.0	0.342925	Y



08/15/2023

Calibration / Acrolein

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

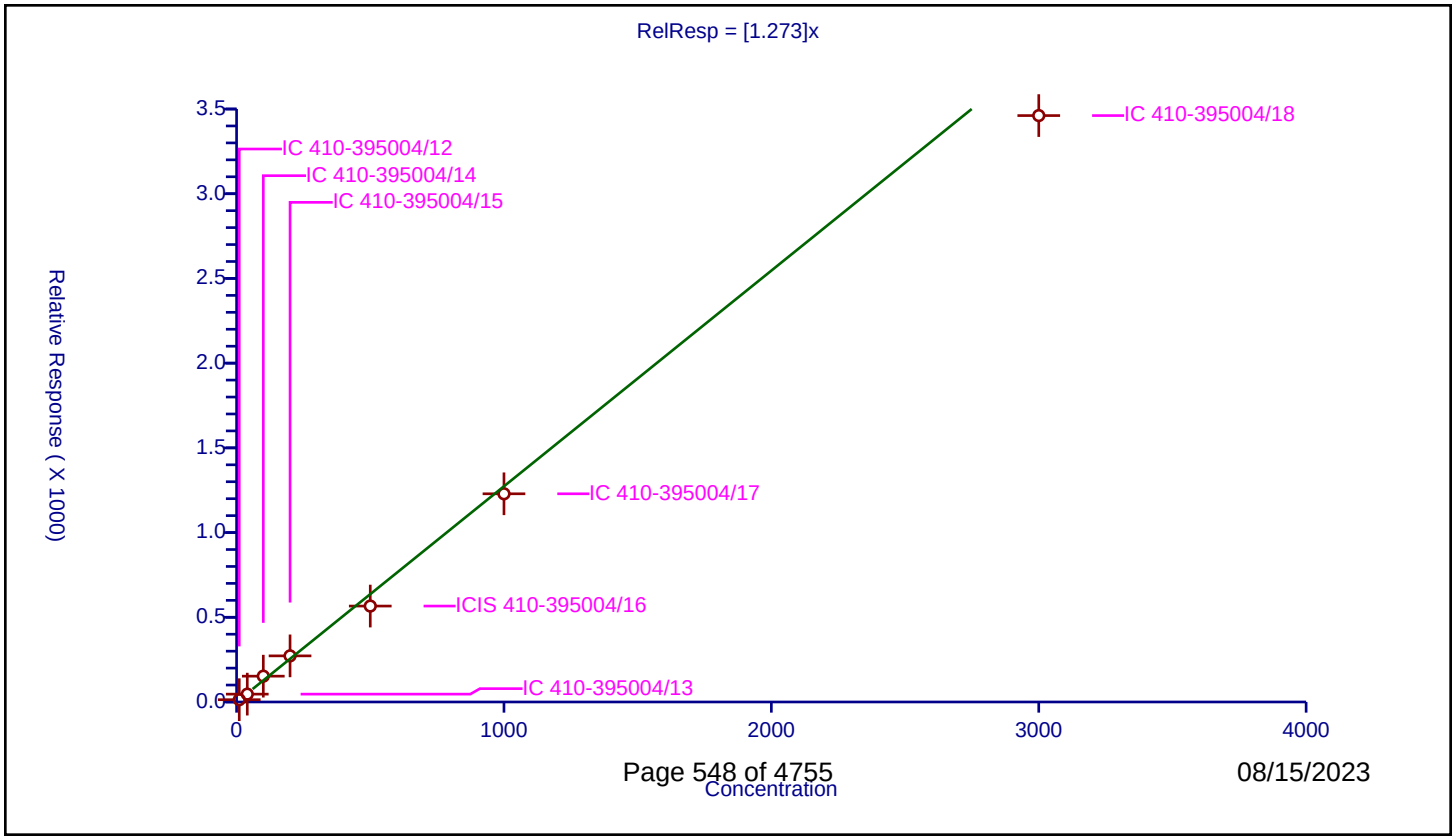
Curve Coefficients

Intercept:	0
Slope:	1.273

Error Coefficients

Standard Error:	3960000
Relative Standard Error:	11.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	10.000333	13.515991	250.0	542635.0	1.351554	Y
2	IC 410-395004/13	40.001333	46.360981	250.0	580019.0	1.158986	Y
3	IC 410-395004/14	100.003333	152.462496	250.0	512285.0	1.524574	Y
4	IC 410-395004/15	200.006666	272.294597	250.0	546074.0	1.361428	Y
5	ICIS 410-395004/16	500.016666	566.186474	250.0	574041.0	1.132335	Y
6	IC 410-395004/17	1000.033332	1228.828026	250.0	603392.0	1.228787	Y
7	IC 410-395004/18	3000.099995	3461.221681	250.0	658306.0	1.153702	Y



Calibration / 1,1-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

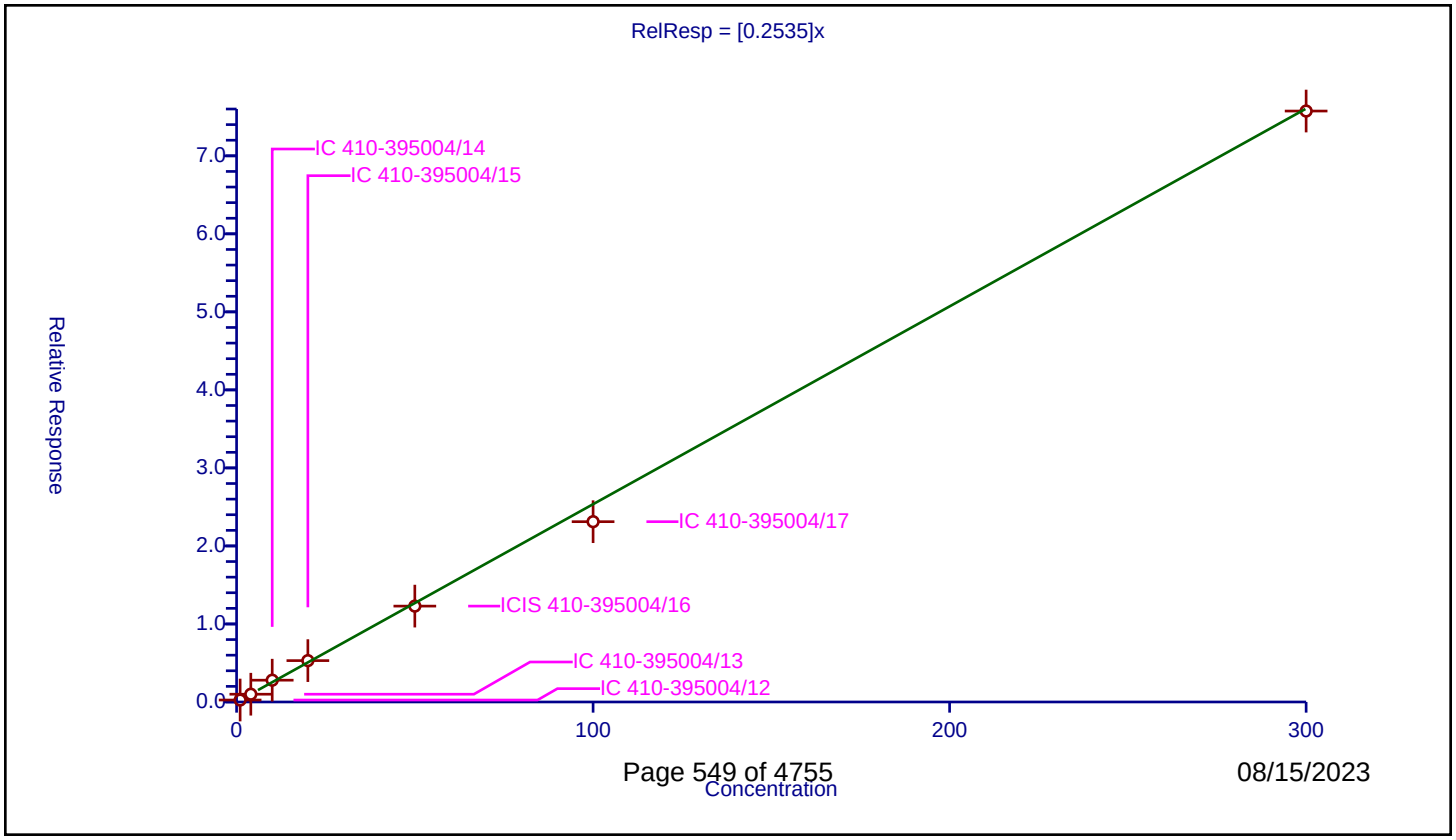
Curve Coefficients

Intercept:	0
Slope:	0.2535

Error Coefficients

Standard Error:	902000
Relative Standard Error:	6.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.251402	50.0	1213596.0	0.251402	Y
2	IC 410-395004/13	4.0	0.997223	50.0	1242450.0	0.249306	Y
3	IC 410-395004/14	10.0	2.793638	50.0	1195341.0	0.279364	Y
4	IC 410-395004/15	20.0	5.301857	50.0	1220742.0	0.265093	Y
5	ICIS 410-395004/16	50.0	12.289679	50.0	1286783.0	0.245794	Y
6	IC 410-395004/17	100.0	23.110598	50.0	1403142.0	0.231106	Y
7	IC 410-395004/18	300.0	75.740744	50.0	1375475.0	0.252469	Y



Calibration / 1,1,2-Trichloro-1,2,2-trifluoroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

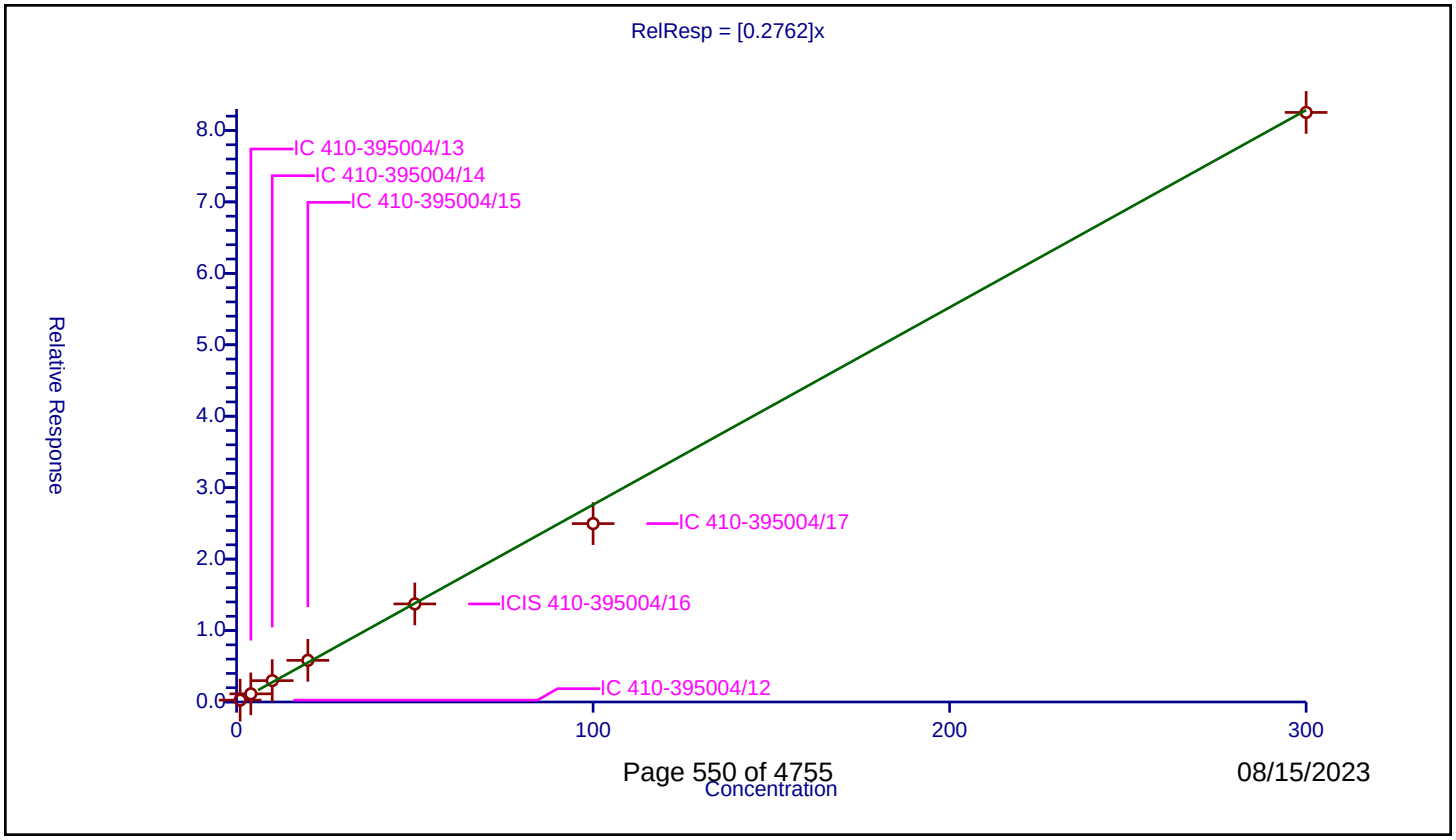
Curve Coefficients

Intercept:	0
Slope:	0.2762

Error Coefficients

Standard Error:	983000
Relative Standard Error:	6.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.258653	50.0	1213596.0	0.258653	Y
2	IC 410-395004/13	4.0	1.139925	50.0	1242450.0	0.284981	Y
3	IC 410-395004/14	10.0	2.988352	50.0	1195341.0	0.298835	Y
4	IC 410-395004/15	20.0	5.82703	50.0	1220742.0	0.291351	Y
5	ICIS 410-395004/16	50.0	13.725741	50.0	1286783.0	0.274515	Y
6	IC 410-395004/17	100.0	24.970673	50.0	1403142.0	0.249707	Y
7	IC 410-395004/18	300.0	82.520547	50.0	1375475.0	0.275068	Y



Calibration / Acetone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

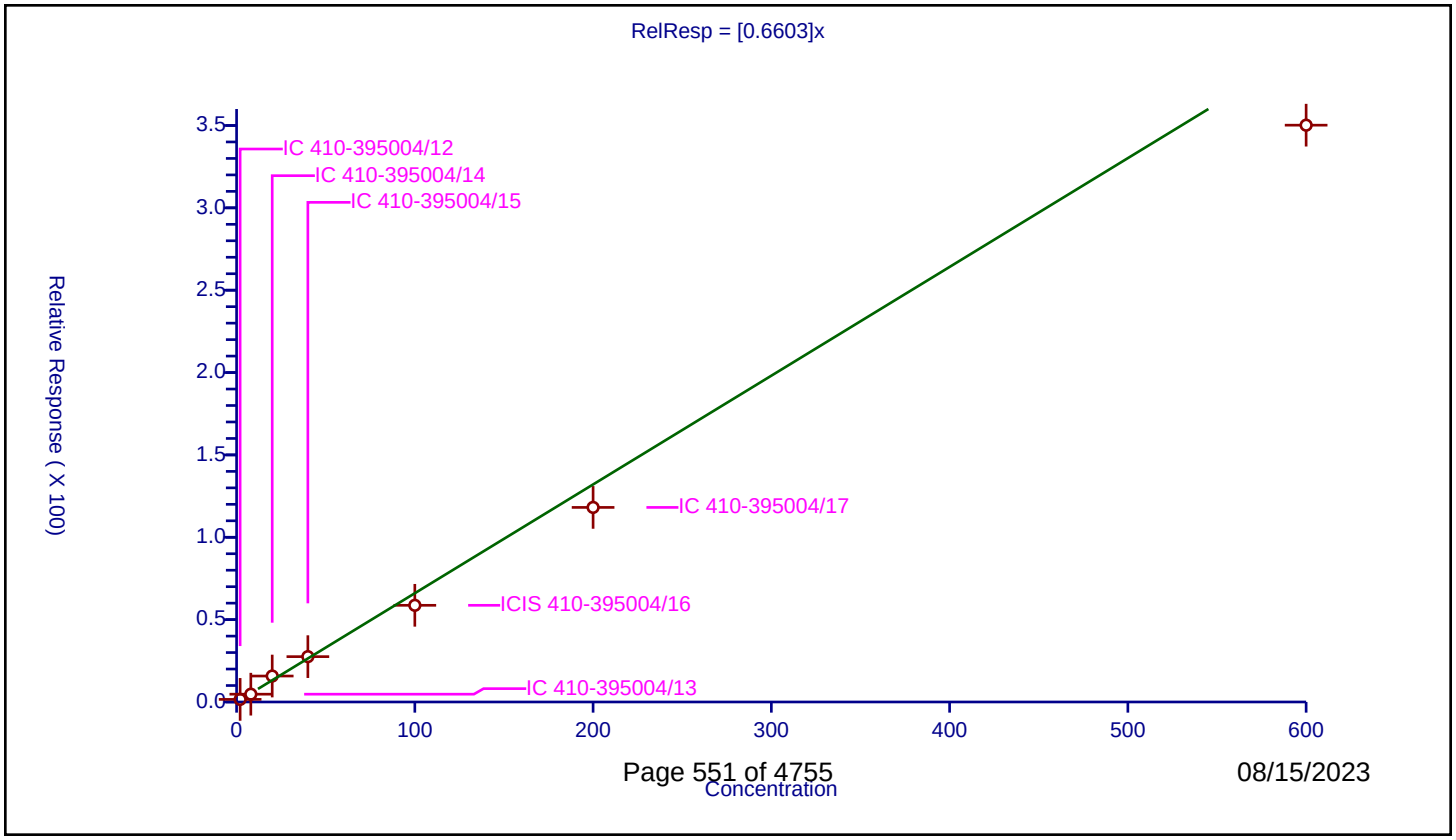
Curve Coefficients

Intercept:	0
Slope:	0.6603

Error Coefficients

Standard Error:	399000
Relative Standard Error:	14.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.973

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	2.0	1.58578	250.0	542635.0	0.79289	Y
2	IC 410-395004/13	8.0	4.733035	250.0	580019.0	0.591629	Y
3	IC 410-395004/14	20.0	15.763686	250.0	512285.0	0.788184	Y
4	IC 410-395004/15	40.0	27.533814	250.0	546074.0	0.688345	Y
5	ICIS 410-395004/16	100.0	58.700511	250.0	574041.0	0.587005	Y
6	IC 410-395004/17	200.0	118.134645	250.0	603392.0	0.590673	Y
7	IC 410-395004/18	600.0	350.187451	250.0	658306.0	0.583646	Y



Calibration / Iodomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

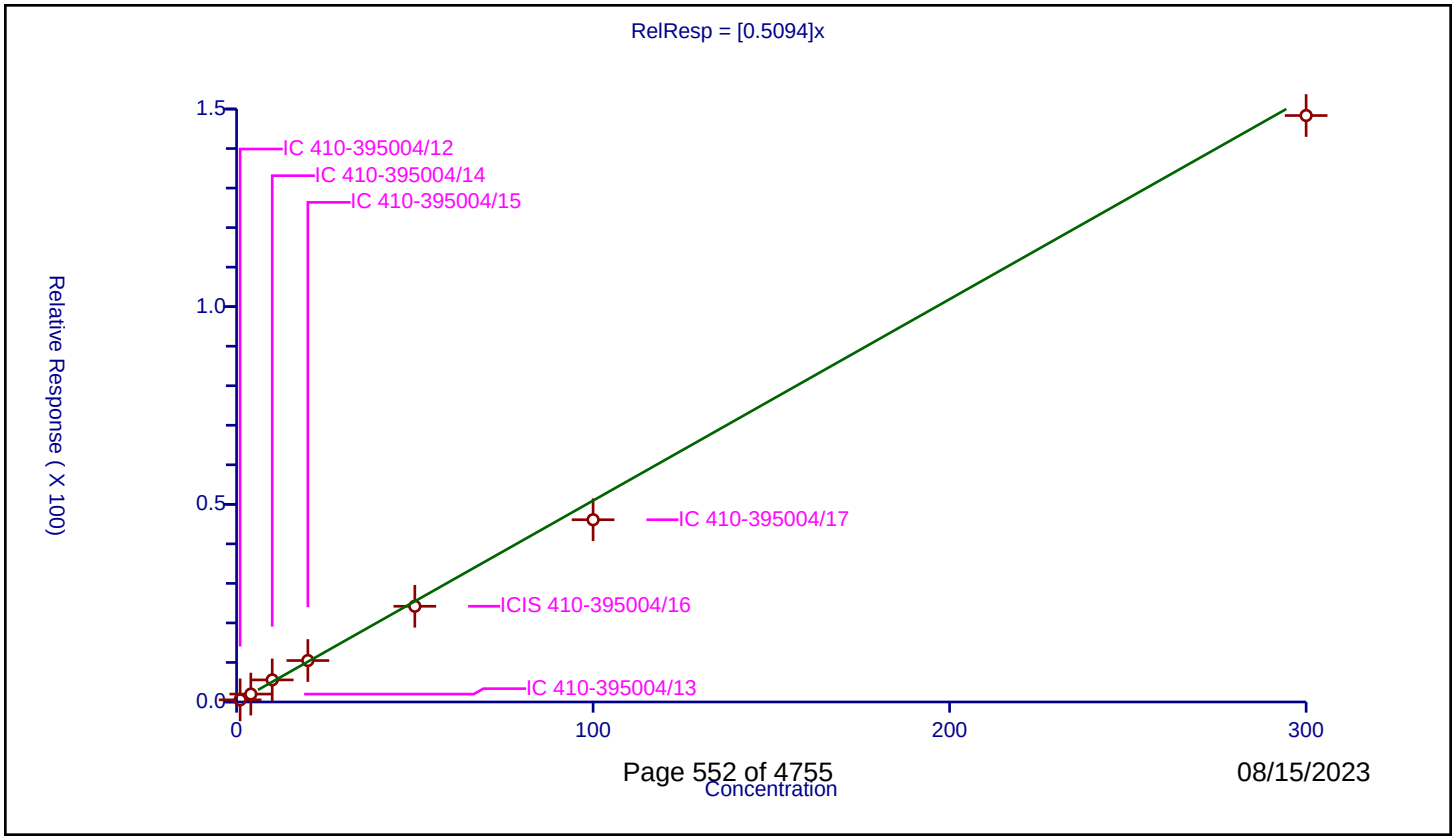
Curve Coefficients

Intercept:	0
Slope:	0.5094

Error Coefficients

Standard Error:	1770000
Relative Standard Error:	6.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.542273	50.0	1213596.0	0.542273	Y
2	IC 410-395004/13	4.0	2.002374	50.0	1242450.0	0.500594	Y
3	IC 410-395004/14	10.0	5.588907	50.0	1195341.0	0.558891	Y
4	IC 410-395004/15	20.0	10.488129	50.0	1220742.0	0.524406	Y
5	ICIS 410-395004/16	50.0	24.214961	50.0	1286783.0	0.484299	Y
6	IC 410-395004/17	100.0	46.104421	50.0	1403142.0	0.461044	Y
7	IC 410-395004/18	300.0	148.356277	50.0	1375475.0	0.494521	Y



Calibration / Isopropyl alcohol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

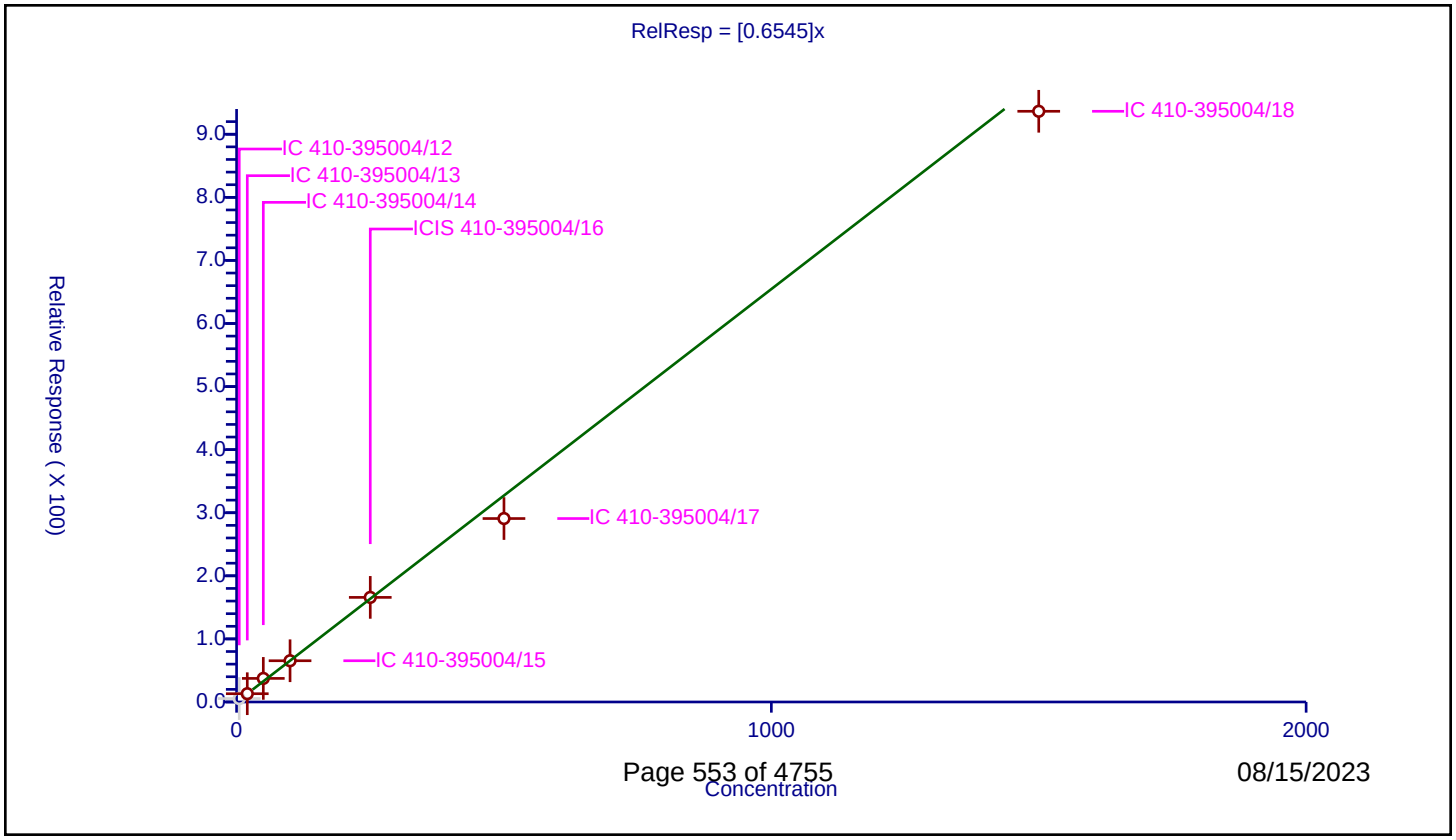
Curve Coefficients

Intercept:	0
Slope:	0.6545

Error Coefficients

Standard Error:	1160000
Relative Standard Error:	8.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	5.0	5.44611	250.0	542635.0	1.089222	N
2	IC 410-395004/13	20.0	13.137501	250.0	580019.0	0.656875	Y
3	IC 410-395004/14	50.0	37.386416	250.0	512285.0	0.747728	Y
4	IC 410-395004/15	100.0	65.35378	250.0	546074.0	0.653538	Y
5	ICIS 410-395004/16	250.0	165.794342	250.0	574041.0	0.663177	Y
6	IC 410-395004/17	500.0	290.824207	250.0	603392.0	0.581648	Y
7	IC 410-395004/18	1500.0	936.400777	250.0	658306.0	0.624267	Y



Calibration / Carbon disulfide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

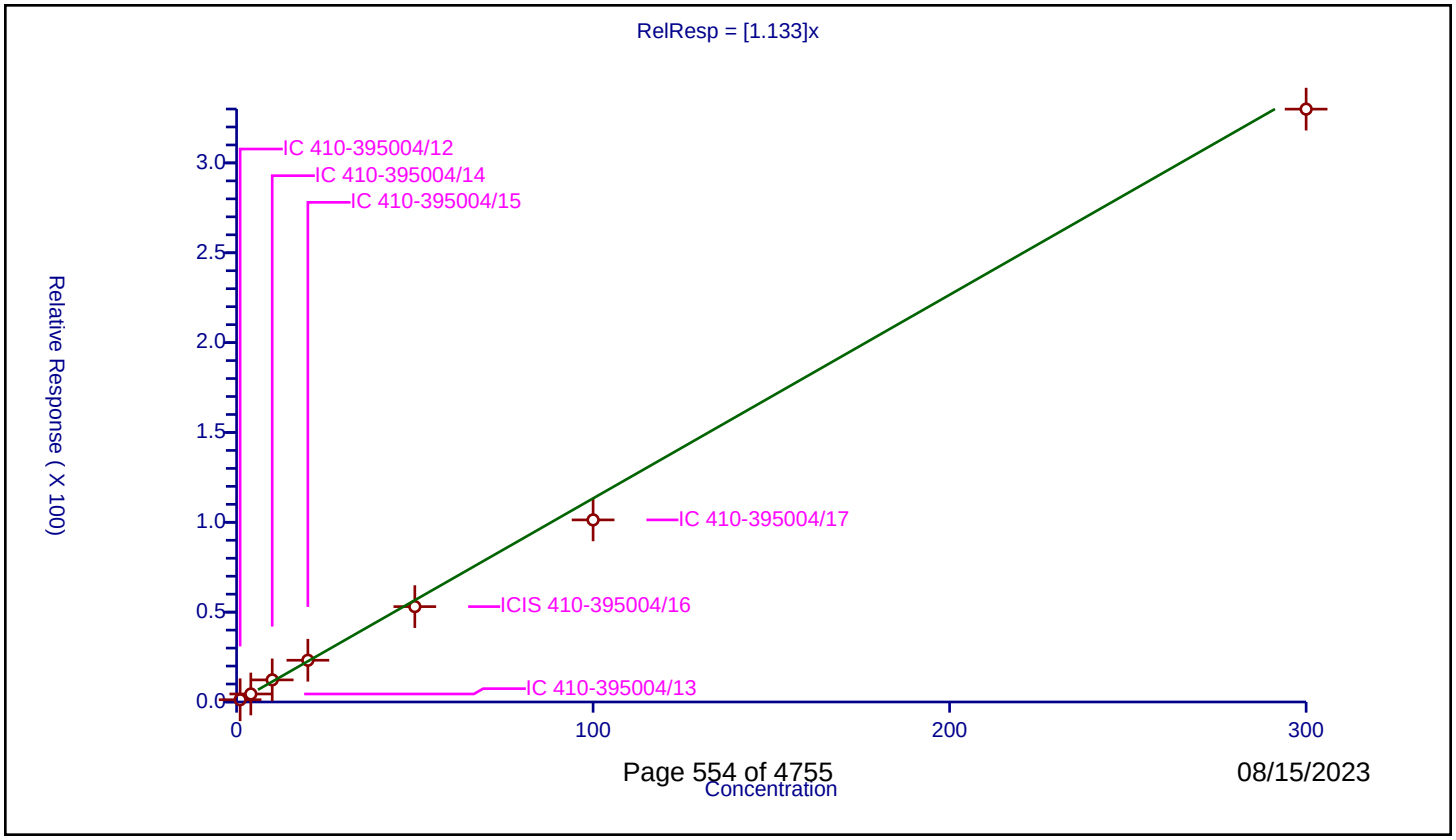
Curve Coefficients

Intercept:	0
Slope:	1.133

Error Coefficients

Standard Error:	3930000
Relative Standard Error:	7.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	1.250416	50.0	1213596.0	1.250416	Y
2	IC 410-395004/13	4.0	4.456397	50.0	1242450.0	1.114099	Y
3	IC 410-395004/14	10.0	12.298039	50.0	1195341.0	1.229804	Y
4	IC 410-395004/15	20.0	23.239309	50.0	1220742.0	1.161965	Y
5	ICIS 410-395004/16	50.0	53.072274	50.0	1286783.0	1.061445	Y
6	IC 410-395004/17	100.0	101.342095	50.0	1403142.0	1.013421	Y
7	IC 410-395004/18	300.0	329.936822	50.0	1375475.0	1.099789	Y



08/15/2023

Calibration / Methyl acetate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

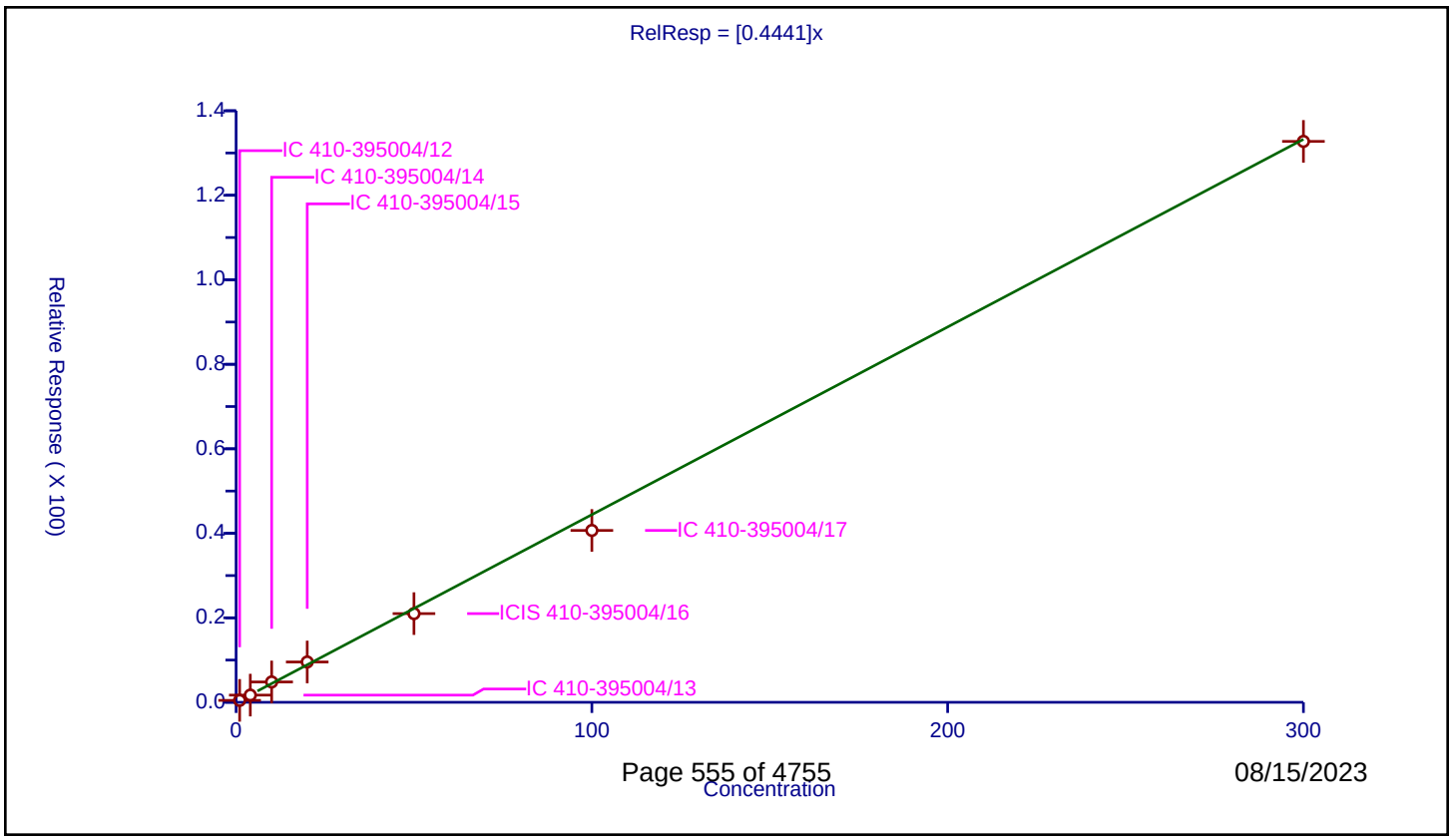
Curve Coefficients

Intercept:	0
Slope:	0.4441

Error Coefficients

Standard Error:	1580000
Relative Standard Error:	6.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.455382	50.0	1213596.0	0.455382	Y
2	IC 410-395004/13	4.0	1.701517	50.0	1242450.0	0.425379	Y
3	IC 410-395004/14	10.0	4.817579	50.0	1195341.0	0.481758	Y
4	IC 410-395004/15	20.0	9.549397	50.0	1220742.0	0.47747	Y
5	ICIS 410-395004/16	50.0	20.992001	50.0	1286783.0	0.41984	Y
6	IC 410-395004/17	100.0	40.673467	50.0	1403142.0	0.406735	Y
7	IC 410-395004/18	300.0	132.744216	50.0	1375475.0	0.442481	Y



Calibration / 3-Chloro-1-propene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

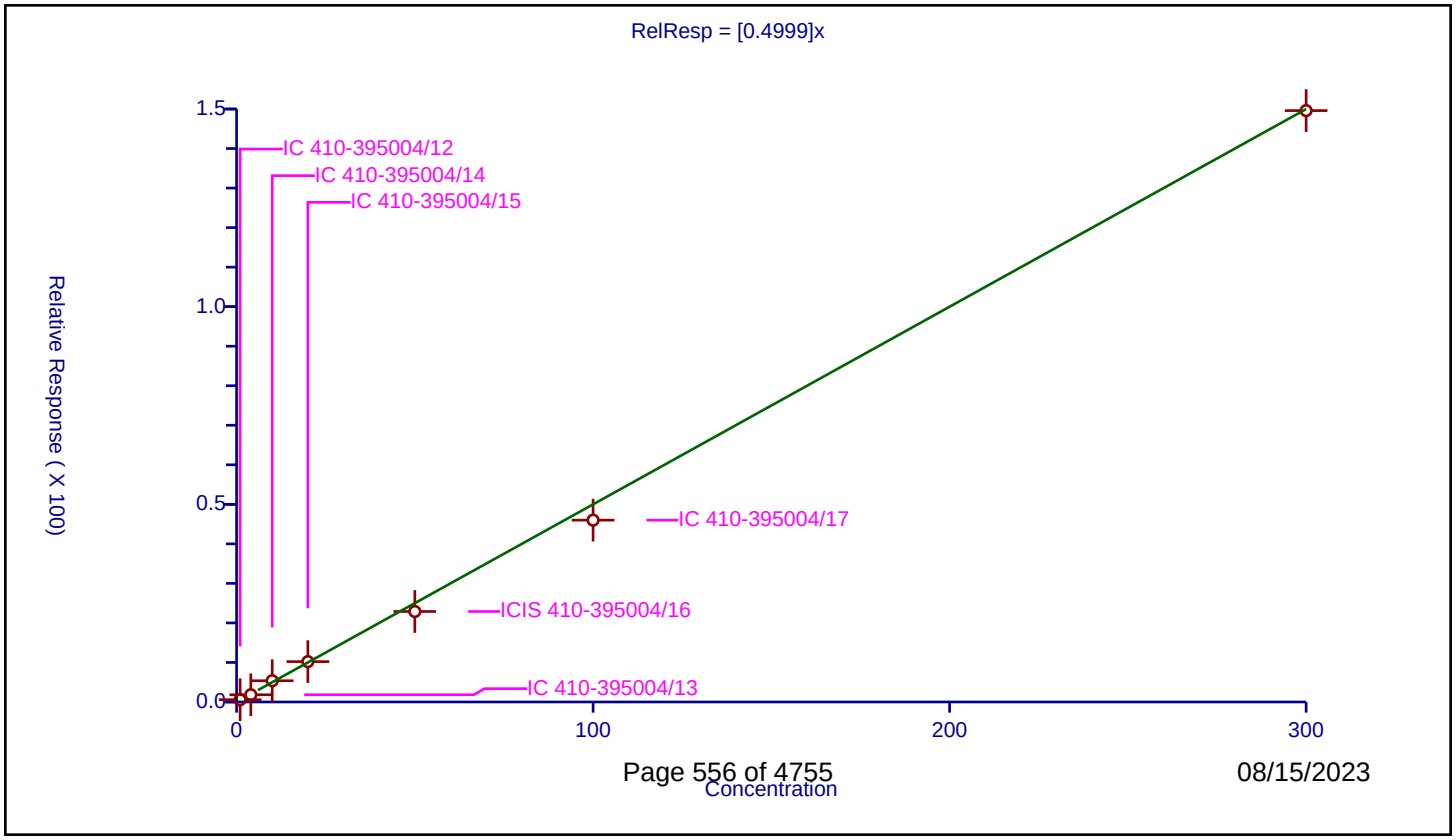
Curve Coefficients

Intercept:	0
Slope:	0.4999

Error Coefficients

Standard Error:	1780000
Relative Standard Error:	9.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.577293	50.0	1213596.0	0.577293	Y
2	IC 410-395004/13	4.0	1.831422	50.0	1242450.0	0.457855	Y
3	IC 410-395004/14	10.0	5.37537	50.0	1195341.0	0.537537	Y
4	IC 410-395004/15	20.0	10.208586	50.0	1220742.0	0.510429	Y
5	ICIS 410-395004/16	50.0	22.891078	50.0	1286783.0	0.457822	Y
6	IC 410-395004/17	100.0	45.994739	50.0	1403142.0	0.459947	Y
7	IC 410-395004/18	300.0	149.598248	50.0	1375475.0	0.498661	Y



Calibration / Methylene Chloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

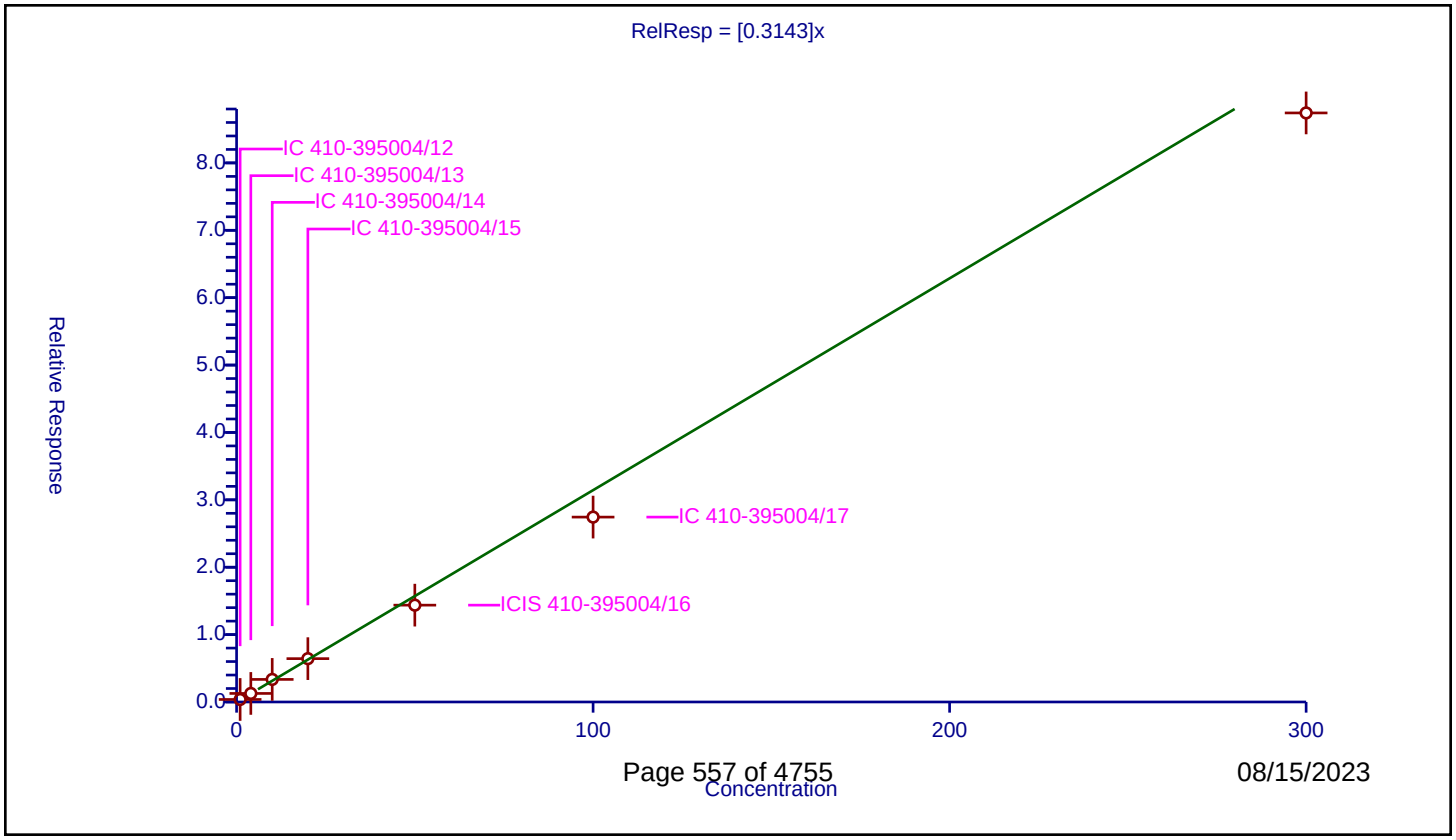
Curve Coefficients

Intercept:	0
Slope:	0.3143

Error Coefficients

Standard Error:	1040000
Relative Standard Error:	10.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.373642	50.0	1213596.0	0.373642	Y
2	IC 410-395004/13	4.0	1.266852	50.0	1242450.0	0.316713	Y
3	IC 410-395004/14	10.0	3.351721	50.0	1195341.0	0.335172	Y
4	IC 410-395004/15	20.0	6.432481	50.0	1220742.0	0.321624	Y
5	ICIS 410-395004/16	50.0	14.372781	50.0	1286783.0	0.287456	Y
6	IC 410-395004/17	100.0	27.440309	50.0	1403142.0	0.274403	Y
7	IC 410-395004/18	300.0	87.419037	50.0	1375475.0	0.291397	Y



Calibration / 2-Methyl-2-propanol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

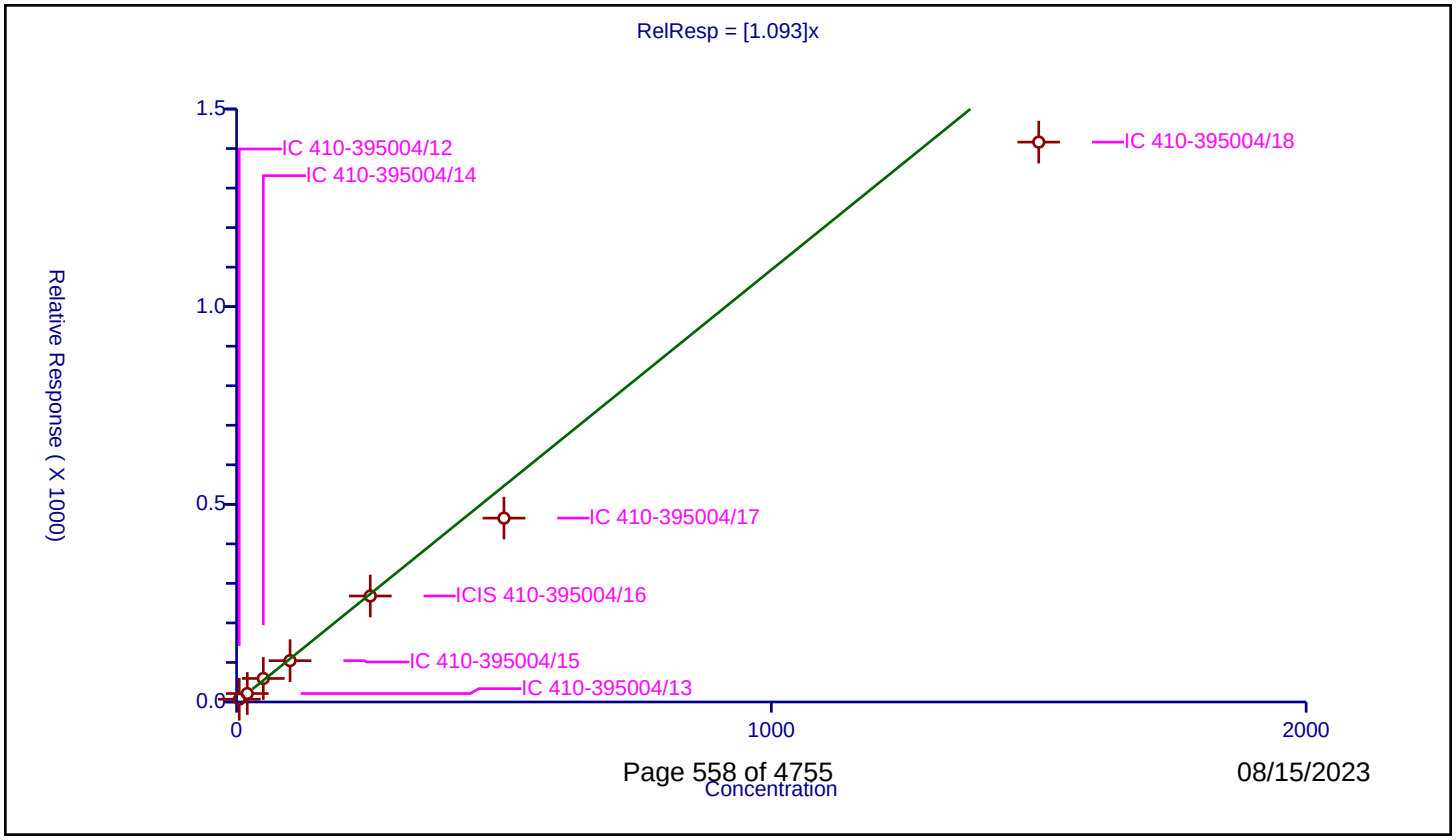
Curve Coefficients

Intercept:	0
Slope:	1.093

Error Coefficients

Standard Error:	1610000
Relative Standard Error:	14.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.970

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	5.0	6.998258	250.0	542635.0	1.399652	Y
2	IC 410-395004/13	20.0	21.407488	250.0	580019.0	1.070374	Y
3	IC 410-395004/14	50.0	59.507891	250.0	512285.0	1.190158	Y
4	IC 410-395004/15	100.0	104.4982	250.0	546074.0	1.044982	Y
5	ICIS 410-395004/16	250.0	268.093655	250.0	574041.0	1.072375	Y
6	IC 410-395004/17	500.0	465.140821	250.0	603392.0	0.930282	Y
7	IC 410-395004/18	1500.0	1416.264625	250.0	658306.0	0.944176	Y



Calibration / Acrylonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

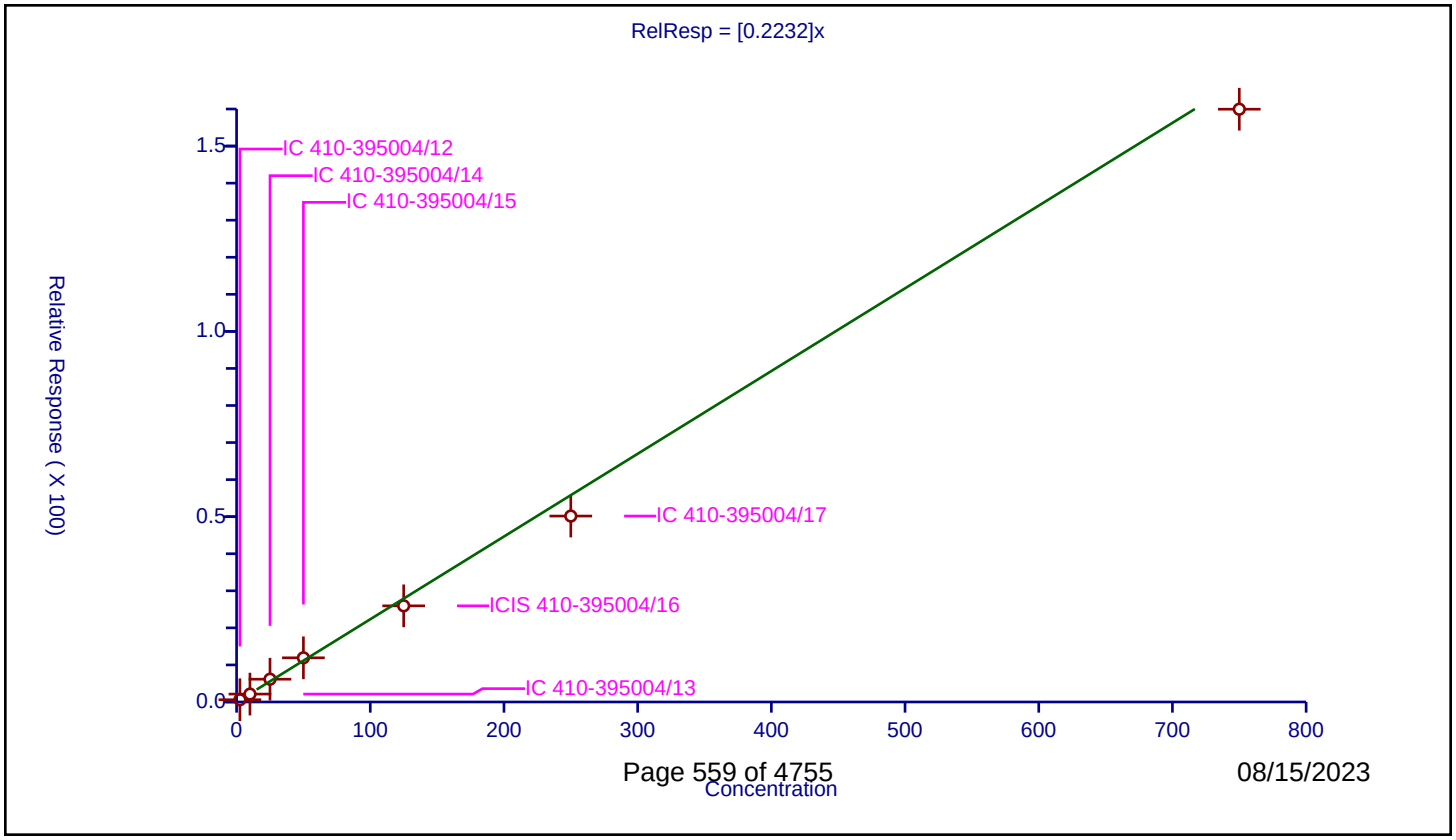
Curve Coefficients

Intercept:	0
Slope:	0.2232

Error Coefficients

Standard Error:	1910000
Relative Standard Error:	8.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	2.5	0.608975	50.0	1213596.0	0.24359	Y
2	IC 410-395004/13	10.0	2.130911	50.0	1242450.0	0.213091	Y
3	IC 410-395004/14	25.0	6.149751	50.0	1195341.0	0.24599	Y
4	IC 410-395004/15	50.0	11.919472	50.0	1220742.0	0.238389	Y
5	ICIS 410-395004/16	125.0	25.943535	50.0	1286783.0	0.207548	Y
6	IC 410-395004/17	250.0	50.16684	50.0	1403142.0	0.200667	Y
7	IC 410-395004/18	750.0	159.951435	50.0	1375475.0	0.213269	Y



Calibration / trans-1,2-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

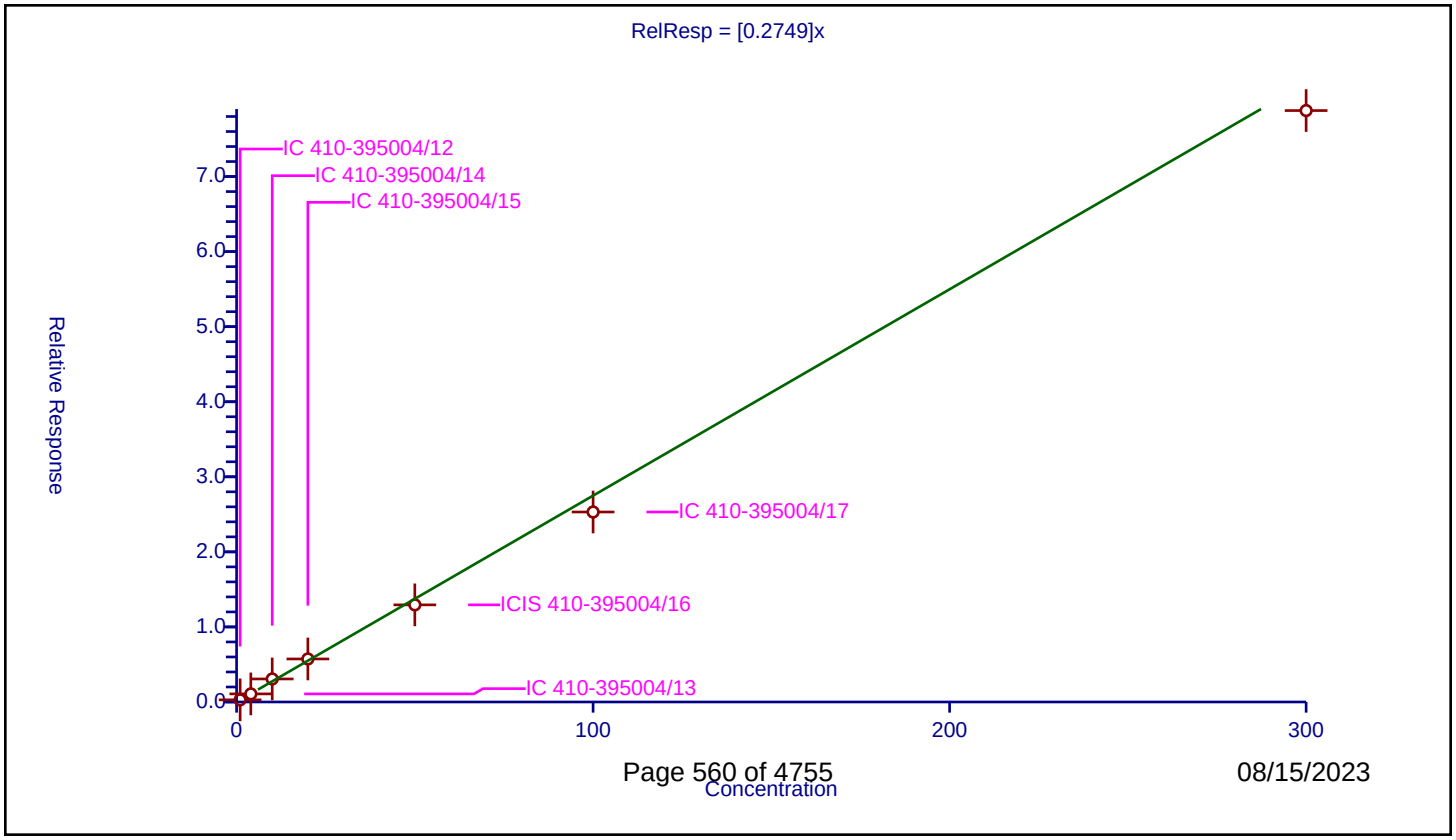
Curve Coefficients

Intercept:	0
Slope:	0.2749

Error Coefficients

Standard Error:	943000
Relative Standard Error:	7.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.286998	50.0	1213596.0	0.286998	Y
2	IC 410-395004/13	4.0	1.077991	50.0	1242450.0	0.269498	Y
3	IC 410-395004/14	10.0	3.066782	50.0	1195341.0	0.306678	Y
4	IC 410-395004/15	20.0	5.731924	50.0	1220742.0	0.286596	Y
5	ICIS 410-395004/16	50.0	12.942431	50.0	1286783.0	0.258849	Y
6	IC 410-395004/17	100.0	25.310874	50.0	1403142.0	0.253109	Y
7	IC 410-395004/18	300.0	78.793835	50.0	1375475.0	0.262646	Y



Calibration / Methyl tert-butyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

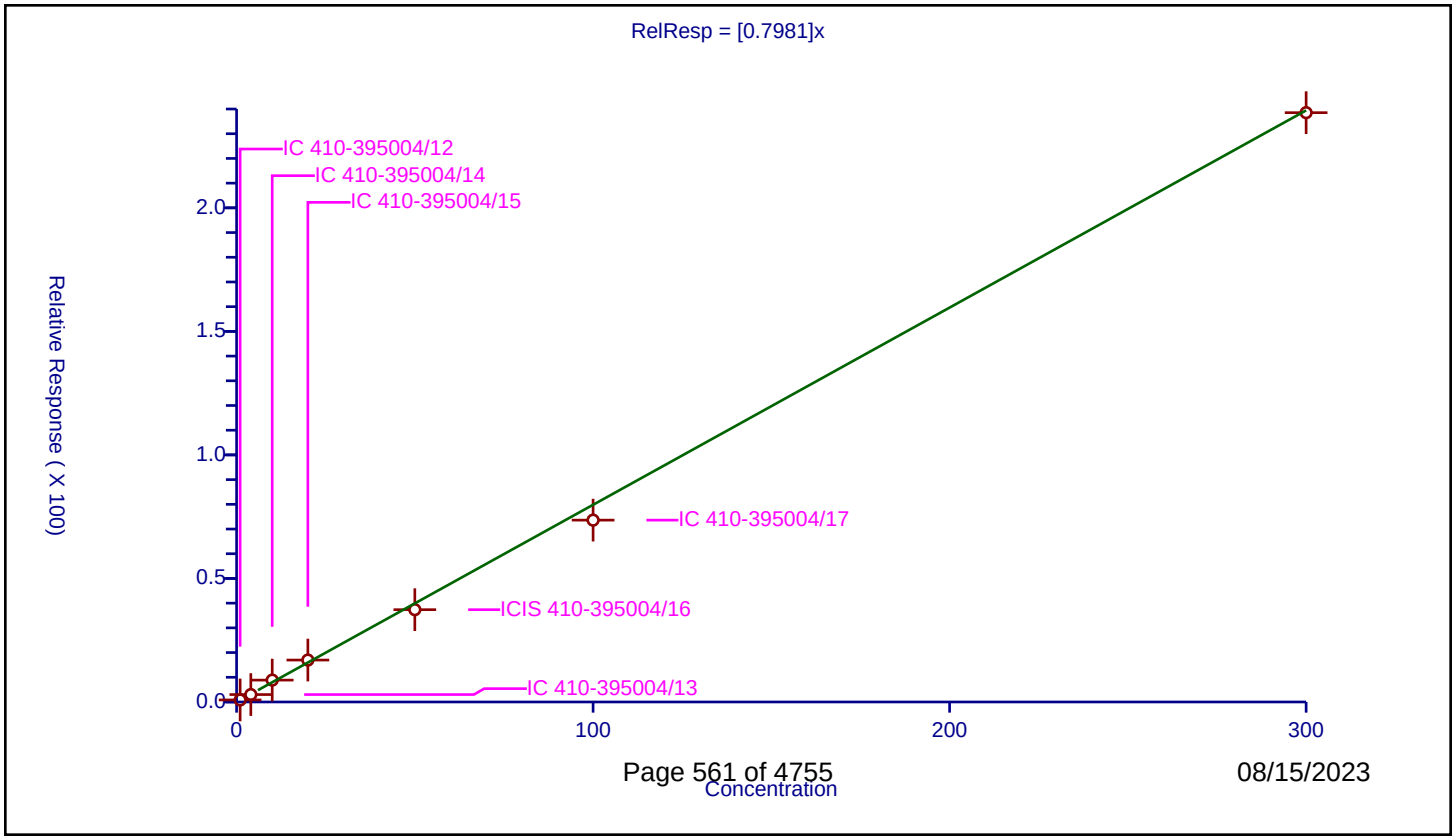
Curve Coefficients

Intercept:	0
Slope:	0.7981

Error Coefficients

Standard Error:	2840000
Relative Standard Error:	7.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.822844	50.0	1213596.0	0.822844	Y
2	IC 410-395004/13	4.0	3.004306	50.0	1242450.0	0.751077	Y
3	IC 410-395004/14	10.0	8.858769	50.0	1195341.0	0.885877	Y
4	IC 410-395004/15	20.0	16.975495	50.0	1220742.0	0.848775	Y
5	ICIS 410-395004/16	50.0	37.363643	50.0	1286783.0	0.747273	Y
6	IC 410-395004/17	100.0	73.601888	50.0	1403142.0	0.736019	Y
7	IC 410-395004/18	300.0	238.521892	50.0	1375475.0	0.795073	Y



Calibration / Hexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

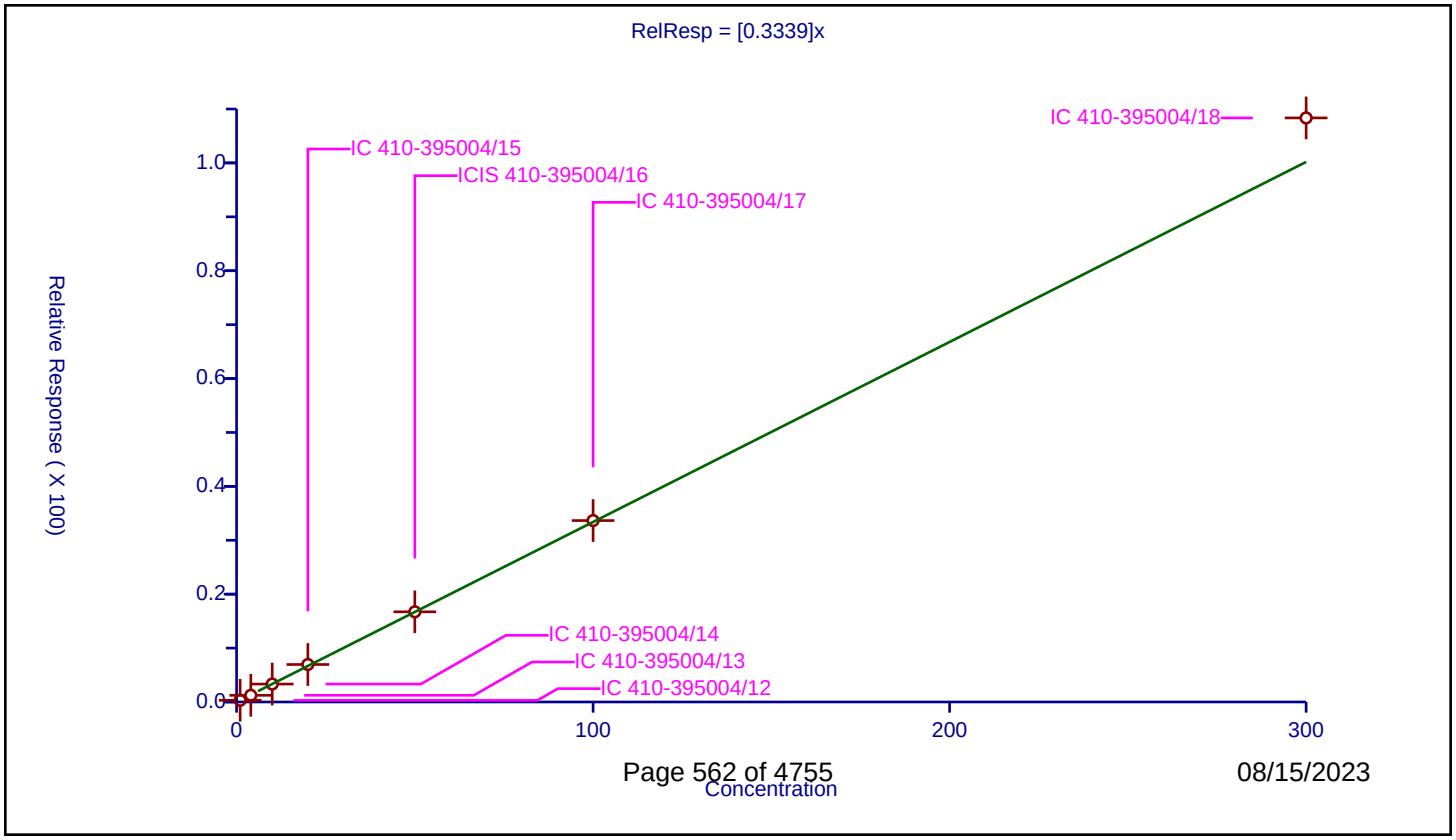
Curve Coefficients

Intercept:	0
Slope:	0.3339

Error Coefficients

Standard Error:	1290000
Relative Standard Error:	5.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.314685	50.0	1213596.0	0.314685	Y
2	IC 410-395004/13	4.0	1.240694	50.0	1242450.0	0.310173	Y
3	IC 410-395004/14	10.0	3.328255	50.0	1195341.0	0.332826	Y
4	IC 410-395004/15	20.0	6.951592	50.0	1220742.0	0.34758	Y
5	ICIS 410-395004/16	50.0	16.728772	50.0	1286783.0	0.334575	Y
6	IC 410-395004/17	100.0	33.655396	50.0	1403142.0	0.336554	Y
7	IC 410-395004/18	300.0	108.346026	50.0	1375475.0	0.361153	Y



Calibration / 1,1-Dichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

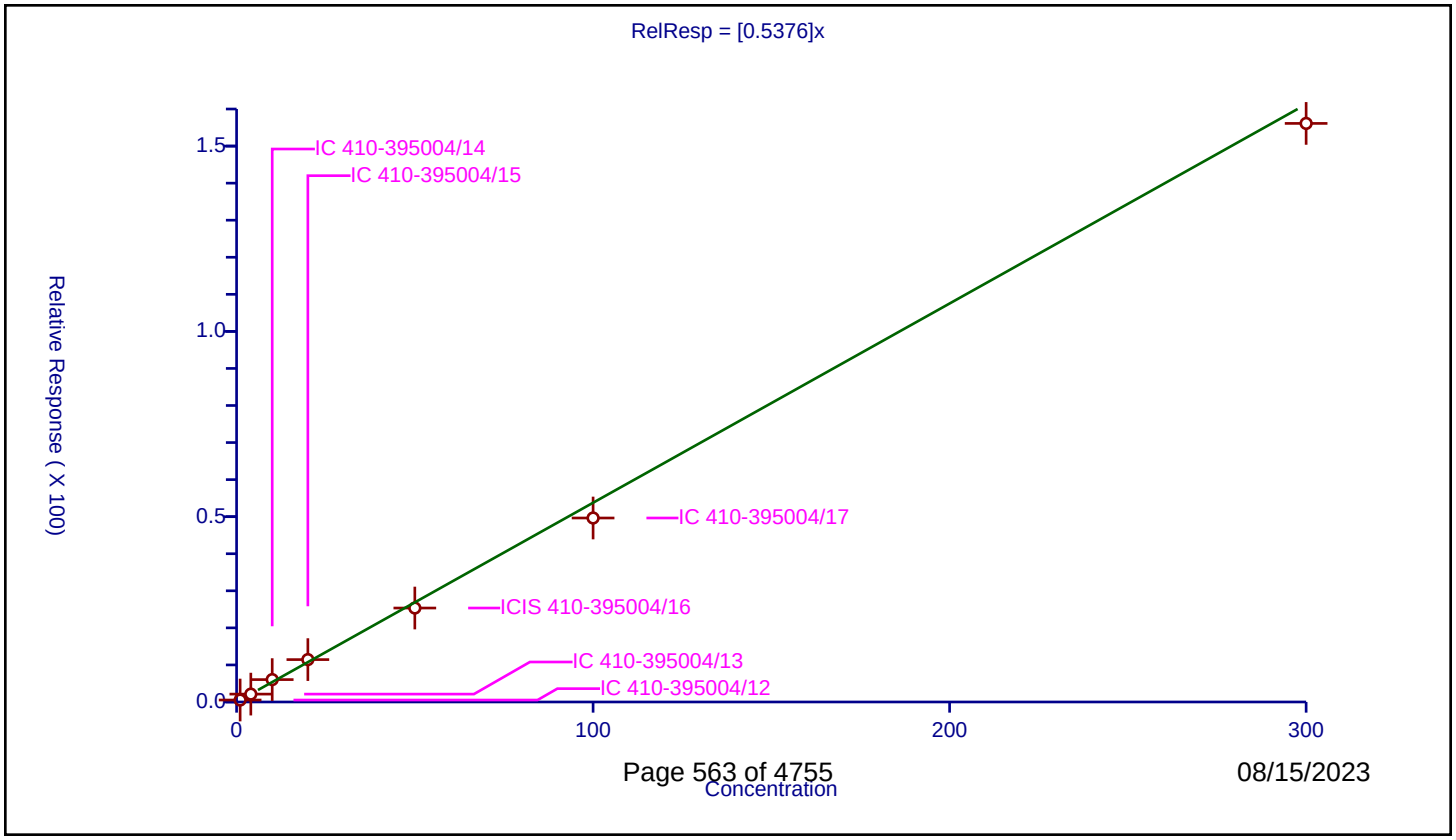
Curve Coefficients

Intercept:	0
Slope:	0.5376

Error Coefficients

Standard Error:	1870000
Relative Standard Error:	7.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.532179	50.0	1213596.0	0.532179	Y
2	IC 410-395004/13	4.0	2.124069	50.0	1242450.0	0.531017	Y
3	IC 410-395004/14	10.0	6.042083	50.0	1195341.0	0.604208	Y
4	IC 410-395004/15	20.0	11.440337	50.0	1220742.0	0.572017	Y
5	ICIS 410-395004/16	50.0	25.352488	50.0	1286783.0	0.50705	Y
6	IC 410-395004/17	100.0	49.645154	50.0	1403142.0	0.496452	Y
7	IC 410-395004/18	300.0	156.112652	50.0	1375475.0	0.520376	Y



Calibration / Isopropyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

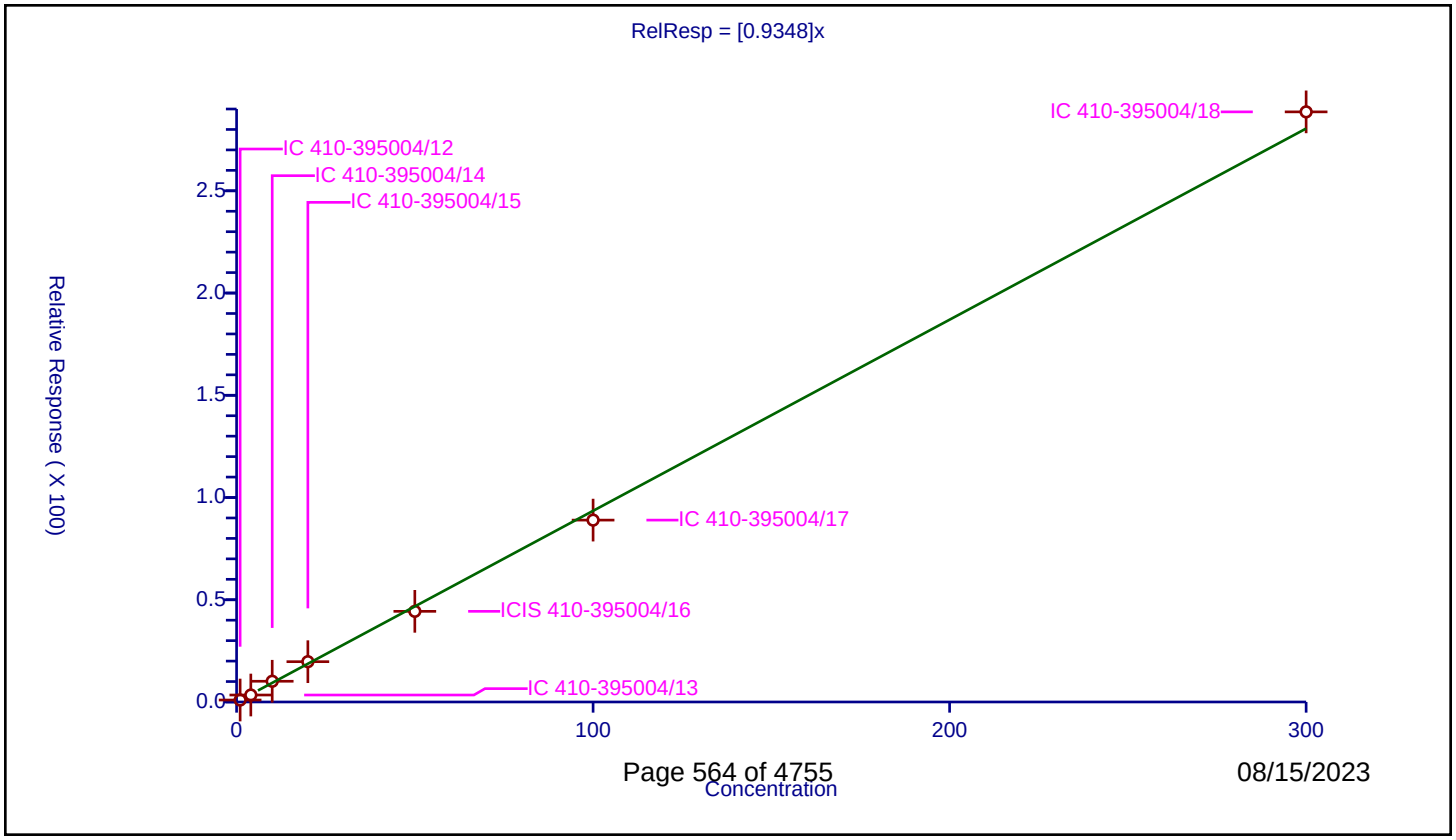
Curve Coefficients

Intercept:	0
Slope:	0.9348

Error Coefficients

Standard Error:	3440000
Relative Standard Error:	6.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.953612	50.0	1213596.0	0.953612	Y
2	IC 410-395004/13	4.0	3.410479	50.0	1242450.0	0.85262	Y
3	IC 410-395004/14	10.0	10.137442	50.0	1195341.0	1.013744	Y
4	IC 410-395004/15	20.0	19.710471	50.0	1220742.0	0.985524	Y
5	ICIS 410-395004/16	50.0	44.341198	50.0	1286783.0	0.886824	Y
6	IC 410-395004/17	100.0	88.945274	50.0	1403142.0	0.889453	Y
7	IC 410-395004/18	300.0	288.601501	50.0	1375475.0	0.962005	Y



Calibration / 2-Chloro-1,3-butadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

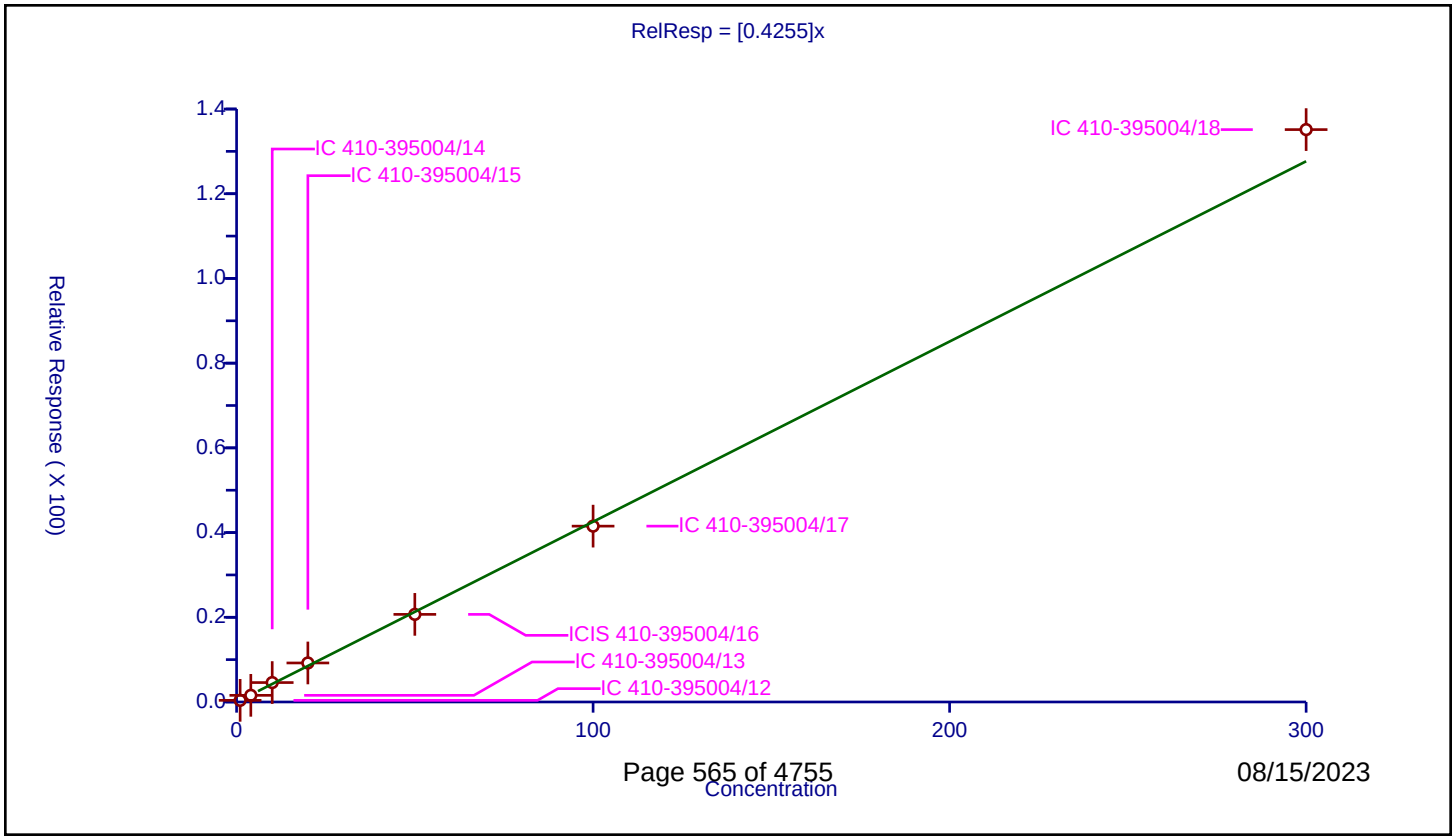
Curve Coefficients

Intercept:	0
Slope:	0.4255

Error Coefficients

Standard Error:	1610000
Relative Standard Error:	7.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.38732	50.0	1213596.0	0.38732	Y
2	IC 410-395004/13	4.0	1.571733	50.0	1242450.0	0.392933	Y
3	IC 410-395004/14	10.0	4.584842	50.0	1195341.0	0.458484	Y
4	IC 410-395004/15	20.0	9.212184	50.0	1220742.0	0.460609	Y
5	ICIS 410-395004/16	50.0	20.683208	50.0	1286783.0	0.413664	Y
6	IC 410-395004/17	100.0	41.518036	50.0	1403142.0	0.41518	Y
7	IC 410-395004/18	300.0	135.142115	50.0	1375475.0	0.450474	Y



Calibration / Tert-butyl ethyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

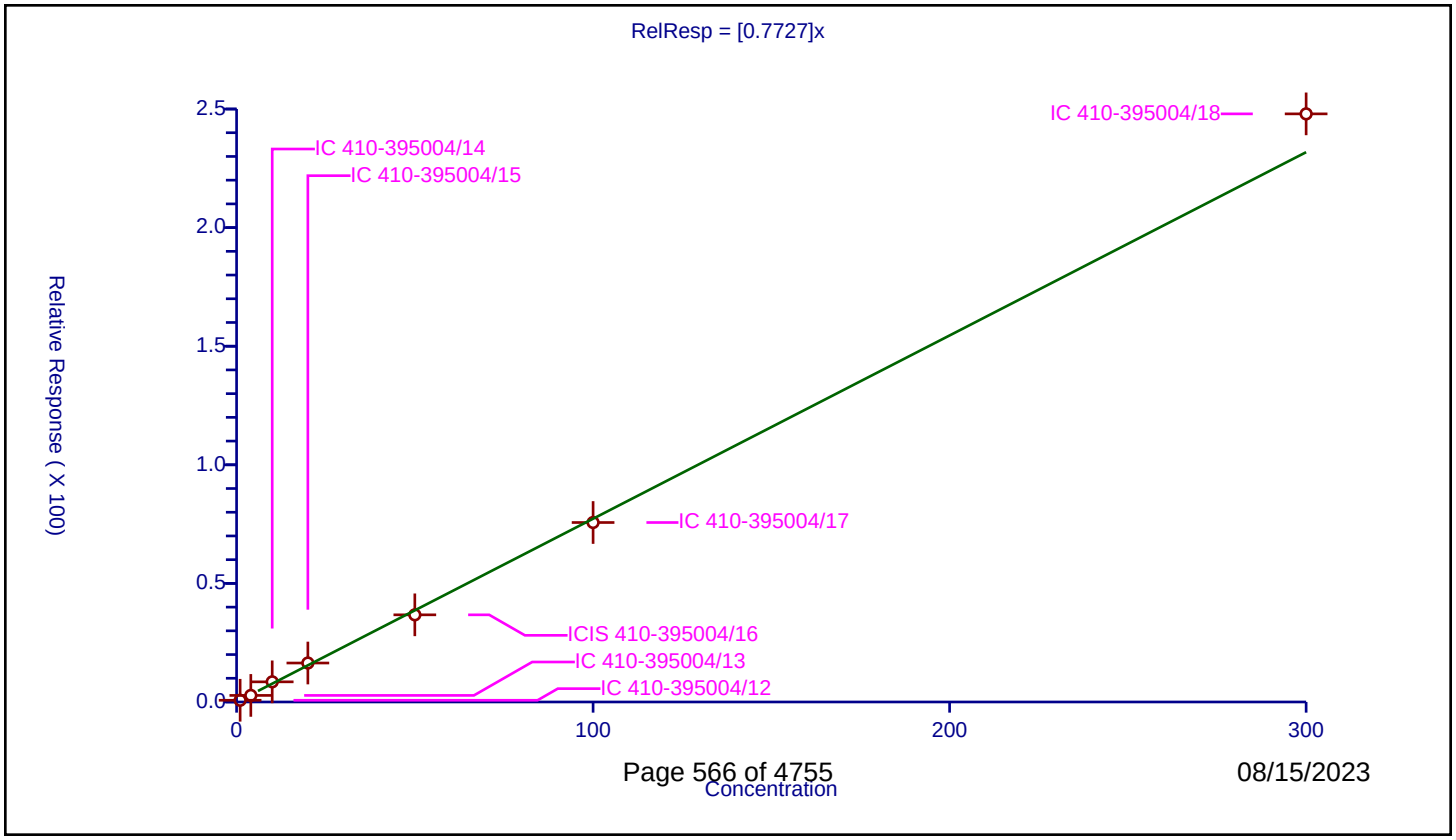
Curve Coefficients

Intercept:	0
Slope:	0.7727

Error Coefficients

Standard Error:	2950000
Relative Standard Error:	7.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.728496	50.0	1213596.0	0.728496	Y
2	IC 410-395004/13	4.0	2.766228	50.0	1242450.0	0.691557	Y
3	IC 410-395004/14	10.0	8.488498	50.0	1195341.0	0.84885	Y
4	IC 410-395004/15	20.0	16.430826	50.0	1220742.0	0.821541	Y
5	ICIS 410-395004/16	50.0	36.74831	50.0	1286783.0	0.734966	Y
6	IC 410-395004/17	100.0	75.66964	50.0	1403142.0	0.756696	Y
7	IC 410-395004/18	300.0	247.953216	50.0	1375475.0	0.826511	Y



Calibration / 2-Butanone (MEK)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

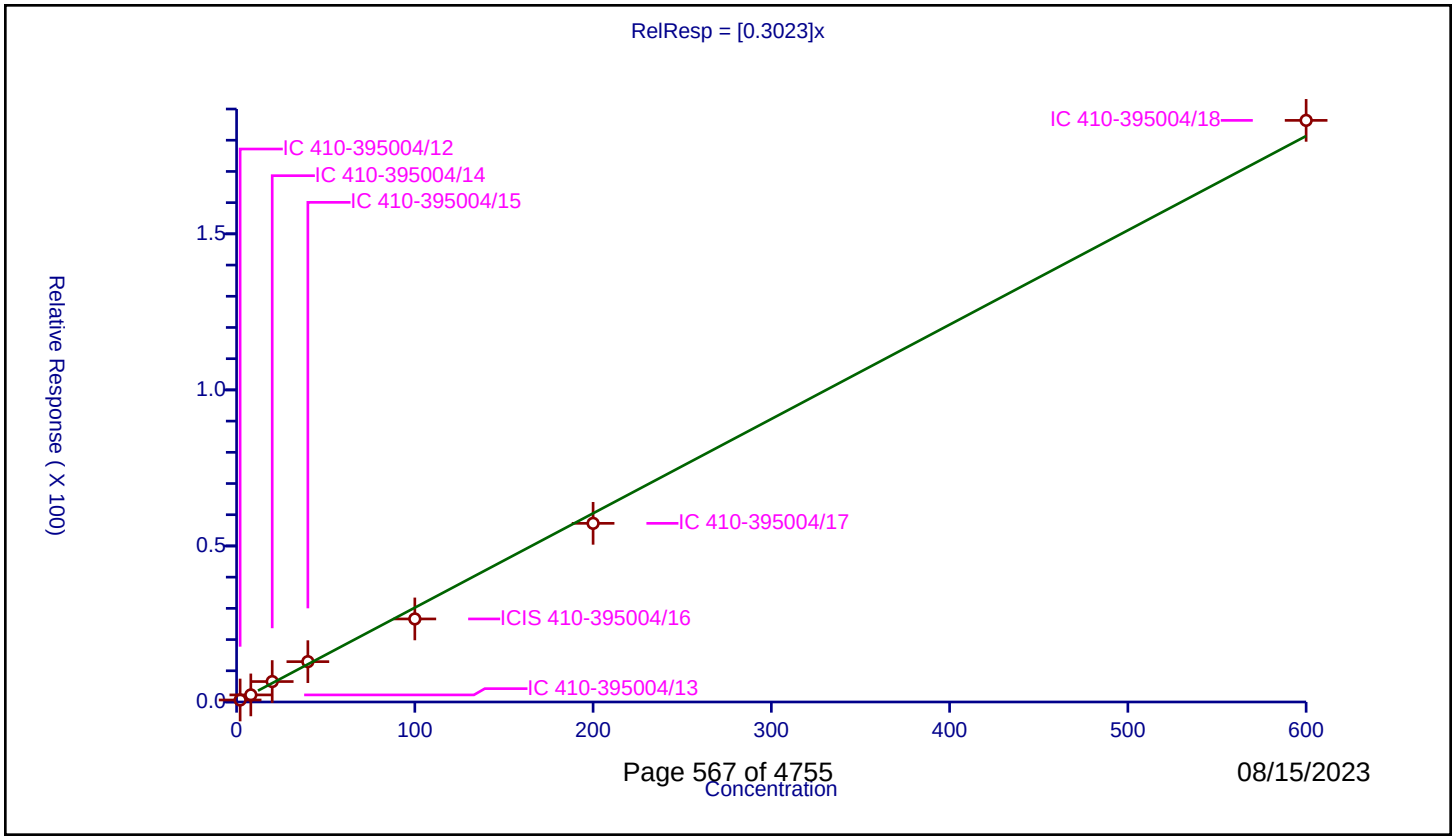
Curve Coefficients

Intercept:	0
Slope:	0.3023

Error Coefficients

Standard Error:	2220000
Relative Standard Error:	7.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	2.0	0.637032	50.0	1213596.0	0.318516	Y
2	IC 410-395004/13	8.0	2.268985	50.0	1242450.0	0.283623	Y
3	IC 410-395004/14	20.0	6.55244	50.0	1195341.0	0.327622	Y
4	IC 410-395004/15	40.0	12.924516	50.0	1220742.0	0.323113	Y
5	ICIS 410-395004/16	100.0	26.614161	50.0	1286783.0	0.266142	Y
6	IC 410-395004/17	200.0	57.24018	50.0	1403142.0	0.286201	Y
7	IC 410-395004/18	600.0	186.35904	50.0	1375475.0	0.310598	Y



Calibration / cis-1,2-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

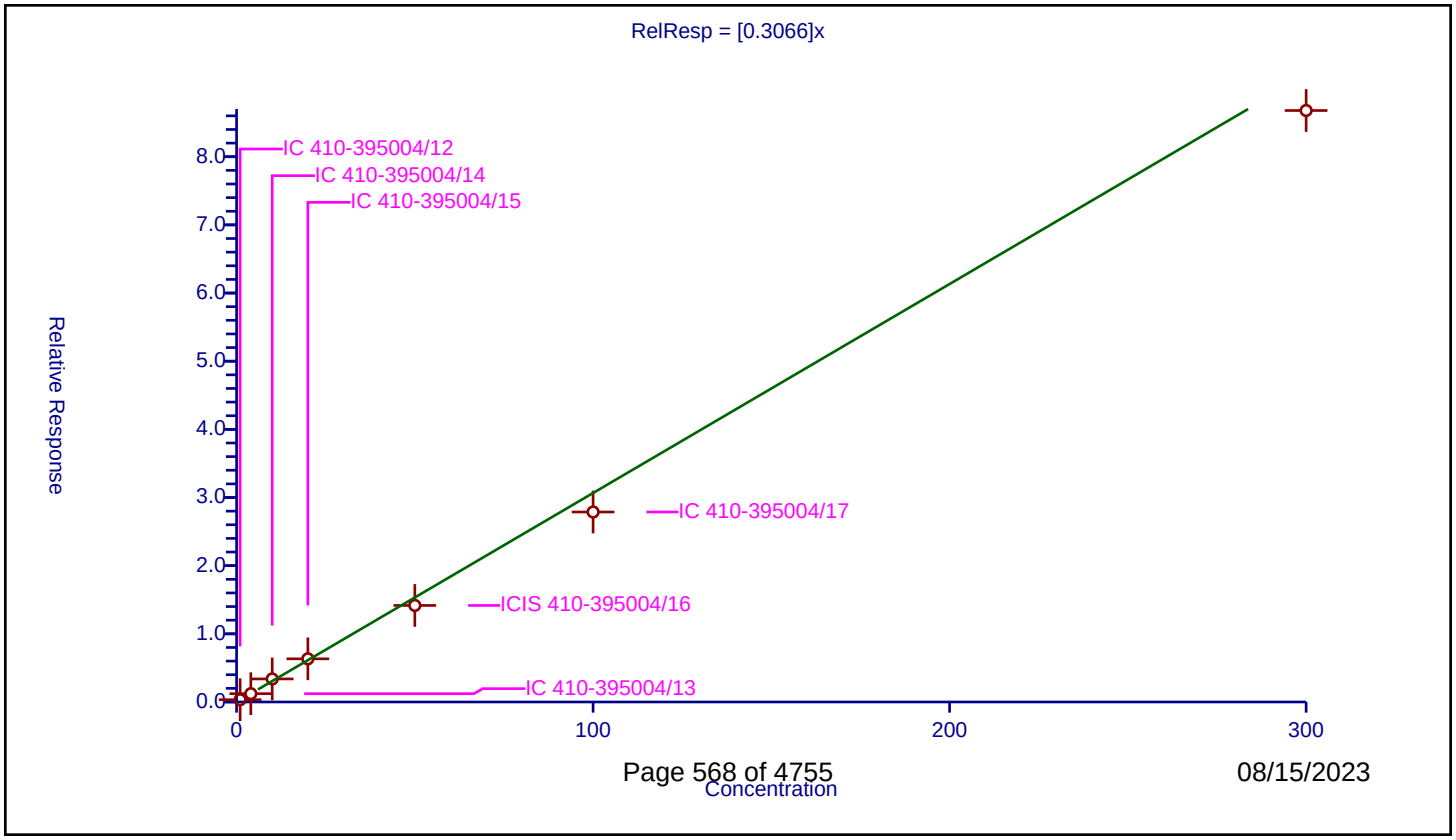
Curve Coefficients

Intercept:	0
Slope:	0.3066

Error Coefficients

Standard Error:	1040000
Relative Standard Error:	8.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.335903	50.0	1213596.0	0.335903	Y
2	IC 410-395004/13	4.0	1.217353	50.0	1242450.0	0.304338	Y
3	IC 410-395004/14	10.0	3.381629	50.0	1195341.0	0.338163	Y
4	IC 410-395004/15	20.0	6.333607	50.0	1220742.0	0.31668	Y
5	ICIS 410-395004/16	50.0	14.165714	50.0	1286783.0	0.283314	Y
6	IC 410-395004/17	100.0	27.872696	50.0	1403142.0	0.278727	Y
7	IC 410-395004/18	300.0	86.78253	50.0	1375475.0	0.289275	Y



Calibration / 2,2-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

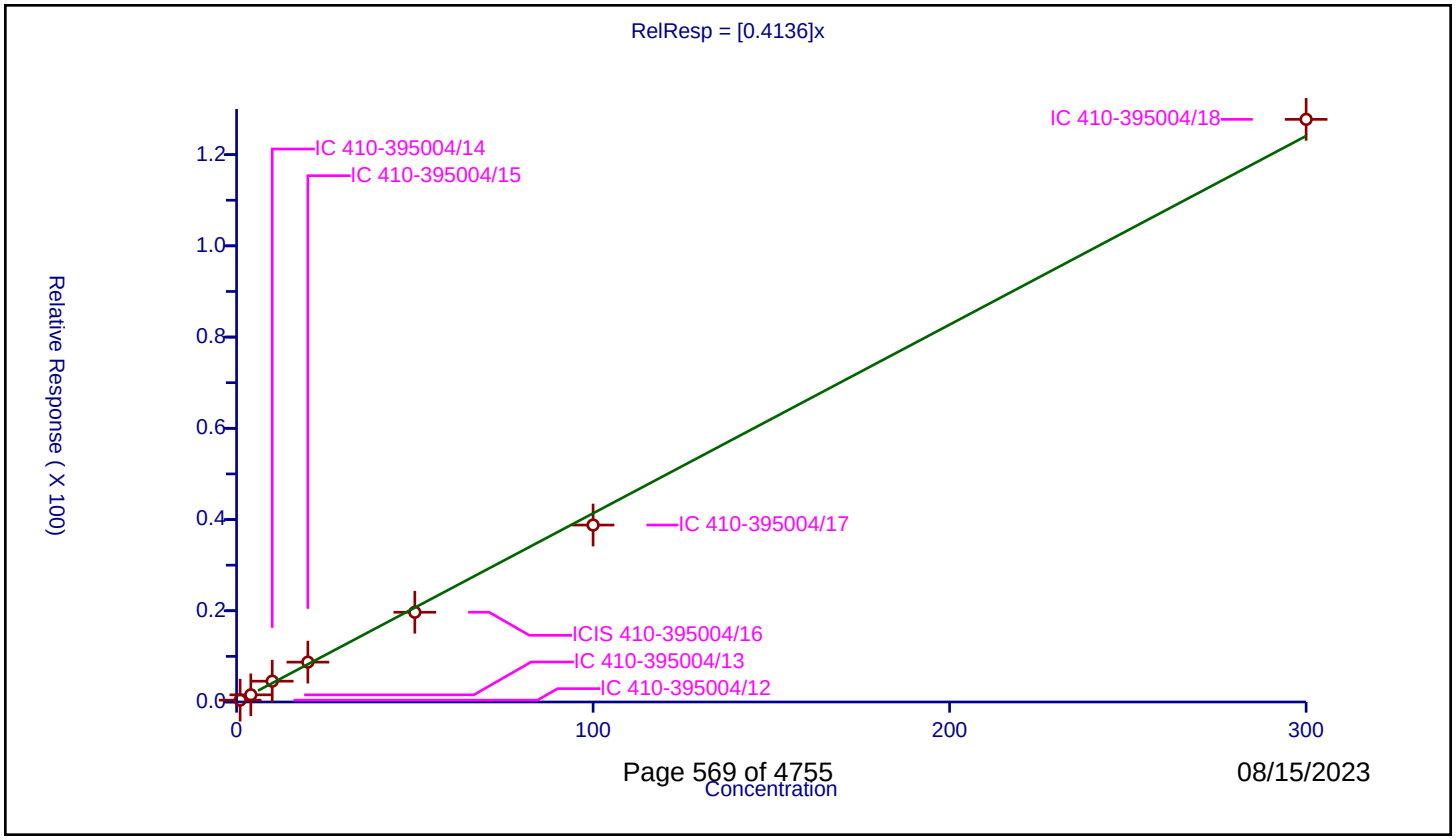
Curve Coefficients

Intercept:	0
Slope:	0.4136

Error Coefficients

Standard Error:	1520000
Relative Standard Error:	6.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.402317	50.0	1213596.0	0.402317	Y
2	IC 410-395004/13	4.0	1.570204	50.0	1242450.0	0.392551	Y
3	IC 410-395004/14	10.0	4.56489	50.0	1195341.0	0.456489	Y
4	IC 410-395004/15	20.0	8.736981	50.0	1220742.0	0.436849	Y
5	ICIS 410-395004/16	50.0	19.672781	50.0	1286783.0	0.393456	Y
6	IC 410-395004/17	100.0	38.793009	50.0	1403142.0	0.38793	Y
7	IC 410-395004/18	300.0	127.731765	50.0	1375475.0	0.425773	Y



Calibration / Propionitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

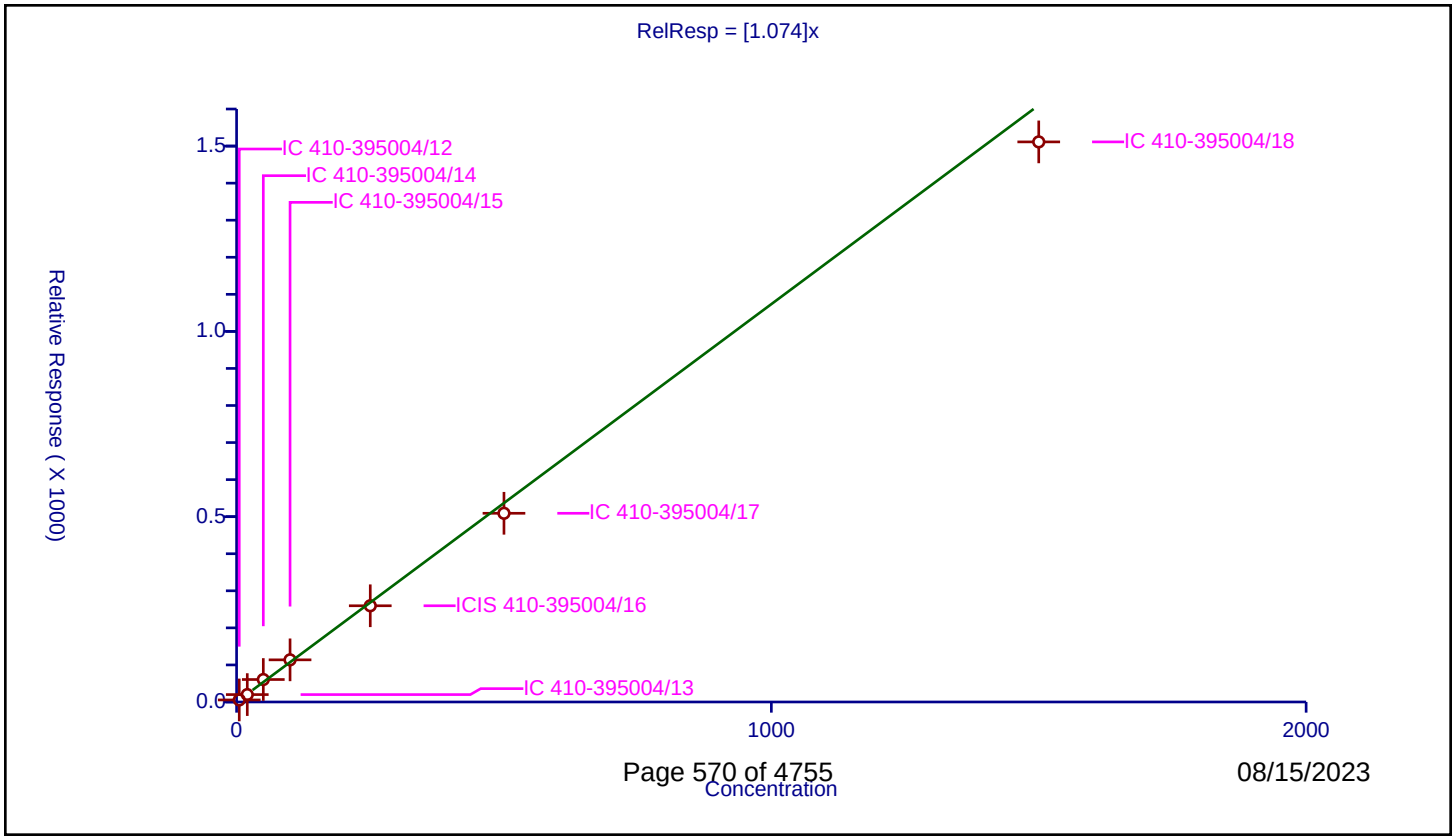
Curve Coefficients

Intercept:	0
Slope:	1.074

Error Coefficients

Standard Error:	1720000
Relative Standard Error:	7.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	5.0	5.519364	250.0	542635.0	1.103873	Y
2	IC 410-395004/13	20.0	19.939864	250.0	580019.0	0.996993	Y
3	IC 410-395004/14	50.0	60.621041	250.0	512285.0	1.212421	Y
4	IC 410-395004/15	100.0	113.71902	250.0	546074.0	1.13719	Y
5	ICIS 410-395004/16	250.0	259.618651	250.0	574041.0	1.038475	Y
6	IC 410-395004/17	500.0	509.154082	250.0	603392.0	1.018308	Y
7	IC 410-395004/18	1500.0	1511.270215	250.0	658306.0	1.007513	Y



Calibration / Methacrylonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

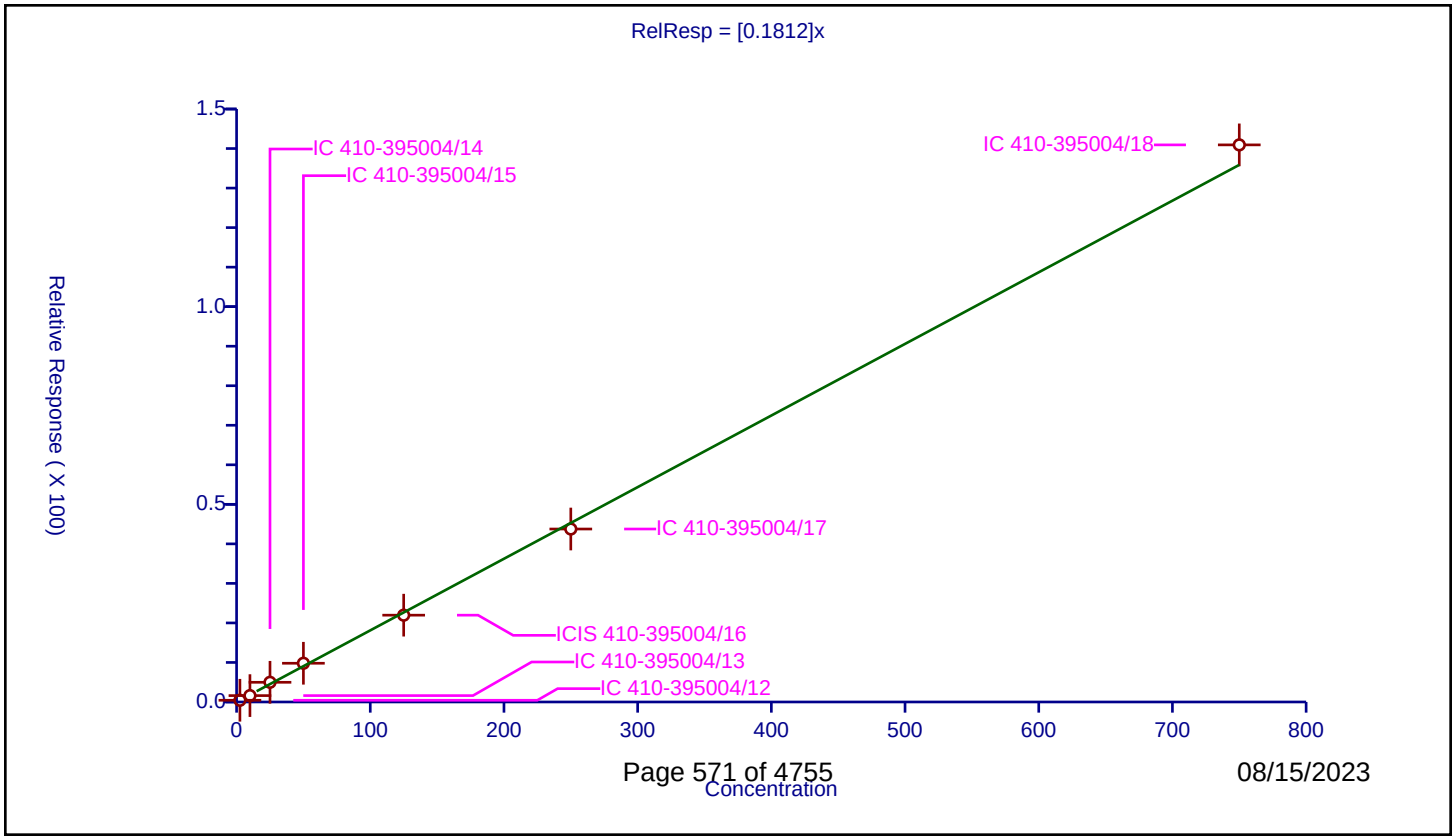
Curve Coefficients

Intercept:	0
Slope:	0.1812

Error Coefficients

Standard Error:	1680000
Relative Standard Error:	7.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	2.5	0.431981	50.0	1213596.0	0.172792	Y
2	IC 410-395004/13	10.0	1.614029	50.0	1242450.0	0.161403	Y
3	IC 410-395004/14	25.0	4.984645	50.0	1195341.0	0.199386	Y
4	IC 410-395004/15	50.0	9.795108	50.0	1220742.0	0.195902	Y
5	ICIS 410-395004/16	125.0	21.96089	50.0	1286783.0	0.175687	Y
6	IC 410-395004/17	250.0	43.755586	50.0	1403142.0	0.175022	Y
7	IC 410-395004/18	750.0	140.925717	50.0	1375475.0	0.187901	Y



Calibration / Chlorobromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

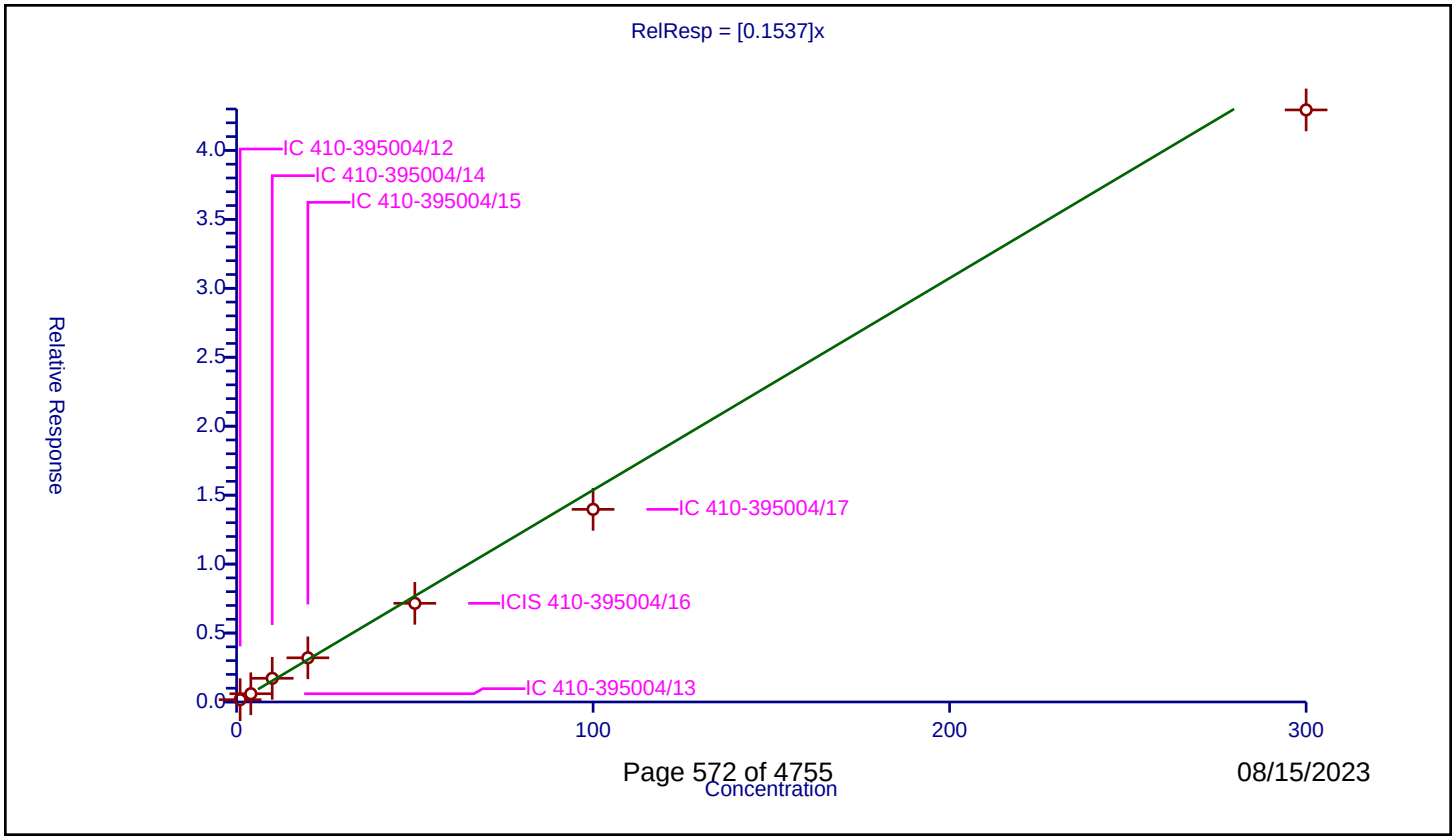
Curve Coefficients

Intercept:	0
Slope:	0.1537

Error Coefficients

Standard Error:	515000
Relative Standard Error:	8.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.168054	50.0	1213596.0	0.168054	Y
2	IC 410-395004/13	4.0	0.59934	50.0	1242450.0	0.149835	Y
3	IC 410-395004/14	10.0	1.718045	50.0	1195341.0	0.171805	Y
4	IC 410-395004/15	20.0	3.20256	50.0	1220742.0	0.160128	Y
5	ICIS 410-395004/16	50.0	7.155519	50.0	1286783.0	0.14311	Y
6	IC 410-395004/17	100.0	13.969399	50.0	1403142.0	0.139694	Y
7	IC 410-395004/18	300.0	42.934659	50.0	1375475.0	0.143116	Y



Calibration / Tetrahydrofuran

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

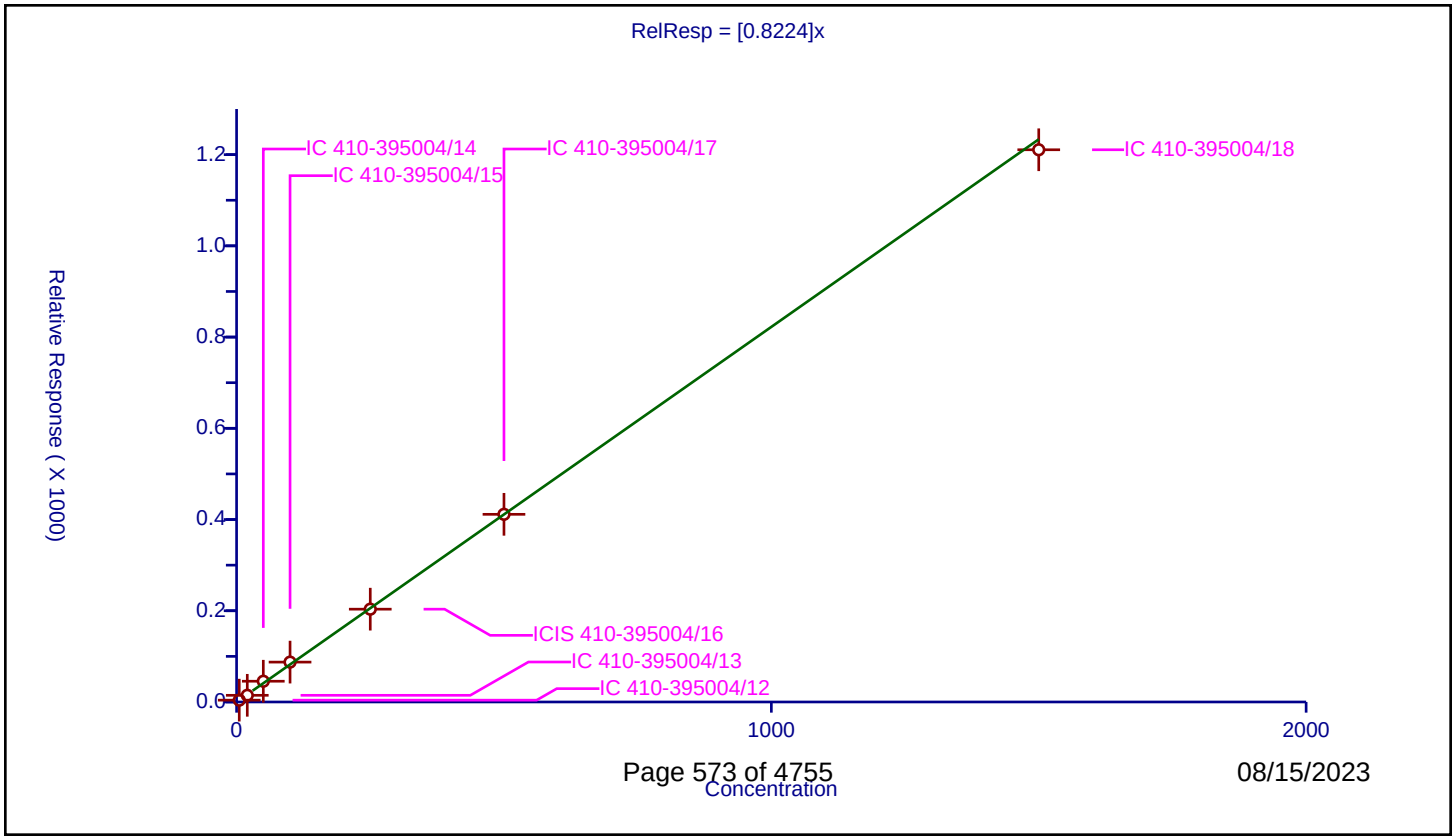
Curve Coefficients

Intercept:	0
Slope:	0.8224

Error Coefficients

Standard Error:	1380000
Relative Standard Error:	6.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	5.0	3.984262	250.0	542635.0	0.796852	Y
2	IC 410-395004/13	20.0	14.63271	250.0	580019.0	0.731636	Y
3	IC 410-395004/14	50.0	45.490791	250.0	512285.0	0.909816	Y
4	IC 410-395004/15	100.0	87.430458	250.0	546074.0	0.874305	Y
5	ICIS 410-395004/16	250.0	203.479804	250.0	574041.0	0.813919	Y
6	IC 410-395004/17	500.0	411.44107	250.0	603392.0	0.822882	Y
7	IC 410-395004/18	1500.0	1210.667987	250.0	658306.0	0.807112	Y



Calibration / Chloroform

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

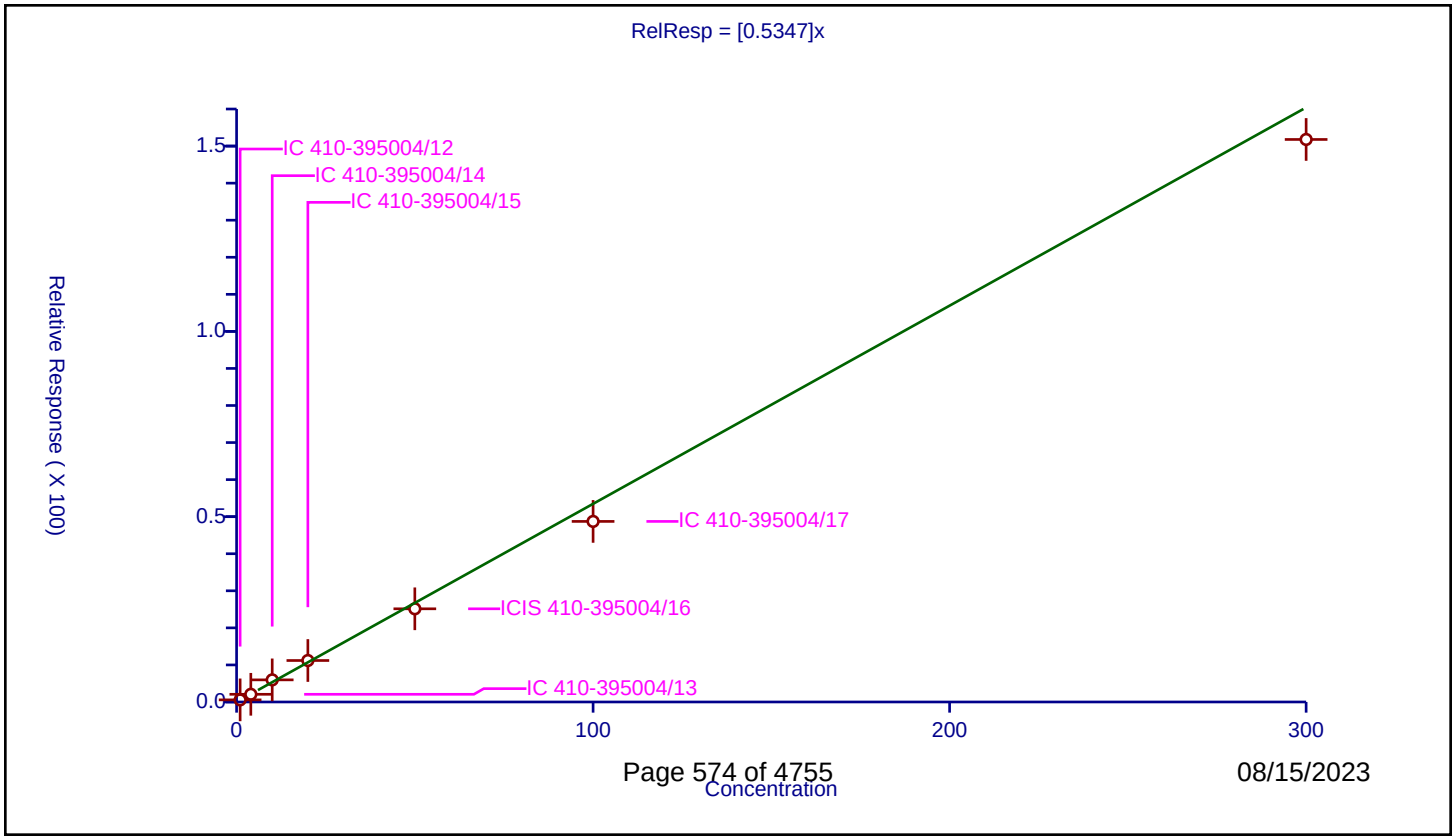
Curve Coefficients

Intercept:	0
Slope:	0.5347

Error Coefficients

Standard Error:	1820000
Relative Standard Error:	7.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.571937	50.0	1213596.0	0.571937	Y
2	IC 410-395004/13	4.0	2.074007	50.0	1242450.0	0.518502	Y
3	IC 410-395004/14	10.0	5.966456	50.0	1195341.0	0.596646	Y
4	IC 410-395004/15	20.0	11.195773	50.0	1220742.0	0.559789	Y
5	ICIS 410-395004/16	50.0	25.142623	50.0	1286783.0	0.502852	Y
6	IC 410-395004/17	100.0	48.720657	50.0	1403142.0	0.487207	Y
7	IC 410-395004/18	300.0	151.782402	50.0	1375475.0	0.505941	Y



Calibration / Dibromofluoromethane (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

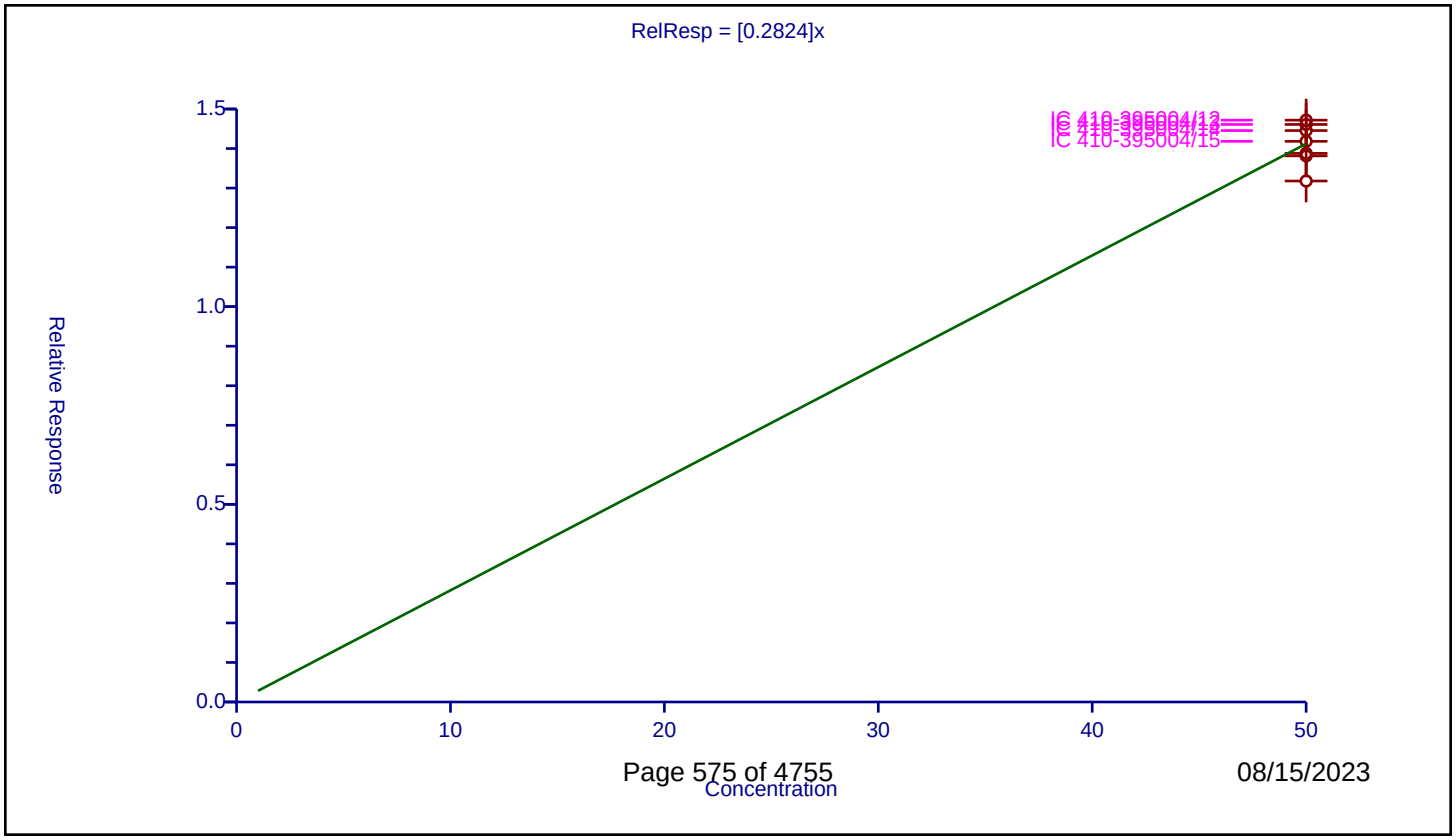
Curve Coefficients

Intercept:	0
Slope:	0.2824

Error Coefficients

Standard Error:	389000
Relative Standard Error:	3.8
Correlation Coefficient:	0.00000000000000000000
Coefficient of Determination (Adjusted):	0.000000000000000111

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	50.0	14.71816	50.0	1213596.0	0.294363	Y
2	IC 410-395004/13	50.0	14.609441	50.0	1242450.0	0.292189	Y
3	IC 410-395004/14	50.0	14.454662	50.0	1195341.0	0.289093	Y
4	IC 410-395004/15	50.0	14.182563	50.0	1220742.0	0.283651	Y
5	ICIS 410-395004/16	50.0	13.878253	50.0	1286783.0	0.277565	Y
6	IC 410-395004/17	50.0	13.814247	50.0	1403142.0	0.276285	Y
7	IC 410-395004/18	50.0	13.178975	50.0	1375475.0	0.263579	Y



Calibration / 1,1,1-Trichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

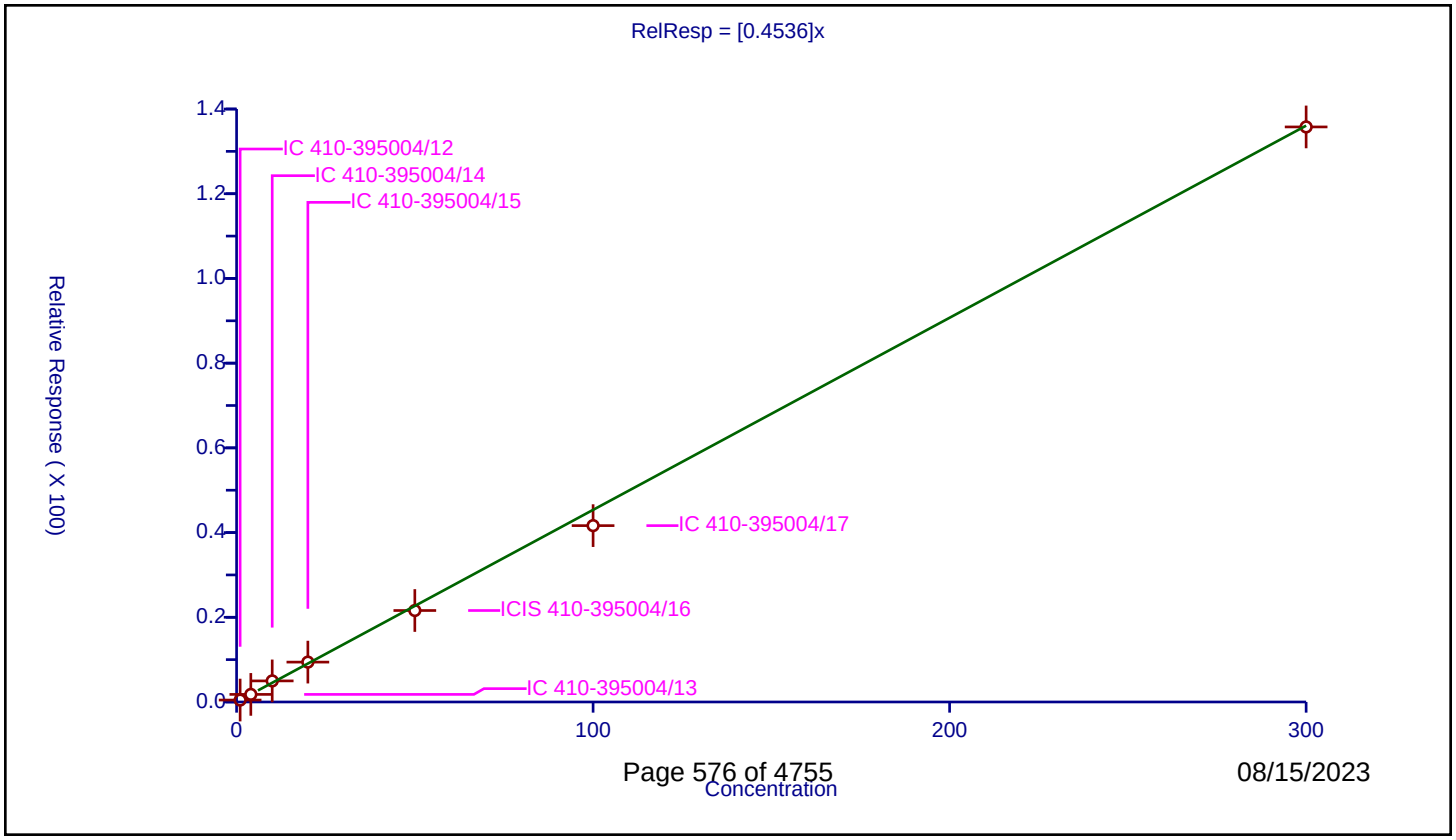
Curve Coefficients

Intercept:	0
Slope:	0.4536

Error Coefficients

Standard Error:	1620000
Relative Standard Error:	5.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.458802	50.0	1213596.0	0.458802	Y
2	IC 410-395004/13	4.0	1.788563	50.0	1242450.0	0.447141	Y
3	IC 410-395004/14	10.0	4.975526	50.0	1195341.0	0.497553	Y
4	IC 410-395004/15	20.0	9.412718	50.0	1220742.0	0.470636	Y
5	ICIS 410-395004/16	50.0	21.595716	50.0	1286783.0	0.431914	Y
6	IC 410-395004/17	100.0	41.640155	50.0	1403142.0	0.416402	Y
7	IC 410-395004/18	300.0	135.768189	50.0	1375475.0	0.452561	Y



Calibration / Cyclohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

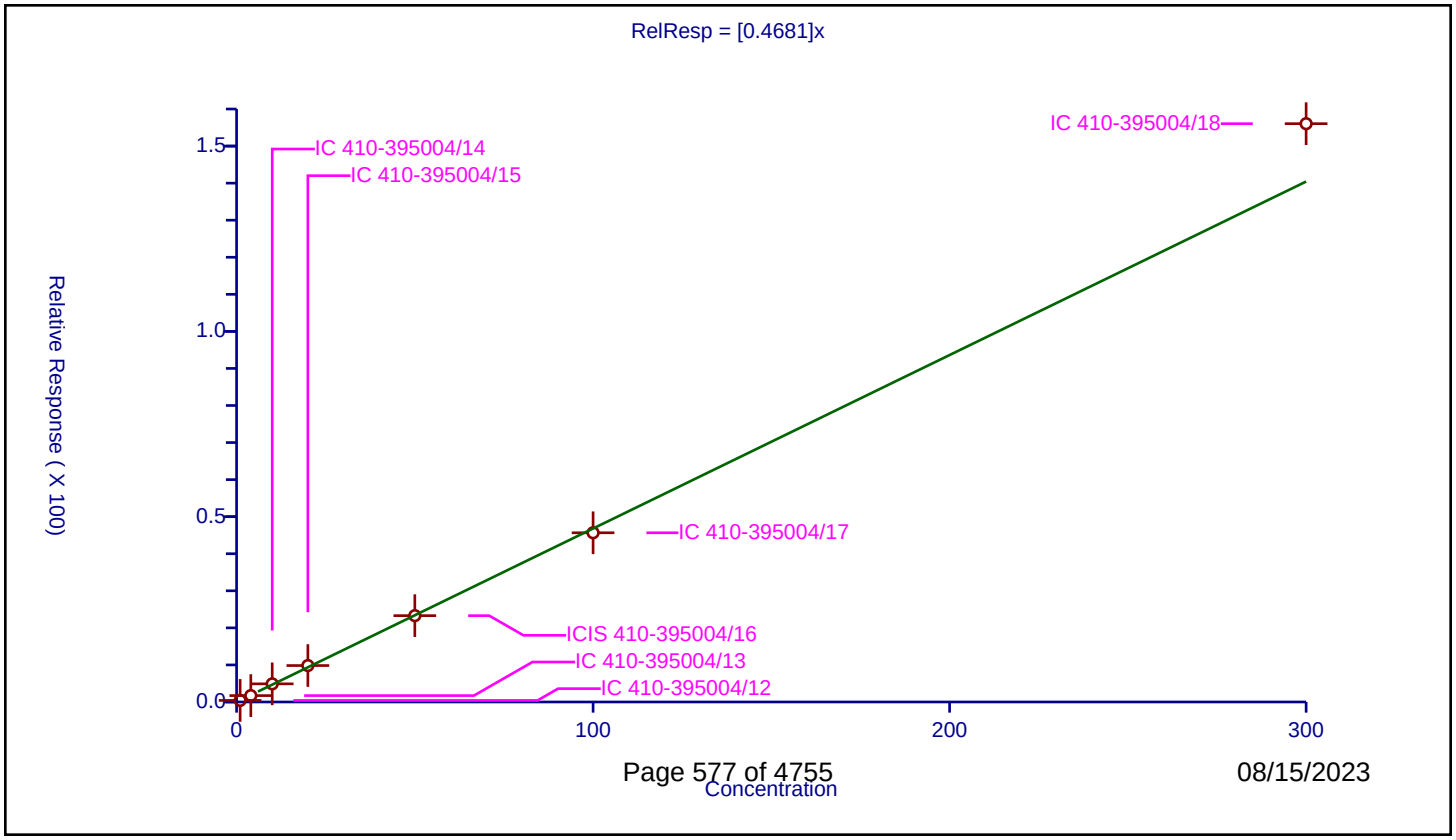
Curve Coefficients

Intercept:	0
Slope:	0.4681

Error Coefficients

Standard Error:	1850000
Relative Standard Error:	7.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.422216	50.0	1213596.0	0.422216	Y
2	IC 410-395004/13	4.0	1.723731	50.0	1242450.0	0.430933	Y
3	IC 410-395004/14	10.0	4.89283	50.0	1195341.0	0.489283	Y
4	IC 410-395004/15	20.0	9.830783	50.0	1220742.0	0.491539	Y
5	ICIS 410-395004/16	50.0	23.295653	50.0	1286783.0	0.465913	Y
6	IC 410-395004/17	100.0	45.659028	50.0	1403142.0	0.45659	Y
7	IC 410-395004/18	300.0	156.045293	50.0	1375475.0	0.520151	Y



08/15/2023

Calibration / Carbon tetrachloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

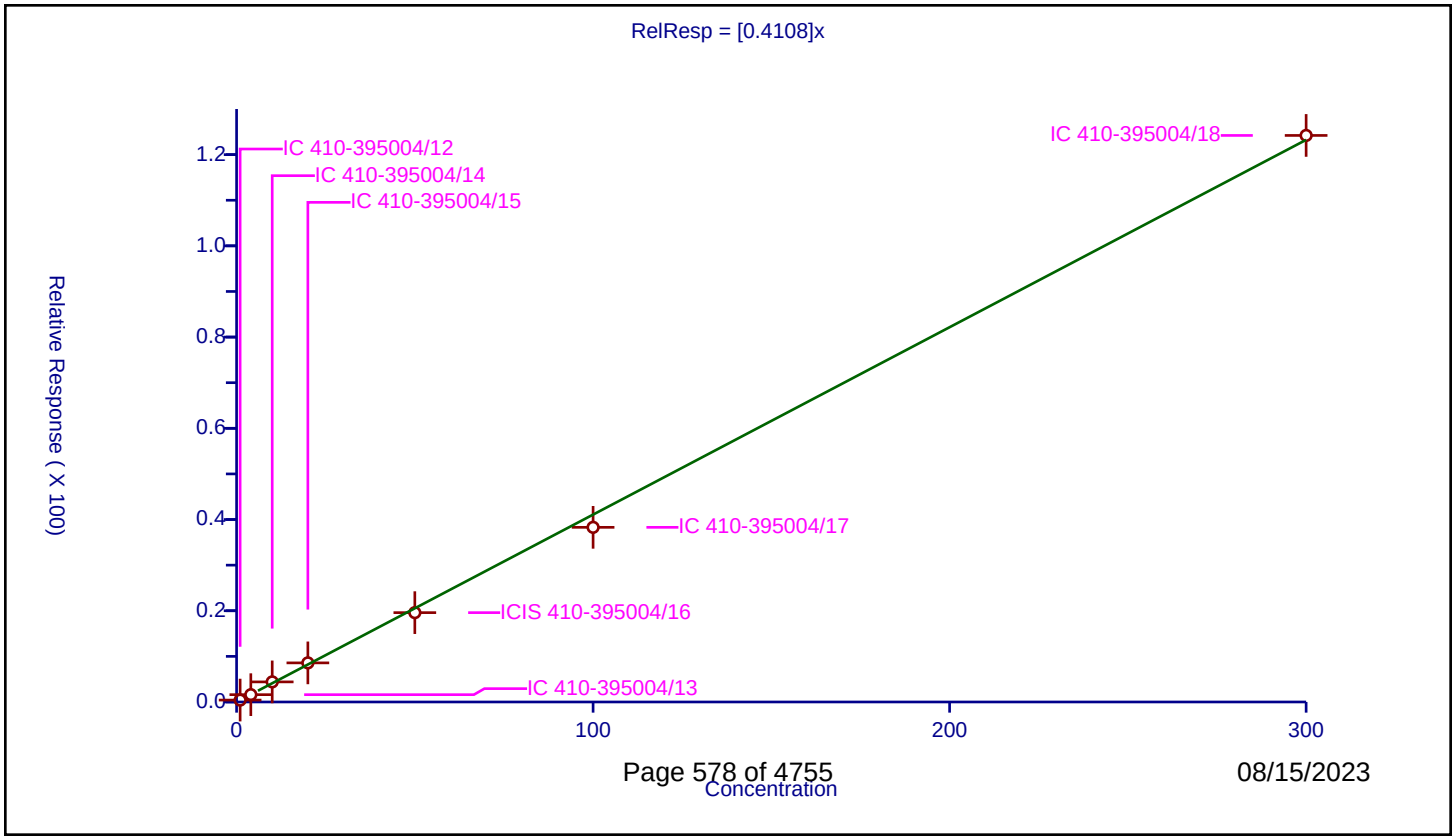
Curve Coefficients

Intercept:	0
Slope:	0.4108

Error Coefficients

Standard Error:	1480000
Relative Standard Error:	4.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.416407	50.0	1213596.0	0.416407	Y
2	IC 410-395004/13	4.0	1.604894	50.0	1242450.0	0.401223	Y
3	IC 410-395004/14	10.0	4.405521	50.0	1195341.0	0.440552	Y
4	IC 410-395004/15	20.0	8.57458	50.0	1220742.0	0.428729	Y
5	ICIS 410-395004/16	50.0	19.588773	50.0	1286783.0	0.391775	Y
6	IC 410-395004/17	100.0	38.290957	50.0	1403142.0	0.38291	Y
7	IC 410-395004/18	300.0	124.204947	50.0	1375475.0	0.414016	Y



Calibration / 1,1-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

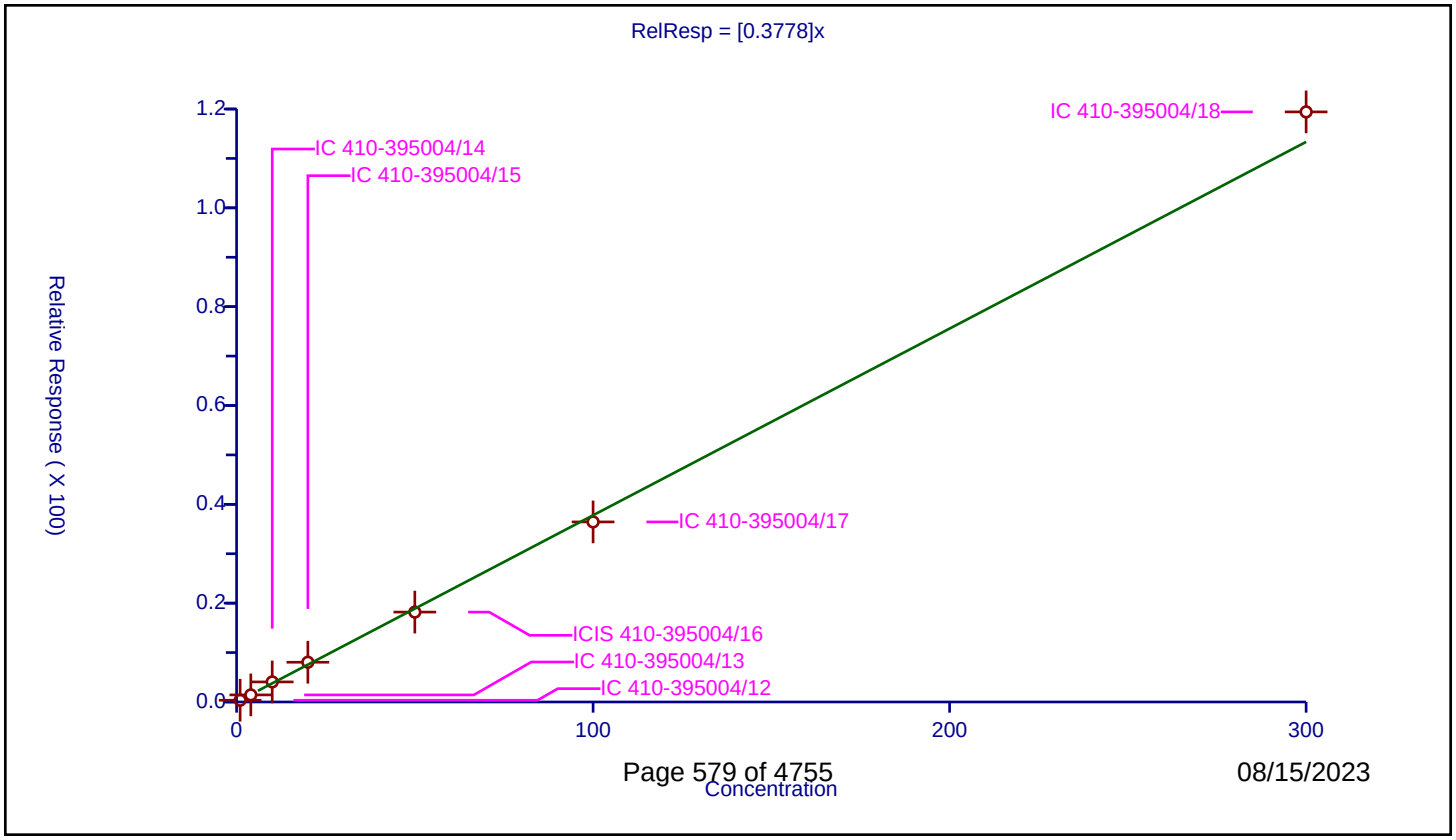
Curve Coefficients

Intercept:	0
Slope:	0.3778

Error Coefficients

Standard Error:	1420000
Relative Standard Error:	6.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.351311	50.0	1213596.0	0.351311	Y
2	IC 410-395004/13	4.0	1.434585	50.0	1242450.0	0.358646	Y
3	IC 410-395004/14	10.0	4.062606	50.0	1195341.0	0.406261	Y
4	IC 410-395004/15	20.0	8.04523	50.0	1220742.0	0.402261	Y
5	ICIS 410-395004/16	50.0	18.193238	50.0	1286783.0	0.363865	Y
6	IC 410-395004/17	100.0	36.437652	50.0	1403142.0	0.364377	Y
7	IC 410-395004/18	300.0	119.416711	50.0	1375475.0	0.398056	Y



Calibration / Isobutyl alcohol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

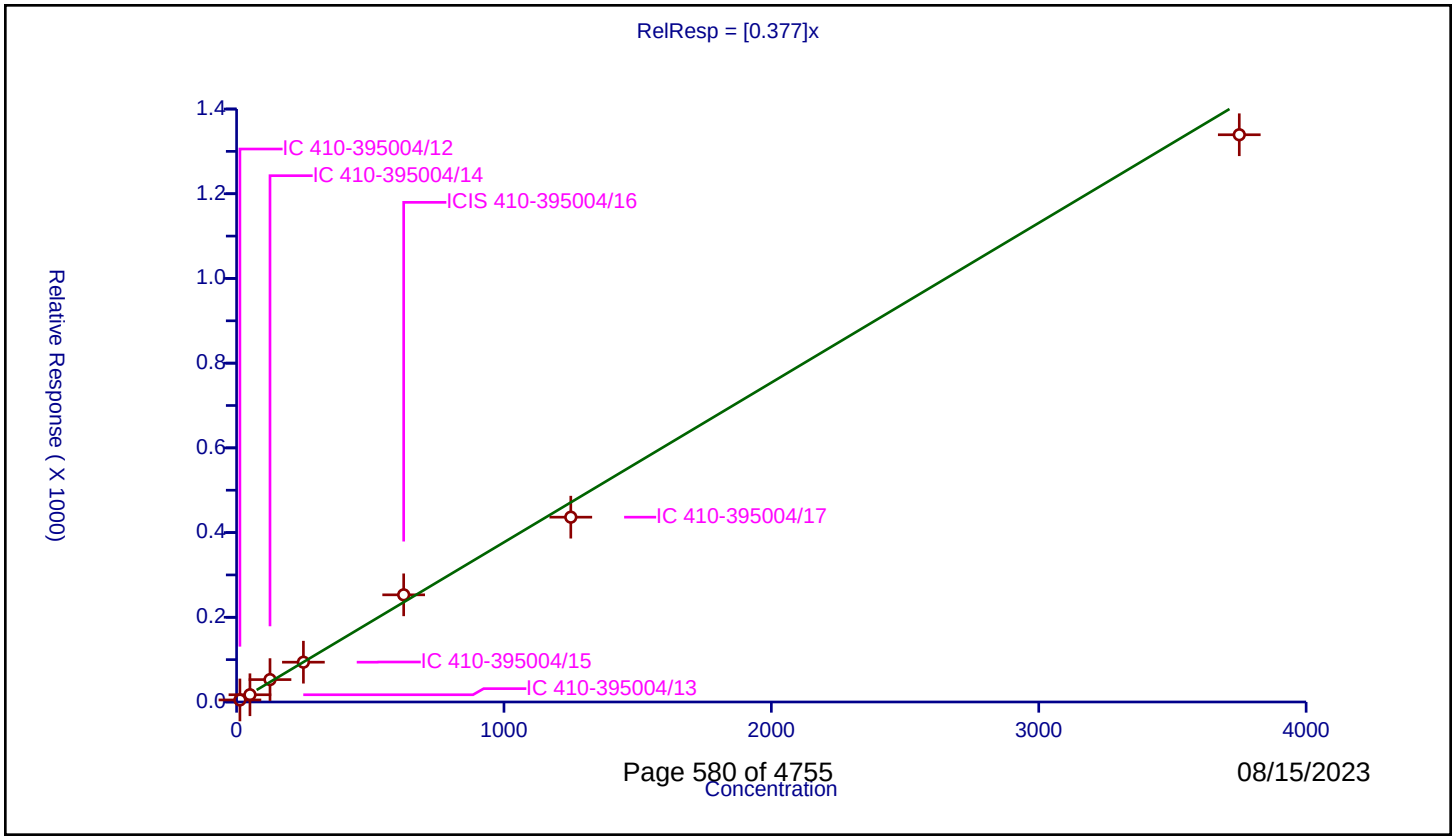
Curve Coefficients

Intercept:	0
Slope:	0.377

Error Coefficients

Standard Error:	1520000
Relative Standard Error:	8.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	12.5	4.844417	250.0	542635.0	0.387553	Y
2	IC 410-395004/13	50.0	17.081768	250.0	580019.0	0.341635	Y
3	IC 410-395004/14	125.0	52.855832	250.0	512285.0	0.422847	Y
4	IC 410-395004/15	250.0	93.996876	250.0	546074.0	0.375988	Y
5	ICIS 410-395004/16	625.0	253.008496	250.0	574041.0	0.404814	Y
6	IC 410-395004/17	1250.0	436.367652	250.0	603392.0	0.349094	Y
7	IC 410-395004/18	3750.0	1339.254085	250.0	658306.0	0.357134	Y



Calibration / 1,2-Dichloroethane-d4 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

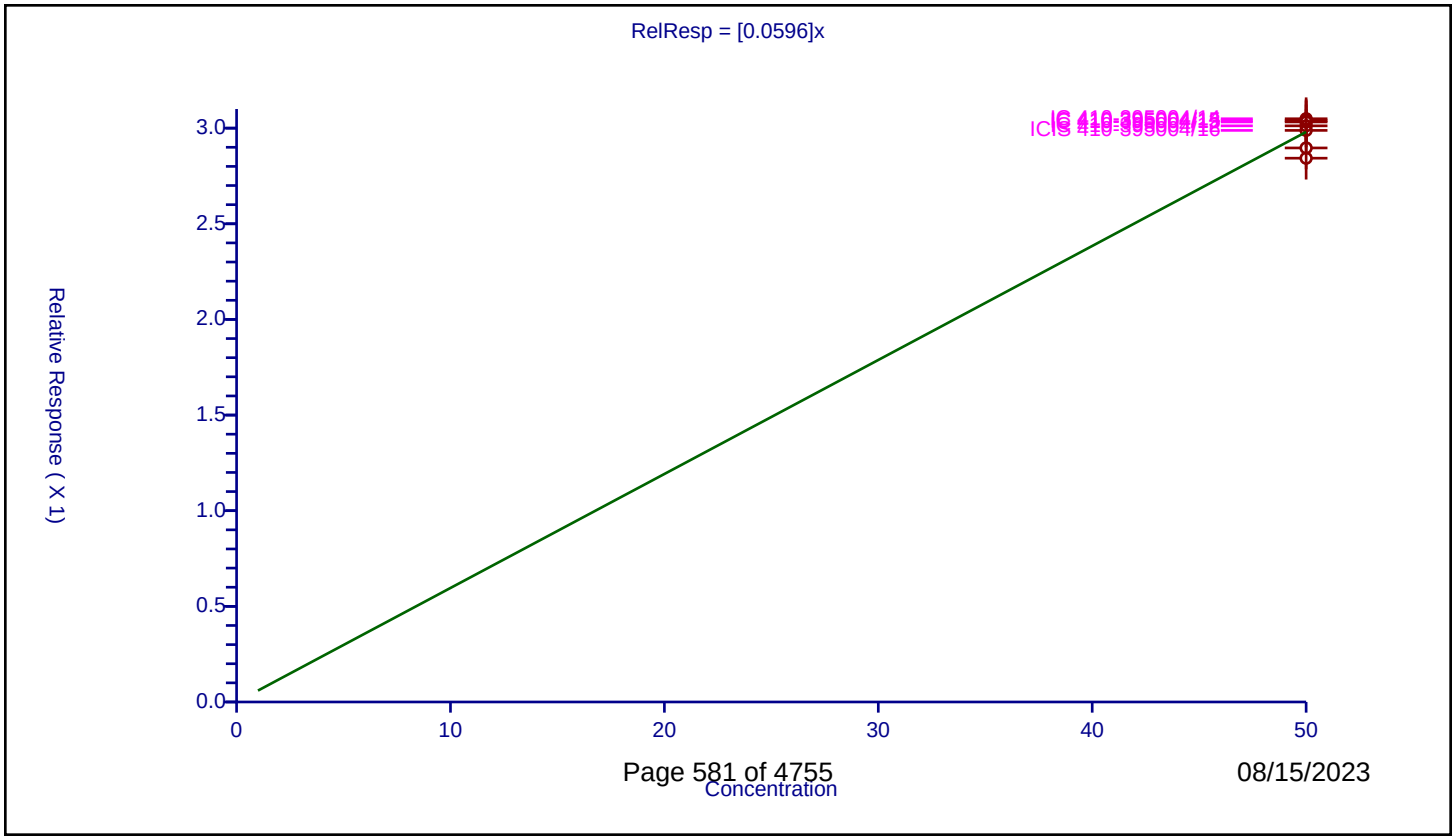
Curve Coefficients

Intercept:	0
Slope:	0.0596

Error Coefficients

Standard Error:	82100
Relative Standard Error:	2.7
Correlation Coefficient:	0.00000000000000000000
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	50.0	3.011999	50.0	1213596.0	0.06024	Y
2	IC 410-395004/13	50.0	3.032355	50.0	1242450.0	0.060647	Y
3	IC 410-395004/14	50.0	3.04913	50.0	1195341.0	0.060983	Y
4	IC 410-395004/15	50.0	3.038889	50.0	1220742.0	0.060778	Y
5	ICIS 410-395004/16	50.0	2.98815	50.0	1286783.0	0.059763	Y
6	IC 410-395004/17	50.0	2.896464	50.0	1403142.0	0.057929	Y
7	IC 410-395004/18	50.0	2.842909	50.0	1375475.0	0.056858	Y



Calibration / Benzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

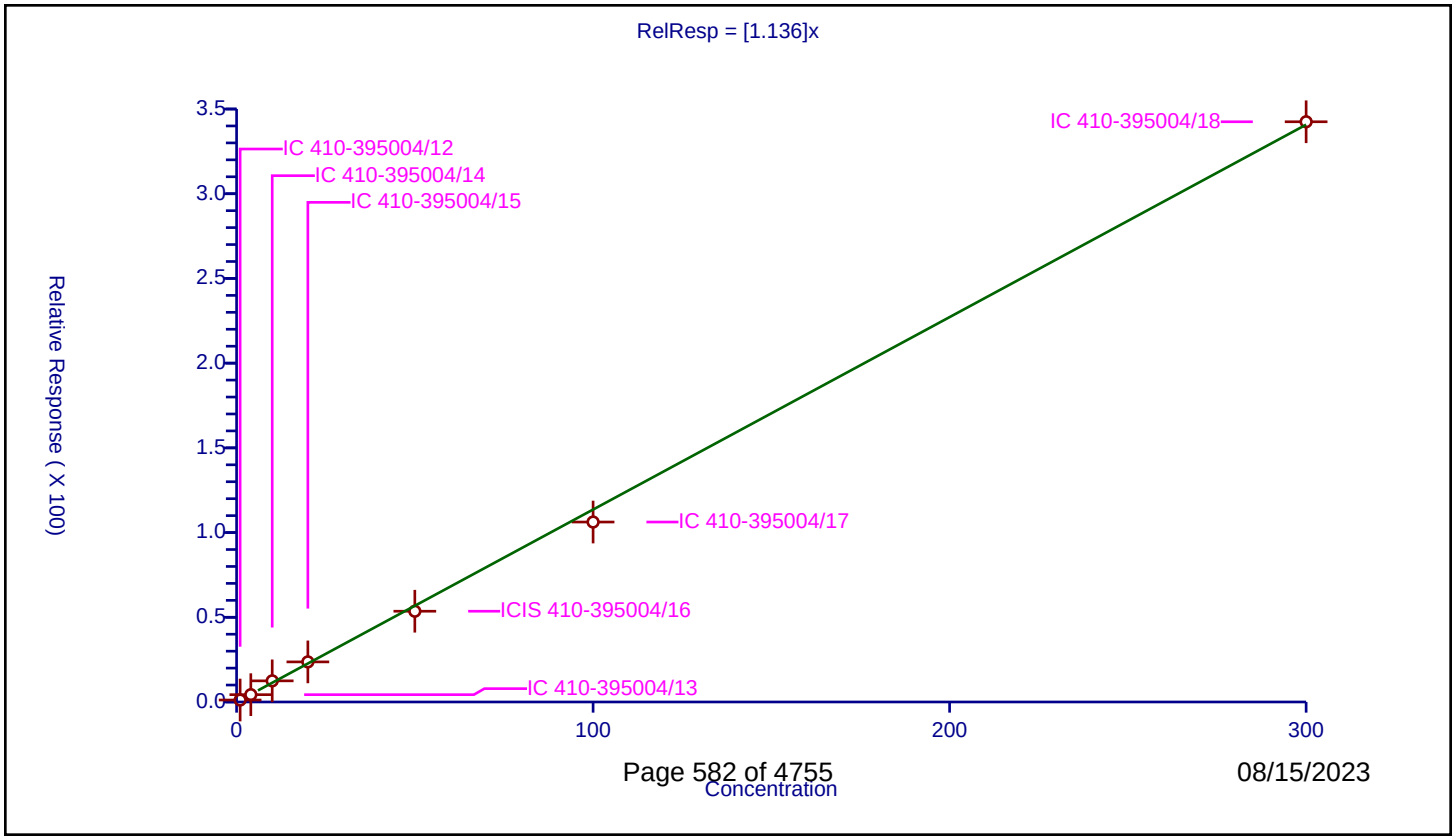
Curve Coefficients

Intercept:	0
Slope:	1.136

Error Coefficients

Standard Error:	4080000
Relative Standard Error:	6.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	1.16402	50.0	1213596.0	1.16402	Y
2	IC 410-395004/13	4.0	4.324923	50.0	1242450.0	1.081231	Y
3	IC 410-395004/14	10.0	12.467907	50.0	1195341.0	1.246791	Y
4	IC 410-395004/15	20.0	23.672447	50.0	1220742.0	1.183622	Y
5	ICIS 410-395004/16	50.0	53.574379	50.0	1286783.0	1.071488	Y
6	IC 410-395004/17	100.0	106.223675	50.0	1403142.0	1.062237	Y
7	IC 410-395004/18	300.0	342.470819	50.0	1375475.0	1.141569	Y



Calibration / 1,2-Dichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

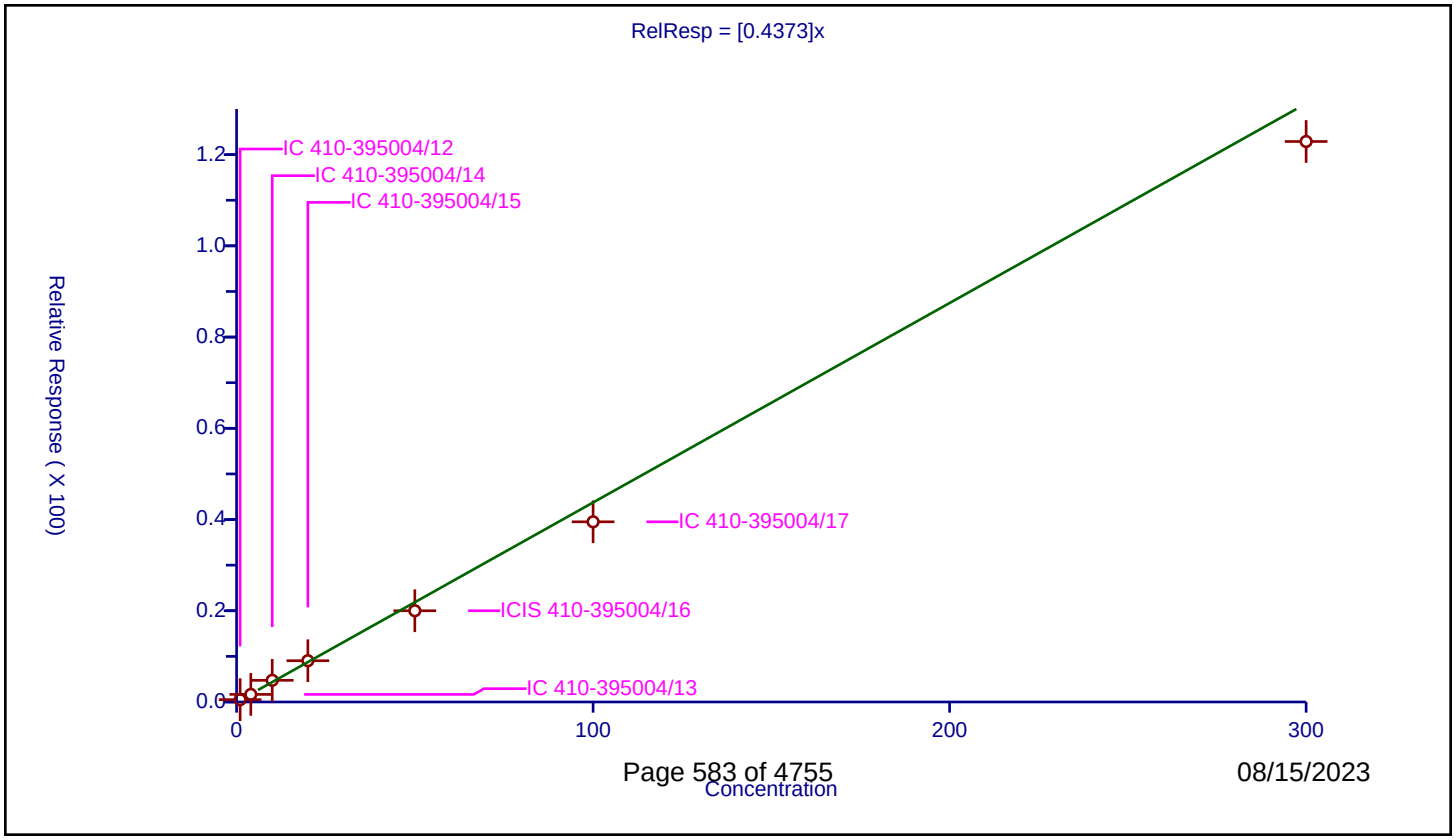
Curve Coefficients

Intercept:	0
Slope:	0.4373

Error Coefficients

Standard Error:	1470000
Relative Standard Error:	10.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.51401	50.0	1213596.0	0.51401	Y
2	IC 410-395004/13	4.0	1.661757	50.0	1242450.0	0.415439	Y
3	IC 410-395004/14	10.0	4.748645	50.0	1195341.0	0.474864	Y
4	IC 410-395004/15	20.0	9.047366	50.0	1220742.0	0.452368	Y
5	ICIS 410-395004/16	50.0	20.003839	50.0	1286783.0	0.400077	Y
6	IC 410-395004/17	100.0	39.498604	50.0	1403142.0	0.394986	Y
7	IC 410-395004/18	300.0	122.877951	50.0	1375475.0	0.409593	Y



Calibration / Tert-amyl methyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

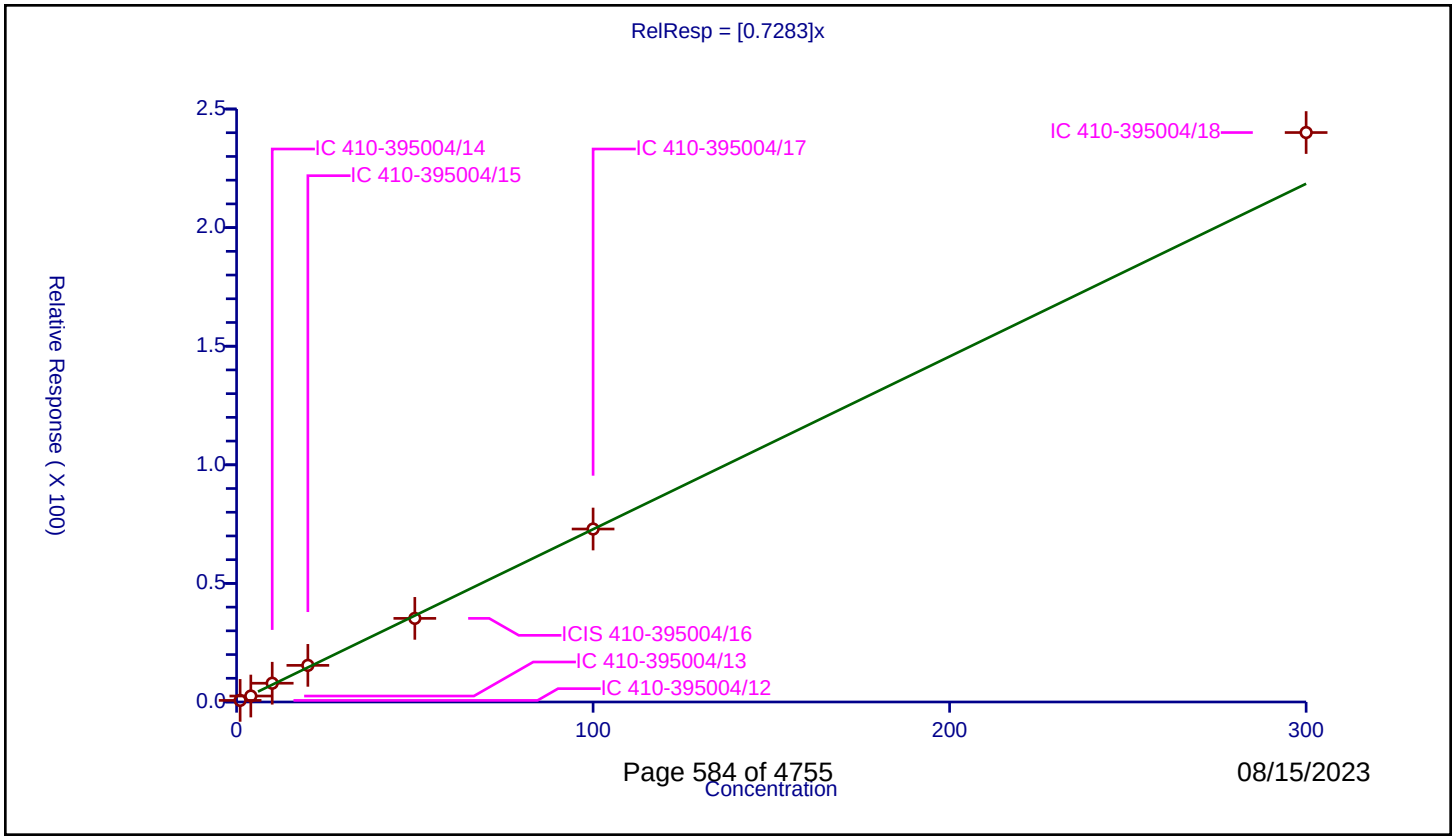
Curve Coefficients

Intercept:	0
Slope:	0.7283

Error Coefficients

Standard Error:	2850000
Relative Standard Error:	8.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.672011	50.0	1213596.0	0.672011	Y
2	IC 410-395004/13	4.0	2.51495	50.0	1242450.0	0.628738	Y
3	IC 410-395004/14	10.0	7.909249	50.0	1195341.0	0.790925	Y
4	IC 410-395004/15	20.0	15.439012	50.0	1220742.0	0.771951	Y
5	ICIS 410-395004/16	50.0	35.256139	50.0	1286783.0	0.705123	Y
6	IC 410-395004/17	100.0	72.921094	50.0	1403142.0	0.729211	Y
7	IC 410-395004/18	300.0	240.084662	50.0	1375475.0	0.800282	Y



08/15/2023

Calibration / n-Heptane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

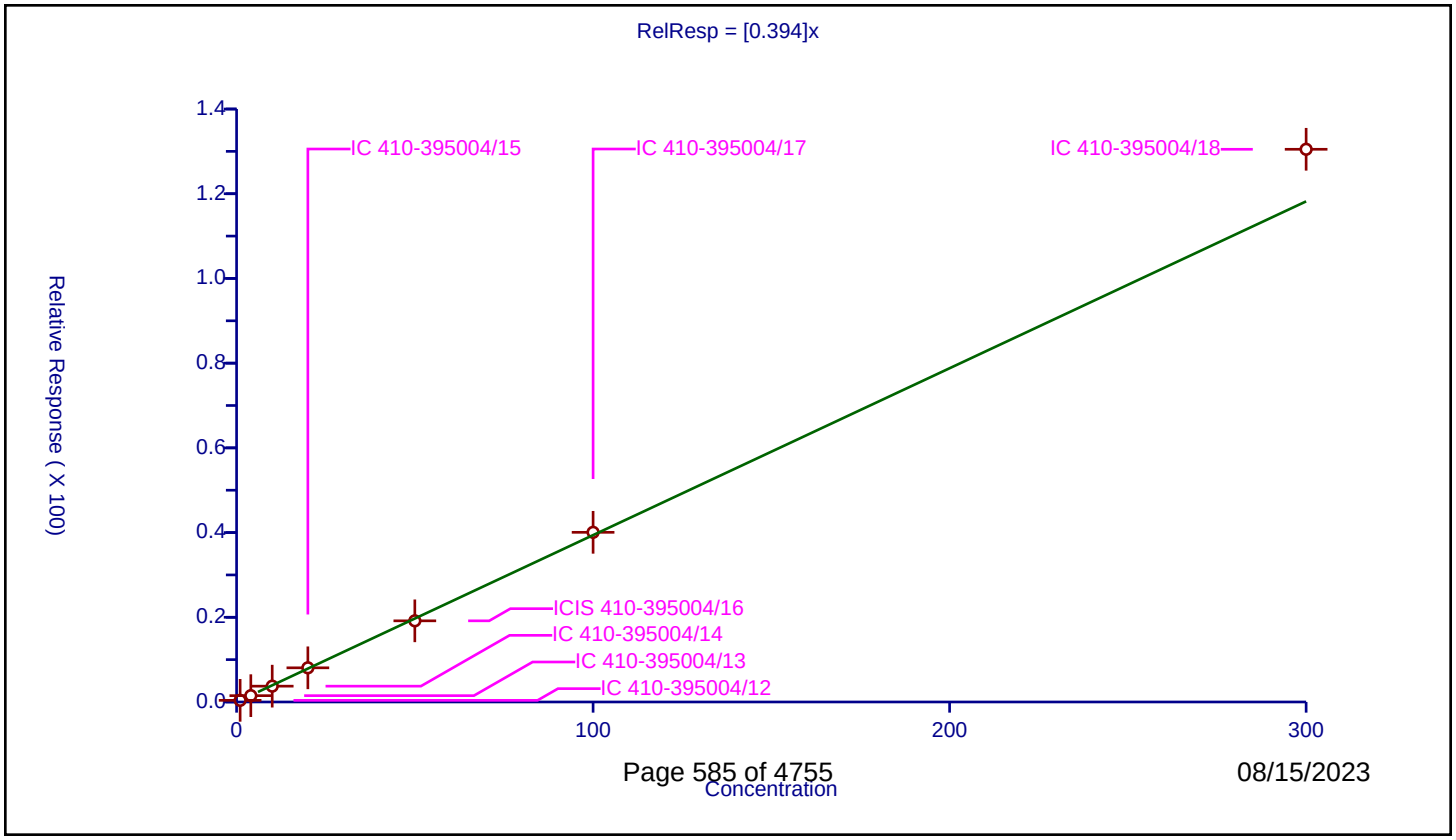
Curve Coefficients

Intercept:	0
Slope:	0.394

Error Coefficients

Standard Error:	1550000
Relative Standard Error:	5.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.388844	50.0	1213596.0	0.388844	Y
2	IC 410-395004/13	4.0	1.493702	50.0	1242450.0	0.373425	Y
3	IC 410-395004/14	10.0	3.733579	50.0	1195341.0	0.373358	Y
4	IC 410-395004/15	20.0	8.067389	50.0	1220742.0	0.403369	Y
5	ICIS 410-395004/16	50.0	19.16477	50.0	1286783.0	0.383295	Y
6	IC 410-395004/17	100.0	40.057421	50.0	1403142.0	0.400574	Y
7	IC 410-395004/18	300.0	130.492375	50.0	1375475.0	0.434975	Y



Calibration / n-Butanol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

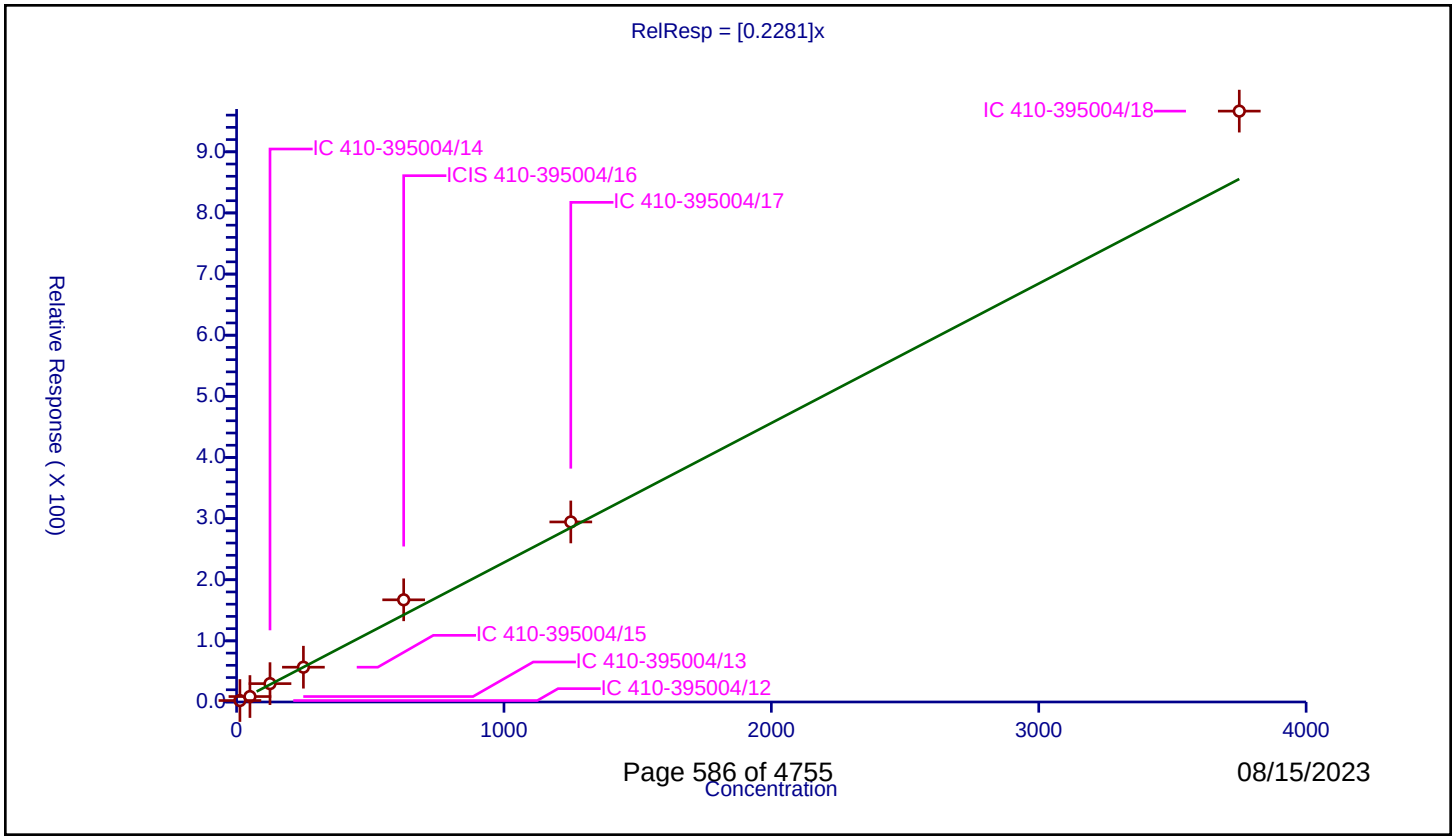
Curve Coefficients

Intercept:	0
Slope:	0.2281

Error Coefficients

Standard Error:	1090000
Relative Standard Error:	14.5
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.978

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	12.5	2.374524	250.0	542635.0	0.189962	Y
2	IC 410-395004/13	50.0	8.91738	250.0	580019.0	0.178348	Y
3	IC 410-395004/14	125.0	30.024303	250.0	512285.0	0.240194	Y
4	IC 410-395004/15	250.0	56.920399	250.0	546074.0	0.227682	Y
5	ICIS 410-395004/16	625.0	167.131355	250.0	574041.0	0.26741	Y
6	IC 410-395004/17	1250.0	294.524538	250.0	603392.0	0.23562	Y
7	IC 410-395004/18	3750.0	966.538737	250.0	658306.0	0.257744	Y



Calibration / Trichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

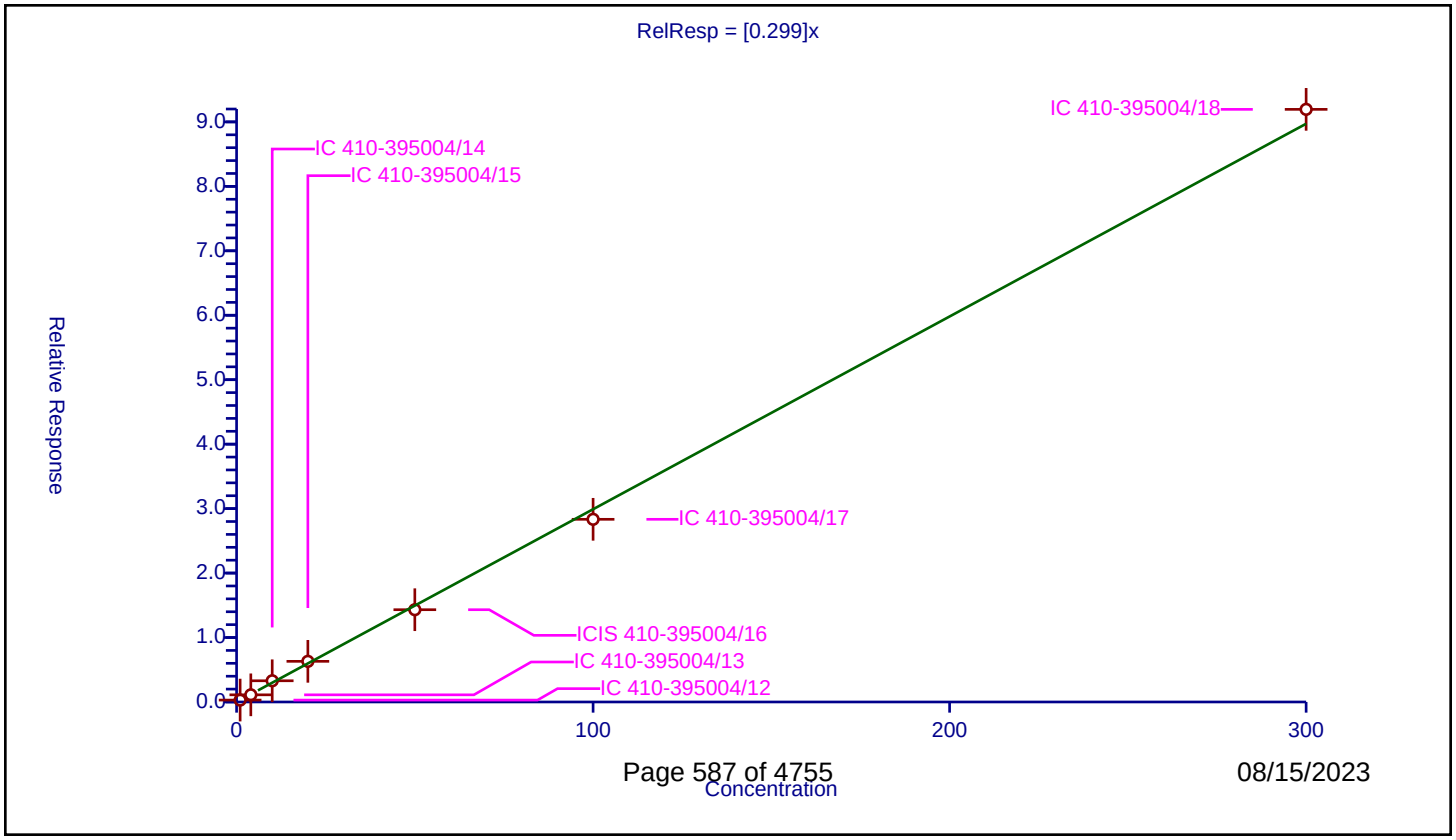
Curve Coefficients

Intercept:	0
Slope:	0.299

Error Coefficients

Standard Error:	1100000
Relative Standard Error:	6.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.294703	50.0	1213596.0	0.294703	Y
2	IC 410-395004/13	4.0	1.112117	50.0	1242450.0	0.278029	Y
3	IC 410-395004/14	10.0	3.289438	50.0	1195341.0	0.328944	Y
4	IC 410-395004/15	20.0	6.308827	50.0	1220742.0	0.315441	Y
5	ICIS 410-395004/16	50.0	14.315428	50.0	1286783.0	0.286309	Y
6	IC 410-395004/17	100.0	28.341073	50.0	1403142.0	0.283411	Y
7	IC 410-395004/18	300.0	91.946273	50.0	1375475.0	0.306488	Y



Calibration / Methylcyclohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

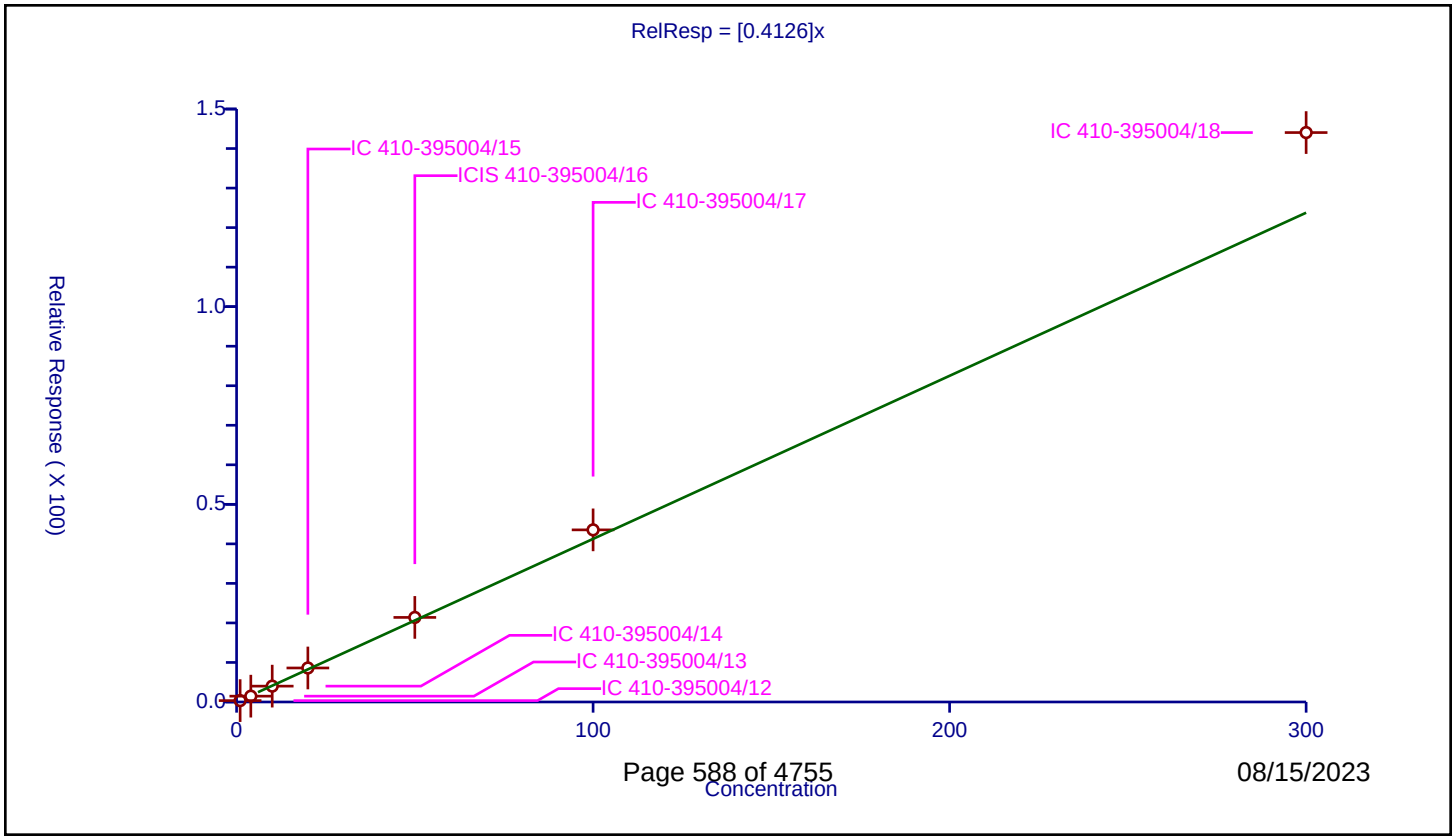
Curve Coefficients

Intercept:	0
Slope:	0.4126

Error Coefficients

Standard Error:	1710000
Relative Standard Error:	11.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.344761	50.0	1213596.0	0.344761	Y
2	IC 410-395004/13	4.0	1.474305	50.0	1242450.0	0.368576	Y
3	IC 410-395004/14	10.0	4.008814	50.0	1195341.0	0.400881	Y
4	IC 410-395004/15	20.0	8.605463	50.0	1220742.0	0.430273	Y
5	ICIS 410-395004/16	50.0	21.391369	50.0	1286783.0	0.427827	Y
6	IC 410-395004/17	100.0	43.539036	50.0	1403142.0	0.43539	Y
7	IC 410-395004/18	300.0	144.043367	50.0	1375475.0	0.480145	Y



08/15/2023

Calibration / 1,2-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

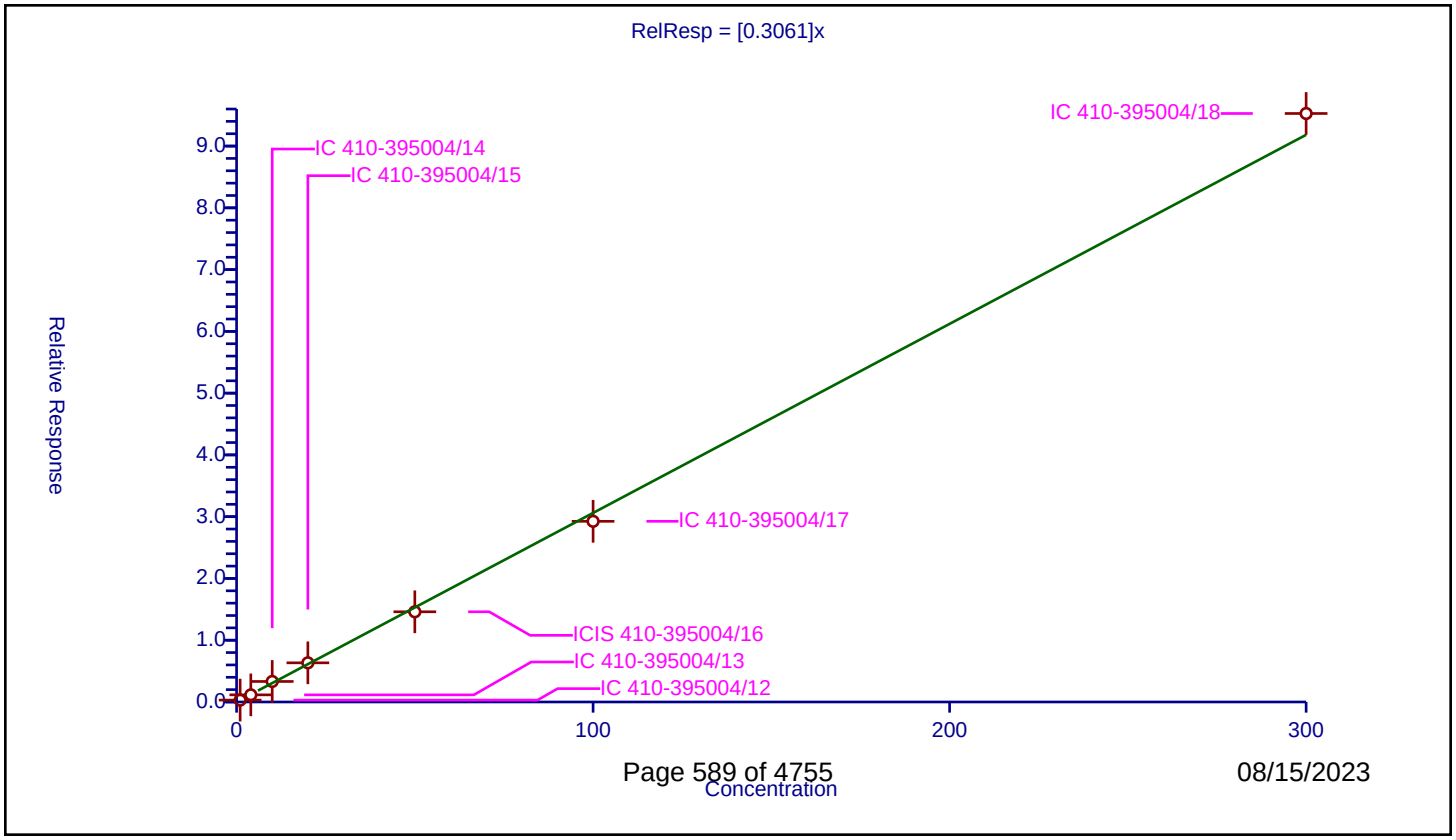
Curve Coefficients

Intercept:	0
Slope:	0.3061

Error Coefficients

Standard Error:	1130000
Relative Standard Error:	5.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.302819	50.0	1213596.0	0.302819	Y
2	IC 410-395004/13	4.0	1.153044	50.0	1242450.0	0.288261	Y
3	IC 410-395004/14	10.0	3.323529	50.0	1195341.0	0.332353	Y
4	IC 410-395004/15	20.0	6.338276	50.0	1220742.0	0.316914	Y
5	ICIS 410-395004/16	50.0	14.60254	50.0	1286783.0	0.292051	Y
6	IC 410-395004/17	100.0	29.250746	50.0	1403142.0	0.292507	Y
7	IC 410-395004/18	300.0	95.272978	50.0	1375475.0	0.317577	Y



Calibration / 2-ethoxy-2-methyl butane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

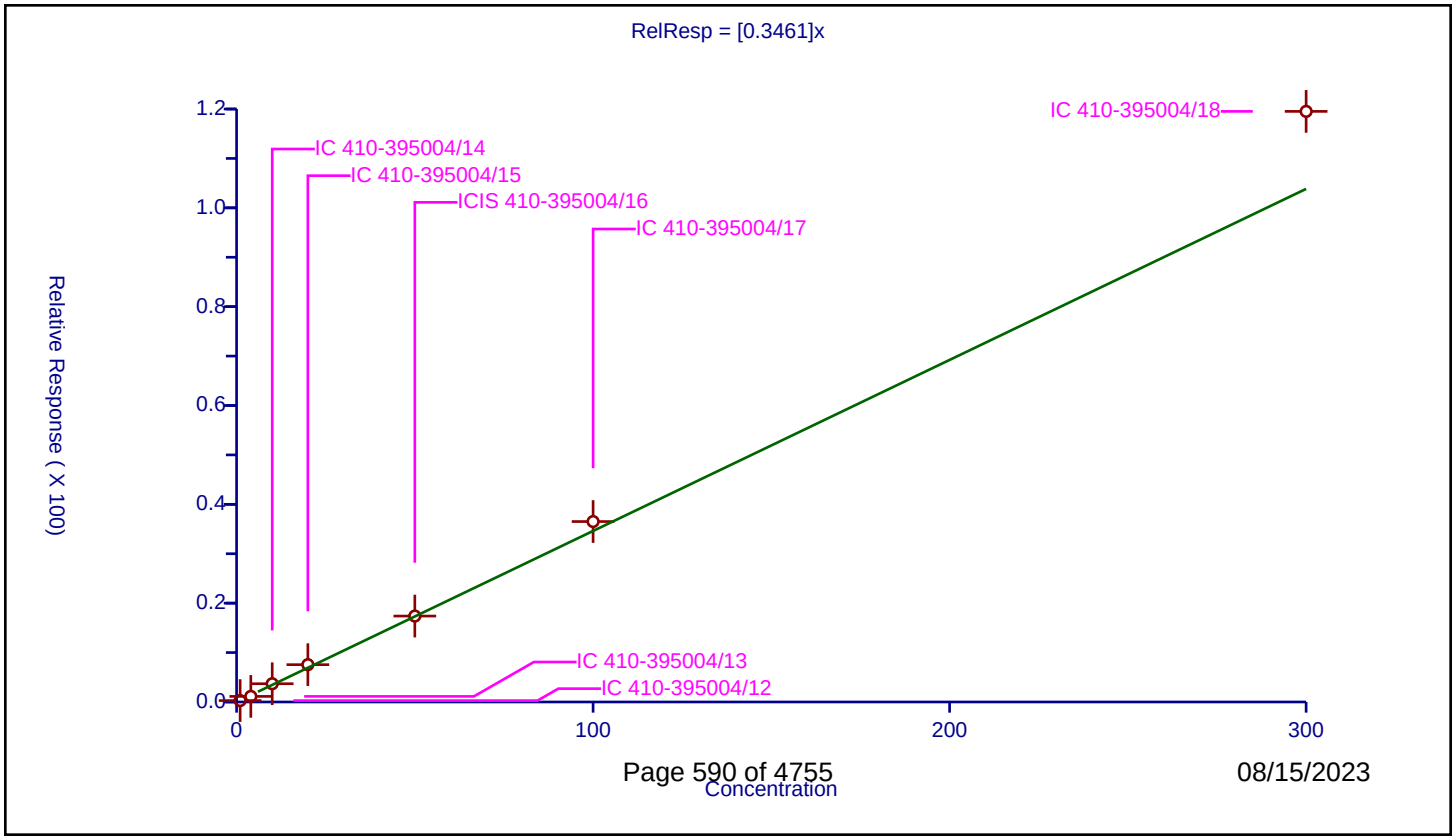
Curve Coefficients

Intercept:	0
Slope:	0.3461

Error Coefficients

Standard Error:	1420000
Relative Standard Error:	13.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.981

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.282219	50.0	1213596.0	0.282219	Y
2	IC 410-395004/13	4.0	1.128416	50.0	1242450.0	0.282104	Y
3	IC 410-395004/14	10.0	3.694594	50.0	1195341.0	0.369459	Y
4	IC 410-395004/15	20.0	7.553316	50.0	1220742.0	0.377666	Y
5	ICIS 410-395004/16	50.0	17.391782	50.0	1286783.0	0.347836	Y
6	IC 410-395004/17	100.0	36.513803	50.0	1403142.0	0.365138	Y
7	IC 410-395004/18	300.0	119.519657	50.0	1375475.0	0.398399	Y



Calibration / Dibromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

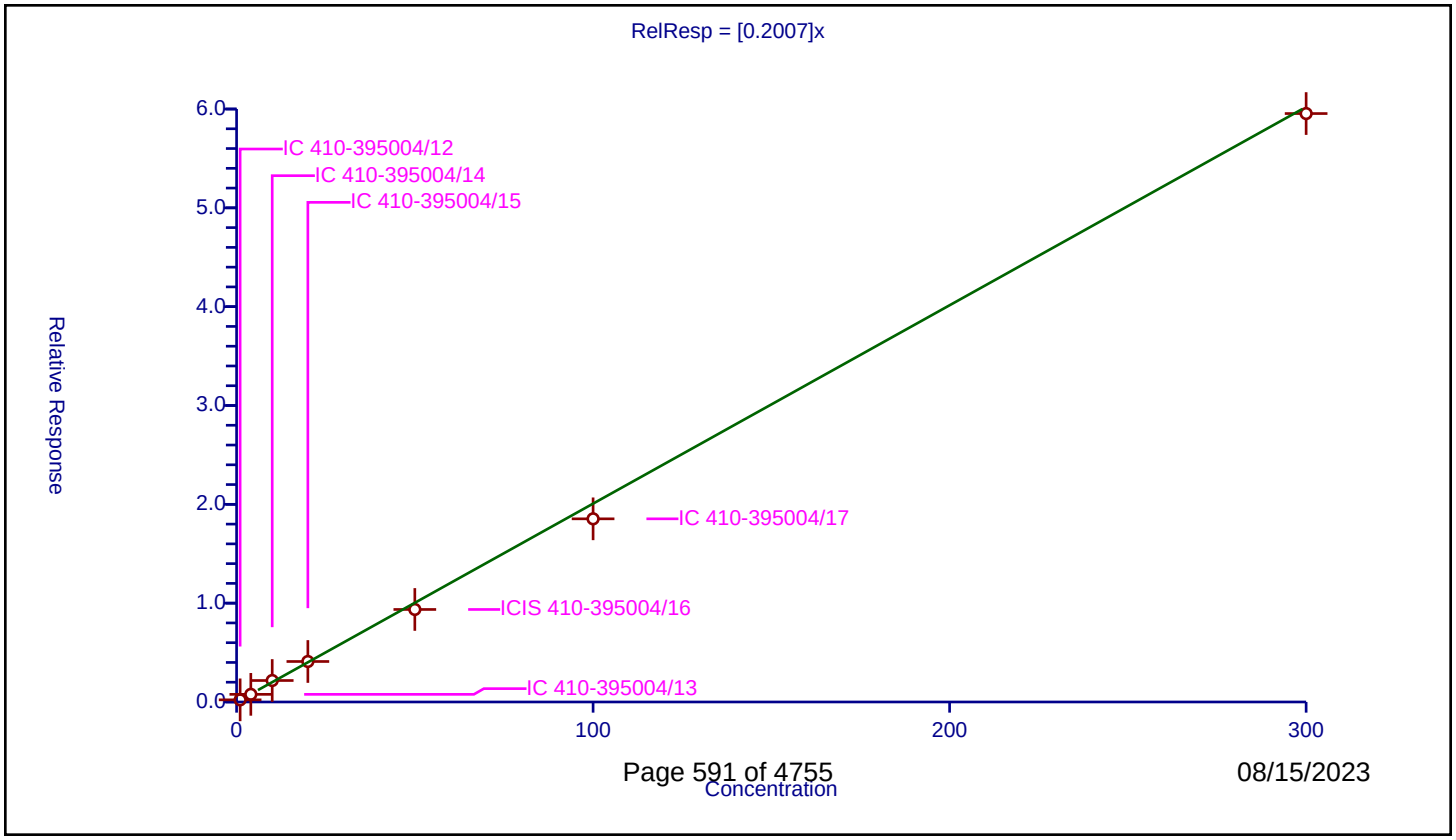
Curve Coefficients

Intercept:	0
Slope:	0.2007

Error Coefficients

Standard Error:	710000
Relative Standard Error:	6.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.218483	50.0	1213596.0	0.218483	Y
2	IC 410-395004/13	4.0	0.77323	50.0	1242450.0	0.193308	Y
3	IC 410-395004/14	10.0	2.17256	50.0	1195341.0	0.217256	Y
4	IC 410-395004/15	20.0	4.097467	50.0	1220742.0	0.204873	Y
5	ICIS 410-395004/16	50.0	9.361913	50.0	1286783.0	0.187238	Y
6	IC 410-395004/17	100.0	18.5328	50.0	1403142.0	0.185328	Y
7	IC 410-395004/18	300.0	59.541577	50.0	1375475.0	0.198472	Y



Calibration / Methyl methacrylate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

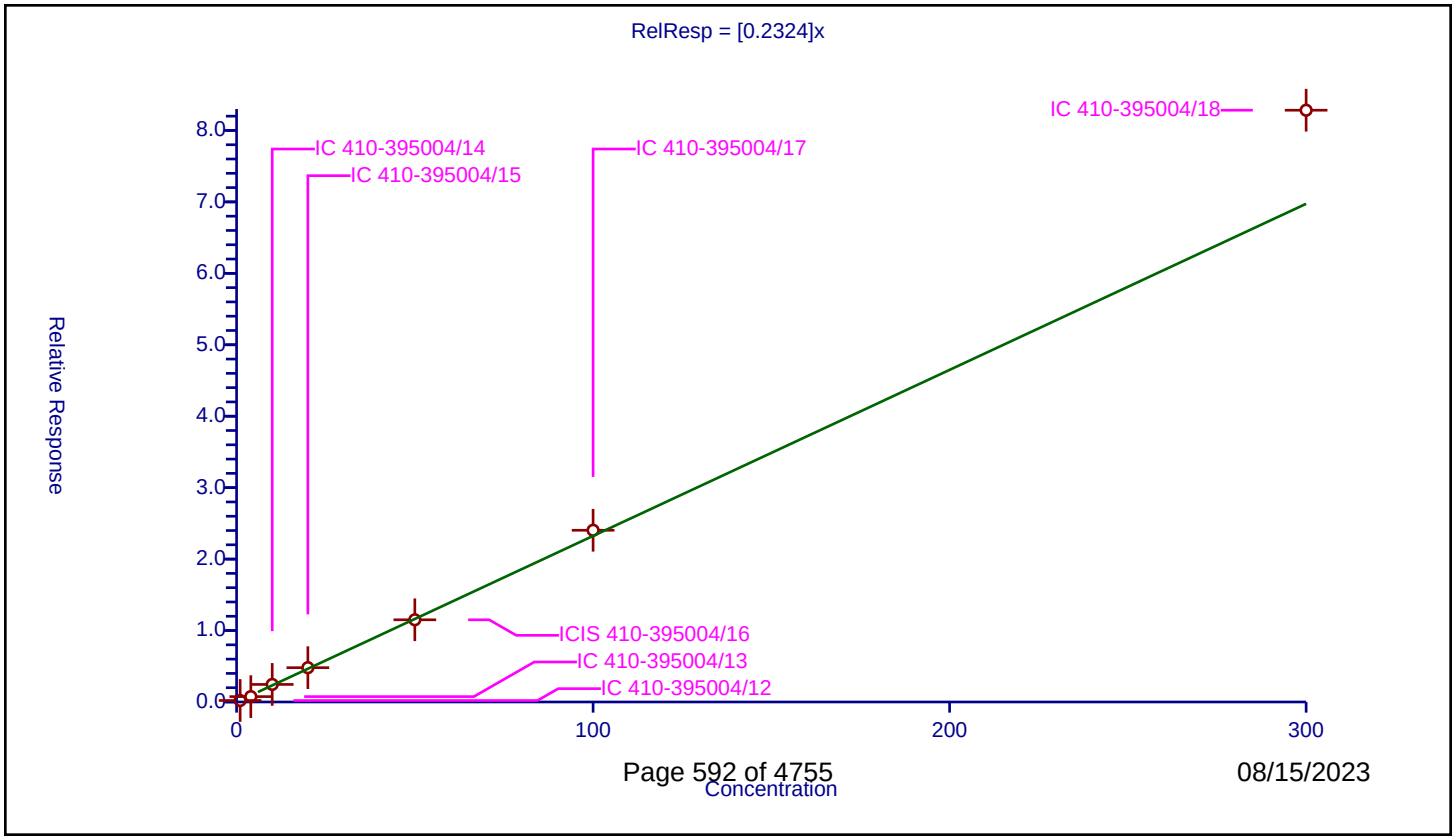
Curve Coefficients

Intercept:	0
Slope:	0.2324

Error Coefficients

Standard Error:	979000
Relative Standard Error:	12.2
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.20637	50.0	1213596.0	0.20637	Y
2	IC 410-395004/13	4.0	0.752827	50.0	1242450.0	0.188207	Y
3	IC 410-395004/14	10.0	2.45842	50.0	1195341.0	0.245842	Y
4	IC 410-395004/15	20.0	4.800605	50.0	1220742.0	0.24003	Y
5	ICIS 410-395004/16	50.0	11.50703	50.0	1286783.0	0.230141	Y
6	IC 410-395004/17	100.0	24.035486	50.0	1403142.0	0.240355	Y
7	IC 410-395004/18	300.0	82.830477	50.0	1375475.0	0.276102	Y



Calibration / 1,4-Dioxane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

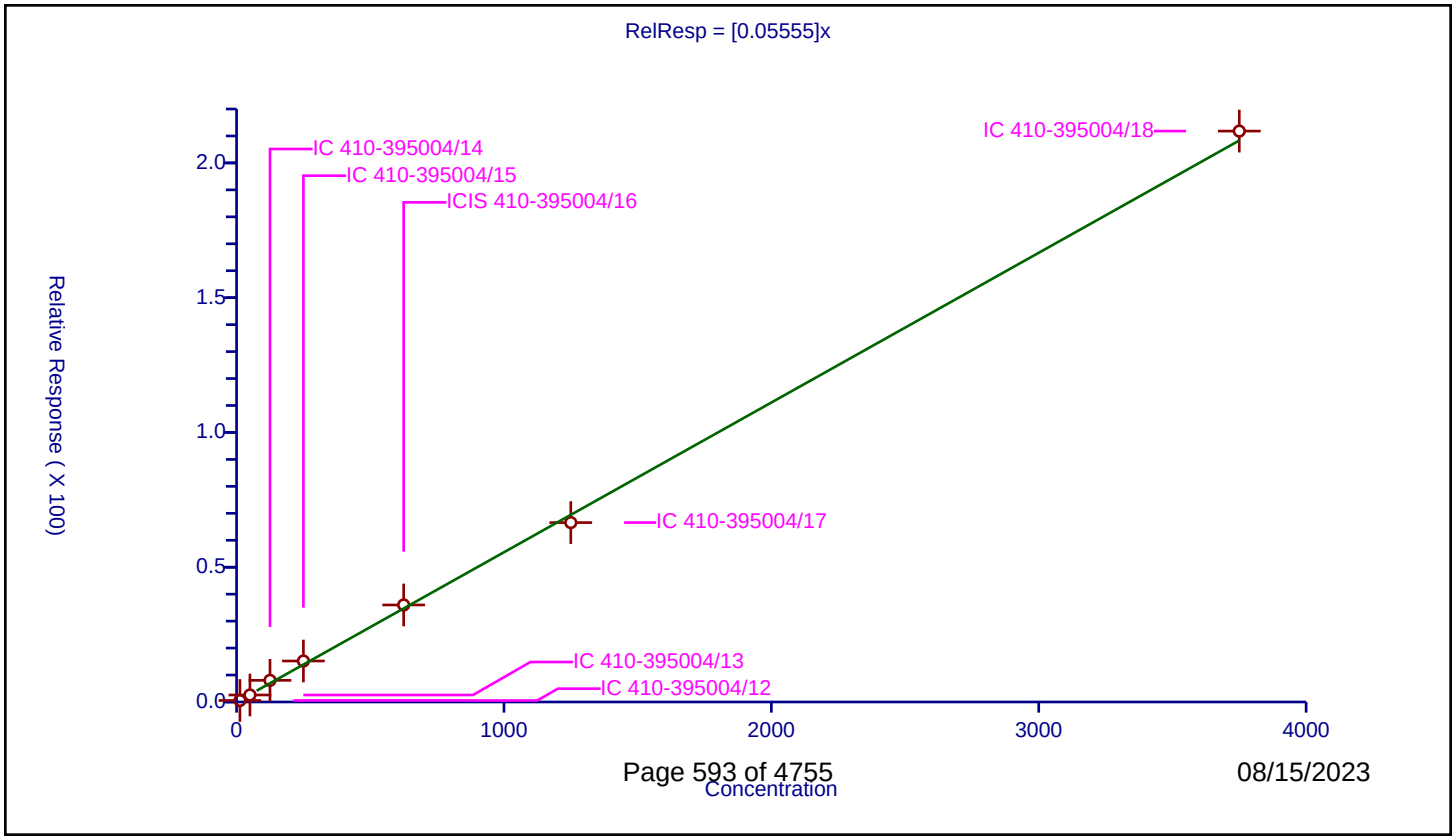
Curve Coefficients

Intercept:	0
Slope:	0.05555

Error Coefficients

Standard Error:	240000
Relative Standard Error:	11.6
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	12.5	0.555622	250.0	542635.0	0.04445	Y
2	IC 410-395004/13	50.0	2.600777	250.0	580019.0	0.052016	Y
3	IC 410-395004/14	125.0	8.02971	250.0	512285.0	0.064238	Y
4	IC 410-395004/15	250.0	15.205815	250.0	546074.0	0.060823	Y
5	ICIS 410-395004/16	625.0	35.997864	250.0	574041.0	0.057597	Y
6	IC 410-395004/17	1250.0	66.554578	250.0	603392.0	0.053244	Y
7	IC 410-395004/18	3750.0	211.809174	250.0	658306.0	0.056482	Y



Calibration / Dichlorobromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

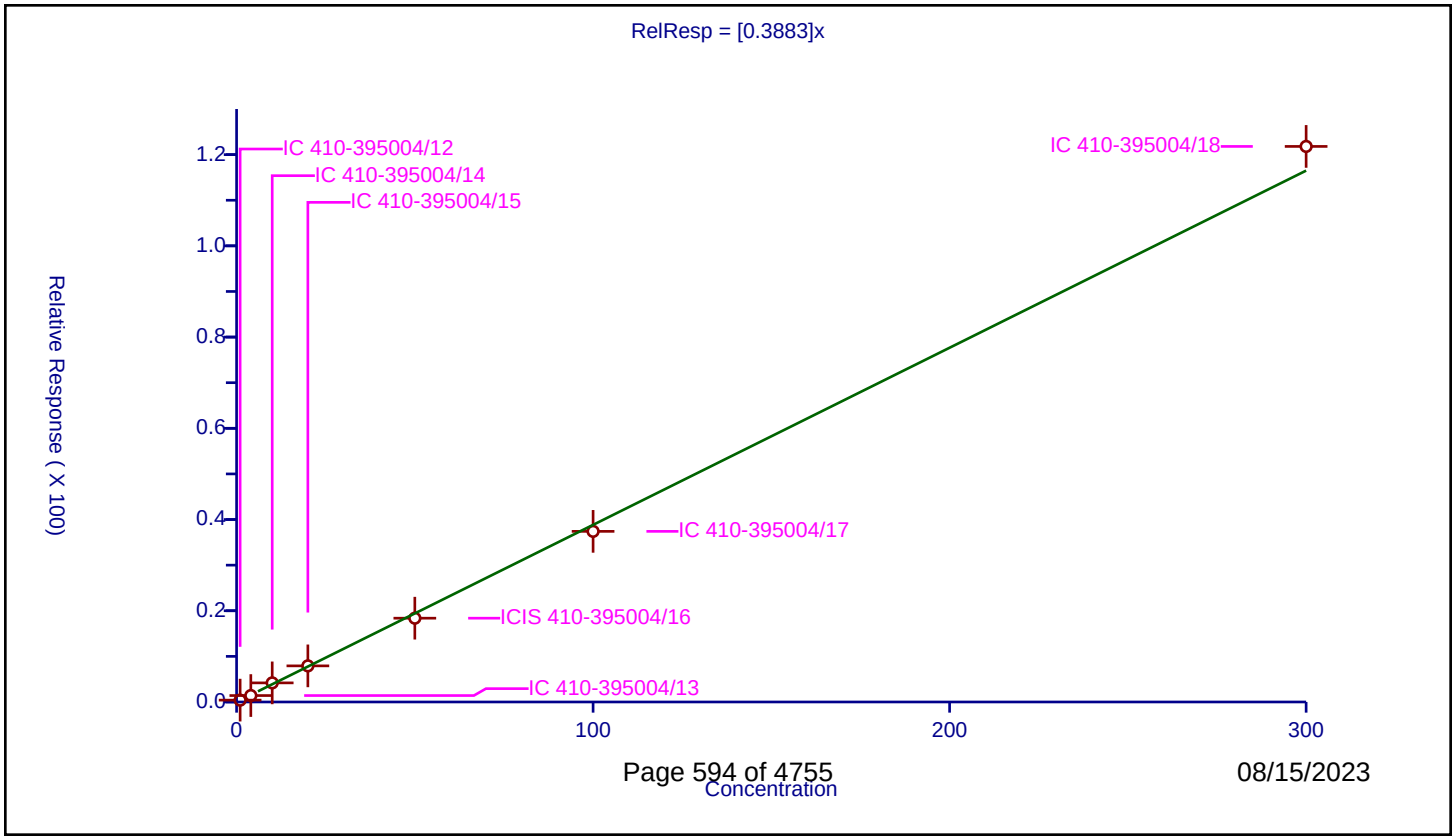
Curve Coefficients

Intercept:	0
Slope:	0.3883

Error Coefficients

Standard Error:	1450000
Relative Standard Error:	6.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.403882	50.0	1213596.0	0.403882	Y
2	IC 410-395004/13	4.0	1.409272	50.0	1242450.0	0.352318	Y
3	IC 410-395004/14	10.0	4.186044	50.0	1195341.0	0.418604	Y
4	IC 410-395004/15	20.0	7.917357	50.0	1220742.0	0.395868	Y
5	ICIS 410-395004/16	50.0	18.373416	50.0	1286783.0	0.367468	Y
6	IC 410-395004/17	100.0	37.408366	50.0	1403142.0	0.374084	Y
7	IC 410-395004/18	300.0	121.79618	50.0	1375475.0	0.405987	Y



Calibration / 2-Nitropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

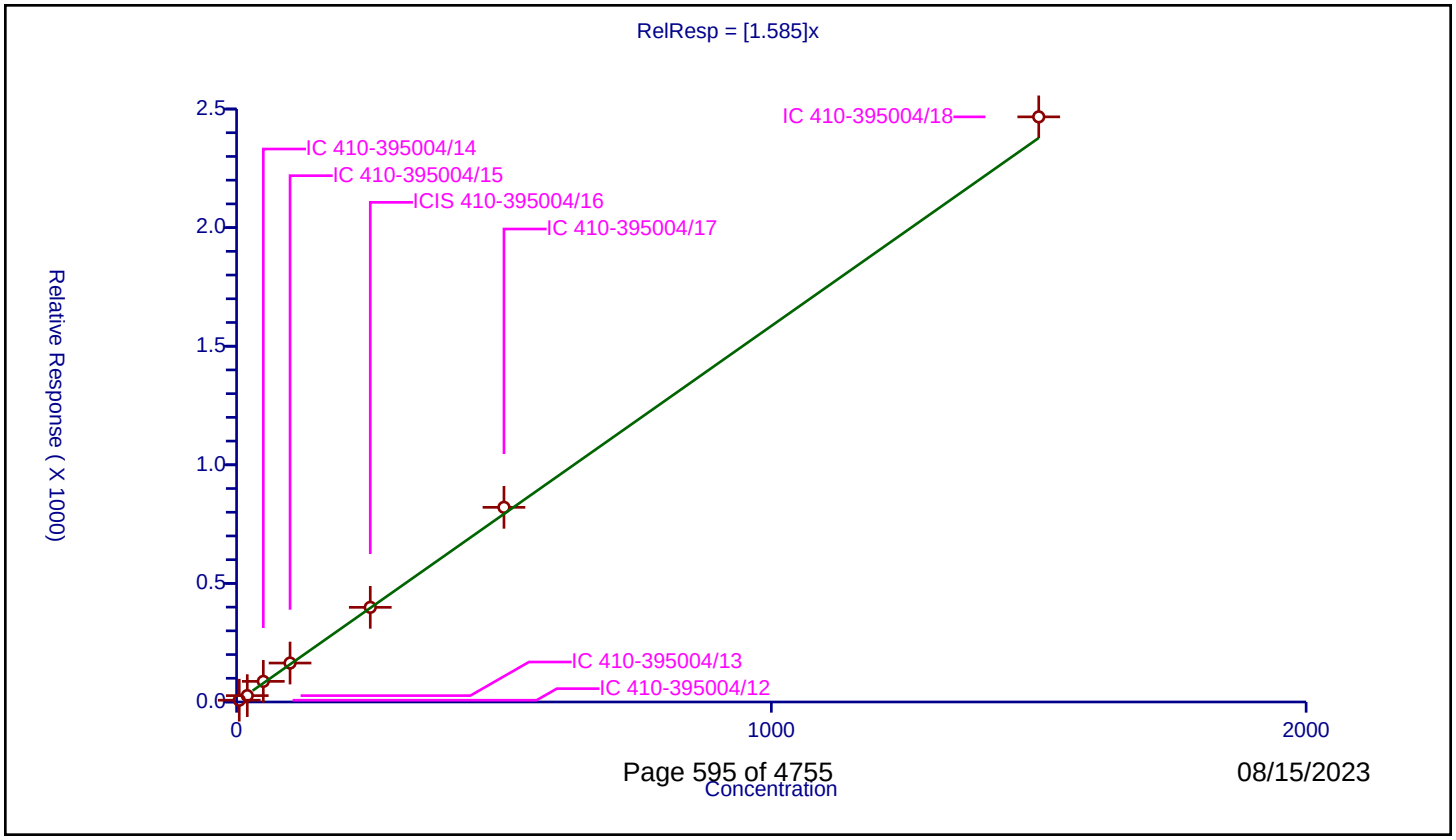
Curve Coefficients

Intercept:	0
Slope:	1.585

Error Coefficients

Standard Error:	2800000
Relative Standard Error:	8.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	5.0	7.461738	250.0	542635.0	1.492348	Y
2	IC 410-395004/13	20.0	26.84481	250.0	580019.0	1.342241	Y
3	IC 410-395004/14	50.0	86.947207	250.0	512285.0	1.738944	Y
4	IC 410-395004/15	100.0	164.159986	250.0	546074.0	1.6416	Y
5	ICIS 410-395004/16	250.0	399.074718	250.0	574041.0	1.596299	Y
6	IC 410-395004/17	500.0	820.720195	250.0	603392.0	1.64144	Y
7	IC 410-395004/18	1500.0	2466.944324	250.0	658306.0	1.64463	Y



08/15/2023

Calibration / 2-Chloroethyl vinyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

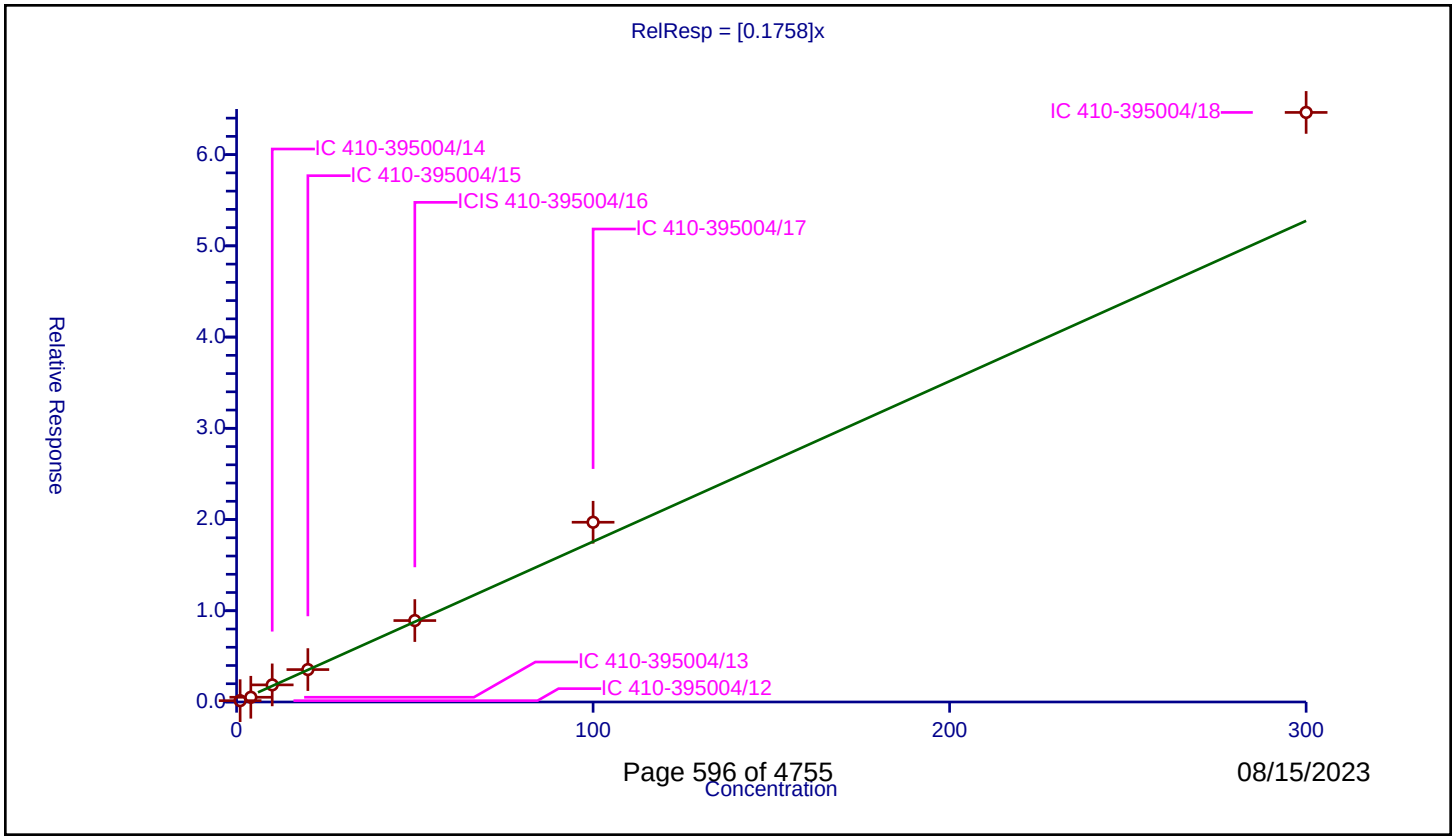
Curve Coefficients

Intercept:	0
Slope:	0.1758

Error Coefficients

Standard Error:	767000
Relative Standard Error:	16.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.971

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.144735	50.0	1213596.0	0.144735	Y
2	IC 410-395004/13	4.0	0.519256	50.0	1242450.0	0.129814	Y
3	IC 410-395004/14	10.0	1.874779	50.0	1195341.0	0.187478	Y
4	IC 410-395004/15	20.0	3.553863	50.0	1220742.0	0.177693	Y
5	ICIS 410-395004/16	50.0	8.926097	50.0	1286783.0	0.178522	Y
6	IC 410-395004/17	100.0	19.704706	50.0	1403142.0	0.197047	Y
7	IC 410-395004/18	300.0	64.626147	50.0	1375475.0	0.21542	Y



Calibration / cis-1,3-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

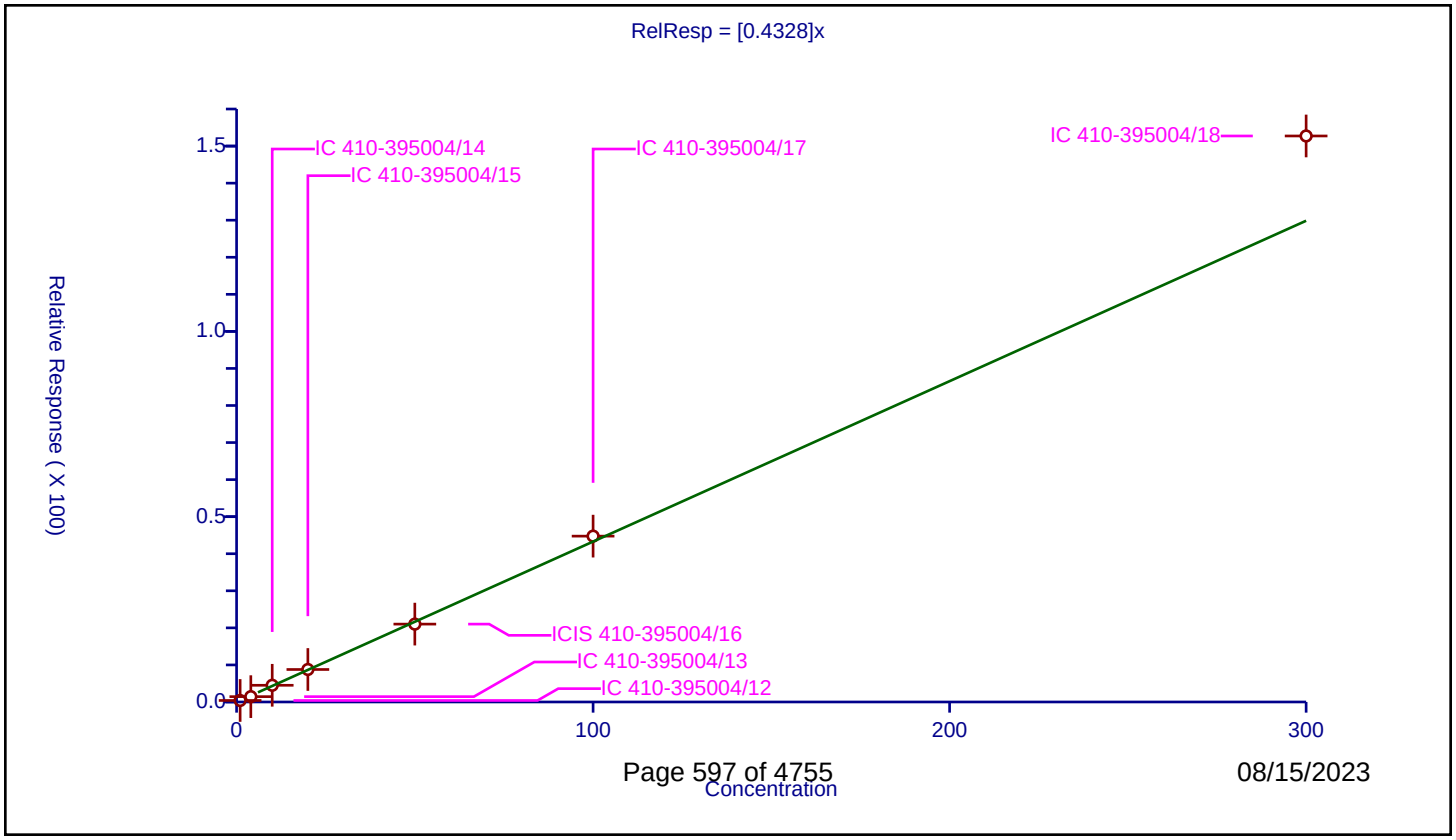
Curve Coefficients

Intercept:	0
Slope:	0.4328

Error Coefficients

Standard Error:	1810000
Relative Standard Error:	10.6
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.403347	50.0	1213596.0	0.403347	Y
2	IC 410-395004/13	4.0	1.440984	50.0	1242450.0	0.360246	Y
3	IC 410-395004/14	10.0	4.509383	50.0	1195341.0	0.450938	Y
4	IC 410-395004/15	20.0	8.768028	50.0	1220742.0	0.438401	Y
5	ICIS 410-395004/16	50.0	21.011002	50.0	1286783.0	0.42022	Y
6	IC 410-395004/17	100.0	44.755057	50.0	1403142.0	0.447551	Y
7	IC 410-395004/18	300.0	152.726767	50.0	1375475.0	0.509089	Y



08/15/2023

Calibration / 4-Methyl-2-pentanone (MIBK)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

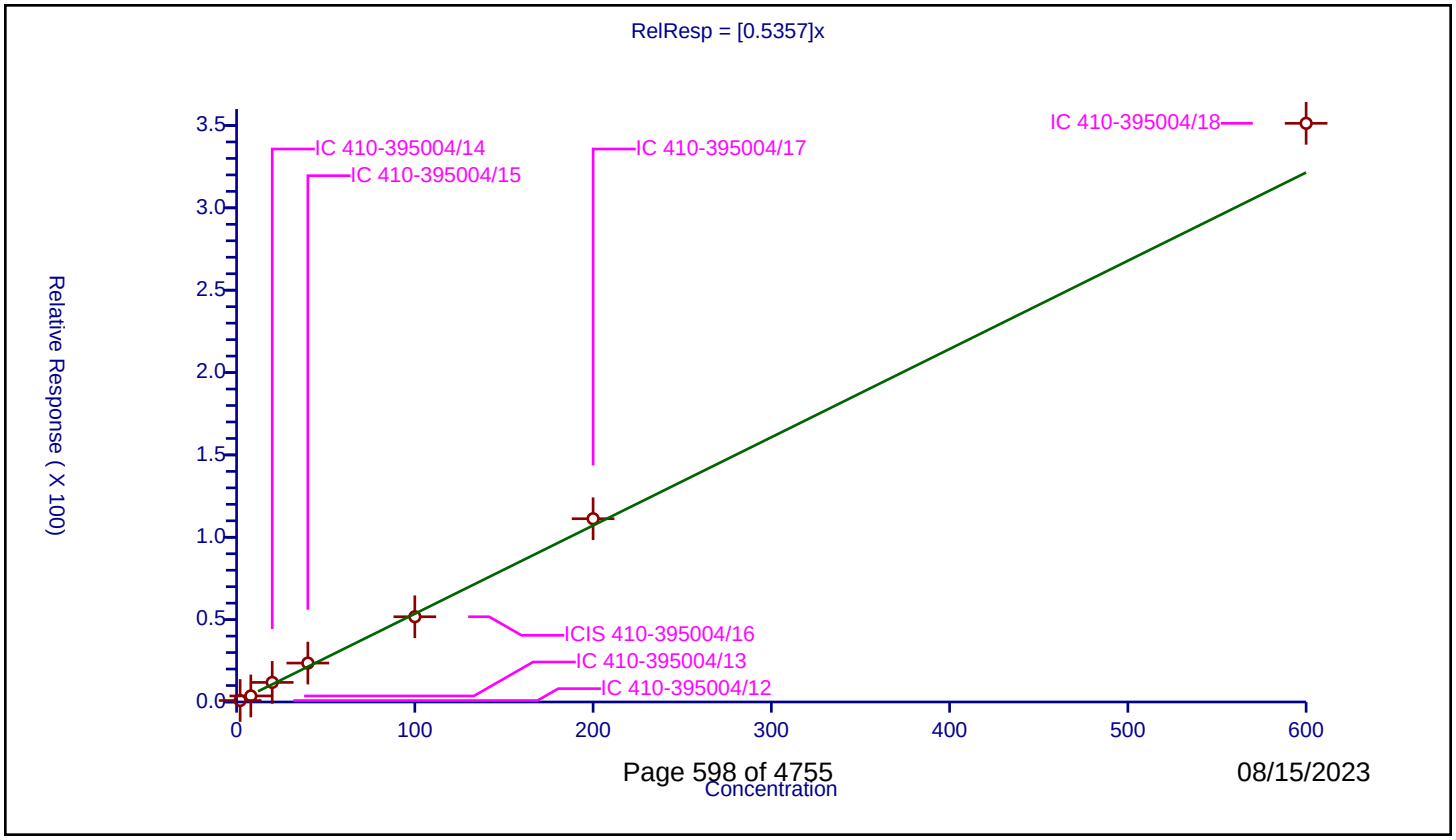
Curve Coefficients

Intercept:	0
Slope:	0.5357

Error Coefficients

Standard Error:	4190000
Relative Standard Error:	11.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	2.0	0.893872	50.0	1213596.0	0.446936	Y
2	IC 410-395004/13	8.0	3.66715	50.0	1242450.0	0.458394	Y
3	IC 410-395004/14	20.0	11.893426	50.0	1195341.0	0.594671	Y
4	IC 410-395004/15	40.0	23.631078	50.0	1220742.0	0.590777	Y
5	ICIS 410-395004/16	100.0	51.757056	50.0	1286783.0	0.517571	Y
6	IC 410-395004/17	200.0	111.268318	50.0	1403142.0	0.556342	Y
7	IC 410-395004/18	600.0	351.319581	50.0	1375475.0	0.585533	Y



Calibration / Toluene-d8 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

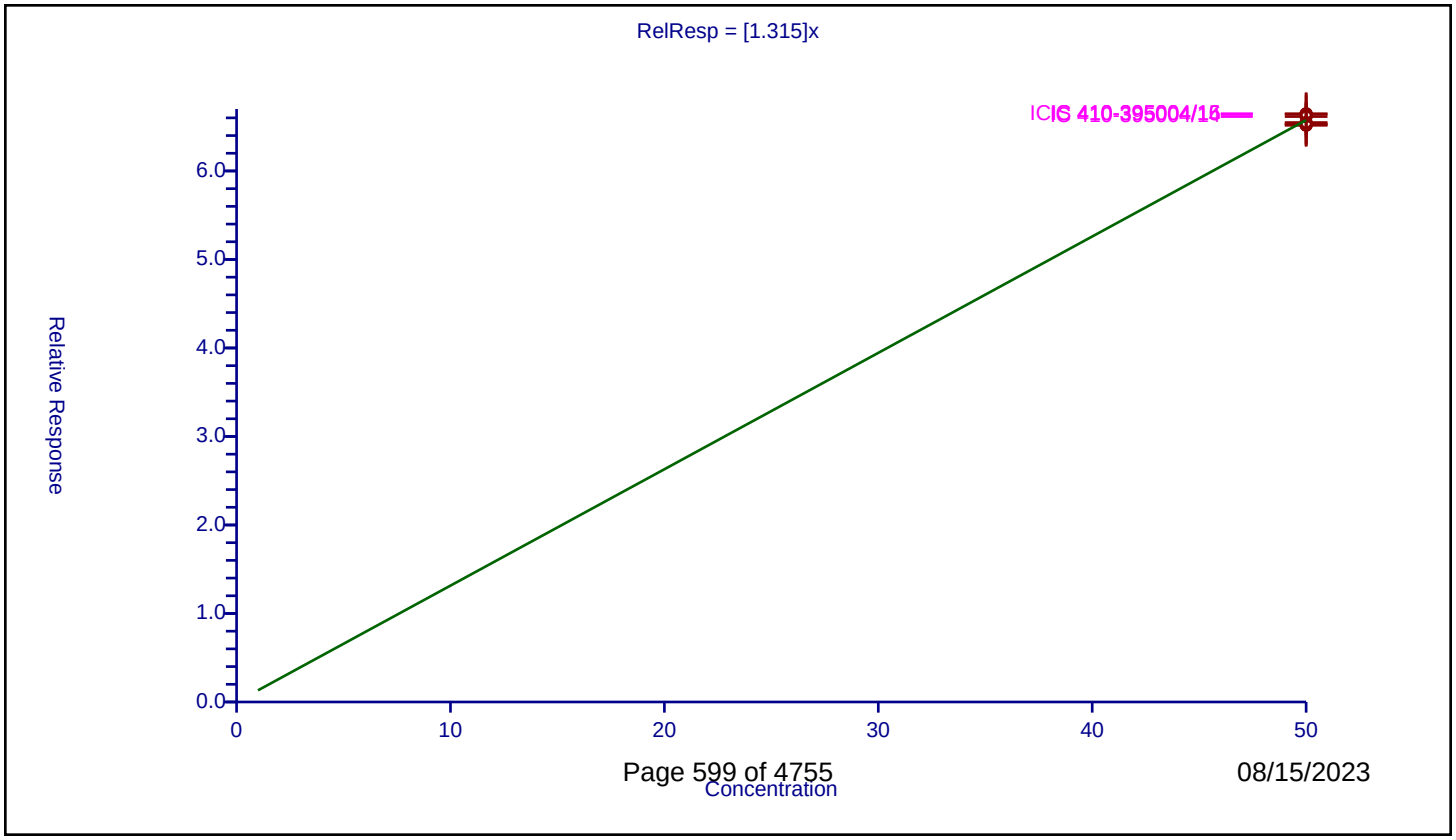
Curve Coefficients

Intercept:	0
Slope:	1.315

Error Coefficients

Standard Error:	1310000
Relative Standard Error:	0.9
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	50.0	65.170154	50.0	851847.0	1.303403	Y
2	IC 410-395004/13	50.0	65.208316	50.0	881281.0	1.304166	Y
3	IC 410-395004/14	50.0	66.14627	50.0	843523.0	1.322925	Y
4	IC 410-395004/15	50.0	66.458124	50.0	859296.0	1.329162	Y
5	ICIS 410-395004/16	50.0	66.422876	50.0	918889.0	1.328458	Y
6	IC 410-395004/17	50.0	65.471073	50.0	1029809.0	1.309421	Y
7	IC 410-395004/18	50.0	65.329715	50.0	1032710.0	1.306594	Y



Calibration / Toluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

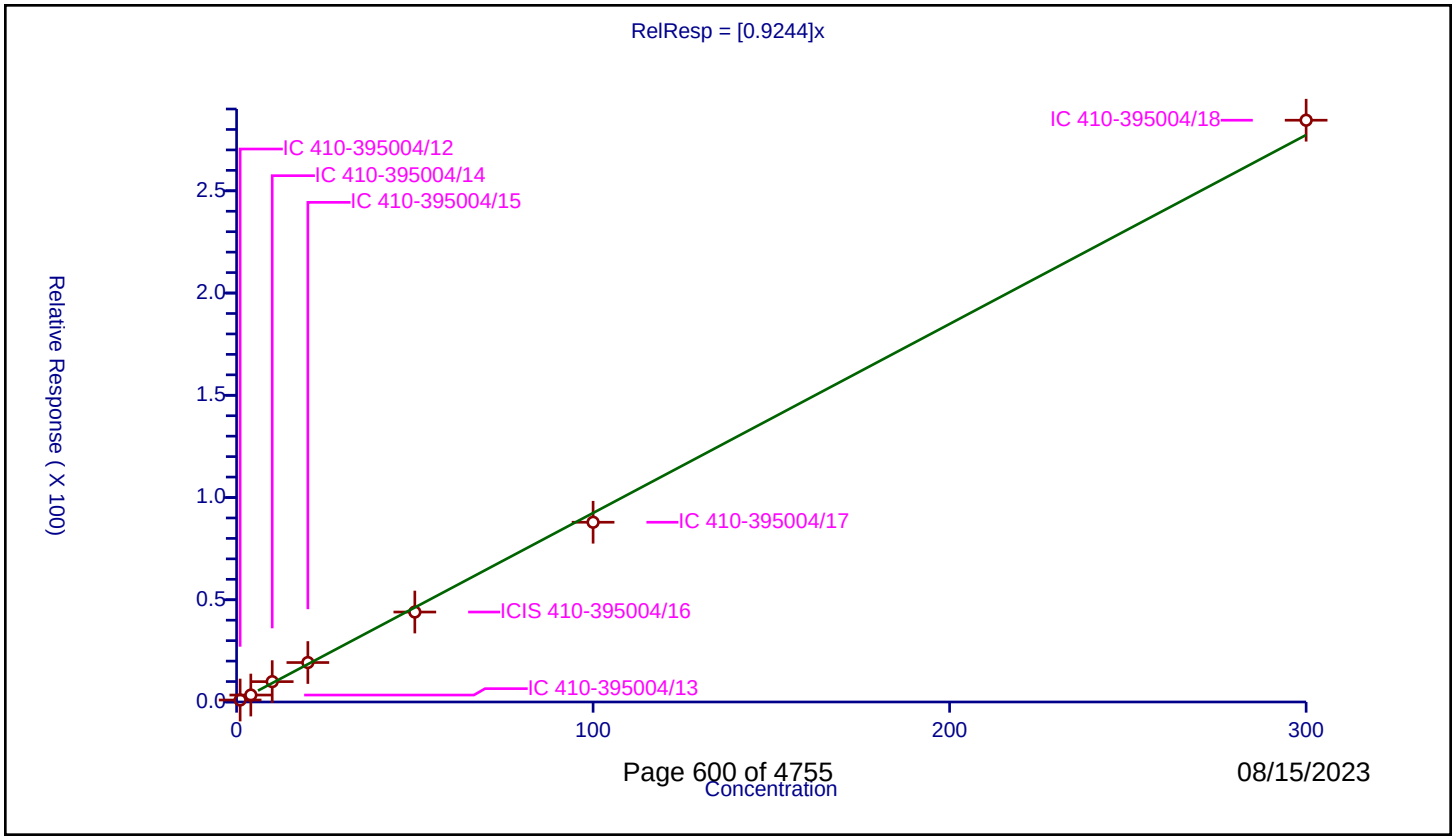
Curve Coefficients

Intercept:	0
Slope:	0.9244

Error Coefficients

Standard Error:	2540000
Relative Standard Error:	5.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.955688	50.0	851847.0	0.955688	Y
2	IC 410-395004/13	4.0	3.391086	50.0	881281.0	0.847772	Y
3	IC 410-395004/14	10.0	9.95207	50.0	843523.0	0.995207	Y
4	IC 410-395004/15	20.0	19.291432	50.0	859296.0	0.964572	Y
5	ICIS 410-395004/16	50.0	43.995575	50.0	918889.0	0.879912	Y
6	IC 410-395004/17	100.0	87.90164	50.0	1029809.0	0.879016	Y
7	IC 410-395004/18	300.0	284.527747	50.0	1032710.0	0.948426	Y



08/15/2023

Calibration / trans-1,3-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

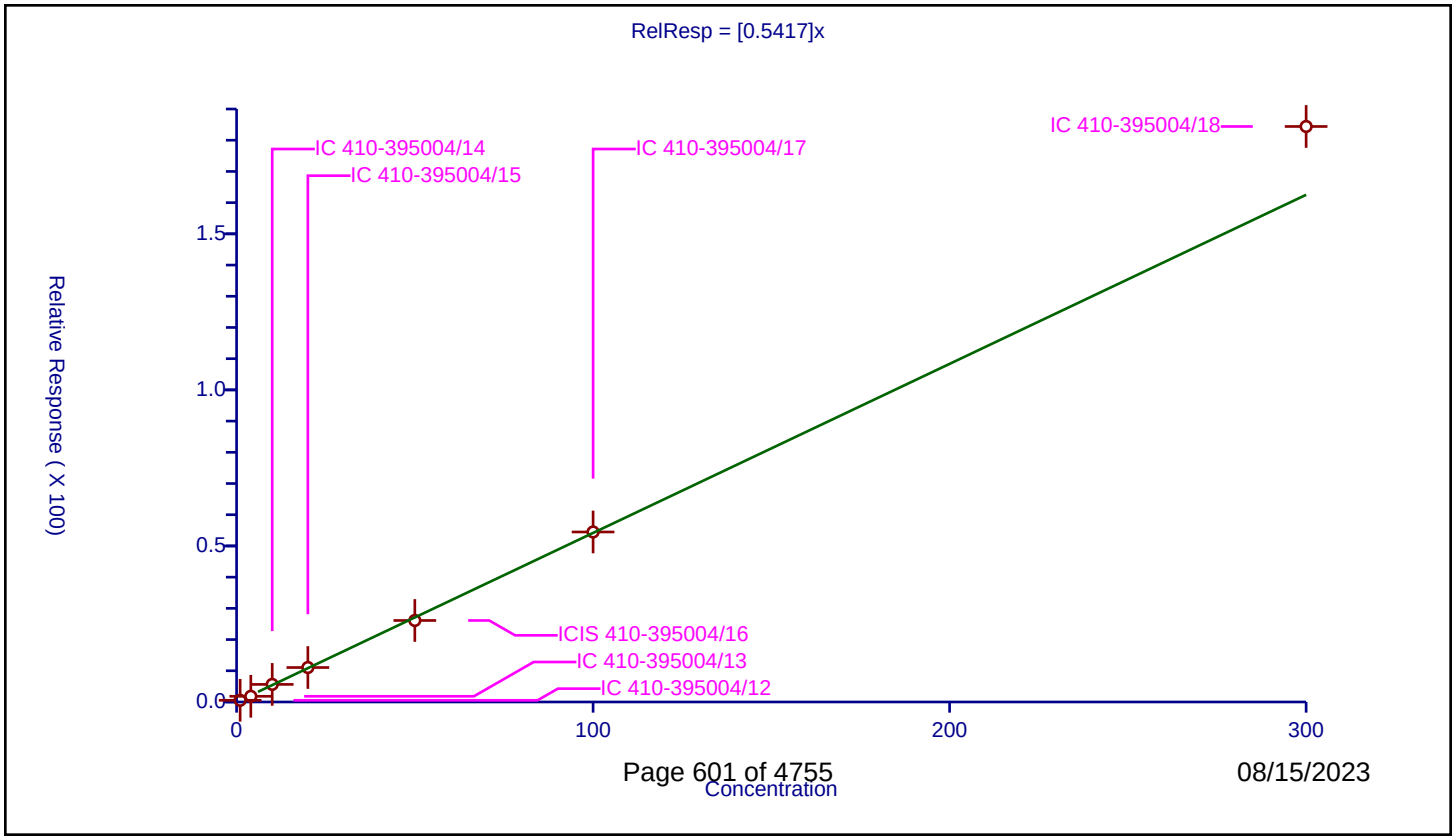
Curve Coefficients

Intercept:	0
Slope:	0.5417

Error Coefficients

Standard Error:	1640000
Relative Standard Error:	8.8
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.538829	50.0	851847.0	0.538829	Y
2	IC 410-395004/13	4.0	1.82195	50.0	881281.0	0.455488	Y
3	IC 410-395004/14	10.0	5.636361	50.0	843523.0	0.563636	Y
4	IC 410-395004/15	20.0	11.041888	50.0	859296.0	0.552094	Y
5	ICIS 410-395004/16	50.0	26.11828	50.0	918889.0	0.522366	Y
6	IC 410-395004/17	100.0	54.476947	50.0	1029809.0	0.544769	Y
7	IC 410-395004/18	300.0	184.401526	50.0	1032710.0	0.614672	Y



08/15/2023

Calibration / Ethyl methacrylate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

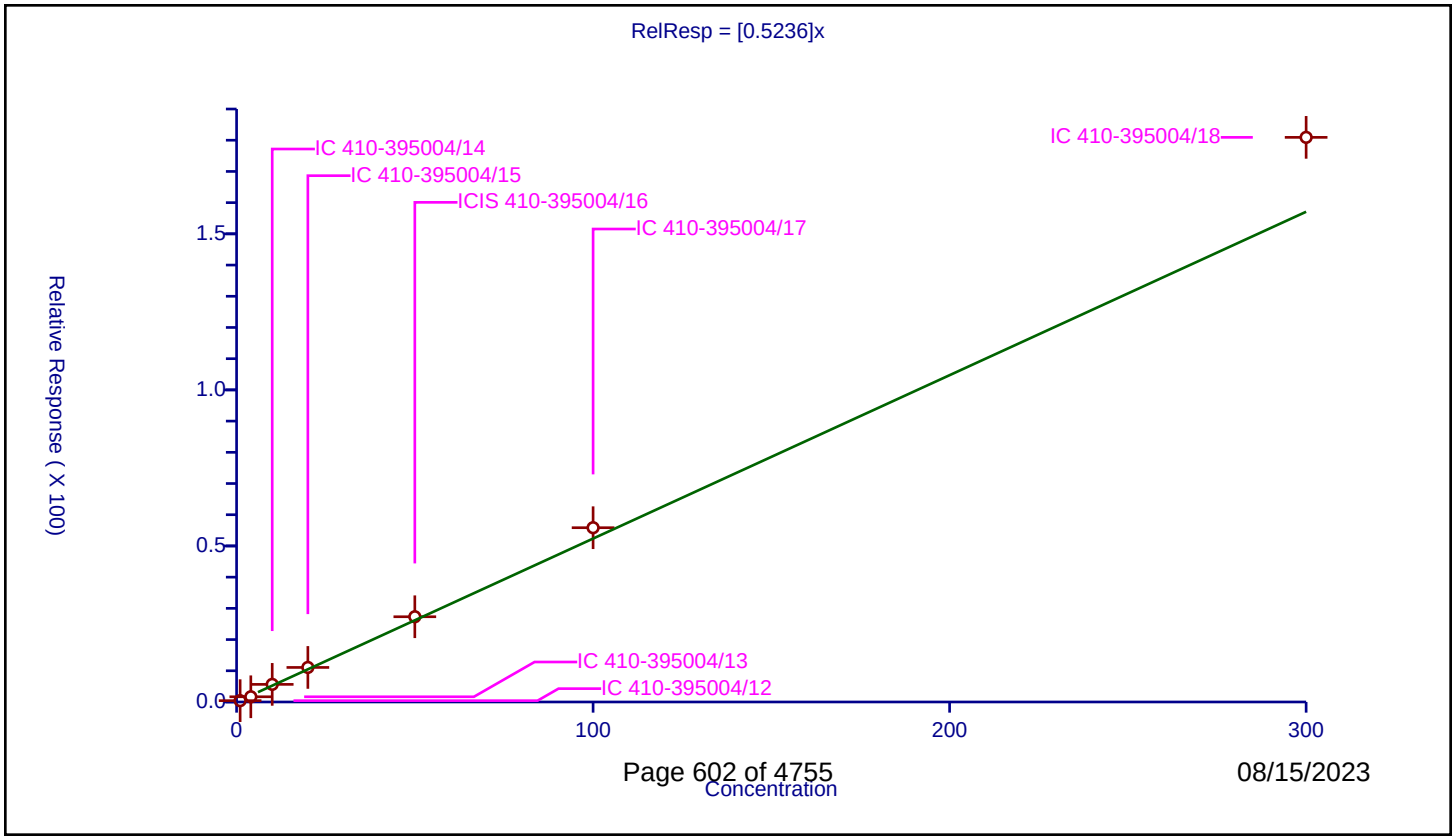
Curve Coefficients

Intercept:	0
Slope:	0.5236

Error Coefficients

Standard Error:	1610000
Relative Standard Error:	14.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.980

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.422318	50.0	851847.0	0.422318	Y
2	IC 410-395004/13	4.0	1.668197	50.0	881281.0	0.417049	Y
3	IC 410-395004/14	10.0	5.644363	50.0	843523.0	0.564436	Y
4	IC 410-395004/15	20.0	11.071214	50.0	859296.0	0.553561	Y
5	ICIS 410-395004/16	50.0	27.31233	50.0	918889.0	0.546247	Y
6	IC 410-395004/17	100.0	55.844191	50.0	1029809.0	0.558442	Y
7	IC 410-395004/18	300.0	180.915988	50.0	1032710.0	0.603053	Y



08/15/2023

Calibration / 1,1,2-Trichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

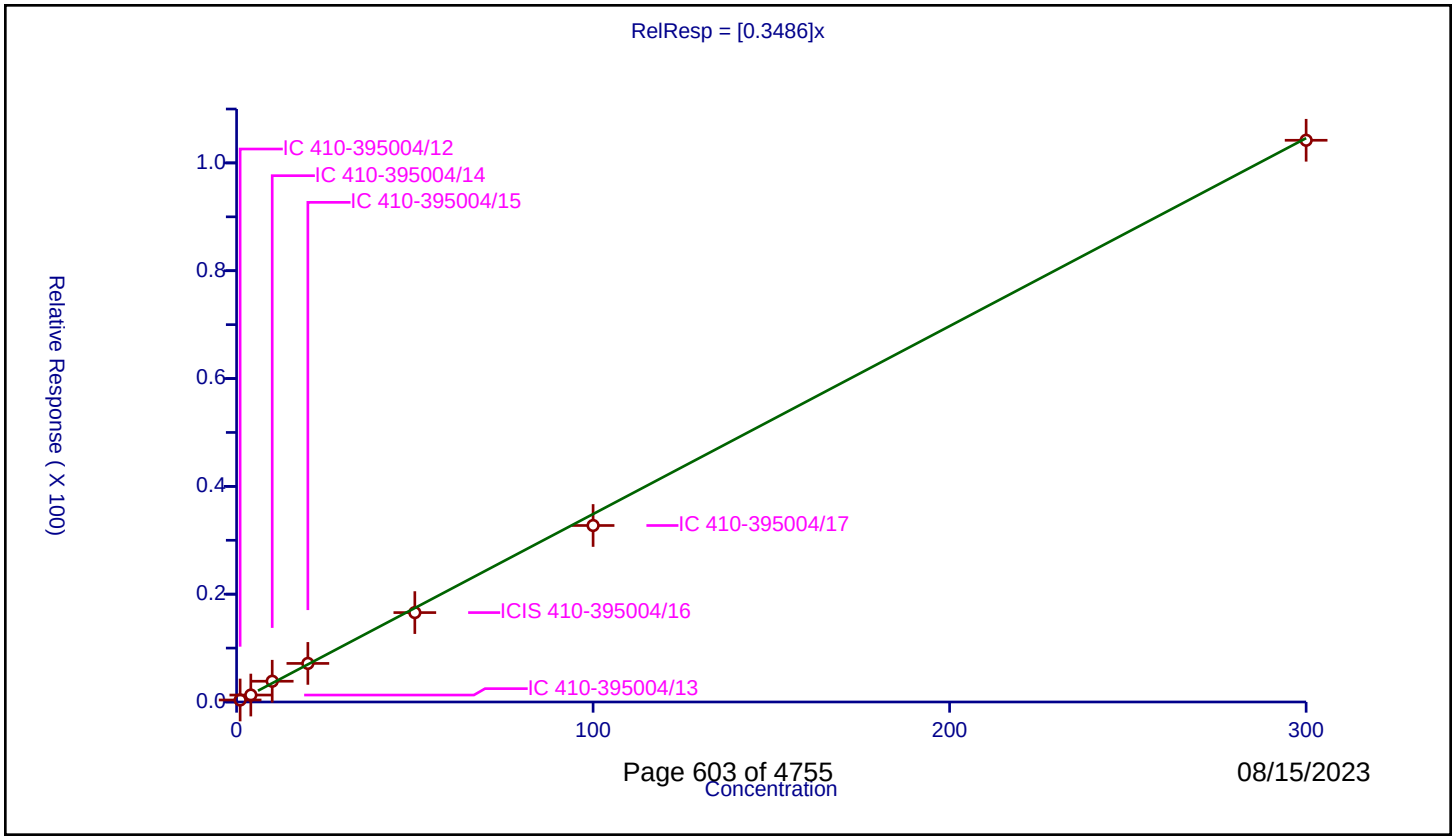
Curve Coefficients

Intercept:	0
Slope:	0.3486

Error Coefficients

Standard Error:	931000
Relative Standard Error:	6.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.368728	50.0	851847.0	0.368728	Y
2	IC 410-395004/13	4.0	1.289373	50.0	881281.0	0.322343	Y
3	IC 410-395004/14	10.0	3.85194	50.0	843523.0	0.385194	Y
4	IC 410-395004/15	20.0	7.154694	50.0	859296.0	0.357735	Y
5	ICIS 410-395004/16	50.0	16.584919	50.0	918889.0	0.331698	Y
6	IC 410-395004/17	100.0	32.740149	50.0	1029809.0	0.327401	Y
7	IC 410-395004/18	300.0	104.204714	50.0	1032710.0	0.347349	Y



Calibration / Tetrachloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

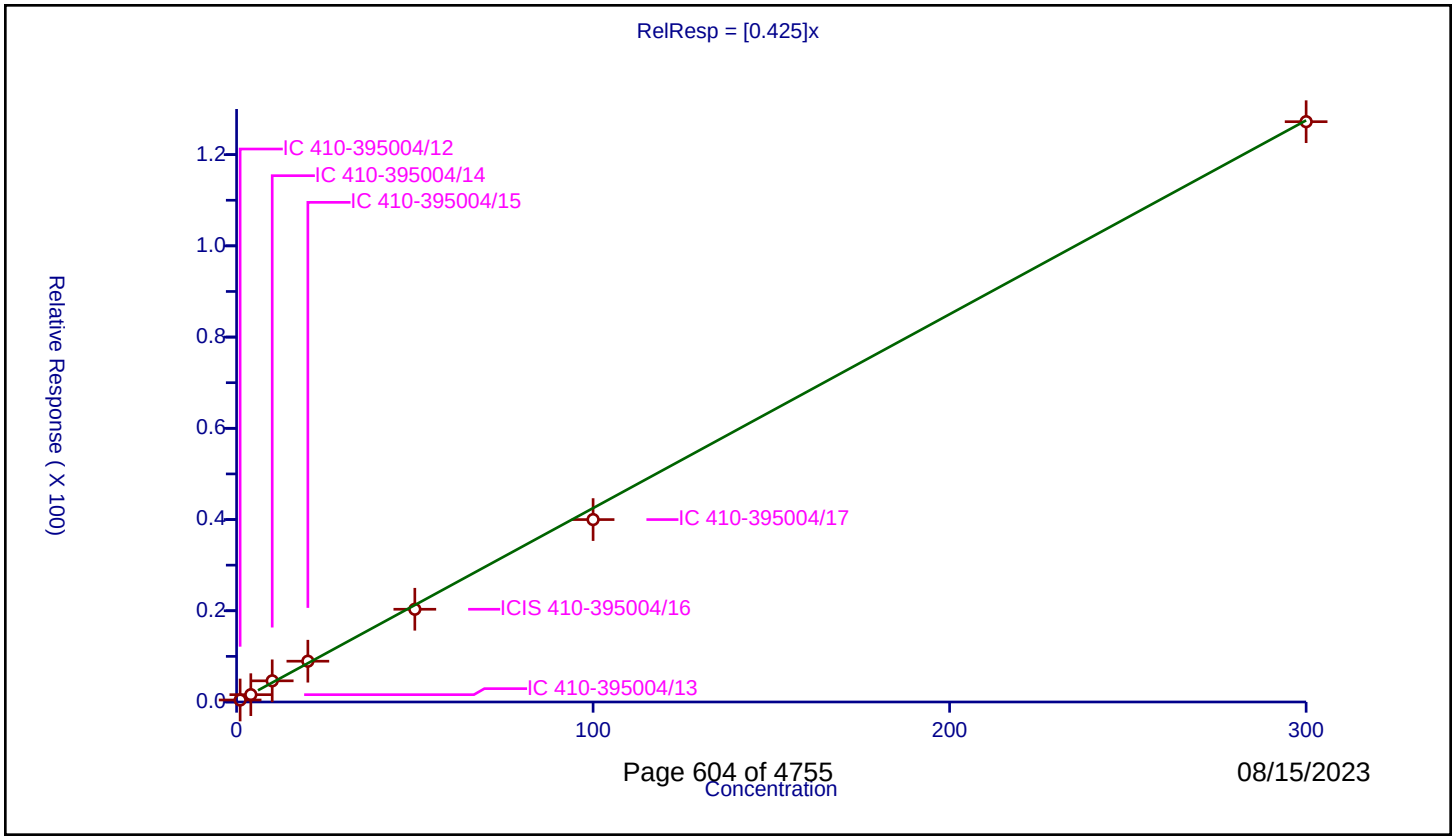
Curve Coefficients

Intercept:	0
Slope:	0.425

Error Coefficients

Standard Error:	1140000
Relative Standard Error:	5.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.432589	50.0	851847.0	0.432589	Y
2	IC 410-395004/13	4.0	1.603461	50.0	881281.0	0.400865	Y
3	IC 410-395004/14	10.0	4.641426	50.0	843523.0	0.464143	Y
4	IC 410-395004/15	20.0	8.942844	50.0	859296.0	0.447142	Y
5	ICIS 410-395004/16	50.0	20.327482	50.0	918889.0	0.40655	Y
6	IC 410-395004/17	100.0	39.988532	50.0	1029809.0	0.399885	Y
7	IC 410-395004/18	300.0	127.222696	50.0	1032710.0	0.424076	Y



Calibration / 1,3-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

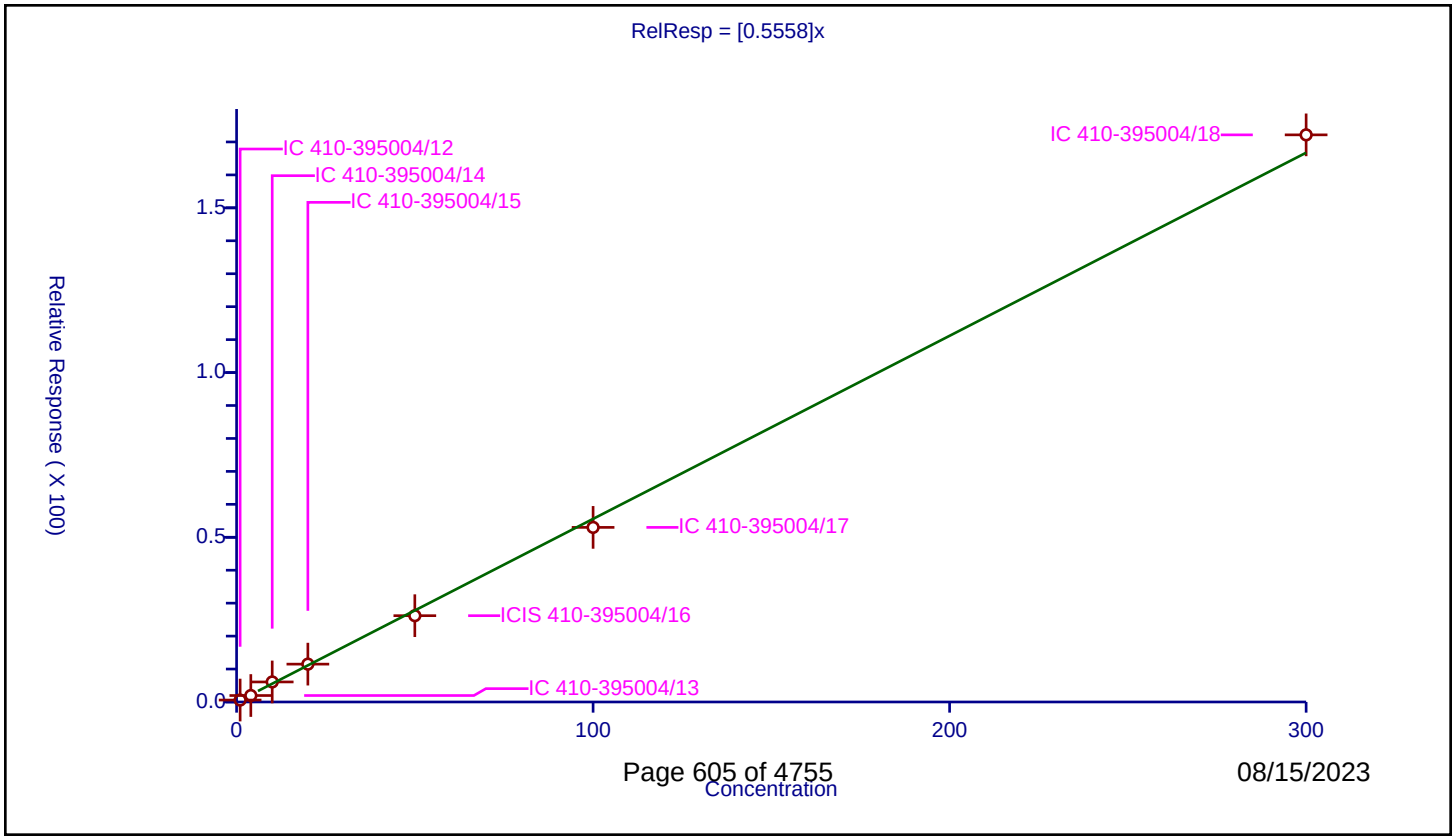
Curve Coefficients

Intercept:	0
Slope:	0.5558

Error Coefficients

Standard Error:	1530000
Relative Standard Error:	7.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.588721	50.0	851847.0	0.588721	Y
2	IC 410-395004/13	4.0	1.962654	50.0	881281.0	0.490664	Y
3	IC 410-395004/14	10.0	6.085785	50.0	843523.0	0.608579	Y
4	IC 410-395004/15	20.0	11.491209	50.0	859296.0	0.57456	Y
5	ICIS 410-395004/16	50.0	26.200662	50.0	918889.0	0.524013	Y
6	IC 410-395004/17	100.0	52.998177	50.0	1029809.0	0.529982	Y
7	IC 410-395004/18	300.0	172.15743	50.0	1032710.0	0.573858	Y



Calibration / 2-Hexanone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

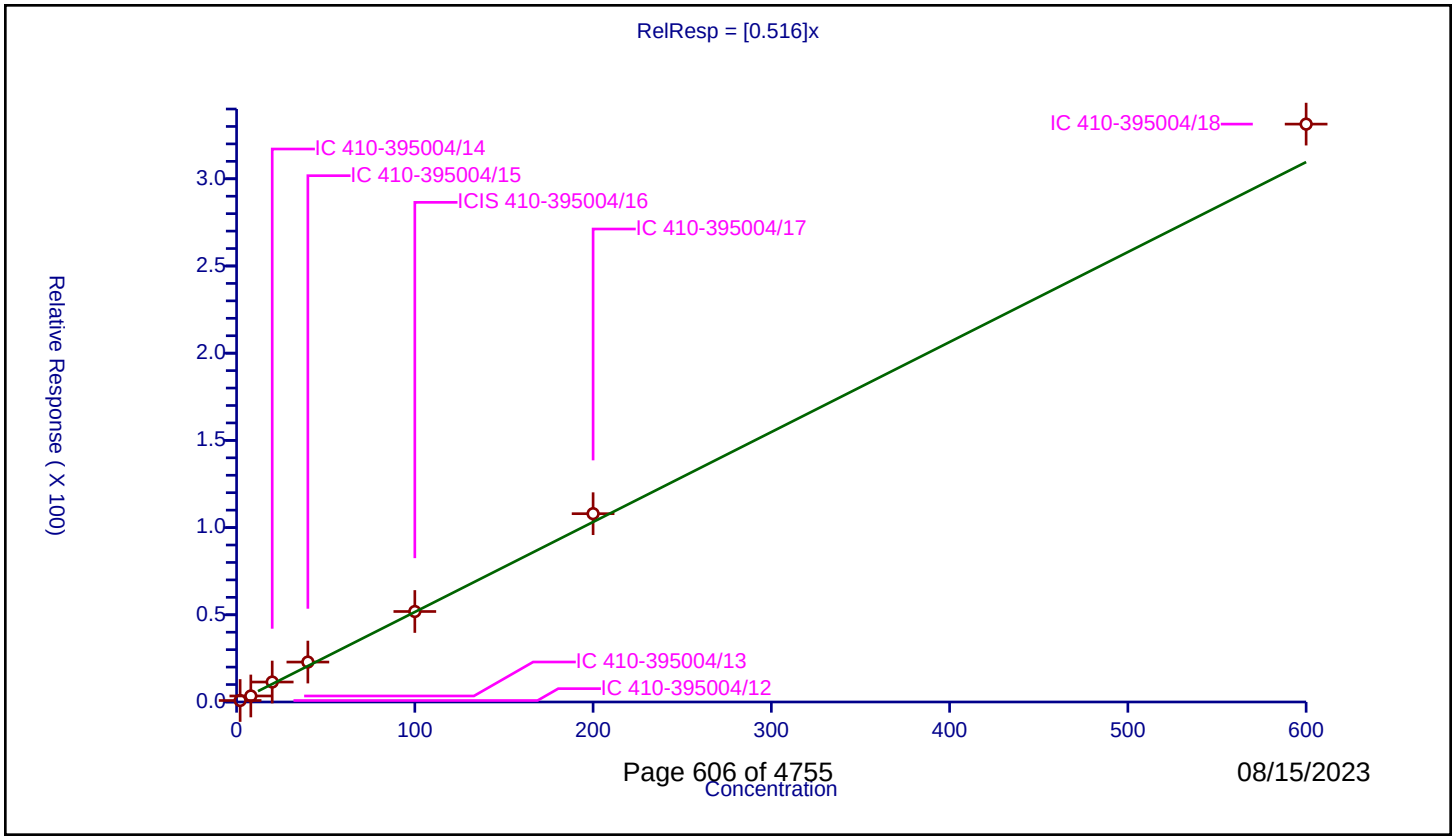
Curve Coefficients

Intercept:	0
Slope:	0.516

Error Coefficients

Standard Error:	2970000
Relative Standard Error:	12.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	2.0	0.849037	50.0	851847.0	0.424519	Y
2	IC 410-395004/13	8.0	3.452077	50.0	881281.0	0.43151	Y
3	IC 410-395004/14	20.0	11.447406	50.0	843523.0	0.57237	Y
4	IC 410-395004/15	40.0	22.892868	50.0	859296.0	0.572322	Y
5	ICIS 410-395004/16	100.0	51.894244	50.0	918889.0	0.518942	Y
6	IC 410-395004/17	200.0	107.975702	50.0	1029809.0	0.539879	Y
7	IC 410-395004/18	600.0	331.349314	50.0	1032710.0	0.552249	Y



Calibration / Chlorodibromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

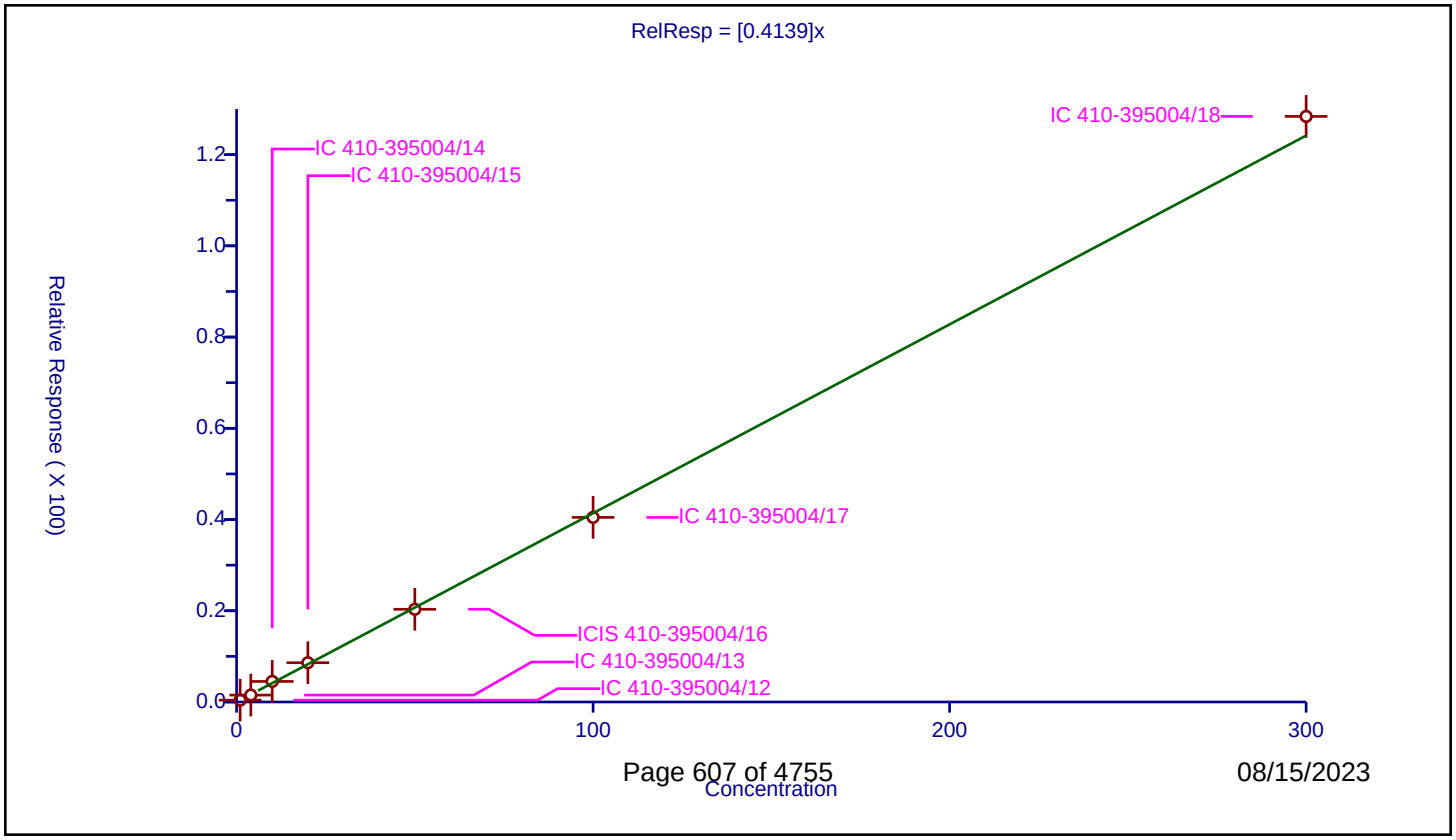
Curve Coefficients

Intercept:	0
Slope:	0.4139

Error Coefficients

Standard Error:	1150000
Relative Standard Error:	5.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.399309	50.0	851847.0	0.399309	Y
2	IC 410-395004/13	4.0	1.511947	50.0	881281.0	0.377987	Y
3	IC 410-395004/14	10.0	4.506753	50.0	843523.0	0.450675	Y
4	IC 410-395004/15	20.0	8.606871	50.0	859296.0	0.430344	Y
5	ICIS 410-395004/16	50.0	20.323021	50.0	918889.0	0.40646	Y
6	IC 410-395004/17	100.0	40.468621	50.0	1029809.0	0.404686	Y
7	IC 410-395004/18	300.0	128.381927	50.0	1032710.0	0.42794	Y



Calibration / Ethylene Dibromide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

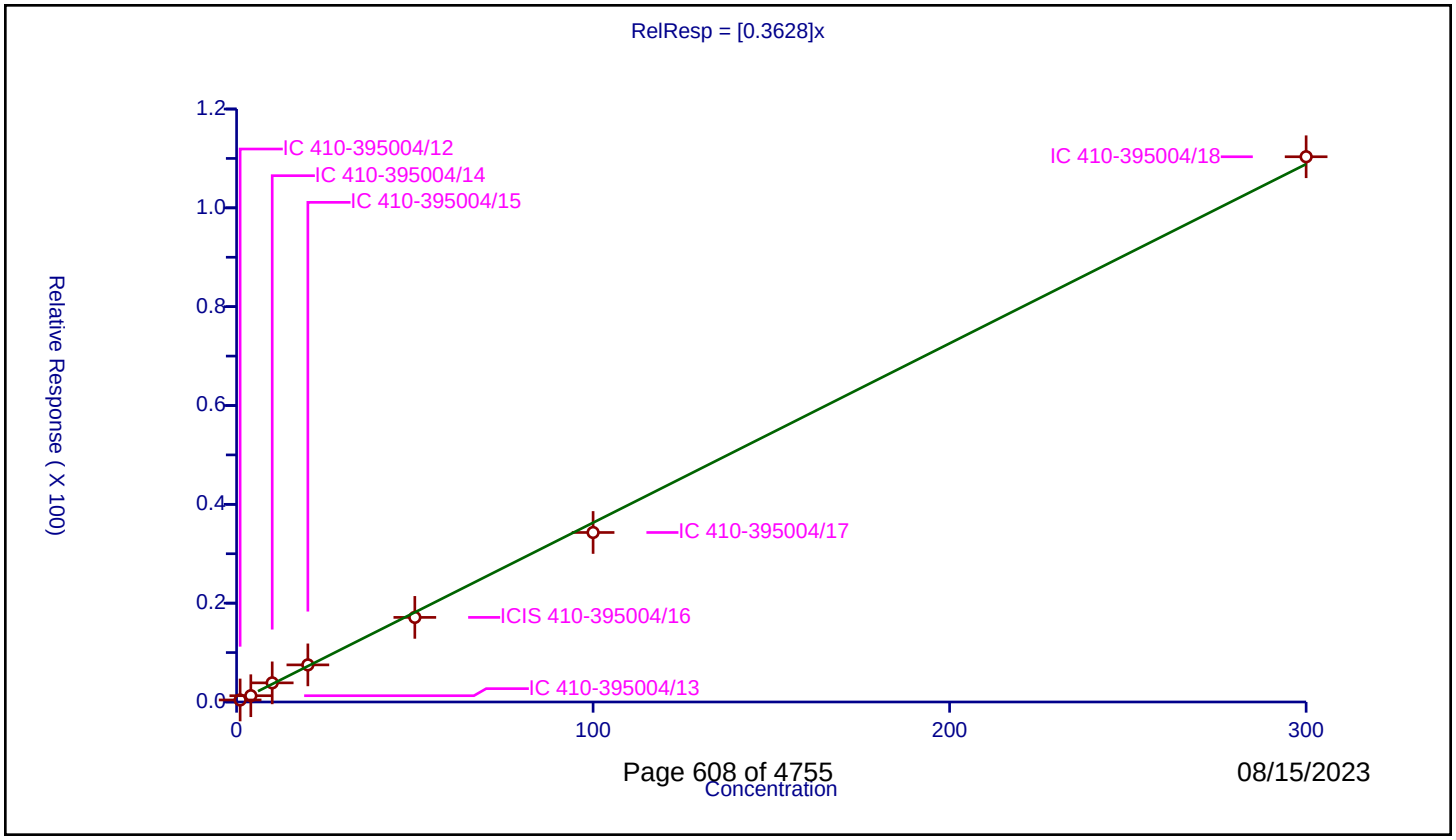
Curve Coefficients

Intercept:	0
Slope:	0.3628

Error Coefficients

Standard Error:	984000
Relative Standard Error:	8.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.405765	50.0	851847.0	0.405765	Y
2	IC 410-395004/13	4.0	1.273033	50.0	881281.0	0.318258	Y
3	IC 410-395004/14	10.0	3.87079	50.0	843523.0	0.387079	Y
4	IC 410-395004/15	20.0	7.510101	50.0	859296.0	0.375505	Y
5	ICIS 410-395004/16	50.0	17.123124	50.0	918889.0	0.342462	Y
6	IC 410-395004/17	100.0	34.302526	50.0	1029809.0	0.343025	Y
7	IC 410-395004/18	300.0	110.342255	50.0	1032710.0	0.367808	Y



Calibration / Chlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

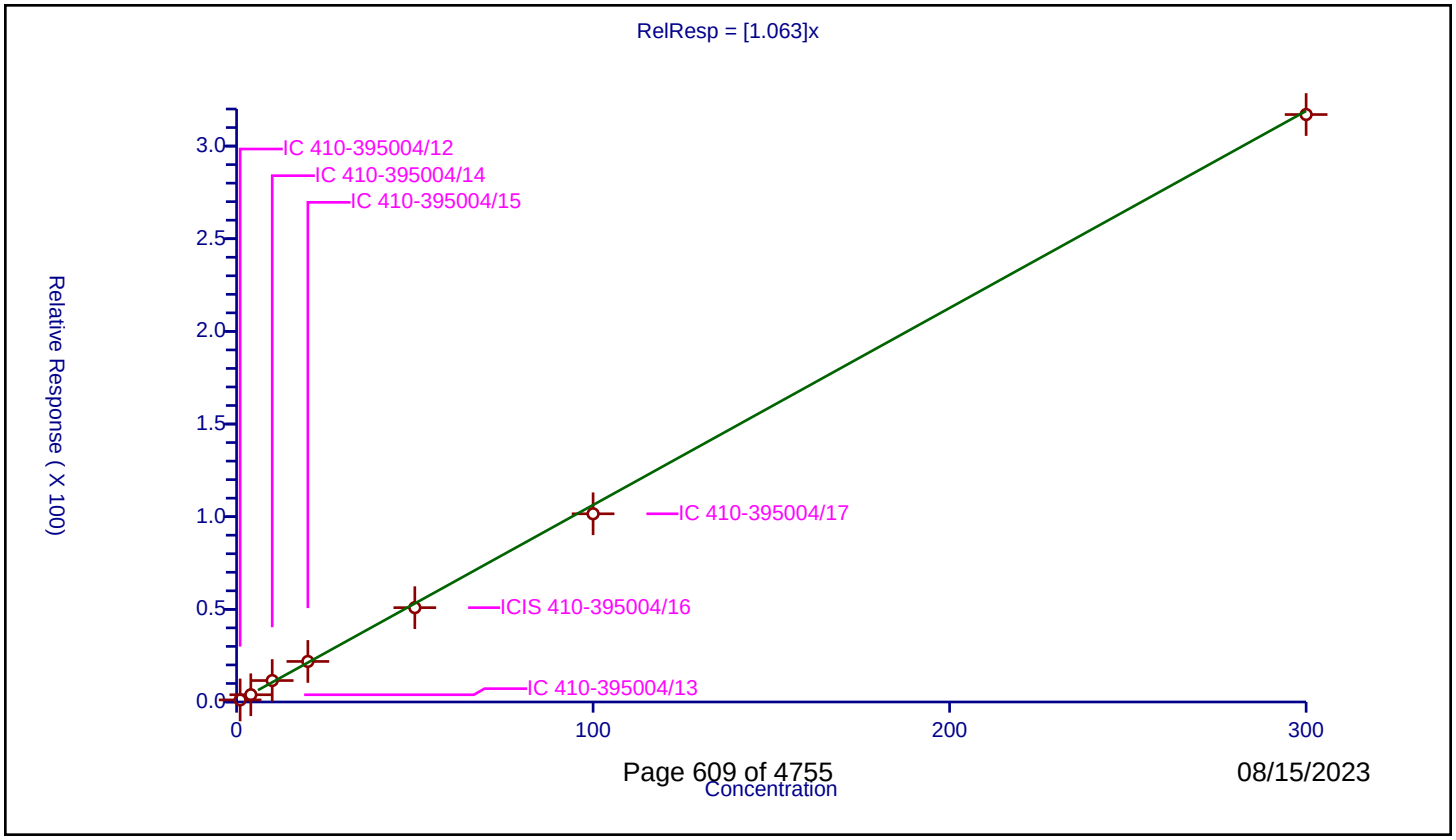
Curve Coefficients

Intercept:	0
Slope:	1.063

Error Coefficients

Standard Error:	2840000
Relative Standard Error:	6.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	1.121504	50.0	851847.0	1.121504	Y
2	IC 410-395004/13	4.0	3.912146	50.0	881281.0	0.978037	Y
3	IC 410-395004/14	10.0	11.581545	50.0	843523.0	1.158155	Y
4	IC 410-395004/15	20.0	21.874418	50.0	859296.0	1.093721	Y
5	ICIS 410-395004/16	50.0	50.901251	50.0	918889.0	1.018025	Y
6	IC 410-395004/17	100.0	101.565436	50.0	1029809.0	1.015654	Y
7	IC 410-395004/18	300.0	317.017362	50.0	1032710.0	1.056725	Y



Calibration / 1-Chlorohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

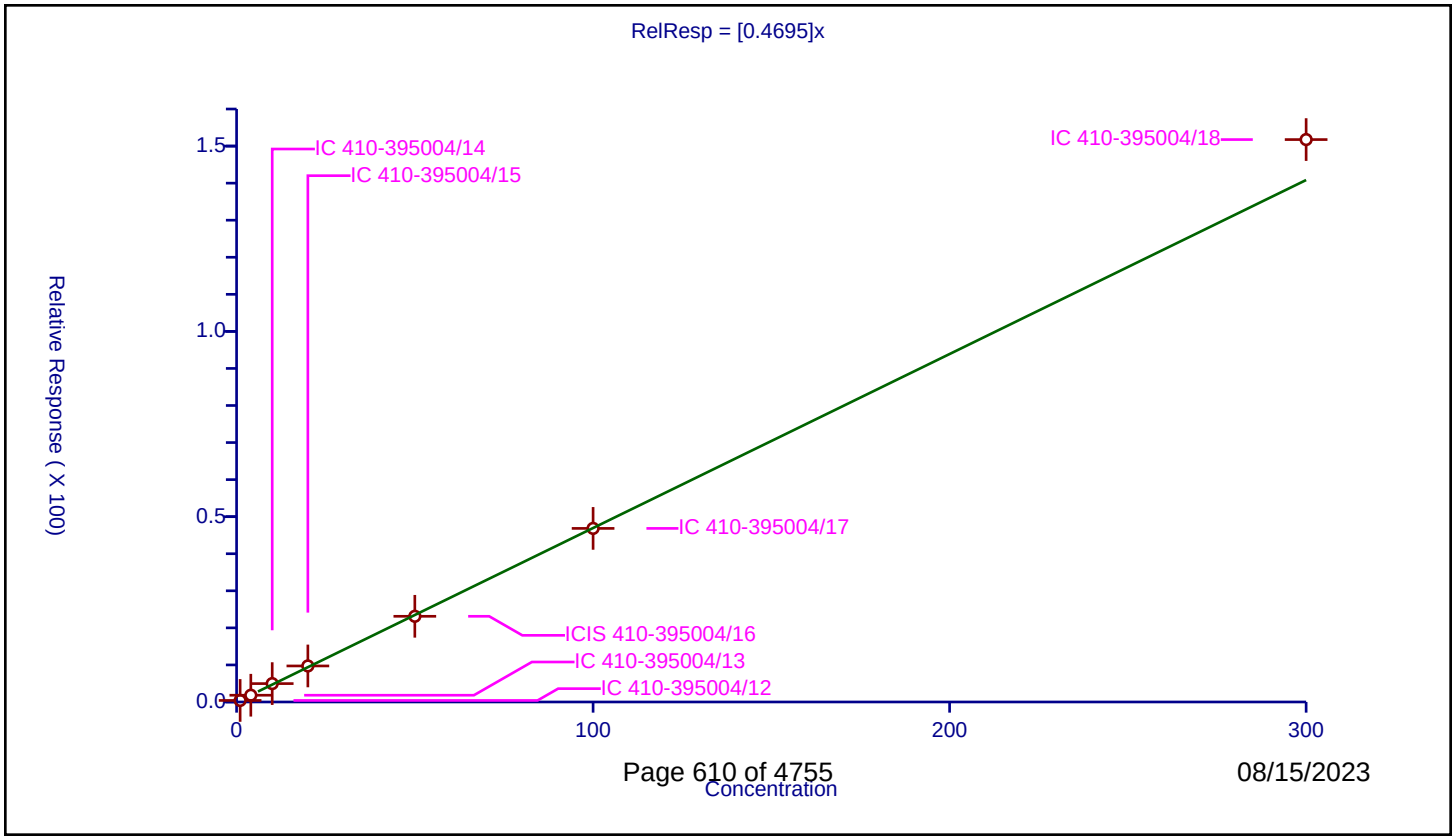
Curve Coefficients

Intercept:	0
Slope:	0.4695

Error Coefficients

Standard Error:	1350000
Relative Standard Error:	6.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.412105	50.0	851847.0	0.412105	Y
2	IC 410-395004/13	4.0	1.820588	50.0	881281.0	0.455147	Y
3	IC 410-395004/14	10.0	4.960683	50.0	843523.0	0.496068	Y
4	IC 410-395004/15	20.0	9.724181	50.0	859296.0	0.486209	Y
5	ICIS 410-395004/16	50.0	23.119659	50.0	918889.0	0.462393	Y
6	IC 410-395004/17	100.0	46.837715	50.0	1029809.0	0.468377	Y
7	IC 410-395004/18	300.0	151.756301	50.0	1032710.0	0.505854	Y



Calibration / 1,1,1,2-Tetrachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

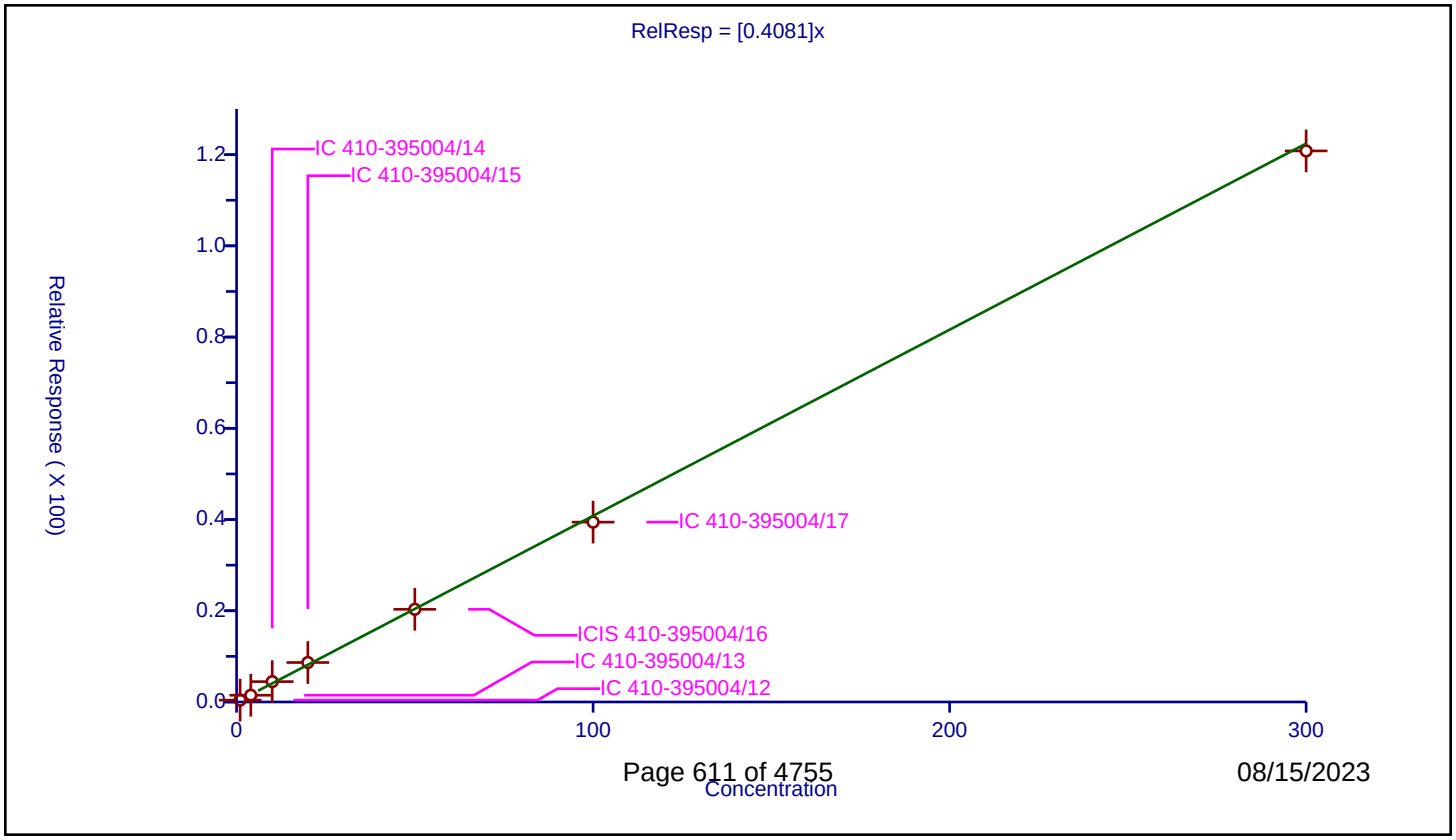
Curve Coefficients

Intercept:	0
Slope:	0.4081

Error Coefficients

Standard Error:	1080000
Relative Standard Error:	6.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.403594	50.0	851847.0	0.403594	Y
2	IC 410-395004/13	4.0	1.480118	50.0	881281.0	0.37003	Y
3	IC 410-395004/14	10.0	4.466209	50.0	843523.0	0.446621	Y
4	IC 410-395004/15	20.0	8.65697	50.0	859296.0	0.432849	Y
5	ICIS 410-395004/16	50.0	20.320572	50.0	918889.0	0.406411	Y
6	IC 410-395004/17	100.0	39.432215	50.0	1029809.0	0.394322	Y
7	IC 410-395004/18	300.0	120.815476	50.0	1032710.0	0.402718	Y



Calibration / Ethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

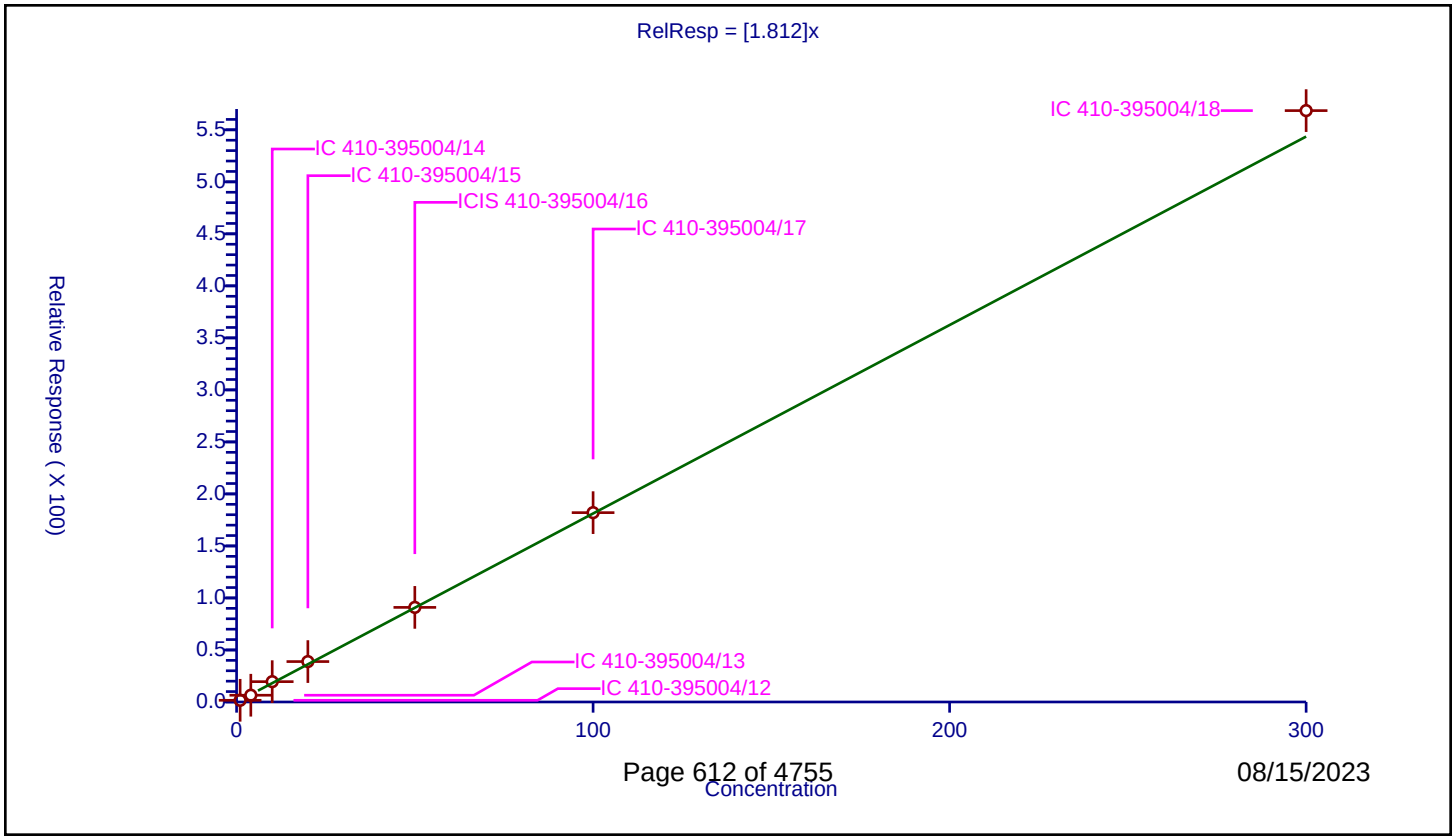
Curve Coefficients

Intercept:	0
Slope:	1.812

Error Coefficients

Standard Error:	5090000
Relative Standard Error:	7.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	1.626524	50.0	851847.0	1.626524	Y
2	IC 410-395004/13	4.0	6.500821	50.0	881281.0	1.625205	Y
3	IC 410-395004/14	10.0	19.543273	50.0	843523.0	1.954327	Y
4	IC 410-395004/15	20.0	38.842727	50.0	859296.0	1.942136	Y
5	ICIS 410-395004/16	50.0	90.938949	50.0	918889.0	1.818779	Y
6	IC 410-395004/17	100.0	182.017928	50.0	1029809.0	1.820179	Y
7	IC 410-395004/18	300.0	568.450339	50.0	1032710.0	1.894834	Y



Calibration / m-Xylene & p-Xylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

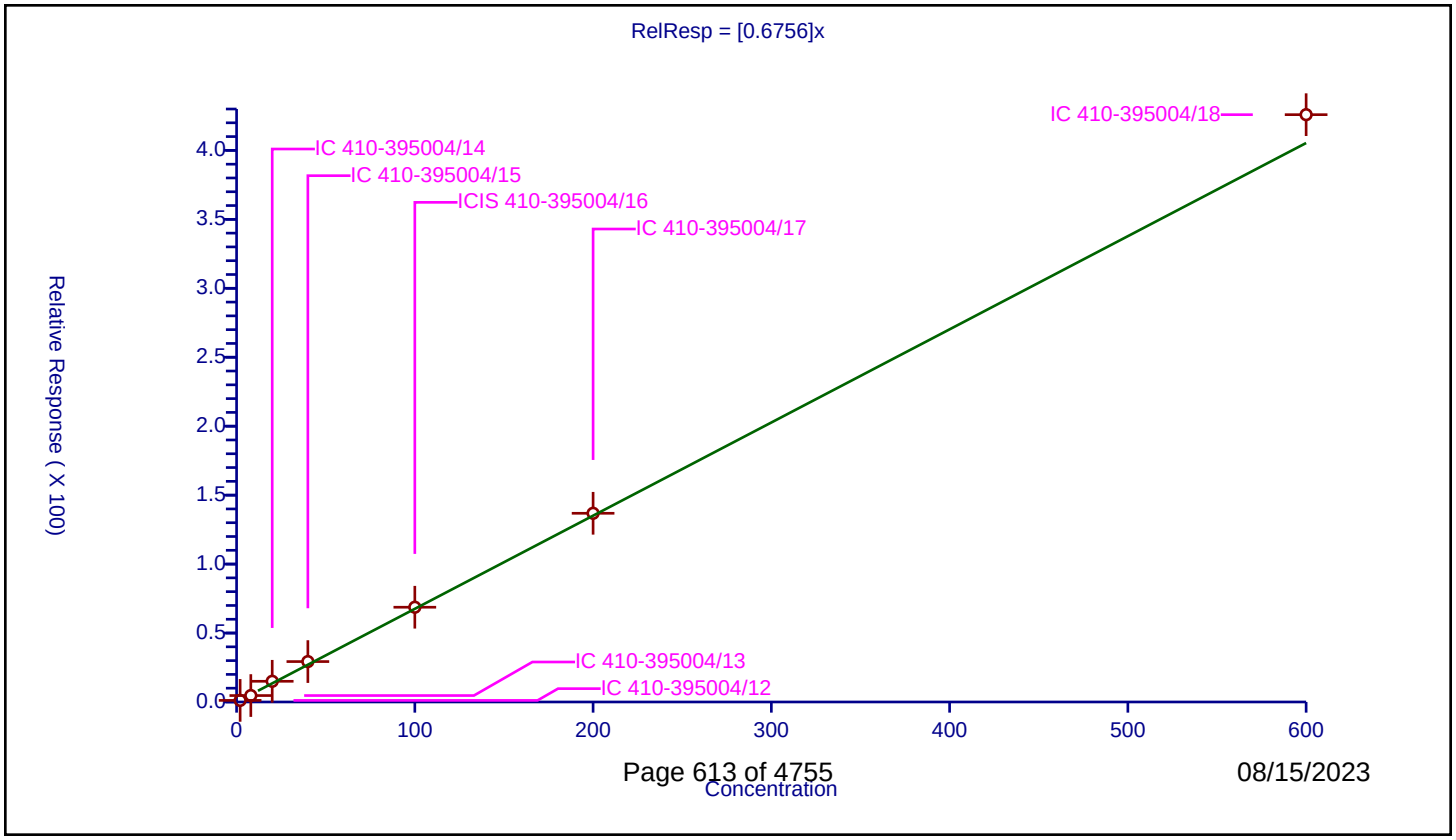
Curve Coefficients

Intercept:	0
Slope:	0.6756

Error Coefficients

Standard Error:	3810000
Relative Standard Error:	10.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	2.0	1.15995	50.0	851847.0	0.579975	Y
2	IC 410-395004/13	8.0	4.677452	50.0	881281.0	0.584682	Y
3	IC 410-395004/14	20.0	15.010083	50.0	843523.0	0.750504	Y
4	IC 410-395004/15	40.0	29.307771	50.0	859296.0	0.732694	Y
5	ICIS 410-395004/16	100.0	68.712706	50.0	918889.0	0.687127	Y
6	IC 410-395004/17	200.0	136.848435	50.0	1029809.0	0.684242	Y
7	IC 410-395004/18	600.0	425.901027	50.0	1032710.0	0.709835	Y



Calibration / o-Xylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

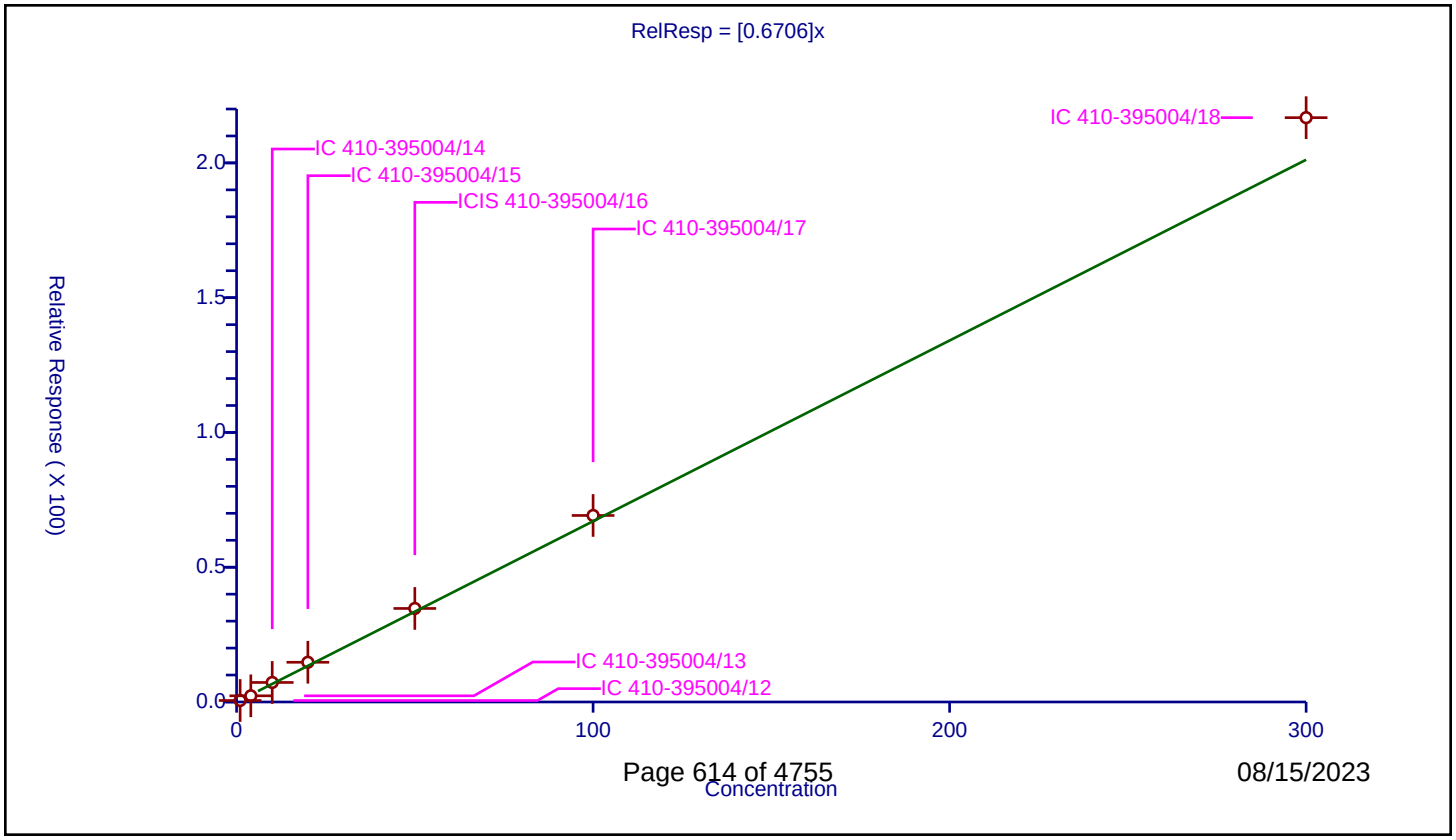
Curve Coefficients

Intercept:	0
Slope:	0.6706

Error Coefficients

Standard Error:	1940000
Relative Standard Error:	11.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.551214	50.0	851847.0	0.551214	Y
2	IC 410-395004/13	4.0	2.290359	50.0	881281.0	0.57259	Y
3	IC 410-395004/14	10.0	7.247876	50.0	843523.0	0.724788	Y
4	IC 410-395004/15	20.0	14.732583	50.0	859296.0	0.736629	Y
5	ICIS 410-395004/16	50.0	34.701743	50.0	918889.0	0.694035	Y
6	IC 410-395004/17	100.0	69.20361	50.0	1029809.0	0.692036	Y
7	IC 410-395004/18	300.0	216.796535	50.0	1032710.0	0.722655	Y



Calibration / Styrene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

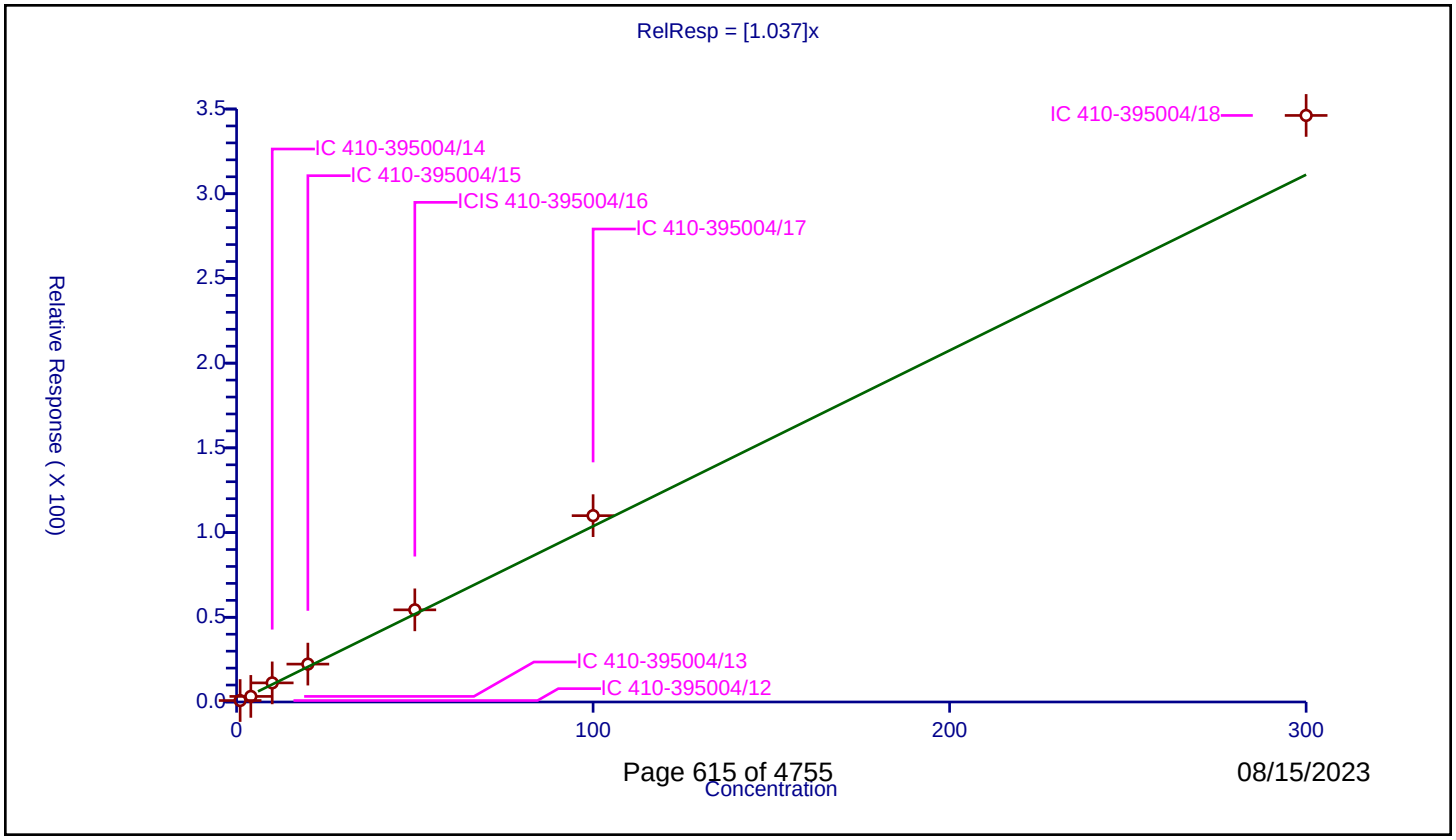
Curve Coefficients

Intercept:	0
Slope:	1.037

Error Coefficients

Standard Error:	3090000
Relative Standard Error:	13.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.981

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.850798	50.0	851847.0	0.850798	Y
2	IC 410-395004/13	4.0	3.295487	50.0	881281.0	0.823872	Y
3	IC 410-395004/14	10.0	11.282798	50.0	843523.0	1.12828	Y
4	IC 410-395004/15	20.0	22.352949	50.0	859296.0	1.117647	Y
5	ICIS 410-395004/16	50.0	54.386058	50.0	918889.0	1.087721	Y
6	IC 410-395004/17	100.0	109.974762	50.0	1029809.0	1.099748	Y
7	IC 410-395004/18	300.0	346.200918	50.0	1032710.0	1.154003	Y



Calibration / Bromoform

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

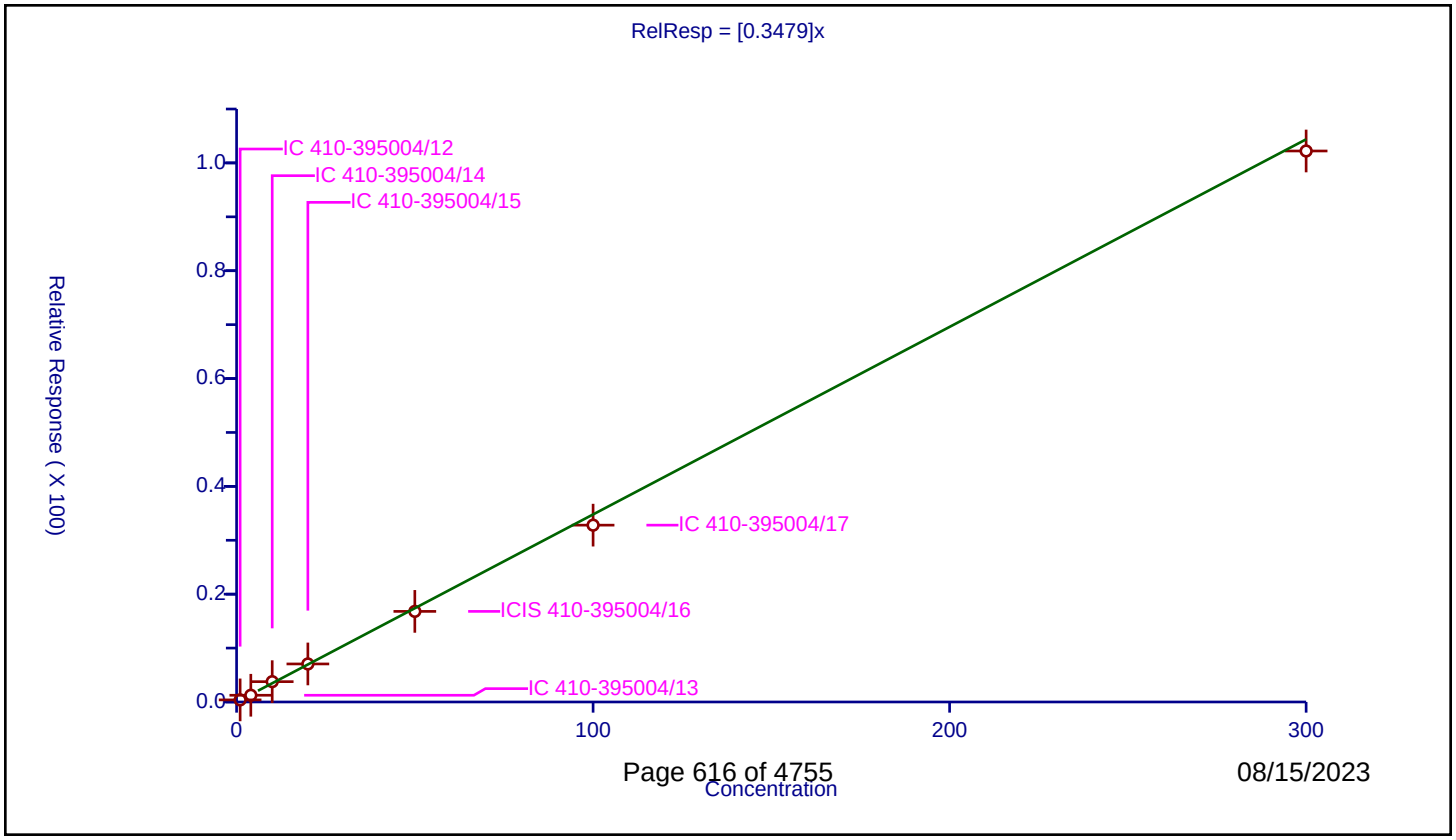
Curve Coefficients

Intercept:	0
Slope:	0.3479

Error Coefficients

Standard Error:	915000
Relative Standard Error:	7.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.387452	50.0	851847.0	0.387452	Y
2	IC 410-395004/13	4.0	1.251304	50.0	881281.0	0.312826	Y
3	IC 410-395004/14	10.0	3.773341	50.0	843523.0	0.377334	Y
4	IC 410-395004/15	20.0	7.057929	50.0	859296.0	0.352896	Y
5	ICIS 410-395004/16	50.0	16.80709	50.0	918889.0	0.336142	Y
6	IC 410-395004/17	100.0	32.80453	50.0	1029809.0	0.328045	Y
7	IC 410-395004/18	300.0	102.21156	50.0	1032710.0	0.340705	Y



Calibration / Isopropylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

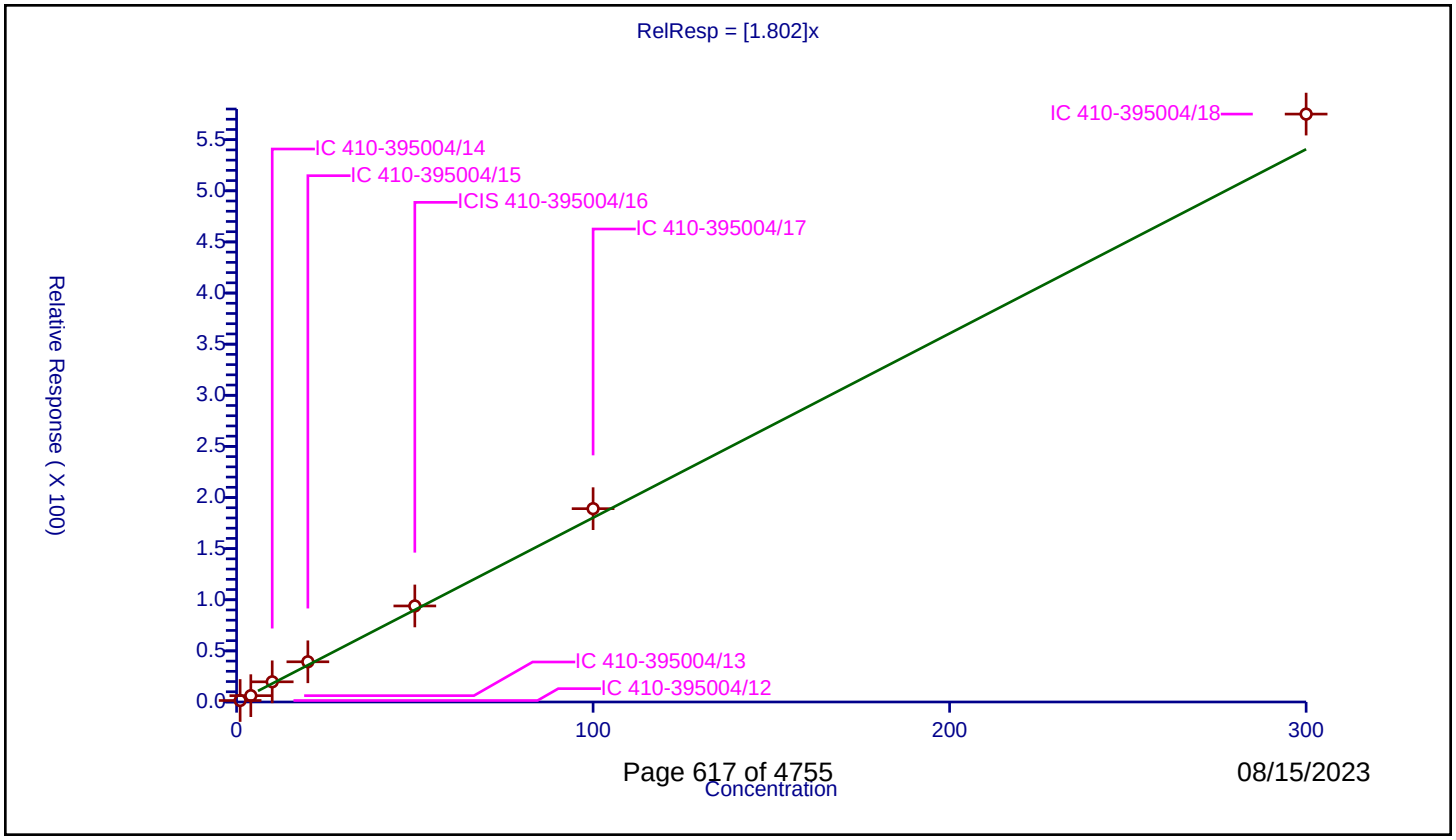
Curve Coefficients

Intercept:	0
Slope:	1.802

Error Coefficients

Standard Error:	5160000
Relative Standard Error:	11.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	1.444215	50.0	851847.0	1.444215	Y
2	IC 410-395004/13	4.0	6.185031	50.0	881281.0	1.546258	Y
3	IC 410-395004/14	10.0	19.723232	50.0	843523.0	1.972323	Y
4	IC 410-395004/15	20.0	39.327426	50.0	859296.0	1.966371	Y
5	ICIS 410-395004/16	50.0	93.938604	50.0	918889.0	1.878772	Y
6	IC 410-395004/17	100.0	189.093172	50.0	1029809.0	1.890932	Y
7	IC 410-395004/18	300.0	575.05563	50.0	1032710.0	1.916852	Y



Calibration / Cyclohexanone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

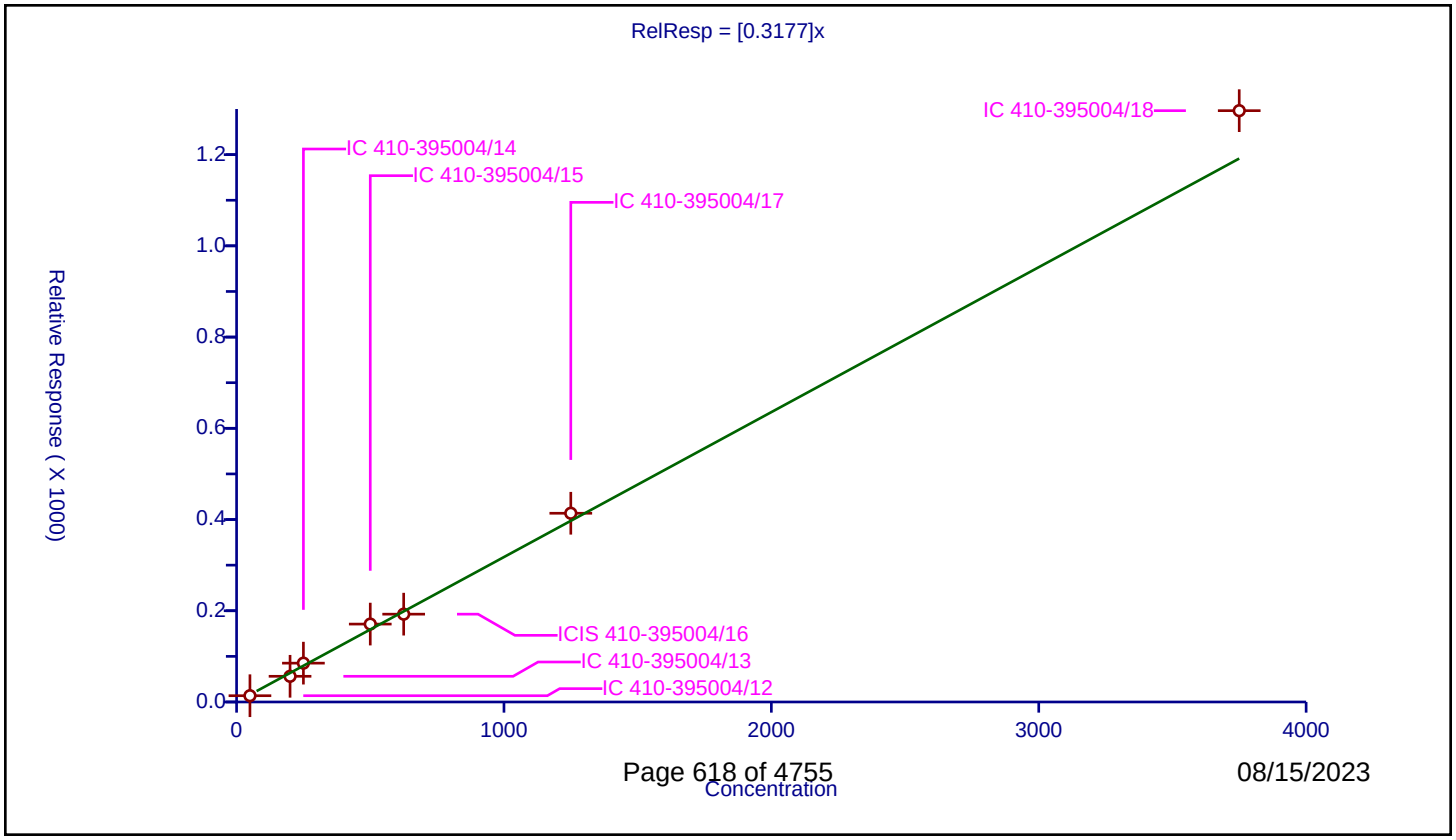
Curve Coefficients

Intercept:	0
Slope:	0.3177

Error Coefficients

Standard Error:	1470000
Relative Standard Error:	9.3
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	49.998	13.768002	250.0	542635.0	0.275371	Y
2	IC 410-395004/13	199.992	56.307207	250.0	580019.0	0.281547	Y
3	IC 410-395004/14	249.99	85.152308	250.0	512285.0	0.340623	Y
4	IC 410-395004/15	499.98	170.820255	250.0	546074.0	0.341654	Y
5	ICIS 410-395004/16	624.975	192.561159	250.0	574041.0	0.30811	Y
6	IC 410-395004/17	1249.95	413.773302	250.0	603392.0	0.331032	Y
7	IC 410-395004/18	3749.85	1296.3918	250.0	658306.0	0.345718	Y



Calibration / 4-Bromofluorobenzene (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

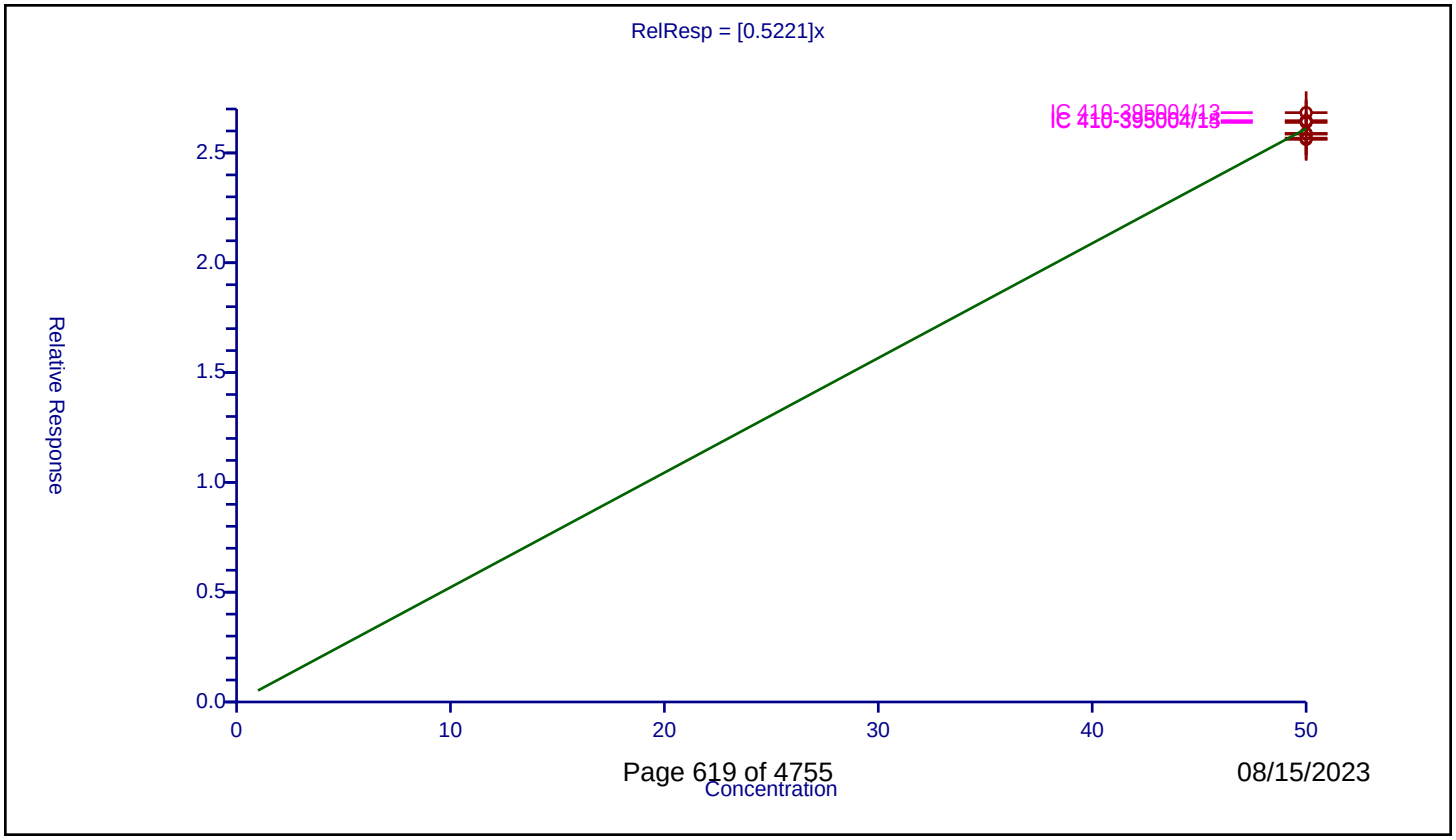
Curve Coefficients

Intercept:	0
Slope:	0.5221

Error Coefficients

Standard Error:	518000
Relative Standard Error:	1.8
Correlation Coefficient:	0.00000000000000000000
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	50.0	25.672451	50.0	851847.0	0.513449	Y
2	IC 410-395004/13	50.0	26.834971	50.0	881281.0	0.536699	Y
3	IC 410-395004/14	50.0	26.469047	50.0	843523.0	0.529381	Y
4	IC 410-395004/15	50.0	26.388869	50.0	859296.0	0.527777	Y
5	ICIS 410-395004/16	50.0	25.618274	50.0	918889.0	0.512365	Y
6	IC 410-395004/17	50.0	25.85829	50.0	1029809.0	0.517166	Y
7	IC 410-395004/18	50.0	25.889988	50.0	1032710.0	0.5178	Y



Calibration / Bromobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

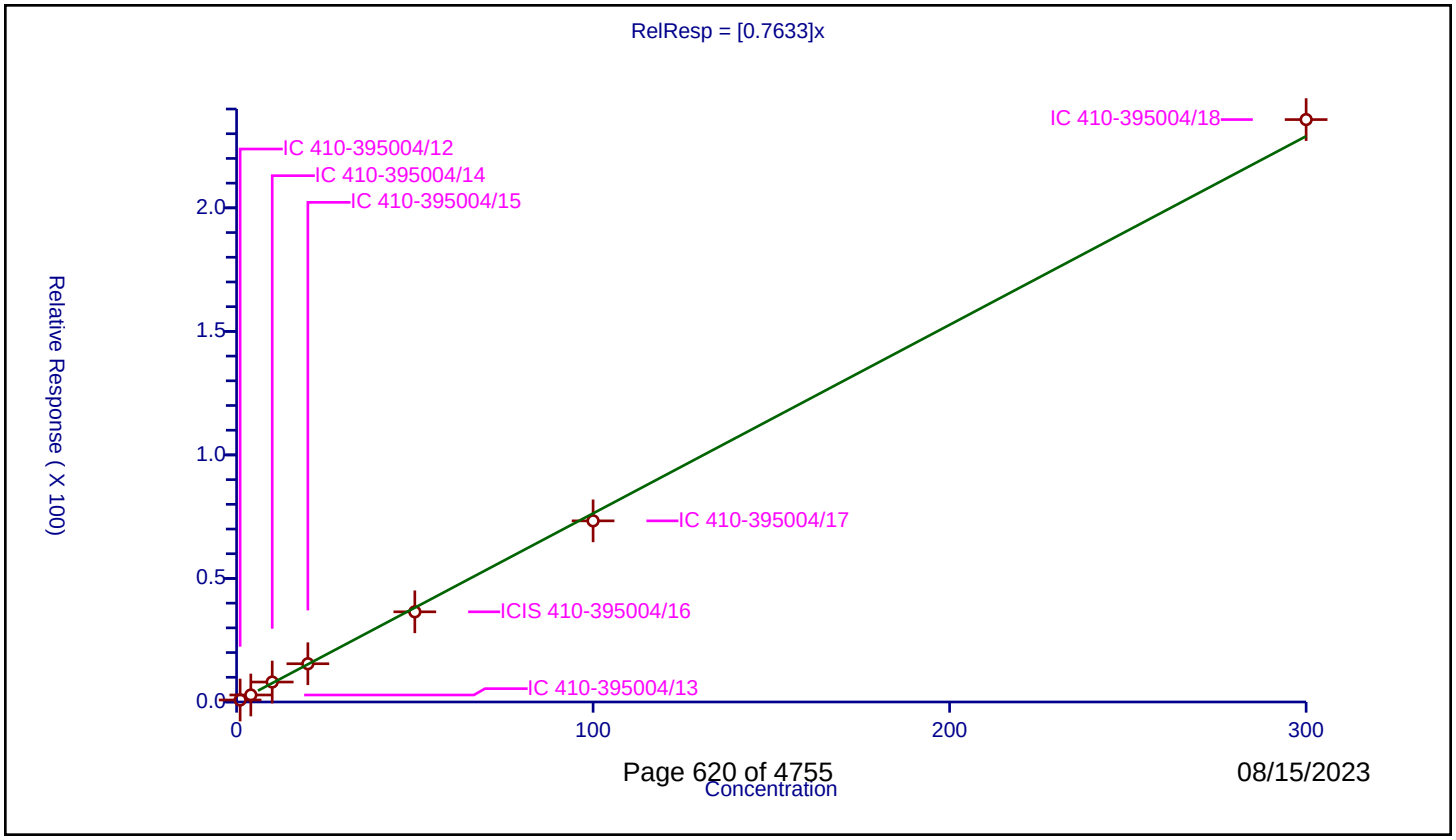
Curve Coefficients

Intercept:	0
Slope:	0.7633

Error Coefficients

Standard Error:	1180000
Relative Standard Error:	5.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.804652	50.0	514881.0	0.804652	Y
2	IC 410-395004/13	4.0	2.83037	50.0	556111.0	0.707593	Y
3	IC 410-395004/14	10.0	8.077837	50.0	526818.0	0.807784	Y
4	IC 410-395004/15	20.0	15.485179	50.0	525425.0	0.774259	Y
5	ICIS 410-395004/16	50.0	36.492306	50.0	553355.0	0.729846	Y
6	IC 410-395004/17	100.0	73.311942	50.0	603978.0	0.733119	Y
7	IC 410-395004/18	300.0	235.730069	50.0	576548.0	0.785767	Y



08/15/2023

Calibration / 1,1,2,2-Tetrachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

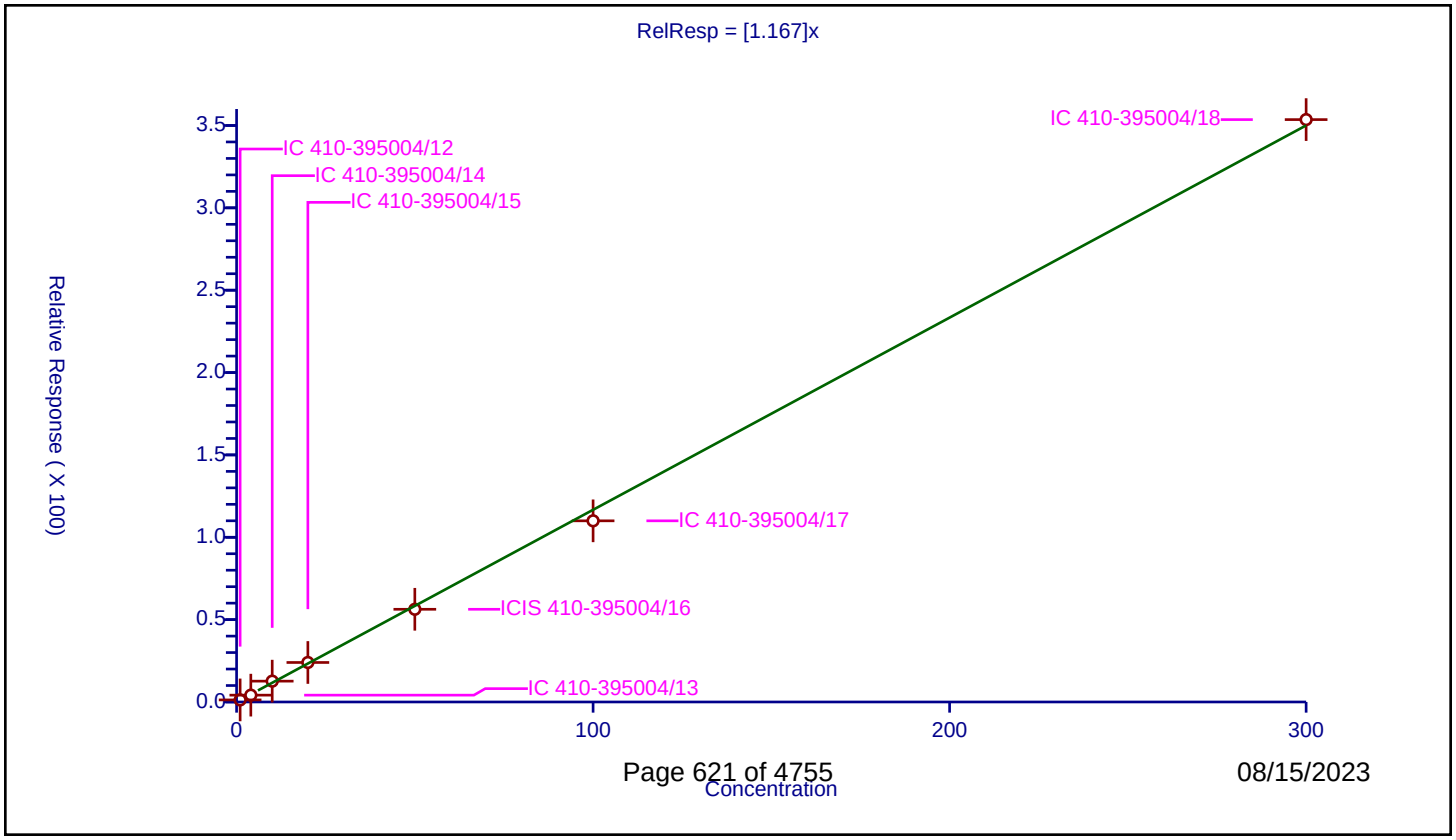
Curve Coefficients

Intercept:	0
Slope:	1.167

Error Coefficients

Standard Error:	1770000
Relative Standard Error:	7.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	1.260388	50.0	514881.0	1.260388	Y
2	IC 410-395004/13	4.0	4.150251	50.0	556111.0	1.037563	Y
3	IC 410-395004/14	10.0	12.659116	50.0	526818.0	1.265912	Y
4	IC 410-395004/15	20.0	23.985631	50.0	525425.0	1.199282	Y
5	ICIS 410-395004/16	50.0	56.290808	50.0	553355.0	1.125816	Y
6	IC 410-395004/17	100.0	109.980496	50.0	603978.0	1.099805	Y
7	IC 410-395004/18	300.0	353.57351	50.0	576548.0	1.178578	Y



Calibration / trans-1,4-Dichloro-2-butene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

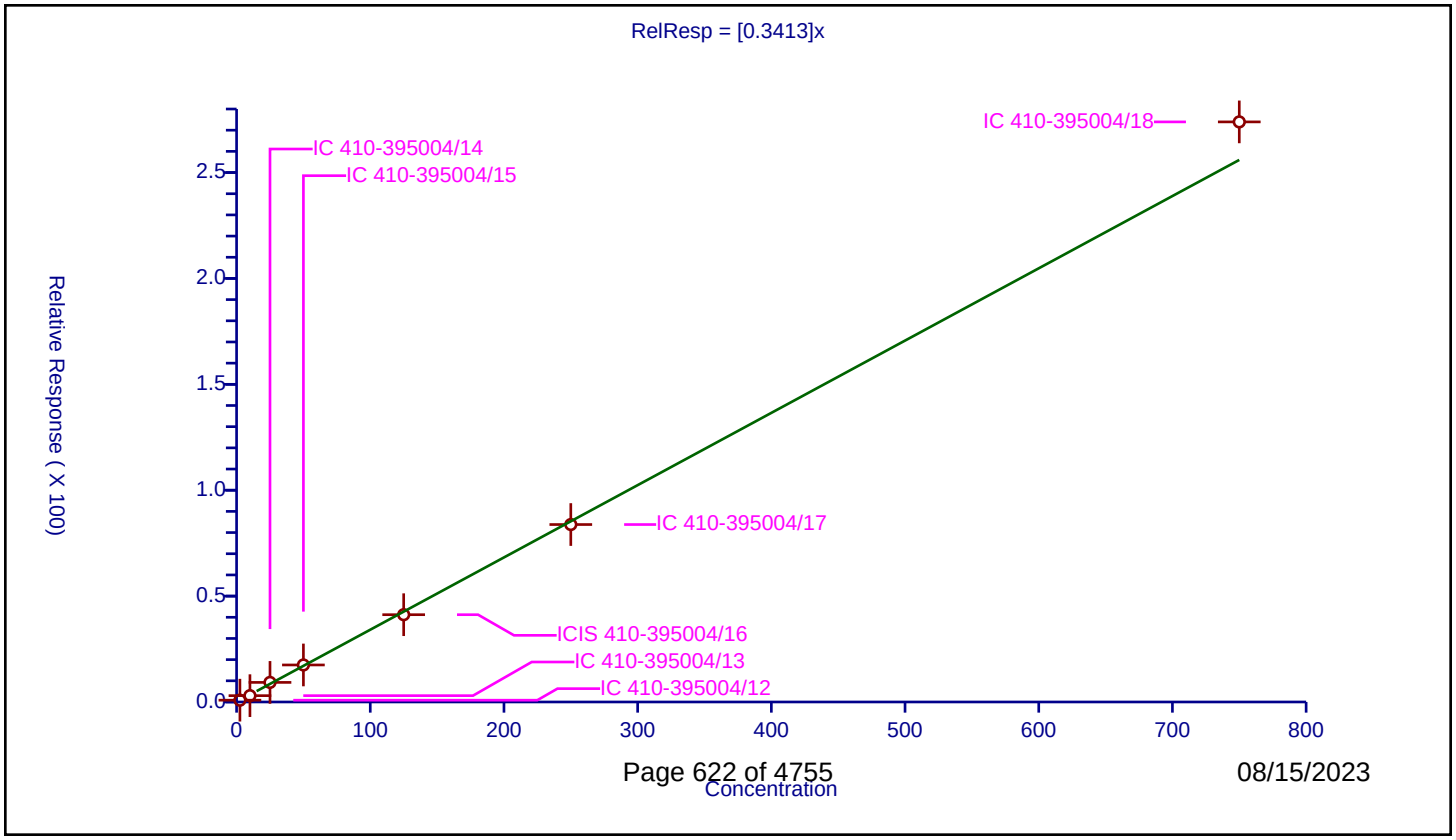
Curve Coefficients

Intercept:	0
Slope:	0.3413

Error Coefficients

Standard Error:	1370000
Relative Standard Error:	7.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	2.5	0.85175	50.0	514881.0	0.3407	Y
2	IC 410-395004/13	10.0	2.986184	50.0	556111.0	0.298618	Y
3	IC 410-395004/14	25.0	9.244938	50.0	526818.0	0.369798	Y
4	IC 410-395004/15	50.0	17.490032	50.0	525425.0	0.349801	Y
5	ICIS 410-395004/16	125.0	41.217392	50.0	553355.0	0.329739	Y
6	IC 410-395004/17	250.0	83.788482	50.0	603978.0	0.335154	Y
7	IC 410-395004/18	750.0	273.914227	50.0	576548.0	0.365219	Y



Calibration / 1,2,3-Trichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

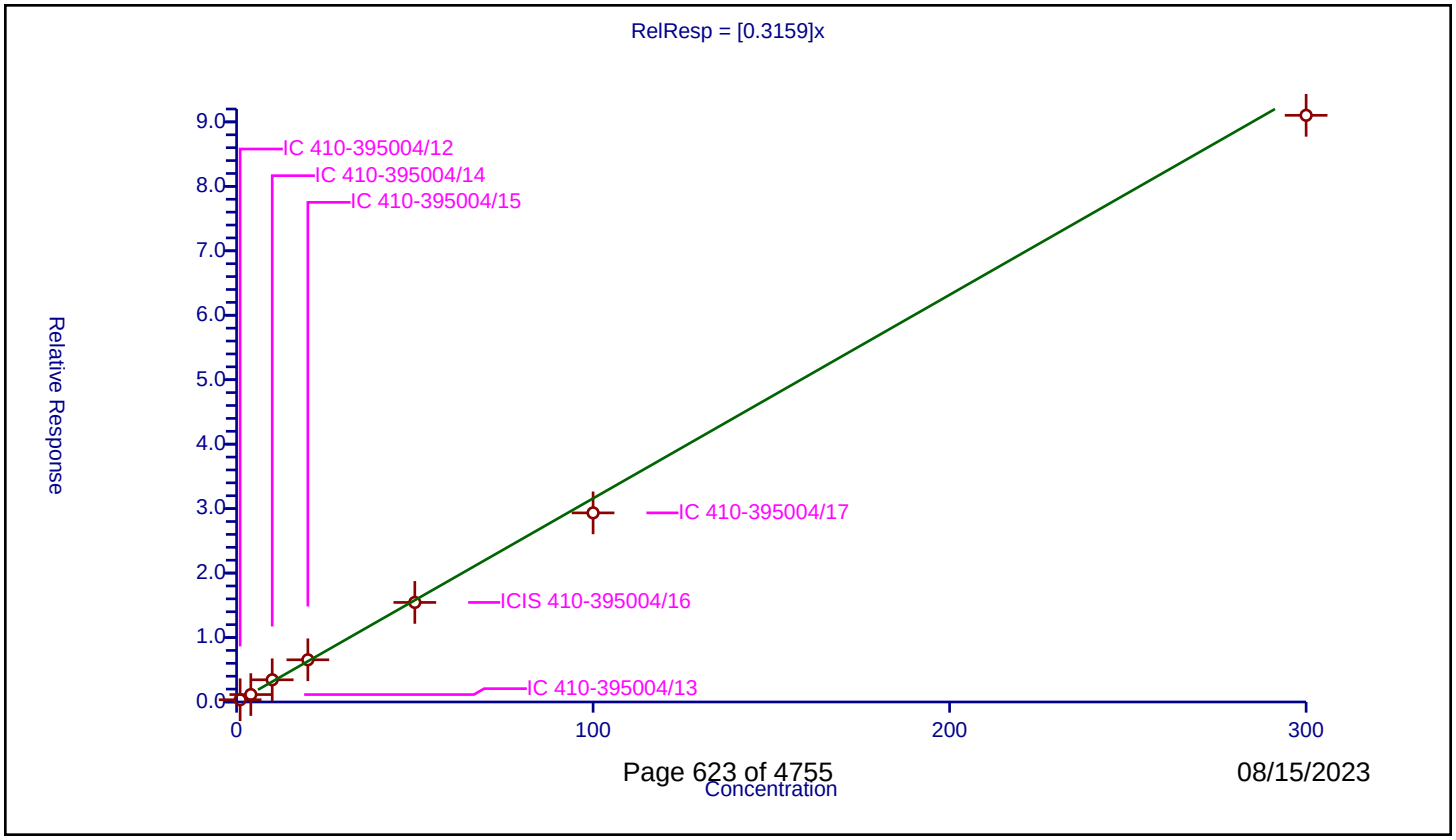
Curve Coefficients

Intercept:	0
Slope:	0.3159

Error Coefficients

Standard Error:	459000
Relative Standard Error:	7.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.345031	50.0	514881.0	0.345031	Y
2	IC 410-395004/13	4.0	1.153727	50.0	556111.0	0.288432	Y
3	IC 410-395004/14	10.0	3.444928	50.0	526818.0	0.344493	Y
4	IC 410-395004/15	20.0	6.545654	50.0	525425.0	0.327283	Y
5	ICIS 410-395004/16	50.0	15.44813	50.0	553355.0	0.308963	Y
6	IC 410-395004/17	100.0	29.339396	50.0	603978.0	0.293394	Y
7	IC 410-395004/18	300.0	91.023037	50.0	576548.0	0.30341	Y



Calibration / N-Propylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

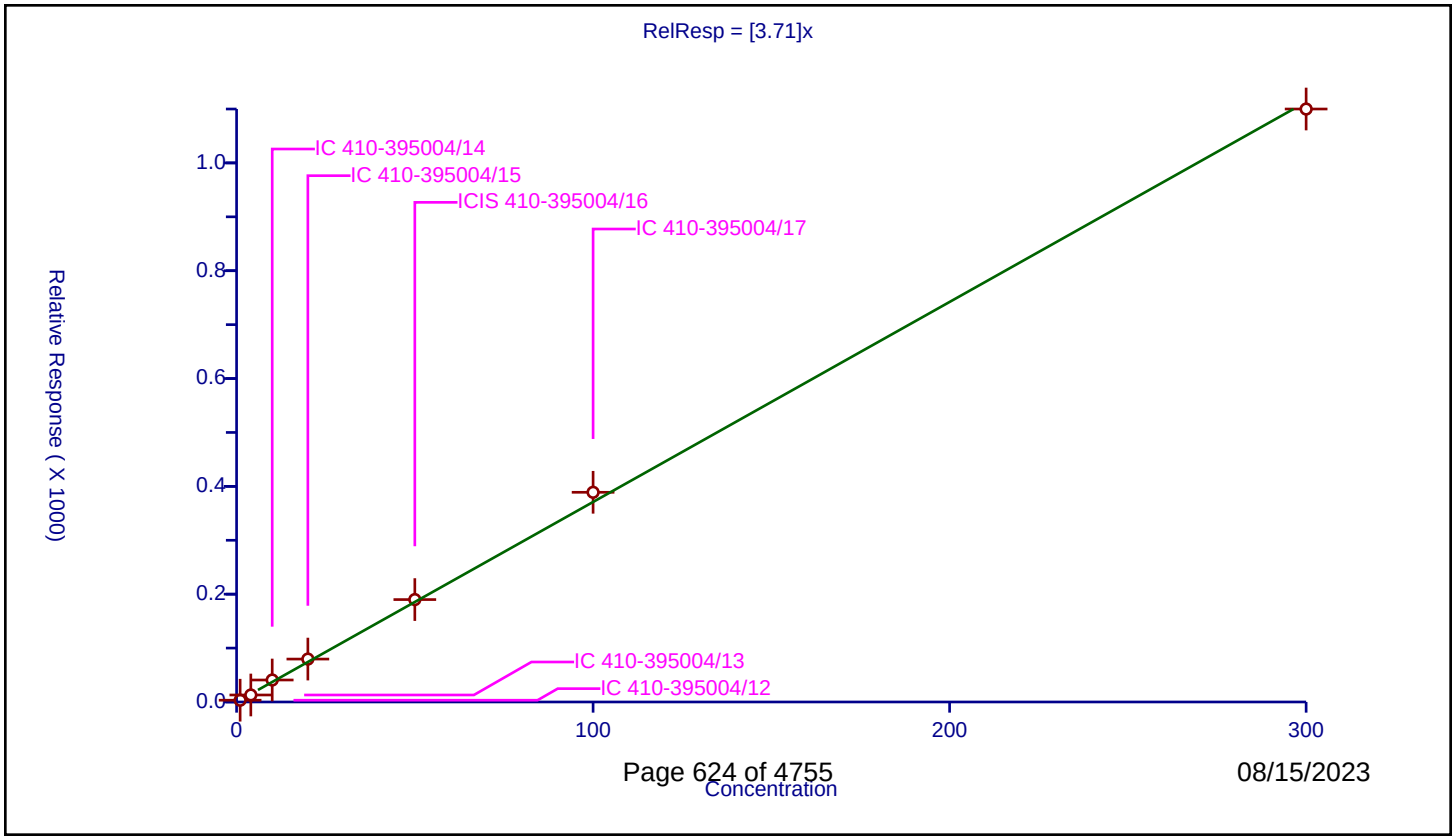
Curve Coefficients

Intercept:	0
Slope:	3.71

Error Coefficients

Standard Error:	5600000
Relative Standard Error:	8.7
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	3.310085	50.0	514881.0	3.310085	Y
2	IC 410-395004/13	4.0	12.985897	50.0	556111.0	3.246474	Y
3	IC 410-395004/14	10.0	40.77803	50.0	526818.0	4.077803	Y
4	IC 410-395004/15	20.0	79.64248	50.0	525425.0	3.982124	Y
5	ICIS 410-395004/16	50.0	189.996928	50.0	553355.0	3.799939	Y
6	IC 410-395004/17	100.0	388.990741	50.0	603978.0	3.889907	Y
7	IC 410-395004/18	300.0	1099.974937	50.0	576548.0	3.666583	Y



Calibration / 2-Chlorotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

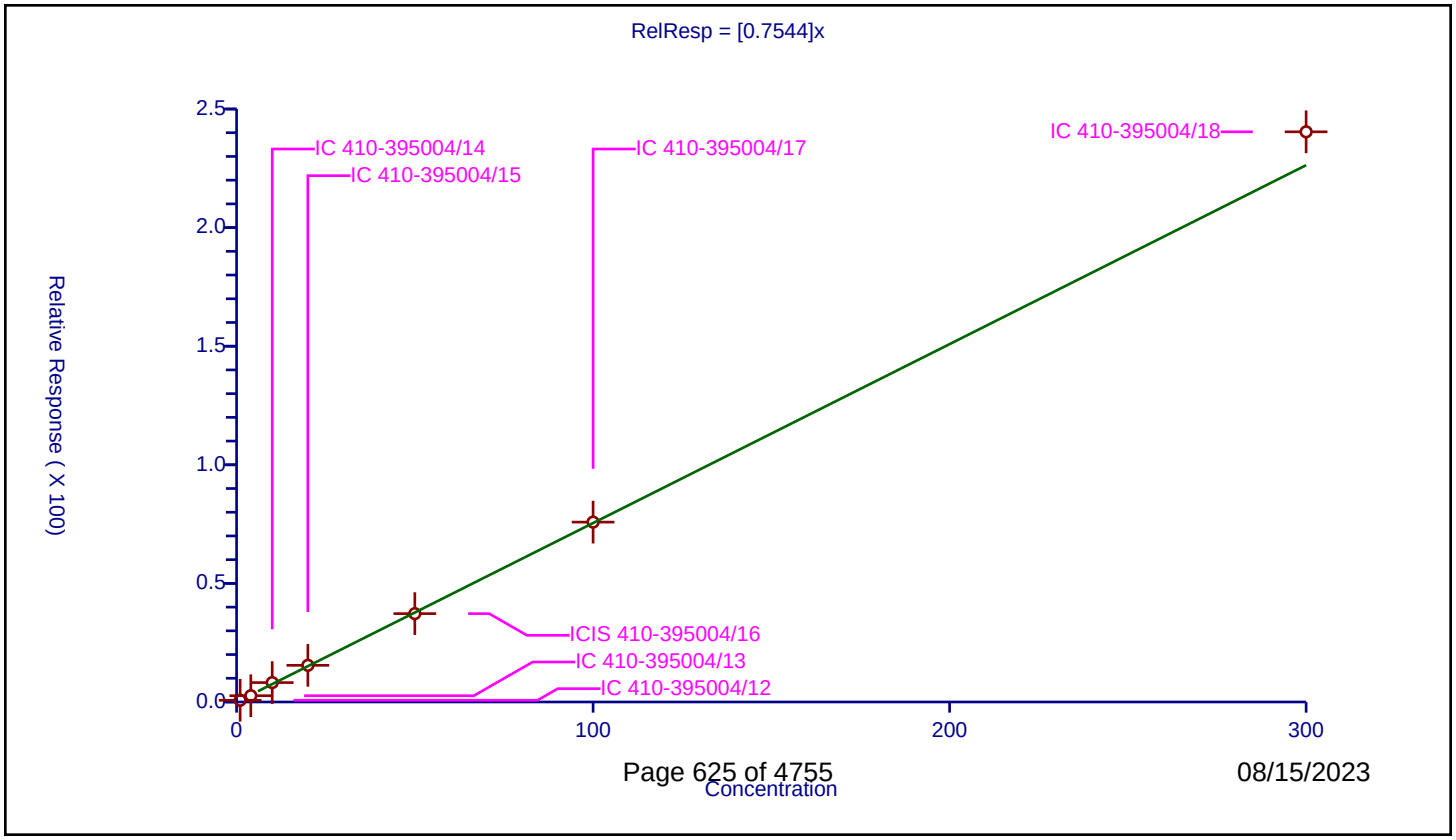
Curve Coefficients

Intercept:	0
Slope:	0.7544

Error Coefficients

Standard Error:	1210000
Relative Standard Error:	6.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.722788	50.0	514881.0	0.722788	Y
2	IC 410-395004/13	4.0	2.651719	50.0	556111.0	0.66293	Y
3	IC 410-395004/14	10.0	8.174455	50.0	526818.0	0.817445	Y
4	IC 410-395004/15	20.0	15.456821	50.0	525425.0	0.772841	Y
5	ICIS 410-395004/16	50.0	37.248331	50.0	553355.0	0.744967	Y
6	IC 410-395004/17	100.0	75.84167	50.0	603978.0	0.758417	Y
7	IC 410-395004/18	300.0	240.385709	50.0	576548.0	0.801286	Y



Calibration / 1,3,5-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

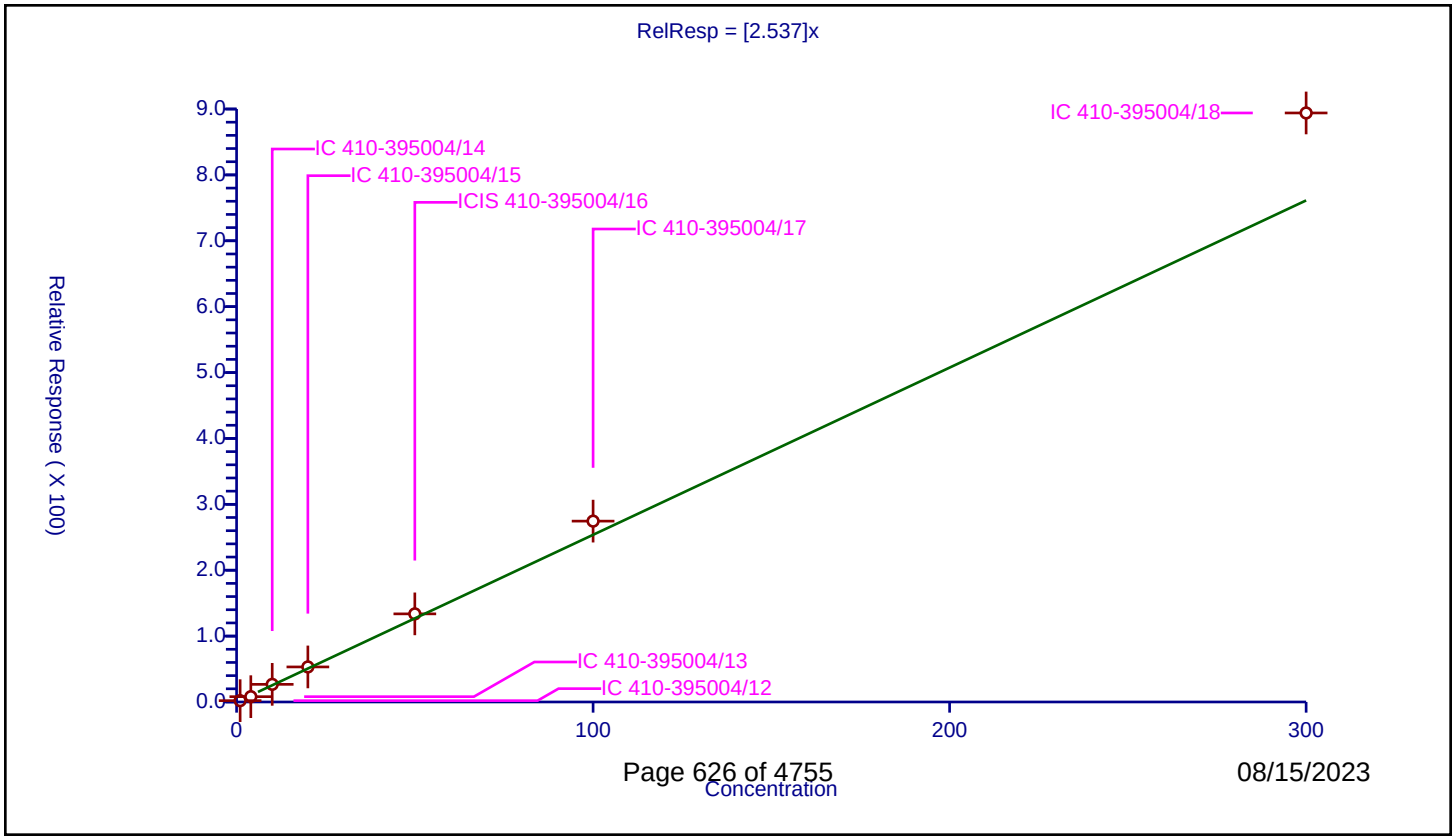
Curve Coefficients

Intercept:	0
Slope:	2.537

Error Coefficients

Standard Error:	4470000
Relative Standard Error:	14.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.978

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	2.009202	50.0	514881.0	2.009202	Y
2	IC 410-395004/13	4.0	8.068893	50.0	556111.0	2.017223	Y
3	IC 410-395004/14	10.0	26.767878	50.0	526818.0	2.676788	Y
4	IC 410-395004/15	20.0	53.186849	50.0	525425.0	2.659342	Y
5	ICIS 410-395004/16	50.0	133.74145	50.0	553355.0	2.674829	Y
6	IC 410-395004/17	100.0	274.496505	50.0	603978.0	2.744965	Y
7	IC 410-395004/18	300.0	893.994516	50.0	576548.0	2.979982	Y



Calibration / 4-Chlorotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

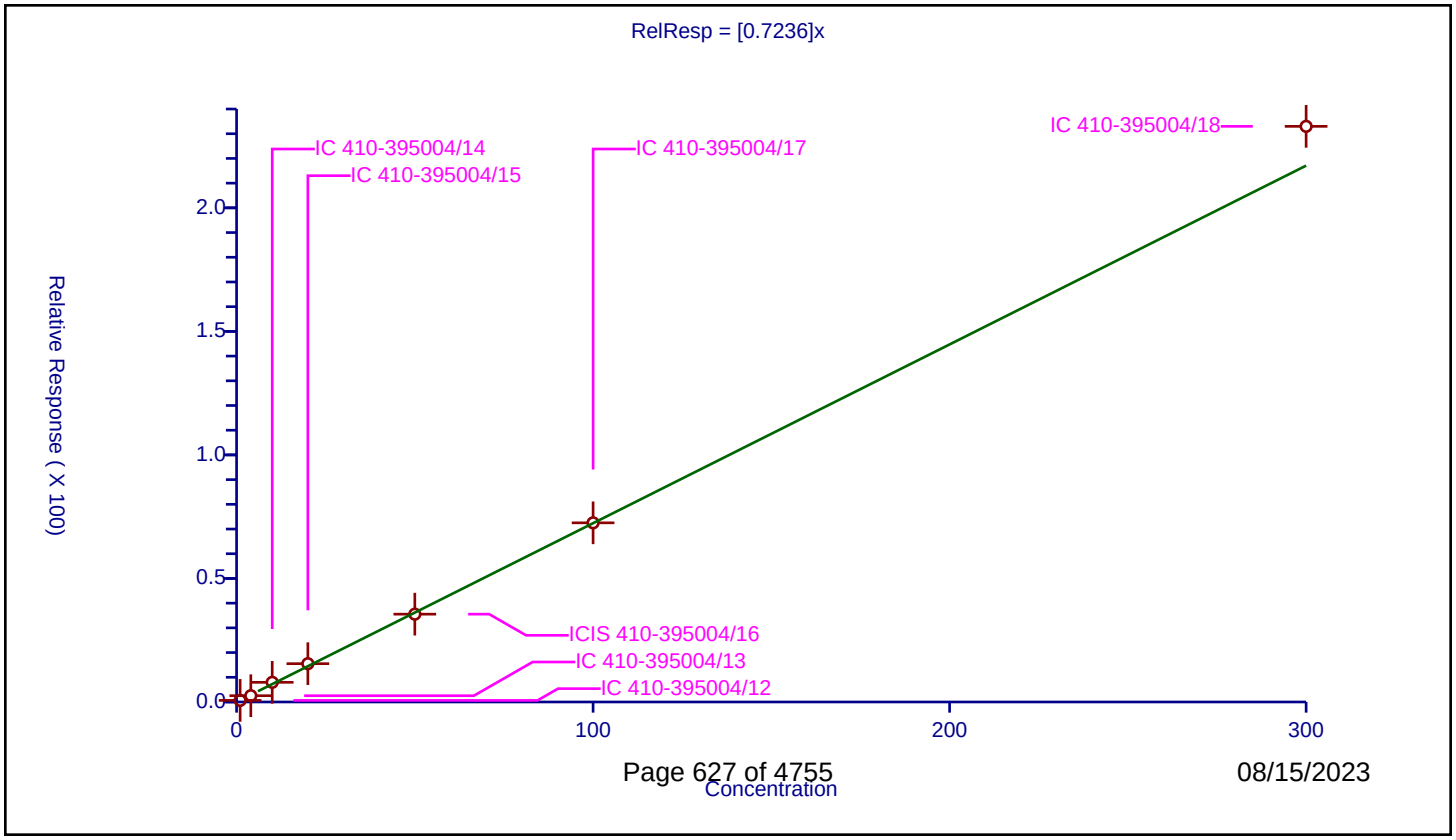
Curve Coefficients

Intercept:	0
Slope:	0.7236

Error Coefficients

Standard Error:	1170000
Relative Standard Error:	8.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.646363	50.0	514881.0	0.646363	Y
2	IC 410-395004/13	4.0	2.542298	50.0	556111.0	0.635575	Y
3	IC 410-395004/14	10.0	7.95455	50.0	526818.0	0.795455	Y
4	IC 410-395004/15	20.0	15.502688	50.0	525425.0	0.775134	Y
5	ICIS 410-395004/16	50.0	35.547253	50.0	553355.0	0.710945	Y
6	IC 410-395004/17	100.0	72.513734	50.0	603978.0	0.725137	Y
7	IC 410-395004/18	300.0	232.983897	50.0	576548.0	0.776613	Y



Calibration / tert-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

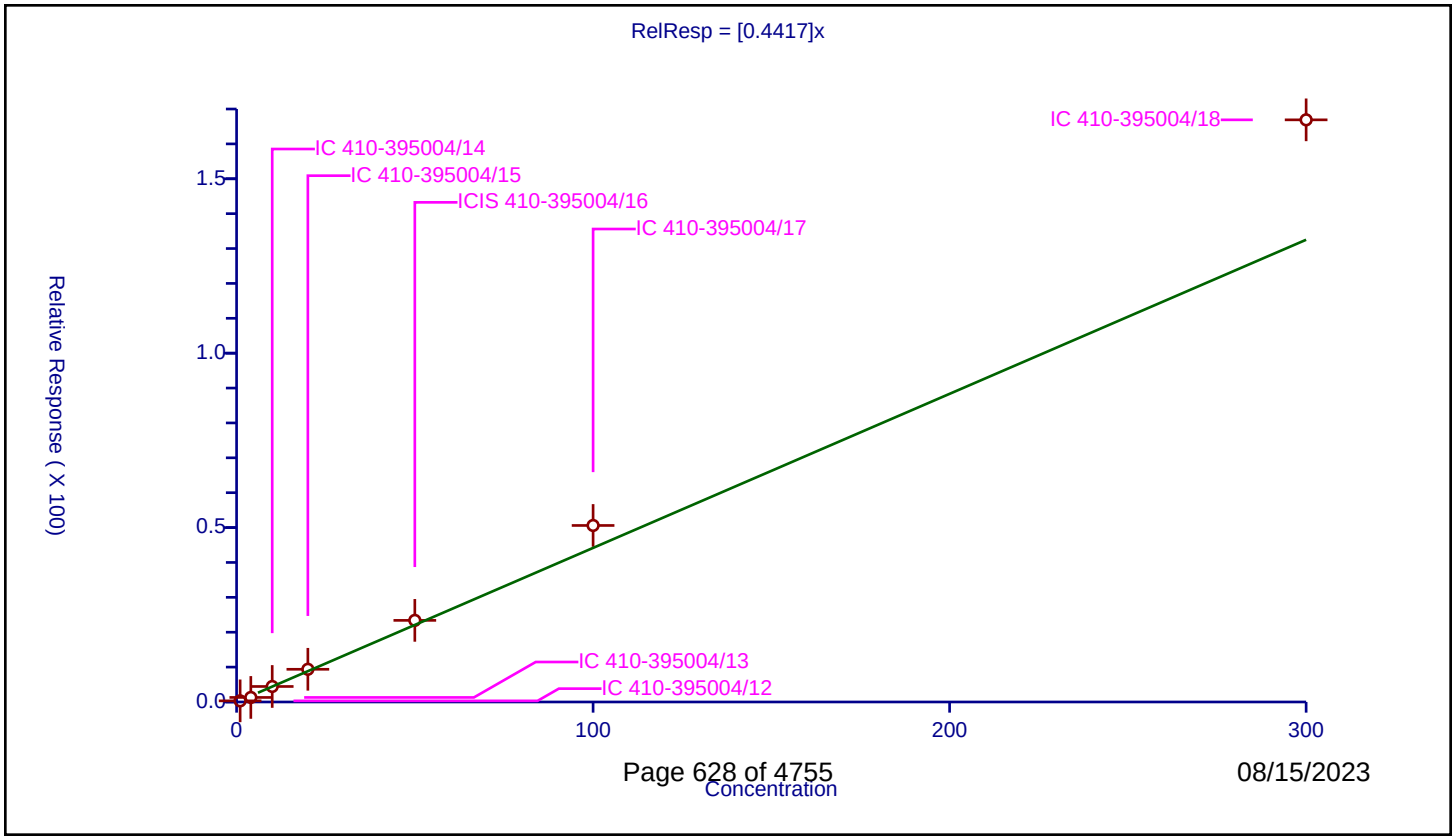
Curve Coefficients

Intercept:	0
Slope:	0.4417

Error Coefficients

Standard Error:	832000
Relative Standard Error:	19.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.961

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.32221	50.0	514881.0	0.32221	Y
2	IC 410-395004/13	4.0	1.303607	50.0	556111.0	0.325902	Y
3	IC 410-395004/14	10.0	4.445748	50.0	526818.0	0.444575	Y
4	IC 410-395004/15	20.0	9.379645	50.0	525425.0	0.468982	Y
5	ICIS 410-395004/16	50.0	23.399807	50.0	553355.0	0.467996	Y
6	IC 410-395004/17	100.0	50.603913	50.0	603978.0	0.506039	Y
7	IC 410-395004/18	300.0	166.89894	50.0	576548.0	0.55633	Y



Calibration / 1,2,4-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

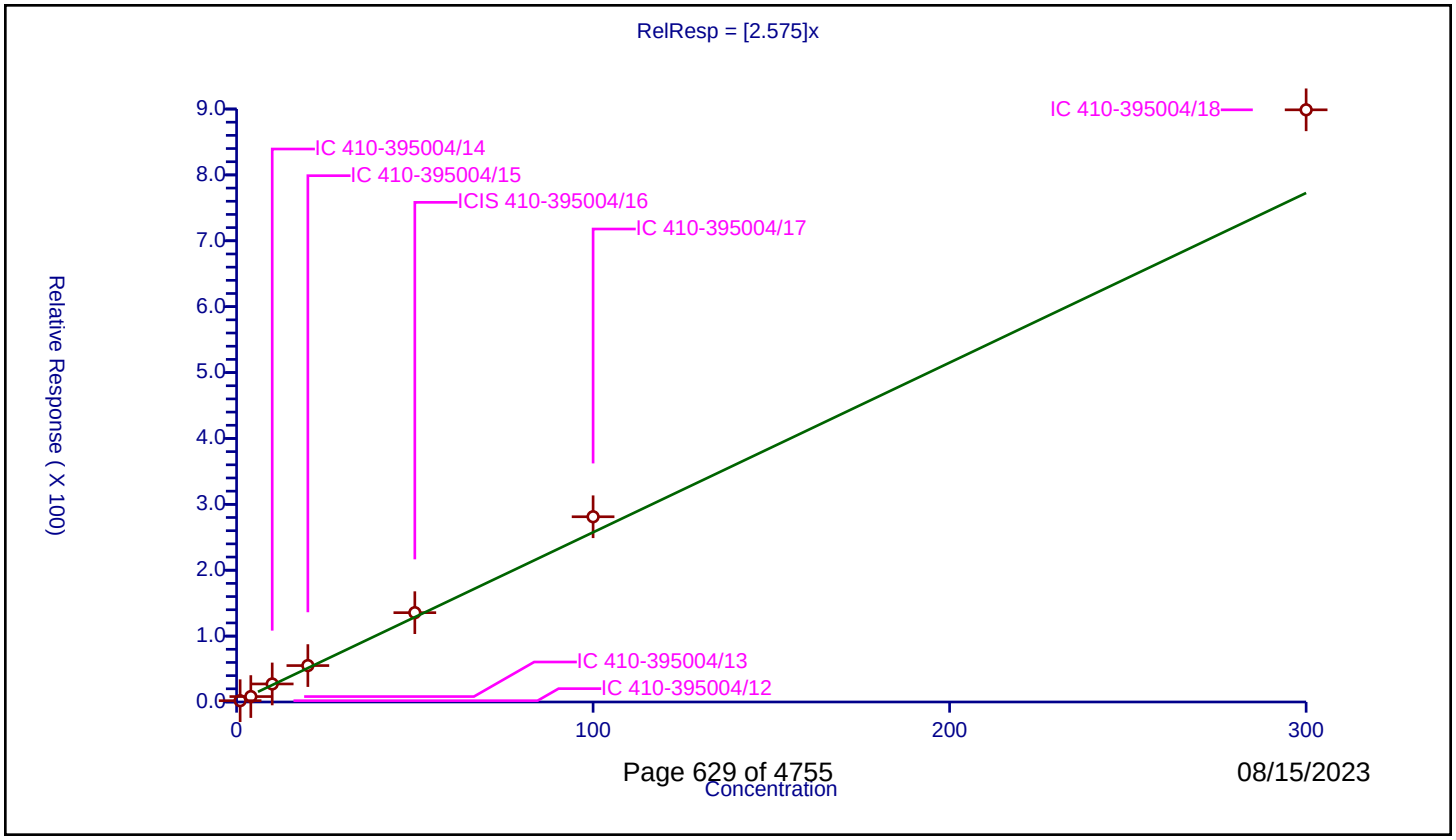
Curve Coefficients

Intercept:	0
Slope:	2.575

Error Coefficients

Standard Error:	4500000
Relative Standard Error:	15.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.975

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	1.948217	50.0	514881.0	1.948217	Y
2	IC 410-395004/13	4.0	8.227404	50.0	556111.0	2.056851	Y
3	IC 410-395004/14	10.0	27.392477	50.0	526818.0	2.739248	Y
4	IC 410-395004/15	20.0	55.274873	50.0	525425.0	2.763744	Y
5	ICIS 410-395004/16	50.0	135.559361	50.0	553355.0	2.711187	Y
6	IC 410-395004/17	100.0	281.148154	50.0	603978.0	2.811482	Y
7	IC 410-395004/18	300.0	898.800534	50.0	576548.0	2.996002	Y



Calibration / sec-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

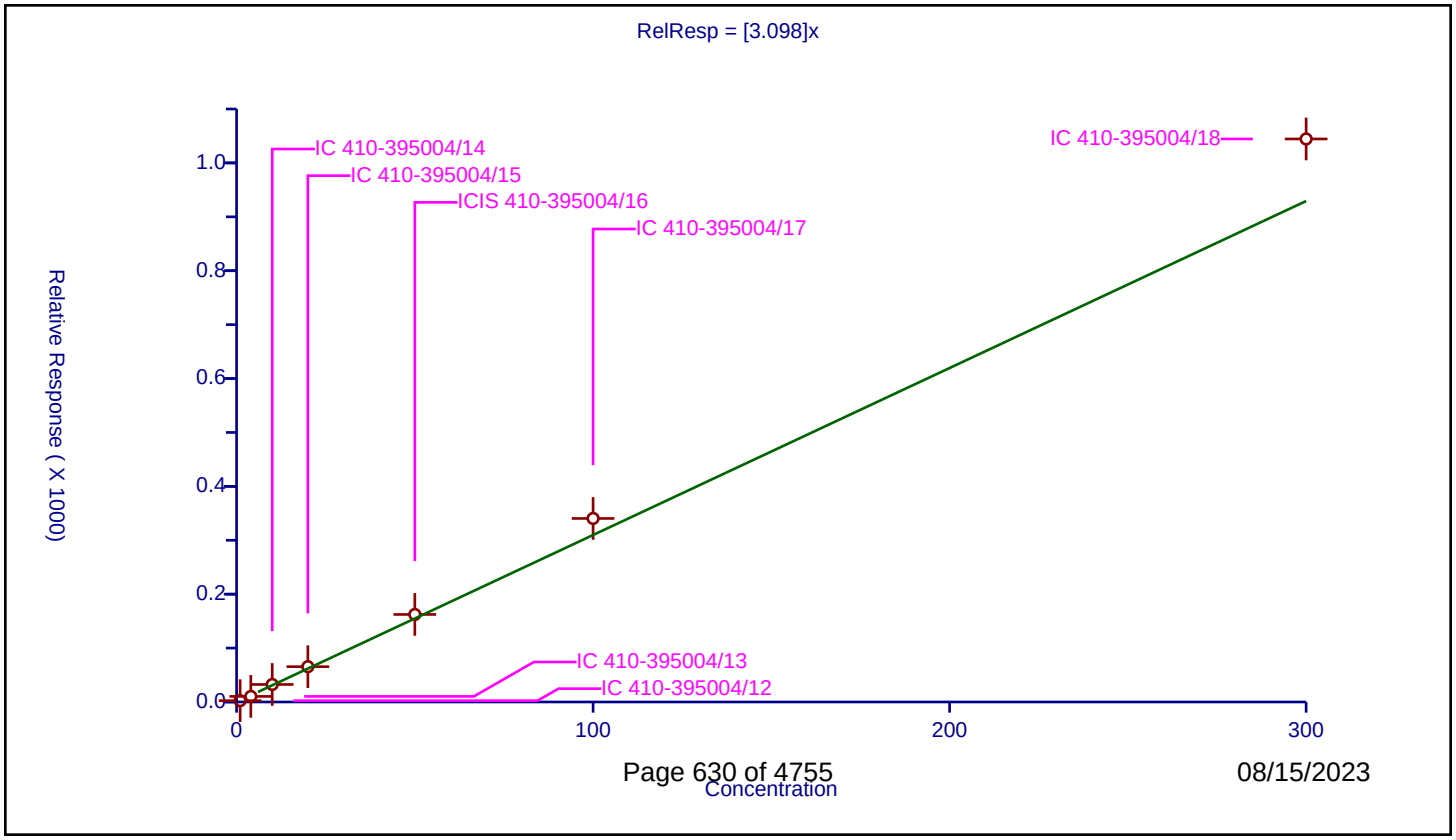
Curve Coefficients

Intercept:	0
Slope:	3.098

Error Coefficients

Standard Error:	5260000
Relative Standard Error:	13.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.982

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	2.431241	50.0	514881.0	2.431241	Y
2	IC 410-395004/13	4.0	10.38246	50.0	556111.0	2.595615	Y
3	IC 410-395004/14	10.0	32.469752	50.0	526818.0	3.246975	Y
4	IC 410-395004/15	20.0	65.522672	50.0	525425.0	3.276134	Y
5	ICIS 410-395004/16	50.0	162.360691	50.0	553355.0	3.247214	Y
6	IC 410-395004/17	100.0	340.477964	50.0	603978.0	3.40478	Y
7	IC 410-395004/18	300.0	1044.466983	50.0	576548.0	3.481557	Y



Calibration / 1,3-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

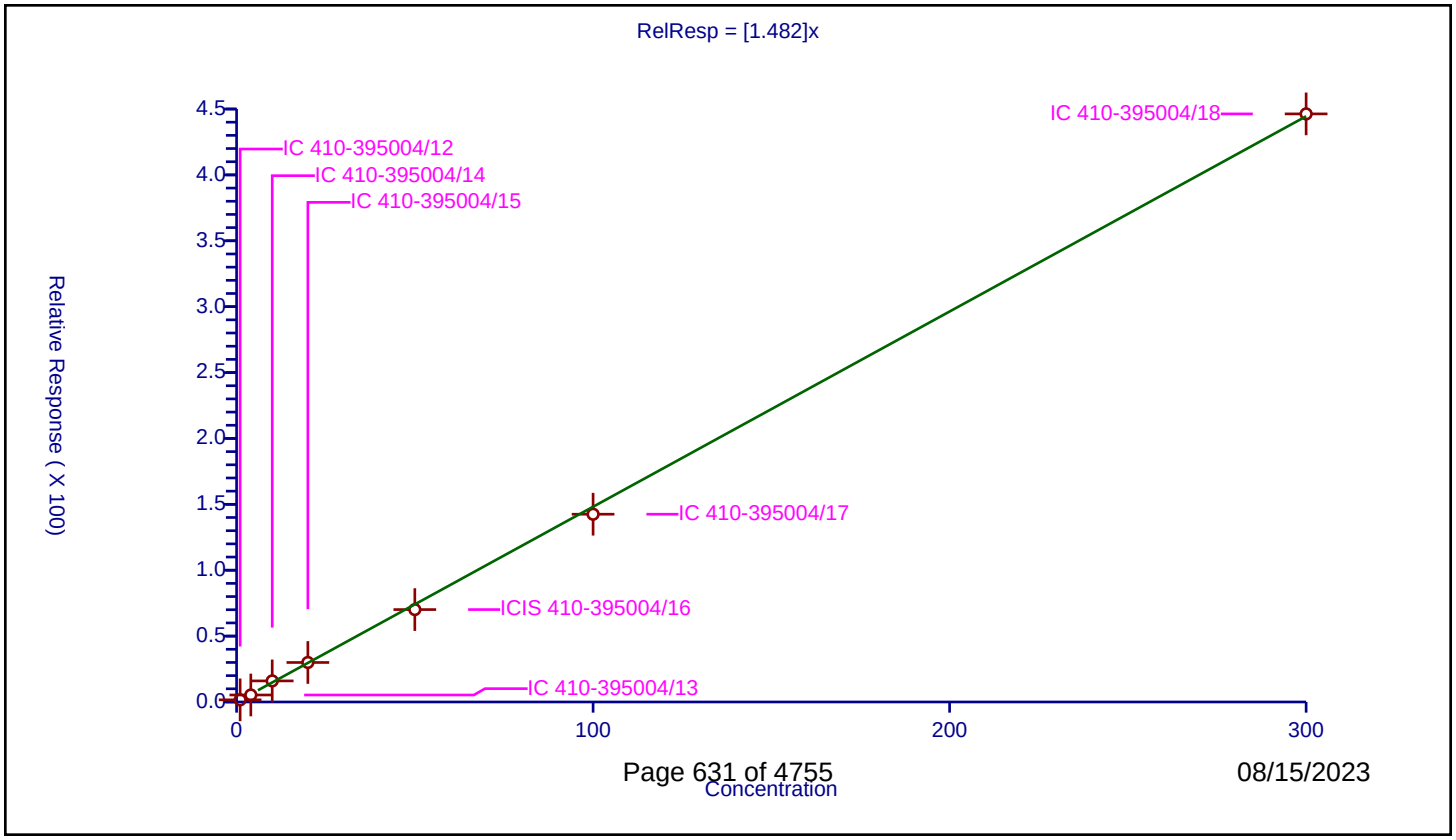
Curve Coefficients

Intercept:	0
Slope:	1.482

Error Coefficients

Standard Error:	2240000
Relative Standard Error:	7.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	1.63028	50.0	514881.0	1.63028	Y
2	IC 410-395004/13	4.0	5.308652	50.0	556111.0	1.327163	Y
3	IC 410-395004/14	10.0	16.00325	50.0	526818.0	1.600325	Y
4	IC 410-395004/15	20.0	29.970976	50.0	525425.0	1.498549	Y
5	ICIS 410-395004/16	50.0	70.121441	50.0	553355.0	1.402429	Y
6	IC 410-395004/17	100.0	142.489958	50.0	603978.0	1.4249	Y
7	IC 410-395004/18	300.0	446.301175	50.0	576548.0	1.487671	Y



Calibration / 4-Isopropyltoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

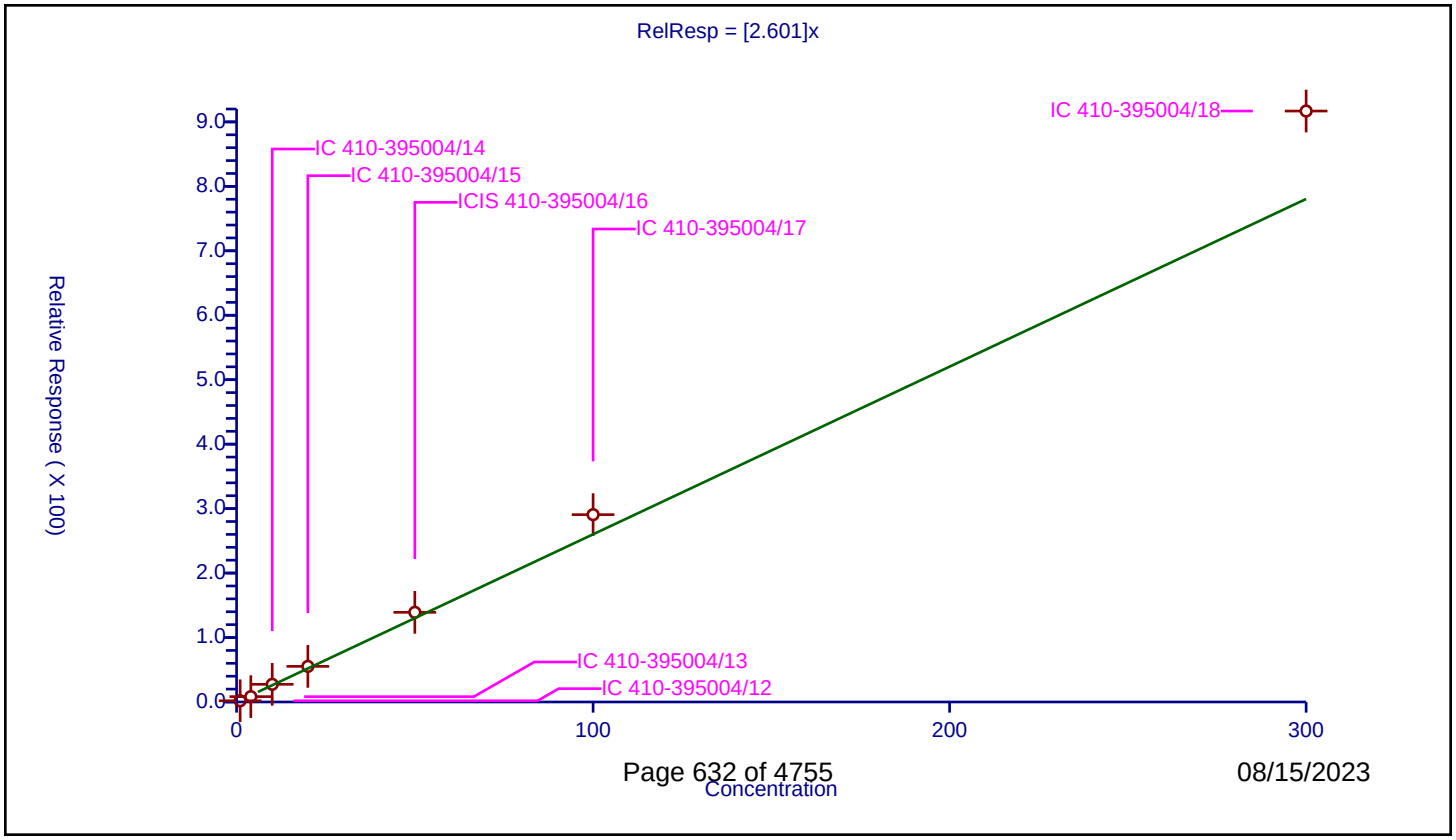
Curve Coefficients

Intercept:	0
Slope:	2.601

Error Coefficients

Standard Error:	4600000
Relative Standard Error:	17.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.971

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	1.882085	50.0	514881.0	1.882085	Y
2	IC 410-395004/13	4.0	8.315516	50.0	556111.0	2.078879	Y
3	IC 410-395004/14	10.0	27.406808	50.0	526818.0	2.740681	Y
4	IC 410-395004/15	20.0	55.254032	50.0	525425.0	2.762702	Y
5	ICIS 410-395004/16	50.0	139.123528	50.0	553355.0	2.782471	Y
6	IC 410-395004/17	100.0	290.67524	50.0	603978.0	2.906752	Y
7	IC 410-395004/18	300.0	916.841616	50.0	576548.0	3.056139	Y



Calibration / 1,4-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

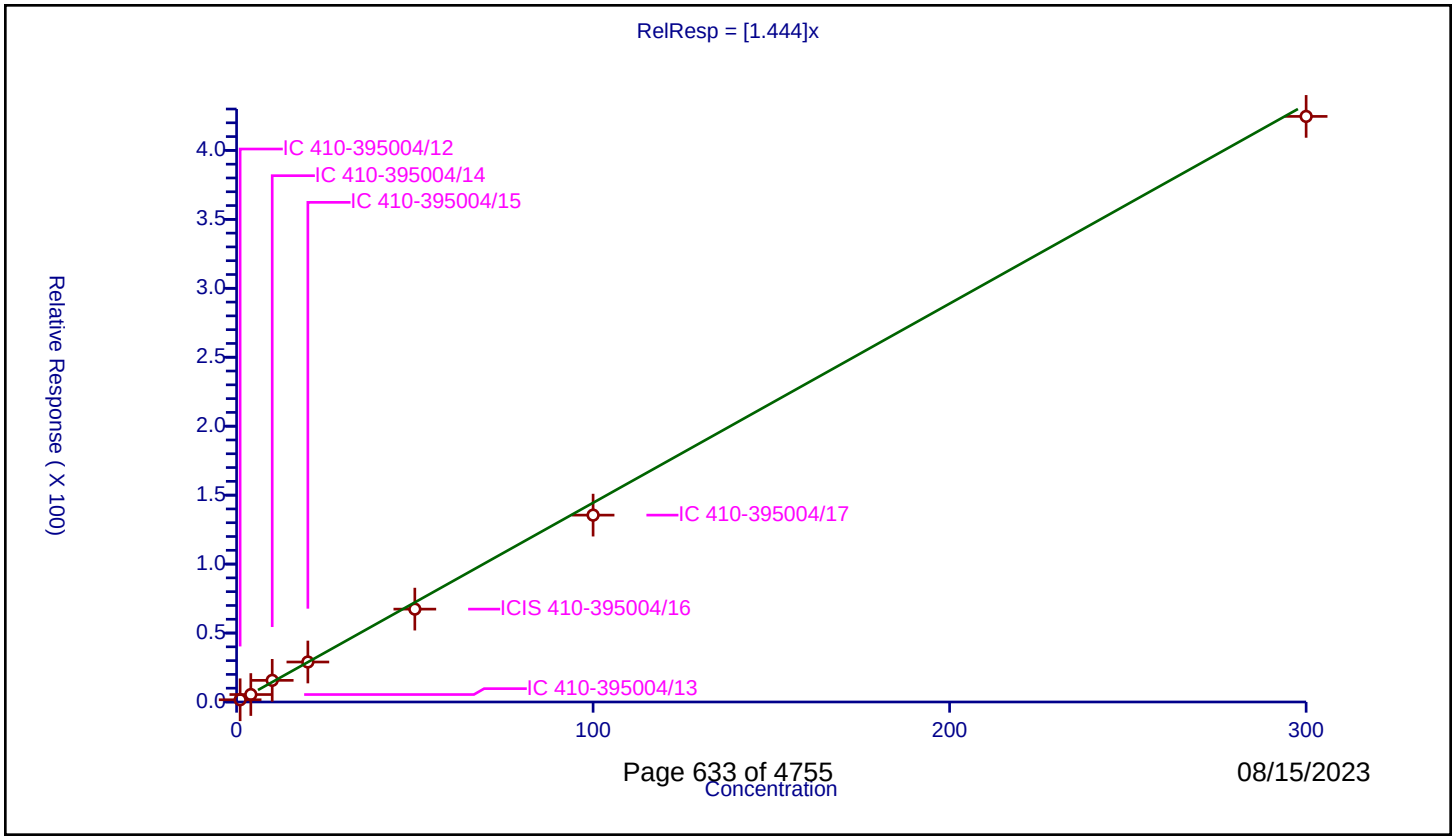
Curve Coefficients

Intercept:	0
Slope:	1.444

Error Coefficients

Standard Error:	2130000
Relative Standard Error:	7.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	1.620569	50.0	514881.0	1.620569	Y
2	IC 410-395004/13	4.0	5.411959	50.0	556111.0	1.35299	Y
3	IC 410-395004/14	10.0	15.698021	50.0	526818.0	1.569802	Y
4	IC 410-395004/15	20.0	28.997193	50.0	525425.0	1.44986	Y
5	ICIS 410-395004/16	50.0	67.352333	50.0	553355.0	1.347047	Y
6	IC 410-395004/17	100.0	135.510813	50.0	603978.0	1.355108	Y
7	IC 410-395004/18	300.0	424.649032	50.0	576548.0	1.415497	Y



Calibration / 1,2,3-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

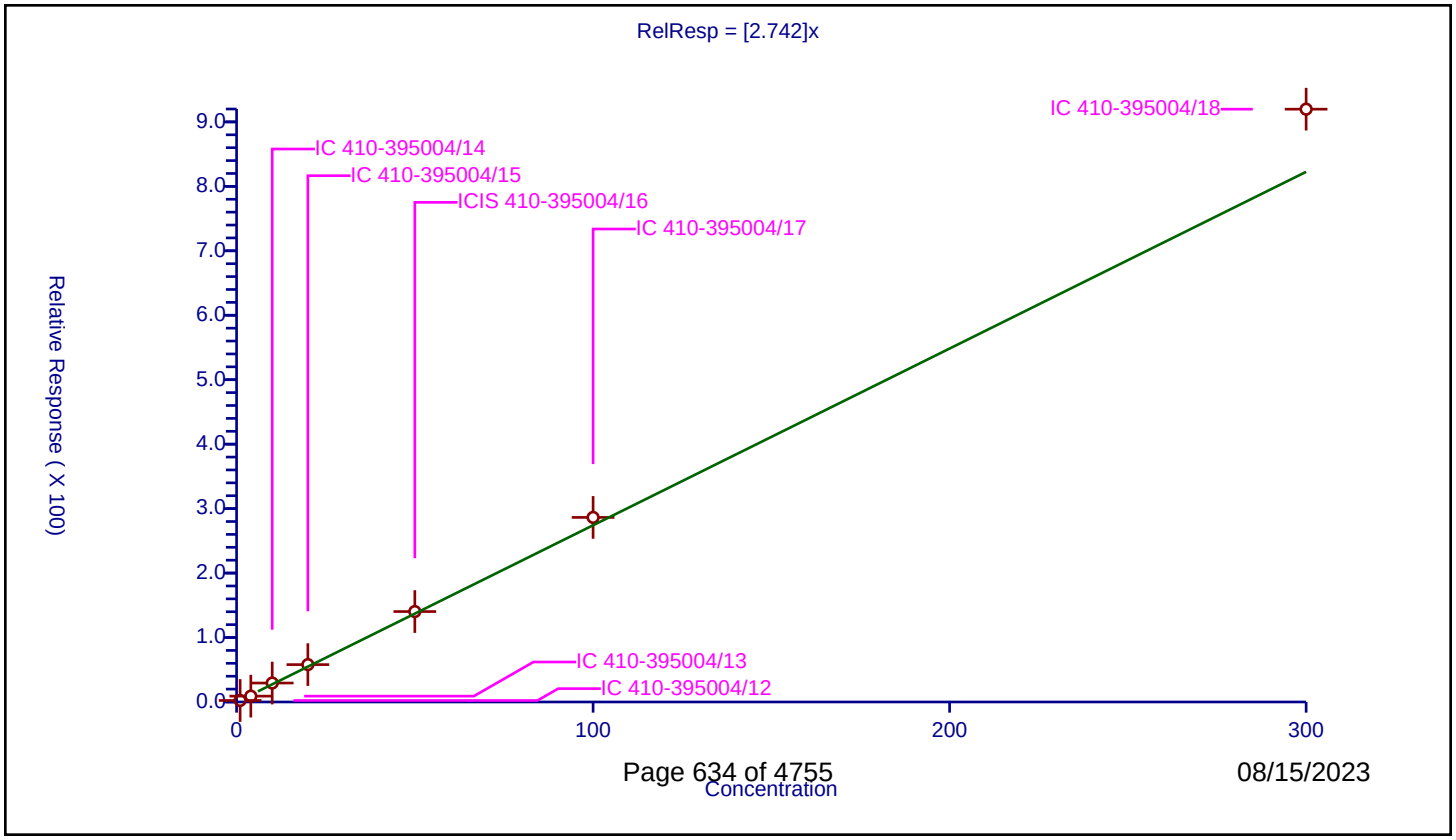
Curve Coefficients

Intercept:	0
Slope:	2.742

Error Coefficients

Standard Error:	4610000
Relative Standard Error:	11.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	2.348698	50.0	514881.0	2.348698	Y
2	IC 410-395004/13	4.0	9.0722	50.0	556111.0	2.26805	Y
3	IC 410-395004/14	10.0	29.39592	50.0	526818.0	2.939592	Y
4	IC 410-395004/15	20.0	57.991816	50.0	525425.0	2.899591	Y
5	ICIS 410-395004/16	50.0	140.334957	50.0	553355.0	2.806699	Y
6	IC 410-395004/17	100.0	286.367384	50.0	603978.0	2.863674	Y
7	IC 410-395004/18	300.0	919.764963	50.0	576548.0	3.065883	Y



Calibration / Benzyl chloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

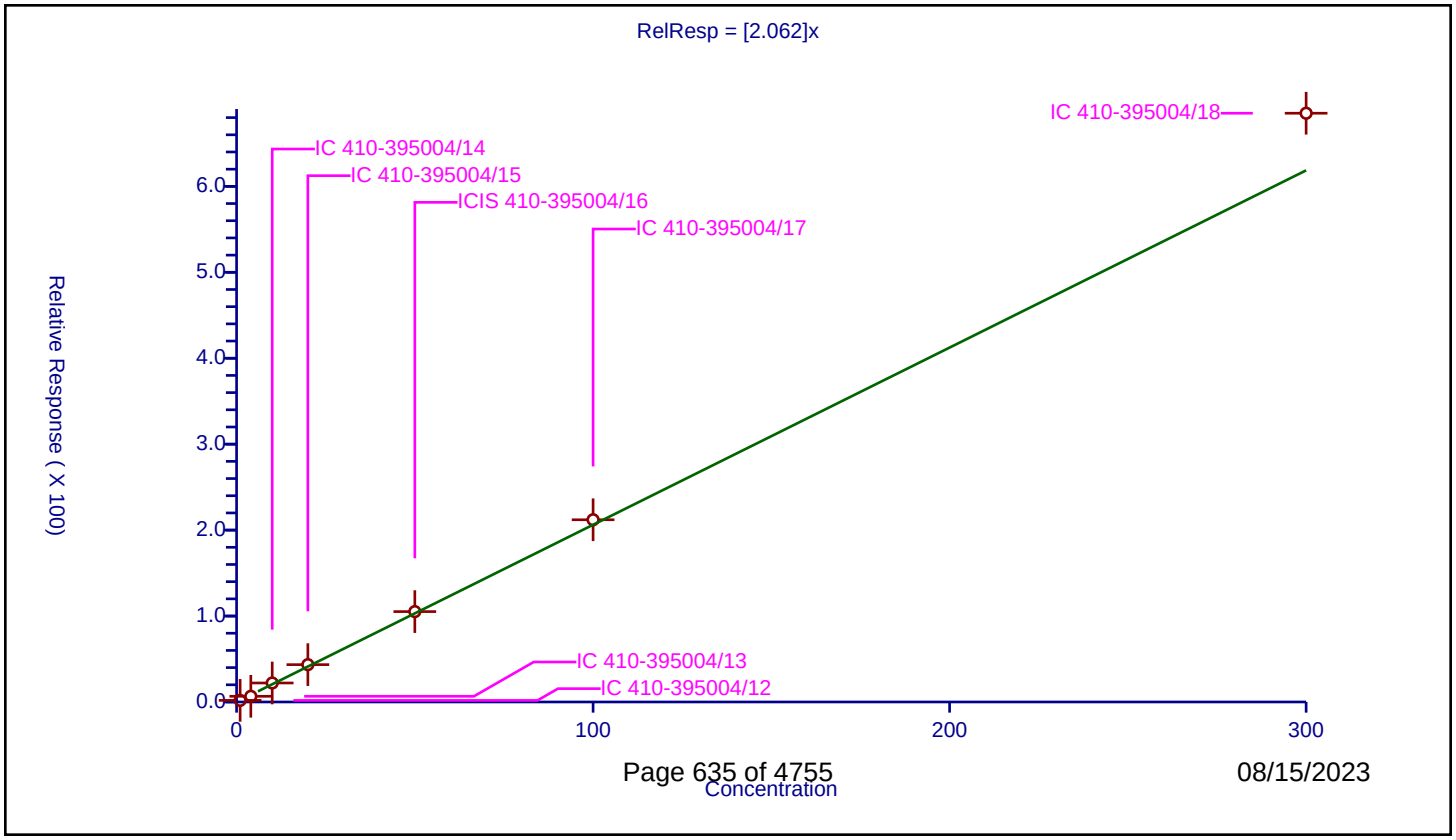
Curve Coefficients

Intercept:	0
Slope:	2.062

Error Coefficients

Standard Error:	3430000
Relative Standard Error:	10.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	1.887621	50.0	514881.0	1.887621	Y
2	IC 410-395004/13	4.0	6.619272	50.0	556111.0	1.654818	Y
3	IC 410-395004/14	10.0	22.104693	50.0	526818.0	2.210469	Y
4	IC 410-395004/15	20.0	43.461864	50.0	525425.0	2.173093	Y
5	ICIS 410-395004/16	50.0	105.179225	50.0	553355.0	2.103584	Y
6	IC 410-395004/17	100.0	212.051846	50.0	603978.0	2.120518	Y
7	IC 410-395004/18	300.0	685.111907	50.0	576548.0	2.283706	Y



Calibration / 1,3-Diethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

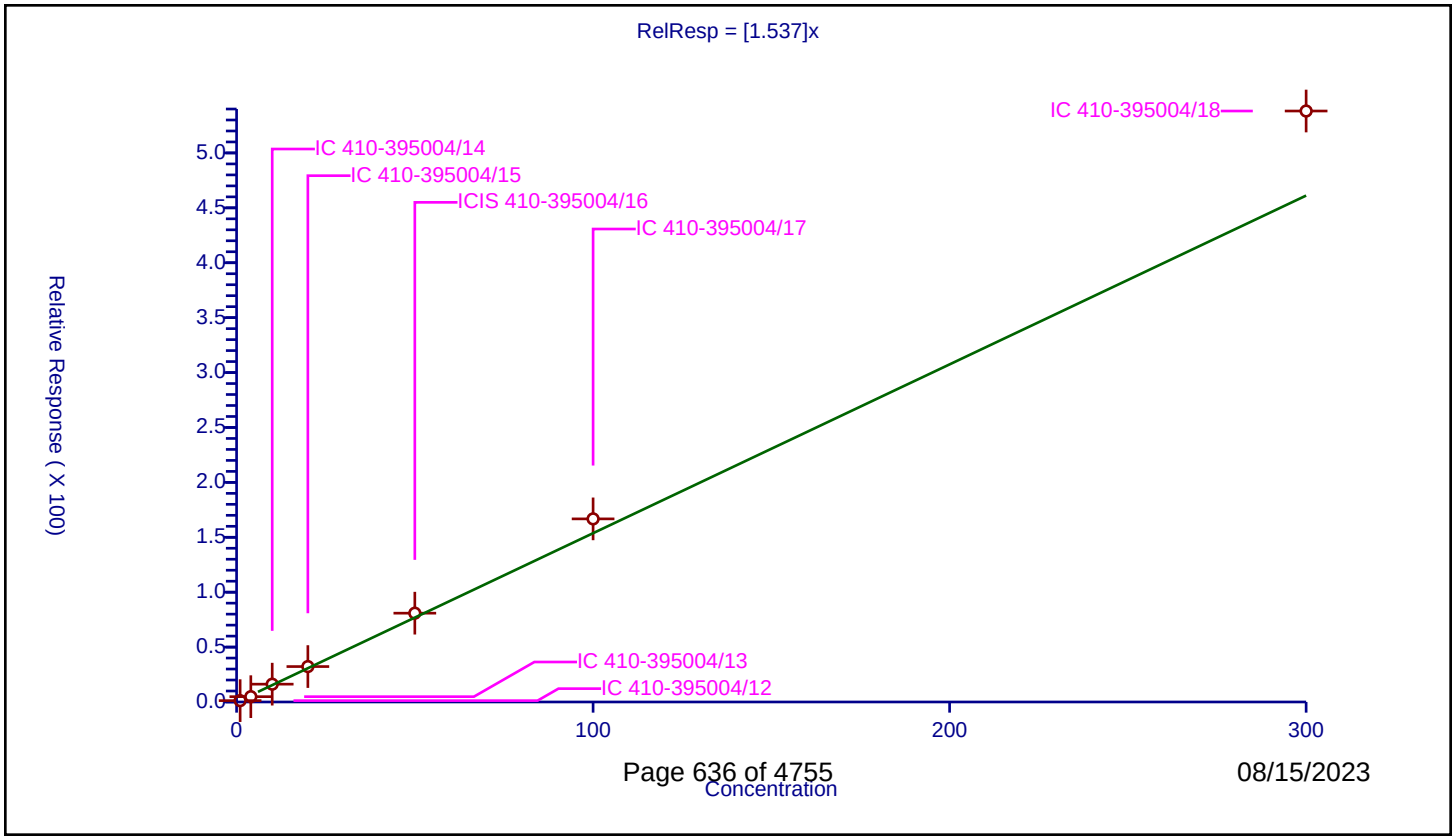
Curve Coefficients

Intercept:	0
Slope:	1.537

Error Coefficients

Standard Error:	2690000
Relative Standard Error:	14.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.978

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	1.235334	50.0	514881.0	1.235334	Y
2	IC 410-395004/13	4.0	4.843637	50.0	556111.0	1.210909	Y
3	IC 410-395004/14	10.0	16.221921	50.0	526818.0	1.622192	Y
4	IC 410-395004/15	20.0	32.270828	50.0	525425.0	1.613541	Y
5	ICIS 410-395004/16	50.0	80.867978	50.0	553355.0	1.61736	Y
6	IC 410-395004/17	100.0	166.737033	50.0	603978.0	1.66737	Y
7	IC 410-395004/18	300.0	538.175486	50.0	576548.0	1.793918	Y



Calibration / p-Diethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

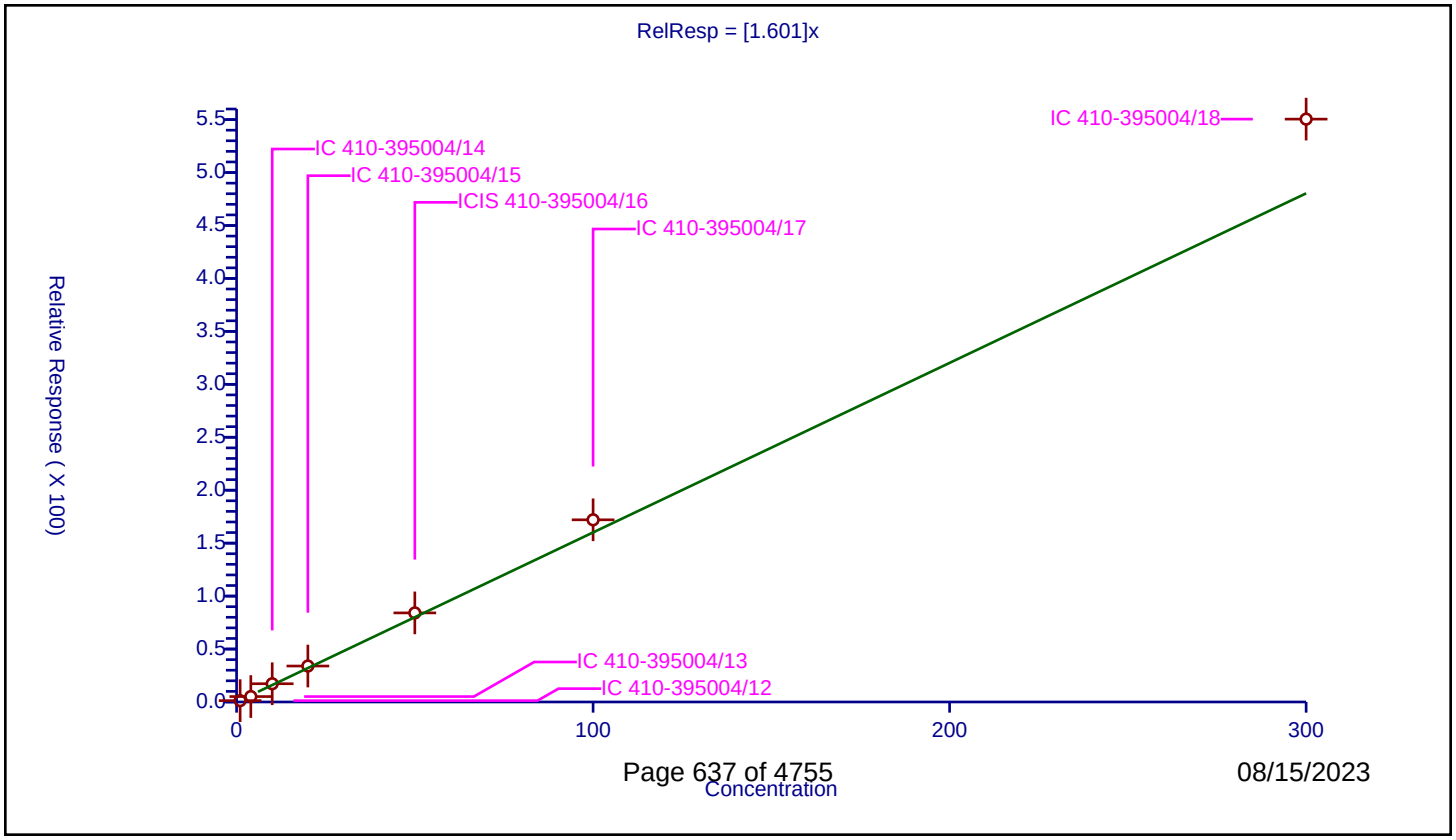
Curve Coefficients

Intercept:	0
Slope:	1.601

Error Coefficients

Standard Error:	2760000
Relative Standard Error:	14.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.979

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	1.267283	50.0	514881.0	1.267283	Y
2	IC 410-395004/13	4.0	5.128293	50.0	556111.0	1.282073	Y
3	IC 410-395004/14	10.0	17.22948	50.0	526818.0	1.722948	Y
4	IC 410-395004/15	20.0	33.966408	50.0	525425.0	1.69832	Y
5	ICIS 410-395004/16	50.0	84.12276	50.0	553355.0	1.682455	Y
6	IC 410-395004/17	100.0	172.038717	50.0	603978.0	1.720387	Y
7	IC 410-395004/18	300.0	550.449139	50.0	576548.0	1.83483	Y



Calibration / n-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

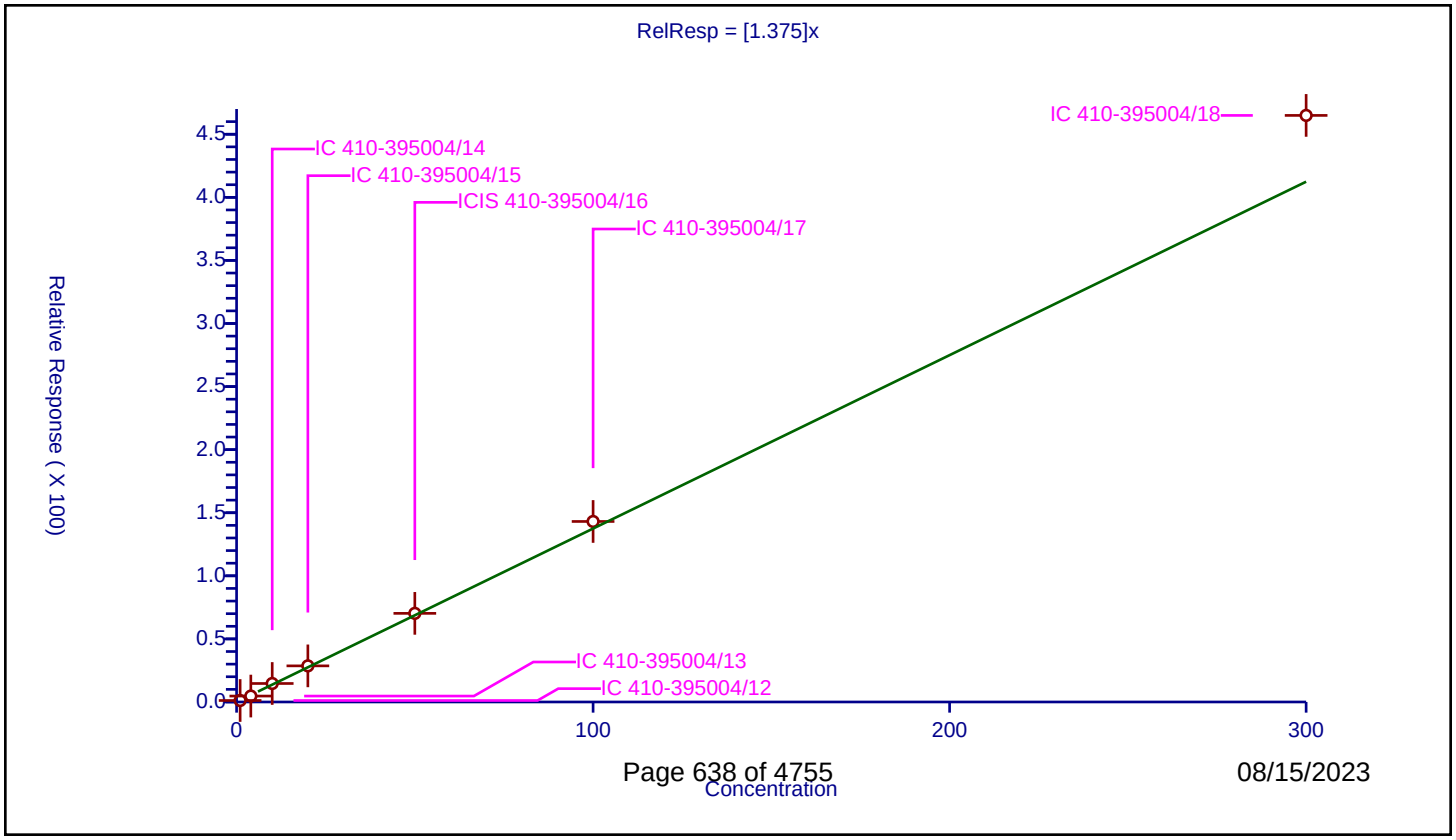
Curve Coefficients

Intercept:	0
Slope:	1.375

Error Coefficients

Standard Error:	2330000
Relative Standard Error:	10.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	1.165026	50.0	514881.0	1.165026	Y
2	IC 410-395004/13	4.0	4.694746	50.0	556111.0	1.173687	Y
3	IC 410-395004/14	10.0	14.660471	50.0	526818.0	1.466047	Y
4	IC 410-395004/15	20.0	28.633773	50.0	525425.0	1.431689	Y
5	ICIS 410-395004/16	50.0	70.256888	50.0	553355.0	1.405138	Y
6	IC 410-395004/17	100.0	143.089152	50.0	603978.0	1.430892	Y
7	IC 410-395004/18	300.0	464.919573	50.0	576548.0	1.549732	Y



Calibration / 1,2-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

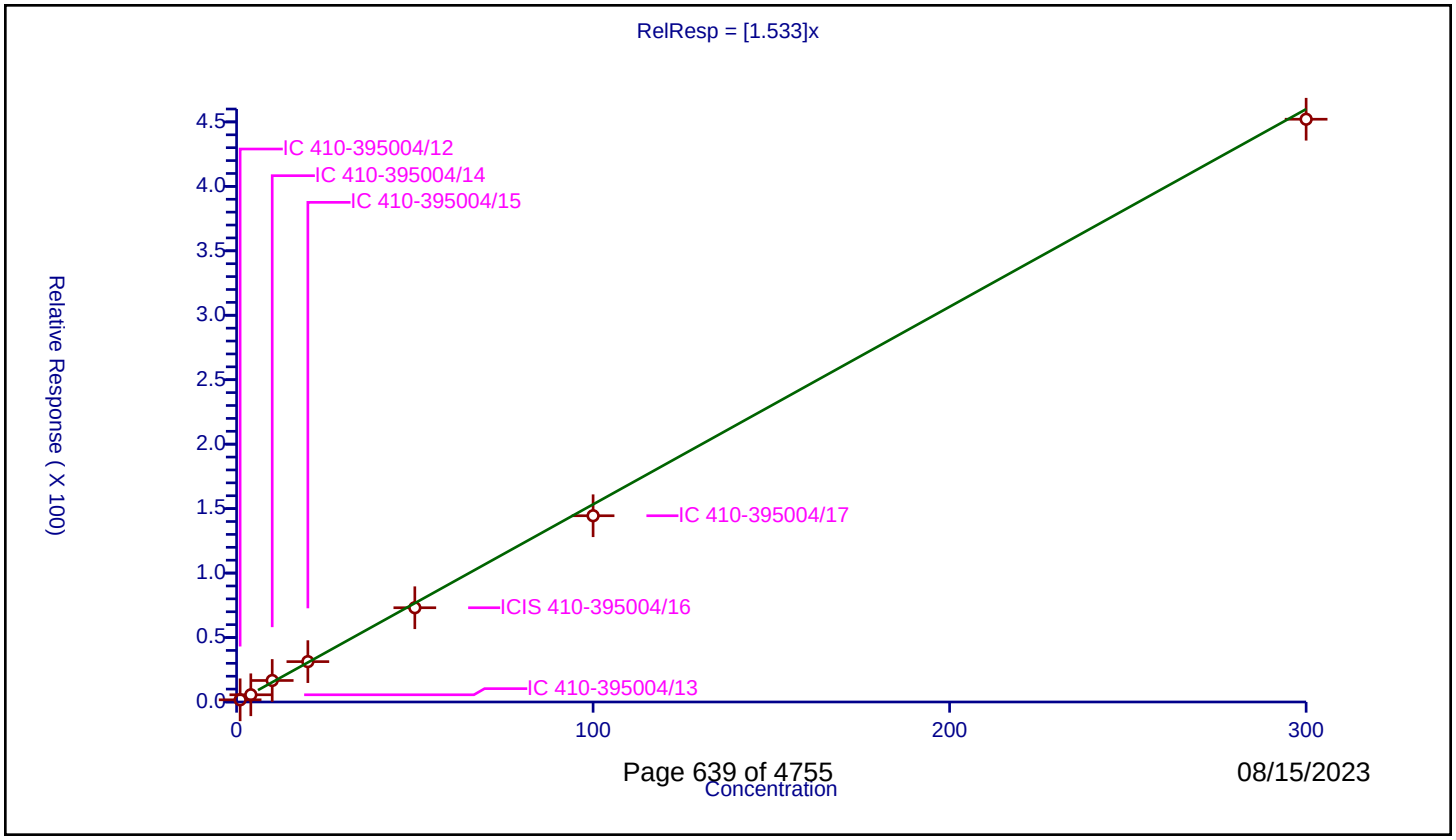
Curve Coefficients

Intercept:	0
Slope:	1.533

Error Coefficients

Standard Error:	2270000
Relative Standard Error:	7.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	1.681456	50.0	514881.0	1.681456	Y
2	IC 410-395004/13	4.0	5.604367	50.0	556111.0	1.401092	Y
3	IC 410-395004/14	10.0	16.686408	50.0	526818.0	1.668641	Y
4	IC 410-395004/15	20.0	31.312461	50.0	525425.0	1.565623	Y
5	ICIS 410-395004/16	50.0	73.116354	50.0	553355.0	1.462327	Y
6	IC 410-395004/17	100.0	144.488044	50.0	603978.0	1.44488	Y
7	IC 410-395004/18	300.0	452.072594	50.0	576548.0	1.506909	Y



Calibration / o-diethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

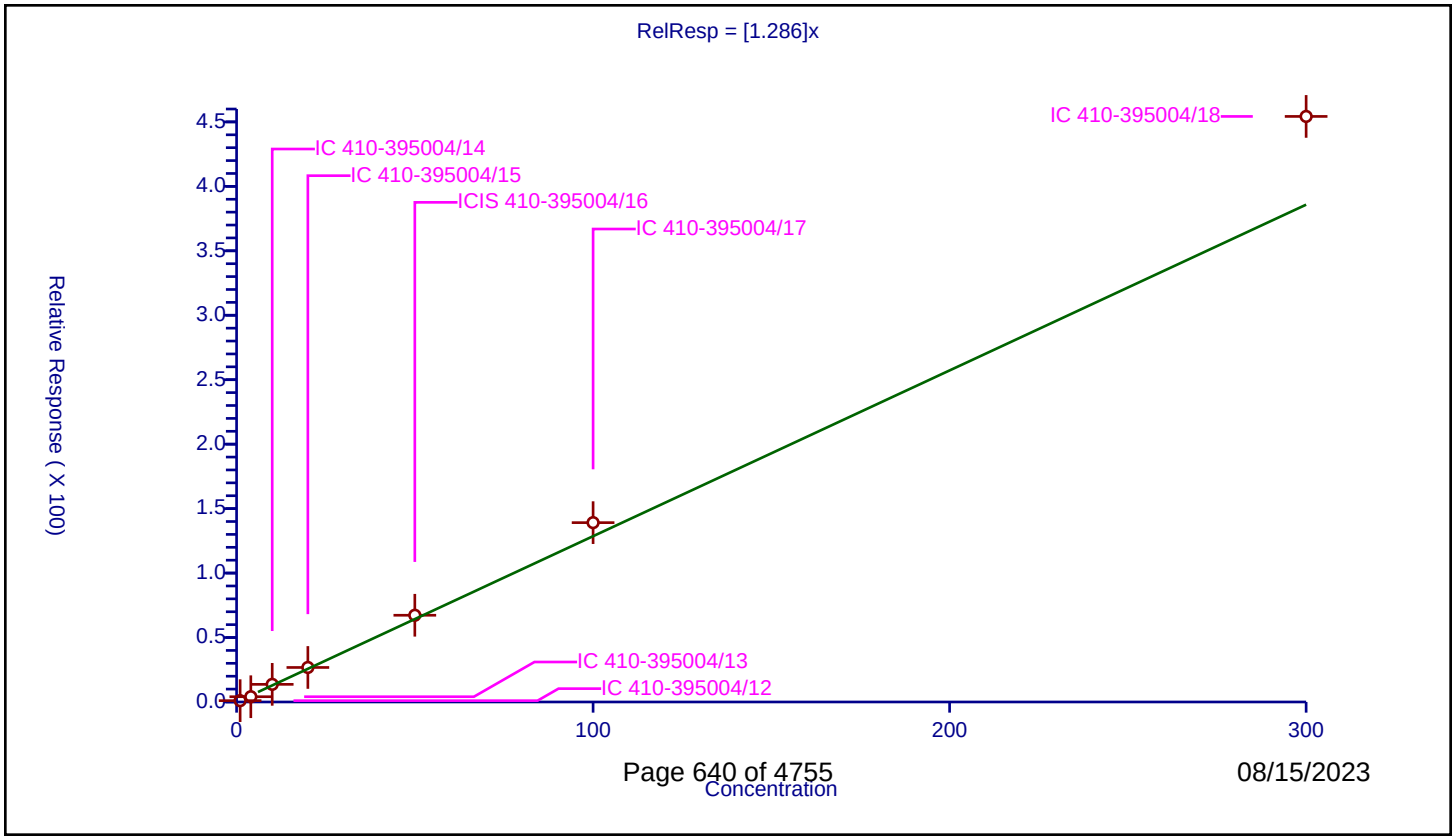
Curve Coefficients

Intercept:	0
Slope:	1.286

Error Coefficients

Standard Error:	2270000
Relative Standard Error:	14.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.978

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	1.019653	50.0	514881.0	1.019653	Y
2	IC 410-395004/13	4.0	4.093967	50.0	556111.0	1.023492	Y
3	IC 410-395004/14	10.0	13.682809	50.0	526818.0	1.368281	Y
4	IC 410-395004/15	20.0	26.788124	50.0	525425.0	1.339406	Y
5	ICIS 410-395004/16	50.0	67.29107	50.0	553355.0	1.345821	Y
6	IC 410-395004/17	100.0	139.136194	50.0	603978.0	1.391362	Y
7	IC 410-395004/18	300.0	454.243532	50.0	576548.0	1.514145	Y



Calibration / 1,2-Dibromo-3-Chloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

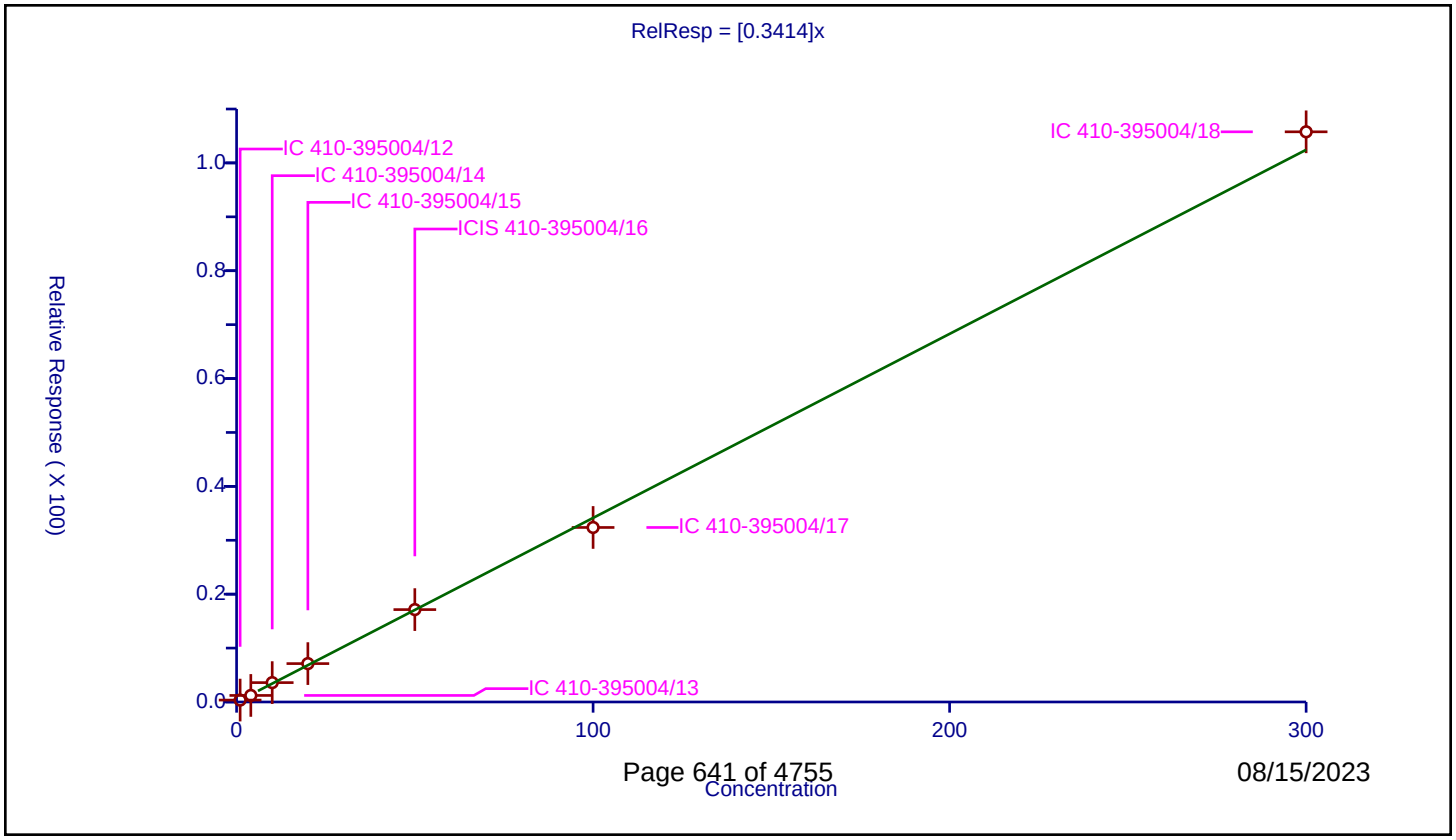
Curve Coefficients

Intercept:	0
Slope:	0.3414

Error Coefficients

Standard Error:	530000
Relative Standard Error:	5.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.351732	50.0	514881.0	0.351732	Y
2	IC 410-395004/13	4.0	1.216124	50.0	556111.0	0.304031	Y
3	IC 410-395004/14	10.0	3.592037	50.0	526818.0	0.359204	Y
4	IC 410-395004/15	20.0	7.119189	50.0	525425.0	0.355959	Y
5	ICIS 410-395004/16	50.0	17.140082	50.0	553355.0	0.342802	Y
6	IC 410-395004/17	100.0	32.376096	50.0	603978.0	0.323761	Y
7	IC 410-395004/18	300.0	105.76847	50.0	576548.0	0.352562	Y



Calibration / 1,3,5-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

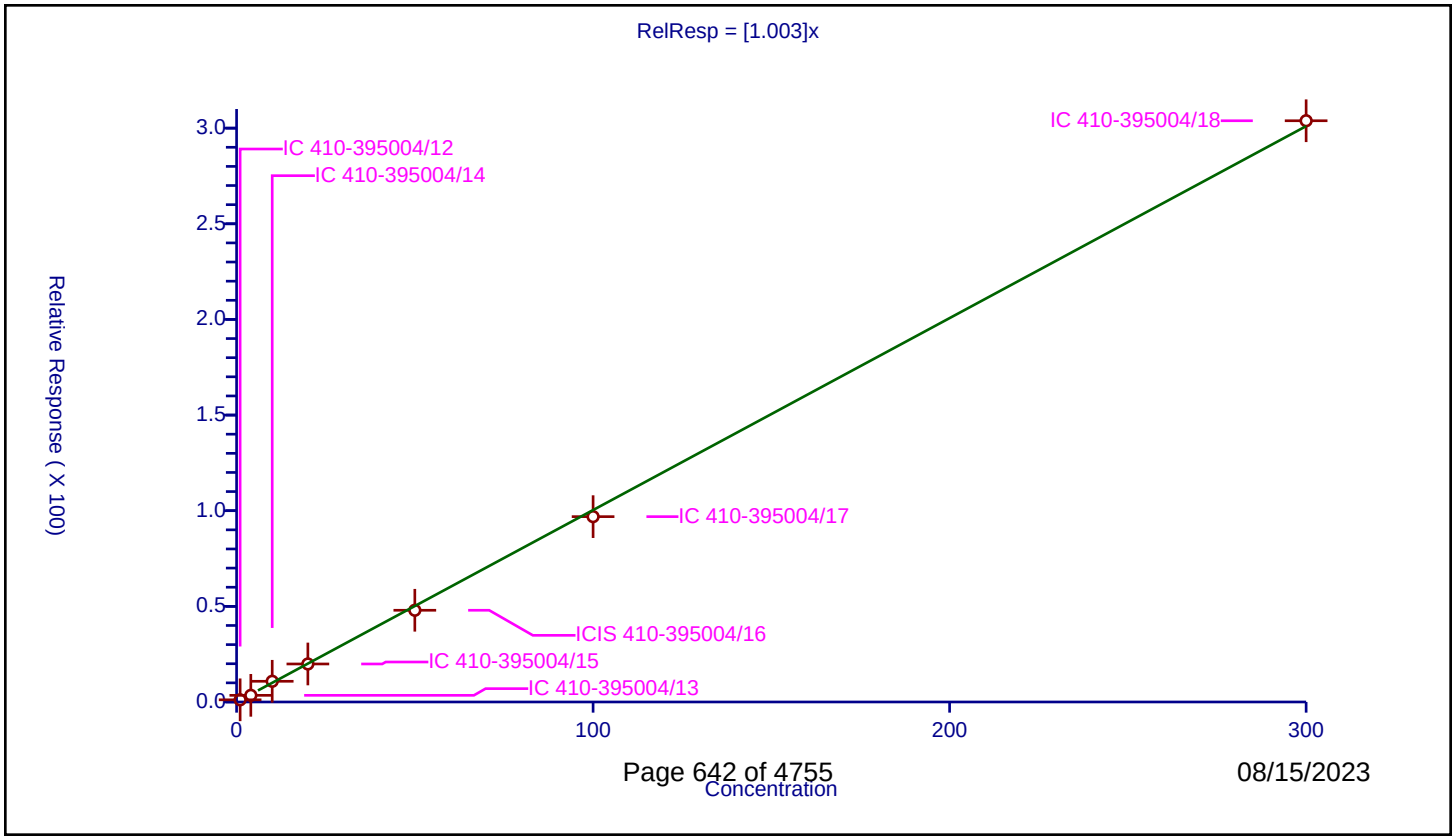
Curve Coefficients

Intercept:	0
Slope:	1.003

Error Coefficients

Standard Error:	1530000
Relative Standard Error:	8.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	1.139389	50.0	514881.0	1.139389	Y
2	IC 410-395004/13	4.0	3.472508	50.0	556111.0	0.868127	Y
3	IC 410-395004/14	10.0	10.819581	50.0	526818.0	1.081958	Y
4	IC 410-395004/15	20.0	19.875149	50.0	525425.0	0.993757	Y
5	ICIS 410-395004/16	50.0	47.951767	50.0	553355.0	0.959035	Y
6	IC 410-395004/17	100.0	96.892602	50.0	603978.0	0.968926	Y
7	IC 410-395004/18	300.0	303.863252	50.0	576548.0	1.012878	Y



Calibration / 1,2,4-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

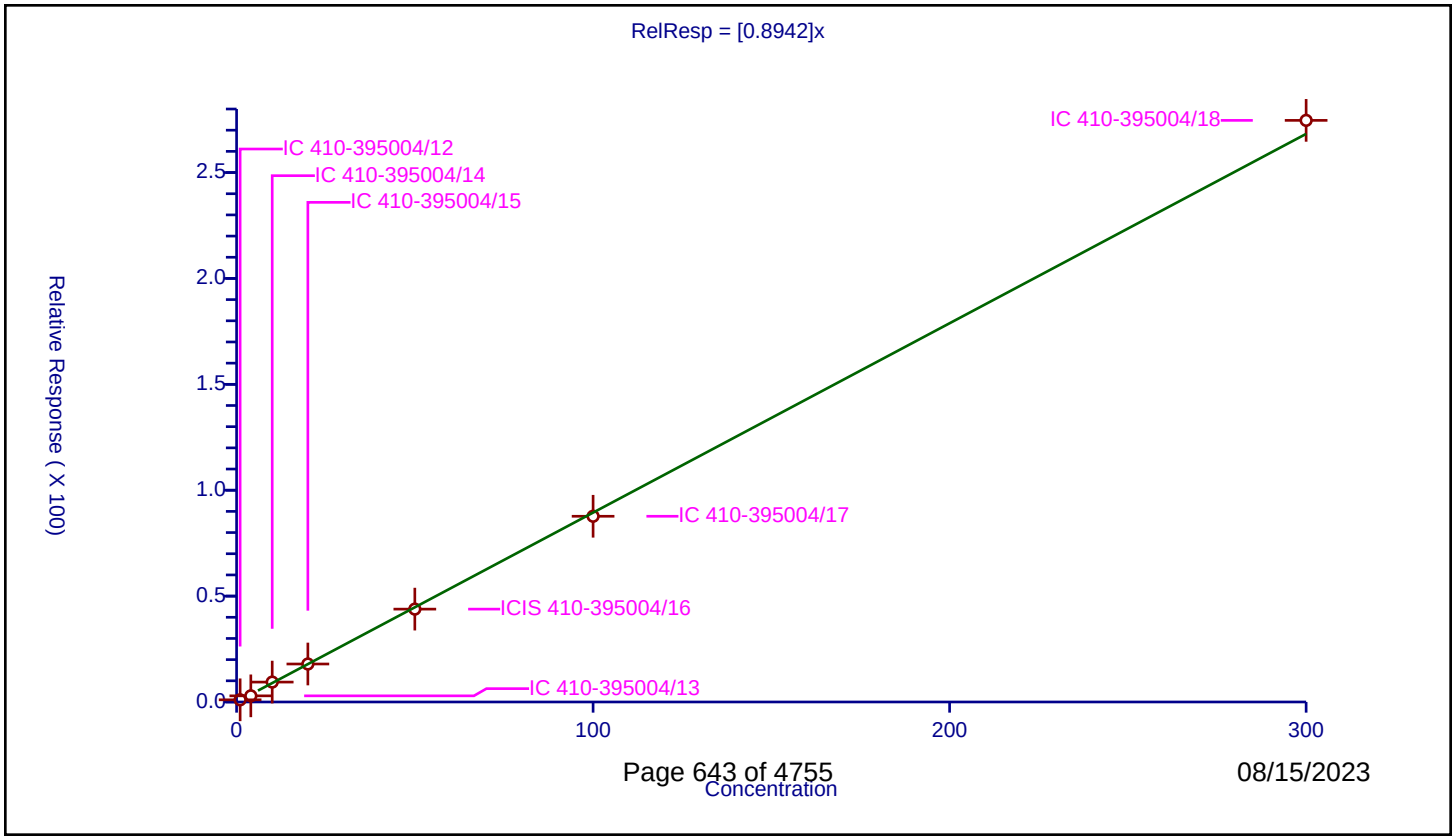
Curve Coefficients

Intercept:	0
Slope:	0.8942

Error Coefficients

Standard Error:	1380000
Relative Standard Error:	10.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	1.027228	50.0	514881.0	1.027228	Y
2	IC 410-395004/13	4.0	2.904456	50.0	556111.0	0.726114	Y
3	IC 410-395004/14	10.0	9.39537	50.0	526818.0	0.939537	Y
4	IC 410-395004/15	20.0	17.936813	50.0	525425.0	0.896841	Y
5	ICIS 410-395004/16	50.0	43.847711	50.0	553355.0	0.876954	Y
6	IC 410-395004/17	100.0	87.699469	50.0	603978.0	0.876995	Y
7	IC 410-395004/18	300.0	274.63108	50.0	576548.0	0.915437	Y



Calibration / Hexachlorobutadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

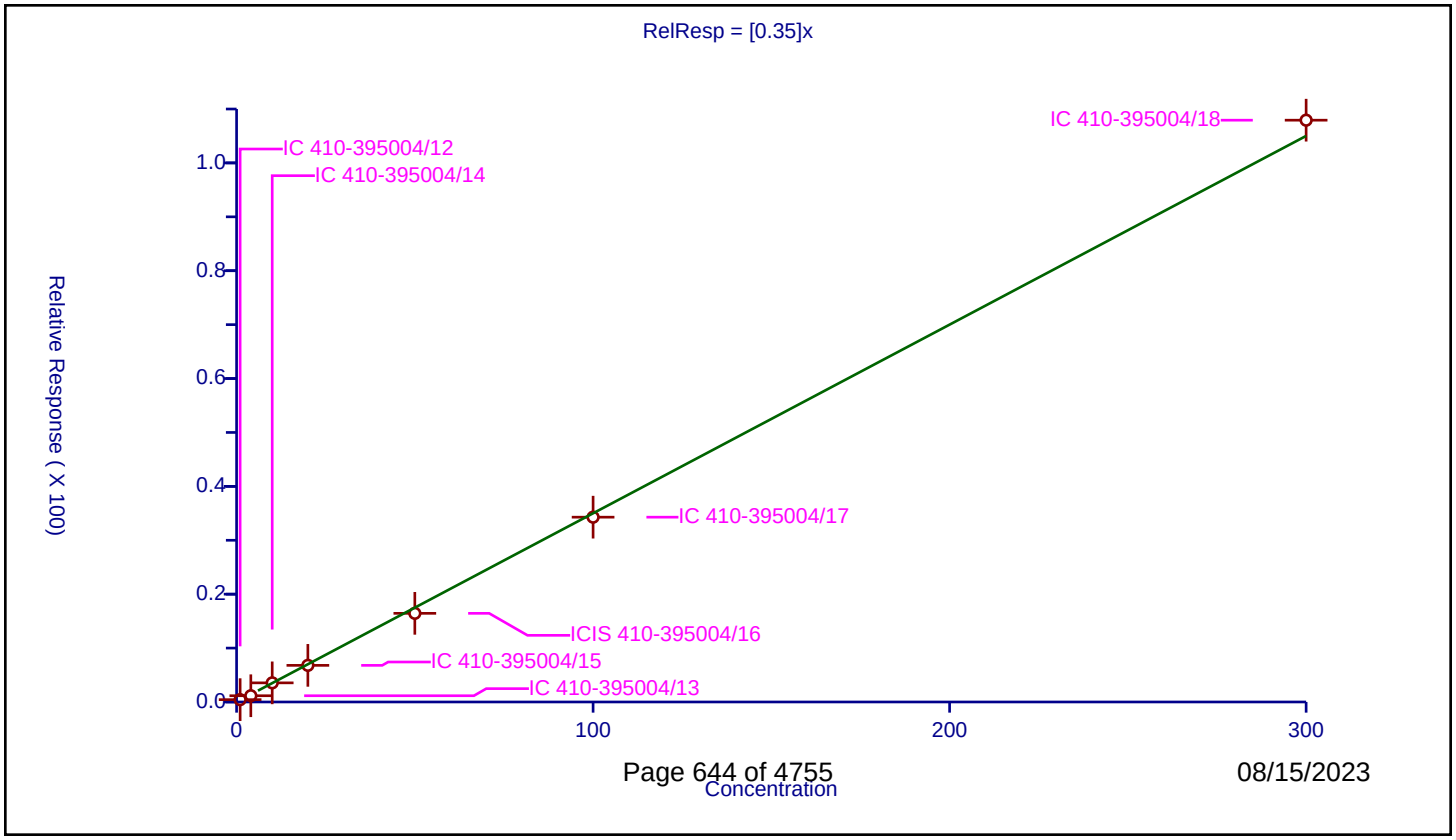
Curve Coefficients

Intercept:	0
Slope:	0.35

Error Coefficients

Standard Error:	542000
Relative Standard Error:	12.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.980

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	0.434178	50.0	514881.0	0.434178	Y
2	IC 410-395004/13	4.0	1.15993	50.0	556111.0	0.289983	Y
3	IC 410-395004/14	10.0	3.548379	50.0	526818.0	0.354838	Y
4	IC 410-395004/15	20.0	6.793643	50.0	525425.0	0.339682	Y
5	ICIS 410-395004/16	50.0	16.443874	50.0	553355.0	0.328877	Y
6	IC 410-395004/17	100.0	34.283368	50.0	603978.0	0.342834	Y
7	IC 410-395004/18	300.0	107.929435	50.0	576548.0	0.359765	Y



Calibration / Naphthalene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

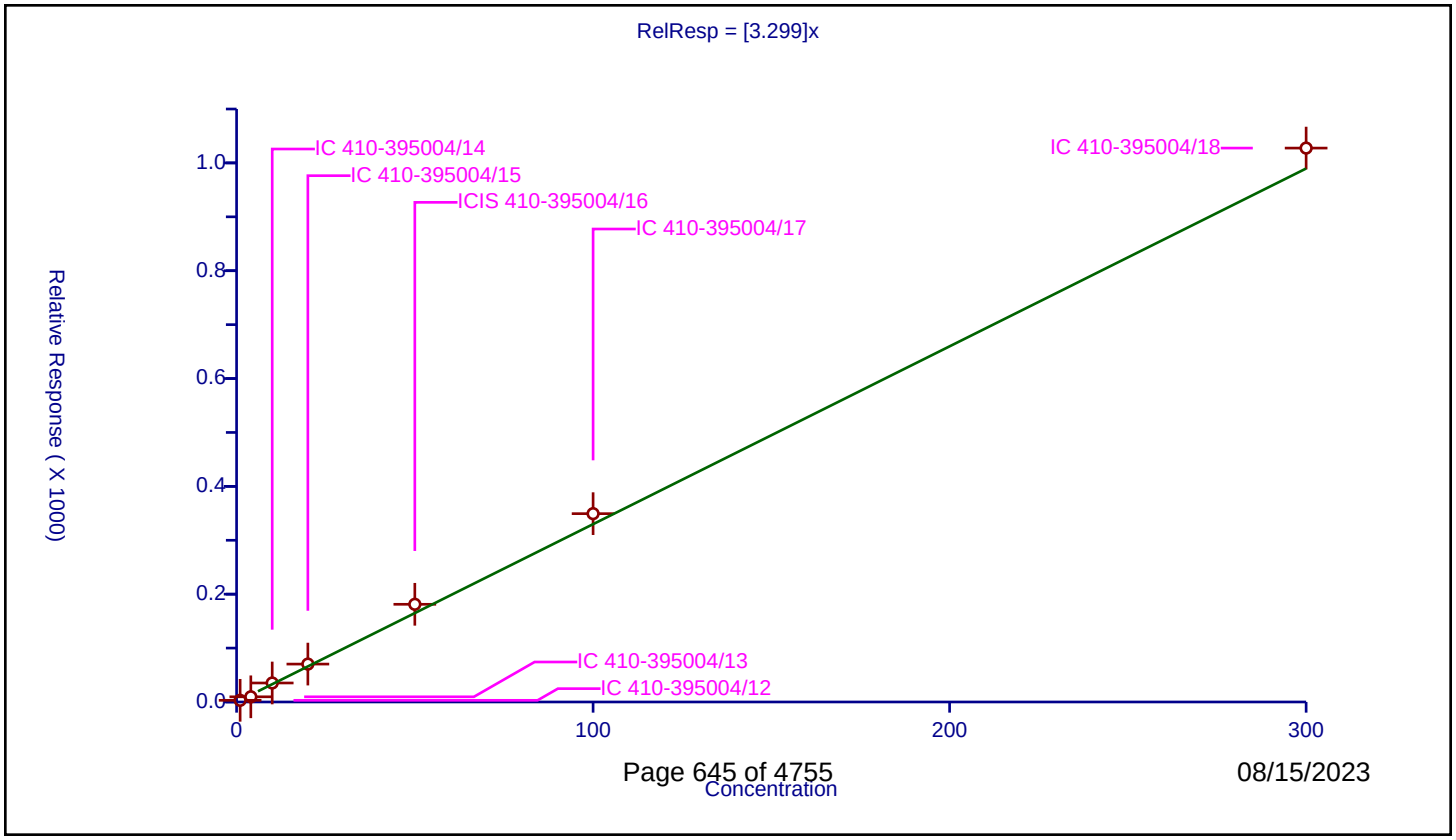
Curve Coefficients

Intercept:	0
Slope:	3.299

Error Coefficients

Standard Error:	5210000
Relative Standard Error:	12.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.982

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	3.097026	50.0	514881.0	3.097026	Y
2	IC 410-395004/13	4.0	9.644567	50.0	556111.0	2.411142	Y
3	IC 410-395004/14	10.0	35.227156	50.0	526818.0	3.522716	Y
4	IC 410-395004/15	20.0	70.342865	50.0	525425.0	3.517143	Y
5	ICIS 410-395004/16	50.0	181.219199	50.0	553355.0	3.624384	Y
6	IC 410-395004/17	100.0	349.3489	50.0	603978.0	3.493489	Y
7	IC 410-395004/18	300.0	1027.523814	50.0	576548.0	3.425079	Y



Calibration / 1,2,3-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

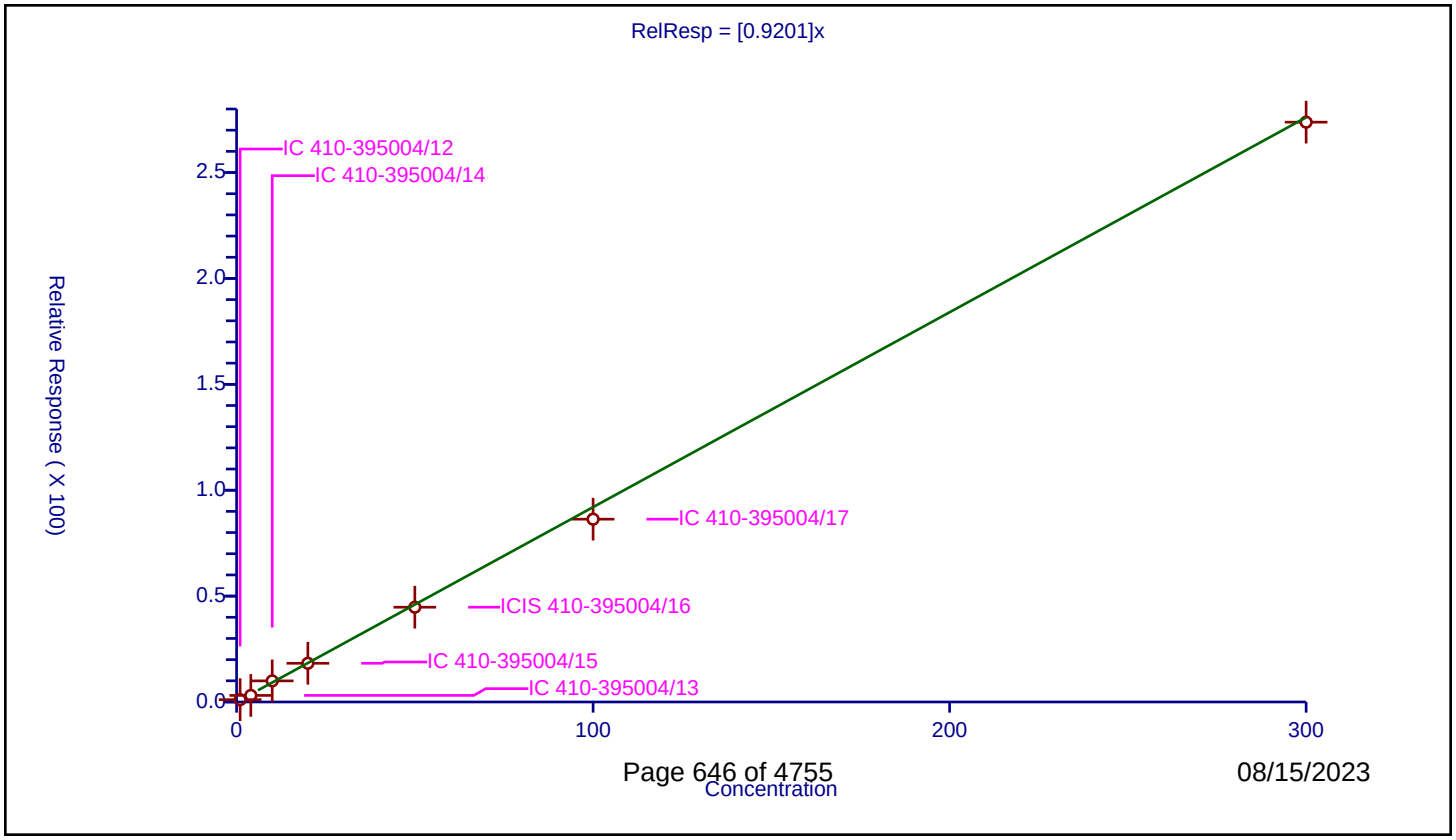
Curve Coefficients

Intercept:	0
Slope:	0.9201

Error Coefficients

Standard Error:	1380000
Relative Standard Error:	10.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	1.083357	50.0	514881.0	1.083357	Y
2	IC 410-395004/13	4.0	3.103967	50.0	556111.0	0.775992	Y
3	IC 410-395004/14	10.0	9.966915	50.0	526818.0	0.996691	Y
4	IC 410-395004/15	20.0	18.278251	50.0	525425.0	0.913913	Y
5	ICIS 410-395004/16	50.0	44.754181	50.0	553355.0	0.895084	Y
6	IC 410-395004/17	100.0	86.321356	50.0	603978.0	0.863214	Y
7	IC 410-395004/18	300.0	273.787352	50.0	576548.0	0.912625	Y



Calibration / 2-Methylnaphthalene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

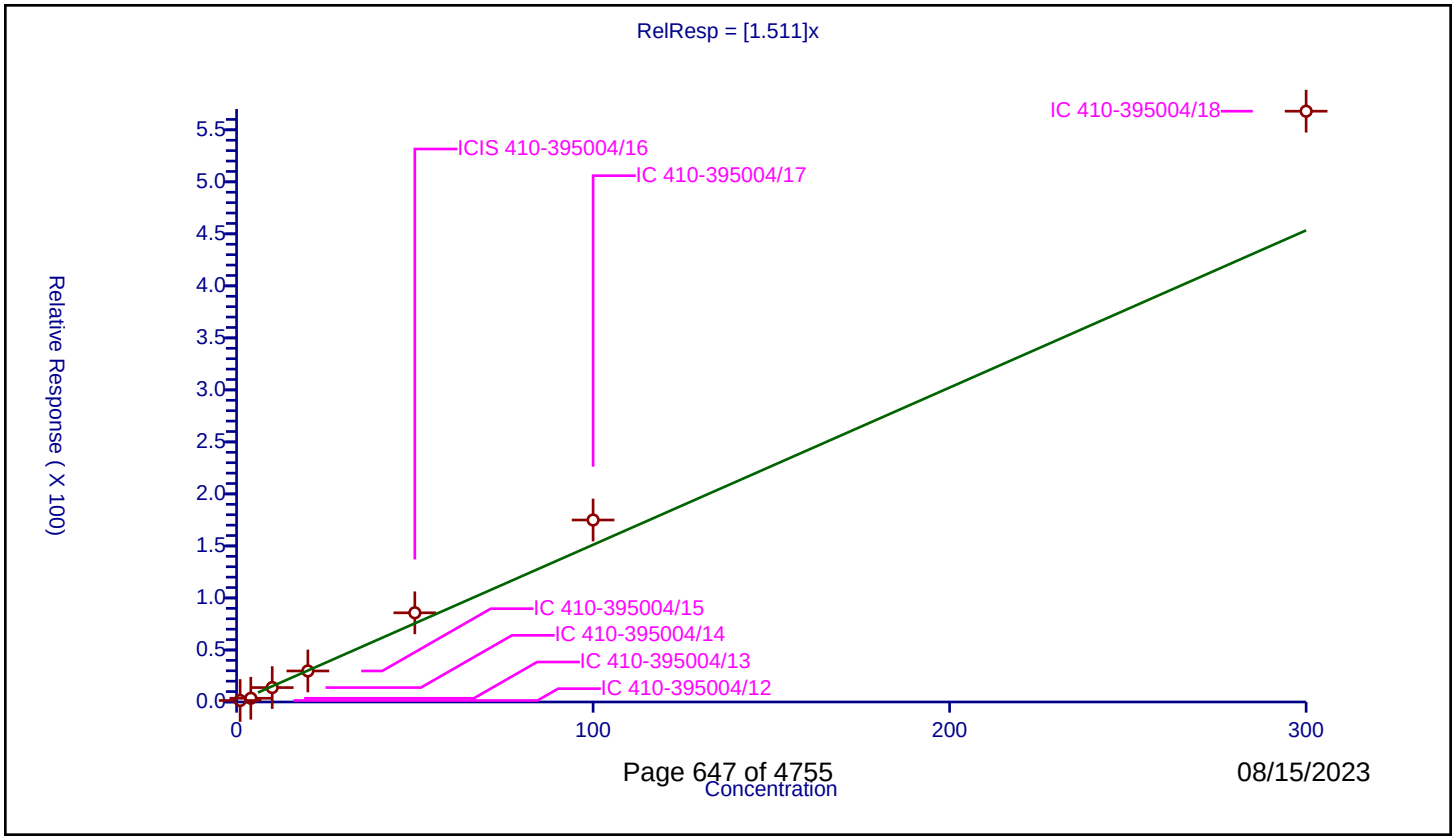
Curve Coefficients

Intercept:	0
Slope:	1.511

Error Coefficients

Standard Error:	2840000
Relative Standard Error:	21.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.951

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395004/12	1.0	1.450432	50.0	514881.0	1.450432	Y
2	IC 410-395004/13	4.0	3.575365	50.0	556111.0	0.893841	Y
3	IC 410-395004/14	10.0	13.852697	50.0	526818.0	1.38527	Y
4	IC 410-395004/15	20.0	29.837275	50.0	525425.0	1.491864	Y
5	ICIS 410-395004/16	50.0	85.739625	50.0	553355.0	1.714792	Y
6	IC 410-395004/17	100.0	174.936918	50.0	603978.0	1.749369	Y
7	IC 410-395004/18	300.0	567.908396	50.0	576548.0	1.893028	Y



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Lab Sample ID: ICV 410-395004/20 Calibration Date: 07/10/2023 22:34

Instrument ID: 26285 Calib Start Date: 07/10/2023 15:53

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 07/10/2023 21:06

Lab File ID: 5U10X28.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4298	0.4246	0.1000	19.8	20.0	-1.2	30.0
Chloromethane	Ave	0.5186	0.4851	0.1000	18.7	20.0	-6.5	30.0
1,3-Butadiene	Ave	0.5471	0.4389		16.0	20.0	-19.8	30.0
Vinyl chloride	Ave	0.4445	0.4189	0.1000	18.9	20.0	-5.7	30.0
Bromomethane	Ave	0.2930	0.2460	0.1000	16.8	20.0	-16.1	30.0
Chloroethane	Ave	0.2508	0.2328	0.1000	18.6	20.0	-7.2	30.0
Dichlorofluoromethane	Ave	0.7561	0.6922		18.3	20.0	-8.5	30.0
n-Pentane	Ave	0.5099	0.4942		19.4	20.0	-3.1	30.0
Trichlorofluoromethane	Ave	0.5128	0.4977	0.1000	19.4	20.0	-2.9	30.0
Ethyl ether	Ave	0.2295	0.2262		19.7	20.0	-1.5	30.0
Freon 123a	Ave	0.3868	0.3928		20.3	20.0	1.6	30.0
Acrolein	Ave	1.273	1.311		154	150	2.9	30.0
1,1-Dichloroethene	Ave	0.2535	0.2765	0.1000	21.8	20.0	9.1	30.0
Acetone	Ave	0.6603	0.6147	0.1000	233	250	-6.9	30.0
Freon 113	Ave	0.2762	0.3046	0.1000	22.1	20.0	10.3	30.0
2-Propanol	Ave	0.6545	0.6277		144	150	-4.1	30.0
Methyl iodide	Ave	0.5094	0.5260		20.7	20.0	3.3	30.0
Carbon disulfide	Ave	1.133	1.130	0.1000	19.9	20.0	-0.3	30.0
Methyl acetate	Ave	0.4441	0.4417	0.1000	19.9	20.0	-0.6	30.0
Allyl chloride	Ave	0.4999	0.5129		20.5	20.0	2.6	30.0
Methylene Chloride	Ave	0.3143	0.3296	0.1000	21.0	20.0	4.9	30.0
t-Butyl alcohol	Ave	1.093	1.072		196	200	-2.0	30.0
Acrylonitrile	Ave	0.2232	0.2159		96.7	100	-3.3	30.0
trans-1,2-Dichloroethene	Ave	0.2749	0.2772	0.1000	20.2	20.0	0.8	30.0
Methyl tertiary butyl ether	Ave	0.7981	0.8344	0.1000	20.9	20.0	4.5	30.0
n-Hexane	Ave	0.3339	0.3511		21.0	20.0	5.1	30.0
1,1-Dichloroethane	Ave	0.5376	0.5449	0.2000	20.3	20.0	1.4	30.0
Isopropyl ether	Ave	0.9348	0.9671		20.7	20.0	3.4	30.0
2-Chloro-1,3-butadiene	Ave	0.4255	0.4353		20.5	20.0	2.3	30.0
Ethyl t-butyl ether	Ave	0.7727	0.8176		21.2	20.0	5.8	30.0
2-Butanone	Ave	0.3023	0.3071	0.1000	254	250	1.6	30.0
cis-1,2-Dichloroethene	Ave	0.3066	0.3253	0.1000	21.2	20.0	6.1	30.0
2,2-Dichloropropane	Ave	0.4136	0.4597		22.2	20.0	11.1	30.0
Propionitrile	Ave	1.074	1.043		146	150	-2.8	30.0
Methacrylonitrile	Ave	0.1812	0.1870		155	150	3.2	30.0
Bromochloromethane	Ave	0.1537	0.1638		21.3	20.0	6.6	30.0
Tetrahydrofuran	Ave	0.8224	0.8104		98.5	100	-1.5	30.0
Chloroform	Ave	0.5347	0.5429	0.2000	20.3	20.0	1.5	30.0
1,1,1-Trichloroethane	Ave	0.4536	0.4839	0.1000	21.3	20.0	6.7	30.0
Cyclohexane	Ave	0.4681	0.5068	0.1000	21.7	20.0	8.3	30.0
Carbon tetrachloride	Ave	0.4108	0.4279	0.1000	20.8	20.0	4.2	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Lab Sample ID: ICV 410-395004/20 Calibration Date: 07/10/2023 22:34

Instrument ID: 26285 Calib Start Date: 07/10/2023 15:53

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 07/10/2023 21:06

Lab File ID: 5U10X28.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,1-Dichloropropene	Ave	0.3778	0.4069		21.5	20.0	7.7	30.0
Isobutyl alcohol	Ave	0.3770	0.3471		460	500	-7.9	30.0
Benzene	Ave	1.136	1.201	0.5000	21.1	20.0	5.7	30.0
1,2-Dichloroethane	Ave	0.4373	0.4284	0.1000	19.6	20.0	-2.0	30.0
t-Amyl methyl ether	Ave	0.7283	0.7794		21.4	20.0	7.0	30.0
n-Heptane	Ave	0.3940	0.3734		19.0	20.0	-5.2	30.0
n-Butanol	Ave	0.2281	0.2384		1040	1000	4.5	30.0
Trichloroethene	Ave	0.2990	0.3014	0.2000	20.2	20.0	0.8	30.0
Methylcyclohexane	Ave	0.4126	0.4570	0.1000	22.2	20.0	10.8	30.0
1,2-Dichloropropane	Ave	0.3061	0.3156	0.1000	20.6	20.0	3.1	30.0
t-Amyl ethyl ether	Ave	0.3461	0.3669		21.2	20.0	6.0	30.0
1,4-Dioxane	Ave	0.0555	0.0642	0.0050	578	500	15.6	30.0
Dibromomethane	Ave	0.2007	0.2060		20.5	20.0	2.6	30.0
Methyl methacrylate	Ave	0.2324	0.2293		19.7	20.0	-1.3	30.0
Bromodichloromethane	Ave	0.3883	0.3902	0.2000	20.1	20.0	0.5	30.0
2-Nitropropane	Ave	1.585	1.400		17.7	20.0	-11.7	30.0
2-Chloroethyl vinyl ether	Ave	0.1758	0.1658		18.9	20.0	-5.7	30.0
cis-1,3-Dichloropropene	Ave	0.4328	0.4277	0.2000	19.8	20.0	-1.2	30.0
4-Methyl-2-pentanone	Ave	0.5357	0.5863	0.1000	274	250	9.4	30.0
Toluene	Ave	0.9244	0.9831	0.4000	21.3	20.0	6.4	30.0
trans-1,3-Dichloropropene	Ave	0.5417	0.5411	0.1000	20.0	20.0	-0.1	30.0
Ethyl methacrylate	Ave	0.5236	0.5128		19.6	20.0	-2.1	30.0
1,1,2-Trichloroethane	Ave	0.3486	0.3525	0.1000	20.2	20.0	1.1	30.0
Tetrachloroethene	Ave	0.4250	0.4441	0.2000	20.9	20.0	4.5	30.0
1,3-Dichloropropane	Ave	0.5558	0.5675		20.4	20.0	2.1	30.0
2-Hexanone	Ave	0.5160	0.5684	0.1000	275	250	10.2	30.0
Dibromochloromethane	Ave	0.4139	0.4189		20.2	20.0	1.2	30.0
1,2-Dibromoethane	Ave	0.3628	0.3680	0.1000	20.3	20.0	1.4	30.0
Chlorobenzene	Ave	1.063	1.064	0.5000	20.0	20.0	0.1	30.0
1-Chlorohexane	Ave	0.4695	0.4763		20.3	20.0	1.5	30.0
1,1,1,2-Tetrachloroethane	Ave	0.4081	0.4562		22.4	20.0	11.8	30.0
Ethylbenzene	Ave	1.812	1.916	0.1000	21.2	20.0	5.8	30.0
m&p-Xylene	Ave	0.6756	0.7369	0.1000	43.6	40.0	9.1	30.0
o-Xylene	Ave	0.6706	0.7359	0.3000	21.9	20.0	9.7	30.0
Styrene	Ave	1.037	1.113	0.3000	21.5	20.0	7.3	30.0
Bromoform	Ave	0.3479	0.3217	0.1000	18.5	20.0	-7.5	30.0
Isopropylbenzene	Ave	1.802	2.048	0.1000	22.7	20.0	13.6	30.0
Cyclohexanone	Ave	0.3177	0.2784		438	500	-12.4	30.0
Bromobenzene	Ave	0.7633	0.7867		20.6	20.0	3.1	30.0
1,1,2,2-Tetrachloroethane	Ave	1.167	1.194	0.3000	20.5	20.0	2.3	30.0
trans-1,4-Dichloro-2-butene	Ave	0.3413	0.3365		98.6	100	-1.4	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Lab Sample ID: ICV 410-395004/20 Calibration Date: 07/10/2023 22:34

Instrument ID: 26285 Calib Start Date: 07/10/2023 15:53

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 07/10/2023 21:06

Lab File ID: 5U10X28.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.3159	0.3210		20.3	20.0	1.6	30.0
N-Propylbenzene	Ave	3.710	4.155		22.4	20.0	12.0	30.0
2-Chlorotoluene	Ave	0.7544	0.8150		21.6	20.0	8.0	30.0
1,3,5-Trimethylbenzene	Ave	2.537	2.901		22.9	20.0	14.3	30.0
4-Chlorotoluene	Ave	0.7236	0.7777		21.5	20.0	7.5	30.0
tert-Butylbenzene	Ave	0.4417	0.5220		23.6	20.0	18.2	30.0
1,2,4-Trimethylbenzene	Ave	2.575	2.969		23.1	20.0	15.3	30.0
sec-Butylbenzene	Ave	3.098	3.624		23.4	20.0	17.0	30.0
1,3-Dichlorobenzene	Ave	1.482	1.521	0.6000	20.5	20.0	2.7	30.0
p-Isopropyltoluene	Ave	2.601	3.074		23.6	20.0	18.2	30.0
1,4-Dichlorobenzene	Ave	1.444	1.543	0.5000	21.4	20.0	6.8	30.0
1,2,3-Trimethylbenzene	Ave	2.742	3.041		22.2	20.0	10.9	30.0
Benzyl chloride	Ave	2.062	1.992		19.3	20.0	-3.4	30.0
1,3-Diethylbenzene	Ave	1.537	1.737		22.6	20.0	13.0	30.0
1,4-Diethylbenzene	Ave	1.601	1.821		22.7	20.0	13.7	30.0
n-Butylbenzene	Ave	1.375	1.529		22.2	20.0	11.2	30.0
1,2-Dichlorobenzene	Ave	1.533	1.577	0.4000	20.6	20.0	2.9	30.0
1,2-Diethylbenzene	Ave	1.286	1.454		22.6	20.0	13.0	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.3414	0.3242	0.0500	19.0	20.0	-5.1	30.0
1,3,5-Trichlorobenzene	Ave	1.003	1.116		22.2	20.0	11.2	30.0
1,2,4-Trichlorobenzene	Ave	0.8942	1.045	0.2000	23.4	20.0	16.9	30.0
Hexachlorobutadiene	Ave	0.3500	0.3879		22.2	20.0	10.8	30.0
Naphthalene	Ave	3.299	3.830		23.2	20.0	16.1	30.0
1,2,3-Trichlorobenzene	Ave	0.9201	1.079		23.4	20.0	17.2	30.0
2-Methylnaphthalene	Ave	1.511	1.815		24.0	20.0	20.1	30.0
Dibromofluoromethane (Surr)	Ave	0.2824	0.2814		49.8	50.0	-0.4	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.0596	0.0590		49.5	50.0	-1.1	30.0
Toluene-d8 (Surr)	Ave	1.315	1.349		51.3	50.0	2.6	30.0
4-Bromofluorobenzene (Surr)	Ave	0.5221	0.5041		48.3	50.0	-3.4	30.0

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X28.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 10-Jul-2023 22:34:30 ALS Bottle#: 27 Worklist Smp#: 20
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 410-0088512-020
Misc. Info.: ICV
Operator ID: CLM27445 Instrument ID: 26285
Sublist:

Method: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\MSVoa_26285a.m
Limit Group: MSV - 8260C_D
Last Update: 11-Jul-2023 00:50:52 Calib Date: 10-Jul-2023 21:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X27.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1619

First Level Reviewer: K4WN Date: 10-Jul-2023 23:00:31

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
3 Dichlorodifluoromethane	85	1.573	1.579	-0.006	99	216589	20.0	19.8	
4 Chloromethane	50	1.726	1.738	-0.012	99	247451	20.0	18.7	
5 Vinyl chloride	62	1.817	1.823	-0.006	75	213703	20.0	18.9	
6 Butadiene	39	1.817	1.829	-0.012	99	223898	20.0	16.0	
8 Bromomethane	94	2.073	2.091	-0.018	92	125481	20.0	16.8	
9 Chloroethane	64	2.134	2.146	-0.012	98	118778	20.0	18.6	
10 Dichlorofluoromethane	67	2.329	2.354	-0.025	97	353116	20.0	18.3	
11 Trichlorofluoromethane	101	2.384	2.402	-0.018	86	253925	20.0	19.4	
12 Pentane	43	2.372	2.408	-0.036	96	252135	20.0	19.4	
13 Ethyl ether	59	2.543	2.573	-0.030	95	115491	20.0	19.7	
15 1,2-Dichloro-1,1,2-trifluoroetha	67	2.634	2.664	-0.030	94	200406	20.0	20.3	
16 Acrolein	56	2.677	2.707	-0.030	99	456779	150.0	154.4	
17 1,1-Dichloroethene	96	2.799	2.829	-0.030	95	141035	20.0	21.8	
18 Acetone	58	2.805	2.847	-0.042	99	357100	250.0	232.7	
19 1,1,2-Trichloro-1,2,2-trifluoroe	101	2.835	2.872	-0.037	94	155412	20.0	22.1	
20 Iodomethane	142	2.963	2.994	-0.031	100	268340	20.0	20.7	
21 Isopropyl alcohol	45	2.957	3.012	-0.055	51	218786	150.0	143.8	
22 Carbon disulfide	76	3.043	3.073	-0.030	100	576369	20.0	19.9	M
25 Methyl acetate	43	3.134	3.177	-0.043	99	225319	20.0	19.9	
26 3-Chloro-1-propene	41	3.158	3.195	-0.037	89	261661	20.0	20.5	
27 Methylene Chloride	84	3.323	3.359	-0.036	99	168155	20.0	21.0	
* 28 t-Butyl alcohol-d10 (IS)	65	3.390	3.420	-0.030	79	580948	250.0	250.0	
29 2-Methyl-2-propanol	59	3.481	3.500	-0.019	99	498123	200.0	196.1	
30 Acrylonitrile	53	3.567	3.615	-0.048	98	550593	100.0	96.7	
31 trans-1,2-Dichloroethene	96	3.634	3.676	-0.042	95	141412	20.0	20.2	
32 Methyl tert-butyl ether	73	3.652	3.695	-0.043	97	425664	20.0	20.9	
33 Hexane	57	4.000	4.054	-0.054	95	179109	20.0	21.0	
34 1,1-Dichloroethane	63	4.219	4.274	-0.055	96	277975	20.0	20.3	
36 Isopropyl ether	45	4.286	4.347	-0.061	95	493340	20.0	20.7	
37 2-Chloro-1,3-butadiene	53	4.335	4.384	-0.049	93	222049	20.0	20.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
39 Tert-butyl ethyl ether	59	4.853	4.908	-0.055	98	417077	20.0	21.2	
40 2-Butanone (MEK)	43	5.060	5.121	-0.061	99	1958089	250.0	254.0	
41 cis-1,2-Dichloroethene	96	5.085	5.133	-0.048	85	165951	20.0	21.2	
42 2,2-Dichloropropane	77	5.097	5.152	-0.055	90	234515	20.0	22.2	
44 Propionitrile	54	5.152	5.213	-0.061	98	363722	150.0	145.8	
46 Methacrylonitrile	67	5.371	5.426	-0.055	95	715463	150.0	154.8	
47 Chlorobromomethane	128	5.426	5.475	-0.049	95	83577	20.0	21.3	
48 Tetrahydrofuran	71	5.438	5.493	-0.055	90	188313	100.0	98.5	
49 Chloroform	83	5.591	5.639	-0.048	95	276956	20.0	20.3	
$ 50 Dibromofluoromethane (Surr)	113	5.810	5.865	-0.055	93	358870	50.0	49.8	
51 1,1,1-Trichloroethane	97	5.816	5.871	-0.055	95	246840	20.0	21.3	
52 Cyclohexane	56	5.914	5.969	-0.055	95	258534	20.0	21.7	
53 Carbon tetrachloride	117	6.030	6.078	-0.048	94	218317	20.0	20.8	
54 1,1-Dichloropropene	75	6.036	6.091	-0.055	93	207603	20.0	21.5	
56 Isobutyl alcohol	41	6.261	6.310	-0.049	93	403275	500.0	460.3	
$ 57 1,2-Dichloroethane-d4 (Surr)	102	6.280	6.328	-0.048	78	75197	50.0	49.5	
58 Benzene	78	6.304	6.353	-0.049	98	612491	20.0	21.1	
59 1,2-Dichloroethane	62	6.383	6.432	-0.049	97	218537	20.0	19.6	
61 Tert-amyl methyl ether	73	6.517	6.578	-0.061	96	397591	20.0	21.4	
* 62 Fluorobenzene (IS)	96	6.731	6.780	-0.049	98	1275368	50.0	50.0	
63 n-Heptane	43	6.767	6.816	-0.049	97	190480	20.0	19.0	
64 n-Butanol	56	7.164	7.225	-0.061	95	553985	1000.0	1045.0	
65 Trichloroethene	95	7.231	7.279	-0.048	97	153759	20.0	20.2	
67 Methylcyclohexane	83	7.536	7.584	-0.048	93	233159	20.0	22.2	
68 1,2-Dichloropropane	63	7.572	7.615	-0.043	97	161009	20.0	20.6	
69 2-ethoxy-2-methyl butane	87	7.609	7.651	-0.042	91	187184	20.0	21.2	
70 Dibromomethane	93	7.682	7.724	-0.042	94	105070	20.0	20.5	
72 1,4-Dioxane	88	7.670	7.724	-0.054	37	74586	500.0	577.8	M
71 Methyl methacrylate	69	7.688	7.737	-0.049	93	116984	20.0	19.7	
75 Dichlorobromomethane	83	7.938	7.980	-0.042	98	199048	20.0	20.1	
76 2-Nitropropane	41	8.224	8.267	-0.043	98	65048	20.0	17.7	
77 2-Chloroethyl vinyl ether	63	8.334	8.377	-0.043	93	84578	20.0	18.9	
78 cis-1,3-Dichloropropene	75	8.517	8.560	-0.043	93	218191	20.0	19.8	
79 4-Methyl-2-pentanone (MIBK)	43	8.730	8.767	-0.037	98	3738496	250.0	273.6	
$ 80 Toluene-d8 (Surr)	98	8.858	8.901	-0.043	95	1201417	50.0	51.3	
81 Toluene	92	8.950	8.986	-0.036	98	350172	20.0	21.3	
82 trans-1,3-Dichloropropene	75	9.267	9.303	-0.036	96	192726	20.0	20.0	
83 Ethyl methacrylate	69	9.364	9.395	-0.031	91	182639	20.0	19.6	
84 1,1,2-Trichloroethane	97	9.499	9.529	-0.030	92	125553	20.0	20.2	
85 Tetrachloroethene	166	9.584	9.614	-0.030	97	158196	20.0	20.9	
86 1,3-Dichloropropane	76	9.675	9.706	-0.031	96	202138	20.0	20.4	
88 2-Hexanone	43	9.755	9.785	-0.030	99	2530836	250.0	275.4	
90 Chlorodibromomethane	129	9.907	9.937	-0.030	90	149210	20.0	20.2	
130 Ethylene Dibromide	107	10.017	10.047	-0.030	98	131092	20.0	20.3	
* 131 Chlorobenzene-d5 (IS)	117	10.504	10.523	-0.019	87	890463	50.0	50.0	
132 Chlorobenzene	112	10.529	10.553	-0.024	93	379068	20.0	20.0	
133 1-Chlorohexane	91	10.535	10.553	-0.018	92	169667	20.0	20.3	
134 1,1,1,2-Tetrachloroethane	131	10.626	10.645	-0.019	95	162500	20.0	22.4	
135 Ethylbenzene	91	10.633	10.657	-0.024	99	682627	20.0	21.2	
136 m-Xylene & p-Xylene	106	10.761	10.779	-0.018	100	524929	40.0	43.6	
137 o-Xylene	106	11.108	11.126	-0.018	98	262101	20.0	21.9	
138 Styrene	104	11.126	11.145	-0.018	94	396525	20.0	21.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
140 Bromoform	173	11.285	11.303	-0.018	96	114595	20.0	18.5	
141 Isopropylbenzene	105	11.437	11.449	-0.012	96	729475	20.0	22.7	
143 Cyclohexanone	55	11.504	11.516	-0.012	95	323537	500.0	438.2	
$ 144 4-Bromofluorobenzene (Surr)	95	11.577	11.596	-0.019	90	448886	50.0	48.3	
145 Bromobenzene	156	11.693	11.711	-0.018	96	164179	20.0	20.6	
146 1,1,2,2-Tetrachloroethane	83	11.699	11.711	-0.012	93	249109	20.0	20.5	
147 trans-1,4-Dichloro-2-butene	53	11.724	11.742	-0.018	92	351170	100.0	98.6	
148 1,2,3-Trichloropropane	110	11.742	11.754	-0.012	86	66984	20.0	20.3	
149 N-Propylbenzene	91	11.779	11.797	-0.018	99	867150	20.0	22.4	
150 2-Chlorotoluene	126	11.852	11.870	-0.018	96	170072	20.0	21.6	
151 1,3,5-Trimethylbenzene	105	11.931	11.943	-0.012	94	605405	20.0	22.9	
152 4-Chlorotoluene	126	11.949	11.968	-0.019	98	162307	20.0	21.5	
154 tert-Butylbenzene	134	12.175	12.193	-0.018	94	108939	20.0	23.6	
156 1,2,4-Trimethylbenzene	105	12.224	12.236	-0.012	98	619542	20.0	23.1	
157 sec-Butylbenzene	105	12.346	12.358	-0.012	95	756213	20.0	23.4	
158 1,3-Dichlorobenzene	146	12.437	12.455	-0.018	98	317478	20.0	20.5	
159 4-Isopropyltoluene	119	12.461	12.474	-0.013	97	641513	20.0	23.6	
* 160 1,4-Dichlorobenzene-d4	152	12.498	12.510	-0.012	95	521723	50.0	50.0	
161 1,4-Dichlorobenzene	146	12.516	12.528	-0.012	96	322054	20.0	21.4	
162 1,2,3-Trimethylbenzene	105	12.535	12.547	-0.012	99	634668	20.0	22.2	
163 Benzyl chloride	91	12.602	12.614	-0.012	99	415754	20.0	19.3	
164 1,3-Diethylbenzene	119	12.675	12.681	-0.006	95	362459	20.0	22.6	
168 p-Diethylbenzene	119	12.742	12.754	-0.012	93	379940	20.0	22.7	
166 n-Butylbenzene	92	12.760	12.772	-0.012	97	319000	20.0	22.2	
167 1,2-Dichlorobenzene	146	12.785	12.797	-0.012	98	329081	20.0	20.6	
165 o-diethylbenzene	119	12.815	12.827	-0.012	97	303355	20.0	22.6	
169 1,2-Dibromo-3-Chloropropane	75	13.339	13.351	-0.012	81	67654	20.0	19.0	
171 1,3,5-Trichlorobenzene	180	13.473	13.479	-0.006	97	232871	20.0	22.2	
172 1,2,4-Trichlorobenzene	180	13.900	13.912	-0.012	94	218097	20.0	23.4	
173 Hexachlorobutadiene	225	13.992	14.004	-0.012	96	80950	20.0	22.2	
174 Naphthalene	128	14.083	14.089	-0.006	97	799215	20.0	23.2	
175 1,2,3-Trichlorobenzene	180	14.229	14.235	-0.006	95	225118	20.0	23.4	
176 2-Methylnaphthalene	142	14.821	14.827	-0.006	92	378797	20.0	24.0	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

MSV_LCS_VOC#1_00118	Amount Added: 50.00	Units: uL	
MSV_LCS_2CEVE_00123	Amount Added: 50.00	Units: uL	
MSV_LCS_EE_00007	Amount Added: 50.00	Units: uL	
MSV_LCS_CYC_00004	Amount Added: 50.00	Units: uL	
MSV_LCS_Gases_00150	Amount Added: 50.00	Units: uL	
MSV_LCS_ACROL_00121	Amount Added: 50.00	Units: uL	
MSV_Cent_ISSS_00016	Amount Added: 5.00	Units: uL	Run Reagent

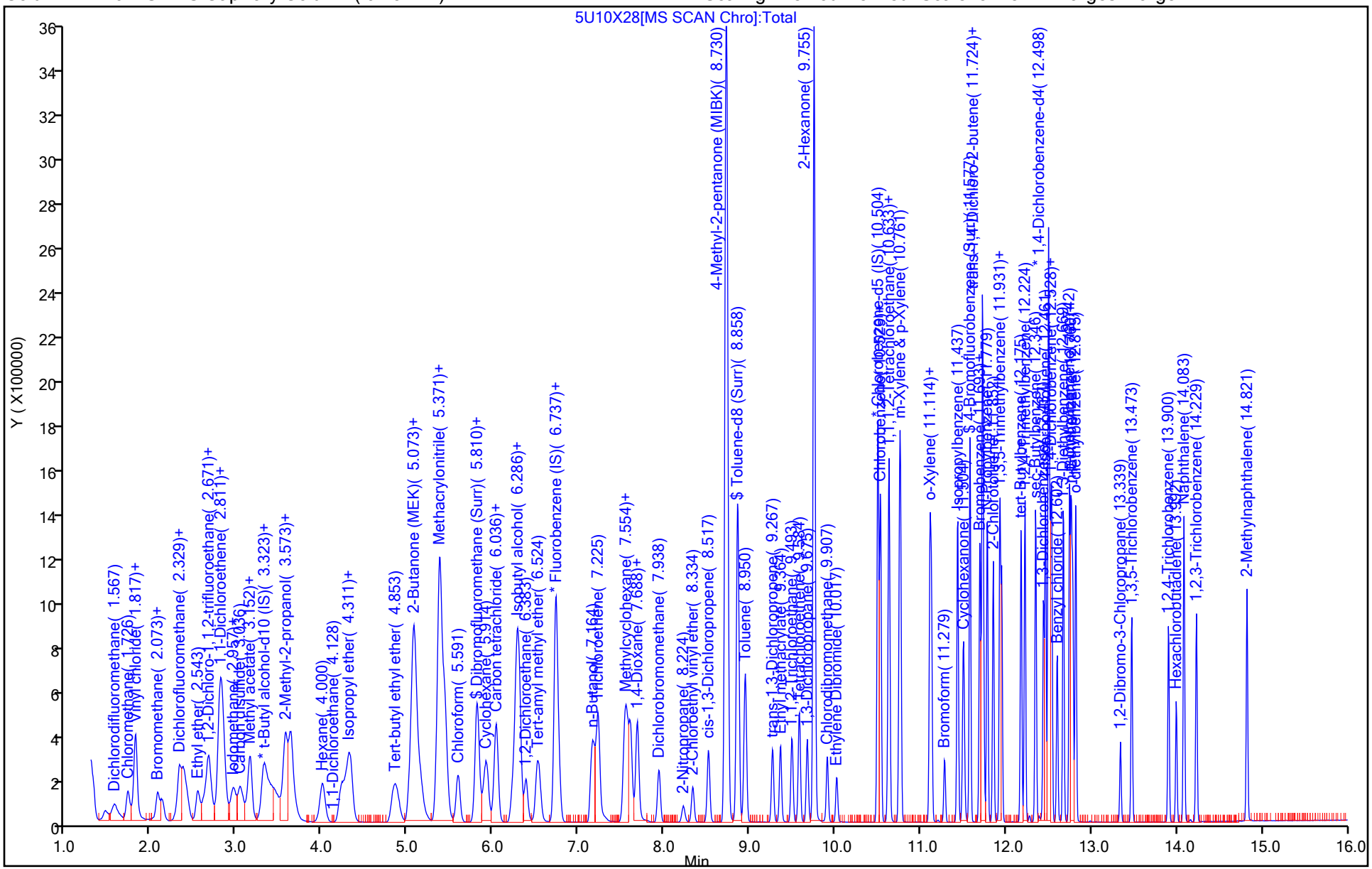
Report Date: 11-Jul-2023 00:50:58 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X28.D

Injection Date:	10-Jul-2023 22:34:30	Instrument ID:	26285	Operator ID:	CLM27445
Lims ID:	ICV			Worklist Smp#:	20
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	27
Method:	MSVoa_26285a	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

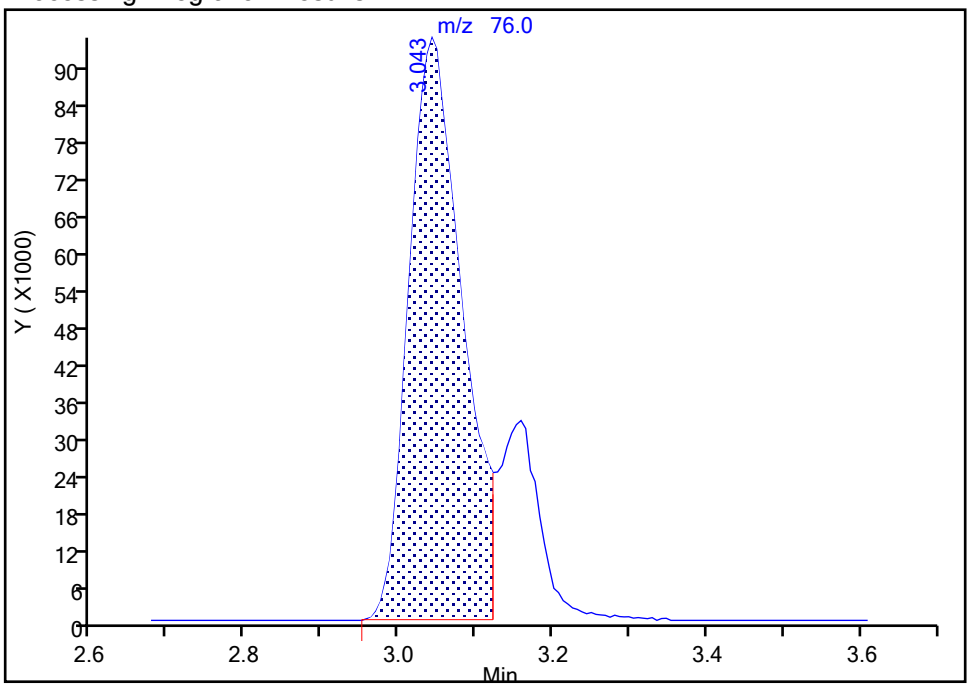
Data File:	\\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X28.D				
Injection Date:	10-Jul-2023 22:34:30	Instrument ID:	26285		
Lims ID:	ICV				
Client ID:					
Operator ID:	CLM27445	ALS Bottle#:	27	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVoa_26285a	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

22 Carbon disulfide, CAS: 75-15-0

Signal: 1

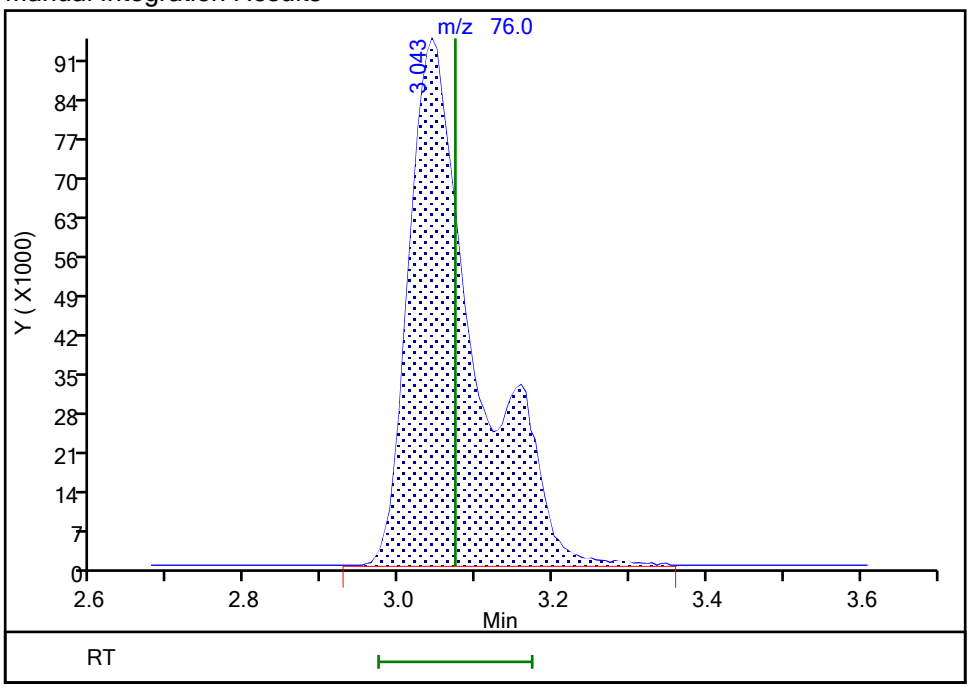
Processing Integration Results

RT: 3.04
Area: 459353
Amount: 15.894775
Amount Units: ug/l



Manual Integration Results

RT: 3.04
Area: 576369
Amount: 19.943825
Amount Units: ug/l



Reviewer: K4WN, 10-Jul-2023 22:59:57 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

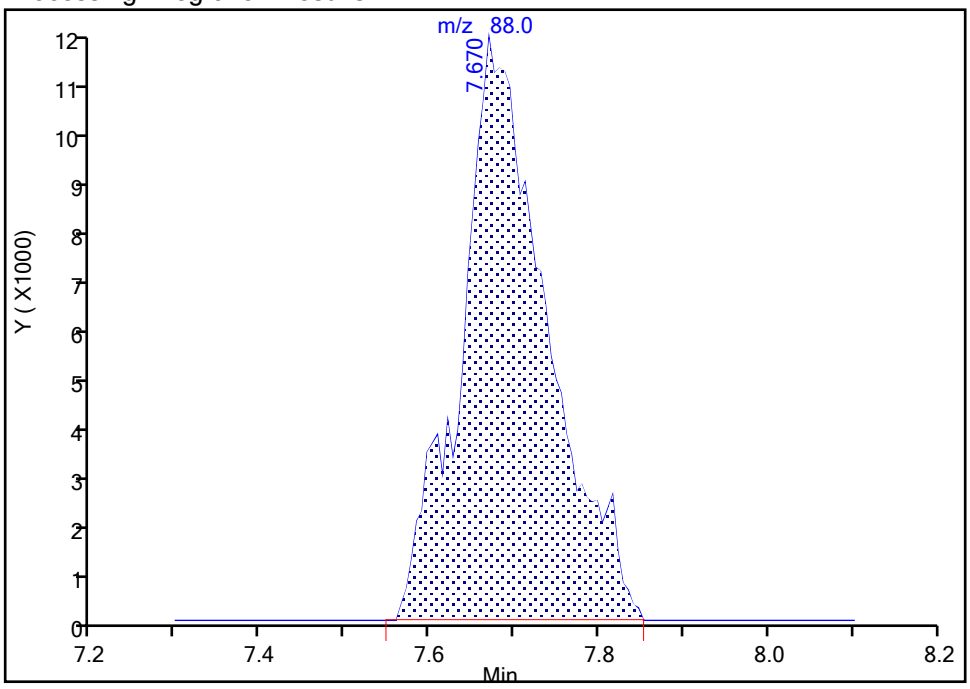
Data File:	\\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X28.D				
Injection Date:	10-Jul-2023 22:34:30	Instrument ID:	26285		
Lims ID:	ICV				
Client ID:					
Operator ID:	CLM27445	ALS Bottle#:	27	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVoa_26285a	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

72 1,4-Dioxane, CAS: 123-91-1

Signal: 1

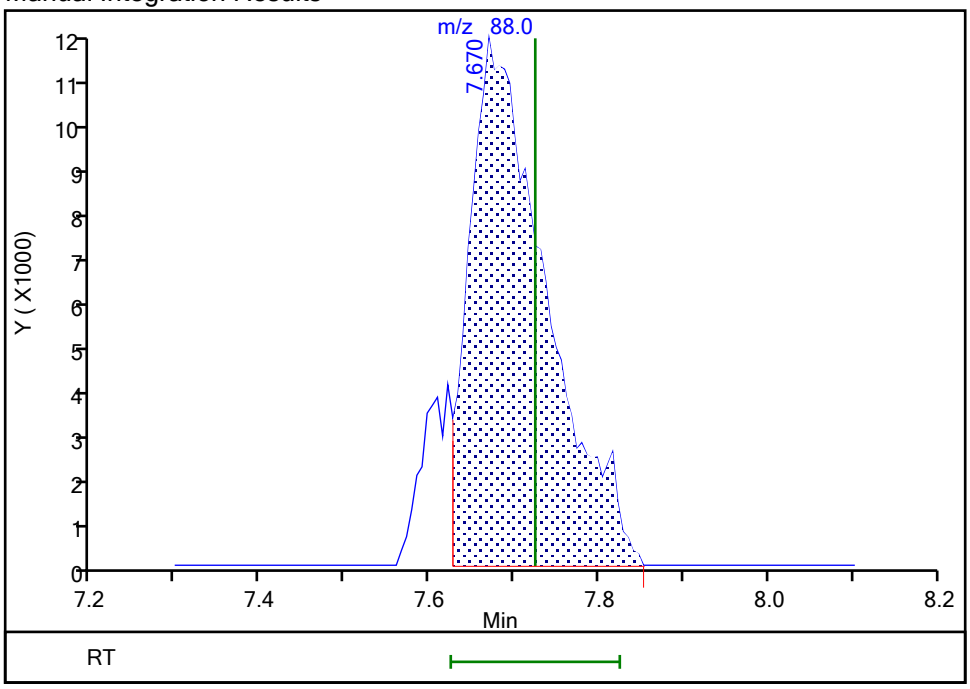
Processing Integration Results

RT: 7.67
Area: 83387
Amount: 645.9787
Amount Units: ug/l



Manual Integration Results

RT: 7.67
Area: 74586
Amount: 577.7995
Amount Units: ug/l



Reviewer: K4WN, 10-Jul-2023 23:00:13 -04:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Lab Sample ID: CCVIS 410-404928/3 Calibration Date: 08/06/2023 11:33

Instrument ID: 26285 Calib Start Date: 07/10/2023 15:53

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 07/10/2023 21:06

Lab File ID: 5G06X05.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4298	0.3789	0.1000	44.1	50.0	-11.8	20.0
Chloromethane	Ave	0.5186	0.3638	0.1000	35.1	50.0	-29.8*	20.0
Vinyl chloride	Ave	0.4445	0.3380	0.1000	38.0	50.0	-23.9*	20.0
1,3-Butadiene	Ave	0.5471	0.3769		34.4	50.0	-31.1*	20.0
Bromomethane	Ave	0.2930	0.2651	0.1000	45.2	50.0	-9.5	20.0
Chloroethane	Ave	0.2508	0.2114	0.1000	42.1	50.0	-15.7	20.0
Dichlorofluoromethane	Ave	0.7561	0.6569		43.4	50.0	-13.1	20.0
Trichlorofluoromethane	Ave	0.5128	0.4818	0.1000	47.0	50.0	-6.0	20.0
n-Pentane	Ave	0.5099	0.3518		34.5	50.0	-31.0*	20.0
Freon 123a	Ave	0.3868	0.3467		44.8	50.0	-10.4	20.0
Acrolein	Ave	1.273	1.218		478	500	-4.3	20.0
1,1-Dichloroethene	Ave	0.2535	0.2274	0.1000	44.8	50.0	-10.3	20.0
Acetone	Ave	0.6603	0.5788	0.1000	87.7	100	-12.3	20.0
Freon 113	Ave	0.2762	0.2292	0.1000	41.5	50.0	-17.0	20.0
2-Propanol	Ave	0.6545	0.5011		191	250	-23.4*	20.0
Methyl iodide	Ave	0.5094	0.4819		47.3	50.0	-5.4	20.0
Carbon disulfide	Ave	1.133	0.7287	0.1000	32.2	50.0	-35.7*	20.0
Methyl acetate	Ave	0.4441	0.3326	0.1000	37.4	50.0	-25.1*	20.0
Allyl chloride	Ave	0.4999	0.3846		38.5	50.0	-23.1*	20.0
Methylene Chloride	Ave	0.3143	0.2573	0.1000	40.9	50.0	-18.2	20.0
t-Butyl alcohol	Ave	1.093	0.8256		189	250	-24.5*	20.0
Acrylonitrile	Ave	0.2232	0.1580		88.5	125	-29.2*	20.0
Methyl tertiary butyl ether	Ave	0.7981	0.6459	0.1000	40.5	50.0	-19.1	20.0
trans-1,2-Dichloroethene	Ave	0.2749	0.2475	0.1000	45.0	50.0	-10.0	20.0
n-Hexane	Ave	0.3339	0.2548		38.2	50.0	-23.7*	20.0
1,1-Dichloroethane	Ave	0.5376	0.4466	0.2000	41.5	50.0	-16.9	20.0
Isopropyl ether	Ave	0.9348	0.7226		38.7	50.0	-22.7*	20.0
2-Chloro-1,3-butadiene	Ave	0.4255	0.3619		42.5	50.0	-15.0	20.0
Ethyl t-butyl ether	Ave	0.7727	0.6260		40.5	50.0	-19.0	20.0
2-Butanone	Ave	0.3023	0.2271	0.1000	75.1	100	-24.9*	20.0
cis-1,2-Dichloroethene	Ave	0.3066	0.2682	0.1000	43.7	50.0	-12.5	20.0
2,2-Dichloropropane	Ave	0.4136	0.3603		43.6	50.0	-12.9	20.0
Propionitrile	Ave	1.074	0.8502		198	250	-20.8*	20.0
Methacrylonitrile	Ave	0.1812	0.1454		100	125	-19.8	20.0
Bromochloromethane	Ave	0.1537	0.1411		45.9	50.0	-8.2	20.0
Tetrahydrofuran	Ave	0.8224	0.7957		242	250	-3.2	20.0
Chloroform	Ave	0.5347	0.4687	0.2000	43.8	50.0	-12.3	20.0
1,1,1-Trichloroethane	Ave	0.4536	0.3971	0.1000	43.8	50.0	-12.5	20.0
Cyclohexane	Ave	0.4681	0.3747	0.1000	40.0	50.0	-19.9	20.0
1,1-Dichloropropene	Ave	0.3778	0.3339		44.2	50.0	-11.6	20.0
Carbon tetrachloride	Ave	0.4108	0.3655	0.1000	44.5	50.0	-11.0	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Lab Sample ID: CCVIS 410-404928/3 Calibration Date: 08/06/2023 11:33

Instrument ID: 26285 Calib Start Date: 07/10/2023 15:53

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 07/10/2023 21:06

Lab File ID: 5G06X05.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Isobutyl alcohol	Ave	0.3770	0.2840		471	625	-24.7*	20.0
Benzene	Ave	1.136	0.9707	0.5000	42.7	50.0	-14.5	20.0
1,2-Dichloroethane	Ave	0.4373	0.3315	0.1000	37.9	50.0	-24.2*	20.0
t-Amyl methyl ether	Ave	0.7283	0.6366		43.7	50.0	-12.6	20.0
n-Heptane	Ave	0.3940	0.2587		32.8	50.0	-34.3*	20.0
n-Butanol	Ave	0.2281	0.2039		559	625	-10.6	20.0
Trichloroethene	Ave	0.2990	0.2674	0.2000	44.7	50.0	-10.6	20.0
Methylcyclohexane	Ave	0.4126	0.3485	0.1000	42.2	50.0	-15.5	20.0
1,2-Dichloropropane	Ave	0.3061	0.2458	0.1000	40.2	50.0	-19.7	20.0
t-Amyl ethyl ether	Ave	0.3461	0.3180		45.9	50.0	-8.1	20.0
1,4-Dioxane	Ave	0.0555	0.0600	0.0050	675	625	8.0	20.0
Dibromomethane	Ave	0.2007	0.1661		41.4	50.0	-17.3	20.0
Methyl methacrylate	Ave	0.2324	0.1918		41.3	50.0	-17.5	20.0
Bromodichloromethane	Ave	0.3883	0.3175	0.2000	40.9	50.0	-18.2	20.0
2-Nitropropane	Ave	1.585	1.383		218	250	-12.8	20.0
2-Chloroethyl vinyl ether	Ave	0.1758	0.1608		45.7	50.0	-8.5	20.0
cis-1,3-Dichloropropene	Ave	0.4328	0.3786	0.2000	43.7	50.0	-12.5	20.0
4-Methyl-2-pentanone	Ave	0.5357	0.4557	0.1000	85.1	100	-14.9	20.0
Toluene	Ave	0.9244	0.8189	0.4000	44.3	50.0	-11.4	20.0
trans-1,3-Dichloropropene	Ave	0.5417	0.4516	0.1000	41.7	50.0	-16.6	20.0
Ethyl methacrylate	Ave	0.5236	0.4468		42.7	50.0	-14.7	20.0
1,1,2-Trichloroethane	Ave	0.3486	0.2943	0.1000	42.2	50.0	-15.6	20.0
Tetrachloroethene	Ave	0.4250	0.4103	0.2000	48.3	50.0	-3.5	20.0
1,3-Dichloropropane	Ave	0.5558	0.4463		40.2	50.0	-19.7	20.0
2-Hexanone	Ave	0.5160	0.4430	0.1000	85.9	100	-14.1	20.0
Dibromochloromethane	Ave	0.4139	0.3629		43.8	50.0	-12.3	20.0
1,2-Dibromoethane	Ave	0.3628	0.3099	0.1000	42.7	50.0	-14.6	20.0
Chlorobenzene	Ave	1.063	0.9328	0.5000	43.9	50.0	-12.3	20.0
1-Chlorohexane	Ave	0.4695	0.3933		41.9	50.0	-16.2	20.0
1,1,1,2-Tetrachloroethane	Ave	0.4081	0.3729		45.7	50.0	-8.6	20.0
Ethylbenzene	Ave	1.812	1.644	0.1000	45.4	50.0	-9.2	20.0
m&p-Xylene	Ave	0.6756	0.6355	0.1000	94.1	100	-5.9	20.0
o-Xylene	Ave	0.6706	0.6400	0.3000	47.7	50.0	-4.6	20.0
Styrene	Ave	1.037	0.9908	0.3000	47.8	50.0	-4.5	20.0
Bromoform	Ave	0.3479	0.3009	0.1000	43.2	50.0	-13.5	20.0
Isopropylbenzene	Ave	1.802	1.677	0.1000	46.5	50.0	-6.9	20.0
Bromobenzene	Ave	0.7633	0.6965		45.6	50.0	-8.8	20.0
1,1,2,2-Tetrachloroethane	Ave	1.167	0.9057	0.3000	38.8	50.0	-22.4*	20.0
trans-1,4-Dichloro-2-butene	Ave	0.3413	0.2213		81.1	125	-35.1*	20.0
1,2,3-Trichloropropane	Ave	0.3159	0.2554		40.4	50.0	-19.1	20.0
N-Propylbenzene	Ave	3.710	3.220		43.4	50.0	-13.2	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Lab Sample ID: CCVIS 410-404928/3 Calibration Date: 08/06/2023 11:33

Instrument ID: 26285 Calib Start Date: 07/10/2023 15:53

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 07/10/2023 21:06

Lab File ID: 5G06X05.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chlorotoluene	Ave	0.7544	0.6909		45.8	50.0	-8.4	20.0
1,3,5-Trimethylbenzene	Ave	2.537	2.302		45.4	50.0	-9.3	20.0
4-Chlorotoluene	Ave	0.7236	0.6589		45.5	50.0	-8.9	20.0
tert-Butylbenzene	Ave	0.4417	0.4273		48.4	50.0	-3.3	20.0
1,2,4-Trimethylbenzene	Ave	2.575	2.381		46.2	50.0	-7.5	20.0
sec-Butylbenzene	Ave	3.098	2.711		43.8	50.0	-12.5	20.0
1,3-Dichlorobenzene	Ave	1.482	1.340	0.6000	45.2	50.0	-9.6	20.0
p-Isopropyltoluene	Ave	2.601	2.370		45.5	50.0	-8.9	20.0
1,4-Dichlorobenzene	Ave	1.444	1.286	0.5000	44.5	50.0	-11.0	20.0
1,2,3-Trimethylbenzene	Ave	2.742	2.439		44.5	50.0	-11.1	20.0
Benzyl chloride	Ave	2.062	1.758		42.6	50.0	-14.7	20.0
1,3-Diethylbenzene	Ave	1.537	1.370		44.5	50.0	-10.9	20.0
1,4-Diethylbenzene	Ave	1.601	1.437		44.9	50.0	-10.2	20.0
n-Butylbenzene	Ave	1.375	1.126		41.0	50.0	-18.1	20.0
1,2-Dichlorobenzene	Ave	1.533	1.363	0.4000	44.5	50.0	-11.1	20.0
1,2-Diethylbenzene	Ave	1.286	1.146		44.6	50.0	-10.9	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.3414	0.2528	0.0500	37.0	50.0	-26.0*	20.0
1,3,5-Trichlorobenzene	Ave	1.003	0.9196		45.8	50.0	-8.4	20.0
1,2,4-Trichlorobenzene	Ave	0.8942	0.8322	0.2000	46.5	50.0	-6.9	20.0
Hexachlorobutadiene	Ave	0.3500	0.2798		40.0	50.0	-20.1*	20.0
Naphthalene	Ave	3.299	3.218		48.8	50.0	-2.4	20.0
1,2,3-Trichlorobenzene	Ave	0.9201	0.8299		45.1	50.0	-9.8	20.0
2-Methylnaphthalene	Ave	1.511	1.547		51.2	50.0	2.4	20.0
Dibromofluoromethane (Surr)	Ave	0.2824	0.2755		48.8	50.0	-2.4	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.0596	0.0594		49.8	50.0	-0.4	20.0
Toluene-d8 (Surr)	Ave	1.315	1.312		49.9	50.0	-0.2	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5221	0.4771		45.7	50.0	-8.6	20.0

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\26285\20230806-90734.b\5G06X05.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 06-Aug-2023 11:33:30 ALS Bottle#: 5 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090734-003
Misc. Info.: CCVIS
Operator ID: knk41612 Instrument ID: 26285
Sublist: chrom-MSVoa_26285a*sub40

Method: \\chromfs\Lancaster\ChromData\26285\20230806-90734.b\MSVoa_26285a.m
Limit Group: MSV - 8260C_D
Last Update: 06-Aug-2023 12:37:19 Calib Date: 10-Jul-2023 21:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X27.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1670

First Level Reviewer: DVW2 Date: 06-Aug-2023 11:57:49

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
3 Dichlorodifluoromethane	85	1.567	1.567	0.000	99	488087	50.0	44.1	
4 Chloromethane	50	1.732	1.732	0.000	99	468683	50.0	35.1	
5 Vinyl chloride	62	1.811	1.811	0.000	97	435470	50.0	38.0	
6 Butadiene	39	1.823	1.823	0.000	97	485511	50.0	34.4	
8 Bromomethane	94	2.085	2.085	0.000	92	341524	50.0	45.2	
9 Chloroethane	64	2.140	2.140	0.000	98	272328	50.0	42.1	
10 Dichlorofluoromethane	67	2.335	2.335	0.000	97	846198	50.0	43.4	
11 Trichlorofluoromethane	101	2.384	2.384	0.000	96	620710	50.0	47.0	
12 Pentane	43	2.390	2.390	0.000	96	453144	50.0	34.5	
15 1,2-Dichloro-1,1,2-trifluoroetha	67	2.646	2.646	0.000	92	446653	50.0	44.8	
16 Acrolein	56	2.689	2.689	0.000	99	1165604	500.0	478.3	
17 1,1-Dichloroethene	96	2.799	2.799	0.000	98	292895	50.0	44.8	
18 Acetone	58	2.823	2.823	0.000	99	110807	100.0	87.7	a
19 1,1,2-Trichloro-1,2,2-trifluoroe	101	2.854	2.854	0.000	90	295279	50.0	41.5	
21 Isopropyl alcohol	45	2.969	2.969	0.000	39	239821	250.0	191.4	
20 Iodomethane	142	2.982	2.982	0.000	99	620834	50.0	47.3	
22 Carbon disulfide	76	3.049	3.049	0.000	99	938679	50.0	32.2	
25 Methyl acetate	43	3.146	3.146	0.000	98	428508	50.0	37.4	
26 3-Chloro-1-propene	41	3.171	3.171	0.000	88	495431	50.0	38.5	
27 Methylene Chloride	84	3.323	3.323	0.000	95	331429	50.0	40.9	
* 28 t-Butyl alcohol-d10 (IS)	65	3.347	3.347	0.000	77	478611	250.0	250.0	
29 2-Methyl-2-propanol	59	3.439	3.439	0.000	99	395130	250.0	188.8	
30 Acrylonitrile	53	3.579	3.579	0.000	98	508737	125.0	88.5	
32 Methyl tert-butyl ether	73	3.640	3.640	0.000	95	832061	50.0	40.5	
31 trans-1,2-Dichloroethene	96	3.646	3.646	0.000	98	318829	50.0	45.0	
33 Hexane	57	4.012	4.012	0.000	95	328276	50.0	38.2	
34 1,1-Dichloroethane	63	4.231	4.231	0.000	96	575378	50.0	41.5	
36 Isopropyl ether	45	4.298	4.298	0.000	94	930925	50.0	38.7	
37 2-Chloro-1,3-butadiene	53	4.335	4.335	0.000	92	466164	50.0	42.5	
39 Tert-butyl ethyl ether	59	4.859	4.859	0.000	98	806408	50.0	40.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
40 2-Butanone (MEK)	43	5.079	5.079	0.000	100	585111	100.0	75.1	
41 cis-1,2-Dichloroethene	96	5.097	5.097	0.000	83	345554	50.0	43.7	
42 2,2-Dichloropropane	77	5.121	5.121	0.000	89	464193	50.0	43.6	
44 Propionitrile	54	5.170	5.170	0.000	99	406931	250.0	198.0	
46 Methacrylonitrile	67	5.390	5.390	0.000	96	468167	125.0	100.3	
47 Chlorobromomethane	128	5.445	5.445	0.000	95	181730	50.0	45.9	
48 Tetrahydrofuran	71	5.463	5.463	0.000	90	380824	250.0	241.9	
49 Chloroform	83	5.615	5.615	0.000	94	603835	50.0	43.8	
$ 50 Dibromofluoromethane (Surr)	113	5.835	5.835	0.000	93	354967	50.0	48.8	
51 1,1,1-Trichloroethane	97	5.847	5.847	0.000	92	511510	50.0	43.8	
52 Cyclohexane	56	5.944	5.944	0.000	93	482733	50.0	40.0	
53 Carbon tetrachloride	117	6.060	6.060	0.000	77	470849	50.0	44.5	
54 1,1-Dichloropropene	75	6.060	6.060	0.000	94	430146	50.0	44.2	
56 Isobutyl alcohol	41	6.292	6.292	0.000	93	339823	625.0	470.8	
$ 57 1,2-Dichloroethane-d4 (Surr)	102	6.310	6.310	0.000	95	76479	50.0	49.8	
58 Benzene	78	6.335	6.335	0.000	98	1250516	50.0	42.7	
59 1,2-Dichloroethane	62	6.414	6.414	0.000	97	427004	50.0	37.9	
61 Tert-amyl methyl ether	73	6.554	6.554	0.000	98	820119	50.0	43.7	
* 62 Fluorobenzene (IS)	96	6.767	6.767	0.000	99	1288233	50.0	50.0	
63 n-Heptane	43	6.804	6.804	0.000	95	333223	50.0	32.8	
64 n-Butanol	56	7.219	7.219	0.000	92	243930	625.0	558.5	
65 Trichloroethene	95	7.273	7.273	0.000	98	344517	50.0	44.7	
67 Methylcyclohexane	83	7.584	7.584	0.000	92	448908	50.0	42.2	
68 1,2-Dichloropropane	63	7.615	7.615	0.000	97	316617	50.0	40.2	
69 2-ethoxy-2-methyl butane	87	7.651	7.651	0.000	92	409614	50.0	45.9	
72 1,4-Dioxane	88	7.725	7.725	0.000	30	71802	625.0	675.2	M
70 Dibromomethane	93	7.731	7.731	0.000	94	213925	50.0	41.4	
71 Methyl methacrylate	69	7.737	7.737	0.000	92	247056	50.0	41.3	
75 Dichlorobromomethane	83	7.987	7.987	0.000	99	409009	50.0	40.9	
76 2-Nitropropane	41	8.279	8.279	0.000	99	661766	250.0	218.0	
77 2-Chloroethyl vinyl ether	63	8.389	8.389	0.000	92	207149	50.0	45.7	
78 cis-1,3-Dichloropropene	75	8.572	8.572	0.000	95	487692	50.0	43.7	
79 4-Methyl-2-pentanone (MIBK)	43	8.785	8.785	0.000	98	1174184	100.0	85.1	
$ 80 Toluene-d8 (Surr)	98	8.919	8.919	0.000	94	1212342	50.0	49.9	
81 Toluene	92	9.005	9.005	0.000	98	756517	50.0	44.3	
82 trans-1,3-Dichloropropene	75	9.328	9.328	0.000	94	417182	50.0	41.7	
83 Ethyl methacrylate	69	9.425	9.425	0.000	90	412786	50.0	42.7	
84 1,1,2-Trichloroethane	97	9.560	9.560	0.000	91	271852	50.0	42.2	
85 Tetrachloroethene	166	9.645	9.645	0.000	98	379030	50.0	48.3	
86 1,3-Dichloropropane	76	9.736	9.736	0.000	93	412304	50.0	40.2	
88 2-Hexanone	43	9.816	9.816	0.000	98	818484	100.0	85.9	
90 Chlorodibromomethane	129	9.974	9.974	0.000	89	335248	50.0	43.8	
130 Ethylene Dibromide	107	10.084	10.084	0.000	98	286270	50.0	42.7	
* 131 Chlorobenzene-d5 (IS)	117	10.572	10.572	0.000	84	923817	50.0	50.0	
132 Chlorobenzene	112	10.596	10.596	0.000	94	861755	50.0	43.9	
133 1-Chlorohexane	91	10.602	10.602	0.000	98	363318	50.0	41.9	
134 1,1,1,2-Tetrachloroethane	131	10.694	10.694	0.000	95	344484	50.0	45.7	
135 Ethylbenzene	91	10.706	10.706	0.000	98	1518889	50.0	45.4	
136 m-Xylene & p-Xylene	106	10.828	10.828	0.000	99	1174252	100.0	94.1	
137 o-Xylene	106	11.181	11.181	0.000	97	591231	50.0	47.7	
138 Styrene	104	11.200	11.200	0.000	95	915336	50.0	47.8	
140 Bromoform	173	11.352	11.352	0.000	97	277946	50.0	43.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
141 Isopropylbenzene	105	11.510	11.510	0.000	96	1549506	50.0	46.5	
$ 144 4-Bromofluorobenzene (Surr)	95	11.651	11.651	0.000	95	440769	50.0	45.7	
145 Bromobenzene	156	11.767	11.767	0.000	92	390065	50.0	45.6	
146 1,1,2,2-Tetrachloroethane	83	11.773	11.773	0.000	95	507262	50.0	38.8	
147 trans-1,4-Dichloro-2-butene	53	11.797	11.797	0.000	89	309909	125.0	81.1	
148 1,2,3-Trichloropropane	110	11.815	11.815	0.000	84	143064	50.0	40.4	
149 N-Propylbenzene	91	11.858	11.858	0.000	99	1803275	50.0	43.4	
150 2-Chlorotoluene	126	11.931	11.931	0.000	97	386964	50.0	45.8	
151 1,3,5-Trimethylbenzene	105	12.004	12.004	0.000	96	1289108	50.0	45.4	
152 4-Chlorotoluene	126	12.029	12.029	0.000	97	369029	50.0	45.5	
154 tert-Butylbenzene	134	12.254	12.254	0.000	94	239332	50.0	48.4	
156 1,2,4-Trimethylbenzene	105	12.303	12.303	0.000	97	1333553	50.0	46.2	
157 sec-Butylbenzene	105	12.425	12.425	0.000	94	1518311	50.0	43.8	
158 1,3-Dichlorobenzene	146	12.516	12.516	0.000	98	750479	50.0	45.2	
159 4-Isopropyltoluene	119	12.541	12.541	0.000	97	1327113	50.0	45.5	
* 160 1,4-Dichlorobenzene-d4	152	12.577	12.577	0.000	94	560053	50.0	50.0	
161 1,4-Dichlorobenzene	146	12.596	12.596	0.000	97	720103	50.0	44.5	
162 1,2,3-Trimethylbenzene	105	12.614	12.614	0.000	98	1365838	50.0	44.5	
163 Benzyl chloride	91	12.681	12.681	0.000	99	984728	50.0	42.6	
164 1,3-Diethylbenzene	119	12.754	12.754	0.000	95	767046	50.0	44.5	
168 p-Diethylbenzene	119	12.827	12.827	0.000	94	804973	50.0	44.9	
166 n-Butylbenzene	92	12.846	12.846	0.000	97	630720	50.0	41.0	
167 1,2-Dichlorobenzene	146	12.864	12.864	0.000	99	763377	50.0	44.5	
165 o-diethylbenzene	119	12.900	12.900	0.000	95	642005	50.0	44.6	
169 1,2-Dibromo-3-Chloropropane	75	13.425	13.425	0.000	87	141583	50.0	37.0	
171 1,3,5-Trichlorobenzene	180	13.559	13.559	0.000	98	515023	50.0	45.8	
172 1,2,4-Trichlorobenzene	180	13.992	13.992	0.000	94	466104	50.0	46.5	
173 Hexachlorobutadiene	225	14.083	14.083	0.000	96	156718	50.0	40.0	
174 Naphthalene	128	14.175	14.175	0.000	97	1802465	50.0	48.8	
175 1,2,3-Trichlorobenzene	180	14.321	14.321	0.000	95	464773	50.0	45.1	
176 2-Methylnaphthalene	142	14.918	14.918	0.000	92	866621	50.0	51.2	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_CCV_2CEVE_00131	Amount Added:	5.00	Units: uL	
MSV_CCV_VOC#1_00137	Amount Added:	5.00	Units: uL	
MSV_CCV_VOC#3_00136	Amount Added:	4.00	Units: uL	
MSV_CCV_GASES_00541	Amount Added:	2.50	Units: uL	
MSV_Cent_ISSS_00021	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 06-Aug-2023 12:37:21 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\26285\20230806-90734.b\5G06X05.D

Injection Date: 06-Aug-2023 11:33:30 Instrument ID: 26285 Operator ID: knk41612

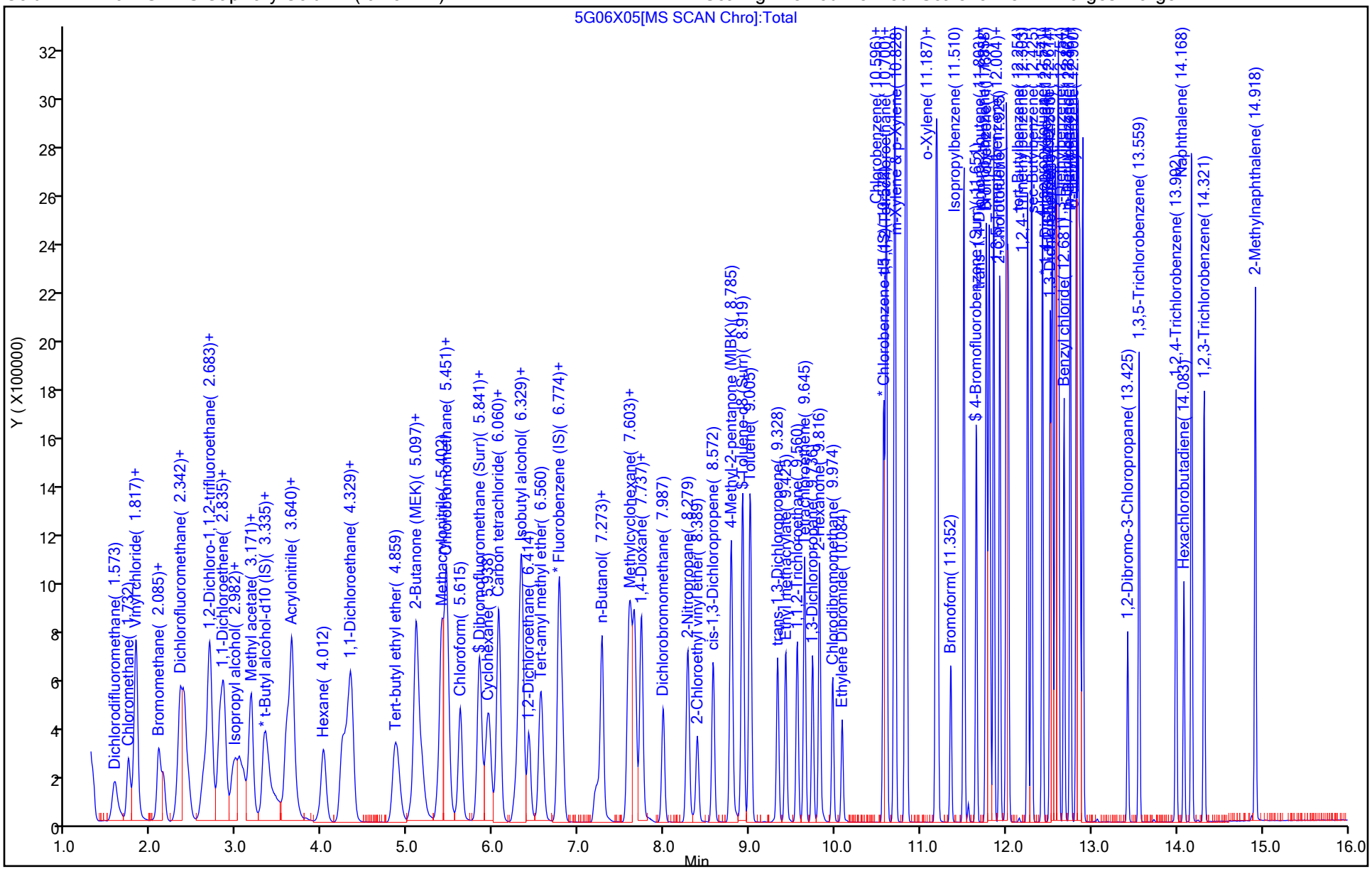
Lims ID: CCVIS Worklist Smp#: 3

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 5

Method: MSVoa_26285a Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

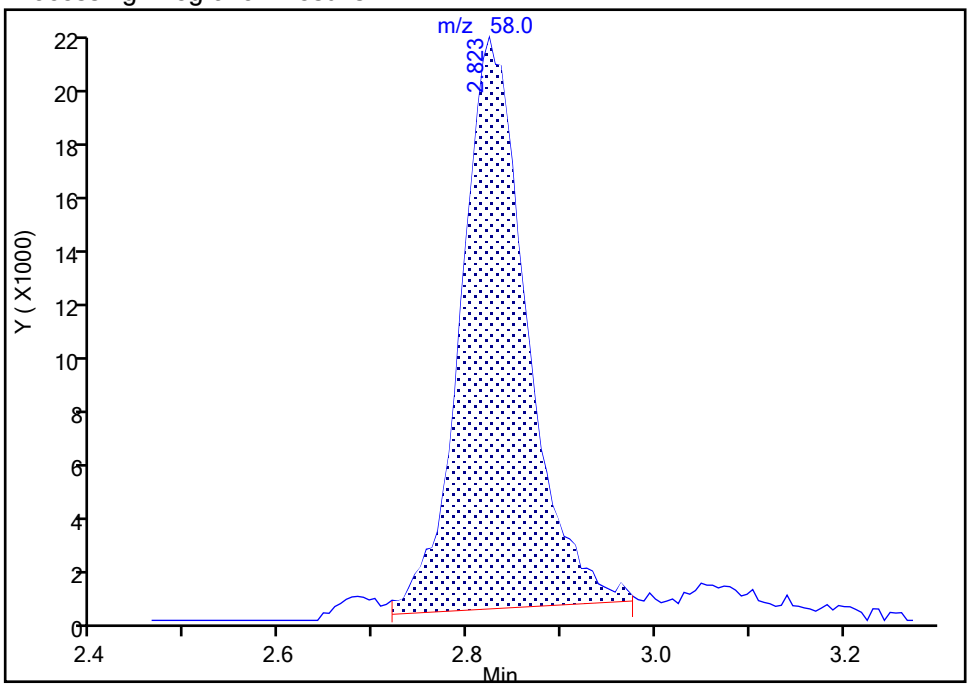
Data File: \\chromfs\Lancaster\ChromData\26285\20230806-90734.b\5G06X05.D
Injection Date: 06-Aug-2023 11:33:30 Instrument ID: 26285
Lims ID: CCVIS
Client ID:
Operator ID: knk41612 ALS Bottle#: 5 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVoa_26285a Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

18 Acetone, CAS: 67-64-1

Signal: 1

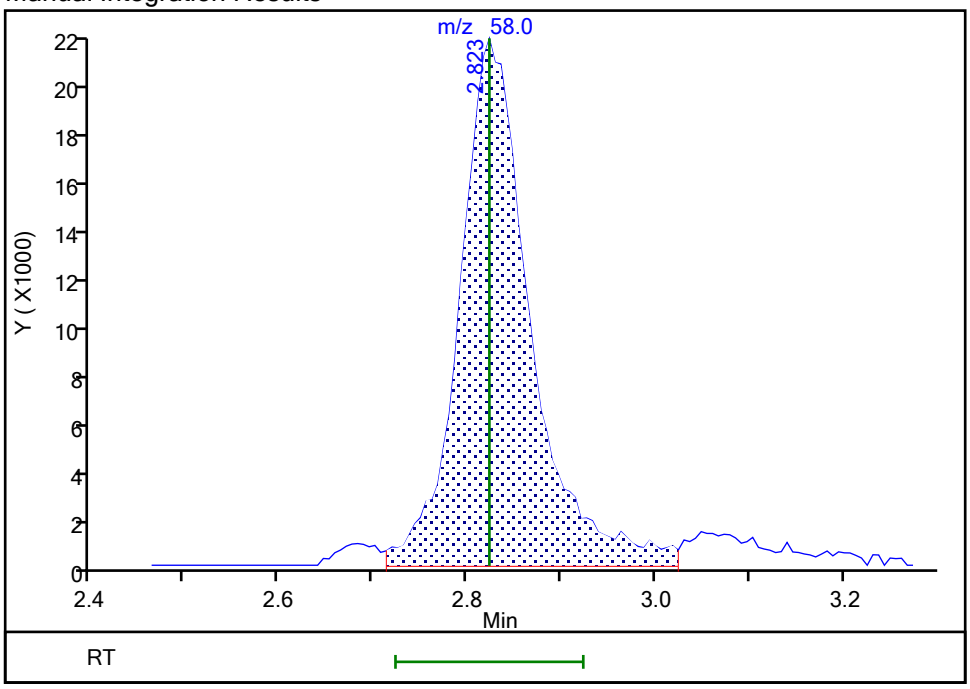
Processing Integration Results

RT: 2.82
Area: 100874
Amount: 79.793882
Amount Units: ug/l



Manual Integration Results

RT: 2.82
Area: 110807
Amount: 87.651136
Amount Units: ug/l



Reviewer: DVW2, 06-Aug-2023 11:54:05 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

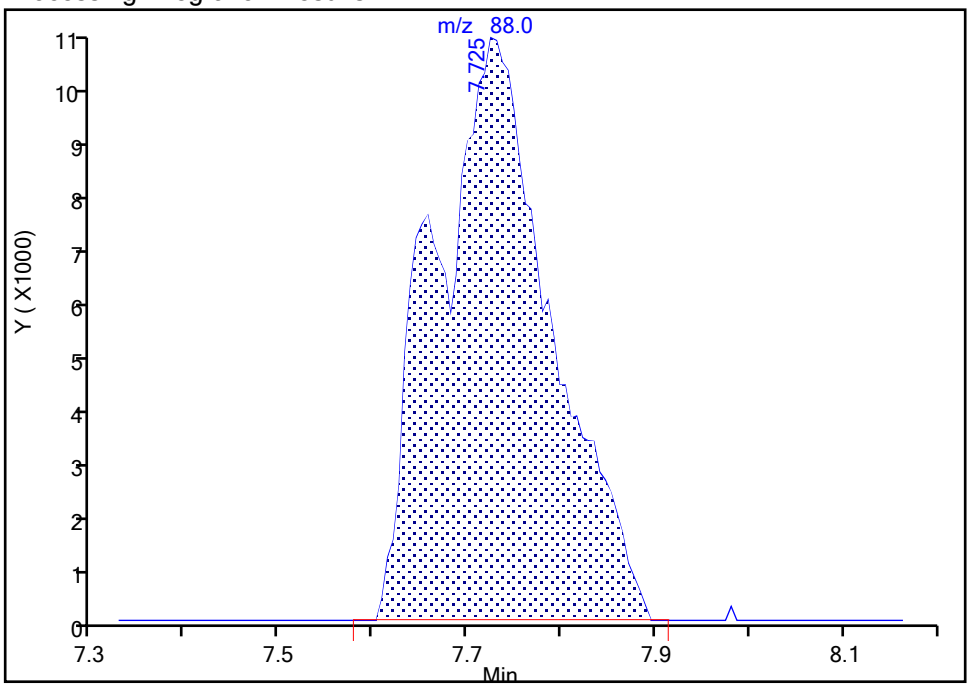
Data File: \\chromfs\Lancaster\ChromData\26285\20230806-90734.b\5G06X05.D
Injection Date: 06-Aug-2023 11:33:30 Instrument ID: 26285
Lims ID: CCVIS
Client ID:
Operator ID: knk41612 ALS Bottle#: 5 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVoa_26285a Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

72 1,4-Dioxane, CAS: 123-91-1

Signal: 1

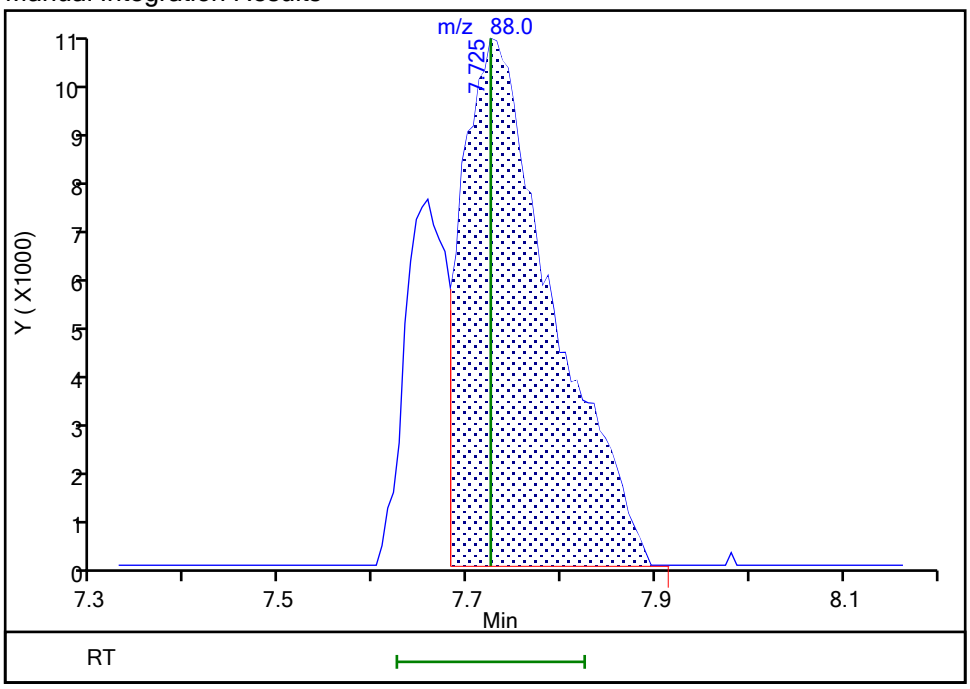
Processing Integration Results

RT: 7.72
Area: 93163
Amount: 876.0279
Amount Units: ug/l



Manual Integration Results

RT: 7.72
Area: 71802
Amount: 675.1667
Amount Units: ug/l



Reviewer: DVW2, 06-Aug-2023 11:55:53 -04:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10T01.D				
Lims ID:	bfb				
Client ID:					
Sample Type:	BFB				
Inject. Date:	10-Jul-2023 10:47:30	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	410-0088512-001				
Misc. Info.:	BFB				
Operator ID:	CLM27445	Instrument ID:	26285		
Method:	\\chromfs\Lancaster\ChromData\26285\20230710-88512.b\MSVoa_26285a.m				
Limit Group:	MSV - 8260C_D				
Last Update:	11-Jul-2023 00:50:52	Calib Date:	10-Jul-2023 21:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X27.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1619				
First Level Reviewer: TQ4J		Date:	10-Jul-2023 10:56:33		

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 38 BFB	95	4.284	4.284	0.000	0	547902	NC	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

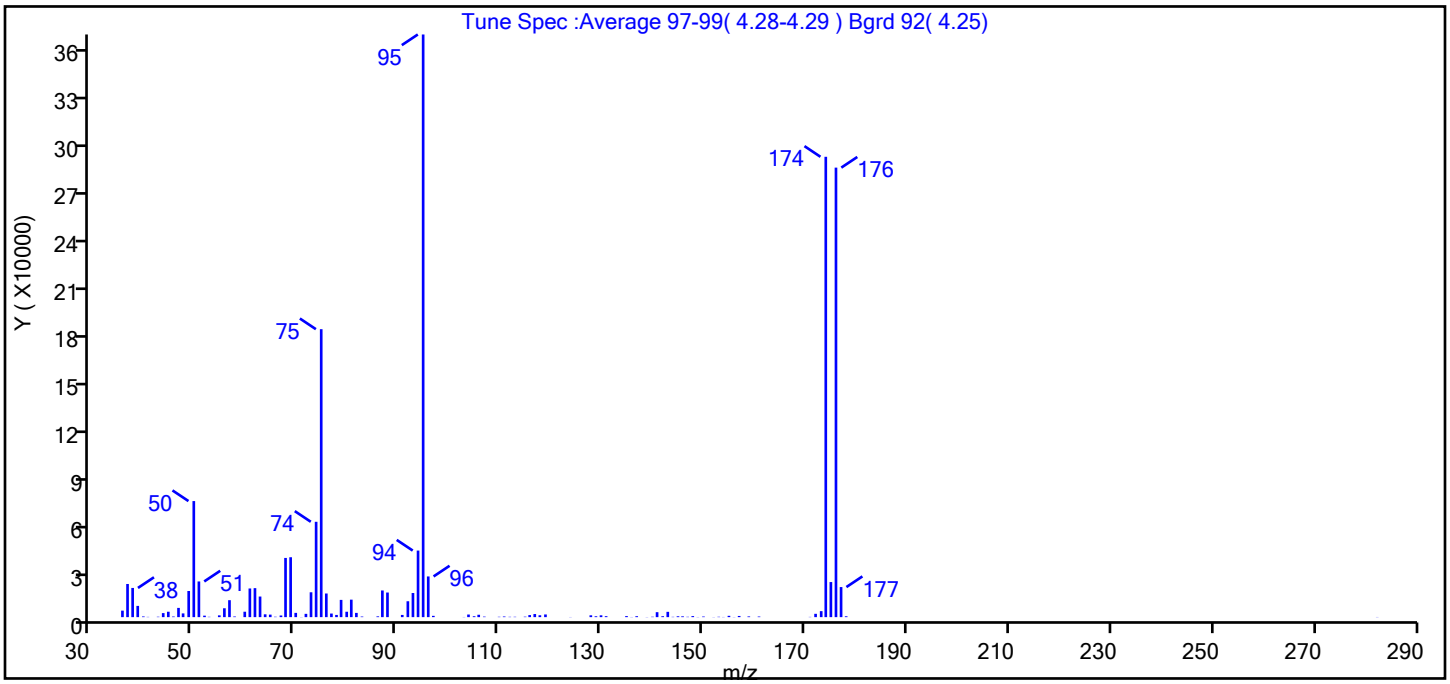
MSV_V_BFB_00012 Amount Added: 1.00 Units: uL

MS Tune Report

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10T01.D
Injection Date: 10-Jul-2023 10:47:30 Instrument ID: 26285
Lims ID: bfb
Client ID:
Operator ID: CLM27445 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: MSVoa_26285a Limit Group: MSV - 8260C_D
Tune Method: BFB Method 8260

$ 38 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	19.9
75	30 to 60% of m/z 95	49.4
96	5 to 9% of m/z 95	7.0
173	Less than 2% of m/z 174	1.0 (1.3)
174	50 to 120% of m/z 95	79.0
175	5 to 9% of m/z 174	6.0 (7.6)
176	Greater than 95% but less than 101% of m/z 174	77.1 (97.6)
177	5 to 9% of m/z 176	5.2 (6.7)

Data File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10T01.D\MSVoa_26285a.rslt\spectra.d
Injection Date: 10-Jul-2023 10:47:30
Spectrum: Tune Spec :Average 97-99(4.28-4.29) Bgrd 92(4.25)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 106

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	4081	66.00	247	97.00	811	143.00	3326
37.00	20768	67.00	1031	103.00	100	144.00	192
38.00	18288	68.00	37080	104.00	1636	145.00	542
39.00	7042	69.00	37520	105.00	557	146.00	494
40.00	428	70.00	2672	106.00	1499	147.00	219
41.00	157	71.00	88	107.00	332	148.00	653
43.00	260	72.00	2067	110.00	226	149.00	98
44.00	2530	73.00	15572	111.00	404	150.00	380
45.00	3387	74.00	59720	112.00	210	152.00	85
46.00	387	75.00	180352	113.00	226	153.00	231
47.00	5791	76.00	14808	115.00	295	154.00	107
48.00	2348	77.00	2255	116.00	1290	155.00	827
49.00	16374	78.00	1383	117.00	1949	156.00	91
50.00	72696	79.00	10804	118.00	1180	157.00	744
51.00	22352	80.00	3386	119.00	1682	159.00	451
52.00	931	81.00	10956	124.00	96	161.00	387
53.00	201	82.00	2661	128.00	1148	171.00	151
55.00	1117	83.00	373	129.00	546	172.00	2084
56.00	5565	86.00	491	130.00	1144	173.00	3759
57.00	10625	87.00	16704	131.00	603	174.00	288320
58.00	404	88.00	15419	135.00	661	175.00	21976
60.00	3397	91.00	1384	136.00	97	176.00	281536
61.00	17952	92.00	9957	137.00	592	177.00	18840
62.00	18160	93.00	15114	139.00	92	178.00	536
63.00	12907	94.00	41696	140.00	256	282.00	100
64.00	1778	95.00	364928	141.00	3109		
65.00	1581	96.00	25488	142.00	575		

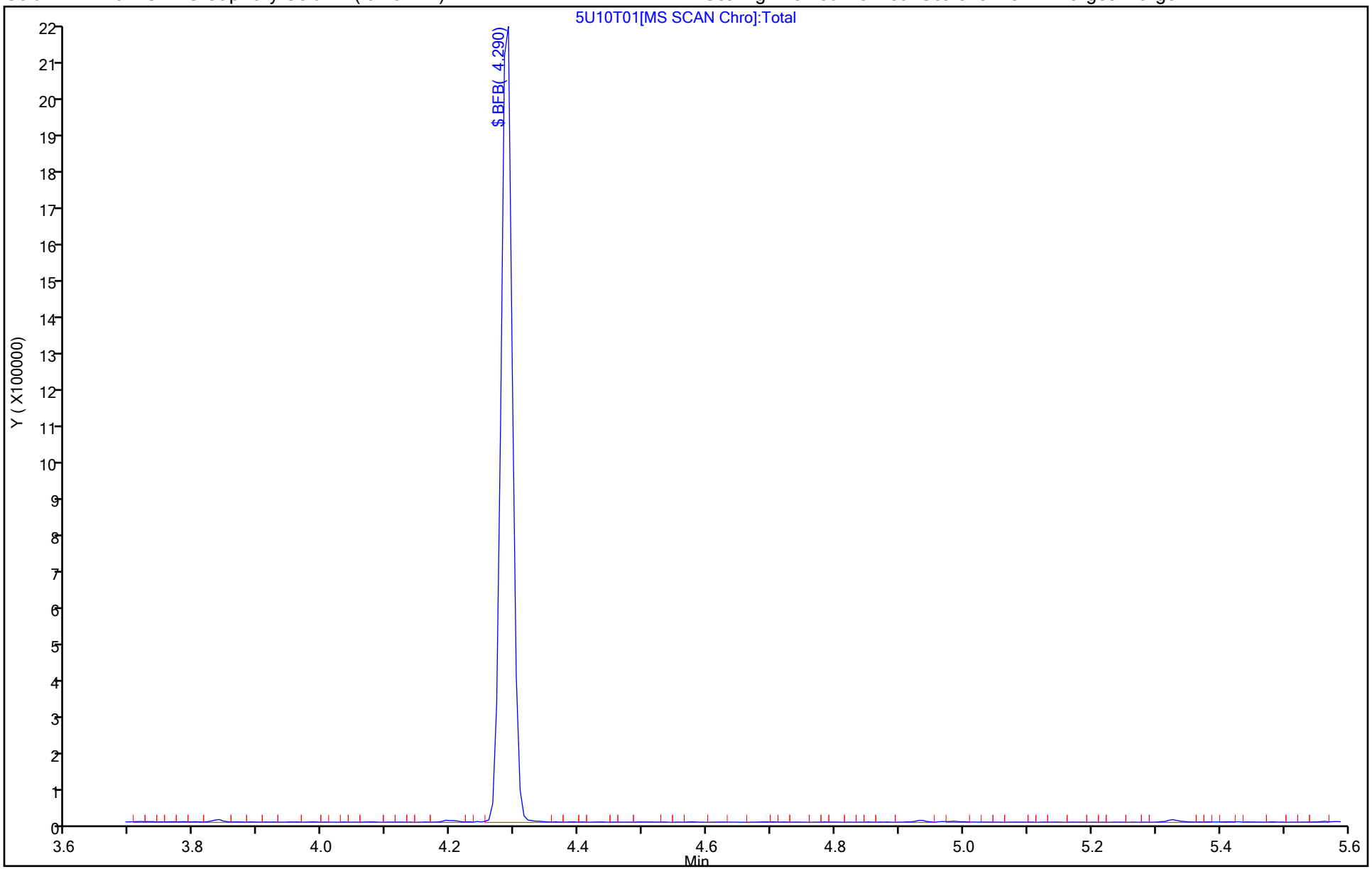
Report Date: 11-Jul-2023 00:50:52 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10T01.D

Injection Date:	10-Jul-2023 10:47:30	Instrument ID:	26285	Operator ID:	CLM27445
Lims ID:	bfb			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MSVoa_26285a	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\26285\20230806-90734.b\5G06T01.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 06-Aug-2023 10:00:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 410-0090734-001
Misc. Info.: BFB
Operator ID: knk41612 Instrument ID: 26285

Method: \\chromfs\Lancaster\ChromData\26285\20230806-90734.b\MSVoa_26285a.m
Limit Group: MSV - 8260C_D
Last Update: 06-Aug-2023 12:37:58 Calib Date: 10-Jul-2023 21:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X27.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1670

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 38 BFB	95	4.339	4.339	0.000	0	651122	NC	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

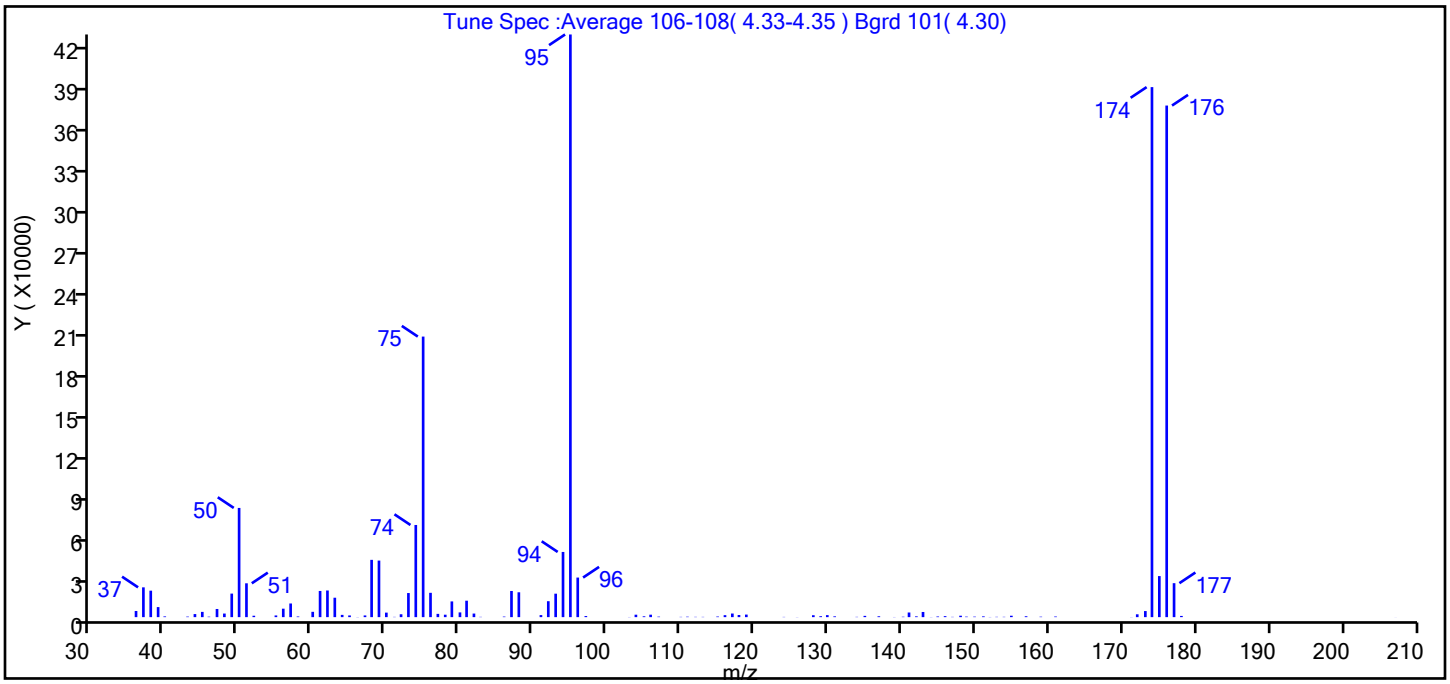
MSV_V_BFB_00012 Amount Added: 1.00 Units: uL

MS Tune Report

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\26285\20230806-90734.b\5G06T01.D
Injection Date: 06-Aug-2023 10:00:30 Instrument ID: 26285
Lims ID: BFB
Client ID:
Operator ID: knk41612 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: MSVoa_26285a Limit Group: MSV - 8260C_D
Tune Method: BFB Method 8260

$ 38 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	18.7
75	30 to 60% of m/z 95	48.2
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	1.0 (1.1)
174	50 to 120% of m/z 95	91.0
175	5 to 9% of m/z 174	7.0 (7.7)
176	Greater than 95% but less than 101% of m/z 174	87.8 (96.5)
177	5 to 9% of m/z 176	5.8 (6.6)

Data File: \\chromfs\Lancaster\ChromData\26285\20230806-90734.b\5G06T01.D\MSVoa_26285a.rslt\spectra.d
Injection Date: 06-Aug-2023 10:00:30
Spectrum: Tune Spec :Average 106-108(4.33-4.35) Bgrd 101(4.30)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 105

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	4443	68.00	41376	104.00	1766	144.00	92
37.00	21520	69.00	40848	105.00	600	145.00	467
38.00	19120	70.00	3264	106.00	1778	146.00	718
39.00	7260	71.00	189	107.00	358	147.00	197
40.00	529	72.00	2082	110.00	195	148.00	1031
43.00	392	73.00	17408	111.00	328	149.00	371
44.00	2222	74.00	66560	112.00	213	150.00	363
45.00	3798	75.00	202624	113.00	190	151.00	554
46.00	338	76.00	17568	115.00	444	152.00	114
47.00	5891	77.00	2369	116.00	1423	153.00	227
48.00	2595	78.00	1761	117.00	2611	154.00	228
49.00	17008	79.00	11364	118.00	1549	155.00	1022
50.00	78872	80.00	3422	119.00	1848	157.00	645
51.00	24440	81.00	11871	124.00	170	159.00	330
52.00	1013	82.00	2588	126.00	83	161.00	452
55.00	1227	83.00	202	128.00	1382	171.00	83
56.00	6110	86.00	399	129.00	668	172.00	2054
57.00	9862	87.00	18896	130.00	1454	173.00	4390
58.00	474	88.00	17952	131.00	567	174.00	382784
60.00	3844	91.00	1481	134.00	208	175.00	29656
61.00	18904	92.00	11511	135.00	921	176.00	369472
62.00	19248	93.00	16944	137.00	620	177.00	24528
63.00	14024	94.00	47080	139.00	111	178.00	881
64.00	1635	95.00	420800	140.00	292	207.00	40
65.00	1230	96.00	28584	141.00	3349		
66.00	104	97.00	794	142.00	576		
67.00	1230	103.00	110	143.00	3730		

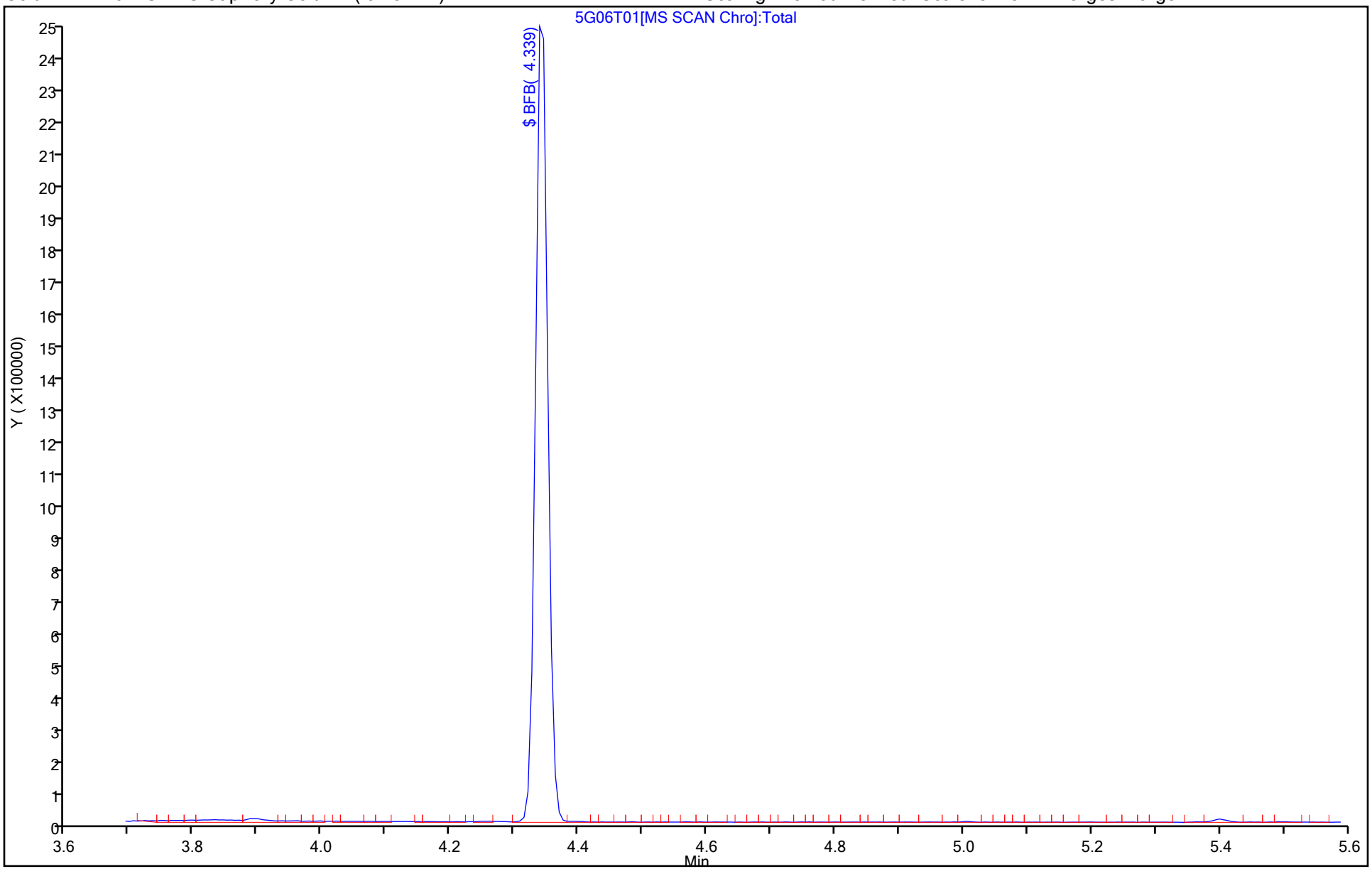
Report Date: 06-Aug-2023 12:37:58 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\26285\20230806-90734.b\5G06T01.D

Injection Date:	06-Aug-2023 10:00:30	Instrument ID:	26285	Operator ID:	knk41612
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MSVoa_26285a	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136514-1

SDG No.:

Client Sample ID:
Lab Sample ID: MB 410-404928/7

Matrix: Water
Lab File ID: 5G06X09.D

Analysis Method: 8260D
Date Collected:

Sample wt/vol: 5(mL)
Date Analyzed: 08/06/2023 12:54

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 5.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 404928
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-63-0	2-Propanol	ND		100	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		80-120
1868-53-7	Dibromofluoromethane (Surr)	103		80-120
460-00-4	4-Bromofluorobenzene (Surr)	93		80-120
2037-26-5	Toluene-d8 (Surr)	96		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\26285\20230806-90734.b\5G06X09.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 06-Aug-2023 12:54:30 ALS Bottle#: 9 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090734-007
Misc. Info.: MB
Operator ID: knk41612 Instrument ID: 26285

Method: \\chromfs\Lancaster\ChromData\26285\20230806-90734.b\MSVoa_26285a.m
Limit Group: MSV - 8260C_D
Last Update: 06-Aug-2023 13:37:24 Calib Date: 10-Jul-2023 21:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X27.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1670

First Level Reviewer: DVW2 Date: 06-Aug-2023 13:34:50

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1	Chlorotrifluoroethene	116		1.531					ND	
3	Dichlorodifluoromethane	85		1.567					ND	
2	Chlorodifluoromethane	51		1.580					ND	
4	Chloromethane	50		1.732					ND	
5	Vinyl chloride	62		1.811					ND	
6	Butadiene	39		1.823					ND	7
7	2-Chloro-1,1,1-Trifluoroethane	118		1.878					ND	
8	Bromomethane	94		2.085					ND	
9	Chloroethane	64		2.140					ND	
10	Dichlorofluoromethane	67		2.335					ND	
11	Trichlorofluoromethane	101		2.384					ND	
12	Pentane	43		2.390					ND	
14	Ethanol	45		2.549					ND	
13	Ethyl ether	59		2.555					ND	
15	1,2-Dichloro-1,1,2-trifluoroetha	67		2.646					ND	
16	Acrolein	56		2.689					ND	
17	1,1-Dichloroethene	96		2.799					ND	
18	Acetone	58		2.823					ND	
19	1,1,2-Trichloro-1,2,2-trifluoroe	101		2.854					ND	
21	Isopropyl alcohol	45		2.969					ND	
20	Iodomethane	142		2.982					ND	
22	Carbon disulfide	76		3.049					ND	7
24	Acetonitrile	41		3.128					ND	
25	Methyl acetate	43		3.146					ND	
26	3-Chloro-1-propene	41		3.171					ND	
27	Methylene Chloride	84		3.323					ND	
* 28	t-Butyl alcohol-d10 (IS)	65	3.347	3.347	0.000	55	403562	250.0	250.0	
29	2-Methyl-2-propanol	59		3.439					ND	
30	Acrylonitrile	53		3.579					ND	
32	Methyl tert-butyl ether	73		3.640					ND	
31	trans-1,2-Dichloroethene	96		3.646					ND	

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
	33 Hexane	57		4.012					ND	
	34 1,1-Dichloroethane	63		4.231					ND	
	35 Vinyl acetate	43		4.238					ND	
	36 Isopropyl ether	45		4.298					ND	
	37 2-Chloro-1,3-butadiene	53		4.335					ND	
	39 Tert-butyl ethyl ether	59		4.859					ND	
	40 2-Butanone (MEK)	43		5.079					ND	
	41 cis-1,2-Dichloroethene	96		5.097					ND	
	42 2,2-Dichloropropane	77		5.121					ND	
	43 Ethyl acetate	43		5.164					ND	
	44 Propionitrile	54		5.170					ND	
	45 Methyl acrylate	55		5.219					ND	
	46 Methacrylonitrile	67		5.390					ND	
	47 Chlorobromomethane	128		5.445					ND	
	48 Tetrahydrofuran	71		5.463					ND	
	49 Chloroform	83		5.615					ND	
$	50 Dibromofluoromethane (Surr)	113	5.835	5.835	0.000	93	319551	50.0	51.4	
	51 1,1,1-Trichloroethane	97		5.847					ND	
	52 Cyclohexane	56		5.944					ND	
	53 Carbon tetrachloride	117		6.060					ND	
	54 1,1-Dichloropropene	75		6.060					ND	
S	55 1,2-Dichloroethene, Total	100		6.155					ND	7
	56 Isobutyl alcohol	41		6.292					ND	
$	57 1,2-Dichloroethane-d4 (Surr)	102	6.310	6.310	0.000	53	67844	50.0	51.7	
	58 Benzene	78		6.335					ND	
	59 1,2-Dichloroethane	62		6.414					ND	
	60 Isopropyl acetate	43		6.475					ND	
	61 Tert-amyl methyl ether	73		6.554					ND	
*	62 Fluorobenzene (IS)	96	6.767	6.767	0.000	99	1101652	50.0	50.0	
	63 n-Heptane	43		6.804					ND	
	64 n-Butanol	56		7.219					ND	
	65 Trichloroethene	95		7.273					ND	
	66 Ethyl acrylate	55		7.420					ND	
	67 Methylcyclohexane	83		7.584					ND	
	68 1,2-Dichloropropane	63		7.615					ND	
	69 2-ethoxy-2-methyl butane	87		7.651					ND	
	72 1,4-Dioxane	88		7.725					ND	
	70 Dibromomethane	93		7.731					ND	
	71 Methyl methacrylate	69		7.737					ND	
	73 n-Propyl acetate	61		7.834					ND	
	74 t-Amyl alcohol	73		7.842					ND	
	75 Dichlorobromomethane	83		7.987					ND	
	76 2-Nitropropane	41		8.279					ND	
	77 2-Chloroethyl vinyl ether	63		8.389					ND	
	78 cis-1,3-Dichloropropene	75		8.572					ND	
	79 4-Methyl-2-pentanone (MIBK)	43		8.785					ND	
$	80 Toluene-d8 (Surr)	98	8.919	8.919	0.000	94	960028	50.0	48.0	
	81 Toluene	92		9.005					ND	
	82 trans-1,3-Dichloropropene	75		9.328					ND	
	83 Ethyl methacrylate	69		9.425					ND	
	84 1,1,2-Trichloroethane	97		9.560					ND	
	85 Tetrachloroethene	166		9.645					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
86 1,3-Dichloropropane	76		9.736					ND	
87 3,4-Dichloro-1-butene	75		9.791					ND	
88 2-Hexanone	43		9.816					ND	
90 Chlorodibromomethane	129		9.974					ND	
89 n-Butyl acetate	43		9.974					ND	
101 Ethyl bromide	108	12.577	10.000	2.577	21	1886		0.0856	
S 129 1,3-Dichloropropene, Total	100		10.060					ND	7
130 Ethylene Dibromide	107		10.084					ND	
* 131 Chlorobenzene-d5 (IS)	117	10.571	10.572	-0.001	85	760269	50.0	50.0	
132 Chlorobenzene	112		10.596					ND	
133 1-Chlorohexane	91		10.602					ND	U
134 1,1,1,2-Tetrachloroethane	131		10.694					ND	
135 Ethylbenzene	91		10.706					ND	
136 m-Xylene & p-Xylene	106		10.828					ND	
270 n-Butyl acrylate	55		11.157					ND	
137 o-Xylene	106		11.181					ND	
138 Styrene	104		11.200					ND	
S 139 Xylenes, Total	106		11.245					ND	7
140 Bromoform	173		11.352					ND	7
141 Isopropylbenzene	105		11.510					ND	
142 cis-1,4-Dichloro-2-butene	88		11.571					ND	
143 Cyclohexanone	55		11.578					ND	
$ 144 4-Bromofluorobenzene (Surr)	95	11.651	11.651	0.000	95	367488	50.0	46.3	
145 Bromobenzene	156		11.767					ND	
146 1,1,2,2-Tetrachloroethane	83		11.773					ND	
147 trans-1,4-Dichloro-2-butene	53		11.797					ND	
148 1,2,3-Trichloropropane	110		11.815					ND	
149 N-Propylbenzene	91		11.858					ND	
150 2-Chlorotoluene	126		11.931					ND	
151 1,3,5-Trimethylbenzene	105		12.004					ND	
152 4-Chlorotoluene	126		12.029					ND	
153 2,3,4-Trichlorobutene	109		12.059					ND	
154 tert-Butylbenzene	134		12.254					ND	
155 Pentachloroethane	167		12.291					ND	
156 1,2,4-Trimethylbenzene	105		12.303					ND	
157 sec-Butylbenzene	105		12.425					ND	
158 1,3-Dichlorobenzene	146		12.516					ND	
159 4-Isopropyltoluene	119		12.541					ND	
* 160 1,4-Dichlorobenzene-d4	152	12.577	12.577	0.000	94	487202	50.0	50.0	
161 1,4-Dichlorobenzene	146		12.596					ND	
162 1,2,3-Trimethylbenzene	105		12.614					ND	
163 Benzyl chloride	91		12.681					ND	
164 1,3-Diethylbenzene	119		12.754					ND	
168 p-Diethylbenzene	119		12.827					ND	
166 n-Butylbenzene	92		12.846					ND	
167 1,2-Dichlorobenzene	146		12.864					ND	
165 o-diethylbenzene	119		12.900					ND	
169 1,2-Dibromo-3-Chloropropane	75		13.425					ND	
171 1,3,5-Trichlorobenzene	180		13.559					ND	
170 Hexachloroethane	201		13.560					ND	
172 1,2,4-Trichlorobenzene	180		13.992					ND	
268 2-Ethylhexyl acrylate	55		14.077					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
173 Hexachlorobutadiene	225		14.083					ND	
174 Naphthalene	128		14.175					ND	7
175 1,2,3-Trichlorobenzene	180		14.321					ND	
176 2-Methylnaphthalene	142		14.918					ND	7
177 C4-C10	1		0.000					ND	
209 3-Methyl-1-butene	1		0.000					ND	
210 sec-Butyl Alcohol	45		0.000					ND	
269 2-Butoxyethyl acetate	1		0.000					ND	
271 sec-Butyl Alcohol TIC	1		0.000					ND	
197 3-chloro-1-Butene	1		0.000					ND	
198 Isobutyl acetate	43		0.000					ND	
199 2,3-Dichloro-1,3-butadiene	1		0.000					ND	
185 Propanol	1		0.000					ND	
181 Undecane	1		0.000					ND	
182 n-Octane	1		0.000					ND	
183 C6-C10	1		0.000					ND	
184 1-Bromo-2-chloroethane	1		0.000					ND	
272 Dimethylformamide TIC	1		0.000					ND	
206 trans-1,2,3-Trichlorobutene-2	1		0.000					ND	
207 cis-1,2,3-Trichlorobutene-2	1		0.000					ND	
208 n-Decane	57		0.000					ND	
194 C5-C12	1		0.000					ND	
195 Butane	1		0.000					ND	
196 1,1,2,2-Tetrachloro-1,2-difluoro	1		0.000					ND	
189 Propene oxide	1		0.000					ND	
190 C4-C12	1		0.000					ND	
191 C6-C12	1		0.000					ND	
S 192 divinyl benzene	1		0.000					ND	7
193 Methylal	1		0.000					ND	
178 Dodecane	57		0.000					ND	
179 Chloroacetonitrile	1		0.000					ND	
180 n-Nonane	1		0.000					ND	
205 Diethoxymethane	1		0.000					ND	
201 1,3-Divinylbenzene	1		0.000					ND	
S 202 Total BTEX	1		0.000					ND	
203 1-Chlorobutane	1		0.000					ND	
204 1,4-Divinylbenzene	1		0.000					ND	
186 4-Ethyltoluene	1		0.000					ND	
S 187 Total Diethylbenzene	1		0.000					ND	7
188 1,1-Dichloro-1-fluoroethane	1		0.000					ND	
200 tert-Butyl Formate	1		0.000					ND	
273 3-Pentanone TIC	1		0.000					ND	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

MSV_Cent_ISSS_00021 Amount Added: 5.00 Units: uL Run Reagent

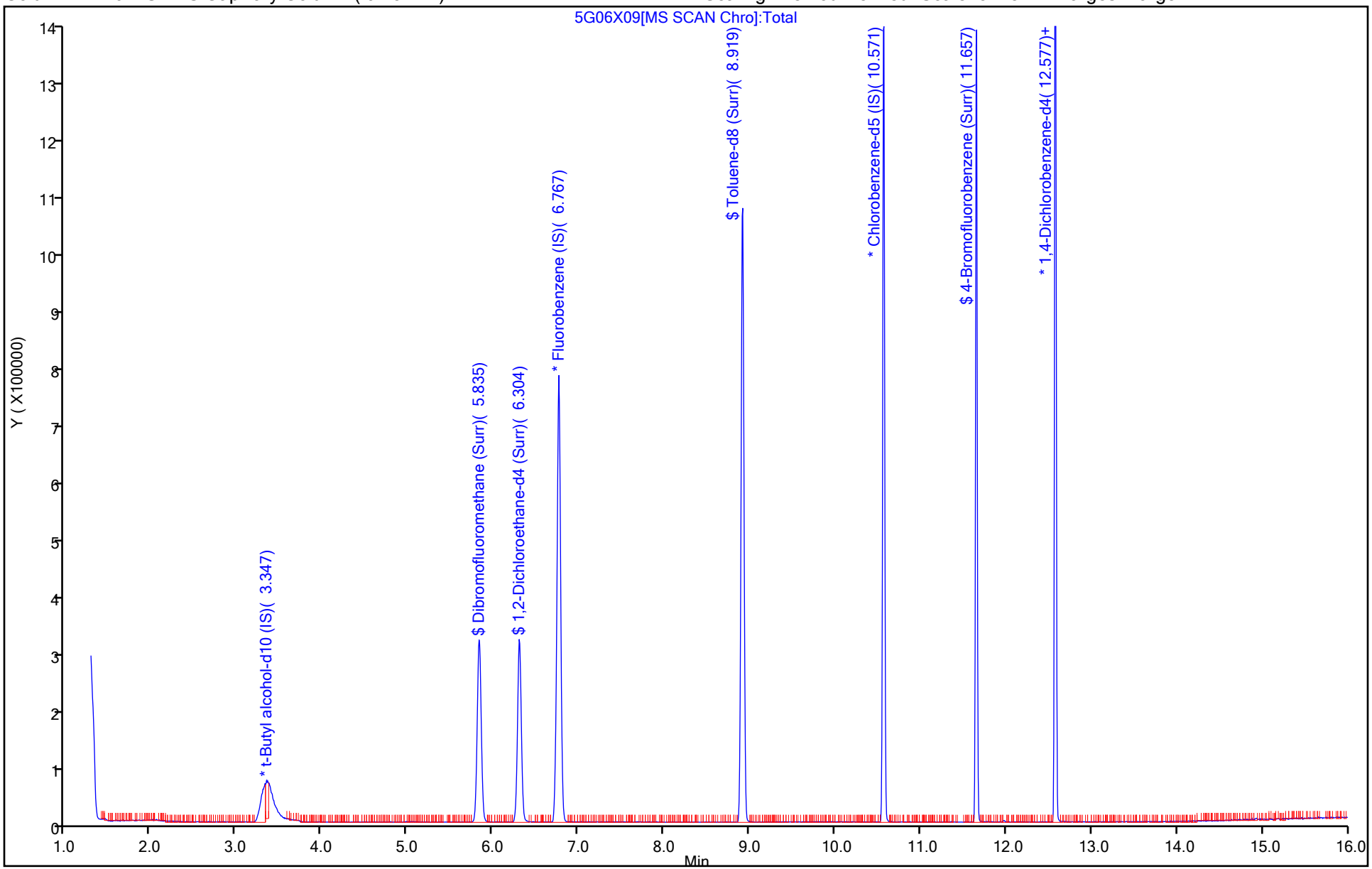
Report Date: 06-Aug-2023 13:37:44 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\26285\20230806-90734.b\5G06X09.D

Injection Date:	06-Aug-2023 12:54:30	Instrument ID:	26285	Operator ID:	knk41612
Lims ID:	MB			Worklist Smp#:	7
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MSVoa_26285a	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\26285\20230806-90734.b\5G06X09.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 06-Aug-2023 12:54:30 ALS Bottle#: 9 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090734-007
Misc. Info.: MB
Operator ID: knk41612 Instrument ID: 26285

Method: \\chromfs\Lancaster\ChromData\26285\20230806-90734.b\MSVoa_26285a.m
Limit Group: MSV - 8260C_D
Last Update: 06-Aug-2023 13:37:24 Calib Date: 10-Jul-2023 21:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X27.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1670

First Level Reviewer: DVW2 Date: 06-Aug-2023 13:34:50

Compound	Amount Added	Amount Recovered	% Rec.
$ 50 Dibromofluoromethane (Surr)	50.0	51.4	102.72
$ 57 1,2-Dichloroethane-d4 (Surr)	50.0	51.7	103.33
$ 80 Toluene-d8 (Surr)	50.0	48.0	96.04
$ 144 4-Bromofluorobenzene (Surr)	50.0	46.3	92.58

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136514-1

SDG No.:

Client Sample ID:
Lab Sample ID: LCS 410-404928/4

Matrix: Water
Lab File ID: 5G06X06.D

Analysis Method: 8260D
Date Collected:

Sample wt/vol: 5(mL)
Date Analyzed: 08/06/2023 11:53

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 5.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 404928
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-63-0	2-Propanol	118		100	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		80-120
1868-53-7	Dibromofluoromethane (Surr)	98		80-120
460-00-4	4-Bromofluorobenzene (Surr)	93		80-120
2037-26-5	Toluene-d8 (Surr)	100		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\26285\20230806-90734.b\5G06X06.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 06-Aug-2023 11:53:30 ALS Bottle#: 6 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090734-004
Misc. Info.: LCS
Operator ID: knk41612 Instrument ID: 26285

Method: \\chromfs\Lancaster\ChromData\26285\20230806-90734.b\MSVoa_26285a.m
Limit Group: MSV - 8260C_D
Last Update: 06-Aug-2023 12:37:19 Calib Date: 10-Jul-2023 21:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X27.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1670

First Level Reviewer: DVW2 Date: 06-Aug-2023 12:25:05

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
3 Dichlorodifluoromethane	85	1.567	1.567	0.000	99	165903	20.0	15.3	
4 Chloromethane	50	1.726	1.732	-0.006	99	168659	20.0	12.9	
5 Vinyl chloride	62	1.811	1.811	0.000	82	151046	20.0	13.5	
6 Butadiene	39	1.817	1.823	-0.006	97	191301	20.0	13.9	
8 Bromomethane	94	2.079	2.085	-0.006	91	111775	20.0	15.1	
9 Chloroethane	64	2.134	2.140	-0.006	99	99104	20.0	15.7	
10 Dichlorofluoromethane	67	2.329	2.335	-0.006	97	279491	20.0	14.7	
11 Trichlorofluoromethane	101	2.366	2.384	-0.018	95	221521	20.0	17.2	
12 Pentane	43	2.384	2.390	-0.006	96	207742	20.0	16.2	
15 1,2-Dichloro-1,1,2-trifluoroetha	67	2.640	2.646	-0.006	92	161710	20.0	16.6	
16 Acrolein	56	2.689	2.689	0.000	100	354542	150.0	147.9	
17 1,1-Dichloroethene	96	2.793	2.799	-0.006	97	122977	20.0	19.3	
18 Acetone	58	2.817	2.823	-0.006	100	276095	250.0	222.0	
19 1,1,2-Trichloro-1,2,2-trifluoroe	101	2.847	2.854	-0.007	91	130295	20.0	18.7	
21 Isopropyl alcohol	45	2.982	2.969	0.013	95	144920	150.0	117.6	
20 Iodomethane	142	2.969	2.982	-0.013	99	246858	20.0	19.2	
22 Carbon disulfide	76	3.049	3.049	0.000	100	396010	20.0	13.9	
25 Methyl acetate	43	3.146	3.146	0.000	98	196506	20.0	17.6	
26 3-Chloro-1-propene	41	3.164	3.171	-0.007	87	195129	20.0	15.5	
27 Methylene Chloride	84	3.317	3.323	-0.006	97	138924	20.0	17.5	
* 28 t-Butyl alcohol-d10 (IS)	65	3.366	3.347	0.019	83	470861	250.0	250.0	
29 2-Methyl-2-propanol	59	3.439	3.439	0.000	99	319501	200.0	155.2	
30 Acrylonitrile	53	3.579	3.579	0.000	98	437303	100.0	77.8	
32 Methyl tert-butyl ether	73	3.634	3.640	-0.006	97	341605	20.0	17.0	
31 trans-1,2-Dichloroethene	96	3.640	3.646	-0.006	97	128584	20.0	18.6	
33 Hexane	57	4.000	4.012	-0.012	95	147355	20.0	17.5	
34 1,1-Dichloroethane	63	4.225	4.231	-0.006	96	225876	20.0	16.7	
36 Isopropyl ether	45	4.292	4.298	-0.006	95	370934	20.0	15.8	
37 2-Chloro-1,3-butadiene	53	4.335	4.335	0.000	92	182772	20.0	17.1	
39 Tert-butyl ethyl ether	59	4.859	4.859	0.000	98	328313	20.0	16.9	
40 2-Butanone (MEK)	43	5.079	5.079	0.000	99	1456812	250.0	191.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
41 cis-1,2-Dichloroethene	96	5.097	5.097	0.000	83	145911	20.0	18.9	
42 2,2-Dichloropropane	77	5.121	5.121	0.000	93	191302	20.0	18.4	
44 Propionitrile	54	5.164	5.170	-0.006	98	262807	150.0	130.0	
46 Methacrylonitrile	67	5.390	5.390	0.000	94	583118	150.0	127.8	
47 Chlorobromomethane	128	5.438	5.445	-0.007	93	74867	20.0	19.3	
48 Tetrahydrofuran	71	5.457	5.463	-0.006	83	156108	100.0	100.8	
49 Chloroform	83	5.615	5.615	0.000	94	255493	20.0	19.0	
$ 50 Dibromofluoromethane (Surr)	113	5.835	5.835	0.000	93	347381	50.0	48.8	
51 1,1,1-Trichloroethane	97	5.841	5.847	-0.006	94	207722	20.0	18.2	
52 Cyclohexane	56	5.944	5.944	0.000	93	209388	20.0	17.8	
53 Carbon tetrachloride	117	6.060	6.060	0.000	78	187610	20.0	18.1	
54 1,1-Dichloropropene	75	6.060	6.060	0.000	94	177405	20.0	18.6	
56 Isobutyl alcohol	41	6.292	6.292	0.000	92	280588	500.0	395.2	
$ 57 1,2-Dichloroethane-d4 (Surr)	102	6.310	6.310	0.000	82	74159	50.0	49.4	
58 Benzene	78	6.335	6.335	0.000	96	522273	20.0	18.3	
59 1,2-Dichloroethane	62	6.414	6.414	0.000	97	178045	20.0	16.2	
61 Tert-amyl methyl ether	73	6.554	6.554	0.000	98	330692	20.0	18.0	
* 62 Fluorobenzene (IS)	96	6.767	6.767	0.000	99	1259409	50.0	50.0	
63 n-Heptane	43	6.804	6.804	0.000	95	159059	20.0	16.0	
64 n-Butanol	56	7.206	7.219	-0.013	92	395064	1000.0	919.4	
65 Trichloroethene	95	7.267	7.273	-0.006	98	137332	20.0	18.2	
67 Methylcyclohexane	83	7.584	7.584	0.000	92	204526	20.0	19.7	
68 1,2-Dichloropropane	63	7.615	7.615	0.000	97	127273	20.0	16.5	
69 2-ethoxy-2-methyl butane	87	7.651	7.651	0.000	92	161693	20.0	18.5	
72 1,4-Dioxane	88	7.706	7.725	-0.019	78	57112	500.0	545.9	M
70 Dibromomethane	93	7.731	7.731	0.000	95	88953	20.0	17.6	
71 Methyl methacrylate	69	7.737	7.737	0.000	92	96656	20.0	16.5	
75 Dichlorobromomethane	83	7.987	7.987	0.000	98	166948	20.0	17.1	
76 2-Nitropropane	41	8.279	8.279	0.000	99	49253	20.0	16.5	
77 2-Chloroethyl vinyl ether	63	8.389	8.389	0.000	92	67571	20.0	15.3	
78 cis-1,3-Dichloropropene	75	8.572	8.572	0.000	95	180679	20.0	16.6	
79 4-Methyl-2-pentanone (MIBK)	43	8.785	8.785	0.000	98	2926495	250.0	216.9	
$ 80 Toluene-d8 (Surr)	98	8.919	8.919	0.000	94	1160855	50.0	50.2	
81 Toluene	92	9.005	9.005	0.000	98	306402	20.0	18.8	
82 trans-1,3-Dichloropropene	75	9.328	9.328	0.000	95	158651	20.0	16.6	
83 Ethyl methacrylate	69	9.419	9.425	-0.006	90	154127	20.0	16.7	
84 1,1,2-Trichloroethane	97	9.553	9.560	-0.007	91	108113	20.0	17.6	
85 Tetrachloroethene	166	9.645	9.645	0.000	97	151360	20.0	20.2	
86 1,3-Dichloropropane	76	9.736	9.736	0.000	93	168725	20.0	17.3	
88 2-Hexanone	43	9.816	9.816	0.000	99	2047057	250.0	225.5	
90 Chlorodibromomethane	129	9.974	9.974	0.000	90	129002	20.0	17.7	
130 Ethylene Dibromide	107	10.084	10.084	0.000	98	114519	20.0	17.9	
* 131 Chlorobenzene-d5 (IS)	117	10.572	10.572	0.000	85	879593	50.0	50.0	
132 Chlorobenzene	112	10.596	10.596	0.000	95	345427	20.0	18.5	
133 1-Chlorohexane	91	10.602	10.602	0.000	98	154789	20.0	18.7	
134 1,1,1,2-Tetrachloroethane	131	10.693	10.694	-0.001	96	139767	20.0	19.5	
135 Ethylbenzene	91	10.706	10.706	0.000	98	610013	20.0	19.1	
136 m-Xylene & p-Xylene	106	10.828	10.828	0.000	99	479982	40.0	40.4	
137 o-Xylene	106	11.181	11.181	0.000	97	240237	20.0	20.4	
138 Styrene	104	11.199	11.200	-0.001	95	363516	20.0	19.9	
140 Bromoform	173	11.352	11.352	0.000	97	102657	20.0	16.8	
141 Isopropylbenzene	105	11.510	11.510	0.000	96	656573	20.0	20.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 144 4-Bromofluorobenzene (Surr)	95	11.651	11.651	0.000	95	428941	50.0	46.7	
145 Bromobenzene	156	11.766	11.767	0.000	90	158417	20.0	18.9	
146 1,1,2,2-Tetrachloroethane	83	11.773	11.773	0.000	93	210065	20.0	16.4	
147 trans-1,4-Dichloro-2-butene	53	11.797	11.797	0.000	93	242882	100.0	64.9	
148 1,2,3-Trichloropropane	110	11.815	11.815	0.000	86	59438	20.0	17.2	
149 N-Propylbenzene	91	11.858	11.858	0.000	99	770772	20.0	18.9	
150 2-Chlorotoluene	126	11.931	11.931	0.000	97	161067	20.0	19.5	
151 1,3,5-Trimethylbenzene	105	12.004	12.004	0.000	95	538807	20.0	19.4	
152 4-Chlorotoluene	126	12.029	12.029	0.000	97	151142	20.0	19.0	
154 tert-Butylbenzene	134	12.254	12.254	0.000	94	100496	20.0	20.7	
156 1,2,4-Trimethylbenzene	105	12.303	12.303	0.000	97	542938	20.0	19.2	
157 sec-Butylbenzene	105	12.425	12.425	0.000	94	656844	20.0	19.3	
158 1,3-Dichlorobenzene	146	12.516	12.516	0.000	99	307148	20.0	18.9	
159 4-Isopropyltoluene	119	12.541	12.541	0.000	97	567000	20.0	19.9	
* 160 1,4-Dichlorobenzene-d4	152	12.577	12.577	0.000	94	548296	50.0	50.0	
161 1,4-Dichlorobenzene	146	12.596	12.596	0.000	96	308776	20.0	19.5	
162 1,2,3-Trimethylbenzene	105	12.614	12.614	0.000	98	552677	20.0	18.4	
163 Benzyl chloride	91	12.681	12.681	0.000	99	376683	20.0	16.7	
164 1,3-Diethylbenzene	119	12.754	12.754	0.000	94	326434	20.0	19.4	
168 p-Diethylbenzene	119	12.827	12.827	0.000	93	344794	20.0	19.6	
166 n-Butylbenzene	92	12.846	12.846	0.000	98	278128	20.0	18.5	
167 1,2-Dichlorobenzene	146	12.864	12.864	0.000	99	315902	20.0	18.8	
165 o-diethylbenzene	119	12.900	12.900	0.000	95	266786	20.0	18.9	
169 1,2-Dibromo-3-Chloropropane	75	13.425	13.425	0.000	86	56822	20.0	15.2	
171 1,3,5-Trichlorobenzene	180	13.559	13.559	0.000	98	217443	20.0	19.8	
172 1,2,4-Trichlorobenzene	180	13.992	13.992	0.000	94	199945	20.0	20.4	
173 Hexachlorobutadiene	225	14.083	14.083	0.000	96	72904	20.0	19.0	
174 Naphthalene	128	14.175	14.175	0.000	97	719311	20.0	19.9	
175 1,2,3-Trichlorobenzene	180	14.321	14.321	0.000	95	201155	20.0	19.9	
176 2-Methylnaphthalene	142	14.918	14.918	0.000	92	327946	20.0	19.8	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

MSV_LCS_VOC#1_00123	Amount Added: 50.00	Units: uL	
MSV_LCS_2CEVE_00126	Amount Added: 50.00	Units: uL	
MSV_LCS_ACROL_00124	Amount Added: 50.00	Units: uL	
MSV_LCS_Gases_00153	Amount Added: 50.00	Units: uL	
MSV_Cent_ISSS_00021	Amount Added: 5.00	Units: uL	Run Reagent

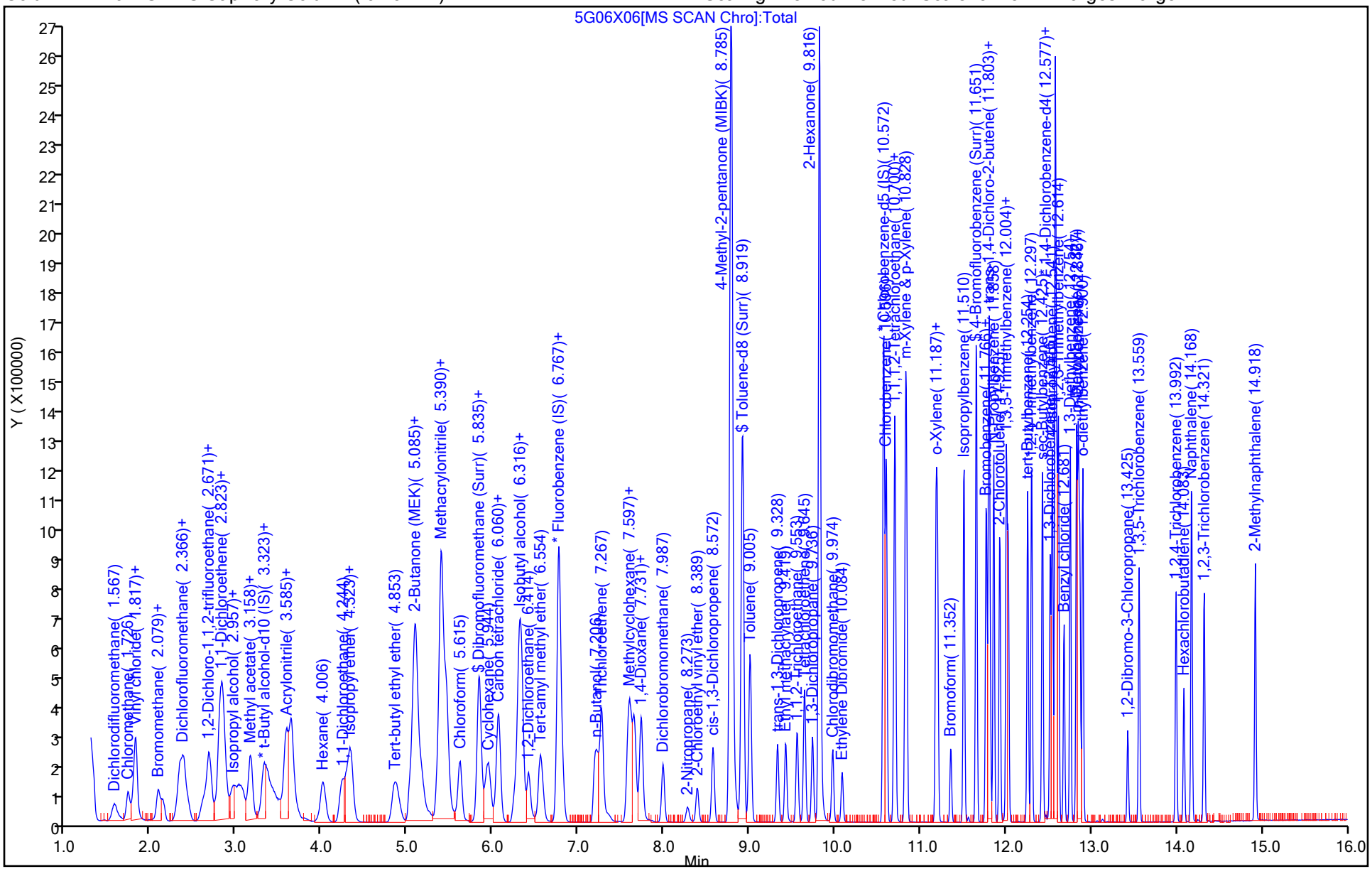
Report Date: 06-Aug-2023 12:37:25 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\26285\20230806-90734.b\5G06X06.D

Injection Date:	06-Aug-2023 11:53:30	Instrument ID:	26285	Operator ID:	knk41612
Lims ID:	LCS			Worklist Smp#:	4
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MSVoa_26285a	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\26285\20230806-90734.b\5G06X06.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 06-Aug-2023 11:53:30 ALS Bottle#: 6 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090734-004
Misc. Info.: LCS
Operator ID: knk41612 Instrument ID: 26285

Method: \\chromfs\Lancaster\ChromData\26285\20230806-90734.b\MSVoa_26285a.m
Limit Group: MSV - 8260C_D
Last Update: 06-Aug-2023 12:37:19 Calib Date: 10-Jul-2023 21:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X27.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1670

First Level Reviewer: DVW2 Date: 06-Aug-2023 12:25:05

Compound	Amount Added	Amount Recovered	% Rec.
$ 50 Dibromofluoromethane (Surr)	50.0	48.8	97.68
$ 57 1,2-Dichloroethane-d4 (Surr)	50.0	49.4	98.80
$ 80 Toluene-d8 (Surr)	50.0	50.2	100.37
$ 144 4-Bromofluorobenzene (Surr)	50.0	46.7	93.40

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136514-1

SDG No.:

Client Sample ID:
Lab Sample ID: LCSD 410-404928/5

Matrix: Water
Lab File ID: 5G06X07.D

Analysis Method: 8260D
Date Collected:

Sample wt/vol: 5(mL)
Date Analyzed: 08/06/2023 12:13

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 5.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 404928
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-63-0	2-Propanol	116		100	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		80-120
1868-53-7	Dibromofluoromethane (Surr)	97		80-120
460-00-4	4-Bromofluorobenzene (Surr)	93		80-120
2037-26-5	Toluene-d8 (Surr)	100		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\26285\20230806-90734.b\5G06X07.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 06-Aug-2023 12:13:30 ALS Bottle#: 7 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090734-005
Misc. Info.: LCSD
Operator ID: knk41612 Instrument ID: 26285

Method: \\chromfs\Lancaster\ChromData\26285\20230806-90734.b\MSVoa_26285a.m
Limit Group: MSV - 8260C_D
Last Update: 06-Aug-2023 12:37:19 Calib Date: 10-Jul-2023 21:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X27.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1670

First Level Reviewer: DVW2 Date: 06-Aug-2023 12:35:07

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
3 Dichlorodifluoromethane	85	1.579	1.567	0.012	99	162407	20.0	14.7	
4 Chloromethane	50	1.732	1.732	0.000	99	159678	20.0	12.0	
5 Vinyl chloride	62	1.811	1.811	0.000	88	148727	20.0	13.0	
6 Butadiene	39	1.823	1.823	0.000	96	183171	20.0	13.0	
8 Bromomethane	94	2.085	2.085	0.000	92	112535	20.0	15.0	
9 Chloroethane	64	2.134	2.140	-0.006	98	96406	20.0	15.0	
10 Dichlorofluoromethane	67	2.335	2.335	0.000	97	272646	20.0	14.0	
11 Trichlorofluoromethane	101	2.378	2.384	-0.006	88	219357	20.0	16.7	
12 Pentane	43	2.384	2.390	-0.006	96	198555	20.0	15.2	
15 1,2-Dichloro-1,1,2-trifluoroetha	67	2.646	2.646	0.000	92	155809	20.0	15.7	
16 Acrolein	56	2.689	2.689	0.000	98	351447	150.0	145.4	
17 1,1-Dichloroethene	96	2.805	2.799	0.006	78	121750	20.0	18.7	
18 Acetone	58	2.823	2.823	0.000	99	271622	250.0	216.7	
19 1,1,2-Trichloro-1,2,2-trifluoroe	101	2.848	2.854	-0.006	91	126200	20.0	17.8	
21 Isopropyl alcohol	45	2.976	2.969	0.007	95	143713	150.0	115.6	
20 Iodomethane	142	2.969	2.982	-0.013	100	244835	20.0	18.7	
22 Carbon disulfide	76	3.049	3.049	0.000	99	391805	20.0	13.5	
25 Methyl acetate	43	3.146	3.146	0.000	99	220375	20.0	19.3	
26 3-Chloro-1-propene	41	3.171	3.171	0.000	90	198544	20.0	15.5	
27 Methylene Chloride	84	3.329	3.323	0.006	95	138179	20.0	17.1	
* 28 t-Butyl alcohol-d10 (IS)	65	3.366	3.347	0.019	82	474639	250.0	250.0	
29 2-Methyl-2-propanol	59	3.445	3.439	0.006	99	324289	200.0	156.3	
30 Acrylonitrile	53	3.579	3.579	0.000	98	438719	100.0	76.5	
32 Methyl tert-butyl ether	73	3.634	3.640	-0.006	98	338910	20.0	16.5	
31 trans-1,2-Dichloroethene	96	3.646	3.646	0.000	97	126892	20.0	18.0	
33 Hexane	57	4.012	4.012	0.000	95	151199	20.0	17.6	
34 1,1-Dichloroethane	63	4.238	4.231	0.007	96	231468	20.0	16.8	
36 Isopropyl ether	45	4.292	4.298	-0.006	95	376517	20.0	15.7	
37 2-Chloro-1,3-butadiene	53	4.347	4.335	0.012	92	183163	20.0	16.8	
39 Tert-butyl ethyl ether	59	4.859	4.859	0.000	98	333861	20.0	16.8	
40 2-Butanone (MEK)	43	5.085	5.079	0.006	100	1550066	250.0	199.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
41 cis-1,2-Dichloroethene	96	5.103	5.097	0.006	83	145610	20.0	18.5	
42 2,2-Dichloropropane	77	5.121	5.121	0.000	88	190560	20.0	17.9	
44 Propionitrile	54	5.170	5.170	0.000	98	275028	150.0	134.9	
46 Methacrylonitrile	67	5.396	5.390	0.006	94	591794	150.0	127.2	
47 Chlorobromomethane	128	5.445	5.445	0.000	92	74934	20.0	19.0	
48 Tetrahydrofuran	71	5.463	5.463	0.000	85	158758	100.0	101.7	
49 Chloroform	83	5.615	5.615	0.000	94	253428	20.0	18.5	
$ 50 Dibromofluoromethane (Surr)	113	5.841	5.835	0.006	93	352128	50.0	48.6	
51 1,1,1-Trichloroethane	97	5.841	5.847	-0.006	56	206858	20.0	17.8	
52 Cyclohexane	56	5.944	5.944	0.000	93	210611	20.0	17.5	
53 Carbon tetrachloride	117	6.060	6.060	0.000	95	188271	20.0	17.8	
54 1,1-Dichloropropene	75	6.066	6.060	0.006	95	176026	20.0	18.1	
56 Isobutyl alcohol	41	6.286	6.292	-0.006	96	287645	500.0	401.9	
$ 57 1,2-Dichloroethane-d4 (Surr)	102	6.310	6.310	0.000	78	77419	50.0	50.6	
58 Benzene	78	6.335	6.335	0.000	96	522680	20.0	17.9	
59 1,2-Dichloroethane	62	6.414	6.414	0.000	98	174058	20.0	15.5	
61 Tert-amyl methyl ether	73	6.554	6.554	0.000	98	335966	20.0	18.0	
* 62 Fluorobenzene (IS)	96	6.774	6.767	0.007	99	1284102	50.0	50.0	
63 n-Heptane	43	6.804	6.804	0.000	95	157426	20.0	15.6	
64 n-Butanol	56	7.219	7.219	0.000	93	394337	1000.0	910.4	
65 Trichloroethene	95	7.273	7.273	0.000	97	138460	20.0	18.0	
67 Methylcyclohexane	83	7.584	7.584	0.000	93	203855	20.0	19.2	
68 1,2-Dichloropropane	63	7.615	7.615	0.000	97	127560	20.0	16.2	
69 2-ethoxy-2-methyl butane	87	7.651	7.651	0.000	92	164223	20.0	18.5	
72 1,4-Dioxane	88	7.712	7.725	-0.013	33	56396	500.0	534.7	M
70 Dibromomethane	93	7.731	7.731	0.000	96	87698	20.0	17.0	
71 Methyl methacrylate	69	7.737	7.737	0.000	91	99318	20.0	16.6	
75 Dichlorobromomethane	83	7.993	7.987	0.006	98	165408	20.0	16.6	
76 2-Nitropropane	41	8.279	8.279	0.000	99	48613	20.0	16.2	
77 2-Chloroethyl vinyl ether	63	8.395	8.389	0.006	93	69283	20.0	15.3	
78 cis-1,3-Dichloropropene	75	8.572	8.572	0.000	95	182765	20.0	16.4	
79 4-Methyl-2-pentanone (MIBK)	43	8.785	8.785	0.000	98	2955744	250.0	214.8	
$ 80 Toluene-d8 (Surr)	98	8.920	8.919	0.001	94	1190825	50.0	50.2	
81 Toluene	92	9.011	9.005	0.006	98	307508	20.0	18.4	
82 trans-1,3-Dichloropropene	75	9.328	9.328	0.000	94	161313	20.0	16.5	
83 Ethyl methacrylate	69	9.426	9.425	0.001	90	156718	20.0	16.6	
84 1,1,2-Trichloroethane	97	9.560	9.560	0.000	91	112355	20.0	17.9	
85 Tetrachloroethene	166	9.645	9.645	0.000	98	151175	20.0	19.7	
86 1,3-Dichloropropane	76	9.736	9.736	0.000	92	168832	20.0	16.8	
88 2-Hexanone	43	9.816	9.816	0.000	99	2072602	250.0	222.5	
90 Chlorodibromomethane	129	9.974	9.974	0.000	90	130202	20.0	17.4	
130 Ethylene Dibromide	107	10.084	10.084	0.000	99	115402	20.0	17.6	
* 131 Chlorobenzene-d5 (IS)	117	10.572	10.572	0.000	85	902588	50.0	50.0	
132 Chlorobenzene	112	10.596	10.596	0.000	95	343737	20.0	17.9	
133 1-Chlorohexane	91	10.602	10.602	0.000	98	154392	20.0	18.2	
134 1,1,1,2-Tetrachloroethane	131	10.694	10.694	0.000	95	140109	20.0	19.0	
135 Ethylbenzene	91	10.706	10.706	0.000	98	608870	20.0	18.6	
136 m-Xylene & p-Xylene	106	10.828	10.828	0.000	99	478317	40.0	39.2	
137 o-Xylene	106	11.181	11.181	0.000	97	240513	20.0	19.9	
138 Styrene	104	11.200	11.200	0.000	95	364460	20.0	19.5	
140 Bromoform	173	11.352	11.352	0.000	96	105089	20.0	16.7	
141 Isopropylbenzene	105	11.510	11.510	0.000	96	652298	20.0	20.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 144 4-Bromofluorobenzene (Surr)	95	11.651	11.651	0.000	95	439192	50.0	46.6	
145 Bromobenzene	156	11.767	11.767	0.001	91	160707	20.0	18.8	
146 1,1,2,2-Tetrachloroethane	83	11.773	11.773	0.000	94	211604	20.0	16.2	
147 trans-1,4-Dichloro-2-butene	53	11.797	11.797	0.000	93	250876	100.0	65.6	
148 1,2,3-Trichloropropane	110	11.815	11.815	0.000	86	59532	20.0	16.8	
149 N-Propylbenzene	91	11.858	11.858	0.000	99	768651	20.0	18.5	
150 2-Chlorotoluene	126	11.931	11.931	0.000	97	160663	20.0	19.0	
151 1,3,5-Trimethylbenzene	105	12.004	12.004	0.000	95	530225	20.0	18.6	
152 4-Chlorotoluene	126	12.029	12.029	0.000	97	153905	20.0	19.0	
154 tert-Butylbenzene	134	12.254	12.254	0.000	93	98014	20.0	19.8	
156 1,2,4-Trimethylbenzene	105	12.303	12.303	0.000	97	545934	20.0	18.9	
157 sec-Butylbenzene	105	12.425	12.425	0.000	95	651843	20.0	18.8	
158 1,3-Dichlorobenzene	146	12.516	12.516	0.000	98	308652	20.0	18.6	
159 4-Isopropyltoluene	119	12.541	12.541	0.000	97	566443	20.0	19.4	
* 160 1,4-Dichlorobenzene-d4	152	12.577	12.577	0.000	93	560643	50.0	50.0	
161 1,4-Dichlorobenzene	146	12.596	12.596	0.000	97	311074	20.0	19.2	
162 1,2,3-Trimethylbenzene	105	12.614	12.614	0.000	99	550734	20.0	17.9	
163 Benzyl chloride	91	12.681	12.681	0.000	99	373990	20.0	16.2	
164 1,3-Diethylbenzene	119	12.754	12.754	0.000	95	323578	20.0	18.8	
168 p-Diethylbenzene	119	12.827	12.827	0.000	93	342460	20.0	19.1	
166 n-Butylbenzene	92	12.846	12.846	0.000	98	275947	20.0	17.9	
167 1,2-Dichlorobenzene	146	12.864	12.864	0.000	99	311645	20.0	18.1	
165 o-diethylbenzene	119	12.900	12.900	0.000	95	264592	20.0	18.3	
169 1,2-Dibromo-3-Chloropropane	75	13.425	13.425	0.000	86	57330	20.0	15.0	
171 1,3,5-Trichlorobenzene	180	13.559	13.559	0.000	98	214092	20.0	19.0	
172 1,2,4-Trichlorobenzene	180	13.992	13.992	0.000	94	197390	20.0	19.7	
173 Hexachlorobutadiene	225	14.083	14.083	0.000	95	70548	20.0	18.0	
174 Naphthalene	128	14.175	14.175	0.000	97	717005	20.0	19.4	
175 1,2,3-Trichlorobenzene	180	14.321	14.321	0.000	96	197540	20.0	19.1	
176 2-Methylnaphthalene	142	14.918	14.918	0.000	92	325993	20.0	19.2	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

MSV_LCS_VOC#1_00123	Amount Added: 50.00	Units: uL	
MSV_LCS_2CEVE_00126	Amount Added: 50.00	Units: uL	
MSV_LCS_ACROL_00124	Amount Added: 50.00	Units: uL	
MSV_LCS_Gases_00153	Amount Added: 50.00	Units: uL	
MSV_Cent_ISSS_00021	Amount Added: 5.00	Units: uL	Run Reagent

Report Date: 06-Aug-2023 12:37:42 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\26285\20230806-90734.b\5G06X07.D

Injection Date: 06-Aug-2023 12:13:30 Instrument ID: 26285 Operator ID: knk41612

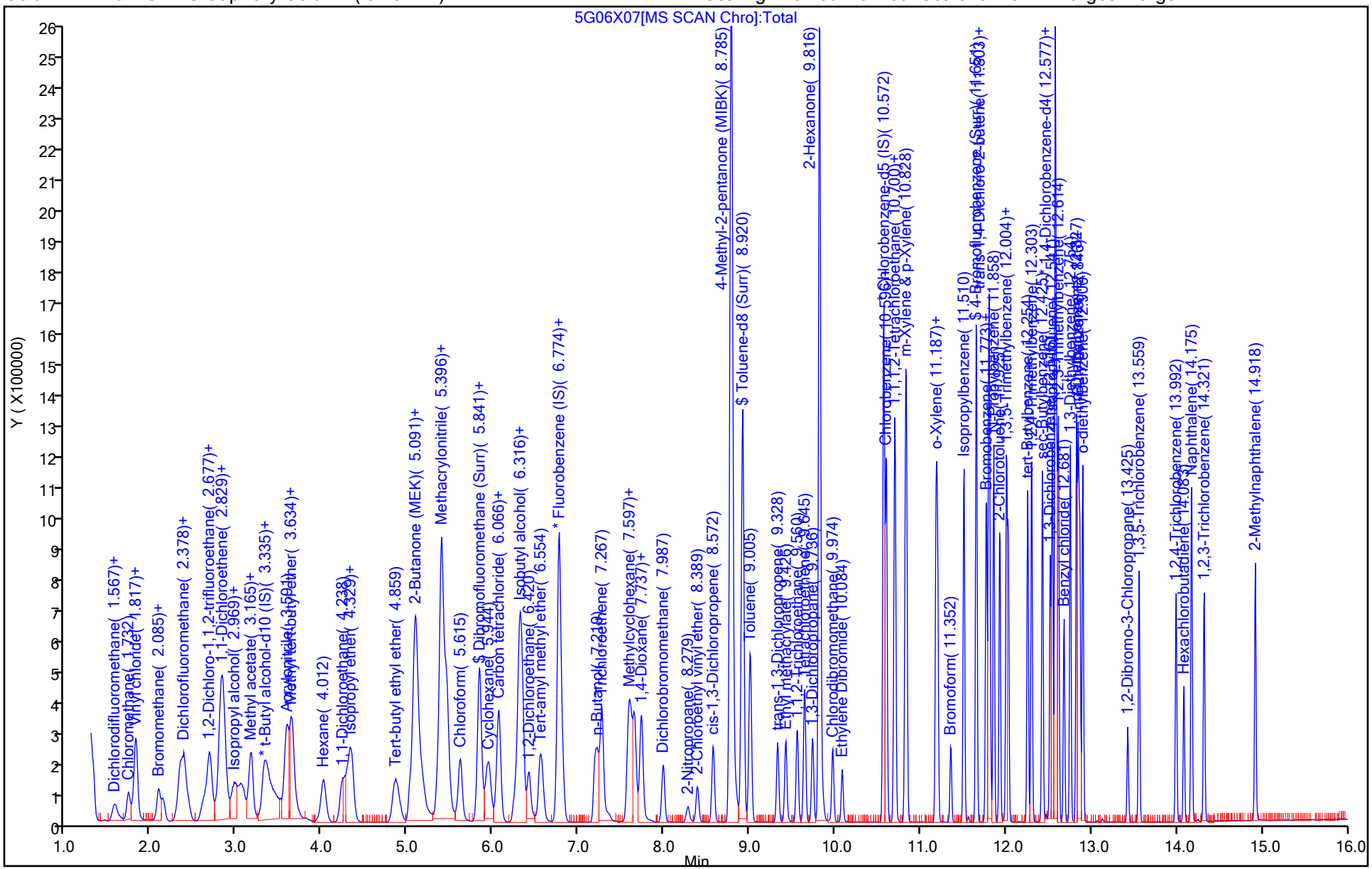
Lims ID: LCSD Worklist Smp#: 5

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 7

Method: MSVoa_26285a Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\26285\20230806-90734.b\5G06X07.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 06-Aug-2023 12:13:30 ALS Bottle#: 7 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090734-005
Misc. Info.: LCSD
Operator ID: knk41612 Instrument ID: 26285

Method: \\chromfs\Lancaster\ChromData\26285\20230806-90734.b\MSVoa_26285a.m
Limit Group: MSV - 8260C_D
Last Update: 06-Aug-2023 12:37:19 Calib Date: 10-Jul-2023 21:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\26285\20230710-88512.b\5U10X27.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1670

First Level Reviewer: DVW2 Date: 06-Aug-2023 12:35:07

Compound	Amount Added	Amount Recovered	% Rec.
$ 50 Dibromofluoromethane (Surr)	50.0	48.6	97.11
$ 57 1,2-Dichloroethane-d4 (Surr)	50.0	50.6	101.16
$ 80 Toluene-d8 (Surr)	50.0	50.2	100.34
$ 144 4-Bromofluorobenzene (Surr)	50.0	46.6	93.20

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Instrument ID: 26285 Start Date: 07/10/2023 10:47

Analysis Batch Number: 395004 End Date: 07/10/2023 22:34

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 410-395004/1		07/10/2023 10:47	1	5U10T01.D	R-624SilMS 30m 0.25(mm)
IC 410-395004/6		07/10/2023 12:32	1		R-624SilMS 30m 0.25(mm)
IC 410-395004/7		07/10/2023 12:52	1		R-624SilMS 30m 0.25(mm)
IC 410-395004/8		07/10/2023 13:12	1		R-624SilMS 30m 0.25(mm)
ICV 410-395004/10		07/10/2023 13:52	1		R-624SilMS 30m 0.25(mm)
ICIS 410-395004/16		07/10/2023 15:53	1	5U10X16.D	R-624SilMS 30m 0.25(mm)
IC 410-395004/17		07/10/2023 16:13	1	5U10X17.D	R-624SilMS 30m 0.25(mm)
IC 410-395004/18		07/10/2023 16:33	1	5U10X18.D	R-624SilMS 30m 0.25(mm)
IC 410-395004/3		07/10/2023 17:58	1		R-624SilMS 30m 0.25(mm)
IC 410-395004/4		07/10/2023 18:18	1		R-624SilMS 30m 0.25(mm)
IC 410-395004/5		07/10/2023 18:39	1		R-624SilMS 30m 0.25(mm)
IC 410-395004/14		07/10/2023 18:59	1	5U10X24.D	R-624SilMS 30m 0.25(mm)
IC 410-395004/15		07/10/2023 19:19	1	5U10X25.D	R-624SilMS 30m 0.25(mm)
IC 410-395004/12		07/10/2023 20:46	1	5U10X26.D	R-624SilMS 30m 0.25(mm)
IC 410-395004/13		07/10/2023 21:06	1	5U10X27.D	R-624SilMS 30m 0.25(mm)
ICV 410-395004/20		07/10/2023 22:34	1	5U10X28.D	R-624SilMS 30m 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Instrument ID: 26285 Start Date: 08/06/2023 10:00

Analysis Batch Number: 404928 End Date: 08/06/2023 19:38

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 410-404928/1		08/06/2023 10:00	1	5G06T01.D	R-624SilMS 30m 0.25(mm)
CCVIS 410-404928/3		08/06/2023 11:33	1	5G06X05.D	R-624SilMS 30m 0.25(mm)
LCS 410-404928/4		08/06/2023 11:53	1	5G06X06.D	R-624SilMS 30m 0.25(mm)
LCSD 410-404928/5		08/06/2023 12:13	1	5G06X07.D	R-624SilMS 30m 0.25(mm)
ZZZZZ		08/06/2023 12:34	1		R-624SilMS 30m 0.25(mm)
MB 410-404928/7		08/06/2023 12:54	1	5G06X09.D	R-624SilMS 30m 0.25(mm)
ZZZZZ		08/06/2023 13:14	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/06/2023 13:34	1		R-624SilMS 30m 0.25(mm)
410-136514-6	Trip Blank 1	08/06/2023 13:54	1	5G06X12.D	R-624SilMS 30m 0.25(mm)
410-136514-7	Trip Blank 2	08/06/2023 14:14	1	5G06X13.D	R-624SilMS 30m 0.25(mm)
ZZZZZ		08/06/2023 14:34	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/06/2023 14:54	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/06/2023 15:15	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/06/2023 15:35	10		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/06/2023 15:55	10		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/06/2023 16:16	10		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/06/2023 16:36	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/06/2023 16:57	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/06/2023 17:17	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/06/2023 17:37	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/06/2023 17:58	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/06/2023 18:18	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/06/2023 18:38	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/06/2023 18:58	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/06/2023 19:18	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/06/2023 19:38	10		R-624SilMS 30m 0.25(mm)

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136514-1

SDG No.:

Batch Number: 395004 | Batch Start Date: 07/10/23 10:47 | Batch Analyst: Campbell, Miranda E

Batch Method: 8260D | Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Lot#Vial	MSV_4ppbEE 00541	MSV_CCV_2CEVE 00128	MSV_CCV_CYC 00006
BFB 410-395004/1		8260D		1 uL	1 uL				
IC 410-395004/12		8260D		5 mL	5 mL	2705	12.5 mL		
IC 410-395004/13		8260D		5 mL	5 mL	2705		2 uL	16 uL
IC 410-395004/14		8260D		5 mL	5 mL	2705		2 uL	8 uL
IC 410-395004/15		8260D		5 mL	5 mL	2705		4 uL	16 uL
ICIS 410-395004/16		8260D		5 mL	5 mL	2705		5 uL	10 uL
IC 410-395004/17		8260D		5 mL	5 mL	2705		5 uL	10 uL
IC 410-395004/18		8260D		5 mL	5 mL	2705		15 uL	30 uL
ICV 410-395004/20		8260D		5 mL	5 mL	2705			

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_CCV_EE 00005	MSV_CCV_GASES 00520	MSV_CCV_VOC#1 00134	MSV_CCV_VOC#3 00133	MSV_Cent_ISSS 00016	MSV_LCS_2CEVE 00123
BFB 410-395004/1		8260D							
IC 410-395004/12		8260D						5 uL	
IC 410-395004/13		8260D		2 uL	1 uL	2 uL	1.6 uL	5 uL	
IC 410-395004/14		8260D		2 uL	1 uL	2 uL	1.6 uL	5 uL	
IC 410-395004/15		8260D		4 uL	2 uL	4 uL	3.2 uL	5 uL	
ICIS 410-395004/16		8260D		5 uL	2.5 uL	5 uL	4 uL	5 uL	
IC 410-395004/17		8260D		5 uL	2.5 uL	5 uL	4 uL	5 uL	
IC 410-395004/18		8260D		15 uL	7.5 uL	15 uL	12 uL	5 uL	
ICV 410-395004/20		8260D						5 uL	50 uL

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-136514-1

SDG No.:

Batch Number: 395004 Batch Start Date: 07/10/23 10:47 Batch Analyst: Campbell, Miranda E

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_LCS_ACROL 00121	MSV_LCS_CYC 00004	MSV_LCS_EE 00007	MSV_LCS_Gases 00150	MSV_LCS_VOC#1 00118	MSV_V_BFB 00012
BFB 410-395004/1		8260D							1 uL
IC 410-395004/12		8260D							
IC 410-395004/13		8260D							
IC 410-395004/14		8260D							
IC 410-395004/15		8260D							
ICIS 410-395004/16		8260D							
IC 410-395004/17		8260D							
IC 410-395004/18		8260D							
ICV 410-395004/20		8260D		50 uL	50 uL	50 uL	50 uL	50 uL	

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136514-1

SDG No.:

Batch Number: 404928 | Batch Start Date: 08/06/23 10:00 | Batch Analyst: Mellinger, Corie M

Batch Method: 8260D | Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	ResidualChloCheck	Headspace	Lot#Vial
BFB 410-404928/1		8260D		1 uL	1 uL				
CCVIS 410-404928/3		8260D		5 mL	5 mL				2705
LCS 410-404928/4		8260D		5 mL	5 mL				2705
LCSD 410-404928/5		8260D		5 mL	5 mL				2705
MB 410-404928/7		8260D		5 mL	5 mL				2705
410-136514-B-6	Trip Blank 1	8260D	T	5 mL	5 mL	<2 SU	N	N	
410-136514-B-7	Trip Blank 2	8260D	T	5 mL	5 mL	<2 SU	N	N	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_CCV_2CEVE 00131	MSV_CCV_GASES 00541	MSV_CCV_VOC#1 00137	MSV_CCV_VOC#3 00136	MSV_Cent_ISSS 00021	MSV_LCS_2CEVE 00126
BFB 410-404928/1		8260D							
CCVIS 410-404928/3		8260D		5 uL	2.5 uL	5 uL	4 uL	5 uL	
LCS 410-404928/4		8260D						5 uL	50 uL
LCSD 410-404928/5		8260D						5 uL	50 uL
MB 410-404928/7		8260D						5 uL	
410-136514-B-6	Trip Blank 1	8260D	T					5 uL	
410-136514-B-7	Trip Blank 2	8260D	T					5 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_LCS_ACROL 00124	MSV_LCS_Gases 00153	MSV_LCS_VOC#1 00123	MSV_V_BFB 00012		
BFB 410-404928/1		8260D					1 uL		
CCVIS 410-404928/3		8260D							
LCS 410-404928/4		8260D		50 uL	50 uL	50 uL			
LCSD 410-404928/5		8260D		50 uL	50 uL	50 uL			
MB 410-404928/7		8260D							
410-136514-B-6	Trip Blank 1	8260D	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136514-1

SDG No.:

Batch Number: 404928 | Batch Start Date: 08/06/23 10:00 | Batch Analyst: Mellinger, Corie M

Batch Method: 8260D | Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_LCS_ACROL 00124	MSV_LCS_Gases 00153	MSV_LCS_VOC#1 00123	MSV_V_BFB 00012		
410-136514-B-7	Trip Blank 2	8260D	T						

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Method 8260D Low Level

Volatile Organic Compounds (GC/MS) by Method 8260D Low Level

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories En Job No.: 410-136514-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): R-624SilMS 3 ID: 0.25 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
16-2	410-136514-1	110	110	95	94
16-3	410-136514-2	108	109	95	95
16-5	410-136514-3	109	109	96	94
16WC2B	410-136514-4	110	110	96	94
16SPRING	410-136514-5	110	109	95	94
Trip Blank 1	410-136514-6	107	107	96	95
Trip Blank 2	410-136514-7	108	108	96	96
	MB 410-404020/11	106	109	94	95
	LCS 410-404020/5	102	103	98	101
	LCSD 410-404020/6	102	102	98	101

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	80-120
DCA = 1,2-Dichloroethane-d4 (Surr)	80-120
TOL = Toluene-d8 (Surr)	80-120
BFB = 4-Bromofluorobenzene (Surr)	80-120

Column to be used to flag recovery values

FORM II 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1

SDG No.:

Matrix: Water Level: Low Lab File ID: IG03X04.D

Lab ID: LCS 410-404020/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1-Trichloroethane	5.00	4.50	90	78-126	
1,1,2-Trichloroethane	5.00	4.72	94	80-120	
1,1-Dichloroethane	5.00	4.63	93	74-120	
1,1-Dichloroethene	5.00	4.35	87	80-131	
2-Butanone	62.5	58.8	94	59-141	
Benzene	5.00	4.86	97	80-120	
Carbon tetrachloride	5.00	4.62	92	64-141	
Chloroethane	5.00	4.01	80	63-120	
Dichlorodifluoromethane	5.00	3.62	72	43-123	
Diethyl ether	5.01	3.60 J	72	72-121	
Ethylbenzene	5.00	4.40	88	80-120	
Methylene Chloride	5.00	4.70	94	80-120	
Tetrachloroethene	5.00	4.21	84	80-120	
Tetrahydrofuran	25.0	21.8 J	87	67-137	
Toluene	5.00	4.45	89	80-120	
Trichloroethene	5.00	4.55	91	80-120	
Trichlorofluoromethane	5.00	4.17	83	62-136	
Vinyl chloride	5.00	3.74	75	60-125	
Xylenes, Total	15.0	13.2	88	80-120	
Chloromethane	5.00	3.72	74	56-124	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.00	4.38	88	75-133	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1

SDG No.:

Matrix: Water Level: Low Lab File ID: IG03X05.D

Lab ID: LCSD 410-404020/6 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1-Trichloroethane	5.00	4.95	99	9	30	78-126	
1,1,2-Trichloroethane	5.00	5.15	103	9	30	80-120	
1,1-Dichloroethane	5.00	5.20	104	12	30	74-120	
1,1-Dichloroethene	5.00	4.84	97	11	30	80-131	
2-Butanone	62.5	65.5	105	11	30	59-141	
Benzene	5.00	5.26	105	8	30	80-120	
Carbon tetrachloride	5.00	5.03	101	9	30	64-141	
Chloroethane	5.00	4.32	86	8	30	63-120	
Dichlorodifluoromethane	5.00	3.95	79	9	30	43-123	
Diethyl ether	5.01	4.03 J	81	11	30	72-121	
Ethylbenzene	5.00	4.90	98	11	30	80-120	
Methylene Chloride	5.00	5.20	104	10	30	80-120	
Tetrachloroethene	5.00	4.69	94	11	30	80-120	
Tetrahydrofuran	25.0	23.8 J	95	8	30	67-137	
Toluene	5.00	4.95	99	11	30	80-120	
Trichloroethene	5.00	5.06	101	10	30	80-120	
Trichlorofluoromethane	5.00	4.42	88	6	30	62-136	
Vinyl chloride	5.00	4.16	83	11	30	60-125	
Xylenes, Total	15.0	14.7	98	11	30	80-120	
Chloromethane	5.00	4.18	84	12	30	56-124	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.00	4.84	97	10	30	75-133	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1

SDG No.:

Lab File ID: IG03X10.D Lab Sample ID: MB 410-404020/11

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: 19930 Date Analyzed: 08/03/2023 14:25

GC Column: R-624SilMS 30m ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 410-404020/5	IG03X04.D	08/03/2023 12:18
	LCSD 410-404020/6	IG03X05.D	08/03/2023 12:39
Trip Blank 1	410-136514-6	IG03X11.D	08/03/2023 14:45
Trip Blank 2	410-136514-7	IG03X12.D	08/03/2023 15:06
16-2	410-136514-1	IG03X22.D	08/03/2023 18:37
16-3	410-136514-2	IG03X23.D	08/03/2023 18:58
16-5	410-136514-3	IG03X24.D	08/03/2023 19:19
16WC2B	410-136514-4	IG03X25.D	08/03/2023 19:40
16SPRING	410-136514-5	IG03X26.D	08/03/2023 20:01

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1

SDG No.:

Lab File ID: BFB Injection Date:

Instrument ID: BFB Injection Time:

Lab File ID: DFTPP Injection Date:

Instrument ID: DFTPP Injection Time:

Analysis Batch No.:

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE

NOTE: All ion abundances shall be normalized to m/z 95, the nominal base peak, even though the ion abundance of m/z 174 may be up to 120% that of m/z 95. Criteria based on EPA method 524.4.

NOTE: All ion abundances MUST be normalized to m/z 198, the nominal base peak, even though the ion abundance of m/z 442 may exceed that of m/z 198.

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 410-355532/12	IM21X11.D	03/21/2023	4:01
	ICIS 410-355532/13	IM21X12.D	03/21/2023	4:22
	IC 410-355532/14	IM21X13.D	03/21/2023	4:42
	IC 410-355532/15	IM21X14.D	03/21/2023	5:02
	IC 410-355532/16	IM21X15.D	03/21/2023	5:22
	IC 410-355532/17	IM21X16.D	03/21/2023	5:42
	IC 410-355532/18	IM21X17.D	03/21/2023	6:02

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1

SDG No.:

Lab File ID: IU19T01.D BFB Injection Date: 06/19/2023

Instrument ID: 19930 BFB Injection Time: 14:12

Analysis Batch No.: 388102

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	15.2	
75	30.0 - 60.0 % of mass 95	45.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	Greater than 50% of mass 95	94.5	
175	5.0 - 9.0 % of mass 174	7.2	(7.6) 1
176	95.0 - 101.0 % of mass 174	93.5	(98.9) 1
177	5.0 - 9.0 % of mass 176	6.1	(6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 410-388102/3	IU19X02.D	06/19/2023	14:49
	IC 410-388102/4	IU19X03.D	06/19/2023	15:10
	IC 410-388102/5	IU19X04.D	06/19/2023	15:31
	IC 410-388102/6	IU19X05.D	06/19/2023	15:52
	IC 410-388102/7	IU19X06.D	06/19/2023	16:13
	IC 410-388102/8	IU19X07.D	06/19/2023	16:34
	IC 410-388102/9	IU19X08.D	06/19/2023	16:55
	ICV 410-388102/11	IU19X10.D	06/19/2023	17:37
	IC 410-388102/13	IU19X12.D	06/19/2023	18:19
	IC 410-388102/14	IU19X13.D	06/19/2023	18:40
	IC 410-388102/15	IU19X14.D	06/19/2023	19:01
	IC 410-388102/16	IU19X15.D	06/19/2023	19:22
	IC 410-388102/17	IU19X16.D	06/19/2023	19:42
	ICIS 410-388102/18	IU19X17.D	06/19/2023	20:03
	IC 410-388102/19	IU19X18.D	06/19/2023	20:25
	ICV 410-388102/21	IU19X20.D	06/19/2023	21:07

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1

SDG No.:

Lab File ID: IG03T01.D BFB Injection Date: 08/03/2023

Instrument ID: 19930 BFB Injection Time: 11:02

Analysis Batch No.: 404020

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	16.0	
75	30.0 - 60.0 % of mass 95	45.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.3	
173	Less than 2.0 % of mass 174	0.9	(0.9) 1
174	Greater than 50% of mass 95	95.4	
175	5.0 - 9.0 % of mass 174	7.2	(7.5) 1
176	95.0 - 101.0 % of mass 174	92.5	(97.0) 1
177	5.0 - 9.0 % of mass 176	5.9	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 410-404020/3	IG03X02.D	08/03/2023	11:36
	LCS 410-404020/5	IG03X04.D	08/03/2023	12:18
	LCSD 410-404020/6	IG03X05.D	08/03/2023	12:39
	MB 410-404020/11	IG03X10.D	08/03/2023	14:25
Trip Blank 1	410-136514-6	IG03X11.D	08/03/2023	14:45
Trip Blank 2	410-136514-7	IG03X12.D	08/03/2023	15:06
16-2	410-136514-1	IG03X22.D	08/03/2023	18:37
16-3	410-136514-2	IG03X23.D	08/03/2023	18:58
16-5	410-136514-3	IG03X24.D	08/03/2023	19:19
16WC2B	410-136514-4	IG03X25.D	08/03/2023	19:40
16SPRING	410-136514-5	IG03X26.D	08/03/2023	20:01

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1

SDG No.:

Sample No.: ICIS 410-388102/18 Date Analyzed: 06/19/2023 20:03

Instrument ID: 19930 GC Column: R-624SilMS 30m ID: 0.25(mm)

Lab File ID (Standard): IU19X17.D Heated Purge: (Y/N) N

Calibration ID: 51353

		TBAd10		FB		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		130775	3.98	1807671	7.45	1439976	10.99
UPPER LIMIT		261550	4.48	3615342	7.95	2879952	11.49
LOWER LIMIT		65388	3.48	903836	6.95	719988	10.49
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 410-388102/21		143904	3.96	1909555	7.45	1501017	10.99
CCVIS 410-404020/3		152302	3.98	1871286	7.46	1594473	10.98

TBAd10 = t-Butyl alcohol-d10 (IS)
FB = Fluorobenzene (IS)
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1

SDG No.:

Sample No.: ICIS 410-388102/18 Date Analyzed: 06/19/2023 20:03

Instrument ID: 19930 GC Column: R-624SilMS 30m ID: 0.25(mm)

Lab File ID (Standard): IU19X17.D Heated Purge: (Y/N) N

Calibration ID: 51353

		DCBd4					
		AREA #	RT #	#	RT #	#	RT #
INITIAL CALIBRATION MID-POINT		884528	12.88				
UPPER LIMIT		1769056	13.38				
LOWER LIMIT		442264	12.38				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 410-388102/21		914425	12.88				
CCVIS 410-404020/3		1007139	12.87				

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1

SDG No.:

Sample No.: CCVIS 410-404020/3 Date Analyzed: 08/03/2023 11:36

Instrument ID: 19930 GC Column: R-624SilMS 30m ID: 0.25(mm)

Lab File ID (Standard): IG03X02.D Heated Purge: (Y/N) N

Calibration ID: 51353

		TBAd10		FB		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		152302	3.98	1871286	7.46	1594473	10.98
UPPER LIMIT		304604	4.48	3742572	7.96	3188946	11.48
LOWER LIMIT		76151	3.48	935643	6.96	797237	10.48
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 410-404020/5		158633	3.98	1883476	7.46	1579324	10.98
LCSD 410-404020/6		141476	3.98	1737953	7.46	1441428	10.98
MB 410-404020/11		140260	3.98	1806795	7.46	1540201	10.98
410-136514-6	Trip Blank 1	130157	3.98	1668121	7.46	1423787	10.98
410-136514-7	Trip Blank 2	128289	3.98	1603214	7.46	1362113	10.98
410-136514-1	16-2	124333	3.98	1585512	7.46	1356033	10.98
410-136514-2	16-3	129465	3.97	1633993	7.46	1382238	10.98
410-136514-3	16-5	129487	3.99	1582283	7.46	1348275	10.98
410-136514-4	16WC2B	139131	4.00	1709988	7.46	1470334	10.98
410-136514-5	16SPRING	127364	4.01	1572352	7.46	1356073	10.98

TBAd10 = t-Butyl alcohol-d10 (IS)
TBAd10 = t-Butyl alcohol-d10 (IS)
FB = Fluorobenzene (IS)
CBZd5 = Chlorobenzene-d5 (IS)
Area Limit = 50%-200% of internal standard area
CBZd5 = Chlorobenzene-d5 (IS)
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1

SDG No.:

Sample No.: CCVIS 410-404020/3 Date Analyzed: 08/03/2023 11:36

Instrument ID: 19930 GC Column: R-624SilMS 30m ID: 0.25(mm)

Lab File ID (Standard): IG03X02.D Heated Purge: (Y/N) N

Calibration ID: 51353

		DCBd4					
		AREA #	RT #	#	RT #	#	RT #
12/24 HOUR STD		1007139	12.87				
UPPER LIMIT		2014278	13.37				
LOWER LIMIT		503570	12.37				
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 410-404020/5		980973	12.88				
LCSD 410-404020/6		893162	12.87				
MB 410-404020/11		913863	12.88				
410-136514-6	Trip Blank 1	848038	12.88				
410-136514-7	Trip Blank 2	813779	12.88				
410-136514-1	16-2	799420	12.88				
410-136514-2	16-3	815461	12.88				
410-136514-3	16-5	802305	12.88				
410-136514-4	16WC2B	865697	12.88				
410-136514-5	16SPRING	795269	12.88				

DCBd4 = 1,4-Dichlorobenzene-d4
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136514-1

SDG No.:

Client Sample ID: 16-2
Lab Sample ID: 410-136514-1

Matrix: Water
Lab File ID: IG03X22.D

Analysis Method: 8260D
Date Collected: 07/26/2023 09:30

Sample wt/vol: 25(mL)
Date Analyzed: 08/03/2023 18:37

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 404020
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		1.0	
75-34-3	1,1-Dichloroethane	ND		1.0	
75-35-4	1,1-Dichloroethene	ND		1.0	
78-93-3	2-Butanone	ND		10	
71-43-2	Benzene	ND		1.0	
56-23-5	Carbon tetrachloride	ND		1.0	
75-00-3	Chloroethane	ND		1.0	
75-71-8	Dichlorodifluoromethane	ND		1.0	
60-29-7	Diethyl ether	ND		10	
100-41-4	Ethylbenzene	ND		1.0	
75-09-2	Methylene Chloride	ND		1.0	
127-18-4	Tetrachloroethene	ND		1.0	
109-99-9	Tetrahydrofuran	ND		25	
108-88-3	Toluene	ND		1.0	
79-01-6	Trichloroethene	ND		1.0	
75-69-4	Trichlorofluoromethane	ND		1.0	
75-01-4	Vinyl chloride	ND		1.0	
1330-20-7	Xylenes, Total	ND		3.0	
74-87-3	Chloromethane	ND		1.0	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	110		80-120
1868-53-7	Dibromofluoromethane (Surr)	110		80-120
460-00-4	4-Bromofluorobenzene (Surr)	94		80-120
2037-26-5	Toluene-d8 (Surr)	95		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X22.D
Lims ID: 410-136514-A-1
Client ID: 16-2
Sample Type: Client
Inject. Date: 03-Aug-2023 18:37:30 ALS Bottle#: 22 Worklist Smp#: 23
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090530-023
Operator ID: knk41612 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 04-Aug-2023 11:12:41 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1672

First Level Reviewer: kaewrungrueangp Date: 04-Aug-2023 11:06:16

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85		1.867				ND	
3 Dimethyl ether	45		1.922				ND	
4 Chloromethane	50		2.056				ND	
5 Vinyl chloride	62		2.160				ND	
8 Chloroethane	64		2.556				ND	
10 Trichlorofluoromethane	101		2.843				ND	
11 Ethyl ether	59		3.062				ND	
15 1,1-Dichloroethene	96		3.349				ND	
17 1,1,2-Trichloro-1,2,2-trifluoroe	101		3.398				ND	
25 Methylene Chloride	84		3.977				ND	
* 26 t-Butyl alcohol-d10 (IS)	65	3.983	3.983	0.000	26	124333	50.0	
32 1,1-Dichloroethane	63	5.031	5.031	0.000	90	5358	0.0661	
38 2-Butanone (MEK)	43		5.830				ND	
47 Tetrahydrofuran	71		6.214				ND	
$ 49 Dibromofluoromethane (Surr)	113	6.567	6.568	-0.001	94	446563	11.0	
50 1,1,1-Trichloroethane	97		6.580				ND	
54 Carbon tetrachloride	117		6.793				ND	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.025	7.025	0.000	62	88731	11.0	
57 Benzene	78		7.055				ND	
* 61 Fluorobenzene (IS)	96	7.458	7.458	0.000	99	1585512	10.0	
64 Trichloroethene	95		7.939				ND	
$ 78 Toluene-d8 (Surr)	98	9.494	9.494	0.000	93	1659756	9.52	
79 Toluene	92		9.573				ND	
100 1,1,2-Trichloroethane	97		10.049				ND	
101 Tetrachloroethene	166		10.140				ND	
* 107 Chlorobenzene-d5 (IS)	117	10.981	10.981	0.000	84	1356033	10.0	
112 Ethylbenzene	91		11.097				ND	
113 m-Xylene & p-Xylene	106		11.213				ND	
S 110 Xylenes, Total	106		11.245				ND	7
114 o-Xylene	106		11.542				ND	
$ 120 4-Bromofluorobenzene (Surr)	95	11.993	11.987	0.006	95	616631	9.39	
* 135 1,4-Dichlorobenzene-d4	152	12.877	12.871	0.006	93	799420	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

MSV_LLcentISS_00009 Amount Added: 5.00 Units: uL Run Reagent

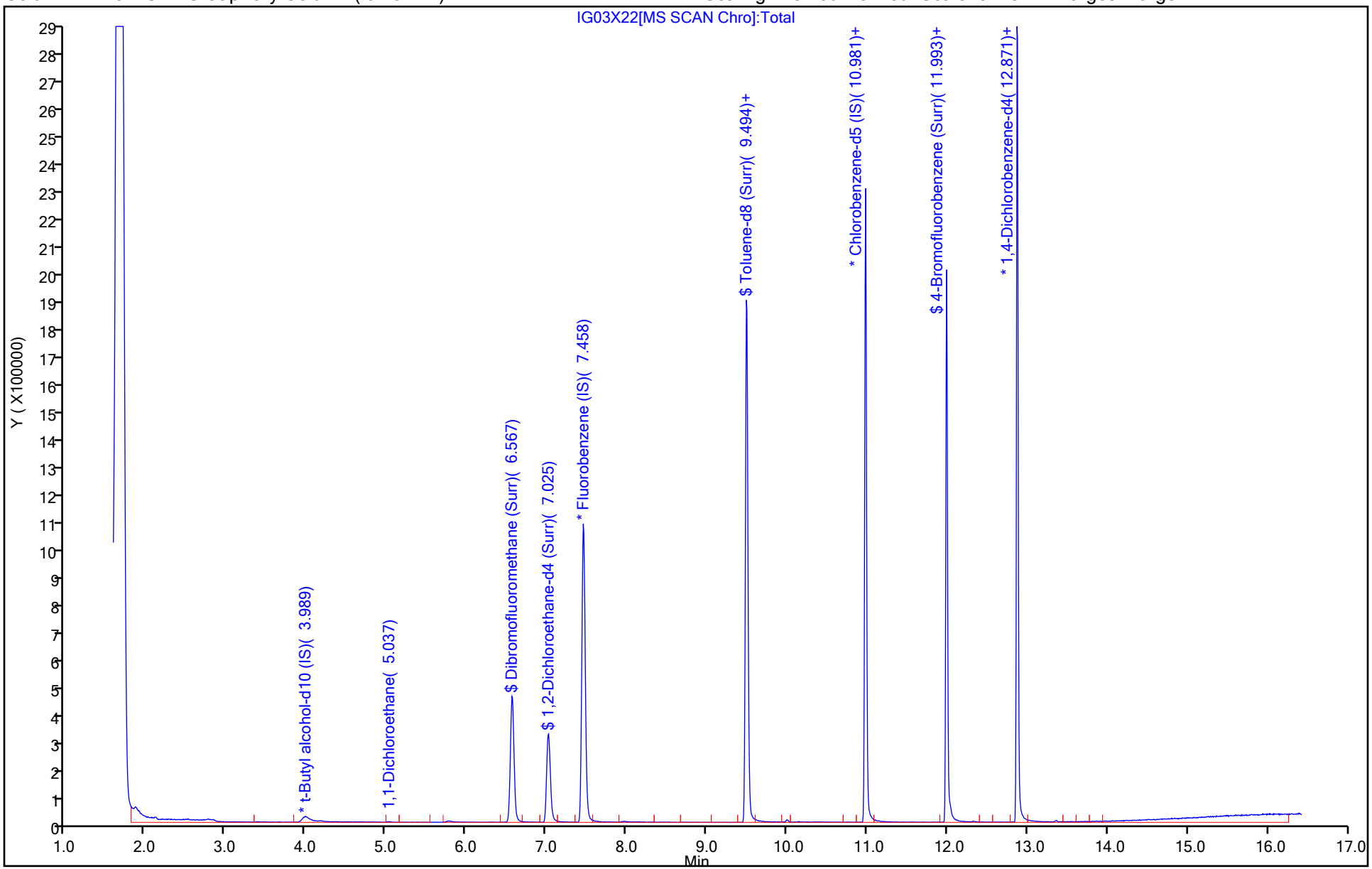
Report Date: 10-Aug-2023 16:32:51 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X22.D

Injection Date:	03-Aug-2023 18:37:30	Instrument ID:	19930	Operator ID:	knk41612
Lims ID:	410-136514-A-1	Lab Sample ID:	410-136514-1	Worklist Smp#:	23
Client ID:	16-2				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X22.D				
Lims ID:	410-136514-A-1				
Client ID:	16-2				
Sample Type:	Client				
Inject. Date:	03-Aug-2023 18:37:30	ALS Bottle#:	22	Worklist Smp#:	23
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0090530-023				
Operator ID:	knk41612	Instrument ID:	19930		
Method:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m				
Limit Group:	MSV - 8260C_D				
Last Update:	04-Aug-2023 11:12:41	Calib Date:	19-Jun-2023 20:25:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1672				

First Level Reviewer: kaewrungrueangp Date: 04-Aug-2023 11:06:16

Compound	Amount Added	Amount Recovered	% Rec.
$ 49 Dibromofluoromethane (Surr)	10.0	11.0	109.65
$ 56 1,2-Dichloroethane-d4 (Surr)	10.0	11.0	109.89
$ 78 Toluene-d8 (Surr)	10.0	9.52	95.20
$ 120 4-Bromofluorobenzene (Surr)	10.0	9.39	93.87

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136514-1

SDG No.:

Client Sample ID: 16-3
Lab Sample ID: 410-136514-2

Matrix: Water
Lab File ID: IG03X23.D

Analysis Method: 8260D
Date Collected: 07/26/2023 11:15

Sample wt/vol: 25(mL)
Date Analyzed: 08/03/2023 18:58

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 404020
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		1.0	
75-34-3	1,1-Dichloroethane	ND		1.0	
75-35-4	1,1-Dichloroethene	ND		1.0	
78-93-3	2-Butanone	ND		10	
71-43-2	Benzene	ND		1.0	
56-23-5	Carbon tetrachloride	ND		1.0	
75-00-3	Chloroethane	ND		1.0	
75-71-8	Dichlorodifluoromethane	ND		1.0	
60-29-7	Diethyl ether	ND		10	
100-41-4	Ethylbenzene	ND		1.0	
75-09-2	Methylene Chloride	ND		1.0	
127-18-4	Tetrachloroethene	ND		1.0	
109-99-9	Tetrahydrofuran	ND		25	
108-88-3	Toluene	ND		1.0	
79-01-6	Trichloroethene	ND		1.0	
75-69-4	Trichlorofluoromethane	ND		1.0	
75-01-4	Vinyl chloride	ND		1.0	
1330-20-7	Xylenes, Total	ND		3.0	
74-87-3	Chloromethane	ND		1.0	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	109		80-120
1868-53-7	Dibromofluoromethane (Surr)	108		80-120
460-00-4	4-Bromofluorobenzene (Surr)	95		80-120
2037-26-5	Toluene-d8 (Surr)	95		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X23.D
Lims ID: 410-136514-A-2
Client ID: 16-3
Sample Type: Client
Inject. Date: 03-Aug-2023 18:58:30 ALS Bottle#: 23 Worklist Smp#: 24
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090530-024
Operator ID: knk41612 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 04-Aug-2023 11:12:41 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1672

First Level Reviewer: kaewrungrueangp Date: 04-Aug-2023 11:07:07

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.843	1.867	-0.024	98	12713	0.1943	
3 Dimethyl ether	45		1.922				ND	
4 Chloromethane	50		2.056				ND	7
5 Vinyl chloride	62		2.160				ND	
8 Chloroethane	64		2.556				ND	
10 Trichlorofluoromethane	101	2.831	2.843	-0.012	1	3355	0.0414	
11 Ethyl ether	59	3.050	3.062	-0.012	20	847	0.0253	
15 1,1-Dichloroethene	96		3.349				ND	
17 1,1,2-Trichloro-1,2,2-trifluoroe	101		3.398				ND	
25 Methylene Chloride	84		3.977				ND	
* 26 t-Butyl alcohol-d10 (IS)	65	3.971	3.983	-0.012	27	129465	50.0	
32 1,1-Dichloroethane	63		5.031				ND	
38 2-Butanone (MEK)	43		5.830				ND	U
47 Tetrahydrofuran	71		6.214				ND	
$ 49 Dibromofluoromethane (Surr)	113	6.568	6.568	0.000	94	455299	10.8	
50 1,1,1-Trichloroethane	97		6.580				ND	
54 Carbon tetrachloride	117		6.793				ND	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.019	7.025	-0.006	62	90700	10.9	
57 Benzene	78		7.055				ND	
* 61 Fluorobenzene (IS)	96	7.458	7.458	0.000	99	1633993	10.0	
64 Trichloroethene	95		7.939				ND	
$ 78 Toluene-d8 (Surr)	98	9.494	9.494	0.000	93	1696576	9.55	
79 Toluene	92		9.573				ND	
100 1,1,2-Trichloroethane	97		10.049				ND	
101 Tetrachloroethene	166		10.140				ND	
* 107 Chlorobenzene-d5 (IS)	117	10.981	10.981	0.000	84	1382238	10.0	
112 Ethylbenzene	91		11.097				ND	
113 m-Xylene & p-Xylene	106		11.213				ND	
S 110 Xylenes, Total	106		11.245				ND	7
114 o-Xylene	106		11.542				ND	
$ 120 4-Bromofluorobenzene (Surr)	95	11.993	11.987	0.006	95	635784	9.49	
* 135 1,4-Dichlorobenzene-d4	152	12.877	12.871	0.006	93	815461	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

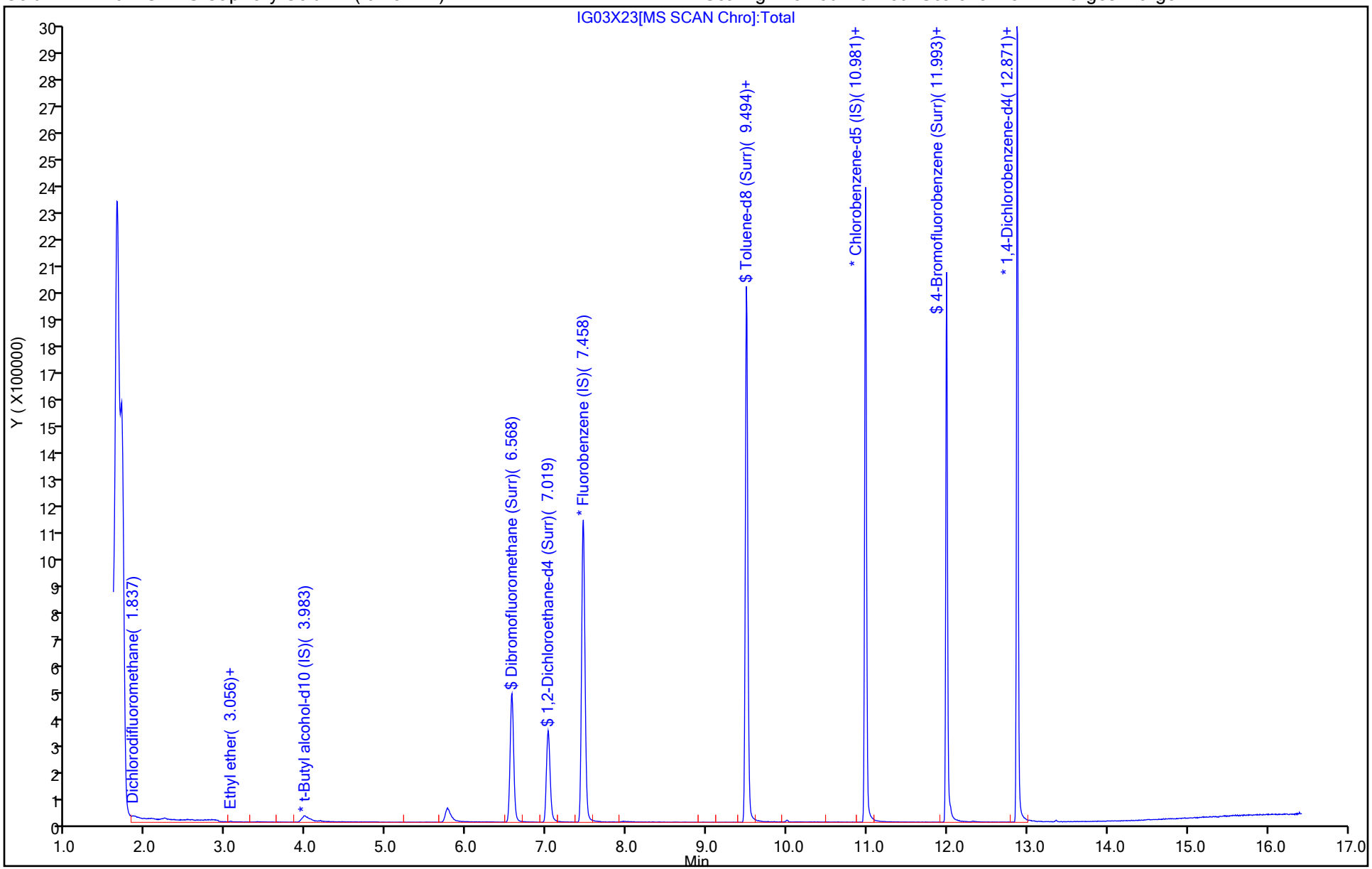
MSV_LLcentISS_00009	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 10-Aug-2023 16:32:52 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X23.D				
Injection Date:	03-Aug-2023 18:58:30	Instrument ID:	19930	Operator ID:	knk41612
Lims ID:	410-136514-A-2	Lab Sample ID:	410-136514-2	Worklist Smp#:	24
Client ID:	16-3				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X23.D				
Lims ID:	410-136514-A-2				
Client ID:	16-3				
Sample Type:	Client				
Inject. Date:	03-Aug-2023 18:58:30	ALS Bottle#:	23	Worklist Smp#:	24
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0090530-024				
Operator ID:	knk41612	Instrument ID:	19930		
Method:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m				
Limit Group:	MSV - 8260C_D				
Last Update:	04-Aug-2023 11:12:41	Calib Date:	19-Jun-2023 20:25:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1672				

First Level Reviewer: kaewrungrueangp Date: 04-Aug-2023 11:07:07

Compound	Amount Added	Amount Recovered	% Rec.
$ 49 Dibromofluoromethane (Surr)	10.0	10.8	108.48
$ 56 1,2-Dichloroethane-d4 (Surr)	10.0	10.9	108.99
$ 78 Toluene-d8 (Surr)	10.0	9.55	95.47
$ 120 4-Bromofluorobenzene (Surr)	10.0	9.49	94.95

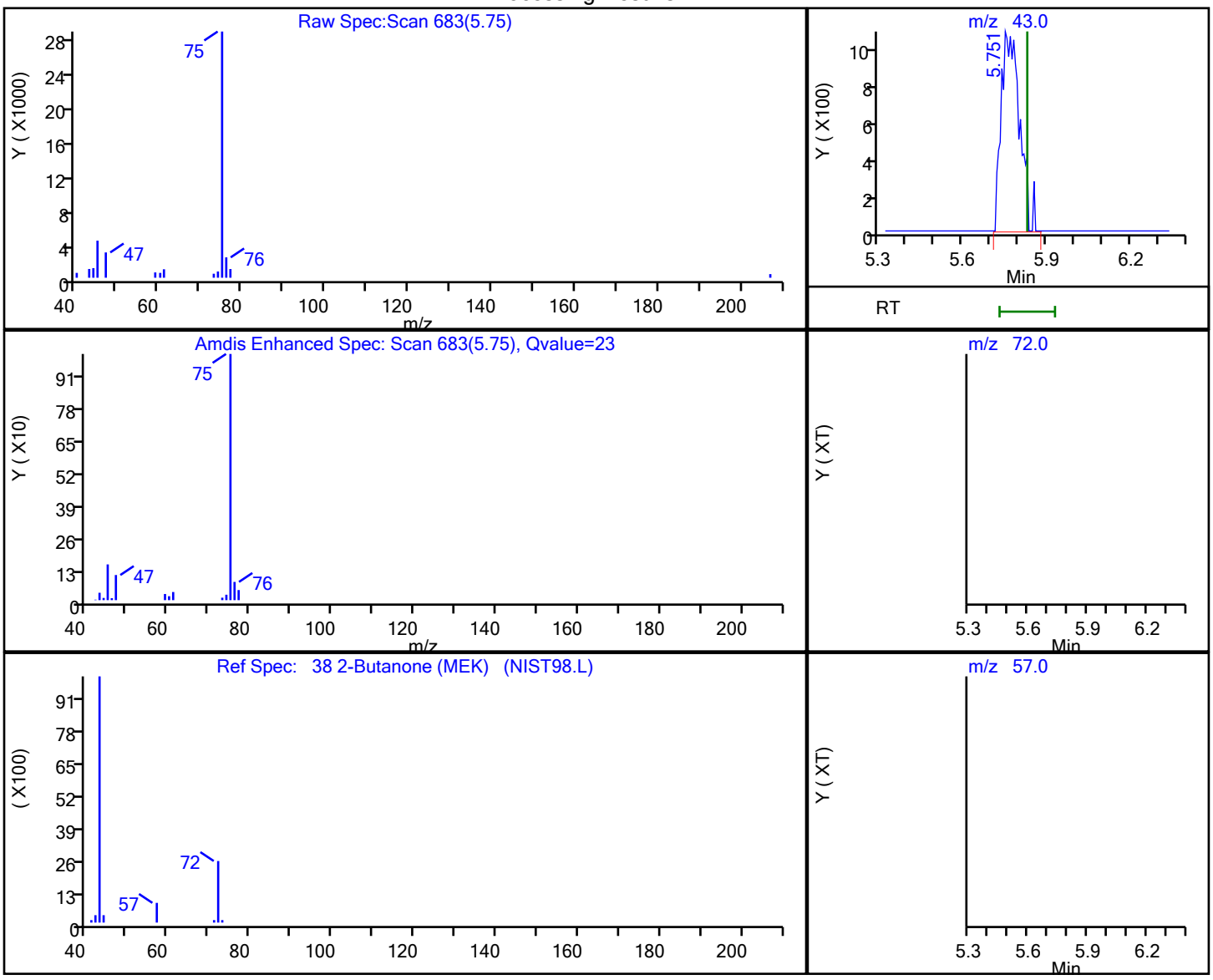
User Disabled Compound Report

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X23.D				
Injection Date:	03-Aug-2023 18:58:30	Instrument ID:	19930		
Lims ID:	410-136514-A-2	Lab Sample ID:	410-136514-2		
Client ID:	16-3				
Operator ID:	knk41612	ALS Bottle#:	23	Worklist Smp#:	24
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

38 2-Butanone (MEK), CAS: 78-93-3

Processing Results



RT	Mass	Response	Amount
5.75	43.00	4733	0.396672
5.83	72.00	0	
5.83	57.00	0	

Reviewer: kaewrungrueangp, 04-Aug-2023 11:06:56 07:00:00 (UTC)

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136514-1

SDG No.:

Client Sample ID: 16-5
Lab Sample ID: 410-136514-3

Matrix: Water
Lab File ID: IG03X24.D

Analysis Method: 8260D
Date Collected: 07/26/2023 07:45

Sample wt/vol: 25(mL)
Date Analyzed: 08/03/2023 19:19

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 404020
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		1.0	
75-34-3	1,1-Dichloroethane	ND		1.0	
75-35-4	1,1-Dichloroethene	ND		1.0	
78-93-3	2-Butanone	ND		10	
71-43-2	Benzene	ND		1.0	
56-23-5	Carbon tetrachloride	ND		1.0	
75-00-3	Chloroethane	ND		1.0	
75-71-8	Dichlorodifluoromethane	ND		1.0	
60-29-7	Diethyl ether	ND		10	
100-41-4	Ethylbenzene	ND		1.0	
75-09-2	Methylene Chloride	ND		1.0	
127-18-4	Tetrachloroethene	ND		1.0	
109-99-9	Tetrahydrofuran	ND		25	
108-88-3	Toluene	ND		1.0	
79-01-6	Trichloroethene	ND		1.0	
75-69-4	Trichlorofluoromethane	ND		1.0	
75-01-4	Vinyl chloride	ND		1.0	
1330-20-7	Xylenes, Total	ND		3.0	
74-87-3	Chloromethane	ND		1.0	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	109		80-120
1868-53-7	Dibromofluoromethane (Surr)	109		80-120
460-00-4	4-Bromofluorobenzene (Surr)	94		80-120
2037-26-5	Toluene-d8 (Surr)	96		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X24.D
Lims ID: 410-136514-A-3
Client ID: 16-5
Sample Type: Client
Inject. Date: 03-Aug-2023 19:19:30 ALS Bottle#: 24 Worklist Smp#: 25
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090530-025
Operator ID: knk41612 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 04-Aug-2023 11:12:41 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1672

First Level Reviewer: kaewrungrueangp Date: 04-Aug-2023 11:07:55

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85		1.867				ND	
3 Dimethyl ether	45		1.922				ND	
4 Chloromethane	50		2.056				ND	7
5 Vinyl chloride	62		2.160				ND	
8 Chloroethane	64		2.556				ND	
10 Trichlorofluoromethane	101		2.843				ND	7
11 Ethyl ether	59		3.062				ND	
15 1,1-Dichloroethene	96		3.349				ND	
17 1,1,2-Trichloro-1,2,2-trifluoroe	101		3.398				ND	
25 Methylene Chloride	84		3.977				ND	
* 26 t-Butyl alcohol-d10 (IS)	65	3.989	3.983	0.006	26	129487	50.0	
32 1,1-Dichloroethane	63	5.049	5.031	0.018	1	3412	0.0422	Ma
38 2-Butanone (MEK)	43		5.830				ND	7
47 Tetrahydrofuran	71		6.214				ND	
$ 49 Dibromofluoromethane (Surr)	113	6.567	6.568	-0.001	94	441947	10.9	
50 1,1,1-Trichloroethane	97		6.580				ND	
54 Carbon tetrachloride	117		6.793				ND	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.019	7.025	-0.006	67	87552	10.9	
57 Benzene	78	7.055	7.055	0.000	92	11386	0.0609	
* 61 Fluorobenzene (IS)	96	7.458	7.458	0.000	99	1582283	10.0	
64 Trichloroethene	95		7.939				ND	
$ 78 Toluene-d8 (Surr)	98	9.494	9.494	0.000	93	1663055	9.59	
79 Toluene	92	9.579	9.573	0.006	99	19632	0.1436	
100 1,1,2-Trichloroethane	97		10.049				ND	
101 Tetrachloroethene	166		10.140				ND	
* 107 Chlorobenzene-d5 (IS)	117	10.981	10.981	0.000	84	1348275	10.0	
112 Ethylbenzene	91		11.097				ND	7
113 m-Xylene & p-Xylene	106	11.219	11.213	0.006	90	4356	0.0404	
S 110 Xylenes, Total	106		11.245				ND	7
114 o-Xylene	106		11.542				ND	
$ 120 4-Bromofluorobenzene (Surr)	95	11.993	11.987	0.006	96	616288	9.44	
* 135 1,4-Dichlorobenzene-d4	152	12.877	12.871	0.006	93	802305	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

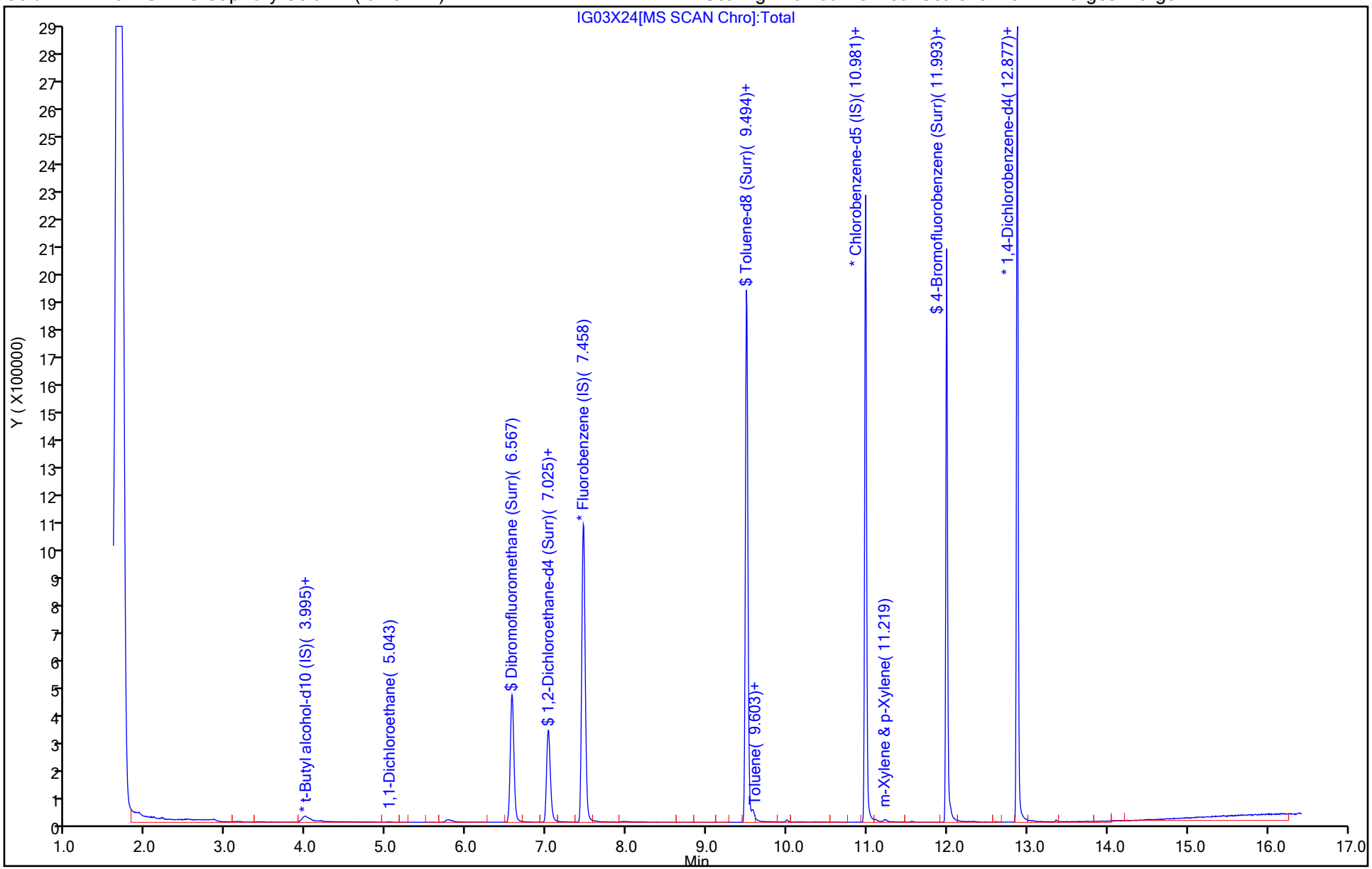
MSV_LLcentISS_00009 Amount Added: 5.00 Units: uL Run Reagent

Report Date: 10-Aug-2023 16:32:53 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X24.D				
Injection Date:	03-Aug-2023 19:19:30	Instrument ID:	19930	Operator ID:	knk41612
Lims ID:	410-136514-A-3	Lab Sample ID:	410-136514-3	Worklist Smp#:	25
Client ID:	16-5				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X24.D				
Lims ID:	410-136514-A-3				
Client ID:	16-5				
Sample Type:	Client				
Inject. Date:	03-Aug-2023 19:19:30	ALS Bottle#:	24	Worklist Smp#:	25
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0090530-025				
Operator ID:	knk41612	Instrument ID:	19930		
Method:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m				
Limit Group:	MSV - 8260C_D				
Last Update:	04-Aug-2023 11:12:41	Calib Date:	19-Jun-2023 20:25:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1672				

First Level Reviewer: kaewrungrueangp Date: 04-Aug-2023 11:07:55

Compound	Amount Added	Amount Recovered	% Rec.
$ 49 Dibromofluoromethane (Surr)	10.0	10.9	108.74
$ 56 1,2-Dichloroethane-d4 (Surr)	10.0	10.9	108.65
$ 78 Toluene-d8 (Surr)	10.0	9.59	95.94
$ 120 4-Bromofluorobenzene (Surr)	10.0	9.44	94.35

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

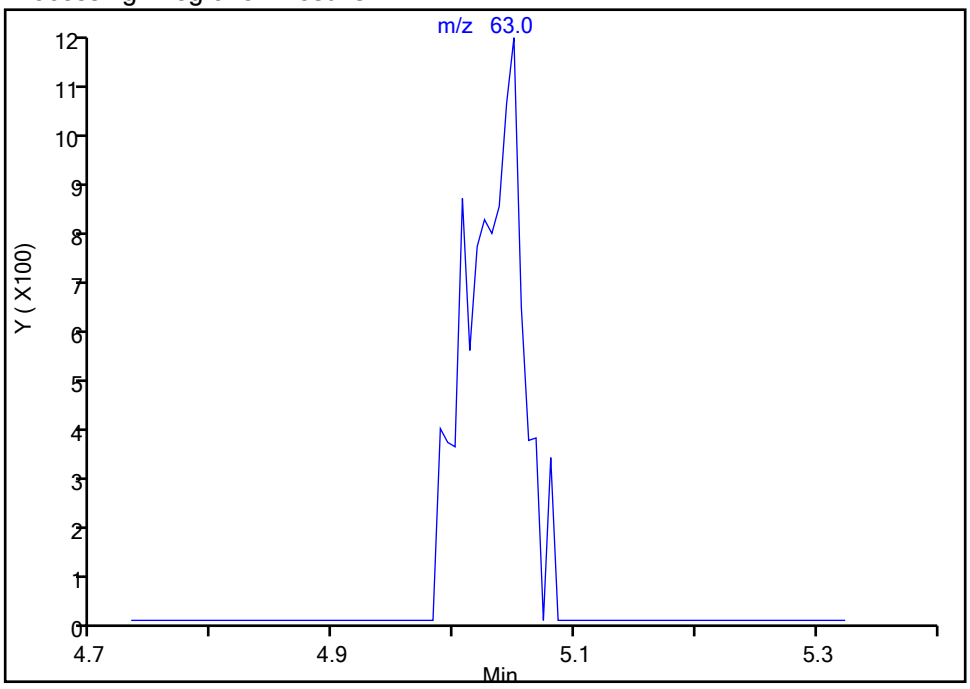
Data File:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X24.D				
Injection Date:	03-Aug-2023 19:19:30	Instrument ID:	19930		
Lims ID:	410-136514-A-3	Lab Sample ID:	410-136514-3		
Client ID:	16-5				
Operator ID:	knk41612	ALS Bottle#:	24	Worklist Smp#:	25
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

32 1,1-Dichloroethane, CAS: 75-34-3

Signal: 1

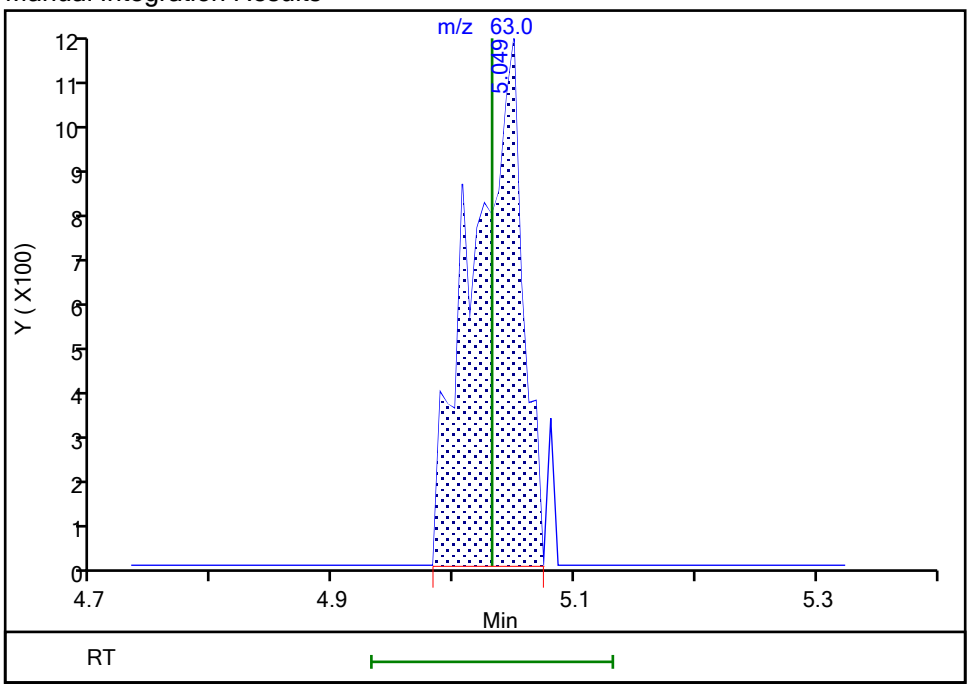
Not Detected
Expected RT: 5.03

Processing Integration Results



Manual Integration Results

RT: 5.05
Area: 3412
Amount: 0.042171
Amount Units: ug/l



Reviewer: kaewrungrueangp, 04-Aug-2023 11:07:39 07:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136514-1

SDG No.:

Client Sample ID: 16WC2B
Lab Sample ID: 410-136514-4

Matrix: Water
Lab File ID: IG03X25.D

Analysis Method: 8260D
Date Collected: 07/26/2023 08:40

Sample wt/vol: 25(mL)
Date Analyzed: 08/03/2023 19:40

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 404020
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		1.0	
75-34-3	1,1-Dichloroethane	ND		1.0	
75-35-4	1,1-Dichloroethene	ND		1.0	
78-93-3	2-Butanone	ND		10	
71-43-2	Benzene	ND		1.0	
56-23-5	Carbon tetrachloride	ND		1.0	
75-00-3	Chloroethane	ND		1.0	
75-71-8	Dichlorodifluoromethane	ND		1.0	
60-29-7	Diethyl ether	ND		10	
100-41-4	Ethylbenzene	ND		1.0	
75-09-2	Methylene Chloride	ND		1.0	
127-18-4	Tetrachloroethene	ND		1.0	
109-99-9	Tetrahydrofuran	ND		25	
108-88-3	Toluene	ND		1.0	
79-01-6	Trichloroethene	ND		1.0	
75-69-4	Trichlorofluoromethane	ND		1.0	
75-01-4	Vinyl chloride	ND		1.0	
1330-20-7	Xylenes, Total	ND		3.0	
74-87-3	Chloromethane	ND		1.0	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	110		80-120
1868-53-7	Dibromofluoromethane (Surr)	110		80-120
460-00-4	4-Bromofluorobenzene (Surr)	94		80-120
2037-26-5	Toluene-d8 (Surr)	96		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X25.D
Lims ID: 410-136514-A-4
Client ID: 16WC2B
Sample Type: Client
Inject. Date: 03-Aug-2023 19:40:30 ALS Bottle#: 25 Worklist Smp#: 26
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090530-026
Operator ID: knk41612 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 04-Aug-2023 11:12:41 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1672

First Level Reviewer: kaewrungrueangp Date: 04-Aug-2023 11:08:17

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85		1.867				ND	
3 Dimethyl ether	45		1.922				ND	U
4 Chloromethane	50		2.056				ND	
5 Vinyl chloride	62		2.160				ND	
8 Chloroethane	64		2.556				ND	
10 Trichlorofluoromethane	101		2.843				ND	
11 Ethyl ether	59		3.062				ND	7
15 1,1-Dichloroethene	96		3.349				ND	
17 1,1,2-Trichloro-1,2,2-trifluoroe	101		3.398				ND	
25 Methylene Chloride	84		3.977				ND	
* 26 t-Butyl alcohol-d10 (IS)	65	4.001	3.983	0.018	26	139131	50.0	
32 1,1-Dichloroethane	63		5.031				ND	
38 2-Butanone (MEK)	43		5.830				ND	7
47 Tetrahydrofuran	71		6.214				ND	
$ 49 Dibromofluoromethane (Surr)	113	6.568	6.568	0.000	94	481179	11.0	
50 1,1,1-Trichloroethane	97	6.586	6.580	0.006	36	14676	0.1740	
54 Carbon tetrachloride	117		6.793				ND	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.019	7.025	-0.006	62	95621	11.0	
57 Benzene	78		7.055				ND	
* 61 Fluorobenzene (IS)	96	7.458	7.458	0.000	99	1709988	10.0	
64 Trichloroethene	95		7.939				ND	
$ 78 Toluene-d8 (Surr)	98	9.494	9.494	0.000	93	1805321	9.55	
79 Toluene	92		9.573				ND	
100 1,1,2-Trichloroethane	97		10.049				ND	
101 Tetrachloroethene	166		10.140				ND	
* 107 Chlorobenzene-d5 (IS)	117	10.981	10.981	0.000	84	1470334	10.0	
112 Ethylbenzene	91		11.097				ND	
113 m-Xylene & p-Xylene	106		11.213				ND	
S 110 Xylenes, Total	106		11.245				ND	7
114 o-Xylene	106		11.542				ND	
$ 120 4-Bromofluorobenzene (Surr)	95	11.993	11.987	0.006	95	670149	9.41	
* 135 1,4-Dichlorobenzene-d4	152	12.877	12.871	0.006	93	865697	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

MSV_LLcentISS_00009	Amount Added:	5.00	Units: uL	Run Reagent

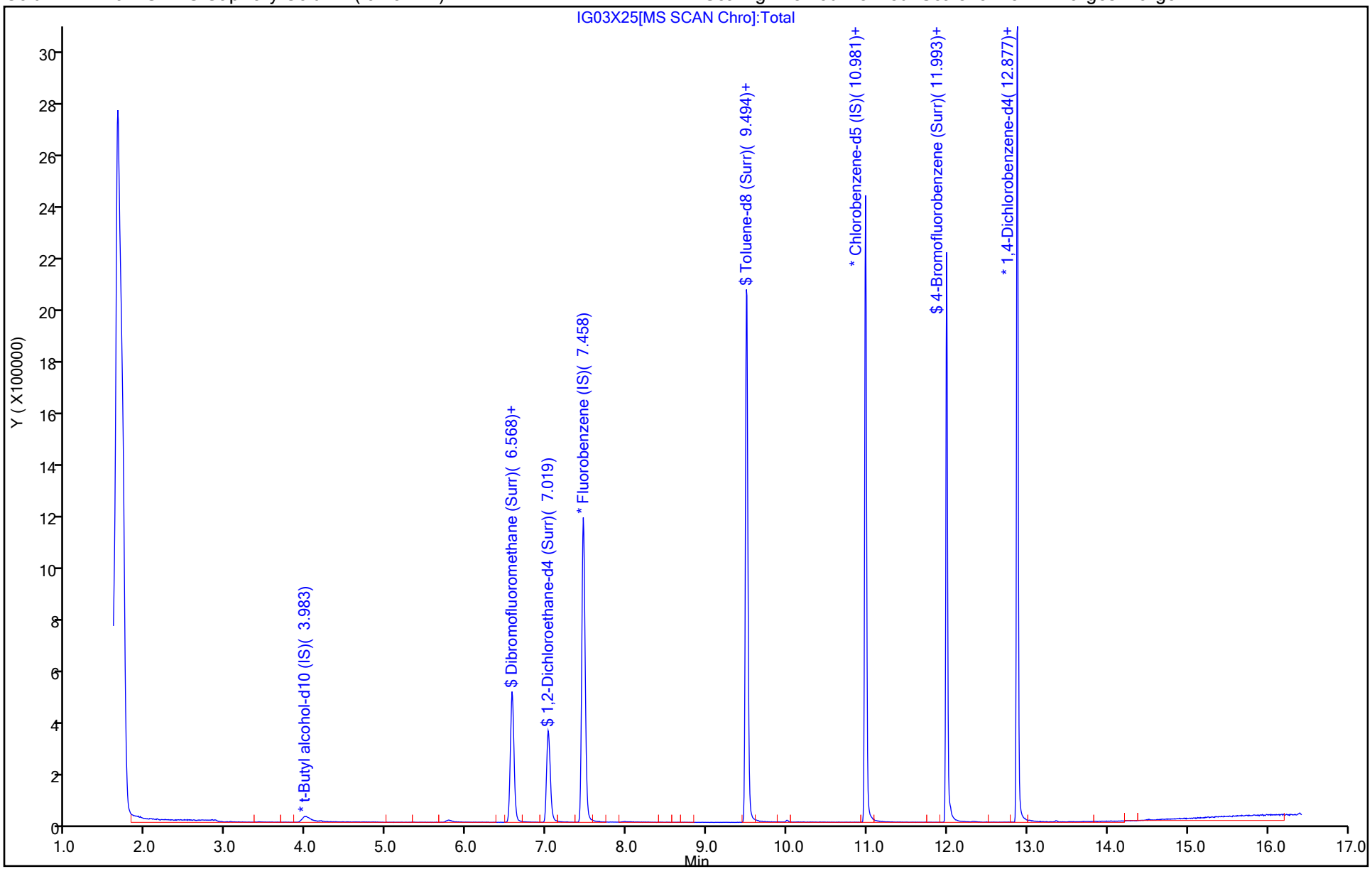
Report Date: 10-Aug-2023 16:32:55 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X25.D

Injection Date:	03-Aug-2023 19:40:30	Instrument ID:	19930	Operator ID:	knk41612
Lims ID:	410-136514-A-4	Lab Sample ID:	410-136514-4	Worklist Smp#:	26
Client ID:	16WC2B				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X25.D				
Lims ID:	410-136514-A-4				
Client ID:	16WC2B				
Sample Type:	Client				
Inject. Date:	03-Aug-2023 19:40:30	ALS Bottle#:	25	Worklist Smp#:	26
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0090530-026				
Operator ID:	knk41612	Instrument ID:	19930		
Method:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m				
Limit Group:	MSV - 8260C_D				
Last Update:	04-Aug-2023 11:12:41	Calib Date:	19-Jun-2023 20:25:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1672				

First Level Reviewer: kaewrungrueangp Date: 04-Aug-2023 11:08:17

Compound	Amount Added	Amount Recovered	% Rec.
$ 49 Dibromofluoromethane (Surr)	10.0	11.0	109.55
$ 56 1,2-Dichloroethane-d4 (Surr)	10.0	11.0	109.80
$ 78 Toluene-d8 (Surr)	10.0	9.55	95.50
$ 120 4-Bromofluorobenzene (Surr)	10.0	9.41	94.08

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136514-1

SDG No.:

Client Sample ID: 16SPRING
Lab Sample ID: 410-136514-5

Matrix: Water
Lab File ID: IG03X26.D

Analysis Method: 8260D
Date Collected: 07/26/2023 08:00

Sample wt/vol: 25(mL)
Date Analyzed: 08/03/2023 20:01

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 404020
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		1.0	
75-34-3	1,1-Dichloroethane	ND		1.0	
75-35-4	1,1-Dichloroethene	ND		1.0	
78-93-3	2-Butanone	ND		10	
71-43-2	Benzene	ND		1.0	
56-23-5	Carbon tetrachloride	ND		1.0	
75-00-3	Chloroethane	ND		1.0	
75-71-8	Dichlorodifluoromethane	ND		1.0	
60-29-7	Diethyl ether	ND		10	
100-41-4	Ethylbenzene	ND		1.0	
75-09-2	Methylene Chloride	ND		1.0	
127-18-4	Tetrachloroethene	ND		1.0	
109-99-9	Tetrahydrofuran	ND		25	
108-88-3	Toluene	ND		1.0	
79-01-6	Trichloroethene	ND		1.0	
75-69-4	Trichlorofluoromethane	ND		1.0	
75-01-4	Vinyl chloride	ND		1.0	
1330-20-7	Xylenes, Total	ND		3.0	
74-87-3	Chloromethane	ND		1.0	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	109		80-120
1868-53-7	Dibromofluoromethane (Surr)	110		80-120
460-00-4	4-Bromofluorobenzene (Surr)	94		80-120
2037-26-5	Toluene-d8 (Surr)	95		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X26.D
Lims ID: 410-136514-A-5
Client ID: 16SPRING
Sample Type: Client
Inject. Date: 03-Aug-2023 20:01:30 ALS Bottle#: 26 Worklist Smp#: 27
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090530-027
Operator ID: knk41612 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 04-Aug-2023 11:12:41 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1672

First Level Reviewer: kaewrungrueangp Date: 04-Aug-2023 11:08:48

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85		1.867				ND	
3 Dimethyl ether	45		1.922				ND	U
4 Chloromethane	50		2.056				ND	7
5 Vinyl chloride	62		2.160				ND	
8 Chloroethane	64		2.556				ND	
10 Trichlorofluoromethane	101		2.843				ND	7
11 Ethyl ether	59	3.050	3.062	-0.012	90	7406	0.2303	
15 1,1-Dichloroethene	96		3.349				ND	
17 1,1,2-Trichloro-1,2,2-trifluoroe	101		3.398				ND	
25 Methylene Chloride	84		3.977				ND	
* 26 t-Butyl alcohol-d10 (IS)	65	4.007	3.983	0.024	22	127364	50.0	
32 1,1-Dichloroethane	63	5.031	5.031	0.000	96	25566	0.3180	
38 2-Butanone (MEK)	43		5.830				ND	
47 Tetrahydrofuran	71		6.214				ND	
$ 49 Dibromofluoromethane (Surr)	113	6.561	6.568	-0.007	94	442402	11.0	
50 1,1,1-Trichloroethane	97		6.580				ND	
54 Carbon tetrachloride	117		6.793				ND	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.019	7.025	-0.006	62	87263	10.9	
57 Benzene	78		7.055				ND	
* 61 Fluorobenzene (IS)	96	7.458	7.458	0.000	99	1572352	10.0	
64 Trichloroethene	95		7.939				ND	
$ 78 Toluene-d8 (Surr)	98	9.494	9.494	0.000	93	1650125	9.46	
79 Toluene	92		9.573				ND	7
100 1,1,2-Trichloroethane	97		10.049				ND	
101 Tetrachloroethene	166		10.140				ND	7
* 107 Chlorobenzene-d5 (IS)	117	10.981	10.981	0.000	84	1356073	10.0	
112 Ethylbenzene	91		11.097				ND	
113 m-Xylene & p-Xylene	106		11.213				ND	
S 110 Xylenes, Total	106		11.245				ND	7
114 o-Xylene	106		11.542				ND	
$ 120 4-Bromofluorobenzene (Surr)	95	11.993	11.987	0.006	96	616758	9.39	
* 135 1,4-Dichlorobenzene-d4	152	12.877	12.871	0.006	93	795269	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

MSV_LLcentISS_00009	Amount Added:	5.00	Units: uL	Run Reagent

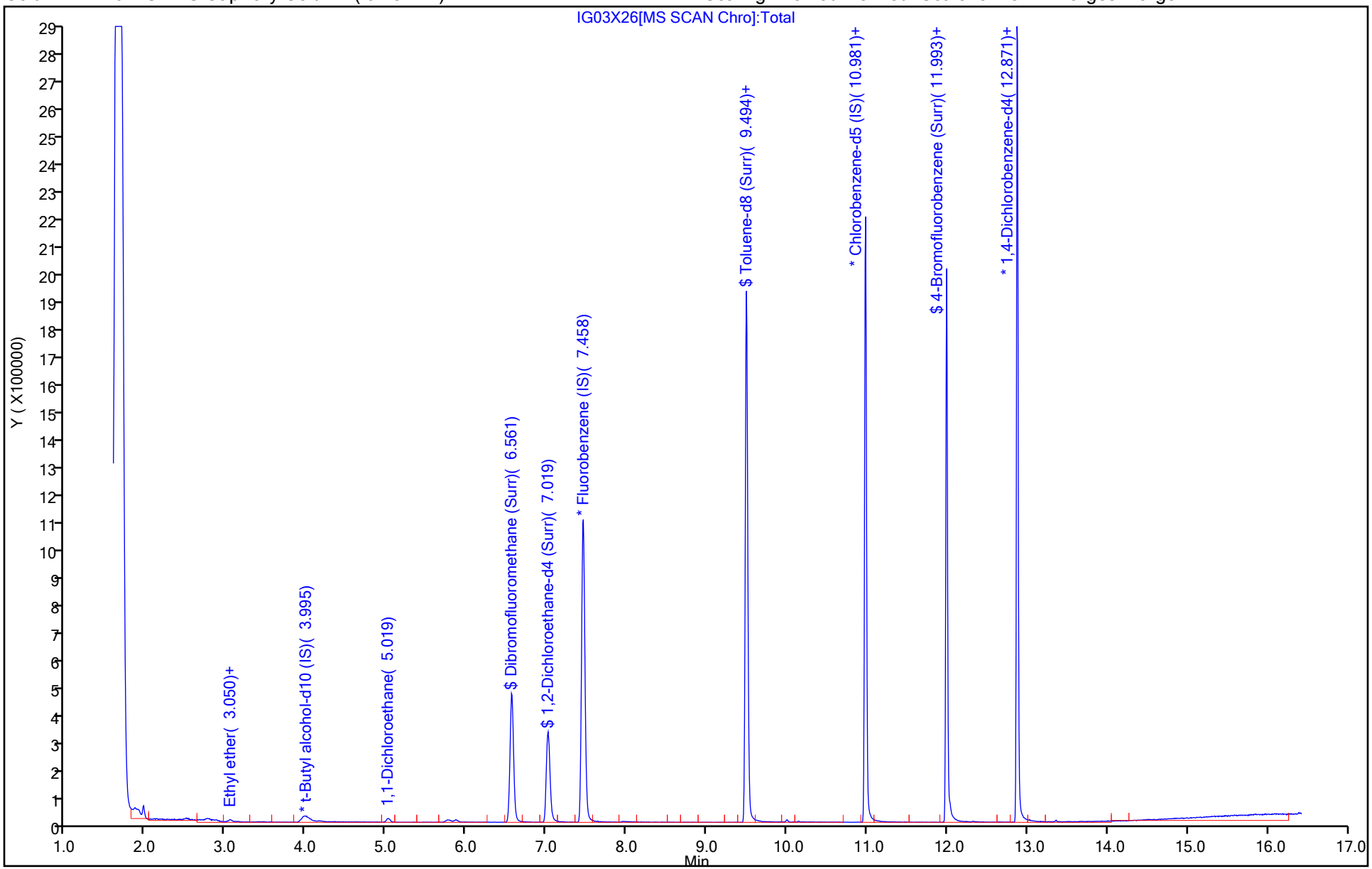
Report Date: 10-Aug-2023 16:32:56 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X26.D

Injection Date:	03-Aug-2023 20:01:30	Instrument ID:	19930	Operator ID:	knk41612
Lims ID:	410-136514-A-5	Lab Sample ID:	410-136514-5	Worklist Smp#:	27
Client ID:	16SPRING				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X26.D				
Lims ID:	410-136514-A-5				
Client ID:	16SPRING				
Sample Type:	Client				
Inject. Date:	03-Aug-2023 20:01:30	ALS Bottle#:	26	Worklist Smp#:	27
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0090530-027				
Operator ID:	knk41612	Instrument ID:	19930		
Method:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m				
Limit Group:	MSV - 8260C_D				
Last Update:	04-Aug-2023 11:12:41	Calib Date:	19-Jun-2023 20:25:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1672				

First Level Reviewer: kaewrungrueangp Date: 04-Aug-2023 11:08:48

Compound	Amount Added	Amount Recovered	% Rec.
$ 49 Dibromofluoromethane (Surr)	10.0	11.0	109.54
$ 56 1,2-Dichloroethane-d4 (Surr)	10.0	10.9	108.97
$ 78 Toluene-d8 (Surr)	10.0	9.46	94.65
$ 120 4-Bromofluorobenzene (Surr)	10.0	9.39	93.88

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136514-1

SDG No.:

Client Sample ID: Trip Blank 1
Lab Sample ID: 410-136514-6

Matrix: Water
Lab File ID: IG03X11.D

Analysis Method: 8260D
Date Collected: 07/26/2023 00:00

Sample wt/vol: 25(mL)
Date Analyzed: 08/03/2023 14:45

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 404020
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		1.0	
75-34-3	1,1-Dichloroethane	ND		1.0	
75-35-4	1,1-Dichloroethene	ND		1.0	
78-93-3	2-Butanone	ND		10	
71-43-2	Benzene	ND		1.0	
56-23-5	Carbon tetrachloride	ND		1.0	
75-00-3	Chloroethane	ND		1.0	
75-71-8	Dichlorodifluoromethane	ND		1.0	
60-29-7	Diethyl ether	ND		10	
100-41-4	Ethylbenzene	ND		1.0	
75-09-2	Methylene Chloride	ND		1.0	
127-18-4	Tetrachloroethene	ND		1.0	
109-99-9	Tetrahydrofuran	ND		25	
108-88-3	Toluene	ND		1.0	
79-01-6	Trichloroethene	ND		1.0	
75-69-4	Trichlorofluoromethane	ND		1.0	
75-01-4	Vinyl chloride	ND		1.0	
1330-20-7	Xylenes, Total	ND		3.0	
74-87-3	Chloromethane	ND		1.0	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	107		80-120
1868-53-7	Dibromofluoromethane (Surr)	107		80-120
460-00-4	4-Bromofluorobenzene (Surr)	95		80-120
2037-26-5	Toluene-d8 (Surr)	96		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X11.D
Lims ID: 410-136514-A-6
Client ID: Trip Blank 1
Sample Type: Client
Inject. Date: 03-Aug-2023 14:45:30 ALS Bottle#: 11 Worklist Smp#: 12
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090530-012
Operator ID: knk41612 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 04-Aug-2023 11:12:41 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1672

First Level Reviewer: JS6E Date: 10-Aug-2023 16:21:41

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85		1.867				ND	
3 Dimethyl ether	45		1.922				ND	
4 Chloromethane	50		2.056				ND	
5 Vinyl chloride	62		2.160				ND	
8 Chloroethane	64		2.556				ND	
10 Trichlorofluoromethane	101		2.843				ND	
11 Ethyl ether	59		3.062				ND	
15 1,1-Dichloroethene	96		3.349				ND	
17 1,1,2-Trichloro-1,2,2-trifluoroe	101		3.398				ND	
25 Methylene Chloride	84		3.977				ND	
* 26 t-Butyl alcohol-d10 (IS)	65	3.977	3.983	-0.006	24	130157	50.0	
32 1,1-Dichloroethane	63		5.031				ND	
38 2-Butanone (MEK)	43		5.830				ND	7
47 Tetrahydrofuran	71		6.214				ND	
$ 49 Dibromofluoromethane (Surr)	113	6.568	6.568	0.000	94	458418	10.7	
50 1,1,1-Trichloroethane	97		6.580				ND	
54 Carbon tetrachloride	117		6.793				ND	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.019	7.025	-0.006	62	90498	10.7	
57 Benzene	78		7.055				ND	
* 61 Fluorobenzene (IS)	96	7.458	7.458	0.000	99	1668121	10.0	
64 Trichloroethene	95		7.939				ND	
$ 78 Toluene-d8 (Surr)	98	9.494	9.494	0.000	93	1753310	9.58	
79 Toluene	92		9.573				ND	
100 1,1,2-Trichloroethane	97		10.049				ND	
101 Tetrachloroethene	166		10.140				ND	
* 107 Chlorobenzene-d5 (IS)	117	10.981	10.981	0.000	84	1423787	10.0	
112 Ethylbenzene	91		11.097				ND	
113 m-Xylene & p-Xylene	106		11.213				ND	
S 110 Xylenes, Total	106		11.245				ND	7
114 o-Xylene	106		11.542				ND	
$ 120 4-Bromofluorobenzene (Surr)	95	11.993	11.987	0.006	96	652619	9.46	
* 135 1,4-Dichlorobenzene-d4	152	12.877	12.871	0.006	93	848038	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

MSV_LLcentISS_00009 Amount Added: 5.00 Units: uL Run Reagent

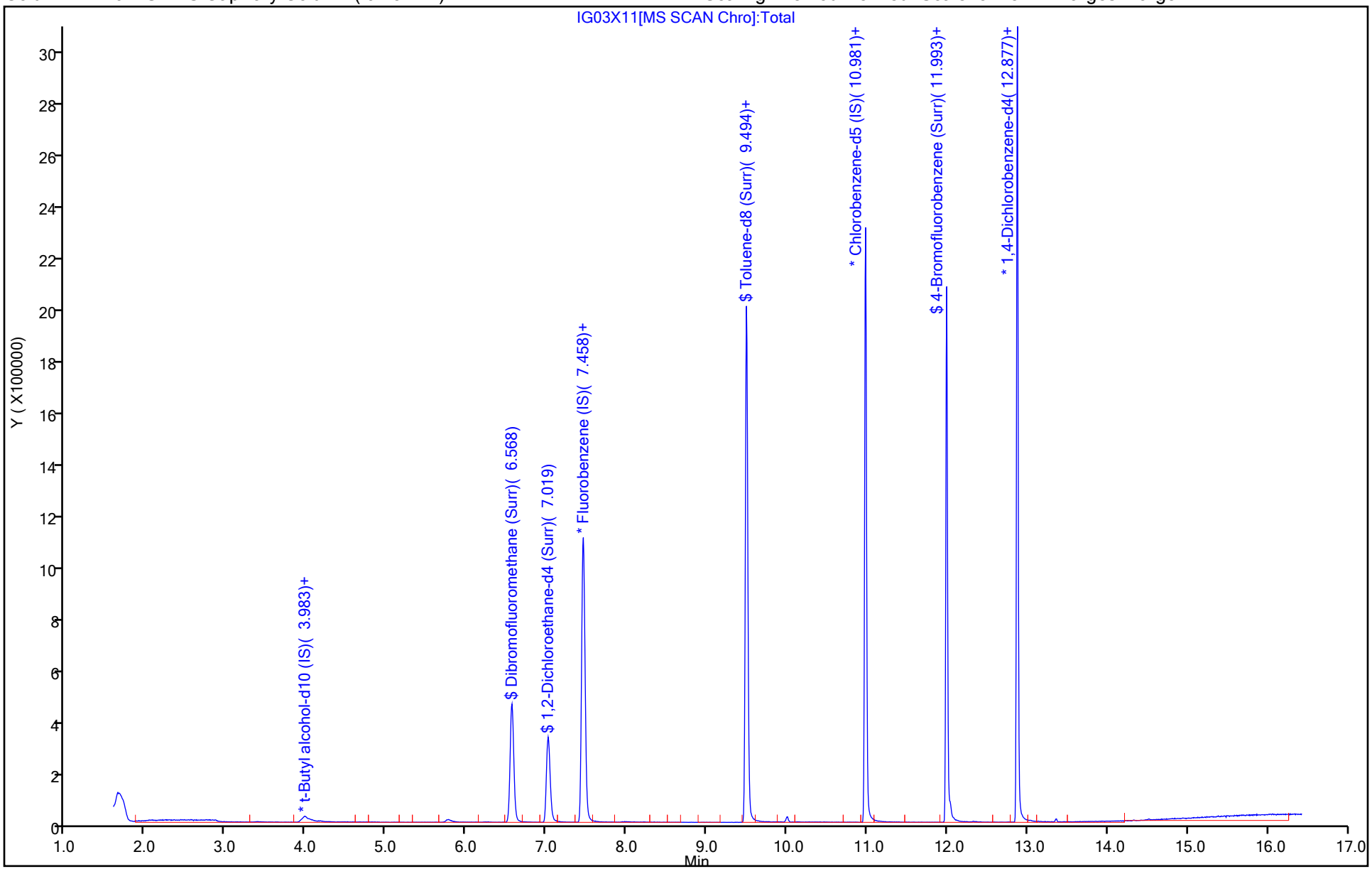
Report Date: 10-Aug-2023 16:32:57 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X11.D

Injection Date:	03-Aug-2023 14:45:30	Instrument ID:	19930	Operator ID:	knk41612
Lims ID:	410-136514-A-6	Lab Sample ID:	410-136514-6	Worklist Smp#:	12
Client ID:	Trip Blank 1				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X11.D				
Lims ID:	410-136514-A-6				
Client ID:	Trip Blank 1				
Sample Type:	Client				
Inject. Date:	03-Aug-2023 14:45:30	ALS Bottle#:	11	Worklist Smp#:	12
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0090530-012				
Operator ID:	knk41612	Instrument ID:	19930		
Method:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m				
Limit Group:	MSV - 8260C_D				
Last Update:	04-Aug-2023 11:12:41	Calib Date:	19-Jun-2023 20:25:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1672				

First Level Reviewer: JS6E Date: 10-Aug-2023 16:21:41

Compound	Amount Added	Amount Recovered	% Rec.
$ 49 Dibromofluoromethane (Surr)	10.0	10.7	106.99
$ 56 1,2-Dichloroethane-d4 (Surr)	10.0	10.7	106.52
$ 78 Toluene-d8 (Surr)	10.0	9.58	95.78
$ 120 4-Bromofluorobenzene (Surr)	10.0	9.46	94.62

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136514-1

SDG No.:

Client Sample ID: Trip Blank 2
Lab Sample ID: 410-136514-7

Matrix: Water
Lab File ID: IG03X12.D

Analysis Method: 8260D
Date Collected: 07/26/2023 00:00

Sample wt/vol: 25(mL)
Date Analyzed: 08/03/2023 15:06

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 404020
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		1.0	
75-34-3	1,1-Dichloroethane	ND		1.0	
75-35-4	1,1-Dichloroethene	ND		1.0	
78-93-3	2-Butanone	ND		10	
71-43-2	Benzene	ND		1.0	
56-23-5	Carbon tetrachloride	ND		1.0	
75-00-3	Chloroethane	ND		1.0	
75-71-8	Dichlorodifluoromethane	ND		1.0	
60-29-7	Diethyl ether	ND		10	
100-41-4	Ethylbenzene	ND		1.0	
75-09-2	Methylene Chloride	ND		1.0	
127-18-4	Tetrachloroethene	ND		1.0	
109-99-9	Tetrahydrofuran	ND		25	
108-88-3	Toluene	ND		1.0	
79-01-6	Trichloroethene	ND		1.0	
75-69-4	Trichlorofluoromethane	ND		1.0	
75-01-4	Vinyl chloride	ND		1.0	
1330-20-7	Xylenes, Total	ND		3.0	
74-87-3	Chloromethane	ND		1.0	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	108		80-120
1868-53-7	Dibromofluoromethane (Surr)	108		80-120
460-00-4	4-Bromofluorobenzene (Surr)	96		80-120
2037-26-5	Toluene-d8 (Surr)	96		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X12.D
Lims ID: 410-136514-A-7
Client ID: Trip Blank 2
Sample Type: Client
Inject. Date: 03-Aug-2023 15:06:30 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090530-013
Operator ID: knk41612 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 04-Aug-2023 11:12:41 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1672

First Level Reviewer: kaewrungrueangp Date: 04-Aug-2023 10:56:35

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85		1.867				ND	
3 Dimethyl ether	45		1.922				ND	
4 Chloromethane	50		2.056				ND	
5 Vinyl chloride	62		2.160				ND	
8 Chloroethane	64		2.556				ND	
10 Trichlorofluoromethane	101		2.843				ND	
11 Ethyl ether	59		3.062				ND	
15 1,1-Dichloroethene	96		3.349				ND	
17 1,1,2-Trichloro-1,2,2-trifluoroe	101		3.398				ND	
25 Methylene Chloride	84		3.977				ND	
* 26 t-Butyl alcohol-d10 (IS)	65	3.983	3.983	0.000	27	128289	50.0	
32 1,1-Dichloroethane	63		5.031				ND	
38 2-Butanone (MEK)	43		5.830				ND	
47 Tetrahydrofuran	71		6.214				ND	
$ 49 Dibromofluoromethane (Surr)	113	6.568	6.568	0.000	94	445632	10.8	
50 1,1,1-Trichloroethane	97		6.580				ND	
54 Carbon tetrachloride	117		6.793				ND	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.019	7.025	-0.006	62	88487	10.8	
57 Benzene	78		7.055				ND	
* 61 Fluorobenzene (IS)	96	7.458	7.458	0.000	99	1603214	10.0	
64 Trichloroethene	95		7.939				ND	
$ 78 Toluene-d8 (Surr)	98	9.494	9.494	0.000	93	1676450	9.57	
79 Toluene	92		9.573				ND	7
100 1,1,2-Trichloroethane	97		10.049				ND	
101 Tetrachloroethene	166		10.140				ND	
* 107 Chlorobenzene-d5 (IS)	117	10.981	10.981	0.000	84	1362113	10.0	
112 Ethylbenzene	91		11.097				ND	
113 m-Xylene & p-Xylene	106		11.213				ND	
S 110 Xylenes, Total	106		11.245				ND	7
114 o-Xylene	106		11.542				ND	
$ 120 4-Bromofluorobenzene (Surr)	95	11.993	11.987	0.006	96	632177	9.58	
* 135 1,4-Dichlorobenzene-d4	152	12.877	12.871	0.006	93	813779	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

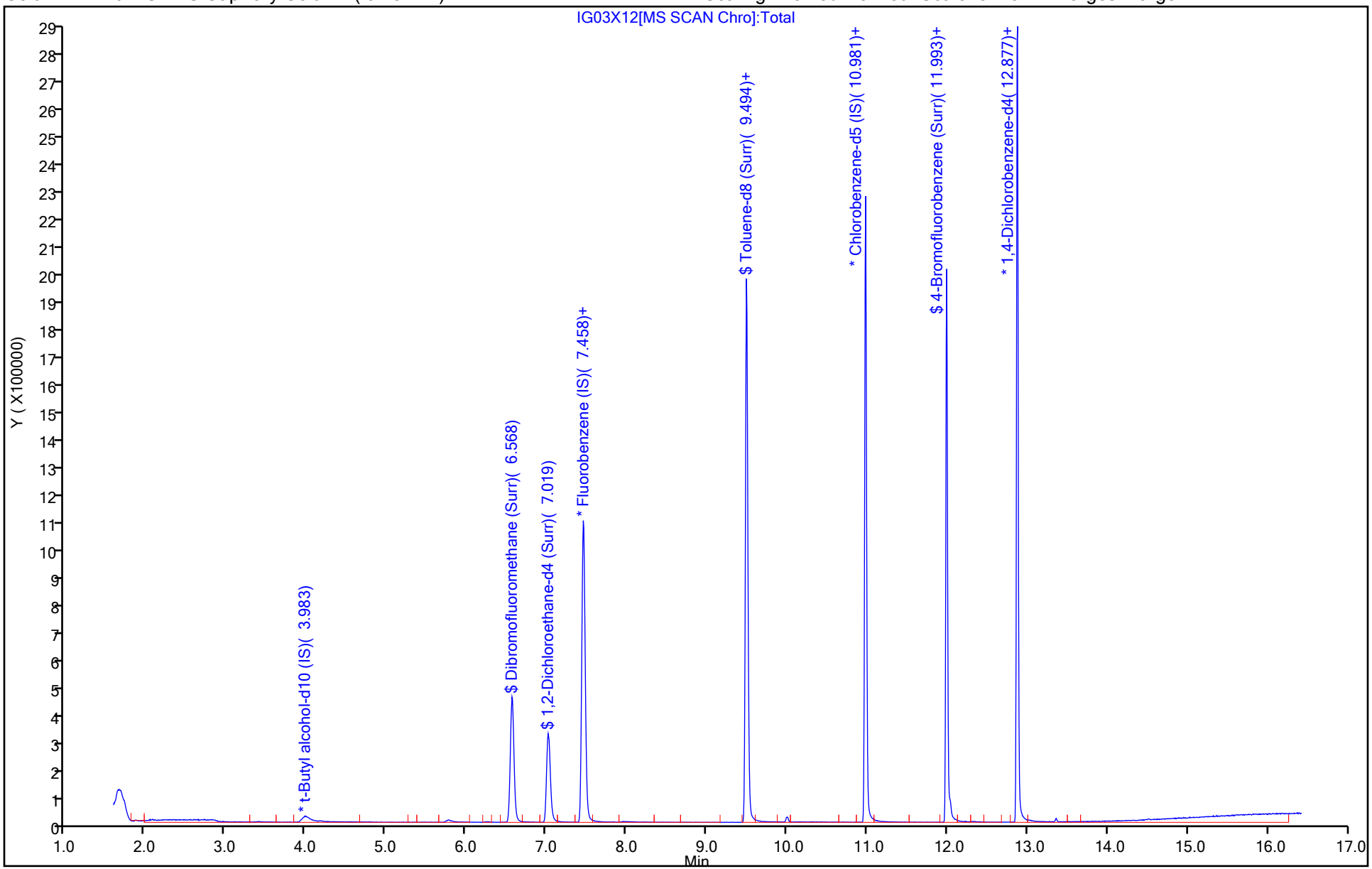
MSV_LLcentISS_00009 Amount Added: 5.00 Units: uL Run Reagent

Report Date: 10-Aug-2023 16:32:58 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X12.D				
Injection Date:	03-Aug-2023 15:06:30	Instrument ID:	19930	Operator ID:	knk41612
Lims ID:	410-136514-A-7	Lab Sample ID:	410-136514-7	Worklist Smp#:	13
Client ID:	Trip Blank 2				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X12.D				
Lims ID:	410-136514-A-7				
Client ID:	Trip Blank 2				
Sample Type:	Client				
Inject. Date:	03-Aug-2023 15:06:30	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0090530-013				
Operator ID:	knk41612	Instrument ID:	19930		
Method:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m				
Limit Group:	MSV - 8260C_D				
Last Update:	04-Aug-2023 11:12:41	Calib Date:	19-Jun-2023 20:25:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1672				

First Level Reviewer: kaewrungrueangp Date: 04-Aug-2023 10:56:35

Compound	Amount Added	Amount Recovered	% Rec.
$ 49 Dibromofluoromethane (Surr)	10.0	10.8	108.22
$ 56 1,2-Dichloroethane-d4 (Surr)	10.0	10.8	108.37
$ 78 Toluene-d8 (Surr)	10.0	9.57	95.73
$ 120 4-Bromofluorobenzene (Surr)	10.0	9.58	95.80

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-355532/18	IM21X17.D
Level 2	IC 410-355532/17	IM21X16.D
Level 3	IC 410-355532/16	IM21X15.D
Level 4	IC 410-355532/15	IM21X14.D
Level 5	IC 410-355532/14	IM21X13.D
Level 6	ICIS 410-355532/13	IM21X12.D
Level 7	IC 410-355532/12	IM21X11.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.3742 0.3872	0.3590 0.3636	0.3691	0.3743	0.3813	Ave		0.3727			0.1000	2.6		20.0			
Chloromethane	0.4537 0.3947	0.4158 0.3730	0.3984	0.4074	0.3852	Ave		0.4040			0.1000	6.4		20.0			
Vinyl chloride	0.4078 0.3908	0.4000 0.3761	0.3949	0.3955	0.3926	Ave		0.3940			0.1000	2.5		20.0			
1,3-Butadiene	0.4168 0.3469	0.3668 0.3386	0.3631	0.3483	0.3426	Ave		0.3604				7.5		20.0			
Bromomethane	0.3175 0.3121	0.3035 0.3028	0.2953	0.3074	0.3006	Ave		0.3056			0.1000	2.4		20.0			
Chloroethane	0.2424 0.2427	0.2401 0.2331	0.2410	0.2404	0.2366	Ave		0.2395			0.1000	1.4		20.0			
Dichlorofluoromethane	0.7096 0.6274	0.6531 0.6073	0.6341	0.6340	0.6241	Ave		0.6414			0.1000	5.2		20.0			
Trichlorofluoromethane	0.6581 0.6748	0.6337 0.5991	0.6275	0.6423	0.6188	Ave		0.6363			0.1000	3.9		20.0			
Ethyl ether	0.2067 0.2116	0.2049 0.2005	0.2078	0.2177	0.2098	Ave		0.2084				2.6		20.0			
Freon 123a	0.3821 0.3549	0.3624 0.3377	0.3529	0.3518	0.3480	Ave		0.3557				3.9		20.0			
Acrolein	2.6184 2.8314	2.4280 2.3185	2.5959	2.9681	2.8117	Ave		2.6531				8.7		20.0			
1,1-Dichloroethene	0.2622 0.2585	0.2710 0.2550	0.2522	0.2522	0.2521	Ave		0.2576			0.1000	2.7		20.0			
Freon 113	0.2851 0.3044	0.2908 0.3001	0.2870	0.2917	0.2934	Ave		0.2932			0.1000	2.4		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Acetone	4.3800 2.9678	3.4912 2.3199	3.1587	3.0631	3.0532	Ave		3.2048			0.1000	19.5		20.0			
Methyl iodide	0.5550 0.5646	0.5841 0.5528	0.5491	0.5457	0.5597	Ave		0.5587				2.3		20.0			
Carbon disulfide	0.7358 0.7307	0.7512 0.7196	0.7000	0.7062	0.7130	Ave		0.7224			0.1000	2.5		20.0			
Methyl acetate	15.851 11.037	9.9295 9.1897	10.713	12.507	11.075	Ave		11.472			0.1000	19.1		20.0			
Allyl chloride	0.4541 0.4319	0.4617 0.4250	0.4117	0.4227	0.4293	Ave		0.4338				4.1		20.0			
Methylene Chloride	0.2732 0.2767	0.2815 0.2675	0.2742	0.2717	0.2714	Ave		0.2737			0.1000	1.6		20.0			
t-Butyl alcohol	1.1005 1.1014	1.2970 0.7890	0.8152	1.0301	1.1608	Ave		1.0420				17.6		20.0			
Acrylonitrile	2.9523 4.3592	3.7461 3.5509	3.8075	4.5309	4.3317	Ave		3.8969				14.2		20.0			
Methyl tertiary butyl ether	0.6635 0.6739	0.6756 0.6367	0.6696	0.6475	0.6697	Ave		0.6624			0.1000	2.2		20.0			
trans-1,2-Dichloroethene	0.3047 0.2856	0.3033 0.2822	0.2885	0.2801	0.2847	Ave		0.2899			0.1000	3.4		20.0			
n-Hexane	0.3378 0.4091	0.3801 0.3995	0.3758	0.3832	0.3927	Ave		0.3826				6.0		20.0			
1,1-Dichloroethane	0.5216 0.5312	0.5232 0.5217	0.5218	0.5313	0.5305	Ave		0.5259			0.2000	0.9		20.0			
di-Isopropyl ether	0.8385 0.8951	0.9014 0.8646	0.8847	0.8738	0.8890	Ave		0.8781				2.4		20.0			
2-Chloro-1,3-butadiene	0.4224 0.4570	0.4511 0.4560	0.4413	0.4368	0.4536	Ave		0.4455				2.8		20.0			
Ethyl t-butyl ether	0.5960 0.6231	0.5872 0.5846	0.6388	0.6057	0.6279	Ave		0.6090				3.5		20.0			
2-Butanone	5.9059 6.4445	5.2245 5.1587	5.7914	6.6337	6.2640	Ave		5.9175			0.1000	9.7		20.0			
cis-1,2-Dichloroethene	0.3059 0.3193	0.3245 0.3165	0.3197	0.3122	0.3197	Ave		0.3168			0.1000	1.9		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
2,2-Dichloropropane	0.4770 0.4839	0.4884 0.4784	0.4684	0.4760	0.4757	Ave		0.4783				1.3		20.0			
Propionitrile	1.0485 1.5953	1.2906 1.3190	1.4222	1.4613	1.4707	Ave		1.3725				12.8		20.0			
Methacrylonitrile	5.9896 7.0400	5.0783 5.6999	6.0083	7.6633	6.6359	Ave		6.3022				13.8		20.0			
Bromochloromethane	0.1366 0.1521	0.1556 0.1491	0.1460	0.1429	0.1504	Ave		0.1475				4.3		20.0			
Tetrahydrofuran	1.7624 1.9655	1.6796 1.5337	1.8593	1.9874	1.9265	Ave		1.8163				9.2		20.0			
Chloroform	0.5233 0.5464	0.5609 0.5422	0.5379	0.5319	0.5395	Ave		0.5403			0.2000	2.2		20.0			
1,1,1-Trichloroethane	0.4975 0.5193	0.5168 0.5180	0.4986	0.5103	0.5122	Ave		0.5104			0.1000	1.8		20.0			
Cyclohexane	0.4781 0.5045	0.4883 0.4962	0.4723	0.4731	0.4860	Ave		0.4855			0.1000	2.5		20.0			
1,1-Dichloropropene	0.3798 0.4080	0.4033 0.4065	0.3923	0.3925	0.3972	Ave		0.3971				2.5		20.0			
Carbon tetrachloride	0.4367 0.4961	0.4687 0.4964	0.4569	0.4694	0.4829	Ave		0.4724			0.1000	4.6		20.0			
Isobutyl alcohol	0.3905 0.4131	0.4437 0.2860	0.3248	0.3479	0.4062	Ave		0.3732				14.9		20.0			
Benzene	1.1391 1.1616	1.1885 1.1530	1.1542	1.1611	1.1599	Ave		1.1596			0.5000	1.3		20.0			
1,2-Dichloroethane	0.3750 0.3566	0.3619 0.3436	0.3527	0.3460	0.3537	Ave		0.3556			0.1000	3.0		20.0			
t-Amyl methyl ether	0.4676 0.4820	0.4353 0.4496	0.4992	0.4758	0.4807	Ave		0.4700				4.6		20.0			
n-Heptane	0.4147 0.4254	0.3923 0.4188	0.3612	0.3824	0.3970	Ave		0.3988				5.7		20.0			
n-Butanol	+++++ 0.3322	0.2439 0.1981	0.2544	0.2791	0.3125	Ave		0.2700				18.0		20.0			
Trichloroethene	0.3190 0.3267	0.3413 0.3277	0.3198	0.3279	0.3261	Ave		0.3269			0.2000	2.2		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.5115 0.5661	0.5429 0.5589	0.5085	0.5390	0.5425	Ave		0.5385			0.1000	4.0		20.0			
1,2-Dichloropropane	0.2697 0.3000	0.2927 0.2982	0.2915	0.2948	0.2984	Ave		0.2922			0.1000	3.6		20.0			
Methyl methacrylate	+++++ 14.430	9.6187 12.351	10.612	16.265	13.394	Ave		12.778				19.2		20.0			
Dibromomethane	0.1390 0.1545	0.1487 0.1527	0.1494	0.1504	0.1518	Ave		0.1495				3.4		20.0			
1,4-Dioxane	0.0362 0.0983	0.0820 0.0351	0.1162	0.1235	0.0963	Ave		0.0840			0.0050	42.5	*	20.0			
Bromodichloromethane	0.3626 0.4031	0.3843 0.4018	0.3748	0.3864	0.3981	Ave		0.3873			0.2000	3.9		20.0			
2-Nitropropane	4.6170 5.0861	3.9973 4.2066	4.0833	5.2811	4.6680	Ave		4.5628				10.9		20.0			
1-Bromo-2-chloroethane	0.2685 0.2844	0.2780 0.2743	0.2655	0.2795	0.2792	Ave		0.2756				2.4		20.0			
cis-1,3-Dichloropropene	0.4123 0.4766	0.4217 0.4746	0.4380	0.4457	0.4626	Ave		0.4474			0.2000	5.6		20.0			
4-Methyl-2-pentanone	16.094 19.899	14.370 16.228	16.343	21.310	18.549	Ave		17.542			0.1000	14.0		20.0			
Toluene	0.9707 1.0049	1.0089 0.9911	1.0027	0.9897	0.9797	Ave		0.9925			0.4000	1.4		20.0			
trans-1,3-Dichloropropene	0.4559 0.5177	0.4548 0.5107	0.4683	0.4701	0.4970	Ave		0.4821			0.1000	5.4		20.0			
Ethyl methacrylate	0.3524 0.3959	0.3795 0.3879	0.3601	0.3558	0.3872	Ave		0.3741				4.7		20.0			
1,1,2-Trichloroethane	0.2616 0.2760	0.2790 0.2650	0.2777	0.2716	0.2694	Ave		0.2715			0.1000	2.4		20.0			
Tetrachloroethene	0.5058 0.5435	0.5531 0.5451	0.5283	0.5302	0.5390	Ave		0.5350			0.2000	2.9		20.0			
1,3-Dichloropropane	0.4336 0.4541	0.4597 0.4412	0.4483	0.4421	0.4535	Ave		0.4475				2.0		20.0			
2-Hexanone	10.866 13.871	9.8482 11.453	11.786	14.829	12.963	Ave		12.231			0.1000	14.3		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dibromochloromethane	0.3506 0.4008	0.3614 0.3941	0.3557	0.3662	0.3881	Ave		0.3738				5.4		20.0			
1,2-Dibromoethane	0.2461 0.2732	0.2645 0.2635	0.2694	0.2589	0.2663	Ave		0.2631			0.1000	3.3		20.0			
1-Chlorohexane	0.6049 0.5756	0.5970 0.5825	0.5466	0.5423	0.5529	Ave		0.5717				4.4		20.0			
Chlorobenzene	1.0915 1.1685	1.1750 1.1595	1.1165	1.1224	1.1521	Ave		1.1408			0.5000	2.7		20.0			
1,1,1,2-Tetrachloroethane	0.3809 0.4387	0.4089 0.4439	0.4172	0.4167	0.4296	Ave		0.4194				5.0		20.0			
Ethylbenzene	1.8582 1.9580	1.9855 1.9732	1.9037	1.8961	1.9541	Ave		1.9327			0.1000	2.4		20.0			
m&p-Xylene	0.7029 0.7841	0.7678 0.8029	0.7713	0.7716	0.7906	Ave		0.7702			0.1000	4.2		20.0			
o-Xylene	0.6986 0.7648	0.7570 0.7900	0.7509	0.7436	0.7660	Ave		0.7530			0.3000	3.7		20.0			
Styrene	1.0358 1.2547	1.1366 1.2857	1.1067	1.1310	1.2251	Ave		1.1680			0.3000	7.7		20.0			
Bromoform	0.2239 0.2670	0.2258 0.2701	0.2309	0.2308	0.2565	Ave		0.2436			0.1000	8.3		20.0			
Isopropylbenzene	1.8424 2.0548	1.9453 2.0698	1.9279	1.9814	2.0144	Ave		1.9766			0.1000	4.0		20.0			
1,1,2,2-Tetrachloroethane	0.5337 0.5688	0.5683 0.5434	0.5508	0.5326	0.5603	Ave		0.5511			0.3000	2.8		20.0			
Bromobenzene	0.8286 0.8392	0.8065 0.8401	0.7951	0.8063	0.8443	Ave		0.8229				2.4		20.0			
trans-1,4-Dichloro-2-butene	6.0532 7.9394	5.1540 7.1108	6.2135	8.5058	7.2718	Ave		6.8926				16.8		20.0			
1,2,3-Trichloropropane	0.1528 0.1622	0.1589 0.1519	0.1538	0.1499	0.1608	Ave		0.1558				3.1		20.0			
N-Propylbenzene	3.2196 3.8451	3.6651 3.7105	3.4752	3.5852	3.7831	Ave		3.6120				5.9		20.0			
2-Chlorotoluene	0.7175 0.8098	0.7730 0.8039	0.7607	0.7882	0.8048	Ave		0.7797				4.2		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,3,5-Trimethylbenzene	2.4425 2.8356	2.6843 2.8058	2.6692	2.7035	2.8035	Ave		2.7064				4.9		20.0			
4-Chlorotoluene	0.7006 0.8141	0.7692 0.8214	0.7536	0.7758	0.8120	Ave		0.7781				5.5		20.0			
tert-Butylbenzene	0.6361 0.6988	0.6626 0.6998	0.6388	0.6686	0.6893	Ave		0.6706				4.0		20.0			
Pentachloroethane	0.4408 0.5749	0.4800 0.5709	0.4933	0.5314	0.5490	Ave		0.5200				9.7		20.0			
1,2,4-Trimethylbenzene	2.5182 2.9387	2.7372 2.9121	2.6895	2.7700	2.8920	Ave		2.7797				5.4		20.0			
sec-Butylbenzene	3.1388 3.6833	3.3444 3.5836	3.3044	3.4844	3.5476	Ave		3.4409				5.5		20.0			
1,3-Dichlorobenzene	1.4540 1.6475	1.4870 1.6607	1.4810	1.5081	1.5849	Ave		1.5462			0.6000	5.4		20.0			
p-Isopropyltoluene	2.7864 3.3035	2.9475 3.3133	2.9537	3.0237	3.1911	Ave		3.0742				6.5		20.0			
1,4-Dichlorobenzene	1.4570 1.5725	1.5024 1.5748	1.4495	1.4874	1.5370	Ave		1.5115			0.5000	3.4		20.0			
1,2,3-Trimethylbenzene	1.2765 1.3128	1.2992 1.3243	1.2159	1.2708	1.2980	Ave		1.2853				2.8		20.0			
Benzyl chloride	0.1647 0.2482	0.1937 0.2491	0.2091	0.2164	0.2402	Ave		0.2173				14.4		20.0			
n-Butylbenzene	1.1609 1.5078	1.2278 1.5676	1.2443	1.3104	1.4343	Ave		1.3504				11.4		20.0			
1,2-Dichlorobenzene	1.3729 1.5462	1.4815 1.5399	1.3893	1.4417	1.5031	Ave		1.4678			0.4000	4.7		20.0			
1,2-Dibromo-3-Chloropropane	0.0773 0.0980	0.0946 0.0925	0.0919	0.0846	0.0944	Ave		0.0905			0.0500	7.9		20.0			
1,3,5-Trichlorobenzene	1.0452 1.2547	1.1112 1.2929	1.1236	1.1498	1.2210	Ave		1.1712				7.5		20.0			
1,2,4-Trichlorobenzene	0.8287 1.0329	0.8846 1.0282	0.8933	0.9354	0.9900	Ave		0.9419			0.2000	8.3		20.0			
Hexachlorobutadiene	0.5583 0.5615	0.5356 0.5713	0.5082	0.5185	0.5306	Ave		0.5406				4.4		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Naphthalene	1.7363 1.8567	1.6832 1.6717	1.7860	1.7149	1.8248	Ave		1.7534				4.0		20.0			
1,2,3-Trichlorobenzene	0.8100 0.9170	0.8102 0.8691	0.8453	0.8472	0.8877	Ave		0.8552				4.6		20.0			
Dibromofluoromethane (Surr)	0.2625 0.2665	0.2665 0.2630	0.2682	0.2628	0.2650	Ave		0.2649				0.8		20.0			
1,2-Dichloroethane-d4 (Surr)	0.0499 0.0496	0.0513 0.0483	0.0514	0.0509	0.0504	Ave		0.0503				2.2		20.0			
Toluene-d8 (Surr)	1.2952 1.2832	1.3032 1.2717	1.2875	1.2862	1.2844	Ave		1.2874				0.8		20.0			
4-Bromofluorobenzene (Surr)	0.4684 0.4714	0.4719 0.4761	0.4685	0.4638	0.4648	Ave		0.4693				0.9		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-355532/18	IM21X17.D
Level 2	IC 410-355532/17	IM21X16.D
Level 3	IC 410-355532/16	IM21X15.D
Level 4	IC 410-355532/15	IM21X14.D
Level 5	IC 410-355532/14	IM21X13.D
Level 6	ICIS 410-355532/13	IM21X12.D
Level 7	IC 410-355532/12	IM21X11.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	17110 922225	41469 2189447	86495	175844	455174	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Chloromethane	FB	Ave	20747 940151	48039 2246458	93366	191397	459776	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Vinyl chloride	FB	Ave	18650 930903	46214 2265037	92540	185810	468573	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3-Butadiene	FB	Ave	19058 826233	42370 2039072	85079	163666	408978	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromomethane	FB	Ave	14521 743346	35058 1823508	69186	144456	358762	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Chloroethane	FB	Ave	11084 577982	27735 1403631	56481	112973	282374	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Dichlorofluoromethane	FB	Ave	32448 1494327	75447 3657101	148598	297881	745004	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Trichlorofluoromethane	FB	Ave	30095 1607262	73208 3607774	147043	301784	738690	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethyl ether	FB	Ave	9452 503956	23667 1207355	48693	102296	250383	0.200 10.00	0.500 25.0	1.000	2.00	5.00
Freon 123a	FB	Ave	17475 845381	41867 2033587	82703	165285	415383	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Acrolein	TBAd 10	Ave	66213 3424553	186326 8179515	347847	579612	1760321	10.00 500	25.0 1250	50.0	100.0	250
1,1-Dichloroethene	FB	Ave	11991 615600	31308 1535483	59105	118520	300931	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Freon 113	FB	Ave	13036 725110	33597 1807499	67263	137039	350208	0.200 10.0	0.500 25.0	1.00	2.00	5.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Acetone	TBAd10	Ave	22153 717958	53587 1636994	84658	119641	382327	2.00 100	5.00 250	10.0	20.0	50.0
Methyl iodide	FB	Ave	25378 1344711	67478 3329342	128674	256394	668087	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Carbon disulfide	FB	Ave	33647 1740418	86787 4333479	164019	331819	851050	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methyl acetate	TBAd10	Ave	8017 266996	15241 648459	28713	48849	138687	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Allyl chloride	FB	Ave	20765 1028696	53339 2559531	96478	198621	512382	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methylene Chloride	FB	Ave	12493 659101	32518 1610741	64247	127652	323924	0.200 10.0	0.500 25.0	1.00	2.00	5.00
t-Butyl alcohol	TBAd10	Ave	11132 532907	39817 1113473	43696	80472	290719	4.00 200	10.0 500	20.0	40.0	100
Acrylonitrile	TBAd10	Ave	3733 263633	14375 626404	25512	44242	135604	0.500 25.0	1.25 62.5	2.50	5.00	12.5
Methyl tertiary butyl ether	FB	Ave	30341 1605079	78046 3834437	156908	304226	799391	0.200 10.0	0.500 25.0	1.00	2.00	5.00
trans-1,2-Dichloroethene	FB	Ave	13932 680341	35040 1699518	67605	131610	339868	0.200 10.0	0.500 25.0	1.00	2.00	5.00
n-Hexane	FB	Ave	15447 974283	43907 2406168	88054	180035	468791	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1-Dichloroethane	FB	Ave	23853 1265159	60447 3141696	122273	249646	633253	0.200 10.0	0.500 25.0	1.00	2.00	5.00
di-Isopropyl ether	FB	Ave	38342 2131812	104135 5206924	207307	410537	1061122	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Chloro-1,3-butadiene	FB	Ave	19317 1088422	52111 2745997	103414	205252	541494	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethyl t-butyl ether	FB	Ave	27255 1484132	67835 3520601	149693	284598	749516	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Butanone	TBAd10	Ave	29871	80192	155219	259100	784382	2.00	5.00	10.0	20.0	50.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
			1559003	3640194				100	250			
cis-1,2-Dichloroethene	FB	Ave	13988 760484	37492 1905843	74915	146693	381596	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2,2-Dichloropropane	FB	Ave	21814 1152650	56427 2881260	109766	223631	567765	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Propionitrile	TBAd 10	Ave	10606 771867	39618 1861462	76235	114151	368330	4.00 200	10.0 500	20.0	40.0	100
Methacrylonitrile	TBAd 10	Ave	30294 1703050	77948 4022032	161032	299318	830959	2.00 100	5.00 250	10.0	20.0	50.0
Bromochloromethane	FB	Ave	6246 362331	17972 897716	34201	67134	179484	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Tetrahydrofuran	TBAd 10	Ave	4457 237735	12890 541115	24916	38813	120622	1.00 50.0	2.50 125	5.00	10.0	25.0
Chloroform	FB	Ave	23932 1301472	64800 3265115	126047	249917	643977	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,1-Trichloroethane	FB	Ave	22751 1236794	59704 3119313	116847	239759	611388	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Cyclohexane	FB	Ave	21863 1201687	56413 2988278	110675	222305	580173	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1-Dichloropropene	FB	Ave	17369 971752	46595 2448000	91929	184421	474125	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Carbon tetrachloride	FB	Ave	19970 1181687	54150 2989237	107065	220533	576461	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Isobutyl alcohol	TBAd 10	Ave	9875 499620	34050 1009122	43526	67949	254297	10.0 500	25.0 1250	50.0	100	250
Benzene	FB	Ave	52092 2766730	137309 6943624	270461	545546	1384537	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dichloroethane	FB	Ave	17147 849419	41807 2069077	82648	162578	422172	0.200 10.0	0.500 25.0	1.00	2.00	5.00
t-Amyl methyl ether	FB	Ave	21381 1148066	50293 2707902	116974	223543	573757	0.200 10.0	0.500 25.0	1.00	2.00	5.00
n-Heptane	FB	Ave	18966	45320	84633	179673	473866	0.200	0.500	1.00	2.00	5.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
			1013268	2521926				10.0	25.0			
n-Butanol	TBAd 10	Ave	+++++ 703258	32752 1223254	59654	95379	342450	+++++ 875	43.8 2188	87.5	175	438
Trichloroethene	FB	Ave	14586 778206	39424 1973657	74939	154058	389301	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methylcyclohexane	FB	Ave	23390 1348244	62717 3365809	119159	253260	647571	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dichloropropane	FB	Ave	12331 714552	33813 1795772	68300	138522	356169	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methyl methacrylate	TBAd 10	Ave	+++++ 349068	14764 871510	28442	63530	167724	+++++ 10.0	0.500 25.0	1.00	2.00	5.00
Dibromomethane	FB	Ave	6355 368087	17182 919481	35015	70654	181241	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,4-Dioxane	TBAd 10	Ave	915 118927	6296 123866	15576	24121	60319	10.0 500	25.0 1250	50.0	100	250
Bromodichloromethane	FB	Ave	16582 960002	44403 2419702	87831	181572	475184	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Nitropropane	TBAd 10	Ave	11676 615199	30678 1484170	54719	103136	292267	1.00 50.0	2.50 125	5.00	10.0	25.0
1-Bromo-2-chloroethane	FB	Ave	12280 677411	32122 1652054	62211	131348	333228	0.200 10.0	0.500 25.0	1.00	2.00	5.00
cis-1,3-Dichloropropene	FB	Ave	18856 1135243	48720 2858052	102636	209411	552133	0.200 10.0	0.500 25.0	1.00	2.00	5.00
4-Methyl-2-pentanone	TBAd 10	Ave	81398 4813730	220574 11451372	438008	832319	2322697	2.00 100	5.00 250	10.0	20.0	50.0
Toluene	CBZd 5	Ave	34373 1895806	89746 4797042	182395	365184	923872	0.200 10.0	0.500 25.0	1.00	2.00	5.00
trans-1,3-Dichloropropene	CBZd 5	Ave	16145 976681	40458 2471995	85183	173460	468676	0.200 10.0	0.500 25.0	1.00	2.00	5.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Ethyl methacrylate	CBZd 5	Ave	12480 746956	33758 1877330	65507	131292	365161	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,2-Trichloroethane	CBZd 5	Ave	9264 520789	24817 1282563	50506	100211	253999	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Tetrachloroethene	CBZd 5	Ave	17910 1025277	49201 2638237	96104	195634	508265	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3-Dichloropropane	CBZd 5	Ave	15353 856612	40890 2135286	81544	163140	427645	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Hexanone	TBAd 10	Ave	54958 3355456	151162 8081494	315875	579187	1623206	2.00 100	5.00 250	10.0	20.0	50.0
Dibromochloromethane	CBZd 5	Ave	12415 756162	32144 1907545	64701	135111	365950	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dibromoethane	CBZd 5	Ave	8713 515479	23525 1275224	48995	95514	251158	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1-Chlorohexane	CBZd 5	Ave	21421 1085890	53107 2819454	99428	200092	521339	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Chlorobenzene	CBZd 5	Ave	38651 2204397	104524 5612245	203081	414157	1086370	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,1,2-Tetrachloroethane	CBZd 5	Ave	13488 827659	36378 2148564	75882	153746	405063	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethylbenzene	CBZd 5	Ave	65799 3694009	176617 9550470	346280	699641	1842666	0.200 10.0	0.500 25.0	1.00	2.00	5.00
m&p-Xylene	CBZd 5	Ave	49779 2958705	136602 7772437	280576	569407	1490951	0.400 20.0	1.00 50.0	2.00	4.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
o-Xylene	CBZd 5	Ave	24739 1442929	67339 3823654	136591	274369	722330	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Styrene	CBZd 5	Ave	36677 2367152	101109 6222891	201308	417331	1155265	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromoform	CBZd 5	Ave	7927 503660	20086 1307321	41999	85160	241884	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Isopropylbenzene	CBZd 5	Ave	65240 3876560	173040 10017939	350685	731109	1899553	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	11706 665065	31254 1684823	62163	120006	325780	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromobenzene	DCBd 4	Ave	18174 981240	44356 2604838	89737	181668	490923	0.200 10.0	0.500 25.0	1.00	2.00	5.00
trans-1,4-Dichloro-2-butene	TBAd 10	Ave	30616 1920626	79110 5017664	166532	332224	910577	2.00 100	5.00 250	10.0	20.0	50.0
1,2,3-Trichloropropane	DCBd 4	Ave	3351 189700	8741 471063	17353	33764	93500	0.200 10.0	0.500 25.0	1.00	2.00	5.00
N-Propylbenzene	DCBd 4	Ave	70616 4495847	201563 11504700	392220	807760	2199783	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Chlorotoluene	DCBd 4	Ave	15738 946897	42512 2492610	85856	177588	467982	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3,5-Trimethylbenzene	DCBd 4	Ave	53572 3315484	147622 8699547	301256	609124	1630191	0.200 10.0	0.500 25.0	1.00	2.00	5.00
4-Chlorotoluene	DCBd 4	Ave	15367 951822	42302 2546778	85059	174789	472147	0.200 10.0	0.500 25.0	1.00	2.00	5.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
tert-Butylbenzene	DCBd 4	Ave	13951 817068	36437 2169810	72093	150650	400832	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Pentachloroethane	DCBd 4	Ave	9669 672224	26396 1770213	55674	119732	319216	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,4-Trimethylbenzene	DCBd 4	Ave	55233 3435975	150530 9029284	303547	624102	1681631	0.200 10.0	0.500 25.0	1.00	2.00	5.00
sec-Butylbenzene	DCBd 4	Ave	68845 4306580	183924 11111339	372950	785059	2062828	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3-Dichlorobenzene	DCBd 4	Ave	31892 1926286	81779 5148991	167155	339776	921590	0.200 10.0	0.500 25.0	1.00	2.00	5.00
p-Isopropyltoluene	DCBd 4	Ave	61116 3862618	162097 10273099	333364	681258	1855523	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,4-Dichlorobenzene	DCBd 4	Ave	31956 1838618	82622 4882929	163590	335121	893710	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,3-Trimethylbenzene	DCBd 4	Ave	27998 1534921	71447 4105948	137229	286323	754758	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Benzyl chloride	DCBd 4	Ave	3612 290235	10655 772337	23595	48767	139656	0.200 10.0	0.500 25.0	1.00	2.00	5.00
n-Butylbenzene	DCBd 4	Ave	25462 1762970	67525 4860363	140431	295236	833984	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dichlorobenzene	DCBd 4	Ave	30112 1807906	81474 4774475	156806	324822	874011	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	1695 114580	5204 286713	10369	19053	54876	0.200 10.0	0.500 25.0	1.00	2.00	5.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1,3,5-Trichlorobenzene	DCBd 4	Ave	22925 1467042	61109 4008610	126816	259052	709964	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,4-Trichlorobenzene	DCBd 4	Ave	18177 1207739	48648 3188084	100826	210756	575676	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Hexachlorobutadiene	DCBd 4	Ave	12245 656545	29455 1771421	57361	116814	308531	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Naphthalene	DCBd 4	Ave	38082 2170950	92567 5183365	201570	386386	1061065	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,3-Trichlorobenzene	DCBd 4	Ave	17765 1072140	44557 2694710	95399	190876	516164	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Dibromofluoromethane (Surr)	FB	Ave	600251 634684	615761 633661	628564	617342	632686	10.0 10.0	10.0 10.0	10.0	10.0	10.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	114034 118206	118620 116302	120346	119524	120327	10.0 10.0	10.0 10.0	10.0	10.0	10.0
Toluene-d8 (Surr)	CBZd 5	Ave	2293084 2420949	2318546 2462175	2341910	2373030	2422302	10.0 10.0	10.0 10.0	10.0	10.0	10.0
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	829348 889396	839517 921757	852245	855599	876575	10.0 10.0	10.0 10.0	10.0	10.0	10.0

Curve Type Legend
Ave = Average ISTD

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-355532/18	IM21X17.D
Level 2	IC 410-355532/17	IM21X16.D
Level 3	IC 410-355532/16	IM21X15.D
Level 4	IC 410-355532/15	IM21X14.D
Level 5	IC 410-355532/14	IM21X13.D
Level 6	ICIS 410-355532/13	IM21X12.D
Level 7	IC 410-355532/12	IM21X11.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Dichlorodifluoromethane	0.4 -2.4	-3.7	-0.9	0.4	2.3	3.9	50 30	30	30	30	30	30
Chloromethane	12.3 -7.7	2.9	-1.4	0.8	-4.7	-2.3	50 30	30	30	30	30	30
Vinyl chloride	3.5 -4.5	1.5	0.2	0.4	-0.4	-0.8	50 30	30	30	30	30	30
1,3-Butadiene	15.6 -6.1	1.8	0.7	-3.4	-4.9	-3.8	50 30	30	30	30	30	30
Bromomethane	3.9 -0.9	-0.7	-3.4	0.6	-1.6	2.1	50 30	30	30	30	30	30
Chloroethane	1.2 -2.7	0.3	0.7	0.4	-1.2	1.3	50 30	30	30	30	30	30
Dichlorofluoromethane	10.6 -5.3	1.8	-1.1	-1.2	-2.7	-2.2	50 30	30	30	30	30	30
Trichlorofluoromethane	3.4 -5.9	-0.4	-1.4	0.9	-2.7	6.0	50 30	30	30	30	30	30
Ethyl ether	-0.8 -3.8	-1.7	-0.3	4.5	0.6	1.5	50 30	30	30	30	30	30
Freon 123a	7.4 -5.1	1.9	-0.8	-1.1	-2.2	-0.2	50 30	30	30	30	30	30
Acrolein	-1.3 -12.6	-8.5	-2.2	11.9	6.0	6.7	50 30	30	30	30	30	30
1,1-Dichloroethene	1.8 -1.0	5.2	-2.1	-2.1	-2.1	0.3	50 30	30	30	30	30	30
Freon 113	-2.8 2.4	-0.8	-2.1	-0.5	0.1	3.8	50 30	30	30	30	30	30
Acetone	36.7 -27.6	8.9	-1.4	-4.4	-4.7	-7.4	50 30	30	30	30	30	30

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Methyl iodide	-0.7 -1.1	4.5	-1.7	-2.3	0.2	1.1	50 30	30	30	30	30	30
Carbon disulfide	1.9 -0.4	4.0	-3.1	-2.2	-1.3	1.2	50 30	30	30	30	30	30
Methyl acetate	38.2 -19.9	-13.4	-6.6	9.0	-3.5	-3.8	50 30	30	30	30	30	30
Allyl chloride	4.7 -2.0	6.4	-5.1	-2.5	-1.0	-0.4	50 30	30	30	30	30	30
Methylene Chloride	-0.2 -2.3	2.8	0.2	-0.7	-0.9	1.1	50 30	30	30	30	30	30
t-Butyl alcohol	5.6 -24.3	24.5	-21.8	-1.1	11.4	5.7	50 30	30	30	30	30	30
Acrylonitrile	-24.2 -8.9	-3.9	-2.3	16.3	11.2	11.9	50 30	30	30	30	30	30
Methyl tertiary butyl ether	0.2 -3.9	2.0	1.1	-2.2	1.1	1.7	50 30	30	30	30	30	30
trans-1,2-Dichloroethene	5.1 -2.6	4.6	-0.5	-3.4	-1.8	-1.5	50 30	30	30	30	30	30
n-Hexane	-11.7 4.4	-0.7	-1.8	0.2	2.7	6.9	50 30	30	30	30	30	30
1,1-Dichloroethane	-0.8 -0.8	-0.5	-0.8	1.0	0.9	1.0	50 30	30	30	30	30	30
di-Isopropyl ether	-4.5 -1.5	2.6	0.7	-0.5	1.2	1.9	50 30	30	30	30	30	30
2-Chloro-1,3-butadiene	-5.2 2.4	1.3	-0.9	-1.9	1.8	2.6	50 30	30	30	30	30	30
Ethyl t-butyl ether	-2.1 -4.0	-3.6	4.9	-0.5	3.1	2.3	50 30	30	30	30	30	30
2-Butanone	-0.2 -12.8	-11.7	-2.1	12.1	5.9	8.9	50 30	30	30	30	30	30
cis-1,2-Dichloroethene	-3.5 -0.1	2.4	0.9	-1.5	0.9	0.8	50 30	30	30	30	30	30
2,2-Dichloropropane	-0.3 0.0	2.1	-2.1	-0.5	-0.5	1.2	50 30	30	30	30	30	30
Propionitrile	-23.6 -3.9	-6.0	3.6	6.5	7.2	16.2	50 30	30	30	30	30	30
Methacrylonitrile	-5.0 -9.6	-19.4	-4.7	21.6	5.3	11.7	50 30	30	30	30	30	30

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Bromochloromethane	-7.4 1.1	5.5	-1.1	-3.1	1.9	3.1	50 30	30	30	30	30	30
Tetrahydrofuran	-3.0 -15.6	-7.5	2.4	9.4	6.1	8.2	50 30	30	30	30	30	30
Chloroform	-3.1 0.3	3.8	-0.4	-1.6	-0.1	1.1	50 30	30	30	30	30	30
1,1,1-Trichloroethane	-2.5 1.5	1.3	-2.3	0.0	0.4	1.7	50 30	30	30	30	30	30
Cyclohexane	-1.5 2.2	0.6	-2.7	-2.6	0.1	3.9	50 30	30	30	30	30	30
1,1-Dichloropropene	-4.3 2.4	1.6	-1.2	-1.2	0.0	2.7	50 30	30	30	30	30	30
Carbon tetrachloride	-7.6 5.1	-0.8	-3.3	-0.7	2.2	5.0	50 30	30	30	30	30	30
Isobutyl alcohol	4.6 -23.4	18.9	-13.0	-6.8	8.8	10.7	50 30	30	30	30	30	30
Benzene	-1.8 -0.6	2.5	-0.5	0.1	0.0	0.2	50 30	30	30	30	30	30
1,2-Dichloroethane	5.4 -3.4	1.8	-0.8	-2.7	-0.5	0.3	50 30	30	30	30	30	30
t-Amyl methyl ether	-0.5 -4.3	-7.4	6.2	1.2	2.3	2.6	50 30	30	30	30	30	30
n-Heptane	4.0 5.0	-1.6	-9.4	-4.1	-0.5	6.7	50 30	30	30	30	30	30
n-Butanol	+++++ -26.6	-9.7	-5.8	3.3	15.7	23.0	 30	50	30	30	30	30
Trichloroethene	-2.4 0.2	4.4	-2.2	0.3	-0.2	-0.1	50 30	30	30	30	30	30
Methylcyclohexane	-5.0 3.8	0.8	-5.6	0.1	0.7	5.1	50 30	30	30	30	30	30
1,2-Dichloropropane	-7.7 2.1	0.2	-0.2	0.9	2.1	2.7	50 30	30	30	30	30	30
Methyl methacrylate	+++++ -3.3	-24.7	-17.0	27.3	4.8	12.9	 30	50	30	30	30	30
Dibromomethane	-7.0 2.1	-0.5	-0.1	0.6	1.6	3.4	50 30	30	30	30	30	30
1,4-Dioxane	-56.9 * -58.2 *	-2.3	38.4 *	47.1 *	14.7	17.1	50 30	30	30	30	30	30

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Bromodichloromethane	-6.4 3.7	-0.8	-3.2	-0.2	2.8	4.1	50 30	30	30	30	30	30
2-Nitropropane	1.2 -7.8	-12.4	-10.5	15.7	2.3	11.5	50 30	30	30	30	30	30
1-Bromo-2-chloroethane	-2.6 -0.5	0.9	-3.7	1.4	1.3	3.2	50 30	30	30	30	30	30
cis-1,3-Dichloropropene	-7.8 6.1	-5.7	-2.1	-0.4	3.4	6.5	50 30	30	30	30	30	30
4-Methyl-2-pentanone	-8.3 -7.5	-18.1	-6.8	21.5	5.7	13.4	50 30	30	30	30	30	30
Toluene	-2.2 -0.1	1.6	1.0	-0.3	-1.3	1.2	50 30	30	30	30	30	30
trans-1,3-Dichloropropene	-5.4 5.9	-5.7	-2.9	-2.5	3.1	7.4	50 30	30	30	30	30	30
Ethyl methacrylate	-5.8 3.7	1.4	-3.7	-4.9	3.5	5.8	50 30	30	30	30	30	30
1,1,2-Trichloroethane	-3.6 -2.4	2.8	2.3	0.0	-0.8	1.7	50 30	30	30	30	30	30
Tetrachloroethene	-5.5 1.9	3.4	-1.2	-0.9	0.7	1.6	50 30	30	30	30	30	30
1,3-Dichloropropane	-3.1 -1.4	2.7	0.2	-1.2	1.3	1.5	50 30	30	30	30	30	30
2-Hexanone	-11.2 -6.4	-19.5	-3.6	21.2	6.0	13.4	50 30	30	30	30	30	30
Dibromochloromethane	-6.2 5.4	-3.3	-4.8	-2.1	3.8	7.2	50 30	30	30	30	30	30
1,2-Dibromoethane	-6.5 0.1	0.5	2.4	-1.6	1.2	3.8	50 30	30	30	30	30	30
1-Chlorohexane	5.8 1.9	4.4	-4.4	-5.1	-3.3	0.7	50 30	30	30	30	30	30
Chlorobenzene	-4.3 1.6	3.0	-2.1	-1.6	1.0	2.4	50 30	30	30	30	30	30
1,1,1,2-Tetrachloroethane	-9.2 5.8	-2.5	-0.5	-0.7	2.4	4.6	50 30	30	30	30	30	30
Ethylbenzene	-3.9 2.1	2.7	-1.5	-1.9	1.1	1.3	50 30	30	30	30	30	30
m&p-Xylene	-8.7 4.3	-0.3	0.1	0.2	2.6	1.8	50 30	30	30	30	30	30

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
o-Xylene	-7.2 4.9	0.5	-0.3	-1.3	1.7	1.6	50 30	30	30	30	30	30
Styrene	-11.3 10.1	-2.7	-5.2	-3.2	4.9	7.4	50 30	30	30	30	30	30
Bromoform	-8.1 10.9	-7.3	-5.2	-5.2	5.3	9.6	50 30	30	30	30	30	30
Isopropylbenzene	-6.8 4.7	-1.6	-2.5	0.2	1.9	4.0	50 30	30	30	30	30	30
1,1,2,2-Tetrachloroethane	-3.2 -1.4	3.1	-0.1	-3.4	1.7	3.2	50 30	30	30	30	30	30
Bromobenzene	0.7 2.1	-2.0	-3.4	-2.0	2.6	2.0	50 30	30	30	30	30	30
trans-1,4-Dichloro-2-butene	-12.2 3.2	-25.2	-9.9	23.4	5.5	15.2	50 30	30	30	30	30	30
1,2,3-Trichloropropane	-1.9 -2.5	2.0	-1.3	-3.8	3.2	4.2	50 30	30	30	30	30	30
N-Propylbenzene	-10.9 2.7	1.5	-3.8	-0.7	4.7	6.5	50 30	30	30	30	30	30
2-Chlorotoluene	-8.0 3.1	-0.9	-2.4	1.1	3.2	3.9	50 30	30	30	30	30	30
1,3,5-Trimethylbenzene	-9.7 3.7	-0.8	-1.4	-0.1	3.6	4.8	50 30	30	30	30	30	30
4-Chlorotoluene	-10.0 5.6	-1.1	-3.1	-0.3	4.4	4.6	50 30	30	30	30	30	30
tert-Butylbenzene	-5.1 4.4	-1.2	-4.7	-0.3	2.8	4.2	50 30	30	30	30	30	30
Pentachloroethane	-15.2 9.8	-7.7	-5.1	2.2	5.6	10.6	50 30	30	30	30	30	30
1,2,4-Trimethylbenzene	-9.4 4.8	-1.5	-3.2	-0.3	4.0	5.7	50 30	30	30	30	30	30
sec-Butylbenzene	-8.8 4.1	-2.8	-4.0	1.3	3.1	7.0	50 30	30	30	30	30	30
1,3-Dichlorobenzene	-6.0 7.4	-3.8	-4.2	-2.5	2.5	6.6	50 30	30	30	30	30	30
p-Isopropyltoluene	-9.4 7.8	-4.1	-3.9	-1.6	3.8	7.5	50 30	30	30	30	30	30
1,4-Dichlorobenzene	-3.6 4.2	-0.6	-4.1	-1.6	1.7	4.0	50 30	30	30	30	30	30

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
1,2,3-Trimethylbenzene	-0.7 3.0	1.1	-5.4	-1.1	1.0	2.1	50 30	30	30	30	30	30
Benzyl chloride	-24.2 14.6	-10.9	-3.8	-0.4	10.5	14.2	50 30	30	30	30	30	30
n-Butylbenzene	-14.0 16.1	-9.1	-7.9	-3.0	6.2	11.7	50 30	30	30	30	30	30
1,2-Dichlorobenzene	-6.5 4.9	0.9	-5.3	-1.8	2.4	5.3	50 30	30	30	30	30	30
1,2-Dibromo-3-Chloropropane	-14.6 2.2	4.6	1.6	-6.5	4.3	8.3	50 30	30	30	30	30	30
1,3,5-Trichlorobenzene	-10.8 10.4	-5.1	-4.1	-1.8	4.3	7.1	50 30	30	30	30	30	30
1,2,4-Trichlorobenzene	-12.0 9.2	-6.1	-5.2	-0.7	5.1	9.7	50 30	30	30	30	30	30
Hexachlorobutadiene	3.3 5.7	-0.9	-6.0	-4.1	-1.8	3.9	50 30	30	30	30	30	30
Naphthalene	-1.0 -4.7	-4.0	1.9	-2.2	4.1	5.9	50 30	30	30	30	30	30
1,2,3-Trichlorobenzene	-5.3 1.6	-5.3	-1.2	-0.9	3.8	7.2	50 30	30	30	30	30	30
Dibromofluoromethane (Surr)	-0.9 -0.7	0.6	1.2	-0.8	0.0	0.6	50 30	30	30	30	30	30
1,2-Dichloroethane-d4 (Surr)	-0.8 -3.9	2.2	2.2	1.2	0.3	-1.2	50 30	30	30	30	30	30
Toluene-d8 (Surr)	0.6 -1.2	1.2	0.0	-0.1	-0.2	-0.3	50 30	30	30	30	30	30
4-Bromofluorobenzene (Surr)	-0.2 1.5	0.6	-0.2	-1.2	-1.0	0.5	50 30	30	30	30	30	30

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X11.D
Lims ID: IC std7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 21-Mar-2023 04:01:30 ALS Bottle#: 11 Worklist Smp#: 12
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0079468-012
Operator ID: mec29284 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 21-Mar-2023 17:37:31 Calib Date: 21-Mar-2023 06:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1651

First Level Reviewer: K4WN Date: 21-Mar-2023 15:42:30

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.898	1.898	0.000	99	2189447	25.0	24.4	
4 Chloromethane	50	2.099	2.087	0.012	99	2246458	25.0	23.1	
5 Vinyl chloride	62	2.209	2.203	0.006	98	2265037	25.0	23.9	
6 Butadiene	39	2.215	2.209	0.006	95	2039072	25.0	23.5	
7 Bromomethane	94	2.532	2.526	0.006	92	1823508	25.0	24.8	
8 Chloroethane	64	2.611	2.599	0.012	99	1403631	25.0	24.3	
9 Dichlorofluoromethane	67	2.843	2.837	0.006	98	3657101	25.0	23.7	
10 Trichlorofluoromethane	101	2.910	2.898	0.012	98	3607774	25.0	23.5	
11 Ethyl ether	59	3.141	3.135	0.006	92	1207355	25.0	24.0	
13 1,2-Dichloro-1,1,2-trifluoroetha	67	3.233	3.227	0.006	89	2033587	25.0	23.7	
14 Acrolein	56	3.300	3.306	-0.006	99	8179515	1249.9	1092.3	
15 1,1-Dichloroethene	96	3.446	3.434	0.012	98	1535483	25.0	24.7	
17 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.489	3.477	0.012	91	1807499	25.0	25.6	
16 Acetone	43	3.470	3.477	-0.007	98	1636994	250.0	181.0	
18 Iodomethane	142	3.635	3.629	0.006	100	3329342	25.0	24.7	
19 Ethyl bromide	108	3.659	3.660	-0.001	100	1427207	25.0	24.6	
20 Carbon disulfide	76	3.745	3.733	0.012	100	4333479	25.0	24.9	
23 Methyl acetate	43	3.873	3.879	-0.006	97	648459	25.0	20.0	M
24 3-Chloro-1-propene	41	3.903	3.897	0.006	88	2559531	25.0	24.5	
25 Methylene Chloride	84	4.086	4.086	0.000	93	1610741	25.0	24.4	
* 26 t-Butyl alcohol-d10 (IS)	65	4.147	4.166	-0.019	99	141127	50.0	50.0	
27 2-Methyl-2-propanol	59	4.239	4.263	-0.024	99	1113473	500.0	378.6	
28 Acrylonitrile	53	4.415	4.416	-0.001	96	626404	62.5	56.9	
29 Methyl tert-butyl ether	73	4.482	4.477	0.005	97	3834437	25.0	24.0	
30 trans-1,2-Dichloroethene	96	4.495	4.495	0.000	98	1699518	25.0	24.3	
31 Hexane	57	4.921	4.915	0.006	95	2406168	25.0	26.1	
32 1,1-Dichloroethane	63	5.153	5.147	0.006	96	3141696	25.0	24.8	
35 Isopropyl ether	45	5.220	5.214	0.006	91	5206924	25.0	24.6	
36 2-Chloro-1,3-butadiene	53	5.263	5.263	0.000	94	2745997	25.0	25.6	
37 Tert-butyl ethyl ether	59	5.751	5.751	0.000	97	3520601	25.0	24.0	
38 2-Butanone (MEK)	43	5.952	5.958	-0.006	100	3640194	250.0	217.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
39 cis-1,2-Dichloroethene	96	5.988	5.982	0.006	83	1905843	25.0	25.0	
40 2,2-Dichloropropane	77	6.007	5.995	0.012	88	2881260	25.0	25.0	
43 Propionitrile	54	6.049	6.056	-0.007	98	1861462	500.0	480.5	
S 41 1,2-Dichloroethene, Total	100				0			49.3	
45 Methacrylonitrile	67	6.257	6.244	0.013	93	4022032	250.0	226.1	
46 Chlorobromomethane	128	6.324	6.318	0.006	90	897716	25.0	25.3	
47 Tetrahydrofuran	71	6.336	6.330	0.006	79	541115	125.0	105.5	
48 Chloroform	83	6.470	6.464	0.006	94	3265115	25.0	25.1	
$ 49 Dibromofluoromethane (Surr)	113	6.683	6.677	0.006	94	633661	10.0	9.93	
50 1,1,1-Trichloroethane	97	6.695	6.690	0.005	99	3119313	25.0	25.4	
51 Cyclohexane	56	6.799	6.793	0.006	92	2988278	25.0	25.6	
53 1,1-Dichloropropene	75	6.909	6.903	0.006	92	2448000	25.0	25.6	
54 Carbon tetrachloride	117	6.909	6.909	0.000	95	2989237	25.0	26.3	
55 Isobutyl alcohol	41	7.080	7.092	-0.012	94	1009122	1250.0	958.1	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.141	7.135	0.005	76	116302	10.0	9.61	
57 Benzene	78	7.171	7.165	0.006	97	6943624	25.0	24.9	
58 1,2-Dichloroethane	62	7.238	7.238	0.000	97	2069077	25.0	24.2	
60 Tert-amyl methyl ether	73	7.366	7.354	0.012	98	2707902	25.0	23.9	
* 61 Fluorobenzene (IS)	96	7.573	7.567	0.006	99	2408929	10.0	10.0	
62 n-Heptane	43	7.586	7.580	0.006	90	2521926	25.0	26.2	
63 n-Butanol	56	7.982	7.976	0.006	91	1223254	2187.5	1604.9	
64 Trichloroethene	95	8.055	8.049	0.006	96	1973657	25.0	25.1	
65 Methylcyclohexane	83	8.360	8.360	0.000	91	3365809	25.0	25.9	
66 1,2-Dichloropropane	63	8.384	8.378	0.006	90	1795772	25.0	25.5	
67 Methyl methacrylate	69	8.470	8.464	0.006	89	871510	25.0	24.2	
69 Dibromomethane	93	8.494	8.488	0.006	92	919481	25.0	25.5	
68 1,4-Dioxane	88	8.530	8.537	-0.007	79	123866	1250.0	522.7	M
71 Dichlorobromomethane	83	8.726	8.726	0.000	98	2419702	25.0	25.9	
72 2-Nitropropane	41	8.994	8.994	0.000	100	1484170	125.0	115.2	
75 1-Bromo-2-chloroethane	63	9.122	9.122	0.000	99	1652054	25.0	24.9	
76 cis-1,3-Dichloropropene	75	9.280	9.280	0.000	94	2858052	25.0	26.5	
77 4-Methyl-2-pentanone (MIBK)	43	9.457	9.451	0.006	97	11451372	250.0	231.3	
$ 78 Toluene-d8 (Surr)	98	9.591	9.591	0.000	94	2462175	10.0	9.88	
79 Toluene	92	9.671	9.671	-0.001	98	4797042	25.0	25.0	
97 trans-1,3-Dichloropropene	75	9.933	9.933	0.000	96	2471995	25.0	26.5	
99 Ethyl methacrylate	69	9.994	9.994	0.000	89	1877330	25.0	25.9	
S 98 1,3-Dichloropropene, Total	100				0			53.0	
100 1,1,2-Trichloroethane	97	10.134	10.134	0.000	92	1282563	25.0	24.4	
101 Tetrachloroethene	166	10.231	10.225	0.006	98	2638237	25.0	25.5	
102 1,3-Dichloropropane	76	10.298	10.299	-0.001	92	2135286	25.0	24.6	
103 2-Hexanone	43	10.353	10.353	0.000	97	8081494	250.0	234.1	
105 Chlorodibromomethane	129	10.518	10.518	0.000	90	1907545	25.0	26.4	
106 Ethylene Dibromide	107	10.628	10.628	0.000	98	1275224	25.0	25.0	
* 107 Chlorobenzene-d5 (IS)	117	11.060	11.061	-0.001	86	1936058	10.0	10.0	
108 1-Chlorohexane	91	11.073	11.073	0.000	97	2819454	25.0	25.5	
109 Chlorobenzene	112	11.091	11.091	0.000	96	5612245	25.0	25.4	
111 1,1,1,2-Tetrachloroethane	131	11.170	11.170	0.000	95	2148564	25.0	26.5	
112 Ethylbenzene	91	11.176	11.176	0.000	98	9550470	25.0	25.5	
S 110 Xylenes, Total	106				0			78.4	
113 m-Xylene & p-Xylene	106	11.292	11.292	0.000	93	7772437	50.0	52.1	
114 o-Xylene	106	11.621	11.621	0.000	96	3823654	25.0	26.2	
115 Styrene	104	11.634	11.634	0.000	95	6222891	25.0	27.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
116 Bromoform	173	11.792	11.792	0.000	97	1307321	25.0	27.7	
117 Isopropylbenzene	105	11.920	11.920	0.000	96	10017939	25.0	26.2	
$ 120 4-Bromofluorobenzene (Surr)	95	12.066	12.067	-0.001	96	921757	10.0	10.1	
121 1,1,2,2-Tetrachloroethane	83	12.164	12.164	0.000	94	1684823	25.0	24.6	
122 Bromobenzene	156	12.182	12.182	0.000	98	2604838	25.0	25.5	
123 trans-1,4-Dichloro-2-butene	53	12.188	12.188	0.000	95	5017664	250.0	257.9	
124 1,2,3-Trichloropropane	110	12.213	12.213	0.000	83	471063	25.0	24.4	
125 N-Propylbenzene	91	12.249	12.249	0.000	98	11504700	25.0	25.7	
126 2-Chlorotoluene	126	12.329	12.329	0.000	97	2492610	25.0	25.8	
127 1,3,5-Trimethylbenzene	105	12.389	12.384	0.005	95	8699547	25.0	25.9	
128 4-Chlorotoluene	126	12.420	12.420	0.000	97	2546778	25.0	26.4	
129 tert-Butylbenzene	134	12.627	12.627	0.000	93	2169810	25.0	26.1	
130 Pentachloroethane	167	12.664	12.664	0.000	92	1770213	25.0	27.4	
131 1,2,4-Trimethylbenzene	105	12.670	12.670	0.000	97	9029284	25.0	26.2	
132 sec-Butylbenzene	105	12.792	12.792	0.000	95	11111339	25.0	26.0	
133 1,3-Dichlorobenzene	146	12.889	12.890	-0.001	99	5148991	25.0	26.9	
134 4-Isopropyltoluene	119	12.902	12.902	0.000	96	10273099	25.0	26.9	
* 135 1,4-Dichlorobenzene-d4	152	12.950	12.944	0.006	92	1240232	10.0	10.0	
136 1,4-Dichlorobenzene	146	12.963	12.963	0.000	94	4882929	25.0	26.0	
137 1,2,3-Trimethylbenzene	120	12.975	12.975	0.000	98	4105948	25.0	25.8	
138 Benzyl chloride	126	13.042	13.042	0.000	99	772337	25.0	28.7	
139 n-Butylbenzene	92	13.194	13.188	0.006	98	4860363	25.0	29.0	
140 1,2-Dichlorobenzene	146	13.225	13.225	0.000	98	4774475	25.0	26.2	
142 1,2-Dibromo-3-Chloropropane	155	13.767	13.767	0.000	88	286713	25.0	25.6	
143 1,3,5-Trichlorobenzene	180	13.895	13.889	0.006	98	4008610	25.0	27.6	
144 1,2,4-Trichlorobenzene	180	14.316	14.316	0.000	94	3188084	25.0	27.3	
145 Hexachlorobutadiene	225	14.395	14.395	0.000	96	1771421	25.0	26.4	
146 Naphthalene	128	14.493	14.493	0.000	97	5183365	25.0	23.8	
147 1,2,3-Trichlorobenzene	180	14.633	14.639	-0.006	95	2694710	25.0	25.4	
155 2-Methylnaphthalene	142		0.000				ND	ND	
156 p-Diethylbenzene	1		0.000				ND	ND	
161 Pentane	43		0.000				ND	ND	
150 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
165 Isopropyl alcohol	45		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MSV_LL_#1_826_00068	Amount Added: 25.00	Units: uL	
MSV_LL_#2_826_00077	Amount Added: 25.00	Units: uL	
MSV_LL_GAS826_00141	Amount Added: 25.00	Units: uL	
MSV_LLcentISS_00006	Amount Added: 5.00	Units: uL	Run Reagent

Report Date: 21-Mar-2023 17:37:32 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X11.D

Injection Date: 21-Mar-2023 04:01:30 Instrument ID: 19930 Operator ID: mec29284

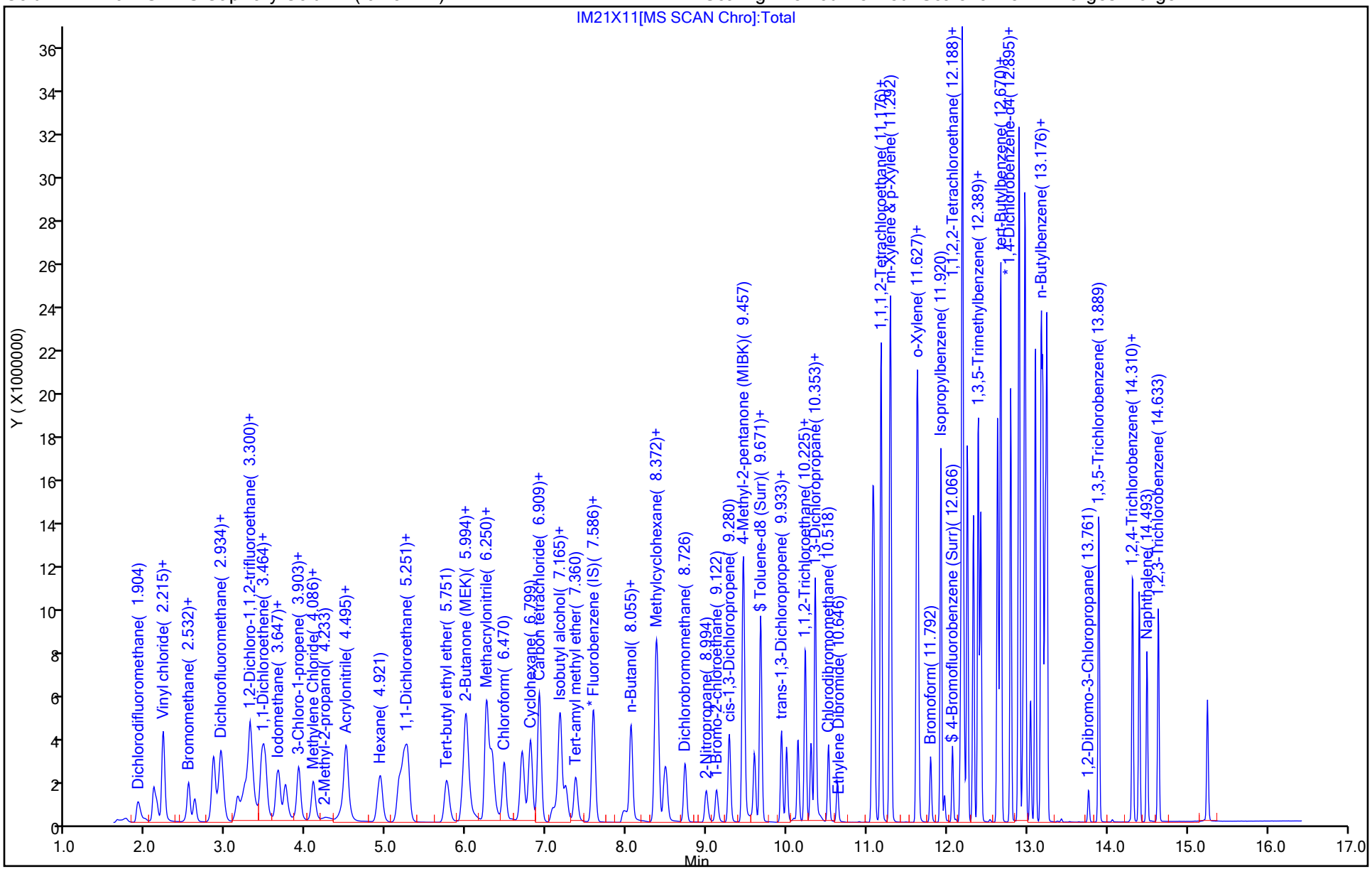
Lims ID: IC std7 Worklist Smp#: 12

Client ID:

Purge Vol: 25.000 mL Dil. Factor: 1.0000 ALS Bottle#: 11

Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

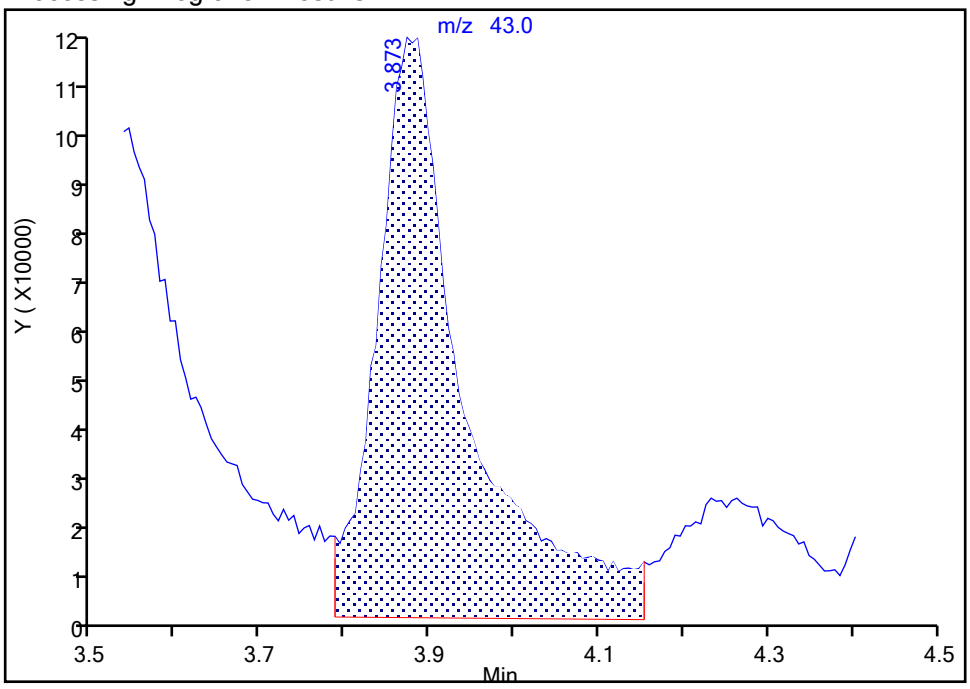
Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X11.D
Injection Date: 21-Mar-2023 04:01:30 Instrument ID: 19930
Lims ID: IC std7
Client ID:
Operator ID: mec29284 ALS Bottle#: 11 Worklist Smp#: 12
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

23 Methyl acetate, CAS: 79-20-9

Signal: 1

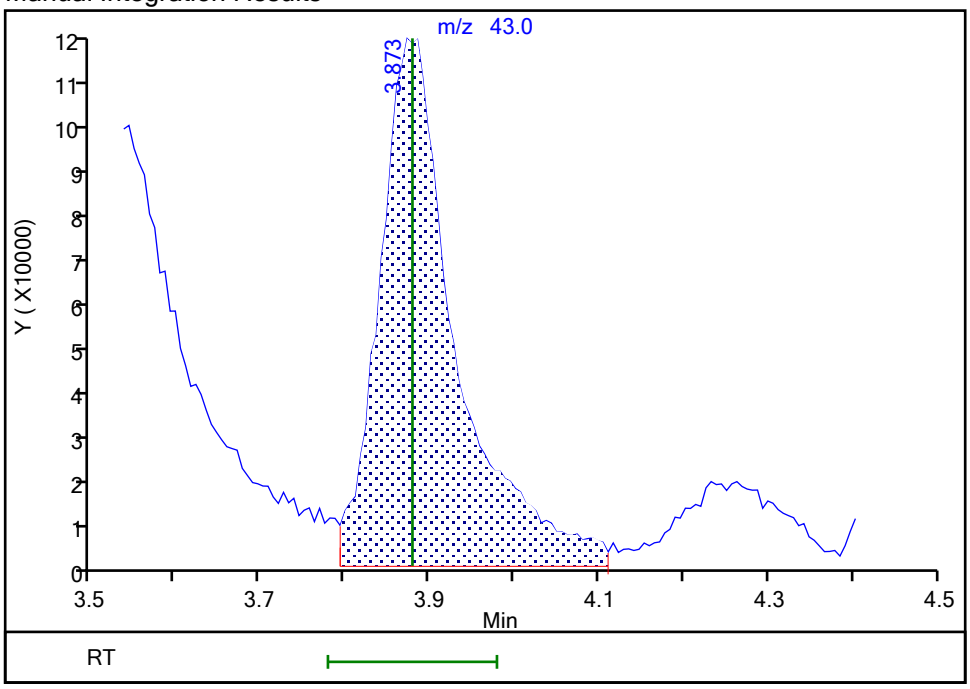
Processing Integration Results

RT: 3.87
Area: 799736
Amount: 26.116895
Amount Units: ug/l



Manual Integration Results

RT: 3.87
Area: 648459
Amount: 20.026891
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:38:01
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

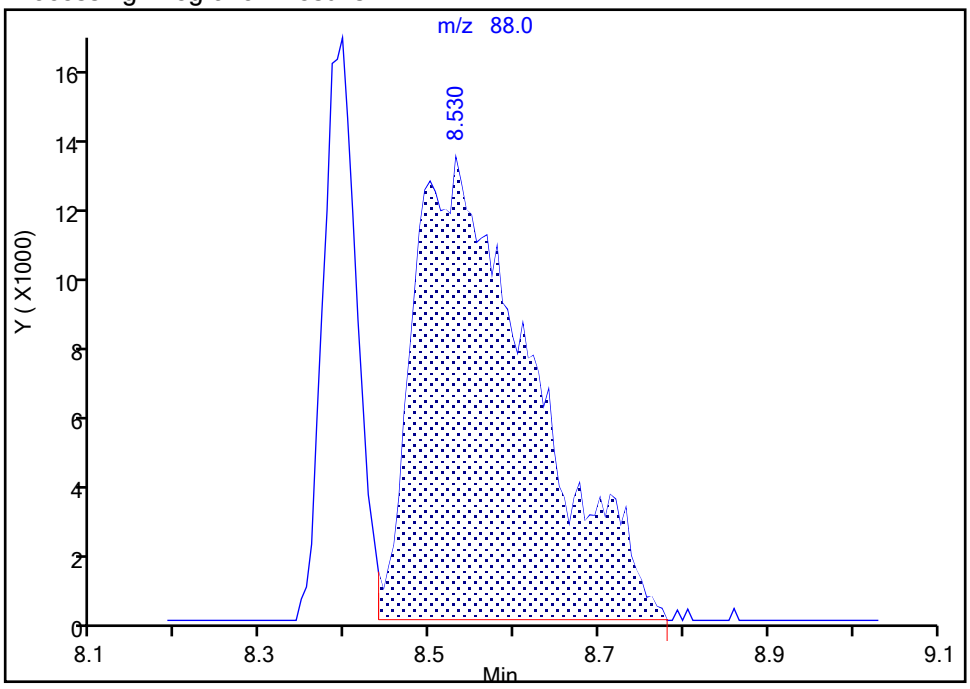
Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X11.D
Injection Date: 21-Mar-2023 04:01:30 Instrument ID: 19930
Lims ID: IC std7
Client ID:
Operator ID: mec29284 ALS Bottle#: 11 Worklist Smp#: 12
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

68 1,4-Dioxane, CAS: 123-91-1

Signal: 1

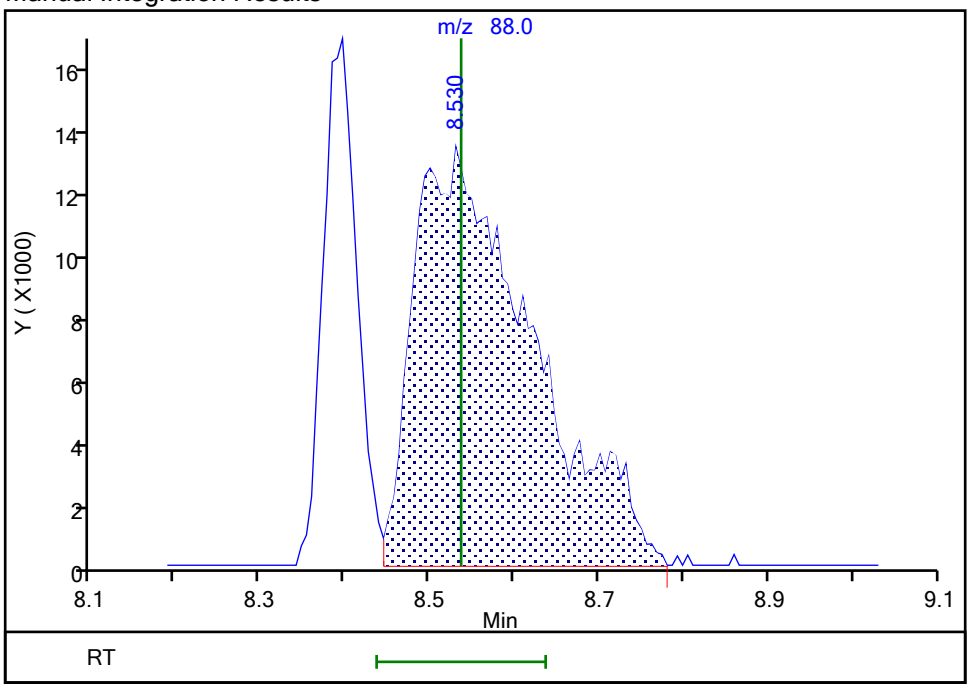
Processing Integration Results

RT: 8.53
Area: 124347
Amount: 571.6595
Amount Units: ug/l



Manual Integration Results

RT: 8.53
Area: 123866
Amount: 522.6727
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:38:58
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X12.D
Lims ID: ICIS - LG
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 21-Mar-2023 04:22:30 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0079468-013
Operator ID: mec29284 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 21-Mar-2023 17:37:37 Calib Date: 21-Mar-2023 06:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1651

First Level Reviewer: DVW2 Date: 21-Mar-2023 10:27:28

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.898	1.898	0.000	99	922225	10.0	10.4	M
4 Chloromethane	50	2.087	2.087	0.000	99	940151	10.0	9.77	
5 Vinyl chloride	62	2.203	2.203	0.000	98	930903	10.0	9.92	
6 Butadiene	39	2.209	2.209	0.000	95	826233	10.0	9.62	
7 Bromomethane	94	2.526	2.526	0.000	92	743346	10.0	10.2	
8 Chloroethane	64	2.599	2.599	0.000	99	577982	10.0	10.1	
9 Dichlorofluoromethane	67	2.837	2.837	0.000	97	1494327	10.0	9.78	
10 Trichlorofluoromethane	101	2.898	2.898	0.000	98	1607262	10.0	10.6	
11 Ethyl ether	59	3.135	3.135	0.000	93	503956	10.0	10.2	
13 1,2-Dichloro-1,1,2-trifluoroetha	67	3.227	3.227	0.000	90	845381	10.0	9.98	
14 Acrolein	56	3.306	3.306	0.000	96	3424553	500.0	533.6	
15 1,1-Dichloroethene	96	3.434	3.434	0.000	98	615600	10.0	10.0	
17 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.477	3.477	0.000	90	725110	10.0	10.4	
16 Acetone	43	3.477	3.477	0.000	68	717958	100.0	92.6	
18 Iodomethane	142	3.629	3.629	0.000	100	1344711	10.0	10.1	
19 Ethyl bromide	108	3.660	3.660	0.000	99	581386	10.0	10.2	
20 Carbon disulfide	76	3.733	3.733	0.000	100	1740418	10.0	10.1	
23 Methyl acetate	43	3.879	3.879	0.000	97	266996	10.0	9.62	M
24 3-Chloro-1-propene	41	3.897	3.897	0.000	87	1028696	10.0	9.96	
25 Methylene Chloride	84	4.086	4.086	0.000	93	659101	10.0	10.1	
* 26 t-Butyl alcohol-d10 (IS)	65	4.135	4.135	0.000	99	120956	50.0	50.0	
27 2-Methyl-2-propanol	59	4.263	4.263	0.000	99	532907	200.0	211.4	
28 Acrylonitrile	53	4.416	4.416	0.000	98	263633	25.0	28.0	
29 Methyl tert-butyl ether	73	4.477	4.477	0.000	95	1605079	10.0	10.2	
30 trans-1,2-Dichloroethene	96	4.495	4.495	0.000	98	680341	10.0	9.85	
31 Hexane	57	4.915	4.915	0.000	95	974283	10.0	10.7	
32 1,1-Dichloroethane	63	5.147	5.147	0.000	96	1265159	10.0	10.1	
35 Isopropyl ether	45	5.214	5.214	0.000	91	2131812	10.0	10.2	
36 2-Chloro-1,3-butadiene	53	5.263	5.263	0.000	93	1088422	10.0	10.3	
37 Tert-butyl ethyl ether	59	5.751	5.751	0.000	97	1484132	10.0	10.2	
38 2-Butanone (MEK)	43	5.958	5.958	0.000	100	1559003	100.0	108.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
39 cis-1,2-Dichloroethene	96	5.982	5.982	0.000	83	760484	10.0	10.1	
40 2,2-Dichloropropane	77	5.995	5.995	0.000	89	1152650	10.0	10.1	
43 Propionitrile	54	6.056	6.056	0.000	98	771867	200.0	232.5	
45 Methacrylonitrile	67	6.244	6.244	0.000	92	1703050	100.0	111.7	
46 Chlorobromomethane	128	6.318	6.318	0.000	90	362331	10.0	10.3	
47 Tetrahydrofuran	71	6.330	6.330	0.000	79	237735	50.0	54.1	
48 Chloroform	83	6.464	6.464	0.000	95	1301472	10.0	10.1	
$ 49 Dibromofluoromethane (Surr)	113	6.677	6.677	0.000	94	634684	10.0	10.1	
50 1,1,1-Trichloroethane	97	6.690	6.690	0.000	98	1236794	10.0	10.2	
51 Cyclohexane	56	6.793	6.793	0.000	92	1201687	10.0	10.4	
53 1,1-Dichloropropene	75	6.903	6.903	0.000	91	971752	10.0	10.3	
54 Carbon tetrachloride	117	6.909	6.909	0.000	95	1181687	10.0	10.5	
55 Isobutyl alcohol	41	7.092	7.092	0.000	90	499620	500.0	553.5	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.135	7.135	0.000	89	118206	10.0	9.88	
57 Benzene	78	7.165	7.165	0.000	98	2766730	10.0	10.0	
58 1,2-Dichloroethane	62	7.238	7.238	0.000	97	849419	10.0	10.0	
60 Tert-amyl methyl ether	73	7.354	7.354	0.000	98	1148066	10.0	10.3	
* 61 Fluorobenzene (IS)	96	7.567	7.567	0.000	99	2381761	10.0	10.0	
62 n-Heptane	43	7.580	7.580	0.000	92	1013268	10.0	10.7	
63 n-Butanol	56	7.976	7.976	0.000	90	703258	875.0	1076.6	
64 Trichloroethene	95	8.049	8.049	0.000	96	778206	10.0	10.0	
65 Methylcyclohexane	83	8.360	8.360	0.000	91	1348244	10.0	10.5	
66 1,2-Dichloropropane	63	8.378	8.378	0.000	90	714552	10.0	10.3	
67 Methyl methacrylate	69	8.464	8.464	0.000	89	349068	10.0	11.3	
69 Dibromomethane	93	8.488	8.488	0.000	92	368087	10.0	10.3	
68 1,4-Dioxane	88	8.537	8.537	0.000	84	118927	500.0	585.5	
71 Dichlorobromomethane	83	8.726	8.726	0.000	98	960002	10.0	10.4	
72 2-Nitropropane	41	8.994	8.994	0.000	99	615199	50.0	55.7	
75 1-Bromo-2-chloroethane	63	9.122	9.122	0.000	99	677411	10.0	10.3	
76 cis-1,3-Dichloropropene	75	9.280	9.280	0.000	93	1135243	10.0	10.7	
77 4-Methyl-2-pentanone (MIBK)	43	9.451	9.451	0.000	98	4813730	100.0	113.4	
$ 78 Toluene-d8 (Surr)	98	9.591	9.591	0.000	94	2420949	10.0	9.97	
79 Toluene	92	9.671	9.671	0.000	98	1895806	10.0	10.1	
97 trans-1,3-Dichloropropene	75	9.933	9.933	0.000	95	976681	10.0	10.7	
99 Ethyl methacrylate	69	9.994	9.994	0.000	89	746956	10.0	10.6	
100 1,1,2-Trichloroethane	97	10.134	10.134	0.000	92	520789	10.0	10.2	
101 Tetrachloroethene	166	10.225	10.225	0.000	98	1025277	10.0	10.2	
102 1,3-Dichloropropane	76	10.299	10.299	0.000	92	856612	10.0	10.1	
103 2-Hexanone	43	10.353	10.353	0.000	98	3355456	100.0	113.4	
105 Chlorodibromomethane	129	10.518	10.518	0.000	89	756162	10.0	10.7	
106 Ethylene Dibromide	107	10.628	10.628	0.000	98	515479	10.0	10.4	
* 107 Chlorobenzene-d5 (IS)	117	11.061	11.061	0.000	86	1886594	10.0	10.0	
108 1-Chlorohexane	91	11.073	11.073	0.000	97	1085890	10.0	10.1	
109 Chlorobenzene	112	11.091	11.091	0.000	96	2204397	10.0	10.2	
111 1,1,1,2-Tetrachloroethane	131	11.170	11.170	0.000	95	827659	10.0	10.5	
112 Ethylbenzene	91	11.176	11.176	0.000	98	3694009	10.0	10.1	
113 m-Xylene & p-Xylene	106	11.292	11.292	0.000	94	2958705	20.0	20.4	
114 o-Xylene	106	11.621	11.621	0.000	97	1442929	10.0	10.2	
115 Styrene	104	11.634	11.634	0.000	95	2367152	10.0	10.7	
116 Bromoform	173	11.792	11.792	0.000	97	503660	10.0	11.0	
117 Isopropylbenzene	105	11.920	11.920	0.000	96	3876560	10.0	10.4	
$ 120 4-Bromofluorobenzene (Surr)	95	12.067	12.067	0.000	96	889396	10.0	10.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
121 1,1,2,2-Tetrachloroethane	83	12.164	12.164	0.000	94	665065	10.0	10.3	
122 Bromobenzene	156	12.182	12.182	0.000	98	981240	10.0	10.2	
123 trans-1,4-Dichloro-2-butene	53	12.188	12.188	0.000	93	1920626	100.0	115.2	
124 1,2,3-Trichloropropane	110	12.213	12.213	0.000	84	189700	10.0	10.4	
125 N-Propylbenzene	91	12.249	12.249	0.000	99	4495847	10.0	10.6	
126 2-Chlorotoluene	126	12.329	12.329	0.000	97	946897	10.0	10.4	
127 1,3,5-Trimethylbenzene	105	12.384	12.384	0.000	94	3315484	10.0	10.5	
128 4-Chlorotoluene	126	12.420	12.420	0.000	97	951822	10.0	10.5	
129 tert-Butylbenzene	134	12.627	12.627	0.000	94	817068	10.0	10.4	
130 Pentachloroethane	167	12.664	12.664	0.000	92	672224	10.0	11.1	
131 1,2,4-Trimethylbenzene	105	12.670	12.670	0.000	97	3435975	10.0	10.6	
132 sec-Butylbenzene	105	12.792	12.792	0.000	94	4306580	10.0	10.7	
133 1,3-Dichlorobenzene	146	12.890	12.890	0.000	99	1926286	10.0	10.7	
134 4-Isopropyltoluene	119	12.902	12.902	0.000	97	3862618	10.0	10.7	
* 135 1,4-Dichlorobenzene-d4	152	12.944	12.944	0.000	94	1169233	10.0	10.0	
136 1,4-Dichlorobenzene	146	12.963	12.963	0.000	94	1838618	10.0	10.4	
137 1,2,3-Trimethylbenzene	120	12.975	12.975	0.000	98	1534921	10.0	10.2	
138 Benzyl chloride	126	13.042	13.042	0.000	99	290235	10.0	11.4	
139 n-Butylbenzene	92	13.188	13.188	0.000	95	1762970	10.0	11.2	
140 1,2-Dichlorobenzene	146	13.225	13.225	0.000	99	1807906	10.0	10.5	
142 1,2-Dibromo-3-Chloropropane	155	13.767	13.767	0.000	87	114580	10.0	10.8	
143 1,3,5-Trichlorobenzene	180	13.889	13.889	0.000	98	1467042	10.0	10.7	
144 1,2,4-Trichlorobenzene	180	14.316	14.316	0.000	94	1207739	10.0	11.0	
145 Hexachlorobutadiene	225	14.395	14.395	0.000	96	656545	10.0	10.4	
146 Naphthalene	128	14.493	14.493	0.000	97	2170950	10.0	10.6	
147 1,2,3-Trichlorobenzene	180	14.639	14.639	0.000	95	1072140	10.0	10.7	
155 2-Methylnaphthalene	142		0.000				ND	ND	
156 p-Diethylbenzene	1		0.000				ND	ND	
161 Pentane	43		0.000				ND	ND	
150 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
165 Isopropyl alcohol	45		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MSV_LL_#1_826_00068	Amount Added: 10.00	Units: uL	
MSV_LL_#2_826_00077	Amount Added: 10.00	Units: uL	
MSV_LL_GAS826_00141	Amount Added: 10.00	Units: uL	
MSV_LLcentISS_00006	Amount Added: 5.00	Units: uL	Run Reagent

Report Date: 21-Mar-2023 17:37:38 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X12.D

Injection Date: 21-Mar-2023 04:22:30 Instrument ID: 19930 Operator ID: mec29284

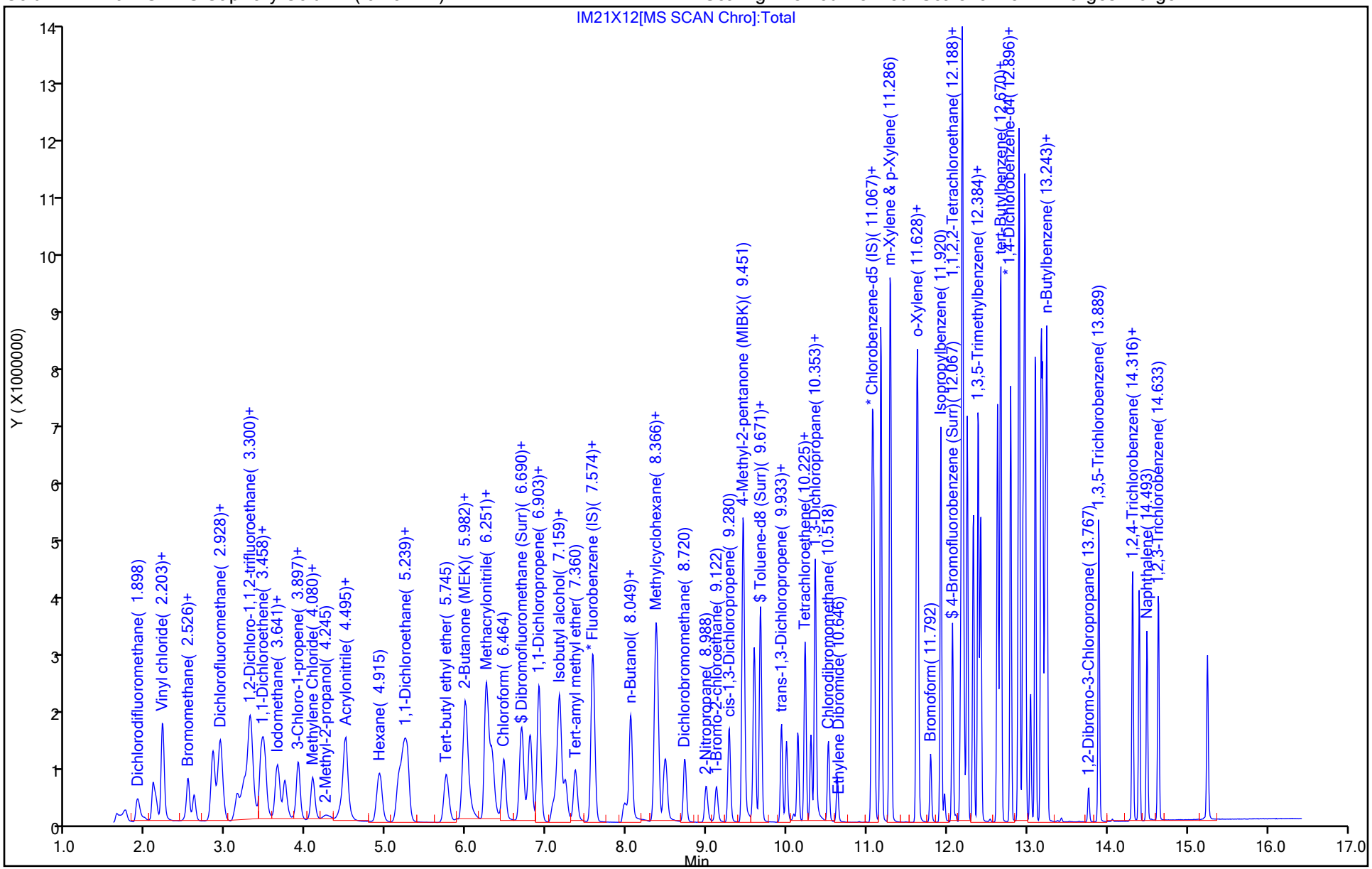
Lims ID: ICIS - LG Worklist Smp#: 13

Client ID:

Purge Vol: 25.000 mL Dil. Factor: 1.0000 ALS Bottle#: 12

Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

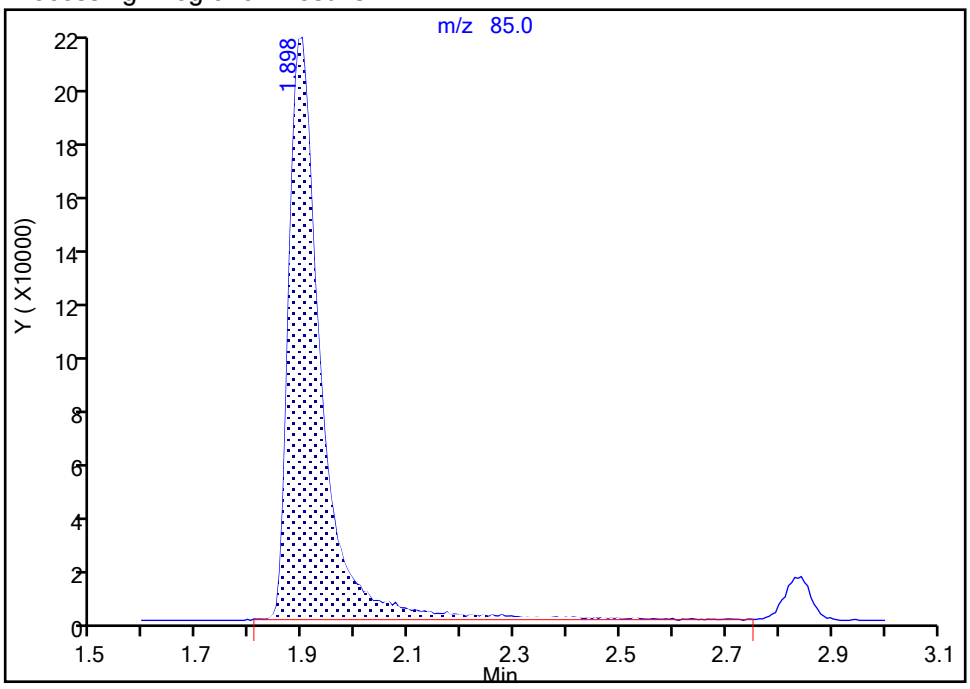
Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X12.D
Injection Date: 21-Mar-2023 04:22:30 Instrument ID: 19930
Lims ID: ICIS - LG
Client ID:
Operator ID: mec29284 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

1 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

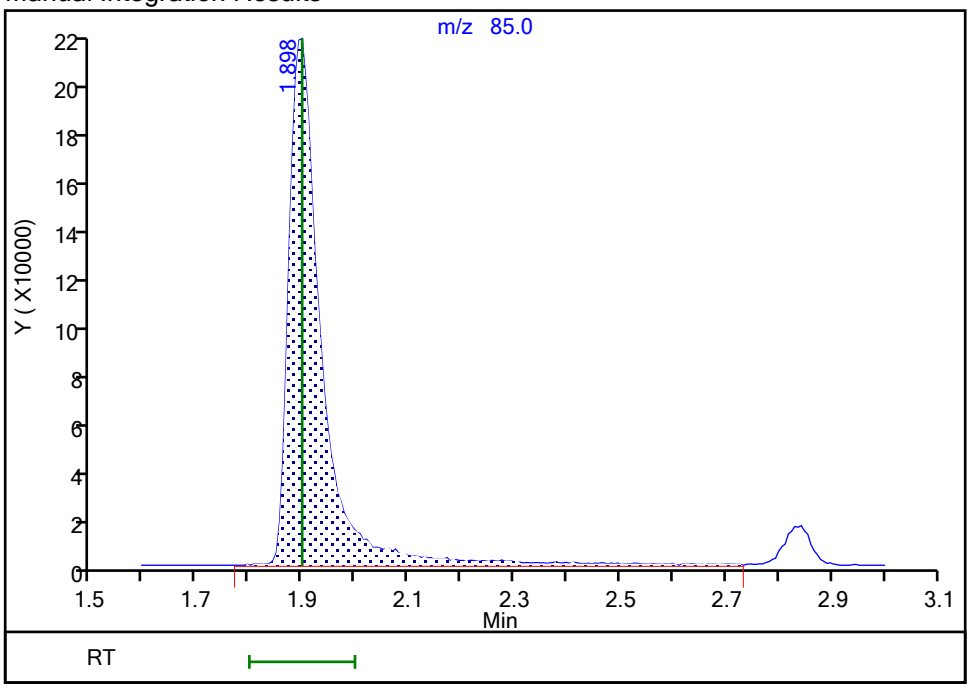
Processing Integration Results

RT: 1.90
Area: 899819
Amount: 10.174710
Amount Units: ug/l



Manual Integration Results

RT: 1.90
Area: 922225
Amount: 10.390459
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:43:07
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

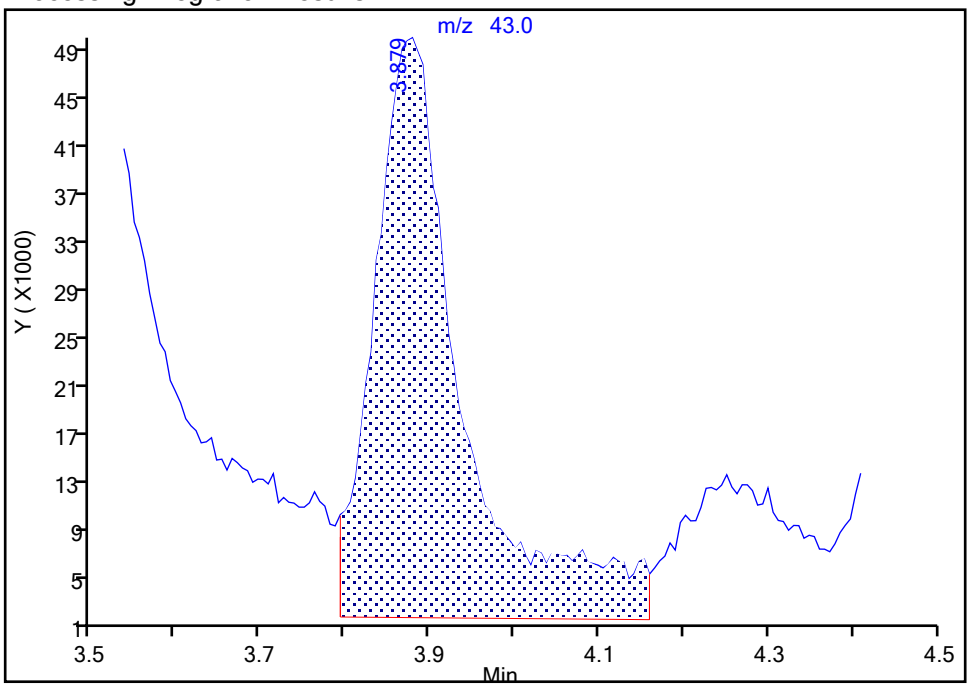
Data File:	\\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X12.D				
Injection Date:	21-Mar-2023 04:22:30	Instrument ID:	19930		
Lims ID:	ICIS - LG				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

23 Methyl acetate, CAS: 79-20-9

Signal: 1

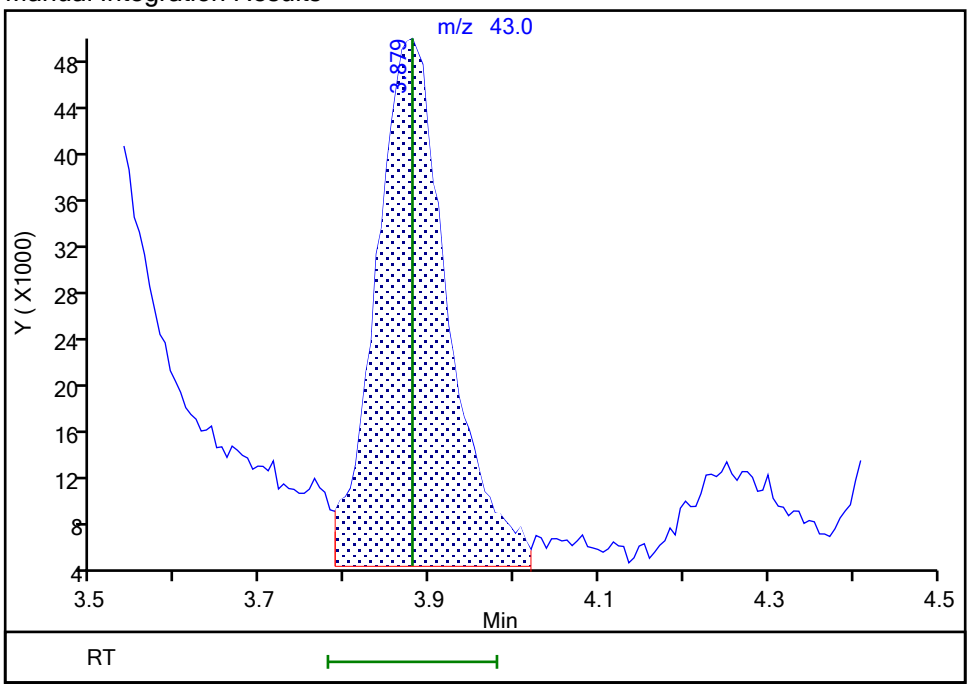
Processing Integration Results

RT: 3.88
Area: 348419
Amount: 12.708697
Amount Units: ug/l



Manual Integration Results

RT: 3.88
Area: 266996
Amount: 9.620961
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:43:58
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X13.D
Lims ID: IC std5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 21-Mar-2023 04:42:30 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0079468-014
Operator ID: mec29284 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 21-Mar-2023 17:37:43 Calib Date: 21-Mar-2023 06:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1651

First Level Reviewer: K4WN Date: 21-Mar-2023 15:49:07

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.898	1.898	0.000	99	455174	5.00	5.12	
4 Chloromethane	50	2.093	2.087	0.006	99	459776	5.00	4.77	
5 Vinyl chloride	62	2.209	2.203	0.006	98	468573	5.00	4.98	
6 Butadiene	39	2.215	2.209	0.006	95	408978	5.00	4.75	
7 Bromomethane	94	2.532	2.526	0.006	92	358762	5.00	4.92	
8 Chloroethane	64	2.605	2.599	0.006	99	282374	5.00	4.94	
9 Dichlorofluoromethane	67	2.843	2.837	0.006	97	745004	5.00	4.87	
10 Trichlorofluoromethane	101	2.904	2.898	0.006	96	738690	5.00	4.86	
11 Ethyl ether	59	3.148	3.135	0.013	91	250383	5.00	5.03	
13 1,2-Dichloro-1,1,2-trifluoroetha	67	3.227	3.227	0.000	88	415383	5.00	4.89	
14 Acrolein	56	3.312	3.306	0.006	95	1760321	250.0	264.9	
15 1,1-Dichloroethene	96	3.440	3.434	0.006	98	300931	5.00	4.89	
17 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.483	3.477	0.006	90	350208	5.00	5.00	
16 Acetone	43	3.489	3.477	0.012	71	382327	50.0	47.6	M
18 Iodomethane	142	3.641	3.629	0.012	99	668087	5.00	5.01	
19 Ethyl bromide	108	3.666	3.660	0.006	99	289573	5.01	5.05	
20 Carbon disulfide	76	3.739	3.733	0.006	100	851050	5.00	4.94	
23 Methyl acetate	43	3.885	3.879	0.006	97	138687	5.00	4.83	M
24 3-Chloro-1-propene	41	3.910	3.897	0.013	88	512382	5.00	4.95	
25 Methylene Chloride	84	4.086	4.086	0.000	93	323924	5.00	4.96	
* 26 t-Butyl alcohol-d10 (IS)	65	4.135	4.135	0.000	98	125221	50.0	50.0	M
27 2-Methyl-2-propanol	59	4.269	4.263	0.006	98	290719	100.0	111.4	M
28 Acrylonitrile	53	4.428	4.416	0.012	96	135604	12.5	13.9	M
29 Methyl tert-butyl ether	73	4.495	4.477	0.018	95	799391	5.00	5.06	
30 trans-1,2-Dichloroethene	96	4.501	4.495	0.006	99	339868	5.00	4.91	
31 Hexane	57	4.922	4.915	0.007	95	468791	5.00	5.13	
32 1,1-Dichloroethane	63	5.159	5.147	0.012	96	633253	5.00	5.04	
35 Isopropyl ether	45	5.214	5.214	0.000	95	1061122	5.00	5.06	
36 2-Chloro-1,3-butadiene	53	5.269	5.263	0.006	93	541494	5.00	5.09	
37 Tert-butyl ethyl ether	59	5.751	5.751	0.000	97	749516	5.00	5.15	
38 2-Butanone (MEK)	43	5.964	5.958	0.006	100	784382	50.0	52.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
39 cis-1,2-Dichloroethene	96	5.989	5.982	0.006	83	381596	5.00	5.05	
40 2,2-Dichloropropane	77	5.995	5.995	0.000	89	567765	5.00	4.97	
43 Propionitrile	54	6.062	6.056	0.006	98	368330	100.0	107.2	
S 41 1,2-Dichloroethene, Total	100				0			9.96	
45 Methacrylonitrile	67	6.251	6.244	0.007	91	830959	50.0	52.6	
46 Chlorobromomethane	128	6.324	6.318	0.006	91	179484	5.00	5.10	
47 Tetrahydrofuran	71	6.336	6.330	0.006	79	120622	25.0	26.5	
48 Chloroform	83	6.470	6.464	0.006	95	643977	5.00	4.99	
$ 49 Dibromofluoromethane (Surr)	113	6.683	6.677	0.006	94	632686	10.0	10.0	
50 1,1,1-Trichloroethane	97	6.696	6.690	0.006	98	611388	5.00	5.02	
51 Cyclohexane	56	6.799	6.793	0.006	92	580173	5.00	5.01	
53 1,1-Dichloropropene	75	6.909	6.903	0.006	91	474125	5.00	5.00	
54 Carbon tetrachloride	117	6.909	6.909	0.000	95	576461	5.00	5.11	
55 Isobutyl alcohol	41	7.098	7.092	0.006	94	254297	250.0	272.1	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.135	7.135	0.000	91	120327	10.0	10.0	
57 Benzene	78	7.171	7.165	0.006	98	1384537	5.00	5.00	
58 1,2-Dichloroethane	62	7.238	7.238	0.000	97	422172	5.00	4.97	M
60 Tert-amyl methyl ether	73	7.366	7.354	0.012	97	573757	5.00	5.11	
* 61 Fluorobenzene (IS)	96	7.574	7.567	0.007	99	2387313	10.0	10.0	
62 n-Heptane	43	7.592	7.580	0.012	91	473866	5.00	4.98	
63 n-Butanol	56	7.988	7.976	0.012	93	342450	437.5	506.4	
64 Trichloroethene	95	8.055	8.049	0.006	96	389301	5.00	4.99	
65 Methylcyclohexane	83	8.360	8.360	0.000	91	647571	5.00	5.04	
66 1,2-Dichloropropane	63	8.384	8.378	0.006	92	356169	5.00	5.11	
67 Methyl methacrylate	69	8.470	8.464	0.006	88	167724	5.00	5.24	
69 Dibromomethane	93	8.494	8.488	0.006	93	181241	5.00	5.08	
68 1,4-Dioxane	88	8.531	8.537	-0.006	83	60319	250.0	286.9	M
71 Dichlorobromomethane	83	8.726	8.726	0.000	98	475184	5.00	5.14	
72 2-Nitropropane	41	8.994	8.994	0.000	100	292267	25.0	25.6	
75 1-Bromo-2-chloroethane	63	9.122	9.122	0.000	99	333228	5.00	5.06	
76 cis-1,3-Dichloropropene	75	9.281	9.280	0.001	94	552133	5.00	5.17	
77 4-Methyl-2-pentanone (MIBK)	43	9.457	9.451	0.006	98	2322697	50.0	52.9	
$ 78 Toluene-d8 (Surr)	98	9.591	9.591	0.000	94	2422302	10.0	9.98	
79 Toluene	92	9.671	9.671	0.000	97	923872	5.00	4.94	
97 trans-1,3-Dichloropropene	75	9.933	9.933	0.000	96	468676	5.00	5.15	
99 Ethyl methacrylate	69	9.994	9.994	0.000	89	365161	5.00	5.18	
S 98 1,3-Dichloropropene, Total	100				0			10.3	
100 1,1,2-Trichloroethane	97	10.140	10.134	0.006	93	253999	5.00	4.96	
101 Tetrachloroethene	166	10.225	10.225	0.000	98	508265	5.00	5.04	
102 1,3-Dichloropropane	76	10.299	10.299	0.000	93	427645	5.00	5.07	
103 2-Hexanone	43	10.354	10.353	0.001	98	1623206	50.0	53.0	
105 Chlorodibromomethane	129	10.518	10.518	0.000	89	365950	5.00	5.19	
106 Ethylene Dibromide	107	10.628	10.628	0.000	98	251158	5.00	5.06	
* 107 Chlorobenzene-d5 (IS)	117	11.061	11.061	0.000	86	1885942	10.0	10.0	
108 1-Chlorohexane	91	11.073	11.073	0.000	97	521339	5.00	4.84	
109 Chlorobenzene	112	11.091	11.091	0.000	95	1086370	5.00	5.05	
111 1,1,1,2-Tetrachloroethane	131	11.170	11.170	0.000	95	405063	5.00	5.12	
112 Ethylbenzene	91	11.177	11.176	0.001	98	1842666	5.00	5.06	
S 110 Xylenes, Total	106				0			15.4	
113 m-Xylene & p-Xylene	106	11.292	11.292	0.000	94	1490951	10.0	10.3	
114 o-Xylene	106	11.622	11.621	0.001	96	722330	5.00	5.09	
115 Styrene	104	11.634	11.634	0.000	95	1155265	5.00	5.24	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
116 Bromoform	173	11.792	11.792	0.000	97	241884	5.00	5.27	
117 Isopropylbenzene	105	11.920	11.920	0.000	96	1899553	5.00	5.10	
$ 120 4-Bromofluorobenzene (Surr)	95	12.067	12.067	0.000	96	876575	10.0	9.90	
121 1,1,2,2-Tetrachloroethane	83	12.164	12.164	0.000	94	325780	5.00	5.08	
122 Bromobenzene	156	12.182	12.182	0.000	97	490923	5.00	5.13	
123 trans-1,4-Dichloro-2-butene	53	12.189	12.188	0.000	93	910577	50.0	52.8	
124 1,2,3-Trichloropropane	110	12.213	12.213	0.000	84	93500	5.00	5.16	
125 N-Propylbenzene	91	12.249	12.249	0.000	99	2199783	5.00	5.24	
126 2-Chlorotoluene	126	12.329	12.329	0.000	97	467982	5.00	5.16	
127 1,3,5-Trimethylbenzene	105	12.390	12.384	0.006	94	1630191	5.00	5.18	
128 4-Chlorotoluene	126	12.420	12.420	0.000	97	472147	5.00	5.22	
129 tert-Butylbenzene	134	12.627	12.627	0.000	93	400832	5.00	5.14	
130 Pentachloroethane	167	12.664	12.664	0.000	92	319216	5.00	5.28	
131 1,2,4-Trimethylbenzene	105	12.670	12.670	0.000	97	1681631	5.00	5.20	
132 sec-Butylbenzene	105	12.792	12.792	0.000	94	2062828	5.00	5.15	
133 1,3-Dichlorobenzene	146	12.890	12.890	0.000	99	921590	5.00	5.13	
134 4-Isopropyltoluene	119	12.902	12.902	0.000	98	1855523	5.00	5.19	
* 135 1,4-Dichlorobenzene-d4	152	12.944	12.944	0.000	94	1162953	10.0	10.0	
136 1,4-Dichlorobenzene	146	12.963	12.963	0.000	95	893710	5.00	5.08	
137 1,2,3-Trimethylbenzene	120	12.975	12.975	0.000	98	754758	5.00	5.05	
138 Benzyl chloride	126	13.042	13.042	0.000	99	139656	5.00	5.53	
139 n-Butylbenzene	92	13.194	13.188	0.006	97	833984	5.00	5.31	
140 1,2-Dichlorobenzene	146	13.225	13.225	0.000	98	874011	5.00	5.12	
142 1,2-Dibromo-3-Chloropropane	155	13.767	13.767	0.000	90	54876	5.00	5.22	
143 1,3,5-Trichlorobenzene	180	13.895	13.889	0.006	97	709964	5.00	5.21	
144 1,2,4-Trichlorobenzene	180	14.316	14.316	0.000	93	575676	5.00	5.26	
145 Hexachlorobutadiene	225	14.401	14.395	0.006	96	308531	5.00	4.91	
146 Naphthalene	128	14.493	14.493	0.000	97	1061065	5.00	5.20	
147 1,2,3-Trichlorobenzene	180	14.639	14.639	0.000	95	516164	5.00	5.19	
155 2-Methylnaphthalene	142		0.000				ND	ND	
156 p-Diethylbenzene	1		0.000				ND	ND	
161 Pentane	43		0.000				ND	ND	
150 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
165 Isopropyl alcohol	45		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MSV_LL_#1_826_00068	Amount Added:	5.00	Units: uL	
MSV_LL_#2_826_00077	Amount Added:	5.00	Units: uL	
MSV_LL_GAS826_00141	Amount Added:	5.00	Units: uL	
MSV_LLcentISS_00006	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 21-Mar-2023 17:37:43 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X13.D

Injection Date: 21-Mar-2023 04:42:30 Instrument ID: 19930 Operator ID: mec29284

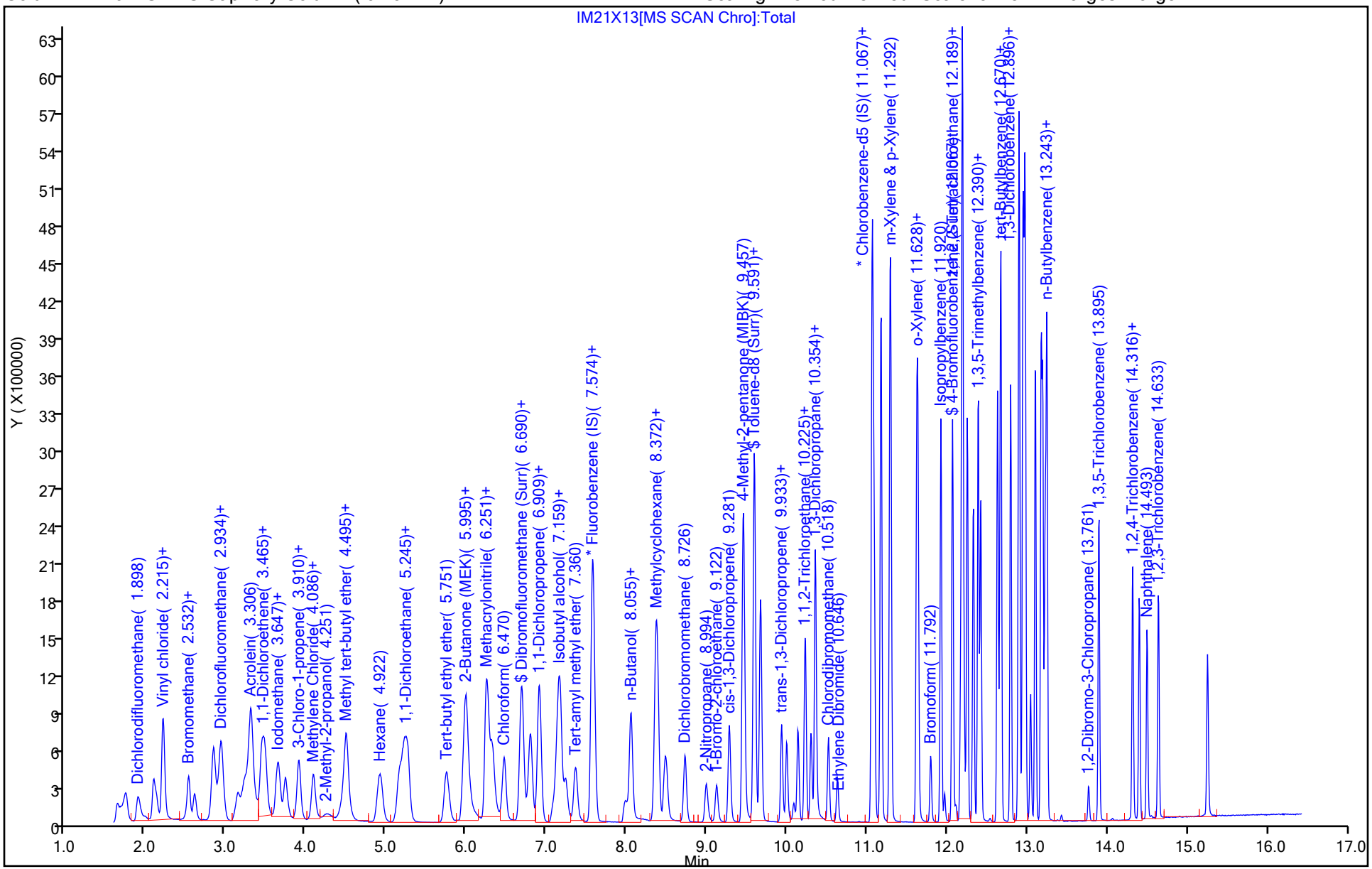
Lims ID: IC std5 Worklist Smp#: 14

Client ID:

Purge Vol: 25.000 mL Dil. Factor: 1.0000 ALS Bottle#: 13

Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

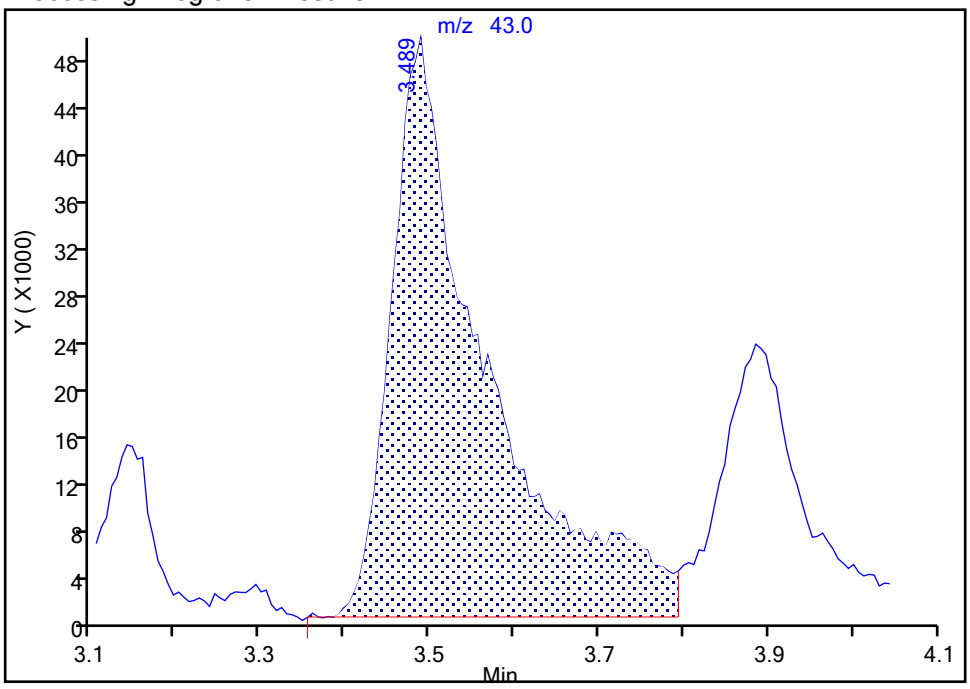
Data File:	\\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X13.D				
Injection Date:	21-Mar-2023 04:42:30	Instrument ID:	19930		
Lims ID:	IC std5				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

16 Acetone, CAS: 67-64-1

Signal: 1

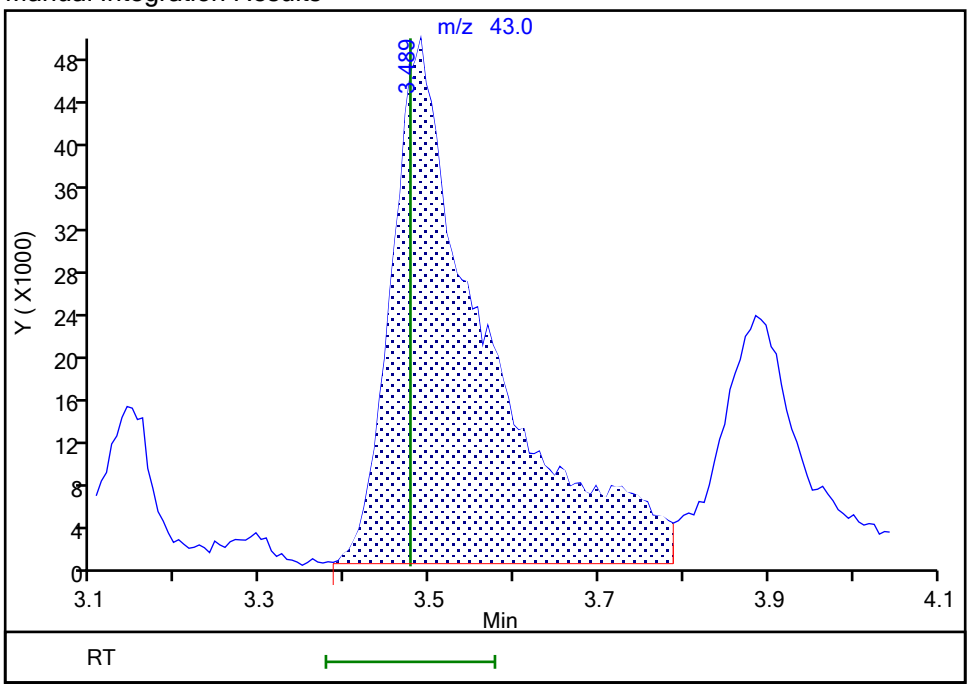
Processing Integration Results

RT: 3.49
Area: 383015
Amount: 47.708398
Amount Units: ug/l



Manual Integration Results

RT: 3.49
Area: 382327
Amount: 47.634364
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 16:13:05
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

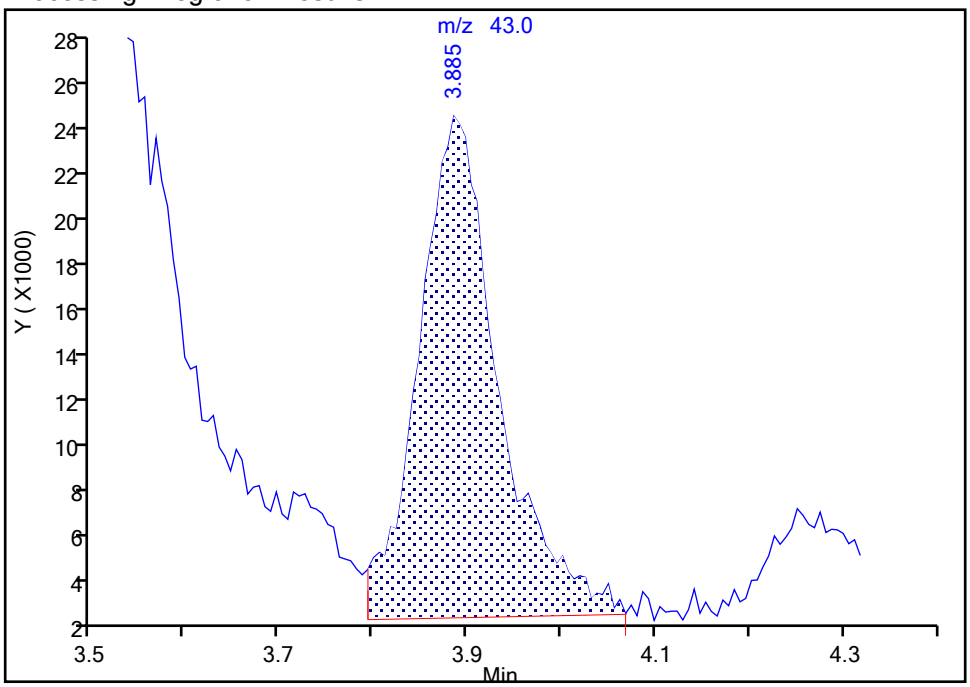
Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X13.D
Injection Date: 21-Mar-2023 04:42:30 Instrument ID: 19930
Lims ID: IC std5
Client ID:
Operator ID: mec29284 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

23 Methyl acetate, CAS: 79-20-9

Signal: 1

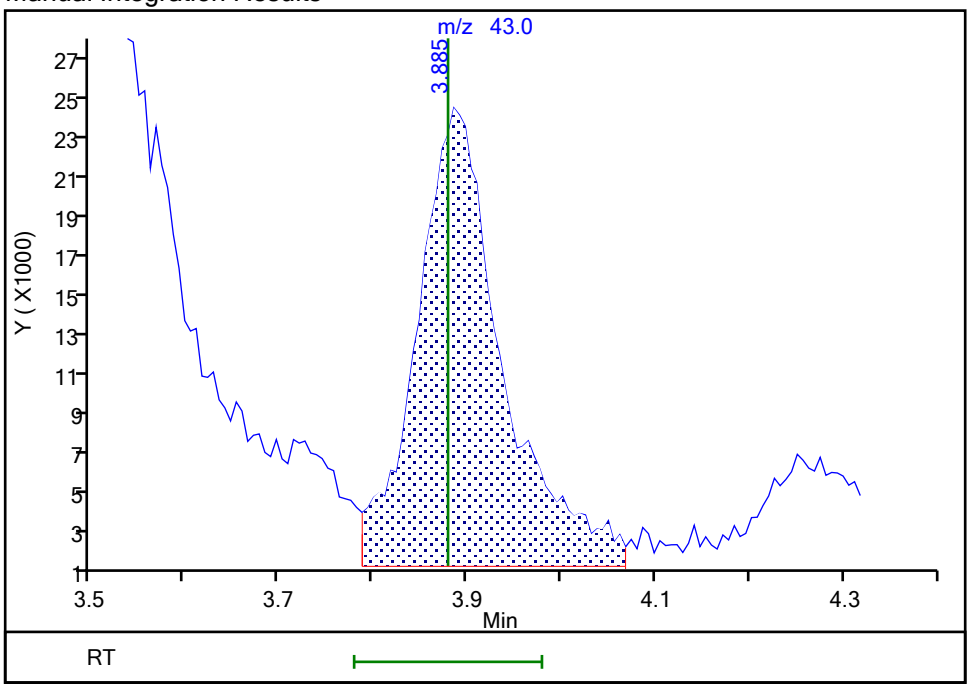
Processing Integration Results

RT: 3.89
Area: 125000
Amount: 4.378117
Amount Units: ug/l



Manual Integration Results

RT: 3.89
Area: 138687
Amount: 4.827249
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:46:36
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

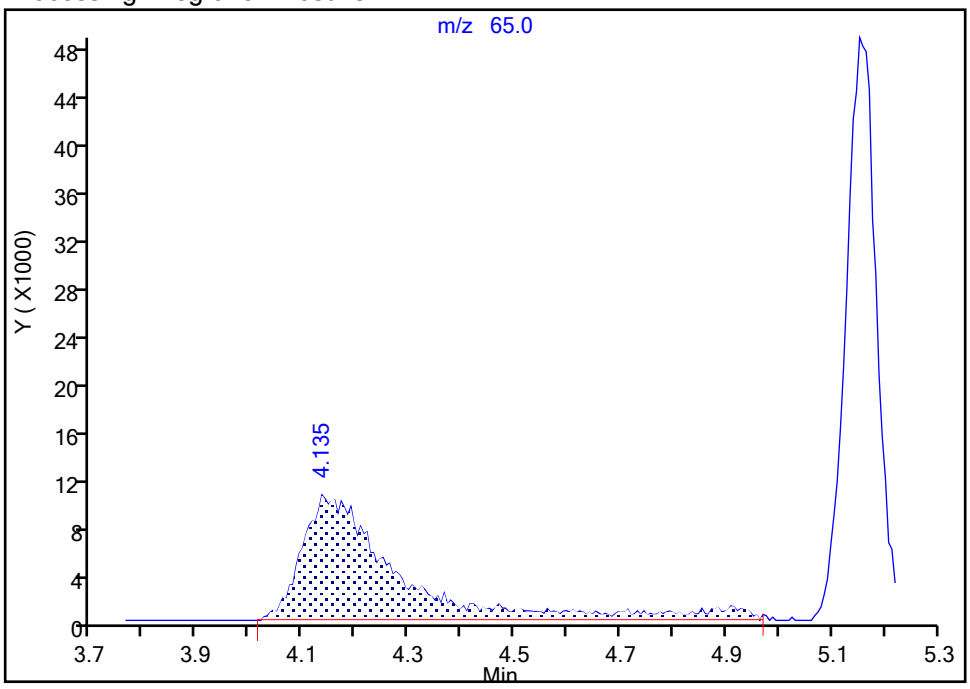
Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X13.D
Injection Date: 21-Mar-2023 04:42:30 Instrument ID: 19930
Lims ID: IC std5
Client ID:
Operator ID: mec29284 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 26 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

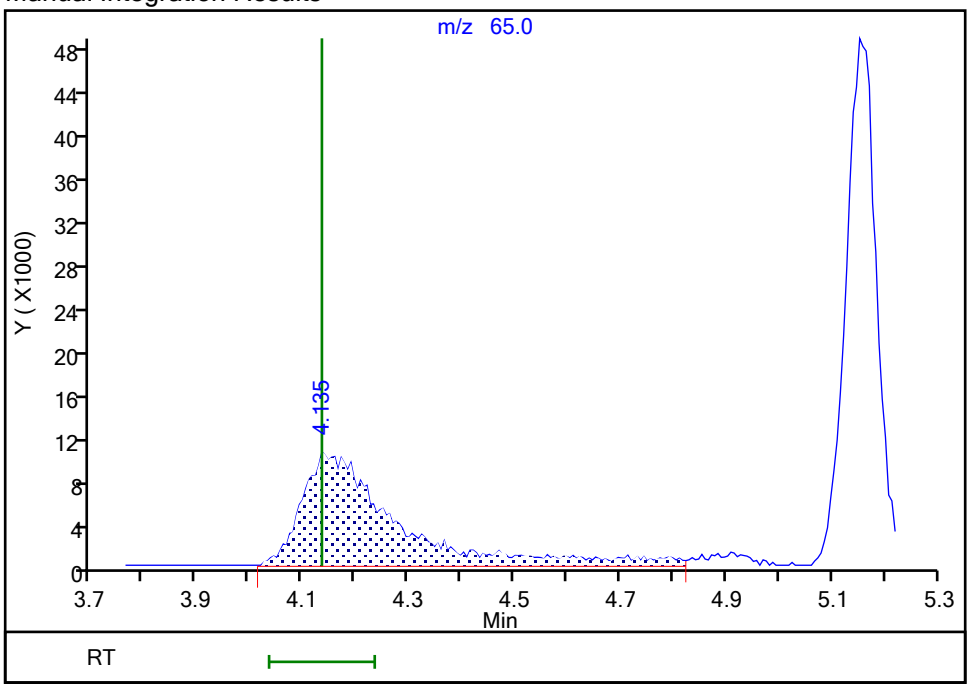
Processing Integration Results

RT: 4.14
Area: 131546
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 4.14
Area: 125221
Amount: 50.000000
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 16:12:32
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

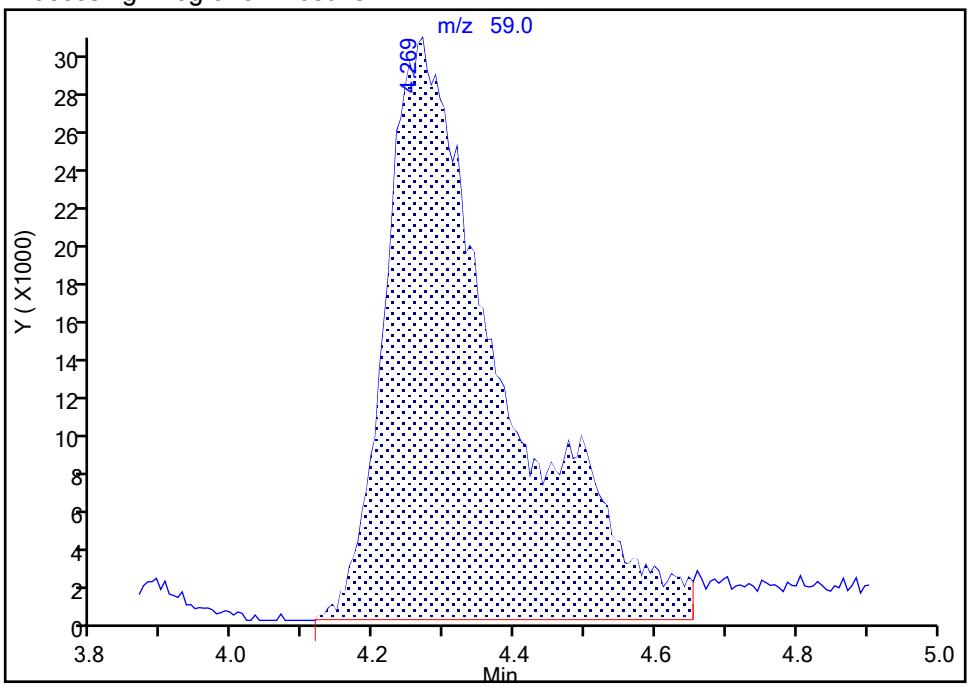
Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X13.D
Injection Date: 21-Mar-2023 04:42:30 Instrument ID: 19930
Lims ID: IC std5
Client ID:
Operator ID: mec29284 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

27 2-Methyl-2-propanol, CAS: 75-65-0

Signal: 1

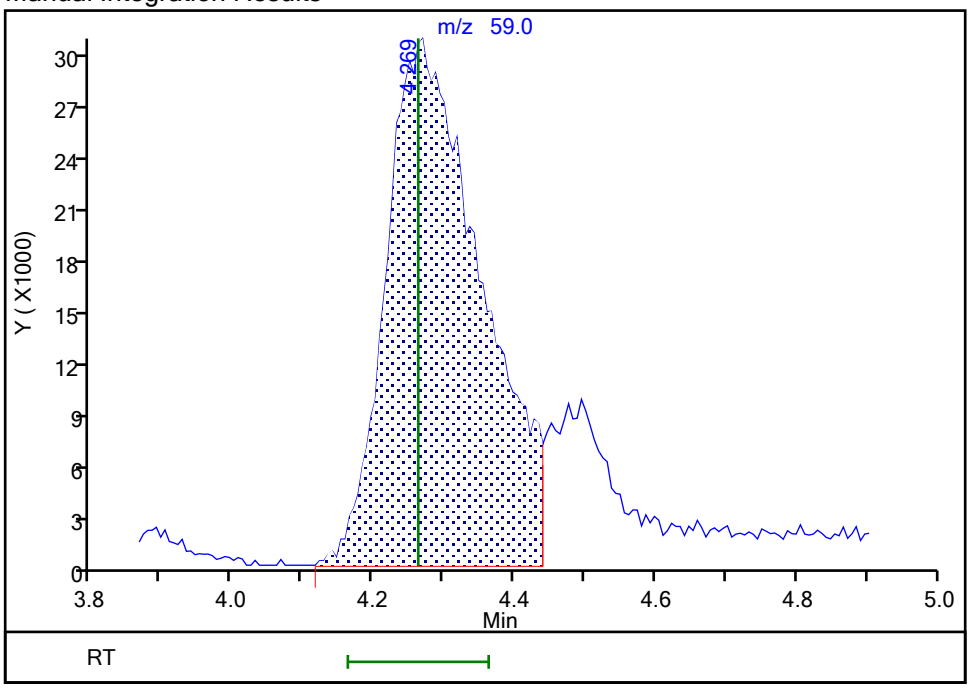
Processing Integration Results

RT: 4.27
Area: 354974
Amount: 115.2823
Amount Units: ug/l



Manual Integration Results

RT: 4.27
Area: 290719
Amount: 111.4019
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:47:03
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

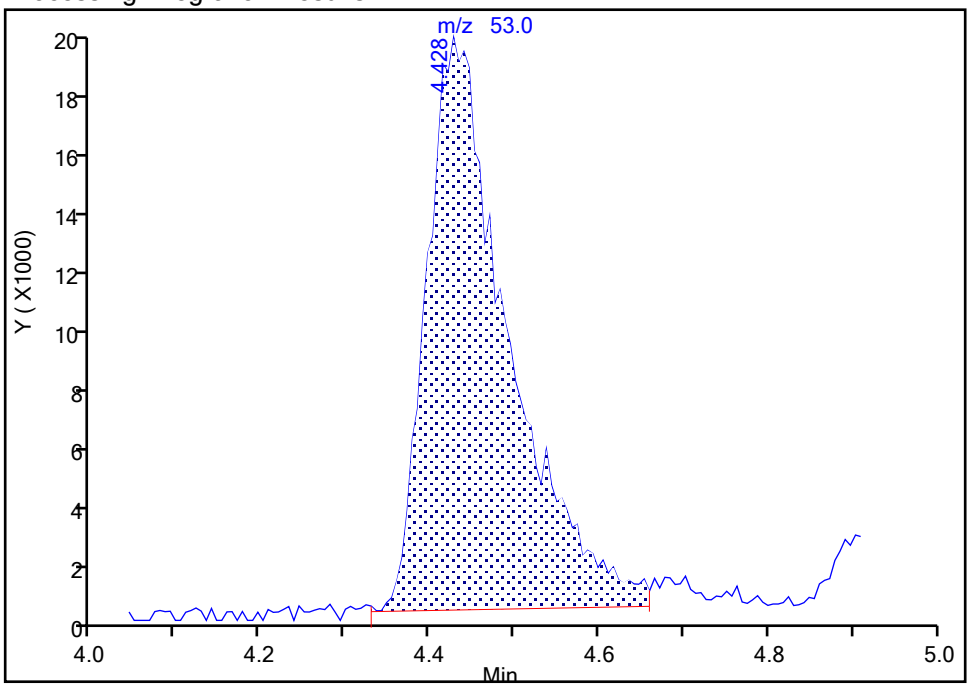
Data File:	\\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X13.D				
Injection Date:	21-Mar-2023 04:42:30	Instrument ID:	19930		
Lims ID:	IC std5				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

28 Acrylonitrile, CAS: 107-13-1

Signal: 1

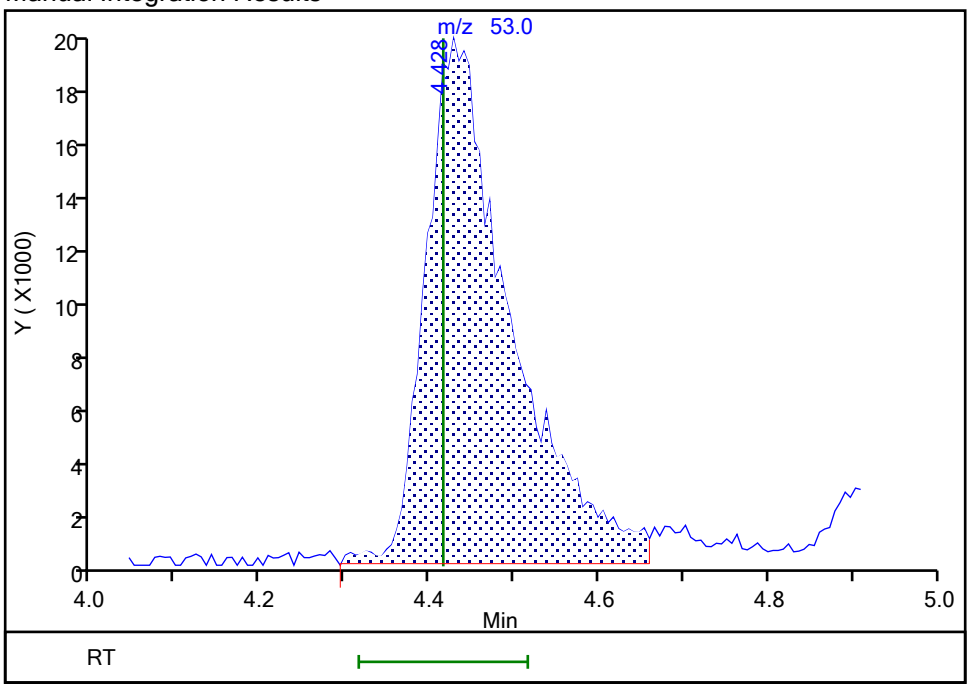
Processing Integration Results

RT: 4.43
Area: 127691
Amount: 13.253608
Amount Units: ug/l



Manual Integration Results

RT: 4.43
Area: 135604
Amount: 13.894510
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:47:31
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

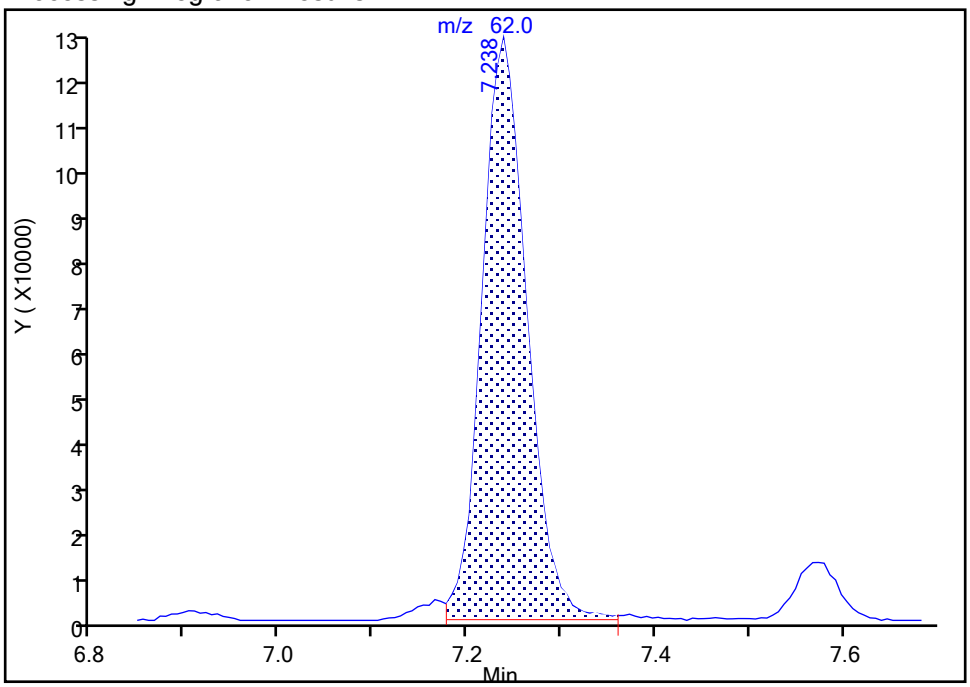
Data File:	\\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X13.D				
Injection Date:	21-Mar-2023 04:42:30	Instrument ID:	19930		
Lims ID:	IC std5				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

58 1,2-Dichloroethane, CAS: 107-06-2

Signal: 1

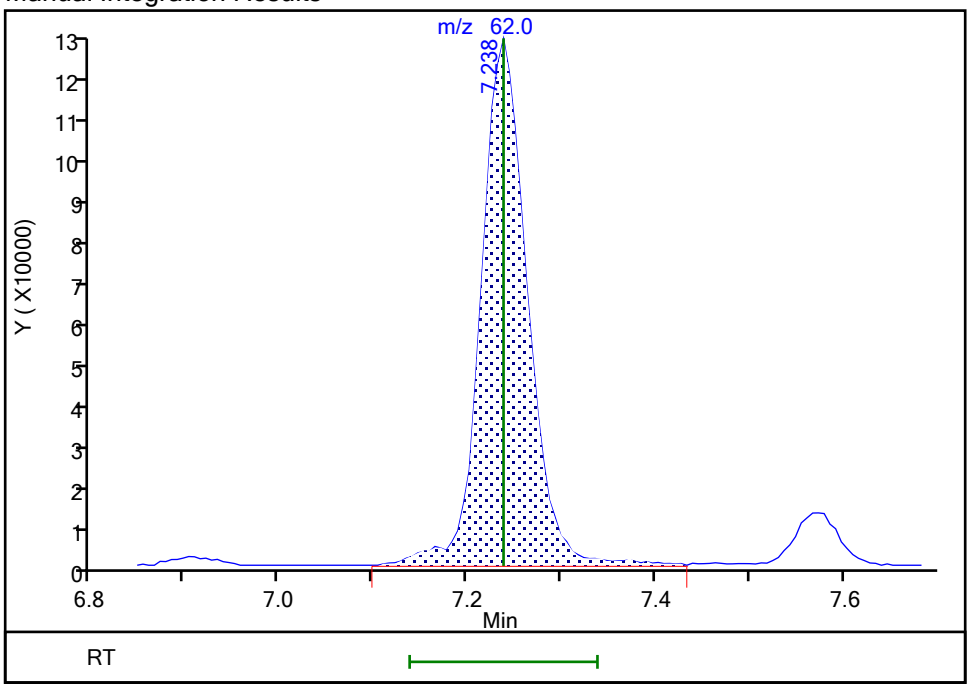
Processing Integration Results

RT: 7.24
Area: 410847
Amount: 4.857627
Amount Units: ug/l



Manual Integration Results

RT: 7.24
Area: 422172
Amount: 4.972504
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:48:07

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

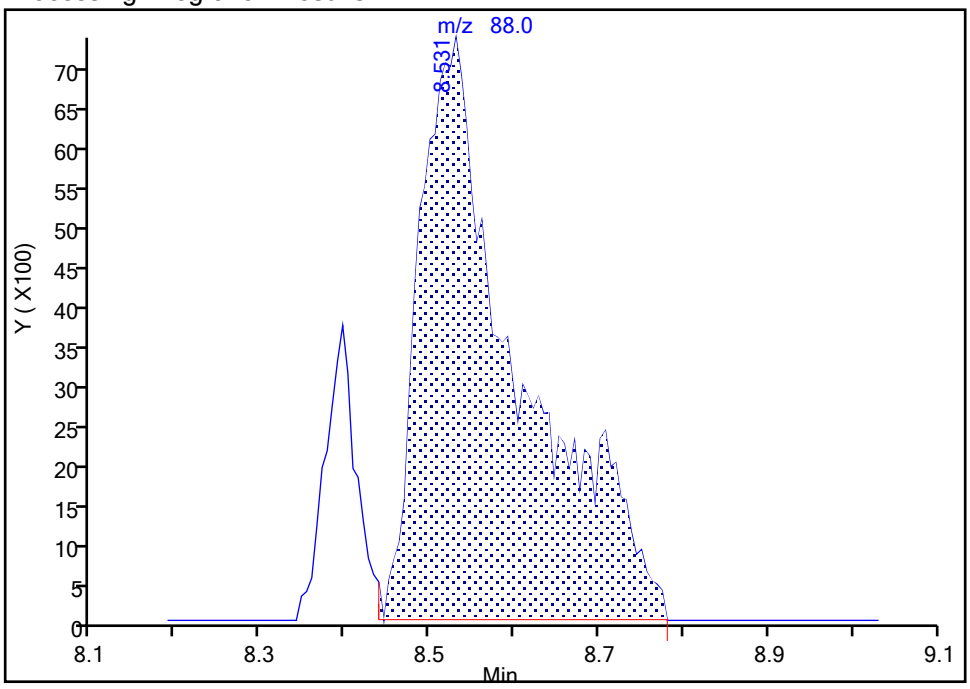
Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X13.D
Injection Date: 21-Mar-2023 04:42:30 Instrument ID: 19930
Lims ID: IC std5
Client ID:
Operator ID: mec29284 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

68 1,4-Dioxane, CAS: 123-91-1

Signal: 1

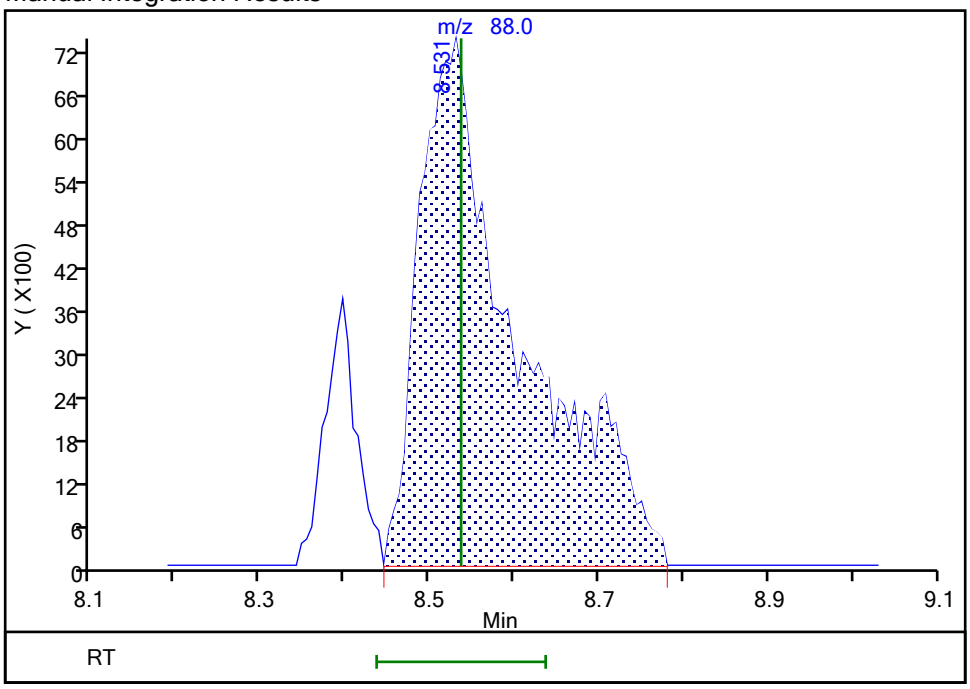
Processing Integration Results

RT: 8.53
Area: 60497
Amount: 304.3985
Amount Units: ug/l



Manual Integration Results

RT: 8.53
Area: 60319
Amount: 286.8566
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:48:23
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X14.D
Lims ID: IC std4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 21-Mar-2023 05:02:30 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0079468-015
Operator ID: mec29284 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 21-Mar-2023 17:37:49 Calib Date: 21-Mar-2023 06:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1651

First Level Reviewer: K4WN Date: 21-Mar-2023 15:51:22

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.898	1.898	0.000	99	175844	2.00	2.01	
4 Chloromethane	50	2.087	2.087	0.000	99	191397	2.00	2.02	
5 Vinyl chloride	62	2.202	2.203	-0.001	98	185810	2.00	2.01	
6 Butadiene	39	2.209	2.209	0.000	95	163666	2.00	1.93	
7 Bromomethane	94	2.526	2.526	0.000	93	144456	2.00	2.01	
8 Chloroethane	64	2.605	2.599	0.006	99	112973	2.00	2.01	
9 Dichlorofluoromethane	67	2.843	2.837	0.006	97	297881	2.00	1.98	
10 Trichlorofluoromethane	101	2.904	2.898	0.006	98	301784	2.00	2.02	
11 Ethyl ether	59	3.141	3.135	0.006	91	102296	2.00	2.09	
13 1,2-Dichloro-1,1,2-trifluoroetha	67	3.221	3.227	-0.006	89	165285	2.00	1.98	
14 Acrolein	56	3.312	3.306	0.006	94	579612	100.0	111.9	
15 1,1-Dichloroethene	96	3.440	3.434	0.006	98	118520	2.00	1.96	
17 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.471	3.477	-0.006	92	137039	2.00	1.99	
16 Acetone	43	3.483	3.477	0.006	57	119641	20.0	19.1	M
18 Iodomethane	142	3.629	3.629	0.000	99	256394	2.00	1.95	
19 Ethyl bromide	108	3.653	3.660	-0.007	97	112150	2.00	1.99	
20 Carbon disulfide	76	3.739	3.733	0.006	100	331819	2.00	1.96	
23 Methyl acetate	43	3.891	3.879	0.012	34	48849	2.00	2.18	
24 3-Chloro-1-propene	41	3.903	3.897	0.006	87	198621	2.00	1.95	
25 Methylene Chloride	84	4.080	4.086	-0.006	92	127652	2.00	1.99	
* 26 t-Butyl alcohol-d10 (IS)	65	4.135	4.135	0.000	99	97646	50.0	50.0	M
27 2-Methyl-2-propanol	59	4.251	4.263	-0.012	98	80472	40.0	39.5	
28 Acrylonitrile	53	4.422	4.416	0.006	97	44242	5.00	5.81	
29 Methyl tert-butyl ether	73	4.483	4.477	0.006	97	304226	2.00	1.96	
30 trans-1,2-Dichloroethene	96	4.501	4.495	0.006	98	131610	2.00	1.93	
31 Hexane	57	4.915	4.915	0.000	95	180035	2.00	2.00	
32 1,1-Dichloroethane	63	5.153	5.147	0.006	96	249646	2.00	2.02	
35 Isopropyl ether	45	5.214	5.214	0.000	92	410537	2.00	1.99	
36 2-Chloro-1,3-butadiene	53	5.269	5.263	0.006	93	205252	2.00	1.96	
37 Tert-butyl ethyl ether	59	5.744	5.751	-0.007	97	284598	2.00	1.99	
38 2-Butanone (MEK)	43	5.958	5.958	0.000	100	259100	20.0	22.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
39 cis-1,2-Dichloroethene	96	5.988	5.982	0.006	83	146693	2.00	1.97	
40 2,2-Dichloropropane	77	6.007	5.995	0.012	88	223631	2.00	1.99	
43 Propionitrile	54	6.061	6.056	0.005	98	114151	40.0	42.6	
S 41 1,2-Dichloroethene, Total	100				0			3.90	
45 Methacrylonitrile	67	6.250	6.244	0.006	93	299318	20.0	24.3	
46 Chlorobromomethane	128	6.318	6.318	0.000	87	67134	2.00	1.94	
47 Tetrahydrofuran	71	6.342	6.330	0.012	89	38813	10.0	10.9	
48 Chloroform	83	6.470	6.464	0.006	94	249917	2.00	1.97	
$ 49 Dibromofluoromethane (Surr)	113	6.683	6.677	0.006	93	617342	10.0	9.92	
50 1,1,1-Trichloroethane	97	6.689	6.690	-0.001	98	239759	2.00	2.00	
51 Cyclohexane	56	6.793	6.793	0.000	92	222305	2.00	1.95	
53 1,1-Dichloropropene	75	6.909	6.903	0.006	93	184421	2.00	1.98	
54 Carbon tetrachloride	117	6.903	6.909	-0.006	95	220533	2.00	1.99	
55 Isobutyl alcohol	41	7.092	7.092	0.000	91	67949	100.0	93.2	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.128	7.135	-0.007	70	119524	10.0	10.1	
57 Benzene	78	7.165	7.165	0.000	96	545546	2.00	2.00	
58 1,2-Dichloroethane	62	7.238	7.238	0.000	97	162578	2.00	1.95	
60 Tert-amyl methyl ether	73	7.366	7.354	0.012	98	223543	2.00	2.02	
* 61 Fluorobenzene (IS)	96	7.567	7.567	0.000	98	2349279	10.0	10.0	
62 n-Heptane	43	7.586	7.580	0.006	92	179673	2.00	1.92	
63 n-Butanol	56	7.988	7.976	0.012	88	95379	175.0	180.9	
64 Trichloroethene	95	8.049	8.049	0.000	96	154058	2.00	2.01	
65 Methylcyclohexane	83	8.360	8.360	0.000	91	253260	2.00	2.00	
66 1,2-Dichloropropane	63	8.384	8.378	0.006	92	138522	2.00	2.02	
67 Methyl methacrylate	69	8.476	8.464	0.012	90	63530	2.00	2.55	
69 Dibromomethane	93	8.494	8.488	0.006	92	70654	2.00	2.01	
68 1,4-Dioxane	88	8.512	8.537	-0.025	33	24121	100.0	147.1	
71 Dichlorobromomethane	83	8.726	8.726	0.000	98	181572	2.00	2.00	
72 2-Nitropropane	41	8.994	8.994	0.000	100	103136	10.0	11.6	
75 1-Bromo-2-chloroethane	63	9.122	9.122	0.000	99	131348	2.00	2.03	
76 cis-1,3-Dichloropropene	75	9.280	9.280	0.000	94	209411	2.00	1.99	
77 4-Methyl-2-pentanone (MIBK)	43	9.451	9.451	0.000	98	832319	20.0	24.3	
$ 78 Toluene-d8 (Surr)	98	9.591	9.591	0.000	94	2373030	10.0	10.0	
79 Toluene	92	9.671	9.671	0.000	98	365184	2.00	1.99	
97 trans-1,3-Dichloropropene	75	9.933	9.933	0.000	96	173460	2.00	1.95	
99 Ethyl methacrylate	69	10.000	9.994	0.006	89	131292	2.00	1.90	
S 98 1,3-Dichloropropene, Total	100				0			3.94	
100 1,1,2-Trichloroethane	97	10.140	10.134	0.006	91	100211	2.00	2.00	
101 Tetrachloroethene	166	10.225	10.225	0.000	97	195634	2.00	1.98	
102 1,3-Dichloropropane	76	10.298	10.299	-0.001	93	163140	2.00	1.98	
103 2-Hexanone	43	10.353	10.353	0.000	98	579187	20.0	24.2	
105 Chlorodibromomethane	129	10.518	10.518	0.000	89	135111	2.00	1.96	
106 Ethylene Dibromide	107	10.628	10.628	0.000	98	95514	2.00	1.97	
* 107 Chlorobenzene-d5 (IS)	117	11.061	11.061	-0.001	87	1844928	10.0	10.0	
108 1-Chlorohexane	91	11.073	11.073	0.000	97	200092	2.00	1.90	
109 Chlorobenzene	112	11.085	11.091	-0.006	96	414157	2.00	1.97	
111 1,1,1,2-Tetrachloroethane	131	11.170	11.170	0.000	94	153746	2.00	1.99	
112 Ethylbenzene	91	11.176	11.176	0.000	98	699641	2.00	1.96	
S 110 Xylenes, Total	106				0			5.98	
113 m-Xylene & p-Xylene	106	11.292	11.292	0.000	93	569407	4.00	4.01	
114 o-Xylene	106	11.621	11.621	0.000	96	274369	2.00	1.97	
115 Styrene	104	11.640	11.634	0.006	95	417331	2.00	1.94	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
116 Bromoform	173	11.792	11.792	0.000	97	85160	2.00	1.90	
117 Isopropylbenzene	105	11.920	11.920	0.000	96	731109	2.00	2.00	
$ 120 4-Bromofluorobenzene (Surr)	95	12.066	12.067	-0.001	96	855599	10.0	9.88	
121 1,1,2,2-Tetrachloroethane	83	12.164	12.164	0.000	94	120006	2.00	1.93	
122 Bromobenzene	156	12.182	12.182	0.000	96	181668	2.00	1.96	
123 trans-1,4-Dichloro-2-butene	53	12.194	12.188	0.006	93	332224	20.0	24.7	
124 1,2,3-Trichloropropane	110	12.213	12.213	0.000	83	33764	2.00	1.92	
125 N-Propylbenzene	91	12.249	12.249	0.000	99	807760	2.00	1.99	
126 2-Chlorotoluene	126	12.329	12.329	0.000	97	177588	2.00	2.02	
127 1,3,5-Trimethylbenzene	105	12.390	12.384	0.006	94	609124	2.00	2.00	
128 4-Chlorotoluene	126	12.420	12.420	0.000	97	174789	2.00	1.99	
129 tert-Butylbenzene	134	12.627	12.627	0.000	93	150650	2.00	1.99	
130 Pentachloroethane	167	12.664	12.664	0.000	92	119732	2.00	2.04	
131 1,2,4-Trimethylbenzene	105	12.670	12.670	0.000	97	624102	2.00	1.99	
132 sec-Butylbenzene	105	12.792	12.792	0.000	94	785059	2.00	2.03	
133 1,3-Dichlorobenzene	146	12.889	12.890	-0.001	99	339776	2.00	1.95	
134 4-Isopropyltoluene	119	12.902	12.902	0.000	97	681258	2.00	1.97	
* 135 1,4-Dichlorobenzene-d4	152	12.950	12.944	0.006	94	1126529	10.0	10.0	
136 1,4-Dichlorobenzene	146	12.963	12.963	0.000	96	335121	2.00	1.97	
137 1,2,3-Trimethylbenzene	120	12.975	12.975	0.000	97	286323	2.00	1.98	
138 Benzyl chloride	126	13.042	13.042	0.000	99	48767	2.00	1.99	
139 n-Butylbenzene	92	13.194	13.188	0.006	97	295236	2.00	1.94	
140 1,2-Dichlorobenzene	146	13.225	13.225	0.000	98	324822	2.00	1.96	
142 1,2-Dibromo-3-Chloropropane	155	13.767	13.767	0.000	87	19053	2.00	1.87	
143 1,3,5-Trichlorobenzene	180	13.895	13.889	0.006	97	259052	2.00	1.96	
144 1,2,4-Trichlorobenzene	180	14.316	14.316	0.000	94	210756	2.00	1.99	
145 Hexachlorobutadiene	225	14.395	14.395	0.000	96	116814	2.00	1.92	
146 Naphthalene	128	14.493	14.493	0.000	97	386386	2.00	1.96	
147 1,2,3-Trichlorobenzene	180	14.639	14.639	0.000	95	190876	2.00	1.98	
155 2-Methylnaphthalene	142		0.000				ND	ND	
156 p-Diethylbenzene	1		0.000				ND	ND	
161 Pentane	43		0.000				ND	ND	
150 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
165 Isopropyl alcohol	45		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MSV_LL_#1_826_00068	Amount Added:	2.00	Units: uL	
MSV_LL_#2_826_00077	Amount Added:	2.00	Units: uL	
MSV_LL_GAS826_00141	Amount Added:	2.00	Units: uL	
MSV_LLcentISS_00006	Amount Added:	5.00	Units: uL	Run Reagent

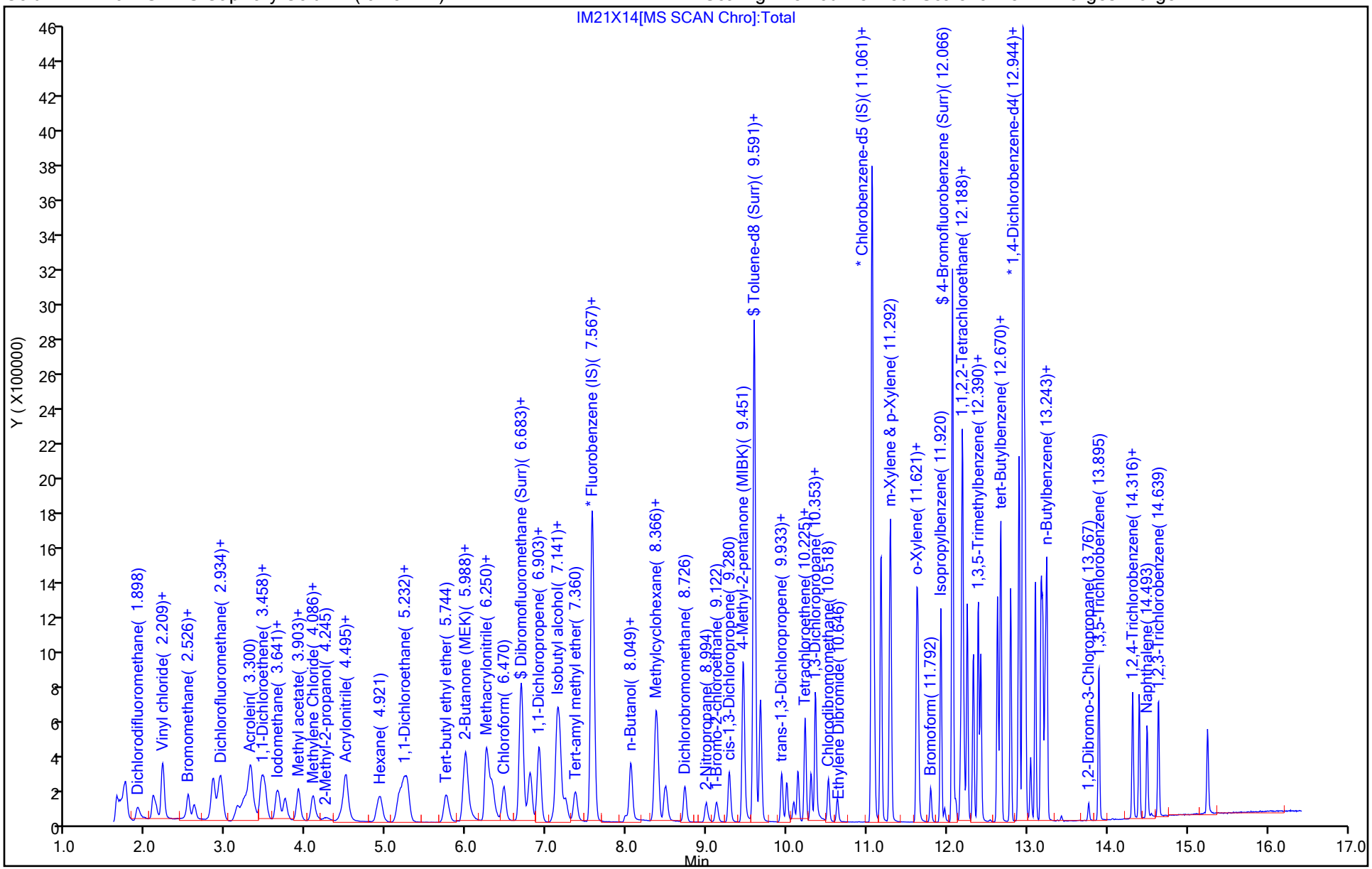
Report Date: 21-Mar-2023 17:37:50 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X14.D

Injection Date:	21-Mar-2023 05:02:30	Instrument ID:	19930	Operator ID:	mec29284
Lims ID:	IC std4			Worklist Smp#:	15
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

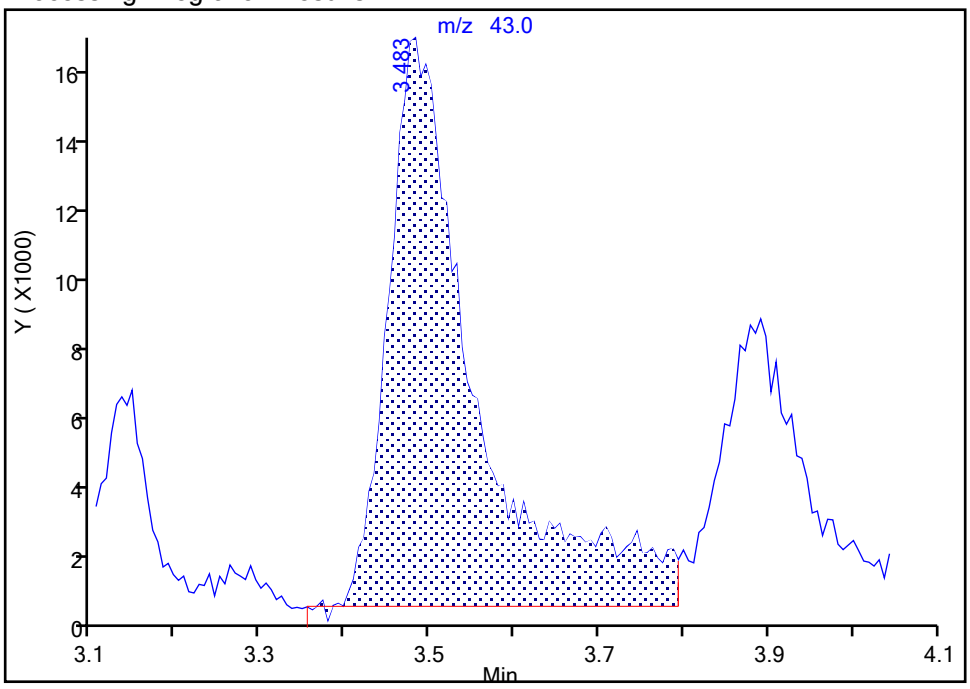
Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X14.D
Injection Date: 21-Mar-2023 05:02:30 Instrument ID: 19930
Lims ID: IC std4
Client ID:
Operator ID: mec29284 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

16 Acetone, CAS: 67-64-1

Signal: 1

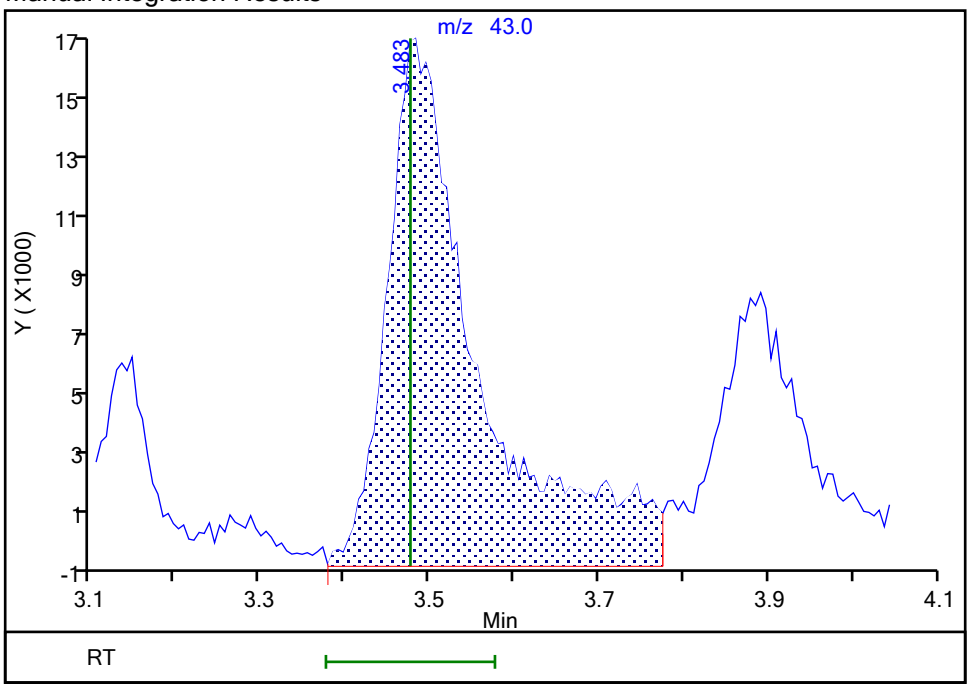
Processing Integration Results

RT: 3.48
Area: 112128
Amount: 19.939760
Amount Units: ug/l



Manual Integration Results

RT: 3.48
Area: 119641
Amount: 19.115609
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:49:46
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

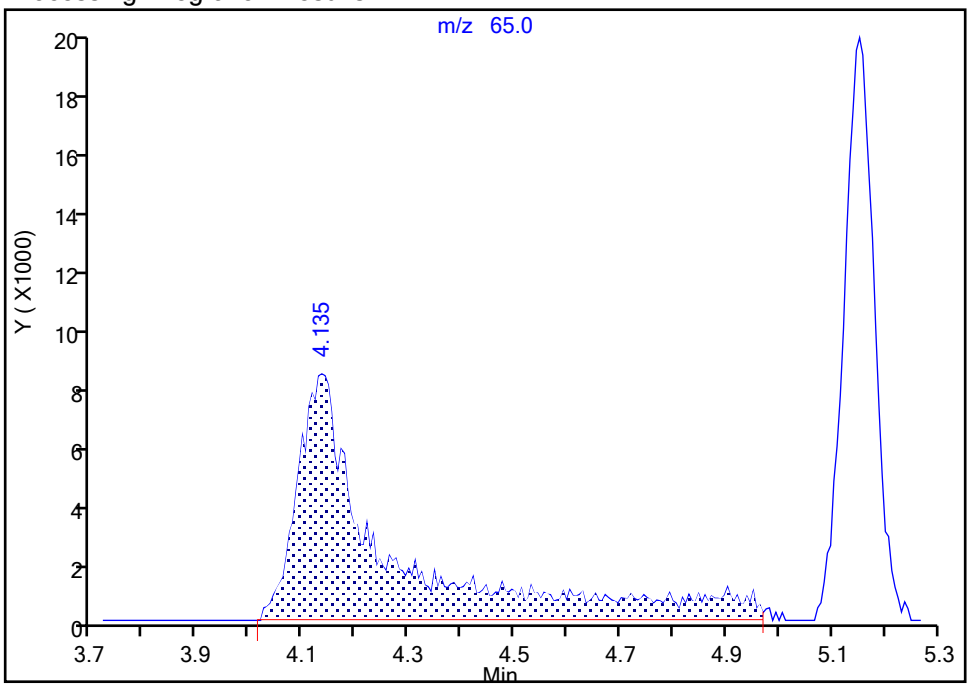
Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X14.D
Injection Date: 21-Mar-2023 05:02:30 Instrument ID: 19930
Lims ID: IC std4
Client ID:
Operator ID: mec29284 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 26 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

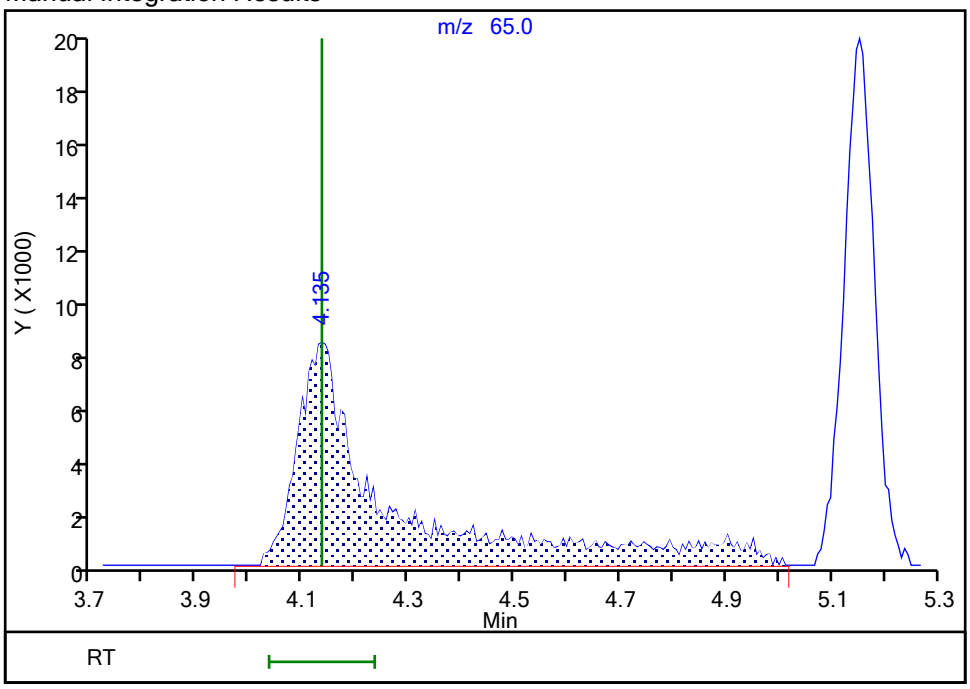
Processing Integration Results

RT: 4.14
Area: 97150
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 4.14
Area: 97646
Amount: 50.000000
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 16:08:28
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X15.D
Lims ID: IC std3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 21-Mar-2023 05:22:30 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0079468-016
Operator ID: mec29284 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 21-Mar-2023 17:37:54 Calib Date: 21-Mar-2023 06:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1651

First Level Reviewer: K4WN Date: 21-Mar-2023 15:54:07

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.898	1.898	0.000	99	86495	1.00	0.99	
4 Chloromethane	50	2.093	2.087	0.006	99	93366	1.00	0.9862	
5 Vinyl chloride	62	2.209	2.203	0.006	98	92540	1.00	1.00	
6 Butadiene	39	2.215	2.209	0.006	95	85079	1.00	1.01	
7 Bromomethane	94	2.532	2.526	0.006	92	69186	1.00	0.9662	
8 Chloroethane	64	2.611	2.599	0.012	99	56481	1.00	1.01	
9 Dichlorofluoromethane	67	2.843	2.837	0.006	97	148598	1.00	0.9887	
10 Trichlorofluoromethane	101	2.897	2.898	-0.001	96	147043	1.00	0.9861	
11 Ethyl ether	59	3.135	3.135	0.000	93	48693	1.00	1.00	
13 1,2-Dichloro-1,1,2-trifluoroetha	67	3.233	3.227	0.006	90	82703	1.00	0.99	
14 Acrolein	56	3.318	3.306	0.012	94	347847	50.0	48.9	
15 1,1-Dichloroethene	96	3.440	3.434	0.006	98	59105	1.00	0.9791	
17 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.483	3.477	0.006	91	67263	1.00	0.9789	
16 Acetone	43	3.495	3.477	0.018	56	84658	10.0	9.86	M
18 Iodomethane	142	3.635	3.629	0.006	100	128674	1.00	0.9828	
19 Ethyl bromide	108	3.659	3.660	-0.001	99	56502	1.00	1.00	
20 Carbon disulfide	76	3.739	3.733	0.006	100	164019	1.00	0.9690	
23 Methyl acetate	43	3.891	3.879	0.012	26	28713	1.00	0.9339	M
24 3-Chloro-1-propene	41	3.909	3.897	0.012	88	96478	1.00	0.9492	
25 Methylene Chloride	84	4.092	4.086	0.006	93	64247	1.00	1.00	
* 26 t-Butyl alcohol-d10 (IS)	65	4.178	4.135	0.043	98	134008	50.0	50.0	
27 2-Methyl-2-propanol	59	4.257	4.263	-0.006	82	43696	20.0	15.6	
28 Acrylonitrile	53	4.440	4.416	0.024	98	25512	2.50	2.44	
29 Methyl tert-butyl ether	73	4.482	4.477	0.005	98	156908	1.00	1.01	
30 trans-1,2-Dichloroethene	96	4.501	4.495	0.006	98	67605	1.00	1.00	
31 Hexane	57	4.921	4.915	0.006	94	88054	1.00	0.9822	
32 1,1-Dichloroethane	63	5.159	5.147	0.012	96	122273	1.00	0.99	
35 Isopropyl ether	45	5.220	5.214	0.006	93	207307	1.00	1.01	
36 2-Chloro-1,3-butadiene	53	5.269	5.263	0.006	93	103414	1.00	0.99	
37 Tert-butyl ethyl ether	59	5.744	5.751	-0.007	97	149693	1.00	1.05	
38 2-Butanone (MEK)	43	5.970	5.958	0.012	96	155219	10.0	9.79	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
39 cis-1,2-Dichloroethene	96	5.994	5.982	0.012	82	74915	1.00	1.01	
40 2,2-Dichloropropane	77	6.007	5.995	0.012	78	109766	1.00	0.9794	
43 Propionitrile	54	6.068	6.056	0.012	97	76235	20.0	20.7	
S 41 1,2-Dichloroethene, Total	100				0			2.00	
45 Methacrylonitrile	67	6.250	6.244	0.006	91	161032	10.0	9.53	
46 Chlorobromomethane	128	6.324	6.318	0.006	88	34201	1.00	0.9895	
47 Tetrahydrofuran	71	6.342	6.330	0.012	78	24916	5.00	5.12	
48 Chloroform	83	6.470	6.464	0.006	95	126047	1.00	1.00	
$ 49 Dibromofluoromethane (Surr)	113	6.683	6.677	0.006	94	628564	10.0	10.1	
50 1,1,1-Trichloroethane	97	6.702	6.690	0.012	97	116847	1.00	0.9770	
51 Cyclohexane	56	6.799	6.793	0.006	91	110675	1.00	0.9728	
53 1,1-Dichloropropene	75	6.909	6.903	0.006	91	91929	1.00	0.9880	
54 Carbon tetrachloride	117	6.909	6.909	0.000	95	107065	1.00	0.9671	
55 Isobutyl alcohol	41	7.104	7.092	0.012	36	43526	50.0	43.5	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.128	7.135	-0.007	67	120346	10.0	10.2	
57 Benzene	78	7.165	7.165	0.000	96	270461	1.00	1.00	
58 1,2-Dichloroethane	62	7.238	7.238	0.000	97	82648	1.00	0.99	
60 Tert-amyl methyl ether	73	7.360	7.354	0.006	97	116974	1.00	1.06	
* 61 Fluorobenzene (IS)	96	7.567	7.567	0.000	98	2343275	10.0	10.0	
62 n-Heptane	43	7.586	7.580	0.006	39	84633	1.00	0.9056	
63 n-Butanol	56	8.018	7.976	0.042	79	59654	87.5	82.4	
64 Trichloroethene	95	8.049	8.049	0.000	95	74939	1.00	0.9782	
65 Methylcyclohexane	83	8.360	8.360	0.000	91	119159	1.00	0.9444	
66 1,2-Dichloropropane	63	8.378	8.378	0.000	89	68300	1.00	1.00	
67 Methyl methacrylate	69	8.482	8.464	0.018	88	28442	1.00	0.8305	
69 Dibromomethane	93	8.494	8.488	0.006	92	35015	1.00	1.00	
68 1,4-Dioxane	88	8.634	8.537	0.097	41	15576	50.0	69.2	
71 Dichlorobromomethane	83	8.726	8.726	0.000	97	87831	1.00	0.9678	
72 2-Nitropropane	41	9.000	8.994	0.006	99	54719	5.00	4.47	
75 1-Bromo-2-chloroethane	63	9.116	9.122	-0.006	99	62211	1.00	0.9631	
76 cis-1,3-Dichloropropene	75	9.280	9.280	0.000	94	102636	1.00	0.9791	
77 4-Methyl-2-pentanone (MIBK)	43	9.457	9.451	0.006	98	438008	10.0	9.32	
$ 78 Toluene-d8 (Surr)	98	9.591	9.591	0.000	94	2341910	10.0	10.0	
79 Toluene	92	9.671	9.671	-0.001	98	182395	1.00	1.01	
97 trans-1,3-Dichloropropene	75	9.933	9.933	0.000	95	85183	1.00	0.9714	
99 Ethyl methacrylate	69	10.000	9.994	0.006	89	65507	1.00	0.9626	
S 98 1,3-Dichloropropene, Total	100				0			1.95	
100 1,1,2-Trichloroethane	97	10.140	10.134	0.006	91	50506	1.00	1.02	
101 Tetrachloroethene	166	10.225	10.225	0.000	98	96104	1.00	0.9876	
102 1,3-Dichloropropane	76	10.305	10.299	0.006	91	81544	1.00	1.00	
103 2-Hexanone	43	10.359	10.353	0.006	98	315875	10.0	9.64	
105 Chlorodibromomethane	129	10.518	10.518	0.000	91	64701	1.00	0.9515	
106 Ethylene Dibromide	107	10.628	10.628	0.000	97	48995	1.00	1.02	
* 107 Chlorobenzene-d5 (IS)	117	11.060	11.061	-0.001	86	1818962	10.0	10.0	
108 1-Chlorohexane	91	11.073	11.073	0.000	96	99428	1.00	0.9562	
109 Chlorobenzene	112	11.091	11.091	0.000	96	203081	1.00	0.9787	
111 1,1,1,2-Tetrachloroethane	131	11.170	11.170	0.000	93	75882	1.00	0.99	
112 Ethylbenzene	91	11.176	11.176	0.000	99	346280	1.00	0.9850	
S 110 Xylenes, Total	106				0			3.00	
113 m-Xylene & p-Xylene	106	11.292	11.292	0.000	93	280576	2.00	2.00	
114 o-Xylene	106	11.621	11.621	0.000	96	136591	1.00	1.00	
115 Styrene	104	11.640	11.634	0.006	95	201308	1.00	0.9476	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
116 Bromoform	173	11.792	11.792	0.000	96	41999	1.00	0.9480	
117 Isopropylbenzene	105	11.920	11.920	0.000	96	350685	1.00	0.9754	
$ 120 4-Bromofluorobenzene (Surr)	95	12.066	12.067	-0.001	96	852245	10.0	9.98	
121 1,1,2,2-Tetrachloroethane	83	12.164	12.164	0.000	96	62163	1.00	1.00	
122 Bromobenzene	156	12.182	12.182	0.000	92	89737	1.00	0.9662	
123 trans-1,4-Dichloro-2-butene	53	12.194	12.188	0.006	95	166532	10.0	9.01	M
124 1,2,3-Trichloropropane	110	12.213	12.213	0.000	82	17353	1.00	0.9871	
125 N-Propylbenzene	91	12.249	12.249	0.000	99	392220	1.00	0.9621	
126 2-Chlorotoluene	126	12.329	12.329	0.000	97	85856	1.00	0.9756	
127 1,3,5-Trimethylbenzene	105	12.389	12.384	0.005	95	301256	1.00	0.9863	
128 4-Chlorotoluene	126	12.420	12.420	0.000	98	85059	1.00	0.9686	
129 tert-Butylbenzene	134	12.627	12.627	0.000	93	72093	1.00	0.9526	
130 Pentachloroethane	167	12.658	12.664	-0.006	80	55674	1.00	0.9485	
131 1,2,4-Trimethylbenzene	105	12.670	12.670	0.000	97	303547	1.00	0.9676	
132 sec-Butylbenzene	105	12.792	12.792	0.000	94	372950	1.00	0.9603	
133 1,3-Dichlorobenzene	146	12.895	12.890	0.005	99	167155	1.00	0.9579	
134 4-Isopropyltoluene	119	12.902	12.902	0.000	97	333364	1.00	0.9608	
* 135 1,4-Dichlorobenzene-d4	152	12.944	12.944	0.000	94	1128630	10.0	10.0	
136 1,4-Dichlorobenzene	146	12.963	12.963	0.000	96	163590	1.00	0.9590	
137 1,2,3-Trimethylbenzene	120	12.975	12.975	0.000	98	137229	1.00	0.9460	
138 Benzyl chloride	126	13.042	13.042	0.000	99	23595	1.00	0.9619	
139 n-Butylbenzene	92	13.188	13.188	0.000	97	140431	1.00	0.9214	
140 1,2-Dichlorobenzene	146	13.225	13.225	0.000	98	156806	1.00	0.9466	
142 1,2-Dibromo-3-Chloropropane	155	13.767	13.767	0.000	85	10369	1.00	1.02	
143 1,3,5-Trichlorobenzene	180	13.895	13.889	0.006	98	126816	1.00	0.9594	
144 1,2,4-Trichlorobenzene	180	14.316	14.316	0.000	93	100826	1.00	0.9485	
145 Hexachlorobutadiene	225	14.395	14.395	0.000	96	57361	1.00	0.9402	
146 Naphthalene	128	14.499	14.493	0.006	97	201570	1.00	1.02	
147 1,2,3-Trichlorobenzene	180	14.639	14.639	0.000	96	95399	1.00	0.9884	
155 2-Methylnaphthalene	142		0.000				ND	ND	
156 p-Diethylbenzene	1		0.000				ND	ND	
161 Pentane	43		0.000				ND	ND	
150 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
165 Isopropyl alcohol	45		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MSV_LL_#1_826_00068	Amount Added:	2.00	Units: uL	
MSV_LL_#2_826_00077	Amount Added:	2.00	Units: uL	
MSV_LL_GAS826_00141	Amount Added:	2.00	Units: uL	
MSV_LLcentISS_00006	Amount Added:	5.00	Units: uL	Run Reagent

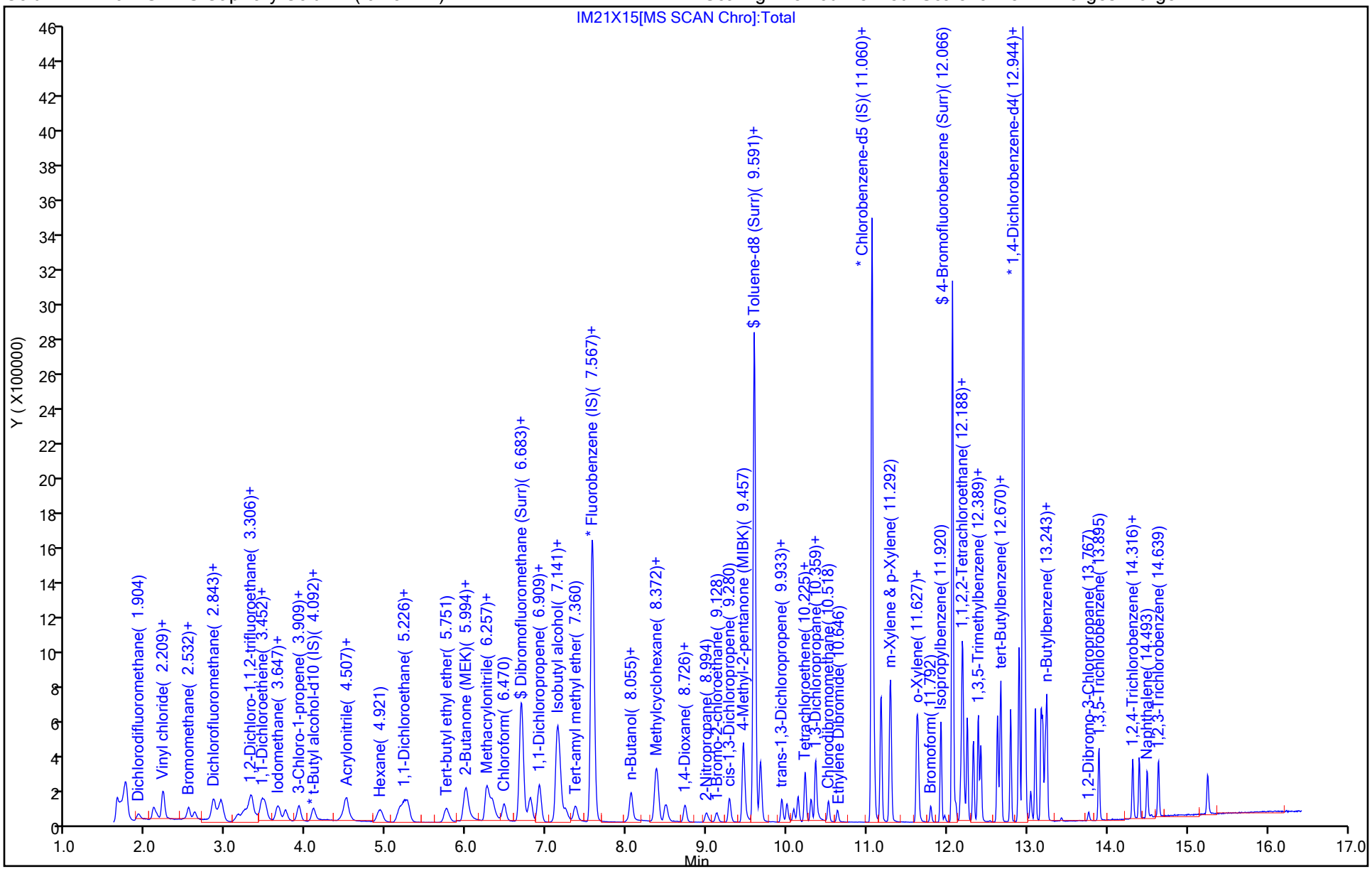
Report Date: 21-Mar-2023 17:37:55 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X15.D

Injection Date:	21-Mar-2023 05:22:30	Instrument ID:	19930	Operator ID:	mec29284
Lims ID:	IC std3			Worklist Smp#:	16
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

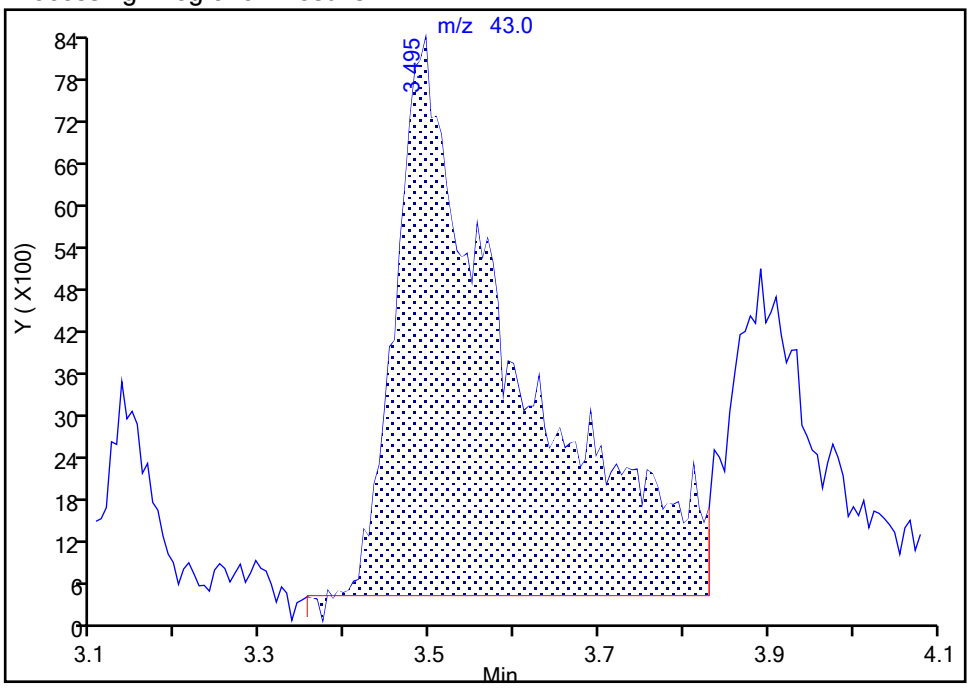
Data File:	\\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X15.D				
Injection Date:	21-Mar-2023 05:22:30	Instrument ID:	19930		
Lims ID:	IC std3				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	15	Worklist Smp#:	16
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

16 Acetone, CAS: 67-64-1

Signal: 1

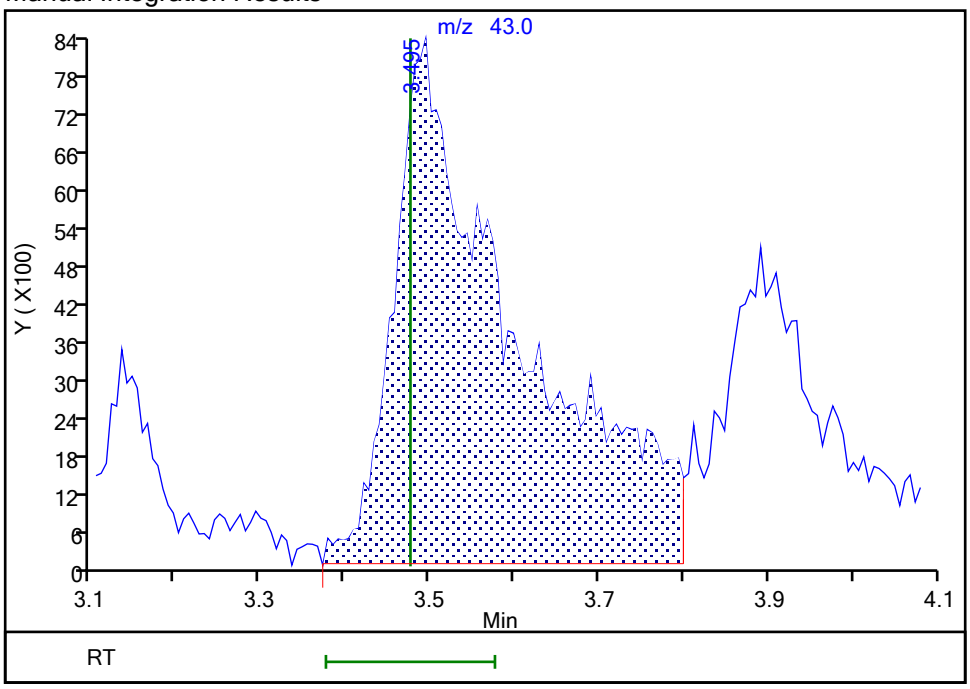
Processing Integration Results

RT: 3.49
Area: 78570
Amount: 8.960887
Amount Units: ug/l



Manual Integration Results

RT: 3.49
Area: 84658
Amount: 9.855981
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:52:06

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

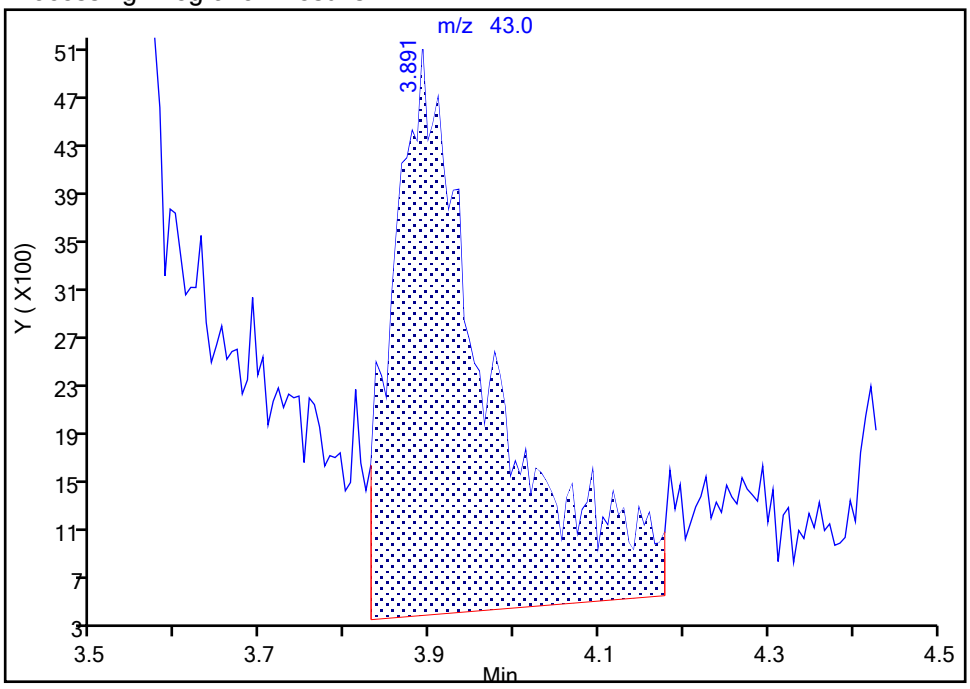
Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X15.D
Injection Date: 21-Mar-2023 05:22:30 Instrument ID: 19930
Lims ID: IC std3
Client ID:
Operator ID: mec29284 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

23 Methyl acetate, CAS: 79-20-9

Signal: 1

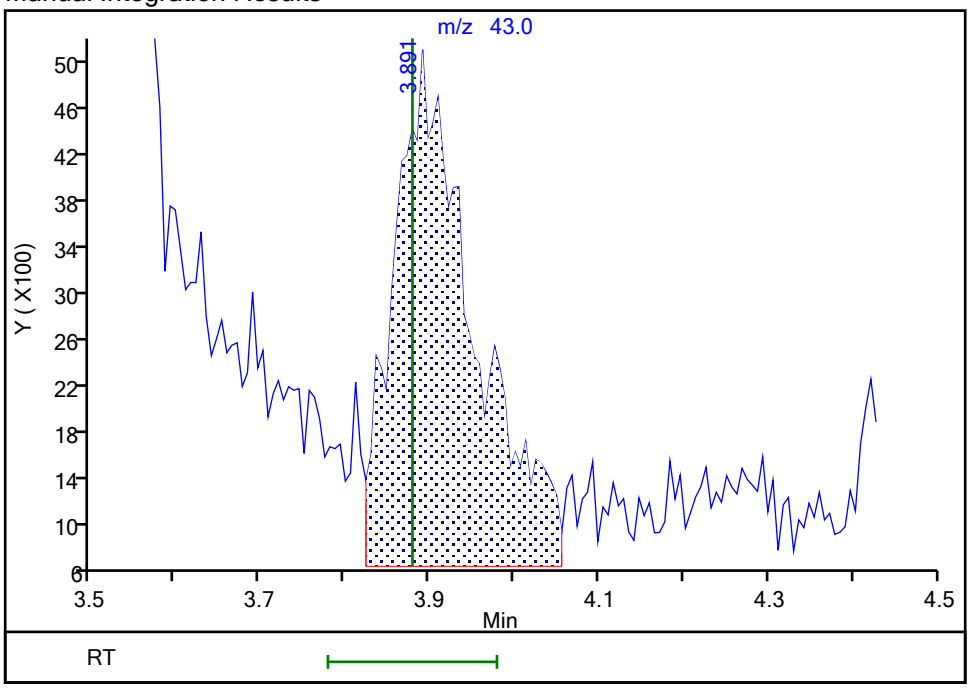
Processing Integration Results

RT: 3.89
Area: 37538
Amount: 1.249303
Amount Units: ug/l



Manual Integration Results

RT: 3.89
Area: 28713
Amount: 0.933875
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:52:27
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

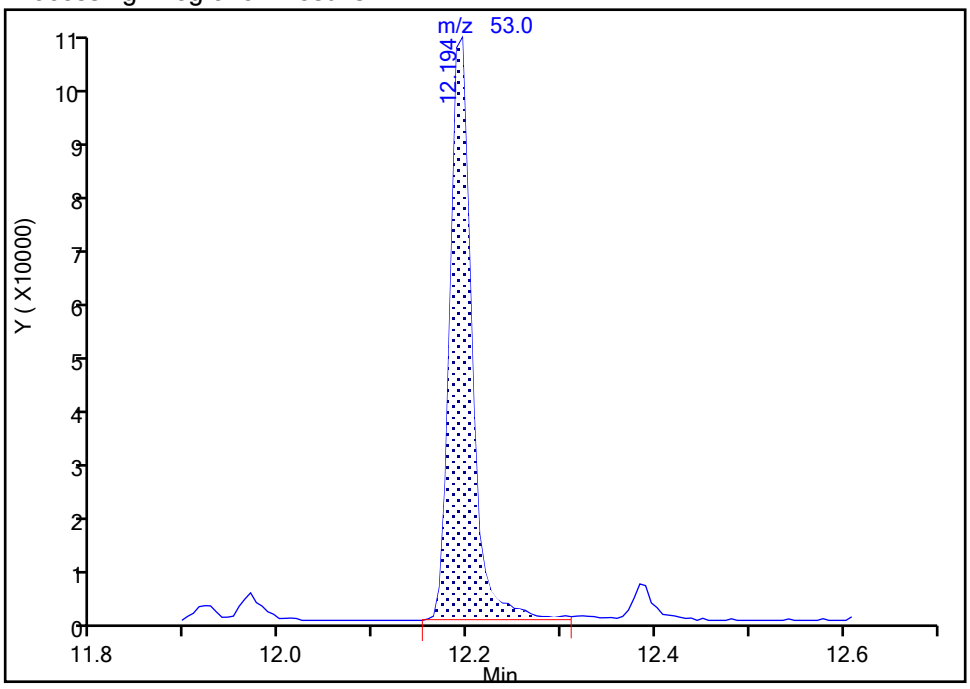
Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X15.D
Injection Date: 21-Mar-2023 05:22:30 Instrument ID: 19930
Lims ID: IC std3
Client ID:
Operator ID: mec29284 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

123 trans-1,4-Dichloro-2-butene, CAS: 110-57-6

Signal: 1

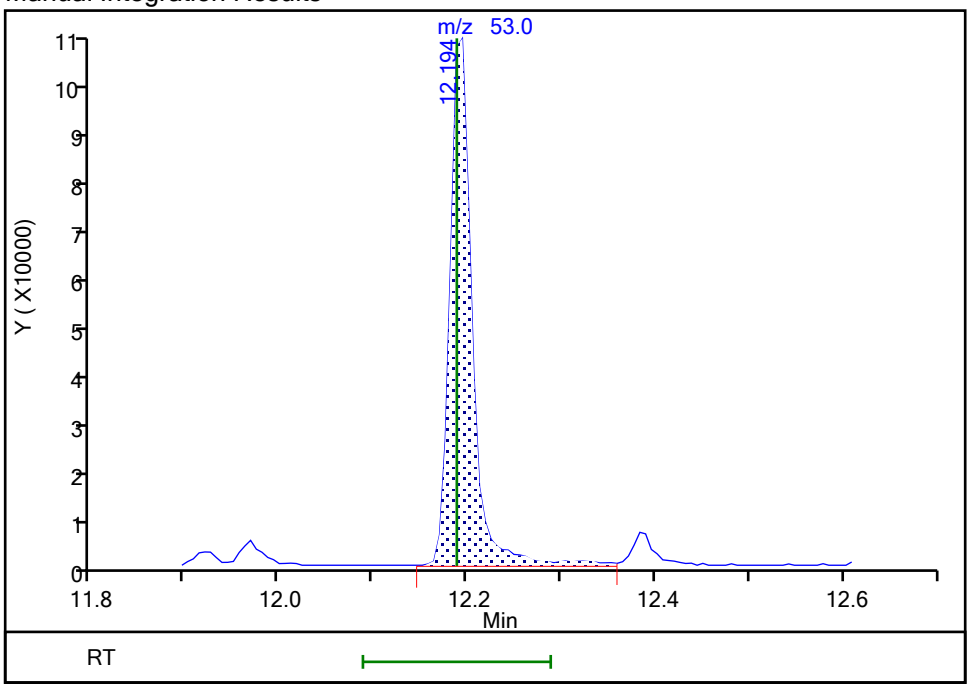
Processing Integration Results

RT: 12.19
Area: 164852
Amount: 8.864562
Amount Units: ug/l



Manual Integration Results

RT: 12.19
Area: 166532
Amount: 9.014690
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 16:27:01
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X16.D
Lims ID: IC std2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 21-Mar-2023 05:42:30 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0079468-017
Operator ID: mec29284 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 21-Mar-2023 17:38:00 Calib Date: 21-Mar-2023 06:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1651

First Level Reviewer: K4WN Date: 21-Mar-2023 15:56:39

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.910	1.898	0.012	99	41469	0.5000	0.4816	
4 Chloromethane	50	2.093	2.087	0.006	99	48039	0.5000	0.5146	
5 Vinyl chloride	62	2.209	2.203	0.006	97	46214	0.5000	0.5077	
6 Butadiene	39	2.221	2.209	0.012	97	42370	0.5000	0.5088	
7 Bromomethane	94	2.532	2.526	0.006	90	35058	0.5000	0.4965	
8 Chloroethane	64	2.611	2.599	0.012	99	27735	0.5000	0.5013	
9 Dichlorofluoromethane	67	2.849	2.837	0.012	96	75447	0.5000	0.5091	
10 Trichlorofluoromethane	101	2.910	2.898	0.012	97	73208	0.5000	0.4979	
11 Ethyl ether	59	3.147	3.135	0.012	92	23667	0.5000	0.4915	
13 1,2-Dichloro-1,1,2-trifluoroetha	67	3.233	3.227	0.006	88	41867	0.5000	0.5094	
14 Acrolein	56	3.318	3.306	0.012	94	186326	25.0	22.9	
15 1,1-Dichloroethene	96	3.452	3.434	0.018	98	31308	0.5000	0.5260	
17 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.489	3.477	0.012	91	33597	0.5000	0.4959	
16 Acetone	43	3.483	3.477	0.006	85	53587	5.00	5.45	
18 Iodomethane	142	3.635	3.629	0.006	99	67478	0.5000	0.5227	
19 Ethyl bromide	108	3.666	3.660	0.006	81	28335	0.5010	0.5101	
20 Carbon disulfide	76	3.745	3.733	0.012	100	86787	0.5000	0.5200	
23 Methyl acetate	43	3.885	3.879	0.006	23	15241	0.5000	0.4328	M
24 3-Chloro-1-propene	41	3.916	3.897	0.019	88	53339	0.5000	0.5322	
25 Methylene Chloride	84	4.092	4.086	0.006	96	32518	0.5000	0.5142	
* 26 t-Butyl alcohol-d10 (IS)	65	4.117	4.135	-0.018	94	153492	50.0	50.0	
27 2-Methyl-2-propanol	59	4.233	4.263	-0.030	98	39817	10.0	12.4	
28 Acrylonitrile	53	4.464	4.416	0.048	60	14375	1.25	1.20	M
29 Methyl tert-butyl ether	73	4.483	4.477	0.006	95	78046	0.5000	0.5100	
30 trans-1,2-Dichloroethene	96	4.495	4.495	0.000	98	35040	0.5000	0.5232	
31 Hexane	57	4.921	4.915	0.006	95	43907	0.5000	0.4967	
32 1,1-Dichloroethane	63	5.159	5.147	0.012	95	60447	0.5000	0.4975	
35 Isopropyl ether	45	5.220	5.214	0.006	91	104135	0.5000	0.5132	
36 2-Chloro-1,3-butadiene	53	5.269	5.263	0.006	93	52111	0.5000	0.5063	
37 Tert-butyl ethyl ether	59	5.751	5.751	0.000	96	67835	0.5000	0.4820	
38 2-Butanone (MEK)	43	5.964	5.958	0.006	98	80192	5.00	4.41	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
39 cis-1,2-Dichloroethene	96	6.001	5.982	0.019	83	37492	0.5000	0.5122	
40 2,2-Dichloropropane	77	6.001	5.995	0.006	72	56427	0.5000	0.5106	
43 Propionitrile	54	6.068	6.056	0.012	91	39618	10.0	9.40	
S 41 1,2-Dichloroethene, Total	100				0			1.04	
45 Methacrylonitrile	67	6.250	6.244	0.006	90	77948	5.00	4.03	
46 Chlorobromomethane	128	6.330	6.318	0.012	91	17972	0.5000	0.5273	
47 Tetrahydrofuran	71	6.348	6.330	0.018	79	12890	2.50	2.31	
48 Chloroform	83	6.470	6.464	0.006	95	64800	0.5000	0.5191	
$ 49 Dibromofluoromethane (Surr)	113	6.683	6.677	0.006	94	615761	10.0	10.1	
50 1,1,1-Trichloroethane	97	6.702	6.690	0.012	97	59704	0.5000	0.5063	
51 Cyclohexane	56	6.799	6.793	0.006	91	56413	0.5000	0.5029	
53 1,1-Dichloropropene	75	6.909	6.903	0.006	90	46595	0.5000	0.5078	
54 Carbon tetrachloride	117	6.909	6.909	0.000	95	54150	0.5000	0.4961	
55 Isobutyl alcohol	41	7.067	7.092	-0.025	83	34050	25.0	29.7	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.128	7.135	-0.007	83	118620	10.0	10.2	
57 Benzene	78	7.165	7.165	0.000	96	137309	0.5000	0.5125	
58 1,2-Dichloroethane	62	7.232	7.238	-0.006	96	41807	0.5000	0.5088	
60 Tert-amyl methyl ether	73	7.366	7.354	0.012	98	50293	0.5000	0.4631	a
* 61 Fluorobenzene (IS)	96	7.567	7.567	0.000	99	2310552	10.0	10.0	
62 n-Heptane	43	7.586	7.580	0.006	37	45320	0.5000	0.4918	
63 n-Butanol	56	7.988	7.976	0.012	95	32752	43.8	39.5	M
64 Trichloroethene	95	8.055	8.049	0.006	96	39424	0.5000	0.5219	
65 Methylcyclohexane	83	8.360	8.360	0.000	90	62717	0.5000	0.5041	
66 1,2-Dichloropropane	63	8.372	8.378	-0.006	89	33813	0.5000	0.5009	
67 Methyl methacrylate	69	8.482	8.464	0.018	88	14764	0.5000	0.3764	
69 Dibromomethane	93	8.494	8.488	0.006	89	17182	0.5000	0.4974	
68 1,4-Dioxane	88	8.518	8.537	-0.019	33	6296	25.0	24.4	M
71 Dichlorobromomethane	83	8.726	8.726	0.000	98	44403	0.5000	0.4962	
72 2-Nitropropane	41	8.994	8.994	0.000	96	30678	2.50	2.19	
75 1-Bromo-2-chloroethane	63	9.128	9.122	0.006	98	32122	0.5000	0.5044	
76 cis-1,3-Dichloropropene	75	9.280	9.280	0.000	93	48720	0.5000	0.4713	
77 4-Methyl-2-pentanone (MIBK)	43	9.457	9.451	0.006	98	220574	5.00	4.10	
$ 78 Toluene-d8 (Surr)	98	9.591	9.591	0.000	94	2318546	10.0	10.1	
79 Toluene	92	9.671	9.671	0.000	98	89746	0.5000	0.5082	
97 trans-1,3-Dichloropropene	75	9.939	9.933	0.006	95	40458	0.5000	0.4717	
99 Ethyl methacrylate	69	10.000	9.994	0.006	88	33758	0.5000	0.5072	
S 98 1,3-Dichloropropene, Total	100				0			0.9431	
100 1,1,2-Trichloroethane	97	10.140	10.134	0.006	94	24817	0.5000	0.5139	
101 Tetrachloroethene	166	10.231	10.225	0.006	98	49201	0.5000	0.5169	
102 1,3-Dichloropropane	76	10.305	10.299	0.006	91	40890	0.5000	0.5136	
103 2-Hexanone	43	10.359	10.353	0.006	98	151162	5.00	4.03	
105 Chlorodibromomethane	129	10.518	10.518	0.000	89	32144	0.5000	0.4833	
106 Ethylene Dibromide	107	10.634	10.628	0.006	99	23525	0.5000	0.5026	
* 107 Chlorobenzene-d5 (IS)	117	11.061	11.061	0.000	86	1779098	10.0	10.0	
108 1-Chlorohexane	91	11.073	11.073	0.000	95	53107	0.5000	0.5221	
109 Chlorobenzene	112	11.091	11.091	0.000	97	104524	0.5000	0.5150	
111 1,1,1,2-Tetrachloroethane	131	11.170	11.170	0.000	92	36378	0.5000	0.4875	
112 Ethylbenzene	91	11.176	11.176	0.000	98	176617	0.5000	0.5137	
S 110 Xylenes, Total	106				0			1.50	
113 m-Xylene & p-Xylene	106	11.292	11.292	0.000	93	136602	1.00	1.00	
114 o-Xylene	106	11.621	11.621	0.000	96	67339	0.5000	0.5027	
115 Styrene	104	11.640	11.634	0.006	95	101109	0.5000	0.4866	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
116 Bromoform	173	11.798	11.792	0.006	96	20086	0.5000	0.4635	
117 Isopropylbenzene	105	11.920	11.920	0.000	96	173040	0.5000	0.4921	
$ 120 4-Bromofluorobenzene (Surr)	95	12.066	12.067	-0.001	96	839517	10.0	10.1	
121 1,1,2,2-Tetrachloroethane	83	12.164	12.164	0.000	95	31254	0.5000	0.5156	
122 Bromobenzene	156	12.182	12.182	0.000	91	44356	0.5000	0.4901	
123 trans-1,4-Dichloro-2-butene	53	12.194	12.188	0.006	94	79110	5.00	3.74	
124 1,2,3-Trichloropropane	110	12.213	12.213	0.000	83	8741	0.5000	0.5102	
125 N-Propylbenzene	91	12.249	12.249	0.000	99	201563	0.5000	0.5074	
126 2-Chlorotoluene	126	12.329	12.329	0.000	97	42512	0.5000	0.4957	
127 1,3,5-Trimethylbenzene	105	12.390	12.384	0.006	94	147622	0.5000	0.4959	
128 4-Chlorotoluene	126	12.420	12.420	0.000	97	42302	0.5000	0.4943	
129 tert-Butylbenzene	134	12.627	12.627	0.000	93	36437	0.5000	0.4940	
130 Pentachloroethane	167	12.664	12.664	0.000	76	26396	0.5000	0.4615	
131 1,2,4-Trimethylbenzene	105	12.670	12.670	0.000	97	150530	0.5000	0.4924	
132 sec-Butylbenzene	105	12.792	12.792	0.000	94	183924	0.5000	0.4860	
133 1,3-Dichlorobenzene	146	12.896	12.890	0.006	97	81779	0.5000	0.4809	
134 4-Isopropyltoluene	119	12.902	12.902	0.000	97	162097	0.5000	0.4794	
* 135 1,4-Dichlorobenzene-d4	152	12.944	12.944	0.000	94	1099896	10.0	10.0	
136 1,4-Dichlorobenzene	146	12.963	12.963	0.000	95	82622	0.5000	0.4970	
137 1,2,3-Trimethylbenzene	120	12.975	12.975	0.000	97	71447	0.5000	0.5054	
138 Benzyl chloride	126	13.042	13.042	0.000	99	10655	0.5000	0.4457	
139 n-Butylbenzene	92	13.194	13.188	0.006	97	67525	0.5000	0.4546	
140 1,2-Dichlorobenzene	146	13.225	13.225	0.000	98	81474	0.5000	0.5047	
142 1,2-Dibromo-3-Chloropropane	155	13.767	13.767	0.000	84	5204	0.5000	0.5231	
143 1,3,5-Trichlorobenzene	180	13.895	13.889	0.006	97	61109	0.5000	0.4744	
144 1,2,4-Trichlorobenzene	180	14.316	14.316	0.000	93	48648	0.5000	0.4696	
145 Hexachlorobutadiene	225	14.395	14.395	0.000	96	29455	0.5000	0.4954	
146 Naphthalene	128	14.499	14.493	0.006	96	92567	0.5000	0.4800	
147 1,2,3-Trichlorobenzene	180	14.639	14.639	0.000	95	44557	0.5000	0.4737	
155 2-Methylnaphthalene	142		0.000				ND	ND	
156 p-Diethylbenzene	1		0.000				ND	ND	
161 Pentane	43		0.000				ND	ND	
150 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
165 Isopropyl alcohol	45		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_LL_#1_826_00068	Amount Added:	2.00	Units: uL	
MSV_LL_#2_826_00077	Amount Added:	2.00	Units: uL	
MSV_LL_GAS826_00141	Amount Added:	2.00	Units: uL	
MSV_LLcentISS_00006	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 21-Mar-2023 17:38:01 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X16.D

Injection Date: 21-Mar-2023 05:42:30 Instrument ID: 19930 Operator ID: mec29284

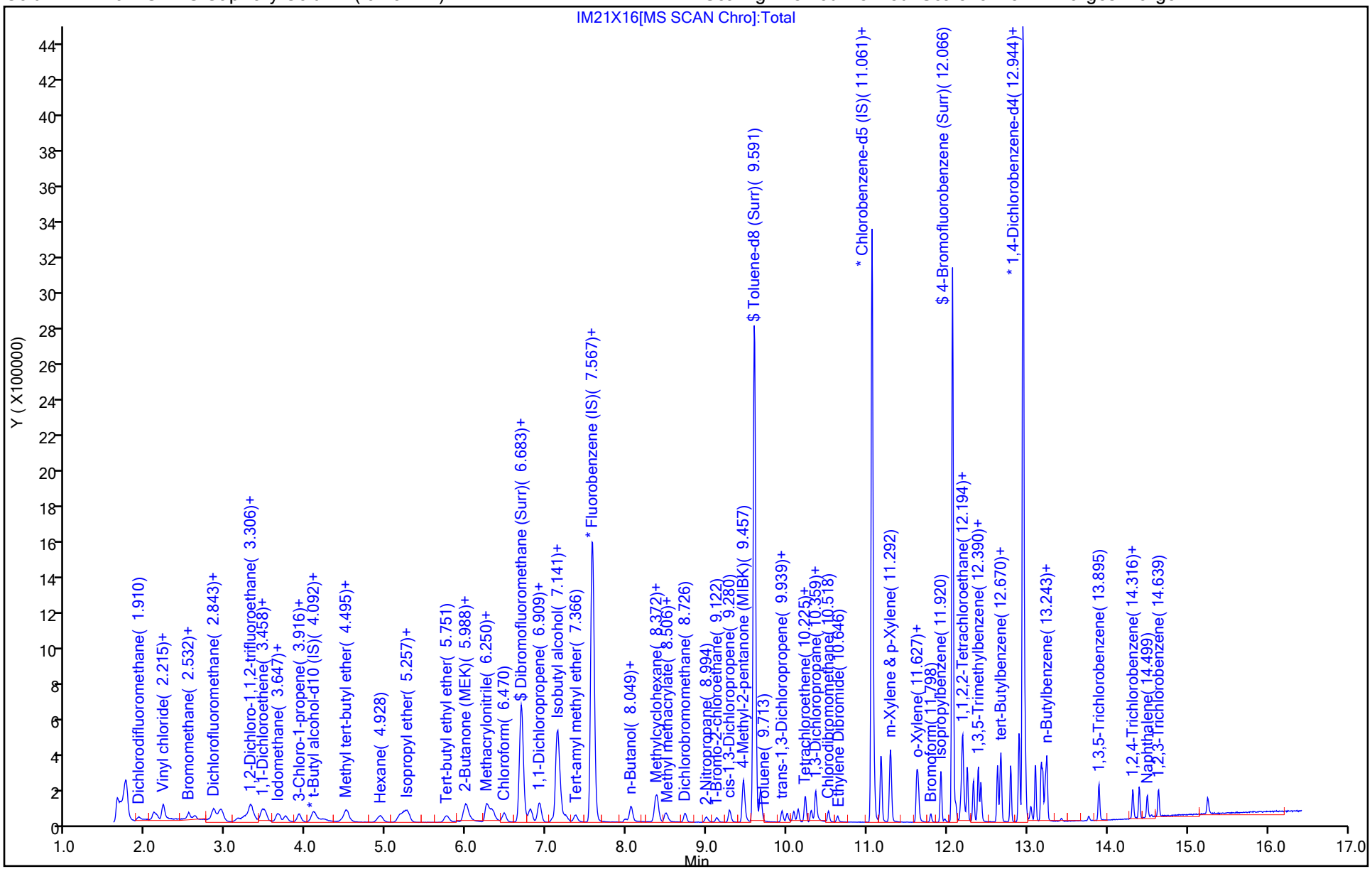
Lims ID: IC std2 Worklist Smp#: 17

Client ID:

Purge Vol: 25.000 mL Dil. Factor: 1.0000 ALS Bottle#: 16

Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

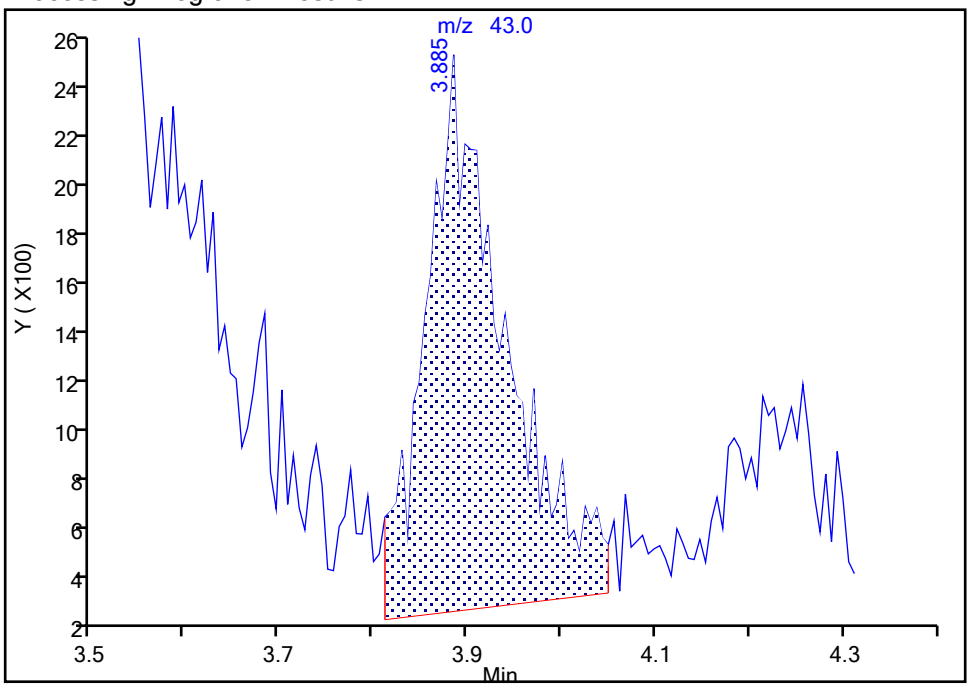
Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X16.D
Injection Date: 21-Mar-2023 05:42:30 Instrument ID: 19930
Lims ID: IC std2
Client ID:
Operator ID: mec29284 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

23 Methyl acetate, CAS: 79-20-9

Signal: 1

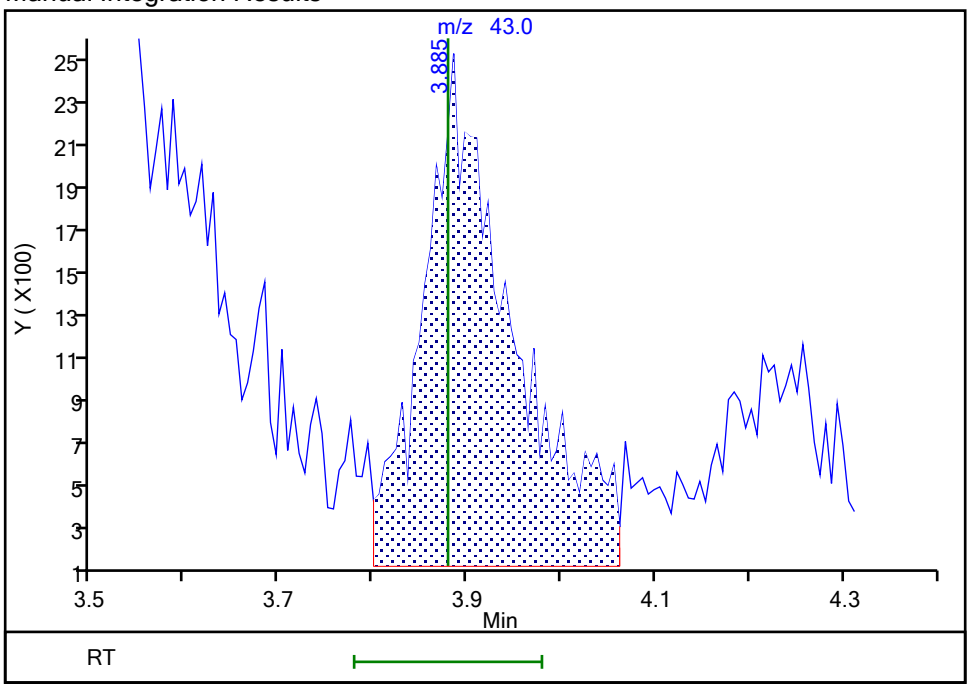
Processing Integration Results

RT: 3.89
Area: 13116
Amount: 0.397794
Amount Units: ug/l



Manual Integration Results

RT: 3.89
Area: 15241
Amount: 0.432782
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:54:48
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

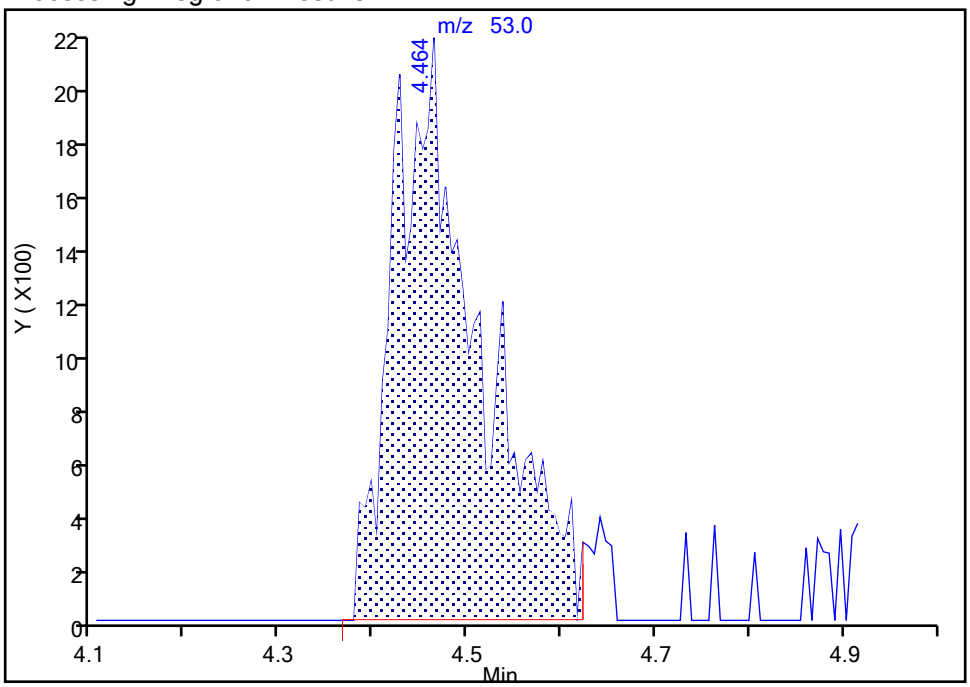
Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X16.D
Injection Date: 21-Mar-2023 05:42:30 Instrument ID: 19930
Lims ID: IC std2
Client ID:
Operator ID: mec29284 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

28 Acrylonitrile, CAS: 107-13-1

Signal: 1

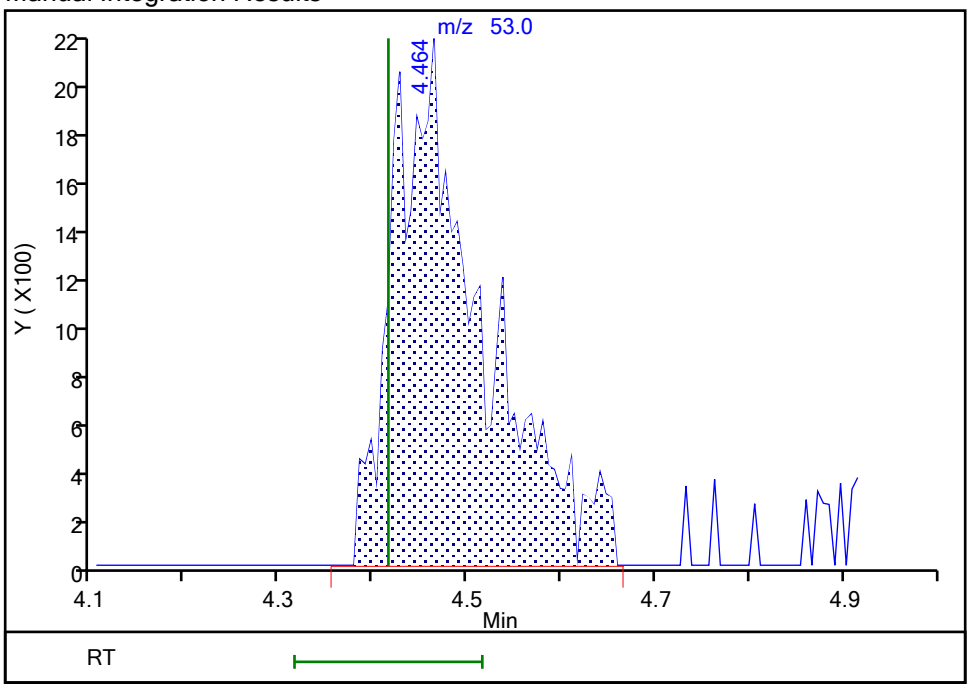
Processing Integration Results

RT: 4.46
Area: 13828
Amount: 1.145690
Amount Units: ug/l



Manual Integration Results

RT: 4.46
Area: 14375
Amount: 1.201628
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:55:01
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

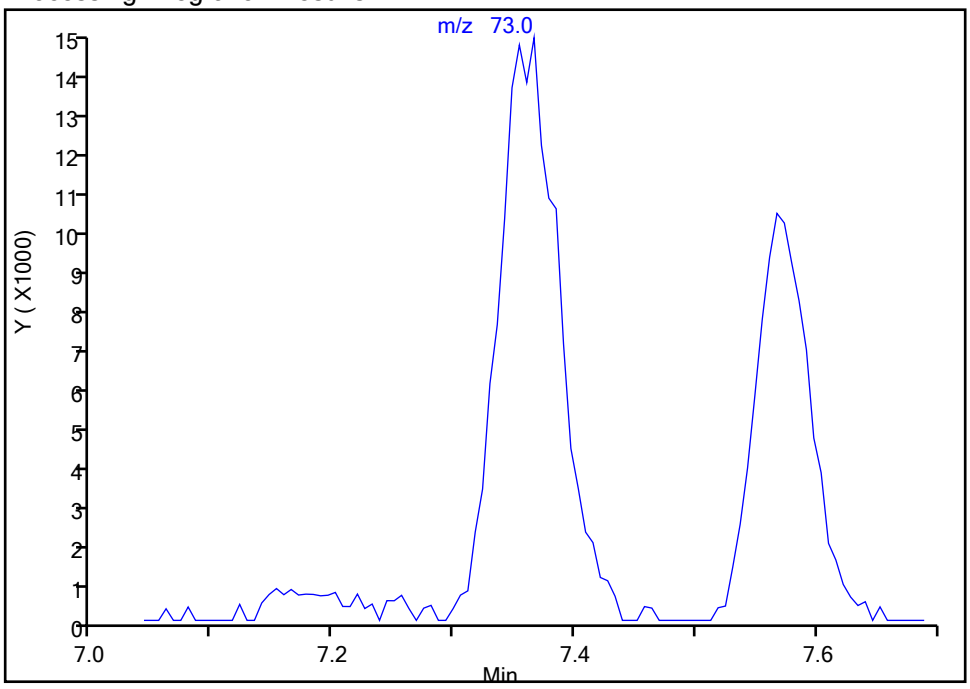
Data File:	\\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X16.D				
Injection Date:	21-Mar-2023 05:42:30	Instrument ID:	19930		
Lims ID:	IC std2				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	16	Worklist Smp#:	17
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

60 Tert-amyl methyl ether, CAS: 994-05-8

Signal: 1

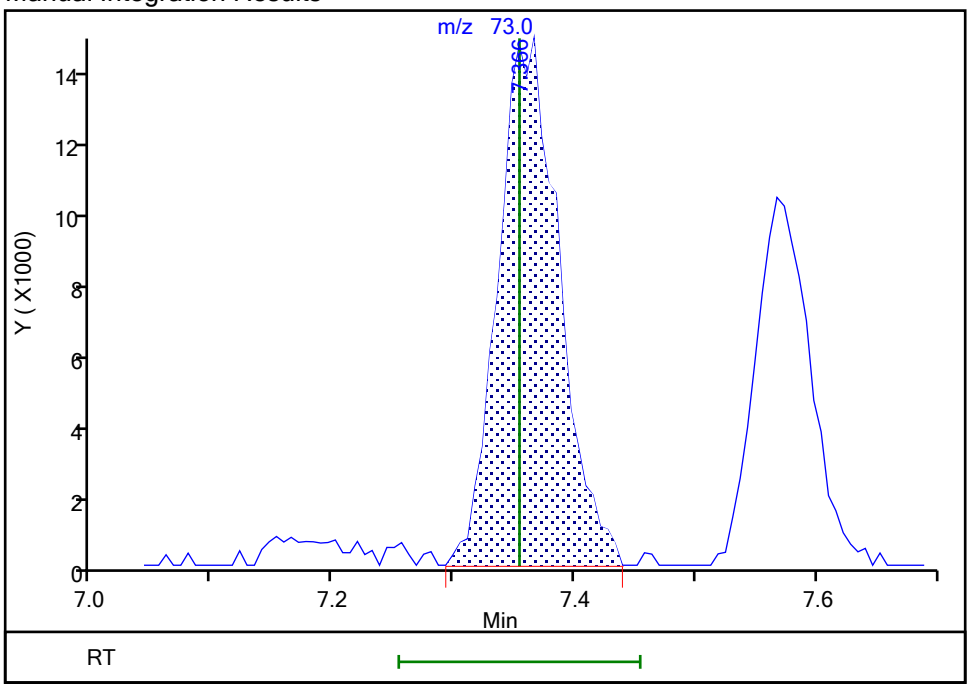
Processing Integration Results

Not Detected
Expected RT: 7.35



Manual Integration Results

RT: 7.37
Area: 50293
Amount: 0.463094
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:55:33
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

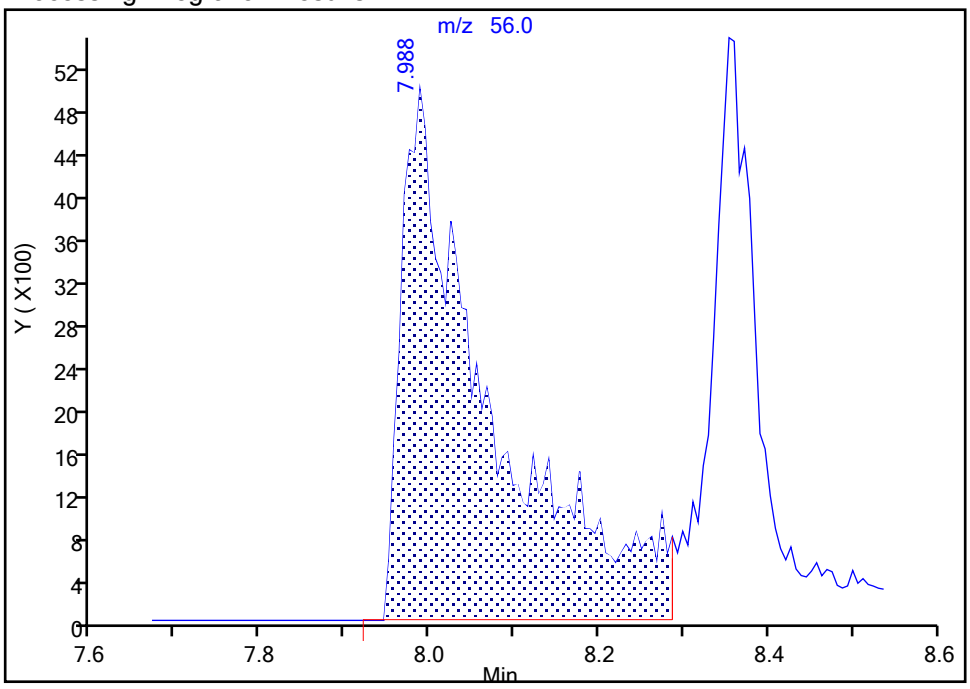
Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X16.D
Injection Date: 21-Mar-2023 05:42:30 Instrument ID: 19930
Lims ID: IC std2
Client ID:
Operator ID: mec29284 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

63 n-Butanol, CAS: 71-36-3

Signal: 1

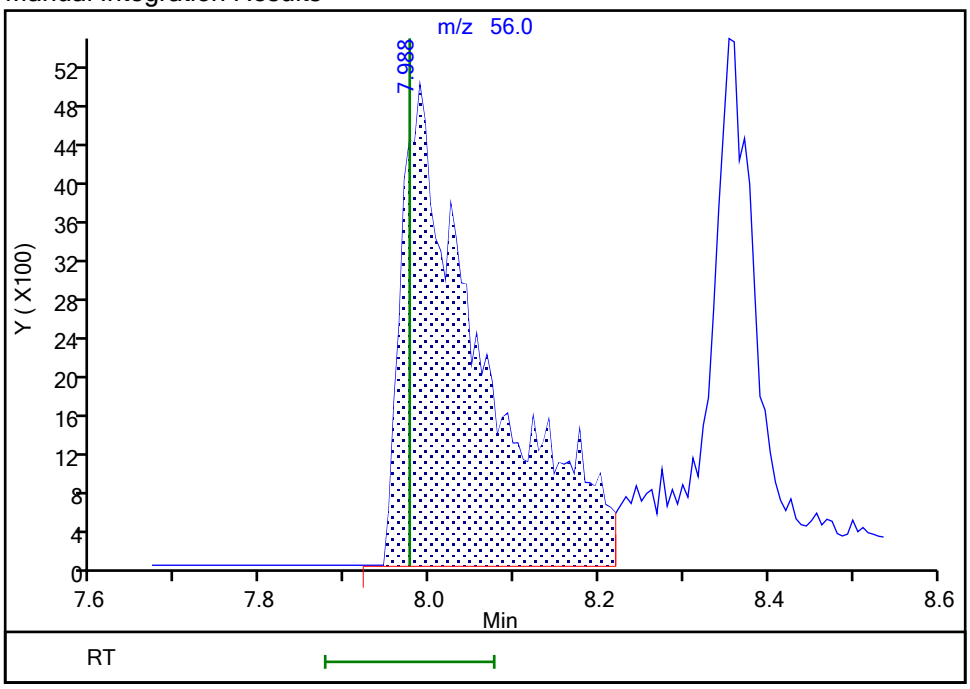
Processing Integration Results

RT: 7.99
Area: 35625
Amount: 43.941193
Amount Units: ug/l



Manual Integration Results

RT: 7.99
Area: 32752
Amount: 39.509341
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 16:07:35
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

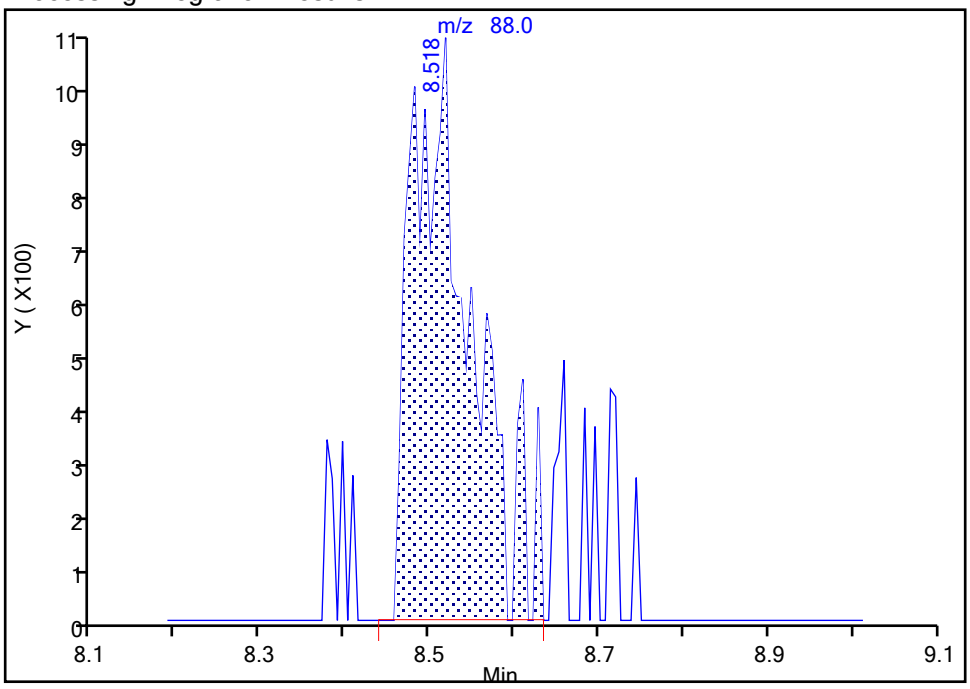
Data File:	\\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X16.D				
Injection Date:	21-Mar-2023 05:42:30	Instrument ID:	19930		
Lims ID:	IC std2				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	16	Worklist Smp#:	17
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

68 1,4-Dioxane, CAS: 123-91-1

Signal: 1

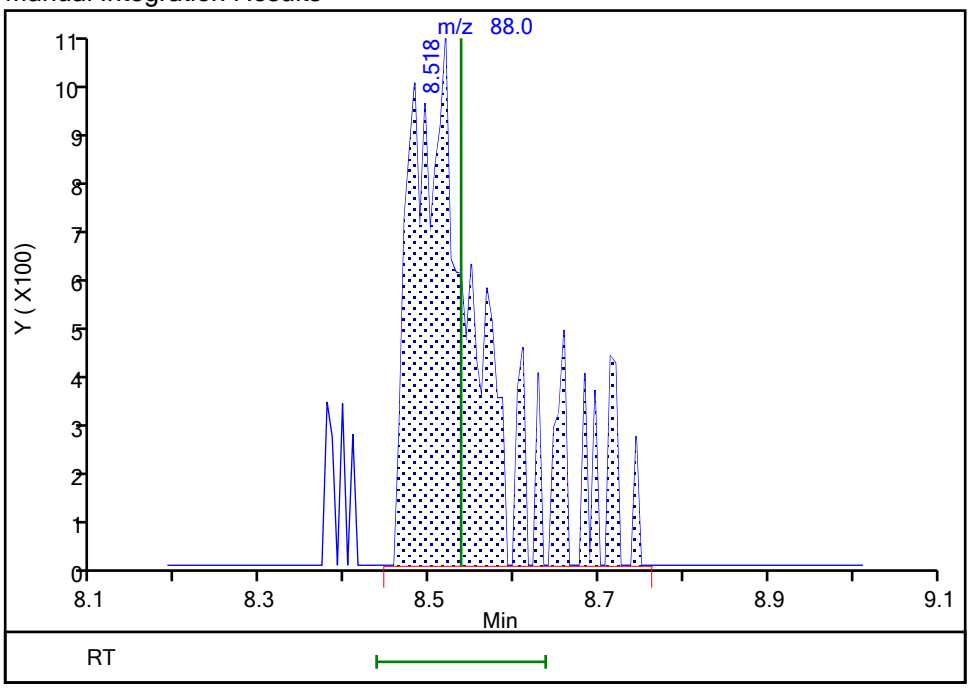
Processing Integration Results

RT: 8.52
Area: 5240
Amount: 21.167113
Amount Units: ug/l



Manual Integration Results

RT: 8.52
Area: 6296
Amount: 24.426812
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:56:02

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X17.D
Lims ID: IC std1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 21-Mar-2023 06:02:30 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0079468-018
Operator ID: mec29284 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 21-Mar-2023 17:38:06 Calib Date: 21-Mar-2023 06:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1651

First Level Reviewer: K4WN Date: 21-Mar-2023 16:07:19

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.904	1.898	0.006	98	17110	0.2000	0.2008	
4 Chloromethane	50	2.093	2.087	0.006	98	20747	0.2000	0.2246	
5 Vinyl chloride	62	2.209	2.203	0.006	92	18650	0.2000	0.2070	
6 Butadiene	39	2.215	2.209	0.006	93	19058	0.2000	0.2313	
7 Bromomethane	94	2.532	2.526	0.006	92	14521	0.2000	0.2078	
8 Chloroethane	64	2.605	2.599	0.006	95	11084	0.2000	0.2024	
9 Dichlorofluoromethane	67	2.837	2.837	0.000	94	32448	0.2000	0.2213	
10 Trichlorofluoromethane	101	2.898	2.898	0.000	95	30095	0.2000	0.2068	
11 Ethyl ether	59	3.141	3.135	0.006	91	9452	0.2000	0.1983	
13 1,2-Dichloro-1,1,2-trifluoroetha	67	3.221	3.227	-0.006	36	17475	0.2000	0.2149	
14 Acrolein	56	3.318	3.306	0.012	99	66213	10.0	9.87	
15 1,1-Dichloroethene	96	3.440	3.434	0.006	98	11991	0.2000	0.2036	
17 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.483	3.477	0.006	92	13036	0.2000	0.1944	
16 Acetone	43	3.495	3.477	0.018	94	22153	2.00	2.73	M
18 Iodomethane	142	3.641	3.629	0.012	98	25378	0.2000	0.1987	
19 Ethyl bromide	108	3.653	3.660	-0.007	52	10854	0.2004	0.1975	
20 Carbon disulfide	76	3.745	3.733	0.012	99	33647	0.2000	0.2037	
23 Methyl acetate	43	3.940	3.879	0.061	25	8017	0.2000	0.2763	M
24 3-Chloro-1-propene	41	3.910	3.897	0.013	86	20765	0.2000	0.2094	
25 Methylene Chloride	84	4.092	4.086	0.006	95	12493	0.2000	0.1996	
* 26 t-Butyl alcohol-d10 (IS)	65	4.123	4.135	-0.012	94	126445	50.0	50.0	
27 2-Methyl-2-propanol	59	4.251	4.263	-0.012	34	11132	4.00	4.22	M
28 Acrylonitrile	53	4.464	4.416	0.048	27	3733	0.5000	0.3788	
29 Methyl tert-butyl ether	73	4.489	4.477	0.012	92	30341	0.2000	0.2003	
30 trans-1,2-Dichloroethene	96	4.507	4.495	0.012	95	13932	0.2000	0.2102	
31 Hexane	57	4.922	4.915	0.007	92	15447	0.2000	0.1766	
32 1,1-Dichloroethane	63	5.165	5.147	0.018	95	23853	0.2000	0.1984	
35 Isopropyl ether	45	5.208	5.214	-0.006	93	38342	0.2000	0.1910	
36 2-Chloro-1,3-butadiene	53	5.263	5.263	0.000	93	19317	0.2000	0.1897	
37 Tert-butyl ethyl ether	59	5.751	5.751	0.000	96	27255	0.2000	0.1957	
38 2-Butanone (MEK)	43	5.982	5.958	0.024	85	29871	2.00	2.00	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
39 cis-1,2-Dichloroethene	96	6.001	5.982	0.019	79	13988	0.2000	0.1931	
40 2,2-Dichloropropane	77	6.013	5.995	0.018	89	21814	0.2000	0.1995	
43 Propionitrile	54	6.080	6.056	0.024	30	10606	4.00	3.06	M
S 41 1,2-Dichloroethene, Total	100				0			0.4033	
45 Methacrylonitrile	67	6.257	6.244	0.013	93	30294	2.00	1.90	
46 Chlorobromomethane	128	6.330	6.318	0.012	81	6246	0.2000	0.1852	
47 Tetrahydrofuran	71	6.348	6.330	0.018	77	4457	1.00	0.9703	
48 Chloroform	83	6.476	6.464	0.012	94	23932	0.2000	0.1937	
$ 49 Dibromofluoromethane (Surr)	113	6.683	6.677	0.006	93	600251	10.0	9.91	
50 1,1,1-Trichloroethane	97	6.696	6.690	0.006	36	22751	0.2000	0.1950	
51 Cyclohexane	56	6.793	6.793	0.000	92	21863	0.2000	0.1969	
53 1,1-Dichloropropene	75	6.909	6.903	0.006	89	17369	0.2000	0.1913	
54 Carbon tetrachloride	117	6.909	6.909	0.000	94	19970	0.2000	0.1849	
55 Isobutyl alcohol	41	7.116	7.092	0.024	33	9875	10.0	10.5	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.134	7.135	-0.001	67	114034	10.0	9.92	
57 Benzene	78	7.165	7.165	0.000	97	52092	0.2000	0.1965	
58 1,2-Dichloroethane	62	7.238	7.238	0.000	91	17147	0.2000	0.2109	
60 Tert-amyl methyl ether	73	7.354	7.354	0.000	96	21381	0.2000	0.1989	
* 61 Fluorobenzene (IS)	96	7.573	7.567	0.006	99	2286473	10.0	10.0	
62 n-Heptane	43	7.586	7.580	0.006	37	18966	0.2000	0.2080	
63 n-Butanol	56	8.171	7.976	0.195	22	8119	17.5	11.9	a
64 Trichloroethene	95	8.067	8.049	0.018	95	14586	0.2000	0.1951	
65 Methylcyclohexane	83	8.360	8.360	0.000	91	23390	0.2000	0.1900	
66 1,2-Dichloropropane	63	8.384	8.378	0.006	81	12331	0.2000	0.1846	
67 Methyl methacrylate	69	8.482	8.464	0.018	82	4729	0.2000	0.1463	M
69 Dibromomethane	93	8.488	8.488	0.000	90	6355	0.2000	0.1859	a
68 1,4-Dioxane	88	8.561	8.537	0.024	28	915	10.0	4.31	M
71 Dichlorobromomethane	83	8.726	8.726	0.000	97	16582	0.2000	0.1872	
72 2-Nitropropane	41	9.000	8.994	0.006	97	11676	1.00	1.01	
75 1-Bromo-2-chloroethane	63	9.128	9.122	0.006	96	12280	0.2000	0.1948	
76 cis-1,3-Dichloropropene	75	9.287	9.280	0.006	94	18856	0.2000	0.1843	
77 4-Methyl-2-pentanone (MIBK)	43	9.457	9.451	0.006	98	81398	2.00	1.83	
$ 78 Toluene-d8 (Surr)	98	9.591	9.591	0.000	94	2293084	10.0	10.1	
79 Toluene	92	9.677	9.671	0.006	97	34373	0.2000	0.1956	
97 trans-1,3-Dichloropropene	75	9.939	9.933	0.006	93	16145	0.2000	0.1892	
99 Ethyl methacrylate	69	10.012	9.994	0.018	87	12480	0.2000	0.1884	
S 98 1,3-Dichloropropene, Total	100				0			0.3735	
100 1,1,2-Trichloroethane	97	10.140	10.134	0.006	93	9264	0.2000	0.1927	
101 Tetrachloroethene	166	10.225	10.225	0.000	96	17910	0.2000	0.1891	
102 1,3-Dichloropropane	76	10.305	10.299	0.006	93	15353	0.2000	0.1938	
103 2-Hexanone	43	10.366	10.353	0.013	97	54958	2.00	1.78	
105 Chlorodibromomethane	129	10.518	10.518	0.000	87	12415	0.2000	0.1876	
106 Ethylene Dibromide	107	10.628	10.628	0.000	94	8713	0.2000	0.1870	
* 107 Chlorobenzene-d5 (IS)	117	11.061	11.061	0.000	86	1770499	10.0	10.0	
108 1-Chlorohexane	91	11.073	11.073	0.000	49	21421	0.2000	0.2116	
109 Chlorobenzene	112	11.091	11.091	0.000	95	38651	0.2000	0.1914	
111 1,1,1,2-Tetrachloroethane	131	11.176	11.170	0.006	89	13488	0.2000	0.1816	
112 Ethylbenzene	91	11.176	11.176	0.000	98	65799	0.2000	0.1923	
S 110 Xylenes, Total	106				0			0.5506	
113 m-Xylene & p-Xylene	106	11.292	11.292	0.000	93	49779	0.4000	0.3651	
114 o-Xylene	106	11.621	11.621	0.000	96	24739	0.2000	0.1856	
115 Styrene	104	11.640	11.634	0.006	94	36677	0.2000	0.1774	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
116 Bromoform	173	11.792	11.792	0.000	95	7927	0.2000	0.1838	
117 Isopropylbenzene	105	11.920	11.920	0.000	95	65240	0.2000	0.1864	
$ 120 4-Bromofluorobenzene (Surr)	95	12.066	12.067	-0.001	96	829348	10.0	9.98	
121 1,1,2,2-Tetrachloroethane	83	12.170	12.164	0.006	94	11706	0.2000	0.1937	
122 Bromobenzene	156	12.182	12.182	0.000	91	18174	0.2000	0.2014	
123 trans-1,4-Dichloro-2-butene	53	12.194	12.188	0.006	93	30616	2.00	1.76	
124 1,2,3-Trichloropropane	110	12.213	12.213	0.000	77	3351	0.2000	0.1962	
125 N-Propylbenzene	91	12.249	12.249	0.000	98	70616	0.2000	0.1783	
126 2-Chlorotoluene	126	12.329	12.329	0.000	97	15738	0.2000	0.1840	
127 1,3,5-Trimethylbenzene	105	12.390	12.384	0.006	95	53572	0.2000	0.1805	
128 4-Chlorotoluene	126	12.426	12.420	0.006	95	15367	0.2000	0.1801	
129 tert-Butylbenzene	134	12.627	12.627	0.000	93	13951	0.2000	0.1897	
130 Pentachloroethane	167	12.658	12.664	-0.006	74	9669	0.2000	0.1695	
131 1,2,4-Trimethylbenzene	105	12.670	12.670	0.000	97	55233	0.2000	0.1812	
132 sec-Butylbenzene	105	12.792	12.792	0.000	94	68845	0.2000	0.1824	
133 1,3-Dichlorobenzene	146	12.896	12.890	0.006	98	31892	0.2000	0.1881	
134 4-Isopropyltoluene	119	12.902	12.902	0.000	98	61116	0.2000	0.1813	
* 135 1,4-Dichlorobenzene-d4	152	12.950	12.944	0.006	94	1096665	10.0	10.0	
136 1,4-Dichlorobenzene	146	12.969	12.963	0.006	92	31956	0.2000	0.1928	
137 1,2,3-Trimethylbenzene	120	12.975	12.975	0.000	97	27998	0.2000	0.1986	
138 Benzyl chloride	126	13.042	13.042	0.000	98	3612	0.2000	0.1515	
139 n-Butylbenzene	92	13.194	13.188	0.006	97	25462	0.2000	0.1719	
140 1,2-Dichlorobenzene	146	13.225	13.225	0.000	97	30112	0.2000	0.1871	
142 1,2-Dibromo-3-Chloropropane	155	13.773	13.767	0.006	83	1695	0.2000	0.1709	
143 1,3,5-Trichlorobenzene	180	13.895	13.889	0.006	96	22925	0.2000	0.1785	
144 1,2,4-Trichlorobenzene	180	14.316	14.316	0.000	93	18177	0.2000	0.1760	
145 Hexachlorobutadiene	225	14.395	14.395	0.000	95	12245	0.2000	0.2066	
146 Naphthalene	128	14.499	14.493	0.006	97	38082	0.2000	0.1980	
147 1,2,3-Trichlorobenzene	180	14.639	14.639	0.000	92	17765	0.2000	0.1894	
155 2-Methylnaphthalene	142		0.000				ND	ND	
156 p-Diethylbenzene	1		0.000				ND	ND	
161 Pentane	43		0.000				ND	ND	
150 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
165 Isopropyl alcohol	45		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_LL_#1_826_00068	Amount Added:	2.00	Units: uL	
MSV_LL_#2_826_00077	Amount Added:	2.00	Units: uL	
MSV_LL_GAS826_00141	Amount Added:	2.00	Units: uL	
MSV_LLcentISS_00006	Amount Added:	5.00	Units: uL	Run Reagent

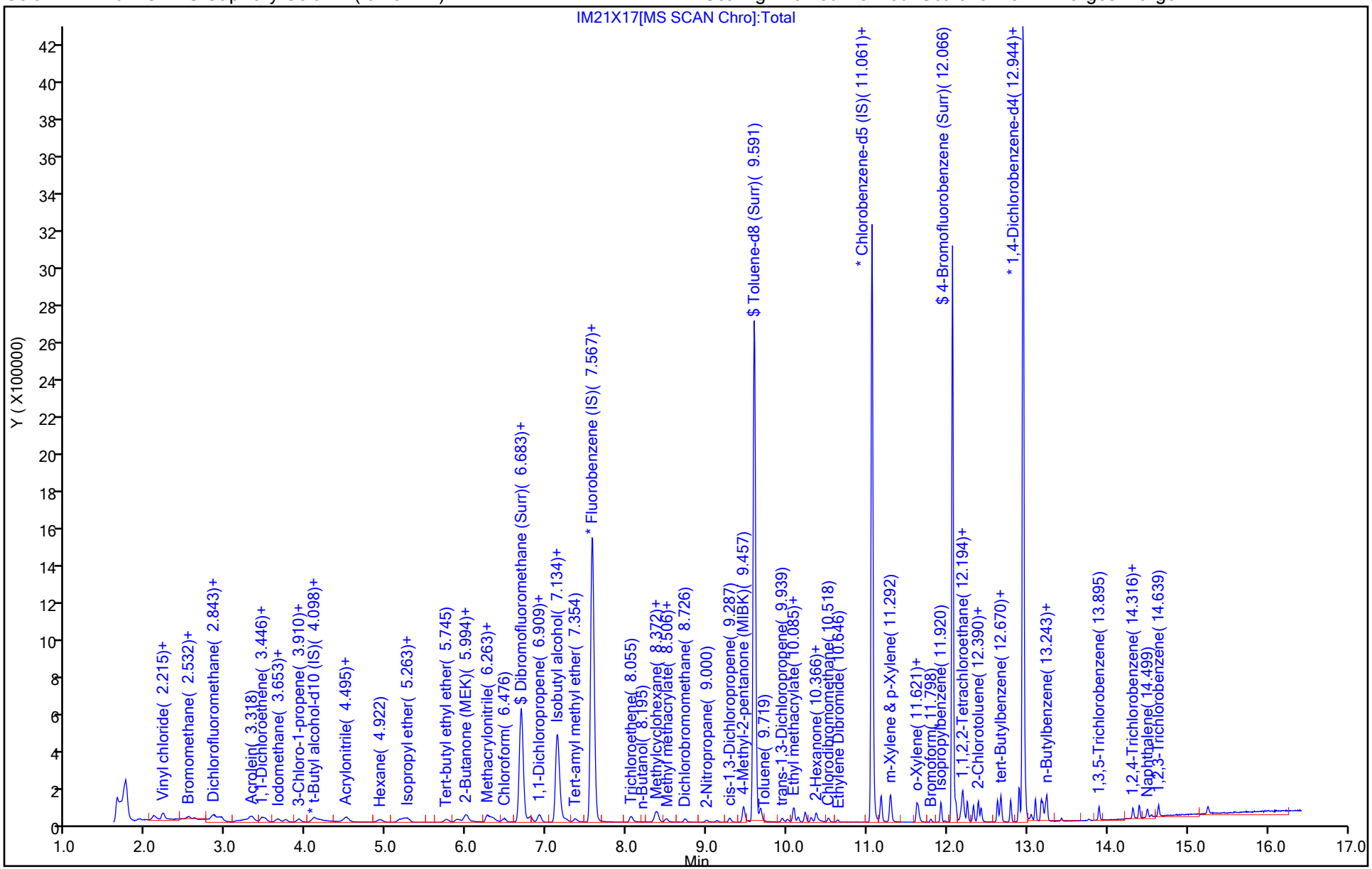
Report Date: 21-Mar-2023 17:38:07 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X17.D

Injection Date:	21-Mar-2023 06:02:30	Instrument ID:	19930	Operator ID:	mec29284
Lims ID:	IC std1			Worklist Smp#:	18
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

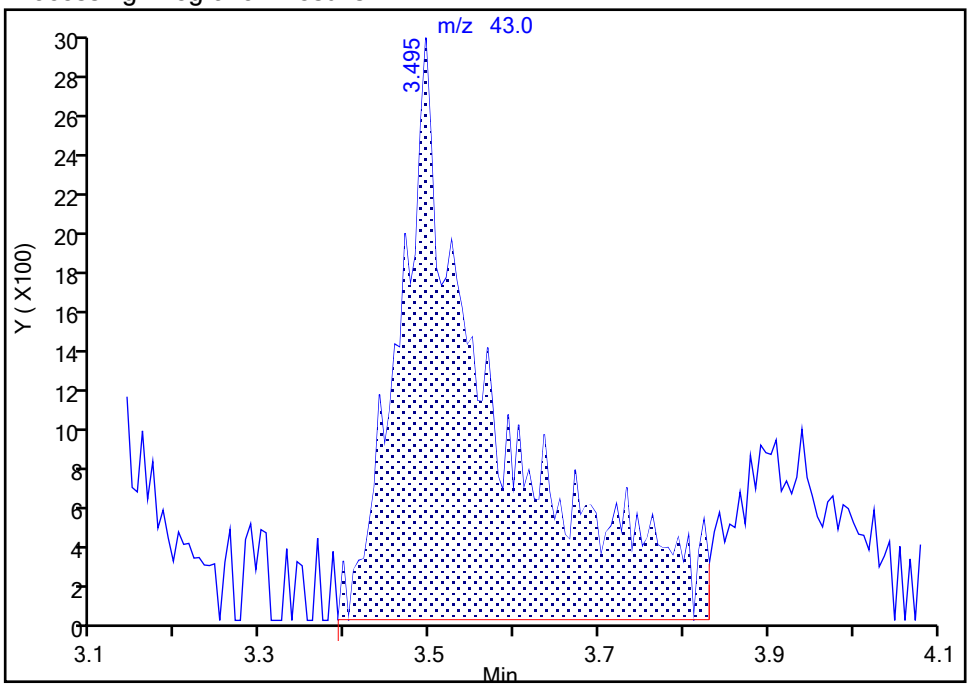
Data File:	\\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X17.D				
Injection Date:	21-Mar-2023 06:02:30	Instrument ID:	19930		
Lims ID:	IC std1				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

16 Acetone, CAS: 67-64-1

Signal: 1

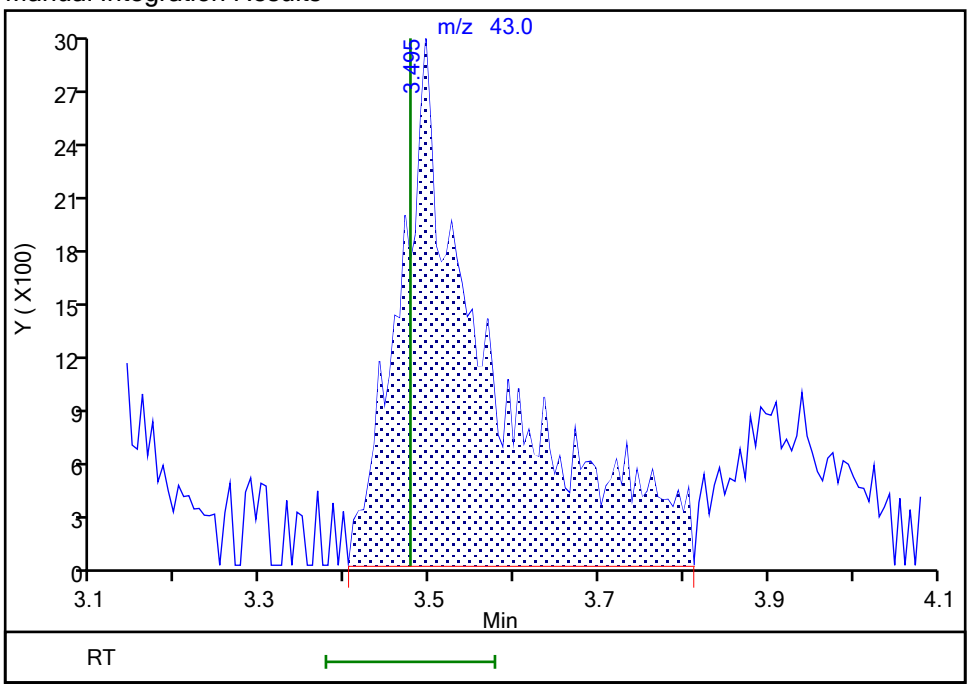
Processing Integration Results

RT: 3.49
Area: 22686
Amount: 2.753548
Amount Units: ug/l



Manual Integration Results

RT: 3.49
Area: 22153
Amount: 2.733339
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 16:02:38

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

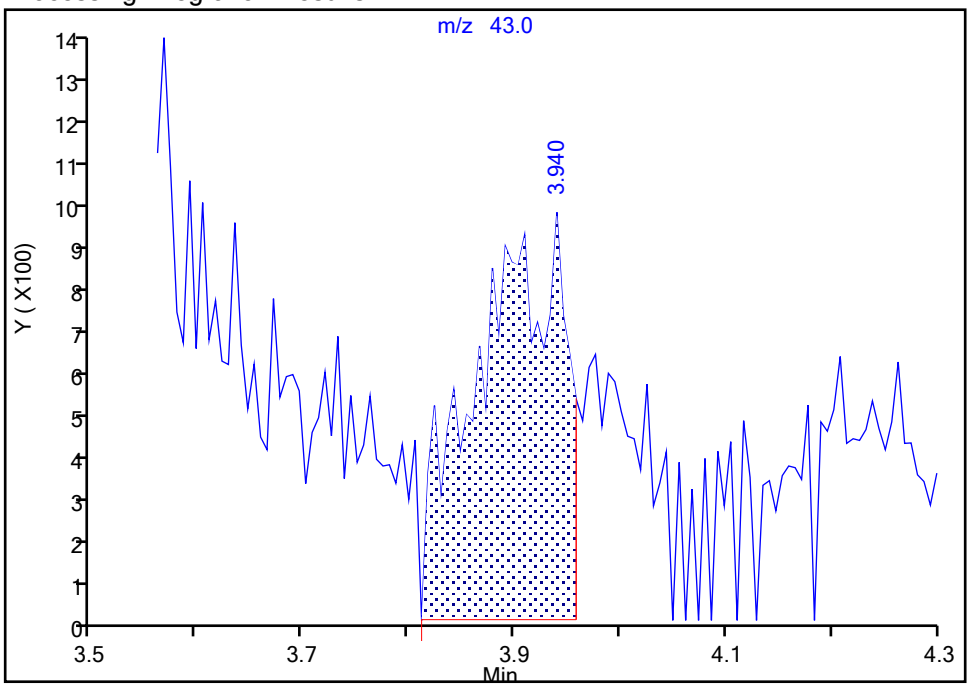
Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X17.D
Injection Date: 21-Mar-2023 06:02:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: mec29284 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

23 Methyl acetate, CAS: 79-20-9

Signal: 1

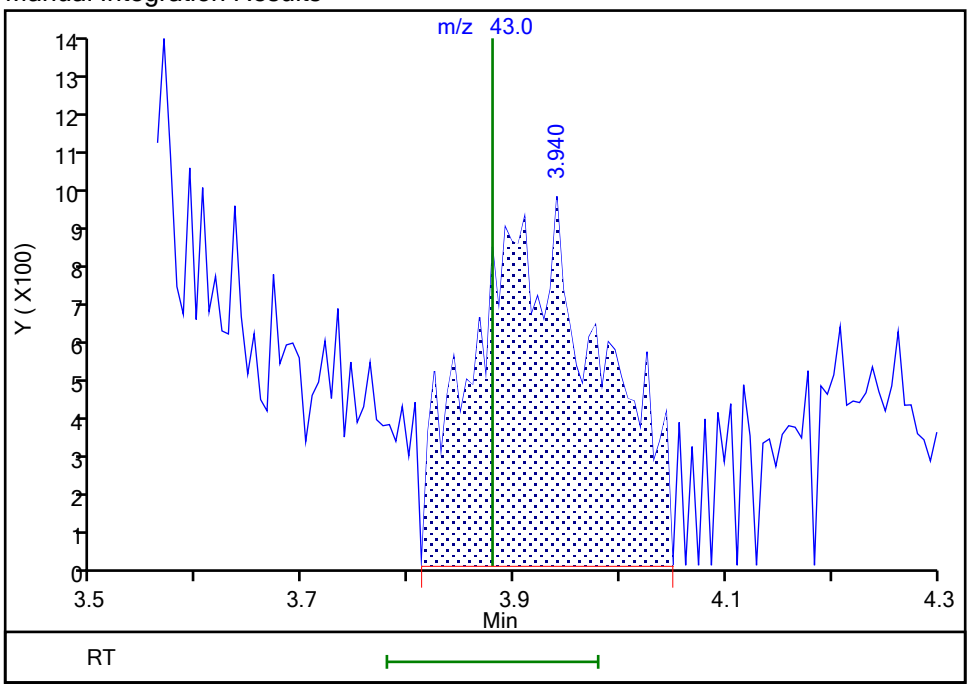
Processing Integration Results

RT: 3.94
Area: 5592
Amount: 0.202155
Amount Units: ug/l



Manual Integration Results

RT: 3.94
Area: 8017
Amount: 0.276345
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:57:10
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC

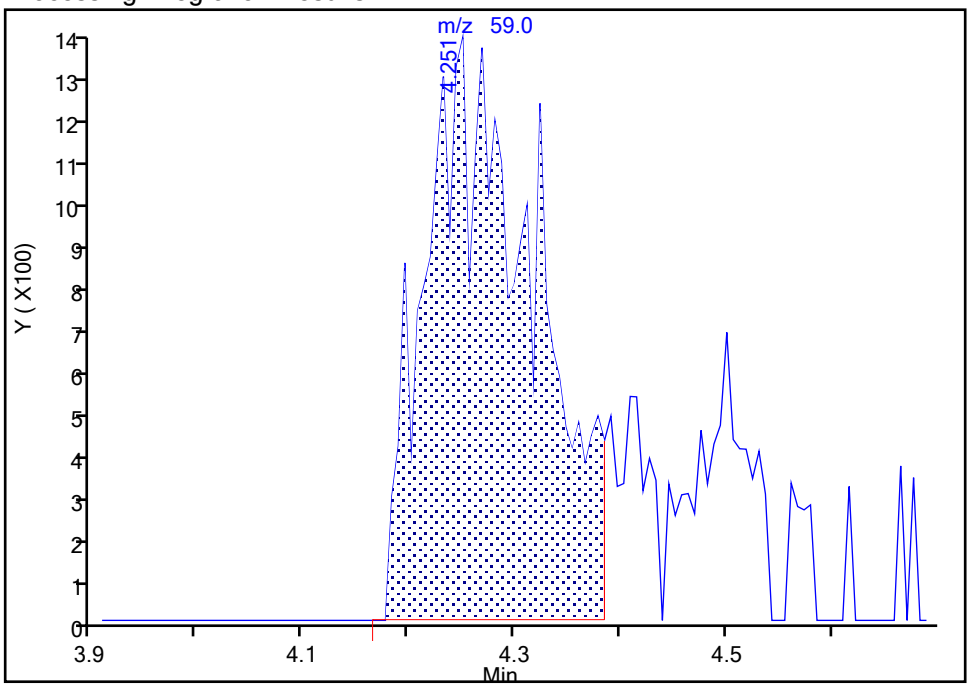
Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X17.D
Injection Date: 21-Mar-2023 06:02:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: mec29284 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

27 2-Methyl-2-propanol, CAS: 75-65-0

Signal: 1

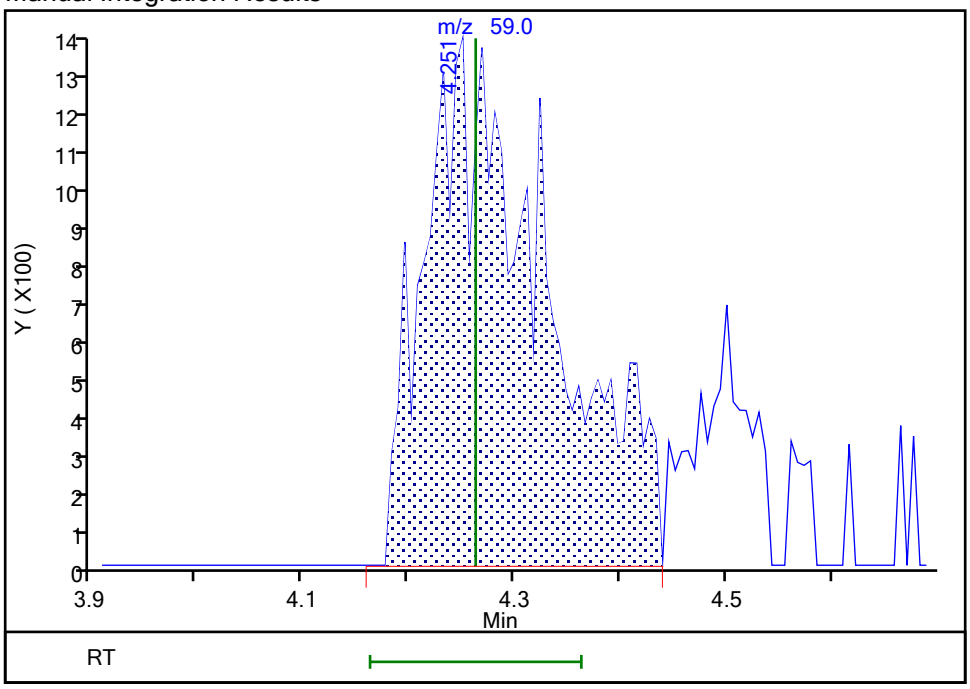
Processing Integration Results

RT: 4.25
Area: 9948
Amount: 3.790427
Amount Units: ug/l



Manual Integration Results

RT: 4.25
Area: 11132
Amount: 4.224428
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:57:18
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

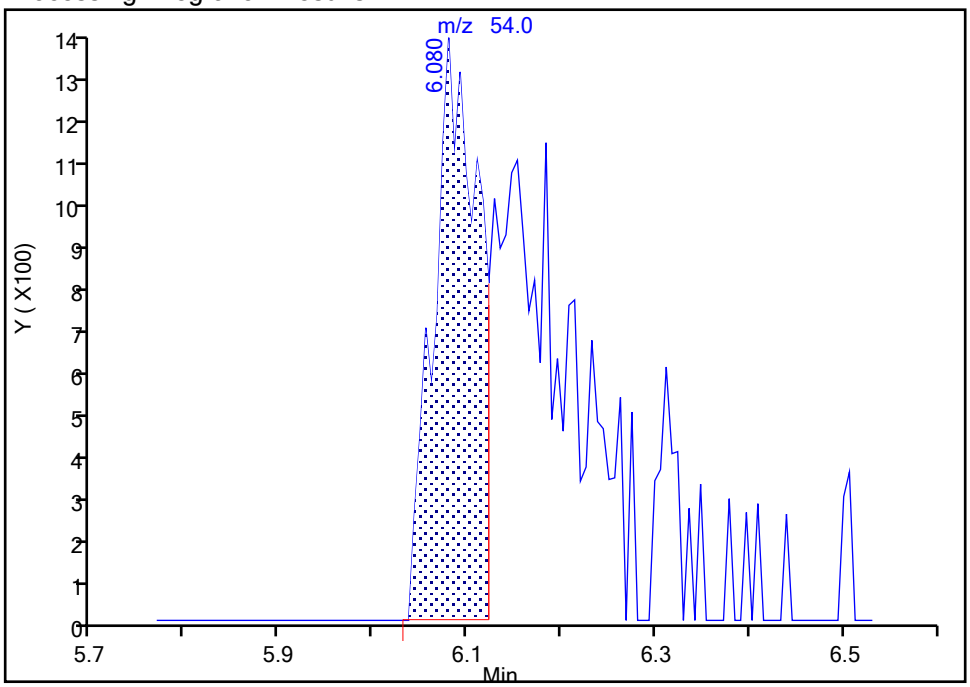
Data File:	\\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X17.D				
Injection Date:	21-Mar-2023 06:02:30	Instrument ID:	19930		
Lims ID:	IC std1				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

43 Propionitrile, CAS: 107-12-0

Signal: 1

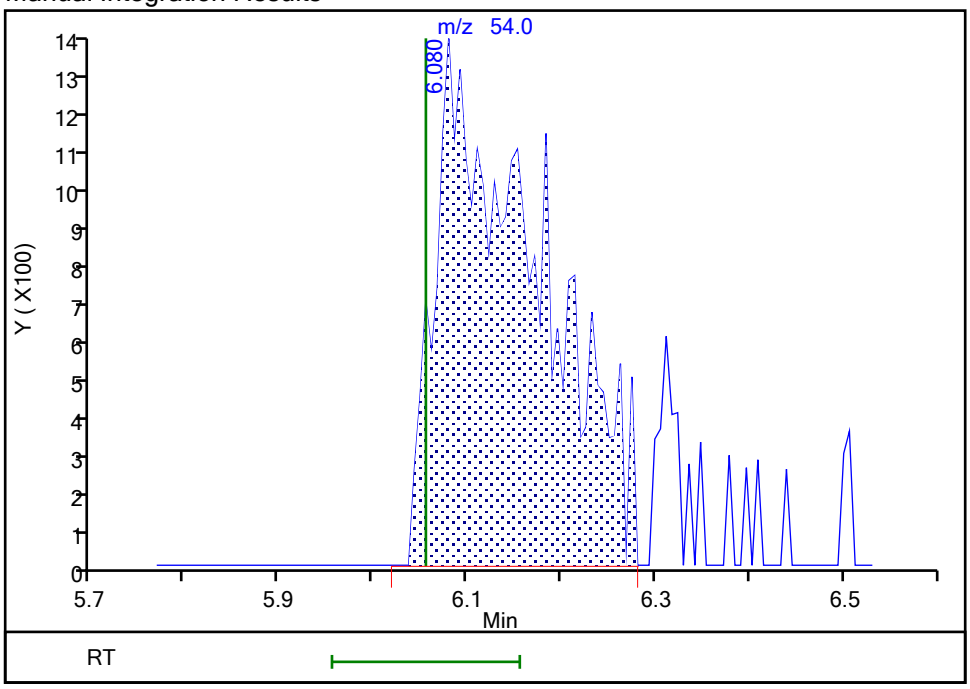
Processing Integration Results

RT: 6.08
Area: 4617
Amount: 3.806844
Amount Units: ug/l



Manual Integration Results

RT: 6.08
Area: 10606
Amount: 3.055648
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:57:35

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

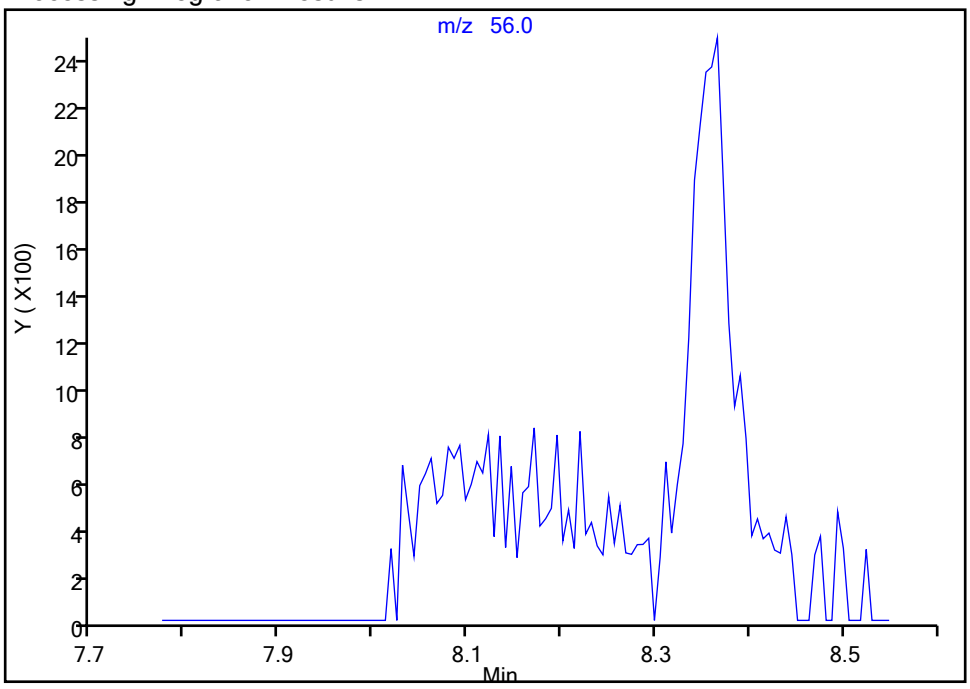
Data File:	\\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X17.D				
Injection Date:	21-Mar-2023 06:02:30	Instrument ID:	19930		
Lims ID:	IC std1				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

63 n-Butanol, CAS: 71-36-3

Signal: 1

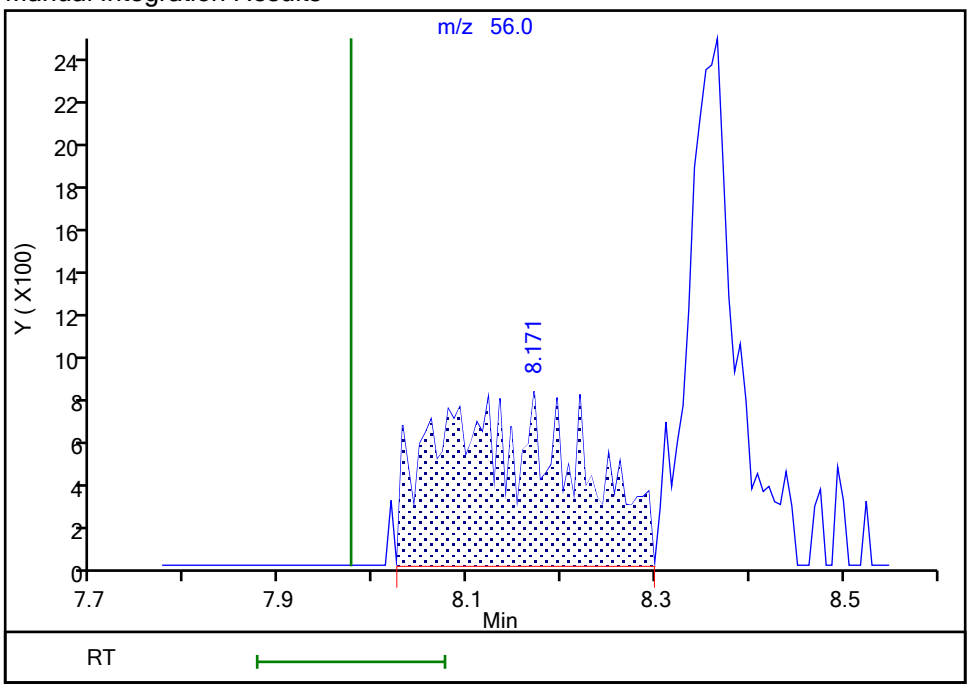
Not Detected
Expected RT: 7.98

Processing Integration Results



Manual Integration Results

RT: 8.17
Area: 8119
Amount: 11.889089
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:57:53
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

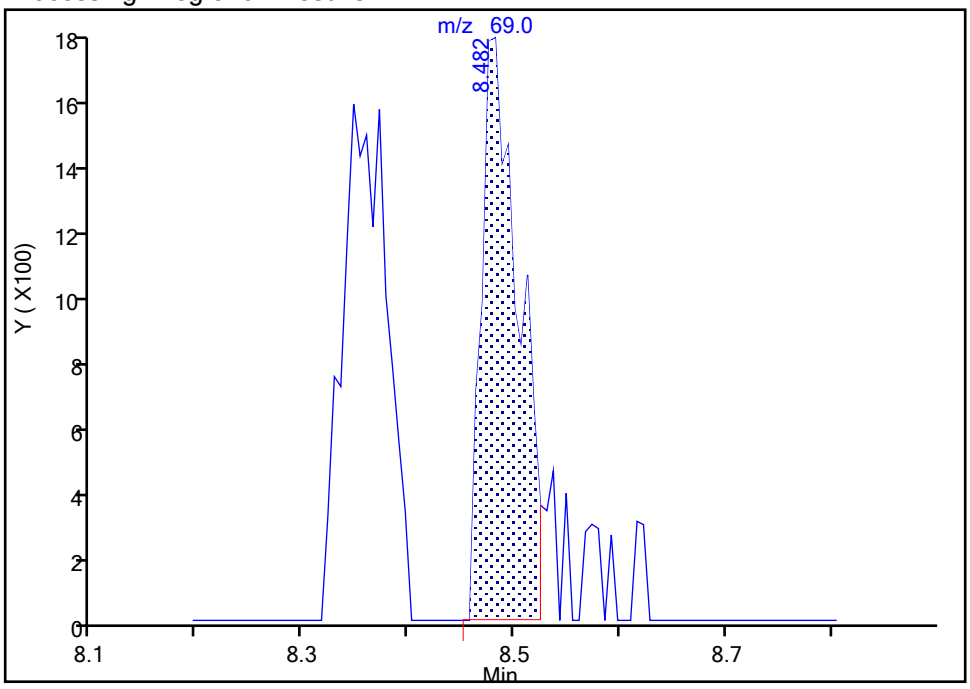
Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X17.D
Injection Date: 21-Mar-2023 06:02:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: mec29284 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

67 Methyl methacrylate, CAS: 80-62-6

Signal: 1

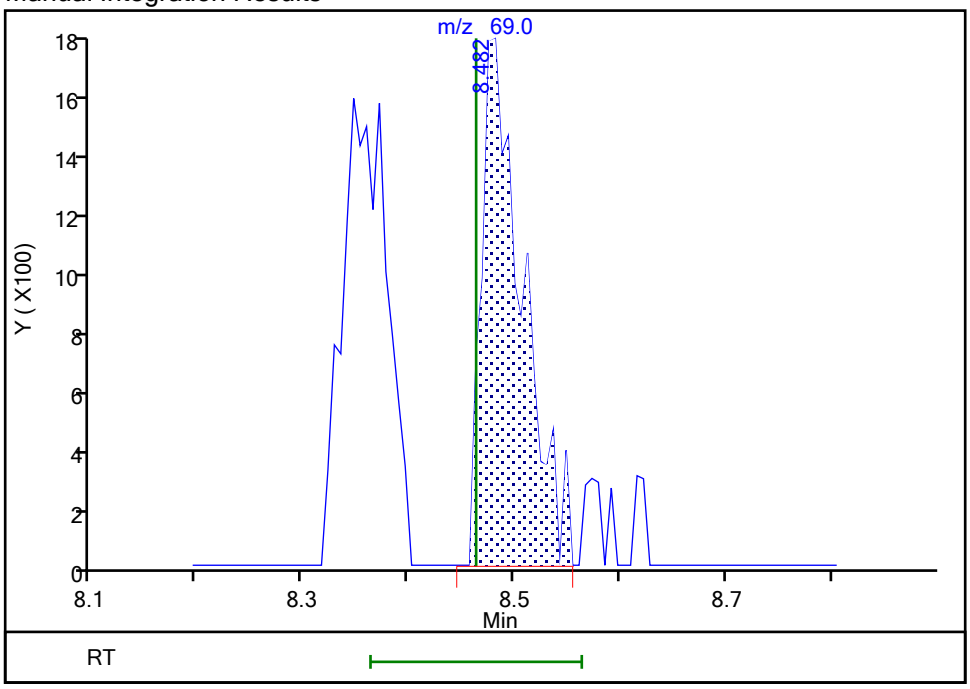
Processing Integration Results

RT: 8.48
Area: 4302
Amount: 0.247940
Amount Units: ug/l



Manual Integration Results

RT: 8.48
Area: 4729
Amount: 0.146339
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:58:04
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

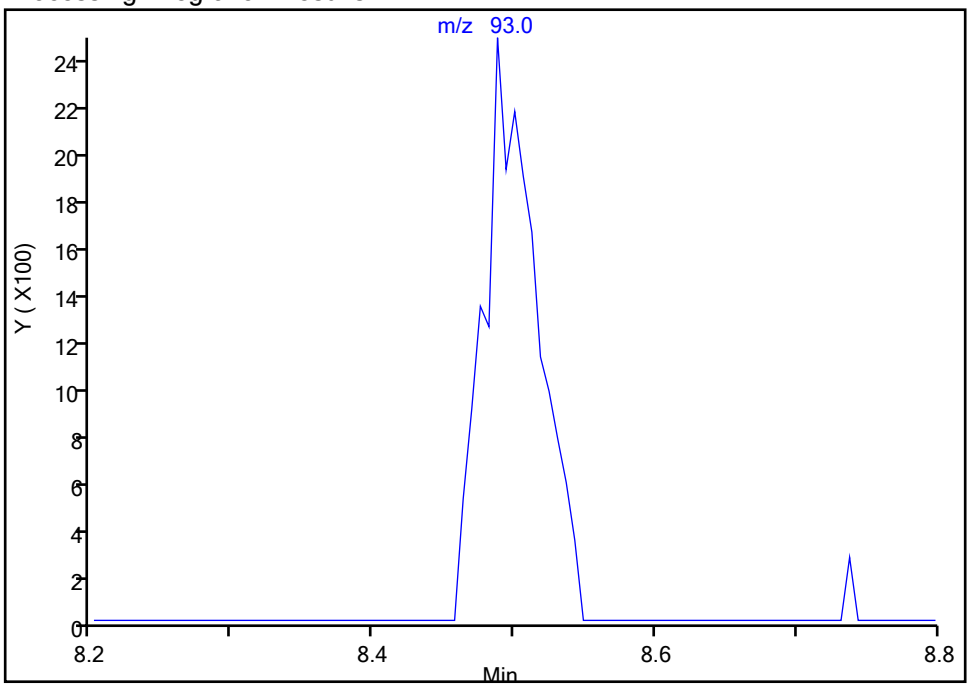
Data File:	\\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X17.D				
Injection Date:	21-Mar-2023 06:02:30	Instrument ID:	19930		
Lims ID:	IC std1				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

69 Dibromomethane, CAS: 74-95-3

Signal: 1

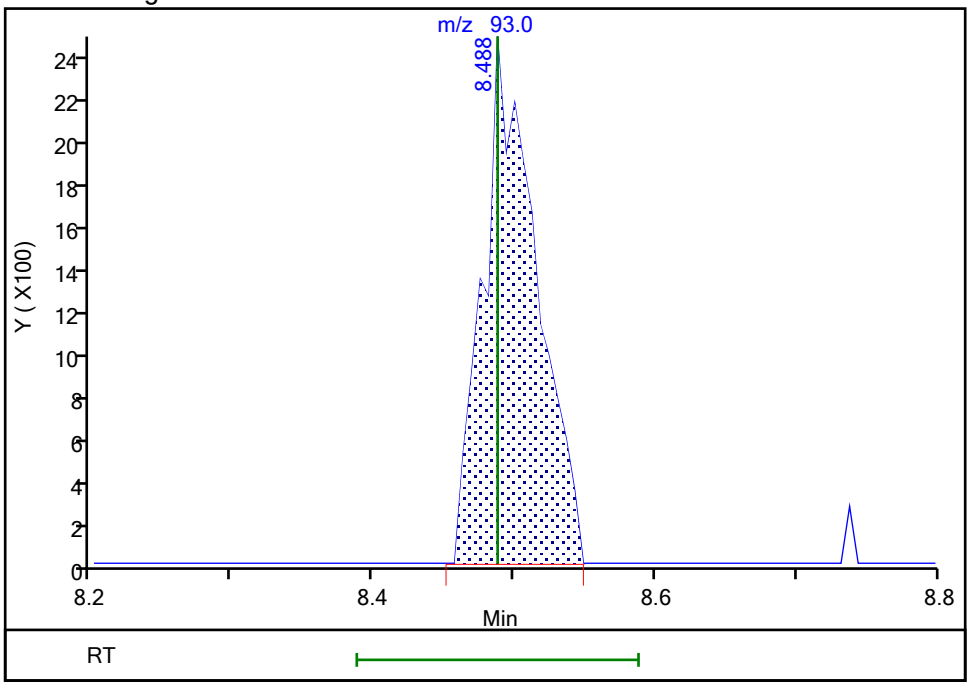
Not Detected
Expected RT: 8.49

Processing Integration Results



Manual Integration Results

RT: 8.49
Area: 6355
Amount: 0.185902
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:58:07
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC

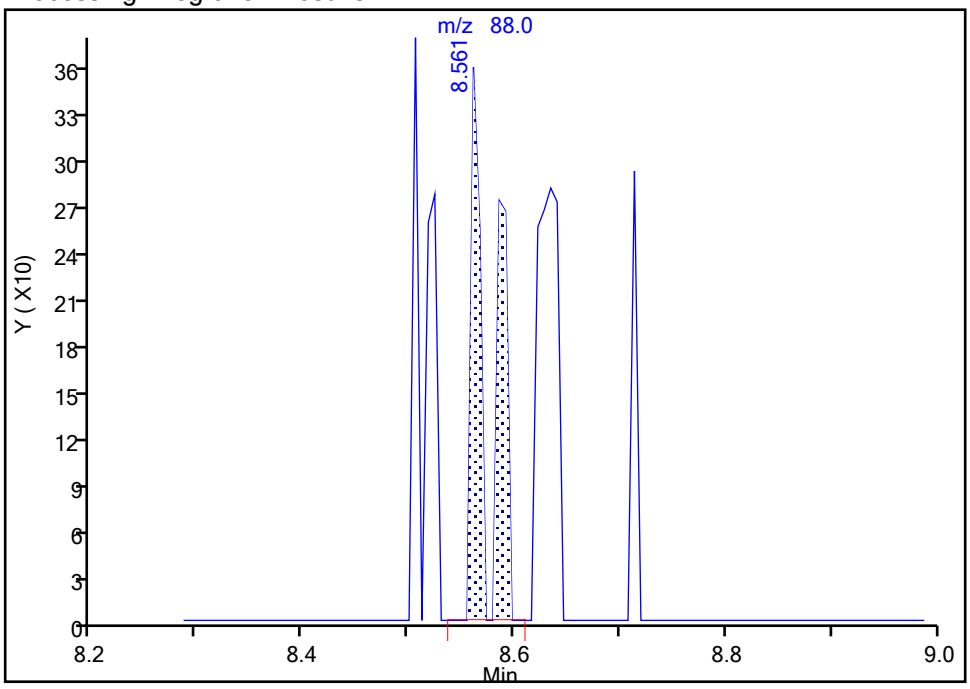
Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X17.D
Injection Date: 21-Mar-2023 06:02:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: mec29284 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

68 1,4-Dioxane, CAS: 123-91-1

Signal: 1

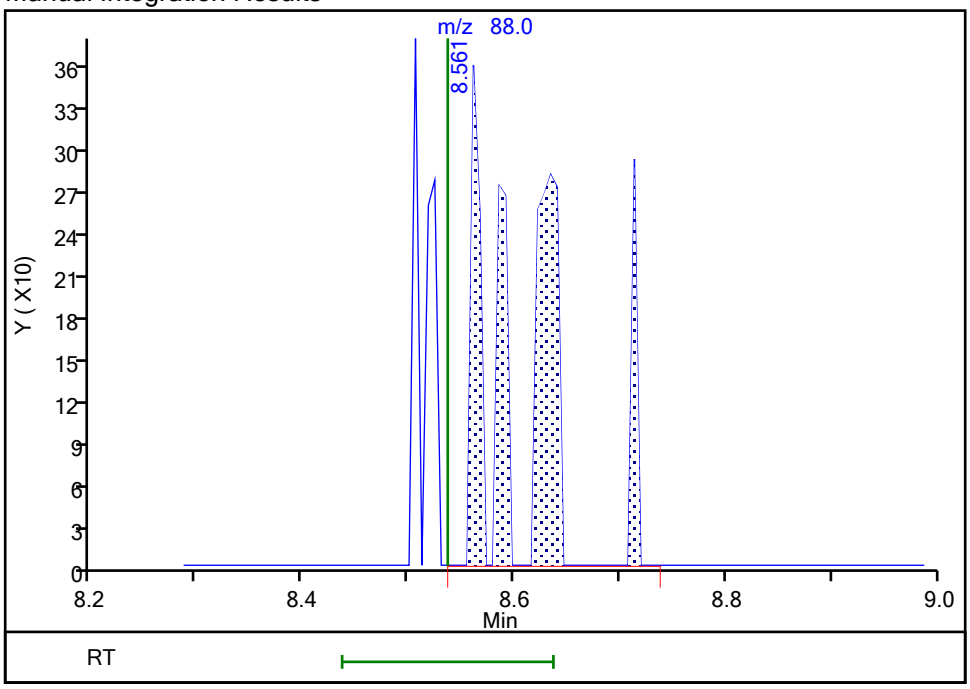
Processing Integration Results

RT: 8.56
Area: 419
Amount: 2.005715
Amount Units: ug/l



Manual Integration Results

RT: 8.56
Area: 915
Amount: 4.309305
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:58:26
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Calibration / Dichlorodifluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

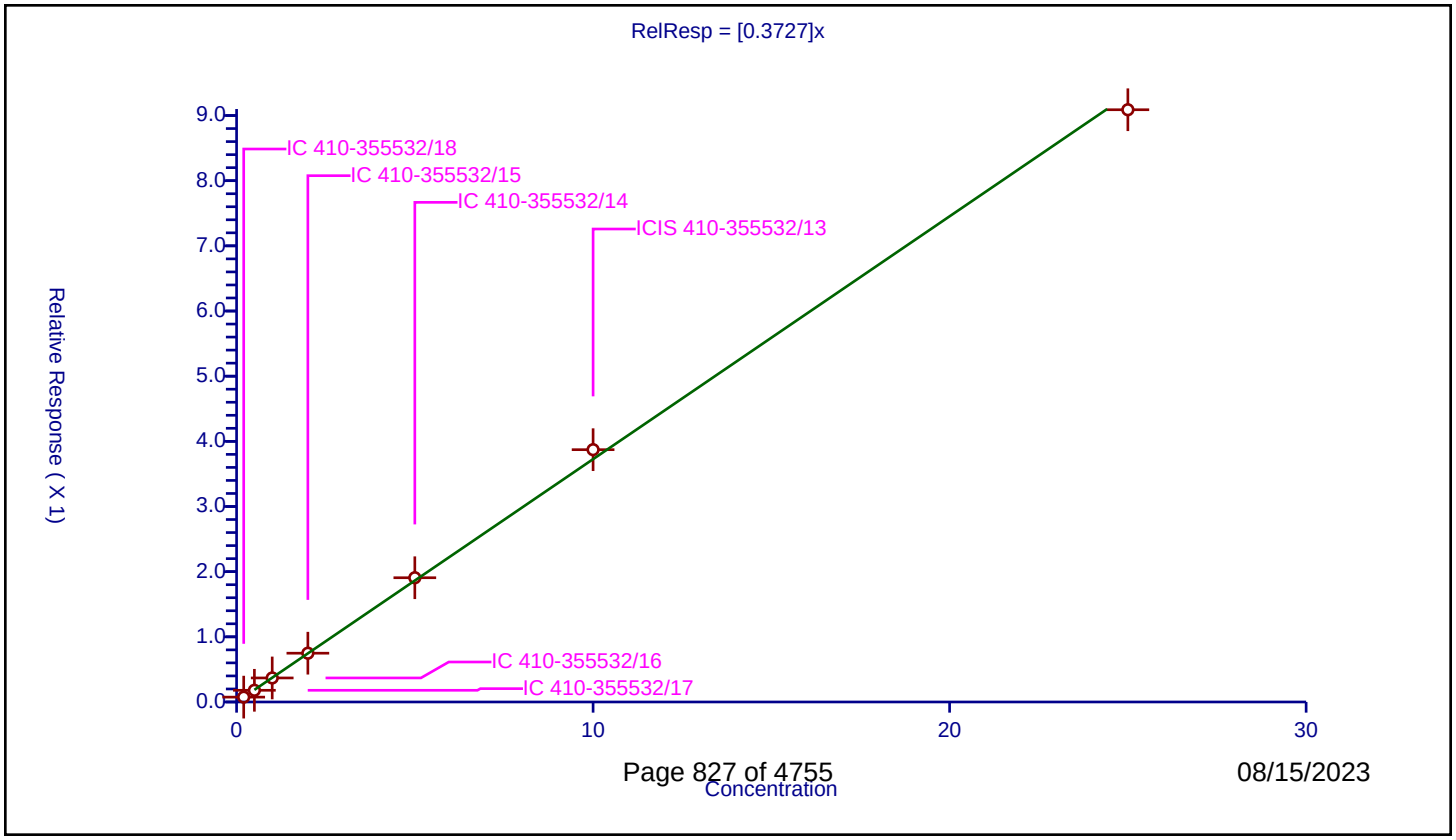
Curve Coefficients

Intercept:	0
Slope:	0.3727

Error Coefficients

Standard Error:	991000
Relative Standard Error:	2.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.074831	10.0	2286473.0	0.374157	Y
2	IC 410-355532/17	0.5	0.179477	10.0	2310552.0	0.358953	Y
3	IC 410-355532/16	1.0	0.36912	10.0	2343275.0	0.36912	Y
4	IC 410-355532/15	2.0	0.748502	10.0	2349279.0	0.374251	Y
5	IC 410-355532/14	5.0	1.906637	10.0	2387313.0	0.381327	Y
6	ICIS 410-355532/13	10.0	3.87203	10.0	2381761.0	0.387203	Y
7	IC 410-355532/12	25.0	9.088881	10.0	2408929.0	0.363555	Y



Calibration / Chloromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

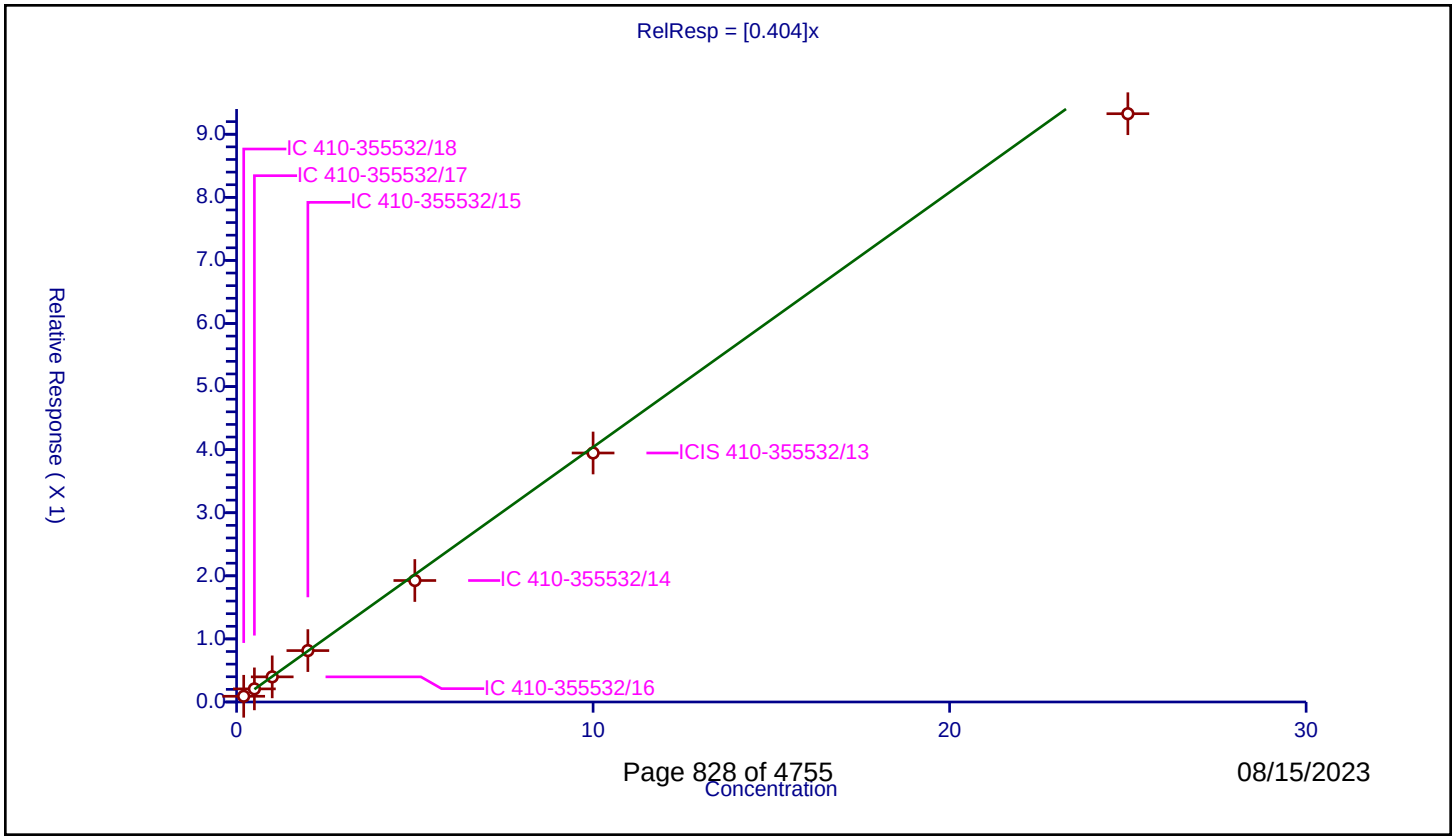
Curve Coefficients

Intercept:	0
Slope:	0.404

Error Coefficients

Standard Error:	1020000
Relative Standard Error:	6.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.090738	10.0	2286473.0	0.45369	Y
2	IC 410-355532/17	0.5	0.207911	10.0	2310552.0	0.415823	Y
3	IC 410-355532/16	1.0	0.398442	10.0	2343275.0	0.398442	Y
4	IC 410-355532/15	2.0	0.814705	10.0	2349279.0	0.407353	Y
5	IC 410-355532/14	5.0	1.925914	10.0	2387313.0	0.385183	Y
6	ICIS 410-355532/13	10.0	3.947294	10.0	2381761.0	0.394729	Y
7	IC 410-355532/12	25.0	9.325547	10.0	2408929.0	0.373022	Y



Calibration / Vinyl chloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

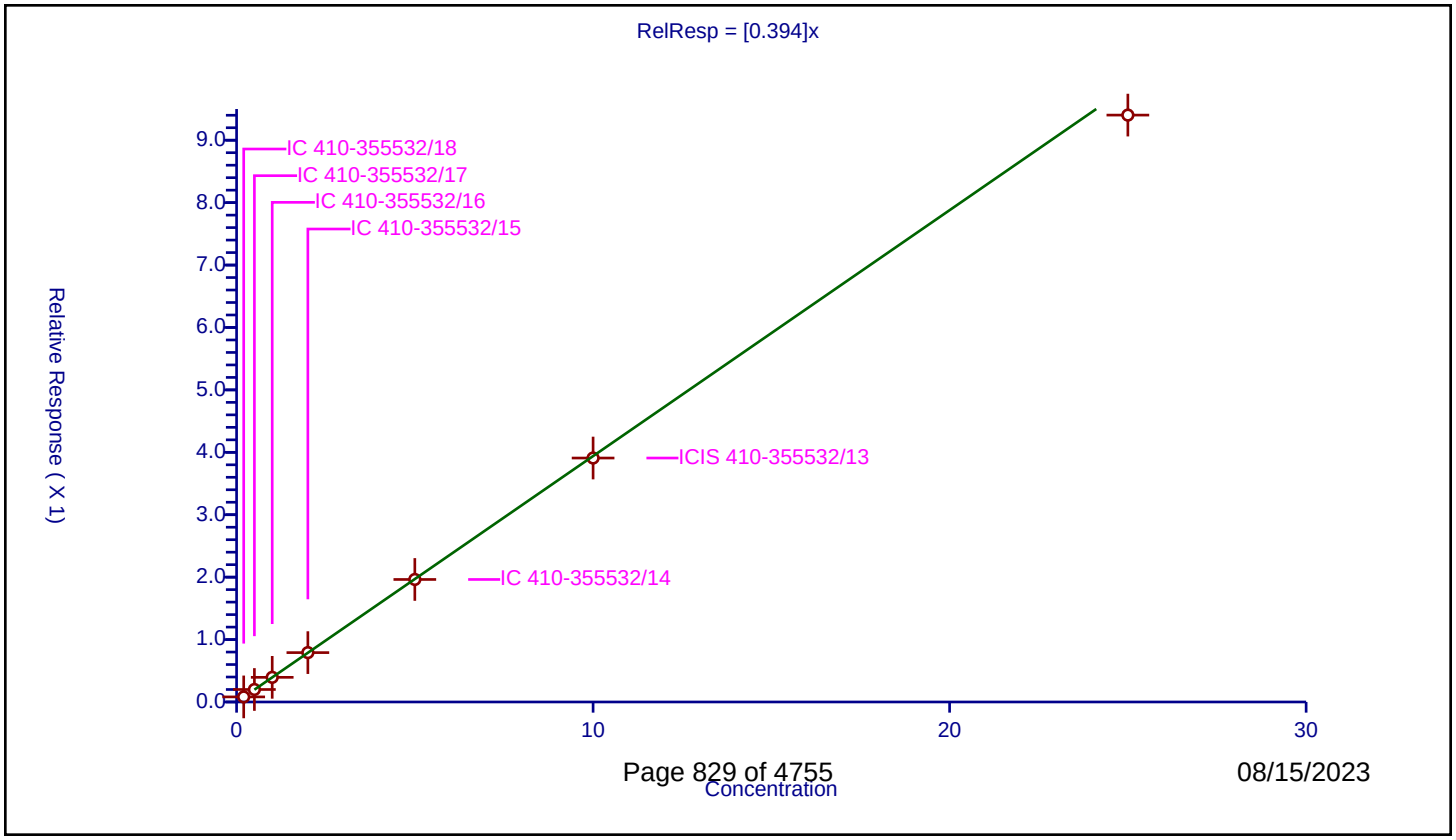
Curve Coefficients

Intercept:	0
Slope:	0.394

Error Coefficients

Standard Error:	1020000
Relative Standard Error:	2.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.081567	10.0	2286473.0	0.407833	Y
2	IC 410-355532/17	0.5	0.200013	10.0	2310552.0	0.400026	Y
3	IC 410-355532/16	1.0	0.394917	10.0	2343275.0	0.394917	Y
4	IC 410-355532/15	2.0	0.790924	10.0	2349279.0	0.395462	Y
5	IC 410-355532/14	5.0	1.962763	10.0	2387313.0	0.392553	Y
6	ICIS 410-355532/13	10.0	3.908465	10.0	2381761.0	0.390847	Y
7	IC 410-355532/12	25.0	9.402672	10.0	2408929.0	0.376107	Y



Calibration / Butadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

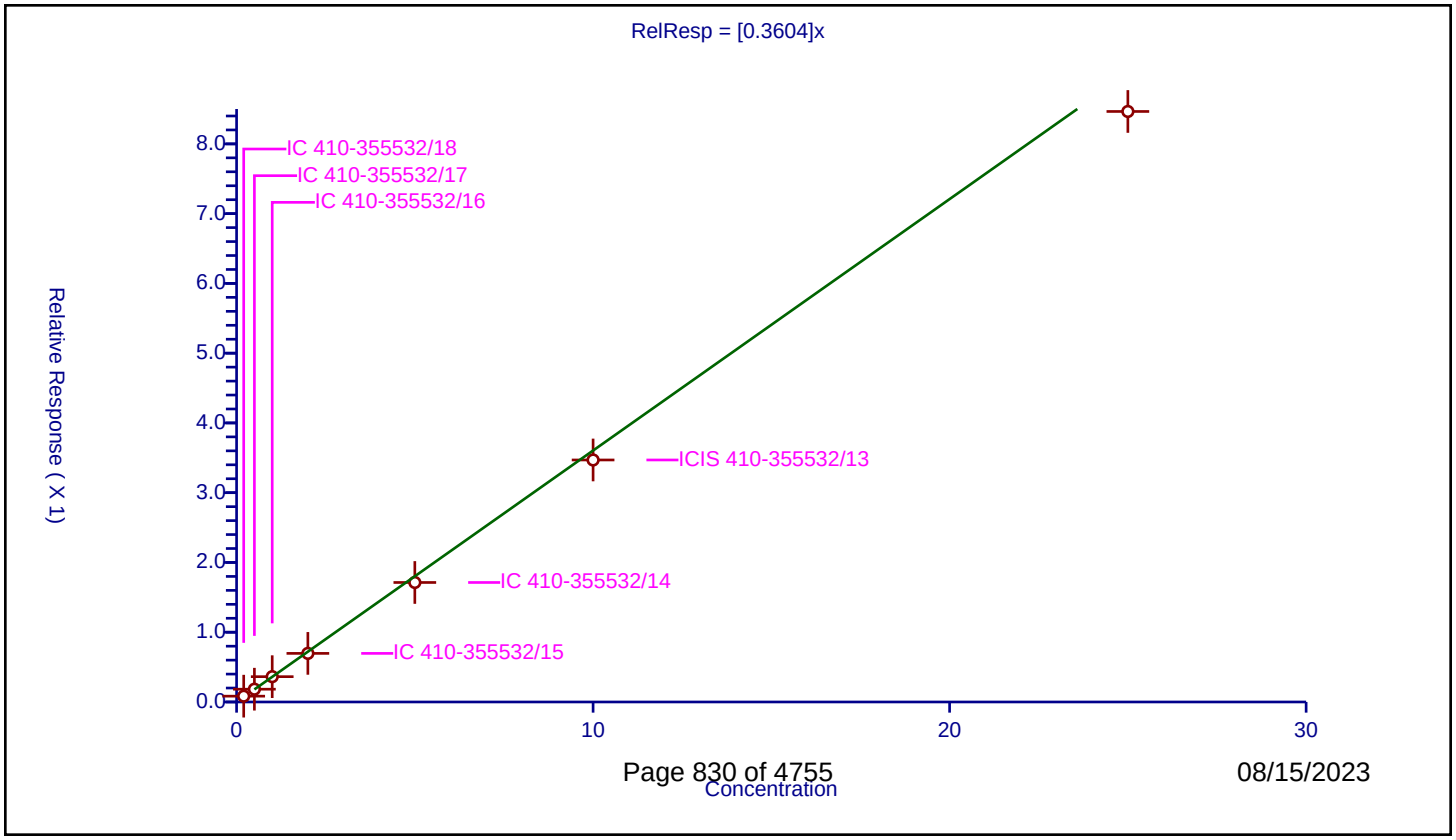
Curve Coefficients

Intercept:	0
Slope:	0.3604

Error Coefficients

Standard Error:	917000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.083351	10.0	2286473.0	0.416755	Y
2	IC 410-355532/17	0.5	0.183376	10.0	2310552.0	0.366752	Y
3	IC 410-355532/16	1.0	0.363077	10.0	2343275.0	0.363077	Y
4	IC 410-355532/15	2.0	0.696665	10.0	2349279.0	0.348332	Y
5	IC 410-355532/14	5.0	1.713131	10.0	2387313.0	0.342626	Y
6	ICIS 410-355532/13	10.0	3.469	10.0	2381761.0	0.3469	Y
7	IC 410-355532/12	25.0	8.464641	10.0	2408929.0	0.338586	Y



Calibration / Bromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

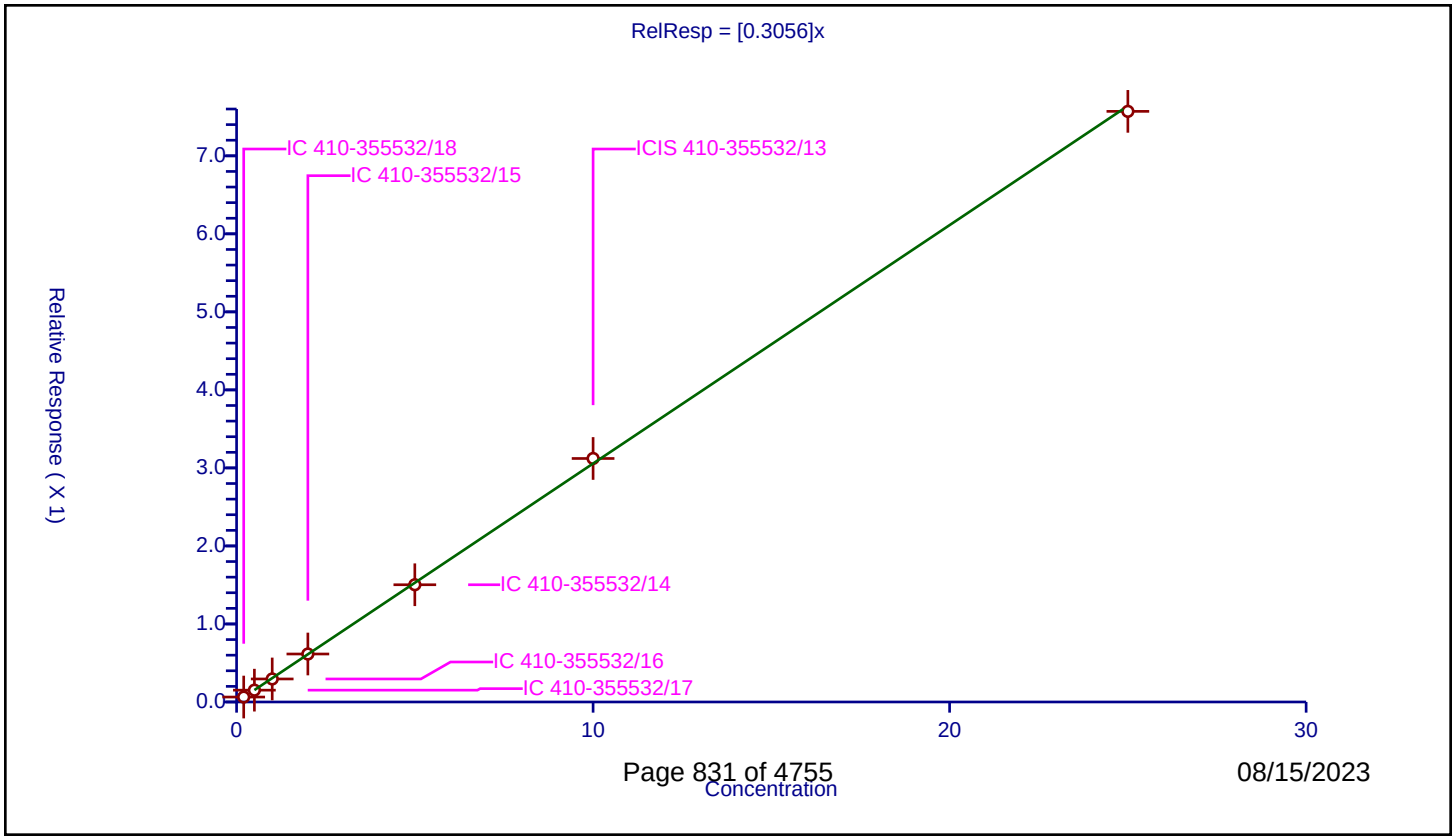
Curve Coefficients

Intercept:	0
Slope:	0.3056

Error Coefficients

Standard Error:	820000
Relative Standard Error:	2.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.063508	10.0	2286473.0	0.317541	Y
2	IC 410-355532/17	0.5	0.15173	10.0	2310552.0	0.30346	Y
3	IC 410-355532/16	1.0	0.295253	10.0	2343275.0	0.295253	Y
4	IC 410-355532/15	2.0	0.614895	10.0	2349279.0	0.307448	Y
5	IC 410-355532/14	5.0	1.502786	10.0	2387313.0	0.300557	Y
6	ICIS 410-355532/13	10.0	3.120993	10.0	2381761.0	0.312099	Y
7	IC 410-355532/12	25.0	7.569787	10.0	2408929.0	0.302791	Y



Calibration / Chloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

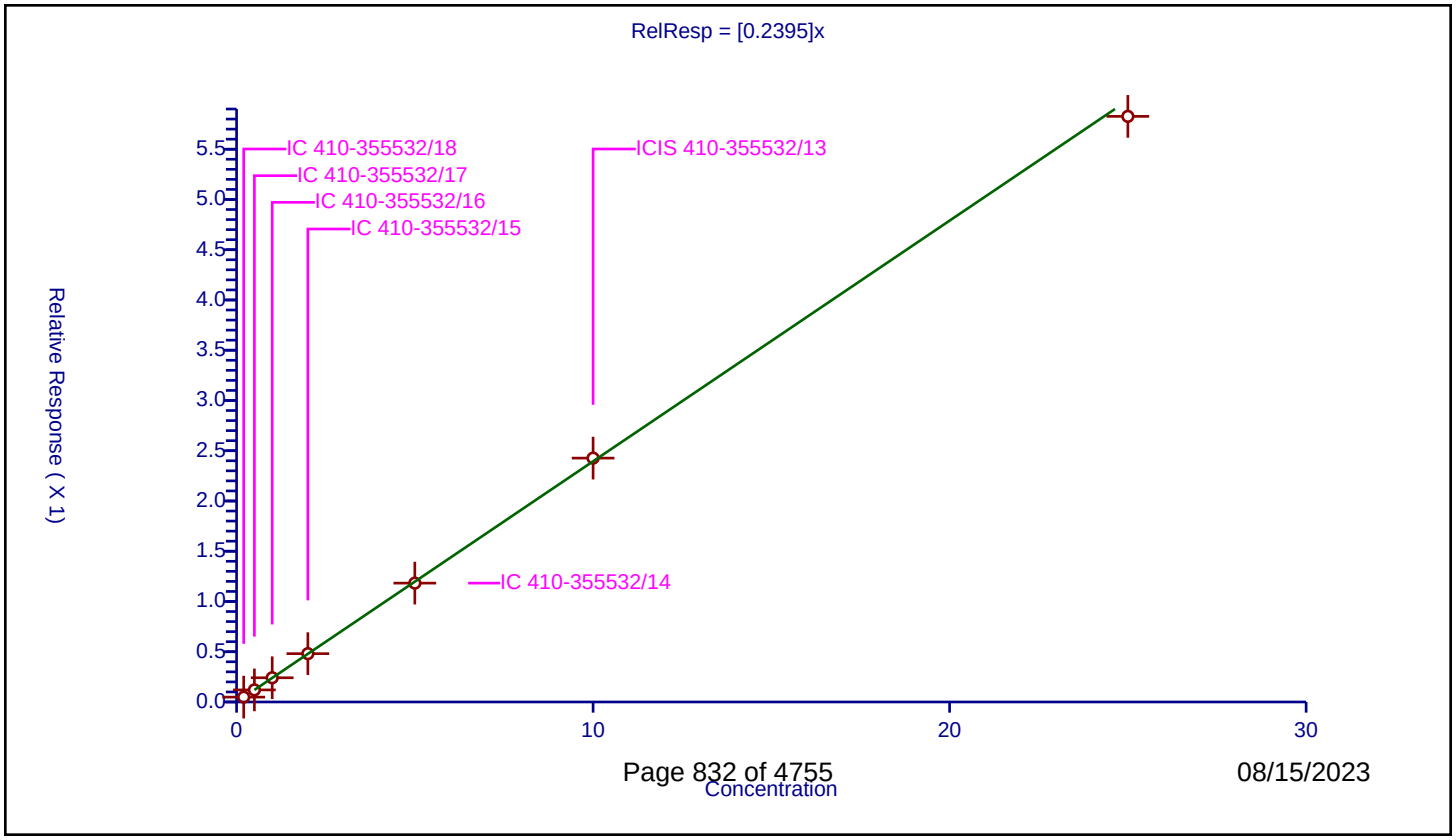
Curve Coefficients

Intercept:	0
Slope:	0.2395

Error Coefficients

Standard Error:	633000
Relative Standard Error:	1.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.048476	10.0	2286473.0	0.242382	Y
2	IC 410-355532/17	0.5	0.120036	10.0	2310552.0	0.240073	Y
3	IC 410-355532/16	1.0	0.241034	10.0	2343275.0	0.241034	Y
4	IC 410-355532/15	2.0	0.480884	10.0	2349279.0	0.240442	Y
5	IC 410-355532/14	5.0	1.182811	10.0	2387313.0	0.236562	Y
6	ICIS 410-355532/13	10.0	2.4267	10.0	2381761.0	0.24267	Y
7	IC 410-355532/12	25.0	5.826784	10.0	2408929.0	0.233071	Y



Calibration / Dichlorofluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

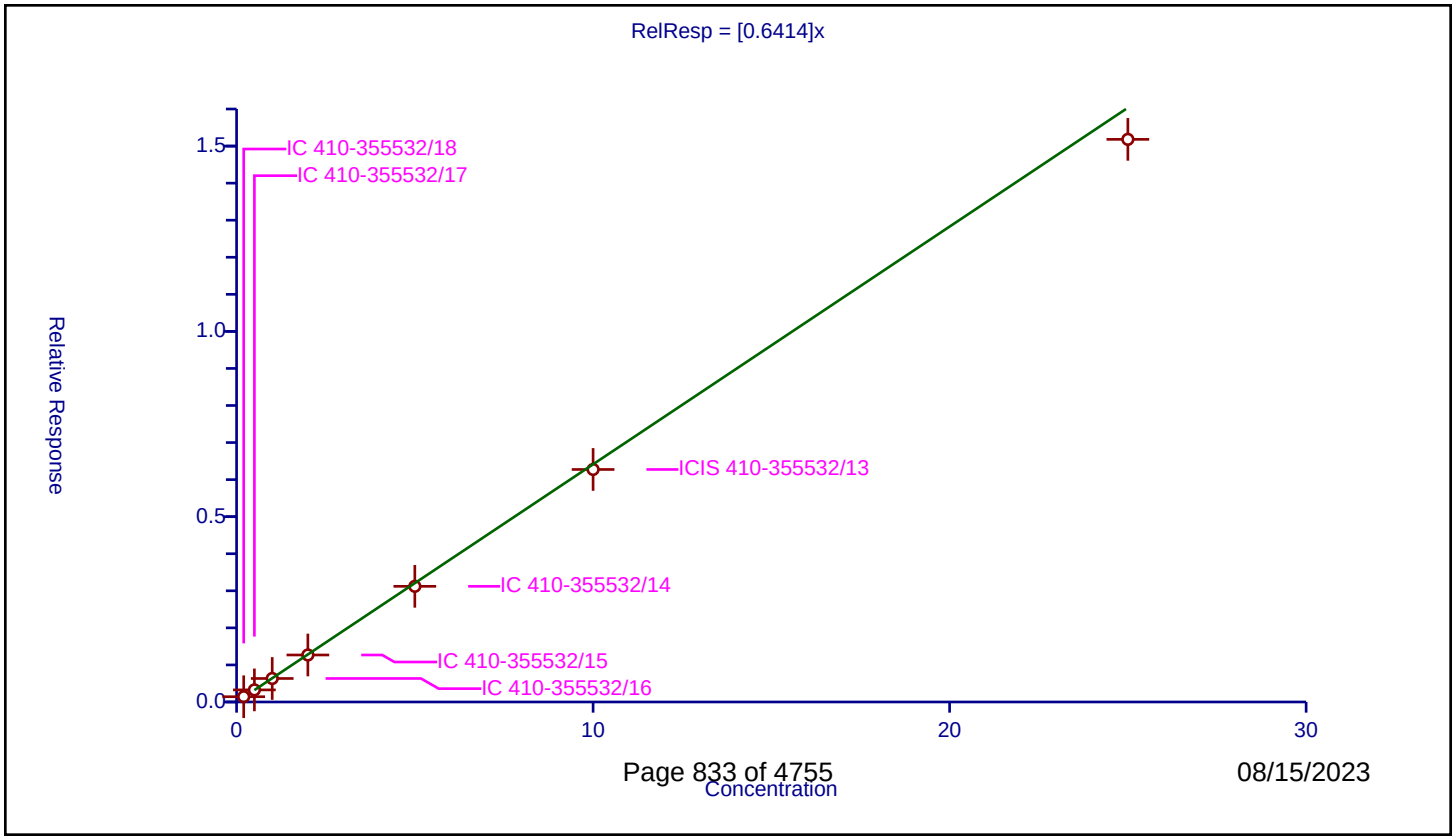
Curve Coefficients

Intercept:	0
Slope:	0.6414

Error Coefficients

Standard Error:	1650000
Relative Standard Error:	5.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.141913	10.0	2286473.0	0.709564	Y
2	IC 410-355532/17	0.5	0.326532	10.0	2310552.0	0.653065	Y
3	IC 410-355532/16	1.0	0.634147	10.0	2343275.0	0.634147	Y
4	IC 410-355532/15	2.0	1.267968	10.0	2349279.0	0.633984	Y
5	IC 410-355532/14	5.0	3.12068	10.0	2387313.0	0.624136	Y
6	ICIS 410-355532/13	10.0	6.274043	10.0	2381761.0	0.627404	Y
7	IC 410-355532/12	25.0	15.18144	10.0	2408929.0	0.607258	Y



Calibration / Trichlorofluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

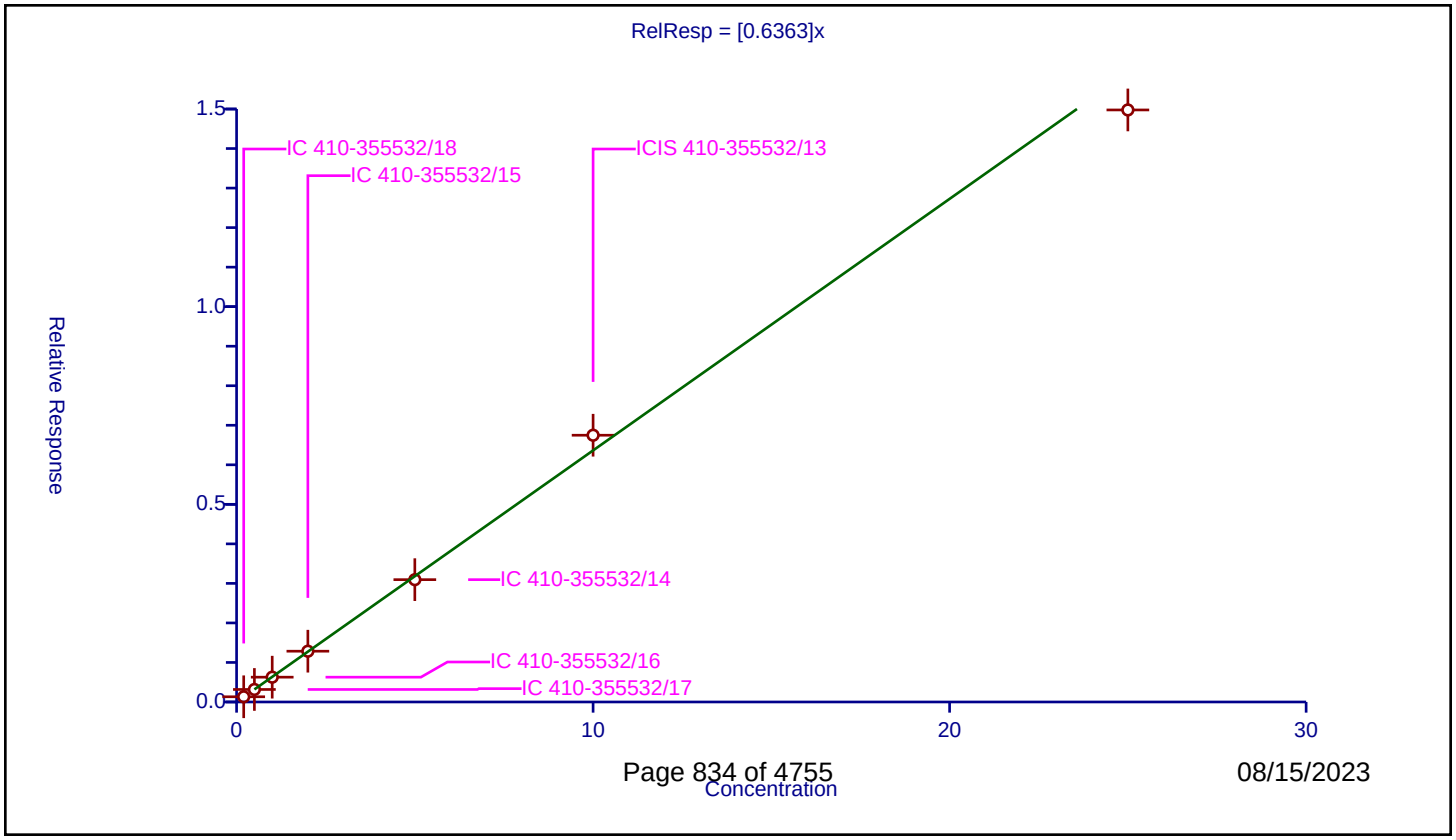
Curve Coefficients

Intercept:	0
Slope:	0.6363

Error Coefficients

Standard Error:	1650000
Relative Standard Error:	3.9
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.131622	10.0	2286473.0	0.65811	Y
2	IC 410-355532/17	0.5	0.316842	10.0	2310552.0	0.633684	Y
3	IC 410-355532/16	1.0	0.627511	10.0	2343275.0	0.627511	Y
4	IC 410-355532/15	2.0	1.284581	10.0	2349279.0	0.642291	Y
5	IC 410-355532/14	5.0	3.094232	10.0	2387313.0	0.618846	Y
6	ICIS 410-355532/13	10.0	6.748209	10.0	2381761.0	0.674821	Y
7	IC 410-355532/12	25.0	14.976672	10.0	2408929.0	0.599067	Y



Calibration / Ethyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

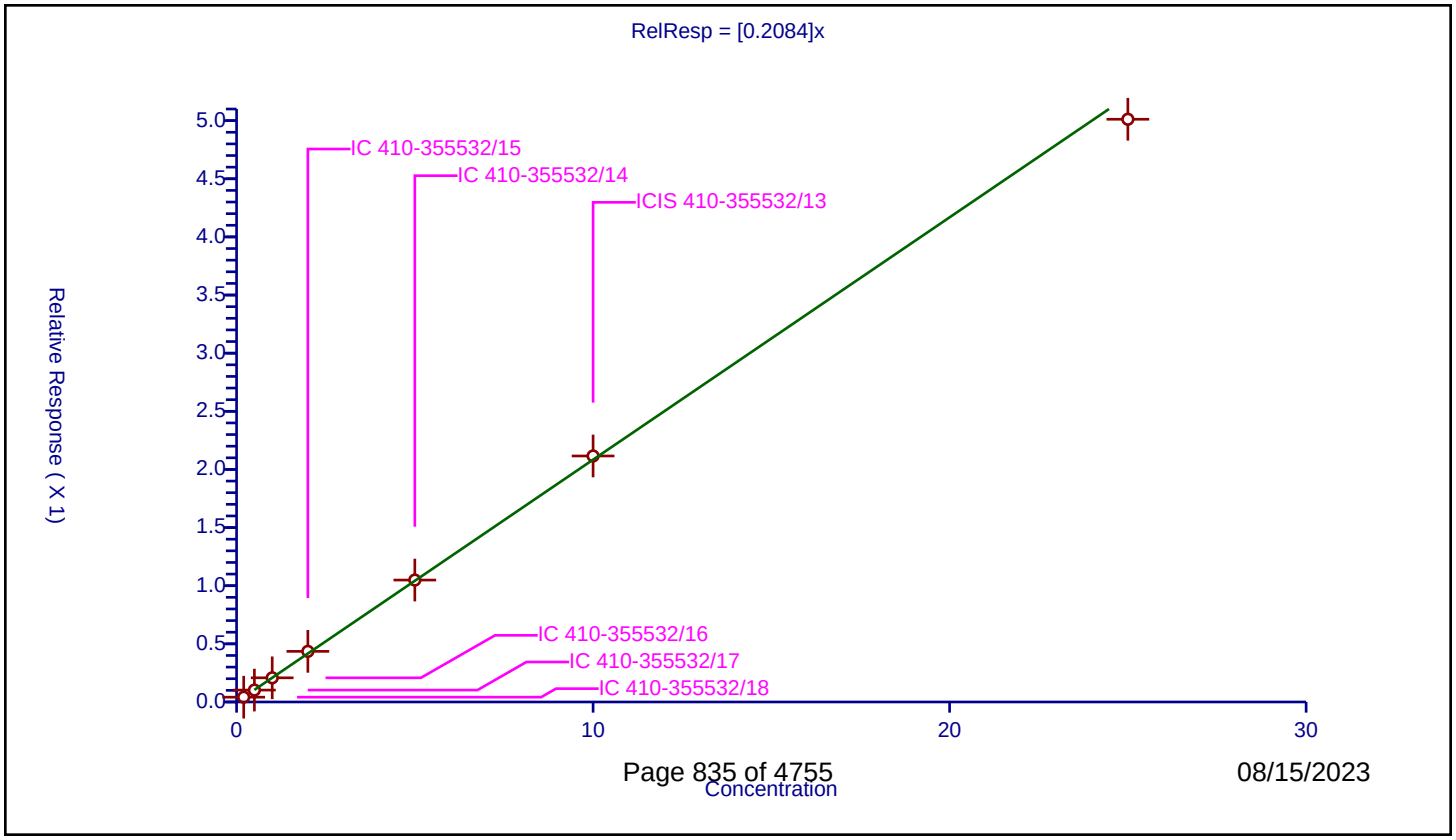
Curve Coefficients

Intercept:	0
Slope:	0.2084

Error Coefficients

Standard Error:	546000
Relative Standard Error:	2.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.199998	0.041339	10.0	2286473.0	0.206695	Y
2	IC 410-355532/17	0.499996	0.10243	10.0	2310552.0	0.204862	Y
3	IC 410-355532/16	0.999992	0.207799	10.0	2343275.0	0.2078	Y
4	IC 410-355532/15	1.999985	0.435436	10.0	2349279.0	0.21772	Y
5	IC 410-355532/14	4.999962	1.048807	10.0	2387313.0	0.209763	Y
6	ICIS 410-355532/13	9.999924	2.115897	10.0	2381761.0	0.211591	Y
7	IC 410-355532/12	24.99981	5.011999	10.0	2408929.0	0.200481	Y



Calibration / 1,2-Dichloro-1,1,2-trifluoroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

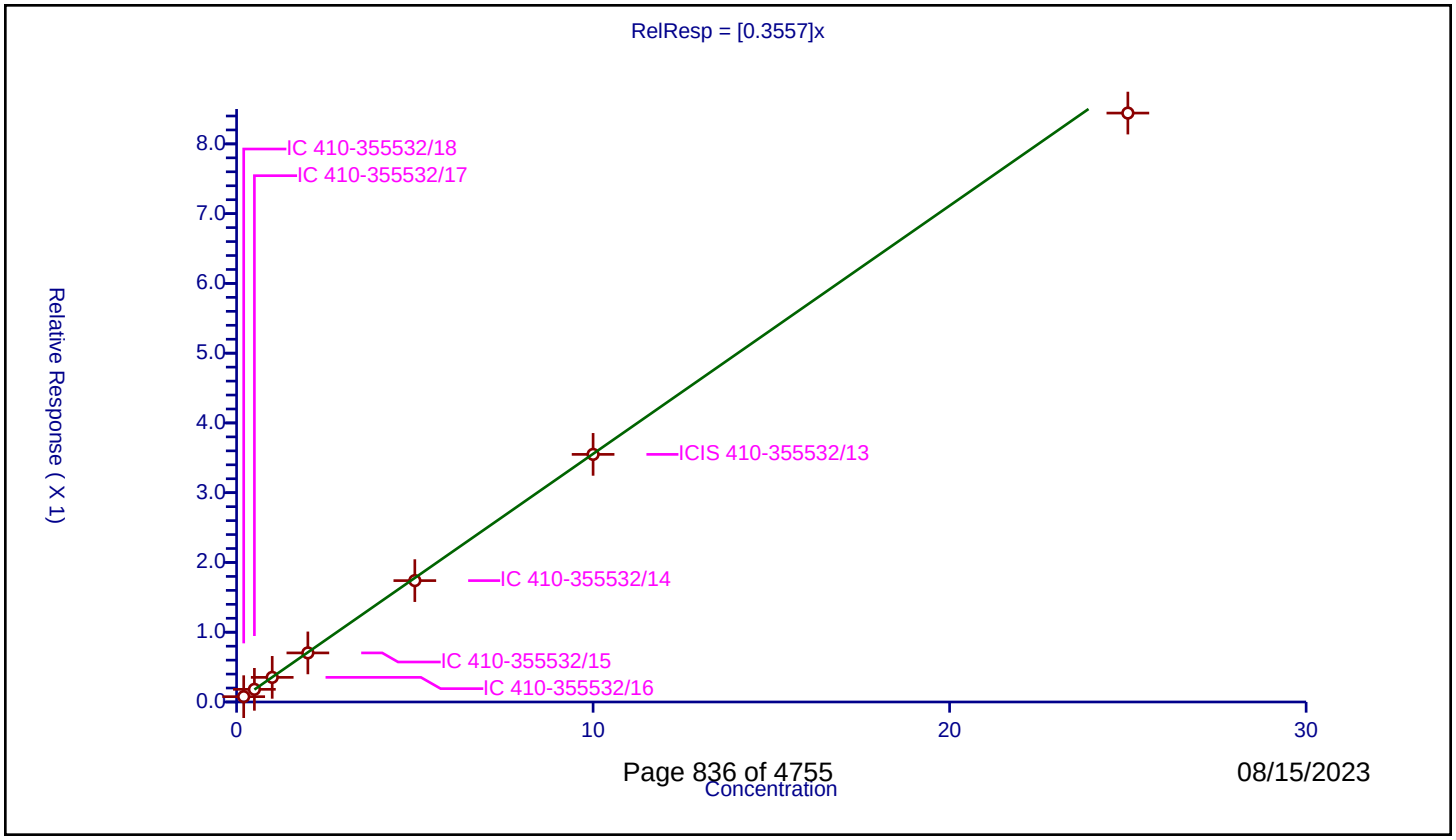
Curve Coefficients

Intercept:	0
Slope:	0.3557

Error Coefficients

Standard Error:	918000
Relative Standard Error:	3.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.076428	10.0	2286473.0	0.382139	Y
2	IC 410-355532/17	0.5	0.181199	10.0	2310552.0	0.362398	Y
3	IC 410-355532/16	1.0	0.352938	10.0	2343275.0	0.352938	Y
4	IC 410-355532/15	2.0	0.703556	10.0	2349279.0	0.351778	Y
5	IC 410-355532/14	5.0	1.73996	10.0	2387313.0	0.347992	Y
6	ICIS 410-355532/13	10.0	3.549395	10.0	2381761.0	0.354939	Y
7	IC 410-355532/12	25.0	8.441872	10.0	2408929.0	0.337675	Y



Calibration / Acrolein

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

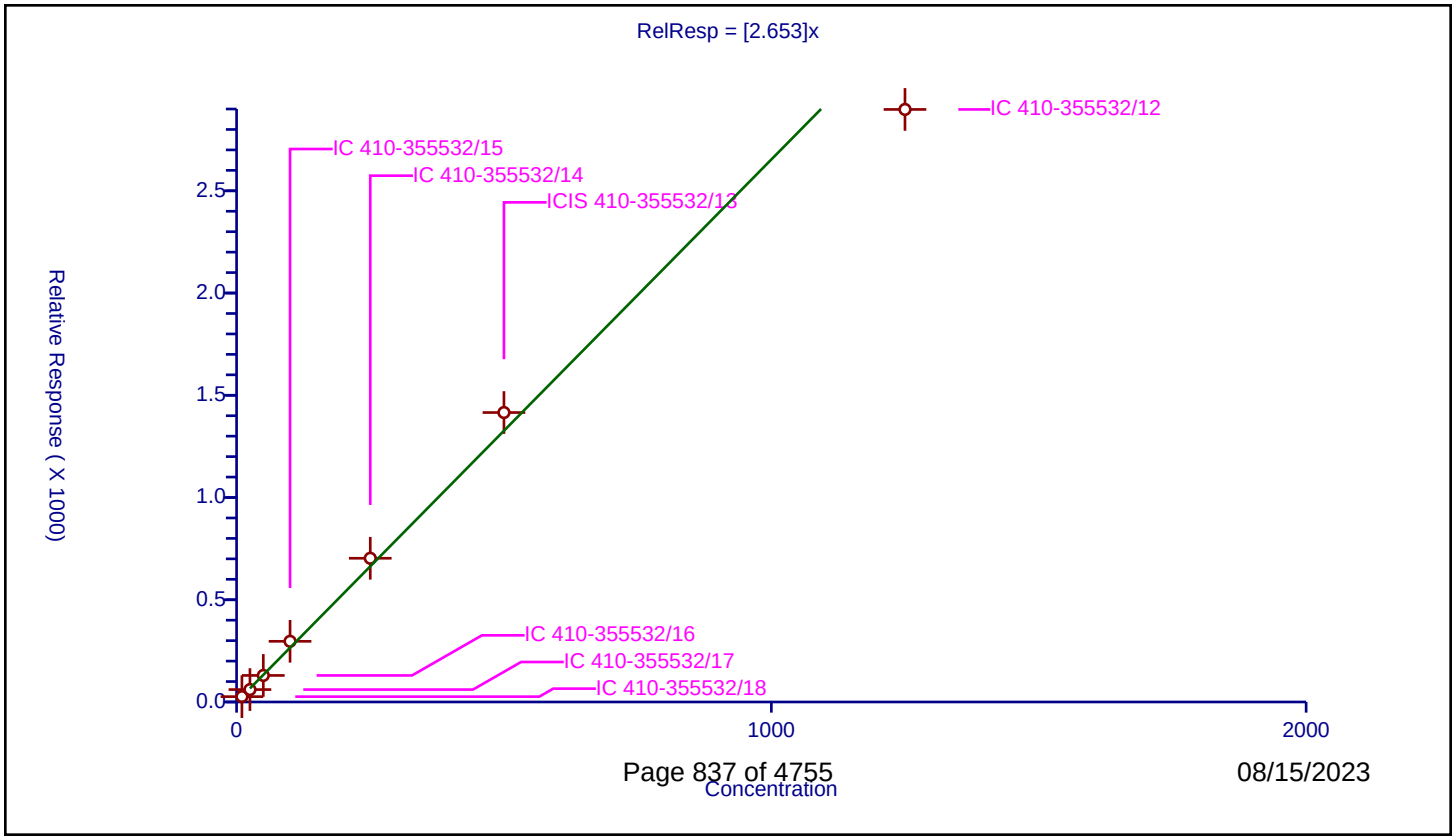
Curve Coefficients

Intercept:	0
Slope:	2.653

Error Coefficients

Standard Error:	3700000
Relative Standard Error:	8.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	9.999352	26.18253	50.0	126445.0	2.618423	Y
2	IC 410-355532/17	24.998379	60.695671	50.0	153492.0	2.427984	Y
3	IC 410-355532/16	49.996759	129.785908	50.0	134008.0	2.595886	Y
4	IC 410-355532/15	99.993517	296.792495	50.0	97646.0	2.968117	Y
5	IC 410-355532/14	249.983793	702.885698	50.0	125221.0	2.811725	Y
6	ICIS 410-355532/13	499.967587	1415.619316	50.0	120956.0	2.831422	Y
7	IC 410-355532/12	1249.918967	2897.927044	50.0	141127.0	2.318492	Y



Calibration / 1,1-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

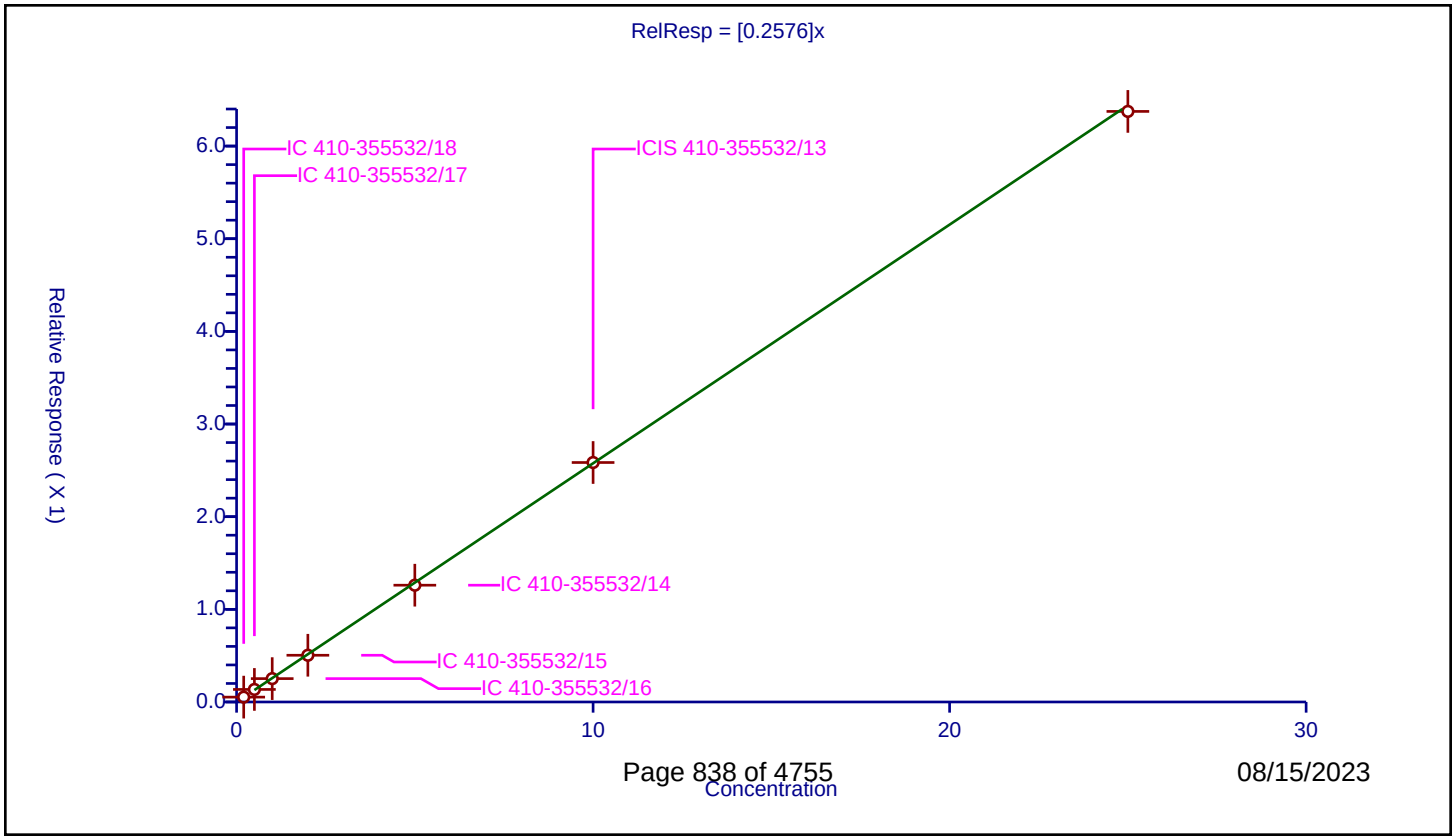
Curve Coefficients

Intercept:	0
Slope:	0.2576

Error Coefficients

Standard Error:	689000
Relative Standard Error:	2.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.052443	10.0	2286473.0	0.262216	Y
2	IC 410-355532/17	0.5	0.1355	10.0	2310552.0	0.271	Y
3	IC 410-355532/16	1.0	0.252232	10.0	2343275.0	0.252232	Y
4	IC 410-355532/15	2.0	0.504495	10.0	2349279.0	0.252248	Y
5	IC 410-355532/14	5.0	1.260543	10.0	2387313.0	0.252109	Y
6	ICIS 410-355532/13	10.0	2.584642	10.0	2381761.0	0.258464	Y
7	IC 410-355532/12	25.0	6.374131	10.0	2408929.0	0.254965	Y



Calibration / Acetone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

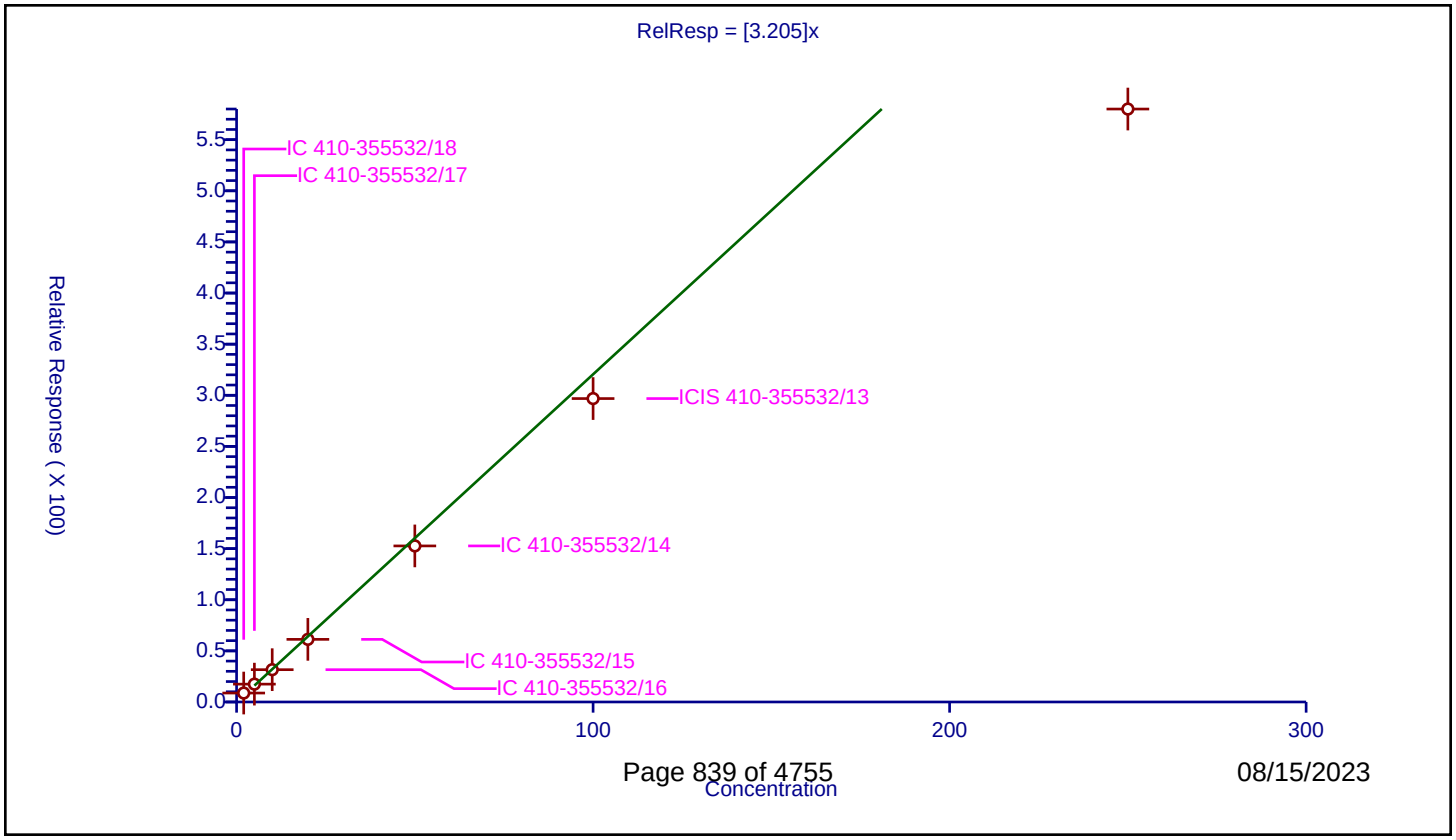
Curve Coefficients

Intercept:	0
Slope:	3.205

Error Coefficients

Standard Error:	749000
Relative Standard Error:	19.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.933

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	2.0	8.759935	50.0	126445.0	4.379968	Y
2	IC 410-355532/17	5.0	17.455959	50.0	153492.0	3.491192	Y
3	IC 410-355532/16	10.0	31.58692	50.0	134008.0	3.158692	Y
4	IC 410-355532/15	20.0	61.262622	50.0	97646.0	3.063131	Y
5	IC 410-355532/14	50.0	152.660896	50.0	125221.0	3.053218	Y
6	ICIS 410-355532/13	100.0	296.784781	50.0	120956.0	2.967848	Y
7	IC 410-355532/12	250.0	579.97194	50.0	141127.0	2.319888	Y



Calibration / 1,1,2-Trichloro-1,2,2-trifluoroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

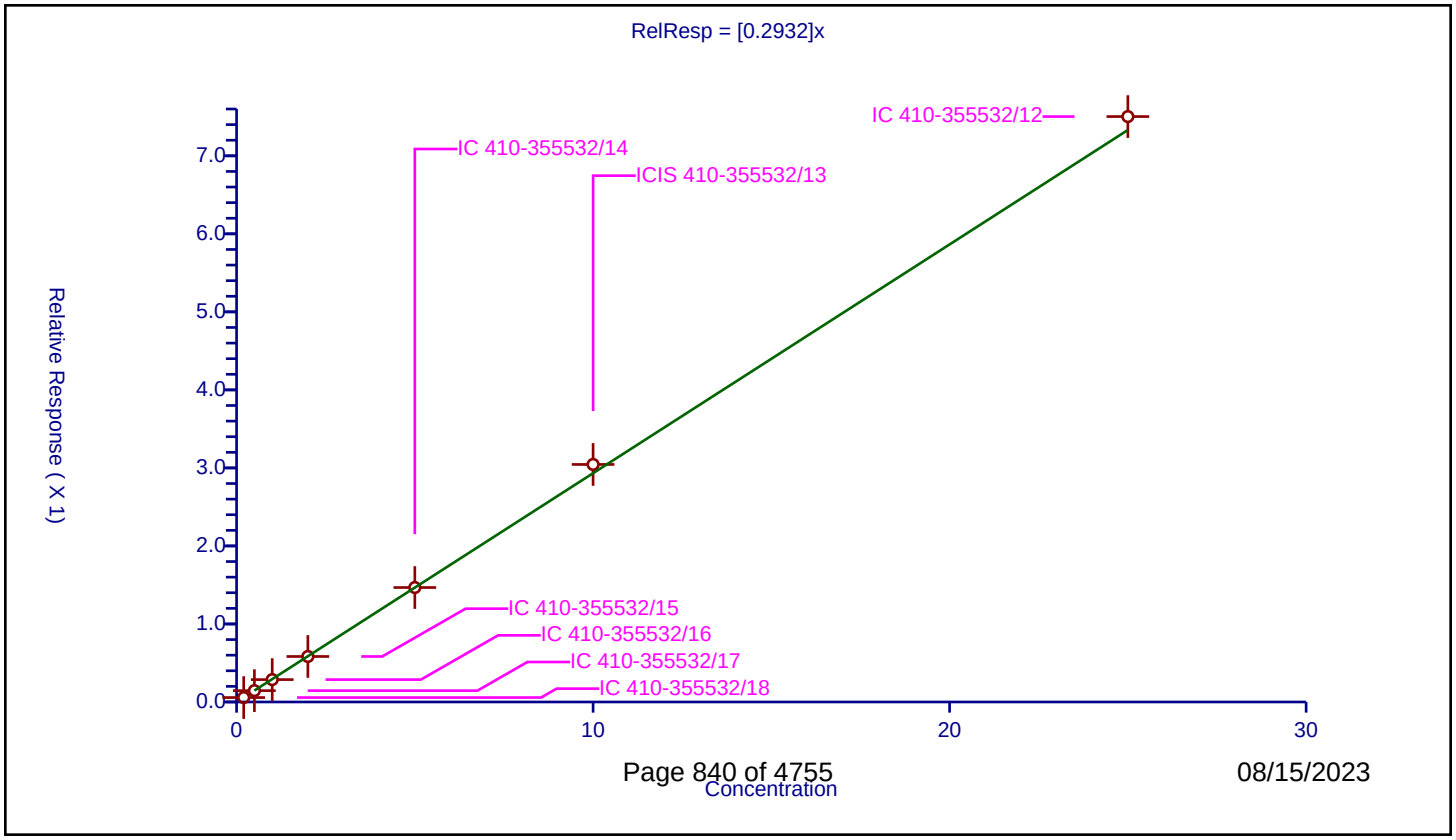
Curve Coefficients

Intercept:	0
Slope:	0.2932

Error Coefficients

Standard Error:	810000
Relative Standard Error:	2.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.057014	10.0	2286473.0	0.285068	Y
2	IC 410-355532/17	0.5	0.145407	10.0	2310552.0	0.290814	Y
3	IC 410-355532/16	1.0	0.287047	10.0	2343275.0	0.287047	Y
4	IC 410-355532/15	2.0	0.583324	10.0	2349279.0	0.291662	Y
5	IC 410-355532/14	5.0	1.466955	10.0	2387313.0	0.293391	Y
6	ICIS 410-355532/13	10.0	3.044428	10.0	2381761.0	0.304443	Y
7	IC 410-355532/12	25.0	7.50333	10.0	2408929.0	0.300133	Y



Calibration / Iodomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

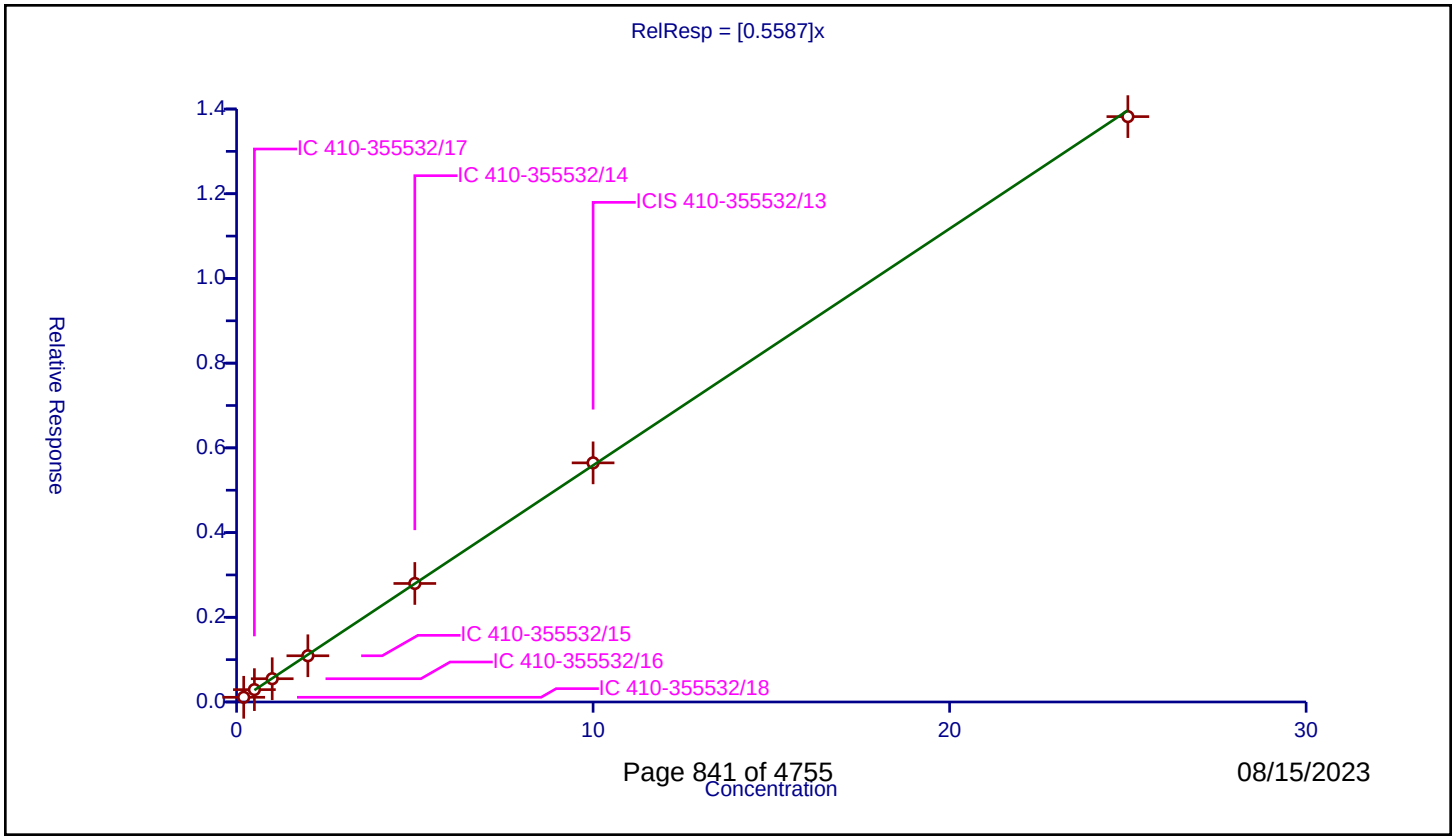
Curve Coefficients

Intercept:	0
Slope:	0.5587

Error Coefficients

Standard Error:	1500000
Relative Standard Error:	2.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.110992	10.0	2286473.0	0.55496	Y
2	IC 410-355532/17	0.5	0.292043	10.0	2310552.0	0.584086	Y
3	IC 410-355532/16	1.0	0.54912	10.0	2343275.0	0.54912	Y
4	IC 410-355532/15	2.0	1.091373	10.0	2349279.0	0.545687	Y
5	IC 410-355532/14	5.0	2.798489	10.0	2387313.0	0.559698	Y
6	ICIS 410-355532/13	10.0	5.645869	10.0	2381761.0	0.564587	Y
7	IC 410-355532/12	25.0	13.820839	10.0	2408929.0	0.552834	Y



Calibration / Carbon disulfide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

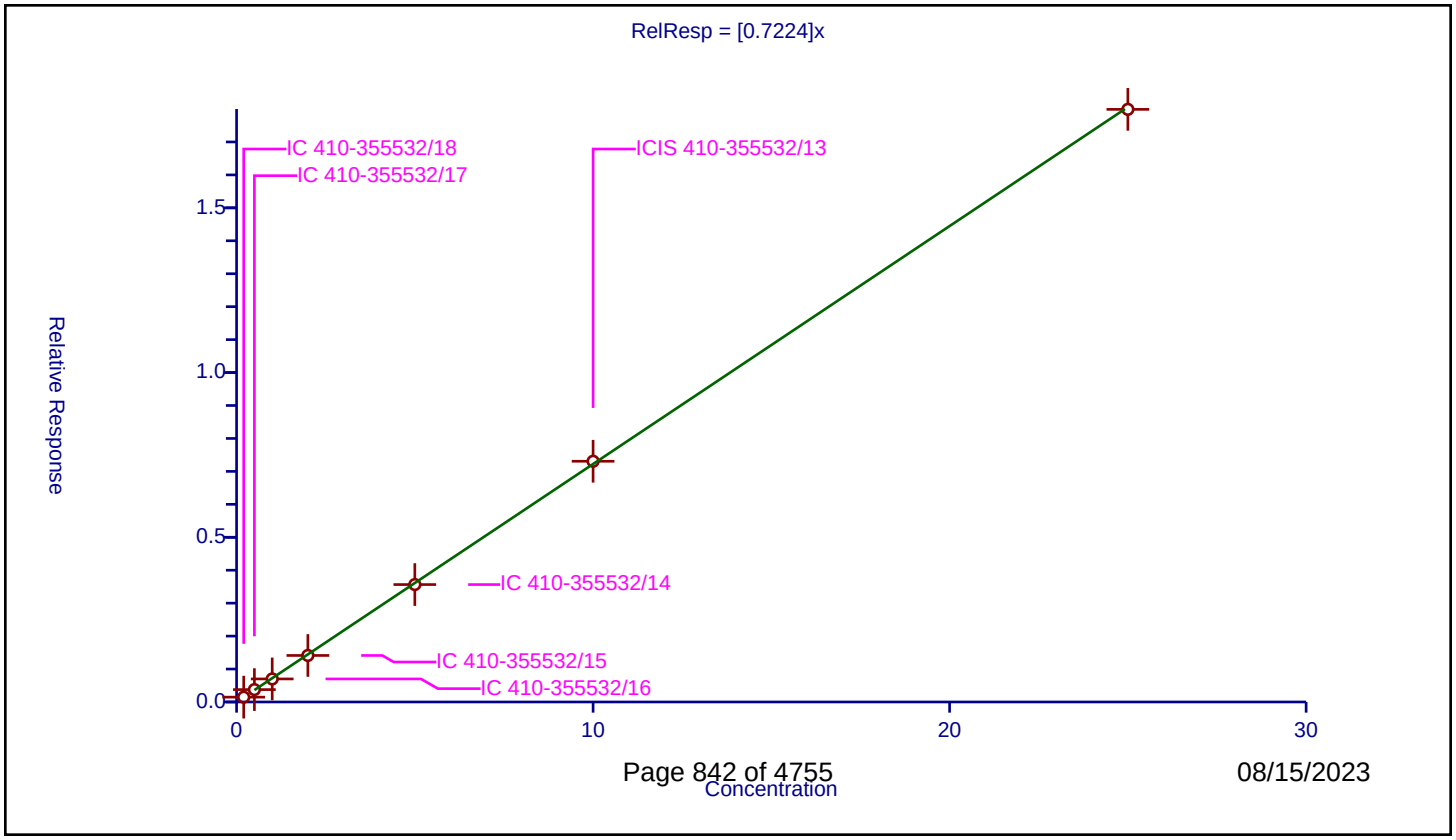
Curve Coefficients

Intercept:	0
Slope:	0.7224

Error Coefficients

Standard Error:	1940000
Relative Standard Error:	2.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.147157	10.0	2286473.0	0.735784	Y
2	IC 410-355532/17	0.5	0.375612	10.0	2310552.0	0.751223	Y
3	IC 410-355532/16	1.0	0.699956	10.0	2343275.0	0.699956	Y
4	IC 410-355532/15	2.0	1.412429	10.0	2349279.0	0.706215	Y
5	IC 410-355532/14	5.0	3.564887	10.0	2387313.0	0.712977	Y
6	ICIS 410-355532/13	10.0	7.307274	10.0	2381761.0	0.730727	Y
7	IC 410-355532/12	25.0	17.989235	10.0	2408929.0	0.719569	Y



Calibration / Methyl acetate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

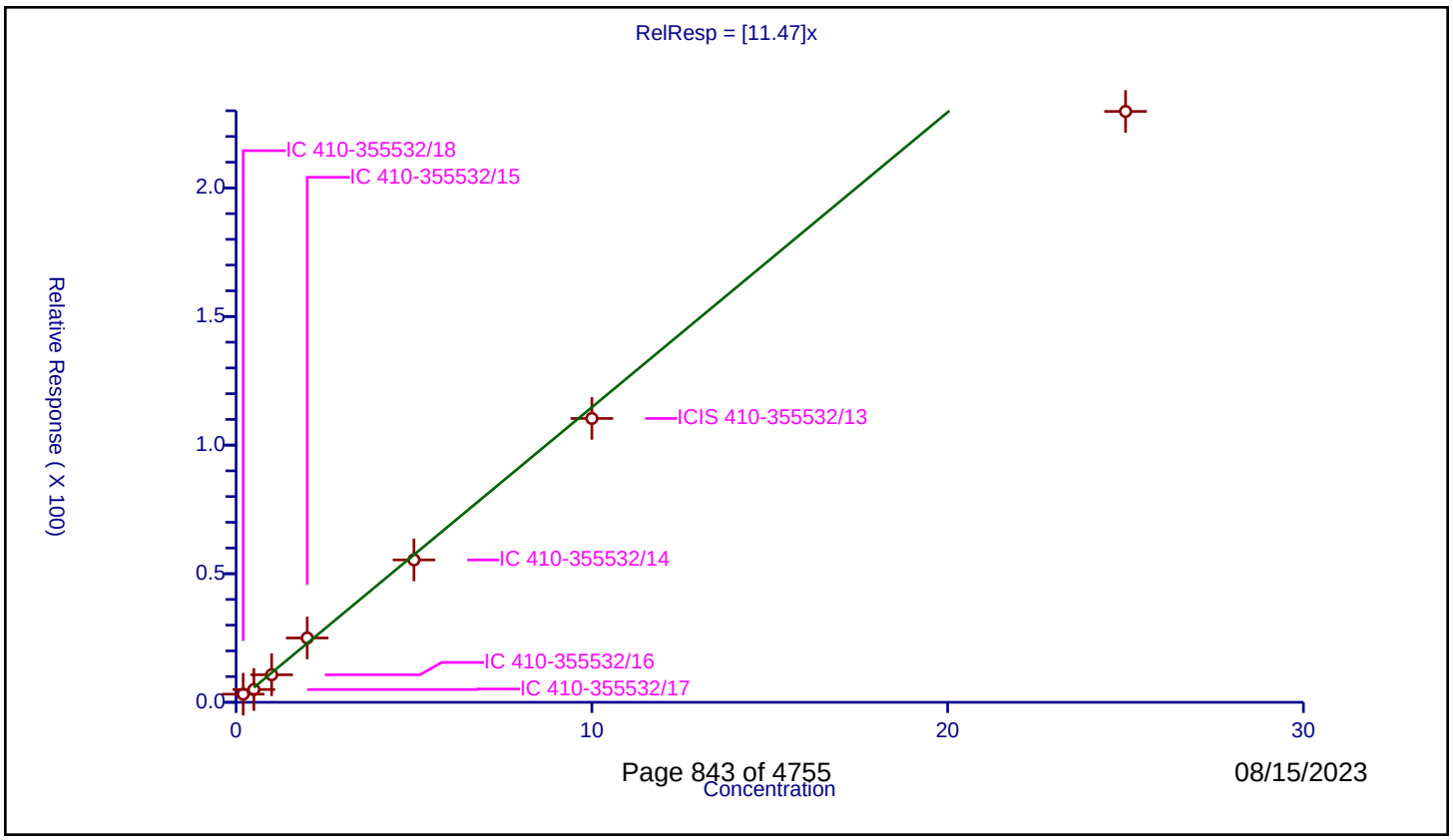
Curve Coefficients

Intercept:	0
Slope:	11.47

Error Coefficients

Standard Error:	293000
Relative Standard Error:	19.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.940

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	3.170153	50.0	126445.0	15.850765	Y
2	IC 410-355532/17	0.5	4.964754	50.0	153492.0	9.929508	Y
3	IC 410-355532/16	1.0	10.713166	50.0	134008.0	10.713166	Y
4	IC 410-355532/15	2.0	25.013313	50.0	97646.0	12.506657	Y
5	IC 410-355532/14	5.0	55.376894	50.0	125221.0	11.075379	Y
6	ICIS 410-355532/13	10.0	110.36906	50.0	120956.0	11.036906	Y
7	IC 410-355532/12	25.0	229.743068	50.0	141127.0	9.189723	Y



Calibration / 3-Chloro-1-propene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

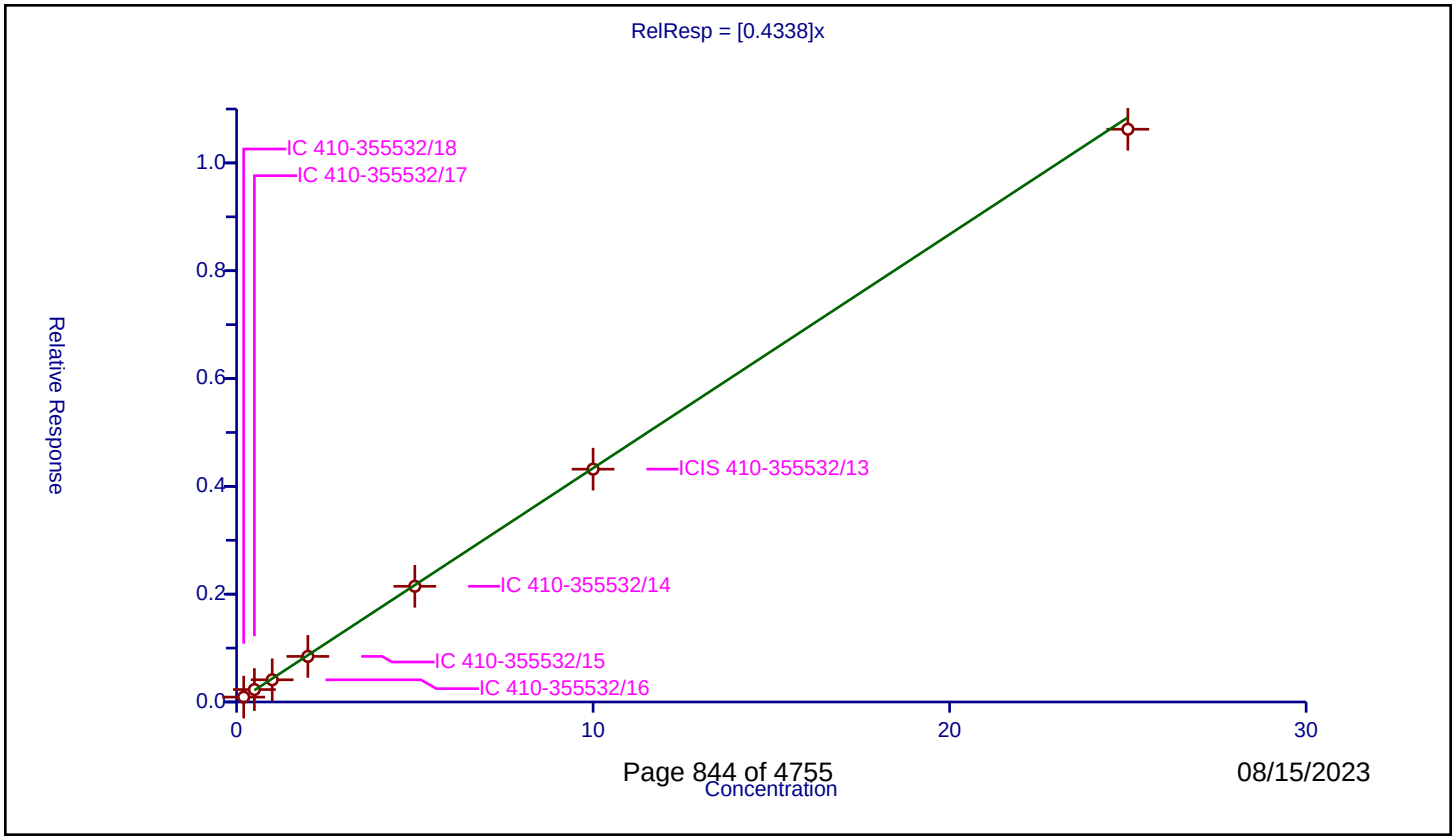
Curve Coefficients

Intercept:	0
Slope:	0.4338

Error Coefficients

Standard Error:	1150000
Relative Standard Error:	4.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.090817	10.0	2286473.0	0.454084	Y
2	IC 410-355532/17	0.5	0.23085	10.0	2310552.0	0.461699	Y
3	IC 410-355532/16	1.0	0.411723	10.0	2343275.0	0.411723	Y
4	IC 410-355532/15	2.0	0.845455	10.0	2349279.0	0.422728	Y
5	IC 410-355532/14	5.0	2.146271	10.0	2387313.0	0.429254	Y
6	ICIS 410-355532/13	10.0	4.319056	10.0	2381761.0	0.431906	Y
7	IC 410-355532/12	25.0	10.625182	10.0	2408929.0	0.425007	Y



Calibration / Methylene Chloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

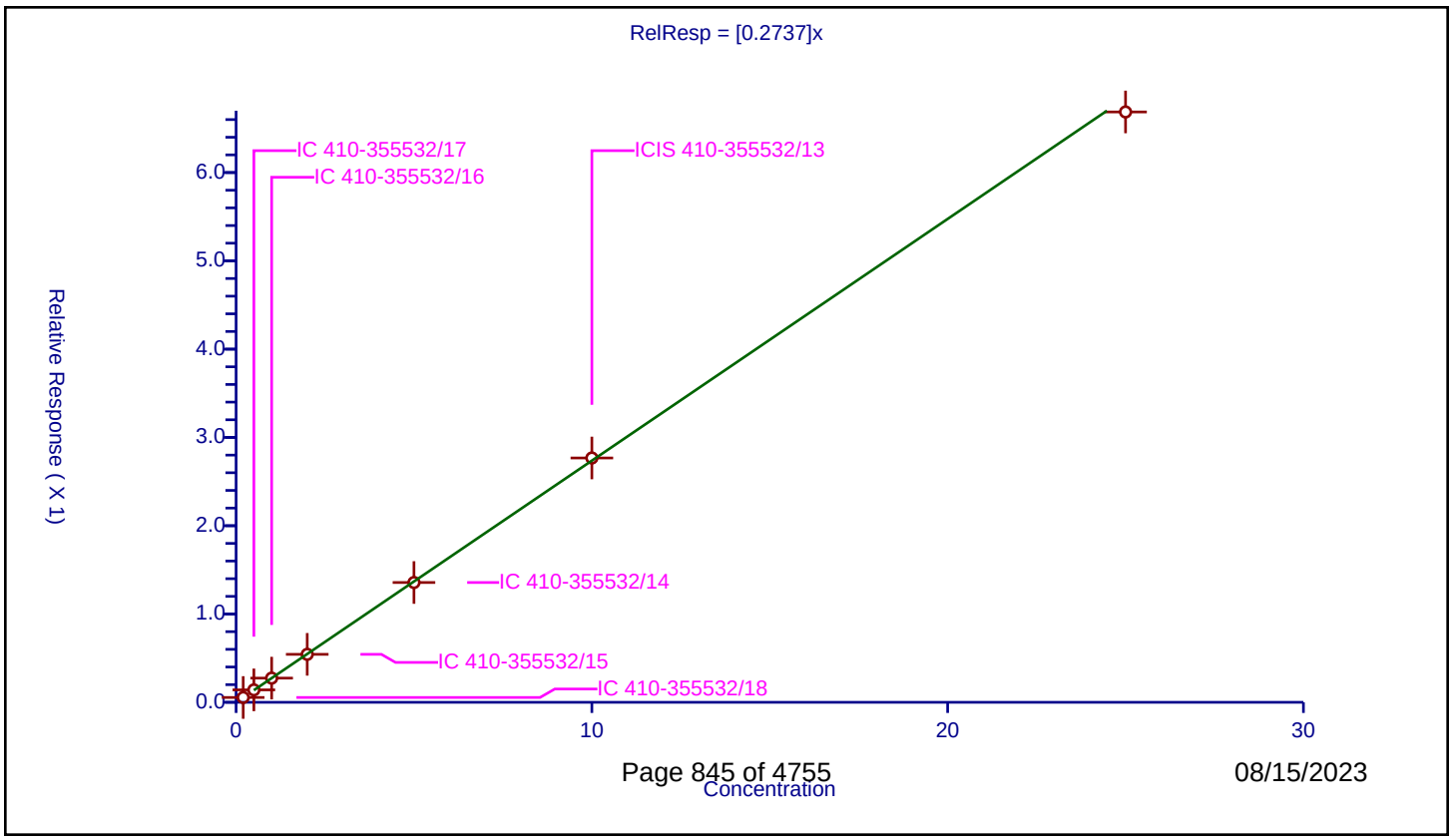
Curve Coefficients

Intercept:	0
Slope:	0.2737

Error Coefficients

Standard Error:	725000
Relative Standard Error:	1.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.054639	10.0	2286473.0	0.273194	Y
2	IC 410-355532/17	0.5	0.140737	10.0	2310552.0	0.281474	Y
3	IC 410-355532/16	1.0	0.274176	10.0	2343275.0	0.274176	Y
4	IC 410-355532/15	2.0	0.543367	10.0	2349279.0	0.271683	Y
5	IC 410-355532/14	5.0	1.356856	10.0	2387313.0	0.271371	Y
6	ICIS 410-355532/13	10.0	2.767284	10.0	2381761.0	0.276728	Y
7	IC 410-355532/12	25.0	6.686544	10.0	2408929.0	0.267462	Y



Calibration / 2-Methyl-2-propanol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

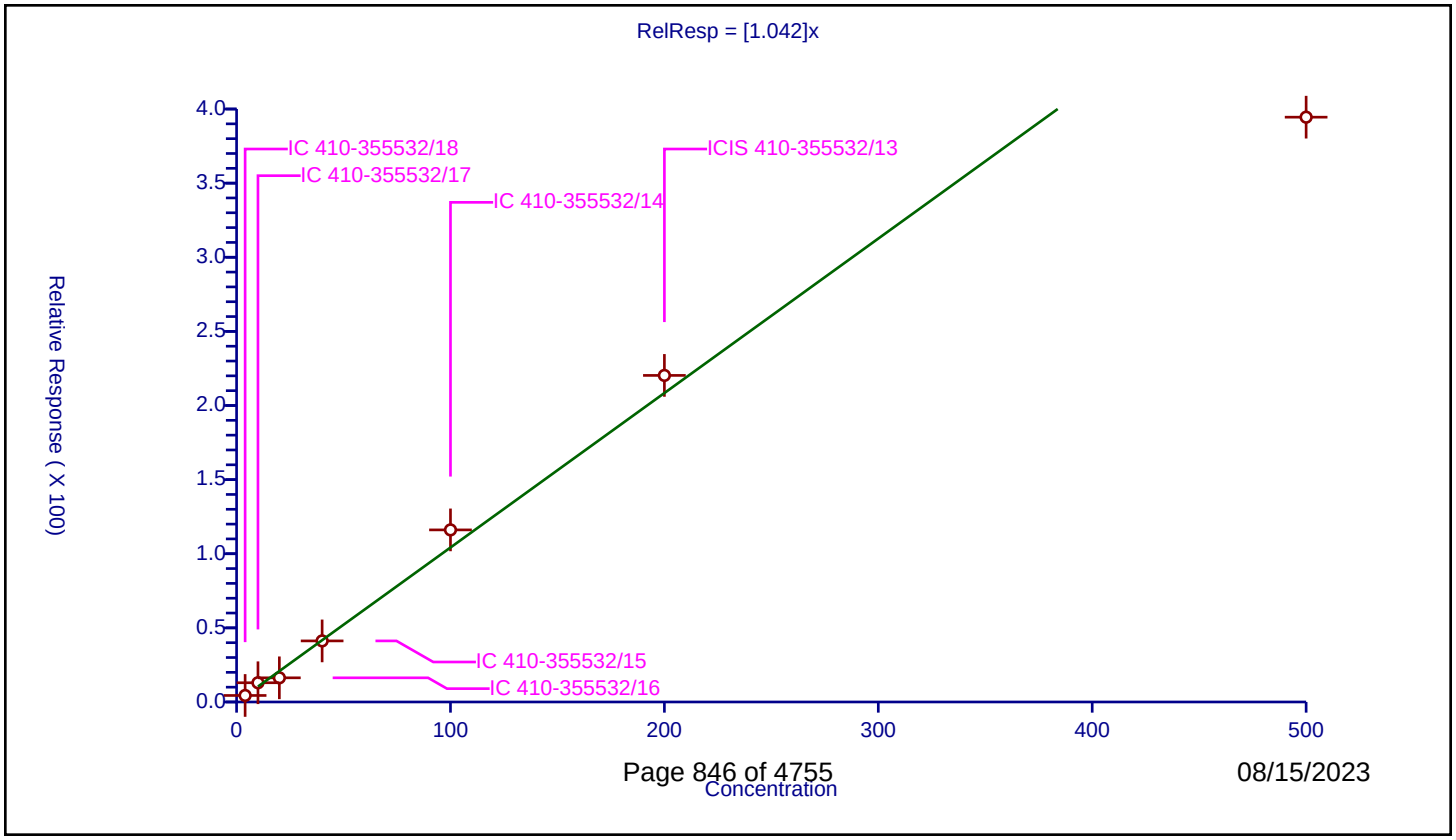
Curve Coefficients

Intercept:	0
Slope:	1.042

Error Coefficients

Standard Error:	519000
Relative Standard Error:	17.6
Correlation Coefficient:	0.991
Coefficient of Determination (Adjusted):	0.956

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	4.0	4.401914	50.0	126445.0	1.100478	Y
2	IC 410-355532/17	10.0	12.970383	50.0	153492.0	1.297038	Y
3	IC 410-355532/16	20.0	16.303504	50.0	134008.0	0.815175	Y
4	IC 410-355532/15	40.0	41.205989	50.0	97646.0	1.03015	Y
5	IC 410-355532/14	100.0	116.082366	50.0	125221.0	1.160824	Y
6	ICIS 410-355532/13	200.0	220.289609	50.0	120956.0	1.101448	Y
7	IC 410-355532/12	500.0	394.493258	50.0	141127.0	0.788987	Y



Calibration / Acrylonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

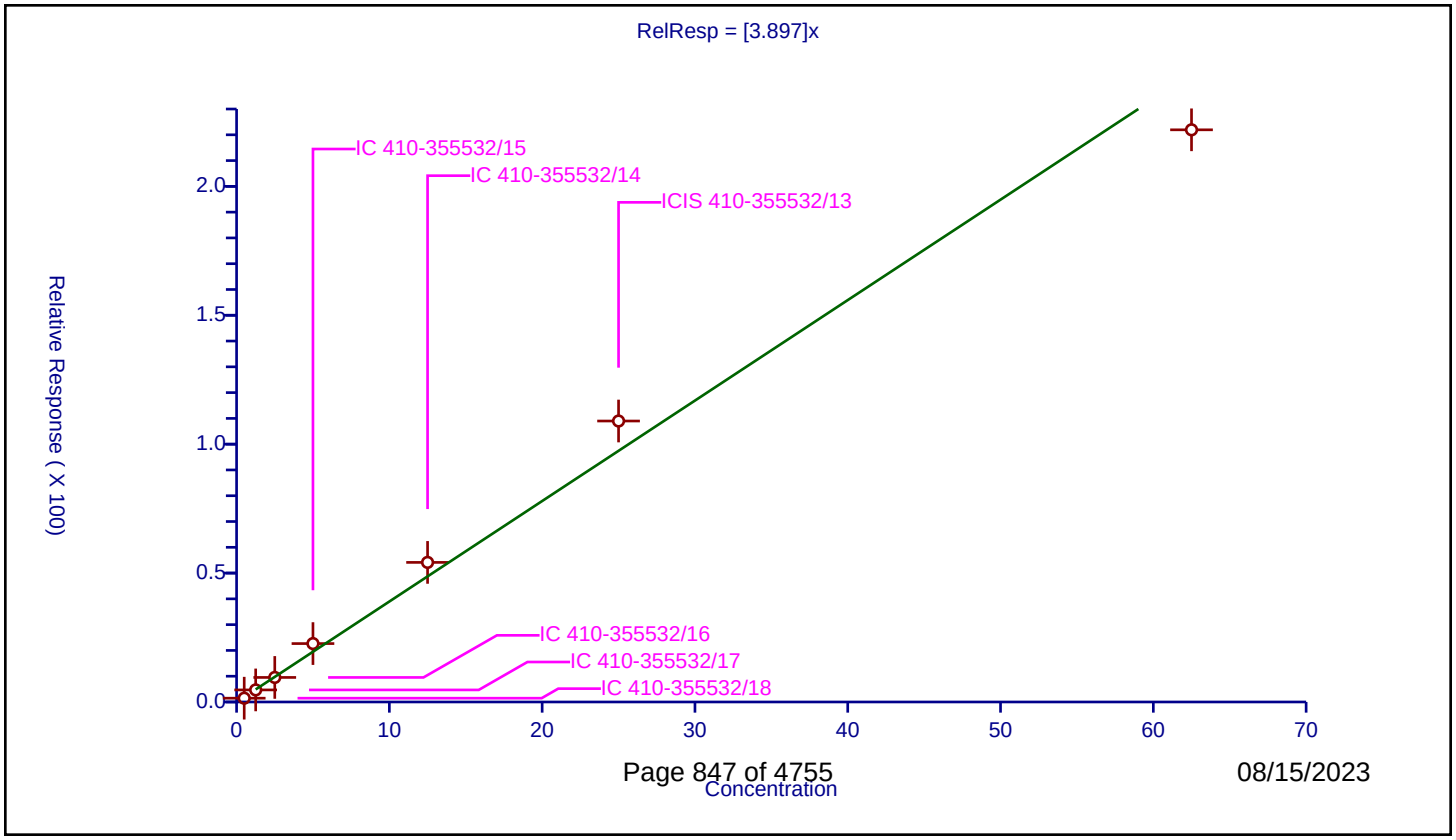
Curve Coefficients

Intercept:	0
Slope:	3.897

Error Coefficients

Standard Error:	284000
Relative Standard Error:	14.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.977

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.5	1.476136	50.0	126445.0	2.952272	Y
2	IC 410-355532/17	1.25	4.682654	50.0	153492.0	3.746124	Y
3	IC 410-355532/16	2.5	9.518835	50.0	134008.0	3.807534	Y
4	IC 410-355532/15	5.0	22.654282	50.0	97646.0	4.530856	Y
5	IC 410-355532/14	12.5	54.14587	50.0	125221.0	4.33167	Y
6	ICIS 410-355532/13	25.0	108.978885	50.0	120956.0	4.359155	Y
7	IC 410-355532/12	62.5	221.929184	50.0	141127.0	3.550867	Y



08/15/2023

Calibration / Methyl tert-butyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

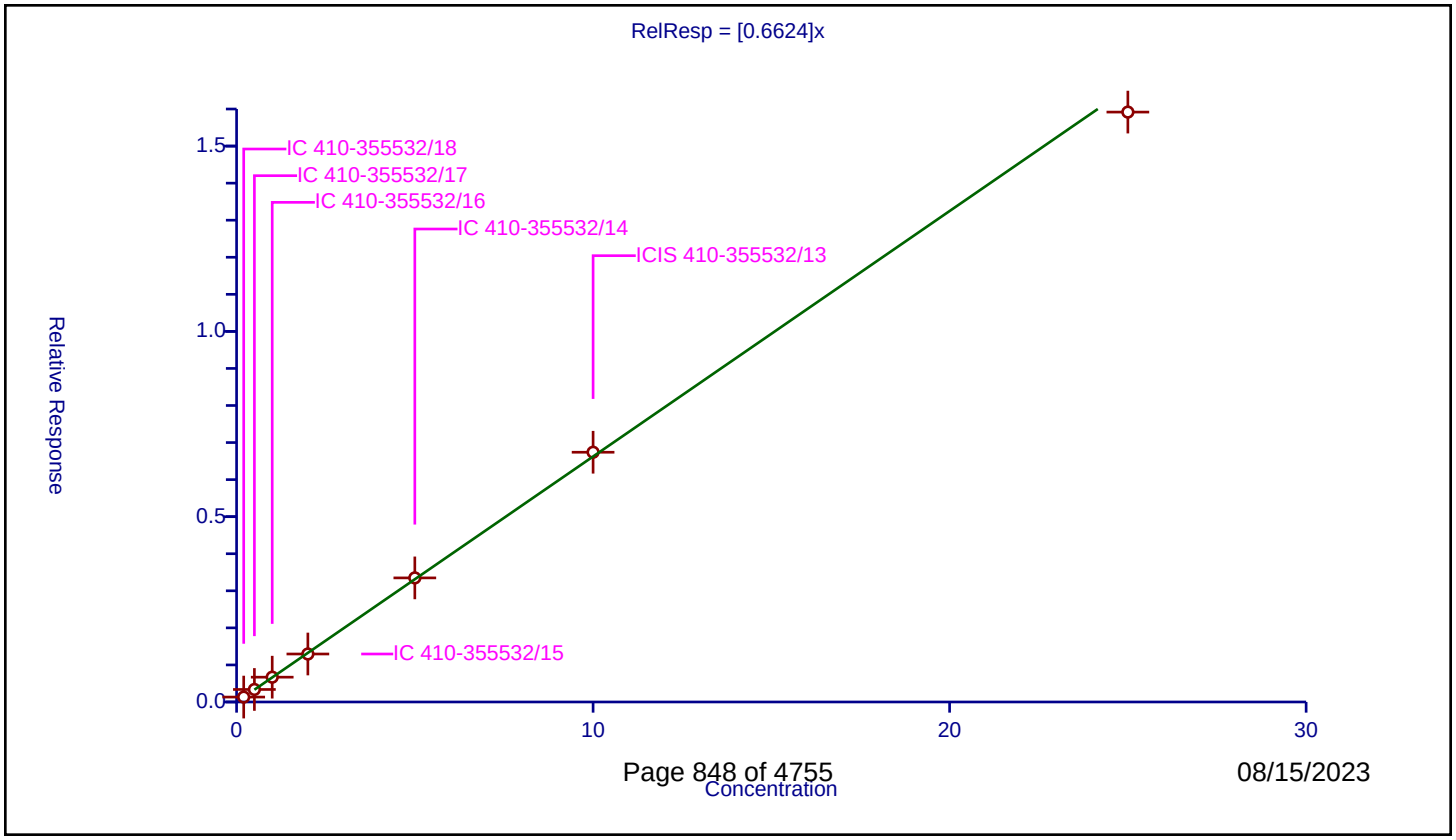
Curve Coefficients

Intercept:	0
Slope:	0.6624

Error Coefficients

Standard Error:	1730000
Relative Standard Error:	2.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.132698	10.0	2286473.0	0.663489	Y
2	IC 410-355532/17	0.5	0.337781	10.0	2310552.0	0.675562	Y
3	IC 410-355532/16	1.0	0.66961	10.0	2343275.0	0.66961	Y
4	IC 410-355532/15	2.0	1.294976	10.0	2349279.0	0.647488	Y
5	IC 410-355532/14	5.0	3.348497	10.0	2387313.0	0.669699	Y
6	ICIS 410-355532/13	10.0	6.739043	10.0	2381761.0	0.673904	Y
7	IC 410-355532/12	25.0	15.917601	10.0	2408929.0	0.636704	Y



Calibration / trans-1,2-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

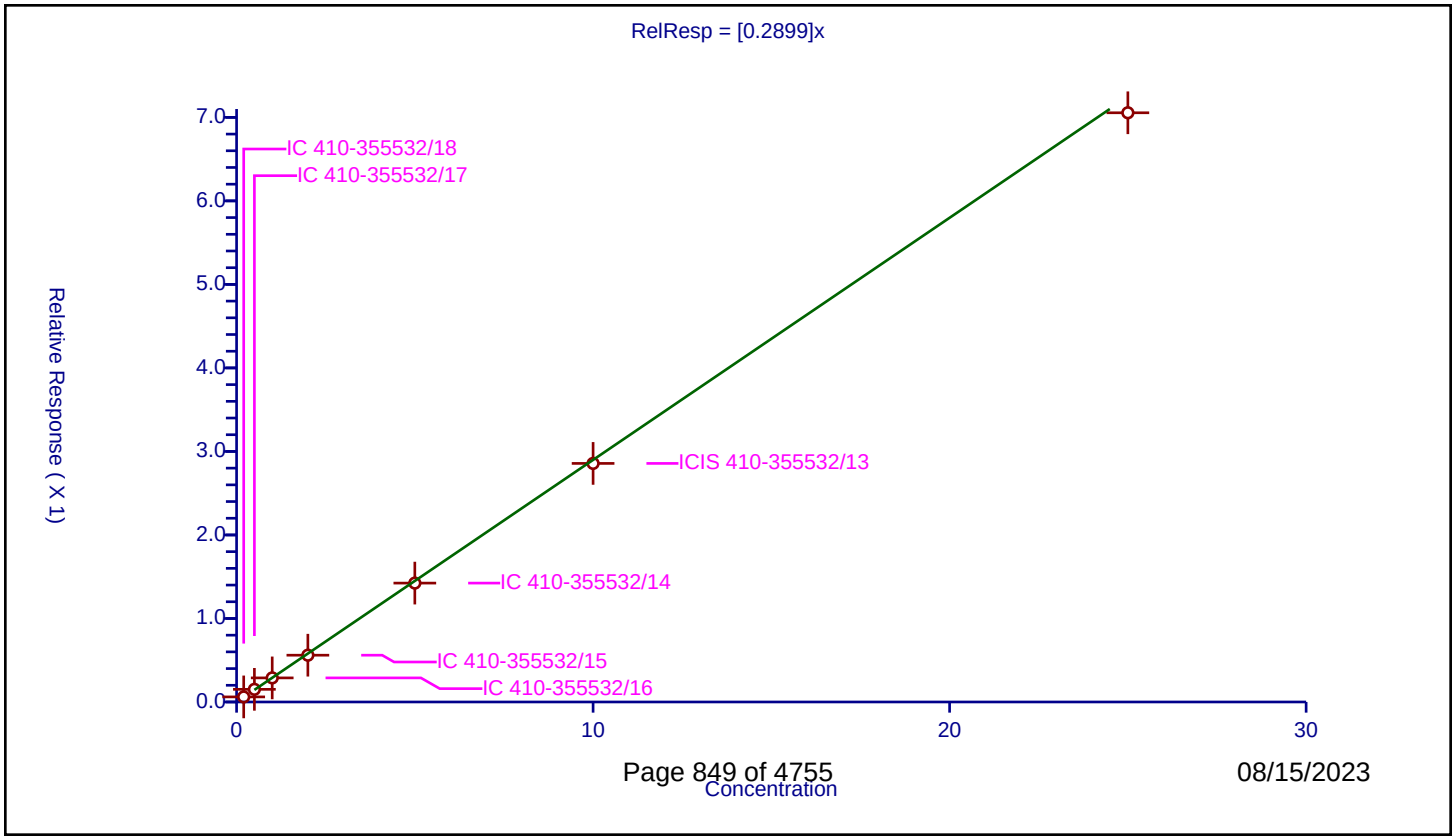
Curve Coefficients

Intercept:	0
Slope:	0.2899

Error Coefficients

Standard Error:	763000
Relative Standard Error:	3.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.060932	10.0	2286473.0	0.304661	Y
2	IC 410-355532/17	0.5	0.151652	10.0	2310552.0	0.303304	Y
3	IC 410-355532/16	1.0	0.288506	10.0	2343275.0	0.288506	Y
4	IC 410-355532/15	2.0	0.560214	10.0	2349279.0	0.280107	Y
5	IC 410-355532/14	5.0	1.423642	10.0	2387313.0	0.284728	Y
6	ICIS 410-355532/13	10.0	2.856462	10.0	2381761.0	0.285646	Y
7	IC 410-355532/12	25.0	7.055077	10.0	2408929.0	0.282203	Y



Calibration / Hexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

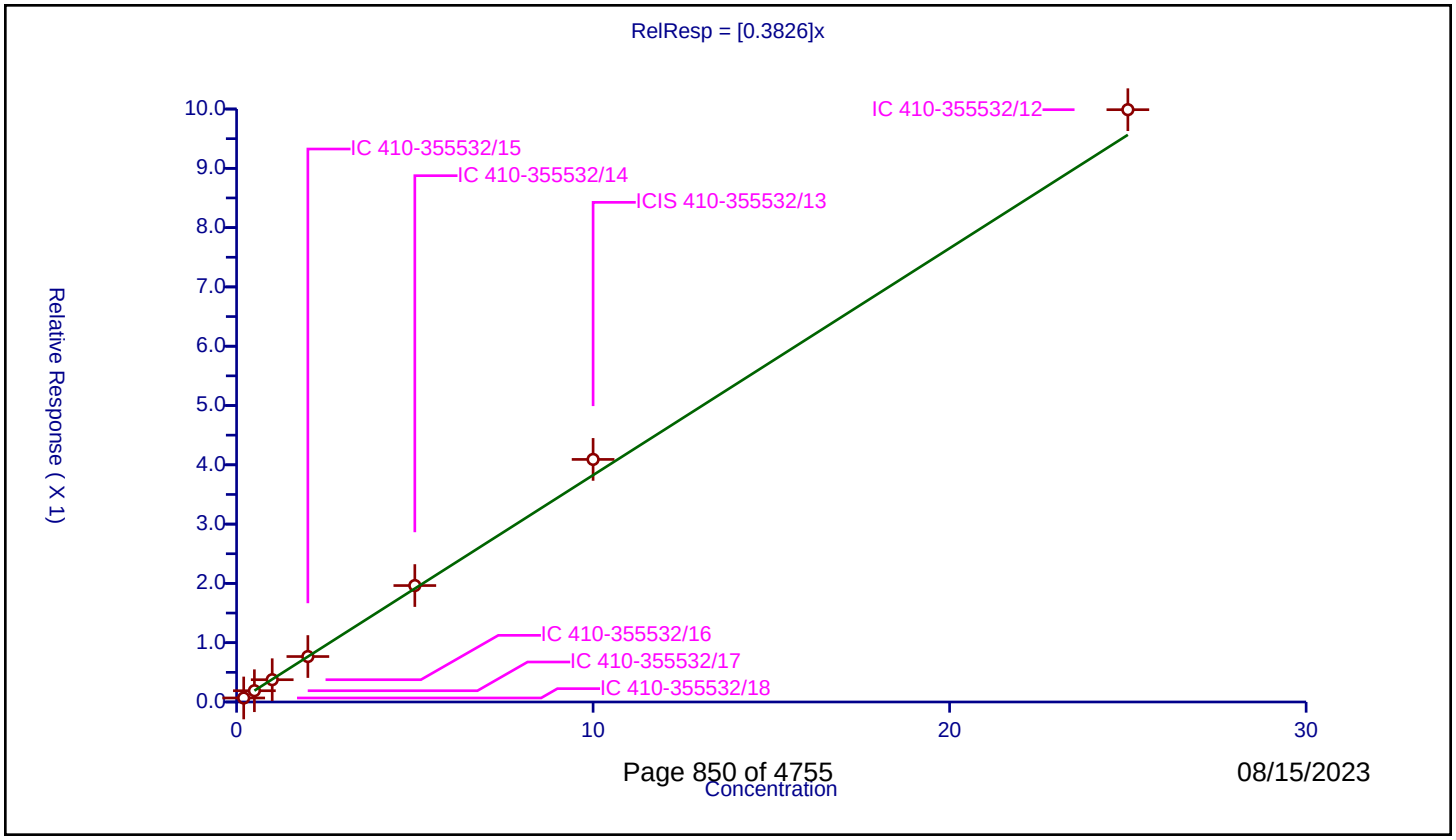
Curve Coefficients

Intercept:	0
Slope:	0.3826

Error Coefficients

Standard Error:	1080000
Relative Standard Error:	6.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.067558	10.0	2286473.0	0.337791	Y
2	IC 410-355532/17	0.5	0.190028	10.0	2310552.0	0.380056	Y
3	IC 410-355532/16	1.0	0.375773	10.0	2343275.0	0.375773	Y
4	IC 410-355532/15	2.0	0.766342	10.0	2349279.0	0.383171	Y
5	IC 410-355532/14	5.0	1.963676	10.0	2387313.0	0.392735	Y
6	ICIS 410-355532/13	10.0	4.090599	10.0	2381761.0	0.40906	Y
7	IC 410-355532/12	25.0	9.988538	10.0	2408929.0	0.399542	Y



Calibration / 1,1-Dichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

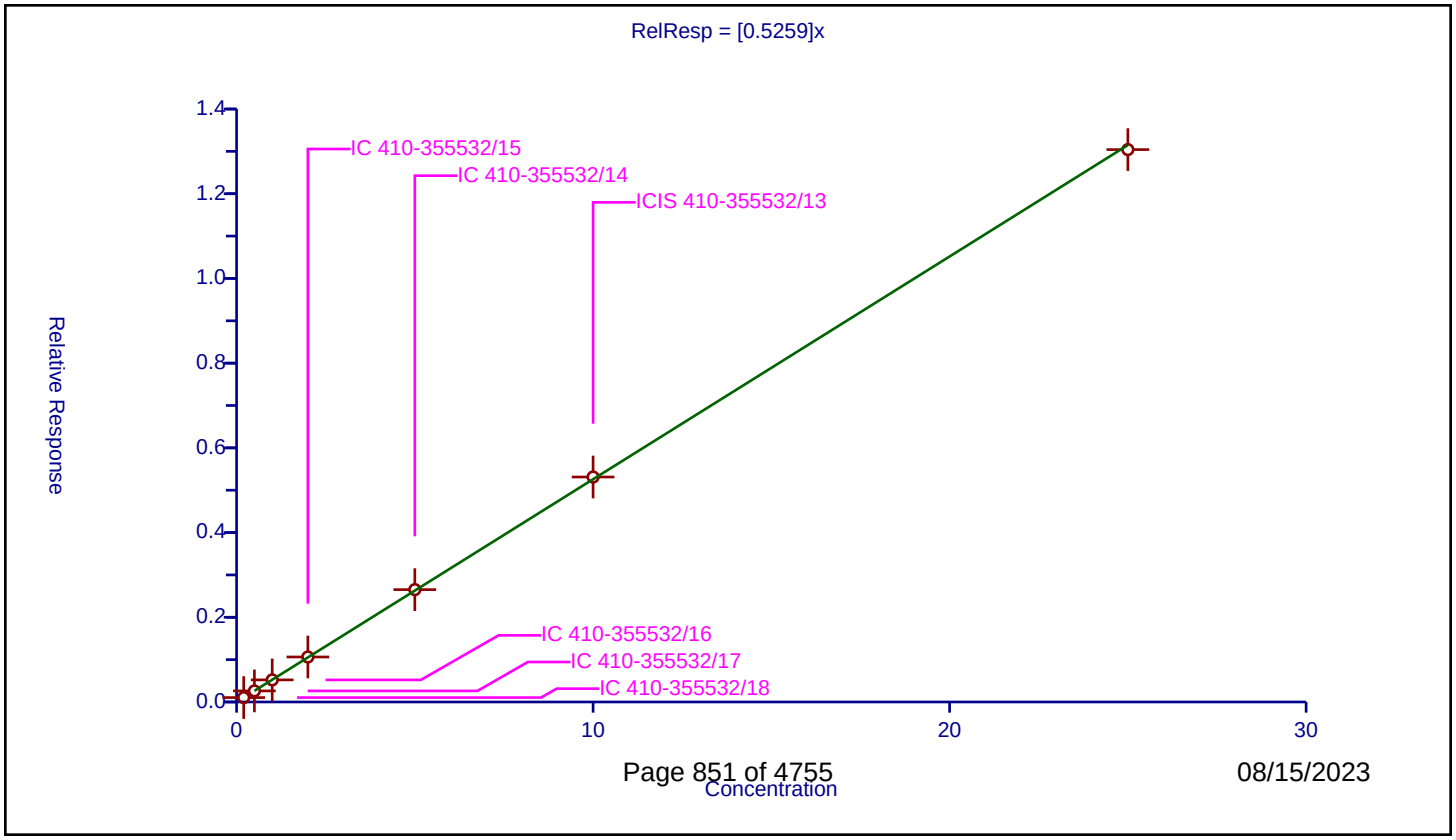
Curve Coefficients

Intercept:	0
Slope:	0.5259

Error Coefficients

Standard Error:	1410000
Relative Standard Error:	0.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.104322	10.0	2286473.0	0.521611	Y
2	IC 410-355532/17	0.5	0.261613	10.0	2310552.0	0.523226	Y
3	IC 410-355532/16	1.0	0.521804	10.0	2343275.0	0.521804	Y
4	IC 410-355532/15	2.0	1.062649	10.0	2349279.0	0.531325	Y
5	IC 410-355532/14	5.0	2.652576	10.0	2387313.0	0.530515	Y
6	ICIS 410-355532/13	10.0	5.311864	10.0	2381761.0	0.531186	Y
7	IC 410-355532/12	25.0	13.041879	10.0	2408929.0	0.521675	Y



Calibration / Isopropyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

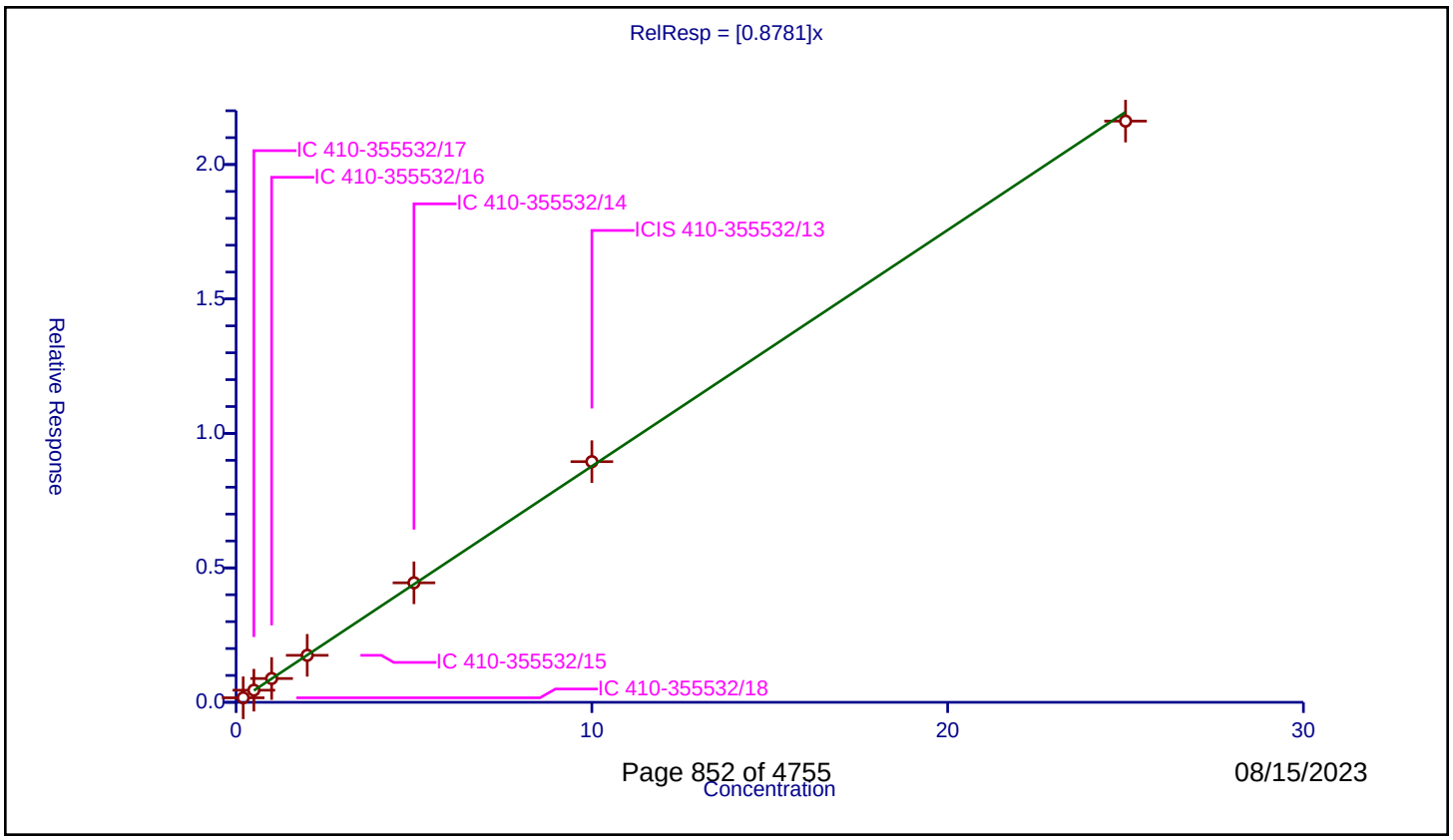
Curve Coefficients

Intercept:	0
Slope:	0.8781

Error Coefficients

Standard Error:	2350000
Relative Standard Error:	2.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.167691	10.0	2286473.0	0.838453	Y
2	IC 410-355532/17	0.5	0.450693	10.0	2310552.0	0.901386	Y
3	IC 410-355532/16	1.0	0.884689	10.0	2343275.0	0.884689	Y
4	IC 410-355532/15	2.0	1.747502	10.0	2349279.0	0.873751	Y
5	IC 410-355532/14	5.0	4.444838	10.0	2387313.0	0.888968	Y
6	ICIS 410-355532/13	10.0	8.950571	10.0	2381761.0	0.895057	Y
7	IC 410-355532/12	25.0	21.615099	10.0	2408929.0	0.864604	Y



Calibration / 2-Chloro-1,3-butadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

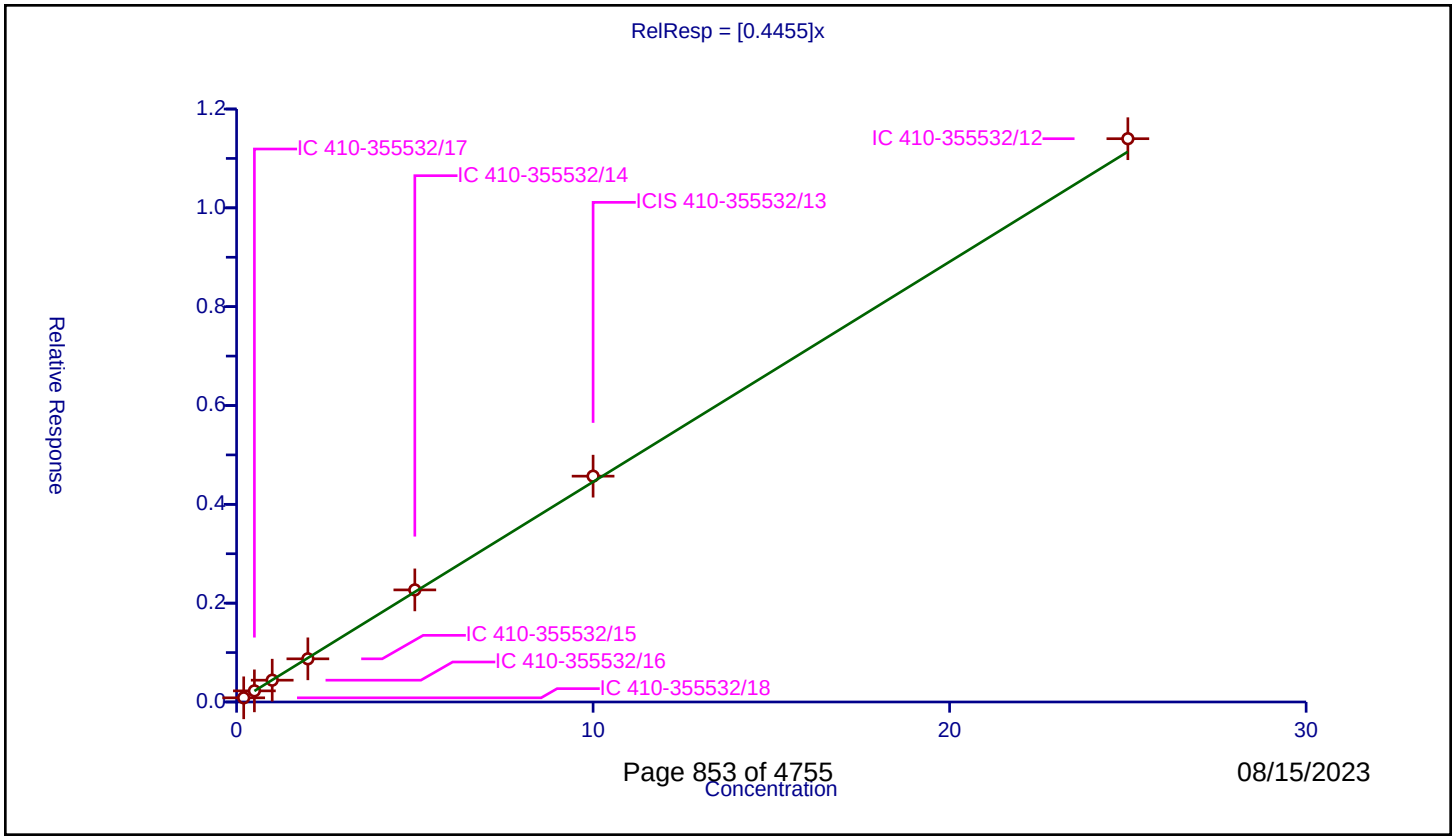
Curve Coefficients

Intercept:	0
Slope:	0.4455

Error Coefficients

Standard Error:	1230000
Relative Standard Error:	2.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.084484	10.0	2286473.0	0.422419	Y
2	IC 410-355532/17	0.5	0.225535	10.0	2310552.0	0.45107	Y
3	IC 410-355532/16	1.0	0.441323	10.0	2343275.0	0.441323	Y
4	IC 410-355532/15	2.0	0.873681	10.0	2349279.0	0.43684	Y
5	IC 410-355532/14	5.0	2.268215	10.0	2387313.0	0.453643	Y
6	ICIS 410-355532/13	10.0	4.56982	10.0	2381761.0	0.456982	Y
7	IC 410-355532/12	25.0	11.399244	10.0	2408929.0	0.45597	Y



Calibration / Tert-butyl ethyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

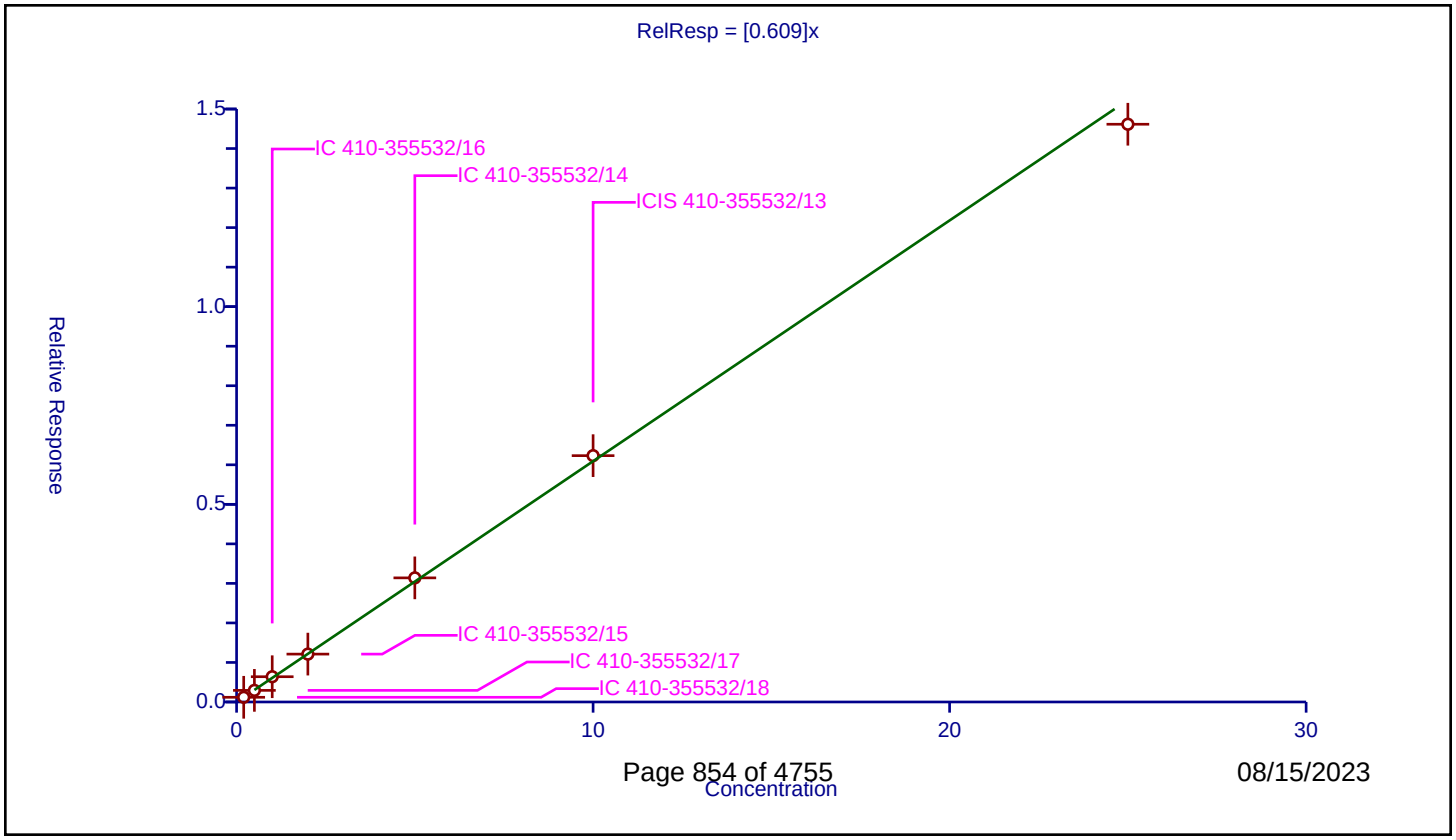
Curve Coefficients

Intercept:	0
Slope:	0.609

Error Coefficients

Standard Error:	1600000
Relative Standard Error:	3.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.119201	10.0	2286473.0	0.596005	Y
2	IC 410-355532/17	0.5	0.293588	10.0	2310552.0	0.587176	Y
3	IC 410-355532/16	1.0	0.63882	10.0	2343275.0	0.63882	Y
4	IC 410-355532/15	2.0	1.211427	10.0	2349279.0	0.605713	Y
5	IC 410-355532/14	5.0	3.13958	10.0	2387313.0	0.627916	Y
6	ICIS 410-355532/13	10.0	6.231238	10.0	2381761.0	0.623124	Y
7	IC 410-355532/12	25.0	14.614798	10.0	2408929.0	0.584592	Y



Calibration / 2-Butanone (MEK)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

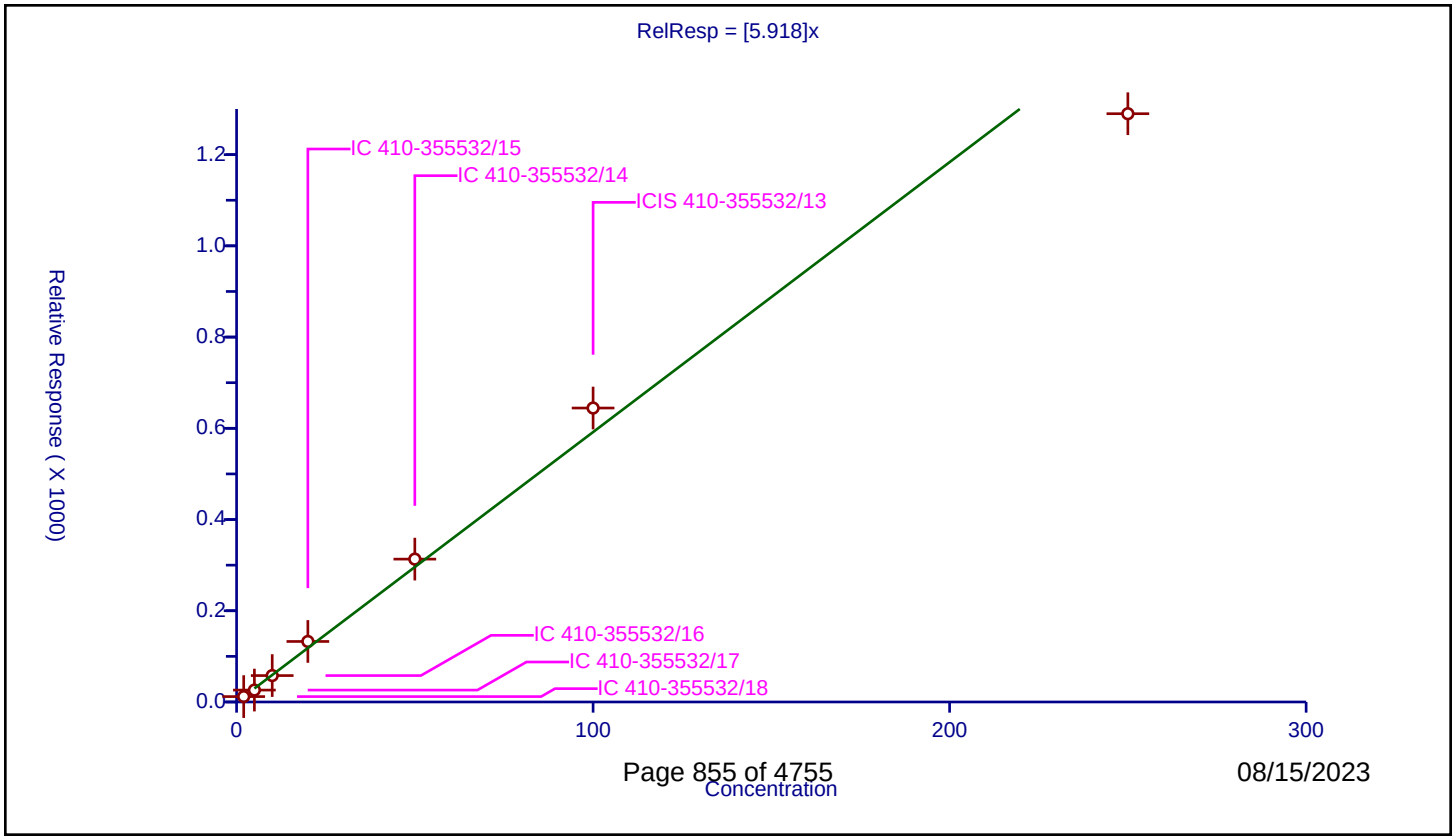
Curve Coefficients

Intercept:	0
Slope:	5.918

Error Coefficients

Standard Error:	1650000
Relative Standard Error:	9.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	2.0	11.811855	50.0	126445.0	5.905927	Y
2	IC 410-355532/17	5.0	26.122534	50.0	153492.0	5.224507	Y
3	IC 410-355532/16	10.0	57.91408	50.0	134008.0	5.791408	Y
4	IC 410-355532/15	20.0	132.673125	50.0	97646.0	6.633656	Y
5	IC 410-355532/14	50.0	313.199064	50.0	125221.0	6.263981	Y
6	ICIS 410-355532/13	100.0	644.450461	50.0	120956.0	6.444505	Y
7	IC 410-355532/12	250.0	1289.687303	50.0	141127.0	5.158749	Y



Calibration / cis-1,2-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

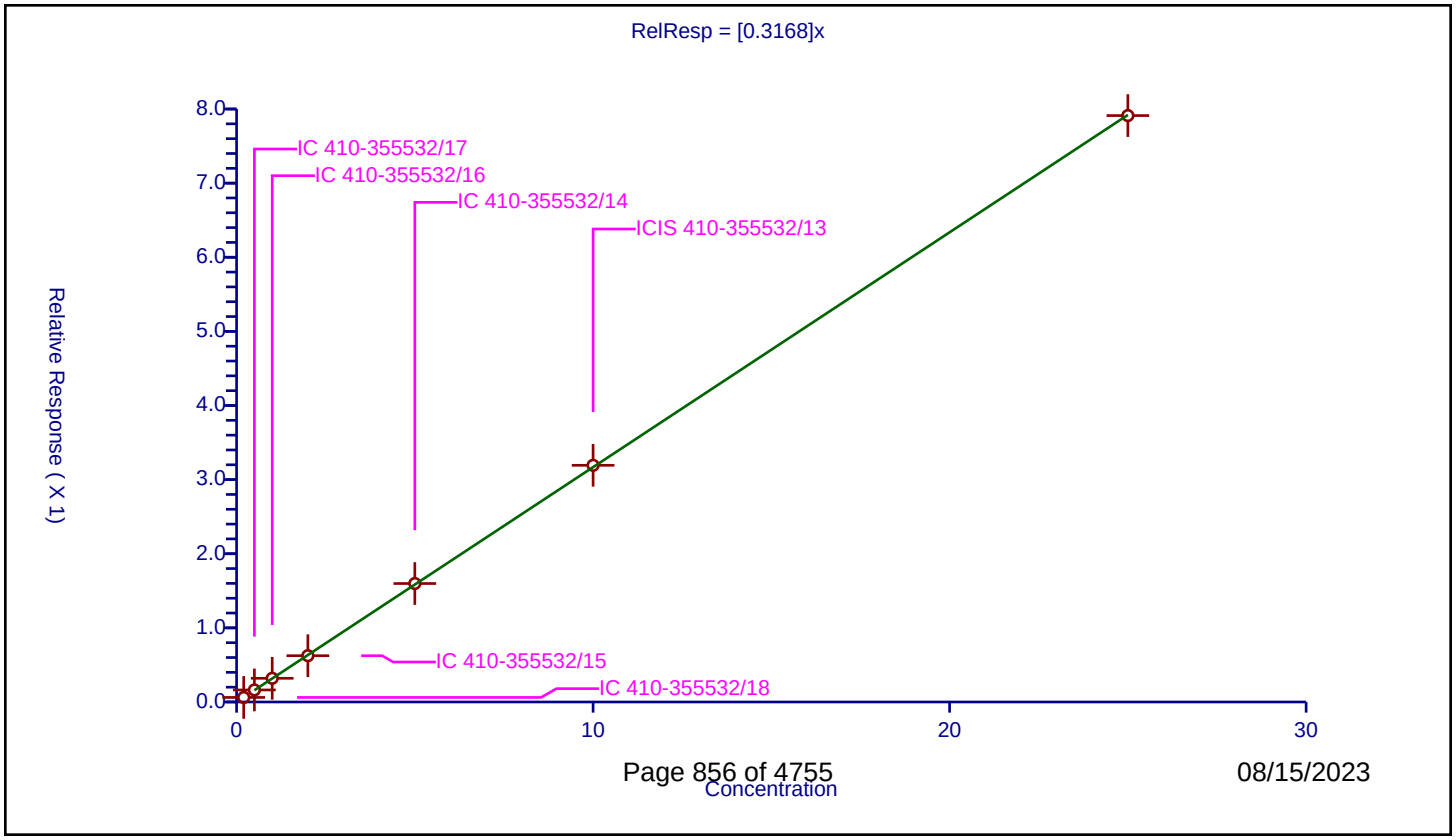
Curve Coefficients

Intercept:	0
Slope:	0.3168

Error Coefficients

Standard Error:	855000
Relative Standard Error:	1.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.061177	10.0	2286473.0	0.305886	Y
2	IC 410-355532/17	0.5	0.162264	10.0	2310552.0	0.324529	Y
3	IC 410-355532/16	1.0	0.319702	10.0	2343275.0	0.319702	Y
4	IC 410-355532/15	2.0	0.624417	10.0	2349279.0	0.312209	Y
5	IC 410-355532/14	5.0	1.598433	10.0	2387313.0	0.319687	Y
6	ICIS 410-355532/13	10.0	3.192948	10.0	2381761.0	0.319295	Y
7	IC 410-355532/12	25.0	7.911578	10.0	2408929.0	0.316463	Y



Calibration / 2,2-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

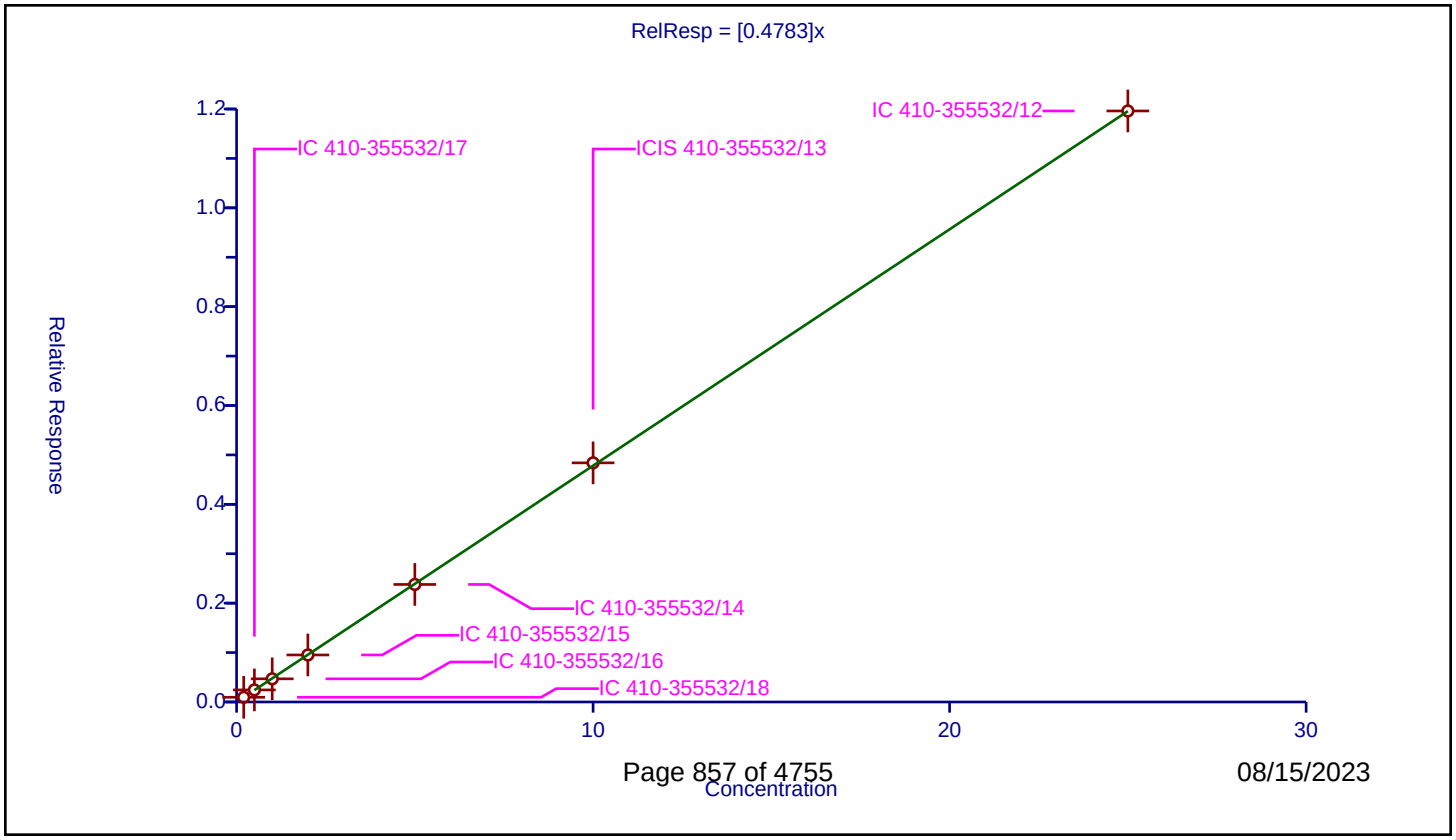
Curve Coefficients

Intercept:	0
Slope:	0.4783

Error Coefficients

Standard Error:	1290000
Relative Standard Error:	1.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.095405	10.0	2286473.0	0.477023	Y
2	IC 410-355532/17	0.5	0.244214	10.0	2310552.0	0.488429	Y
3	IC 410-355532/16	1.0	0.46843	10.0	2343275.0	0.46843	Y
4	IC 410-355532/15	2.0	0.951913	10.0	2349279.0	0.475957	Y
5	IC 410-355532/14	5.0	2.37826	10.0	2387313.0	0.475652	Y
6	ICIS 410-355532/13	10.0	4.839486	10.0	2381761.0	0.483949	Y
7	IC 410-355532/12	25.0	11.960751	10.0	2408929.0	0.47843	Y



Calibration / Propionitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

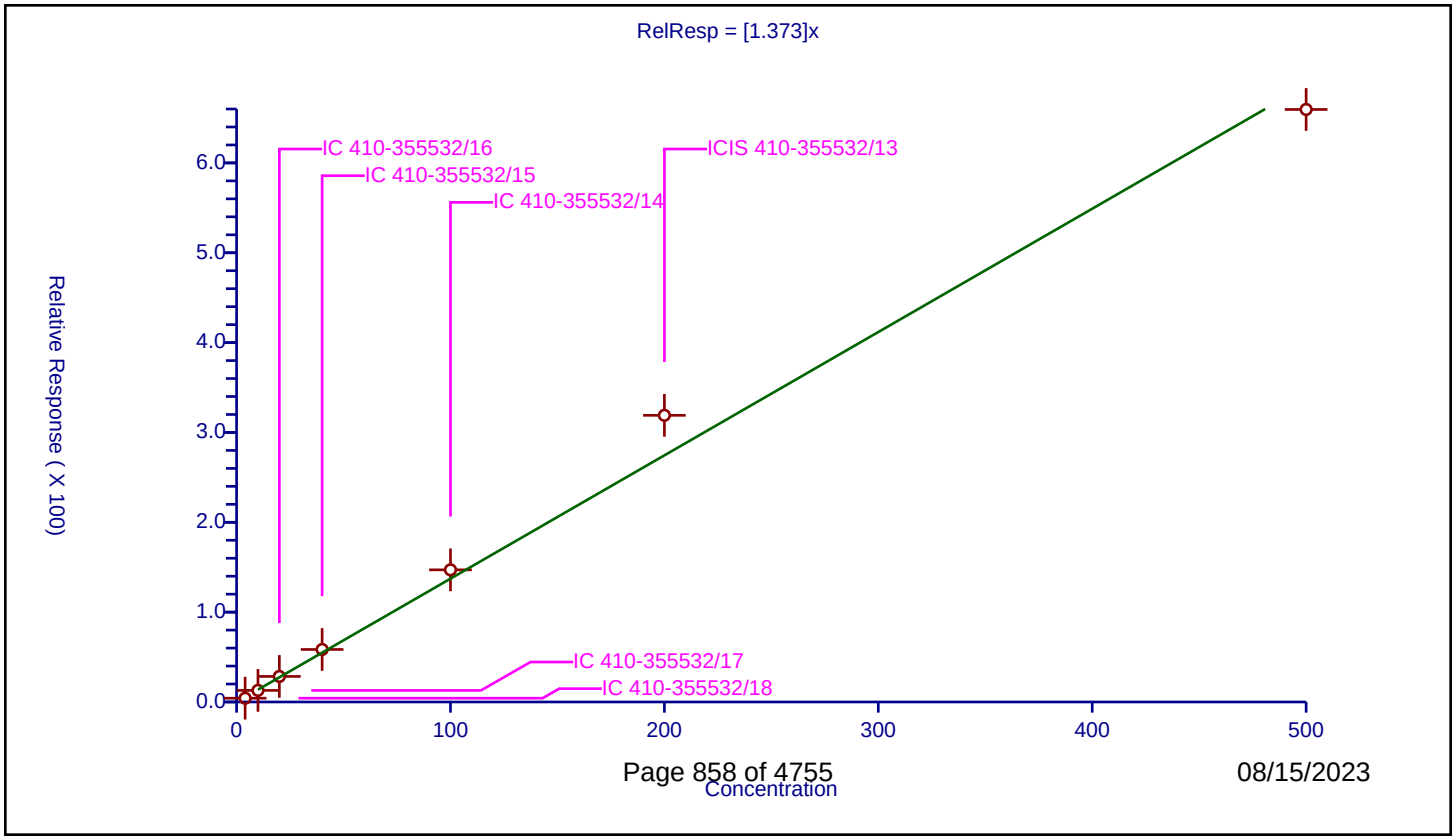
Curve Coefficients

Intercept:	0
Slope:	1.373

Error Coefficients

Standard Error:	838000
Relative Standard Error:	12.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.981

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	4.0	4.193918	50.0	126445.0	1.04848	Y
2	IC 410-355532/17	10.0	12.905559	50.0	153492.0	1.290556	Y
3	IC 410-355532/16	20.0	28.444197	50.0	134008.0	1.42221	Y
4	IC 410-355532/15	40.0	58.451447	50.0	97646.0	1.461286	Y
5	IC 410-355532/14	100.0	147.071977	50.0	125221.0	1.47072	Y
6	ICIS 410-355532/13	200.0	319.069331	50.0	120956.0	1.595347	Y
7	IC 410-355532/12	500.0	659.498891	50.0	141127.0	1.318998	Y



Calibration / Methacrylonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

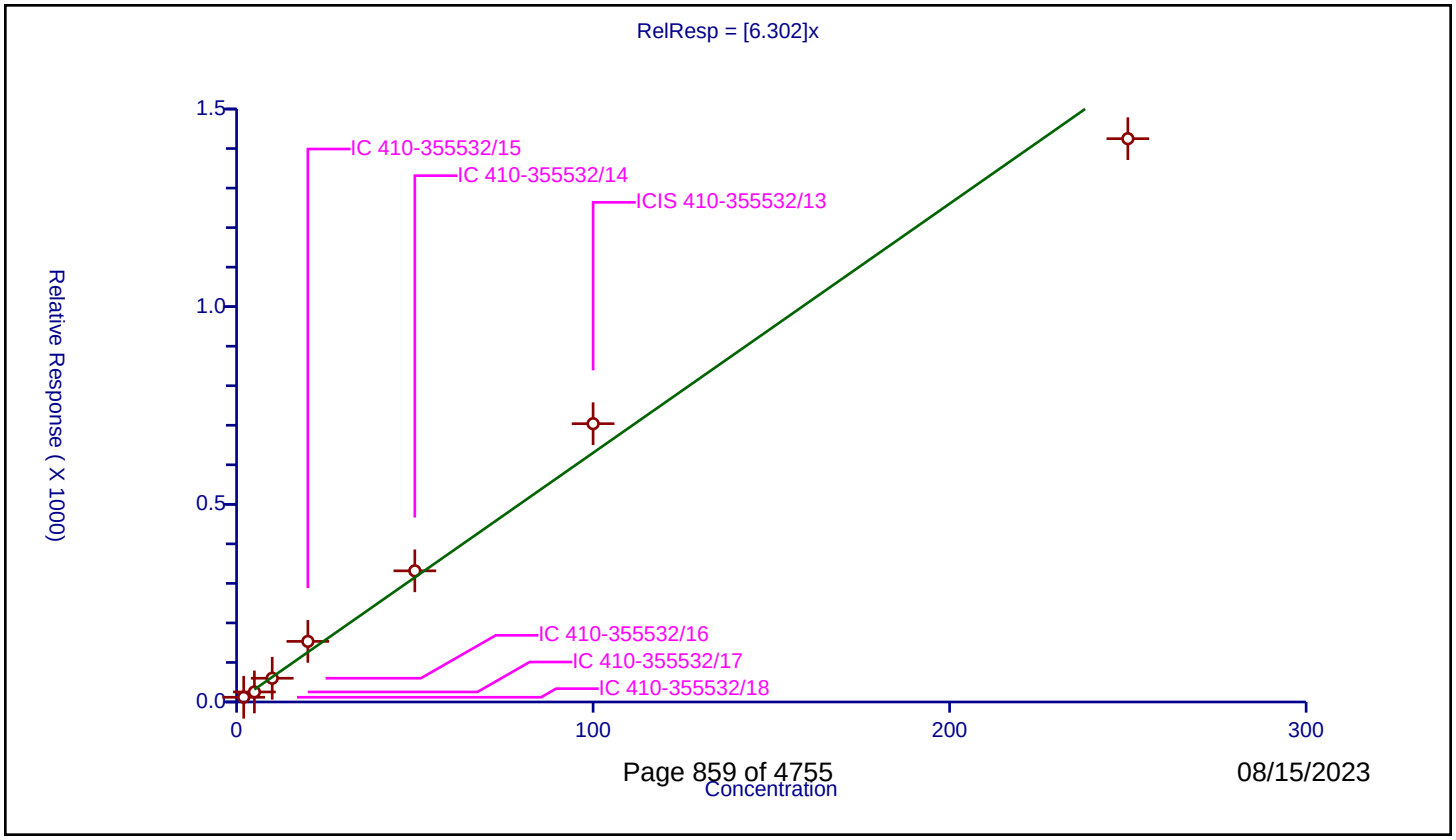
Curve Coefficients

Intercept:	0
Slope:	6.302

Error Coefficients

Standard Error:	1820000
Relative Standard Error:	13.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.976

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	2.0	11.979121	50.0	126445.0	5.989561	Y
2	IC 410-355532/17	5.0	25.391551	50.0	153492.0	5.07831	Y
3	IC 410-355532/16	10.0	60.08298	50.0	134008.0	6.008298	Y
4	IC 410-355532/15	20.0	153.266903	50.0	97646.0	7.663345	Y
5	IC 410-355532/14	50.0	331.796983	50.0	125221.0	6.63594	Y
6	ICIS 410-355532/13	100.0	703.995668	50.0	120956.0	7.039957	Y
7	IC 410-355532/12	250.0	1424.969	50.0	141127.0	5.699876	Y



Calibration / Chlorobromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

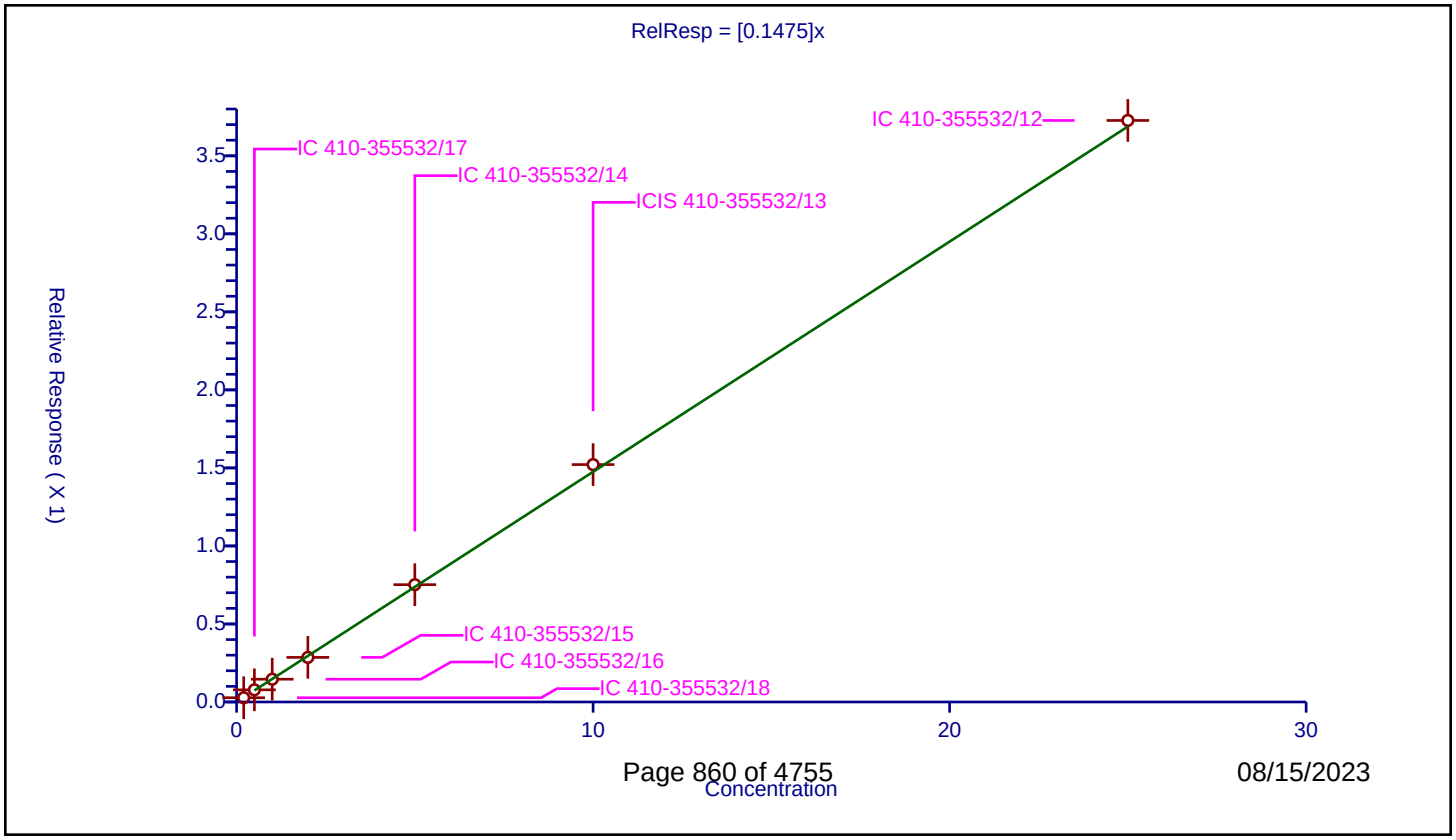
Curve Coefficients

Intercept:	0
Slope:	0.1475

Error Coefficients

Standard Error:	403000
Relative Standard Error:	4.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.027317	10.0	2286473.0	0.136586	Y
2	IC 410-355532/17	0.5	0.077782	10.0	2310552.0	0.155565	Y
3	IC 410-355532/16	1.0	0.145954	10.0	2343275.0	0.145954	Y
4	IC 410-355532/15	2.0	0.285764	10.0	2349279.0	0.142882	Y
5	IC 410-355532/14	5.0	0.751824	10.0	2387313.0	0.150365	Y
6	ICIS 410-355532/13	10.0	1.521274	10.0	2381761.0	0.152127	Y
7	IC 410-355532/12	25.0	3.726619	10.0	2408929.0	0.149065	Y



Calibration / Tetrahydrofuran

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

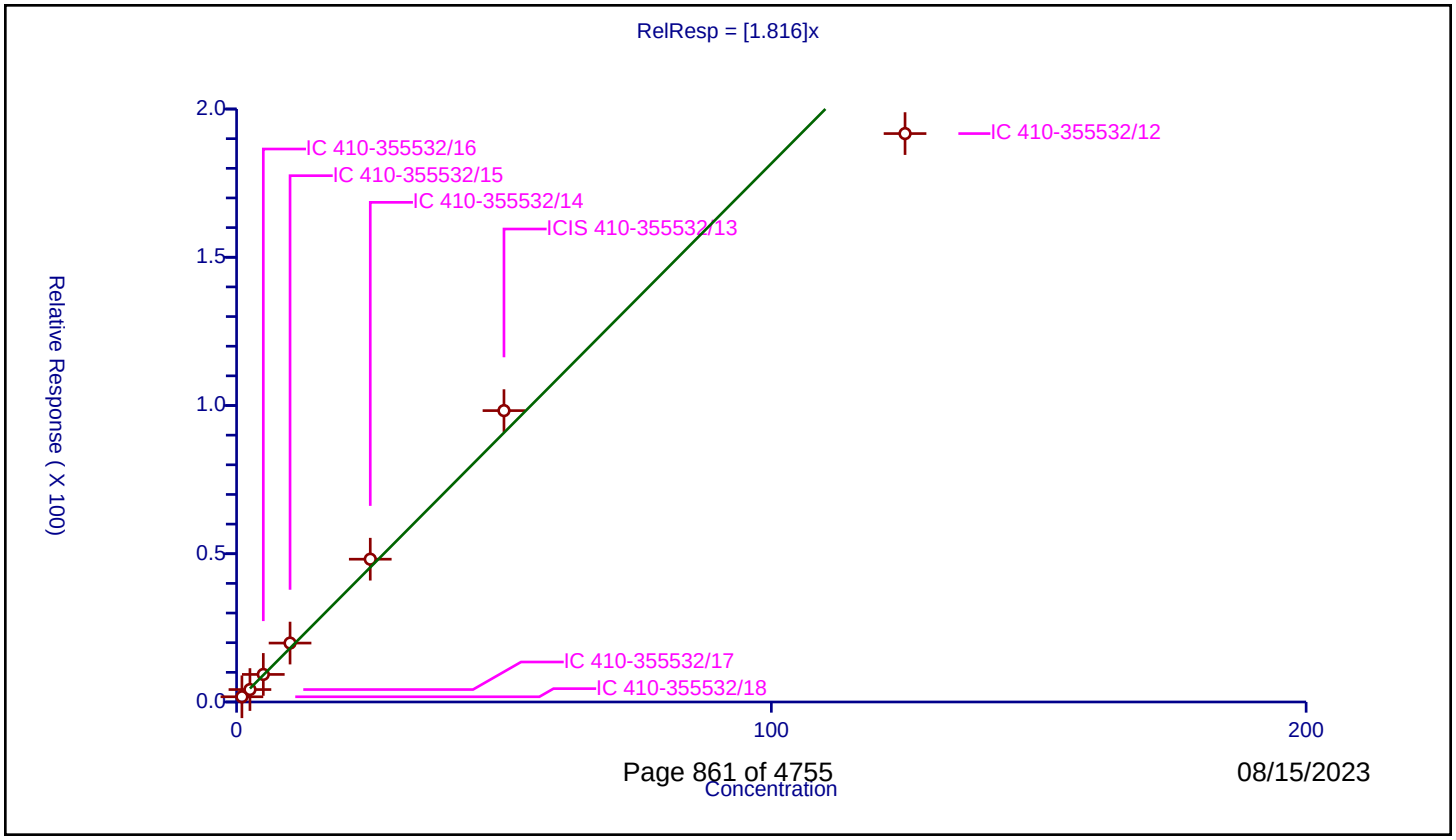
Curve Coefficients

Intercept:	0
Slope:	1.816

Error Coefficients

Standard Error:	247000
Relative Standard Error:	9.2
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	1.0	1.762426	50.0	126445.0	1.762426	Y
2	IC 410-355532/17	2.5	4.198916	50.0	153492.0	1.679566	Y
3	IC 410-355532/16	5.0	9.29646	50.0	134008.0	1.859292	Y
4	IC 410-355532/15	10.0	19.874342	50.0	97646.0	1.987434	Y
5	IC 410-355532/14	25.0	48.163647	50.0	125221.0	1.926546	Y
6	ICIS 410-355532/13	50.0	98.273339	50.0	120956.0	1.965467	Y
7	IC 410-355532/12	125.0	191.712075	50.0	141127.0	1.533697	Y



Calibration / Chloroform

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

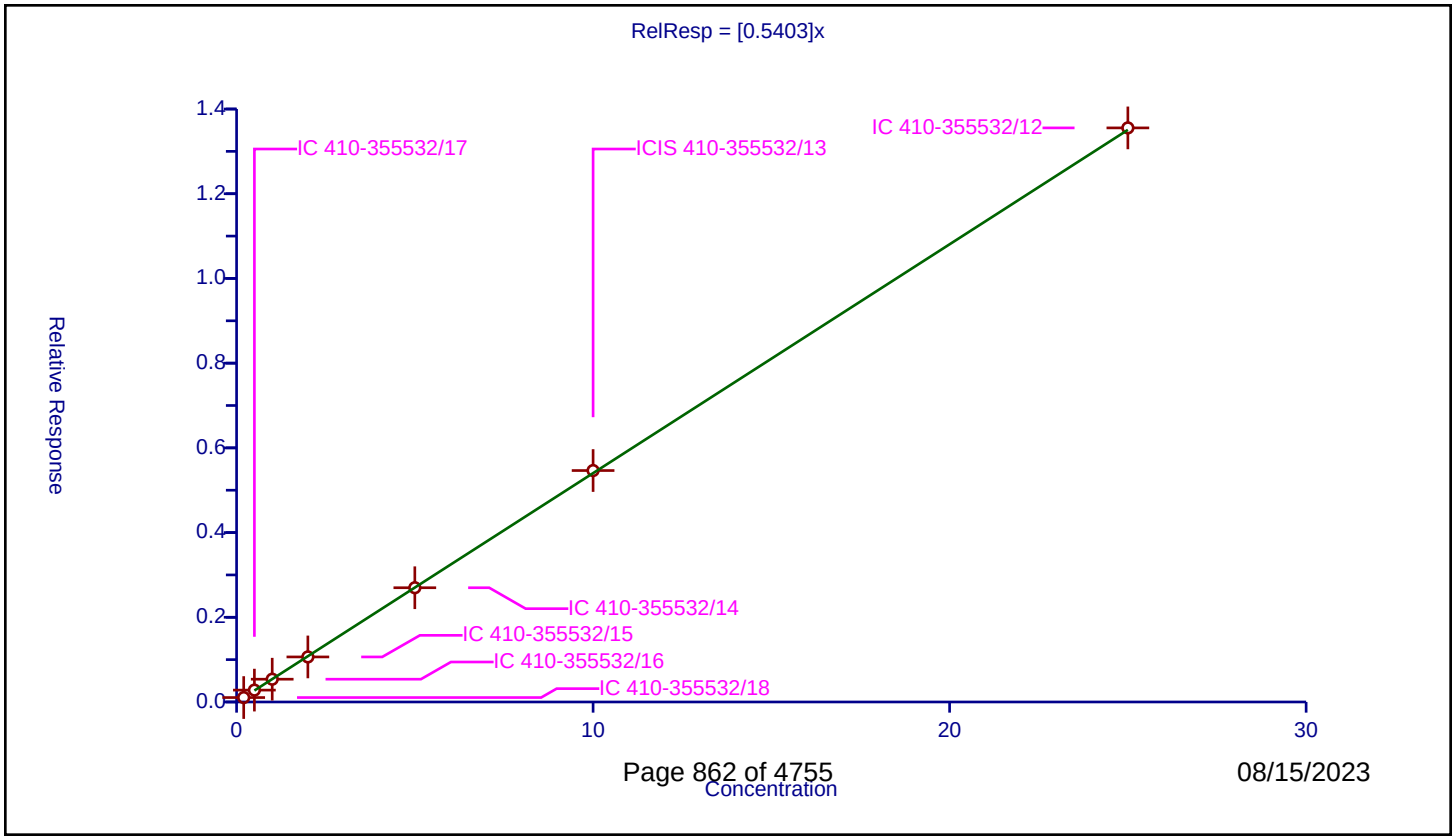
Curve Coefficients

Intercept:	0
Slope:	0.5403

Error Coefficients

Standard Error:	1460000
Relative Standard Error:	2.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.104668	10.0	2286473.0	0.523339	Y
2	IC 410-355532/17	0.5	0.280452	10.0	2310552.0	0.560905	Y
3	IC 410-355532/16	1.0	0.53791	10.0	2343275.0	0.53791	Y
4	IC 410-355532/15	2.0	1.063803	10.0	2349279.0	0.531901	Y
5	IC 410-355532/14	5.0	2.697497	10.0	2387313.0	0.539499	Y
6	ICIS 410-355532/13	10.0	5.464327	10.0	2381761.0	0.546433	Y
7	IC 410-355532/12	25.0	13.554218	10.0	2408929.0	0.542169	Y



Calibration / Dibromofluoromethane (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

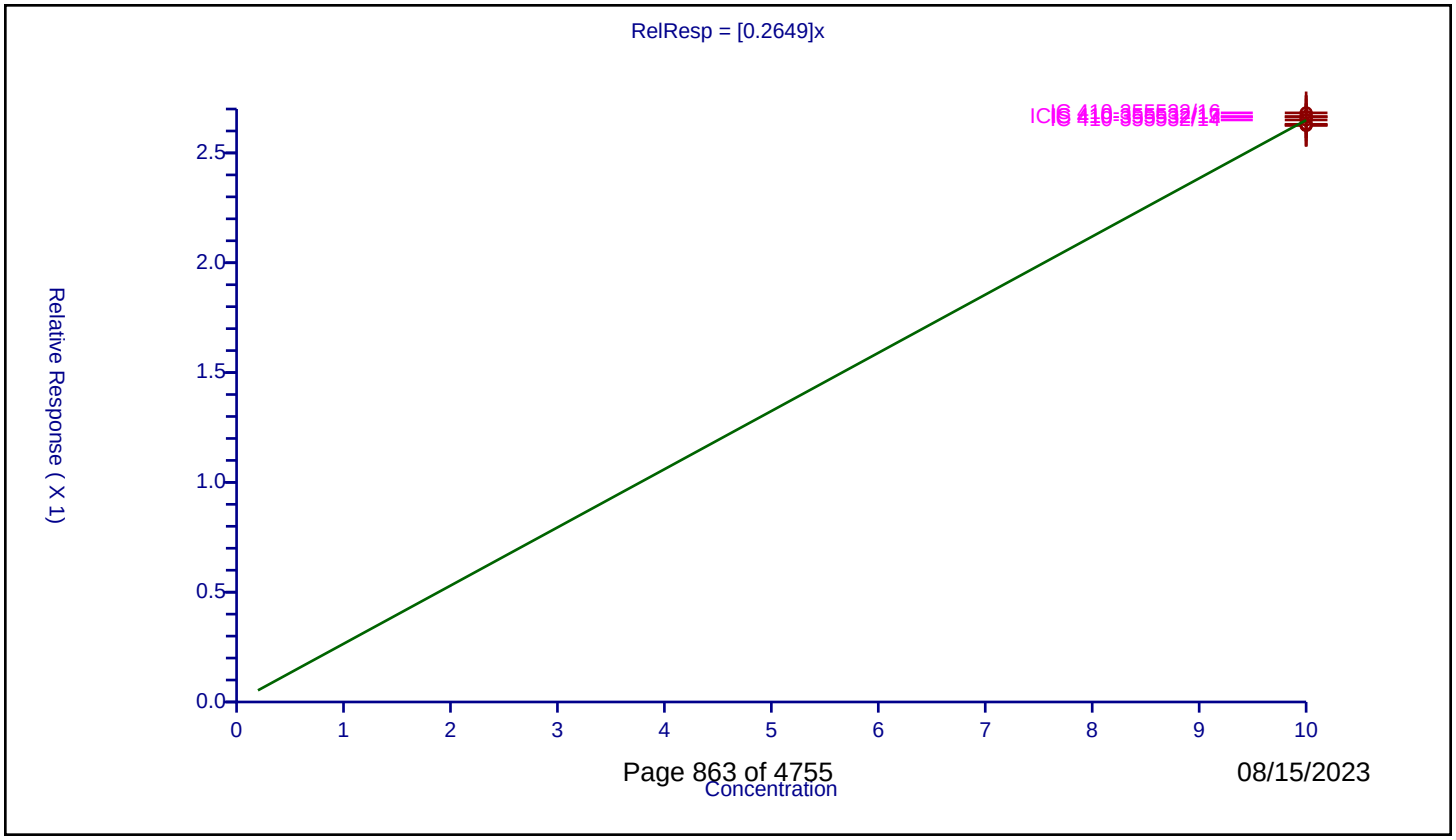
Curve Coefficients

Intercept:	0
Slope:	0.2649

Error Coefficients

Standard Error:	673000
Relative Standard Error:	0.8
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/12	10.0	2.630468	10.0	2408929.0	0.263047	Y
2	ICIS 410-355532/13	10.0	2.664768	10.0	2381761.0	0.266477	Y
3	IC 410-355532/14	10.0	2.650201	10.0	2387313.0	0.26502	Y
4	IC 410-355532/15	10.0	2.627793	10.0	2349279.0	0.262779	Y
5	IC 410-355532/16	10.0	2.682417	10.0	2343275.0	0.268242	Y
6	IC 410-355532/17	10.0	2.664995	10.0	2310552.0	0.2665	Y
7	IC 410-355532/18	10.0	2.625227	10.0	2286473.0	0.262523	Y



Calibration / 1,1,1-Trichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

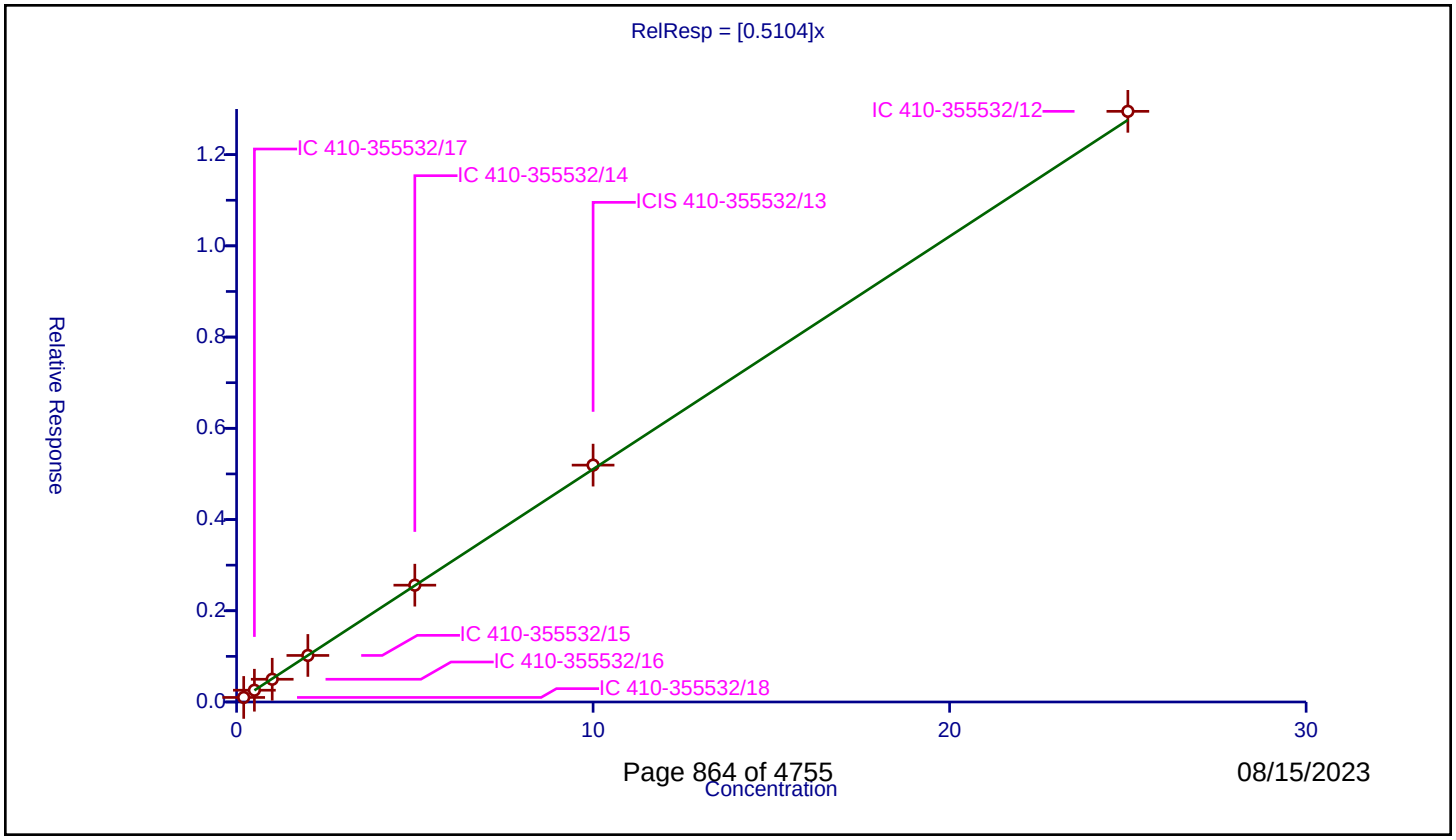
Curve Coefficients

Intercept:	0
Slope:	0.5104

Error Coefficients

Standard Error:	1400000
Relative Standard Error:	1.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.099503	10.0	2286473.0	0.497513	Y
2	IC 410-355532/17	0.5	0.258397	10.0	2310552.0	0.516794	Y
3	IC 410-355532/16	1.0	0.498648	10.0	2343275.0	0.498648	Y
4	IC 410-355532/15	2.0	1.020564	10.0	2349279.0	0.510282	Y
5	IC 410-355532/14	5.0	2.560988	10.0	2387313.0	0.512198	Y
6	ICIS 410-355532/13	10.0	5.192771	10.0	2381761.0	0.519277	Y
7	IC 410-355532/12	25.0	12.948962	10.0	2408929.0	0.517958	Y



Calibration / Cyclohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

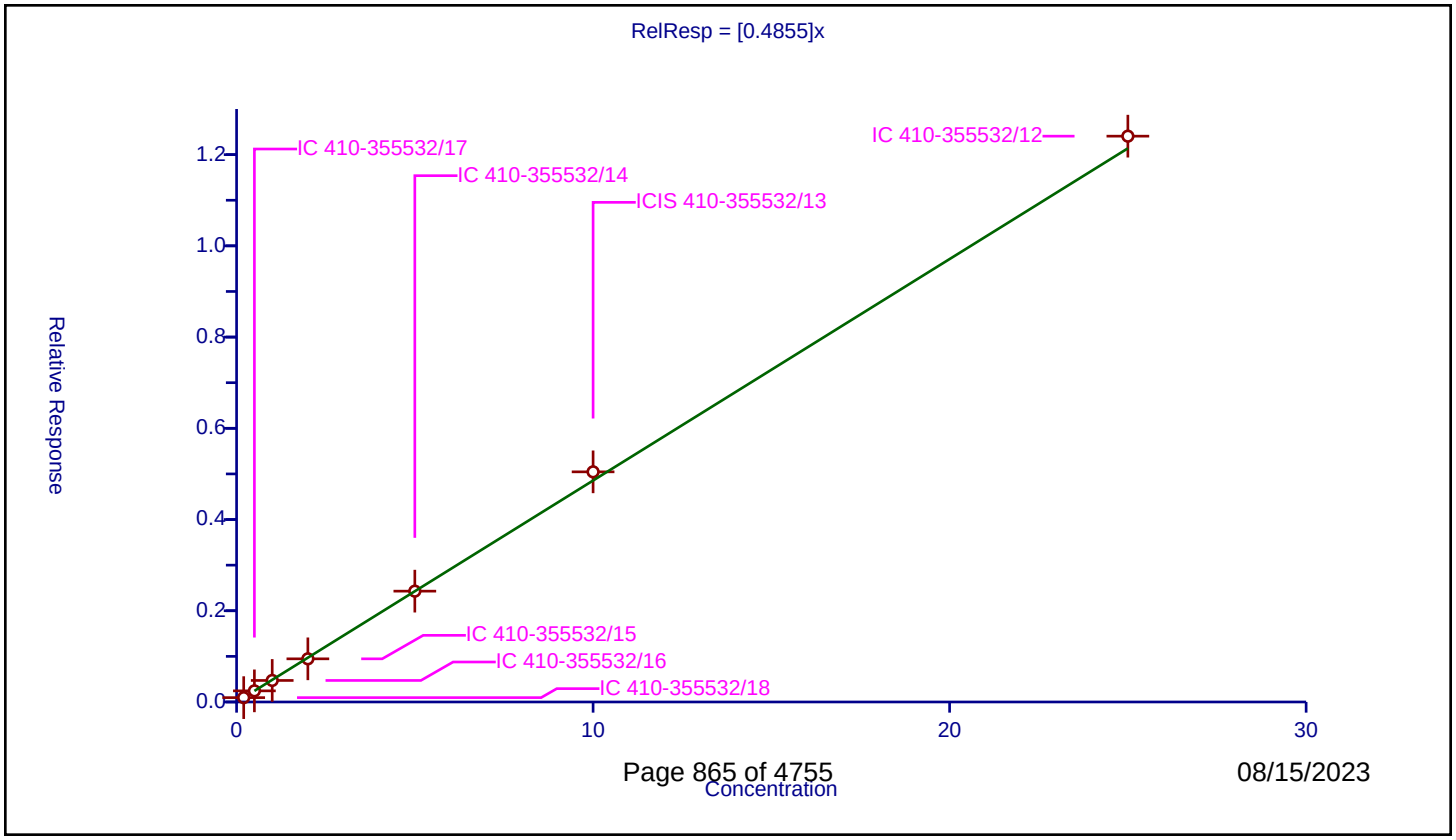
Curve Coefficients

Intercept:	0
Slope:	0.4855

Error Coefficients

Standard Error:	1340000
Relative Standard Error:	2.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.095619	10.0	2286473.0	0.478094	Y
2	IC 410-355532/17	0.5	0.244154	10.0	2310552.0	0.488308	Y
3	IC 410-355532/16	1.0	0.472309	10.0	2343275.0	0.472309	Y
4	IC 410-355532/15	2.0	0.946269	10.0	2349279.0	0.473135	Y
5	IC 410-355532/14	5.0	2.430234	10.0	2387313.0	0.486047	Y
6	ICIS 410-355532/13	10.0	5.045372	10.0	2381761.0	0.504537	Y
7	IC 410-355532/12	25.0	12.405007	10.0	2408929.0	0.4962	Y



08/15/2023

Calibration / 1,1-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

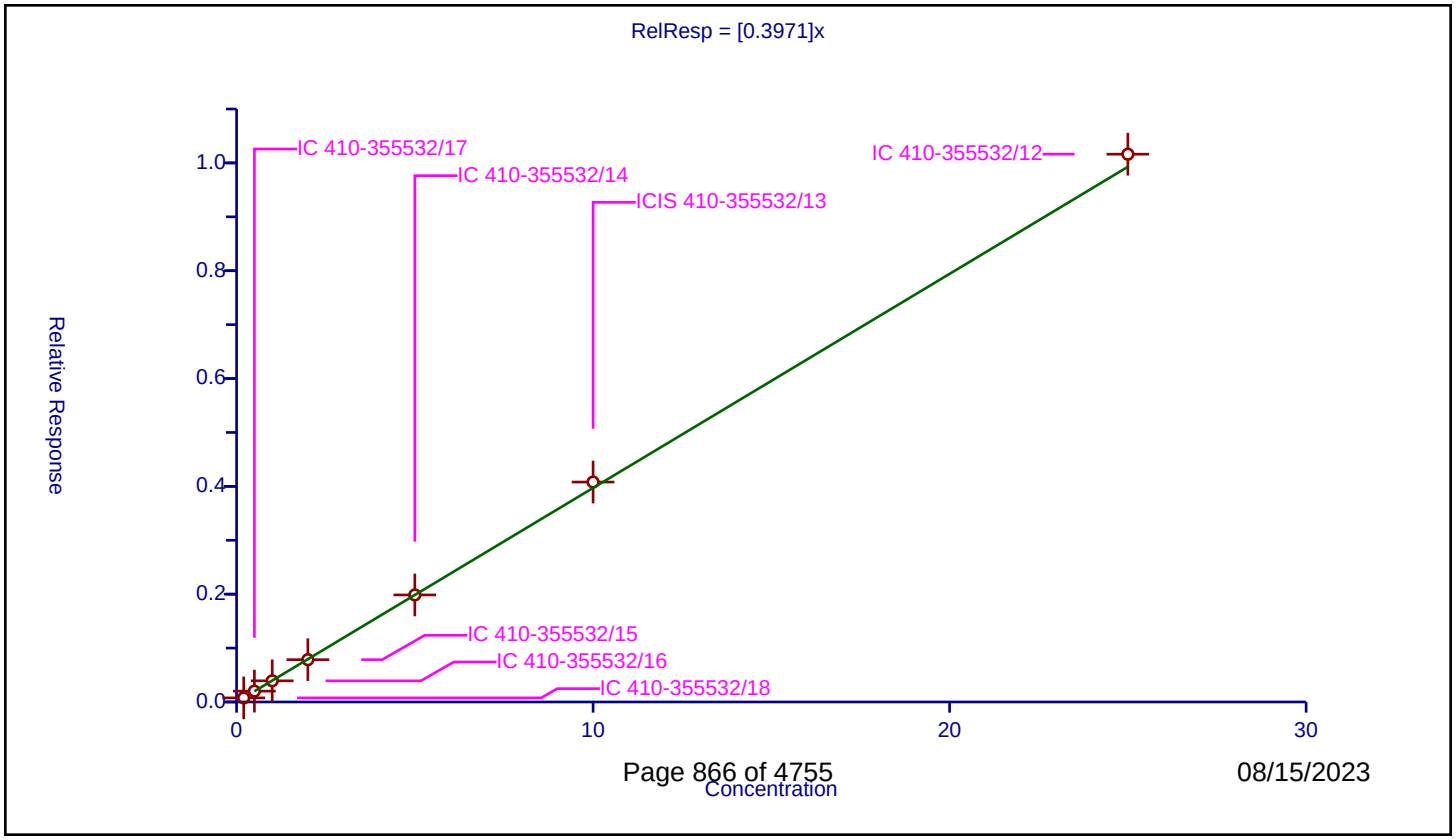
Curve Coefficients

Intercept:	0
Slope:	0.3971

Error Coefficients

Standard Error:	1100000
Relative Standard Error:	2.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.075964	10.0	2286473.0	0.379821	Y
2	IC 410-355532/17	0.5	0.201662	10.0	2310552.0	0.403324	Y
3	IC 410-355532/16	1.0	0.39231	10.0	2343275.0	0.39231	Y
4	IC 410-355532/15	2.0	0.785011	10.0	2349279.0	0.392506	Y
5	IC 410-355532/14	5.0	1.986019	10.0	2387313.0	0.397204	Y
6	ICIS 410-355532/13	10.0	4.079973	10.0	2381761.0	0.407997	Y
7	IC 410-355532/12	25.0	10.162192	10.0	2408929.0	0.406488	Y



Calibration / Carbon tetrachloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

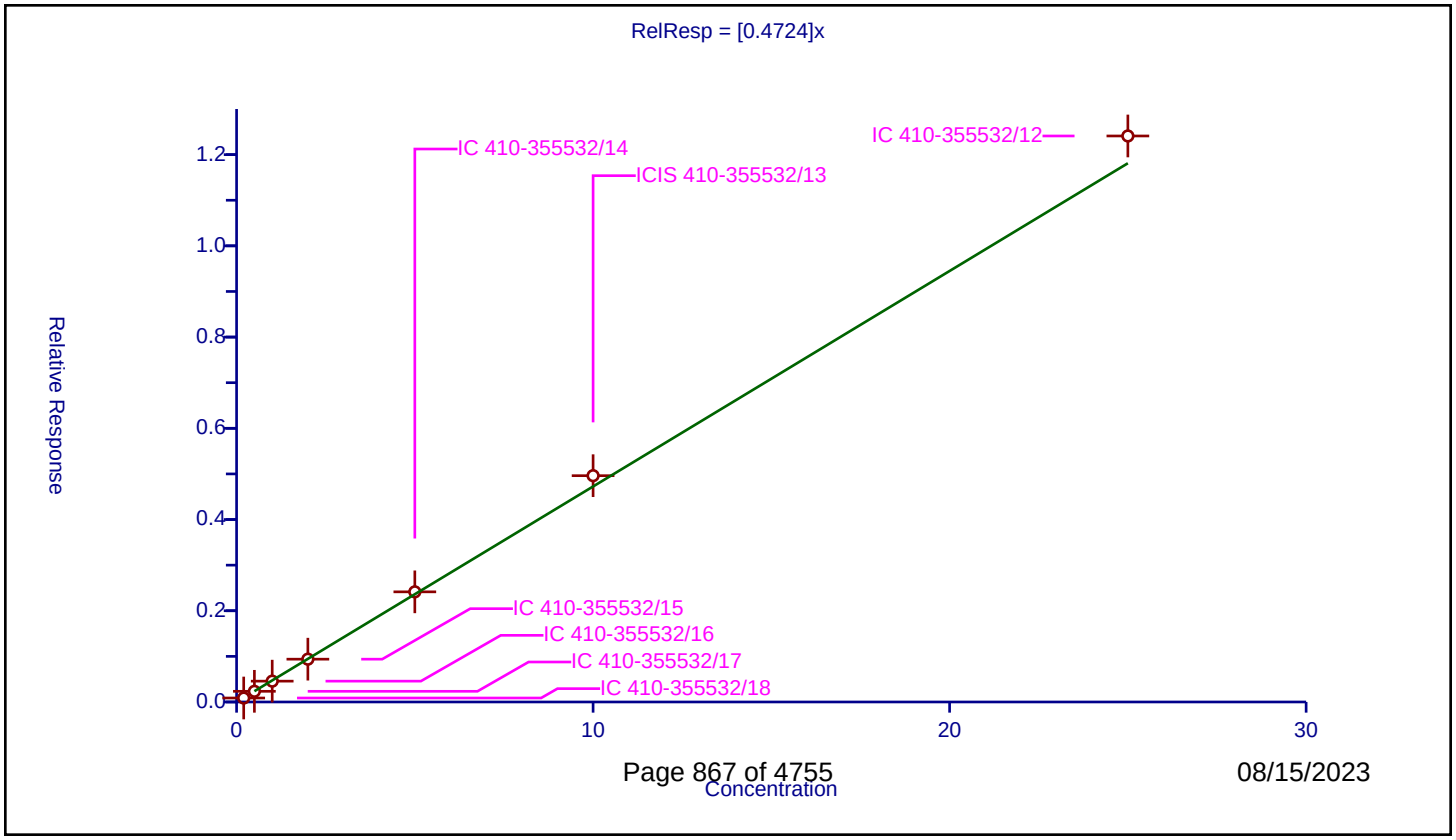
Curve Coefficients

Intercept:	0
Slope:	0.4724

Error Coefficients

Standard Error:	1340000
Relative Standard Error:	4.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.08734	10.0	2286473.0	0.436699	Y
2	IC 410-355532/17	0.5	0.23436	10.0	2310552.0	0.468719	Y
3	IC 410-355532/16	1.0	0.456903	10.0	2343275.0	0.456903	Y
4	IC 410-355532/15	2.0	0.938726	10.0	2349279.0	0.469363	Y
5	IC 410-355532/14	5.0	2.414685	10.0	2387313.0	0.482937	Y
6	ICIS 410-355532/13	10.0	4.9614	10.0	2381761.0	0.49614	Y
7	IC 410-355532/12	25.0	12.408988	10.0	2408929.0	0.49636	Y



Calibration / Isobutyl alcohol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

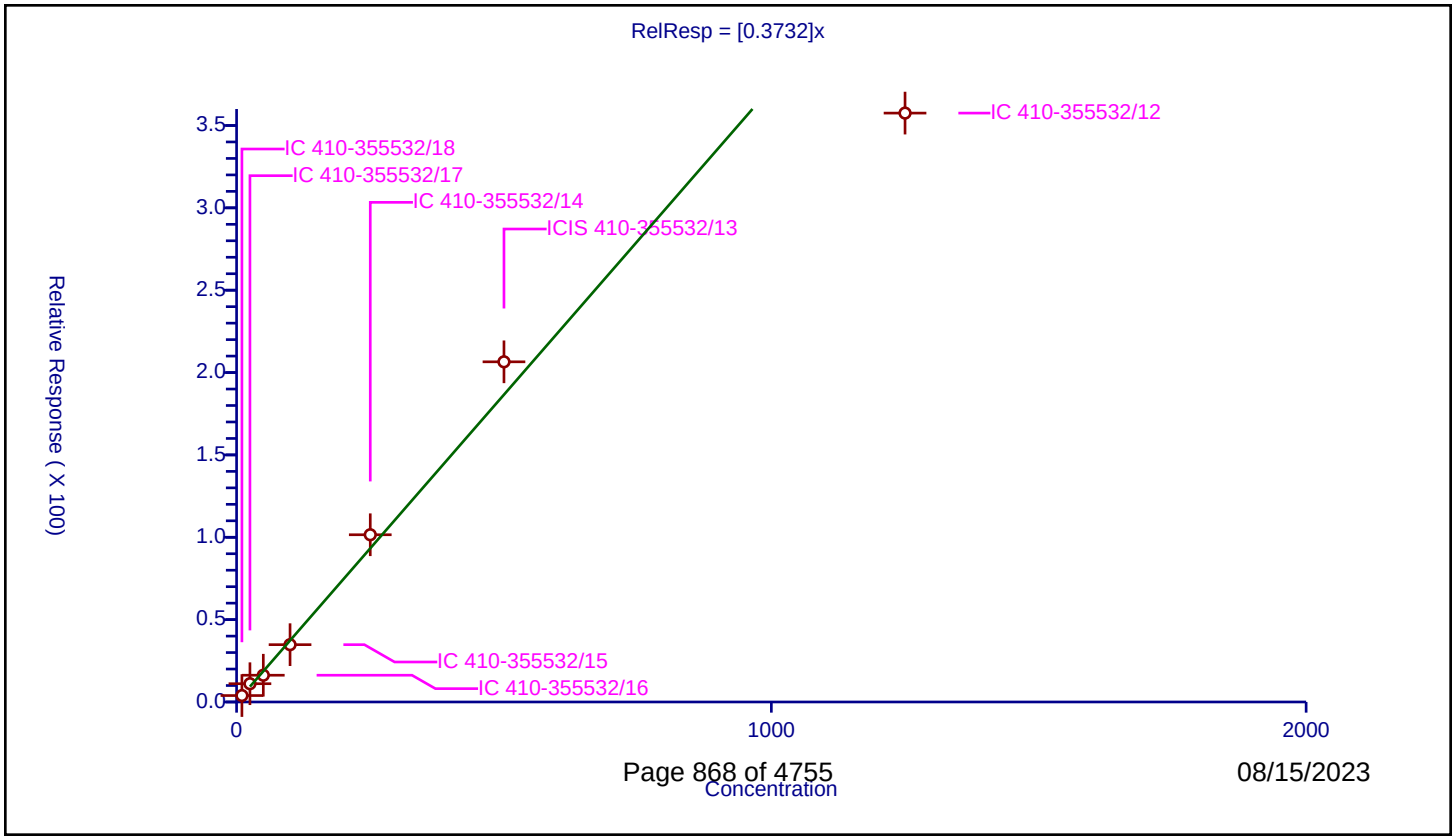
Curve Coefficients

Intercept:	0
Slope:	0.3732

Error Coefficients

Standard Error:	472000
Relative Standard Error:	14.9
Correlation Coefficient:	0.989
Coefficient of Determination (Adjusted):	0.969

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	10.0	3.90486	50.0	126445.0	0.390486	Y
2	IC 410-355532/17	25.0	11.091783	50.0	153492.0	0.443671	Y
3	IC 410-355532/16	50.0	16.240075	50.0	134008.0	0.324802	Y
4	IC 410-355532/15	100.0	34.79354	50.0	97646.0	0.347935	Y
5	IC 410-355532/14	250.0	101.539279	50.0	125221.0	0.406157	Y
6	ICIS 410-355532/13	500.0	206.529647	50.0	120956.0	0.413059	Y
7	IC 410-355532/12	1250.0	357.522657	50.0	141127.0	0.286018	Y



Calibration / 1,2-Dichloroethane-d4 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

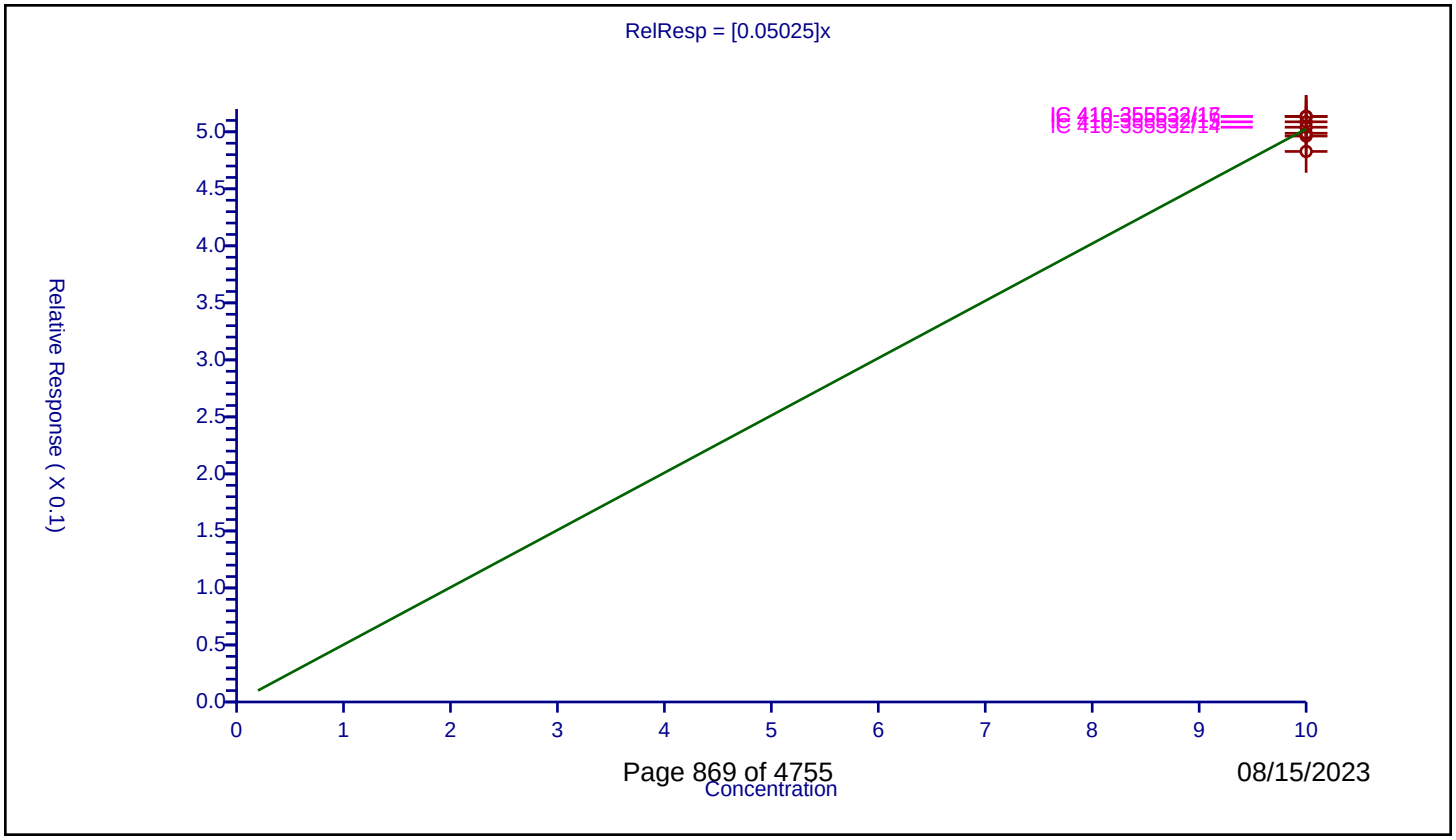
Curve Coefficients

Intercept:	0
Slope:	0.05025

Error Coefficients

Standard Error:	128000
Relative Standard Error:	2.2
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/12	10.0	0.482795	10.0	2408929.0	0.04828	Y
2	ICIS 410-355532/13	10.0	0.496297	10.0	2381761.0	0.04963	Y
3	IC 410-355532/14	10.0	0.504027	10.0	2387313.0	0.050403	Y
4	IC 410-355532/15	10.0	0.508769	10.0	2349279.0	0.050877	Y
5	IC 410-355532/16	10.0	0.51358	10.0	2343275.0	0.051358	Y
6	IC 410-355532/17	10.0	0.513384	10.0	2310552.0	0.051338	Y
7	IC 410-355532/18	10.0	0.498733	10.0	2286473.0	0.049873	Y



Calibration / Benzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

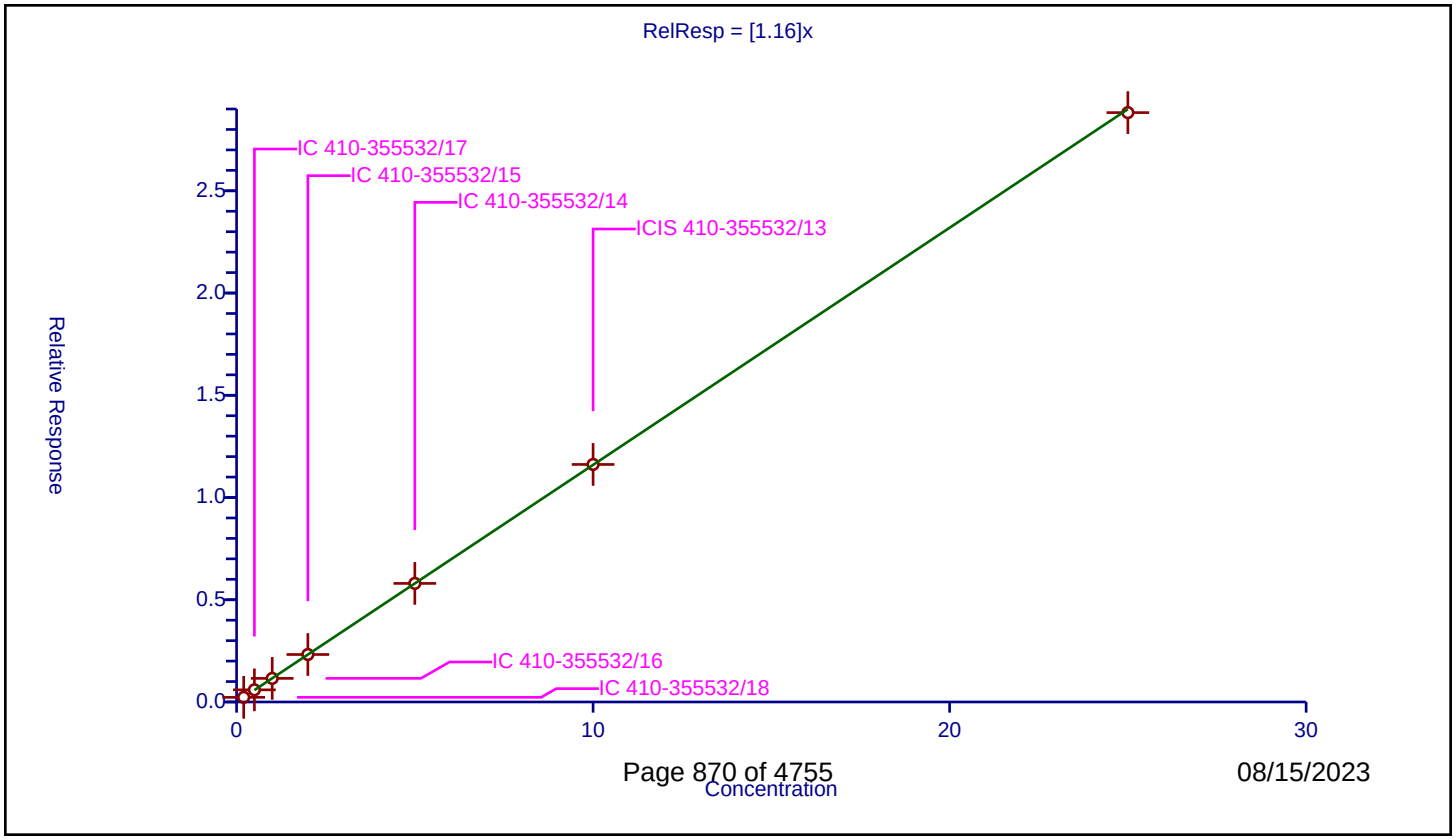
Curve Coefficients

Intercept:	0
Slope:	1.16

Error Coefficients

Standard Error:	3110000
Relative Standard Error:	1.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.227827	10.0	2286473.0	1.139134	Y
2	IC 410-355532/17	0.5	0.594269	10.0	2310552.0	1.188538	Y
3	IC 410-355532/16	1.0	1.154201	10.0	2343275.0	1.154201	Y
4	IC 410-355532/15	2.0	2.322185	10.0	2349279.0	1.161092	Y
5	IC 410-355532/14	5.0	5.799562	10.0	2387313.0	1.159912	Y
6	ICIS 410-355532/13	10.0	11.616321	10.0	2381761.0	1.161632	Y
7	IC 410-355532/12	25.0	28.824527	10.0	2408929.0	1.152981	Y



Calibration / 1,2-Dichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

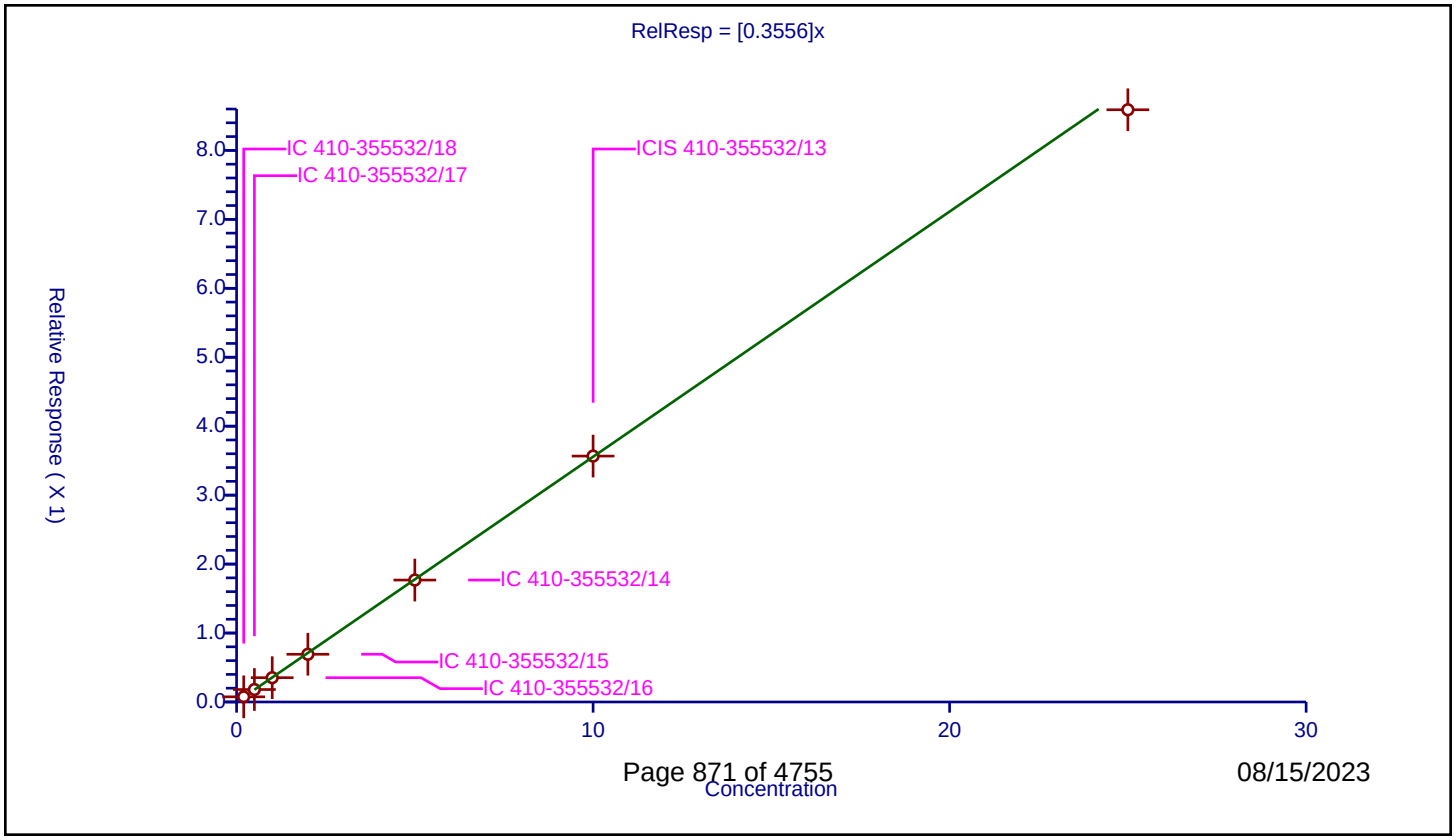
Curve Coefficients

Intercept:	0
Slope:	0.3556

Error Coefficients

Standard Error:	932000
Relative Standard Error:	3.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.074993	10.0	2286473.0	0.374966	Y
2	IC 410-355532/17	0.5	0.180939	10.0	2310552.0	0.361879	Y
3	IC 410-355532/16	1.0	0.352703	10.0	2343275.0	0.352703	Y
4	IC 410-355532/15	2.0	0.692034	10.0	2349279.0	0.346017	Y
5	IC 410-355532/14	5.0	1.768398	10.0	2387313.0	0.35368	Y
6	ICIS 410-355532/13	10.0	3.566349	10.0	2381761.0	0.356635	Y
7	IC 410-355532/12	25.0	8.589199	10.0	2408929.0	0.343568	Y



Calibration / Tert-amyl methyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

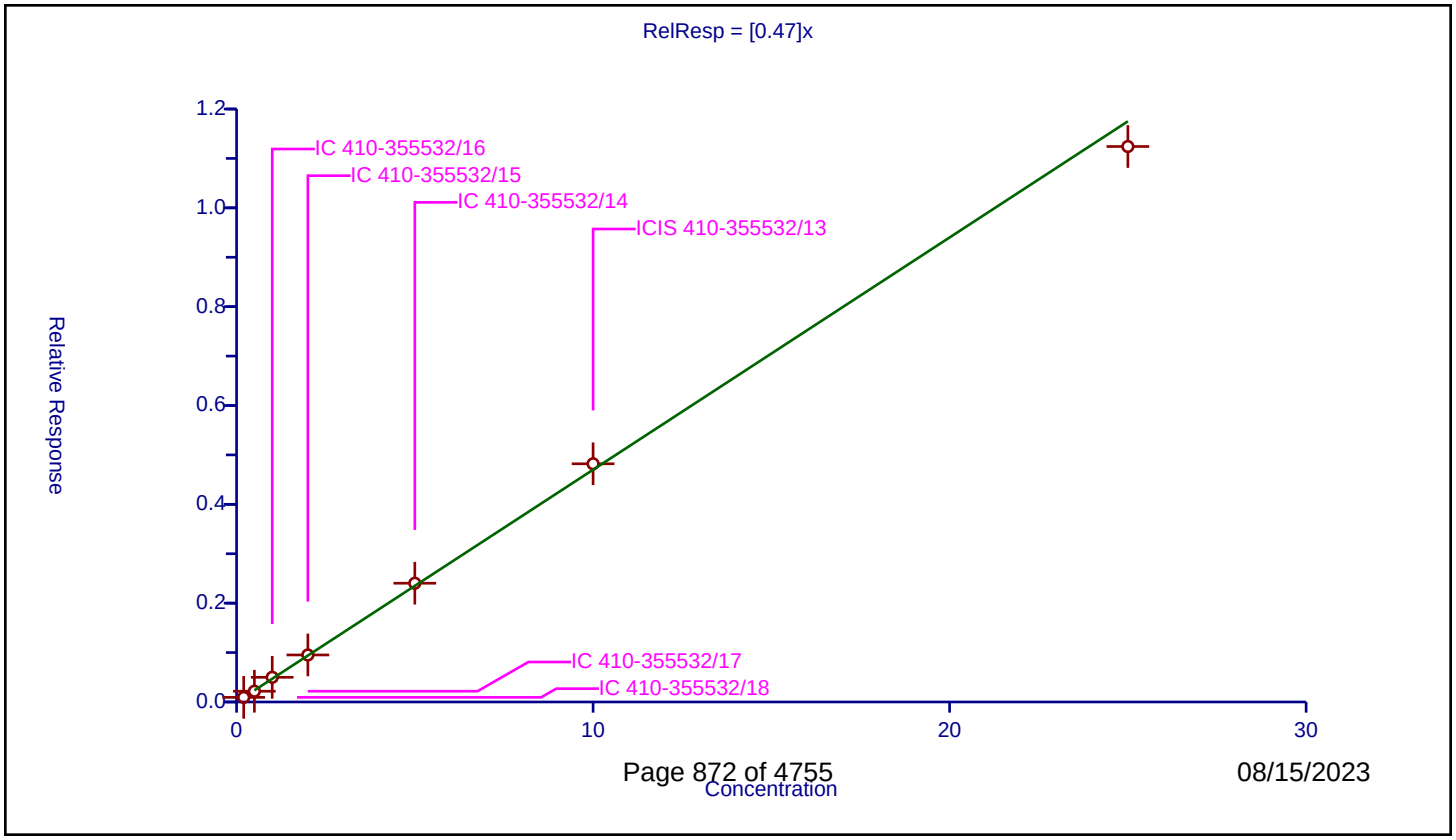
Curve Coefficients

Intercept:	0
Slope:	0.47

Error Coefficients

Standard Error:	1230000
Relative Standard Error:	4.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.093511	10.0	2286473.0	0.467554	Y
2	IC 410-355532/17	0.5	0.217667	10.0	2310552.0	0.435333	Y
3	IC 410-355532/16	1.0	0.49919	10.0	2343275.0	0.49919	Y
4	IC 410-355532/15	2.0	0.951539	10.0	2349279.0	0.475769	Y
5	IC 410-355532/14	5.0	2.403359	10.0	2387313.0	0.480672	Y
6	ICIS 410-355532/13	10.0	4.82024	10.0	2381761.0	0.482024	Y
7	IC 410-355532/12	25.0	11.241103	10.0	2408929.0	0.449644	Y



Calibration / n-Heptane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

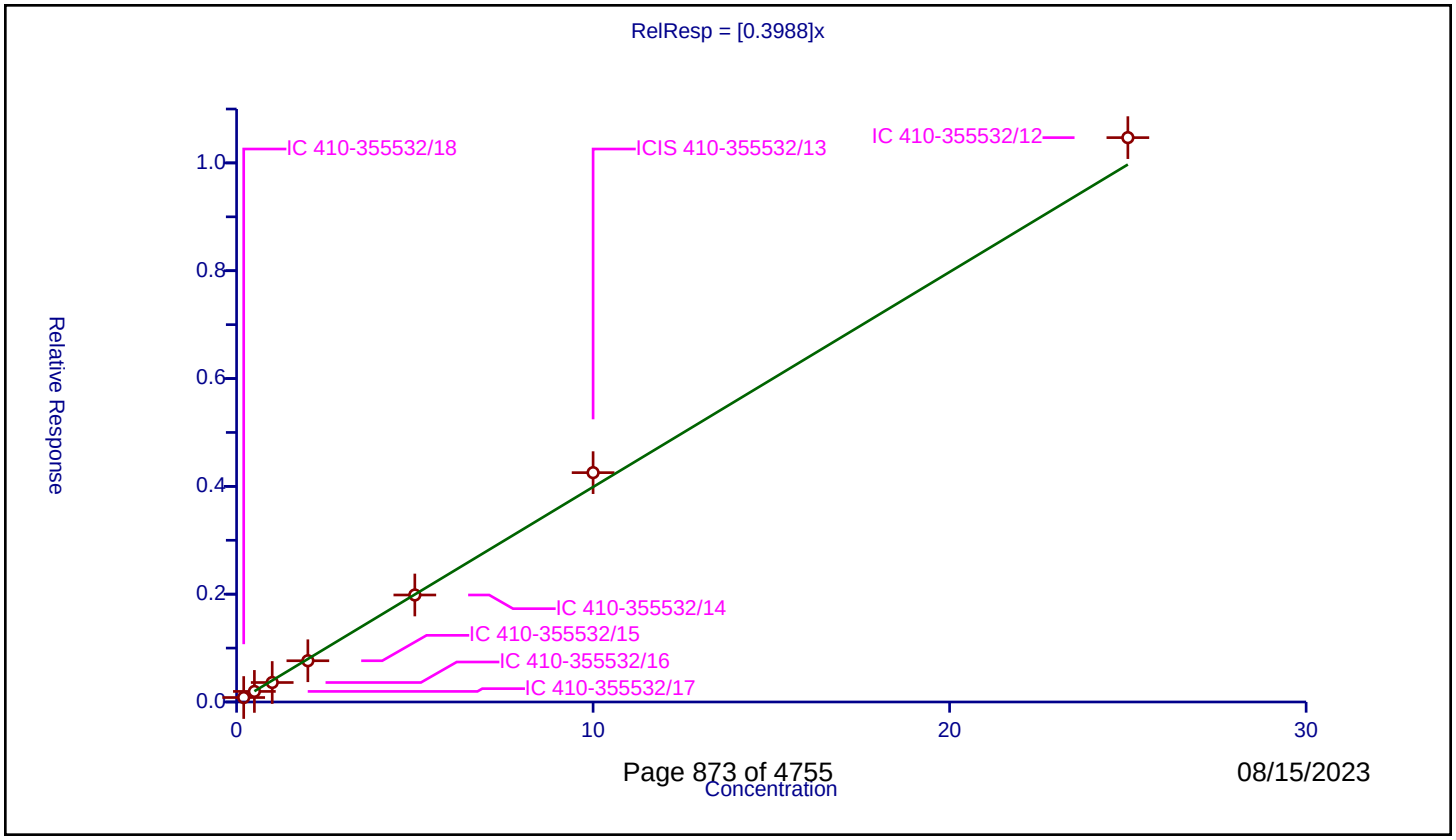
Curve Coefficients

Intercept:	0
Slope:	0.3988

Error Coefficients

Standard Error:	1130000
Relative Standard Error:	5.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.082949	10.0	2286473.0	0.414744	Y
2	IC 410-355532/17	0.5	0.196144	10.0	2310552.0	0.392287	Y
3	IC 410-355532/16	1.0	0.361174	10.0	2343275.0	0.361174	Y
4	IC 410-355532/15	2.0	0.764801	10.0	2349279.0	0.3824	Y
5	IC 410-355532/14	5.0	1.984935	10.0	2387313.0	0.396987	Y
6	ICIS 410-355532/13	10.0	4.254281	10.0	2381761.0	0.425428	Y
7	IC 410-355532/12	25.0	10.469076	10.0	2408929.0	0.418763	Y



Calibration / n-Butanol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

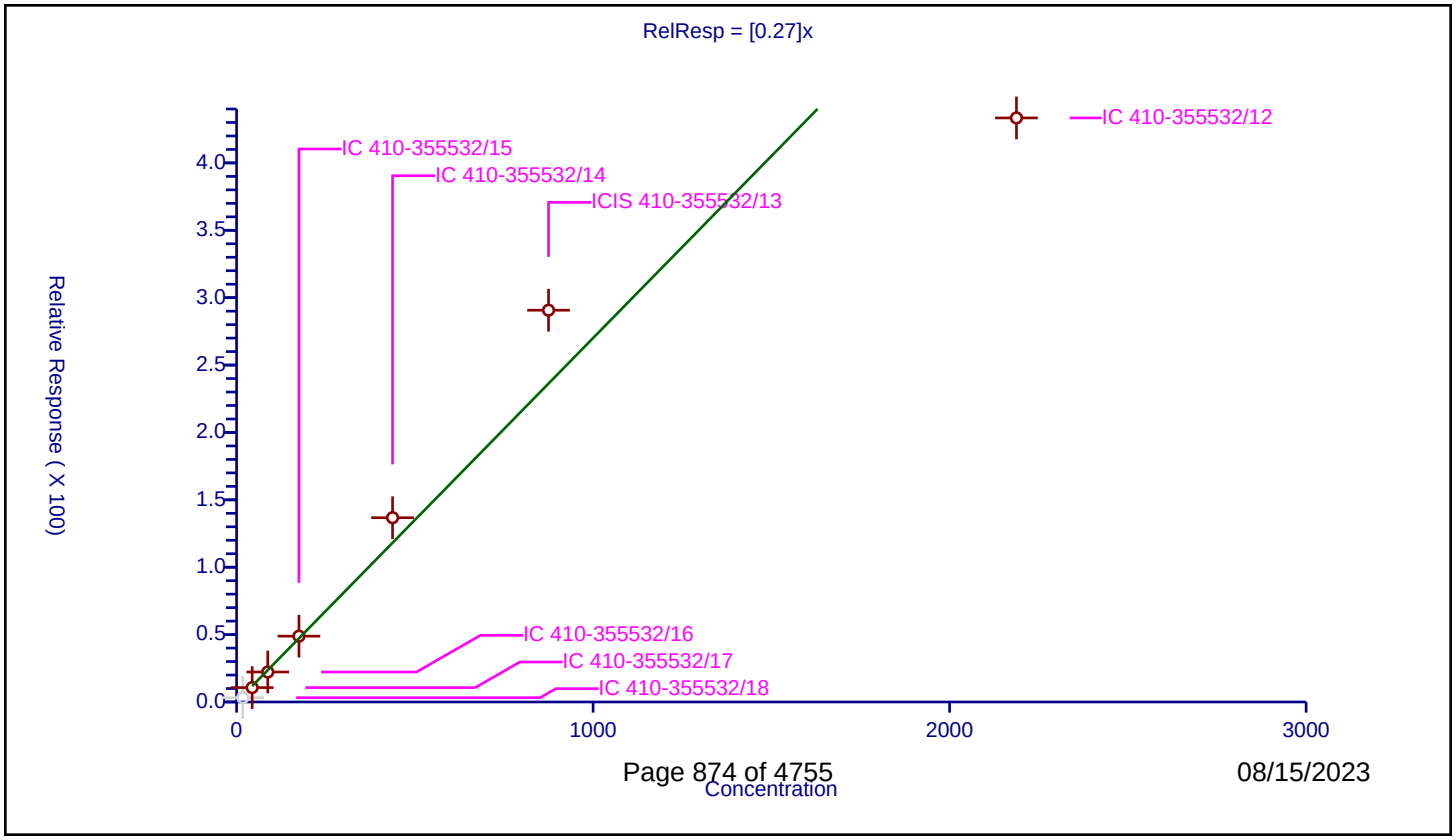
Curve Coefficients

Intercept:	0
Slope:	0.27

Error Coefficients

Standard Error:	651000
Relative Standard Error:	18.0
Correlation Coefficient:	0.966
Coefficient of Determination (Adjusted):	0.955

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	17.5	3.210487	50.0	126445.0	0.183456	N
2	IC 410-355532/17	43.75	10.66896	50.0	153492.0	0.243862	Y
3	IC 410-355532/16	87.5	22.257626	50.0	134008.0	0.254373	Y
4	IC 410-355532/15	175.0	48.839174	50.0	97646.0	0.279081	Y
5	IC 410-355532/14	437.5	136.738247	50.0	125221.0	0.312545	Y
6	ICIS 410-355532/13	875.0	290.708191	50.0	120956.0	0.332238	Y
7	IC 410-355532/12	2187.5	433.387658	50.0	141127.0	0.19812	Y



Calibration / Trichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

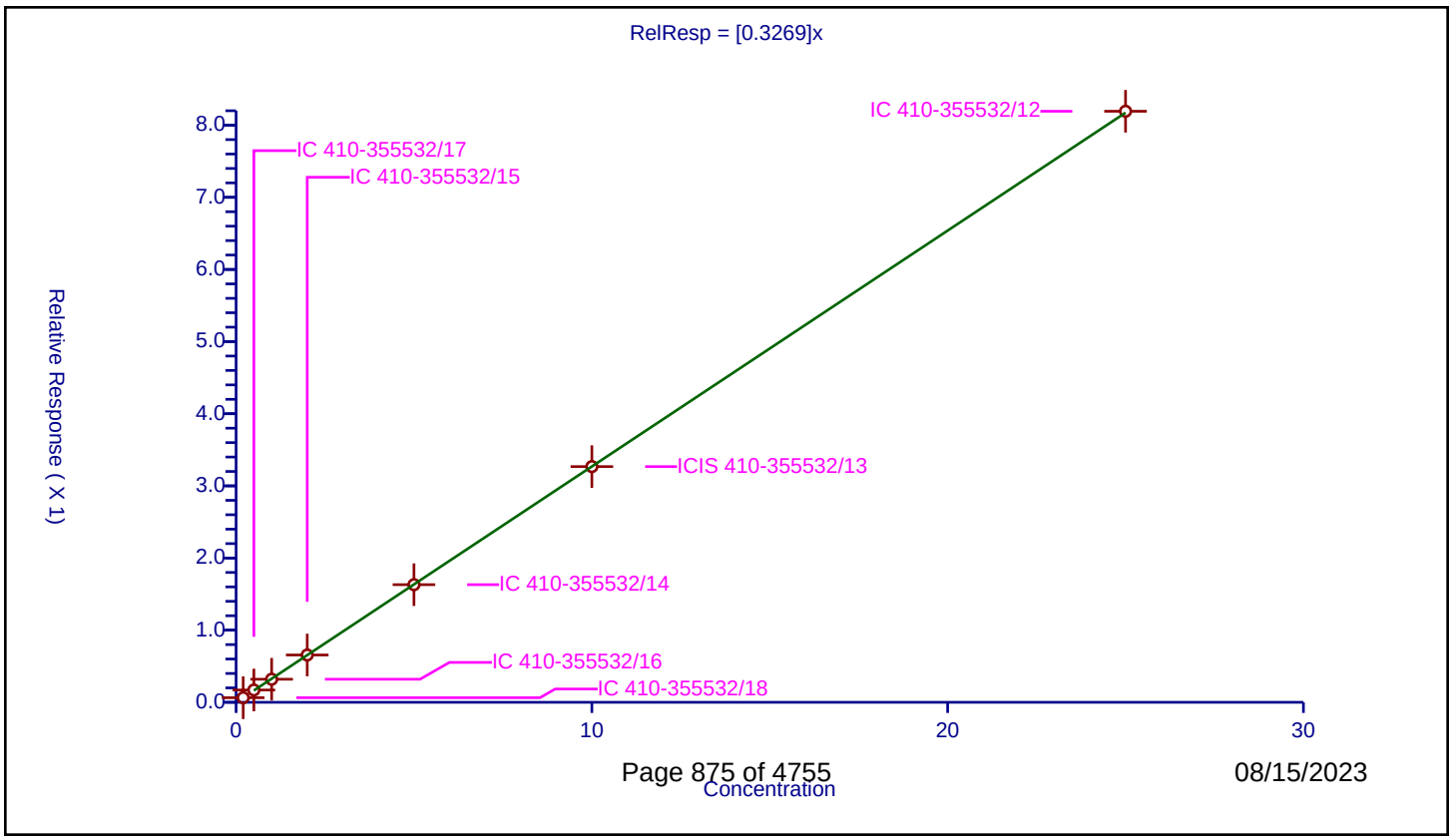
Curve Coefficients

Intercept:	0
Slope:	0.3269

Error Coefficients

Standard Error:	884000
Relative Standard Error:	2.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.063793	10.0	2286473.0	0.318963	Y
2	IC 410-355532/17	0.5	0.170626	10.0	2310552.0	0.341252	Y
3	IC 410-355532/16	1.0	0.319805	10.0	2343275.0	0.319805	Y
4	IC 410-355532/15	2.0	0.655767	10.0	2349279.0	0.327884	Y
5	IC 410-355532/14	5.0	1.630708	10.0	2387313.0	0.326142	Y
6	ICIS 410-355532/13	10.0	3.267356	10.0	2381761.0	0.326736	Y
7	IC 410-355532/12	25.0	8.193089	10.0	2408929.0	0.327724	Y



Calibration / Methylcyclohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

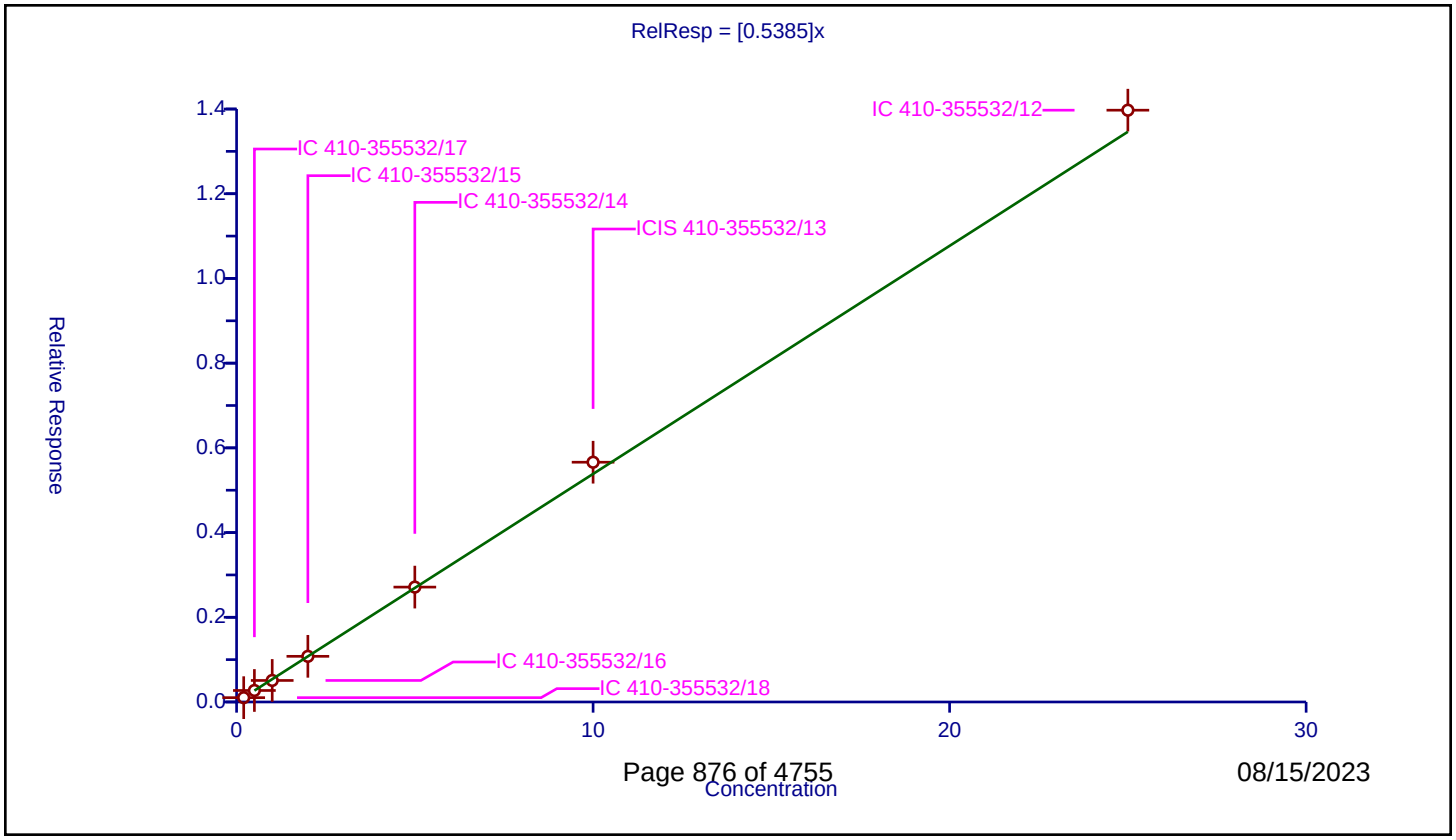
Curve Coefficients

Intercept:	0
Slope:	0.5385

Error Coefficients

Standard Error:	1510000
Relative Standard Error:	4.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.102297	10.0	2286473.0	0.511486	Y
2	IC 410-355532/17	0.5	0.271437	10.0	2310552.0	0.542875	Y
3	IC 410-355532/16	1.0	0.508515	10.0	2343275.0	0.508515	Y
4	IC 410-355532/15	2.0	1.078033	10.0	2349279.0	0.539016	Y
5	IC 410-355532/14	5.0	2.712552	10.0	2387313.0	0.54251	Y
6	ICIS 410-355532/13	10.0	5.660702	10.0	2381761.0	0.56607	Y
7	IC 410-355532/12	25.0	13.972222	10.0	2408929.0	0.558889	Y



Calibration / 1,2-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

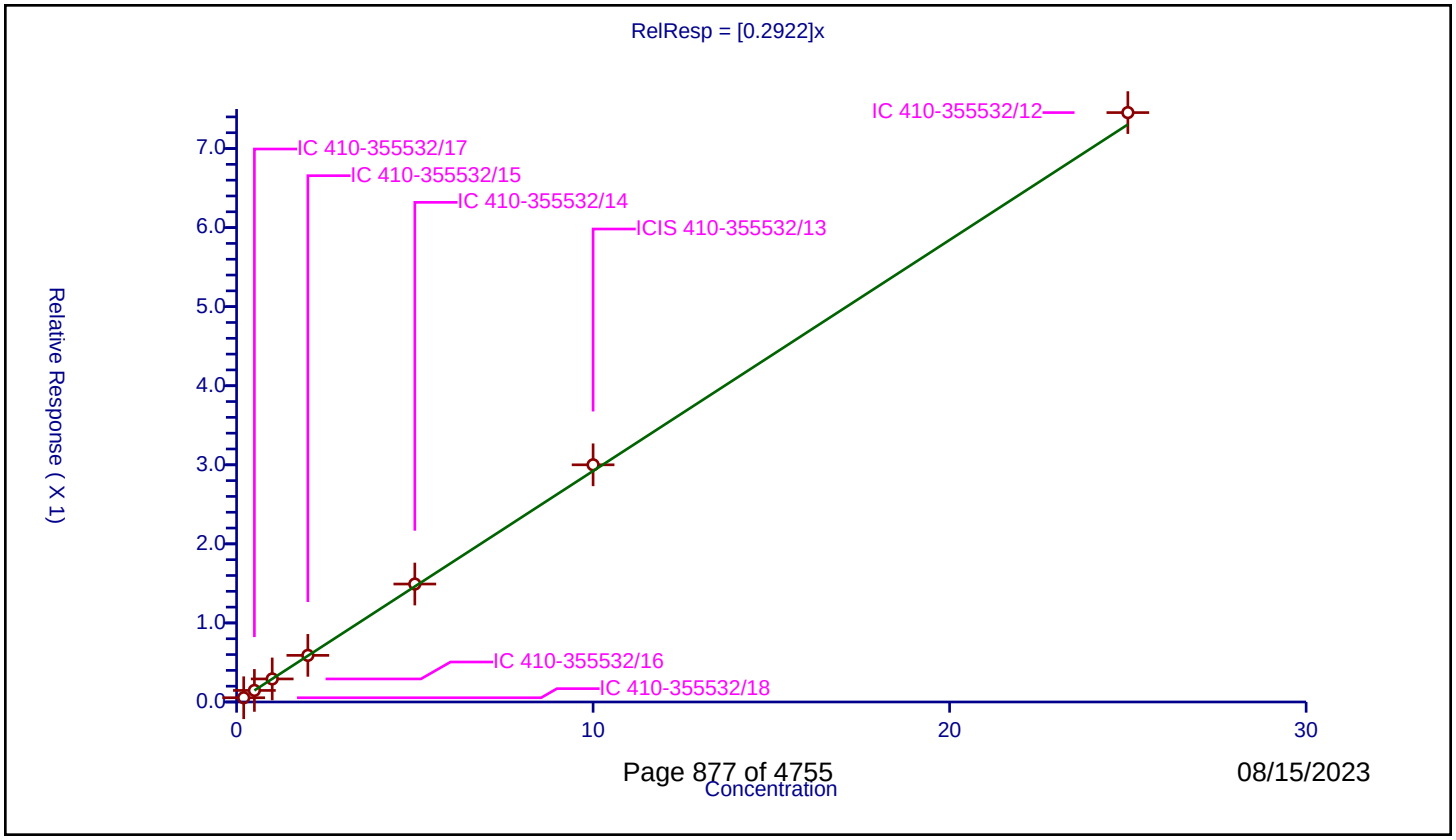
Curve Coefficients

Intercept:	0
Slope:	0.2922

Error Coefficients

Standard Error:	805000
Relative Standard Error:	3.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.05393	10.0	2286473.0	0.269651	Y
2	IC 410-355532/17	0.5	0.146342	10.0	2310552.0	0.292683	Y
3	IC 410-355532/16	1.0	0.291472	10.0	2343275.0	0.291472	Y
4	IC 410-355532/15	2.0	0.589636	10.0	2349279.0	0.294818	Y
5	IC 410-355532/14	5.0	1.491924	10.0	2387313.0	0.298385	Y
6	ICIS 410-355532/13	10.0	3.0001	10.0	2381761.0	0.30001	Y
7	IC 410-355532/12	25.0	7.454649	10.0	2408929.0	0.298186	Y



Calibration / Methyl methacrylate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

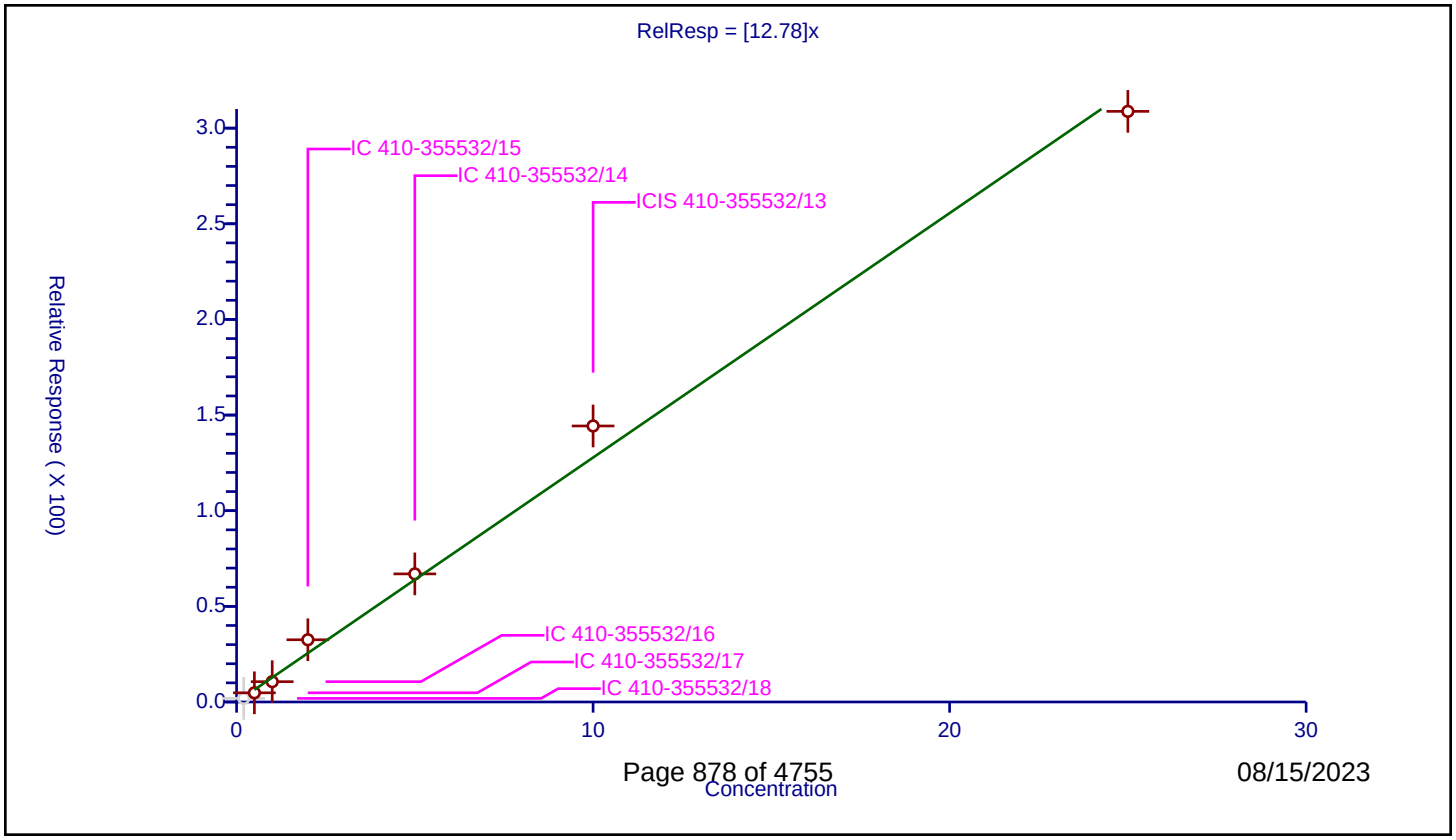
Curve Coefficients

Intercept:	0
Slope:	12.78

Error Coefficients

Standard Error:	428000
Relative Standard Error:	19.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.955

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	1.869983	50.0	126445.0	9.349915	N
2	IC 410-355532/17	0.5	4.809371	50.0	153492.0	9.618742	Y
3	IC 410-355532/16	1.0	10.612053	50.0	134008.0	10.612053	Y
4	IC 410-355532/15	2.0	32.530774	50.0	97646.0	16.265387	Y
5	IC 410-355532/14	5.0	66.971195	50.0	125221.0	13.394239	Y
6	ICIS 410-355532/13	10.0	144.295446	50.0	120956.0	14.429545	Y
7	IC 410-355532/12	25.0	308.767989	50.0	141127.0	12.35072	Y



08/15/2023

Calibration / Dibromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

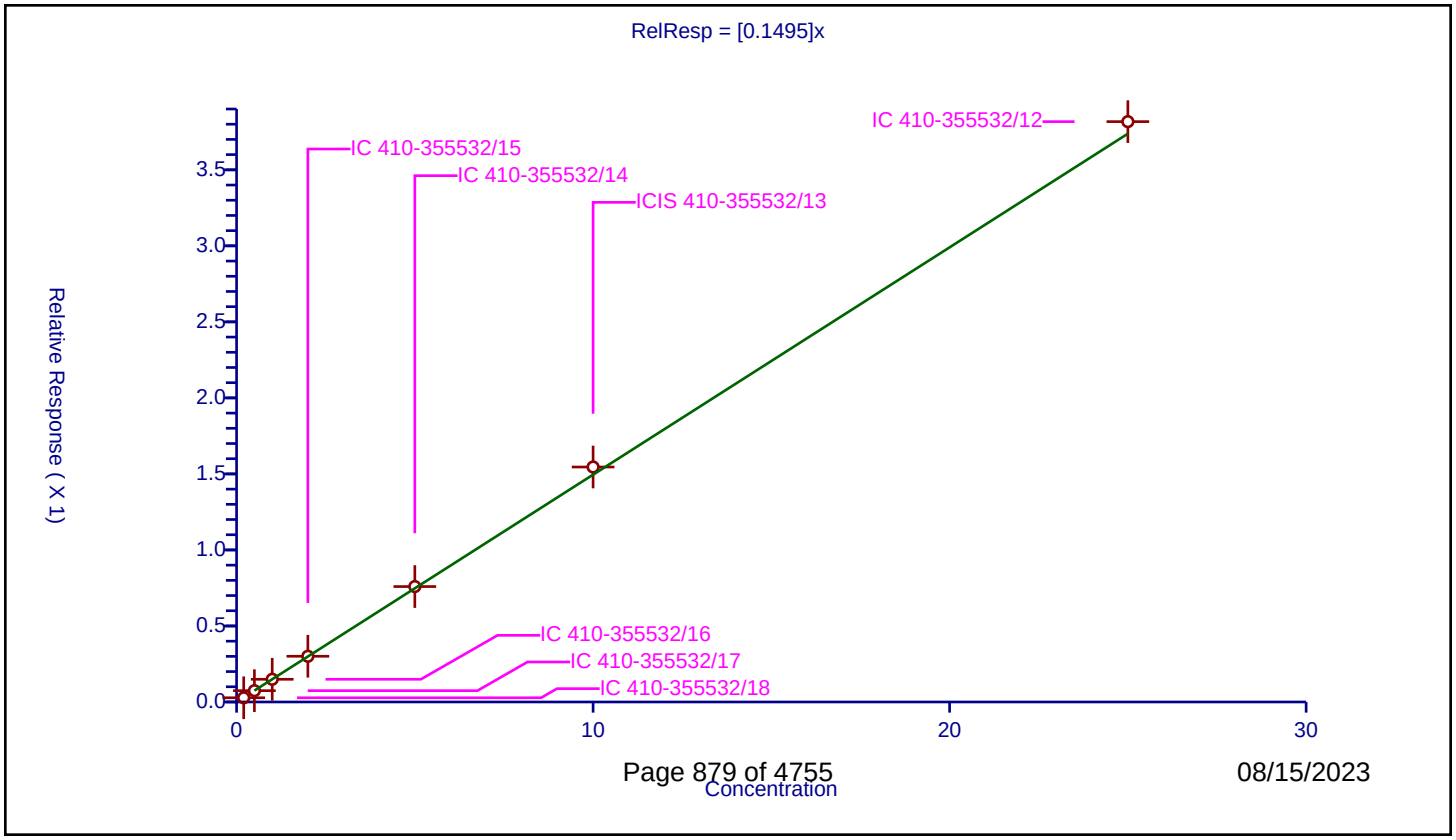
Curve Coefficients

Intercept:	0
Slope:	0.1495

Error Coefficients

Standard Error:	412000
Relative Standard Error:	3.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.027794	10.0	2286473.0	0.138969	Y
2	IC 410-355532/17	0.5	0.074363	10.0	2310552.0	0.148726	Y
3	IC 410-355532/16	1.0	0.149428	10.0	2343275.0	0.149428	Y
4	IC 410-355532/15	2.0	0.300748	10.0	2349279.0	0.150374	Y
5	IC 410-355532/14	5.0	0.759184	10.0	2387313.0	0.151837	Y
6	ICIS 410-355532/13	10.0	1.545441	10.0	2381761.0	0.154544	Y
7	IC 410-355532/12	25.0	3.81697	10.0	2408929.0	0.152679	Y



Calibration / 1,4-Dioxane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

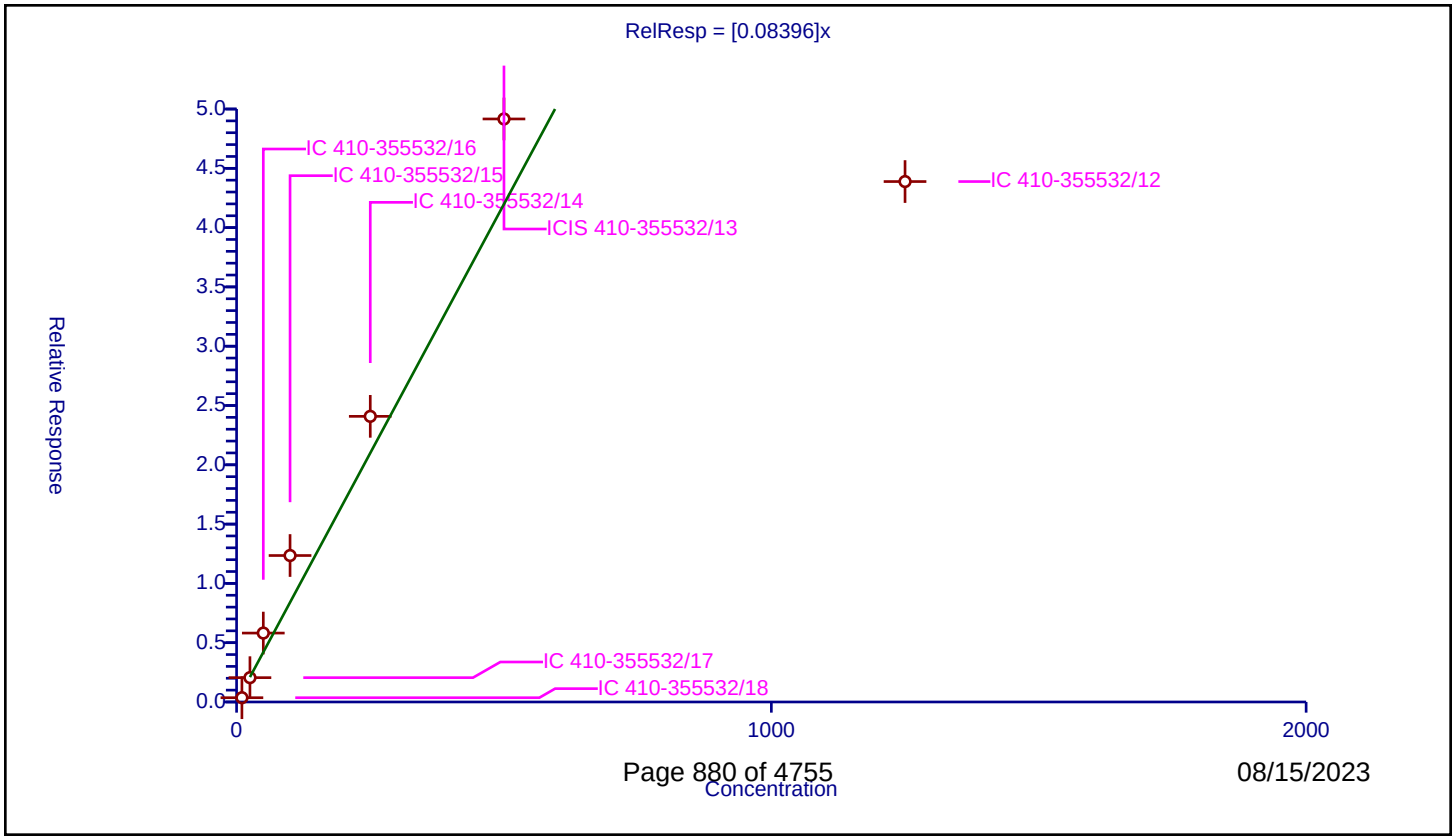
Curve Coefficients

Intercept:	0
Slope:	0.08396

Error Coefficients

Standard Error:	75200
Relative Standard Error:	42.5
Correlation Coefficient:	0.767
Coefficient of Determination (Adjusted):	0.837

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	10.0	0.361817	50.0	126445.0	0.036182	Y
2	IC 410-355532/17	25.0	2.050921	50.0	153492.0	0.082037	Y
3	IC 410-355532/16	50.0	5.811593	50.0	134008.0	0.116232	Y
4	IC 410-355532/15	100.0	12.351248	50.0	97646.0	0.123512	Y
5	IC 410-355532/14	250.0	24.085018	50.0	125221.0	0.09634	Y
6	ICIS 410-355532/13	500.0	49.161265	50.0	120956.0	0.098323	Y
7	IC 410-355532/12	1250.0	43.884586	50.0	141127.0	0.035108	Y



Calibration / Dichlorobromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

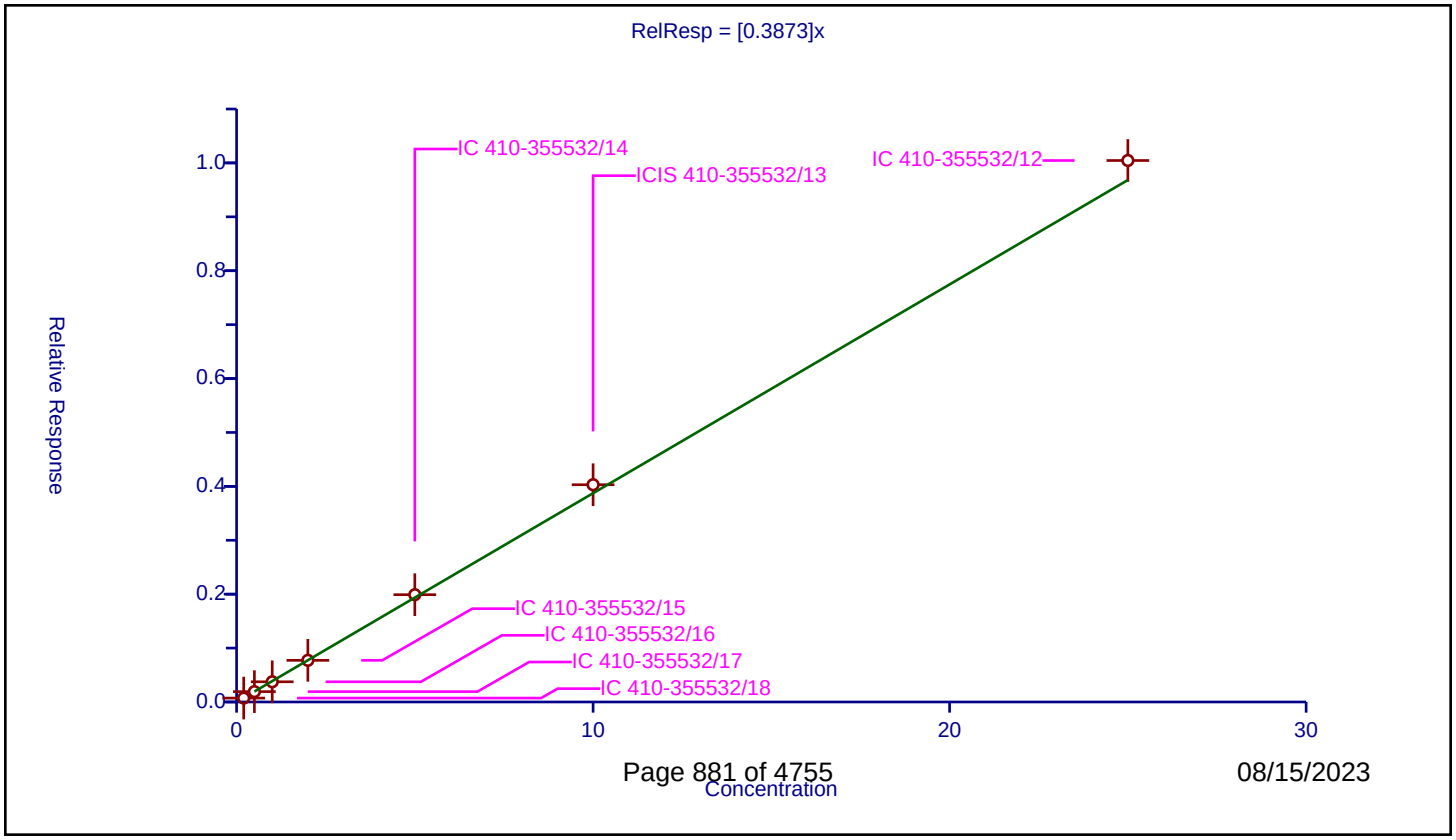
Curve Coefficients

Intercept:	0
Slope:	0.3873

Error Coefficients

Standard Error:	1080000
Relative Standard Error:	3.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.072522	10.0	2286473.0	0.362611	Y
2	IC 410-355532/17	0.5	0.192175	10.0	2310552.0	0.38435	Y
3	IC 410-355532/16	1.0	0.374822	10.0	2343275.0	0.374822	Y
4	IC 410-355532/15	2.0	0.772884	10.0	2349279.0	0.386442	Y
5	IC 410-355532/14	5.0	1.990455	10.0	2387313.0	0.398091	Y
6	ICIS 410-355532/13	10.0	4.03064	10.0	2381761.0	0.403064	Y
7	IC 410-355532/12	25.0	10.044721	10.0	2408929.0	0.401789	Y



Calibration / 2-Nitropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

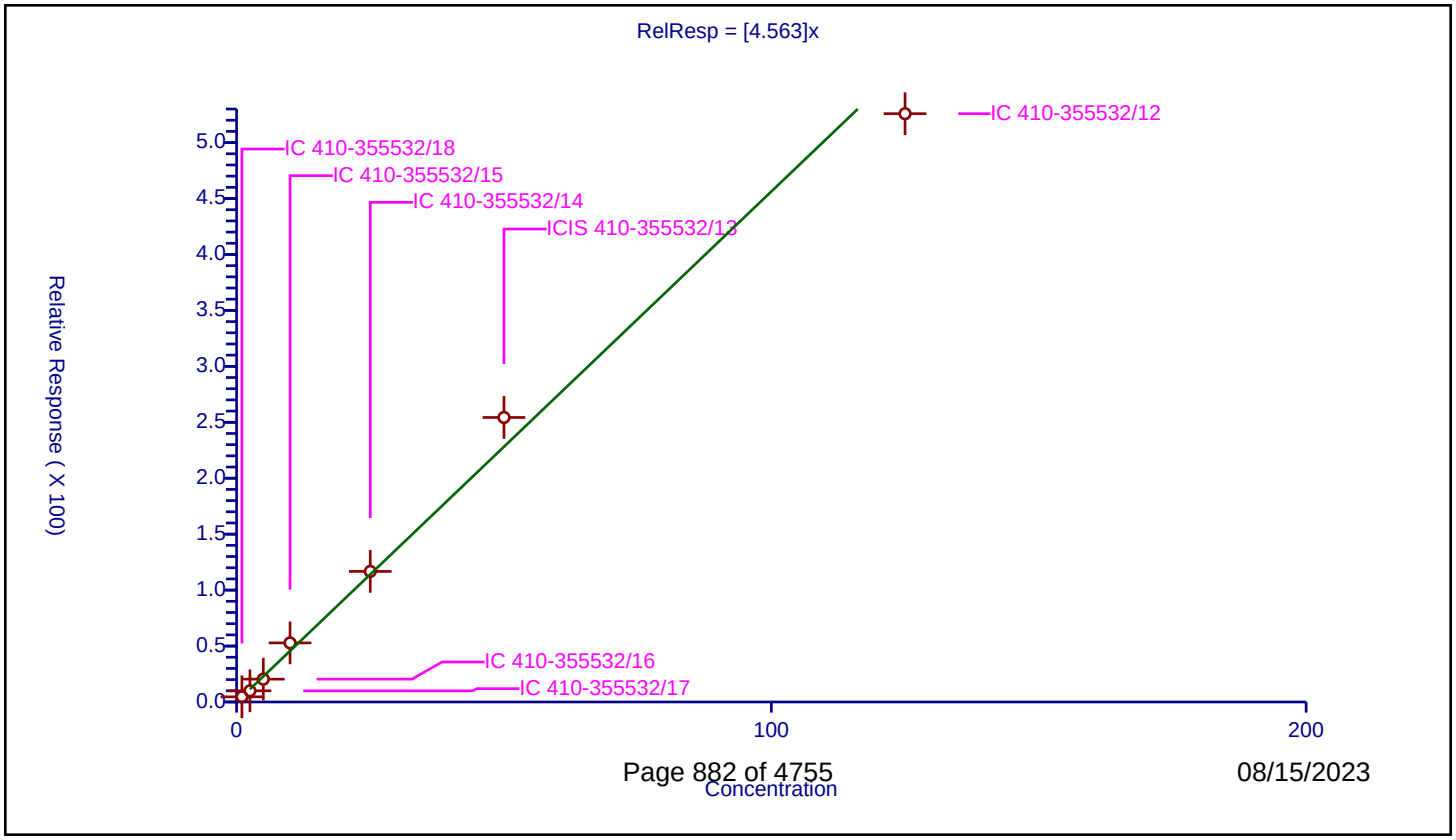
Curve Coefficients

Intercept:	0
Slope:	4.563

Error Coefficients

Standard Error:	668000
Relative Standard Error:	10.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	1.0	4.617027	50.0	126445.0	4.617027	Y
2	IC 410-355532/17	2.5	9.993355	50.0	153492.0	3.997342	Y
3	IC 410-355532/16	5.0	20.416318	50.0	134008.0	4.083264	Y
4	IC 410-355532/15	10.0	52.811175	50.0	97646.0	5.281118	Y
5	IC 410-355532/14	25.0	116.700474	50.0	125221.0	4.668019	Y
6	ICIS 410-355532/13	50.0	254.306938	50.0	120956.0	5.086139	Y
7	IC 410-355532/12	125.0	525.8278	50.0	141127.0	4.206622	Y



Calibration / 1-Bromo-2-chloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

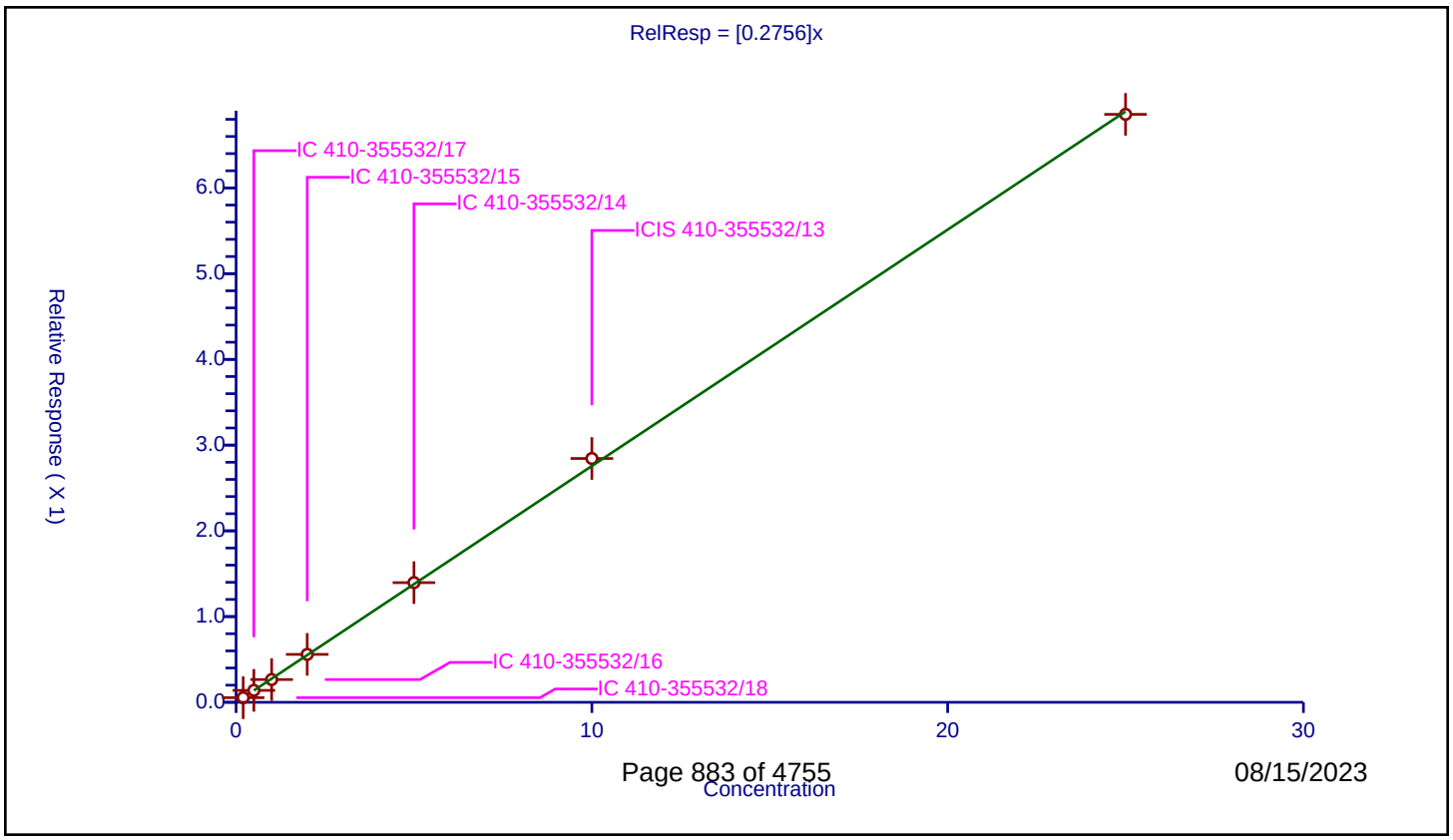
Curve Coefficients

Intercept:	0
Slope:	0.2756

Error Coefficients

Standard Error:	744000
Relative Standard Error:	2.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.053707	10.0	2286473.0	0.268536	Y
2	IC 410-355532/17	0.5	0.139023	10.0	2310552.0	0.278046	Y
3	IC 410-355532/16	1.0	0.265487	10.0	2343275.0	0.265487	Y
4	IC 410-355532/15	2.0	0.559099	10.0	2349279.0	0.27955	Y
5	IC 410-355532/14	5.0	1.395829	10.0	2387313.0	0.279166	Y
6	ICIS 410-355532/13	10.0	2.84416	10.0	2381761.0	0.284416	Y
7	IC 410-355532/12	25.0	6.858044	10.0	2408929.0	0.274322	Y



Calibration / cis-1,3-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

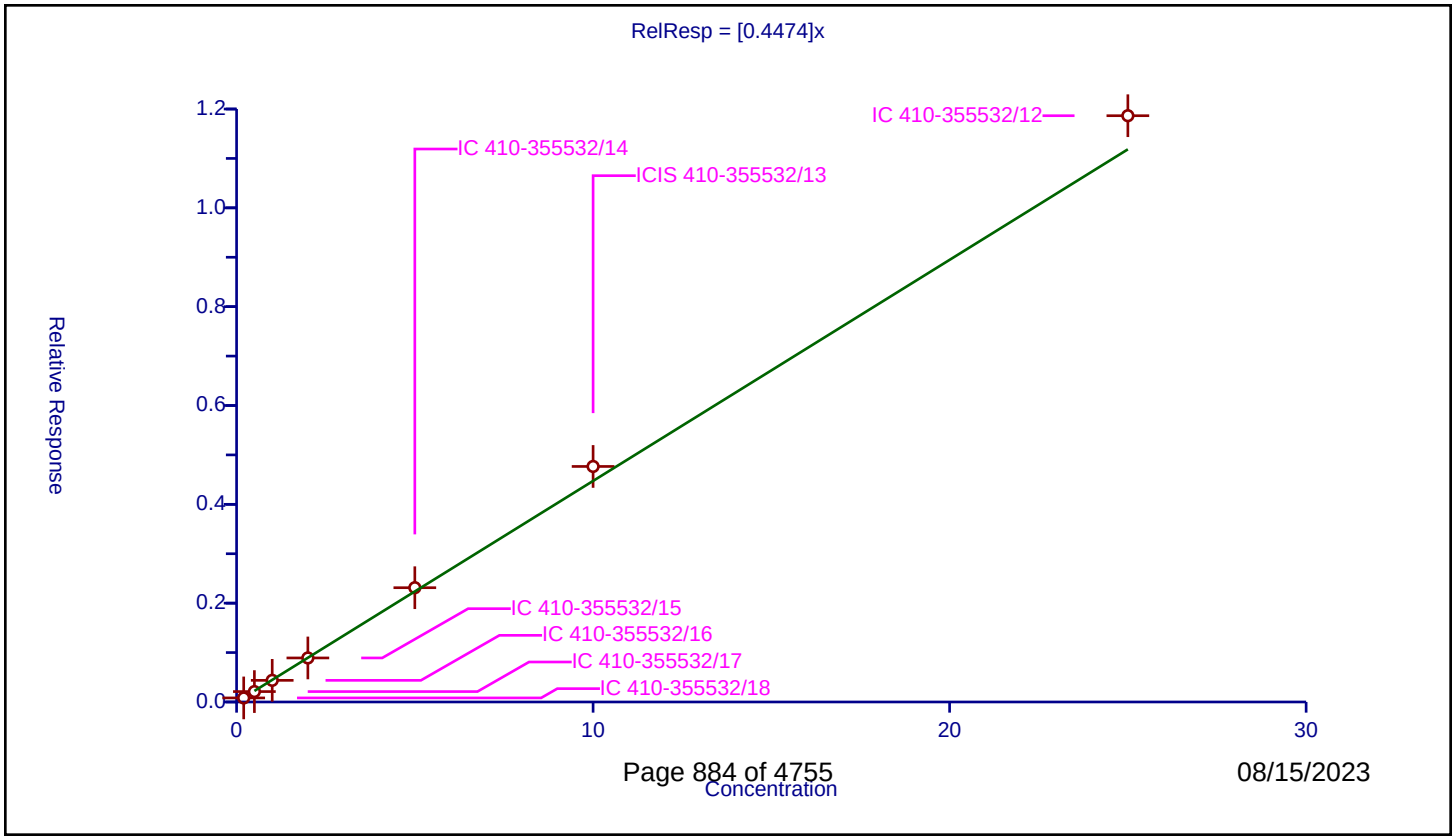
Curve Coefficients

Intercept:	0
Slope:	0.4474

Error Coefficients

Standard Error:	1280000
Relative Standard Error:	5.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.082468	10.0	2286473.0	0.412338	Y
2	IC 410-355532/17	0.5	0.210859	10.0	2310552.0	0.421717	Y
3	IC 410-355532/16	1.0	0.438002	10.0	2343275.0	0.438002	Y
4	IC 410-355532/15	2.0	0.891384	10.0	2349279.0	0.445692	Y
5	IC 410-355532/14	5.0	2.31278	10.0	2387313.0	0.462556	Y
6	ICIS 410-355532/13	10.0	4.766402	10.0	2381761.0	0.47664	Y
7	IC 410-355532/12	25.0	11.864409	10.0	2408929.0	0.474576	Y



Calibration / 4-Methyl-2-pentanone (MIBK)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

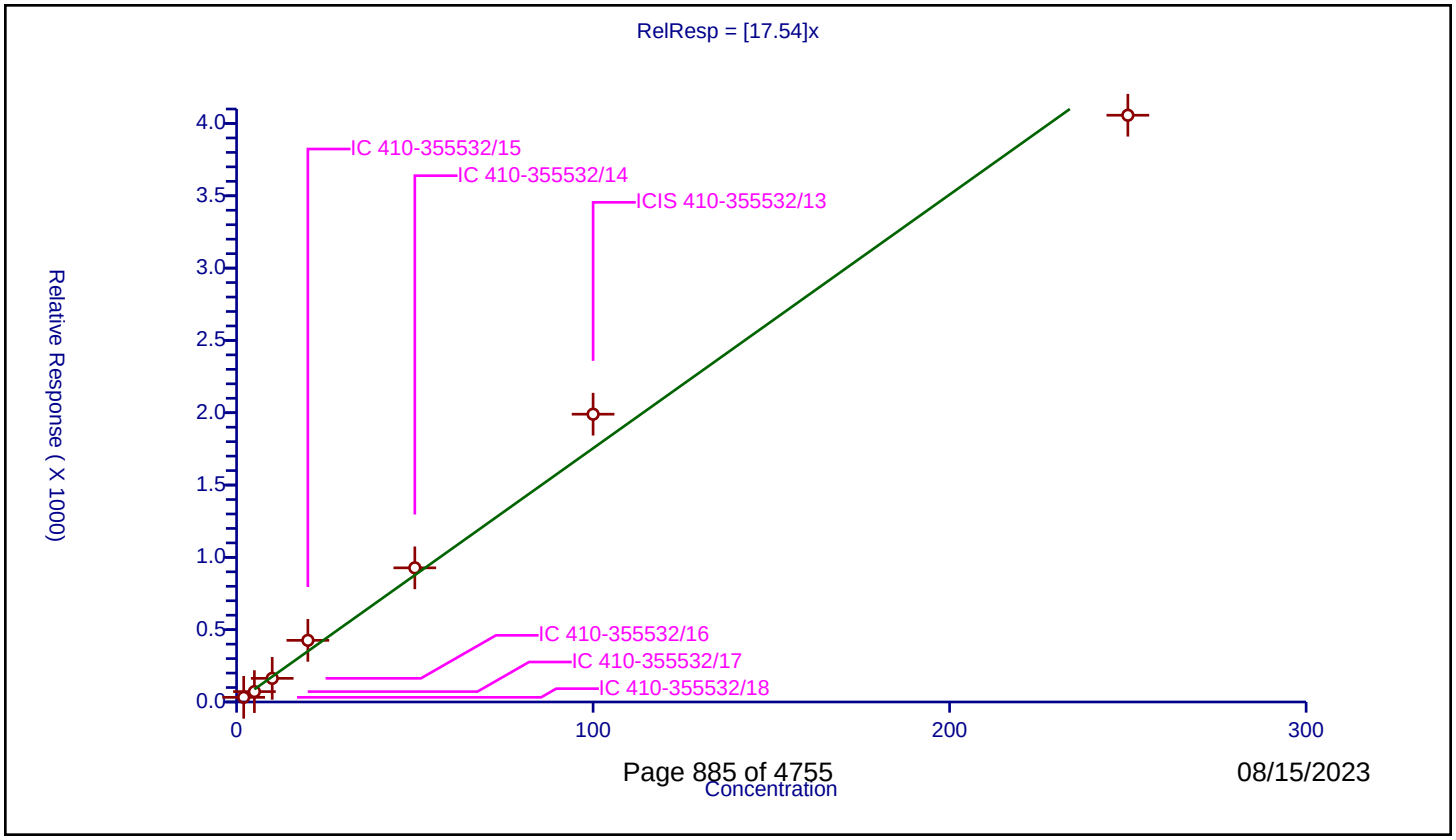
Curve Coefficients

Intercept:	0
Slope:	17.54

Error Coefficients

Standard Error:	5170000
Relative Standard Error:	14.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.976

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	2.0	32.187117	50.0	126445.0	16.093558	Y
2	IC 410-355532/17	5.0	71.851953	50.0	153492.0	14.370391	Y
3	IC 410-355532/16	10.0	163.426064	50.0	134008.0	16.342606	Y
4	IC 410-355532/15	20.0	426.192061	50.0	97646.0	21.309603	Y
5	IC 410-355532/14	50.0	927.439088	50.0	125221.0	18.548782	Y
6	ICIS 410-355532/13	100.0	1989.868217	50.0	120956.0	19.898682	Y
7	IC 410-355532/12	250.0	4057.115931	50.0	141127.0	16.228464	Y



Calibration / Toluene-d8 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

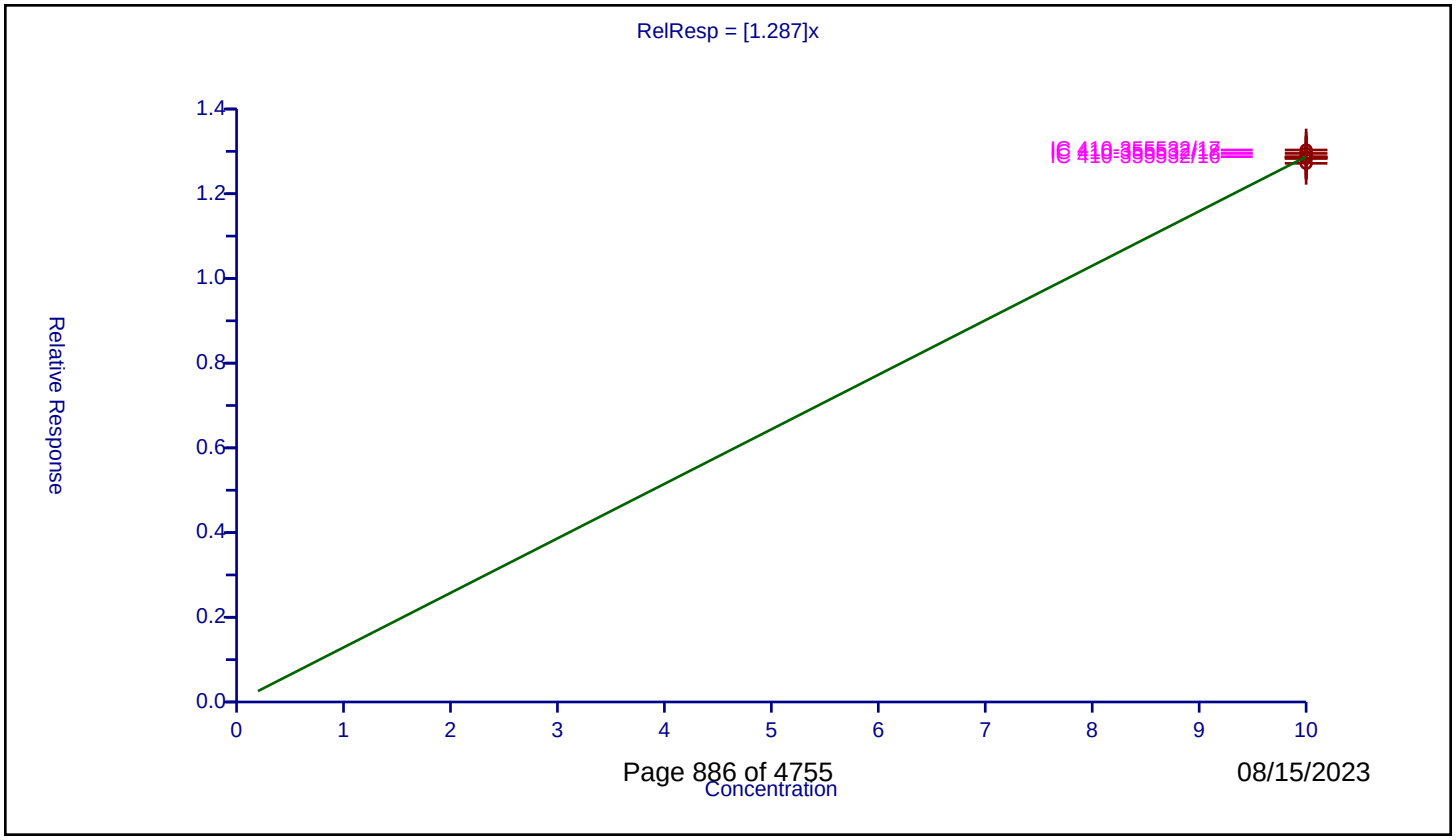
Curve Coefficients

Intercept:	0
Slope:	1.287

Error Coefficients

Standard Error:	2570000
Relative Standard Error:	0.8
Correlation Coefficient:	0.00000000000000000000
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/12	10.0	12.717465	10.0	1936058.0	1.271747	Y
2	ICIS 410-355532/13	10.0	12.832379	10.0	1886594.0	1.283238	Y
3	IC 410-355532/14	10.0	12.84399	10.0	1885942.0	1.284399	Y
4	IC 410-355532/15	10.0	12.862453	10.0	1844928.0	1.286245	Y
5	IC 410-355532/16	10.0	12.87498	10.0	1818962.0	1.287498	Y
6	IC 410-355532/17	10.0	13.032143	10.0	1779098.0	1.303214	Y
7	IC 410-355532/18	10.0	12.951626	10.0	1770499.0	1.295163	Y



Calibration / Toluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

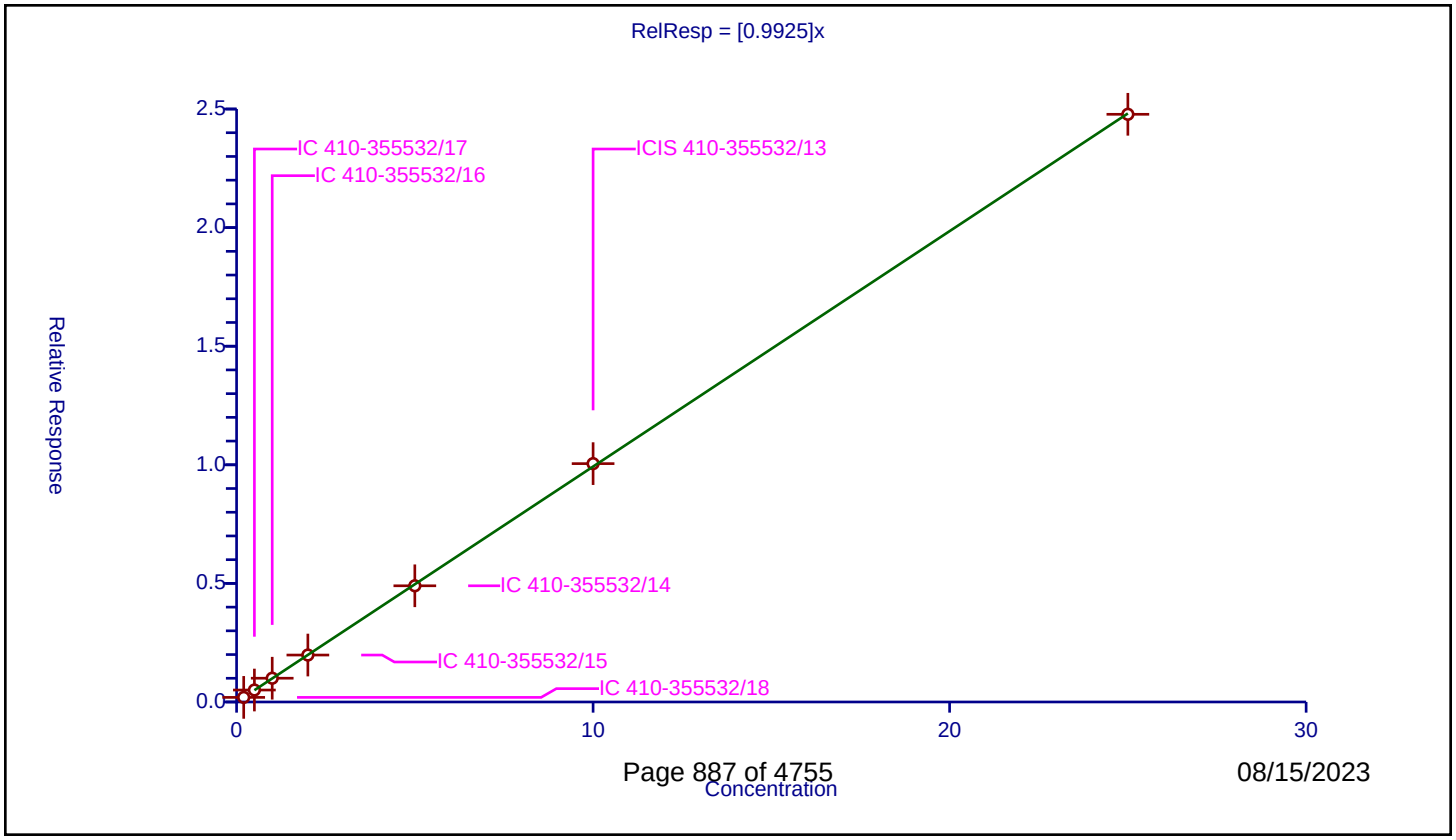
Curve Coefficients

Intercept:	0
Slope:	0.9925

Error Coefficients

Standard Error:	2150000
Relative Standard Error:	1.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.194143	10.0	1770499.0	0.970715	Y
2	IC 410-355532/17	0.5	0.504447	10.0	1779098.0	1.008893	Y
3	IC 410-355532/16	1.0	1.002742	10.0	1818962.0	1.002742	Y
4	IC 410-355532/15	2.0	1.979394	10.0	1844928.0	0.989697	Y
5	IC 410-355532/14	5.0	4.89873	10.0	1885942.0	0.979746	Y
6	ICIS 410-355532/13	10.0	10.048829	10.0	1886594.0	1.004883	Y
7	IC 410-355532/12	25.0	24.777367	10.0	1936058.0	0.991095	Y



Calibration / trans-1,3-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

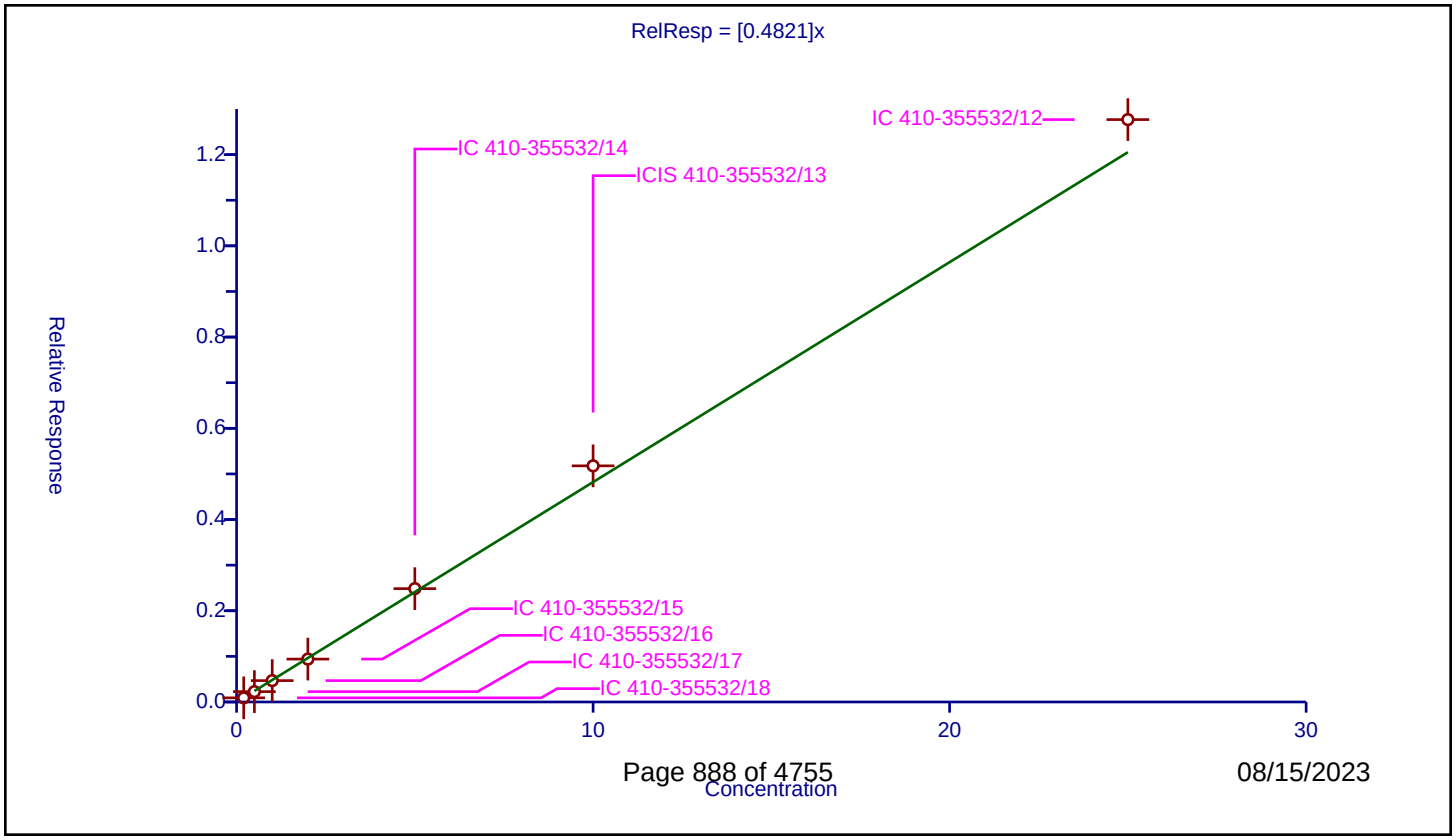
Curve Coefficients

Intercept:	0
Slope:	0.4821

Error Coefficients

Standard Error:	1100000
Relative Standard Error:	5.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.091189	10.0	1770499.0	0.455945	Y
2	IC 410-355532/17	0.5	0.227407	10.0	1779098.0	0.454815	Y
3	IC 410-355532/16	1.0	0.468306	10.0	1818962.0	0.468306	Y
4	IC 410-355532/15	2.0	0.940199	10.0	1844928.0	0.4701	Y
5	IC 410-355532/14	5.0	2.485103	10.0	1885942.0	0.497021	Y
6	ICIS 410-355532/13	10.0	5.176954	10.0	1886594.0	0.517695	Y
7	IC 410-355532/12	25.0	12.768187	10.0	1936058.0	0.510727	Y



Calibration / Ethyl methacrylate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

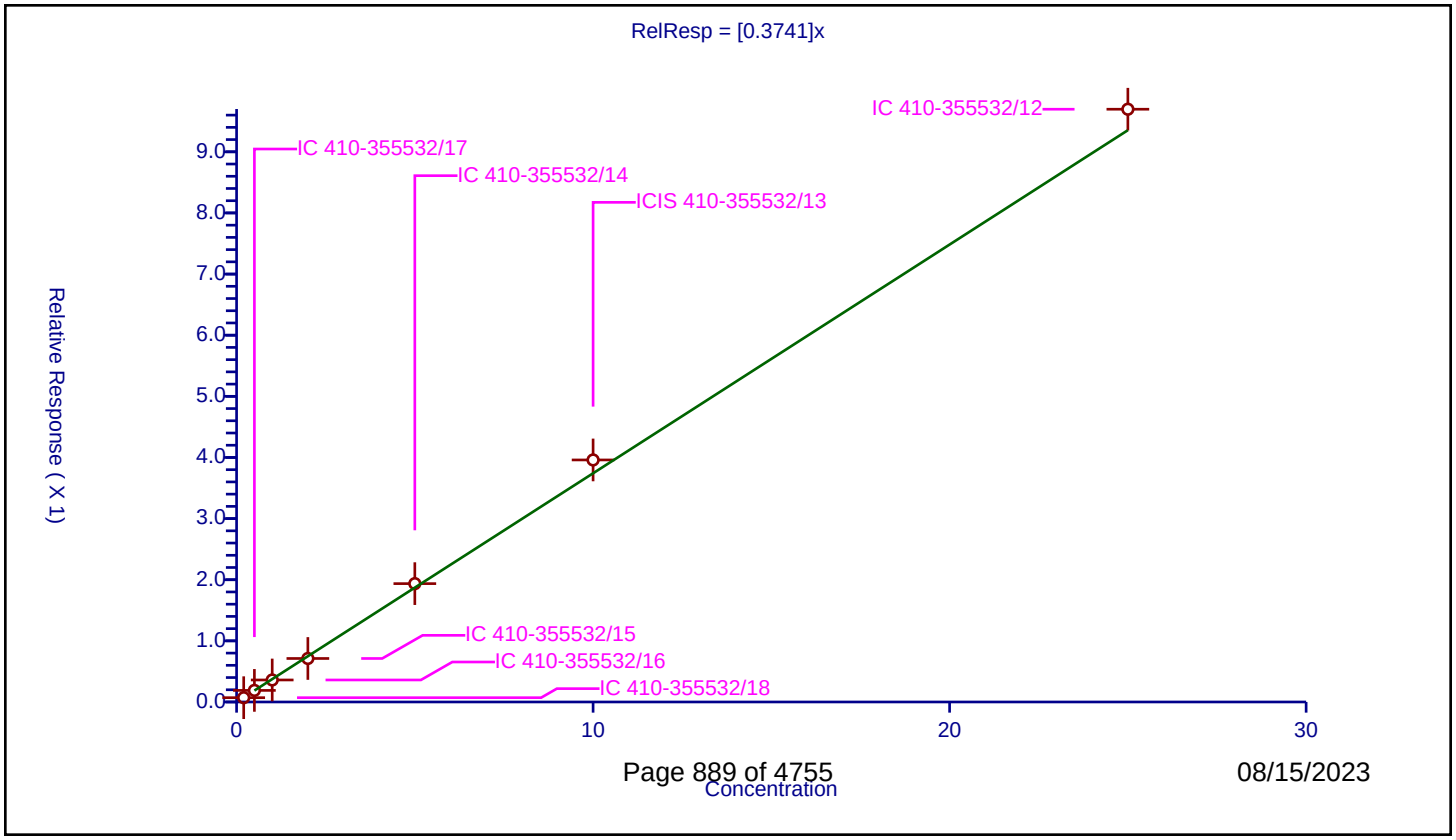
Curve Coefficients

Intercept:	0
Slope:	0.3741

Error Coefficients

Standard Error:	840000
Relative Standard Error:	4.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.070489	10.0	1770499.0	0.352443	Y
2	IC 410-355532/17	0.5	0.189748	10.0	1779098.0	0.379496	Y
3	IC 410-355532/16	1.0	0.360134	10.0	1818962.0	0.360134	Y
4	IC 410-355532/15	2.0	0.711638	10.0	1844928.0	0.355819	Y
5	IC 410-355532/14	5.0	1.936226	10.0	1885942.0	0.387245	Y
6	ICIS 410-355532/13	10.0	3.959283	10.0	1886594.0	0.395928	Y
7	IC 410-355532/12	25.0	9.696662	10.0	1936058.0	0.387866	Y



Calibration / 1,1,2-Trichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

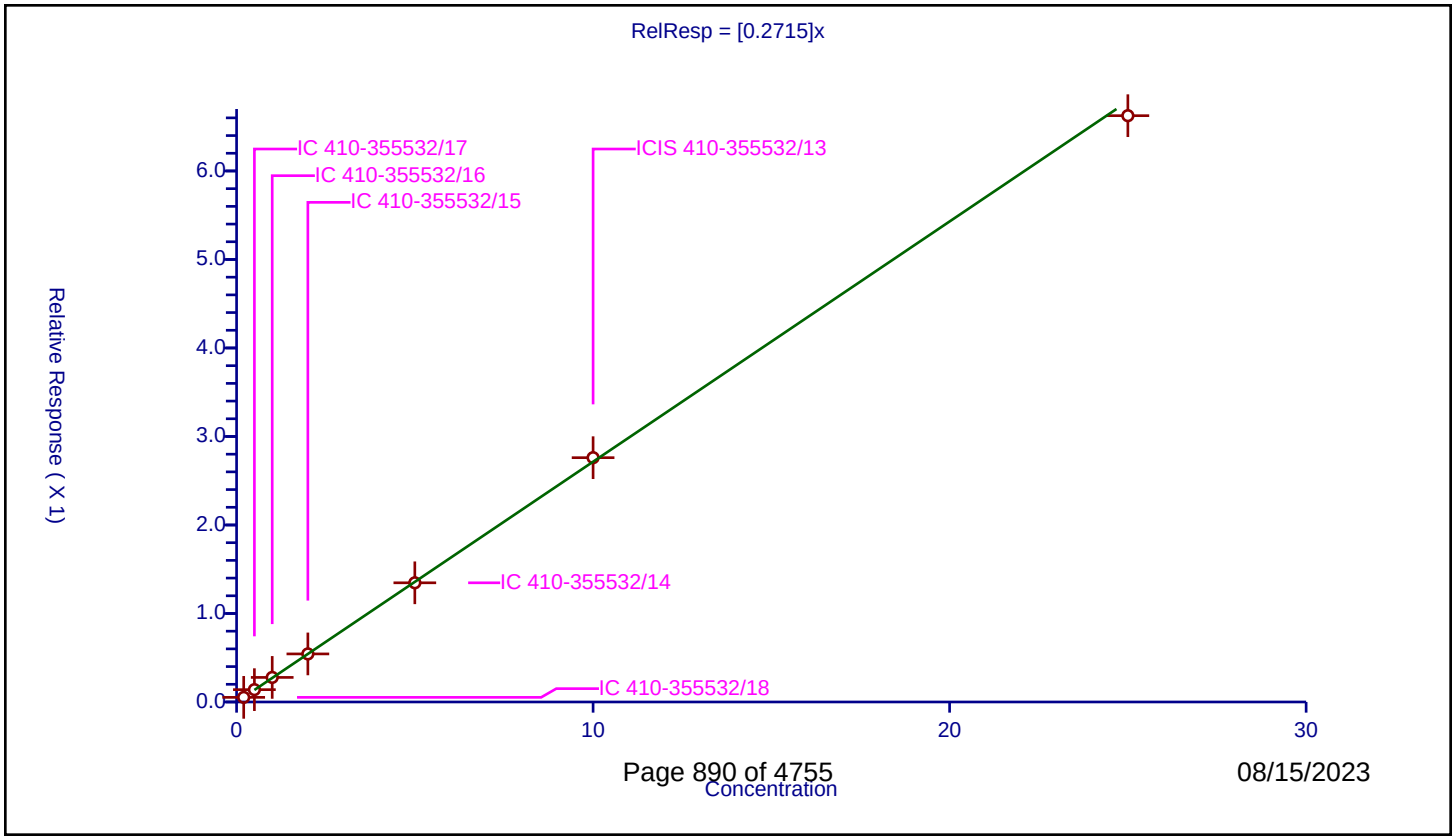
Curve Coefficients

Intercept:	0
Slope:	0.2715

Error Coefficients

Standard Error:	576000
Relative Standard Error:	2.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.052324	10.0	1770499.0	0.261621	Y
2	IC 410-355532/17	0.5	0.139492	10.0	1779098.0	0.278984	Y
3	IC 410-355532/16	1.0	0.277664	10.0	1818962.0	0.277664	Y
4	IC 410-355532/15	2.0	0.54317	10.0	1844928.0	0.271585	Y
5	IC 410-355532/14	5.0	1.346802	10.0	1885942.0	0.26936	Y
6	ICIS 410-355532/13	10.0	2.760472	10.0	1886594.0	0.276047	Y
7	IC 410-355532/12	25.0	6.62461	10.0	1936058.0	0.264984	Y



Calibration / Tetrachloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

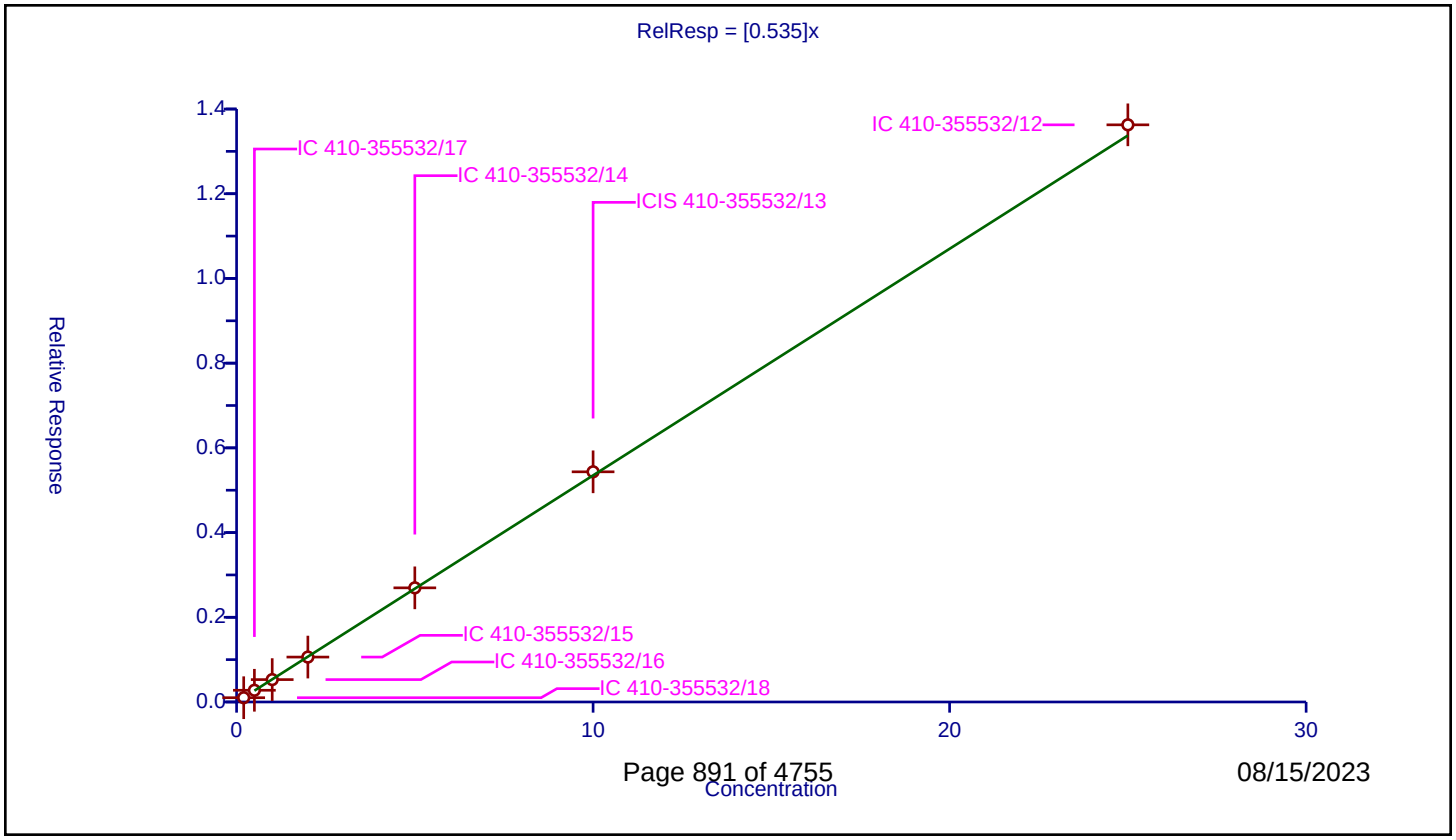
Curve Coefficients

Intercept:	0
Slope:	0.535

Error Coefficients

Standard Error:	1180000
Relative Standard Error:	2.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.101158	10.0	1770499.0	0.50579	Y
2	IC 410-355532/17	0.5	0.27655	10.0	1779098.0	0.553101	Y
3	IC 410-355532/16	1.0	0.528345	10.0	1818962.0	0.528345	Y
4	IC 410-355532/15	2.0	1.060388	10.0	1844928.0	0.530194	Y
5	IC 410-355532/14	5.0	2.695019	10.0	1885942.0	0.539004	Y
6	ICIS 410-355532/13	10.0	5.43454	10.0	1886594.0	0.543454	Y
7	IC 410-355532/12	25.0	13.626849	10.0	1936058.0	0.545074	Y



08/15/2023

Calibration / 1,3-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

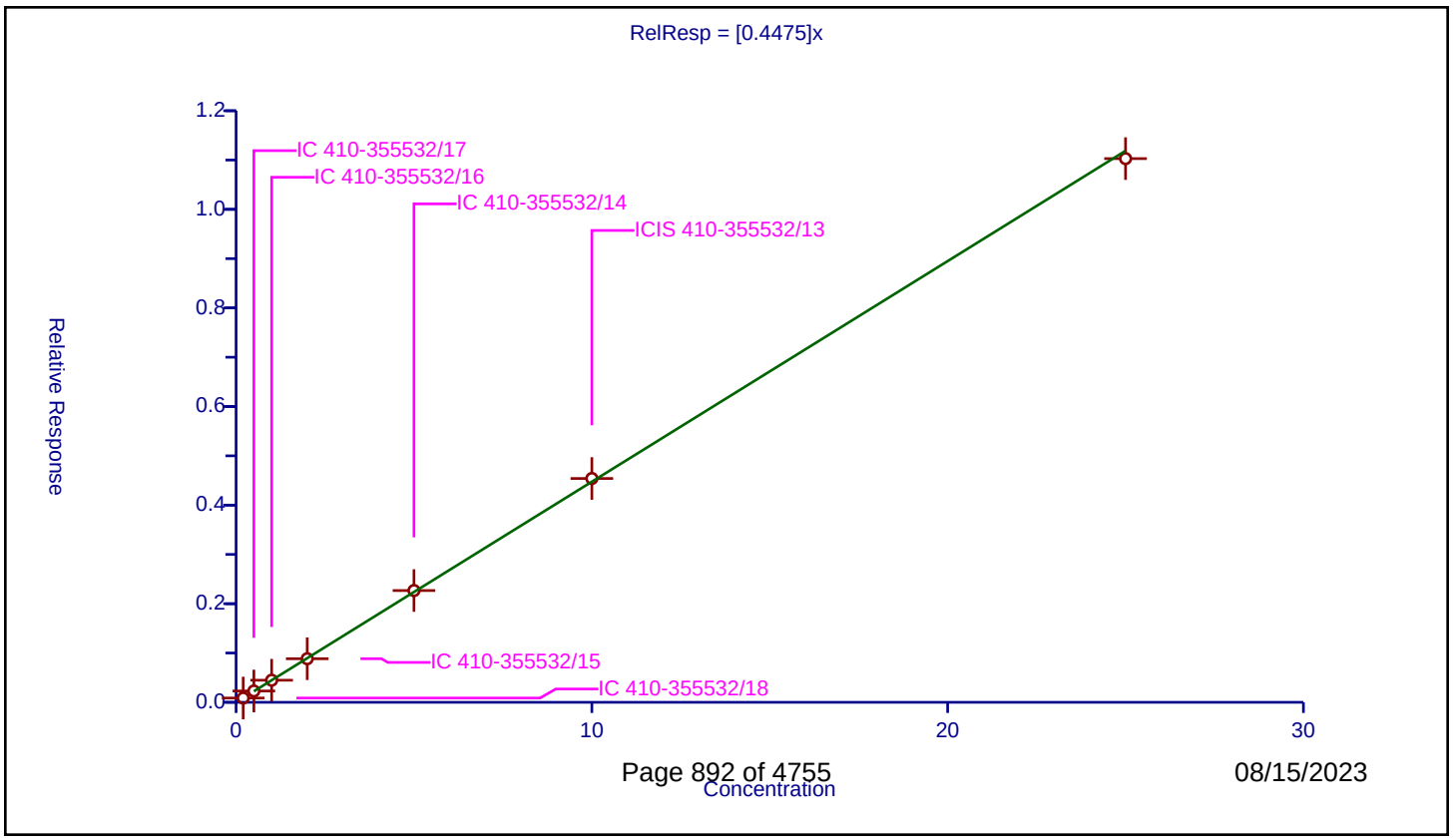
Curve Coefficients

Intercept:	0
Slope:	0.4475

Error Coefficients

Standard Error:	958000
Relative Standard Error:	2.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.086716	10.0	1770499.0	0.433578	Y
2	IC 410-355532/17	0.5	0.229836	10.0	1779098.0	0.459671	Y
3	IC 410-355532/16	1.0	0.4483	10.0	1818962.0	0.4483	Y
4	IC 410-355532/15	2.0	0.884262	10.0	1844928.0	0.442131	Y
5	IC 410-355532/14	5.0	2.267541	10.0	1885942.0	0.453508	Y
6	ICIS 410-355532/13	10.0	4.540521	10.0	1886594.0	0.454052	Y
7	IC 410-355532/12	25.0	11.029039	10.0	1936058.0	0.441162	Y



Calibration / 2-Hexanone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

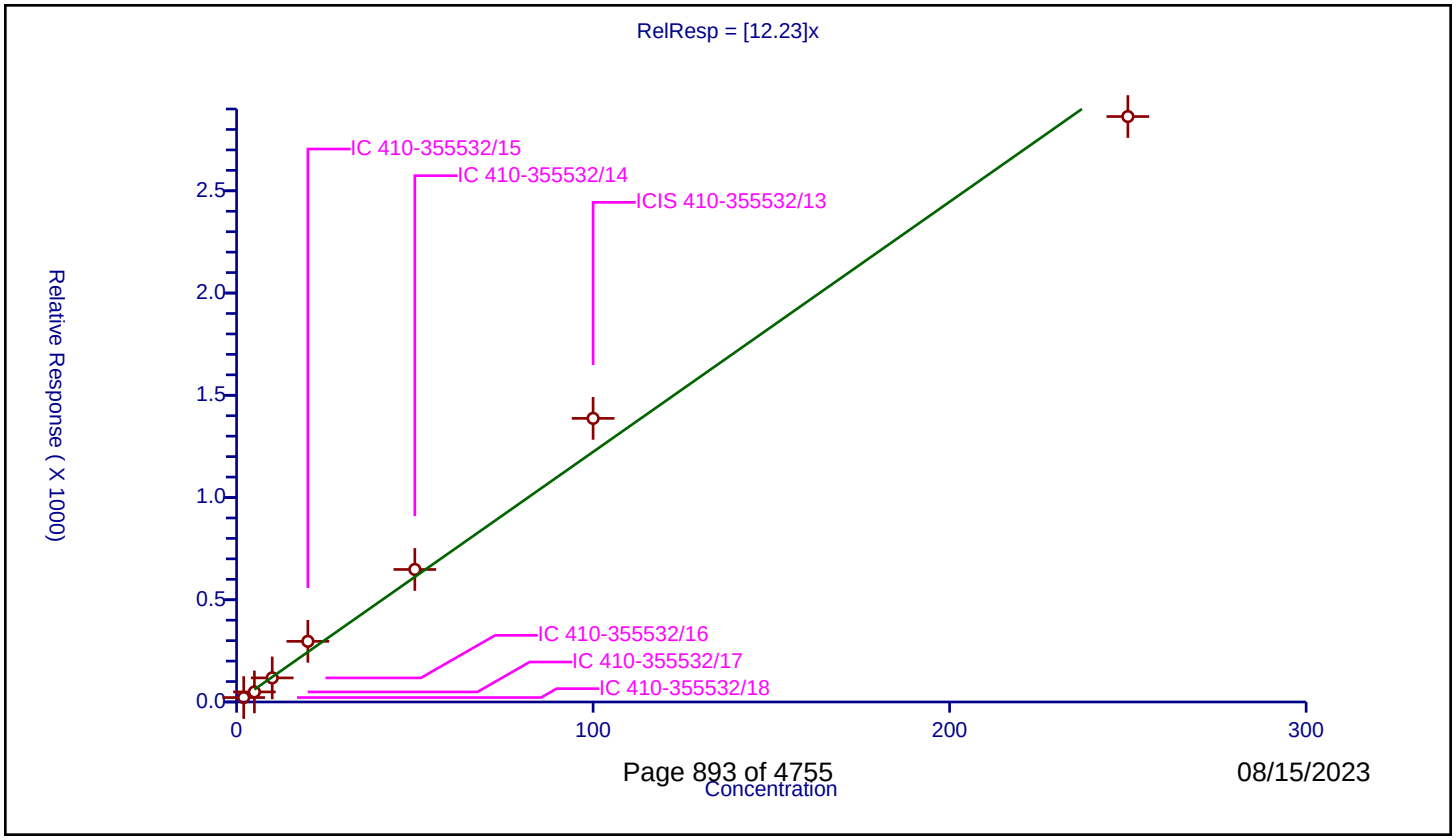
Curve Coefficients

Intercept:	0
Slope:	12.23

Error Coefficients

Standard Error:	3640000
Relative Standard Error:	14.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.976

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	2.0	21.731978	50.0	126445.0	10.865989	Y
2	IC 410-355532/17	5.0	49.241003	50.0	153492.0	9.848201	Y
3	IC 410-355532/16	10.0	117.85677	50.0	134008.0	11.785677	Y
4	IC 410-355532/15	20.0	296.574872	50.0	97646.0	14.828744	Y
5	IC 410-355532/14	50.0	648.136495	50.0	125221.0	12.96273	Y
6	ICIS 410-355532/13	100.0	1387.05645	50.0	120956.0	13.870565	Y
7	IC 410-355532/12	250.0	2863.199104	50.0	141127.0	11.452796	Y



08/15/2023

Calibration / Chlorodibromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

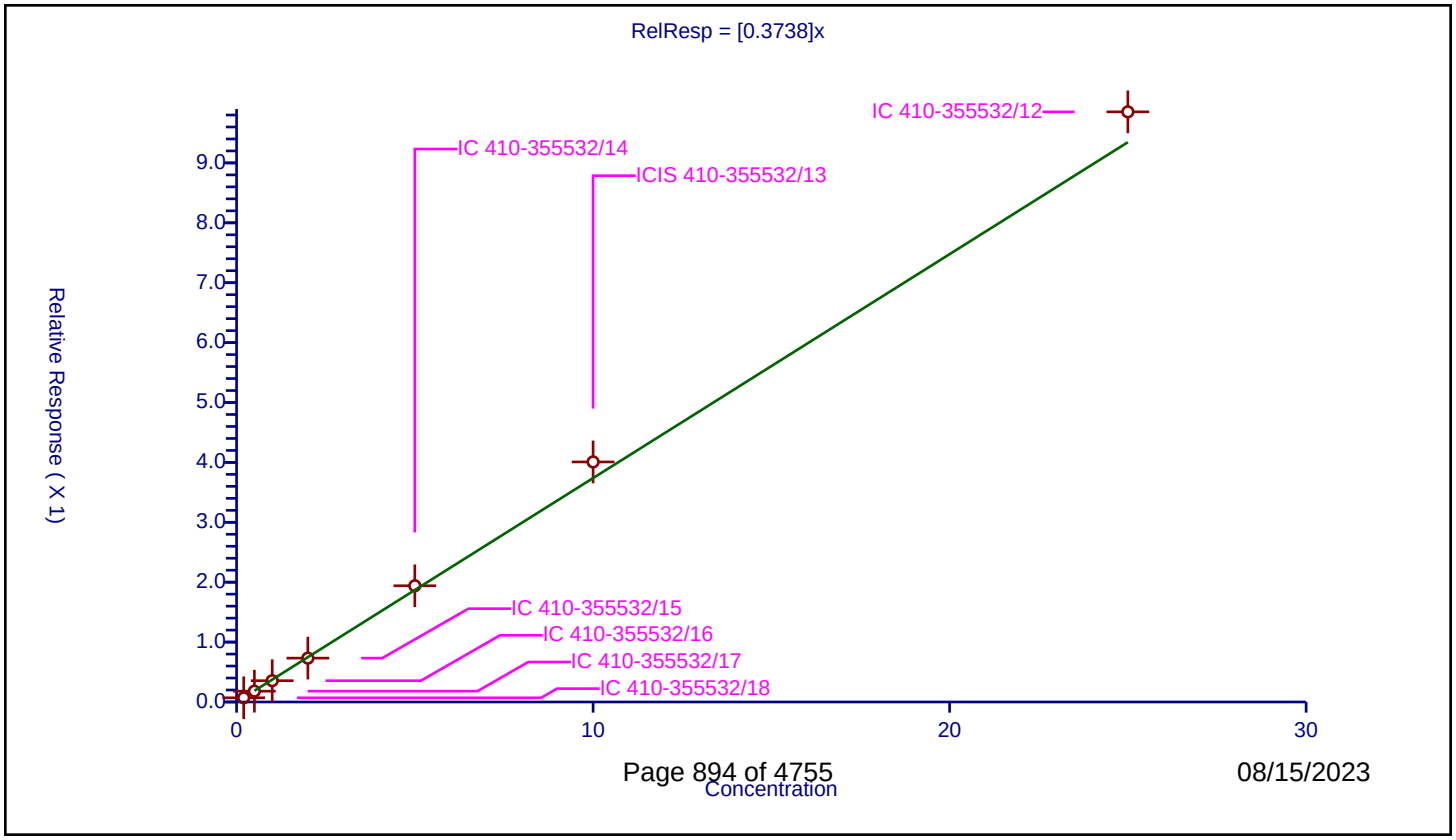
Curve Coefficients

Intercept:	0
Slope:	0.3738

Error Coefficients

Standard Error:	853000
Relative Standard Error:	5.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.070121	10.0	1770499.0	0.350607	Y
2	IC 410-355532/17	0.5	0.180676	10.0	1779098.0	0.361352	Y
3	IC 410-355532/16	1.0	0.355703	10.0	1818962.0	0.355703	Y
4	IC 410-355532/15	2.0	0.732338	10.0	1844928.0	0.366169	Y
5	IC 410-355532/14	5.0	1.94041	10.0	1885942.0	0.388082	Y
6	ICIS 410-355532/13	10.0	4.00808	10.0	1886594.0	0.400808	Y
7	IC 410-355532/12	25.0	9.852727	10.0	1936058.0	0.394109	Y



Calibration / Ethylene Dibromide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

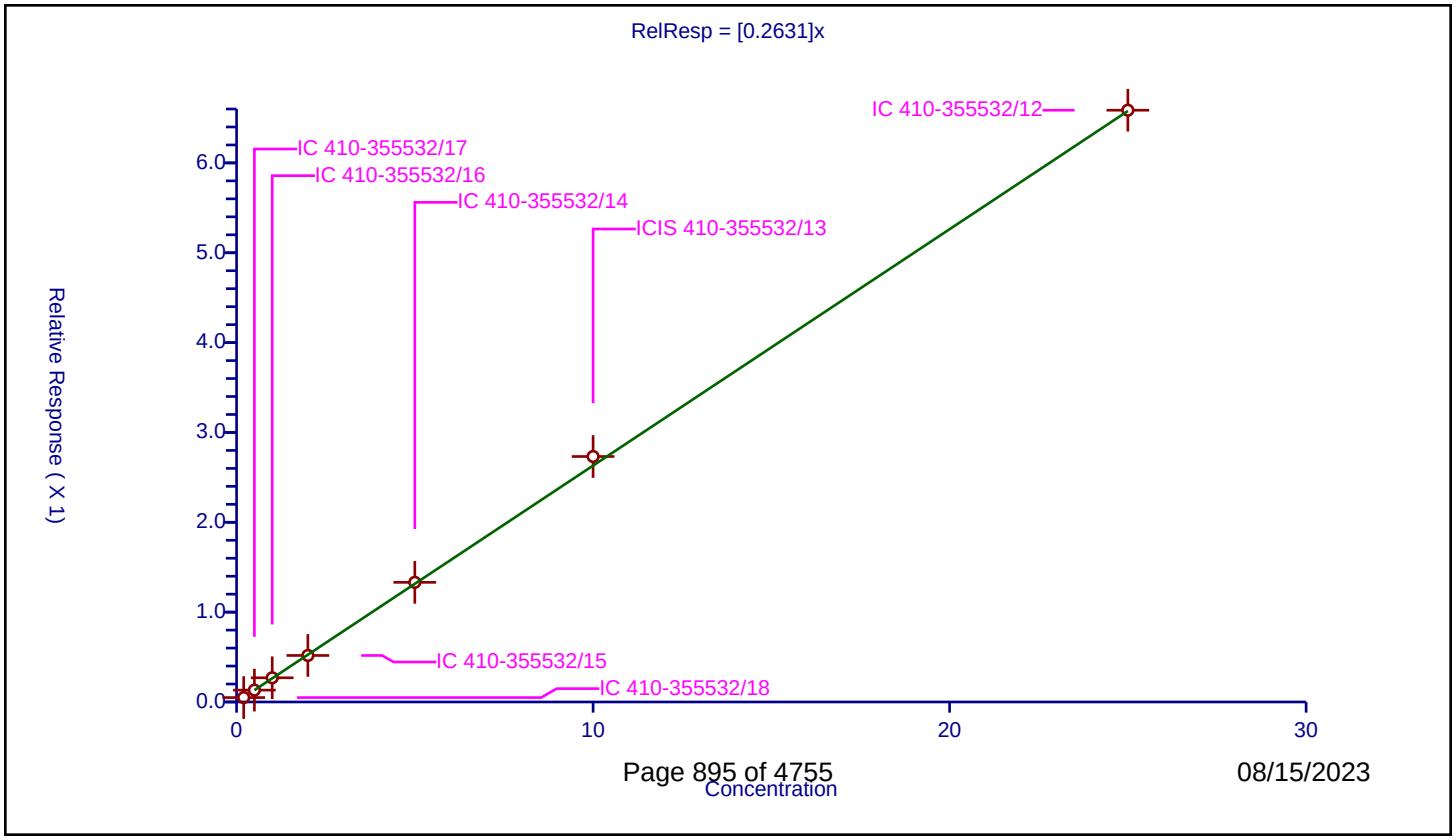
Curve Coefficients

Intercept:	0
Slope:	0.2631

Error Coefficients

Standard Error:	573000
Relative Standard Error:	3.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.049212	10.0	1770499.0	0.246061	Y
2	IC 410-355532/17	0.5	0.13223	10.0	1779098.0	0.26446	Y
3	IC 410-355532/16	1.0	0.269357	10.0	1818962.0	0.269357	Y
4	IC 410-355532/15	2.0	0.517711	10.0	1844928.0	0.258856	Y
5	IC 410-355532/14	5.0	1.331738	10.0	1885942.0	0.266348	Y
6	ICIS 410-355532/13	10.0	2.732326	10.0	1886594.0	0.273233	Y
7	IC 410-355532/12	25.0	6.586703	10.0	1936058.0	0.263468	Y



Calibration / 1-Chlorohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

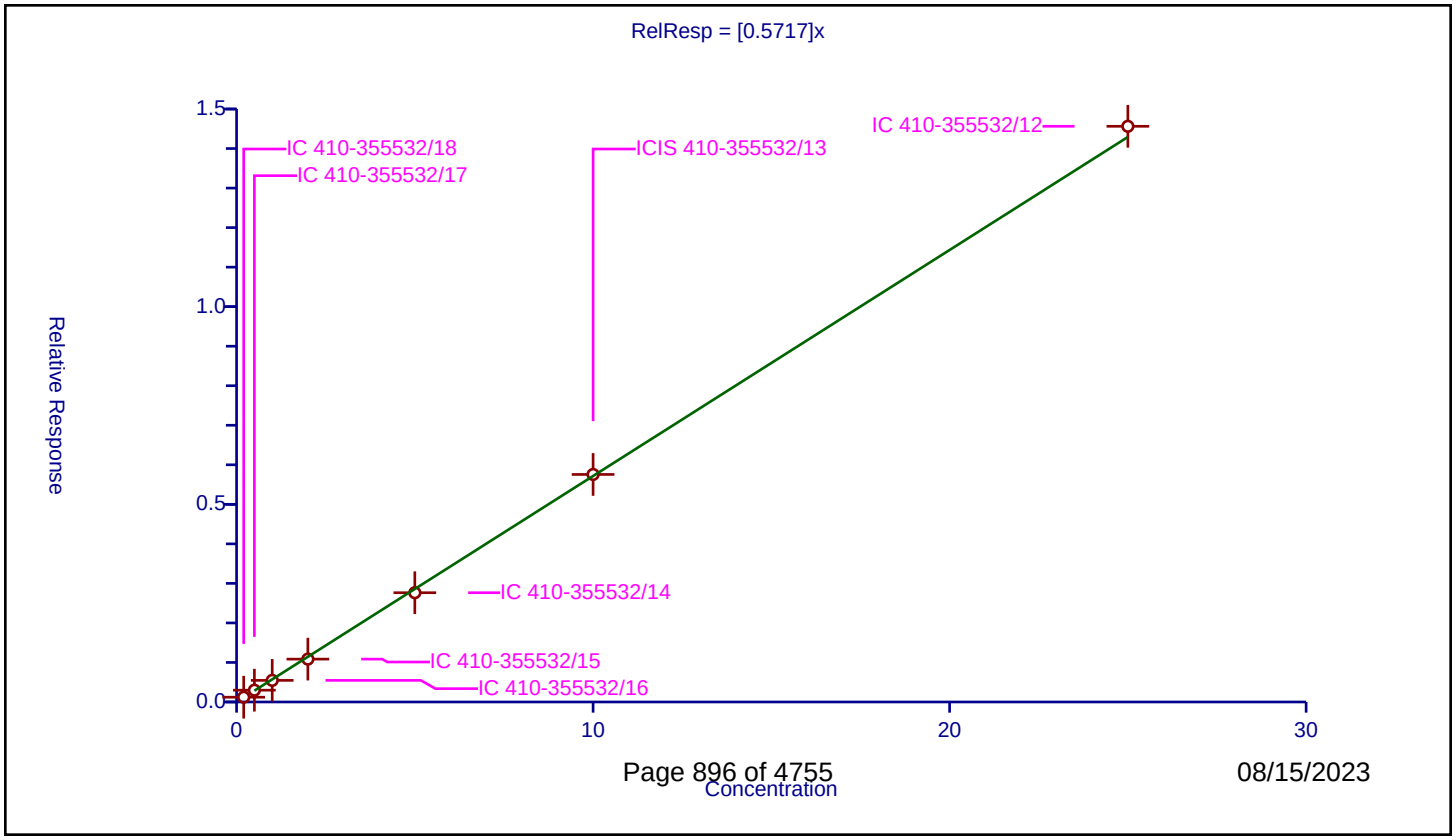
Curve Coefficients

Intercept:	0
Slope:	0.5717

Error Coefficients

Standard Error:	1260000
Relative Standard Error:	4.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.120988	10.0	1770499.0	0.604942	Y
2	IC 410-355532/17	0.5	0.298505	10.0	1779098.0	0.59701	Y
3	IC 410-355532/16	1.0	0.546619	10.0	1818962.0	0.546619	Y
4	IC 410-355532/15	2.0	1.084552	10.0	1844928.0	0.542276	Y
5	IC 410-355532/14	5.0	2.764343	10.0	1885942.0	0.552869	Y
6	ICIS 410-355532/13	10.0	5.755822	10.0	1886594.0	0.575582	Y
7	IC 410-355532/12	25.0	14.562859	10.0	1936058.0	0.582514	Y



Calibration / Chlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

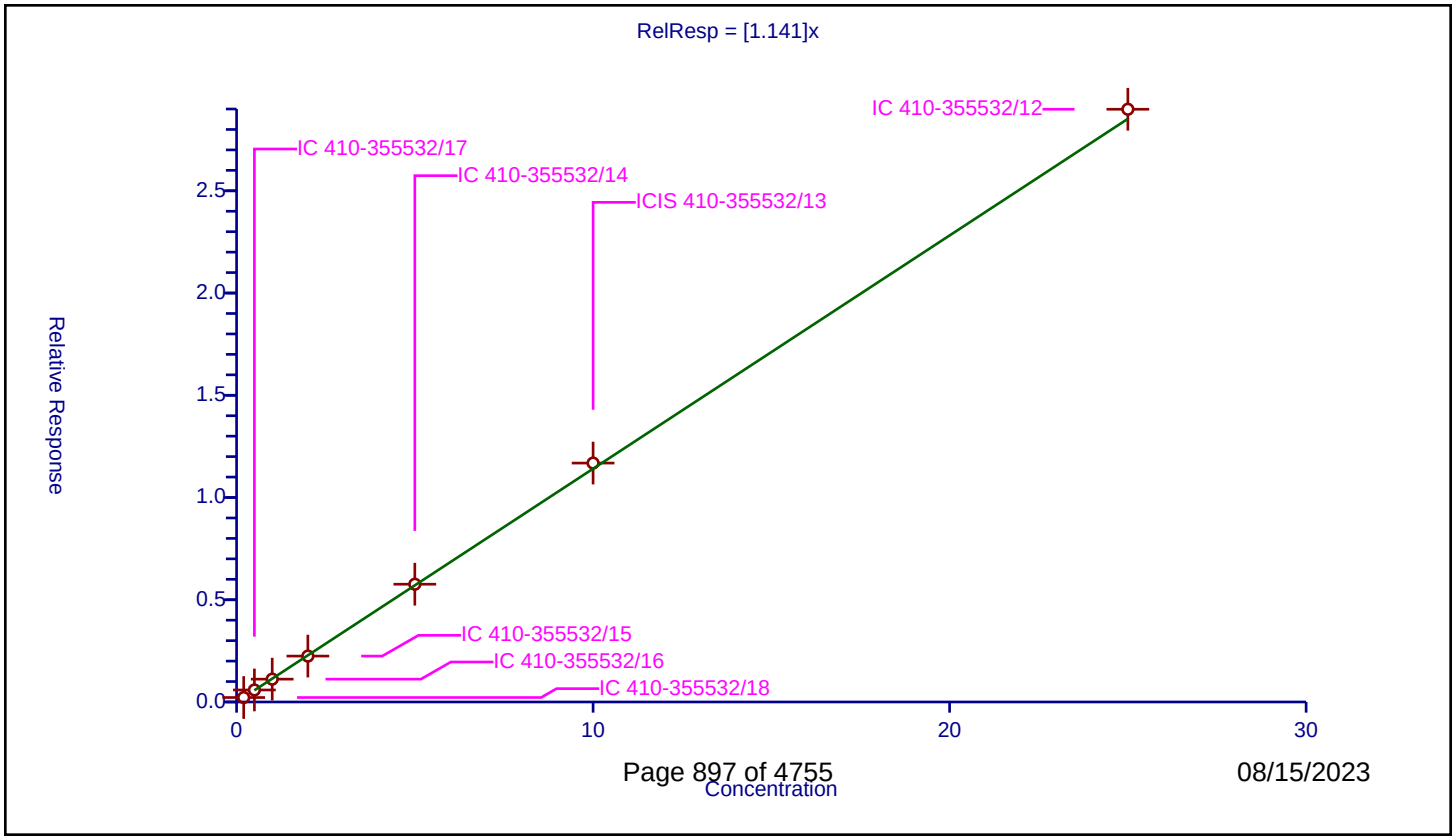
Curve Coefficients

Intercept:	0
Slope:	1.141

Error Coefficients

Standard Error:	2510000
Relative Standard Error:	2.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.218306	10.0	1770499.0	1.091528	Y
2	IC 410-355532/17	0.5	0.587511	10.0	1779098.0	1.175022	Y
3	IC 410-355532/16	1.0	1.116466	10.0	1818962.0	1.116466	Y
4	IC 410-355532/15	2.0	2.244841	10.0	1844928.0	1.12242	Y
5	IC 410-355532/14	5.0	5.760357	10.0	1885942.0	1.152071	Y
6	ICIS 410-355532/13	10.0	11.684533	10.0	1886594.0	1.168453	Y
7	IC 410-355532/12	25.0	28.988	10.0	1936058.0	1.15952	Y



Calibration / 1,1,1,2-Tetrachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

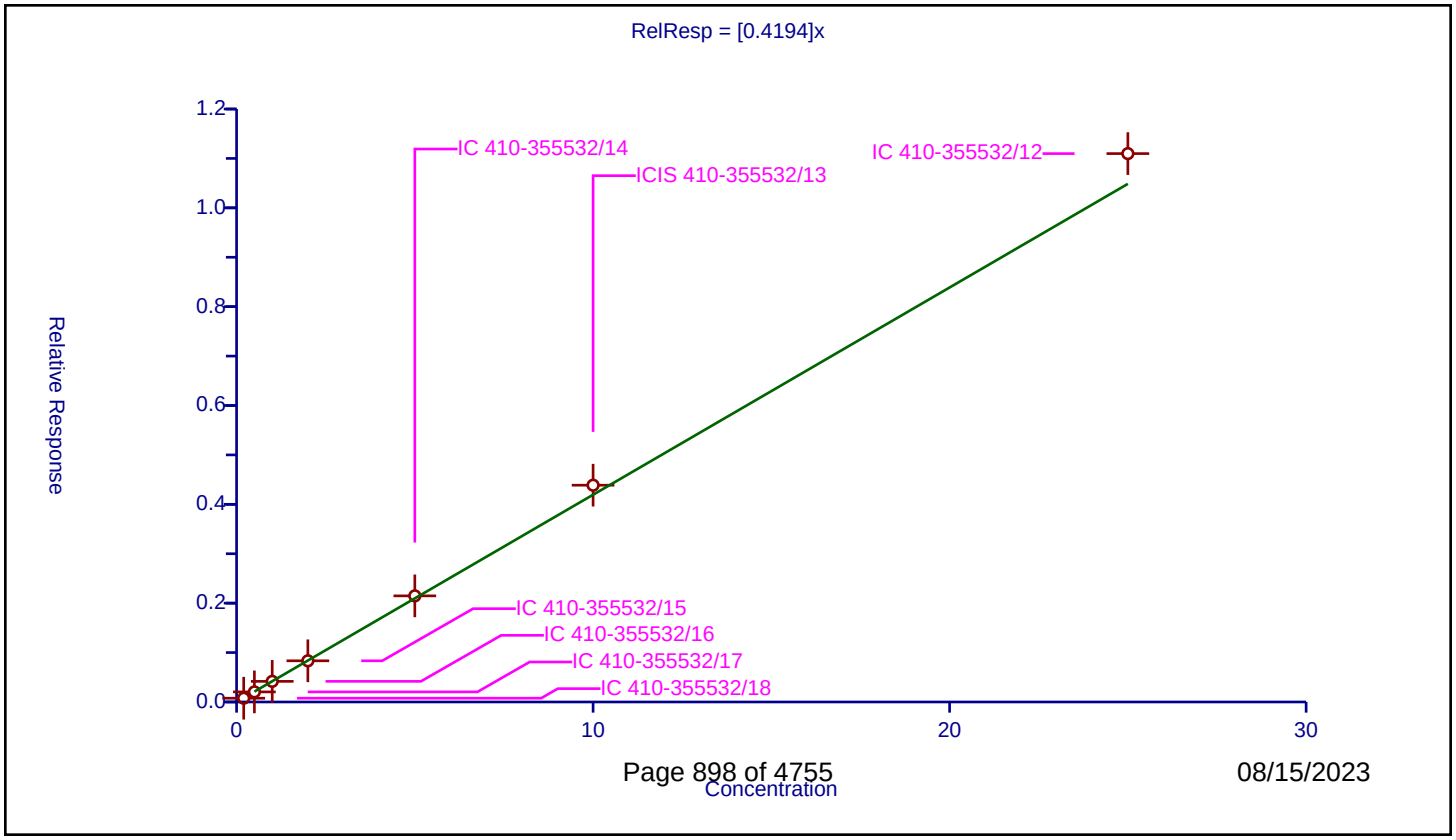
Curve Coefficients

Intercept:	0
Slope:	0.4194

Error Coefficients

Standard Error:	957000
Relative Standard Error:	5.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.076182	10.0	1770499.0	0.38091	Y
2	IC 410-355532/17	0.5	0.204474	10.0	1779098.0	0.408949	Y
3	IC 410-355532/16	1.0	0.417172	10.0	1818962.0	0.417172	Y
4	IC 410-355532/15	2.0	0.833344	10.0	1844928.0	0.416672	Y
5	IC 410-355532/14	5.0	2.147802	10.0	1885942.0	0.42956	Y
6	ICIS 410-355532/13	10.0	4.387054	10.0	1886594.0	0.438705	Y
7	IC 410-355532/12	25.0	11.097622	10.0	1936058.0	0.443905	Y



Calibration / Ethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

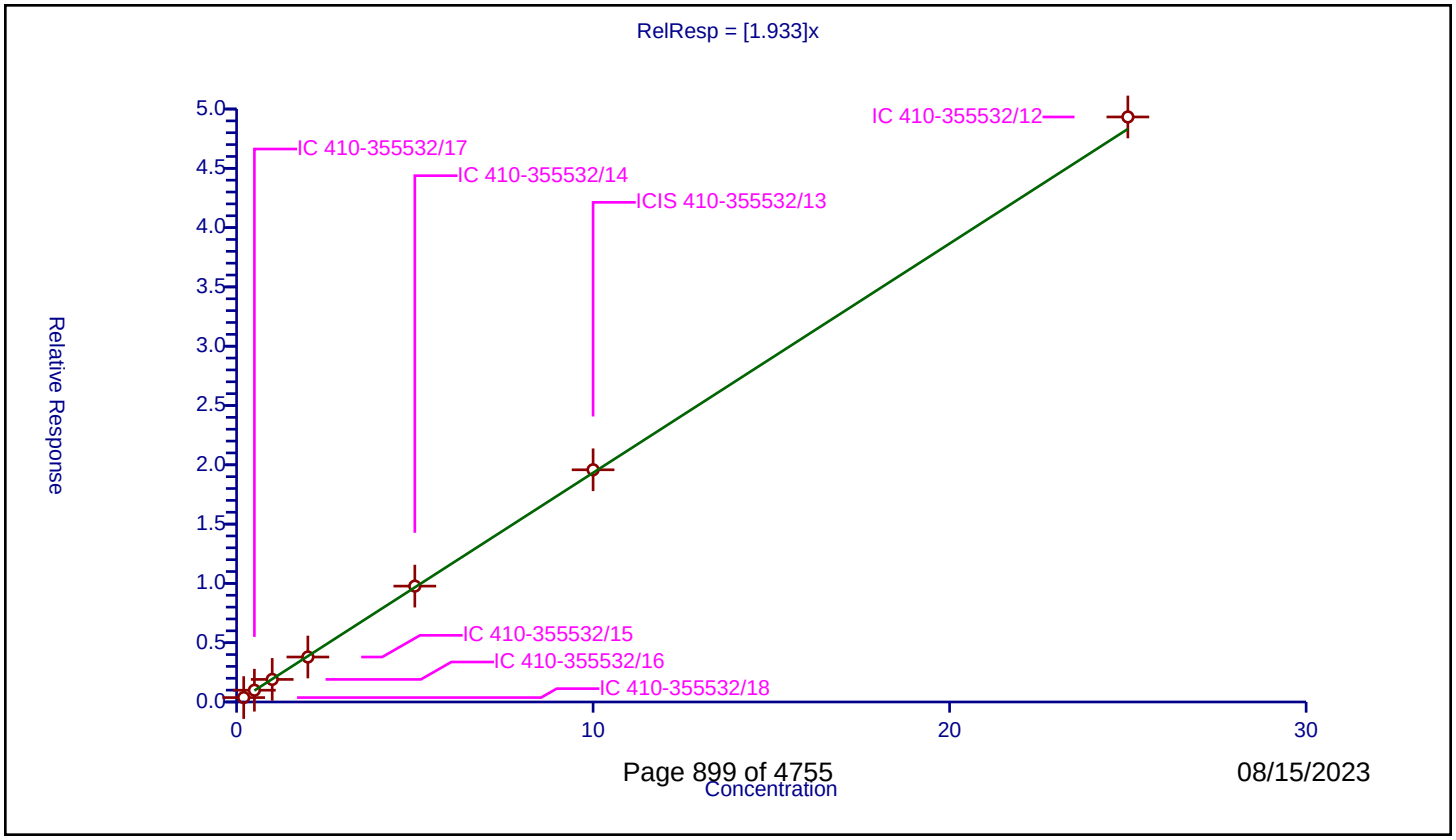
Curve Coefficients

Intercept:	0
Slope:	1.933

Error Coefficients

Standard Error:	4260000
Relative Standard Error:	2.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.371641	10.0	1770499.0	1.858205	Y
2	IC 410-355532/17	0.5	0.992733	10.0	1779098.0	1.985467	Y
3	IC 410-355532/16	1.0	1.903723	10.0	1818962.0	1.903723	Y
4	IC 410-355532/15	2.0	3.79224	10.0	1844928.0	1.89612	Y
5	IC 410-355532/14	5.0	9.770534	10.0	1885942.0	1.954107	Y
6	ICIS 410-355532/13	10.0	19.580307	10.0	1886594.0	1.958031	Y
7	IC 410-355532/12	25.0	49.329462	10.0	1936058.0	1.973178	Y



Calibration / m-Xylene & p-Xylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

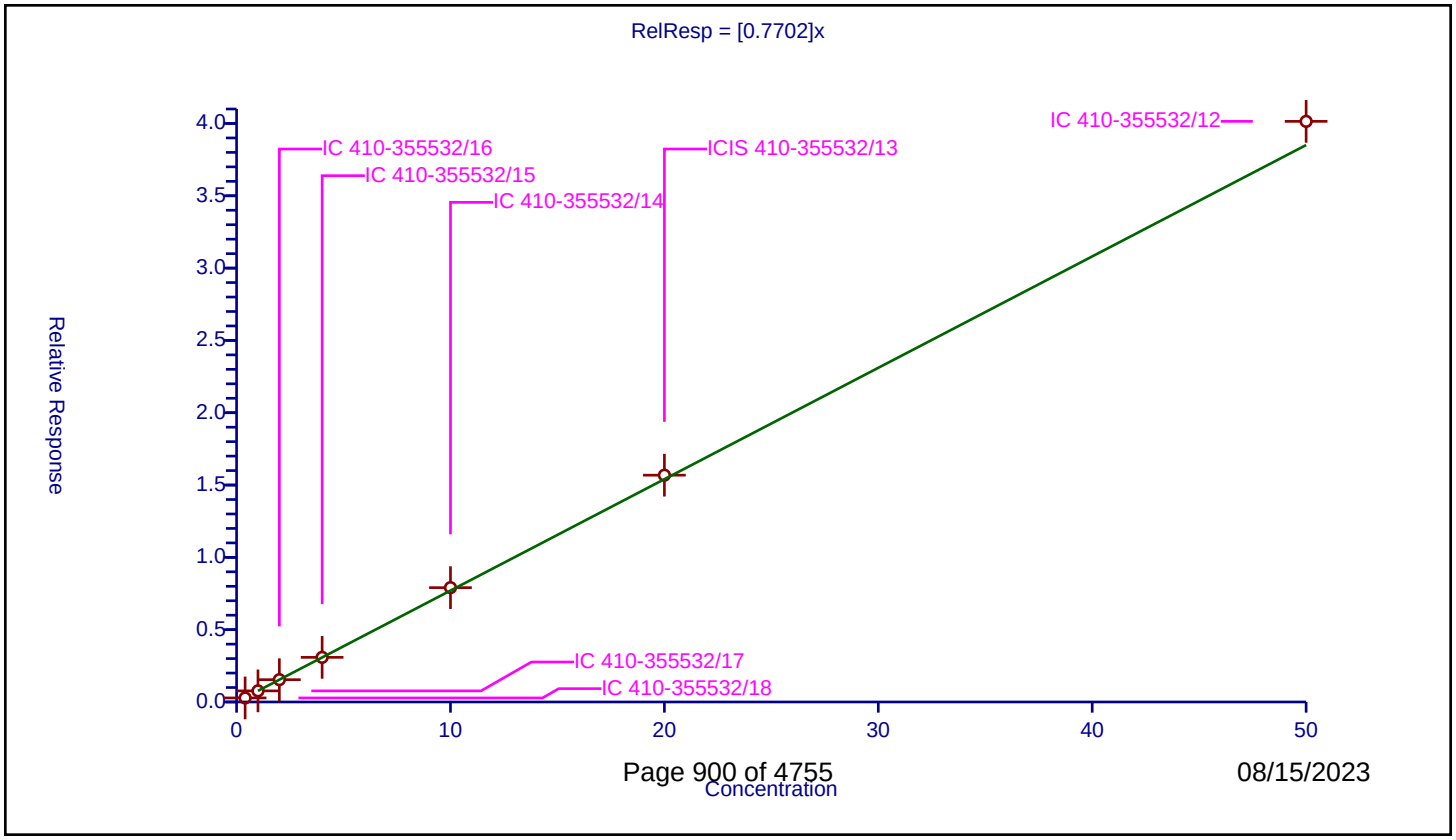
Curve Coefficients

Intercept:	0
Slope:	0.7702

Error Coefficients

Standard Error:	3460000
Relative Standard Error:	4.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.4	0.281158	10.0	1770499.0	0.702895	Y
2	IC 410-355532/17	1.0	0.767816	10.0	1779098.0	0.767816	Y
3	IC 410-355532/16	2.0	1.542506	10.0	1818962.0	0.771253	Y
4	IC 410-355532/15	4.0	3.086337	10.0	1844928.0	0.771584	Y
5	IC 410-355532/14	10.0	7.905604	10.0	1885942.0	0.79056	Y
6	ICIS 410-355532/13	20.0	15.682786	10.0	1886594.0	0.784139	Y
7	IC 410-355532/12	50.0	40.145683	10.0	1936058.0	0.802914	Y



Calibration / o-Xylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

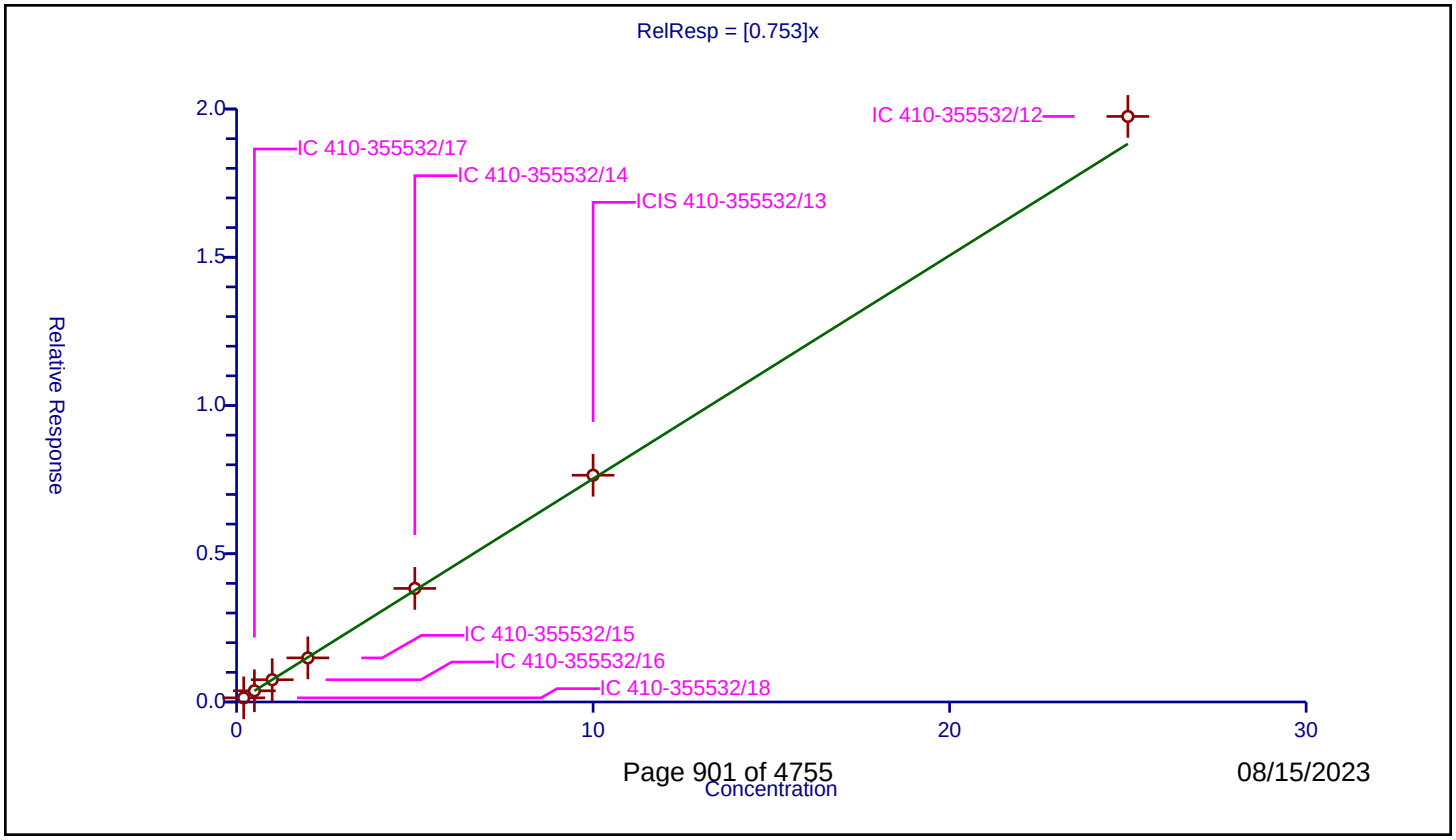
Curve Coefficients

Intercept:	0
Slope:	0.753

Error Coefficients

Standard Error:	1700000
Relative Standard Error:	3.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.139729	10.0	1770499.0	0.698645	Y
2	IC 410-355532/17	0.5	0.378501	10.0	1779098.0	0.757002	Y
3	IC 410-355532/16	1.0	0.750928	10.0	1818962.0	0.750928	Y
4	IC 410-355532/15	2.0	1.487153	10.0	1844928.0	0.743576	Y
5	IC 410-355532/14	5.0	3.830075	10.0	1885942.0	0.766015	Y
6	ICIS 410-355532/13	10.0	7.648328	10.0	1886594.0	0.764833	Y
7	IC 410-355532/12	25.0	19.749687	10.0	1936058.0	0.789987	Y



Calibration / Styrene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

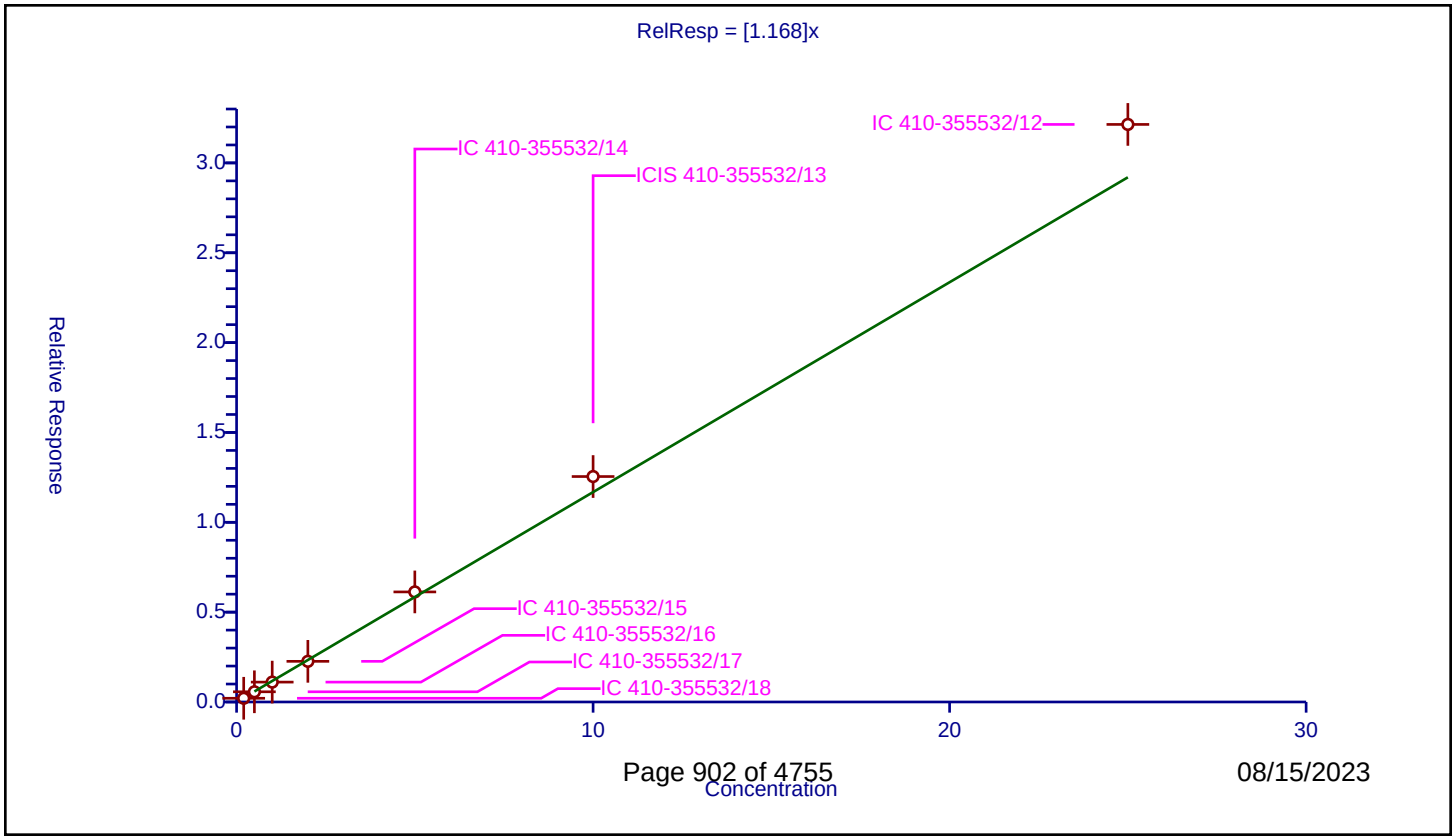
Curve Coefficients

Intercept:	0
Slope:	1.168

Error Coefficients

Standard Error:	2770000
Relative Standard Error:	7.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.207156	10.0	1770499.0	1.035781	Y
2	IC 410-355532/17	0.5	0.568316	10.0	1779098.0	1.136632	Y
3	IC 410-355532/16	1.0	1.106719	10.0	1818962.0	1.106719	Y
4	IC 410-355532/15	2.0	2.262045	10.0	1844928.0	1.131022	Y
5	IC 410-355532/14	5.0	6.125666	10.0	1885942.0	1.225133	Y
6	ICIS 410-355532/13	10.0	12.547225	10.0	1886594.0	1.254723	Y
7	IC 410-355532/12	25.0	32.142069	10.0	1936058.0	1.285683	Y



Calibration / Bromoform

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

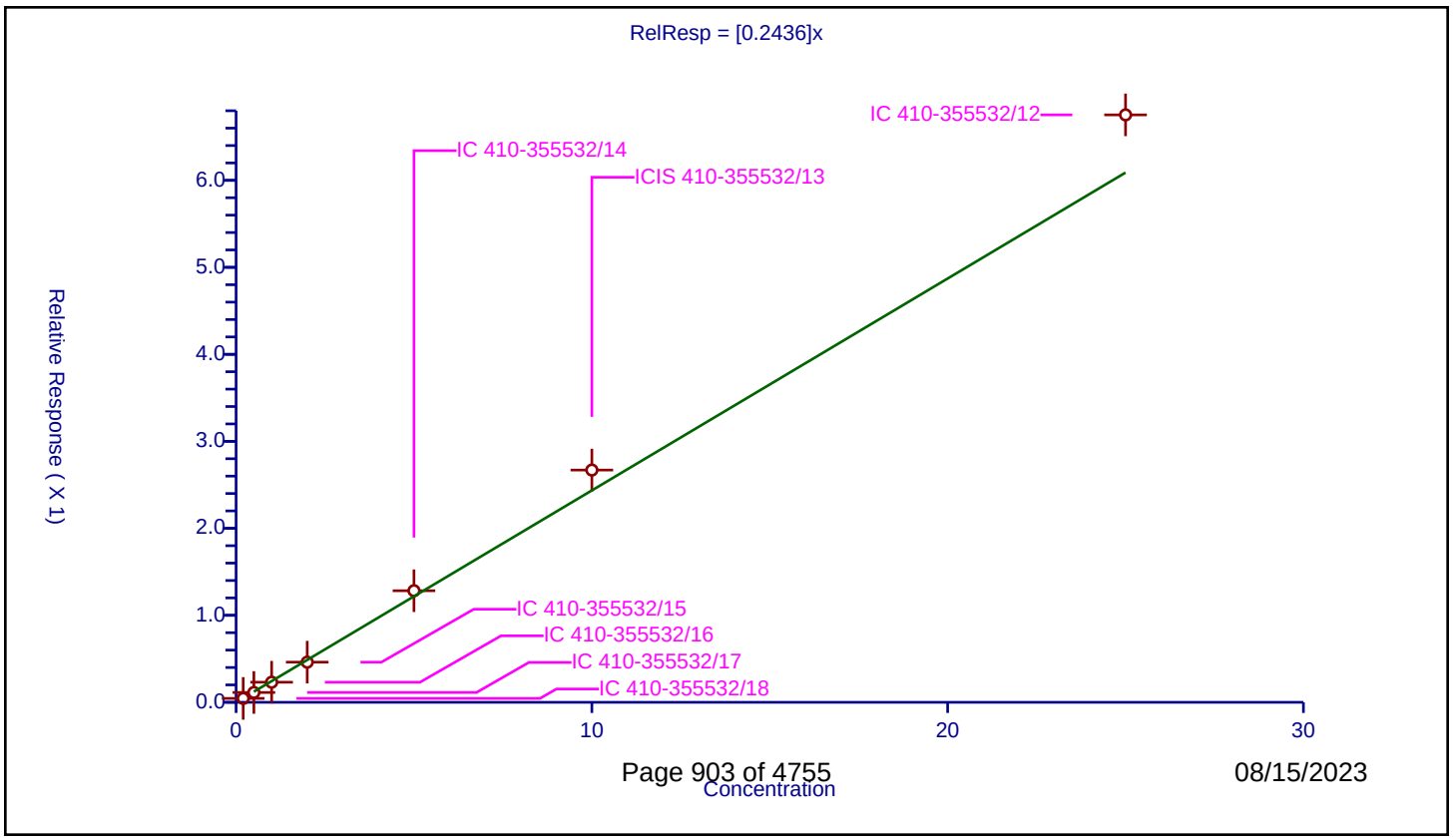
Curve Coefficients

Intercept:	0
Slope:	0.2436

Error Coefficients

Standard Error:	582000
Relative Standard Error:	8.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.044773	10.0	1770499.0	0.223863	Y
2	IC 410-355532/17	0.5	0.1129	10.0	1779098.0	0.2258	Y
3	IC 410-355532/16	1.0	0.230895	10.0	1818962.0	0.230895	Y
4	IC 410-355532/15	2.0	0.46159	10.0	1844928.0	0.230795	Y
5	IC 410-355532/14	5.0	1.282563	10.0	1885942.0	0.256513	Y
6	ICIS 410-355532/13	10.0	2.669679	10.0	1886594.0	0.266968	Y
7	IC 410-355532/12	25.0	6.752489	10.0	1936058.0	0.2701	Y



Calibration / Isopropylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

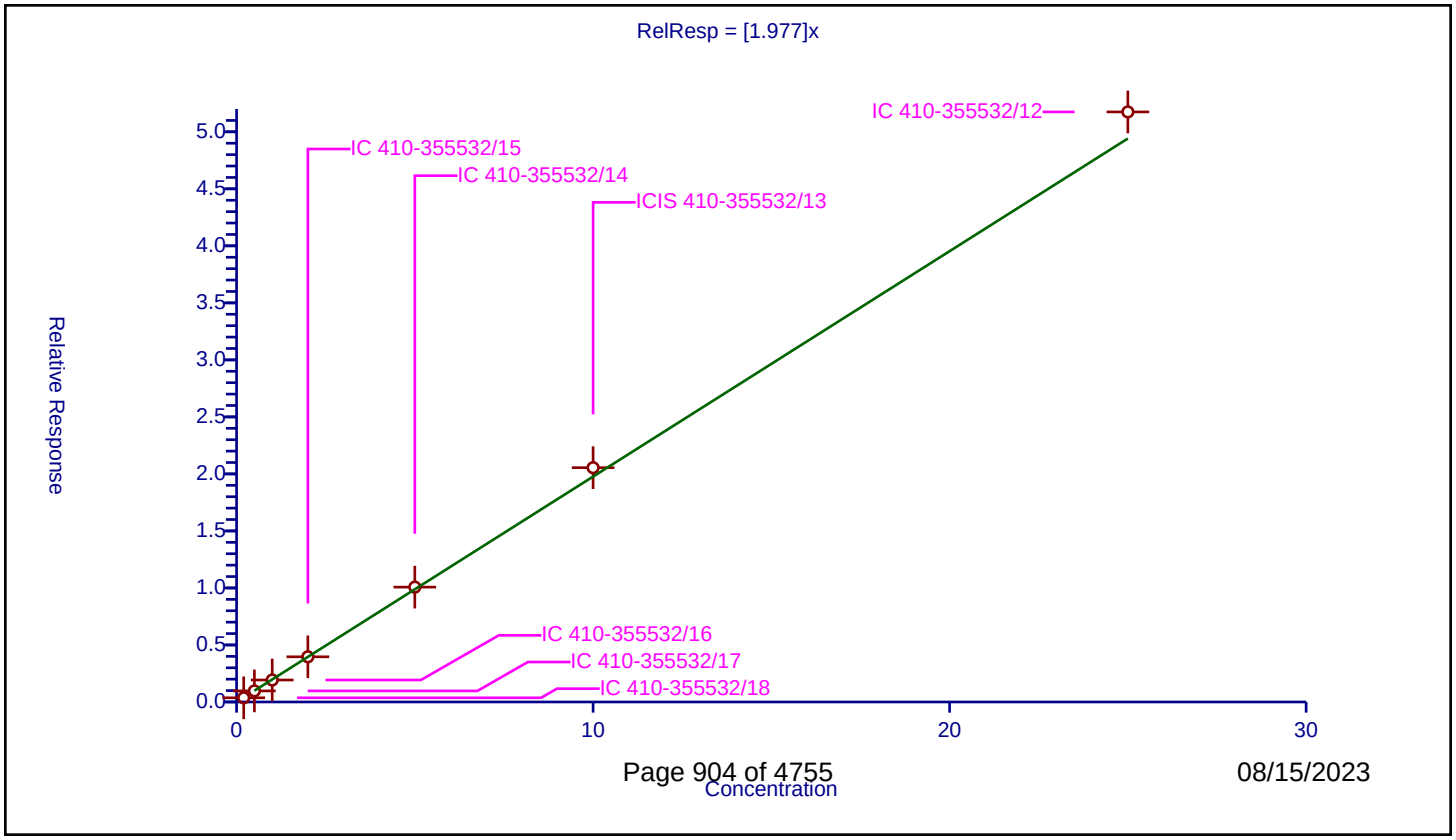
Curve Coefficients

Intercept:	0
Slope:	1.977

Error Coefficients

Standard Error:	4470000
Relative Standard Error:	4.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.368484	10.0	1770499.0	1.842418	Y
2	IC 410-355532/17	0.5	0.972628	10.0	1779098.0	1.945255	Y
3	IC 410-355532/16	1.0	1.92794	10.0	1818962.0	1.92794	Y
4	IC 410-355532/15	2.0	3.962805	10.0	1844928.0	1.981403	Y
5	IC 410-355532/14	5.0	10.072171	10.0	1885942.0	2.014434	Y
6	ICIS 410-355532/13	10.0	20.547929	10.0	1886594.0	2.054793	Y
7	IC 410-355532/12	25.0	51.744003	10.0	1936058.0	2.06976	Y



Calibration / 4-Bromofluorobenzene (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

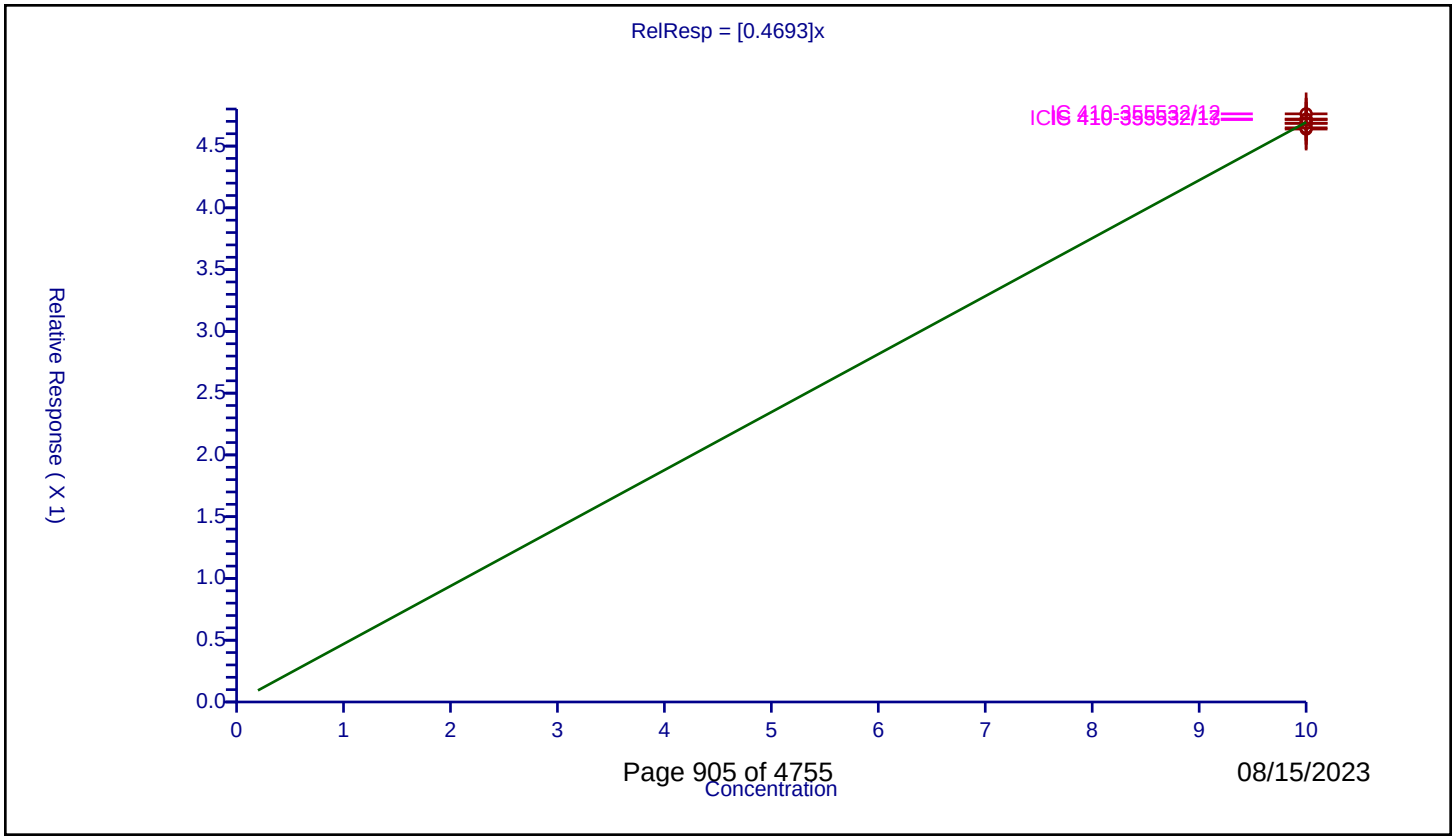
Curve Coefficients

Intercept:	0
Slope:	0.4693

Error Coefficients

Standard Error:	936000
Relative Standard Error:	0.9
Correlation Coefficient:	0.00000000000000000000
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/12	10.0	4.760999	10.0	1936058.0	0.4761	Y
2	ICIS 410-355532/13	10.0	4.714295	10.0	1886594.0	0.471429	Y
3	IC 410-355532/14	10.0	4.647943	10.0	1885942.0	0.464794	Y
4	IC 410-355532/15	10.0	4.637574	10.0	1844928.0	0.463757	Y
5	IC 410-355532/16	10.0	4.685337	10.0	1818962.0	0.468534	Y
6	IC 410-355532/17	10.0	4.718779	10.0	1779098.0	0.471878	Y
7	IC 410-355532/18	10.0	4.684261	10.0	1770499.0	0.468426	Y



Calibration / 1,1,2,2-Tetrachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

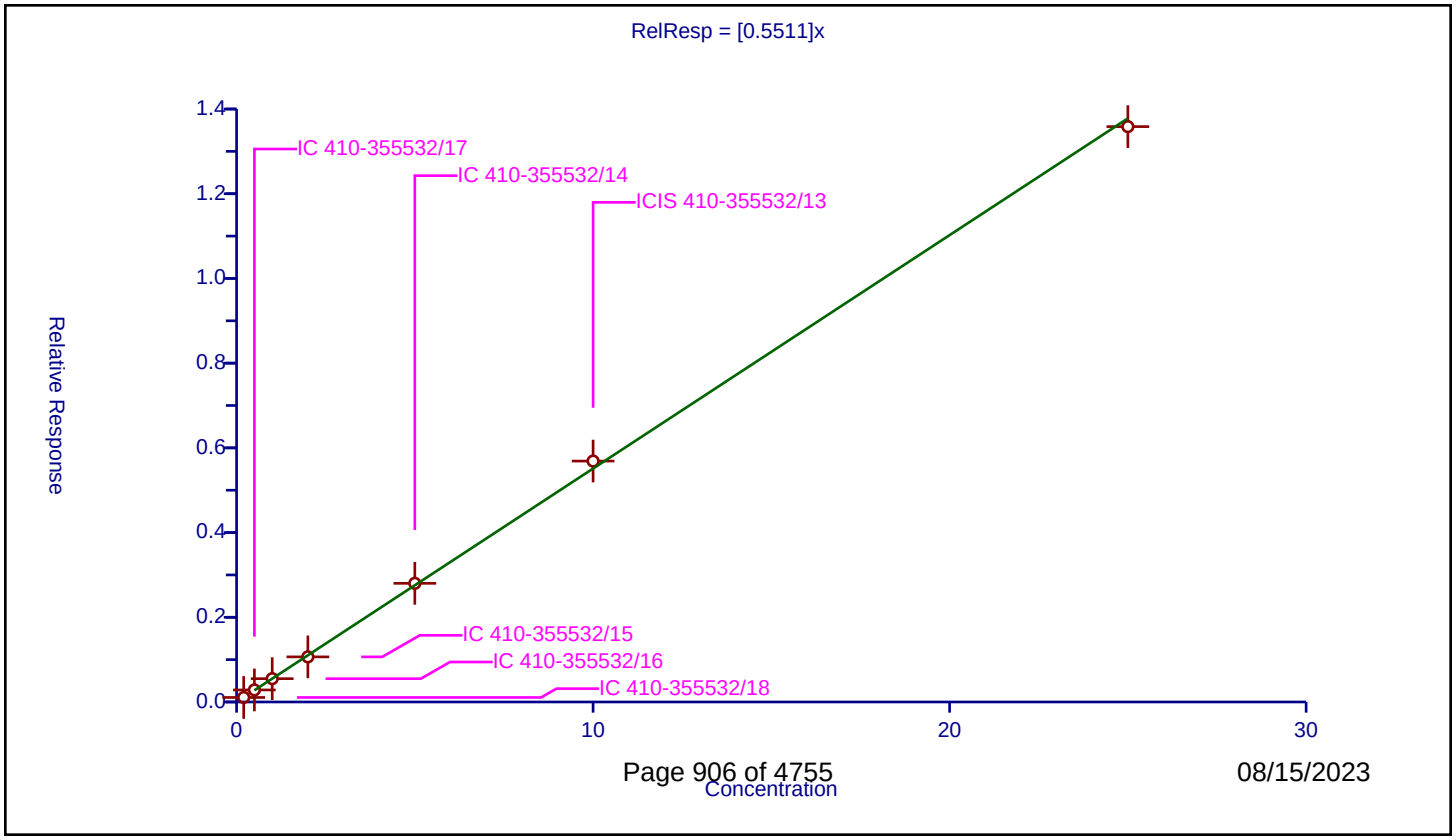
Curve Coefficients

Intercept:	0
Slope:	0.5511

Error Coefficients

Standard Error:	753000
Relative Standard Error:	2.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.106742	10.0	1096665.0	0.533709	Y
2	IC 410-355532/17	0.5	0.284154	10.0	1099896.0	0.568308	Y
3	IC 410-355532/16	1.0	0.550783	10.0	1128630.0	0.550783	Y
4	IC 410-355532/15	2.0	1.065272	10.0	1126529.0	0.532636	Y
5	IC 410-355532/14	5.0	2.801317	10.0	1162953.0	0.560263	Y
6	ICIS 410-355532/13	10.0	5.688045	10.0	1169233.0	0.568805	Y
7	IC 410-355532/12	25.0	13.584741	10.0	1240232.0	0.54339	Y



Calibration / Bromobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

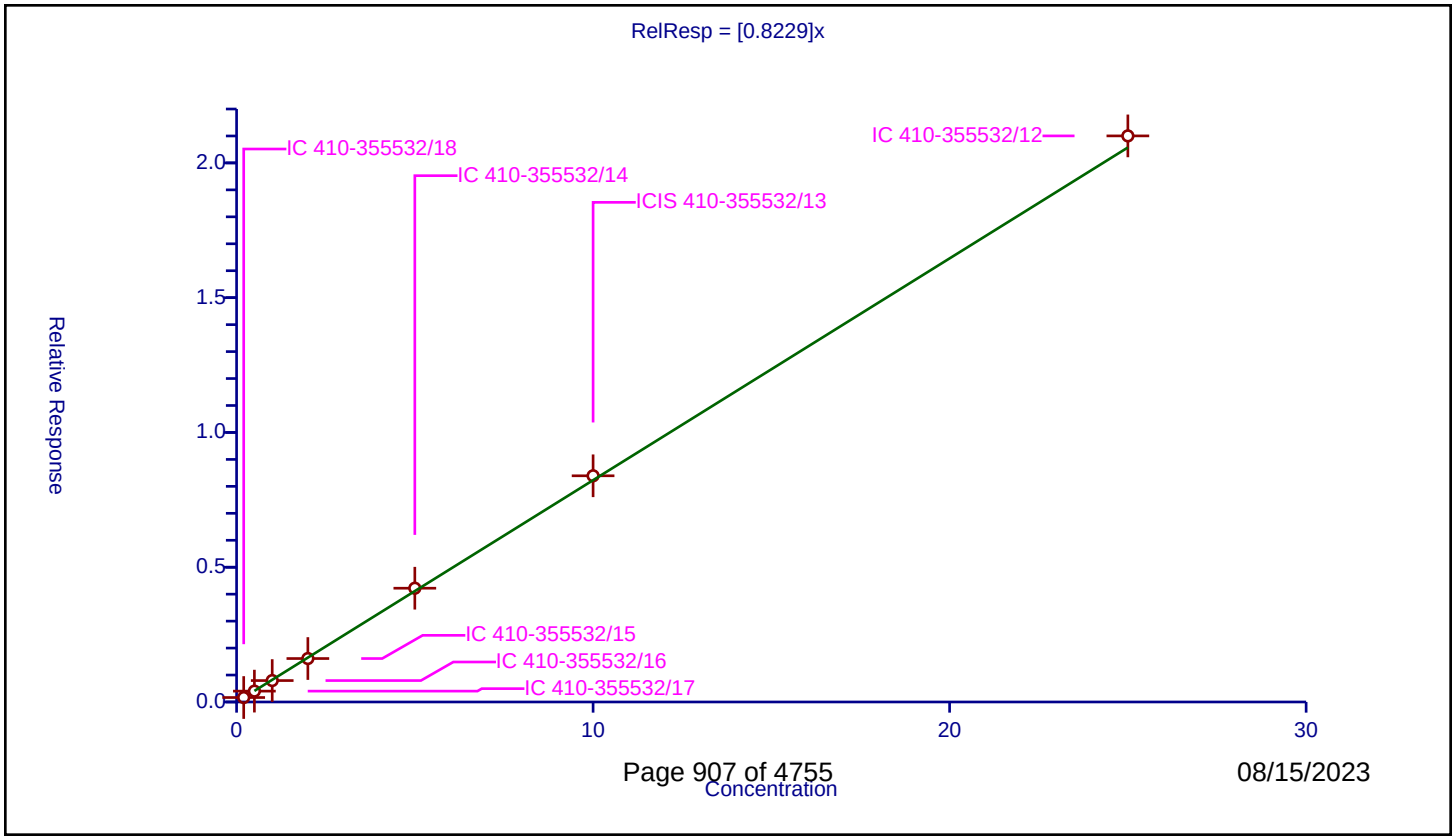
Curve Coefficients

Intercept:	0
Slope:	0.8229

Error Coefficients

Standard Error:	1160000
Relative Standard Error:	2.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.165721	10.0	1096665.0	0.828603	Y
2	IC 410-355532/17	0.5	0.403274	10.0	1099896.0	0.806549	Y
3	IC 410-355532/16	1.0	0.795097	10.0	1128630.0	0.795097	Y
4	IC 410-355532/15	2.0	1.612635	10.0	1126529.0	0.806317	Y
5	IC 410-355532/14	5.0	4.221349	10.0	1162953.0	0.84427	Y
6	ICIS 410-355532/13	10.0	8.392168	10.0	1169233.0	0.839217	Y
7	IC 410-355532/12	25.0	21.002829	10.0	1240232.0	0.840113	Y



08/15/2023

Calibration / trans-1,4-Dichloro-2-butene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

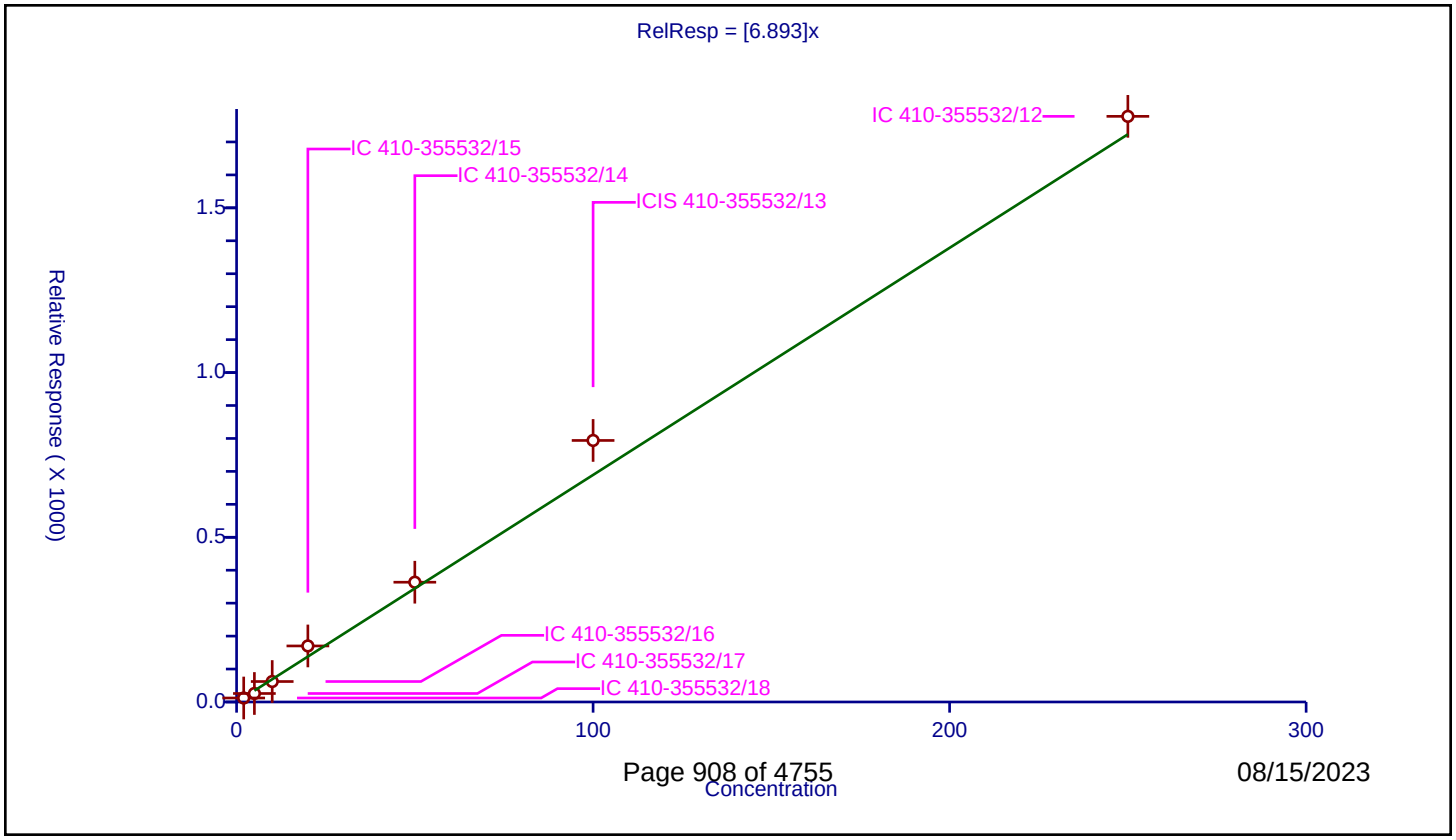
Curve Coefficients

Intercept:	0
Slope:	6.893

Error Coefficients

Standard Error:	2230000
Relative Standard Error:	16.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.967

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	2.0	12.106449	50.0	126445.0	6.053225	Y
2	IC 410-355532/17	5.0	25.770073	50.0	153492.0	5.154015	Y
3	IC 410-355532/16	10.0	62.135096	50.0	134008.0	6.21351	Y
4	IC 410-355532/15	20.0	170.116543	50.0	97646.0	8.505827	Y
5	IC 410-355532/14	50.0	363.587976	50.0	125221.0	7.27176	Y
6	ICIS 410-355532/13	100.0	793.935811	50.0	120956.0	7.939358	Y
7	IC 410-355532/12	250.0	1777.712273	50.0	141127.0	7.110849	Y



Calibration / 1,2,3-Trichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

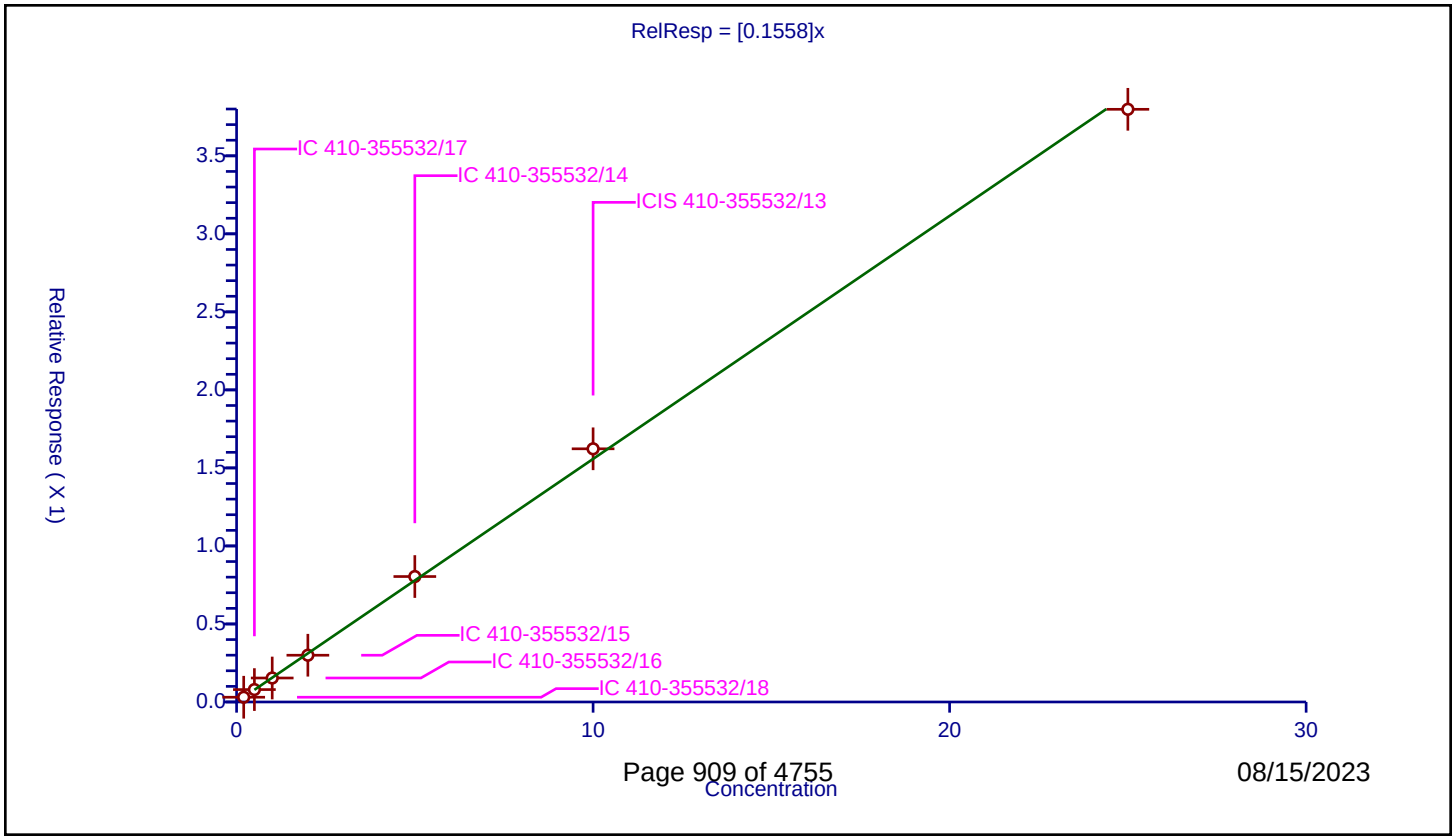
Curve Coefficients

Intercept:	0
Slope:	0.1558

Error Coefficients

Standard Error:	211000
Relative Standard Error:	3.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.030556	10.0	1096665.0	0.152781	Y
2	IC 410-355532/17	0.5	0.079471	10.0	1099896.0	0.158942	Y
3	IC 410-355532/16	1.0	0.153753	10.0	1128630.0	0.153753	Y
4	IC 410-355532/15	2.0	0.299717	10.0	1126529.0	0.149859	Y
5	IC 410-355532/14	5.0	0.803988	10.0	1162953.0	0.160798	Y
6	ICIS 410-355532/13	10.0	1.622431	10.0	1169233.0	0.162243	Y
7	IC 410-355532/12	25.0	3.798185	10.0	1240232.0	0.151927	Y



Calibration / N-Propylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

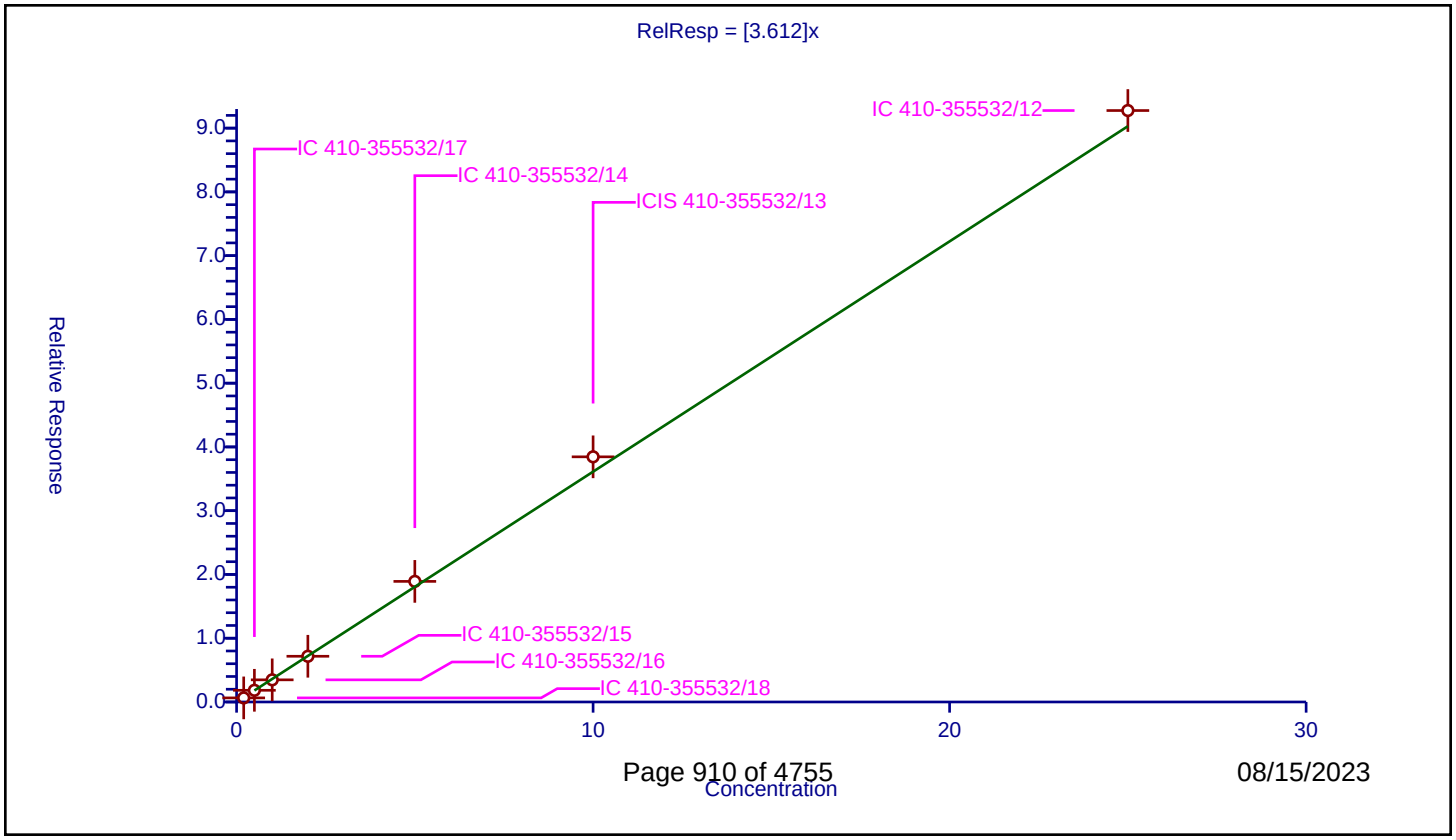
Curve Coefficients

Intercept:	0
Slope:	3.612

Error Coefficients

Standard Error:	5140000
Relative Standard Error:	5.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.643916	10.0	1096665.0	3.219579	Y
2	IC 410-355532/17	0.5	1.832564	10.0	1099896.0	3.665128	Y
3	IC 410-355532/16	1.0	3.475187	10.0	1128630.0	3.475187	Y
4	IC 410-355532/15	2.0	7.170344	10.0	1126529.0	3.585172	Y
5	IC 410-355532/14	5.0	18.915494	10.0	1162953.0	3.783099	Y
6	ICIS 410-355532/13	10.0	38.45125	10.0	1169233.0	3.845125	Y
7	IC 410-355532/12	25.0	92.762483	10.0	1240232.0	3.710499	Y



Calibration / 2-Chlorotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

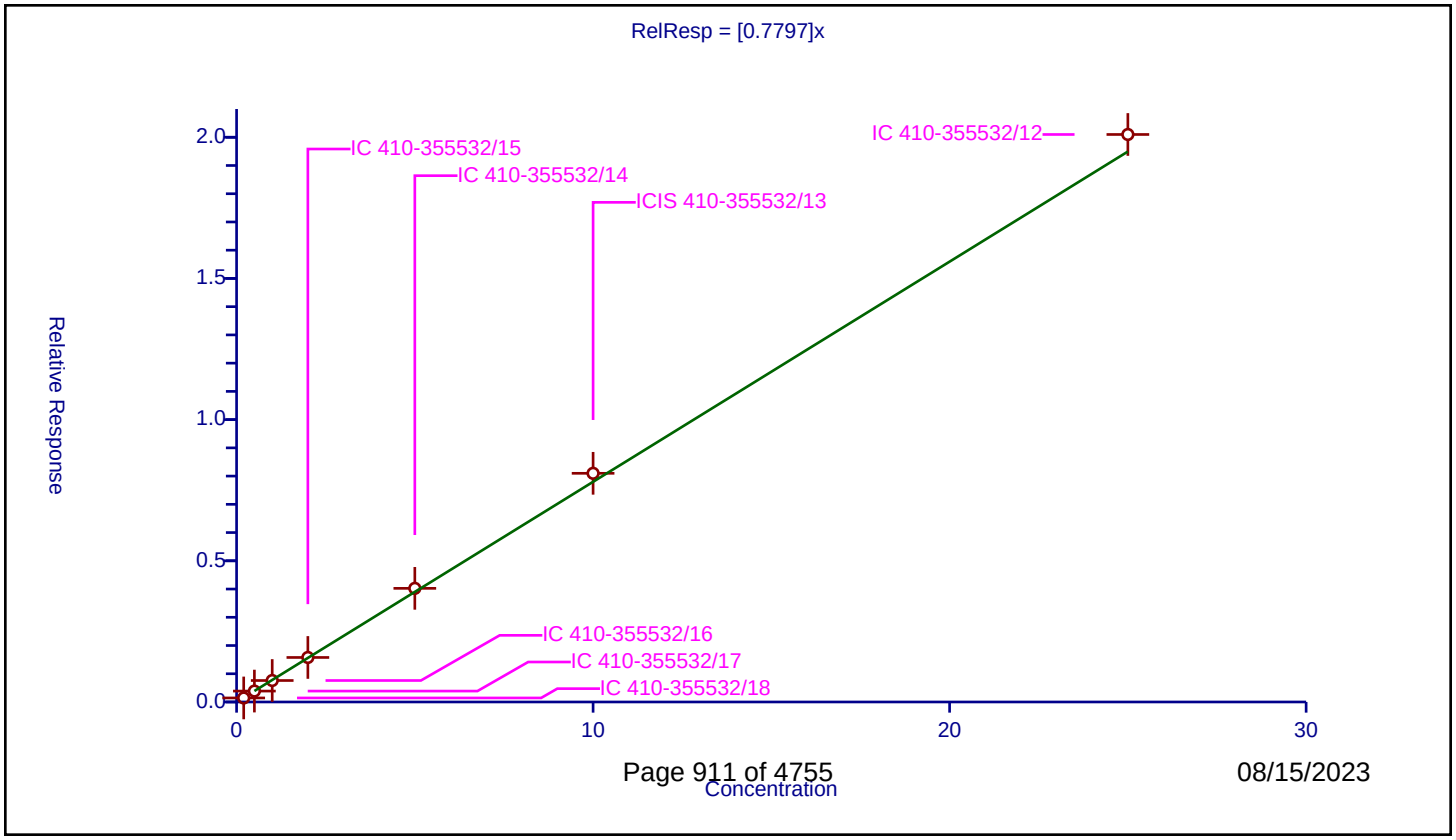
Curve Coefficients

Intercept:	0
Slope:	0.7797

Error Coefficients

Standard Error:	1110000
Relative Standard Error:	4.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.143508	10.0	1096665.0	0.717539	Y
2	IC 410-355532/17	0.5	0.386509	10.0	1099896.0	0.773019	Y
3	IC 410-355532/16	1.0	0.76071	10.0	1128630.0	0.76071	Y
4	IC 410-355532/15	2.0	1.576417	10.0	1126529.0	0.788209	Y
5	IC 410-355532/14	5.0	4.024084	10.0	1162953.0	0.804817	Y
6	ICIS 410-355532/13	10.0	8.098446	10.0	1169233.0	0.809845	Y
7	IC 410-355532/12	25.0	20.097933	10.0	1240232.0	0.803917	Y



Calibration / 1,3,5-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

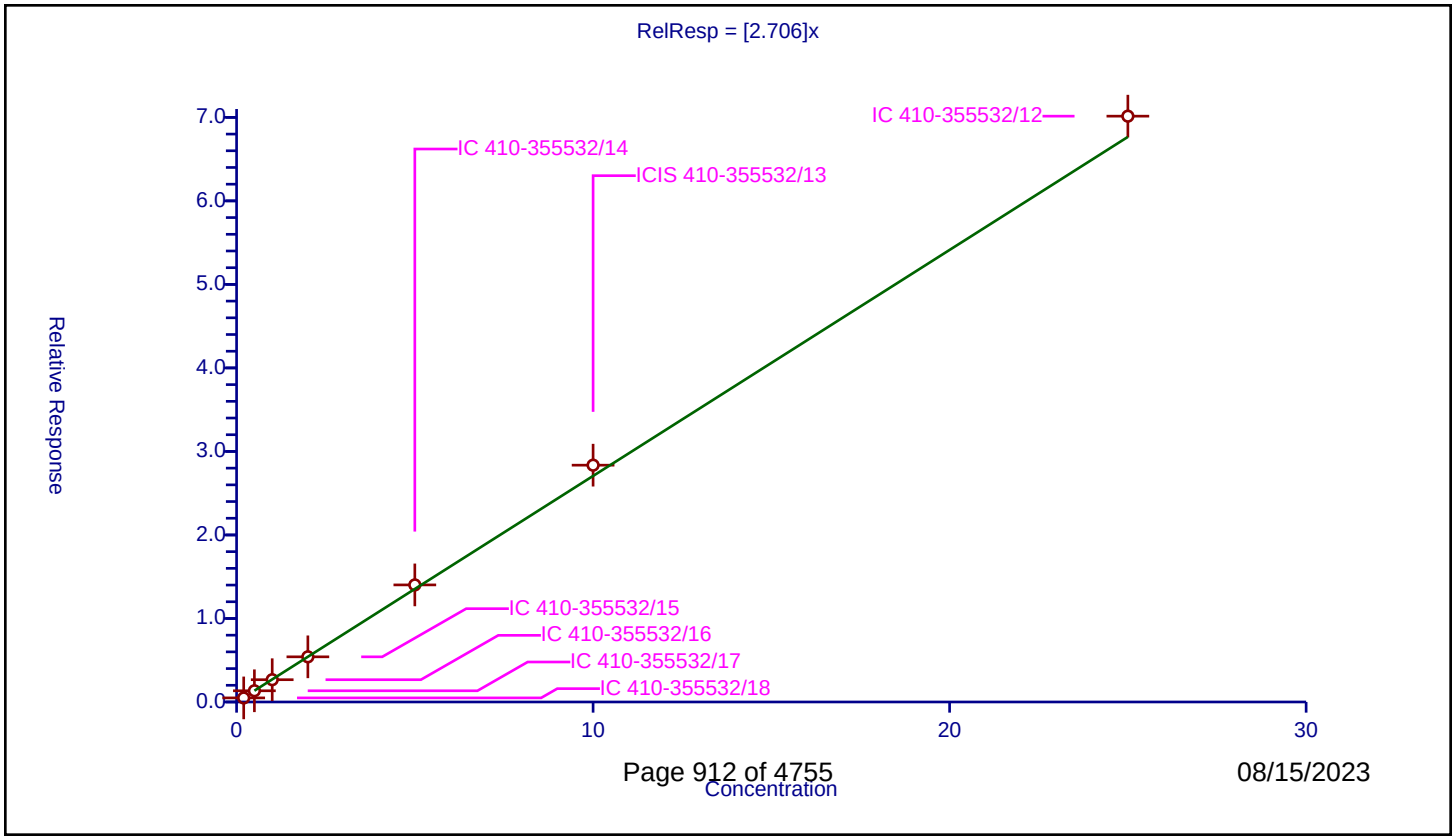
Curve Coefficients

Intercept:	0
Slope:	2.706

Error Coefficients

Standard Error:	3870000
Relative Standard Error:	4.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.488499	10.0	1096665.0	2.442496	Y
2	IC 410-355532/17	0.5	1.342145	10.0	1099896.0	2.68429	Y
3	IC 410-355532/16	1.0	2.669218	10.0	1128630.0	2.669218	Y
4	IC 410-355532/15	2.0	5.407087	10.0	1126529.0	2.703543	Y
5	IC 410-355532/14	5.0	14.017686	10.0	1162953.0	2.803537	Y
6	ICIS 410-355532/13	10.0	28.356059	10.0	1169233.0	2.835606	Y
7	IC 410-355532/12	25.0	70.144513	10.0	1240232.0	2.805781	Y



Calibration / 4-Chlorotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

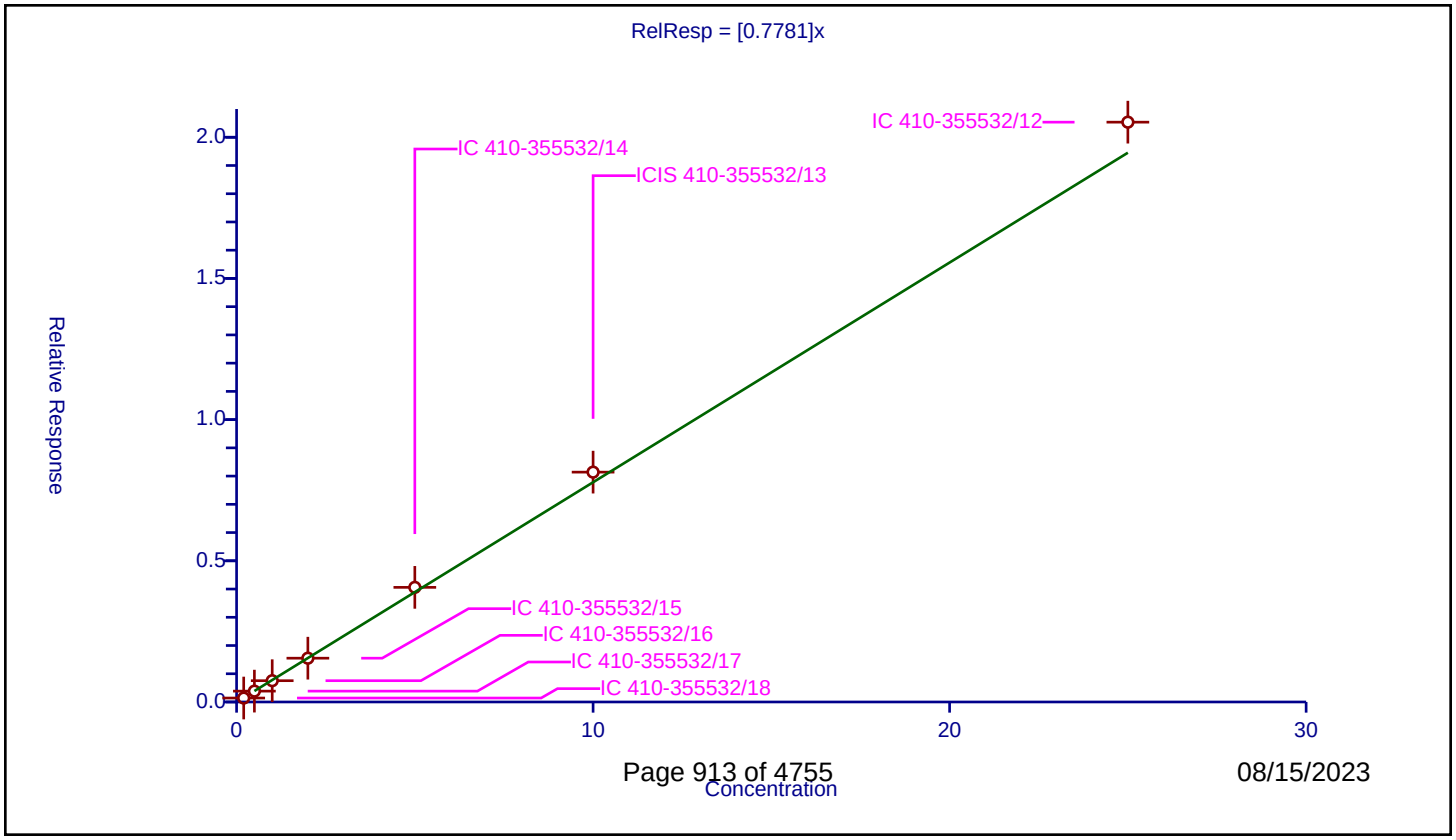
Curve Coefficients

Intercept:	0
Slope:	0.7781

Error Coefficients

Standard Error:	1130000
Relative Standard Error:	5.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.140125	10.0	1096665.0	0.700624	Y
2	IC 410-355532/17	0.5	0.3846	10.0	1099896.0	0.7692	Y
3	IC 410-355532/16	1.0	0.753648	10.0	1128630.0	0.753648	Y
4	IC 410-355532/15	2.0	1.551571	10.0	1126529.0	0.775786	Y
5	IC 410-355532/14	5.0	4.059898	10.0	1162953.0	0.81198	Y
6	ICIS 410-355532/13	10.0	8.140567	10.0	1169233.0	0.814057	Y
7	IC 410-355532/12	25.0	20.53469	10.0	1240232.0	0.821388	Y



Calibration / tert-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

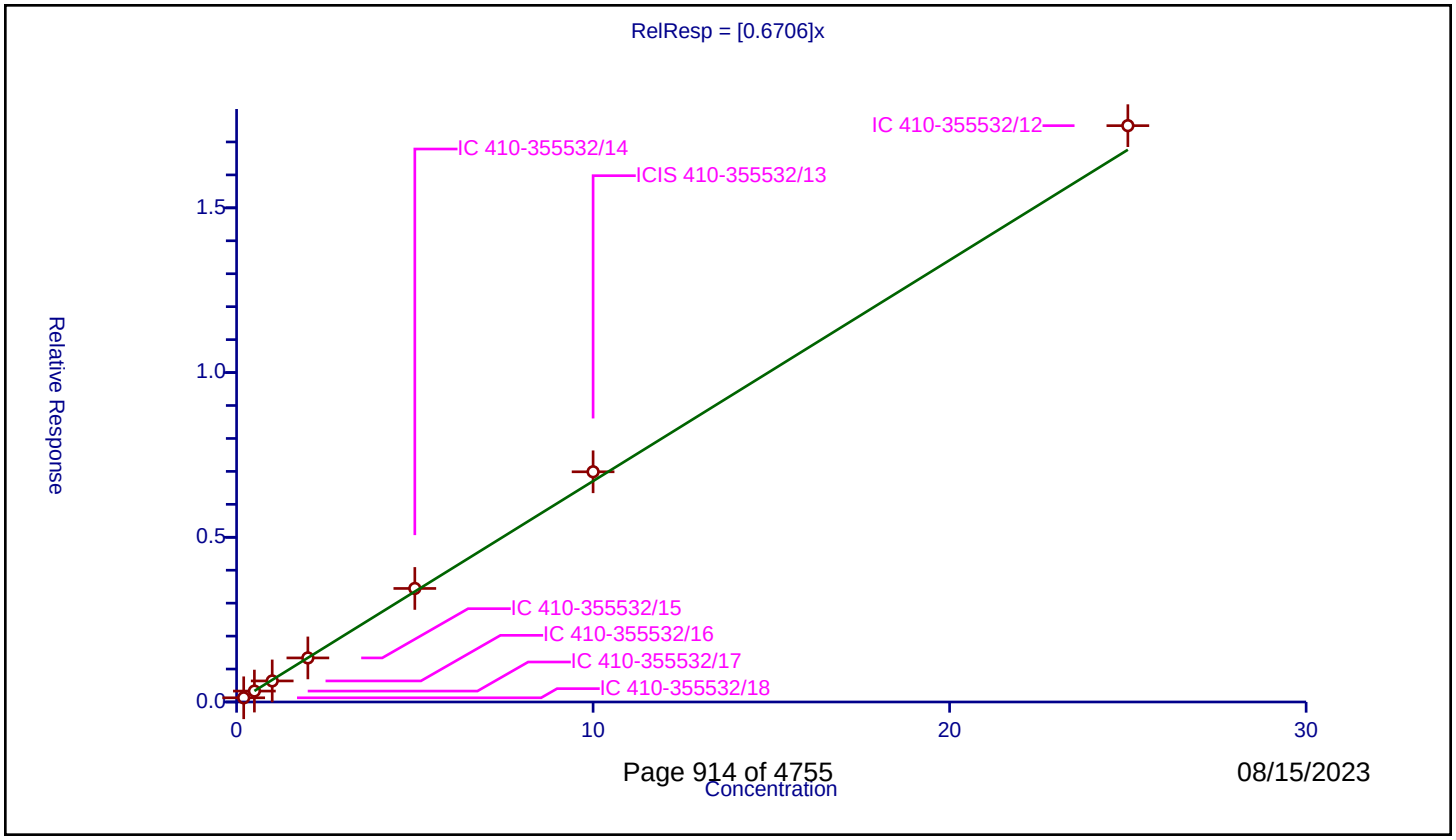
Curve Coefficients

Intercept:	0
Slope:	0.6706

Error Coefficients

Standard Error:	963000
Relative Standard Error:	4.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.127213	10.0	1096665.0	0.636065	Y
2	IC 410-355532/17	0.5	0.331277	10.0	1099896.0	0.662554	Y
3	IC 410-355532/16	1.0	0.638766	10.0	1128630.0	0.638766	Y
4	IC 410-355532/15	2.0	1.337294	10.0	1126529.0	0.668647	Y
5	IC 410-355532/14	5.0	3.446674	10.0	1162953.0	0.689335	Y
6	ICIS 410-355532/13	10.0	6.988068	10.0	1169233.0	0.698807	Y
7	IC 410-355532/12	25.0	17.495194	10.0	1240232.0	0.699808	Y



Calibration / Pentachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

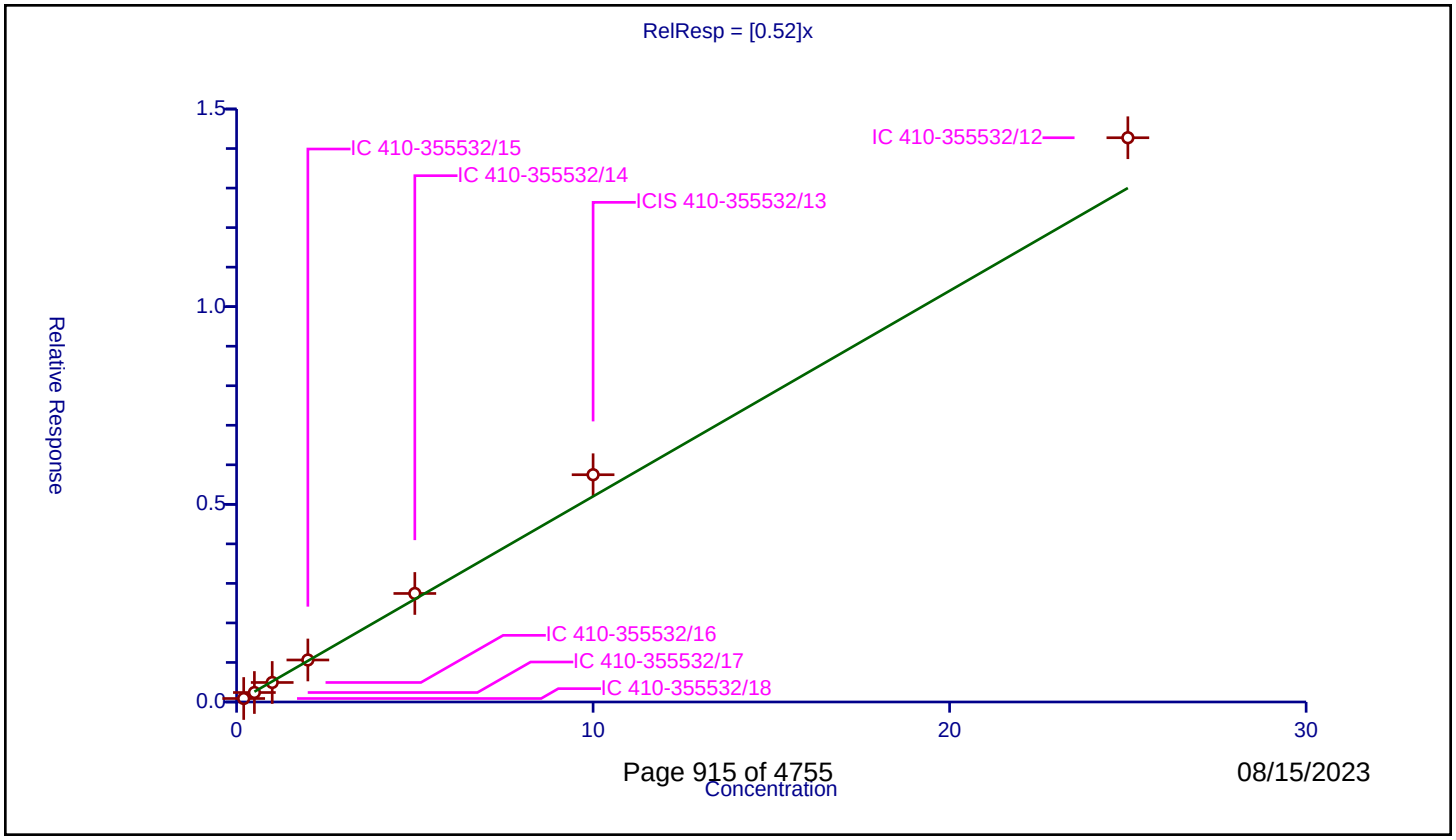
Curve Coefficients

Intercept:	0
Slope:	0.52

Error Coefficients

Standard Error:	786000
Relative Standard Error:	9.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.088167	10.0	1096665.0	0.440837	Y
2	IC 410-355532/17	0.5	0.239986	10.0	1099896.0	0.479973	Y
3	IC 410-355532/16	1.0	0.493288	10.0	1128630.0	0.493288	Y
4	IC 410-355532/15	2.0	1.06284	10.0	1126529.0	0.53142	Y
5	IC 410-355532/14	5.0	2.744874	10.0	1162953.0	0.548975	Y
6	ICIS 410-355532/13	10.0	5.749273	10.0	1169233.0	0.574927	Y
7	IC 410-355532/12	25.0	14.273241	10.0	1240232.0	0.57093	Y



Calibration / 1,2,4-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

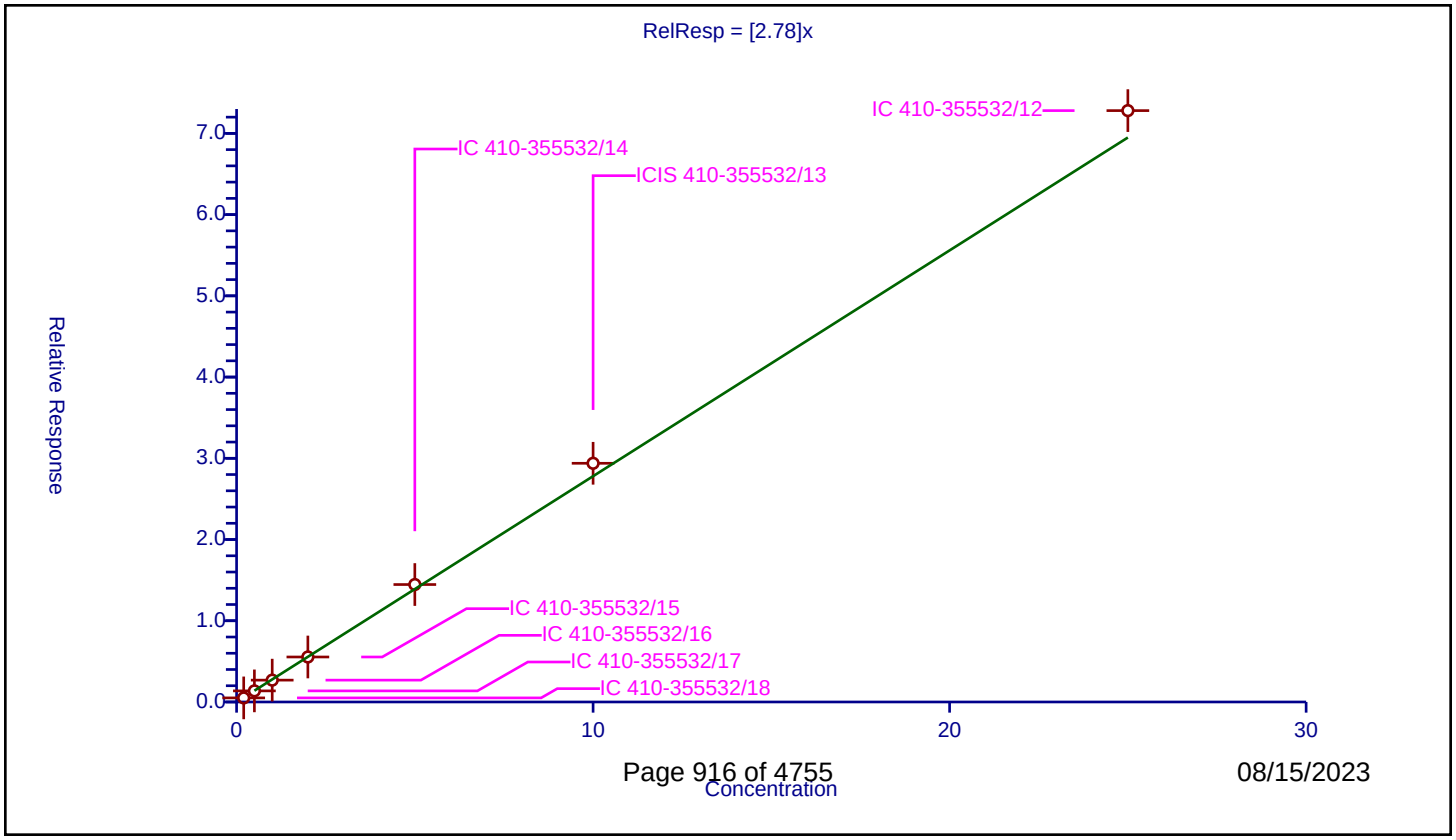
Curve Coefficients

Intercept:	0
Slope:	2.78

Error Coefficients

Standard Error:	4010000
Relative Standard Error:	5.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.503645	10.0	1096665.0	2.518226	Y
2	IC 410-355532/17	0.5	1.368584	10.0	1099896.0	2.737168	Y
3	IC 410-355532/16	1.0	2.689517	10.0	1128630.0	2.689517	Y
4	IC 410-355532/15	2.0	5.540044	10.0	1126529.0	2.770022	Y
5	IC 410-355532/14	5.0	14.460008	10.0	1162953.0	2.892002	Y
6	ICIS 410-355532/13	10.0	29.386572	10.0	1169233.0	2.938657	Y
7	IC 410-355532/12	25.0	72.803185	10.0	1240232.0	2.912127	Y



Calibration / sec-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

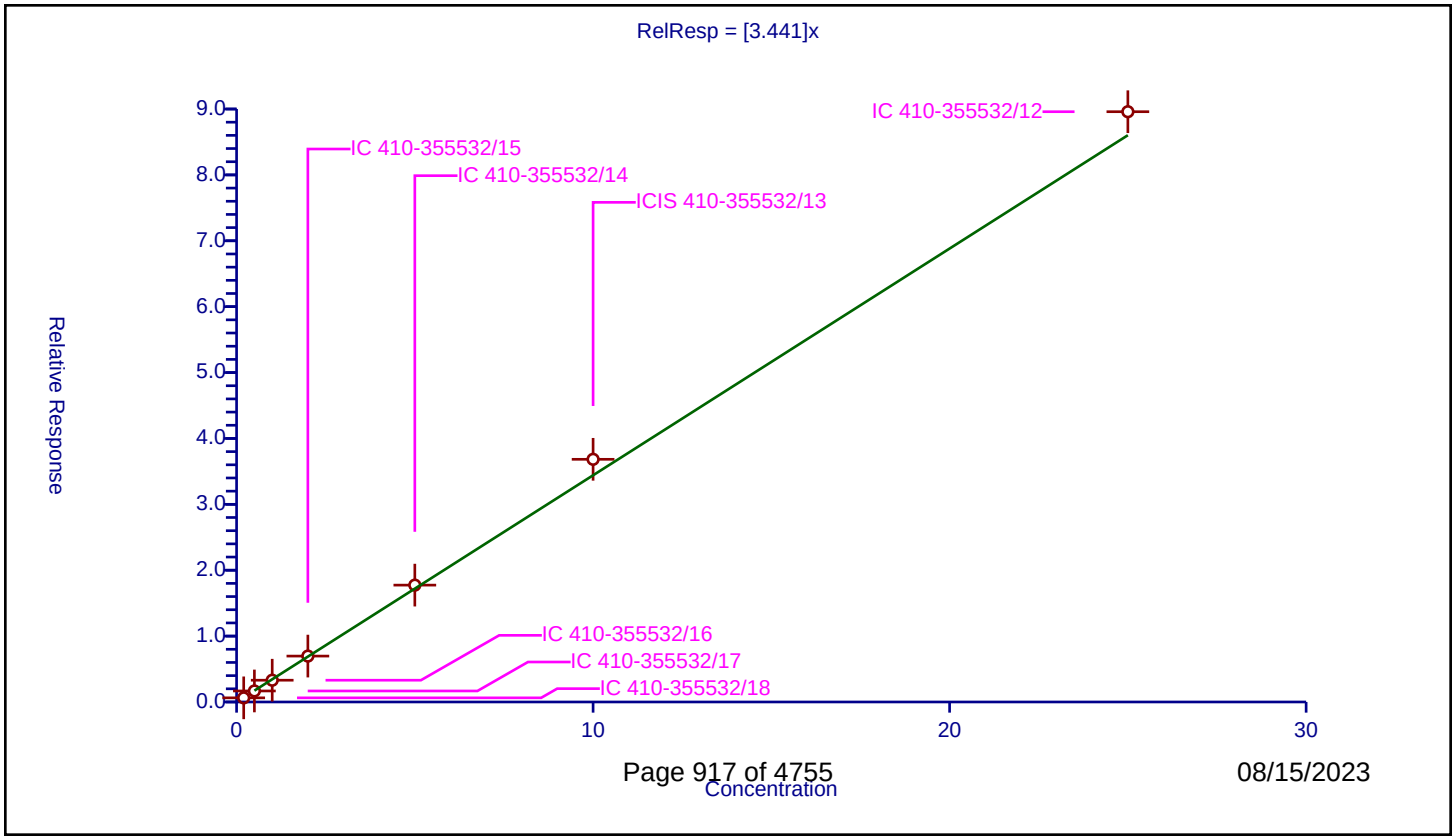
Curve Coefficients

Intercept:	0
Slope:	3.441

Error Coefficients

Standard Error:	4950000
Relative Standard Error:	5.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.627767	10.0	1096665.0	3.138835	Y
2	IC 410-355532/17	0.5	1.672194	10.0	1099896.0	3.344389	Y
3	IC 410-355532/16	1.0	3.304449	10.0	1128630.0	3.304449	Y
4	IC 410-355532/15	2.0	6.968831	10.0	1126529.0	3.484415	Y
5	IC 410-355532/14	5.0	17.737845	10.0	1162953.0	3.547569	Y
6	ICIS 410-355532/13	10.0	36.832522	10.0	1169233.0	3.683252	Y
7	IC 410-355532/12	25.0	89.59081	10.0	1240232.0	3.583632	Y



Calibration / 1,3-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

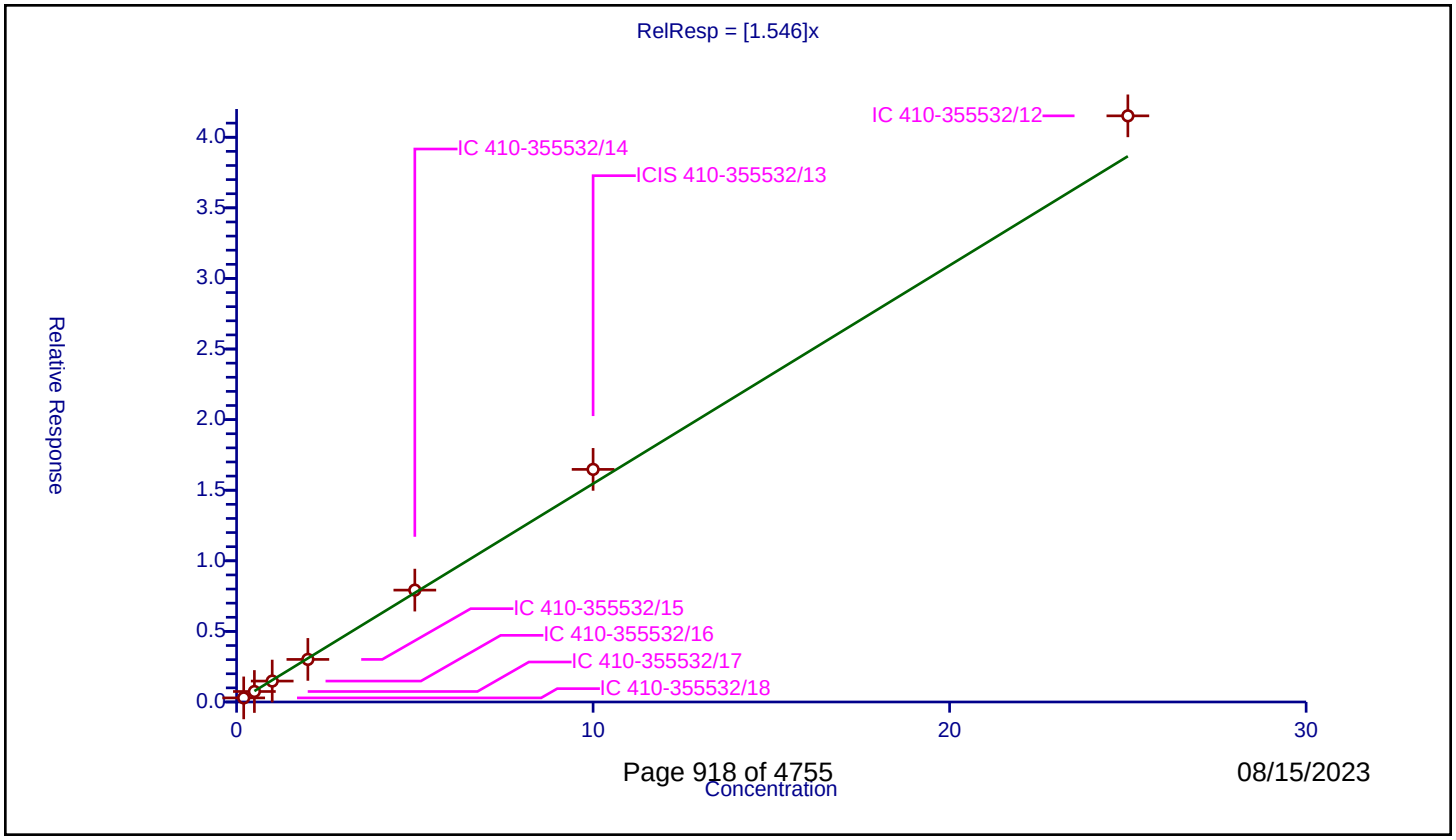
Curve Coefficients

Intercept:	0
Slope:	1.546

Error Coefficients

Standard Error:	2280000
Relative Standard Error:	5.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.290809	10.0	1096665.0	1.454045	Y
2	IC 410-355532/17	0.5	0.743516	10.0	1099896.0	1.487032	Y
3	IC 410-355532/16	1.0	1.481043	10.0	1128630.0	1.481043	Y
4	IC 410-355532/15	2.0	3.016132	10.0	1126529.0	1.508066	Y
5	IC 410-355532/14	5.0	7.924568	10.0	1162953.0	1.584914	Y
6	ICIS 410-355532/13	10.0	16.474783	10.0	1169233.0	1.647478	Y
7	IC 410-355532/12	25.0	41.516353	10.0	1240232.0	1.660654	Y



Calibration / 4-Isopropyltoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

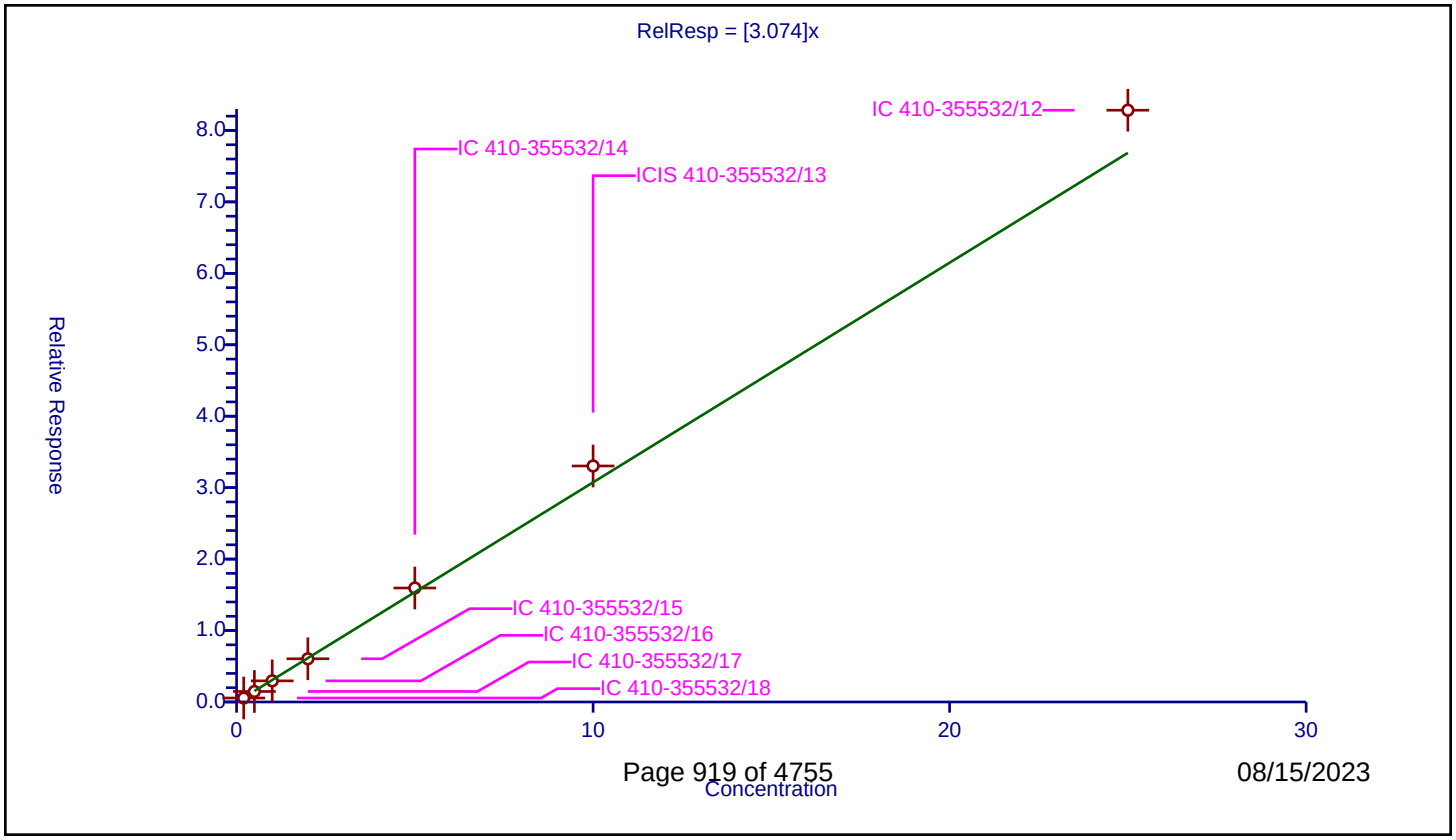
Curve Coefficients

Intercept:	0
Slope:	3.074

Error Coefficients

Standard Error:	4560000
Relative Standard Error:	6.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.55729	10.0	1096665.0	2.786448	Y
2	IC 410-355532/17	0.5	1.473748	10.0	1099896.0	2.947497	Y
3	IC 410-355532/16	1.0	2.953705	10.0	1128630.0	2.953705	Y
4	IC 410-355532/15	2.0	6.047408	10.0	1126529.0	3.023704	Y
5	IC 410-355532/14	5.0	15.955271	10.0	1162953.0	3.191054	Y
6	ICIS 410-355532/13	10.0	33.035486	10.0	1169233.0	3.303549	Y
7	IC 410-355532/12	25.0	82.832075	10.0	1240232.0	3.313283	Y



Calibration / 1,4-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

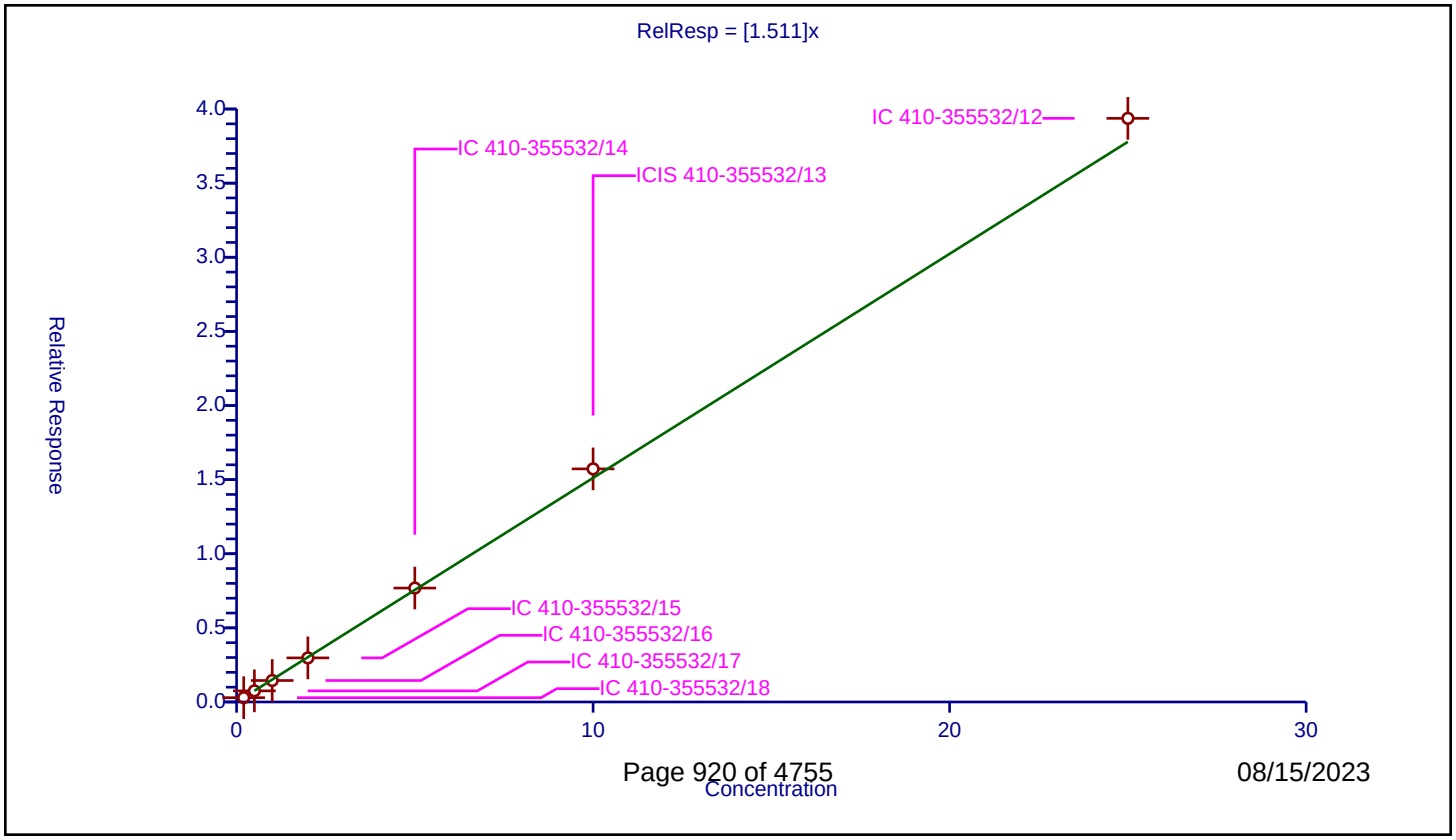
Curve Coefficients

Intercept:	0
Slope:	1.511

Error Coefficients

Standard Error:	2170000
Relative Standard Error:	3.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.291393	10.0	1096665.0	1.456963	Y
2	IC 410-355532/17	0.5	0.75118	10.0	1099896.0	1.50236	Y
3	IC 410-355532/16	1.0	1.449456	10.0	1128630.0	1.449456	Y
4	IC 410-355532/15	2.0	2.97481	10.0	1126529.0	1.487405	Y
5	IC 410-355532/14	5.0	7.684833	10.0	1162953.0	1.536967	Y
6	ICIS 410-355532/13	10.0	15.724992	10.0	1169233.0	1.572499	Y
7	IC 410-355532/12	25.0	39.371093	10.0	1240232.0	1.574844	Y



Calibration / 1,2,3-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

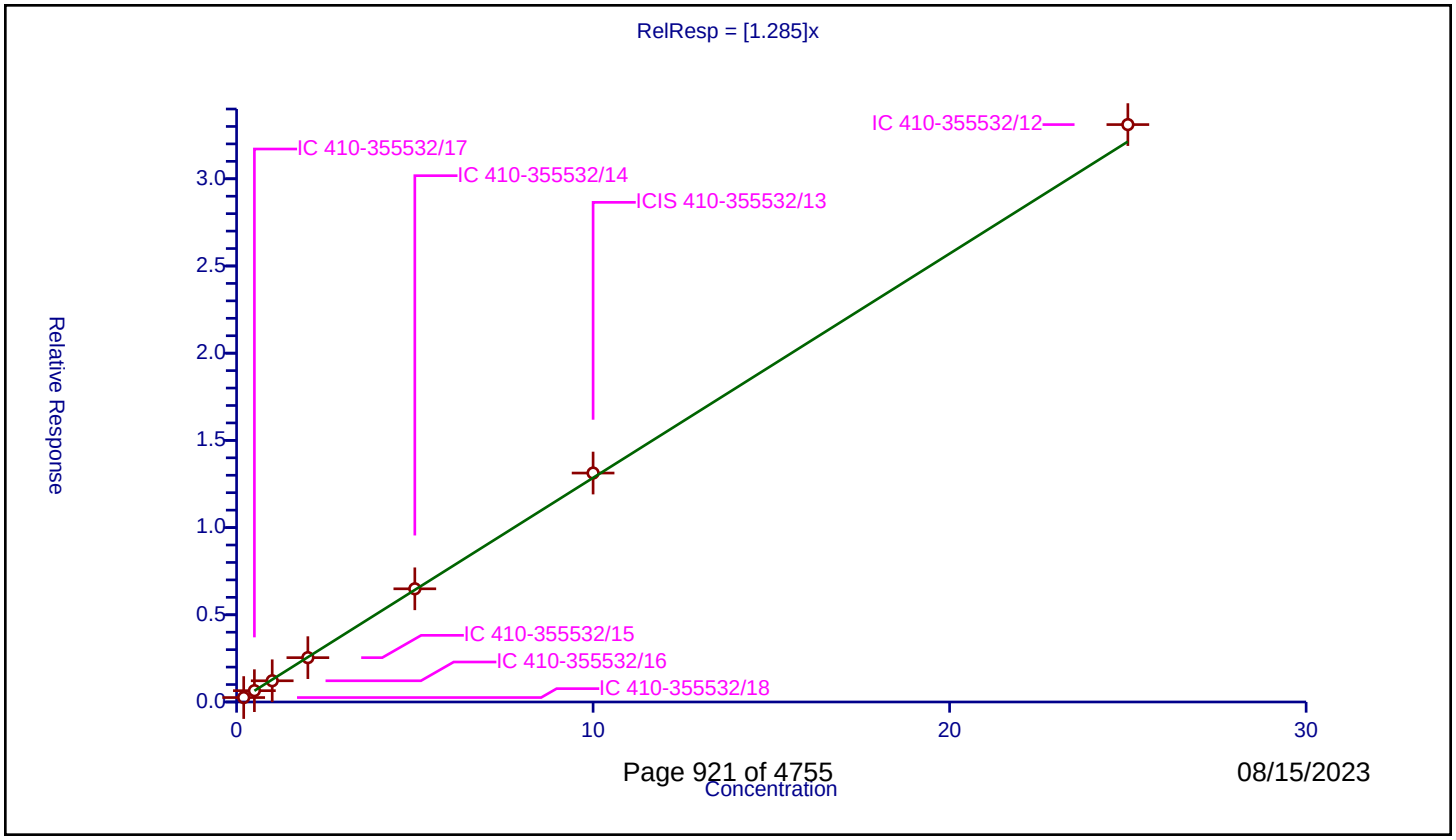
Curve Coefficients

Intercept:	0
Slope:	1.285

Error Coefficients

Standard Error:	1820000
Relative Standard Error:	2.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.255301	10.0	1096665.0	1.276506	Y
2	IC 410-355532/17	0.5	0.64958	10.0	1099896.0	1.299159	Y
3	IC 410-355532/16	1.0	1.21589	10.0	1128630.0	1.21589	Y
4	IC 410-355532/15	2.0	2.541639	10.0	1126529.0	1.270819	Y
5	IC 410-355532/14	5.0	6.490013	10.0	1162953.0	1.298003	Y
6	ICIS 410-355532/13	10.0	13.127589	10.0	1169233.0	1.312759	Y
7	IC 410-355532/12	25.0	33.10629	10.0	1240232.0	1.324252	Y



Calibration / Benzyl chloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

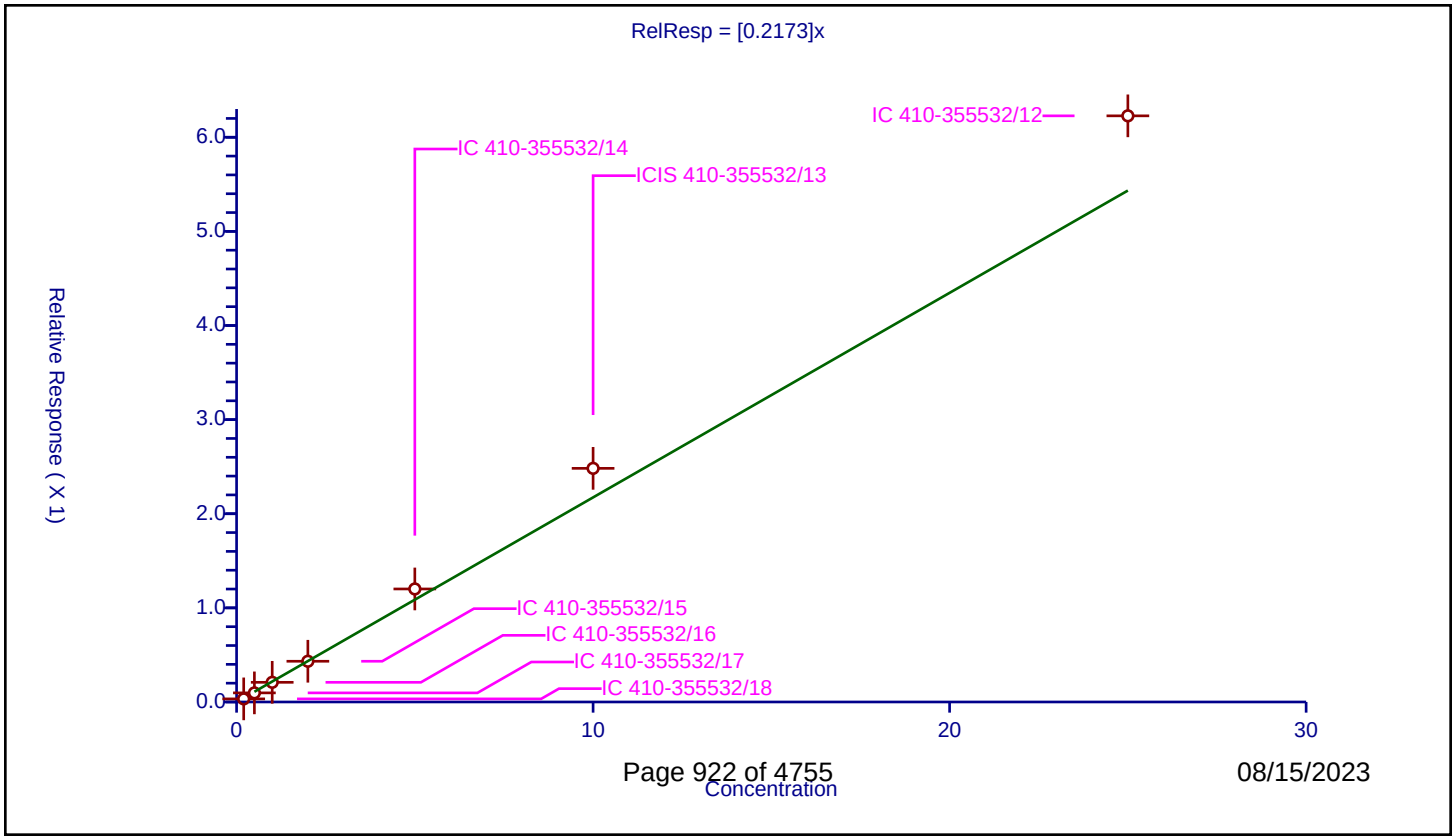
Curve Coefficients

Intercept:	0
Slope:	0.2173

Error Coefficients

Standard Error:	342000
Relative Standard Error:	14.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.977

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.032936	10.0	1096665.0	0.164681	Y
2	IC 410-355532/17	0.5	0.096873	10.0	1099896.0	0.193746	Y
3	IC 410-355532/16	1.0	0.209059	10.0	1128630.0	0.209059	Y
4	IC 410-355532/15	2.0	0.432896	10.0	1126529.0	0.216448	Y
5	IC 410-355532/14	5.0	1.200874	10.0	1162953.0	0.240175	Y
6	ICIS 410-355532/13	10.0	2.482268	10.0	1169233.0	0.248227	Y
7	IC 410-355532/12	25.0	6.227359	10.0	1240232.0	0.249094	Y



Calibration / n-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

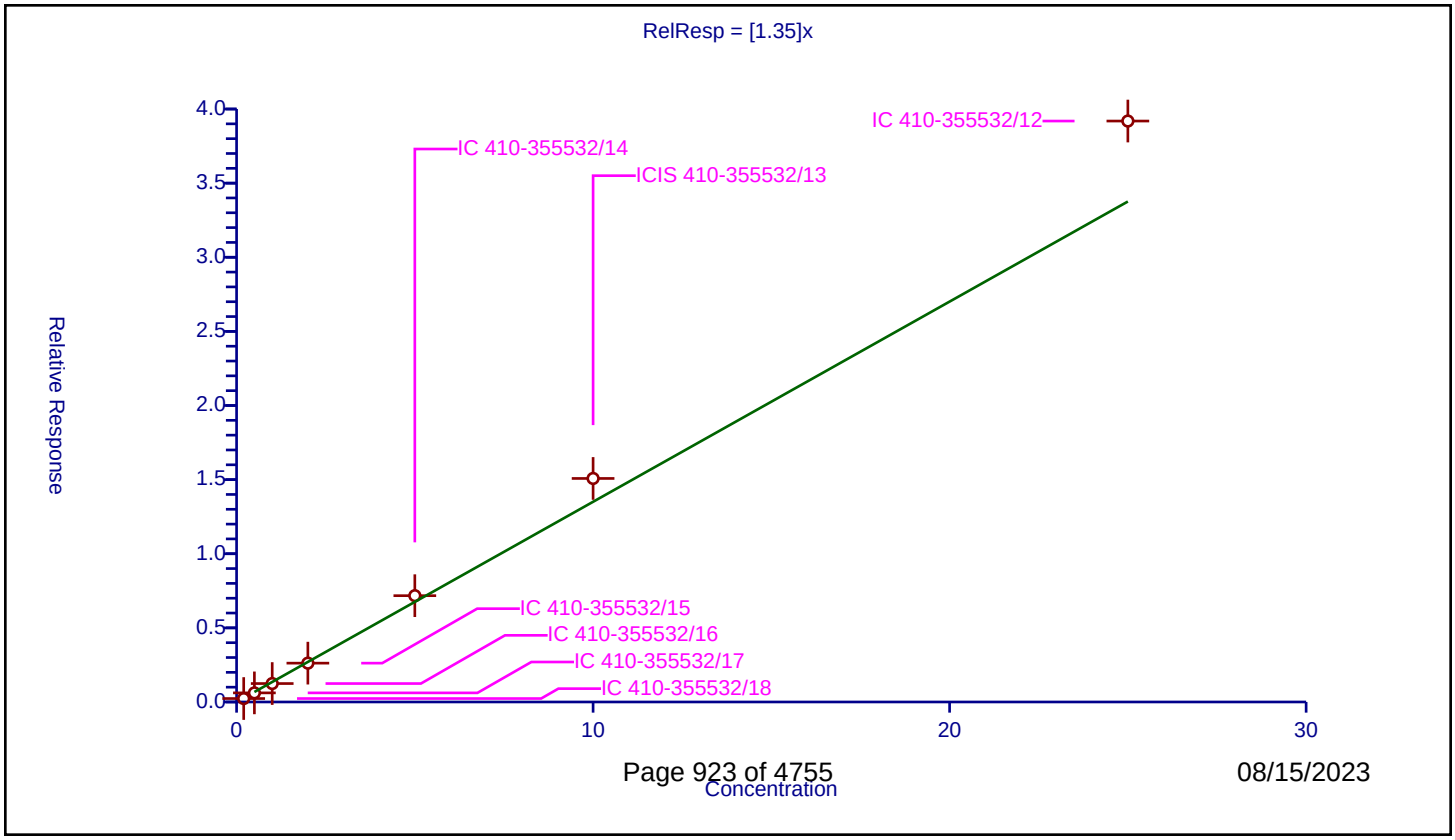
Curve Coefficients

Intercept:	0
Slope:	1.35

Error Coefficients

Standard Error:	2140000
Relative Standard Error:	11.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.232177	10.0	1096665.0	1.160883	Y
2	IC 410-355532/17	0.5	0.613922	10.0	1099896.0	1.227843	Y
3	IC 410-355532/16	1.0	1.244261	10.0	1128630.0	1.244261	Y
4	IC 410-355532/15	2.0	2.620758	10.0	1126529.0	1.310379	Y
5	IC 410-355532/14	5.0	7.171261	10.0	1162953.0	1.434252	Y
6	ICIS 410-355532/13	10.0	15.078004	10.0	1169233.0	1.5078	Y
7	IC 410-355532/12	25.0	39.189144	10.0	1240232.0	1.567566	Y



Calibration / 1,2-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

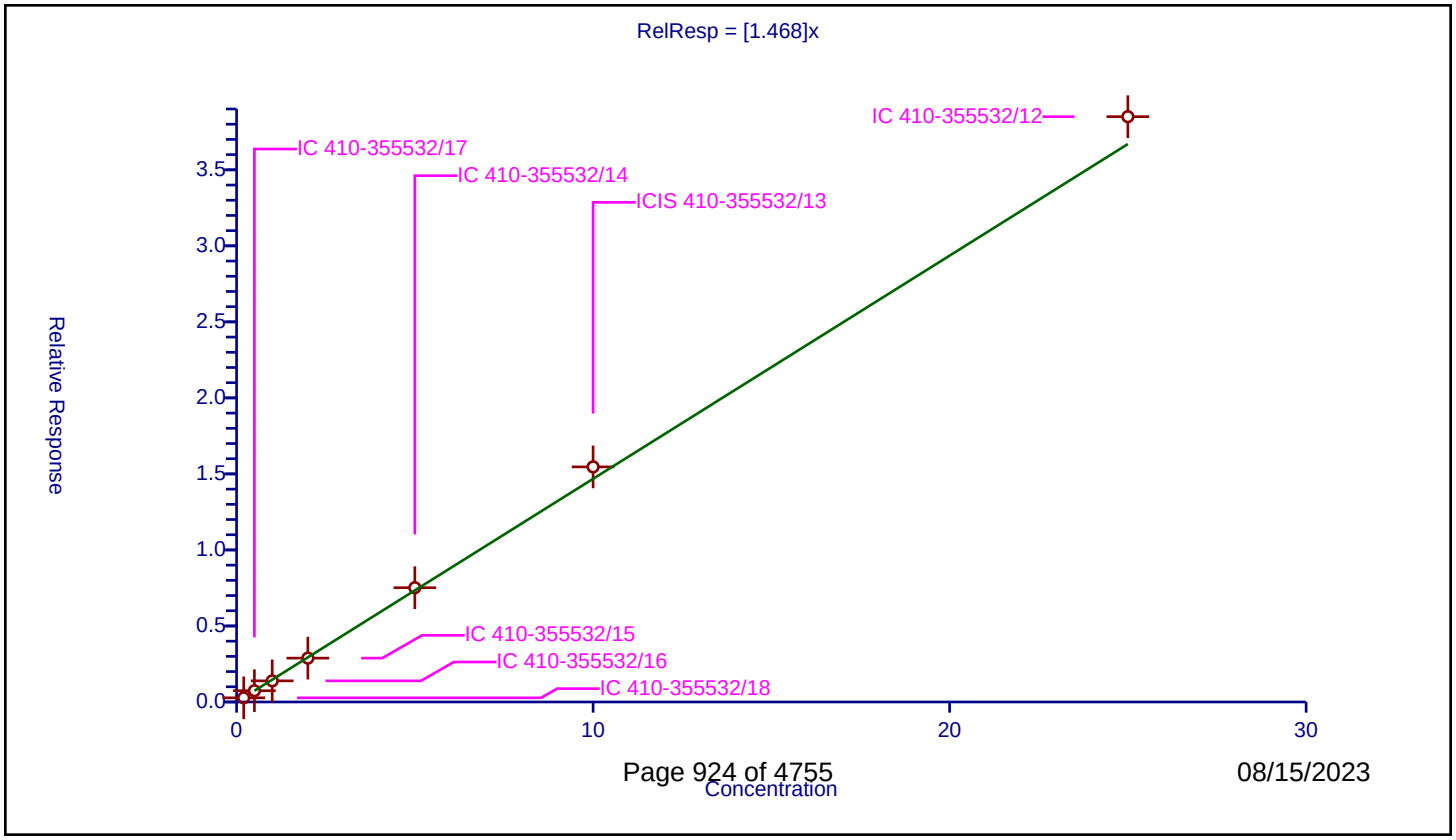
Curve Coefficients

Intercept:	0
Slope:	1.468

Error Coefficients

Standard Error:	2120000
Relative Standard Error:	4.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.274578	10.0	1096665.0	1.37289	Y
2	IC 410-355532/17	0.5	0.740743	10.0	1099896.0	1.481486	Y
3	IC 410-355532/16	1.0	1.389348	10.0	1128630.0	1.389348	Y
4	IC 410-355532/15	2.0	2.883388	10.0	1126529.0	1.441694	Y
5	IC 410-355532/14	5.0	7.515446	10.0	1162953.0	1.503089	Y
6	ICIS 410-355532/13	10.0	15.462324	10.0	1169233.0	1.546232	Y
7	IC 410-355532/12	25.0	38.496628	10.0	1240232.0	1.539865	Y



Calibration / 1,2-Dibromo-3-Chloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

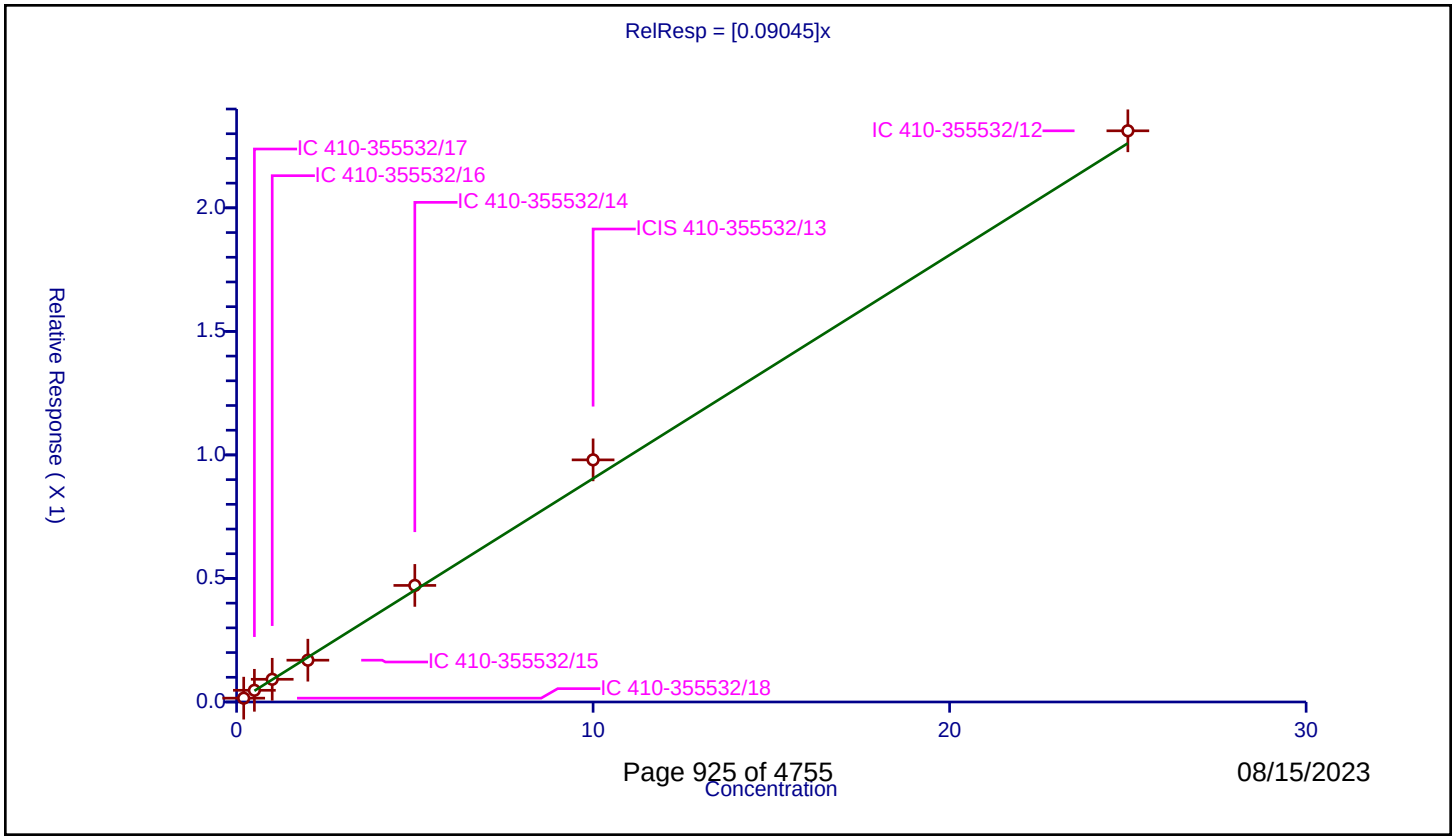
Curve Coefficients

Intercept:	0
Slope:	0.09045

Error Coefficients

Standard Error:	128000
Relative Standard Error:	7.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.015456	10.0	1096665.0	0.07728	Y
2	IC 410-355532/17	0.5	0.047314	10.0	1099896.0	0.094627	Y
3	IC 410-355532/16	1.0	0.091872	10.0	1128630.0	0.091872	Y
4	IC 410-355532/15	2.0	0.16913	10.0	1126529.0	0.084565	Y
5	IC 410-355532/14	5.0	0.471868	10.0	1162953.0	0.094374	Y
6	ICIS 410-355532/13	10.0	0.979959	10.0	1169233.0	0.097996	Y
7	IC 410-355532/12	25.0	2.311769	10.0	1240232.0	0.092471	Y



Calibration / 1,3,5-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

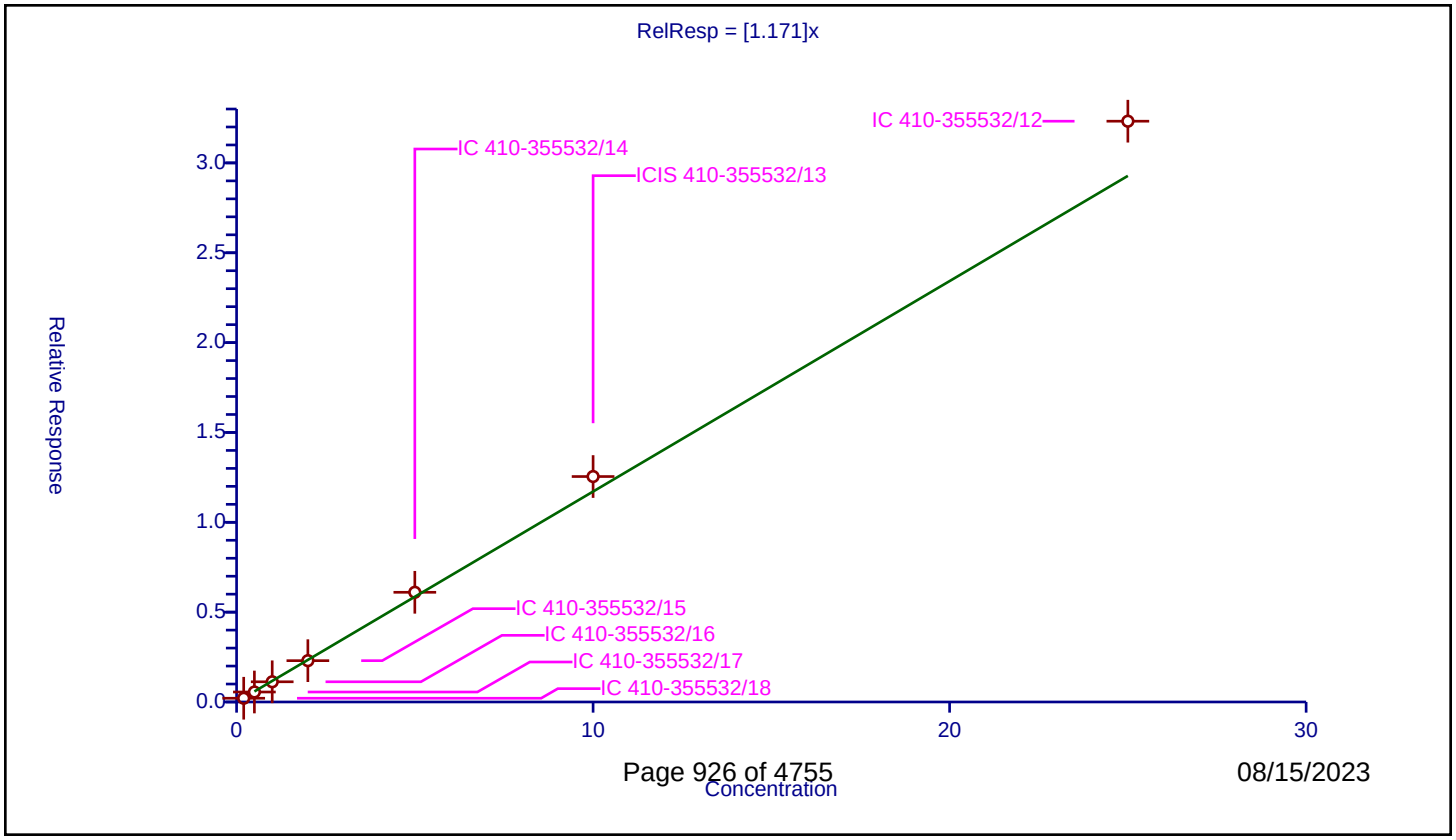
Curve Coefficients

Intercept:	0
Slope:	1.171

Error Coefficients

Standard Error:	1770000
Relative Standard Error:	7.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.209043	10.0	1096665.0	1.045214	Y
2	IC 410-355532/17	0.5	0.555589	10.0	1099896.0	1.111178	Y
3	IC 410-355532/16	1.0	1.123628	10.0	1128630.0	1.123628	Y
4	IC 410-355532/15	2.0	2.299559	10.0	1126529.0	1.14978	Y
5	IC 410-355532/14	5.0	6.104838	10.0	1162953.0	1.220968	Y
6	ICIS 410-355532/13	10.0	12.547046	10.0	1169233.0	1.254705	Y
7	IC 410-355532/12	25.0	32.321453	10.0	1240232.0	1.292858	Y



Calibration / 1,2,4-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

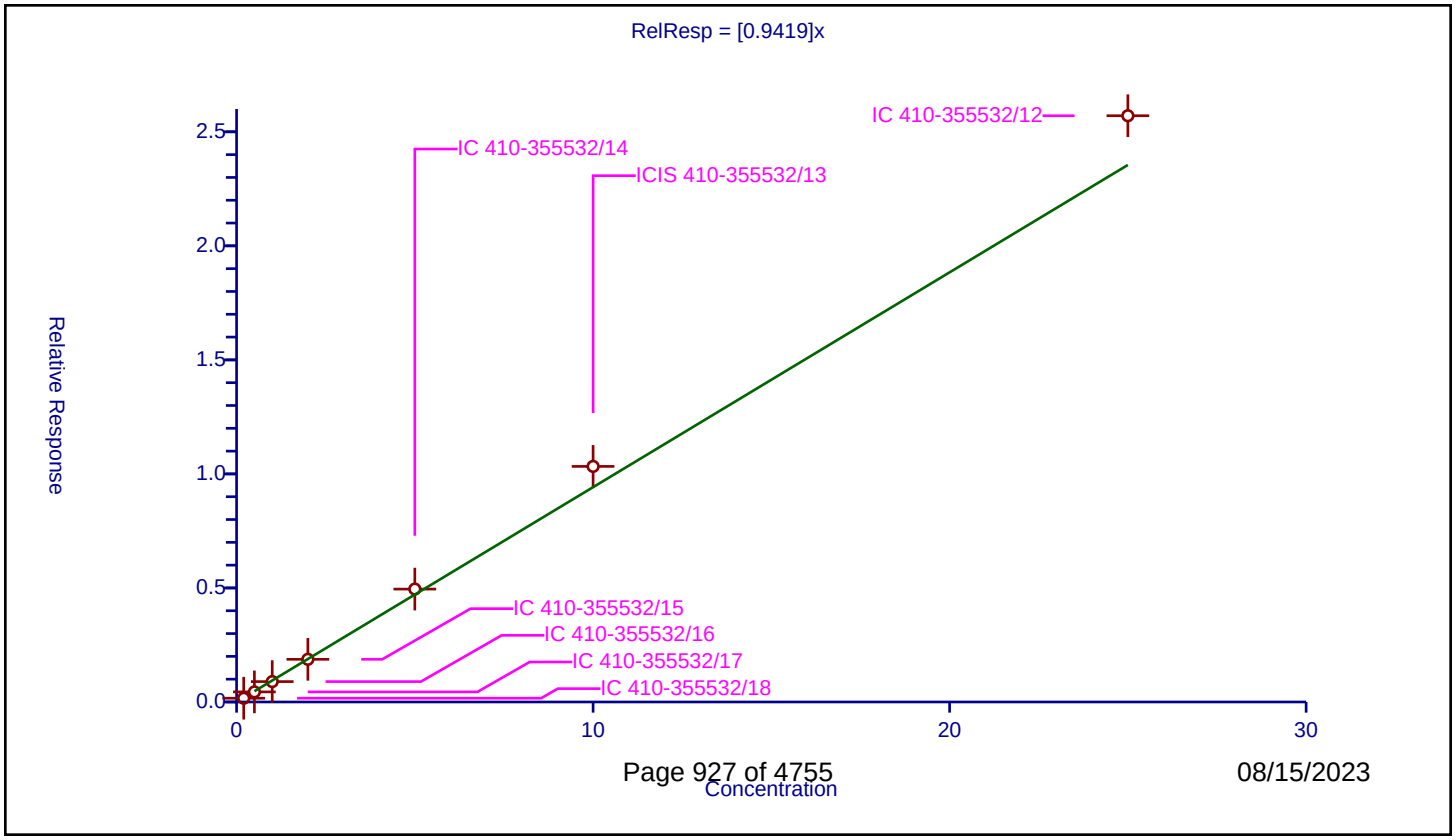
Curve Coefficients

Intercept:	0
Slope:	0.9419

Error Coefficients

Standard Error:	1410000
Relative Standard Error:	8.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.165748	10.0	1096665.0	0.82874	Y
2	IC 410-355532/17	0.5	0.442296	10.0	1099896.0	0.884593	Y
3	IC 410-355532/16	1.0	0.893349	10.0	1128630.0	0.893349	Y
4	IC 410-355532/15	2.0	1.870844	10.0	1126529.0	0.935422	Y
5	IC 410-355532/14	5.0	4.950123	10.0	1162953.0	0.990025	Y
6	ICIS 410-355532/13	10.0	10.329327	10.0	1169233.0	1.032933	Y
7	IC 410-355532/12	25.0	25.705545	10.0	1240232.0	1.028222	Y



Calibration / Hexachlorobutadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

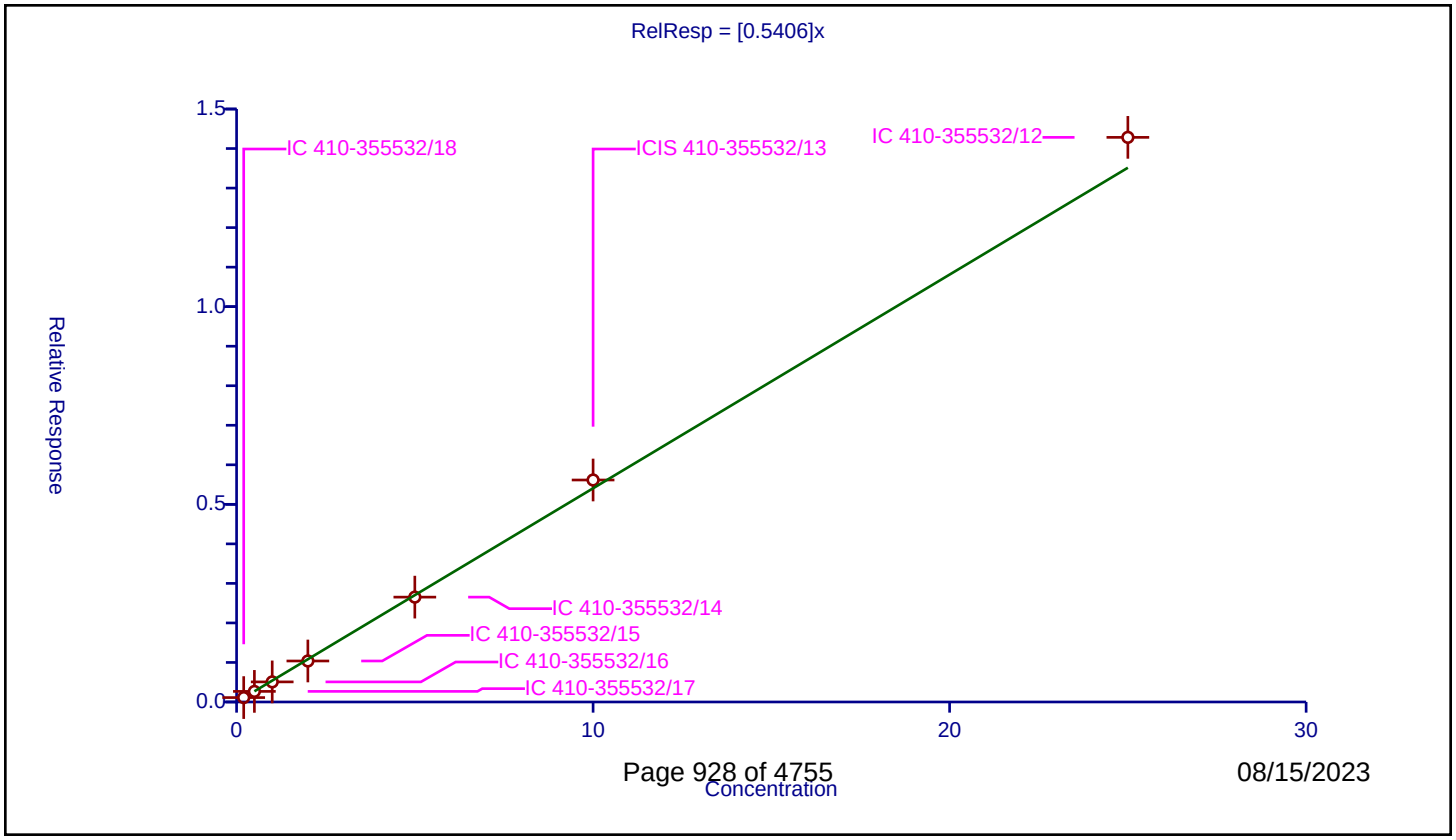
Curve Coefficients

Intercept:	0
Slope:	0.5406

Error Coefficients

Standard Error:	783000
Relative Standard Error:	4.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.111657	10.0	1096665.0	0.558284	Y
2	IC 410-355532/17	0.5	0.267798	10.0	1099896.0	0.535596	Y
3	IC 410-355532/16	1.0	0.508236	10.0	1128630.0	0.508236	Y
4	IC 410-355532/15	2.0	1.036937	10.0	1126529.0	0.518469	Y
5	IC 410-355532/14	5.0	2.652996	10.0	1162953.0	0.530599	Y
6	ICIS 410-355532/13	10.0	5.615177	10.0	1169233.0	0.561518	Y
7	IC 410-355532/12	25.0	14.282981	10.0	1240232.0	0.571319	Y



Calibration / Naphthalene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

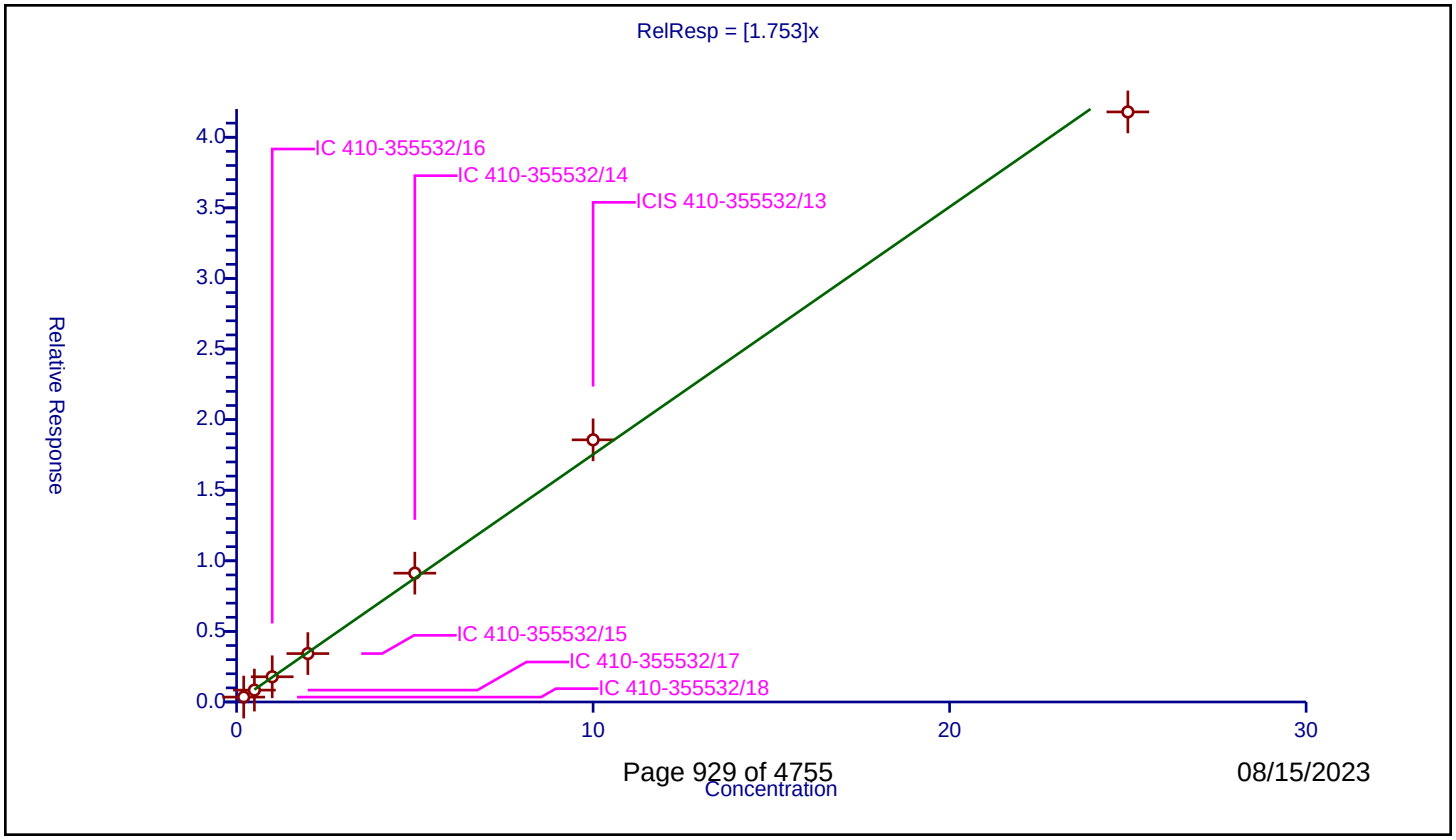
Curve Coefficients

Intercept:	0
Slope:	1.753

Error Coefficients

Standard Error:	2340000
Relative Standard Error:	4.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.347253	10.0	1096665.0	1.736264	Y
2	IC 410-355532/17	0.5	0.841598	10.0	1099896.0	1.683196	Y
3	IC 410-355532/16	1.0	1.785971	10.0	1128630.0	1.785971	Y
4	IC 410-355532/15	2.0	3.429881	10.0	1126529.0	1.71494	Y
5	IC 410-355532/14	5.0	9.123885	10.0	1162953.0	1.824777	Y
6	ICIS 410-355532/13	10.0	18.5673	10.0	1169233.0	1.85673	Y
7	IC 410-355532/12	25.0	41.793511	10.0	1240232.0	1.67174	Y



Calibration / 1,2,3-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

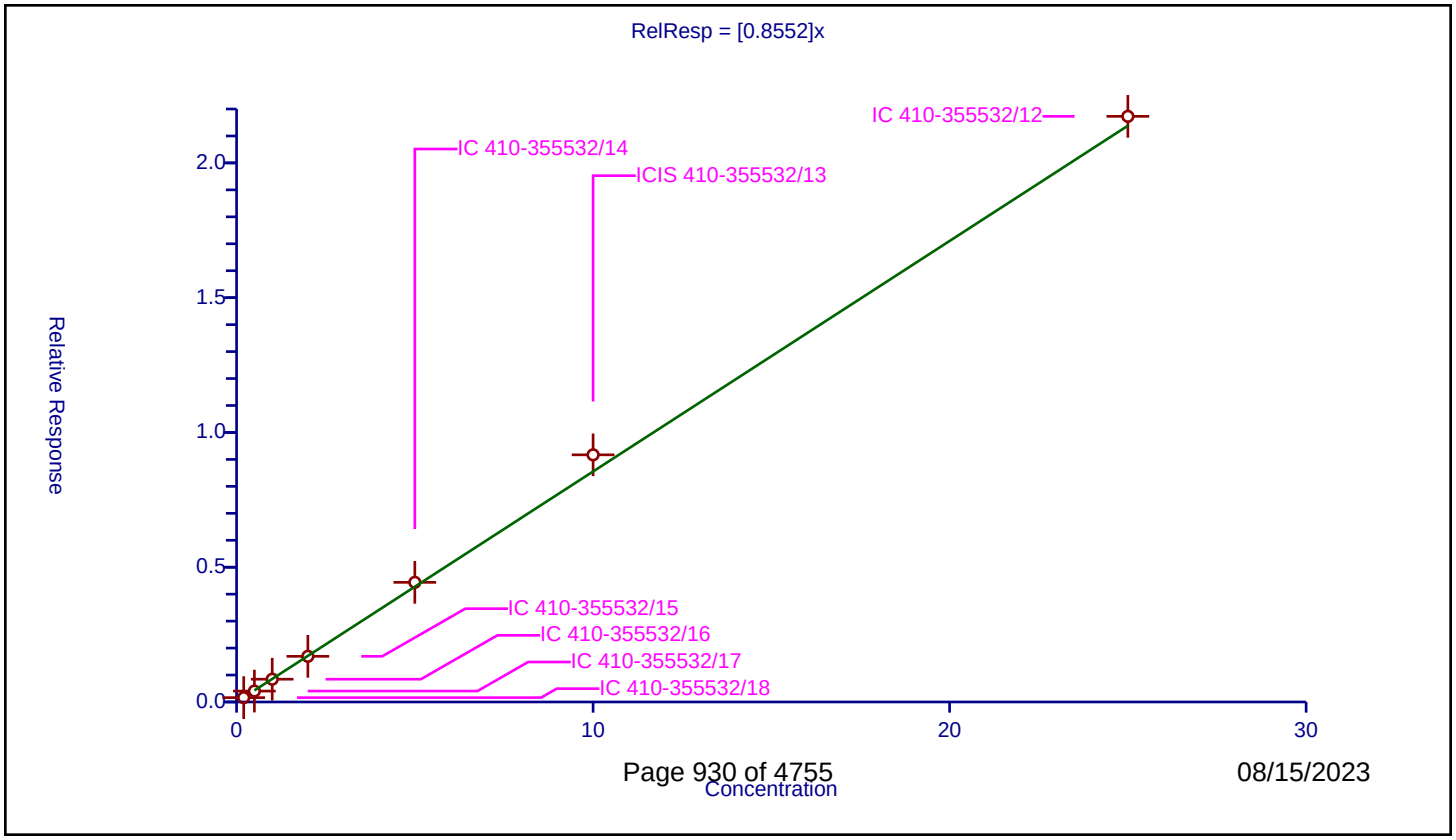
Curve Coefficients

Intercept:	0
Slope:	0.8552

Error Coefficients

Standard Error:	1210000
Relative Standard Error:	4.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.161991	10.0	1096665.0	0.809956	Y
2	IC 410-355532/17	0.5	0.405102	10.0	1099896.0	0.810204	Y
3	IC 410-355532/16	1.0	0.845264	10.0	1128630.0	0.845264	Y
4	IC 410-355532/15	2.0	1.694373	10.0	1126529.0	0.847186	Y
5	IC 410-355532/14	5.0	4.438391	10.0	1162953.0	0.887678	Y
6	ICIS 410-355532/13	10.0	9.169601	10.0	1169233.0	0.91696	Y
7	IC 410-355532/12	25.0	21.727467	10.0	1240232.0	0.869099	Y



FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 14:49 Calibration End Date: 06/19/2023 16:55 Calibration ID: 51350

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-388102/3	IU19X02.D
Level 2	IC 410-388102/4	IU19X03.D
Level 3	IC 410-388102/5	IU19X04.D
Level 4	IC 410-388102/6	IU19X05.D
Level 5	IC 410-388102/7	IU19X06.D
Level 6	IC 410-388102/8	IU19X07.D
Level 7	IC 410-388102/9	IU19X08.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Chlorodifluoromethane	0.3654 0.3895	0.4339 0.3952	0.3891	0.4056	0.3874	Ave		0.3951				5.3		20.0			
Methoxymethane	0.3130 0.3314	0.3292 0.3503	0.3736	0.3223	0.3453	Ave		0.3379				6.0		20.0			
Acetonitrile	+++++ 0.0094	+++++ 0.0122	0.0134	0.0123	0.0101	Ave		0.0115				14.4		20.0			
Vinyl acetate	0.3596 0.3305	0.3433 0.3403	0.3397	0.3123	0.3303	Ave		0.3366				4.3		20.0			
Ethyl acetate	0.1011 0.1479	0.1062 0.1523	0.1134	0.1281	0.1419	Ave		0.1273				16.3		20.0			
2-Chloroethyl vinyl ether	+++++ 0.0018	+++++ 0.0017	+++++	+++++	0.0010	Ave		0.0015				29.3	*	20.0			
cis-1,4-Dichloro-2-butene	0.0805 0.1146	0.0820 0.1200	0.0919	0.1019	0.1110	Ave		0.1002				15.8		20.0			
Cyclohexanone	+++++ 0.5272	0.4308 0.5277	0.4415	0.4967	0.4852	Ave		0.4848				8.5		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 14:49 Calibration End Date: 06/19/2023 16:55 Calibration ID: 51350

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-388102/3	IU19X02.D
Level 2	IC 410-388102/4	IU19X03.D
Level 3	IC 410-388102/5	IU19X04.D
Level 4	IC 410-388102/6	IU19X05.D
Level 5	IC 410-388102/7	IU19X06.D
Level 6	IC 410-388102/8	IU19X07.D
Level 7	IC 410-388102/9	IU19X08.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Chlorodifluoromethane	FB	Ave	13875 702885	42825 1791816	70059	147068	354220	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methoxymethane	FB	Ave	11886 597989	32491 1588476	67276	116853	315734	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Acetonitrile	FB	Ave	+++++ 84890	+++++ 276683	12033	22246	46193	+++++ 50.0	+++++ 125	5.00	10.0	25.0
Vinyl acetate	FB	Ave	13657 596485	33879 1543134	61164	113242	302053	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethyl acetate	FB	Ave	3840 266923	10477 690605	20416	46431	129747	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Chloroethyl vinyl ether	FB	Ave	+++++ 3197	+++++ 7591	+++++	+++++	895	+++++ 10.0	+++++ 25.0	+++++	+++++	5.00
cis-1,4-Dichloro-2-butene	CBZd 5	Ave	4787 329445	12683 865958	26241	58366	160237	0.400 20.0	1.00 50.0	2.00	4.00	10.0
Cyclohexanone	TBAd 10	Ave	+++++ 441030	30502 1415471	48696	99814	217173	+++++ 500	25.0 1250	50.0	100.0	250

Curve Type Legend
Ave = Average ISTD

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 14:49 Calibration End Date: 06/19/2023 16:55 Calibration ID: 51350

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-388102/3	IU19X02.D
Level 2	IC 410-388102/4	IU19X03.D
Level 3	IC 410-388102/5	IU19X04.D
Level 4	IC 410-388102/6	IU19X05.D
Level 5	IC 410-388102/7	IU19X06.D
Level 6	IC 410-388102/8	IU19X07.D
Level 7	IC 410-388102/9	IU19X08.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Chlorodifluoromethane	-7.5 0.0	9.8	-1.5	2.6	-2.0	-1.4	50 30	30	30	30	30	30
Methoxymethane	-7.4 3.7	-2.6	10.6	-4.6	2.2	-1.9	50 30	30	30	30	30	30
Acetonitrile	+++++ 6.4	+++++	16.5	7.0	-11.9	-18.0	 30		50	30	30	30
Vinyl acetate	6.8 1.1	2.0	0.9	-7.2	-1.9	-1.8	50 30	30	30	30	30	30
Ethyl acetate	-20.5 19.7	-16.6	-10.9	0.6	11.5	16.2	50 30	30	30	30	30	30
2-Chloroethyl vinyl ether	+++++ 13.5	+++++	+++++	+++++	-33.6	20.1	 30				50	30
cis-1,4-Dichloro-2-butene	-19.7 19.7	-18.2	-8.3	1.6	10.7	14.3	50 30	30	30	30	30	30
Cyclohexanone	+++++ 8.8	-11.2	-8.9	2.4	0.1	8.7	 30	50	30	30	30	30

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X02.D
Lims ID: IC std1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 19-Jun-2023 14:49:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0086929-003
Misc. Info.: SM 25.0
Operator ID: KNK41612 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub44

Method: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 27-Jun-2023 12:29:44 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1687

First Level Reviewer: DVW2 Date: 20-Jun-2023 10:47:21

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Chlorodifluoromethane	51	1.867	1.867	0.000	96	13875	0.2000	0.1849	
3 Dimethyl ether	45	1.922	1.922	0.000	100	11886	0.2000	0.1853	Ma
21 Acetonitrile	41	3.824	3.788	0.036	19	11647	1.00	5.35	M
* 26 t-Butyl alcohol-d10 (IS)	65	3.940	3.977	-0.037	22	144911	50.0	50.0	M
33 Vinyl acetate	43	5.062	4.989	0.073	70	13657	0.2000	0.2137	M
42 Ethyl acetate	43	5.946	5.891	0.055	3	3840	0.2000	0.1589	Ma
59 Isopropyl acetate	43	7.141	7.128	0.013	94	15837	0.2000	0.2417	
* 61 Fluorobenzene (IS)	96	7.445	7.452	-0.007	99	1898742	10.0	10.0	
70 n-Propyl acetate	43	8.470	8.445	0.025	45	8658	0.2000	0.2066	Ma
73 2-Chloroethyl vinyl ether	63		9.006				ND	ND	
104 n-Butyl acetate	43	10.427	10.408	0.019	96	9343	0.2000	0.1790	
* 107 Chlorobenzene-d5 (IS)	117	10.987	10.988	-0.001	84	1487320	10.0	10.0	
118 cis-1,4-Dichloro-2-butene	88	11.908	11.902	0.006	29	4787	0.4000	0.3211	a
119 Cyclohexanone	55	11.945	11.938	0.007	86	7240	10.0	5.15	
* 135 1,4-Dichlorobenzene-d4	152	12.883	12.884	-0.001	93	920648	10.0	10.0	
149 2-Chloro-1,1,1-Trifluoroethane	1		0.000				ND	ND	
162 Chlorotrifluoroethene	1		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

MSV_CCV_V5ACE_00025	Amount Added:	0.20	Units: uL
MSV_DME_00046	Amount Added:	0.20	Units: uL
MSV_CCV_CYC_00005	Amount Added:	1.60	Units: uL
MSV_LLcentISO_00006	Amount Added:	5.00	Units: uL
MSV_V_SMRV4_00059	Amount Added:	1.00	Units: uL

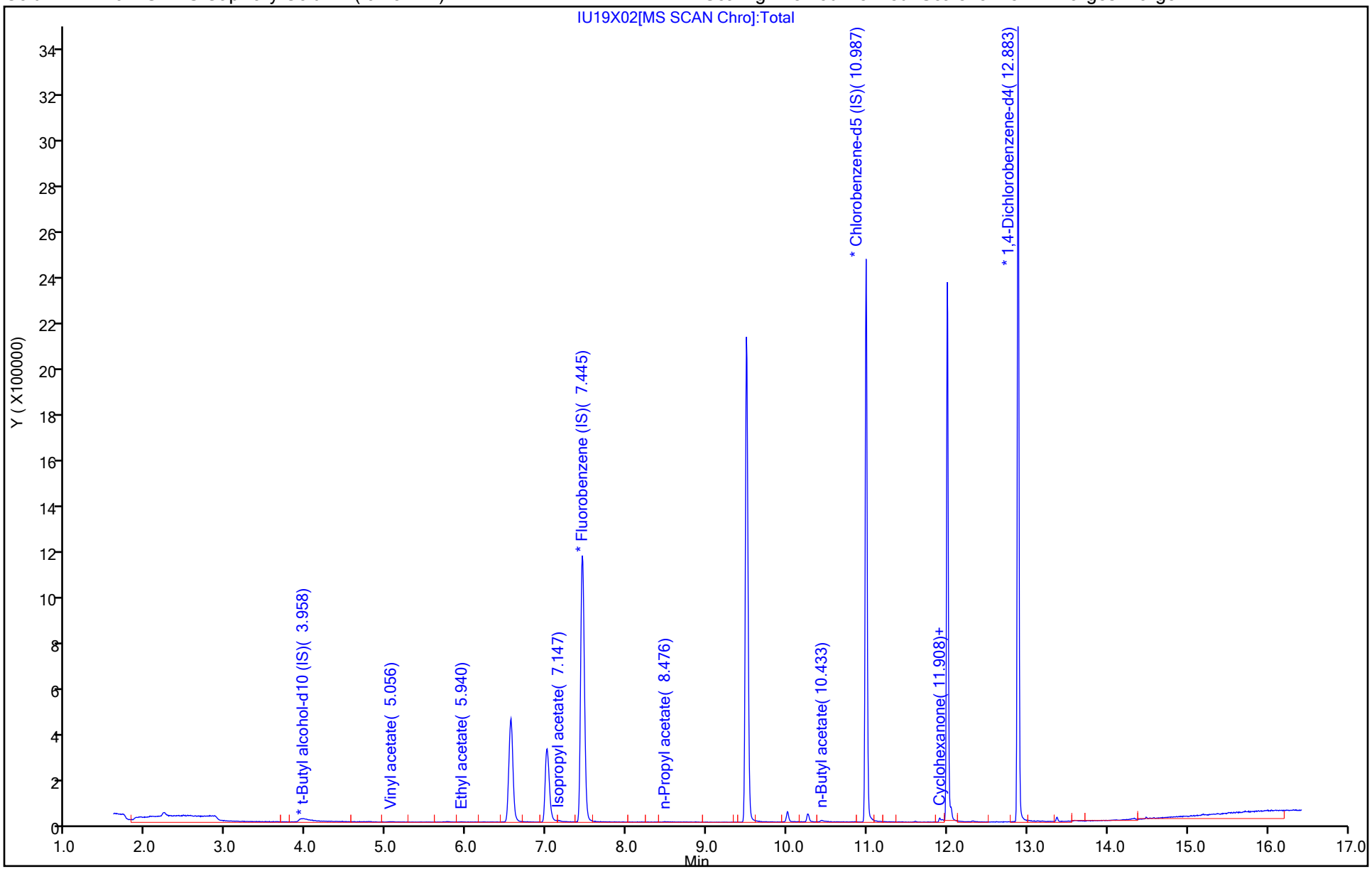
Report Date: 27-Jun-2023 12:29:45 Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X02.D

Injection Date:	19-Jun-2023 14:49:30	Instrument ID:	19930	Operator ID:	KNK41612
Lims ID:	IC std1			Worklist Smp#:	3
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

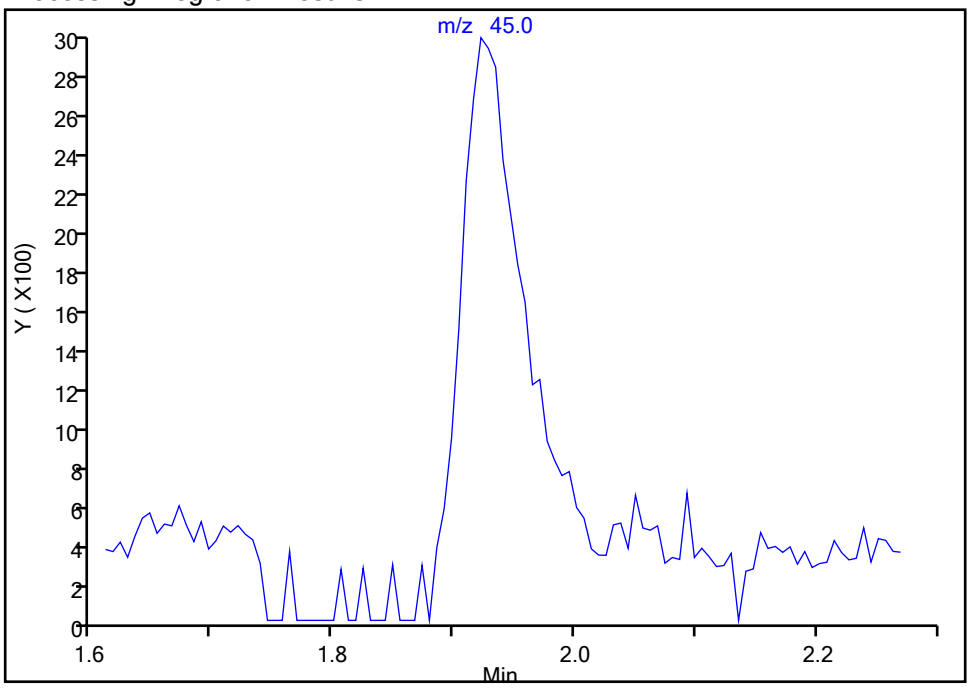
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X02.D				
Injection Date:	19-Jun-2023 14:49:30	Instrument ID:	19930		
Lims ID:	IC std1				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	2	Worklist Smp#:	3
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

3 Dimethyl ether, CAS: 115-10-6

Signal: 1

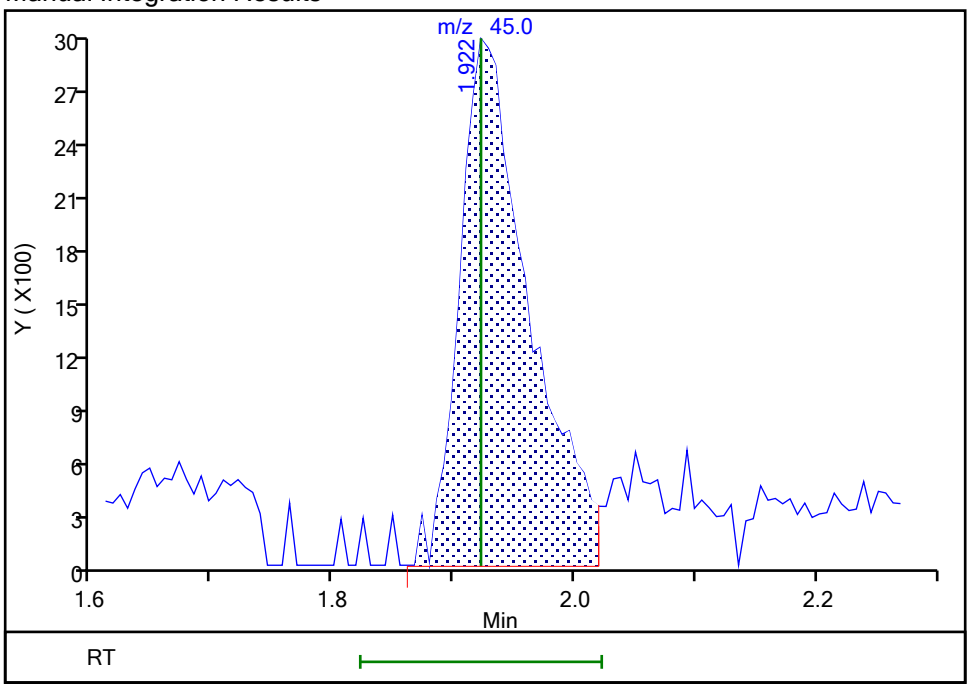
Not Detected
Expected RT: 1.92

Processing Integration Results



Manual Integration Results

RT: 1.92
Area: 11886
Amount: 0.185276
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:18:24 -04:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

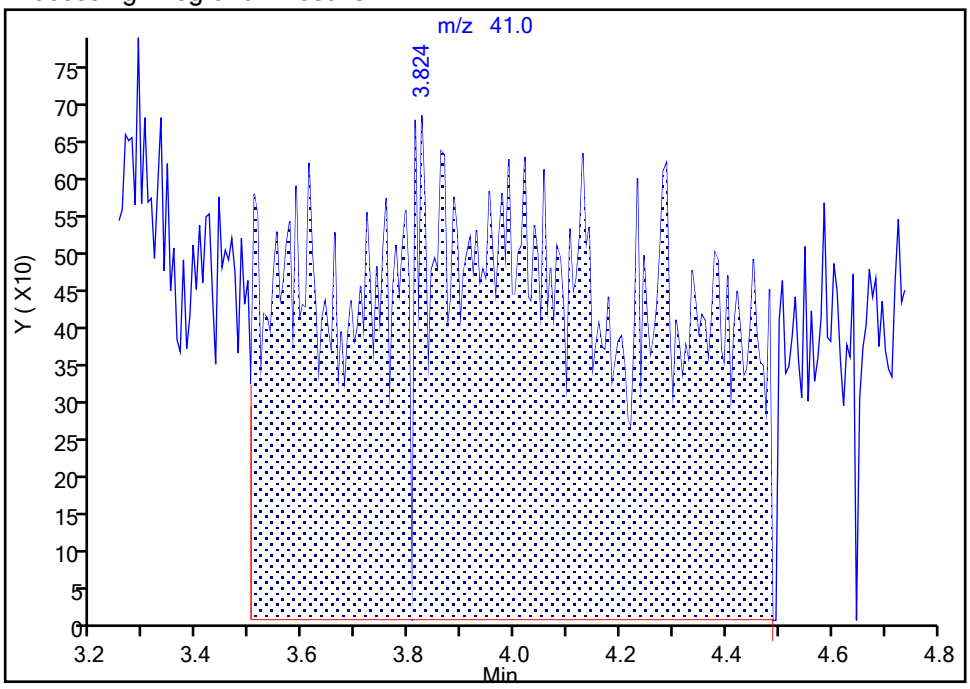
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X02.D				
Injection Date:	19-Jun-2023 14:49:30	Instrument ID:	19930		
Lims ID:	IC std1				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	2	Worklist Smp#:	3
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

21 Acetonitrile, CAS: 75-05-8

Signal: 1

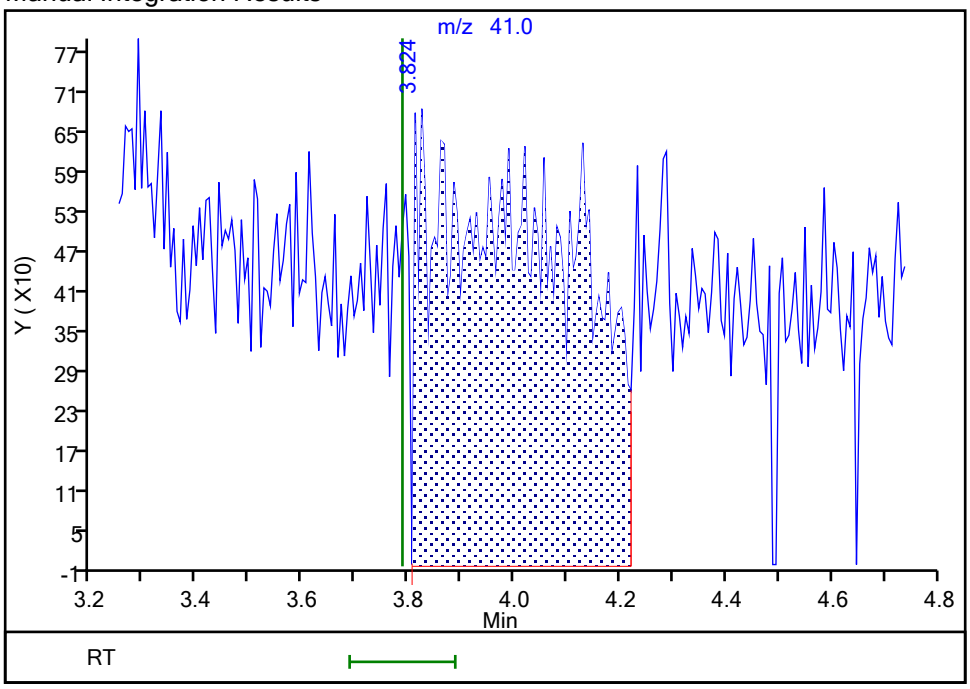
Processing Integration Results

RT: 3.82
Area: 26038
Amount: 3.960059
Amount Units: ug/l



Manual Integration Results

RT: 3.82
Area: 11647
Amount: 5.347833
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:19:20 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

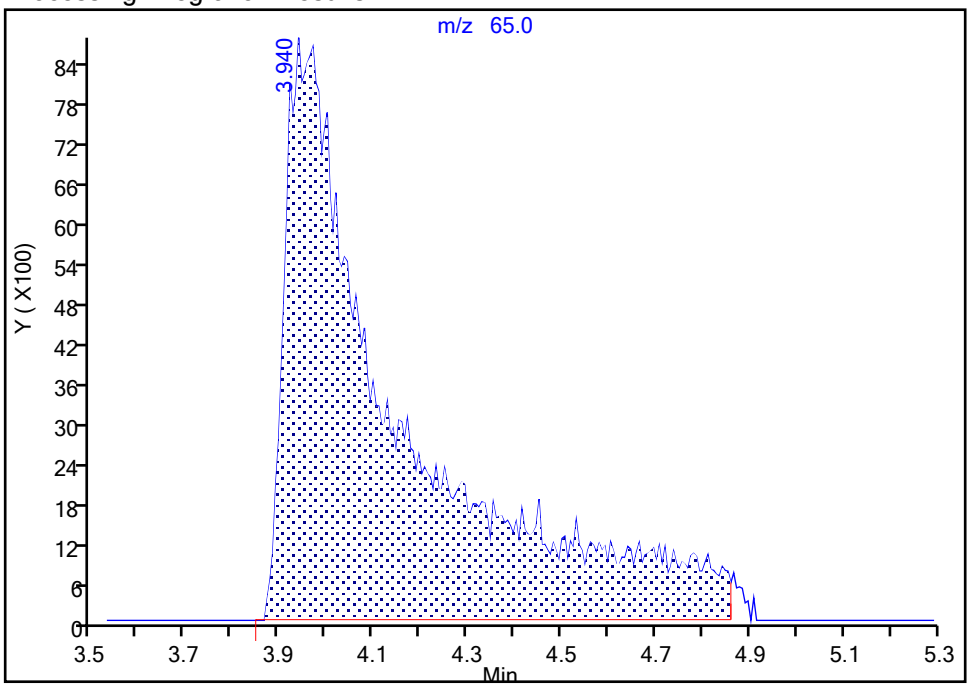
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X02.D
Injection Date: 19-Jun-2023 14:49:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: KNK41612 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 26 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

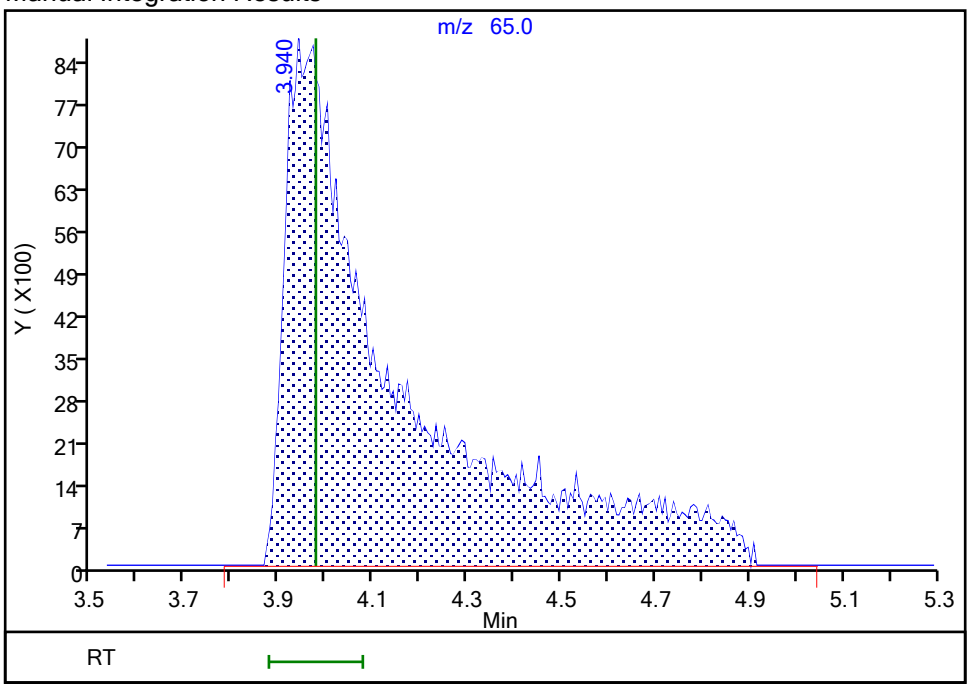
Processing Integration Results

RT: 3.94
Area: 143786
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 3.94
Area: 144911
Amount: 50.000000
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:19:28 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

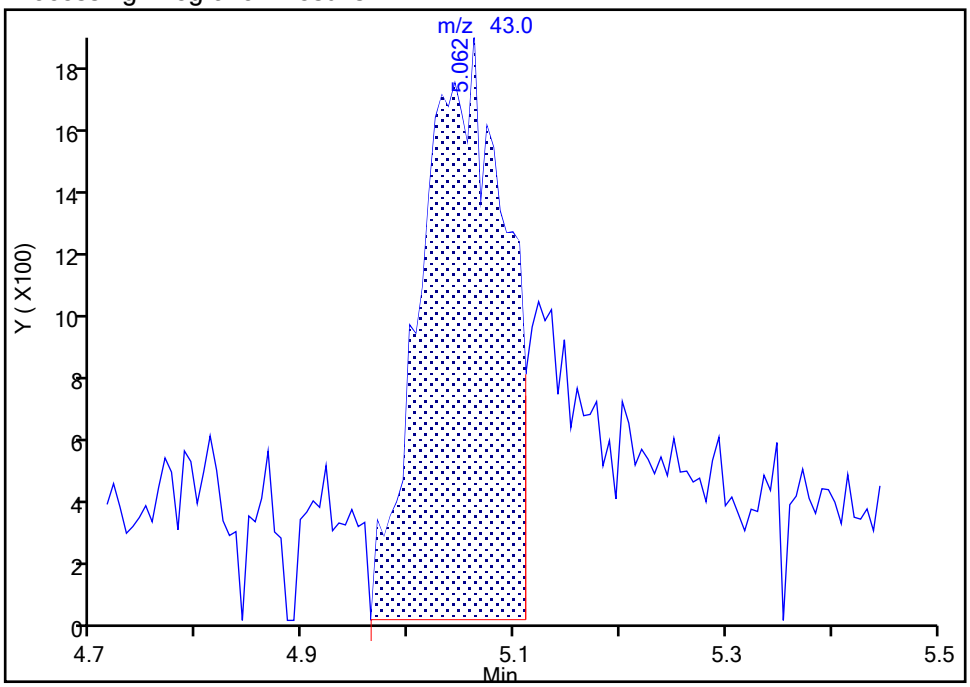
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X02.D				
Injection Date:	19-Jun-2023 14:49:30	Instrument ID:	19930		
Lims ID:	IC std1				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	2	Worklist Smp#:	3
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

33 Vinyl acetate, CAS: 108-05-4

Signal: 1

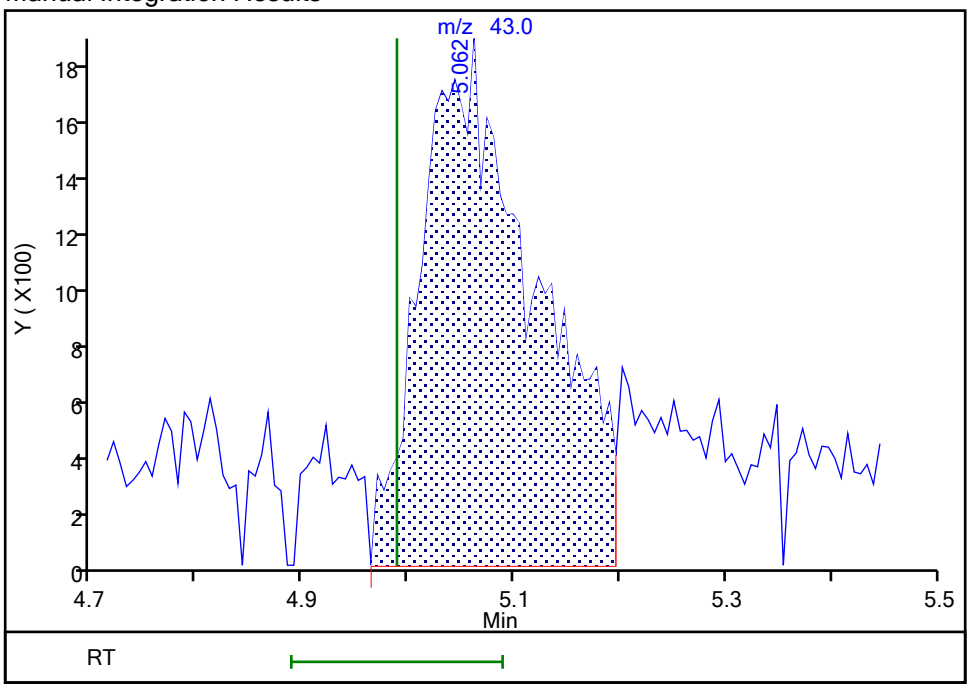
Processing Integration Results

RT: 5.06
Area: 9958
Amount: 0.163514
Amount Units: ug/l



Manual Integration Results

RT: 5.06
Area: 13657
Amount: 0.213695
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:19:45 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

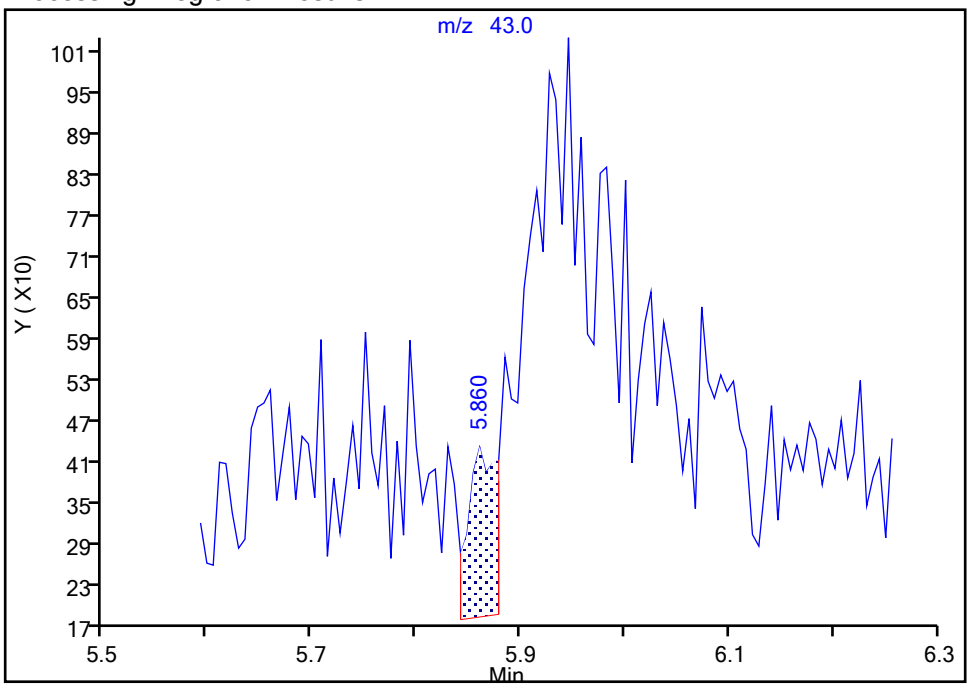
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X02.D				
Injection Date:	19-Jun-2023 14:49:30	Instrument ID:	19930		
Lims ID:	IC std1				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	2	Worklist Smp#:	3
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

42 Ethyl acetate, CAS: 141-78-6

Signal: 1

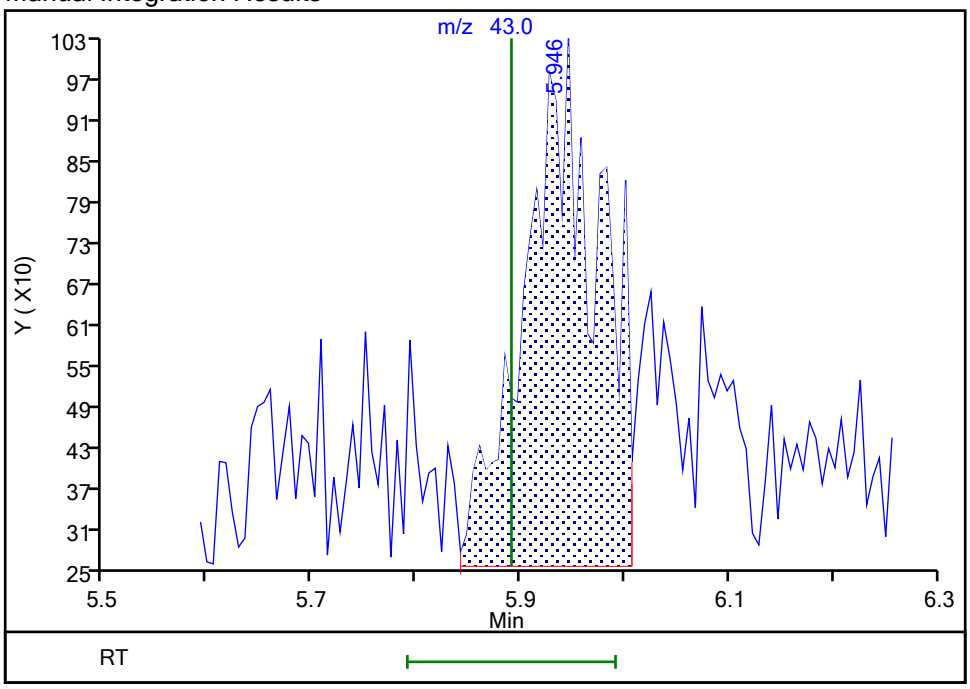
Processing Integration Results

RT: 5.86
Area: 494
Amount: 0.289235
Amount Units: ug/l



Manual Integration Results

RT: 5.95
Area: 3840
Amount: 0.158917
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:20:03 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC

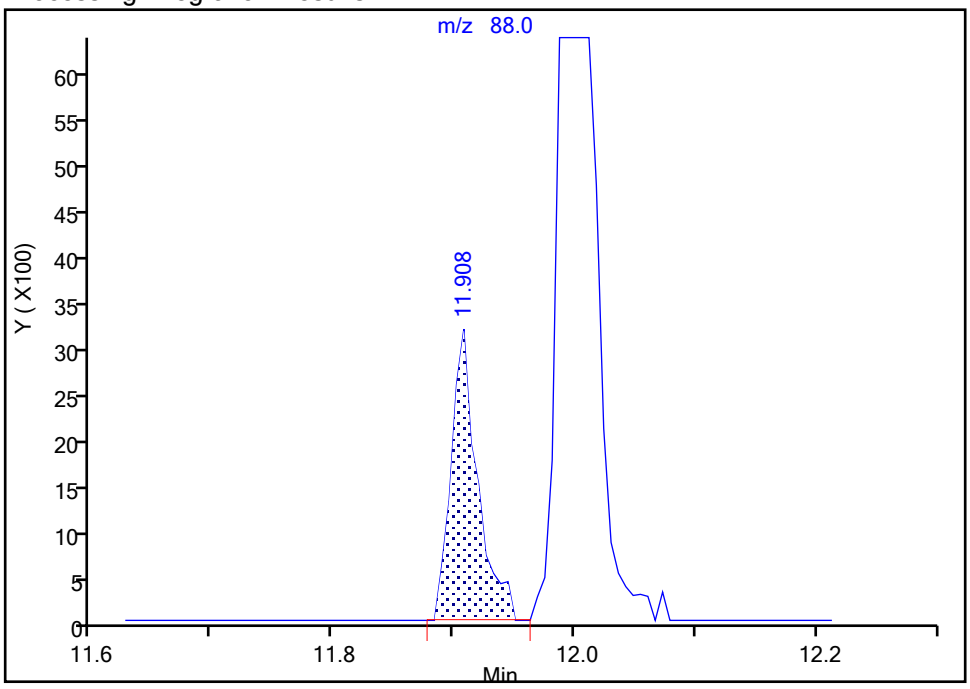
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X02.D				
Injection Date:	19-Jun-2023 14:49:30	Instrument ID:	19930		
Lims ID:	IC std1				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	2	Worklist Smp#:	3
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

118 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

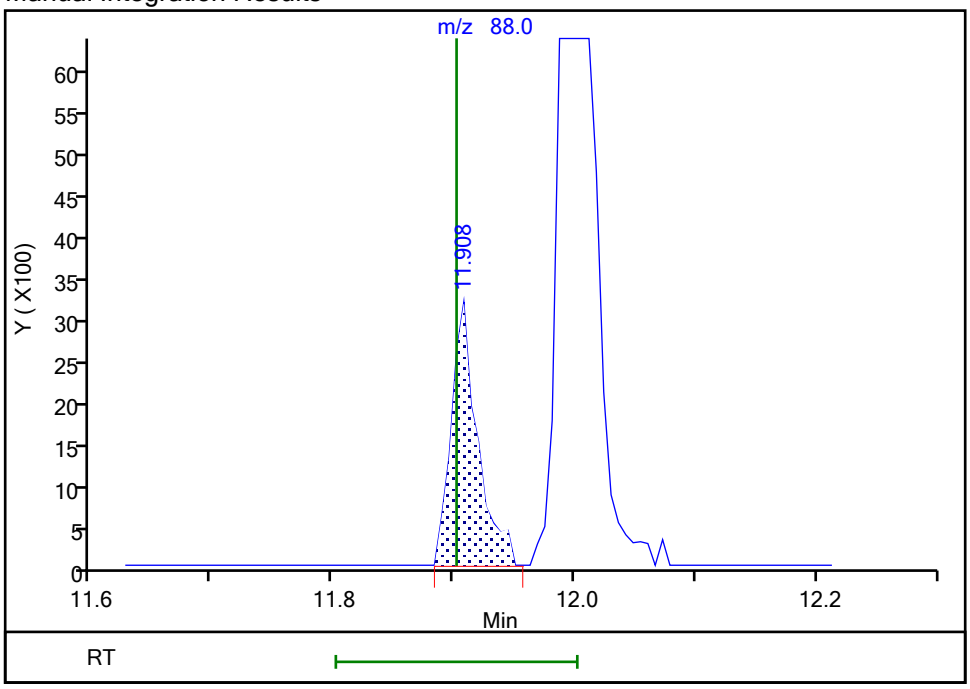
Processing Integration Results

RT: 11.91
Area: 4786
Amount: 0.292178
Amount Units: ug/l



Manual Integration Results

RT: 11.91
Area: 4787
Amount: 0.321094
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:32:12 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X03.D
Lims ID: IC std2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 19-Jun-2023 15:10:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0086929-004
Misc. Info.: SM 10.0
Operator ID: KNK41612 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub44

Method: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 27-Jun-2023 12:29:47 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1687

First Level Reviewer: DVW2 Date: 21-Jun-2023 08:17:52

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Chlorodifluoromethane	51	1.879	1.867	0.012	96	42825	0.5000	0.5491	
3 Dimethyl ether	45	1.928	1.922	0.006	98	32491	0.5000	0.4872	
21 Acetonitrile	41	3.769	3.788	-0.019	20	14059	2.50	6.21	M
* 26 t-Butyl alcohol-d10 (IS)	65	3.964	3.977	-0.013	22	141625	50.0	50.0	M
33 Vinyl acetate	43	5.025	4.989	0.036	97	33879	0.5000	0.5100	
42 Ethyl acetate	43	5.927	5.891	0.036	94	10477	0.5000	0.4171	
59 Isopropyl acetate	43	7.134	7.128	0.006	98	31989	0.5000	0.4696	
* 61 Fluorobenzene (IS)	96	7.445	7.452	-0.007	99	1973742	10.0	10.0	
70 n-Propyl acetate	43	8.470	8.445	0.025	98	15407	0.5000	0.3537	
73 2-Chloroethyl vinyl ether	63		9.006				ND	ND	
104 n-Butyl acetate	43	10.420	10.408	0.012	98	27123	0.5000	0.4995	M
* 107 Chlorobenzene-d5 (IS)	117	10.987	10.988	-0.001	84	1547291	10.0	10.0	
118 cis-1,4-Dichloro-2-butene	88	11.908	11.902	0.006	30	12683	1.00	0.8178	
119 Cyclohexanone	55	11.944	11.938	0.006	88	30502	25.0	22.2	
* 135 1,4-Dichlorobenzene-d4	152	12.883	12.884	-0.001	93	946775	10.0	10.0	
149 2-Chloro-1,1,1-Trifluoroethane	1		0.000				ND	ND	
162 Chlorotrifluoroethene	1		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND
Review Flags
M - Manually Integrated

Reagents:

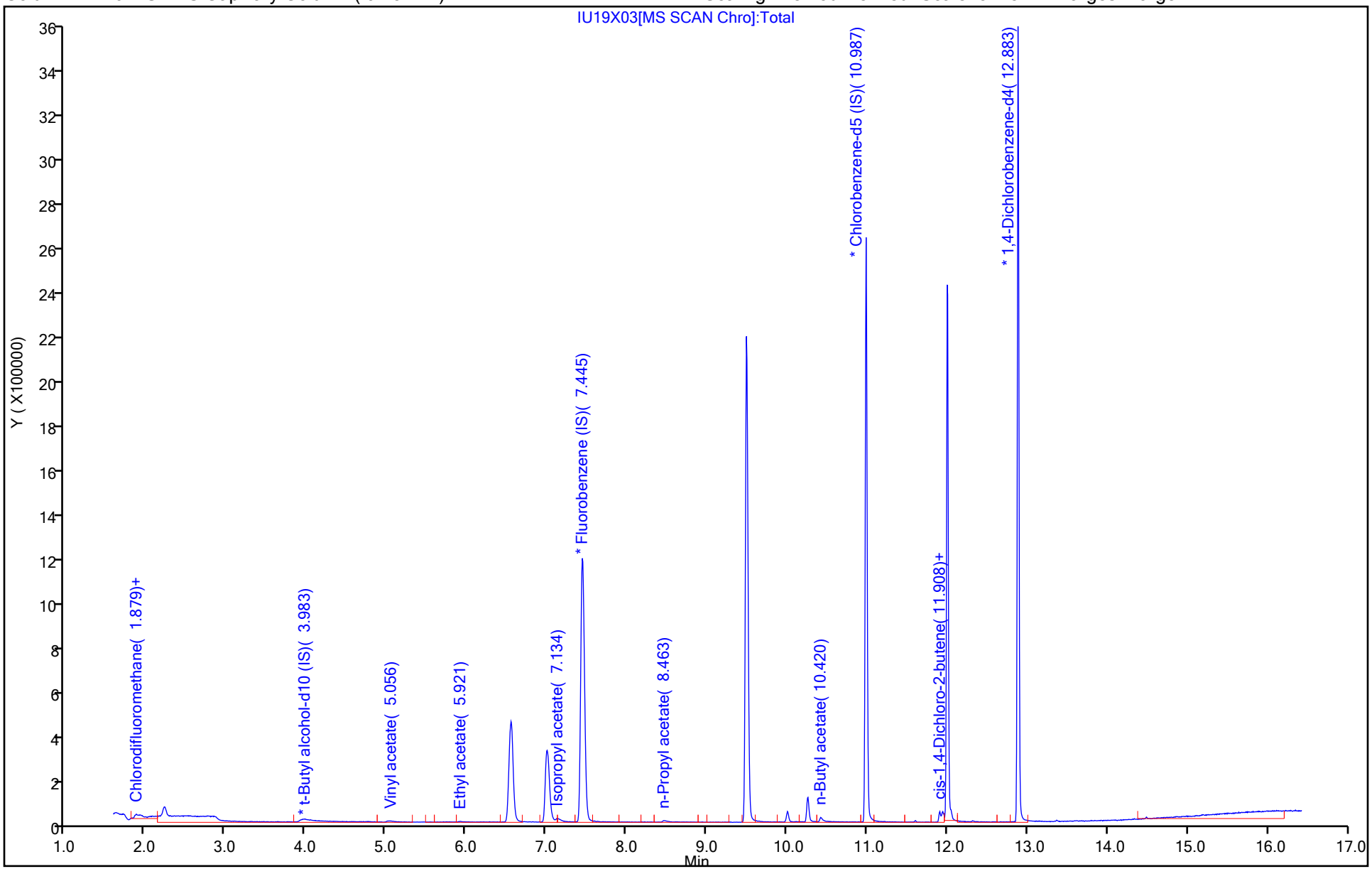
MSV_CCV_V5ACE_00025	Amount Added:	0.50	Units: uL
MSV_DME_00046	Amount Added:	0.50	Units: uL
MSV_CCV_CYC_00005	Amount Added:	4.00	Units: uL
MSV_LLcentISO_00006	Amount Added:	5.00	Units: uL
MSV_V_SMRV4_00059	Amount Added:	2.50	Units: uL

Report Date: 27-Jun-2023 12:29:48 Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X03.D				
Injection Date:	19-Jun-2023 15:10:30	Instrument ID:	19930	Operator ID:	KNK41612
Lims ID:	IC std2			Worklist Smp#:	4
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

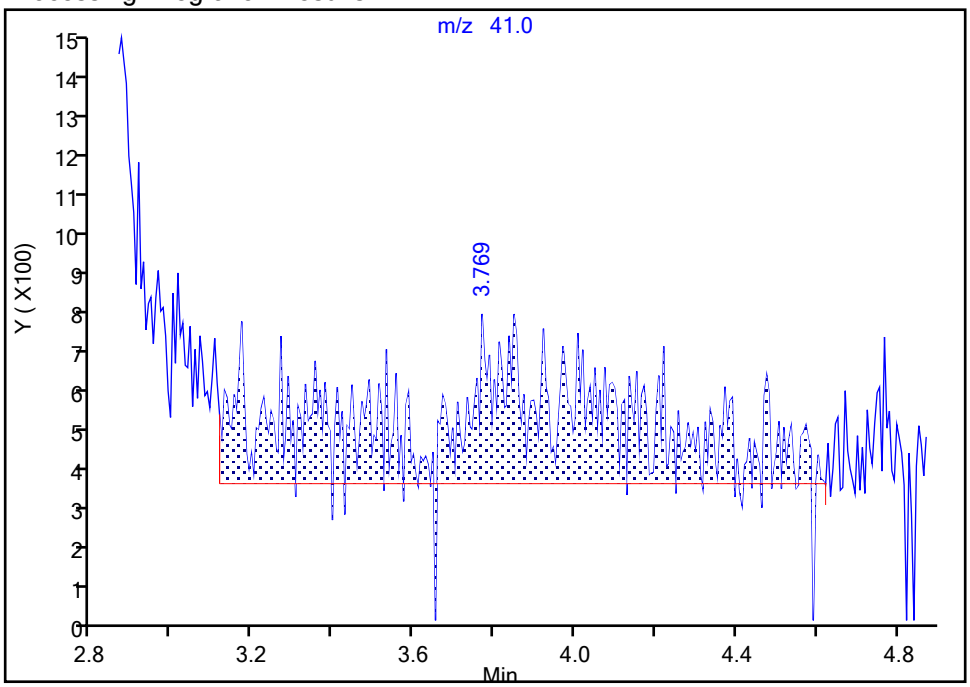
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X03.D
Injection Date: 19-Jun-2023 15:10:30 Instrument ID: 19930
Lims ID: IC std2
Client ID:
Operator ID: KNK41612 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

21 Acetonitrile, CAS: 75-05-8

Signal: 1

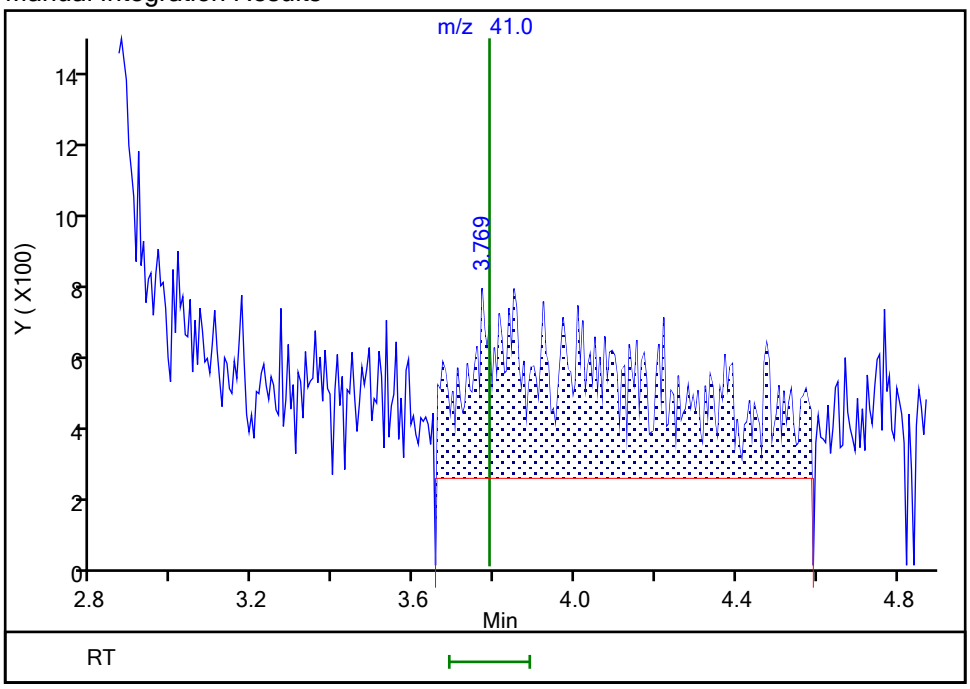
Processing Integration Results

RT: 3.77
Area: 13000
Amount: 5.742258
Amount Units: ug/l



Manual Integration Results

RT: 3.77
Area: 14059
Amount: 6.210031
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 16:08:51 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

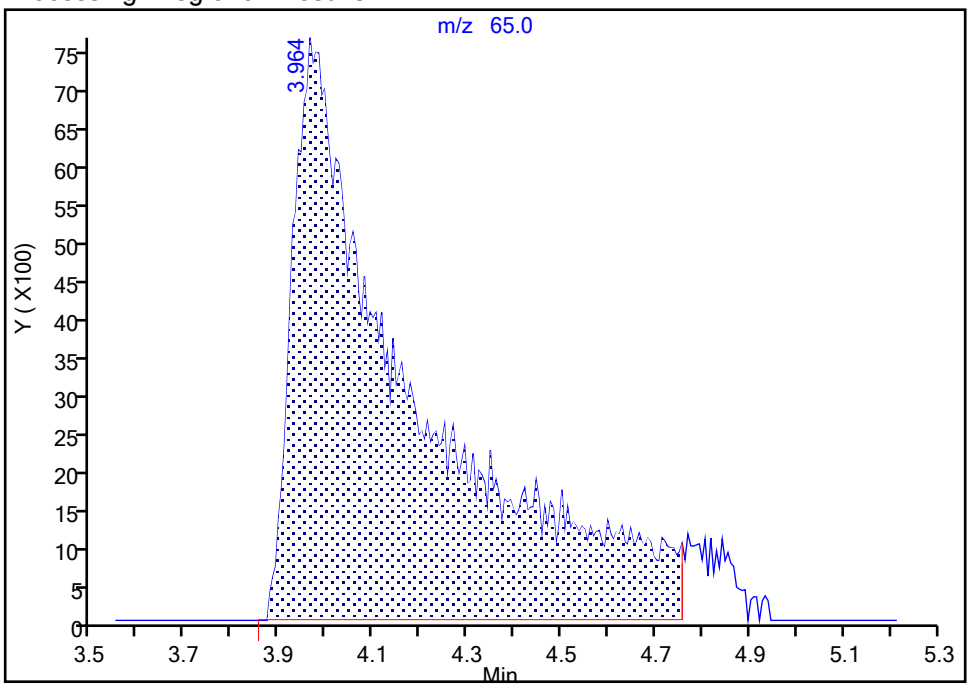
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X03.D
Injection Date: 19-Jun-2023 15:10:30 Instrument ID: 19930
Lims ID: IC std2
Client ID:
Operator ID: KNK41612 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

* 26 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

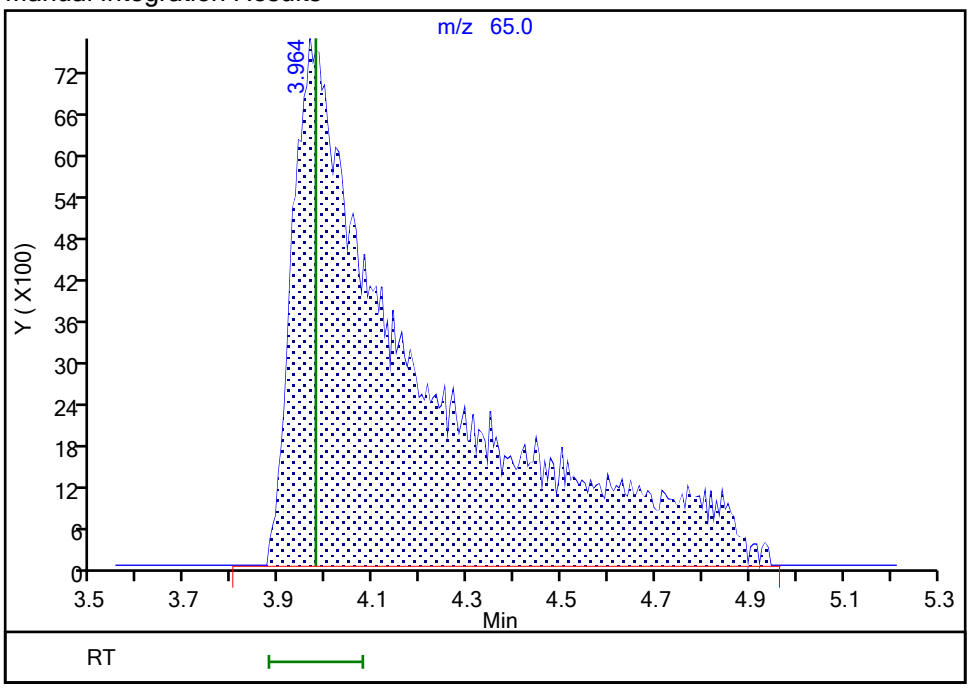
Processing Integration Results

RT: 3.96
Area: 134592
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 3.96
Area: 141625
Amount: 50.000000
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 16:08:59 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X04.D
Lims ID: IC std3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 19-Jun-2023 15:31:30 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0086929-005
Misc. Info.: SM 5.0
Operator ID: KNK41612 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub44

Method: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 27-Jun-2023 12:29:50 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1687

First Level Reviewer: DVW2 Date: 21-Jun-2023 08:23:00

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Chlorodifluoromethane	51	1.867	1.867	0.000	97	70059	1.00	0.9846	
3 Dimethyl ether	45	1.922	1.922	0.000	100	67276	1.00	1.11	
21 Acetonitrile	41	3.775	3.788	-0.013	22	12033	5.00	5.83	M
* 26 t-Butyl alcohol-d10 (IS)	65	3.995	3.977	0.018	22	110300	50.0	50.0	
33 Vinyl acetate	43	5.007	4.989	0.018	97	61164	1.00	1.01	
42 Ethyl acetate	43	5.909	5.891	0.018	97	20416	1.00	0.8909	
59 Isopropyl acetate	43	7.141	7.128	0.013	98	62822	1.00	1.01	M
* 61 Fluorobenzene (IS)	96	7.445	7.452	-0.007	99	1800694	10.0	10.0	
70 n-Propyl acetate	43	8.470	8.445	0.025	99	37708	1.00	0.9489	Ma
73 2-Chloroethyl vinyl ether	63		9.006				ND	ND	
104 n-Butyl acetate	43	10.414	10.408	0.006	98	52499	1.00	1.05	
* 107 Chlorobenzene-d5 (IS)	117	10.987	10.988	-0.001	84	1428082	10.0	10.0	
118 cis-1,4-Dichloro-2-butene	88	11.908	11.902	0.006	30	26241	2.00	1.83	a
119 Cyclohexanone	55	11.944	11.938	0.006	90	48696	50.0	45.5	
* 135 1,4-Dichlorobenzene-d4	152	12.883	12.884	-0.001	93	873761	10.0	10.0	
149 2-Chloro-1,1,1-Trifluoroethane	1		0.000				ND	ND	
162 Chlorotrifluoroethene	1		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

MSV_CCV_V5ACE_00025	Amount Added:	1.00	Units: uL
MSV_DME_00046	Amount Added:	1.00	Units: uL
MSV_CCV_CYC_00005	Amount Added:	8.00	Units: uL
MSV_LLcentISO_00006	Amount Added:	5.00	Units: uL
MSV_V_SMRV4_00059	Amount Added:	5.00	Units: uL

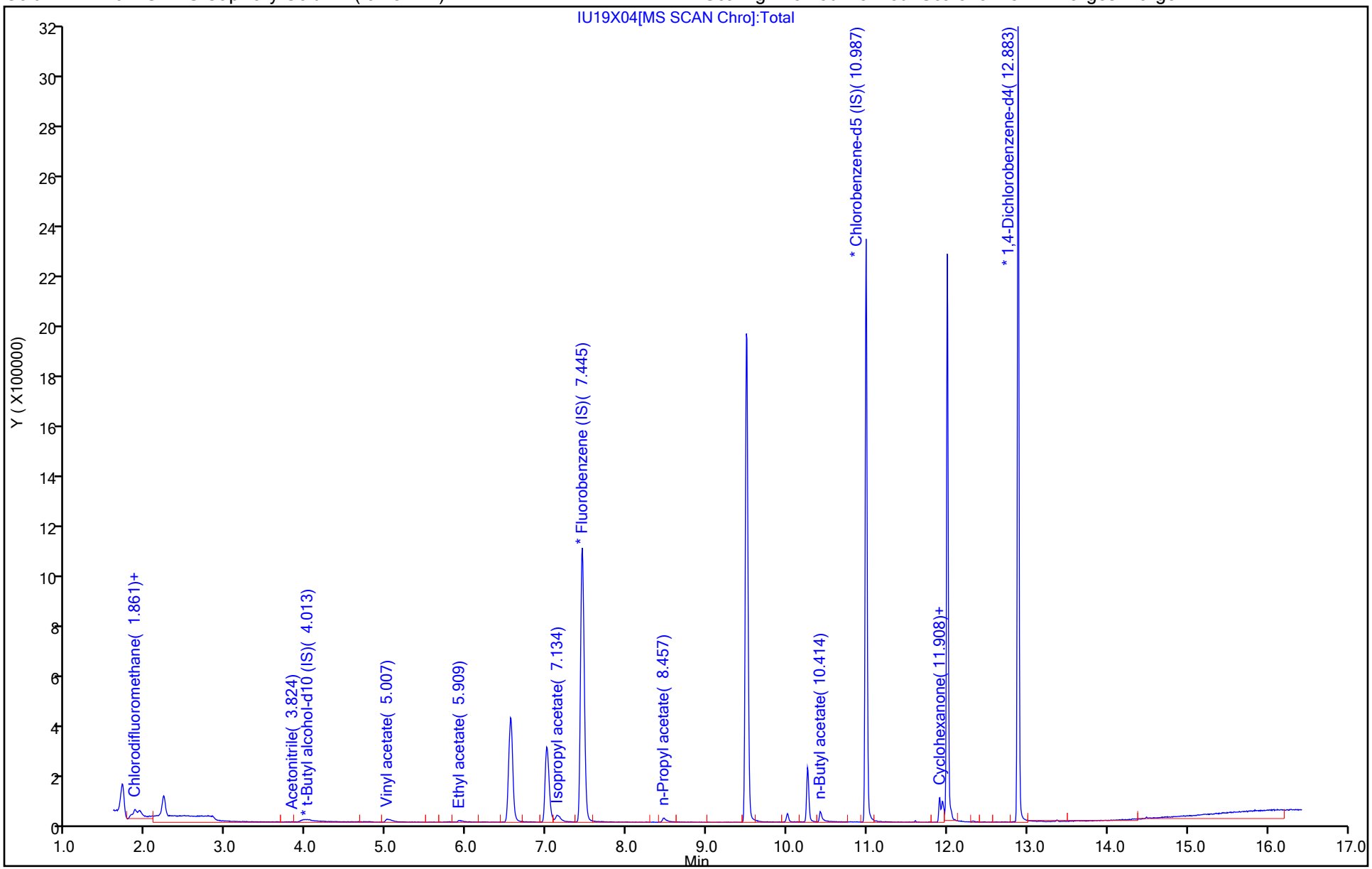
Report Date: 27-Jun-2023 12:29:51 Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X04.D

Injection Date:	19-Jun-2023 15:31:30	Instrument ID:	19930	Operator ID:	KNK41612
Lims ID:	IC std3			Worklist Smp#:	5
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

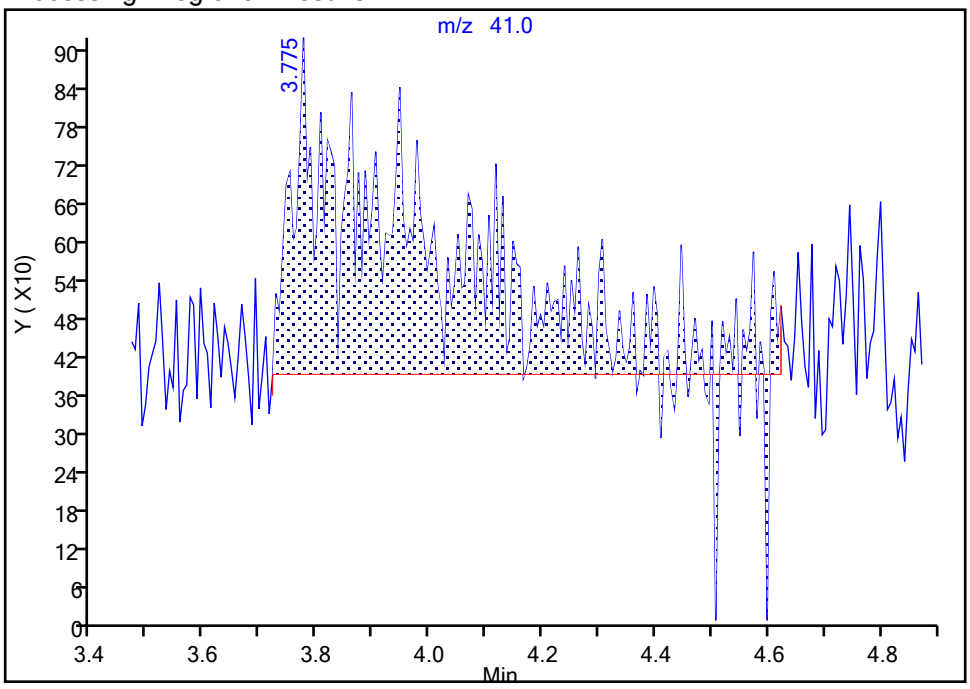
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X04.D
Injection Date: 19-Jun-2023 15:31:30 Instrument ID: 19930
Lims ID: IC std3
Client ID:
Operator ID: KNK41612 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

21 Acetonitrile, CAS: 75-05-8

Signal: 1

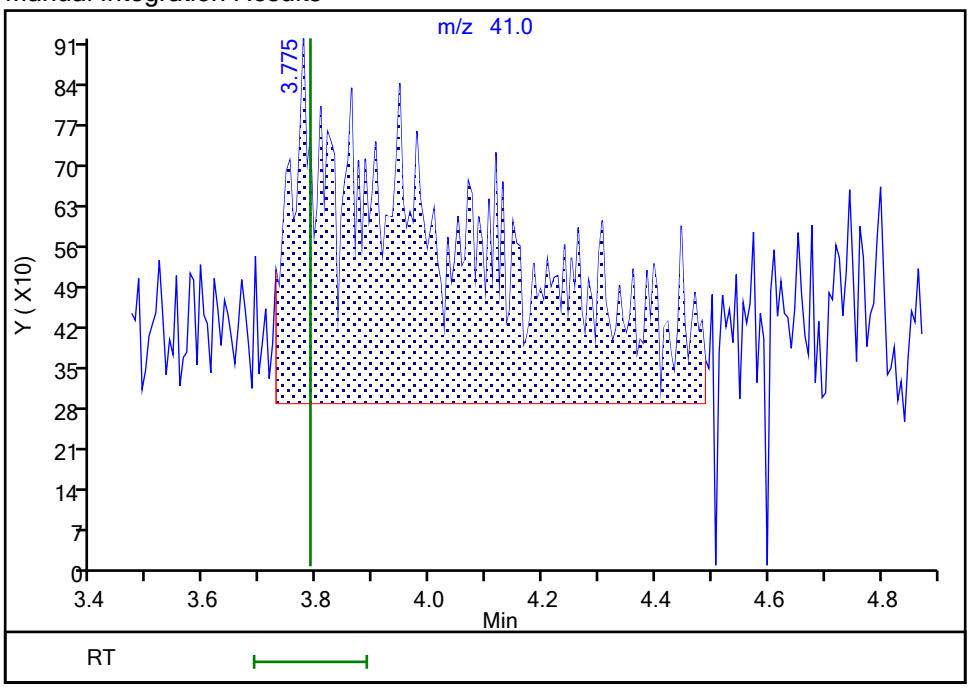
Processing Integration Results

RT: 3.78
Area: 7280
Amount: 1.698582
Amount Units: ug/l



Manual Integration Results

RT: 3.78
Area: 12033
Amount: 5.825910
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 14:56:16 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

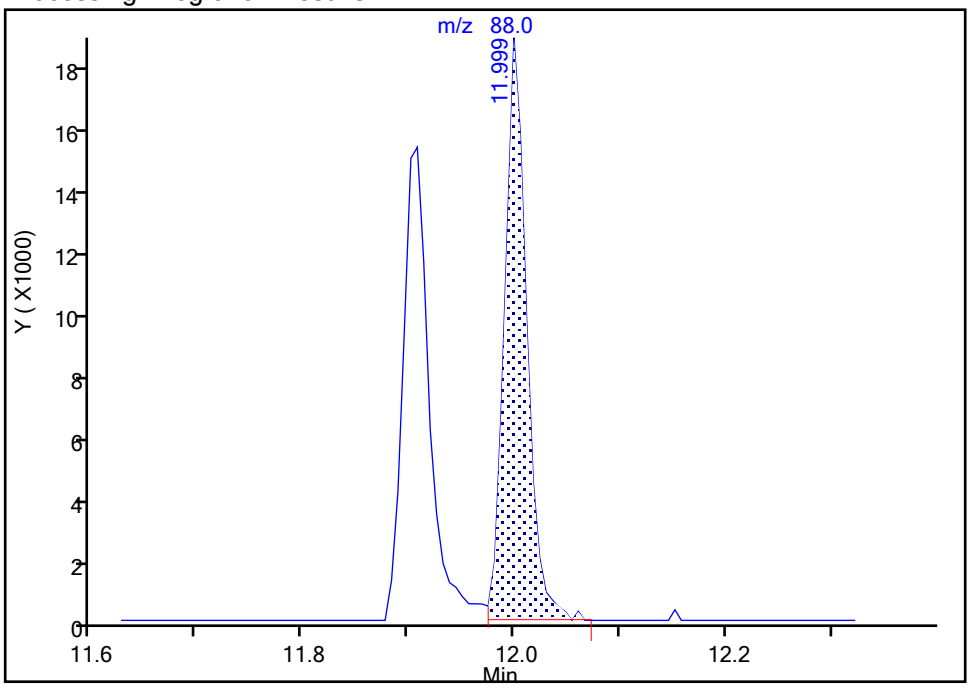
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X04.D				
Injection Date:	19-Jun-2023 15:31:30	Instrument ID:	19930		
Lims ID:	IC std3				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	4	Worklist Smp#:	5
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

118 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

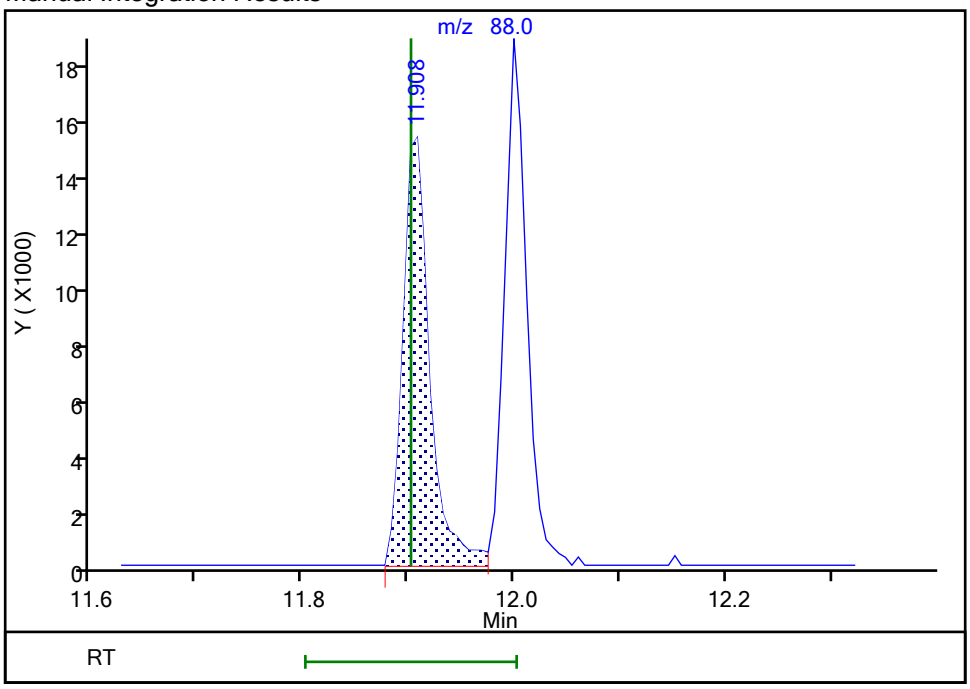
Processing Integration Results

RT: 12.00
Area: 26883
Amount: 2.018193
Amount Units: ug/l



Manual Integration Results

RT: 11.91
Area: 26241
Amount: 1.833162
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:32:31 -04:00:00 (UTC)

Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X05.D
Lims ID: IC std4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 19-Jun-2023 15:52:30 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0086929-006
Misc. Info.: SM 2.0
Operator ID: KNK41612 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub44

Method: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 27-Jun-2023 12:29:52 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1687

First Level Reviewer: DVW2 Date: 21-Jun-2023 08:23:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Chlorodifluoromethane	51	1.867	1.867	0.000	96	147068	2.00	2.05	
3 Dimethyl ether	45	1.928	1.922	0.006	99	116853	2.00	1.91	
21 Acetonitrile	41	3.830	3.788	0.042	19	22246	10.0	10.7	Ma
* 26 t-Butyl alcohol-d10 (IS)	65	3.982	3.977	0.005	22	100489	50.0	50.0	
33 Vinyl acetate	43	5.007	4.989	0.018	97	113242	2.00	1.86	M
42 Ethyl acetate	43	5.903	5.891	0.012	99	46431	2.00	2.01	M
59 Isopropyl acetate	43	7.134	7.128	0.006	97	118911	2.00	1.90	M
* 61 Fluorobenzene (IS)	96	7.445	7.452	-0.007	99	1812979	10.0	10.0	
70 n-Propyl acetate	43	8.451	8.445	0.006	98	80951	2.00	2.02	M
73 2-Chloroethyl vinyl ether	63		9.006				ND	ND	
104 n-Butyl acetate	43	10.414	10.408	0.006	98	92045	2.00	1.83	
* 107 Chlorobenzene-d5 (IS)	117	10.987	10.988	-0.001	84	1432231	10.0	10.0	
118 cis-1,4-Dichloro-2-butene	88	11.908	11.902	0.006	29	58366	4.00	4.07	a
119 Cyclohexanone	55	11.938	11.938	0.000	90	99814	100.0	102.4	
* 135 1,4-Dichlorobenzene-d4	152	12.883	12.884	-0.001	93	868921	10.0	10.0	
149 2-Chloro-1,1,1-Trifluoroethane	1		0.000				ND	ND	
162 Chlorotrifluoroethene	1		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

MSV_CCV_V5ACE_00025	Amount Added:	1.00	Units: uL
MSV_DME_00046	Amount Added:	1.00	Units: uL
MSV_CCV_CYC_00005	Amount Added:	8.00	Units: uL
MSV_LLcentISO_00006	Amount Added:	5.00	Units: uL
MSV_V_SMRV4_00059	Amount Added:	5.00	Units: uL

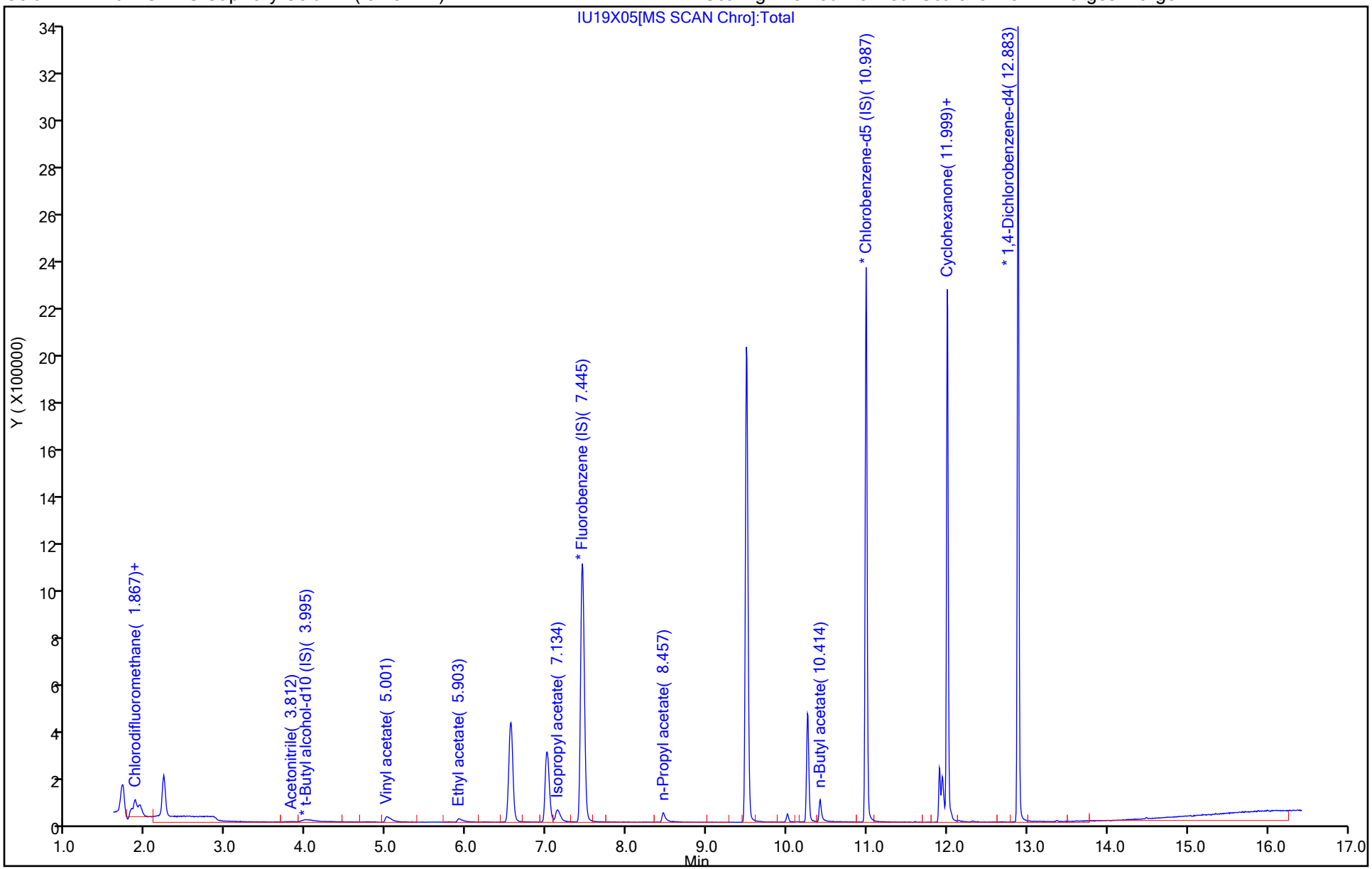
Report Date: 27-Jun-2023 12:29:53 Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X05.D

Injection Date:	19-Jun-2023 15:52:30	Instrument ID:	19930	Operator ID:	KNK41612
Lims ID:	IC std4			Worklist Smp#:	6
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

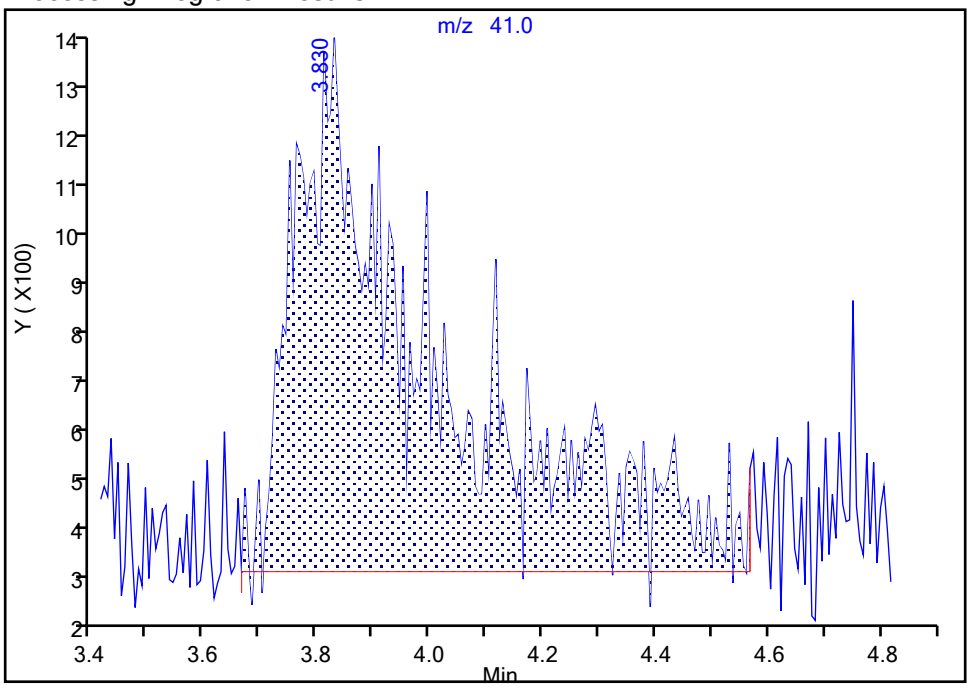
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X05.D
Injection Date: 19-Jun-2023 15:52:30 Instrument ID: 19930
Lims ID: IC std4
Client ID:
Operator ID: KNK41612 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

21 Acetonitrile, CAS: 75-05-8

Signal: 1

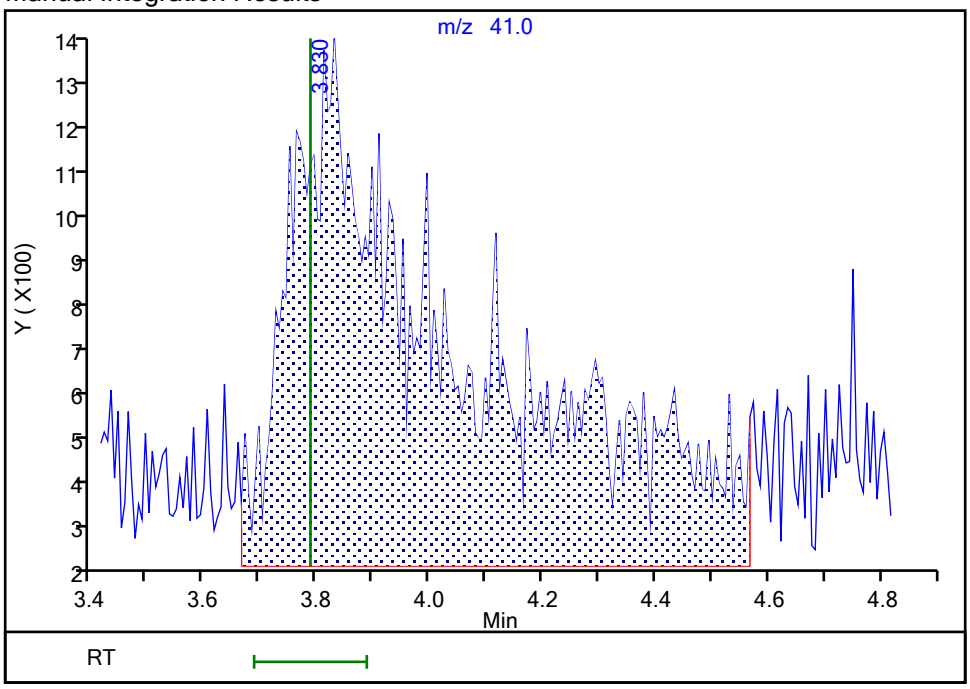
Processing Integration Results

RT: 3.83
Area: 15870
Amount: 3.294878
Amount Units: ug/l



Manual Integration Results

RT: 3.83
Area: 22246
Amount: 10.697663
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 14:55:53 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

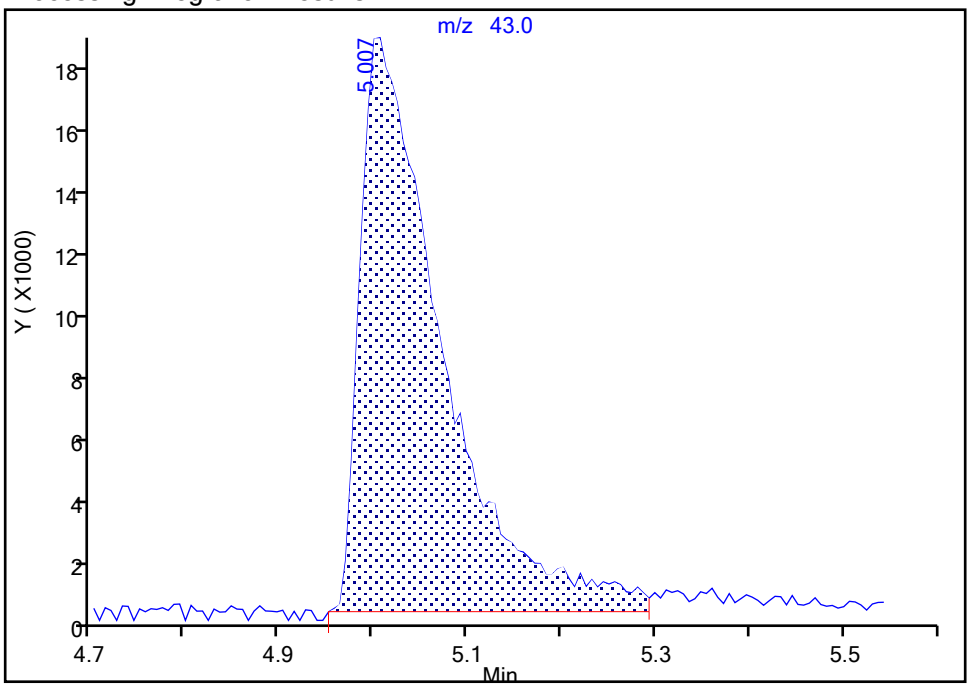
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X05.D				
Injection Date:	19-Jun-2023 15:52:30	Instrument ID:	19930		
Lims ID:	IC std4				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	5	Worklist Smp#:	6
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

33 Vinyl acetate, CAS: 108-05-4

Signal: 1

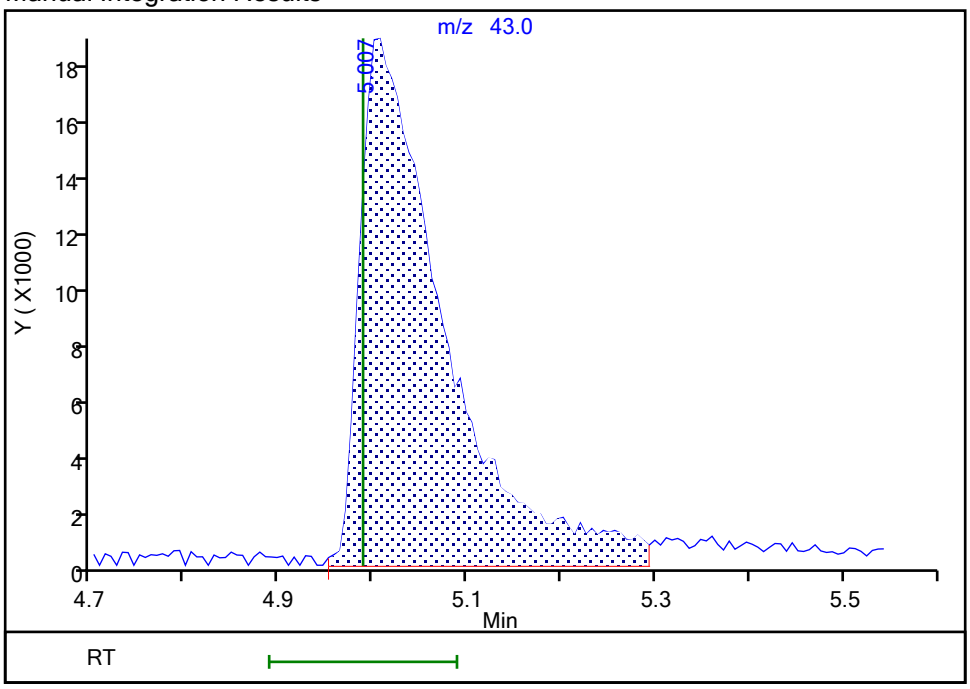
Processing Integration Results

RT: 5.01
Area: 107800
Amount: 1.776767
Amount Units: ug/l



Manual Integration Results

RT: 5.01
Area: 113242
Amount: 1.855750
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:25:28 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

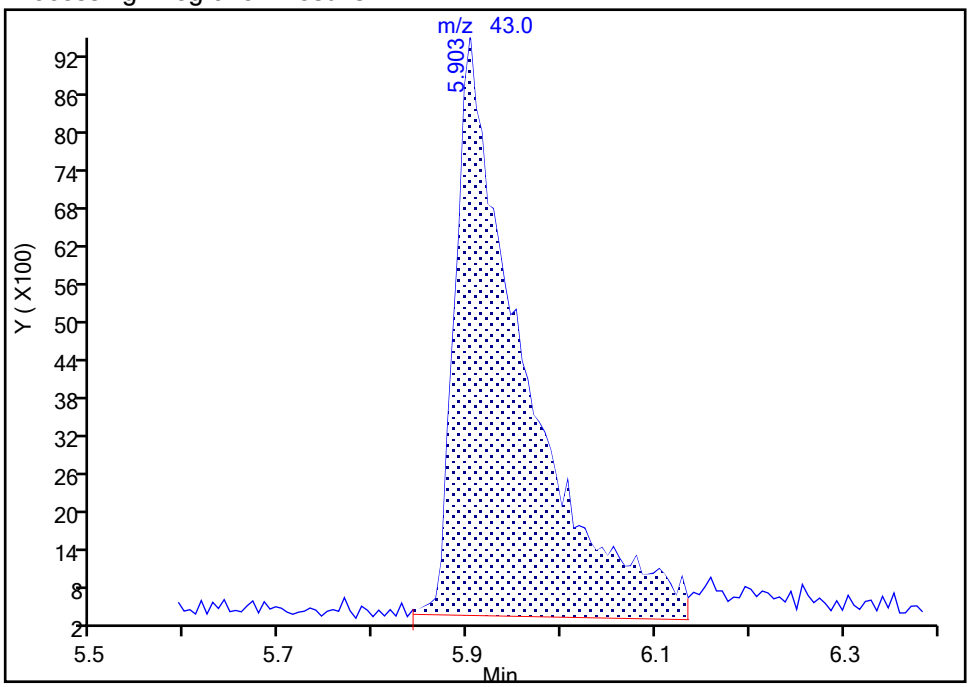
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X05.D
Injection Date: 19-Jun-2023 15:52:30 Instrument ID: 19930
Lims ID: IC std4
Client ID:
Operator ID: KNK41612 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

42 Ethyl acetate, CAS: 141-78-6

Signal: 1

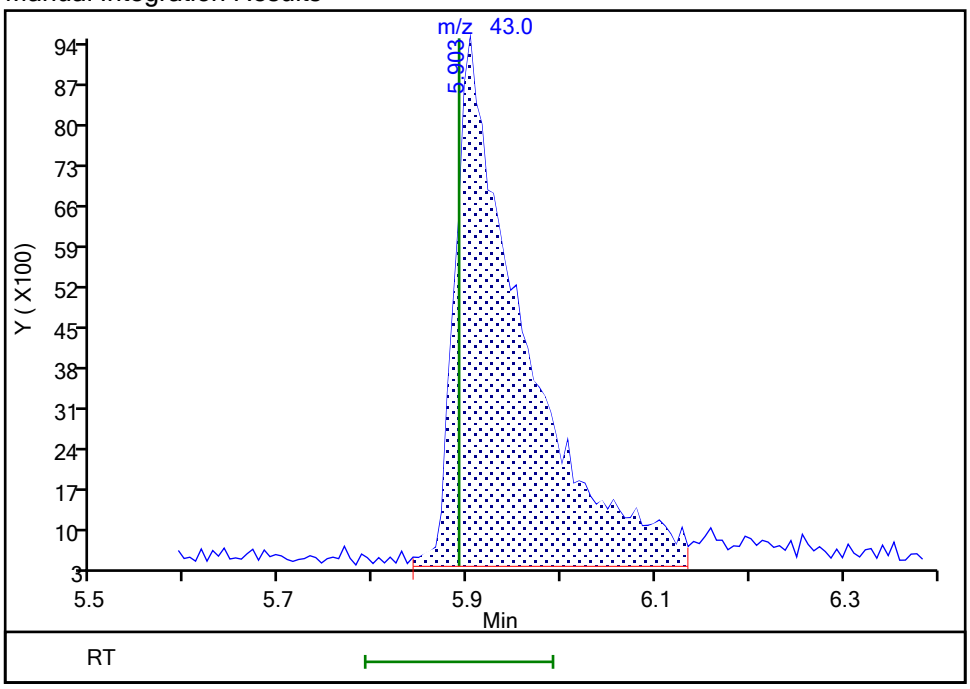
Processing Integration Results

RT: 5.90
Area: 45983
Amount: 1.994748
Amount Units: ug/l



Manual Integration Results

RT: 5.90
Area: 46431
Amount: 2.012427
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:25:36 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

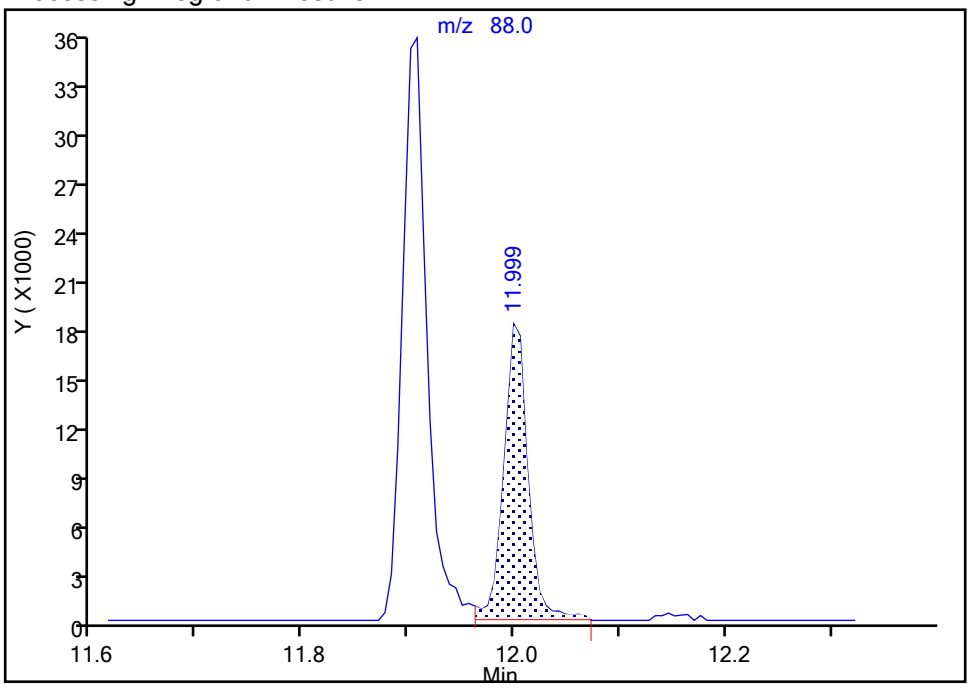
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X05.D
Injection Date: 19-Jun-2023 15:52:30 Instrument ID: 19930
Lims ID: IC std4
Client ID:
Operator ID: KNK41612 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

118 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

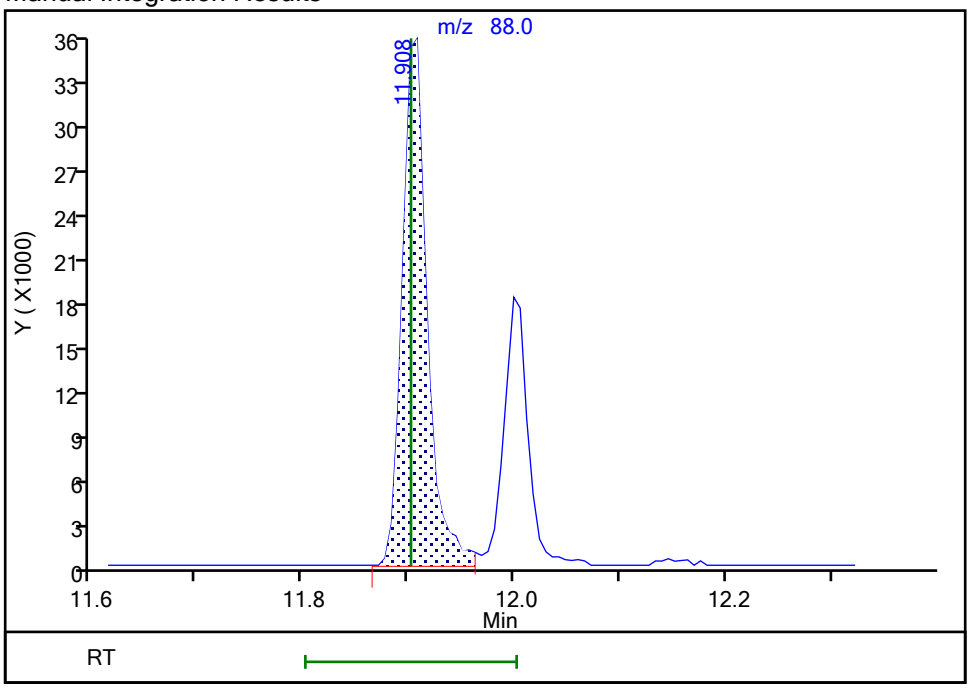
Processing Integration Results

RT: 12.00
Area: 29165
Amount: 1.213614
Amount Units: ug/l



Manual Integration Results

RT: 11.91
Area: 58366
Amount: 4.065560
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:32:36 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X06.D
Lims ID: IC std5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 19-Jun-2023 16:13:30 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0086929-007
Misc. Info.: SM 5.0
Operator ID: KNK41612 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub44

Method: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 27-Jun-2023 12:29:55 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1687

First Level Reviewer: DVW2 Date: 21-Jun-2023 08:26:51

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Chlorodifluoromethane	51	1.867	1.867	0.000	97	354220	5.00	4.90	
3 Dimethyl ether	45	1.922	1.922	0.000	99	315734	5.00	5.11	
21 Acetonitrile	41	3.812	3.788	0.024	19	46193	25.0	22.0	M
* 26 t-Butyl alcohol-d10 (IS)	65	4.050	3.977	0.073	27	89518	50.0	50.0	M
33 Vinyl acetate	43	5.001	4.989	0.012	97	302053	5.00	4.91	
42 Ethyl acetate	43	5.897	5.891	0.006	99	129747	5.00	5.57	
59 Isopropyl acetate	43	7.128	7.128	0.000	98	295497	5.00	4.68	
* 61 Fluorobenzene (IS)	96	7.445	7.452	-0.007	99	1828854	10.0	10.0	
70 n-Propyl acetate	43	8.445	8.445	0.000	98	216058	5.00	5.35	
73 2-Chloroethyl vinyl ether	63	9.012	9.006	0.006	1	895	5.00	3.32	
104 n-Butyl acetate	43	10.408	10.408	0.000	98	258101	5.00	5.09	
* 107 Chlorobenzene-d5 (IS)	117	10.987	10.988	-0.001	84	1444071	10.0	10.0	
118 cis-1,4-Dichloro-2-butene	88	11.902	11.902	0.000	29	160237	10.0	11.1	
119 Cyclohexanone	55	11.938	11.938	0.000	90	217173	250.0	250.2	
* 135 1,4-Dichlorobenzene-d4	152	12.883	12.884	-0.001	93	887604	10.0	10.0	
149 2-Chloro-1,1,1-Trifluoroethane	1		0.000				ND	ND	
162 Chlorotrifluoroethene	1		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND
Review Flags
M - Manually Integrated

Reagents:

MSV_CCV_V5ACE_00025	Amount Added:	1.00	Units: uL
MSV_DME_00046	Amount Added:	1.00	Units: uL
MSV_CCV_CYC_00005	Amount Added:	8.00	Units: uL
MSV_LLcentISO_00006	Amount Added:	5.00	Units: uL
MSV_V_SMRV4_00059	Amount Added:	5.00	Units: uL

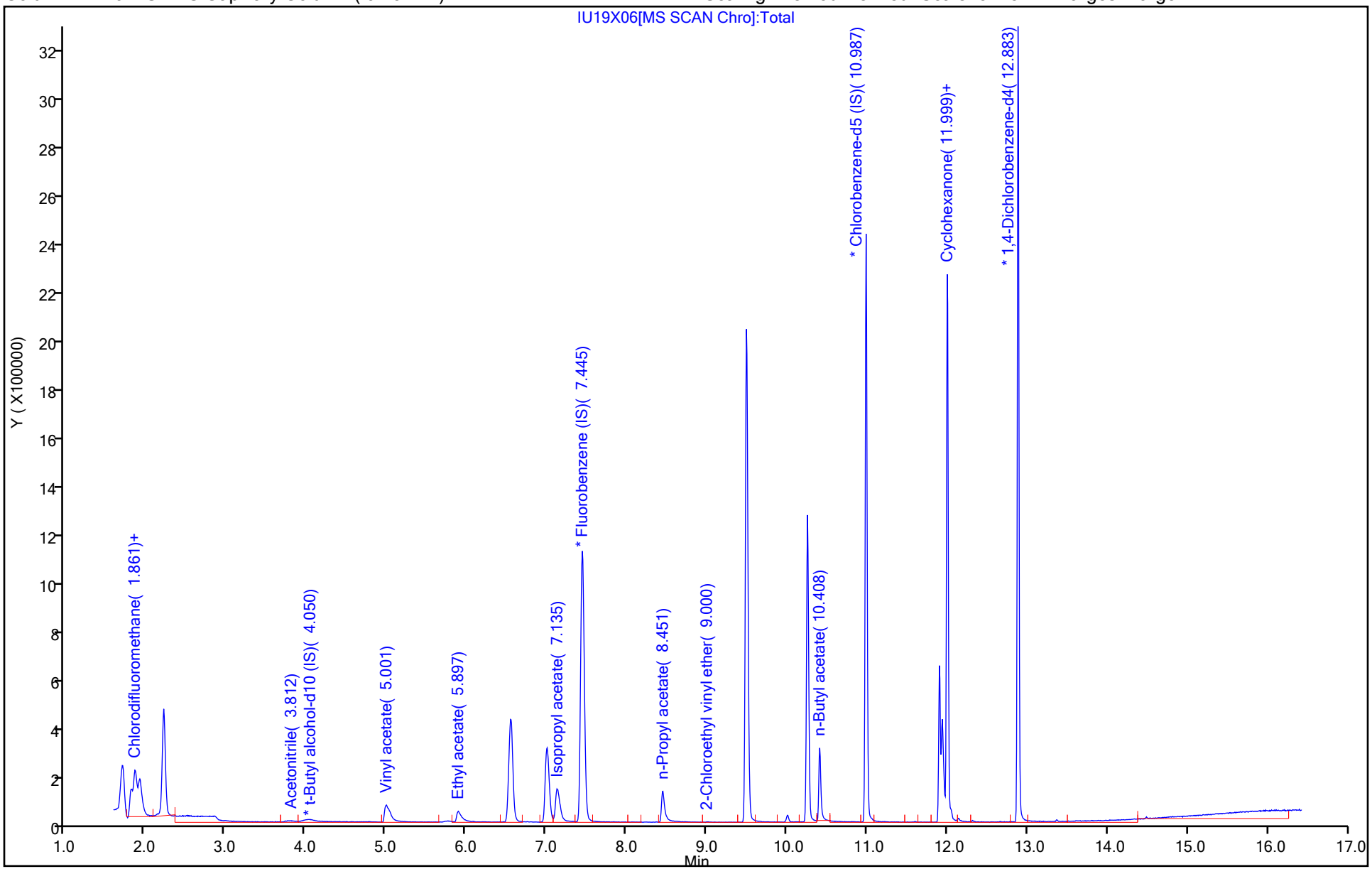
Report Date: 27-Jun-2023 12:29:55 Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X06.D

Injection Date:	19-Jun-2023 16:13:30	Instrument ID:	19930	Operator ID:	KNK41612
Lims ID:	IC std5			Worklist Smp#:	7
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

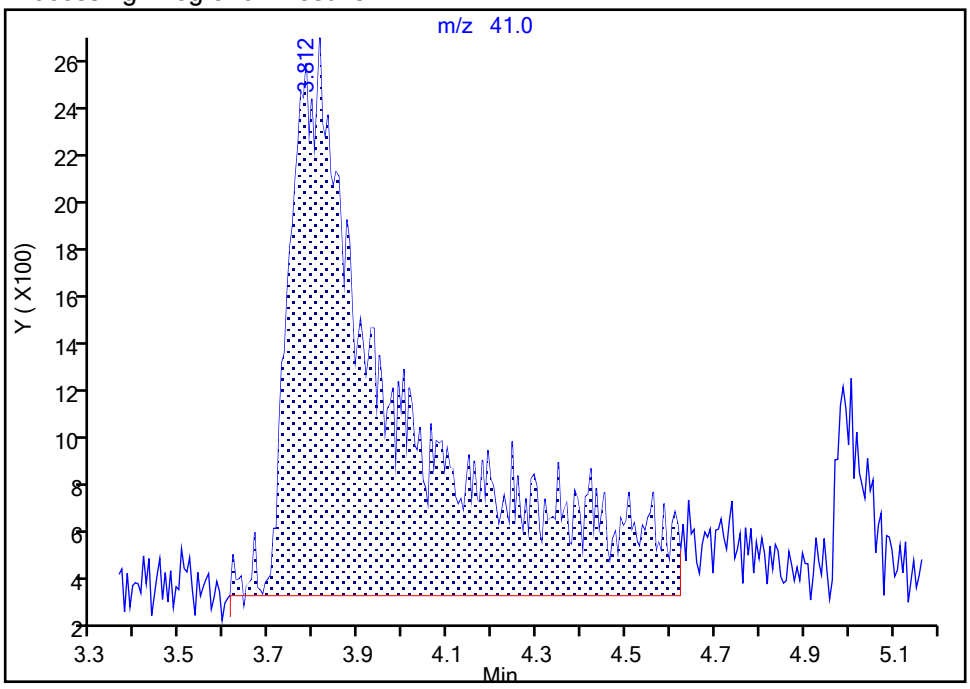
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X06.D
Injection Date: 19-Jun-2023 16:13:30 Instrument ID: 19930
Lims ID: IC std5
Client ID:
Operator ID: KNK41612 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

21 Acetonitrile, CAS: 75-05-8

Signal: 1

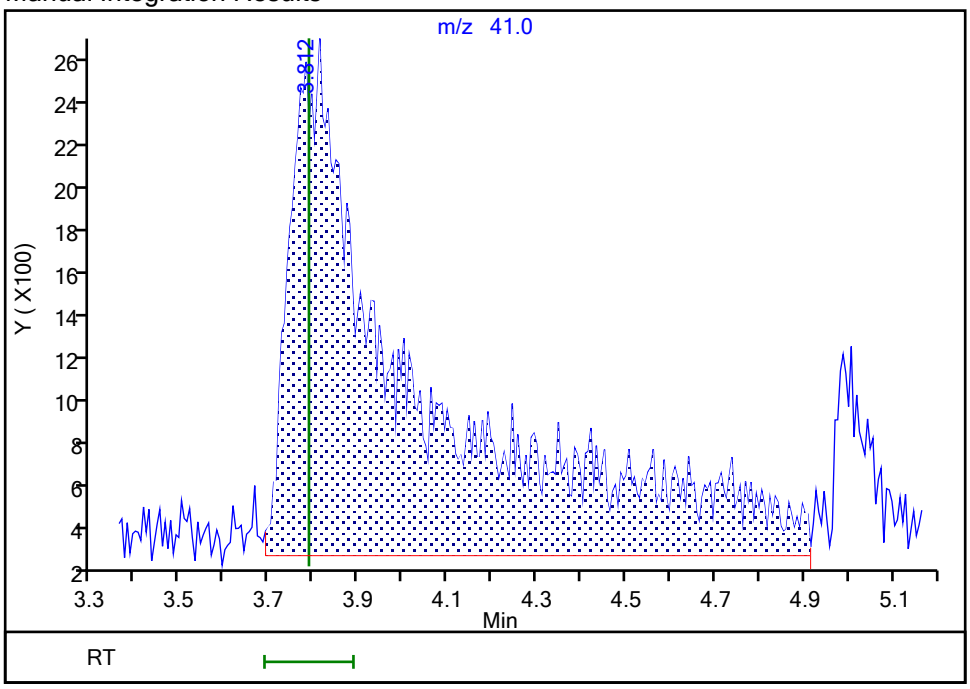
Processing Integration Results

RT: 3.81
Area: 38597
Amount: 7.501240
Amount Units: ug/l



Manual Integration Results

RT: 3.81
Area: 46193
Amount: 22.020485
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 14:55:37 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

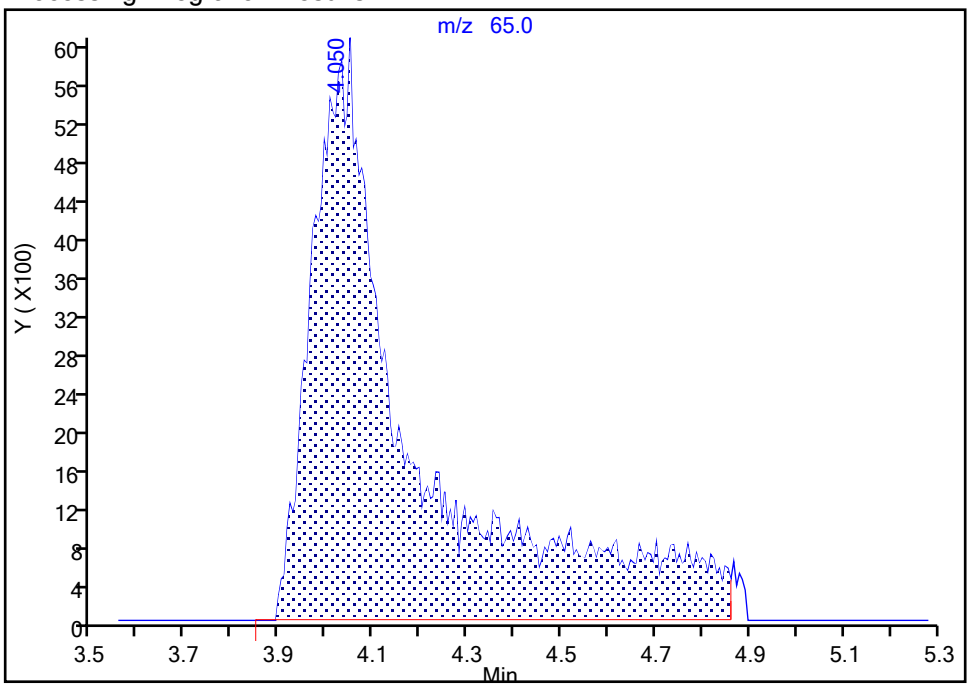
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X06.D
Injection Date: 19-Jun-2023 16:13:30 Instrument ID: 19930
Lims ID: IC std5
Client ID:
Operator ID: KNK41612 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

* 26 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

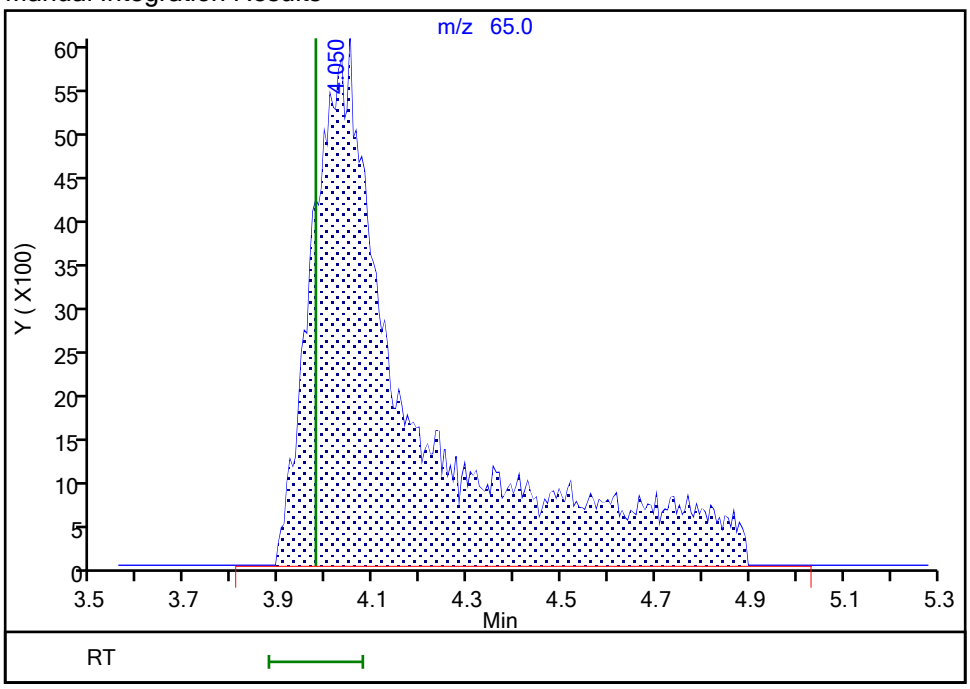
Processing Integration Results

RT: 4.05
Area: 88718
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 4.05
Area: 89518
Amount: 50.000000
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:26:39 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X07.D
Lims ID: IC std6 SM
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 19-Jun-2023 16:34:30 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0086929-008
Misc. Info.: SM 10.0
Operator ID: KNK41612 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub44

Method: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 27-Jun-2023 12:29:57 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1687

First Level Reviewer: DVW2 Date: 20-Jun-2023 15:14:24

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Chlorodifluoromethane	51	1.867	1.867	0.000	97	702885	10.0	9.86	
3 Dimethyl ether	45	1.922	1.922	0.000	99	597989	10.0	9.81	
21 Acetonitrile	41	3.788	3.788	0.000	25	84890	50.0	41.0	M
* 26 t-Butyl alcohol-d10 (IS)	65	4.025	4.025	0.000	22	83666	50.0	50.0	M
33 Vinyl acetate	43	4.989	4.989	0.000	97	596485	10.0	9.82	
42 Ethyl acetate	43	5.891	5.891	0.000	99	266923	10.0	11.6	
59 Isopropyl acetate	43	7.128	7.128	0.000	98	610049	10.0	9.79	
* 61 Fluorobenzene (IS)	96	7.445	7.445	0.000	99	1804558	10.0	10.0	
70 n-Propyl acetate	43	8.445	8.445	0.000	98	440656	10.0	11.1	
73 2-Chloroethyl vinyl ether	63	9.006	9.006	0.000	89	3197	10.0	12.0	
104 n-Butyl acetate	43	10.408	10.408	0.000	98	543448	10.0	10.8	
* 107 Chlorobenzene-d5 (IS)	117	10.987	10.987	0.000	84	1437525	10.0	10.0	
118 cis-1,4-Dichloro-2-butene	88	11.902	11.902	0.000	30	329445	20.0	22.9	
119 Cyclohexanone	55	11.938	11.938	0.000	91	441030	500.0	543.6	
* 135 1,4-Dichlorobenzene-d4	152	12.883	12.883	0.000	93	872295	10.0	10.0	
149 2-Chloro-1,1,1-Trifluoroethane	1		0.000				ND	ND	
162 Chlorotrifluoroethene	1		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND
Review Flags
M - Manually Integrated

Reagents:

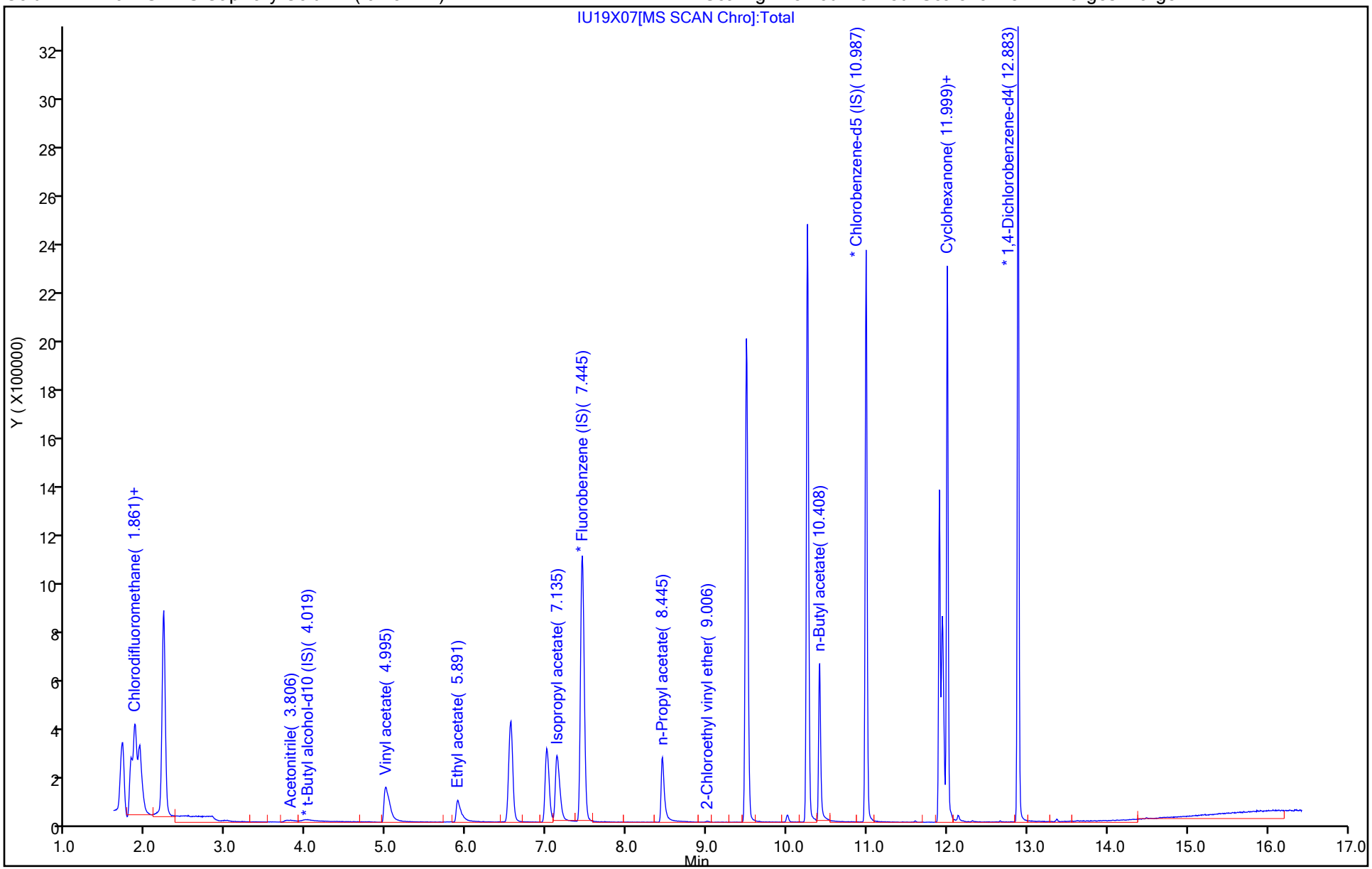
MSV_CCV_V5ACE_00025	Amount Added:	1.00	Units: uL
MSV_DME_00046	Amount Added:	1.00	Units: uL
MSV_CCV_CYC_00005	Amount Added:	8.00	Units: uL
MSV_LLcentISO_00006	Amount Added:	5.00	Units: uL
MSV_V_SMRV4_00059	Amount Added:	5.00	Units: uL

Report Date: 27-Jun-2023 12:29:58 Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X07.D				
Injection Date:	19-Jun-2023 16:34:30	Instrument ID:	19930	Operator ID:	KNK41612
Lims ID:	IC std6 SM			Worklist Smp#:	8
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

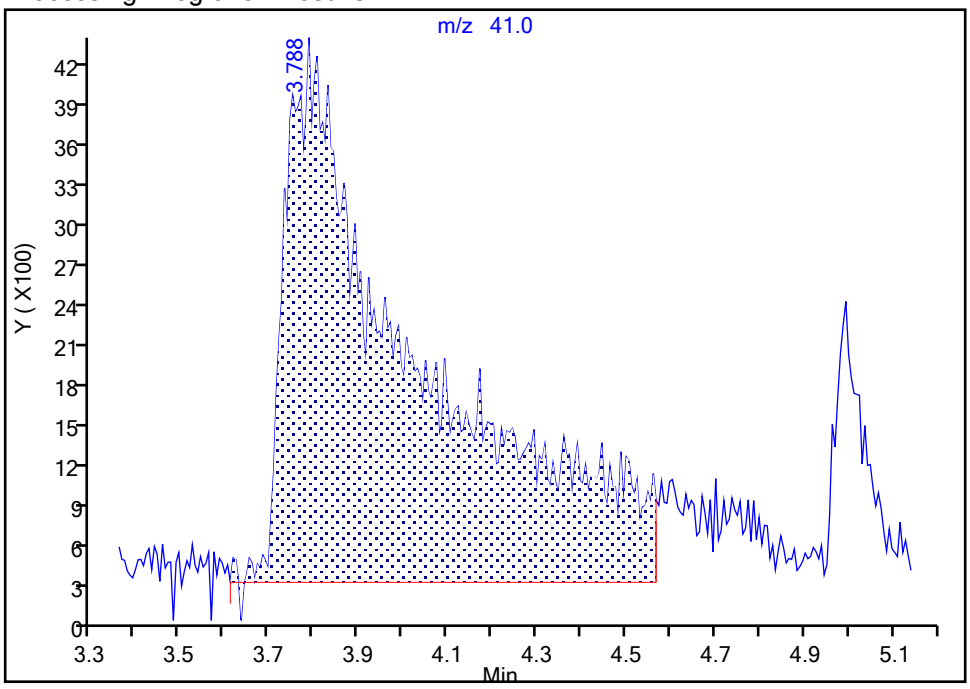
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X07.D
Injection Date: 19-Jun-2023 16:34:30 Instrument ID: 19930
Lims ID: IC std6 SM
Client ID:
Operator ID: KNK41612 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

21 Acetonitrile, CAS: 75-05-8

Signal: 1

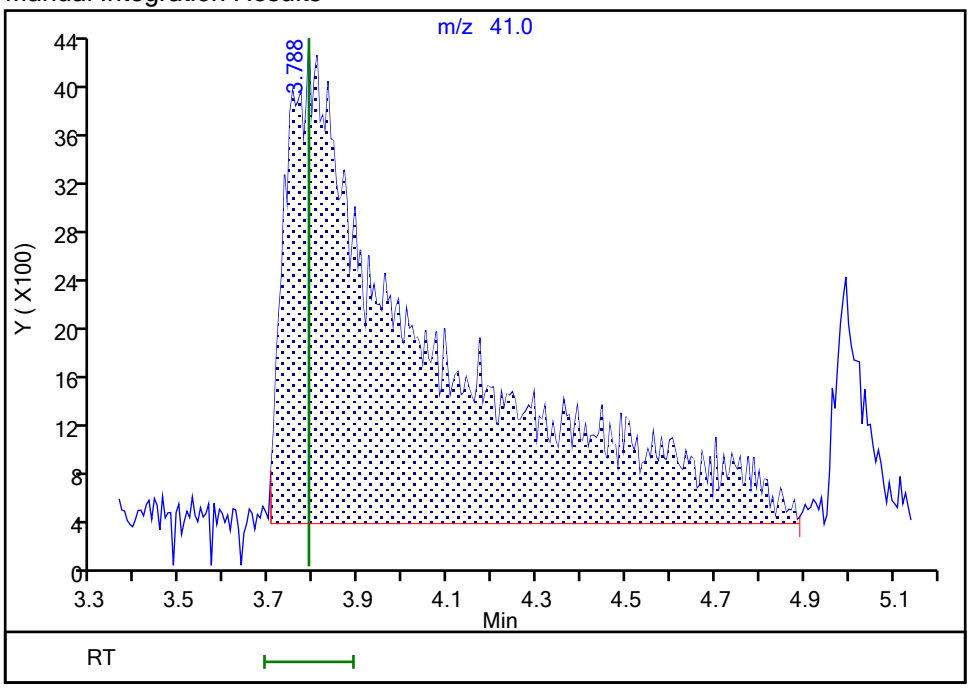
Processing Integration Results

RT: 3.79
Area: 81014
Amount: 6.118113
Amount Units: ug/l



Manual Integration Results

RT: 3.79
Area: 84890
Amount: 41.012423
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 14:54:49 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

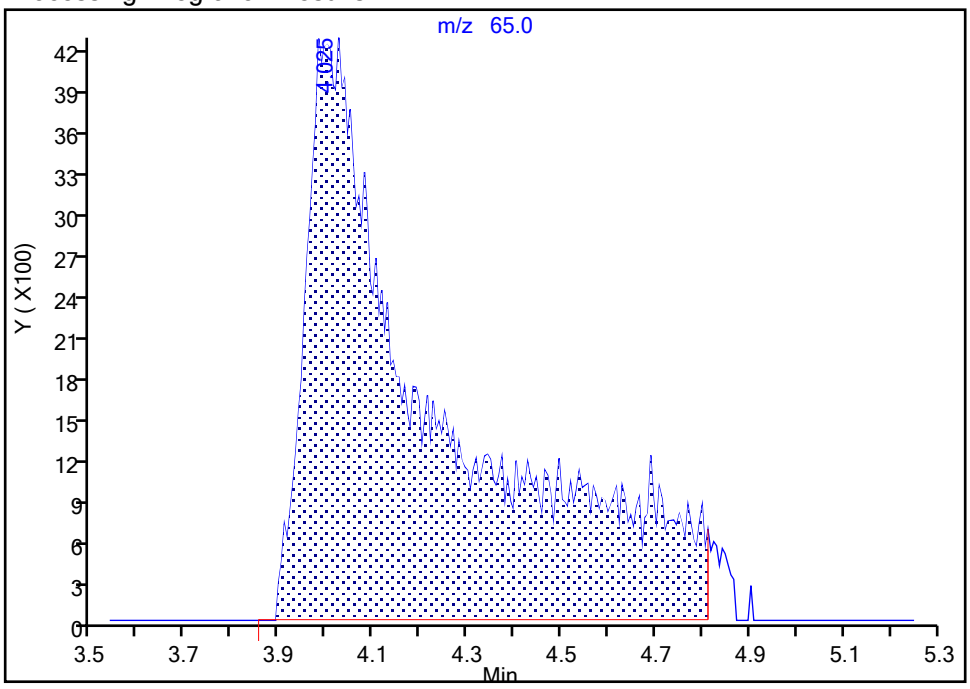
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X07.D				
Injection Date:	19-Jun-2023 16:34:30	Instrument ID:	19930		
Lims ID:	IC std6 SM				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	7	Worklist Smp#:	8
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

* 26 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

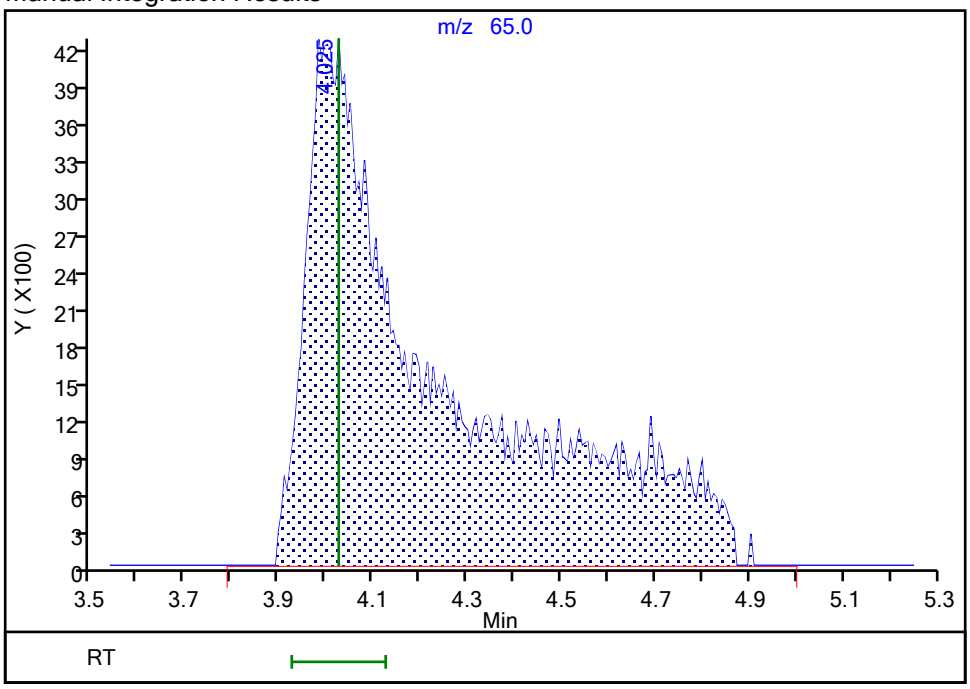
Processing Integration Results

RT: 4.03
Area: 82063
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 4.03
Area: 83666
Amount: 50.000000
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:14:41 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X08.D
Lims ID: IC std7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 19-Jun-2023 16:55:30 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0086929-009
Misc. Info.: SM 25.0
Operator ID: KNK41612 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub44

Method: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 27-Jun-2023 12:29:59 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1687

First Level Reviewer: DVW2 Date: 21-Jun-2023 08:27:27

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Chlorodifluoromethane	51	1.873	1.867	0.006	97	1791816	25.0	25.0	
3 Dimethyl ether	45	1.928	1.922	0.006	99	1588476	25.0	25.9	
21 Acetonitrile	41	3.751	3.788	-0.037	99	276683	125.0	133.0	M
* 26 t-Butyl alcohol-d10 (IS)	65	3.995	4.025	-0.030	30	107302	50.0	50.0	M
33 Vinyl acetate	43	4.989	4.989	0.000	97	1543134	25.0	25.3	
42 Ethyl acetate	43	5.885	5.891	-0.006	99	690605	25.0	29.9	
59 Isopropyl acetate	43	7.135	7.128	0.006	98	1527407	25.0	24.4	
* 61 Fluorobenzene (IS)	96	7.445	7.445	0.000	99	1813707	10.0	10.0	
70 n-Propyl acetate	43	8.445	8.445	0.000	98	1122558	25.0	28.0	
73 2-Chloroethyl vinyl ether	63	9.006	9.006	0.000	93	7591	25.0	28.4	
104 n-Butyl acetate	43	10.402	10.408	-0.006	98	1325744	25.0	26.2	
* 107 Chlorobenzene-d5 (IS)	117	10.987	10.987	0.000	84	1443609	10.0	10.0	
118 cis-1,4-Dichloro-2-butene	88	11.902	11.902	0.000	29	865958	50.0	59.8	a
119 Cyclohexanone	55	11.938	11.938	0.000	91	1415471	1250.0	1360.4	
* 135 1,4-Dichlorobenzene-d4	152	12.883	12.883	0.000	93	874610	10.0	10.0	
149 2-Chloro-1,1,1-Trifluoroethane	1		0.000				ND	ND	
162 Chlorotrifluoroethene	1		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

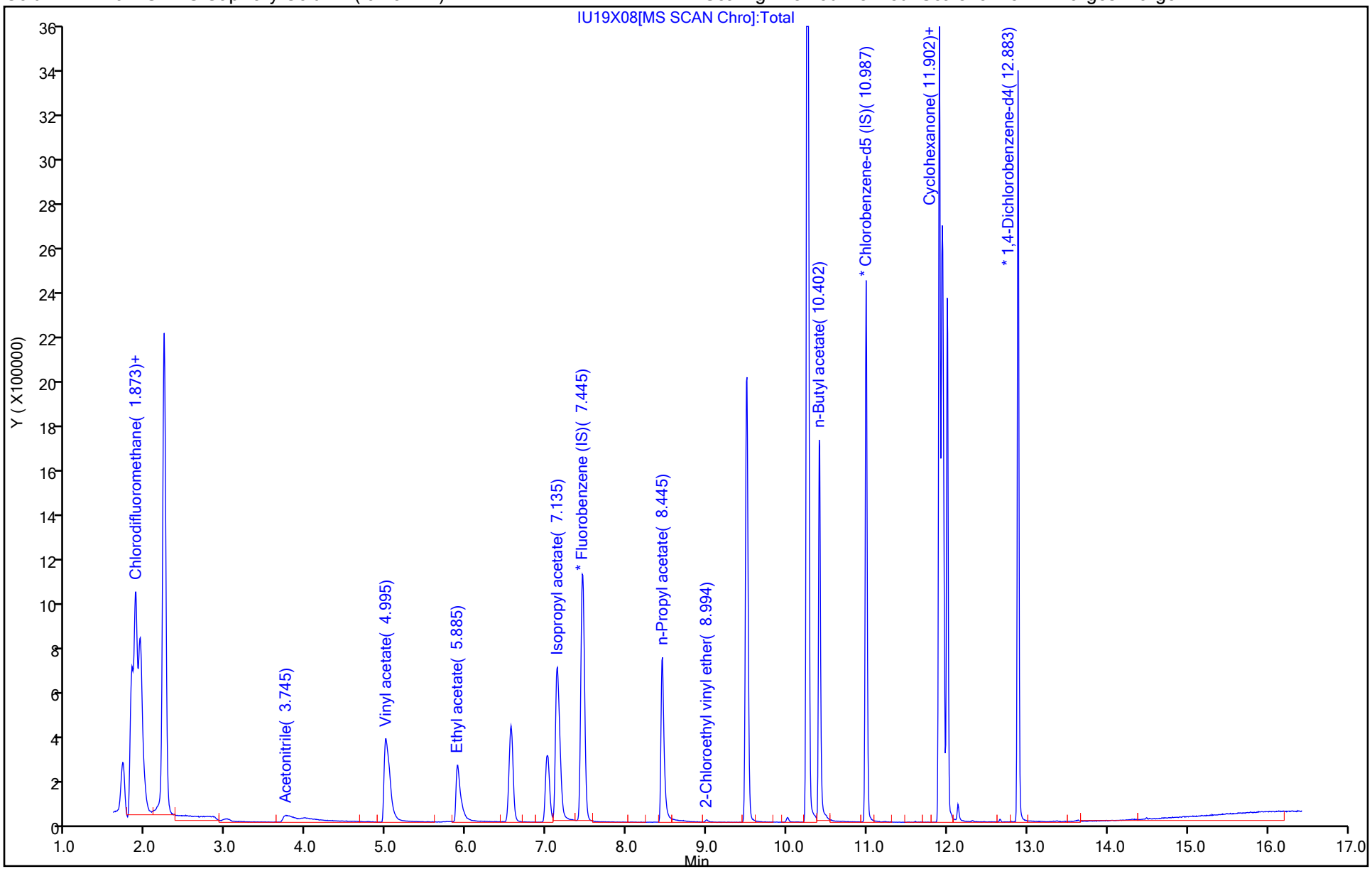
MSV_CCV_V5ACE_00025	Amount Added:	2.50	Units: uL
MSV_DME_00046	Amount Added:	2.50	Units: uL
MSV_CCV_CYC_00005	Amount Added:	20.00	Units: uL
MSV_LLcentISO_00006	Amount Added:	5.00	Units: uL
MSV_V_SMRV4_00059	Amount Added:	12.50	Units: uL

Report Date: 27-Jun-2023 12:30:00 Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X08.D				
Injection Date:	19-Jun-2023 16:55:30	Instrument ID:	19930	Operator ID:	KNK41612
Lims ID:	IC std7			Worklist Smp#:	9
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

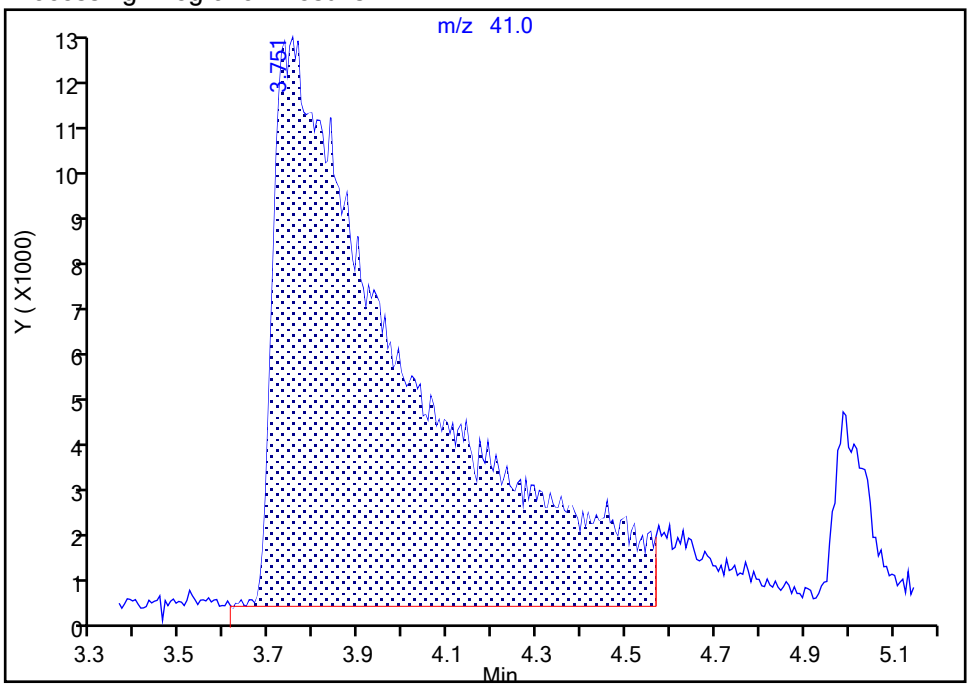
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X08.D				
Injection Date:	19-Jun-2023 16:55:30	Instrument ID:	19930		
Lims ID:	IC std7				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	8	Worklist Smp#:	9
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

21 Acetonitrile, CAS: 75-05-8

Signal: 1

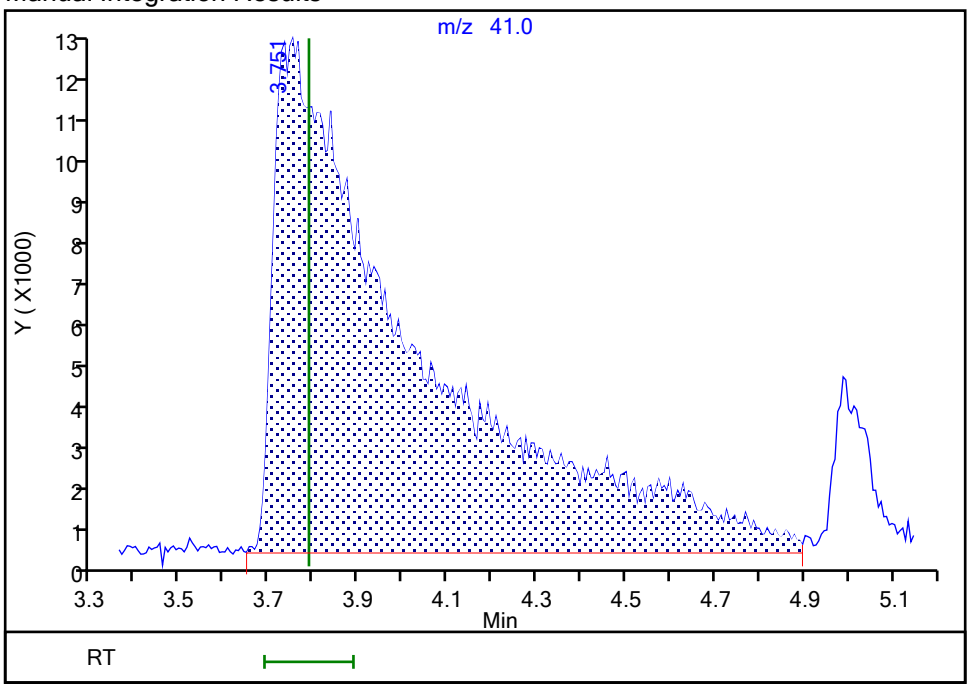
Processing Integration Results

RT: 3.75
Area: 256812
Amount: 49.978431
Amount Units: ug/l



Manual Integration Results

RT: 3.75
Area: 276683
Amount: 132.9980
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 14:54:24 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

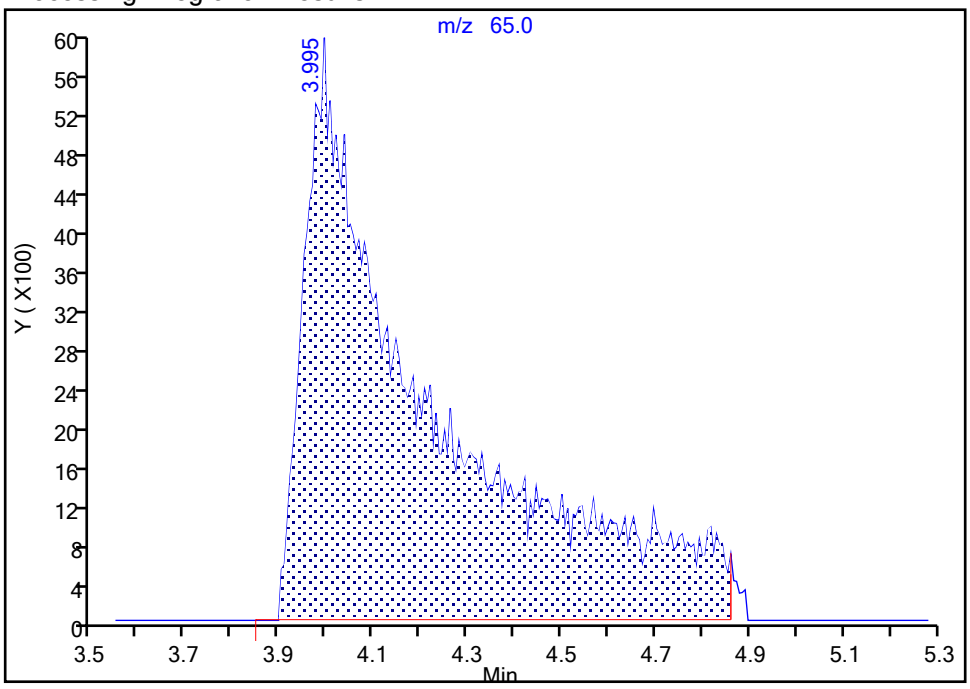
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X08.D
Injection Date: 19-Jun-2023 16:55:30 Instrument ID: 19930
Lims ID: IC std7
Client ID:
Operator ID: KNK41612 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

* 26 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

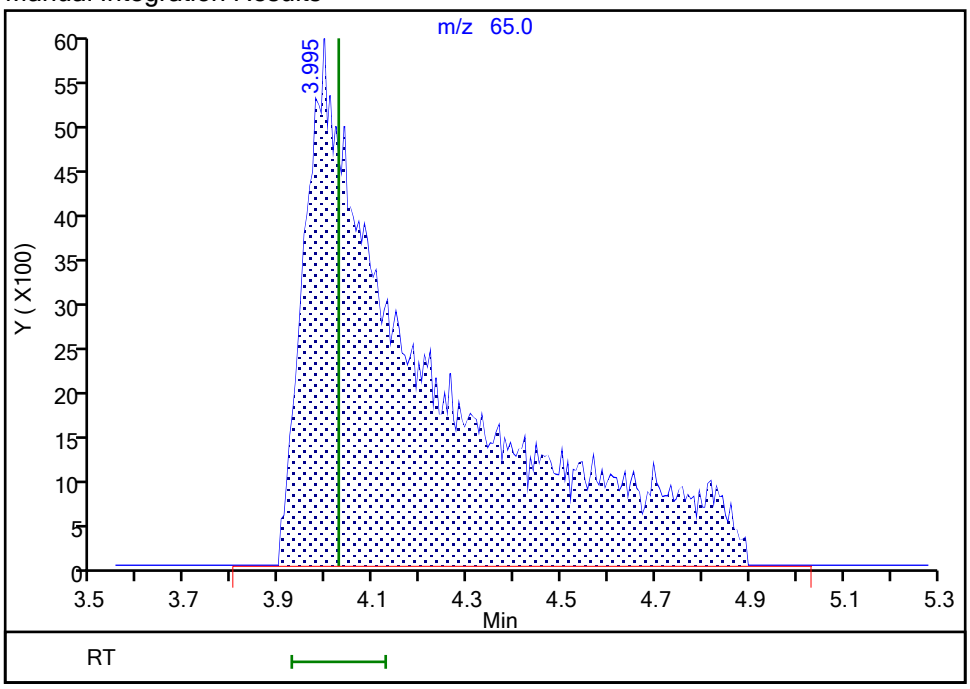
Processing Integration Results

RT: 3.99
Area: 106683
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 3.99
Area: 107302
Amount: 50.000000
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:27:13 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

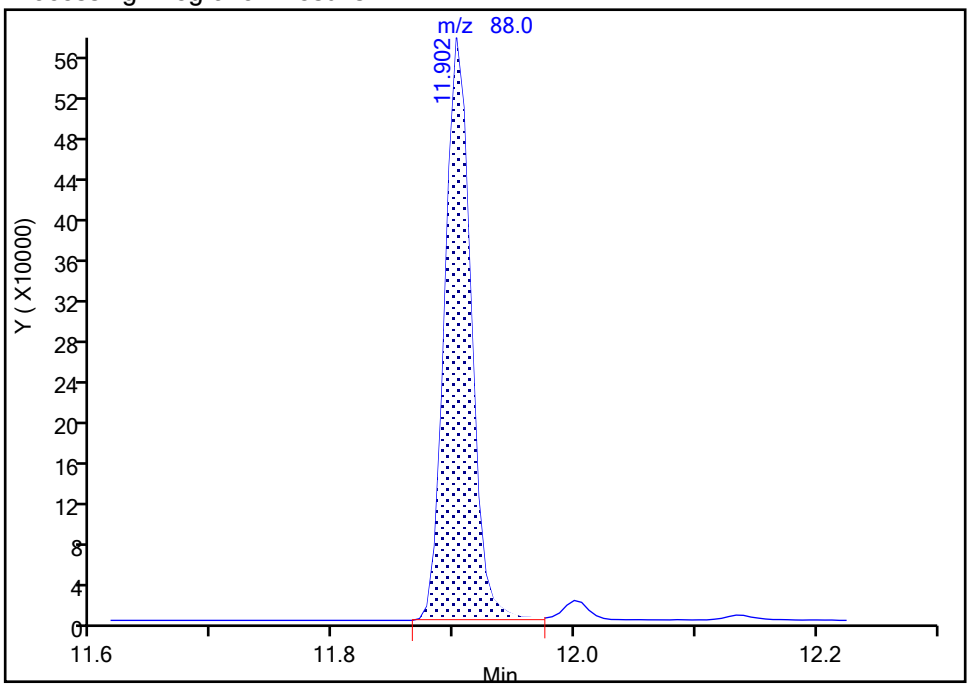
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X08.D				
Injection Date:	19-Jun-2023 16:55:30	Instrument ID:	19930		
Lims ID:	IC std7				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	8	Worklist Smp#:	9
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

118 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

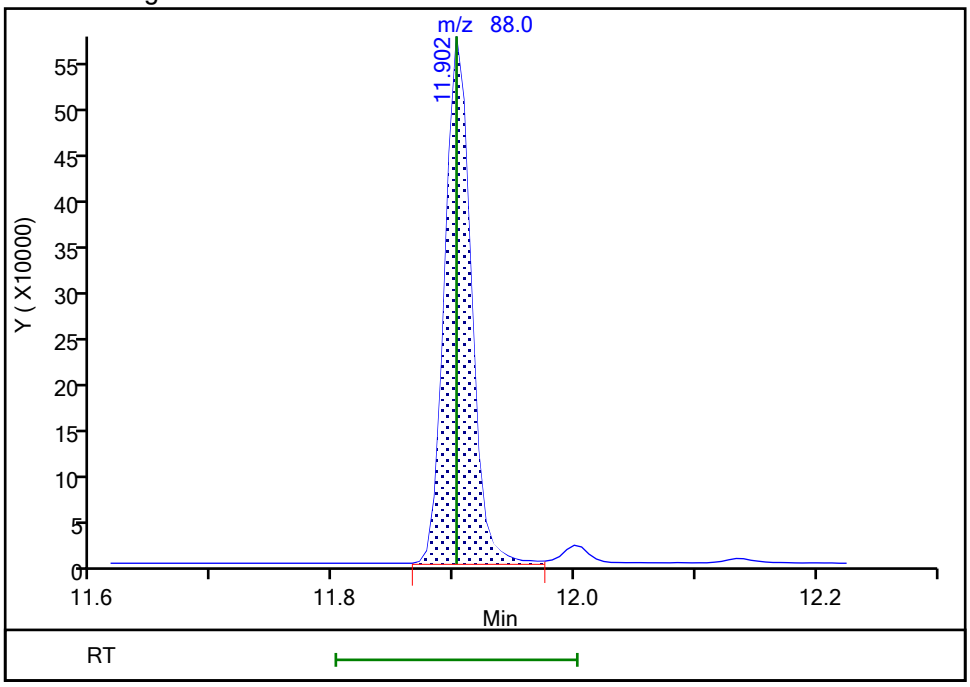
Processing Integration Results

RT: 11.90
Area: 865958
Amount: 35.750244
Amount Units: ug/l



Manual Integration Results

RT: 11.90
Area: 865958
Amount: 59.844022
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:32:50 -04:00:00 (UTC)

Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Calibration / Chlorodifluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

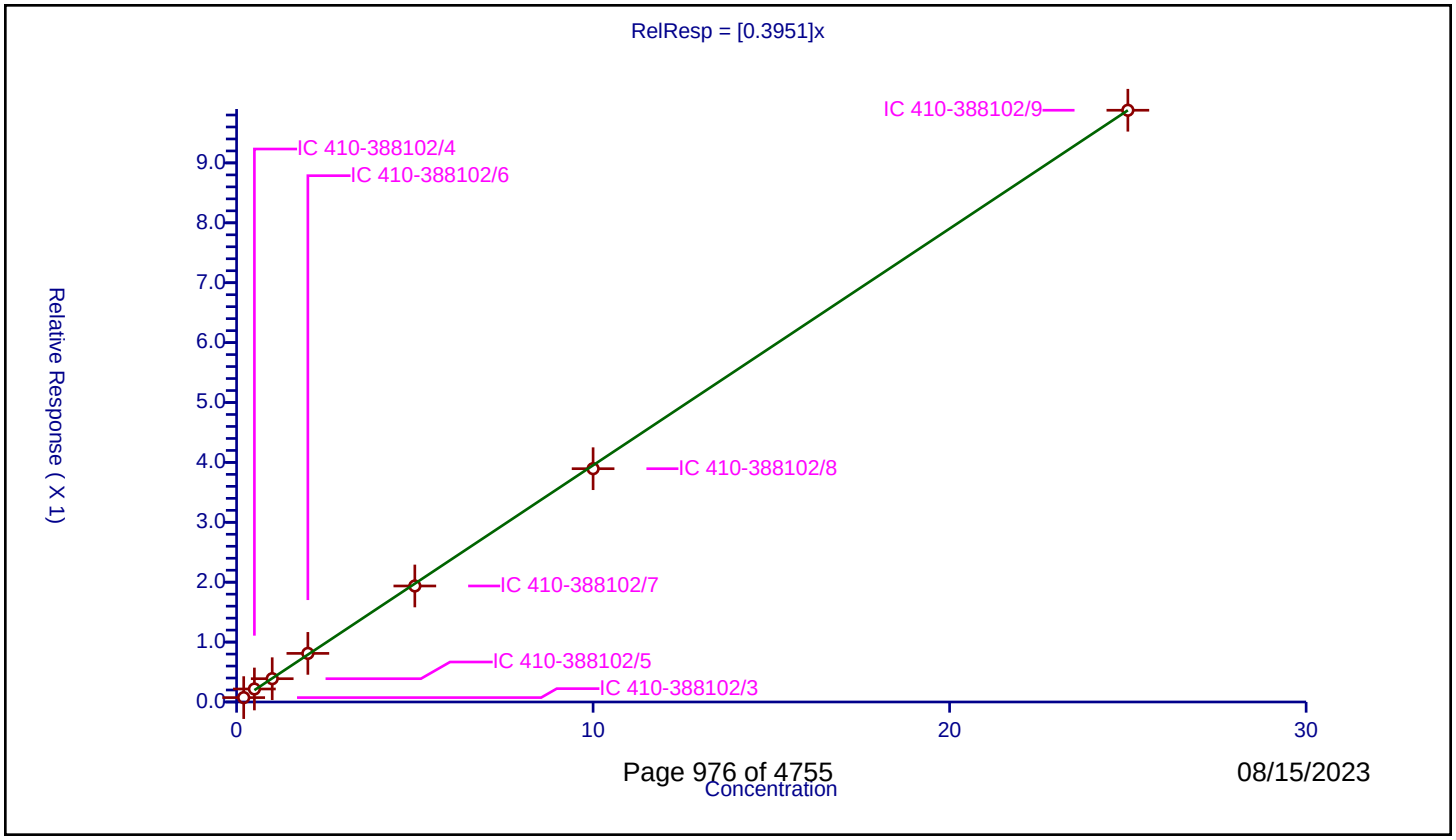
Curve Coefficients

Intercept:	0
Slope:	0.3951

Error Coefficients

Standard Error:	802000
Relative Standard Error:	5.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/3	0.2	0.073075	10.0	1898742.0	0.365373	Y
2	IC 410-388102/4	0.5	0.216974	10.0	1973742.0	0.433947	Y
3	IC 410-388102/5	1.0	0.389067	10.0	1800694.0	0.389067	Y
4	IC 410-388102/6	2.0	0.811195	10.0	1812979.0	0.405598	Y
5	IC 410-388102/7	5.0	1.936841	10.0	1828854.0	0.387368	Y
6	IC 410-388102/8	10.0	3.895054	10.0	1804558.0	0.389505	Y
7	IC 410-388102/9	25.0	9.879302	10.0	1813707.0	0.395172	Y



Calibration / Dimethyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

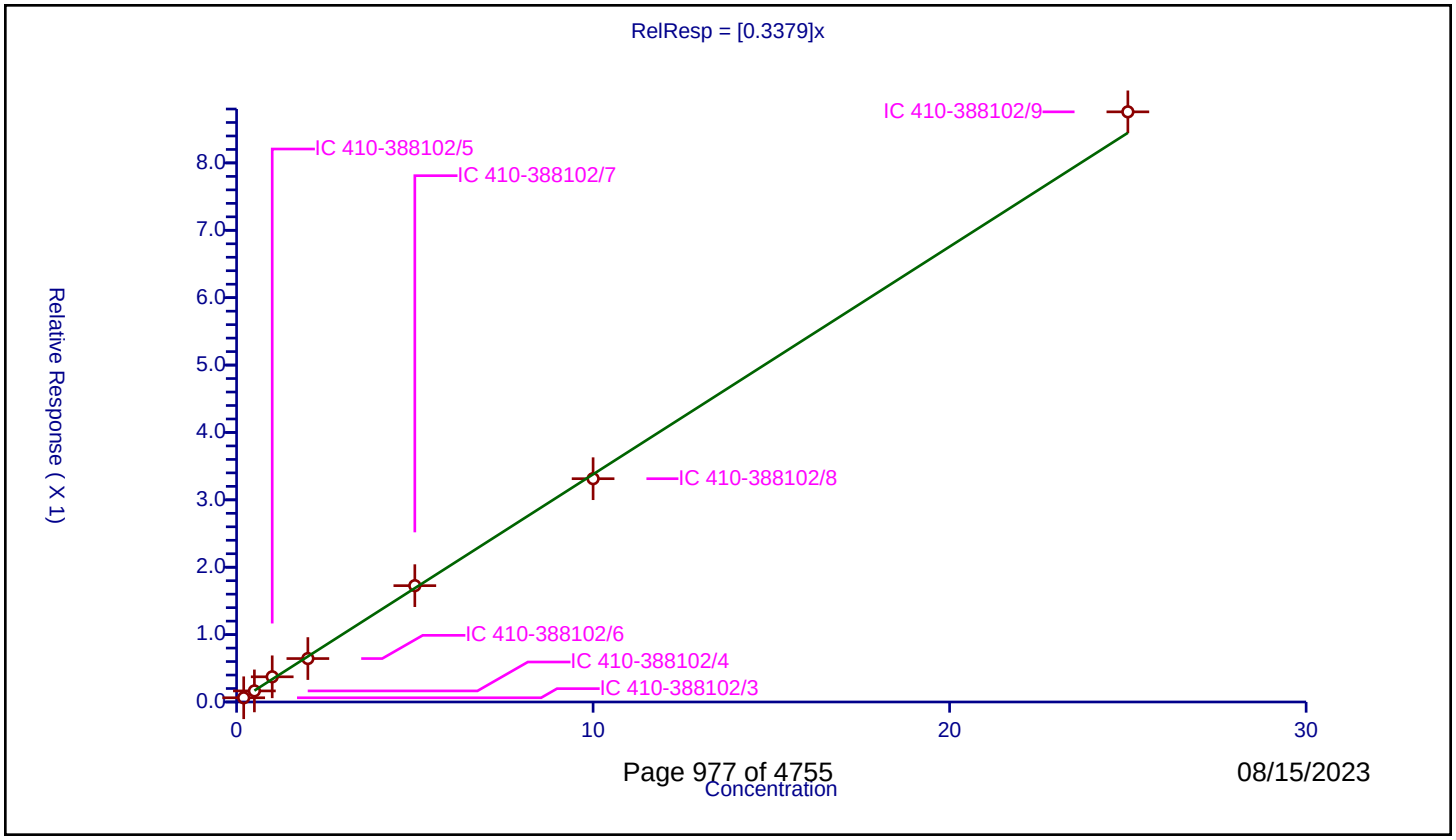
Curve Coefficients

Intercept:	0
Slope:	0.3379

Error Coefficients

Standard Error:	707000
Relative Standard Error:	6.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/3	0.2	0.062599	10.0	1898742.0	0.312997	Y
2	IC 410-388102/4	0.5	0.164616	10.0	1973742.0	0.329232	Y
3	IC 410-388102/5	1.0	0.373612	10.0	1800694.0	0.373612	Y
4	IC 410-388102/6	2.0	0.644536	10.0	1812979.0	0.322268	Y
5	IC 410-388102/7	5.0	1.726404	10.0	1828854.0	0.345281	Y
6	IC 410-388102/8	10.0	3.31377	10.0	1804558.0	0.331377	Y
7	IC 410-388102/9	25.0	8.758173	10.0	1813707.0	0.350327	Y



Calibration / Acetonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

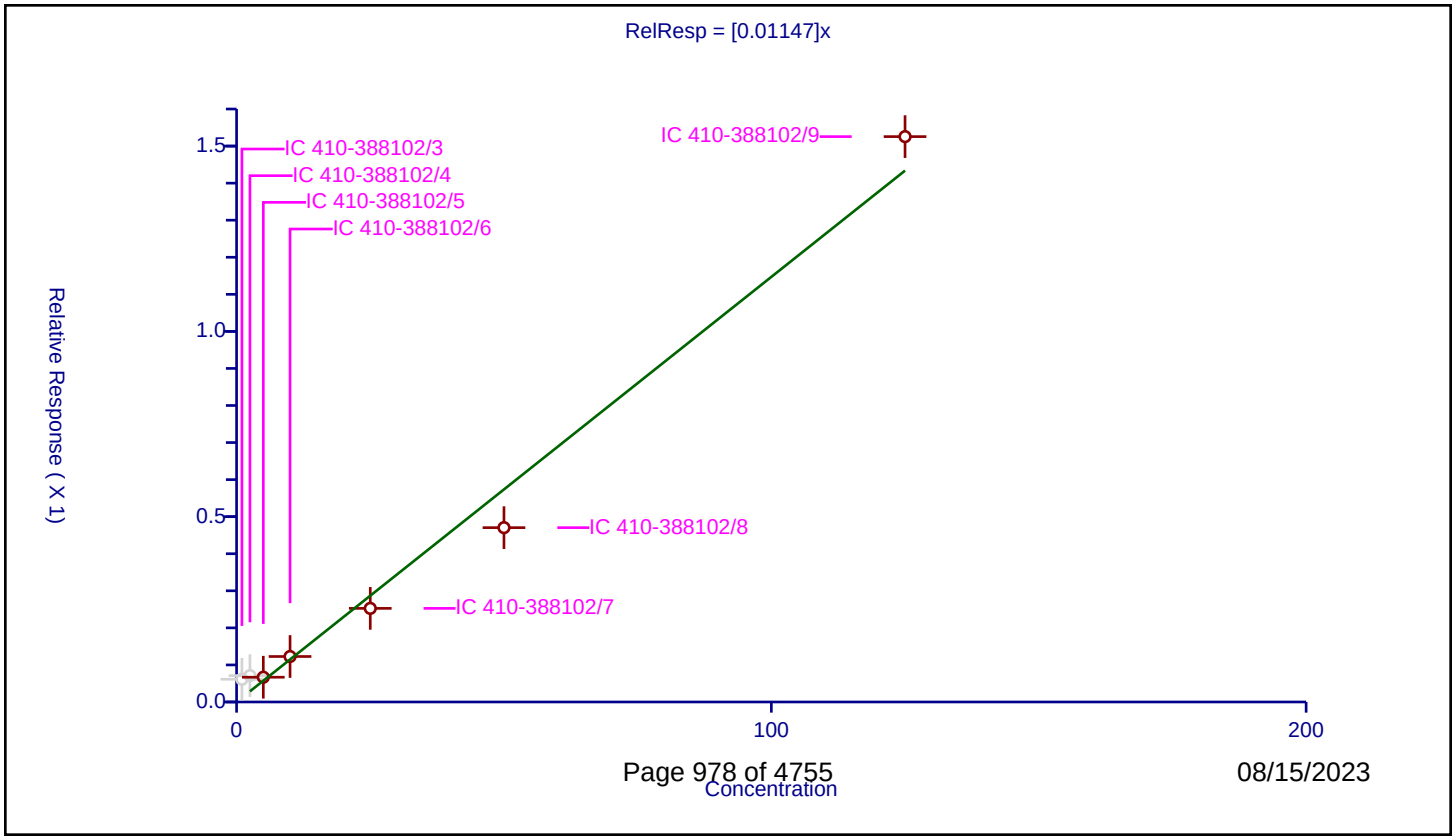
Curve Coefficients

Intercept:	0
Slope:	0.01147

Error Coefficients

Standard Error:	147000
Relative Standard Error:	14.4
Correlation Coefficient:	0.989
Coefficient of Determination (Adjusted):	0.959

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/3	1.0	0.061341	10.0	1898742.0	0.061341	N
2	IC 410-388102/4	2.5	0.07123	10.0	1973742.0	0.028492	N
3	IC 410-388102/5	5.0	0.066824	10.0	1800694.0	0.013365	Y
4	IC 410-388102/6	10.0	0.122704	10.0	1812979.0	0.01227	Y
5	IC 410-388102/7	25.0	0.252579	10.0	1828854.0	0.010103	Y
6	IC 410-388102/8	50.0	0.47042	10.0	1804558.0	0.009408	Y
7	IC 410-388102/9	125.0	1.525511	10.0	1813707.0	0.012204	Y



Calibration / Vinyl acetate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

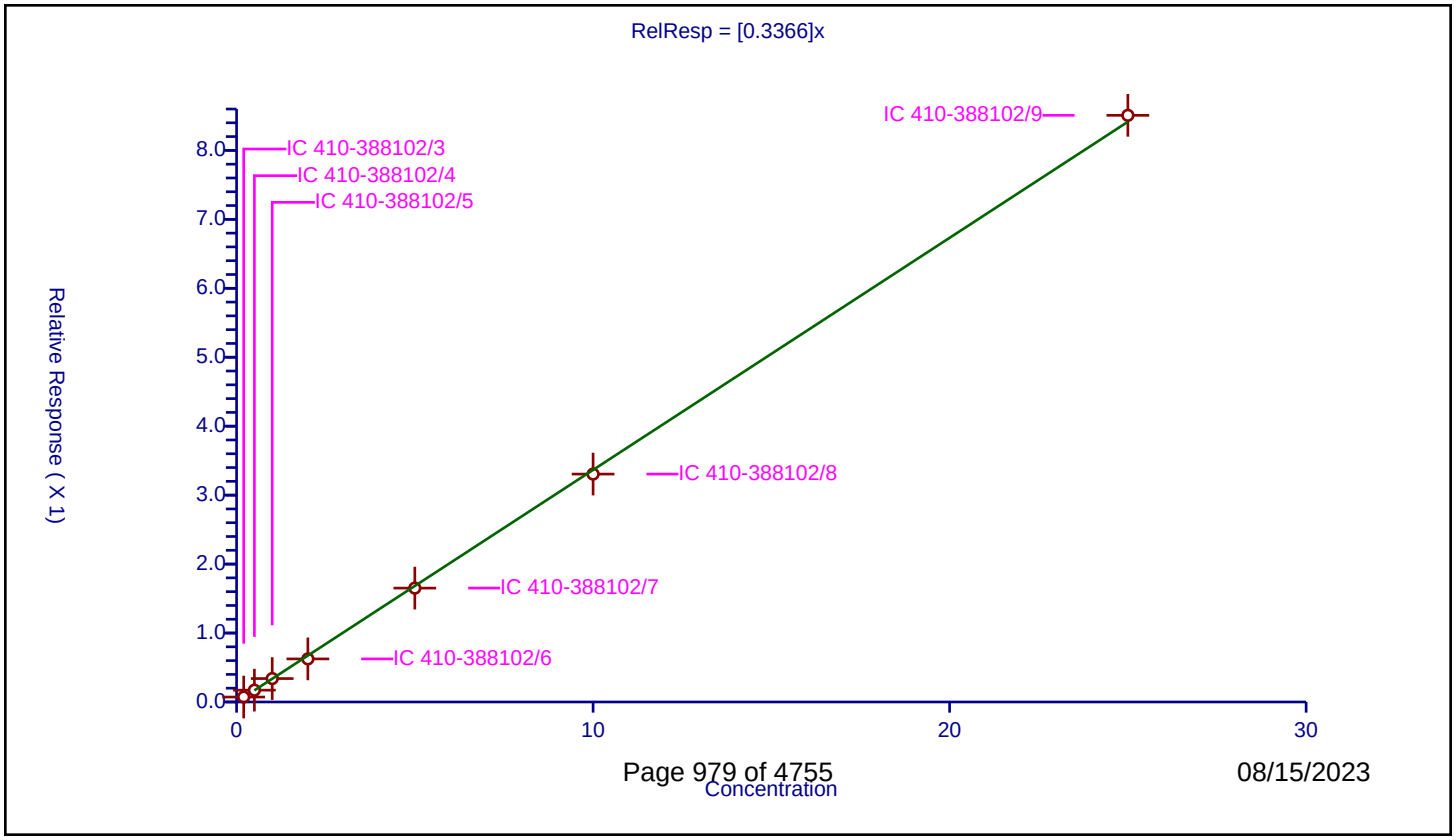
Curve Coefficients

Intercept:	0
Slope:	0.3366

Error Coefficients

Standard Error:	689000
Relative Standard Error:	4.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/3	0.2	0.071927	10.0	1898742.0	0.359633	Y
2	IC 410-388102/4	0.5	0.171649	10.0	1973742.0	0.343297	Y
3	IC 410-388102/5	1.0	0.339669	10.0	1800694.0	0.339669	Y
4	IC 410-388102/6	2.0	0.624618	10.0	1812979.0	0.312309	Y
5	IC 410-388102/7	5.0	1.651597	10.0	1828854.0	0.330319	Y
6	IC 410-388102/8	10.0	3.305435	10.0	1804558.0	0.330544	Y
7	IC 410-388102/9	25.0	8.508177	10.0	1813707.0	0.340327	Y



Calibration / Ethyl acetate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

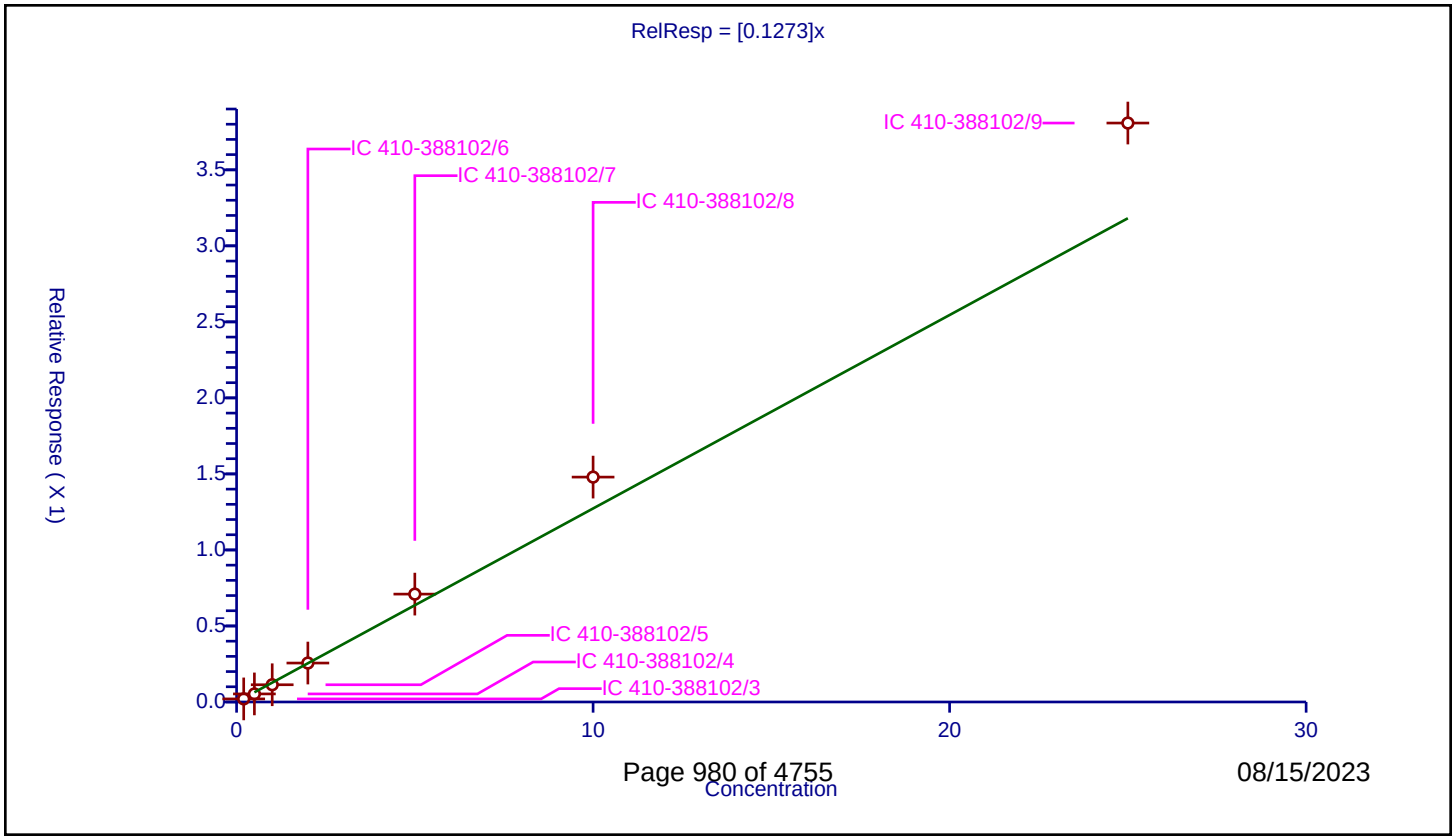
Curve Coefficients

Intercept:	0
Slope:	0.1273

Error Coefficients

Standard Error:	308000
Relative Standard Error:	16.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.970

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/3	0.2	0.020224	10.0	1898742.0	0.10112	Y
2	IC 410-388102/4	0.5	0.053082	10.0	1973742.0	0.106164	Y
3	IC 410-388102/5	1.0	0.113379	10.0	1800694.0	0.113379	Y
4	IC 410-388102/6	2.0	0.256103	10.0	1812979.0	0.128052	Y
5	IC 410-388102/7	5.0	0.709444	10.0	1828854.0	0.141889	Y
6	IC 410-388102/8	10.0	1.47916	10.0	1804558.0	0.147916	Y
7	IC 410-388102/9	25.0	3.807699	10.0	1813707.0	0.152308	Y



Calibration / 2-Chloroethyl vinyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

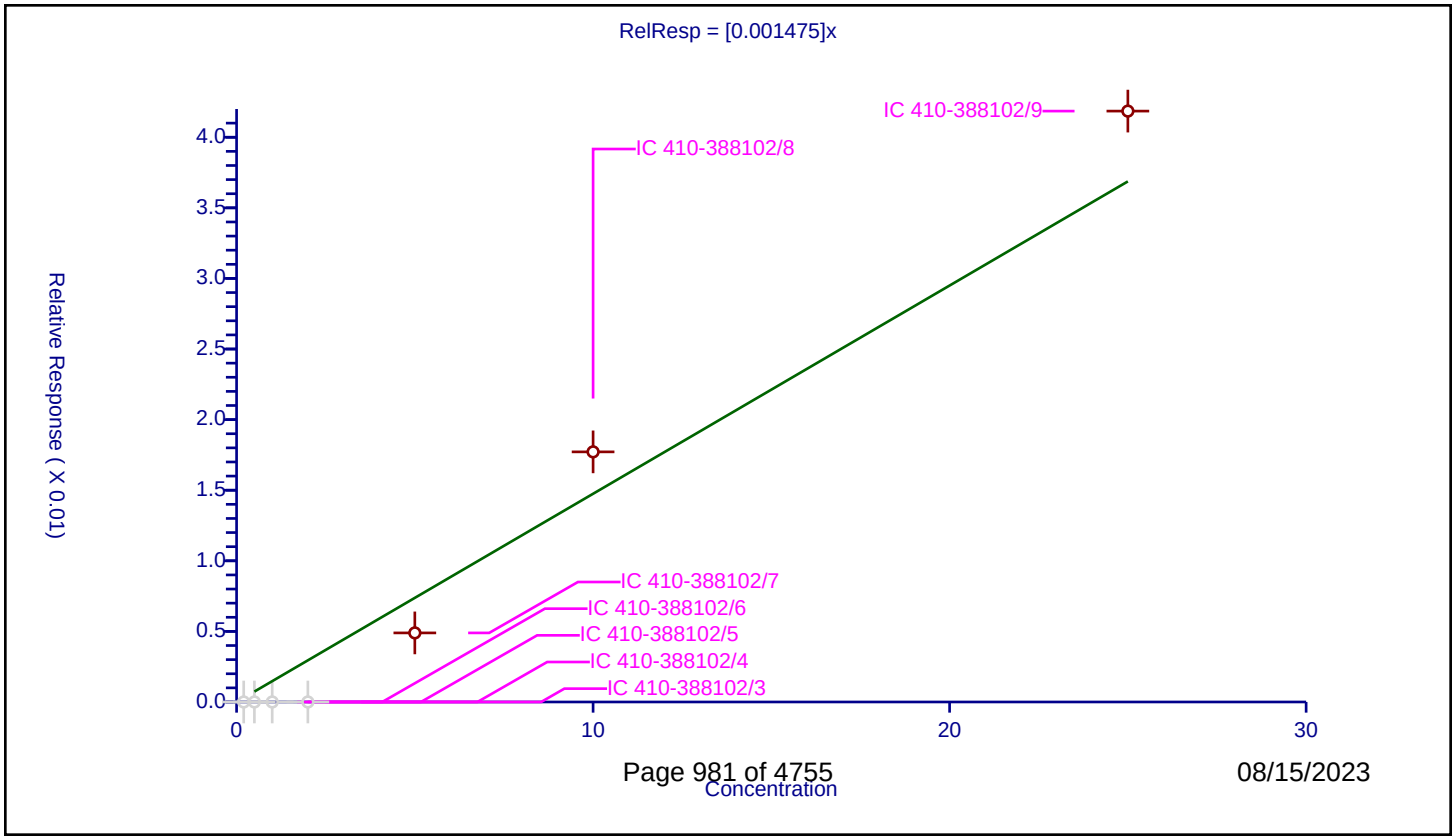
Curve Coefficients

Intercept:	0
Slope:	0.001475

Error Coefficients

Standard Error:	5860
Relative Standard Error:	29.3
Correlation Coefficient:	0.990
Coefficient of Determination (Adjusted):	0.881

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/3	0.2	0.0	10.0	1898742.0	0.0	N
2	IC 410-388102/4	0.5	0.0	10.0	1973742.0	0.0	N
3	IC 410-388102/5	1.0	0.0	10.0	1800694.0	0.0	N
4	IC 410-388102/6	2.0	0.0	10.0	1812979.0	0.0	N
5	IC 410-388102/7	5.0	0.004894	10.0	1828854.0	0.000979	Y
6	IC 410-388102/8	10.0	0.017716	10.0	1804558.0	0.001772	Y
7	IC 410-388102/9	25.0	0.041854	10.0	1813707.0	0.001674	Y



Calibration / cis-1,4-Dichloro-2-butene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

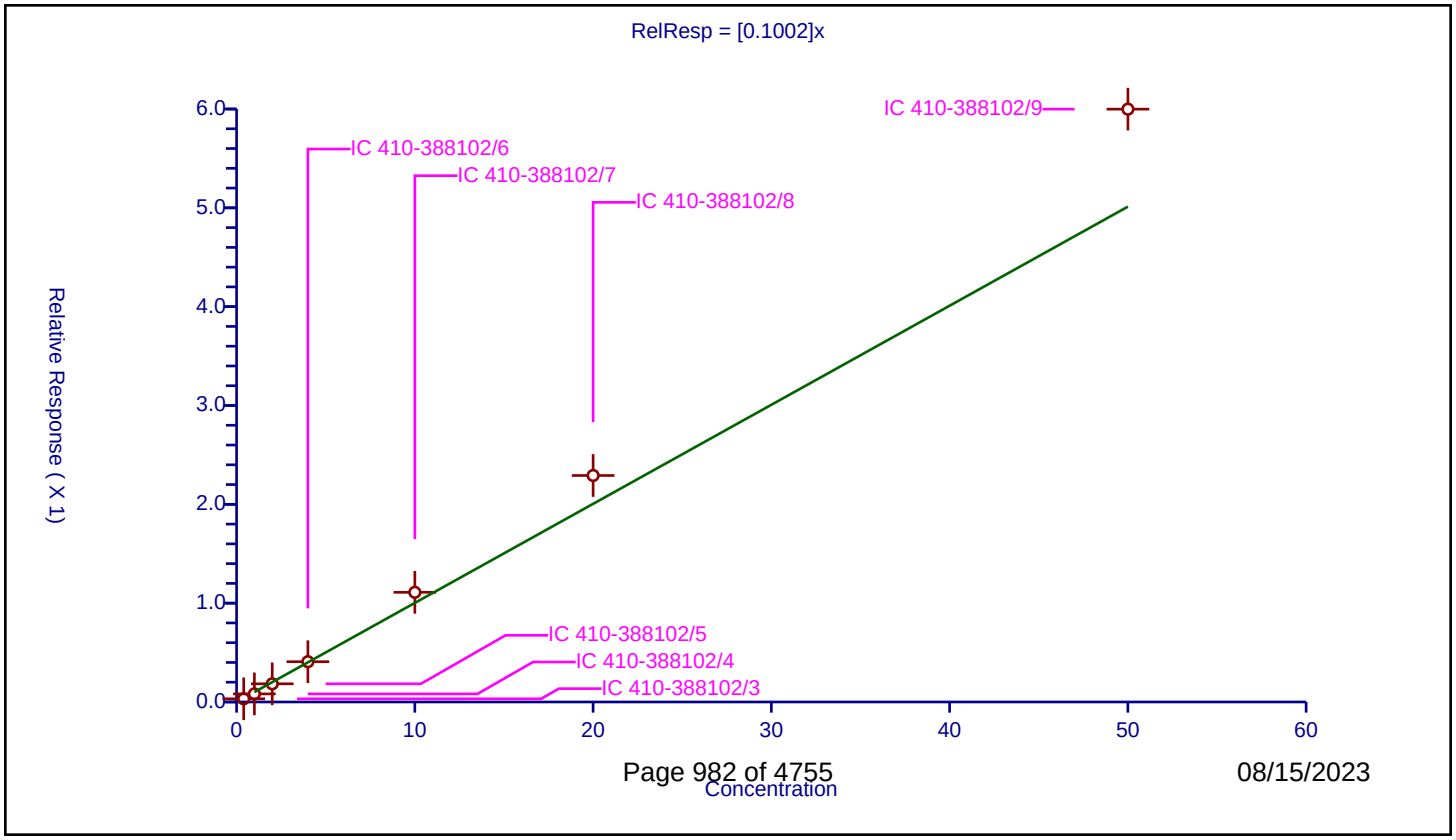
Curve Coefficients

Intercept:	0
Slope:	0.1002

Error Coefficients

Standard Error:	385000
Relative Standard Error:	15.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.972

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/3	0.400029	0.032185	10.0	1487320.0	0.080458	Y
2	IC 410-388102/4	1.000073	0.081969	10.0	1547291.0	0.081963	Y
3	IC 410-388102/5	2.000147	0.18375	10.0	1428082.0	0.091868	Y
4	IC 410-388102/6	4.000293	0.407518	10.0	1432231.0	0.101872	Y
5	IC 410-388102/7	10.000734	1.10962	10.0	1444071.0	0.110954	Y
6	IC 410-388102/8	20.001467	2.291751	10.0	1437525.0	0.114579	Y
7	IC 410-388102/9	50.003668	5.998563	10.0	1443609.0	0.119962	Y



Calibration / Cyclohexanone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

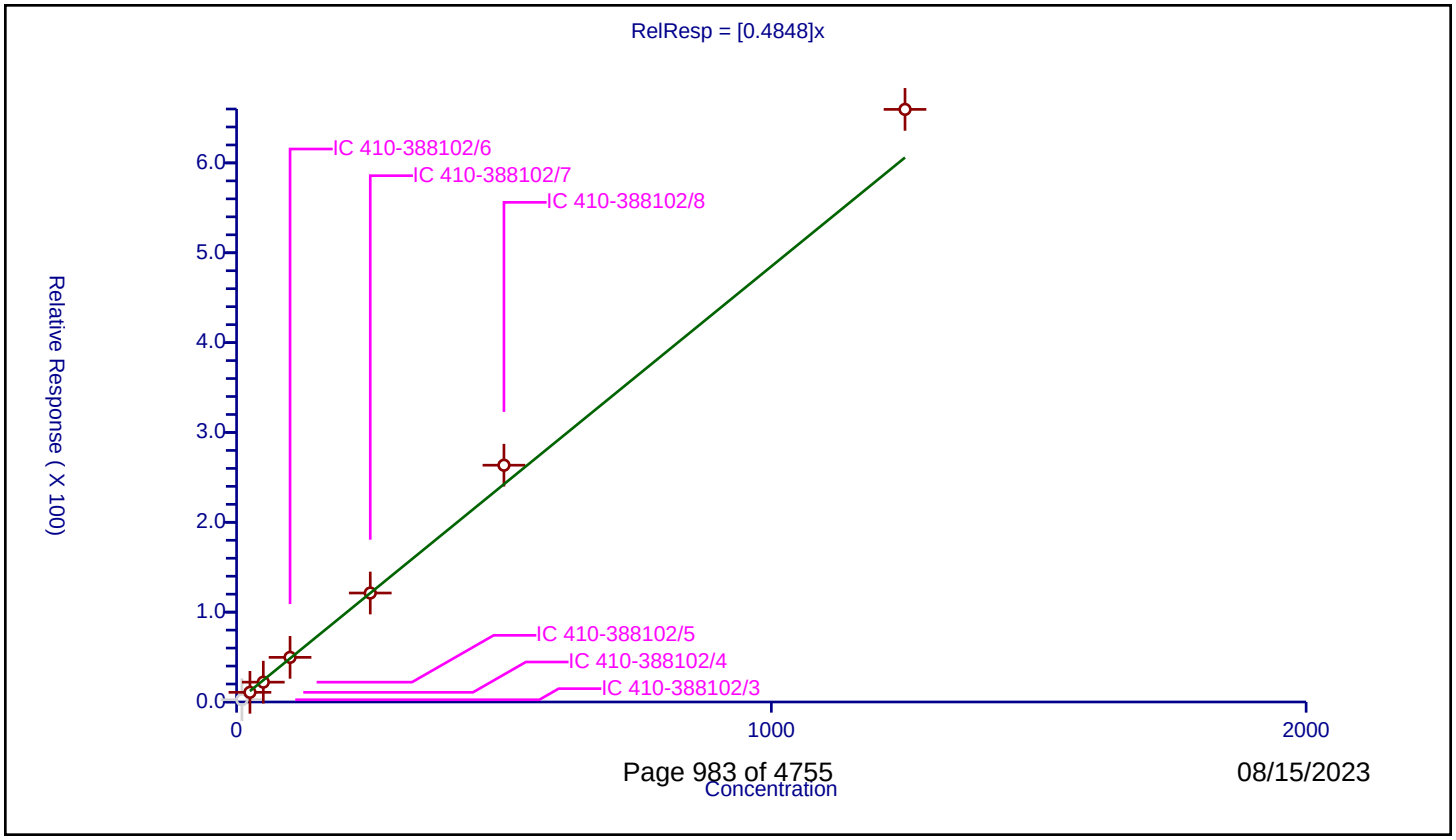
Curve Coefficients

Intercept:	0
Slope:	0.4848

Error Coefficients

Standard Error:	672000
Relative Standard Error:	8.5
Correlation Coefficient:	0.991
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/3	9.9996	2.498085	50.0	144911.0	0.249818	N
2	IC 410-388102/4	24.999	10.768579	50.0	141625.0	0.43076	Y
3	IC 410-388102/5	49.998	22.074343	50.0	110300.0	0.441505	Y
4	IC 410-388102/6	99.996	49.664142	50.0	100489.0	0.496661	Y
5	IC 410-388102/7	249.99	121.301303	50.0	89518.0	0.485225	Y
6	IC 410-388102/8	499.98	263.565845	50.0	83666.0	0.527153	Y
7	IC 410-388102/9	1249.95	659.573447	50.0	107302.0	0.52768	Y



FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-388102/13	IU19X12.D
Level 2	IC 410-388102/14	IU19X13.D
Level 3	IC 410-388102/15	IU19X14.D
Level 4	IC 410-388102/16	IU19X15.D
Level 5	IC 410-388102/17	IU19X16.D
Level 6	ICIS 410-388102/18	IU19X17.D
Level 7	IC 410-388102/19	IU19X18.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.4525 0.4048	0.3959 0.3520	0.3851	0.4247	0.3877	Ave		0.4004			0.1000	7.9		20.0			
Chloromethane	0.4433 0.3934	0.4368 0.3705	0.4085	0.4123	0.3826	Ave		0.4068			0.1000	6.6		20.0			
Vinyl chloride	0.4128 0.3849	0.3972 0.3663	0.3909	0.4002	0.3721	Ave		0.3892			0.1000	4.2		20.0			
1,3-Butadiene	0.5664 0.3662	0.4570 0.3293	0.3964	0.3854	0.3500	Ave		0.4073				19.9		20.0			
Bromomethane	0.3286 0.2931	0.3338 0.2760	0.3073	0.3027	0.2852	Ave		0.3038			0.1000	7.1		20.0			
Chloroethane	0.2544 0.2262	0.2542 0.2118	0.2302	0.2332	0.2201	Ave		0.2329			0.1000	7.0		20.0			
Dichlorofluoromethane	0.7728 0.6099	0.7173 0.5755	0.6529	0.6302	0.5908	Ave		0.6499			0.1000	11.0		20.0			
Trichlorofluoromethane	0.5073 0.5153	0.4966 0.4601	0.4861	0.5148	0.4884	Ave		0.4955			0.1000	3.9		20.0			
Diethyl ether	0.1976 0.2098	0.2136 0.2002	0.2097	0.1996	0.2014	Ave		0.2046				3.1		20.0			
Freon 123a	0.4218 0.3420	0.3693 0.3196	0.3401	0.3494	0.3315	Ave		0.3534				9.6		20.0			
Acrolein	2.1302 2.2533	2.1540 2.1214	2.1475	2.2512	2.0978	Ave		2.1650				2.9		20.0			
1,1-Dichloroethene	0.2869 0.2721	0.2788 0.2625	0.2395	0.2657	0.2718	Ave		0.2682			0.1000	5.6		20.0			
Acetone	+++++ 2.2593	2.6577 2.0209	2.6463	2.4301	2.3347	Ave		2.3915			0.1000	10.2		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,1,2-Trichloro-1,2,2-trifluoroethane	0.2638 0.3056	0.2848 0.2883	0.2543	0.2884	0.3074	Ave		0.2847			0.1000	6.9		20.0			
Methyl iodide	0.5402 0.5790	0.5821 0.5553	0.5396	0.5761	0.5753	Ave		0.5640				3.3		20.0			
Carbon disulfide	0.7149 0.7487	0.7545 0.7334	0.6654	0.7357	0.7381	Ave		0.7273			0.1000	4.1		20.0			
Methyl acetate	5.4358 6.3319	6.2063 6.0419	5.3978	5.8772	6.0227	Ave		5.9019			0.1000	6.1		20.0			
Allyl chloride	0.4626 0.4175	0.4280 0.4051	0.3811	0.4125	0.4110	Ave		0.4168				5.9		20.0			
Methylene Chloride	0.2864 0.2867	0.3045 0.2734	0.2669	0.2808	0.2833	Ave		0.2831			0.1000	4.2		20.0			
t-Butyl alcohol	1.0041 0.8013	1.0479 0.8236	0.9841	0.9770	1.0217	Ave		0.9514				10.3		20.0			
Acrylonitrile	1.6935 3.2995	2.9982 3.1295	2.6051	3.3404	3.2807	Ave		2.9067				20.4	*	20.0			
Methyl tertiary butyl ether	0.7141 0.7350	0.7731 0.7210	0.7422	0.7418	0.7249	Ave		0.7360			0.1000	2.6		20.0			
trans-1,2-Dichloroethene	0.2943 0.3042	0.3166 0.2930	0.2773	0.3034	0.3005	Ave		0.2985			0.1000	4.1		20.0			
n-Hexane	0.4302 0.4138	0.3781 0.3892	0.3457	0.3839	0.3976	Ave		0.3912				6.9		20.0			
1,1-Dichloroethane	0.4683 0.5297	0.5304 0.5105	0.4963	0.5217	0.5225	Ave		0.5113			0.2000	4.4		20.0			
di-Isopropyl ether	0.7966 0.8513	0.8881 0.8227	0.8263	0.8469	0.8460	Ave		0.8397				3.4		20.0			
2-Chloro-1,3-butadiene	0.4161 0.4460	0.4352 0.4278	0.3940	0.4360	0.4378	Ave		0.4276				4.1		20.0			
Ethyl t-butyl ether	0.7685 0.8160	0.8385 0.7839	0.7901	0.8148	0.8023	Ave		0.8020				2.9		20.0			
2-Butanone	5.1322 4.6373	4.4498 4.3181	4.5676	4.7743	4.3775	Ave		4.6081			0.1000	6.1		20.0			
cis-1,2-Dichloroethene	0.3215 0.3358	0.3567 0.3265	0.3175	0.3363	0.3302	Ave		0.3321			0.1000	3.9		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
2,2-Dichloropropane	0.4598 0.4721	0.4783 0.4555	0.4215	0.4701	0.4682	Ave		0.4608				4.1		20.0			
Propionitrile	1.0481 1.3118	1.1977 1.2176	1.2436	1.3500	1.1627	Ave		1.2188				8.2		20.0			
Methacrylonitrile	4.5635 4.9890	4.7918 4.7422	4.8210	5.0216	4.7357	Ave		4.8093				3.3		20.0			
Bromochloromethane	0.1420 0.1540	0.1616 0.1468	0.1504	0.1524	0.1502	Ave		0.1511				4.0		20.0			
Tetrahydrofuran	1.5911 1.5342	1.6331 1.3936	1.5046	1.5387	1.4196	Ave		1.5164				5.7		20.0			
Chloroform	0.5098 0.5383	0.5474 0.5159	0.5102	0.5410	0.5348	Ave		0.5282			0.2000	3.0		20.0			
1,1,1-Trichloroethane	0.4856 0.5059	0.5086 0.4904	0.4532	0.5014	0.5077	Ave		0.4933			0.1000	4.0		20.0			
Cyclohexane	0.4612 0.4971	0.4664 0.4719	0.4112	0.4696	0.4947	Ave		0.4674			0.1000	6.1		20.0			
Carbon tetrachloride	0.4069 0.4690	0.4383 0.4552	0.3987	0.4478	0.4602	Ave		0.4394			0.1000	6.1		20.0			
1,1-Dichloropropene	0.3797 0.4086	0.4051 0.3980	0.3554	0.3980	0.4043	Ave		0.3927				4.8		20.0			
Isobutyl alcohol	0.4092 0.3121	0.3748 0.2863	0.3625	0.3029	0.3179	Ave		0.3380				13.2		20.0			
Benzene	1.1324 1.2126	1.2208 1.1743	1.1293	1.2019	1.1941	Ave		1.1808			0.5000	3.1		20.0			
1,2-Dichloroethane	0.3147 0.3261	0.3339 0.3094	0.3162	0.3176	0.3229	Ave		0.3201			0.1000	2.6		20.0			
t-Amyl methyl ether	0.6994 0.7606	0.7858 0.7275	0.7344	0.7445	0.7370	Ave		0.7413				3.6		20.0			
n-Heptane	0.4195 0.3999	0.3518 0.3803	0.3281	0.3627	0.3874	Ave		0.3757				8.2		20.0			
n-Butanol	+++++ 0.2896	0.2186 0.2709	0.2443	0.2525	0.2816	Ave		0.2596				10.2		20.0			
Trichloroethene	0.3086 0.3402	0.3473 0.3305	0.3074	0.3325	0.3331	Ave		0.3285			0.2000	4.6		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.4972 0.5734	0.5243 0.5419	0.4769	0.5366	0.5642	Ave		0.5306			0.1000	6.5		20.0			
1,2-Dichloropropane	0.2673 0.3012	0.3075 0.2928	0.2835	0.2949	0.2965	Ave		0.2919			0.1000	4.5		20.0			
Methyl methacrylate	7.4884 10.561	8.8196 10.309	9.6140	9.6930	9.8628	Ave		9.4783				11.0		20.0			
1,4-Dioxane	+++++ 0.0609	+++++ 0.0569	0.0430	0.0548	0.0601	Ave		0.0551			0.0050	13.1		20.0			
Dibromomethane	0.1334 0.1503	0.1537 0.1434	0.1456	0.1503	0.1477	Ave		0.1463				4.5		20.0			
Bromodichloromethane	0.3547 0.3900	0.3883 0.3838	0.3732	0.3822	0.3839	Ave		0.3795			0.2000	3.2		20.0			
2-Nitropropane	4.1430 3.0167	2.9957 2.9052	2.9048	2.9221	2.8065	Ave		3.0991				15.0		20.0			
1-Bromo-2-chloroethane	0.2835 0.3087	0.3056 0.2944	0.3118	0.2873	0.2924	Ave		0.2977				3.7		20.0			
cis-1,3-Dichloropropene	0.3975 0.4841	0.4622 0.4722	0.4365	0.4632	0.4716	Ave		0.4553			0.2000	6.5		20.0			
4-Methyl-2-pentanone	12.137 12.918	12.249 12.109	12.159	12.861	12.142	Ave		12.368			0.1000	2.9		20.0			
Toluene	0.9498 1.0396	1.0588 1.0106	0.9539	1.0488	1.0369	Ave		1.0141			0.4000	4.4		20.0			
trans-1,3-Dichloropropene	0.4002 0.5158	0.4945 0.4987	0.4652	0.4821	0.4941	Ave		0.4787			0.1000	7.9		20.0			
Ethyl methacrylate	0.3574 0.4129	0.4090 0.3952	0.3972	0.3989	0.3999	Ave		0.3958				4.6		20.0			
1,1,2-Trichloroethane	0.2809 0.2865	0.3083 0.2726	0.2875	0.2881	0.2795	Ave		0.2862			0.1000	3.9		20.0			
Tetrachloroethene	0.5014 0.5475	0.5467 0.5307	0.4921	0.5405	0.5439	Ave		0.5290			0.2000	4.3		20.0			
1,3-Dichloropropane	0.4233 0.4641	0.4778 0.4436	0.4490	0.4616	0.4512	Ave		0.4529				3.8		20.0			
2-Hexanone	8.8528 9.1467	8.2331 8.6577	8.7808	9.0425	8.5353	Ave		8.7498			0.1000	3.5		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dibromochloromethane	0.3311 0.3948	0.3760 0.3851	0.3600	0.3771	0.3845	Ave		0.3726				5.7		20.0			
1,2-Dibromoethane	0.2490 0.2810	0.2725 0.2684	0.2745	0.2729	0.2718	Ave		0.2700			0.1000	3.7		20.0			
1-Chlorohexane	0.6591 0.5910	0.6133 0.5709	0.5318	0.5810	0.5843	Ave		0.5902				6.6		20.0			
Chlorobenzene	1.1145 1.2137	1.2421 1.1772	1.1389	1.2154	1.2035	Ave		1.1865			0.5000	3.8		20.0			
1,1,1,2-Tetrachloroethane	0.3909 0.4370	0.4363 0.4247	0.4106	0.4304	0.4299	Ave		0.4228				3.9		20.0			
Ethylbenzene	1.8937 2.0294	2.0779 1.9576	1.8576	2.0129	2.0058	Ave		1.9764			0.1000	4.0		20.0			
m&p-Xylene	0.7394 0.8258	0.8389 0.7973	0.7562	0.8222	0.8159	Ave		0.7994			0.1000	4.7		20.0			
o-Xylene	0.7350 0.8150	0.8284 0.7844	0.7597	0.8087	0.7990	Ave		0.7900			0.3000	4.2		20.0			
Styrene	1.1454 1.3288	1.3143 1.2965	1.2118	1.2952	1.3055	Ave		1.2711			0.3000	5.3		20.0			
Bromoform	0.2012 0.2639	0.2371 0.2586	0.2355	0.2444	0.2511	Ave		0.2417			0.1000	8.6		20.0			
Isopropylbenzene	1.9253 2.1240	2.1280 2.0372	1.9198	2.1066	2.1028	Ave		2.0491			0.1000	4.5		20.0			
1,1,2,2-Tetrachloroethane	0.5637 0.6041	0.6320 0.5707	0.6187	0.5949	0.5825	Ave		0.5952			0.3000	4.2		20.0			
Bromobenzene	0.8029 0.8744	0.9071 0.8596	0.8350	0.8740	0.8686	Ave		0.8602				3.9		20.0			
trans-1,4-Dichloro-2-butene	4.4463 4.8601	4.5473 4.6942	4.6249	4.8862	4.5387	Ave		4.6568				3.6		20.0			
1,2,3-Trichloropropane	0.1529 0.1682	0.1789 0.1595	0.1799	0.1681	0.1621	Ave		0.1671				5.9		20.0			
N-Propylbenzene	3.5762 3.9541	3.9093 3.8303	3.5631	3.8564	3.9626	Ave		3.8074				4.4		20.0			
2-Chlorotoluene	0.7479 0.8603	0.8859 0.8359	0.7910	0.8531	0.8467	Ave		0.8316				5.6		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,3,5-Trimethylbenzene	2.7354 3.0010	3.0084 2.9111	2.7669	2.9427	2.9480	Ave		2.9019				3.7		20.0			
4-Chlorotoluene	0.7768 0.8636	0.9021 0.8509	0.8266	0.8793	0.8647	Ave		0.8520				4.8		20.0			
tert-Butylbenzene	0.6389 0.7236	0.7280 0.7095	0.6604	0.7129	0.7079	Ave		0.6973				4.9		20.0			
Pentachloroethane	0.4612 0.5778	0.5310 0.5785	0.5635	0.5170	0.5459	Ave		0.5393				7.7		20.0			
1,2,4-Trimethylbenzene	2.7498 3.0738	3.1042 2.9947	2.8733	3.0134	3.0460	Ave		2.9793				4.2		20.0			
sec-Butylbenzene	3.4494 3.8478	3.8100 3.7003	3.4512	3.7866	3.7896	Ave		3.6907				4.6		20.0			
1,3-Dichlorobenzene	1.5119 1.7448	1.7192 1.7169	1.6056	1.7205	1.7489	Ave		1.6811			0.6000	5.3		20.0			
p-Isopropyltoluene	3.0078 3.4729	3.2975 3.3483	3.1075	3.3750	3.4248	Ave		3.2906				5.2		20.0			
1,4-Dichlorobenzene	1.5508 1.6728	1.7572 1.6451	1.6382	1.6842	1.6514	Ave		1.6571			0.5000	3.7		20.0			
1,2,3-Trimethylbenzene	1.3062 1.3657	1.3641 1.3507	1.3123	1.3647	1.3634	Ave		1.3467				1.9		20.0			
Benzyl chloride	0.2067 0.2763	0.2541 0.2737	0.2545	0.2640	0.2609	Ave		0.2558				9.1		20.0			
n-Butylbenzene	1.2574 1.5853	1.4653 1.5899	1.3608	1.4904	1.5647	Ave		1.4734				8.5		20.0			
1,2-Dichlorobenzene	1.4557 1.6147	1.6656 1.5763	1.5399	1.6033	1.6002	Ave		1.5794			0.4000	4.2		20.0			
1,2-Dibromo-3-Chloropropane	0.0799 0.1038	0.0949 0.1037	0.0986	0.1007	0.0994	Ave		0.0973			0.0500	8.5		20.0			
1,3,5-Trichlorobenzene	1.1011 1.3352	1.2246 1.3675	1.1948	1.2867	1.3162	Ave		1.2609				7.4		20.0			
1,2,4-Trichlorobenzene	0.8179 1.1039	0.9767 1.1316	0.9610	1.0464	1.0630	Ave		1.0144			0.2000	10.5		20.0			
Hexachlorobutadiene	0.4453 0.5269	0.4695 0.5414	0.4489	0.4990	0.5280	Ave		0.4941				8.1		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Naphthalene	1.6038 1.9170	1.8541 1.9319	1.8268	1.8969	1.8932	Ave		1.8463				6.1		20.0			
1,2,3-Trichlorobenzene	0.7343 0.9057	0.8133 0.9277	0.8120	0.8622	0.8883	Ave		0.8491				7.9		20.0			
Dibromofluoromethane (Surr)	0.2566 0.2570	0.2579 0.2549	0.2576	0.2551	0.2588	Ave		0.2569				0.6		20.0			
1,2-Dichloroethane-d4 (Surr)	0.0503 0.0509	0.0510 0.0491	0.0523	0.0511	0.0519	Ave		0.0509				2.1		20.0			
Toluene-d8 (Surr)	1.2909 1.2855	1.2924 1.2749	1.2762	1.2905	1.2890	Ave		1.2856				0.6		20.0			
4-Bromofluorobenzene (Surr)	0.4829 0.4850	0.4855 0.4808	0.4824	0.4880	0.4865	Ave		0.4844				0.5		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-388102/13	IU19X12.D
Level 2	IC 410-388102/14	IU19X13.D
Level 3	IC 410-388102/15	IU19X14.D
Level 4	IC 410-388102/16	IU19X15.D
Level 5	IC 410-388102/17	IU19X16.D
Level 6	ICIS 410-388102/18	IU19X17.D
Level 7	IC 410-388102/19	IU19X18.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	16248 731790	34723 1664427	68962	153092	360756	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Chloromethane	FB	Ave	15918 711149	38309 1751882	73144	148627	355971	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Vinyl chloride	FB	Ave	14822 695810	34833 1731717	69992	144284	346234	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3-Butadiene	FB	Ave	20337 661981	40081 1556945	70973	138958	325681	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromomethane	FB	Ave	11798 529829	29277 1304970	55026	109113	265387	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Chloroethane	FB	Ave	9134 408968	22289 1001229	41214	84063	204756	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Dichlorofluoromethane	FB	Ave	27749 1102425	62910 2721094	116915	227201	549690	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Trichlorofluoromethane	FB	Ave	18216 931553	43553 2175547	87039	185589	454389	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Diethyl ether	FB	Ave	7096 379387	18739 946563	37553	71951	187410	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Freon 123a	FB	Ave	15145 618203	32387 1511147	60893	125946	308465	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Acrolein	TBAd 10	Ave	49712 2946849	142596 7153643	286815	572441	1460333	10.0 500	25.0 1250	50.0	100	250
1,1-Dichloroethene	FB	Ave	10300 491920	24450 1241308	42885	95792	252853	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Acetone	TBAd 10	Ave	+++++	35188	70684	123579	325042	+++++	5.00	10.0	20.0	50.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
			590923	1362907				100	250			
1,1,2-Trichloro-1,2,2-trifluoroe thane	FB	Ave	9472 552493	24980 1362883	45537	103962	285989	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methyl iodide	FB	Ave	19398 1046658	51051 2625621	96625	207682	535229	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Carbon disulfide	FB	Ave	25669 1353487	66169 3467769	119139	265233	686699	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methyl acetate	TBAd 10	Ave	2537 165612	8217 407475	14418	29888	83849	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Allyl chloride	FB	Ave	16611 754668	37534 1915265	68239	148700	382363	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methylene Chloride	FB	Ave	10282 518296	26705 1292711	47789	101250	263546	0.200 10.0	0.500 25.0	1.00	2.00	5.00
t-Butyl alcohol	TBAd 10	Ave	9373 419183	27747 1110969	52571	99365	284492	4.00 200	10.0 500	20.0	40.0	100
Acrylonitrile	TBAd 10	Ave	1976 215747	9924 527652	17396	42468	114187	0.500 25.0	1.25 62.5	2.50	5.00	12.5
Methyl tertiary butyl ether	FB	Ave	25640 1328588	67798 3409123	132891	267433	674458	0.200 10.0	0.500 25.0	1.00	2.00	5.00
trans-1,2-Dichloroethene	FB	Ave	10568 549965	27769 1385244	49647	109363	279615	0.200 10.0	0.500 25.0	1.00	2.00	5.00
n-Hexane	FB	Ave	15447 747981	33162 1840079	61908	138409	369911	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1-Dichloroethane	FB	Ave	16814 957603	46514 2413824	88859	188062	486164	0.200 10.0	0.500 25.0	1.00	2.00	5.00
di-Isopropyl ether	FB	Ave	28604 1538859	77884 3889612	147957	305304	787124	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Chloro-1,3-butadiene	FB	Ave	14941 806204	38162 2022645	70549	157183	407363	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethyl t-butyl ether	FB	Ave	27595 1475081	73536 3706375	141482	293761	746447	0.200 10.0	0.500 25.0	1.00	2.00	5.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
2-Butanone	TBAd 10	Ave	23953 1212881	58914 2912203	122006	242793	609434	2.00 100	5.00 250	10.0	20.0	50.0
cis-1,2-Dichloroethene	FB	Ave	11544 607013	31280 1543889	56850	121238	307184	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2,2-Dichloropropane	FB	Ave	16510 853357	41944 2153694	75466	169485	435561	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Propionitrile	TBAd 10	Ave	9783 686213	31714 1642296	66438	137306	323734	4.00 200	10.0 500	20.0	40.0	100
Methacrylonitrile	TBAd 10	Ave	21299 1304884	63442 3198256	128773	255367	659307	2.00 100	5.00 250	10.0	20.0	50.0
Bromochloromethane	FB	Ave	5098 278362	14176 693916	26936	54957	139749	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Tetrahydrofuran	TBAd 10	Ave	3713 200641	10811 469929	20095	39125	98820	1.00 50.0	2.50 125	5.00	10.0	25.0
Chloroform	FB	Ave	18306 973119	48008 2439280	91363	195036	497602	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,1-Trichloroethane	FB	Ave	17436 914467	44606 2318413	81153	180779	472367	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Cyclohexane	FB	Ave	16560 898646	40898 2230992	73626	169296	460220	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Carbon tetrachloride	FB	Ave	14611 847817	38435 2152417	71388	161435	428174	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1-Dichloropropene	FB	Ave	13634 738645	35524 1881849	63636	143481	376146	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Isobutyl alcohol	TBAd 10	Ave	9548 408183	24811 965364	48416	77021	221312	10.0 500	25.0 1250	50.0	100	250
Benzene	FB	Ave	40659 2192041	107059 5552169	202213	433294	1110945	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dichloroethane	FB	Ave	11298 589464	29283 1462742	56615	114498	300424	0.200 10.0	0.500 25.0	1.00	2.00	5.00
t-Amyl methyl ether	FB	Ave	25111	68913	131492	268420	685739	0.200	0.500	1.00	2.00	5.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
			1374850	3439411				10.0	25.0			
n-Heptane	FB	Ave	15063 722856	30853 1798135	58742	130745	360420	0.200 10.0	0.500 25.0	1.00	2.00	5.00
n-Butanol	TBAd 10	Ave	+++++ 662655	25327 1598692	57099	112349	343098	+++++ 875	43.8 2188	87.5	175	438
Trichloroethene	FB	Ave	11079 615027	30455 1562411	55041	119866	309932	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methylcyclohexane	FB	Ave	17852 1036558	45980 2562276	85392	193464	524891	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dichloropropane	FB	Ave	9597 544394	26965 1384198	50772	106323	275849	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methyl methacrylate	TBAd 10	Ave	3495 276225	11677 695290	25680	49293	137311	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,4-Dioxane	TBAd 10	Ave	+++++ 79624	+++++ 191965	5746	13925	41814	+++++ 500	+++++ 1250	50.0	100	250
Dibromomethane	FB	Ave	4789 271761	13482 678044	26070	54174	137376	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromodichloromethane	FB	Ave	12737 705073	34054 1814784	66817	137781	357171	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Nitropropane	TBAd 10	Ave	9668 394504	19831 979651	38795	74299	195361	1.00 50.0	2.50 125	5.00	10.0	25.0
1-Bromo-2-chloroethane	FB	Ave	10178 557990	26799 1391897	55828	103572	272020	0.200 10.0	0.500 25.0	1.00	2.00	5.00
cis-1,3-Dichloropropene	FB	Ave	14274 875051	40532 2232649	78154	166986	438752	0.200 10.0	0.500 25.0	1.00	2.00	5.00
4-Methyl-2-pentanone	TBAd 10	Ave	56646 3378679	162172 8166235	324775	654051	1690397	2.00 100	5.00 250	10.0	20.0	50.0
Toluene	CBZd 5	Ave	26878 1497015	73122 3812060	134873	296153	767071	0.200 10.0	0.500 25.0	1.00	2.00	5.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
trans-1,3-Dichloropropene	CBZd 5	Ave	11326 742761	34150 1881067	65778	136143	365510	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethyl methacrylate	CBZd 5	Ave	10113 594538	28243 1490629	56167	112647	295850	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,2-Trichloroethane	CBZd 5	Ave	7948 412606	21292 1028167	40644	81347	206782	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Tetrachloroethene	CBZd 5	Ave	14188 788455	37751 2002051	69578	152617	402350	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3-Dichloropropane	CBZd 5	Ave	11978 668224	32993 1673377	63491	130340	333810	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Hexanone	TBAd 10	Ave	41318 2392308	109004 5838914	234543	459845	1188293	2.00 100	5.00 250	10.0	20.0	50.0
Dibromochloromethane	CBZd 5	Ave	9369 568456	25969 1452583	50898	106469	284463	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dibromoethane	CBZd 5	Ave	7047 404683	18815 1012515	38807	77070	201076	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1-Chlorohexane	CBZd 5	Ave	18652 850962	42354 2153392	75197	164067	432239	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Chlorobenzene	CBZd 5	Ave	31539 1747675	85778 4440532	161040	343177	890297	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,1,2-Tetrachloroethane	CBZd 5	Ave	11062 629258	30129 1601843	58062	121541	318029	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethylbenzene	CBZd 5	Ave	53589 2922252	143495 7384442	262649	568378	1483797	0.200 10.0	0.500 25.0	1.00	2.00	5.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
m&p-Xylene	CBZd 5	Ave	41851 2378256	115867 6014911	213843	464338	1207085	0.400 20.0	1.00 50.0	2.00	4.00	10.0
o-Xylene	CBZd 5	Ave	20800 1173518	57211 2958784	107419	228364	591109	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Styrene	CBZd 5	Ave	32413 1913392	90765 4890581	171340	365726	965746	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromoform	CBZd 5	Ave	5694 380006	16371 975567	33303	69013	185725	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Isopropylbenzene	CBZd 5	Ave	54485 3058543	146958 7684471	271455	594828	1555613	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	9790 534348	26384 1308898	52659	103555	265162	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromobenzene	DCBd 4	Ave	13944 773433	37870 1971522	71063	152143	395435	0.200 10.0	0.500 25.0	1.00	2.00	5.00
trans-1,4-Dichloro-2-butene	TBAd 10	Ave	20752 1271163	60206 3165888	123536	248485	631878	2.00 100	5.00 250	10.0	20.0	50.0
1,2,3-Trichloropropane	DCBd 4	Ave	2656 148764	7469 365750	15312	29265	73791	0.200 10.0	0.500 25.0	1.00	2.00	5.00
N-Propylbenzene	DCBd 4	Ave	62107 3497528	163202 8784621	303252	671294	1803955	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Chlorotoluene	DCBd 4	Ave	12989 760985	36985 1917179	67323	148498	385471	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3,5-Trimethylbenzene	DCBd 4	Ave	47506 2654457	125592 6676624	235489	512246	1342032	0.200 10.0	0.500 25.0	1.00	2.00	5.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
4-Chlorotoluene	DCBd 4	Ave	13490 763897	37661 1951600	70351	153069	393652	0.200 10.0	0.500 25.0	1.00	2.00	5.00
tert-Butylbenzene	DCBd 4	Ave	11096 640020	30391 1627291	56204	124089	322256	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Pentachloroethane	DCBd 4	Ave	8010 511060	22167 1326828	47961	89999	248510	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,4-Trimethylbenzene	DCBd 4	Ave	47756 2718845	129589 6868217	244539	524551	1386678	0.200 10.0	0.500 25.0	1.00	2.00	5.00
sec-Butylbenzene	DCBd 4	Ave	59906 3403512	159057 8486591	293727	659131	1725161	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3-Dichlorobenzene	DCBd 4	Ave	26258 1543368	71773 3937722	136646	299493	796177	0.200 10.0	0.500 25.0	1.00	2.00	5.00
p-Isopropyltoluene	DCBd 4	Ave	52236 3071854	137662 7679357	264478	587493	1559110	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,4-Dichlorobenzene	DCBd 4	Ave	26932 1479609	73356 3772911	139429	293178	751794	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,3-Trimethylbenzene	DCBd 4	Ave	22684 1208040	56949 3097874	111687	237548	620671	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Benzyl chloride	DCBd 4	Ave	3590 244410	10607 627829	21662	45949	118785	0.200 10.0	0.500 25.0	1.00	2.00	5.00
n-Butylbenzene	DCBd 4	Ave	21838 1402209	61172 3646359	115817	259442	712295	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dichlorobenzene	DCBd 4	Ave	25281 1428274	69532 3615183	131059	279095	728454	0.200 10.0	0.500 25.0	1.00	2.00	5.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	1388 91829	3960 237783	8390	17537	45263	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3,5-Trichlorobenzene	DCBd 4	Ave	19123 1180993	51123 3136365	101687	223971	599184	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,4-Trichlorobenzene	DCBd 4	Ave	14205 976458	40773 2595192	81792	182141	483938	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Hexachlorobutadiene	DCBd 4	Ave	7733 466073	19602 1241765	38205	86860	240365	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Naphthalene	DCBd 4	Ave	27854 1695646	77405 4430802	155480	330200	861870	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,3-Trichlorobenzene	DCBd 4	Ave	12752 801092	33951 2127625	69112	150086	404377	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Dibromofluoromethane (Surr)	FB	Ave	460650 464653	452360 482075	461318	459886	481549	10.0 10.0	10.0 10.0	10.0	10.0	10.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	90262 91929	89414 92867	93659	92053	96600	10.0 10.0	10.0 10.0	10.0	10.0	10.0
Toluene-d8 (Surr)	CBZd 5	Ave	1826605 1851132	1785023 1923611	1804500	1822022	1907167	10.0 10.0	10.0 10.0	10.0	10.0	10.0
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	683248 698444	670589 725457	682073	688953	719841	10.0 10.0	10.0 10.0	10.0	10.0	10.0

Curve Type Legend
Ave = Average ISTD

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-388102/13	IU19X12.D
Level 2	IC 410-388102/14	IU19X13.D
Level 3	IC 410-388102/15	IU19X14.D
Level 4	IC 410-388102/16	IU19X15.D
Level 5	IC 410-388102/17	IU19X16.D
Level 6	ICIS 410-388102/18	IU19X17.D
Level 7	IC 410-388102/19	IU19X18.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Dichlorodifluoromethane	13.0 -12.1	-1.1	-3.8	6.1	-3.2	1.1	50 30	30	30	30	30	30
Chloromethane	9.0 -8.9	7.4	0.4	1.3	-5.9	-3.3	50 30	30	30	30	30	30
Vinyl chloride	6.1 -5.9	2.1	0.4	2.8	-4.4	-1.1	50 30	30	30	30	30	30
1,3-Butadiene	39.1 -19.1	12.2	-2.7	-5.4	-14.0	-10.1	50 30	30	30	30	30	30
Bromomethane	8.2 -9.2	9.9	1.1	-0.4	-6.1	-3.5	50 30	30	30	30	30	30
Chloroethane	9.2 -9.1	9.1	-1.2	0.1	-5.5	-2.8	50 30	30	30	30	30	30
Dichlorofluoromethane	18.9 -11.4	10.4	0.5	-3.0	-9.1	-6.2	50 30	30	30	30	30	30
Trichlorofluoromethane	2.4 -7.1	0.2	-1.9	3.9	-1.4	4.0	50 30	30	30	30	30	30
Diethyl ether	-3.4 -2.1	4.4	2.5	-2.4	-1.5	2.6	50 30	30	30	30	30	30
Freon 123a	19.4 -9.6	4.5	-3.8	-1.1	-6.2	-3.2	50 30	30	30	30	30	30
Acrolein	-1.6 -2.0	-0.5	-0.8	4.0	-3.1	4.1	50 30	30	30	30	30	30
1,1-Dichloroethene	7.0 -2.1	4.0	-10.7	-0.9	1.3	1.5	50 30	30	30	30	30	30
Acetone	+++++ -15.5	11.1	10.7	1.6	-2.4	-5.5	 30	50	30	30	30	30
1,1,2-Trichloro-1,2,2-trifluoroethane	-7.3 1.3	0.1	-10.7	1.3	8.0	7.4	50 30	30	30	30	30	30

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Methyl iodide	-4.2 -1.5	3.2	-4.3	2.1	2.0	2.7	50 30	30	30	30	30	30
Carbon disulfide	-1.7 0.9	3.7	-8.5	1.2	1.5	3.0	50 30	30	30	30	30	30
Methyl acetate	-7.9 2.4	5.2	-8.5	-0.4	2.0	7.3	50 30	30	30	30	30	30
Allyl chloride	11.0 -2.8	2.7	-8.6	-1.0	-1.4	0.2	50 30	30	30	30	30	30
Methylene Chloride	1.1 -3.4	7.5	-5.7	-0.8	0.0	1.3	50 30	30	30	30	30	30
t-Butyl alcohol	5.5 -13.4	10.1	3.4	2.7	7.4	-15.8	50 30	30	30	30	30	30
Acrylonitrile	-41.7 7.7	3.1	-10.4	14.9	12.9	13.5	50 30	30	30	30	30	30
Methyl tertiary butyl ether	-3.0 -2.0	5.0	0.8	0.8	-1.5	-0.1	50 30	30	30	30	30	30
trans-1,2-Dichloroethene	-1.4 -1.8	6.1	-7.1	1.6	0.7	1.9	50 30	30	30	30	30	30
n-Hexane	10.0 -0.5	-3.3	-11.6	-1.9	1.6	5.8	50 30	30	30	30	30	30
1,1-Dichloroethane	-8.4 -0.2	3.7	-3.0	2.0	2.2	3.6	50 30	30	30	30	30	30
di-Isopropyl ether	-5.1 -2.0	5.8	-1.6	0.9	0.8	1.4	50 30	30	30	30	30	30
2-Chloro-1,3-butadiene	-2.7 0.1	1.8	-7.8	2.0	2.4	4.3	50 30	30	30	30	30	30
Ethyl t-butyl ether	-4.2 -2.3	4.5	-1.5	1.6	0.0	1.7	50 30	30	30	30	30	30
2-Butanone	11.4 -6.3	-3.4	-0.9	3.6	-5.0	0.6	50 30	30	30	30	30	30
cis-1,2-Dichloroethene	-3.2 -1.7	7.4	-4.4	1.3	-0.6	1.1	50 30	30	30	30	30	30
2,2-Dichloropropane	-0.2 -1.1	3.8	-8.5	2.0	1.6	2.5	50 30	30	30	30	30	30
Propionitrile	-14.0 -0.1	-1.7	2.0	10.8	-4.6	7.6	50 30	30	30	30	30	30
Methacrylonitrile	-5.1 -1.4	-0.4	0.2	4.4	-1.5	3.7	50 30	30	30	30	30	30

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Bromochloromethane	-6.0 -2.8	7.0	-0.4	0.9	-0.6	1.9	50 30	30	30	30	30	30
Tetrahydrofuran	4.9 -8.1	7.7	-0.8	1.5	-6.4	1.2	50 30	30	30	30	30	30
Chloroform	-3.5 -2.3	3.6	-3.4	2.4	1.3	1.9	50 30	30	30	30	30	30
1,1,1-Trichloroethane	-1.6 -0.6	3.1	-8.1	1.7	2.9	2.6	50 30	30	30	30	30	30
Cyclohexane	-1.3 0.9	-0.2	-12.0	0.5	5.8	6.4	50 30	30	30	30	30	30
Carbon tetrachloride	-7.4 3.6	-0.3	-9.3	1.9	4.7	6.7	50 30	30	30	30	30	30
1,1-Dichloropropene	-3.3 1.3	3.1	-9.5	1.3	2.9	4.0	50 30	30	30	30	30	30
Isobutyl alcohol	21.1 -15.3	10.9	7.3	-10.4	-5.9	-7.6	50 30	30	30	30	30	30
Benzene	-4.1 -0.5	3.4	-4.4	1.8	1.1	2.7	50 30	30	30	30	30	30
1,2-Dichloroethane	-1.7 -3.4	4.3	-1.2	-0.8	0.9	1.9	50 30	30	30	30	30	30
t-Amyl methyl ether	-5.7 -1.9	6.0	-0.9	0.4	-0.6	2.6	50 30	30	30	30	30	30
n-Heptane	11.7 1.2	-6.3	-12.7	-3.5	3.1	6.4	50 30	30	30	30	30	30
n-Butanol	+++++ 4.4	-15.8	-5.9	-2.7	8.5	11.5	 30	50	30	30	30	30
Trichloroethene	-6.1 0.6	5.7	-6.4	1.2	1.4	3.6	50 30	30	30	30	30	30
Methylcyclohexane	-6.3 2.1	-1.2	-10.1	1.1	6.3	8.1	50 30	30	30	30	30	30
1,2-Dichloropropane	-8.4 0.3	5.3	-2.9	1.0	1.6	3.2	50 30	30	30	30	30	30
Methyl methacrylate	-21.0 8.8	-6.9	1.4	2.3	4.1	11.4	50 30	30	30	30	30	30
1,4-Dioxane	+++++ 3.3	+++++	-22.0	-0.7	8.9	10.4	 30		50	30	30	30
Dibromomethane	-8.9 -2.0	5.1	-0.5	2.7	0.9	2.7	50 30	30	30	30	30	30

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Bromodichloromethane	-6.5 1.2	2.3	-1.7	0.7	1.2	2.8	50 30	30	30	30	30	30
2-Nitropropane	33.7 -6.3	-3.3	-6.3	-5.7	-9.4	-2.7	50 30	30	30	30	30	30
1-Bromo-2-chloroethane	-4.8 -1.1	2.7	4.7	-3.5	-1.8	3.7	50 30	30	30	30	30	30
cis-1,3-Dichloropropene	-12.7 3.7	1.5	-4.1	1.7	3.6	6.3	50 30	30	30	30	30	30
4-Methyl-2-pentanone	-1.9 -2.1	-1.0	-1.7	4.0	-1.8	4.4	50 30	30	30	30	30	30
Toluene	-6.3 -0.3	4.4	-5.9	3.4	2.3	2.5	50 30	30	30	30	30	30
trans-1,3-Dichloropropene	-16.4 4.2	3.3	-2.8	0.7	3.2	7.8	50 30	30	30	30	30	30
Ethyl methacrylate	-9.7 -0.2	3.3	0.4	0.8	1.0	4.3	50 30	30	30	30	30	30
1,1,2-Trichloroethane	-1.9 -4.8	7.7	0.4	0.7	-2.3	0.1	50 30	30	30	30	30	30
Tetrachloroethene	-5.2 0.3	3.3	-7.0	2.2	2.8	3.5	50 30	30	30	30	30	30
1,3-Dichloropropane	-6.6 -2.1	5.5	-0.9	1.9	-0.4	2.5	50 30	30	30	30	30	30
2-Hexanone	1.2 -1.1	-5.9	0.4	3.3	-2.5	4.5	50 30	30	30	30	30	30
Dibromochloromethane	-11.2 3.3	0.9	-3.4	1.2	3.2	5.9	50 30	30	30	30	30	30
1,2-Dibromoethane	-7.8 -0.6	0.9	1.6	1.1	0.7	4.1	50 30	30	30	30	30	30
1-Chlorohexane	11.7 -3.3	3.9	-9.9	-1.6	-1.0	0.1	50 30	30	30	30	30	30
Chlorobenzene	-6.1 -0.8	4.7	-4.0	2.4	1.4	2.3	50 30	30	30	30	30	30
1,1,1,2-Tetrachloroethane	-7.6 0.4	3.2	-2.9	1.8	1.7	3.3	50 30	30	30	30	30	30
Ethylbenzene	-4.2 -0.9	5.1	-6.0	1.8	1.5	2.7	50 30	30	30	30	30	30
m&p-Xylene	-7.5 -0.3	4.9	-5.4	2.9	2.1	3.3	50 30	30	30	30	30	30

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
o-Xylene	-7.0 -0.7	4.9	-3.8	2.4	1.1	3.2	50 30	30	30	30	30	30
Styrene	-9.9 2.0	3.4	-4.7	1.9	2.7	4.5	50 30	30	30	30	30	30
Bromoform	-16.7 7.0	-1.9	-2.5	1.1	3.9	9.2	50 30	30	30	30	30	30
Isopropylbenzene	-6.0 -0.6	3.9	-6.3	2.8	2.6	3.7	50 30	30	30	30	30	30
1,1,2,2-Tetrachloroethane	-5.3 -4.1	6.2	3.9	-0.1	-2.1	1.5	50 30	30	30	30	30	30
Bromobenzene	-6.7 -0.1	5.5	-2.9	1.6	1.0	1.6	50 30	30	30	30	30	30
trans-1,4-Dichloro-2-butene	-4.5 0.8	-2.4	-0.7	4.9	-2.5	4.4	50 30	30	30	30	30	30
1,2,3-Trichloropropane	-8.5 -4.6	7.1	7.7	0.6	-3.0	0.7	50 30	30	30	30	30	30
N-Propylbenzene	-6.1 0.6	2.7	-6.4	1.3	4.1	3.9	50 30	30	30	30	30	30
2-Chlorotoluene	-10.1 0.5	6.5	-4.9	2.6	1.8	3.5	50 30	30	30	30	30	30
1,3,5-Trimethylbenzene	-5.7 0.3	3.7	-4.7	1.4	1.6	3.4	50 30	30	30	30	30	30
4-Chlorotoluene	-8.8 -0.1	5.9	-3.0	3.2	1.5	1.4	50 30	30	30	30	30	30
tert-Butylbenzene	-8.4 1.8	4.4	-5.3	2.2	1.5	3.8	50 30	30	30	30	30	30
Pentachloroethane	-14.5 7.3	-1.5	4.5	-4.1	1.2	7.1	50 30	30	30	30	30	30
1,2,4-Trimethylbenzene	-7.7 0.5	4.2	-3.6	1.1	2.2	3.2	50 30	30	30	30	30	30
sec-Butylbenzene	-6.5 0.3	3.2	-6.5	2.6	2.7	4.3	50 30	30	30	30	30	30
1,3-Dichlorobenzene	-10.1 2.1	2.3	-4.5	2.3	4.0	3.8	50 30	30	30	30	30	30
p-Isopropyltoluene	-8.6 1.8	0.2	-5.6	2.6	4.1	5.5	50 30	30	30	30	30	30
1,4-Dichlorobenzene	-6.4 -0.7	6.0	-1.1	1.6	-0.3	0.9	50 30	30	30	30	30	30

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
1,2,3-Trimethylbenzene	-3.0 0.3	1.3	-2.6	1.3	1.2	1.4	50 30	30	30	30	30	30
Benzyl chloride	-19.2 7.0	-0.7	-0.5	3.2	2.0	8.0	50 30	30	30	30	30	30
n-Butylbenzene	-14.7 7.9	-0.5	-7.6	1.2	6.2	7.6	50 30	30	30	30	30	30
1,2-Dichlorobenzene	-7.8 -0.2	5.5	-2.5	1.5	1.3	2.2	50 30	30	30	30	30	30
1,2-Dibromo-3-Chloropropane	-17.9 6.6	-2.5	1.3	3.6	2.2	6.7	50 30	30	30	30	30	30
1,3,5-Trichlorobenzene	-12.7 8.5	-2.9	-5.2	2.0	4.4	5.9	50 30	30	30	30	30	30
1,2,4-Trichlorobenzene	-19.4 11.6	-3.7	-5.3	3.2	4.8	8.8	50 30	30	30	30	30	30
Hexachlorobutadiene	-9.9 9.6	-5.0	-9.2	1.0	6.8	6.6	50 30	30	30	30	30	30
Naphthalene	-13.1 4.6	0.4	-1.1	2.7	2.5	3.8	50 30	30	30	30	30	30
1,2,3-Trichlorobenzene	-13.5 9.3	-4.2	-4.4	1.5	4.6	6.7	50 30	30	30	30	30	30
Dibromofluoromethane (Surr)	-0.1 -0.8	0.4	0.3	-0.7	0.8	0.1	50 30	30	30	30	30	30
1,2-Dichloroethane-d4 (Surr)	-1.3 -3.6	0.1	2.7	0.3	1.9	-0.1	50 30	30	30	30	30	30
Toluene-d8 (Surr)	0.4 -0.8	0.5	-0.7	0.4	0.3	0.0	50 30	30	30	30	30	30
4-Bromofluorobenzene (Surr)	-0.3 -0.8	0.2	-0.4	0.7	0.4	0.1	50 30	30	30	30	30	30

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X12.D
Lims ID: IC std1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 19-Jun-2023 18:19:30 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0086929-013
Misc. Info.: LG 0.2
Operator ID: KNK41612 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 27-Jun-2023 12:30:03 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1687

First Level Reviewer: DVW2 Date: 21-Jun-2023 07:51:12

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.849	1.855	-0.006	95	16248	0.2000	0.2260	M
4 Chloromethane	50	2.038	2.050	-0.012	99	15918	0.2000	0.2180	
5 Vinyl chloride	62	2.148	2.160	-0.012	79	14822	0.2000	0.2121	
6 Butadiene	39	2.142	2.160	-0.018	90	20337	0.2000	0.2782	M
7 Bromomethane	94	2.452	2.465	-0.013	90	11798	0.2000	0.2163	
8 Chloroethane	64	2.532	2.538	-0.006	99	9134	0.2000	0.2185	
9 Dichlorofluoromethane	67	2.751	2.764	-0.013	96	27749	0.2000	0.2378	M
10 Trichlorofluoromethane	101	2.836	2.824	0.012	61	18216	0.2000	0.2048	
11 Ethyl ether	59	3.038	3.050	-0.012	59	7096	0.2000	0.1932	
13 1,2-Dichloro-1,1,2-trifluoroetha	67	3.117	3.142	-0.025	88	15145	0.2000	0.2387	
14 Acrolein	56	3.208	3.209	-0.001	98	49712	10.0	9.84	
15 1,1-Dichloroethene	96	3.330	3.337	-0.007	94	10300	0.2000	0.2139	
16 Acetone	43	3.379	3.361	0.018	48	22071	2.00	3.95	M
17 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.379	3.385	-0.006	86	9472	0.2000	0.1853	
18 Iodomethane	142	3.513	3.526	-0.013	98	19398	0.2000	0.1916	
19 Ethyl bromide	108	3.538	3.550	-0.012	95	8280	0.1998	0.1965	
20 Carbon disulfide	76	3.617	3.629	-0.012	99	25669	0.2000	0.1966	
23 Methyl acetate	43	3.769	3.757	0.012	24	2537	0.2000	0.1842	M
24 3-Chloro-1-propene	41	3.775	3.782	-0.007	89	16611	0.2000	0.2220	M
25 Methylene Chloride	84	3.958	3.958	0.000	86	10282	0.2000	0.2023	
* 26 t-Butyl alcohol-d10 (IS)	65	3.964	4.025	-0.061	87	116680	50.0	50.0	M
27 2-Methyl-2-propanol	59	4.080	4.093	-0.013	26	9373	4.00	4.22	M
28 Acrylonitrile	53	4.330	4.282	0.048	24	1976	0.5000	0.2913	
29 Methyl tert-butyl ether	73	4.330	4.342	-0.012	93	25640	0.2000	0.1940	
30 trans-1,2-Dichloroethene	96	4.348	4.355	-0.007	96	10568	0.2000	0.1972	
31 Hexane	57	4.775	4.781	-0.006	94	15447	0.2000	0.2199	
32 1,1-Dichloroethane	63	5.013	5.013	0.000	94	16814	0.2000	0.1832	
35 Isopropyl ether	45	5.074	5.074	0.000	97	28604	0.2000	0.1897	
36 2-Chloro-1,3-butadiene	53	5.129	5.123	0.006	89	14941	0.2000	0.1946	
37 Tert-butyl ethyl ether	59	5.610	5.623	-0.013	97	27595	0.2000	0.1916	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
38 2-Butanone (MEK)	43	5.848	5.812	0.036	68	23953	2.00	2.23	
39 cis-1,2-Dichloroethene	96	5.848	5.854	-0.006	79	11544	0.2000	0.1936	
40 2,2-Dichloropropane	77	5.866	5.867	-0.001	66	16510	0.2000	0.1996	
43 Propionitrile	54	5.976	5.891	0.085	39	9783	4.00	3.44	
45 Methacrylonitrile	67	6.122	6.110	0.012	92	21299	2.00	1.90	
S 41 1,2-Dichloroethene, Total	100				0			0.3909	
46 Chlorobromomethane	128	6.190	6.190	0.000	83	5098	0.2000	0.1880	
47 Tetrahydrofuran	71	6.202	6.196	0.006	60	3713	1.00	1.05	
48 Chloroform	83	6.342	6.342	0.000	92	18306	0.2000	0.1930	
$ 49 Dibromofluoromethane (Surr)	113	6.549	6.555	-0.006	95	460650	10.0	9.99	
50 1,1,1-Trichloroethane	97	6.567	6.568	-0.001	37	17436	0.2000	0.1969	
51 Cyclohexane	56	6.659	6.671	-0.012	87	16560	0.2000	0.1973	
54 Carbon tetrachloride	117	6.775	6.781	-0.006	96	14611	0.2000	0.1852	
53 1,1-Dichloropropene	75	6.781	6.781	0.000	93	13634	0.2000	0.1934	
55 Isobutyl alcohol	41	6.952	6.940	0.012	50	9548	10.0	12.1	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.000	7.013	-0.013	65	90262	10.0	9.87	
57 Benzene	78	7.037	7.043	-0.006	92	40659	0.2000	0.1918	
58 1,2-Dichloroethane	62	7.116	7.116	0.000	59	11298	0.2000	0.1966	
60 Tert-amyl methyl ether	73	7.238	7.244	-0.006	98	25111	0.2000	0.1887	
* 61 Fluorobenzene (IS)	96	7.445	7.445	0.000	99	1795291	10.0	10.0	
62 n-Heptane	43	7.464	7.470	-0.006	36	15063	0.2000	0.2233	
63 n-Butanol	56	8.006	7.836	0.170	6	5699	17.5	9.41	M
64 Trichloroethene	95	7.933	7.933	0.000	95	11079	0.2000	0.1879	
65 Methylcyclohexane	83	8.244	8.244	0.000	89	17852	0.2000	0.1874	
66 1,2-Dichloropropane	63	8.262	8.269	-0.007	79	9597	0.2000	0.1831	
67 Methyl methacrylate	69	8.396	8.354	0.042	69	3495	0.2000	0.1580	
68 1,4-Dioxane	88		8.366				ND	ND	U
69 Dibromomethane	93	8.378	8.378	0.000	89	4789	0.2000	0.1823	
71 Dichlorobromomethane	83	8.616	8.616	0.000	97	12737	0.2000	0.1870	
72 2-Nitropropane	41	8.890	8.884	0.006	97	9668	1.00	1.34	M
75 1-Bromo-2-chloroethane	63	9.012	9.012	0.000	96	10178	0.2000	0.1905	
76 cis-1,3-Dichloropropene	75	9.189	9.177	0.012	94	14274	0.2000	0.1746	
77 4-Methyl-2-pentanone (MIBK)	43	9.366	9.360	0.006	96	56646	2.00	1.96	
$ 78 Toluene-d8 (Surr)	98	9.494	9.500	-0.006	93	1826605	10.0	10.0	
79 Toluene	92	9.579	9.579	0.000	98	26878	0.2000	0.1873	
97 trans-1,3-Dichloropropene	75	9.853	9.848	0.005	91	11326	0.2000	0.1672	
99 Ethyl methacrylate	69	9.927	9.915	0.012	86	10113	0.2000	0.1806	
100 1,1,2-Trichloroethane	97	10.061	10.055	0.006	89	7948	0.2000	0.1963	
S 98 1,3-Dichloropropene, Total	100				0			0.3418	
101 Tetrachloroethene	166	10.146	10.146	0.000	96	14188	0.2000	0.1896	
102 1,3-Dichloropropane	76	10.225	10.219	0.006	89	11978	0.2000	0.1869	
103 2-Hexanone	43	10.292	10.274	0.018	95	41318	2.00	2.02	
105 Chlorodibromomethane	129	10.439	10.439	0.000	89	9369	0.2000	0.1777	
106 Ethylene Dibromide	107	10.555	10.549	0.005	97	7047	0.2000	0.1844	
* 107 Chlorobenzene-d5 (IS)	117	10.987	10.987	0.000	84	1414940	10.0	10.0	
108 1-Chlorohexane	91	11.006	11.000	0.006	86	18652	0.2000	0.2234	a
109 Chlorobenzene	112	11.012	11.018	-0.006	96	31539	0.2000	0.1879	
111 1,1,1,2-Tetrachloroethane	131	11.097	11.097	0.000	91	11062	0.2000	0.1849	
112 Ethylbenzene	91	11.103	11.103	0.000	98	53589	0.2000	0.1916	a
113 m-Xylene & p-Xylene	106	11.225	11.219	0.006	93	41851	0.4000	0.3700	
S 110 Xylenes, Total	106				0			0.5561	
114 o-Xylene	106	11.554	11.554	0.000	95	20800	0.2000	0.1861	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
115 Styrene	104	11.579	11.567	0.012	94	32413	0.2000	0.1802	
116 Bromoform	173	11.731	11.725	0.006	96	5694	0.2000	0.1665	
117 Isopropylbenzene	105	11.859	11.859	0.000	95	54485	0.2000	0.1879	
$ 120 4-Bromofluorobenzene (Surr)	95	11.999	12.000	-0.001	96	683248	10.0	9.97	
121 1,1,2,2-Tetrachloroethane	83	12.103	12.103	0.000	95	9790	0.2000	0.1894	
122 Bromobenzene	156	12.121	12.115	0.006	89	13944	0.2000	0.1867	
123 trans-1,4-Dichloro-2-butene	53	12.133	12.128	0.005	94	20752	2.00	1.91	
124 1,2,3-Trichloropropane	110	12.152	12.146	0.006	79	2656	0.2000	0.1831	
125 N-Propylbenzene	91	12.188	12.189	-0.001	98	62107	0.2000	0.1879	M
126 2-Chlorotoluene	126	12.268	12.262	0.006	98	12989	0.2000	0.1799	a
127 1,3,5-Trimethylbenzene	105	12.329	12.323	0.006	95	47506	0.2000	0.1885	
128 4-Chlorotoluene	126	12.359	12.353	0.006	97	13490	0.2000	0.1823	
129 tert-Butylbenzene	134	12.566	12.566	0.000	93	11096	0.2000	0.1833	
130 Pentachloroethane	167	12.597	12.597	0.000	77	8010	0.2000	0.1711	
131 1,2,4-Trimethylbenzene	105	12.609	12.609	0.000	96	47756	0.2000	0.1846	
132 sec-Butylbenzene	105	12.731	12.731	0.000	93	59906	0.2000	0.1869	
133 1,3-Dichlorobenzene	146	12.835	12.829	0.006	97	26258	0.2000	0.1799	
134 4-Isopropyltoluene	119	12.841	12.841	0.000	97	52236	0.2000	0.1828	
* 135 1,4-Dichlorobenzene-d4	152	12.883	12.883	0.000	93	868350	10.0	10.0	
136 1,4-Dichlorobenzene	146	12.902	12.902	0.000	96	26932	0.2000	0.1872	
137 1,2,3-Trimethylbenzene	120	12.914	12.914	0.000	96	22684	0.2000	0.1940	
138 Benzyl chloride	126	12.987	12.981	0.006	97	3590	0.2000	0.1617	
139 n-Butylbenzene	92	13.133	13.133	0.000	97	21838	0.2000	0.1707	
140 1,2-Dichlorobenzene	146	13.164	13.158	0.006	98	25281	0.2000	0.1843	
142 1,2-Dibromo-3-Chloropropane	155	13.712	13.700	0.012	89	1388	0.2000	0.1643	
143 1,3,5-Trichlorobenzene	180	13.834	13.828	0.006	97	19123	0.2000	0.1747	
144 1,2,4-Trichlorobenzene	180	14.261	14.249	0.012	92	14205	0.2000	0.1613	
145 Hexachlorobutadiene	225	14.334	14.334	0.000	93	7733	0.2000	0.1802	
146 Naphthalene	128	14.438	14.426	0.012	97	27854	0.2000	0.1737	
147 1,2,3-Trichlorobenzene	180	14.578	14.572	0.006	97	12752	0.2000	0.1730	
155 2-Methylnaphthalene	142		0.000				ND	ND	
156 p-Diethylbenzene	1		0.000				ND	ND	
161 Pentane	43		0.000				ND	ND	
150 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
165 Isopropyl alcohol	45		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Reagents:

MSV_LL_#1_826_00081	Amount Added:	2.00	Units: uL	
MSV_LL_#2_826_00093	Amount Added:	2.00	Units: uL	
MSV_LL_GAS826_00156	Amount Added:	2.00	Units: uL	
MSV_LLcentISS_00007	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 27-Jun-2023 12:30:03 Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X12.D

Injection Date:	19-Jun-2023 18:19:30	Instrument ID:	19930	Operator ID:	KNK41612
Lims ID:	IC std1			Worklist Smp#:	13
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

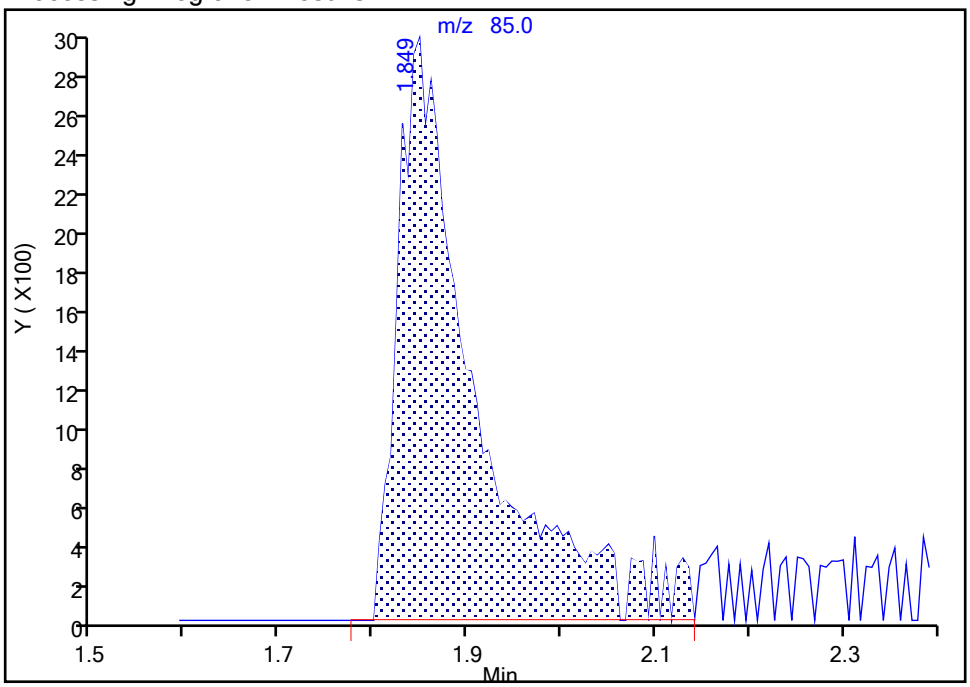
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X12.D				
Injection Date:	19-Jun-2023 18:19:30	Instrument ID:	19930		
Lims ID:	IC std1				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

1 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

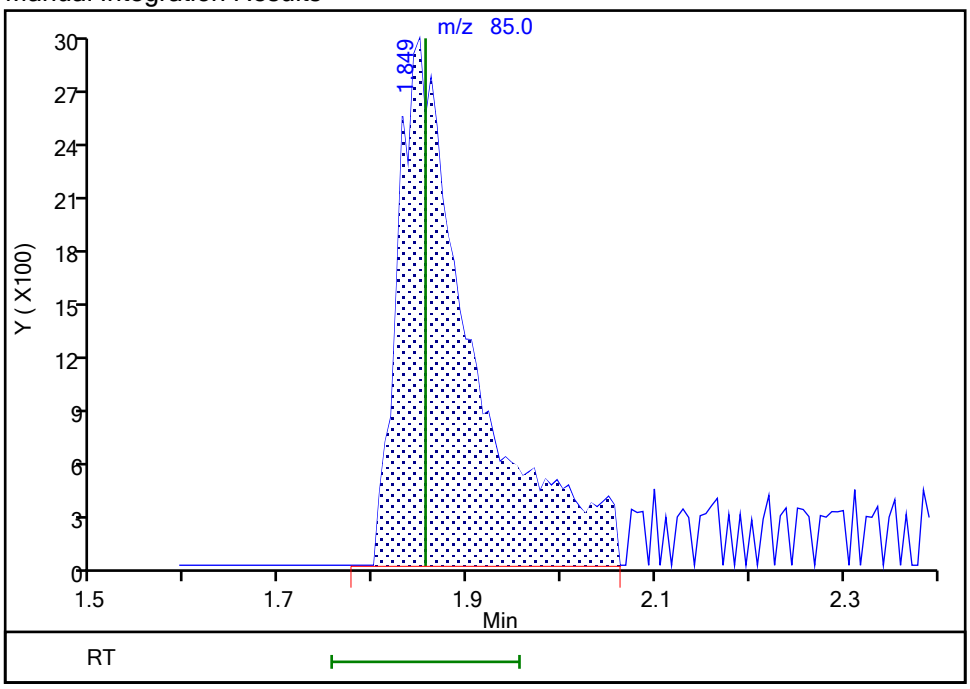
Processing Integration Results

RT: 1.85
Area: 17153
Amount: 0.228743
Amount Units: ug/l



Manual Integration Results

RT: 1.85
Area: 16248
Amount: 0.226029
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:45:13 -04:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

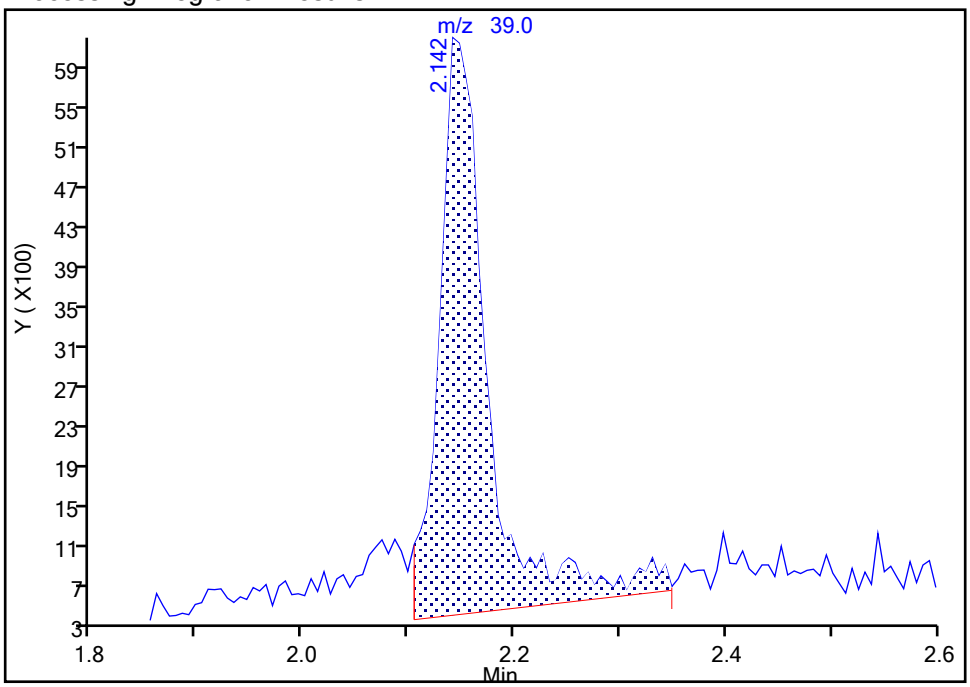
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X12.D				
Injection Date:	19-Jun-2023 18:19:30	Instrument ID:	19930		
Lims ID:	IC std1				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

6 Butadiene, CAS: 106-99-0

Signal: 1

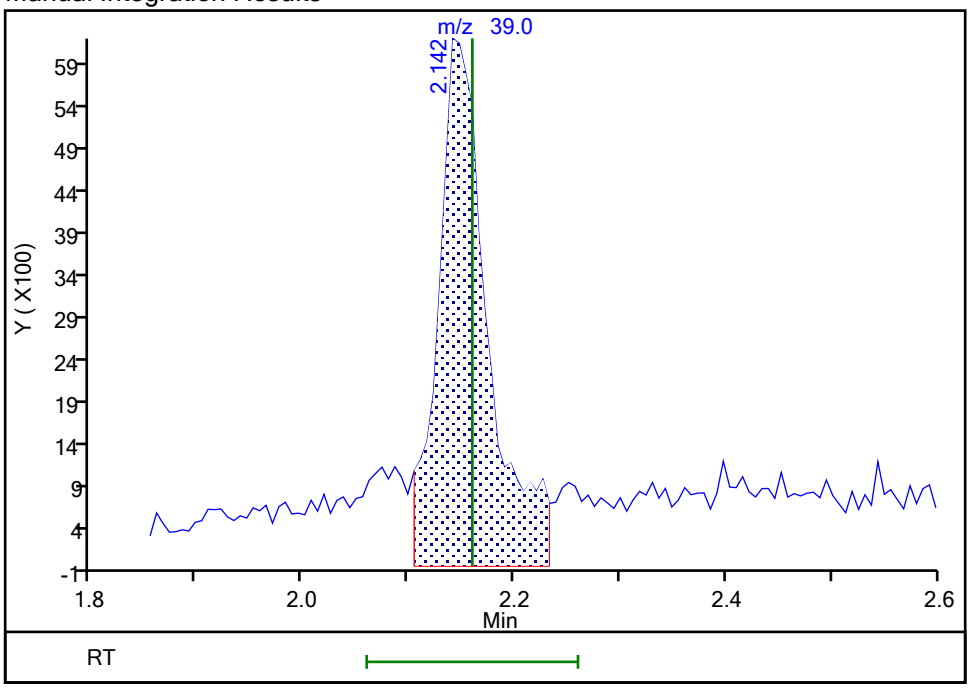
Processing Integration Results

RT: 2.14
Area: 18397
Amount: 0.251107
Amount Units: ug/l



Manual Integration Results

RT: 2.14
Area: 20337
Amount: 0.278153
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:45:27 -04:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

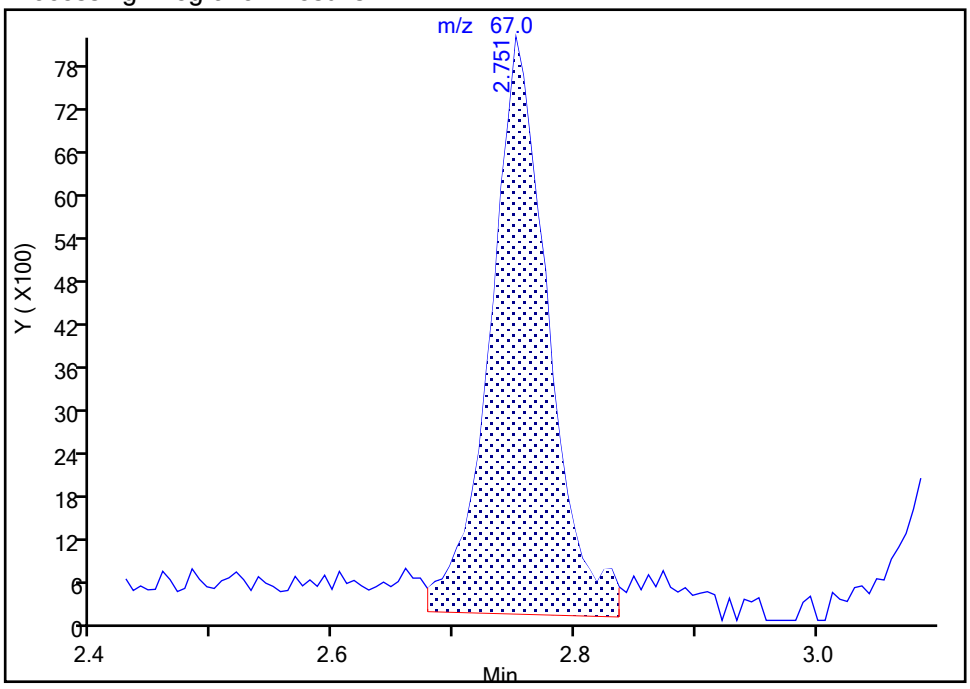
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X12.D				
Injection Date:	19-Jun-2023 18:19:30	Instrument ID:	19930		
Lims ID:	IC std1				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

9 Dichlorofluoromethane, CAS: 75-43-4

Signal: 1

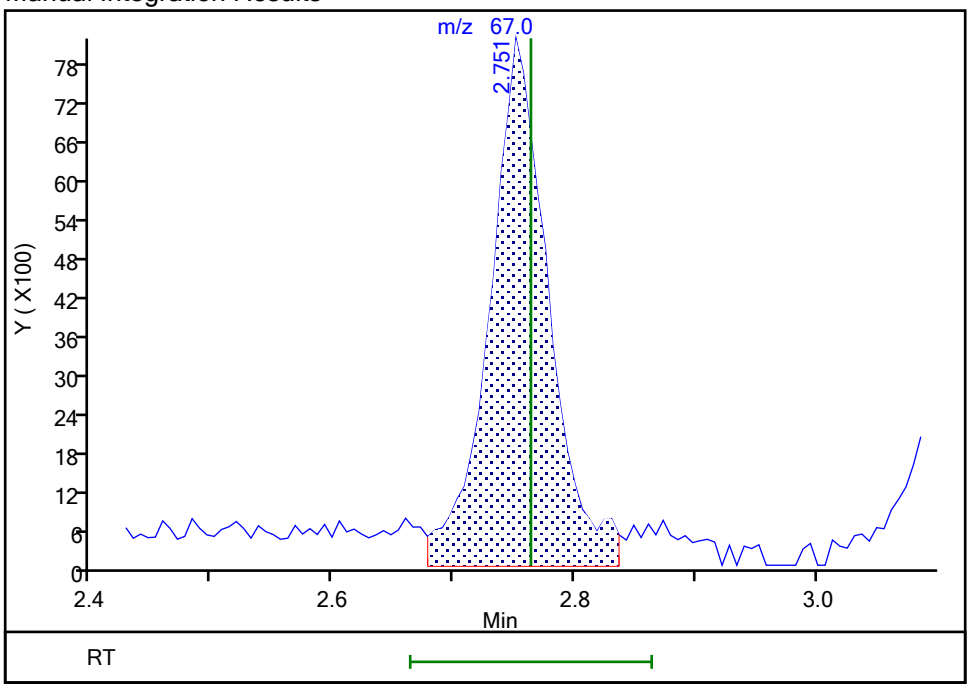
Processing Integration Results

RT: 2.75
Area: 26871
Amount: 0.307709
Amount Units: ug/l



Manual Integration Results

RT: 2.75
Area: 27749
Amount: 0.237817
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:46:06 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

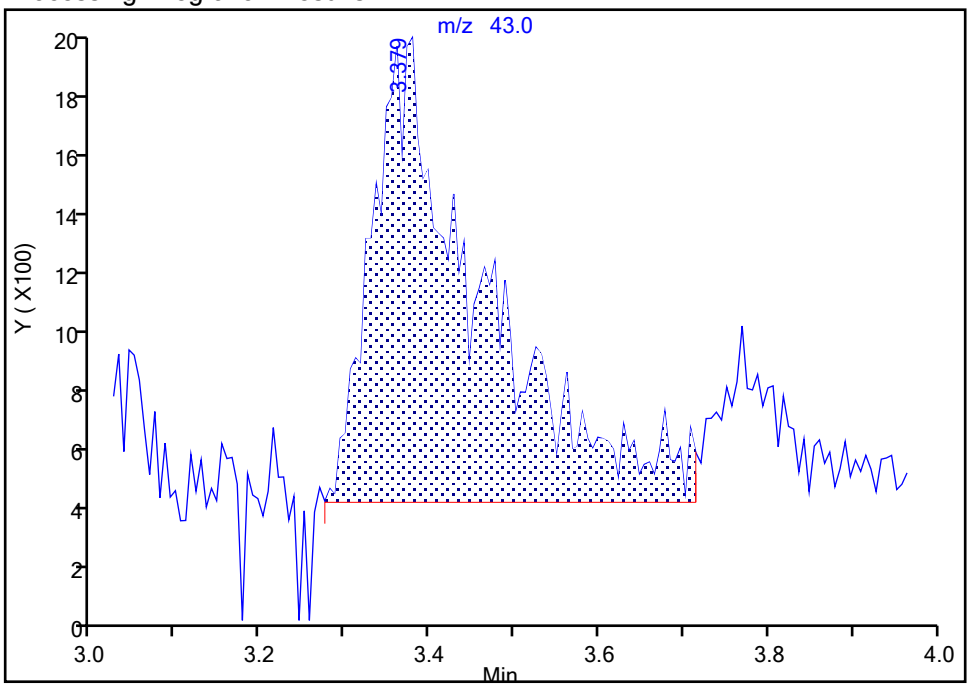
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X12.D
Injection Date: 19-Jun-2023 18:19:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: KNK41612 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

16 Acetone, CAS: 67-64-1

Signal: 1

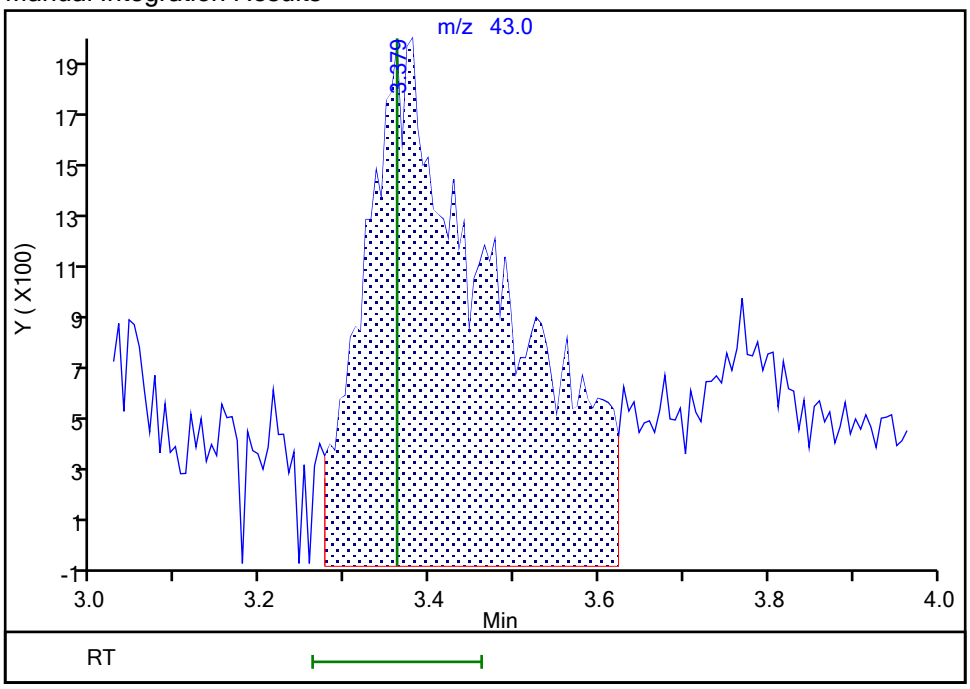
Processing Integration Results

RT: 3.38
Area: 14161
Amount: 2.451386
Amount Units: ug/l



Manual Integration Results

RT: 3.38
Area: 22071
Amount: 3.954818
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:47:22 -04:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

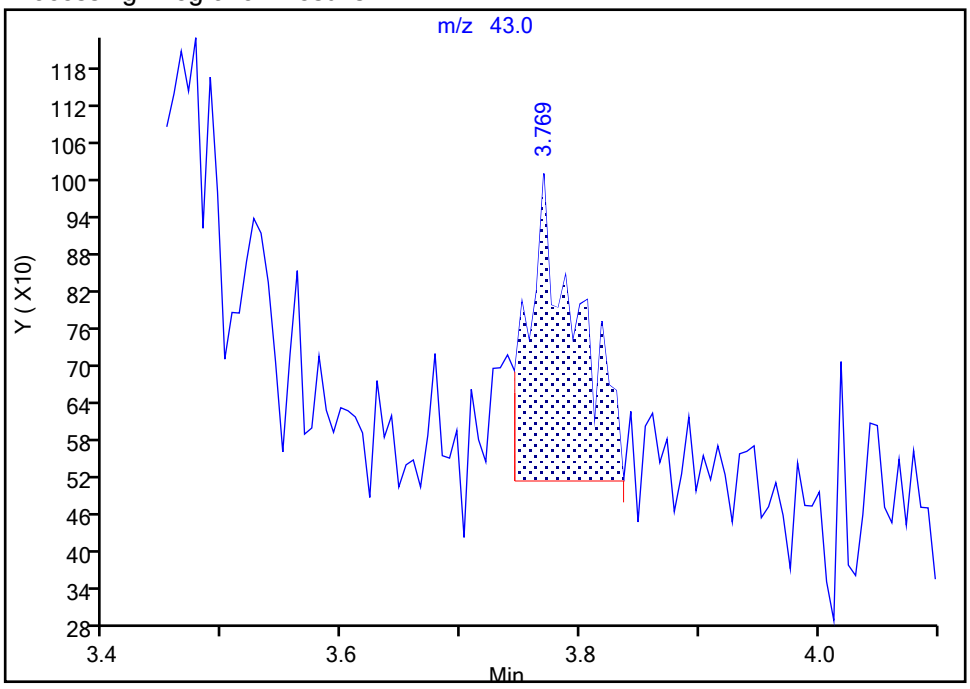
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X12.D				
Injection Date:	19-Jun-2023 18:19:30	Instrument ID:	19930		
Lims ID:	IC std1				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

23 Methyl acetate, CAS: 79-20-9

Signal: 1

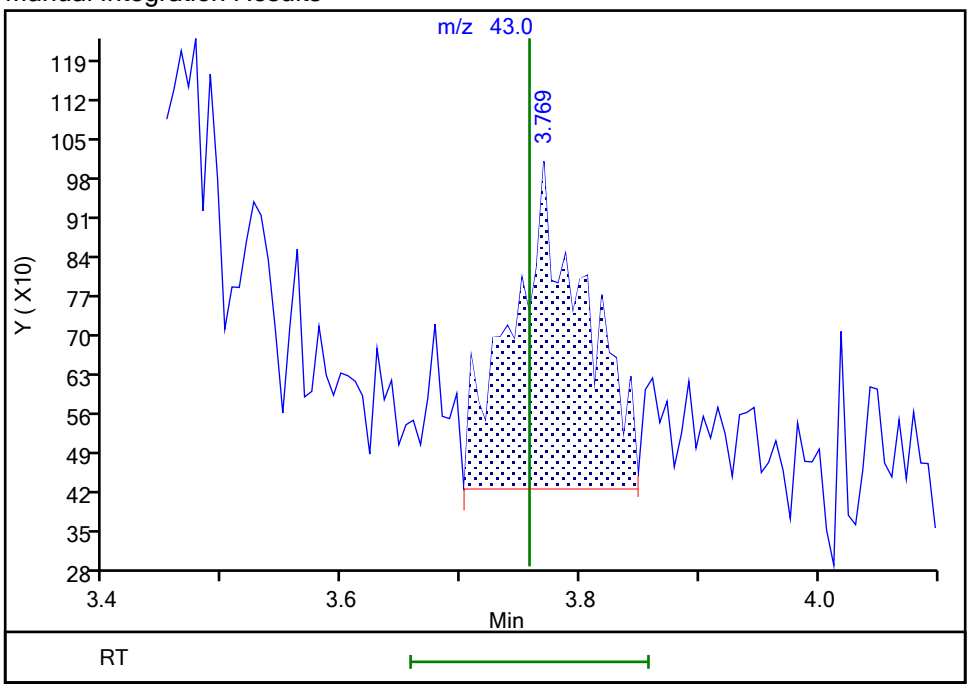
Processing Integration Results

RT: 3.77
Area: 1413
Amount: 0.145020
Amount Units: ug/l



Manual Integration Results

RT: 3.77
Area: 2537
Amount: 0.184204
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:47:43 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

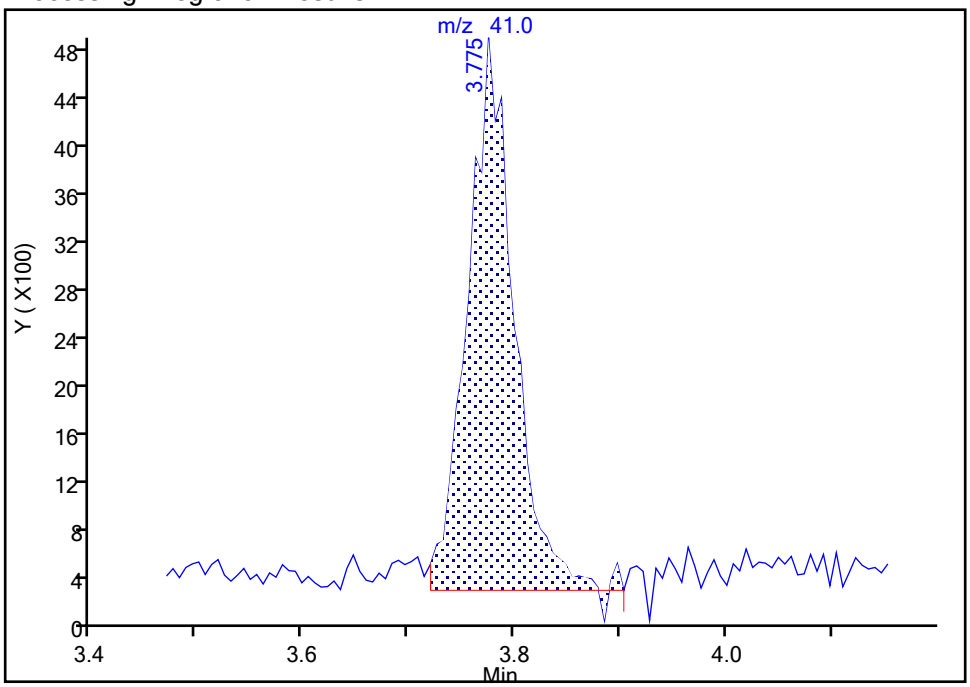
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X12.D				
Injection Date:	19-Jun-2023 18:19:30	Instrument ID:	19930		
Lims ID:	IC std1				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

24 3-Chloro-1-propene, CAS: 107-05-1

Signal: 1

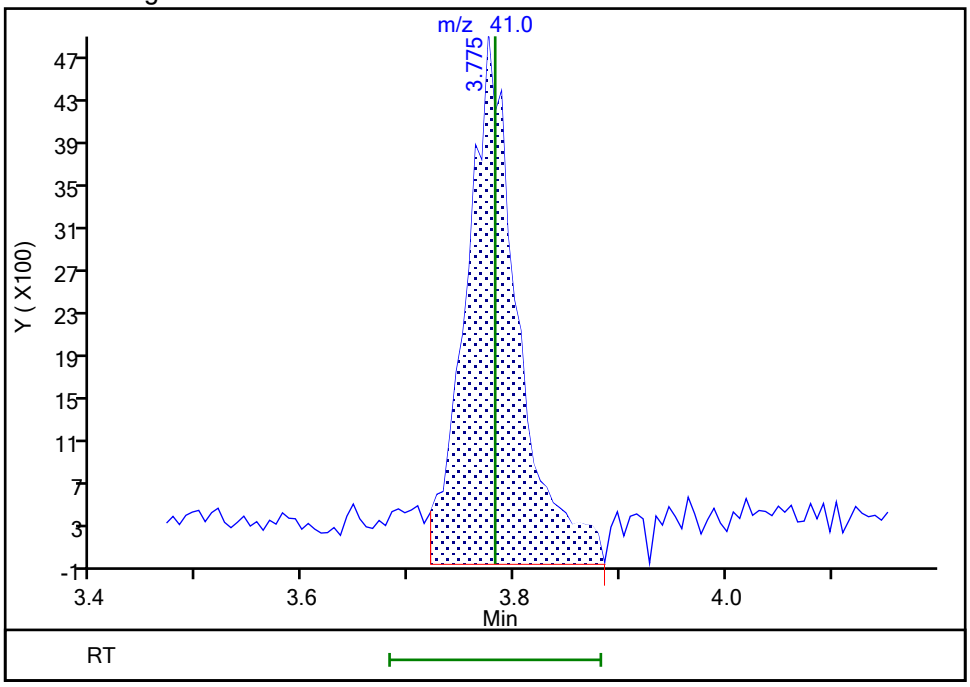
Processing Integration Results

RT: 3.78
Area: 14127
Amount: 0.194132
Amount Units: ug/l



Manual Integration Results

RT: 3.78
Area: 16611
Amount: 0.221980
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:48:01 -04:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

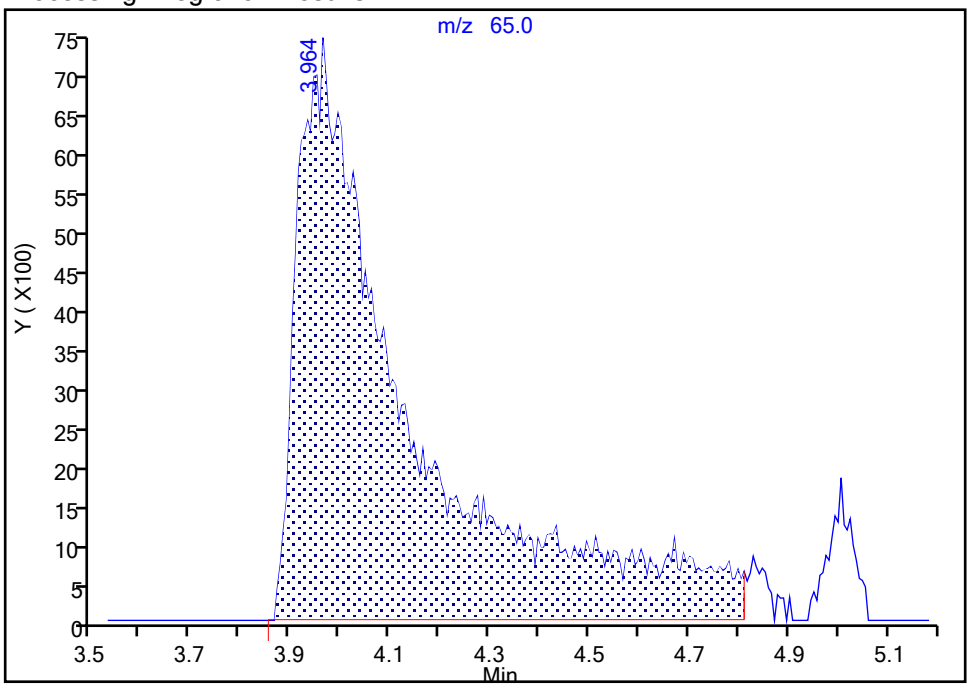
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X12.D				
Injection Date:	19-Jun-2023 18:19:30	Instrument ID:	19930		
Lims ID:	IC std1				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

* 26 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

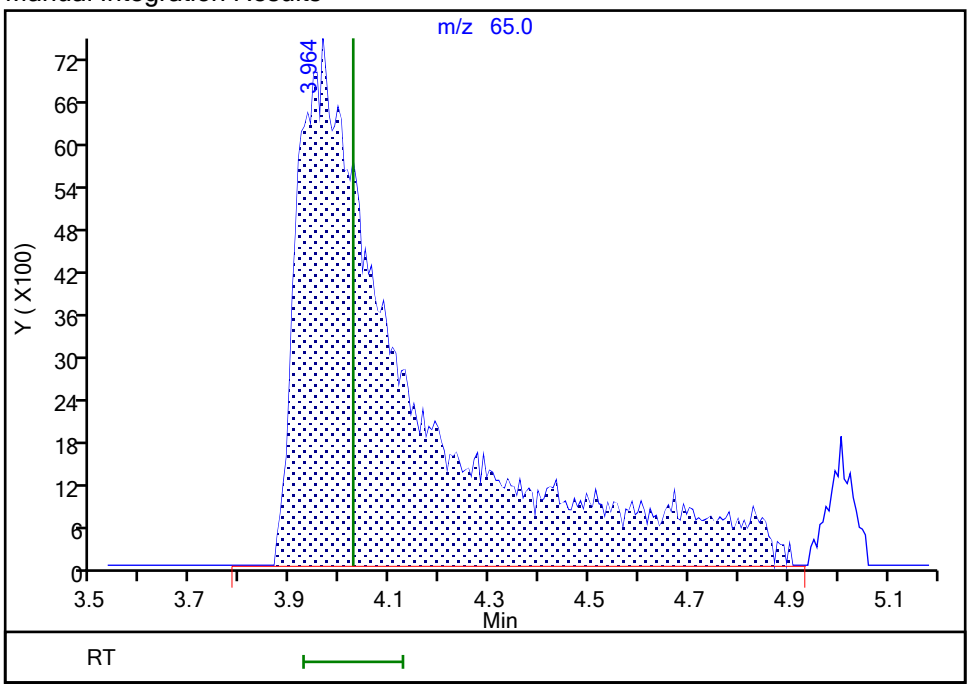
Processing Integration Results

RT: 3.96
Area: 114329
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 3.96
Area: 116680
Amount: 50.000000
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:48:08 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

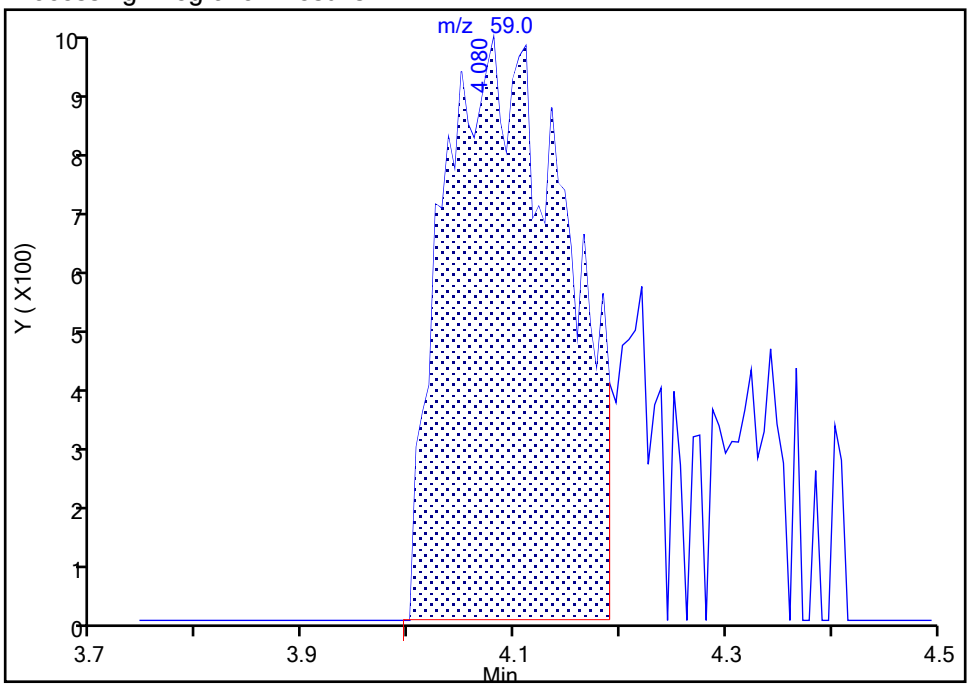
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X12.D
Injection Date: 19-Jun-2023 18:19:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: KNK41612 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

27 2-Methyl-2-propanol, CAS: 75-65-0

Signal: 1

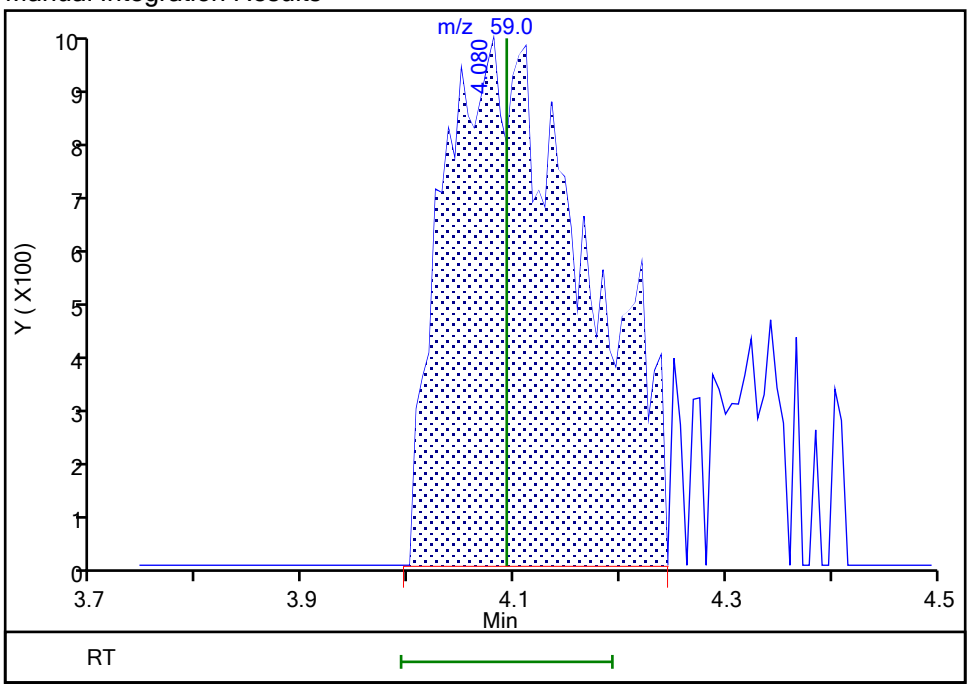
Processing Integration Results

RT: 4.08
Area: 8116
Amount: 4.003590
Amount Units: ug/l



Manual Integration Results

RT: 4.08
Area: 9373
Amount: 4.221747
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:48:15 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

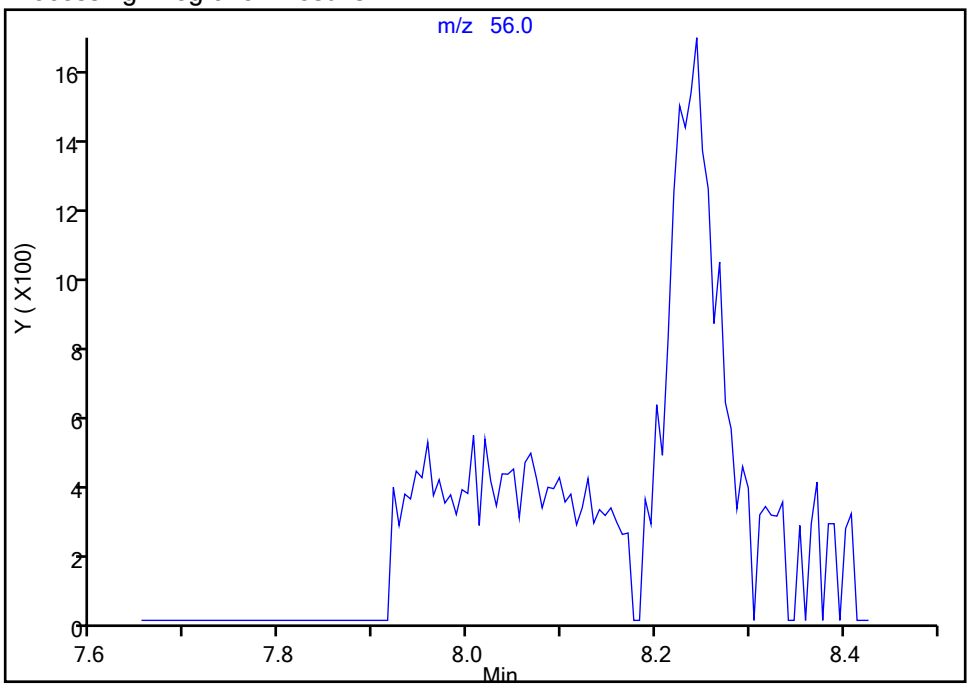
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X12.D				
Injection Date:	19-Jun-2023 18:19:30	Instrument ID:	19930		
Lims ID:	IC std1				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

63 n-Butanol, CAS: 71-36-3

Signal: 1

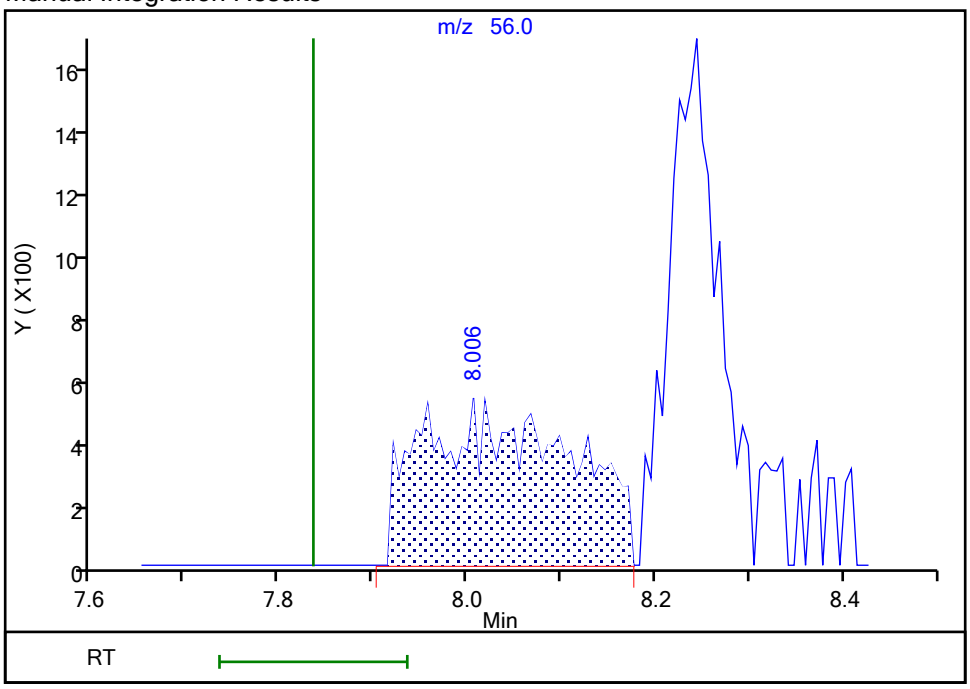
Not Detected
Expected RT: 7.84

Processing Integration Results



Manual Integration Results

RT: 8.01
Area: 5699
Amount: 9.407838
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:48:49 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

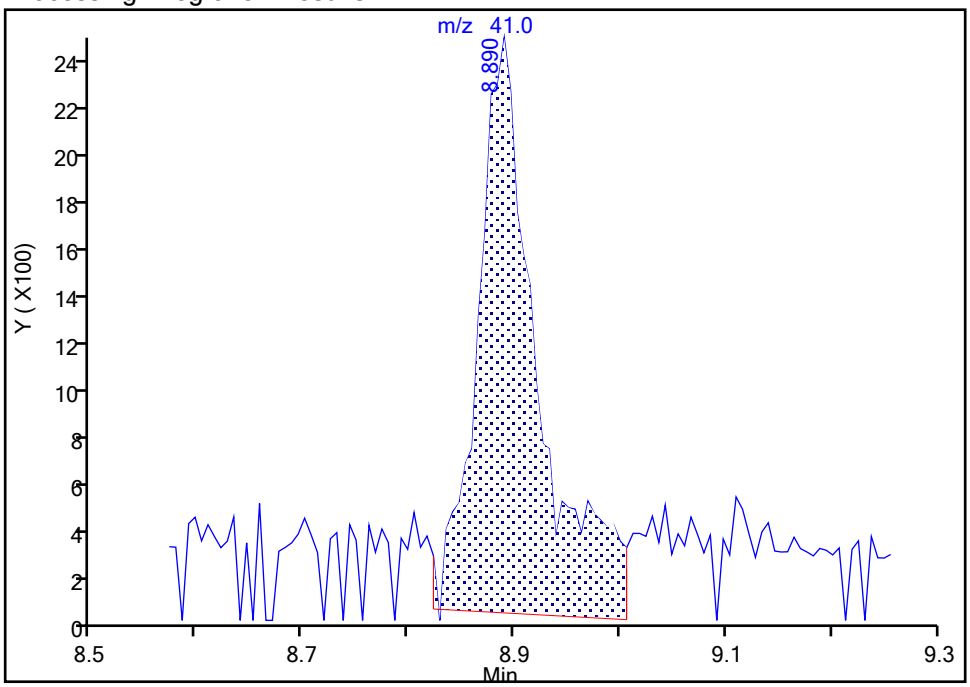
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X12.D
Injection Date: 19-Jun-2023 18:19:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: KNK41612 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

72 2-Nitropropane, CAS: 79-46-9

Signal: 1

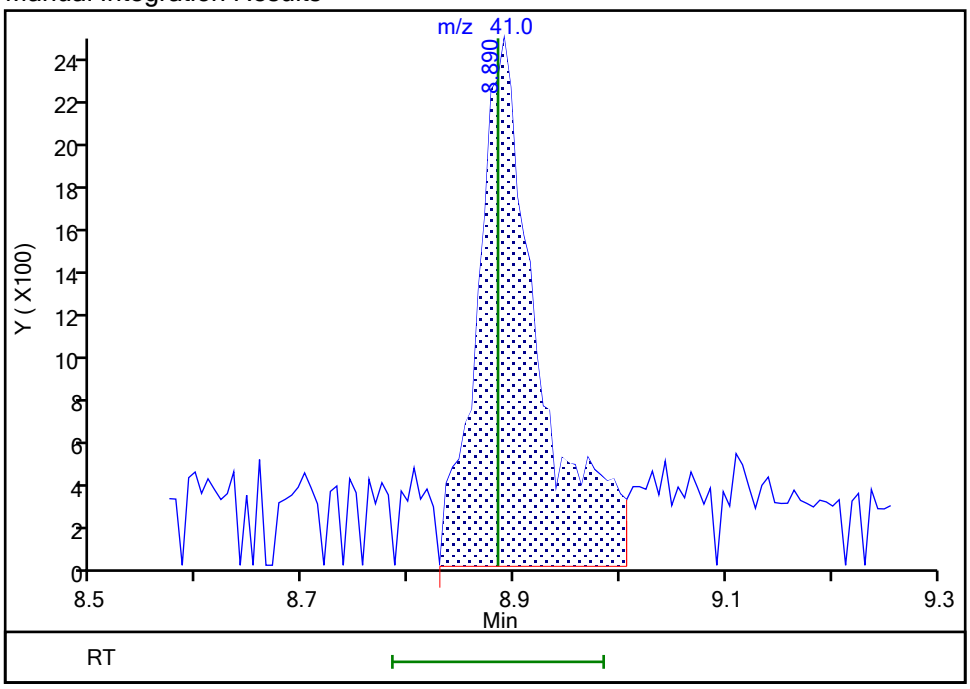
Processing Integration Results

RT: 8.89
Area: 9510
Amount: 1.267713
Amount Units: ug/l



Manual Integration Results

RT: 8.89
Area: 9668
Amount: 1.336820
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:49:40 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

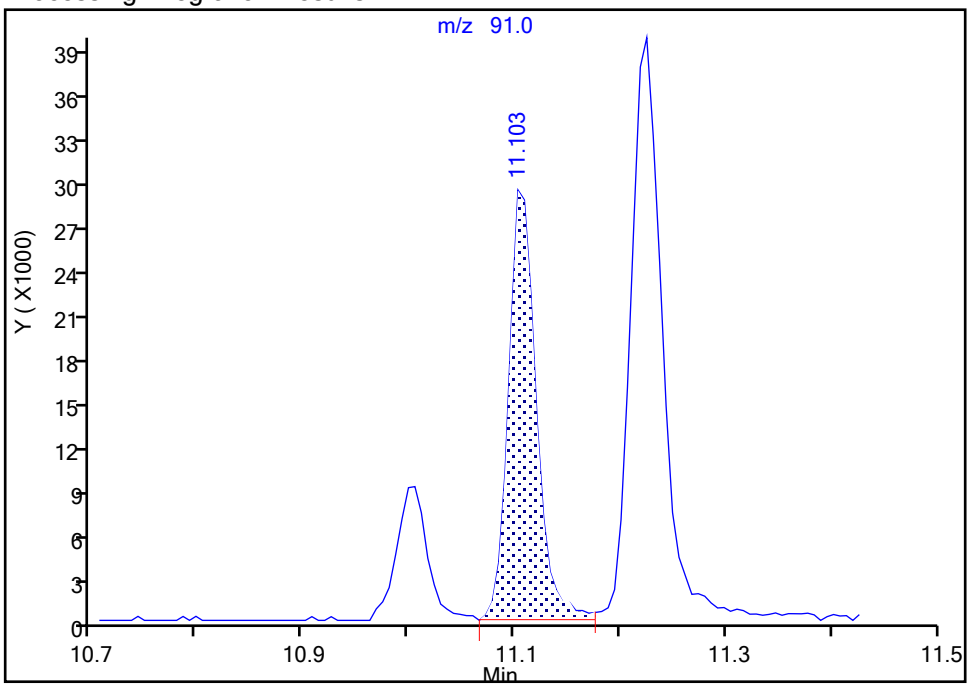
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X12.D
Injection Date: 19-Jun-2023 18:19:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: KNK41612 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

108 1-Chlorohexane, CAS: 544-10-5

Signal: 1

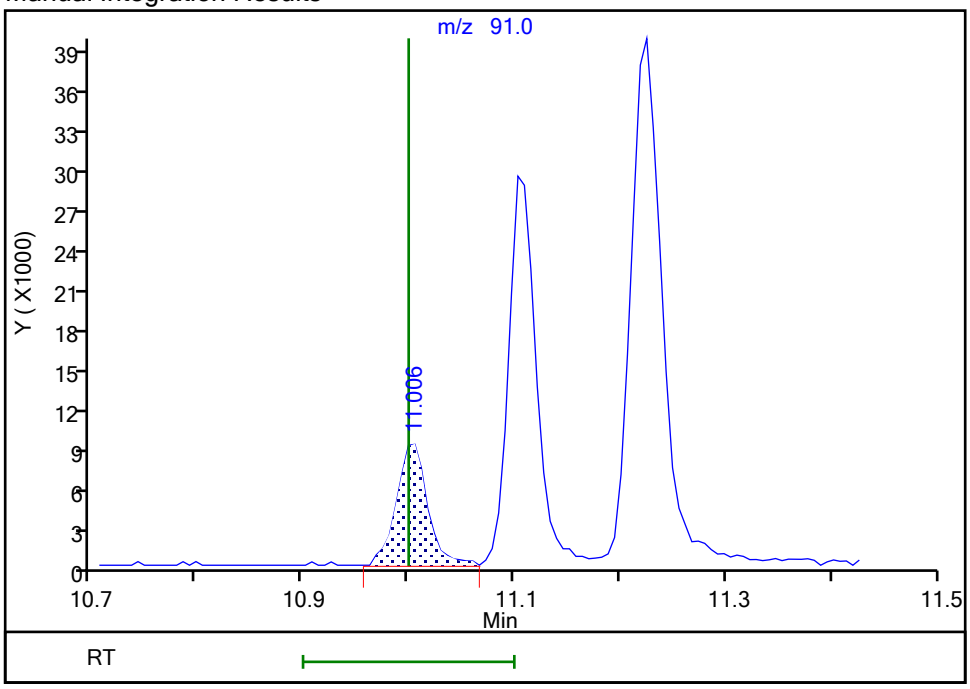
Processing Integration Results

RT: 11.10
Area: 53589
Amount: 0.191518
Amount Units: ug/l



Manual Integration Results

RT: 11.01
Area: 18652
Amount: 0.223351
Amount Units: ug/l



Reviewer: DVW2, 22-Jun-2023 07:47:06 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

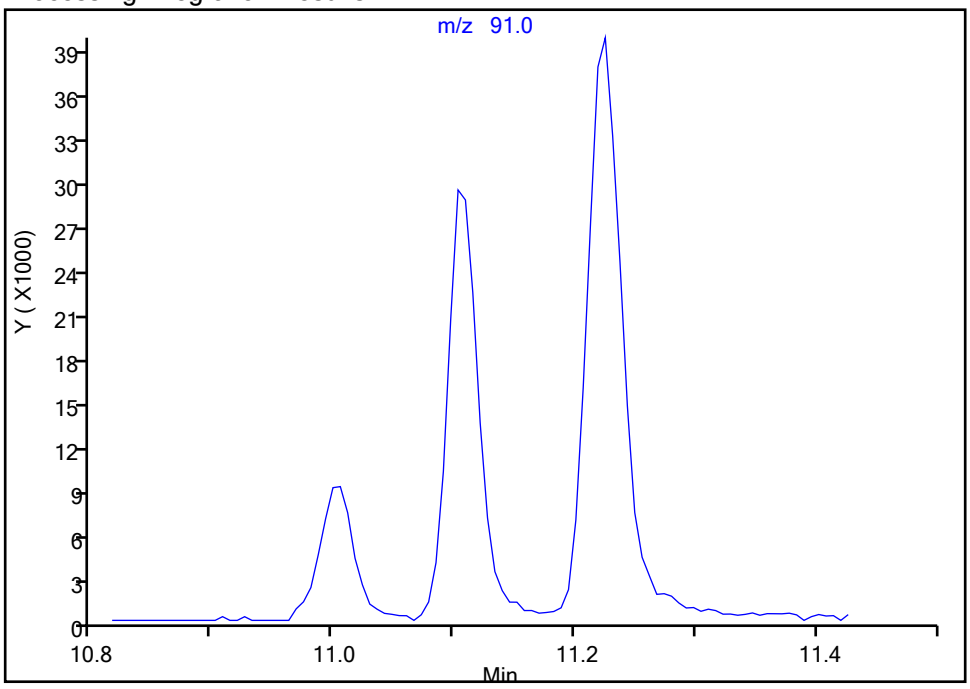
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X12.D				
Injection Date:	19-Jun-2023 18:19:30	Instrument ID:	19930		
Lims ID:	IC std1				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

112 Ethylbenzene, CAS: 100-41-4

Signal: 1

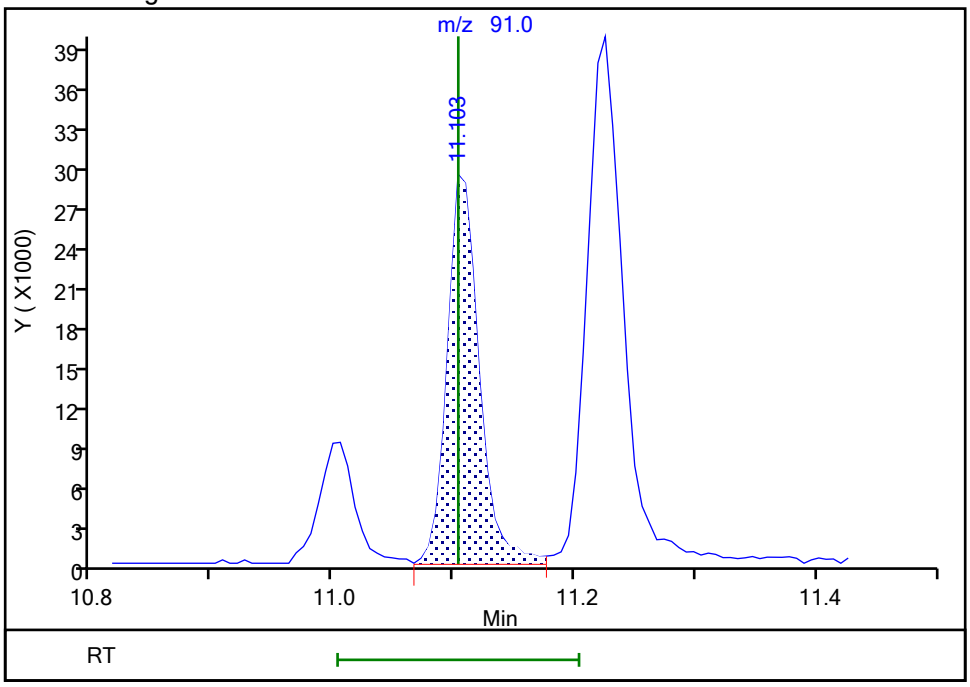
Not Detected
Expected RT: 11.10

Processing Integration Results



Manual Integration Results

RT: 11.10
Area: 53589
Amount: 0.191630
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 15:33:35 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

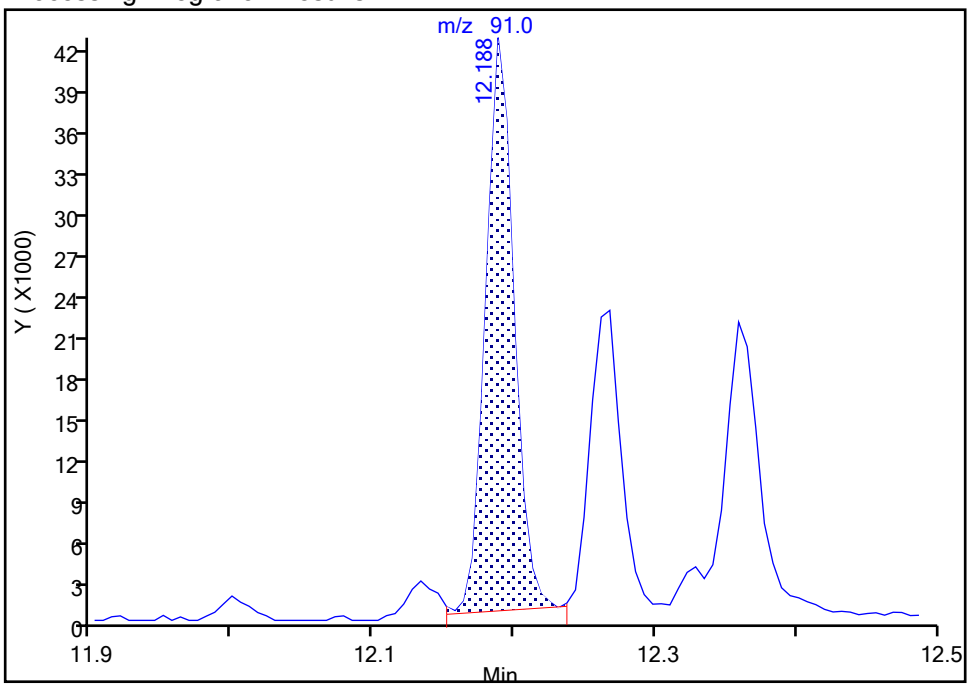
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X12.D				
Injection Date:	19-Jun-2023 18:19:30	Instrument ID:	19930		
Lims ID:	IC std1				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

125 N-Propylbenzene, CAS: 103-65-1

Signal: 1

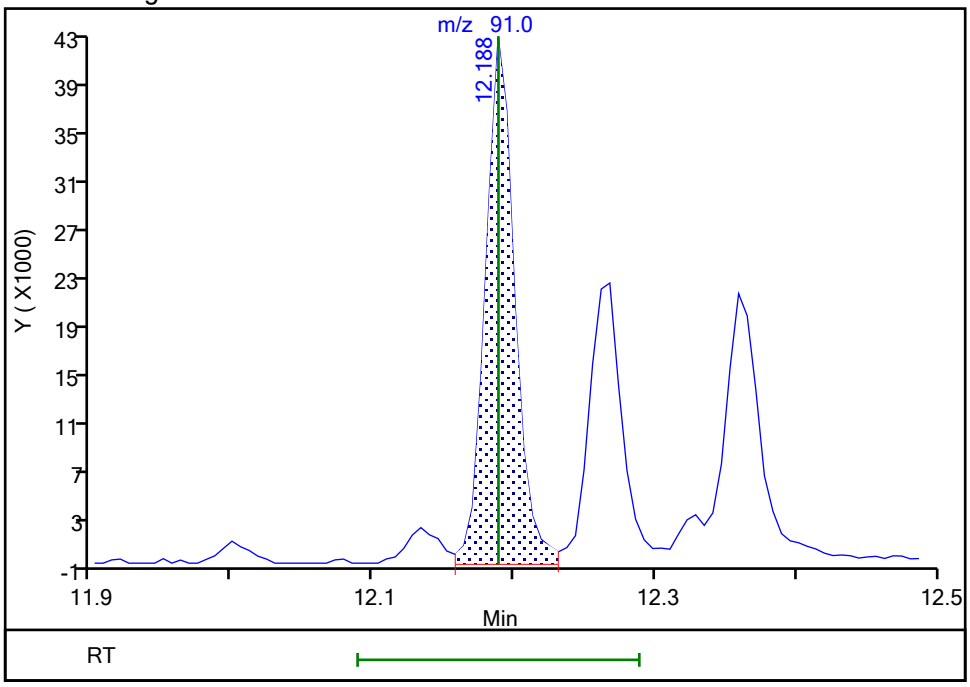
Processing Integration Results

RT: 12.19
Area: 58930
Amount: 0.204912
Amount Units: ug/l



Manual Integration Results

RT: 12.19
Area: 62107
Amount: 0.187851
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:50:50 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

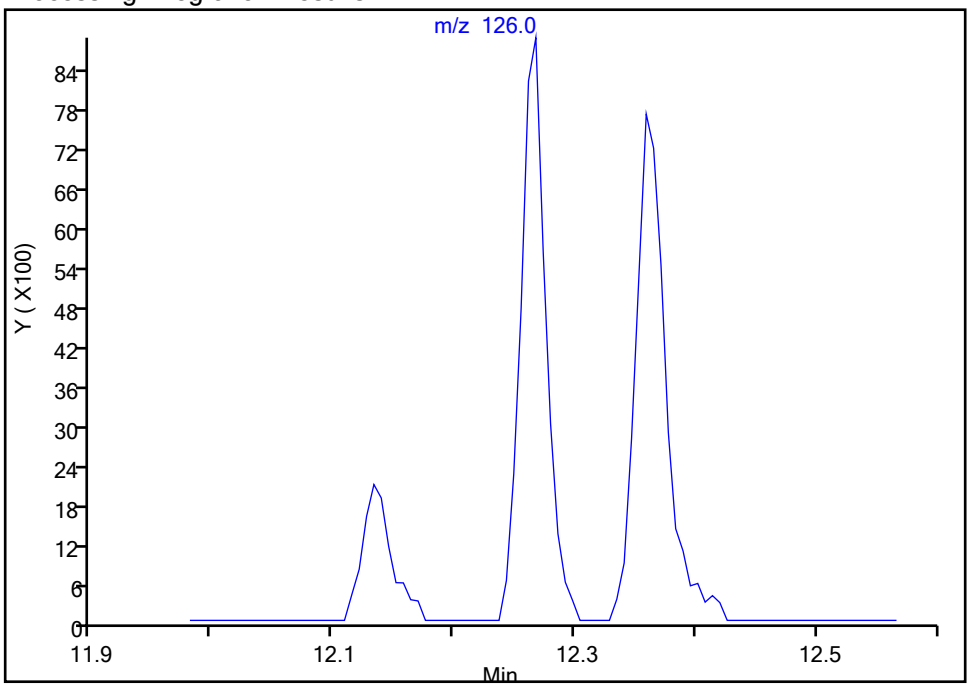
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X12.D				
Injection Date:	19-Jun-2023 18:19:30	Instrument ID:	19930		
Lims ID:	IC std1				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

126 2-Chlorotoluene, CAS: 95-49-8

Signal: 1

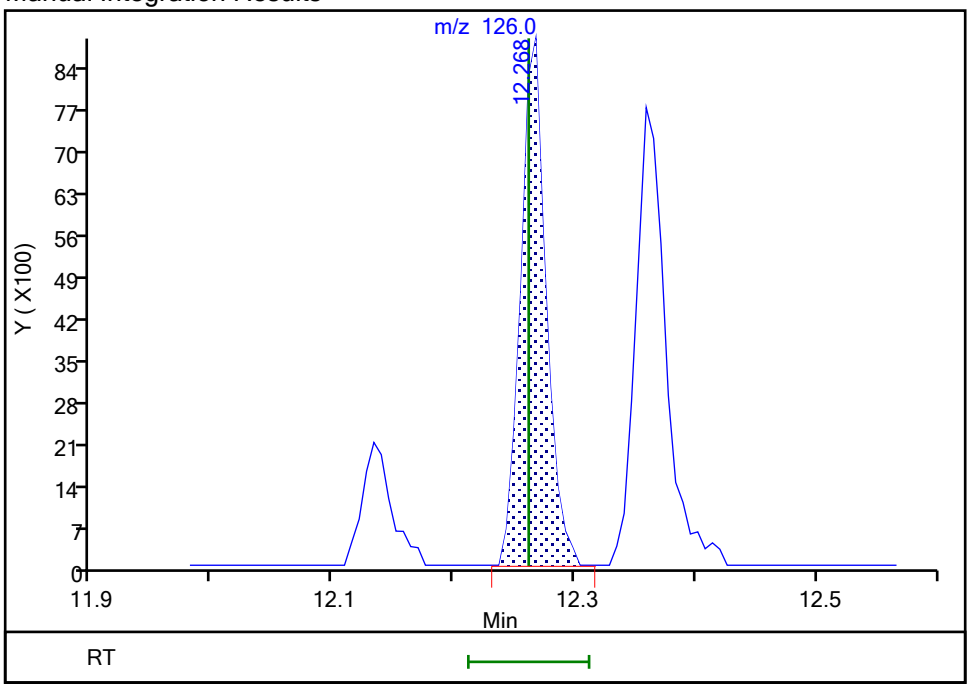
Not Detected
Expected RT: 12.26

Processing Integration Results



Manual Integration Results

RT: 12.27
Area: 12989
Amount: 0.179881
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 15:33:41 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

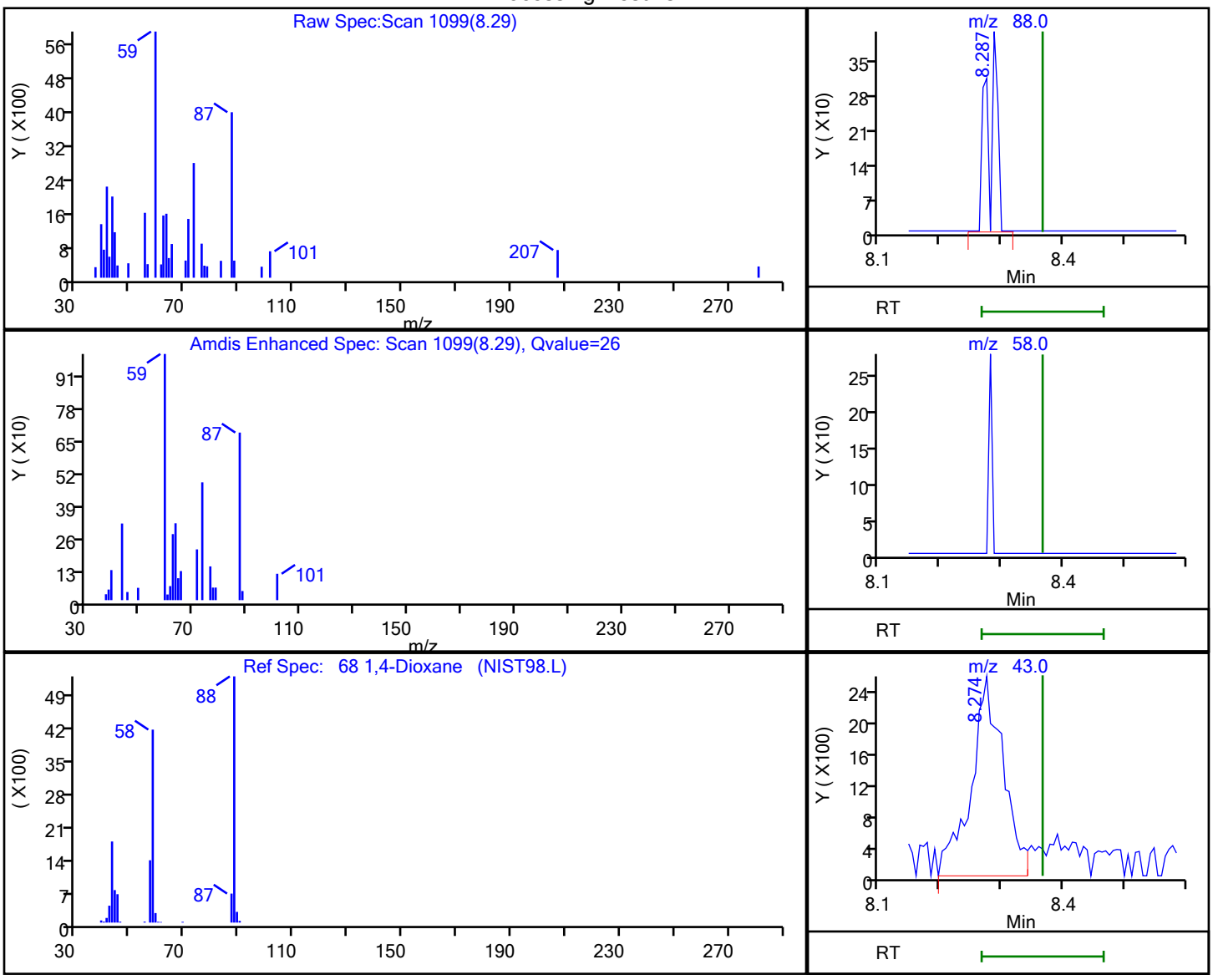
User Disabled Compound Report

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X12.D				
Injection Date:	19-Jun-2023 18:19:30	Instrument ID:	19930		
Lims ID:	IC std1				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

68 1,4-Dioxane, CAS: 123-91-1

Processing Results



RT	Mass	Response	Amount
8.29	88.00	468	4.950139
8.37	58.00	0	
8.27	43.00	9532	

Reviewer: DVW2, 21-Jun-2023 07:49:15 -04:00:00 (UTC)

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X13.D
Lims ID: IC std2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 19-Jun-2023 18:40:30 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0086929-014
Misc. Info.: LG 0.5
Operator ID: KNK41612 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 27-Jun-2023 12:30:09 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1687

First Level Reviewer: DVW2 Date: 20-Jun-2023 10:43:02

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.861	1.855	0.006	99	34723	0.5000	0.4944	M
4 Chloromethane	50	2.038	2.050	-0.012	99	38309	0.5000	0.5369	
5 Vinyl chloride	62	2.148	2.160	-0.012	71	34833	0.5000	0.5103	
6 Butadiene	39	2.154	2.160	-0.006	92	40081	0.5000	0.5611	M
7 Bromomethane	94	2.459	2.465	-0.007	90	29277	0.5000	0.5494	
8 Chloroethane	64	2.538	2.538	0.000	99	22289	0.5000	0.5457	
9 Dichlorofluoromethane	67	2.757	2.764	-0.007	97	62910	0.5000	0.5519	M
10 Trichlorofluoromethane	101	2.824	2.824	0.000	94	43553	0.5000	0.5011	
11 Ethyl ether	59	3.038	3.050	-0.012	88	18739	0.5001	0.5223	
13 1,2-Dichloro-1,1,2-trifluoroetha	67	3.111	3.142	-0.031	89	32387	0.5000	0.5225	
14 Acrolein	56	3.202	3.209	-0.007	99	142596	25.0	24.9	
15 1,1-Dichloroethene	96	3.330	3.337	-0.007	97	24450	0.5000	0.5198	
16 Acetone	43	3.373	3.361	0.012	97	35188	5.00	5.56	M
17 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.373	3.385	-0.012	89	24980	0.5000	0.5003	
18 Iodomethane	142	3.513	3.526	-0.013	99	51051	0.5000	0.5161	
19 Ethyl bromide	108	3.538	3.550	-0.012	98	21495	0.4995	0.5221	
20 Carbon disulfide	76	3.617	3.629	-0.012	99	66169	0.5000	0.5187	
23 Methyl acetate	43	3.769	3.757	0.012	24	8217	0.5000	0.5258	M
24 3-Chloro-1-propene	41	3.775	3.782	-0.007	91	37534	0.5000	0.5134	
25 Methylene Chloride	84	3.946	3.958	-0.012	87	26705	0.5000	0.5377	
* 26 t-Butyl alcohol-d10 (IS)	65	3.983	4.025	-0.042	92	132398	50.0	50.0	M
27 2-Methyl-2-propanol	59	4.092	4.093	-0.001	95	27747	10.0	11.0	
28 Acrylonitrile	53	4.300	4.282	0.018	91	9924	1.25	1.29	
29 Methyl tert-butyl ether	73	4.330	4.342	-0.012	94	67798	0.5000	0.5252	
30 trans-1,2-Dichloroethene	96	4.354	4.355	-0.001	97	27769	0.5000	0.5304	
31 Hexane	57	4.775	4.781	-0.006	95	33162	0.5000	0.4833	
32 1,1-Dichloroethane	63	5.013	5.013	0.000	96	46514	0.5000	0.5186	
35 Isopropyl ether	45	5.068	5.074	-0.006	93	77884	0.5000	0.5288	
36 2-Chloro-1,3-butadiene	53	5.123	5.123	0.000	90	38162	0.5000	0.5089	
37 Tert-butyl ethyl ether	59	5.604	5.623	-0.019	97	73536	0.5000	0.5227	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
38 2-Butanone (MEK)	43	5.824	5.812	0.012	99	58914	5.00	4.83	
39 cis-1,2-Dichloroethene	96	5.854	5.854	0.000	79	31280	0.5000	0.5371	
40 2,2-Dichloropropane	77	5.860	5.867	-0.007	73	41944	0.5000	0.5190	
43 Propionitrile	54	5.909	5.891	0.018	95	31714	10.0	9.83	
45 Methacrylonitrile	67	6.116	6.110	0.006	91	63442	5.00	4.98	
S 41 1,2-Dichloroethene, Total	100				0			1.07	
46 Chlorobromomethane	128	6.183	6.190	-0.007	88	14176	0.5000	0.5350	
47 Tetrahydrofuran	71	6.208	6.196	0.012	78	10811	2.50	2.69	
48 Chloroform	83	6.342	6.342	0.000	93	48008	0.5000	0.5182	
$ 49 Dibromofluoromethane (Surr)	113	6.549	6.555	-0.006	95	452360	10.0	10.0	
50 1,1,1-Trichloroethane	97	6.567	6.568	-0.001	96	44606	0.5000	0.5156	
51 Cyclohexane	56	6.659	6.671	-0.012	89	40898	0.5000	0.4988	
54 Carbon tetrachloride	117	6.775	6.781	-0.006	96	38435	0.5000	0.4987	
53 1,1-Dichloropropene	75	6.775	6.781	-0.006	95	35524	0.5000	0.5157	
55 Isobutyl alcohol	41	6.952	6.940	0.012	90	24811	25.0	27.7	M
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.006	7.013	-0.007	65	89414	10.0	10.0	
57 Benzene	78	7.037	7.043	-0.006	92	107059	0.5000	0.5169	
58 1,2-Dichloroethane	62	7.110	7.116	-0.006	96	29283	0.5000	0.5216	
60 Tert-amyl methyl ether	73	7.232	7.244	-0.012	98	68913	0.5000	0.5300	
* 61 Fluorobenzene (IS)	96	7.445	7.445	0.000	99	1753956	10.0	10.0	
62 n-Heptane	43	7.464	7.470	-0.006	37	30853	0.5000	0.4683	
63 n-Butanol	56	7.866	7.836	0.030	87	25327	43.8	36.8	
64 Trichloroethene	95	7.933	7.933	0.000	96	30455	0.5000	0.5286	
65 Methylcyclohexane	83	8.244	8.244	0.000	90	45980	0.5000	0.4940	
66 1,2-Dichloropropane	63	8.268	8.269	-0.001	95	26965	0.5000	0.5266	
67 Methyl methacrylate	69	8.366	8.354	0.012	76	11677	0.5000	0.4653	
68 1,4-Dioxane	88	8.372	8.366	0.006	31	1097	25.0	7.51	
69 Dibromomethane	93	8.378	8.378	0.000	90	13482	0.5000	0.5253	
71 Dichlorobromomethane	83	8.610	8.616	-0.006	99	34054	0.5000	0.5117	
72 2-Nitropropane	41	8.884	8.884	0.000	96	19831	2.50	2.42	
75 1-Bromo-2-chloroethane	63	9.018	9.012	0.006	98	26799	0.5000	0.5133	
76 cis-1,3-Dichloropropene	75	9.183	9.177	0.006	96	40532	0.5000	0.5075	
77 4-Methyl-2-pentanone (MIBK)	43	9.360	9.360	0.000	95	162172	5.00	4.95	
$ 78 Toluene-d8 (Surr)	98	9.494	9.500	-0.006	93	1785023	10.0	10.1	
79 Toluene	92	9.579	9.579	0.000	99	73122	0.5000	0.5221	
97 trans-1,3-Dichloropropene	75	9.847	9.848	-0.001	91	34150	0.5000	0.5165	
99 Ethyl methacrylate	69	9.920	9.915	0.005	90	28243	0.5000	0.5167	
100 1,1,2-Trichloroethane	97	10.055	10.055	0.000	90	21292	0.5000	0.5387	
S 98 1,3-Dichloropropene, Total	100				0			1.02	
101 Tetrachloroethene	166	10.146	10.146	0.000	98	37751	0.5000	0.5167	
102 1,3-Dichloropropane	76	10.219	10.219	0.000	88	32993	0.5000	0.5274	
103 2-Hexanone	43	10.280	10.274	0.006	96	109004	5.00	4.70	
105 Chlorodibromomethane	129	10.439	10.439	0.000	91	25969	0.5000	0.5046	
106 Ethylene Dibromide	107	10.554	10.549	0.005	98	18815	0.5000	0.5045	
* 107 Chlorobenzene-d5 (IS)	117	10.987	10.987	0.000	84	1381168	10.0	10.0	
108 1-Chlorohexane	91	11.006	11.000	0.006	95	42354	0.5000	0.5196	a
109 Chlorobenzene	112	11.018	11.018	0.000	97	85778	0.5000	0.5234	
111 1,1,1,2-Tetrachloroethane	131	11.097	11.097	0.000	95	30129	0.5000	0.5159	
112 Ethylbenzene	91	11.103	11.103	0.000	98	143495	0.5000	0.5257	a
113 m-Xylene & p-Xylene	106	11.225	11.219	0.006	93	115867	1.00	1.05	
S 110 Xylenes, Total	106				0			1.57	
114 o-Xylene	106	11.554	11.554	0.000	95	57211	0.5000	0.5243	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
115 Styrene	104	11.573	11.567	0.006	94	90765	0.5000	0.5170	
116 Bromoform	173	11.731	11.725	0.006	97	16371	0.5000	0.4904	
117 Isopropylbenzene	105	11.859	11.859	0.000	95	146958	0.5000	0.5193	
$ 120 4-Bromofluorobenzene (Surr)	95	11.999	12.000	-0.001	96	670589	10.0	10.0	
121 1,1,2,2-Tetrachloroethane	83	12.103	12.103	0.000	94	26384	0.5000	0.5309	
122 Bromobenzene	156	12.115	12.115	0.000	89	37870	0.5000	0.5273	
123 trans-1,4-Dichloro-2-butene	53	12.133	12.128	0.005	94	60206	5.00	4.88	
124 1,2,3-Trichloropropane	110	12.152	12.146	0.006	79	7469	0.5000	0.5354	
125 N-Propylbenzene	91	12.188	12.189	-0.001	98	163202	0.5000	0.5134	
126 2-Chlorotoluene	126	12.261	12.262	-0.001	98	36985	0.5000	0.5327	a
127 1,3,5-Trimethylbenzene	105	12.322	12.323	-0.001	94	125592	0.5000	0.5183	
128 4-Chlorotoluene	126	12.359	12.353	0.006	96	37661	0.5000	0.5294	
129 tert-Butylbenzene	134	12.566	12.566	0.000	91	30391	0.5000	0.5220	
130 Pentachloroethane	167	12.597	12.597	0.000	78	22167	0.5000	0.4923	
131 1,2,4-Trimethylbenzene	105	12.609	12.609	0.000	96	129589	0.5000	0.5210	
132 sec-Butylbenzene	105	12.731	12.731	0.000	93	159057	0.5000	0.5162	
133 1,3-Dichlorobenzene	146	12.828	12.829	-0.001	99	71773	0.5000	0.5113	
134 4-Isopropyltoluene	119	12.841	12.841	0.000	97	137662	0.5000	0.5011	
* 135 1,4-Dichlorobenzene-d4	152	12.883	12.883	0.000	93	834938	10.0	10.0	
136 1,4-Dichlorobenzene	146	12.902	12.902	0.000	96	73356	0.5000	0.5302	
137 1,2,3-Trimethylbenzene	120	12.914	12.914	0.000	97	56949	0.5000	0.5065	
138 Benzyl chloride	126	12.981	12.981	0.000	98	10607	0.5000	0.4967	
139 n-Butylbenzene	92	13.133	13.133	0.000	97	61172	0.5000	0.4973	
140 1,2-Dichlorobenzene	146	13.164	13.158	0.006	100	69532	0.5000	0.5273	
142 1,2-Dibromo-3-Chloropropane	155	13.712	13.700	0.012	86	3960	0.5000	0.4875	
143 1,3,5-Trichlorobenzene	180	13.834	13.828	0.006	97	51123	0.5000	0.4856	
144 1,2,4-Trichlorobenzene	180	14.255	14.249	0.006	94	40773	0.5000	0.4814	
145 Hexachlorobutadiene	225	14.334	14.334	0.000	95	19602	0.5000	0.4751	
146 Naphthalene	128	14.432	14.426	0.006	96	77405	0.5000	0.5021	
147 1,2,3-Trichlorobenzene	180	14.572	14.572	0.000	96	33951	0.5000	0.4789	
155 2-Methylnaphthalene	142		0.000				ND	ND	
156 p-Diethylbenzene	1		0.000				ND	ND	
161 Pentane	43		0.000				ND	ND	
150 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
165 Isopropyl alcohol	45		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_LL_#1_826_00081	Amount Added:	2.00	Units: uL	
MSV_LL_#2_826_00093	Amount Added:	2.00	Units: uL	
MSV_LL_GAS826_00156	Amount Added:	2.00	Units: uL	
MSV_LLcentISS_00007	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 27-Jun-2023 12:30:10 Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X13.D

Injection Date: 19-Jun-2023 18:40:30 Instrument ID: 19930 Operator ID: KNK41612

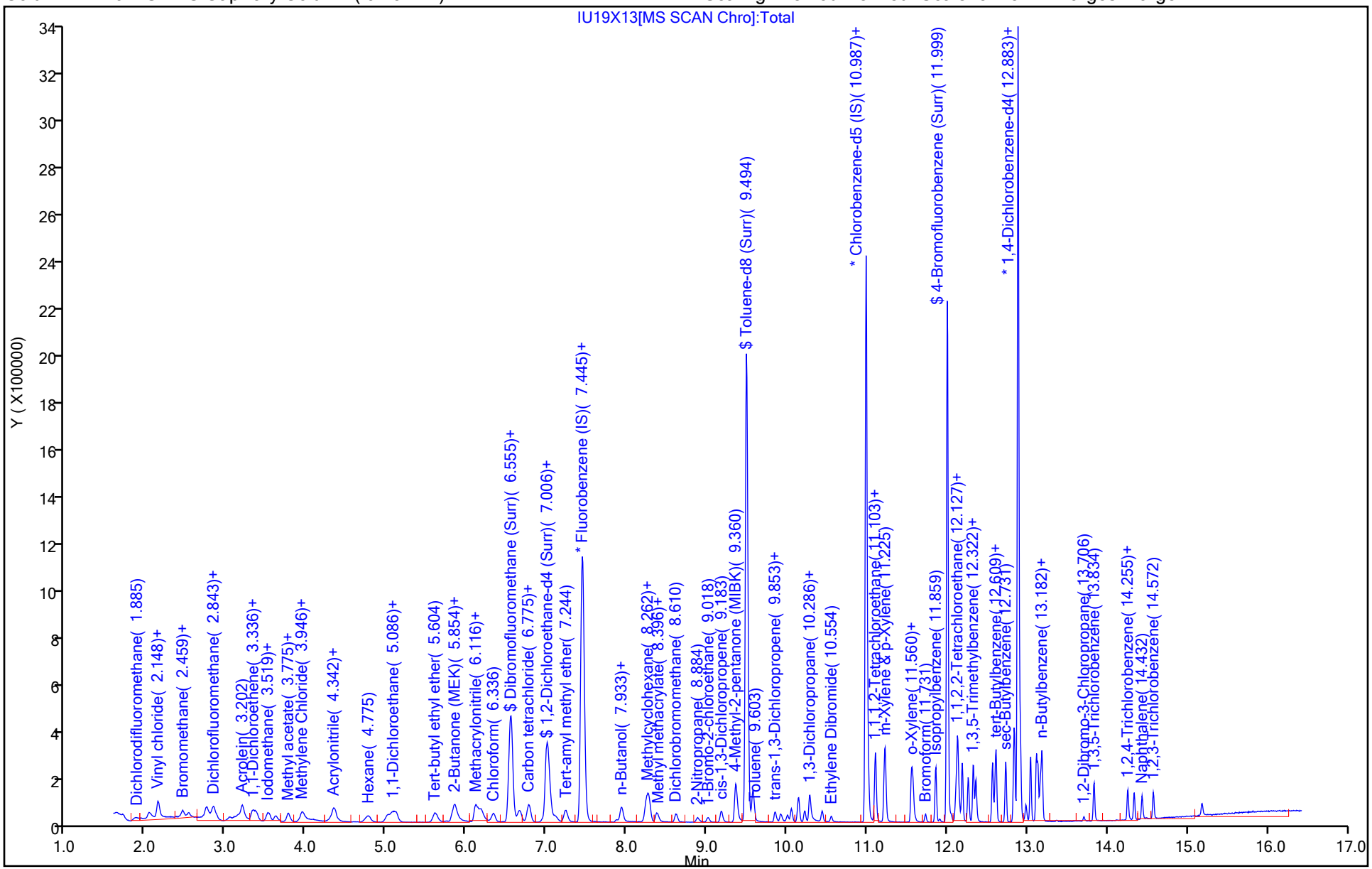
Lims ID: IC std2 Worklist Smp#: 14

Client ID:

Purge Vol: 25.000 mL Dil. Factor: 1.0000 ALS Bottle#: 13

Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

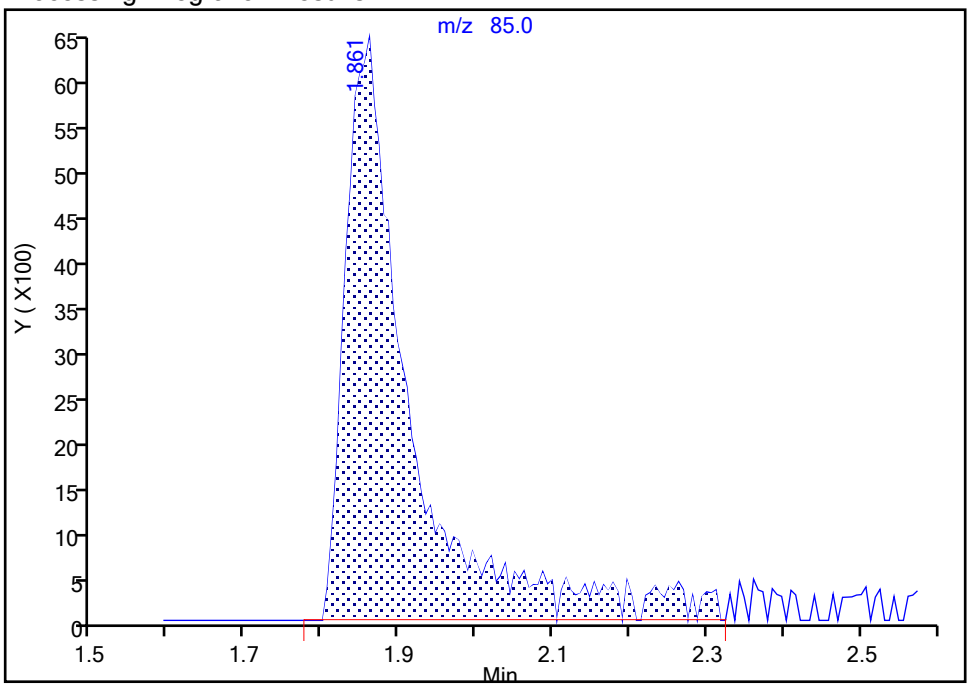
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X13.D				
Injection Date:	19-Jun-2023 18:40:30	Instrument ID:	19930		
Lims ID:	IC std2				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

1 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

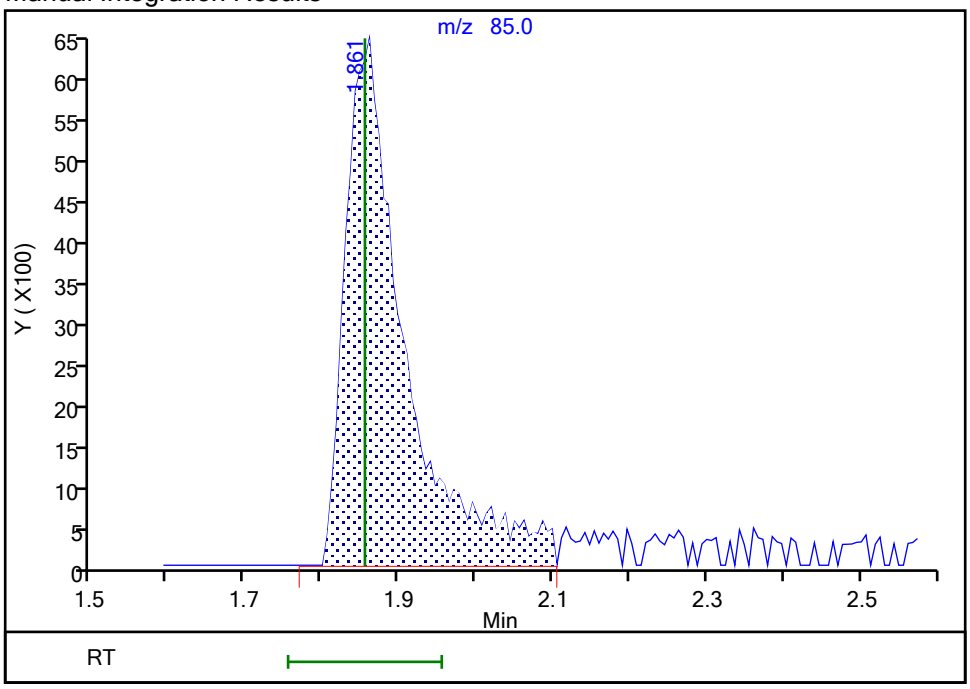
Processing Integration Results

RT: 1.86
Area: 38274
Amount: 0.530355
Amount Units: ug/l



Manual Integration Results

RT: 1.86
Area: 34723
Amount: 0.494421
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:51:45 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

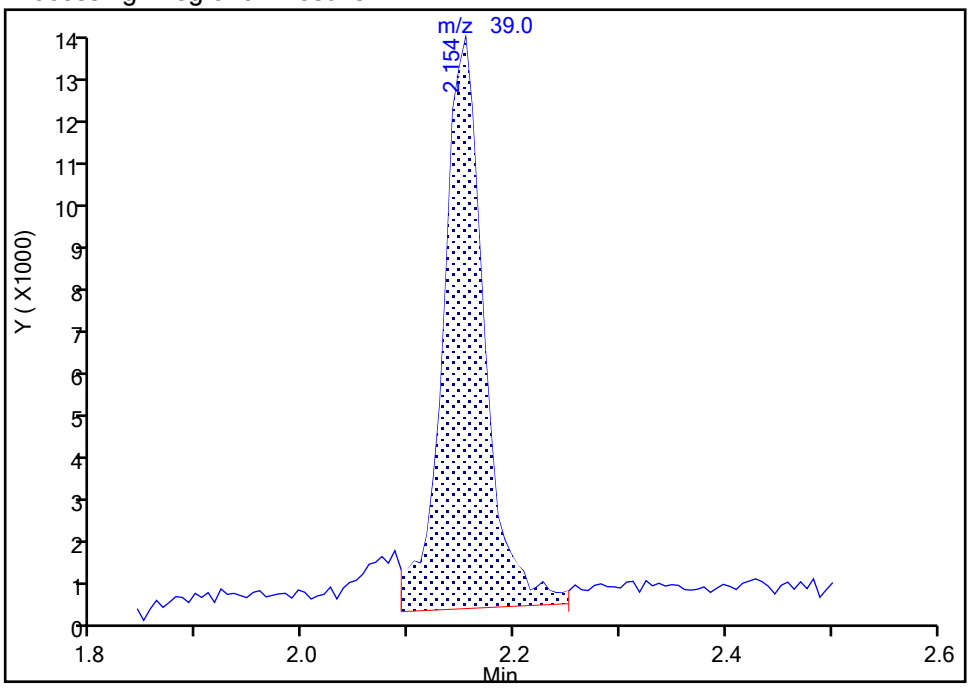
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X13.D				
Injection Date:	19-Jun-2023 18:40:30	Instrument ID:	19930		
Lims ID:	IC std2				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

6 Butadiene, CAS: 106-99-0

Signal: 1

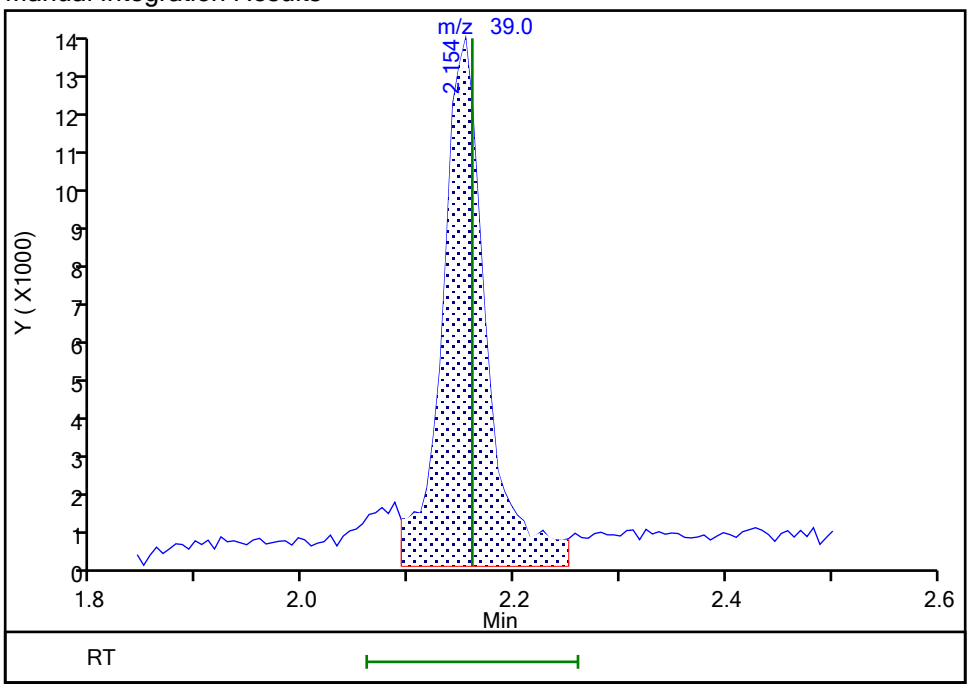
Processing Integration Results

RT: 2.15
Area: 37005
Amount: 0.500365
Amount Units: ug/l



Manual Integration Results

RT: 2.15
Area: 40081
Amount: 0.561114
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:52:00 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

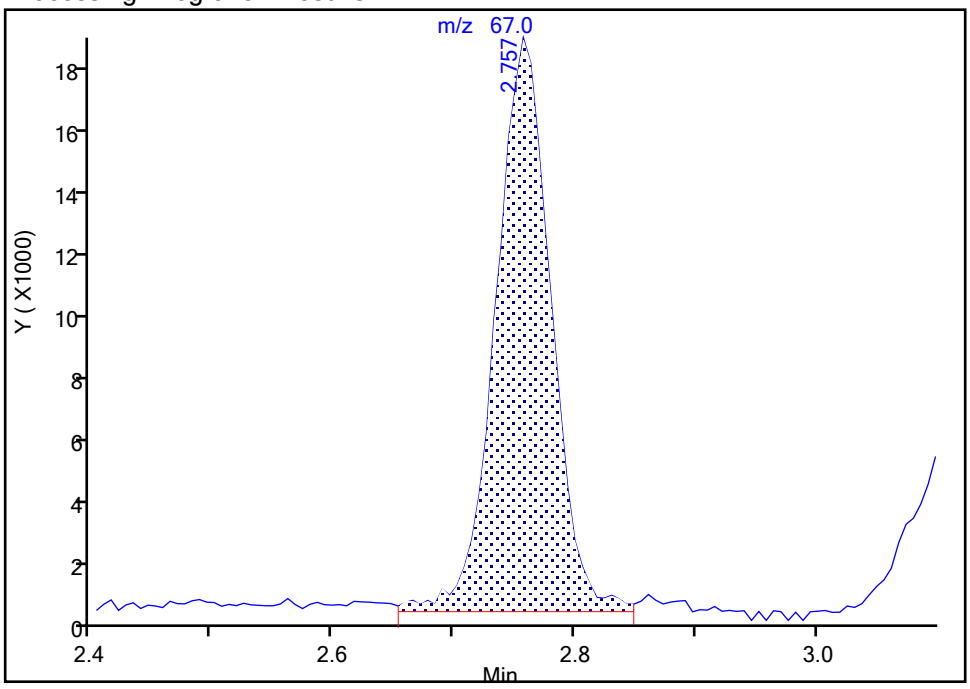
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X13.D				
Injection Date:	19-Jun-2023 18:40:30	Instrument ID:	19930		
Lims ID:	IC std2				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

9 Dichlorofluoromethane, CAS: 75-43-4

Signal: 1

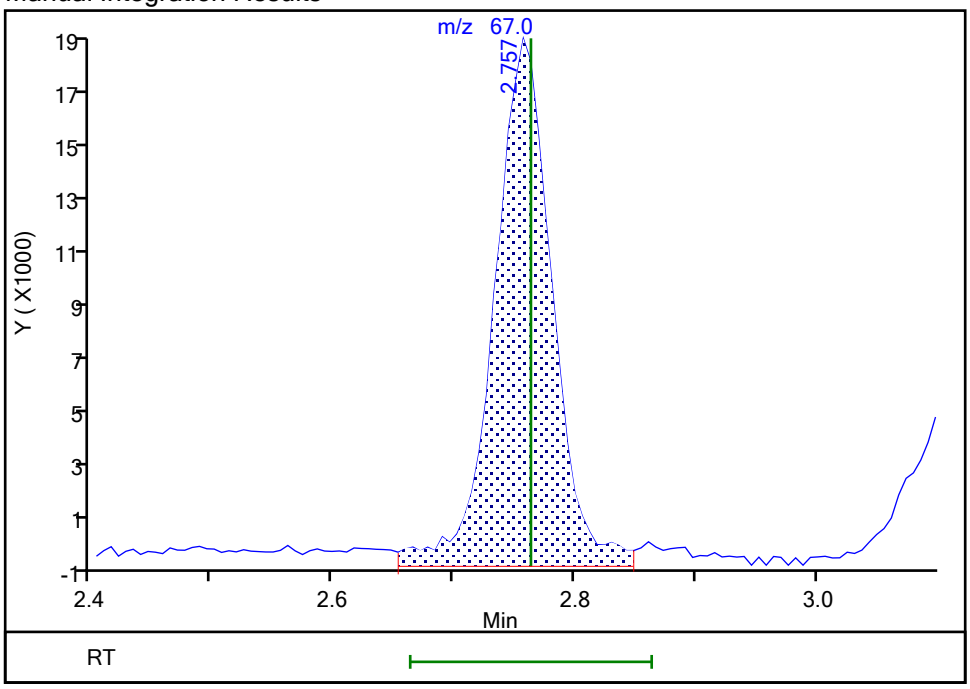
Processing Integration Results

RT: 2.76
Area: 59470
Amount: 0.514445
Amount Units: ug/l



Manual Integration Results

RT: 2.76
Area: 62910
Amount: 0.551864
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:52:13 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

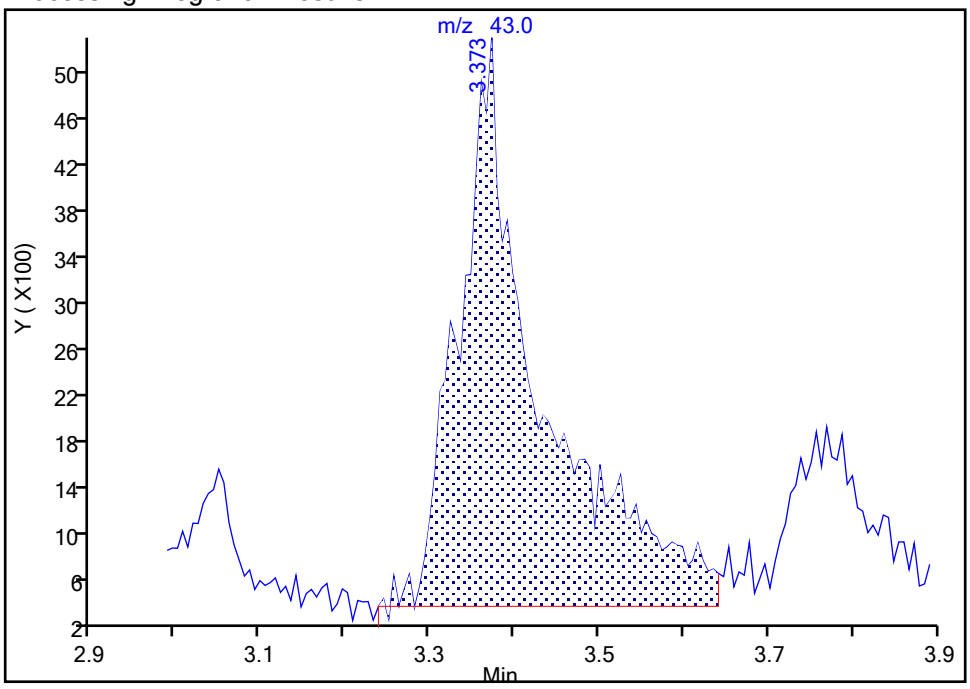
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X13.D
Injection Date: 19-Jun-2023 18:40:30 Instrument ID: 19930
Lims ID: IC std2
Client ID:
Operator ID: KNK41612 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

16 Acetone, CAS: 67-64-1

Signal: 1

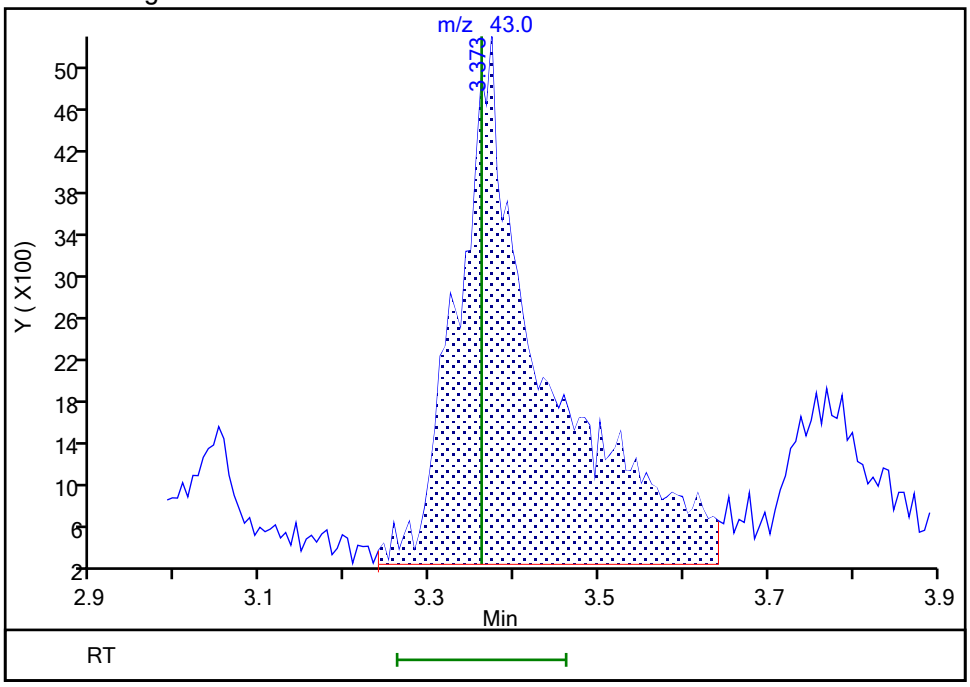
Processing Integration Results

RT: 3.37
Area: 32296
Amount: 4.222448
Amount Units: ug/l



Manual Integration Results

RT: 3.37
Area: 35188
Amount: 5.556663
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:52:28 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

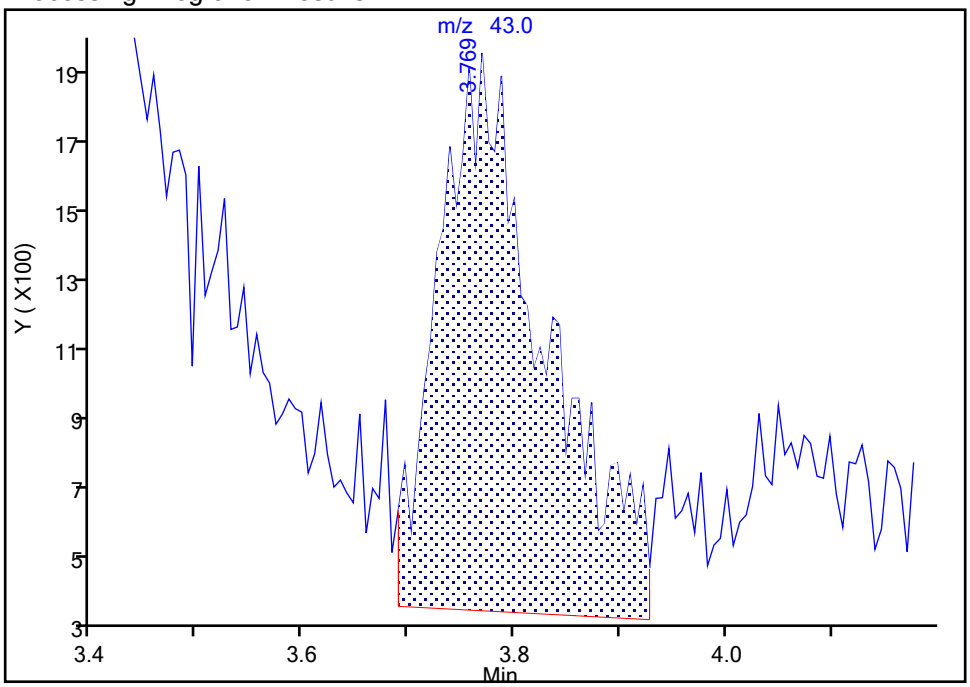
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X13.D
Injection Date: 19-Jun-2023 18:40:30 Instrument ID: 19930
Lims ID: IC std2
Client ID:
Operator ID: KNK41612 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

23 Methyl acetate, CAS: 79-20-9

Signal: 1

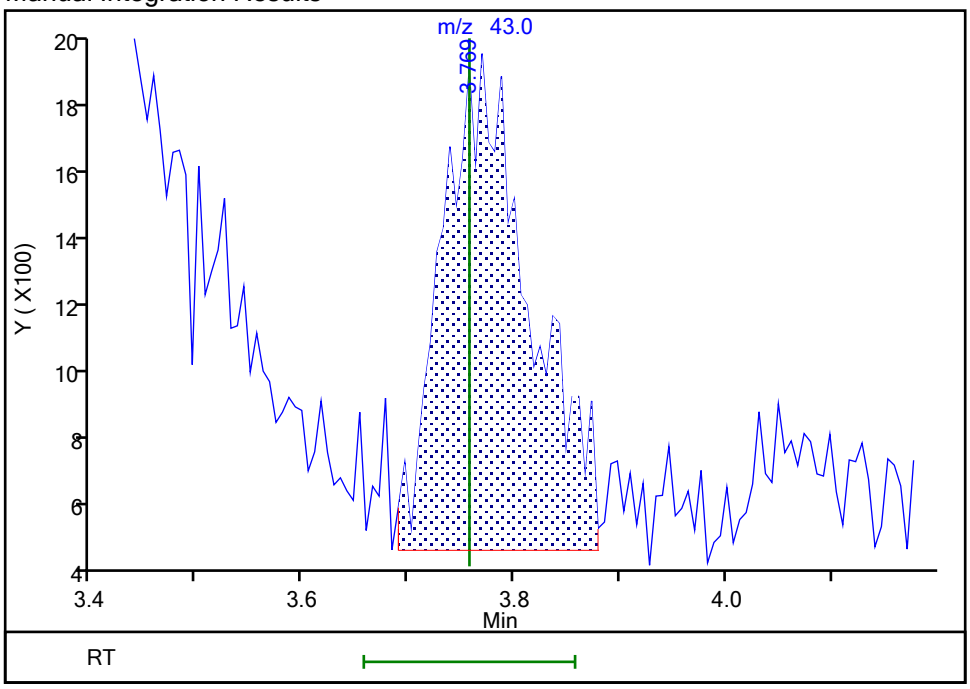
Processing Integration Results

RT: 3.77
Area: 11064
Amount: 0.695352
Amount Units: ug/l



Manual Integration Results

RT: 3.77
Area: 8217
Amount: 0.525783
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:52:48 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

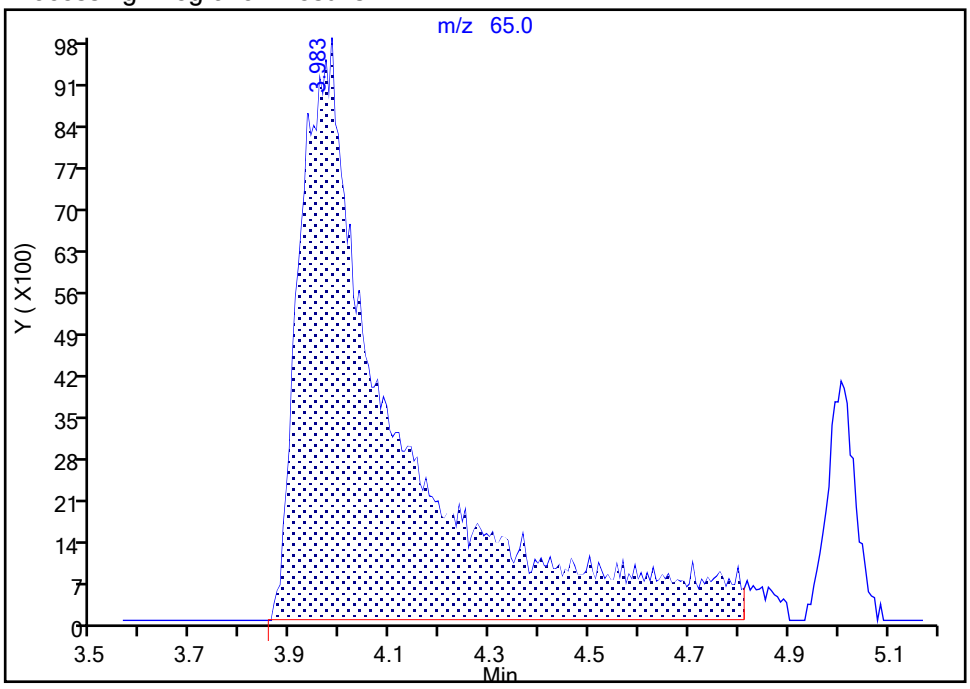
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X13.D				
Injection Date:	19-Jun-2023 18:40:30	Instrument ID:	19930		
Lims ID:	IC std2				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

* 26 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

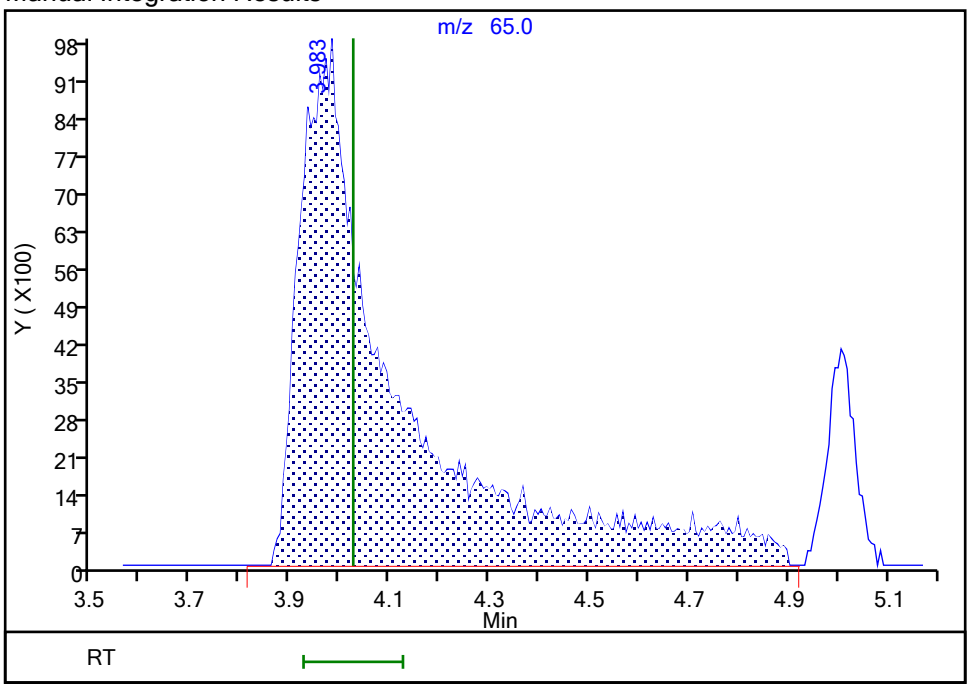
Processing Integration Results

RT: 3.98
Area: 129998
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 3.98
Area: 132398
Amount: 50.000000
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:53:02 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

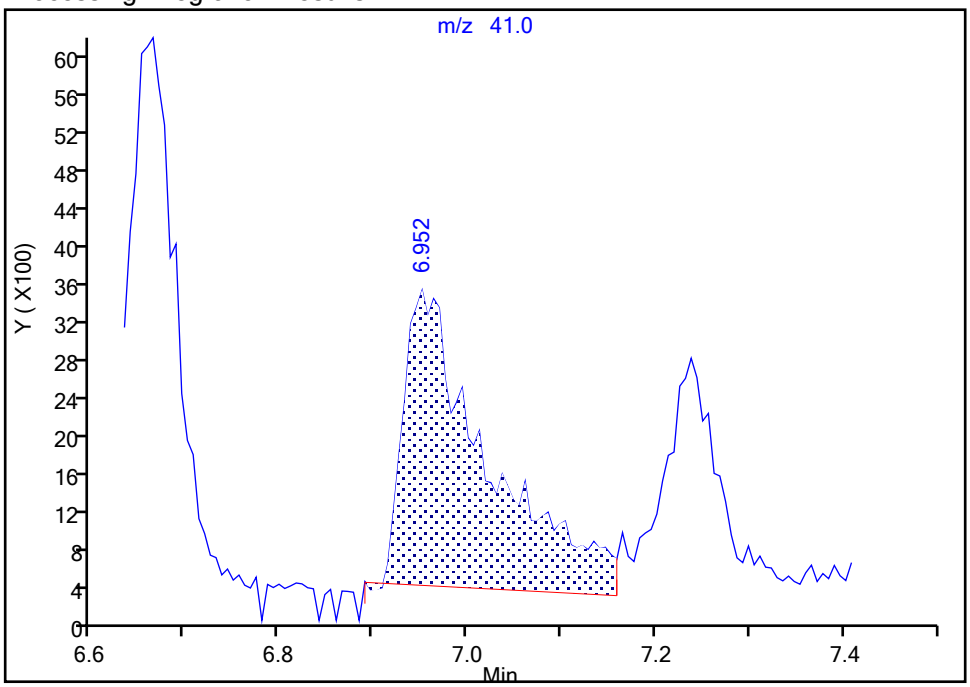
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X13.D				
Injection Date:	19-Jun-2023 18:40:30	Instrument ID:	19930		
Lims ID:	IC std2				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

55 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

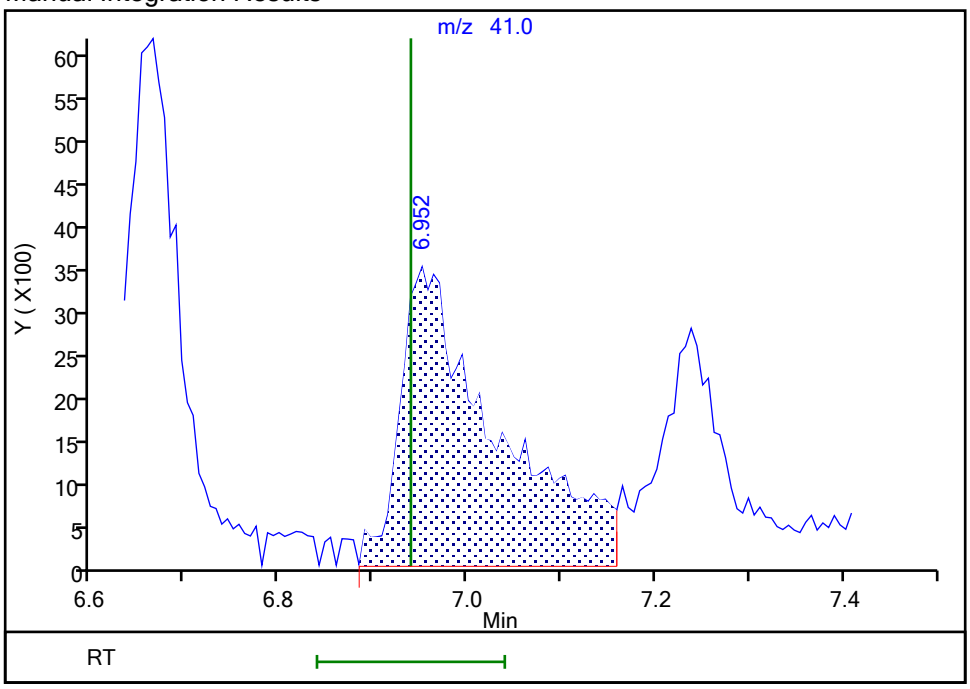
Processing Integration Results

RT: 6.95
Area: 19231
Amount: 21.730300
Amount Units: ug/l



Manual Integration Results

RT: 6.95
Area: 24811
Amount: 27.724861
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:53:30 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

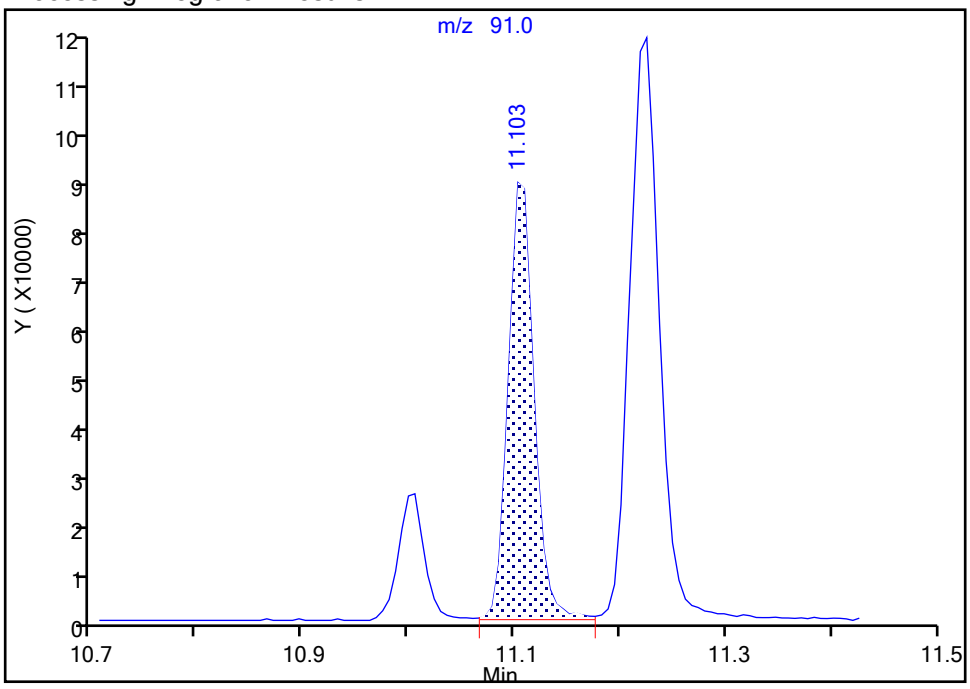
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X13.D				
Injection Date:	19-Jun-2023 18:40:30	Instrument ID:	19930		
Lims ID:	IC std2				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

108 1-Chlorohexane, CAS: 544-10-5

Signal: 1

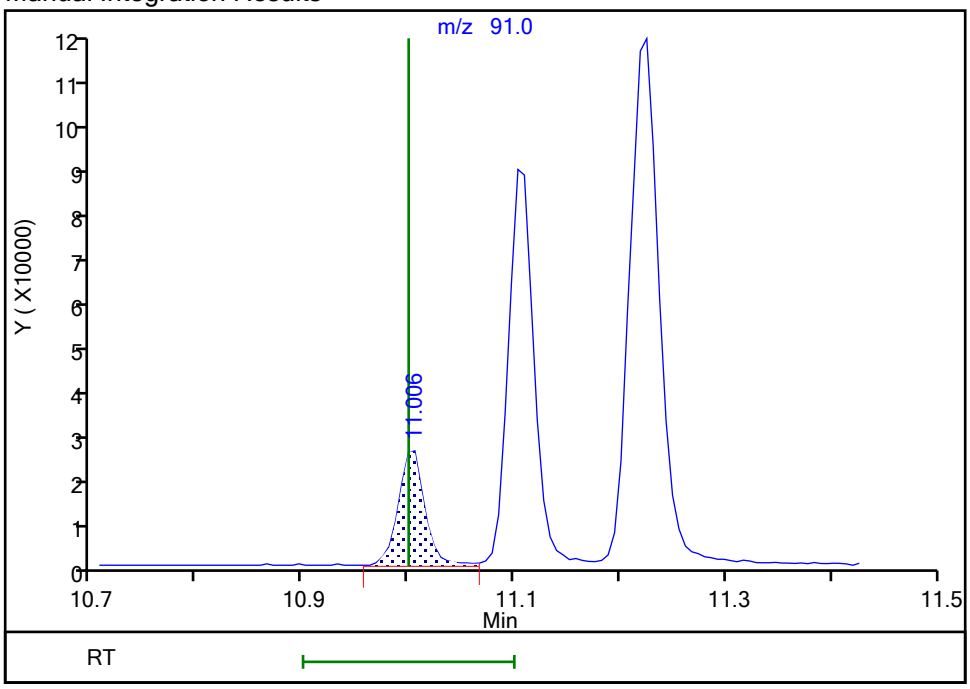
Processing Integration Results

RT: 11.10
Area: 143495
Amount: 0.598385
Amount Units: ug/l



Manual Integration Results

RT: 11.01
Area: 42354
Amount: 0.519576
Amount Units: ug/l



Reviewer: DVW2, 22-Jun-2023 07:47:29 -04:00:00 (UTC)

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

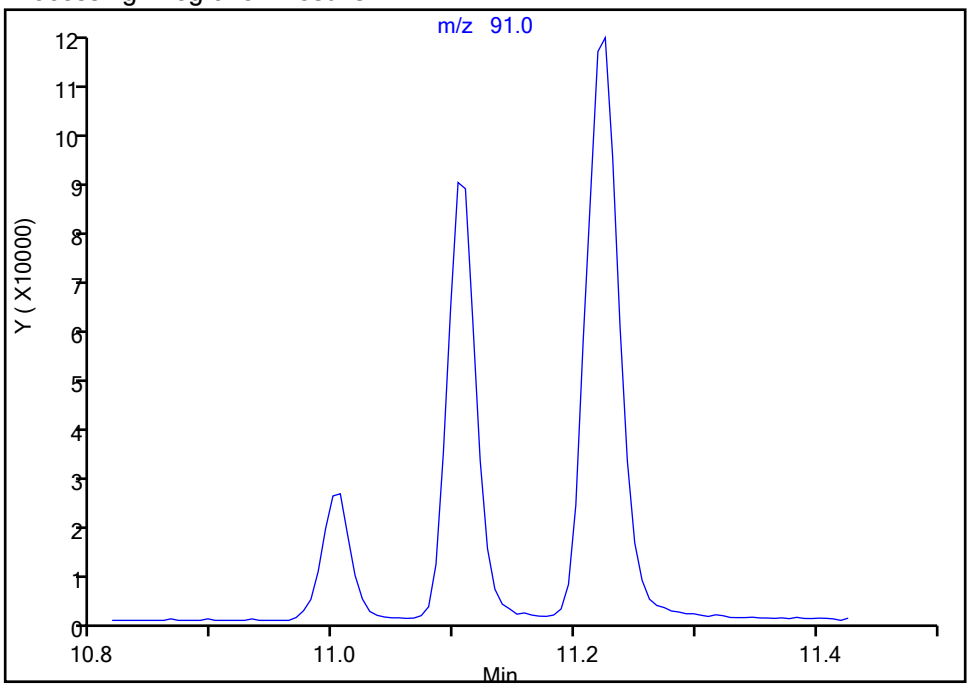
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X13.D				
Injection Date:	19-Jun-2023 18:40:30	Instrument ID:	19930		
Lims ID:	IC std2				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

112 Ethylbenzene, CAS: 100-41-4

Signal: 1

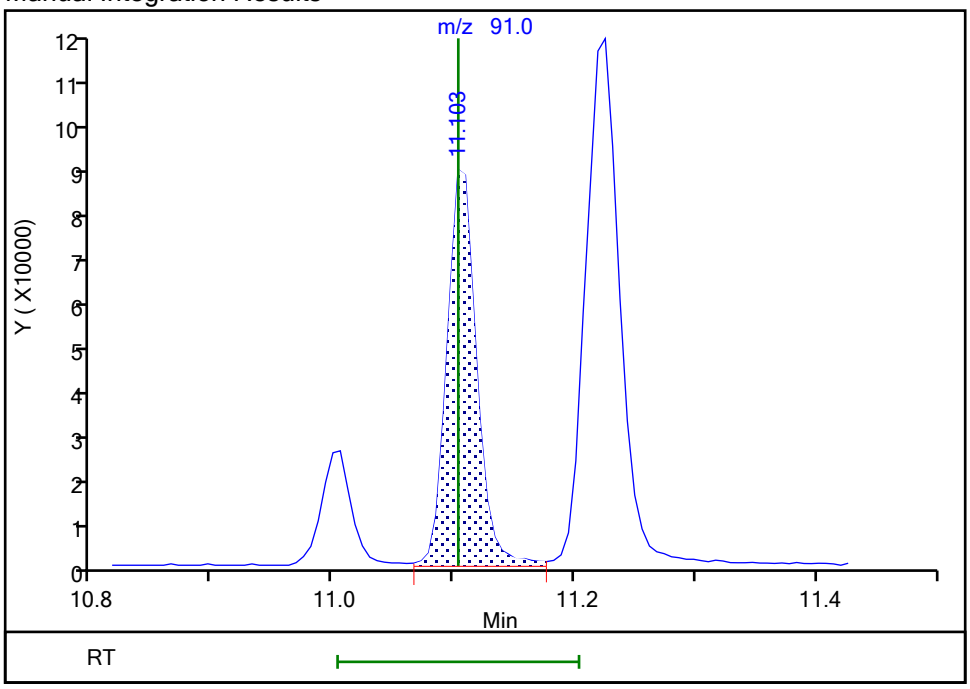
Not Detected
Expected RT: 11.10

Processing Integration Results



Manual Integration Results

RT: 11.10
Area: 143495
Amount: 0.525673
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 15:33:58 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

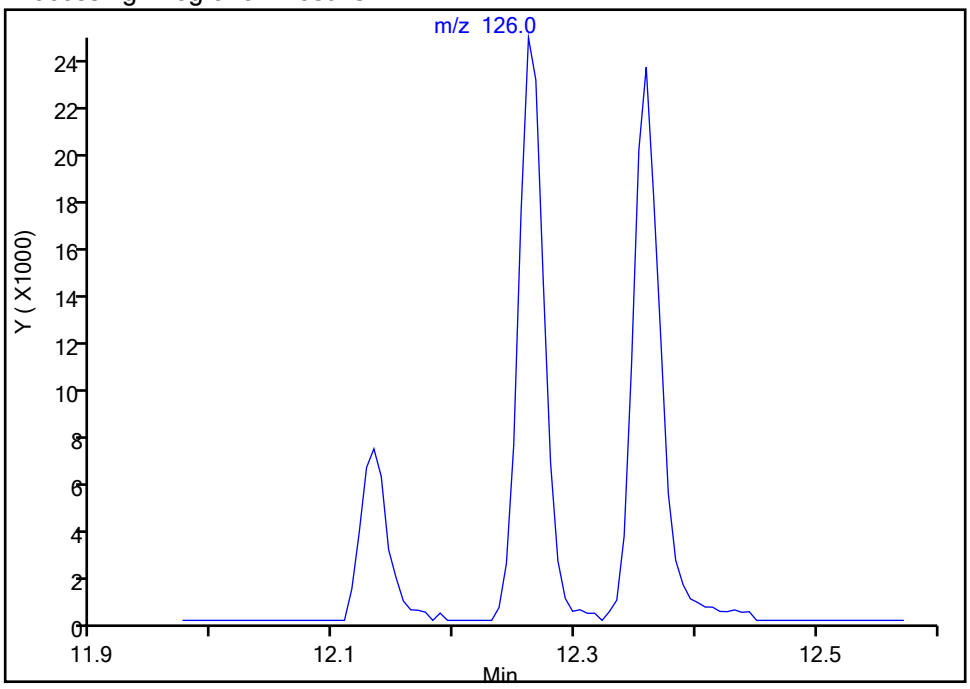
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X13.D				
Injection Date:	19-Jun-2023 18:40:30	Instrument ID:	19930		
Lims ID:	IC std2				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

126 2-Chlorotoluene, CAS: 95-49-8

Signal: 1

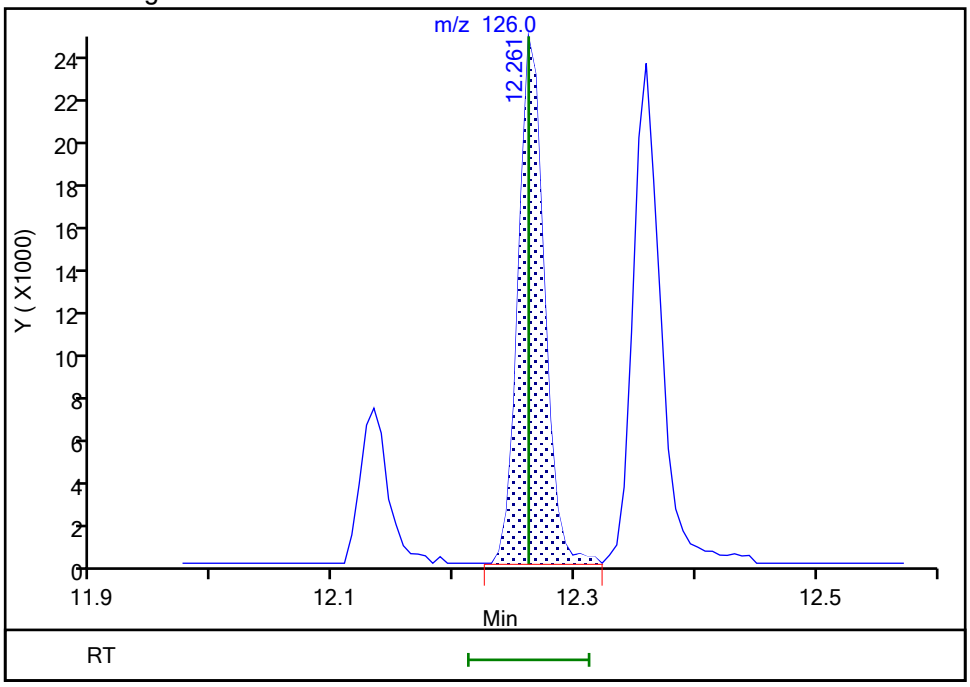
Not Detected
Expected RT: 12.26

Processing Integration Results



Manual Integration Results

RT: 12.26
Area: 36985
Amount: 0.532691
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 15:34:04 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X14.D
Lims ID: IC std3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 19-Jun-2023 19:01:30 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0086929-015
Misc. Info.: LG 1.0
Operator ID: KNK41612 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 27-Jun-2023 12:30:15 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1687

First Level Reviewer: DVW2 Date: 21-Jun-2023 07:57:36

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.849	1.855	-0.006	99	68962	1.00	0.9619	M
4 Chloromethane	50	2.044	2.050	-0.006	99	73144	1.00	1.00	
5 Vinyl chloride	62	2.148	2.160	-0.012	75	69992	1.00	1.00	
6 Butadiene	39	2.154	2.160	-0.006	91	70973	1.00	0.9733	M
7 Bromomethane	94	2.459	2.465	-0.006	90	55026	1.00	1.01	
8 Chloroethane	64	2.532	2.538	-0.006	99	41214	1.00	0.9885	
9 Dichlorofluoromethane	67	2.763	2.764	-0.001	97	116915	1.00	1.00	
10 Trichlorofluoromethane	101	2.824	2.824	0.000	97	87039	1.00	0.9810	
11 Ethyl ether	59	3.044	3.050	-0.006	91	37553	1.00	1.03	
13 1,2-Dichloro-1,1,2-trifluoroetha	67	3.117	3.142	-0.025	88	60893	1.00	0.9623	
14 Acrolein	56	3.208	3.209	-0.001	98	286815	50.0	49.6	
15 1,1-Dichloroethene	96	3.336	3.337	-0.001	98	42885	1.00	0.8930	
16 Acetone	43	3.367	3.361	0.006	84	70684	10.0	11.1	M
17 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.373	3.385	-0.012	89	45537	1.00	0.8934	
18 Iodomethane	142	3.519	3.526	-0.007	98	96625	1.00	0.9569	
19 Ethyl bromide	108	3.544	3.550	-0.006	97	44143	1.00	1.05	
20 Carbon disulfide	76	3.623	3.629	-0.006	99	119139	1.00	0.9149	
23 Methyl acetate	43	3.769	3.757	0.012	25	14418	1.00	0.9146	M
24 3-Chloro-1-propene	41	3.775	3.782	-0.007	91	68239	1.00	0.9143	
25 Methylene Chloride	84	3.952	3.958	-0.006	89	47789	1.00	0.9426	
* 26 t-Butyl alcohol-d10 (IS)	65	3.983	4.025	-0.042	95	133555	50.0	50.0	M
27 2-Methyl-2-propanol	59	4.092	4.093	-0.001	96	52571	20.0	20.7	
28 Acrylonitrile	53	4.294	4.282	0.012	98	17396	2.50	2.24	
29 Methyl tert-butyl ether	73	4.342	4.342	0.000	91	132891	1.00	1.01	
30 trans-1,2-Dichloroethene	96	4.348	4.355	-0.007	98	49647	1.00	0.9289	
31 Hexane	57	4.769	4.781	-0.012	91	61908	1.00	0.8837	
32 1,1-Dichloroethane	63	5.013	5.013	0.000	96	88859	1.00	0.9705	
35 Isopropyl ether	45	5.074	5.074	0.000	94	147957	1.00	0.9841	
36 2-Chloro-1,3-butadiene	53	5.123	5.123	0.000	91	70549	1.00	0.9215	
37 Tert-butyl ethyl ether	59	5.610	5.623	-0.013	96	141482	1.00	0.9852	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
38 2-Butanone (MEK)	43	5.824	5.812	0.012	99	122006	10.0	9.91	
39 cis-1,2-Dichloroethene	96	5.854	5.854	0.000	81	56850	1.00	0.9561	
40 2,2-Dichloropropane	77	5.866	5.867	-0.001	88	75466	1.00	0.9147	
43 Propionitrile	54	5.903	5.891	0.012	98	66438	20.0	20.4	
45 Methacrylonitrile	67	6.110	6.110	0.000	90	128773	10.0	10.0	
S 41 1,2-Dichloroethene, Total	100				0			1.89	
46 Chlorobromomethane	128	6.177	6.190	-0.013	84	26936	1.00	1.00	
47 Tetrahydrofuran	71	6.196	6.196	0.000	74	20095	5.00	4.96	
48 Chloroform	83	6.336	6.342	-0.006	93	91363	1.00	0.9660	
$ 49 Dibromofluoromethane (Surr)	113	6.555	6.555	0.000	95	461318	10.0	10.0	
50 1,1,1-Trichloroethane	97	6.568	6.568	0.000	96	81153	1.00	0.9188	
51 Cyclohexane	56	6.659	6.671	-0.012	88	73626	1.00	0.8797	
54 Carbon tetrachloride	117	6.775	6.781	-0.006	97	71388	1.00	0.9072	
53 1,1-Dichloropropene	75	6.781	6.781	0.000	94	63636	1.00	0.9049	
55 Isobutyl alcohol	41	6.952	6.940	0.012	94	48416	50.0	53.6	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.006	7.013	-0.007	68	93659	10.0	10.3	
57 Benzene	78	7.037	7.043	-0.006	92	202213	1.00	0.9564	
58 1,2-Dichloroethane	62	7.110	7.116	-0.006	98	56615	1.00	0.9878	
60 Tert-amyl methyl ether	73	7.238	7.244	-0.006	98	131492	1.00	0.99	
* 61 Fluorobenzene (IS)	96	7.445	7.445	0.000	99	1790586	10.0	10.0	
62 n-Heptane	43	7.470	7.470	0.000	92	58742	1.00	0.8733	
63 n-Butanol	56	7.860	7.836	0.024	85	57099	87.5	82.3	
64 Trichloroethene	95	7.933	7.933	0.000	96	55041	1.00	0.9357	
65 Methylcyclohexane	83	8.244	8.244	0.000	92	85392	1.00	0.8987	
66 1,2-Dichloropropane	63	8.262	8.269	-0.007	95	50772	1.00	0.9712	
67 Methyl methacrylate	69	8.366	8.354	0.012	89	25680	1.00	1.01	
68 1,4-Dioxane	88	8.372	8.366	0.006	31	5746	50.0	39.0	
69 Dibromomethane	93	8.384	8.378	0.006	92	26070	1.00	0.99	
71 Dichlorobromomethane	83	8.616	8.616	0.000	99	66817	1.00	0.9834	
72 2-Nitropropane	41	8.884	8.884	0.000	98	38795	5.00	4.69	
75 1-Bromo-2-chloroethane	63	9.018	9.012	0.006	98	55828	1.00	1.05	
76 cis-1,3-Dichloropropene	75	9.177	9.177	0.000	96	78154	1.00	0.9586	
77 4-Methyl-2-pentanone (MIBK)	43	9.360	9.360	0.000	95	324775	10.0	9.83	
$ 78 Toluene-d8 (Surr)	98	9.494	9.500	-0.006	93	1804500	10.0	9.93	
79 Toluene	92	9.573	9.579	-0.006	98	134873	1.00	0.9406	
97 trans-1,3-Dichloropropene	75	9.847	9.848	-0.001	92	65778	1.00	0.9719	
99 Ethyl methacrylate	69	9.921	9.915	0.005	89	56167	1.00	1.00	
100 1,1,2-Trichloroethane	97	10.055	10.055	0.000	90	40644	1.00	1.00	
S 98 1,3-Dichloropropene, Total	100				0			1.93	
101 Tetrachloroethene	166	10.140	10.146	-0.006	98	69578	1.00	0.9303	
102 1,3-Dichloropropane	76	10.219	10.219	0.000	89	63491	1.00	0.99	
103 2-Hexanone	43	10.280	10.274	0.006	95	234543	10.0	10.0	
105 Chlorodibromomethane	129	10.439	10.439	0.000	90	50898	1.00	0.9660	
106 Ethylene Dibromide	107	10.555	10.549	0.006	99	38807	1.00	1.02	
* 107 Chlorobenzene-d5 (IS)	117	10.987	10.987	0.000	84	1413947	10.0	10.0	
108 1-Chlorohexane	91	11.000	11.000	0.000	95	75197	1.00	0.9011	a
109 Chlorobenzene	112	11.018	11.018	0.000	97	161040	1.00	0.9599	
111 1,1,1,2-Tetrachloroethane	131	11.103	11.097	0.006	96	58062	1.00	0.9712	
112 Ethylbenzene	91	11.103	11.103	0.000	98	262649	1.00	0.9399	a
113 m-Xylene & p-Xylene	106	11.225	11.219	0.006	93	213843	2.00	1.89	
S 110 Xylenes, Total	106				0			2.85	
114 o-Xylene	106	11.554	11.554	0.000	95	107419	1.00	0.9616	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
115 Styrene	104	11.573	11.567	0.006	95	171340	1.00	0.9534	
116 Bromoform	173	11.725	11.725	0.000	98	33303	1.00	0.9745	
117 Isopropylbenzene	105	11.859	11.859	0.000	95	271455	1.00	0.9369	
$ 120 4-Bromofluorobenzene (Surr)	95	11.999	12.000	-0.001	96	682073	10.0	9.96	
121 1,1,2,2-Tetrachloroethane	83	12.103	12.103	0.000	93	52659	1.00	1.04	
122 Bromobenzene	156	12.115	12.115	0.000	94	71063	1.00	0.9706	
123 trans-1,4-Dichloro-2-butene	53	12.133	12.128	0.005	93	123536	10.0	9.93	
124 1,2,3-Trichloropropane	110	12.152	12.146	0.006	81	15312	1.00	1.08	
125 N-Propylbenzene	91	12.188	12.189	-0.001	98	303252	1.00	0.9358	
126 2-Chlorotoluene	126	12.262	12.262	0.000	97	67323	1.00	0.9512	a
127 1,3,5-Trimethylbenzene	105	12.322	12.323	-0.001	95	235489	1.00	0.9535	
128 4-Chlorotoluene	126	12.359	12.353	0.006	96	70351	1.00	0.9702	
129 tert-Butylbenzene	134	12.566	12.566	0.000	92	56204	1.00	0.9470	
130 Pentachloroethane	167	12.597	12.597	0.000	92	47961	1.00	1.04	
131 1,2,4-Trimethylbenzene	105	12.609	12.609	0.000	96	244539	1.00	0.9644	
132 sec-Butylbenzene	105	12.731	12.731	0.000	94	293727	1.00	0.9351	
133 1,3-Dichlorobenzene	146	12.828	12.829	-0.001	98	136646	1.00	0.9550	
134 4-Isopropyltoluene	119	12.841	12.841	0.000	97	264478	1.00	0.9444	
* 135 1,4-Dichlorobenzene-d4	152	12.883	12.883	0.000	93	851085	10.0	10.0	
136 1,4-Dichlorobenzene	146	12.902	12.902	0.000	96	139429	1.00	0.9886	
137 1,2,3-Trimethylbenzene	120	12.914	12.914	0.000	98	111687	1.00	0.9744	
138 Benzyl chloride	126	12.981	12.981	0.000	98	21662	1.00	1.00	
139 n-Butylbenzene	92	13.133	13.133	0.000	97	115817	1.00	0.9236	
140 1,2-Dichlorobenzene	146	13.164	13.158	0.006	99	131059	1.00	0.9750	
142 1,2-Dibromo-3-Chloropropane	155	13.706	13.700	0.006	89	8390	1.00	1.01	
143 1,3,5-Trichlorobenzene	180	13.834	13.828	0.006	97	101687	1.00	0.9476	
144 1,2,4-Trichlorobenzene	180	14.255	14.249	0.006	94	81792	1.00	0.9474	
145 Hexachlorobutadiene	225	14.334	14.334	0.000	96	38205	1.00	0.9084	
146 Naphthalene	128	14.432	14.426	0.006	96	155480	1.00	0.9895	
147 1,2,3-Trichlorobenzene	180	14.572	14.572	0.000	96	69112	1.00	0.9564	
155 2-Methylnaphthalene	142		0.000				ND	ND	
156 p-Diethylbenzene	1		0.000				ND	ND	
161 Pentane	43		0.000				ND	ND	
150 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
165 Isopropyl alcohol	45		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_LL_#1_826_00081	Amount Added:	2.00	Units: uL	
MSV_LL_#2_826_00093	Amount Added:	2.00	Units: uL	
MSV_LL_GAS826_00156	Amount Added:	2.00	Units: uL	
MSV_LLcentISS_00007	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 27-Jun-2023 12:30:15 Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X14.D

Injection Date:	19-Jun-2023 19:01:30	Instrument ID:	19930	Operator ID:	KNK41612
Lims ID:	IC std3			Worklist Smp#:	15
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

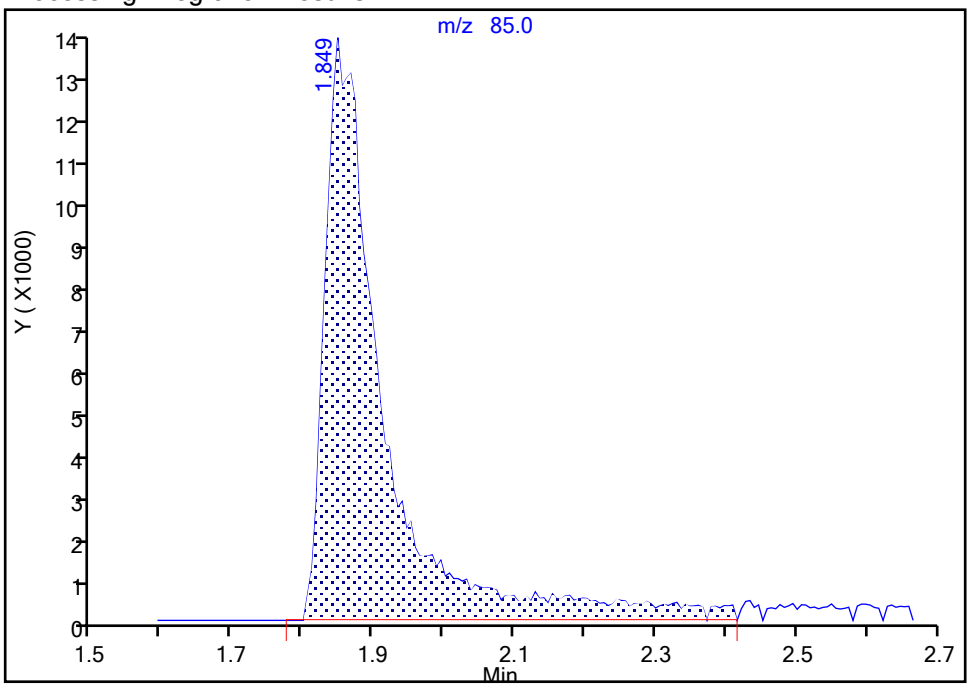
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X14.D				
Injection Date:	19-Jun-2023 19:01:30	Instrument ID:	19930		
Lims ID:	IC std3				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

1 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

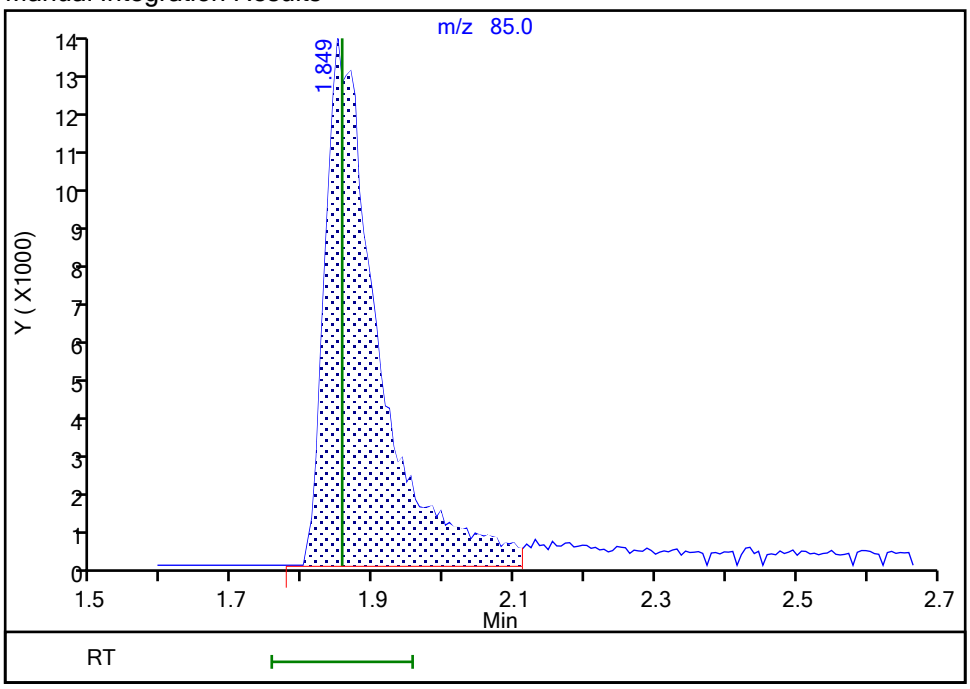
Processing Integration Results

RT: 1.85
Area: 76082
Amount: 1.046441
Amount Units: ug/l



Manual Integration Results

RT: 1.85
Area: 68962
Amount: 0.961862
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:54:35 -04:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

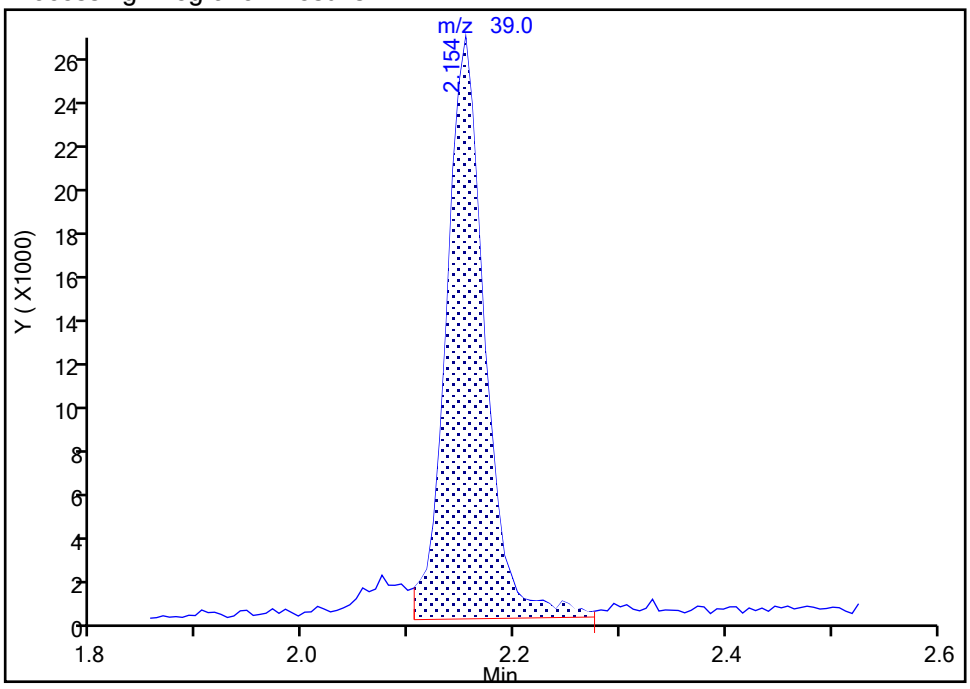
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X14.D				
Injection Date:	19-Jun-2023 19:01:30	Instrument ID:	19930		
Lims ID:	IC std3				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

6 Butadiene, CAS: 106-99-0

Signal: 1

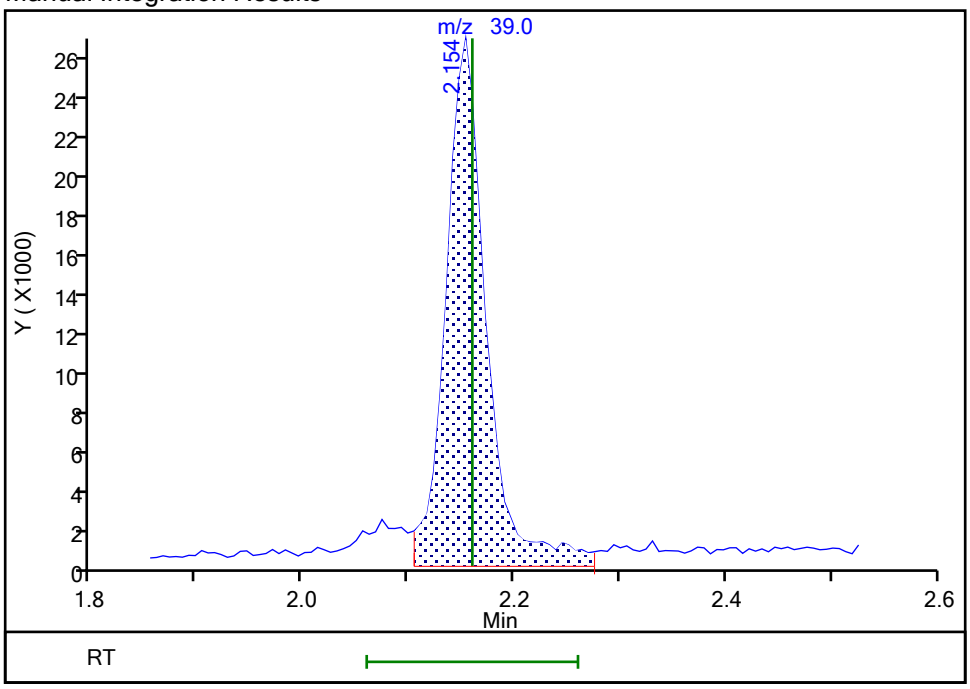
Processing Integration Results

RT: 2.15
Area: 67127
Amount: 0.953617
Amount Units: ug/l



Manual Integration Results

RT: 2.15
Area: 70973
Amount: 0.973260
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:54:49 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

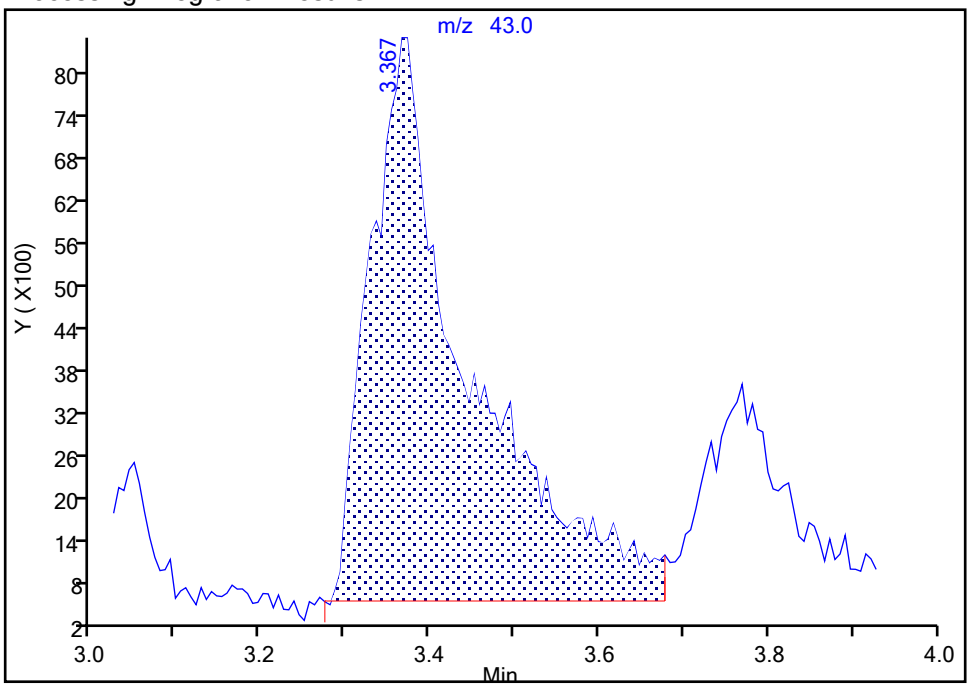
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X14.D				
Injection Date:	19-Jun-2023 19:01:30	Instrument ID:	19930		
Lims ID:	IC std3				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

16 Acetone, CAS: 67-64-1

Signal: 1

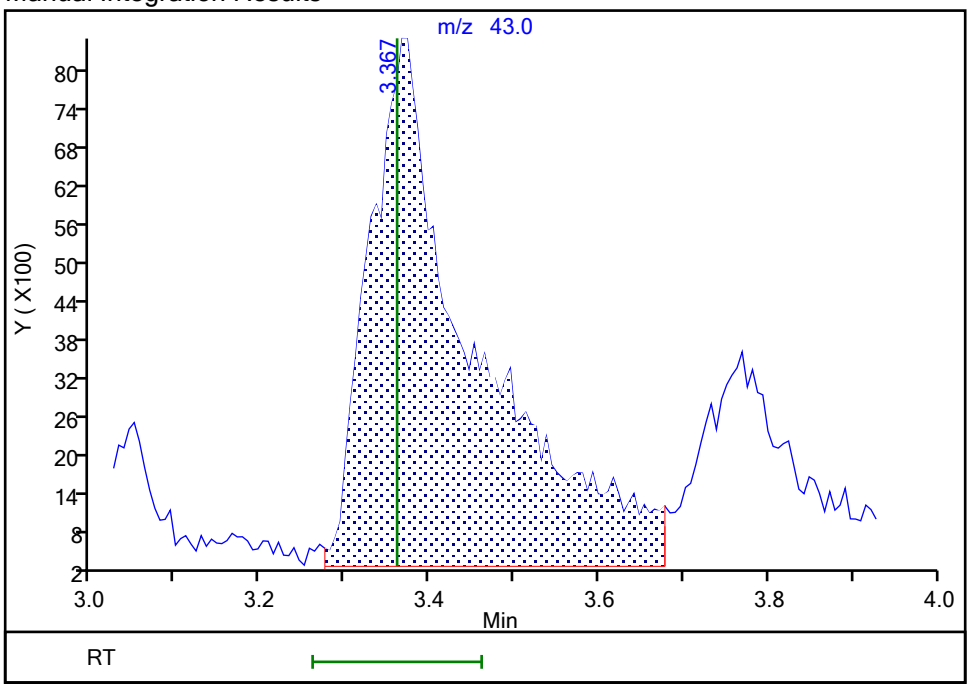
Processing Integration Results

RT: 3.37
Area: 64263
Amount: 9.340978
Amount Units: ug/l



Manual Integration Results

RT: 3.37
Area: 70684
Amount: 11.065266
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:55:06 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

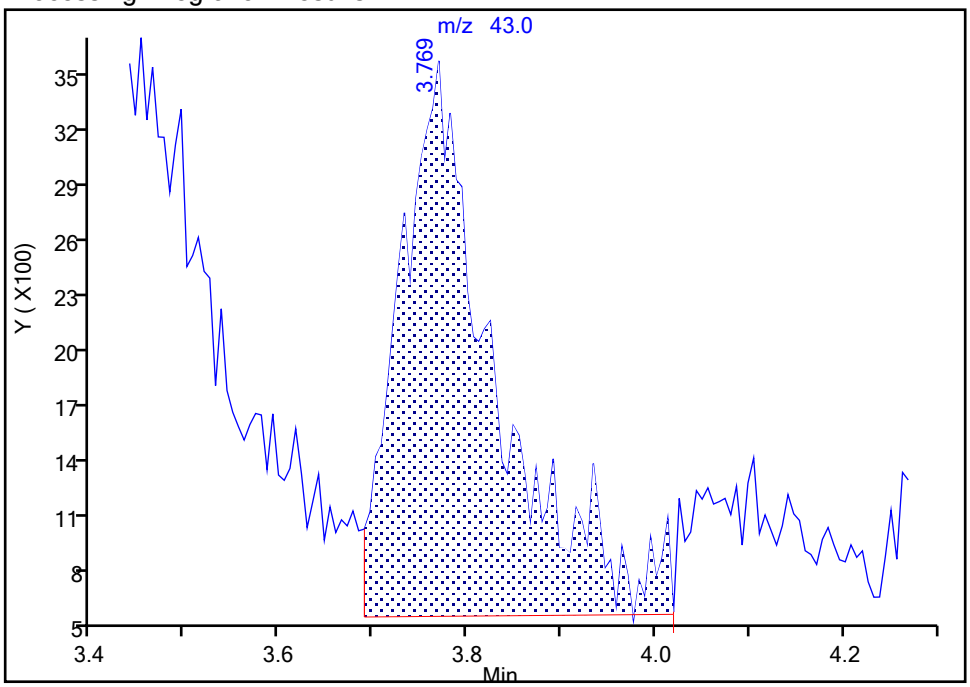
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X14.D
Injection Date: 19-Jun-2023 19:01:30 Instrument ID: 19930
Lims ID: IC std3
Client ID:
Operator ID: KNK41612 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

23 Methyl acetate, CAS: 79-20-9

Signal: 1

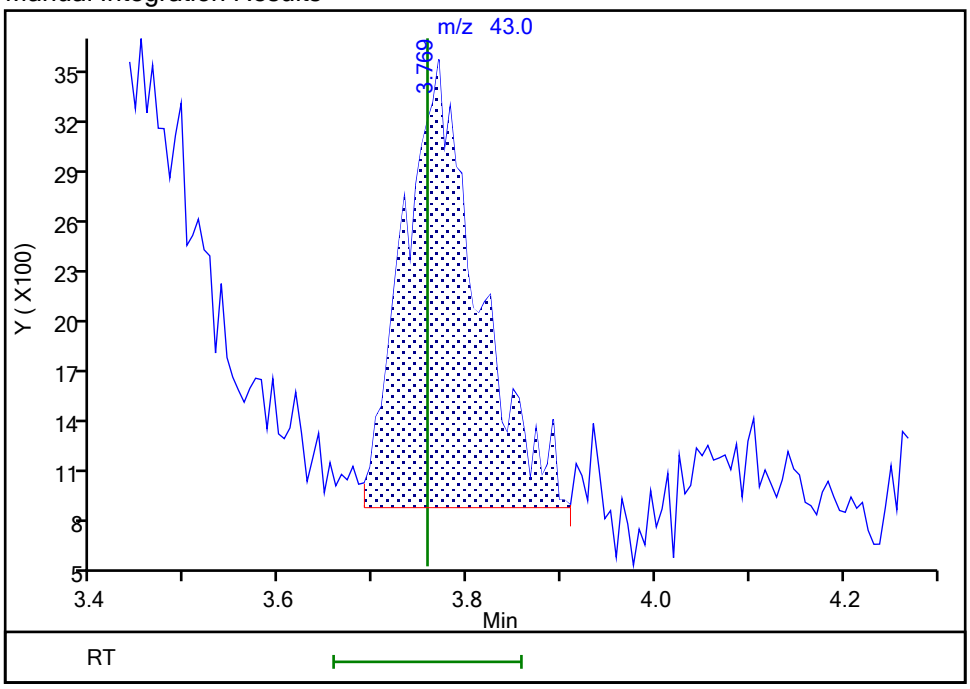
Processing Integration Results

RT: 3.77
Area: 20787
Amount: 1.131048
Amount Units: ug/l



Manual Integration Results

RT: 3.77
Area: 14418
Amount: 0.914576
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:55:31 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

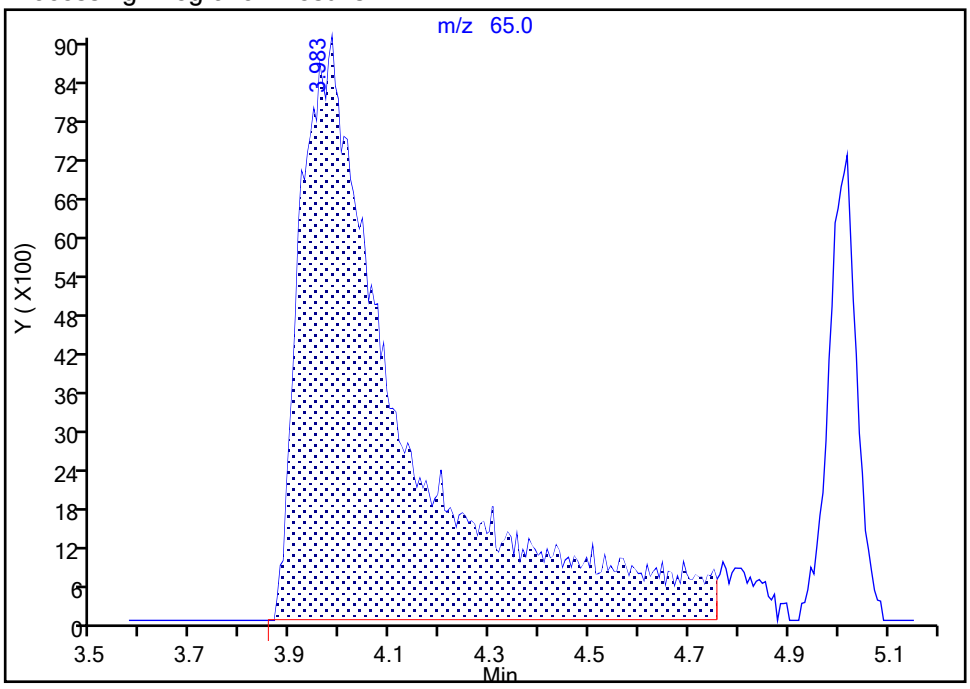
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X14.D
Injection Date: 19-Jun-2023 19:01:30 Instrument ID: 19930
Lims ID: IC std3
Client ID:
Operator ID: KNK41612 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 26 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

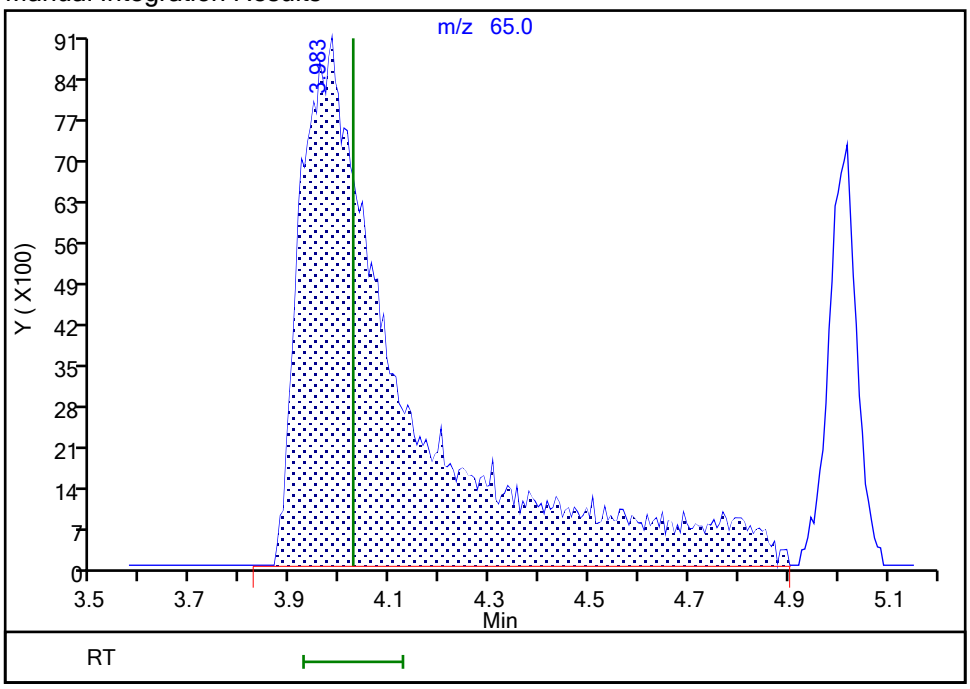
Processing Integration Results

RT: 3.98
Area: 128785
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 3.98
Area: 133555
Amount: 50.000000
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:55:40 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

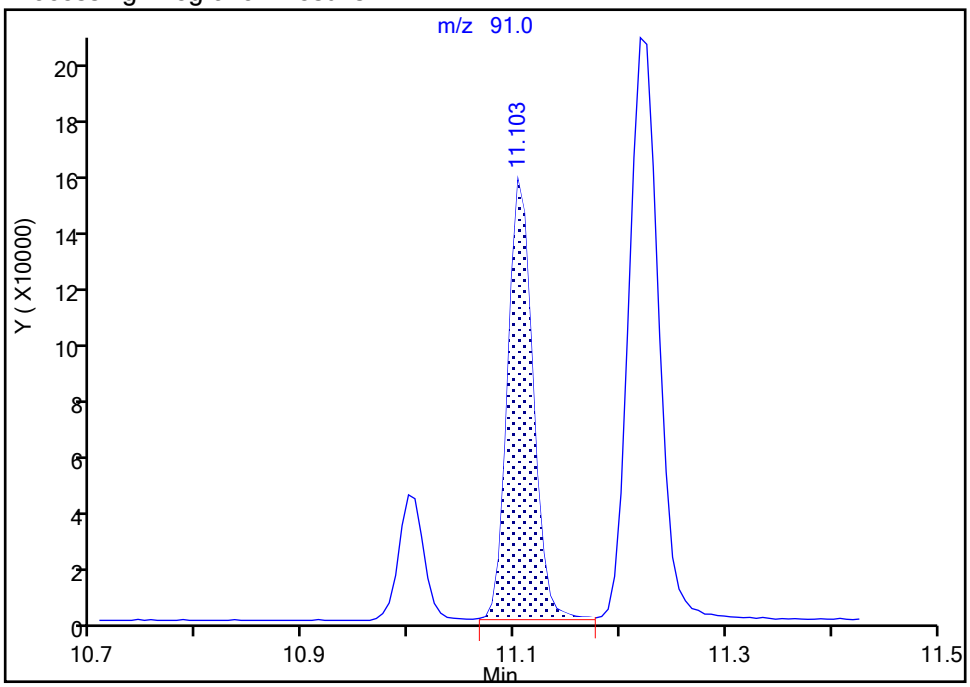
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X14.D				
Injection Date:	19-Jun-2023 19:01:30	Instrument ID:	19930		
Lims ID:	IC std3				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

108 1-Chlorohexane, CAS: 544-10-5

Signal: 1

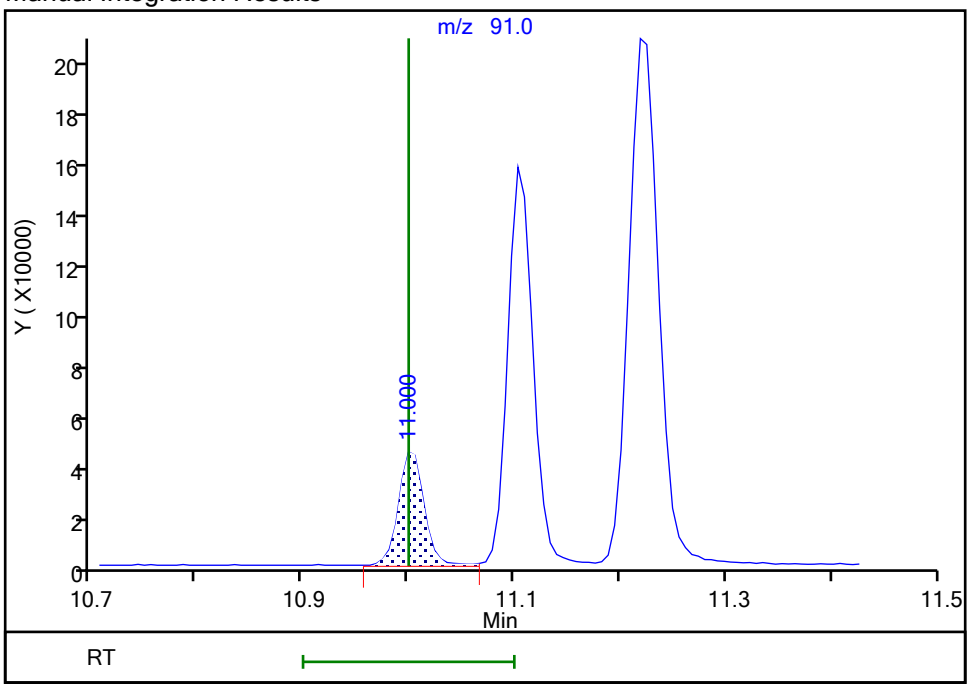
Processing Integration Results

RT: 11.10
Area: 262649
Amount: 1.166835
Amount Units: ug/l



Manual Integration Results

RT: 11.00
Area: 75197
Amount: 0.901091
Amount Units: ug/l



Reviewer: DVW2, 22-Jun-2023 07:47:42 -04:00:00 (UTC)

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

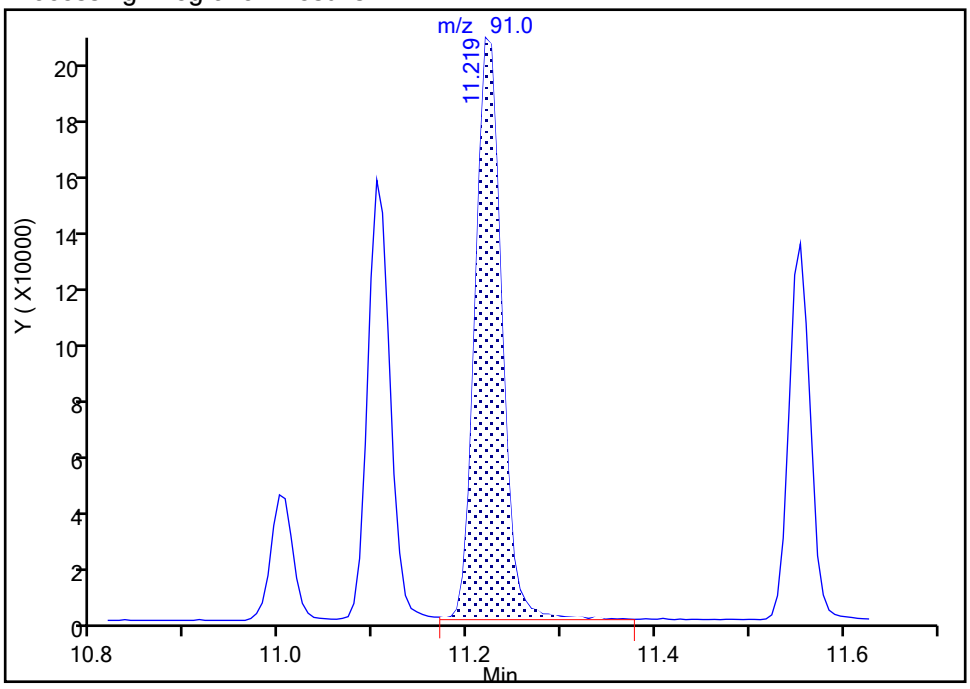
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X14.D				
Injection Date:	19-Jun-2023 19:01:30	Instrument ID:	19930		
Lims ID:	IC std3				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

112 Ethylbenzene, CAS: 100-41-4

Signal: 1

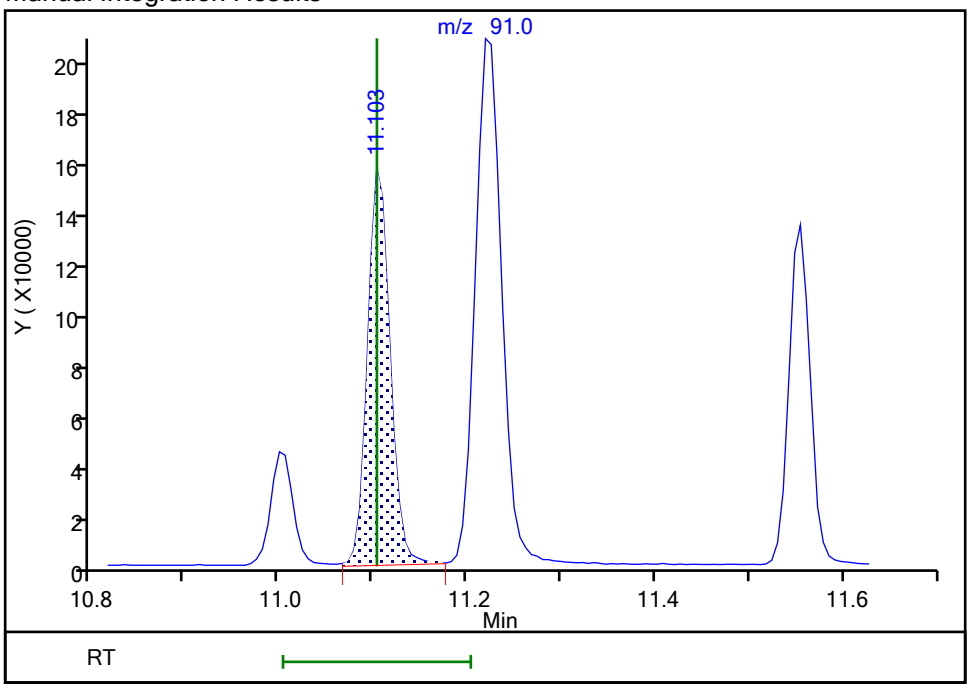
Processing Integration Results

RT: 11.22
Area: 410800
Amount: 1.054612
Amount Units: ug/l



Manual Integration Results

RT: 11.10
Area: 262649
Amount: 0.939871
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 15:34:29 -04:00:00 (UTC)

Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

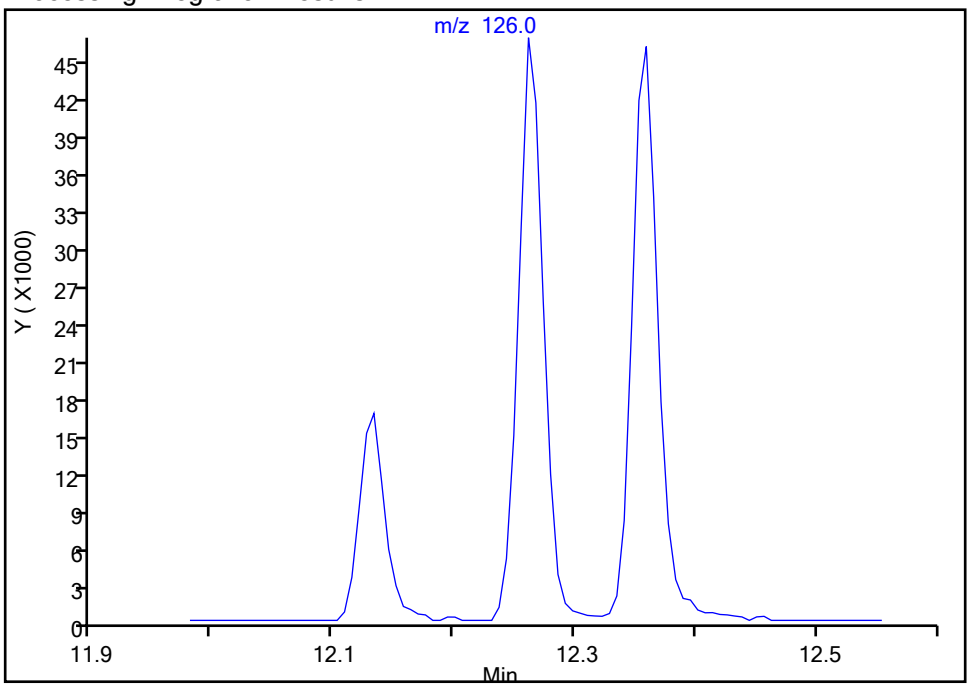
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X14.D				
Injection Date:	19-Jun-2023 19:01:30	Instrument ID:	19930		
Lims ID:	IC std3				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

126 2-Chlorotoluene, CAS: 95-49-8

Signal: 1

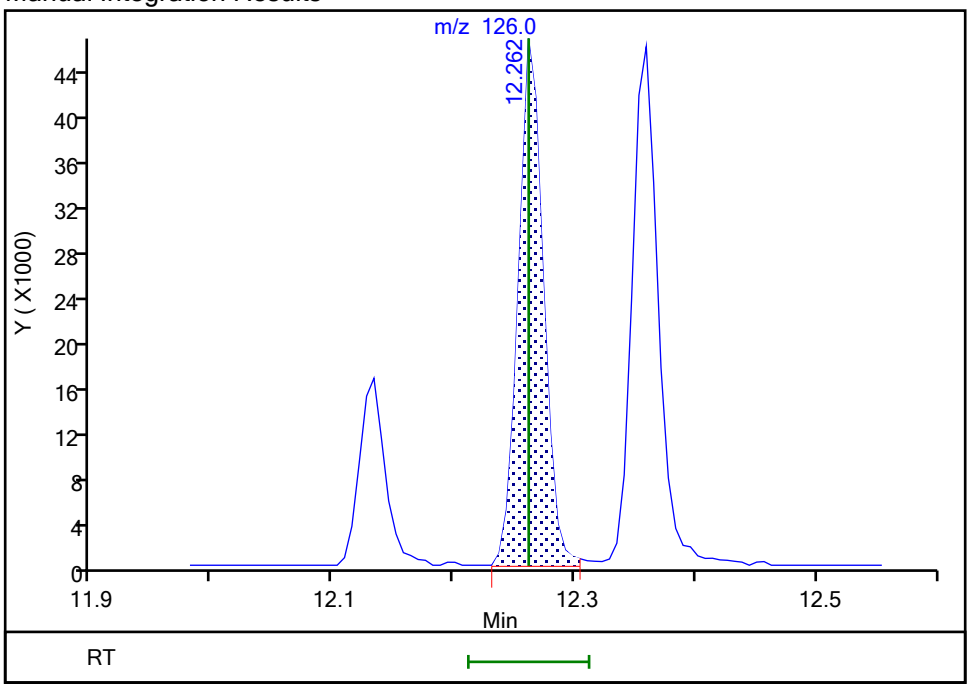
Not Detected
Expected RT: 12.26

Processing Integration Results



Manual Integration Results

RT: 12.26
Area: 67323
Amount: 0.951249
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 15:34:24 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X15.D
Lims ID: IC std4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 19-Jun-2023 19:22:30 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0086929-016
Misc. Info.: LG 2.0
Operator ID: KNK41612 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 27-Jun-2023 12:30:21 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1687

First Level Reviewer: DVW2 Date: 21-Jun-2023 08:05:25

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.849	1.855	-0.006	99	153092	2.00	2.12	
4 Chloromethane	50	2.038	2.050	-0.012	99	148627	2.00	2.03	
5 Vinyl chloride	62	2.148	2.160	-0.012	77	144284	2.00	2.06	
6 Butadiene	39	2.148	2.160	-0.012	90	138958	2.00	1.89	
7 Bromomethane	94	2.459	2.465	-0.006	90	109113	2.00	1.99	
8 Chloroethane	64	2.532	2.538	-0.006	100	84063	2.00	2.00	
9 Dichlorofluoromethane	67	2.757	2.764	-0.007	97	227201	2.00	1.94	
10 Trichlorofluoromethane	101	2.818	2.824	-0.006	95	185589	2.00	2.08	
11 Ethyl ether	59	3.038	3.050	-0.012	89	71951	2.00	1.95	
13 1,2-Dichloro-1,1,2-trifluoroetha	67	3.129	3.142	-0.013	89	125946	2.00	1.98	
14 Acrolein	56	3.202	3.209	-0.007	98	572441	100.0	104.0	
15 1,1-Dichloroethene	96	3.324	3.337	-0.013	97	95792	2.00	1.98	
16 Acetone	43	3.355	3.361	-0.006	76	123579	20.0	20.3	
17 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.379	3.385	-0.006	90	103962	2.00	2.03	
18 Iodomethane	142	3.513	3.526	-0.013	99	207682	2.00	2.04	
19 Ethyl bromide	108	3.538	3.550	-0.012	99	80536	2.00	1.90	
20 Carbon disulfide	76	3.617	3.629	-0.012	99	265233	2.00	2.02	
23 Methyl acetate	43	3.757	3.757	0.000	24	29888	2.00	1.99	M
24 3-Chloro-1-propene	41	3.769	3.782	-0.013	91	148700	2.00	1.98	
25 Methylene Chloride	84	3.952	3.958	-0.006	89	101250	2.00	1.98	
* 26 t-Butyl alcohol-d10 (IS)	65	3.971	4.025	-0.054	96	127135	50.0	50.0	M
27 2-Methyl-2-propanol	59	4.099	4.093	0.006	99	99365	40.0	41.1	
28 Acrylonitrile	53	4.281	4.282	-0.001	97	42468	5.00	5.75	
29 Methyl tert-butyl ether	73	4.336	4.342	-0.006	94	267433	2.00	2.02	
30 trans-1,2-Dichloroethene	96	4.349	4.355	-0.006	98	109363	2.00	2.03	
31 Hexane	57	4.769	4.781	-0.012	91	138409	2.00	1.96	
32 1,1-Dichloroethane	63	5.007	5.013	-0.006	96	188062	2.00	2.04	
35 Isopropyl ether	45	5.068	5.074	-0.006	92	305304	2.00	2.02	
36 2-Chloro-1,3-butadiene	53	5.117	5.123	-0.006	90	157183	2.00	2.04	
37 Tert-butyl ethyl ether	59	5.611	5.623	-0.013	96	293761	2.00	2.03	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
38 2-Butanone (MEK)	43	5.806	5.812	-0.006	100	242793	20.0	20.7	
39 cis-1,2-Dichloroethene	96	5.848	5.854	-0.006	81	121238	2.00	2.03	
40 2,2-Dichloropropane	77	5.854	5.867	-0.013	71	169485	2.00	2.04	
43 Propionitrile	54	5.897	5.891	0.006	98	137306	40.0	44.3	
45 Methacrylonitrile	67	6.110	6.110	0.000	90	255367	20.0	20.9	
S 41 1,2-Dichloroethene, Total	100				0			4.06	
46 Chlorobromomethane	128	6.184	6.190	-0.006	86	54957	2.00	2.02	
47 Tetrahydrofuran	71	6.196	6.196	0.000	78	39125	10.0	10.1	
48 Chloroform	83	6.336	6.342	-0.006	93	195036	2.00	2.05	
$ 49 Dibromofluoromethane (Surr)	113	6.555	6.555	0.000	95	459886	10.0	9.93	
50 1,1,1-Trichloroethane	97	6.555	6.568	-0.013	54	180779	2.00	2.03	
51 Cyclohexane	56	6.659	6.671	-0.012	89	169296	2.00	2.01	
54 Carbon tetrachloride	117	6.775	6.781	-0.006	96	161435	2.00	2.04	
53 1,1-Dichloropropene	75	6.775	6.781	-0.006	95	143481	2.00	2.03	
55 Isobutyl alcohol	41	6.946	6.940	0.006	93	77021	100.0	89.6	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.007	7.013	-0.006	83	92053	10.0	10.0	
57 Benzene	78	7.037	7.043	-0.006	96	433294	2.00	2.04	
58 1,2-Dichloroethane	62	7.110	7.116	-0.006	97	114498	2.00	1.98	
60 Tert-amyl methyl ether	73	7.238	7.244	-0.006	98	268420	2.00	2.01	
* 61 Fluorobenzene (IS)	96	7.446	7.445	0.001	99	1802566	10.0	10.0	
62 n-Heptane	43	7.464	7.470	-0.006	92	130745	2.00	1.93	
63 n-Butanol	56	7.848	7.836	0.012	87	112349	175.0	170.2	
64 Trichloroethene	95	7.927	7.933	-0.006	96	119866	2.00	2.02	
65 Methylcyclohexane	83	8.244	8.244	0.000	90	193464	2.00	2.02	
66 1,2-Dichloropropane	63	8.262	8.269	-0.007	96	106323	2.00	2.02	
67 Methyl methacrylate	69	8.360	8.354	0.006	89	49293	2.00	2.05	
68 1,4-Dioxane	88	8.372	8.366	0.006	30	13925	100.0	99.3	M
69 Dibromomethane	93	8.378	8.378	0.000	93	54174	2.00	2.05	
71 Dichlorobromomethane	83	8.616	8.616	0.000	99	137781	2.00	2.01	
72 2-Nitropropane	41	8.884	8.884	0.000	98	74299	10.0	9.43	
75 1-Bromo-2-chloroethane	63	9.006	9.012	-0.006	98	103572	2.00	1.93	
76 cis-1,3-Dichloropropene	75	9.177	9.177	0.000	97	166986	2.00	2.03	
77 4-Methyl-2-pentanone (MIBK)	43	9.360	9.360	0.000	96	654051	20.0	20.8	
$ 78 Toluene-d8 (Surr)	98	9.494	9.500	-0.006	93	1822022	10.0	10.0	
79 Toluene	92	9.573	9.579	-0.006	99	296153	2.00	2.07	
97 trans-1,3-Dichloropropene	75	9.847	9.848	-0.001	92	136143	2.00	2.01	
99 Ethyl methacrylate	69	9.915	9.915	0.000	89	112647	2.00	2.02	
100 1,1,2-Trichloroethane	97	10.055	10.055	0.000	90	81347	2.00	2.01	
S 98 1,3-Dichloropropene, Total	100				0			4.05	
101 Tetrachloroethene	166	10.140	10.146	-0.006	97	152617	2.00	2.04	
102 1,3-Dichloropropane	76	10.219	10.219	0.000	90	130340	2.00	2.04	
103 2-Hexanone	43	10.274	10.274	0.000	96	459845	20.0	20.7	
105 Chlorodibromomethane	129	10.439	10.439	0.000	89	106469	2.00	2.02	
106 Ethylene Dibromide	107	10.549	10.549	0.000	99	77070	2.00	2.02	
* 107 Chlorobenzene-d5 (IS)	117	10.988	10.987	0.001	84	1411844	10.0	10.0	
108 1-Chlorohexane	91	11.000	11.000	0.000	94	164067	2.00	1.97	a
109 Chlorobenzene	112	11.018	11.018	0.000	97	343177	2.00	2.05	
111 1,1,1,2-Tetrachloroethane	131	11.097	11.097	0.000	95	121541	2.00	2.04	
112 Ethylbenzene	91	11.103	11.103	0.000	98	568378	2.00	2.04	a
113 m-Xylene & p-Xylene	106	11.219	11.219	0.000	93	464338	4.00	4.11	
S 110 Xylenes, Total	106				0			6.16	
114 o-Xylene	106	11.554	11.554	0.000	95	228364	2.00	2.05	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
115 Styrene	104	11.573	11.567	0.006	95	365726	2.00	2.04	
116 Bromoform	173	11.725	11.725	0.000	97	69013	2.00	2.02	
117 Isopropylbenzene	105	11.853	11.859	-0.006	95	594828	2.00	2.06	
$ 120 4-Bromofluorobenzene (Surr)	95	12.000	12.000	0.000	96	688953	10.0	10.1	
121 1,1,2,2-Tetrachloroethane	83	12.103	12.103	0.000	93	103555	2.00	2.00	
122 Bromobenzene	156	12.115	12.115	0.000	94	152143	2.00	2.03	
123 trans-1,4-Dichloro-2-butene	53	12.128	12.128	0.000	93	248485	20.0	21.0	
124 1,2,3-Trichloropropane	110	12.152	12.146	0.006	82	29265	2.00	2.01	
125 N-Propylbenzene	91	12.188	12.189	-0.001	98	671294	2.00	2.03	
126 2-Chlorotoluene	126	12.262	12.262	0.000	98	148498	2.00	2.05	a
127 1,3,5-Trimethylbenzene	105	12.323	12.323	0.000	94	512246	2.00	2.03	
128 4-Chlorotoluene	126	12.359	12.353	0.006	96	153069	2.00	2.06	
129 tert-Butylbenzene	134	12.566	12.566	0.000	92	124089	2.00	2.04	
130 Pentachloroethane	167	12.597	12.597	0.000	90	89999	2.00	1.92	
131 1,2,4-Trimethylbenzene	105	12.609	12.609	0.000	96	524551	2.00	2.02	
132 sec-Butylbenzene	105	12.731	12.731	0.000	93	659131	2.00	2.05	
133 1,3-Dichlorobenzene	146	12.829	12.829	0.000	99	299493	2.00	2.05	
134 4-Isopropyltoluene	119	12.841	12.841	0.000	97	587493	2.00	2.05	
* 135 1,4-Dichlorobenzene-d4	152	12.883	12.883	0.000	93	870354	10.0	10.0	
136 1,4-Dichlorobenzene	146	12.902	12.902	0.000	97	293178	2.00	2.03	
137 1,2,3-Trimethylbenzene	120	12.914	12.914	0.000	98	237548	2.00	2.03	
138 Benzyl chloride	126	12.981	12.981	0.000	98	45949	2.00	2.06	
139 n-Butylbenzene	92	13.133	13.133	0.000	97	259442	2.00	2.02	
140 1,2-Dichlorobenzene	146	13.164	13.158	0.006	99	279095	2.00	2.03	
142 1,2-Dibromo-3-Chloropropane	155	13.706	13.700	0.006	91	17537	2.00	2.07	
143 1,3,5-Trichlorobenzene	180	13.828	13.828	0.000	97	223971	2.00	2.04	
144 1,2,4-Trichlorobenzene	180	14.255	14.249	0.006	94	182141	2.00	2.06	
145 Hexachlorobutadiene	225	14.334	14.334	0.000	95	86860	2.00	2.02	
146 Naphthalene	128	14.432	14.426	0.006	96	330200	2.00	2.05	
147 1,2,3-Trichlorobenzene	180	14.572	14.572	0.000	96	150086	2.00	2.03	
155 2-Methylnaphthalene	142		0.000				ND	ND	
156 p-Diethylbenzene	1		0.000				ND	ND	
161 Pentane	43		0.000				ND	ND	
150 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
165 Isopropyl alcohol	45		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_LL_#1_826_00081	Amount Added:	2.00	Units: uL	
MSV_LL_#2_826_00093	Amount Added:	2.00	Units: uL	
MSV_LL_GAS826_00156	Amount Added:	2.00	Units: uL	
MSV_LLcentISS_00007	Amount Added:	5.00	Units: uL	Run Reagent

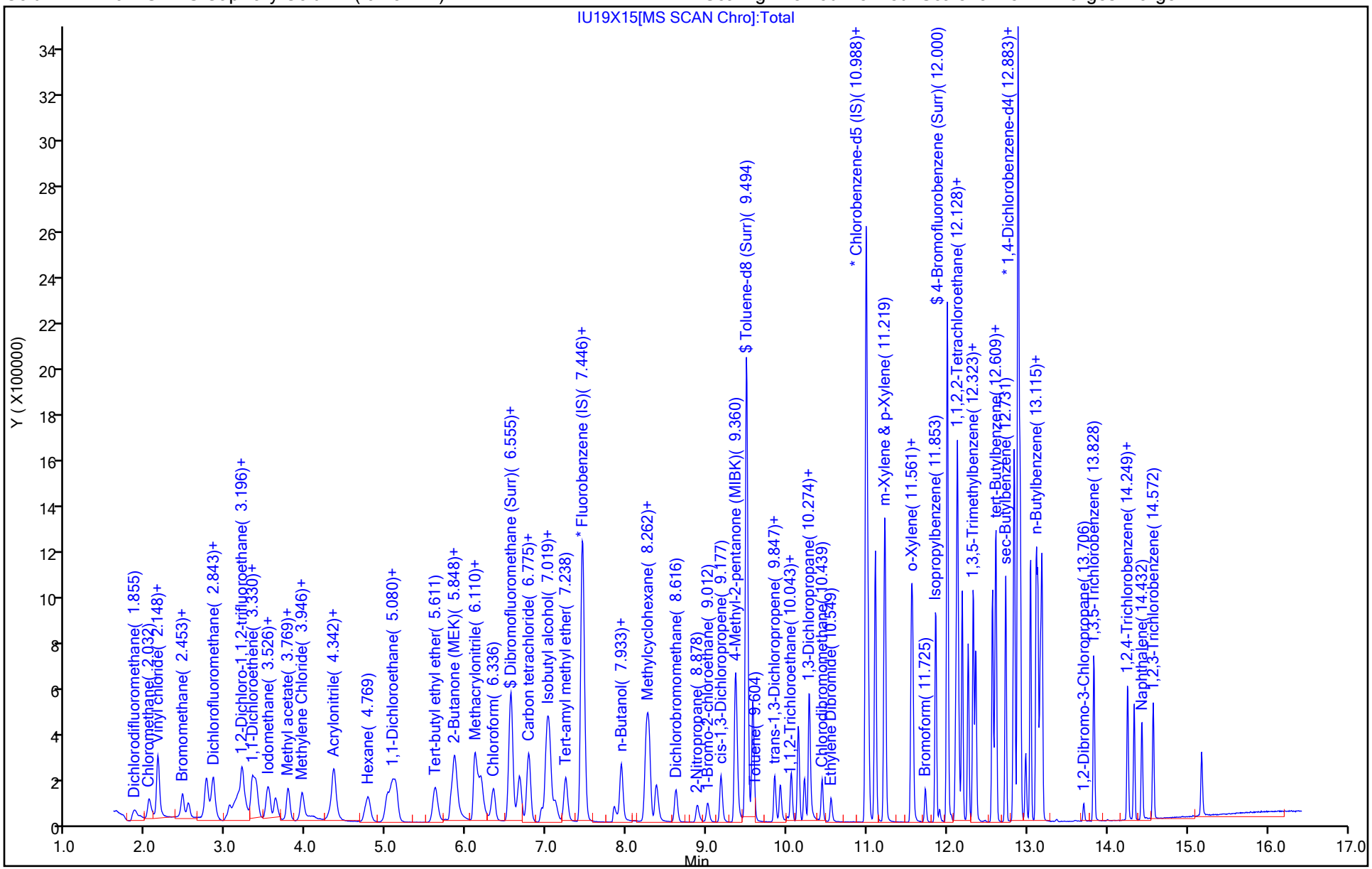
Report Date: 27-Jun-2023 12:30:21 Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X15.D

Injection Date:	19-Jun-2023 19:22:30	Instrument ID:	19930	Operator ID:	KNK41612
Lims ID:	IC std4			Worklist Smp#:	16
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

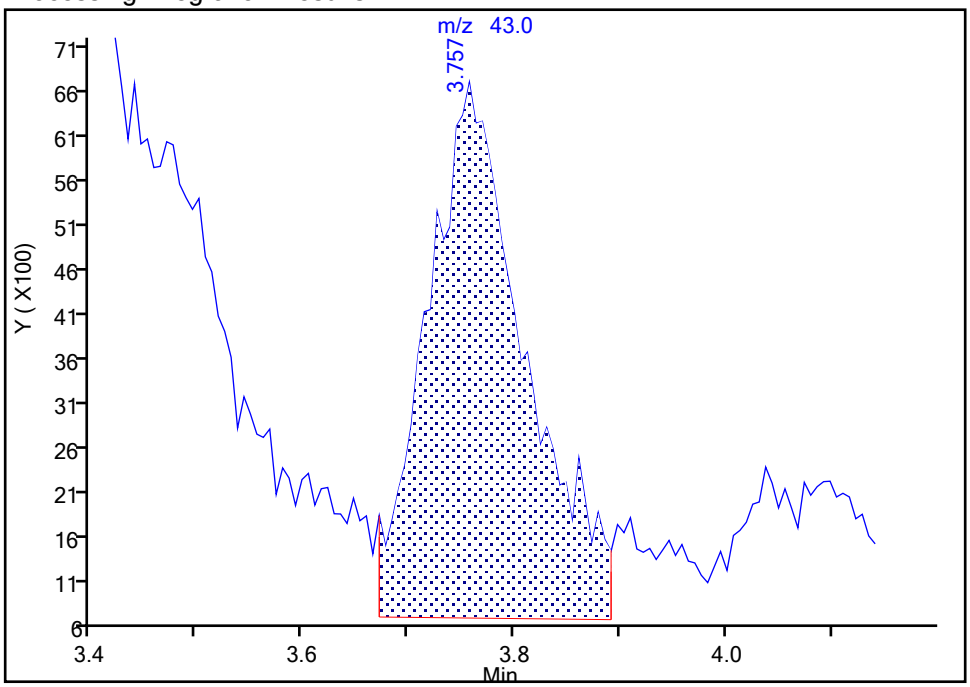
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X15.D				
Injection Date:	19-Jun-2023 19:22:30	Instrument ID:	19930		
Lims ID:	IC std4				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	15	Worklist Smp#:	16
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

23 Methyl acetate, CAS: 79-20-9

Signal: 1

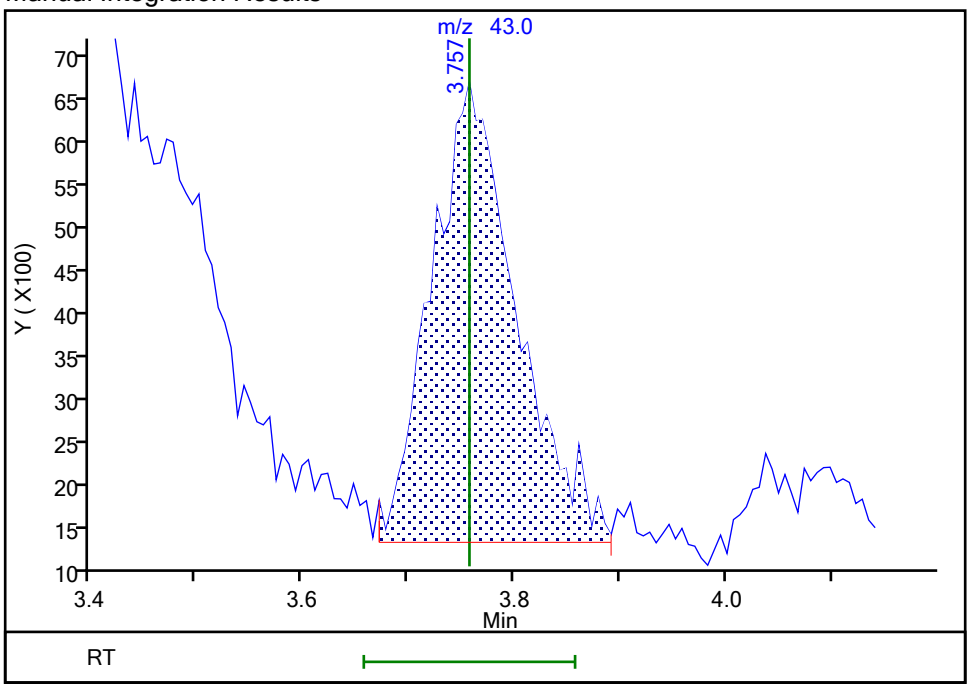
Processing Integration Results

RT: 3.76
Area: 38847
Amount: 2.303021
Amount Units: ug/l



Manual Integration Results

RT: 3.76
Area: 29888
Amount: 1.991620
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:04:18 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

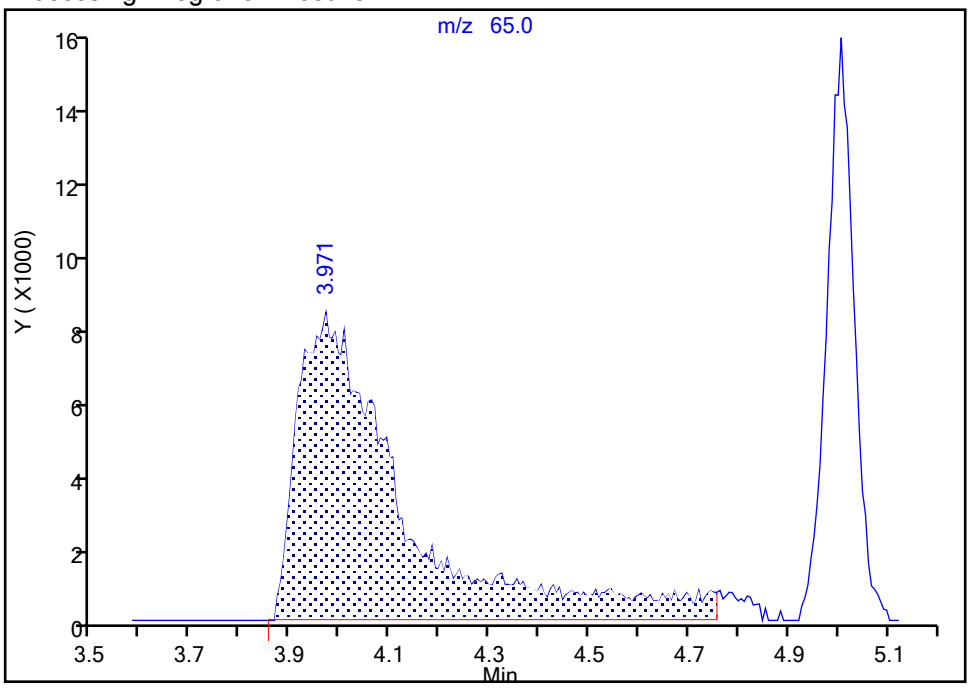
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X15.D
Injection Date: 19-Jun-2023 19:22:30 Instrument ID: 19930
Lims ID: IC std4
Client ID:
Operator ID: KNK41612 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 26 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

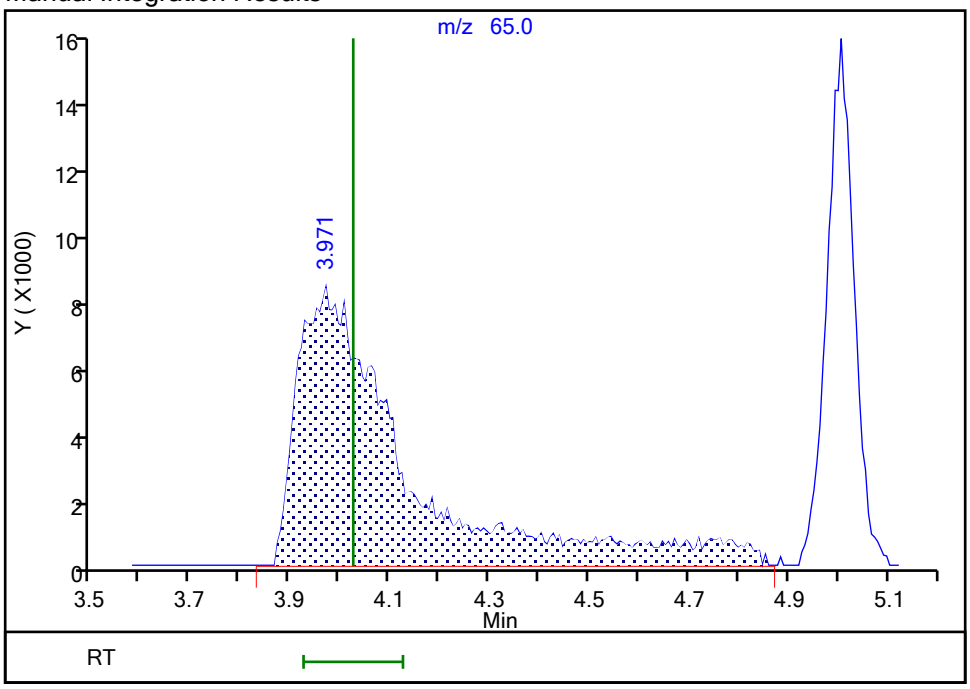
Processing Integration Results

RT: 3.97
Area: 123899
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 3.97
Area: 127135
Amount: 50.000000
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:04:29 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

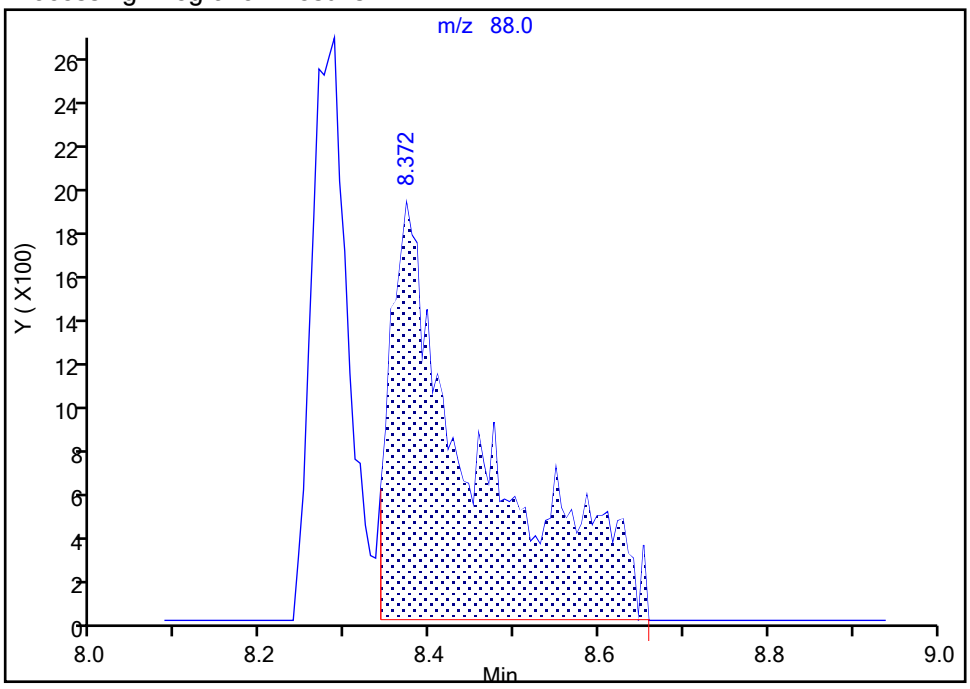
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X15.D
Injection Date: 19-Jun-2023 19:22:30 Instrument ID: 19930
Lims ID: IC std4
Client ID:
Operator ID: KNK41612 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

68 1,4-Dioxane, CAS: 123-91-1

Signal: 1

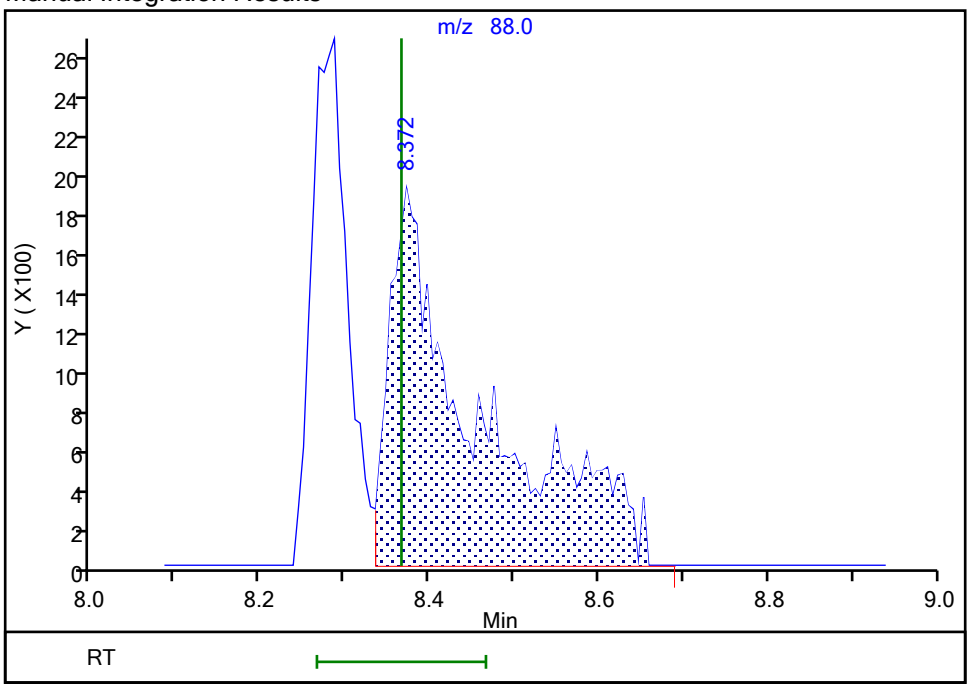
Processing Integration Results

RT: 8.37
Area: 13819
Amount: 104.2969
Amount Units: ug/l



Manual Integration Results

RT: 8.37
Area: 13925
Amount: 99.329922
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:04:56 -04:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

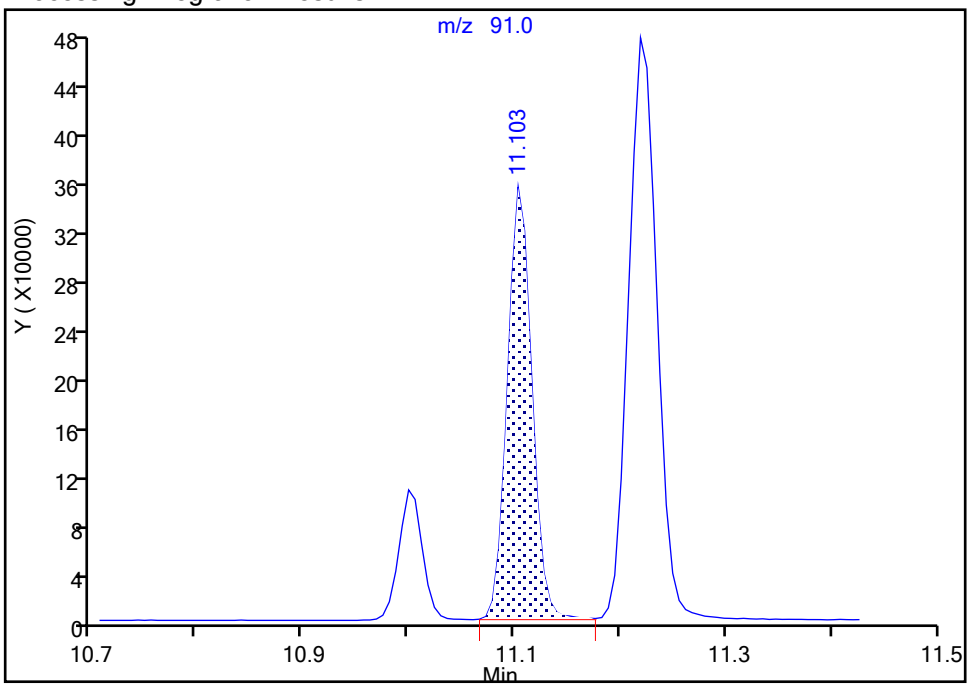
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X15.D				
Injection Date:	19-Jun-2023 19:22:30	Instrument ID:	19930		
Lims ID:	IC std4				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	15	Worklist Smp#:	16
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

108 1-Chlorohexane, CAS: 544-10-5

Signal: 1

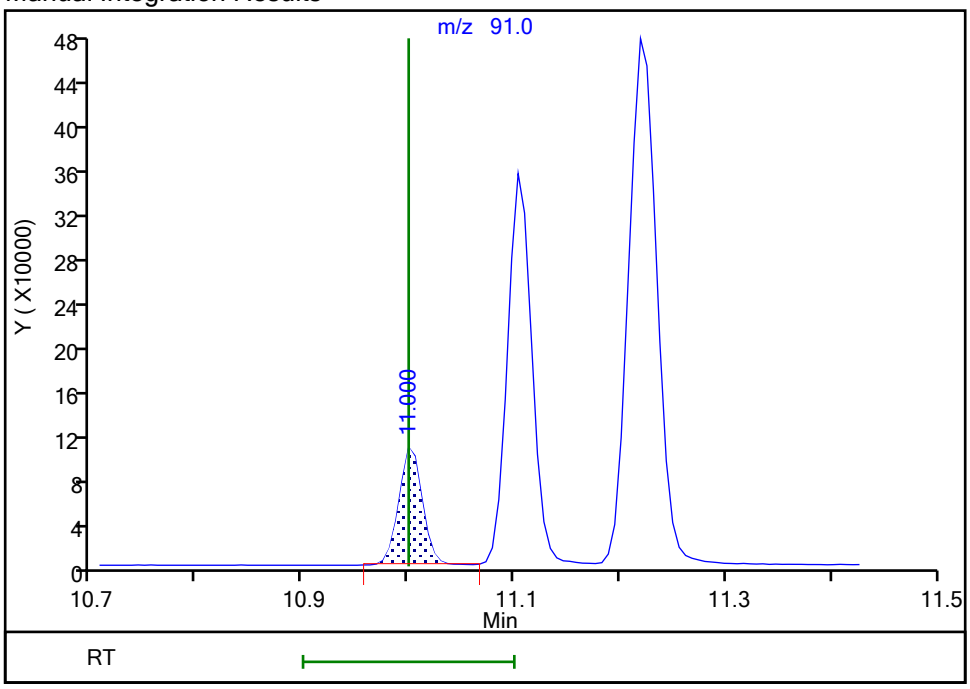
Processing Integration Results

RT: 11.10
Area: 568378
Amount: 2.870285
Amount Units: ug/l



Manual Integration Results

RT: 11.00
Area: 164067
Amount: 1.968956
Amount Units: ug/l



Reviewer: DVW2, 22-Jun-2023 07:47:52 -04:00:00 (UTC)

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

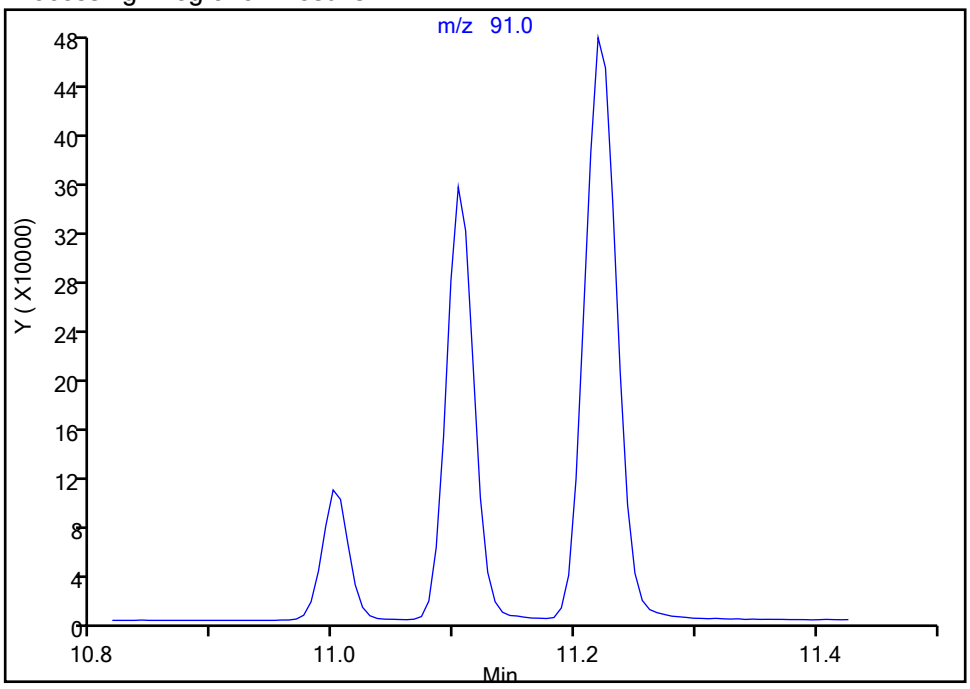
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X15.D				
Injection Date:	19-Jun-2023 19:22:30	Instrument ID:	19930		
Lims ID:	IC std4				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	15	Worklist Smp#:	16
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

112 Ethylbenzene, CAS: 100-41-4

Signal: 1

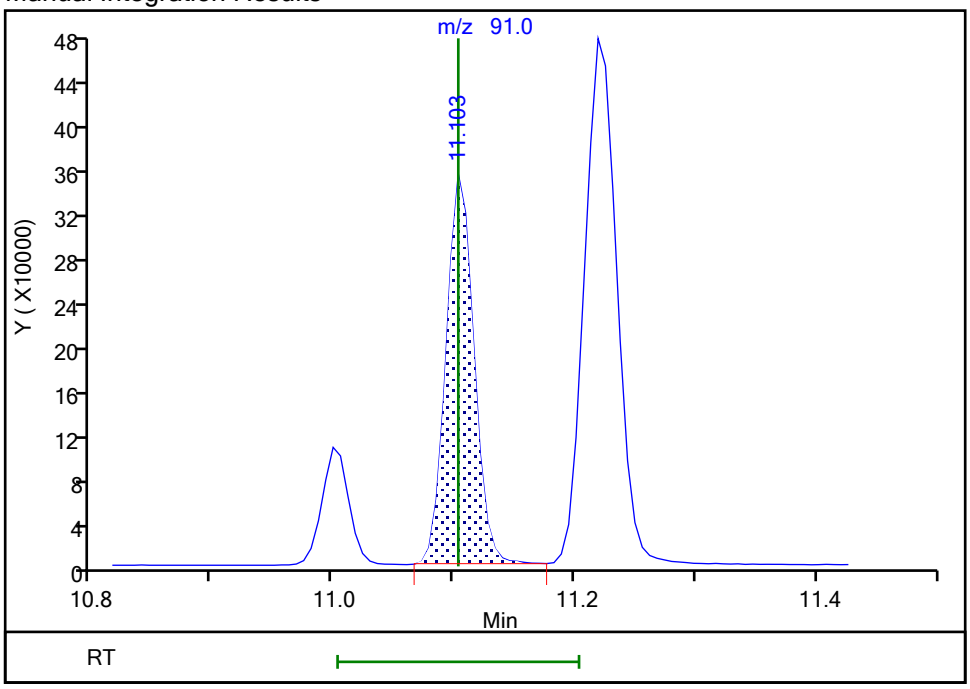
Not Detected
Expected RT: 11.10

Processing Integration Results



Manual Integration Results

RT: 11.10
Area: 568378
Amount: 2.036930
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 15:35:00 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

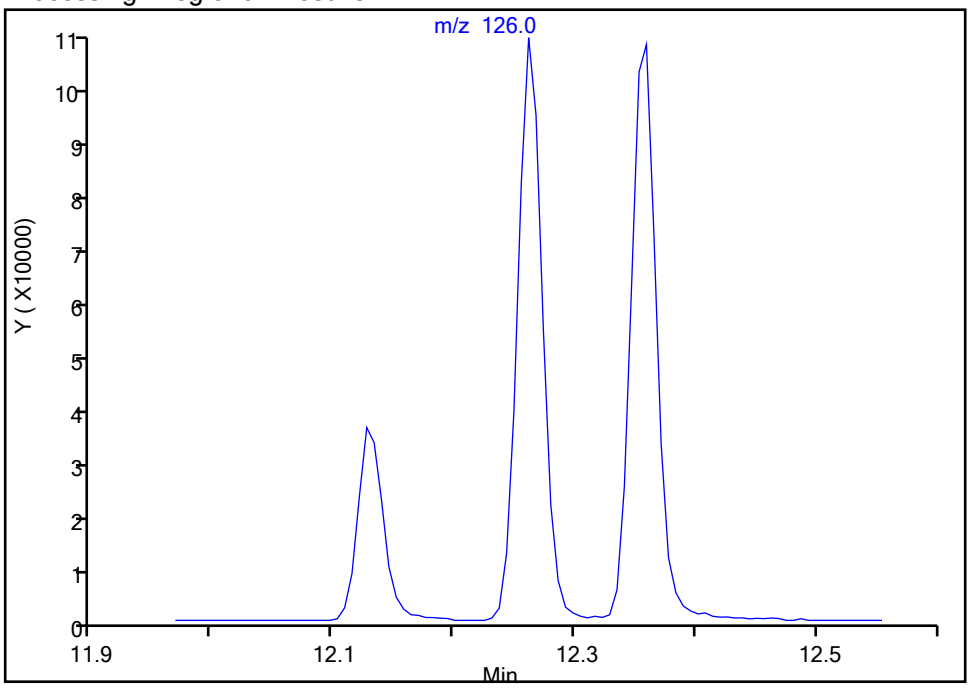
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X15.D
Injection Date: 19-Jun-2023 19:22:30 Instrument ID: 19930
Lims ID: IC std4
Client ID:
Operator ID: KNK41612 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

126 2-Chlorotoluene, CAS: 95-49-8

Signal: 1

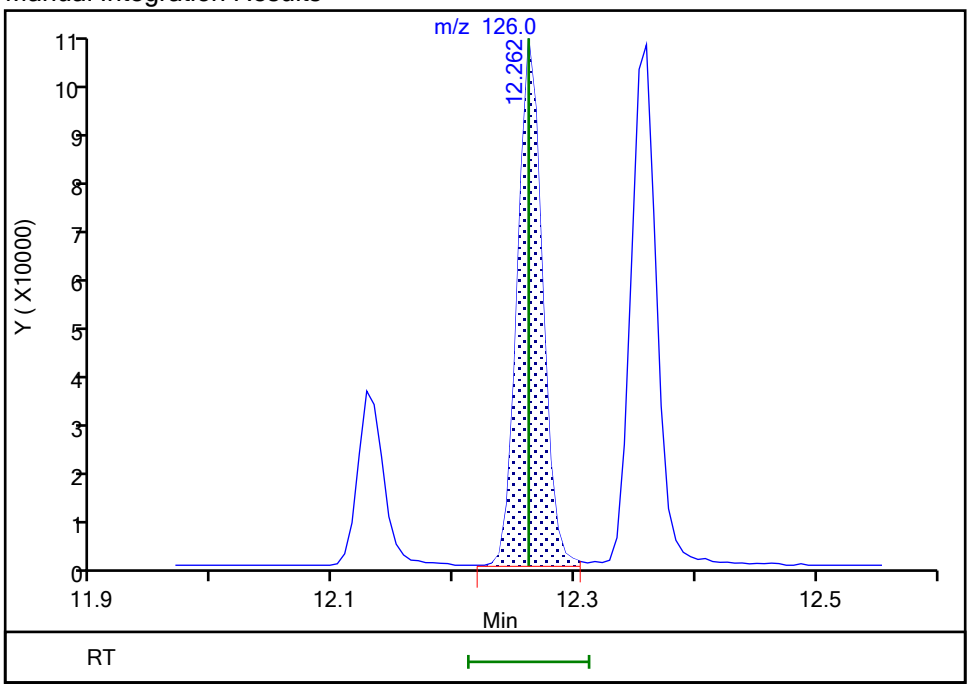
Not Detected
Expected RT: 12.26

Processing Integration Results



Manual Integration Results

RT: 12.26
Area: 148498
Amount: 2.051768
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 15:35:10 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X16.D
Lims ID: IC std5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 19-Jun-2023 19:42:30 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0086929-017
Misc. Info.: LG 5.0
Operator ID: KNK41612 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 27-Jun-2023 12:30:27 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1687

First Level Reviewer: DVW2 Date: 21-Jun-2023 08:07:10

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.849	1.855	-0.006	99	360756	5.00	4.84	
4 Chloromethane	50	2.044	2.050	-0.006	99	355971	5.00	4.70	
5 Vinyl chloride	62	2.148	2.160	-0.012	97	346234	5.00	4.78	
6 Butadiene	39	2.154	2.160	-0.006	90	325681	5.00	4.30	
7 Bromomethane	94	2.459	2.465	-0.006	91	265387	5.00	4.69	
8 Chloroethane	64	2.532	2.538	-0.006	100	204756	5.00	4.73	
9 Dichlorofluoromethane	67	2.757	2.764	-0.007	97	549690	5.00	4.55	
10 Trichlorofluoromethane	101	2.818	2.824	-0.006	97	454389	5.00	4.93	
11 Ethyl ether	59	3.044	3.050	-0.006	89	187410	5.00	4.92	
13 1,2-Dichloro-1,1,2-trifluoroetha	67	3.129	3.142	-0.013	88	308465	5.00	4.69	
14 Acrolein	56	3.196	3.209	-0.013	98	1460333	250.0	242.2	
15 1,1-Dichloroethene	96	3.330	3.337	-0.007	97	252853	5.00	5.07	
16 Acetone	43	3.361	3.361	0.000	100	325042	50.0	48.8	
17 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.379	3.385	-0.006	91	285989	5.00	5.40	
18 Iodomethane	142	3.519	3.526	-0.007	99	535229	5.00	5.10	
19 Ethyl bromide	108	3.544	3.550	-0.006	99	210130	5.00	4.81	
20 Carbon disulfide	76	3.623	3.629	-0.006	99	686699	5.00	5.07	
23 Methyl acetate	43	3.757	3.757	0.000	96	83849	5.00	5.10	M
24 3-Chloro-1-propene	41	3.775	3.782	-0.007	91	382363	5.00	4.93	
25 Methylene Chloride	84	3.952	3.958	-0.006	89	263546	5.00	5.00	
* 26 t-Butyl alcohol-d10 (IS)	65	3.983	4.025	-0.042	96	139221	50.0	50.0	M
27 2-Methyl-2-propanol	59	4.080	4.093	-0.013	100	284492	100.0	107.4	
28 Acrylonitrile	53	4.269	4.282	-0.013	98	114187	12.5	14.1	
29 Methyl tert-butyl ether	73	4.336	4.342	-0.006	94	674458	5.00	4.92	
30 trans-1,2-Dichloroethene	96	4.342	4.355	-0.013	98	279615	5.00	5.03	
31 Hexane	57	4.775	4.781	-0.006	91	369911	5.00	5.08	
32 1,1-Dichloroethane	63	5.007	5.013	-0.006	96	486164	5.00	5.11	
35 Isopropyl ether	45	5.068	5.074	-0.006	93	787124	5.00	5.04	
36 2-Chloro-1,3-butadiene	53	5.123	5.123	0.000	90	407363	5.00	5.12	
37 Tert-butyl ethyl ether	59	5.610	5.623	-0.013	96	746447	5.00	5.00	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
38 2-Butanone (MEK)	43	5.806	5.812	-0.006	99	609434	50.0	47.5	
39 cis-1,2-Dichloroethene	96	5.848	5.854	-0.006	81	307184	5.00	4.97	
40 2,2-Dichloropropane	77	5.860	5.867	-0.007	86	435561	5.00	5.08	
43 Propionitrile	54	5.897	5.891	0.006	99	323734	100.0	95.4	
45 Methacrylonitrile	67	6.116	6.110	0.006	90	659307	50.0	49.2	
S 41 1,2-Dichloroethene, Total	100				0			10.0	
46 Chlorobromomethane	128	6.184	6.190	-0.006	86	139749	5.00	4.97	
47 Tetrahydrofuran	71	6.190	6.196	-0.006	78	98820	25.0	23.4	
48 Chloroform	83	6.336	6.342	-0.006	93	497602	5.00	5.06	
$ 49 Dibromofluoromethane (Surr)	113	6.549	6.555	-0.006	95	481549	10.0	10.1	
50 1,1,1-Trichloroethane	97	6.562	6.568	-0.006	98	472367	5.00	5.15	
51 Cyclohexane	56	6.665	6.671	-0.006	88	460220	5.00	5.29	
54 Carbon tetrachloride	117	6.775	6.781	-0.006	97	428174	5.00	5.24	
53 1,1-Dichloropropene	75	6.781	6.781	0.000	96	376146	5.00	5.15	
55 Isobutyl alcohol	41	6.940	6.940	0.000	95	221312	250.0	235.2	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.000	7.013	-0.013	84	96600	10.0	10.2	
57 Benzene	78	7.037	7.043	-0.006	97	1110945	5.00	5.06	
58 1,2-Dichloroethane	62	7.110	7.116	-0.006	98	300424	5.00	5.04	
60 Tert-amyl methyl ether	73	7.238	7.244	-0.006	98	685739	5.00	4.97	
* 61 Fluorobenzene (IS)	96	7.446	7.445	0.001	98	1860774	10.0	10.0	
62 n-Heptane	43	7.464	7.470	-0.006	91	360420	5.00	5.16	
63 n-Butanol	56	7.836	7.836	0.000	88	343098	437.5	474.7	
64 Trichloroethene	95	7.933	7.933	0.000	96	309932	5.00	5.07	
65 Methylcyclohexane	83	8.244	8.244	0.000	91	524891	5.00	5.32	
66 1,2-Dichloropropane	63	8.262	8.269	-0.007	96	275849	5.00	5.08	
67 Methyl methacrylate	69	8.360	8.354	0.006	87	137311	5.00	5.20	
68 1,4-Dioxane	88	8.360	8.366	-0.006	32	41814	250.0	272.4	M
69 Dibromomethane	93	8.372	8.378	-0.006	91	137376	5.00	5.04	
71 Dichlorobromomethane	83	8.616	8.616	0.000	99	357171	5.00	5.06	
72 2-Nitropropane	41	8.878	8.884	-0.006	98	195361	25.0	22.6	
75 1-Bromo-2-chloroethane	63	9.012	9.012	0.000	98	272020	5.00	4.91	
76 cis-1,3-Dichloropropene	75	9.177	9.177	0.000	97	438752	5.00	5.18	
77 4-Methyl-2-pentanone (MIBK)	43	9.360	9.360	0.000	96	1690397	50.0	49.1	
$ 78 Toluene-d8 (Surr)	98	9.500	9.500	0.000	93	1907167	10.0	10.0	
79 Toluene	92	9.573	9.579	-0.006	99	767071	5.00	5.11	
97 trans-1,3-Dichloropropene	75	9.841	9.848	-0.007	92	365510	5.00	5.16	
99 Ethyl methacrylate	69	9.915	9.915	0.000	88	295850	5.00	5.05	
100 1,1,2-Trichloroethane	97	10.055	10.055	0.000	90	206782	5.00	4.88	
S 98 1,3-Dichloropropene, Total	100				0			10.3	
101 Tetrachloroethene	166	10.140	10.146	-0.006	98	402350	5.00	5.14	
102 1,3-Dichloropropane	76	10.219	10.219	0.000	89	333810	5.00	4.98	
103 2-Hexanone	43	10.274	10.274	0.000	95	1188293	50.0	48.8	
105 Chlorodibromomethane	129	10.439	10.439	0.000	90	284463	5.00	5.16	
106 Ethylene Dibromide	107	10.549	10.549	0.000	98	201076	5.00	5.03	
* 107 Chlorobenzene-d5 (IS)	117	10.987	10.987	0.000	84	1479531	10.0	10.0	
108 1-Chlorohexane	91	11.000	11.000	0.000	67	432239	5.00	4.95	a
109 Chlorobenzene	112	11.012	11.018	-0.006	97	890297	5.00	5.07	
111 1,1,1,2-Tetrachloroethane	131	11.097	11.097	0.000	95	318029	5.00	5.08	
112 Ethylbenzene	91	11.103	11.103	0.000	98	1483797	5.00	5.07	a
113 m-Xylene & p-Xylene	106	11.219	11.219	0.000	93	1207085	10.0	10.2	
S 110 Xylenes, Total	106				0			15.3	
114 o-Xylene	106	11.554	11.554	0.000	96	591109	5.00	5.06	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
115 Styrene	104	11.567	11.567	0.000	94	965746	5.00	5.14	
116 Bromoform	173	11.725	11.725	0.000	98	185725	5.00	5.19	
117 Isopropylbenzene	105	11.853	11.859	-0.006	95	1555613	5.00	5.13	
$ 120 4-Bromofluorobenzene (Surr)	95	11.999	12.000	-0.001	96	719841	10.0	10.0	
121 1,1,2,2-Tetrachloroethane	83	12.103	12.103	0.000	93	265162	5.00	4.89	
122 Bromobenzene	156	12.115	12.115	0.000	94	395435	5.00	5.05	
123 trans-1,4-Dichloro-2-butene	53	12.128	12.128	0.000	92	631878	50.0	48.7	
124 1,2,3-Trichloropropane	110	12.146	12.146	0.000	79	73791	5.00	4.85	
125 N-Propylbenzene	91	12.188	12.189	-0.001	98	1803955	5.00	5.20	
126 2-Chlorotoluene	126	12.262	12.262	0.000	98	385471	5.00	5.09	a
127 1,3,5-Trimethylbenzene	105	12.323	12.323	0.000	95	1342032	5.00	5.08	
128 4-Chlorotoluene	126	12.353	12.353	0.000	97	393652	5.00	5.07	
129 tert-Butylbenzene	134	12.566	12.566	0.000	92	322256	5.00	5.08	
130 Pentachloroethane	167	12.597	12.597	0.000	91	248510	5.00	5.06	
131 1,2,4-Trimethylbenzene	105	12.609	12.609	0.000	96	1386678	5.00	5.11	
132 sec-Butylbenzene	105	12.731	12.731	0.000	94	1725161	5.00	5.13	
133 1,3-Dichlorobenzene	146	12.829	12.829	0.000	99	796177	5.00	5.20	
134 4-Isopropyltoluene	119	12.841	12.841	0.000	97	1559110	5.00	5.20	
* 135 1,4-Dichlorobenzene-d4	152	12.883	12.883	0.000	93	910481	10.0	10.0	
136 1,4-Dichlorobenzene	146	12.902	12.902	0.000	96	751794	5.00	4.98	
137 1,2,3-Trimethylbenzene	120	12.914	12.914	0.000	98	620671	5.00	5.06	
138 Benzyl chloride	126	12.981	12.981	0.000	98	118785	5.00	5.10	
139 n-Butylbenzene	92	13.133	13.133	0.000	96	712295	5.00	5.31	
140 1,2-Dichlorobenzene	146	13.158	13.158	0.000	99	728454	5.00	5.07	
142 1,2-Dibromo-3-Chloropropane	155	13.706	13.700	0.006	91	45263	5.00	5.11	
143 1,3,5-Trichlorobenzene	180	13.828	13.828	0.000	97	599184	5.00	5.22	
144 1,2,4-Trichlorobenzene	180	14.249	14.249	0.000	94	483938	5.00	5.24	
145 Hexachlorobutadiene	225	14.334	14.334	0.000	95	240365	5.00	5.34	
146 Naphthalene	128	14.432	14.426	0.006	96	861870	5.00	5.13	
147 1,2,3-Trichlorobenzene	180	14.572	14.572	0.000	96	404377	5.00	5.23	
155 2-Methylnaphthalene	142		0.000				ND	ND	
156 p-Diethylbenzene	1		0.000				ND	ND	
161 Pentane	43		0.000				ND	ND	
150 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
165 Isopropyl alcohol	45		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_LL_#1_826_00081	Amount Added:	5.00	Units: uL	
MSV_LL_#2_826_00093	Amount Added:	5.00	Units: uL	
MSV_LL_GAS826_00156	Amount Added:	5.00	Units: uL	
MSV_LLcentISS_00007	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 27-Jun-2023 12:30:28 Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X16.D

Injection Date: 19-Jun-2023 19:42:30 Instrument ID: 19930 Operator ID: KNK41612

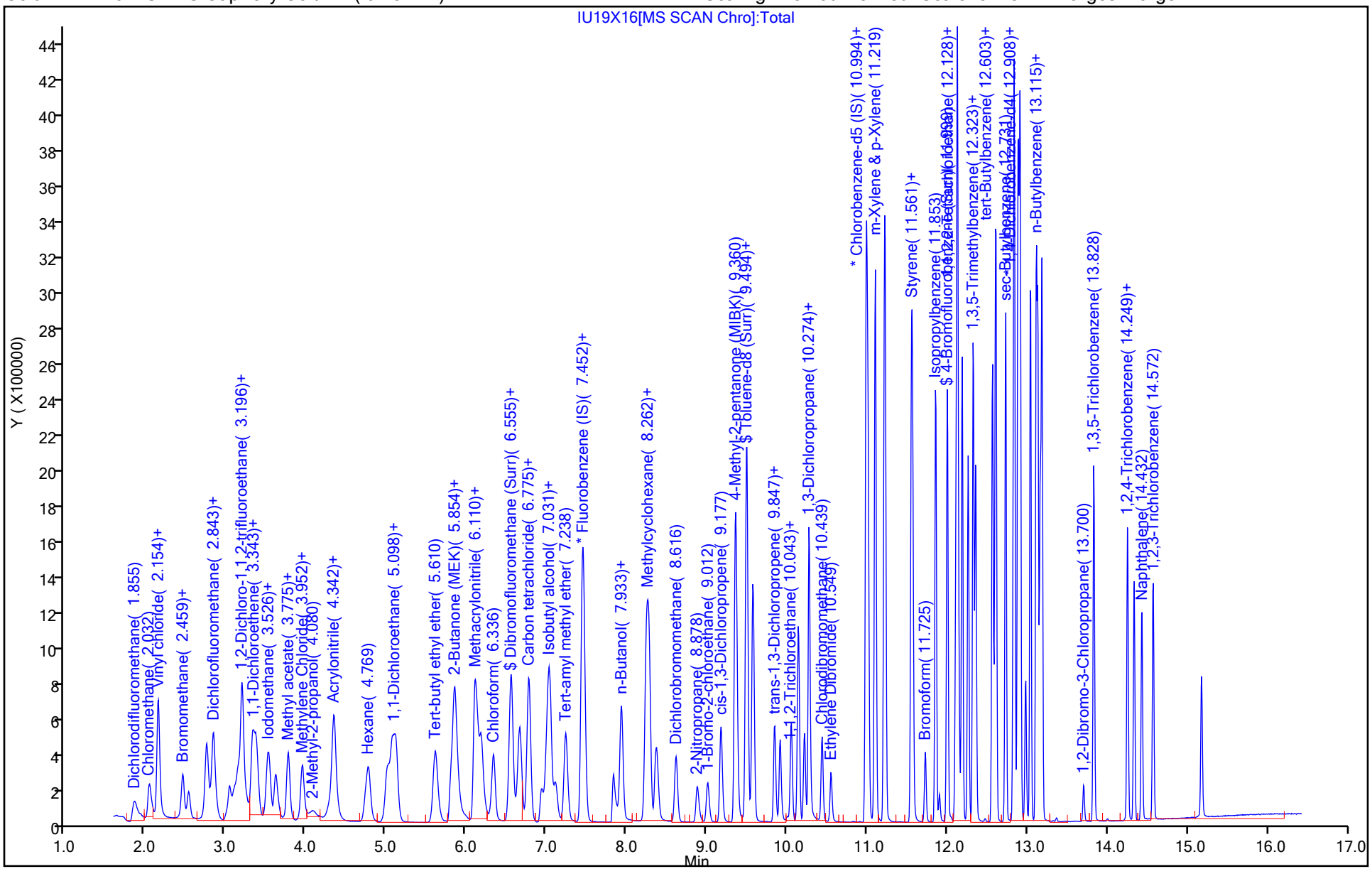
Lims ID: IC std5 Worklist Smp#: 17

Client ID:

Purge Vol: 25.000 mL Dil. Factor: 1.0000 ALS Bottle#: 16

Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

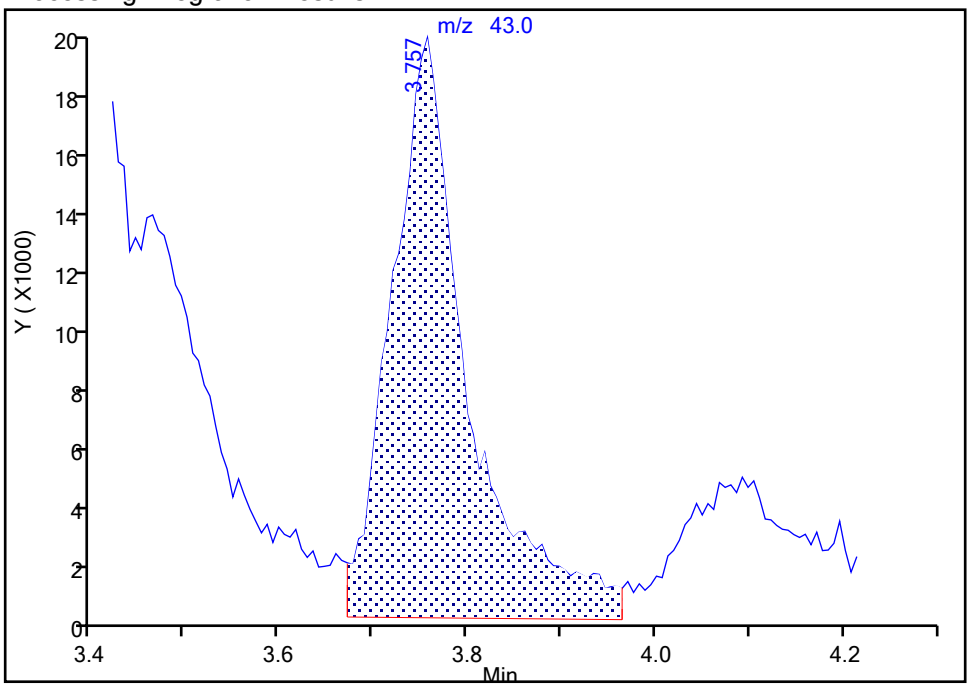
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X16.D				
Injection Date:	19-Jun-2023 19:42:30	Instrument ID:	19930		
Lims ID:	IC std5				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	16	Worklist Smp#:	17
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

23 Methyl acetate, CAS: 79-20-9

Signal: 1

Processing Integration Results

RT: 3.76
Area: 107077
Amount: 6.058921
Amount Units: ug/l



Manual Integration Results

RT: 3.76
Area: 83849
Amount: 5.102323
Amount Units: ug/l

Reviewer: DVW2, 21-Jun-2023 08:06:09 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

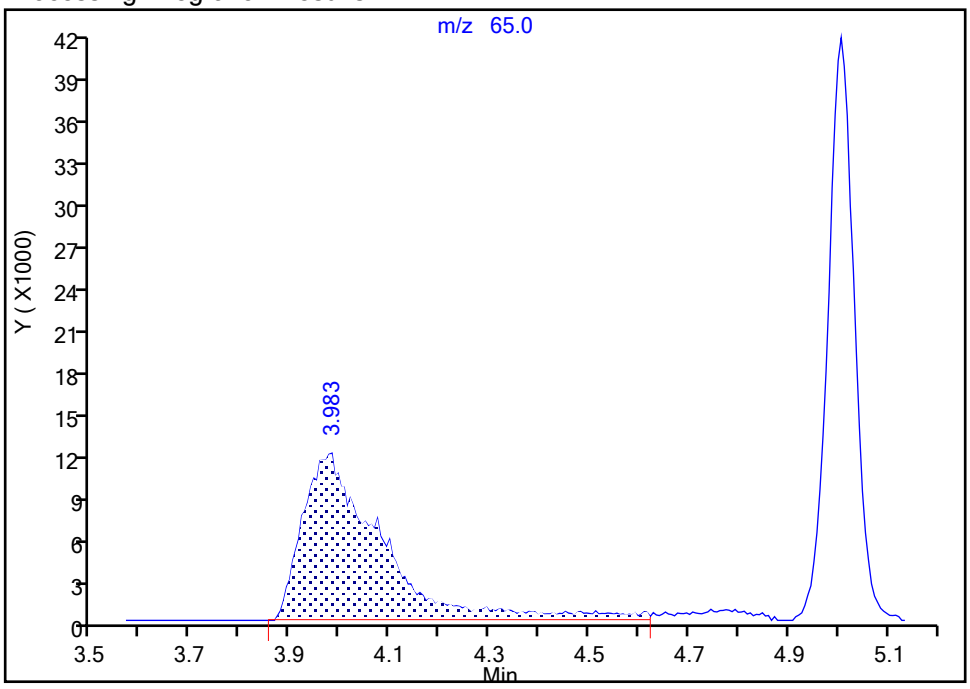
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X16.D
Injection Date: 19-Jun-2023 19:42:30 Instrument ID: 19930
Lims ID: IC std5
Client ID:
Operator ID: KNK41612 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 26 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

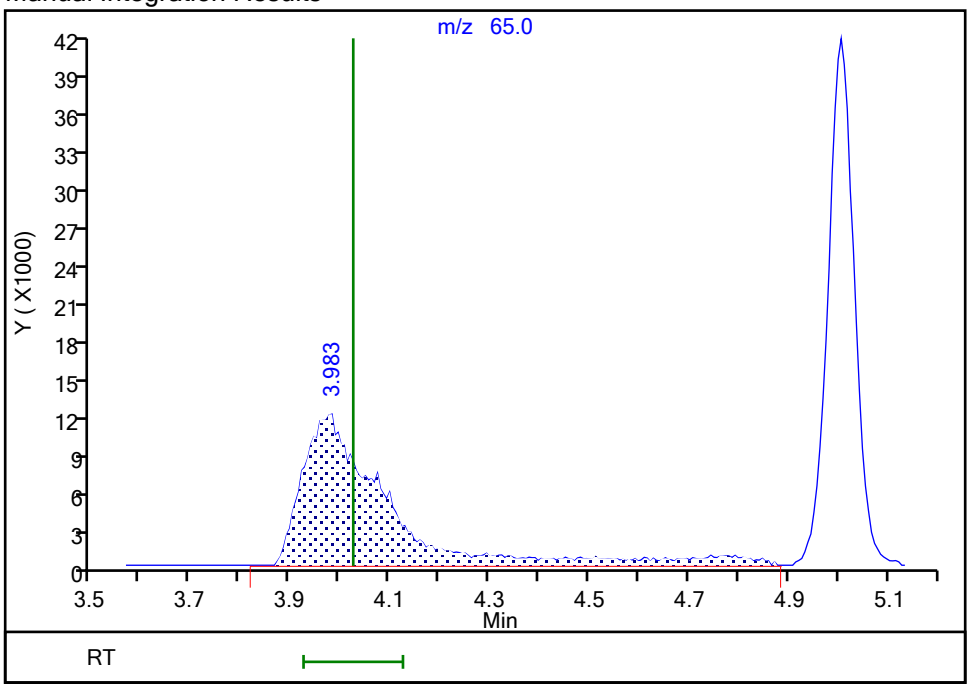
Processing Integration Results

RT: 3.98
Area: 131545
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 3.98
Area: 139221
Amount: 50.000000
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:06:17 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

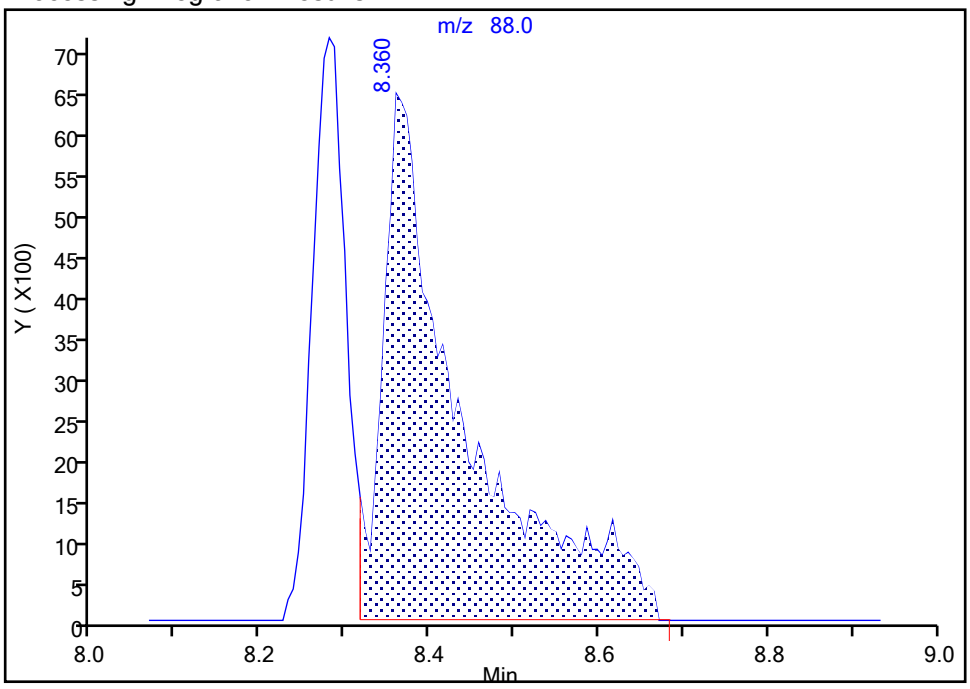
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X16.D				
Injection Date:	19-Jun-2023 19:42:30	Instrument ID:	19930		
Lims ID:	IC std5				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	16	Worklist Smp#:	17
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

68 1,4-Dioxane, CAS: 123-91-1

Signal: 1

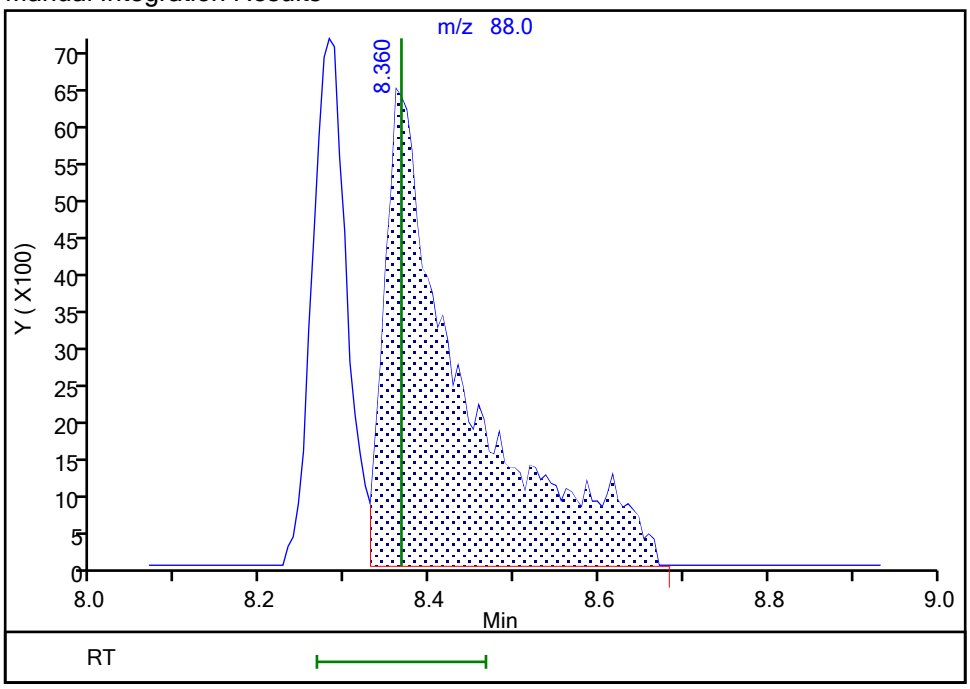
Processing Integration Results

RT: 8.36
Area: 42761
Amount: 252.0352
Amount Units: ug/l



Manual Integration Results

RT: 8.36
Area: 41814
Amount: 272.3748
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:06:38 -04:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

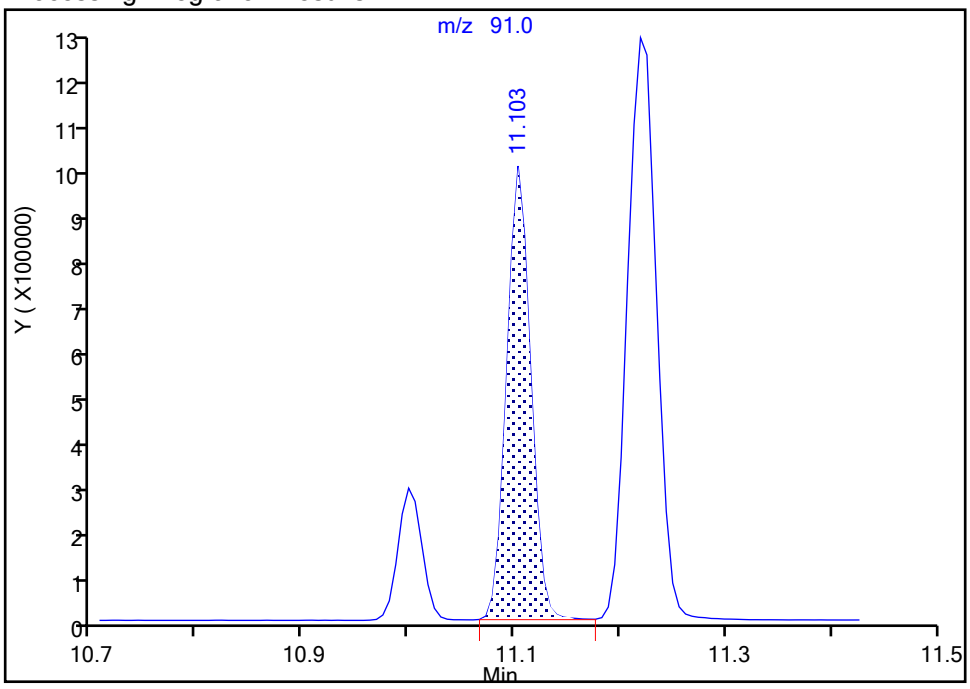
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X16.D
Injection Date: 19-Jun-2023 19:42:30 Instrument ID: 19930
Lims ID: IC std5
Client ID:
Operator ID: KNK41612 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

108 1-Chlorohexane, CAS: 544-10-5

Signal: 1

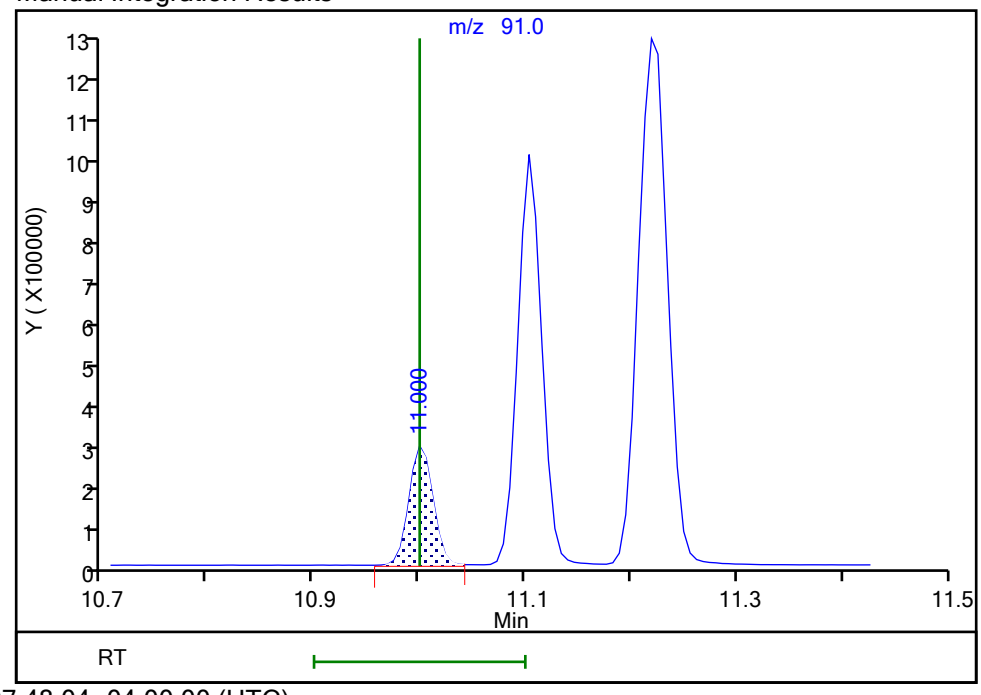
Processing Integration Results

RT: 11.10
Area: 1491281
Amount: 8.413378
Amount Units: ug/l



Manual Integration Results

RT: 11.00
Area: 432239
Amount: 4.949956
Amount Units: ug/l



Reviewer: DVW2, 22-Jun-2023 07:48:04 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

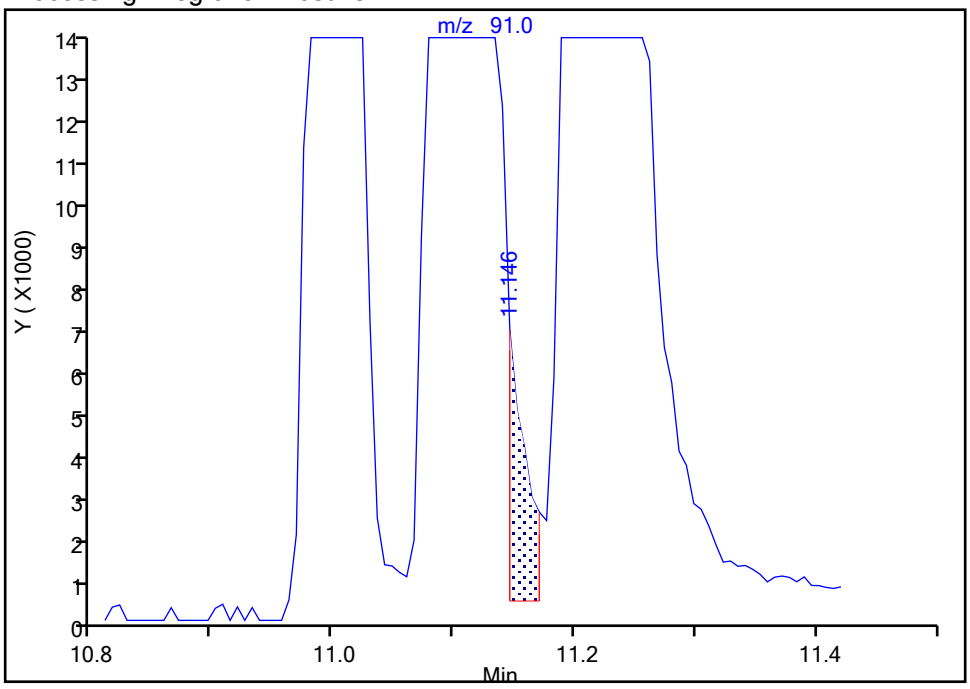
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X16.D				
Injection Date:	19-Jun-2023 19:42:30	Instrument ID:	19930		
Lims ID:	IC std5				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	16	Worklist Smp#:	17
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

112 Ethylbenzene, CAS: 100-41-4

Signal: 1

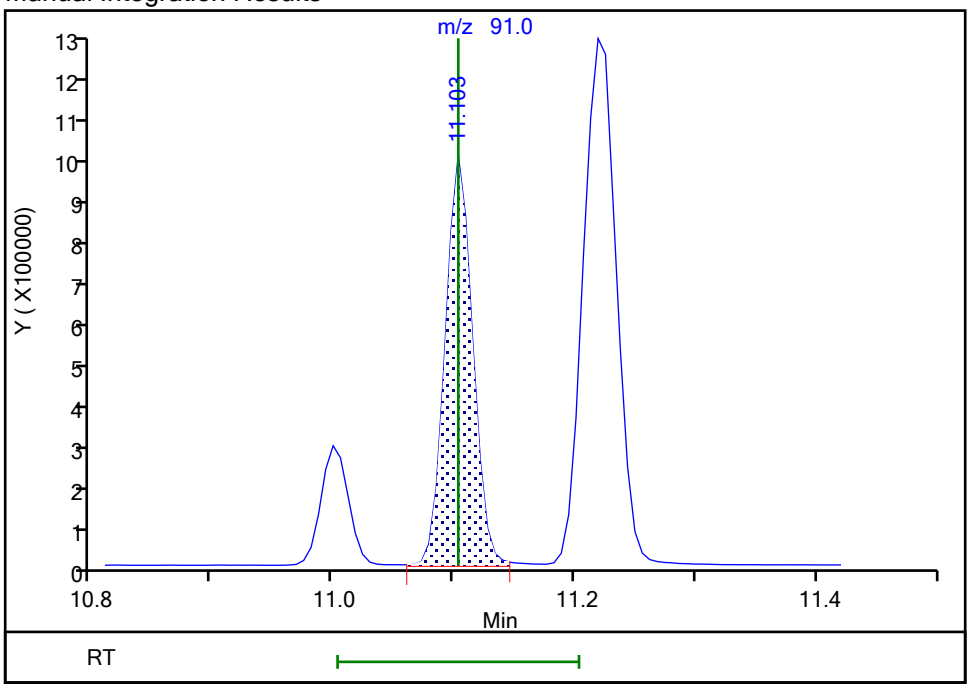
Processing Integration Results

RT: 11.15
Area: 6971
Amount: 0.021435
Amount Units: ug/l



Manual Integration Results

RT: 11.10
Area: 1483797
Amount: 5.074298
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 15:38:43 -04:00:00 (UTC)

Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

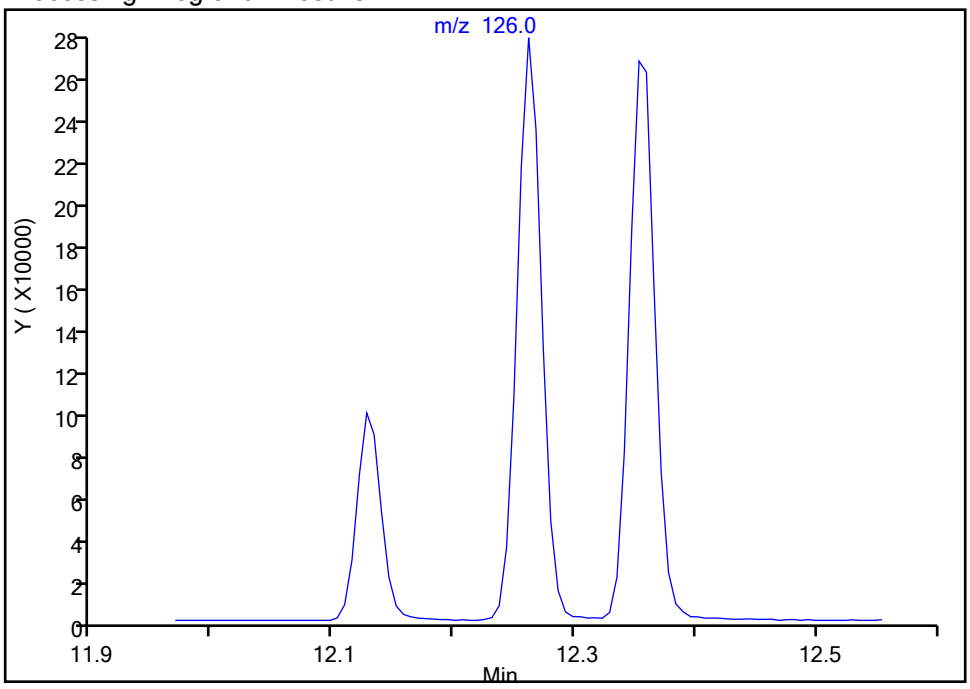
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X16.D				
Injection Date:	19-Jun-2023 19:42:30	Instrument ID:	19930		
Lims ID:	IC std5				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	16	Worklist Smp#:	17
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

126 2-Chlorotoluene, CAS: 95-49-8

Signal: 1

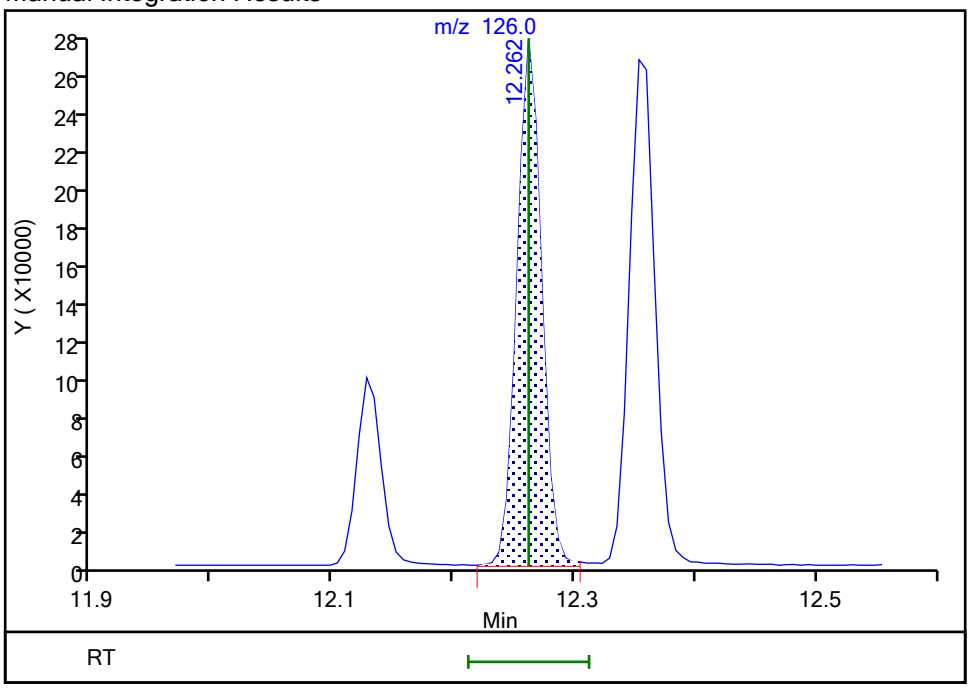
Not Detected
Expected RT: 12.26

Processing Integration Results



Manual Integration Results

RT: 12.26
Area: 385471
Amount: 5.091250
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 15:38:46 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Lims ID: ICIS std6 LG
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 19-Jun-2023 20:03:30 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0086929-018
Misc. Info.: LG 10.0
Operator ID: KNK41612 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 27-Jun-2023 12:30:34 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1687

First Level Reviewer: DVW2 Date: 21-Jun-2023 07:41:38

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.855	1.855	0.000	99	731790	10.0	10.1	
4 Chloromethane	50	2.050	2.050	0.000	99	711149	10.0	9.67	a
5 Vinyl chloride	62	2.160	2.160	0.000	98	695810	10.0	9.89	
6 Butadiene	39	2.160	2.160	0.000	91	661981	10.0	8.99	M
7 Bromomethane	94	2.465	2.465	0.000	90	529829	10.0	9.65	
8 Chloroethane	64	2.538	2.538	0.000	99	408968	10.0	9.72	
9 Dichlorofluoromethane	67	2.764	2.764	0.000	97	1102425	10.0	9.38	
10 Trichlorofluoromethane	101	2.824	2.824	0.000	96	931553	10.0	10.4	
11 Ethyl ether	59	3.050	3.050	0.000	90	379387	10.0	10.3	
13 1,2-Dichloro-1,1,2-trifluoroetha	67	3.142	3.142	0.000	94	618203	10.0	9.68	
14 Acrolein	56	3.209	3.209	0.000	98	2946849	500.0	520.4	
15 1,1-Dichloroethene	96	3.337	3.337	0.000	97	491920	10.0	10.1	a
16 Acetone	43	3.361	3.361	0.000	99	590923	100.0	94.5	a
17 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.385	3.385	0.000	91	552493	10.0	10.7	a
18 Iodomethane	142	3.526	3.526	0.000	99	1046658	10.0	10.3	a
19 Ethyl bromide	108	3.550	3.550	0.000	98	433776	10.0	10.2	a
20 Carbon disulfide	76	3.629	3.629	0.000	99	1353487	10.0	10.3	a
23 Methyl acetate	43	3.757	3.757	0.000	96	165612	10.0	10.7	Ma
24 3-Chloro-1-propene	41	3.782	3.782	0.000	91	754668	10.0	10.0	a
25 Methylene Chloride	84	3.958	3.958	0.000	89	518296	10.0	10.1	a
* 26 t-Butyl alcohol-d10 (IS)	65	3.977	3.977	0.000	95	130775	50.0	50.0	M
27 2-Methyl-2-propanol	59	4.093	4.093	0.000	99	419183	200.0	168.5	Ma
28 Acrylonitrile	53	4.282	4.282	0.000	97	215747	25.0	28.4	a
29 Methyl tert-butyl ether	73	4.342	4.342	0.000	94	1328588	10.0	9.99	a
30 trans-1,2-Dichloroethene	96	4.355	4.355	0.000	99	549965	10.0	10.2	a
31 Hexane	57	4.781	4.781	0.000	91	747981	10.0	10.6	a
32 1,1-Dichloroethane	63	5.013	5.013	0.000	96	957603	10.0	10.4	a
35 Isopropyl ether	45	5.074	5.074	0.000	93	1538859	10.0	10.1	a
36 2-Chloro-1,3-butadiene	53	5.123	5.123	0.000	90	806204	10.0	10.4	a
37 Tert-butyl ethyl ether	59	5.623	5.623	0.000	96	1475081	10.0	10.2	a

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
38 2-Butanone (MEK)	43	5.812	5.812	0.000	99	1212881	100.0	100.6	a
39 cis-1,2-Dichloroethene	96	5.854	5.854	0.000	81	607013	10.0	10.1	a
40 2,2-Dichloropropane	77	5.867	5.867	0.000	86	853357	10.0	10.2	a
43 Propionitrile	54	5.891	5.891	0.000	98	686213	200.0	215.3	a
45 Methacrylonitrile	67	6.110	6.110	0.000	90	1304884	100.0	103.7	a
46 Chlorobromomethane	128	6.190	6.190	0.000	86	278362	10.0	10.2	a
47 Tetrahydrofuran	71	6.196	6.196	0.000	74	200641	50.0	50.6	a
48 Chloroform	83	6.342	6.342	0.000	94	973119	10.0	10.2	a
$ 49 Dibromofluoromethane (Surr)	113	6.555	6.555	0.000	94	464653	10.0	10.0	a
50 1,1,1-Trichloroethane	97	6.568	6.568	0.000	98	914467	10.0	10.3	a
51 Cyclohexane	56	6.671	6.671	0.000	88	898646	10.0	10.6	a
54 Carbon tetrachloride	117	6.781	6.781	0.000	97	847817	10.0	10.7	a
53 1,1-Dichloropropene	75	6.781	6.781	0.000	95	738645	10.0	10.4	a
55 Isobutyl alcohol	41	6.940	6.940	0.000	94	408183	500.0	461.8	a
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.013	7.013	0.000	73	91929	10.0	9.99	a
57 Benzene	78	7.043	7.043	0.000	96	2192041	10.0	10.3	a
58 1,2-Dichloroethane	62	7.116	7.116	0.000	97	589464	10.0	10.2	a
60 Tert-amyl methyl ether	73	7.244	7.244	0.000	98	1374850	10.0	10.3	a
* 61 Fluorobenzene (IS)	96	7.452	7.452	0.000	99	1807671	10.0	10.0	a
62 n-Heptane	43	7.470	7.470	0.000	90	722856	10.0	10.6	a
63 n-Butanol	56	7.836	7.836	0.000	87	662655	875.0	976.0	a
64 Trichloroethene	95	7.933	7.933	0.000	96	615027	10.0	10.4	a
65 Methylcyclohexane	83	8.244	8.244	0.000	91	1036558	10.0	10.8	a
66 1,2-Dichloropropane	63	8.269	8.269	0.000	96	544394	10.0	10.3	a
67 Methyl methacrylate	69	8.354	8.354	0.000	93	276225	10.0	11.1	a
68 1,4-Dioxane	88	8.366	8.366	0.000	68	79624	500.0	552.2	M
69 Dibromomethane	93	8.378	8.378	0.000	91	271761	10.0	10.3	a
71 Dichlorobromomethane	83	8.616	8.616	0.000	99	705073	10.0	10.3	a
72 2-Nitropropane	41	8.884	8.884	0.000	97	394504	50.0	48.7	
75 1-Bromo-2-chloroethane	63	9.012	9.012	0.000	98	557990	10.0	10.4	a
76 cis-1,3-Dichloropropene	75	9.177	9.177	0.000	97	875051	10.0	10.6	
77 4-Methyl-2-pentanone (MIBK)	43	9.360	9.360	0.000	96	3378679	100.0	104.4	
$ 78 Toluene-d8 (Surr)	98	9.500	9.500	0.000	93	1851132	10.0	10.0	a
79 Toluene	92	9.579	9.579	0.000	99	1497015	10.0	10.3	
97 trans-1,3-Dichloropropene	75	9.848	9.848	0.000	92	742761	10.0	10.8	
99 Ethyl methacrylate	69	9.915	9.915	0.000	88	594538	10.0	10.4	
100 1,1,2-Trichloroethane	97	10.055	10.055	0.000	90	412606	10.0	10.0	
101 Tetrachloroethene	166	10.146	10.146	0.000	98	788455	10.0	10.4	
102 1,3-Dichloropropane	76	10.219	10.219	0.000	89	668224	10.0	10.2	
103 2-Hexanone	43	10.274	10.274	0.000	96	2392308	100.0	104.5	
105 Chlorodibromomethane	129	10.439	10.439	0.000	89	568456	10.0	10.6	
106 Ethylene Dibromide	107	10.549	10.549	0.000	98	404683	10.0	10.4	
* 107 Chlorobenzene-d5 (IS)	117	10.988	10.988	0.000	86	1439976	10.0	10.0	
108 1-Chlorohexane	91	11.000	11.000	0.000	95	850962	10.0	10.0	a
109 Chlorobenzene	112	11.018	11.018	0.000	97	1747675	10.0	10.2	
111 1,1,1,2-Tetrachloroethane	131	11.097	11.097	0.000	97	629258	10.0	10.3	
112 Ethylbenzene	91	11.103	11.103	0.000	98	2922252	10.0	10.3	a
113 m-Xylene & p-Xylene	106	11.219	11.219	0.000	93	2378256	20.0	20.7	
114 o-Xylene	106	11.554	11.554	0.000	95	1173518	10.0	10.3	
115 Styrene	104	11.567	11.567	0.000	95	1913392	10.0	10.5	
116 Bromoform	173	11.725	11.725	0.000	98	380006	10.0	10.9	
117 Isopropylbenzene	105	11.859	11.859	0.000	95	3058543	10.0	10.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 120 4-Bromofluorobenzene (Surr)	95	12.000	12.000	0.000	96	698444	10.0	10.0	a
121 1,1,2,2-Tetrachloroethane	83	12.103	12.103	0.000	93	534348	10.0	10.1	
122 Bromobenzene	156	12.115	12.115	0.000	95	773433	10.0	10.2	
123 trans-1,4-Dichloro-2-butene	53	12.128	12.128	0.000	91	1271163	100.0	104.4	
124 1,2,3-Trichloropropane	110	12.146	12.146	0.000	81	148764	10.0	10.1	
125 N-Propylbenzene	91	12.189	12.189	0.000	98	3497528	10.0	10.4	
126 2-Chlorotoluene	126	12.262	12.262	0.000	98	760985	10.0	10.3	a
127 1,3,5-Trimethylbenzene	105	12.323	12.323	0.000	95	2654457	10.0	10.3	
128 4-Chlorotoluene	126	12.353	12.353	0.000	95	763897	10.0	10.1	a
129 tert-Butylbenzene	134	12.566	12.566	0.000	92	640020	10.0	10.4	
130 Pentachloroethane	167	12.597	12.597	0.000	91	511060	10.0	10.7	
131 1,2,4-Trimethylbenzene	105	12.609	12.609	0.000	96	2718845	10.0	10.3	a
132 sec-Butylbenzene	105	12.731	12.731	0.000	94	3403512	10.0	10.4	
133 1,3-Dichlorobenzene	146	12.829	12.829	0.000	99	1543368	10.0	10.4	
134 4-Isopropyltoluene	119	12.841	12.841	0.000	97	3071854	10.0	10.6	
* 135 1,4-Dichlorobenzene-d4	152	12.884	12.884	0.000	93	884528	10.0	10.0	
136 1,4-Dichlorobenzene	146	12.902	12.902	0.000	95	1479609	10.0	10.1	
137 1,2,3-Trimethylbenzene	120	12.914	12.914	0.000	98	1208040	10.0	10.1	
138 Benzyl chloride	126	12.981	12.981	0.000	98	244410	10.0	10.8	a
139 n-Butylbenzene	92	13.133	13.133	0.000	97	1402209	10.0	10.8	
140 1,2-Dichlorobenzene	146	13.158	13.158	0.000	99	1428274	10.0	10.2	
142 1,2-Dibromo-3-Chloropropane	155	13.700	13.700	0.000	91	91829	10.0	10.7	
143 1,3,5-Trichlorobenzene	180	13.828	13.828	0.000	98	1180993	10.0	10.6	
144 1,2,4-Trichlorobenzene	180	14.249	14.249	0.000	94	976458	10.0	10.9	
145 Hexachlorobutadiene	225	14.334	14.334	0.000	95	466073	10.0	10.7	
146 Naphthalene	128	14.426	14.426	0.000	96	1695646	10.0	10.4	a
147 1,2,3-Trichlorobenzene	180	14.572	14.572	0.000	96	801092	10.0	10.7	
155 2-Methylnaphthalene	142		0.000				ND	ND	
156 p-Diethylbenzene	1		0.000				ND	ND	
161 Pentane	43		0.000				ND	ND	
150 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
165 Isopropyl alcohol	45		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_LL_#1_826_00081	Amount Added: 10.00	Units: uL	
MSV_LL_#2_826_00093	Amount Added: 10.00	Units: uL	
MSV_LL_GAS826_00156	Amount Added: 10.00	Units: uL	
MSV_LLcentISS_00007	Amount Added: 5.00	Units: uL	Run Reagent

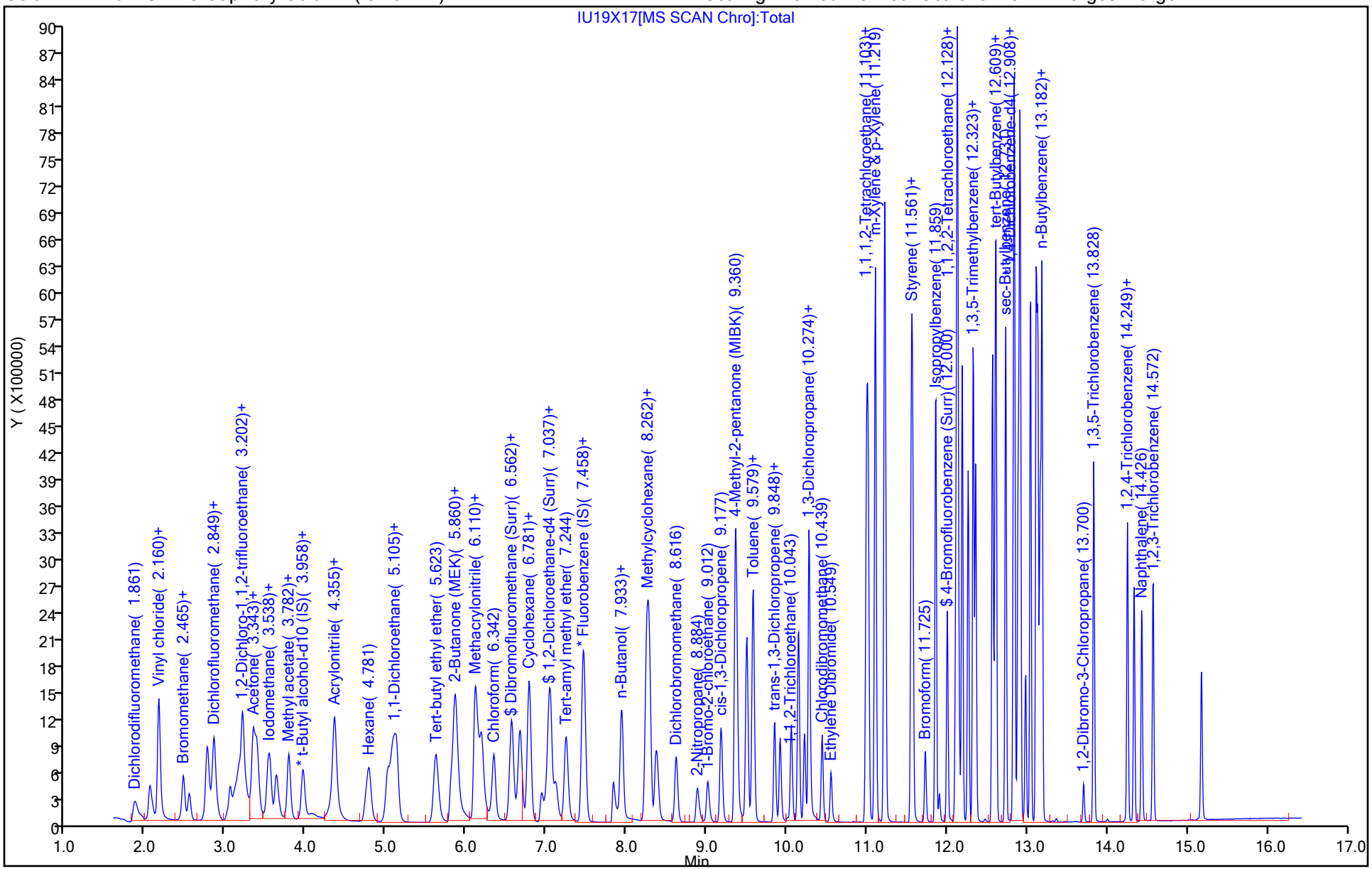
Report Date: 27-Jun-2023 12:30:35 Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D

Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930	Operator ID:	KNK41612
Lims ID:	ICIS std6 LG			Worklist Smp#:	18
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

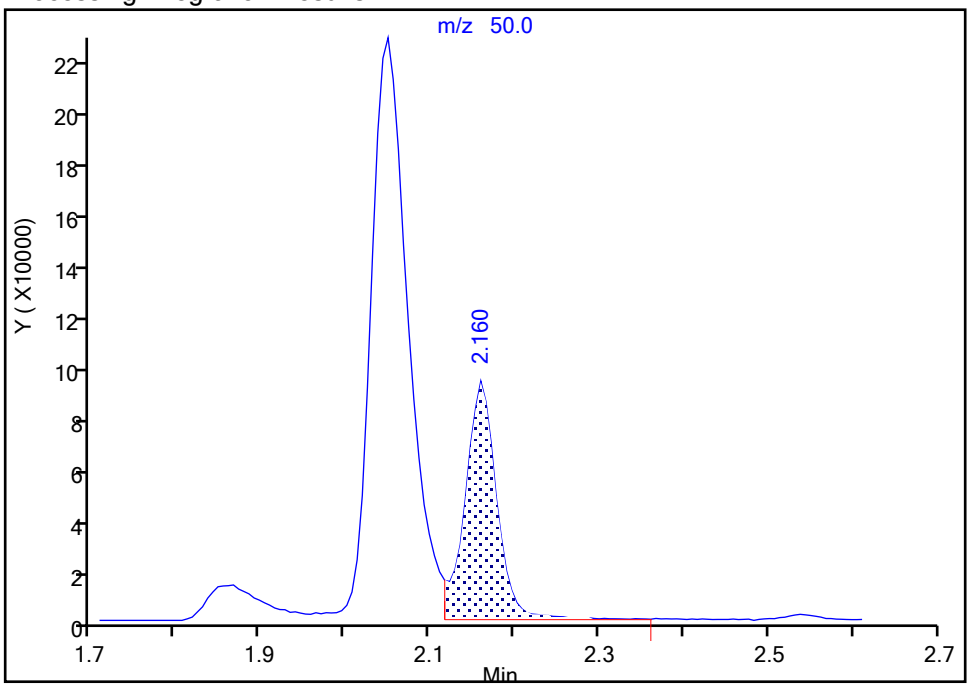
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

4 Chloromethane, CAS: 74-87-3

Signal: 1

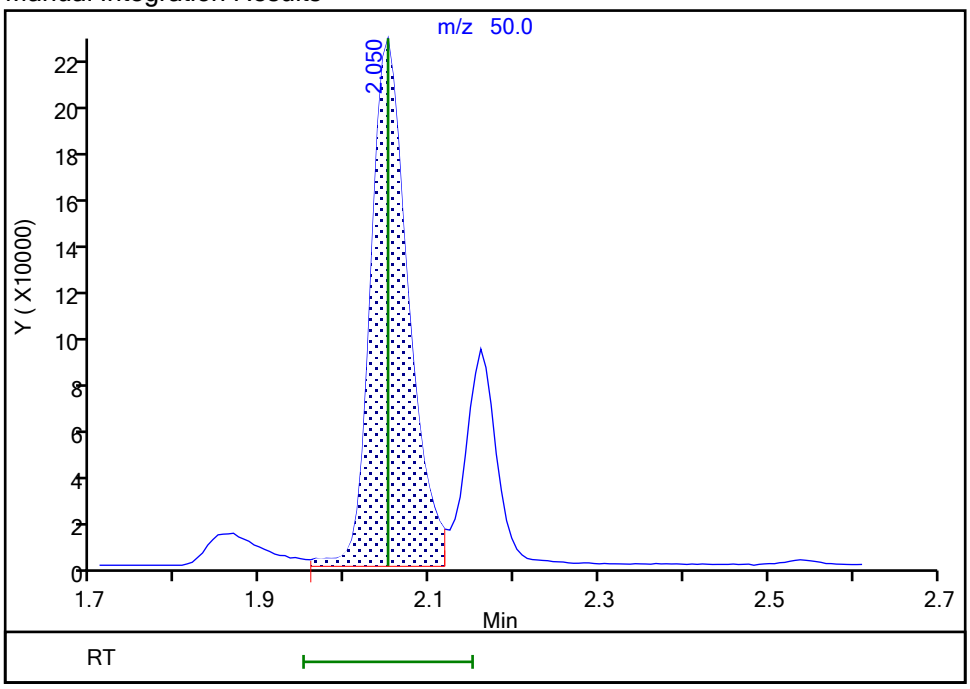
Processing Integration Results

RT: 2.16
Area: 250430
Amount: 0.112854
Amount Units: ug/l



Manual Integration Results

RT: 2.05
Area: 711149
Amount: 9.671244
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:36:29 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

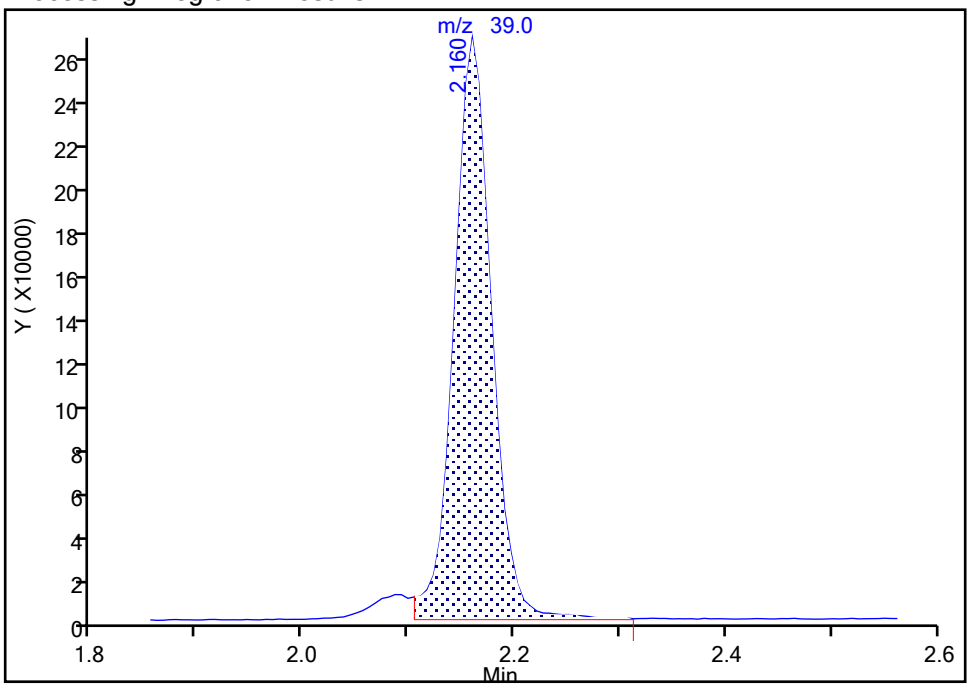
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

6 Butadiene, CAS: 106-99-0

Signal: 1

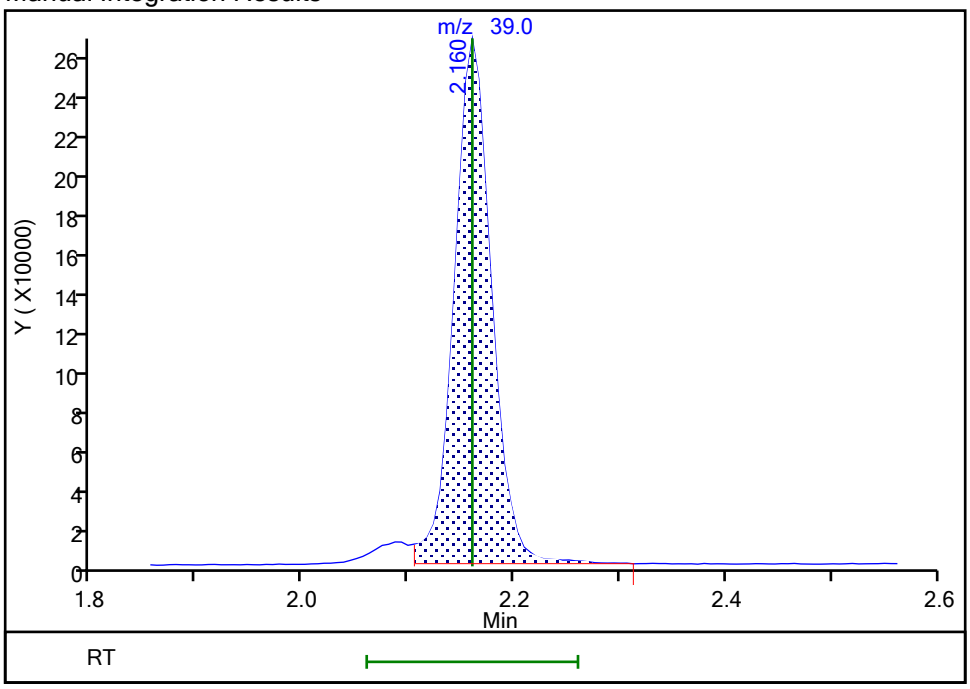
Processing Integration Results

RT: 2.16
Area: 663703
Amount: 9.006732
Amount Units: ug/l



Manual Integration Results

RT: 2.16
Area: 661981
Amount: 8.992016
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:07:48 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

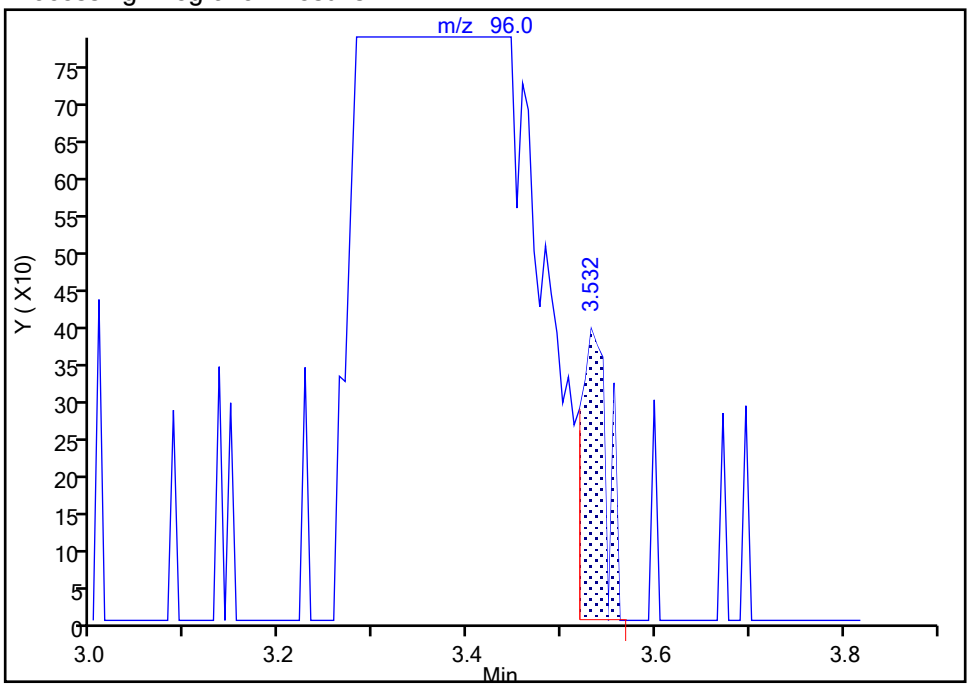
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

15 1,1-Dichloroethene, CAS: 75-35-4

Signal: 1

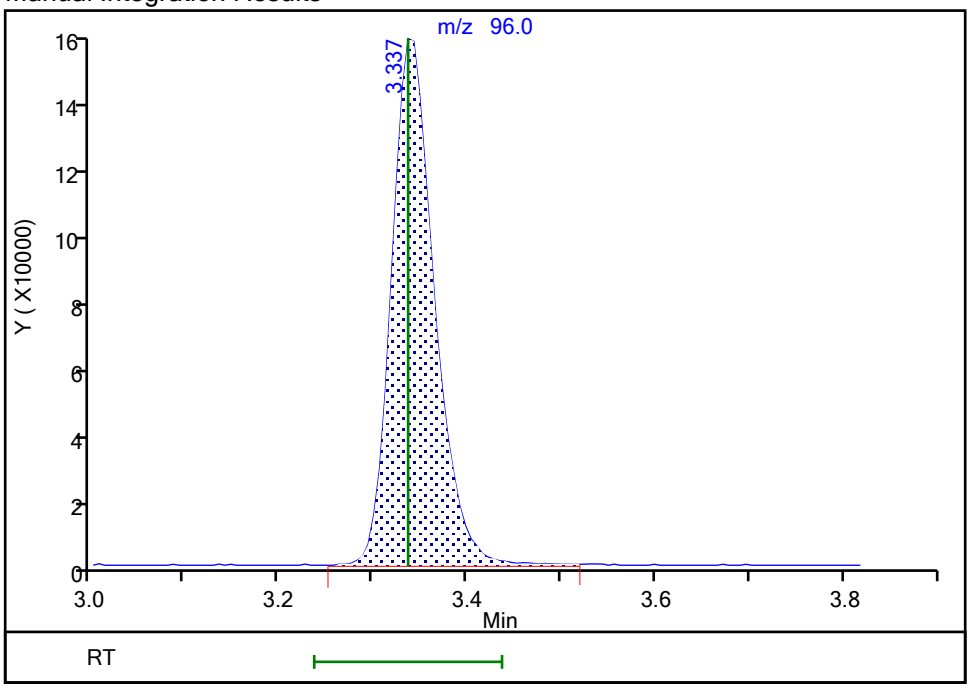
Processing Integration Results

RT: 3.53
Area: 754
Amount: 10.000000
Amount Units: ug/l



Manual Integration Results

RT: 3.34
Area: 491920
Amount: 10.146958
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:36:52 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

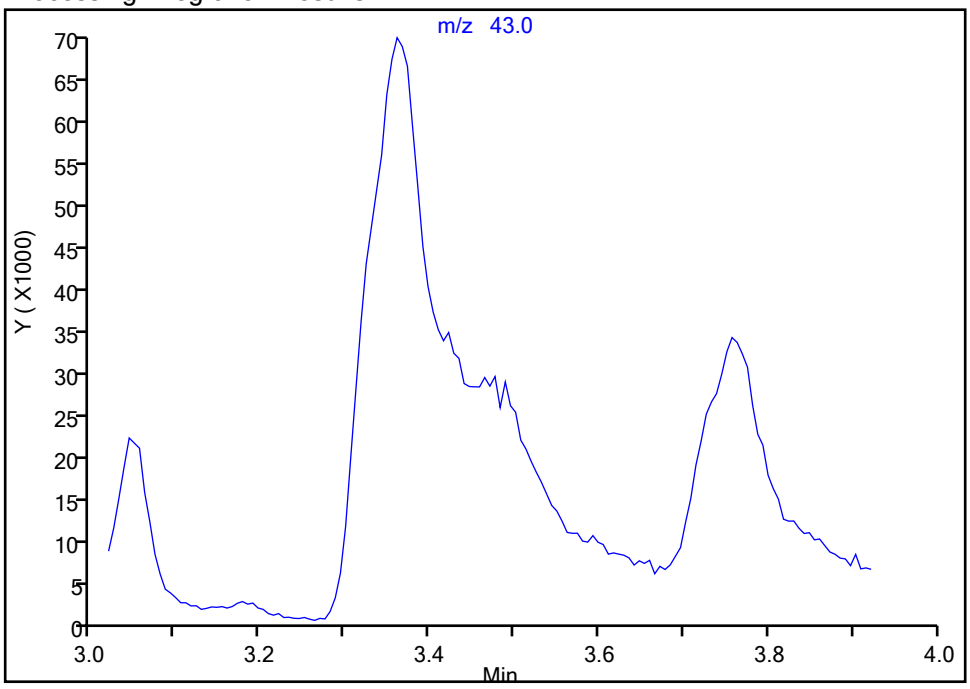
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

16 Acetone, CAS: 67-64-1

Signal: 1

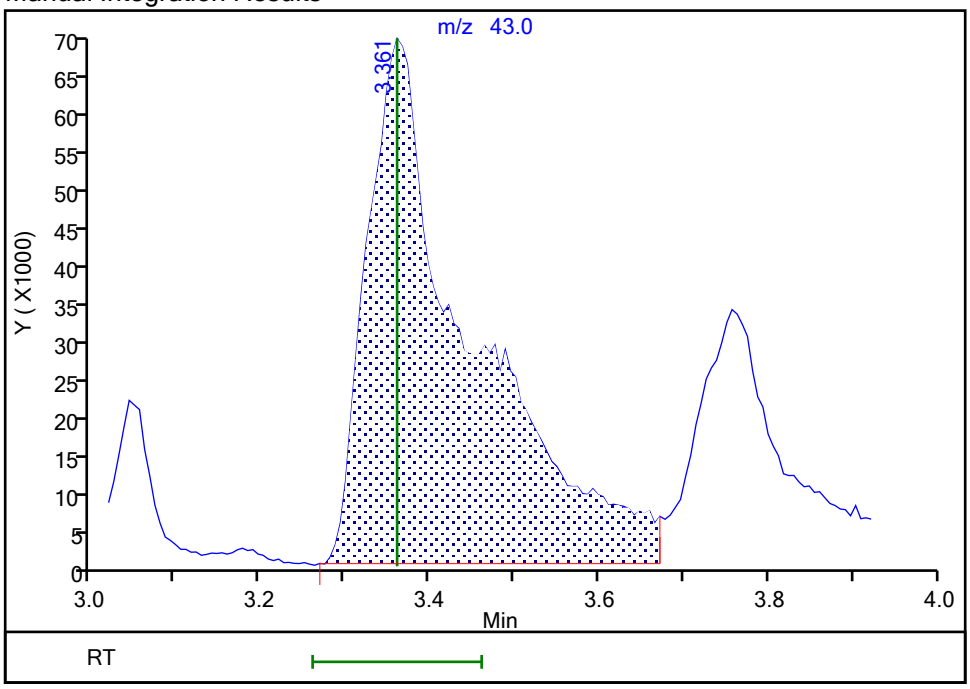
Not Detected
Expected RT: 3.36

Processing Integration Results



Manual Integration Results

RT: 3.36
Area: 590923
Amount: 94.472856
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:36:43 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

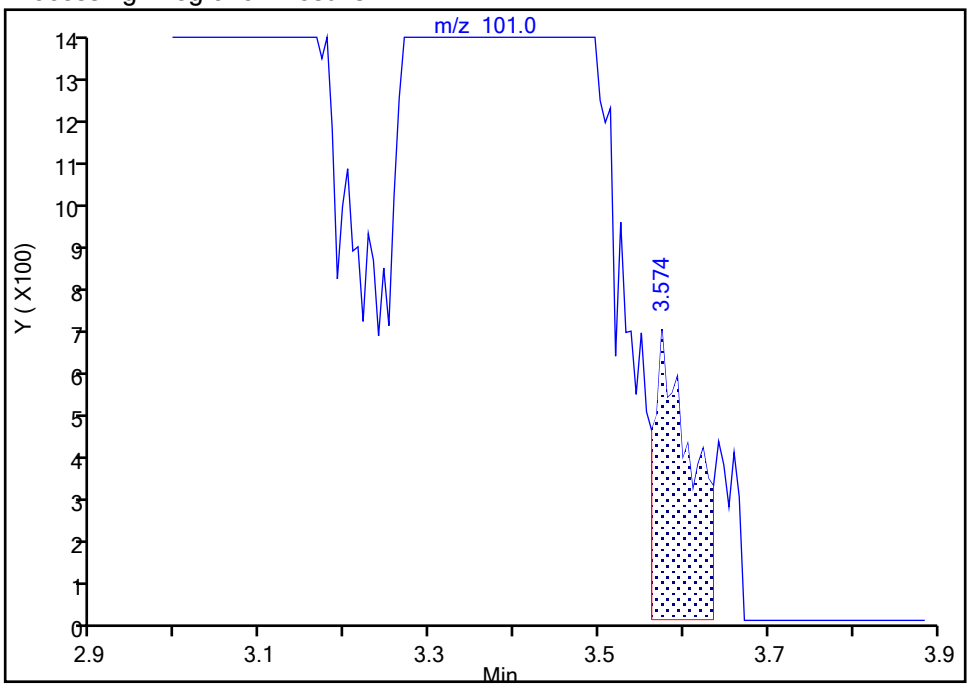
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

17 1,1,2-Trichloro-1,2,2-trifluoroe, CAS: 76-13-1

Signal: 1

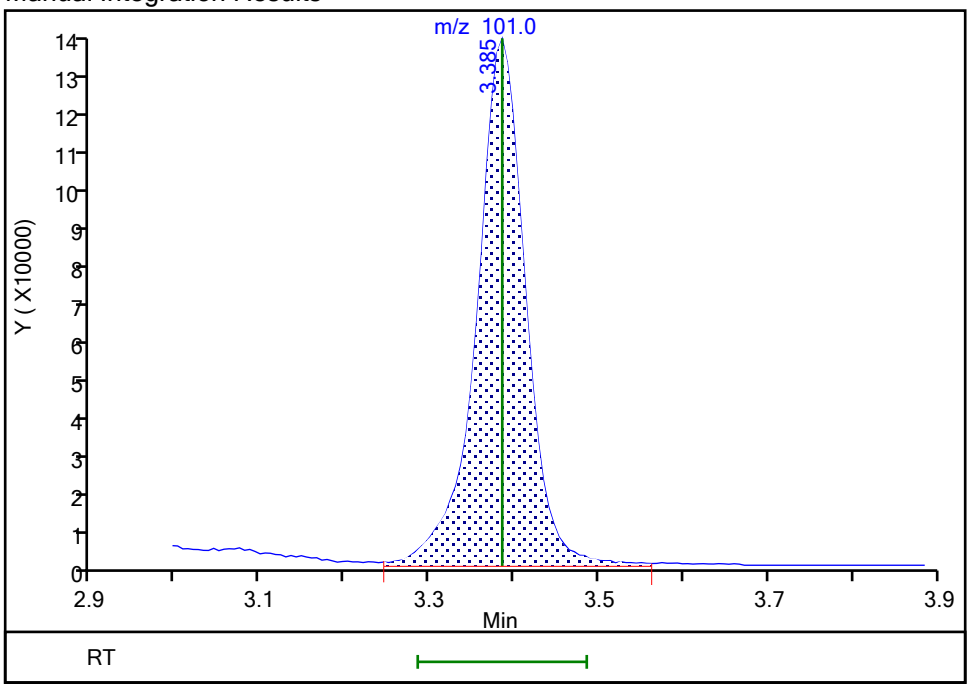
Processing Integration Results

RT: 3.57
Area: 2114
Amount: 10.000000
Amount Units: ug/l



Manual Integration Results

RT: 3.39
Area: 552493
Amount: 10.737007
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:36:55 -04:00:00 (UTC)

Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

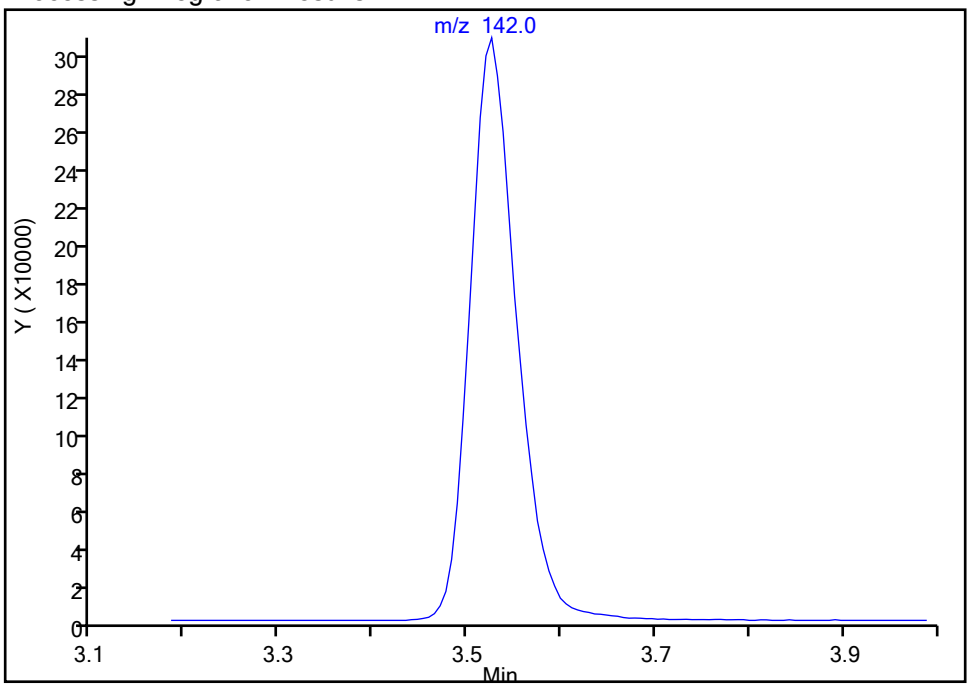
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

18 Iodomethane, CAS: 74-88-4

Signal: 1

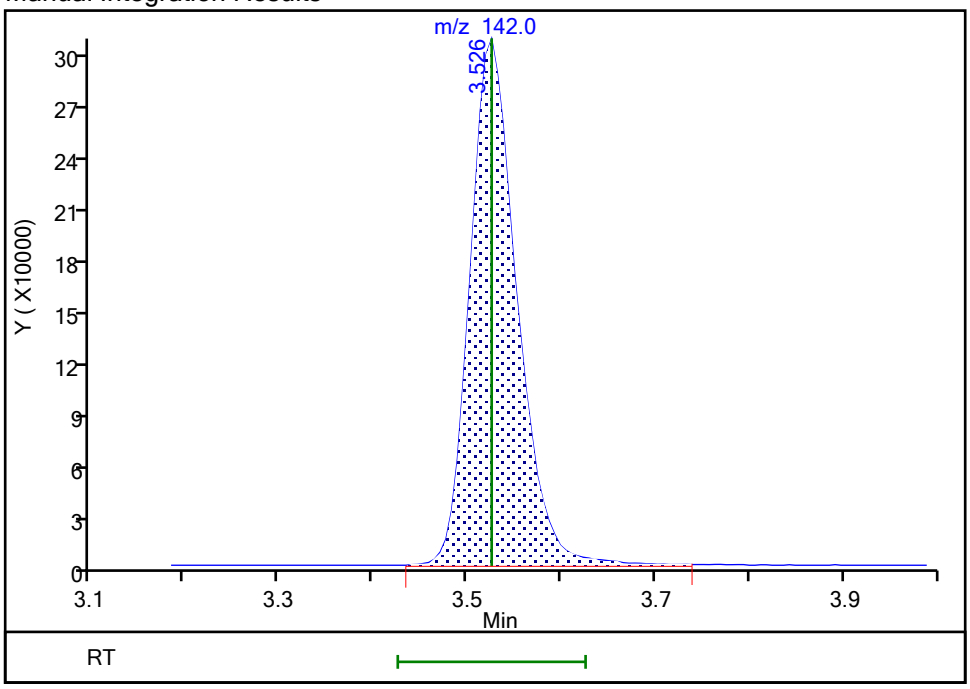
Not Detected
Expected RT: 3.53

Processing Integration Results



Manual Integration Results

RT: 3.53
Area: 1046658
Amount: 10.266934
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:37:00 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

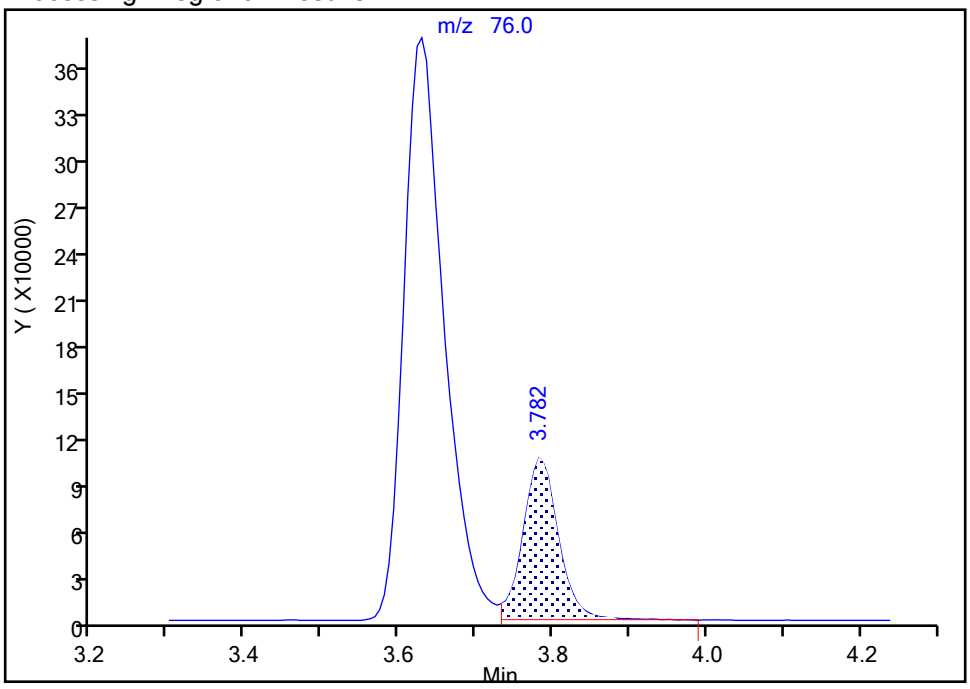
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

20 Carbon disulfide, CAS: 75-15-0

Signal: 1

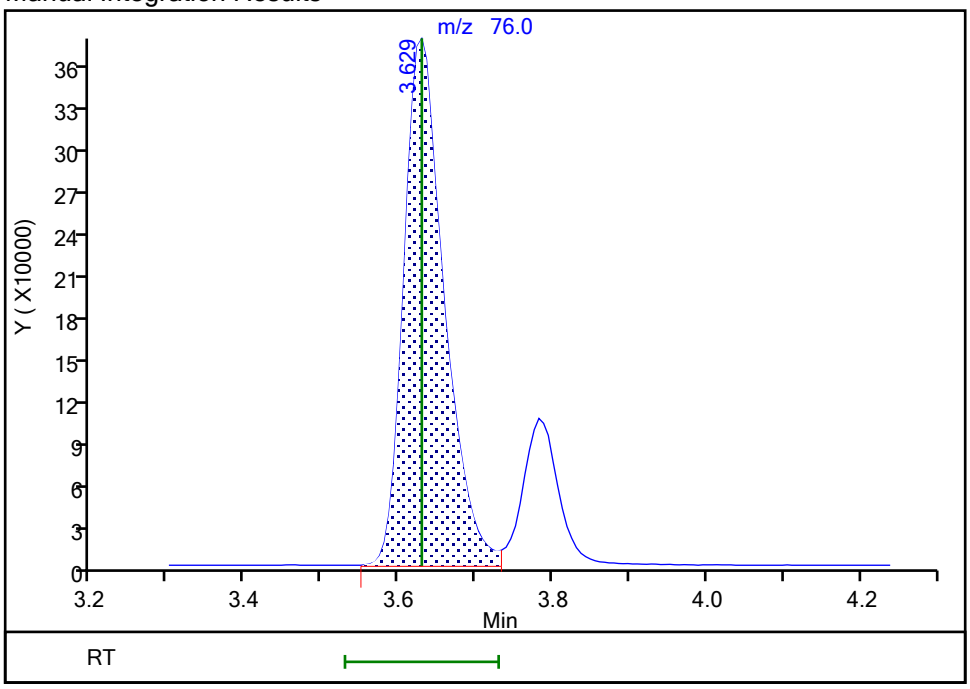
Processing Integration Results

RT: 3.78
Area: 335979
Amount: 0.167343
Amount Units: ug/l



Manual Integration Results

RT: 3.63
Area: 1353487
Amount: 10.295573
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:37:07 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

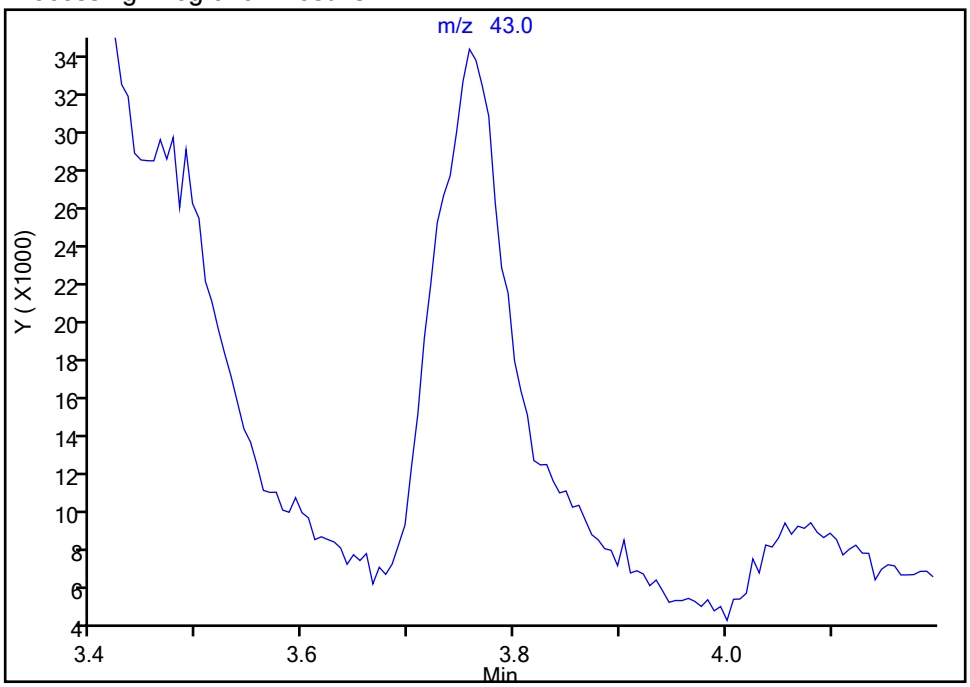
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

23 Methyl acetate, CAS: 79-20-9

Signal: 1

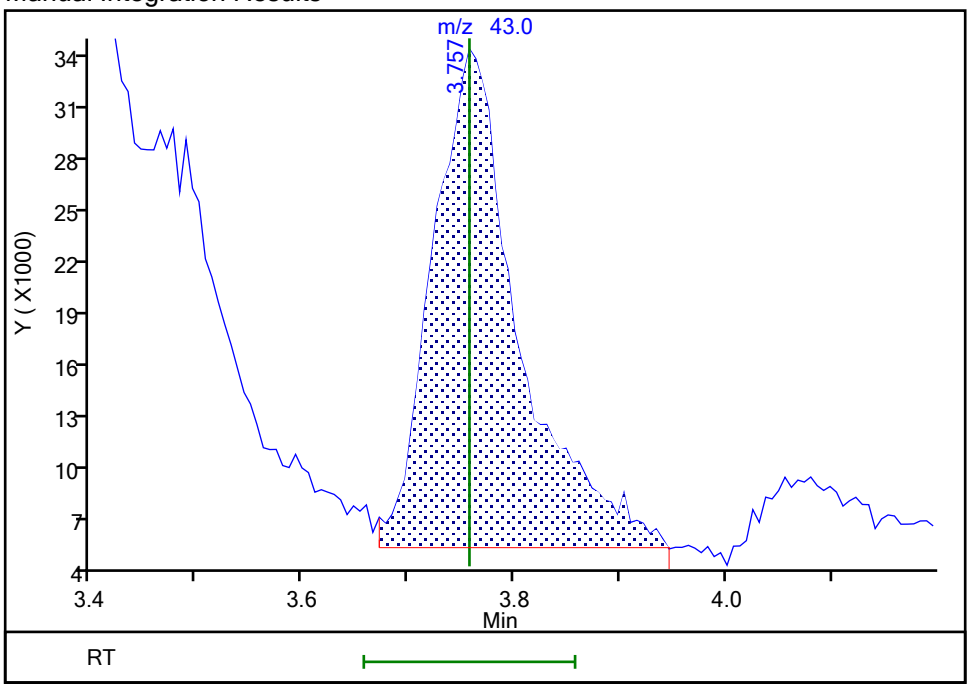
Not Detected
Expected RT: 3.76

Processing Integration Results



Manual Integration Results

RT: 3.76
Area: 165612
Amount: 10.728572
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:37:29 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

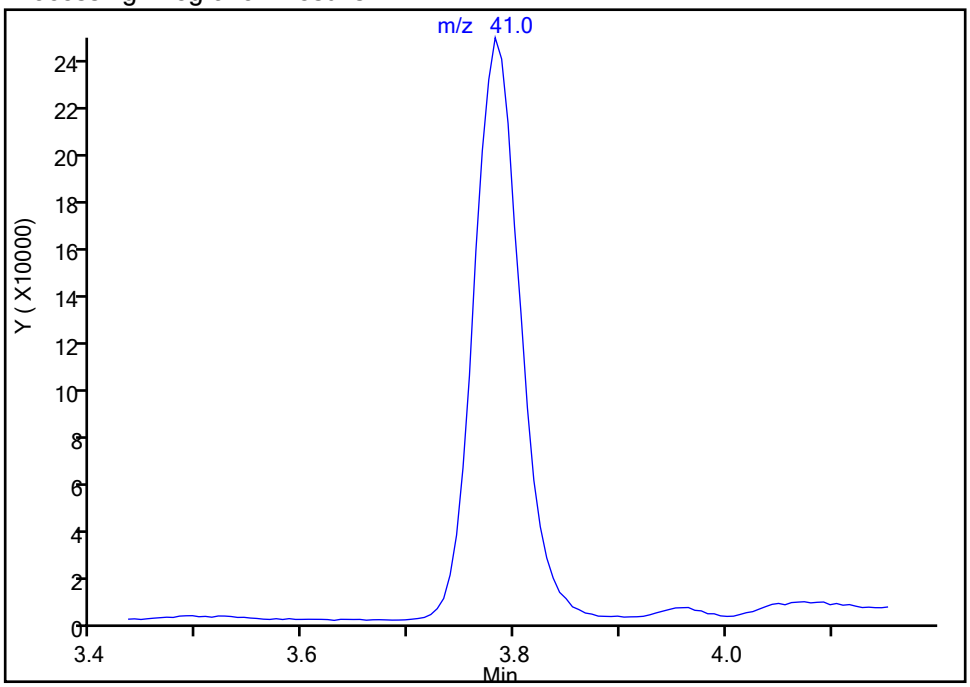
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

24 3-Chloro-1-propene, CAS: 107-05-1

Signal: 1

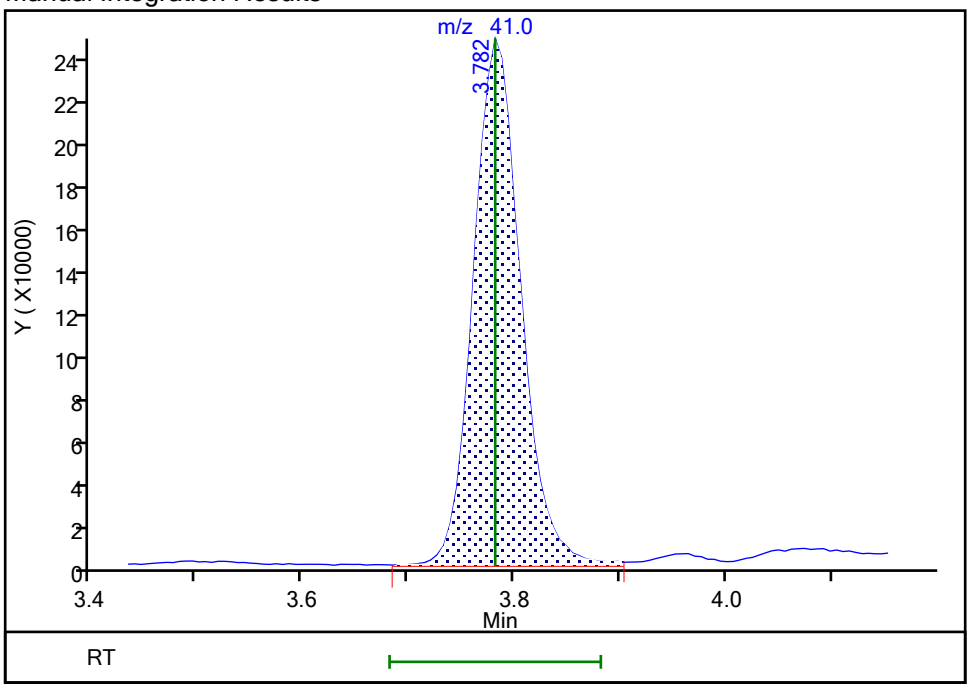
Not Detected
Expected RT: 3.78

Processing Integration Results



Manual Integration Results

RT: 3.78
Area: 754668
Amount: 10.015905
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:37:36 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

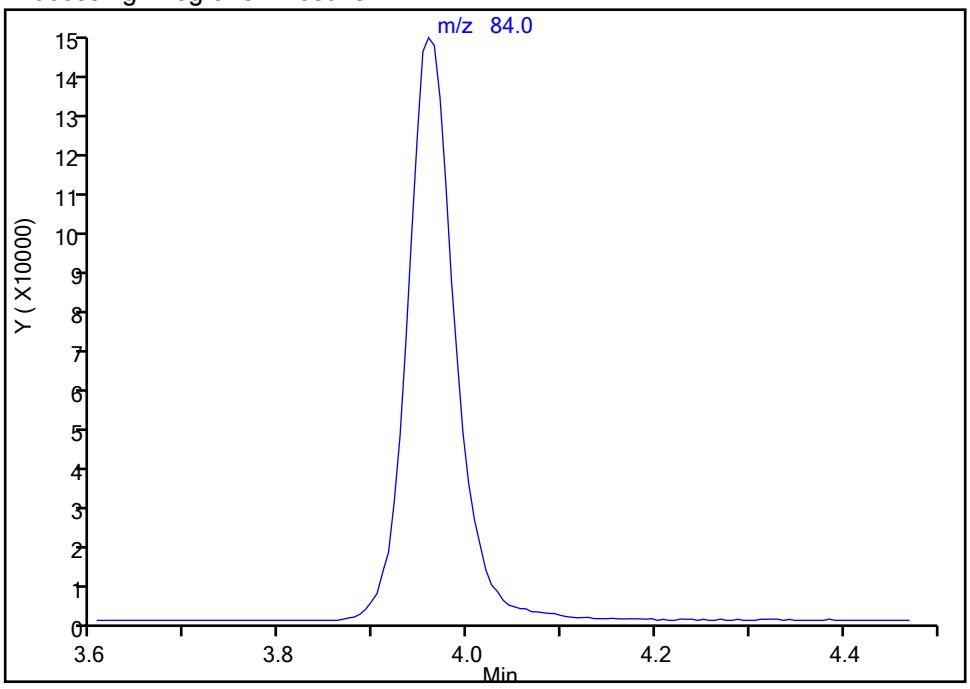
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

25 Methylene Chloride, CAS: 75-09-2

Signal: 1

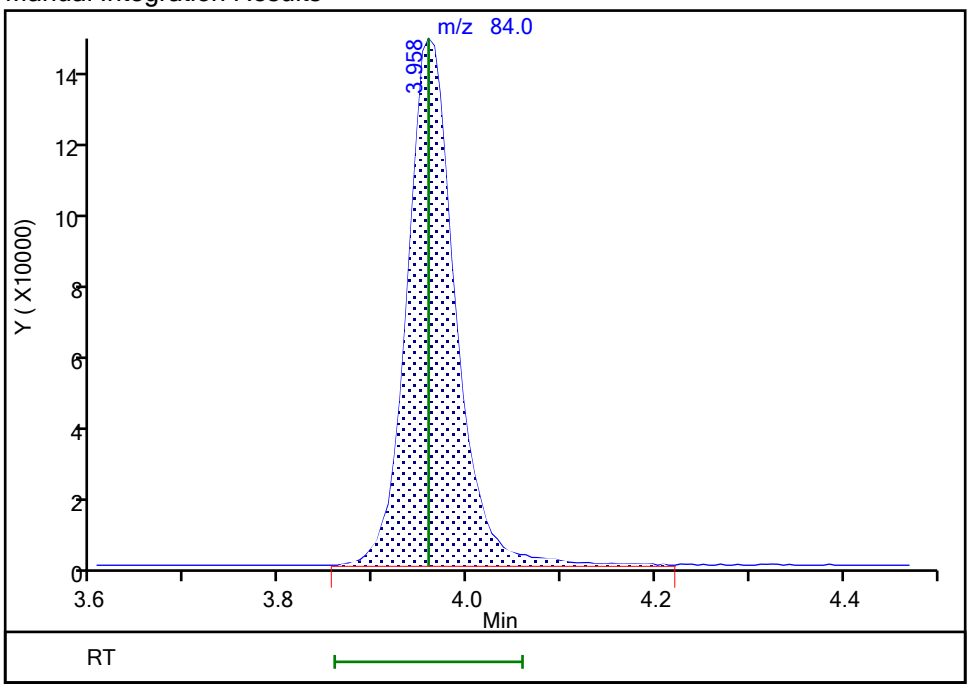
Not Detected
Expected RT: 3.96

Processing Integration Results



Manual Integration Results

RT: 3.96
Area: 518296
Amount: 10.126292
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:37:42 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

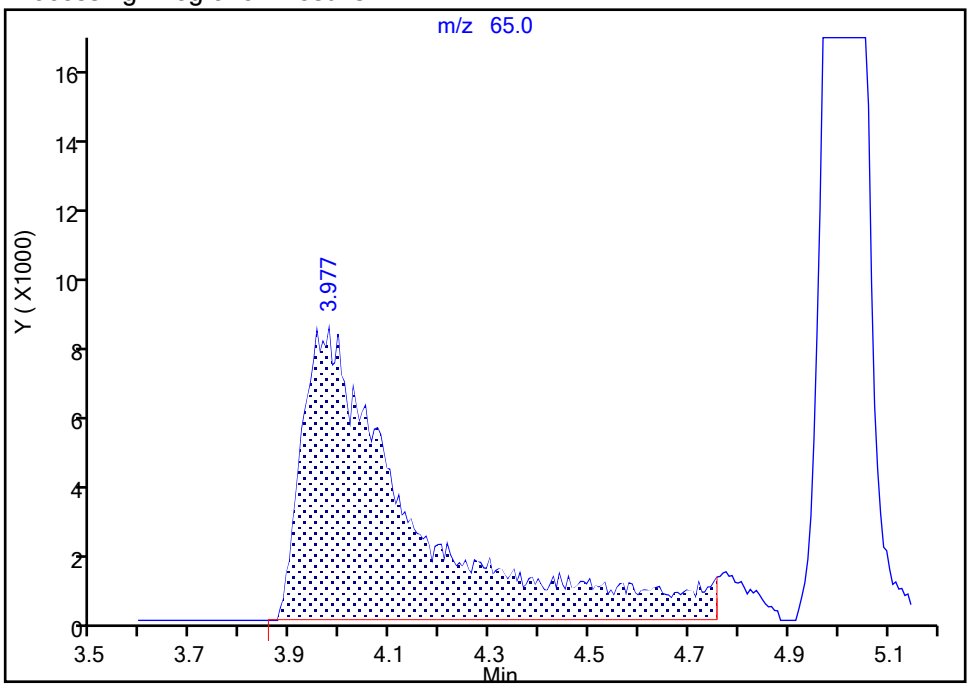
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 26 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

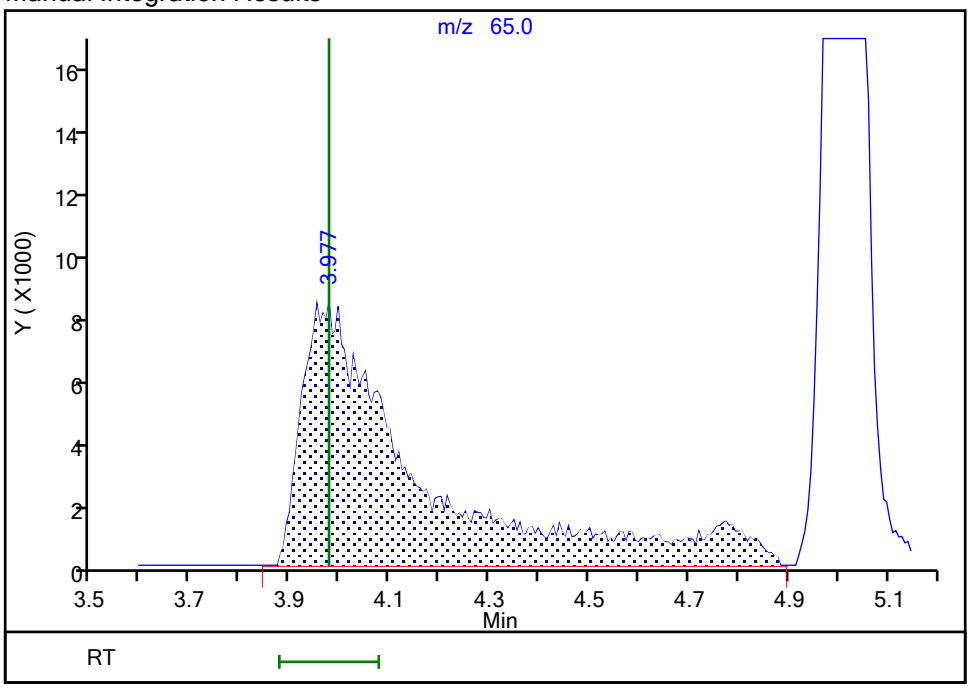
Processing Integration Results

RT: 3.98
Area: 124681
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 3.98
Area: 130775
Amount: 50.000000
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:35:34 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

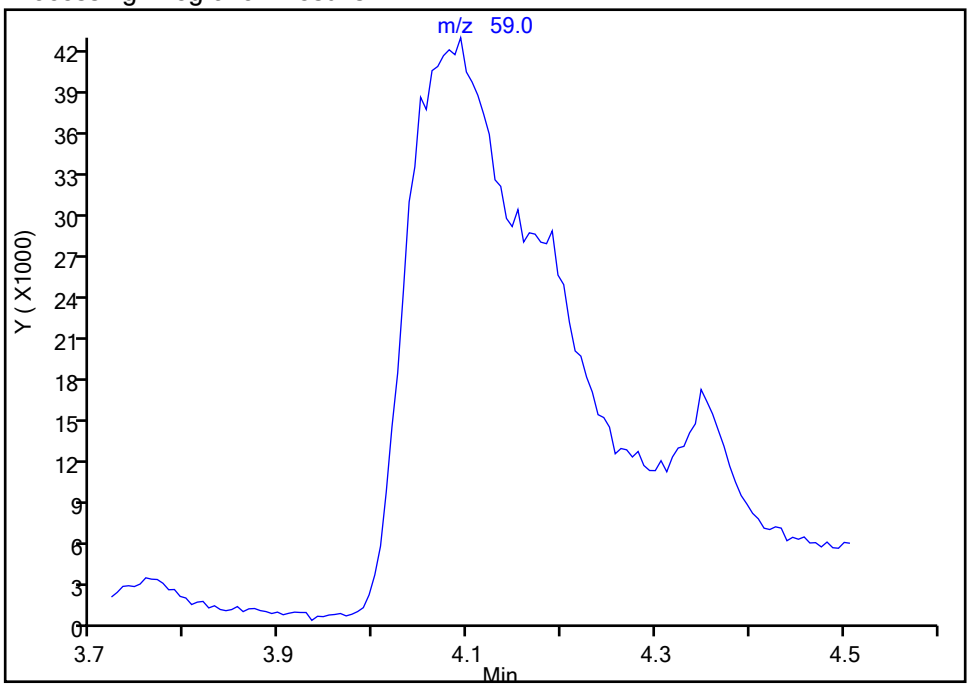
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

27 2-Methyl-2-propanol, CAS: 75-65-0

Signal: 1

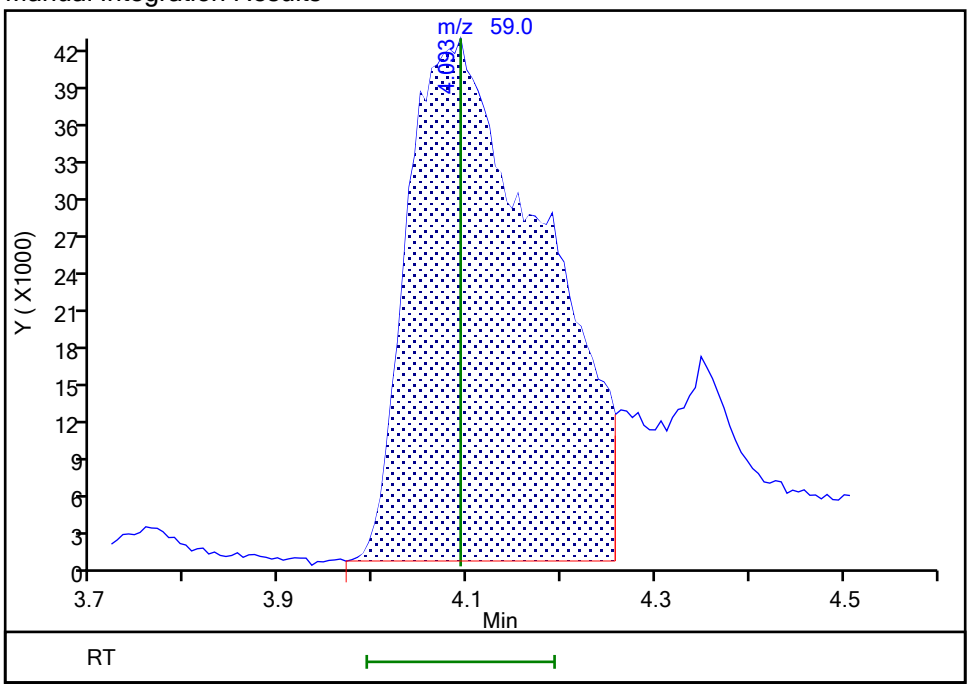
Not Detected
Expected RT: 4.09

Processing Integration Results



Manual Integration Results

RT: 4.09
Area: 419183
Amount: 168.4569
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:37:54 -04:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

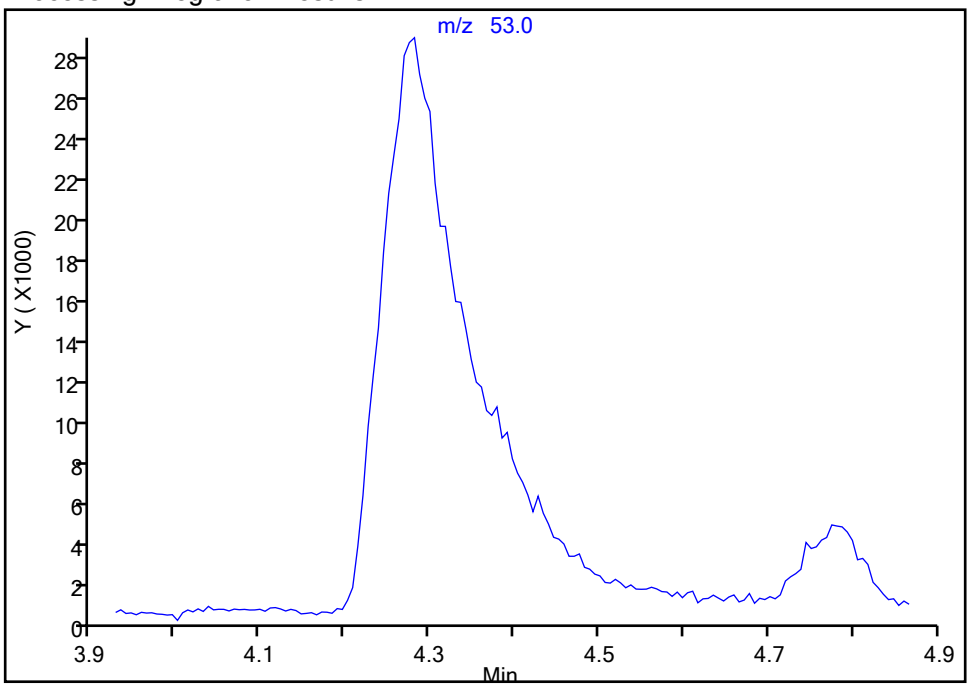
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

28 Acrylonitrile, CAS: 107-13-1

Signal: 1

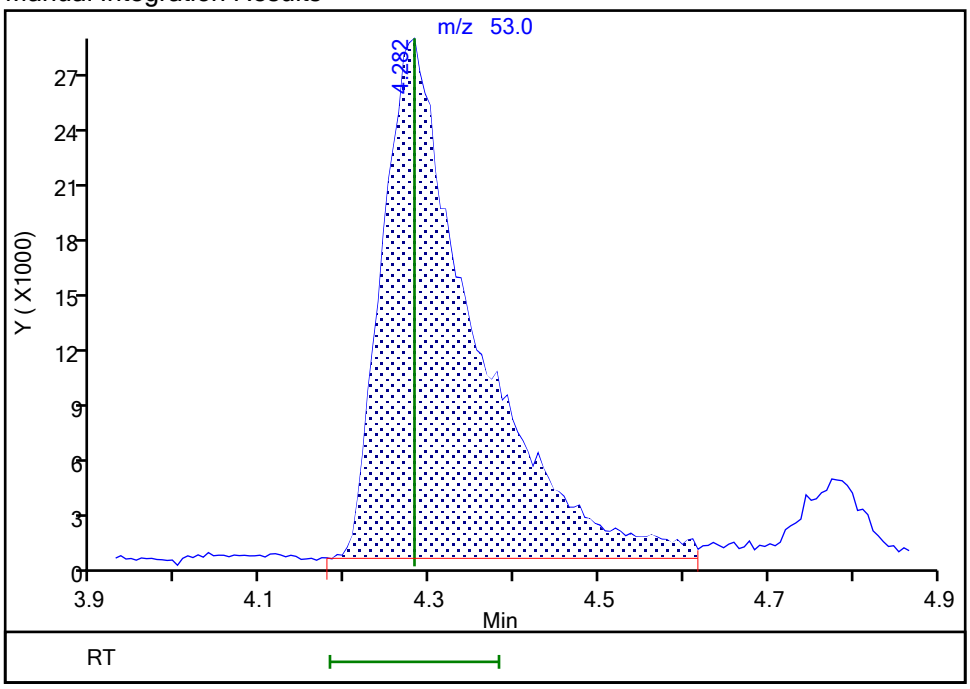
Not Detected
Expected RT: 4.28

Processing Integration Results



Manual Integration Results

RT: 4.28
Area: 215747
Amount: 28.378415
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:37:59 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

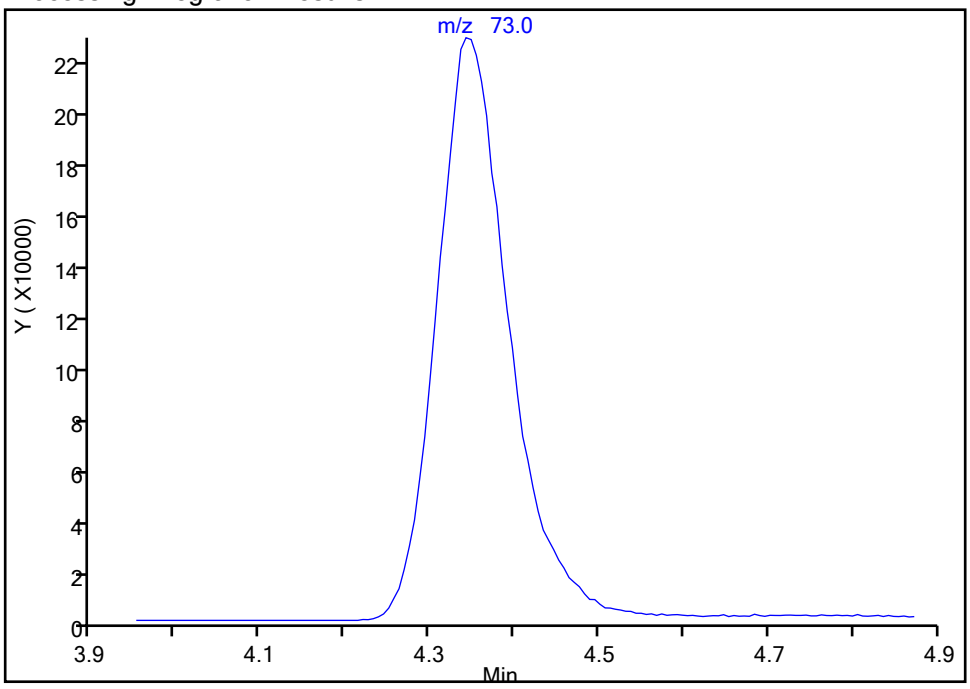
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

29 Methyl tert-butyl ether, CAS: 1634-04-4

Signal: 1

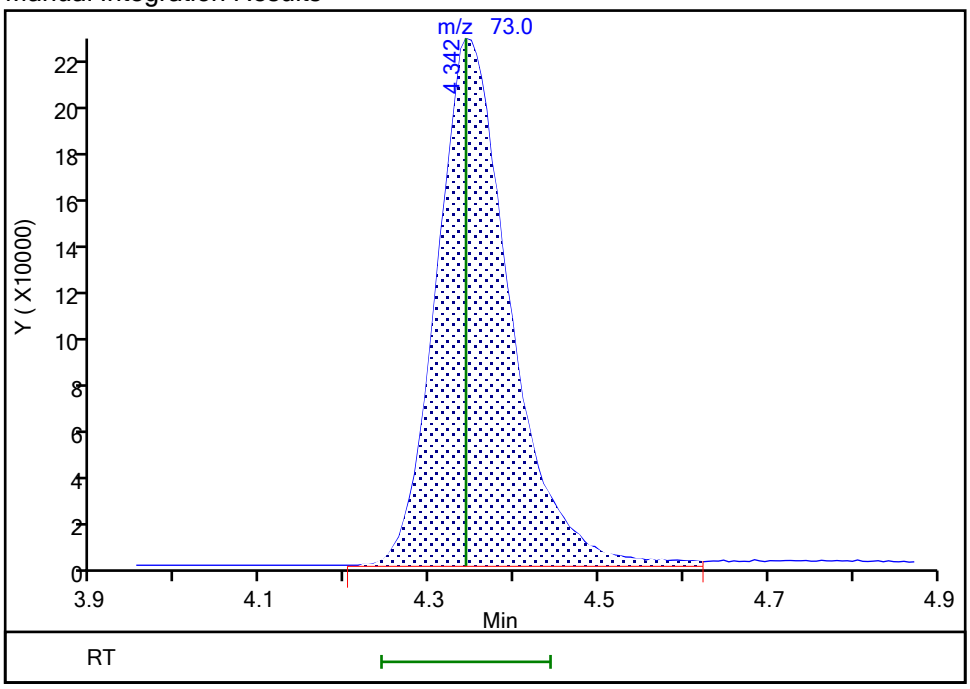
Not Detected
Expected RT: 4.34

Processing Integration Results



Manual Integration Results

RT: 4.34
Area: 1328588
Amount: 9.985857
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:38:02 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

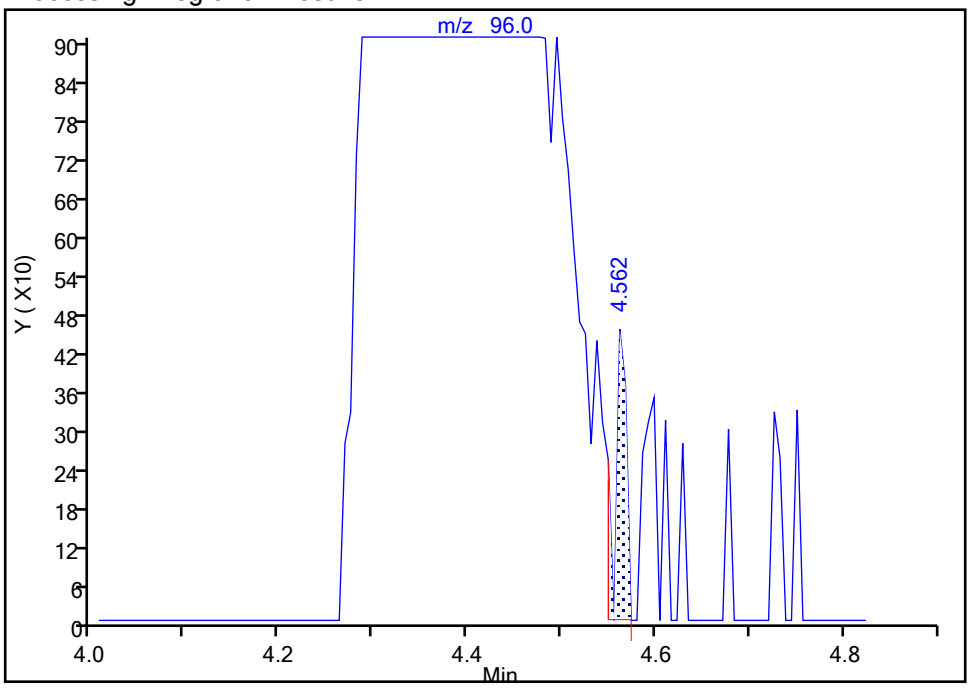
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

30 trans-1,2-Dichloroethene, CAS: 156-60-5

Signal: 1

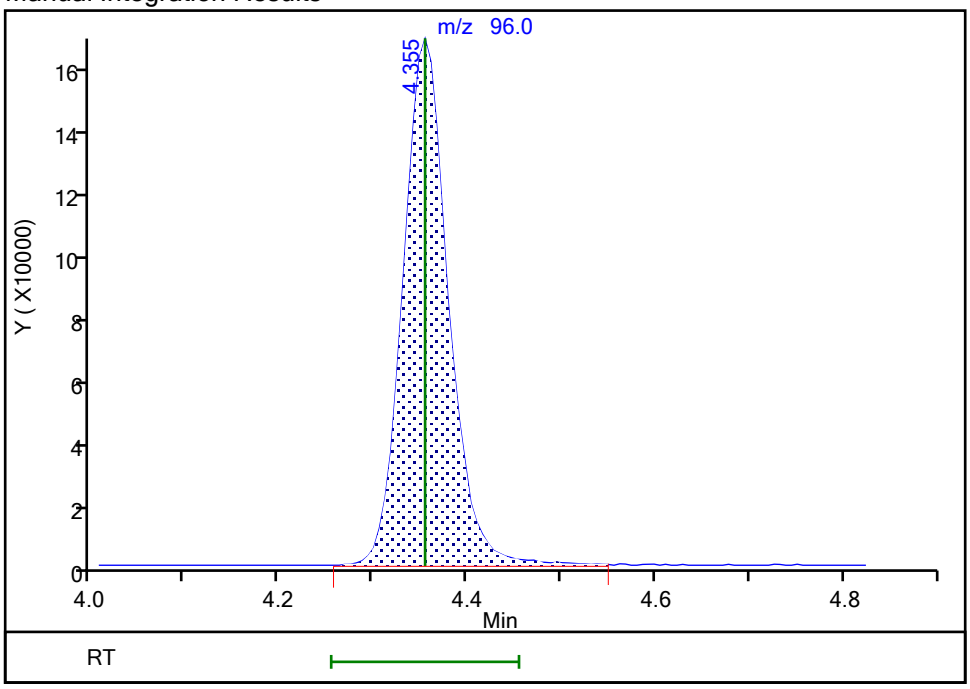
Processing Integration Results

RT: 4.56
Area: 392
Amount: 10.000000
Amount Units: ug/l



Manual Integration Results

RT: 4.35
Area: 549965
Amount: 10.193007
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:38:05 -04:00:00 (UTC)

Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

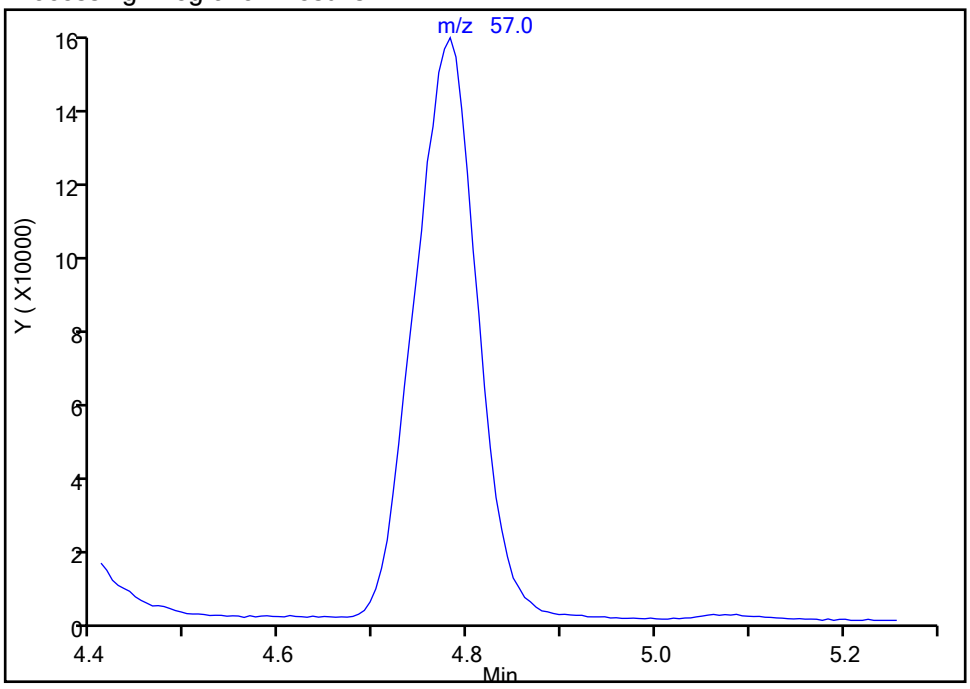
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

31 Hexane, CAS: 110-54-3

Signal: 1

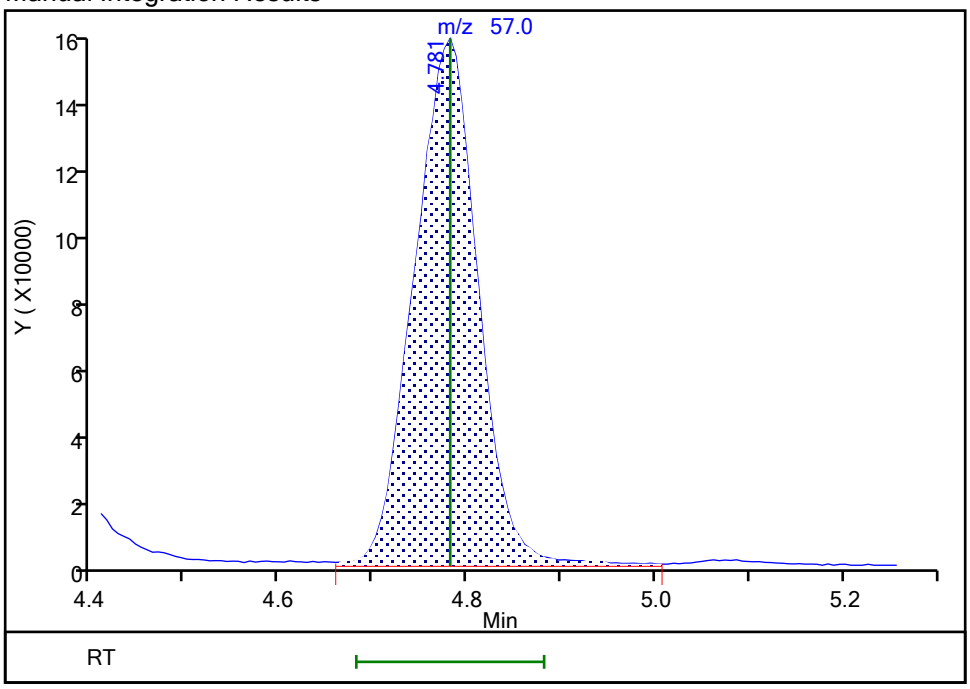
Not Detected
Expected RT: 4.78

Processing Integration Results



Manual Integration Results

RT: 4.78
Area: 747981
Amount: 10.576597
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:38:09 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

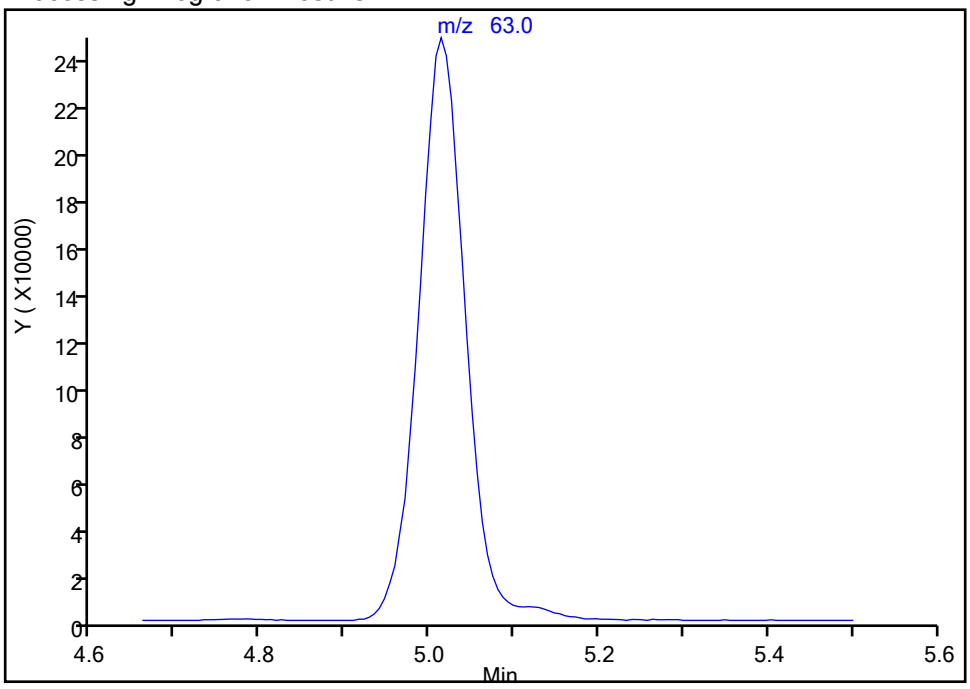
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

32 1,1-Dichloroethane, CAS: 75-34-3

Signal: 1

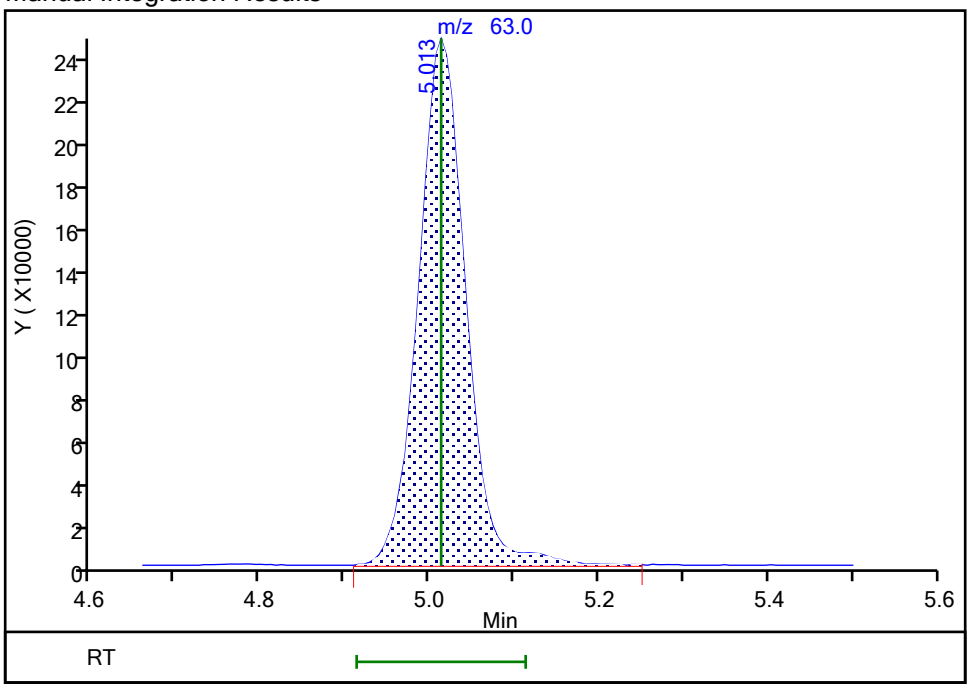
Not Detected
Expected RT: 5.01

Processing Integration Results



Manual Integration Results

RT: 5.01
Area: 957603
Amount: 10.359875
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:38:12 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

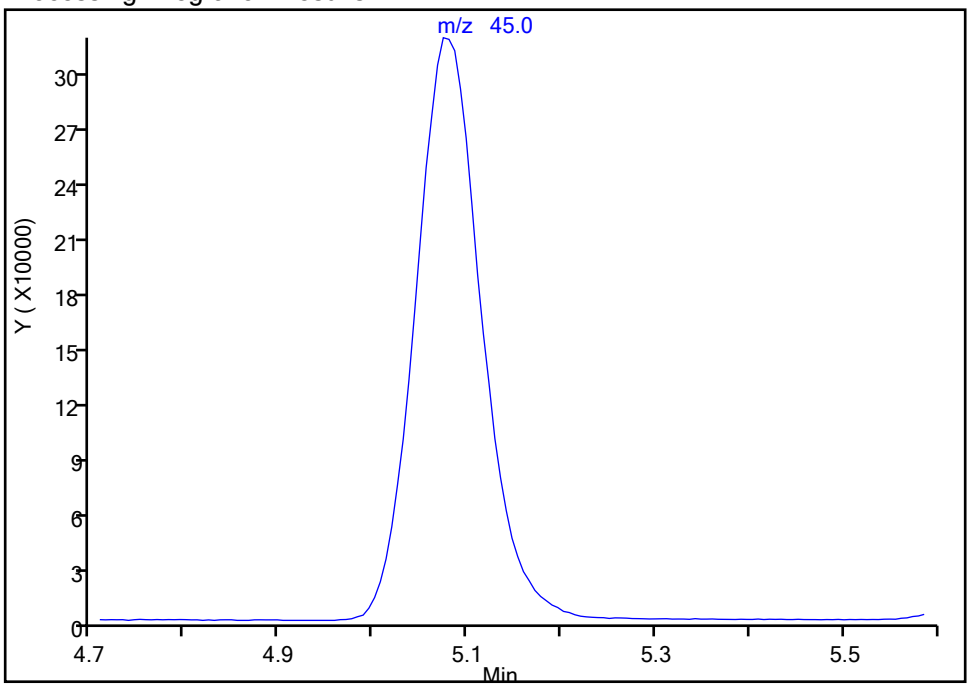
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

35 Isopropyl ether, CAS: 108-20-3

Signal: 1

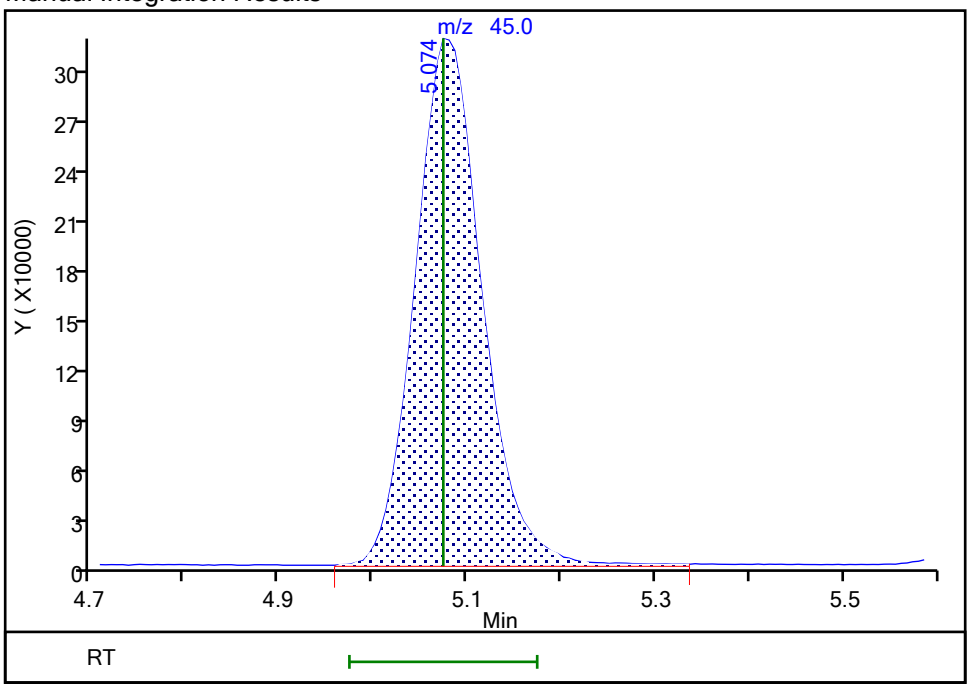
Not Detected
Expected RT: 5.07

Processing Integration Results



Manual Integration Results

RT: 5.07
Area: 1538859
Amount: 10.138104
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:38:15 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

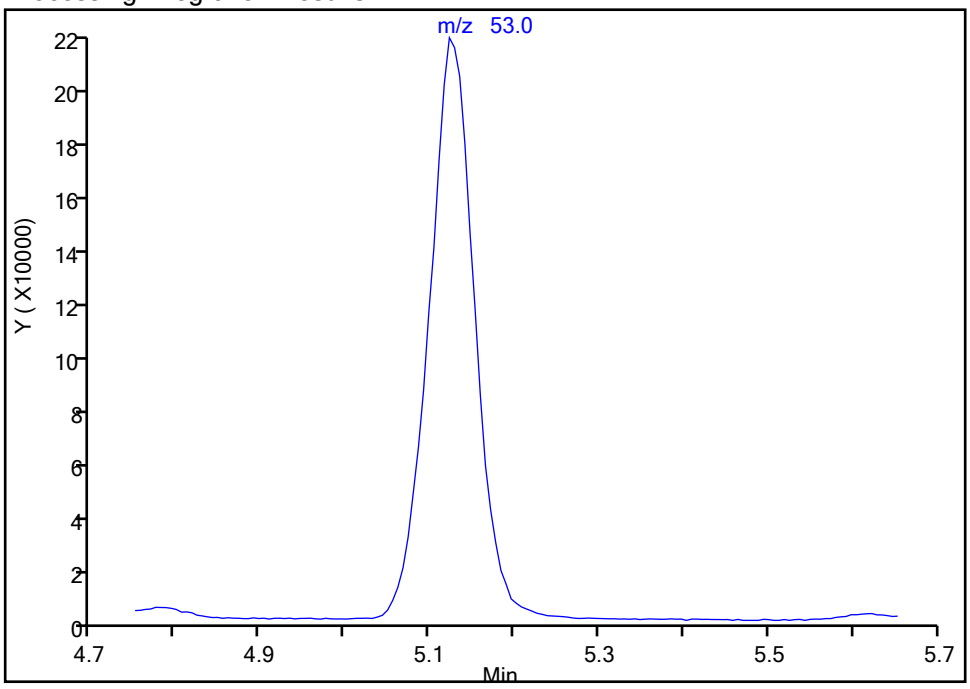
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

36 2-Chloro-1,3-butadiene, CAS: 126-99-8

Signal: 1

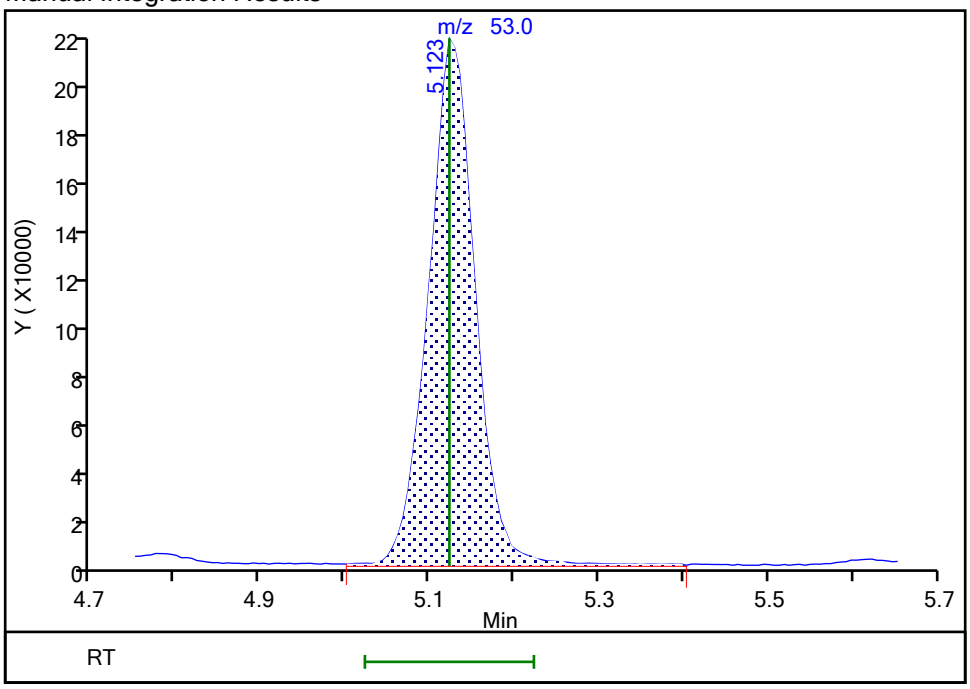
Not Detected
Expected RT: 5.12

Processing Integration Results



Manual Integration Results

RT: 5.12
Area: 806204
Amount: 10.431137
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:38:18 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

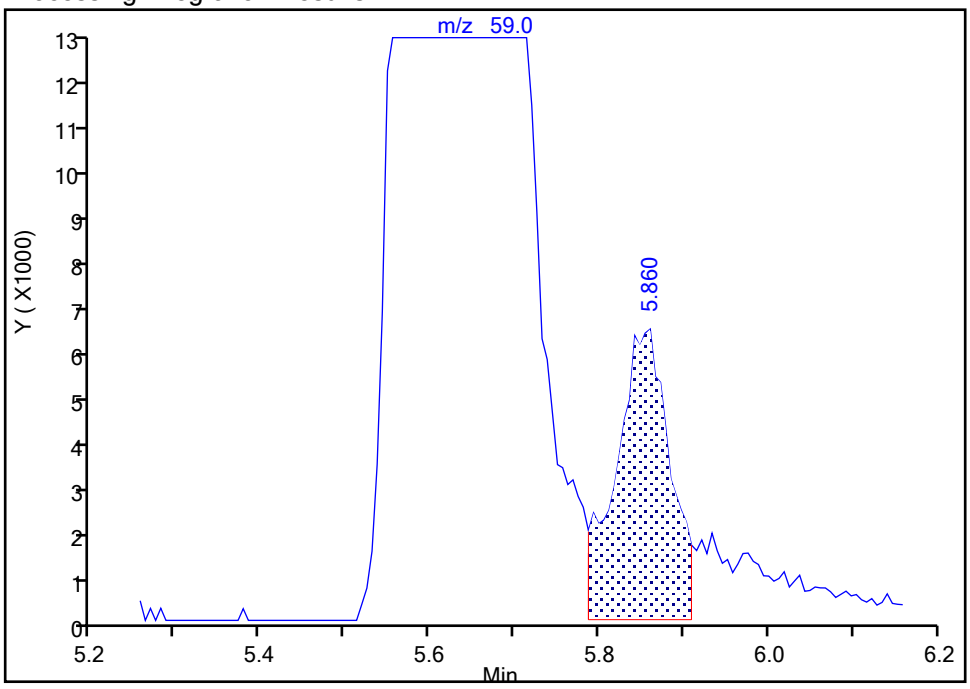
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

37 Tert-butyl ethyl ether, CAS: 637-92-3

Signal: 1

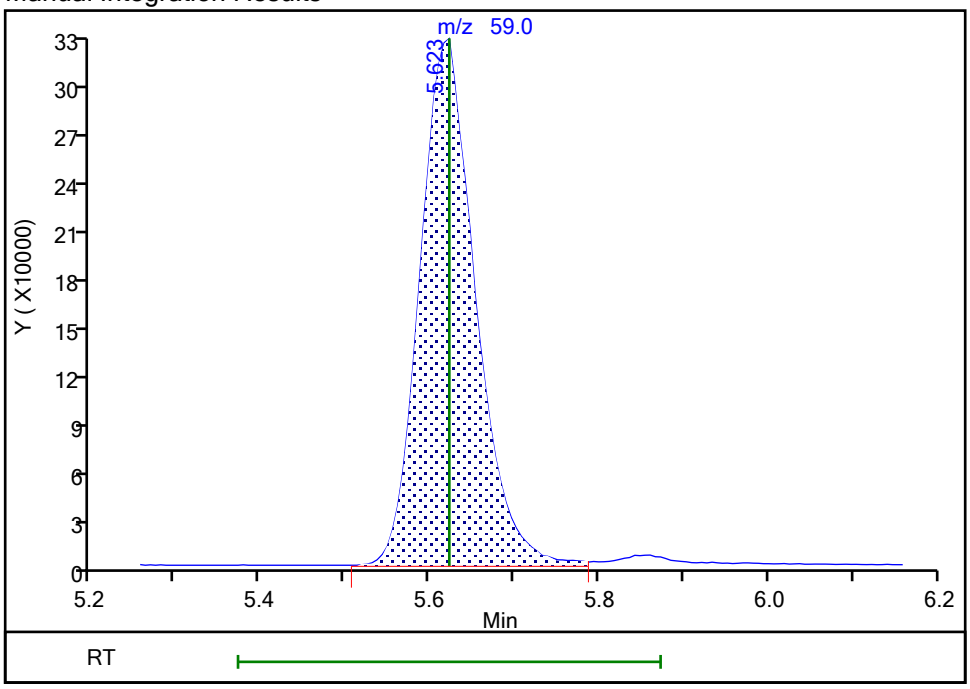
Processing Integration Results

RT: 5.86
Area: 28220
Amount: 0.003154
Amount Units: ug/l



Manual Integration Results

RT: 5.62
Area: 1475081
Amount: 10.174236
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:38:21 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

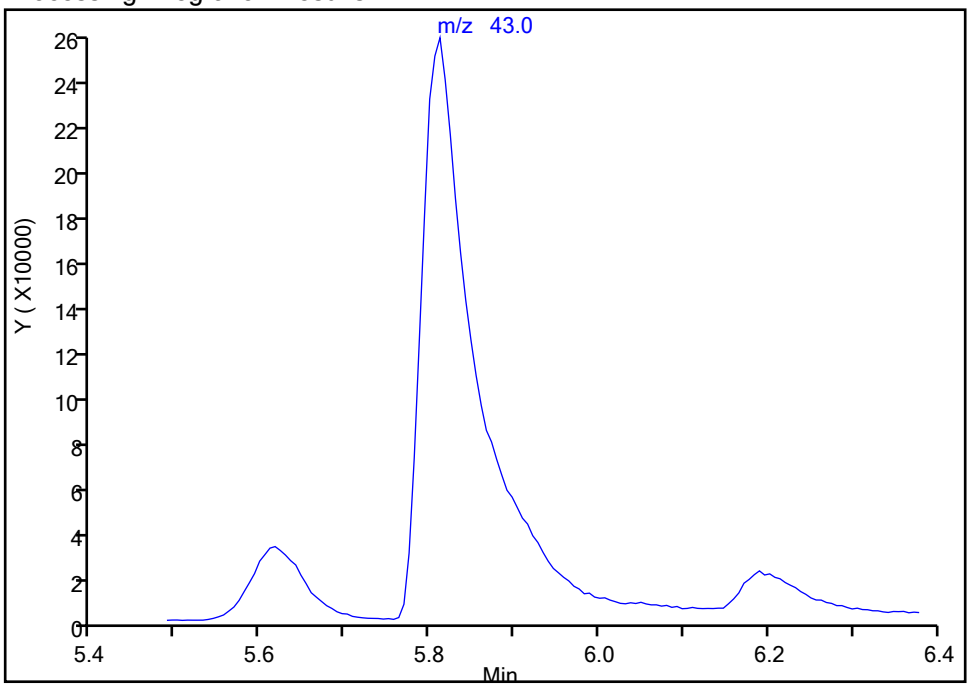
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

38 2-Butanone (MEK), CAS: 78-93-3

Signal: 1

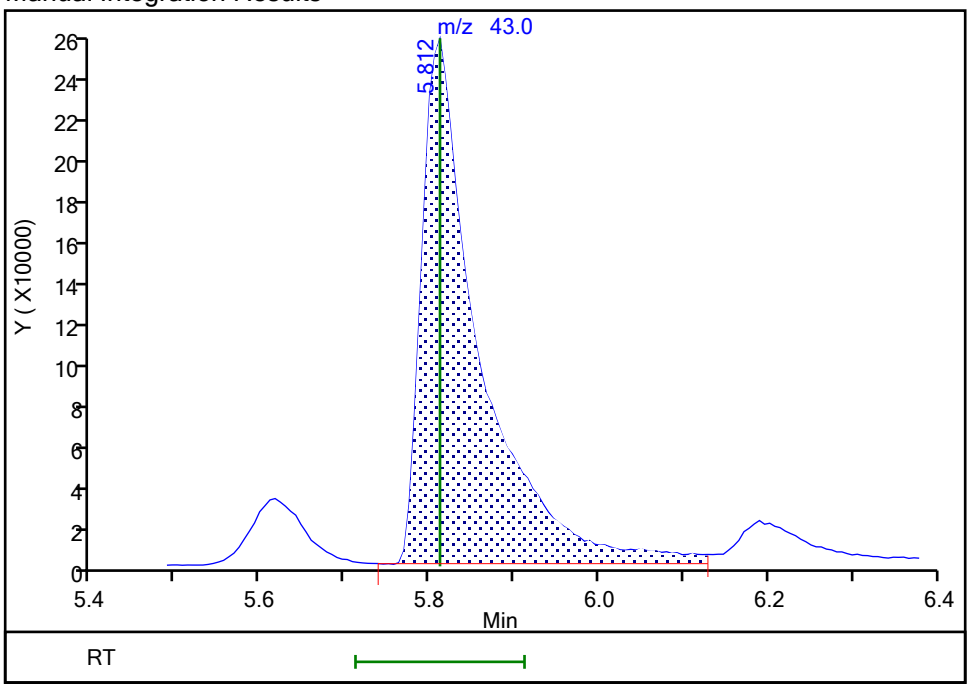
Not Detected
Expected RT: 5.81

Processing Integration Results



Manual Integration Results

RT: 5.81
Area: 1212881
Amount: 100.6332
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:38:25 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

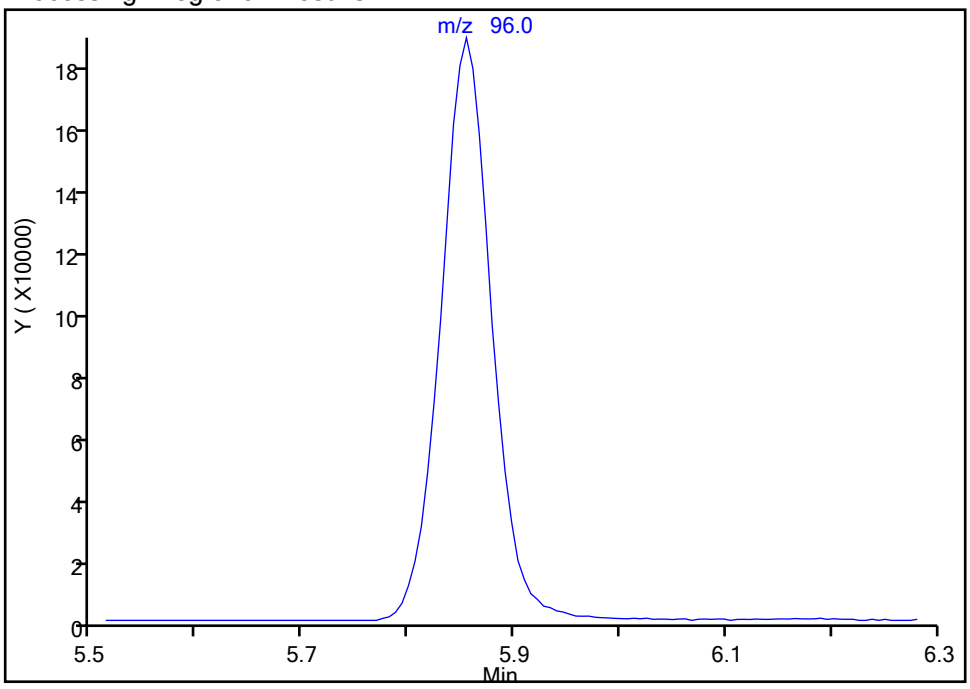
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

39 cis-1,2-Dichloroethene, CAS: 156-59-2

Signal: 1

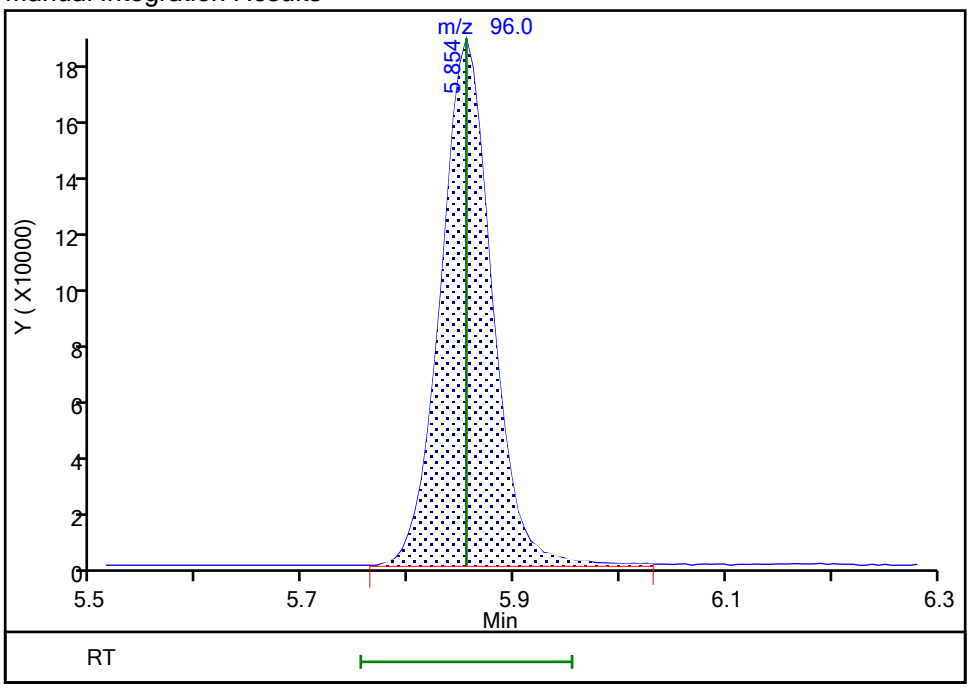
Not Detected
Expected RT: 5.85

Processing Integration Results



Manual Integration Results

RT: 5.85
Area: 607013
Amount: 10.112324
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:38:28 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

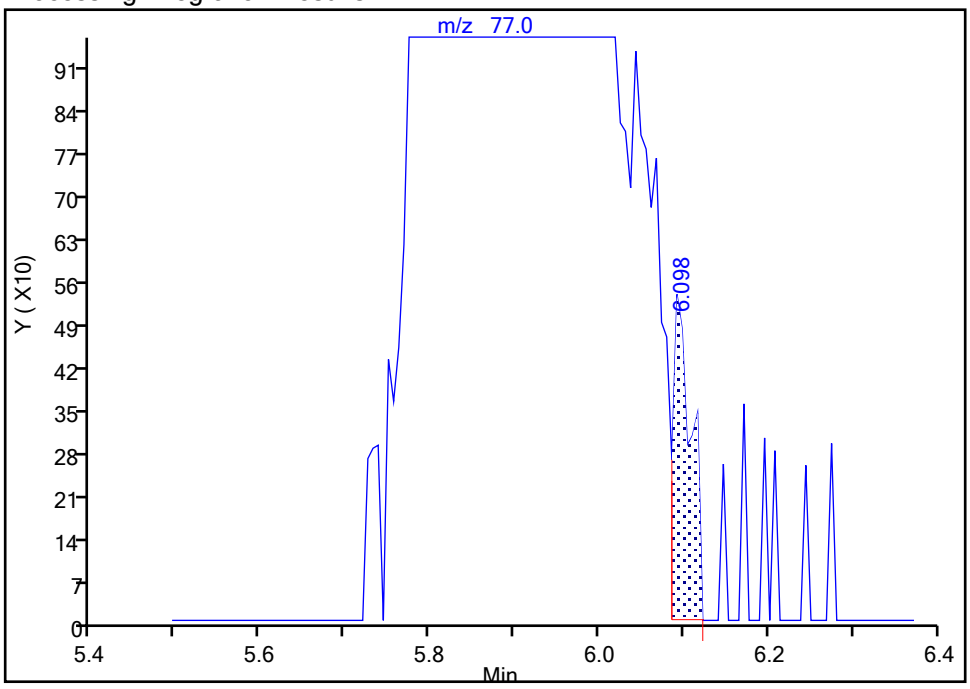
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

40 2,2-Dichloropropane, CAS: 594-20-7

Signal: 1

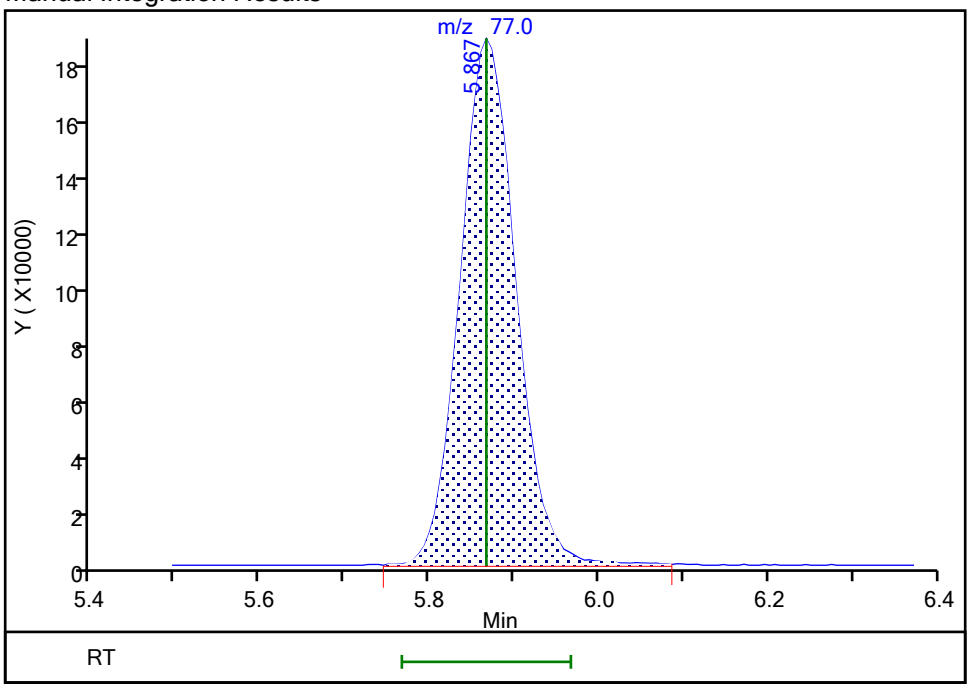
Processing Integration Results

RT: 6.10
Area: 809
Amount: 5.763513
Amount Units: ug/l



Manual Integration Results

RT: 5.87
Area: 853357
Amount: 10.245278
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:38:34 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

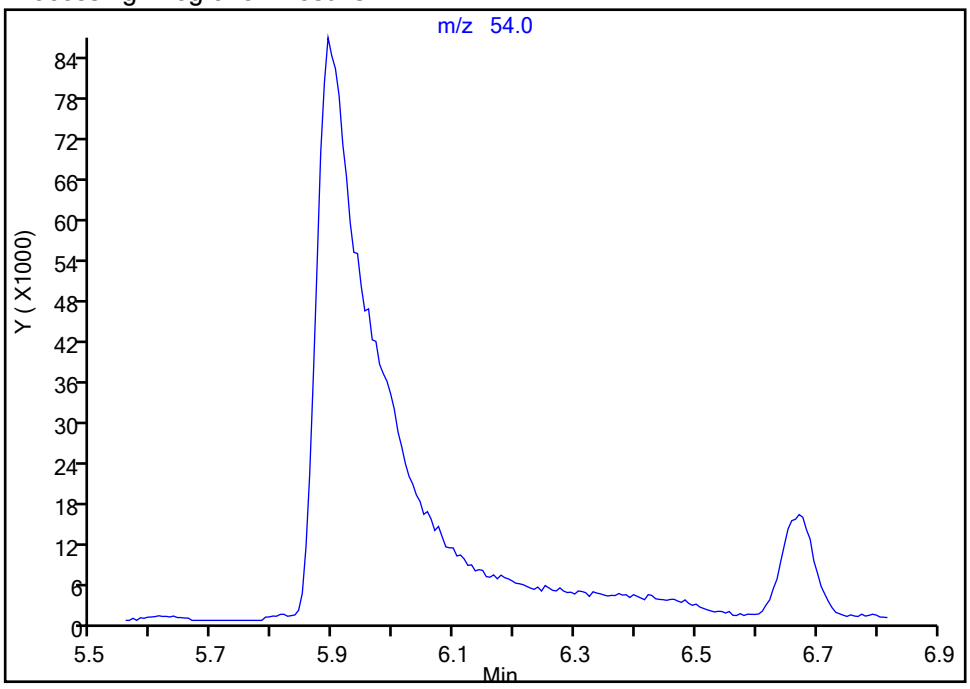
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

43 Propionitrile, CAS: 107-12-0

Signal: 1

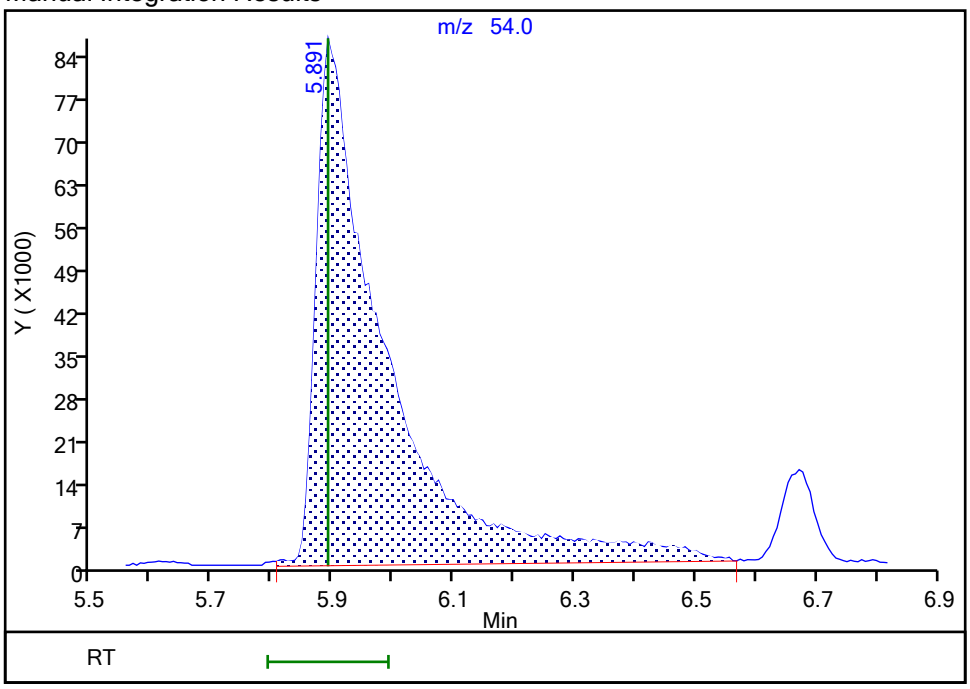
Not Detected
Expected RT: 5.89

Processing Integration Results



Manual Integration Results

RT: 5.89
Area: 686213
Amount: 215.2686
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:38:31 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

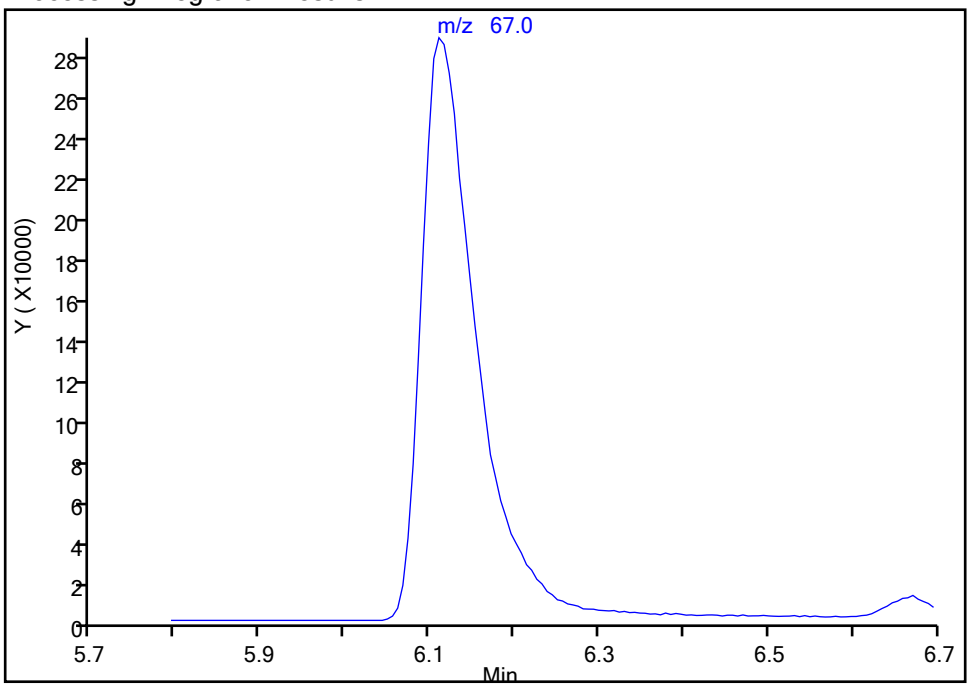
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

45 Methacrylonitrile, CAS: 126-98-7

Signal: 1

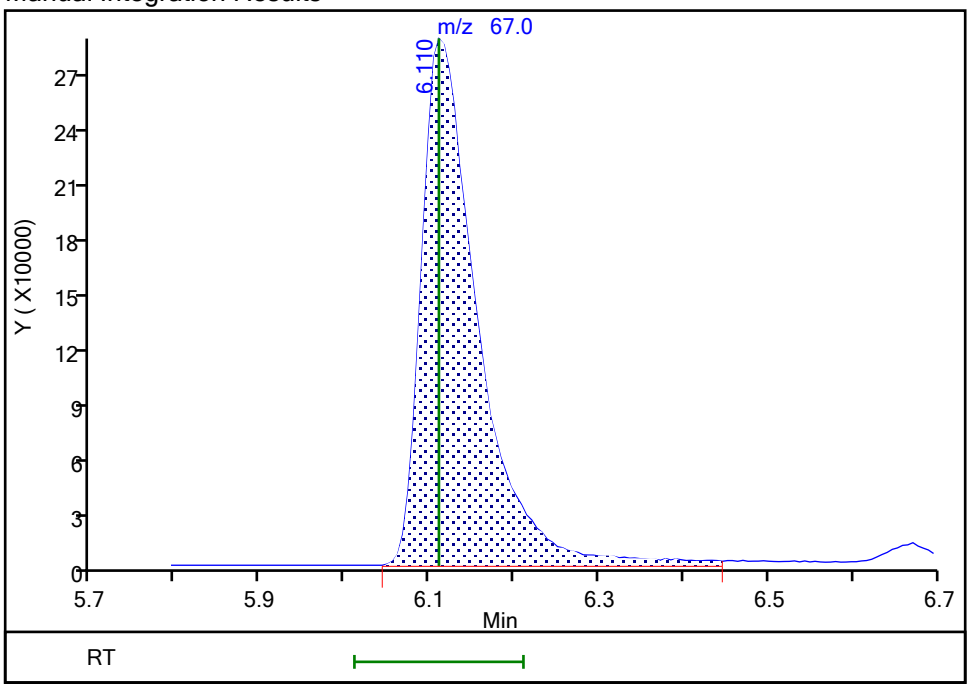
Not Detected
Expected RT: 6.11

Processing Integration Results



Manual Integration Results

RT: 6.11
Area: 1304884
Amount: 103.7383
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:38:38 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

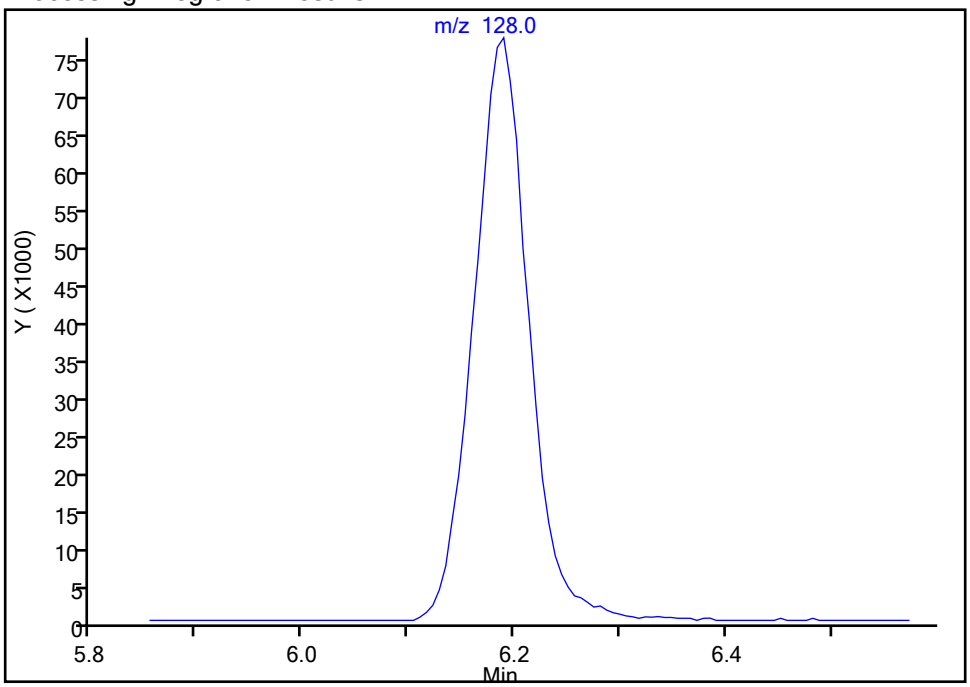
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

46 Chlorobromomethane, CAS: 74-97-5

Signal: 1

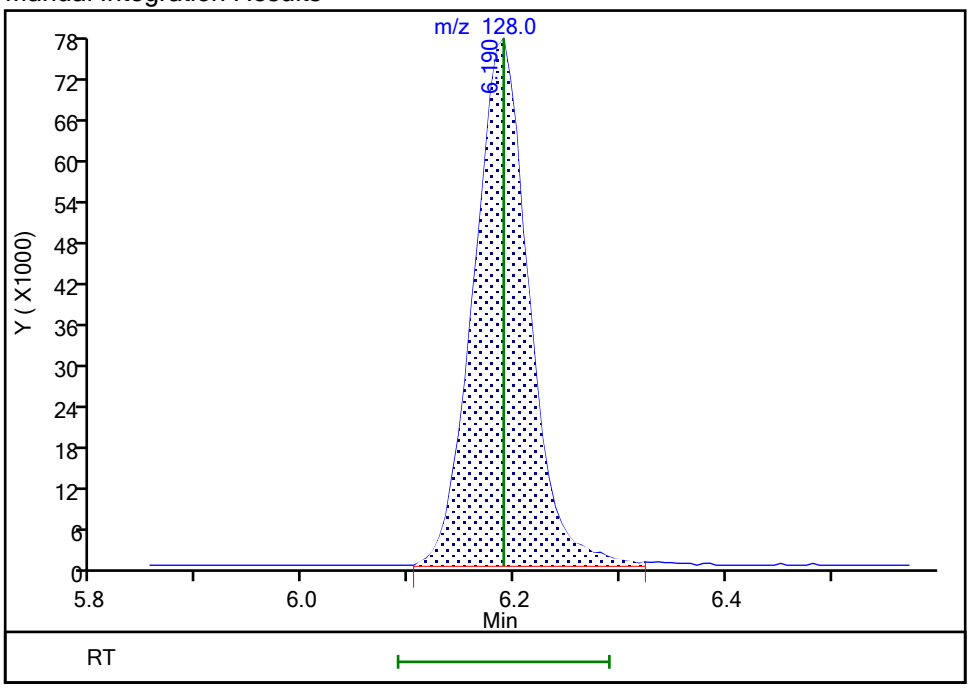
Not Detected
Expected RT: 6.19

Processing Integration Results



Manual Integration Results

RT: 6.19
Area: 278362
Amount: 10.193516
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:38:41 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

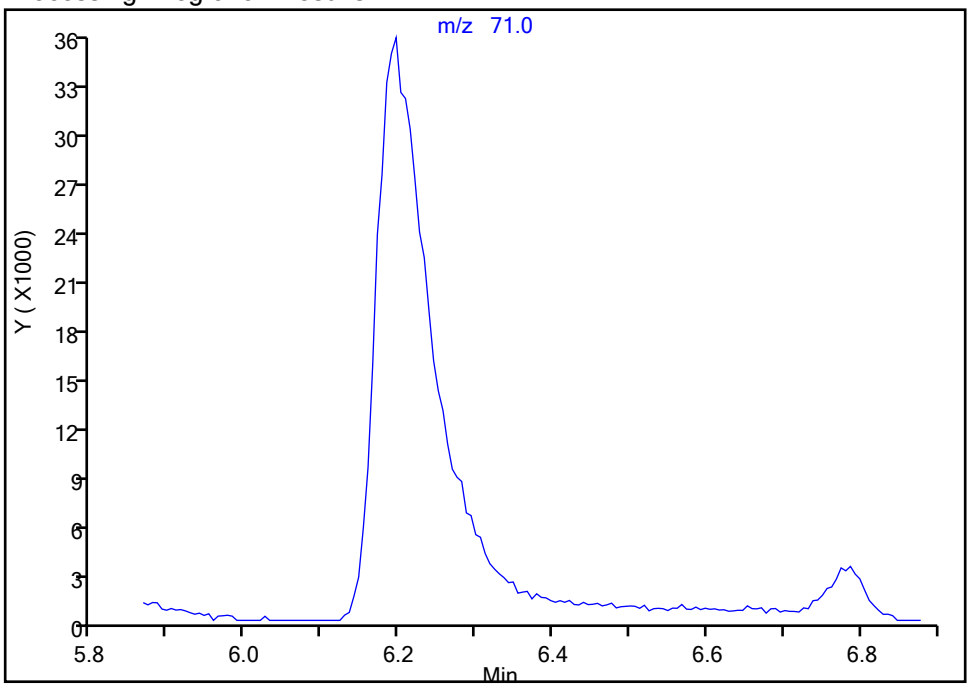
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

47 Tetrahydrofuran, CAS: 109-99-9

Signal: 1

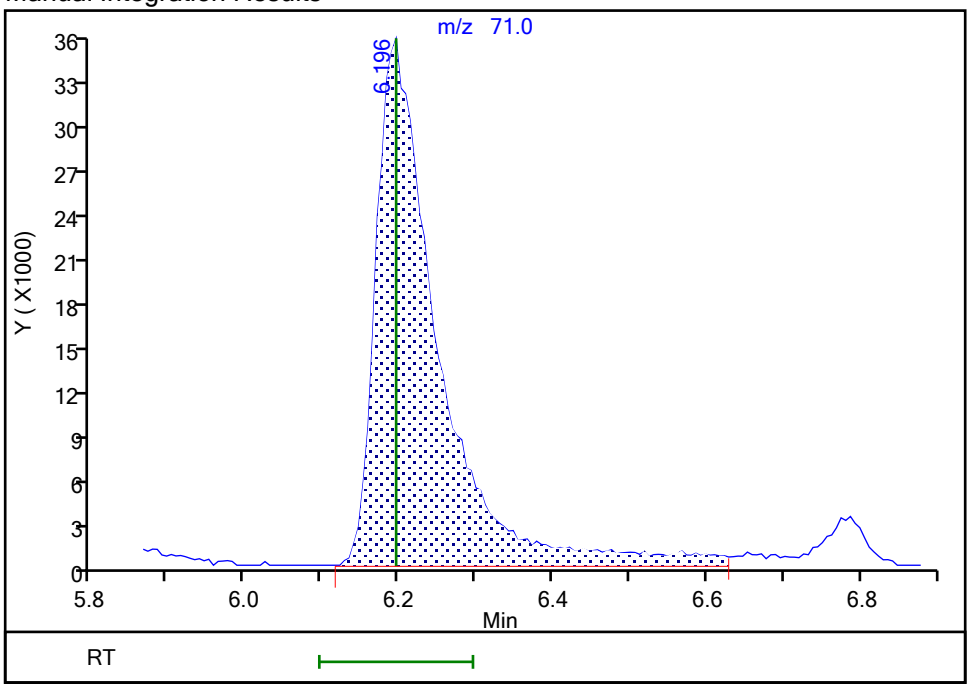
Not Detected
Expected RT: 6.20

Processing Integration Results



Manual Integration Results

RT: 6.20
Area: 200641
Amount: 50.587516
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:38:44 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

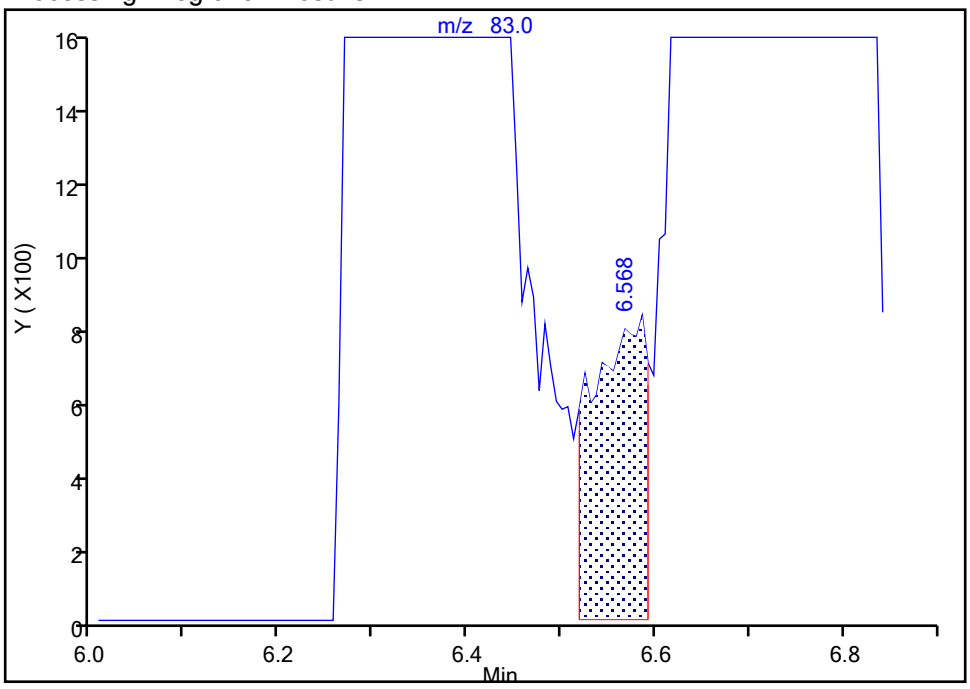
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

48 Chloroform, CAS: 67-66-3

Signal: 1

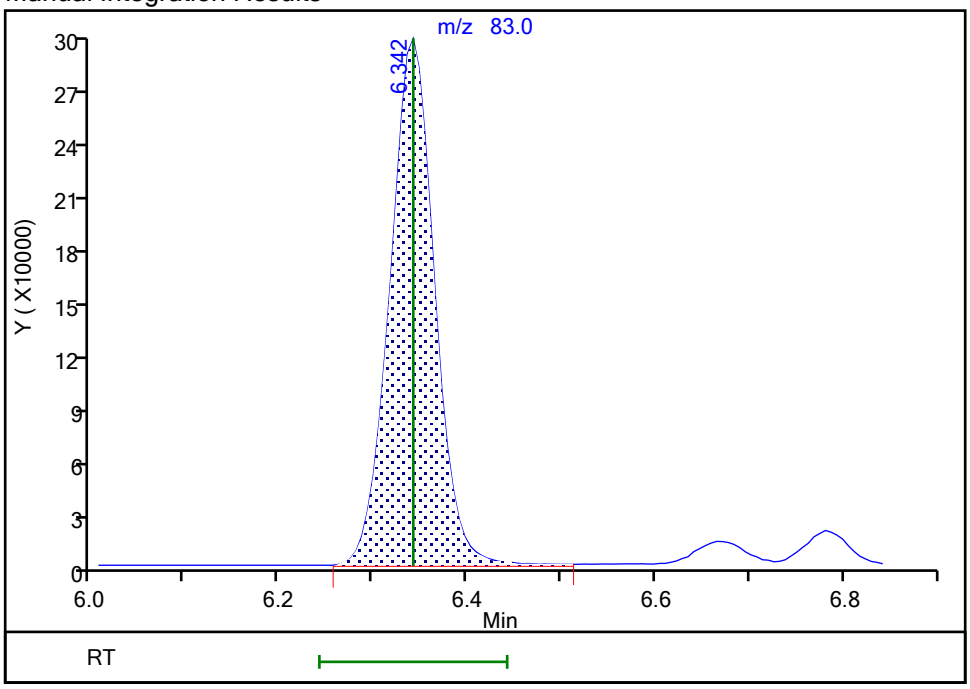
Processing Integration Results

RT: 6.57
Area: 3291
Amount: 10.000000
Amount Units: ug/l



Manual Integration Results

RT: 6.34
Area: 973119
Amount: 10.191256
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:38:50 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

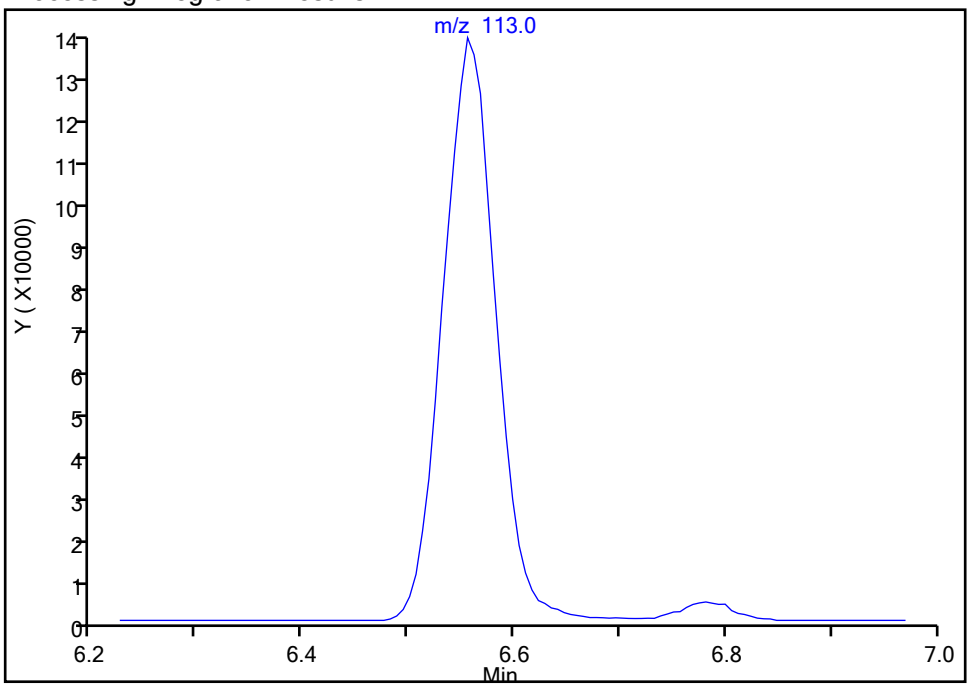
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

$ 49 Dibromofluoromethane (Surr), CAS: 1868-53-7

Signal: 1

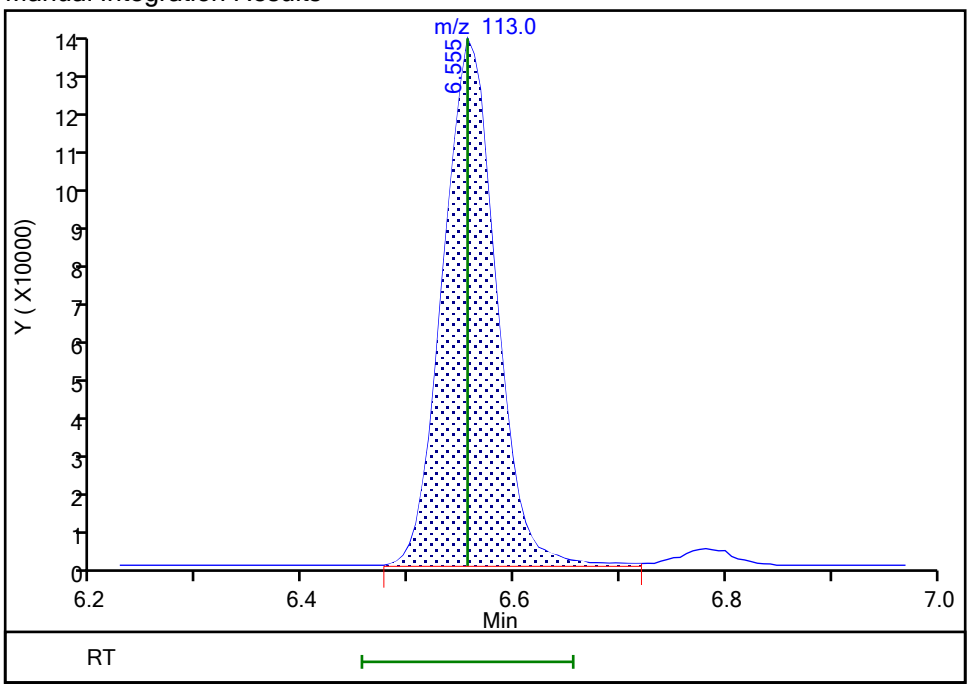
Not Detected
Expected RT: 6.56

Processing Integration Results



RT: 6.56
Area: 464653
Amount: 10.007334
Amount Units: ug/l

Manual Integration Results



Reviewer: DVW2, 21-Jun-2023 07:35:20 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

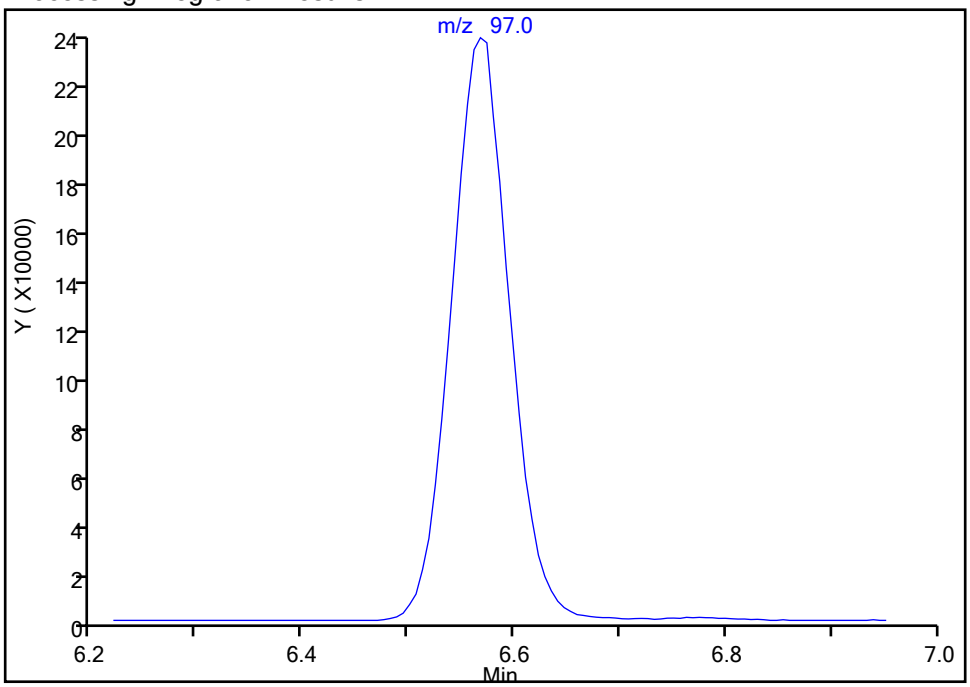
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

50 1,1,1-Trichloroethane, CAS: 71-55-6

Signal: 1

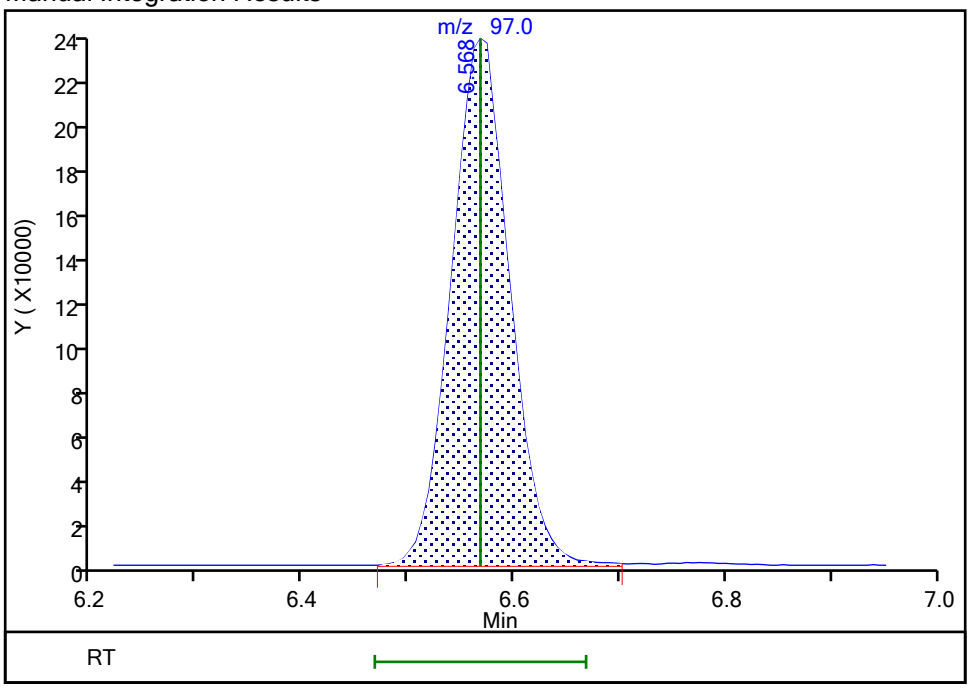
Not Detected
Expected RT: 6.57

Processing Integration Results



RT: 6.57
Area: 914467
Amount: 10.255781
Amount Units: ug/l

Manual Integration Results



Reviewer: DVW2, 21-Jun-2023 07:38:55 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

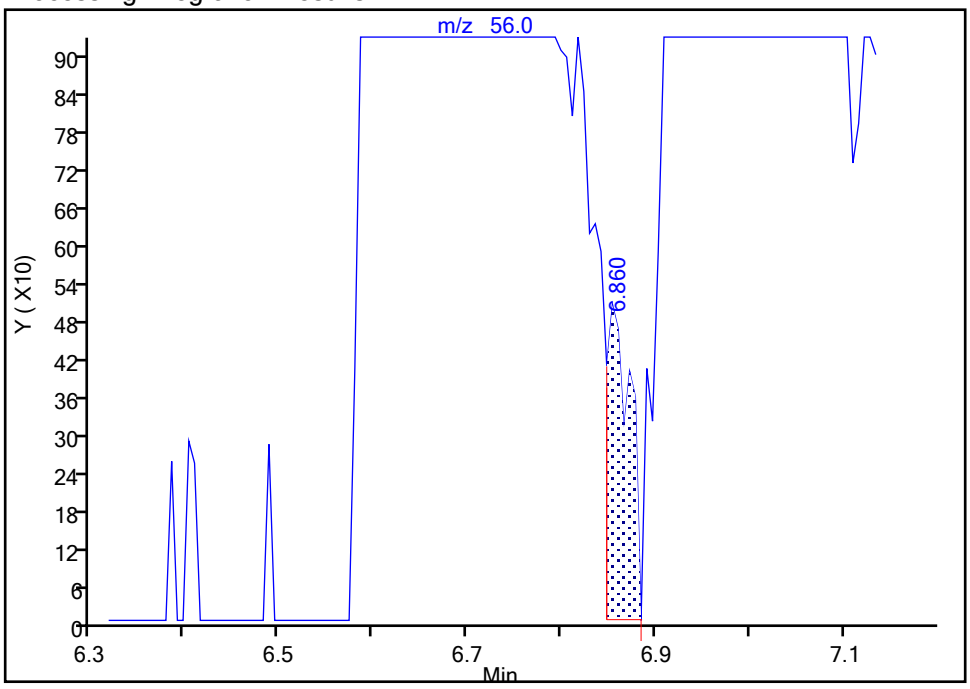
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

51 Cyclohexane, CAS: 110-82-7

Signal: 1

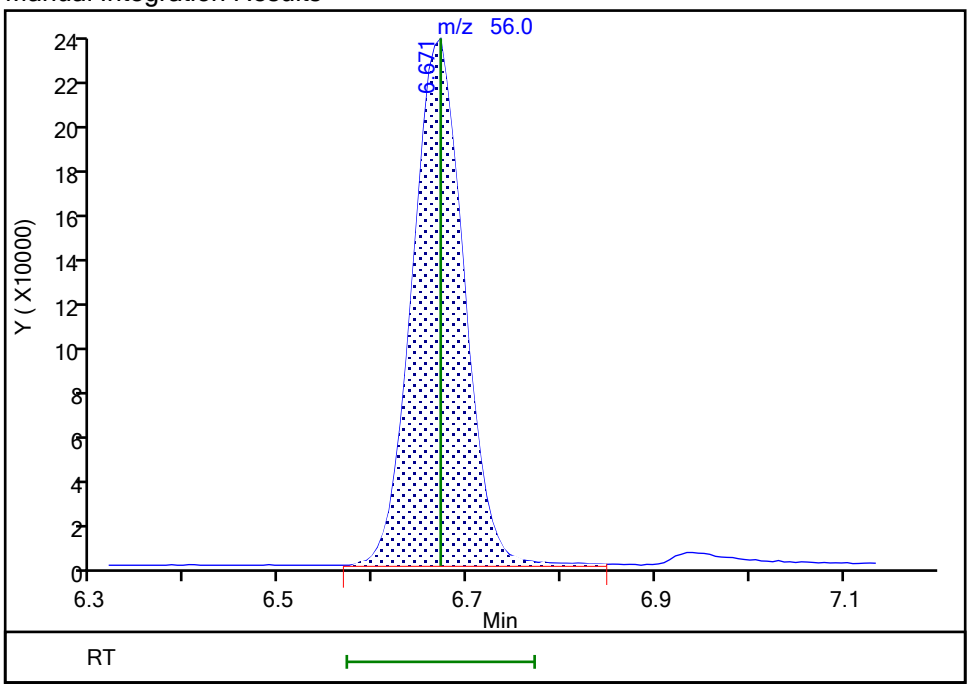
Processing Integration Results

RT: 6.86
Area: 891
Amount: 3.740536
Amount Units: ug/l



Manual Integration Results

RT: 6.67
Area: 898646
Amount: 10.635447
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:38:58 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

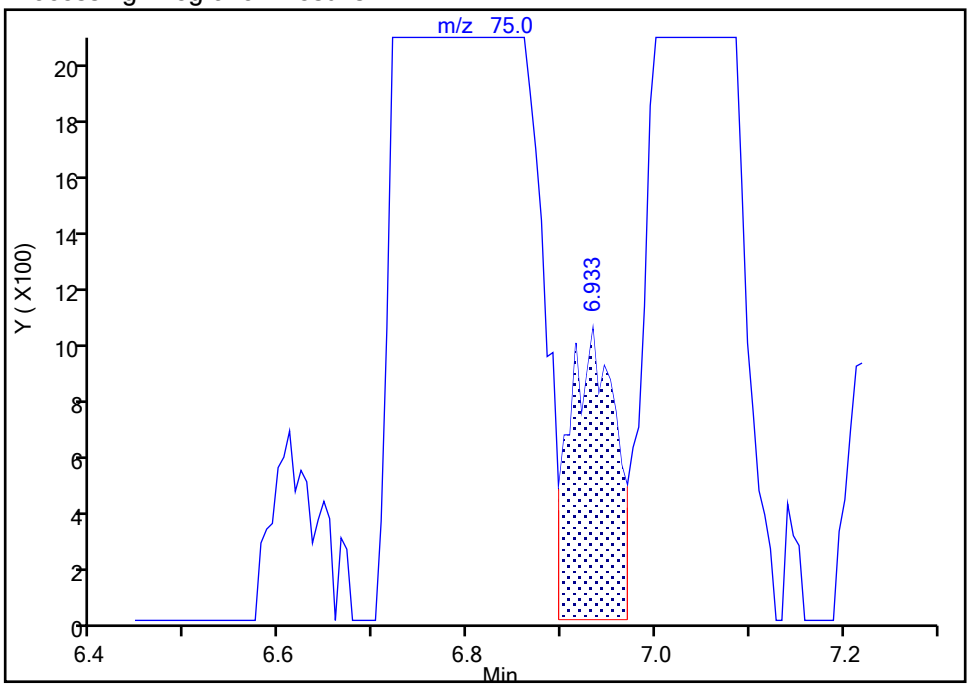
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

53 1,1-Dichloropropene, CAS: 563-58-6

Signal: 1

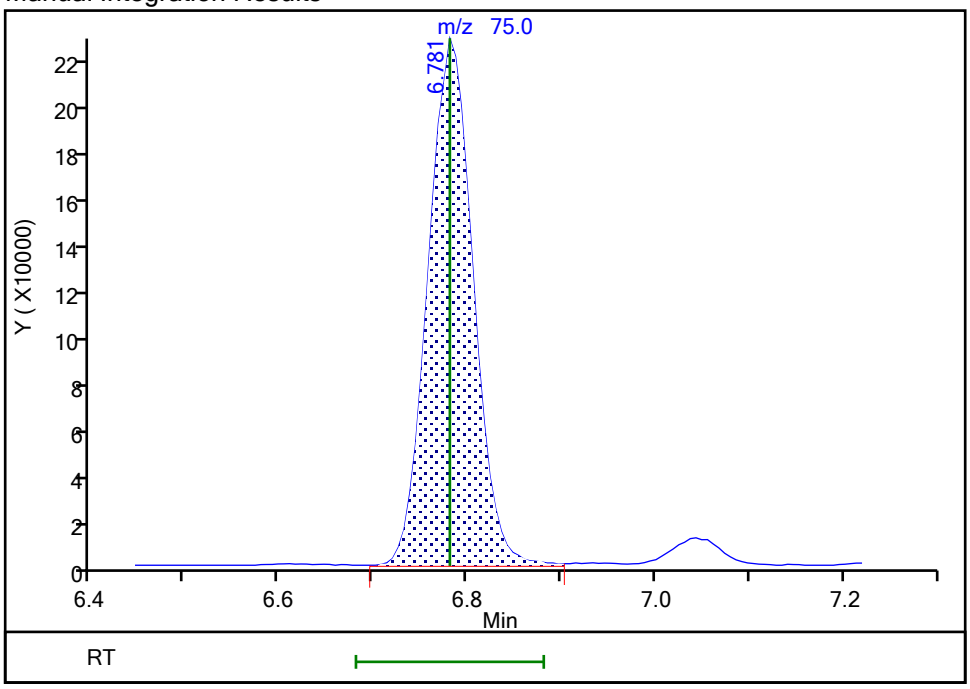
Processing Integration Results

RT: 6.93
Area: 3538
Amount: 10.000000
Amount Units: ug/l



Manual Integration Results

RT: 6.78
Area: 738645
Amount: 10.404574
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:39:13 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

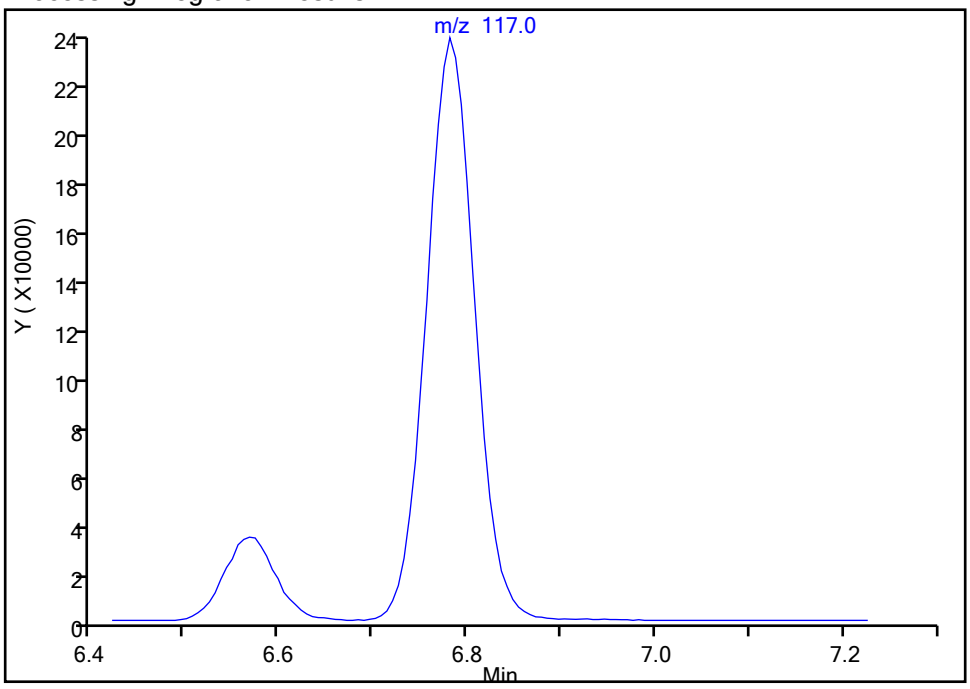
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

54 Carbon tetrachloride, CAS: 56-23-5

Signal: 1

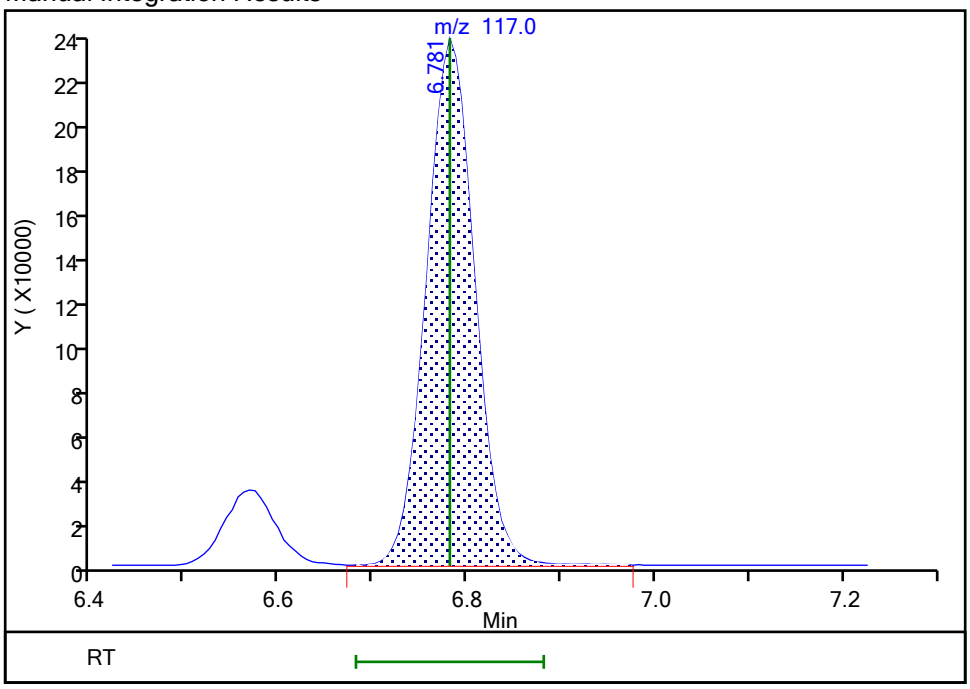
Not Detected
Expected RT: 6.78

Processing Integration Results



Manual Integration Results

RT: 6.78
Area: 847817
Amount: 10.672723
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:39:10 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

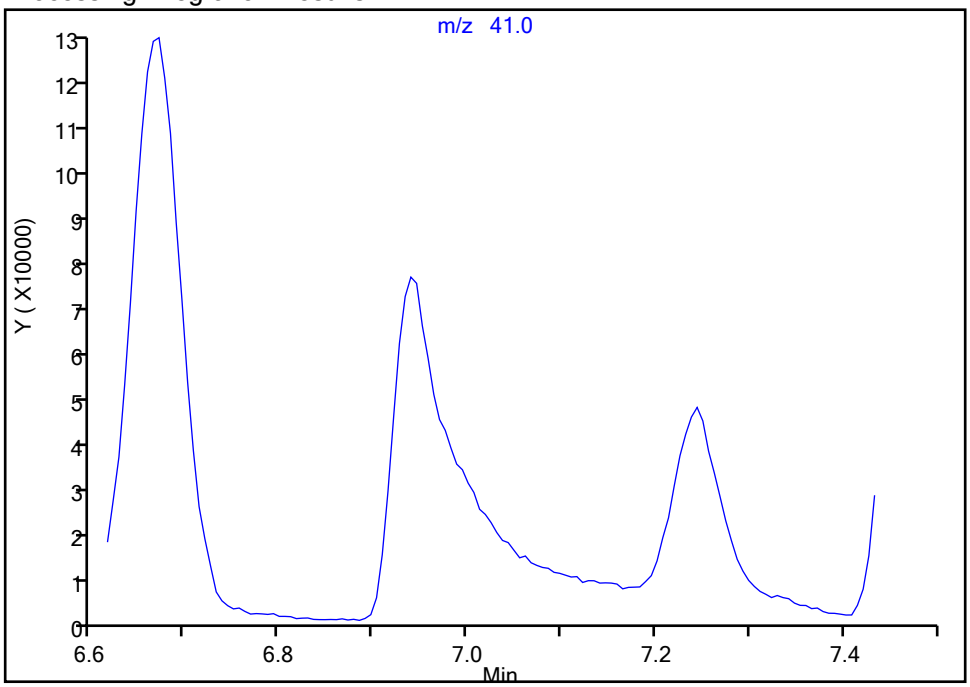
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

55 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

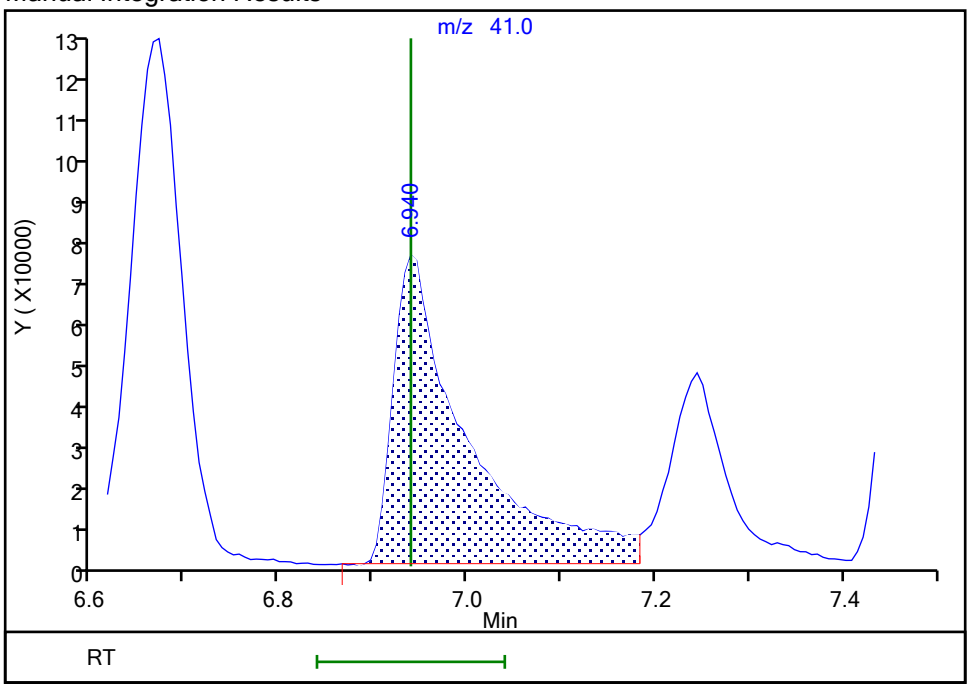
Not Detected
Expected RT: 6.94

Processing Integration Results



Manual Integration Results

RT: 6.94
Area: 408183
Amount: 461.7817
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:39:17 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

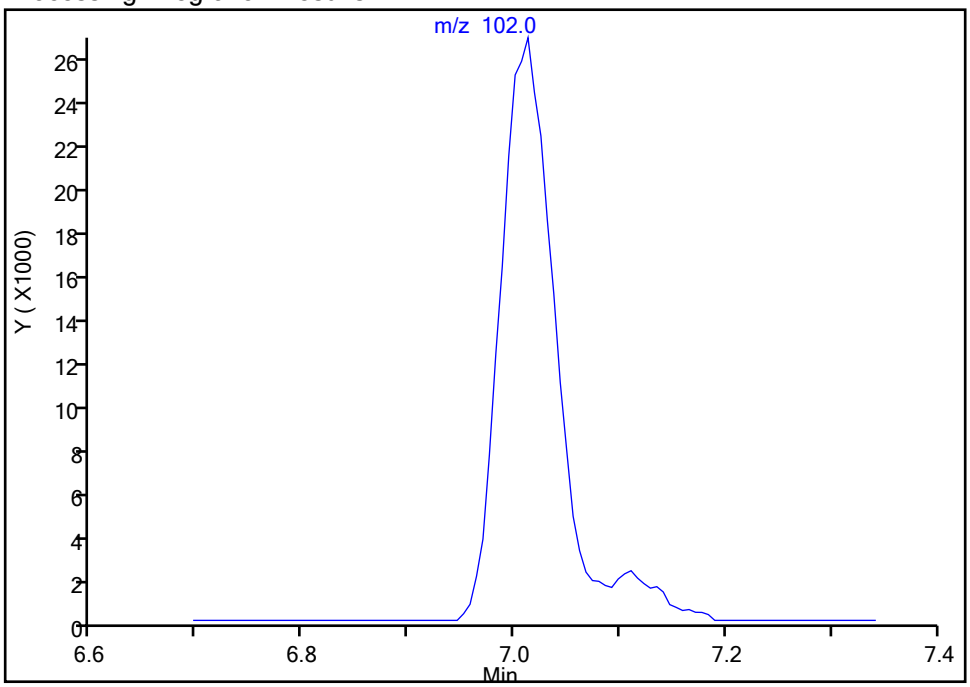
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

$ 56 1,2-Dichloroethane-d4 (Surr), CAS: 17060-07-0

Signal: 1

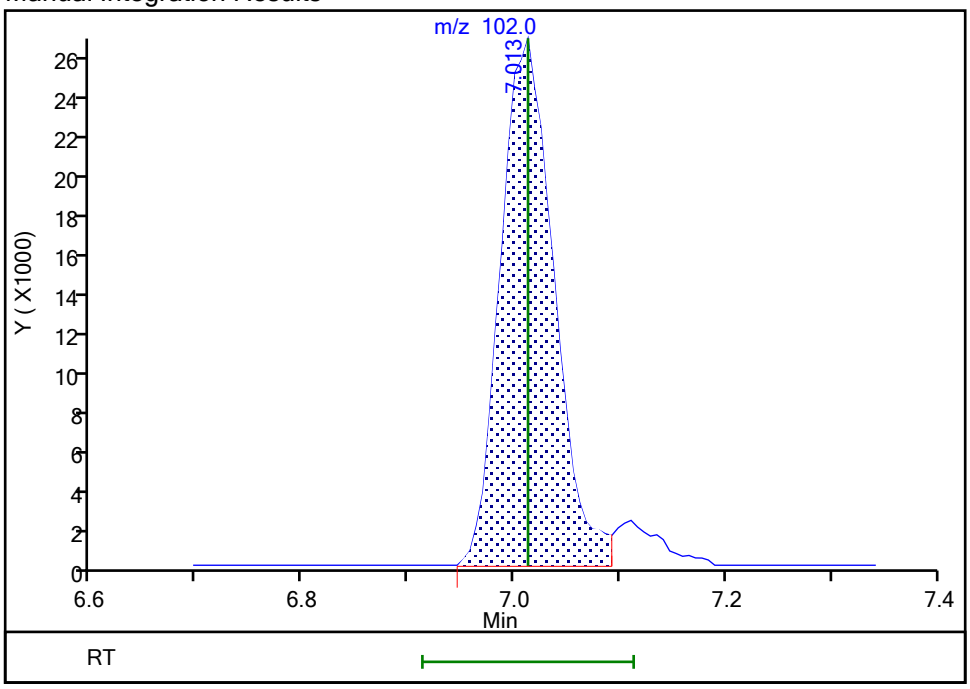
Processing Integration Results

Not Detected
Expected RT: 7.01



Manual Integration Results

RT: 7.01
Area: 91929
Amount: 9.985461
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:35:23 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

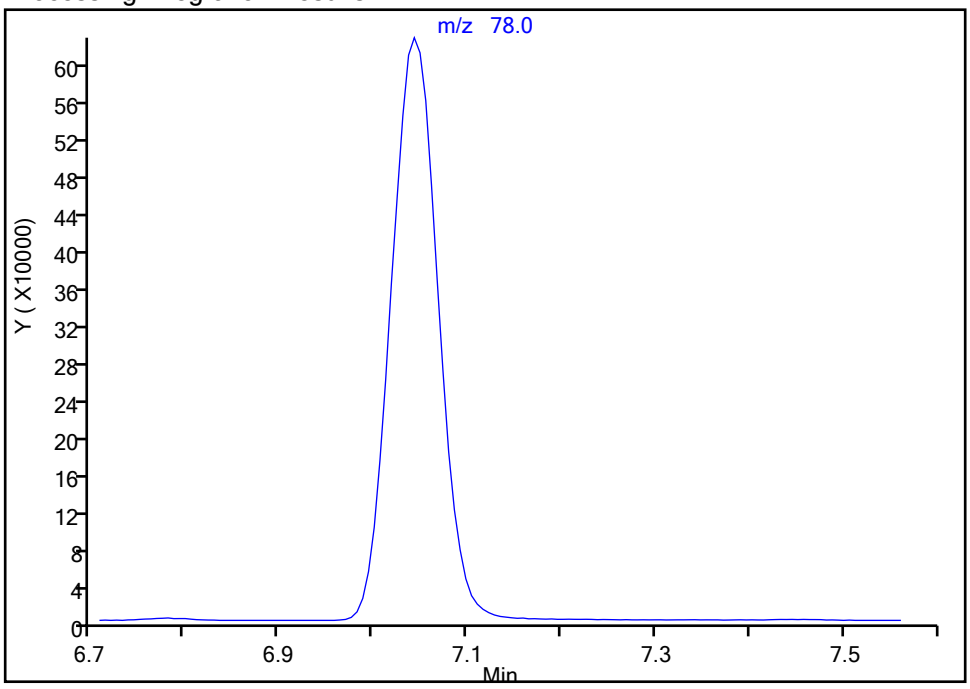
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

57 Benzene, CAS: 71-43-2

Signal: 1

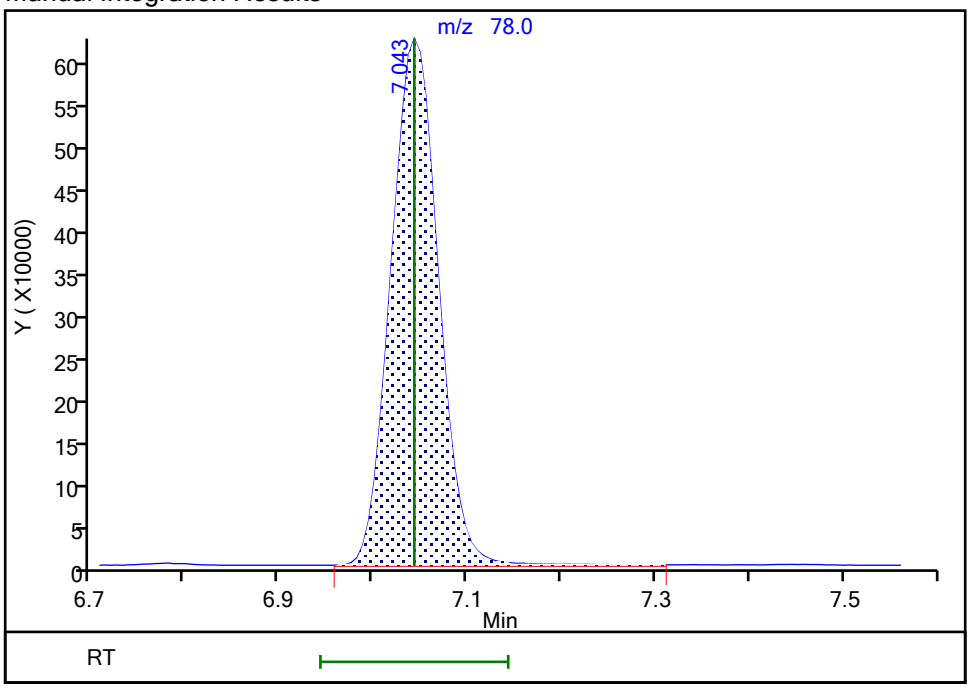
Not Detected
Expected RT: 7.04

Processing Integration Results



Manual Integration Results

RT: 7.04
Area: 2192041
Amount: 10.269895
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:39:23 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

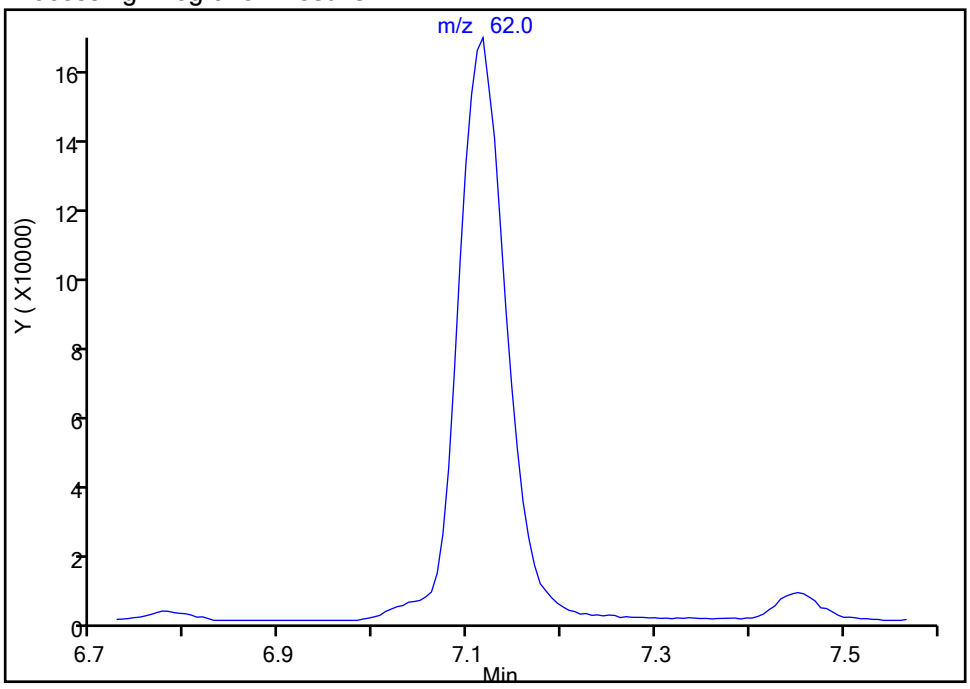
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

58 1,2-Dichloroethane, CAS: 107-06-2

Signal: 1

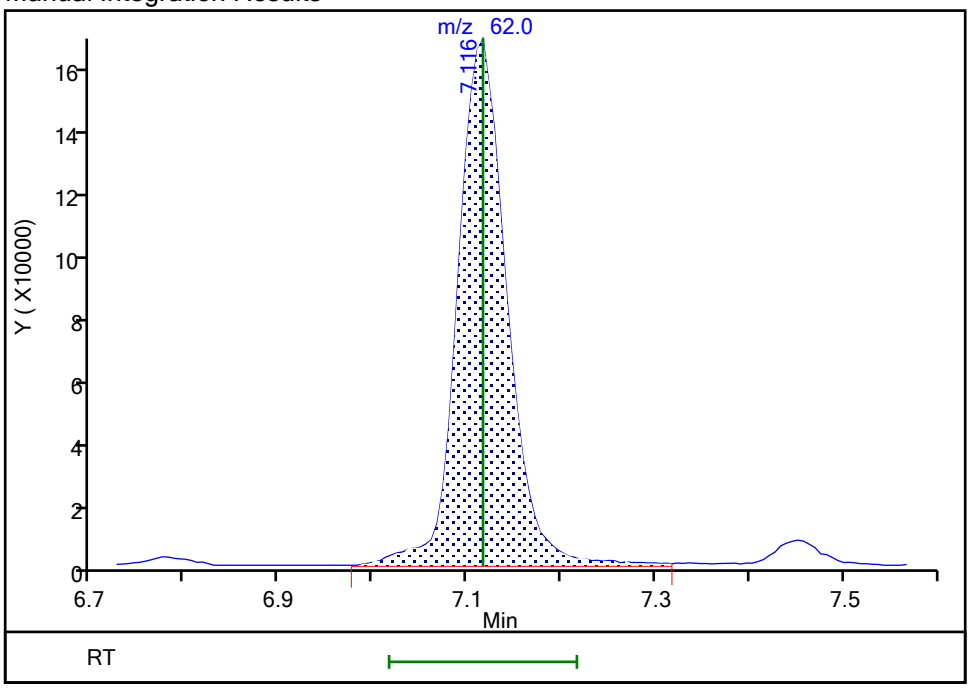
Not Detected
Expected RT: 7.12

Processing Integration Results



Manual Integration Results

RT: 7.12
Area: 589464
Amount: 10.187085
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:39:26 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

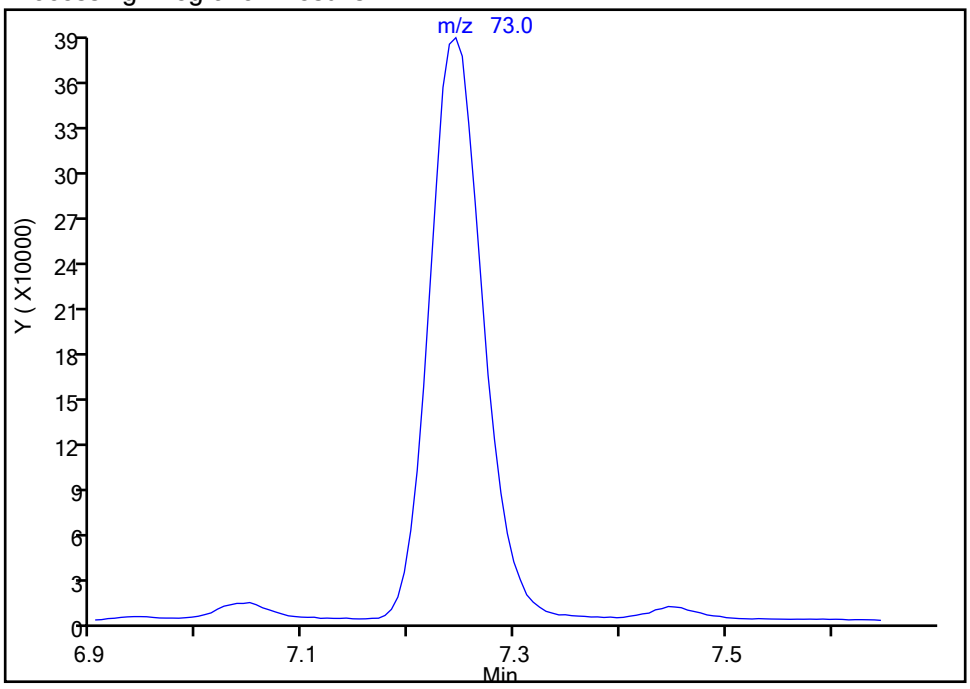
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

60 Tert-amyl methyl ether, CAS: 994-05-8

Signal: 1

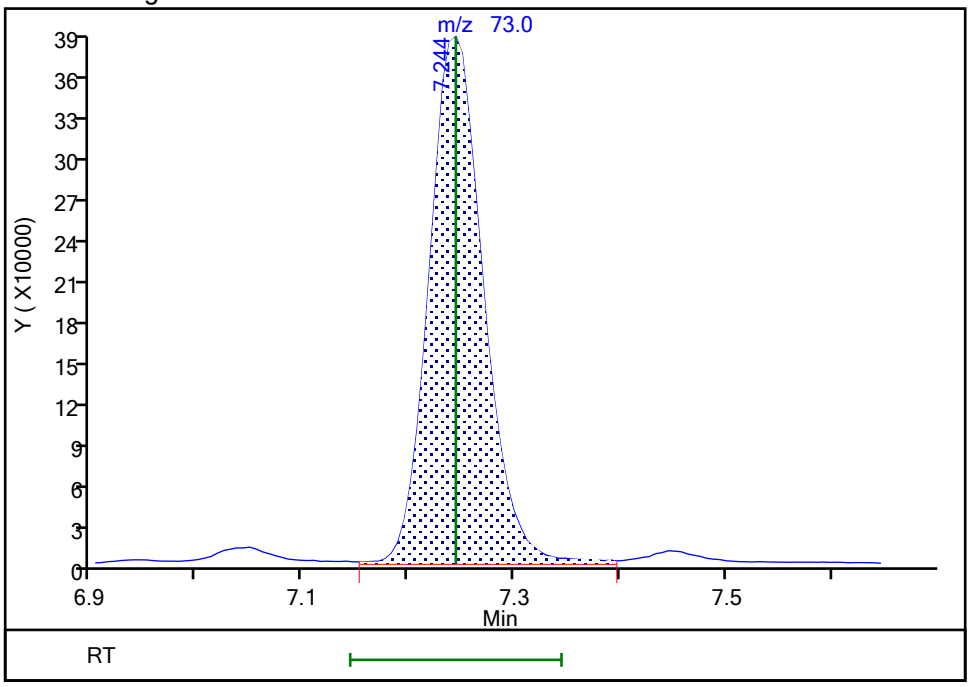
Not Detected
Expected RT: 7.24

Processing Integration Results



Manual Integration Results

RT: 7.24
Area: 1374850
Amount: 10.259830
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:39:29 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

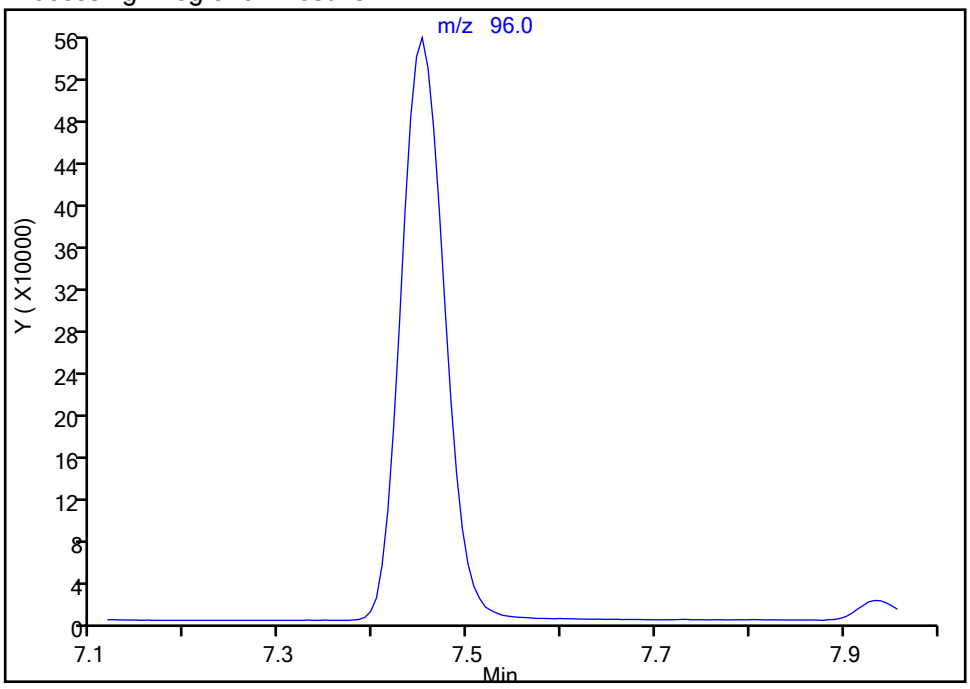
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

* 61 Fluorobenzene (IS), CAS: 462-06-6

Signal: 1

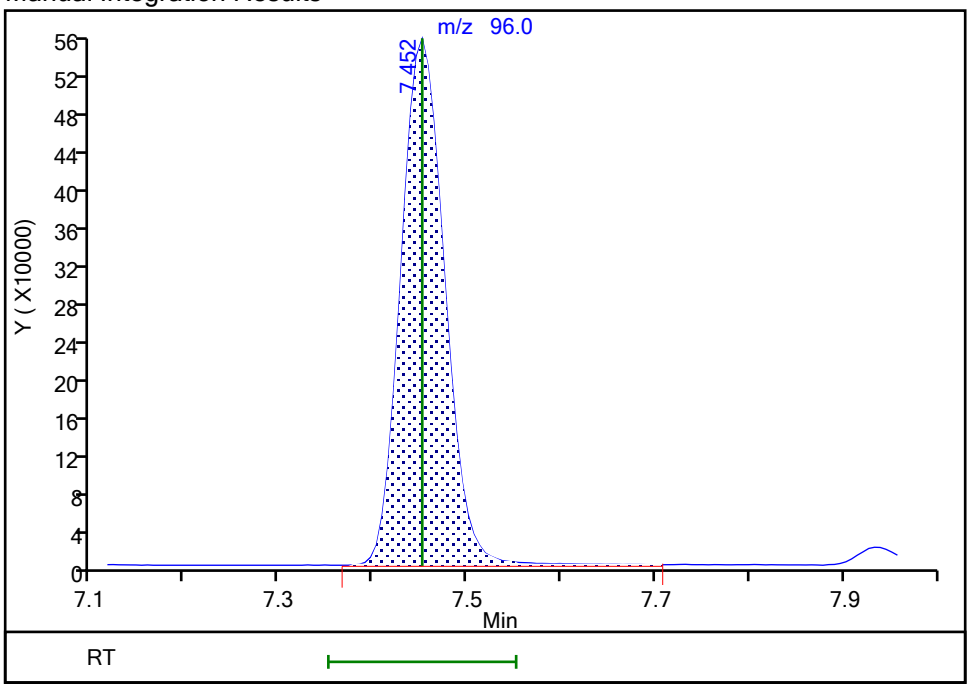
Not Detected
Expected RT: 7.45

Processing Integration Results



Manual Integration Results

RT: 7.45
Area: 1807671
Amount: 10.000000
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:35:11 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

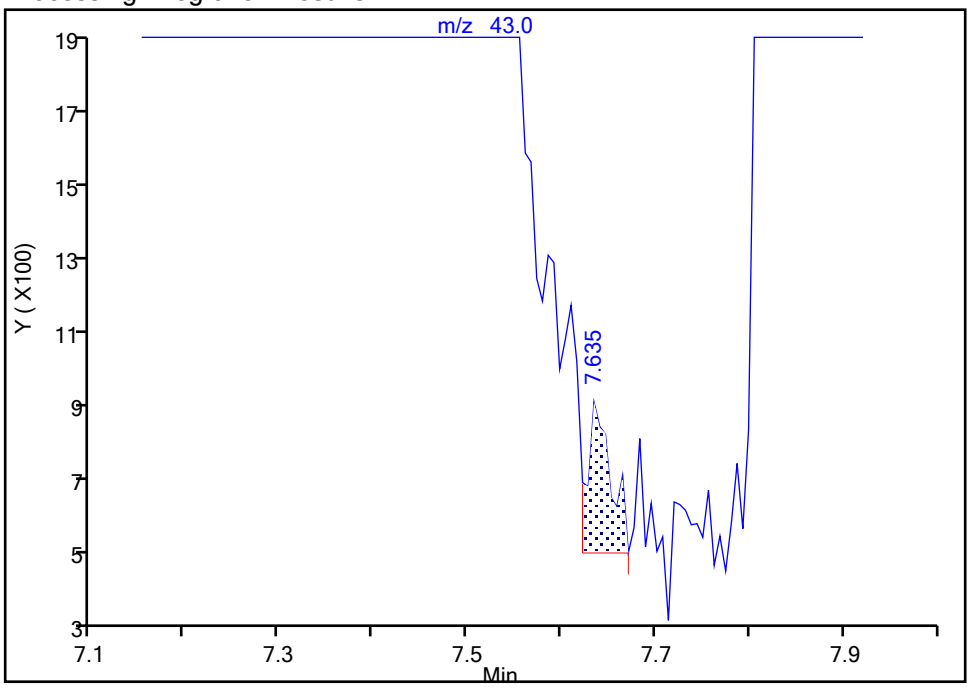
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

62 n-Heptane, CAS: 142-82-5

Signal: 1

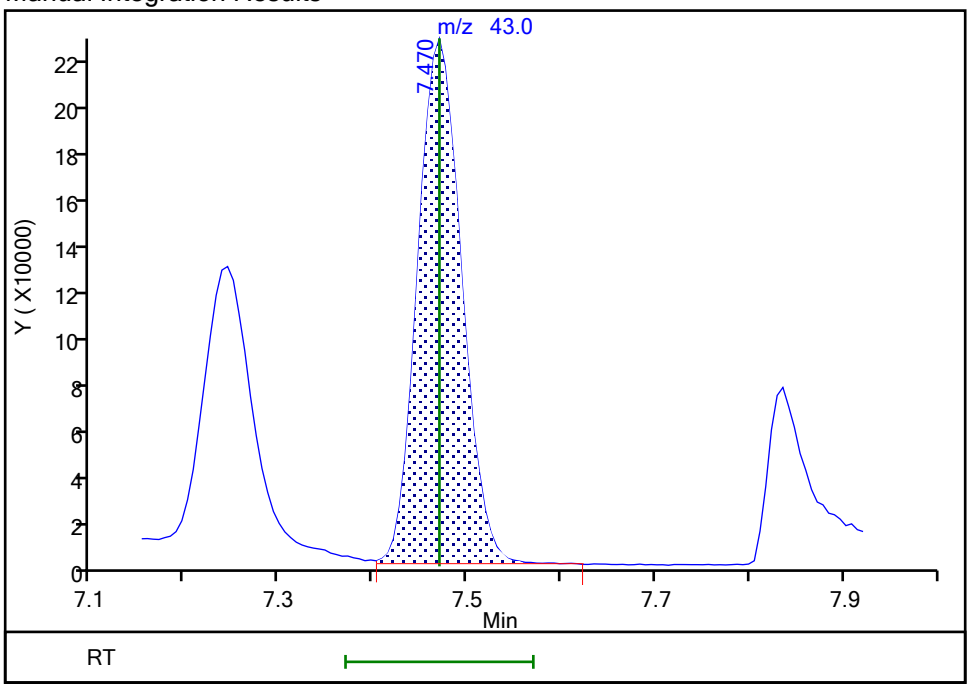
Processing Integration Results

RT: 7.63
Area: 669
Amount: 0.002433
Amount Units: ug/l



Manual Integration Results

RT: 7.47
Area: 722856
Amount: 10.644753
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:39:35 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

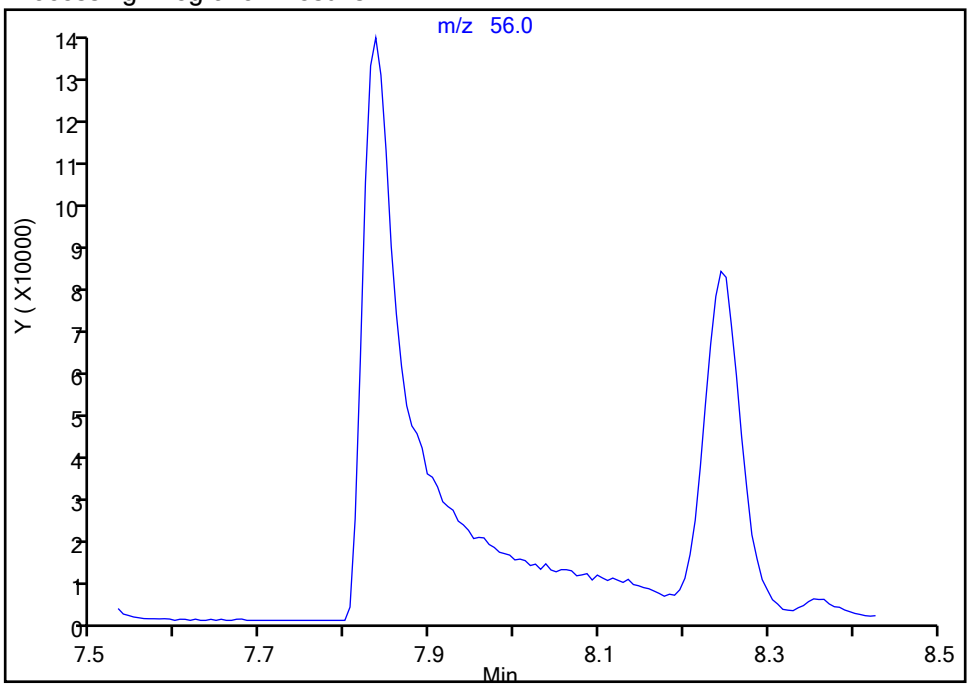
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

63 n-Butanol, CAS: 71-36-3

Signal: 1

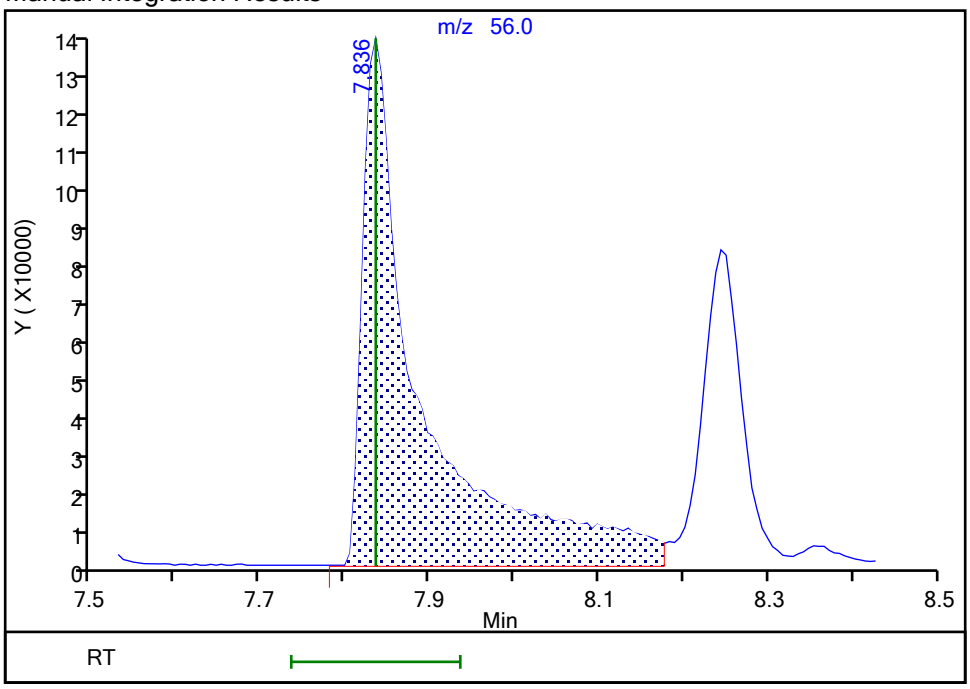
Not Detected
Expected RT: 7.84

Processing Integration Results



Manual Integration Results

RT: 7.84
Area: 662655
Amount: 976.0012
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:39:38 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

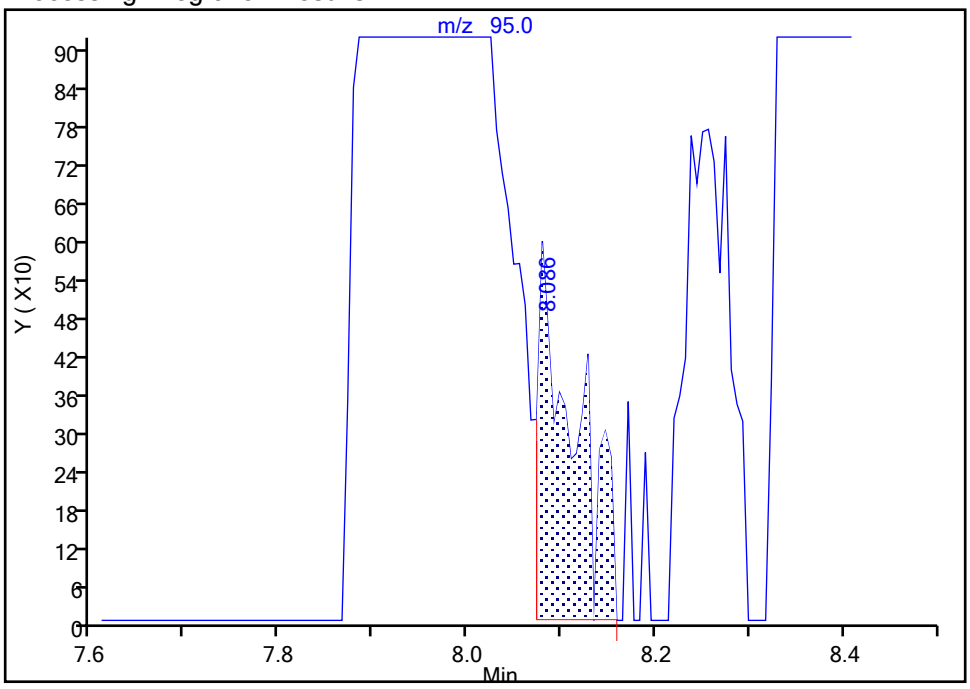
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

64 Trichloroethene, CAS: 79-01-6

Signal: 1

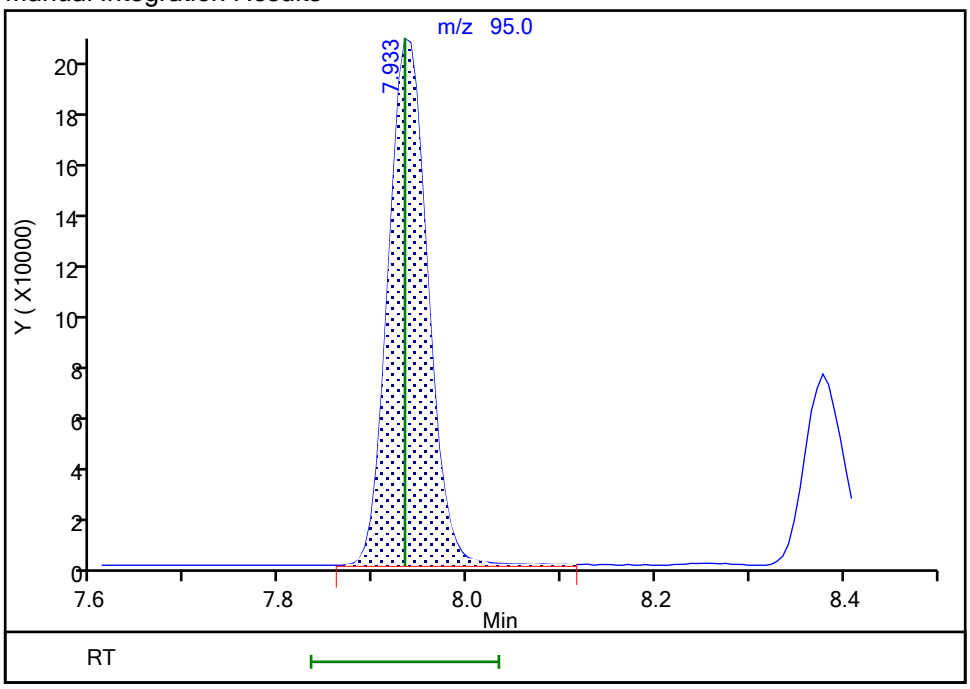
Processing Integration Results

RT: 8.09
Area: 1628
Amount: 10.000000
Amount Units: ug/l



Manual Integration Results

RT: 7.93
Area: 615027
Amount: 10.357052
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:39:44 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

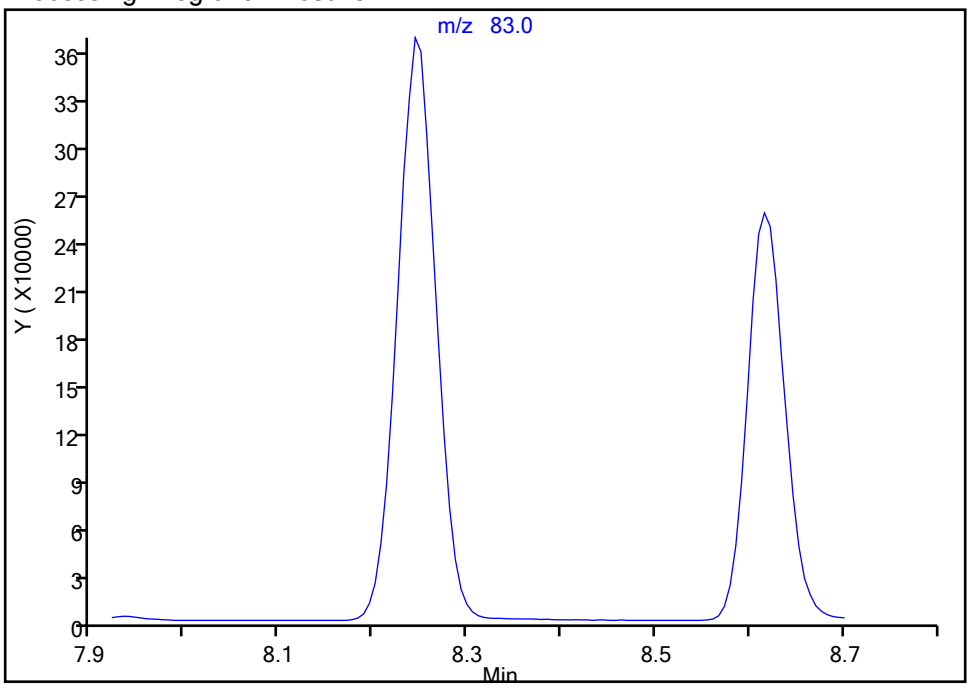
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

65 Methylcyclohexane, CAS: 108-87-2

Signal: 1

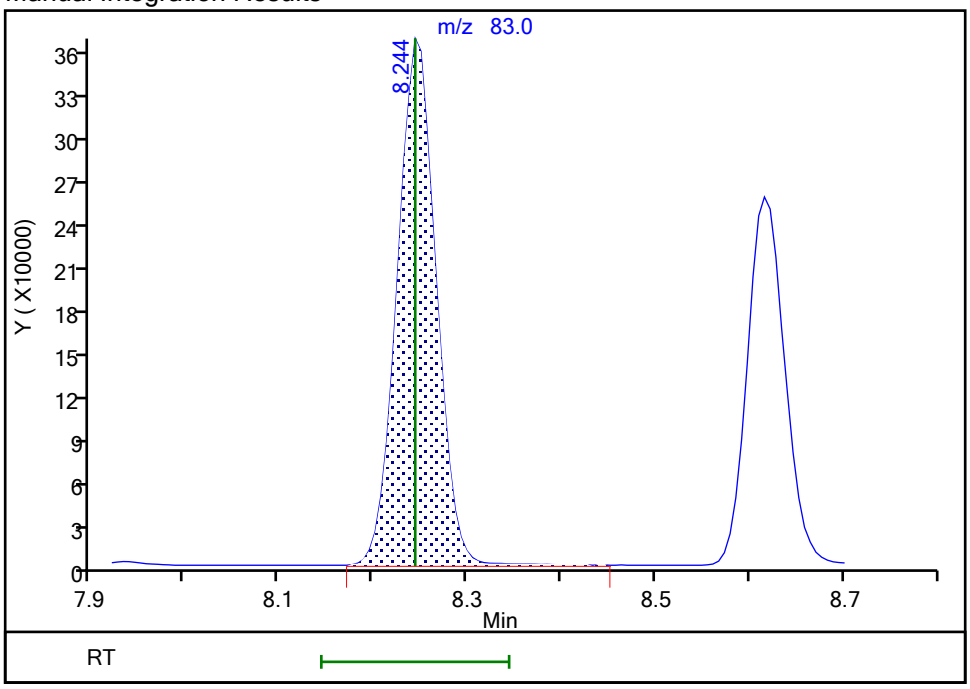
Not Detected
Expected RT: 8.24

Processing Integration Results



Manual Integration Results

RT: 8.24
Area: 1036558
Amount: 10.806063
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:39:47 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC

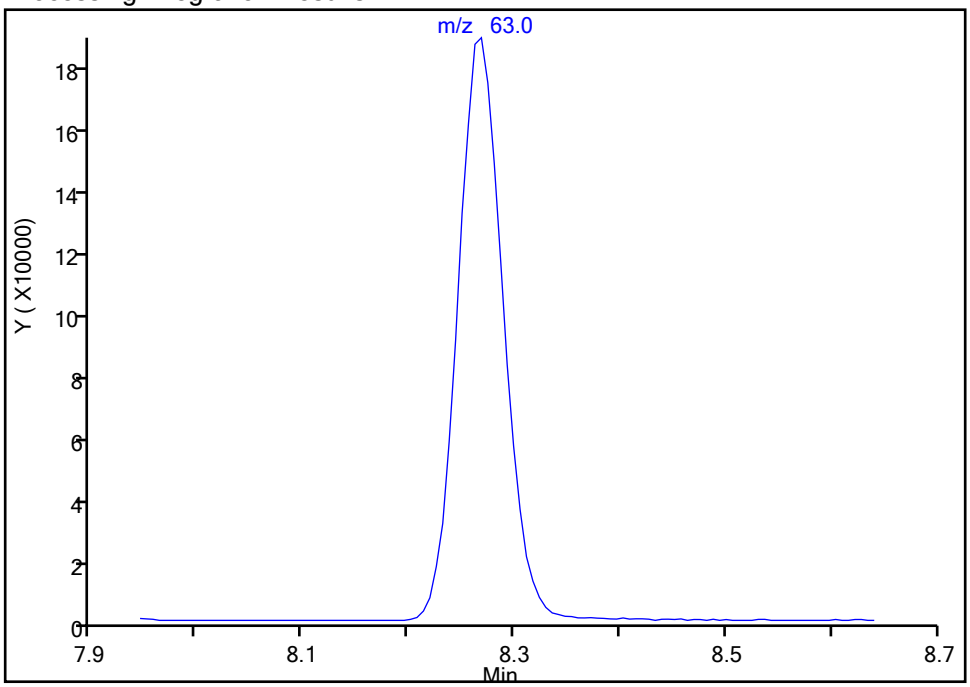
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

66 1,2-Dichloropropane, CAS: 78-87-5

Signal: 1

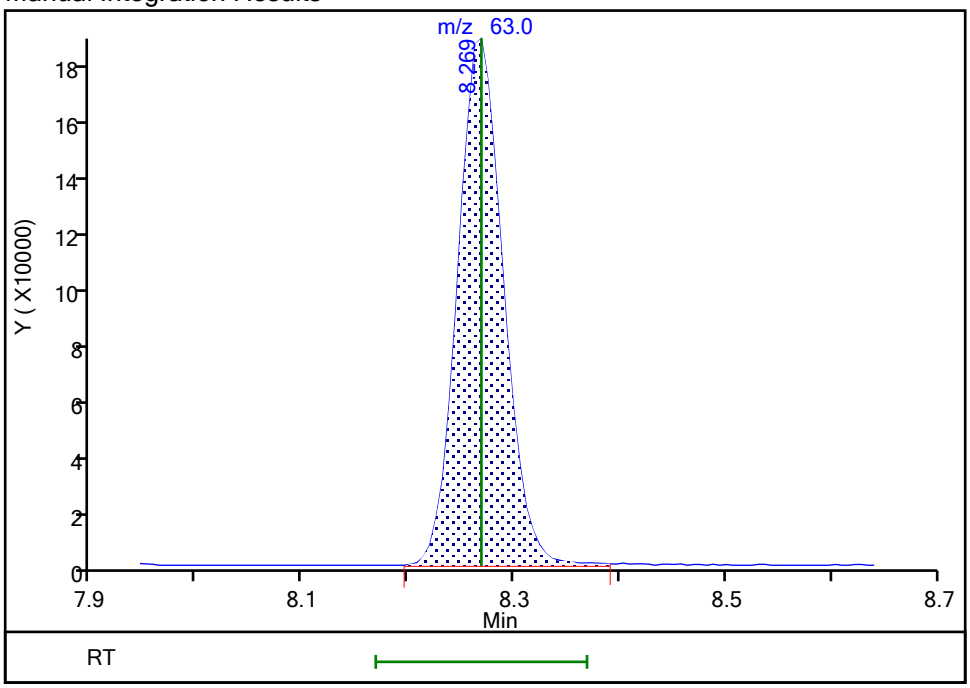
Not Detected
Expected RT: 8.27

Processing Integration Results



Manual Integration Results

RT: 8.27
Area: 544394
Amount: 10.315438
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:39:50 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

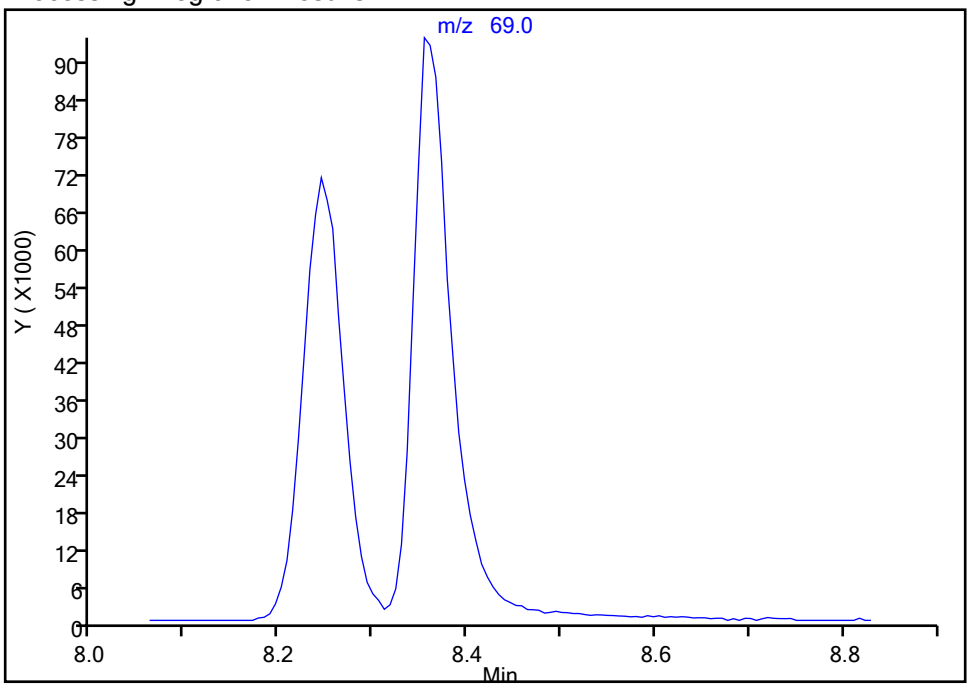
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

67 Methyl methacrylate, CAS: 80-62-6

Signal: 1

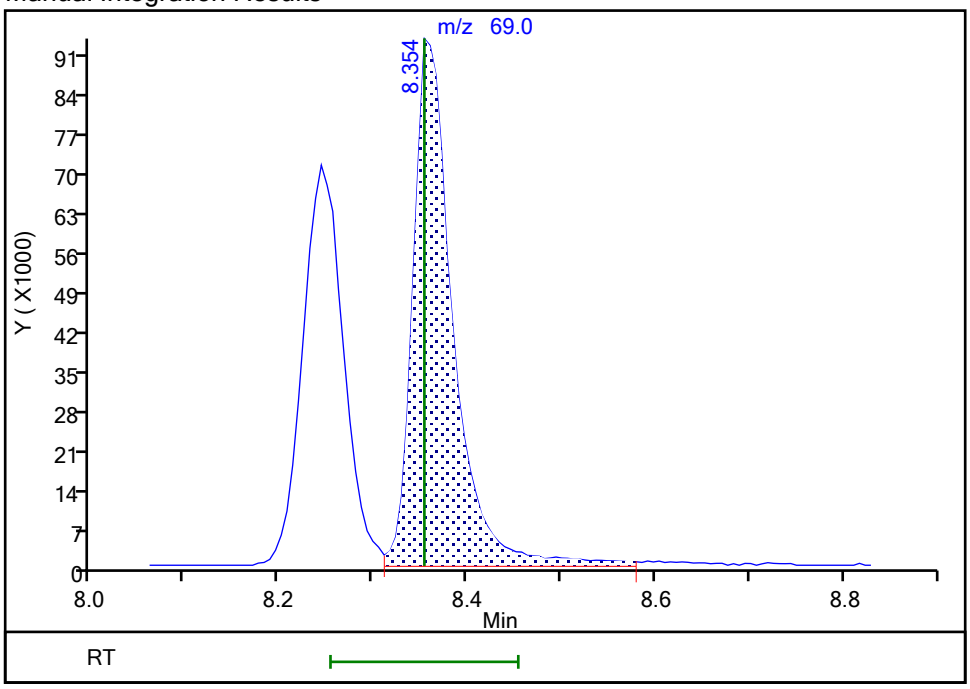
Not Detected
Expected RT: 8.35

Processing Integration Results



Manual Integration Results

RT: 8.35
Area: 276225
Amount: 11.142318
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:39:54 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

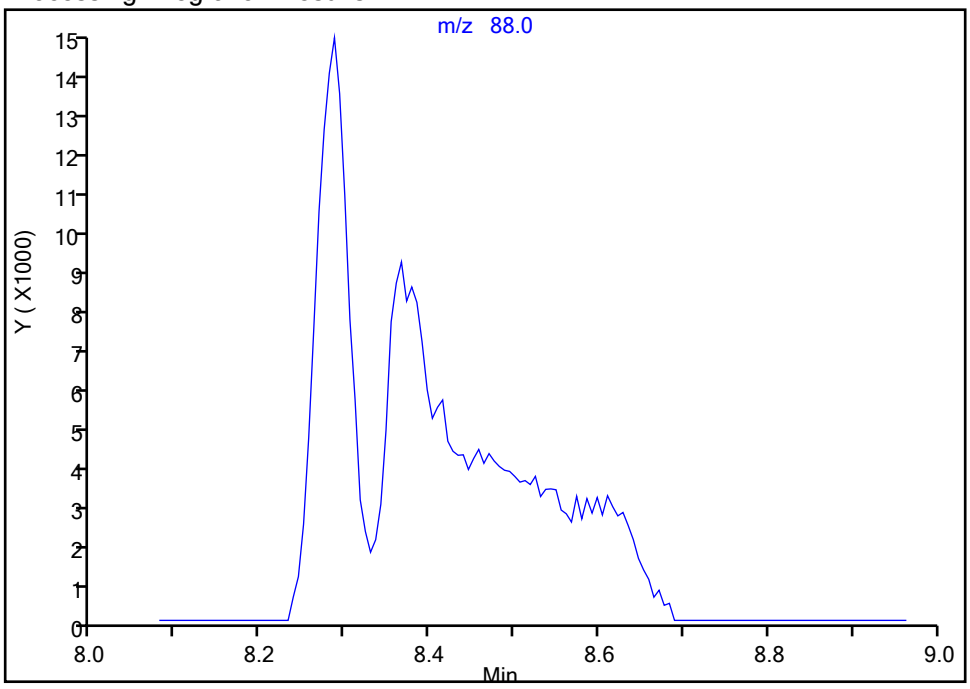
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

68 1,4-Dioxane, CAS: 123-91-1

Signal: 1

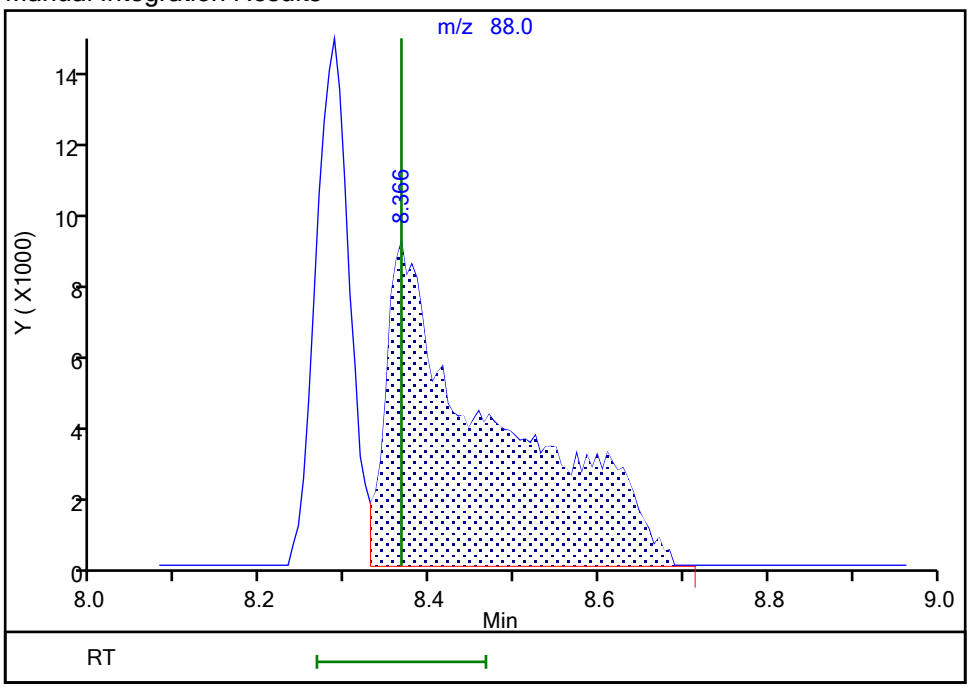
Not Detected
Expected RT: 8.37

Processing Integration Results



Manual Integration Results

RT: 8.37
Area: 79624
Amount: 552.1655
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:40:07 -04:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

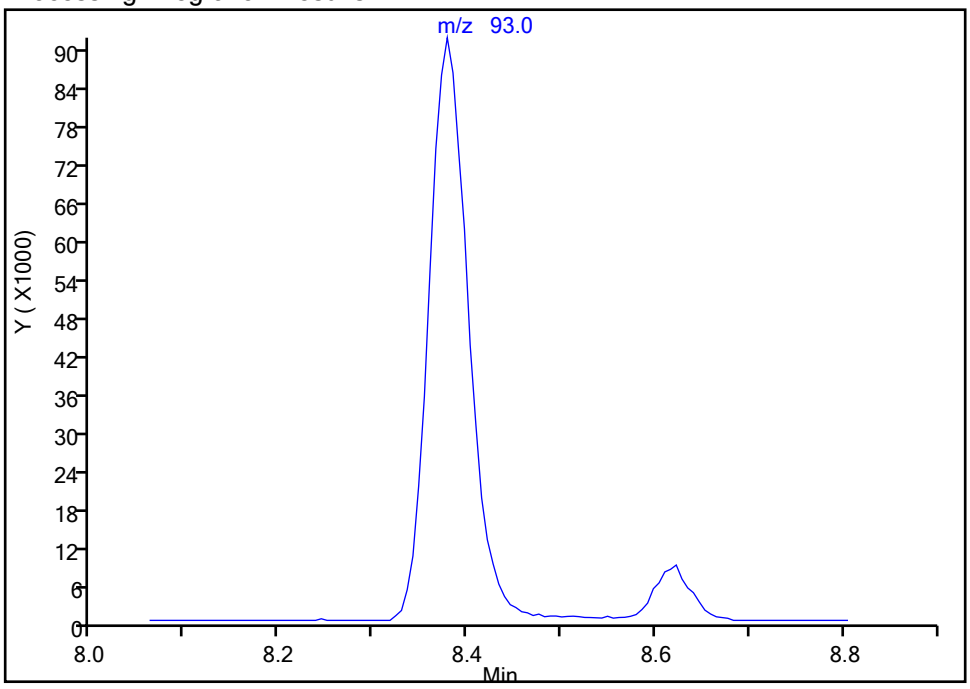
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

69 Dibromomethane, CAS: 74-95-3

Signal: 1

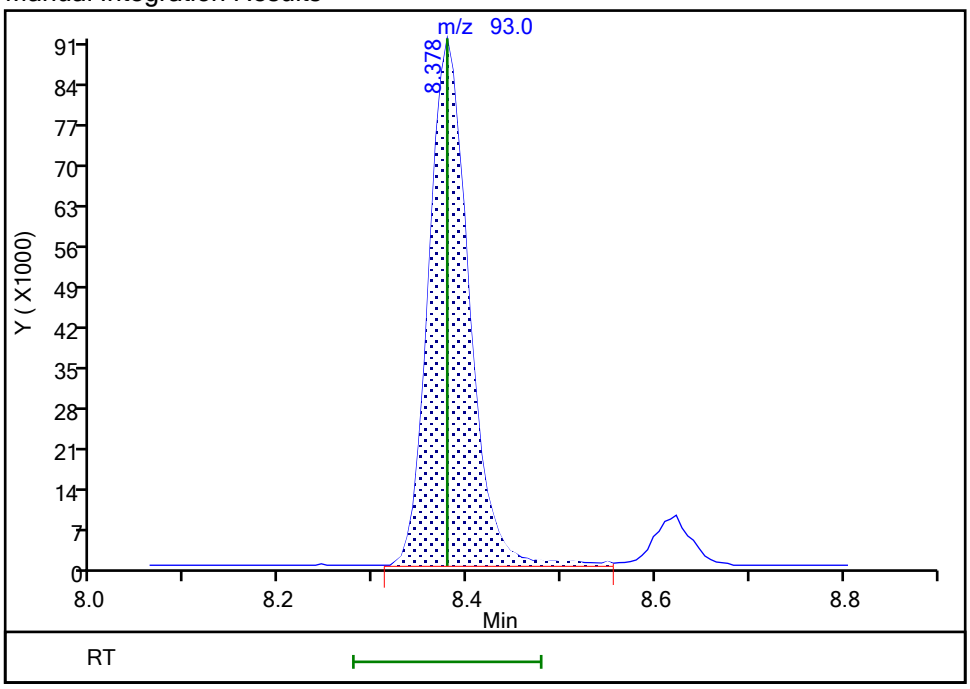
Not Detected
Expected RT: 8.38

Processing Integration Results



Manual Integration Results

RT: 8.38
Area: 271761
Amount: 10.273229
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:40:10 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

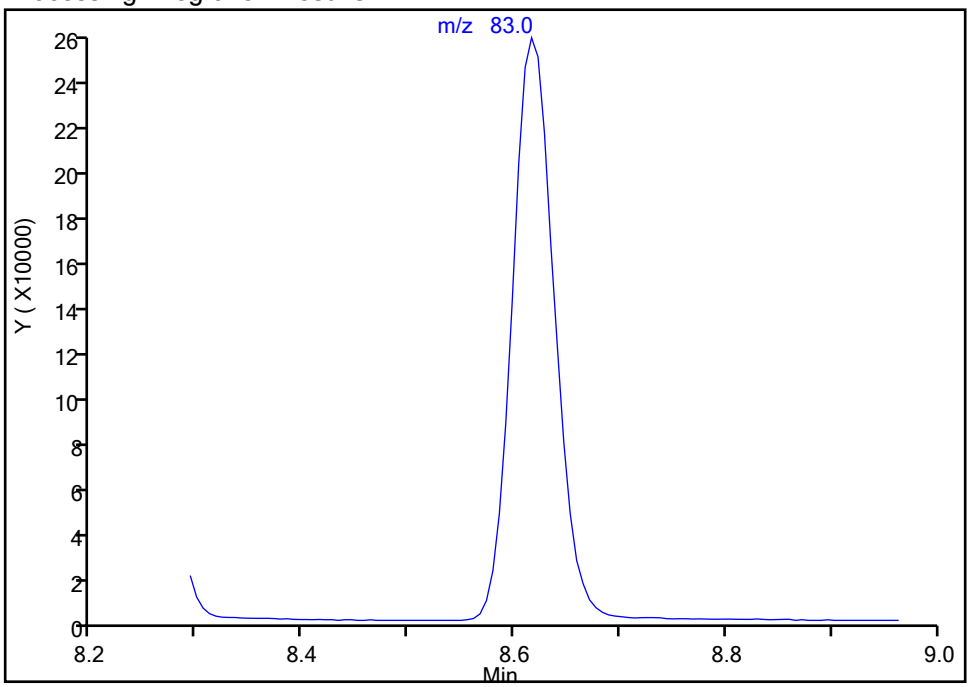
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

71 Dichlorobromomethane, CAS: 75-27-4

Signal: 1

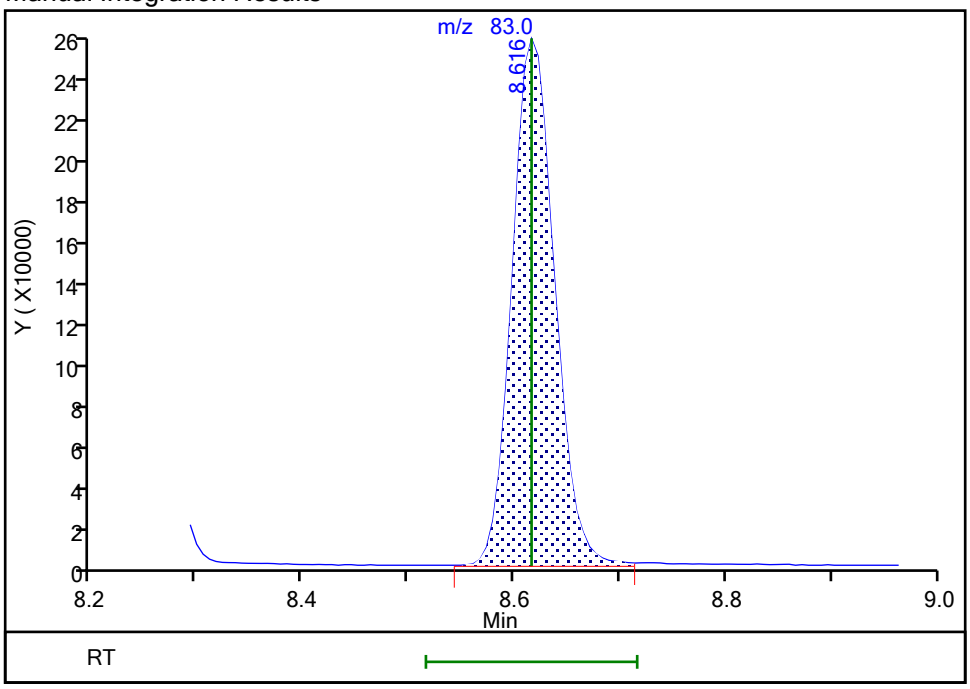
Not Detected
Expected RT: 8.62

Processing Integration Results



Manual Integration Results

RT: 8.62
Area: 705073
Amount: 10.279195
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:40:13 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

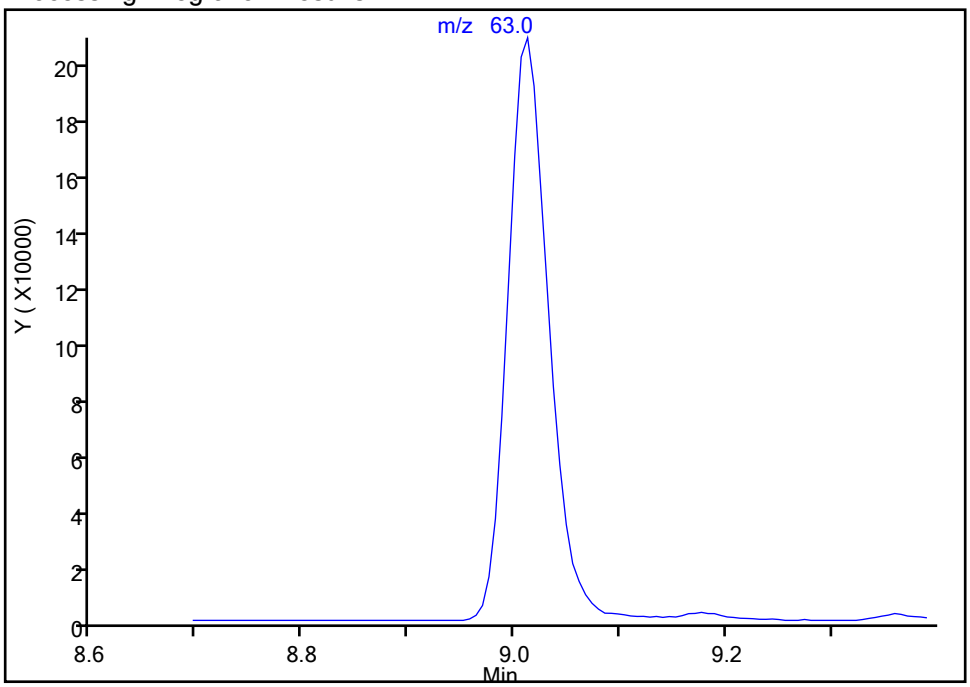
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

75 1-Bromo-2-chloroethane, CAS: 107-04-0

Signal: 1

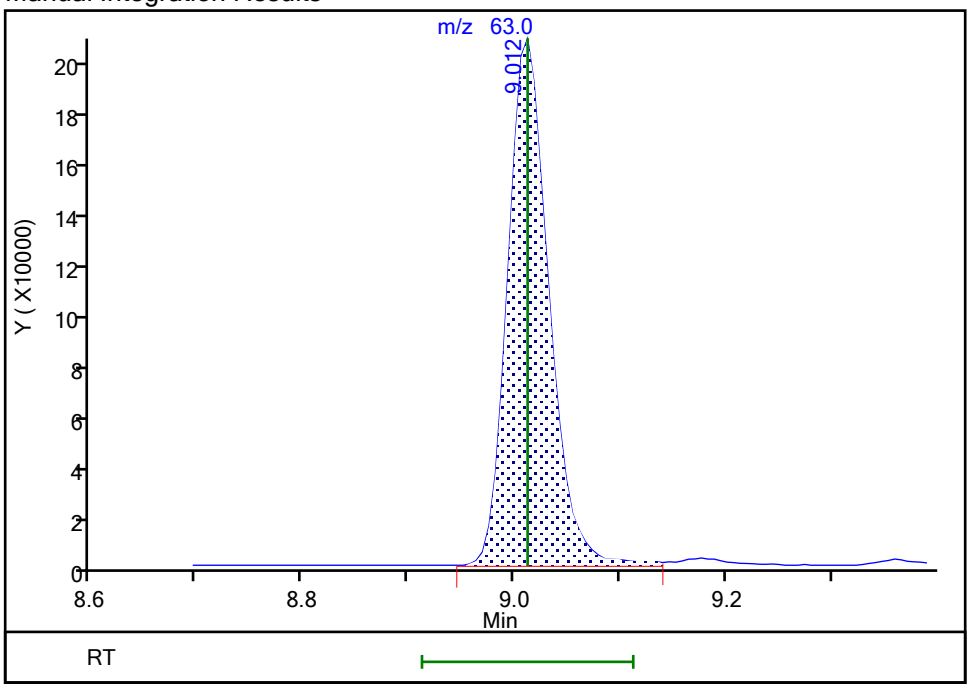
Not Detected
Expected RT: 9.01

Processing Integration Results



Manual Integration Results

RT: 9.01
Area: 557990
Amount: 10.370445
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:40:17 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

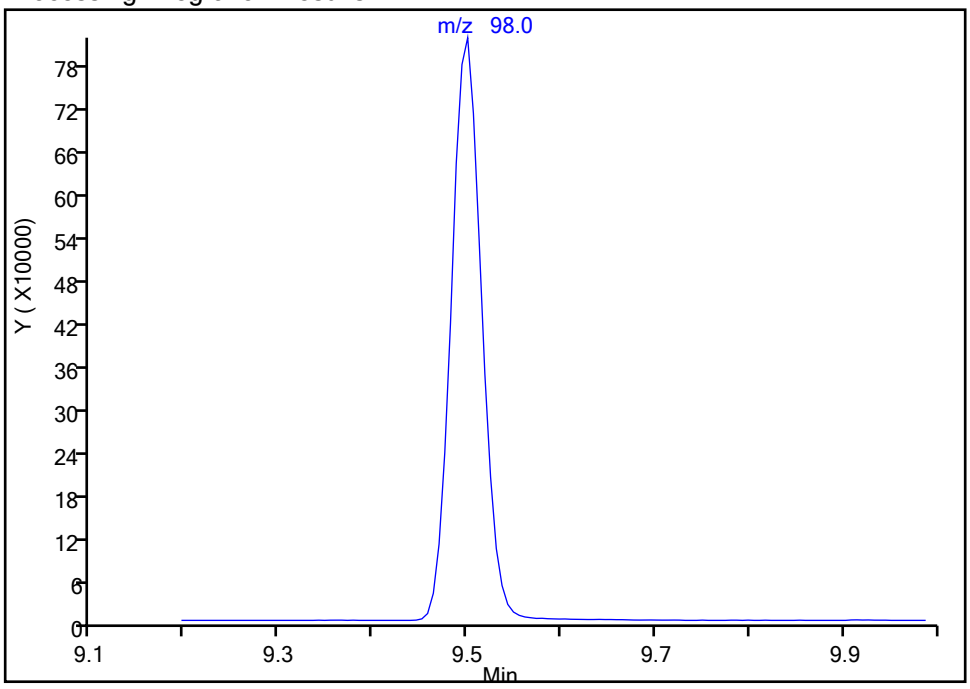
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

$ 78 Toluene-d8 (Surr), CAS: 2037-26-5

Signal: 1

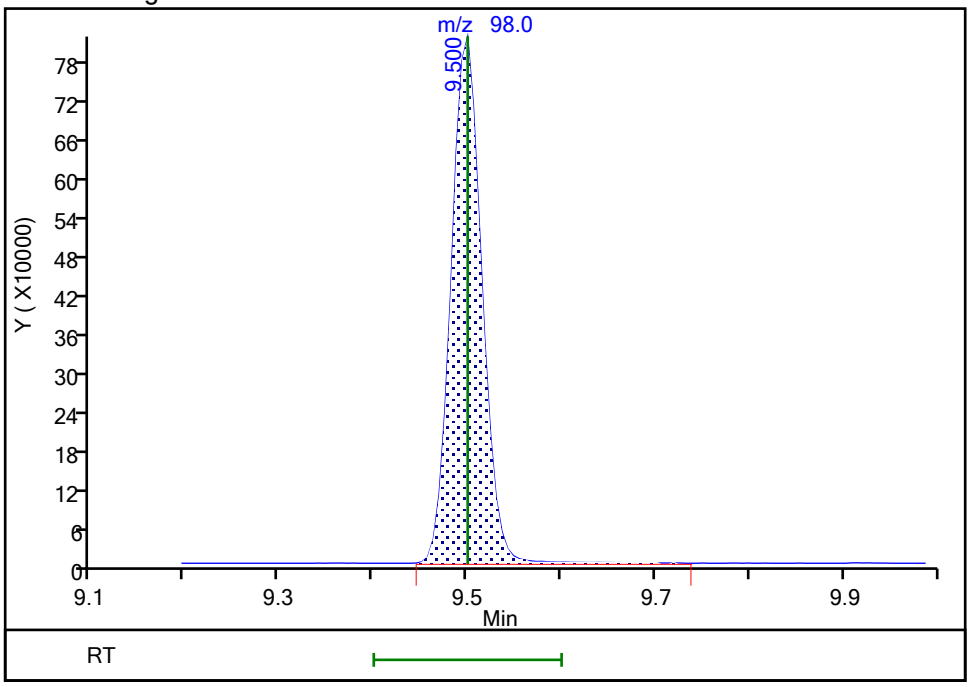
Not Detected
Expected RT: 9.50

Processing Integration Results



Manual Integration Results

RT: 9.50
Area: 1851132
Amount: 9.999085
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:35:47 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

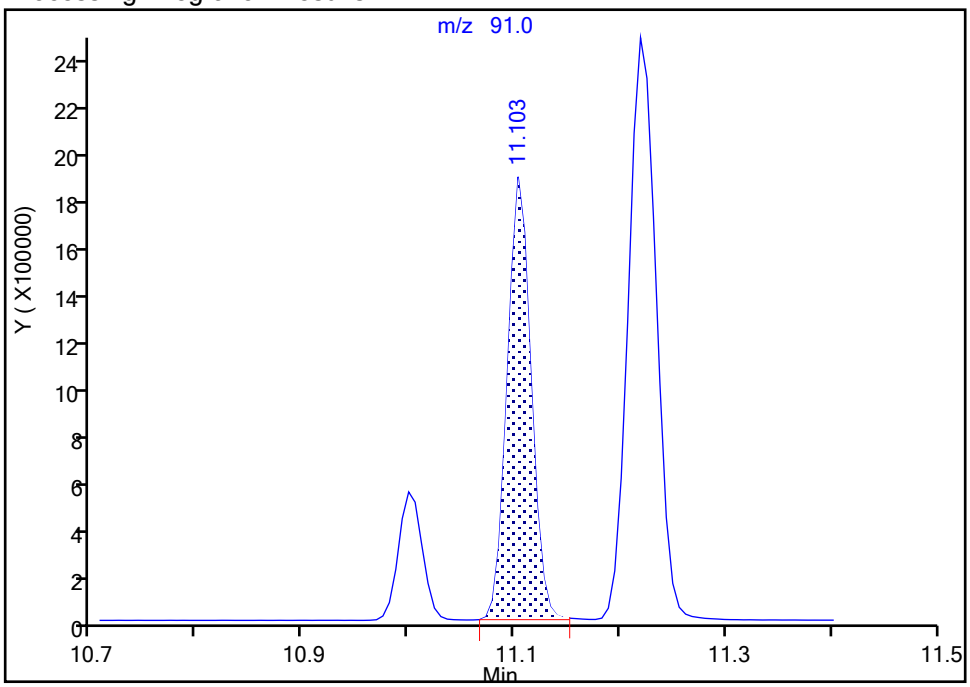
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

108 1-Chlorohexane, CAS: 544-10-5

Signal: 1

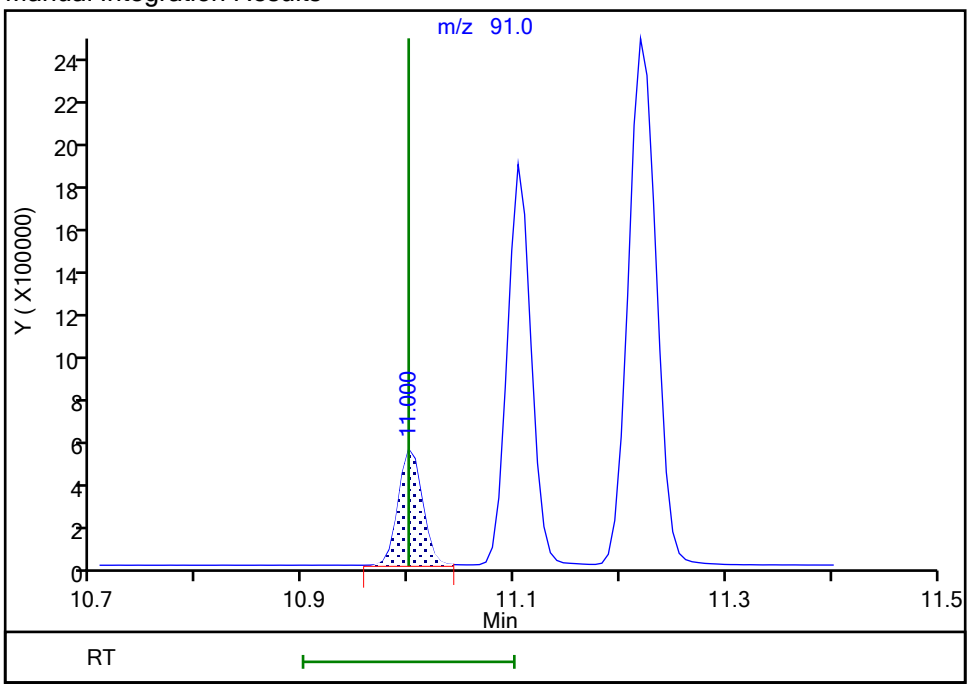
Processing Integration Results

RT: 11.10
Area: 2916569
Amount: 20.386606
Amount Units: ug/l



Manual Integration Results

RT: 11.00
Area: 850962
Amount: 10.012819
Amount Units: ug/l



Reviewer: DVW2, 22-Jun-2023 07:48:21 -04:00:00 (UTC)

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

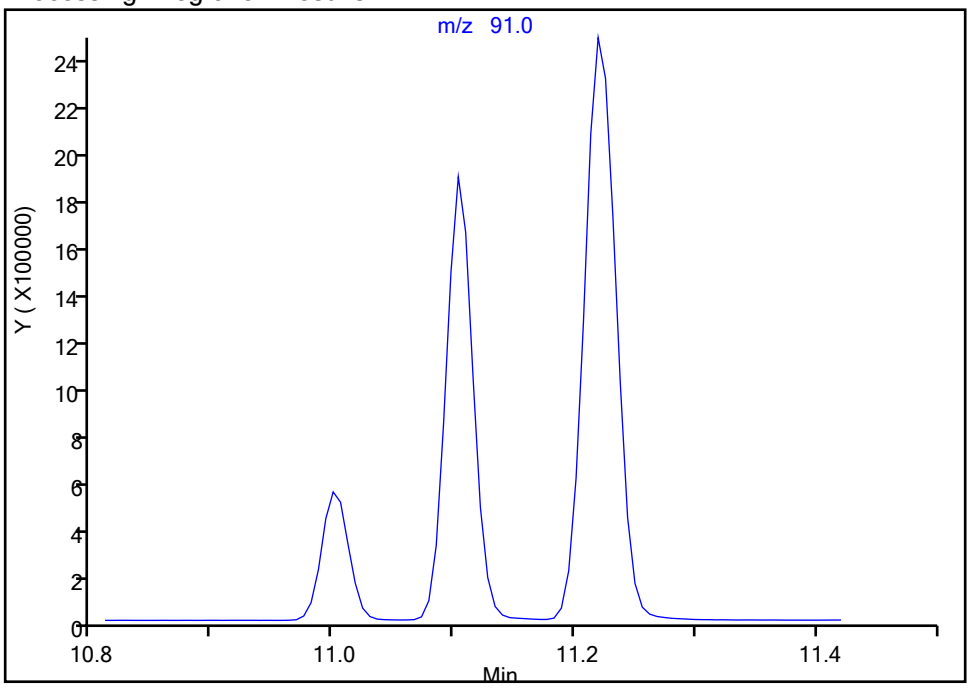
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

112 Ethylbenzene, CAS: 100-41-4

Signal: 1

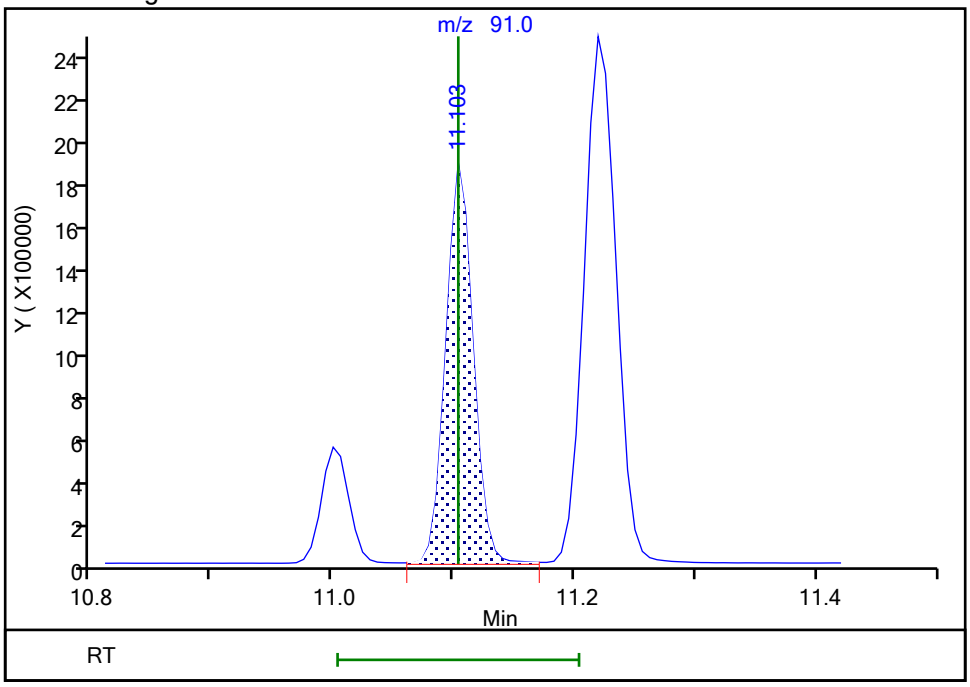
Not Detected
Expected RT: 11.10

Processing Integration Results



Manual Integration Results

RT: 11.10
Area: 2922252
Amount: 10.268049
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 15:39:03 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

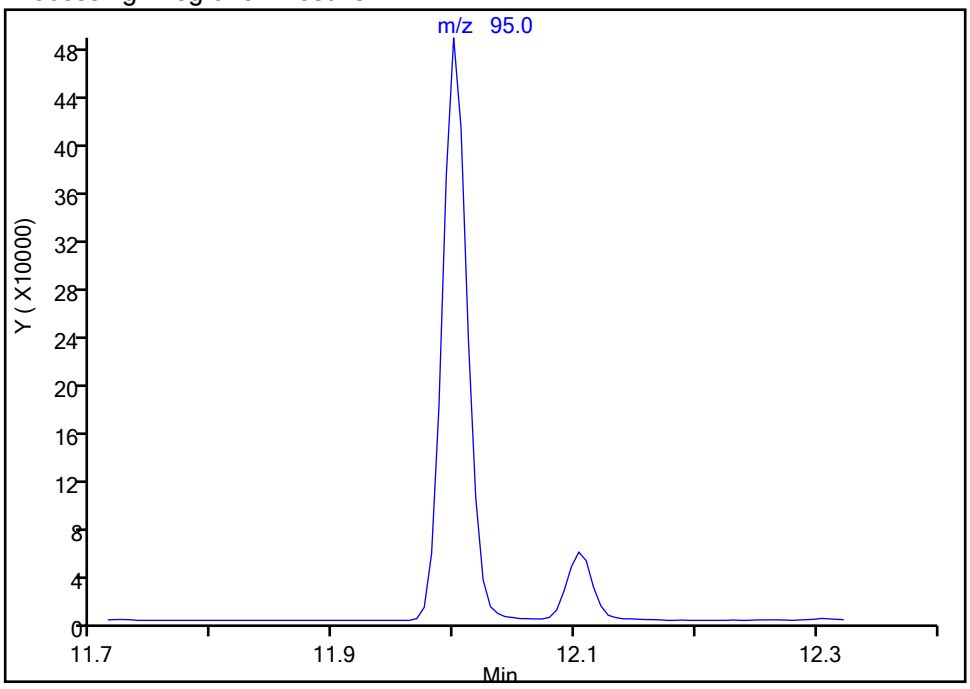
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

$ 120 4-Bromofluorobenzene (Surr), CAS: 460-00-4

Signal: 1

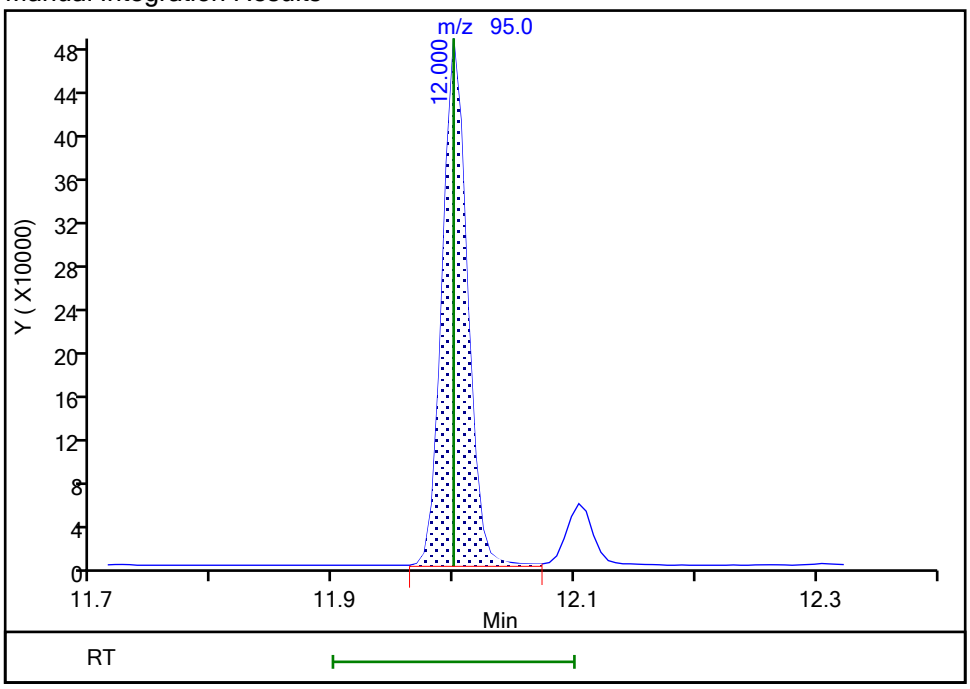
Not Detected
Expected RT: 12.00

Processing Integration Results



Manual Integration Results

RT: 12.00
Area: 698444
Amount: 10.012160
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:35:56 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

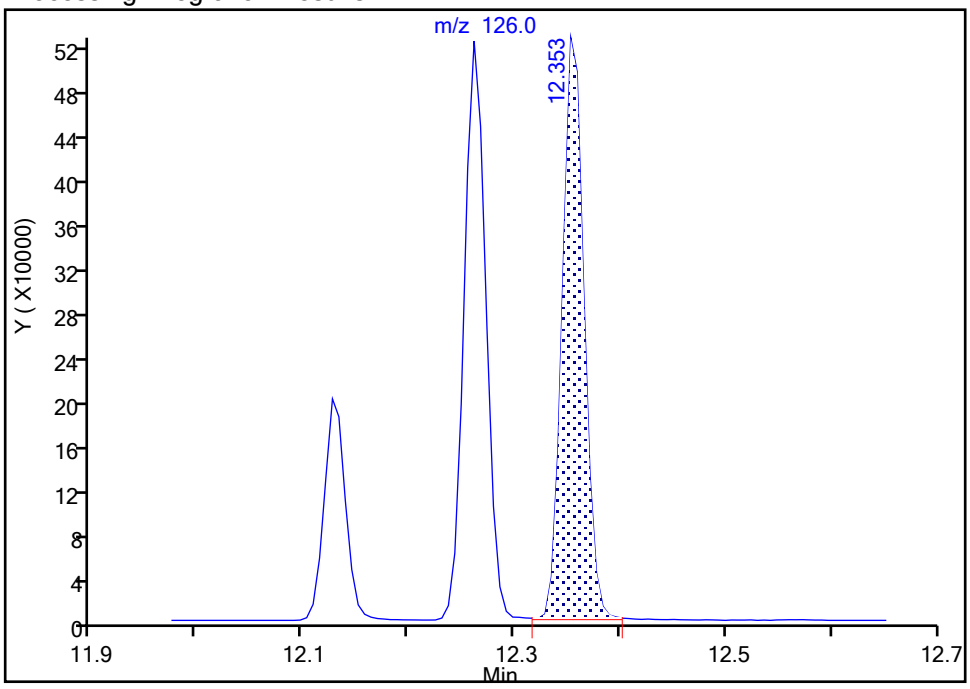
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

126 2-Chlorotoluene, CAS: 95-49-8

Signal: 1

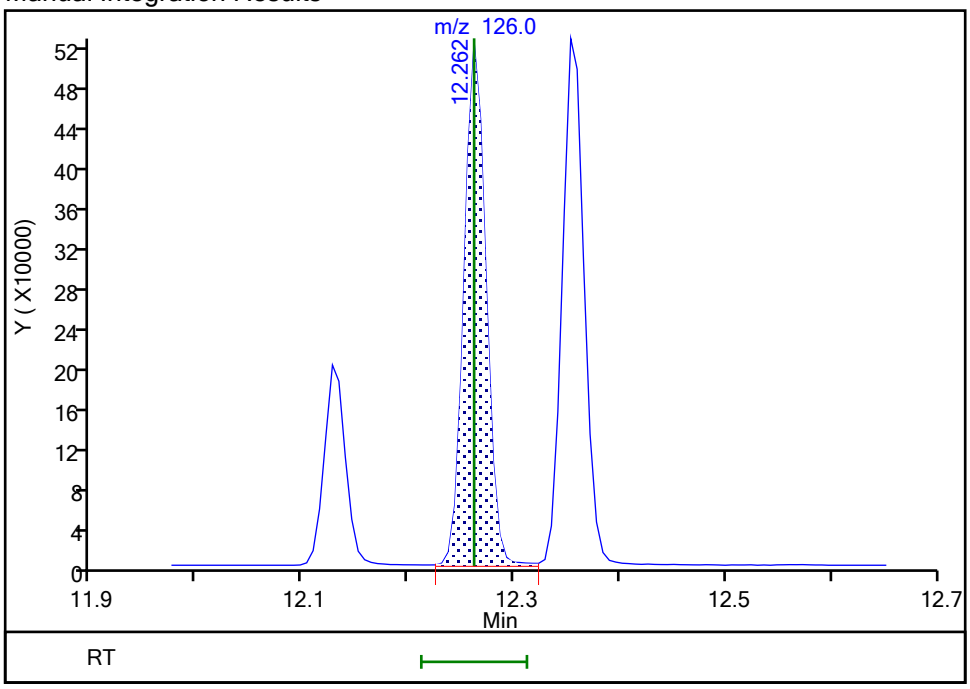
Processing Integration Results

RT: 12.35
Area: 763900
Amount: 10.352973
Amount Units: ug/l



Manual Integration Results

RT: 12.26
Area: 760985
Amount: 10.345897
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 15:39:09 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

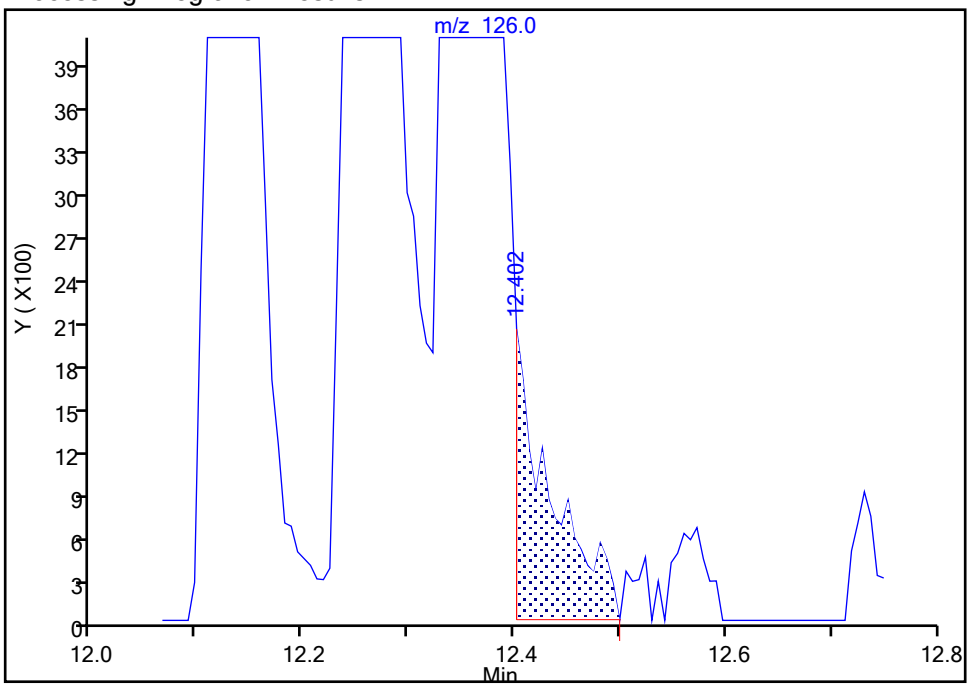
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

128 4-Chlorotoluene, CAS: 106-43-4

Signal: 1

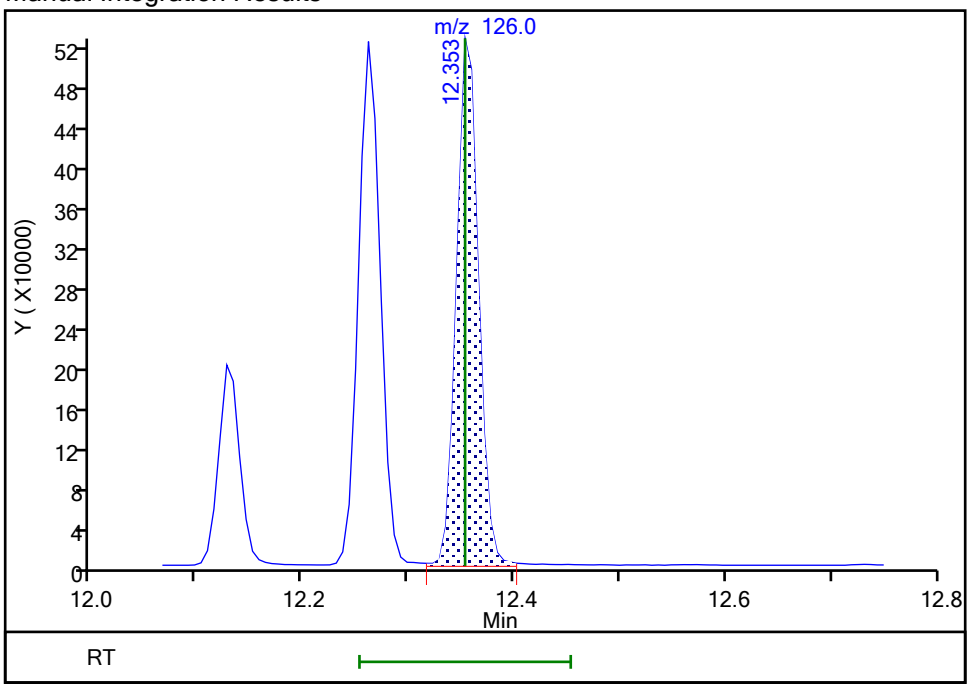
Processing Integration Results

RT: 12.40
Area: 4753
Amount: 0.088167
Amount Units: ug/l



Manual Integration Results

RT: 12.35
Area: 763897
Amount: 10.136216
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:40:51 -04:00:00 (UTC)

Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

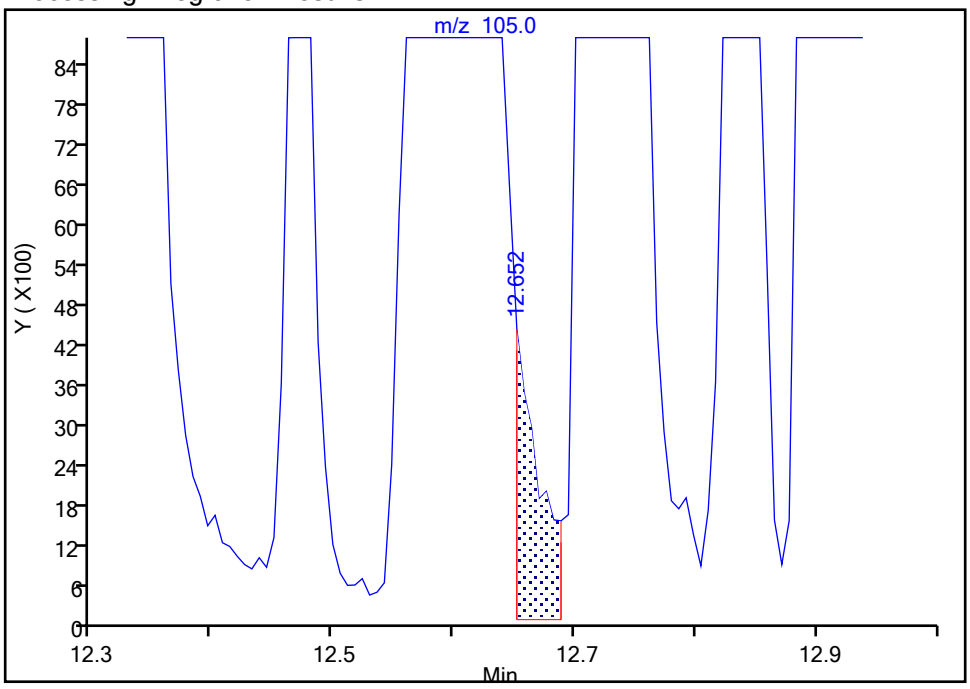
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

131 1,2,4-Trimethylbenzene, CAS: 95-63-6

Signal: 1

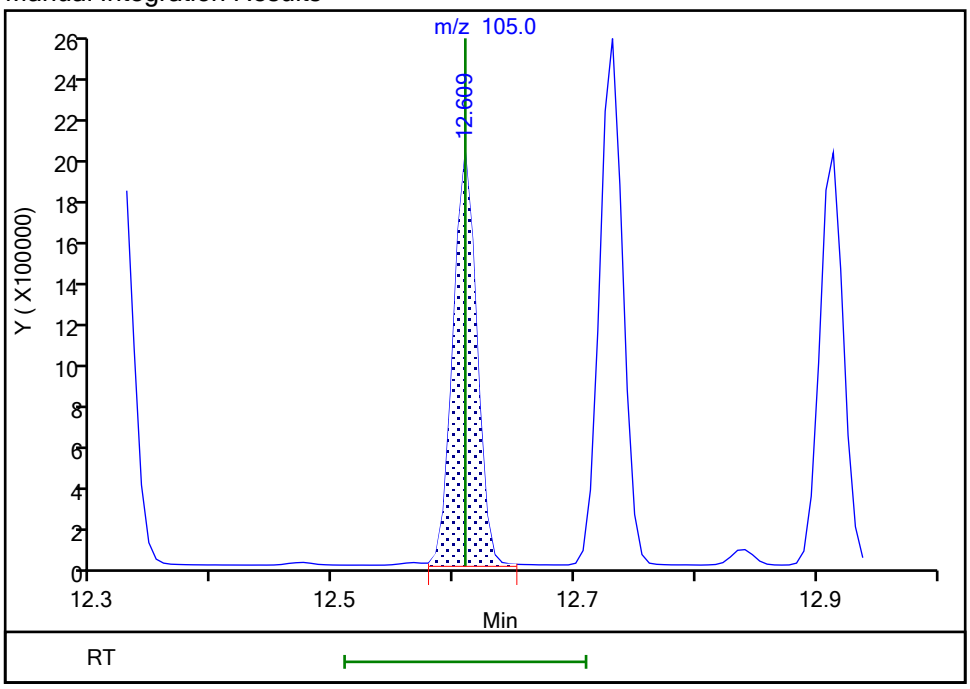
Processing Integration Results

RT: 12.65
Area: 6384
Amount: 0.034086
Amount Units: ug/l



Manual Integration Results

RT: 12.61
Area: 2718845
Amount: 10.317099
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:41:12 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

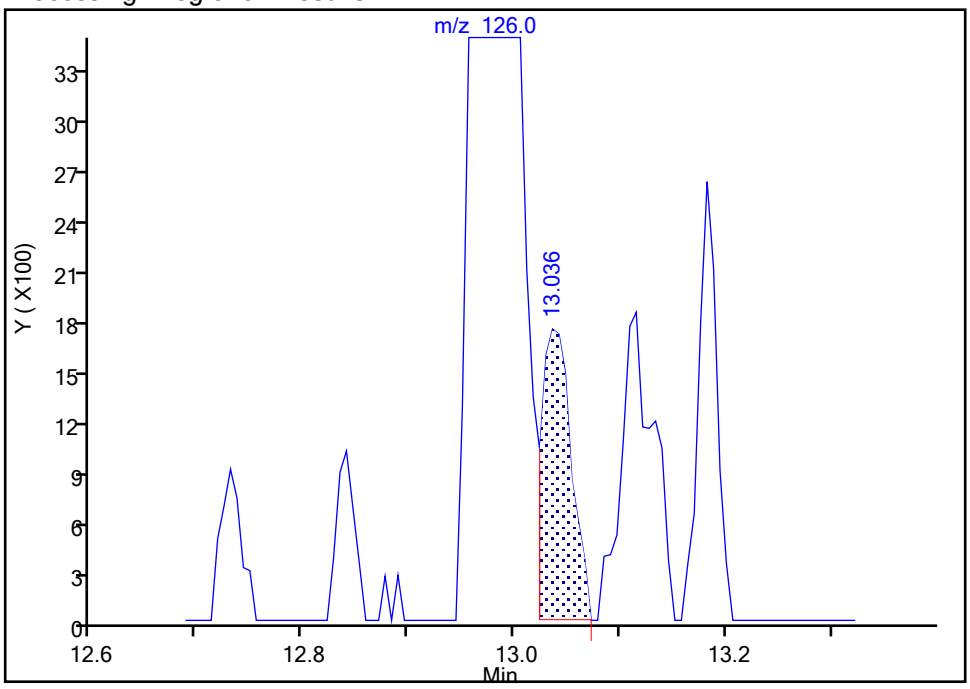
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

138 Benzyl chloride, CAS: 100-44-7

Signal: 1

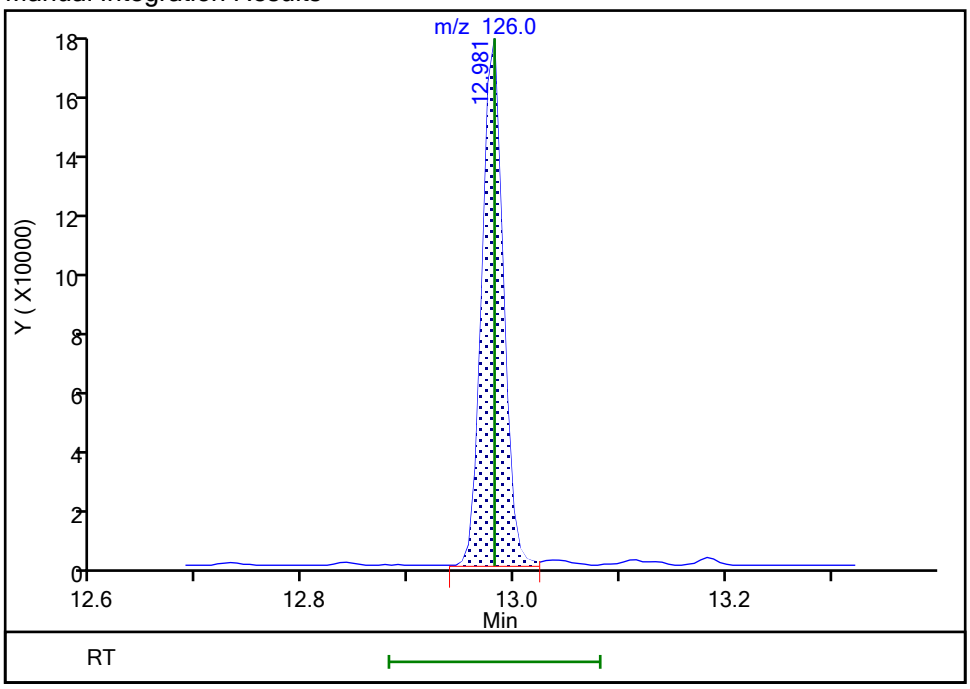
Processing Integration Results

RT: 13.04
Area: 3377
Amount: 0.271077
Amount Units: ug/l



Manual Integration Results

RT: 12.98
Area: 244410
Amount: 10.804047
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:41:22 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

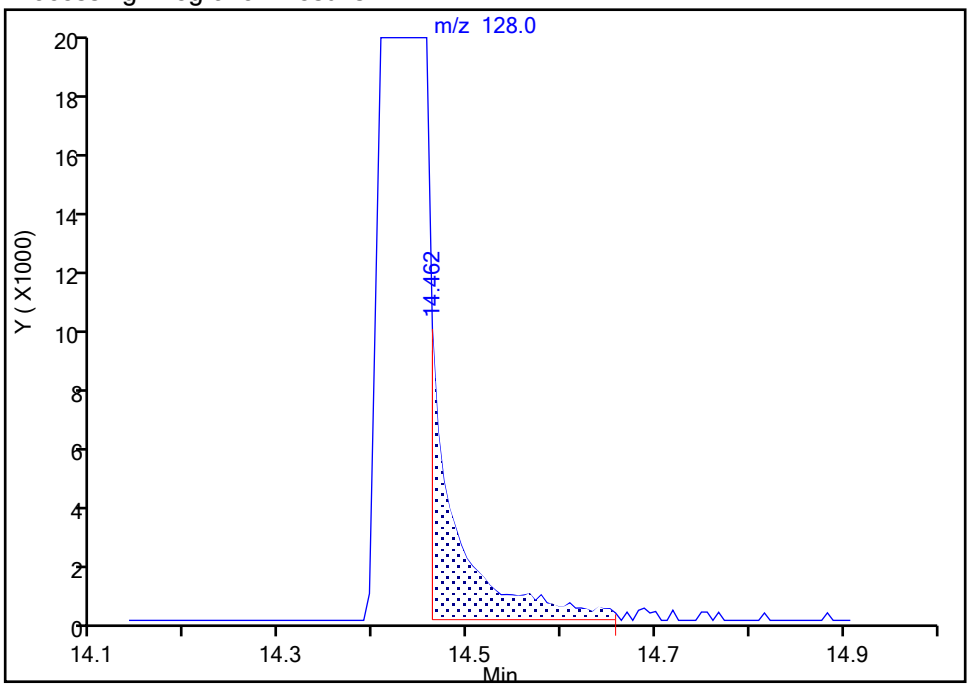
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

146 Naphthalene, CAS: 91-20-3

Signal: 1

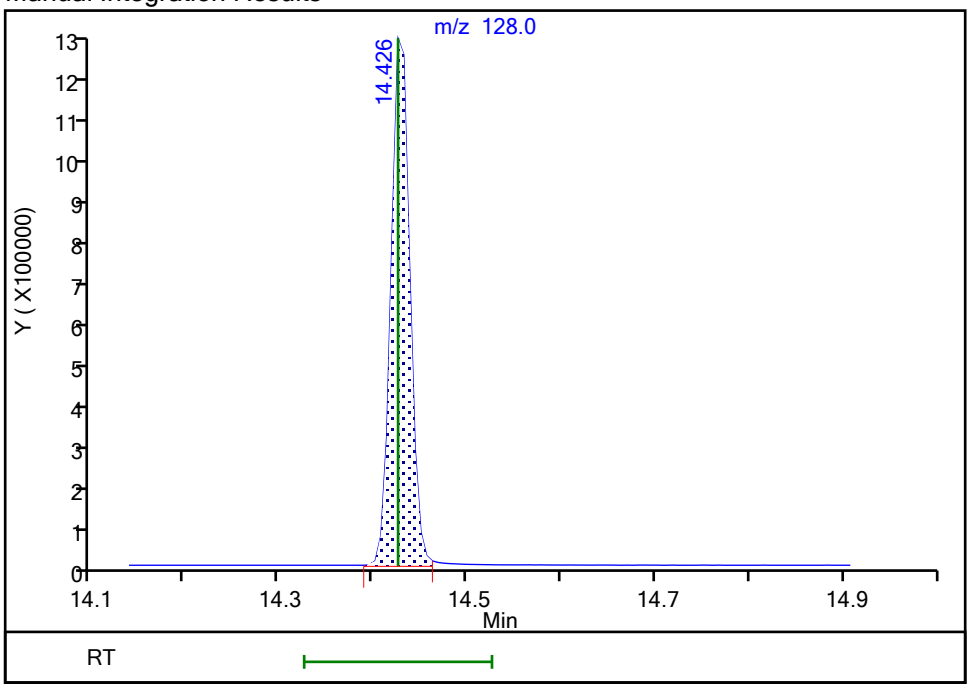
Processing Integration Results

RT: 14.46
Area: 19147
Amount: 0.166073
Amount Units: ug/l



Manual Integration Results

RT: 14.43
Area: 1695646
Amount: 10.383120
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:41:30 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D
Lims ID: IC std7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 19-Jun-2023 20:25:30 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0086929-019
Misc. Info.: LG 25.0
Operator ID: KNK41612 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 27-Jun-2023 12:30:46 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1687

First Level Reviewer: DVW2 Date: 21-Jun-2023 07:44:38

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.855	1.855	0.000	99	1664427	25.0	22.0	
4 Chloromethane	50	2.044	2.050	-0.006	99	1751882	25.0	22.8	
5 Vinyl chloride	62	2.148	2.160	-0.012	98	1731717	25.0	23.5	
6 Butadiene	39	2.154	2.160	-0.006	90	1556945	25.0	20.2	M
7 Bromomethane	94	2.459	2.465	-0.006	90	1304970	25.0	22.7	
8 Chloroethane	64	2.532	2.538	-0.006	99	1001229	25.0	22.7	
9 Dichlorofluoromethane	67	2.757	2.764	-0.007	97	2721094	25.0	22.1	
10 Trichlorofluoromethane	101	2.818	2.824	-0.006	98	2175547	25.0	23.2	
11 Ethyl ether	59	3.038	3.050	-0.012	89	946563	25.0	24.5	
13 1,2-Dichloro-1,1,2-trifluoroetha	67	3.129	3.142	-0.013	91	1511147	25.0	22.6	
14 Acrolein	56	3.196	3.209	-0.013	98	7153643	1250.0	1224.8	
15 1,1-Dichloroethene	96	3.330	3.337	-0.007	97	1241308	25.0	24.5	
16 Acetone	43	3.355	3.361	-0.006	100	1362907	250.0	211.3	
17 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.379	3.385	-0.006	90	1362883	25.0	25.3	
18 Iodomethane	142	3.519	3.526	-0.007	98	2625621	25.0	24.6	
19 Ethyl bromide	108	3.544	3.550	-0.006	98	1087944	25.0	24.5	
20 Carbon disulfide	76	3.617	3.629	-0.012	99	3467769	25.0	25.2	
23 Methyl acetate	43	3.751	3.757	-0.006	96	407475	25.0	25.6	M
24 3-Chloro-1-propene	41	3.775	3.782	-0.007	91	1915265	25.0	24.3	
25 Methylene Chloride	84	3.952	3.958	-0.006	89	1292711	25.0	24.1	
* 26 t-Butyl alcohol-d10 (IS)	65	3.977	3.977	0.000	95	134884	50.0	50.0	M
27 2-Methyl-2-propanol	59	4.099	4.093	0.006	99	1110969	500.0	432.9	
28 Acrylonitrile	53	4.269	4.282	-0.013	100	527652	62.5	67.3	
29 Methyl tert-butyl ether	73	4.342	4.342	0.000	94	3409123	25.0	24.5	
30 trans-1,2-Dichloroethene	96	4.342	4.355	-0.013	98	1385244	25.0	24.5	
31 Hexane	57	4.769	4.781	-0.012	91	1840079	25.0	24.9	
32 1,1-Dichloroethane	63	5.007	5.013	-0.006	96	2413824	25.0	25.0	
35 Isopropyl ether	45	5.068	5.074	-0.006	93	3889612	25.0	24.5	
36 2-Chloro-1,3-butadiene	53	5.117	5.123	-0.006	90	2022645	25.0	25.0	
37 Tert-butyl ethyl ether	59	5.617	5.623	-0.006	96	3706375	25.0	24.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
38 2-Butanone (MEK)	43	5.806	5.812	-0.006	99	2912203	250.0	234.3	
39 cis-1,2-Dichloroethene	96	5.848	5.854	-0.006	80	1543889	25.0	24.6	
40 2,2-Dichloropropane	77	5.860	5.867	-0.007	86	2153694	25.0	24.7	
43 Propionitrile	54	5.891	5.891	0.000	99	1642296	500.0	499.5	
45 Methacrylonitrile	67	6.110	6.110	0.000	91	3198256	250.0	246.5	
S 41 1,2-Dichloroethene, Total	100				0			49.1	
46 Chlorobromomethane	128	6.184	6.190	-0.006	86	693916	25.0	24.3	
47 Tetrahydrofuran	71	6.196	6.196	0.000	77	469929	125.0	114.9	
48 Chloroform	83	6.336	6.342	-0.006	93	2439280	25.0	24.4	
$ 49 Dibromofluoromethane (Surr)	113	6.549	6.555	-0.006	95	482075	10.0	9.92	
50 1,1,1-Trichloroethane	97	6.562	6.568	-0.006	98	2318413	25.0	24.9	
51 Cyclohexane	56	6.665	6.671	-0.006	88	2230992	25.0	25.2	
54 Carbon tetrachloride	117	6.775	6.781	-0.006	95	2152417	25.0	25.9	
53 1,1-Dichloropropene	75	6.775	6.781	-0.006	95	1881849	25.0	25.3	
55 Isobutyl alcohol	41	6.933	6.940	-0.007	95	965364	1250.0	1058.9	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.007	7.013	-0.006	78	92867	10.0	9.64	
57 Benzene	78	7.043	7.043	0.000	95	5552169	25.0	24.9	
58 1,2-Dichloroethane	62	7.110	7.116	-0.006	98	1462742	25.0	24.2	
60 Tert-amyl methyl ether	73	7.244	7.244	0.000	98	3439411	25.0	24.5	
* 61 Fluorobenzene (IS)	96	7.452	7.452	0.000	96	1891215	10.0	10.0	
62 n-Heptane	43	7.470	7.470	0.000	89	1798135	25.0	25.3	
63 n-Butanol	56	7.830	7.836	-0.006	86	1598692	2187.5	2282.9	
64 Trichloroethene	95	7.933	7.933	0.000	96	1562411	25.0	25.1	
65 Methylcyclohexane	83	8.244	8.244	0.000	91	2562276	25.0	25.5	
66 1,2-Dichloropropane	63	8.262	8.269	-0.007	97	1384198	25.0	25.1	
67 Methyl methacrylate	69	8.354	8.354	0.000	87	695290	25.0	27.2	
68 1,4-Dioxane	88	8.366	8.366	0.000	29	191965	1250.0	1290.7	M
69 Dibromomethane	93	8.378	8.378	0.000	91	678044	25.0	24.5	
71 Dichlorobromomethane	83	8.616	8.616	0.000	99	1814784	25.0	25.3	
72 2-Nitropropane	41	8.884	8.884	0.000	98	979651	125.0	117.2	
75 1-Bromo-2-chloroethane	63	9.012	9.012	0.000	98	1391897	25.0	24.7	
76 cis-1,3-Dichloropropene	75	9.177	9.177	0.000	97	2232649	25.0	25.9	
77 4-Methyl-2-pentanone (MIBK)	43	9.360	9.360	0.000	95	8166235	250.0	244.8	
$ 78 Toluene-d8 (Surr)	98	9.500	9.500	0.000	93	1923611	10.0	9.92	
79 Toluene	92	9.573	9.579	-0.006	99	3812060	25.0	24.9	
97 trans-1,3-Dichloropropene	75	9.847	9.848	-0.001	91	1881067	25.0	26.0	
99 Ethyl methacrylate	69	9.915	9.915	0.000	88	1490629	25.0	25.0	
100 1,1,2-Trichloroethane	97	10.055	10.055	0.000	90	1028167	25.0	23.8	
S 98 1,3-Dichloropropene, Total	100				0			52.0	
101 Tetrachloroethene	166	10.146	10.146	0.000	98	2002051	25.0	25.1	
102 1,3-Dichloropropane	76	10.219	10.219	0.000	89	1673377	25.0	24.5	
103 2-Hexanone	43	10.274	10.274	0.000	95	5838914	250.0	247.4	
105 Chlorodibromomethane	129	10.439	10.439	0.000	89	1452583	25.0	25.8	
106 Ethylene Dibromide	107	10.549	10.549	0.000	99	1012515	25.0	24.9	
* 107 Chlorobenzene-d5 (IS)	117	10.987	10.988	-0.001	84	1508853	10.0	10.0	
108 1-Chlorohexane	91	11.000	11.000	0.000	95	2153392	25.0	24.2	a
109 Chlorobenzene	112	11.018	11.018	0.000	97	4440532	25.0	24.8	
111 1,1,1,2-Tetrachloroethane	131	11.097	11.097	0.000	96	1601843	25.0	25.1	
112 Ethylbenzene	91	11.103	11.103	0.000	98	7384442	25.0	24.8	a
113 m-Xylene & p-Xylene	106	11.219	11.219	0.000	93	6014911	50.0	49.9	
S 110 Xylenes, Total	106				0			74.7	
114 o-Xylene	106	11.554	11.554	0.000	96	2958784	25.0	24.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
115 Styrene	104	11.567	11.567	0.000	95	4890581	25.0	25.5	
116 Bromoform	173	11.725	11.725	0.000	99	975567	25.0	26.8	
117 Isopropylbenzene	105	11.853	11.859	-0.006	95	7684471	25.0	24.9	
$ 120 4-Bromofluorobenzene (Surr)	95	11.999	12.000	-0.001	96	725457	10.0	9.92	
121 1,1,2,2-Tetrachloroethane	83	12.103	12.103	0.000	93	1308898	25.0	24.0	
122 Bromobenzene	156	12.115	12.115	0.000	95	1971522	25.0	25.0	
123 trans-1,4-Dichloro-2-butene	53	12.128	12.128	0.000	90	3165888	250.0	252.0	
124 1,2,3-Trichloropropane	110	12.146	12.146	0.000	79	365750	25.0	23.9	
125 N-Propylbenzene	91	12.188	12.189	-0.001	98	8784621	25.0	25.1	
126 2-Chlorotoluene	126	12.262	12.262	0.000	98	1917179	25.0	25.1	a
127 1,3,5-Trimethylbenzene	105	12.323	12.323	0.000	94	6676624	25.0	25.1	
128 4-Chlorotoluene	126	12.353	12.353	0.000	95	1951600	25.0	25.0	a
129 tert-Butylbenzene	134	12.566	12.566	0.000	92	1627291	25.0	25.4	
130 Pentachloroethane	167	12.597	12.597	0.000	91	1326828	25.0	26.8	
131 1,2,4-Trimethylbenzene	105	12.609	12.609	0.000	97	6868217	25.0	25.1	
132 sec-Butylbenzene	105	12.731	12.731	0.000	94	8486591	25.0	25.1	
133 1,3-Dichlorobenzene	146	12.829	12.829	0.000	99	3937722	25.0	25.5	
134 4-Isopropyltoluene	119	12.841	12.841	0.000	96	7679357	25.0	25.4	
* 135 1,4-Dichlorobenzene-d4	152	12.883	12.884	-0.001	92	917393	10.0	10.0	
136 1,4-Dichlorobenzene	146	12.902	12.902	0.000	95	3772911	25.0	24.8	
137 1,2,3-Trimethylbenzene	120	12.914	12.914	0.000	98	3097874	25.0	25.1	
138 Benzyl chloride	126	12.981	12.981	0.000	98	627829	25.0	26.8	
139 n-Butylbenzene	92	13.133	13.133	0.000	97	3646359	25.0	27.0	
140 1,2-Dichlorobenzene	146	13.158	13.158	0.000	99	3615183	25.0	25.0	
142 1,2-Dibromo-3-Chloropropane	155	13.700	13.700	0.000	92	237783	25.0	26.6	
143 1,3,5-Trichlorobenzene	180	13.828	13.828	0.000	98	3136365	25.0	27.1	
144 1,2,4-Trichlorobenzene	180	14.249	14.249	0.000	94	2595192	25.0	27.9	
145 Hexachlorobutadiene	225	14.334	14.334	0.000	95	1241765	25.0	27.4	
146 Naphthalene	128	14.426	14.426	0.000	97	4430802	25.0	26.2	
147 1,2,3-Trichlorobenzene	180	14.572	14.572	0.000	96	2127625	25.0	27.3	
155 2-Methylnaphthalene	142		0.000				ND	ND	
156 p-Diethylbenzene	1		0.000				ND	ND	
161 Pentane	43		0.000				ND	ND	
150 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
165 Isopropyl alcohol	45		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_LL_#1_826_00081	Amount Added: 25.00	Units: uL	
MSV_LL_#2_826_00093	Amount Added: 25.00	Units: uL	
MSV_LL_GAS826_00156	Amount Added: 25.00	Units: uL	
MSV_LLcentISS_00007	Amount Added: 5.00	Units: uL	Run Reagent

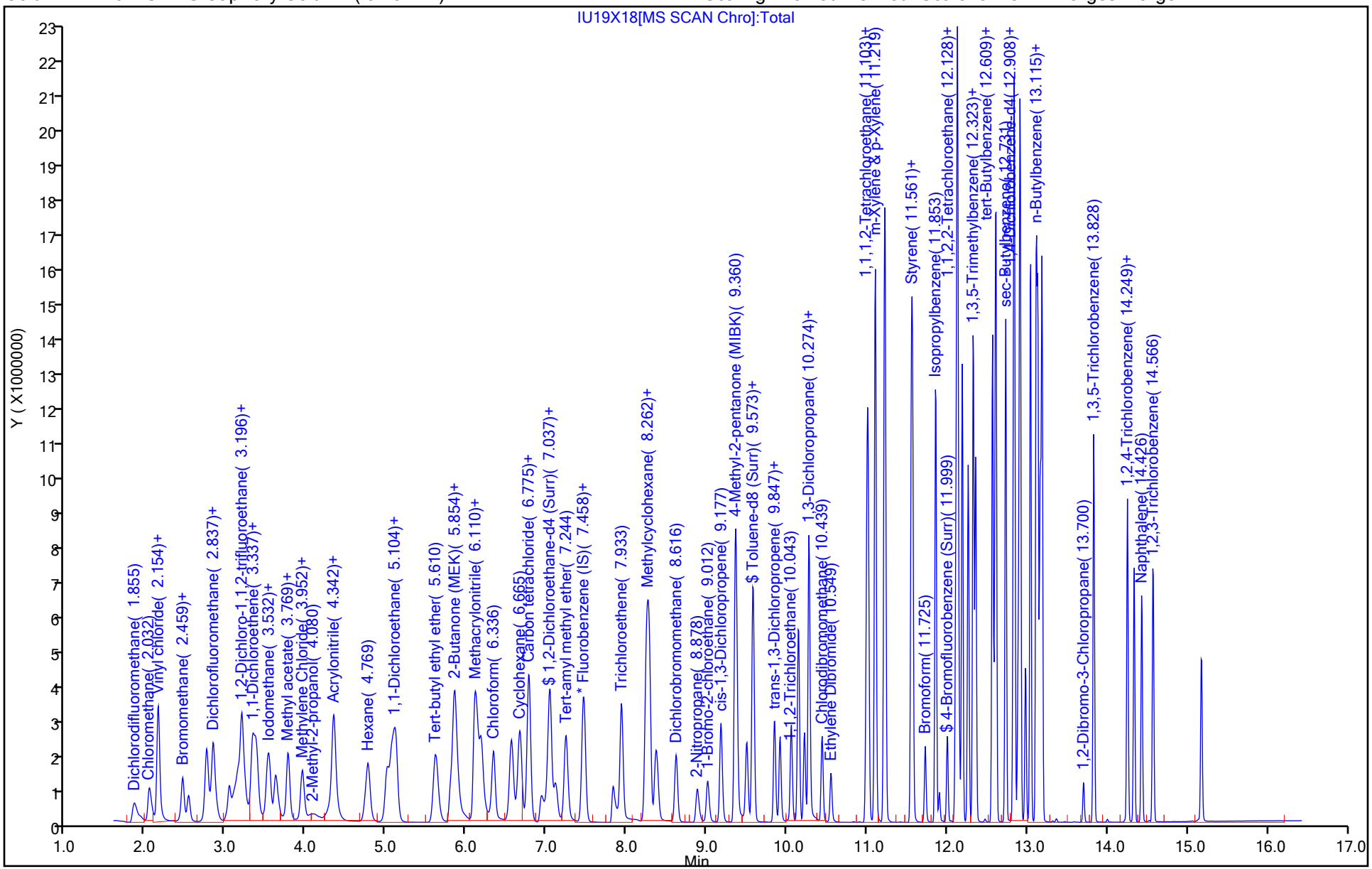
Report Date: 27-Jun-2023 12:30:47 Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Injection Date:	19-Jun-2023 20:25:30	Instrument ID:	19930	Operator ID:	KNK41612
Lims ID:	IC std7			Worklist Smp#:	19
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

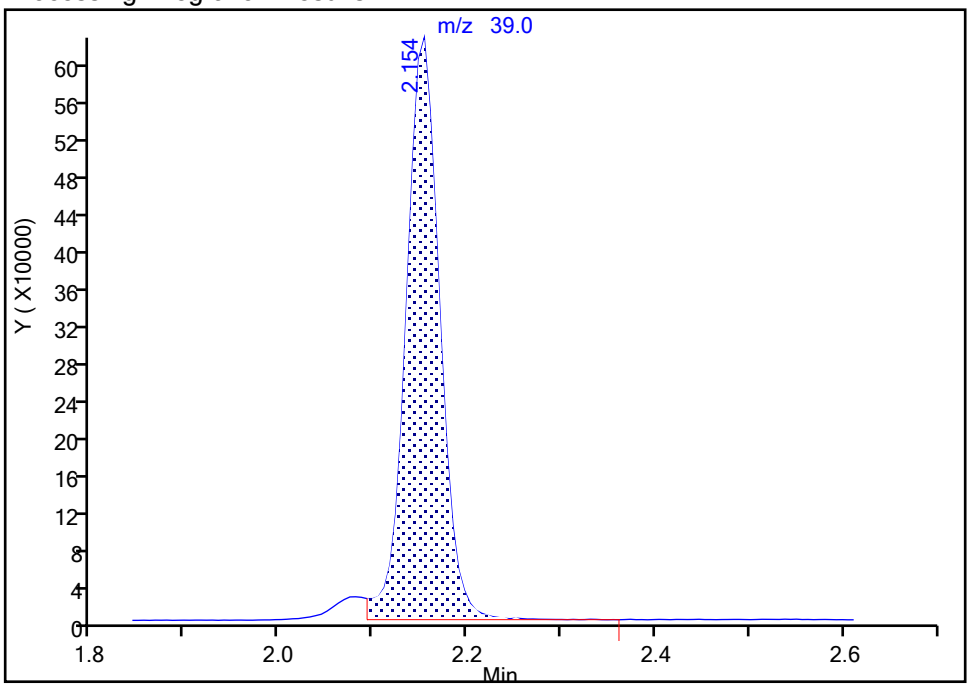
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D
Injection Date: 19-Jun-2023 20:25:30 Instrument ID: 19930
Lims ID: IC std7
Client ID:
Operator ID: KNK41612 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

6 Butadiene, CAS: 106-99-0

Signal: 1

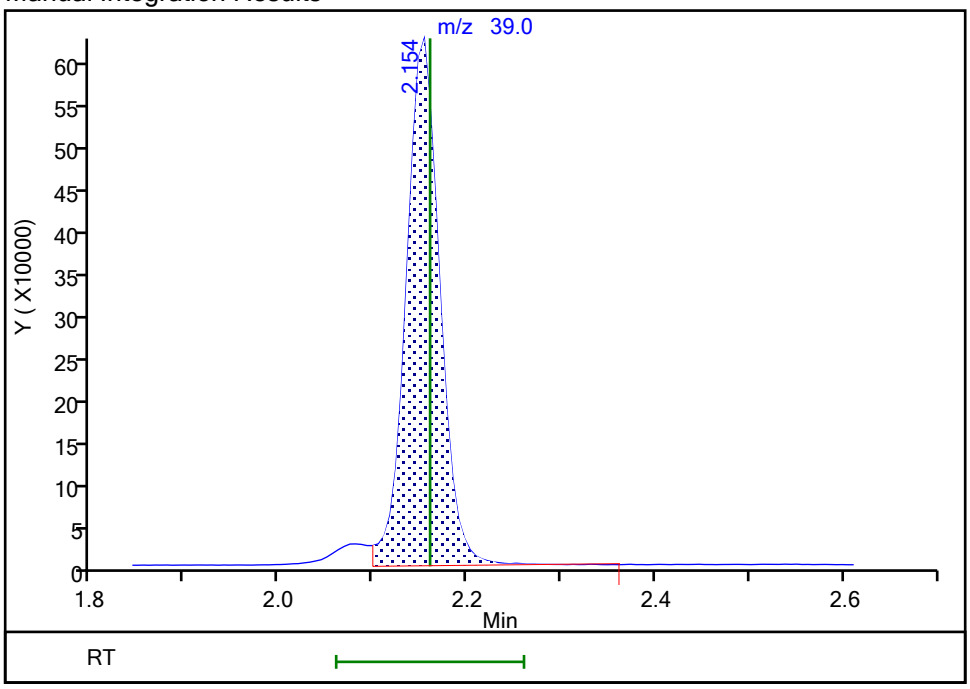
Processing Integration Results

RT: 2.15
Area: 1565423
Amount: 20.311812
Amount Units: ug/l



Manual Integration Results

RT: 2.15
Area: 1556945
Amount: 20.214514
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:08:46 -04:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

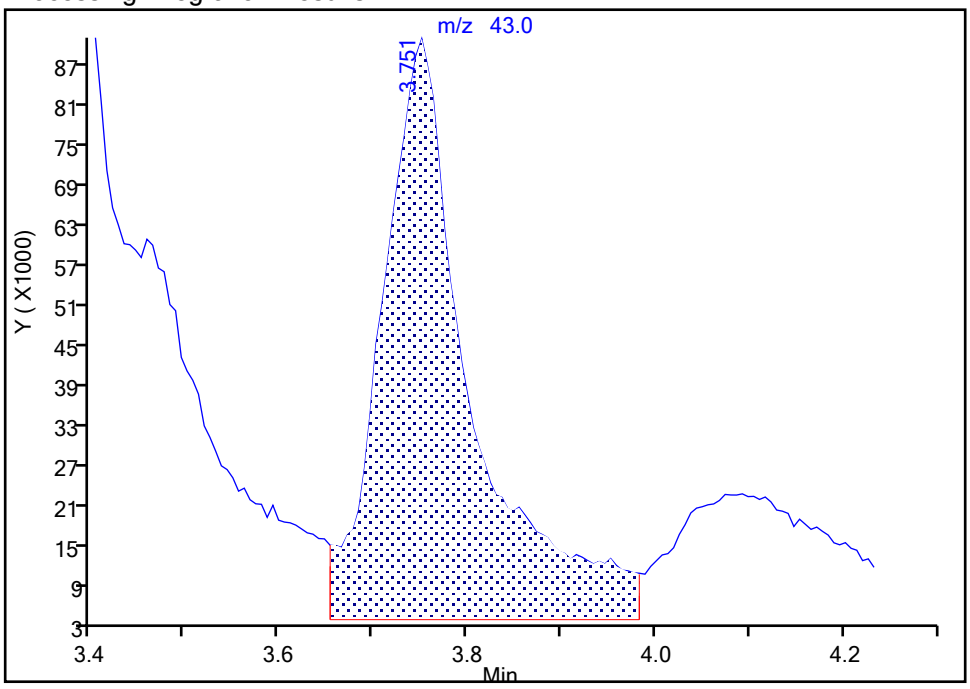
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D				
Injection Date:	19-Jun-2023 20:25:30	Instrument ID:	19930		
Lims ID:	IC std7				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

23 Methyl acetate, CAS: 79-20-9

Signal: 1

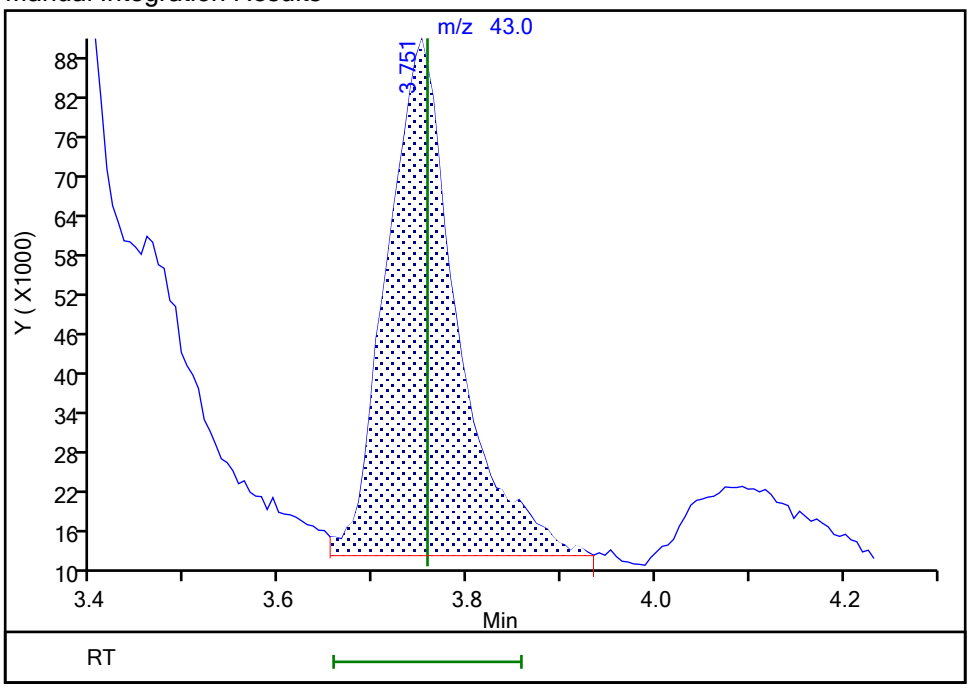
Processing Integration Results

RT: 3.75
Area: 572097
Amount: 37.539030
Amount Units: ug/l



Manual Integration Results

RT: 3.75
Area: 407475
Amount: 25.592656
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:09:07 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

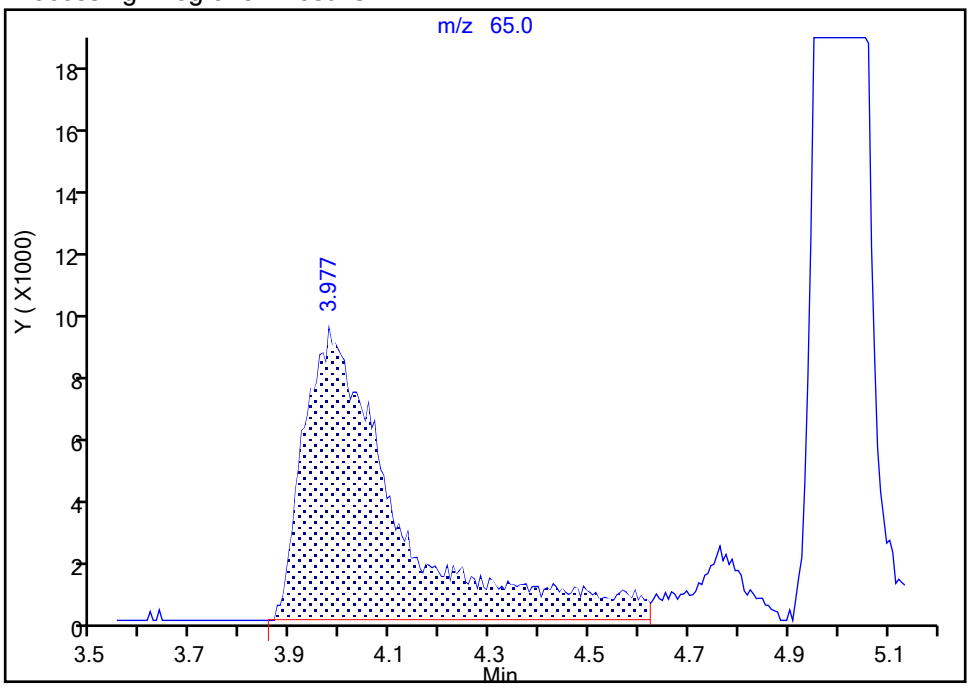
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D
Injection Date: 19-Jun-2023 20:25:30 Instrument ID: 19930
Lims ID: IC std7
Client ID:
Operator ID: KNK41612 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

* 26 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

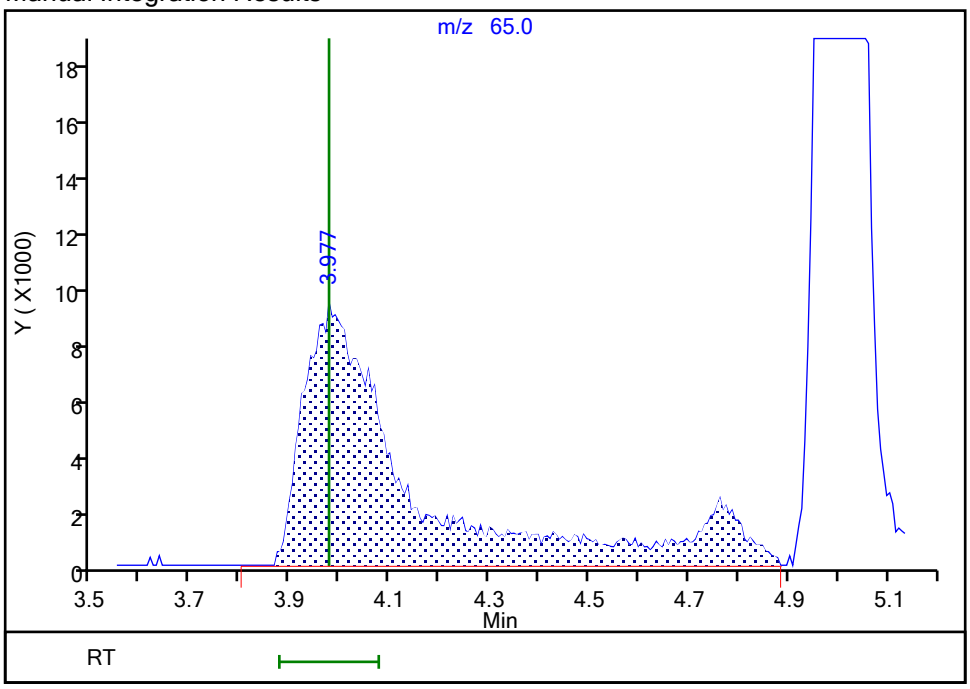
Processing Integration Results

RT: 3.98
Area: 118787
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 3.98
Area: 134884
Amount: 50.000000
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:09:14 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

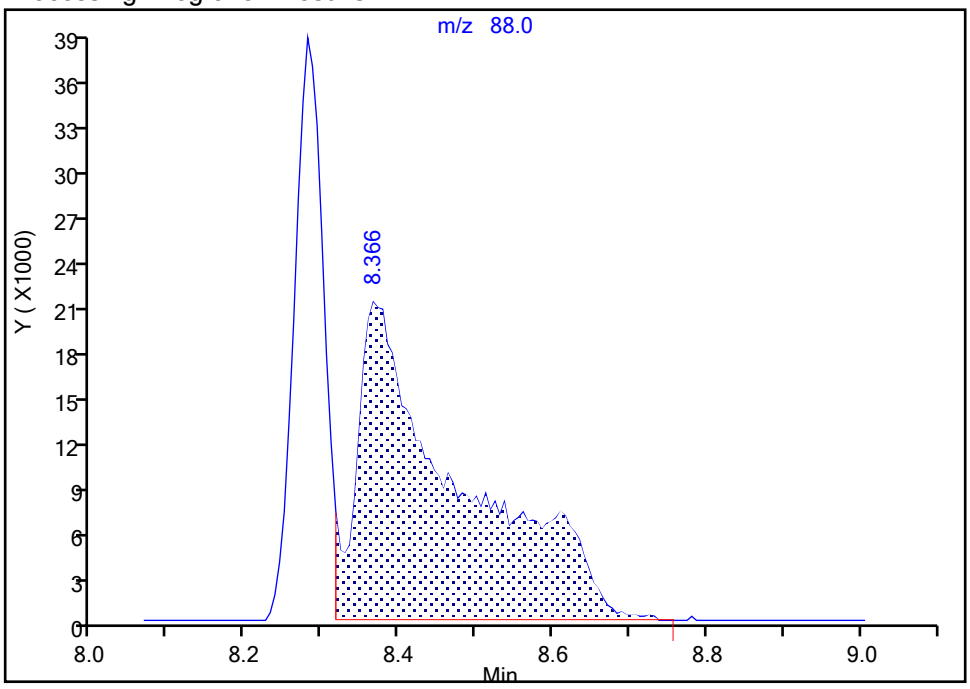
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D
Injection Date: 19-Jun-2023 20:25:30 Instrument ID: 19930
Lims ID: IC std7
Client ID:
Operator ID: KNK41612 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

68 1,4-Dioxane, CAS: 123-91-1

Signal: 1

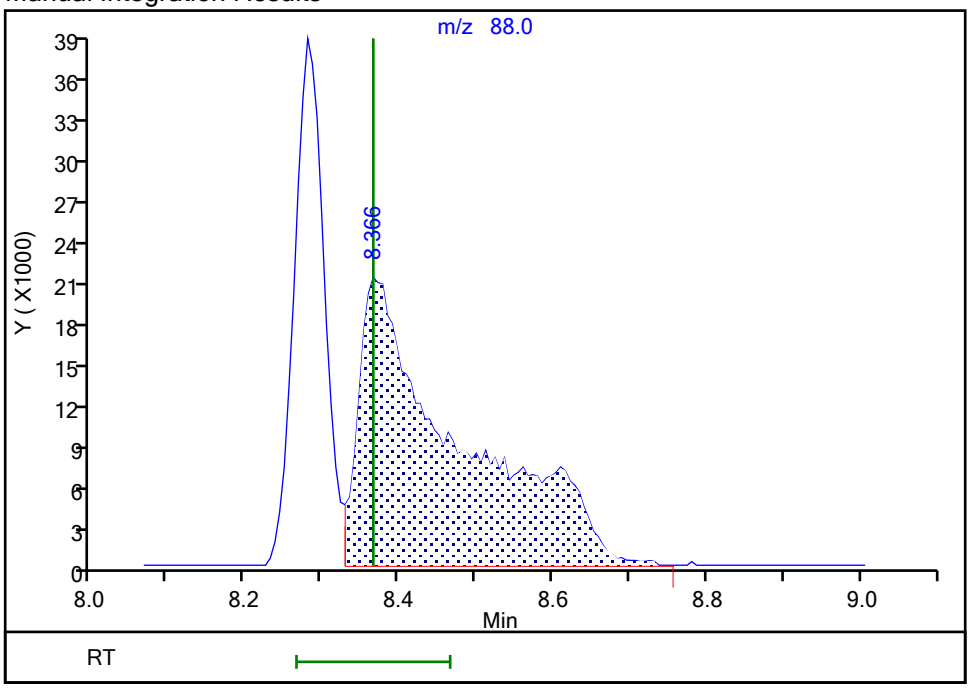
Processing Integration Results

RT: 8.37
Area: 196286
Amount: 1239.8637
Amount Units: ug/l



Manual Integration Results

RT: 8.37
Area: 191965
Amount: 1290.6594
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:09:34 -04:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

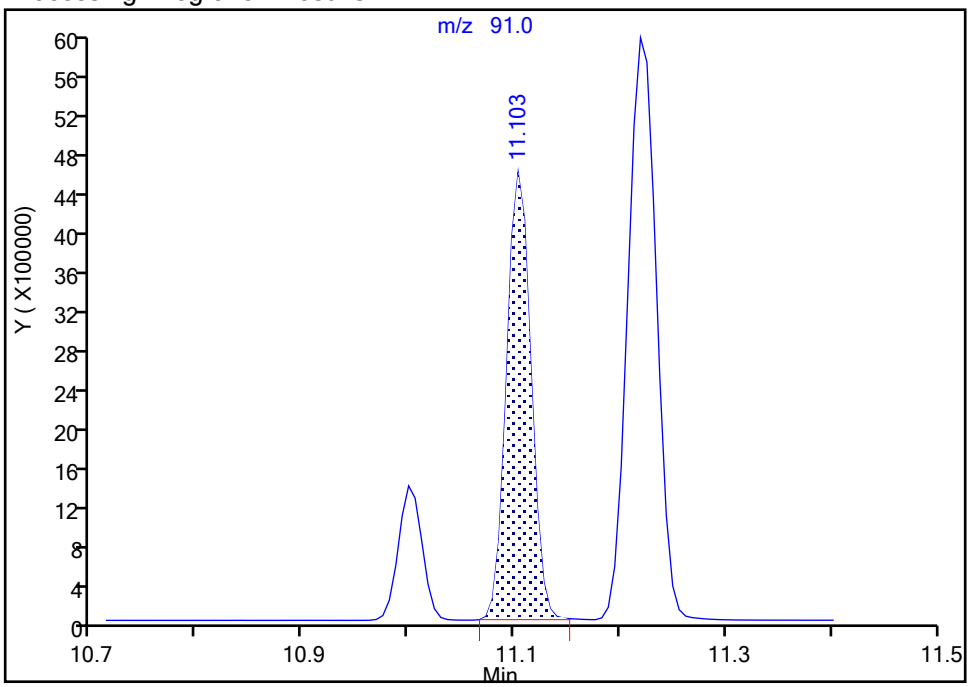
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D				
Injection Date:	19-Jun-2023 20:25:30	Instrument ID:	19930		
Lims ID:	IC std7				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

108 1-Chlorohexane, CAS: 544-10-5

Signal: 1

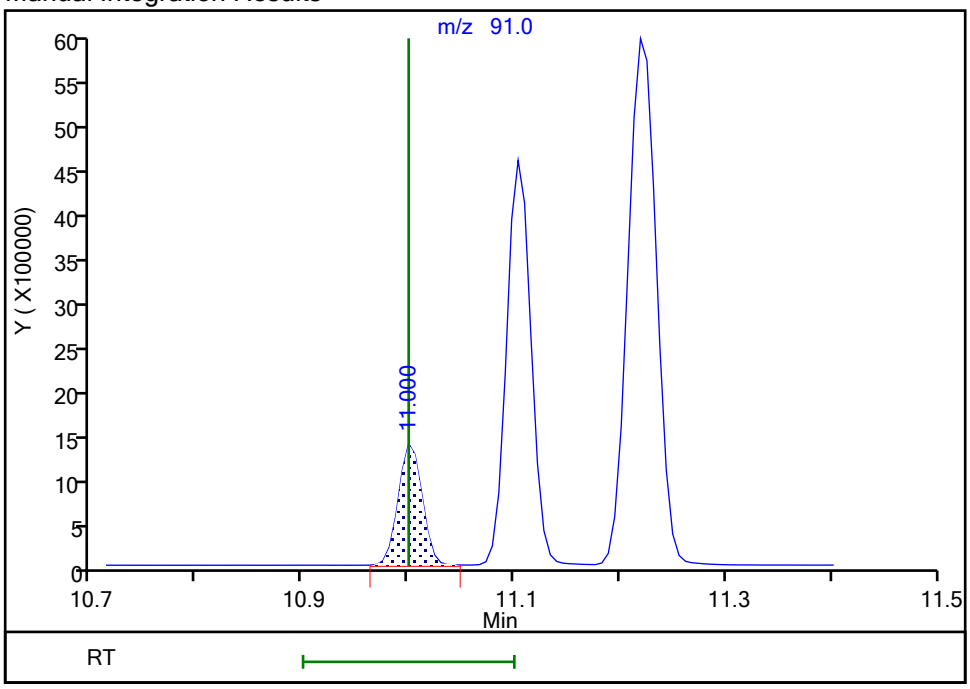
Processing Integration Results

RT: 11.10
Area: 7391753
Amount: 62.122953
Amount Units: ug/l



Manual Integration Results

RT: 11.00
Area: 2153392
Amount: 24.181187
Amount Units: ug/l



Reviewer: DVW2, 22-Jun-2023 07:48:40 -04:00:00 (UTC)

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

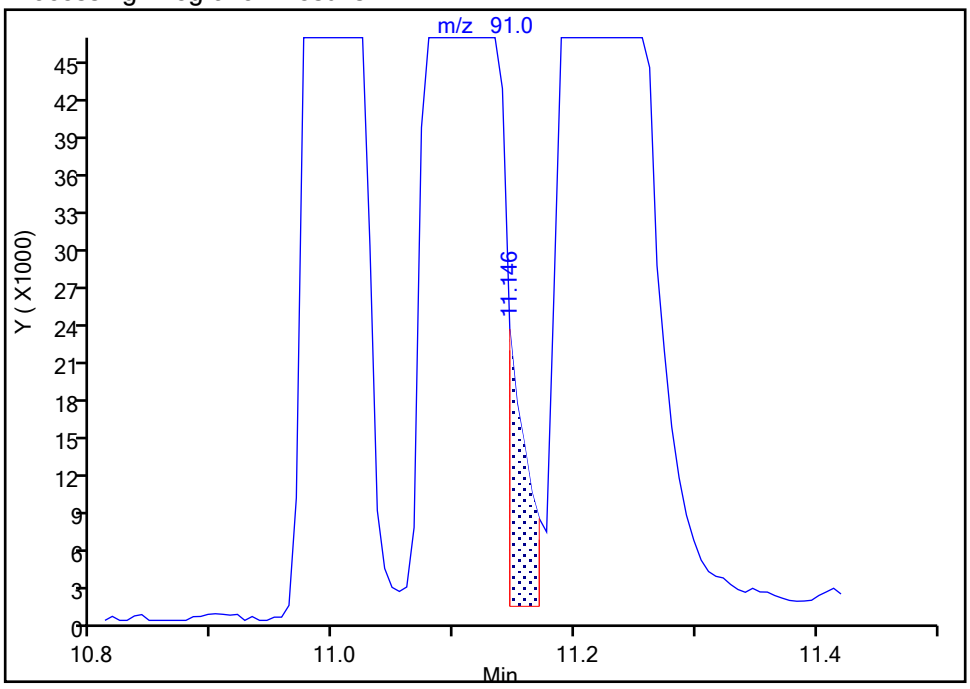
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D				
Injection Date:	19-Jun-2023 20:25:30	Instrument ID:	19930		
Lims ID:	IC std7				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

112 Ethylbenzene, CAS: 100-41-4

Signal: 1

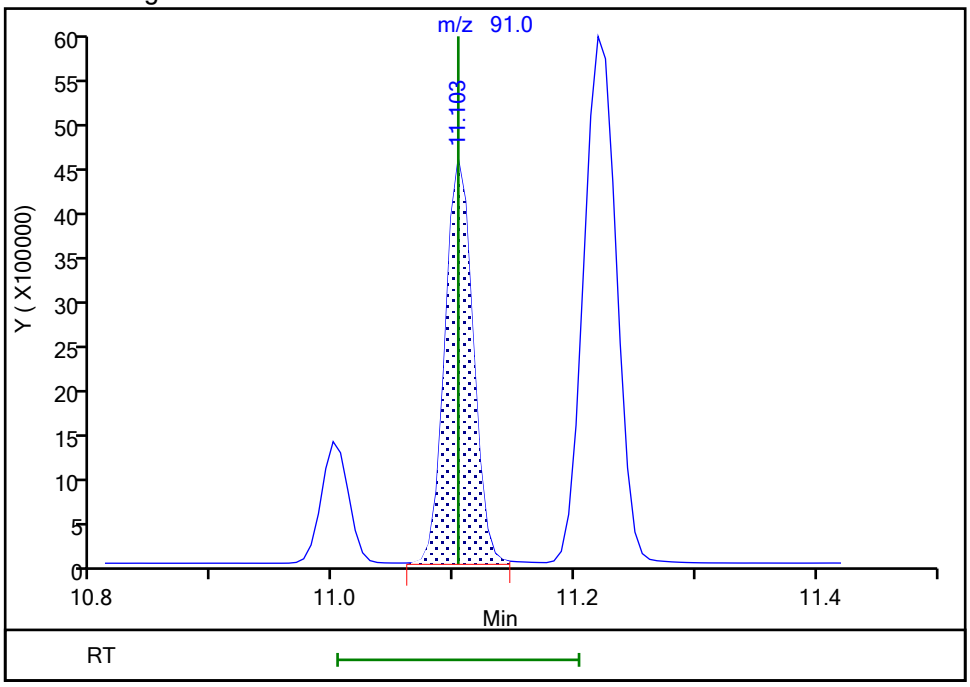
Processing Integration Results

RT: 11.15
Area: 24916
Amount: 0.062513
Amount Units: ug/l



Manual Integration Results

RT: 11.10
Area: 7384442
Amount: 24.762603
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 15:39:35 -04:00:00 (UTC)

Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

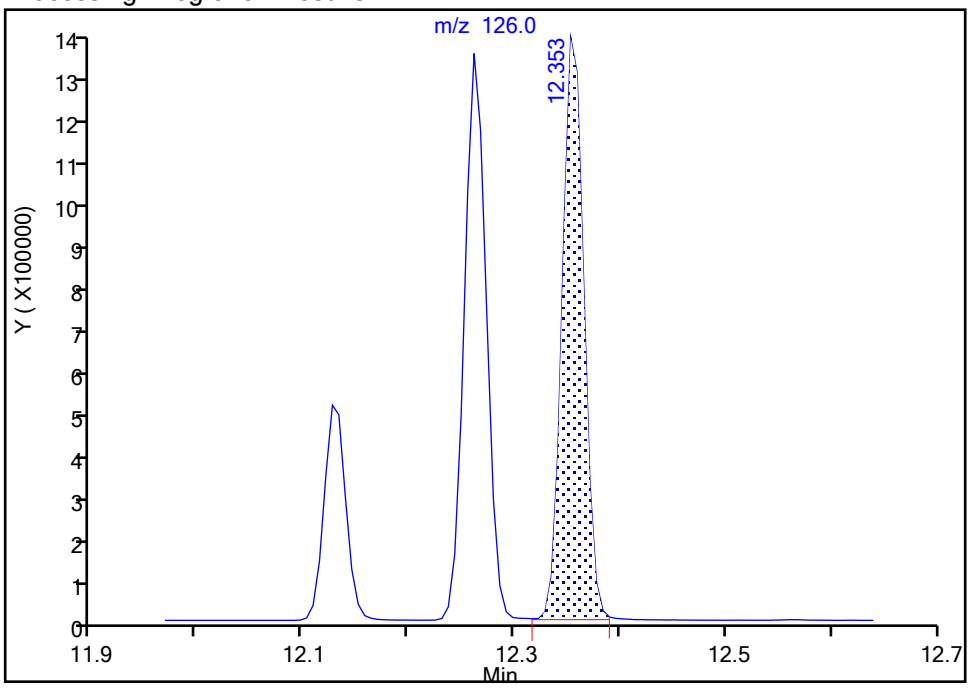
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D
Injection Date: 19-Jun-2023 20:25:30 Instrument ID: 19930
Lims ID: IC std7
Client ID:
Operator ID: KNK41612 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

126 2-Chlorotoluene, CAS: 95-49-8

Signal: 1

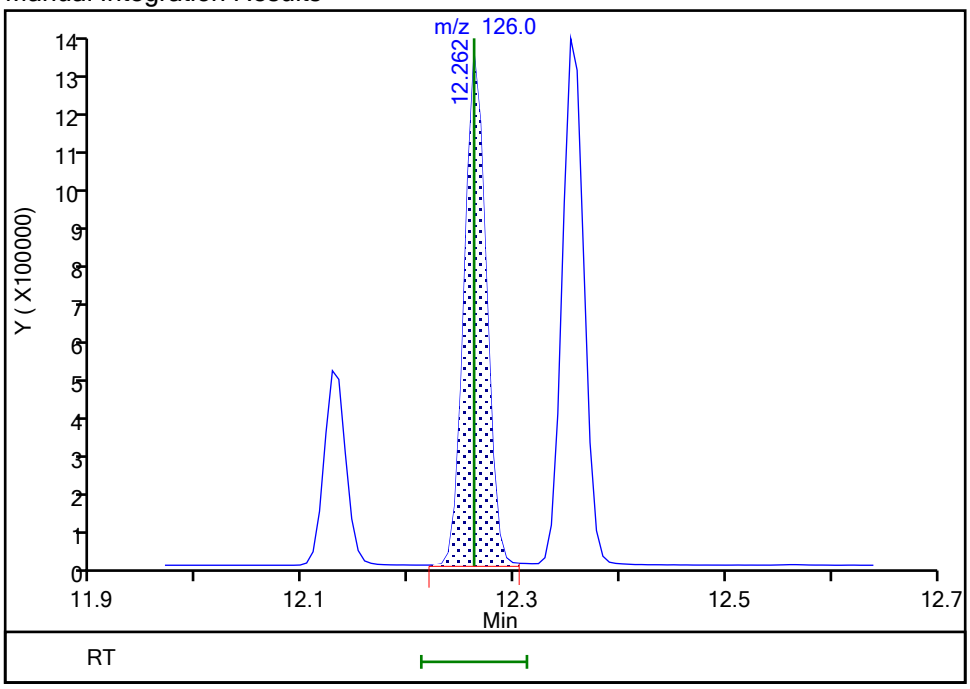
Processing Integration Results

RT: 12.35
Area: 1951600
Amount: 25.516478
Amount Units: ug/l



Manual Integration Results

RT: 12.26
Area: 1917179
Amount: 25.131064
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 15:39:42 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

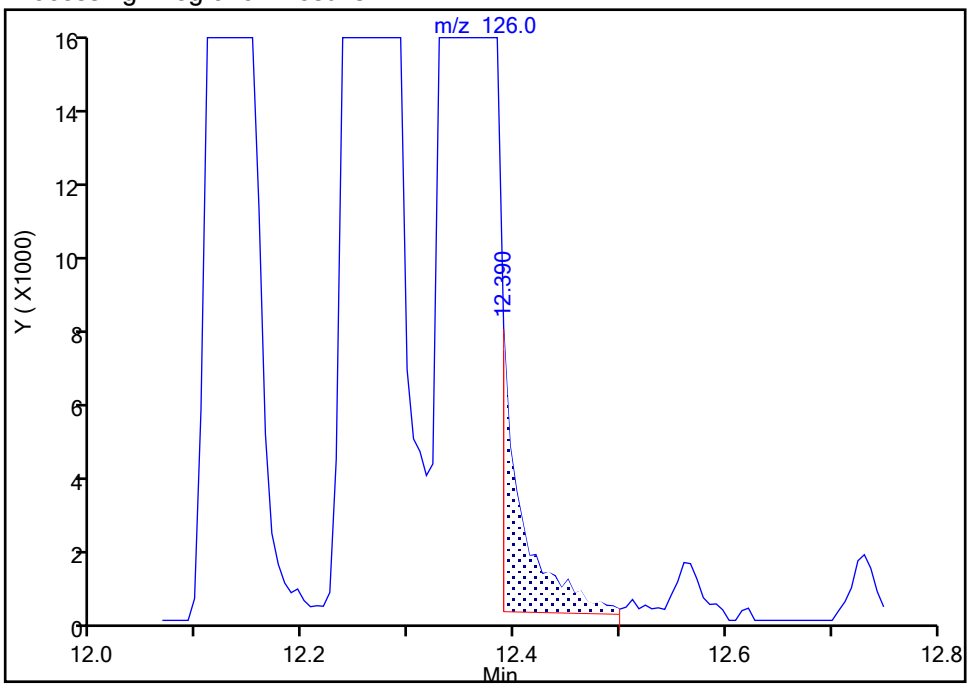
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D
Injection Date: 19-Jun-2023 20:25:30 Instrument ID: 19930
Lims ID: IC std7
Client ID:
Operator ID: KNK41612 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

128 4-Chlorotoluene, CAS: 106-43-4

Signal: 1

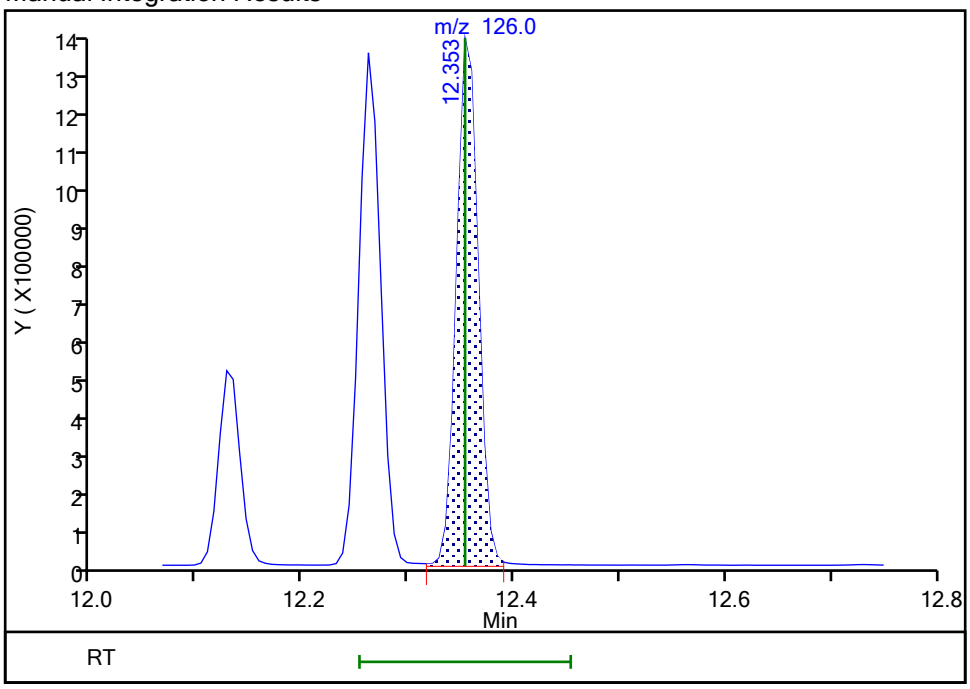
Processing Integration Results

RT: 12.39
Area: 10355
Amount: 0.154390
Amount Units: ug/l



Manual Integration Results

RT: 12.35
Area: 1951600
Amount: 24.968247
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:09:57 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Calibration / Dichlorodifluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

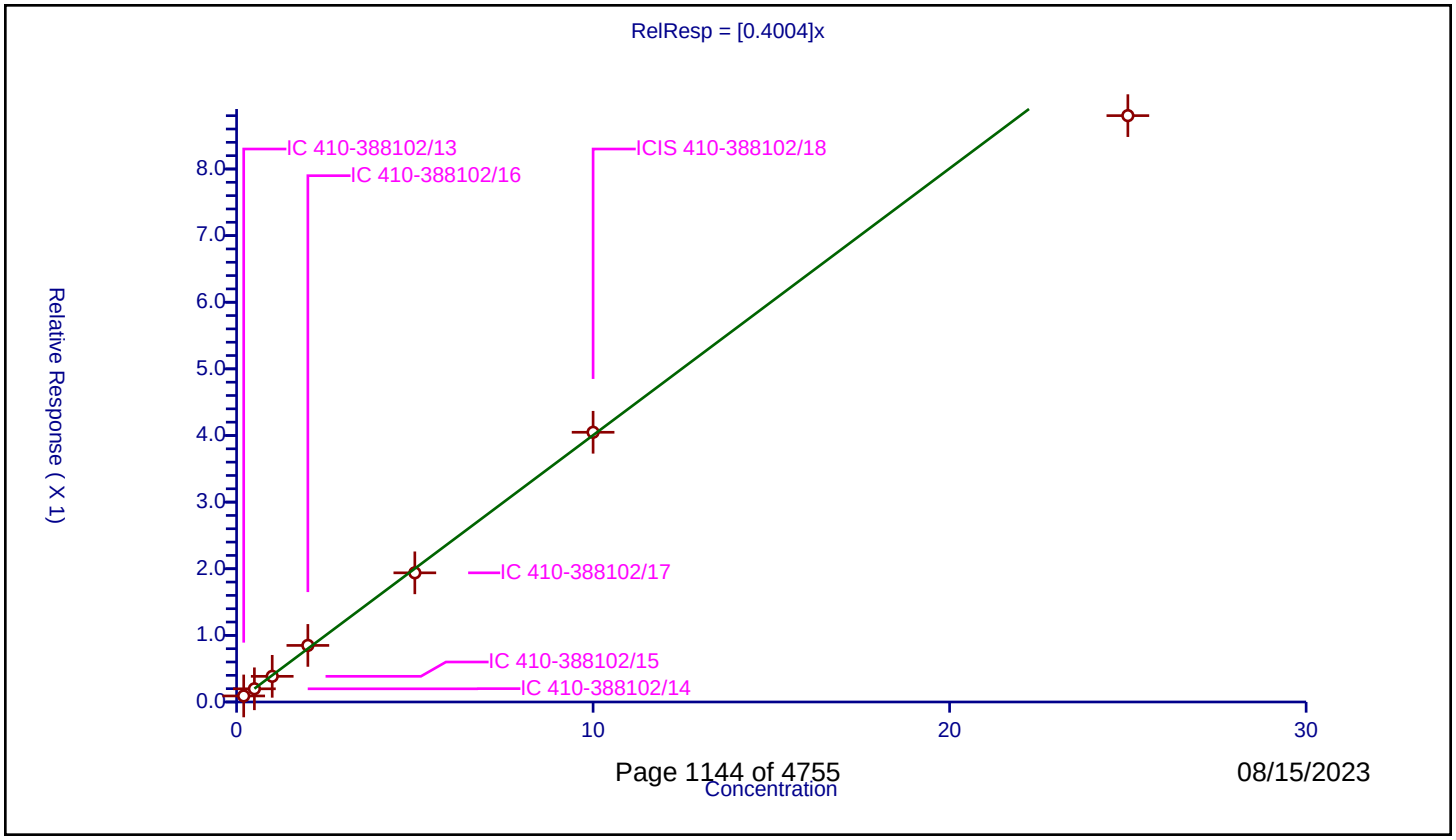
Curve Coefficients

Intercept:	0
Slope:	0.4004

Error Coefficients

Standard Error:	760000
Relative Standard Error:	7.9
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.090503	10.0	1795291.0	0.452517	Y
2	IC 410-388102/14	0.5	0.19797	10.0	1753956.0	0.395939	Y
3	IC 410-388102/15	1.0	0.385136	10.0	1790586.0	0.385136	Y
4	IC 410-388102/16	2.0	0.8493	10.0	1802566.0	0.42465	Y
5	IC 410-388102/17	5.0	1.938742	10.0	1860774.0	0.387748	Y
6	ICIS 410-388102/18	10.0	4.048248	10.0	1807671.0	0.404825	Y
7	IC 410-388102/19	25.0	8.800834	10.0	1891215.0	0.352033	Y



Calibration / Chloromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

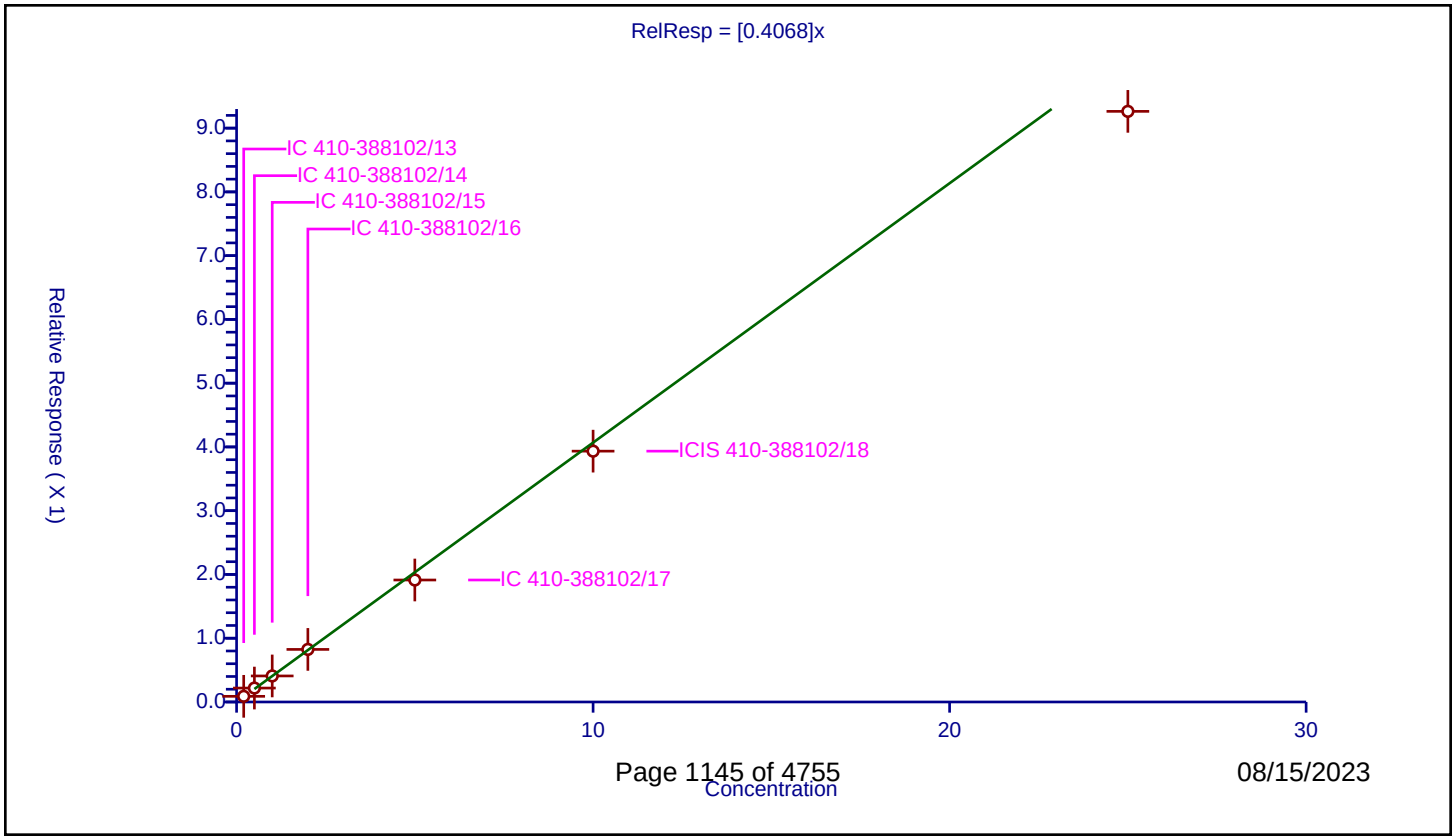
Curve Coefficients

Intercept:	0
Slope:	0.4068

Error Coefficients

Standard Error:	789000
Relative Standard Error:	6.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.088665	10.0	1795291.0	0.443326	Y
2	IC 410-388102/14	0.5	0.218415	10.0	1753956.0	0.43683	Y
3	IC 410-388102/15	1.0	0.408492	10.0	1790586.0	0.408492	Y
4	IC 410-388102/16	2.0	0.82453	10.0	1802566.0	0.412265	Y
5	IC 410-388102/17	5.0	1.913027	10.0	1860774.0	0.382605	Y
6	ICIS 410-388102/18	10.0	3.934062	10.0	1807671.0	0.393406	Y
7	IC 410-388102/19	25.0	9.263262	10.0	1891215.0	0.37053	Y



Calibration / Butadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

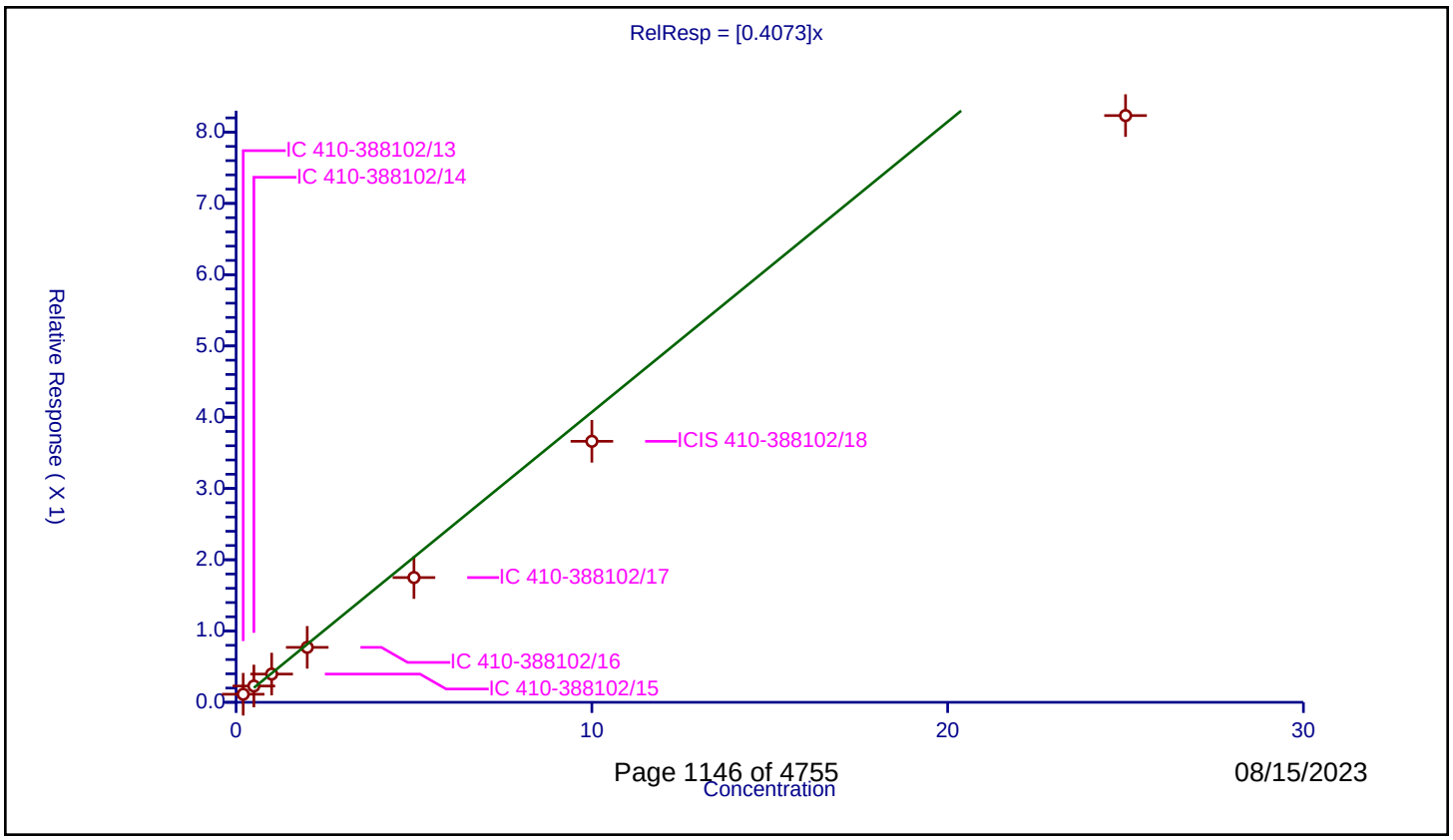
Curve Coefficients

Intercept:	0
Slope:	0.4073

Error Coefficients

Standard Error:	706000
Relative Standard Error:	19.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.928

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.11328	10.0	1795291.0	0.566398	Y
2	IC 410-388102/14	0.5	0.228518	10.0	1753956.0	0.457035	Y
3	IC 410-388102/15	1.0	0.396367	10.0	1790586.0	0.396367	Y
4	IC 410-388102/16	2.0	0.77089	10.0	1802566.0	0.385445	Y
5	IC 410-388102/17	5.0	1.750245	10.0	1860774.0	0.350049	Y
6	ICIS 410-388102/18	10.0	3.662066	10.0	1807671.0	0.366207	Y
7	IC 410-388102/19	25.0	8.232512	10.0	1891215.0	0.3293	Y



Calibration / Vinyl chloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

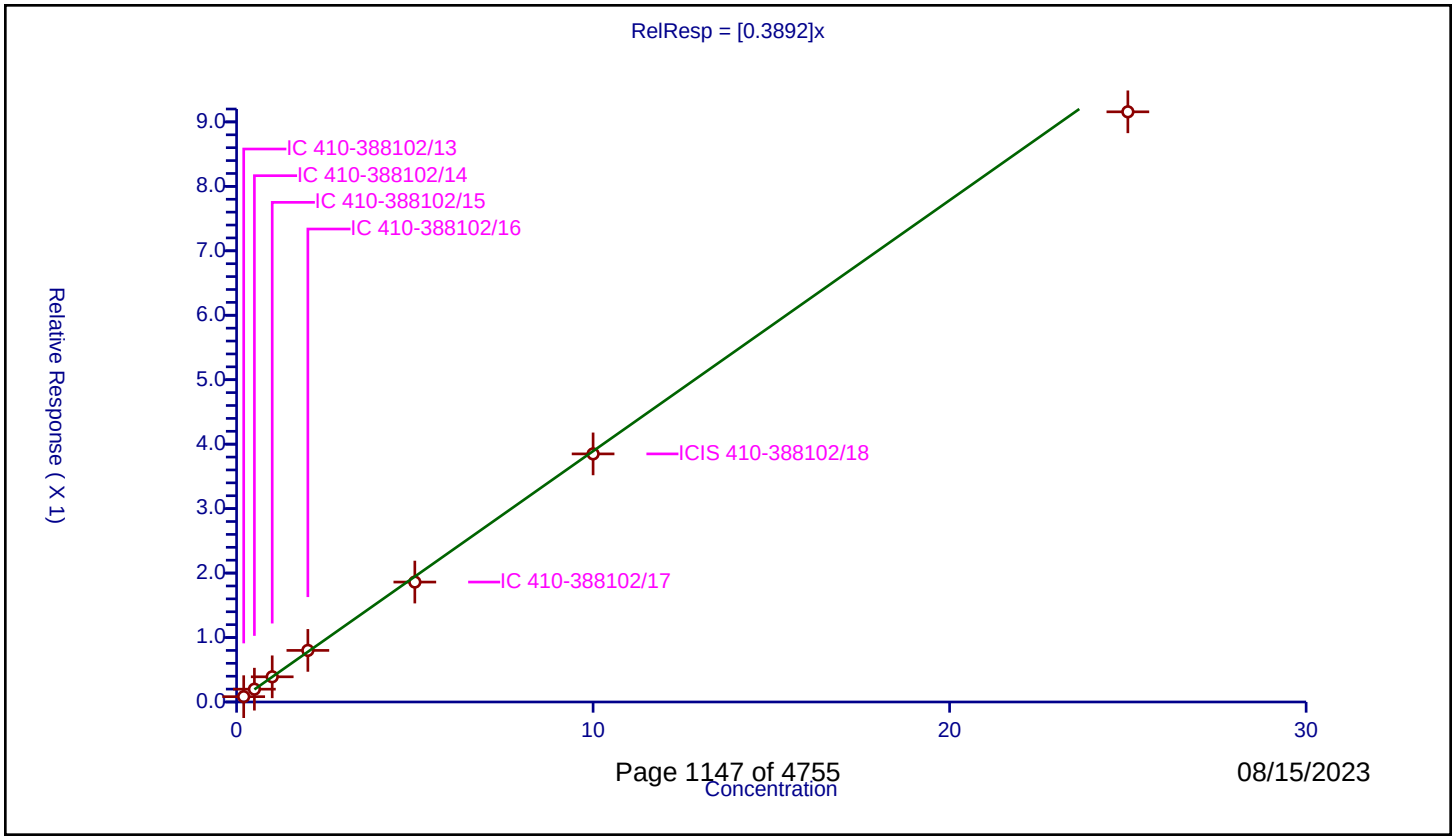
Curve Coefficients

Intercept:	0
Slope:	0.3892

Error Coefficients

Standard Error:	778000
Relative Standard Error:	4.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.08256	10.0	1795291.0	0.412802	Y
2	IC 410-388102/14	0.5	0.198597	10.0	1753956.0	0.397194	Y
3	IC 410-388102/15	1.0	0.390889	10.0	1790586.0	0.390889	Y
4	IC 410-388102/16	2.0	0.800437	10.0	1802566.0	0.400218	Y
5	IC 410-388102/17	5.0	1.860699	10.0	1860774.0	0.37214	Y
6	ICIS 410-388102/18	10.0	3.849207	10.0	1807671.0	0.384921	Y
7	IC 410-388102/19	25.0	9.156637	10.0	1891215.0	0.366265	Y



Calibration / Bromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

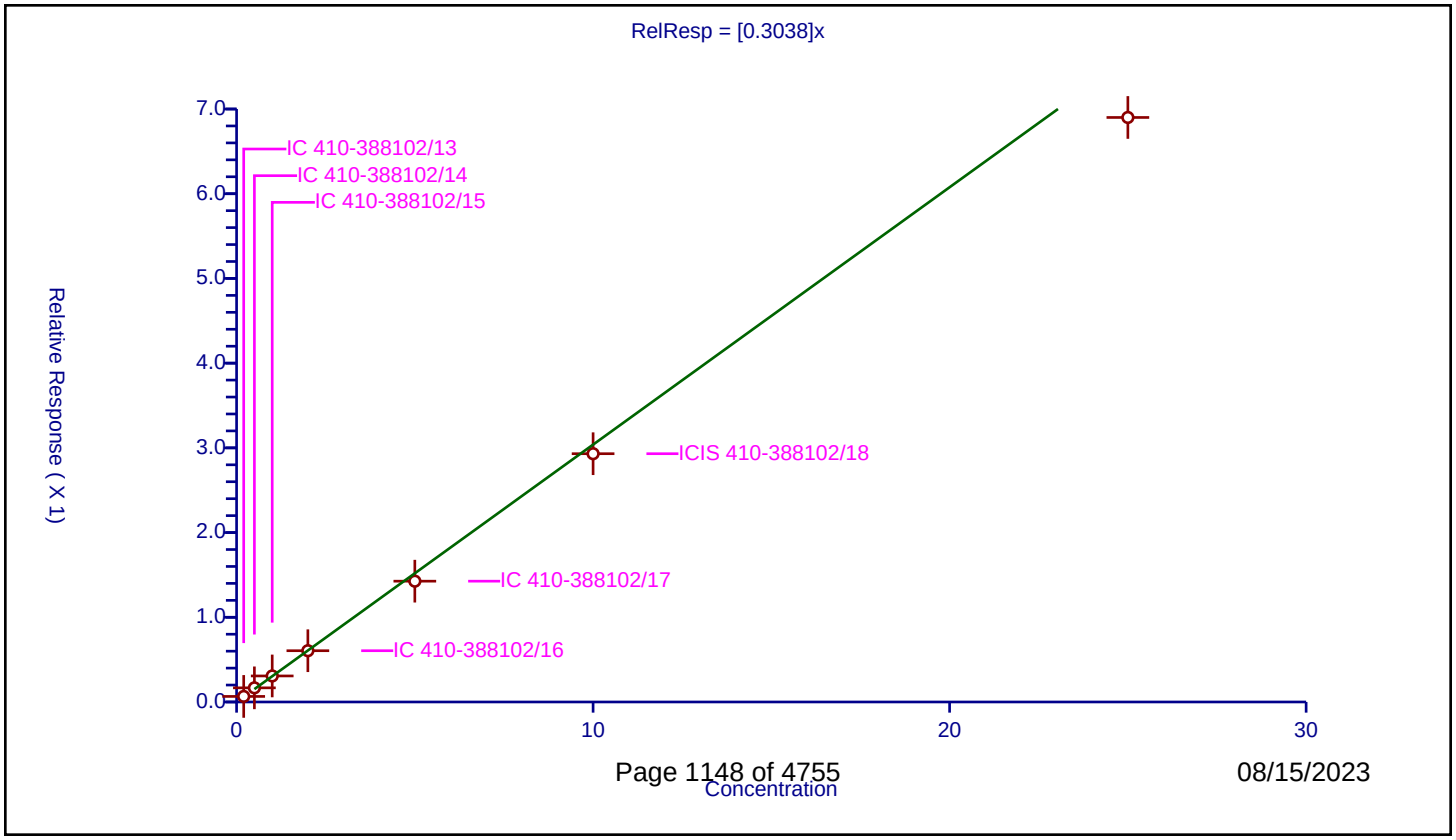
Curve Coefficients

Intercept:	0
Slope:	0.3038

Error Coefficients

Standard Error:	587000
Relative Standard Error:	7.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.065716	10.0	1795291.0	0.328582	Y
2	IC 410-388102/14	0.5	0.16692	10.0	1753956.0	0.33384	Y
3	IC 410-388102/15	1.0	0.307307	10.0	1790586.0	0.307307	Y
4	IC 410-388102/16	2.0	0.60532	10.0	1802566.0	0.30266	Y
5	IC 410-388102/17	5.0	1.426218	10.0	1860774.0	0.285244	Y
6	ICIS 410-388102/18	10.0	2.931003	10.0	1807671.0	0.2931	Y
7	IC 410-388102/19	25.0	6.900167	10.0	1891215.0	0.276007	Y



Calibration / Chloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

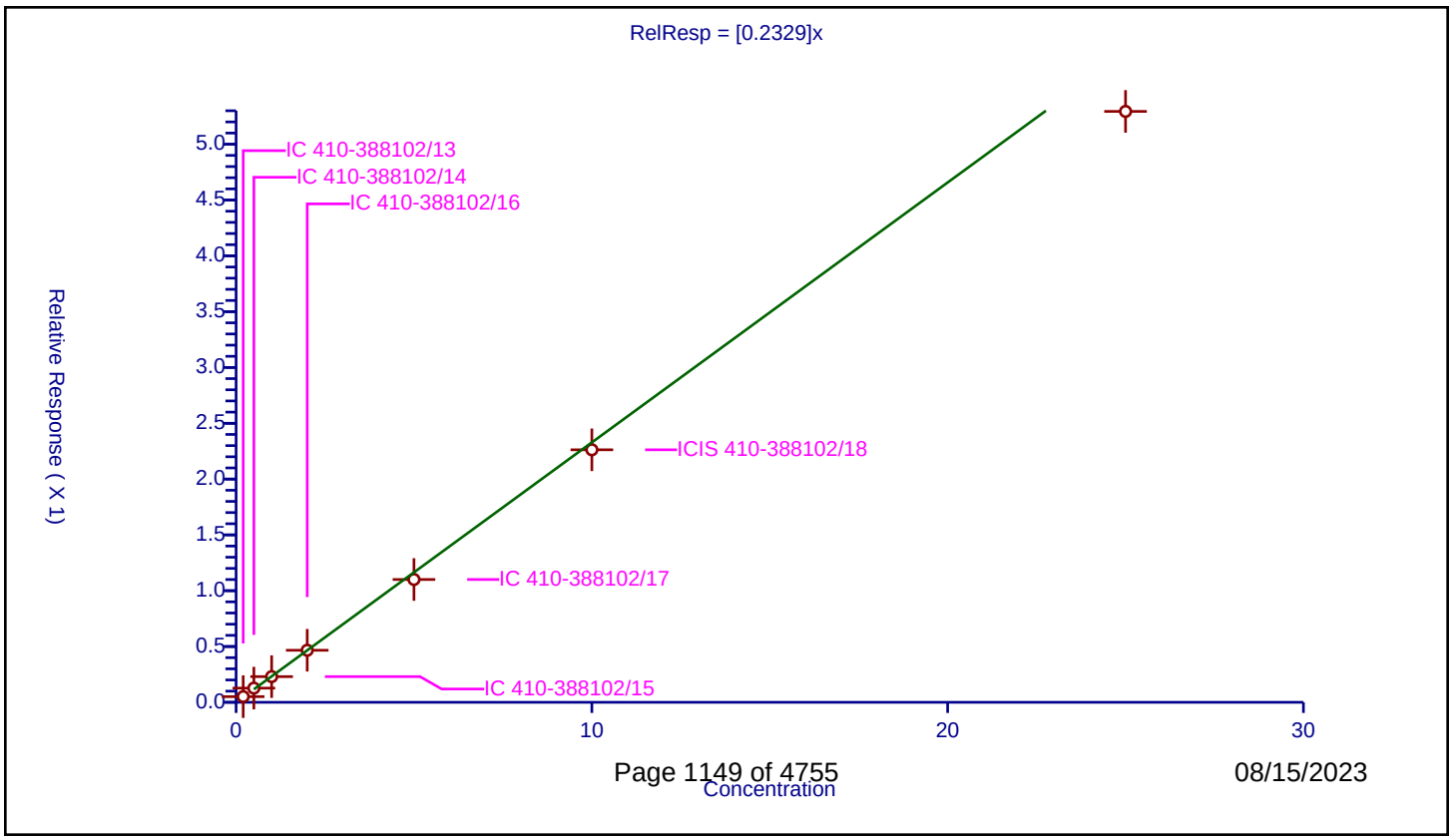
Curve Coefficients

Intercept:	0
Slope:	0.2329

Error Coefficients

Standard Error:	451000
Relative Standard Error:	7.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.050878	10.0	1795291.0	0.254388	Y
2	IC 410-388102/14	0.5	0.127078	10.0	1753956.0	0.254157	Y
3	IC 410-388102/15	1.0	0.23017	10.0	1790586.0	0.23017	Y
4	IC 410-388102/16	2.0	0.466352	10.0	1802566.0	0.233176	Y
5	IC 410-388102/17	5.0	1.100381	10.0	1860774.0	0.220076	Y
6	ICIS 410-388102/18	10.0	2.262403	10.0	1807671.0	0.22624	Y
7	IC 410-388102/19	25.0	5.294105	10.0	1891215.0	0.211764	Y



Calibration / Dichlorofluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

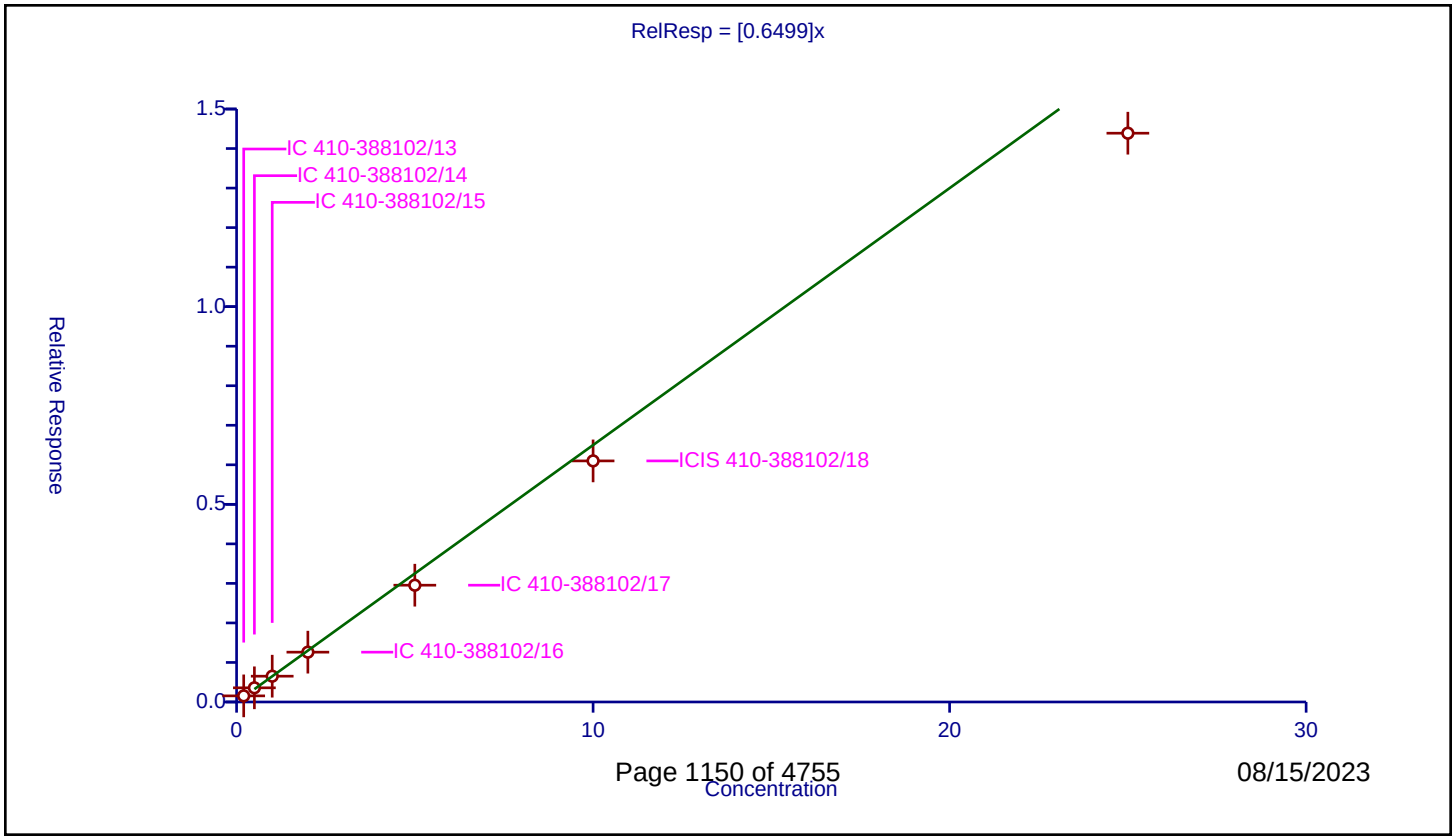
Curve Coefficients

Intercept:	0
Slope:	0.6499

Error Coefficients

Standard Error:	1220000
Relative Standard Error:	11.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.981

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.154565	10.0	1795291.0	0.772827	Y
2	IC 410-388102/14	0.5	0.358675	10.0	1753956.0	0.71735	Y
3	IC 410-388102/15	1.0	0.652943	10.0	1790586.0	0.652943	Y
4	IC 410-388102/16	2.0	1.260431	10.0	1802566.0	0.630215	Y
5	IC 410-388102/17	5.0	2.954093	10.0	1860774.0	0.590819	Y
6	ICIS 410-388102/18	10.0	6.098593	10.0	1807671.0	0.609859	Y
7	IC 410-388102/19	25.0	14.388073	10.0	1891215.0	0.575523	Y



Calibration / Trichlorofluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

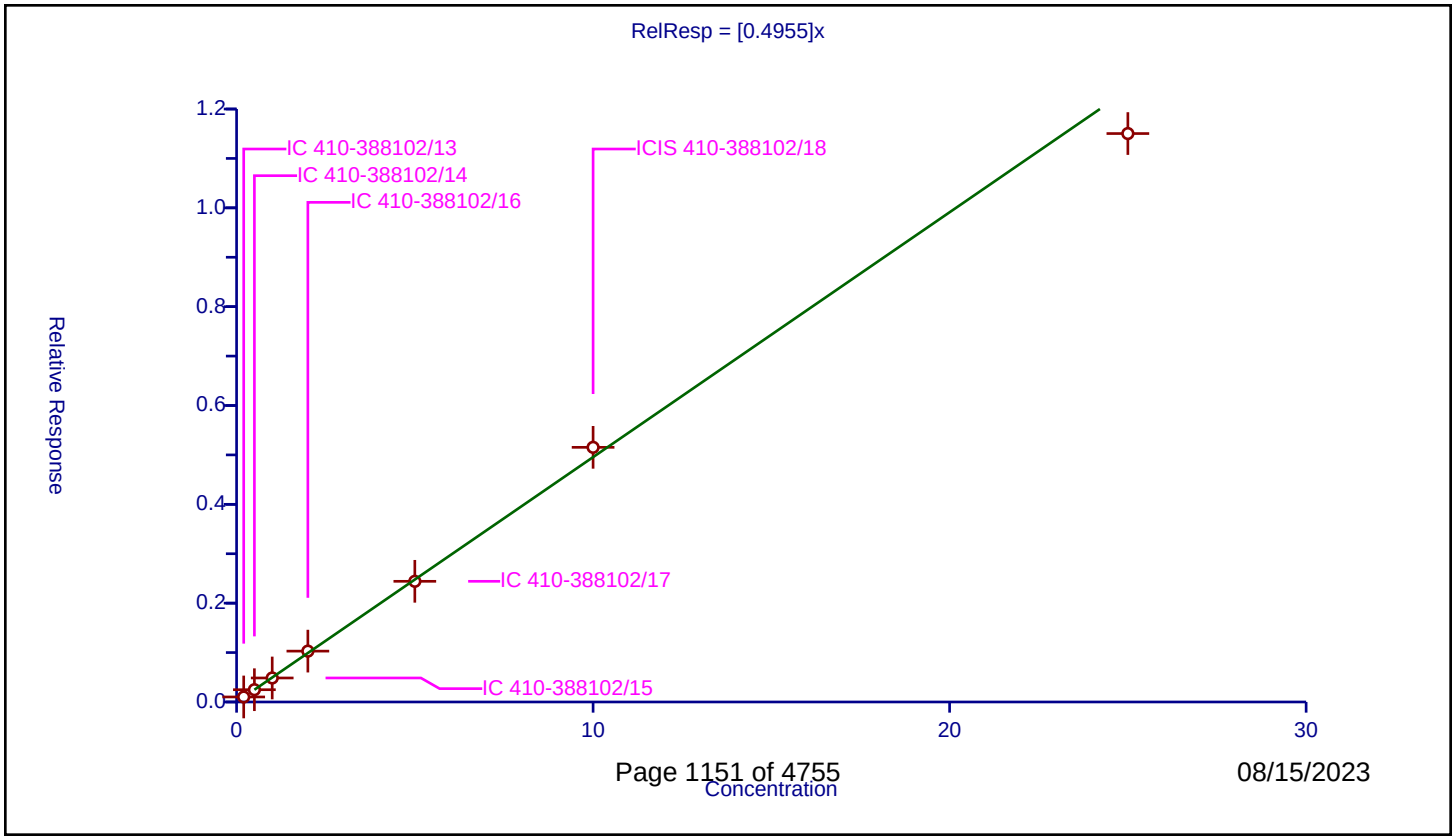
Curve Coefficients

Intercept:	0
Slope:	0.4955

Error Coefficients

Standard Error:	988000
Relative Standard Error:	3.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.101465	10.0	1795291.0	0.507327	Y
2	IC 410-388102/14	0.5	0.248313	10.0	1753956.0	0.496626	Y
3	IC 410-388102/15	1.0	0.486092	10.0	1790586.0	0.486092	Y
4	IC 410-388102/16	2.0	1.029582	10.0	1802566.0	0.514791	Y
5	IC 410-388102/17	5.0	2.441935	10.0	1860774.0	0.488387	Y
6	ICIS 410-388102/18	10.0	5.153333	10.0	1807671.0	0.515333	Y
7	IC 410-388102/19	25.0	11.503436	10.0	1891215.0	0.460137	Y



Calibration / Ethyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

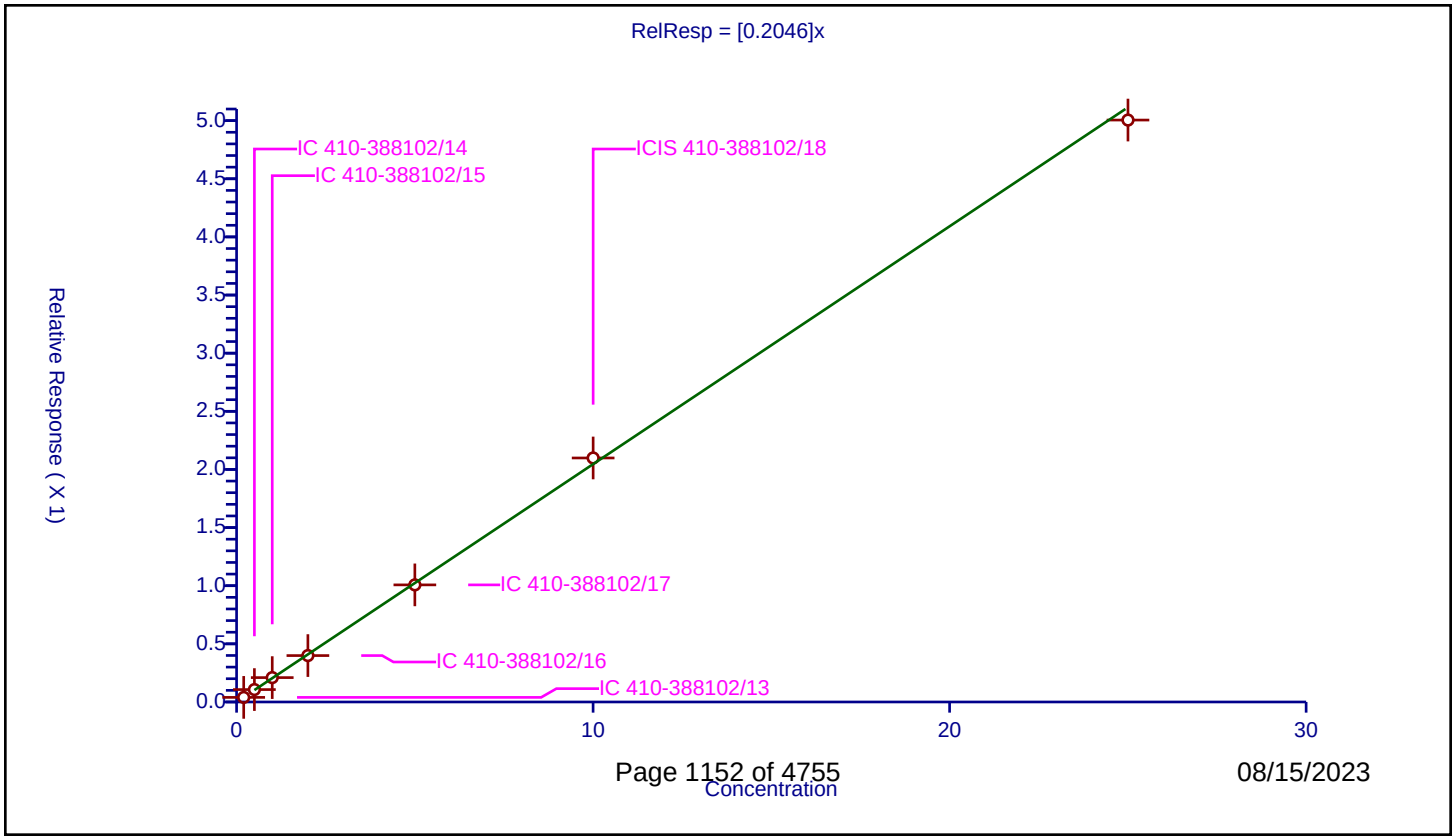
Curve Coefficients

Intercept:	0
Slope:	0.2046

Error Coefficients

Standard Error:	425000
Relative Standard Error:	3.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.200027	0.039526	10.0	1795291.0	0.197601	Y
2	IC 410-388102/14	0.500068	0.106838	10.0	1753956.0	0.213648	Y
3	IC 410-388102/15	1.000135	0.209725	10.0	1790586.0	0.209696	Y
4	IC 410-388102/16	2.00027	0.399159	10.0	1802566.0	0.199552	Y
5	IC 410-388102/17	5.000676	1.007162	10.0	1860774.0	0.201405	Y
6	ICIS 410-388102/18	10.001352	2.098761	10.0	1807671.0	0.209848	Y
7	IC 410-388102/19	25.00338	5.005052	10.0	1891215.0	0.200175	Y



Calibration / 1,2-Dichloro-1,1,2-trifluoroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

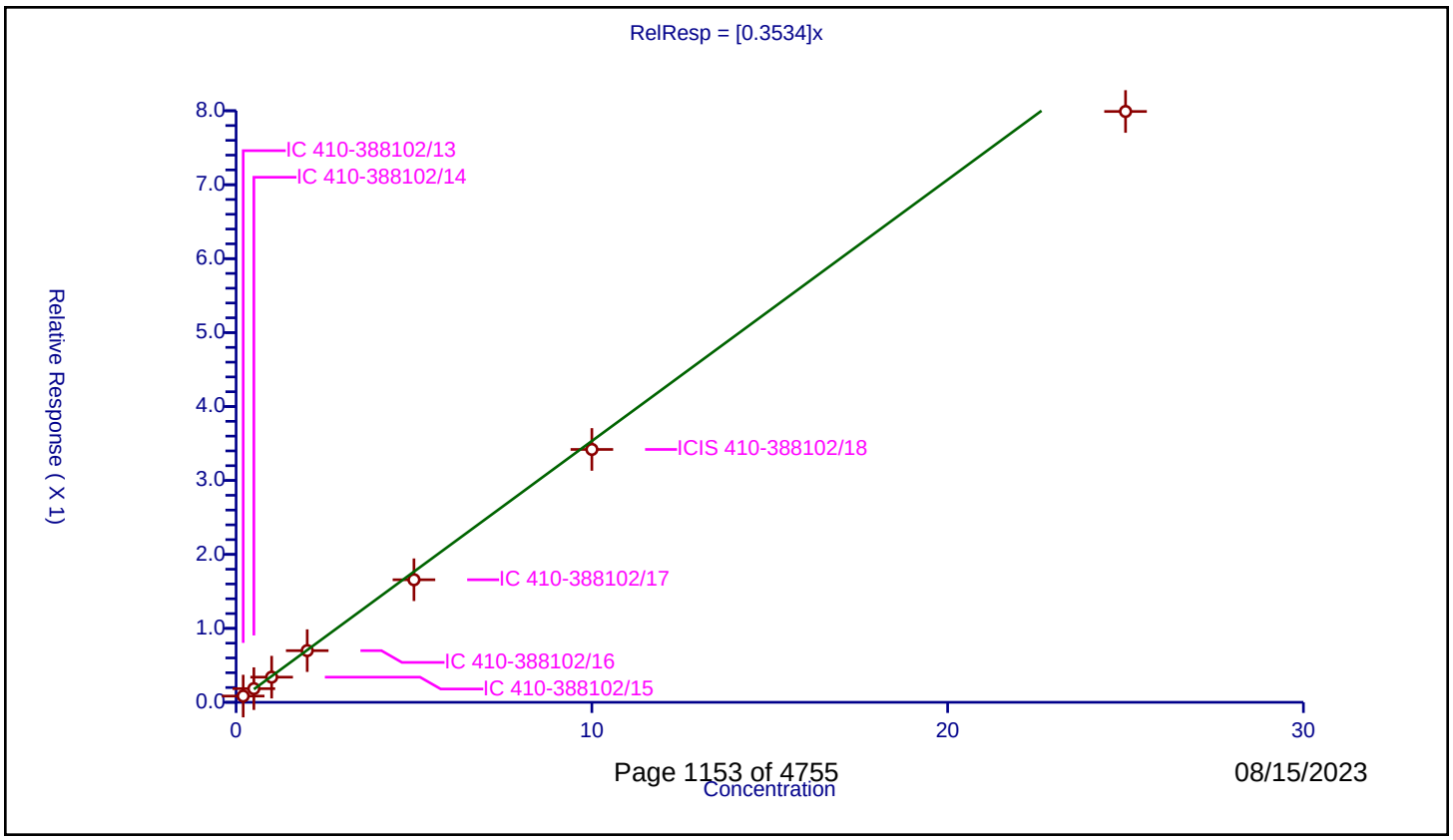
Curve Coefficients

Intercept:	0
Slope:	0.3534

Error Coefficients

Standard Error:	681000
Relative Standard Error:	9.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.08436	10.0	1795291.0	0.421798	Y
2	IC 410-388102/14	0.5	0.184651	10.0	1753956.0	0.369302	Y
3	IC 410-388102/15	1.0	0.340073	10.0	1790586.0	0.340073	Y
4	IC 410-388102/16	2.0	0.698704	10.0	1802566.0	0.349352	Y
5	IC 410-388102/17	5.0	1.657724	10.0	1860774.0	0.331545	Y
6	ICIS 410-388102/18	10.0	3.419887	10.0	1807671.0	0.341989	Y
7	IC 410-388102/19	25.0	7.99035	10.0	1891215.0	0.319614	Y



Calibration / Acrolein

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

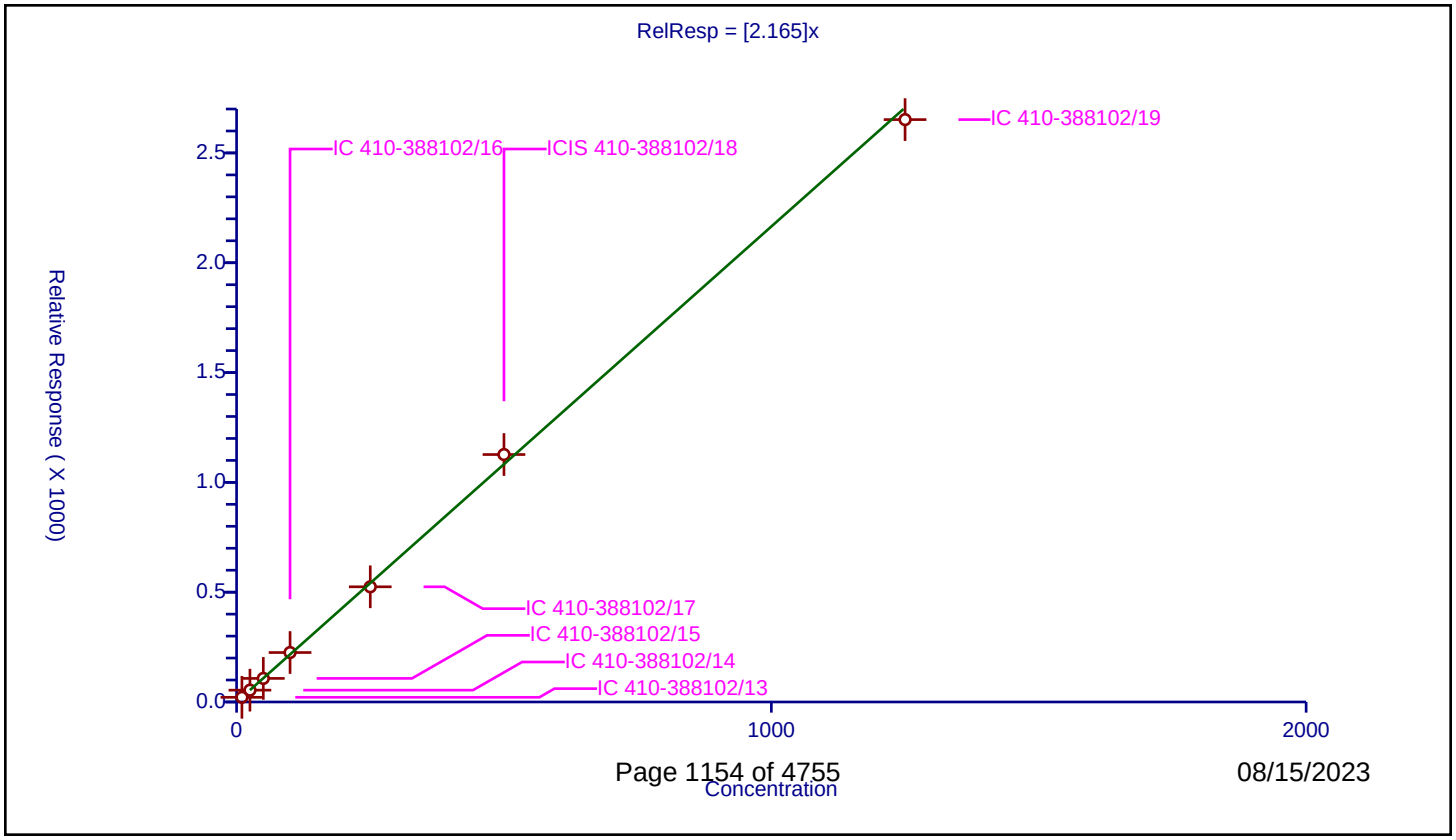
Curve Coefficients

Intercept:	0
Slope:	2.165

Error Coefficients

Standard Error:	3220000
Relative Standard Error:	2.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	10.000333	21.302708	50.0	116680.0	2.1302	Y
2	IC 410-388102/14	25.000833	53.851267	50.0	132398.0	2.153979	Y
3	IC 410-388102/15	50.001667	107.377111	50.0	133555.0	2.147471	Y
4	IC 410-388102/16	100.003333	225.13116	50.0	127135.0	2.251237	Y
5	IC 410-388102/17	250.008333	524.465777	50.0	139221.0	2.097793	Y
6	ICIS 410-388102/18	500.016666	1126.686676	50.0	130775.0	2.253298	Y
7	IC 410-388102/19	1250.041665	2651.77597	50.0	134884.0	2.12135	Y



Calibration / 1,1-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

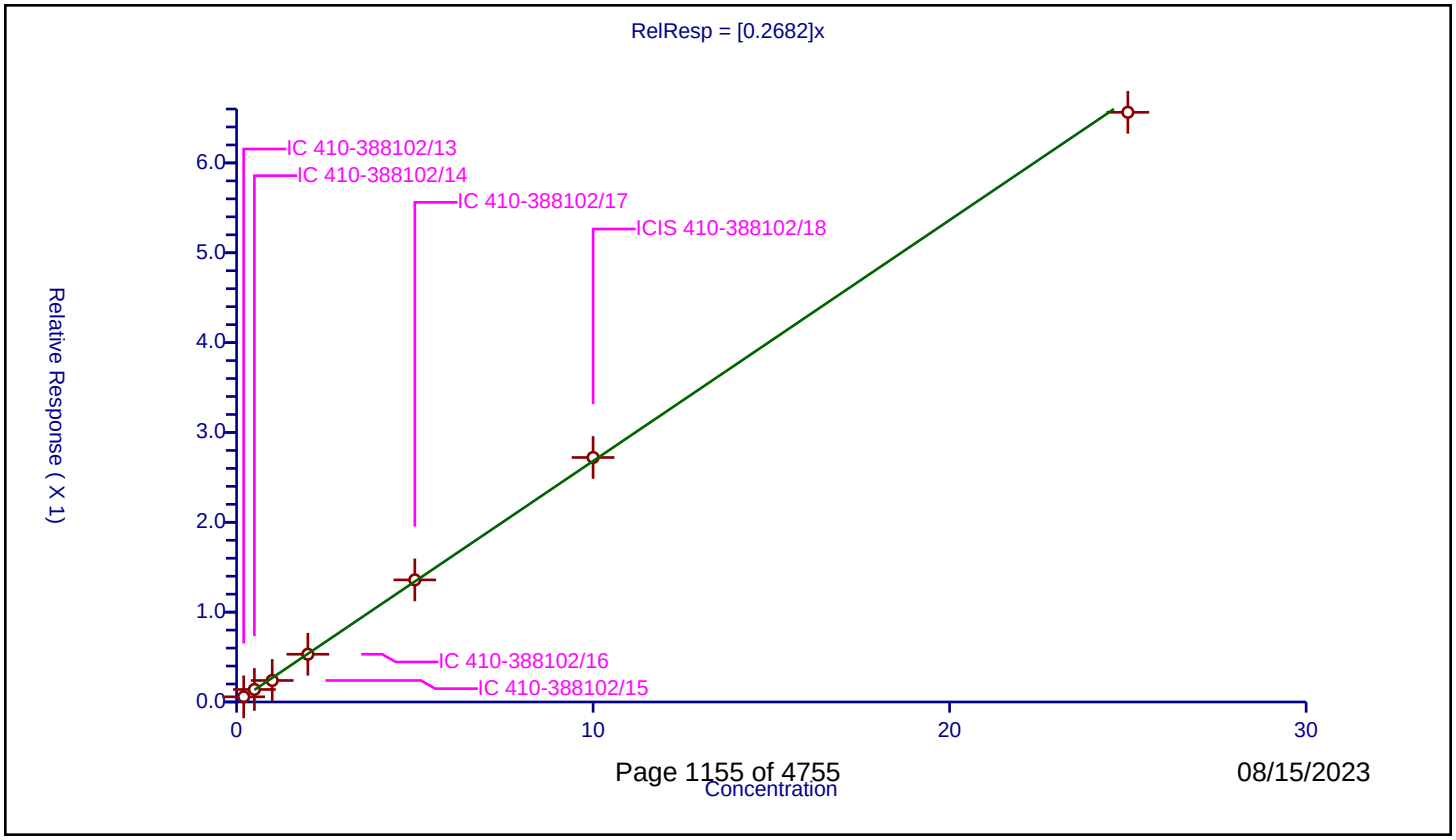
Curve Coefficients

Intercept:	0
Slope:	0.2682

Error Coefficients

Standard Error:	557000
Relative Standard Error:	5.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.057372	10.0	1795291.0	0.286862	Y
2	IC 410-388102/14	0.5	0.139399	10.0	1753956.0	0.278798	Y
3	IC 410-388102/15	1.0	0.239503	10.0	1790586.0	0.239503	Y
4	IC 410-388102/16	2.0	0.53142	10.0	1802566.0	0.26571	Y
5	IC 410-388102/17	5.0	1.358859	10.0	1860774.0	0.271772	Y
6	ICIS 410-388102/18	10.0	2.721292	10.0	1807671.0	0.272129	Y
7	IC 410-388102/19	25.0	6.563548	10.0	1891215.0	0.262542	Y



Calibration / Acetone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

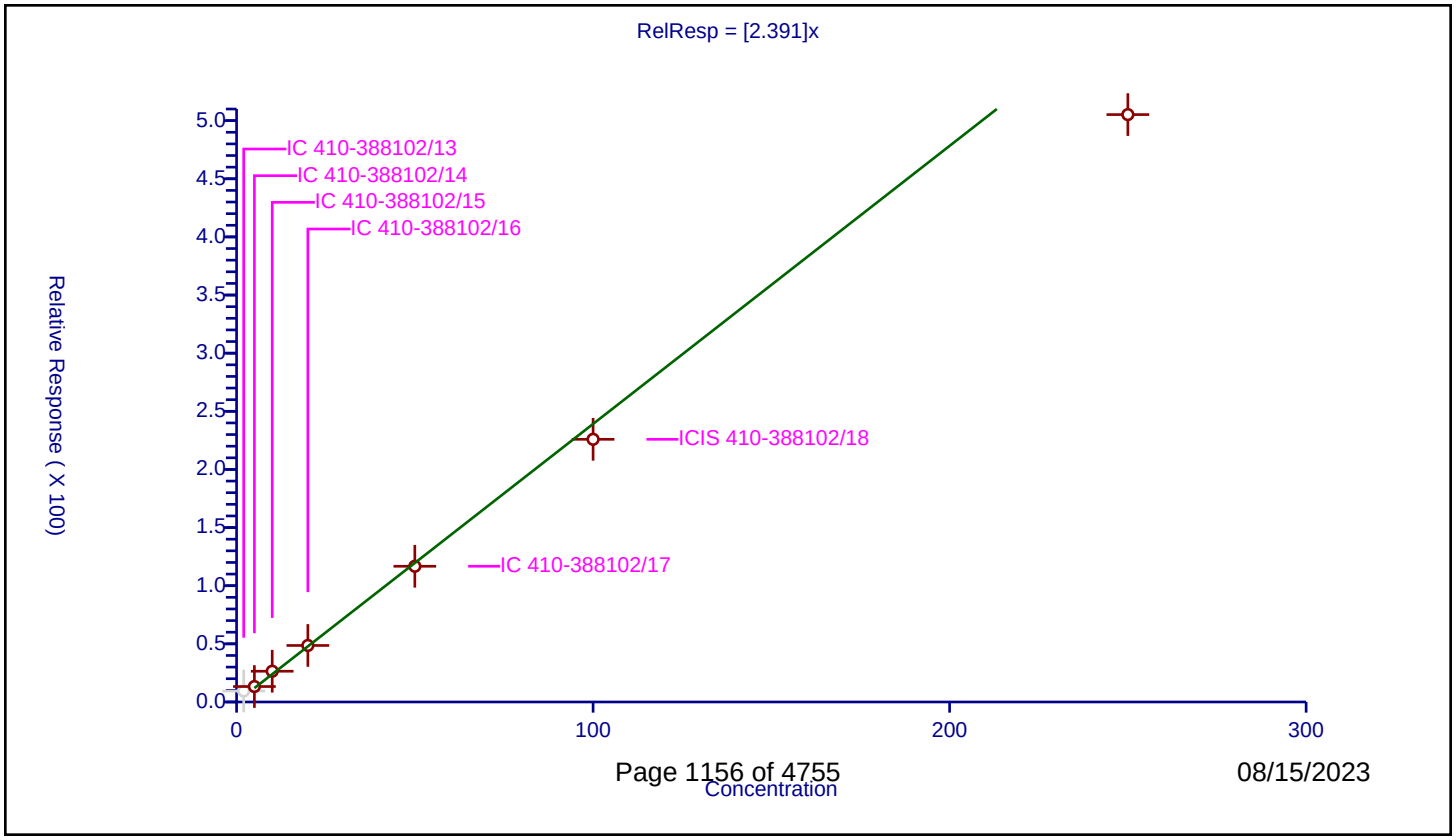
Curve Coefficients

Intercept:	0
Slope:	2.391

Error Coefficients

Standard Error:	683000
Relative Standard Error:	10.2
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.981

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	2.0	9.457919	50.0	116680.0	4.72896	N
2	IC 410-388102/14	5.0	13.28872	50.0	132398.0	2.657744	Y
3	IC 410-388102/15	10.0	26.462506	50.0	133555.0	2.646251	Y
4	IC 410-388102/16	20.0	48.601487	50.0	127135.0	2.430074	Y
5	IC 410-388102/17	50.0	116.735981	50.0	139221.0	2.33472	Y
6	ICIS 410-388102/18	100.0	225.93118	50.0	130775.0	2.259312	Y
7	IC 410-388102/19	250.0	505.214481	50.0	134884.0	2.020858	Y



Calibration / 1,1,2-Trichloro-1,2,2-trifluoroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

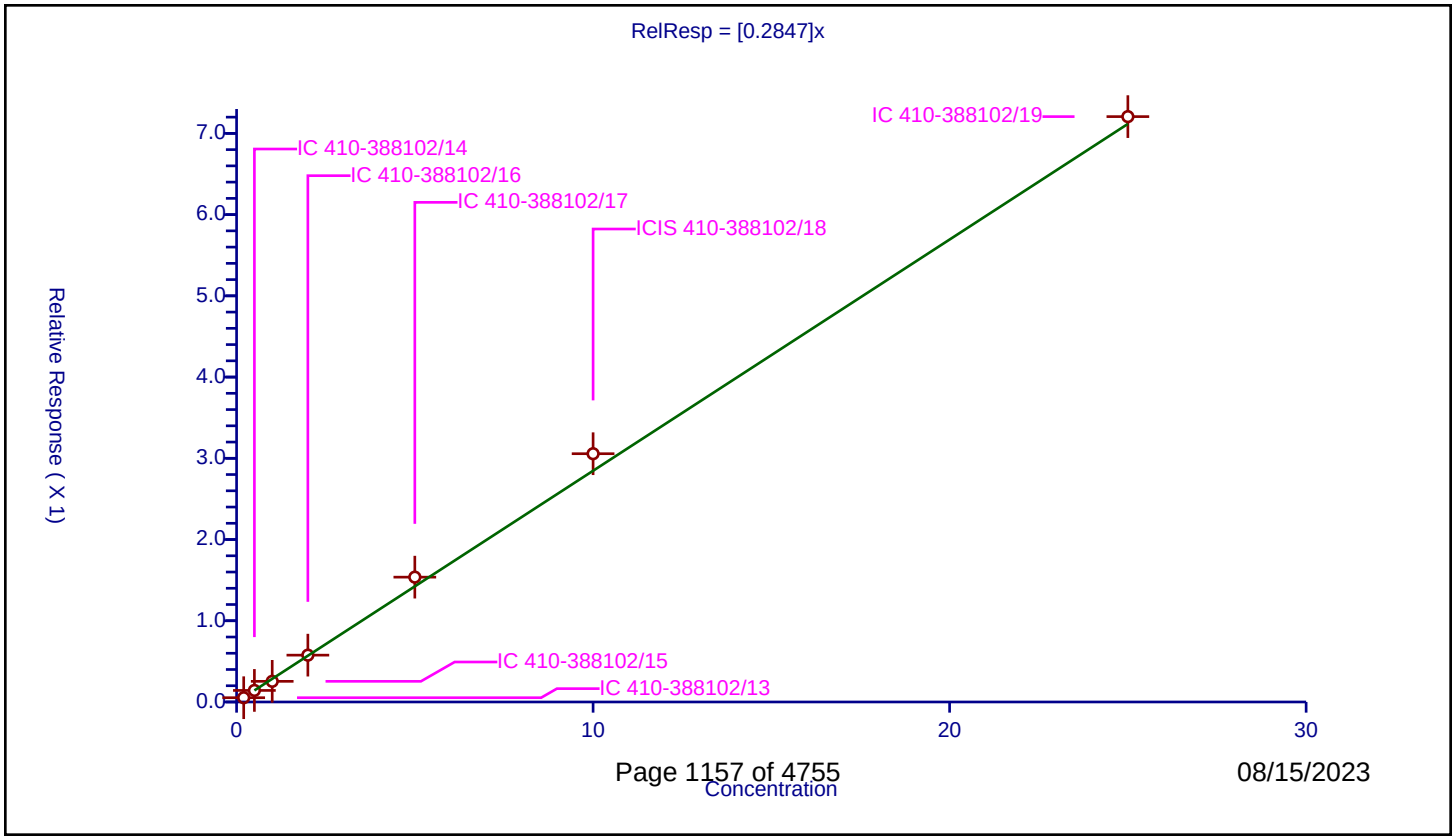
Curve Coefficients

Intercept:	0
Slope:	0.2847

Error Coefficients

Standard Error:	613000
Relative Standard Error:	6.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.05276	10.0	1795291.0	0.263801	Y
2	IC 410-388102/14	0.5	0.142421	10.0	1753956.0	0.284842	Y
3	IC 410-388102/15	1.0	0.254313	10.0	1790586.0	0.254313	Y
4	IC 410-388102/16	2.0	0.576744	10.0	1802566.0	0.288372	Y
5	IC 410-388102/17	5.0	1.536936	10.0	1860774.0	0.307387	Y
6	ICIS 410-388102/18	10.0	3.05638	10.0	1807671.0	0.305638	Y
7	IC 410-388102/19	25.0	7.206388	10.0	1891215.0	0.288256	Y



Calibration / Iodomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

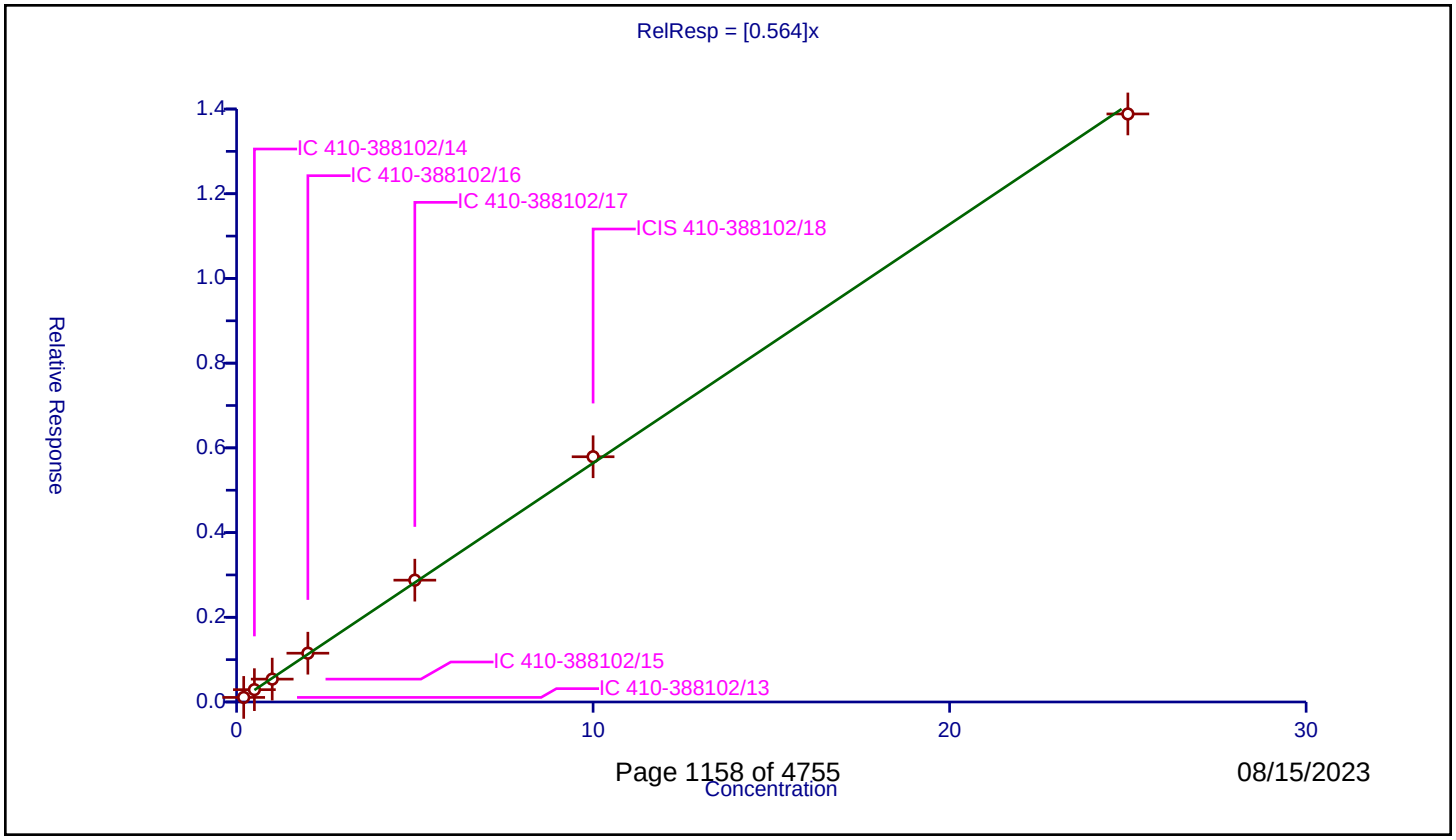
Curve Coefficients

Intercept:	0
Slope:	0.564

Error Coefficients

Standard Error:	1180000
Relative Standard Error:	3.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.108049	10.0	1795291.0	0.540247	Y
2	IC 410-388102/14	0.5	0.291062	10.0	1753956.0	0.582124	Y
3	IC 410-388102/15	1.0	0.539628	10.0	1790586.0	0.539628	Y
4	IC 410-388102/16	2.0	1.152146	10.0	1802566.0	0.576073	Y
5	IC 410-388102/17	5.0	2.876378	10.0	1860774.0	0.575276	Y
6	ICIS 410-388102/18	10.0	5.790091	10.0	1807671.0	0.579009	Y
7	IC 410-388102/19	25.0	13.88325	10.0	1891215.0	0.55533	Y



Calibration / Carbon disulfide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

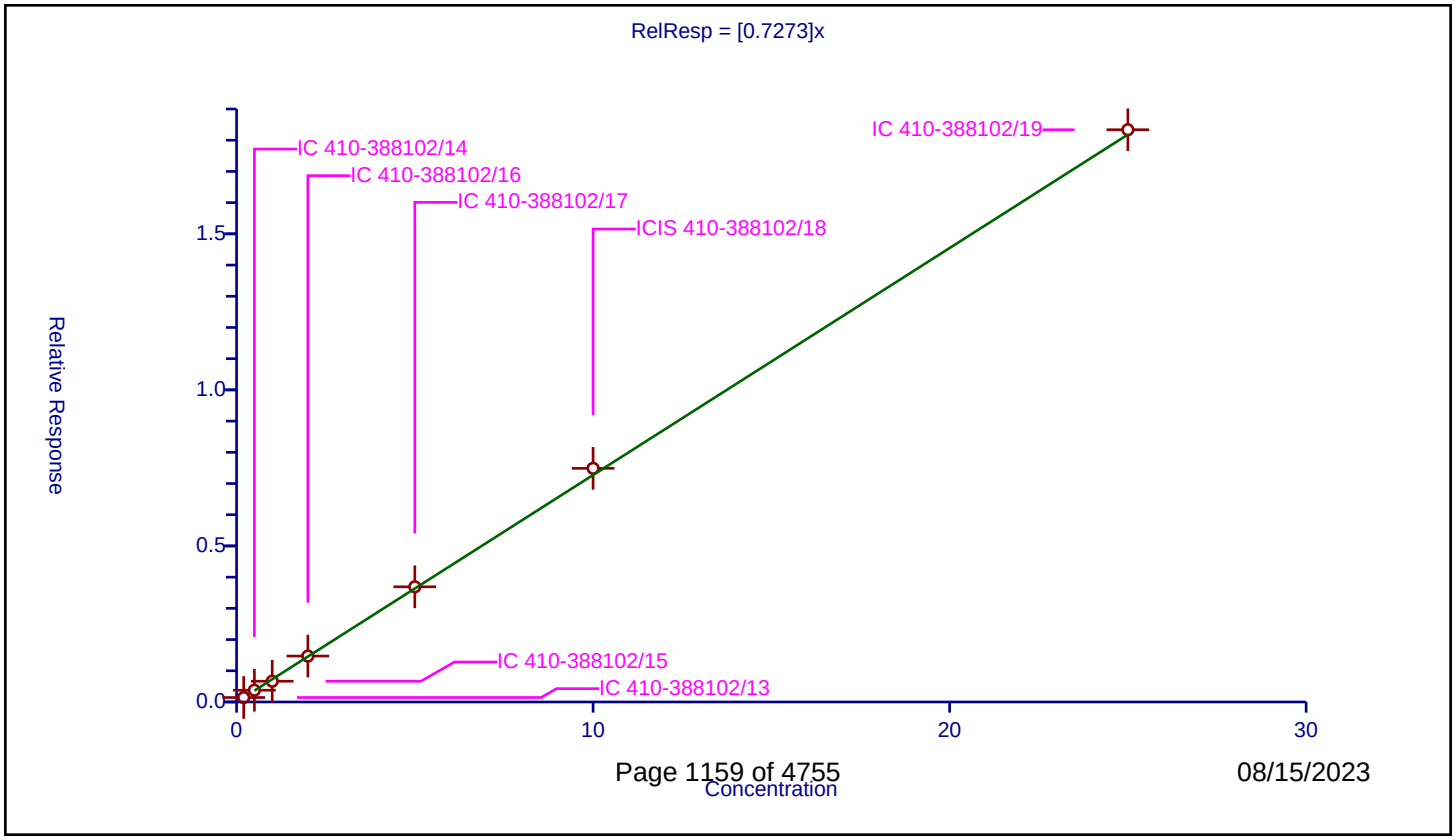
Curve Coefficients

Intercept:	0
Slope:	0.7273

Error Coefficients

Standard Error:	1550000
Relative Standard Error:	4.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.14298	10.0	1795291.0	0.714898	Y
2	IC 410-388102/14	0.5	0.377256	10.0	1753956.0	0.754512	Y
3	IC 410-388102/15	1.0	0.665363	10.0	1790586.0	0.665363	Y
4	IC 410-388102/16	2.0	1.471419	10.0	1802566.0	0.73571	Y
5	IC 410-388102/17	5.0	3.690394	10.0	1860774.0	0.738079	Y
6	ICIS 410-388102/18	10.0	7.487463	10.0	1807671.0	0.748746	Y
7	IC 410-388102/19	25.0	18.336197	10.0	1891215.0	0.733448	Y



Calibration / Methyl acetate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

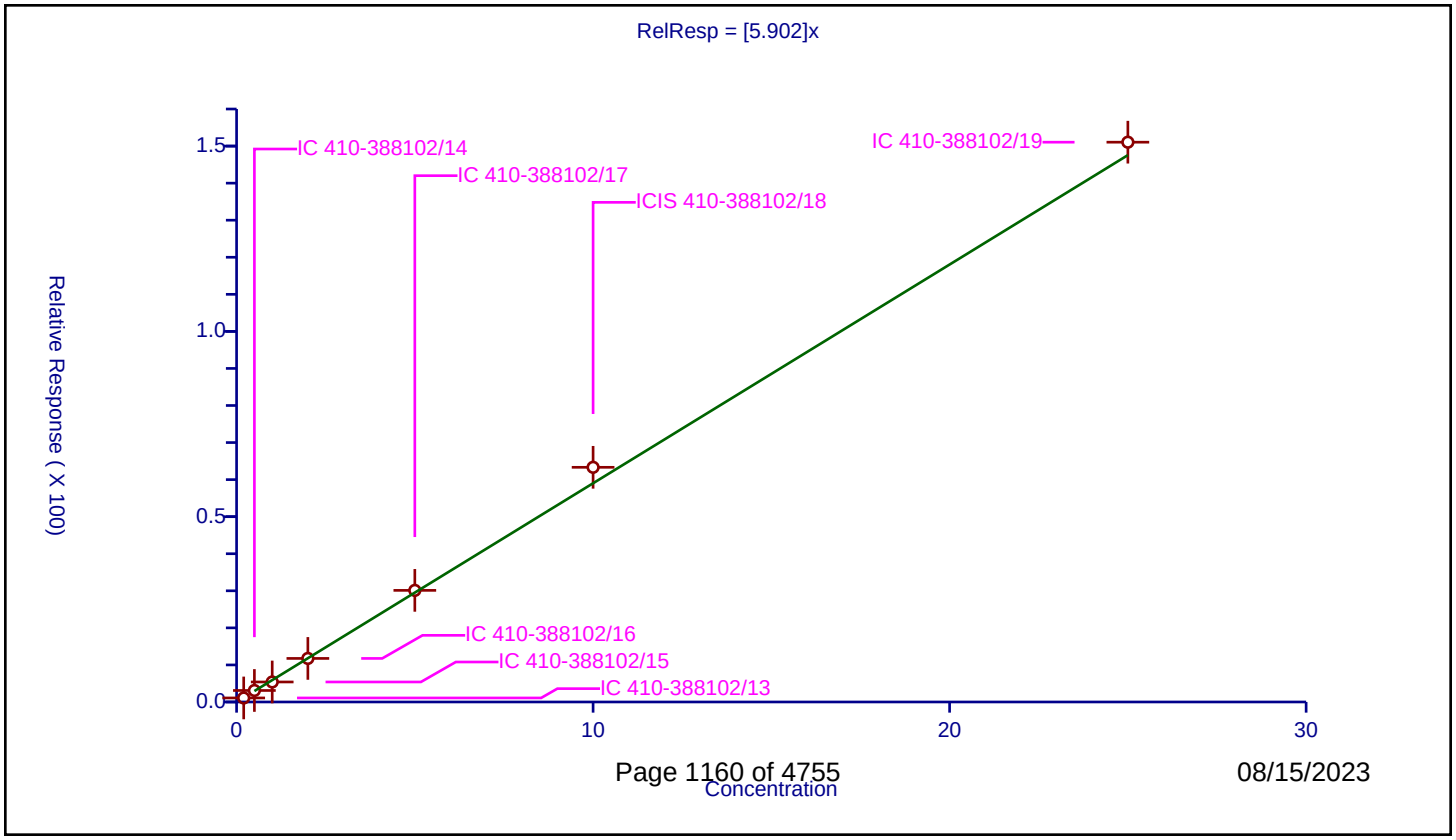
Curve Coefficients

Intercept:	0
Slope:	5.902

Error Coefficients

Standard Error:	183000
Relative Standard Error:	6.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	1.087161	50.0	116680.0	5.435807	Y
2	IC 410-388102/14	0.5	3.103144	50.0	132398.0	6.206287	Y
3	IC 410-388102/15	1.0	5.397776	50.0	133555.0	5.397776	Y
4	IC 410-388102/16	2.0	11.754434	50.0	127135.0	5.877217	Y
5	IC 410-388102/17	5.0	30.113632	50.0	139221.0	6.022726	Y
6	ICIS 410-388102/18	10.0	63.319442	50.0	130775.0	6.331944	Y
7	IC 410-388102/19	25.0	151.046455	50.0	134884.0	6.041858	Y



Calibration / 3-Chloro-1-propene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

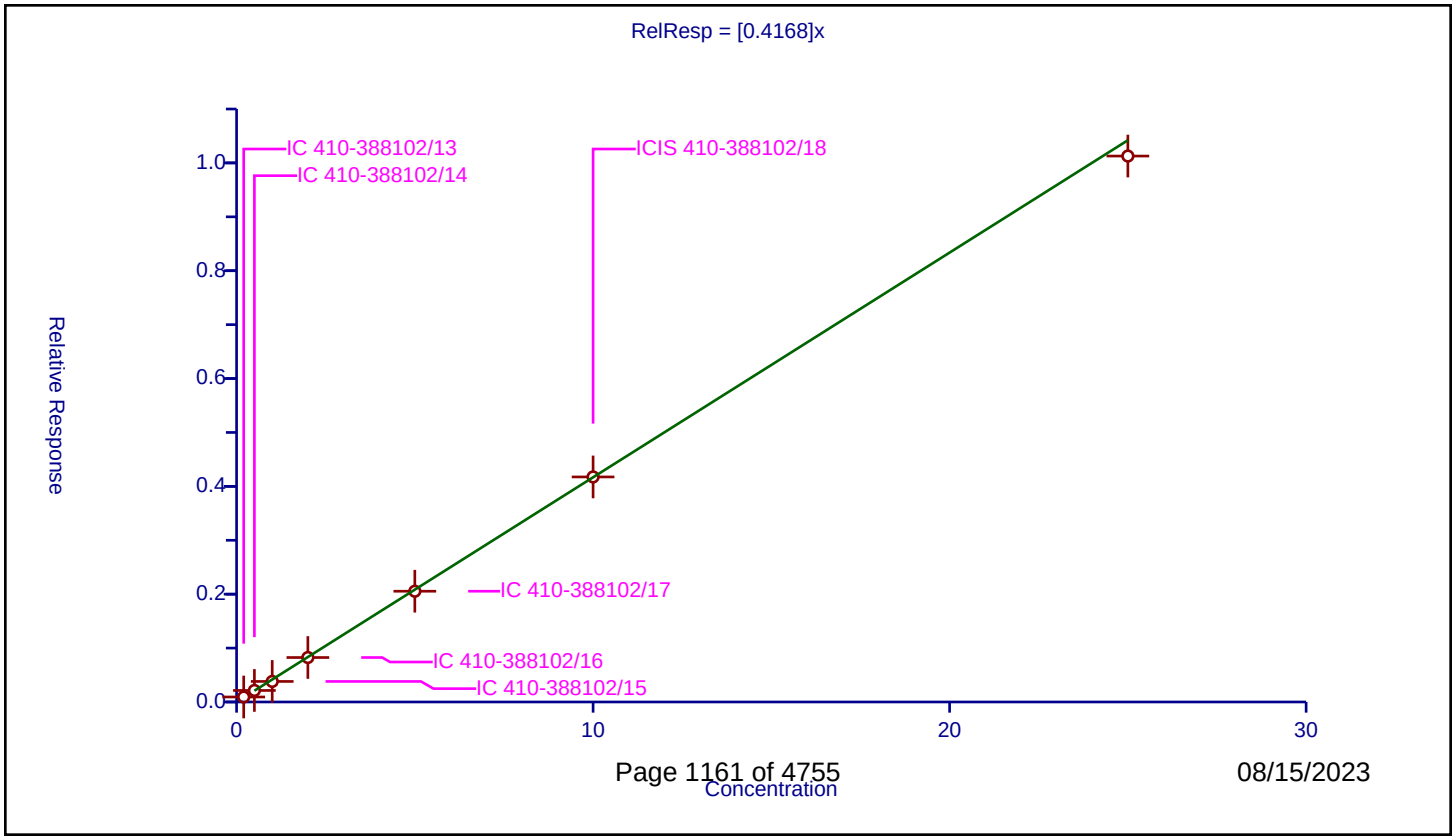
Curve Coefficients

Intercept:	0
Slope:	0.4168

Error Coefficients

Standard Error:	858000
Relative Standard Error:	5.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.092525	10.0	1795291.0	0.462627	Y
2	IC 410-388102/14	0.5	0.213996	10.0	1753956.0	0.427992	Y
3	IC 410-388102/15	1.0	0.381099	10.0	1790586.0	0.381099	Y
4	IC 410-388102/16	2.0	0.824935	10.0	1802566.0	0.412468	Y
5	IC 410-388102/17	5.0	2.05486	10.0	1860774.0	0.410972	Y
6	ICIS 410-388102/18	10.0	4.174808	10.0	1807671.0	0.417481	Y
7	IC 410-388102/19	25.0	10.127167	10.0	1891215.0	0.405087	Y



Calibration / Methylene Chloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

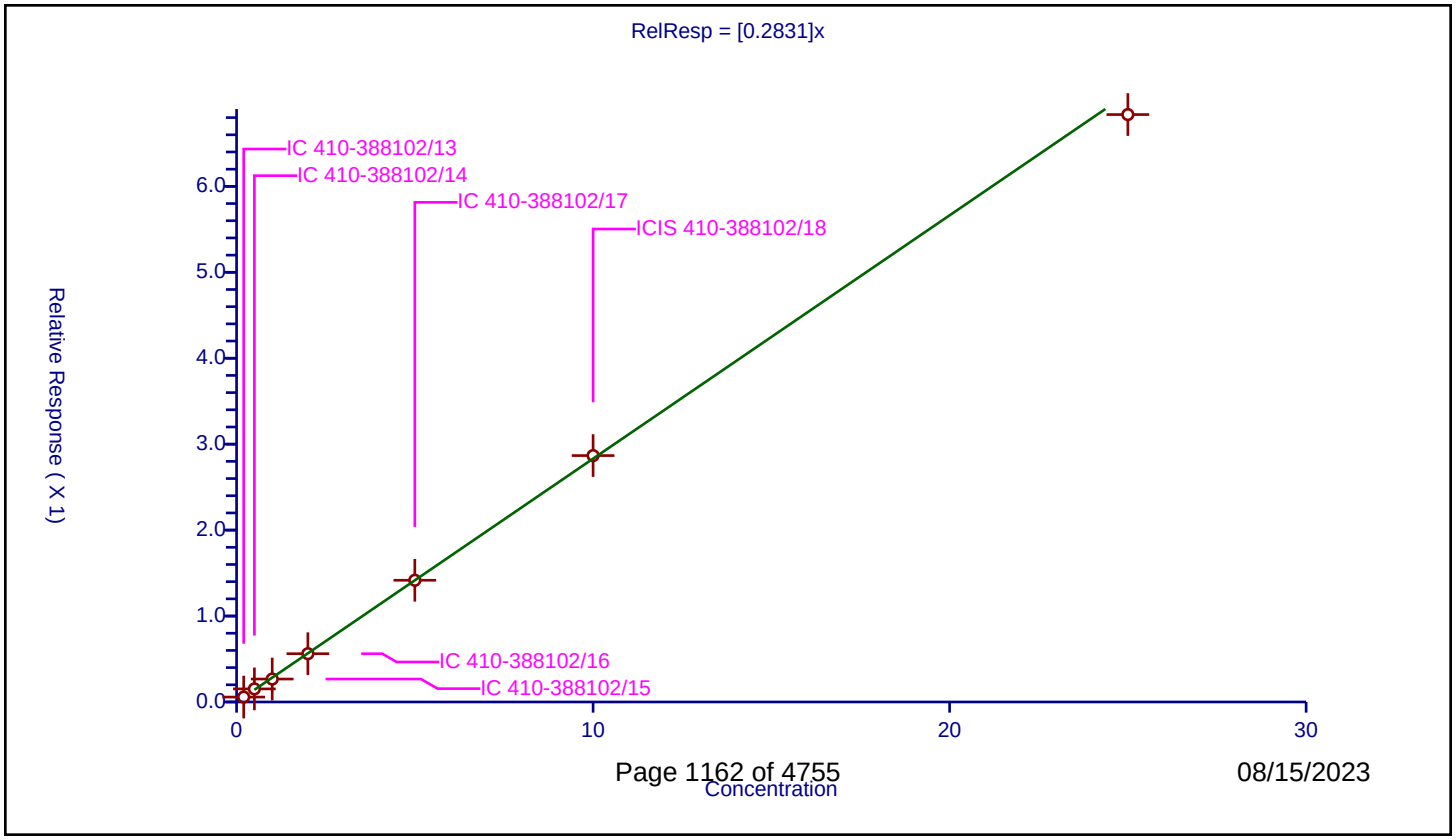
Curve Coefficients

Intercept:	0
Slope:	0.2831

Error Coefficients

Standard Error:	581000
Relative Standard Error:	4.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.057272	10.0	1795291.0	0.28636	Y
2	IC 410-388102/14	0.5	0.152256	10.0	1753956.0	0.304512	Y
3	IC 410-388102/15	1.0	0.26689	10.0	1790586.0	0.26689	Y
4	IC 410-388102/16	2.0	0.561699	10.0	1802566.0	0.28085	Y
5	IC 410-388102/17	5.0	1.416325	10.0	1860774.0	0.283265	Y
6	ICIS 410-388102/18	10.0	2.867203	10.0	1807671.0	0.28672	Y
7	IC 410-388102/19	25.0	6.835347	10.0	1891215.0	0.273414	Y



Calibration / 2-Methyl-2-propanol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

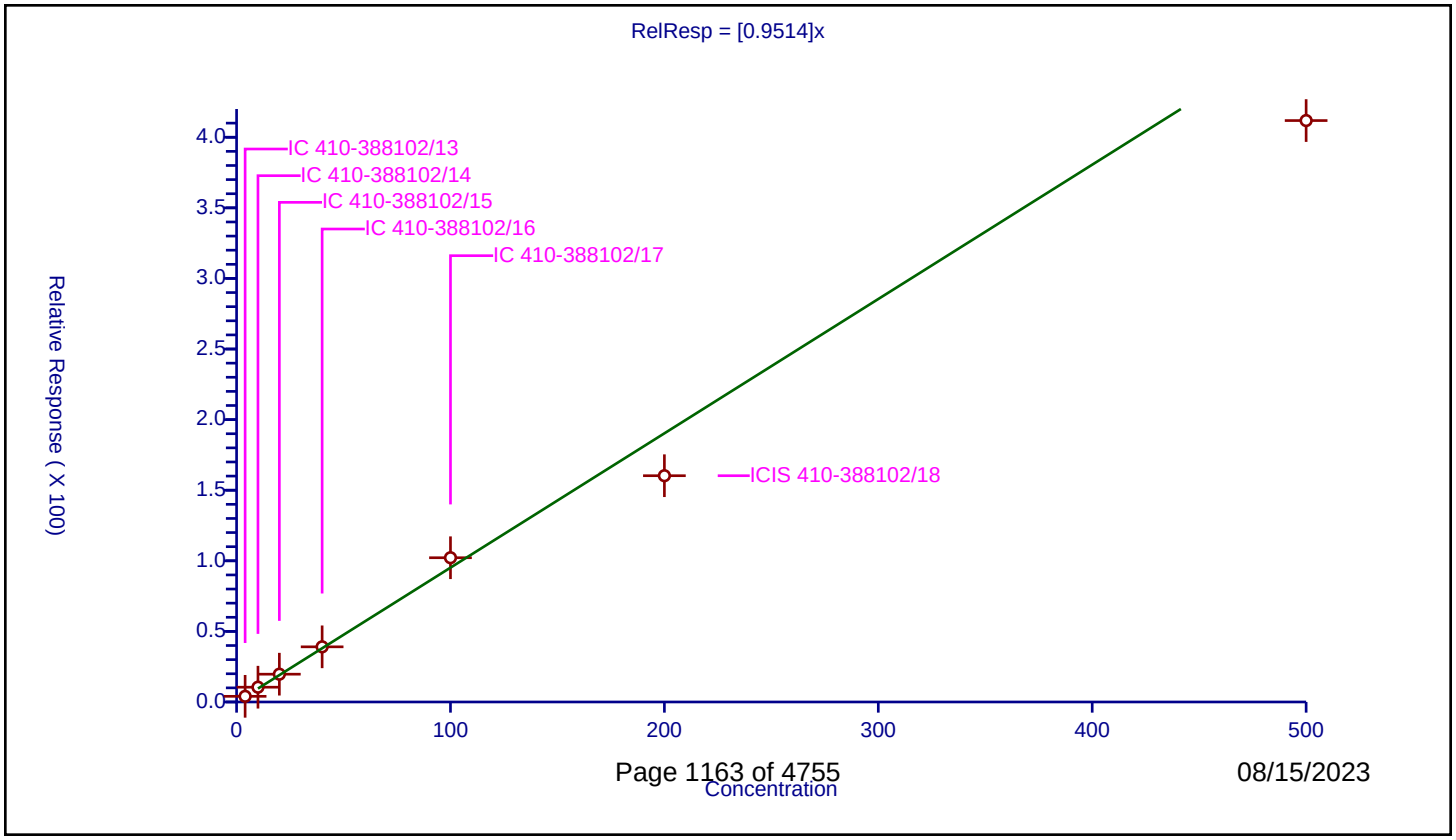
Curve Coefficients

Intercept:	0
Slope:	0.9514

Error Coefficients

Standard Error:	501000
Relative Standard Error:	10.3
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	4.0	4.016541	50.0	116680.0	1.004135	Y
2	IC 410-388102/14	10.0	10.478633	50.0	132398.0	1.047863	Y
3	IC 410-388102/15	20.0	19.681405	50.0	133555.0	0.98407	Y
4	IC 410-388102/16	40.0	39.078539	50.0	127135.0	0.976963	Y
5	IC 410-388102/17	100.0	102.172804	50.0	139221.0	1.021728	Y
6	ICIS 410-388102/18	200.0	160.268782	50.0	130775.0	0.801344	Y
7	IC 410-388102/19	500.0	411.823863	50.0	134884.0	0.823648	Y



Calibration / Acrylonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

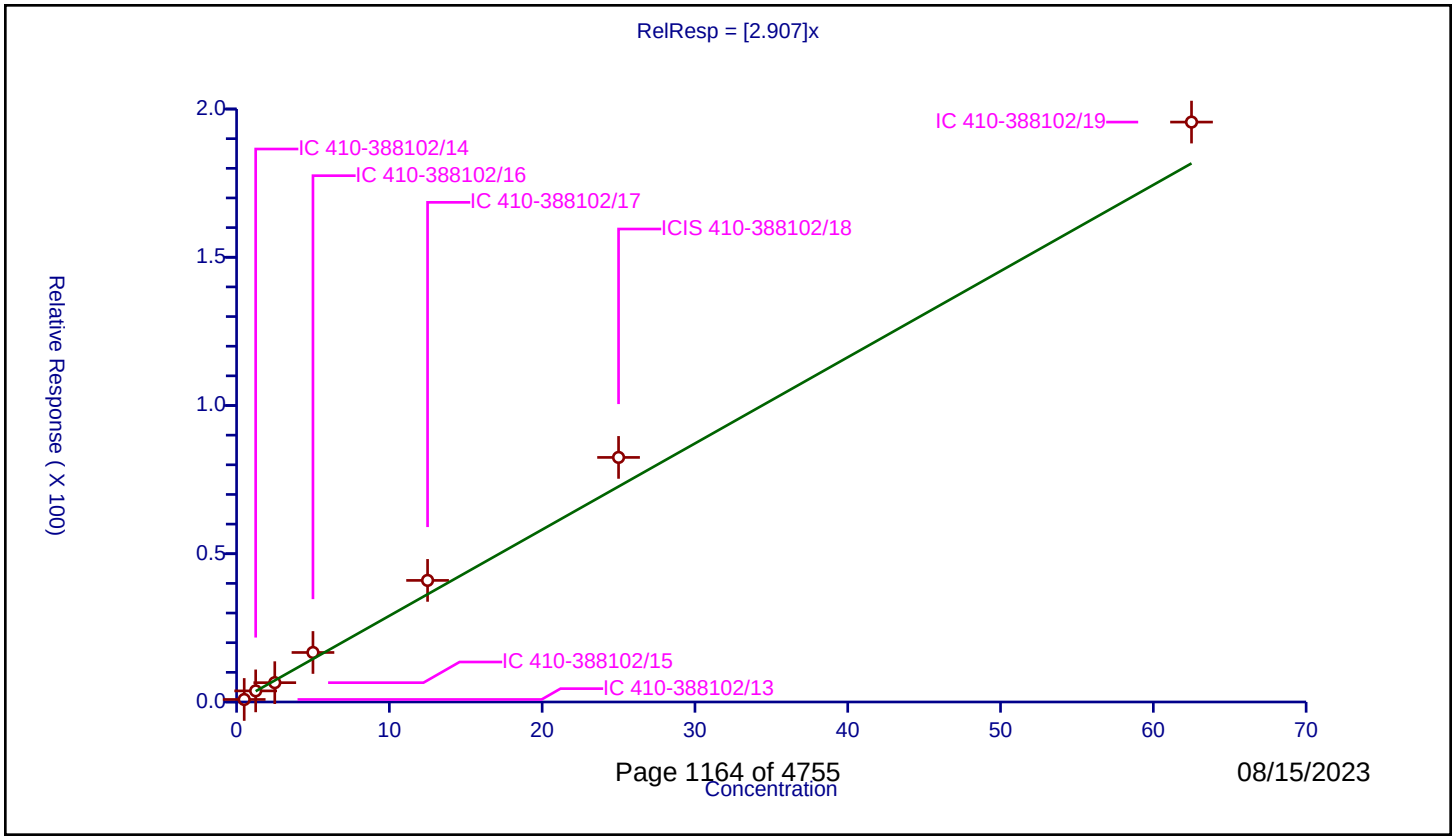
Curve Coefficients

Intercept:	0
Slope:	2.907

Error Coefficients

Standard Error:	238000
Relative Standard Error:	20.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.956

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.5	0.84676	50.0	116680.0	1.693521	Y
2	IC 410-388102/14	1.25	3.747791	50.0	132398.0	2.998233	Y
3	IC 410-388102/15	2.5	6.512673	50.0	133555.0	2.605069	Y
4	IC 410-388102/16	5.0	16.701931	50.0	127135.0	3.340386	Y
5	IC 410-388102/17	12.5	41.009259	50.0	139221.0	3.280741	Y
6	ICIS 410-388102/18	25.0	82.487861	50.0	130775.0	3.299514	Y
7	IC 410-388102/19	62.5	195.594733	50.0	134884.0	3.129516	Y



Calibration / Methyl tert-butyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

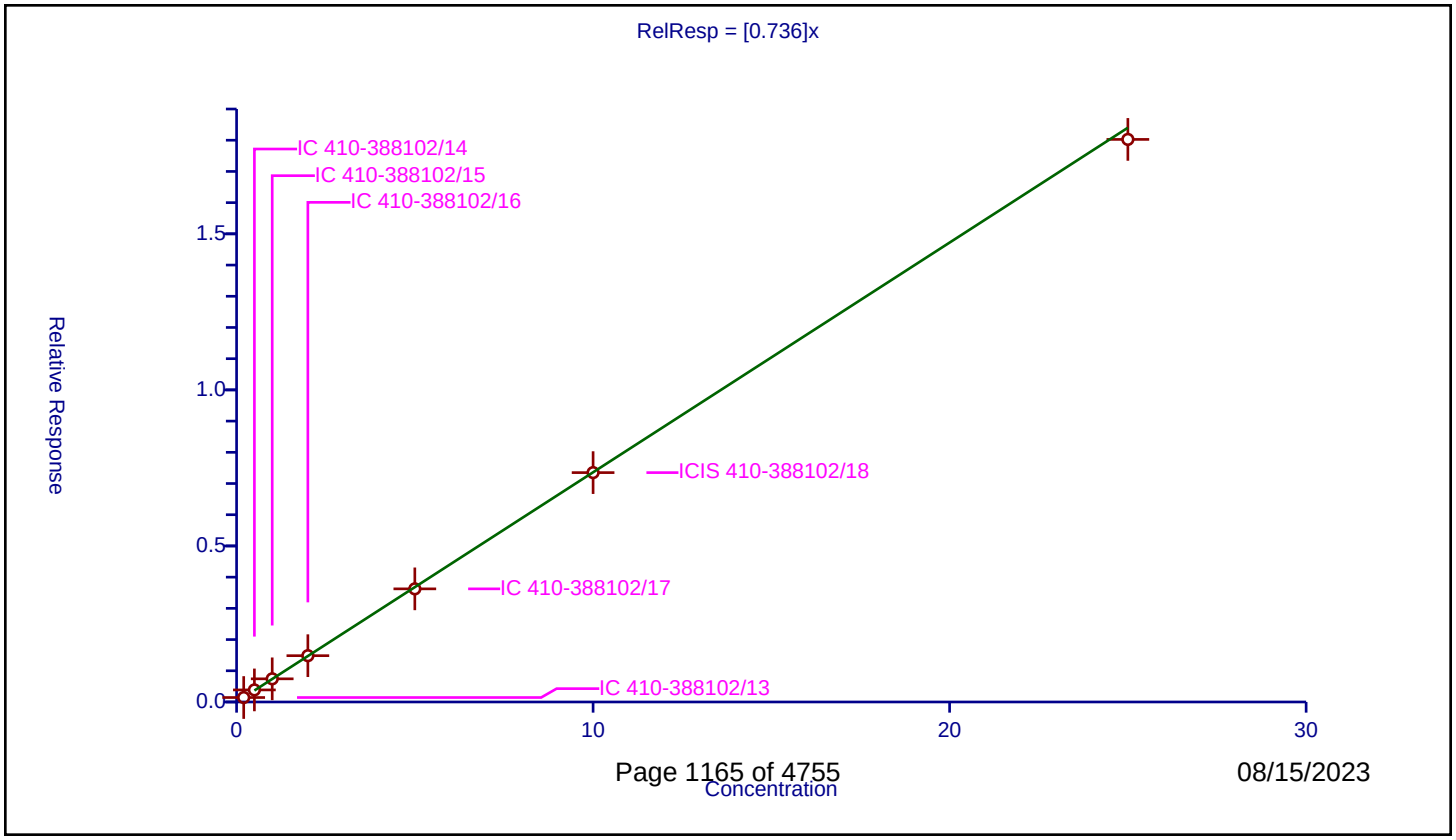
Curve Coefficients

Intercept:	0
Slope:	0.736

Error Coefficients

Standard Error:	1520000
Relative Standard Error:	2.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.142818	10.0	1795291.0	0.71409	Y
2	IC 410-388102/14	0.5	0.386543	10.0	1753956.0	0.773087	Y
3	IC 410-388102/15	1.0	0.742165	10.0	1790586.0	0.742165	Y
4	IC 410-388102/16	2.0	1.483624	10.0	1802566.0	0.741812	Y
5	IC 410-388102/17	5.0	3.62461	10.0	1860774.0	0.724922	Y
6	ICIS 410-388102/18	10.0	7.349722	10.0	1807671.0	0.734972	Y
7	IC 410-388102/19	25.0	18.0261	10.0	1891215.0	0.721044	Y



Calibration / trans-1,2-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

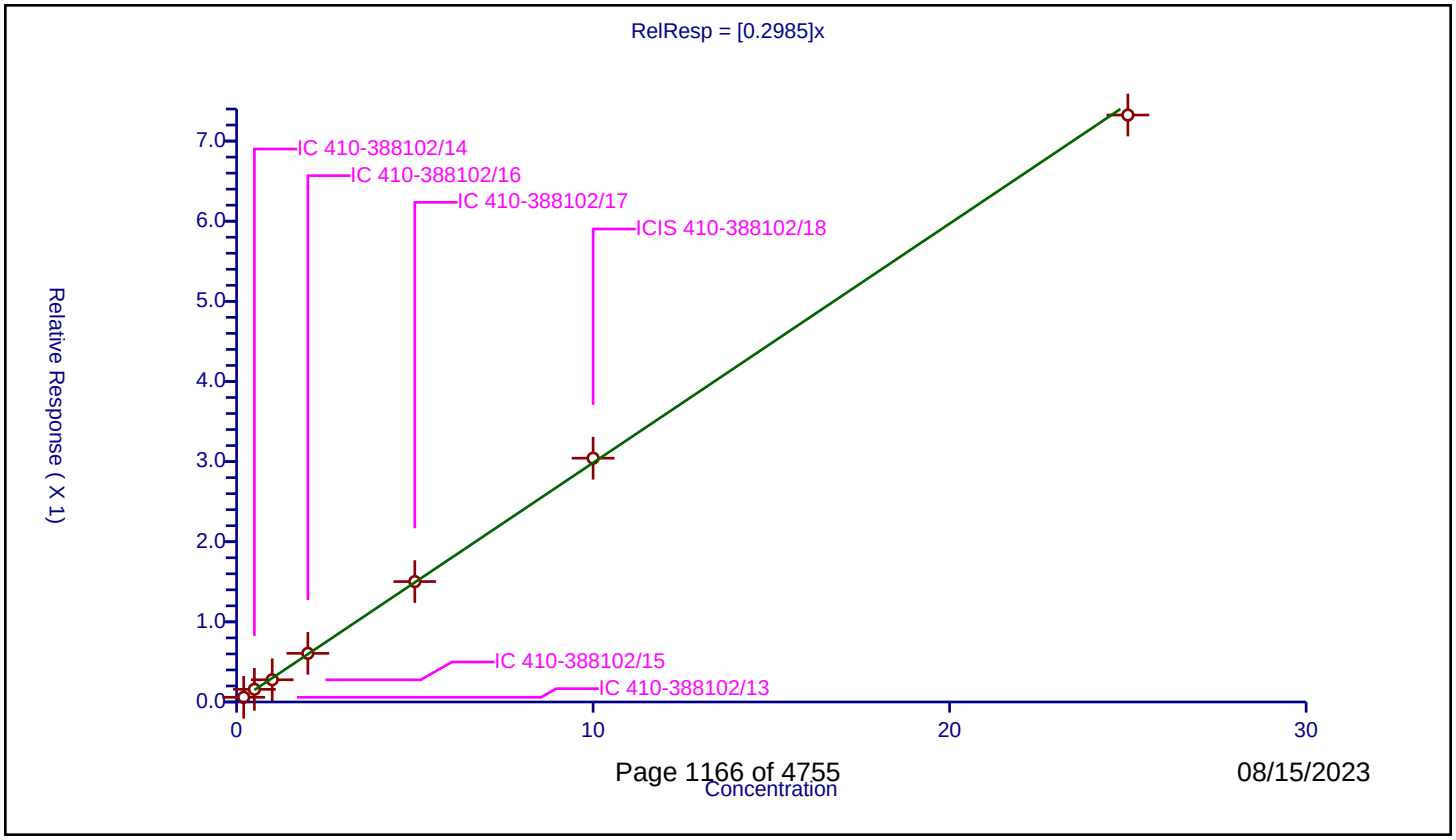
Curve Coefficients

Intercept:	0
Slope:	0.2985

Error Coefficients

Standard Error:	621000
Relative Standard Error:	4.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.058865	10.0	1795291.0	0.294326	Y
2	IC 410-388102/14	0.5	0.158322	10.0	1753956.0	0.316644	Y
3	IC 410-388102/15	1.0	0.277267	10.0	1790586.0	0.277267	Y
4	IC 410-388102/16	2.0	0.606707	10.0	1802566.0	0.303354	Y
5	IC 410-388102/17	5.0	1.502681	10.0	1860774.0	0.300536	Y
6	ICIS 410-388102/18	10.0	3.042395	10.0	1807671.0	0.30424	Y
7	IC 410-388102/19	25.0	7.324625	10.0	1891215.0	0.292985	Y



Calibration / Hexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

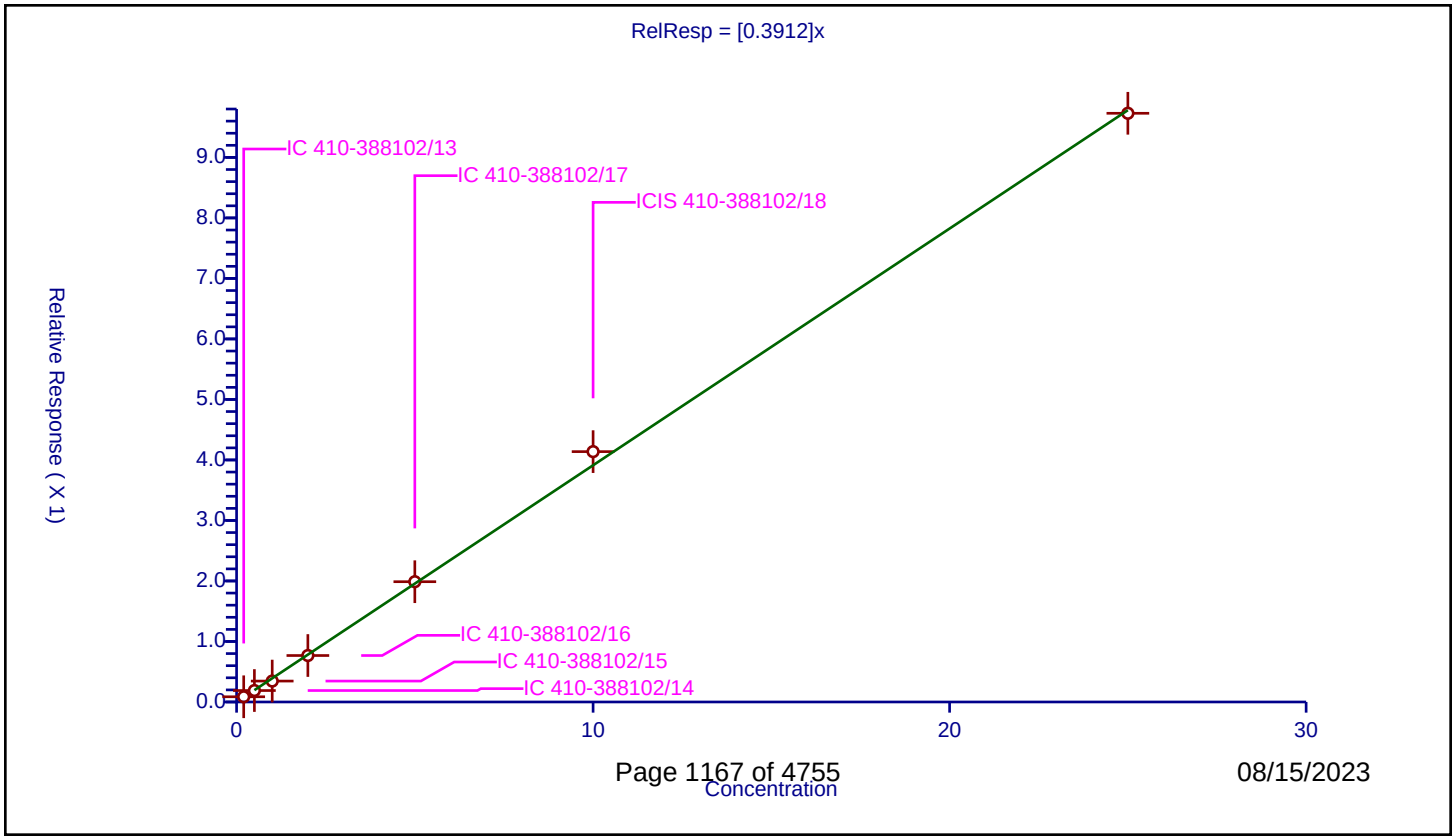
Curve Coefficients

Intercept:	0
Slope:	0.3912

Error Coefficients

Standard Error:	827000
Relative Standard Error:	6.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.086042	10.0	1795291.0	0.430209	Y
2	IC 410-388102/14	0.5	0.18907	10.0	1753956.0	0.378139	Y
3	IC 410-388102/15	1.0	0.345742	10.0	1790586.0	0.345742	Y
4	IC 410-388102/16	2.0	0.767844	10.0	1802566.0	0.383922	Y
5	IC 410-388102/17	5.0	1.987942	10.0	1860774.0	0.397588	Y
6	ICIS 410-388102/18	10.0	4.137816	10.0	1807671.0	0.413782	Y
7	IC 410-388102/19	25.0	9.729613	10.0	1891215.0	0.389185	Y



Calibration / 1,1-Dichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

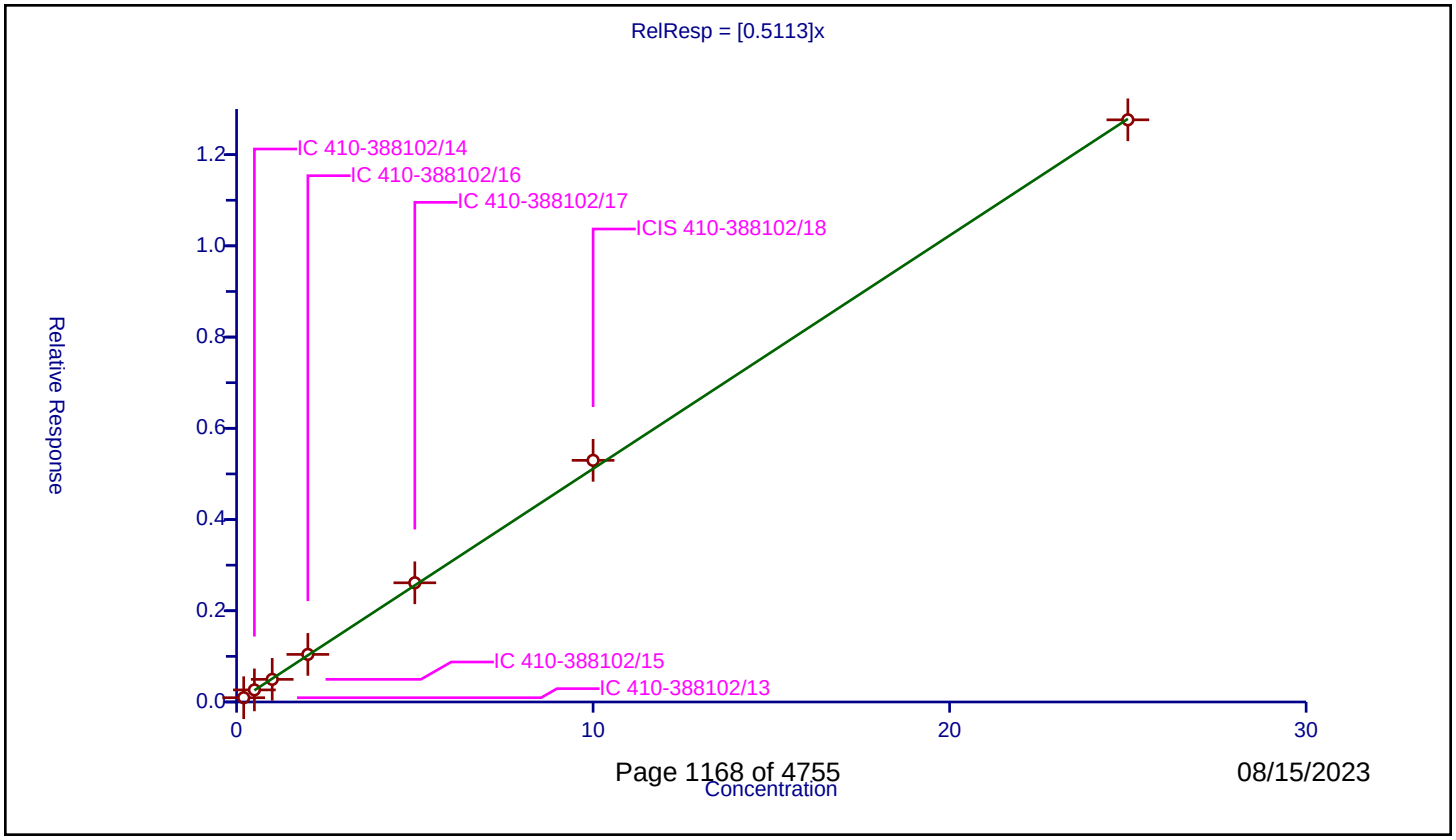
Curve Coefficients

Intercept:	0
Slope:	0.5113

Error Coefficients

Standard Error:	1080000
Relative Standard Error:	4.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.093656	10.0	1795291.0	0.468281	Y
2	IC 410-388102/14	0.5	0.265195	10.0	1753956.0	0.53039	Y
3	IC 410-388102/15	1.0	0.496257	10.0	1790586.0	0.496257	Y
4	IC 410-388102/16	2.0	1.043302	10.0	1802566.0	0.521651	Y
5	IC 410-388102/17	5.0	2.612698	10.0	1860774.0	0.52254	Y
6	ICIS 410-388102/18	10.0	5.297441	10.0	1807671.0	0.529744	Y
7	IC 410-388102/19	25.0	12.763351	10.0	1891215.0	0.510534	Y



Calibration / Isopropyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

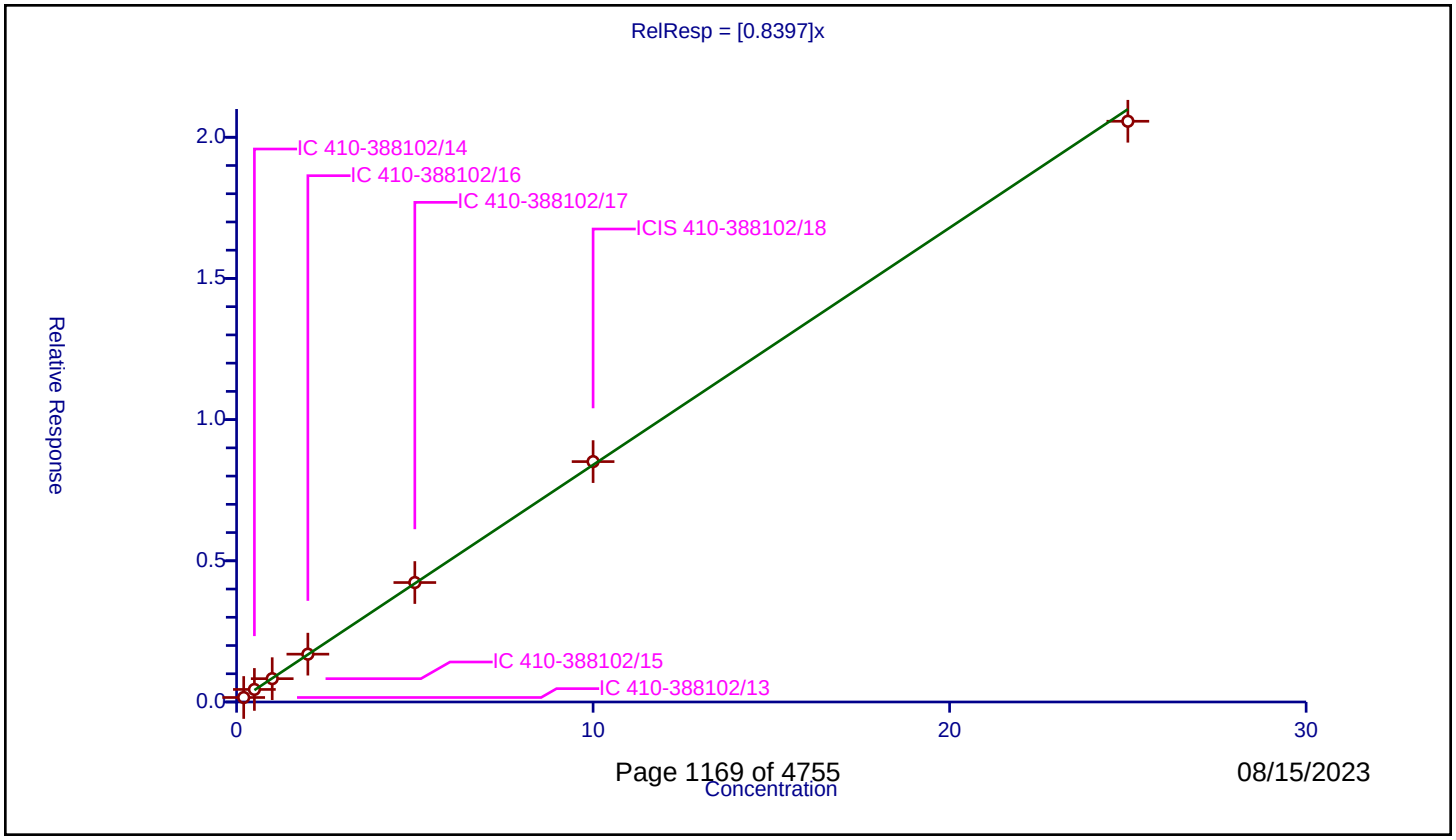
Curve Coefficients

Intercept:	0
Slope:	0.8397

Error Coefficients

Standard Error:	1740000
Relative Standard Error:	3.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.159328	10.0	1795291.0	0.79664	Y
2	IC 410-388102/14	0.5	0.444048	10.0	1753956.0	0.888095	Y
3	IC 410-388102/15	1.0	0.826305	10.0	1790586.0	0.826305	Y
4	IC 410-388102/16	2.0	1.693719	10.0	1802566.0	0.846859	Y
5	IC 410-388102/17	5.0	4.230089	10.0	1860774.0	0.846018	Y
6	ICIS 410-388102/18	10.0	8.512937	10.0	1807671.0	0.851294	Y
7	IC 410-388102/19	25.0	20.566736	10.0	1891215.0	0.822669	Y



Calibration / 2-Chloro-1,3-butadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

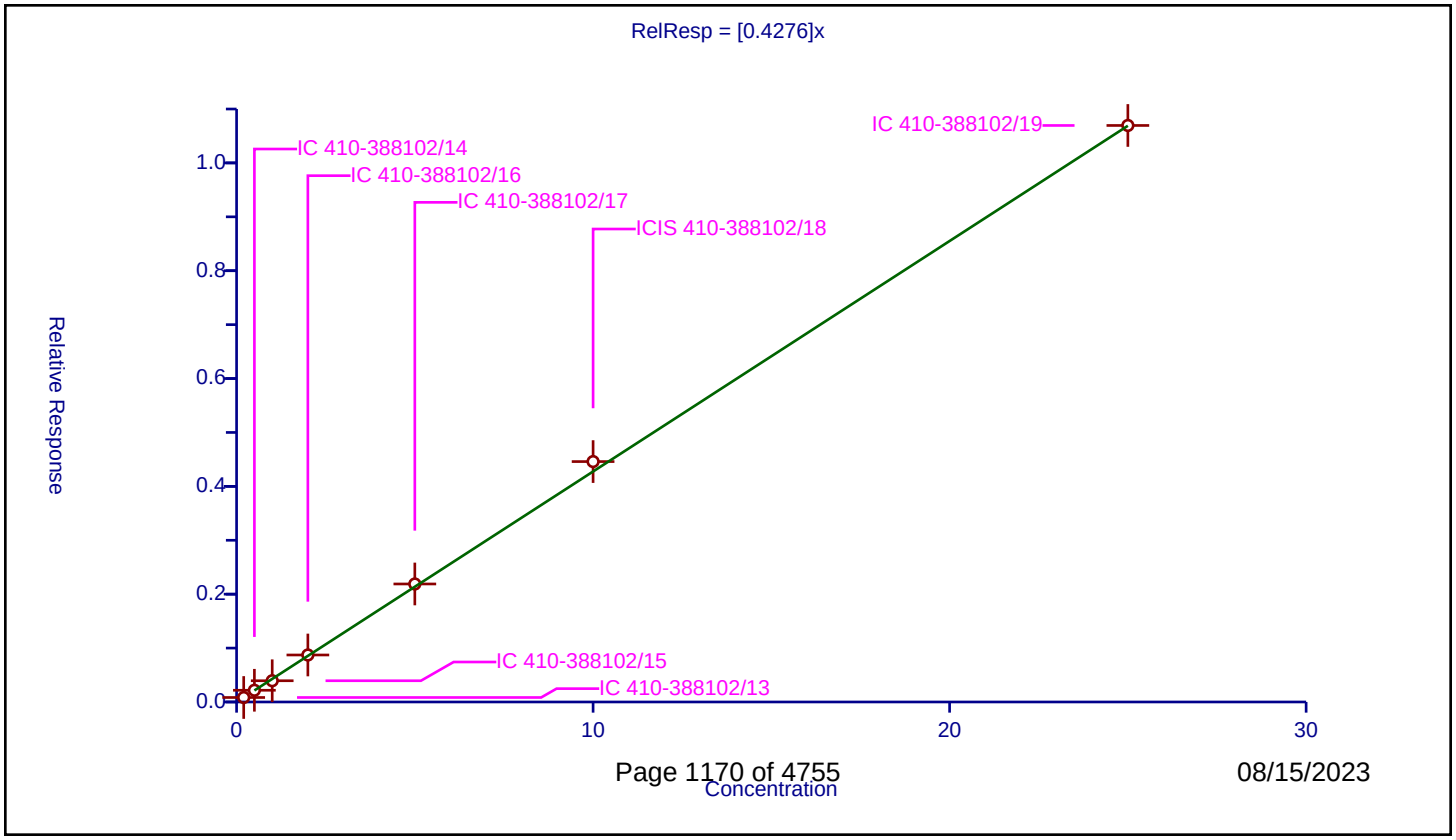
Curve Coefficients

Intercept:	0
Slope:	0.4276

Error Coefficients

Standard Error:	907000
Relative Standard Error:	4.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.083223	10.0	1795291.0	0.416116	Y
2	IC 410-388102/14	0.5	0.217577	10.0	1753956.0	0.435153	Y
3	IC 410-388102/15	1.0	0.394	10.0	1790586.0	0.394	Y
4	IC 410-388102/16	2.0	0.871996	10.0	1802566.0	0.435998	Y
5	IC 410-388102/17	5.0	2.189213	10.0	1860774.0	0.437843	Y
6	ICIS 410-388102/18	10.0	4.459904	10.0	1807671.0	0.44599	Y
7	IC 410-388102/19	25.0	10.69495	10.0	1891215.0	0.427798	Y



Calibration / Tert-butyl ethyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

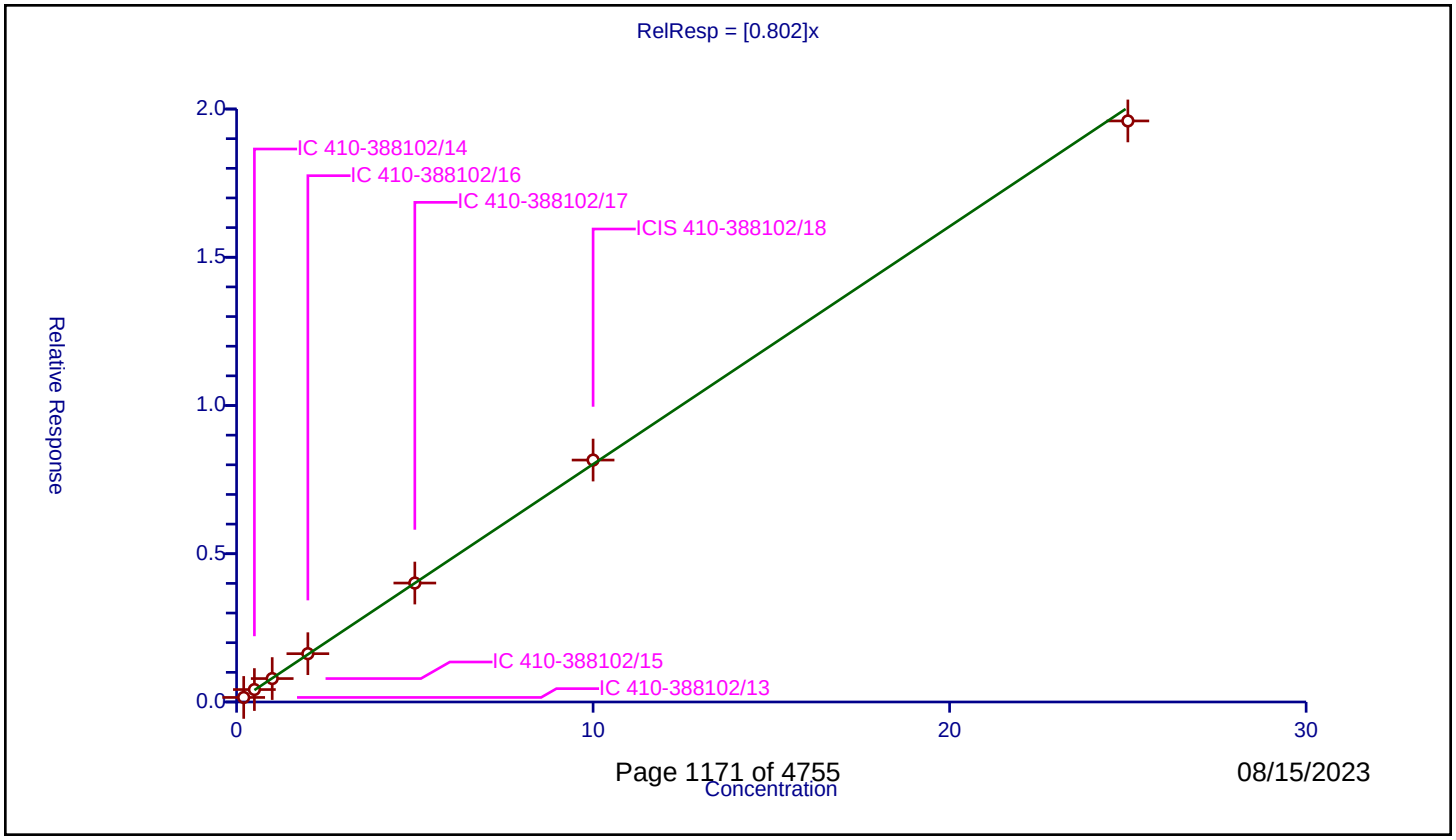
Curve Coefficients

Intercept:	0
Slope:	0.802

Error Coefficients

Standard Error:	1660000
Relative Standard Error:	2.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.153708	10.0	1795291.0	0.768538	Y
2	IC 410-388102/14	0.5	0.419258	10.0	1753956.0	0.838516	Y
3	IC 410-388102/15	1.0	0.790144	10.0	1790586.0	0.790144	Y
4	IC 410-388102/16	2.0	1.629682	10.0	1802566.0	0.814841	Y
5	IC 410-388102/17	5.0	4.011487	10.0	1860774.0	0.802297	Y
6	ICIS 410-388102/18	10.0	8.160119	10.0	1807671.0	0.816012	Y
7	IC 410-388102/19	25.0	19.597851	10.0	1891215.0	0.783914	Y



Calibration / 2-Butanone (MEK)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

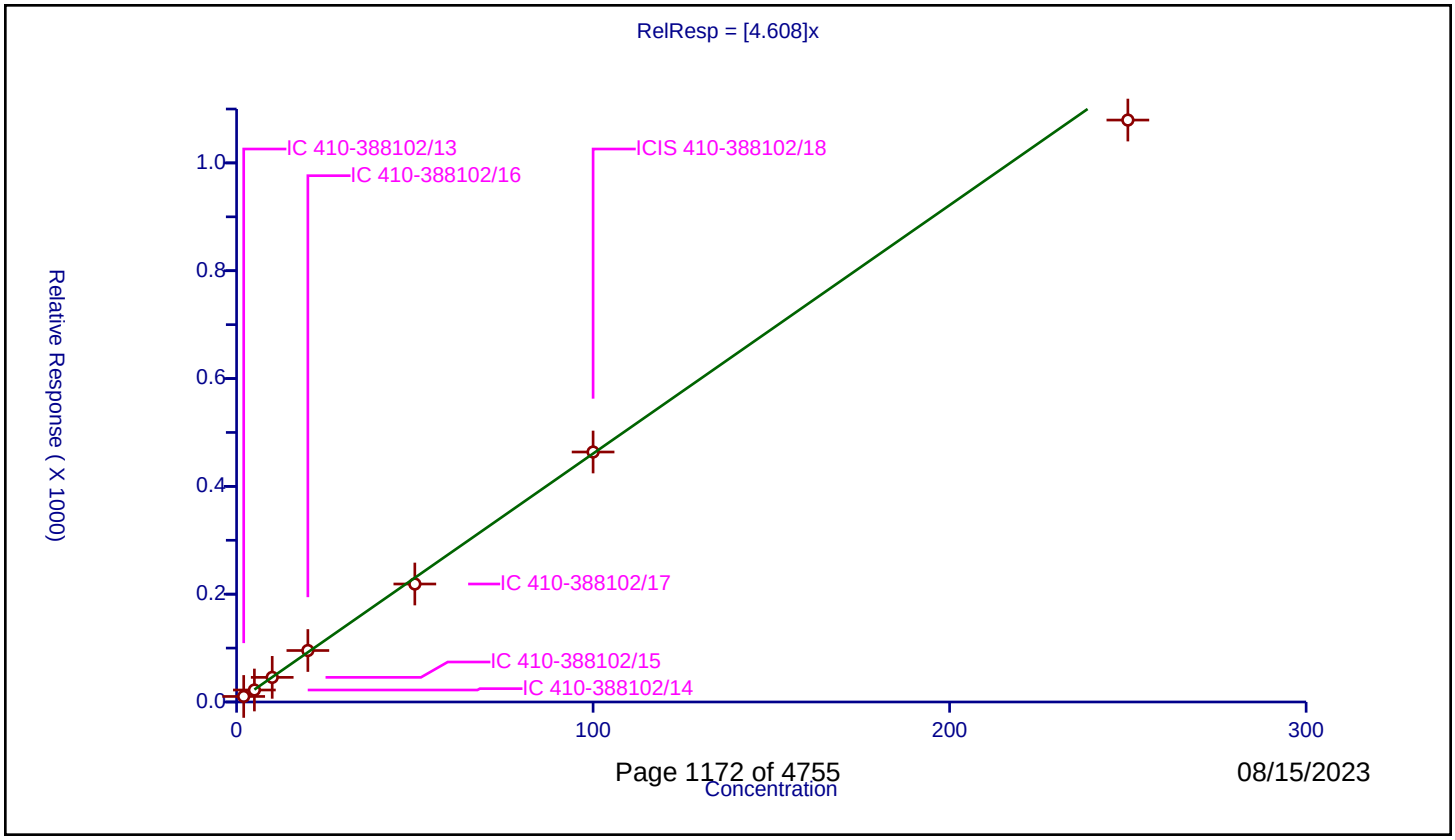
Curve Coefficients

Intercept:	0
Slope:	4.608

Error Coefficients

Standard Error:	1320000
Relative Standard Error:	6.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	2.0	10.264398	50.0	116680.0	5.132199	Y
2	IC 410-388102/14	5.0	22.248826	50.0	132398.0	4.449765	Y
3	IC 410-388102/15	10.0	45.676313	50.0	133555.0	4.567631	Y
4	IC 410-388102/16	20.0	95.486294	50.0	127135.0	4.774315	Y
5	IC 410-388102/17	50.0	218.872871	50.0	139221.0	4.377457	Y
6	ICIS 410-388102/18	100.0	463.728159	50.0	130775.0	4.637282	Y
7	IC 410-388102/19	250.0	1079.521292	50.0	134884.0	4.318085	Y



Calibration / cis-1,2-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

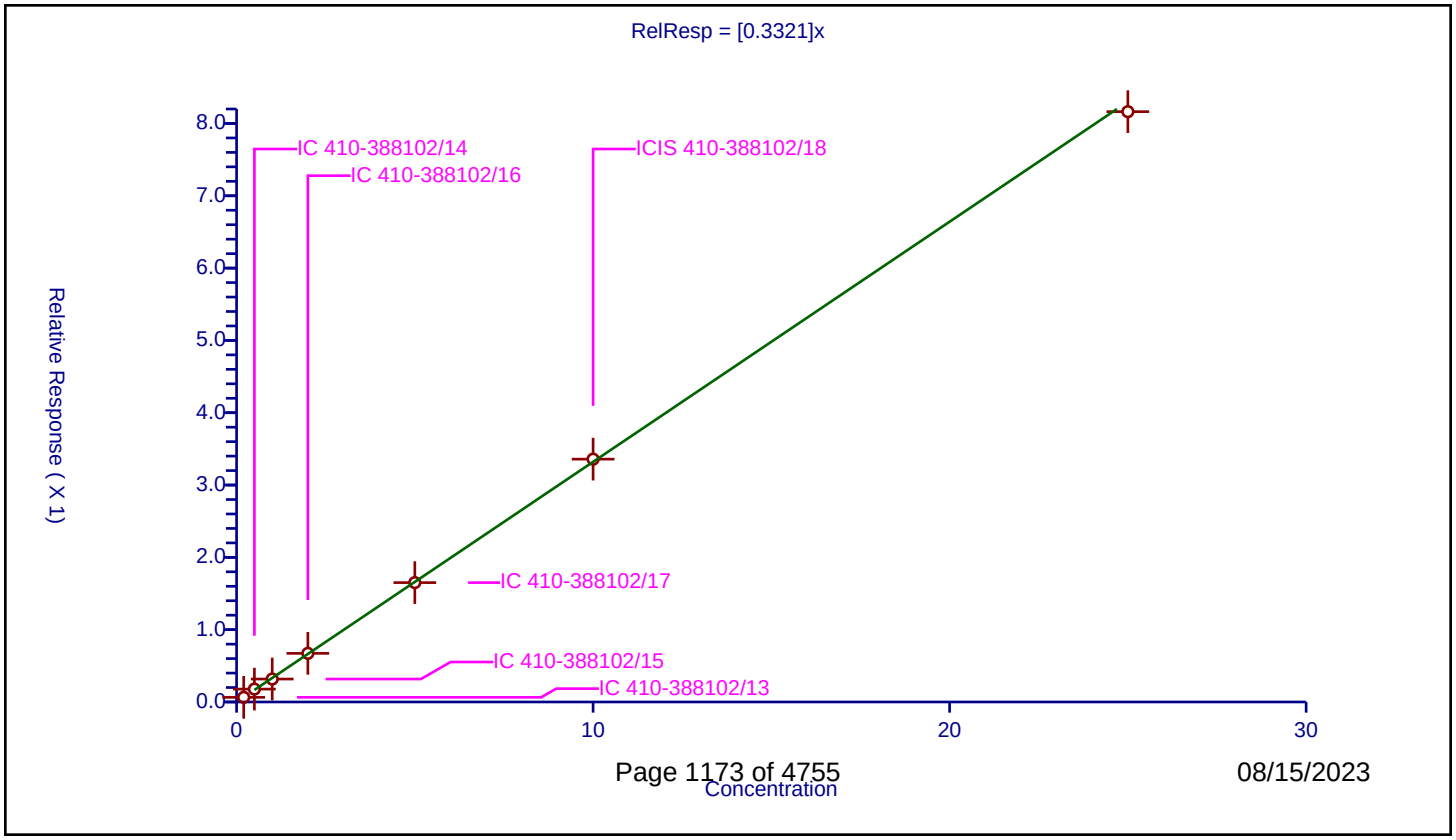
Curve Coefficients

Intercept:	0
Slope:	0.3321

Error Coefficients

Standard Error:	691000
Relative Standard Error:	3.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.064302	10.0	1795291.0	0.321508	Y
2	IC 410-388102/14	0.5	0.17834	10.0	1753956.0	0.356679	Y
3	IC 410-388102/15	1.0	0.317494	10.0	1790586.0	0.317494	Y
4	IC 410-388102/16	2.0	0.672586	10.0	1802566.0	0.336293	Y
5	IC 410-388102/17	5.0	1.65084	10.0	1860774.0	0.330168	Y
6	ICIS 410-388102/18	10.0	3.357984	10.0	1807671.0	0.335798	Y
7	IC 410-388102/19	25.0	8.163477	10.0	1891215.0	0.326539	Y



Calibration / 2,2-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

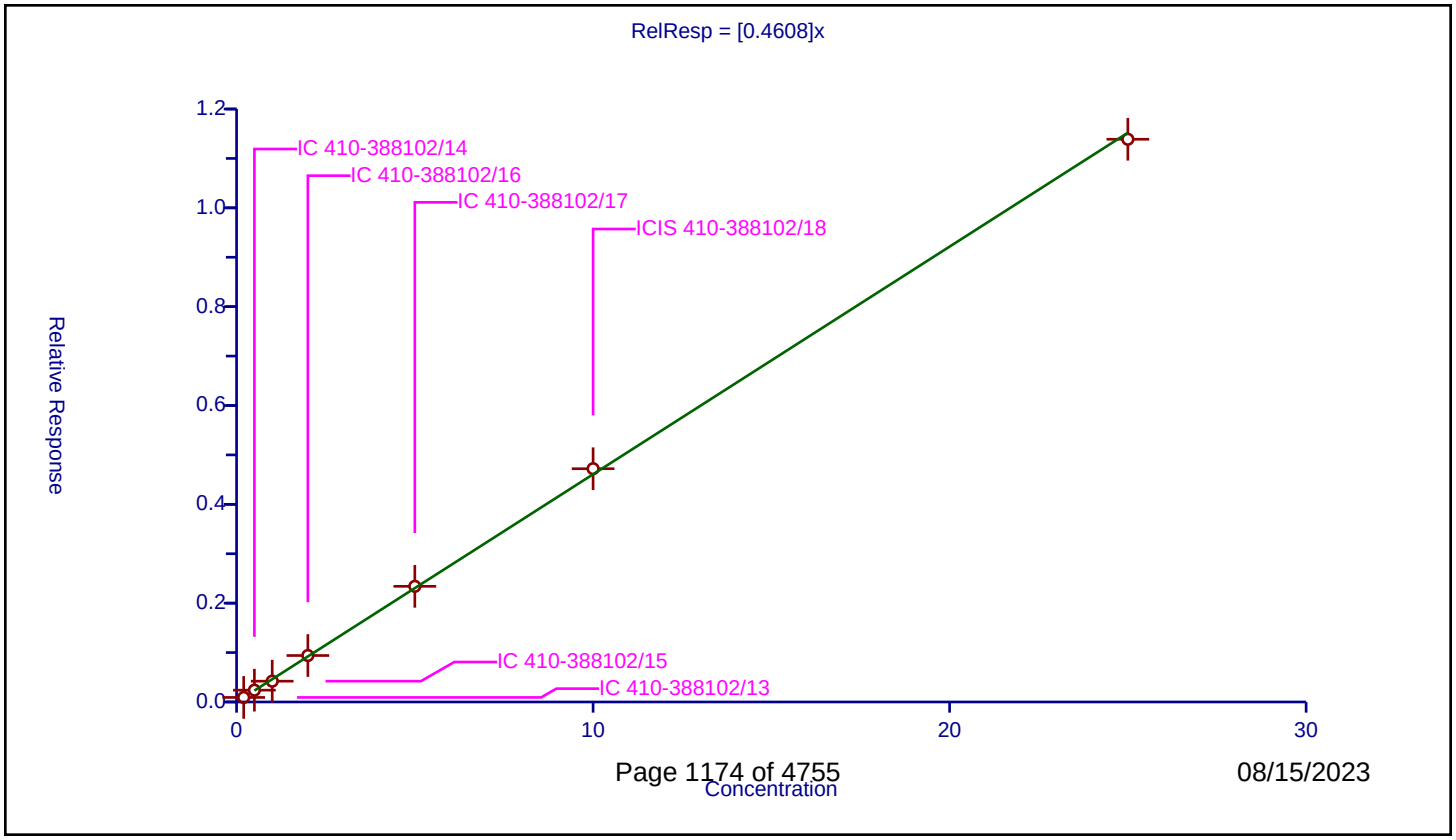
Curve Coefficients

Intercept:	0
Slope:	0.4608

Error Coefficients

Standard Error:	965000
Relative Standard Error:	4.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.091963	10.0	1795291.0	0.459814	Y
2	IC 410-388102/14	0.5	0.239139	10.0	1753956.0	0.478279	Y
3	IC 410-388102/15	1.0	0.42146	10.0	1790586.0	0.42146	Y
4	IC 410-388102/16	2.0	0.940243	10.0	1802566.0	0.470121	Y
5	IC 410-388102/17	5.0	2.340752	10.0	1860774.0	0.46815	Y
6	ICIS 410-388102/18	10.0	4.720754	10.0	1807671.0	0.472075	Y
7	IC 410-388102/19	25.0	11.387886	10.0	1891215.0	0.455515	Y



Calibration / Propionitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

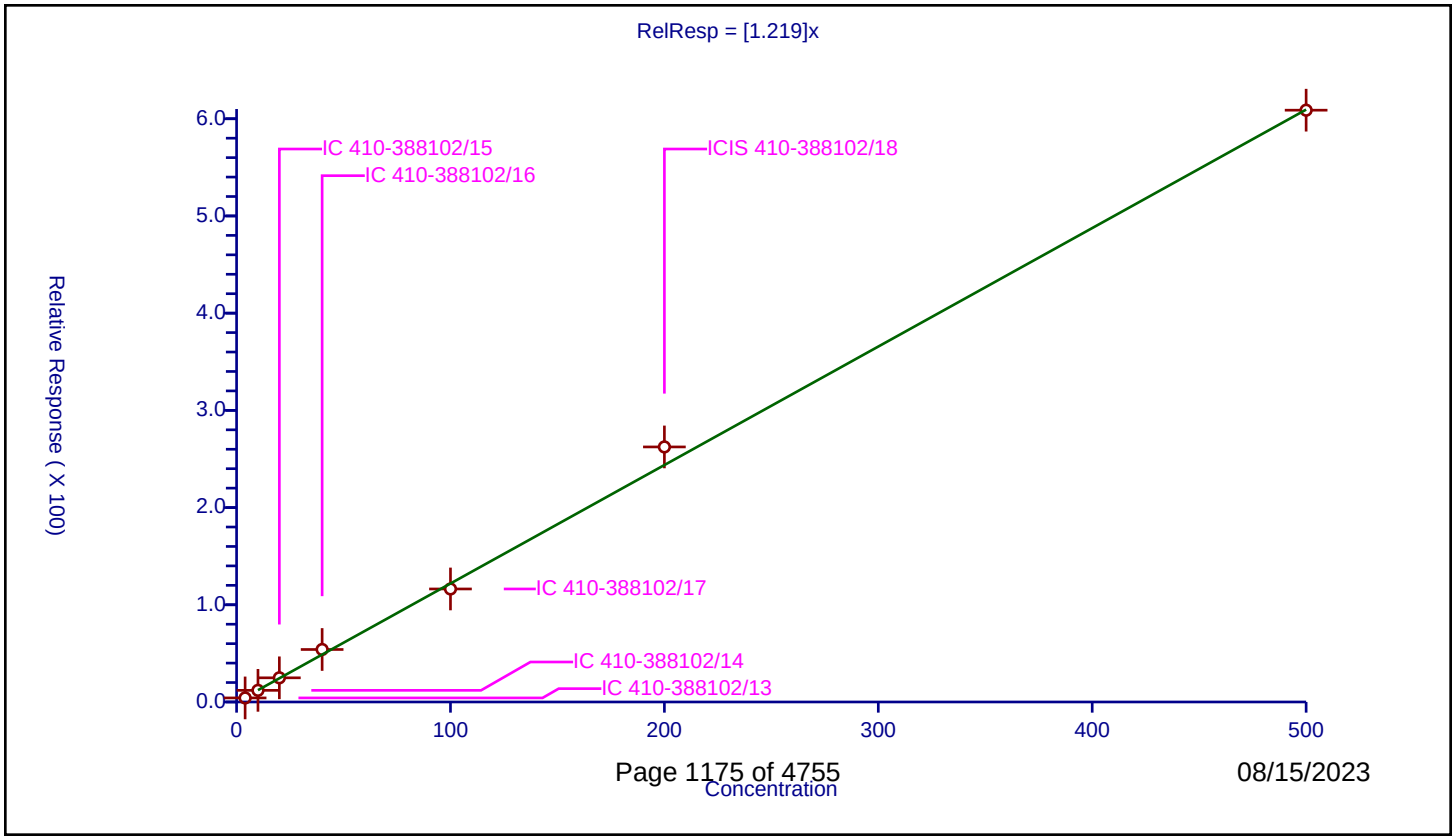
Curve Coefficients

Intercept:	0
Slope:	1.219

Error Coefficients

Standard Error:	741000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	4.0	4.192235	50.0	116680.0	1.048059	Y
2	IC 410-388102/14	10.0	11.976767	50.0	132398.0	1.197677	Y
3	IC 410-388102/15	20.0	24.872899	50.0	133555.0	1.243645	Y
4	IC 410-388102/16	40.0	54.000079	50.0	127135.0	1.350002	Y
5	IC 410-388102/17	100.0	116.266224	50.0	139221.0	1.162662	Y
6	ICIS 410-388102/18	200.0	262.363984	50.0	130775.0	1.31182	Y
7	IC 410-388102/19	500.0	608.780878	50.0	134884.0	1.217562	Y



Calibration / Methacrylonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

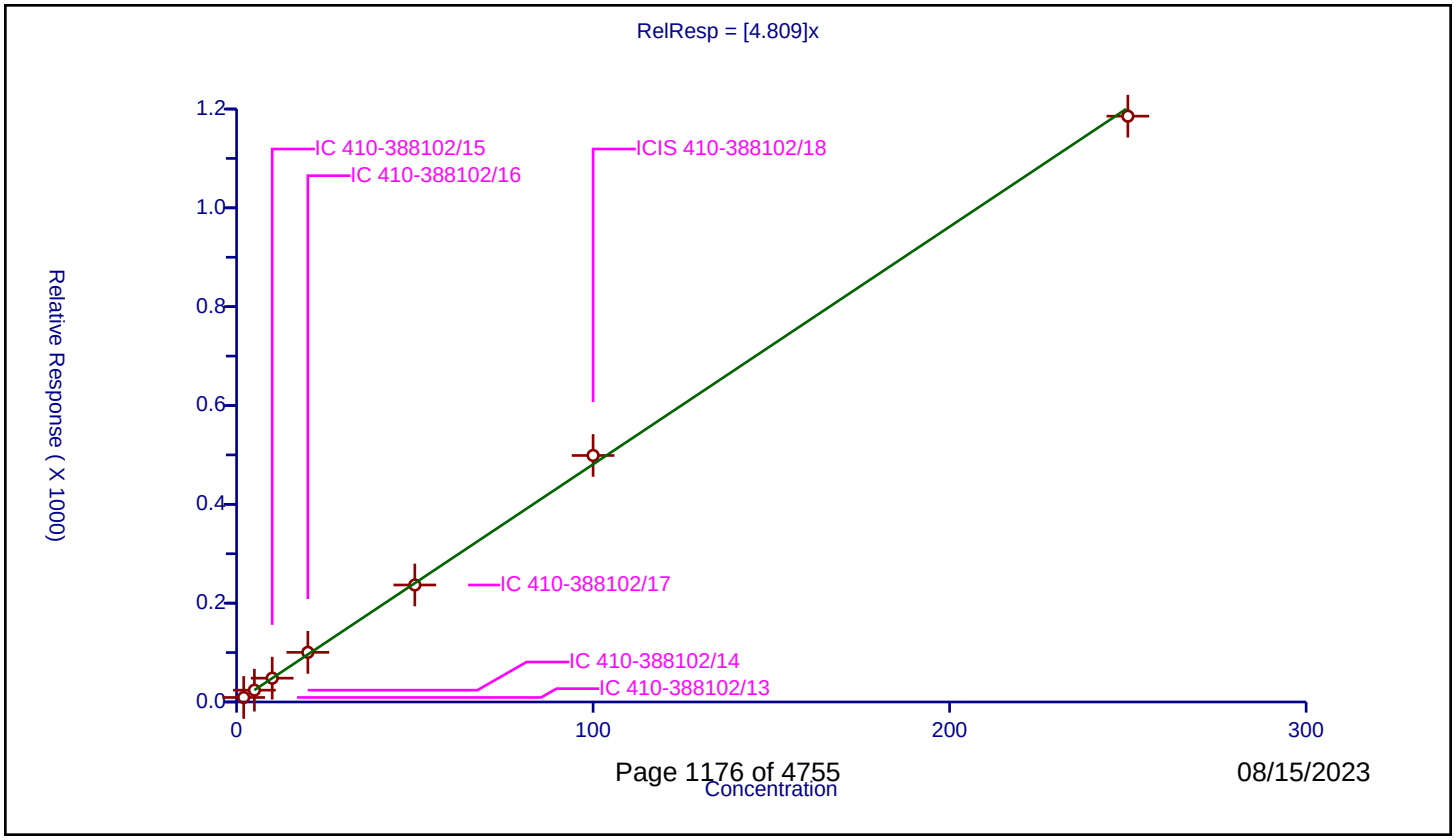
Curve Coefficients

Intercept:	0
Slope:	4.809

Error Coefficients

Standard Error:	1440000
Relative Standard Error:	3.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	2.0	9.1271	50.0	116680.0	4.56355	Y
2	IC 410-388102/14	5.0	23.958821	50.0	132398.0	4.791764	Y
3	IC 410-388102/15	10.0	48.209726	50.0	133555.0	4.820973	Y
4	IC 410-388102/16	20.0	100.431431	50.0	127135.0	5.021572	Y
5	IC 410-388102/17	50.0	236.784321	50.0	139221.0	4.735686	Y
6	ICIS 410-388102/18	100.0	498.904225	50.0	130775.0	4.989042	Y
7	IC 410-388102/19	250.0	1185.557961	50.0	134884.0	4.742232	Y



Calibration / Chlorobromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

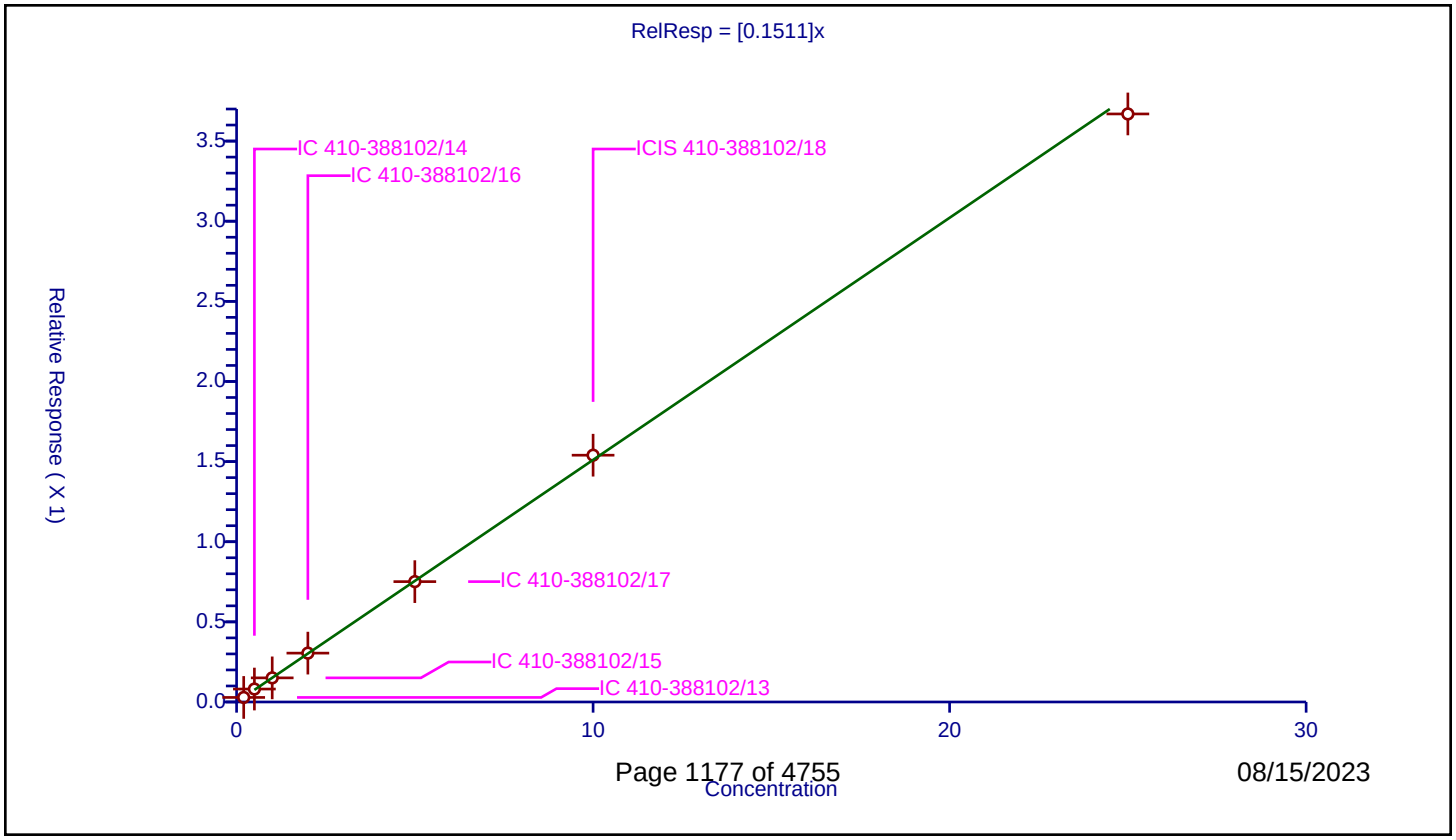
Curve Coefficients

Intercept:	0
Slope:	0.1511

Error Coefficients

Standard Error:	312000
Relative Standard Error:	4.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.028397	10.0	1795291.0	0.141983	Y
2	IC 410-388102/14	0.5	0.080823	10.0	1753956.0	0.161646	Y
3	IC 410-388102/15	1.0	0.150431	10.0	1790586.0	0.150431	Y
4	IC 410-388102/16	2.0	0.304882	10.0	1802566.0	0.152441	Y
5	IC 410-388102/17	5.0	0.751026	10.0	1860774.0	0.150205	Y
6	ICIS 410-388102/18	10.0	1.539893	10.0	1807671.0	0.153989	Y
7	IC 410-388102/19	25.0	3.669154	10.0	1891215.0	0.146766	Y



Calibration / Tetrahydrofuran

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

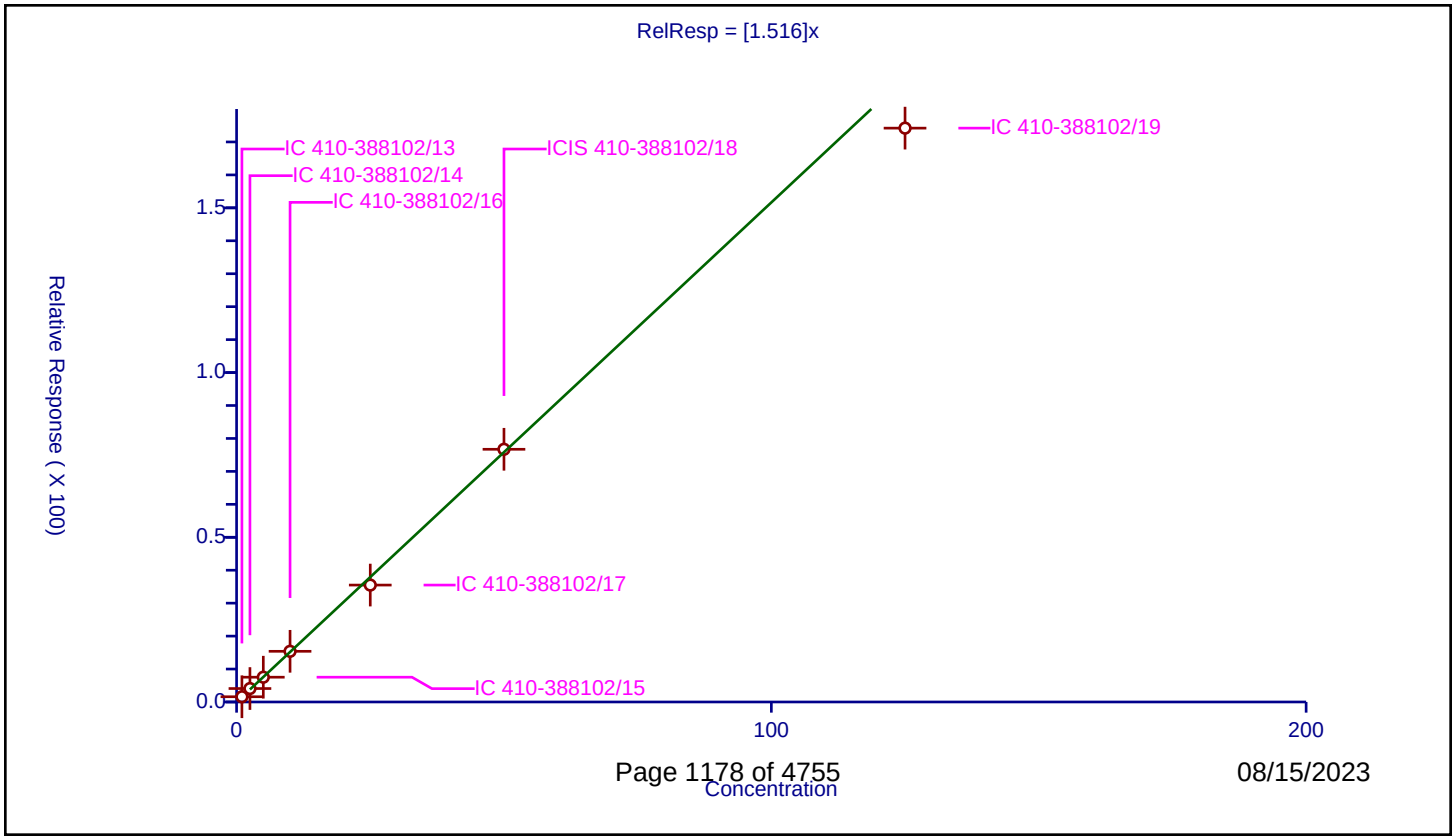
Curve Coefficients

Intercept:	0
Slope:	1.516

Error Coefficients

Standard Error:	213000
Relative Standard Error:	5.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	1.0	1.591104	50.0	116680.0	1.591104	Y
2	IC 410-388102/14	2.5	4.082766	50.0	132398.0	1.633106	Y
3	IC 410-388102/15	5.0	7.523118	50.0	133555.0	1.504624	Y
4	IC 410-388102/16	10.0	15.387187	50.0	127135.0	1.538719	Y
5	IC 410-388102/17	25.0	35.490336	50.0	139221.0	1.419613	Y
6	ICIS 410-388102/18	50.0	76.712292	50.0	130775.0	1.534246	Y
7	IC 410-388102/19	125.0	174.197459	50.0	134884.0	1.39358	Y



Calibration / Chloroform

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

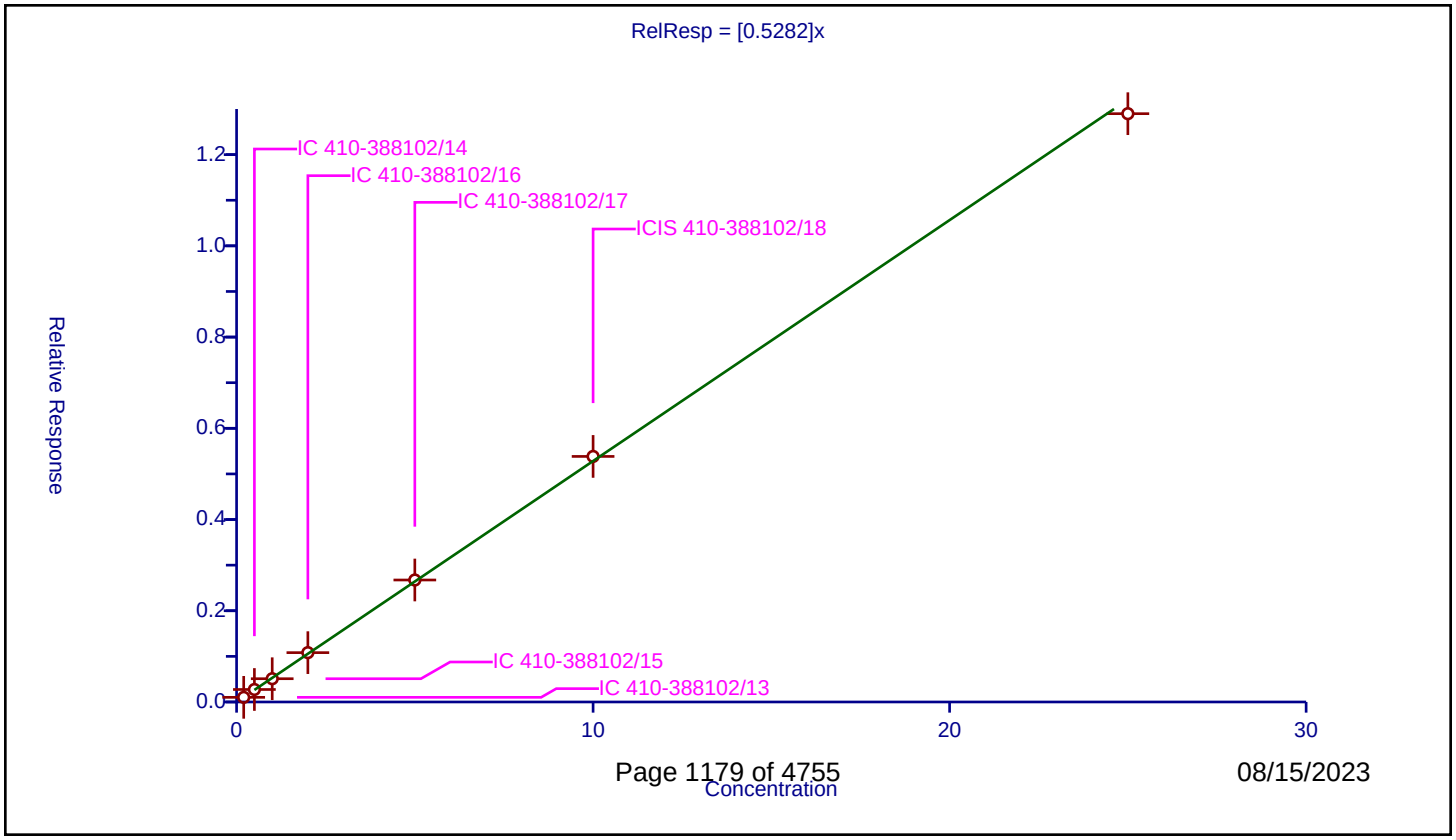
Curve Coefficients

Intercept:	0
Slope:	0.5282

Error Coefficients

Standard Error:	1090000
Relative Standard Error:	3.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.101967	10.0	1795291.0	0.509834	Y
2	IC 410-388102/14	0.5	0.273713	10.0	1753956.0	0.547425	Y
3	IC 410-388102/15	1.0	0.510241	10.0	1790586.0	0.510241	Y
4	IC 410-388102/16	2.0	1.081991	10.0	1802566.0	0.540995	Y
5	IC 410-388102/17	5.0	2.674167	10.0	1860774.0	0.534833	Y
6	ICIS 410-388102/18	10.0	5.383275	10.0	1807671.0	0.538327	Y
7	IC 410-388102/19	25.0	12.897952	10.0	1891215.0	0.515918	Y



Calibration / Dibromofluoromethane (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

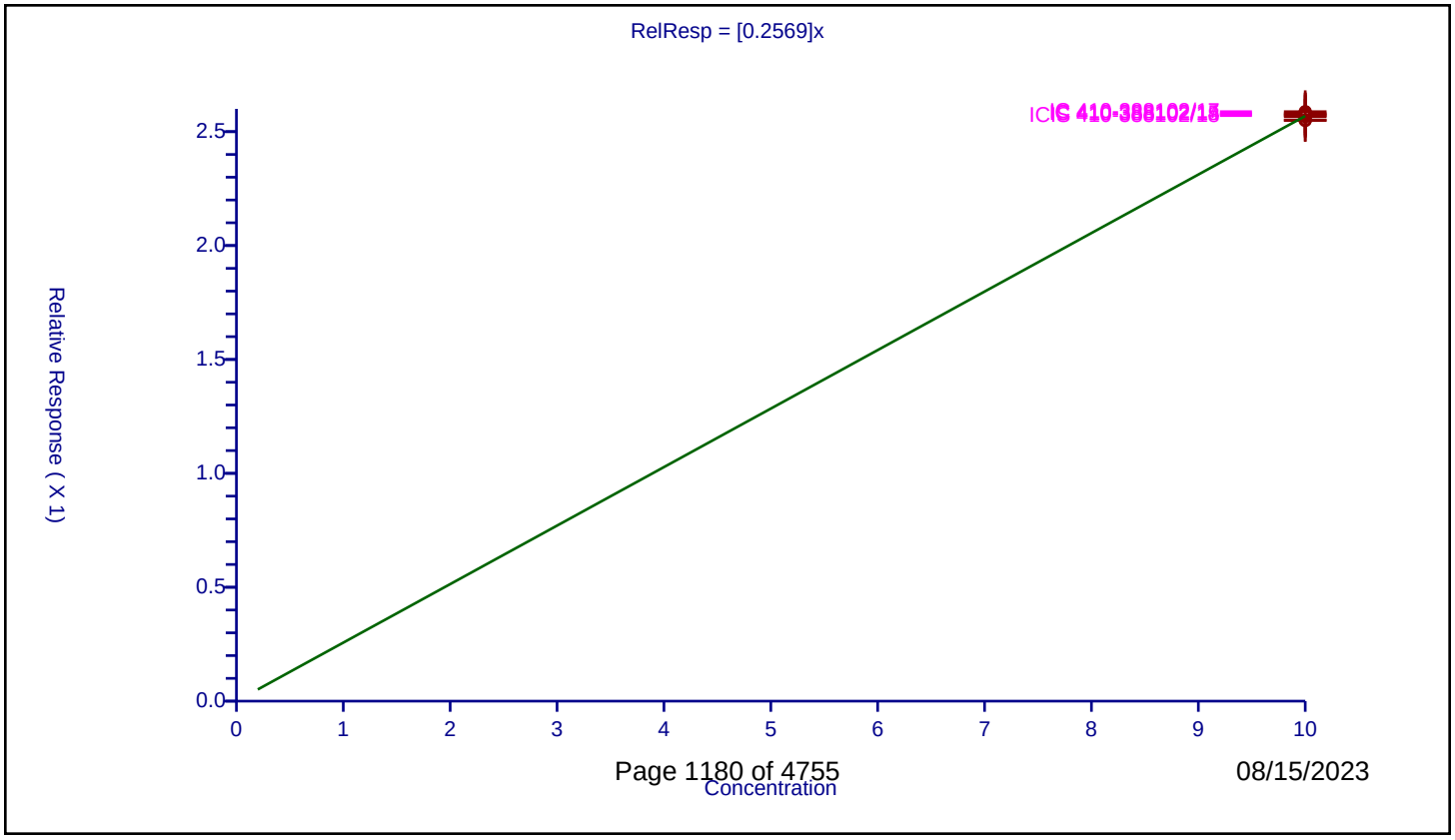
Curve Coefficients

Intercept:	0
Slope:	0.2569

Error Coefficients

Standard Error:	504000
Relative Standard Error:	0.6
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	10.0	2.565879	10.0	1795291.0	0.256588	Y
2	IC 410-388102/14	10.0	2.579084	10.0	1753956.0	0.257908	Y
3	IC 410-388102/15	10.0	2.576352	10.0	1790586.0	0.257635	Y
4	IC 410-388102/16	10.0	2.551285	10.0	1802566.0	0.255129	Y
5	IC 410-388102/17	10.0	2.587896	10.0	1860774.0	0.25879	Y
6	ICIS 410-388102/18	10.0	2.570451	10.0	1807671.0	0.257045	Y
7	IC 410-388102/19	10.0	2.549023	10.0	1891215.0	0.254902	Y



Calibration / 1,1,1-Trichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

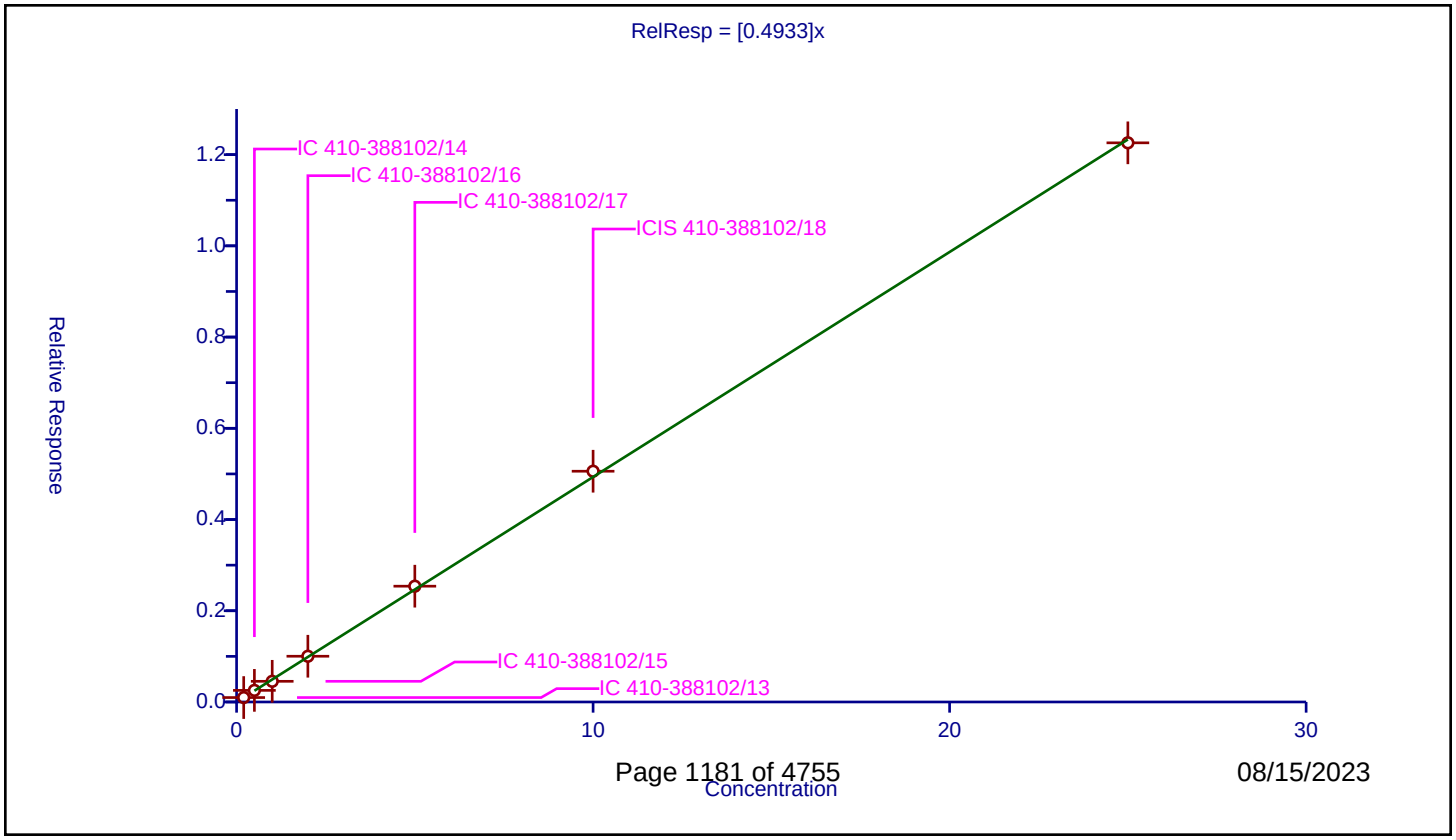
Curve Coefficients

Intercept:	0
Slope:	0.4933

Error Coefficients

Standard Error:	1040000
Relative Standard Error:	4.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.097121	10.0	1795291.0	0.485604	Y
2	IC 410-388102/14	0.5	0.254317	10.0	1753956.0	0.508633	Y
3	IC 410-388102/15	1.0	0.45322	10.0	1790586.0	0.45322	Y
4	IC 410-388102/16	2.0	1.002898	10.0	1802566.0	0.501449	Y
5	IC 410-388102/17	5.0	2.538551	10.0	1860774.0	0.50771	Y
6	ICIS 410-388102/18	10.0	5.058813	10.0	1807671.0	0.505881	Y
7	IC 410-388102/19	25.0	12.258855	10.0	1891215.0	0.490354	Y



Calibration / Cyclohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

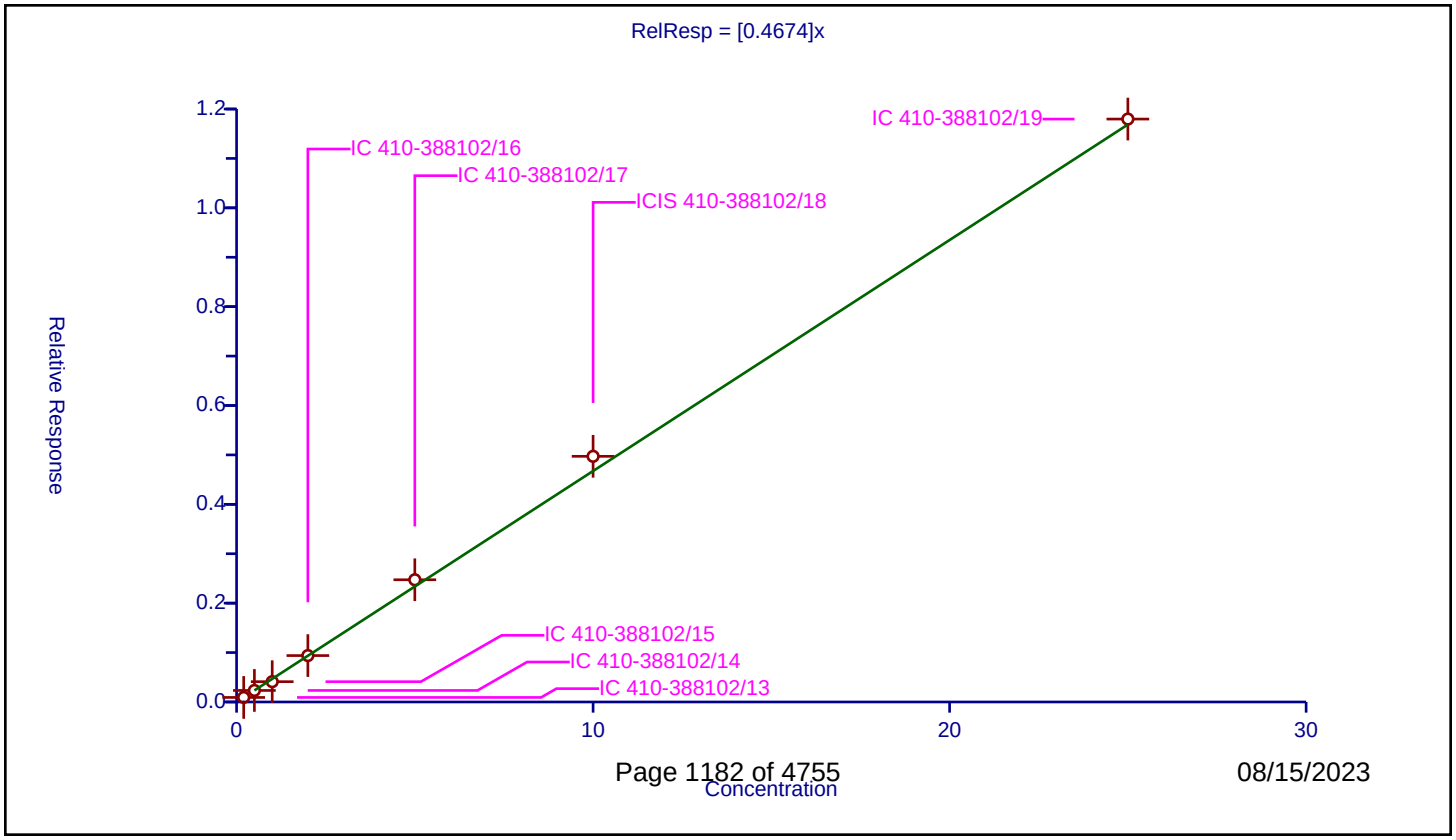
Curve Coefficients

Intercept:	0
Slope:	0.4674

Error Coefficients

Standard Error:	1000000
Relative Standard Error:	6.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.092241	10.0	1795291.0	0.461207	Y
2	IC 410-388102/14	0.5	0.233176	10.0	1753956.0	0.466351	Y
3	IC 410-388102/15	1.0	0.411184	10.0	1790586.0	0.411184	Y
4	IC 410-388102/16	2.0	0.939194	10.0	1802566.0	0.469597	Y
5	IC 410-388102/17	5.0	2.473272	10.0	1860774.0	0.494654	Y
6	ICIS 410-388102/18	10.0	4.971292	10.0	1807671.0	0.497129	Y
7	IC 410-388102/19	25.0	11.796607	10.0	1891215.0	0.471864	Y



Calibration / 1,1-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

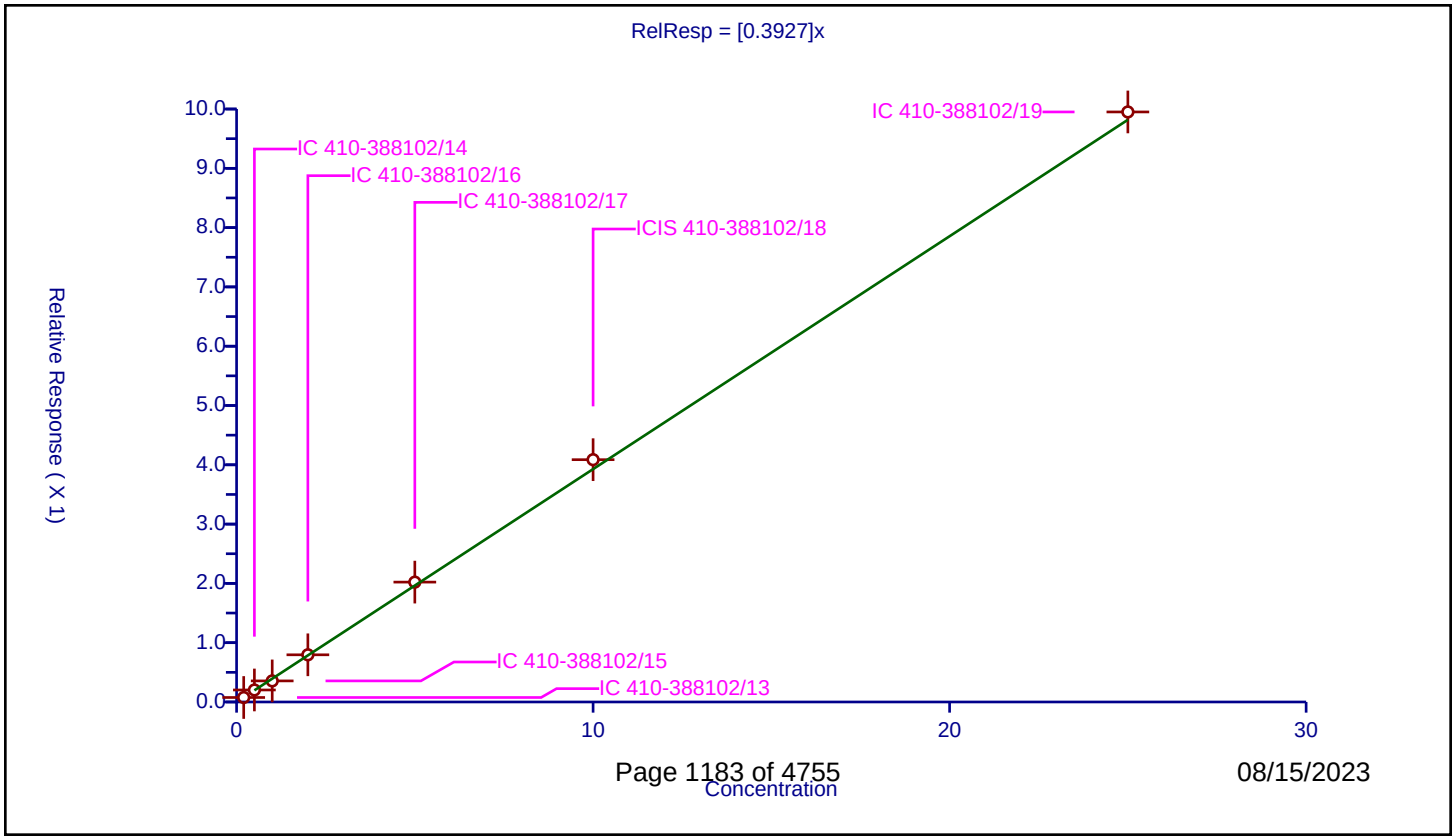
Curve Coefficients

Intercept:	0
Slope:	0.3927

Error Coefficients

Standard Error:	842000
Relative Standard Error:	4.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.075943	10.0	1795291.0	0.379716	Y
2	IC 410-388102/14	0.5	0.202536	10.0	1753956.0	0.405073	Y
3	IC 410-388102/15	1.0	0.355392	10.0	1790586.0	0.355392	Y
4	IC 410-388102/16	2.0	0.795982	10.0	1802566.0	0.397991	Y
5	IC 410-388102/17	5.0	2.021449	10.0	1860774.0	0.40429	Y
6	ICIS 410-388102/18	10.0	4.086169	10.0	1807671.0	0.408617	Y
7	IC 410-388102/19	25.0	9.950476	10.0	1891215.0	0.398019	Y



Calibration / Carbon tetrachloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

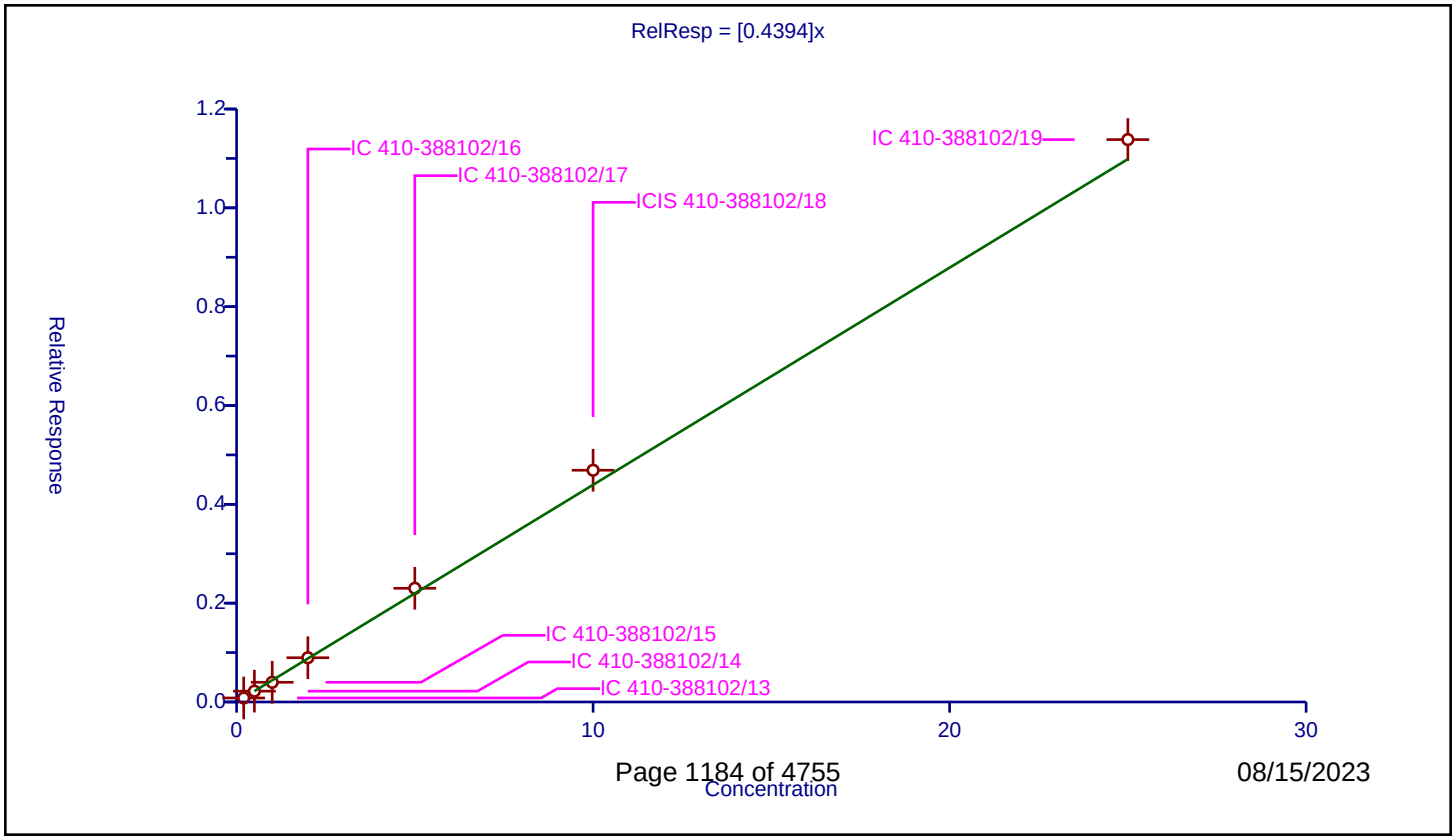
Curve Coefficients

Intercept:	0
Slope:	0.4394

Error Coefficients

Standard Error:	963000
Relative Standard Error:	6.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.081385	10.0	1795291.0	0.406926	Y
2	IC 410-388102/14	0.5	0.219133	10.0	1753956.0	0.438266	Y
3	IC 410-388102/15	1.0	0.398685	10.0	1790586.0	0.398685	Y
4	IC 410-388102/16	2.0	0.895584	10.0	1802566.0	0.447792	Y
5	IC 410-388102/17	5.0	2.301053	10.0	1860774.0	0.460211	Y
6	ICIS 410-388102/18	10.0	4.690107	10.0	1807671.0	0.469011	Y
7	IC 410-388102/19	25.0	11.381133	10.0	1891215.0	0.455245	Y



Calibration / Isobutyl alcohol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

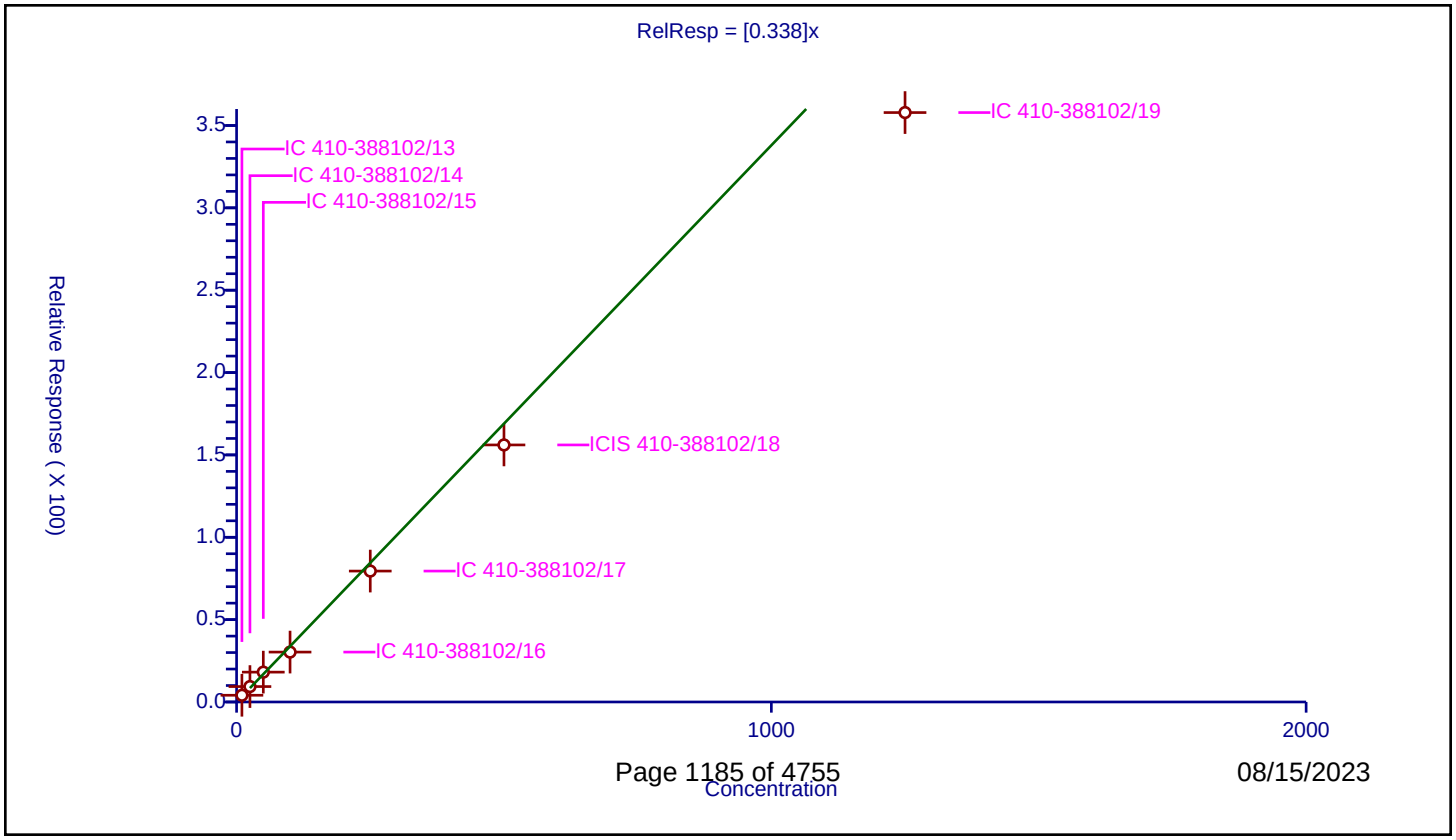
Curve Coefficients

Intercept:	0
Slope:	0.338

Error Coefficients

Standard Error:	439000
Relative Standard Error:	13.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.972

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	10.0	4.091532	50.0	116680.0	0.409153	Y
2	IC 410-388102/14	25.0	9.369855	50.0	132398.0	0.374794	Y
3	IC 410-388102/15	50.0	18.125866	50.0	133555.0	0.362517	Y
4	IC 410-388102/16	100.0	30.291029	50.0	127135.0	0.30291	Y
5	IC 410-388102/17	250.0	79.482262	50.0	139221.0	0.317929	Y
6	ICIS 410-388102/18	500.0	156.063085	50.0	130775.0	0.312126	Y
7	IC 410-388102/19	1250.0	357.849708	50.0	134884.0	0.28628	Y



Calibration / 1,2-Dichloroethane-d4 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

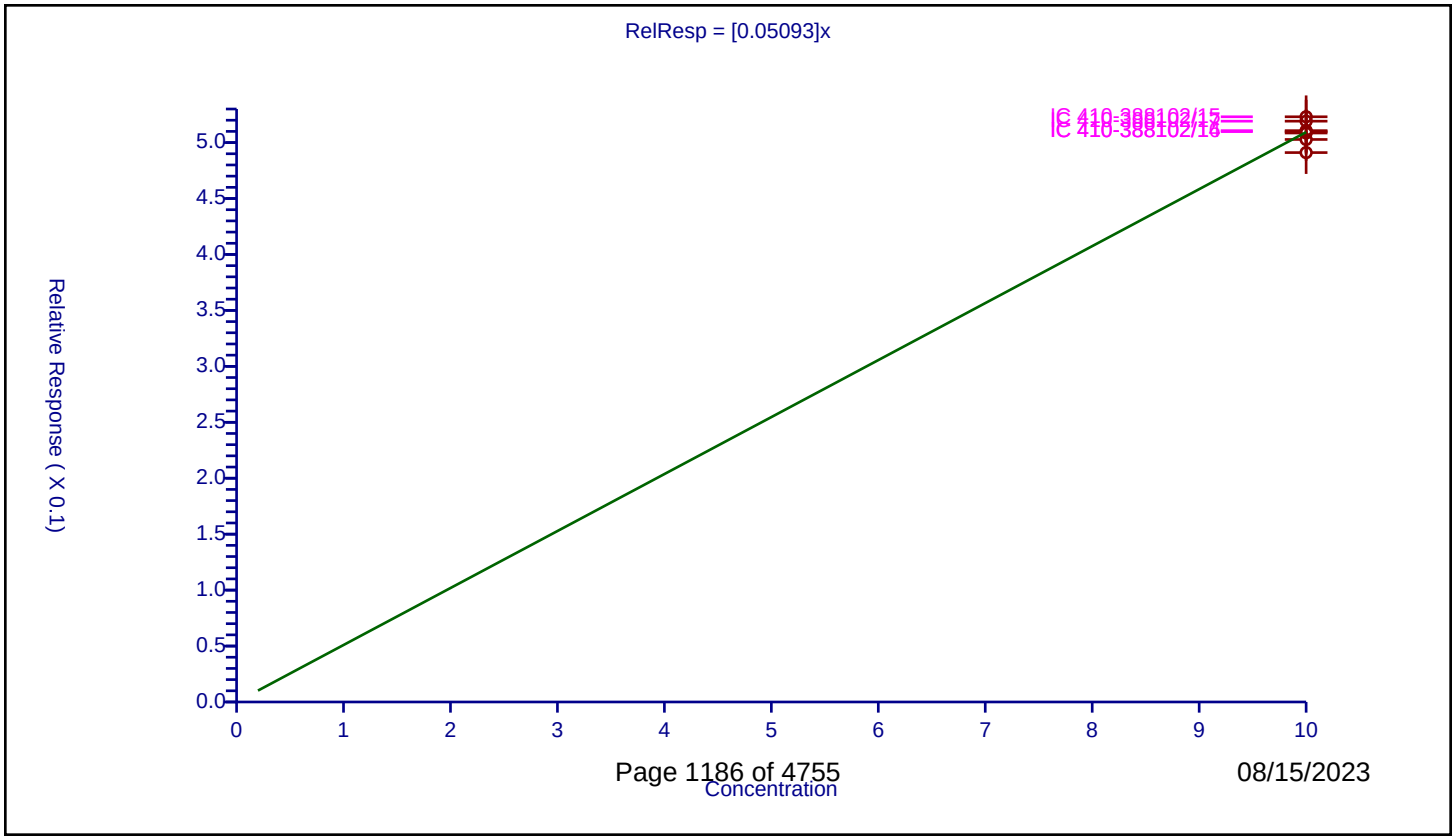
Curve Coefficients

Intercept:	0
Slope:	0.05093

Error Coefficients

Standard Error:	99800
Relative Standard Error:	2.1
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0.000000000000000111

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	10.0	0.502771	10.0	1795291.0	0.050277	Y
2	IC 410-388102/14	10.0	0.509785	10.0	1753956.0	0.050978	Y
3	IC 410-388102/15	10.0	0.523063	10.0	1790586.0	0.052306	Y
4	IC 410-388102/16	10.0	0.510678	10.0	1802566.0	0.051068	Y
5	IC 410-388102/17	10.0	0.519139	10.0	1860774.0	0.051914	Y
6	ICIS 410-388102/18	10.0	0.508549	10.0	1807671.0	0.050855	Y
7	IC 410-388102/19	10.0	0.491044	10.0	1891215.0	0.049104	Y



Calibration / Benzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

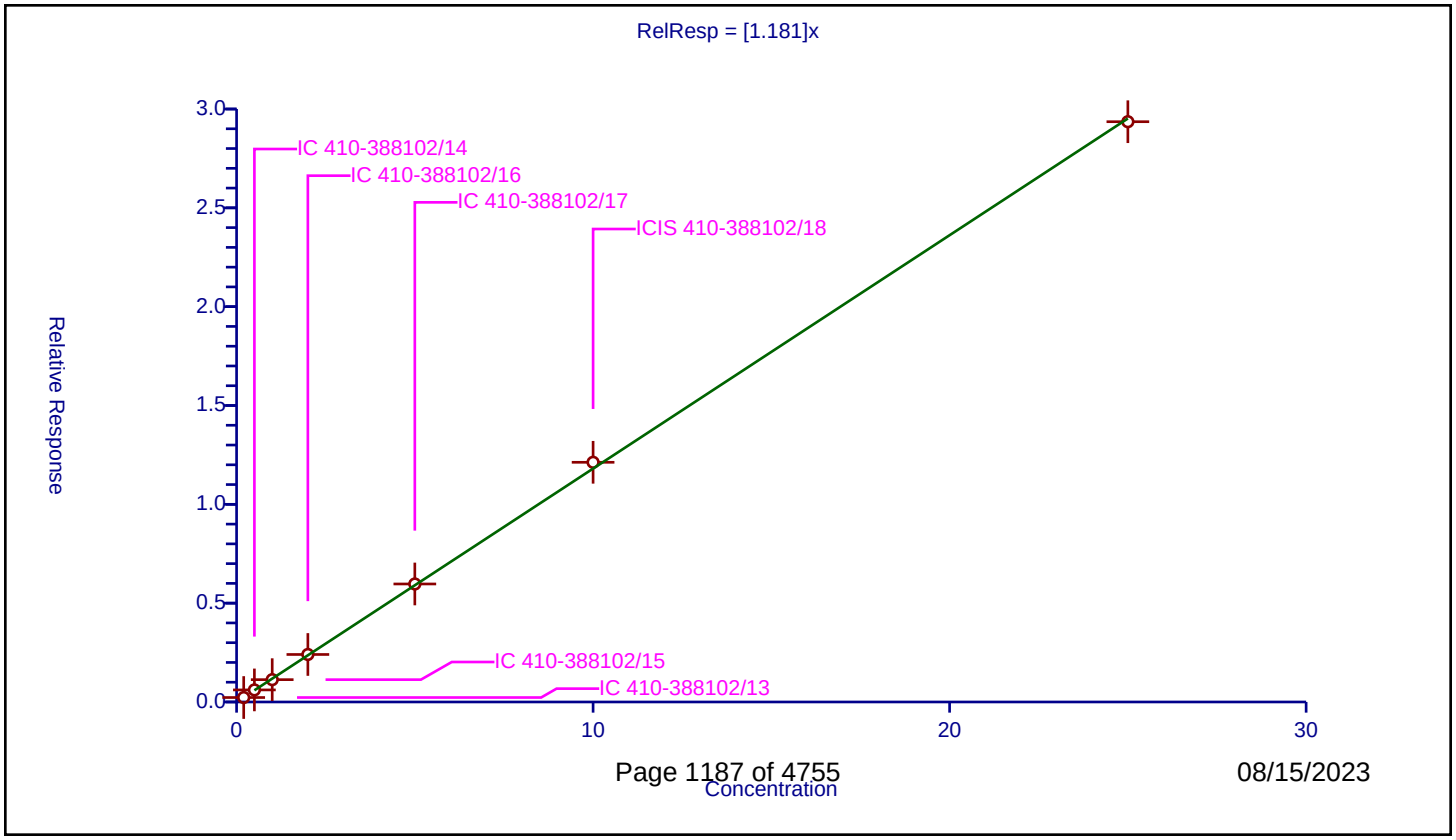
Curve Coefficients

Intercept:	0
Slope:	1.181

Error Coefficients

Standard Error:	2490000
Relative Standard Error:	3.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.226476	10.0	1795291.0	1.132379	Y
2	IC 410-388102/14	0.5	0.610386	10.0	1753956.0	1.220772	Y
3	IC 410-388102/15	1.0	1.129312	10.0	1790586.0	1.129312	Y
4	IC 410-388102/16	2.0	2.403762	10.0	1802566.0	1.201881	Y
5	IC 410-388102/17	5.0	5.970338	10.0	1860774.0	1.194068	Y
6	ICIS 410-388102/18	10.0	12.126327	10.0	1807671.0	1.212633	Y
7	IC 410-388102/19	25.0	29.357683	10.0	1891215.0	1.174307	Y



Calibration / 1,2-Dichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

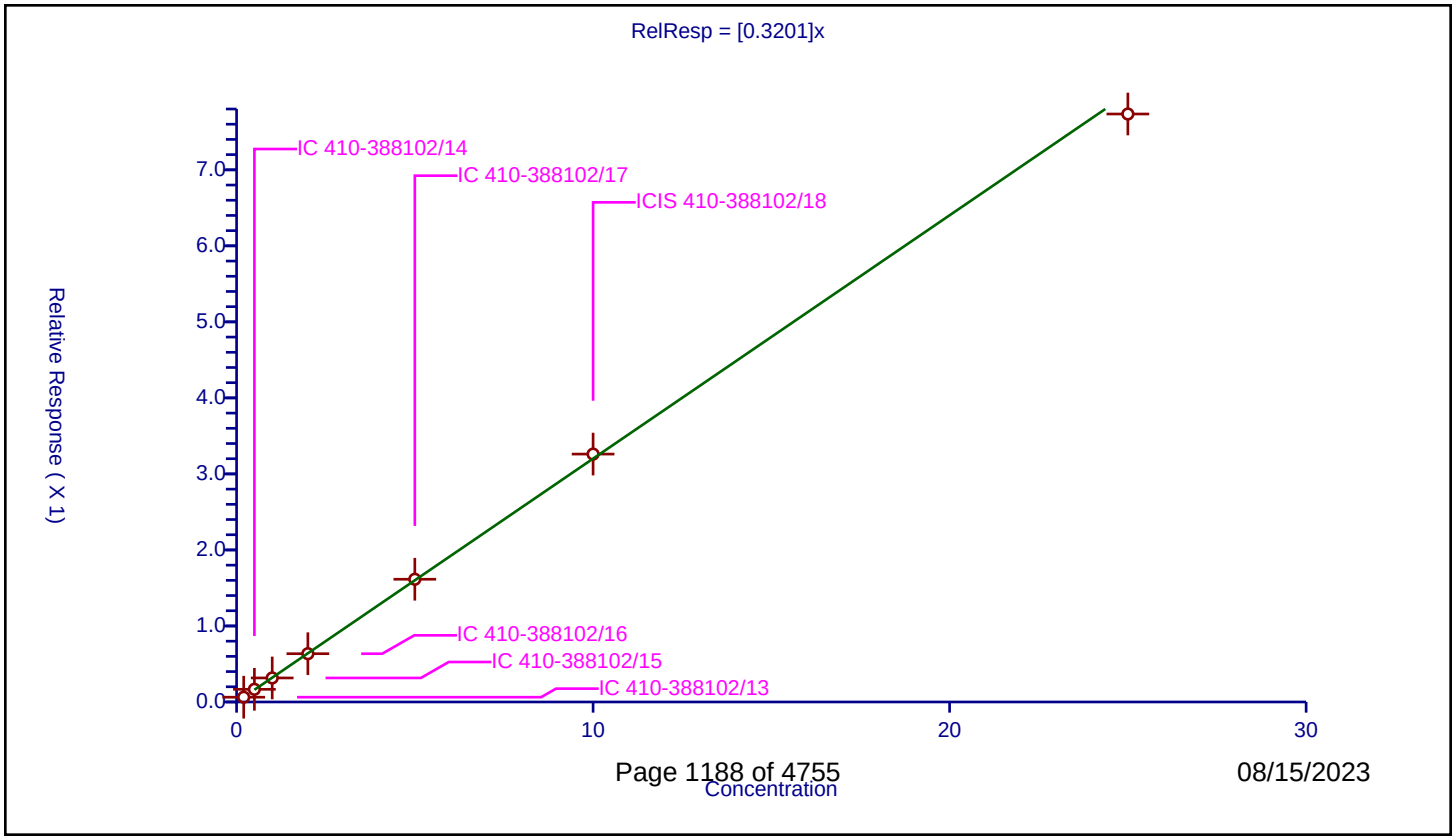
Curve Coefficients

Intercept:	0
Slope:	0.3201

Error Coefficients

Standard Error:	658000
Relative Standard Error:	2.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.062931	10.0	1795291.0	0.314657	Y
2	IC 410-388102/14	0.5	0.166954	10.0	1753956.0	0.333908	Y
3	IC 410-388102/15	1.0	0.316181	10.0	1790586.0	0.316181	Y
4	IC 410-388102/16	2.0	0.635194	10.0	1802566.0	0.317597	Y
5	IC 410-388102/17	5.0	1.614511	10.0	1860774.0	0.322902	Y
6	ICIS 410-388102/18	10.0	3.260903	10.0	1807671.0	0.32609	Y
7	IC 410-388102/19	25.0	7.734404	10.0	1891215.0	0.309376	Y



Calibration / Tert-amyl methyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

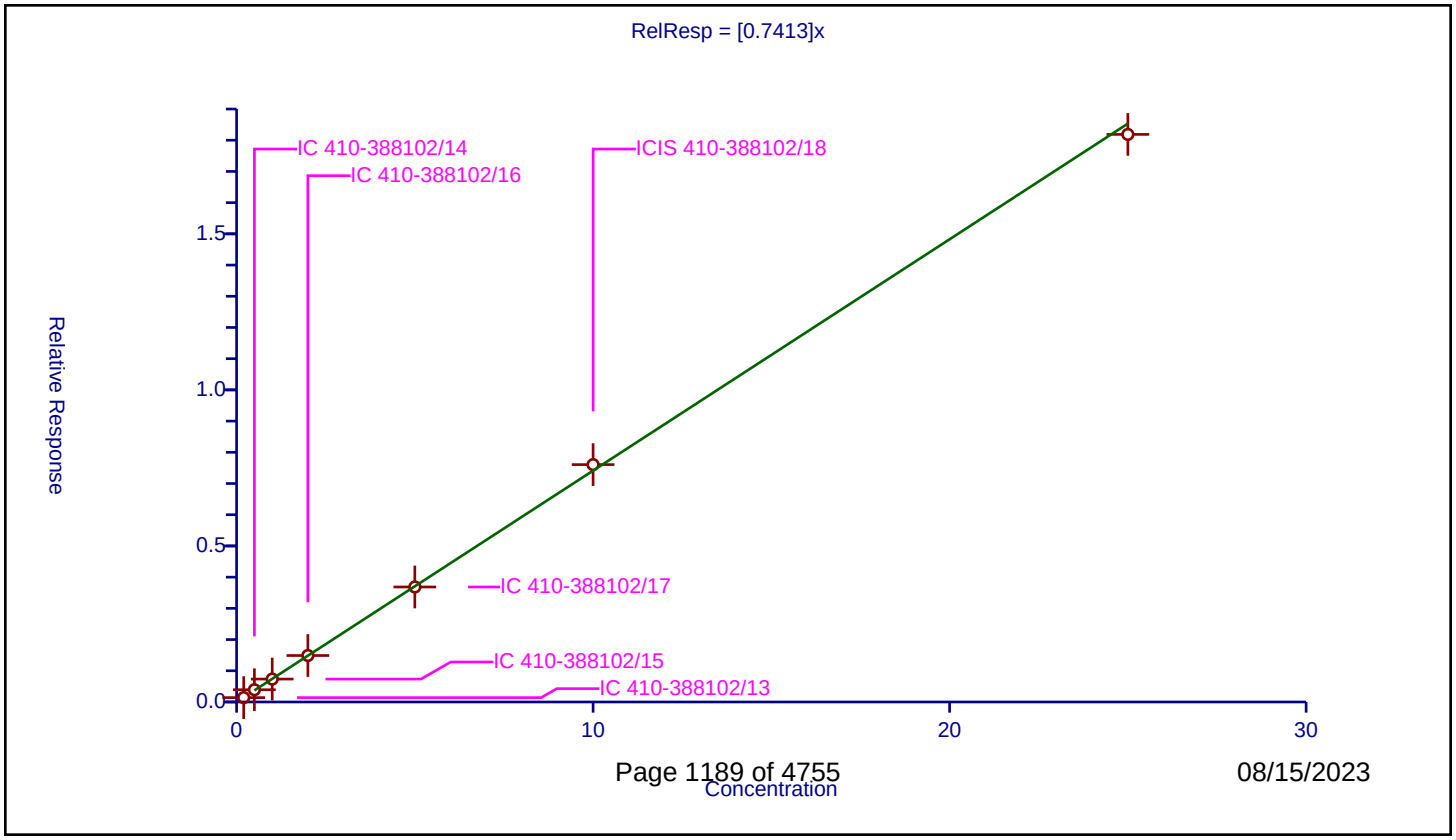
Curve Coefficients

Intercept:	0
Slope:	0.7413

Error Coefficients

Standard Error:	1540000
Relative Standard Error:	3.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.139871	10.0	1795291.0	0.699357	Y
2	IC 410-388102/14	0.5	0.3929	10.0	1753956.0	0.785801	Y
3	IC 410-388102/15	1.0	0.734352	10.0	1790586.0	0.734352	Y
4	IC 410-388102/16	2.0	1.489099	10.0	1802566.0	0.74455	Y
5	IC 410-388102/17	5.0	3.685235	10.0	1860774.0	0.737047	Y
6	ICIS 410-388102/18	10.0	7.605643	10.0	1807671.0	0.760564	Y
7	IC 410-388102/19	25.0	18.186251	10.0	1891215.0	0.72745	Y



Calibration / n-Heptane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

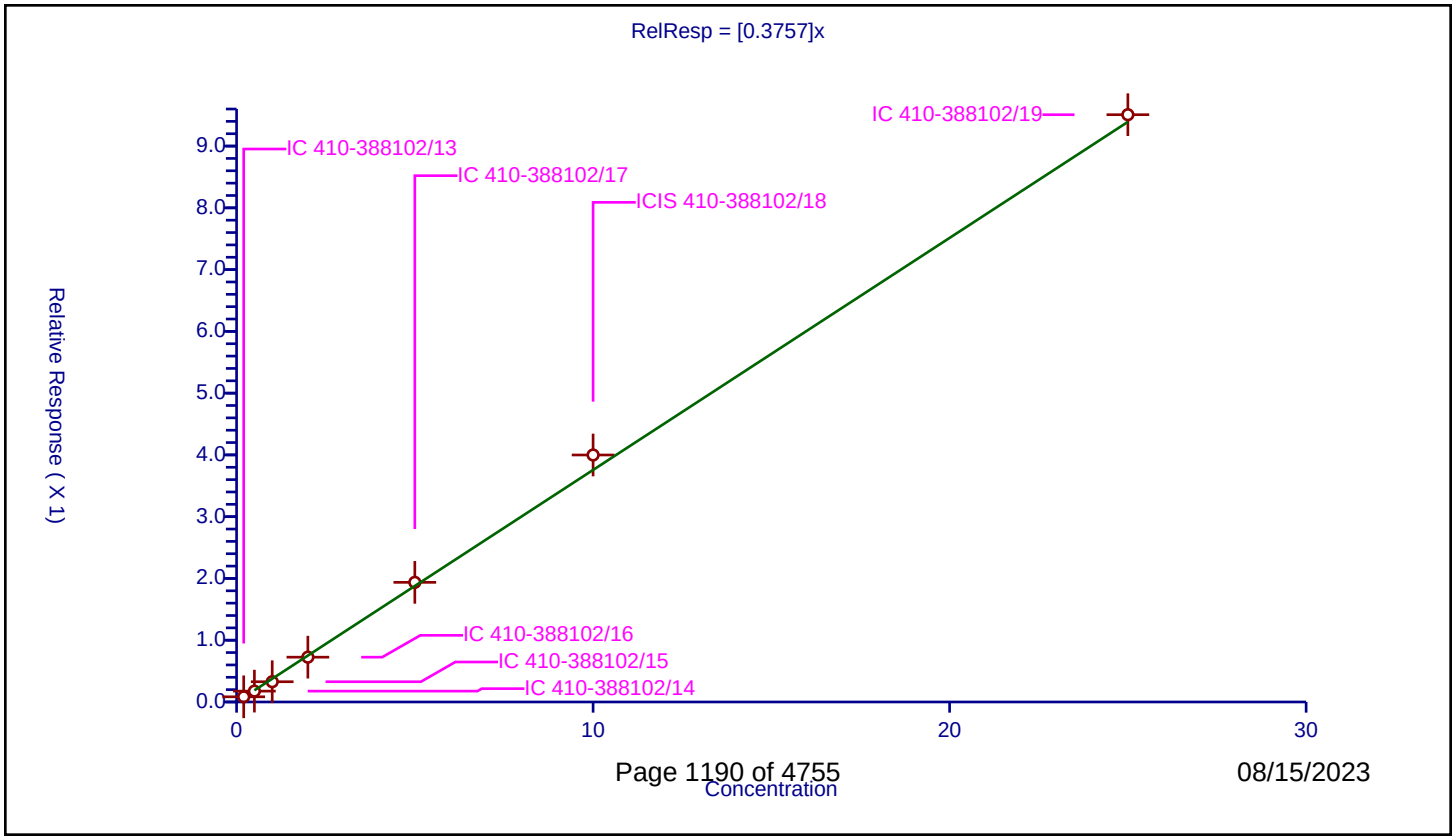
Curve Coefficients

Intercept:	0
Slope:	0.3757

Error Coefficients

Standard Error:	807000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.083903	10.0	1795291.0	0.419514	Y
2	IC 410-388102/14	0.5	0.175905	10.0	1753956.0	0.35181	Y
3	IC 410-388102/15	1.0	0.32806	10.0	1790586.0	0.32806	Y
4	IC 410-388102/16	2.0	0.725327	10.0	1802566.0	0.362664	Y
5	IC 410-388102/17	5.0	1.936936	10.0	1860774.0	0.387387	Y
6	ICIS 410-388102/18	10.0	3.998825	10.0	1807671.0	0.399883	Y
7	IC 410-388102/19	25.0	9.50783	10.0	1891215.0	0.380313	Y



Calibration / n-Butanol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

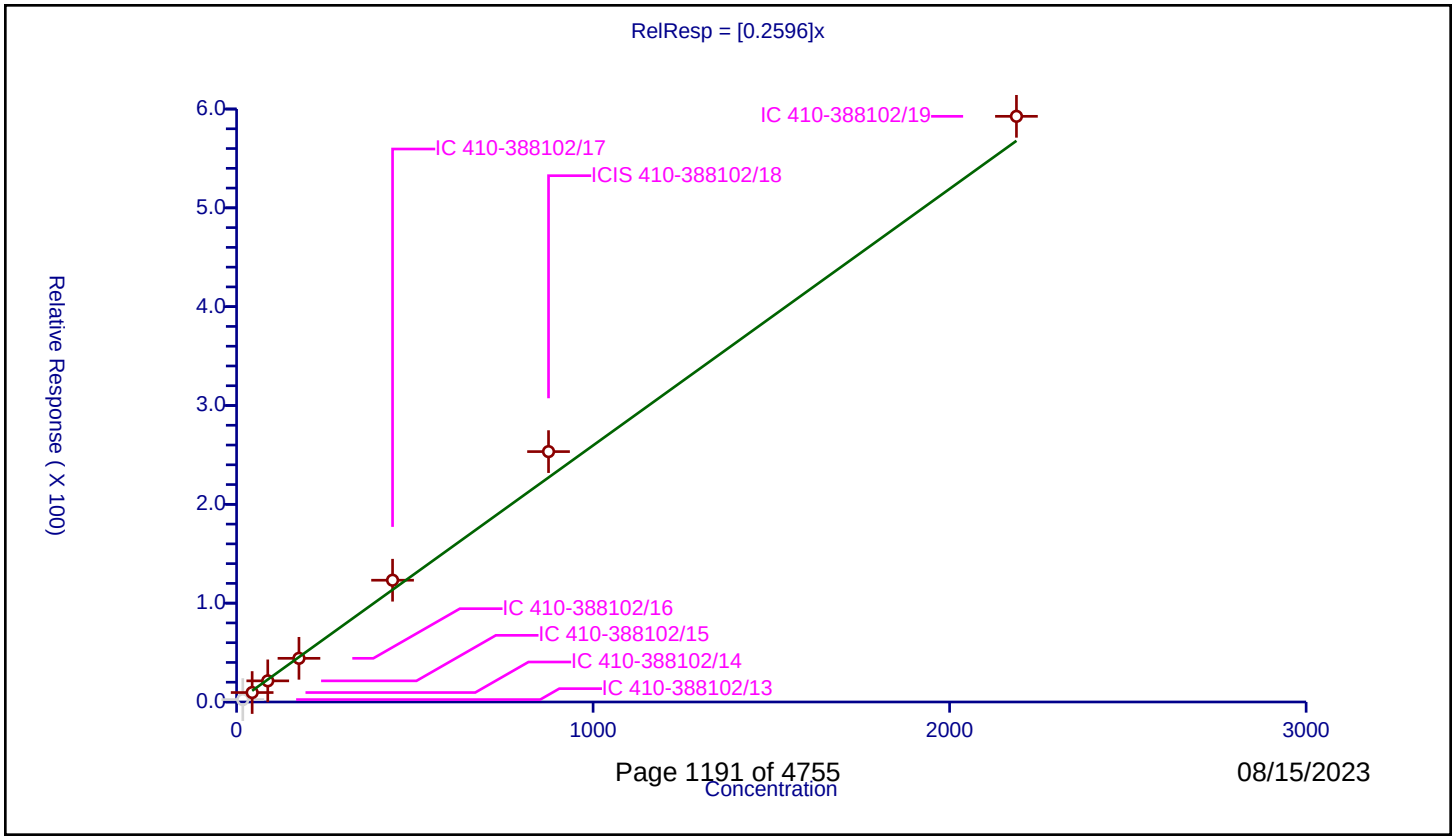
Curve Coefficients

Intercept:	0
Slope:	0.2596

Error Coefficients

Standard Error:	791000
Relative Standard Error:	10.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	17.5	2.442149	50.0	116680.0	0.139551	N
2	IC 410-388102/14	43.75	9.564722	50.0	132398.0	0.218622	Y
3	IC 410-388102/15	87.5	21.376586	50.0	133555.0	0.244304	Y
4	IC 410-388102/16	175.0	44.184922	50.0	127135.0	0.252485	Y
5	IC 410-388102/17	437.5	123.220635	50.0	139221.0	0.281647	Y
6	ICIS 410-388102/18	875.0	253.356911	50.0	130775.0	0.289551	Y
7	IC 410-388102/19	2187.5	592.61736	50.0	134884.0	0.270911	Y



Calibration / Trichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

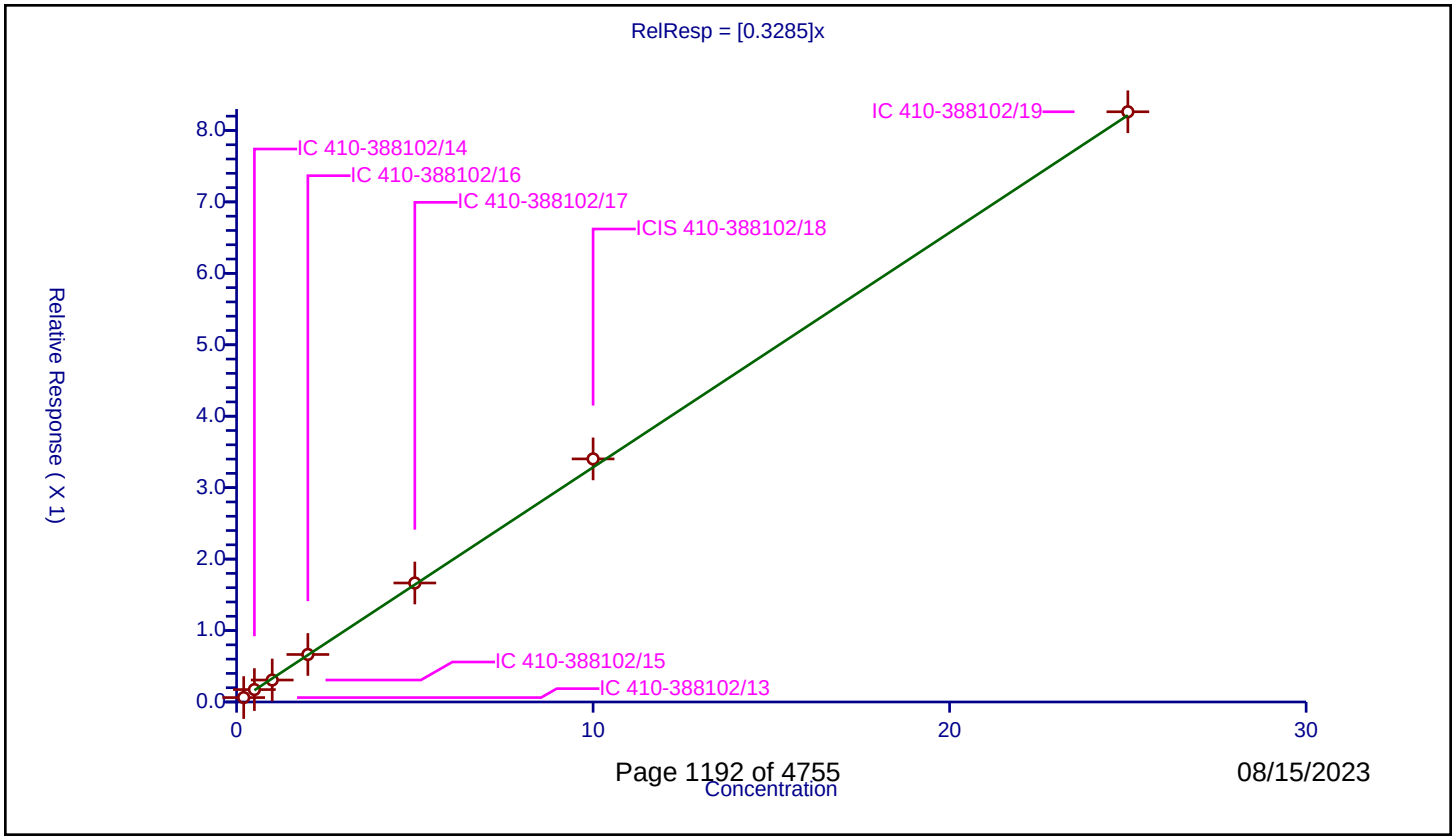
Curve Coefficients

Intercept:	0
Slope:	0.3285

Error Coefficients

Standard Error:	699000
Relative Standard Error:	4.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.061711	10.0	1795291.0	0.308557	Y
2	IC 410-388102/14	0.5	0.173636	10.0	1753956.0	0.347272	Y
3	IC 410-388102/15	1.0	0.307391	10.0	1790586.0	0.307391	Y
4	IC 410-388102/16	2.0	0.664974	10.0	1802566.0	0.332487	Y
5	IC 410-388102/17	5.0	1.665608	10.0	1860774.0	0.333122	Y
6	ICIS 410-388102/18	10.0	3.402317	10.0	1807671.0	0.340232	Y
7	IC 410-388102/19	25.0	8.261414	10.0	1891215.0	0.330457	Y



Calibration / Methylcyclohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

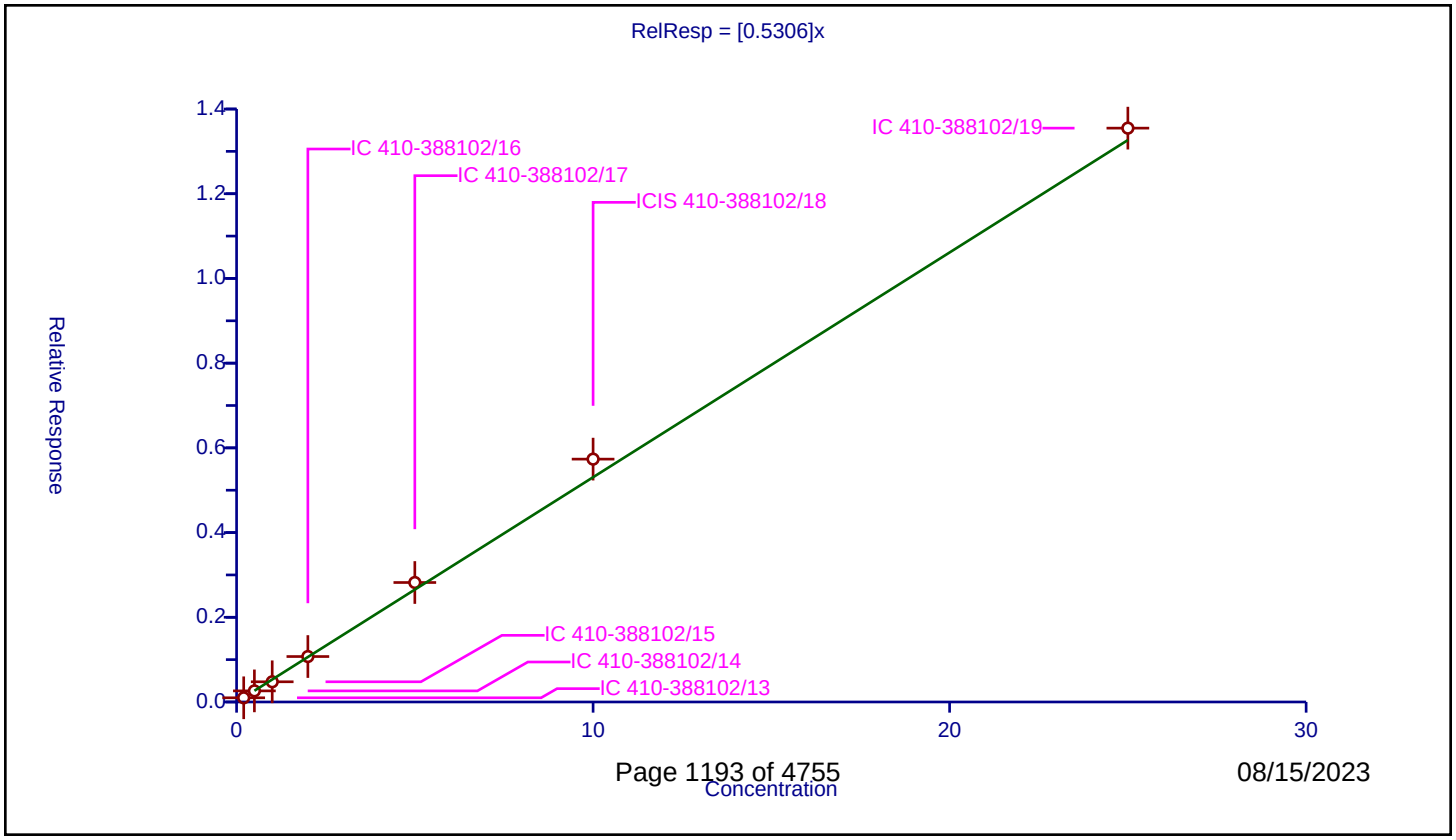
Curve Coefficients

Intercept:	0
Slope:	0.5306

Error Coefficients

Standard Error:	1150000
Relative Standard Error:	6.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.099438	10.0	1795291.0	0.49719	Y
2	IC 410-388102/14	0.5	0.26215	10.0	1753956.0	0.5243	Y
3	IC 410-388102/15	1.0	0.476894	10.0	1790586.0	0.476894	Y
4	IC 410-388102/16	2.0	1.07327	10.0	1802566.0	0.536635	Y
5	IC 410-388102/17	5.0	2.820821	10.0	1860774.0	0.564164	Y
6	ICIS 410-388102/18	10.0	5.734218	10.0	1807671.0	0.573422	Y
7	IC 410-388102/19	25.0	13.548306	10.0	1891215.0	0.541932	Y



Calibration / 1,2-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

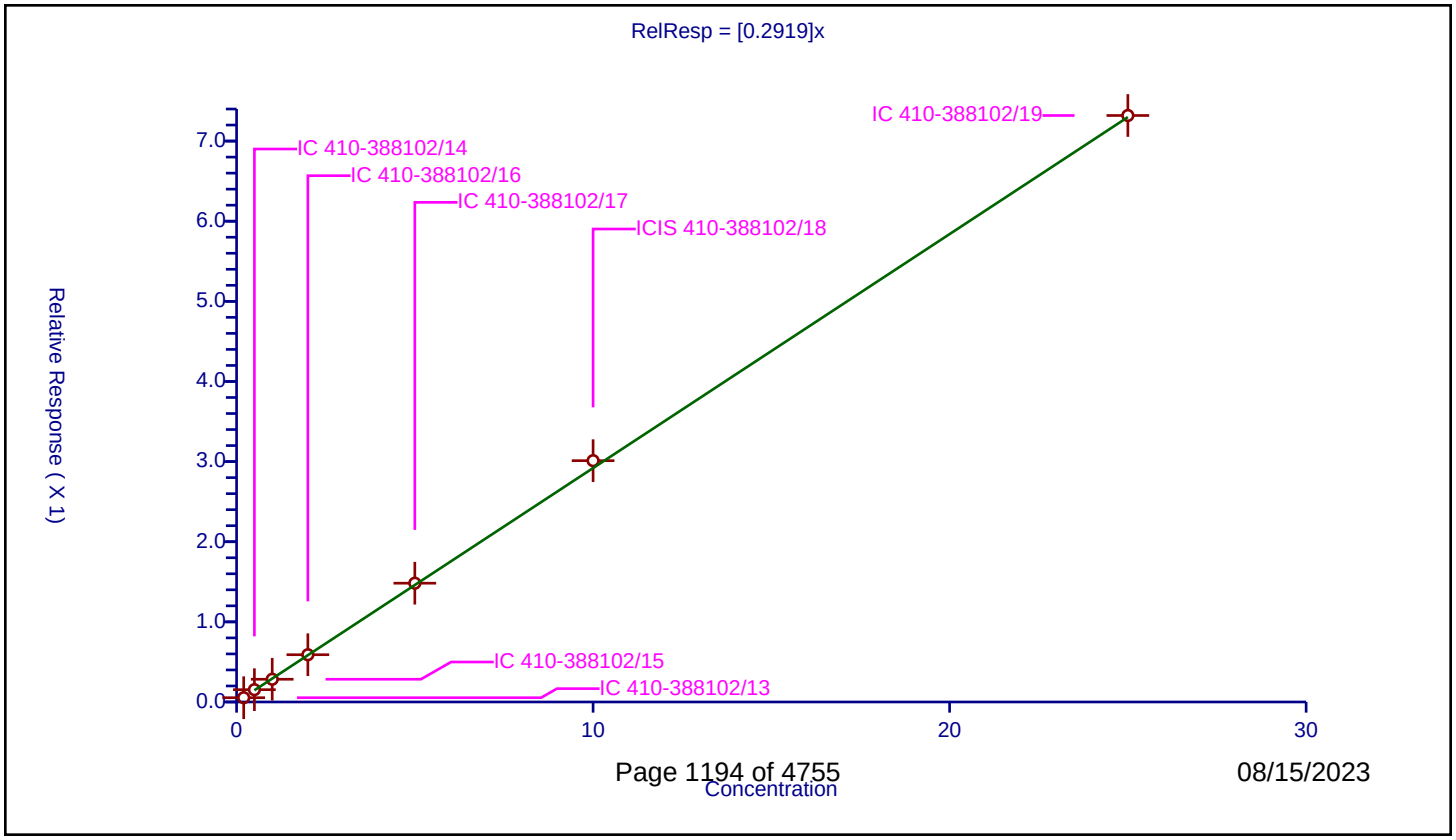
Curve Coefficients

Intercept:	0
Slope:	0.2919

Error Coefficients

Standard Error:	620000
Relative Standard Error:	4.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.053457	10.0	1795291.0	0.267283	Y
2	IC 410-388102/14	0.5	0.153738	10.0	1753956.0	0.307476	Y
3	IC 410-388102/15	1.0	0.28355	10.0	1790586.0	0.28355	Y
4	IC 410-388102/16	2.0	0.589842	10.0	1802566.0	0.294921	Y
5	IC 410-388102/17	5.0	1.482442	10.0	1860774.0	0.296488	Y
6	ICIS 410-388102/18	10.0	3.011577	10.0	1807671.0	0.301158	Y
7	IC 410-388102/19	25.0	7.319094	10.0	1891215.0	0.292764	Y



Calibration / Methyl methacrylate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

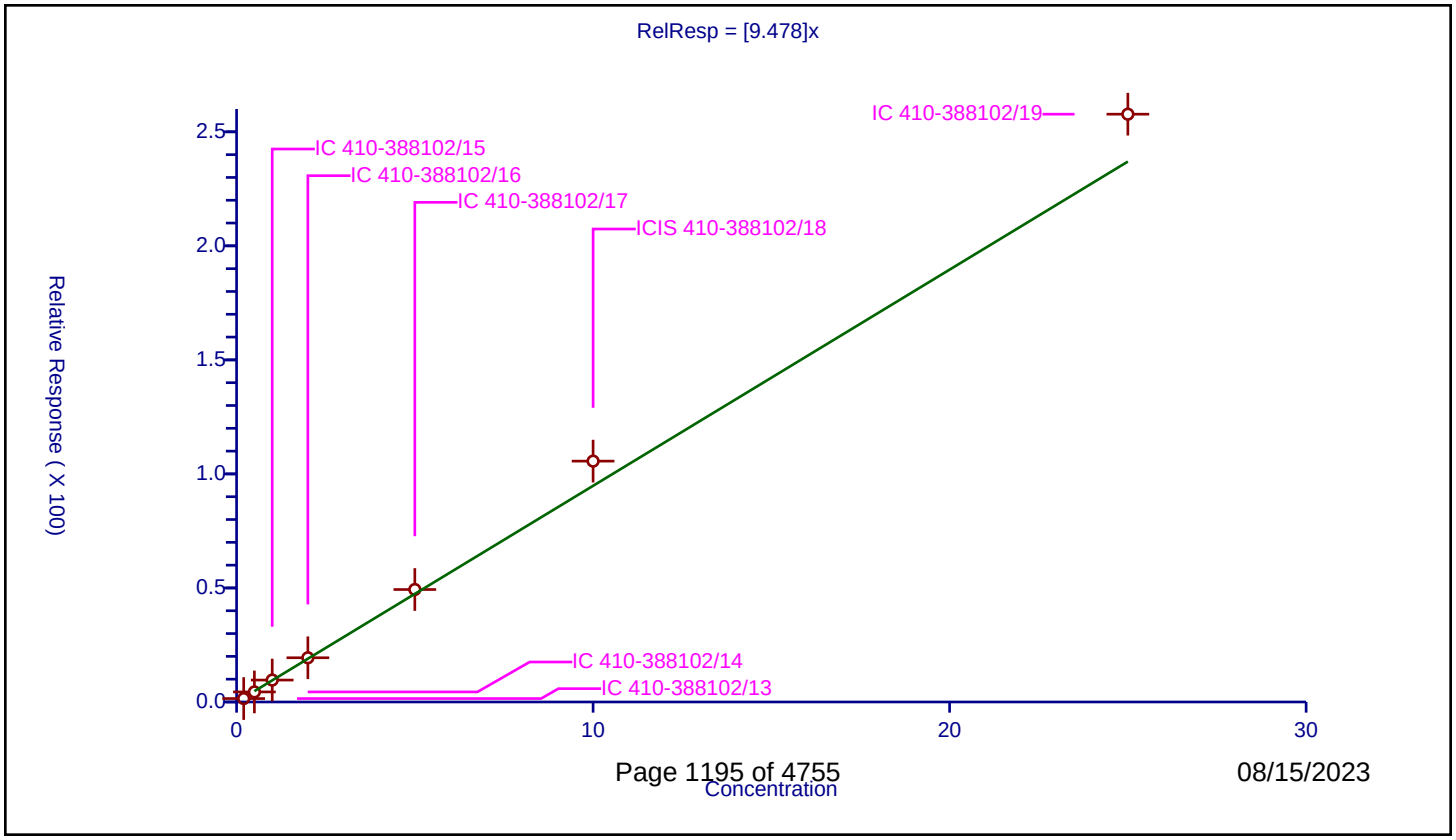
Curve Coefficients

Intercept:	0
Slope:	9.478

Error Coefficients

Standard Error:	311000
Relative Standard Error:	11.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	1.497686	50.0	116680.0	7.48843	Y
2	IC 410-388102/14	0.5	4.40981	50.0	132398.0	8.81962	Y
3	IC 410-388102/15	1.0	9.614017	50.0	133555.0	9.614017	Y
4	IC 410-388102/16	2.0	19.386086	50.0	127135.0	9.693043	Y
5	IC 410-388102/17	5.0	49.31404	50.0	139221.0	9.862808	Y
6	ICIS 410-388102/18	10.0	105.610782	50.0	130775.0	10.561078	Y
7	IC 410-388102/19	25.0	257.736277	50.0	134884.0	10.309451	Y



Calibration / 1,4-Dioxane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

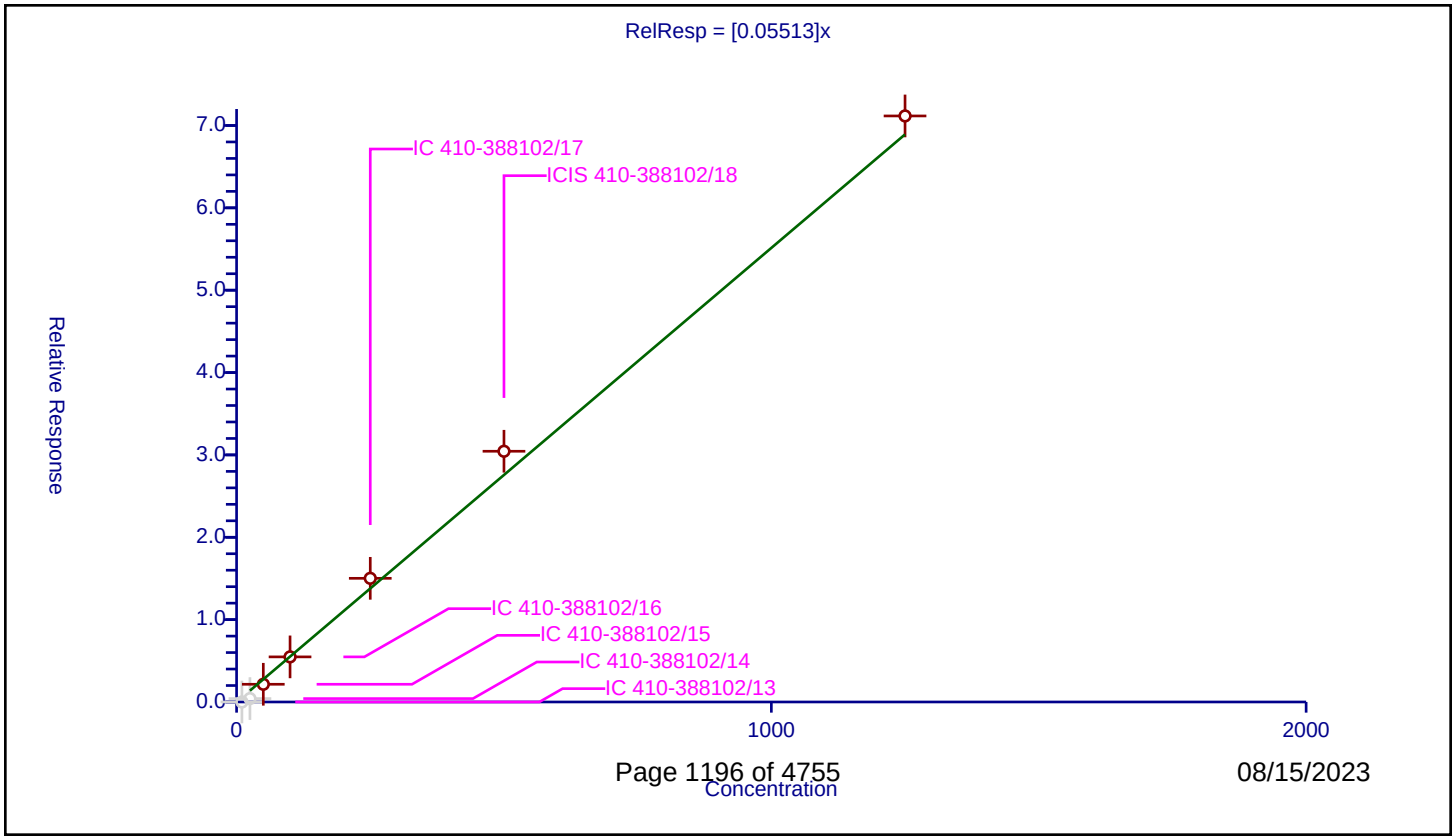
Curve Coefficients

Intercept:	0
Slope:	0.05513

Error Coefficients

Standard Error:	106000
Relative Standard Error:	13.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.977

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	10.0	0.0	50.0	116680.0	0.0	N
2	IC 410-388102/14	25.0	0.414281	50.0	132398.0	0.016571	N
3	IC 410-388102/15	50.0	2.151174	50.0	133555.0	0.043023	Y
4	IC 410-388102/16	100.0	5.476462	50.0	127135.0	0.054765	Y
5	IC 410-388102/17	250.0	15.017131	50.0	139221.0	0.060069	Y
6	ICIS 410-388102/18	500.0	30.443128	50.0	130775.0	0.060886	Y
7	IC 410-388102/19	1250.0	71.159292	50.0	134884.0	0.056927	Y



Calibration / Dibromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

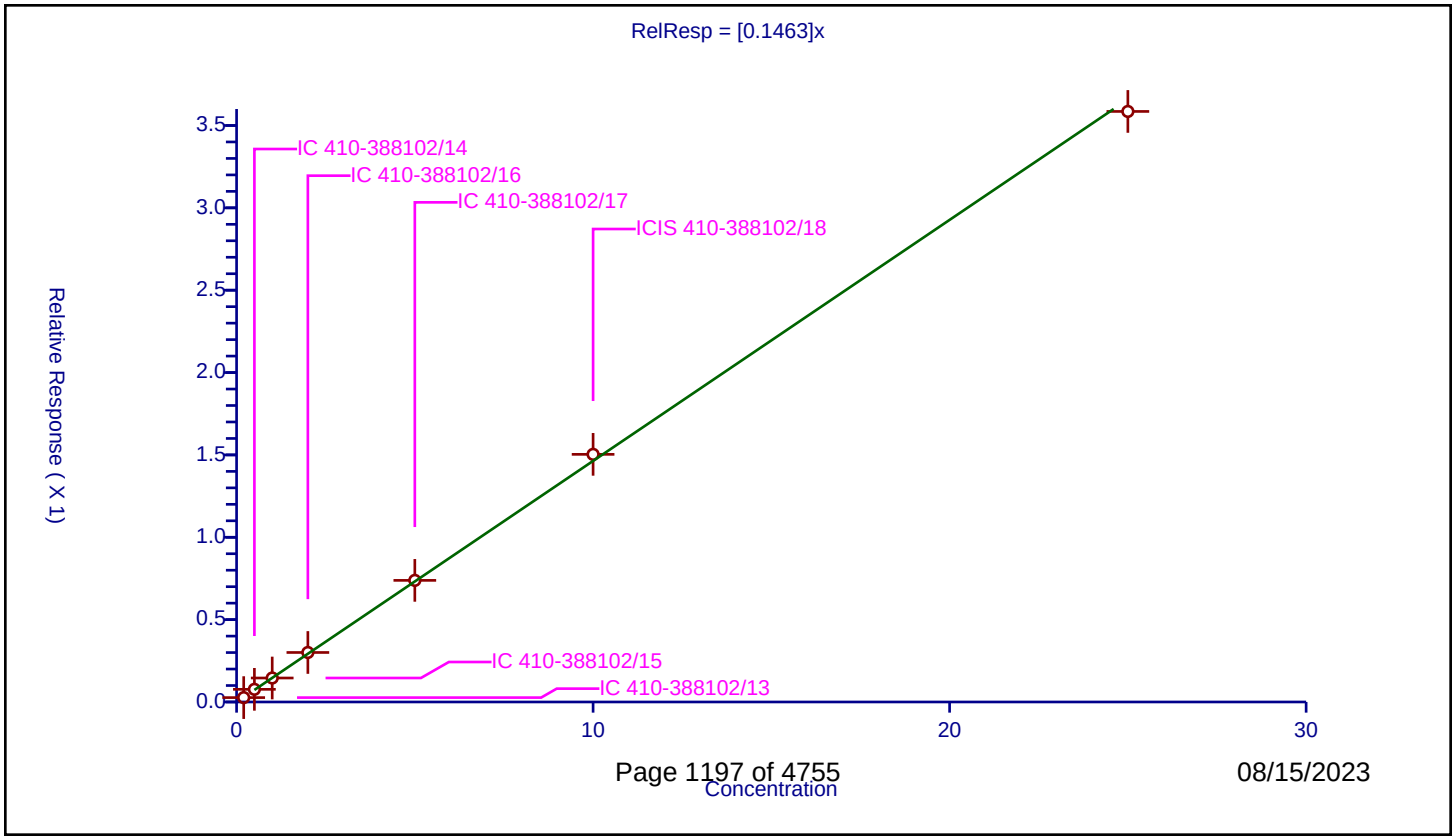
Curve Coefficients

Intercept:	0
Slope:	0.1463

Error Coefficients

Standard Error:	304000
Relative Standard Error:	4.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.026675	10.0	1795291.0	0.133377	Y
2	IC 410-388102/14	0.5	0.076866	10.0	1753956.0	0.153732	Y
3	IC 410-388102/15	1.0	0.145595	10.0	1790586.0	0.145595	Y
4	IC 410-388102/16	2.0	0.300538	10.0	1802566.0	0.150269	Y
5	IC 410-388102/17	5.0	0.738273	10.0	1860774.0	0.147655	Y
6	ICIS 410-388102/18	10.0	1.503376	10.0	1807671.0	0.150338	Y
7	IC 410-388102/19	25.0	3.58523	10.0	1891215.0	0.143409	Y



Calibration / Dichlorobromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

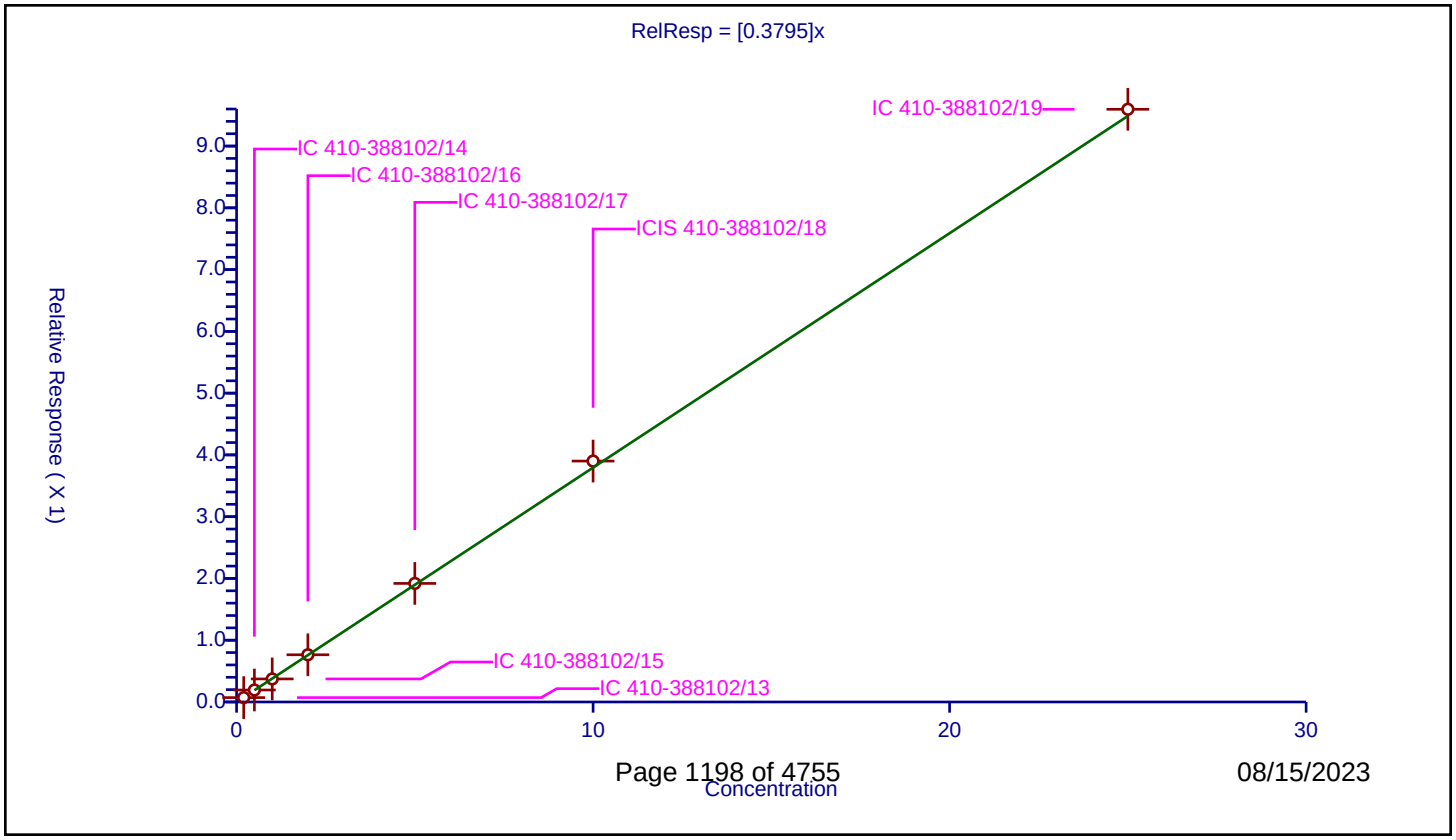
Curve Coefficients

Intercept:	0
Slope:	0.3795

Error Coefficients

Standard Error:	811000
Relative Standard Error:	3.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.070947	10.0	1795291.0	0.354734	Y
2	IC 410-388102/14	0.5	0.194155	10.0	1753956.0	0.388311	Y
3	IC 410-388102/15	1.0	0.373157	10.0	1790586.0	0.373157	Y
4	IC 410-388102/16	2.0	0.76436	10.0	1802566.0	0.38218	Y
5	IC 410-388102/17	5.0	1.919475	10.0	1860774.0	0.383895	Y
6	ICIS 410-388102/18	10.0	3.90045	10.0	1807671.0	0.390045	Y
7	IC 410-388102/19	25.0	9.595863	10.0	1891215.0	0.383835	Y



Calibration / 2-Nitropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

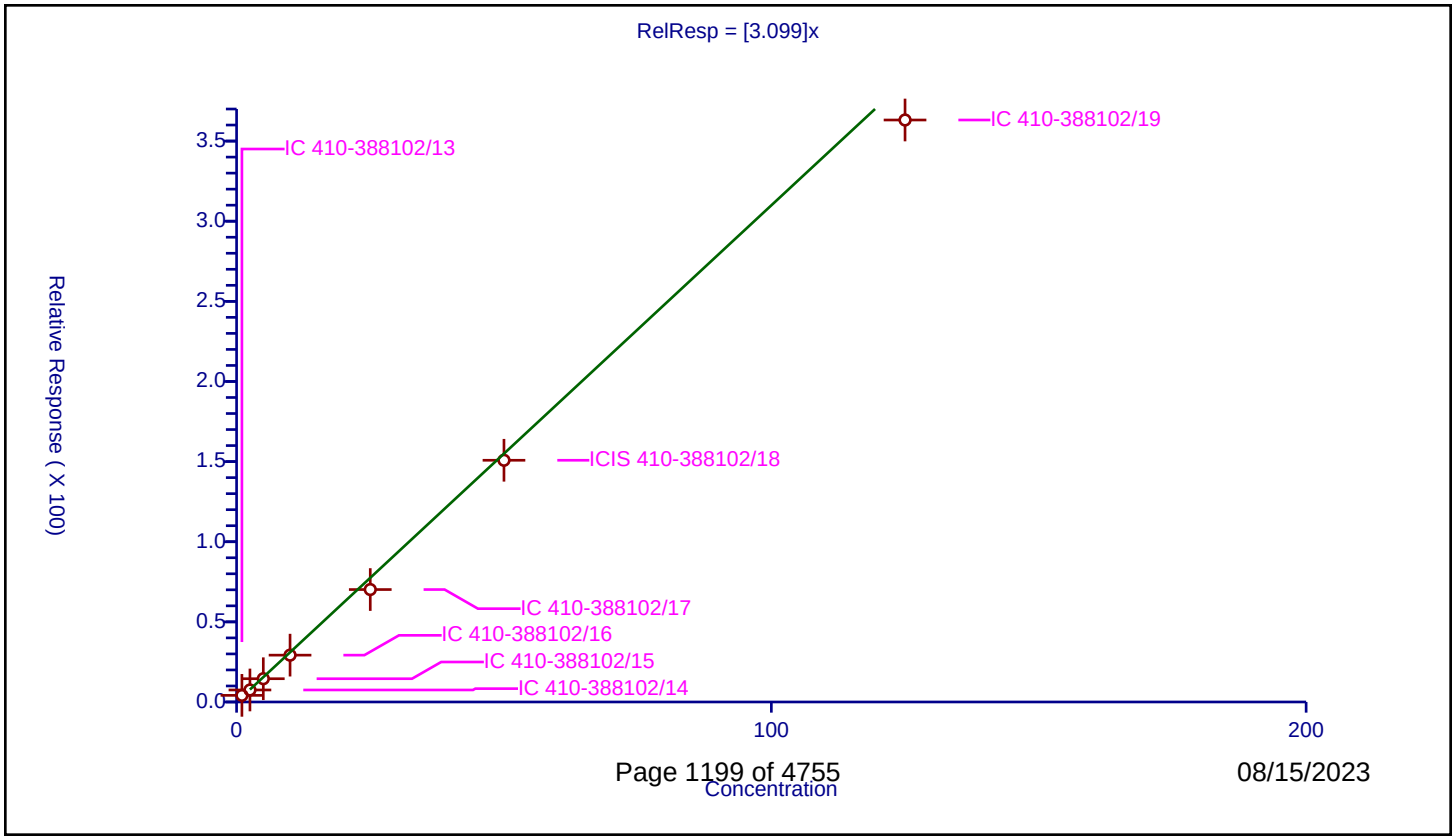
Curve Coefficients

Intercept:	0
Slope:	3.099

Error Coefficients

Standard Error:	440000
Relative Standard Error:	15.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.962

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	1.0	4.142955	50.0	116680.0	4.142955	Y
2	IC 410-388102/14	2.5	7.489161	50.0	132398.0	2.995665	Y
3	IC 410-388102/15	5.0	14.523979	50.0	133555.0	2.904796	Y
4	IC 410-388102/16	10.0	29.220514	50.0	127135.0	2.922051	Y
5	IC 410-388102/17	25.0	70.162188	50.0	139221.0	2.806488	Y
6	ICIS 410-388102/18	50.0	150.83311	50.0	130775.0	3.016662	Y
7	IC 410-388102/19	125.0	363.14574	50.0	134884.0	2.905166	Y



Calibration / 1-Bromo-2-chloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

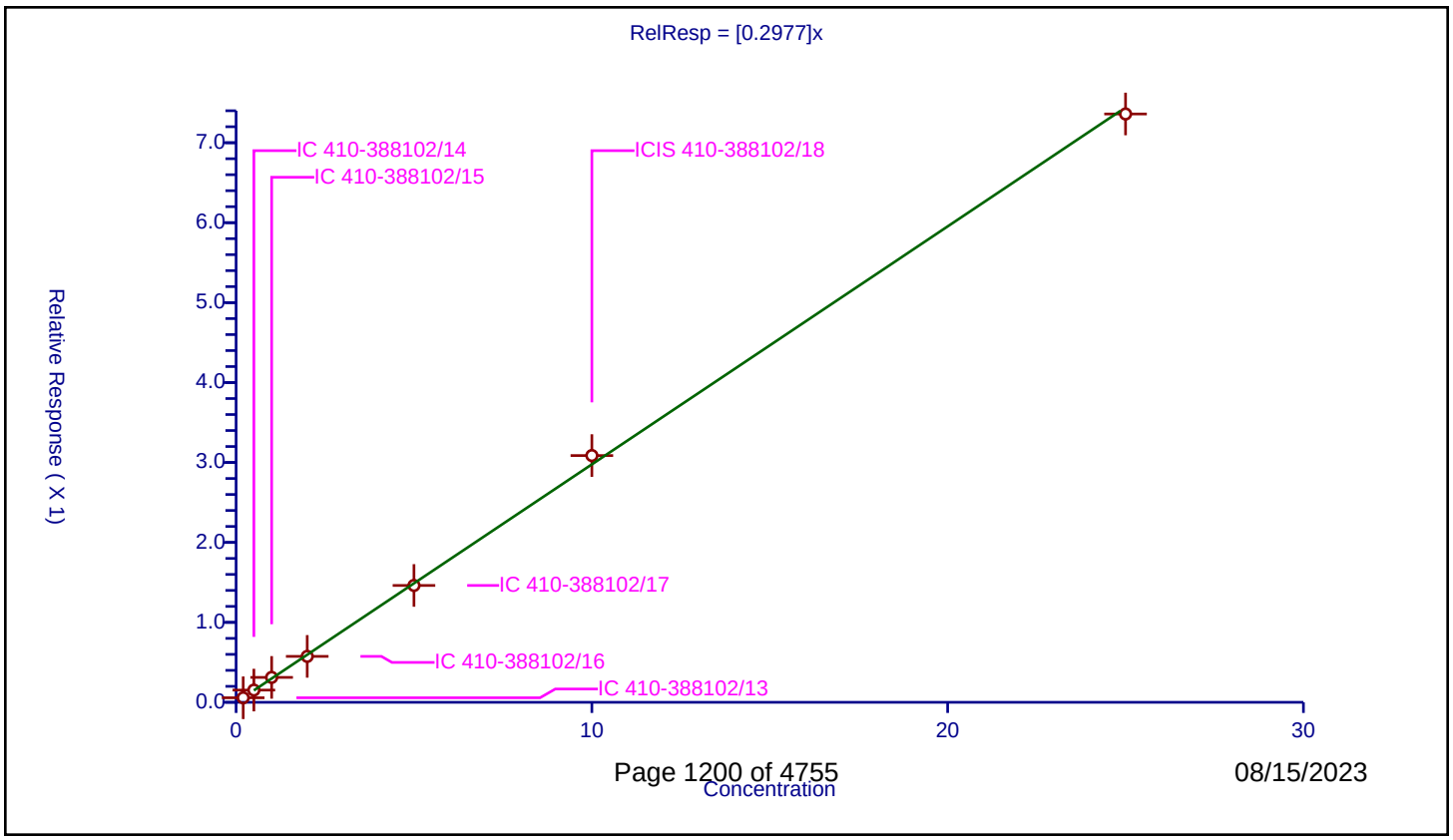
Curve Coefficients

Intercept:	0
Slope:	0.2977

Error Coefficients

Standard Error:	624000
Relative Standard Error:	3.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.056693	10.0	1795291.0	0.283464	Y
2	IC 410-388102/14	0.5	0.152792	10.0	1753956.0	0.305583	Y
3	IC 410-388102/15	1.0	0.311786	10.0	1790586.0	0.311786	Y
4	IC 410-388102/16	2.0	0.574581	10.0	1802566.0	0.28729	Y
5	IC 410-388102/17	5.0	1.461865	10.0	1860774.0	0.292373	Y
6	ICIS 410-388102/18	10.0	3.08679	10.0	1807671.0	0.308679	Y
7	IC 410-388102/19	25.0	7.359803	10.0	1891215.0	0.294392	Y



Calibration / cis-1,3-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

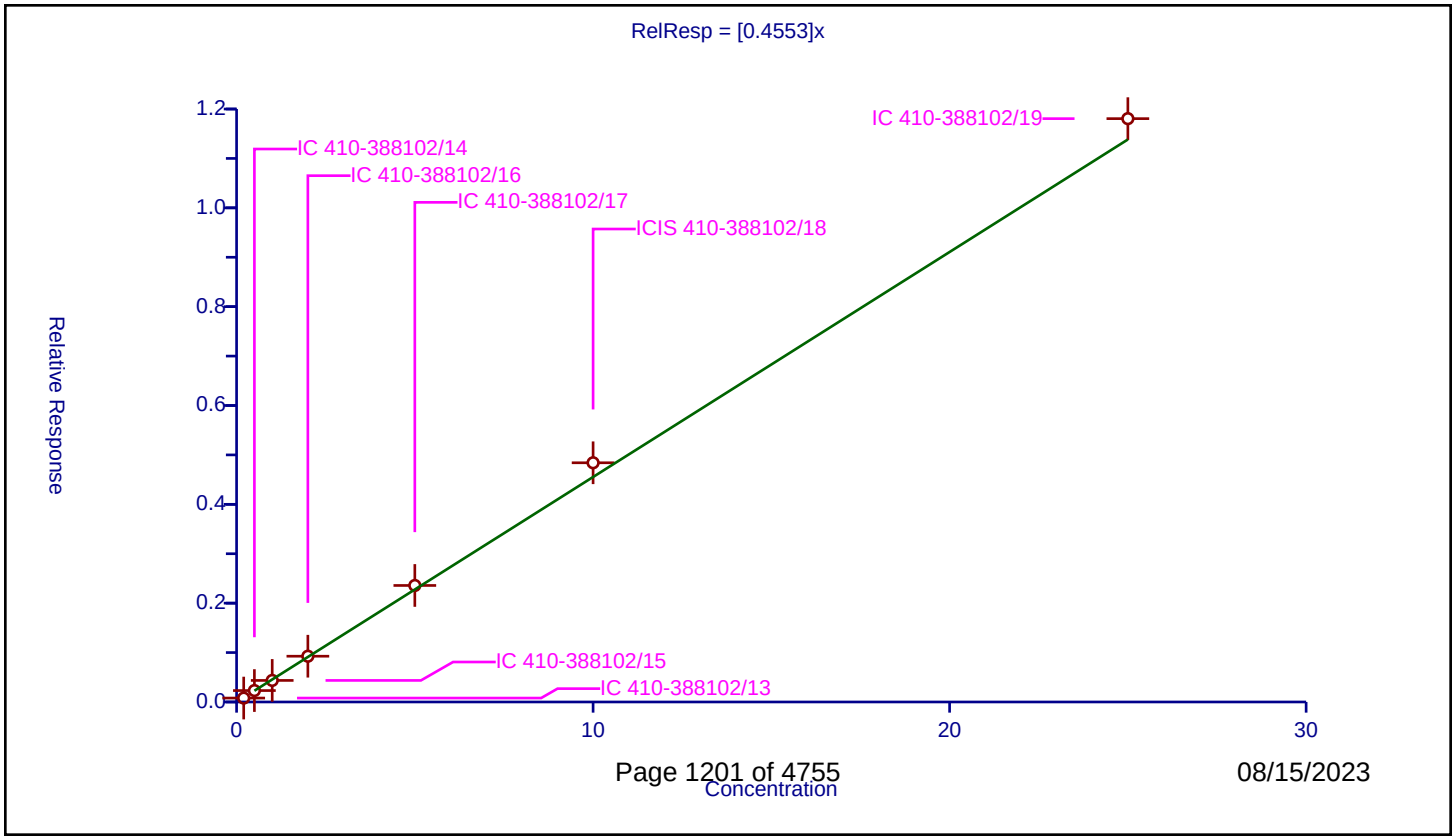
Curve Coefficients

Intercept:	0
Slope:	0.4553

Error Coefficients

Standard Error:	998000
Relative Standard Error:	6.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.079508	10.0	1795291.0	0.39754	Y
2	IC 410-388102/14	0.5	0.231089	10.0	1753956.0	0.462178	Y
3	IC 410-388102/15	1.0	0.436472	10.0	1790586.0	0.436472	Y
4	IC 410-388102/16	2.0	0.926379	10.0	1802566.0	0.46319	Y
5	IC 410-388102/17	5.0	2.357901	10.0	1860774.0	0.47158	Y
6	ICIS 410-388102/18	10.0	4.840765	10.0	1807671.0	0.484076	Y
7	IC 410-388102/19	25.0	11.805369	10.0	1891215.0	0.472215	Y



Calibration / 4-Methyl-2-pentanone (MIBK)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

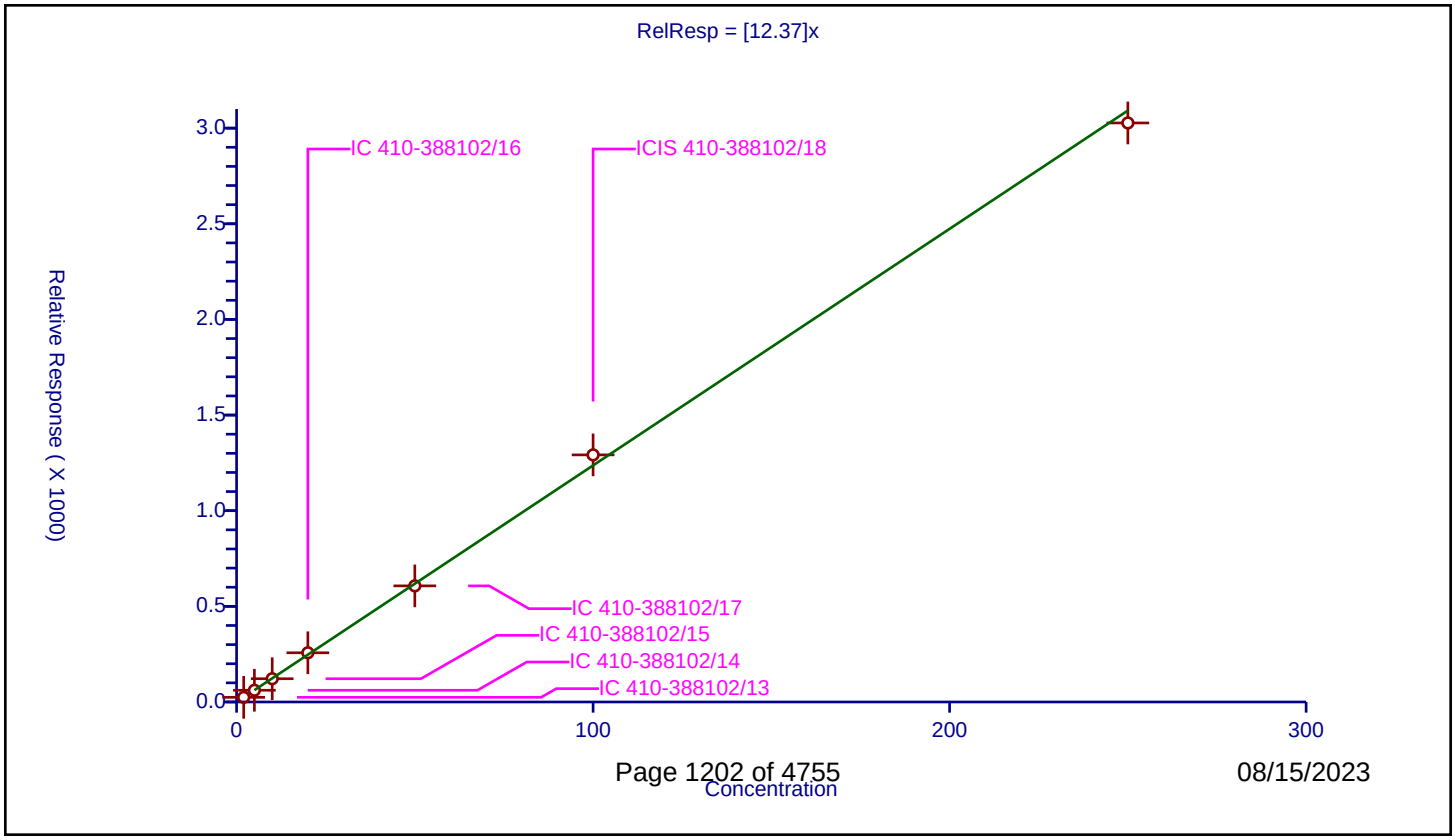
Curve Coefficients

Intercept:	0
Slope:	12.37

Error Coefficients

Standard Error:	3680000
Relative Standard Error:	2.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	2.0	24.274083	50.0	116680.0	12.137041	Y
2	IC 410-388102/14	5.0	61.244128	50.0	132398.0	12.248826	Y
3	IC 410-388102/15	10.0	121.588484	50.0	133555.0	12.158848	Y
4	IC 410-388102/16	20.0	257.226963	50.0	127135.0	12.861348	Y
5	IC 410-388102/17	50.0	607.091243	50.0	139221.0	12.141825	Y
6	ICIS 410-388102/18	100.0	1291.790862	50.0	130775.0	12.917909	Y
7	IC 410-388102/19	250.0	3027.132573	50.0	134884.0	12.10853	Y



Calibration / Toluene-d8 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

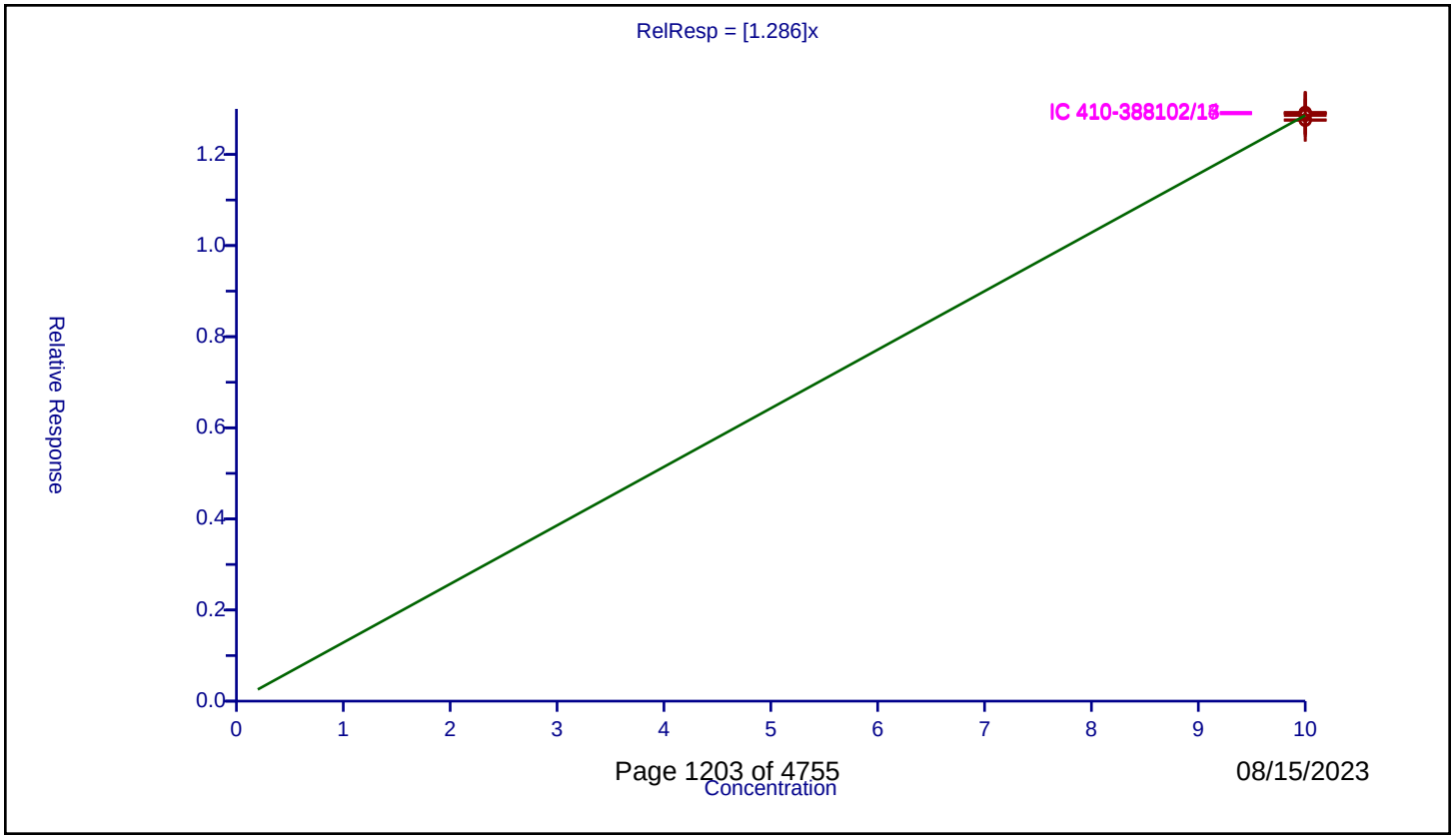
Curve Coefficients

Intercept:	0
Slope:	1.286

Error Coefficients

Standard Error:	1990000
Relative Standard Error:	0.6
Correlation Coefficient:	0.000000000000000000
Coefficient of Determination (Adjusted):	0.000000000000000222

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	10.0	12.909417	10.0	1414940.0	1.290942	Y
2	IC 410-388102/14	10.0	12.924011	10.0	1381168.0	1.292401	Y
3	IC 410-388102/15	10.0	12.762147	10.0	1413947.0	1.276215	Y
4	IC 410-388102/16	10.0	12.905264	10.0	1411844.0	1.290526	Y
5	IC 410-388102/17	10.0	12.890348	10.0	1479531.0	1.289035	Y
6	ICIS 410-388102/18	10.0	12.855298	10.0	1439976.0	1.28553	Y
7	IC 410-388102/19	10.0	12.74883	10.0	1508853.0	1.274883	Y



Calibration / Toluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

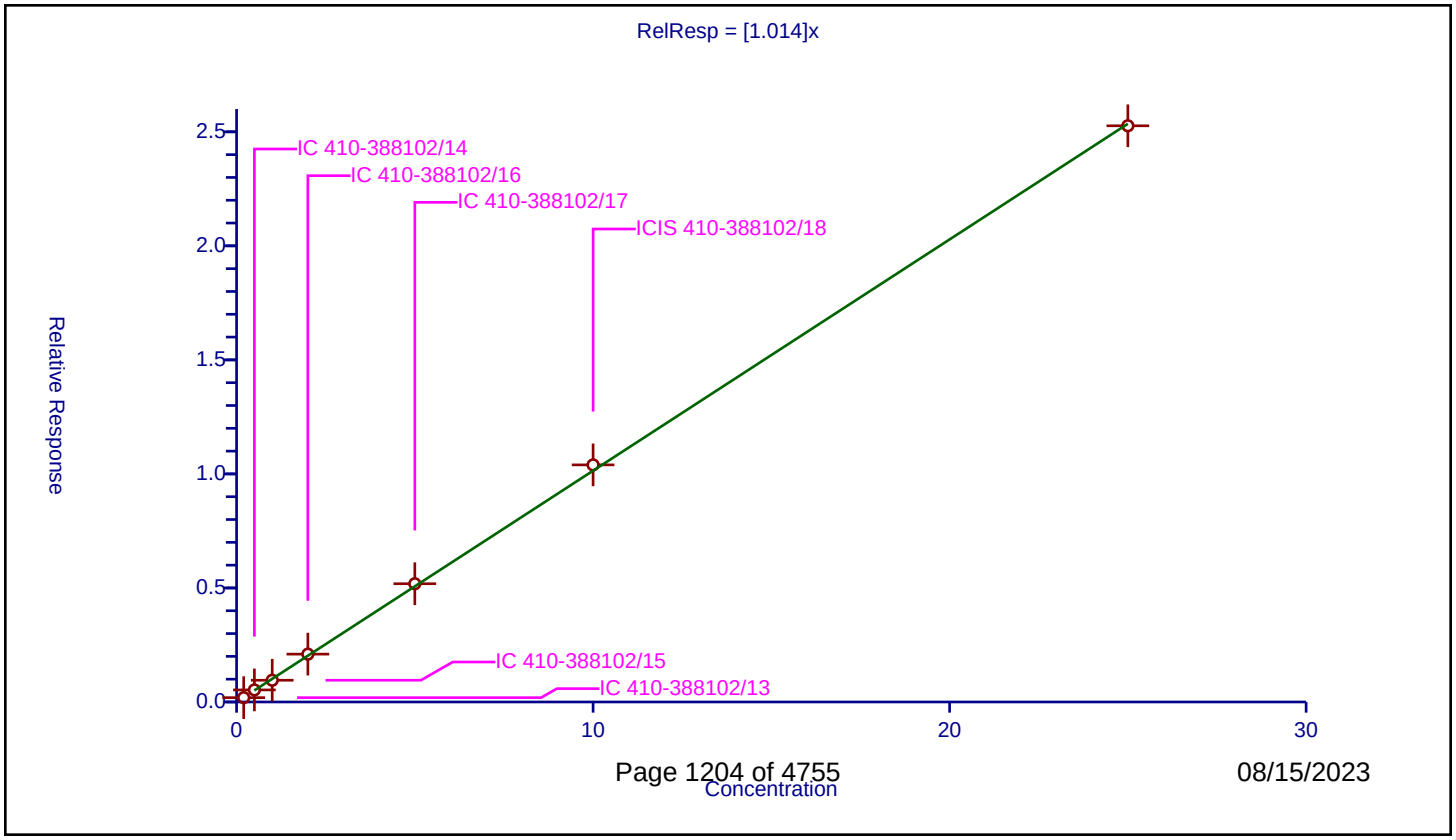
Curve Coefficients

Intercept:	0
Slope:	1.014

Error Coefficients

Standard Error:	1710000
Relative Standard Error:	4.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.189959	10.0	1414940.0	0.949793	Y
2	IC 410-388102/14	0.5	0.529421	10.0	1381168.0	1.058843	Y
3	IC 410-388102/15	1.0	0.953876	10.0	1413947.0	0.953876	Y
4	IC 410-388102/16	2.0	2.097633	10.0	1411844.0	1.048816	Y
5	IC 410-388102/17	5.0	5.184555	10.0	1479531.0	1.036911	Y
6	ICIS 410-388102/18	10.0	10.396111	10.0	1439976.0	1.039611	Y
7	IC 410-388102/19	25.0	25.264622	10.0	1508853.0	1.010585	Y



Calibration / trans-1,3-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

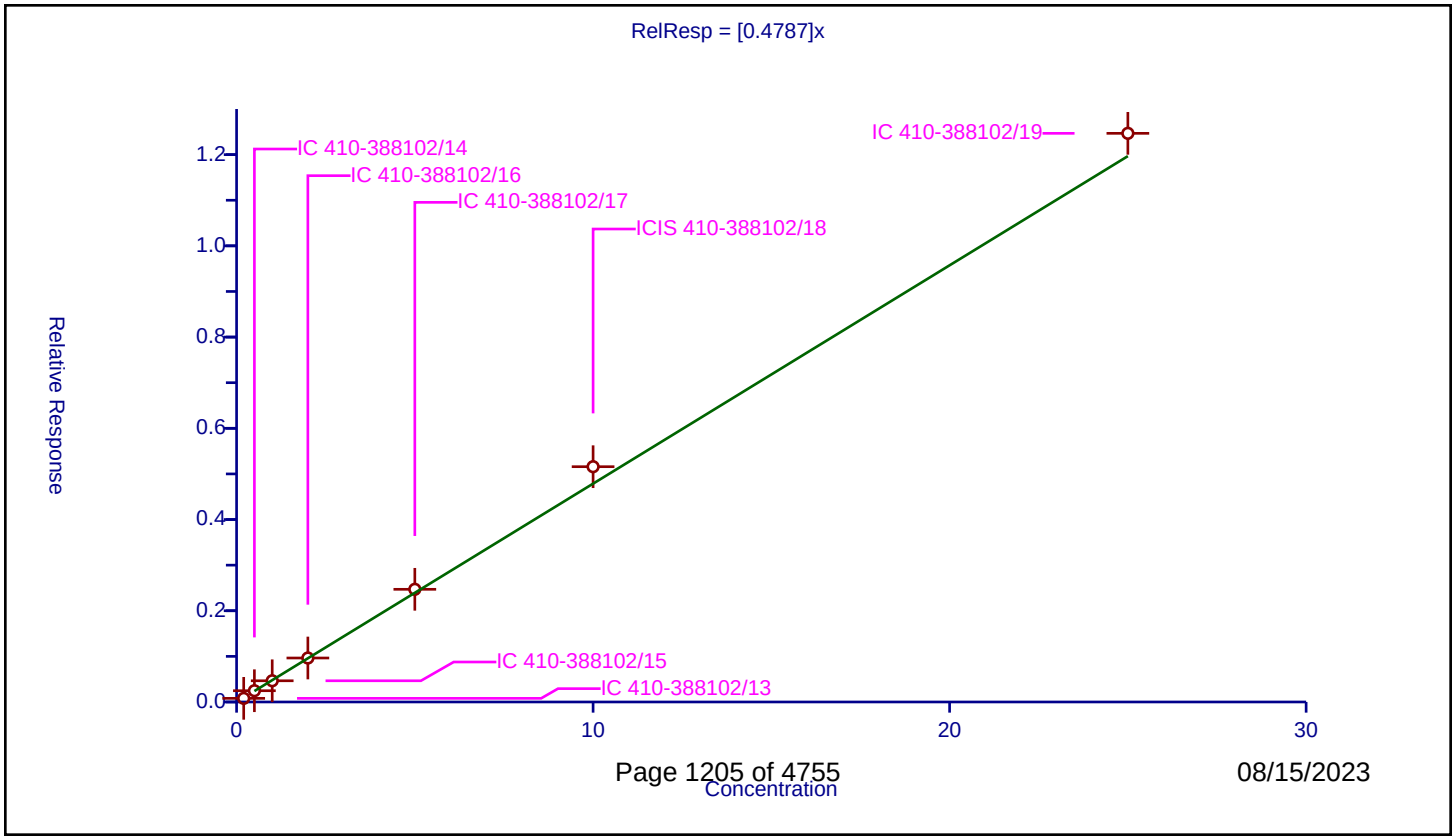
Curve Coefficients

Intercept:	0
Slope:	0.4787

Error Coefficients

Standard Error:	841000
Relative Standard Error:	7.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.080046	10.0	1414940.0	0.400229	Y
2	IC 410-388102/14	0.5	0.247254	10.0	1381168.0	0.494509	Y
3	IC 410-388102/15	1.0	0.465208	10.0	1413947.0	0.465208	Y
4	IC 410-388102/16	2.0	0.964292	10.0	1411844.0	0.482146	Y
5	IC 410-388102/17	5.0	2.470445	10.0	1479531.0	0.494089	Y
6	ICIS 410-388102/18	10.0	5.158148	10.0	1439976.0	0.515815	Y
7	IC 410-388102/19	25.0	12.466867	10.0	1508853.0	0.498675	Y



Calibration / Ethyl methacrylate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

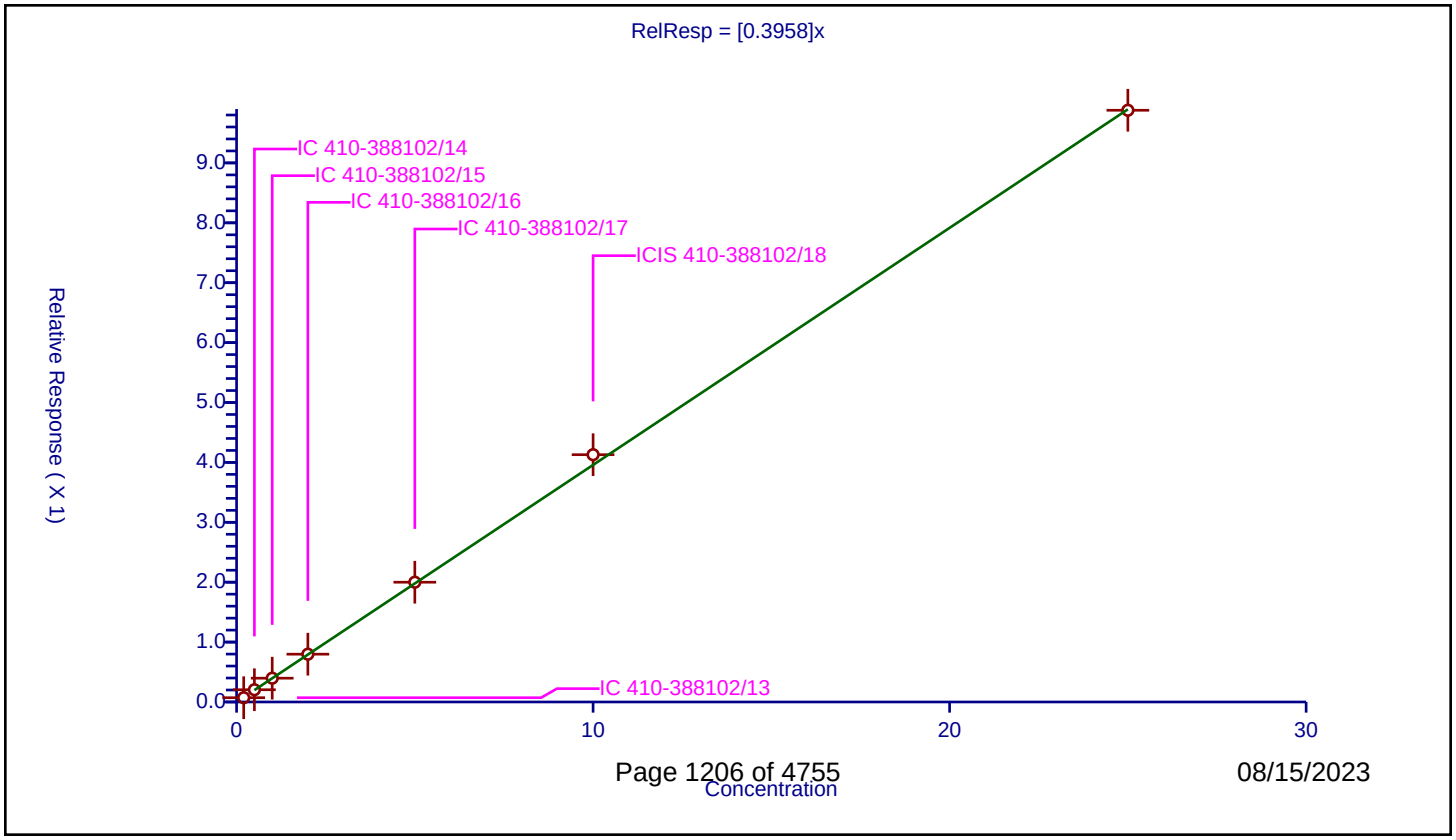
Curve Coefficients

Intercept:	0
Slope:	0.3958

Error Coefficients

Standard Error:	668000
Relative Standard Error:	4.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.071473	10.0	1414940.0	0.357365	Y
2	IC 410-388102/14	0.5	0.204486	10.0	1381168.0	0.408973	Y
3	IC 410-388102/15	1.0	0.397236	10.0	1413947.0	0.397236	Y
4	IC 410-388102/16	2.0	0.797871	10.0	1411844.0	0.398936	Y
5	IC 410-388102/17	5.0	1.99962	10.0	1479531.0	0.399924	Y
6	ICIS 410-388102/18	10.0	4.128805	10.0	1439976.0	0.41288	Y
7	IC 410-388102/19	25.0	9.87922	10.0	1508853.0	0.395169	Y



Calibration / 1,1,2-Trichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

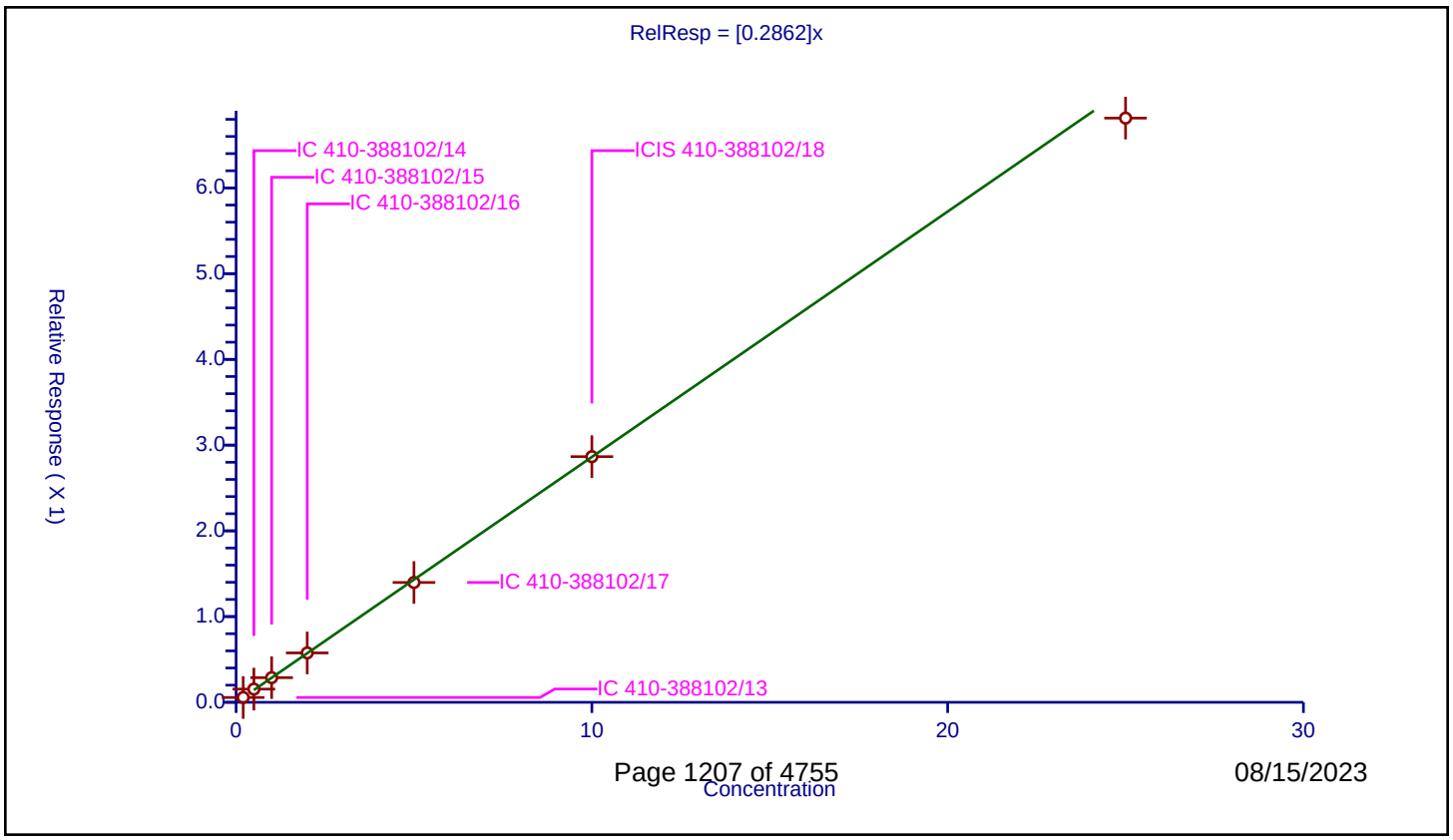
Curve Coefficients

Intercept:	0
Slope:	0.2862

Error Coefficients

Standard Error:	462000
Relative Standard Error:	3.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.056172	10.0	1414940.0	0.28086	Y
2	IC 410-388102/14	0.5	0.154159	10.0	1381168.0	0.308319	Y
3	IC 410-388102/15	1.0	0.287451	10.0	1413947.0	0.287451	Y
4	IC 410-388102/16	2.0	0.576176	10.0	1411844.0	0.288088	Y
5	IC 410-388102/17	5.0	1.397619	10.0	1479531.0	0.279524	Y
6	ICIS 410-388102/18	10.0	2.865367	10.0	1439976.0	0.286537	Y
7	IC 410-388102/19	25.0	6.814229	10.0	1508853.0	0.272569	Y



Calibration / Tetrachloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

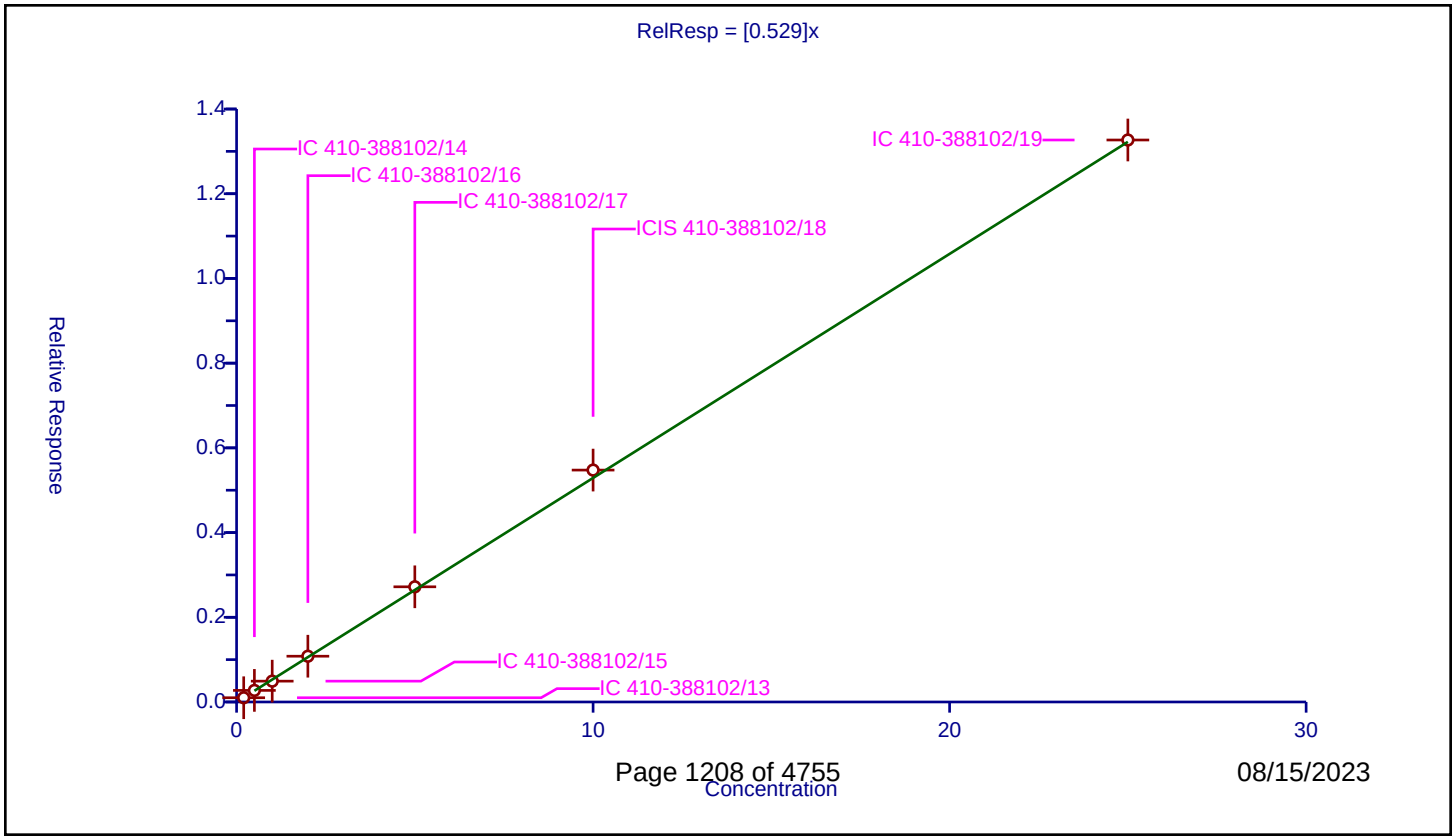
Curve Coefficients

Intercept:	0
Slope:	0.529

Error Coefficients

Standard Error:	896000
Relative Standard Error:	4.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.100273	10.0	1414940.0	0.501364	Y
2	IC 410-388102/14	0.5	0.273327	10.0	1381168.0	0.546653	Y
3	IC 410-388102/15	1.0	0.492084	10.0	1413947.0	0.492084	Y
4	IC 410-388102/16	2.0	1.080976	10.0	1411844.0	0.540488	Y
5	IC 410-388102/17	5.0	2.719443	10.0	1479531.0	0.543889	Y
6	ICIS 410-388102/18	10.0	5.475473	10.0	1439976.0	0.547547	Y
7	IC 410-388102/19	25.0	13.268695	10.0	1508853.0	0.530748	Y



Calibration / 1,3-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

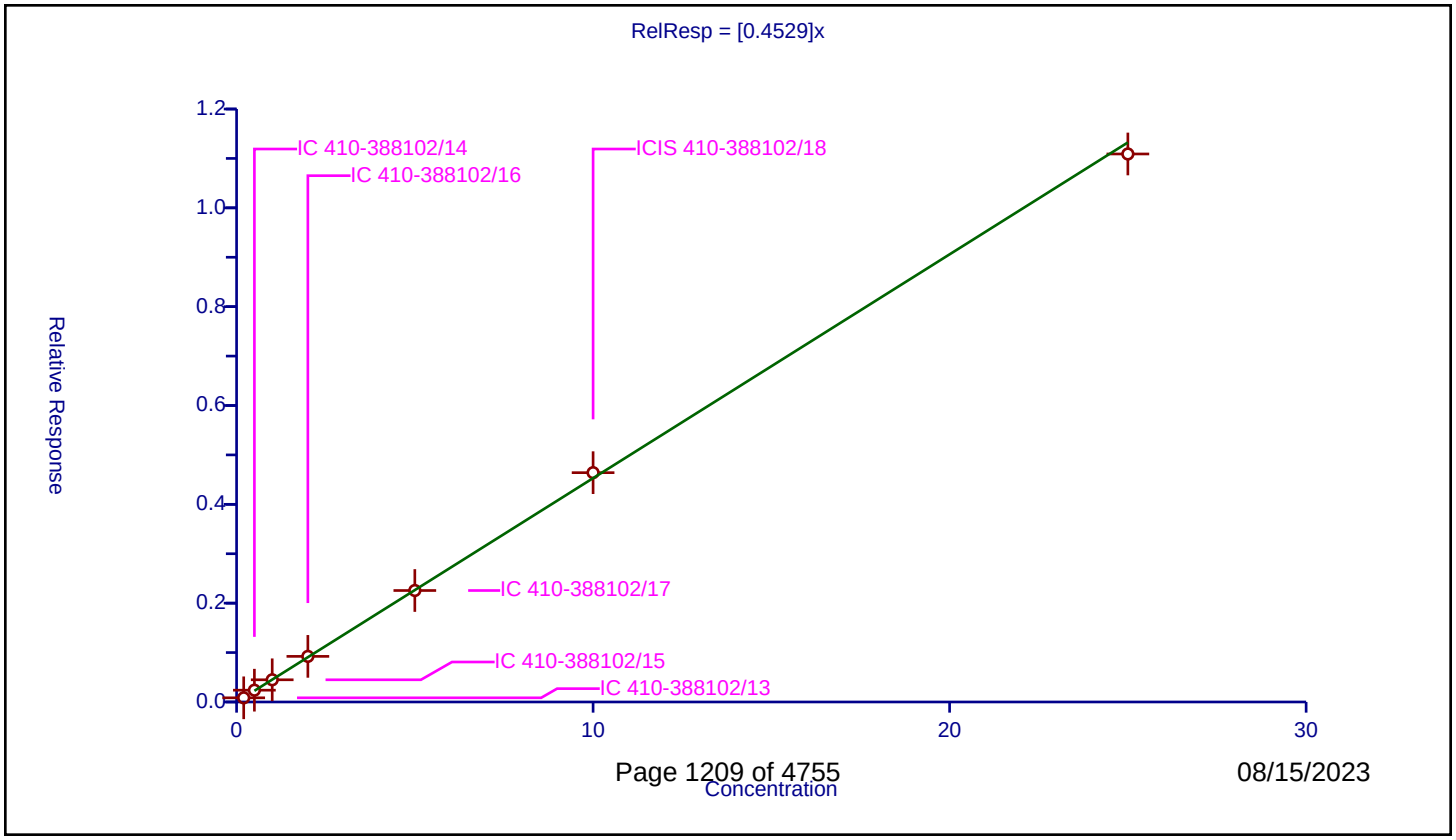
Curve Coefficients

Intercept:	0
Slope:	0.4529

Error Coefficients

Standard Error:	751000
Relative Standard Error:	3.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.084654	10.0	1414940.0	0.423269	Y
2	IC 410-388102/14	0.5	0.238878	10.0	1381168.0	0.477755	Y
3	IC 410-388102/15	1.0	0.449034	10.0	1413947.0	0.449034	Y
4	IC 410-388102/16	2.0	0.92319	10.0	1411844.0	0.461595	Y
5	IC 410-388102/17	5.0	2.256188	10.0	1479531.0	0.451238	Y
6	ICIS 410-388102/18	10.0	4.640522	10.0	1439976.0	0.464052	Y
7	IC 410-388102/19	25.0	11.090391	10.0	1508853.0	0.443616	Y



Calibration / 2-Hexanone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

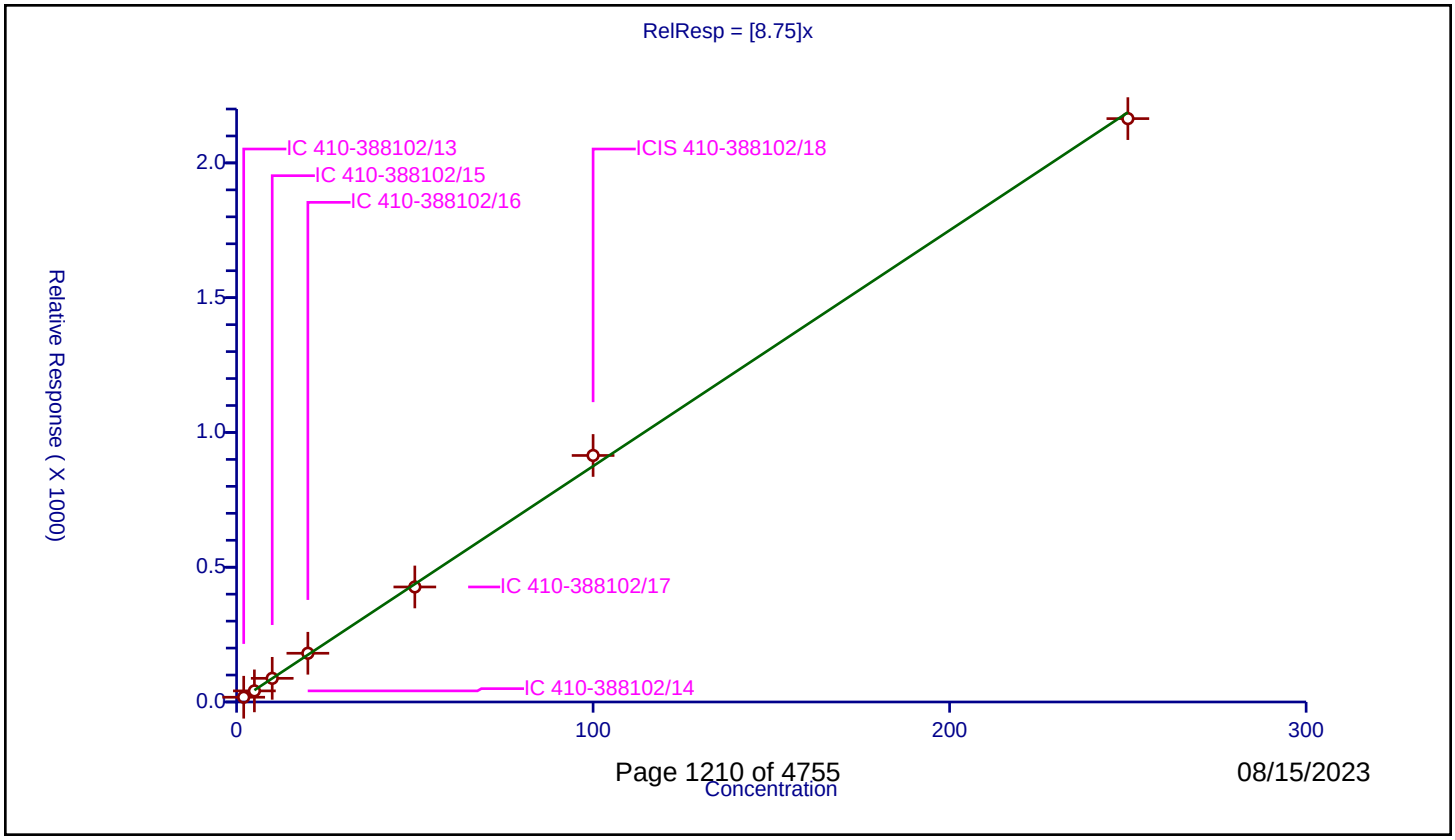
Curve Coefficients

Intercept:	0
Slope:	8.75

Error Coefficients

Standard Error:	2630000
Relative Standard Error:	3.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	2.0	17.705691	50.0	116680.0	8.852845	Y
2	IC 410-388102/14	5.0	41.165274	50.0	132398.0	8.233055	Y
3	IC 410-388102/15	10.0	87.807645	50.0	133555.0	8.780764	Y
4	IC 410-388102/16	20.0	180.849097	50.0	127135.0	9.042455	Y
5	IC 410-388102/17	50.0	426.765	50.0	139221.0	8.5353	Y
6	ICIS 410-388102/18	100.0	914.665647	50.0	130775.0	9.146656	Y
7	IC 410-388102/19	250.0	2164.420539	50.0	134884.0	8.657682	Y



Calibration / Chlorodibromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

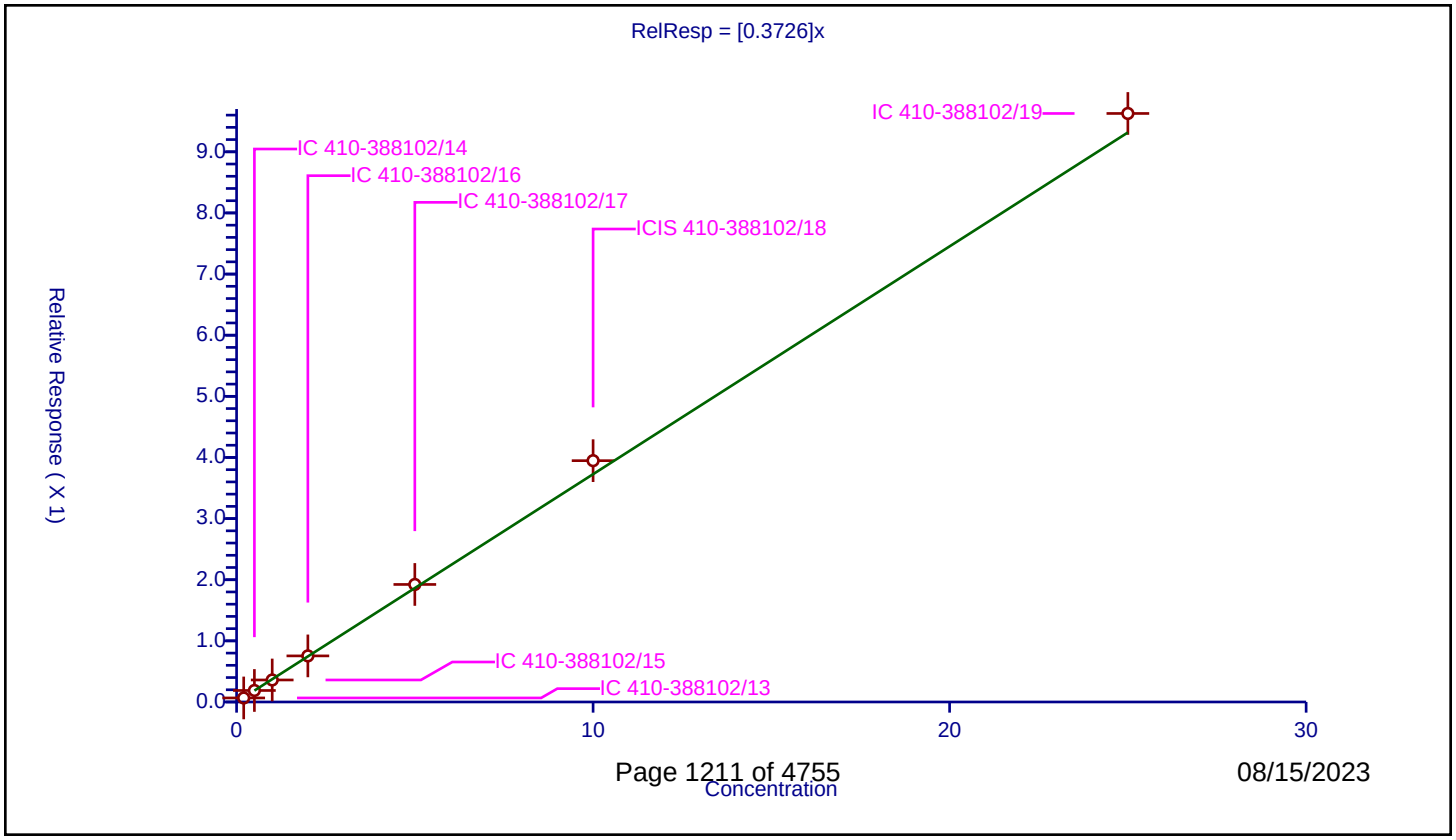
Curve Coefficients

Intercept:	0
Slope:	0.3726

Error Coefficients

Standard Error:	649000
Relative Standard Error:	5.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.066215	10.0	1414940.0	0.331074	Y
2	IC 410-388102/14	0.5	0.188022	10.0	1381168.0	0.376044	Y
3	IC 410-388102/15	1.0	0.359971	10.0	1413947.0	0.359971	Y
4	IC 410-388102/16	2.0	0.754113	10.0	1411844.0	0.377057	Y
5	IC 410-388102/17	5.0	1.922657	10.0	1479531.0	0.384531	Y
6	ICIS 410-388102/18	10.0	3.947677	10.0	1439976.0	0.394768	Y
7	IC 410-388102/19	25.0	9.627068	10.0	1508853.0	0.385083	Y



Calibration / Ethylene Dibromide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

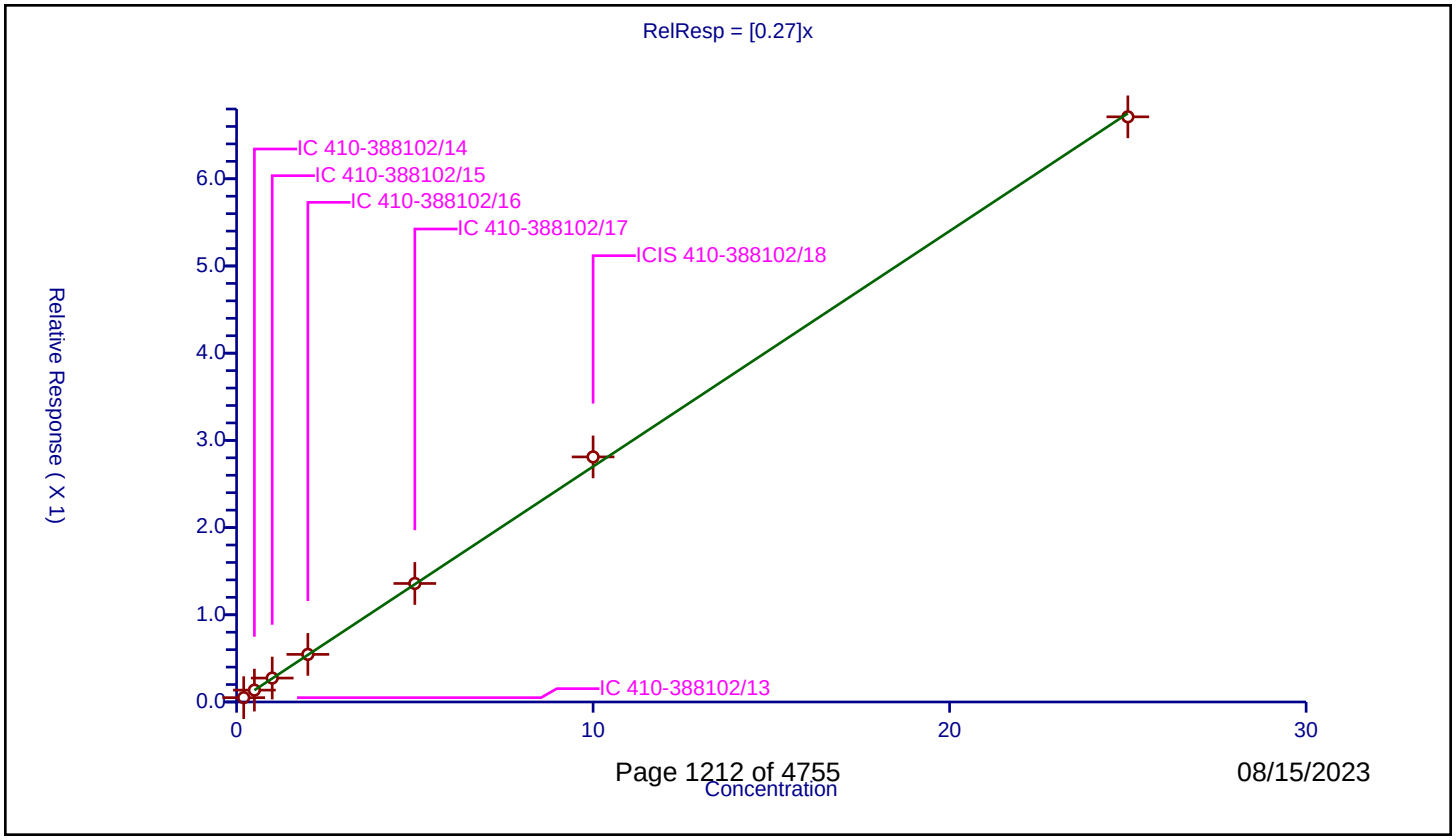
Curve Coefficients

Intercept:	0
Slope:	0.27

Error Coefficients

Standard Error:	454000
Relative Standard Error:	3.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.049804	10.0	1414940.0	0.249021	Y
2	IC 410-388102/14	0.5	0.136225	10.0	1381168.0	0.272451	Y
3	IC 410-388102/15	1.0	0.274459	10.0	1413947.0	0.274459	Y
4	IC 410-388102/16	2.0	0.545882	10.0	1411844.0	0.272941	Y
5	IC 410-388102/17	5.0	1.359052	10.0	1479531.0	0.27181	Y
6	ICIS 410-388102/18	10.0	2.810345	10.0	1439976.0	0.281035	Y
7	IC 410-388102/19	25.0	6.710495	10.0	1508853.0	0.26842	Y



Calibration / 1-Chlorohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

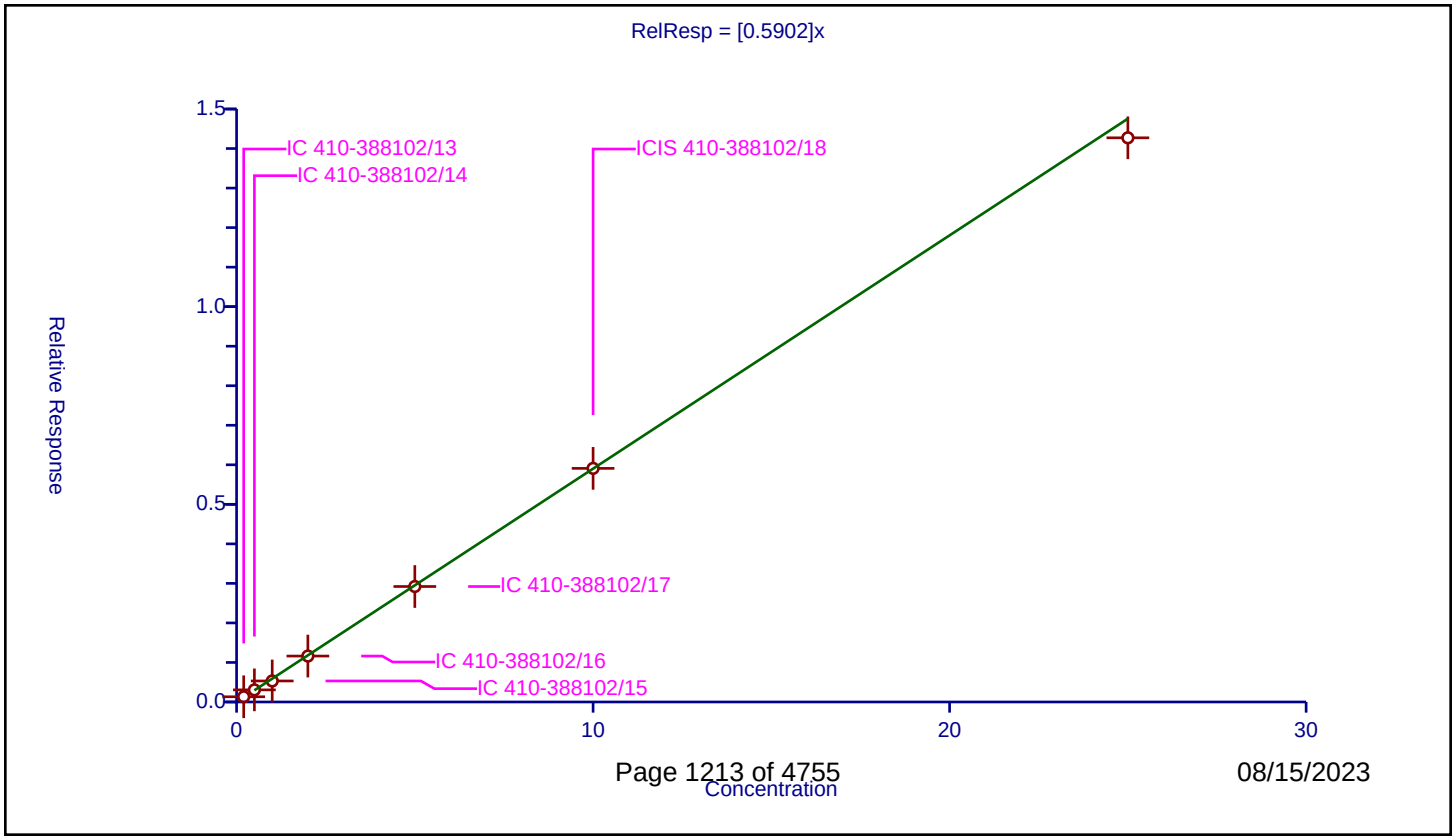
Curve Coefficients

Intercept:	0
Slope:	0.5902

Error Coefficients

Standard Error:	965000
Relative Standard Error:	6.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.131822	10.0	1414940.0	0.659109	Y
2	IC 410-388102/14	0.5	0.306653	10.0	1381168.0	0.613307	Y
3	IC 410-388102/15	1.0	0.531823	10.0	1413947.0	0.531823	Y
4	IC 410-388102/16	2.0	1.162076	10.0	1411844.0	0.581038	Y
5	IC 410-388102/17	5.0	2.92146	10.0	1479531.0	0.584292	Y
6	ICIS 410-388102/18	10.0	5.909557	10.0	1439976.0	0.590956	Y
7	IC 410-388102/19	25.0	14.271715	10.0	1508853.0	0.570869	Y



Calibration / Chlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

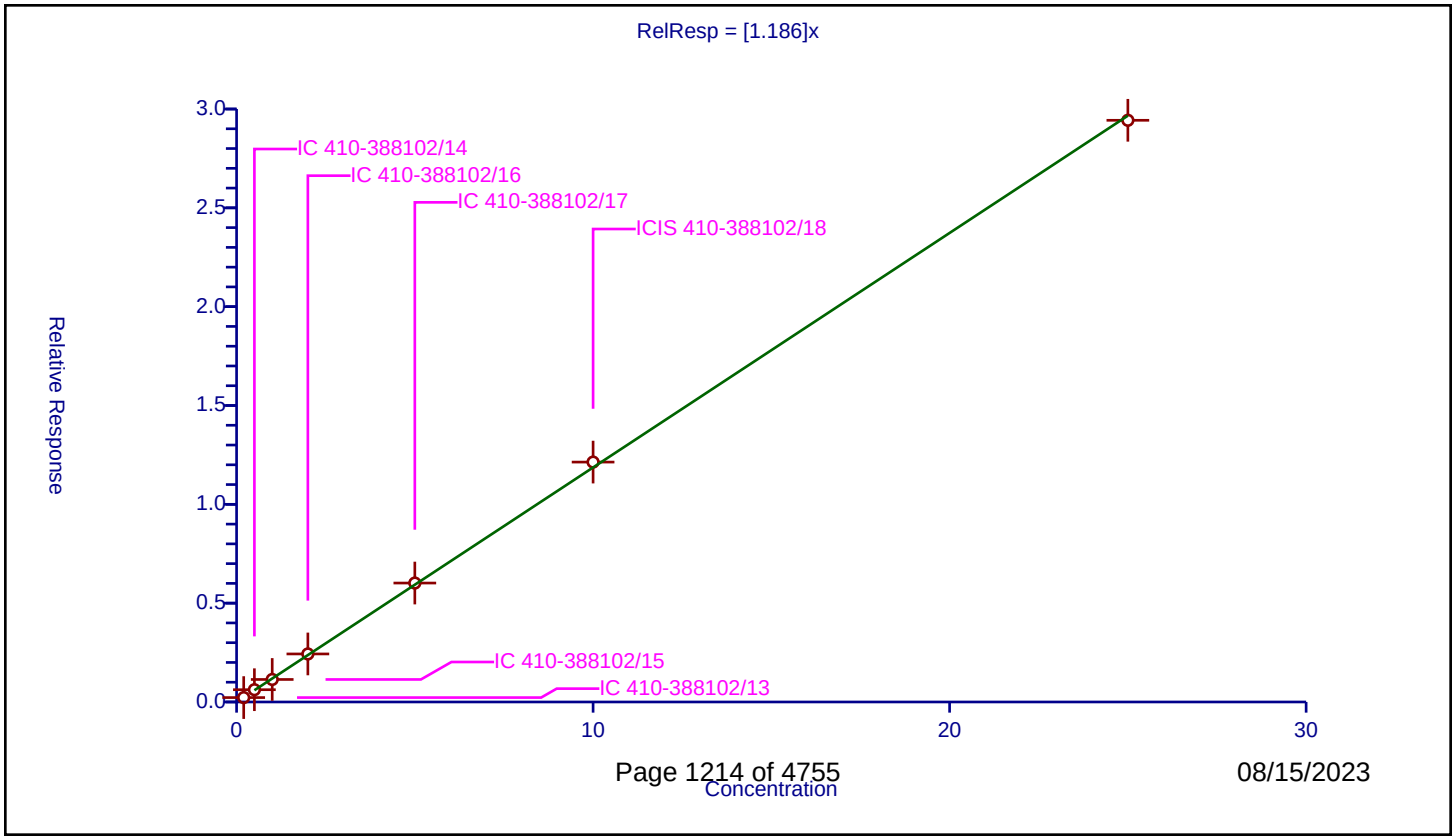
Curve Coefficients

Intercept:	0
Slope:	1.186

Error Coefficients

Standard Error:	1990000
Relative Standard Error:	3.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.2229	10.0	1414940.0	1.1145	Y
2	IC 410-388102/14	0.5	0.621054	10.0	1381168.0	1.242108	Y
3	IC 410-388102/15	1.0	1.138939	10.0	1413947.0	1.138939	Y
4	IC 410-388102/16	2.0	2.430701	10.0	1411844.0	1.21535	Y
5	IC 410-388102/17	5.0	6.017427	10.0	1479531.0	1.203485	Y
6	ICIS 410-388102/18	10.0	12.136834	10.0	1439976.0	1.213683	Y
7	IC 410-388102/19	25.0	29.429852	10.0	1508853.0	1.177194	Y



Calibration / 1,1,1,2-Tetrachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

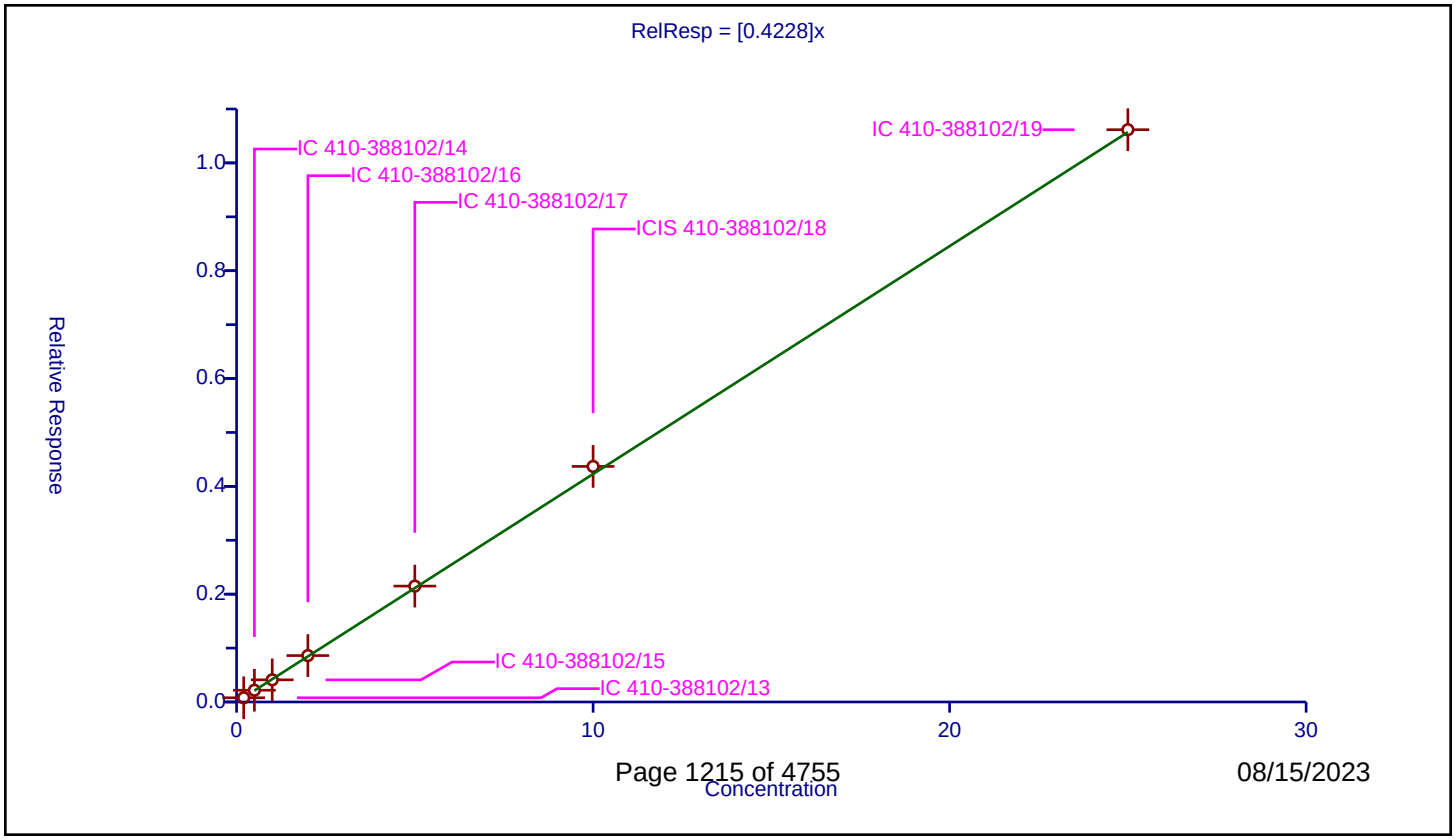
Curve Coefficients

Intercept:	0
Slope:	0.4228

Error Coefficients

Standard Error:	717000
Relative Standard Error:	3.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.07818	10.0	1414940.0	0.3909	Y
2	IC 410-388102/14	0.5	0.218141	10.0	1381168.0	0.436283	Y
3	IC 410-388102/15	1.0	0.410638	10.0	1413947.0	0.410638	Y
4	IC 410-388102/16	2.0	0.860867	10.0	1411844.0	0.430434	Y
5	IC 410-388102/17	5.0	2.149526	10.0	1479531.0	0.429905	Y
6	ICIS 410-388102/18	10.0	4.36992	10.0	1439976.0	0.436992	Y
7	IC 410-388102/19	25.0	10.616296	10.0	1508853.0	0.424652	Y



Calibration / Ethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

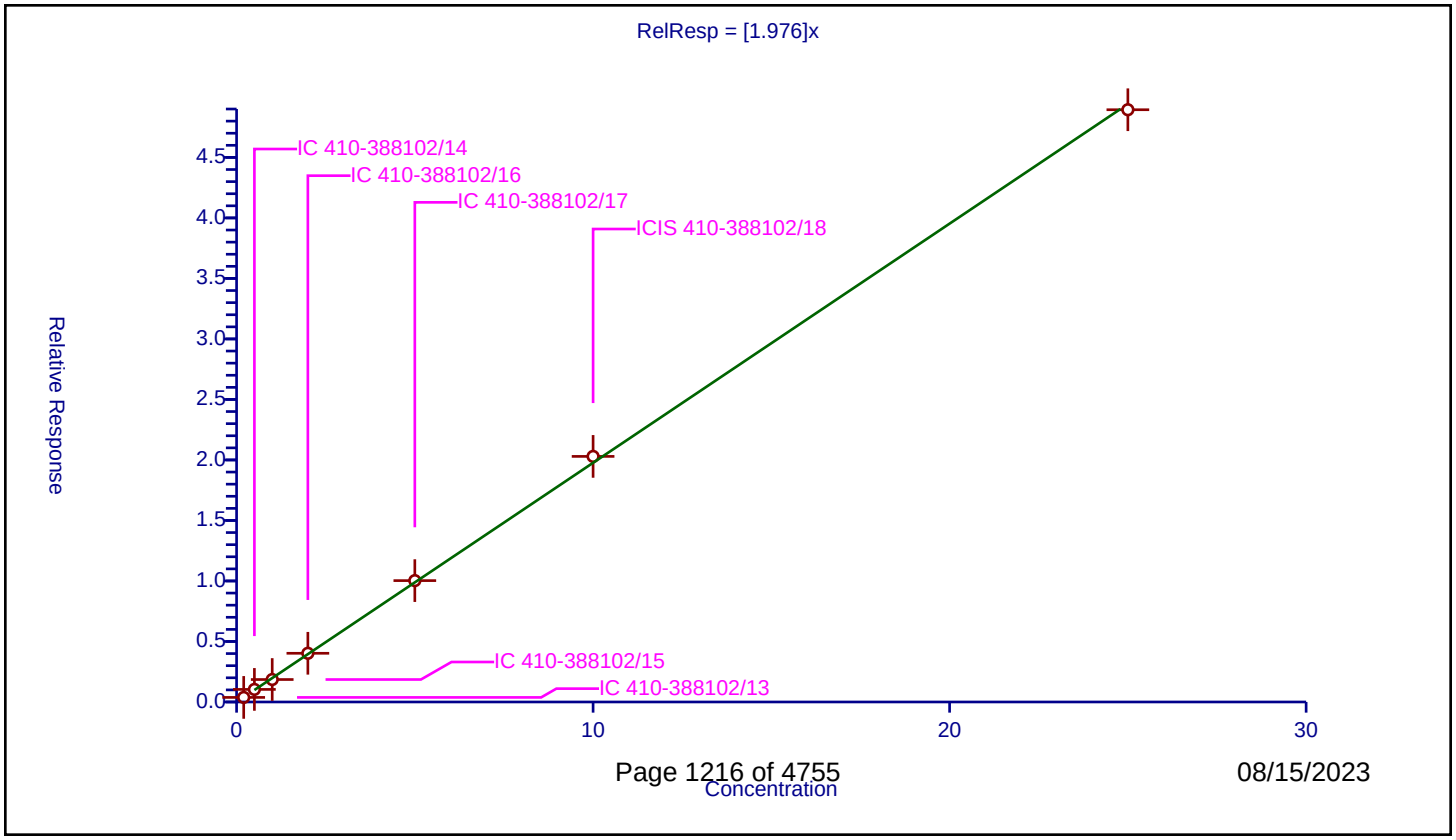
Curve Coefficients

Intercept:	0
Slope:	1.976

Error Coefficients

Standard Error:	3310000
Relative Standard Error:	4.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.378737	10.0	1414940.0	1.893685	Y
2	IC 410-388102/14	0.5	1.03894	10.0	1381168.0	2.077879	Y
3	IC 410-388102/15	1.0	1.857559	10.0	1413947.0	1.857559	Y
4	IC 410-388102/16	2.0	4.025785	10.0	1411844.0	2.012892	Y
5	IC 410-388102/17	5.0	10.028833	10.0	1479531.0	2.005767	Y
6	ICIS 410-388102/18	10.0	20.293755	10.0	1439976.0	2.029375	Y
7	IC 410-388102/19	25.0	48.940765	10.0	1508853.0	1.957631	Y



Calibration / m-Xylene & p-Xylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

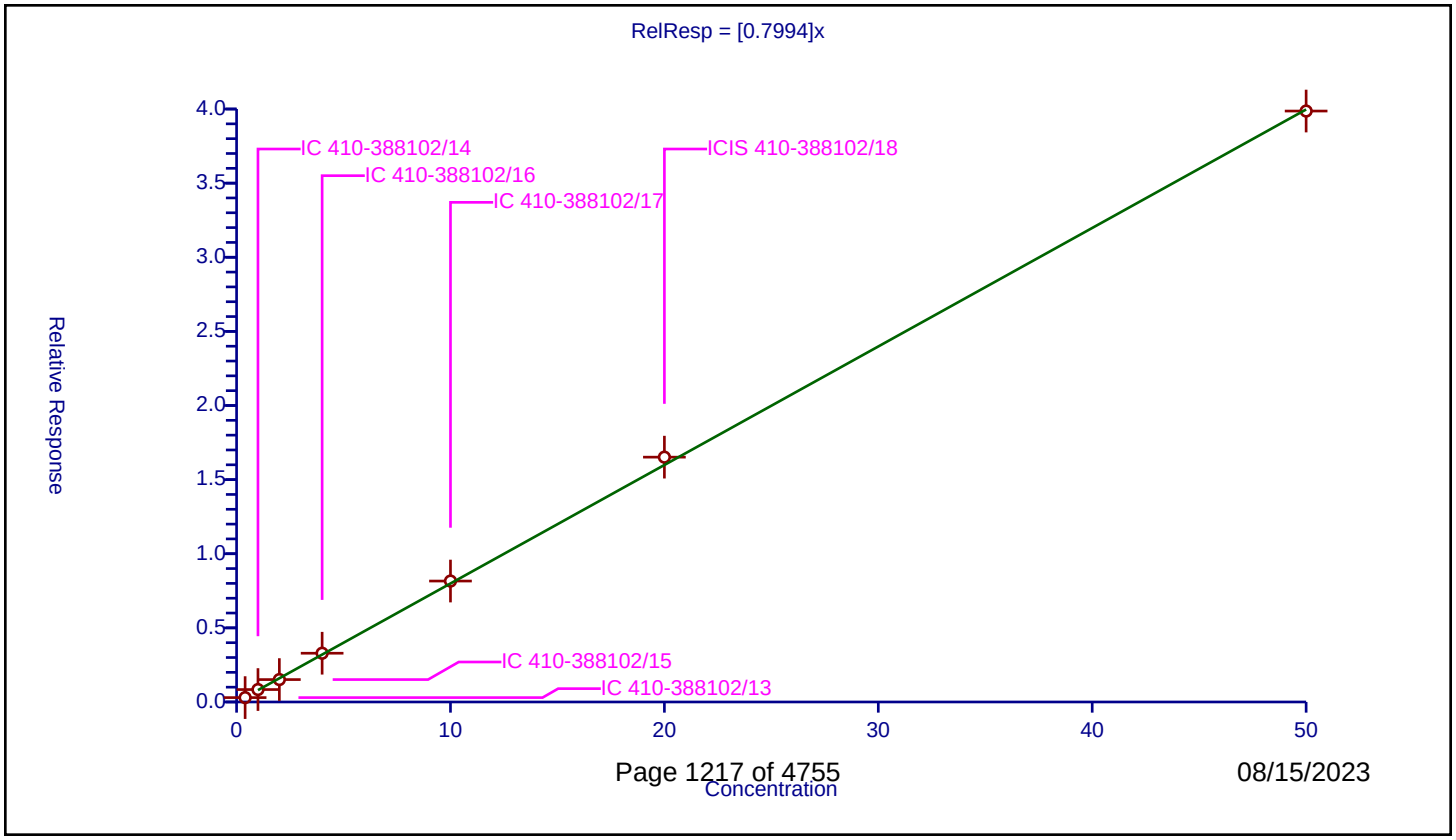
Curve Coefficients

Intercept:	0
Slope:	0.7994

Error Coefficients

Standard Error:	2690000
Relative Standard Error:	4.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.4	0.295779	10.0	1414940.0	0.739448	Y
2	IC 410-388102/14	1.0	0.838906	10.0	1381168.0	0.838906	Y
3	IC 410-388102/15	2.0	1.512383	10.0	1413947.0	0.756192	Y
4	IC 410-388102/16	4.0	3.288876	10.0	1411844.0	0.822219	Y
5	IC 410-388102/17	10.0	8.158565	10.0	1479531.0	0.815857	Y
6	ICIS 410-388102/18	20.0	16.515942	10.0	1439976.0	0.825797	Y
7	IC 410-388102/19	50.0	39.864129	10.0	1508853.0	0.797283	Y



Calibration / o-Xylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

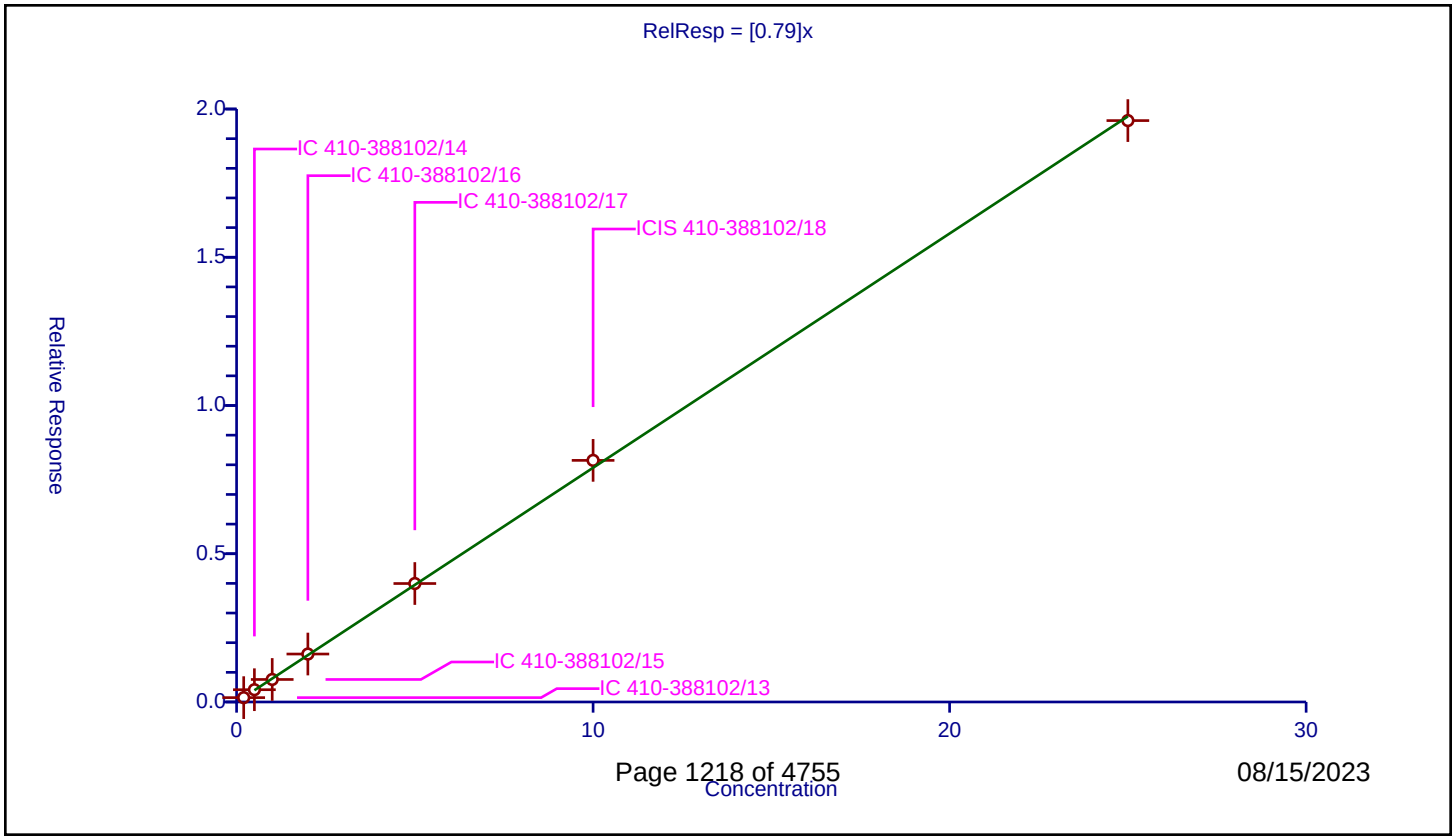
Curve Coefficients

Intercept:	0
Slope:	0.79

Error Coefficients

Standard Error:	1330000
Relative Standard Error:	4.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.147003	10.0	1414940.0	0.735013	Y
2	IC 410-388102/14	0.5	0.414222	10.0	1381168.0	0.828444	Y
3	IC 410-388102/15	1.0	0.75971	10.0	1413947.0	0.75971	Y
4	IC 410-388102/16	2.0	1.617487	10.0	1411844.0	0.808744	Y
5	IC 410-388102/17	5.0	3.995246	10.0	1479531.0	0.799049	Y
6	ICIS 410-388102/18	10.0	8.149566	10.0	1439976.0	0.814957	Y
7	IC 410-388102/19	25.0	19.609491	10.0	1508853.0	0.78438	Y



Calibration / Styrene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

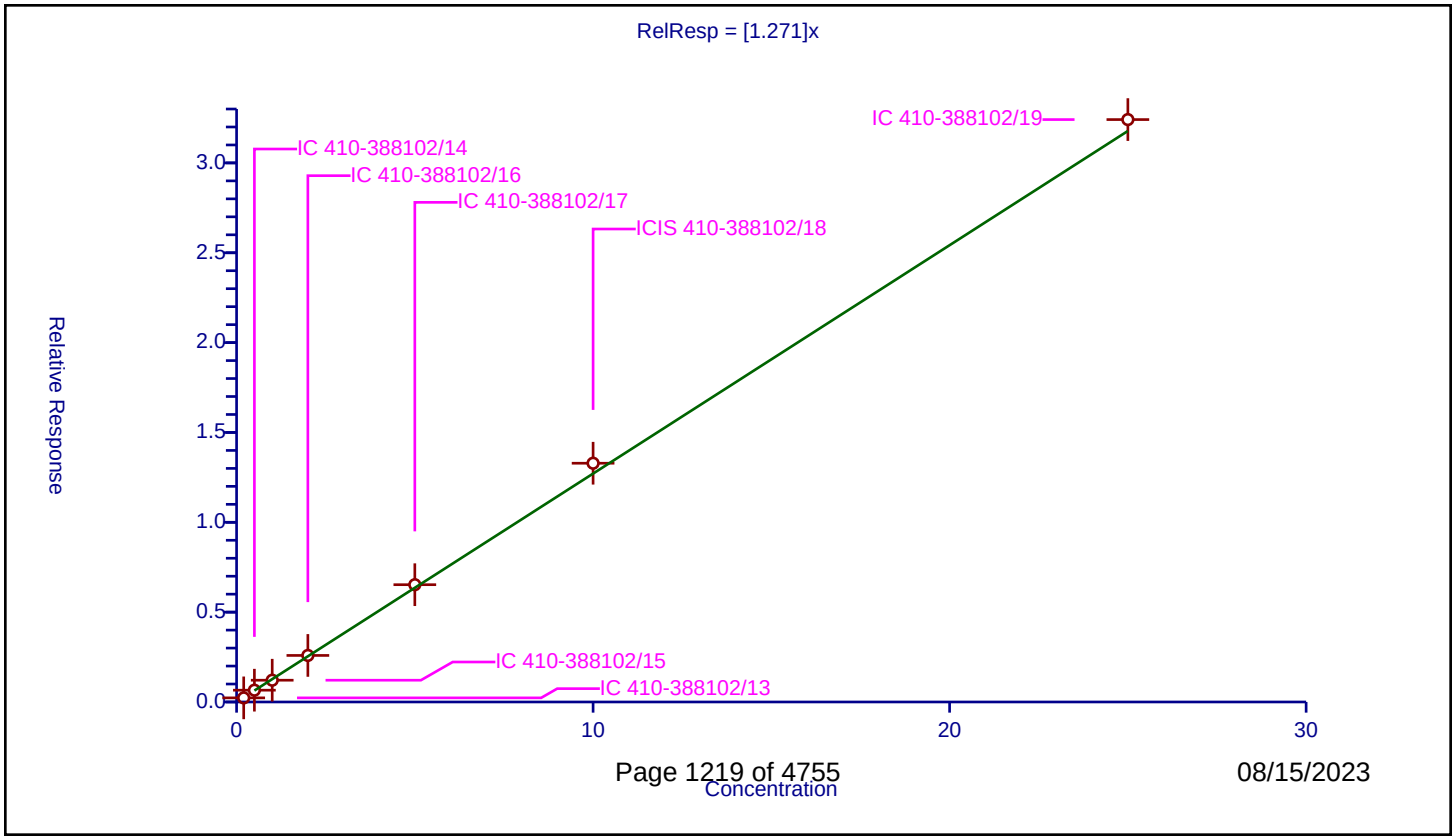
Curve Coefficients

Intercept:	0
Slope:	1.271

Error Coefficients

Standard Error:	2190000
Relative Standard Error:	5.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.229077	10.0	1414940.0	1.145384	Y
2	IC 410-388102/14	0.5	0.657161	10.0	1381168.0	1.314322	Y
3	IC 410-388102/15	1.0	1.211785	10.0	1413947.0	1.211785	Y
4	IC 410-388102/16	2.0	2.590414	10.0	1411844.0	1.295207	Y
5	IC 410-388102/17	5.0	6.527379	10.0	1479531.0	1.305476	Y
6	ICIS 410-388102/18	10.0	13.287666	10.0	1439976.0	1.328767	Y
7	IC 410-388102/19	25.0	32.412574	10.0	1508853.0	1.296503	Y



Calibration / Bromoform

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

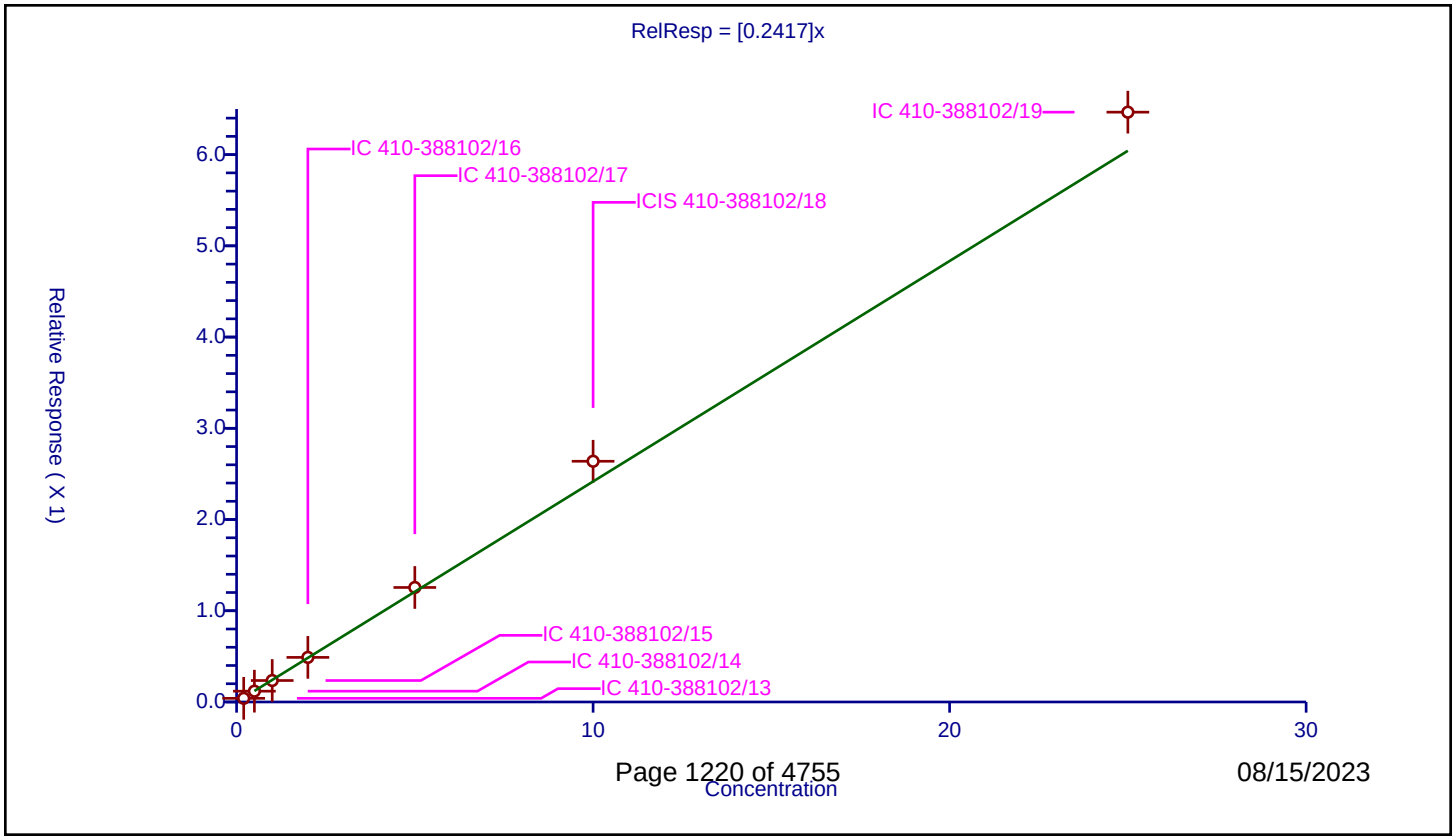
Curve Coefficients

Intercept:	0
Slope:	0.2417

Error Coefficients

Standard Error:	435000
Relative Standard Error:	8.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.040242	10.0	1414940.0	0.20121	Y
2	IC 410-388102/14	0.5	0.11853	10.0	1381168.0	0.23706	Y
3	IC 410-388102/15	1.0	0.235532	10.0	1413947.0	0.235532	Y
4	IC 410-388102/16	2.0	0.488815	10.0	1411844.0	0.244407	Y
5	IC 410-388102/17	5.0	1.255296	10.0	1479531.0	0.251059	Y
6	ICIS 410-388102/18	10.0	2.638975	10.0	1439976.0	0.263897	Y
7	IC 410-388102/19	25.0	6.46562	10.0	1508853.0	0.258625	Y



Calibration / Isopropylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

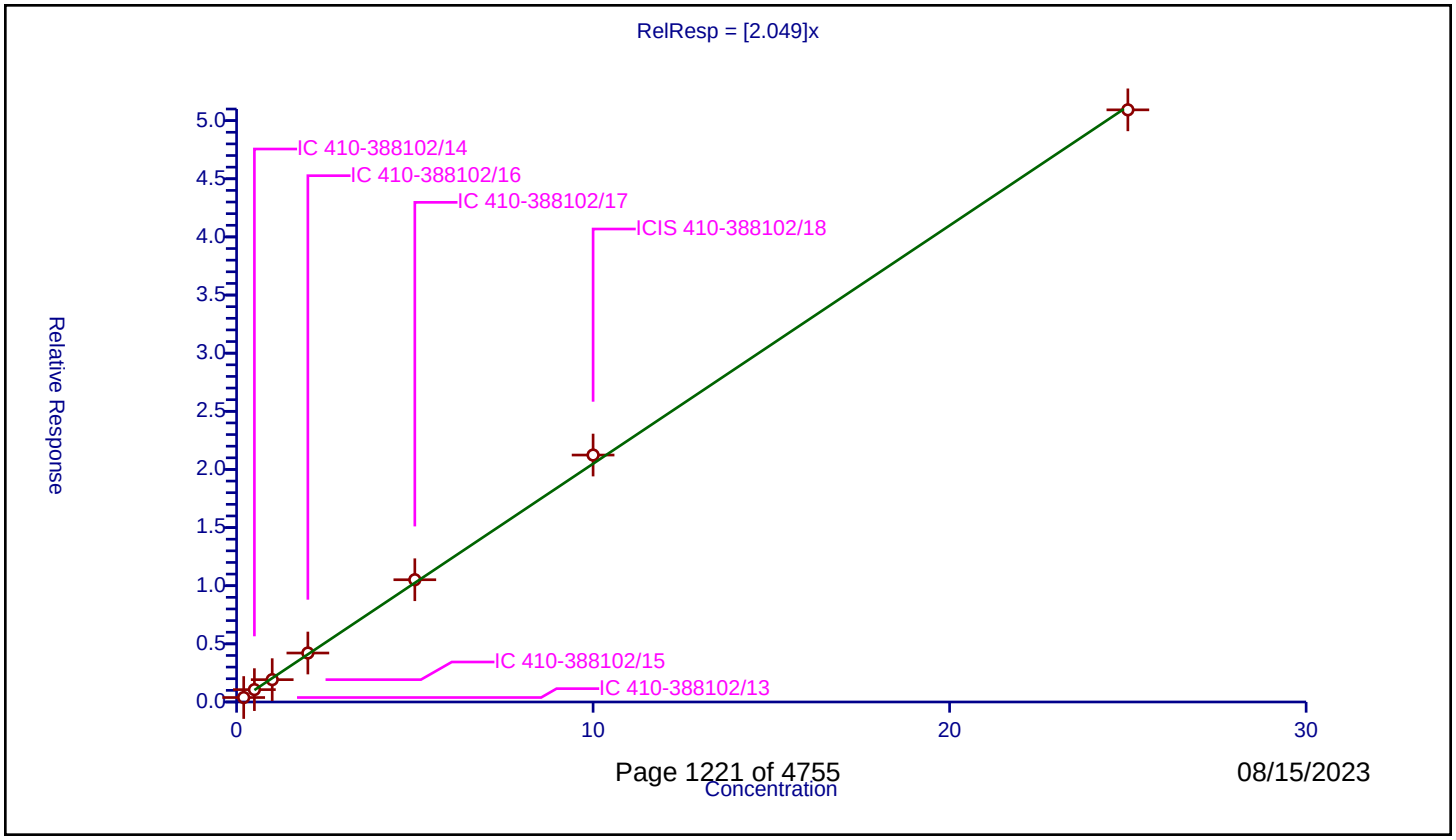
Curve Coefficients

Intercept:	0
Slope:	2.049

Error Coefficients

Standard Error:	3450000
Relative Standard Error:	4.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.385069	10.0	1414940.0	1.925347	Y
2	IC 410-388102/14	0.5	1.064012	10.0	1381168.0	2.128025	Y
3	IC 410-388102/15	1.0	1.919839	10.0	1413947.0	1.919839	Y
4	IC 410-388102/16	2.0	4.213128	10.0	1411844.0	2.106564	Y
5	IC 410-388102/17	5.0	10.514231	10.0	1479531.0	2.102846	Y
6	ICIS 410-388102/18	10.0	21.240236	10.0	1439976.0	2.124024	Y
7	IC 410-388102/19	25.0	50.929222	10.0	1508853.0	2.037169	Y



Calibration / 4-Bromofluorobenzene (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

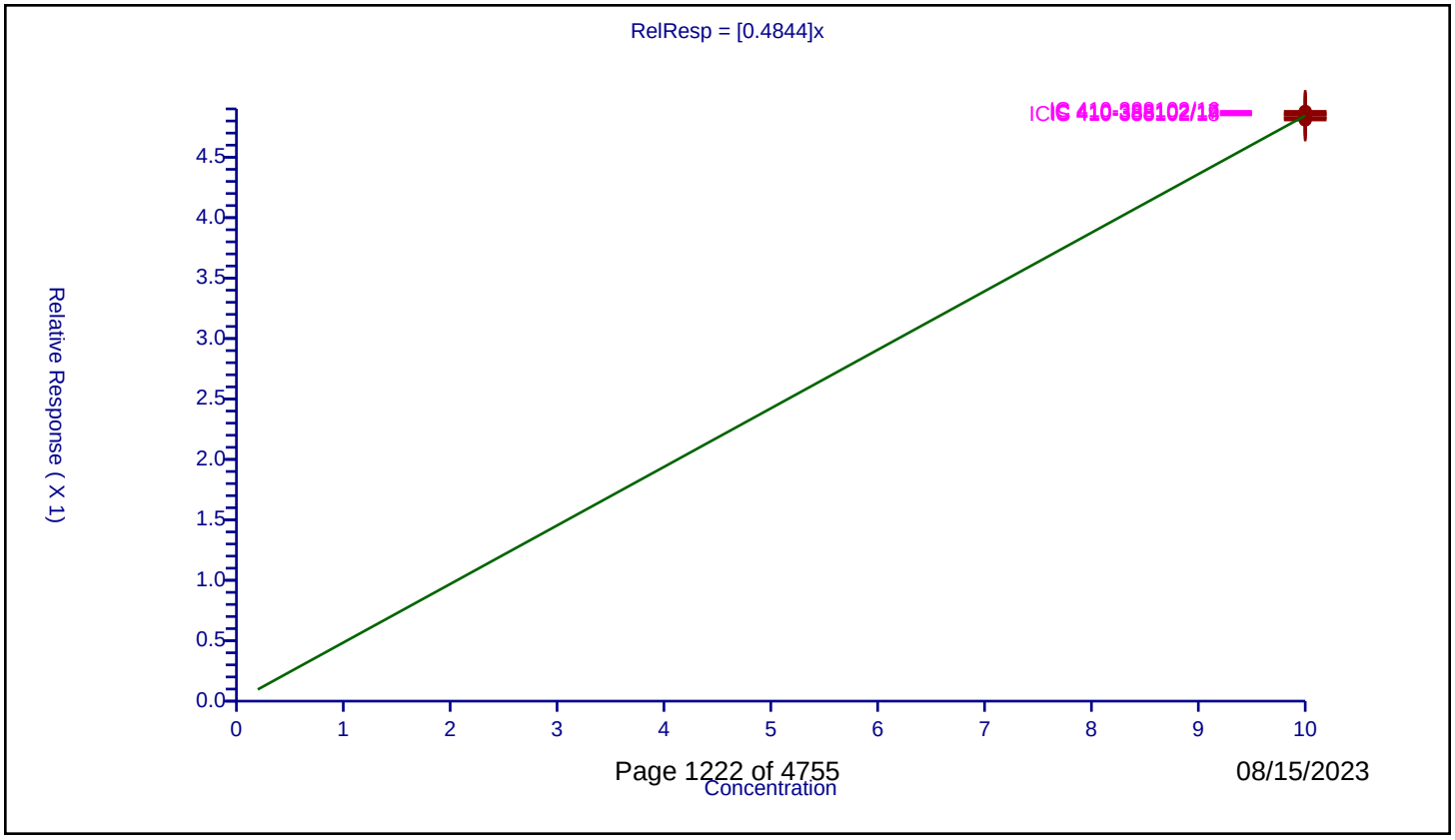
Curve Coefficients

Intercept:	0
Slope:	0.4844

Error Coefficients

Standard Error:	752000
Relative Standard Error:	0.5
Correlation Coefficient:	0
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	10.0	4.828813	10.0	1414940.0	0.482881	Y
2	IC 410-388102/14	10.0	4.855231	10.0	1381168.0	0.485523	Y
3	IC 410-388102/15	10.0	4.823894	10.0	1413947.0	0.482389	Y
4	IC 410-388102/16	10.0	4.87981	10.0	1411844.0	0.487981	Y
5	IC 410-388102/17	10.0	4.865332	10.0	1479531.0	0.486533	Y
6	ICIS 410-388102/18	10.0	4.850386	10.0	1439976.0	0.485039	Y
7	IC 410-388102/19	10.0	4.808003	10.0	1508853.0	0.4808	Y



Calibration / 1,1,2,2-Tetrachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

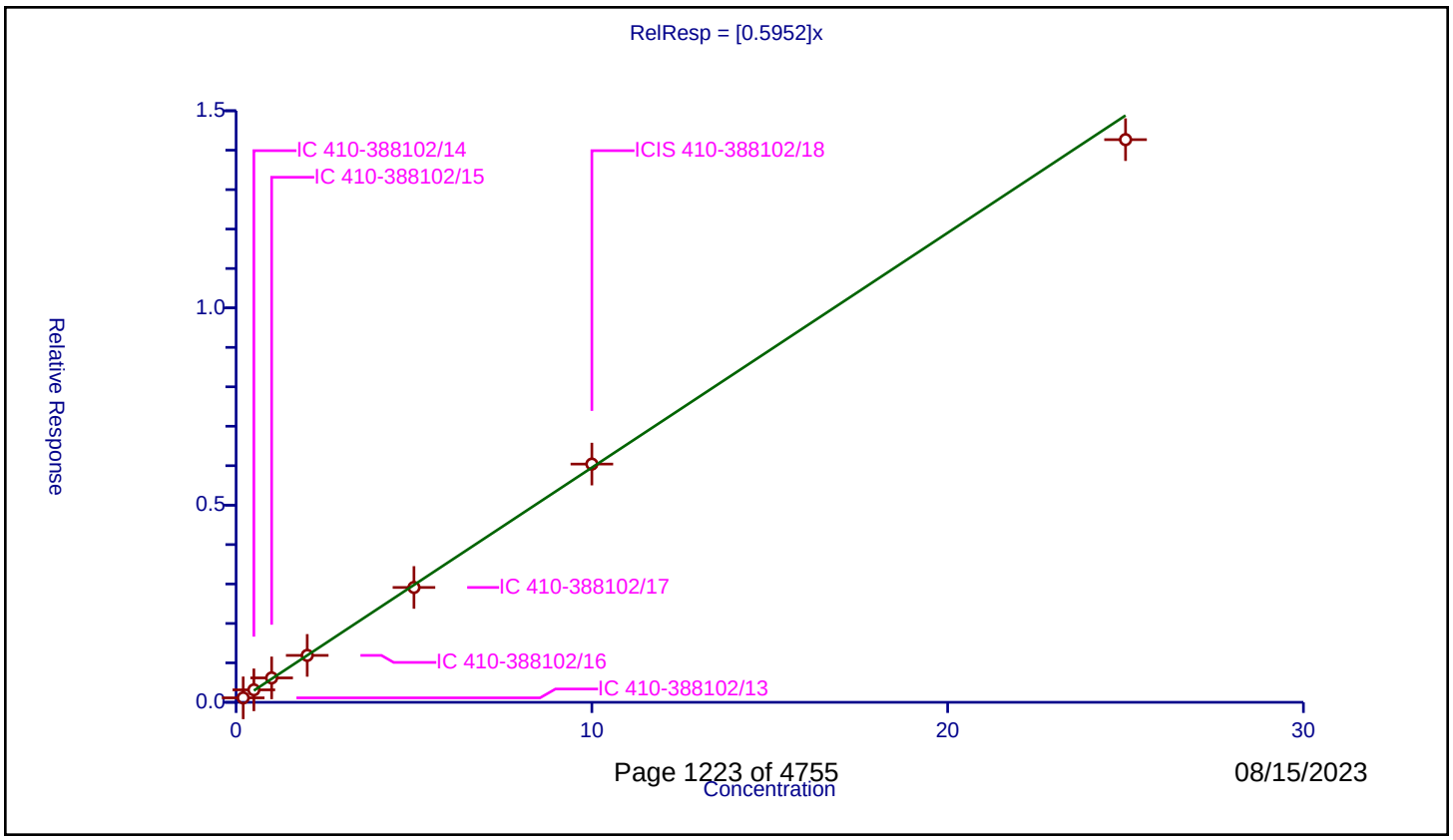
Curve Coefficients

Intercept:	0
Slope:	0.5952

Error Coefficients

Standard Error:	589000
Relative Standard Error:	4.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.112743	10.0	868350.0	0.563713	Y
2	IC 410-388102/14	0.5	0.316	10.0	834938.0	0.631999	Y
3	IC 410-388102/15	1.0	0.618728	10.0	851085.0	0.618728	Y
4	IC 410-388102/16	2.0	1.189803	10.0	870354.0	0.594902	Y
5	IC 410-388102/17	5.0	2.912329	10.0	910481.0	0.582466	Y
6	ICIS 410-388102/18	10.0	6.041052	10.0	884528.0	0.604105	Y
7	IC 410-388102/19	25.0	14.267582	10.0	917393.0	0.570703	Y



Calibration / Bromobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

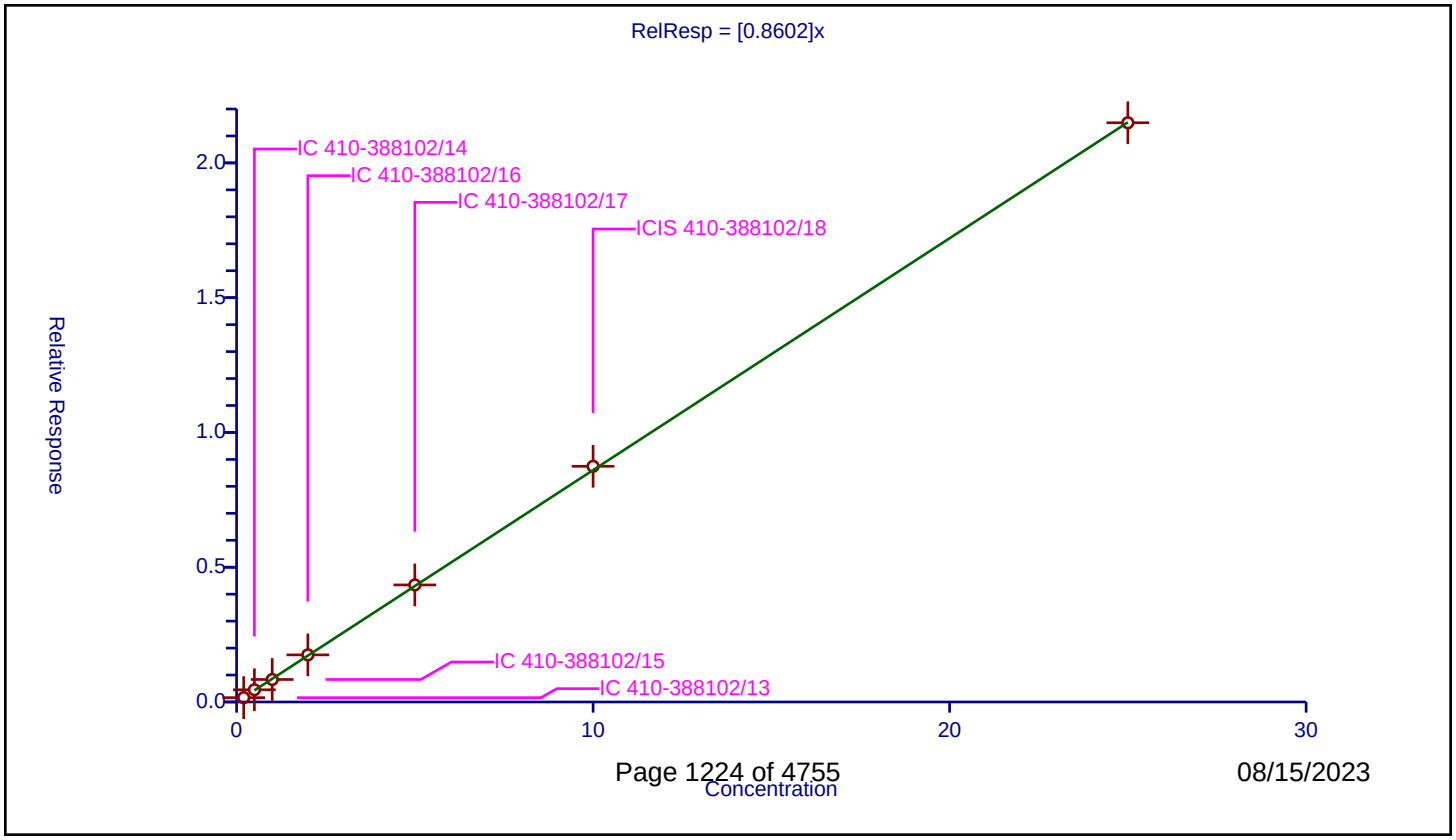
Curve Coefficients

Intercept:	0
Slope:	0.8602

Error Coefficients

Standard Error:	882000
Relative Standard Error:	3.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.16058	10.0	868350.0	0.802902	Y
2	IC 410-388102/14	0.5	0.453567	10.0	834938.0	0.907133	Y
3	IC 410-388102/15	1.0	0.834969	10.0	851085.0	0.834969	Y
4	IC 410-388102/16	2.0	1.748059	10.0	870354.0	0.874029	Y
5	IC 410-388102/17	5.0	4.343144	10.0	910481.0	0.868629	Y
6	ICIS 410-388102/18	10.0	8.744019	10.0	884528.0	0.874402	Y
7	IC 410-388102/19	25.0	21.490484	10.0	917393.0	0.859619	Y



Calibration / trans-1,4-Dichloro-2-butene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

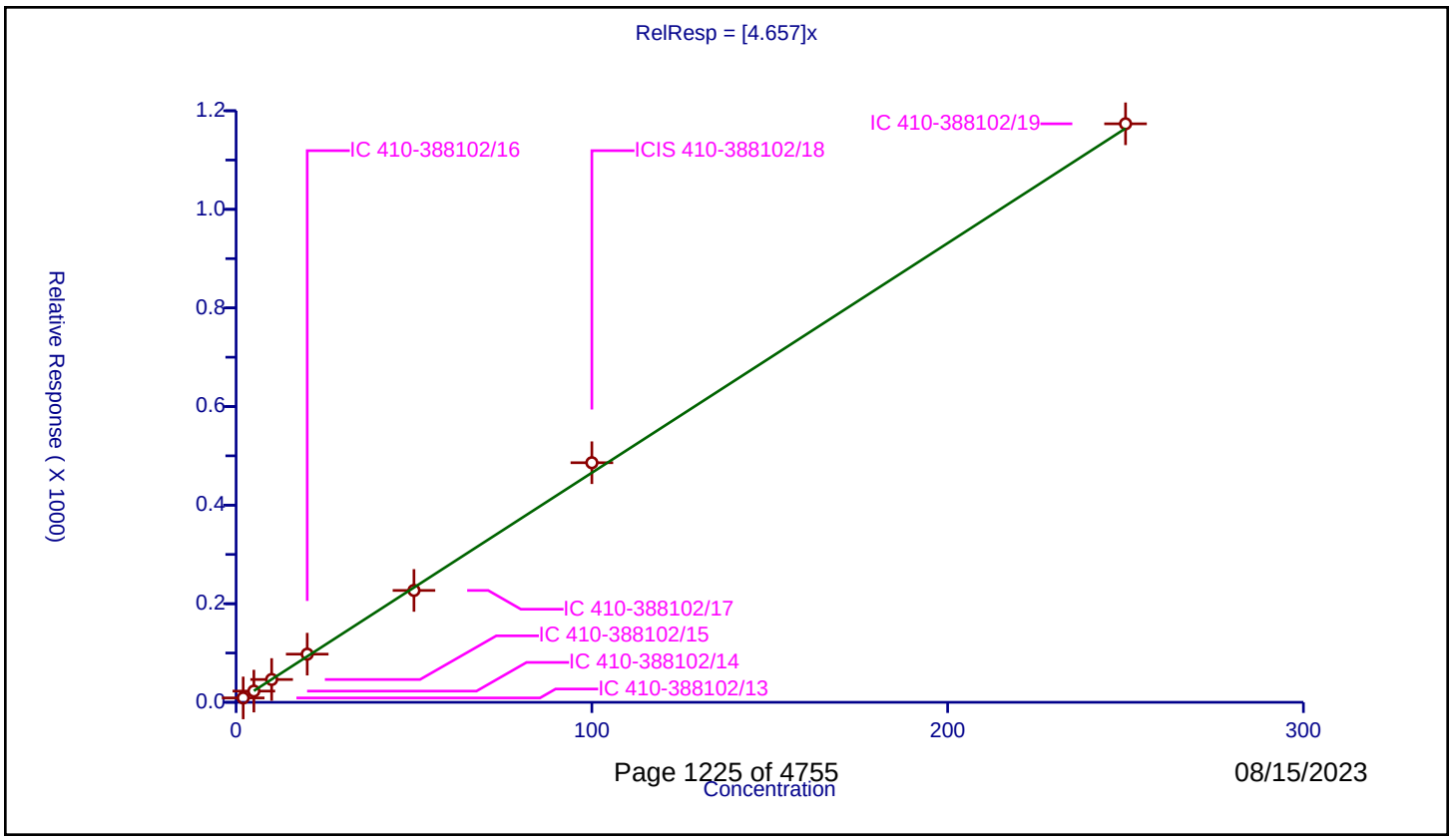
Curve Coefficients

Intercept:	0
Slope:	4.657

Error Coefficients

Standard Error:	1420000
Relative Standard Error:	3.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	2.0	8.892698	50.0	116680.0	4.446349	Y
2	IC 410-388102/14	5.0	22.736748	50.0	132398.0	4.54735	Y
3	IC 410-388102/15	10.0	46.249111	50.0	133555.0	4.624911	Y
4	IC 410-388102/16	20.0	97.724859	50.0	127135.0	4.886243	Y
5	IC 410-388102/17	50.0	226.933437	50.0	139221.0	4.538669	Y
6	ICIS 410-388102/18	100.0	486.01147	50.0	130775.0	4.860115	Y
7	IC 410-388102/19	250.0	1173.559503	50.0	134884.0	4.694238	Y



Calibration / 1,2,3-Trichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

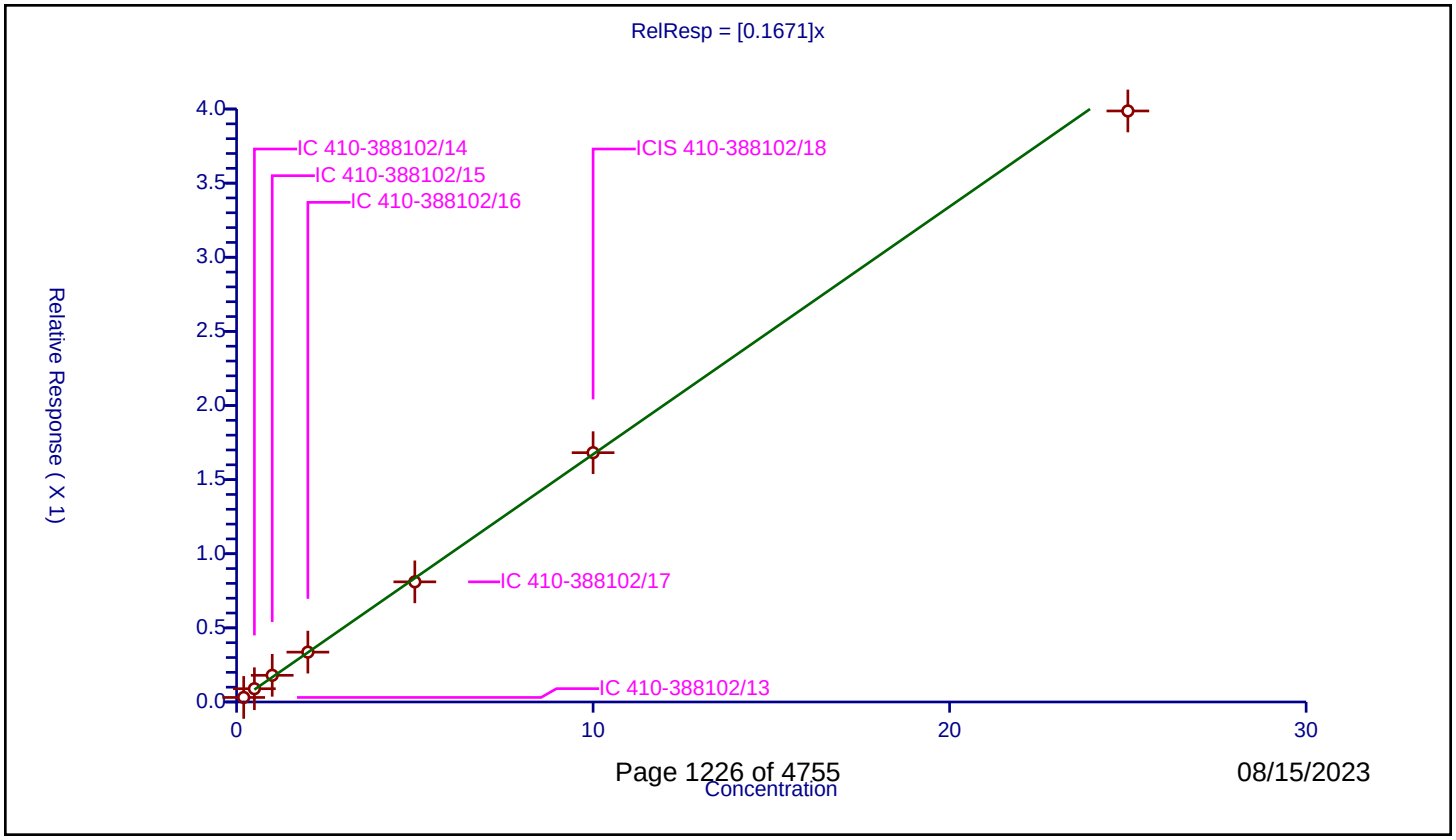
Curve Coefficients

Intercept:	0
Slope:	0.1671

Error Coefficients

Standard Error:	165000
Relative Standard Error:	5.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.030587	10.0	868350.0	0.152934	Y
2	IC 410-388102/14	0.5	0.089456	10.0	834938.0	0.178911	Y
3	IC 410-388102/15	1.0	0.179912	10.0	851085.0	0.179912	Y
4	IC 410-388102/16	2.0	0.336242	10.0	870354.0	0.168121	Y
5	IC 410-388102/17	5.0	0.810462	10.0	910481.0	0.162092	Y
6	ICIS 410-388102/18	10.0	1.681846	10.0	884528.0	0.168185	Y
7	IC 410-388102/19	25.0	3.986841	10.0	917393.0	0.159474	Y



Calibration / N-Propylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

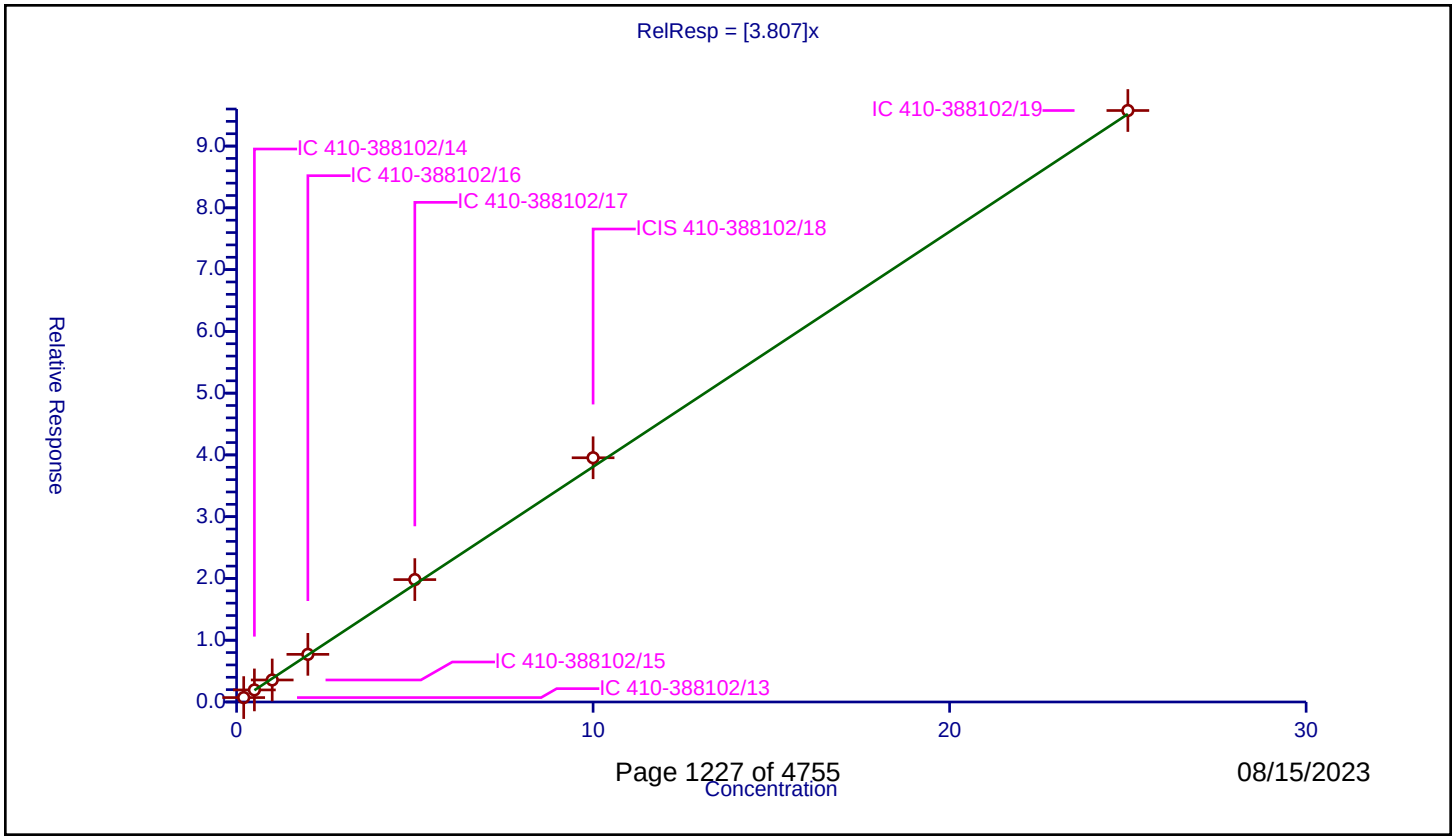
Curve Coefficients

Intercept:	0
Slope:	3.807

Error Coefficients

Standard Error:	3940000
Relative Standard Error:	4.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.71523	10.0	868350.0	3.57615	Y
2	IC 410-388102/14	0.5	1.95466	10.0	834938.0	3.90932	Y
3	IC 410-388102/15	1.0	3.563122	10.0	851085.0	3.563122	Y
4	IC 410-388102/16	2.0	7.712885	10.0	870354.0	3.856442	Y
5	IC 410-388102/17	5.0	19.813209	10.0	910481.0	3.962642	Y
6	ICIS 410-388102/18	10.0	39.541179	10.0	884528.0	3.954118	Y
7	IC 410-388102/19	25.0	95.756355	10.0	917393.0	3.830254	Y



Calibration / 2-Chlorotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

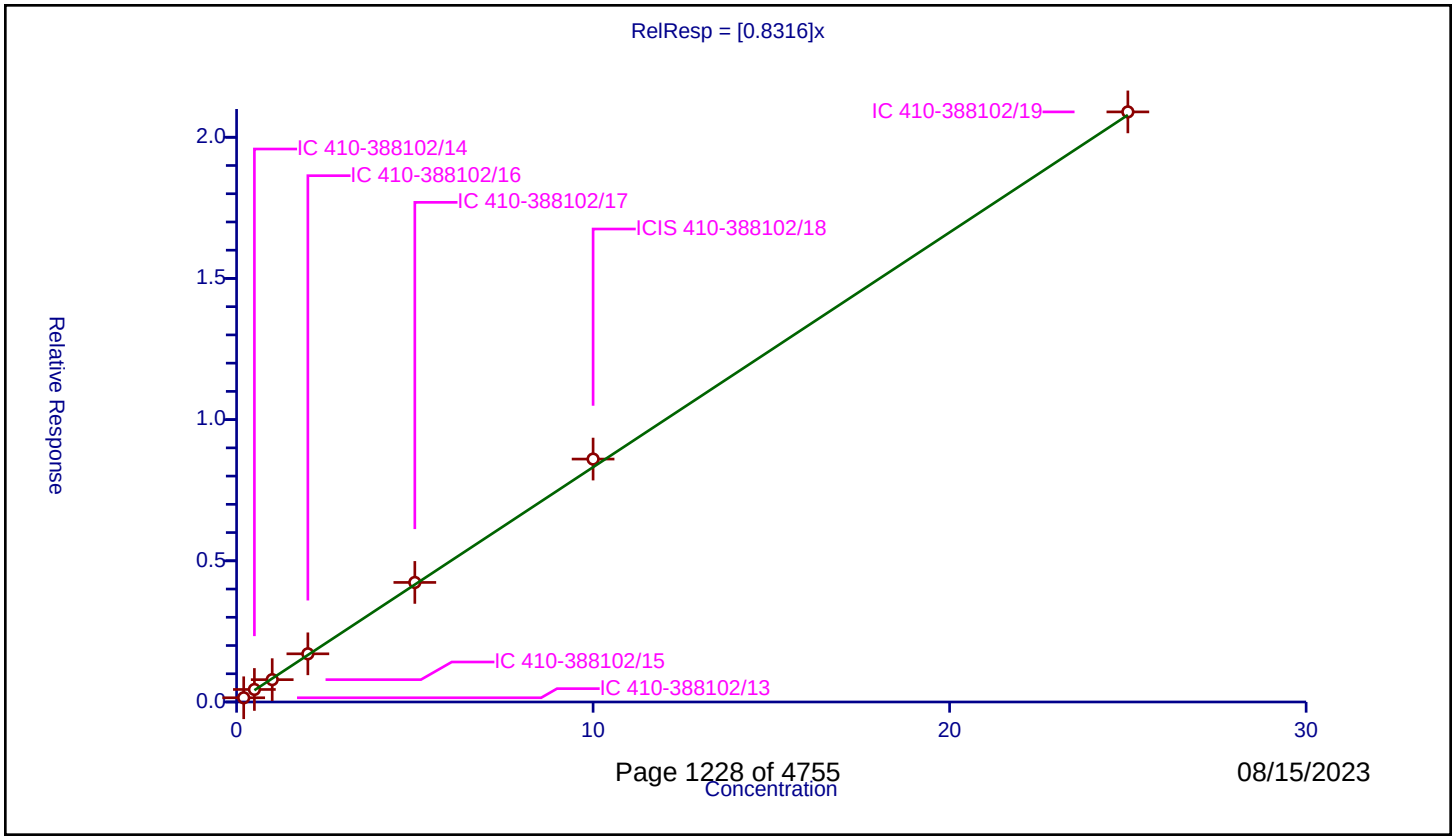
Curve Coefficients

Intercept:	0
Slope:	0.8316

Error Coefficients

Standard Error:	859000
Relative Standard Error:	5.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.149583	10.0	868350.0	0.747913	Y
2	IC 410-388102/14	0.5	0.442967	10.0	834938.0	0.885934	Y
3	IC 410-388102/15	1.0	0.791026	10.0	851085.0	0.791026	Y
4	IC 410-388102/16	2.0	1.706179	10.0	870354.0	0.85309	Y
5	IC 410-388102/17	5.0	4.233707	10.0	910481.0	0.846741	Y
6	ICIS 410-388102/18	10.0	8.603289	10.0	884528.0	0.860329	Y
7	IC 410-388102/19	25.0	20.898121	10.0	917393.0	0.835925	Y



Calibration / 1,3,5-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

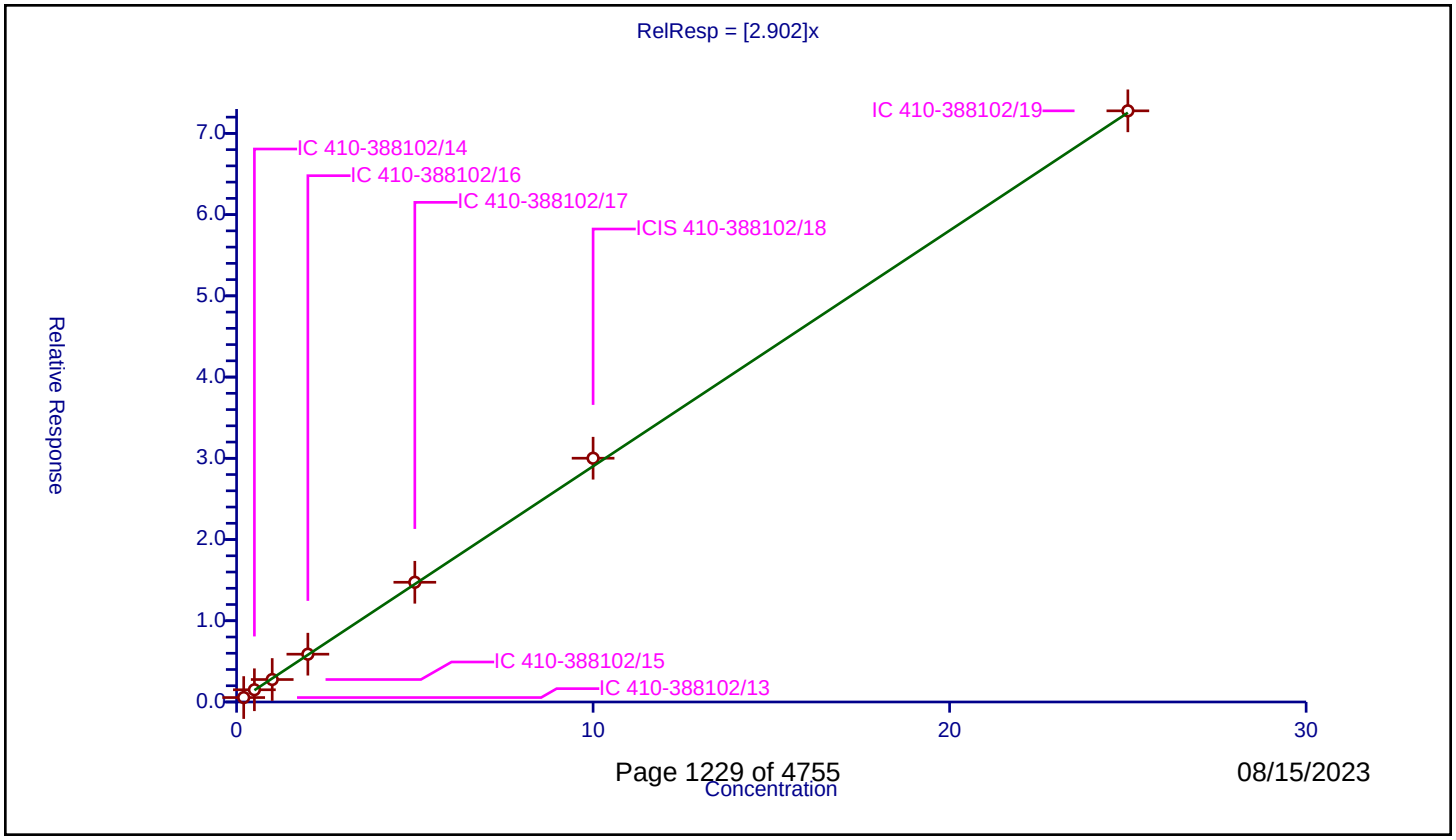
Curve Coefficients

Intercept:	0
Slope:	2.902

Error Coefficients

Standard Error:	2990000
Relative Standard Error:	3.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.547084	10.0	868350.0	2.735418	Y
2	IC 410-388102/14	0.5	1.504207	10.0	834938.0	3.008415	Y
3	IC 410-388102/15	1.0	2.766927	10.0	851085.0	2.766927	Y
4	IC 410-388102/16	2.0	5.88549	10.0	870354.0	2.942745	Y
5	IC 410-388102/17	5.0	14.739813	10.0	910481.0	2.947963	Y
6	ICIS 410-388102/18	10.0	30.00987	10.0	884528.0	3.000987	Y
7	IC 410-388102/19	25.0	72.778231	10.0	917393.0	2.911129	Y



Calibration / 4-Chlorotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

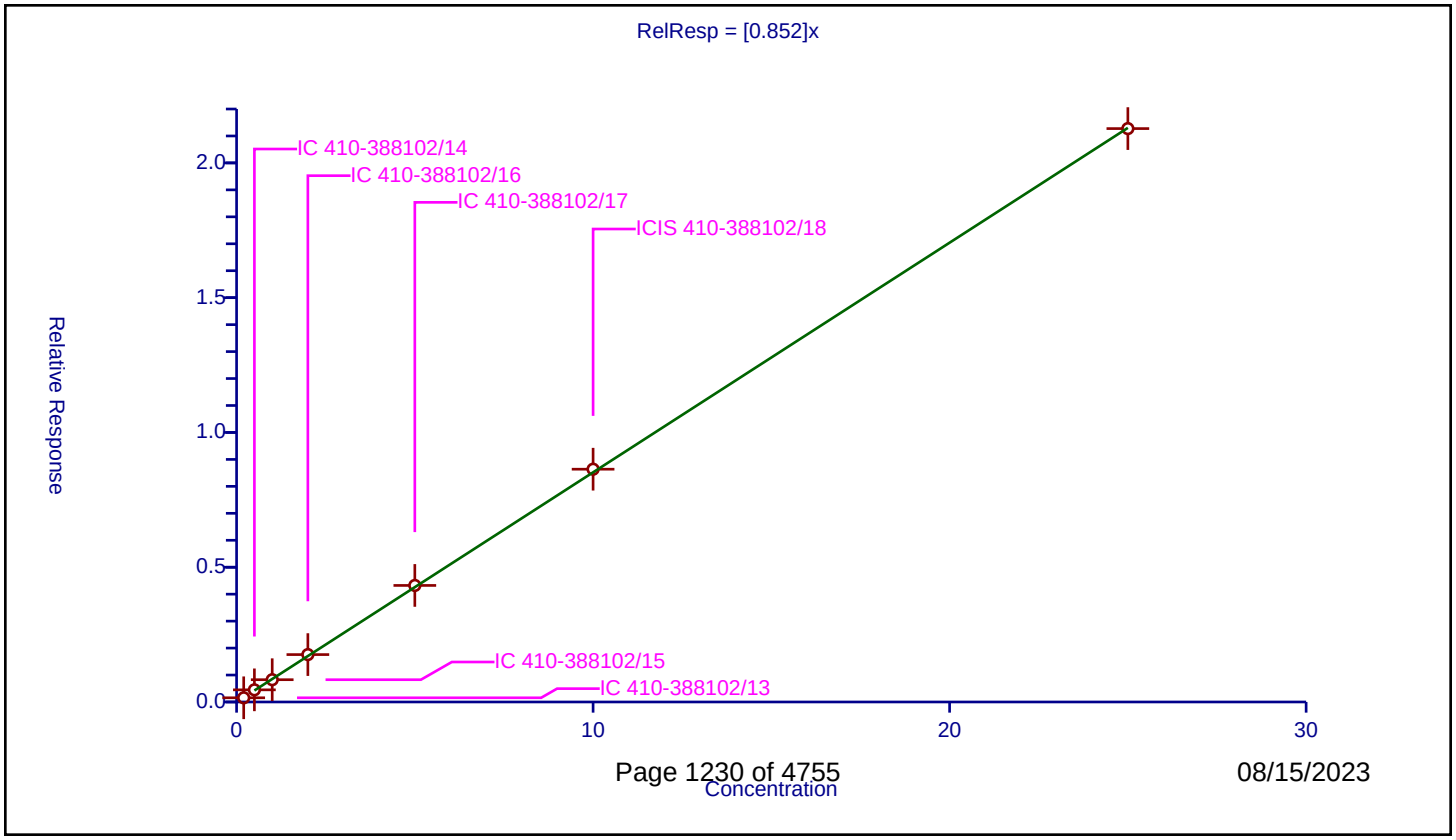
Curve Coefficients

Intercept:	0
Slope:	0.852

Error Coefficients

Standard Error:	873000
Relative Standard Error:	4.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.155352	10.0	868350.0	0.776761	Y
2	IC 410-388102/14	0.5	0.451063	10.0	834938.0	0.902127	Y
3	IC 410-388102/15	1.0	0.826604	10.0	851085.0	0.826604	Y
4	IC 410-388102/16	2.0	1.758698	10.0	870354.0	0.879349	Y
5	IC 410-388102/17	5.0	4.323561	10.0	910481.0	0.864712	Y
6	ICIS 410-388102/18	10.0	8.63621	10.0	884528.0	0.863621	Y
7	IC 410-388102/19	25.0	21.273326	10.0	917393.0	0.850933	Y



Calibration / tert-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

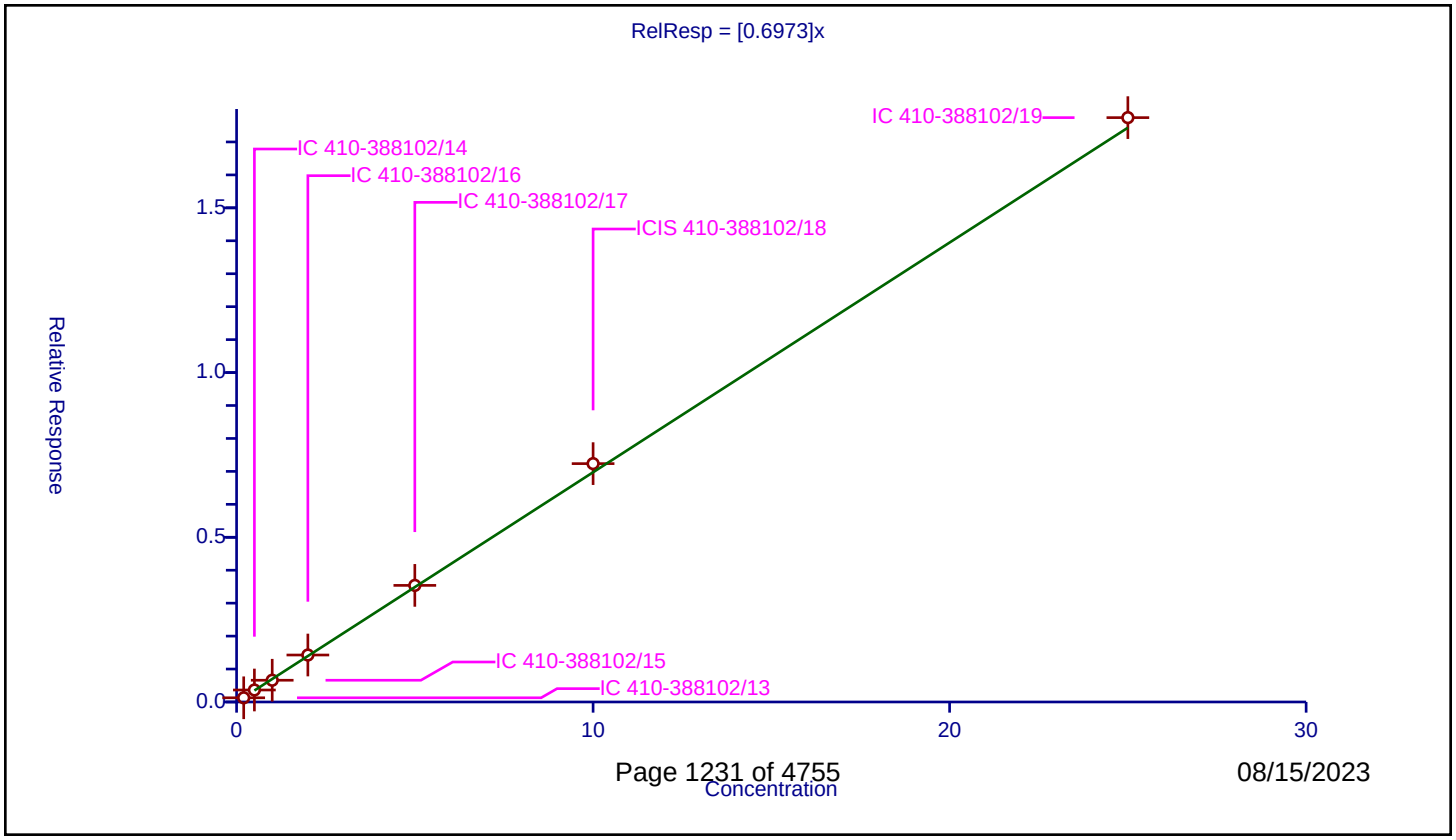
Curve Coefficients

Intercept:	0
Slope:	0.6973

Error Coefficients

Standard Error:	728000
Relative Standard Error:	4.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.127783	10.0	868350.0	0.638913	Y
2	IC 410-388102/14	0.5	0.363991	10.0	834938.0	0.727982	Y
3	IC 410-388102/15	1.0	0.660381	10.0	851085.0	0.660381	Y
4	IC 410-388102/16	2.0	1.42573	10.0	870354.0	0.712865	Y
5	IC 410-388102/17	5.0	3.539404	10.0	910481.0	0.707881	Y
6	ICIS 410-388102/18	10.0	7.235723	10.0	884528.0	0.723572	Y
7	IC 410-388102/19	25.0	17.73821	10.0	917393.0	0.709528	Y



Calibration / Pentachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

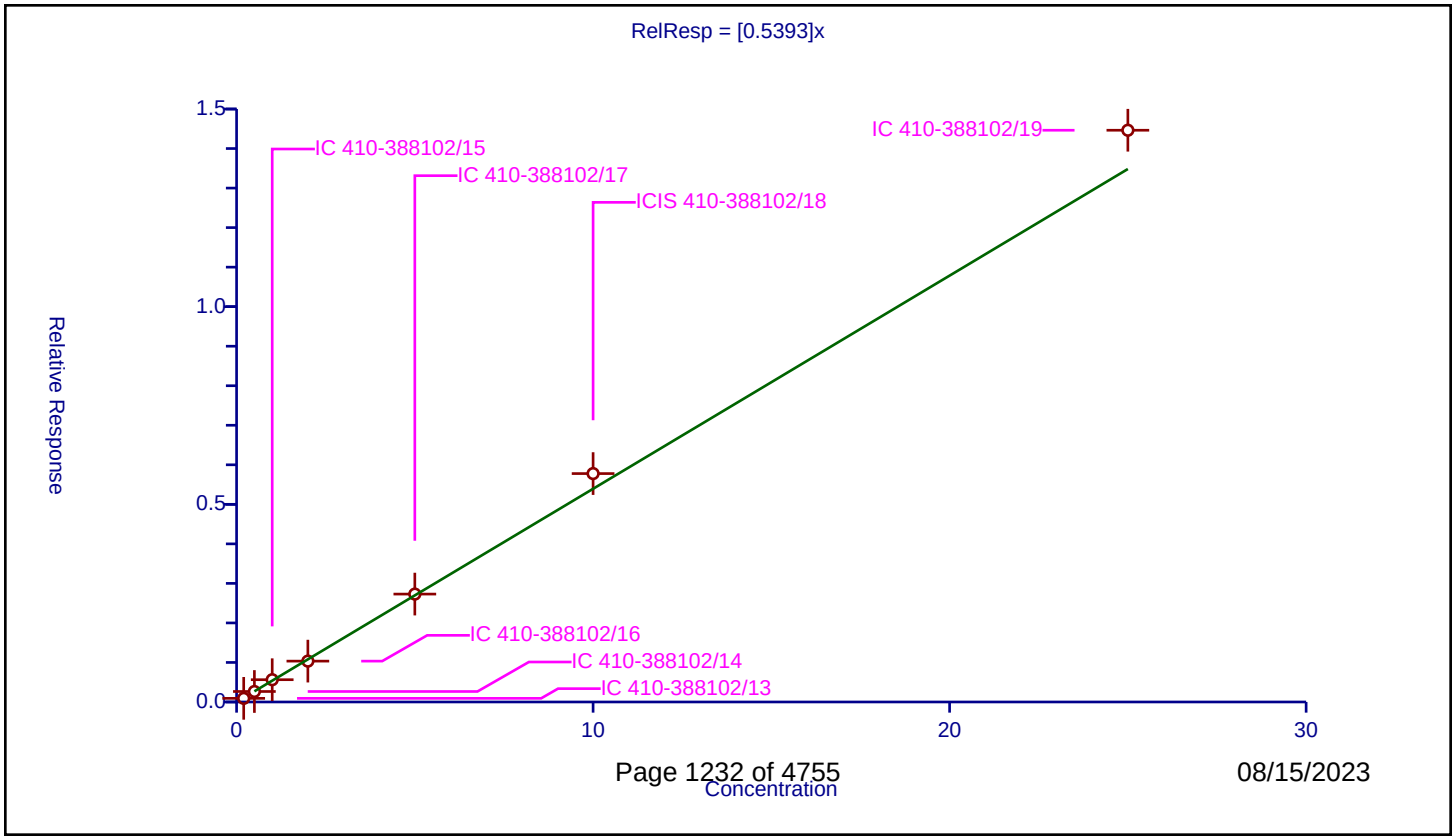
Curve Coefficients

Intercept:	0
Slope:	0.5393

Error Coefficients

Standard Error:	591000
Relative Standard Error:	7.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.092244	10.0	868350.0	0.46122	Y
2	IC 410-388102/14	0.5	0.265493	10.0	834938.0	0.530986	Y
3	IC 410-388102/15	1.0	0.563528	10.0	851085.0	0.563528	Y
4	IC 410-388102/16	2.0	1.034051	10.0	870354.0	0.517025	Y
5	IC 410-388102/17	5.0	2.729436	10.0	910481.0	0.545887	Y
6	ICIS 410-388102/18	10.0	5.777771	10.0	884528.0	0.577777	Y
7	IC 410-388102/19	25.0	14.463027	10.0	917393.0	0.578521	Y



Calibration / 1,2,4-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

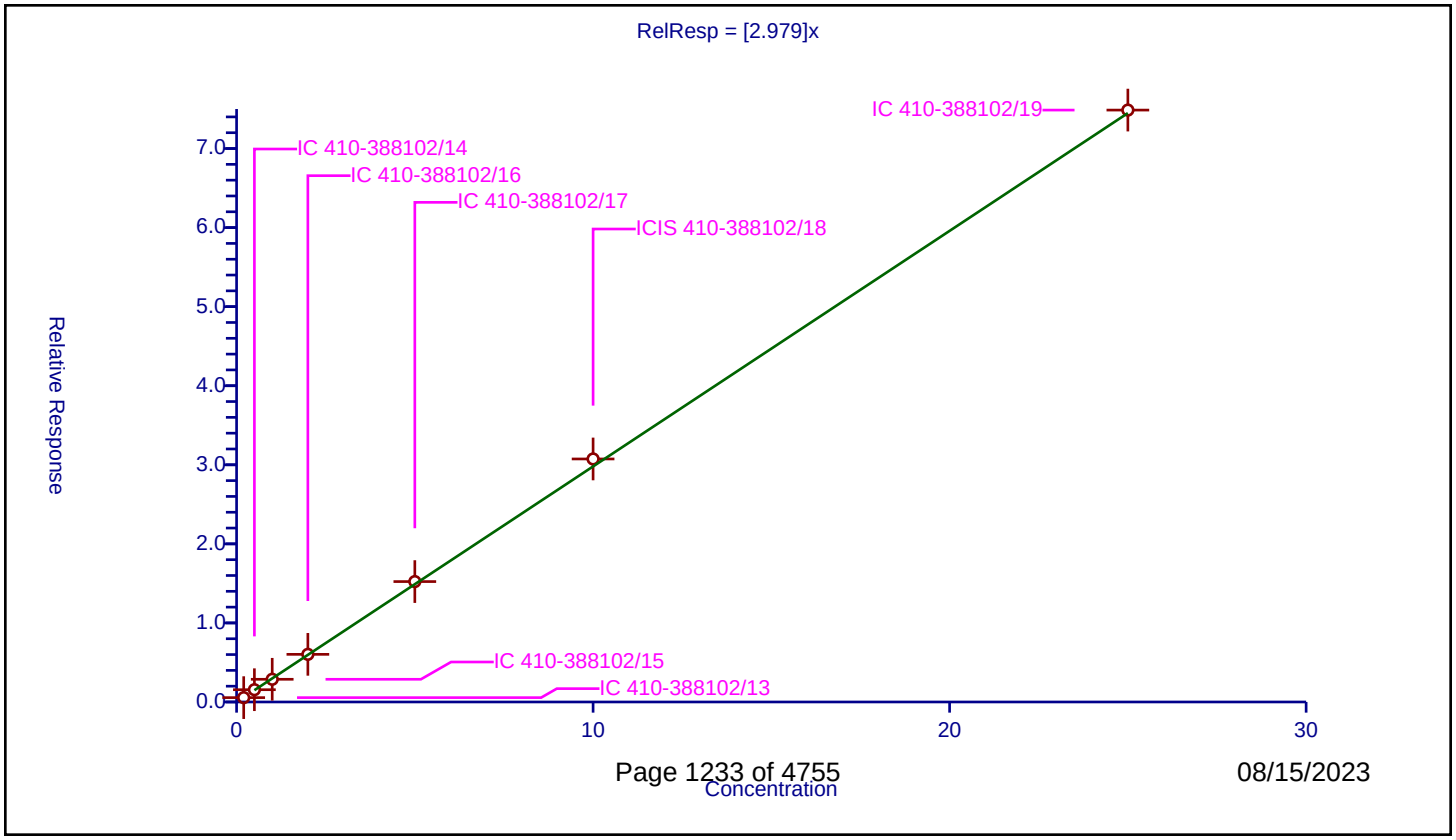
Curve Coefficients

Intercept:	0
Slope:	2.979

Error Coefficients

Standard Error:	3080000
Relative Standard Error:	4.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.549963	10.0	868350.0	2.749813	Y
2	IC 410-388102/14	0.5	1.552079	10.0	834938.0	3.104159	Y
3	IC 410-388102/15	1.0	2.873262	10.0	851085.0	2.873262	Y
4	IC 410-388102/16	2.0	6.02687	10.0	870354.0	3.013435	Y
5	IC 410-388102/17	5.0	15.23017	10.0	910481.0	3.046034	Y
6	ICIS 410-388102/18	10.0	30.737806	10.0	884528.0	3.073781	Y
7	IC 410-388102/19	25.0	74.866682	10.0	917393.0	2.994667	Y



Calibration / sec-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

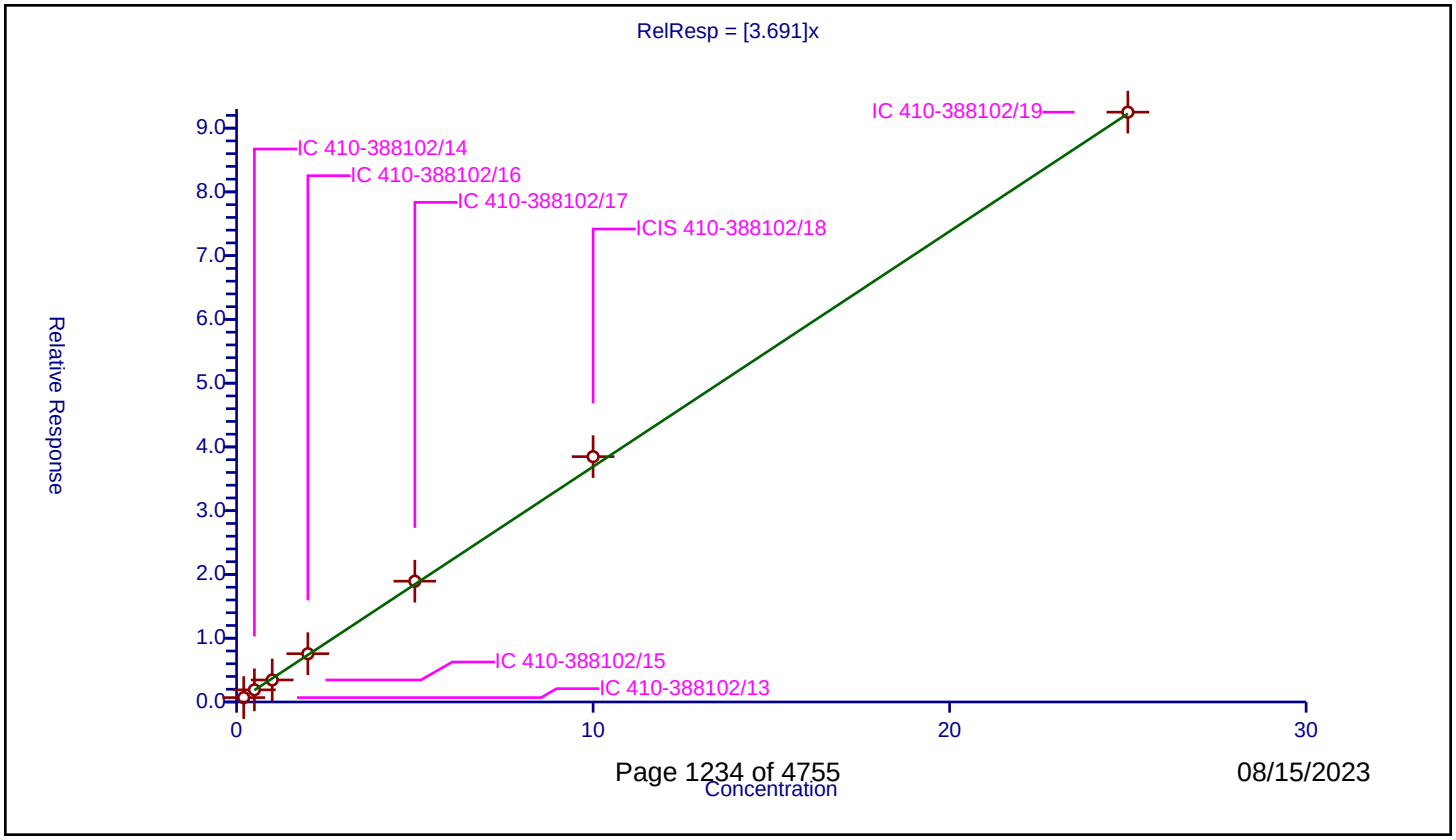
Curve Coefficients

Intercept:	0
Slope:	3.691

Error Coefficients

Standard Error:	3810000
Relative Standard Error:	4.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.689883	10.0	868350.0	3.449416	Y
2	IC 410-388102/14	0.5	1.905016	10.0	834938.0	3.810031	Y
3	IC 410-388102/15	1.0	3.451206	10.0	851085.0	3.451206	Y
4	IC 410-388102/16	2.0	7.573137	10.0	870354.0	3.786568	Y
5	IC 410-388102/17	5.0	18.947798	10.0	910481.0	3.78956	Y
6	ICIS 410-388102/18	10.0	38.478284	10.0	884528.0	3.847828	Y
7	IC 410-388102/19	25.0	92.507693	10.0	917393.0	3.700308	Y



Calibration / 1,3-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

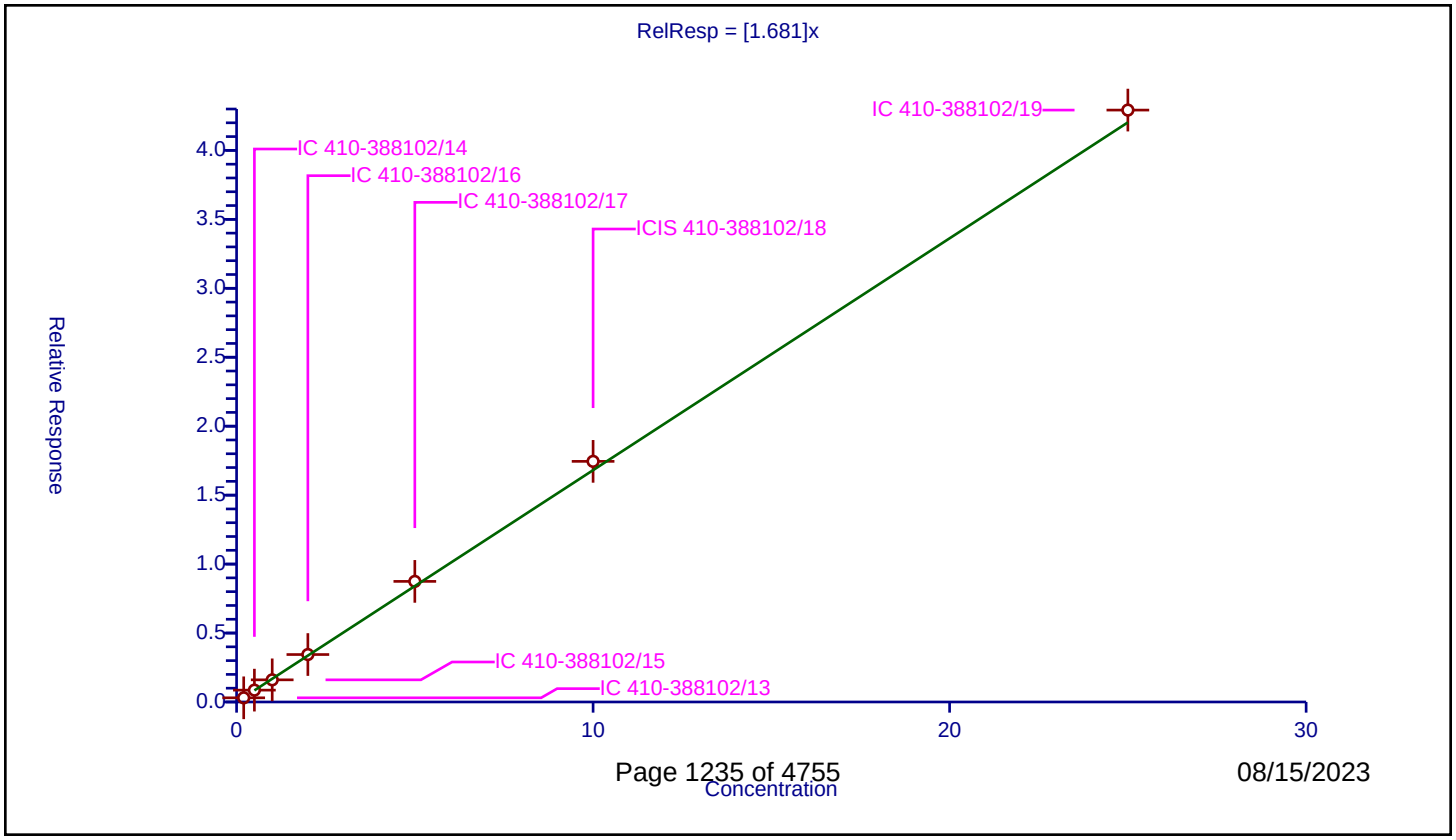
Curve Coefficients

Intercept:	0
Slope:	1.681

Error Coefficients

Standard Error:	1760000
Relative Standard Error:	5.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.30239	10.0	868350.0	1.511948	Y
2	IC 410-388102/14	0.5	0.859621	10.0	834938.0	1.719241	Y
3	IC 410-388102/15	1.0	1.605551	10.0	851085.0	1.605551	Y
4	IC 410-388102/16	2.0	3.441048	10.0	870354.0	1.720524	Y
5	IC 410-388102/17	5.0	8.744576	10.0	910481.0	1.748915	Y
6	ICIS 410-388102/18	10.0	17.448492	10.0	884528.0	1.744849	Y
7	IC 410-388102/19	25.0	42.922957	10.0	917393.0	1.716918	Y



Calibration / 4-Isopropyltoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

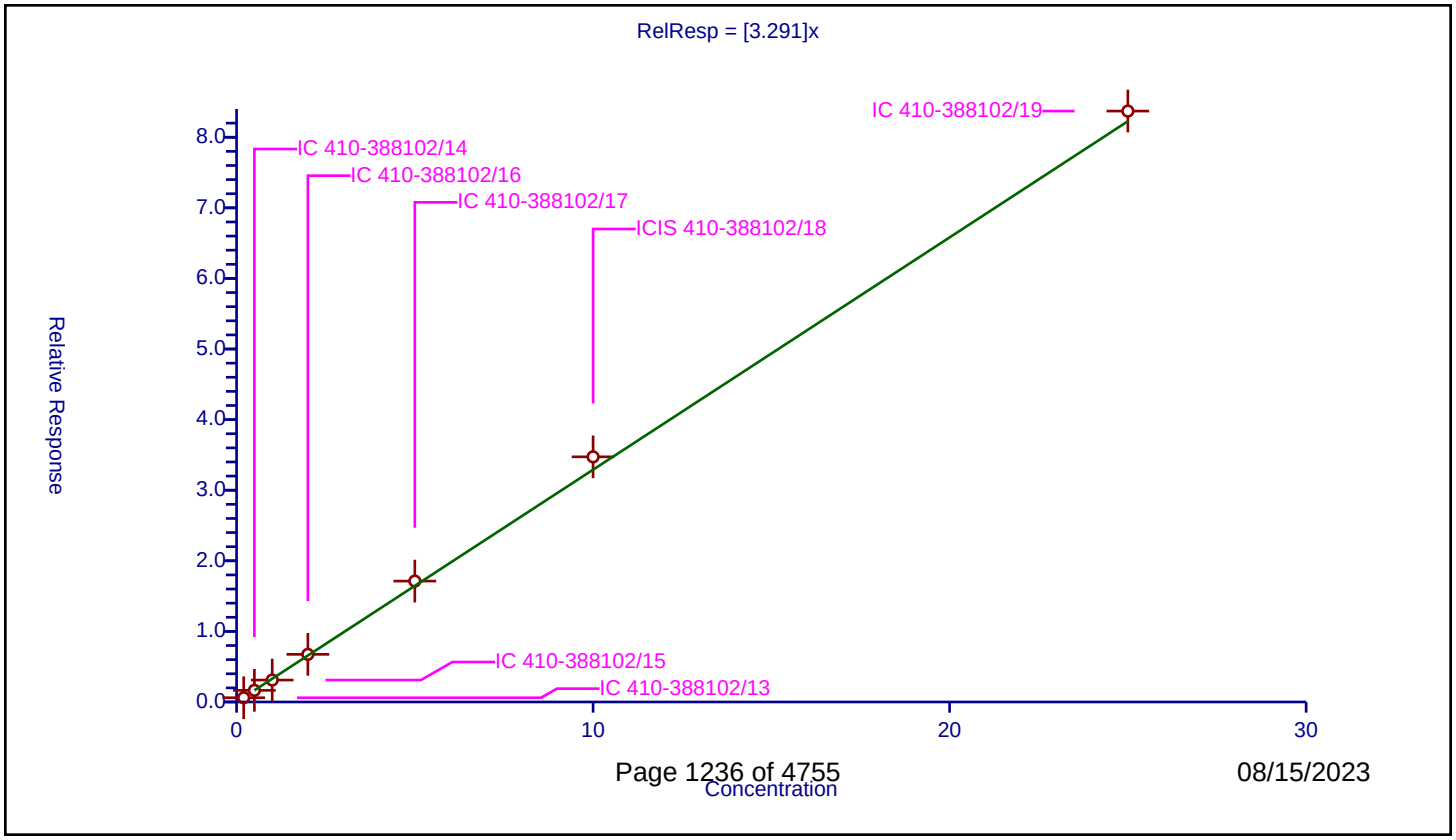
Curve Coefficients

Intercept:	0
Slope:	3.291

Error Coefficients

Standard Error:	3450000
Relative Standard Error:	5.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.601555	10.0	868350.0	3.007773	Y
2	IC 410-388102/14	0.5	1.648769	10.0	834938.0	3.297538	Y
3	IC 410-388102/15	1.0	3.107539	10.0	851085.0	3.107539	Y
4	IC 410-388102/16	2.0	6.750047	10.0	870354.0	3.375023	Y
5	IC 410-388102/17	5.0	17.124026	10.0	910481.0	3.424805	Y
6	ICIS 410-388102/18	10.0	34.728737	10.0	884528.0	3.472874	Y
7	IC 410-388102/19	25.0	83.708476	10.0	917393.0	3.348339	Y



Calibration / 1,4-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

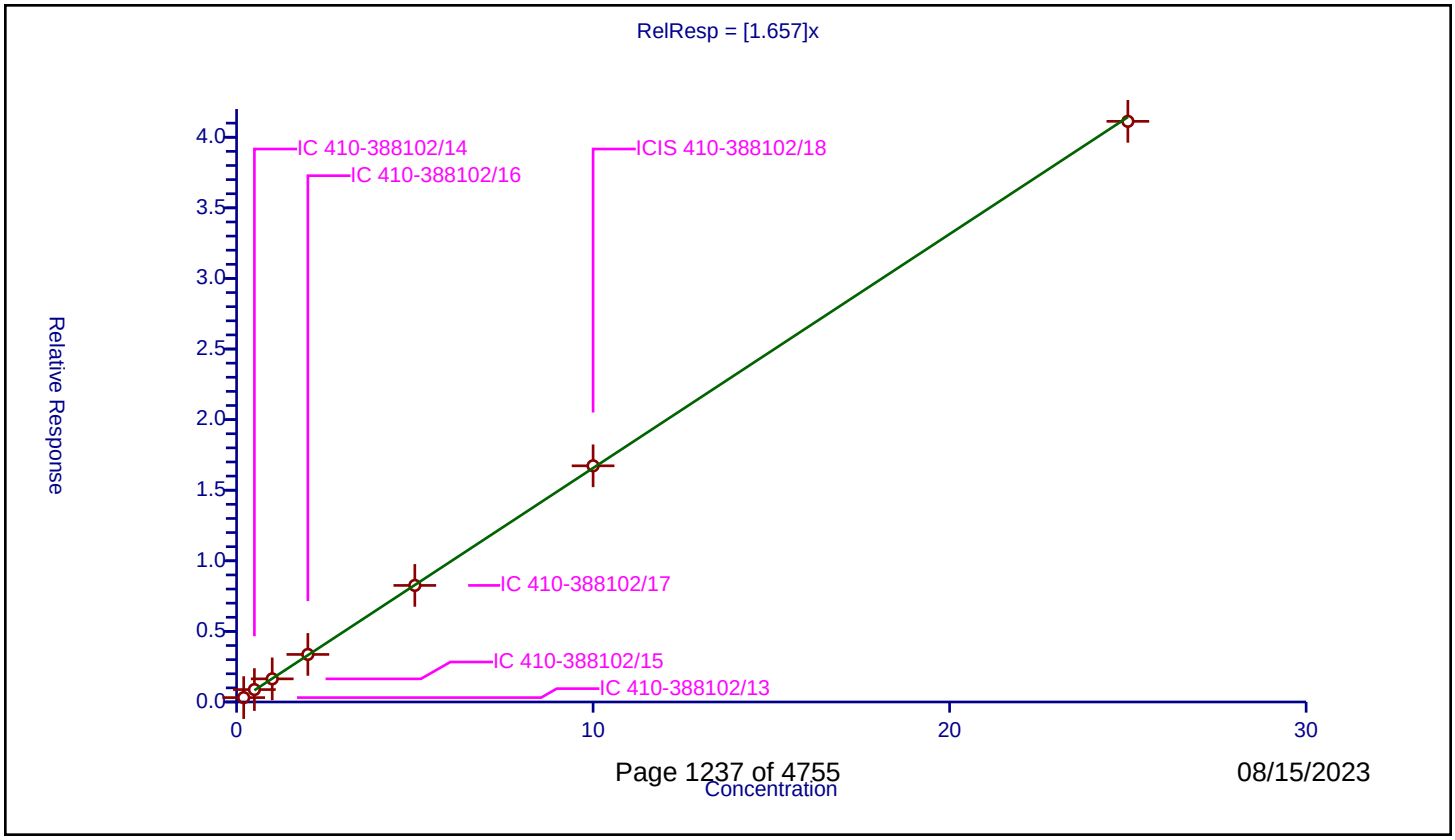
Curve Coefficients

Intercept:	0
Slope:	1.657

Error Coefficients

Standard Error:	1690000
Relative Standard Error:	3.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.310151	10.0	868350.0	1.550757	Y
2	IC 410-388102/14	0.5	0.87858	10.0	834938.0	1.75716	Y
3	IC 410-388102/15	1.0	1.63825	10.0	851085.0	1.63825	Y
4	IC 410-388102/16	2.0	3.368491	10.0	870354.0	1.684246	Y
5	IC 410-388102/17	5.0	8.257108	10.0	910481.0	1.651422	Y
6	ICIS 410-388102/18	10.0	16.727667	10.0	884528.0	1.672767	Y
7	IC 410-388102/19	25.0	41.126442	10.0	917393.0	1.645058	Y



Calibration / 1,2,3-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

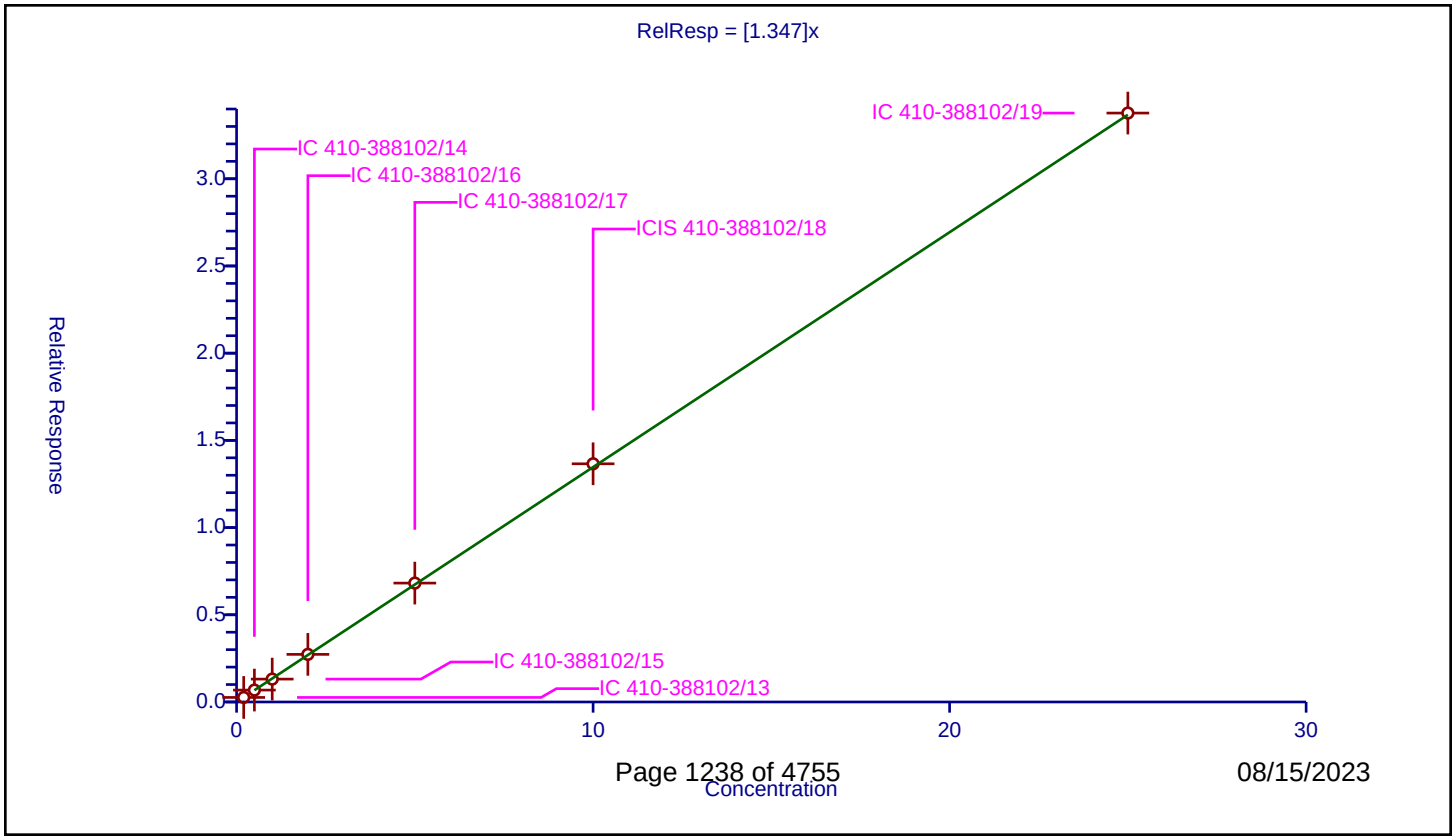
Curve Coefficients

Intercept:	0
Slope:	1.347

Error Coefficients

Standard Error:	1390000
Relative Standard Error:	1.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.261231	10.0	868350.0	1.306155	Y
2	IC 410-388102/14	0.5	0.682075	10.0	834938.0	1.364149	Y
3	IC 410-388102/15	1.0	1.31229	10.0	851085.0	1.31229	Y
4	IC 410-388102/16	2.0	2.729326	10.0	870354.0	1.364663	Y
5	IC 410-388102/17	5.0	6.816957	10.0	910481.0	1.363391	Y
6	ICIS 410-388102/18	10.0	13.657453	10.0	884528.0	1.365745	Y
7	IC 410-388102/19	25.0	33.768232	10.0	917393.0	1.350729	Y



Calibration / Benzyl chloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

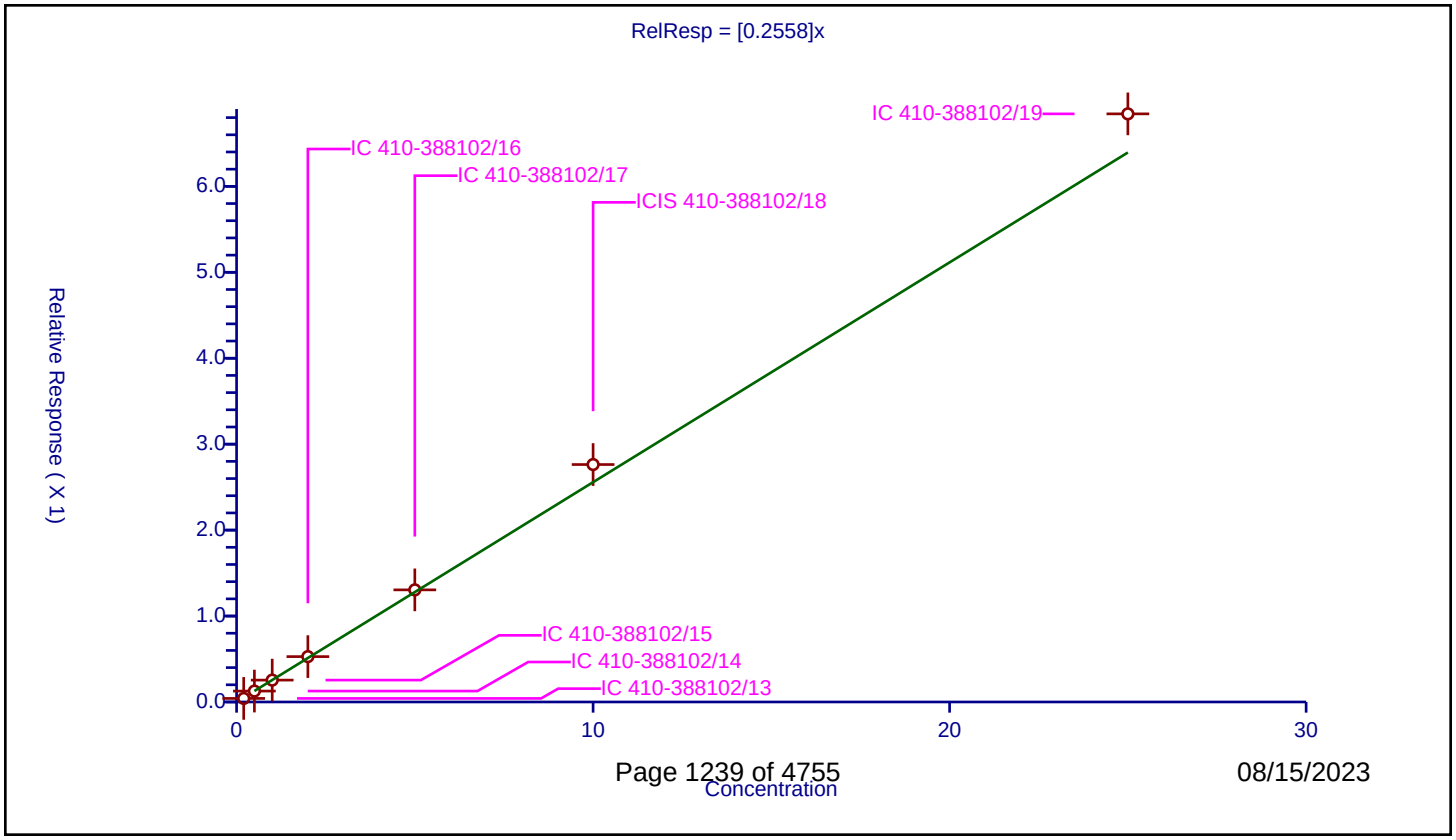
Curve Coefficients

Intercept:	0
Slope:	0.2558

Error Coefficients

Standard Error:	280000
Relative Standard Error:	9.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.041343	10.0	868350.0	0.206714	Y
2	IC 410-388102/14	0.5	0.127039	10.0	834938.0	0.254079	Y
3	IC 410-388102/15	1.0	0.254522	10.0	851085.0	0.254522	Y
4	IC 410-388102/16	2.0	0.527935	10.0	870354.0	0.263967	Y
5	IC 410-388102/17	5.0	1.30464	10.0	910481.0	0.260928	Y
6	ICIS 410-388102/18	10.0	2.763169	10.0	884528.0	0.276317	Y
7	IC 410-388102/19	25.0	6.843621	10.0	917393.0	0.273745	Y



Calibration / n-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

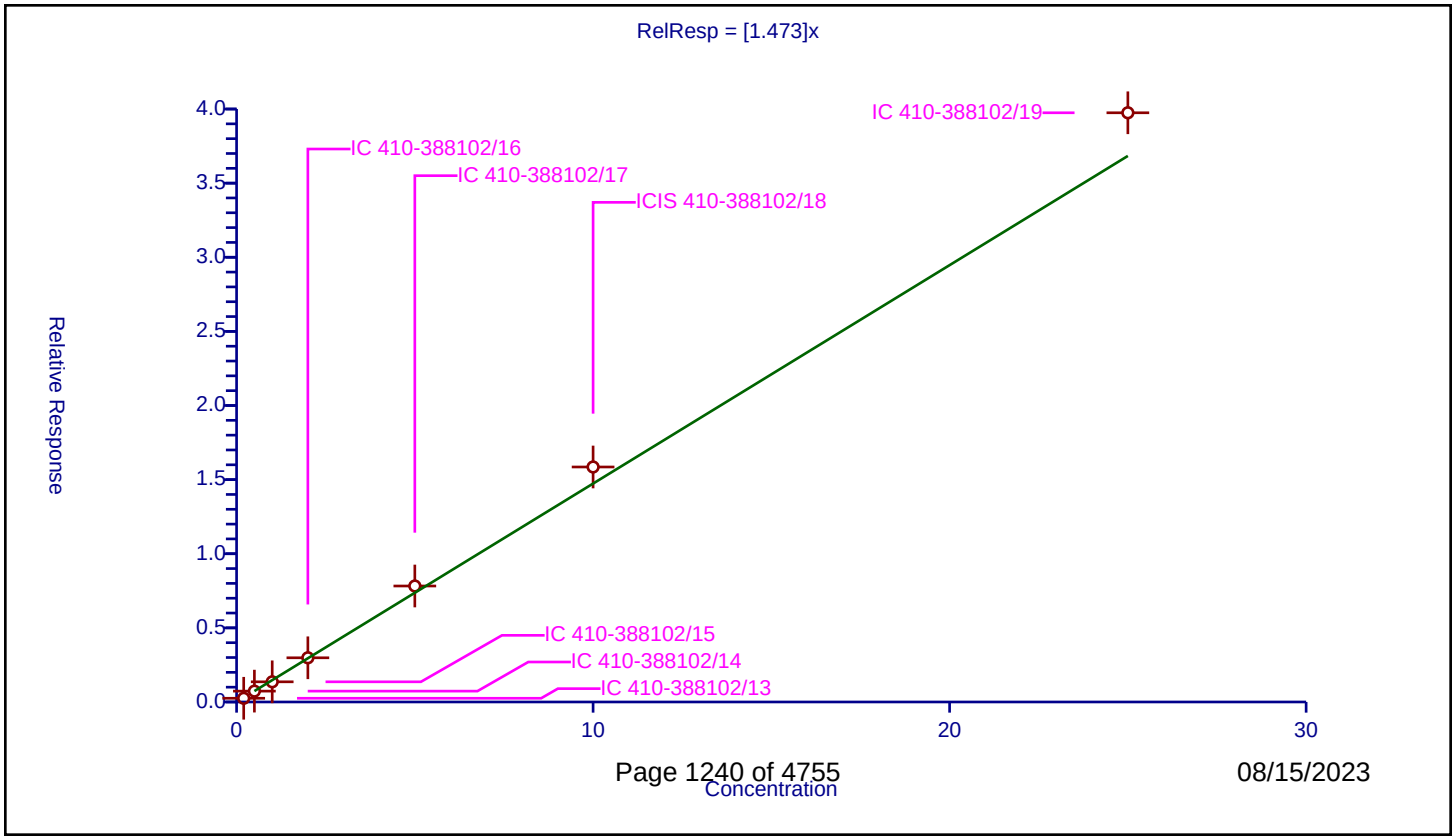
Curve Coefficients

Intercept:	0
Slope:	1.473

Error Coefficients

Standard Error:	1630000
Relative Standard Error:	8.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.251488	10.0	868350.0	1.257442	Y
2	IC 410-388102/14	0.5	0.732653	10.0	834938.0	1.465306	Y
3	IC 410-388102/15	1.0	1.360816	10.0	851085.0	1.360816	Y
4	IC 410-388102/16	2.0	2.980879	10.0	870354.0	1.49044	Y
5	IC 410-388102/17	5.0	7.823282	10.0	910481.0	1.564656	Y
6	ICIS 410-388102/18	10.0	15.852624	10.0	884528.0	1.585262	Y
7	IC 410-388102/19	25.0	39.746968	10.0	917393.0	1.589879	Y



Calibration / 1,2-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

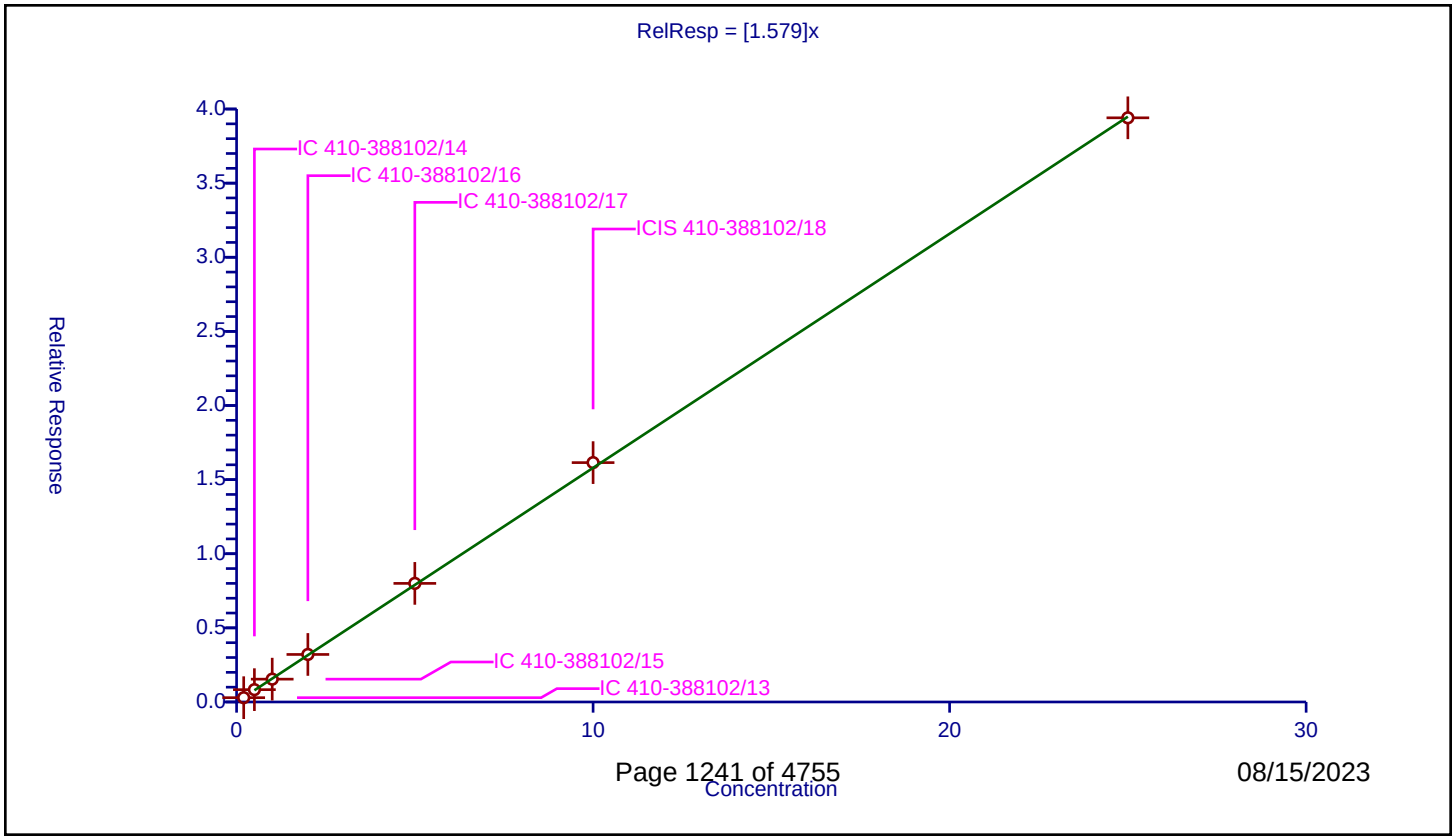
Curve Coefficients

Intercept:	0
Slope:	1.579

Error Coefficients

Standard Error:	1620000
Relative Standard Error:	4.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.291138	10.0	868350.0	1.455692	Y
2	IC 410-388102/14	0.5	0.83278	10.0	834938.0	1.665561	Y
3	IC 410-388102/15	1.0	1.539905	10.0	851085.0	1.539905	Y
4	IC 410-388102/16	2.0	3.206684	10.0	870354.0	1.603342	Y
5	IC 410-388102/17	5.0	8.00076	10.0	910481.0	1.600152	Y
6	ICIS 410-388102/18	10.0	16.147301	10.0	884528.0	1.61473	Y
7	IC 410-388102/19	25.0	39.407135	10.0	917393.0	1.576285	Y



Calibration / 1,2-Dibromo-3-Chloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

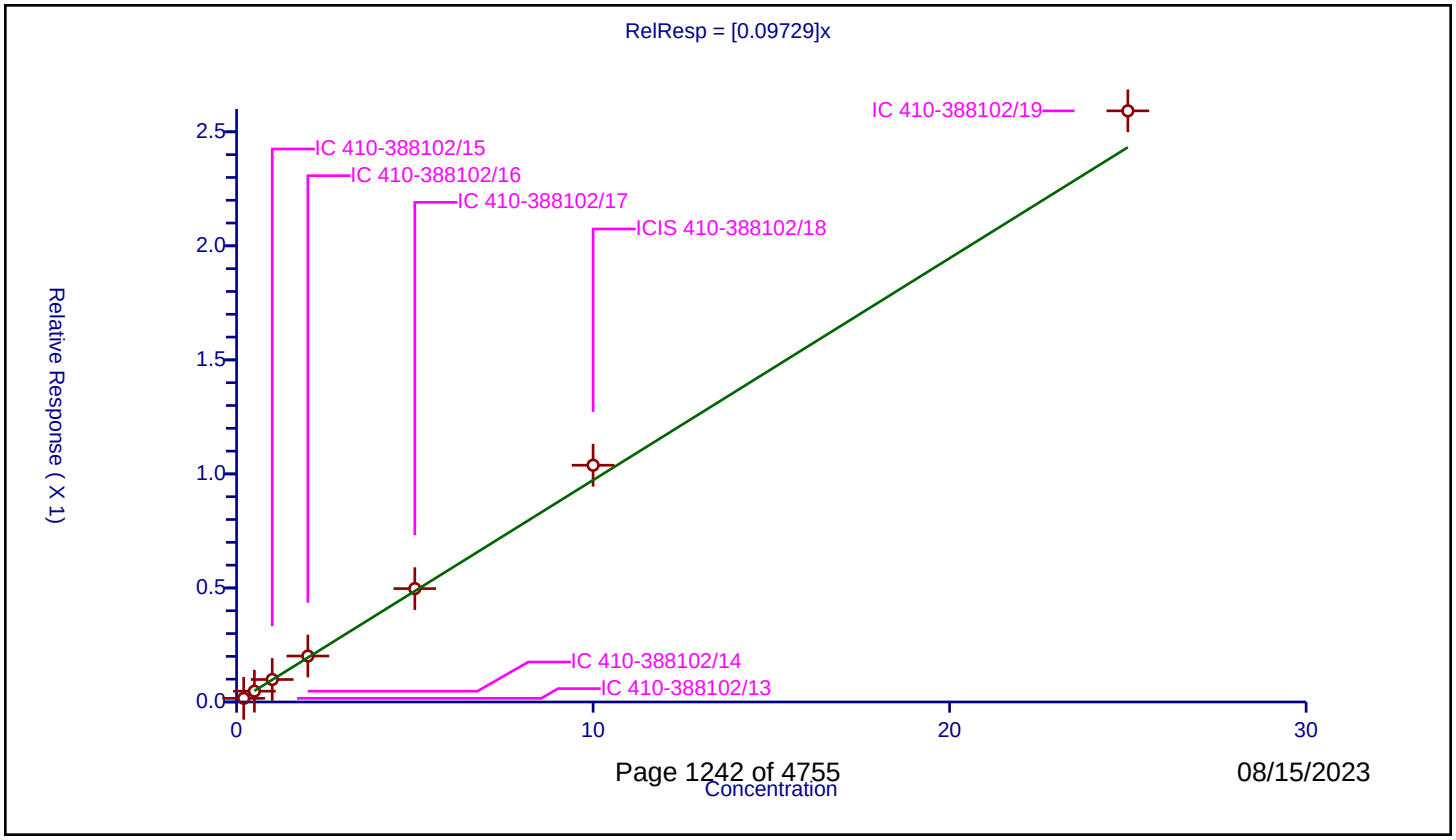
Curve Coefficients

Intercept:	0
Slope:	0.09729

Error Coefficients

Standard Error:	106000
Relative Standard Error:	8.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.015984	10.0	868350.0	0.079922	Y
2	IC 410-388102/14	0.5	0.047429	10.0	834938.0	0.094857	Y
3	IC 410-388102/15	1.0	0.09858	10.0	851085.0	0.09858	Y
4	IC 410-388102/16	2.0	0.201493	10.0	870354.0	0.100746	Y
5	IC 410-388102/17	5.0	0.497133	10.0	910481.0	0.099427	Y
6	ICIS 410-388102/18	10.0	1.03817	10.0	884528.0	0.103817	Y
7	IC 410-388102/19	25.0	2.591943	10.0	917393.0	0.103678	Y



Calibration / 1,3,5-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

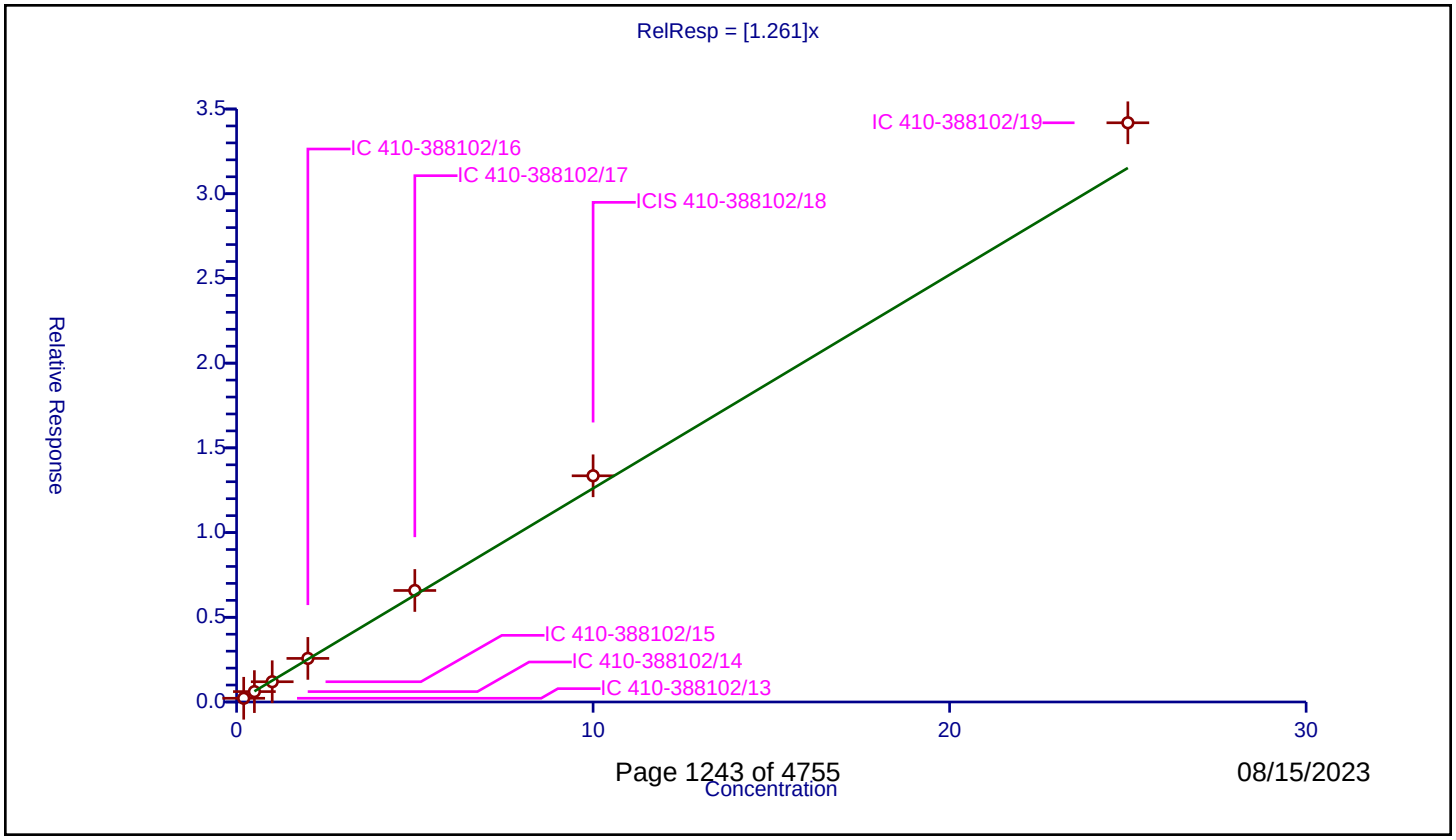
Curve Coefficients

Intercept:	0
Slope:	1.261

Error Coefficients

Standard Error:	1390000
Relative Standard Error:	7.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.220222	10.0	868350.0	1.101111	Y
2	IC 410-388102/14	0.5	0.612297	10.0	834938.0	1.224594	Y
3	IC 410-388102/15	1.0	1.194793	10.0	851085.0	1.194793	Y
4	IC 410-388102/16	2.0	2.573332	10.0	870354.0	1.286666	Y
5	IC 410-388102/17	5.0	6.580961	10.0	910481.0	1.316192	Y
6	ICIS 410-388102/18	10.0	13.351675	10.0	884528.0	1.335167	Y
7	IC 410-388102/19	25.0	34.187802	10.0	917393.0	1.367512	Y



Calibration / 1,2,4-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

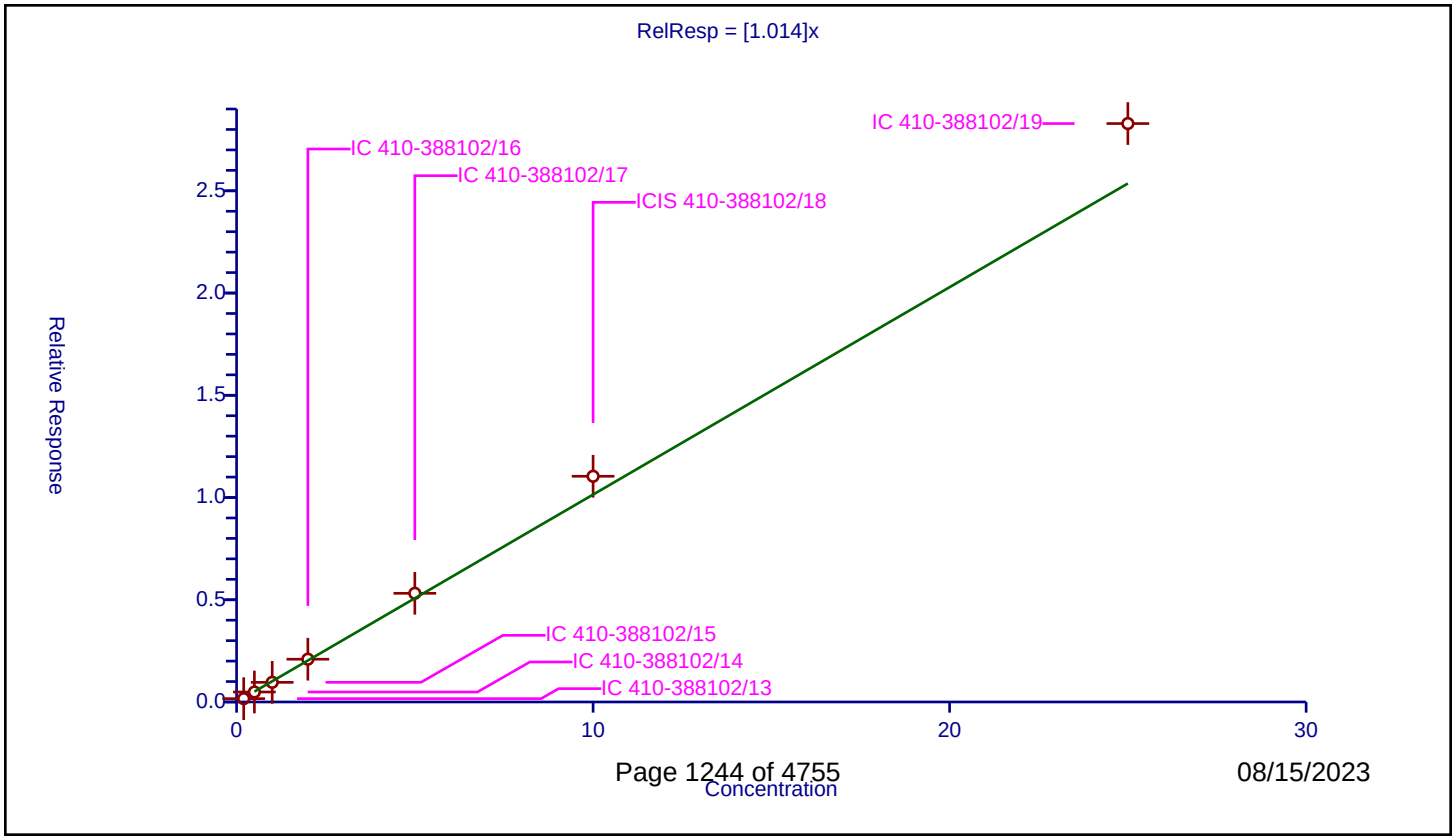
Curve Coefficients

Intercept:	0
Slope:	1.014

Error Coefficients

Standard Error:	1150000
Relative Standard Error:	10.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.163586	10.0	868350.0	0.817931	Y
2	IC 410-388102/14	0.5	0.488336	10.0	834938.0	0.976671	Y
3	IC 410-388102/15	1.0	0.961032	10.0	851085.0	0.961032	Y
4	IC 410-388102/16	2.0	2.092723	10.0	870354.0	1.046362	Y
5	IC 410-388102/17	5.0	5.315191	10.0	910481.0	1.063038	Y
6	ICIS 410-388102/18	10.0	11.039311	10.0	884528.0	1.103931	Y
7	IC 410-388102/19	25.0	28.28877	10.0	917393.0	1.131551	Y



Calibration / Hexachlorobutadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

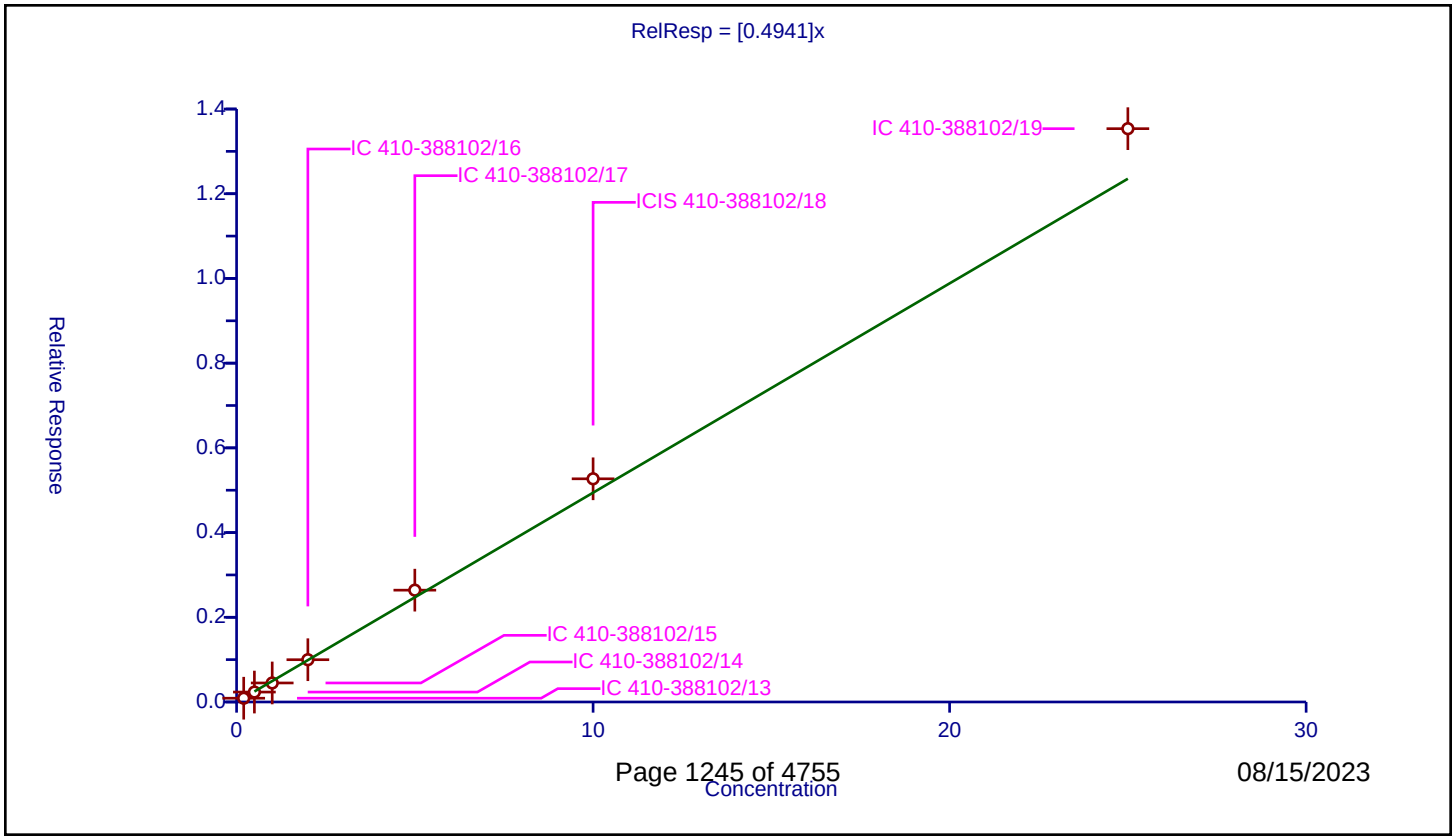
Curve Coefficients

Intercept:	0
Slope:	0.4941

Error Coefficients

Standard Error:	552000
Relative Standard Error:	8.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.089054	10.0	868350.0	0.44527	Y
2	IC 410-388102/14	0.5	0.234772	10.0	834938.0	0.469544	Y
3	IC 410-388102/15	1.0	0.448898	10.0	851085.0	0.448898	Y
4	IC 410-388102/16	2.0	0.997985	10.0	870354.0	0.498992	Y
5	IC 410-388102/17	5.0	2.639978	10.0	910481.0	0.527996	Y
6	ICIS 410-388102/18	10.0	5.269172	10.0	884528.0	0.526917	Y
7	IC 410-388102/19	25.0	13.535802	10.0	917393.0	0.541432	Y



Calibration / Naphthalene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

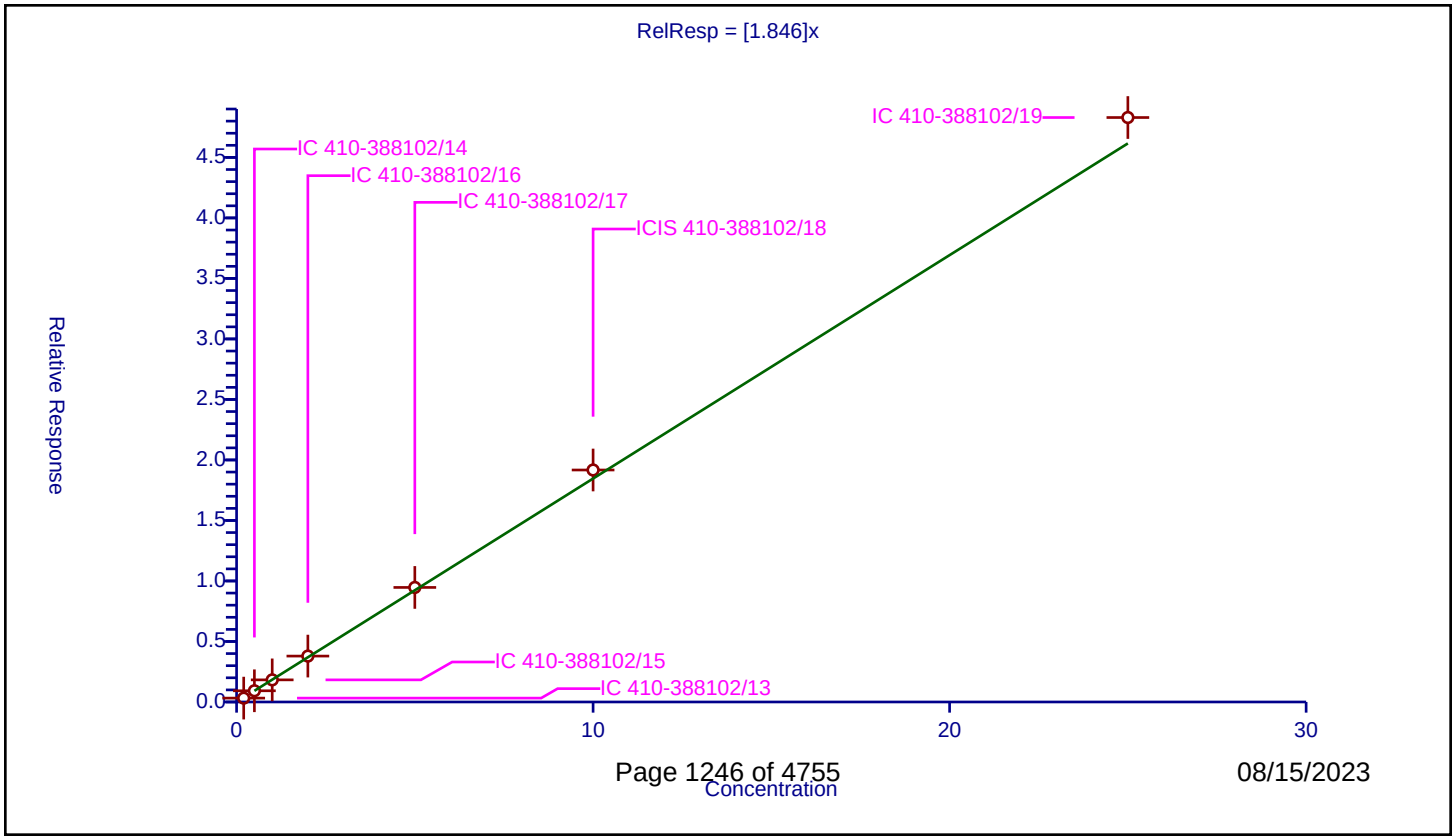
Curve Coefficients

Intercept:	0
Slope:	1.846

Error Coefficients

Standard Error:	1970000
Relative Standard Error:	6.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.320769	10.0	868350.0	1.603846	Y
2	IC 410-388102/14	0.5	0.927075	10.0	834938.0	1.85415	Y
3	IC 410-388102/15	1.0	1.826845	10.0	851085.0	1.826845	Y
4	IC 410-388102/16	2.0	3.793859	10.0	870354.0	1.896929	Y
5	IC 410-388102/17	5.0	9.466095	10.0	910481.0	1.893219	Y
6	ICIS 410-388102/18	10.0	19.170066	10.0	884528.0	1.917007	Y
7	IC 410-388102/19	25.0	48.297752	10.0	917393.0	1.93191	Y



Calibration / 1,2,3-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

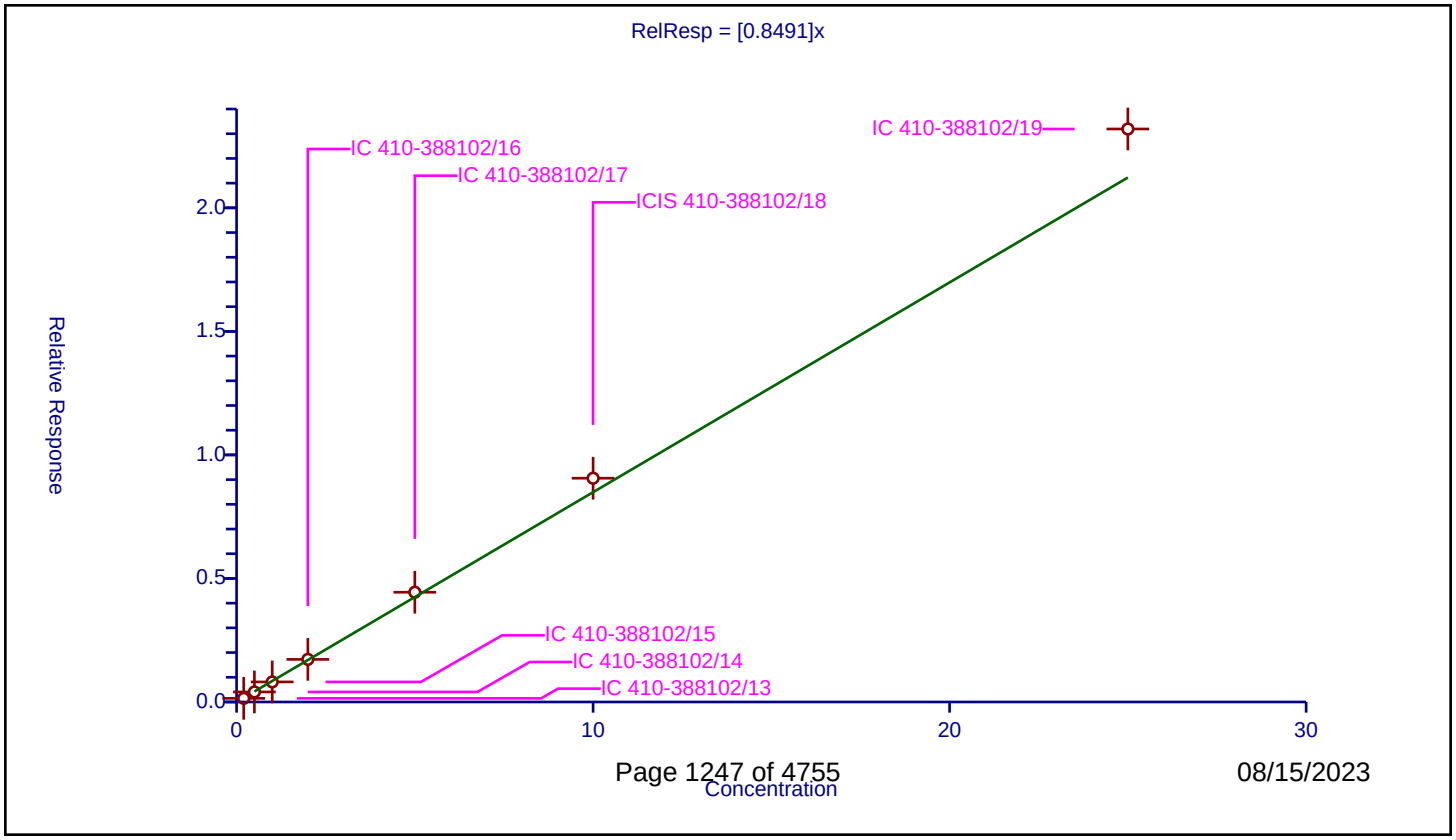
Curve Coefficients

Intercept:	0
Slope:	0.8491

Error Coefficients

Standard Error:	945000
Relative Standard Error:	7.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.146853	10.0	868350.0	0.734266	Y
2	IC 410-388102/14	0.5	0.406629	10.0	834938.0	0.813258	Y
3	IC 410-388102/15	1.0	0.812046	10.0	851085.0	0.812046	Y
4	IC 410-388102/16	2.0	1.724425	10.0	870354.0	0.862212	Y
5	IC 410-388102/17	5.0	4.441356	10.0	910481.0	0.888271	Y
6	ICIS 410-388102/18	10.0	9.056717	10.0	884528.0	0.905672	Y
7	IC 410-388102/19	25.0	23.192078	10.0	917393.0	0.927683	Y



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Lab Sample ID: ICV 410-388102/11 Calibration Date: 06/19/2023 17:37

Instrument ID: 19930 Calib Start Date: 03/21/2023 04:01

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 03/21/2023 06:02

Lab File ID: IU19X10.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2649	0.2567		9.99	10.0	-3.1	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.0503	0.0512		10.0	10.0	1.9	30.0
Toluene-d8 (Surr)	Ave	1.287	1.277		9.93	10.0	-0.8	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4693	0.4887		10.1	10.0	4.1	30.0

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X10.D
Lims ID: ICV SM
Client ID:
Sample Type: ICV
Inject. Date: 19-Jun-2023 17:37:30 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0086929-011
Misc. Info.: ICV SM
Operator ID: KNK41612 Instrument ID: 19930
Sublist:

Method: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 27-Jun-2023 12:31:25 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1687

First Level Reviewer: DVW2 Date: 21-Jun-2023 08:28:07

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Chlorodifluoromethane	51	1.867	1.867	0.000	97	326341	5.00	4.46	M
3 Dimethyl ether	45	1.922	1.922	0.000	98	321388	5.00	5.14	
21 Acetonitrile	41	3.745	3.788	-0.043	19	36688	18.8	17.3	M
* 26 t-Butyl alcohol-d10 (IS)	65	3.964	3.977	-0.013	22	119910	50.0	50.0	
33 Vinyl acetate	43	4.989	4.989	0.000	97	860748	12.5	13.8	
42 Ethyl acetate	43	5.897	5.891	0.006	98	64694	2.50	2.74	
$ 49 Dibromofluoromethane (Surr)	113	6.549	6.555	-0.006	94	475443	10.0	10.0	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.006	7.013	-0.007	62	94808	10.0	10.0	
59 Isopropyl acetate	43	7.128	7.128	0.000	98	152331	2.50	2.38	
* 61 Fluorobenzene (IS)	96	7.445	7.452	-0.007	99	1852370	10.0	10.0	
70 n-Propyl acetate	43	8.451	8.445	0.006	98	105994	2.50	2.59	
73 2-Chloroethyl vinyl ether	63	9.018	9.006	0.012	1	697	5.00	2.55	
$ 78 Toluene-d8 (Surr)	98	9.494	9.500	-0.006	93	1861973	10.0	9.93	
104 n-Butyl acetate	43	10.408	10.408	0.000	98	131134	2.50	2.56	
* 107 Chlorobenzene-d5 (IS)	117	10.987	10.988	-0.001	84	1457982	10.0	10.0	
118 cis-1,4-Dichloro-2-butene	88	11.902	11.902	0.000	30	193345	12.5	13.2	a
119 Cyclohexanone	55	11.938	11.938	0.000	90	83207	125.0	71.6	
$ 120 4-Bromofluorobenzene (Surr)	95	11.999	12.000	-0.001	96	712515	10.0	10.1	
* 135 1,4-Dichlorobenzene-d4	152	12.883	12.884	-0.001	93	895612	10.0	10.0	
149 2-Chloro-1,1,1-Trifluoroethane	1		0.000				ND	ND	
162 Chlorotrifluoroethene	1		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

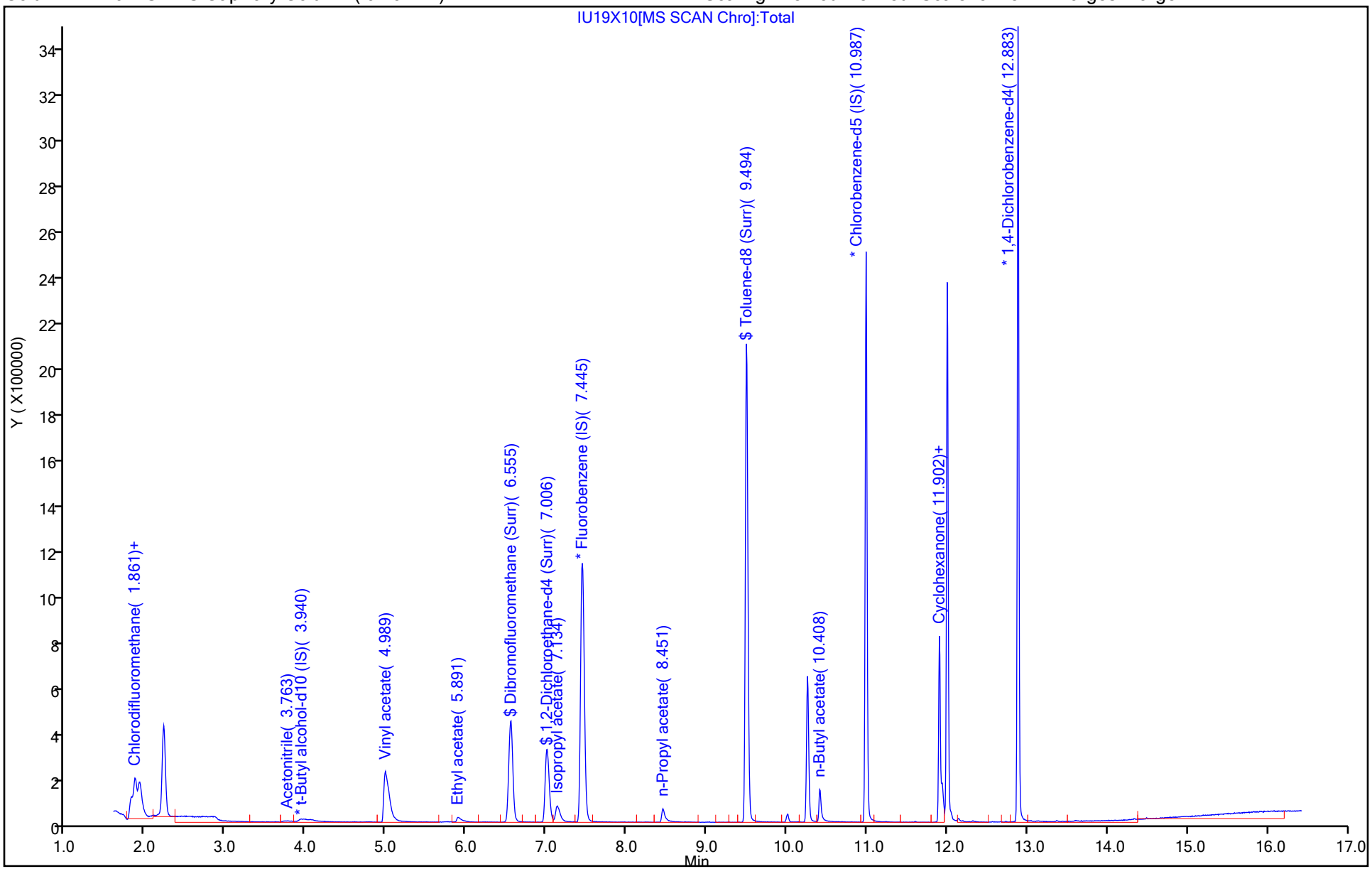
MSV_LCS_V5ACE_00026	Amount Added:	6.25	Units: uL	
MSV_LCS_CYC_00003	Amount Added:	12.50	Units: uL	
MSV_LCS_LKB_00006	Amount Added:	25.00	Units: uL	
MSV_Q_QDME_00032	Amount Added:	5.00	Units: uL	
MSV_LCS_2CEVE_00120	Amount Added:	12.50	Units: uL	
MSV_LCS_SMFre_00050	Amount Added:	12.50	Units: uL	
MSV_LLcentISS_00007	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 27-Jun-2023 12:31:28 Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X10.D				
Injection Date:	19-Jun-2023 17:37:30	Instrument ID:	19930	Operator ID:	KNK41612
Lims ID:	ICV SM			Worklist Smp#:	11
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Lab Sample ID: ICV 410-388102/11 Calibration Date: 06/19/2023 17:37

Instrument ID: 19930 Calib Start Date: 06/19/2023 14:49

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 06/19/2023 16:55

Lab File ID: IU19X10.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.3951	0.3523		4.46	5.00	-10.8	30.0
Methoxymethane	Ave	0.3379	0.3470		5.14	5.00	2.7	30.0
Acetonitrile	Ave	0.0115	0.0106		17.3	18.8	-7.9	30.0
Vinyl acetate	Ave	0.3366	0.3717		13.8	12.5	10.4	30.0
Ethyl acetate	Ave	0.1273	0.1397		2.74	2.50	9.8	30.0
2-Chloroethyl vinyl ether	Ave	0.0015	0.0008		2.55	5.00	-49.0*	30.0
cis-1,4-Dichloro-2-butene	Ave	0.1002	0.1061			12.5	5.8	30.0
Cyclohexanone	Ave	0.4848	0.2776		71.6	125	-42.8*	30.0
2-Chloro-1,1,1-Trifluoroethane	None					5.00		30.0
Chlorotrifluoroethene	None					5.00		30.0

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X10.D
Lims ID: ICV SM
Client ID:
Sample Type: ICV
Inject. Date: 19-Jun-2023 17:37:30 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0086929-011
Misc. Info.: ICV SM
Operator ID: KNK41612 Instrument ID: 19930
Sublist:

Method: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 27-Jun-2023 12:31:25 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1687

First Level Reviewer: DVW2 Date: 21-Jun-2023 08:28:07

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Chlorodifluoromethane	51	1.867	1.867	0.000	97	326341	5.00	4.46	M
3 Dimethyl ether	45	1.922	1.922	0.000	98	321388	5.00	5.14	
21 Acetonitrile	41	3.745	3.788	-0.043	19	36688	18.8	17.3	M
* 26 t-Butyl alcohol-d10 (IS)	65	3.964	3.977	-0.013	22	119910	50.0	50.0	
33 Vinyl acetate	43	4.989	4.989	0.000	97	860748	12.5	13.8	
42 Ethyl acetate	43	5.897	5.891	0.006	98	64694	2.50	2.74	
$ 49 Dibromofluoromethane (Surr)	113	6.549	6.555	-0.006	94	475443	10.0	10.0	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.006	7.013	-0.007	62	94808	10.0	10.0	
59 Isopropyl acetate	43	7.128	7.128	0.000	98	152331	2.50	2.38	
* 61 Fluorobenzene (IS)	96	7.445	7.452	-0.007	99	1852370	10.0	10.0	
70 n-Propyl acetate	43	8.451	8.445	0.006	98	105994	2.50	2.59	
73 2-Chloroethyl vinyl ether	63	9.018	9.006	0.012	1	697	5.00	2.55	
$ 78 Toluene-d8 (Surr)	98	9.494	9.500	-0.006	93	1861973	10.0	9.93	
104 n-Butyl acetate	43	10.408	10.408	0.000	98	131134	2.50	2.56	
* 107 Chlorobenzene-d5 (IS)	117	10.987	10.988	-0.001	84	1457982	10.0	10.0	
118 cis-1,4-Dichloro-2-butene	88	11.902	11.902	0.000	30	193345	12.5	13.2	a
119 Cyclohexanone	55	11.938	11.938	0.000	90	83207	125.0	71.6	
$ 120 4-Bromofluorobenzene (Surr)	95	11.999	12.000	-0.001	96	712515	10.0	10.1	
* 135 1,4-Dichlorobenzene-d4	152	12.883	12.884	-0.001	93	895612	10.0	10.0	
149 2-Chloro-1,1,1-Trifluoroethane	1		0.000				ND	ND	
162 Chlorotrifluoroethene	1		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

MSV_LCS_V5ACE_00026	Amount Added:	6.25	Units: uL	
MSV_LCS_CYC_00003	Amount Added:	12.50	Units: uL	
MSV_LCS_LKB_00006	Amount Added:	25.00	Units: uL	
MSV_Q_QDME_00032	Amount Added:	5.00	Units: uL	
MSV_LCS_2CEVE_00120	Amount Added:	12.50	Units: uL	
MSV_LCS_SMFre_00050	Amount Added:	12.50	Units: uL	
MSV_LLcentISS_00007	Amount Added:	5.00	Units: uL	Run Reagent

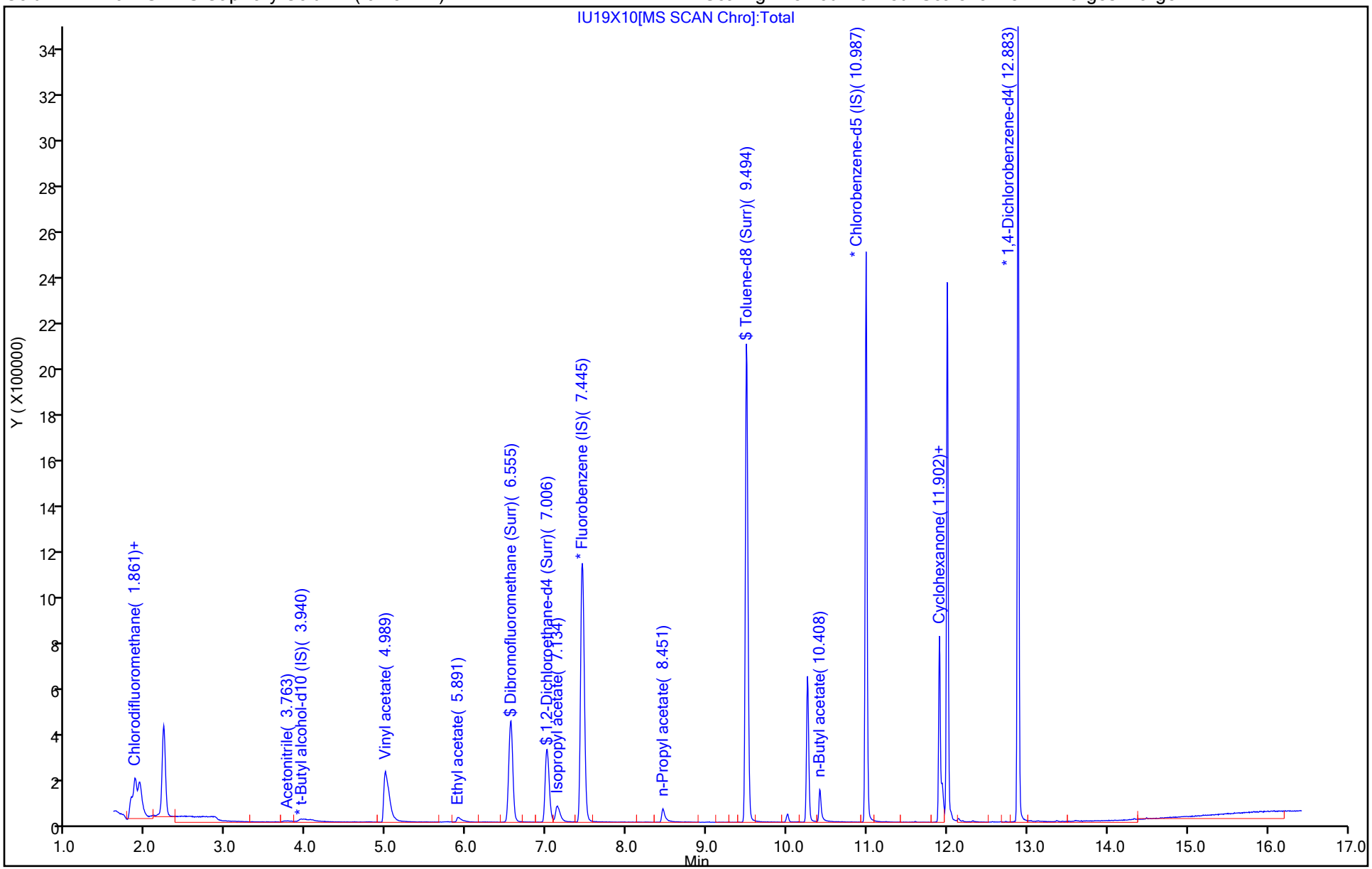
Report Date: 27-Jun-2023 12:31:28 Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X10.D

Injection Date:	19-Jun-2023 17:37:30	Instrument ID:	19930	Operator ID:	KNK41612
Lims ID:	ICV SM			Worklist Smp#:	11
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

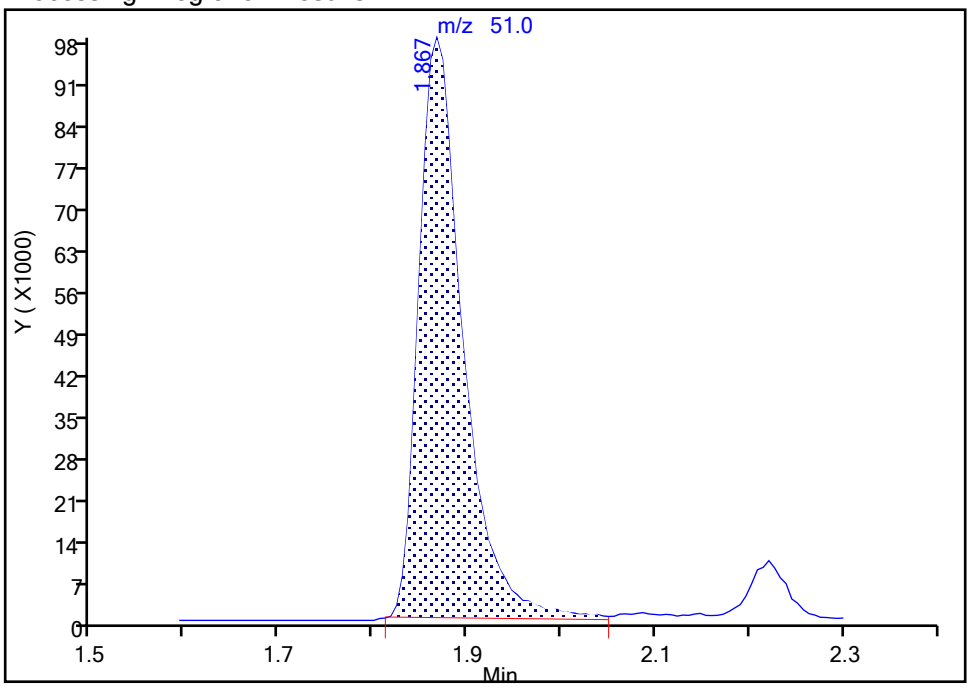
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X10.D				
Injection Date:	19-Jun-2023 17:37:30	Instrument ID:	19930		
Lims ID:	ICV SM				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	10	Worklist Smp#:	11
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

2 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

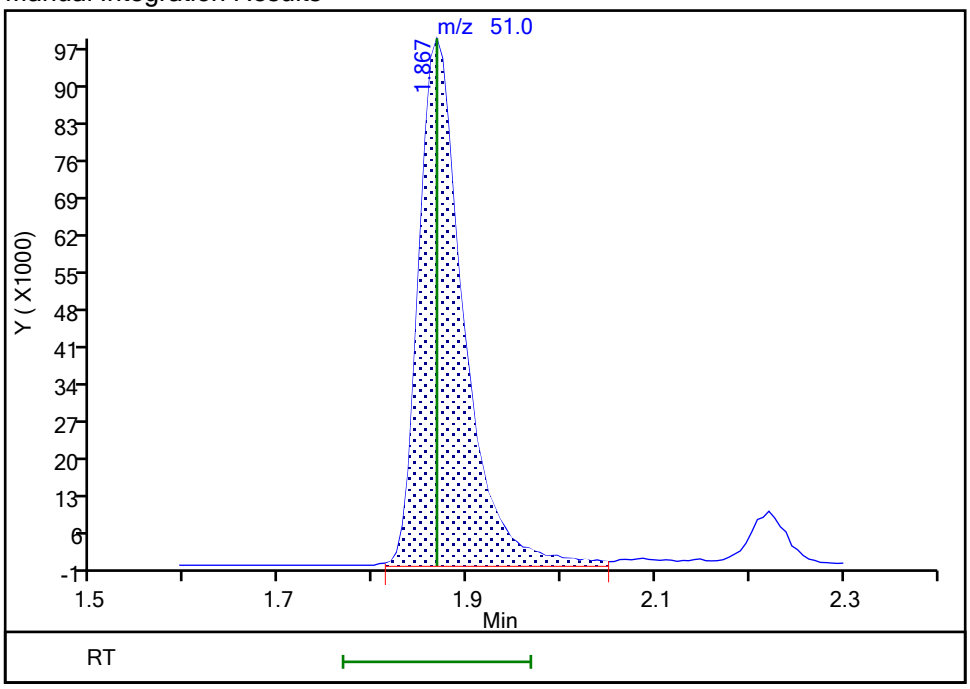
Processing Integration Results

RT: 1.87
Area: 323408
Amount: 4.500445
Amount Units: ug/l



Manual Integration Results

RT: 1.87
Area: 326341
Amount: 4.458461
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:27:45 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

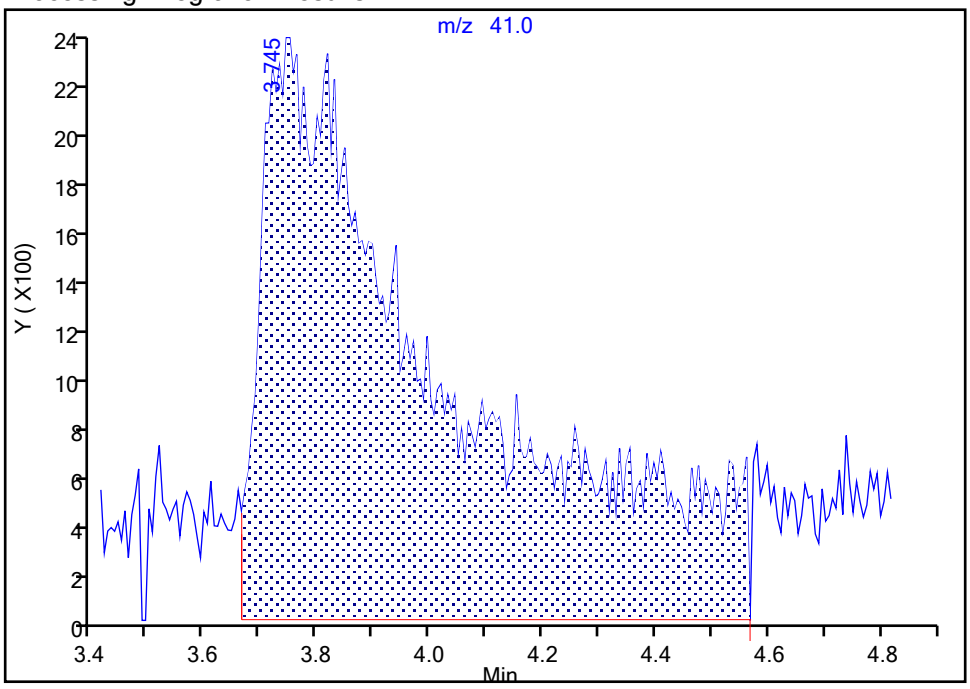
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X10.D
Injection Date: 19-Jun-2023 17:37:30 Instrument ID: 19930
Lims ID: ICV SM
Client ID:
Operator ID: KNK41612 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

21 Acetonitrile, CAS: 75-05-8

Signal: 1

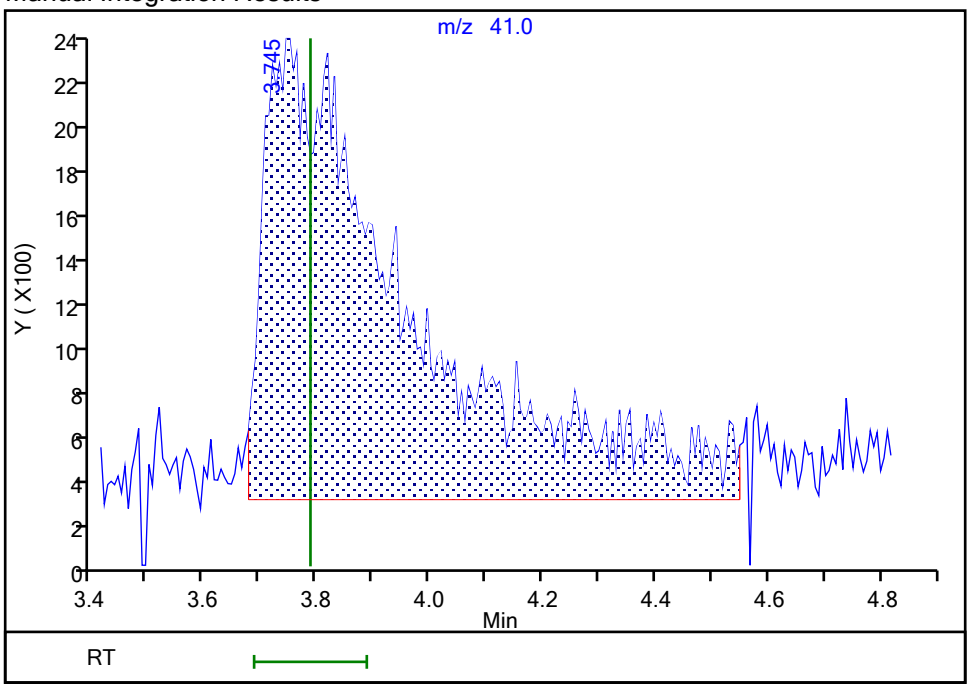
Processing Integration Results

RT: 3.74
Area: 52489
Amount: 24.704172
Amount Units: ug/l



Manual Integration Results

RT: 3.74
Area: 36688
Amount: 17.267364
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 14:58:14 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

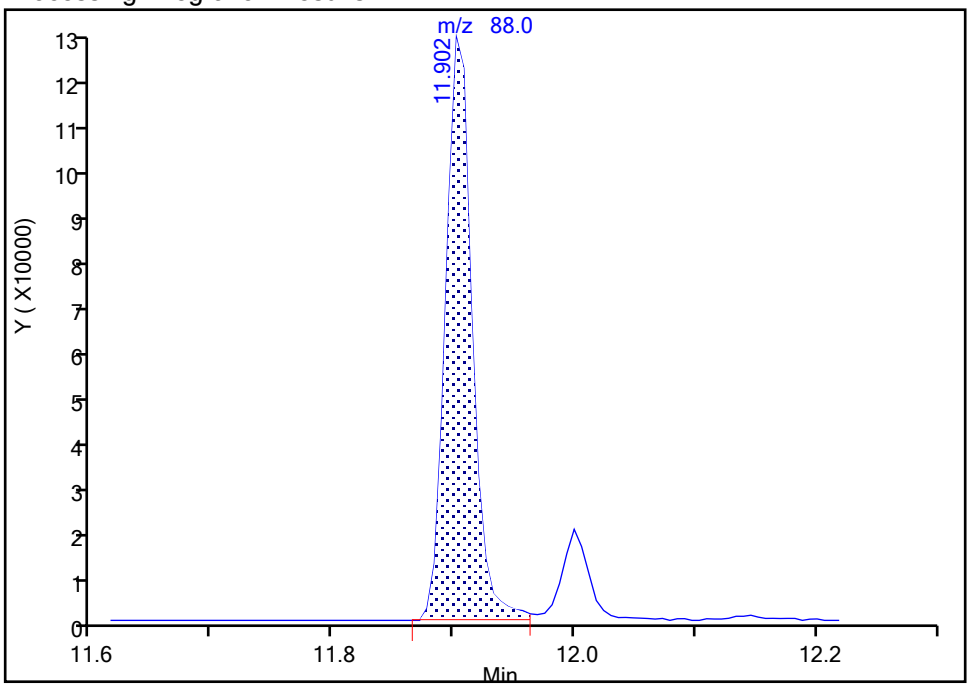
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X10.D				
Injection Date:	19-Jun-2023 17:37:30	Instrument ID:	19930		
Lims ID:	ICV SM				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	10	Worklist Smp#:	11
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

118 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

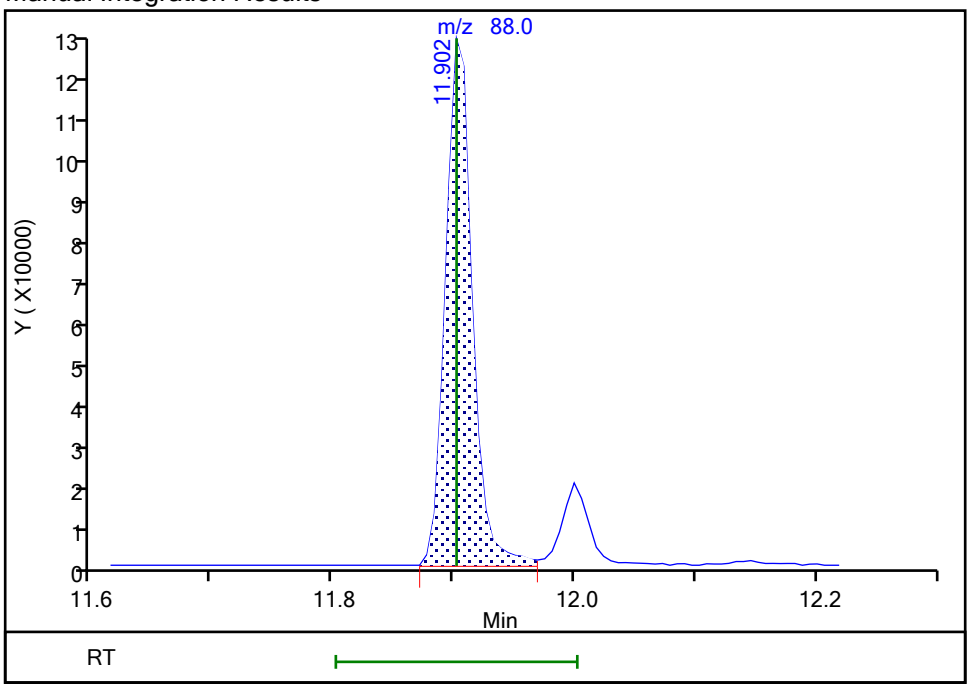
Processing Integration Results

RT: 11.90
Area: 192923
Amount: 8.749666
Amount Units: ug/l



Manual Integration Results

RT: 11.90
Area: 193345
Amount: 13.229831
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:32:59 -04:00:00 (UTC)

Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Lab Sample ID: ICV 410-388102/21 Calibration Date: 06/19/2023 21:07

Instrument ID: 19930 Calib Start Date: 06/19/2023 18:19

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 06/19/2023 20:25

Lab File ID: IU19X20.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4004	0.3483	0.1000	4.35	5.00	-13.0	30.0
Chloromethane	Ave	0.4068	0.3486	0.1000	4.28	5.00	-14.3	30.0
Vinyl chloride	Ave	0.3892	0.3475	0.1000	4.46	5.00	-10.7	30.0
1,3-Butadiene	Ave	0.4073	0.2992		3.67	5.00	-26.5	30.0
Bromomethane	Ave	0.3038	0.2659	0.1000	4.38	5.00	-12.5	30.0
Chloroethane	Ave	0.2329	0.2166	0.1000	4.65	5.00	-7.0	30.0
Dichlorofluoromethane	Ave	0.6499	0.5241		4.03	5.00	-19.4	30.0
Trichlorofluoromethane	Ave	0.4955	0.4545	0.1000	4.59	5.00	-8.3	30.0
Diethyl ether	Ave	0.2046	0.1909		4.67	5.01	-6.7	30.0
Freon 123a	Ave	0.3534	0.3205		4.53	5.00	-9.3	30.0
Acrolein	Ave	2.165	1.920		33.2	37.5	-11.3	30.0
1,1-Dichloroethene	Ave	0.2682	0.2593	0.1000	4.83	5.00	-3.3	30.0
Acetone	Ave	2.391	2.028	0.1000	53.0	62.5	-15.2	30.0
1,1,2-Trichloro-1,2,2-triflu oroethane	Ave	0.2847	0.2739	0.1000	4.81	5.00	-3.8	30.0
Methyl iodide	Ave	0.5640	0.5161		4.58	5.00	-8.5	30.0
Ethyl bromide	Ave	0.2347	0.2293		4.94	5.06	-2.3	30.0
Carbon disulfide	Ave	0.7273	0.6646	0.1000	4.57	5.00	-8.6	30.0
Methyl acetate	Ave	5.902	6.367	0.1000	5.39	5.00	7.9	30.0
Allyl chloride	Ave	0.4168	0.3807		4.57	5.00	-8.7	30.0
Methylene Chloride	Ave	0.2831	0.2674	0.1000	4.72	5.00	-5.5	30.0
t-Butyl alcohol	Ave	0.9514	0.8170		42.9	50.0	-14.1	30.0
Acrylonitrile	Ave	2.907	3.095		26.6	25.0	6.5	30.0
Methyl tertiary butyl ether	Ave	0.7360	0.6681	0.1000	4.54	5.00	-9.2	30.0
trans-1,2-Dichloroethene	Ave	0.2985	0.2748	0.1000	4.60	5.00	-7.9	30.0
n-Hexane	Ave	0.3912	0.3498		4.47	5.00	-10.6	30.0
1,1-Dichloroethane	Ave	0.5113	0.4837	0.2000	4.73	5.00	-5.4	30.0
di-Isopropyl ether	Ave	0.8397	0.7764		4.62	5.00	-7.5	30.0
2-Chloro-1,3-butadiene	Ave	0.4276	0.4100		4.80	5.00	-4.1	30.0
Ethyl t-butyl ether	Ave	0.8020	0.7635		4.76	5.00	-4.8	30.0
2-Butanone	Ave	4.608	4.254	0.1000	57.7	62.5	-7.7	30.0
cis-1,2-Dichloroethene	Ave	0.3321	0.3236	0.1000	4.87	5.00	-2.5	30.0
2,2-Dichloropropane	Ave	0.4608	0.4445		4.82	5.00	-3.5	30.0
Propionitrile	Ave	1.219	1.130		34.8	37.5	-7.3	30.0
Methacrylonitrile	Ave	4.809	4.437		34.6	37.5	-7.7	30.0
Bromochloromethane	Ave	0.1511	0.1441		4.77	5.00	-4.6	30.0
Tetrahydrofuran	Ave	1.516	1.392		22.9	25.0	-8.2	30.0
Chloroform	Ave	0.5282	0.4968	0.2000	4.70	5.00	-6.0	30.0
1,1,1-Trichloroethane	Ave	0.4933	0.4782	0.1000	4.85	5.00	-3.1	30.0
Cyclohexane	Ave	0.4674	0.4502	0.1000	4.82	5.00	-3.7	30.0
1,1-Dichloropropene	Ave	0.3927	0.3916		4.99	5.00	-0.3	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Lab Sample ID: ICV 410-388102/21 Calibration Date: 06/19/2023 21:07

Instrument ID: 19930 Calib Start Date: 06/19/2023 18:19

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 06/19/2023 20:25

Lab File ID: IU19X20.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Carbon tetrachloride	Ave	0.4394	0.4320	0.1000	4.92	5.00	-1.7	30.0
Isobutyl alcohol	Ave	0.3380	0.2702		99.9	125	-20.1	30.0
Benzene	Ave	1.181	1.145	0.5000	4.85	5.00	-3.0	30.0
1,2-Dichloroethane	Ave	0.3201	0.3020	0.1000	4.72	5.00	-5.6	30.0
t-Amyl methyl ether	Ave	0.7413	0.7125		4.81	5.00	-3.9	30.0
n-Heptane	Ave	0.3757	0.3328		4.43	5.00	-11.4	30.0
n-Butanol	Ave	0.2596	0.2519		243	250	-3.0	30.0
Trichloroethene	Ave	0.3285	0.3080	0.2000	4.69	5.00	-6.2	30.0
Methylcyclohexane	Ave	0.5306	0.5118	0.1000	4.82	5.00	-3.6	30.0
1,2-Dichloropropane	Ave	0.2919	0.2770	0.1000	4.74	5.00	-5.1	30.0
Methyl methacrylate	Ave	9.478	8.727		4.60	5.00	-7.9	30.0
1,4-Dioxane	Ave	0.0551	0.0600	0.0050	136	125	8.7	30.0
Dibromomethane	Ave	0.1463	0.1403		4.79	5.00	-4.1	30.0
Bromodichloromethane	Ave	0.3795	0.3600	0.2000	4.74	5.00	-5.1	30.0
2-Nitropropane	Ave	3.099	2.514			5.00	-18.9	30.0
1-Bromo-2-chloroethane	Ave	0.2977	0.2836		4.76	5.00	-4.7	30.0
cis-1,3-Dichloropropene	Ave	0.4553	0.4287	0.2000	4.71	5.00	-5.9	30.0
4-Methyl-2-pentanone	Ave	12.37	11.72	0.1000	59.2	62.5	-5.2	30.0
Toluene	Ave	1.014	0.9874	0.4000	4.87	5.00	-2.6	30.0
trans-1,3-Dichloropropene	Ave	0.4787	0.4640	0.1000	4.85	5.00	-3.1	30.0
Ethyl methacrylate	Ave	0.3958	0.3797		4.80	5.00	-4.1	30.0
1,1,2-Trichloroethane	Ave	0.2862	0.2652	0.1000	4.63	5.00	-7.3	30.0
Tetrachloroethene	Ave	0.5290	0.5110	0.2000	4.83	5.00	-3.4	30.0
1,3-Dichloropropane	Ave	0.4529	0.4379		4.83	5.00	-3.3	30.0
2-Hexanone	Ave	8.750	8.281	0.1000	59.1	62.5	-5.4	30.0
Dibromochloromethane	Ave	0.3726	0.3572		4.79	5.00	-4.1	30.0
1,2-Dibromoethane	Ave	0.2700	0.2601	0.1000	4.82	5.00	-3.7	30.0
1-Chlorohexane	Ave	0.5902	0.5297		4.49	5.00	-10.3	30.0
Chlorobenzene	Ave	1.186	1.119	0.5000	4.72	5.00	-5.7	30.0
1,1,1,2-Tetrachloroethane	Ave	0.4228	0.4160		4.92	5.00	-1.6	30.0
Ethylbenzene	Ave	1.976	1.898	0.1000	4.80	5.00	-4.0	30.0
m&p-Xylene	Ave	0.7994	0.7789	0.1000	9.74	10.0	-2.6	30.0
o-Xylene	Ave	0.7900	0.7609	0.3000	4.82	5.00	-3.7	30.0
Styrene	Ave	1.271	1.245	0.3000	4.90	5.00	-2.1	30.0
Bromoform	Ave	0.2417	0.2332	0.1000	4.82	5.00	-3.5	30.0
Isopropylbenzene	Ave	2.049	2.023	0.1000	4.94	5.00	-1.3	30.0
1,1,2,2-Tetrachloroethane	Ave	0.5952	0.5637	0.3000	4.73	5.00	-5.3	30.0
Bromobenzene	Ave	0.8602	0.8298		4.82	5.00	-3.5	30.0
trans-1,4-Dichloro-2-butene	Ave	4.657	4.133		22.2	25.0	-11.3	30.0
1,2,3-Trichloropropane	Ave	0.1671	0.1616		4.84	5.00	-3.3	30.0
N-Propylbenzene	Ave	3.807	3.712		4.87	5.00	-2.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Lab Sample ID: ICV 410-388102/21 Calibration Date: 06/19/2023 21:07

Instrument ID: 19930 Calib Start Date: 06/19/2023 18:19

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 06/19/2023 20:25

Lab File ID: IU19X20.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chlorotoluene	Ave	0.8316	0.8008		4.82	5.00	-3.7	30.0
1,3,5-Trimethylbenzene	Ave	2.902	2.762		4.76	5.00	-4.8	30.0
4-Chlorotoluene	Ave	0.8520	0.8209		4.82	5.00	-3.7	30.0
tert-Butylbenzene	Ave	0.6973	0.6719		4.82	5.00	-3.6	30.0
Pentachloroethane	Ave	0.5393	0.5204		4.82	5.00	-3.5	30.0
1,2,4-Trimethylbenzene	Ave	2.979	2.822		4.74	5.00	-5.3	30.0
sec-Butylbenzene	Ave	3.691	3.582		4.85	5.00	-2.9	30.0
1,3-Dichlorobenzene	Ave	1.681	1.571	0.6000	4.67	5.00	-6.6	30.0
p-Isopropyltoluene	Ave	3.291	3.189		4.85	5.00	-3.1	30.0
1,4-Dichlorobenzene	Ave	1.657	1.595	0.5000	4.81	5.00	-3.7	30.0
1,2,3-Trimethylbenzene	Ave	1.347	1.230		4.57	5.00	-8.7	30.0
Benzyl chloride	Ave	0.2558	0.2330		4.56	5.00	-8.9	30.0
n-Butylbenzene	Ave	1.473	1.434		4.87	5.00	-2.7	30.0
1,2-Dichlorobenzene	Ave	1.579	1.466	0.4000	4.64	5.00	-7.2	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.0973	0.0942	0.0500	4.84	5.00	-3.2	30.0
1,3,5-Trichlorobenzene	Ave	1.261	1.170		4.64	5.00	-7.2	30.0
1,2,4-Trichlorobenzene	Ave	1.014	0.9728	0.2000	4.80	5.00	-4.1	30.0
Hexachlorobutadiene	Ave	0.4941	0.4866		4.92	5.00	-1.5	30.0
Naphthalene	Ave	1.846	1.721		4.66	5.00	-6.8	30.0
1,2,3-Trichlorobenzene	Ave	0.8491	0.8046		4.74	5.00	-5.2	30.0
2-ethoxy-2-methyl butane	None					5.00		30.0
2-Methylnaphthalene	None					5.00		30.0
Isopropyl alcohol	None					37.5		30.0
p-Diethylbenzene	None					5.00		30.0
Pentane	None					5.00		30.0
Dibromofluoromethane (Surr)	Ave	0.2569	0.2580		10.0	10.0	0.5	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.0509	0.0537		10.5	10.0	5.5	30.0
Toluene-d8 (Surr)	Ave	1.286	1.295		10.1	10.0	0.7	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4844	0.4894		10.1	10.0	1.0	30.0

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X20.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 19-Jun-2023 21:07:30 ALS Bottle#: 20 Worklist Smp#: 21
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0086929-021
Misc. Info.: ICV LG
Operator ID: KNK41612 Instrument ID: 19930
Sublist:

Method: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 27-Jun-2023 12:31:25 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1687

First Level Reviewer: DVW2 Date: 21-Jun-2023 08:13:18

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.855	1.855	0.000	99	332540	5.00	4.35	
4 Chloromethane	50	2.044	2.050	-0.006	99	332810	5.00	4.28	
5 Vinyl chloride	62	2.148	2.160	-0.012	98	331776	5.00	4.46	
6 Butadiene	39	2.154	2.160	-0.006	90	285710	5.00	3.67	M
7 Bromomethane	94	2.459	2.465	-0.006	90	253865	5.00	4.38	
8 Chloroethane	64	2.532	2.538	-0.006	100	206791	5.00	4.65	
9 Dichlorofluoromethane	67	2.757	2.764	-0.007	97	500400	5.00	4.03	
10 Trichlorofluoromethane	101	2.824	2.824	0.000	96	433916	5.00	4.59	
11 Ethyl ether	59	3.044	3.050	-0.006	90	182439	5.01	4.67	
13 1,2-Dichloro-1,1,2-trifluoroetha	67	3.129	3.142	-0.013	90	306017	5.00	4.53	
14 Acrolein	56	3.202	3.209	-0.007	98	207154	37.5	33.2	
15 1,1-Dichloroethene	96	3.337	3.337	0.000	97	247568	5.00	4.83	
16 Acetone	43	3.361	3.361	0.000	99	364839	62.5	53.0	
17 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.379	3.385	-0.006	90	261561	5.00	4.81	
18 Iodomethane	142	3.519	3.526	-0.007	98	492761	5.00	4.58	
19 Ethyl bromide	108	3.544	3.550	-0.006	98	221545	5.06	4.94	
20 Carbon disulfide	76	3.623	3.629	-0.006	99	634568	5.00	4.57	
23 Methyl acetate	43	3.757	3.757	0.000	23	91621	5.00	5.39	M
24 3-Chloro-1-propene	41	3.776	3.782	-0.006	91	363509	5.00	4.57	
25 Methylene Chloride	84	3.946	3.958	-0.012	91	255339	5.00	4.72	
* 26 t-Butyl alcohol-d10 (IS)	65	3.958	3.977	-0.019	98	143904	50.0	50.0	M
27 2-Methyl-2-propanol	59	4.080	4.093	-0.013	98	117574	50.0	42.9	
28 Acrylonitrile	53	4.275	4.282	-0.007	97	222687	25.0	26.6	
29 Methyl tert-butyl ether	73	4.336	4.342	-0.006	89	637850	5.00	4.54	
30 trans-1,2-Dichloroethene	96	4.349	4.355	-0.006	98	262384	5.00	4.60	
31 Hexane	57	4.769	4.781	-0.012	92	333993	5.00	4.47	
32 1,1-Dichloroethane	63	5.013	5.013	0.000	96	461799	5.00	4.73	
35 Isopropyl ether	45	5.074	5.074	0.000	93	741335	5.00	4.62	
36 2-Chloro-1,3-butadiene	53	5.123	5.123	0.000	90	391488	5.00	4.80	
37 Tert-butyl ethyl ether	59	5.611	5.623	-0.012	97	728931	5.00	4.76	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
38 2-Butanone (MEK)	43	5.806	5.812	-0.006	99	765203	62.5	57.7	
39 cis-1,2-Dichloroethene	96	5.848	5.854	-0.006	80	309006	5.00	4.87	
40 2,2-Dichloropropane	77	5.860	5.867	-0.007	89	424413	5.00	4.82	
43 Propionitrile	54	5.897	5.891	0.006	98	121929	37.5	34.8	
45 Methacrylonitrile	67	6.110	6.110	0.000	91	478875	37.5	34.6	
46 Chlorobromomethane	128	6.184	6.190	-0.006	88	137582	5.00	4.77	
47 Tetrahydrofuran	71	6.190	6.196	-0.006	74	100129	25.0	22.9	
48 Chloroform	83	6.342	6.342	0.000	93	474321	5.00	4.70	
$ 49 Dibromofluoromethane (Surr)	113	6.555	6.555	0.000	95	492721	10.0	10.0	
50 1,1,1-Trichloroethane	97	6.562	6.568	-0.006	98	456568	5.00	4.85	
51 Cyclohexane	56	6.665	6.671	-0.006	89	429888	5.00	4.82	
54 Carbon tetrachloride	117	6.781	6.781	0.000	97	412457	5.00	4.92	
53 1,1-Dichloropropene	75	6.775	6.781	-0.006	95	373859	5.00	4.99	
55 Isobutyl alcohol	41	6.940	6.940	0.000	95	97204	125.0	99.9	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.007	7.013	-0.006	91	102560	10.0	10.5	
57 Benzene	78	7.037	7.043	-0.006	97	1093365	5.00	4.85	
58 1,2-Dichloroethane	62	7.110	7.116	-0.006	98	288380	5.00	4.72	
60 Tert-amyl methyl ether	73	7.238	7.244	-0.006	98	680277	5.00	4.81	
* 61 Fluorobenzene (IS)	96	7.446	7.452	-0.006	98	1909555	10.0	10.0	
62 n-Heptane	43	7.470	7.470	0.000	92	317781	5.00	4.43	
63 n-Butanol	56	7.848	7.836	0.012	87	181235	250.0	242.6	
64 Trichloroethene	95	7.933	7.933	0.000	96	294102	5.00	4.69	
65 Methylcyclohexane	83	8.244	8.244	0.000	91	488652	5.00	4.82	
66 1,2-Dichloropropane	63	8.262	8.269	-0.007	95	264486	5.00	4.74	
67 Methyl methacrylate	69	8.360	8.354	0.006	87	125585	5.00	4.60	
68 1,4-Dioxane	88	8.372	8.366	0.006	28	21568	125.0	135.9	M
69 Dibromomethane	93	8.372	8.378	-0.006	90	133984	5.00	4.79	
71 Dichlorobromomethane	83	8.616	8.616	0.000	99	343706	5.00	4.74	
72 2-Nitropropane	41	8.878	8.884	-0.006	99	36173	5.00	4.06	
75 1-Bromo-2-chloroethane	63	9.012	9.012	0.000	98	270736	5.00	4.76	
76 cis-1,3-Dichloropropene	75	9.177	9.177	0.000	97	409297	5.00	4.71	
77 4-Methyl-2-pentanone (MIBK)	43	9.360	9.360	0.000	96	2108105	62.5	59.2	
$ 78 Toluene-d8 (Surr)	98	9.494	9.500	-0.006	93	1943756	10.0	10.1	
79 Toluene	92	9.573	9.579	-0.006	99	741055	5.00	4.87	
97 trans-1,3-Dichloropropene	75	9.848	9.848	0.000	92	348233	5.00	4.85	
99 Ethyl methacrylate	69	9.915	9.915	0.000	88	284946	5.00	4.80	
100 1,1,2-Trichloroethane	97	10.055	10.055	0.000	90	199046	5.00	4.63	
101 Tetrachloroethene	166	10.140	10.146	-0.006	98	383524	5.00	4.83	
102 1,3-Dichloropropane	76	10.219	10.219	0.000	89	328646	5.00	4.83	
103 2-Hexanone	43	10.274	10.274	0.000	95	1489528	62.5	59.1	
105 Chlorodibromomethane	129	10.439	10.439	0.000	89	268087	5.00	4.79	
106 Ethylene Dibromide	107	10.549	10.549	0.000	99	195236	5.00	4.82	
* 107 Chlorobenzene-d5 (IS)	117	10.988	10.988	0.000	84	1501017	10.0	10.0	
108 1-Chlorohexane	91	11.000	11.000	0.000	95	397532	5.00	4.49	a
109 Chlorobenzene	112	11.012	11.018	-0.006	97	839963	5.00	4.72	
111 1,1,1,2-Tetrachloroethane	131	11.103	11.097	0.006	97	312189	5.00	4.92	
112 Ethylbenzene	91	11.103	11.103	0.000	98	1424703	5.00	4.80	a
113 m-Xylene & p-Xylene	106	11.219	11.219	0.000	93	1169154	10.0	9.74	
114 o-Xylene	106	11.554	11.554	0.000	95	571089	5.00	4.82	
115 Styrene	104	11.567	11.567	0.000	95	934299	5.00	4.90	
116 Bromoform	173	11.725	11.725	0.000	99	175012	5.00	4.82	
117 Isopropylbenzene	105	11.859	11.859	0.000	95	1517986	5.00	4.94	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 120 4-Bromofluorobenzene (Surr)	95	12.000	12.000	0.000	96	734581	10.0	10.1	
121 1,1,2,2-Tetrachloroethane	83	12.103	12.103	0.000	94	257715	5.00	4.73	
122 Bromobenzene	156	12.115	12.115	0.000	94	379404	5.00	4.82	
123 trans-1,4-Dichloro-2-butene	53	12.128	12.128	0.000	92	297356	25.0	22.2	
124 1,2,3-Trichloropropane	110	12.146	12.146	0.000	81	73904	5.00	4.84	
125 N-Propylbenzene	91	12.189	12.189	-0.001	98	1697161	5.00	4.87	
126 2-Chlorotoluene	126	12.262	12.262	0.000	97	366155	5.00	4.82	a
127 1,3,5-Trimethylbenzene	105	12.323	12.323	0.000	94	1262779	5.00	4.76	
128 4-Chlorotoluene	126	12.353	12.353	0.000	97	375312	5.00	4.82	
129 tert-Butylbenzene	134	12.566	12.566	0.000	92	307218	5.00	4.82	
130 Pentachloroethane	167	12.597	12.597	0.000	92	237922	5.00	4.82	
131 1,2,4-Trimethylbenzene	105	12.609	12.609	0.000	96	1290272	5.00	4.74	
132 sec-Butylbenzene	105	12.731	12.731	0.000	93	1637677	5.00	4.85	
133 1,3-Dichlorobenzene	146	12.829	12.829	0.000	99	718228	5.00	4.67	
134 4-Isopropyltoluene	119	12.841	12.841	0.000	97	1458168	5.00	4.85	
* 135 1,4-Dichlorobenzene-d4	152	12.883	12.884	-0.001	93	914425	10.0	10.0	
136 1,4-Dichlorobenzene	146	12.902	12.902	0.000	96	729452	5.00	4.81	
137 1,2,3-Trimethylbenzene	120	12.914	12.914	0.000	98	562323	5.00	4.57	
138 Benzyl chloride	126	12.981	12.981	0.000	98	106540	5.00	4.56	
139 n-Butylbenzene	92	13.127	13.133	-0.006	96	655530	5.00	4.87	
140 1,2-Dichlorobenzene	146	13.164	13.158	0.006	99	670246	5.00	4.64	
142 1,2-Dibromo-3-Chloropropane	155	13.707	13.700	0.006	91	43063	5.00	4.84	
143 1,3,5-Trichlorobenzene	180	13.828	13.828	0.000	98	534823	5.00	4.64	
144 1,2,4-Trichlorobenzene	180	14.249	14.249	0.000	94	444787	5.00	4.80	
145 Hexachlorobutadiene	225	14.334	14.334	0.000	95	222490	5.00	4.92	
146 Naphthalene	128	14.432	14.426	0.006	96	787088	5.00	4.66	
147 1,2,3-Trichlorobenzene	180	14.572	14.572	0.000	96	367878	5.00	4.74	
155 2-Methylnaphthalene	142		0.000				ND	ND	
156 p-Diethylbenzene	1		0.000				ND	ND	
161 Pentane	43		0.000				ND	ND	
150 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
165 Isopropyl alcohol	45		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_LCS_VOC#1_00115	Amount Added:	12.50	Units: uL	
MSV_LCS_ACROL_00118	Amount Added:	12.50	Units: uL	
LCS_ETBR_00006	Amount Added:	12.50	Units: uL	
MSV_LCS_EE_00007	Amount Added:	12.50	Units: uL	
MSV_QC_Gas826_00145	Amount Added:	12.50	Units: uL	
MSV_LCS_Penta_00029	Amount Added:	12.50	Units: uL	
MSV_LLcentISS_00007	Amount Added:	5.00	Units: uL	Run Reagent

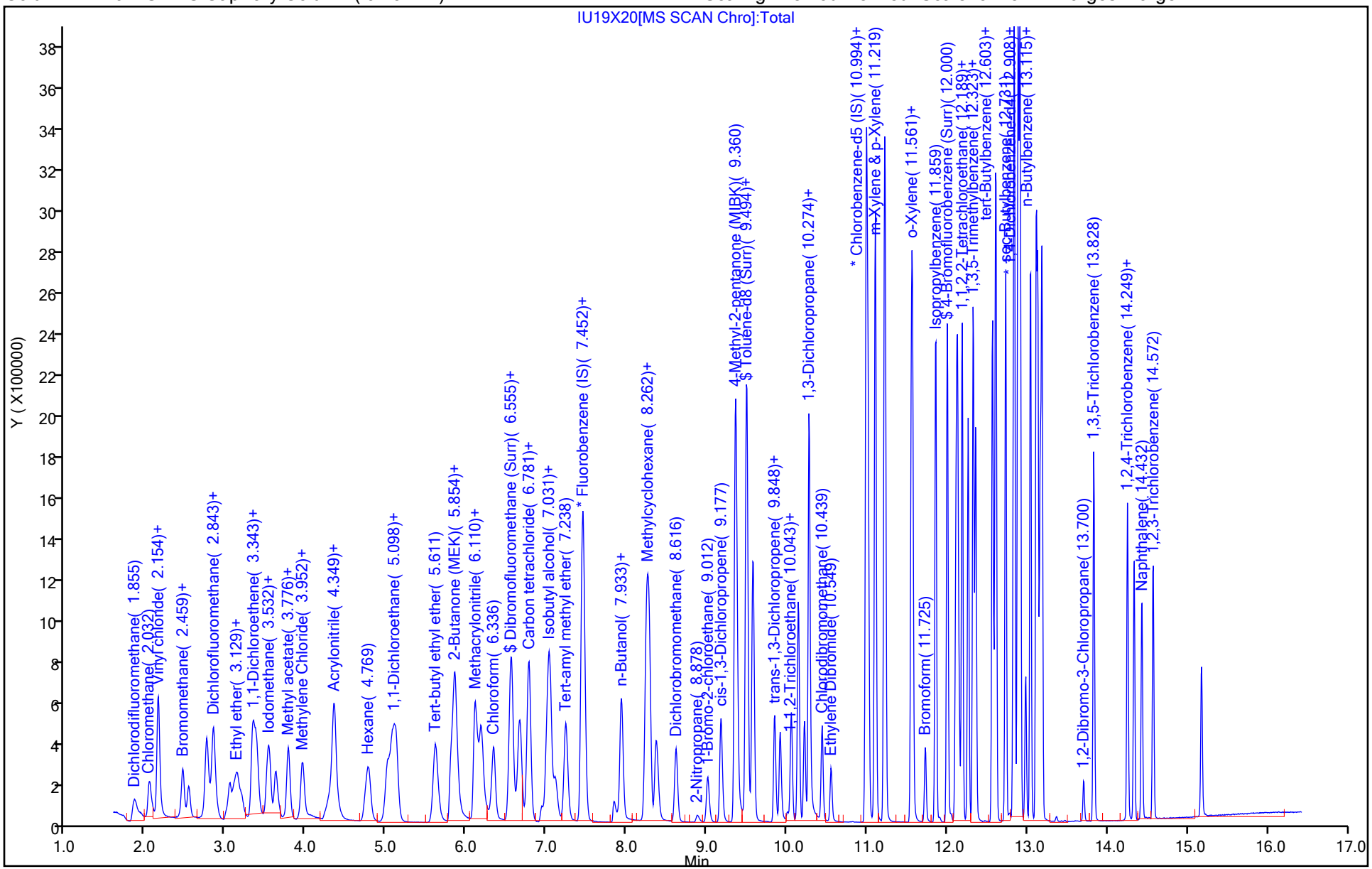
Report Date: 27-Jun-2023 12:31:31 Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X20.D

Injection Date:	19-Jun-2023 21:07:30	Instrument ID:	19930	Operator ID:	KNK41612
Lims ID:	ICV			Worklist Smp#:	21
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

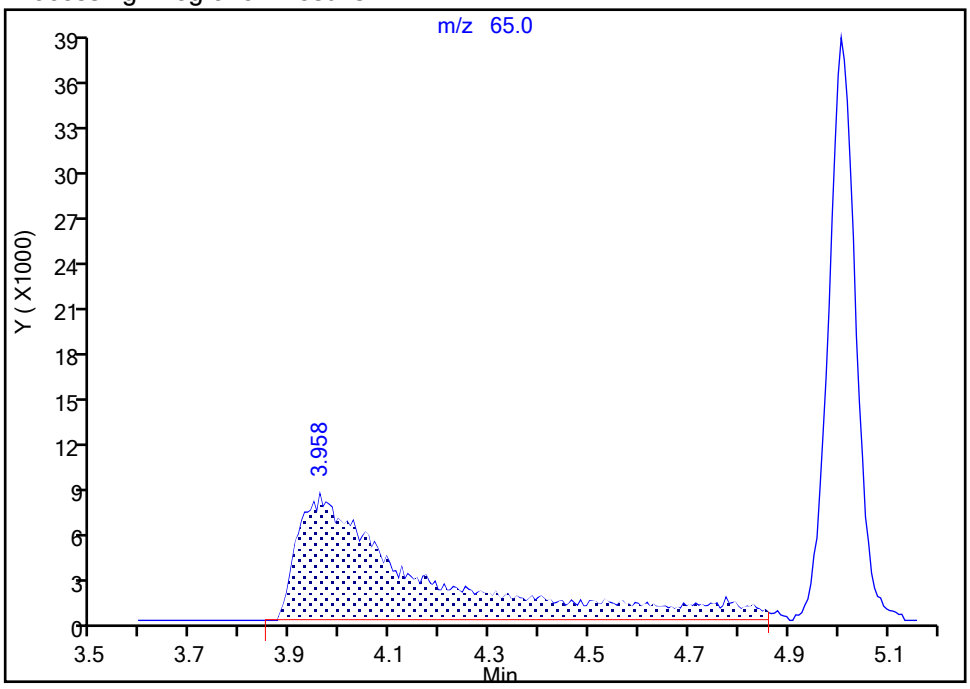
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X20.D				
Injection Date:	19-Jun-2023 21:07:30	Instrument ID:	19930		
Lims ID:	ICV				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	20	Worklist Smp#:	21
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

* 26 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

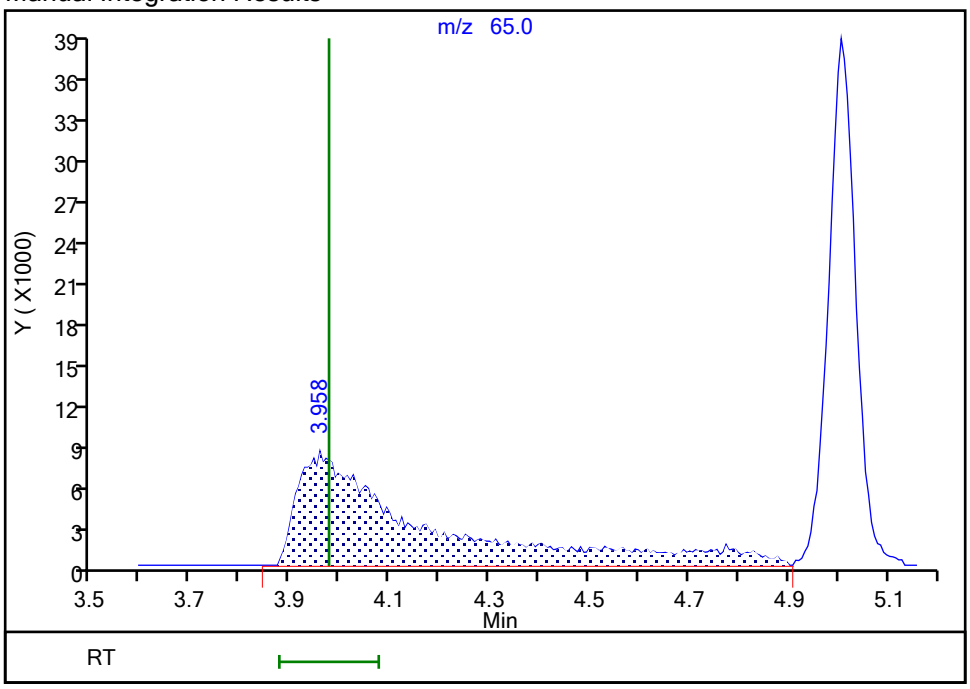
Processing Integration Results

RT: 3.96
Area: 142993
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 3.96
Area: 143904
Amount: 50.000000
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:11:25 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

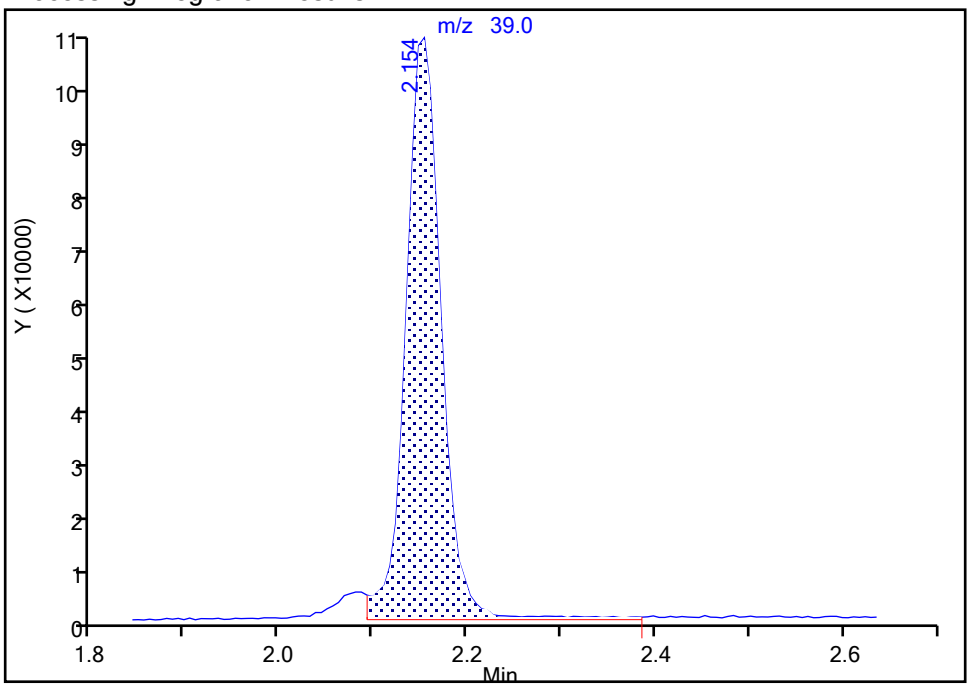
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X20.D				
Injection Date:	19-Jun-2023 21:07:30	Instrument ID:	19930		
Lims ID:	ICV				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	20	Worklist Smp#:	21
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

6 Butadiene, CAS: 106-99-0

Signal: 1

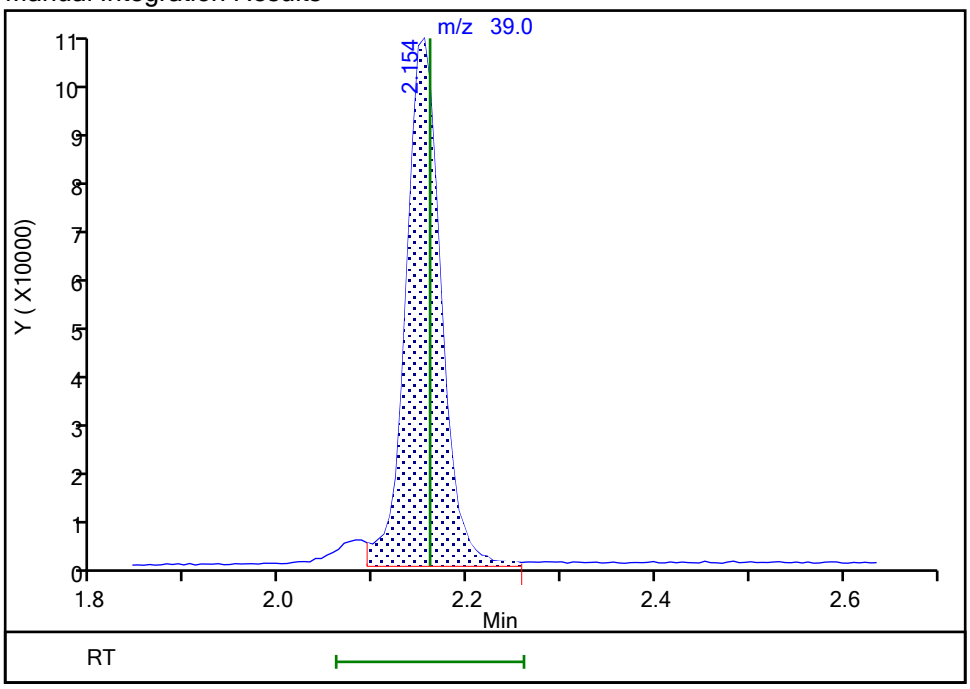
Processing Integration Results

RT: 2.15
Area: 289543
Amount: 3.723161
Amount Units: ug/l



Manual Integration Results

RT: 2.15
Area: 285710
Amount: 3.673874
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:10:59 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

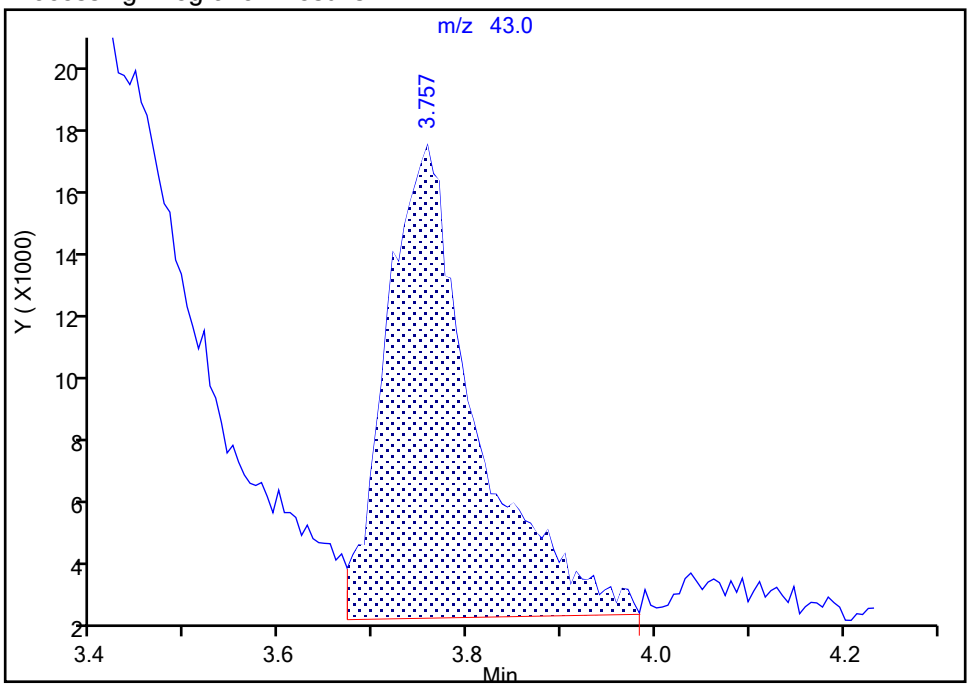
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X20.D				
Injection Date:	19-Jun-2023 21:07:30	Instrument ID:	19930		
Lims ID:	ICV				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	20	Worklist Smp#:	21
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

23 Methyl acetate, CAS: 79-20-9

Signal: 1

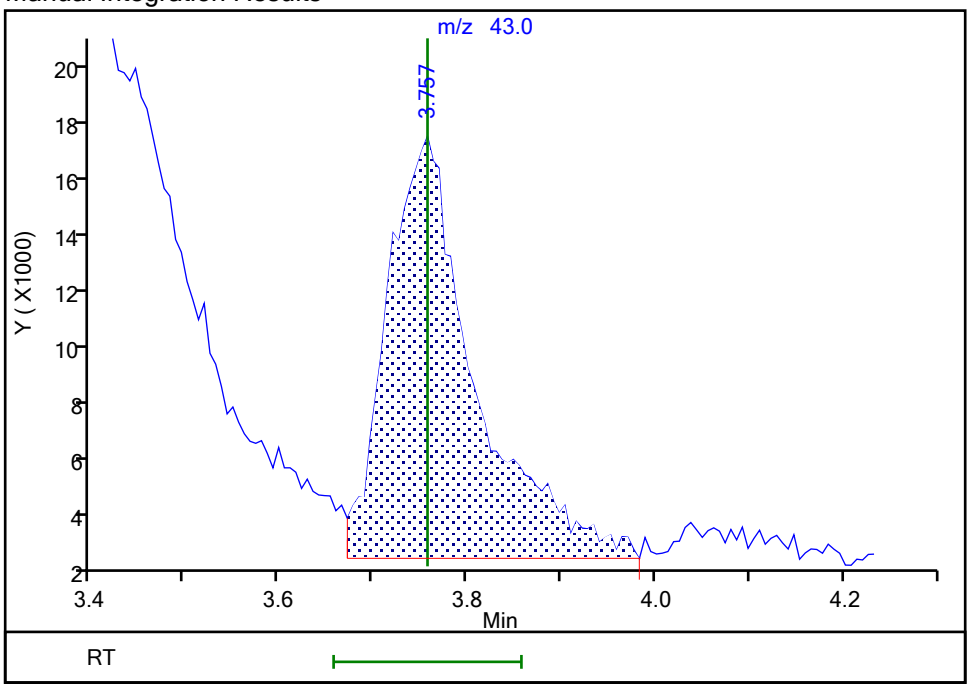
Processing Integration Results

RT: 3.76
Area: 93028
Amount: 5.511550
Amount Units: ug/l



Manual Integration Results

RT: 3.76
Area: 91621
Amount: 5.393827
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:11:17 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

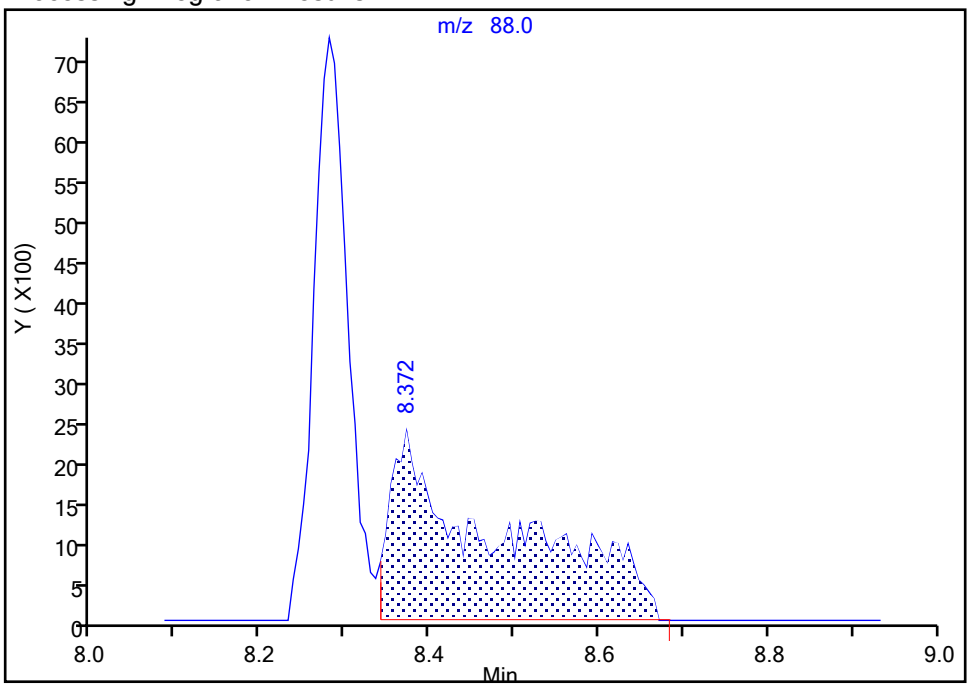
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X20.D
Injection Date: 19-Jun-2023 21:07:30 Instrument ID: 19930
Lims ID: ICV
Client ID:
Operator ID: KNK41612 ALS Bottle#: 20 Worklist Smp#: 21
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

68 1,4-Dioxane, CAS: 123-91-1

Signal: 1

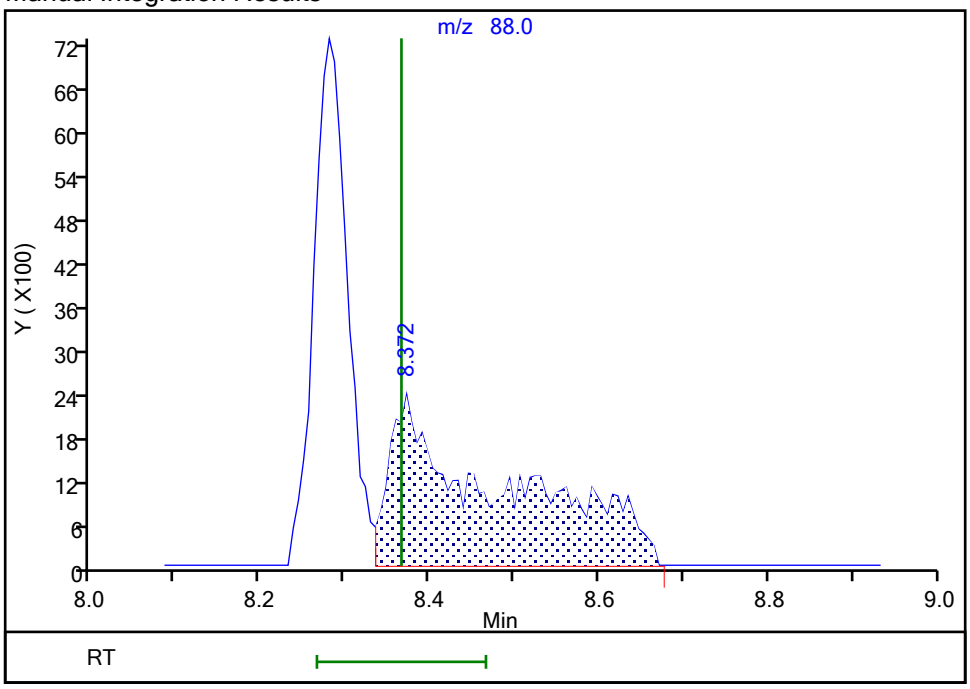
Processing Integration Results

RT: 8.37
Area: 21375
Amount: 135.6946
Amount Units: ug/l



Manual Integration Results

RT: 8.37
Area: 21568
Amount: 135.9211
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:11:47 -04:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

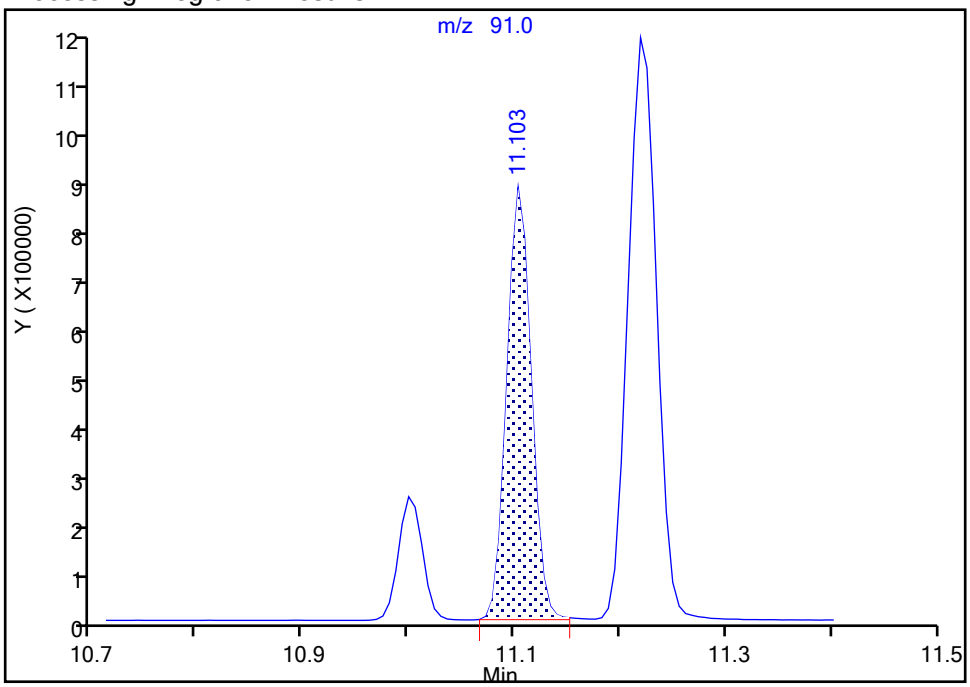
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X20.D
Injection Date: 19-Jun-2023 21:07:30 Instrument ID: 19930
Lims ID: ICV
Client ID:
Operator ID: KNK41612 ALS Bottle#: 20 Worklist Smp#: 21
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

108 1-Chlorohexane, CAS: 544-10-5

Signal: 1

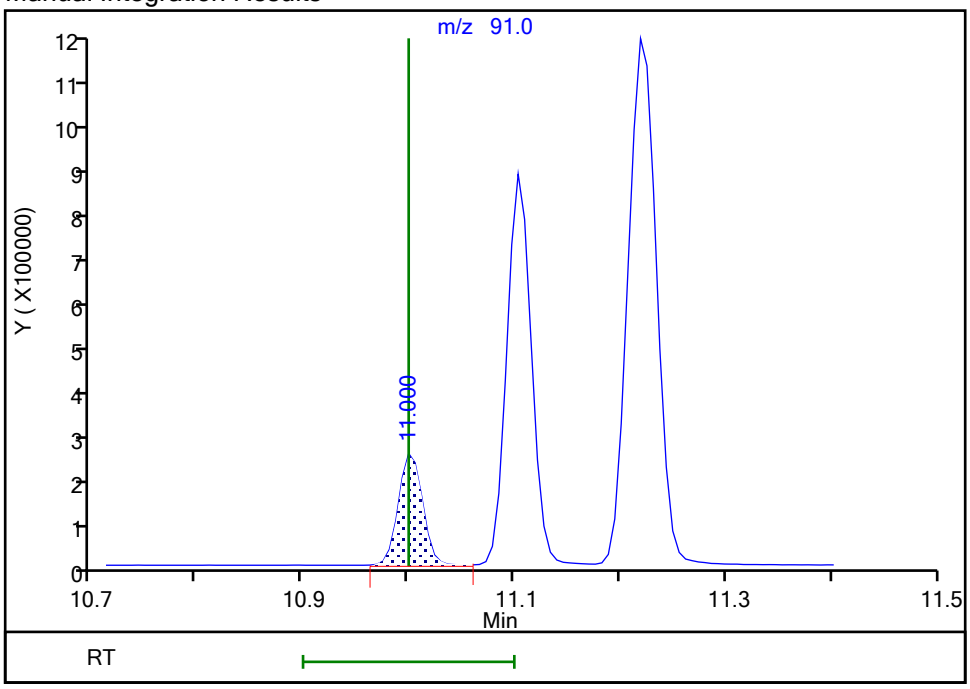
Processing Integration Results

RT: 11.10
Area: 1422236
Amount: 16.054157
Amount Units: ug/l



Manual Integration Results

RT: 11.00
Area: 397532
Amount: 4.487329
Amount Units: ug/l



Reviewer: DVW2, 22-Jun-2023 07:49:02 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

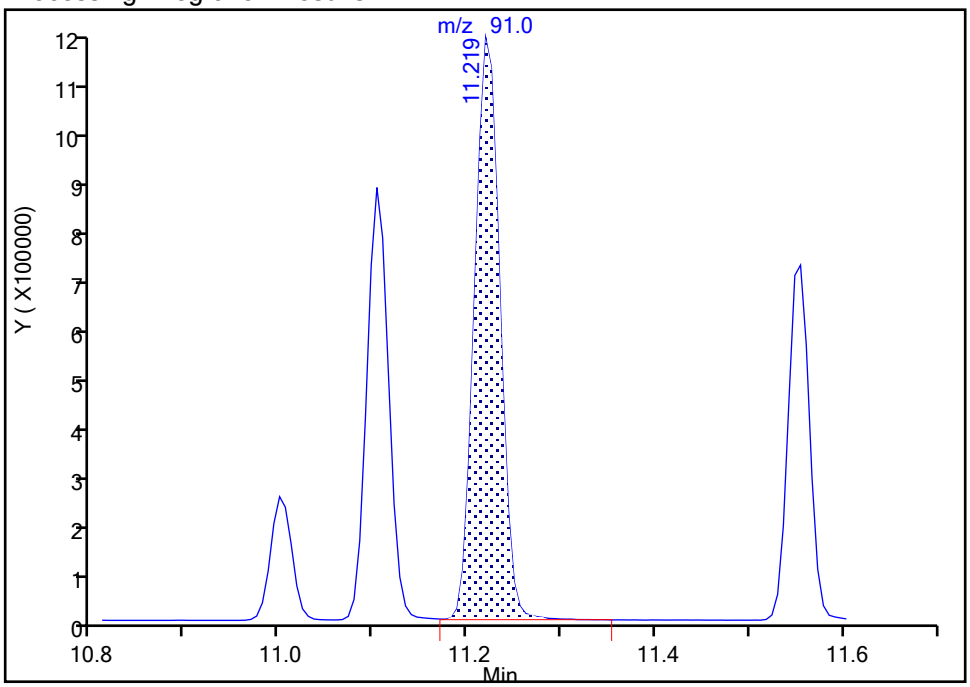
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X20.D				
Injection Date:	19-Jun-2023 21:07:30	Instrument ID:	19930		
Lims ID:	ICV				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	20	Worklist Smp#:	21
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

112 Ethylbenzene, CAS: 100-41-4

Signal: 1

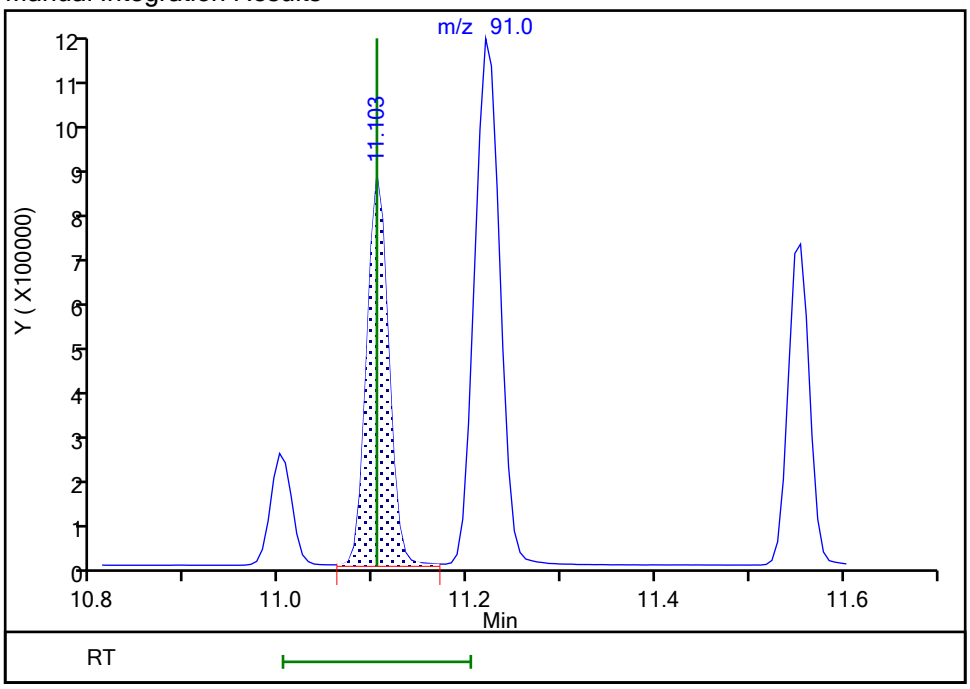
Processing Integration Results

RT: 11.22
Area: 2233460
Amount: 7.528667
Amount Units: ug/l



Manual Integration Results

RT: 11.10
Area: 1424703
Amount: 4.802466
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 15:40:53 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

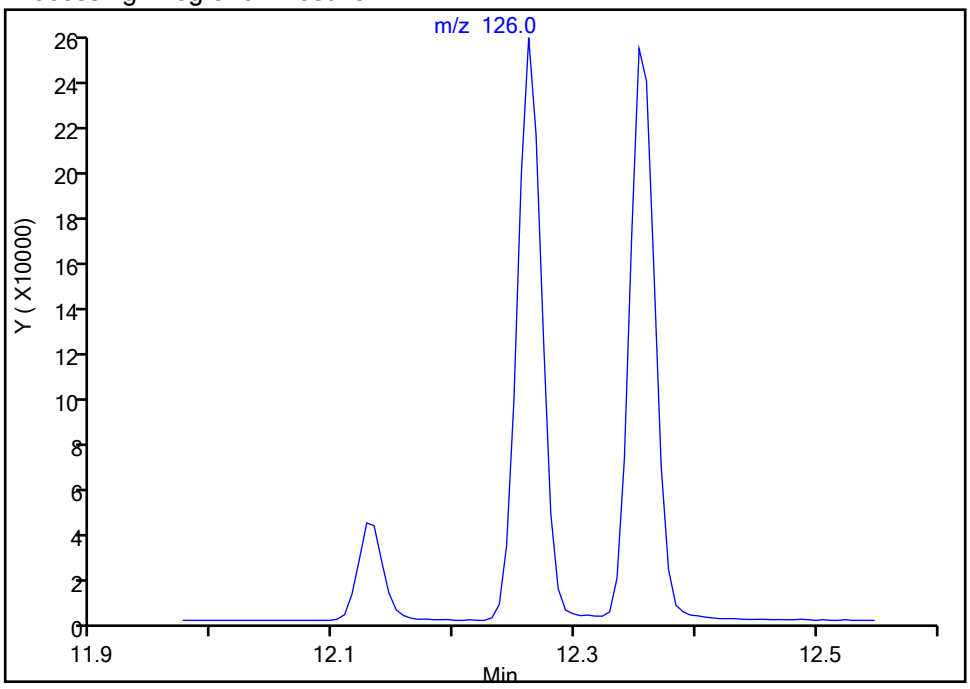
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X20.D				
Injection Date:	19-Jun-2023 21:07:30	Instrument ID:	19930		
Lims ID:	ICV				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	20	Worklist Smp#:	21
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

126 2-Chlorotoluene, CAS: 95-49-8

Signal: 1

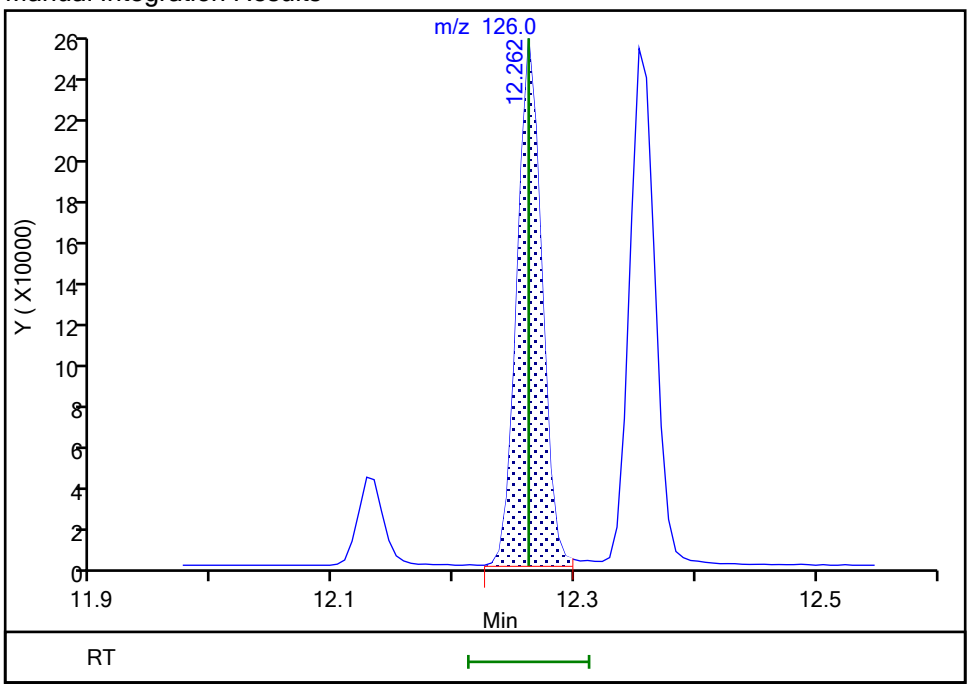
Not Detected
Expected RT: 12.26

Processing Integration Results



Manual Integration Results

RT: 12.26
Area: 366155
Amount: 4.815269
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 15:40:58 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Lab Sample ID: CCVIS 410-404020/3 Calibration Date: 08/03/2023 11:36

Instrument ID: 19930 Calib Start Date: 06/19/2023 18:19

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 06/19/2023 20:25

Lab File ID: IG03X02.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4004	0.3520	0.1000	8.79	10.0	-12.1	20.0
Chloromethane	Ave	0.4068	0.3519	0.1000	8.65	10.0	-13.5	20.0
Vinyl chloride	Ave	0.3892	0.3395	0.1000	8.72	10.0	-12.8	20.0
1,3-Butadiene	Ave	0.4073	0.3908		9.60	10.0	-4.0	20.0
Bromomethane	Ave	0.3038	0.2452	0.1000	8.07	10.0	-19.3	20.0
Chloroethane	Ave	0.2329	0.1994	0.1000	8.56	10.0	-14.4	20.0
Dichlorofluoromethane	Ave	0.6499	0.5775		8.89	10.0	-11.1	20.0
Trichlorofluoromethane	Ave	0.4955	0.4508	0.1000	9.10	10.0	-9.0	20.0
Diethyl ether	Ave	0.2046	0.1410		6.89	10.0	-31.1*	20.0
Freon 123a	Ave	0.3534	0.3477		9.84	10.0	-1.6	20.0
Acrolein	Ave	2.165	1.894		437	500	-12.5	20.0
1,1-Dichloroethene	Ave	0.2682	0.2386	0.1000	8.90	10.0	-11.0	20.0
Acetone	Ave	2.391	2.466	0.1000	103	100	3.1	20.0
1,1,2-Trichloro-1,2,2-triflu oroethane	Ave	0.2847	0.2718	0.1000	9.55	10.0	-4.5	20.0
Methyl iodide	Ave	0.5640	0.4839		8.58	10.0	-14.2	20.0
Ethyl bromide	Ave	0.2347	0.1112		4.73	9.99	-52.6*	20.0
Carbon disulfide	Ave	0.7273	0.6257	0.1000	8.60	10.0	-14.0	20.0
Methyl acetate	Ave	5.902	6.296	0.1000	10.7	10.0	6.7	20.0
Allyl chloride	Ave	0.4168	0.3817		9.16	10.0	-8.4	20.0
Methylene Chloride	Ave	0.2831	0.2686	0.1000	9.49	10.0	-5.1	20.0
t-Butyl alcohol	Ave	0.9514	0.8391		176	200	-11.8	20.0
Acrylonitrile	Ave	2.907	3.337		28.7	25.0	14.8	20.0
Methyl tertiary butyl ether	Ave	0.7360	0.6467	0.1000	8.79	10.0	-12.1	20.0
trans-1,2-Dichloroethene	Ave	0.2985	0.2639	0.1000	8.84	10.0	-11.6	20.0
n-Hexane	Ave	0.3912	0.3399		8.69	10.0	-13.1	20.0
1,1-Dichloroethane	Ave	0.5113	0.4974	0.2000	9.73	10.0	-2.7	20.0
di-Isopropyl ether	Ave	0.8397	0.8061		9.60	10.0	-4.0	20.0
2-Chloro-1,3-butadiene	Ave	0.4276	0.3913		9.15	10.0	-8.5	20.0
Ethyl t-butyl ether	Ave	0.8020	0.6973		8.69	10.0	-13.1	20.0
2-Butanone	Ave	4.608	4.687	0.1000	102	100	1.7	20.0
cis-1,2-Dichloroethene	Ave	0.3321	0.3070	0.1000	9.25	10.0	-7.5	20.0
2,2-Dichloropropane	Ave	0.4608	0.4309		9.35	10.0	-6.5	20.0
Propionitrile	Ave	1.219	1.303		214	200	6.9	20.0
Methacrylonitrile	Ave	4.809	4.745		98.7	100	-1.3	20.0
Bromochloromethane	Ave	0.1511	0.1441		9.54	10.0	-4.6	20.0
Tetrahydrofuran	Ave	1.516	1.333		43.9	50.0	-12.1	20.0
Chloroform	Ave	0.5282	0.5053	0.2000	9.57	10.0	-4.3	20.0
1,1,1-Trichloroethane	Ave	0.4933	0.4524	0.1000	9.17	10.0	-8.3	20.0
Cyclohexane	Ave	0.4674	0.4344	0.1000	9.29	10.0	-7.1	20.0
1,1-Dichloropropene	Ave	0.3927	0.3671		9.35	10.0	-6.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Lab Sample ID: CCVIS 410-404020/3 Calibration Date: 08/03/2023 11:36

Instrument ID: 19930 Calib Start Date: 06/19/2023 18:19

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 06/19/2023 20:25

Lab File ID: IG03X02.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Carbon tetrachloride	Ave	0.4394	0.4197	0.1000	9.55	10.0	-4.5	20.0
Isobutyl alcohol	Ave	0.3380	0.3251		481	500	-3.8	20.0
Benzene	Ave	1.181	1.132	0.5000	9.58	10.0	-4.2	20.0
1,2-Dichloroethane	Ave	0.3201	0.3080	0.1000	9.62	10.0	-3.8	20.0
t-Amyl methyl ether	Ave	0.7413	0.6790		9.16	10.0	-8.4	20.0
n-Heptane	Ave	0.3757	0.3494		9.30	10.0	-7.0	20.0
n-Butanol	Ave	0.2596	0.3339		1130	875	28.6*	20.0
Trichloroethene	Ave	0.3285	0.3079	0.2000	9.37	10.0	-6.3	20.0
Methylcyclohexane	Ave	0.5306	0.4811	0.1000	9.07	10.0	-9.3	20.0
1,2-Dichloropropane	Ave	0.2919	0.3038	0.1000	10.4	10.0	4.0	20.0
1,4-Dioxane	Ave	0.0551	0.0668	0.0050	606	500	21.2*	20.0
Methyl methacrylate	Ave	9.478	8.888		9.38	10.0	-6.2	20.0
Dibromomethane	Ave	0.1463	0.1461		9.99	10.0	-0.1	20.0
Bromodichloromethane	Ave	0.3795	0.3804	0.2000	10.0	10.0	0.2	20.0
2-Nitropropane	Ave	3.099	2.589		41.8	50.0	-16.5	20.0
1-Bromo-2-chloroethane	Ave	0.2977	0.2450		8.23	10.0	-17.7	20.0
cis-1,3-Dichloropropene	Ave	0.4553	0.4517	0.2000	9.92	10.0	-0.8	20.0
4-Methyl-2-pentanone	Ave	12.37	12.25	0.1000	99.1	100	-0.9	20.0
Toluene	Ave	1.014	0.8920	0.4000	8.80	10.0	-12.0	20.0
trans-1,3-Dichloropropene	Ave	0.4787	0.4575	0.1000	9.56	10.0	-4.4	20.0
Ethyl methacrylate	Ave	0.3958	0.3625		9.16	10.0	-8.4	20.0
1,1,2-Trichloroethane	Ave	0.2862	0.2650	0.1000	9.26	10.0	-7.4	20.0
Tetrachloroethene	Ave	0.5290	0.4578	0.2000	8.65	10.0	-13.5	20.0
1,3-Dichloropropane	Ave	0.4529	0.4303		9.50	10.0	-5.0	20.0
2-Hexanone	Ave	8.750	8.898	0.1000	102	100	1.7	20.0
Dibromochloromethane	Ave	0.3726	0.3603		9.67	10.0	-3.3	20.0
1,2-Dibromoethane	Ave	0.2700	0.2518	0.1000	9.33	10.0	-6.7	20.0
1-Chlorohexane	Ave	0.5902	0.4854		8.22	10.0	-17.8	20.0
Chlorobenzene	Ave	1.186	1.065	0.5000	8.97	10.0	-10.3	20.0
1,1,1,2-Tetrachloroethane	Ave	0.4228	0.3901		9.23	10.0	-7.7	20.0
Ethylbenzene	Ave	1.976	1.749	0.1000	8.85	10.0	-11.5	20.0
m&p-Xylene	Ave	0.7994	0.7083	0.1000	17.7	20.0	-11.4	20.0
o-Xylene	Ave	0.7900	0.6803	0.3000	8.61	10.0	-13.9	20.0
Styrene	Ave	1.271	1.151	0.3000	9.06	10.0	-9.4	20.0
Bromoform	Ave	0.2417	0.2358	0.1000	9.75	10.0	-2.5	20.0
Isopropylbenzene	Ave	2.049	1.775	0.1000	8.66	10.0	-13.4	20.0
1,1,2,2-Tetrachloroethane	Ave	0.5952	0.5380	0.3000	9.04	10.0	-9.6	20.0
Bromobenzene	Ave	0.8602	0.7405		8.61	10.0	-13.9	20.0
trans-1,4-Dichloro-2-butene	Ave	4.657	4.250		91.3	100	-8.7	20.0
1,2,3-Trichloropropane	Ave	0.1671	0.1485		8.88	10.0	-11.2	20.0
N-Propylbenzene	Ave	3.807	3.373		8.86	10.0	-11.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Lab Sample ID: CCVIS 410-404020/3 Calibration Date: 08/03/2023 11:36

Instrument ID: 19930 Calib Start Date: 06/19/2023 18:19

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 06/19/2023 20:25

Lab File ID: IG03X02.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chlorotoluene	Ave	0.8316	0.7182		8.64	10.0	-13.6	20.0
1,3,5-Trimethylbenzene	Ave	2.902	2.479		8.54	10.0	-14.6	20.0
4-Chlorotoluene	Ave	0.8520	0.7405		8.69	10.0	-13.1	20.0
tert-Butylbenzene	Ave	0.6973	0.5919		8.49	10.0	-15.1	20.0
Pentachloroethane	Ave	0.5393	0.4968		9.21	10.0	-7.9	20.0
1,2,4-Trimethylbenzene	Ave	2.979	2.549		8.56	10.0	-14.4	20.0
sec-Butylbenzene	Ave	3.691	3.197		8.66	10.0	-13.4	20.0
1,3-Dichlorobenzene	Ave	1.681	1.481	0.6000	8.81	10.0	-11.9	20.0
p-Isopropyltoluene	Ave	3.291	2.866		8.71	10.0	-12.9	20.0
1,4-Dichlorobenzene	Ave	1.657	1.429	0.5000	8.62	10.0	-13.8	20.0
1,2,3-Trimethylbenzene	Ave	1.347	1.147		8.52	10.0	-14.8	20.0
Benzyl chloride	Ave	0.2558	0.2533		9.90	10.0	-1.0	20.0
n-Butylbenzene	Ave	1.473	1.384		9.39	10.0	-6.1	20.0
1,2-Dichlorobenzene	Ave	1.579	1.361	0.4000	8.62	10.0	-13.8	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0973	0.0836	0.0500	8.59	10.0	-14.1	20.0
1,3,5-Trichlorobenzene	Ave	1.261	1.080		8.56	10.0	-14.4	20.0
1,2,4-Trichlorobenzene	Ave	1.014	0.8440	0.2000	8.32	10.0	-16.8	20.0
Hexachlorobutadiene	Ave	0.4941	0.4426		8.96	10.0	-10.4	20.0
Naphthalene	Ave	1.846	1.474		7.99	10.0	-20.1*	20.0
1,2,3-Trichlorobenzene	Ave	0.8491	0.7015		8.26	10.0	-17.4	20.0
Dibromofluoromethane (Surr)	Ave	0.2569	0.2593		10.1	10.0	1.0	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.0509	0.0528		10.4	10.0	3.6	20.0
Toluene-d8 (Surr)	Ave	1.286	1.246		9.69	10.0	-3.1	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4844	0.4917		10.1	10.0	1.5	20.0

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X02.D
Lims ID: CCVIS VSTD10
Client ID:
Sample Type: CCVIS
Inject. Date: 03-Aug-2023 11:36:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090530-003
Misc. Info.: CCVIS
Operator ID: knk41612 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 03-Aug-2023 13:57:40 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1684

First Level Reviewer: DVW2 Date: 03-Aug-2023 12:07:04

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1	Dichlorodifluoromethane	85	1.867	1.867	0.000	99	658716	10.0	8.79	
4	Chloromethane	50	2.056	2.056	0.000	99	658531	10.0	8.65	
5	Vinyl chloride	62	2.160	2.160	0.000	98	635267	10.0	8.72	
6	Butadiene	39	2.172	2.172	0.000	91	731384	10.0	9.60	
7	Bromomethane	94	2.477	2.477	0.000	91	458811	10.0	8.07	
8	Chloroethane	64	2.556	2.556	0.000	100	373101	10.0	8.56	
9	Dichlorofluoromethane	67	2.782	2.782	0.000	97	1080738	10.0	8.89	
10	Trichlorofluoromethane	101	2.843	2.843	0.000	98	843628	10.0	9.10	
11	Ethyl ether	59	3.062	3.062	0.000	90	263918	10.0	6.89	
13	1,2-Dichloro-1,1,2-trifluoroetha	67	3.154	3.154	0.000	90	650654	10.0	9.84	
14	Acrolein	56	3.215	3.215	0.000	99	2883827	500.0	437.3	
15	1,1-Dichloroethene	96	3.349	3.349	0.000	97	446411	10.0	8.90	
16	Acetone	43	3.379	3.379	0.000	100	751199	100.0	103.1	
17	1,1,2-Trichloro-1,2,2-trifluoroe	101	3.398	3.398	0.000	90	508638	10.0	9.55	
18	Iodomethane	142	3.538	3.538	0.000	98	905502	10.0	8.58	
19	Ethyl bromide	108	3.562	3.562	0.000	99	207892	10.0	4.73	
20	Carbon disulfide	76	3.641	3.641	0.000	99	1170835	10.0	8.60	
23	Methyl acetate	43	3.782	3.782	0.000	97	191764	10.0	10.7	M
24	3-Chloro-1-propene	41	3.800	3.800	0.000	93	714284	10.0	9.16	
25	Methylene Chloride	84	3.977	3.977	0.000	91	502634	10.0	9.49	
* 26	t-Butyl alcohol-d10 (IS)	65	3.983	3.983	0.000	97	152302	50.0	50.0	M
27	2-Methyl-2-propanol	59	4.099	4.099	0.000	99	511168	200.0	176.4	
28	Acrylonitrile	53	4.294	4.294	0.000	99	254145	25.0	28.7	
29	Methyl tert-butyl ether	73	4.361	4.361	0.000	95	1210152	10.0	8.79	
30	trans-1,2-Dichloroethene	96	4.373	4.373	0.000	99	493873	10.0	8.84	
31	Hexane	57	4.794	4.794	0.000	91	635981	10.0	8.69	
32	1,1-Dichloroethane	63	5.031	5.031	0.000	96	930695	10.0	9.73	
35	Isopropyl ether	45	5.092	5.092	0.000	96	1508506	10.0	9.60	
36	2-Chloro-1,3-butadiene	53	5.141	5.141	0.000	89	732277	10.0	9.15	
37	Tert-butyl ethyl ether	59	5.629	5.629	0.000	97	1304886	10.0	8.69	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
38 2-Butanone (MEK)	43	5.830	5.830	0.000	99	1427773	100.0	101.7	
39 cis-1,2-Dichloroethene	96	5.867	5.867	0.000	81	574554	10.0	9.25	
40 2,2-Dichloropropane	77	5.879	5.879	0.000	86	806325	10.0	9.35	
43 Propionitrile	54	5.915	5.915	0.000	99	793650	200.0	213.8	
45 Methacrylonitrile	67	6.141	6.141	0.000	92	1445244	100.0	98.7	
46 Chlorobromomethane	128	6.196	6.196	0.000	90	269560	10.0	9.54	
47 Tetrahydrofuran	71	6.214	6.214	0.000	83	202976	50.0	43.9	
48 Chloroform	83	6.354	6.354	0.000	93	945638	10.0	9.57	
$ 49 Dibromofluoromethane (Surr)	113	6.568	6.568	0.000	94	485315	10.0	10.1	
50 1,1,1-Trichloroethane	97	6.580	6.580	0.000	98	846624	10.0	9.17	
51 Cyclohexane	56	6.677	6.677	0.000	89	812901	10.0	9.29	
54 Carbon tetrachloride	117	6.793	6.793	0.000	96	785409	10.0	9.55	
53 1,1-Dichloropropene	75	6.793	6.793	0.000	96	686989	10.0	9.35	
55 Isobutyl alcohol	41	6.952	6.952	0.000	94	495161	500.0	481.0	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.025	7.025	0.000	86	98766	10.0	10.4	
57 Benzene	78	7.055	7.055	0.000	96	2117393	10.0	9.58	
58 1,2-Dichloroethane	62	7.122	7.122	0.000	97	576435	10.0	9.62	
60 Tert-amyl methyl ether	73	7.250	7.250	0.000	99	1270565	10.0	9.16	
* 61 Fluorobenzene (IS)	96	7.458	7.458	0.000	97	1871286	10.0	10.0	
62 n-Heptane	43	7.476	7.476	0.000	91	653852	10.0	9.30	
63 n-Butanol	56	7.836	7.836	0.000	88	890024	875.0	1125.6	
64 Trichloroethene	95	7.939	7.939	0.000	96	576227	10.0	9.37	
65 Methylcyclohexane	83	8.250	8.250	0.000	92	900365	10.0	9.07	
66 1,2-Dichloropropane	63	8.269	8.269	0.000	97	568416	10.0	10.4	
67 Methyl methacrylate	69	8.366	8.366	0.000	89	270739	10.0	9.38	
68 1,4-Dioxane	88	8.366	8.366	0.000	35	101771	500.0	606.0	M
69 Dibromomethane	93	8.378	8.378	0.000	92	273438	10.0	9.99	
71 Dichlorobromomethane	83	8.616	8.616	0.000	99	711781	10.0	10.0	
72 2-Nitropropane	41	8.878	8.878	0.000	98	394270	50.0	41.8	
75 1-Bromo-2-chloroethane	63	9.012	9.012	0.000	98	458552	10.0	8.23	
76 cis-1,3-Dichloropropene	75	9.177	9.177	0.000	97	845251	10.0	9.92	
77 4-Methyl-2-pentanone (MIBK)	43	9.354	9.354	0.000	96	3731905	100.0	99.1	
$ 78 Toluene-d8 (Surr)	98	9.494	9.494	0.000	93	1986464	10.0	9.69	
79 Toluene	92	9.573	9.573	0.000	98	1422341	10.0	8.80	
97 trans-1,3-Dichloropropene	75	9.841	9.841	0.000	91	729551	10.0	9.56	
99 Ethyl methacrylate	69	9.908	9.908	0.000	89	578042	10.0	9.16	
100 1,1,2-Trichloroethane	97	10.049	10.049	0.000	90	422609	10.0	9.26	
101 Tetrachloroethene	166	10.140	10.140	0.000	98	729918	10.0	8.65	
102 1,3-Dichloropropane	76	10.213	10.213	0.000	89	686113	10.0	9.50	
103 2-Hexanone	43	10.268	10.268	0.000	96	2710276	100.0	101.7	
105 Chlorodibromomethane	129	10.433	10.433	0.000	89	574557	10.0	9.67	
106 Ethylene Dibromide	107	10.542	10.542	0.000	99	401485	10.0	9.33	
* 107 Chlorobenzene-d5 (IS)	117	10.981	10.981	0.000	84	1594473	10.0	10.0	
108 1-Chlorohexane	91	10.994	10.994	0.000	96	774010	10.0	8.22	
109 Chlorobenzene	112	11.006	11.006	0.000	96	1697786	10.0	8.97	
111 1,1,1,2-Tetrachloroethane	131	11.091	11.091	0.000	96	622077	10.0	9.23	
112 Ethylbenzene	91	11.097	11.097	0.000	98	2788806	10.0	8.85	
113 m-Xylene & p-Xylene	106	11.213	11.213	0.000	93	2258684	20.0	17.7	
114 o-Xylene	106	11.542	11.542	0.000	96	1084754	10.0	8.61	
115 Styrene	104	11.561	11.561	0.000	95	1835998	10.0	9.06	
116 Bromoform	173	11.719	11.719	0.000	99	375907	10.0	9.75	
117 Isopropylbenzene	105	11.847	11.847	0.000	95	2830670	10.0	8.66	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 120 4-Bromofluorobenzene (Surr)	95	11.987	11.987	0.000	96	784025	10.0	10.1	
121 1,1,2,2-Tetrachloroethane	83	12.091	12.091	0.000	93	541861	10.0	9.04	
122 Bromobenzene	156	12.103	12.103	0.000	94	745761	10.0	8.61	
123 trans-1,4-Dichloro-2-butene	53	12.115	12.115	0.000	92	1294711	100.0	91.3	
124 1,2,3-Trichloropropane	110	12.140	12.140	0.000	81	149514	10.0	8.88	
125 N-Propylbenzene	91	12.176	12.176	0.000	98	3397109	10.0	8.86	
126 2-Chlorotoluene	126	12.249	12.249	0.000	98	723348	10.0	8.64	
127 1,3,5-Trimethylbenzene	105	12.317	12.317	0.000	94	2496223	10.0	8.54	
128 4-Chlorotoluene	126	12.347	12.347	0.000	96	745755	10.0	8.69	
129 tert-Butylbenzene	134	12.554	12.554	0.000	92	596150	10.0	8.49	
130 Pentachloroethane	167	12.585	12.585	0.000	94	500341	10.0	9.21	
131 1,2,4-Trimethylbenzene	105	12.597	12.597	0.000	96	2567427	10.0	8.56	
132 sec-Butylbenzene	105	12.719	12.719	0.000	94	3220149	10.0	8.66	
133 1,3-Dichlorobenzene	146	12.816	12.816	0.000	99	1491437	10.0	8.81	
134 4-Isopropyltoluene	119	12.829	12.829	0.000	97	2886308	10.0	8.71	
* 135 1,4-Dichlorobenzene-d4	152	12.871	12.871	0.000	93	1007139	10.0	10.0	
136 1,4-Dichlorobenzene	146	12.890	12.890	0.000	95	1438878	10.0	8.62	
137 1,2,3-Trimethylbenzene	120	12.902	12.902	0.000	98	1155483	10.0	8.52	
138 Benzyl chloride	126	12.969	12.969	0.000	98	255126	10.0	9.90	
139 n-Butylbenzene	92	13.121	13.121	0.000	97	1393544	10.0	9.39	
140 1,2-Dichlorobenzene	146	13.152	13.152	0.000	99	1371172	10.0	8.62	
142 1,2-Dibromo-3-Chloropropane	155	13.694	13.694	0.000	91	84209	10.0	8.59	
143 1,3,5-Trichlorobenzene	180	13.822	13.822	0.000	98	1087383	10.0	8.56	
144 1,2,4-Trichlorobenzene	180	14.243	14.243	0.000	94	849997	10.0	8.32	
145 Hexachlorobutadiene	225	14.322	14.322	0.000	95	445759	10.0	8.96	
146 Naphthalene	128	14.420	14.420	0.000	97	1484842	10.0	7.99	
147 1,2,3-Trichlorobenzene	180	14.560	14.560	0.000	96	706465	10.0	8.26	
155 2-Methylnaphthalene	142		0.000				ND	ND	
156 p-Diethylbenzene	1		0.000				ND	ND	
161 Pentane	43		0.000				ND	ND	
150 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
165 Isopropyl alcohol	45		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MSV_LL_GAS826_00162	Amount Added: 20.00	Units: uL	
MSV_LL_#1_826_00087	Amount Added: 20.00	Units: uL	
MSV_LL_#2_826_00097	Amount Added: 20.00	Units: uL	
MSV_LLcentISS_00009	Amount Added: 5.00	Units: uL	Run Reagent

Report Date: 03-Aug-2023 13:57:41 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X02.D

Injection Date: 03-Aug-2023 11:36:30 Instrument ID: 19930 Operator ID: knk41612

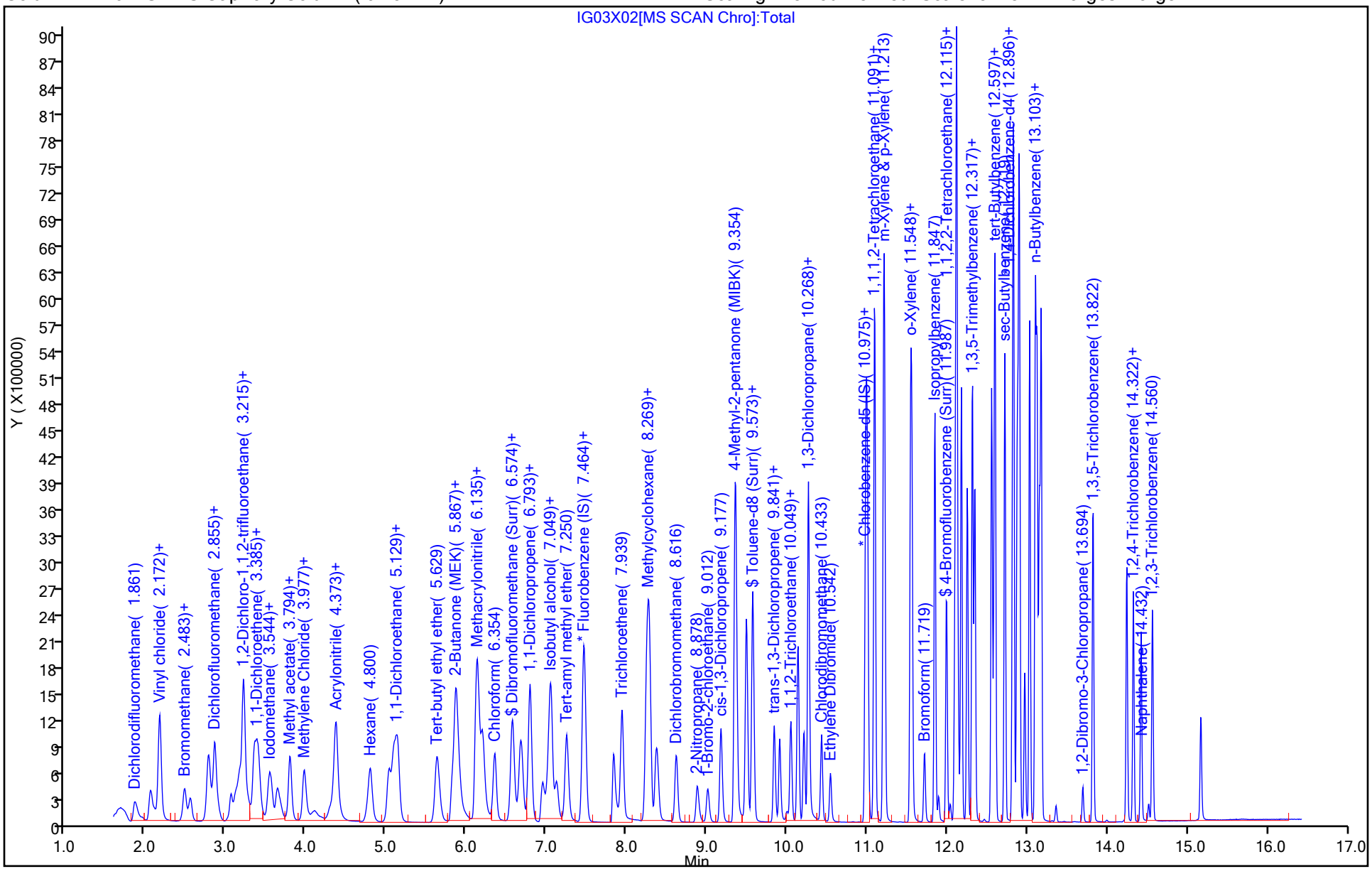
Lims ID: CCVIS VSTD10 Worklist Smp#: 3

Client ID:

Purge Vol: 25.000 mL Dil. Factor: 1.0000 ALS Bottle#: 2

Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

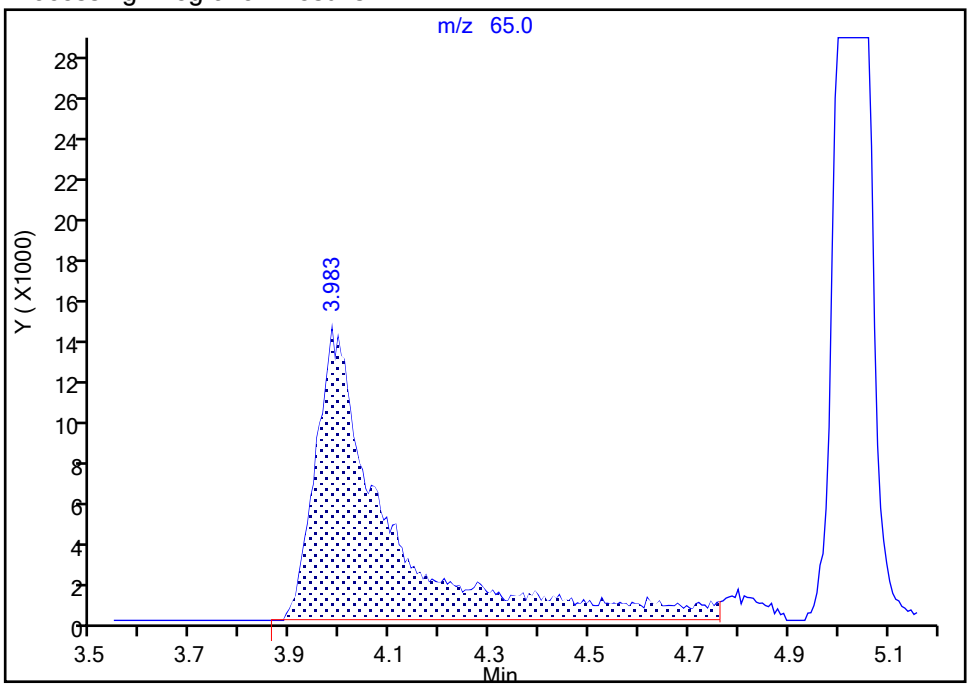
Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X02.D
Injection Date: 03-Aug-2023 11:36:30 Instrument ID: 19930
Lims ID: CCVIS VSTD10
Client ID:
Operator ID: knk41612 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 26 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

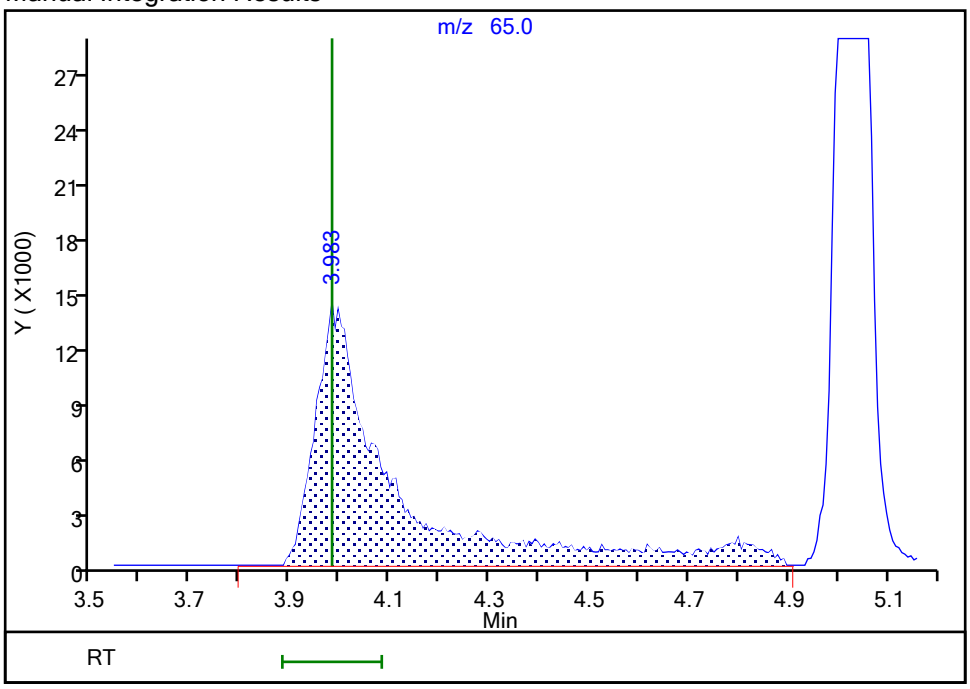
Processing Integration Results

RT: 3.98
Area: 145444
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 3.98
Area: 152302
Amount: 50.000000
Amount Units: ug/l



Reviewer: DVW2, 03-Aug-2023 12:03:43 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC

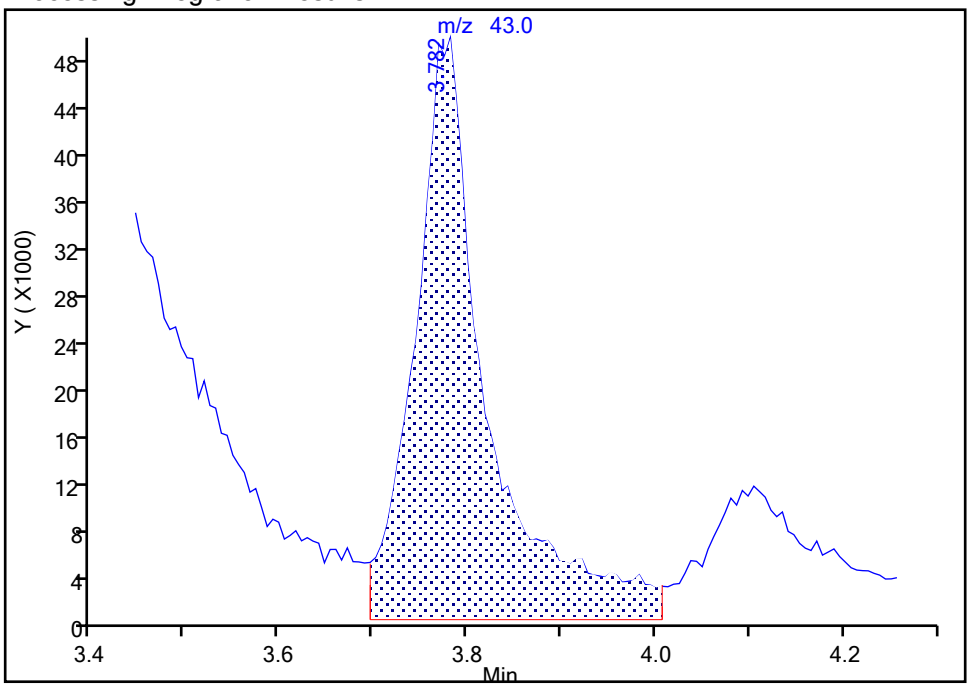
Data File:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X02.D				
Injection Date:	03-Aug-2023 11:36:30	Instrument ID:	19930		
Lims ID:	CCVIS VSTD10				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	2	Worklist Smp#:	3
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

23 Methyl acetate, CAS: 79-20-9

Signal: 1

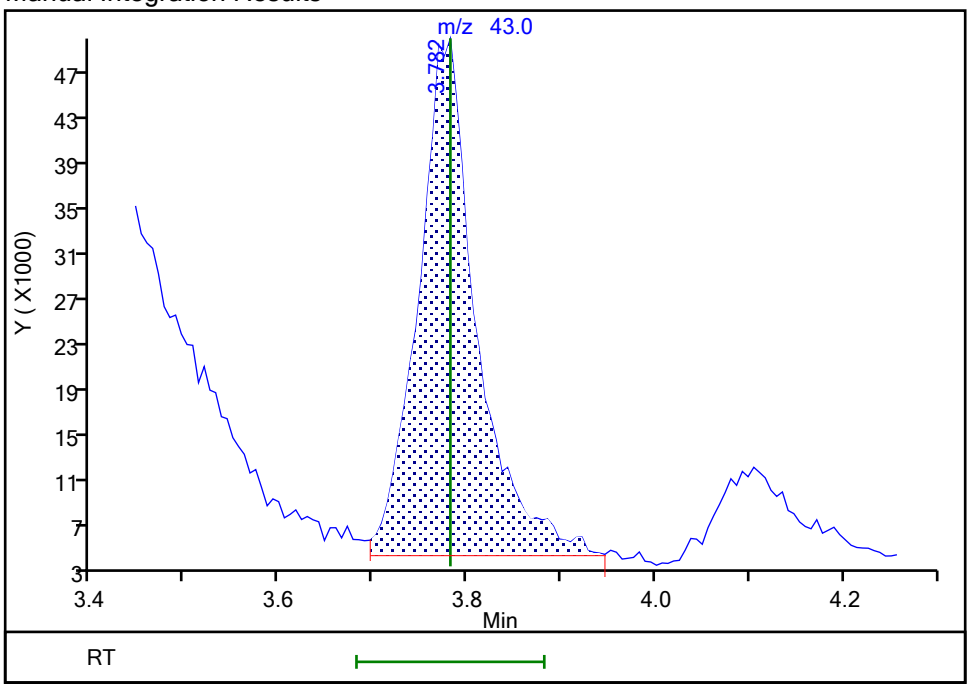
Processing Integration Results

RT: 3.78
Area: 257430
Amount: 14.994714
Amount Units: ug/l



Manual Integration Results

RT: 3.78
Area: 191764
Amount: 10.666853
Amount Units: ug/l



Reviewer: DVW2, 03-Aug-2023 12:03:33 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

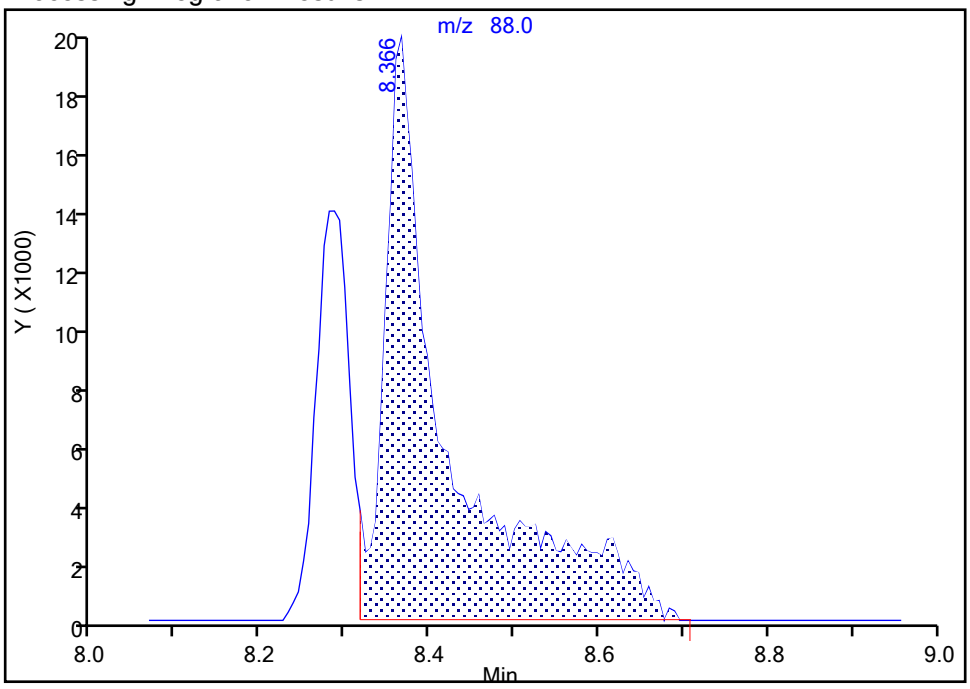
Data File:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X02.D				
Injection Date:	03-Aug-2023 11:36:30	Instrument ID:	19930		
Lims ID:	CCVIS VSTD10				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	2	Worklist Smp#:	3
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

68 1,4-Dioxane, CAS: 123-91-1

Signal: 1

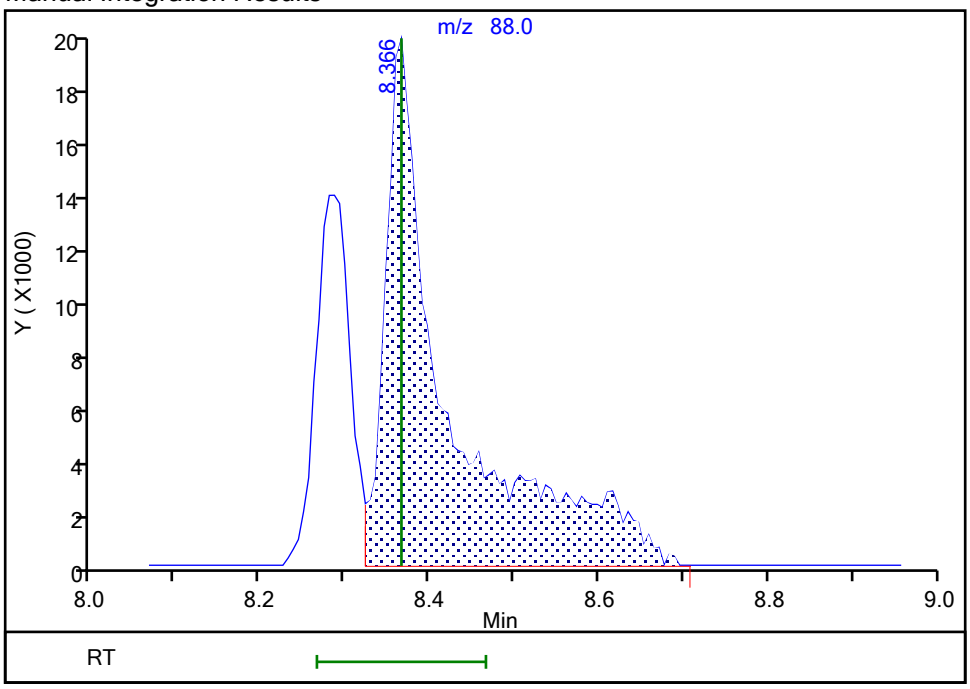
Processing Integration Results

RT: 8.37
Area: 103132
Amount: 614.0982
Amount Units: ug/l



Manual Integration Results

RT: 8.37
Area: 101771
Amount: 605.9942
Amount Units: ug/l



Reviewer: DVW2, 03-Aug-2023 12:04:20 -04:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19T01.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 19-Jun-2023 14:12:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 410-0086929-001
Misc. Info.: BFB
Operator ID: KNK41612 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 27-Jun-2023 12:31:25 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1687

First Level Reviewer: DVW2 Date: 19-Jun-2023 15:39:15

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 167 BFB	95	5.032	5.032	0.000	0	220427	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

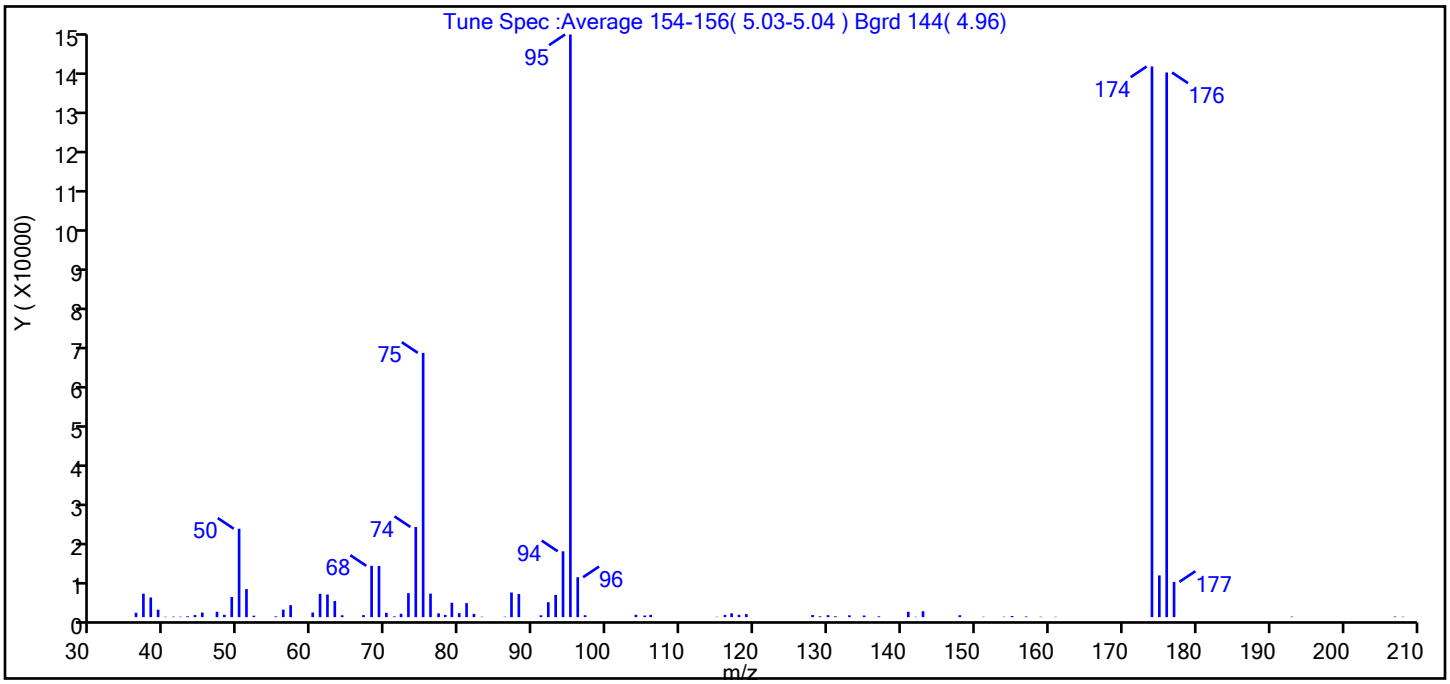
MSV_V_BFB_00012 Amount Added: 1.00 Units: uL

MS Tune Report

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19T01.D
Injection Date: 19-Jun-2023 14:12:30 Instrument ID: 19930
Lims ID: BFB
Client ID:
Operator ID: KNK41612 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Tune Method: BFB Method 8260

$ 167 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	15.2
75	30 to 60% of m/z 95	45.4
96	5 to 9% of m/z 95	6.9
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	94.5
175	5 to 9% of m/z 174	7.2 (7.6)
176	Greater than 95% but less than 101% of m/z 174	93.5 (98.9)
177	5 to 9% of m/z 176	6.1 (6.5)

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19T01.D\8260 25ml HP31.rslt\spectra.d
Injection Date: 19-Jun-2023 14:12:30
Spectrum: Tune Spec :Average 154-156(5.03-5.04) Bgrd 144(4.96)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 83

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1075	62.00	5564	87.00	6046	133.00	446
37.00	5773	63.00	3978	88.00	5692	135.00	402
38.00	4835	64.00	462	91.00	457	137.00	203
39.00	1835	67.00	503	92.00	3671	141.00	1325
40.00	99	68.00	12615	93.00	5464	142.00	90
41.00	126	69.00	12585	94.00	16190	143.00	1453
42.00	98	70.00	1063	95.00	143232	148.00	471
43.00	217	71.00	188	96.00	9818	151.00	93
44.00	513	72.00	826	97.00	481	154.00	99
45.00	1125	73.00	5902	104.00	577	155.00	280
47.00	1319	74.00	22152	105.00	405	157.00	164
48.00	566	75.00	64968	106.00	555	159.00	100
49.00	4961	76.00	5785	115.00	87	161.00	90
50.00	21736	77.00	932	116.00	551	174.00	135360
51.00	6908	78.00	545	117.00	944	175.00	10258
52.00	358	79.00	3542	118.00	572	176.00	133888
55.00	193	80.00	985	119.00	750	177.00	8666
56.00	1838	81.00	3444	128.00	520	193.00	132
57.00	2949	82.00	806	129.00	205	207.00	149
60.00	1129	83.00	96	130.00	486	208.00	96
61.00	5738	86.00	103	131.00	217		

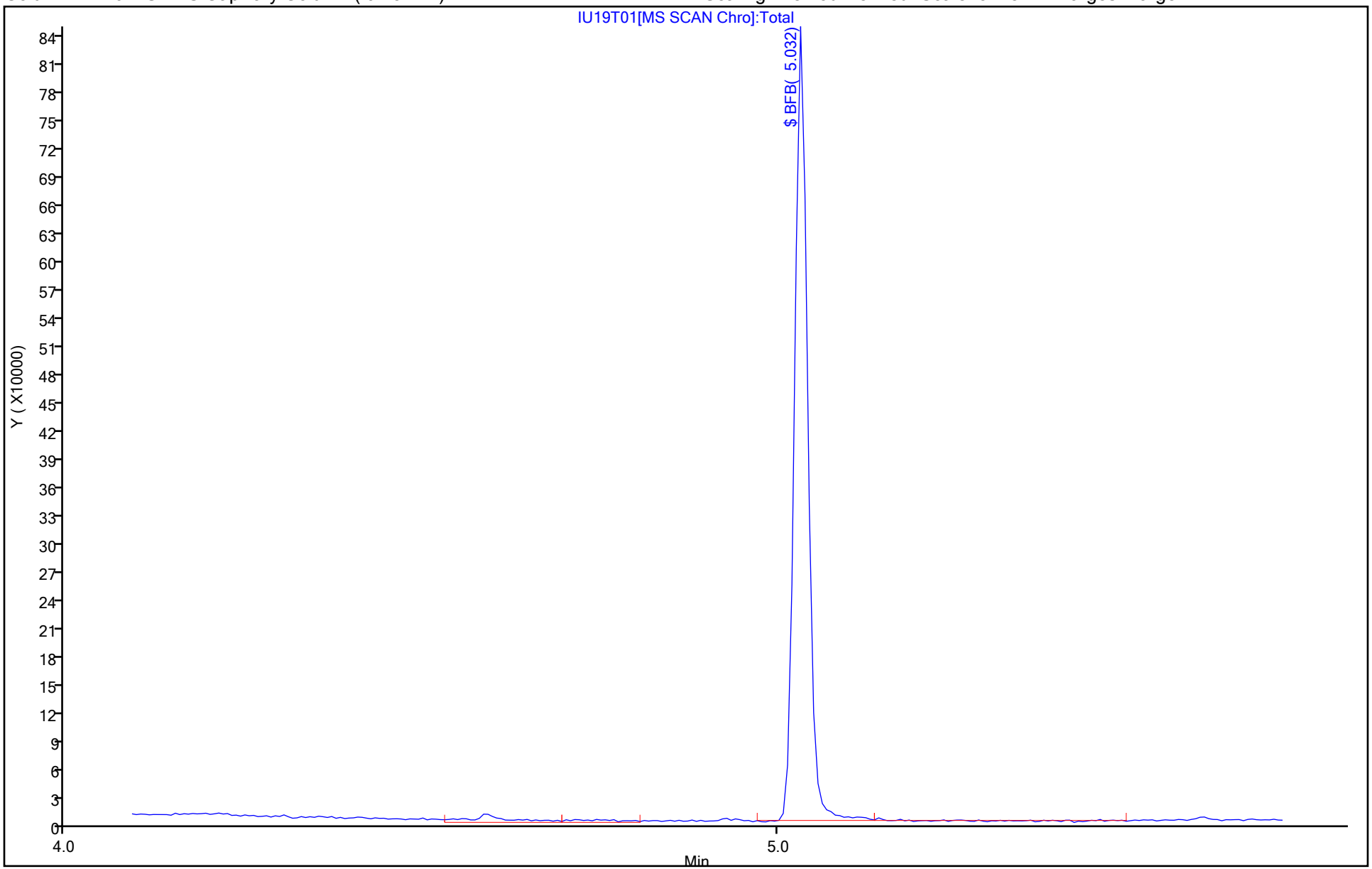
Report Date: 27-Jun-2023 12:31:26 Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19T01.D

Injection Date:	19-Jun-2023 14:12:30	Instrument ID:	19930	Operator ID:	KNK41612
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03T01.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 03-Aug-2023 11:02:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info:
Misc. Info.: BFB
Operator ID: knk41612 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 03-Aug-2023 13:58:33 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1684

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 167 BFB	95	5.026	5.026	0.000	0	172517	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

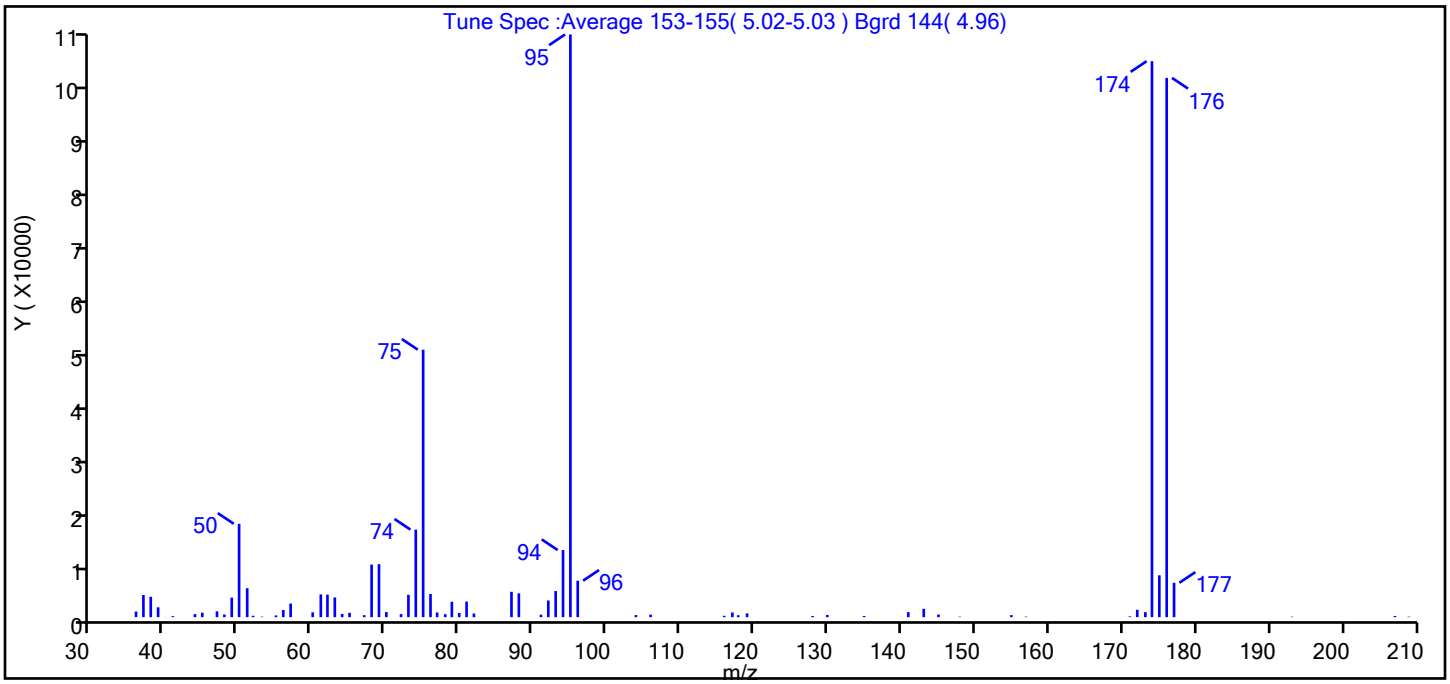
MSV_V_BFB_00012 Amount Added: 1.00 Units: uL

MS Tune Report

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03T01.D
Injection Date: 03-Aug-2023 11:02:30 Instrument ID: 19930
Lims ID: BFB
Client ID:
Operator ID: knk41612 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Tune Method: BFB Method 8260

$ 167 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	16.0
75	30 to 60% of m/z 95	45.9
96	5 to 9% of m/z 95	6.3
173	Less than 2% of m/z 174	0.9 (0.9)
174	50 to 120% of m/z 95	95.4
175	5 to 9% of m/z 174	7.2 (7.5)
176	Greater than 95% but less than 101% of m/z 174	92.5 (97.0)
177	5 to 9% of m/z 176	5.9 (6.4)

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03T01.D\8260 25ml HP31.rslt\spectra.d
Injection Date: 03-Aug-2023 11:02:30
Spectrum: Tune Spec :Average 153-155(5.02-5.03) Bgrd 144(4.96)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 72

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1038	60.00	884	80.00	762	130.00	410
37.00	4079	61.00	4200	81.00	2877	135.00	222
38.00	3758	62.00	4152	82.00	669	141.00	923
39.00	1816	63.00	3634	87.00	4683	143.00	1532
40.00	18	64.00	595	88.00	4393	145.00	480
41.00	186	65.00	795	91.00	453	148.00	85
44.00	556	67.00	370	92.00	3080	155.00	370
45.00	827	68.00	9716	93.00	4819	157.00	94
47.00	1074	69.00	9782	94.00	12395	171.00	139
48.00	485	70.00	937	95.00	107656	172.00	1363
49.00	3609	72.00	563	96.00	6737	173.00	919
50.00	17248	73.00	4127	104.00	385	174.00	102720
51.00	5352	74.00	16173	106.00	459	175.00	7727
52.00	257	75.00	49416	116.00	248	176.00	99632
53.00	87	76.00	4278	117.00	859	177.00	6349
55.00	321	77.00	865	118.00	351	193.00	85
56.00	1322	78.00	545	119.00	701	207.00	222
57.00	2507	79.00	2850	128.00	216	209.00	90

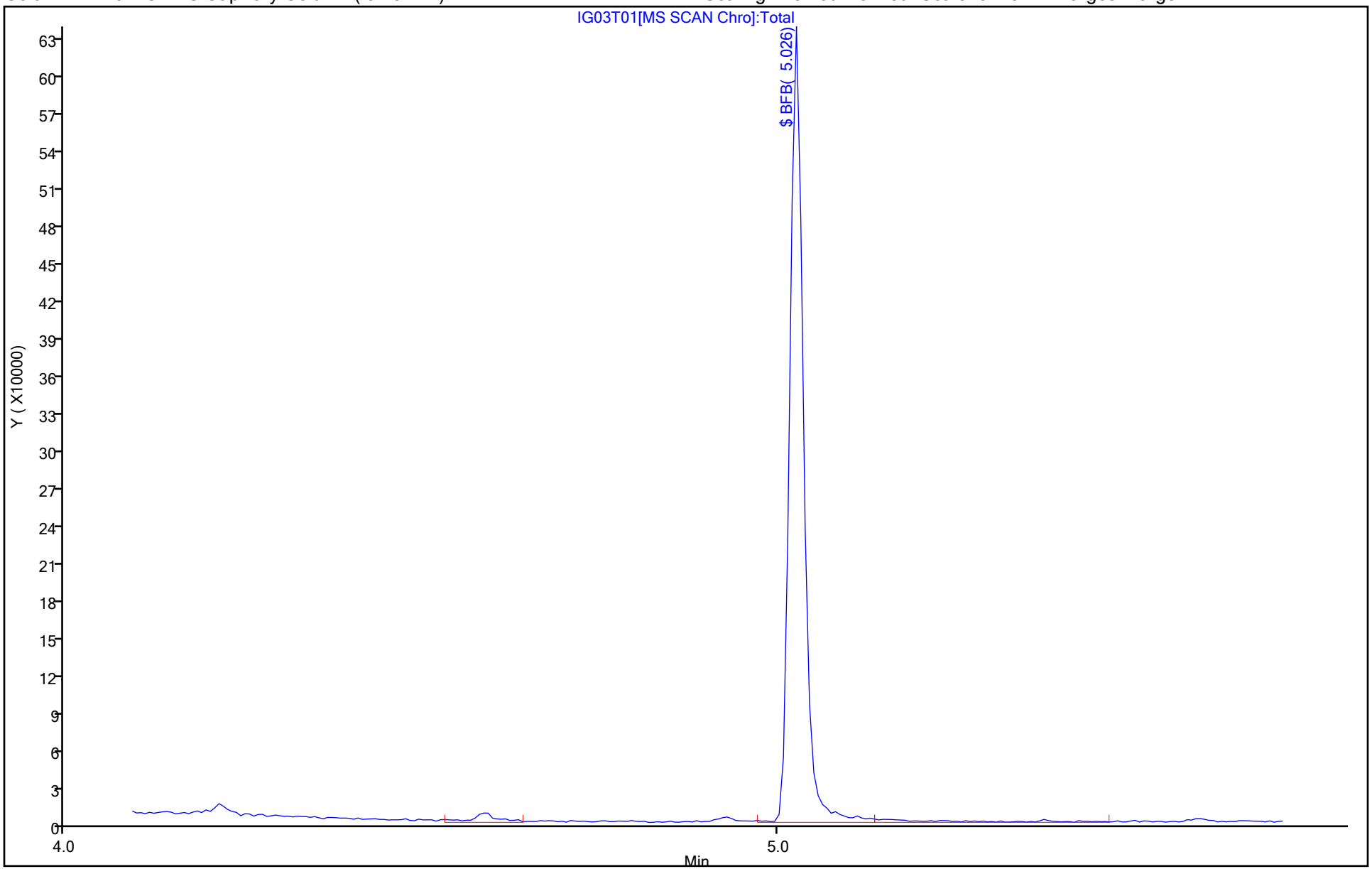
Report Date: 03-Aug-2023 13:58:33 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03T01.D

Injection Date:	03-Aug-2023 11:02:30	Instrument ID:	19930	Operator ID:	knk41612
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136514-1

SDG No.:

Client Sample ID:
Lab Sample ID: MB 410-404020/11

Matrix: Water
Lab File ID: IG03X10.D

Analysis Method: 8260D
Date Collected:

Sample wt/vol: 25(mL)
Date Analyzed: 08/03/2023 14:25

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 404020
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		1.0	
75-34-3	1,1-Dichloroethane	ND		1.0	
75-35-4	1,1-Dichloroethene	ND		1.0	
78-93-3	2-Butanone	ND		10	
71-43-2	Benzene	ND		1.0	
56-23-5	Carbon tetrachloride	ND		1.0	
75-00-3	Chloroethane	ND		1.0	
75-71-8	Dichlorodifluoromethane	ND		1.0	
60-29-7	Diethyl ether	ND		10	
100-41-4	Ethylbenzene	ND		1.0	
75-09-2	Methylene Chloride	ND		1.0	
127-18-4	Tetrachloroethene	ND		1.0	
109-99-9	Tetrahydrofuran	ND		25	
108-88-3	Toluene	ND		1.0	
79-01-6	Trichloroethene	ND		1.0	
75-69-4	Trichlorofluoromethane	ND		1.0	
75-01-4	Vinyl chloride	ND		1.0	
1330-20-7	Xylenes, Total	ND		3.0	
74-87-3	Chloromethane	ND		1.0	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	109		80-120
1868-53-7	Dibromofluoromethane (Surr)	106		80-120
460-00-4	4-Bromofluorobenzene (Surr)	95		80-120
2037-26-5	Toluene-d8 (Surr)	94		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X10.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 03-Aug-2023 14:25:30 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090530-011
Operator ID: knk41612 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 04-Aug-2023 10:56:08 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1601

First Level Reviewer: DVW2 Date: 03-Aug-2023 14:47:28

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Chlorodifluoromethane	51		1.867					ND	
1 Dichlorodifluoromethane	85		1.867					ND	
3 Dimethyl ether	45		1.922					ND	U
4 Chloromethane	50		2.056					ND	
5 Vinyl chloride	62		2.160					ND	
6 Butadiene	39		2.172					ND	7
7 Bromomethane	94		2.477					ND	
8 Chloroethane	64		2.556					ND	
9 Dichlorofluoromethane	67		2.782					ND	7
10 Trichlorofluoromethane	101		2.843					ND	
11 Ethyl ether	59		3.062					ND	
13 1,2-Dichloro-1,1,2-trifluoroetha	67		3.154					ND	
14 Acrolein	56		3.215					ND	
15 1,1-Dichloroethene	96		3.349					ND	
16 Acetone	43		3.379					ND	MU
17 1,1,2-Trichloro-1,2,2-trifluoroe	101		3.398					ND	
18 Iodomethane	142		3.538					ND	
19 Ethyl bromide	108		3.562					ND	
20 Carbon disulfide	76		3.641					ND	7
23 Methyl acetate	43		3.782					ND	7
21 Acetonitrile	41		3.788					ND	
24 3-Chloro-1-propene	41		3.800					ND	
25 Methylene Chloride	84		3.977					ND	
* 26 t-Butyl alcohol-d10 (IS)	65	3.983	3.983	0.000	27	140260	50.0	50.0	
27 2-Methyl-2-propanol	59		4.099					ND	U
28 Acrylonitrile	53		4.294					ND	
29 Methyl tert-butyl ether	73		4.361					ND	
30 trans-1,2-Dichloroethene	96		4.373					ND	
31 Hexane	57		4.794					ND	
33 Vinyl acetate	43		4.989					ND	
32 1,1-Dichloroethane	63		5.031					ND	
35 Isopropyl ether	45		5.092					ND	

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
	36 2-Chloro-1,3-butadiene	53		5.141				ND		
	37 Tert-butyl ethyl ether	59		5.629				ND		
	38 2-Butanone (MEK)	43		5.830				ND		
	39 cis-1,2-Dichloroethene	96		5.867				ND		
	40 2,2-Dichloropropane	77		5.879				ND		
	42 Ethyl acetate	43		5.891				ND		
	43 Propionitrile	54		5.915				ND		
	45 Methacrylonitrile	67		6.141				ND		
S	41 1,2-Dichloroethene, Total	100		6.155				ND		7
	46 Chlorobromomethane	128		6.196				ND		
	47 Tetrahydrofuran	71		6.214				ND		
	44 Methyl acrylate	55		6.220				ND		
	48 Chloroform	83		6.354				ND		
$	49 Dibromofluoromethane (Surr)	113	6.568	6.568	0.000	94	489777	10.0	10.6	
	50 1,1,1-Trichloroethane	97		6.580				ND		
	51 Cyclohexane	56		6.677				ND		
	54 Carbon tetrachloride	117		6.793				ND		
	53 1,1-Dichloropropene	75		6.793				ND		
	55 Isobutyl alcohol	41		6.952				ND		
	52 1-Chlorobutane	56		7.019				ND		
$	56 1,2-Dichloroethane-d4 (Surr)	102	7.019	7.025	-0.006	62	99847	10.0	10.9	
	57 Benzene	78		7.055				ND		
	58 1,2-Dichloroethane	62		7.122				ND		
	59 Isopropyl acetate	43		7.128				ND		
	60 Tert-amyl methyl ether	73		7.250				ND		
*	61 Fluorobenzene (IS)	96	7.458	7.458	0.000	99	1806795	10.0	10.0	
	62 n-Heptane	43		7.476				ND		7
	63 n-Butanol	56		7.836				ND		
	64 Trichloroethene	95		7.939				ND		
	65 Methylcyclohexane	83		8.250				ND		
	66 1,2-Dichloropropane	63		8.269				ND		
	67 Methyl methacrylate	69		8.366				ND		
	68 1,4-Dioxane	88		8.366				ND		
	69 Dibromomethane	93		8.378				ND		
	70 n-Propyl acetate	43		8.445				ND		
	71 Dichlorobromomethane	83		8.616				ND		
	72 2-Nitropropane	41		8.878				ND		
	73 2-Chloroethyl vinyl ether	63		9.006				ND		
	75 1-Bromo-2-chloroethane	63		9.012				ND		
	76 cis-1,3-Dichloropropene	75		9.177				ND		
	74 Chloroacetonitrile	75		9.226				ND		
	77 4-Methyl-2-pentanone (MIBK)	43		9.354				ND		
$	78 Toluene-d8 (Surr)	98	9.494	9.494	0.000	93	1866222	10.0	9.42	
	79 Toluene	92		9.573				ND		7
	97 trans-1,3-Dichloropropene	75		9.841				ND		
	99 Ethyl methacrylate	69		9.908				ND		
	100 1,1,2-Trichloroethane	97		10.049				ND		
S	98 1,3-Dichloropropene, Total	100		10.060				ND		7
	101 Tetrachloroethene	166		10.140				ND		
	102 1,3-Dichloropropane	76		10.213				ND		
	103 2-Hexanone	43		10.268				ND		
	104 n-Butyl acetate	43		10.408				ND		

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
105 Chlorodibromomethane	129		10.433					ND	
106 Ethylene Dibromide	107		10.542					ND	
* 107 Chlorobenzene-d5 (IS)	117	10.981	10.981	0.000	84	1540201	10.0	10.0	
108 1-Chlorohexane	91		10.994					ND	7
109 Chlorobenzene	112		11.006					ND	
111 1,1,1,2-Tetrachloroethane	131		11.091					ND	
112 Ethylbenzene	91		11.097					ND	
113 m-Xylene & p-Xylene	106		11.213					ND	
S 110 Xylenes, Total	106		11.245					ND	7
114 o-Xylene	106		11.542					ND	
115 Styrene	104		11.561					ND	
116 Bromoform	173		11.719					ND	7
117 Isopropylbenzene	105		11.847					ND	
118 cis-1,4-Dichloro-2-butene	88		11.902					ND	U
119 Cyclohexanone	55		11.938					ND	
$ 120 4-Bromofluorobenzene (Surr)	95	11.993	11.987	0.006	96	712299	10.0	9.55	
121 1,1,2,2-Tetrachloroethane	83		12.091					ND	
122 Bromobenzene	156		12.103					ND	
123 trans-1,4-Dichloro-2-butene	53		12.115					ND	
124 1,2,3-Trichloropropane	110		12.140					ND	
125 N-Propylbenzene	91		12.176					ND	
126 2-Chlorotoluene	126		12.249					ND	
127 1,3,5-Trimethylbenzene	105		12.317					ND	
128 4-Chlorotoluene	126		12.347					ND	
129 tert-Butylbenzene	134		12.554					ND	
130 Pentachloroethane	167		12.585					ND	
131 1,2,4-Trimethylbenzene	105		12.597					ND	
132 sec-Butylbenzene	105		12.719					ND	
133 1,3-Dichlorobenzene	146		12.816					ND	7
134 4-Isopropyltoluene	119		12.829					ND	
* 135 1,4-Dichlorobenzene-d4	152	12.877	12.871	0.006	93	913863	10.0	10.0	
136 1,4-Dichlorobenzene	146		12.890					ND	7
137 1,2,3-Trimethylbenzene	120		12.902					ND	7
138 Benzyl chloride	126		12.969					ND	
139 n-Butylbenzene	92		13.121					ND	
140 1,2-Dichlorobenzene	146		13.152					ND	
141 Hexachloroethane	117		13.542					ND	
142 1,2-Dibromo-3-Chloropropane	155		13.694					ND	
143 1,3,5-Trichlorobenzene	180		13.822					ND	
144 1,2,4-Trichlorobenzene	180		14.243					ND	
145 Hexachlorobutadiene	225		14.322					ND	
146 Naphthalene	128		14.420					ND	
147 1,2,3-Trichlorobenzene	180		14.560					ND	
148 Dodecane	57		0.000					ND	
151 1,1-Dichloroacetone	1		0.000					ND	
152 n-Decane	57		0.000					ND	
153 1-Bromo-3-Chloropropane	1		0.000					ND	
154 1,1-Dichloro-1-fluoroethane	1		0.000					ND	
155 2-Methylnaphthalene	142		0.000					ND	
156 p-Diethylbenzene	1		0.000					ND	
157 t-Amyl alcohol	1		0.000					ND	
158 Methylal	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
159 tert-Butyl Formate	1		0.000					ND	
160 2-Bromo-1-chloropropane	1		0.000					ND	
223 1,1,2-Trifluoroethane TIC	1		0.000					ND	
161 Pentane	43		0.000					ND	
149 2-Chloro-1,1,1-Trifluoroethane	1		0.000					ND	
150 2-ethoxy-2-methyl butane	1		0.000					ND	
165 Isopropyl alcohol	45		0.000					ND	
217 Freon 115 TIC	1		0.000					ND	
216 Ethyl ether TIC	1		0.000					ND	
215 1-Chloro-1,1-difluoroethane TIC	1		0.000					ND	
214 Dichloro-1,1,2,2-tetrafluoretha	1		0.000					ND	
213 Chlorofluoromethane TIC	1		0.000					ND	
218 Fluoromethane TIC	1		0.000					ND	
225 1,1-Dichloro-1-fluoroethane TIC	1		0.000					ND	
222 Vinyl Fluoride TIC	1		0.000					ND	
162 Chlorotrifluoroethene	1		0.000					ND	
163 Propene oxide	1		0.000					ND	
221 1,1,1-Trichloro-2,2,2-trifluoroe	1		0.000					ND	
220 1,2-Dichlorofluoroethane TIC	1		0.000					ND	
219 1,1,1-Trifluoro-2,2-dichloroetha	1		0.000					ND	
164 1-Chloropropane	1		0.000					ND	
166 Ethanol	45		3.269					ND	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

MSV_LLcentISS_00009 Amount Added: 5.00 Units: uL Run Reagent

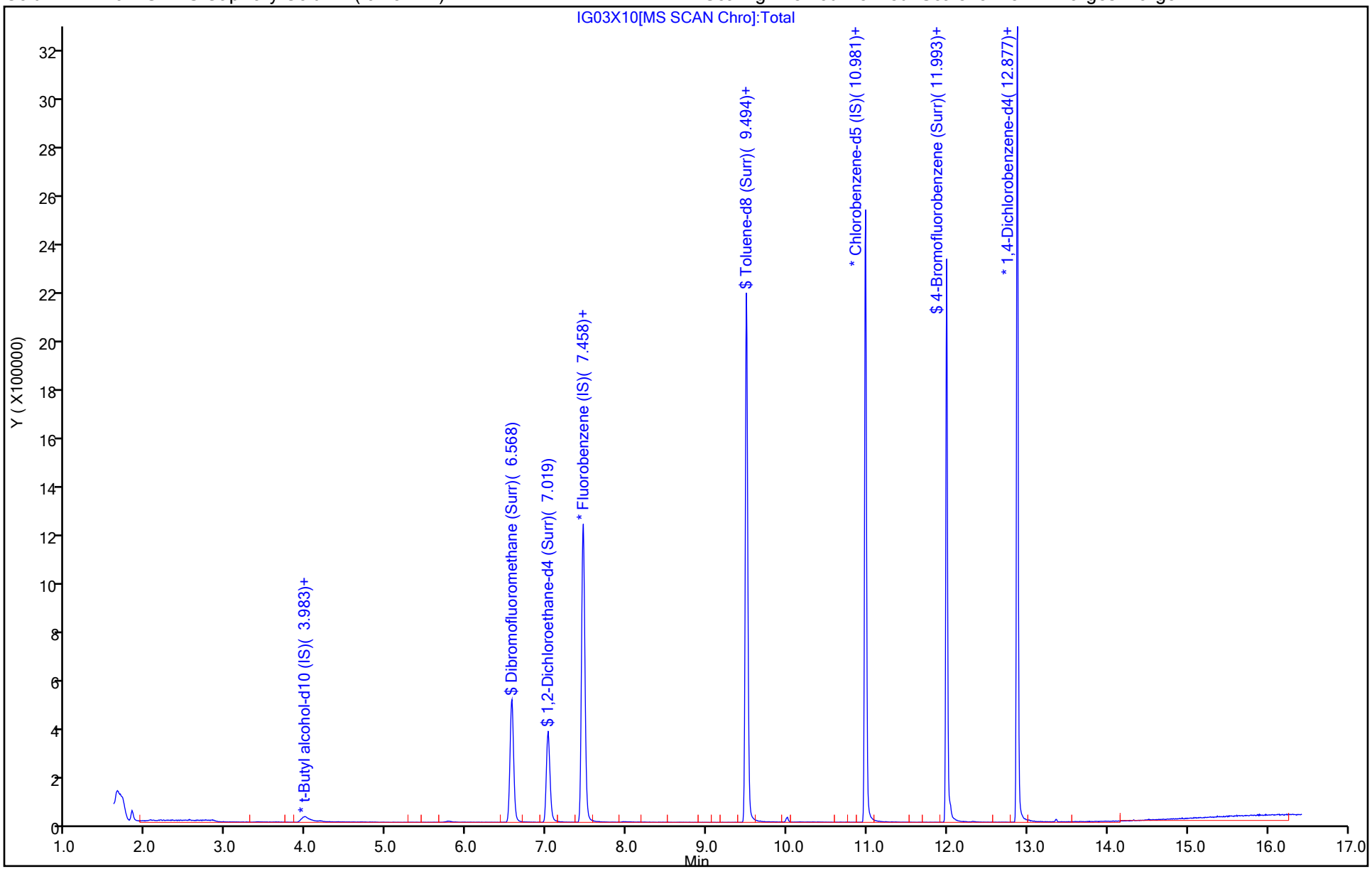
Report Date: 04-Aug-2023 10:56:09 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X10.D

Injection Date:	03-Aug-2023 14:25:30	Instrument ID:	19930	Operator ID:	knk41612
Lims ID:	MB			Worklist Smp#:	11
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X10.D				
Lims ID:	MB				
Client ID:					
Sample Type:	MB				
Inject. Date:	03-Aug-2023 14:25:30	ALS Bottle#:	10	Worklist Smp#:	11
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0090530-011				
Operator ID:	knk41612	Instrument ID:	19930		
Method:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m				
Limit Group:	MSV - 8260C_D				
Last Update:	04-Aug-2023 10:56:08	Calib Date:	19-Jun-2023 20:25:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1601				

First Level Reviewer: DVW2 Date: 03-Aug-2023 14:47:28

Compound	Amount Added	Amount Recovered	% Rec.
$ 49 Dibromofluoromethane (Surr)	10.0	10.6	105.54
$ 56 1,2-Dichloroethane-d4 (Surr)	10.0	10.9	108.51
$ 78 Toluene-d8 (Surr)	10.0	9.42	94.25
$ 120 4-Bromofluorobenzene (Surr)	10.0	9.55	95.46

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136514-1

SDG No.:

Client Sample ID:
Lab Sample ID: LCS 410-404020/5

Matrix: Water
Lab File ID: IG03X04.D

Analysis Method: 8260D
Date Collected:

Sample wt/vol: 25(mL)
Date Analyzed: 08/03/2023 12:18

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 404020
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	4.50		1.0	
75-34-3	1,1-Dichloroethane	4.63		1.0	
75-35-4	1,1-Dichloroethene	4.35		1.0	
78-93-3	2-Butanone	58.8		10	
71-43-2	Benzene	4.86		1.0	
56-23-5	Carbon tetrachloride	4.62		1.0	
75-00-3	Chloroethane	4.01		1.0	
75-71-8	Dichlorodifluoromethane	3.62		1.0	
60-29-7	Diethyl ether	3.60	J	10	
100-41-4	Ethylbenzene	4.40		1.0	
75-09-2	Methylene Chloride	4.70		1.0	
127-18-4	Tetrachloroethene	4.21		1.0	
109-99-9	Tetrahydrofuran	21.8	J	25	
108-88-3	Toluene	4.45		1.0	
79-01-6	Trichloroethene	4.55		1.0	
75-69-4	Trichlorofluoromethane	4.17		1.0	
75-01-4	Vinyl chloride	3.74		1.0	
1330-20-7	Xylenes, Total	13.2		3.0	
74-87-3	Chloromethane	3.72		1.0	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	4.38		1.0	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		80-120
1868-53-7	Dibromofluoromethane (Surr)	102		80-120
460-00-4	4-Bromofluorobenzene (Surr)	101		80-120
2037-26-5	Toluene-d8 (Surr)	98		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X04.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 03-Aug-2023 12:18:30 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090530-005
Operator ID: knk41612 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 03-Aug-2023 13:57:48 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1684

First Level Reviewer: DVW2 Date: 03-Aug-2023 12:59:05

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1	Dichlorodifluoromethane	85	1.849	1.867	-0.018	99	272864	5.00	3.62	
4	Chloromethane	50	2.044	2.056	-0.012	98	285389	5.00	3.72	
5	Vinyl chloride	62	2.142	2.160	-0.018	98	274024	5.00	3.74	
6	Butadiene	39	2.154	2.172	-0.018	91	282866	5.00	3.69	
7	Bromomethane	94	2.465	2.477	-0.012	91	209145	5.00	3.65	
8	Chloroethane	64	2.538	2.556	-0.018	100	175726	5.00	4.01	
9	Dichlorofluoromethane	67	2.770	2.782	-0.012	97	471050	5.00	3.85	
10	Trichlorofluoromethane	101	2.824	2.843	-0.019	98	388809	5.00	4.17	
11	Ethyl ether	59	3.044	3.062	-0.018	91	138851	5.01	3.60	
13	1,2-Dichloro-1,1,2-trifluoroetha	67	3.129	3.154	-0.025	91	308117	5.00	4.63	
15	1,1-Dichloroethene	96	3.343	3.349	-0.006	98	219587	5.00	4.35	
16	Acetone	43	3.373	3.379	-0.006	100	424290	62.5	55.9	
17	1,1,2-Trichloro-1,2,2-trifluoroe	101	3.385	3.398	-0.013	89	234926	5.00	4.38	
18	Iodomethane	142	3.525	3.538	-0.013	98	430663	5.00	4.05	
19	Ethyl bromide	108	3.550	3.562	-0.012	98	143002	5.06	3.23	
20	Carbon disulfide	76	3.629	3.641	-0.012	99	615529	5.00	4.49	
23	Methyl acetate	43	3.769	3.782	-0.013	97	88289	5.00	4.72	M
24	3-Chloro-1-propene	41	3.788	3.800	-0.012	94	348555	5.00	4.44	
25	Methylene Chloride	84	3.964	3.977	-0.013	91	250786	5.00	4.70	
* 26	t-Butyl alcohol-d10 (IS)	65	3.983	3.983	0.000	97	158633	50.0	50.0	M
27	2-Methyl-2-propanol	59	4.099	4.099	-0.001	99	131573	50.0	43.6	
28	Acrylonitrile	53	4.281	4.294	-0.013	99	243515	25.0	26.4	
29	Methyl tert-butyl ether	73	4.348	4.361	-0.013	95	585061	5.00	4.22	
30	trans-1,2-Dichloroethene	96	4.355	4.373	-0.018	99	243555	5.00	4.33	
31	Hexane	57	4.787	4.794	-0.007	92	299211	5.00	4.06	
32	1,1-Dichloroethane	63	5.025	5.031	-0.006	96	445699	5.00	4.63	
35	Isopropyl ether	45	5.086	5.092	-0.006	93	713843	5.00	4.51	
36	2-Chloro-1,3-butadiene	53	5.135	5.141	-0.006	89	347276	5.00	4.31	
37	Tert-butyl ethyl ether	59	5.623	5.629	-0.006	96	654331	5.00	4.33	
38	2-Butanone (MEK)	43	5.824	5.830	-0.006	99	860369	62.5	58.8	
39	cis-1,2-Dichloroethene	96	5.860	5.867	-0.007	81	296252	5.00	4.74	
40	2,2-Dichloropropane	77	5.866	5.879	-0.013	85	403335	5.00	4.65	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
43 Propionitrile	54	5.934	5.915	0.019	98	126322	37.5	32.7	
45 Methacrylonitrile	67	6.129	6.141	-0.012	90	524034	37.5	34.3	
46 Chlorobromomethane	128	6.196	6.196	0.000	91	137337	5.00	4.83	
47 Tetrahydrofuran	71	6.208	6.214	-0.006	79	105017	25.0	21.8	
48 Chloroform	83	6.348	6.354	-0.006	92	467881	5.00	4.70	
$ 49 Dibromofluoromethane (Surr)	113	6.561	6.568	-0.007	95	492450	10.0	10.2	
50 1,1,1-Trichloroethane	97	6.574	6.580	-0.006	97	417966	5.00	4.50	
51 Cyclohexane	56	6.671	6.677	-0.006	89	386908	5.00	4.39	
54 Carbon tetrachloride	117	6.787	6.793	-0.006	92	382069	5.00	4.62	
53 1,1-Dichloropropene	75	6.787	6.793	-0.006	96	350517	5.00	4.74	
55 Isobutyl alcohol	41	6.952	6.952	0.000	93	119284	125.0	111.2	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.013	7.025	-0.012	85	98559	10.0	10.3	
57 Benzene	78	7.043	7.055	-0.012	97	1080104	5.00	4.86	
58 1,2-Dichloroethane	62	7.122	7.122	0.000	97	283576	5.00	4.70	
60 Tert-amyl methyl ether	73	7.250	7.250	0.000	99	636661	5.00	4.56	
* 61 Fluorobenzene (IS)	96	7.458	7.458	0.000	98	1883476	10.0	10.0	
62 n-Heptane	43	7.470	7.476	-0.006	91	325121	5.00	4.60	
63 n-Butanol	56	7.842	7.836	0.006	90	242338	250.0	294.2	
64 Trichloroethene	95	7.933	7.939	-0.006	96	281701	5.00	4.55	
65 Methylcyclohexane	83	8.244	8.250	-0.006	93	429138	5.00	4.29	
66 1,2-Dichloropropane	63	8.268	8.269	-0.001	97	280496	5.00	5.10	
67 Methyl methacrylate	69	8.360	8.366	-0.006	90	128443	5.00	4.27	
68 1,4-Dioxane	88	8.378	8.366	0.012	31	28596	125.0	163.5	
69 Dibromomethane	93	8.378	8.378	0.000	92	136834	5.00	4.96	
71 Dichlorobromomethane	83	8.616	8.616	0.000	99	347893	5.00	4.87	
72 2-Nitropropane	41	8.890	8.878	0.012	99	36389	5.00	3.70	
75 1-Bromo-2-chloroethane	63	9.012	9.012	0.000	98	256736	5.00	4.58	
76 cis-1,3-Dichloropropene	75	9.177	9.177	0.000	97	395181	5.00	4.61	
77 4-Methyl-2-pentanone (MIBK)	43	9.354	9.354	0.000	96	2270525	62.5	57.9	
$ 78 Toluene-d8 (Surr)	98	9.494	9.494	0.000	93	1987240	10.0	9.79	
79 Toluene	92	9.573	9.573	0.000	98	712678	5.00	4.45	
97 trans-1,3-Dichloropropene	75	9.841	9.841	0.000	91	354708	5.00	4.69	
99 Ethyl methacrylate	69	9.908	9.908	0.000	89	266948	5.00	4.27	
100 1,1,2-Trichloroethane	97	10.049	10.049	0.000	90	213408	5.00	4.72	
101 Tetrachloroethene	166	10.140	10.140	0.000	97	352112	5.00	4.21	
102 1,3-Dichloropropane	76	10.213	10.213	0.000	89	343699	5.00	4.80	
103 2-Hexanone	43	10.268	10.268	0.000	96	1625353	62.5	58.5	
105 Chlorodibromomethane	129	10.433	10.433	0.000	90	278136	5.00	4.73	
106 Ethylene Dibromide	107	10.542	10.542	0.000	99	201791	5.00	4.73	
* 107 Chlorobenzene-d5 (IS)	117	10.981	10.981	0.000	84	1579324	10.0	10.0	
108 1-Chlorohexane	91	10.994	10.994	0.000	96	374340	5.00	4.02	
109 Chlorobenzene	112	11.006	11.006	0.000	96	841294	5.00	4.49	
111 1,1,1,2-Tetrachloroethane	131	11.091	11.091	0.000	96	311425	5.00	4.66	
112 Ethylbenzene	91	11.097	11.097	0.000	98	1372818	5.00	4.40	
113 m-Xylene & p-Xylene	106	11.213	11.213	0.000	93	1122544	10.0	8.89	
114 o-Xylene	106	11.542	11.542	0.000	96	537206	5.00	4.31	
115 Styrene	104	11.560	11.561	-0.001	95	900328	5.00	4.48	
116 Bromoform	173	11.719	11.719	0.000	98	181909	5.00	4.77	
117 Isopropylbenzene	105	11.847	11.847	0.000	95	1409477	5.00	4.36	
$ 120 4-Bromofluorobenzene (Surr)	95	11.993	11.987	0.006	97	772137	10.0	10.1	
121 1,1,2,2-Tetrachloroethane	83	12.091	12.091	0.000	93	278422	5.00	4.77	
122 Bromobenzene	156	12.109	12.103	0.006	95	371130	5.00	4.40	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
123 trans-1,4-Dichloro-2-butene	53	12.115	12.115	0.000	92	288940	25.0	19.6	
124 1,2,3-Trichloropropane	110	12.140	12.140	0.000	82	75861	5.00	4.63	
125 N-Propylbenzene	91	12.176	12.176	0.000	99	1633407	5.00	4.37	
126 2-Chlorotoluene	126	12.249	12.249	0.000	98	361866	5.00	4.44	
127 1,3,5-Trimethylbenzene	105	12.316	12.317	-0.001	94	1200182	5.00	4.22	
128 4-Chlorotoluene	126	12.347	12.347	0.000	96	370590	5.00	4.43	
129 tert-Butylbenzene	134	12.554	12.554	0.000	92	263018	5.00	3.85	
131 1,2,4-Trimethylbenzene	105	12.597	12.597	0.000	97	1251197	5.00	4.28	
132 sec-Butylbenzene	105	12.719	12.719	0.000	94	1560438	5.00	4.31	
133 1,3-Dichlorobenzene	146	12.816	12.816	0.000	98	710041	5.00	4.31	
134 4-Isopropyltoluene	119	12.829	12.829	-0.001	97	1386147	5.00	4.29	
* 135 1,4-Dichlorobenzene-d4	152	12.877	12.871	0.006	92	980973	10.0	10.0	
136 1,4-Dichlorobenzene	146	12.889	12.890	-0.001	96	738429	5.00	4.54	
137 1,2,3-Trimethylbenzene	120	12.902	12.902	0.000	98	551373	5.00	4.17	
138 Benzyl chloride	126	12.969	12.969	0.000	98	117978	5.00	4.70	
139 n-Butylbenzene	92	13.121	13.121	0.000	96	656792	5.00	4.54	
140 1,2-Dichlorobenzene	146	13.152	13.152	0.000	100	666688	5.00	4.30	
142 1,2-Dibromo-3-Chloropropane	155	13.694	13.694	0.000	90	41725	5.00	4.37	
143 1,3,5-Trichlorobenzene	180	13.822	13.822	0.000	98	510118	5.00	4.12	
144 1,2,4-Trichlorobenzene	180	14.243	14.243	0.000	94	409092	5.00	4.11	
145 Hexachlorobutadiene	225	14.322	14.322	0.000	96	220314	5.00	4.54	
146 Naphthalene	128	14.420	14.420	0.000	97	717525	5.00	3.96	
147 1,2,3-Trichlorobenzene	180	14.560	14.560	0.000	96	350666	5.00	4.21	
155 2-Methylnaphthalene	142		0.000				ND	ND	
156 p-Diethylbenzene	1		0.000				ND	ND	
161 Pentane	43		0.000				ND	ND	
150 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
165 Isopropyl alcohol	45		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MSV_LCS_VOC#1_00123	Amount Added:	12.50	Units: uL	
MSV_QC_Gas826_00153	Amount Added:	12.50	Units: uL	
MSV_LCS_EE_00007	Amount Added:	12.50	Units: uL	
LCS_ETBR_00006	Amount Added:	12.50	Units: uL	
MSV_LLcentISS_00009	Amount Added:	5.00	Units: uL	Run Reagent

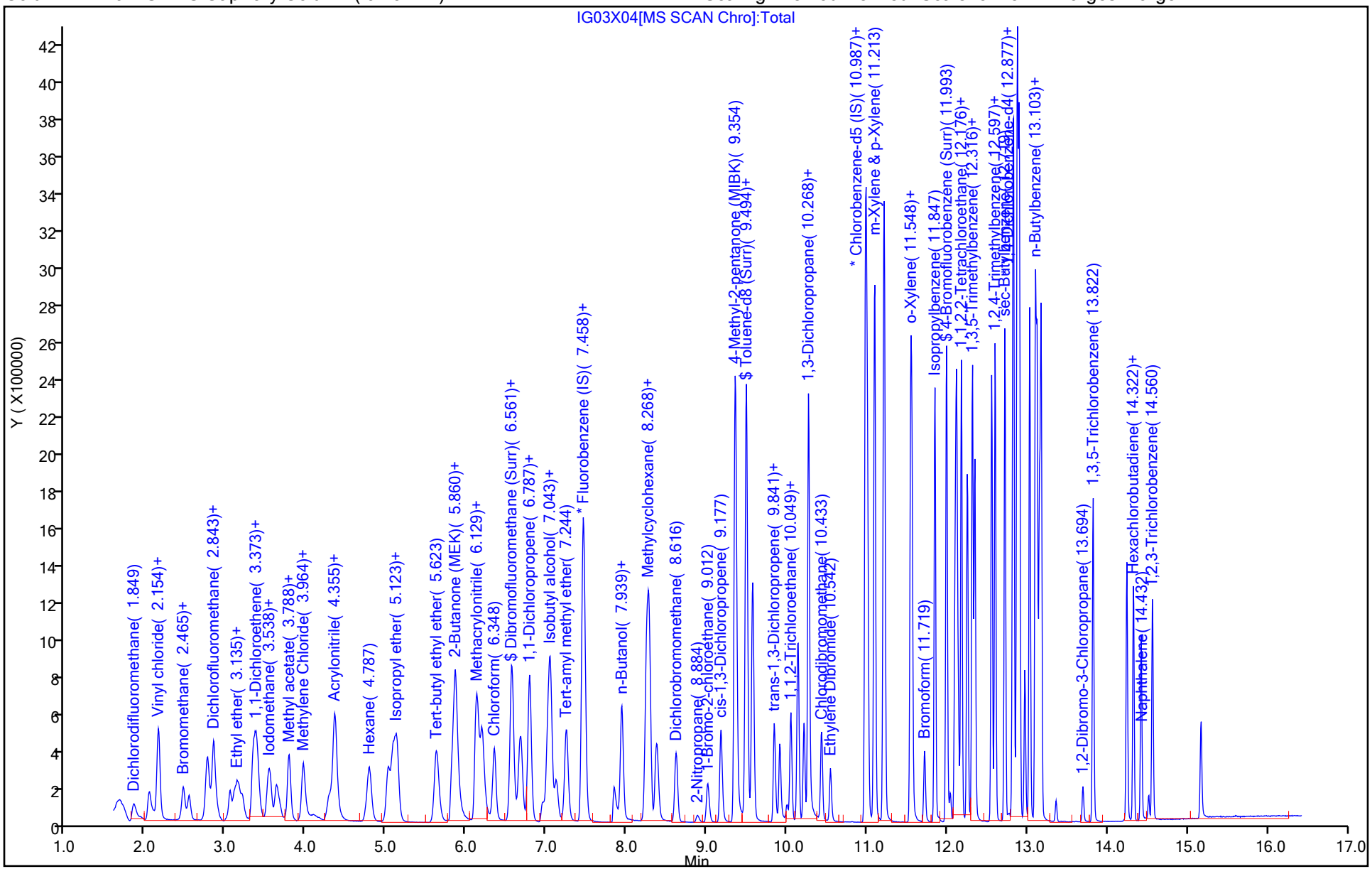
Report Date: 03-Aug-2023 13:57:51 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X04.D

Injection Date:	03-Aug-2023 12:18:30	Instrument ID:	19930	Operator ID:	knk41612
Lims ID:	LCS			Worklist Smp#:	5
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X04.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 03-Aug-2023 12:18:30 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090530-005
Operator ID: knk41612 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 03-Aug-2023 13:57:48 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1684

First Level Reviewer: DVW2 Date: 03-Aug-2023 12:59:05

Compound	Amount Added	Amount Recovered	% Rec.
$ 49 Dibromofluoromethane (Surr)	10.0	10.2	101.79
$ 56 1,2-Dichloroethane-d4 (Surr)	10.0	10.3	102.75
$ 78 Toluene-d8 (Surr)	10.0	9.79	97.87
$ 120 4-Bromofluorobenzene (Surr)	10.0	10.1	100.92

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

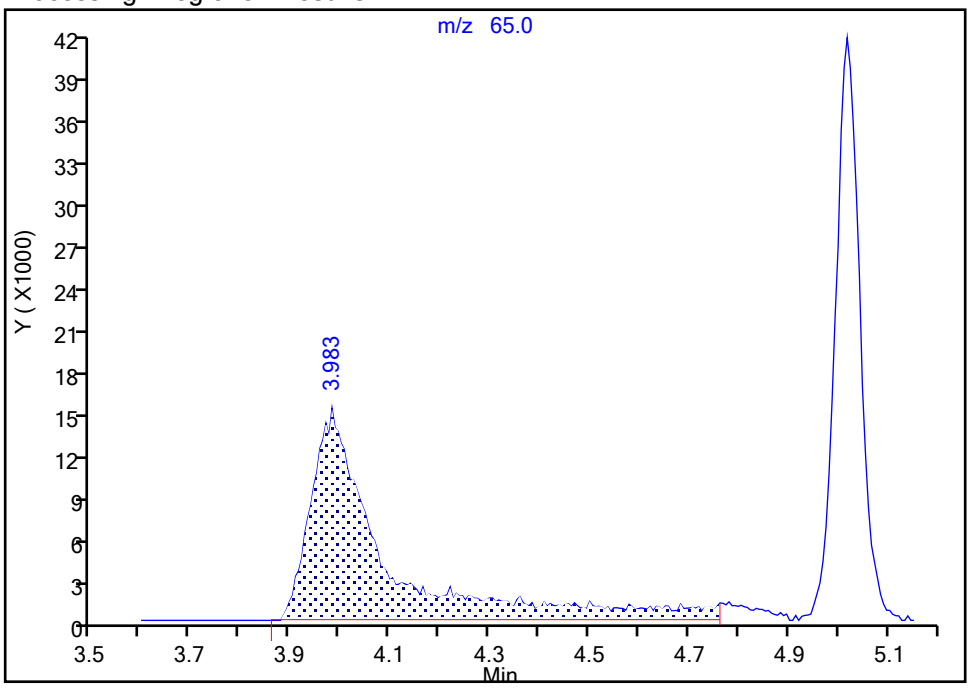
Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X04.D
Injection Date: 03-Aug-2023 12:18:30 Instrument ID: 19930
Lims ID: LCS
Client ID:
Operator ID: knk41612 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 26 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

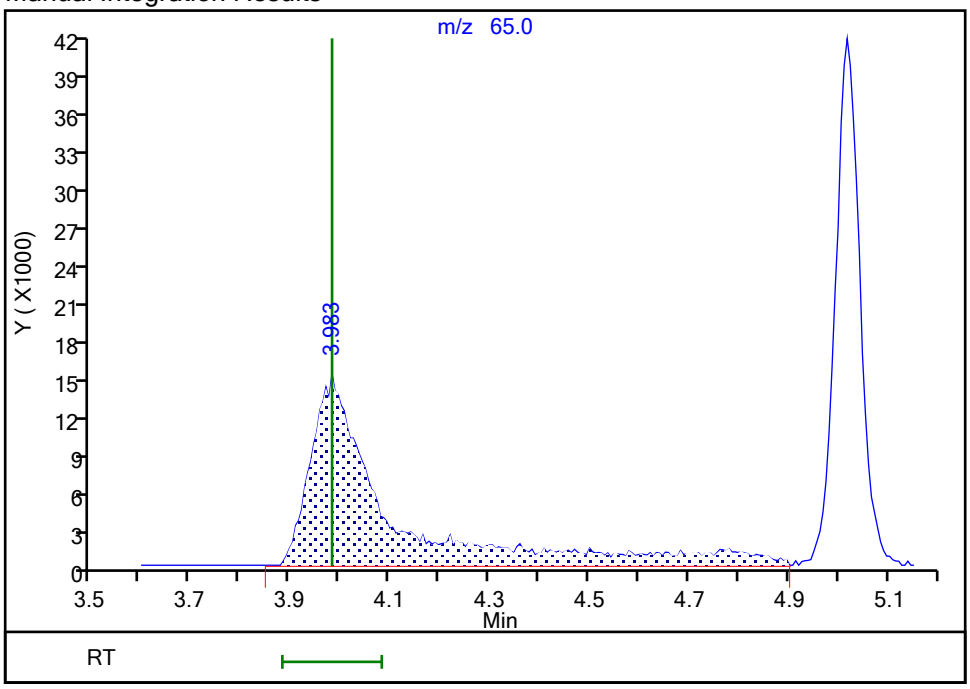
Processing Integration Results

RT: 3.98
Area: 152241
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 3.98
Area: 158633
Amount: 50.000000
Amount Units: ug/l



Reviewer: DVW2, 03-Aug-2023 12:59:00 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136514-1

SDG No.:

Client Sample ID:
Lab Sample ID: LCSD 410-404020/6

Matrix: Water
Lab File ID: IG03X05.D

Analysis Method: 8260D
Date Collected:

Sample wt/vol: 25(mL)
Date Analyzed: 08/03/2023 12:39

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 404020
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	4.95		1.0	
75-34-3	1,1-Dichloroethane	5.20		1.0	
75-35-4	1,1-Dichloroethene	4.84		1.0	
78-93-3	2-Butanone	65.5		10	
71-43-2	Benzene	5.26		1.0	
56-23-5	Carbon tetrachloride	5.03		1.0	
75-00-3	Chloroethane	4.32		1.0	
75-71-8	Dichlorodifluoromethane	3.95		1.0	
60-29-7	Diethyl ether	4.03	J	10	
100-41-4	Ethylbenzene	4.90		1.0	
75-09-2	Methylene Chloride	5.20		1.0	
127-18-4	Tetrachloroethene	4.69		1.0	
109-99-9	Tetrahydrofuran	23.8	J	25	
108-88-3	Toluene	4.95		1.0	
79-01-6	Trichloroethene	5.06		1.0	
75-69-4	Trichlorofluoromethane	4.42		1.0	
75-01-4	Vinyl chloride	4.16		1.0	
1330-20-7	Xylenes, Total	14.7		3.0	
74-87-3	Chloromethane	4.18		1.0	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	4.84		1.0	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		80-120
1868-53-7	Dibromofluoromethane (Surr)	102		80-120
460-00-4	4-Bromofluorobenzene (Surr)	101		80-120
2037-26-5	Toluene-d8 (Surr)	98		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X05.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 03-Aug-2023 12:39:30 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090530-006
Operator ID: knk41612 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 03-Aug-2023 13:57:48 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1684

First Level Reviewer: DVW2 Date: 03-Aug-2023 13:53:02

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1	Dichlorodifluoromethane	85	1.849	1.867	-0.018	99	274568	5.00	3.95	
4	Chloromethane	50	2.038	2.056	-0.018	99	295548	5.00	4.18	
5	Vinyl chloride	62	2.148	2.160	-0.012	97	281557	5.00	4.16	
6	Butadiene	39	2.160	2.172	-0.012	91	288707	5.00	4.08	
7	Bromomethane	94	2.465	2.477	-0.012	90	210256	5.00	3.98	
8	Chloroethane	64	2.544	2.556	-0.012	100	174857	5.00	4.32	
9	Dichlorofluoromethane	67	2.769	2.782	-0.013	97	471611	5.00	4.18	
10	Trichlorofluoromethane	101	2.824	2.843	-0.019	97	380373	5.00	4.42	
11	Ethyl ether	59	3.050	3.062	-0.012	90	143272	5.01	4.03	
13	1,2-Dichloro-1,1,2-trifluoroetha	67	3.141	3.154	-0.013	91	315617	5.00	5.14	
15	1,1-Dichloroethene	96	3.342	3.349	-0.007	97	225655	5.00	4.84	
16	Acetone	43	3.367	3.379	-0.012	100	425719	62.5	62.9	
17	1,1,2-Trichloro-1,2,2-trifluoroe	101	3.385	3.398	-0.013	90	239235	5.00	4.84	
18	Iodomethane	142	3.525	3.538	-0.013	98	435778	5.00	4.45	
19	Ethyl bromide	108	3.550	3.562	-0.012	98	145865	5.06	3.58	
20	Carbon disulfide	76	3.629	3.641	-0.012	99	618101	5.00	4.89	
23	Methyl acetate	43	3.763	3.782	-0.019	97	89216	5.00	5.34	M
24	3-Chloro-1-propene	41	3.787	3.800	-0.013	93	356970	5.00	4.93	
25	Methylene Chloride	84	3.964	3.977	-0.013	91	255815	5.00	5.20	
* 26	t-Butyl alcohol-d10 (IS)	65	3.976	3.983	-0.007	97	141476	50.0	50.0	M
27	2-Methyl-2-propanol	59	4.098	4.099	-0.001	99	133376	50.0	49.5	
28	Acrylonitrile	53	4.281	4.294	-0.013	99	247781	25.0	30.1	
29	Methyl tert-butyl ether	73	4.348	4.361	-0.013	90	591474	5.00	4.62	
30	trans-1,2-Dichloroethene	96	4.361	4.373	-0.012	99	252242	5.00	4.86	
31	Hexane	57	4.793	4.794	-0.001	92	315516	5.00	4.64	
32	1,1-Dichloroethane	63	5.025	5.031	-0.006	96	462283	5.00	5.20	
35	Isopropyl ether	45	5.092	5.092	0.000	95	729313	5.00	5.00	
36	2-Chloro-1,3-butadiene	53	5.135	5.141	-0.006	89	357920	5.00	4.82	
37	Tert-butyl ethyl ether	59	5.629	5.629	0.000	96	672576	5.00	4.83	
38	2-Butanone (MEK)	43	5.830	5.830	0.000	99	854592	62.5	65.5	
39	cis-1,2-Dichloroethene	96	5.860	5.867	-0.007	80	296032	5.00	5.13	
40	2,2-Dichloropropane	77	5.872	5.879	-0.007	70	414074	5.00	5.17	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
43 Propionitrile	54	5.915	5.915	0.000	97	142533	37.5	41.3	
45 Methacrylonitrile	67	6.128	6.141	-0.013	91	522676	37.5	38.4	
46 Chlorobromomethane	128	6.196	6.196	0.000	91	140690	5.00	5.36	
47 Tetrahydrofuran	71	6.214	6.214	0.000	78	101927	25.0	23.8	
48 Chloroform	83	6.348	6.354	-0.006	93	472182	5.00	5.14	
$ 49 Dibromofluoromethane (Surr)	113	6.561	6.568	-0.007	94	453323	10.0	10.2	
50 1,1,1-Trichloroethane	97	6.574	6.580	-0.006	98	423963	5.00	4.95	
51 Cyclohexane	56	6.671	6.677	-0.006	90	395630	5.00	4.87	
54 Carbon tetrachloride	117	6.787	6.793	-0.006	96	383963	5.00	5.03	
53 1,1-Dichloropropene	75	6.787	6.793	-0.006	96	357962	5.00	5.24	
55 Isobutyl alcohol	41	6.945	6.952	-0.007	93	121774	125.0	127.3	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.019	7.025	-0.006	92	90544	10.0	10.2	
57 Benzene	78	7.049	7.055	-0.006	96	1080370	5.00	5.26	
58 1,2-Dichloroethane	62	7.122	7.122	0.000	97	286637	5.00	5.15	
60 Tert-amyl methyl ether	73	7.250	7.250	0.000	99	648942	5.00	5.04	
* 61 Fluorobenzene (IS)	96	7.457	7.458	-0.001	98	1737953	10.0	10.0	
62 n-Heptane	43	7.476	7.476	0.000	85	333208	5.00	5.10	
63 n-Butanol	56	7.842	7.836	0.006	89	236108	250.0	321.5	
64 Trichloroethene	95	7.939	7.939	0.000	97	288693	5.00	5.06	
65 Methylcyclohexane	83	8.244	8.250	-0.006	92	437043	5.00	4.74	
66 1,2-Dichloropropane	63	8.268	8.269	-0.001	98	284552	5.00	5.61	
67 Methyl methacrylate	69	8.360	8.366	-0.006	90	131205	5.00	4.89	
68 1,4-Dioxane	88	8.366	8.366	0.000	32	26994	125.0	173.0	
69 Dibromomethane	93	8.378	8.378	0.000	93	140414	5.00	5.52	
71 Dichlorobromomethane	83	8.616	8.616	0.000	99	351817	5.00	5.33	
72 2-Nitropropane	41	8.890	8.878	0.012	98	41019	5.00	4.68	
75 1-Bromo-2-chloroethane	63	9.012	9.012	0.000	98	255943	5.00	4.95	
76 cis-1,3-Dichloropropene	75	9.177	9.177	0.000	97	400790	5.00	5.06	
77 4-Methyl-2-pentanone (MIBK)	43	9.353	9.354	-0.001	96	2232225	62.5	63.8	
$ 78 Toluene-d8 (Surr)	98	9.494	9.494	0.000	93	1813563	10.0	9.79	
79 Toluene	92	9.573	9.573	0.000	98	723124	5.00	4.95	
97 trans-1,3-Dichloropropene	75	9.841	9.841	0.000	91	351710	5.00	5.10	
99 Ethyl methacrylate	69	9.908	9.908	0.000	89	268154	5.00	4.70	
100 1,1,2-Trichloroethane	97	10.048	10.049	-0.001	90	212545	5.00	5.15	
101 Tetrachloroethene	166	10.134	10.140	-0.006	97	357590	5.00	4.69	
102 1,3-Dichloropropane	76	10.213	10.213	0.000	88	346107	5.00	5.30	
103 2-Hexanone	43	10.268	10.268	0.000	96	1620982	62.5	65.5	
105 Chlorodibromomethane	129	10.433	10.433	0.000	89	277401	5.00	5.16	
106 Ethylene Dibromide	107	10.542	10.542	0.000	100	202488	5.00	5.20	
* 107 Chlorobenzene-d5 (IS)	117	10.981	10.981	0.000	85	1441428	10.0	10.0	
108 1-Chlorohexane	91	10.993	10.994	-0.001	96	378107	5.00	4.44	
109 Chlorobenzene	112	11.006	11.006	0.000	96	835183	5.00	4.88	
111 1,1,1,2-Tetrachloroethane	131	11.091	11.091	0.000	97	309866	5.00	5.08	
112 Ethylbenzene	91	11.097	11.097	0.000	98	1395607	5.00	4.90	
113 m-Xylene & p-Xylene	106	11.213	11.213	0.000	93	1147741	10.0	9.96	
114 o-Xylene	106	11.542	11.542	0.000	96	539258	5.00	4.74	
115 Styrene	104	11.560	11.561	-0.001	95	890692	5.00	4.86	
116 Bromoform	173	11.719	11.719	0.000	98	181125	5.00	5.20	
117 Isopropylbenzene	105	11.847	11.847	0.000	95	1410144	5.00	4.77	
$ 120 4-Bromofluorobenzene (Surr)	95	11.993	11.987	0.006	97	706830	10.0	10.1	
121 1,1,2,2-Tetrachloroethane	83	12.091	12.091	0.000	94	277500	5.00	5.22	
122 Bromobenzene	156	12.109	12.103	0.006	95	374709	5.00	4.88	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
123 trans-1,4-Dichloro-2-butene	53	12.121	12.115	0.006	91	283116	25.0	21.5	
124 1,2,3-Trichloropropane	110	12.140	12.140	0.000	83	77101	5.00	5.17	
125 N-Propylbenzene	91	12.176	12.176	0.000	98	1687015	5.00	4.96	
126 2-Chlorotoluene	126	12.249	12.249	0.000	98	360589	5.00	4.85	
127 1,3,5-Trimethylbenzene	105	12.316	12.317	-0.001	94	1213196	5.00	4.68	
128 4-Chlorotoluene	126	12.347	12.347	0.000	96	374714	5.00	4.92	
129 tert-Butylbenzene	134	12.554	12.554	0.000	91	261252	5.00	4.19	
131 1,2,4-Trimethylbenzene	105	12.597	12.597	0.000	97	1257356	5.00	4.73	
132 sec-Butylbenzene	105	12.719	12.719	0.000	94	1579764	5.00	4.79	
133 1,3-Dichlorobenzene	146	12.816	12.816	0.000	99	713060	5.00	4.75	
134 4-Isopropyltoluene	119	12.828	12.829	-0.001	97	1400204	5.00	4.76	
* 135 1,4-Dichlorobenzene-d4	152	12.871	12.871	0.000	93	893162	10.0	10.0	
136 1,4-Dichlorobenzene	146	12.889	12.890	-0.001	96	743517	5.00	5.02	
137 1,2,3-Trimethylbenzene	120	12.902	12.902	0.000	98	560662	5.00	4.66	
138 Benzyl chloride	126	12.969	12.969	0.000	98	119735	5.00	5.24	
139 n-Butylbenzene	92	13.121	13.121	0.000	96	665996	5.00	5.06	
140 1,2-Dichlorobenzene	146	13.152	13.152	0.000	99	667349	5.00	4.73	
142 1,2-Dibromo-3-Chloropropane	155	13.694	13.694	0.000	91	41367	5.00	4.76	
143 1,3,5-Trichlorobenzene	180	13.822	13.822	0.000	98	521013	5.00	4.63	
144 1,2,4-Trichlorobenzene	180	14.243	14.243	0.000	94	426799	5.00	4.71	
145 Hexachlorobutadiene	225	14.322	14.322	0.000	96	224271	5.00	5.08	
146 Naphthalene	128	14.420	14.420	0.000	97	749501	5.00	4.55	
147 1,2,3-Trichlorobenzene	180	14.560	14.560	0.000	96	370098	5.00	4.88	
155 2-Methylnaphthalene	142		0.000				ND	ND	
156 p-Diethylbenzene	1		0.000				ND	ND	
161 Pentane	43		0.000				ND	ND	
150 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
165 Isopropyl alcohol	45		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MSV_LCS_VOC#1_00123	Amount Added: 12.50	Units: uL	
MSV_QC_Gas826_00153	Amount Added: 12.50	Units: uL	
MSV_LCS_EE_00007	Amount Added: 12.50	Units: uL	
LCS_ETBR_00006	Amount Added: 12.50	Units: uL	
MSV_LLcentISS_00009	Amount Added: 5.00	Units: uL	Run Reagent

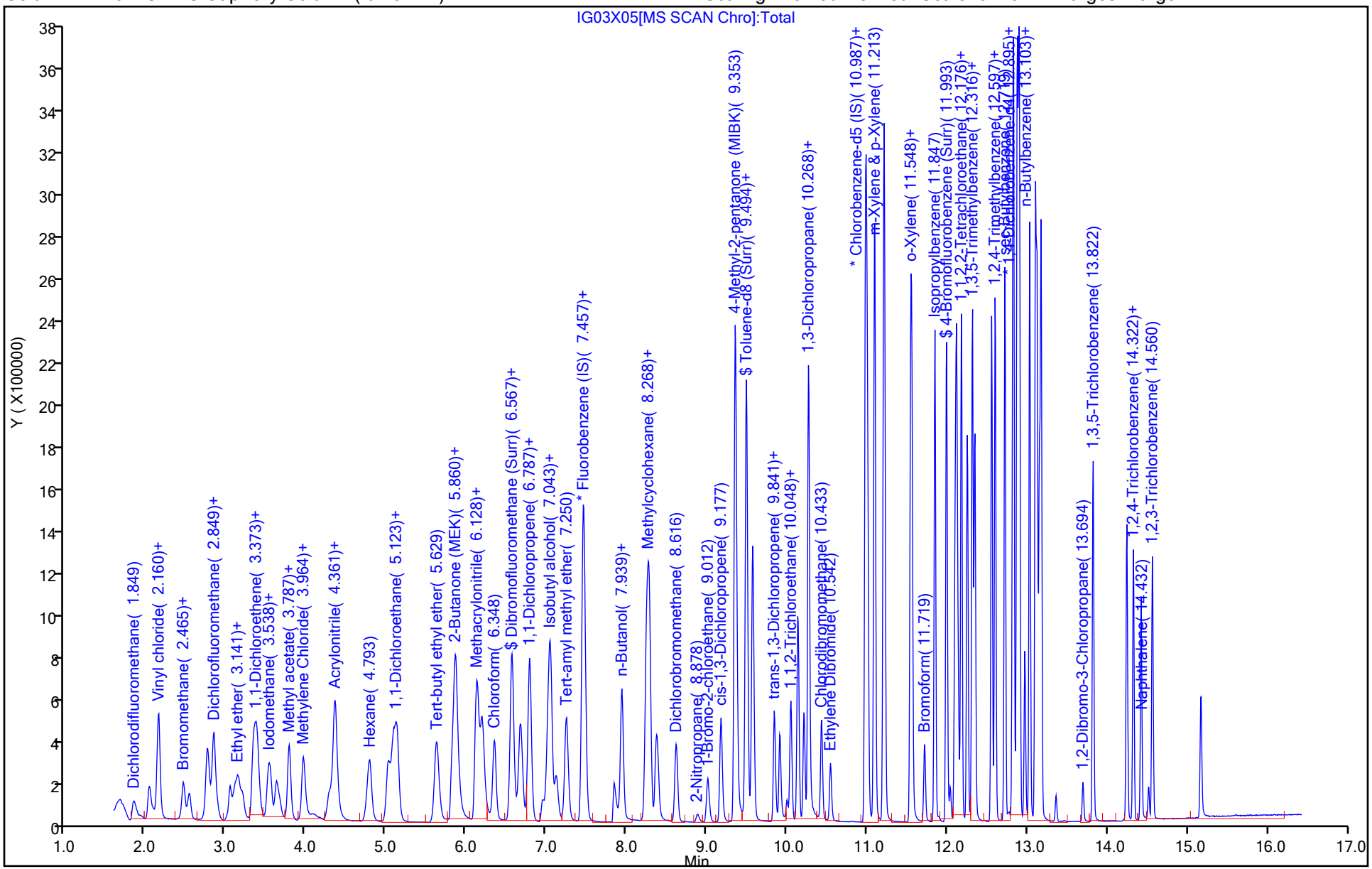
Report Date: 03-Aug-2023 13:58:10 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X05.D

Injection Date:	03-Aug-2023 12:39:30	Instrument ID:	19930	Operator ID:	knk41612
Lims ID:	LCSD			Worklist Smp#:	6
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X05.D				
Lims ID:	LCSD				
Client ID:					
Sample Type:	LCSD				
Inject. Date:	03-Aug-2023 12:39:30	ALS Bottle#:	5	Worklist Smp#:	6
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0090530-006				
Operator ID:	knk41612	Instrument ID:	19930		
Method:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m				
Limit Group:	MSV - 8260C_D				
Last Update:	03-Aug-2023 13:57:48	Calib Date:	19-Jun-2023 20:25:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1684				

First Level Reviewer: DVW2 Date: 03-Aug-2023 13:53:02

Compound	Amount Added	Amount Recovered	% Rec.
$ 49 Dibromofluoromethane (Surr)	10.0	10.2	101.55
$ 56 1,2-Dichloroethane-d4 (Surr)	10.0	10.2	102.30
$ 78 Toluene-d8 (Surr)	10.0	9.79	97.86
$ 120 4-Bromofluorobenzene (Surr)	10.0	10.1	101.22

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

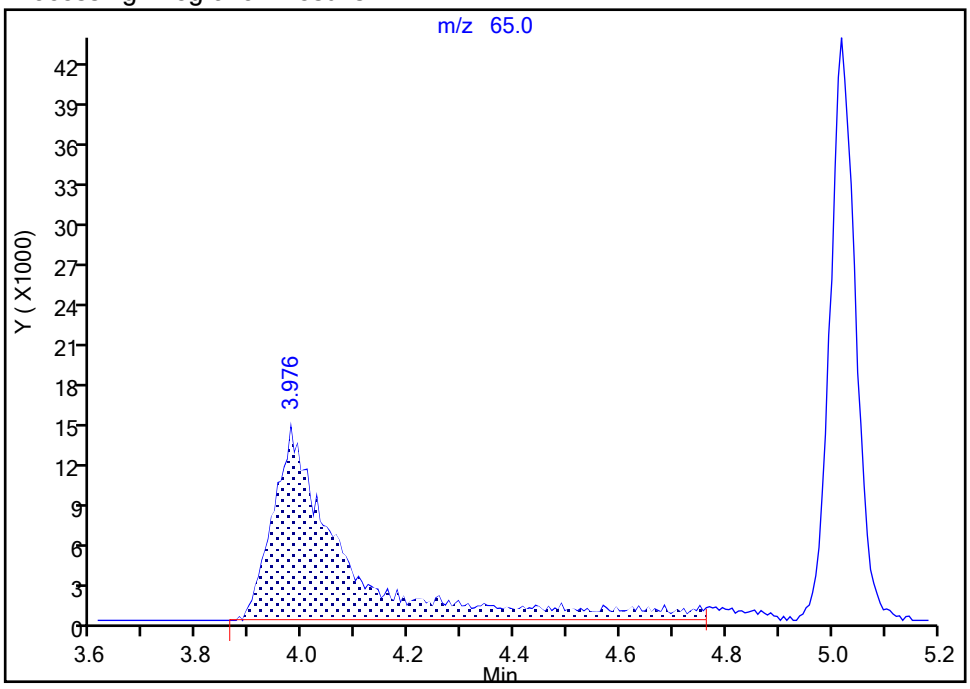
Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X05.D
Injection Date: 03-Aug-2023 12:39:30 Instrument ID: 19930
Lims ID: LCSD
Client ID:
Operator ID: knk41612 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 26 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

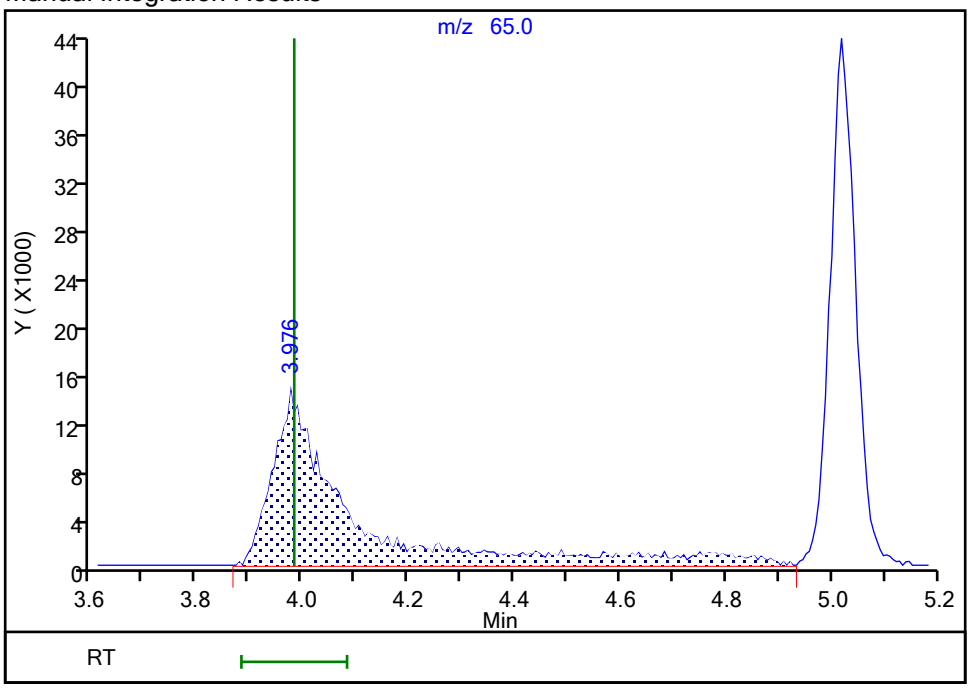
Processing Integration Results

RT: 3.98
Area: 135772
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 3.98
Area: 141476
Amount: 50.000000
Amount Units: ug/l



Reviewer: DVW2, 03-Aug-2023 13:52:54 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Instrument ID: 19930 Start Date: 03/21/2023 00:26

Analysis Batch Number: 355532 End Date: 03/21/2023 06:23

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 410-355532/1		03/21/2023 00:26	1	IM21T01.D	R-624SilMS 30m 0.25(mm)
IC 410-355532/3		03/21/2023 01:00	1		R-624SilMS 30m 0.25(mm)
IC 410-355532/4		03/21/2023 01:20	1		R-624SilMS 30m 0.25(mm)
IC 410-355532/5		03/21/2023 01:40	1		R-624SilMS 30m 0.25(mm)
IC 410-355532/6		03/21/2023 02:00	1		R-624SilMS 30m 0.25(mm)
IC 410-355532/7		03/21/2023 02:20	1		R-624SilMS 30m 0.25(mm)
IC 410-355532/8		03/21/2023 02:41	1		R-624SilMS 30m 0.25(mm)
IC 410-355532/9		03/21/2023 03:01	1		R-624SilMS 30m 0.25(mm)
ICV 410-355532/10		03/21/2023 03:21	1		R-624SilMS 30m 0.25(mm)
IC 410-355532/12		03/21/2023 04:01	1	IM21X11.D	R-624SilMS 30m 0.25(mm)
ICIS 410-355532/13		03/21/2023 04:22	1	IM21X12.D	R-624SilMS 30m 0.25(mm)
IC 410-355532/14		03/21/2023 04:42	1	IM21X13.D	R-624SilMS 30m 0.25(mm)
IC 410-355532/15		03/21/2023 05:02	1	IM21X14.D	R-624SilMS 30m 0.25(mm)
IC 410-355532/16		03/21/2023 05:22	1	IM21X15.D	R-624SilMS 30m 0.25(mm)
IC 410-355532/17		03/21/2023 05:42	1	IM21X16.D	R-624SilMS 30m 0.25(mm)
IC 410-355532/18		03/21/2023 06:02	1	IM21X17.D	R-624SilMS 30m 0.25(mm)
ICV 410-355532/19		03/21/2023 06:23	1		R-624SilMS 30m 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Instrument ID: 19930 Start Date: 06/19/2023 14:12

Analysis Batch Number: 388102 End Date: 06/19/2023 21:07

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 410-388102/1		06/19/2023 14:12	1	IU19T01.D	R-624SilMS 30m 0.25(mm)
IC 410-388102/3		06/19/2023 14:49	1	IU19X02.D	R-624SilMS 30m 0.25(mm)
IC 410-388102/4		06/19/2023 15:10	1	IU19X03.D	R-624SilMS 30m 0.25(mm)
IC 410-388102/5		06/19/2023 15:31	1	IU19X04.D	R-624SilMS 30m 0.25(mm)
IC 410-388102/6		06/19/2023 15:52	1	IU19X05.D	R-624SilMS 30m 0.25(mm)
IC 410-388102/7		06/19/2023 16:13	1	IU19X06.D	R-624SilMS 30m 0.25(mm)
IC 410-388102/8		06/19/2023 16:34	1	IU19X07.D	R-624SilMS 30m 0.25(mm)
IC 410-388102/9		06/19/2023 16:55	1	IU19X08.D	R-624SilMS 30m 0.25(mm)
ICV 410-388102/11		06/19/2023 17:37	1	IU19X10.D	R-624SilMS 30m 0.25(mm)
IC 410-388102/13		06/19/2023 18:19	1	IU19X12.D	R-624SilMS 30m 0.25(mm)
IC 410-388102/14		06/19/2023 18:40	1	IU19X13.D	R-624SilMS 30m 0.25(mm)
IC 410-388102/15		06/19/2023 19:01	1	IU19X14.D	R-624SilMS 30m 0.25(mm)
IC 410-388102/16		06/19/2023 19:22	1	IU19X15.D	R-624SilMS 30m 0.25(mm)
IC 410-388102/17		06/19/2023 19:42	1	IU19X16.D	R-624SilMS 30m 0.25(mm)
ICIS 410-388102/18		06/19/2023 20:03	1	IU19X17.D	R-624SilMS 30m 0.25(mm)
IC 410-388102/19		06/19/2023 20:25	1	IU19X18.D	R-624SilMS 30m 0.25(mm)
ICV 410-388102/21		06/19/2023 21:07	1	IU19X20.D	R-624SilMS 30m 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Instrument ID: 19930 Start Date: 08/03/2023 11:02

Analysis Batch Number: 404020 End Date: 08/03/2023 22:07

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 410-404020/1		08/03/2023 11:02	1	IG03T01.D	R-624SilMS 30m 0.25(mm)
CCVIS 410-404020/3		08/03/2023 11:36	1	IG03X02.D	R-624SilMS 30m 0.25(mm)
CCV 410-404020/4		08/03/2023 11:57	1		R-624SilMS 30m 0.25(mm)
LCS 410-404020/5		08/03/2023 12:18	1	IG03X04.D	R-624SilMS 30m 0.25(mm)
LCSD 410-404020/6		08/03/2023 12:39	1	IG03X05.D	R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 13:00	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 13:21	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 13:42	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 14:03	1		R-624SilMS 30m 0.25(mm)
MB 410-404020/11		08/03/2023 14:25	1	IG03X10.D	R-624SilMS 30m 0.25(mm)
410-136514-6	Trip Blank 1	08/03/2023 14:45	1	IG03X11.D	R-624SilMS 30m 0.25(mm)
410-136514-7	Trip Blank 2	08/03/2023 15:06	1	IG03X12.D	R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 15:28	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 15:48	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 16:09	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 16:30	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 16:51	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 17:12	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 17:34	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 17:55	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 18:16	1		R-624SilMS 30m 0.25(mm)
410-136514-1	16-2	08/03/2023 18:37	1	IG03X22.D	R-624SilMS 30m 0.25(mm)
410-136514-2	16-3	08/03/2023 18:58	1	IG03X23.D	R-624SilMS 30m 0.25(mm)
410-136514-3	16-5	08/03/2023 19:19	1	IG03X24.D	R-624SilMS 30m 0.25(mm)
410-136514-4	16WC2B	08/03/2023 19:40	1	IG03X25.D	R-624SilMS 30m 0.25(mm)
410-136514-5	16SPRING	08/03/2023 20:01	1	IG03X26.D	R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 20:22	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 20:43	10		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 21:04	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 21:25	10		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 21:46	50		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 22:07	1		R-624SilMS 30m 0.25(mm)

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136514-1

SDG No.:

Batch Number: 355532 | Batch Start Date: 03/21/23 00:26 | Batch Analyst: Campbell, Miranda E

Batch Method: 8260D | Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Lot#Vial	MSV_LL_#1_826 00068	MSV_LL_#2_826 00077	MSV_LL_GAS826 00141
BFB 410-355532/1		8260D		1 uL	1 uL				
IC 410-355532/12		8260D		25 mL	25 mL	2680	25 uL	25 uL	25 uL
ICIS 410-355532/13		8260D		25 mL	25 mL	2680	10 uL	10 uL	10 uL
IC 410-355532/14		8260D		25 mL	25 mL	2680	5 uL	5 uL	5 uL
IC 410-355532/15		8260D		25 mL	25 mL	2680	2 uL	2 uL	2 uL
IC 410-355532/16		8260D		25 mL	25 mL	2680	2 uL	2 uL	2 uL
IC 410-355532/17		8260D		25 mL	25 mL	2680	2 uL	2 uL	2 uL
IC 410-355532/18		8260D		25 mL	25 mL	2680	2 uL	2 uL	2 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_LLcentISS 00006	MSV_V_BFB 00011				
BFB 410-355532/1		8260D			1 uL				
IC 410-355532/12		8260D		5 uL					
ICIS 410-355532/13		8260D		5 uL					
IC 410-355532/14		8260D		5 uL					
IC 410-355532/15		8260D		5 uL					
IC 410-355532/16		8260D		5 uL					
IC 410-355532/17		8260D		5 uL					
IC 410-355532/18		8260D		5 uL					

Batch Notes	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136514-1

SDG No.:

Batch Number: 355532 | Batch Start Date: 03/21/23 00:26 | Batch Analyst: Campbell, Miranda E

Batch Method: 8260D | Batch End Date:

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-136514-1

SDG No.:

Batch Number: 388102 Batch Start Date: 06/19/23 14:12 Batch Analyst: Kephart, Kayla

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Lot#Vial	LCS_ETBR 00006	MSV_CCV_CYC 00005	MSV_CCV_V5ACE 00025
BFB 410-388102/1		8260D		1 uL	1 uL				
IC 410-388102/3		8260D		25 mL	25 mL	2692		1.6 uL	0.2 uL
IC 410-388102/4		8260D		25 mL	25 mL	2692		4 uL	0.5 uL
IC 410-388102/5		8260D		25 mL	25 mL	2692		8 uL	1 uL
IC 410-388102/6		8260D		25 mL	25 mL	2692		8 uL	1 uL
IC 410-388102/7		8260D		25 mL	25 mL	2692		8 uL	1 uL
IC 410-388102/8		8260D		25 mL	25 mL	2692		8 uL	1 uL
IC 410-388102/9		8260D		25 mL	25 mL	2692		20 uL	2.5 uL
ICV 410-388102/11		8260D		25 mL	25 mL	2692			
IC 410-388102/13		8260D		25 mL	25 mL	2692			
IC 410-388102/14		8260D		25 mL	25 mL	2692			
IC 410-388102/15		8260D		25 mL	25 mL	2692			
IC 410-388102/16		8260D		25 mL	25 mL	2692			
IC 410-388102/17		8260D		25 mL	25 mL	2692			
ICIS 410-388102/18		8260D		25 mL	25 mL	2692			
IC 410-388102/19		8260D		25 mL	25 mL	2692			
ICV 410-388102/21		8260D		25 mL	25 mL	2692	12.5 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_DME 00046	MSV_LCS_2CEVE 00120	MSV_LCS_ACROL 00118	MSV_LCS_CYC 00003	MSV_LCS_EE 00007	MSV_LCS_LKB 00006
BFB 410-388102/1		8260D							
IC 410-388102/3		8260D		0.2 uL					
IC 410-388102/4		8260D		0.5 uL					
IC 410-388102/5		8260D		1 uL					
IC 410-388102/6		8260D		1 uL					
IC 410-388102/7		8260D		1 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136514-1

SDG No.:

Batch Number: 388102 | Batch Start Date: 06/19/23 14:12 | Batch Analyst: Kephart, Kayla

Batch Method: 8260D | Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_DME 00046	MSV_LCS_2CEVE 00120	MSV_LCS_ACROL 00118	MSV_LCS_CYC 00003	MSV_LCS_EE 00007	MSV_LCS_LKB 00006
IC 410-388102/8		8260D		1 uL					
IC 410-388102/9		8260D		2.5 uL					
ICV 410-388102/11		8260D			12.5 uL		12.5 uL		25 uL
IC 410-388102/13		8260D							
IC 410-388102/14		8260D							
IC 410-388102/15		8260D							
IC 410-388102/16		8260D							
IC 410-388102/17		8260D							
ICIS 410-388102/18		8260D							
IC 410-388102/19		8260D							
ICV 410-388102/21		8260D				12.5 uL		12.5 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_LCS_Penta 00029	MSV_LCS_SMFre 00050	MSV_LCS_V5ACE 00026	MSV_LCS_VOC#1 00115	MSV_LL_#1_826 00081	MSV_LL_#2_826 00093
BFB 410-388102/1		8260D							
IC 410-388102/3		8260D							
IC 410-388102/4		8260D							
IC 410-388102/5		8260D							
IC 410-388102/6		8260D							
IC 410-388102/7		8260D							
IC 410-388102/8		8260D							
IC 410-388102/9		8260D							
ICV 410-388102/11		8260D			12.5 uL	6.25 uL			
IC 410-388102/13		8260D						2 uL	2 uL
IC 410-388102/14		8260D						2 uL	2 uL

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-136514-1

SDG No.:

Batch Number: 388102 Batch Start Date: 06/19/23 14:12 Batch Analyst: Kephart, Kayla

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_LCS_Penta 00029	MSV_LCS_SMFre 00050	MSV_LCS_V5ACE 00026	MSV_LCS_VOC#1 00115	MSV_LL_#1_826 00081	MSV_LL_#2_826 00093
IC 410-388102/15		8260D						2 uL	2 uL
IC 410-388102/16		8260D						2 uL	2 uL
IC 410-388102/17		8260D						5 uL	5 uL
ICIS 410-388102/18		8260D						10 uL	10 uL
IC 410-388102/19		8260D						25 uL	25 uL
ICV 410-388102/21		8260D		12.5 uL			12.5 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_LL_GAS826 00156	MSV_LLcentISO 00006	MSV_LLcentISS 00007	MSV_Q_QDME 00032	MSV_QC_Gas826 00145	MSV_V_BFB 00012
BFB 410-388102/1		8260D							1 uL
IC 410-388102/3		8260D			5 uL				
IC 410-388102/4		8260D			5 uL				
IC 410-388102/5		8260D			5 uL				
IC 410-388102/6		8260D			5 uL				
IC 410-388102/7		8260D			5 uL				
IC 410-388102/8		8260D			5 uL				
IC 410-388102/9		8260D			5 uL				
ICV 410-388102/11		8260D				5 uL	5 uL		
IC 410-388102/13		8260D		2 uL		5 uL			
IC 410-388102/14		8260D		2 uL		5 uL			
IC 410-388102/15		8260D		2 uL		5 uL			
IC 410-388102/16		8260D		2 uL		5 uL			
IC 410-388102/17		8260D		5 uL		5 uL			
ICIS 410-388102/18		8260D		10 uL		5 uL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136514-1

SDG No.:

Batch Number: 388102 | Batch Start Date: 06/19/23 14:12 | Batch Analyst: Kephart, Kayla

Batch Method: 8260D | Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_LL_GAS826 00156	MSV_LLcentISO 00006	MSV_LLcentISS 00007	MSV_Q_QDME 00032	MSV_QC_Gas826 00145	MSV_V_BFB 00012
IC 410-388102/19		8260D		25 uL		5 uL			
ICV 410-388102/21		8260D				5 uL		12.5 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_V_SMRV4 00059					
BFB 410-388102/1		8260D							
IC 410-388102/3		8260D		1 uL					
IC 410-388102/4		8260D		2.5 uL					
IC 410-388102/5		8260D		5 uL					
IC 410-388102/6		8260D		5 uL					
IC 410-388102/7		8260D		5 uL					
IC 410-388102/8		8260D		5 uL					
IC 410-388102/9		8260D		12.5 uL					
ICV 410-388102/11		8260D							
IC 410-388102/13		8260D							
IC 410-388102/14		8260D							
IC 410-388102/15		8260D							
IC 410-388102/16		8260D							
IC 410-388102/17		8260D							
ICIS 410-388102/18		8260D							
IC 410-388102/19		8260D							
ICV 410-388102/21		8260D							

Batch Notes	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136514-1

SDG No.:

Batch Number: 388102 | Batch Start Date: 06/19/23 14:12 | Batch Analyst: Kephart, Kayla

Batch Method: 8260D | Batch End Date:

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136514-1

SDG No.:

Batch Number: 404020 | Batch Start Date: 08/03/23 11:02 | Batch Analyst: Kephart, Kayla

Batch Method: 8260D | Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	ResidualChloCheck	Headspace	Lot#Vial
BFB 410-404020/1		8260D		1 uL	1 uL				
CCVIS 410-404020/3		8260D		25 mL	25 mL				2705
LCS 410-404020/5		8260D		25 mL	25 mL				2705
LCSD 410-404020/6		8260D		25 mL	25 mL				2705
MB 410-404020/11		8260D		25 mL	25 mL				2705
410-136514-A-6	Trip Blank 1	8260D	T	25 mL	25 mL	<2 SU	N	N	
410-136514-A-7	Trip Blank 2	8260D	T	25 mL	25 mL	<2 SU	N	N	
410-136514-A-1	16-2	8260D	T	25 mL	25 mL	<2 SU	N	N	
410-136514-A-2	16-3	8260D	T	25 mL	25 mL	<2 SU	N	N	
410-136514-A-3	16-5	8260D	T	25 mL	25 mL	<2 SU	N	N	
410-136514-A-4	16WC2B	8260D	T	25 mL	25 mL	<2 SU	N	N	
410-136514-A-5	16SPRING	8260D	T	25 mL	25 mL	<2 SU	N	N	

Lab Sample ID	Client Sample ID	Method Chain	Basis	LCS_ETBR 00006	MSV_LCS_EE 00007	MSV_LCS_VOC#1 00123	MSV_LL_#1_826 00087	MSV_LL_#2_826 00097	MSV_LL_GAS826 00162
BFB 410-404020/1		8260D							
CCVIS 410-404020/3		8260D					20 uL	20 uL	20 uL
LCS 410-404020/5		8260D		12.5 uL	12.5 uL	12.5 uL			
LCSD 410-404020/6		8260D		12.5 uL	12.5 uL	12.5 uL			
MB 410-404020/11		8260D							
410-136514-A-6	Trip Blank 1	8260D	T						
410-136514-A-7	Trip Blank 2	8260D	T						
410-136514-A-1	16-2	8260D	T						
410-136514-A-2	16-3	8260D	T						
410-136514-A-3	16-5	8260D	T						
410-136514-A-4	16WC2B	8260D	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136514-1

SDG No.:

Batch Number: 404020 | Batch Start Date: 08/03/23 11:02 | Batch Analyst: Kephart, Kayla

Batch Method: 8260D | Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	LCS_ETBR 00006	MSV_LCS_EE 00007	MSV_LCS_VOC#1 00123	MSV_LL_#1_826 00087	MSV_LL_#2_826 00097	MSV_LL_GAS826 00162
410-136514-A-5	16SPRING	8260D	T						

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_LLcentISS 00009	MSV_QC_Gas826 00153	MSV_V_BFB 00012			
BFB 410-404020/1		8260D				1 uL			
CCVIS 410-404020/3		8260D		5 uL					
LCS 410-404020/5		8260D		5 uL	12.5 uL				
LCSD 410-404020/6		8260D		5 uL	12.5 uL				
MB 410-404020/11		8260D		5 uL					
410-136514-A-6	Trip Blank 1	8260D	T	5 uL					
410-136514-A-7	Trip Blank 2	8260D	T	5 uL					
410-136514-A-1	16-2	8260D	T	5 uL					
410-136514-A-2	16-3	8260D	T	5 uL					
410-136514-A-3	16-5	8260D	T	5 uL					
410-136514-A-4	16WC2B	8260D	T	5 uL					
410-136514-A-5	16SPRING	8260D	T	5 uL					

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Method 8270D

Semivolatile Organic Compounds (GC/MS) by Method 8270D

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories En Job No.: 410-136514-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-5MS 30m 0 ID: 0.25 (mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPHd14 #
16-2	410-136514-1	38	26	66	65	68	73
16-3	410-136514-2	46	32	75	73	80	92
16-5	410-136514-3	43	29	74	75	86	86
16WC2B	410-136514-4	37	25	69	72	69	74
16SPRING	410-136514-5	39	27	67	68	72	86
	MB 410-403666/1-A	43	30	73	82	85	86
	LCS 410-403666/2-A	53	39	74	78	79	83
	LCSD 410-403666/3-A	50	38	76	80	79	90

	QC LIMITS
2FP = 2-Fluorophenol (Surr)	10-120
PHL = Phenol-d5 (Surr)	10-120
NBZ = Nitrobenzene-d5 (Surr)	31-120
FBP = 2-Fluorobiphenyl (Surr)	44-120
TBP = 2,4,6-Tribromophenol (Surr)	13-138
TPHd14 = p-Terphenyl-d14 (Surr)	30-125

Column to be used to flag recovery values

FORM II 8270D

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1

SDG No.:

Matrix: Water Level: Low Lab File ID: JH0260.D

Lab ID: LCS 410-403666/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
2,4-Dinitrotoluene	50.0	50.4	101	66-131	
2,6-Dinitrotoluene	50.0	51.6	103	66-129	
Diethyl phthalate	50.0	47.6	95	46-123	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1

SDG No.:

Matrix: Water Level: Low Lab File ID: JH0261.D

Lab ID: LCSD 410-403666/3-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2,4-Dinitrotoluene	50.0	52.3	105	4	30	66-131	
2,6-Dinitrotoluene	50.0	49.3	99	4	30	66-129	
Diethyl phthalate	50.0	51.9	104	9	30	46-123	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1

SDG No.:

Lab File ID: JH0259.D Lab Sample ID: MB 410-403666/1-A

Matrix: Water Date Extracted: 08/02/2023 15:28

Instrument ID: HP23264 Date Analyzed: 08/02/2023 23:30

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 410-403666/2-A	JH0260.D	08/02/2023 23:51
	LCSD 410-403666/3-A	JH0261.D	08/03/2023 00:12
16-2	410-136514-1	JH0278.D	08/03/2023 06:12
16-3	410-136514-2	JH0279.D	08/03/2023 06:33
16-5	410-136514-3	JH0280.D	08/03/2023 06:54
16WC2B	410-136514-4	JH0281.D	08/03/2023 07:15
16SPRING	410-136514-5	JH0282.D	08/03/2023 07:37

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1

SDG No.:

Lab File ID: JG1800.D DFTPP Injection Date: 07/18/2023

Instrument ID: HP23264 DFTPP Injection Time: 07:23

Analysis Batch No.: 397829

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	10-80% of Base Peak	65.2	
68	Less than 2% of mass 69	0.8	(1.4) 1
69	Mass 69 Relative abundance	61.4	
70	Less than 2% of mass 69	0.2	(0.3) 1
127	10-80% of Base Peak	57.9	
197	Less than 2% of mass 198	0.9	
198	Base peak	100.0	
199	5-9% of mass 198	7.0	
275	10-60% of Base Peak	21.5	
365	Greater than 1% of mass 198	2.6	
441	present but less than 24% of mass 442	13.3	(14.9) 2
442	Greater than 50% of mass 198	89.0	
443	15-24% of mass 442	17.4	(19.6) 2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	ICIS 410-397829/2	JG1801a.D	07/18/2023	7:41
	IC 410-397829/3	JG1802.D	07/18/2023	8:07
	IC 410-397829/4	JG1803.D	07/18/2023	8:28
	IC 410-397829/5	JG1804.D	07/18/2023	8:49
	IC 410-397829/6	JG1805.D	07/18/2023	9:10
	IC 410-397829/7	JG1806.D	07/18/2023	9:31
	IC 410-397829/8	JG1807.D	07/18/2023	9:52
	IC 410-397829/9	JG1808.D	07/18/2023	10:14
	ICV 410-397829/12	JG1811.D	07/18/2023	11:17
	ICV 410-397829/13	JG1812.D	07/18/2023	11:38

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1

SDG No.:

Lab File ID: JH0250.D DFTPP Injection Date: 08/02/2023

Instrument ID: HP23264 DFTPP Injection Time: 20:15

Analysis Batch No.: 403788

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	10-80% of Base Peak	63.5	
68	Less than 2% of mass 69	1.0	(1.8) 1
69	Mass 69 Relative abundance	56.9	
70	Less than 2% of mass 69	0.3	(0.5) 1
127	10-80% of Base Peak	55.6	
197	Less than 2% of mass 198	0.5	
198	Base peak	100.0	
199	5-9% of mass 198	7.2	
275	10-60% of Base Peak	21.9	
365	Greater than 1% of mass 198	3.0	
441	present but less than 24% of mass 442	15.0	(14.9) 2
442	Greater than 50% of mass 198	100.9	
443	15-24% of mass 442	18.5	(18.3) 2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 410-403788/2	JH0251.D	08/02/2023	20:32
	MB 410-403666/1-A	JH0259.D	08/02/2023	23:30
	LCS 410-403666/2-A	JH0260.D	08/02/2023	23:51
	LCSD 410-403666/3-A	JH0261.D	08/03/2023	0:12
16-2	410-136514-1	JH0278.D	08/03/2023	6:12
16-3	410-136514-2	JH0279.D	08/03/2023	6:33
16-5	410-136514-3	JH0280.D	08/03/2023	6:54
16WC2B	410-136514-4	JH0281.D	08/03/2023	7:15
16SPRING	410-136514-5	JH0282.D	08/03/2023	7:37

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1

SDG No.:

Sample No.: ICIS 410-397829/2 Date Analyzed: 07/18/2023 07:41

Instrument ID: HP23264 GC Column: DB-5MS 30m 0.25 ID: 0.25(mm)

Lab File ID (Standard): JG1801a.D Heated Purge: (Y/N) N

Calibration ID: 52063

		DCBd4		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		212767	4.33	781685	5.55	392579	7.21
UPPER LIMIT		425534	4.83	1563370	6.05	785158	7.71
LOWER LIMIT		106384	3.83	390843	5.05	196290	6.71
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 410-397829/12		184810	4.33	712856	5.55	341549	7.21
ICV 410-397829/13		176950	4.33	678969	5.55	333229	7.21
CCVIS 410-403788/2		193417	4.33	753961	5.54	383345	7.21

DCBd4 = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1

SDG No.:

Sample No.: ICIS 410-397829/2 Date Analyzed: 07/18/2023 07:41

Instrument ID: HP23264 GC Column: DB-5MS 30m 0.25 ID: 0.25(mm)

Lab File ID (Standard): JG1801a.D Heated Purge: (Y/N) N

Calibration ID: 52063

		PHN		PYR10		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		802857	8.62	698430	9.96	547299	13.13
UPPER LIMIT		1605714	9.12	1396860	10.46	1094598	13.63
LOWER LIMIT		401429	8.12	349215	9.46	273650	12.63
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 410-397829/12		628690	8.62	642170	9.96	471572	13.13
ICV 410-397829/13		652388	8.62	592780	9.96	469314	13.12
CCVIS 410-403788/2		743642	8.61	702598	9.96	570903	13.12

PHN = Phenanthrene-d10
PYR10 = Pyrene-d10 (IS)
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1

SDG No.:

Sample No.: CCVIS 410-403788/2 Date Analyzed: 08/02/2023 20:32

Instrument ID: HP23264 GC Column: DB-5MS 30m 0.25 ID: 0.25(mm)

Lab File ID (Standard): JH0251.D Heated Purge: (Y/N) N

Calibration ID: 52063

		DCBd4		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		193417	4.33	753961	5.54	383345	7.21
UPPER LIMIT		386834	4.83	1507922	6.04	766690	7.71
LOWER LIMIT		96709	3.83	376981	5.04	191673	6.71
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 410-403666/1-A		135972	4.33	520706	5.54	262215	7.21
LCS 410-403666/2-A		145029	4.32	573579	5.54	292405	7.21
LCSD 410-403666/3-A		137160	4.33	532198	5.54	274938	7.21
410-136514-1	16-2	123942	4.32	504032	5.54	277011	7.21
410-136514-2	16-3	146318	4.32	557320	5.54	294790	7.21
410-136514-3	16-5	144516	4.33	547542	5.54	283710	7.21
410-136514-4	16WC2B	147401	4.33	531362	5.54	273069	7.21
410-136514-5	16SPRING	138243	4.32	554407	5.54	281434	7.21

DCBd4 = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
NPT = Naphthalene-d8
ANT = Acenaphthene-d10
Area Limit = 50%-200% of internal standard area
ANT = Acenaphthene-d10
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1

SDG No.:

Sample No.: CCVIS 410-403788/2 Date Analyzed: 08/02/2023 20:32

Instrument ID: HP23264 GC Column: DB-5MS 30m 0.25 ID: 0.25(mm)

Lab File ID (Standard): JH0251.D Heated Purge: (Y/N) N

Calibration ID: 52063

		PHN		PYR10		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		743642	8.61	702598	9.96	570903	13.12
UPPER LIMIT		1487284	9.11	1405196	10.46	1141806	13.62
LOWER LIMIT		371821	8.11	351299	9.46	285452	12.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 410-403666/1-A		548571	8.61	509539	9.96	380144	13.12
LCS 410-403666/2-A		549351	8.61	491276	9.96	414104	13.12
LCSD 410-403666/3-A		520905	8.61	494297	9.96	439036	13.12
410-136514-1	16-2	543258	8.61	518885	9.96	432978	13.12
410-136514-2	16-3	580993	8.61	518788	9.96	481549	13.12
410-136514-3	16-5	560801	8.61	522356	9.96	413667	13.12
410-136514-4	16WC2B	543164	8.61	513315	9.96	435025	13.12
410-136514-5	16SPRING	524663	8.61	523591	9.96	413269	13.12

PHN = Phenanthrene-d10
PHN = Phenanthrene-d10
PYR10 = Pyrene-d10 (IS)
PYR10 = Pyrene-d10 (IS)
Area Limit = 50%-200% of internal standard area
PRY = Perylene-d12
RT Limit = ± 0.5 minutes of internal standard RT
PRY = Perylene-d12

Column used to flag values outside QC limits

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136514-1

SDG No.:

Client Sample ID: 16-2
Lab Sample ID: 410-136514-1

Matrix: Water
Lab File ID: JH0278.D

Analysis Method: 8270D
Date Collected: 07/26/2023 09:30

Extract. Method: 3510C
Date Extracted: 08/02/2023 15:28

Sample wt/vol: 251.1(mL)
Date Analyzed: 08/03/2023 06:12

Con. Extract Vol.: 1(mL)
Dilution Factor: 1

Injection Volume: 1(uL)
GC Column: DB-5MS 30m 0.25 ID: 0.25(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:
Level: (low/med) Low

Analysis Batch No.: 403788
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
121-14-2	2,4-Dinitrotoluene	ND		10	
606-20-2	2,6-Dinitrotoluene	ND		10	
84-66-2	Diethyl phthalate	ND		5.0	

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	68		13-138
321-60-8	2-Fluorobiphenyl (Surr)	65		44-120
367-12-4	2-Fluorophenol (Surr)	38		10-120
4165-60-0	Nitrobenzene-d5 (Surr)	66		31-120
1718-51-0	p-Terphenyl-d14 (Surr)	73		30-125
4165-62-2	Phenol-d5 (Surr)	26		10-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0278.D
Lims ID: 410-136514-D-1-A
Client ID: 16-2
Sample Type: Client
Inject. Date: 03-Aug-2023 06:12:30 ALS Bottle#: 28 Worklist Smp#: 27
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 410-136514-D-1-A
Misc. Info.: 410-0090492-027
Operator ID: mem41592 Instrument ID: HP23264

Method: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\MSSemi_HP23264.m
Limit Group: MSSV - 8270D_E LVI
Last Update: 03-Aug-2023 08:48:58 Calib Date: 02-Aug-2023 21:45:30
Integrator: Falcon ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0254.D

Column 1 : DB-5MS 20m 0.25mm (0.25 mm) Det: MS SCAN
Process Host: CTX1602

First Level Reviewer: N5QU Date: 03-Aug-2023 08:49:35

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
$ 9 2-Fluorophenol	112	3.085	3.090	-0.005	96	718730	18.9	
$ 15 Phenol-d5	99	3.990	3.990	0.000	95	717133	13.1	
* 22 1,4-Dichlorobenzene-d4	152	4.323	4.322	0.000	97	123942	5.00	
$ 39 Nitrobenzene-d5	82	4.854	4.854	0.000	93	884733	16.4	
* 52 Naphthalene-d8	136	5.543	5.543	0.000	98	504032	5.00	
$ 81 2-Fluorobiphenyl (Surr)	172	6.576	6.576	0.000	99	1439343	16.4	
92 2,6-Dinitrotoluene	165		7.020				ND	
* 96 Acenaphthene-d10	164	7.207	7.207	0.000	95	277011	5.00	
102 2,4-Dinitrotoluene	165		7.400				ND	7
107 Diethyl phthalate	149		7.633				ND	7
$ 116 2,4,6-Tribromophenol	330	7.960	7.960	0.000	90	443318	33.8	
* 131 Phenanthrene-d10	188	8.614	8.614	0.000	97	543258	5.00	
* 146 Pyrene-d10 (IS)	212	9.957	9.957	0.000	97	518885	5.00	
$ 148 p-Terphenyl-d14	244	10.132	10.132	0.000	96	1683893	18.3	
* 167 Perylene-d12	264	13.116	13.116	0.000	94	432978	5.00	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection

Reagents:

MSS_RV8270_IS_00059 Amount Added: 20.00 Units: uL Run Reagent

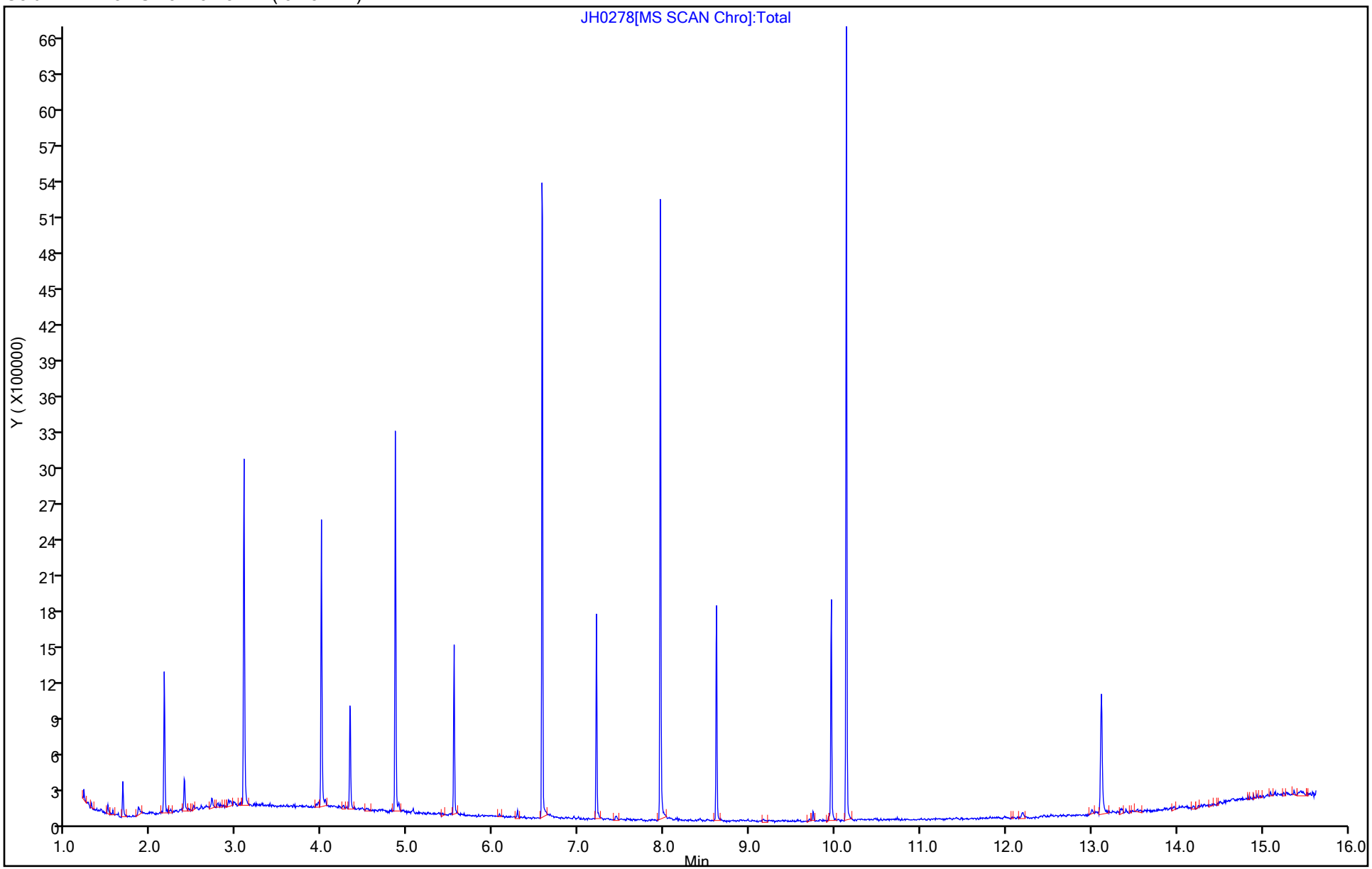
Report Date: 03-Aug-2023 08:53:56 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0278.D

Injection Date:	03-Aug-2023 06:12:30	Instrument ID:	HP23264	Operator ID:	mem41592
Lims ID:	410-136514-D-1-A	Lab Sample ID:	410-136514-1	Worklist Smp#:	27
Client ID:	16-2				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	28
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		

Column: DB-5MS 20m 0.25mm (0.25 mm)



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0278.D				
Lims ID:	410-136514-D-1-A				
Client ID:	16-2				
Sample Type:	Client				
Inject. Date:	03-Aug-2023 06:12:30	ALS Bottle#:	28	Worklist Smp#:	27
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	410-136514-D-1-A				
Misc. Info.:	410-0090492-027				
Operator ID:	mem41592	Instrument ID:	HP23264		
Method:	\\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\MSSemi_HP23264.m				
Limit Group:	MSSV - 8270D_E LVI				
Last Update:	03-Aug-2023 08:48:58	Calib Date:	02-Aug-2023 21:45:30		
Integrator:	Falcon	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0254.D				
Column 1 :	DB-5MS 20m 0.25mm (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1602				

First Level Reviewer: N5QU Date: 03-Aug-2023 08:49:35

Compound	Amount Added	Amount Recovered	% Rec.
$ 9 2-Fluorophenol	50.0	18.9	37.74
$ 15 Phenol-d5	50.0	13.1	26.26
$ 39 Nitrobenzene-d5	25.0	16.4	65.59
$ 81 2-Fluorobiphenyl (Surr)	25.0	16.4	65.48
$ 116 2,4,6-Tribromophenol	50.0	33.8	67.57
$ 148 p-Terphenyl-d14	25.0	18.3	73.21

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136514-1

SDG No.:

Client Sample ID: 16-3
Lab Sample ID: 410-136514-2

Matrix: Water
Lab File ID: JH0279.D

Analysis Method: 8270D
Date Collected: 07/26/2023 11:15

Extract. Method: 3510C
Date Extracted: 08/02/2023 15:28

Sample wt/vol: 248.6(mL)
Date Analyzed: 08/03/2023 06:33

Con. Extract Vol.: 1(mL)
Dilution Factor: 1

Injection Volume: 1(uL)
GC Column: DB-5MS 30m 0.25 ID: 0.25(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:
Level: (low/med) Low

Analysis Batch No.: 403788
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
121-14-2	2,4-Dinitrotoluene	ND		10	
606-20-2	2,6-Dinitrotoluene	ND		10	
84-66-2	Diethyl phthalate	ND		5.0	

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	80		13-138
321-60-8	2-Fluorobiphenyl (Surr)	73		44-120
367-12-4	2-Fluorophenol (Surr)	46		10-120
4165-60-0	Nitrobenzene-d5 (Surr)	75		31-120
1718-51-0	p-Terphenyl-d14 (Surr)	92		30-125
4165-62-2	Phenol-d5 (Surr)	32		10-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0279.D
Lims ID: 410-136514-D-2-A
Client ID: 16-3
Sample Type: Client
Inject. Date: 03-Aug-2023 06:33:30 ALS Bottle#: 29 Worklist Smp#: 28
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 410-136514-D-2-A
Misc. Info.: 410-0090492-028
Operator ID: mem41592 Instrument ID: HP23264

Method: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\MSSemi_HP23264.m
Limit Group: MSSV - 8270D_E LVI
Last Update: 03-Aug-2023 08:48:58 Calib Date: 02-Aug-2023 21:45:30
Integrator: Falcon ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0254.D

Column 1 : DB-5MS 20m 0.25mm (0.25 mm) Det: MS SCAN
Process Host: CTX1602

First Level Reviewer: N5QU Date: 03-Aug-2023 08:50:09

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
$ 9 2-Fluorophenol	112	3.084	3.090	-0.006	96	1026435	22.8	
$ 15 Phenol-d5	99	3.989	3.990	-0.001	96	1018428	15.8	
* 22 1,4-Dichlorobenzene-d4	152	4.322	4.322	0.000	95	146318	5.00	
$ 39 Nitrobenzene-d5	82	4.854	4.854	0.000	94	1111498	18.6	
* 52 Naphthalene-d8	136	5.543	5.543	0.000	99	557320	5.00	
$ 81 2-Fluorobiphenyl (Surr)	172	6.576	6.576	0.000	99	1709912	18.3	
92 2,6-Dinitrotoluene	165		7.020				ND	
* 96 Acenaphthene-d10	164	7.207	7.207	0.000	95	294790	5.00	
102 2,4-Dinitrotoluene	165		7.400				ND	7
107 Diethyl phthalate	149		7.633				ND	7
$ 116 2,4,6-Tribromophenol	330	7.960	7.960	0.000	90	557686	39.9	
* 131 Phenanthrene-d10	188	8.614	8.614	0.000	97	580993	5.00	
* 146 Pyrene-d10 (IS)	212	9.957	9.957	0.000	97	518788	5.00	
$ 148 p-Terphenyl-d14	244	10.132	10.132	0.000	96	2106887	22.9	
* 167 Perylene-d12	264	13.116	13.116	0.000	95	481549	5.00	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection

Reagents:

MSS_RV8270_IS_00059 Amount Added: 20.00 Units: uL Run Reagent

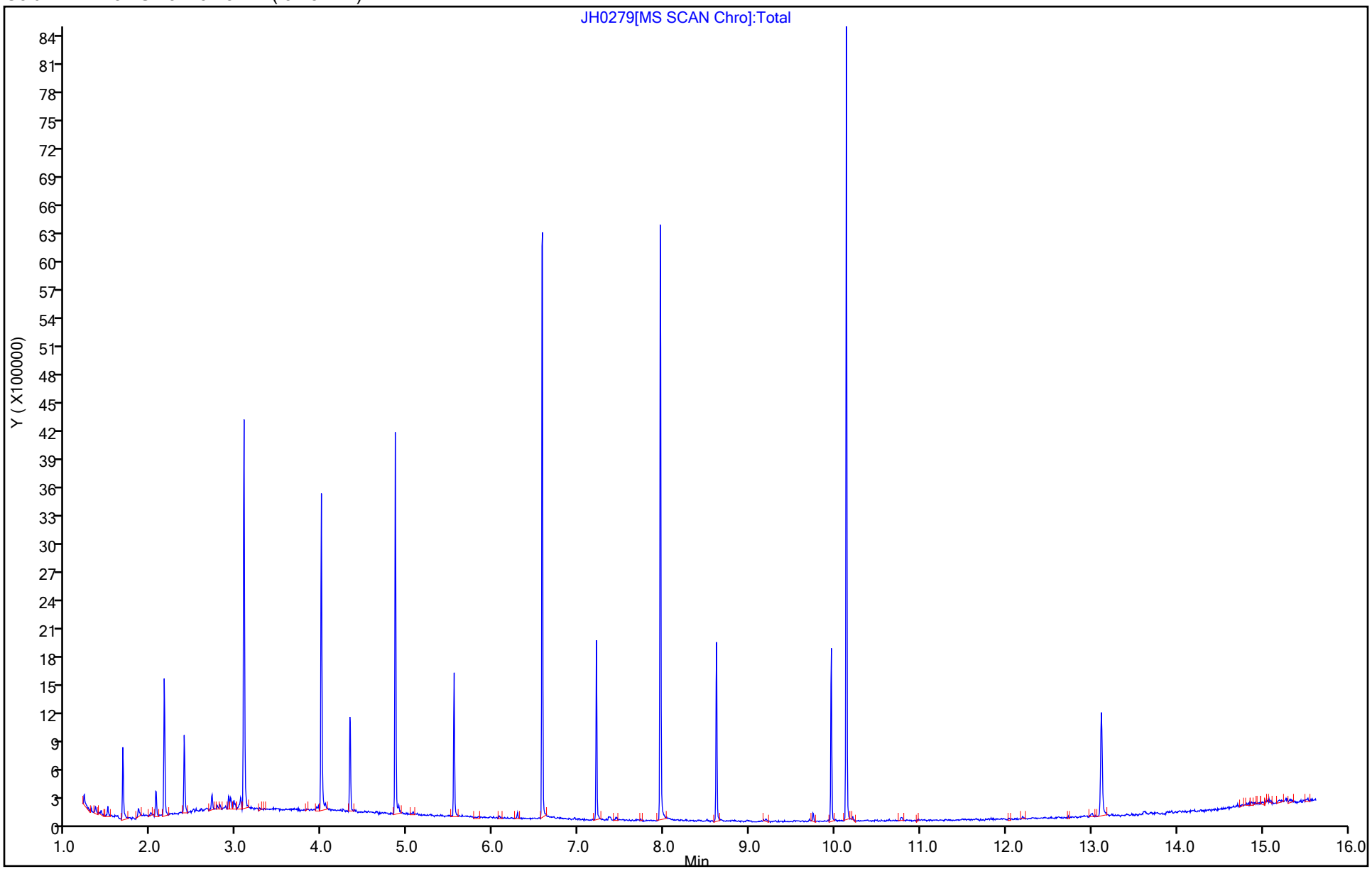
Report Date: 03-Aug-2023 08:53:57 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0279.D

Injection Date:	03-Aug-2023 06:33:30	Instrument ID:	HP23264	Operator ID:	mem41592
Lims ID:	410-136514-D-2-A	Lab Sample ID:	410-136514-2	Worklist Smp#:	28
Client ID:	16-3				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	29
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		

Column: DB-5MS 20m 0.25mm (0.25 mm)



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0279.D				
Lims ID:	410-136514-D-2-A				
Client ID:	16-3				
Sample Type:	Client				
Inject. Date:	03-Aug-2023 06:33:30	ALS Bottle#:	29	Worklist Smp#:	28
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	410-136514-D-2-A				
Misc. Info.:	410-0090492-028				
Operator ID:	mem41592	Instrument ID:	HP23264		
Method:	\\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\MSSemi_HP23264.m				
Limit Group:	MSSV - 8270D_E LVI				
Last Update:	03-Aug-2023 08:48:58	Calib Date:	02-Aug-2023 21:45:30		
Integrator:	Falcon	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0254.D				
Column 1 :	DB-5MS 20m 0.25mm (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1602				

First Level Reviewer: N5QU Date: 03-Aug-2023 08:50:09

Compound	Amount Added	Amount Recovered	% Rec.
$ 9 2-Fluorophenol	50.0	22.8	45.65
$ 15 Phenol-d5	50.0	15.8	31.59
$ 39 Nitrobenzene-d5	25.0	18.6	74.53
$ 81 2-Fluorobiphenyl (Surr)	25.0	18.3	73.10
$ 116 2,4,6-Tribromophenol	50.0	39.9	79.87
$ 148 p-Terphenyl-d14	25.0	22.9	91.62

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136514-1

SDG No.:

Client Sample ID: 16-5
Lab Sample ID: 410-136514-3

Matrix: Water
Lab File ID: JH0280.D

Analysis Method: 8270D
Date Collected: 07/26/2023 07:45

Extract. Method: 3510C
Date Extracted: 08/02/2023 15:28

Sample wt/vol: 249.8(mL)
Date Analyzed: 08/03/2023 06:54

Con. Extract Vol.: 1(mL)
Dilution Factor: 1

Injection Volume: 1(uL)
GC Column: DB-5MS 30m 0.25 ID: 0.25(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:
Level: (low/med) Low

Analysis Batch No.: 403788
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
121-14-2	2,4-Dinitrotoluene	ND		10	
606-20-2	2,6-Dinitrotoluene	ND		10	
84-66-2	Diethyl phthalate	ND		5.0	

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	86		13-138
321-60-8	2-Fluorobiphenyl (Surr)	75		44-120
367-12-4	2-Fluorophenol (Surr)	43		10-120
4165-60-0	Nitrobenzene-d5 (Surr)	74		31-120
1718-51-0	p-Terphenyl-d14 (Surr)	86		30-125
4165-62-2	Phenol-d5 (Surr)	29		10-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0280.D
Lims ID: 410-136514-D-3-A
Client ID: 16-5
Sample Type: Client
Inject. Date: 03-Aug-2023 06:54:30 ALS Bottle#: 30 Worklist Smp#: 29
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 410-136514-D-3-A
Misc. Info.: 410-0090492-029
Operator ID: mem41592 Instrument ID: HP23264

Method: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\MSSemi_HP23264.m
Limit Group: MSSV - 8270D_E LVI
Last Update: 03-Aug-2023 08:48:58 Calib Date: 02-Aug-2023 21:45:30
Integrator: Falcon ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0254.D

Column 1 : DB-5MS 20m 0.25mm (0.25 mm) Det: MS SCAN
Process Host: CTX1602

First Level Reviewer: N5QU Date: 03-Aug-2023 08:51:36

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
$ 9 2-Fluorophenol	112	3.085	3.090	-0.005	96	958449	21.6	
$ 15 Phenol-d5	99	3.990	3.990	0.000	95	920513	14.5	
* 22 1,4-Dichlorobenzene-d4	152	4.328	4.322	0.006	96	144516	5.00	
$ 39 Nitrobenzene-d5	82	4.854	4.854	0.000	94	1085424	18.5	
* 52 Naphthalene-d8	136	5.543	5.543	0.000	98	547542	5.00	
$ 81 2-Fluorobiphenyl (Surr)	172	6.576	6.576	0.000	99	1683131	18.7	
92 2,6-Dinitrotoluene	165		7.020				ND	
* 96 Acenaphthene-d10	164	7.207	7.207	0.000	95	283710	5.00	
102 2,4-Dinitrotoluene	165		7.400				ND	7
107 Diethyl phthalate	149		7.633				ND	7
$ 116 2,4,6-Tribromophenol	330	7.960	7.960	0.000	89	578366	43.0	
* 131 Phenanthrene-d10	188	8.614	8.614	0.000	96	560801	5.00	
* 146 Pyrene-d10 (IS)	212	9.957	9.957	0.000	96	522356	5.00	
$ 148 p-Terphenyl-d14	244	10.132	10.132	0.000	96	1996940	21.6	
* 167 Perylene-d12	264	13.116	13.116	0.000	94	413667	5.00	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection

Reagents:

MSS_RV8270_IS_00059 Amount Added: 20.00 Units: uL Run Reagent

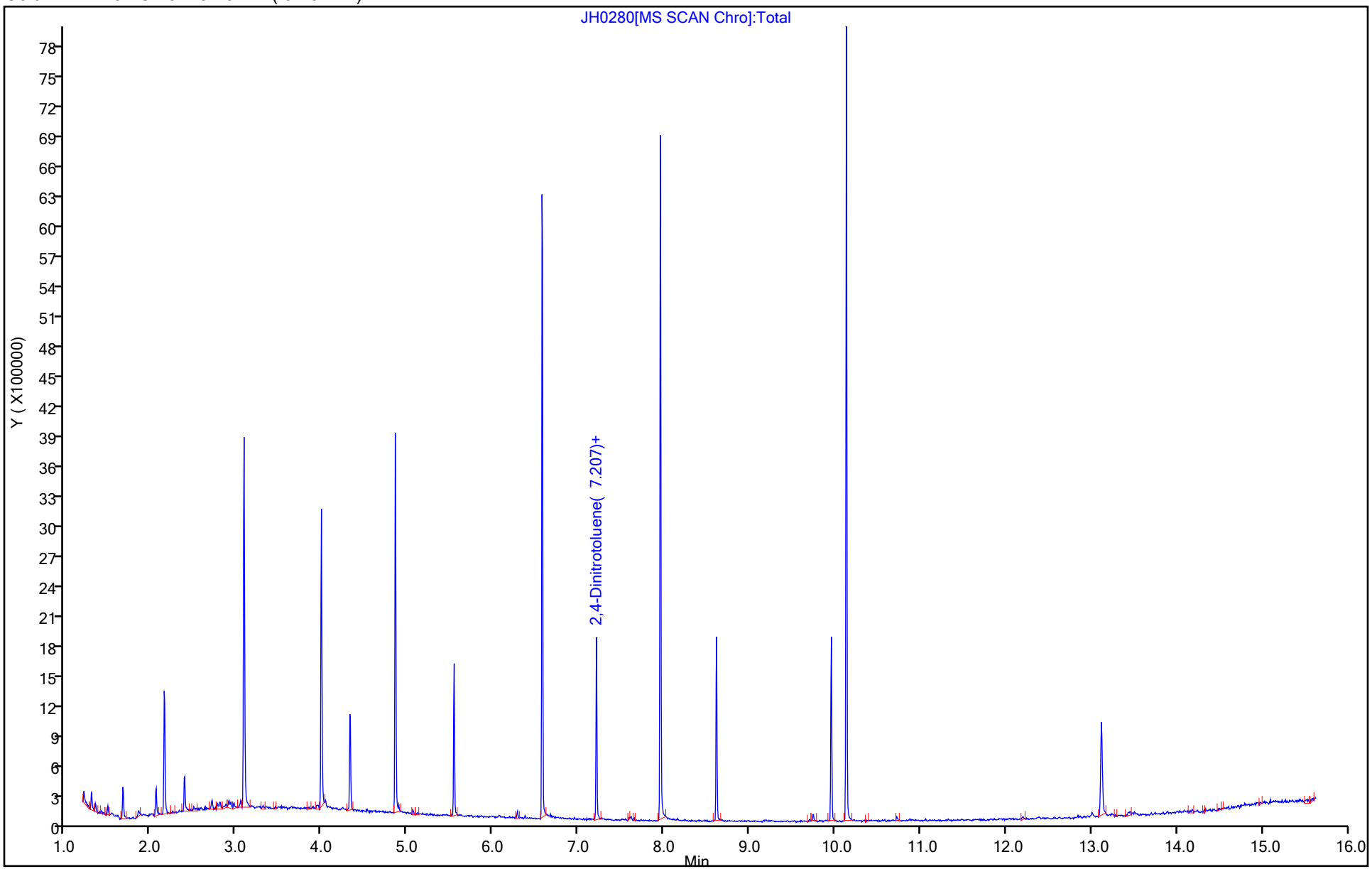
Report Date: 03-Aug-2023 08:53:59 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0280.D

Injection Date:	03-Aug-2023 06:54:30	Instrument ID:	HP23264	Operator ID:	mem41592
Lims ID:	410-136514-D-3-A	Lab Sample ID:	410-136514-3	Worklist Smp#:	29
Client ID:	16-5				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	30
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		

Column: DB-5MS 20m 0.25mm (0.25 mm)



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0280.D
Lims ID: 410-136514-D-3-A
Client ID: 16-5
Sample Type: Client
Inject. Date: 03-Aug-2023 06:54:30 ALS Bottle#: 30 Worklist Smp#: 29
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 410-136514-D-3-A
Misc. Info.: 410-0090492-029
Operator ID: mem41592 Instrument ID: HP23264

Method: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\MSSemi_HP23264.m
Limit Group: MSSV - 8270D_E LVI
Last Update: 03-Aug-2023 08:48:58 Calib Date: 02-Aug-2023 21:45:30
Integrator: Falcon ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0254.D

Column 1 : DB-5MS 20m 0.25mm (0.25 mm) Det: MS SCAN
Process Host: CTX1602

First Level Reviewer: N5QU Date: 03-Aug-2023 08:51:36

Compound	Amount Added	Amount Recovered	% Rec.
$ 9 2-Fluorophenol	50.0	21.6	43.16
$ 15 Phenol-d5	50.0	14.5	28.91
$ 39 Nitrobenzene-d5	25.0	18.5	74.08
$ 81 2-Fluorobiphenyl (Surr)	25.0	18.7	74.76
$ 116 2,4,6-Tribromophenol	50.0	43.0	86.07
$ 148 p-Terphenyl-d14	25.0	21.6	86.24

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136514-1

SDG No.:

Client Sample ID: 16WC2B
Lab Sample ID: 410-136514-4

Matrix: Water
Lab File ID: JH0281.D

Analysis Method: 8270D
Date Collected: 07/26/2023 08:40

Extract. Method: 3510C
Date Extracted: 08/02/2023 15:28

Sample wt/vol: 249(mL)
Date Analyzed: 08/03/2023 07:15

Con. Extract Vol.: 1(mL)
Dilution Factor: 1

Injection Volume: 1(uL)
GC Column: DB-5MS 30m 0.25 ID: 0.25(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:
Level: (low/med) Low

Analysis Batch No.: 403788
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
121-14-2	2,4-Dinitrotoluene	ND		10	
606-20-2	2,6-Dinitrotoluene	ND		10	
84-66-2	Diethyl phthalate	ND		5.0	

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	69		13-138
321-60-8	2-Fluorobiphenyl (Surr)	72		44-120
367-12-4	2-Fluorophenol (Surr)	37		10-120
4165-60-0	Nitrobenzene-d5 (Surr)	69		31-120
1718-51-0	p-Terphenyl-d14 (Surr)	74		30-125
4165-62-2	Phenol-d5 (Surr)	25		10-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0281.D
Lims ID: 410-136514-D-4-A
Client ID: 16WC2B
Sample Type: Client
Inject. Date: 03-Aug-2023 07:15:30 ALS Bottle#: 31 Worklist Smp#: 30
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 410-136514-D-4-A
Misc. Info.: 410-0090492-030
Operator ID: mem41592 Instrument ID: HP23264

Method: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\MSSemi_HP23264.m
Limit Group: MSSV - 8270D_E LVI
Last Update: 03-Aug-2023 08:48:58 Calib Date: 02-Aug-2023 21:45:30
Integrator: Falcon ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0254.D

Column 1 : DB-5MS 20m 0.25mm (0.25 mm) Det: MS SCAN
Process Host: CTX1602

First Level Reviewer: N5QU Date: 03-Aug-2023 08:52:16

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
$ 9 2-Fluorophenol	112	3.084	3.090	-0.006	96	847162	18.7	
$ 15 Phenol-d5	99	3.989	3.990	-0.001	95	798908	12.3	
* 22 1,4-Dichlorobenzene-d4	152	4.328	4.322	0.006	96	147401	5.00	
$ 39 Nitrobenzene-d5	82	4.854	4.854	0.000	93	982689	17.3	
* 52 Naphthalene-d8	136	5.543	5.543	0.000	98	531362	5.00	
$ 81 2-Fluorobiphenyl (Surr)	172	6.576	6.576	0.000	99	1566829	18.1	
92 2,6-Dinitrotoluene	165		7.020				ND	7
* 96 Acenaphthene-d10	164	7.207	7.207	0.000	95	273069	5.00	
102 2,4-Dinitrotoluene	165		7.400				ND	
107 Diethyl phthalate	149		7.633				ND	7
$ 116 2,4,6-Tribromophenol	330	7.960	7.960	0.000	89	443106	34.3	
* 131 Phenanthrene-d10	188	8.614	8.614	0.000	96	543164	5.00	
* 146 Pyrene-d10 (IS)	212	9.957	9.957	0.000	97	513315	5.00	
$ 148 p-Terphenyl-d14	244	10.132	10.132	0.000	96	1689134	18.6	
* 167 Perylene-d12	264	13.116	13.116	0.000	95	435025	5.00	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection

Reagents:

MSS_RV8270_IS_00059 Amount Added: 20.00 Units: uL Run Reagent

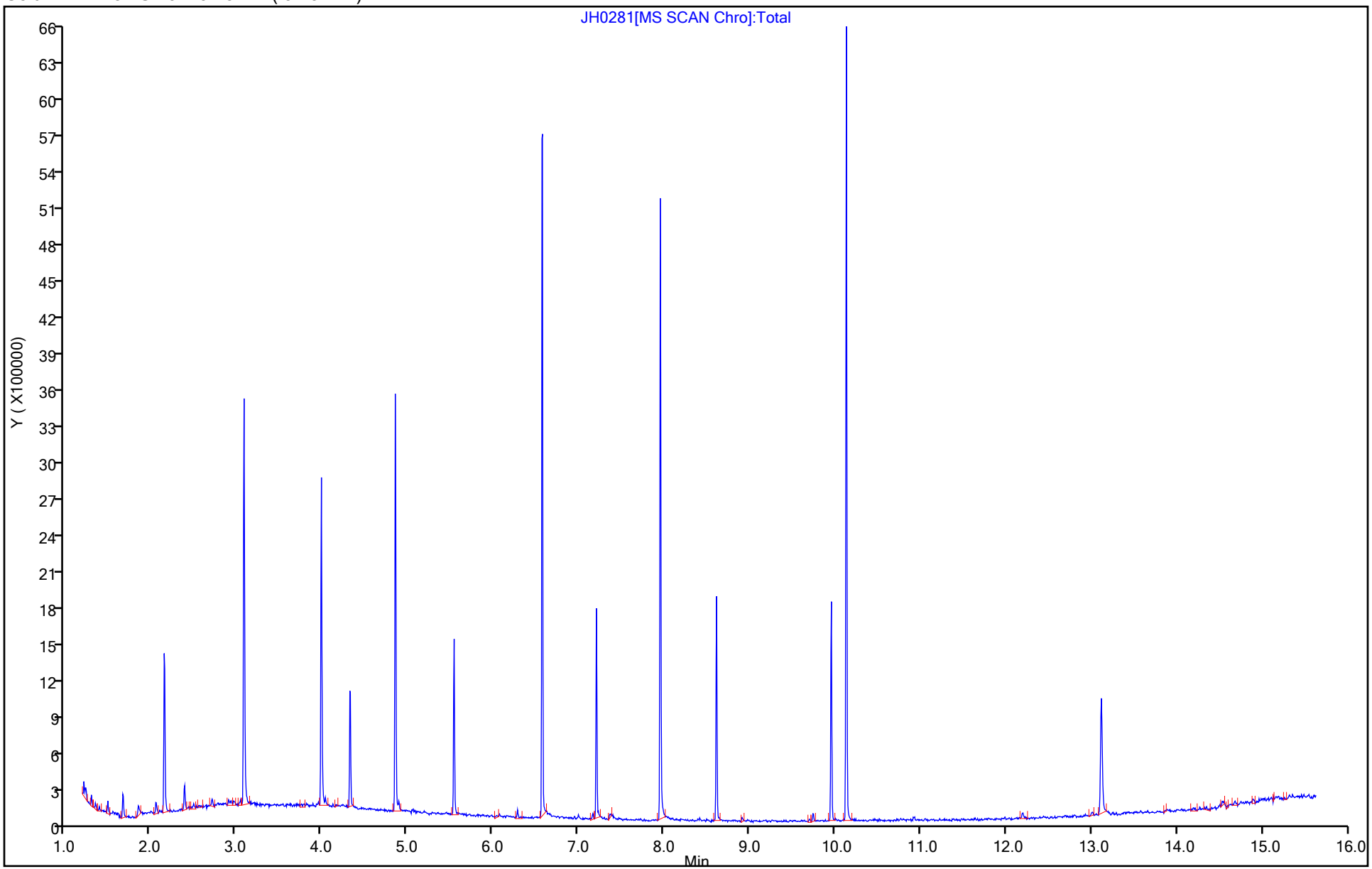
Report Date: 03-Aug-2023 08:54:00 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0281.D

Injection Date:	03-Aug-2023 07:15:30	Instrument ID:	HP23264	Operator ID:	mem41592
Lims ID:	410-136514-D-4-A	Lab Sample ID:	410-136514-4	Worklist Smp#:	30
Client ID:	16WC2B				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	31
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		

Column: DB-5MS 20m 0.25mm (0.25 mm)



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0281.D				
Lims ID:	410-136514-D-4-A				
Client ID:	16WC2B				
Sample Type:	Client				
Inject. Date:	03-Aug-2023 07:15:30	ALS Bottle#:	31	Worklist Smp#:	30
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	410-136514-D-4-A				
Misc. Info.:	410-0090492-030				
Operator ID:	mem41592	Instrument ID:	HP23264		
Method:	\\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\MSSemi_HP23264.m				
Limit Group:	MSSV - 8270D_E LVI				
Last Update:	03-Aug-2023 08:48:58	Calib Date:	02-Aug-2023 21:45:30		
Integrator:	Falcon	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0254.D				
Column 1 :	DB-5MS 20m 0.25mm (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1602				

First Level Reviewer: N5QU Date: 03-Aug-2023 08:52:16

Compound	Amount Added	Amount Recovered	% Rec.
$ 9 2-Fluorophenol	50.0	18.7	37.40
$ 15 Phenol-d5	50.0	12.3	24.60
$ 39 Nitrobenzene-d5	25.0	17.3	69.11
$ 81 2-Fluorobiphenyl (Surr)	25.0	18.1	72.31
$ 116 2,4,6-Tribromophenol	50.0	34.3	68.51
$ 148 p-Terphenyl-d14	25.0	18.6	74.24

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136514-1

SDG No.:

Client Sample ID: 16SPRING
Lab Sample ID: 410-136514-5

Matrix: Water
Lab File ID: JH0282.D

Analysis Method: 8270D
Date Collected: 07/26/2023 08:00

Extract. Method: 3510C
Date Extracted: 08/02/2023 15:28

Sample wt/vol: 247.1(mL)
Date Analyzed: 08/03/2023 07:37

Con. Extract Vol.: 1(mL)
Dilution Factor: 1

Injection Volume: 1(uL)
GC Column: DB-5MS 30m 0.25 ID: 0.25(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:
Level: (low/med) Low

Analysis Batch No.: 403788
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
121-14-2	2,4-Dinitrotoluene	ND		10	
606-20-2	2,6-Dinitrotoluene	ND		10	
84-66-2	Diethyl phthalate	ND		5.1	

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	72		13-138
321-60-8	2-Fluorobiphenyl (Surr)	68		44-120
367-12-4	2-Fluorophenol (Surr)	39		10-120
4165-60-0	Nitrobenzene-d5 (Surr)	67		31-120
1718-51-0	p-Terphenyl-d14 (Surr)	86		30-125
4165-62-2	Phenol-d5 (Surr)	27		10-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0282.D
Lims ID: 410-136514-D-5-A
Client ID: 16SPRING
Sample Type: Client
Inject. Date: 03-Aug-2023 07:37:30 ALS Bottle#: 32 Worklist Smp#: 31
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 410-136514-D-5-A
Misc. Info.: 410-0090492-031
Operator ID: mem41592 Instrument ID: HP23264

Method: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\MSSemi_HP23264.m
Limit Group: MSSV - 8270D_E LVI
Last Update: 03-Aug-2023 08:48:58 Calib Date: 02-Aug-2023 21:45:30
Integrator: Falcon ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0254.D

Column 1 : DB-5MS 20m 0.25mm (0.25 mm) Det: MS SCAN
Process Host: CTX1602

First Level Reviewer: N5QU Date: 03-Aug-2023 08:52:54

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
$ 9 2-Fluorophenol	112	3.085	3.090	-0.005	96	837210	19.7	
$ 15 Phenol-d5	99	3.990	3.990	0.000	95	817463	13.4	
* 22 1,4-Dichlorobenzene-d4	152	4.323	4.322	0.001	96	138243	5.00	
$ 39 Nitrobenzene-d5	82	4.854	4.854	0.000	94	1000598	16.9	
* 52 Naphthalene-d8	136	5.543	5.543	0.000	99	554407	5.00	
$ 81 2-Fluorobiphenyl (Surr)	172	6.576	6.576	0.000	99	1513471	16.9	
92 2,6-Dinitrotoluene	165		7.020				ND	
* 96 Acenaphthene-d10	164	7.207	7.207	0.000	96	281434	5.00	
102 2,4-Dinitrotoluene	165		7.400				ND	7
107 Diethyl phthalate	149		7.633				ND	7
$ 116 2,4,6-Tribromophenol	330	7.960	7.960	0.000	90	479238	35.9	
* 131 Phenanthrene-d10	188	8.614	8.614	0.000	96	524663	5.00	
* 146 Pyrene-d10 (IS)	212	9.957	9.957	0.000	97	523591	5.00	
$ 148 p-Terphenyl-d14	244	10.132	10.132	0.000	96	1985261	21.4	
* 167 Perylene-d12	264	13.116	13.116	0.000	94	413269	5.00	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection

Reagents:

MSS_RV8270_IS_00059 Amount Added: 20.00 Units: uL Run Reagent

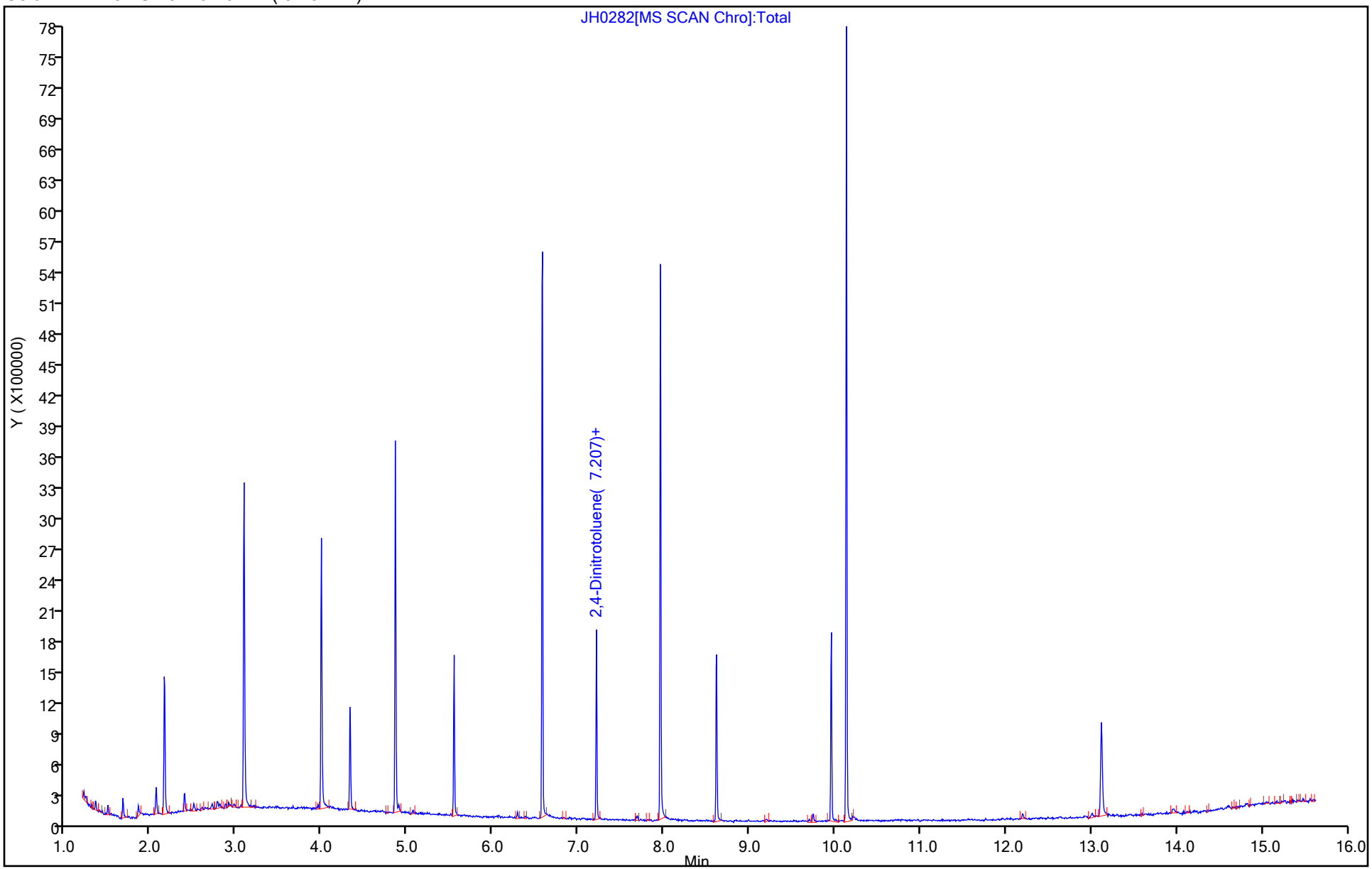
Report Date: 03-Aug-2023 08:54:02 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0282.D

Injection Date:	03-Aug-2023 07:37:30	Instrument ID:	HP23264	Operator ID:	mem41592
Lims ID:	410-136514-D-5-A	Lab Sample ID:	410-136514-5	Worklist Smp#:	31
Client ID:	16SPRING				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	32
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		

Column: DB-5MS 20m 0.25mm (0.25 mm)



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0282.D
Lims ID: 410-136514-D-5-A
Client ID: 16SPRING
Sample Type: Client
Inject. Date: 03-Aug-2023 07:37:30 ALS Bottle#: 32 Worklist Smp#: 31
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 410-136514-D-5-A
Misc. Info.: 410-0090492-031
Operator ID: mem41592 Instrument ID: HP23264

Method: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\MSSemi_HP23264.m
Limit Group: MSSV - 8270D_E LVI
Last Update: 03-Aug-2023 08:48:58 Calib Date: 02-Aug-2023 21:45:30
Integrator: Falcon ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0254.D

Column 1 : DB-5MS 20m 0.25mm (0.25 mm) Det: MS SCAN
Process Host: CTX1602

First Level Reviewer: N5QU Date: 03-Aug-2023 08:52:54

Compound	Amount Added	Amount Recovered	% Rec.
$ 9 2-Fluorophenol	50.0	19.7	39.41
$ 15 Phenol-d5	50.0	13.4	26.84
$ 39 Nitrobenzene-d5	25.0	16.9	67.44
$ 81 2-Fluorobiphenyl (Surr)	25.0	16.9	67.77
$ 116 2,4,6-Tribromophenol	50.0	35.9	71.90
$ 148 p-Terphenyl-d14	25.0	21.4	85.54

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1 Analy Batch No.: 397829

SDG No.:

Instrument ID: HP23264 GC Column: DB-5MS 30m 0 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/18/2023 07:41 Calibration End Date: 07/18/2023 10:14 Calibration ID: 52063

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-397829/3	JG1802.D
Level 2	IC 410-397829/9	JG1808.D
Level 3	IC 410-397829/8	JG1807.D
Level 4	IC 410-397829/7	JG1806.D
Level 5	ICIS 410-397829/2	JG1801a.D
Level 6	IC 410-397829/6	JG1805.D
Level 7	IC 410-397829/5	JG1804.D
Level 8	IC 410-397829/4	JG1803.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
1,4-Dioxane	+++++ 0.5980	+++++ 0.6083	0.6685 0.5980	0.5996	0.5901	Ave		0.6104				4.8		20.0			
N-Nitrosodimethylamine	1.0522 1.0263	0.8045 1.0294	1.0273 1.0499	0.9815	0.9878	Ave		0.9949				8.2		20.0			
Pyridine	1.9117 1.6310	1.9663 1.6937	1.5804 1.6635	1.6236	1.6559	Ave		1.7158				8.3		20.0			
N,N-dimethylformamide	+++++ 1.2314	+++++ 1.2450	1.2146 1.3102	1.1225	1.2294	Ave		1.2255				4.9		20.0			
2-Picoline	1.8644 1.7340	1.4453 1.7119	1.5722 1.7231	1.6297	1.6368	Ave		1.6647				7.5		20.0			
N-Nitrosomethylethylamine	+++++ 0.7446	+++++ 0.7483	0.9569 0.7294	0.9160	0.8097	Ave		0.8175				11.9		20.0			
Methyl methanesulfonate	1.0213 0.9606	0.9599 0.9905	0.9881 0.9901	0.9837	0.9823	Ave		0.9846				2.0		20.0			
N-Nitrosodiethylamine	0.5396 0.7366	0.5253 0.7404	0.7270 0.7107	0.6746	0.6594	Ave		0.6642				13.0		20.0			
Ethyl methanesulfonate	0.9055 0.8038	0.8590 0.8289	0.7592 0.8590	0.7826	0.7853	Ave		0.8229				6.0		20.0			
Benzaldehyde	1.1706	1.5060 1.0642	1.5098 +++++	1.4329	1.3303	Ave		1.3356			0.0100	13.8		20.0			
Aniline	2.2426 2.3595	2.1274 2.4933	2.2543 2.4926	2.3178	2.2972	Ave		2.3231				5.4		20.0			
Phenol	2.2770 2.2694	2.4025 2.3323	2.2423 2.3449	2.3158	2.3223	Ave		2.3133			0.8000	2.2		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1 Analy Batch No.: 397829

SDG No.:

Instrument ID: HP23264 GC Column: DB-5MS 30m 0 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/18/2023 07:41 Calibration End Date: 07/18/2023 10:14 Calibration ID: 52063

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Bis(2-chloroethyl)ether	1.6538 1.5473	1.8475 1.5694	1.6941 1.5319	1.5681	1.4900	Ave		1.6128			0.7000	7.2		20.0			
2-Chlorophenol	1.5309 1.4724	1.2766 1.4835	1.3714 1.4442	1.4066	1.4048	Ave		1.4238			0.8000	5.5		20.0			
1,3-Dichlorobenzene	1.3811 1.4229	1.3442 1.4259	1.3810 1.4741	1.4402	1.4551	Ave		1.4156				3.1		20.0			
1,4-Dichlorobenzene	1.5732 1.4836	1.6583 1.4804	1.5115 1.4555	1.4790	1.4846	Ave		1.5158				4.5		20.0			
Benzyl alcohol	0.8873 1.0244	0.8194 1.0099	0.8461 1.0714	0.9384	0.9545	Ave		0.9439				9.4		20.0			
1,2-Dichlorobenzene	1.5300 1.4356	1.2752 1.4147	1.3902 1.4312	1.3619	1.3784	Ave		1.4021				5.2		20.0			
2,2'-oxybis[1-chloropropane]	4.3473 3.4210	3.6303 3.5146	3.3451 3.3926	3.3493	3.4170	Ave		3.5522			0.0100	9.4		20.0			
2-Methylphenol	1.3640 1.4325	1.3121 1.4771	1.2598 1.4272	1.3165	1.3400	Ave		1.3661			0.7000	5.4		20.0			
N-Nitrosopyrrolidine	0.6574 0.8704	0.8187 0.8699	0.8298 0.8952	0.7804	0.8325	Ave		0.8193				9.1		20.0			
Acetophenone	2.1187 2.1864	2.1859 2.1748	2.2118 2.2485	2.1876	2.2398	Ave		2.1942			0.0100	1.9		20.0			
N-Nitrosodi-n-propylamine	1.5147 1.3258	1.4668 1.3017	1.2950 1.3474	1.2697	1.3395	Ave		1.3576			0.5000	6.4		20.0			
N-Nitrosomorpholine	1.1694 1.1933	1.4614 1.2493	1.2765 1.2562	1.2133	1.2575	Ave		1.2596				7.1		20.0			
o-Toluidine	2.1432 2.3733	2.3311 2.4773	2.3161 2.4731	2.3522	2.5422	Ave		2.3761				5.2		20.0			
4-Methylphenol (and/or 3-Methylphenol)	1.4308 1.6255	1.4559 1.6819	1.5030 1.6958	1.5737	1.6811	Ave		1.5809			0.6000	6.7		20.0			
Hexachloroethane	0.6258 0.6099	0.6827 0.6224	0.6349 0.6598	0.6280	0.6441	Ave		0.6384			0.3000	3.7		20.0			
Nitrobenzene	0.6122 0.4424	0.5257 0.4609	0.4440 0.4658	0.4841	0.4758	Ave		0.4889			0.2000	11.5		20.0			
N-Nitrosopiperidine	0.2250 0.1936	0.1848 0.2043	0.1688 0.2018	0.1976	0.2016	Ave		0.1972				8.2		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1 Analy Batch No.: 397829

SDG No.:

Instrument ID: HP23264 GC Column: DB-5MS 30m 0 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/18/2023 07:41 Calibration End Date: 07/18/2023 10:14 Calibration ID: 52063

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Isophorone	0.9053 0.8592	0.8579 0.9092	0.8124 0.8580	0.8742	0.9183	Ave		0.8743			0.4000	4.0		20.0			
2-Nitrophenol	0.1668 0.1856	0.1764 0.2043	0.1537 0.1901	0.1867	0.1813	Ave		0.1806			0.1000	8.5		20.0			
2,4-Dimethylphenol	0.3474 0.3975	0.2951 0.4143	0.3582 0.3667	0.3942	0.3787	Ave		0.3690			0.2000	10.1		20.0			
o,o',o''-Triethylphosphorothioate	0.1263 0.1369	0.1416 0.1605	0.1334 0.1331	0.1538	0.1503	Ave		0.1420				8.3		20.0			
Bis(2-chloroethoxy)methane	0.4882 0.5159	0.5337 0.5501	0.4939 0.4964	0.5907	0.5525	Ave		0.5277			0.3000	6.8		20.0			
2,4-Dichlorophenol	0.2083 0.2856	0.2606 0.3149	0.2575 0.2908	0.2912	0.2953	Ave		0.2755			0.2000	12.0		20.0			
1,2,4-Trichlorobenzene	0.3274 0.2950	0.3135 0.3096	0.2908 0.3077	0.3233	0.3135	Ave		0.3101				4.0		20.0			
Naphthalene	1.1323 1.0183	1.0180 1.1206	1.0368 1.0781	1.0993	1.1040	Ave		1.0759			0.7000	4.3		20.0			
a-Terpineol	0.5131 0.4592	0.4099 0.5177	0.4163 0.4876	0.4968	0.4811	Ave		0.4727				8.7		20.0			
4-Chloroaniline	0.3445 0.4750	0.4552 0.4944	0.4329 0.4763	0.4833	0.4742	Ave		0.4545			0.0100	10.6		20.0			
2,6-Dichlorophenol	0.2263 0.2937	0.2402 0.3001	0.2646 0.2860	0.2764	0.2923	Ave		0.2724				9.9		20.0			
Hexachloropropene	0.1812 0.1951	0.1933 0.2054	0.1823 0.1916	0.2069	0.2037	Ave		0.1950				5.1		20.0			
Hexachlorobutadiene	0.1650 0.1709	0.1487 0.1812	0.1625 0.1628	0.1743	0.1780	Ave		0.1679			0.0100	6.2		20.0			
Quinoline	0.7684 0.7164	0.7056 0.7573	0.6867 0.7419	0.7643	0.7698	Ave		0.7388				4.3		20.0			
Caprolactam	0.0994	0.0966 0.1044	0.0880 0.0986	0.1015	0.0956	Ave		0.0977			0.0100	5.3		20.0			
N-Nitrosodi-n-butylamine	+++++ 0.3735	+++++ 0.3976	0.4291 0.3899	0.4435	0.3949	Ave		0.4048				6.5		20.0			
1,4-phenylenediamine	+++++ 0.2305	+++++ 0.2322	+++++ 0.2126	0.2835	0.2422	Ave		0.2402				11.0		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1 Analy Batch No.: 397829

SDG No.:

Instrument ID: HP23264 GC Column: DB-5MS 30m 0 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/18/2023 07:41 Calibration End Date: 07/18/2023 10:14 Calibration ID: 52063

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
4-Chloro-3-methylphenol	0.3188 0.3448	0.3304 0.3521	0.3121 0.3601	0.3403	0.3612	Ave		0.3400			0.2000	5.4		20.0			
Safrole, Total	0.1974 0.2400	0.2146 0.2611	0.2309 0.2519	0.2374	0.2617	Ave		0.2369				9.5		20.0			
2-Methylnaphthalene	0.6432 0.6352	0.6219 0.6967	0.6123 0.6553	0.7014	0.6630	Ave		0.6536			0.4000	5.0		20.0			
1-Methylnaphthalene	0.6396 0.6397	0.6205 0.6280	0.5596 0.6305	0.6637	0.6312	Ave		0.6266				4.8		20.0			
Hexachlorocyclopentadiene	0.3121 0.3437	0.2765 0.3419	0.2774 0.3257	0.3674	0.3750	Ave		0.3275			0.0500	11.4		20.0			
1,2,4,5-Tetrachlorobenzene	0.5657 0.5968	0.5141 0.6125	0.5794 0.6196	0.6403	0.6066	Ave		0.5919			0.0100	6.6		20.0			
Isosafrole Peak 1	0.6537 0.5695	0.5556 0.5500	0.5371 0.5656	0.5751	0.5692	Ave		0.5720				6.2		20.0			
2,4,6-Trichlorophenol	0.3577 0.3817	0.3174 0.3961	0.3522 0.4007	0.3893	0.4138	Ave		0.3761			0.2000	8.4		20.0			
2,4,5-Trichlorophenol	0.3393 0.4208	0.3932 0.4207	0.4012 0.4461	0.4269	0.4661	Ave		0.4143			0.2000	9.2		20.0			
Isosafrole Peak 2	0.5253 0.5638	0.5056 0.6032	0.5679 0.5767	0.6227	0.6492	Ave		0.5768				8.3		20.0			
1,1'-Biphenyl	1.4007 1.4894	1.5551 1.5709	1.5555 1.5149	1.6435	1.7072	Ave		1.5546			0.0100	6.0		20.0			
2-Chloronaphthalene	1.2300 1.0520	1.1666 1.0932	1.1249 1.2656	1.2239	1.2707	Ave		1.1784			0.8000	7.0		20.0			
1-Chloronaphthalene	1.0284 1.1260	1.0748 1.2005	1.0859 1.0347	1.1967	1.3019	Ave		1.1311				8.4		20.0			
Diphenyl ether	0.8573 0.7791	0.7488 0.8556	0.8309 0.8241	0.8280	0.8918	Ave		0.8270				5.5		20.0			
2-Nitroaniline	+++++ 0.4228	+++++ 0.4369	0.3724 0.4361	0.3971	0.4262	Ave		0.4152			0.0100	6.1		20.0			
1,4-Naphthoquinone	0.3985 0.5085	0.3951 0.5136	0.4391 0.5079	0.4737	0.4945	Ave		0.4664				10.6		20.0			
1,4-Dinitrobenzene	0.2266 0.1938	0.1359 0.1864	0.1582 0.2021	0.1797	0.1935	Ave		0.1845				15.0		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1 Analy Batch No.: 397829

SDG No.:

Instrument ID: HP23264 GC Column: DB-5MS 30m 0 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/18/2023 07:41 Calibration End Date: 07/18/2023 10:14 Calibration ID: 52063

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Dimethyl phthalate	1.3280 1.3797	1.4462 1.3210	1.3915 1.3248	1.5026	1.4639	Ave		1.3947			0.0100	5.0		20.0			
1,3-Dinitrobenzene	0.2809 0.2082	0.1718 0.2117	0.1998 0.2110	0.2212	0.2156	Ave		0.2150				14.2		20.0			
2,6-Dinitrotoluene	+++++ 0.3180	0.2207 0.3023	0.2892 0.2954	0.2992	0.3277	Ave		0.2932			0.2000	11.8		20.0			
Acenaphthylene	1.8801 2.0384	1.8975 2.1317	2.0063 2.0098	2.1271	2.1722	Ave		2.0329			0.9000	5.3		20.0			
3-Nitroaniline	0.2898 0.3884	0.2980 0.3943	0.3595 0.3901	0.3725	0.3915	Ave		0.3605			0.0100	11.9		20.0			
Acenaphthene	1.3253 1.2609	1.3099 1.3466	1.3211 1.3149	1.3467	1.3094	Ave		1.3169			0.9000	2.0		20.0			
2,4-Dinitrophenol	+++++ 0.1981	+++++ 0.2034	0.1430 0.2082	0.1740	0.1870	Ave		0.1856			0.0100	13.1		20.0			
Pentachlorobenzene	0.4685 0.4985	0.5402 0.5211	0.4951 0.5280	0.5138	0.5295	Ave		0.5118				4.6		20.0			
4-Nitrophenol	+++++ 0.2337	0.1564 0.2282	0.2007 0.2413	0.2285	0.2449	Ave		0.2191			0.0100	14.2		20.0			
2,4-Dinitrotoluene	0.3756 0.4098	0.3563 0.4007	0.3746 0.4104	0.4230	0.4348	Ave		0.3981			0.2000	6.8		20.0			
Dibenzofuran	1.8598 1.7480	1.7056 1.6884	1.7870 1.6883	1.8375	1.8967	Ave		1.7764			0.8000	4.6		20.0			
1-Naphthylamine	1.2807 1.1347	1.1752 1.1586	1.1278 1.1656	1.2452	1.2708	Ave		1.1948				5.1		20.0			
2,3,4,6-Tetrachlorophenol	0.3740 0.3401	0.4117 0.3409	0.3451 0.3546	0.3580	0.3817	Ave		0.3633			0.0100	6.8		20.0			
2-Naphthylamine	0.9897 1.2979	1.1817 1.2863	1.2609 1.2265	1.2912	1.3843	Ave		1.2398				9.4		20.0			
Diethyl phthalate	1.4416 1.4669	1.5552 1.4432	1.5197 1.4791	1.5186	1.5984	Ave		1.5028			0.0100	3.7		20.0			
Thionazin	0.2739 0.2607	0.2215 0.2679	0.2698 0.2708	0.2752	0.2902	Ave		0.2662				7.5		20.0			
Fluorene	1.3859 1.3607	1.3290 1.3980	1.4031 1.3267	1.5267	1.4595	Ave		1.3987			0.9000	4.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1 Analy Batch No.: 397829

SDG No.:

Instrument ID: HP23264 GC Column: DB-5MS 30m 0 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/18/2023 07:41 Calibration End Date: 07/18/2023 10:14 Calibration ID: 52063

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
4-Chlorophenyl-phenyl ether	0.6136 0.5925	0.6830 0.6097	0.6139 0.5844	0.6661	0.6431	Ave		0.6258			0.4000	5.6		20.0			
5-Nitro-o-toluidine	0.3895 0.3983	0.3282 0.3923	0.4155 0.4175	0.3926	0.4162	Ave		0.3937				7.4		20.0			
4-Nitroaniline	+++++ 0.3756	0.2582 0.3504	0.3847 0.3762	0.3740	0.3903	Ave		0.3585			0.0100	12.8		20.0			
4,6-Dinitro-2-methylphenol	+++++ 0.1193	+++++ 0.1201	0.1058 0.1312	0.1144	0.1090	Ave		0.1166			0.0100	7.8		20.0			
N-Nitrosodiphenylamine	0.6012 0.5887	0.5456 0.6353	0.6336 0.6390	0.6447	0.5852	Ave		0.6091			0.0100	5.7		20.0			
1,2-Diphenylhydrazine	1.0414 0.9694	1.0392 1.0289	1.0500 1.0683	1.0471	0.9313	Ave		1.0219				4.6		20.0			
Sulfotepp	0.1537 0.1703	0.1594 0.1796	0.1749 0.1756	0.1680	0.1607	Ave		0.1678				5.4		20.0			
1,3,5-Trinitrobenzene	+++++ 0.0615	0.0713 0.0702	0.0494 0.0672	0.0556	0.0562	Ave		0.0616				13.5		20.0			
cis-Diallate	0.4949 0.3713	0.4877 0.4047	0.3819 0.3965	0.3791	0.3462	Ave		0.4078				13.3		20.0			
Phorate	+++++ 0.6248	0.5131 0.7079	0.5770 +++++	0.6048	0.5662	Ave		0.5990				10.9		20.0			
Phenacetin	0.3039 0.4535	0.3368 0.4566	0.4063 0.4781	0.4328	0.4040	Ave		0.4090				14.9		20.0			
4-Bromophenyl-phenylether	0.1836 0.1930	0.2070 0.2019	0.2035 0.1925	0.2036	0.1923	Ave		0.1972			0.1000	4.0		20.0			
trans-Diallate	+++++ 0.3699	+++++ 0.3842	0.4215 0.3794	0.4102	0.3739	Ave		0.3898				5.4		20.0			
Hexachlorobenzene	0.1908 0.2302	0.2789 0.2330	0.2349 0.2296	0.2458	0.2289	Ave		0.2340			0.1000	10.3		20.0			
Dimethoate	0.3381 0.3769	0.3683 0.4124	0.3932 0.3991	0.3890	0.3575	Ave		0.3793				6.4		20.0			
Atrazine	0.1702	0.1710 0.1828	0.1858 0.1692	0.1956	0.1758	Ave		0.1786			0.0100	5.5		20.0			
Pentachloronitrobenzene	0.1006 0.0986	0.0957 0.0955	0.1037 0.1079	0.1039	0.0958	Ave		0.1002				4.6		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1 Analy Batch No.: 397829

SDG No.:

Instrument ID: HP23264 GC Column: DB-5MS 30m 0 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/18/2023 07:41 Calibration End Date: 07/18/2023 10:14 Calibration ID: 52063

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Pentachlorophenol	0.0922 0.1217	0.0864 0.1248	0.1063 +++++	0.1240	0.1219	Ave		0.1110			0.0500	14.6		20.0			
4-Aminobiphenyl	0.8343 0.7526	0.8089 0.7531	0.8215 0.8230	0.8682	0.7486	Ave		0.8013				5.6		20.0			
Pronamide	0.2702 0.3608	0.3177 0.3633	0.3191 0.3595	0.3564	0.3507	Ave		0.3372				9.7		20.0			
Dinoseb	+++++ 0.1702	+++++ 0.1768	0.1288 0.1801	0.1416	0.1580	Ave		0.1593				12.9		20.0			
Disulfoton	0.5293 0.6274	0.8688 0.6389	0.6690 0.6101	0.6350	0.6198	Ave		0.6498				15.0		20.0			
Phenanthrene	1.0782 1.0330	0.9589 1.0610	1.1439 1.0399	1.0858	1.0333	Ave		1.0543			0.7000	5.0		20.0			
Anthracene	1.1031 1.0628	1.0203 1.0531	1.0833 1.0367	1.0619	0.9817	Ave		1.0504			0.7000	3.6		20.0			
Carbazole	0.9614 1.0805	1.0003 1.0346	1.0559 1.0760	1.0713	1.0120	Ave		1.0365			0.0100	4.1		20.0			
Methyl parathion	0.2145 0.3006	0.2256 0.3253	0.2783 0.3284	0.2692	0.2789	Ave		0.2776				15.0		20.0			
Di-n-butyl phthalate	1.1359 1.4370	1.2031 1.4249	1.4050 1.3854	1.3877	1.2956	Ave		1.3343			0.0100	8.4		20.0			
Parathion	0.1348 0.1714	0.1424 0.1893	0.1517 0.1890	0.1707	0.1639	Ave		0.1642				12.3		20.0			
4-Nitroquinoline-1-oxide	+++++ 0.0715	+++++ 0.0770	+++++ 0.0881	0.0592	0.0620	Ave		0.0716				16.3		20.0			
Octachlorostyrene	0.0671 0.0860	0.0845 0.0919	0.0993 0.0909	0.0922	0.0848	Ave		0.0871				10.8		20.0			
Isodrin	+++++ 0.1304	0.1741 0.1280	0.1601 0.1301	0.1371	0.1163	Ave		0.1394				14.5		20.0			
Fluoranthene	1.0065 1.1016	1.0618 1.1592	1.1720 1.1344	1.2023	1.0881	Ave		1.1157			0.6000	5.7		20.0			
Benzidine	0.6203 0.7622	0.5595 0.7685	0.6927 0.7231	0.7459	0.7778	Ave		0.7062				11.1		20.0			
Pyrene	1.3399 1.2276	1.2602 1.3450	1.2418 1.3427	1.2730	1.2322	Ave		1.2828			0.6000	4.0		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1 Analy Batch No.: 397829

SDG No.:

Instrument ID: HP23264 GC Column: DB-5MS 30m 0 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/18/2023 07:41 Calibration End Date: 07/18/2023 10:14 Calibration ID: 52063

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
p-Dimethylamino azobenzene	+++++ 0.1623	+++++ 0.1864	0.1469 0.1968	0.1605	0.1593	Ave		0.1687				11.2		20.0			
Chlorobenzilate	0.4360 0.4075	0.2935 0.4458	0.3678 0.4781	0.3828	0.4380	Ave		0.4062				14.2		20.0			
3,3'-Dimethylbenzidine	0.6141 0.5789	0.4800 0.6490	0.4817 0.6309	0.5148	0.6021	Ave		0.5689				11.9		20.0			
Butylbenzylphthalate	0.4984 0.5948	0.5336 0.6647	0.5307 0.6602	0.5688	0.6220	Ave		0.5841			0.0100	10.6		20.0			
2-Acetylaminofluorene	+++++ 0.3774	+++++ 0.4264	+++++ 0.4554	0.3100	0.3666	Ave		0.3872				14.5		20.0			
3,3'-Dichlorobenzidine	0.2954 0.3741	0.3160 0.4068	0.3301 0.4158	0.3488	0.3774	Ave		0.3581			0.0100	12.0		20.0			
4,4'-Methylene bis(2-chloroaniline)	0.1557 0.2006	0.1410 0.2107	0.1713 0.2176	0.1718	0.2030	Ave		0.1840				15.1		20.0			
Benzo[a]anthracene	0.8589 0.9864	0.7935 1.0535	0.9299 1.0418	0.9353	0.9861	Ave		0.9482			0.8000	9.4		20.0			
Chrysene	0.9393 0.9005	0.8527 0.9648	0.9109 1.0460	0.9268	0.9596	Ave		0.9376			0.7000	6.0		20.0			
Bis(2-ethylhexyl) phthalate	0.6694 0.8458	0.6433 0.9138	0.7316 0.9598	0.7718	0.8065	Ave		0.7928			0.0100	14.1		20.0			
6-Methylchrysene	0.6397 0.6095	0.6113 0.6648	0.5915 0.7470	0.6075	0.6737	Ave		0.6431				7.9		20.0			
Di-n-octyl phthalate	+++++ 1.8032	+++++ 1.8178	1.4405 2.0488	1.8165	1.7991	Ave		1.7877			0.0100	10.9		20.0			
7,12-Dimethylbenz(a)anthracene	0.4178 0.4775	0.3455 0.5029	0.4472 0.4848	0.5451	0.4840	Ave		0.4631				13.0		20.0			
Benzo[b]fluoranthene	1.4065 1.2240	1.0152 1.2567	1.2062 1.2208	1.3865	1.2873	Ave		1.2504			0.7000	9.7		20.0			
Benzo[k]fluoranthene	1.2445 1.3035	1.1976 1.2670	1.1706 1.2877	1.3782	1.3262	Ave		1.2719			0.7000	5.3		20.0			
Benzo[a]pyrene	1.0523 1.0613	0.9745 1.0796	1.0200 1.1165	1.0985	1.1089	Ave		1.0639			0.7000	4.5		20.0			
3-Methylcholanthrene	0.4905 0.4633	0.3837 0.4729	0.4232 0.5398	0.5033	0.4654	Ave		0.4678				10.2		20.0			

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FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1 Analy Batch No.: 397829

SDG No.:

Instrument ID: HP23264 GC Column: DB-5MS 30m 0 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/18/2023 07:41 Calibration End Date: 07/18/2023 10:14 Calibration ID: 52063

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Dibenz[a,h]acridine	0.8869 0.8634	0.8020 0.8958	0.8355 0.9572	0.9092	0.9025	Ave		0.8816				5.4		20.0			
Dibenz[a,j]acridine	0.9870 0.9581	0.9134 0.9807	0.9327 1.0864	1.1361	0.9965	Ave		0.9988				7.6		20.0			
Indeno[1,2,3-cd]pyrene	0.9839 1.0203	0.8670 1.0304	0.9705 1.1090	1.1403	0.9908	Ave		1.0140			0.5000	8.4		20.0			
Dibenz(a,h)anthracene	1.0329 1.1392	0.9691 1.1283	1.0822 1.1999	1.2501	1.1655	Ave		1.1209			0.4000	8.1		20.0			
Benzo[g,h,i]perylene	1.1848 1.1407	1.0651 1.1757	1.1455 1.2730	1.2863	1.2654	Ave		1.1921			0.5000	6.5		20.0			
2-Fluorophenol (Surr)	1.4311 1.5949	1.4832 1.6079	1.4970 1.6142	1.5317	1.5332	Ave		1.5366				4.3		20.0			
Phenol-d5 (Surr)	2.0409 2.3141	1.8632 2.3795	2.1684 2.3651	2.2551	2.2396	Ave		2.2032				8.0		20.0			
Nitrobenzene-d5 (Surr)	0.5262 0.5002	0.5515 0.5502	0.5160 0.5378	0.5551	0.5446	Ave		0.5352				3.6		20.0			
2-Fluorobiphenyl (Surr)	1.5963 1.5186	1.6115 1.6369	1.5777 1.4135	1.6169	1.7247	Ave		1.5870				5.7		20.0			
2,4,6-Tribromophenol (Surr)	0.1991 0.2426	0.2330 0.2463	0.2289 0.2405	0.2419	0.2626	Ave		0.2368				7.7		20.0			
p-Terphenyl-d14 (Surr)	0.8756 0.8679	0.8434 0.8759	0.8642 0.8944	0.9083	0.9627	Ave		0.8865				4.1		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 397829

SDG No.:

Instrument ID: HP23264 GC Column: DB-5MS 30m 0 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/18/2023 07:41 Calibration End Date: 07/18/2023 10:14 Calibration ID: 52063

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-397829/3	JG1802.D
Level 2	IC 410-397829/9	JG1808.D
Level 3	IC 410-397829/8	JG1807.D
Level 4	IC 410-397829/7	JG1806.D
Level 5	ICIS 410-397829/2	JG1801a.D
Level 6	IC 410-397829/6	JG1805.D
Level 7	IC 410-397829/5	JG1804.D
Level 8	IC 410-397829/4	JG1803.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
1,4-Dioxane	DCBd 4	Ave	+++++	+++++	39236	86564	188328	+++++	+++++	1.25	3.75	7.50
			344728	552607	758139			12.5	20.0	30.0		
N-Nitrosodimethylamine	DCBd 4	Ave	5717	7593	60295	141688	315242	0.125	0.250	1.25	3.75	7.50
			591627	935066	1331176			12.5	20.0	30.0		
Pyridine	DCBd 4	Ave	20774	37118	185508	468775	1056962	0.250	0.500	2.50	7.50	15.0
			1880460	3077034	4218053			25.0	40.0	60.0		
N,N-dimethylformamide	DCBd 4	Ave	+++++	+++++	71283	162039	392348	+++++	+++++	1.25	3.75	7.50
			709839	1130899	1661162			12.5	20.0	30.0		
2-Picoline	DCBd 4	Ave	10130	13641	92270	235256	522378	0.125	0.250	1.25	3.75	7.50
			999554	1555113	2184698			12.5	20.0	30.0		
N-Nitrosomethylethylamine	DCBd 4	Ave	+++++	+++++	56162	132237	258422	+++++	+++++	1.25	3.75	7.50
			429259	679740	924805			12.5	20.0	30.0		
Methyl methanesulfonate	DCBd 4	Ave	5549	9060	57993	142001	313500	0.125	0.250	1.25	3.75	7.50
			553757	899721	1255316			12.5	20.0	30.0		
N-Nitrosodiethylamine	DCBd 4	Ave	2932	4958	42666	97390	210463	0.125	0.250	1.25	3.75	7.50
			424605	672534	901108			12.5	20.0	30.0		
Ethyl methanesulfonate	DCBd 4	Ave	4920	8108	44559	112977	250618	0.125	0.250	1.25	3.75	7.50

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 397829

SDG No.:

Instrument ID: HP23264 GC Column: DB-5MS 30m 0 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/18/2023 07:41 Calibration End Date: 07/18/2023 10:14 Calibration ID: 52063

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
			463350	752996	1089118			12.5	20.0	30.0		
Benzaldehyde	DCBd 4	Ave		14214	88611	206848	424550		0.250	1.25	3.75	7.50
			674785	966730	+++++			12.5	20.0	+++++		
Aniline	DCBd 4	Ave	12185	20079	132307	334598	733148	0.125	0.250	1.25	3.75	7.50
			1360168	2264896	3160259			12.5	20.0	30.0		
Phenol	DCBd 4	Ave	12372	22676	131603	334305	741167	0.125	0.250	1.25	3.75	7.50
			1308192	2118631	2973020			12.5	20.0	30.0		
Bis(2-chloroethyl)ether	DCBd 4	Ave	8986	17437	99429	226362	475541	0.125	0.250	1.25	3.75	7.50
			891977	1425613	1942224			12.5	20.0	30.0		
2-Chlorophenol	DCBd 4	Ave	8318	12049	80486	203052	448330	0.125	0.250	1.25	3.75	7.50
			848768	1347636	1831037			12.5	20.0	30.0		
1,3-Dichlorobenzene	DCBd 4	Ave	7504	12687	81053	207905	464391	0.125	0.250	1.25	3.75	7.50
			820239	1295260	1868945			12.5	20.0	30.0		
1,4-Dichlorobenzene	DCBd 4	Ave	8548	15652	88711	213503	473819	0.125	0.250	1.25	3.75	7.50
			855219	1344816	1845336			12.5	20.0	30.0		
Benzyl alcohol	DCBd 4	Ave	4821	7734	49655	135473	304640	0.125	0.250	1.25	3.75	7.50
			590534	917389	1358348			12.5	20.0	30.0		
1,2-Dichlorobenzene	DCBd 4	Ave	8313	12036	81588	196605	439910	0.125	0.250	1.25	3.75	7.50
			827551	1285129	1814507			12.5	20.0	30.0		
2,2'-oxybis[1-chloropropane]	DCBd 4	Ave	23621	34264	196326	483495	1090541	0.125	0.250	1.25	3.75	7.50
			1972059	3192650	4301264			12.5	20.0	30.0		
2-Methylphenol	DCBd 4	Ave	7411	12384	73940	190048	427647	0.125	0.250	1.25	3.75	7.50
			825774	1341808	1809425			12.5	20.0	30.0		
N-Nitrosopyrrolidine	DCBd 4	Ave	3572	7727	48702	112657	265679	0.125	0.250	1.25	3.75	7.50

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 397829

SDG No.:

Instrument ID: HP23264 GC Column: DB-5MS 30m 0 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/18/2023 07:41 Calibration End Date: 07/18/2023 10:14 Calibration ID: 52063

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
			501730	790226	1134935			12.5	20.0	30.0		
Acetophenone	DCBd 4	Ave	11512 1260374	20631 1975563	129811 2850714	315799	714827	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
N-Nitrosodi-n-propylamine	DCBd 4	Ave	8230 764275	13844 1182472	76003 1708253	183291	427502	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
N-Nitrosomorpholine	DCBd 4	Ave	6354 687911	13793 1134880	74919 1592626	175146	401320	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
o-Toluidine	DCBd 4	Ave	11645 1368101	22002 2250375	135934 3135525	339553	811332	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
4-Methylphenol (and/or 3-Methylphenol)	DCBd 4	Ave	7774 937008	13741 1527791	88210 2149999	227183	536513	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Hexachloroethane	DCBd 4	Ave	3400 351578	6444 565396	37263 836588	90652	205550	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Nitrobenzene	NPT	Ave	12978 1023932	18870 1574319	104580 2297951	257341	557937	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
N-Nitrosopiperidine	NPT	Ave	4769 448198	6635 697888	39762 995288	105025	236371	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Isophorone	NPT	Ave	19192 1988537	30798 3105432	191355 4232244	464646	1076763	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
2-Nitrophenol	NPT	Ave	3535 429664	6333 697828	36201 937703	99254	212630	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
2,4-Dimethylphenol	NPT	Ave	7364 920106	10595 1414914	84376 1809092	209542	444010	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
o,o',o''-Triethylphosphorothioate	NPT	Ave	2678 316953	5083 548173	31411 656618	81733	176223	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Bis(2-chloroethoxy)methane	NPT	Ave	10350 1194002	19159 1878754	116327 2448605	313973	647787	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
2,4-Dichlorophenol	NPT	Ave	4415 661028	9356 1075516	60658 1434658	154808	346214	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 397829

SDG No.:

Instrument ID: HP23264 GC Column: DB-5MS 30m 0 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/18/2023 07:41 Calibration End Date: 07/18/2023 10:14 Calibration ID: 52063

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
1,2,4-Trichlorobenzene	NPT	Ave	6940 682667	11255 1057382	68507 1518107	171847	367641	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Naphthalene	NPT	Ave	24004 2356877	36545 3827519	244228 5318245	584301	1294520	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
a-Terpineol	NPT	Ave	10877 1062879	14716 1768342	98054 2405204	264042	564048	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
4-Chloroaniline	NPT	Ave	7302 1099329	16342 1688552	101979 2349345	256874	556069	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
2,6-Dichlorophenol	NPT	Ave	4798 679678	8621 1025095	62321 1410998	146915	342746	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Hexachloropropene	NPT	Ave	3842 451501	6940 701637	42951 944940	109981	238881	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Hexachlorobutadiene	NPT	Ave	3498 395453	5338 618744	38282 802915	92648	208730	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Quinoline	NPT	Ave	16290 1657991	25329 2586492	161749 3659695	406251	902597	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Caprolactam	NPT	Ave	 229984	3467 356615	20721 486477	53932	112097	 12.5	0.250 20.0	1.25 30.0	3.75	7.50
N-Nitrosodi-n-butylamine	NPT	Ave	+++++ 864574	+++++ 1358056	101074 1923533	235719	463033	+++++ 12.5	+++++ 20.0	1.25 30.0	3.75	7.50
1,4-phenylenediamine	NPT	Ave	+++++ 533389	+++++ 793060	+++++ 1048579	150678	284022	+++++ 12.5	+++++ 20.0	+++++ 30.0	3.75	7.50
4-Chloro-3-methylphenol	NPT	Ave	6758 797987	11860 1202487	73506 1776236	180907	423546	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Safrole, Total	NPT	Ave	4184 555590	7702 891771	54396 1242648	126195	306900	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
2-Methylnaphthalene	NPT	Ave	13635 1470058	22326 2379623	144228 3232363	372806	777354	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
1-Methylnaphthalene	NPT	Ave	13558 1480614	22273 2144900	131816 3110285	352755	740103	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Hexachlorocyclopentadiene	ANT	Ave	3411 410711	5299 606468	32281 814796	100443	220832	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
1,2,4,5-Tetrachlorobenzene	ANT	Ave	6182 713170	9854 1086417	67430 1549832	175078	357183	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Isosafrole Peak 1	ANT	Ave	1143 108895	1704 156065	10001 226389	25159	53630	0.0200 2.00	0.0400 3.20	0.200 4.80	0.600	1.20

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 397829

SDG No.:

Instrument ID: HP23264 GC Column: DB-5MS 30m 0 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/18/2023 07:41 Calibration End Date: 07/18/2023 10:14 Calibration ID: 52063

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
2,4,6-Trichlorophenol	ANT	Ave	3909 456102	6083 702470	40990 1002427	106445	243697	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
2,4,5-Trichlorophenol	ANT	Ave	3708 502890	7536 746082	46690 1115858	116734	274450	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Isosafrole Peak 2	ANT	Ave	4822 565998	8140 898730	55516 1211718	143019	321102	0.105 10.5	0.210 16.8	1.05 25.2	3.15	6.30
1,1'-Biphenyl	ANT	Ave	15307 1779906	29807 2786135	181022 3789487	449360	1005300	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
2-Chloronaphthalene	ANT	Ave	13442 1257193	22361 1938874	130910 3165716	334623	748290	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
1-Chloronaphthalene	ANT	Ave	11238 1345697	20600 2129294	126372 2588131	327188	766656	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Diphenyl ether	ANT	Ave	9369 931062	14352 1517543	96695 2061445	226401	525175	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
2-Nitroaniline	ANT	Ave	+++++ 505283	+++++ 774957	43333 1090794	108573	250980	+++++ 12.5	+++++ 20.0	1.25 30.0	3.75	7.50
1,4-Naphthoquinone	ANT	Ave	4355 607747	7573 910966	51101 1270508	129530	291212	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
1,4-Dinitrobenzene	ANT	Ave	2476 231617	2605 330533	18406 505612	49136	113923	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Dimethyl phthalate	ANT	Ave	14513 1648857	27720 2342888	161939 3313928	410834	862060	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
1,3-Dinitrobenzene	ANT	Ave	3070 248806	3293 375445	23254 527714	60490	126956	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
2,6-Dinitrotoluene	ANT	Ave	+++++ 380075	4231 536178	33656 739031	81818	192964	+++++ 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Acenaphthylene	ANT	Ave	20546 2436056	36369 3780836	233488 5027376	581599	1279126	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
3-Nitroaniline	ANT	Ave	3167 464150	5711 699357	41834 975702	101846	230553	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Acenaphthene	ANT	Ave	14483 1506926	25108 2388349	153744 3289130	368210	771090	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
2,4-Dinitrophenol	ANT	Ave	+++++ 473545	+++++ 721579	66552 1041502	142743	256885	+++++ 25.0	+++++ 40.0	5.00 60.0	11.3	17.5
Pentachlorobenzene	ANT	Ave	5120 595727	10355 924253	57614 1320708	140471	311809	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 397829

SDG No.:

Instrument ID: HP23264 GC Column: DB-5MS 30m 0 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/18/2023 07:41 Calibration End Date: 07/18/2023 10:14 Calibration ID: 52063

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
4-Nitrophenol	ANT	Ave	+++++ 558546	17987 809483	70076 1207288	124929	288466	+++++ 25.0	1.50 40.0	3.75 60.0	7.50	15.0
2,4-Dinitrotoluene	ANT	Ave	4105 489700	6829 710649	43599 1026638	115644	256044	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Dibenzofuran	ANT	Ave	20324 2088979	32691 2994625	207959 4223162	502401	1116904	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
1-Naphthylamine	ANT	Ave	13996 1356020	22526 2054924	131249 2915673	340473	748311	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
2,3,4,6-Tetrachlorophenol	ANT	Ave	4087 406481	7892 604565	40165 887037	97888	224744	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
2-Naphthylamine	ANT	Ave	10816 1551098	22649 2281327	146743 3068143	353025	815162	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Diethyl phthalate	ANT	Ave	15754 1753034	29809 2559624	176854 3699969	415225	941245	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Thionazin	ANT	Ave	2993 311529	4245 475073	31399 677392	75246	170866	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Fluorene	ANT	Ave	15145 1626086	25474 2479499	163283 3318688	417431	859455	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
4-Chlorophenyl-phenyl ether	ANT	Ave	6706 708063	13091 1081302	71444 1461852	182127	378715	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
5-Nitro-o-toluidine	ANT	Ave	4256 475993	6290 695792	48358 1044283	107343	245067	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
4-Nitroaniline	ANT	Ave	+++++ 448882	4949 621517	44769 941053	102254	229862	+++++ 12.5	0.250 20.0	1.25 30.0	3.75	7.50
4,6-Dinitro-2-methylphenol	PHN	Ave	+++++ 526923	+++++ 752685	67128 1147286	116549	262544	+++++ 25.0	+++++ 40.0	3.75 60.0	7.50	15.0
N-Nitrosodiphenylamine	PHN	Ave	10277 1105153	16392 1692187	113870 2375303	279085	598994	0.106 10.6	0.213 17.0	1.06 25.5	3.19	6.38
1,2-Diphenylhydrazine	PHN	Ave	20944 2140819	36734 3224217	222023 4672113	533280	1121567	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Sulfotepp	PHN	Ave	3092 376153	5633 562950	36978 767749	85540	193474	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
1,3,5-Trinitrobenzene	PHN	Ave	+++++ 135742	2521 219972	10445 293828	28314	67723	+++++ 12.5	0.250 20.0	1.25 30.0	3.75	7.50
cis-Diallate	PHN	Ave	7365 606801	12758 938427	59759 1283042	142884	308505	0.0925 9.25	0.185 14.8	0.925 22.2	2.78	5.55

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 397829

SDG No.:

Instrument ID: HP23264 GC Column: DB-5MS 30m 0 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/18/2023 07:41 Calibration End Date: 07/18/2023 10:14 Calibration ID: 52063

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Phorate	PHN	Ave	+++++ 1379888	18137 2218183	122015 +++++	308022	681816	+++++ 12.5	0.250 20.0	1.25 +++++	3.75	7.50
Phenacetin	PHN	Ave	6113 1001454	11906 1430872	85907 2090955	220448	486502	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
4-Bromophenyl-phenylether	PHN	Ave	3693 426153	7316 632660	43025 841869	103669	231605	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
trans-Diallate	PHN	Ave	+++++ 212374	+++++ 313039	23175 431356	54315	117078	+++++ 3.25	+++++ 5.20	0.325 7.80	0.975	1.95
Hexachlorobenzene	PHN	Ave	3837 508428	9858 730182	49679 1004060	125181	275654	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Dimethoate	PHN	Ave	6800 832322	13018 1292276	83143 1745336	198108	430516	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Atrazine	PHN	Ave	 375895	6043 572793	39280 739863	99596	211759	 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Pentachloronitrobenzene	PHN	Ave	2024 217765	3382 299117	21928 471866	52899	115339	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Pentachlorophenol	PHN	Ave	9273 537516	15262 782266	44969 +++++	126284	293634	0.625 25.0	1.25 40.0	2.50 +++++	7.50	15.0
4-Aminobiphenyl	PHN	Ave	16779 1662090	28595 2359997	173710 3598950	442158	901508	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Pronamide	PHN	Ave	5435 796823	11231 1138403	67464 1572267	181521	422361	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Dinoseb	PHN	Ave	+++++ 375948	+++++ 554044	27234 787656	72131	190320	+++++ 12.5	+++++ 20.0	1.25 30.0	3.75	7.50
Disulfoton	PHN	Ave	10645 1385615	30710 2002024	141448 2667923	323390	746391	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Phenanthrene	PHN	Ave	21684 2281428	33896 3324991	241875 4547860	553001	1244410	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Anthracene	PHN	Ave	22186 2347203	36065 3300194	229057 4533662	540842	1182296	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Carbazole	PHN	Ave	19336 2386159	35360 3241977	223276 4705775	545632	1218752	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Methyl parathion	PHN	Ave	4314 663897	7973 1019267	58845 1436383	137081	335825	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Di-n-butyl phthalate	PHN	Ave	22845 3173440	42527 4465053	297076 6058805	706745	1560292	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 397829

SDG No.:

Instrument ID: HP23264 GC Column: DB-5MS 30m 0 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/18/2023 07:41 Calibration End Date: 07/18/2023 10:14 Calibration ID: 52063

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Parathion	PHN	Ave	2711 378629	5032 593213	32086 826730	86940	197436	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
4-Nitroquinoline-1-oxide	PHN	Ave	+++++ 157867	+++++ 241247	+++++ 385319	30169	74706	+++++ 12.5	+++++ 20.0	+++++ 30.0	3.75	7.50
Octachlorostyrene	PHN	Ave	1350 189820	2987 288048	20987 397429	46981	102167	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Isodrin	PHN	Ave	+++++ 288092	6153 401146	33850 568884	69843	140034	+++++ 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Fluoranthene	PHN	Ave	20242 2432903	37533 3632622	247826 4961103	612311	1310358	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Benzidine	PYR10	Ave	34316 4882330	56350 6495011	452767 8562031	1123403	2444466	0.375 37.5	0.750 60.0	3.75 90.0	11.3	22.5
Pyrene	PYR10	Ave	24708 2621383	42309 3789293	270567 5299123	639077	1290885	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
p-Dimethylamino azobenzene	PYR10	Ave	+++++ 346551	+++++ 525216	31999 776708	80571	166892	+++++ 12.5	+++++ 20.0	1.25 30.0	3.75	7.50
Chlorobenzilate	PYR10	Ave	8041 870060	9854 1256030	80144 1887121	192148	458867	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
3,3'-Dimethylbenzidine	PYR10	Ave	11325 1236050	16117 1828341	104950 2489927	258443	630805	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Butylbenzylphthalate	PYR10	Ave	9190 1270114	17915 1872559	115634 2605649	285528	651658	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
2-Acetylaminofluorene	PYR10	Ave	+++++ 805866	+++++ 1201420	+++++ 1797350	155649	384081	+++++ 12.5	+++++ 20.0	+++++ 30.0	3.75	7.50
3,3'-Dichlorobenzidine	PYR10	Ave	5448 798891	10609 1145974	71915 1641122	175091	395429	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
4,4'-Methylene bis(2-chloroaniline)	PYR10	Ave	2871	4734	37331	86266	212694	0.125	0.250	1.25	3.75	7.50

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 397829

SDG No.:

Instrument ID: HP23264 GC Column: DB-5MS 30m 0 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/18/2023 07:41 Calibration End Date: 07/18/2023 10:14 Calibration ID: 52063

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
			428397	593478	858865			12.5	20.0	30.0		
Benzo[a]anthracene	PYR10	Ave	15839 2106160	26642 2967991	202609 4111608	469547	1033128	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Chrysene	PYR10	Ave	17322 1922877	28627 2718314	198461 4128130	465262	1005364	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Bis(2-ethylhexyl) phthalate	PYR10	Ave	12345 1806011	21599 2574536	159408 3787944	387470	844907	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
6-Methylchrysene	PYR10	Ave	11796 1301423	20523 1873048	128883 2948128	304994	705803	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Di-n-octyl phthalate	PRY	Ave	+++++ 3038527	+++++ 4293371	246376 6714812	647239	1477000	+++++ 12.5	+++++ 20.0	1.25 30.0	3.75	7.50
7,12-Dimethylbenz(a)anthracene	PRY	Ave	5991 804531	9306 1187839	76486 1588990	194214	397327	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Benzo[b]fluoranthene	PRY	Ave	20166 2062463	27348 2968163	206295 4000931	494017	1056806	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Benzo[k]fluoranthene	PRY	Ave	17843 2196534	32260 2992534	200213 4220209	491053	1088750	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Benzo[a]pyrene	PRY	Ave	15088 1788380	26251 2550018	174453 3659072	391391	910317	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
3-Methylcholanthrene	PRY	Ave	7033 780681	10335 1117040	72385 1769236	179336	382065	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Dibenz[a,h]acridine	PRY	Ave	12716 1454919	21604 2115860	142889 3137193	323939	740890	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Dibenz[a,j]acridine	PRY	Ave	14152 1614406	24606 2316213	159513 3560552	404787	818053	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Indeno[1,2,3-cd]pyrene	PRY	Ave	14107 1719181	23355 2433703	165988 3634794	406284	813400	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Dibenz(a,h)anthracene	PRY	Ave	14809 1919596	26105 2664858	185093 3932644	445434	956776	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50
Benzo[g,h,i]perylene	PRY	Ave	16988 1922075	28691 2776898	195917 4172078	458330	1038814	0.125 12.5	0.250 20.0	1.25 30.0	3.75	7.50

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-1 Analy Batch No.: 397829

SDG No.:

Instrument ID: HP23264 GC Column: DB-5MS 30m 0 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/18/2023 07:41 Calibration End Date: 07/18/2023 10:14 Calibration ID: 52063

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
2-Fluorophenol (Surr)	DCBd 4	Ave	15552 1838729	27997 2921241	175720 4093043	442229	978644	0.250 25.0	0.500 40.0	2.50 60.0	7.50	15.0
Phenol-d5 (Surr)	DCBd 4	Ave	22178 2667971	35171 4322971	254522 5997111	651095	1429513	0.250 25.0	0.500 40.0	2.50 60.0	7.50	15.0
Nitrobenzene-d5 (Surr)	NPT	Ave	22310 2315361	39592 3758510	243107 5305854	590137	1277098	0.250 25.0	0.500 40.0	2.50 60.0	7.50	15.0
2-Fluorobiphenyl (Surr)	ANT	Ave	34889 3629778	61775 5806339	367207 7071668	884190	2031204	0.250 25.0	0.500 40.0	2.50 60.0	7.50	15.0
2,4,6-Tribromophenol (Surr)	ANT	Ave	4351 579732	8931 873518	53273 1203425	132286	309253	0.250 25.0	0.500 40.0	2.50 60.0	7.50	15.0
p-Terphenyl-d14 (Surr)	PYR10	Ave	32293 3706583	56629 4935167	376593 7059892	911973	2017039	0.250 25.0	0.500 40.0	2.50 60.0	7.50	15.0

Curve Type Legend
Ave = Average ISTD

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1801a.D
Lims ID: ICIS L5
Client ID:
Sample Type: ICIS Calib Level: 5
Inject. Date: 18-Jul-2023 07:41:30 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICIS L5
Misc. Info.: 410-0089185-002
Operator ID: kel10217 Instrument ID: HP23264
Sublist: chrom-MSSemi_HP23264*sub27

Method: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\MSSemi_HP23264.m
Limit Group: MSSV - 8270D_E LVI
Last Update: 18-Jul-2023 15:15:02 Calib Date: 18-Jul-2023 10:14:30
Integrator: Falcon ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1808.D

Column 1 : DB-5MS 20m 0.25mm (0.25 mm) Det: MS SCAN
Process Host: CTX1640

First Level Reviewer: SJ89 Date: 18-Jul-2023 08:13:25

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 1,4-Dioxane	88	1.701	1.701	0.000	94	188328	7.50	7.25	
	2 N-Nitrosodimethylamine	74	1.928	1.928	0.000	93	315242	7.50	7.45	
	3 Pyridine	79	1.969	1.969	0.000	84	1056962	15.0	14.5	
	4 Dimethylformamide	73	2.267	2.267	0.000	97	392348	7.50	7.52	
	5 2-Picoline	93	2.559	2.559	0.000	93	522378	7.50	7.37	
	6 N-Nitrosomethylethylamine	88	2.647	2.647	0.000	95	258422	7.50	7.43	
	7 Methyl methanesulfonate	80	2.921	2.921	0.000	86	313500	7.50	7.48	
$	9 2-Fluorophenol	112	3.119	3.119	0.000	96	978644	15.0	15.0	
	11 N-Nitrosodiethylamine	102	3.289	3.289	0.000	86	210463	7.50	7.45	
	12 Ethyl methanesulfonate	109	3.587	3.587	0.000	95	250618	7.50	7.16	
	13 Benzaldehyde	77	3.914	3.914	0.000	92	424550	7.50	7.47	
	17 Aniline	93	4.019	4.019	0.000	76	733148	7.50	7.42	
$	15 Phenol-d5	99	4.025	4.025	0.000	95	1429513	15.0	15.2	
	16 Phenol	94	4.036	4.036	0.000	93	741167	7.50	7.53	
	18 Bis(2-chloroethyl)ether	93	4.077	4.077	0.000	87	475541	7.50	6.93	
	19 2-Chlorophenol	128	4.147	4.147	0.000	94	448330	7.50	7.40	
	21 1,3-Dichlorobenzene	146	4.276	4.276	0.000	95	464391	7.50	7.71	
*	22 1,4-Dichlorobenzene-d4	152	4.328	4.328	0.000	95	212767	5.00	5.00	
	23 1,4-Dichlorobenzene	146	4.346	4.346	0.000	91	473819	7.50	7.35	
	26 Benzyl alcohol	108	4.474	4.474	0.000	89	304640	7.50	7.58	
	27 1,2-Dichlorobenzene	146	4.492	4.492	0.000	95	439910	7.50	7.37	
	30 2,2'-oxybis[1-chloropropane]	45	4.591	4.591	0.000	93	1090541	7.50	7.21	
	29 2-Methylphenol	108	4.603	4.603	0.000	98	427647	7.50	7.36	
	31 N-Nitrosopyrrolidine	100	4.696	4.696	0.000	81	265679	7.50	7.62	
	33 N-Nitrosodi-n-propylamine	70	4.714	4.714	0.000	88	427502	7.50	7.40	
	32 Acetophenone	105	4.714	4.714	0.000	85	714827	7.50	7.66	
	35 N-Nitrosomorpholine	56	4.737	4.737	0.000	91	401320	7.50	7.49	
	36 2-Toluidine	106	4.754	4.754	0.000	83	811332	7.50	8.02	
	34 4-Methylphenol	108	4.754	4.754	0.000	83	536513	7.50	7.97	
	37 Hexachloroethane	117	4.813	4.813	0.000	96	205550	7.50	7.57	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 39 Nitrobenzene-d5	82	4.860	4.860	0.000	93	1277098	15.0	15.3	
40 Nitrobenzene	77	4.877	4.877	0.000	94	557937	7.50	7.30	
41 N-Nitrosopiperidine	114	5.023	5.023	0.000	80	236371	7.50	7.67	
42 Isophorone	82	5.105	5.105	0.000	98	1076763	7.50	7.88	
43 2-Nitrophenol	139	5.186	5.186	0.000	91	212630	7.50	7.53	
44 2,4-Dimethylphenol	107	5.251	5.251	0.000	97	444010	7.50	7.70	
46 o,o',o''-Triethylphosphorothioat	198	5.292	5.292	0.000	95	176223	7.50	7.94	
47 Bis(2-chloroethoxy)methane	93	5.321	5.321	0.000	91	647787	7.50	7.85	
49 2,4-Dichlorophenol	162	5.438	5.438	0.000	97	346214	7.50	8.04	
50 1,2,4-Trichlorobenzene	180	5.490	5.490	0.000	94	367641	7.50	7.58	
* 52 Naphthalene-d8	136	5.549	5.549	0.000	98	781685	5.00	5.00	
53 Naphthalene	128	5.566	5.566	0.000	97	1294520	7.50	7.70	
55 Alpha-Terpineol	59	5.578	5.578	0.000	89	564048	7.50	7.63	
56 4-Chloroaniline	127	5.630	5.630	0.000	94	556069	7.50	7.83	
57 2,6-Dichlorophenol	162	5.636	5.636	0.000	91	342746	7.50	8.05	
58 Hexachloropropene	213	5.648	5.648	0.000	94	238881	7.50	7.84	
59 Hexachlorobutadiene	225	5.683	5.683	0.000	97	208730	7.50	7.95	
61 Quinoline	129	5.887	5.887	0.000	95	902597	7.50	7.81	
62 Caprolactam	113	5.940	5.940	0.000	67	112097	7.50	7.34	
63 N-Nitrosodi-n-butylamine	84	5.946	5.946	0.000	92	463033	7.50	7.32	
64 p-Phenylene diamine	108	5.969	5.969	0.000	95	284022	7.50	7.56	
65 4-Chloro-3-methylphenol	107	6.121	6.121	0.000	96	423546	7.50	7.97	
66 Safrole, Total	162	6.150	6.150	0.000	84	306900	7.50	8.29	
67 2-Methylnaphthalene	142	6.226	6.226	0.000	91	777354	7.50	7.61	
69 1-Methylnaphthalene	142	6.319	6.319	0.000	93	740103	7.50	7.56	
71 Hexachlorocyclopentadiene	237	6.372	6.372	0.000	95	220832	7.50	8.59	
70 1,2,4,5-Tetrachlorobenzene	216	6.383	6.383	0.000	97	357183	7.50	7.69	
72 Isosafrole Peak 1	162	6.430	6.430	0.000	84	53630	1.20	1.19	
79 2,4,6-Trichlorophenol	196	6.506	6.506	0.000	96	243697	7.50	8.25	
80 2,4,5-Trichlorophenol	196	6.553	6.553	0.000	91	274450	7.50	8.44	
$ 81 2-Fluorobiphenyl (Surr)	172	6.582	6.582	0.000	99	2031204	15.0	16.3	
82 Isosafrole Peak 2	162	6.640	6.640	0.000	88	321102	6.30	7.09	
83 1,1'-Biphenyl	154	6.675	6.675	0.000	97	1005300	7.50	8.24	
84 2-Chloronaphthalene	162	6.687	6.687	0.000	97	748290	7.50	8.09	
85 1-Chloronaphthalene	162	6.710	6.710	0.000	97	766656	7.50	8.63	
86 Phenyl ether	170	6.775	6.775	0.000	92	525175	7.50	8.09	
87 2-Nitroaniline	138	6.798	6.798	0.000	78	250980	7.50	7.70	
88 1,4-Naphthoquinone	158	6.862	6.862	0.000	80	291212	7.50	7.95	
89 1,4-Dinitrobenzene	168	6.932	6.932	0.000	90	113923	7.50	7.86	
90 Dimethyl phthalate	163	6.967	6.967	0.000	97	862060	7.50	7.87	
91 1,3-Dinitrobenzene	168	6.997	6.997	0.000	78	126956	7.50	7.52	
92 2,6-Dinitrotoluene	165	7.026	7.026	0.000	87	192964	7.50	8.38	
93 Acenaphthylene	152	7.078	7.078	0.000	99	1279126	7.50	8.01	
95 3-Nitroaniline	138	7.189	7.189	0.000	87	230553	7.50	8.15	
* 96 Acenaphthene-d10	164	7.213	7.213	0.000	95	392579	5.00	5.00	
97 Acenaphthene	153	7.242	7.242	0.000	97	771090	7.50	7.46	
98 2,4-Dinitrophenol	184	7.283	7.283	0.000	76	256885	17.5	17.6	
99 Pentachlorobenzene	250	7.370	7.370	0.000	98	311809	7.50	7.76	
100 4-Nitrophenol	109	7.399	7.399	0.000	95	288466	15.0	16.8	
102 2,4-Dinitrotoluene	165	7.405	7.405	0.000	85	256044	7.50	8.19	
101 Dibenzofuran	168	7.411	7.411	0.000	98	1116904	7.50	8.01	
104 1-Naphthylamine	143	7.487	7.487	0.000	98	748311	7.50	7.98	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
105 2,3,4,6-Tetrachlorophenol	232	7.534	7.534	0.000	76	224744	7.50	7.88	a
106 2-Naphthylamine	143	7.563	7.563	0.000	96	815162	7.50	8.37	
107 Diethyl phthalate	149	7.639	7.639	0.000	96	941245	7.50	7.98	
109 Thionazin	107	7.715	7.715	0.000	76	170866	7.50	8.17	
108 Fluorene	166	7.732	7.732	0.000	93	859455	7.50	7.83	
110 4-Chlorophenyl phenyl ether	204	7.738	7.738	0.000	92	378715	7.50	7.71	
111 N-Nitro-o-toluidine	152	7.756	7.756	0.000	92	245067	7.50	7.93	
112 4-Nitroaniline	138	7.767	7.767	0.000	81	229862	7.50	8.17	
113 4,6-Dinitro-2-methylphenol	198	7.785	7.785	0.000	68	262544	15.0	14.0	
114 N-Nitrosodiphenylamine	169	7.855	7.855	0.000	67	598994	6.38	6.12	
115 1,2-Diphenylhydrazine	77	7.884	7.884	0.000	41	1121567	7.50	6.83	
$ 116 2,4,6-Tribromophenol	330	7.966	7.966	0.000	90	309253	15.0	16.6	
117 Sulfotepp	97	8.013	8.013	0.000	75	193474	7.50	7.18	
118 1,3,5-Trinitrobenzene	213	8.118	8.118	0.000	81	67723	7.50	6.84	
120 cis-Diallate	86	8.124	8.124	0.000	94	308505	5.55	4.71	
119 Phorate	75	8.135	8.135	0.000	92	681816	7.50	7.09	
121 Phenacetin	108	8.153	8.153	0.000	90	486502	7.50	7.41	
122 4-Bromophenyl phenyl ether	248	8.199	8.199	0.000	75	231605	7.50	7.32	
123 trans-Diallate	86	8.211	8.211	0.000	92	117078	1.95	1.87	
124 Hexachlorobenzene	284	8.246	8.246	0.000	93	275654	7.50	7.34	
125 Dimethoate	87	8.299	8.299	0.000	96	430516	7.50	7.07	
126 Atrazine	200	8.369	8.369	0.000	82	211759	7.50	7.38	
128 Pentachloronitrobenzene	237	8.445	8.445	0.000	61	115339	7.50	7.17	
127 Pentachlorophenol	266	8.451	8.451	0.000	84	293634	15.0	16.5	
129 4-Aminobiphenyl	169	8.451	8.451	0.000	91	901508	7.50	7.01	
130 Pronamide	173	8.515	8.515	0.000	88	422361	7.50	7.80	
* 131 Phenanthrene-d10	188	8.620	8.620	0.000	96	802857	5.00	5.00	
133 Dinoseb	211	8.620	8.620	0.000	71	190320	7.50	7.44	
134 Disulfoton	88	8.632	8.632	0.000	97	746391	7.50	7.15	
132 Phenanthrene	178	8.643	8.643	0.000	98	1244410	7.50	7.35	
135 Anthracene	178	8.690	8.690	0.000	99	1182296	7.50	7.01	
136 Carbazole	167	8.853	8.853	0.000	96	1218752	7.50	7.32	
137 Methyl parathion	109	8.988	8.988	0.000	89	335825	7.50	7.53	
138 Di-n-butyl phthalate	149	9.192	9.192	0.000	99	1560292	7.50	7.28	
139 Ethyl Parathion	109	9.356	9.356	0.000	81	197436	7.50	7.49	
140 4-Nitroquinoline-1-oxide	190	9.379	9.379	0.000	78	74706	7.50	6.50	
142 Octachlorostyrene	308	9.583	9.583	0.000	91	102167	7.50	7.31	
143 Isodrin	193	9.624	9.624	0.000	92	140034	7.50	6.25	
S 68 Diallate	86				0		7.50	6.58	
144 Fluoranthene	202	9.764	9.764	0.000	99	1310358	7.50	7.31	
145 Benzidine	184	9.910	9.910	0.000	99	2444466	22.5	24.8	
* 146 Pyrene-d10 (IS)	212	9.963	9.963	0.000	96	698430	5.00	5.00	
147 Pyrene	202	9.980	9.980	0.000	96	1290885	7.50	7.20	
$ 148 p-Terphenyl-d14	244	10.138	10.138	0.000	98	2017039	15.0	16.3	
149 p-Dimethylamino azobenzene	225	10.278	10.278	0.000	91	166892	7.50	7.08	
150 Chlorobenzilate	139	10.331	10.331	0.000	81	458867	7.50	8.09	
152 3,3'-Dimethylbenzidine	212	10.628	10.628	0.000	98	630805	7.50	7.94	
153 Butyl benzyl phthalate	149	10.646	10.646	0.000	96	651658	7.50	7.99	
155 2-Acetylaminofluorene	181	10.897	10.897	0.000	94	384081	7.50	7.10	
S 94 Isosafrole	162				0		7.50	8.28	
157 3,3'-Dichlorobenzidine	252	11.218	11.218	0.000	79	395429	7.50	7.91	
158 4,4'-Methylene bis(2-chloroani	231	11.230	11.230	0.000	84	212694	7.50	8.28	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
156 Benzo[a]anthracene	228	11.230	11.230	0.000	97	1033128	7.50	7.80	
159 Chrysene	228	11.271	11.271	0.000	97	1005364	7.50	7.68	
160 Bis(2-ethylhexyl) phthalate	149	11.312	11.312	0.000	94	844907	7.50	7.63	
161 6-Methylchrysene	242	11.831	11.831	0.000	98	705803	7.50	7.86	
162 Di-n-octyl phthalate	149	12.152	12.152	0.000	98	1477000	7.50	7.55	
163 7,12-Dimethylbenz(a)anthracene	256	12.596	12.596	0.000	88	397327	7.50	7.84	
164 Benzo[b]fluoranthene	252	12.602	12.602	0.000	95	1056806	7.50	7.72	
165 Benzo[k]fluoranthene	252	12.637	12.637	0.000	97	1088750	7.50	7.82	
166 Benzo[a]pyrene	252	13.046	13.046	0.000	82	910317	7.50	7.82	
* 167 Perylene-d12	264	13.128	13.128	0.000	94	547299	5.00	5.00	
168 3-Methylcholanthrene	268	13.560	13.560	0.000	92	382065	7.50	7.46	
169 Dibenz[a,h]acridine	279	14.342	14.342	0.000	93	740890	7.50	7.68	
170 Dibenz[a,j]acridine	279	14.412	14.412	0.000	95	818053	7.50	7.48	
171 Indeno[1,2,3-cd]pyrene	276	14.634	14.634	0.000	95	813400	7.50	7.33	
172 Dibenz(a,h)anthracene	278	14.675	14.675	0.000	95	956776	7.50	7.80	
173 Benzo[g,h,i]perylene	276	14.984	14.984	0.000	92	1038814	7.50	7.96	

QC Flag Legend

Processing Flags

Review Flags

a - User Assigned ID

Reagents:

MSS_RV8270_5_00037 Amount Added: 1.00 Units: mL

Report Date: 18-Jul-2023 15:15:04 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1801a.D

Injection Date: 18-Jul-2023 07:41:30 Instrument ID: HP23264 Operator ID: kel10217

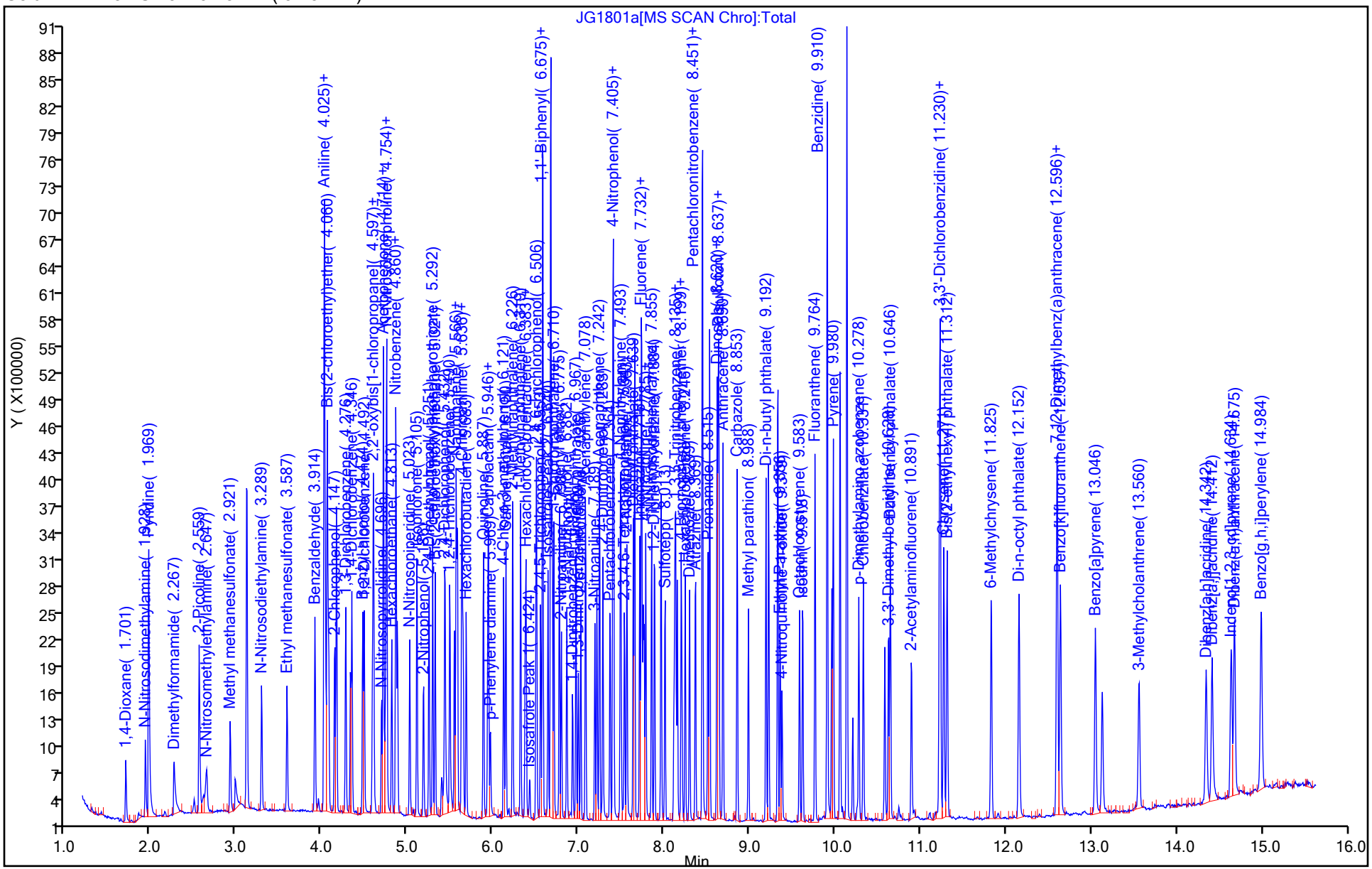
Lims ID: ICIS L5 Worklist Smp#: 2

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 2

Method: MSSemi_HP23264 Limit Group: MSSV - 8270D_E LVI

Column: DB-5MS 20m 0.25mm (0.25 mm)



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

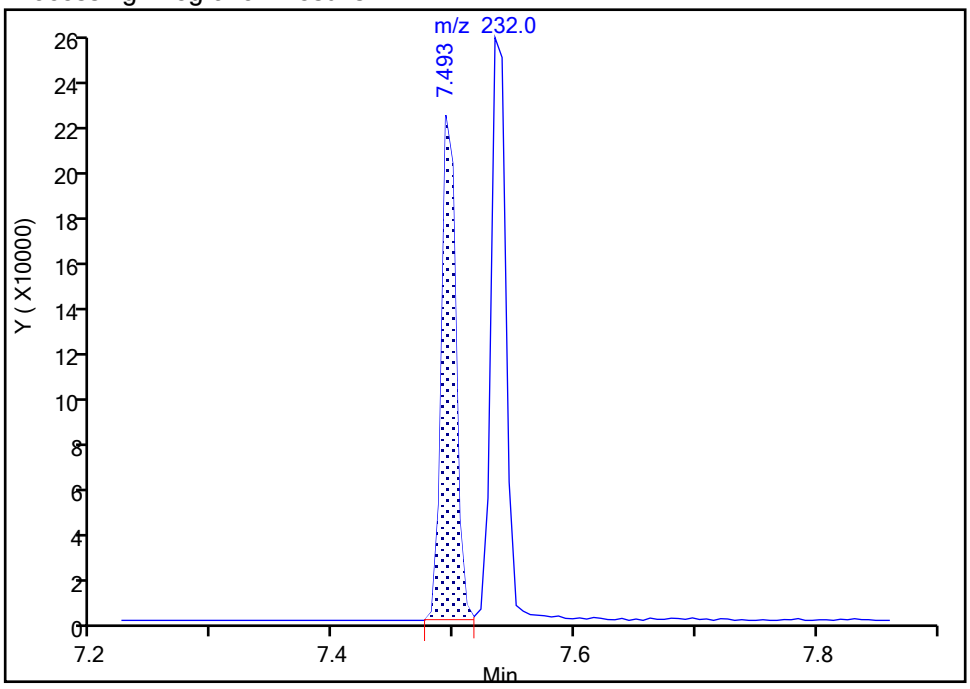
Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1801a.D				
Injection Date:	18-Jul-2023 07:41:30	Instrument ID:	HP23264		
Lims ID:	ICIS L5				
Client ID:					
Operator ID:	kel10217	ALS Bottle#:	2	Worklist Smp#:	2
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		
Column:	DB-5MS 20m 0.25mm (0.25 mm)	Detector	MS SCAN		

105 2,3,4,6-Tetrachlorophenol, CAS: 58-90-2

Signal: 1

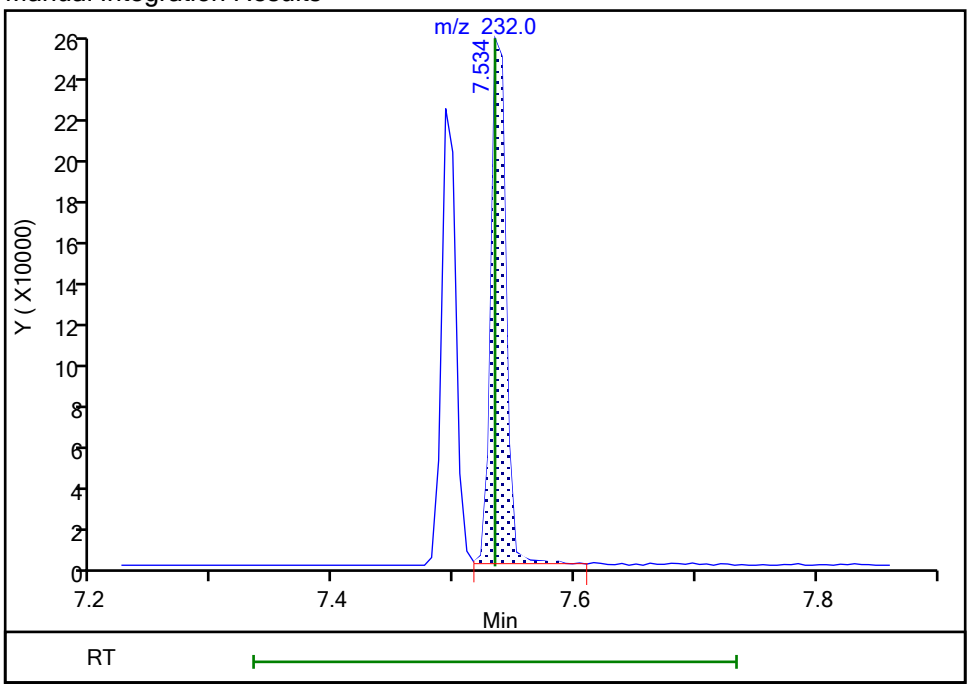
Processing Integration Results

RT: 7.49
Area: 184580
Amount: 8.046429
Amount Units: ug/ml



Manual Integration Results

RT: 7.53
Area: 224744
Amount: 7.879595
Amount Units: ug/ml



Reviewer: SJ89, 18-Jul-2023 11:03:28 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Baseline

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1802.D
Lims ID: IC L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 18-Jul-2023 08:07:30 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: IC L1
Misc. Info.: 410-0089185-003
Operator ID: kel10217 Instrument ID: HP23264
Sublist: chrom-MSSemi_HP23264*sub27

Method: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\MSSemi_HP23264.m
Limit Group: MSSV - 8270D_E LVI
Last Update: 18-Jul-2023 15:15:38 Calib Date: 18-Jul-2023 10:14:30
Integrator: Falcon ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1808.D

Column 1 : DB-5MS 20m 0.25mm (0.25 mm) Det: MS SCAN
Process Host: CTX1640

First Level Reviewer: SJ89 Date: 18-Jul-2023 11:03:12

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 1,4-Dioxane	88	1.707	1.701	0.006	22	5799	0.1250	0.2185	
2 N-Nitrosodimethylamine	74	1.928	1.928	0.000	30	5717	0.1250	0.1322	
3 Pyridine	79	2.004	1.969	0.035	76	20774	0.2500	0.2785	
4 Dimethylformamide	73		2.267				ND	ND	U
5 2-Picoline	93	2.577	2.559	0.018	71	10130	0.1250	0.1400	
6 N-Nitrosomethylethylamine	88		2.647				ND	ND	U
7 Methyl methanesulfonate	80	2.933	2.921	0.012	75	5549	0.1250	0.1297	
$ 9 2-Fluorophenol	112	3.114	3.119	-0.005	91	15552	0.2500	0.2328	
11 N-Nitrosodiethylamine	102	3.295	3.289	0.006	61	2932	0.1250	0.1016	
12 Ethyl methanesulfonate	109	3.593	3.587	0.006	96	4920	0.1250	0.1375	
17 Aniline	93	4.025	4.019	0.006	68	12185	0.1250	0.1207	
$ 15 Phenol-d5	99	4.025	4.025	0.000	91	22178	0.2500	0.2316	
16 Phenol	94	4.036	4.036	0.000	49	12372	0.1250	0.1230	
18 Bis(2-chloroethyl)ether	93	4.077	4.077	0.000	74	8986	0.1250	0.1282	
19 2-Chlorophenol	128	4.147	4.147	0.000	69	8318	0.1250	0.1344	
21 1,3-Dichlorobenzene	146	4.276	4.276	0.000	85	7504	0.1250	0.1220	
* 22 1,4-Dichlorobenzene-d4	152	4.328	4.328	0.000	97	217338	5.00	5.00	
23 1,4-Dichlorobenzene	146	4.346	4.346	0.000	63	8548	0.1250	0.1297	
26 Benzyl alcohol	108	4.480	4.474	0.006	75	4821	0.1250	0.1175	
27 1,2-Dichlorobenzene	146	4.492	4.492	0.000	70	8313	0.1250	0.1364	
30 2,2'-oxybis[1-chloropropane]	45	4.591	4.591	0.000	91	23621	0.1250	0.1530	
29 2-Methylphenol	108	4.597	4.603	-0.006	87	7411	0.1250	0.1248	
31 N-Nitrosopyrrolidine	100	4.696	4.696	0.000	47	3572	0.1250	0.1003	
33 N-Nitrosodi-n-propylamine	70	4.714	4.714	0.000	77	8230	0.1250	0.1395	
32 Acetophenone	105	4.720	4.714	0.006	80	11512	0.1250	0.1207	
35 N-Nitrosomorpholine	56	4.737	4.737	0.000	40	6354	0.1250	0.1160	
36 2-Toluidine	106	4.755	4.754	0.001	82	11645	0.1250	0.1127	
34 4-Methylphenol	108	4.755	4.754	0.001	83	7774	0.1250	0.1131	
37 Hexachloroethane	117	4.813	4.813	0.000	76	3400	0.1250	0.1225	
$ 39 Nitrobenzene-d5	82	4.860	4.860	0.000	92	22310	0.2500	0.2458	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
40 Nitrobenzene	77	4.883	4.877	0.006	70	12978	0.1250	0.1565	
41 N-Nitrosopiperidine	114	5.023	5.023	0.000	54	4769	0.1250	0.1426	
42 Isophorone	82	5.111	5.105	0.006	97	19192	0.1250	0.1294	
43 2-Nitrophenol	139	5.187	5.186	0.001	88	3535	0.1250	0.1154	
44 2,4-Dimethylphenol	107	5.251	5.251	0.000	91	7364	0.1250	0.1177	
46 o,o',o''-Triethylphosphorothioat	198	5.292	5.292	0.000	81	2678	0.1250	0.1112	
47 Bis(2-chloroethoxy)methane	93	5.321	5.321	0.000	85	10350	0.1250	0.1157	
49 2,4-Dichlorophenol	162	5.438	5.438	0.000	85	4415	0.1250	0.0945	
50 1,2,4-Trichlorobenzene	180	5.490	5.490	0.000	51	6940	0.1250	0.1320	
* 52 Naphthalene-d8	136	5.549	5.549	0.001	99	847959	5.00	5.00	
53 Naphthalene	128	5.566	5.566	0.000	96	24004	0.1250	0.1315	
55 Alpha-Terpineol	59	5.578	5.578	0.000	47	10877	0.1250	0.1357	
56 4-Chloroaniline	127	5.636	5.630	0.006	76	7302	0.1250	0.0947	
57 2,6-Dichlorophenol	162	5.636	5.636	0.000	80	4798	0.1250	0.1038	
58 Hexachloropropene	213	5.648	5.648	0.000	87	3842	0.1250	0.1162	
59 Hexachlorobutadiene	225	5.683	5.683	0.000	89	3498	0.1250	0.1228	
61 Quinoline	129	5.887	5.887	0.000	97	16290	0.1250	0.1300	
63 N-Nitrosodi-n-butylamine	84		5.946				ND	ND	U
64 p-Phenylene diamine	108		5.969				ND	ND	U
65 4-Chloro-3-methylphenol	107	6.121	6.121	0.000	84	6758	0.1250	0.1172	
66 Safrole, Total	162	6.150	6.150	0.000	64	4184	0.1250	0.1041	
67 2-Methylnaphthalene	142	6.226	6.226	0.000	90	13635	0.1250	0.1230	
69 1-Methylnaphthalene	142	6.319	6.319	0.000	88	13558	0.1250	0.1276	
71 Hexachlorocyclopentadiene	237	6.372	6.372	0.000	49	3411	0.1250	0.1191	
70 1,2,4,5-Tetrachlorobenzene	216	6.384	6.383	0.001	91	6182	0.1250	0.1195	
72 Isosafrole Peak 1	162	6.425	6.430	-0.005	7	1143	0.0200	0.0229	
79 2,4,6-Trichlorophenol	196	6.506	6.506	0.000	76	3909	0.1250	0.1189	
S 24 Dinitrotoluene	165				0			0.1940	
80 2,4,5-Trichlorophenol	196	6.559	6.553	0.006	83	3708	0.1250	0.1024	
$ 81 2-Fluorobiphenyl (Surr)	172	6.576	6.582	-0.006	98	34889	0.2500	0.2515	
82 Isosafrole Peak 2	162	6.646	6.640	0.006	51	4822	0.1050	0.0956	
83 1,1'-Biphenyl	154	6.670	6.675	-0.005	91	15307	0.1250	0.1126	
84 2-Chloronaphthalene	162	6.687	6.687	0.000	93	13442	0.1250	0.1305	
85 1-Chloronaphthalene	162	6.711	6.710	0.001	79	11238	0.1250	0.1136	
86 Phenyl ether	170	6.775	6.775	0.000	85	9369	0.1250	0.1296	
87 2-Nitroaniline	138	6.804	6.798	0.006	62	3690	0.1250	0.1016	
88 1,4-Naphthoquinone	158	6.862	6.862	0.000	82	4355	0.1250	0.1068	
89 1,4-Dinitrobenzene	168	6.938	6.932	0.006	34	2476	0.1250	0.1535	a
90 Dimethyl phthalate	163	6.968	6.967	0.001	95	14513	0.1250	0.1190	
91 1,3-Dinitrobenzene	168	6.997	6.997	0.000	49	3070	0.1250	0.1633	
92 2,6-Dinitrotoluene	165	7.026	7.026	0.000	22	1951	0.1250	0.0761	a
93 Acenaphthylene	152	7.079	7.078	0.001	97	20546	0.1250	0.1156	
95 3-Nitroaniline	138	7.195	7.189	0.006	53	3167	0.1250	0.1005	
* 96 Acenaphthene-d10	164	7.213	7.213	0.000	95	437124	5.00	5.00	
97 Acenaphthene	153	7.242	7.242	0.000	94	14483	0.1250	0.1258	
98 2,4-Dinitrophenol	184	7.283	7.283	0.000	75	13445	1.25	0.8286	
99 Pentachlorobenzene	250	7.370	7.370	0.000	89	5120	0.1250	0.1144	
100 4-Nitrophenol	109	7.406	7.399	0.007	81	9594	0.7500	0.5009	
102 2,4-Dinitrotoluene	165	7.406	7.405	0.001	62	4105	0.1250	0.1179	
101 Dibenzofuran	168	7.411	7.411	0.000	79	20324	0.1250	0.1309	
104 1-Naphthylamine	143	7.487	7.487	0.000	96	13996	0.1250	0.1340	
105 2,3,4,6-Tetrachlorophenol	232	7.540	7.534	0.006	67	4087	0.1250	0.1287	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
106 2-Naphthylamine	143	7.563	7.563	0.000	93	10816	0.1250	0.0998	
107 Diethyl phthalate	149	7.633	7.639	-0.006	95	15754	0.1250	0.1199	
109 Thionazin	107	7.709	7.715	-0.006	69	2993	0.1250	0.1286	
108 Fluorene	166	7.732	7.732	0.000	90	15145	0.1250	0.1239	
110 4-Chlorophenyl phenyl ether	204	7.738	7.738	0.000	90	6706	0.1250	0.1226	
111 N-Nitro-o-toluidine	152	7.756	7.756	0.000	85	4256	0.1250	0.1236	
112 4-Nitroaniline	138	7.773	7.767	0.006	40	2810	0.1250	0.0897	
113 4,6-Dinitro-2-methylphenol	198	7.785	7.785	0.000	62	9013	0.7500	0.4803	
114 N-Nitrosodiphenylamine	169	7.814	7.855	-0.041	66	10277	0.1063	0.1049	
115 1,2-Diphenylhydrazine	77	7.884	7.884	0.000	41	20944	0.1250	0.1274	
$ 116 2,4,6-Tribromophenol	330	7.966	7.966	0.000	83	4351	0.2500	0.2101	
117 Sulfotepp	97	8.007	8.013	-0.006	67	3092	0.1250	0.1146	
118 1,3,5-Trinitrobenzene	213	8.118	8.118	0.000	62	681	0.1250	0.0687	
120 cis-Diallate	86	8.130	8.124	0.006	53	7365	0.0925	0.1123	
119 Phorate	75	8.135	8.135	0.000	90	10410	0.1250	0.1080	
121 Phenacetin	108	8.153	8.153	0.000	76	6113	0.1250	0.0929	
122 4-Bromophenyl phenyl ether	248	8.200	8.199	0.001	72	3693	0.1250	0.1164	
123 trans-Diallate	86		8.211				ND	ND	
124 Hexachlorobenzene	284	8.246	8.246	0.000	86	3837	0.1250	0.1019	
125 Dimethoate	87	8.299	8.299	0.000	91	6800	0.1250	0.1114	
128 Pentachloronitrobenzene	237	8.445	8.445	0.000	58	2024	0.1250	0.1255	
127 Pentachlorophenol	266	8.451	8.451	0.000	73	9273	0.6250	0.5190	
129 4-Aminobiphenyl	169	8.451	8.451	0.000	89	16779	0.1250	0.1301	
130 Pronamide	173	8.515	8.515	0.000	84	5435	0.1250	0.1002	
* 131 Phenanthrene-d10	188	8.620	8.620	0.000	97	804481	5.00	5.00	
133 Dinoseb	211	8.620	8.620	0.000	60	1977	0.1250	0.0771	
134 Disulfoton	88	8.632	8.632	0.000	56	10645	0.1250	0.1018	Ma
132 Phenanthrene	178	8.643	8.643	0.000	94	21684	0.1250	0.1278	
135 Anthracene	178	8.690	8.690	0.000	98	22186	0.1250	0.1313	
136 Carbazole	167	8.854	8.853	0.001	96	19336	0.1250	0.1159	
137 Methyl parathion	109	8.988	8.988	0.000	85	4314	0.1250	0.0966	
138 Di-n-butyl phthalate	149	9.192	9.192	0.000	99	22845	0.1250	0.1064	
139 Ethyl Parathion	109	9.356	9.356	0.000	1	2711	0.1250	0.1026	
140 4-Nitroquinoline-1-oxide	190	9.379	9.379	0.000	17	996	0.1250	0.0865	
142 Octachlorostyrene	308	9.578	9.583	-0.005	74	1350	0.1250	0.0963	
143 Isodrin	193	9.624	9.624	0.000	80	3647	0.1250	0.1626	
S 68 Diallate	86				0		0.1250	0.1123	
144 Fluoranthene	202	9.770	9.764	0.006	97	20242	0.1250	0.1128	
145 Benzidine	184	9.910	9.910	0.000	99	34316	0.3750	0.3294	
* 146 Pyrene-d10 (IS)	212	9.963	9.963	0.000	96	737632	5.00	5.00	
147 Pyrene	202	9.981	9.980	0.001	97	24708	0.1250	0.1306	
$ 148 p-Terphenyl-d14	244	10.138	10.138	0.000	96	32293	0.2500	0.2469	
149 p-Dimethylamino azobenzene	225	10.278	10.278	0.000	86	2614	0.1250	0.1050	
150 Chlorobenzilate	139	10.331	10.331	0.000	77	8041	0.1250	0.1342	
152 3,3'-Dimethylbenzidine	212	10.629	10.628	0.001	96	11325	0.1250	0.1349	
153 Butyl benzyl phthalate	149	10.646	10.646	0.000	90	9190	0.1250	0.1066	
155 2-Acetylaminofluorene	181	10.891	10.897	-0.006	90	4959	0.1250	0.0868	
S 94 Isosafrole	162				0		0.1250	0.1185	
157 3,3'-Dichlorobenzidine	252	11.224	11.218	0.006	58	5448	0.1250	0.1031	
158 4,4'-Methylene bis(2-chloroani	231	11.224	11.230	-0.006	65	2871	0.1250	0.1058	
156 Benzo[a]anthracene	228	11.230	11.230	0.000	93	15839	0.1250	0.1132	
159 Chrysene	228	11.271	11.271	0.000	94	17322	0.1250	0.1252	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
160 Bis(2-ethylhexyl) phthalate	149	11.312	11.312	0.000	91	12345	0.1250	0.1056	
161 6-Methylchrysene	242	11.831	11.831	0.000	95	11796	0.1250	0.1243	
162 Di-n-octyl phthalate	149	12.147	12.152	-0.005	95	18327	0.1250	0.0894	
163 7,12-Dimethylbenz(a)anthracene	256	12.591	12.596	-0.005	64	5991	0.1250	0.1128	
164 Benzo[b]fluoranthene	252	12.602	12.602	0.000	93	20166	0.1250	0.1406	
165 Benzo[k]fluoranthene	252	12.637	12.637	0.000	79	17843	0.1250	0.1223	
166 Benzo[a]pyrene	252	13.046	13.046	0.000	42	15088	0.1250	0.1236	
* 167 Perylene-d12	264	13.128	13.128	0.000	94	573515	5.00	5.00	
168 3-Methylcholanthrene	268	13.560	13.560	0.000	44	7033	0.1250	0.1311	
169 Dibenz[a,h]acridine	279	14.342	14.342	0.000	90	12716	0.1250	0.1258	
170 Dibenz[a,j]acridine	279	14.407	14.412	-0.006	41	14152	0.1250	0.1235	a
171 Indeno[1,2,3-cd]pyrene	276	14.640	14.634	0.006	88	14107	0.1250	0.1213	
172 Dibenz(a,h)anthracene	278	14.669	14.675	-0.006	90	14809	0.1250	0.1152	
173 Benzo[g,h,i]perylene	276	14.979	14.984	-0.005	93	16988	0.1250	0.1242	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Reagents:

MSS_RV8270_1_00029 Amount Added: 1.00 Units: mL

Report Date: 18-Jul-2023 15:15:40 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1802.D

Injection Date: 18-Jul-2023 08:07:30 Instrument ID: HP23264 Operator ID: kel10217

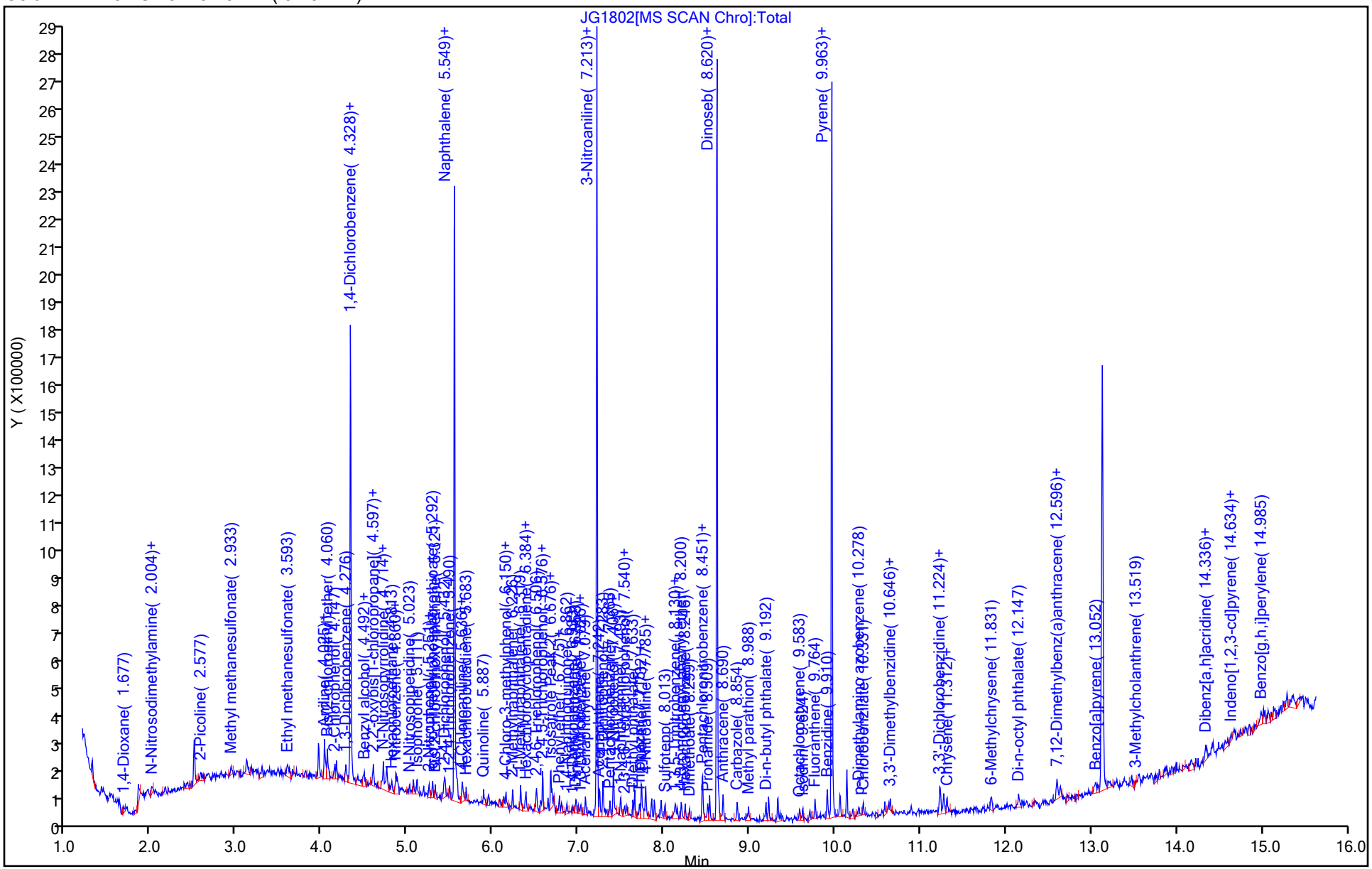
Lims ID: IC L1 Worklist Smp#: 3

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 3

Method: MSSemi_HP23264 Limit Group: MSSV - 8270D_E LVI

Column: DB-5MS 20m 0.25mm (0.25 mm)



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

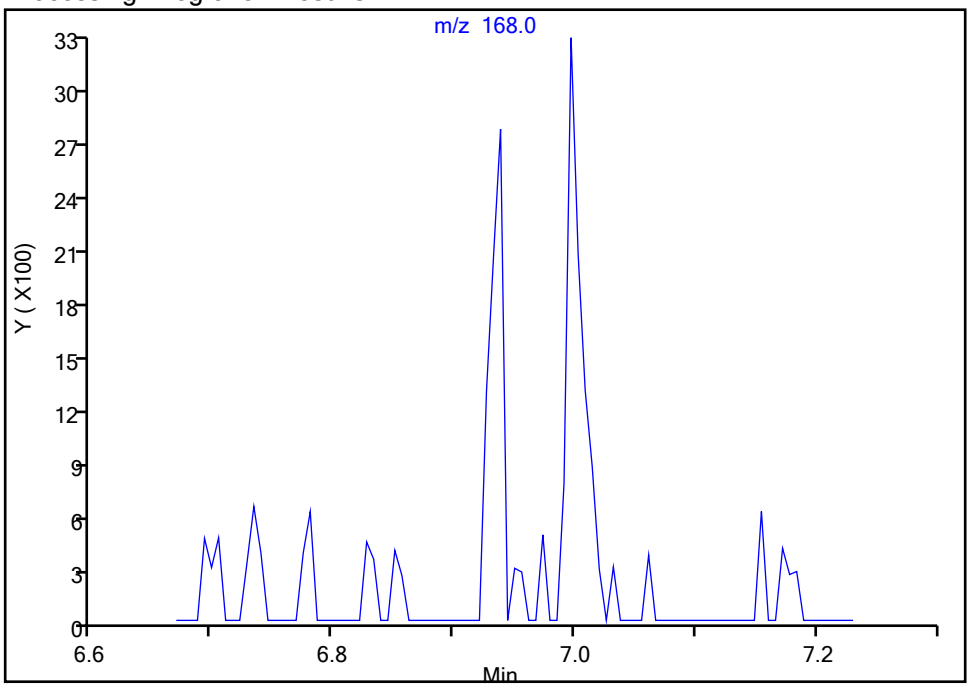
Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1802.D				
Injection Date:	18-Jul-2023 08:07:30	Instrument ID:	HP23264		
Lims ID:	IC L1				
Client ID:					
Operator ID:	kel10217	ALS Bottle#:	3	Worklist Smp#:	3
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		
Column:	DB-5MS 20m 0.25mm (0.25 mm)	Detector	MS SCAN		

89 1,4-Dinitrobenzene, CAS: 100-25-4

Signal: 1

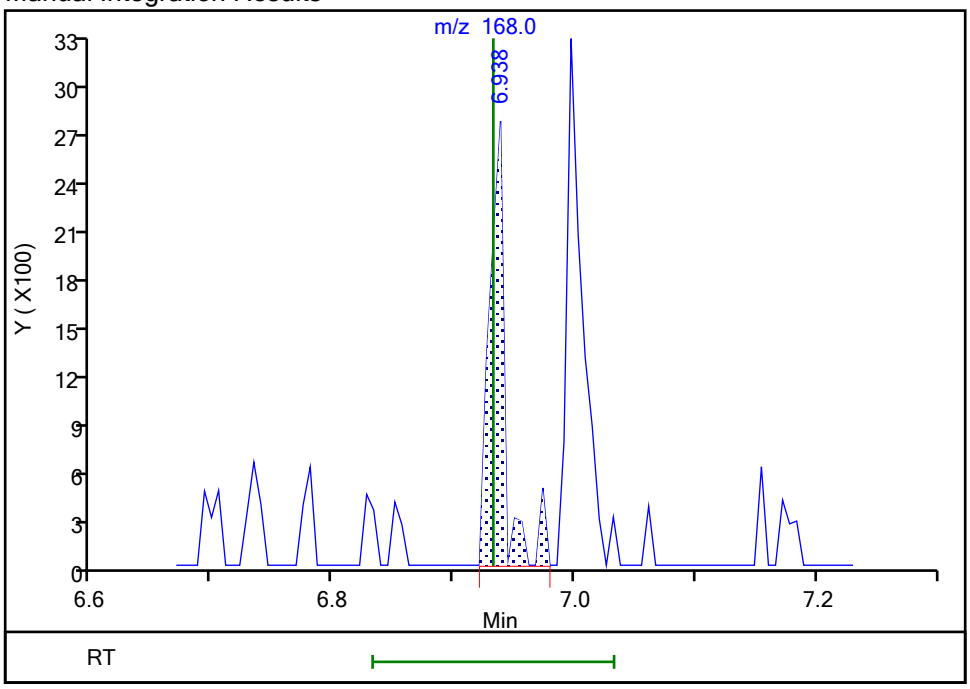
Not Detected
Expected RT: 6.93

Processing Integration Results



Manual Integration Results

RT: 6.94
Area: 2476
Amount: 0.153492
Amount Units: ug/ml



Reviewer: SJ89, 18-Jul-2023 11:02:45 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

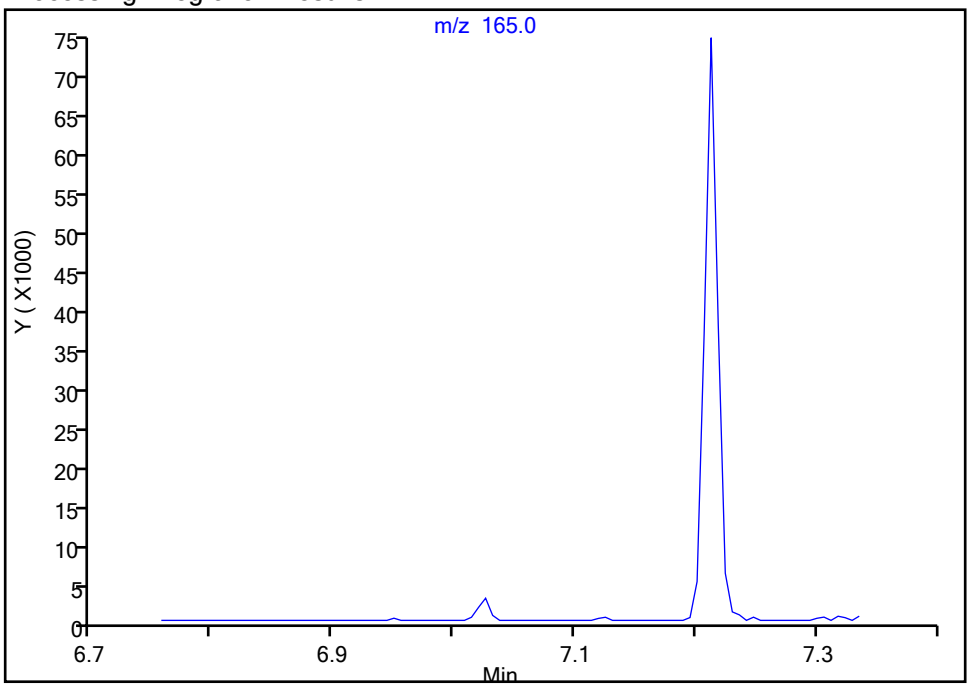
Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1802.D				
Injection Date:	18-Jul-2023 08:07:30	Instrument ID:	HP23264		
Lims ID:	IC L1				
Client ID:					
Operator ID:	kel10217	ALS Bottle#:	3	Worklist Smp#:	3
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		
Column:	DB-5MS 20m 0.25mm (0.25 mm)	Detector	MS SCAN		

92 2,6-Dinitrotoluene, CAS: 606-20-2

Signal: 1

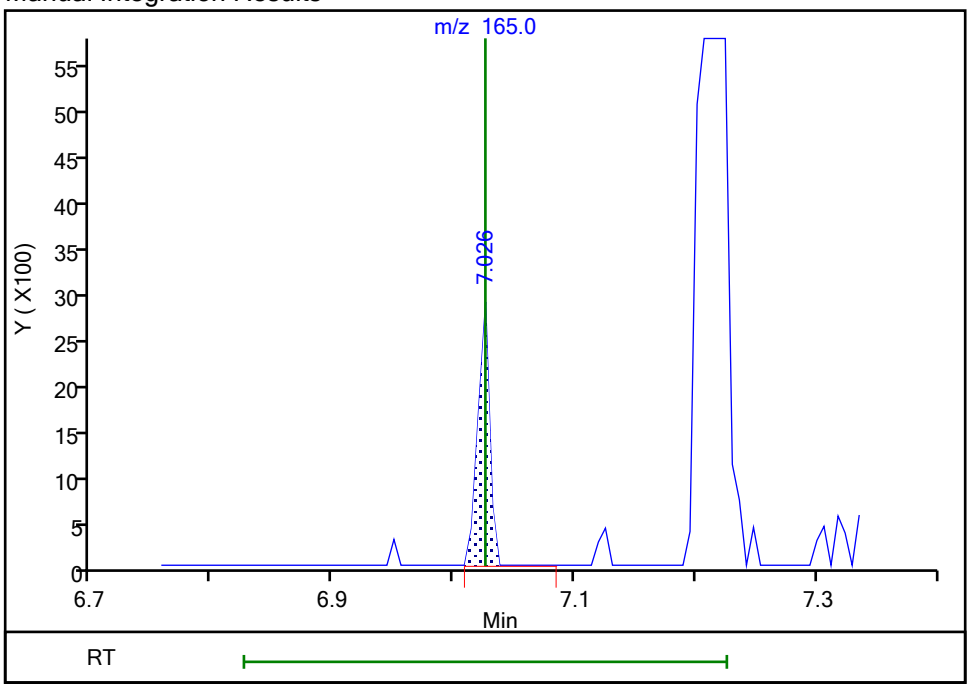
Not Detected
Expected RT: 7.03

Processing Integration Results



RT: 7.03
Area: 1951
Amount: 0.076103
Amount Units: ug/ml

Manual Integration Results



Reviewer: SJ89, 18-Jul-2023 11:02:53 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

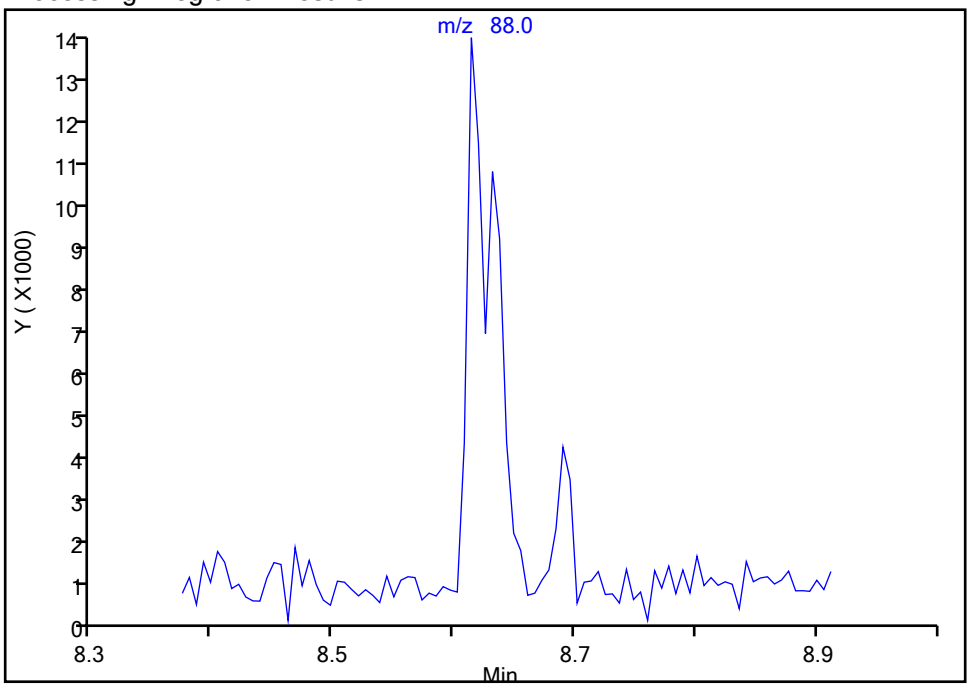
Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1802.D				
Injection Date:	18-Jul-2023 08:07:30	Instrument ID:	HP23264		
Lims ID:	IC L1				
Client ID:					
Operator ID:	kel10217	ALS Bottle#:	3	Worklist Smp#:	3
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		
Column:	DB-5MS 20m 0.25mm (0.25 mm)	Detector	MS SCAN		

134 Disulfoton, CAS: 298-04-4

Signal: 1

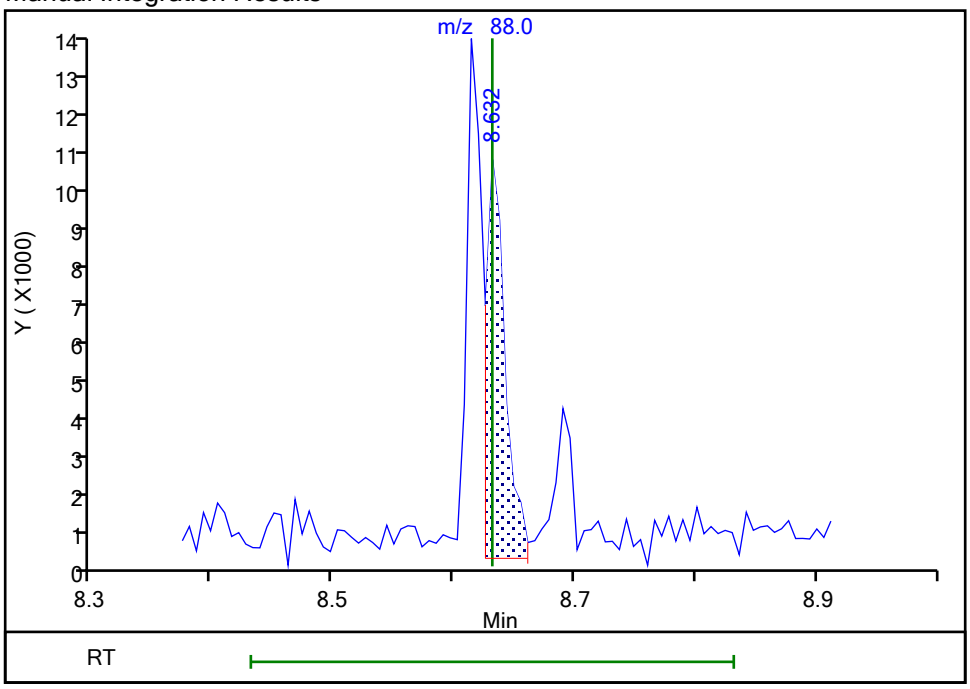
Not Detected
Expected RT: 8.63

Processing Integration Results



Manual Integration Results

RT: 8.63
Area: 10645
Amount: 0.101823
Amount Units: ug/ml



Reviewer: SJ89, 18-Jul-2023 11:04:19 -04:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

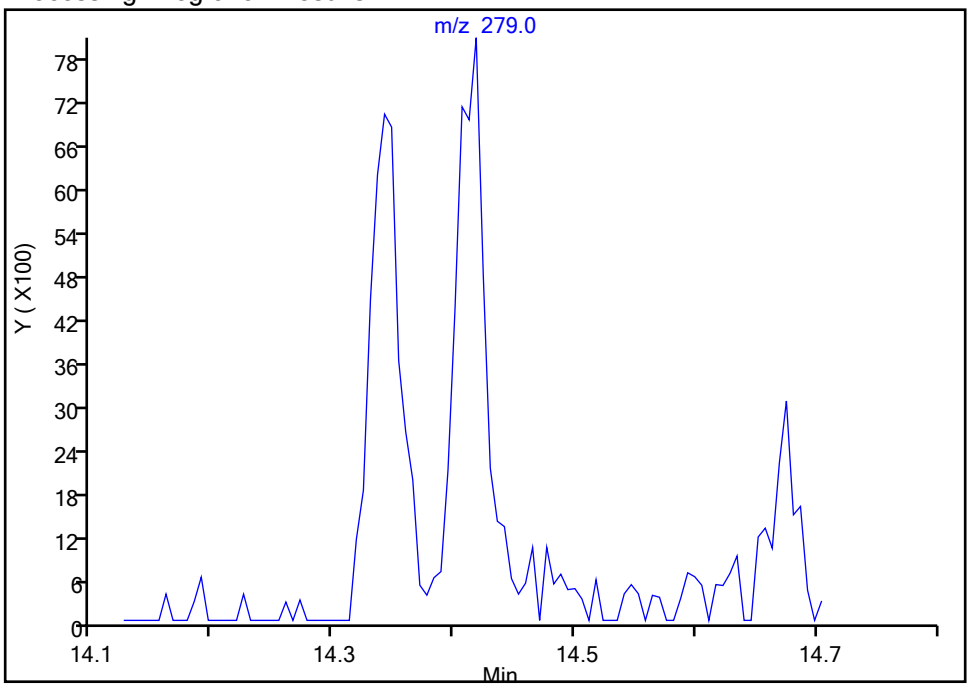
Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1802.D				
Injection Date:	18-Jul-2023 08:07:30	Instrument ID:	HP23264		
Lims ID:	IC L1				
Client ID:					
Operator ID:	kel10217	ALS Bottle#:	3	Worklist Smp#:	3
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		
Column:	DB-5MS 20m 0.25mm (0.25 mm)	Detector	MS SCAN		

170 Dibenz[a,j]acridine, CAS: 224-42-0

Signal: 1

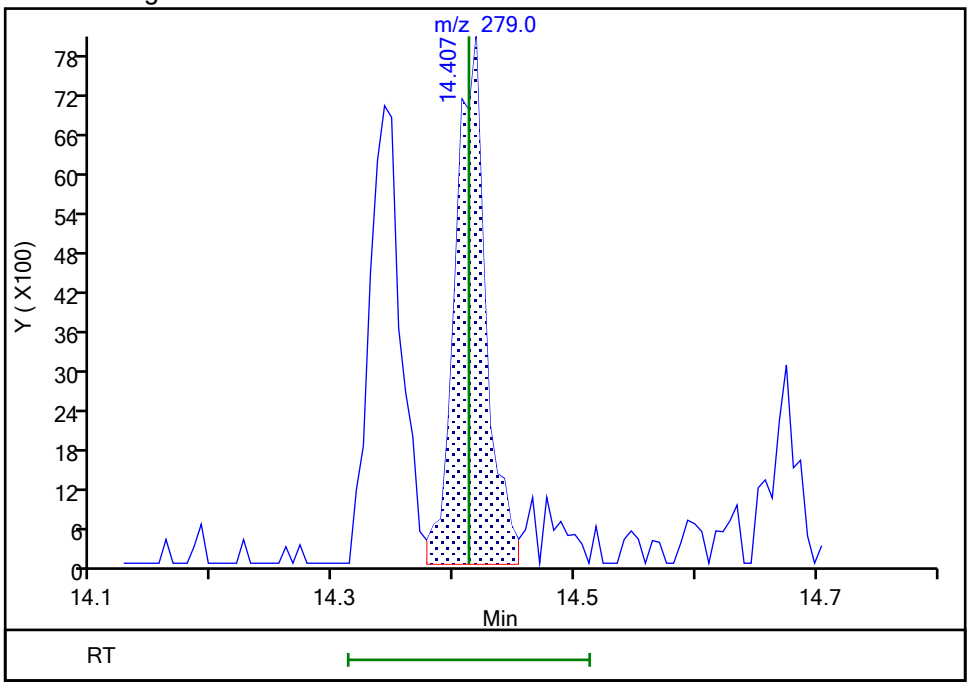
Not Detected
Expected RT: 14.41

Processing Integration Results



Manual Integration Results

RT: 14.41
Area: 14152
Amount: 0.123522
Amount Units: ug/ml



Reviewer: SJ89, 18-Jul-2023 11:04:38 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Baseline

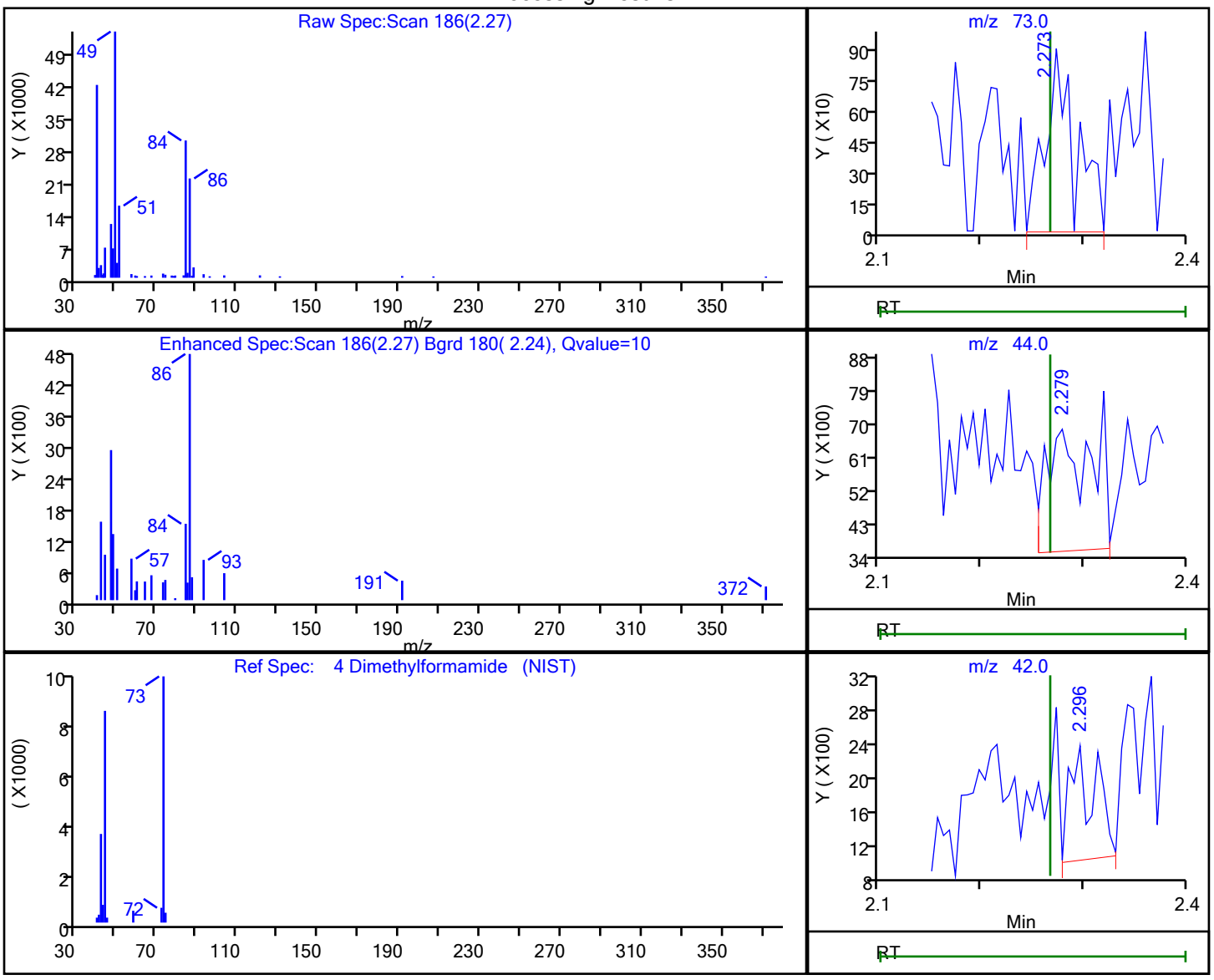
User Disabled Compound Report

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1802.D				
Injection Date:	18-Jul-2023 08:07:30	Instrument ID:	HP23264		
Lims ID:	IC L1				
Client ID:					
Operator ID:	kel10217	ALS Bottle#:	3	Worklist Smp#:	3
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		
Column:	DB-5MS 20m 0.25mm (0.25 mm)	Detector	MS SCAN		

4 Dimethylformamide, CAS: 68-12-2

Processing Results



RT	Mass	Response	Amount
2.27	73.00	1849	0.048656
2.28	44.00	10237	
2.30	42.00	2315	

Reviewer: SJ89, 18-Jul-2023 11:01:54 -04:00:00 (UTC)

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

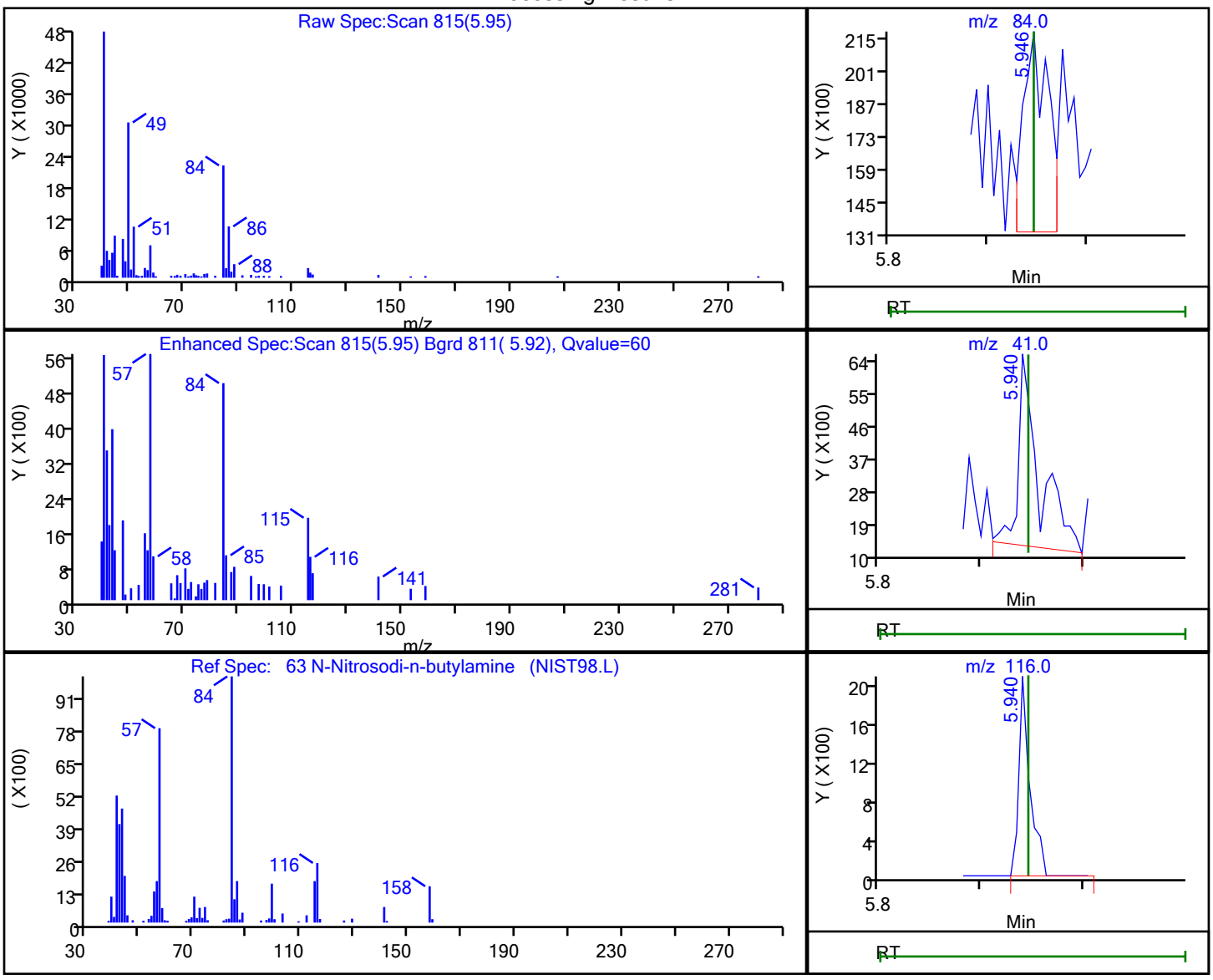
User Disabled Compound Report

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1802.D				
Injection Date:	18-Jul-2023 08:07:30	Instrument ID:	HP23264		
Lims ID:	IC L1				
Client ID:					
Operator ID:	kel10217	ALS Bottle#:	3	Worklist Smp#:	3
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		
Column:	DB-5MS 20m 0.25mm (0.25 mm)	Detector	MS SCAN		

63 N-Nitrosodi-n-butylamine, CAS: 924-16-3

Processing Results



RT	Mass	Response	Amount
5.95	84.00	14589	0.085205
5.94	41.00	7699	
5.94	116.00	1516	
5.95	57.00	6340	

Reviewer: SJ89, 18-Jul-2023 11:02:24 -04:00:00 (UTC)

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

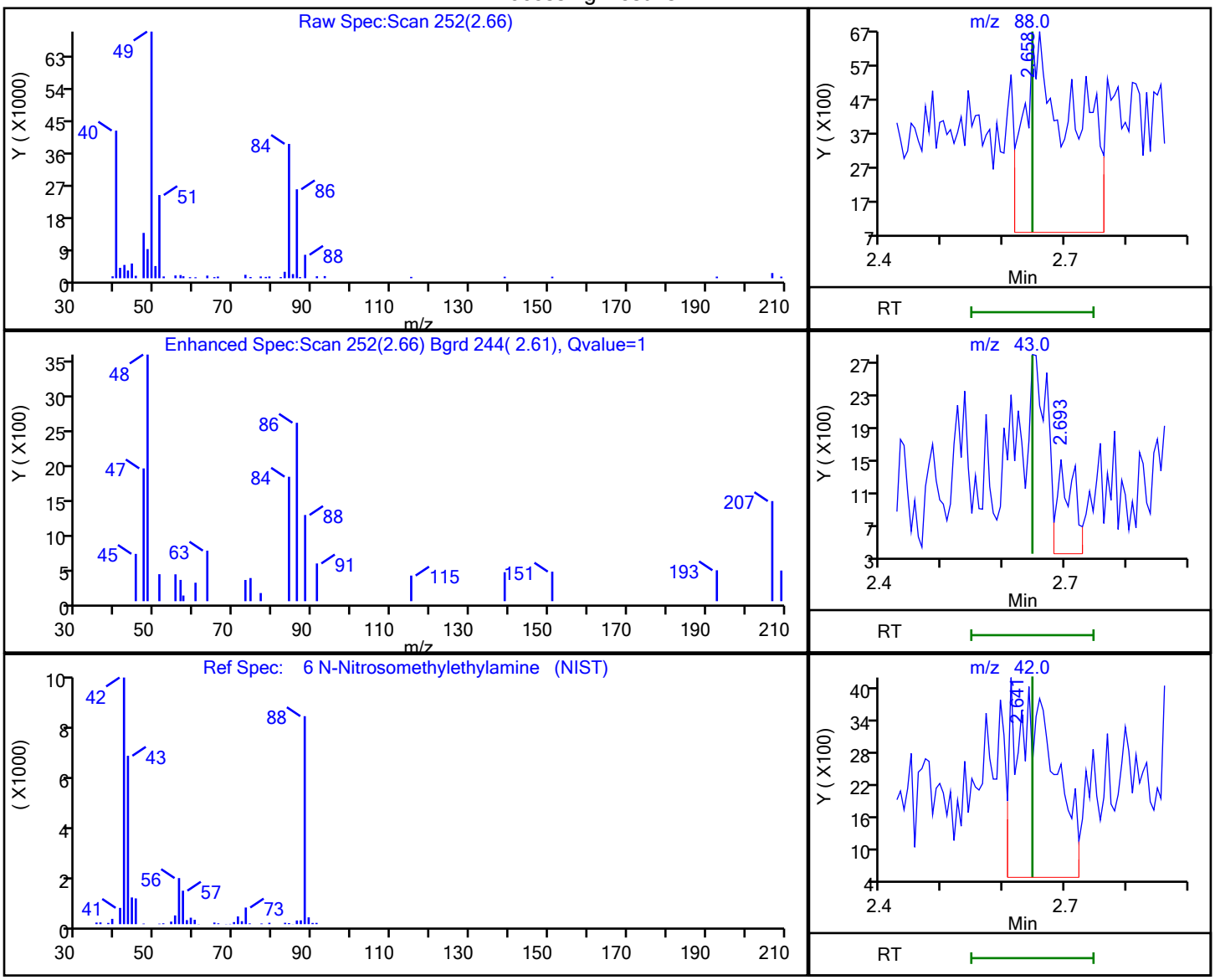
User Disabled Compound Report

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1802.D				
Injection Date:	18-Jul-2023 08:07:30	Instrument ID:	HP23264		
Lims ID:	IC L1				
Client ID:					
Operator ID:	kel10217	ALS Bottle#:	3	Worklist Smp#:	3
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		
Column:	DB-5MS 20m 0.25mm (0.25 mm)	Detector	MS SCAN		

6 N-Nitrosomethylethylamine, CAS: 10595-95-6

Processing Results



RT	Mass	Response	Amount
2.66	88.00	31183	0.480685
2.69	43.00	2024	
2.64	42.00	15875	

Reviewer: SJ89, 18-Jul-2023 11:02:00 -04:00:00 (UTC)

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

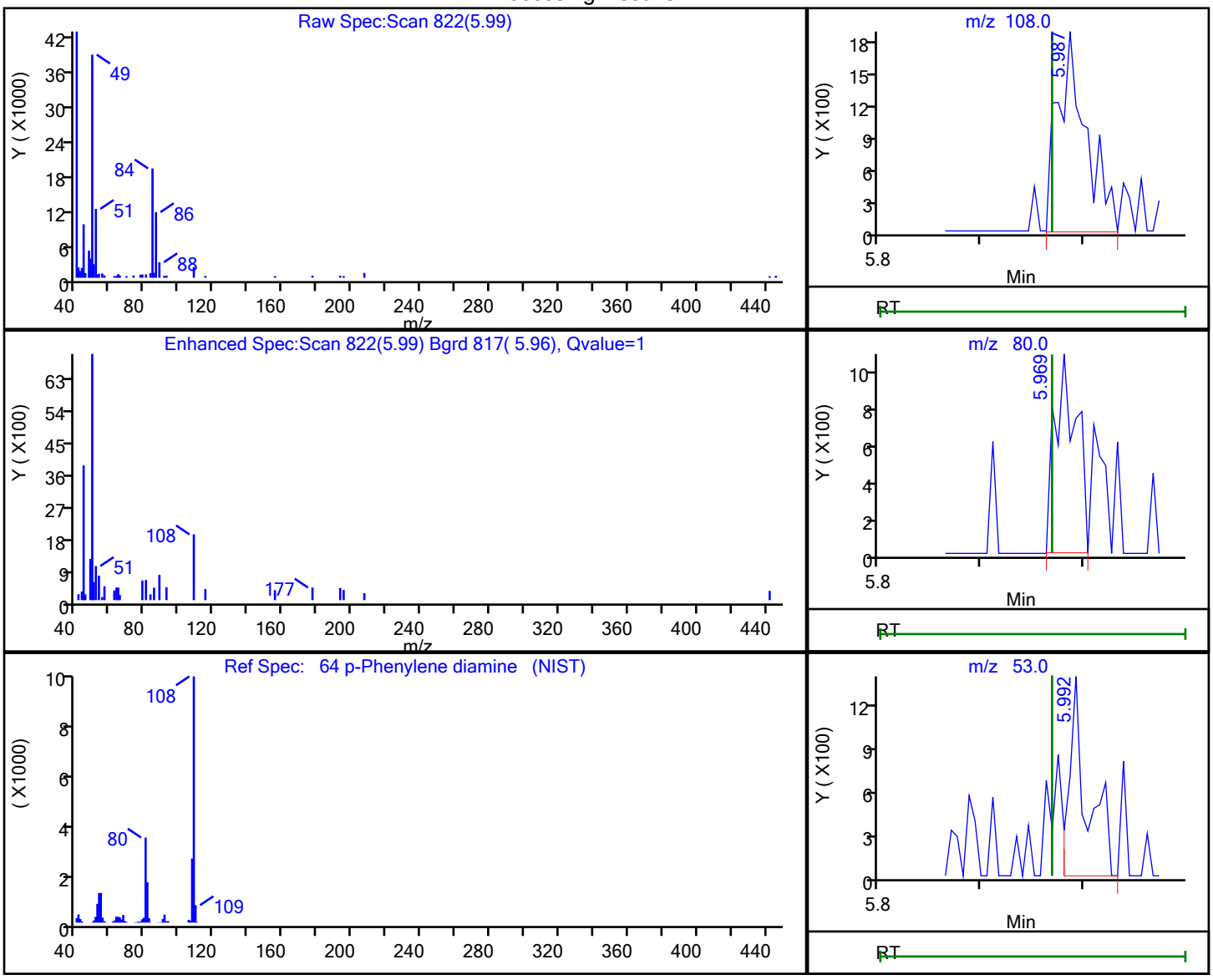
User Disabled Compound Report

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1802.D				
Injection Date:	18-Jul-2023 08:07:30	Instrument ID:	HP23264		
Lims ID:	IC L1				
Client ID:					
Operator ID:	kel10217	ALS Bottle#:	3	Worklist Smp#:	3
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		
Column:	DB-5MS 20m 0.25mm (0.25 mm)	Detector	MS SCAN		

64 p-Phenylene diamine, CAS: 106-50-3

Processing Results



RT	Mass	Response	Amount
5.99	108.00	3561	0.104154
5.97	80.00	1493	
5.99	53.00	1601	
5.98	54.00	350	
5.97	52.00	1127	

Reviewer: SJ89, 18-Jul-2023 11:02:28 -04:00:00 (UTC)

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1803.D
Lims ID: IC L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 18-Jul-2023 08:28:30 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: IC L8
Misc. Info.: 410-0089185-004
Operator ID: kel10217 Instrument ID: HP23264
Sublist: chrom-MSSemi_HP23264*sub27

Method: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\MSSemi_HP23264.m
Limit Group: MSSV - 8270D_E LVI
Last Update: 18-Jul-2023 15:16:11 Calib Date: 18-Jul-2023 10:14:30
Integrator: Falcon ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1808.D

Column 1 : DB-5MS 20m 0.25mm (0.25 mm) Det: MS SCAN
Process Host: CTX1640

First Level Reviewer: SJ89 Date: 18-Jul-2023 11:06:34

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 1,4-Dioxane	88	1.701	1.701	0.000	95	758139	30.0	29.4	
	2 N-Nitrosodimethylamine	74	1.929	1.928	0.001	92	1331176	30.0	31.7	
	3 Pyridine	79	1.964	1.969	-0.005	84	4218053	60.0	58.2	
	4 Dimethylformamide	73	2.250	2.267	-0.017	94	1661162	30.0	32.1	
	5 2-Picoline	93	2.553	2.559	-0.006	96	2184698	30.0	31.1	
	6 N-Nitrosomethylethylamine	88	2.647	2.647	0.001	95	924805	30.0	26.8	
	7 Methyl methanesulfonate	80	2.927	2.921	0.006	86	1255316	30.0	30.2	
$	9 2-Fluorophenol	112	3.120	3.119	0.001	96	4093043	60.0	63.0	
	11 N-Nitrosodiethylamine	102	3.295	3.289	0.006	89	901108	30.0	32.1	
	12 Ethyl methanesulfonate	109	3.593	3.587	0.006	96	1089118	30.0	31.3	
	13 Benzaldehyde	77	3.914	3.914	0.000	91	1038938	30.0	18.4	
	17 Aniline	93	4.025	4.019	0.006	97	3160259	30.0	32.2	
$	15 Phenol-d5	99	4.025	4.025	0.000	97	5997111	60.0	64.4	
	16 Phenol	94	4.036	4.036	0.000	95	2973020	30.0	30.4	
	18 Bis(2-chloroethyl)ether	93	4.077	4.077	0.000	86	1942224	30.0	28.5	
	19 2-Chlorophenol	128	4.147	4.147	0.000	93	1831037	30.0	30.4	
	21 1,3-Dichlorobenzene	146	4.276	4.276	0.000	96	1868945	30.0	31.2	
*	22 1,4-Dichlorobenzene-d4	152	4.334	4.328	0.006	96	211309	5.00	5.00	
	23 1,4-Dichlorobenzene	146	4.346	4.346	0.000	91	1845336	30.0	28.8	
	26 Benzyl alcohol	108	4.474	4.474	0.000	90	1358348	30.0	34.1	
	27 1,2-Dichlorobenzene	146	4.492	4.492	0.000	95	1814507	30.0	30.6	
	30 2,2'-oxybis[1-chloropropane]	45	4.591	4.591	0.000	93	4301264	30.0	28.7	
	29 2-Methylphenol	108	4.609	4.603	0.006	96	1809425	30.0	31.3	
	31 N-Nitrosopyrrolidine	100	4.702	4.696	0.006	83	1134935	30.0	32.8	
	33 N-Nitrosodi-n-propylamine	70	4.720	4.714	0.006	89	1708253	30.0	29.8	
	32 Acetophenone	105	4.720	4.714	0.006	92	2850714	30.0	30.7	
	35 N-Nitrosomorpholine	56	4.743	4.737	0.006	90	1592626	30.0	29.9	
	36 2-Toluidine	106	4.755	4.754	0.001	82	3135525	30.0	31.2	
	34 4-Methylphenol	108	4.755	4.754	0.001	83	2149999	30.0	32.2	
	37 Hexachloroethane	117	4.813	4.813	0.000	96	836588	30.0	31.0	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 39 Nitrobenzene-d5	82	4.866	4.860	0.006	93	5305854	60.0	60.3	
40 Nitrobenzene	77	4.883	4.877	0.006	93	2297951	30.0	28.6	
41 N-Nitrosopiperidine	114	5.029	5.023	0.006	80	995288	30.0	30.7	
42 Isophorone	82	5.111	5.105	0.006	98	4232244	30.0	29.4	
43 2-Nitrophenol	139	5.187	5.186	0.001	92	937703	30.0	31.6	
44 2,4-Dimethylphenol	107	5.251	5.251	0.000	98	1809092	30.0	29.8	
46 o,o',o''-Triethylphosphorothioat	198	5.298	5.292	0.006	94	656618	30.0	28.1	
47 Bis(2-chloroethoxy)methane	93	5.327	5.321	0.006	90	2448605	30.0	28.2	
49 2,4-Dichlorophenol	162	5.438	5.438	0.000	98	1434658	30.0	31.7	
50 1,2,4-Trichlorobenzene	180	5.496	5.490	0.006	94	1518107	30.0	29.8	
* 52 Naphthalene-d8	136	5.549	5.549	0.001	98	822157	5.00	5.00	
53 Naphthalene	128	5.566	5.566	0.000	97	5318245	30.0	30.1	
55 Alpha-Terpineol	59	5.584	5.578	0.006	89	2405204	30.0	30.9	
56 4-Chloroaniline	127	5.636	5.630	0.006	94	2349345	30.0	31.4	
57 2,6-Dichlorophenol	162	5.642	5.636	0.006	95	1410998	30.0	31.5	
58 Hexachloropropene	213	5.648	5.648	0.000	95	944940	30.0	29.5	
59 Hexachlorobutadiene	225	5.683	5.683	0.000	96	802915	30.0	29.1	
61 Quinoline	129	5.887	5.887	0.000	94	3659695	30.0	30.1	
62 Caprolactam	113	5.957	5.940	0.017	72	486477	30.0	30.3	
63 N-Nitrosodi-n-butylamine	84	5.952	5.946	0.006	91	1923533	30.0	28.9	
64 p-Phenylene diamine	108	5.969	5.969	0.000	95	1048579	30.0	26.6	
65 4-Chloro-3-methylphenol	107	6.127	6.121	0.006	96	1776236	30.0	31.8	
66 Safrole, Total	162	6.150	6.150	0.000	84	1242648	30.0	31.9	
67 2-Methylnaphthalene	142	6.232	6.226	0.006	91	3232363	30.0	30.1	
69 1-Methylnaphthalene	142	6.319	6.319	0.000	93	3110285	30.0	30.2	
71 Hexachlorocyclopentadiene	237	6.378	6.372	0.006	96	814796	30.0	29.8	
70 1,2,4,5-Tetrachlorobenzene	216	6.384	6.383	0.001	98	1549832	30.0	31.4	
72 Isosafrole Peak 1	162	6.425	6.430	-0.005	84	226389	4.80	4.75	
79 2,4,6-Trichlorophenol	196	6.512	6.506	0.006	96	1002427	30.0	32.0	
S 24 Dinitrotoluene	165				0			61.2	
80 2,4,5-Trichlorophenol	196	6.559	6.553	0.006	92	1115858	30.0	32.3	
$ 81 2-Fluorobiphenyl (Surr)	172	6.582	6.582	0.000	95	7071668	60.0	53.4	e
82 Isosafrole Peak 2	162	6.646	6.640	0.006	88	1211718	25.2	25.2	
83 1,1'-Biphenyl	154	6.676	6.675	0.001	95	3789487	30.0	29.2	
84 2-Chloronaphthalene	162	6.693	6.687	0.006	95	3165716	30.0	32.2	M
85 1-Chloronaphthalene	162	6.711	6.710	0.001	97	2588131	30.0	27.4	Ma
86 Phenyl ether	170	6.775	6.775	0.000	91	2061445	30.0	29.9	
87 2-Nitroaniline	138	6.798	6.798	0.000	78	1090794	30.0	31.5	
88 1,4-Naphthoquinone	158	6.863	6.862	0.000	80	1270508	30.0	32.7	
89 1,4-Dinitrobenzene	168	6.933	6.932	0.001	89	505612	30.0	32.9	
90 Dimethyl phthalate	163	6.973	6.967	0.006	96	3313928	30.0	28.5	
91 1,3-Dinitrobenzene	168	7.003	6.997	0.006	79	527714	30.0	29.4	
92 2,6-Dinitrotoluene	165	7.026	7.026	0.000	85	739031	30.0	30.2	
93 Acenaphthylene	152	7.084	7.078	0.006	99	5027376	30.0	29.7	
95 3-Nitroaniline	138	7.195	7.189	0.006	88	975702	30.0	32.5	
* 96 Acenaphthene-d10	164	7.213	7.213	0.000	95	416908	5.00	5.00	
97 Acenaphthene	153	7.248	7.242	0.006	98	3289130	30.0	30.0	
98 2,4-Dinitrophenol	184	7.289	7.283	0.006	78	1041502	60.0	67.3	
99 Pentachlorobenzene	250	7.371	7.370	0.000	97	1320708	30.0	30.9	
100 4-Nitrophenol	109	7.406	7.399	0.007	91	1207288	60.0	66.1	
102 2,4-Dinitrotoluene	165	7.411	7.405	0.006	82	1026638	30.0	30.9	
101 Dibenzofuran	168	7.411	7.411	0.000	98	4223162	30.0	28.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
104 1-Naphthylamine	143	7.493	7.487	0.006	98	2915673	30.0	29.3	
105 2,3,4,6-Tetrachlorophenol	232	7.540	7.534	0.006	76	887037	30.0	29.3	a
106 2-Naphthylamine	143	7.569	7.563	0.006	96	3068143	30.0	29.7	
107 Diethyl phthalate	149	7.645	7.639	0.006	96	3699969	30.0	29.5	
109 Thionazin	107	7.721	7.715	0.006	76	677392	30.0	30.5	
108 Fluorene	166	7.733	7.732	0.001	93	3318688	30.0	28.5	
110 4-Chlorophenyl phenyl ether	204	7.738	7.738	0.000	94	1461852	30.0	28.0	
111 N-Nitro-o-toluidine	152	7.762	7.756	0.006	92	1044283	30.0	31.8	
112 4-Nitroaniline	138	7.779	7.767	0.012	83	941053	30.0	31.5	
113 4,6-Dinitro-2-methylphenol	198	7.791	7.785	0.006	82	1147286	60.0	67.5	
114 N-Nitrosodiphenylamine	169	7.855	7.855	0.000	66	2375303	25.5	26.7	
115 1,2-Diphenylhydrazine	77	7.890	7.884	0.006	41	4672113	30.0	31.4	
$ 116 2,4,6-Tribromophenol	330	7.966	7.966	0.000	88	1203425	60.0	60.9	
117 Sulfotepp	97	8.013	8.013	0.000	75	767749	30.0	31.4	
118 1,3,5-Trinitrobenzene	213	8.124	8.118	0.006	81	293828	30.0	32.7	
120 cis-Diallate	86	8.130	8.124	0.006	94	1283042	22.2	21.6	
119 Phorate	75	8.135	8.135	0.000	93	4053302	30.0	46.4	
121 Phenacetin	108	8.165	8.153	0.012	90	2090955	30.0	35.1	
122 4-Bromophenyl phenyl ether	248	8.205	8.199	0.006	77	841869	30.0	29.3	
123 trans-Diallate	86	8.211	8.211	0.000	92	431356	7.80	7.59	
124 Hexachlorobenzene	284	8.252	8.246	0.006	93	1004060	30.0	29.4	
125 Dimethoate	87	8.305	8.299	0.006	96	1745336	30.0	31.6	
126 Atrazine	200	8.375	8.369	0.006	83	739863	30.0	28.4	
128 Pentachloronitrobenzene	237	8.451	8.445	0.006	59	471866	30.0	32.3	
127 Pentachlorophenol	266	8.451	8.451	0.000	84	1259991	60.0	77.8	
129 4-Aminobiphenyl	169	8.451	8.451	0.000	91	3598950	30.0	30.8	
130 Pronamide	173	8.515	8.515	0.000	89	1572267	30.0	32.0	
* 131 Phenanthrene-d10	188	8.620	8.620	0.000	94	728871	5.00	5.00	
133 Dinoseb	211	8.620	8.620	0.000	90	787656	30.0	33.9	
134 Disulfoton	88	8.632	8.632	0.000	97	2667923	30.0	28.2	
132 Phenanthrene	178	8.643	8.643	0.000	98	4547860	30.0	29.6	
135 Anthracene	178	8.690	8.690	0.000	98	4533662	30.0	29.6	
136 Carbazole	167	8.859	8.853	0.006	96	4705775	30.0	31.1	
137 Methyl parathion	109	8.988	8.988	0.000	88	1436383	30.0	35.5	
138 Di-n-butyl phthalate	149	9.192	9.192	0.000	99	6058805	30.0	31.1	
139 Ethyl Parathion	109	9.362	9.356	0.006	81	826730	30.0	34.5	
140 4-Nitroquinoline-1-oxide	190	9.385	9.379	0.006	91	385319	30.0	36.9	
142 Octachlorostyrene	308	9.584	9.583	0.001	91	397429	30.0	31.3	
143 Isodrin	193	9.624	9.624	0.000	90	568884	30.0	28.0	
S 68 Diallate	86				0		30.0	29.2	
144 Fluoranthene	202	9.770	9.764	0.006	99	4961103	30.0	30.5	
145 Benzidine	184	9.916	9.910	0.006	97	8562031	90.0	92.2	e
* 146 Pyrene-d10 (IS)	212	9.963	9.963	0.000	96	657789	5.00	5.00	
147 Pyrene	202	9.981	9.980	0.001	96	5299123	30.0	31.4	
$ 148 p-Terphenyl-d14	244	10.144	10.138	0.006	98	7059892	60.0	60.5	e
149 p-Dimethylamino azobenzene	225	10.278	10.278	0.000	92	776708	30.0	35.0	
150 Chlorobenzilate	139	10.331	10.331	0.000	82	1887121	30.0	35.3	
152 3,3'-Dimethylbenzidine	212	10.629	10.628	0.001	98	2489927	30.0	33.3	
153 Butyl benzyl phthalate	149	10.646	10.646	0.000	96	2605649	30.0	33.9	
155 2-Acetylaminofluorene	181	10.897	10.897	0.000	94	1797350	30.0	35.3	
S 94 Isosafrole	162				0		30.0	29.9	
157 3,3'-Dichlorobenzidine	252	11.224	11.218	0.006	79	1641122	30.0	34.8	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
158 4,4'-Methylene bis(2-chloroanil	231	11.230	11.230	0.000	89	858865	30.0	35.5	
156 Benzo[a]anthracene	228	11.236	11.230	0.006	98	4111608	30.0	33.0	
159 Chrysene	228	11.277	11.271	0.006	96	4128130	30.0	33.5	
160 Bis(2-ethylhexyl) phthalate	149	11.312	11.312	0.000	95	3787944	30.0	36.3	
161 6-Methylchrysene	242	11.832	11.831	0.001	98	2948128	30.0	34.8	
162 Di-n-octyl phthalate	149	12.153	12.152	0.001	98	6714812	30.0	34.4	
163 7,12-Dimethylbenz(a)anthracene	256	12.602	12.596	0.006	74	1588990	30.0	31.4	
164 Benzo[b]fluoranthene	252	12.608	12.602	0.006	94	4000931	30.0	29.3	
165 Benzo[k]fluoranthene	252	12.643	12.637	0.006	97	4220209	30.0	30.4	
166 Benzo[a]pyrene	252	13.052	13.046	0.006	83	3659072	30.0	31.5	
* 167 Perylene-d12	264	13.128	13.128	0.000	94	546233	5.00	5.00	
168 3-Methylcholanthrene	268	13.560	13.560	0.000	94	1769236	30.0	34.6	
169 Dibenz[a,h]acridine	279	14.348	14.342	0.006	93	3137193	30.0	32.6	
170 Dibenz[a,j]acridine	279	14.424	14.412	0.012	95	3560552	30.0	32.6	
171 Indeno[1,2,3-cd]pyrene	276	14.646	14.634	0.012	94	3634794	30.0	32.8	
172 Dibenz(a,h)anthracene	278	14.681	14.675	0.006	96	3932644	30.0	32.1	
173 Benzo[g,h,i]perylene	276	14.996	14.984	0.012	92	4172078	30.0	32.0	

QC Flag Legend

Processing Flags
e - Potential Peak Saturated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

MSS_RV8270_8_00030 Amount Added: 1.00 Units: mL

Report Date: 18-Jul-2023 15:16:12 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1803.D

Injection Date: 18-Jul-2023 08:28:30 Instrument ID: HP23264 Operator ID: kel10217

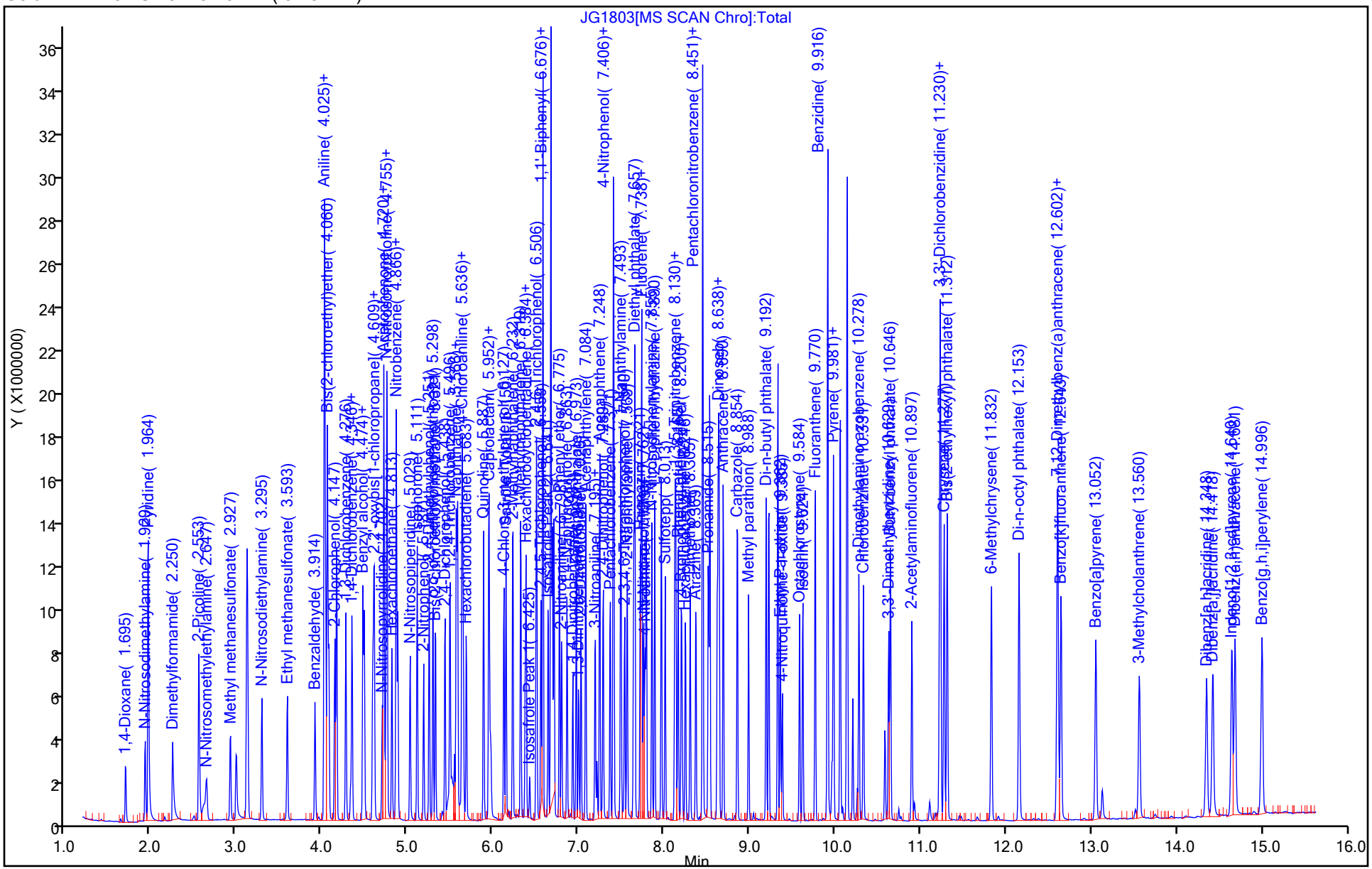
Lims ID: IC L8 Worklist Smp#: 4

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 4

Method: MSSemi_HP23264 Limit Group: MSSV - 8270D_E LVI

Column: DB-5MS 20m 0.25mm (0.25 mm)



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

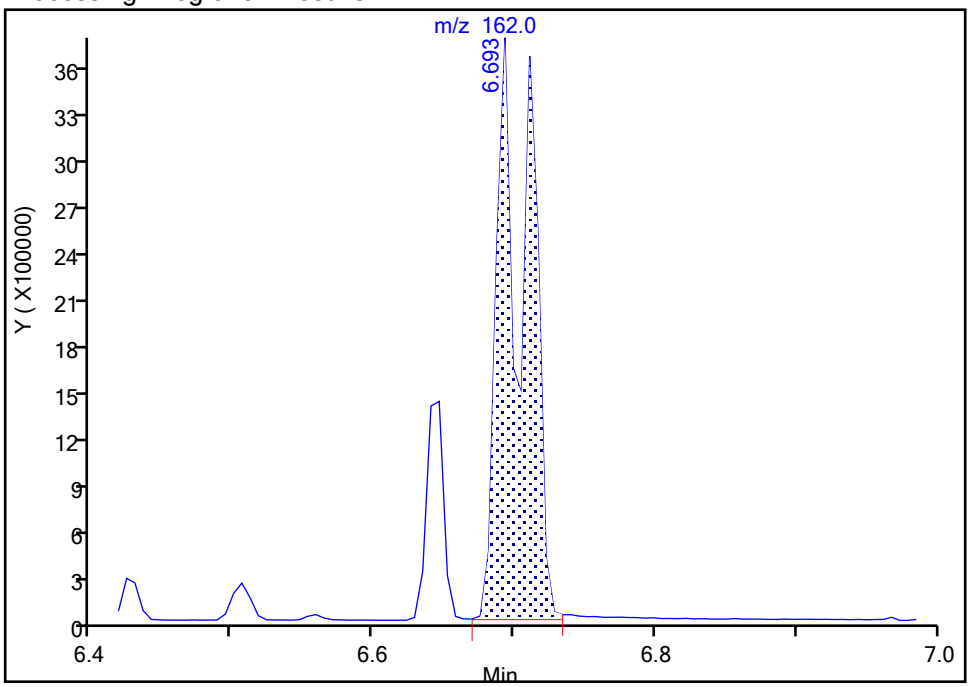
Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1803.D				
Injection Date:	18-Jul-2023 08:28:30	Instrument ID:	HP23264		
Lims ID:	IC L8				
Client ID:					
Operator ID:	kel10217	ALS Bottle#:	4	Worklist Smp#:	4
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		
Column:	DB-5MS 20m 0.25mm (0.25 mm)	Detector	MS SCAN		

84 2-Chloronaphthalene, CAS: 91-58-7

Signal: 1

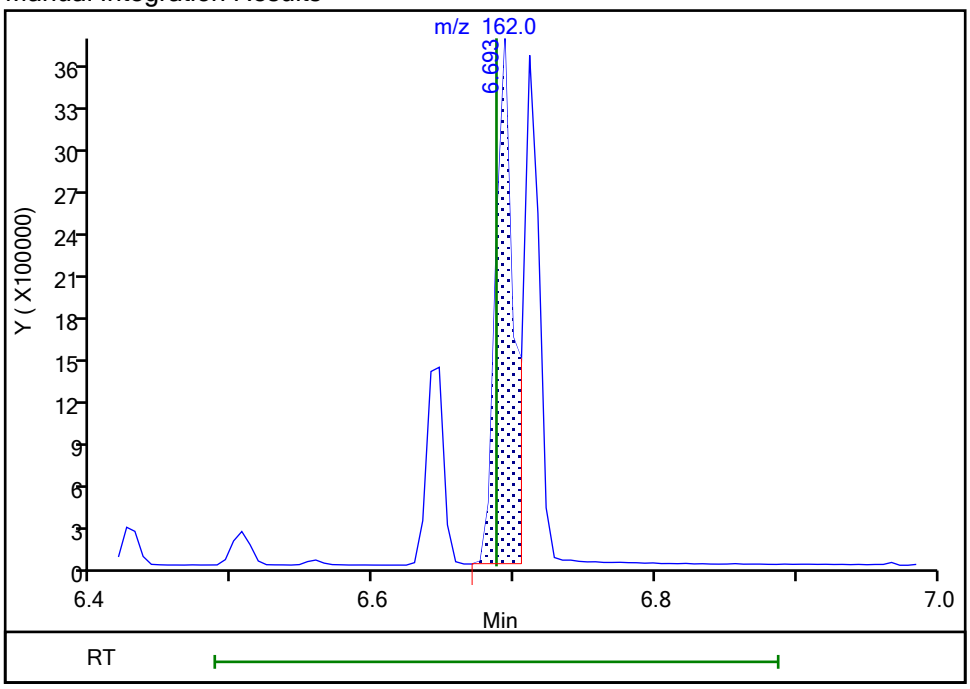
Processing Integration Results

RT: 6.69
Area: 5753846
Amount: 52.769619
Amount Units: ug/ml



Manual Integration Results

RT: 6.69
Area: 3165716
Amount: 32.219972
Amount Units: ug/ml



Reviewer: SJ89, 18-Jul-2023 11:05:39 -04:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

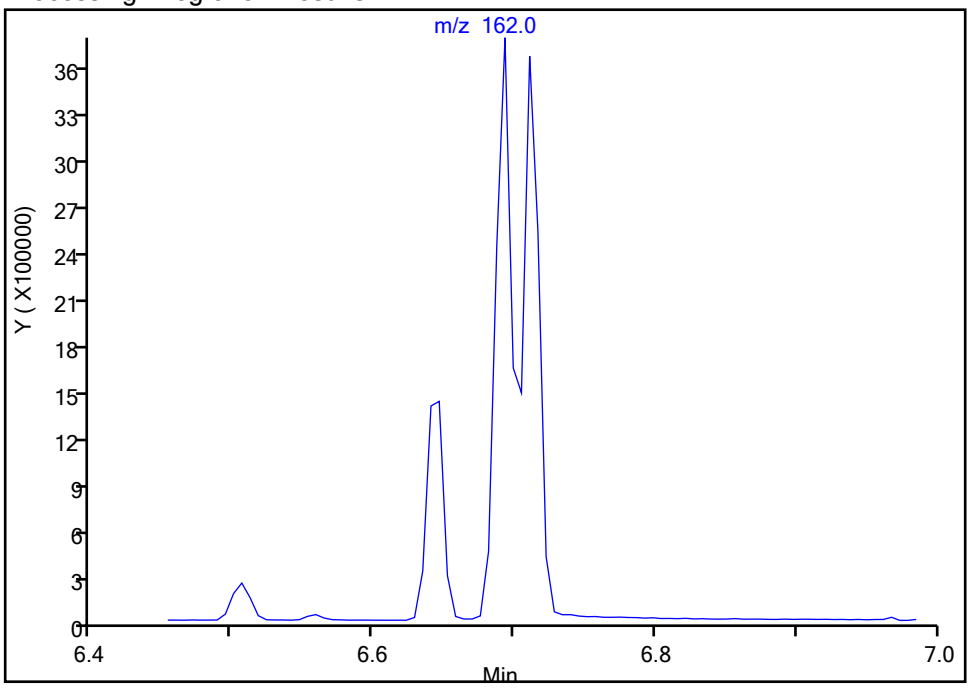
Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1803.D				
Injection Date:	18-Jul-2023 08:28:30	Instrument ID:	HP23264		
Lims ID:	IC L8				
Client ID:					
Operator ID:	kel10217	ALS Bottle#:	4	Worklist Smp#:	4
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		
Column:	DB-5MS 20m 0.25mm (0.25 mm)	Detector	MS SCAN		

85 1-Chloronaphthalene, CAS: 90-13-1

Signal: 1

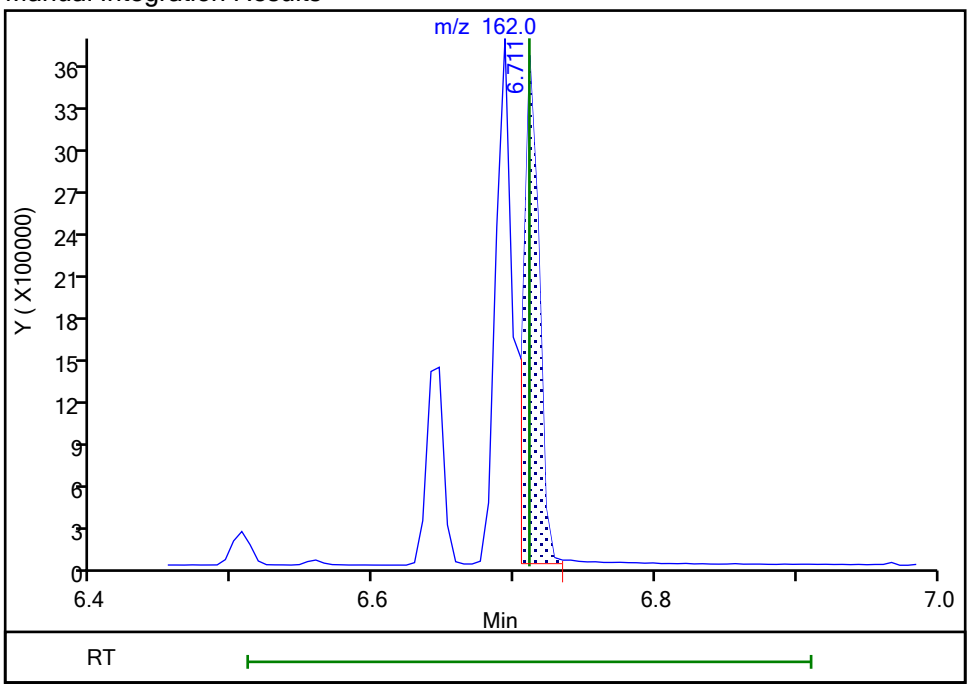
Not Detected
Expected RT: 6.71

Processing Integration Results



Manual Integration Results

RT: 6.71
Area: 2588131
Amount: 27.441912
Amount Units: ug/ml



Reviewer: SJ89, 18-Jul-2023 11:05:50 -04:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

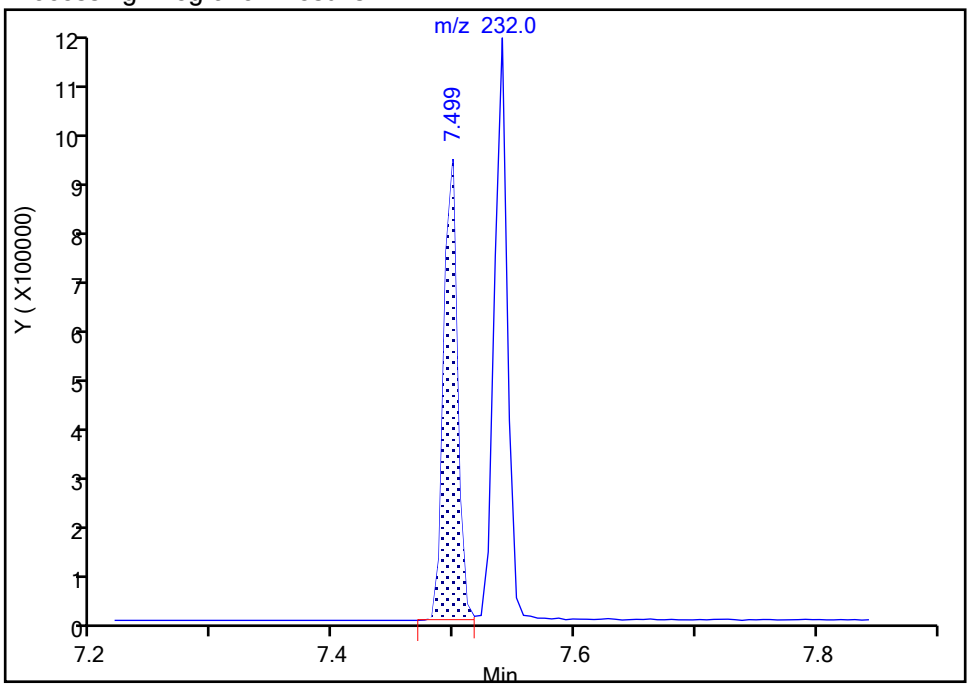
Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1803.D				
Injection Date:	18-Jul-2023 08:28:30	Instrument ID:	HP23264		
Lims ID:	IC L8				
Client ID:					
Operator ID:	kel10217	ALS Bottle#:	4	Worklist Smp#:	4
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		
Column:	DB-5MS 20m 0.25mm (0.25 mm)	Detector	MS SCAN		

105 2,3,4,6-Tetrachlorophenol, CAS: 58-90-2

Signal: 1

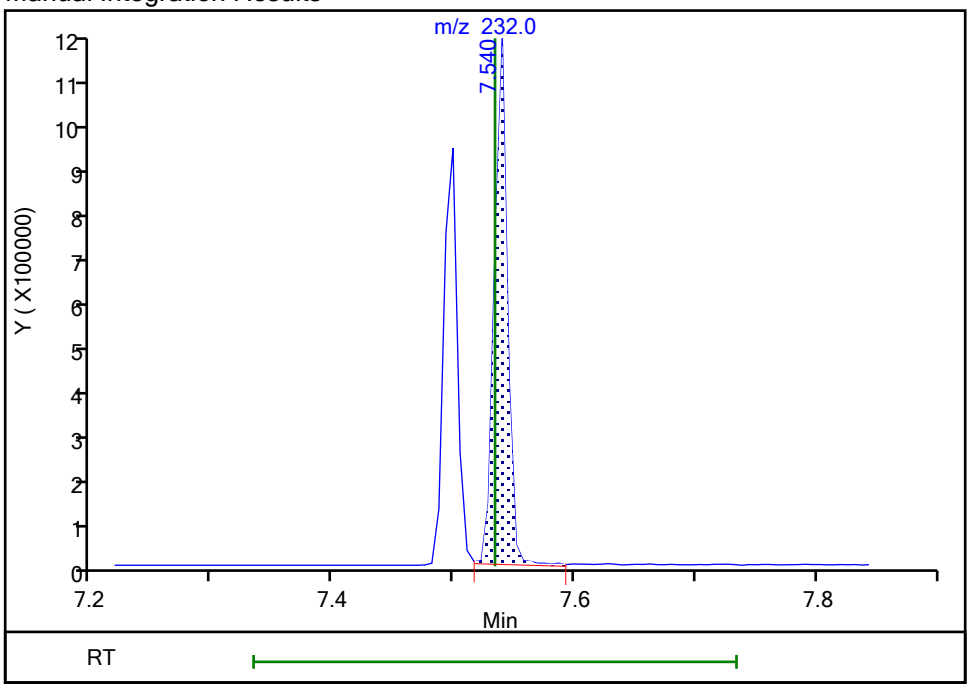
Processing Integration Results

RT: 7.50
Area: 731085
Amount: 29.159586
Amount Units: ug/ml



Manual Integration Results

RT: 7.54
Area: 887037
Amount: 29.284940
Amount Units: ug/ml



Reviewer: SJ89, 18-Jul-2023 11:06:03 -04:00:00 (UTC)

Audit Action: Assigned Compound ID Audit Reason: Baseline

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1804.D
Lims ID: IC L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 18-Jul-2023 08:49:30 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: IC L7
Misc. Info.: 410-0089185-005
Operator ID: kel10217 Instrument ID: HP23264
Sublist: chrom-MSSemi_HP23264*sub27

Method: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\MSSemi_HP23264.m
Limit Group: MSSV - 8270D_E LVI
Last Update: 18-Jul-2023 15:16:48 Calib Date: 18-Jul-2023 10:14:30
Integrator: Falcon ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1808.D

Column 1 : DB-5MS 20m 0.25mm (0.25 mm) Det: MS SCAN
Process Host: CTX1640

First Level Reviewer: SJ89 Date: 18-Jul-2023 11:07:56

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 1,4-Dioxane	88	1.701	1.701	0.000	93	552607	20.0	19.9	
	2 N-Nitrosodimethylamine	74	1.928	1.928	0.000	93	935066	20.0	20.7	
	3 Pyridine	79	1.964	1.969	-0.005	84	3077034	40.0	39.5	
	4 Dimethylformamide	73	2.250	2.267	-0.017	96	1130899	20.0	20.3	
	5 2-Picoline	93	2.553	2.559	-0.006	93	1555113	20.0	20.6	
	6 N-Nitrosomethylethylamine	88	2.647	2.647	0.001	95	679740	20.0	18.3	
	7 Methyl methanesulfonate	80	2.921	2.921	0.000	86	899721	20.0	20.1	
$	9 2-Fluorophenol	112	3.120	3.119	0.001	96	2921241	40.0	41.9	
	11 N-Nitrosodiethylamine	102	3.295	3.289	0.006	89	672534	20.0	22.3	
	12 Ethyl methanesulfonate	109	3.587	3.587	0.000	95	752996	20.0	20.1	
	13 Benzaldehyde	77	3.914	3.914	0.000	91	966730	20.0	15.9	
	17 Aniline	93	4.025	4.019	0.006	97	2264896	20.0	21.5	
$	15 Phenol-d5	99	4.025	4.025	0.000	95	4322971	40.0	43.2	
	16 Phenol	94	4.036	4.036	0.000	96	2118631	20.0	20.2	
	18 Bis(2-chloroethyl)ether	93	4.077	4.077	0.000	86	1425613	20.0	19.5	
	19 2-Chlorophenol	128	4.147	4.147	0.000	94	1347636	20.0	20.8	
	21 1,3-Dichlorobenzene	146	4.276	4.276	0.000	96	1295260	20.0	20.1	
*	22 1,4-Dichlorobenzene-d4	152	4.334	4.328	0.006	97	227097	5.00	5.00	
	23 1,4-Dichlorobenzene	146	4.346	4.346	0.000	91	1344816	20.0	19.5	
	26 Benzyl alcohol	108	4.474	4.474	0.000	89	917389	20.0	21.4	
	27 1,2-Dichlorobenzene	146	4.492	4.492	0.000	95	1285129	20.0	20.2	
	30 2,2'-oxybis[1-chloropropane]	45	4.591	4.591	0.000	93	3192650	20.0	19.8	
	29 2-Methylphenol	108	4.603	4.603	0.000	98	1341808	20.0	21.6	
	31 N-Nitrosopyrrolidine	100	4.696	4.696	0.000	88	790226	20.0	21.2	
	33 N-Nitrosodi-n-propylamine	70	4.720	4.714	0.006	93	1182472	20.0	19.2	
	32 Acetophenone	105	4.720	4.714	0.006	93	1975563	20.0	19.8	
	35 N-Nitrosomorpholine	56	4.743	4.737	0.006	87	1134880	20.0	19.8	
	36 2-Toluidine	106	4.755	4.754	0.001	81	2250375	20.0	20.9	
	34 4-Methylphenol	108	4.755	4.754	0.001	83	1527791	20.0	21.3	
	37 Hexachloroethane	117	4.813	4.813	0.000	97	565396	20.0	19.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 39 Nitrobenzene-d5	82	4.866	4.860	0.006	93	3758510	40.0	41.1	
40 Nitrobenzene	77	4.883	4.877	0.006	92	1574319	20.0	18.9	
41 N-Nitrosopiperidine	114	5.029	5.023	0.006	80	697888	20.0	20.7	
42 Isophorone	82	5.111	5.105	0.006	98	3105432	20.0	20.8	
43 2-Nitrophenol	139	5.187	5.186	0.001	92	697828	20.0	22.6	
44 2,4-Dimethylphenol	107	5.251	5.251	0.000	97	1414914	20.0	22.5	
46 o,o',o''-Triethylphosphorothioat	198	5.292	5.292	0.000	96	548173	20.0	22.6	
47 Bis(2-chloroethoxy)methane	93	5.321	5.321	0.000	90	1878754	20.0	20.8	
49 2,4-Dichlorophenol	162	5.438	5.438	0.000	97	1075516	20.0	22.9	
50 1,2,4-Trichlorobenzene	180	5.496	5.490	0.006	94	1057382	20.0	20.0	
* 52 Naphthalene-d8	136	5.549	5.549	0.001	98	853884	5.00	5.00	
53 Naphthalene	128	5.566	5.566	0.000	97	3827519	20.0	20.8	
55 Alpha-Terpineol	59	5.584	5.578	0.006	88	1768342	20.0	21.9	
56 4-Chloroaniline	127	5.630	5.630	0.000	94	1688552	20.0	21.8	
57 2,6-Dichlorophenol	162	5.636	5.636	0.000	92	1025095	20.0	22.0	
58 Hexachloropropene	213	5.648	5.648	0.000	95	701637	20.0	21.1	
59 Hexachlorobutadiene	225	5.683	5.683	0.000	97	618744	20.0	21.6	
61 Quinoline	129	5.887	5.887	0.000	95	2586492	20.0	20.5	
62 Caprolactam	113	5.952	5.940	0.012	59	356615	20.0	21.4	
63 N-Nitrosodi-n-butylamine	84	5.946	5.946	0.000	82	1358056	20.0	19.6	
64 p-Phenylene diamine	108	5.969	5.969	0.000	94	793060	20.0	19.3	
65 4-Chloro-3-methylphenol	107	6.121	6.121	0.000	96	1202487	20.0	20.7	
66 Safrole, Total	162	6.150	6.150	0.000	84	891771	20.0	22.0	
67 2-Methylnaphthalene	142	6.226	6.226	0.000	91	2379623	20.0	21.3	
69 1-Methylnaphthalene	142	6.319	6.319	0.000	92	2144900	20.0	20.0	
71 Hexachlorocyclopentadiene	237	6.378	6.372	0.006	95	606468	20.0	20.9	
70 1,2,4,5-Tetrachlorobenzene	216	6.384	6.383	0.001	97	1086417	20.0	20.7	
72 Isosafrole Peak 1	162	6.425	6.430	-0.005	85	156065	3.20	3.08	
79 2,4,6-Trichlorophenol	196	6.512	6.506	0.006	95	702470	20.0	21.1	
S 24 Dinitrotoluene	165				0			40.7	
80 2,4,5-Trichlorophenol	196	6.559	6.553	0.006	92	746082	20.0	20.3	
$ 81 2-Fluorobiphenyl (Surr)	172	6.582	6.582	0.000	99	5806339	40.0	41.3	
82 Isosafrole Peak 2	162	6.641	6.640	0.001	87	898730	16.8	17.6	
83 1,1'-Biphenyl	154	6.676	6.675	0.001	92	2786135	20.0	20.2	
84 2-Chloronaphthalene	162	6.693	6.687	0.006	89	1938874	20.0	18.6	
85 1-Chloronaphthalene	162	6.711	6.710	0.001	96	2129294	20.0	21.2	
86 Phenyl ether	170	6.775	6.775	0.000	91	1517543	20.0	20.7	
87 2-Nitroaniline	138	6.798	6.798	0.000	78	774957	20.0	21.0	
88 1,4-Naphthoquinone	158	6.862	6.862	0.000	81	910966	20.0	22.0	
89 1,4-Dinitrobenzene	168	6.933	6.932	0.001	90	330533	20.0	20.2	
90 Dimethyl phthalate	163	6.973	6.967	0.006	96	2342888	20.0	18.9	
91 1,3-Dinitrobenzene	168	6.997	6.997	0.000	79	375445	20.0	19.7	
92 2,6-Dinitrotoluene	165	7.026	7.026	0.000	85	536178	20.0	20.6	
93 Acenaphthylene	152	7.084	7.078	0.006	99	3780836	20.0	21.0	
95 3-Nitroaniline	138	7.189	7.189	0.000	88	699357	20.0	21.9	
* 96 Acenaphthene-d10	164	7.213	7.213	0.000	95	443400	5.00	5.00	
97 Acenaphthene	153	7.248	7.242	0.006	98	2388349	20.0	20.5	
98 2,4-Dinitrophenol	184	7.289	7.283	0.006	78	721579	40.0	43.8	
99 Pentachlorobenzene	250	7.370	7.370	0.000	97	924253	20.0	20.4	
100 4-Nitrophenol	109	7.400	7.399	0.001	90	809483	40.0	41.7	
102 2,4-Dinitrotoluene	165	7.405	7.405	0.000	75	710649	20.0	20.1	
101 Dibenzofuran	168	7.411	7.411	0.000	98	2994625	20.0	19.0	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
104 1-Naphthylamine	143	7.493	7.487	0.006	98	2054924	20.0	19.4	
105 2,3,4,6-Tetrachlorophenol	232	7.540	7.534	0.006	77	604565	20.0	18.8	a
106 2-Naphthylamine	143	7.569	7.563	0.006	96	2281327	20.0	20.7	
107 Diethyl phthalate	149	7.639	7.639	0.000	96	2559624	20.0	19.2	
109 Thionazin	107	7.721	7.715	0.006	77	475073	20.0	20.1	
108 Fluorene	166	7.732	7.732	0.000	94	2479499	20.0	20.0	
110 4-Chlorophenyl phenyl ether	204	7.738	7.738	0.000	96	1081302	20.0	19.5	
111 N-Nitro-o-toluidine	152	7.756	7.756	0.000	93	695792	20.0	19.9	
112 4-Nitroaniline	138	7.773	7.767	0.006	83	621517	20.0	19.5	
113 4,6-Dinitro-2-methylphenol	198	7.791	7.785	0.006	70	752685	40.0	41.2	
114 N-Nitrosodiphenylamine	169	7.855	7.855	0.000	67	1692187	17.0	17.7	
115 1,2-Diphenylhydrazine	77	7.890	7.884	0.006	41	3224217	20.0	20.1	
$ 116 2,4,6-Tribromophenol	330	7.966	7.966	0.000	89	873518	40.0	41.6	
117 Sulfotepp	97	8.013	8.013	0.000	75	562950	20.0	21.4	
118 1,3,5-Trinitrobenzene	213	8.118	8.118	0.000	81	219972	20.0	22.8	
120 cis-Diallate	86	8.124	8.124	0.000	93	938427	14.8	14.7	
119 Phorate	75	8.135	8.135	0.000	92	2218183	20.0	23.6	
121 Phenacetin	108	8.159	8.153	0.006	90	1430872	20.0	22.3	
122 4-Bromophenyl phenyl ether	248	8.200	8.199	0.001	75	632660	20.0	20.5	
123 trans-Diallate	86	8.211	8.211	0.000	91	313039	5.20	5.12	
124 Hexachlorobenzene	284	8.246	8.246	0.000	93	730182	20.0	19.9	
125 Dimethoate	87	8.299	8.299	0.000	96	1292276	20.0	21.7	
126 Atrazine	200	8.369	8.369	0.000	80	572793	20.0	20.5	
128 Pentachloronitrobenzene	237	8.451	8.445	0.006	60	299117	20.0	19.1	
127 Pentachlorophenol	266	8.451	8.451	0.000	85	782266	40.0	45.0	
129 4-Aminobiphenyl	169	8.451	8.451	0.000	91	2359997	20.0	18.8	
130 Pronamide	173	8.515	8.515	0.000	88	1138403	20.0	21.5	
* 131 Phenanthrene-d10	188	8.620	8.620	0.000	95	783422	5.00	5.00	
133 Dinoseb	211	8.620	8.620	0.000	90	554044	20.0	22.2	
134 Disulfoton	88	8.632	8.632	0.000	97	2002024	20.0	19.7	
132 Phenanthrene	178	8.643	8.643	0.000	99	3324991	20.0	20.1	
135 Anthracene	178	8.690	8.690	0.000	98	3300194	20.0	20.1	
136 Carbazole	167	8.854	8.853	0.001	96	3241977	20.0	20.0	
137 Methyl parathion	109	8.988	8.988	0.000	88	1019267	20.0	23.4	
138 Di-n-butyl phthalate	149	9.192	9.192	0.000	99	4465053	20.0	21.4	
139 Ethyl Parathion	109	9.356	9.356	0.000	81	593213	20.0	23.1	
140 4-Nitroquinoline-1-oxide	190	9.385	9.379	0.006	88	241247	20.0	21.5	
142 Octachlorostyrene	308	9.583	9.583	0.000	91	288048	20.0	21.1	
143 Isodrin	193	9.624	9.624	0.000	92	401146	20.0	18.4	
S 68 Diallate	86				0		20.0	19.8	
144 Fluoranthene	202	9.764	9.764	0.000	99	3632622	20.0	20.8	
145 Benzidine	184	9.910	9.910	0.000	99	6495011	60.0	65.3	
* 146 Pyrene-d10 (IS)	212	9.963	9.963	0.000	96	704339	5.00	5.00	
147 Pyrene	202	9.981	9.980	0.000	96	3789293	20.0	21.0	
$ 148 p-Terphenyl-d14	244	10.144	10.138	0.006	99	4935167	40.0	39.5	
149 p-Dimethylamino azobenzene	225	10.278	10.278	0.000	92	525216	20.0	22.1	
150 Chlorobenzilate	139	10.331	10.331	0.000	81	1256030	20.0	22.0	
152 3,3'-Dimethylbenzidine	212	10.629	10.628	0.001	98	1828341	20.0	22.8	
153 Butyl benzyl phthalate	149	10.646	10.646	0.000	96	1872559	20.0	22.8	
155 2-Acetylaminofluorene	181	10.897	10.897	0.000	94	1201420	20.0	22.0	
S 94 Isosafrole	162				0		20.0	20.6	
157 3,3'-Dichlorobenzidine	252	11.218	11.218	0.000	80	1145974	20.0	22.7	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
158 4,4'-Methylene bis(2-chloroanil	231	11.230	11.230	0.000	90	593478	20.0	22.9	
156 Benzo[a]anthracene	228	11.230	11.230	0.000	99	2967991	20.0	22.2	
159 Chrysene	228	11.271	11.271	0.000	97	2718314	20.0	20.6	
160 Bis(2-ethylhexyl) phthalate	149	11.312	11.312	0.000	95	2574536	20.0	23.1	
161 6-Methylchrysene	242	11.826	11.831	-0.005	98	1873048	20.0	20.7	
162 Di-n-octyl phthalate	149	12.153	12.152	0.001	98	4293371	20.0	20.3	
163 7,12-Dimethylbenz(a)anthracene	256	12.602	12.596	0.006	86	1187839	20.0	21.7	
164 Benzo[b]fluoranthene	252	12.602	12.602	0.000	96	2968163	20.0	20.1	
165 Benzo[k]fluoranthene	252	12.637	12.637	0.000	97	2992534	20.0	19.9	
166 Benzo[a]pyrene	252	13.046	13.046	0.000	83	2550018	20.0	20.3	
* 167 Perylene-d12	264	13.128	13.128	0.000	95	590478	5.00	5.00	
168 3-Methylcholanthrene	268	13.560	13.560	0.000	93	1117040	20.0	20.2	
169 Dibenz[a,h]acridine	279	14.342	14.342	0.000	93	2115860	20.0	20.3	
170 Dibenz[a,j]acridine	279	14.412	14.412	0.000	95	2316213	20.0	19.6	
171 Indeno[1,2,3-cd]pyrene	276	14.640	14.634	0.006	94	2433703	20.0	20.3	
172 Dibenz(a,h)anthracene	278	14.681	14.675	0.006	96	2664858	20.0	20.1	
173 Benzo[g,h,i]perylene	276	14.990	14.984	0.006	92	2776898	20.0	19.7	

QC Flag Legend

Processing Flags

Review Flags

a - User Assigned ID

Reagents:

MSS_RV8270_7_00030 Amount Added: 1.00 Units: mL

Report Date: 18-Jul-2023 15:16:49 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1804.D

Injection Date: 18-Jul-2023 08:49:30 Instrument ID: HP23264 Operator ID: kel10217

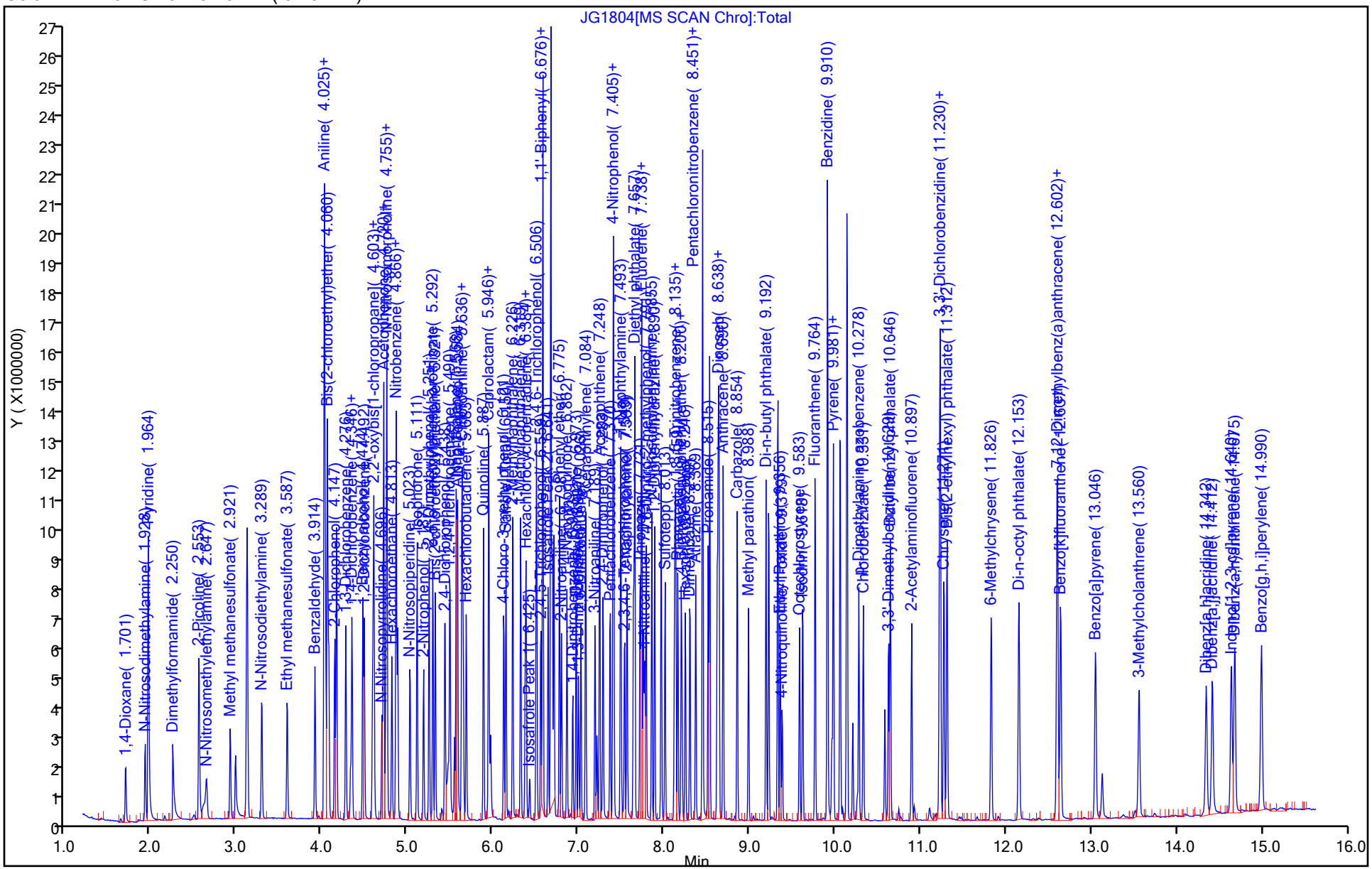
Lims ID: IC L7 Worklist Smp#: 5

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 5

Method: MSSemi_HP23264 Limit Group: MSSV - 8270D_E LVI

Column: DB-5MS 20m 0.25mm (0.25 mm)



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

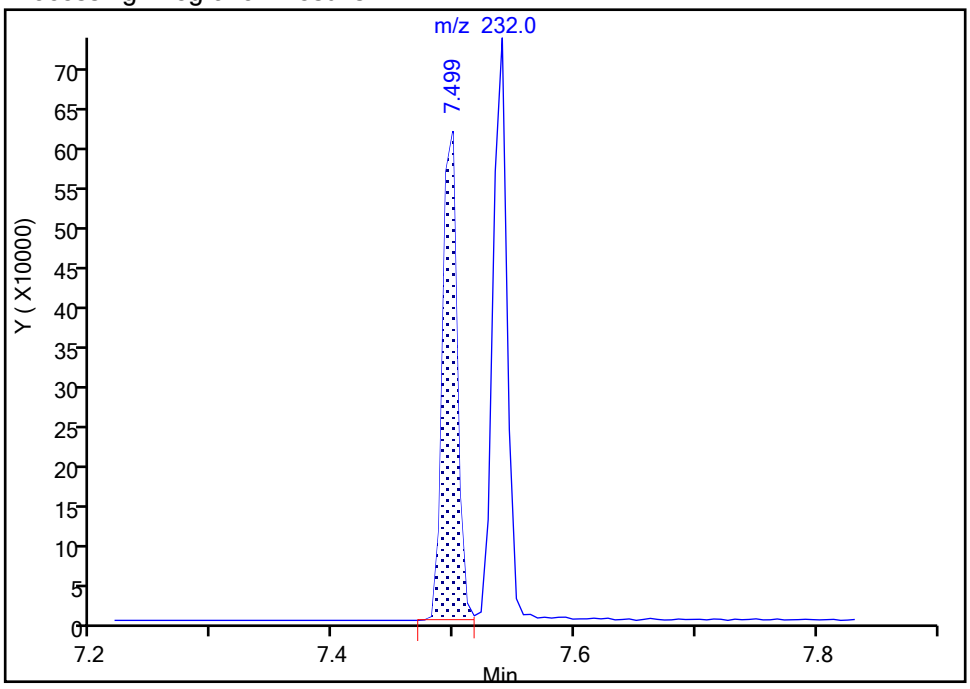
Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1804.D				
Injection Date:	18-Jul-2023 08:49:30	Instrument ID:	HP23264		
Lims ID:	IC L7				
Client ID:					
Operator ID:	kel10217	ALS Bottle#:	5	Worklist Smp#:	5
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		
Column:	DB-5MS 20m 0.25mm (0.25 mm)	Detector	MS SCAN		

105 2,3,4,6-Tetrachlorophenol, CAS: 58-90-2

Signal: 1

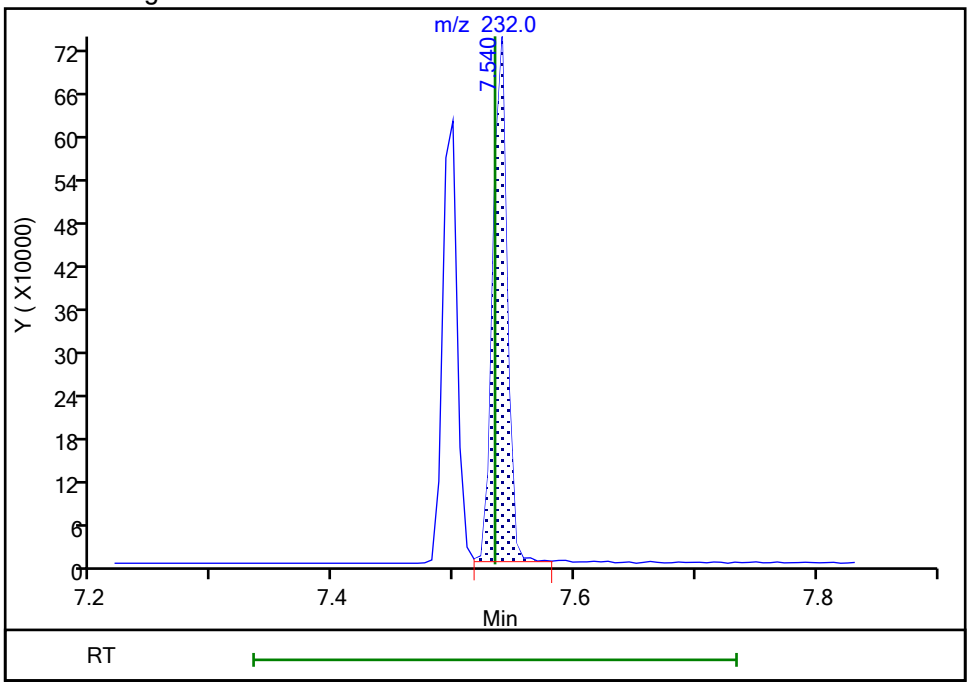
Processing Integration Results

RT: 7.50
Area: 520963
Amount: 19.043749
Amount Units: ug/ml



Manual Integration Results

RT: 7.54
Area: 604565
Amount: 18.766796
Amount Units: ug/ml



Reviewer: SJ89, 18-Jul-2023 11:07:27 -04:00:00 (UTC)

Audit Action: Assigned Compound ID Audit Reason: Baseline

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1805.D
Lims ID: IC L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 18-Jul-2023 09:10:30 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: IC L6
Misc. Info.: 410-0089185-006
Operator ID: kel10217 Instrument ID: HP23264
Sublist: chrom-MSSemi_HP23264*sub27

Method: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\MSSemi_HP23264.m
Limit Group: MSSV - 8270D_E LVI
Last Update: 18-Jul-2023 15:17:26 Calib Date: 18-Jul-2023 10:14:30
Integrator: Falcon ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1808.D

Column 1 : DB-5MS 20m 0.25mm (0.25 mm) Det: MS SCAN
Process Host: CTX1640

First Level Reviewer: SJ89 Date: 18-Jul-2023 11:09:43

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 1,4-Dioxane	88	1.695	1.701	-0.006	93	344728	12.5	12.2	
	2 N-Nitrosodimethylamine	74	1.928	1.928	0.000	94	591627	12.5	12.9	
	3 Pyridine	79	1.964	1.969	-0.005	84	1880460	25.0	23.8	
	4 Dimethylformamide	73	2.255	2.267	-0.012	94	709839	12.5	12.6	Ma
	5 2-Picoline	93	2.553	2.559	-0.006	94	999554	12.5	13.0	
	6 N-Nitrosomethylethylamine	88	2.647	2.647	0.001	94	429259	12.5	11.4	
	7 Methyl methanesulfonate	80	2.921	2.921	0.000	86	553757	12.5	12.2	
$	9 2-Fluorophenol	112	3.120	3.119	0.001	96	1838729	25.0	25.9	
	11 N-Nitrosodiethylamine	102	3.289	3.289	0.000	89	424605	12.5	13.9	
	12 Ethyl methanesulfonate	109	3.587	3.587	0.000	95	463350	12.5	12.2	
	13 Benzaldehyde	77	3.914	3.914	0.000	92	674785	12.5	11.0	
	17 Aniline	93	4.019	4.019	0.000	96	1360168	12.5	12.7	
$	15 Phenol-d5	99	4.025	4.025	0.000	98	2667971	25.0	26.3	
	16 Phenol	94	4.036	4.036	0.000	96	1308192	12.5	12.3	
	18 Bis(2-chloroethyl)ether	93	4.077	4.077	0.000	86	891977	12.5	12.0	
	19 2-Chlorophenol	128	4.147	4.147	0.000	93	848768	12.5	12.9	
	21 1,3-Dichlorobenzene	146	4.276	4.276	0.000	95	820239	12.5	12.6	
*	22 1,4-Dichlorobenzene-d4	152	4.328	4.328	0.000	96	230583	5.00	5.00	
	23 1,4-Dichlorobenzene	146	4.346	4.346	0.000	90	855219	12.5	12.2	
	26 Benzyl alcohol	108	4.474	4.474	0.000	90	590534	12.5	13.6	
	27 1,2-Dichlorobenzene	146	4.492	4.492	0.000	95	827551	12.5	12.8	
	30 2,2'-oxybis[1-chloropropane]	45	4.591	4.591	0.000	93	1972059	12.5	12.0	
	29 2-Methylphenol	108	4.603	4.603	0.000	98	825774	12.5	13.1	
	31 N-Nitrosopyrrolidine	100	4.696	4.696	0.000	84	501730	12.5	13.3	
	33 N-Nitrosodi-n-propylamine	70	4.720	4.714	0.006	87	764275	12.5	12.2	
	32 Acetophenone	105	4.714	4.714	0.000	84	1260374	12.5	12.5	
	35 N-Nitrosomorpholine	56	4.737	4.737	0.000	90	687911	12.5	11.8	
	36 2-Toluidine	106	4.755	4.754	0.001	82	1368101	12.5	12.5	
	34 4-Methylphenol	108	4.755	4.754	0.001	83	937008	12.5	12.9	
	37 Hexachloroethane	117	4.813	4.813	0.000	96	351578	12.5	11.9	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 39 Nitrobenzene-d5	82	4.866	4.860	0.006	93	2315361	25.0	23.4	
40 Nitrobenzene	77	4.883	4.877	0.006	93	1023932	12.5	11.3	
41 N-Nitrosopiperidine	114	5.023	5.023	0.000	80	448198	12.5	12.3	
42 Isophorone	82	5.111	5.105	0.006	98	1988537	12.5	12.3	
43 2-Nitrophenol	139	5.187	5.186	0.001	92	429664	12.5	12.8	
44 2,4-Dimethylphenol	107	5.251	5.251	0.000	97	920106	12.5	13.5	
46 o,o',o''-Triethylphosphorothioat	198	5.292	5.292	0.000	95	316953	12.5	12.1	
47 Bis(2-chloroethoxy)methane	93	5.321	5.321	0.000	90	1194002	12.5	12.2	
49 2,4-Dichlorophenol	162	5.432	5.438	-0.006	97	661028	12.5	13.0	
50 1,2,4-Trichlorobenzene	180	5.496	5.490	0.006	93	682667	12.5	11.9	
* 52 Naphthalene-d8	136	5.549	5.549	0.001	98	925798	5.00	5.00	
53 Naphthalene	128	5.566	5.566	0.000	97	2356877	12.5	11.8	
55 Alpha-Terpineol	59	5.578	5.578	0.000	89	1062879	12.5	12.1	
56 4-Chloroaniline	127	5.630	5.630	0.000	94	1099329	12.5	13.1	
57 2,6-Dichlorophenol	162	5.636	5.636	0.000	91	679678	12.5	13.5	
58 Hexachloropropene	213	5.648	5.648	0.000	95	451501	12.5	12.5	
59 Hexachlorobutadiene	225	5.683	5.683	0.000	96	395453	12.5	12.7	
61 Quinoline	129	5.887	5.887	0.000	95	1657991	12.5	12.1	
62 Caprolactam	113	5.940	5.940	0.000	59	229984	12.5	12.7	
63 N-Nitrosodi-n-butylamine	84	5.946	5.946	0.000	80	864574	12.5	11.5	
64 p-Phenylene diamine	108	5.969	5.969	0.000	94	533389	12.5	12.0	
65 4-Chloro-3-methylphenol	107	6.121	6.121	0.000	96	797987	12.5	12.7	
66 Safrole, Total	162	6.150	6.150	0.000	84	555590	12.5	12.7	
67 2-Methylnaphthalene	142	6.226	6.226	0.000	91	1470058	12.5	12.1	
69 1-Methylnaphthalene	142	6.319	6.319	0.000	93	1480614	12.5	12.8	
71 Hexachlorocyclopentadiene	237	6.372	6.372	0.000	95	410711	12.5	13.1	
70 1,2,4,5-Tetrachlorobenzene	216	6.384	6.383	0.001	98	713170	12.5	12.6	
72 Isosafrole Peak 1	162	6.425	6.430	-0.005	87	108895	2.00	1.99	
79 2,4,6-Trichlorophenol	196	6.506	6.506	0.000	90	456102	12.5	12.7	
S 24 Dinitrotoluene	165				0			26.4	
80 2,4,5-Trichlorophenol	196	6.553	6.553	0.000	92	502890	12.5	12.7	
$ 81 2-Fluorobiphenyl (Surr)	172	6.582	6.582	0.000	99	3629778	25.0	23.9	
82 Isosafrole Peak 2	162	6.641	6.640	0.001	87	565998	10.5	10.3	
83 1,1'-Biphenyl	154	6.676	6.675	0.001	94	1779906	12.5	12.0	
84 2-Chloronaphthalene	162	6.693	6.687	0.006	95	1257193	12.5	11.2	
85 1-Chloronaphthalene	162	6.711	6.710	0.001	96	1345697	12.5	12.4	
86 Phenyl ether	170	6.775	6.775	0.000	91	931062	12.5	11.8	
87 2-Nitroaniline	138	6.798	6.798	0.000	77	505283	12.5	12.7	
88 1,4-Naphthoquinone	158	6.862	6.862	0.000	83	607747	12.5	13.6	
89 1,4-Dinitrobenzene	168	6.933	6.932	0.001	90	231617	12.5	13.1	
90 Dimethyl phthalate	163	6.968	6.967	0.001	97	1648857	12.5	12.4	
91 1,3-Dinitrobenzene	168	6.997	6.997	0.000	78	248806	12.5	12.1	
92 2,6-Dinitrotoluene	165	7.026	7.026	0.000	87	380075	12.5	13.6	
93 Acenaphthylene	152	7.079	7.078	0.000	99	2436056	12.5	12.5	
95 3-Nitroaniline	138	7.189	7.189	0.000	89	464150	12.5	13.5	
* 96 Acenaphthene-d10	164	7.213	7.213	0.000	95	478030	5.00	5.00	
97 Acenaphthene	153	7.248	7.242	0.006	98	1506926	12.5	12.0	
98 2,4-Dinitrophenol	184	7.283	7.283	0.000	77	473545	25.0	26.7	
99 Pentachlorobenzene	250	7.370	7.370	0.000	97	595727	12.5	12.2	
100 4-Nitrophenol	109	7.400	7.399	0.001	90	558546	25.0	26.7	
102 2,4-Dinitrotoluene	165	7.405	7.405	0.000	83	489700	12.5	12.9	
101 Dibenzofuran	168	7.411	7.411	0.000	97	2088979	12.5	12.3	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
104 1-Naphthylamine	143	7.487	7.487	0.000	98	1356020	12.5	11.9	
105 2,3,4,6-Tetrachlorophenol	232	7.534	7.534	0.000	77	406481	12.5	11.7	a
106 2-Naphthylamine	143	7.563	7.563	0.000	96	1551098	12.5	13.1	
107 Diethyl phthalate	149	7.639	7.639	0.000	96	1753034	12.5	12.2	
109 Thionazin	107	7.715	7.715	0.000	76	311529	12.5	12.2	
108 Fluorene	166	7.732	7.732	0.000	93	1626086	12.5	12.2	
110 4-Chlorophenyl phenyl ether	204	7.738	7.738	0.000	94	708063	12.5	11.8	
111 N-Nitro-o-toluidine	152	7.756	7.756	0.000	93	475993	12.5	12.6	
112 4-Nitroaniline	138	7.768	7.767	0.001	84	448882	12.5	13.1	
113 4,6-Dinitro-2-methylphenol	198	7.791	7.785	0.006	80	526923	25.0	25.6	
114 N-Nitrosodiphenylamine	169	7.855	7.855	0.000	68	1105153	10.6	10.3	
115 1,2-Diphenylhydrazine	77	7.890	7.884	0.006	41	2140819	12.5	11.9	
$ 116 2,4,6-Tribromophenol	330	7.966	7.966	0.000	89	579732	25.0	25.6	
117 Sulfotepp	97	8.013	8.013	0.000	76	376153	12.5	12.7	
118 1,3,5-Trinitrobenzene	213	8.118	8.118	0.000	83	135742	12.5	12.5	
120 cis-Diallate	86	8.124	8.124	0.000	95	606801	9.25	8.42	
119 Phorate	75	8.135	8.135	0.000	92	1379888	12.5	13.0	
121 Phenacetin	108	8.159	8.153	0.006	90	1001454	12.5	13.9	
122 4-Bromophenyl phenyl ether	248	8.200	8.199	0.001	74	426153	12.5	12.2	
123 trans-Diallate	86	8.211	8.211	0.000	91	212374	3.25	3.08	
124 Hexachlorobenzene	284	8.246	8.246	0.000	94	508428	12.5	12.3	
125 Dimethoate	87	8.299	8.299	0.000	96	832322	12.5	12.4	
126 Atrazine	200	8.369	8.369	0.000	80	375895	12.5	11.9	
128 Pentachloronitrobenzene	237	8.451	8.445	0.006	62	217765	12.5	12.3	
127 Pentachlorophenol	266	8.451	8.451	0.000	85	537516	25.0	27.4	
129 4-Aminobiphenyl	169	8.451	8.451	0.000	92	1662090	12.5	11.7	
130 Pronamide	173	8.515	8.515	0.000	89	796823	12.5	13.4	
* 131 Phenanthrene-d10	188	8.620	8.620	0.000	95	883382	5.00	5.00	
133 Dinoseb	211	8.620	8.620	0.000	80	375948	12.5	13.4	
134 Disulfoton	88	8.632	8.632	0.000	97	1385615	12.5	12.1	
132 Phenanthrene	178	8.643	8.643	0.000	98	2281428	12.5	12.2	
135 Anthracene	178	8.690	8.690	0.000	98	2347203	12.5	12.6	
136 Carbazole	167	8.854	8.853	0.001	96	2386159	12.5	13.0	
137 Methyl parathion	109	8.988	8.988	0.000	89	663897	12.5	13.5	
138 Di-n-butyl phthalate	149	9.192	9.192	0.000	99	3173440	12.5	13.5	
139 Ethyl Parathion	109	9.356	9.356	0.000	80	378629	12.5	13.1	
140 4-Nitroquinoline-1-oxide	190	9.385	9.379	0.006	80	157867	12.5	12.5	
142 Octachlorostyrene	308	9.583	9.583	0.000	91	189820	12.5	12.3	
143 Isodrin	193	9.618	9.624	-0.006	89	288092	12.5	11.7	
S 68 Diallate	86				0		12.5	11.5	
144 Fluoranthene	202	9.764	9.764	0.000	98	2432903	12.5	12.3	
145 Benzidine	184	9.910	9.910	0.000	99	4882330	37.5	40.5	
* 146 Pyrene-d10 (IS)	212	9.963	9.963	0.000	96	854122	5.00	5.00	
147 Pyrene	202	9.981	9.980	0.000	96	2621383	12.5	12.0	
$ 148 p-Terphenyl-d14	244	10.138	10.138	0.000	98	3706583	25.0	24.5	
149 p-Dimethylamino azobenzene	225	10.278	10.278	0.000	92	346551	12.5	12.0	
150 Chlorobenzilate	139	10.331	10.331	0.000	81	870060	12.5	12.5	
152 3,3'-Dimethylbenzidine	212	10.629	10.628	0.001	98	1236050	12.5	12.7	
153 Butyl benzyl phthalate	149	10.646	10.646	0.000	96	1270114	12.5	12.7	
155 2-Acetylaminofluorene	181	10.897	10.897	0.000	94	805866	12.5	12.2	
S 94 Isosafrole	162				0		12.5	12.3	
157 3,3'-Dichlorobenzidine	252	11.218	11.218	0.000	77	798891	12.5	13.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
158 4,4'-Methylene bis(2-chloroanil	231	11.230	11.230	0.000	91	428397	12.5	13.6	
156 Benzo[a]anthracene	228	11.230	11.230	0.000	98	2106160	12.5	13.0	
159 Chrysene	228	11.271	11.271	0.000	97	1922877	12.5	12.0	
160 Bis(2-ethylhexyl) phthalate	149	11.312	11.312	0.000	95	1806011	12.5	13.3	
161 6-Methylchrysene	242	11.826	11.831	-0.005	97	1301423	12.5	11.8	
162 Di-n-octyl phthalate	149	12.153	12.152	0.001	98	3038527	12.5	12.6	
163 7,12-Dimethylbenz(a)anthracene	256	12.596	12.596	0.000	89	804531	12.5	12.9	
164 Benzo[b]fluoranthene	252	12.602	12.602	0.000	96	2062463	12.5	12.2	
165 Benzo[k]fluoranthene	252	12.637	12.637	0.000	97	2196534	12.5	12.8	
166 Benzo[a]pyrene	252	13.046	13.046	0.000	82	1788380	12.5	12.5	
* 167 Perylene-d12	264	13.128	13.128	0.000	95	674017	5.00	5.00	
168 3-Methylcholanthrene	268	13.560	13.560	0.000	93	780681	12.5	12.4	
169 Dibenz[a,h]acridine	279	14.342	14.342	0.000	93	1454919	12.5	12.2	
170 Dibenz[a,j]acridine	279	14.412	14.412	0.000	95	1614406	12.5	12.0	
171 Indeno[1,2,3-cd]pyrene	276	14.634	14.634	0.000	95	1719181	12.5	12.6	
172 Dibenz(a,h)anthracene	278	14.675	14.675	0.000	95	1919596	12.5	12.7	
173 Benzo[g,h,i]perylene	276	14.990	14.984	0.006	92	1922075	12.5	12.0	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSS_RV8270_6_00045 Amount Added: 1.00 Units: mL

Report Date: 18-Jul-2023 15:17:27 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1805.D

Injection Date: 18-Jul-2023 09:10:30 Instrument ID: HP23264 Operator ID: kel10217

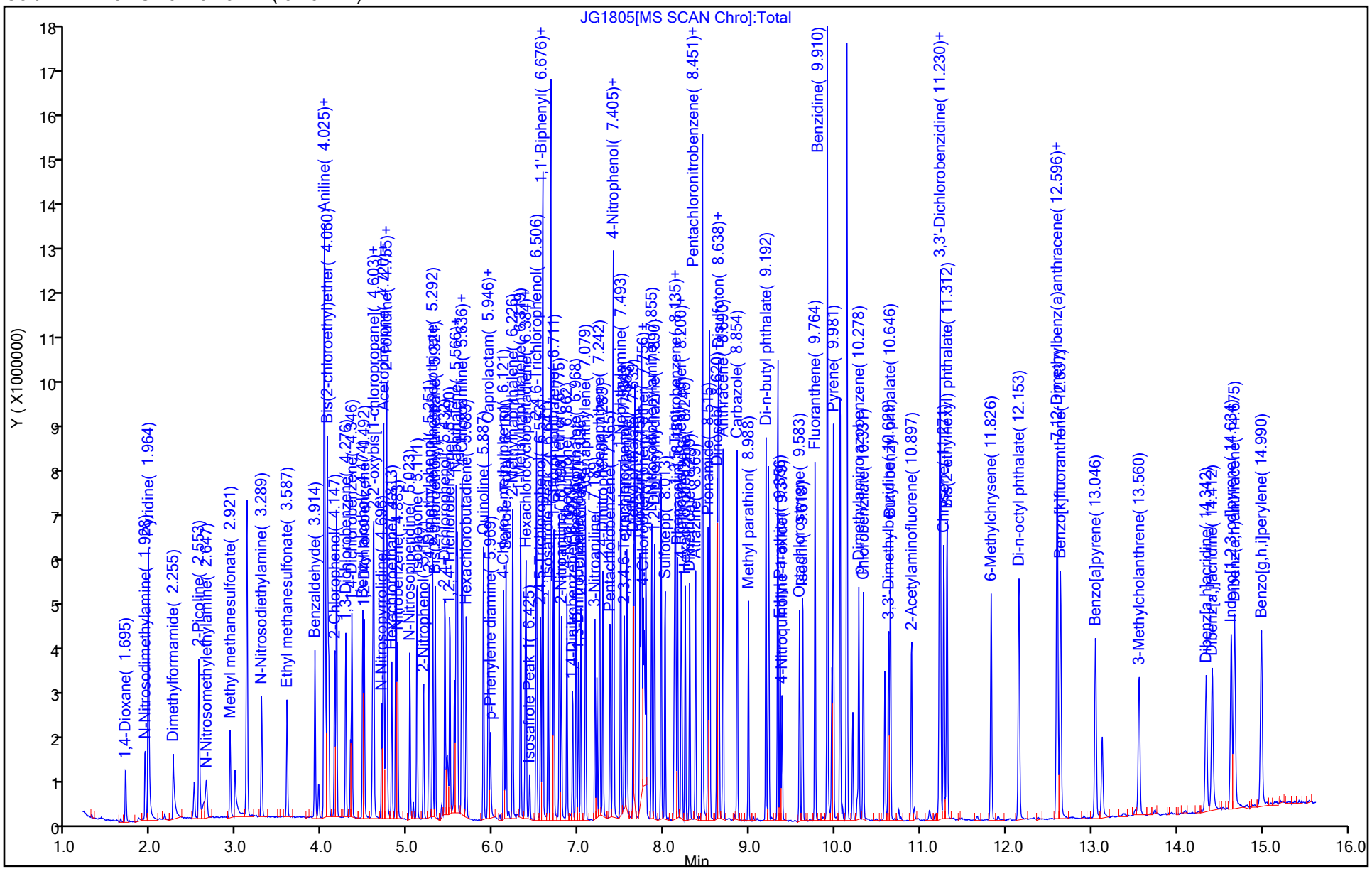
Lims ID: IC L6 Worklist Smp#: 6

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 6

Method: MSSemi_HP23264 Limit Group: MSSV - 8270D_E LVI

Column: DB-5MS 20m 0.25mm (0.25 mm)



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

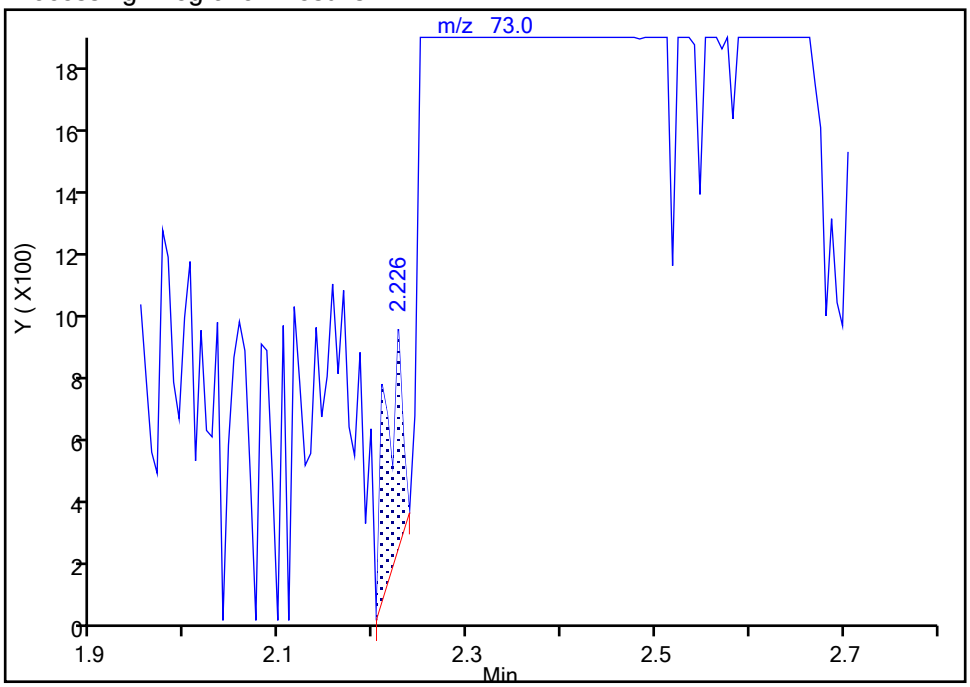
Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1805.D				
Injection Date:	18-Jul-2023 09:10:30	Instrument ID:	HP23264		
Lims ID:	IC L6				
Client ID:					
Operator ID:	kel10217	ALS Bottle#:	6	Worklist Smp#:	6
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		
Column:	DB-5MS 20m 0.25mm (0.25 mm)	Detector	MS SCAN		

4 Dimethylformamide, CAS: 68-12-2

Signal: 1

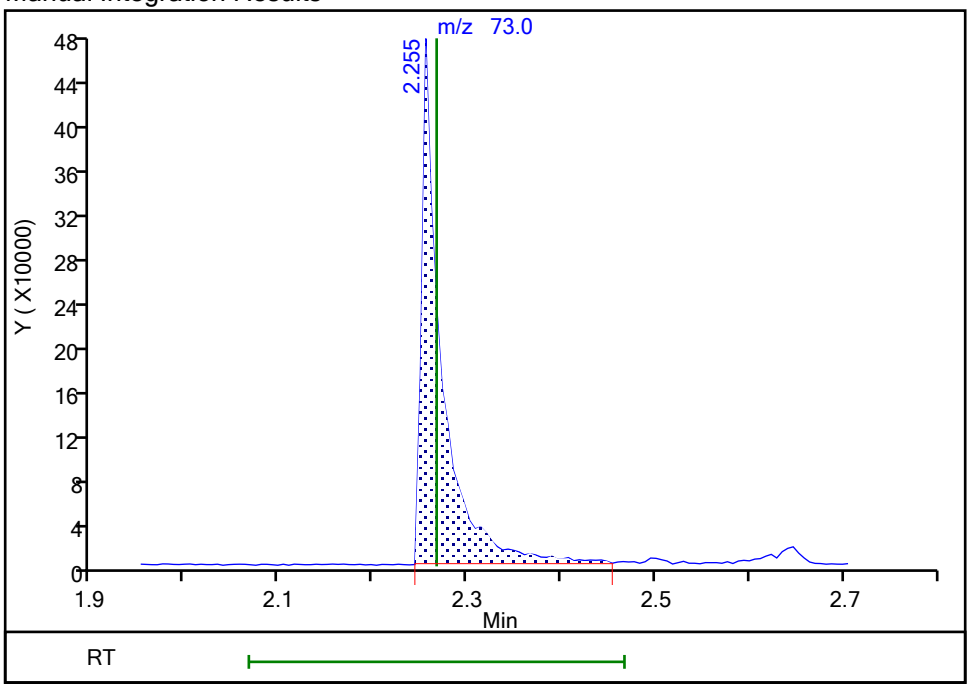
Processing Integration Results

RT: 2.23
Area: 865
Amount: 0.019733
Amount Units: ug/ml



Manual Integration Results

RT: 2.26
Area: 709839
Amount: 12.560085
Amount Units: ug/ml



Reviewer: SJ89, 18-Jul-2023 11:08:49 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

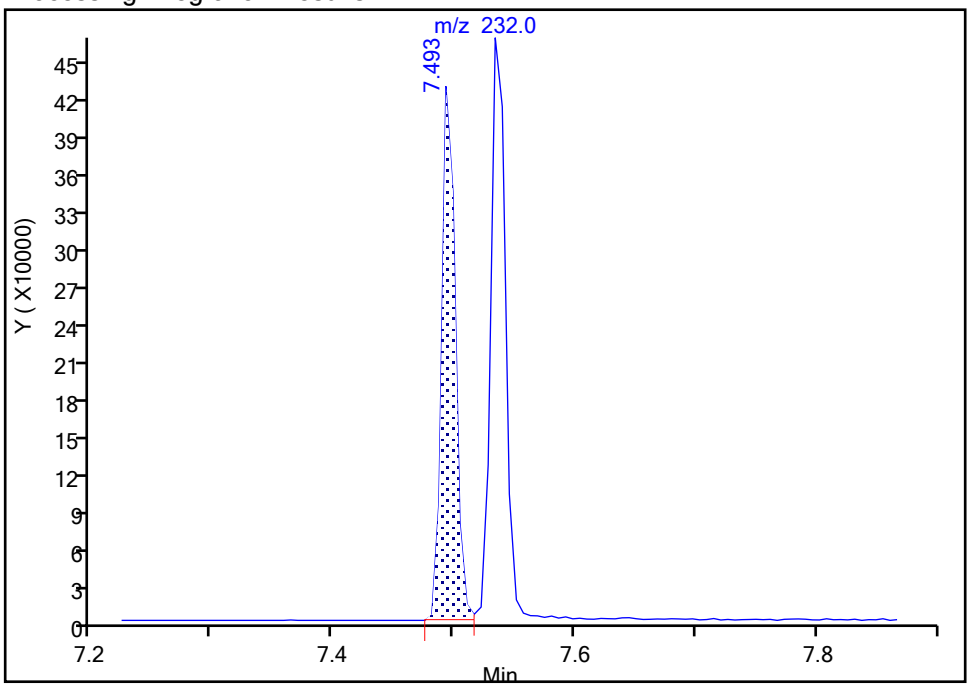
Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1805.D				
Injection Date:	18-Jul-2023 09:10:30	Instrument ID:	HP23264		
Lims ID:	IC L6				
Client ID:					
Operator ID:	kel10217	ALS Bottle#:	6	Worklist Smp#:	6
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		
Column:	DB-5MS 20m 0.25mm (0.25 mm)	Detector	MS SCAN		

105 2,3,4,6-Tetrachlorophenol, CAS: 58-90-2

Signal: 1

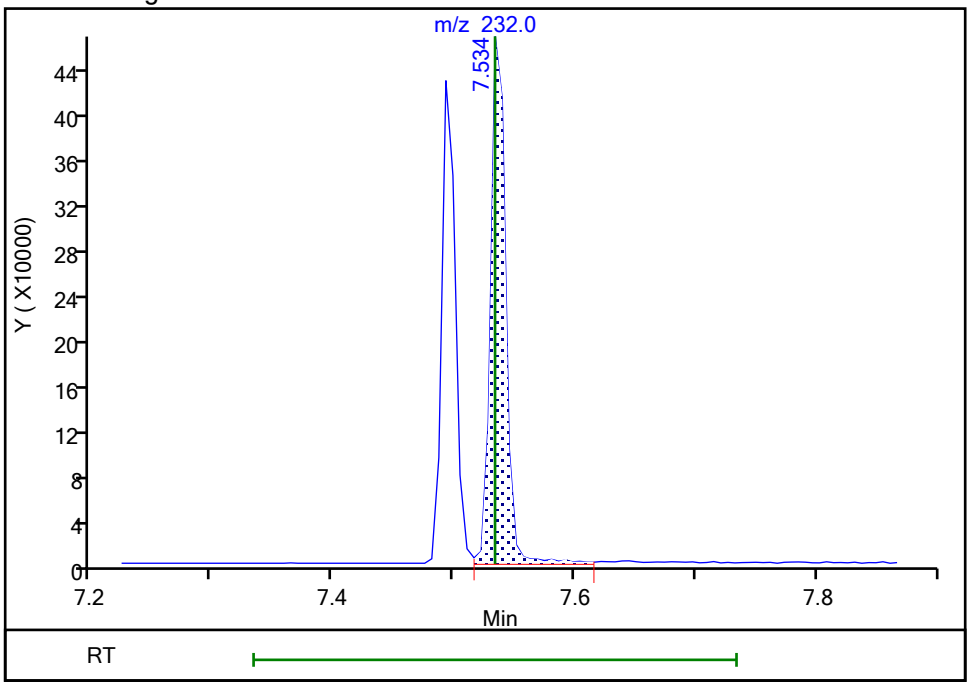
Processing Integration Results

RT: 7.49
Area: 336698
Amount: 11.202364
Amount Units: ug/ml



Manual Integration Results

RT: 7.53
Area: 406481
Amount: 11.703828
Amount Units: ug/ml



Reviewer: SJ89, 18-Jul-2023 11:09:17 -04:00:00 (UTC)

Audit Action: Assigned Compound ID Audit Reason: Baseline

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1806.D
Lims ID: IC L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 18-Jul-2023 09:31:30 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: IC L4
Misc. Info.: 410-0089185-007
Operator ID: kel10217 Instrument ID: HP23264
Sublist: chrom-MSSemi_HP23264*sub27

Method: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\MSSemi_HP23264.m
Limit Group: MSSV - 8270D_E LVI
Last Update: 18-Jul-2023 15:18:04 Calib Date: 18-Jul-2023 10:14:30
Integrator: Falcon ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1808.D

Column 1 : DB-5MS 20m 0.25mm (0.25 mm) Det: MS SCAN
Process Host: CTX1640

First Level Reviewer: SJ89 Date: 18-Jul-2023 11:11:33

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 1,4-Dioxane	88	1.701	1.701	0.000	97	86564	3.75	3.68	
2 N-Nitrosodimethylamine	74	1.929	1.928	0.001	93	141688	3.75	3.70	
3 Pyridine	79	1.969	1.969	0.000	83	468775	7.50	7.10	
4 Dimethylformamide	73	2.279	2.267	0.012	94	162039	3.75	3.43	
5 2-Picoline	93	2.559	2.559	0.000	89	235256	3.75	3.67	
6 N-Nitrosomethylethylamine	88	2.641	2.647	-0.005	94	132237	3.75	4.20	
7 Methyl methanesulfonate	80	2.921	2.921	0.000	85	142001	3.75	3.75	
$ 9 2-Fluorophenol	112	3.114	3.119	-0.005	96	442229	7.50	7.48	
11 N-Nitrosodiethylamine	102	3.289	3.289	0.000	90	97390	3.75	3.81	
12 Ethyl methanesulfonate	109	3.587	3.587	0.000	96	112977	3.75	3.57	
13 Benzaldehyde	77	3.914	3.914	0.000	92	206848	3.75	4.02	
17 Aniline	93	4.019	4.019	0.000	70	334598	3.75	3.74	
$ 15 Phenol-d5	99	4.025	4.025	0.000	95	651095	7.50	7.68	
16 Phenol	94	4.036	4.036	0.000	97	334305	3.75	3.75	
18 Bis(2-chloroethyl)ether	93	4.077	4.077	0.000	86	226362	3.75	3.65	
19 2-Chlorophenol	128	4.142	4.147	-0.005	92	203052	3.75	3.70	
21 1,3-Dichlorobenzene	146	4.276	4.276	0.000	96	207905	3.75	3.82	
* 22 1,4-Dichlorobenzene-d4	152	4.328	4.328	0.000	96	192478	5.00	5.00	
23 1,4-Dichlorobenzene	146	4.346	4.346	0.000	92	213503	3.75	3.66	
26 Benzyl alcohol	108	4.474	4.474	0.000	90	135473	3.75	3.73	
27 1,2-Dichlorobenzene	146	4.492	4.492	0.000	96	196605	3.75	3.64	
30 2,2'-oxybis[1-chloropropane]	45	4.591	4.591	0.000	92	483495	3.75	3.54	
29 2-Methylphenol	108	4.597	4.603	-0.006	96	190048	3.75	3.61	
31 N-Nitrosopyrrolidine	100	4.690	4.696	-0.006	83	112657	3.75	3.57	
33 N-Nitrosodi-n-propylamine	70	4.714	4.714	0.000	93	183291	3.75	3.51	
32 Acetophenone	105	4.714	4.714	0.000	92	315799	3.75	3.74	
35 N-Nitrosomorpholine	56	4.737	4.737	0.000	93	175146	3.75	3.61	
36 2-Toluidine	106	4.755	4.754	0.001	82	339553	3.75	3.71	
34 4-Methylphenol	108	4.755	4.754	0.001	83	227183	3.75	3.73	
37 Hexachloroethane	117	4.813	4.813	0.000	96	90652	3.75	3.69	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 39 Nitrobenzene-d5	82	4.860	4.860	0.000	93	590137	7.50	7.78	
40 Nitrobenzene	77	4.877	4.877	0.000	94	257341	3.75	3.71	
41 N-Nitrosopiperidine	114	5.023	5.023	0.000	80	105025	3.75	3.76	
42 Isophorone	82	5.105	5.105	0.000	98	464646	3.75	3.75	
43 2-Nitrophenol	139	5.187	5.186	0.001	92	99254	3.75	3.88	
44 2,4-Dimethylphenol	107	5.251	5.251	0.000	97	209542	3.75	4.01	
46 o,o',o''-Triethylphosphorothioat	198	5.292	5.292	0.000	94	81733	3.75	4.06	
47 Bis(2-chloroethoxy)methane	93	5.321	5.321	0.000	90	313973	3.75	4.20	
49 2,4-Dichlorophenol	162	5.432	5.438	-0.006	96	154808	3.75	3.96	
50 1,2,4-Trichlorobenzene	180	5.490	5.490	0.000	94	171847	3.75	3.91	
* 52 Naphthalene-d8	136	5.549	5.549	0.001	99	708713	5.00	5.00	
53 Naphthalene	128	5.566	5.566	0.000	96	584301	3.75	3.83	
55 Alpha-Terpineol	59	5.578	5.578	0.000	89	264042	3.75	3.94	
56 4-Chloroaniline	127	5.631	5.630	0.001	94	256874	3.75	3.99	
57 2,6-Dichlorophenol	162	5.636	5.636	0.000	90	146915	3.75	3.80	
58 Hexachloropropene	213	5.648	5.648	0.000	95	109981	3.75	3.98	
59 Hexachlorobutadiene	225	5.683	5.683	0.000	97	92648	3.75	3.89	
61 Quinoline	129	5.887	5.887	0.000	95	406251	3.75	3.88	
62 Caprolactam	113	5.934	5.940	-0.006	67	53932	3.75	3.89	
63 N-Nitrosodi-n-butylamine	84	5.946	5.946	0.000	90	235719	3.75	4.11	
64 p-Phenylene diamine	108	5.969	5.969	0.000	94	150678	3.75	4.43	
65 4-Chloro-3-methylphenol	107	6.121	6.121	0.000	96	180907	3.75	3.75	
66 Safrole, Total	162	6.150	6.150	0.000	82	126195	3.75	3.76	
67 2-Methylnaphthalene	142	6.226	6.226	0.000	91	372806	3.75	4.02	
69 1-Methylnaphthalene	142	6.320	6.319	0.001	93	352755	3.75	3.97	
71 Hexachlorocyclopentadiene	237	6.372	6.372	0.000	93	100443	3.75	4.21	
70 1,2,4,5-Tetrachlorobenzene	216	6.384	6.383	0.001	97	175078	3.75	4.06	
72 Isosafrole Peak 1	162	6.430	6.430	0.000	83	25159	0.6000	0.6033	
79 2,4,6-Trichlorophenol	196	6.506	6.506	0.000	91	106445	3.75	3.88	
S 24 Dinitrotoluene	165				0			7.81	
80 2,4,5-Trichlorophenol	196	6.553	6.553	0.000	92	116734	3.75	3.86	
$ 81 2-Fluorobiphenyl (Surr)	172	6.576	6.582	-0.006	99	884190	7.50	7.64	
82 Isosafrole Peak 2	162	6.641	6.640	0.001	88	143019	3.15	3.40	
83 1,1'-Biphenyl	154	6.670	6.675	-0.005	97	449360	3.75	3.96	
84 2-Chloronaphthalene	162	6.687	6.687	0.000	97	334623	3.75	3.89	
85 1-Chloronaphthalene	162	6.711	6.710	0.001	97	327188	3.75	3.97	
86 Phenyl ether	170	6.775	6.775	0.000	90	226401	3.75	3.75	
87 2-Nitroaniline	138	6.798	6.798	0.000	76	108573	3.75	3.59	
88 1,4-Naphthoquinone	158	6.863	6.862	0.001	81	129530	3.75	3.81	
89 1,4-Dinitrobenzene	168	6.927	6.932	-0.005	89	49136	3.75	3.65	
90 Dimethyl phthalate	163	6.968	6.967	0.001	97	410834	3.75	4.04	
91 1,3-Dinitrobenzene	168	6.997	6.997	0.000	81	60490	3.75	3.86	
92 2,6-Dinitrotoluene	165	7.026	7.026	0.000	85	81818	3.75	3.83	
93 Acenaphthylene	152	7.079	7.078	0.001	99	581599	3.75	3.92	
95 3-Nitroaniline	138	7.190	7.189	0.001	88	101846	3.75	3.87	
* 96 Acenaphthene-d10	164	7.213	7.213	0.000	95	364557	5.00	5.00	
97 Acenaphthene	153	7.242	7.242	0.000	97	368210	3.75	3.83	
98 2,4-Dinitrophenol	184	7.283	7.283	0.000	78	142743	11.3	10.5	
99 Pentachlorobenzene	250	7.365	7.370	-0.005	97	140471	3.75	3.76	
100 4-Nitrophenol	109	7.400	7.399	0.001	91	124929	7.50	7.82	
102 2,4-Dinitrotoluene	165	7.406	7.405	0.001	79	115644	3.75	3.98	
101 Dibenzofuran	168	7.411	7.411	0.000	97	502401	3.75	3.88	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
104 1-Naphthylamine	143	7.487	7.487	0.000	98	340473	3.75	3.91	
105 2,3,4,6-Tetrachlorophenol	232	7.534	7.534	0.000	76	97888	3.75	3.70	a
106 2-Naphthylamine	143	7.563	7.563	0.000	96	353025	3.75	3.91	
107 Diethyl phthalate	149	7.639	7.639	0.000	96	415225	3.75	3.79	
109 Thionazin	107	7.715	7.715	0.000	76	75246	3.75	3.88	
108 Fluorene	166	7.733	7.732	0.001	93	417431	3.75	4.09	
110 4-Chlorophenyl phenyl ether	204	7.738	7.738	0.000	94	182127	3.75	3.99	
111 N-Nitro-o-toluidine	152	7.756	7.756	0.000	92	107343	3.75	3.74	
112 4-Nitroaniline	138	7.768	7.767	0.001	83	102254	3.75	3.91	
113 4,6-Dinitro-2-methylphenol	198	7.785	7.785	0.000	68	116549	7.50	7.36	
114 N-Nitrosodiphenylamine	169	7.855	7.855	0.000	67	279085	3.19	3.37	
115 1,2-Diphenylhydrazine	77	7.884	7.884	0.000	41	533280	3.75	3.84	
$ 116 2,4,6-Tribromophenol	330	7.966	7.966	0.000	88	132286	7.50	7.66	
117 Sulfotepp	97	8.007	8.013	-0.006	78	85540	3.75	3.75	
118 1,3,5-Trinitrobenzene	213	8.112	8.118	-0.006	82	28314	3.75	3.38	
120 cis-Diallate	86	8.124	8.124	0.000	94	142884	2.78	2.58	
119 Phorate	75	8.135	8.135	0.000	93	308022	3.75	3.79	
121 Phenacetin	108	8.153	8.153	0.000	90	220448	3.75	3.97	
122 4-Bromophenyl phenyl ether	248	8.200	8.199	0.001	76	103669	3.75	3.87	
123 trans-Diallate	86	8.211	8.211	0.000	90	54315	0.9750	1.03	
124 Hexachlorobenzene	284	8.246	8.246	0.000	94	125181	3.75	3.94	
125 Dimethoate	87	8.293	8.299	-0.006	95	198108	3.75	3.85	
126 Atrazine	200	8.363	8.369	-0.006	80	99596	3.75	4.11	
128 Pentachloronitrobenzene	237	8.445	8.445	0.000	61	52899	3.75	3.89	
127 Pentachlorophenol	266	8.445	8.451	-0.006	85	126284	7.50	8.37	
129 4-Aminobiphenyl	169	8.451	8.451	0.000	91	442158	3.75	4.06	
130 Pronamide	173	8.515	8.515	0.000	89	181521	3.75	3.96	
* 131 Phenanthrene-d10	188	8.620	8.620	0.000	97	679061	5.00	5.00	
133 Dinoseb	211	8.620	8.620	0.000	91	72131	3.75	3.33	
134 Disulfoton	88	8.632	8.632	0.000	96	323390	3.75	3.66	
132 Phenanthrene	178	8.638	8.643	-0.005	97	553001	3.75	3.86	
135 Anthracene	178	8.690	8.690	0.000	98	540842	3.75	3.79	
136 Carbazole	167	8.854	8.853	0.001	96	545632	3.75	3.88	
137 Methyl parathion	109	8.988	8.988	0.000	88	137081	3.75	3.64	
138 Di-n-butyl phthalate	149	9.192	9.192	0.000	99	706745	3.75	3.90	
139 Ethyl Parathion	109	9.356	9.356	0.000	79	86940	3.75	3.90	
140 4-Nitroquinoline-1-oxide	190	9.379	9.379	0.000	79	30169	3.75	3.10	
142 Octachlorostyrene	308	9.584	9.583	0.001	89	46981	3.75	3.97	
143 Isodrin	193	9.619	9.624	-0.005	88	69843	3.75	3.69	
S 68 Diallate	86				0		3.75	3.61	
144 Fluoranthene	202	9.765	9.764	0.001	99	612311	3.75	4.04	
145 Benzidine	184	9.911	9.910	0.001	100	1123403	11.3	11.9	
* 146 Pyrene-d10 (IS)	212	9.963	9.963	0.000	97	669358	5.00	5.00	
147 Pyrene	202	9.981	9.980	0.001	96	639077	3.75	3.72	
$ 148 p-Terphenyl-d14	244	10.138	10.138	0.000	98	911973	7.50	7.68	
149 p-Dimethylamino azobenzene	225	10.278	10.278	0.000	91	80571	3.75	3.57	
150 Chlorobenzilate	139	10.331	10.331	0.000	84	192148	3.75	3.53	
152 3,3'-Dimethylbenzidine	212	10.623	10.628	-0.005	98	258443	3.75	3.39	
153 Butyl benzyl phthalate	149	10.646	10.646	0.000	95	285528	3.75	3.65	
155 2-Acetylaminofluorene	181	10.892	10.897	-0.005	93	155649	3.75	3.00	
S 94 Isosafrole	162				0		3.75	4.00	
157 3,3'-Dichlorobenzidine	252	11.218	11.218	0.000	80	175091	3.75	3.65	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
158 4,4'-Methylene bis(2-chloroanil	231	11.230	11.230	0.000	66	86266	3.75	3.50	
156 Benzo[a]anthracene	228	11.230	11.230	0.000	98	469547	3.75	3.70	
159 Chrysene	228	11.271	11.271	0.000	96	465262	3.75	3.71	
160 Bis(2-ethylhexyl) phthalate	149	11.312	11.312	0.000	94	387470	3.75	3.65	
161 6-Methylchrysene	242	11.826	11.831	-0.005	98	304994	3.75	3.54	
162 Di-n-octyl phthalate	149	12.153	12.152	0.001	98	647239	3.75	3.81	
163 7,12-Dimethylbenz(a)anthracene	256	12.597	12.596	0.000	88	194214	3.75	4.41	
164 Benzo[b]fluoranthene	252	12.597	12.602	-0.006	96	494017	3.75	4.16	
165 Benzo[k]fluoranthene	252	12.632	12.637	-0.005	97	491053	3.75	4.06	
166 Benzo[a]pyrene	252	13.046	13.046	0.000	83	391391	3.75	3.87	
* 167 Perylene-d12	264	13.122	13.128	-0.006	94	475078	5.00	5.00	
168 3-Methylcholanthrene	268	13.554	13.560	-0.006	95	179336	3.75	4.03	
169 Dibenz[a,h]acridine	279	14.342	14.342	0.000	93	323939	3.75	3.87	
170 Dibenz[a,j]acridine	279	14.412	14.412	0.000	95	404787	3.75	4.27	
171 Indeno[1,2,3-cd]pyrene	276	14.628	14.634	-0.006	95	406284	3.75	4.22	
172 Dibenz(a,h)anthracene	278	14.675	14.675	0.000	94	445434	3.75	4.18	
173 Benzo[g,h,i]perylene	276	14.979	14.984	-0.005	91	458330	3.75	4.05	

QC Flag Legend

Processing Flags

Review Flags

a - User Assigned ID

Reagents:

MSS_RV8270_4_00027 Amount Added: 1.00 Units: mL

Report Date: 18-Jul-2023 15:18:06 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1806.D

Injection Date: 18-Jul-2023 09:31:30 Instrument ID: HP23264 Operator ID: kel10217

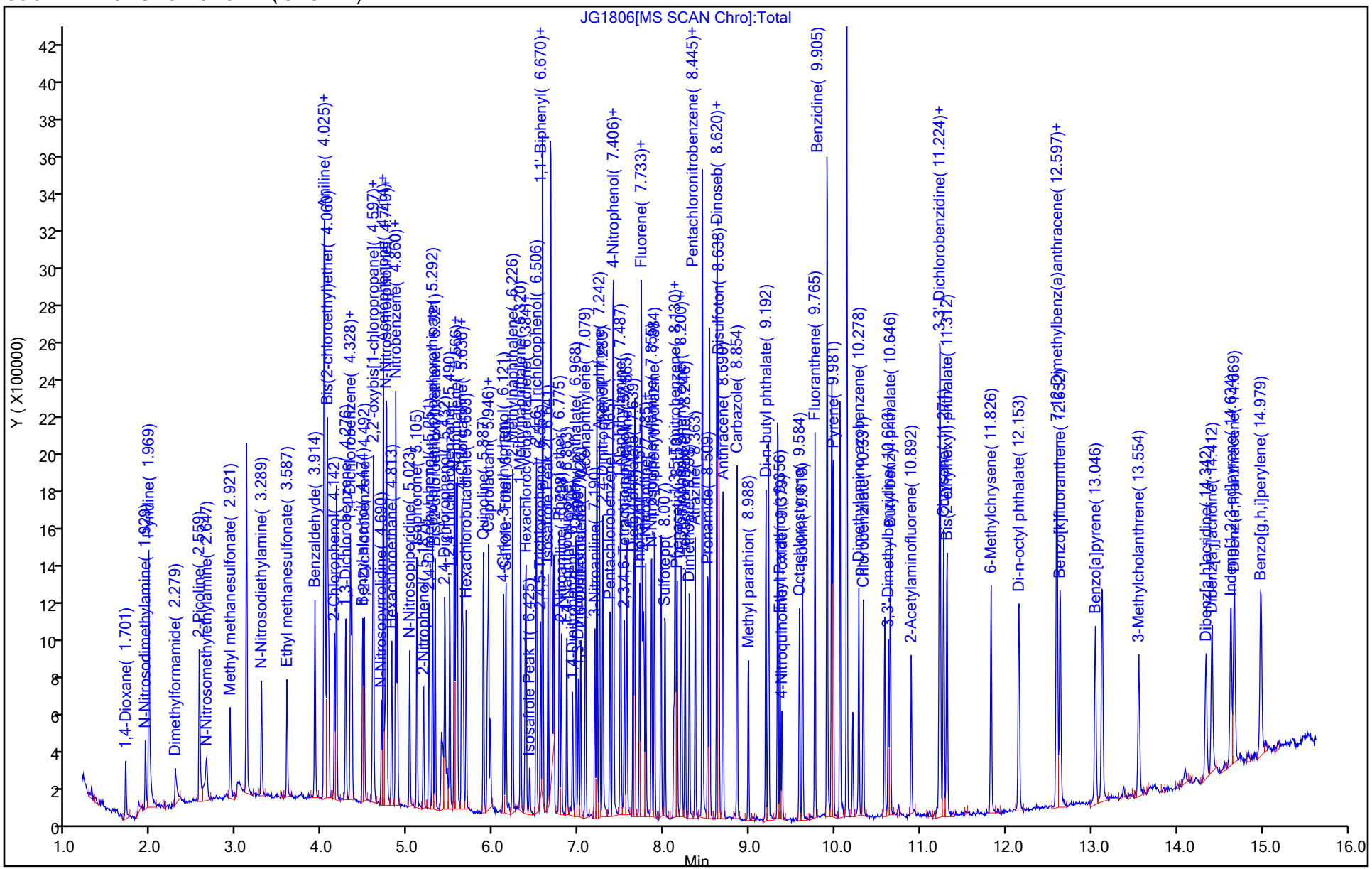
Lims ID: IC L4 Worklist Smp#: 7

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 7

Method: MSSemi_HP23264 Limit Group: MSSV - 8270D_E LVI

Column: DB-5MS 20m 0.25mm (0.25 mm)



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

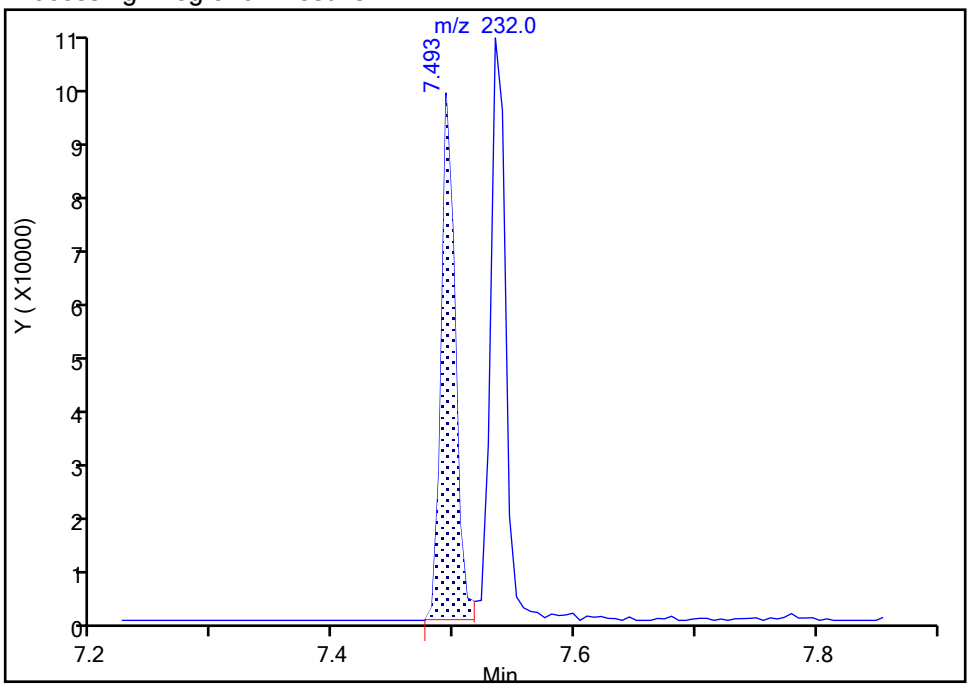
Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1806.D				
Injection Date:	18-Jul-2023 09:31:30	Instrument ID:	HP23264		
Lims ID:	IC L4				
Client ID:					
Operator ID:	kel10217	ALS Bottle#:	7	Worklist Smp#:	7
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		
Column:	DB-5MS 20m 0.25mm (0.25 mm)	Detector	MS SCAN		

105 2,3,4,6-Tetrachlorophenol, CAS: 58-90-2

Signal: 1

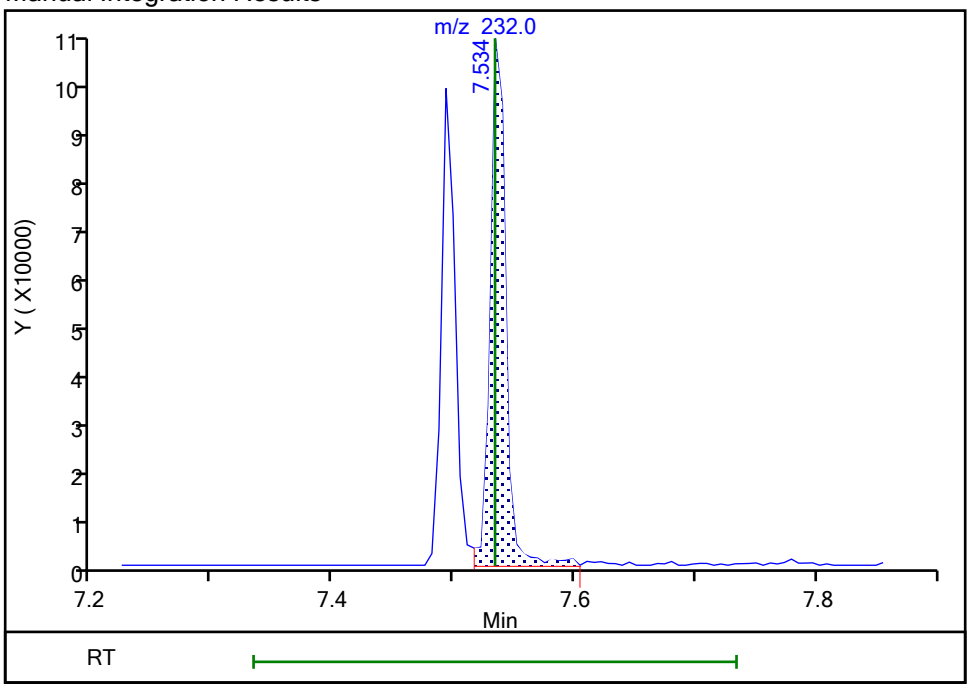
Processing Integration Results

RT: 7.49
Area: 79826
Amount: 3.403574
Amount Units: ug/ml



Manual Integration Results

RT: 7.53
Area: 97888
Amount: 3.695786
Amount Units: ug/ml



Reviewer: SJ89, 18-Jul-2023 11:11:06 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Baseline

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1807.D
Lims ID: IC L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 18-Jul-2023 09:52:30 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: IC L3
Misc. Info.: 410-0089185-008
Operator ID: kel10217 Instrument ID: HP23264
Sublist: chrom-MSSemi_HP23264*sub27

Method: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\MSSemi_HP23264.m
Limit Group: MSSV - 8270D_E LVI
Last Update: 18-Jul-2023 15:18:44 Calib Date: 18-Jul-2023 10:14:30
Integrator: Falcon ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1808.D

Column 1 : DB-5MS 20m 0.25mm (0.25 mm) Det: MS SCAN
Process Host: CTX1640

First Level Reviewer: SJ89 Date: 18-Jul-2023 11:13:25

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 1,4-Dioxane	88	1.701	1.701	0.000	95	39236	1.25	1.37	
2 N-Nitrosodimethylamine	74	1.934	1.928	0.006	91	60295	1.25	1.29	
3 Pyridine	79	1.975	1.969	0.006	86	185508	2.50	2.30	
4 Dimethylformamide	73	2.314	2.267	0.047	97	71283	1.25	1.24	
5 2-Picoline	93	2.565	2.559	0.006	90	92270	1.25	1.18	
6 N-Nitrosomethylethylamine	88	2.647	2.647	0.001	94	56162	1.25	1.46	
7 Methyl methanesulfonate	80	2.921	2.921	0.000	87	57993	1.25	1.25	
$ 9 2-Fluorophenol	112	3.114	3.119	-0.005	95	175720	2.50	2.44	
11 N-Nitrosodiethylamine	102	3.289	3.289	0.000	88	42666	1.25	1.37	
12 Ethyl methanesulfonate	109	3.587	3.587	0.000	96	44559	1.25	1.15	
13 Benzaldehyde	77	3.914	3.914	0.000	92	88611	1.25	1.41	
17 Aniline	93	4.019	4.019	0.000	73	132307	1.25	1.21	
$ 15 Phenol-d5	99	4.025	4.025	0.000	94	254522	2.50	2.46	
16 Phenol	94	4.036	4.036	0.000	92	131603	1.25	1.21	
18 Bis(2-chloroethyl)ether	93	4.071	4.077	-0.006	85	99429	1.25	1.31	
19 2-Chlorophenol	128	4.147	4.147	0.000	93	80486	1.25	1.20	
21 1,3-Dichlorobenzene	146	4.276	4.276	0.000	94	81053	1.25	1.22	
* 22 1,4-Dichlorobenzene-d4	152	4.328	4.328	0.000	96	234760	5.00	5.00	
23 1,4-Dichlorobenzene	146	4.346	4.346	0.000	95	88711	1.25	1.25	
26 Benzyl alcohol	108	4.474	4.474	0.000	90	49655	1.25	1.12	
27 1,2-Dichlorobenzene	146	4.492	4.492	0.000	95	81588	1.25	1.24	
30 2,2'-oxybis[1-chloropropane]	45	4.591	4.591	0.000	92	196326	1.25	1.18	
29 2-Methylphenol	108	4.597	4.603	-0.006	96	73940	1.25	1.15	
31 N-Nitrosopyrrolidine	100	4.690	4.696	-0.006	83	48702	1.25	1.27	
33 N-Nitrosodi-n-propylamine	70	4.714	4.714	0.000	91	76003	1.25	1.19	
32 Acetophenone	105	4.714	4.714	0.000	82	129811	1.25	1.26	
35 N-Nitrosomorpholine	56	4.737	4.737	0.000	92	74919	1.25	1.27	
36 2-Toluidine	106	4.749	4.754	-0.005	83	135934	1.25	1.22	
34 4-Methylphenol	108	4.755	4.754	0.001	83	88210	1.25	1.19	
37 Hexachloroethane	117	4.813	4.813	0.000	95	37263	1.25	1.24	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 39 Nitrobenzene-d5	82	4.860	4.860	0.000	93	243107	2.50	2.41	
40 Nitrobenzene	77	4.877	4.877	0.000	98	104580	1.25	1.14	
41 N-Nitrosopiperidine	114	5.023	5.023	0.000	79	39762	1.25	1.07	
42 Isophorone	82	5.105	5.105	0.000	98	191355	1.25	1.16	
43 2-Nitrophenol	139	5.187	5.186	0.001	88	36201	1.25	1.06	
44 2,4-Dimethylphenol	107	5.245	5.251	-0.006	97	84376	1.25	1.21	
46 o,o',o''-Triethylphosphorothioat	198	5.292	5.292	0.000	95	31411	1.25	1.17	
47 Bis(2-chloroethoxy)methane	93	5.321	5.321	0.000	91	116327	1.25	1.17	
49 2,4-Dichlorophenol	162	5.432	5.438	-0.006	96	60658	1.25	1.17	
50 1,2,4-Trichlorobenzene	180	5.490	5.490	0.000	93	68507	1.25	1.17	
* 52 Naphthalene-d8	136	5.549	5.549	0.001	98	942199	5.00	5.00	
53 Naphthalene	128	5.566	5.566	0.000	96	244228	1.25	1.20	
55 Alpha-Terpineol	59	5.578	5.578	0.000	89	98054	1.25	1.10	
56 4-Chloroaniline	127	5.630	5.630	0.000	93	101979	1.25	1.19	
57 2,6-Dichlorophenol	162	5.636	5.636	0.000	89	62321	1.25	1.21	
58 Hexachloropropene	213	5.648	5.648	0.000	93	42951	1.25	1.17	
59 Hexachlorobutadiene	225	5.683	5.683	0.000	96	38282	1.25	1.21	
61 Quinoline	129	5.887	5.887	0.000	94	161749	1.25	1.16	
62 Caprolactam	113	5.934	5.940	-0.006	71	20721	1.25	1.13	
63 N-Nitrosodi-n-butylamine	84	5.946	5.946	0.000	88	101074	1.25	1.33	
64 p-Phenylene diamine	108	5.969	5.969	0.000	97	35686	1.25	0.7885	
65 4-Chloro-3-methylphenol	107	6.121	6.121	0.000	96	73506	1.25	1.15	
66 Safrole, Total	162	6.150	6.150	0.000	87	54396	1.25	1.22	
67 2-Methylnaphthalene	142	6.226	6.226	0.000	92	144228	1.25	1.17	
69 1-Methylnaphthalene	142	6.319	6.319	0.000	90	131816	1.25	1.12	
71 Hexachlorocyclopentadiene	237	6.378	6.372	0.006	96	32281	1.25	1.06	
70 1,2,4,5-Tetrachlorobenzene	216	6.384	6.383	0.001	97	67430	1.25	1.22	
72 Isosafrole Peak 1	162	6.425	6.430	-0.005	85	10001	0.2000	0.1878	
79 2,4,6-Trichlorophenol	196	6.506	6.506	0.000	94	40990	1.25	1.17	
S 24 Dinitrotoluene	165				0			2.41	
80 2,4,5-Trichlorophenol	196	6.553	6.553	0.000	89	46690	1.25	1.21	
$ 81 2-Fluorobiphenyl (Surr)	172	6.576	6.582	-0.006	99	367207	2.50	2.49	
82 Isosafrole Peak 2	162	6.641	6.640	0.001	90	55516	1.05	1.03	
83 1,1'-Biphenyl	154	6.670	6.675	-0.005	97	181022	1.25	1.25	
84 2-Chloronaphthalene	162	6.687	6.687	0.000	95	130910	1.25	1.19	
85 1-Chloronaphthalene	162	6.711	6.710	0.001	95	126372	1.25	1.20	
86 Phenyl ether	170	6.775	6.775	0.000	91	96695	1.25	1.26	
87 2-Nitroaniline	138	6.798	6.798	0.000	77	43333	1.25	1.12	
88 1,4-Naphthoquinone	158	6.862	6.862	0.000	79	51101	1.25	1.18	
89 1,4-Dinitrobenzene	168	6.933	6.932	0.001	87	18406	1.25	1.07	
90 Dimethyl phthalate	163	6.968	6.967	0.001	97	161939	1.25	1.25	
91 1,3-Dinitrobenzene	168	6.997	6.997	0.000	80	23254	1.25	1.16	
92 2,6-Dinitrotoluene	165	7.026	7.026	0.000	84	33656	1.25	1.23	
93 Acenaphthylene	152	7.079	7.078	0.001	99	233488	1.25	1.23	
95 3-Nitroaniline	138	7.189	7.189	0.000	87	41834	1.25	1.25	
* 96 Acenaphthene-d10	164	7.213	7.213	0.000	94	465505	5.00	5.00	
97 Acenaphthene	153	7.242	7.242	0.000	98	153744	1.25	1.25	
98 2,4-Dinitrophenol	184	7.283	7.283	0.000	73	66552	5.00	3.85	
99 Pentachlorobenzene	250	7.365	7.370	-0.005	97	57614	1.25	1.21	
100 4-Nitrophenol	109	7.400	7.399	0.001	90	70076	3.75	3.44	
102 2,4-Dinitrotoluene	165	7.406	7.405	0.001	70	43599	1.25	1.18	
101 Dibenzofuran	168	7.411	7.411	0.000	97	207959	1.25	1.26	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
104 1-Naphthylamine	143	7.487	7.487	0.000	97	131249	1.25	1.18	
105 2,3,4,6-Tetrachlorophenol	232	7.534	7.534	0.000	76	40165	1.25	1.19	a
106 2-Naphthylamine	143	7.563	7.563	0.000	96	146743	1.25	1.27	
107 Diethyl phthalate	149	7.639	7.639	0.000	96	176854	1.25	1.26	
109 Thionazin	107	7.715	7.715	0.000	74	31399	1.25	1.27	
108 Fluorene	166	7.732	7.732	0.000	92	163283	1.25	1.25	
110 4-Chlorophenyl phenyl ether	204	7.738	7.738	0.000	94	71444	1.25	1.23	
111 N-Nitro-o-toluidine	152	7.750	7.756	-0.006	90	48358	1.25	1.32	
112 4-Nitroaniline	138	7.768	7.767	0.001	82	44769	1.25	1.34	
113 4,6-Dinitro-2-methylphenol	198	7.785	7.785	0.000	67	67128	3.75	3.40	
114 N-Nitrosodiphenylamine	169	7.855	7.855	0.000	67	113870	1.06	1.11	
115 1,2-Diphenylhydrazine	77	7.884	7.884	0.000	41	222023	1.25	1.28	
$ 116 2,4,6-Tribromophenol	330	7.966	7.966	0.000	88	53273	2.50	2.42	
117 Sulfotepp	97	8.007	8.013	-0.006	76	36978	1.25	1.30	
118 1,3,5-Trinitrobenzene	213	8.112	8.118	-0.006	82	10445	1.25	1.00	
120 cis-Diallate	86	8.124	8.124	0.000	95	59759	0.9250	0.8663	
119 Phorate	75	8.135	8.135	0.000	92	122015	1.25	1.20	
121 Phenacetin	108	8.153	8.153	0.000	91	85907	1.25	1.24	
122 4-Bromophenyl phenyl ether	248	8.200	8.199	0.001	75	43025	1.25	1.29	
123 trans-Diallate	86	8.211	8.211	0.000	89	23175	0.3250	0.3514	
124 Hexachlorobenzene	284	8.246	8.246	0.000	93	49679	1.25	1.25	
125 Dimethoate	87	8.293	8.299	-0.006	96	83143	1.25	1.30	
126 Atrazine	200	8.363	8.369	-0.006	79	39280	1.25	1.30	
128 Pentachloronitrobenzene	237	8.445	8.445	0.000	64	21928	1.25	1.29	
127 Pentachlorophenol	266	8.445	8.451	-0.006	81	44969	2.50	2.39	
129 4-Aminobiphenyl	169	8.451	8.451	0.000	91	173710	1.25	1.28	
130 Pronamide	173	8.509	8.515	-0.006	90	67464	1.25	1.18	
* 131 Phenanthrene-d10	188	8.614	8.620	-0.006	96	845790	5.00	5.00	
133 Dinoseb	211	8.620	8.620	0.000	61	27234	1.25	1.01	
134 Disulfoton	88	8.632	8.632	0.000	97	141448	1.25	1.29	
132 Phenanthrene	178	8.638	8.643	-0.005	97	241875	1.25	1.36	
135 Anthracene	178	8.690	8.690	0.000	98	229057	1.25	1.29	
136 Carbazole	167	8.854	8.853	0.001	96	223276	1.25	1.27	
137 Methyl parathion	109	8.988	8.988	0.000	88	58845	1.25	1.25	
138 Di-n-butyl phthalate	149	9.192	9.192	0.000	99	297076	1.25	1.32	
139 Ethyl Parathion	109	9.356	9.356	0.000	78	32086	1.25	1.16	
140 4-Nitroquinoline-1-oxide	190	9.379	9.379	0.000	77	12134	1.25	1.00	
142 Octachlorostyrene	308	9.583	9.583	0.000	88	20987	1.25	1.42	
143 Isodrin	193	9.619	9.624	-0.006	88	33850	1.25	1.44	
S 68 Diallate	86				0		1.25	1.22	
144 Fluoranthene	202	9.764	9.764	0.000	99	247826	1.25	1.31	
145 Benzidine	184	9.905	9.910	-0.005	100	452767	3.75	3.68	
* 146 Pyrene-d10 (IS)	212	9.963	9.963	0.000	97	871519	5.00	5.00	
147 Pyrene	202	9.981	9.980	0.001	96	270567	1.25	1.21	
$ 148 p-Terphenyl-d14	244	10.138	10.138	0.000	98	376593	2.50	2.44	
149 p-Dimethylamino azobenzene	225	10.278	10.278	0.000	92	31999	1.25	1.09	
150 Chlorobenzilate	139	10.331	10.331	0.000	81	80144	1.25	1.13	
152 3,3'-Dimethylbenzidine	212	10.623	10.628	-0.005	98	104950	1.25	1.06	
153 Butyl benzyl phthalate	149	10.646	10.646	0.000	95	115634	1.25	1.14	
155 2-Acetylaminofluorene	181	10.891	10.897	-0.006	94	62993	1.25	0.9334	
S 94 Isosafrole	162				0		1.25	1.22	
157 3,3'-Dichlorobenzidine	252	11.218	11.218	0.000	78	71915	1.25	1.15	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
158 4,4'-Methylene bis(2-chloroanil	231	11.230	11.230	0.000	69	37331	1.25	1.16	
156 Benzo[a]anthracene	228	11.230	11.230	0.000	98	202609	1.25	1.23	
159 Chrysene	228	11.271	11.271	0.000	97	198461	1.25	1.21	
160 Bis(2-ethylhexyl) phthalate	149	11.312	11.312	0.000	93	159408	1.25	1.15	
161 6-Methylchrysene	242	11.826	11.831	-0.005	98	128883	1.25	1.15	
162 Di-n-octyl phthalate	149	12.153	12.152	0.001	98	246376	1.25	1.01	
163 7,12-Dimethylbenz(a)anthracene	256	12.591	12.596	-0.005	84	76486	1.25	1.21	
164 Benzo[b]fluoranthene	252	12.596	12.602	-0.006	94	206295	1.25	1.21	
165 Benzo[k]fluoranthene	252	12.637	12.637	0.000	96	200213	1.25	1.15	
166 Benzo[a]pyrene	252	13.046	13.046	0.000	82	174453	1.25	1.20	
* 167 Perylene-d12	264	13.128	13.128	0.000	94	684118	5.00	5.00	
168 3-Methylcholanthrene	268	13.554	13.560	-0.006	93	72385	1.25	1.13	
169 Dibenz[a,h]acridine	279	14.336	14.342	-0.006	92	142889	1.25	1.18	
170 Dibenz[a,j]acridine	279	14.412	14.412	0.000	94	159513	1.25	1.17	
171 Indeno[1,2,3-cd]pyrene	276	14.634	14.634	0.000	95	165988	1.25	1.20	
172 Dibenz(a,h)anthracene	278	14.669	14.675	-0.006	95	185093	1.25	1.21	
173 Benzo[g,h,i]perylene	276	14.985	14.984	0.001	92	195917	1.25	1.20	

QC Flag Legend

Processing Flags

Review Flags

a - User Assigned ID

Reagents:

MSS_RV8270_3_00027 Amount Added: 1.00 Units: mL

Report Date: 18-Jul-2023 15:18:46 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1807.D

Injection Date: 18-Jul-2023 09:52:30 Instrument ID: HP23264 Operator ID: kel10217

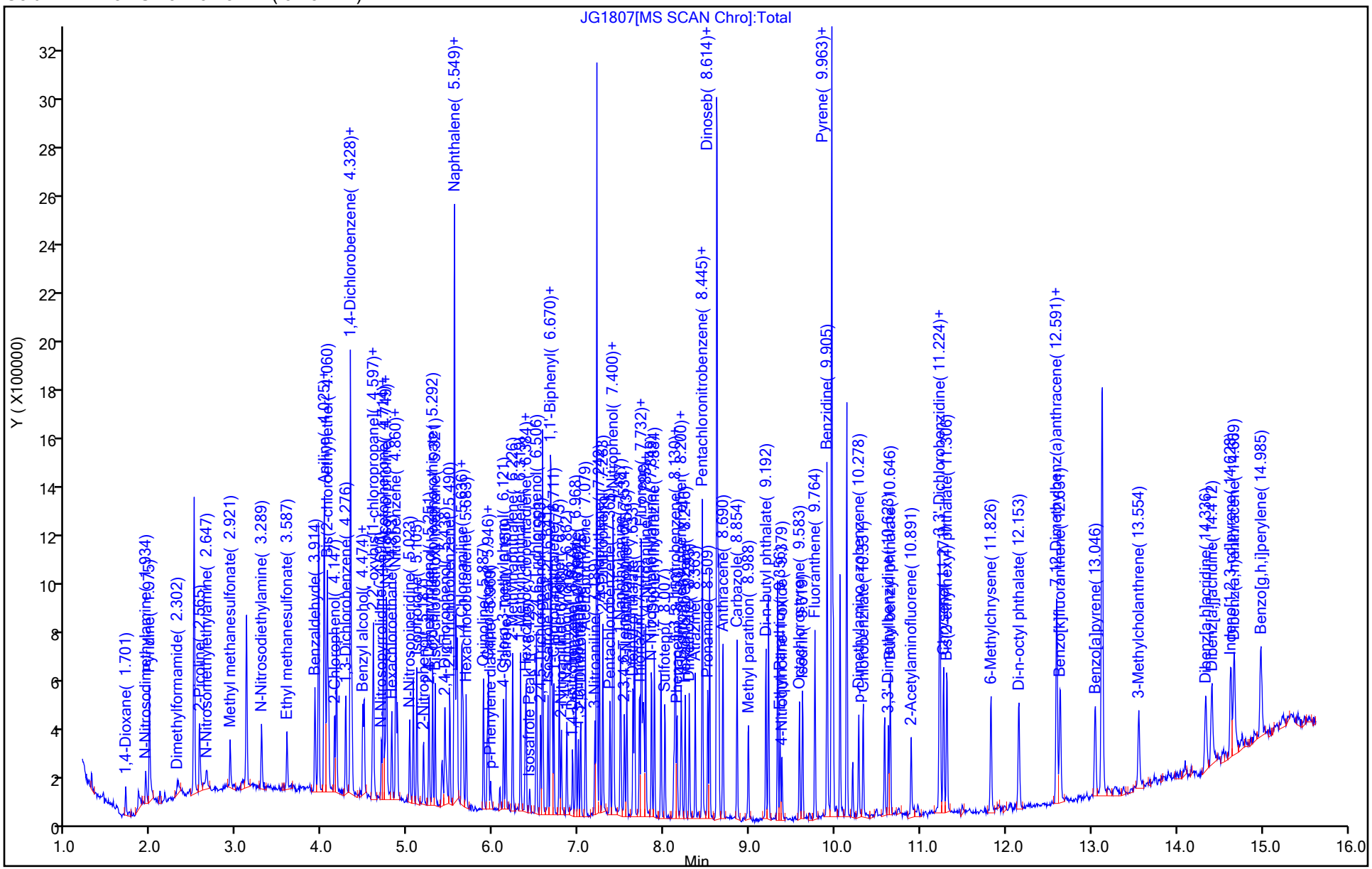
Lims ID: IC L3 Worklist Smp#: 8

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 8

Method: MSSemi_HP23264 Limit Group: MSSV - 8270D_E LVI

Column: DB-5MS 20m 0.25mm (0.25 mm)



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

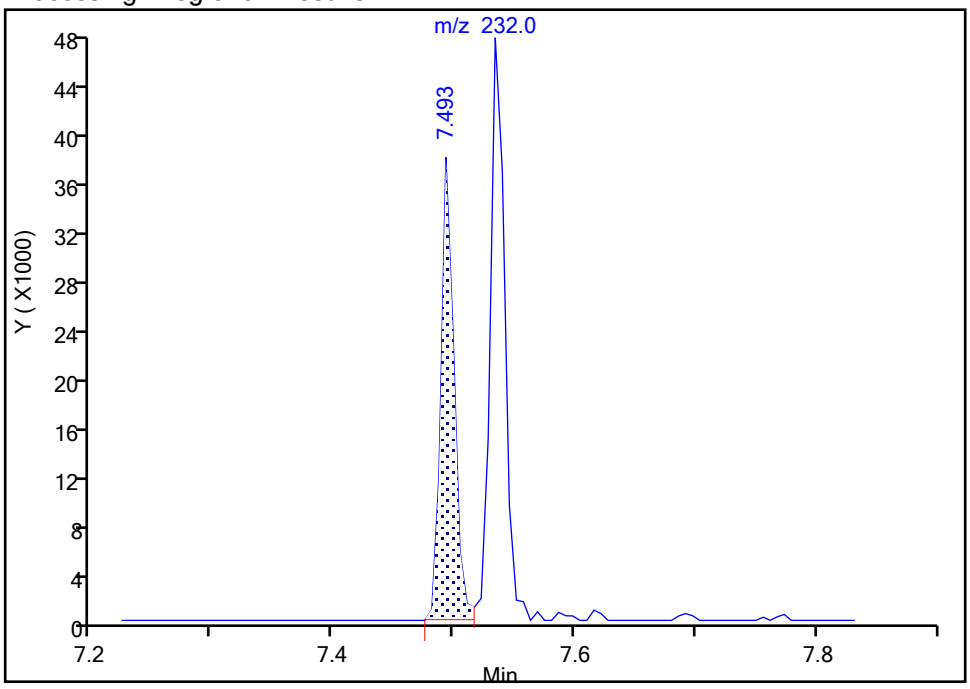
Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1807.D				
Injection Date:	18-Jul-2023 09:52:30	Instrument ID:	HP23264		
Lims ID:	IC L3				
Client ID:					
Operator ID:	kel10217	ALS Bottle#:	8	Worklist Smp#:	8
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		
Column:	DB-5MS 20m 0.25mm (0.25 mm)	Detector	MS SCAN		

105 2,3,4,6-Tetrachlorophenol, CAS: 58-90-2

Signal: 1

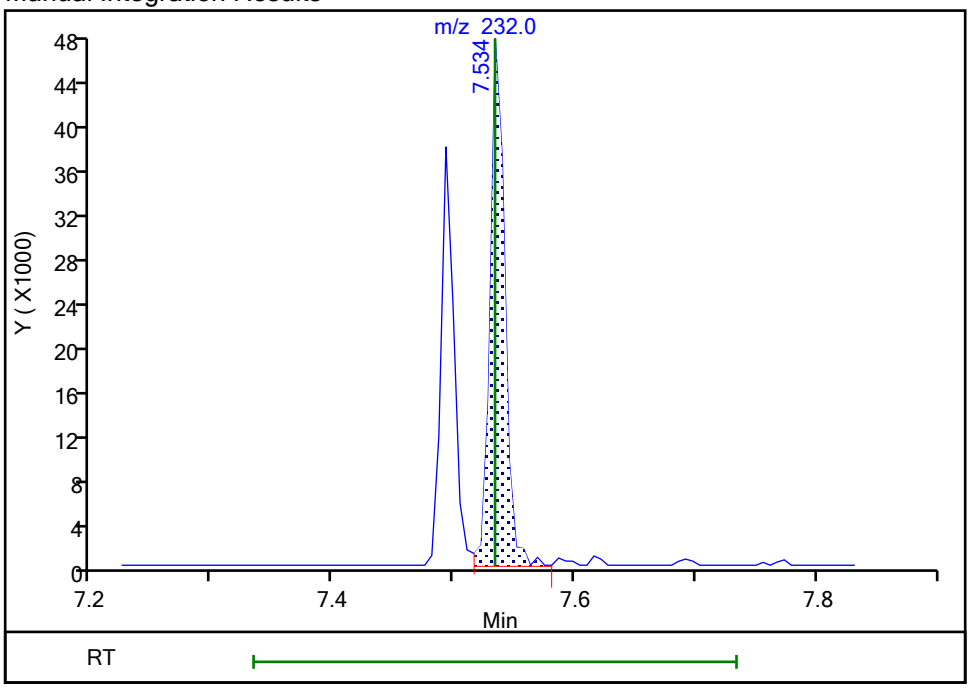
Processing Integration Results

RT: 7.49
Area: 28550
Amount: 0.929459
Amount Units: ug/ml



Manual Integration Results

RT: 7.53
Area: 40165
Amount: 1.187589
Amount Units: ug/ml



Reviewer: SJ89, 18-Jul-2023 11:22:45 -04:00:00 (UTC)

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1808.D
Lims ID: IC L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 18-Jul-2023 10:14:30 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: IC L2
Misc. Info.: 410-0089185-009
Operator ID: kel10217 Instrument ID: HP23264
Sublist: chrom-MSSemi_HP23264*sub27

Method: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\MSSemi_HP23264.m
Limit Group: MSSV - 8270D_E LVI
Last Update: 18-Jul-2023 15:19:23 Calib Date: 18-Jul-2023 10:14:30
Integrator: Falcon ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1808.D

Column 1 : DB-5MS 20m 0.25mm (0.25 mm) Det: MS SCAN
Process Host: CTX1640

First Level Reviewer: SJ89 Date: 18-Jul-2023 11:28:57

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 1,4-Dioxane	88	1.701	1.701	0.000	94	13058	0.2500	0.5666	
	2 N-Nitrosodimethylamine	74	1.946	1.928	0.018	76	7593	0.2500	0.2022	
	3 Pyridine	79	1.993	1.969	0.024	82	37118	0.5000	0.5730	
	4 Dimethylformamide	73		2.267				ND	ND	U
	5 2-Picoline	93	2.571	2.559	0.012	48	13641	0.2500	0.2171	
	6 N-Nitrosomethylethylamine	88	2.647	2.647	0.001	55	12225	0.2500	0.3961	
	7 Methyl methanesulfonate	80	2.927	2.921	0.006	52	9060	0.2500	0.2437	
$	9 2-Fluorophenol	112	3.114	3.119	-0.005	96	27997	0.5000	0.4826	
	11 N-Nitrosodiethylamine	102	3.295	3.289	0.006	61	4958	0.2500	0.1977	
	12 Ethyl methanesulfonate	109	3.593	3.587	0.006	97	8108	0.2500	0.2610	
	13 Benzaldehyde	77	3.914	3.914	0.000	93	14214	0.2500	0.2819	
	17 Aniline	93	4.025	4.019	0.006	69	20079	0.2500	0.2289	
$	15 Phenol-d5	99	4.025	4.025	0.000	94	35171	0.5000	0.4228	
	16 Phenol	94	4.036	4.036	0.000	65	22676	0.2500	0.2596	
	18 Bis(2-chloroethyl)ether	93	4.077	4.077	0.000	91	17437	0.2500	0.2864	
	19 2-Chlorophenol	128	4.147	4.147	0.000	87	12049	0.2500	0.2242	
	21 1,3-Dichlorobenzene	146	4.276	4.276	0.000	93	12687	0.2500	0.2374	
*	22 1,4-Dichlorobenzene-d4	152	4.328	4.328	0.000	96	188767	5.00	5.00	
	23 1,4-Dichlorobenzene	146	4.346	4.346	0.000	90	15652	0.2500	0.2735	
	26 Benzyl alcohol	108	4.474	4.474	0.000	82	7734	0.2500	0.2170	
	27 1,2-Dichlorobenzene	146	4.492	4.492	0.000	91	12036	0.2500	0.2274	
	30 2,2'-oxybis[1-chloropropane]	45	4.591	4.591	0.000	88	34264	0.2500	0.2555	
	29 2-Methylphenol	108	4.603	4.603	0.000	89	12384	0.2500	0.2401	
	31 N-Nitrosopyrrolidine	100	4.696	4.696	0.000	74	7727	0.2500	0.2498	
	33 N-Nitrosodi-n-propylamine	70	4.714	4.714	0.000	84	13844	0.2500	0.2701	
	32 Acetophenone	105	4.714	4.714	0.000	84	20631	0.2500	0.2491	
	35 N-Nitrosomorpholine	56	4.737	4.737	0.000	40	13793	0.2500	0.2900	
	36 2-Toluidine	106	4.749	4.754	-0.005	80	22002	0.2500	0.2453	
	34 4-Methylphenol	108	4.755	4.754	0.001	80	13741	0.2500	0.2302	
	37 Hexachloroethane	117	4.813	4.813	0.000	86	6444	0.2500	0.2673	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 39 Nitrobenzene-d5	82	4.860	4.860	0.000	93	39592	0.5000	0.5152	
40 Nitrobenzene	77	4.877	4.877	0.000	81	18870	0.2500	0.2688	
41 N-Nitrosopiperidine	114	5.023	5.023	0.000	76	6635	0.2500	0.2343	
42 Isophorone	82	5.105	5.105	0.000	98	30798	0.2500	0.2453	
43 2-Nitrophenol	139	5.187	5.186	0.001	88	6333	0.2500	0.2442	
44 2,4-Dimethylphenol	107	5.251	5.251	0.000	90	10595	0.2500	0.1999	
46 o,o',o''-Triethylphosphorothioat	198	5.292	5.292	0.000	82	5083	0.2500	0.2493	
47 Bis(2-chloroethoxy)methane	93	5.321	5.321	0.000	91	19159	0.2500	0.2529	
49 2,4-Dichlorophenol	162	5.438	5.438	0.000	91	9356	0.2500	0.2365	
50 1,2,4-Trichlorobenzene	180	5.490	5.490	0.000	89	11255	0.2500	0.2528	
* 52 Naphthalene-d8	136	5.549	5.549	0.001	99	717961	5.00	5.00	
53 Naphthalene	128	5.566	5.566	0.000	96	36545	0.2500	0.2365	
55 Alpha-Terpineol	59	5.578	5.578	0.000	90	14716	0.2500	0.2168	
56 4-Chloroaniline	127	5.630	5.630	0.000	81	16342	0.2500	0.2504	
57 2,6-Dichlorophenol	162	5.636	5.636	0.000	79	8621	0.2500	0.2204	
58 Hexachloropropene	213	5.648	5.648	0.000	90	6940	0.2500	0.2479	
59 Hexachlorobutadiene	225	5.683	5.683	0.000	90	5338	0.2500	0.2214	
61 Quinoline	129	5.887	5.887	0.000	94	25329	0.2500	0.2388	
62 Caprolactam	113	5.940	5.940	0.000	51	3467	0.2500	0.2471	
63 N-Nitrosodi-n-butylamine	84	5.946	5.946	0.000	84	25191	0.2500	0.4334	
64 p-Phenylene diamine	108	5.975	5.969	0.006	41	3317	0.2500	0.0962	
65 4-Chloro-3-methylphenol	107	6.121	6.121	0.000	90	11860	0.2500	0.2430	
66 Safrole, Total	162	6.150	6.150	0.000	81	7702	0.2500	0.2264	
67 2-Methylnaphthalene	142	6.226	6.226	0.000	85	22326	0.2500	0.2379	
69 1-Methylnaphthalene	142	6.319	6.319	0.000	88	22273	0.2500	0.2476	
71 Hexachlorocyclopentadiene	237	6.372	6.372	0.000	65	5299	0.2500	0.2111	
70 1,2,4,5-Tetrachlorobenzene	216	6.384	6.383	0.001	94	9854	0.2500	0.2172	
72 Isosafrole Peak 1	162	6.425	6.430	-0.005	3	1704	0.0400	0.0389	a
79 2,4,6-Trichlorophenol	196	6.512	6.506	0.006	86	6083	0.2500	0.2110	
S 24 Dinitrotoluene	165				0			0.4119	
80 2,4,5-Trichlorophenol	196	6.559	6.553	0.006	73	7536	0.2500	0.2373	
$ 81 2-Fluorobiphenyl (Surr)	172	6.576	6.582	-0.006	99	61775	0.5000	0.5077	
82 Isosafrole Peak 2	162	6.641	6.640	0.001	88	8140	0.2100	0.1841	
83 1,1'-Biphenyl	154	6.670	6.675	-0.005	96	29807	0.2500	0.2501	
84 2-Chloronaphthalene	162	6.687	6.687	0.000	94	22361	0.2500	0.2475	
85 1-Chloronaphthalene	162	6.711	6.710	0.001	92	20600	0.2500	0.2375	
86 Phenyl ether	170	6.775	6.775	0.000	87	14352	0.2500	0.2264	
87 2-Nitroaniline	138	6.798	6.798	0.000	68	4946	0.2500	0.1554	
88 1,4-Naphthoquinone	158	6.863	6.862	0.000	74	7573	0.2500	0.2118	
89 1,4-Dinitrobenzene	168	6.903	6.932	-0.029	84	2605	0.2500	0.1841	
90 Dimethyl phthalate	163	6.968	6.967	0.001	97	27720	0.2500	0.2592	
91 1,3-Dinitrobenzene	168	6.997	6.997	0.000	80	3293	0.2500	0.1997	
92 2,6-Dinitrotoluene	165	7.026	7.026	0.000	72	4231	0.2500	0.1882	
93 Acenaphthylene	152	7.079	7.078	0.001	97	36369	0.2500	0.2333	
95 3-Nitroaniline	138	7.189	7.189	0.000	73	5711	0.2500	0.2066	
* 96 Acenaphthene-d10	164	7.213	7.213	0.000	95	383344	5.00	5.00	
97 Acenaphthene	153	7.242	7.242	0.000	95	25108	0.2500	0.2487	
98 2,4-Dinitrophenol	184	7.283	7.283	0.000	72	20156	2.50	1.42	
99 Pentachlorobenzene	250	7.371	7.370	0.000	96	10355	0.2500	0.2639	
100 4-Nitrophenol	109	7.400	7.399	0.001	89	17987	1.50	1.07	
102 2,4-Dinitrotoluene	165	7.406	7.405	0.001	62	6829	0.2500	0.2237	
101 Dibenzofuran	168	7.411	7.411	0.000	79	32691	0.2500	0.2400	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
104 1-Naphthylamine	143	7.487	7.487	0.000	95	22526	0.2500	0.2459	
105 2,3,4,6-Tetrachlorophenol	232	7.540	7.534	0.006	70	7892	0.2500	0.2834	a
106 2-Naphthylamine	143	7.563	7.563	0.000	94	22649	0.2500	0.2383	
107 Diethyl phthalate	149	7.633	7.639	-0.006	96	29809	0.2500	0.2587	
109 Thionazin	107	7.709	7.715	-0.006	71	4245	0.2500	0.2080	
108 Fluorene	166	7.733	7.732	0.001	92	25474	0.2500	0.2376	
110 4-Chlorophenyl phenyl ether	204	7.738	7.738	0.000	90	13091	0.2500	0.2729	
111 N-Nitro-o-toluidine	152	7.756	7.756	0.000	76	6290	0.2500	0.2084	
112 4-Nitroaniline	138	7.768	7.767	0.001	47	4949	0.2500	0.1801	
113 4,6-Dinitro-2-methylphenol	198	7.785	7.785	0.000	68	16537	1.50	1.00	
114 N-Nitrosodiphenylamine	169	7.855	7.855	0.000	65	16392	0.2125	0.1903	
115 1,2-Diphenylhydrazine	77	7.884	7.884	0.000	44	36734	0.2500	0.2542	
$ 116 2,4,6-Tribromophenol	330	7.966	7.966	0.000	88	8931	0.5000	0.4918	
117 Sulfotepp	97	8.007	8.013	-0.006	74	5633	0.2500	0.2375	
118 1,3,5-Trinitrobenzene	213	8.118	8.118	0.000	80	2521	0.2500	0.2893	
120 cis-Diallate	86	8.124	8.124	0.000	90	12758	0.1850	0.2213	
119 Phorate	75	8.135	8.135	0.000	90	18137	0.2500	0.2142	
121 Phenacetin	108	8.153	8.153	0.000	89	11906	0.2500	0.2059	
122 4-Bromophenyl phenyl ether	248	8.200	8.199	0.001	70	7316	0.2500	0.2624	
123 trans-Diallate	86	8.205	8.211	-0.006	44	6238	0.0650	0.1132	a
124 Hexachlorobenzene	284	8.246	8.246	0.000	88	9858	0.2500	0.2979	
125 Dimethoate	87	8.293	8.299	-0.006	94	13018	0.2500	0.2427	
126 Atrazine	200	8.363	8.369	-0.006	80	6043	0.2500	0.2393	
128 Pentachloronitrobenzene	237	8.445	8.445	0.000	51	3382	0.2500	0.2387	
127 Pentachlorophenol	266	8.445	8.451	-0.006	82	15262	1.25	0.9720	
129 4-Aminobiphenyl	169	8.451	8.451	0.000	90	28595	0.2500	0.2524	
130 Pronamide	173	8.509	8.515	-0.006	84	11231	0.2500	0.2355	
* 131 Phenanthrene-d10	188	8.620	8.620	0.000	97	706975	5.00	5.00	
133 Dinoseb	211	8.620	8.620	0.000	61	3089	0.2500	0.1372	
134 Disulfoton	88	8.632	8.632	0.000	92	30710	0.2500	0.3343	
132 Phenanthrene	178	8.638	8.643	-0.005	96	33896	0.2500	0.2274	
135 Anthracene	178	8.690	8.690	0.000	98	36065	0.2500	0.2428	
136 Carbazole	167	8.854	8.853	0.001	95	35360	0.2500	0.2413	
137 Methyl parathion	109	8.988	8.988	0.000	87	7973	0.2500	0.2031	
138 Di-n-butyl phthalate	149	9.192	9.192	0.000	98	42527	0.2500	0.2254	
139 Ethyl Parathion	109	9.356	9.356	0.000	75	5032	0.2500	0.2168	
140 4-Nitroquinoline-1-oxide	190	9.379	9.379	0.000	24	1696	0.2500	0.1676	
142 Octachlorostyrene	308	9.584	9.583	0.001	83	2987	0.2500	0.2426	
143 Isodrin	193	9.619	9.624	-0.005	81	6153	0.2500	0.3121	
S 68 Diallate	86				0		0.2500	0.3344	
144 Fluoranthene	202	9.765	9.764	0.000	98	37533	0.2500	0.2379	
145 Benzidine	184	9.905	9.910	-0.005	98	56350	0.7500	0.5941	
* 146 Pyrene-d10 (IS)	212	9.963	9.963	0.000	97	671472	5.00	5.00	
147 Pyrene	202	9.981	9.980	0.001	96	42309	0.2500	0.2456	
$ 148 p-Terphenyl-d14	244	10.138	10.138	0.000	97	56629	0.5000	0.4756	
149 p-Dimethylamino azobenzene	225	10.278	10.278	0.000	84	2962	0.2500	0.1307	
150 Chlorobenzilate	139	10.331	10.331	0.000	81	9854	0.2500	0.1806	
152 3,3'-Dimethylbenzidine	212	10.623	10.628	-0.005	96	16117	0.2500	0.2109	
153 Butyl benzyl phthalate	149	10.646	10.646	0.000	92	17915	0.2500	0.2284	
155 2-Acetylaminofluorene	181	10.891	10.897	-0.006	86	7746	0.2500	0.1490	
S 94 Isosafrole	162				0		0.2500	0.2229	
157 3,3'-Dichlorobenzidine	252	11.224	11.218	0.006	72	10609	0.2500	0.2206	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
158 4,4'-Methylene bis(2-chloroanil	231	11.230	11.230	0.000	66	4734	0.2500	0.1916	
156 Benzo[a]anthracene	228	11.230	11.230	0.000	96	26642	0.2500	0.2092	
159 Chrysene	228	11.271	11.271	0.000	95	28627	0.2500	0.2274	
160 Bis(2-ethylhexyl) phthalate	149	11.312	11.312	0.000	93	21599	0.2500	0.2029	
161 6-Methylchrysene	242	11.826	11.831	-0.005	98	20523	0.2500	0.2376	
162 Di-n-octyl phthalate	149	12.153	12.152	0.001	97	33425	0.2500	0.1735	
163 7,12-Dimethylbenz(a)anthracene	256	12.596	12.596	0.000	71	9306	0.2500	0.1865	
164 Benzo[b]fluoranthene	252	12.596	12.602	-0.006	94	27348	0.2500	0.2030	
165 Benzo[k]fluoranthene	252	12.631	12.637	-0.006	97	32260	0.2500	0.2354	
166 Benzo[a]pyrene	252	13.046	13.046	0.000	80	26251	0.2500	0.2290	
* 167 Perylene-d12	264	13.128	13.128	0.000	95	538761	5.00	5.00	
168 3-Methylcholanthrene	268	13.554	13.560	-0.006	82	10335	0.2500	0.2050	
169 Dibenz[a,h]acridine	279	14.336	14.342	-0.006	91	21604	0.2500	0.2274	
170 Dibenz[a,j]acridine	279	14.412	14.412	0.000	51	24606	0.2500	0.2286	
171 Indeno[1,2,3-cd]pyrene	276	14.634	14.634	0.000	91	23355	0.2500	0.2138	
172 Dibenz(a,h)anthracene	278	14.669	14.675	-0.006	93	26105	0.2500	0.2161	
173 Benzo[g,h,i]perylene	276	14.985	14.984	0.001	91	28691	0.2500	0.2234	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

MSS_RV8270_2_00030 Amount Added: 1.00 Units: mL

Report Date: 18-Jul-2023 15:19:24 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1808.D

Injection Date: 18-Jul-2023 10:14:30 Instrument ID: HP23264 Operator ID: kel10217

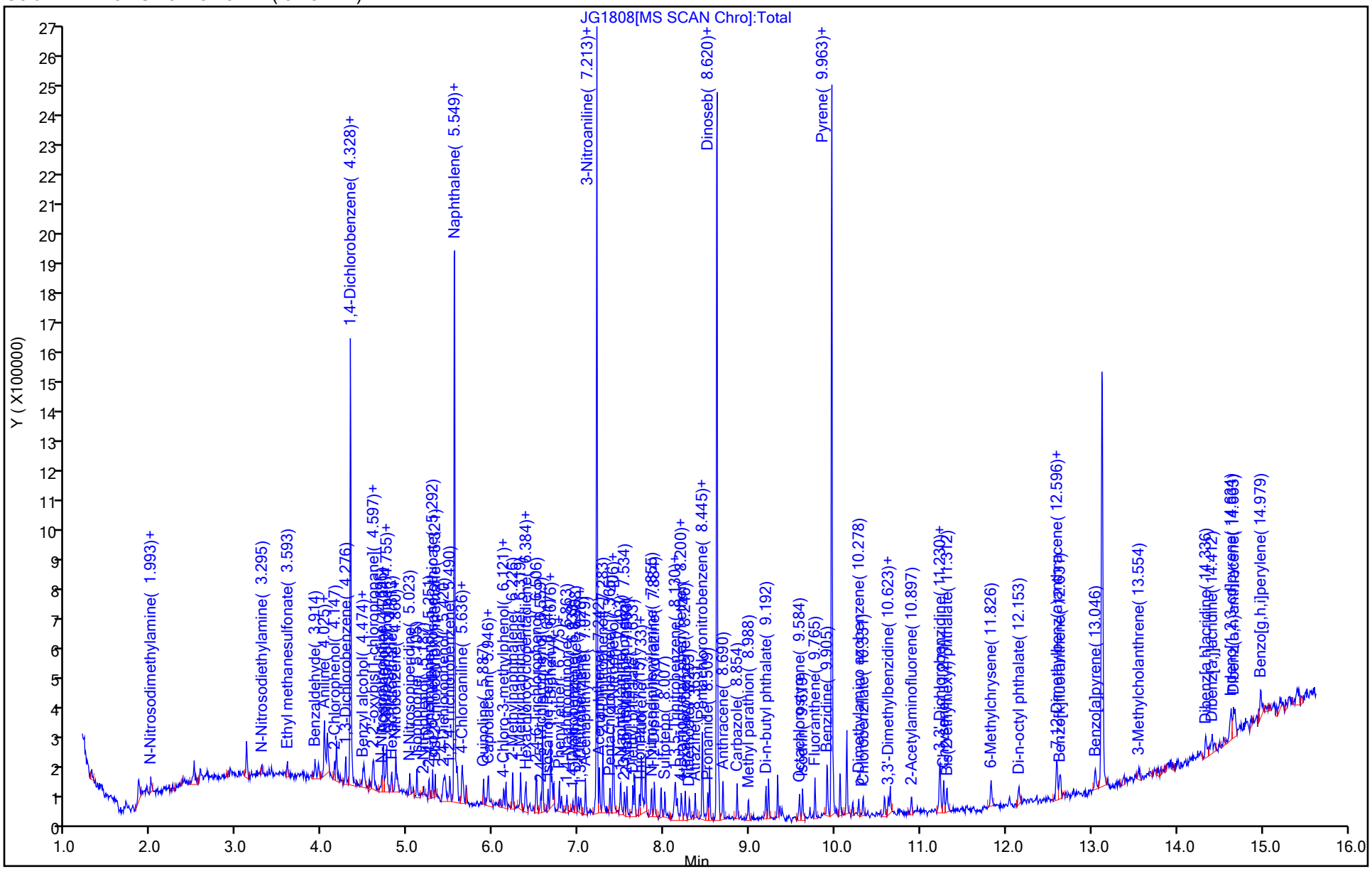
Lims ID: IC L2 Worklist Smp#: 9

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 9

Method: MSSemi_HP23264 Limit Group: MSSV - 8270D_E LVI

Column: DB-5MS 20m 0.25mm (0.25 mm)



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

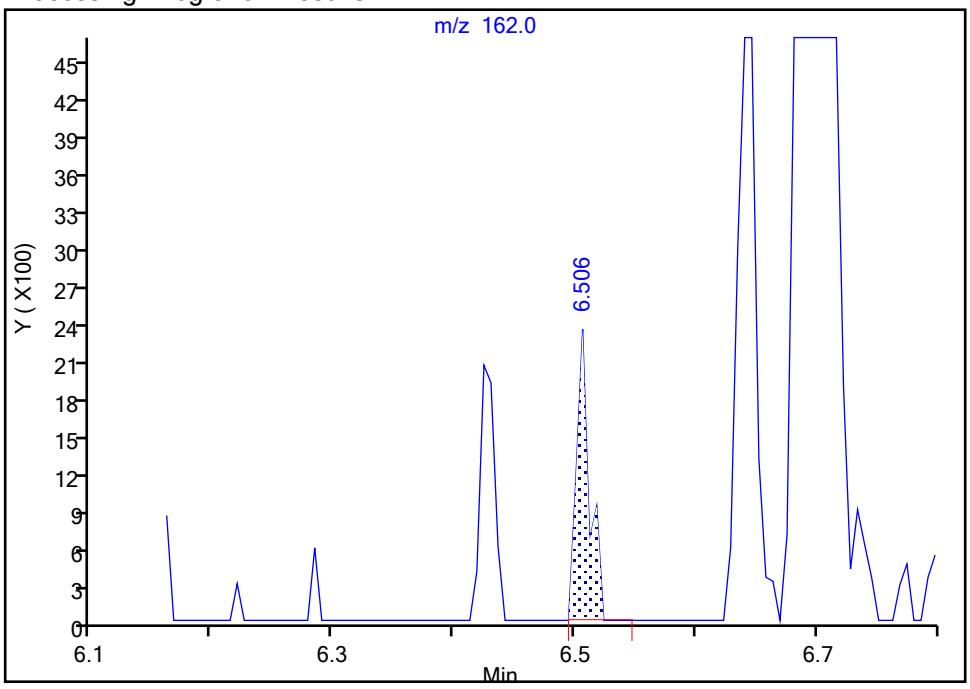
Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1808.D				
Injection Date:	18-Jul-2023 10:14:30	Instrument ID:	HP23264		
Lims ID:	IC L2				
Client ID:					
Operator ID:	kel10217	ALS Bottle#:	9	Worklist Smp#:	9
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		
Column:	DB-5MS 20m 0.25mm (0.25 mm)	Detector	MS SCAN		

72 Isosafrole Peak 1, CAS: 120-58-1

Signal: 1

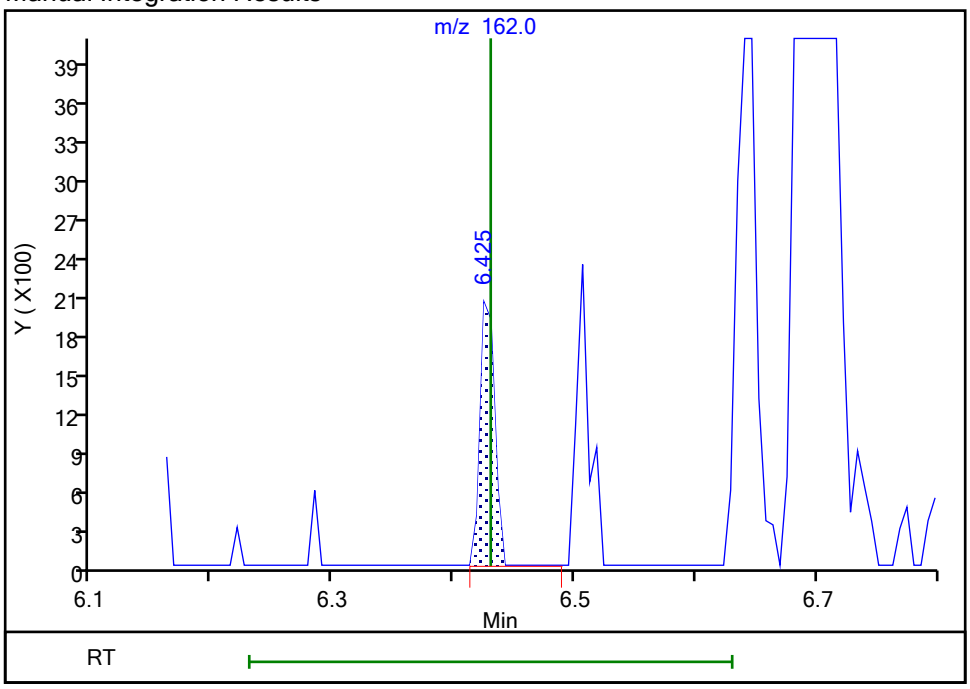
Processing Integration Results

RT: 6.51
Area: 1720
Amount: 0.039177
Amount Units: ug/ml



Manual Integration Results

RT: 6.42
Area: 1704
Amount: 0.038857
Amount Units: ug/ml



Reviewer: SJ89, 18-Jul-2023 11:27:42 -04:00:00 (UTC)

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

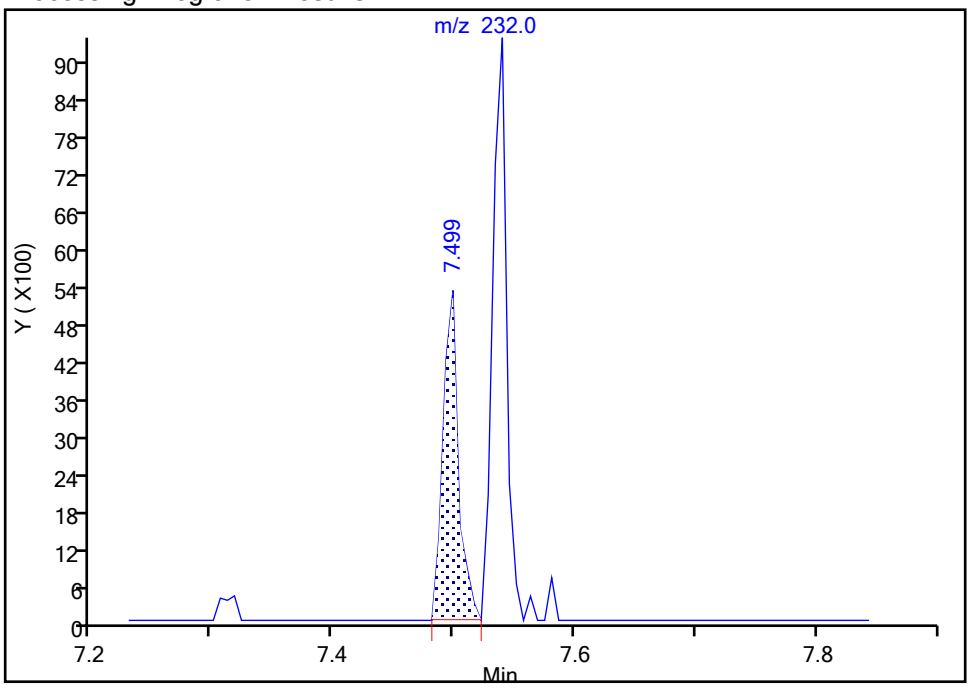
Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1808.D				
Injection Date:	18-Jul-2023 10:14:30	Instrument ID:	HP23264		
Lims ID:	IC L2				
Client ID:					
Operator ID:	kel10217	ALS Bottle#:	9	Worklist Smp#:	9
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		
Column:	DB-5MS 20m 0.25mm (0.25 mm)	Detector	MS SCAN		

105 2,3,4,6-Tetrachlorophenol, CAS: 58-90-2

Signal: 1

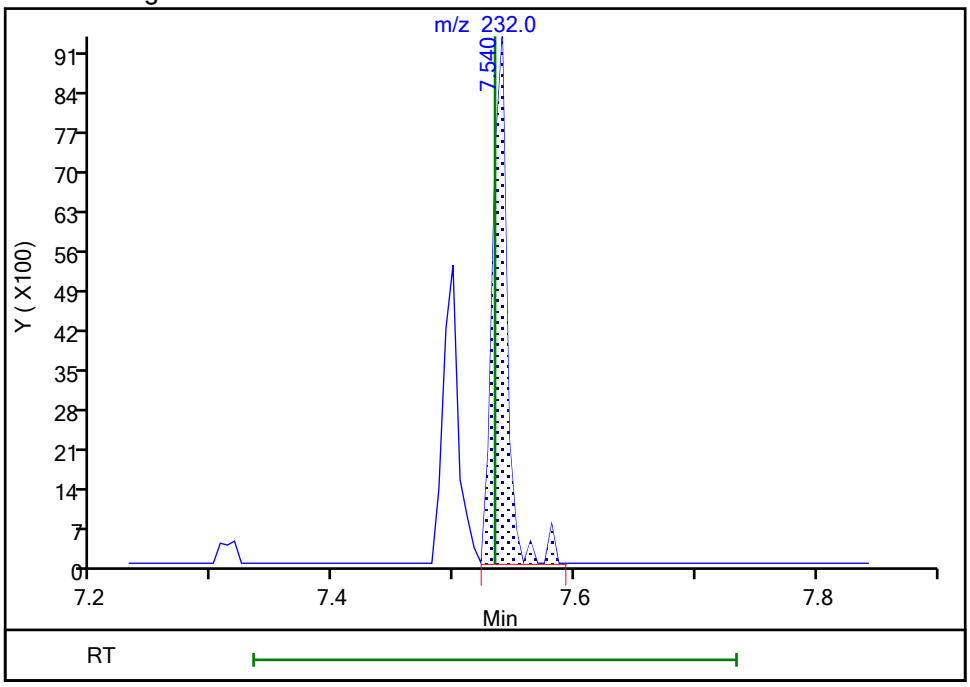
Processing Integration Results

RT: 7.50
Area: 4693
Amount: 0.178769
Amount Units: ug/ml



Manual Integration Results

RT: 7.54
Area: 7892
Amount: 0.283362
Amount Units: ug/ml



Reviewer: SJ89, 18-Jul-2023 11:27:58 -04:00:00 (UTC)

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

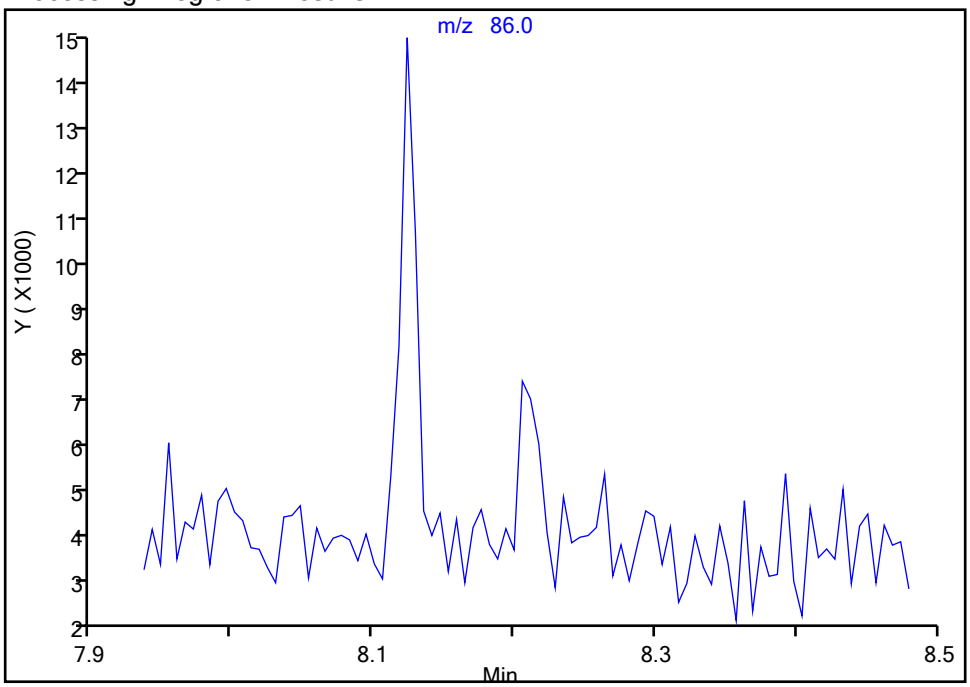
Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1808.D				
Injection Date:	18-Jul-2023 10:14:30	Instrument ID:	HP23264		
Lims ID:	IC L2				
Client ID:					
Operator ID:	kel10217	ALS Bottle#:	9	Worklist Smp#:	9
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		
Column:	DB-5MS 20m 0.25mm (0.25 mm)	Detector	MS SCAN		

123 trans-Diallate, CAS: 17708-58-6

Signal: 1

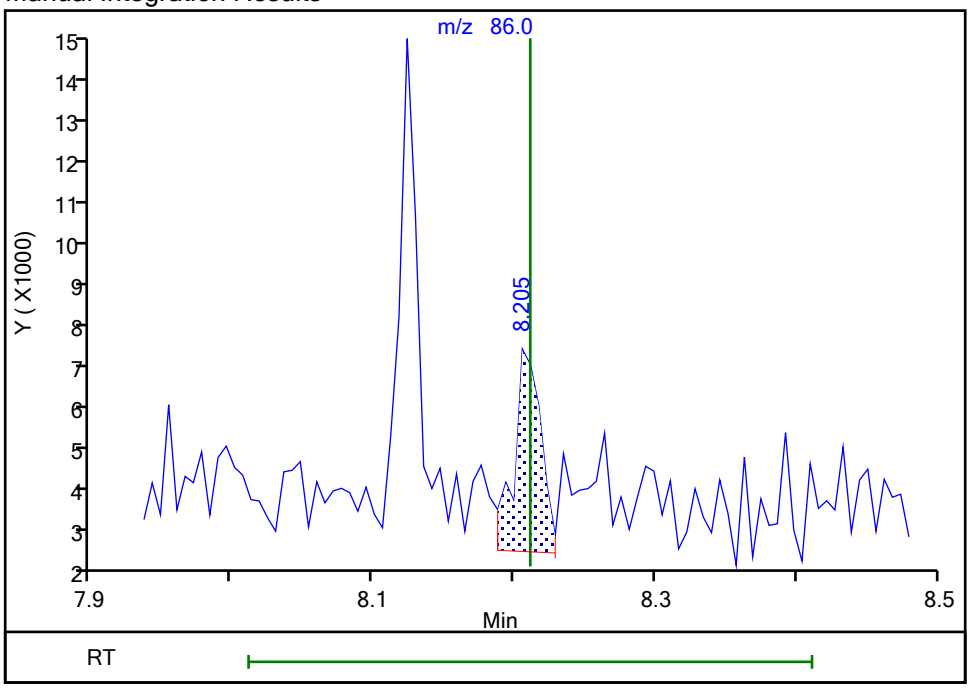
Not Detected
Expected RT: 8.21

Processing Integration Results



Manual Integration Results

RT: 8.21
Area: 6238
Amount: 0.113166
Amount Units: ug/ml



Reviewer: SJ89, 18-Jul-2023 11:28:11 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

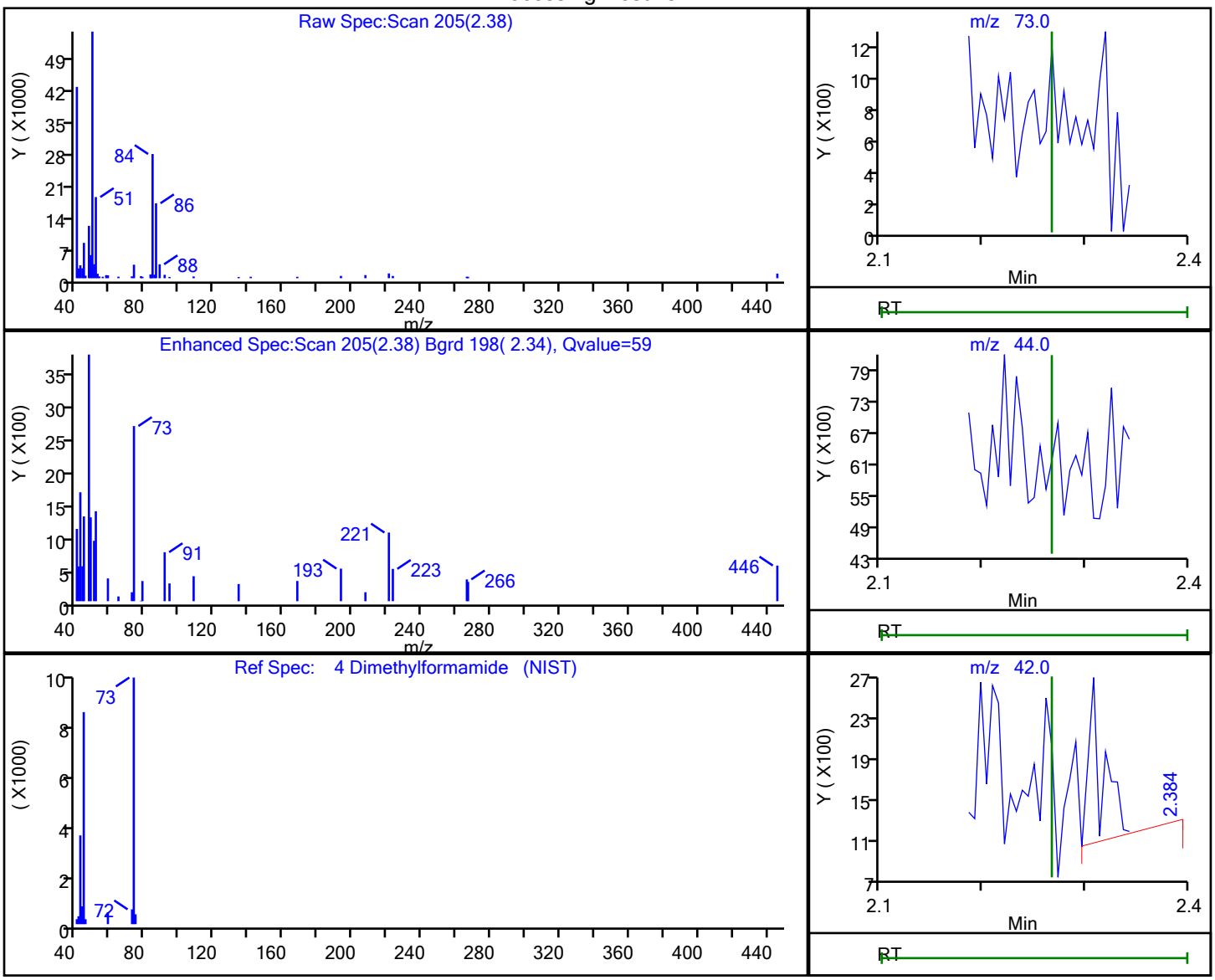
User Disabled Compound Report

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1808.D				
Injection Date:	18-Jul-2023 10:14:30	Instrument ID:	HP23264		
Lims ID:	IC L2				
Client ID:					
Operator ID:	kel10217	ALS Bottle#:	9	Worklist Smp#:	9
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		
Column:	DB-5MS 20m 0.25mm (0.25 mm)	Detector	MS SCAN		

4 Dimethylformamide, CAS: 68-12-2

Processing Results



RT	Mass	Response	Amount
2.38	73.00	5008	0.247590
2.39	44.00	13933	
2.38	42.00	4146	

Reviewer: SJ89, 18-Jul-2023 11:27:14 -04:00:00 (UTC)

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Calibration / 1,4-Dioxane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

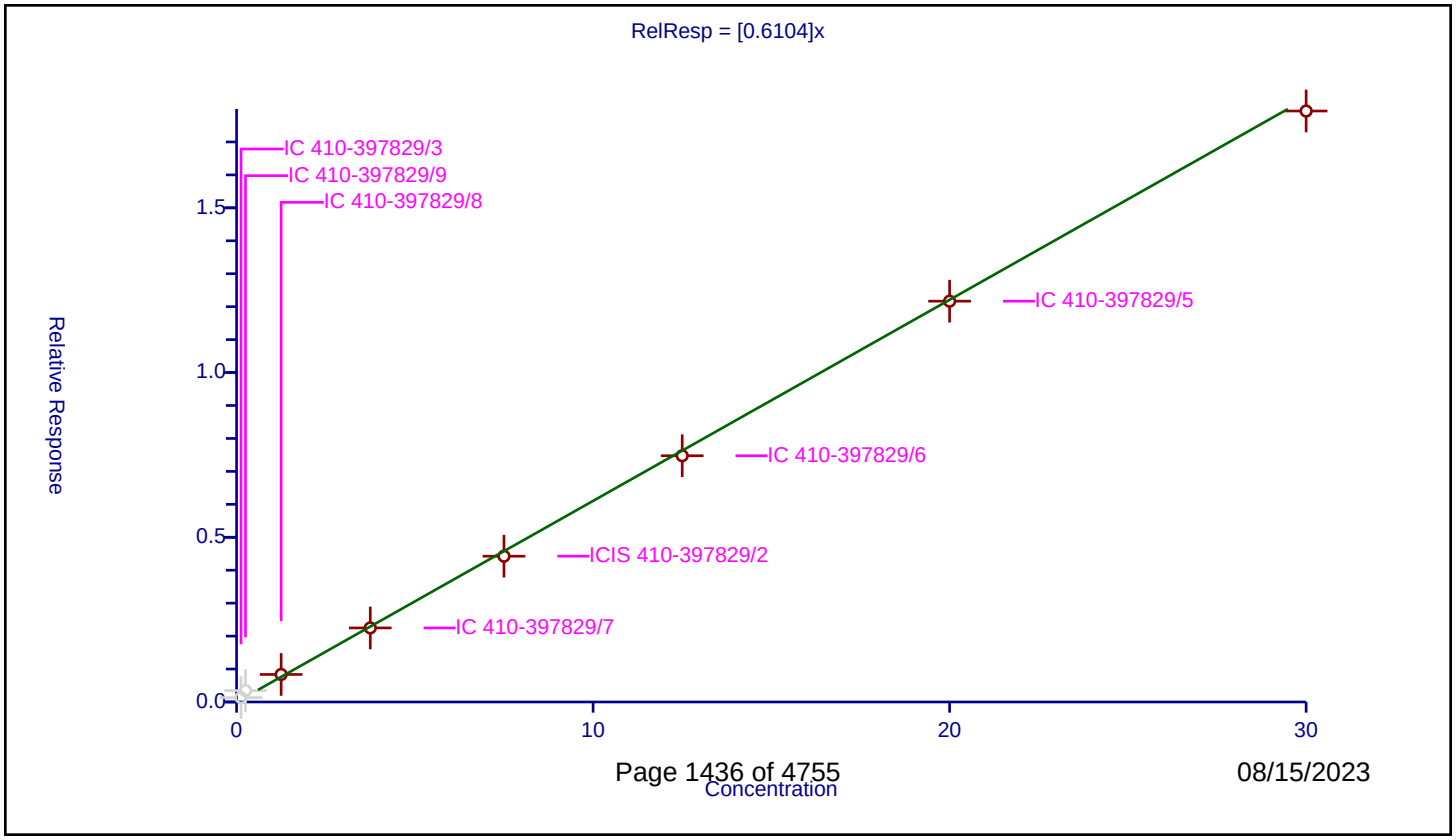
Curve Coefficients

Intercept:	0
Slope:	0.6104

Error Coefficients

Standard Error:	457000
Relative Standard Error:	4.8
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.13341	5.0	217338.0	1.067278	N
2	IC 410-397829/9	0.25	0.345876	5.0	188767.0	1.383505	N
3	IC 410-397829/8	1.25	0.835662	5.0	234760.0	0.66853	Y
4	IC 410-397829/7	3.75	2.248673	5.0	192478.0	0.599646	Y
5	ICIS 410-397829/2	7.5	4.425686	5.0	212767.0	0.590092	Y
6	IC 410-397829/6	12.5	7.475139	5.0	230583.0	0.598011	Y
7	IC 410-397829/5	20.0	12.166761	5.0	227097.0	0.608338	Y
8	IC 410-397829/4	30.0	17.939108	5.0	211309.0	0.59797	Y



Calibration / N-Nitrosodimethylamine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

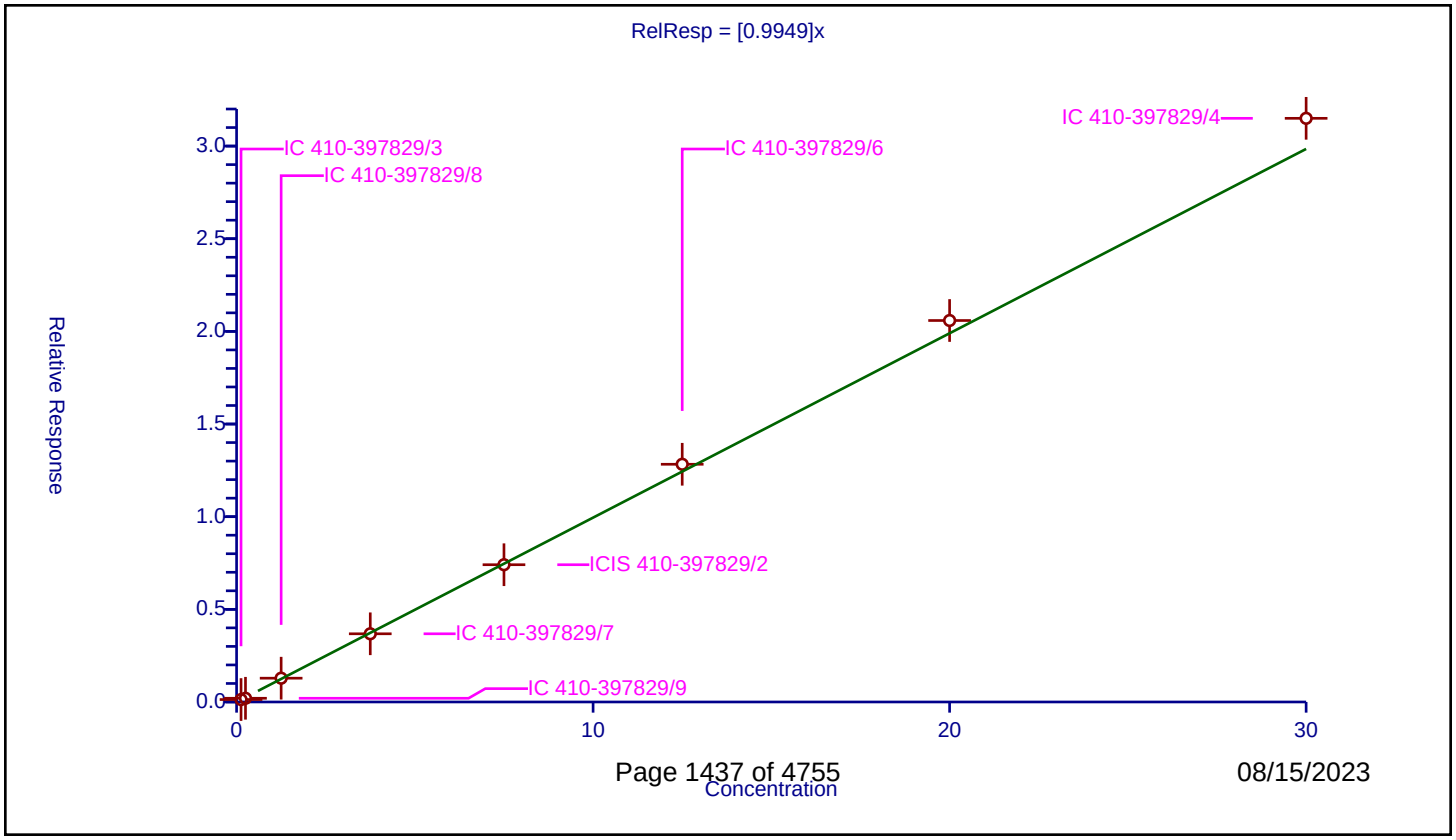
Curve Coefficients

Intercept:	0
Slope:	0.9949

Error Coefficients

Standard Error:	668000
Relative Standard Error:	8.2
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.131523	5.0	217338.0	1.052186	Y
2	IC 410-397829/9	0.25	0.201121	5.0	188767.0	0.804484	Y
3	IC 410-397829/8	1.25	1.284184	5.0	234760.0	1.027347	Y
4	IC 410-397829/7	3.75	3.680628	5.0	192478.0	0.981501	Y
5	ICIS 410-397829/2	7.5	7.408151	5.0	212767.0	0.987753	Y
6	IC 410-397829/6	12.5	12.828938	5.0	230583.0	1.026315	Y
7	IC 410-397829/5	20.0	20.58737	5.0	227097.0	1.029369	Y
8	IC 410-397829/4	30.0	31.498327	5.0	211309.0	1.049944	Y



Calibration / Pyridine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

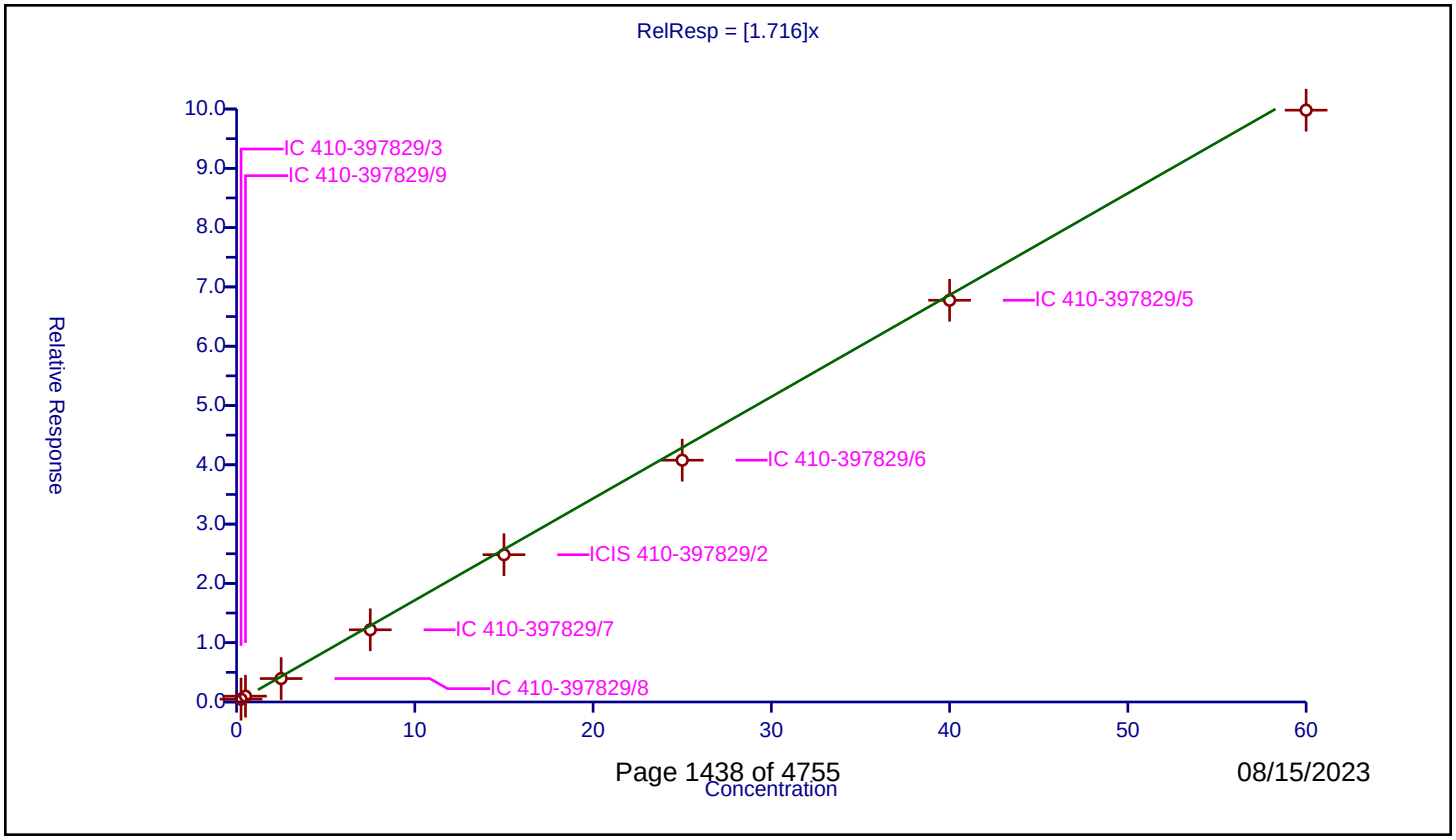
Curve Coefficients

Intercept:	0
Slope:	1.716

Error Coefficients

Standard Error:	2140000
Relative Standard Error:	8.3
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.25	0.477919	5.0	217338.0	1.911677	Y
2	IC 410-397829/9	0.5	0.98317	5.0	188767.0	1.966339	Y
3	IC 410-397829/8	2.5	3.951014	5.0	234760.0	1.580406	Y
4	IC 410-397829/7	7.5	12.177366	5.0	192478.0	1.623649	Y
5	ICIS 410-397829/2	15.0	24.838485	5.0	212767.0	1.655899	Y
6	IC 410-397829/6	25.0	40.776206	5.0	230583.0	1.631048	Y
7	IC 410-397829/5	40.0	67.74713	5.0	227097.0	1.693678	Y
8	IC 410-397829/4	60.0	99.807699	5.0	211309.0	1.663462	Y



08/15/2023

Calibration / Dimethylformamide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

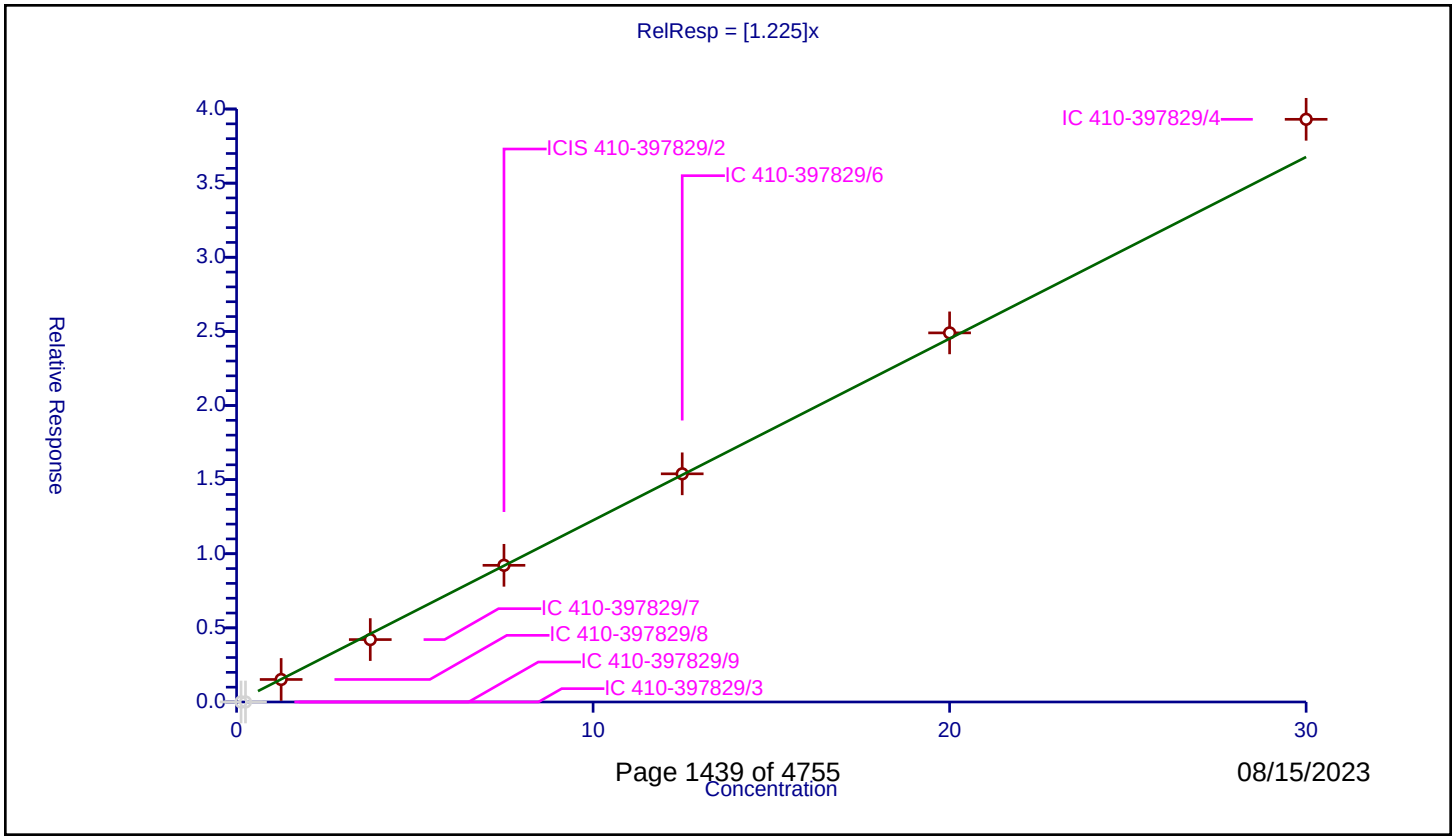
Curve Coefficients

Intercept:	0
Slope:	1.225

Error Coefficients

Standard Error:	972000
Relative Standard Error:	4.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.0	5.0	217338.0	0.0	N
2	IC 410-397829/9	0.25	0.0	5.0	188767.0	0.0	N
3	IC 410-397829/8	1.25	1.51821	5.0	234760.0	1.214568	Y
4	IC 410-397829/7	3.75	4.209286	5.0	192478.0	1.122476	Y
5	ICIS 410-397829/2	7.5	9.220133	5.0	212767.0	1.229351	Y
6	IC 410-397829/6	12.5	15.392267	5.0	230583.0	1.231381	Y
7	IC 410-397829/5	20.0	24.89903	5.0	227097.0	1.244951	Y
8	IC 410-397829/4	30.0	39.306466	5.0	211309.0	1.310216	Y



Calibration / 2-Picoline

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

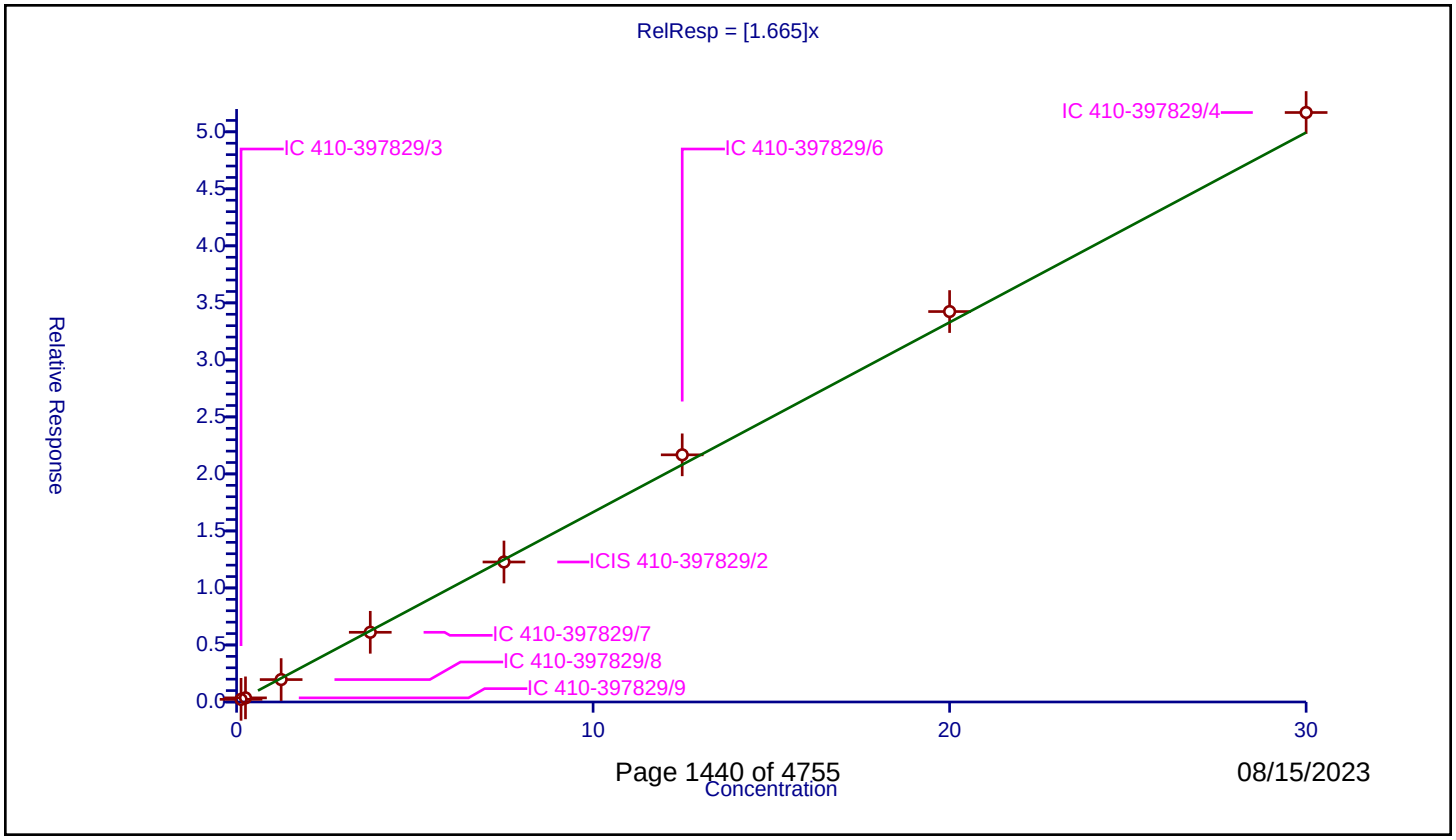
Curve Coefficients

Intercept:	0
Slope:	1.665

Error Coefficients

Standard Error:	1100000
Relative Standard Error:	7.5
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.233047	5.0	217338.0	1.864377	Y
2	IC 410-397829/9	0.25	0.361318	5.0	188767.0	1.445274	Y
3	IC 410-397829/8	1.25	1.965199	5.0	234760.0	1.572159	Y
4	IC 410-397829/7	3.75	6.111244	5.0	192478.0	1.629665	Y
5	ICIS 410-397829/2	7.5	12.275823	5.0	212767.0	1.636776	Y
6	IC 410-397829/6	12.5	21.674495	5.0	230583.0	1.73396	Y
7	IC 410-397829/5	20.0	34.23896	5.0	227097.0	1.711948	Y
8	IC 410-397829/4	30.0	51.694391	5.0	211309.0	1.723146	Y



Calibration / N-Nitrosomethylethylamine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

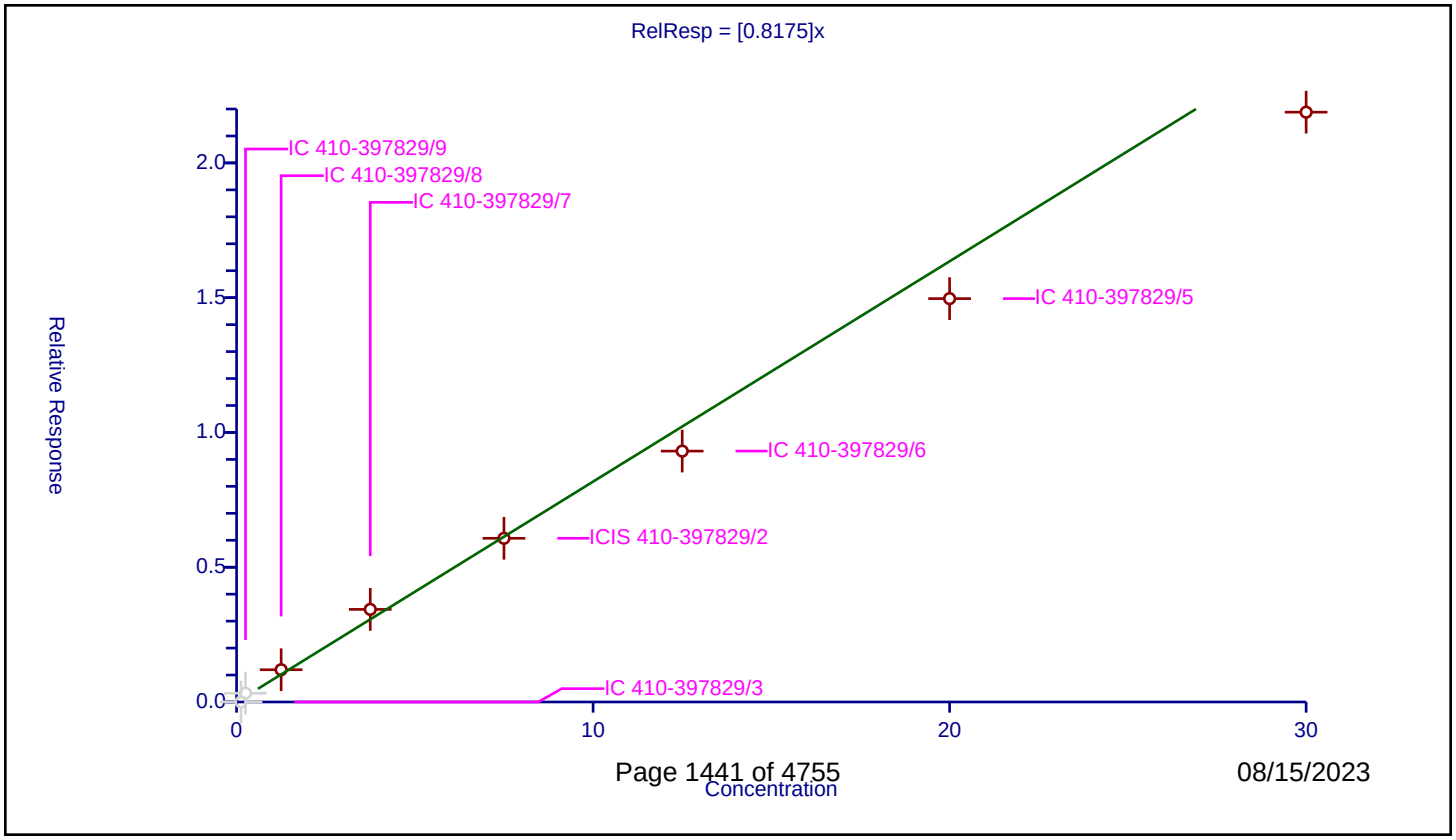
Curve Coefficients

Intercept:	0
Slope:	0.8175

Error Coefficients

Standard Error:	564000
Relative Standard Error:	11.9
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.976

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.0	5.0	217338.0	0.0	N
2	IC 410-397829/9	0.25	0.323812	5.0	188767.0	1.295248	N
3	IC 410-397829/8	1.25	1.196158	5.0	234760.0	0.956926	Y
4	IC 410-397829/7	3.75	3.43512	5.0	192478.0	0.916032	Y
5	ICIS 410-397829/2	7.5	6.072887	5.0	212767.0	0.809718	Y
6	IC 410-397829/6	12.5	9.308123	5.0	230583.0	0.74465	Y
7	IC 410-397829/5	20.0	14.965852	5.0	227097.0	0.748293	Y
8	IC 410-397829/4	30.0	21.882764	5.0	211309.0	0.729425	Y



Calibration / Methyl methanesulfonate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

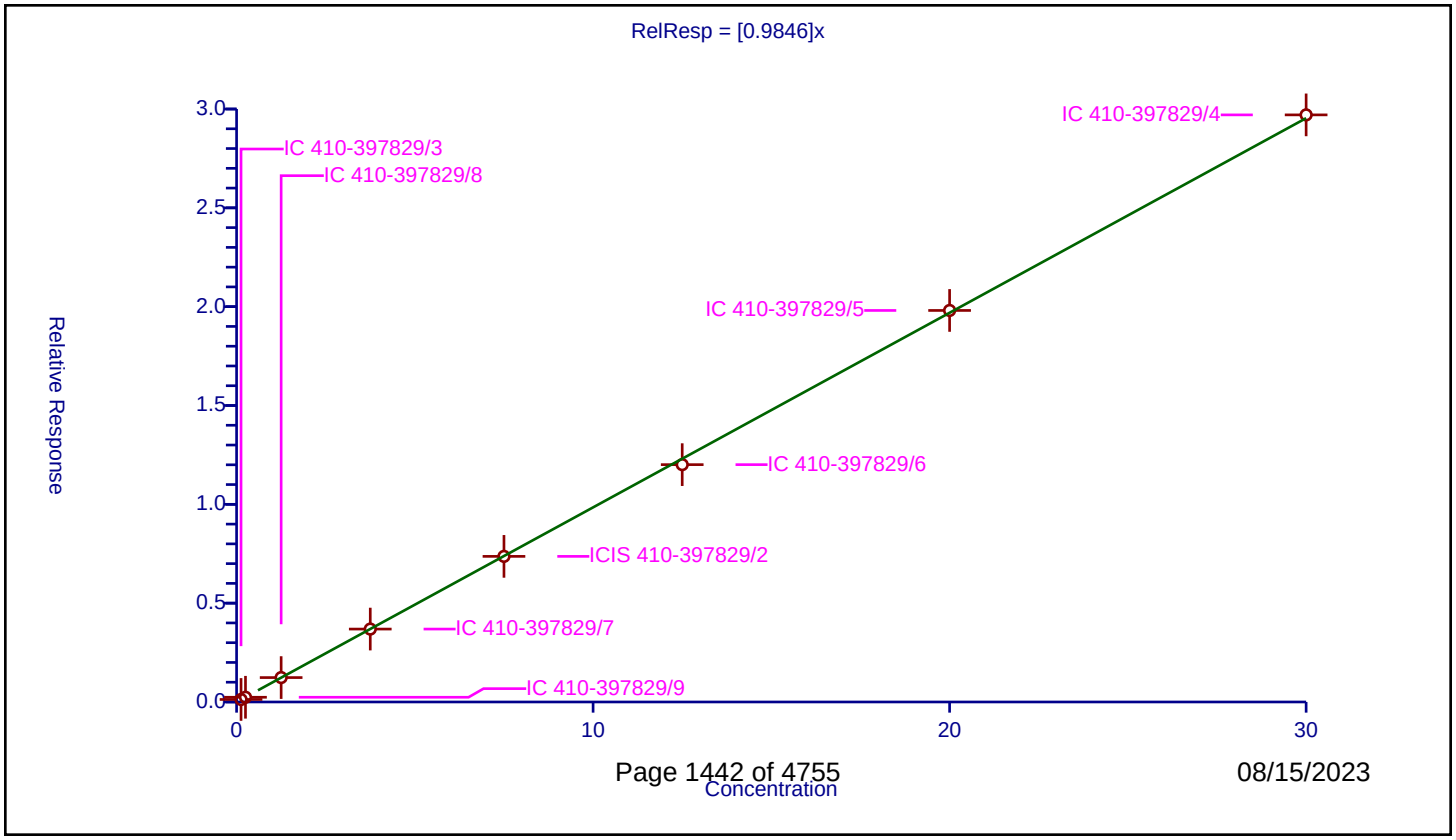
Curve Coefficients

Intercept:	0
Slope:	0.9846

Error Coefficients

Standard Error:	634000
Relative Standard Error:	2.0
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.127658	5.0	217338.0	1.021266	Y
2	IC 410-397829/9	0.25	0.239978	5.0	188767.0	0.959914	Y
3	IC 410-397829/8	1.25	1.235155	5.0	234760.0	0.988124	Y
4	IC 410-397829/7	3.75	3.688759	5.0	192478.0	0.983669	Y
5	ICIS 410-397829/2	7.5	7.367214	5.0	212767.0	0.982295	Y
6	IC 410-397829/6	12.5	12.007759	5.0	230583.0	0.960621	Y
7	IC 410-397829/5	20.0	19.809178	5.0	227097.0	0.990459	Y
8	IC 410-397829/4	30.0	29.703325	5.0	211309.0	0.990111	Y



Calibration / 2-Fluorophenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

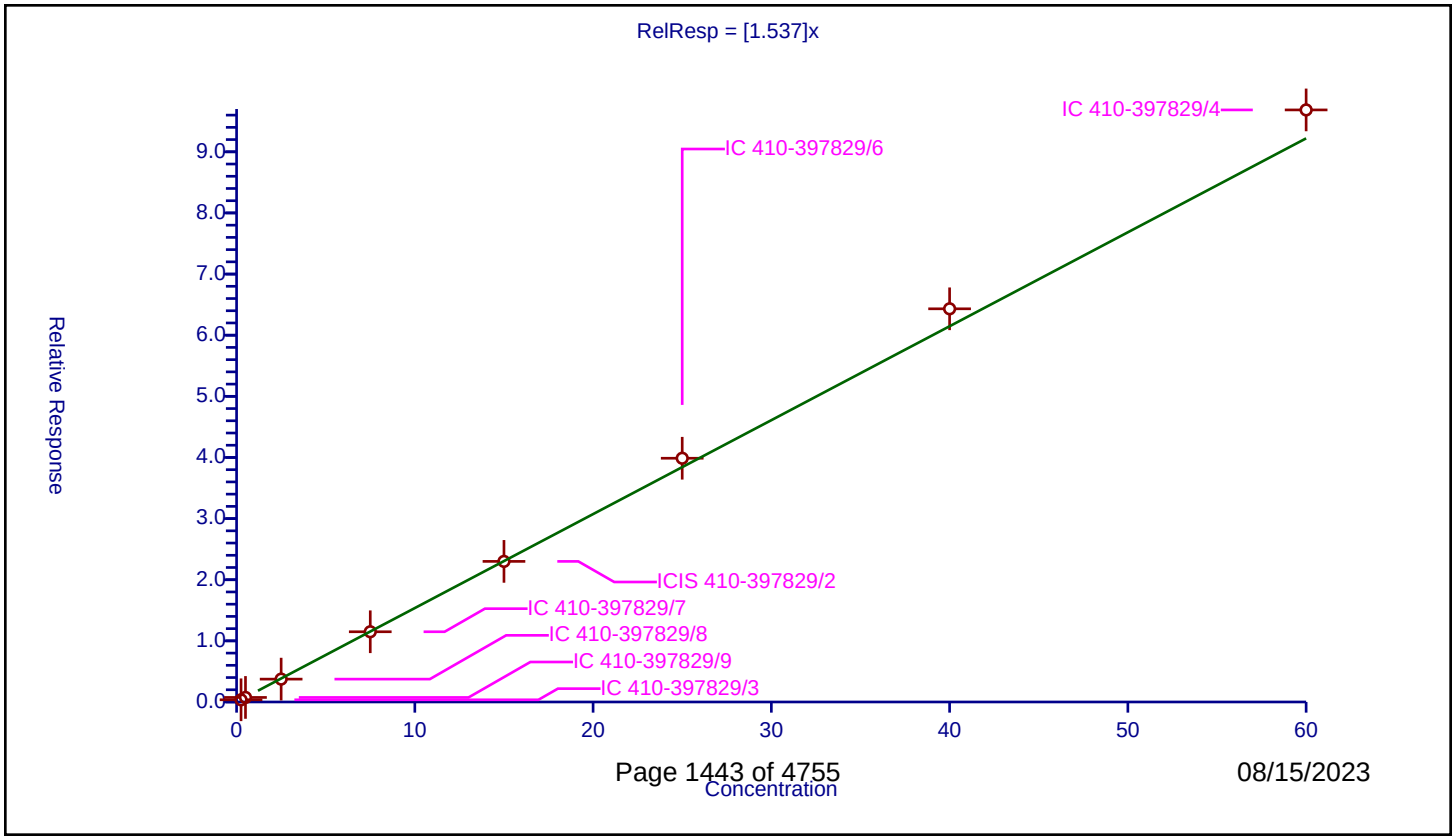
Curve Coefficients

Intercept:	0
Slope:	1.537

Error Coefficients

Standard Error:	2070000
Relative Standard Error:	4.3
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.25	0.357784	5.0	217338.0	1.431135	Y
2	IC 410-397829/9	0.5	0.741576	5.0	188767.0	1.483151	Y
3	IC 410-397829/8	2.5	3.742546	5.0	234760.0	1.497018	Y
4	IC 410-397829/7	7.5	11.48778	5.0	192478.0	1.531704	Y
5	ICIS 410-397829/2	15.0	22.998021	5.0	212767.0	1.533201	Y
6	IC 410-397829/6	25.0	39.871304	5.0	230583.0	1.594852	Y
7	IC 410-397829/5	40.0	64.317032	5.0	227097.0	1.607926	Y
8	IC 410-397829/4	60.0	96.849708	5.0	211309.0	1.614162	Y



Calibration / N-Nitrosodiethylamine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

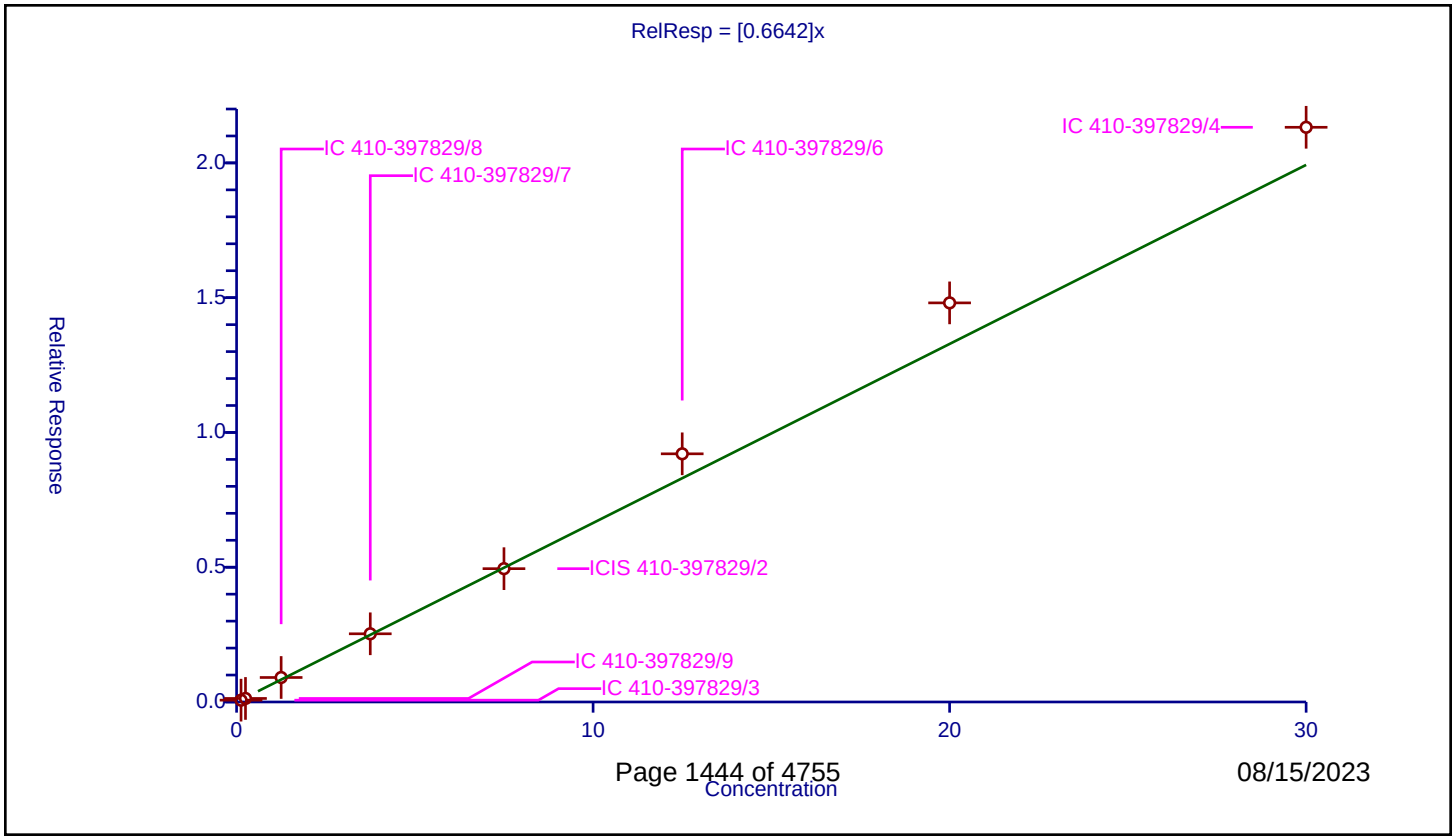
Curve Coefficients

Intercept:	0
Slope:	0.6642

Error Coefficients

Standard Error:	463000
Relative Standard Error:	13.0
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.982

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.067453	5.0	217338.0	0.53962	Y
2	IC 410-397829/9	0.25	0.131326	5.0	188767.0	0.525304	Y
3	IC 410-397829/8	1.25	0.908715	5.0	234760.0	0.726972	Y
4	IC 410-397829/7	3.75	2.5299	5.0	192478.0	0.67464	Y
5	ICIS 410-397829/2	7.5	4.945856	5.0	212767.0	0.659448	Y
6	IC 410-397829/6	12.5	9.207205	5.0	230583.0	0.736576	Y
7	IC 410-397829/5	20.0	14.807197	5.0	227097.0	0.74036	Y
8	IC 410-397829/4	30.0	21.322045	5.0	211309.0	0.710735	Y



Calibration / Ethyl methanesulfonate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

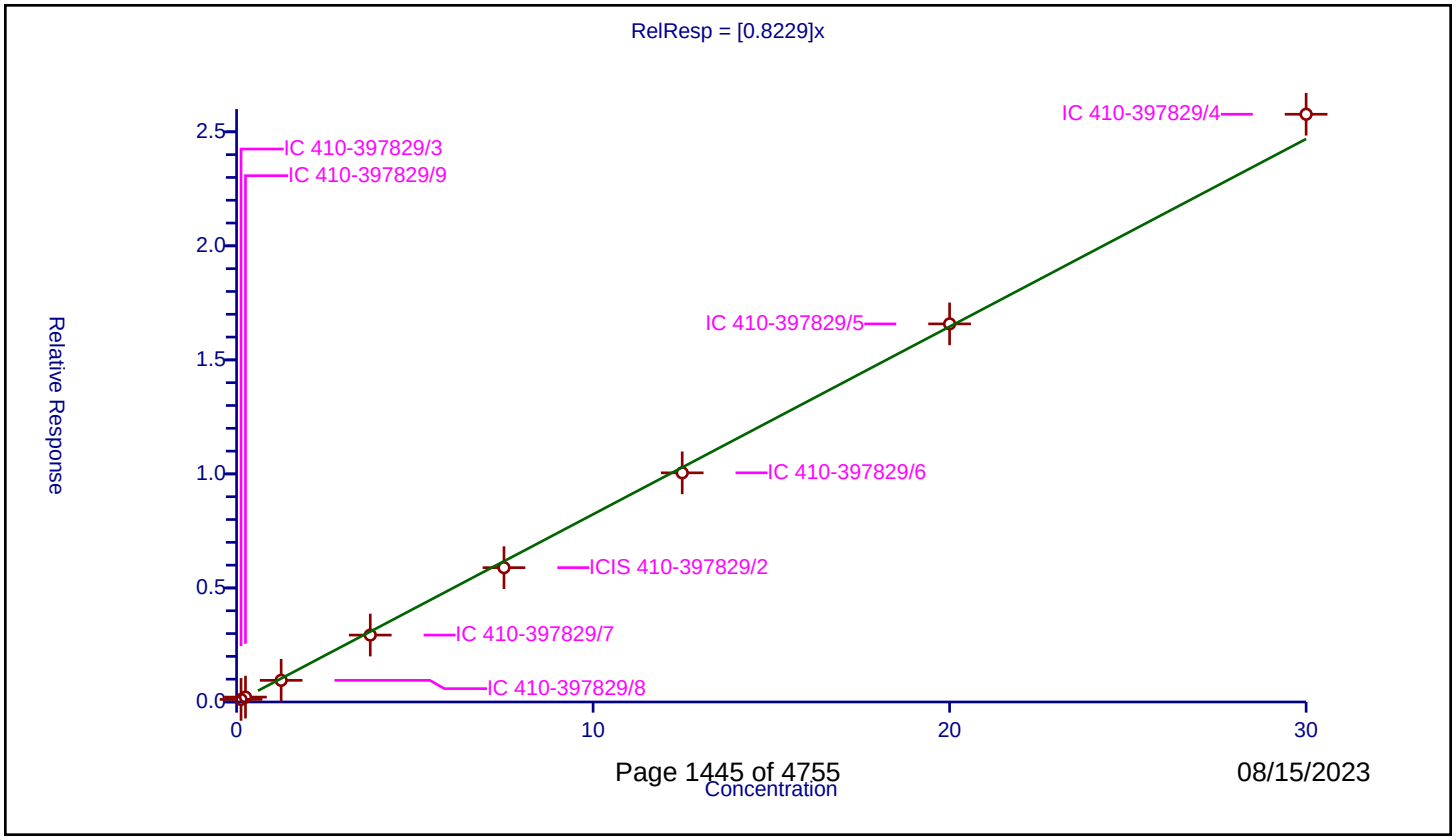
Curve Coefficients

Intercept:	0
Slope:	0.8229

Error Coefficients

Standard Error:	541000
Relative Standard Error:	6.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.113188	5.0	217338.0	0.905502	Y
2	IC 410-397829/9	0.25	0.214762	5.0	188767.0	0.859048	Y
3	IC 410-397829/8	1.25	0.949033	5.0	234760.0	0.759226	Y
4	IC 410-397829/7	3.75	2.934803	5.0	192478.0	0.782614	Y
5	ICIS 410-397829/2	7.5	5.889494	5.0	212767.0	0.785266	Y
6	IC 410-397829/6	12.5	10.047358	5.0	230583.0	0.803789	Y
7	IC 410-397829/5	20.0	16.578731	5.0	227097.0	0.828937	Y
8	IC 410-397829/4	30.0	25.770743	5.0	211309.0	0.859025	Y



Calibration / Benzaldehyde

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

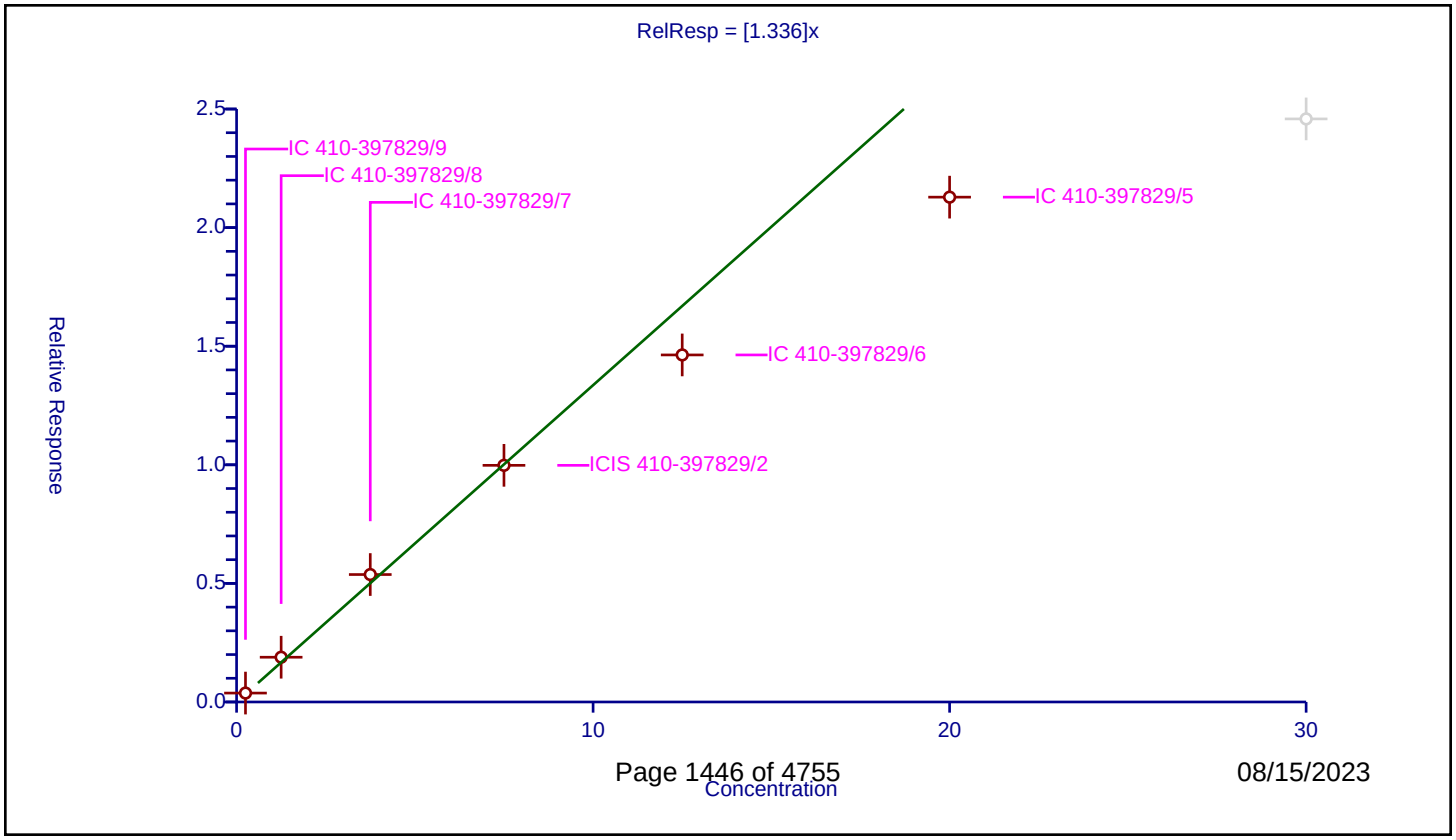
Curve Coefficients

Intercept:	0
Slope:	1.336

Error Coefficients

Standard Error:	569000
Relative Standard Error:	13.8
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.976

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/9	0.25	0.376496	5.0	188767.0	1.505984	Y
2	IC 410-397829/8	1.25	1.887268	5.0	234760.0	1.509814	Y
3	IC 410-397829/7	3.75	5.373289	5.0	192478.0	1.432877	Y
4	ICIS 410-397829/2	7.5	9.976876	5.0	212767.0	1.33025	Y
5	IC 410-397829/6	12.5	14.63215	5.0	230583.0	1.170572	Y
6	IC 410-397829/5	20.0	21.284517	5.0	227097.0	1.064226	Y
7	IC 410-397829/4	30.0	24.583383	5.0	211309.0	0.819446	N



Calibration / Aniline

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

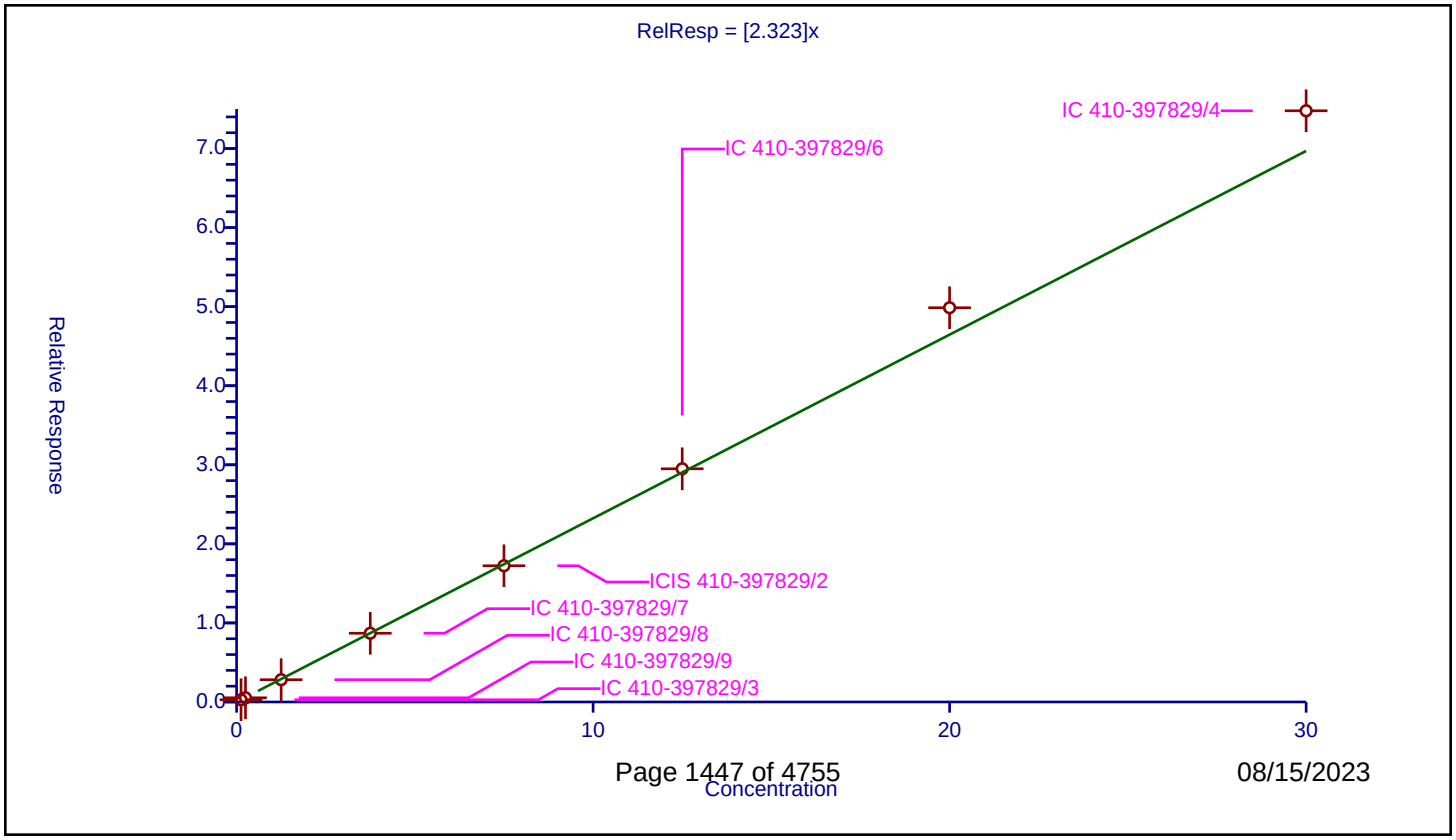
Curve Coefficients

Intercept:	0
Slope:	2.323

Error Coefficients

Standard Error:	1590000
Relative Standard Error:	5.4
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.280324	5.0	217338.0	2.24259	Y
2	IC 410-397829/9	0.25	0.531846	5.0	188767.0	2.127385	Y
3	IC 410-397829/8	1.25	2.81792	5.0	234760.0	2.254336	Y
4	IC 410-397829/7	3.75	8.69185	5.0	192478.0	2.317827	Y
5	ICIS 410-397829/2	7.5	17.228894	5.0	212767.0	2.297186	Y
6	IC 410-397829/6	12.5	29.494108	5.0	230583.0	2.359529	Y
7	IC 410-397829/5	20.0	49.866269	5.0	227097.0	2.493313	Y
8	IC 410-397829/4	30.0	74.778145	5.0	211309.0	2.492605	Y



Calibration / Phenol-d5

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

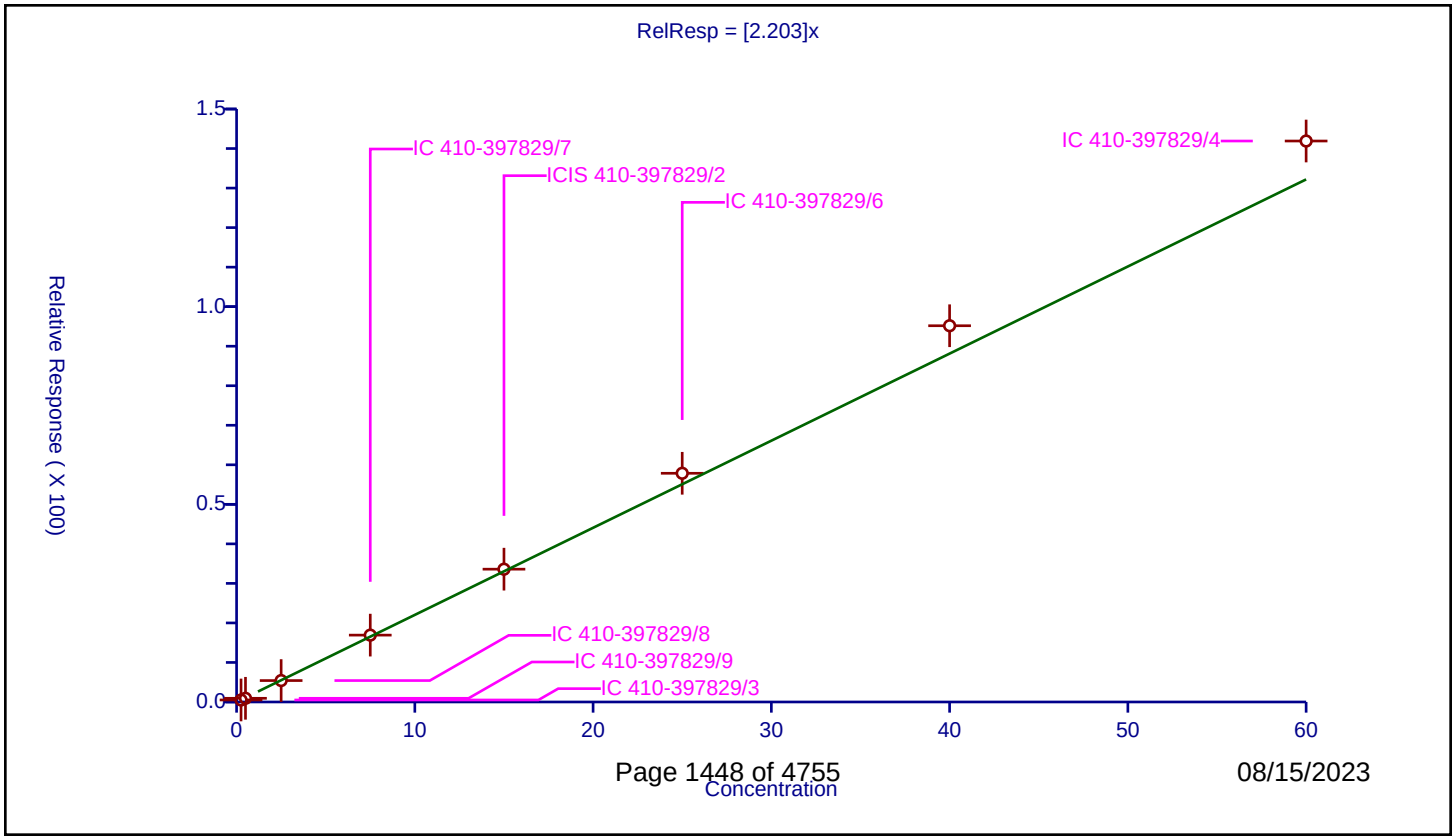
Curve Coefficients

Intercept:	0
Slope:	2.203

Error Coefficients

Standard Error:	3030000
Relative Standard Error:	8.0
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.25	0.510219	5.0	217338.0	2.040876	Y
2	IC 410-397829/9	0.5	0.931598	5.0	188767.0	1.863196	Y
3	IC 410-397829/8	2.5	5.420898	5.0	234760.0	2.168359	Y
4	IC 410-397829/7	7.5	16.913491	5.0	192478.0	2.255132	Y
5	ICIS 410-397829/2	15.0	33.593391	5.0	212767.0	2.239559	Y
6	IC 410-397829/6	25.0	57.852725	5.0	230583.0	2.314109	Y
7	IC 410-397829/5	40.0	95.178954	5.0	227097.0	2.379474	Y
8	IC 410-397829/4	60.0	141.903823	5.0	211309.0	2.365064	Y



Calibration / Phenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

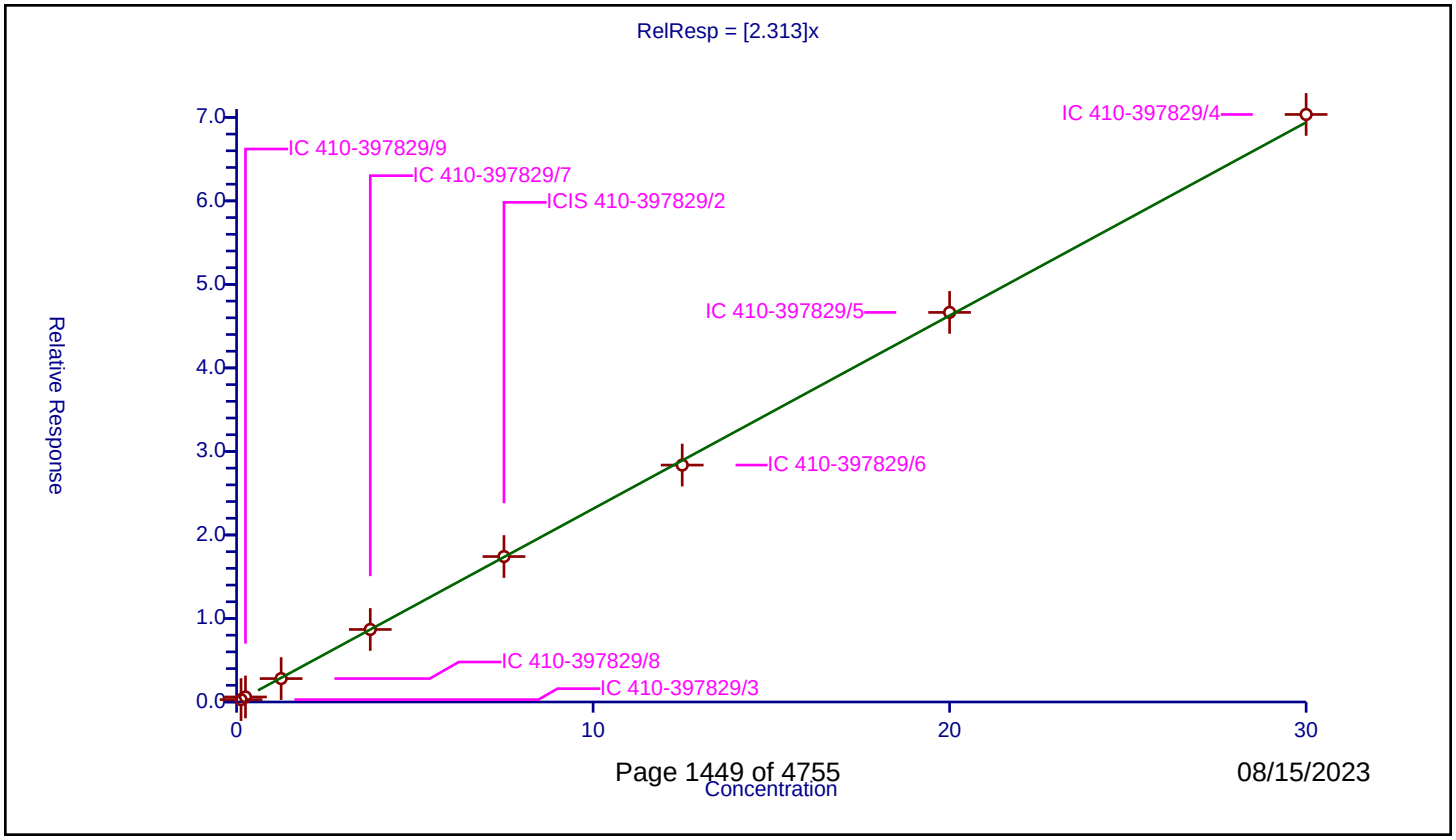
Curve Coefficients

Intercept:	0
Slope:	2.313

Error Coefficients

Standard Error:	1500000
Relative Standard Error:	2.2
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.284626	5.0	217338.0	2.277006	Y
2	IC 410-397829/9	0.25	0.600635	5.0	188767.0	2.402539	Y
3	IC 410-397829/8	1.25	2.802926	5.0	234760.0	2.242341	Y
4	IC 410-397829/7	3.75	8.684239	5.0	192478.0	2.315797	Y
5	ICIS 410-397829/2	7.5	17.417339	5.0	212767.0	2.322312	Y
6	IC 410-397829/6	12.5	28.367052	5.0	230583.0	2.269364	Y
7	IC 410-397829/5	20.0	46.645949	5.0	227097.0	2.332297	Y
8	IC 410-397829/4	30.0	70.34769	5.0	211309.0	2.344923	Y



Calibration / Bis(2-chloroethyl)ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

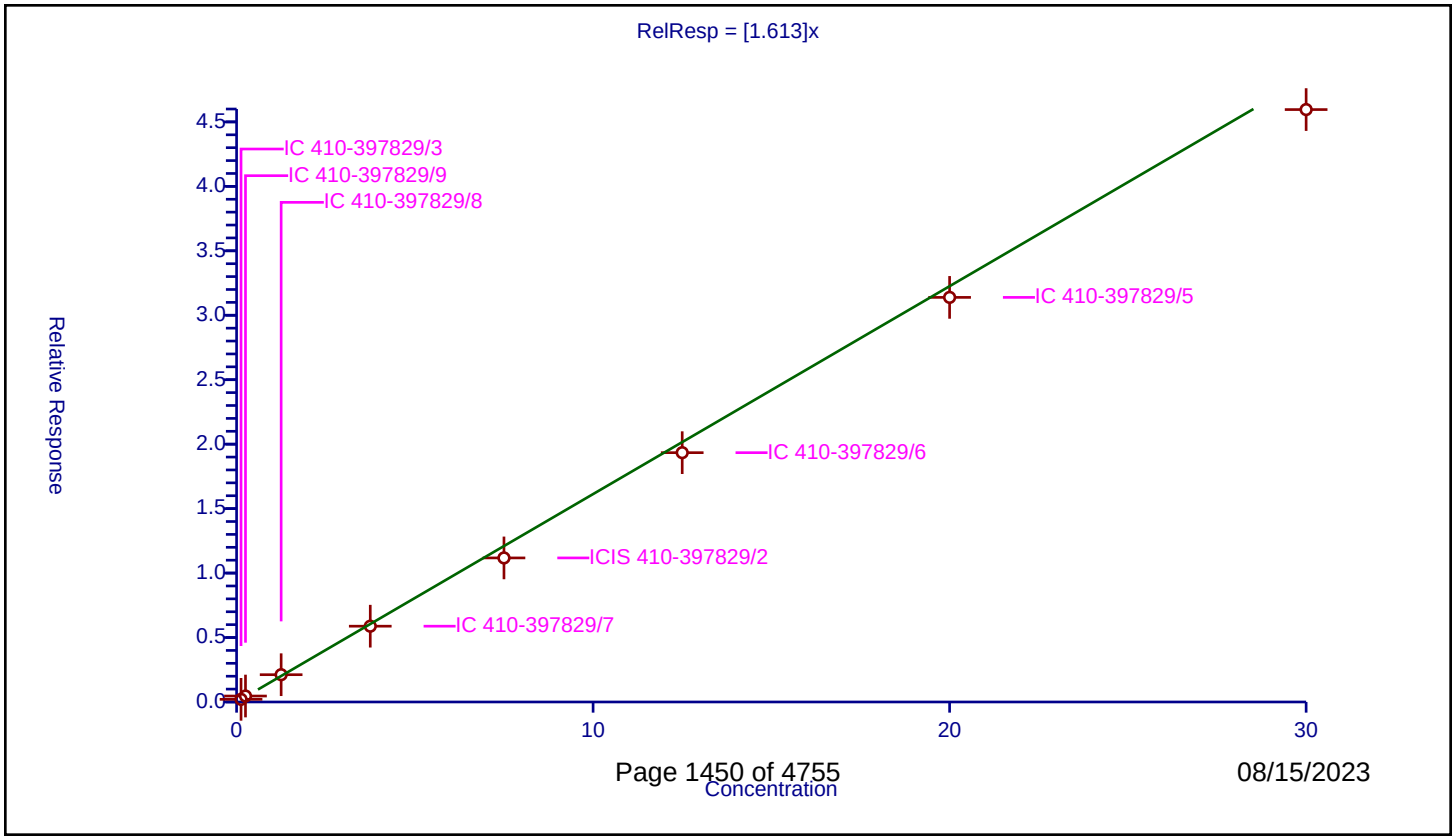
Curve Coefficients

Intercept:	0
Slope:	1.613

Error Coefficients

Standard Error:	992000
Relative Standard Error:	7.2
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.206729	5.0	217338.0	1.65383	Y
2	IC 410-397829/9	0.25	0.461866	5.0	188767.0	1.847463	Y
3	IC 410-397829/8	1.25	2.117673	5.0	234760.0	1.694139	Y
4	IC 410-397829/7	3.75	5.880204	5.0	192478.0	1.568055	Y
5	ICIS 410-397829/2	7.5	11.175159	5.0	212767.0	1.490021	Y
6	IC 410-397829/6	12.5	19.341777	5.0	230583.0	1.547342	Y
7	IC 410-397829/5	20.0	31.387755	5.0	227097.0	1.569388	Y
8	IC 410-397829/4	30.0	45.956963	5.0	211309.0	1.531899	Y



Calibration / 2-Chlorophenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

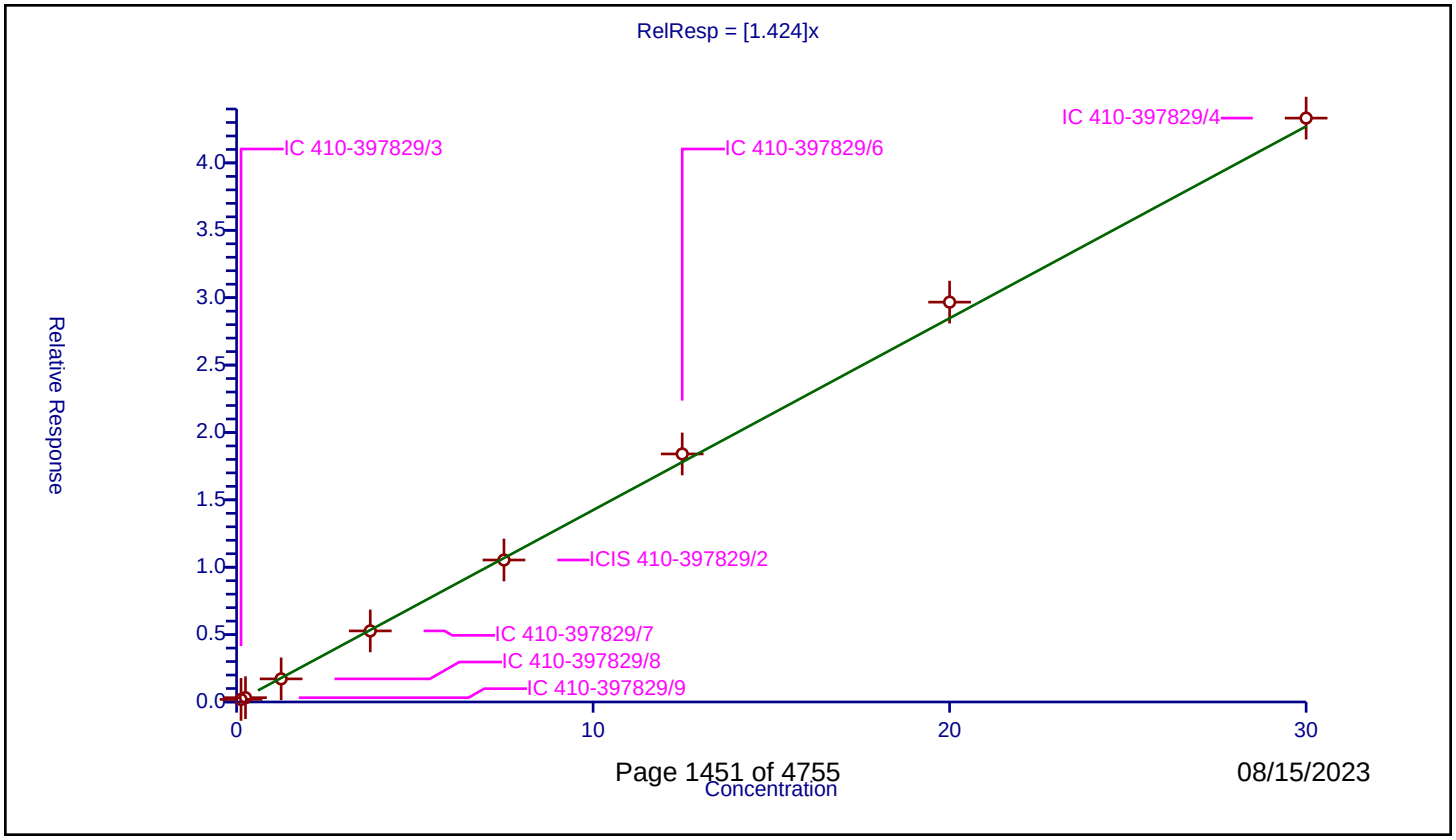
Curve Coefficients

Intercept:	0
Slope:	1.424

Error Coefficients

Standard Error:	936000
Relative Standard Error:	5.5
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.191361	5.0	217338.0	1.530887	Y
2	IC 410-397829/9	0.25	0.31915	5.0	188767.0	1.2766	Y
3	IC 410-397829/8	1.25	1.714219	5.0	234760.0	1.371375	Y
4	IC 410-397829/7	3.75	5.274681	5.0	192478.0	1.406582	Y
5	ICIS 410-397829/2	7.5	10.535703	5.0	212767.0	1.40476	Y
6	IC 410-397829/6	12.5	18.404826	5.0	230583.0	1.472386	Y
7	IC 410-397829/5	20.0	29.670934	5.0	227097.0	1.483547	Y
8	IC 410-397829/4	30.0	43.326053	5.0	211309.0	1.444202	Y



Calibration / 1,3-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

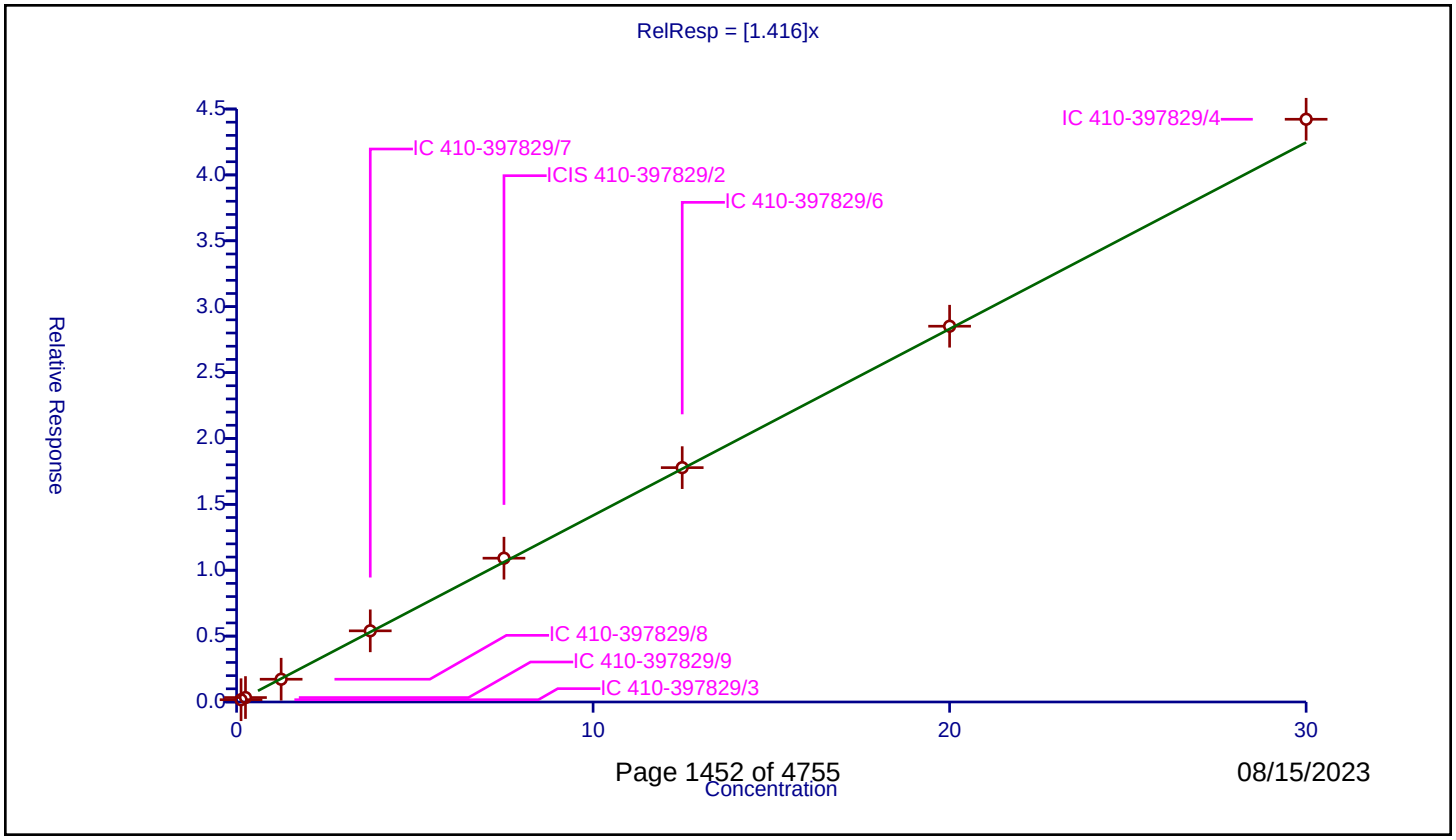
Curve Coefficients

Intercept:	0
Slope:	1.416

Error Coefficients

Standard Error:	934000
Relative Standard Error:	3.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.172634	5.0	217338.0	1.381075	Y
2	IC 410-397829/9	0.25	0.336049	5.0	188767.0	1.344197	Y
3	IC 410-397829/8	1.25	1.726295	5.0	234760.0	1.381036	Y
4	IC 410-397829/7	3.75	5.400747	5.0	192478.0	1.440199	Y
5	ICIS 410-397829/2	7.5	10.913135	5.0	212767.0	1.455085	Y
6	IC 410-397829/6	12.5	17.786198	5.0	230583.0	1.422896	Y
7	IC 410-397829/5	20.0	28.51777	5.0	227097.0	1.425888	Y
8	IC 410-397829/4	30.0	44.223034	5.0	211309.0	1.474101	Y



Calibration / 1,4-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

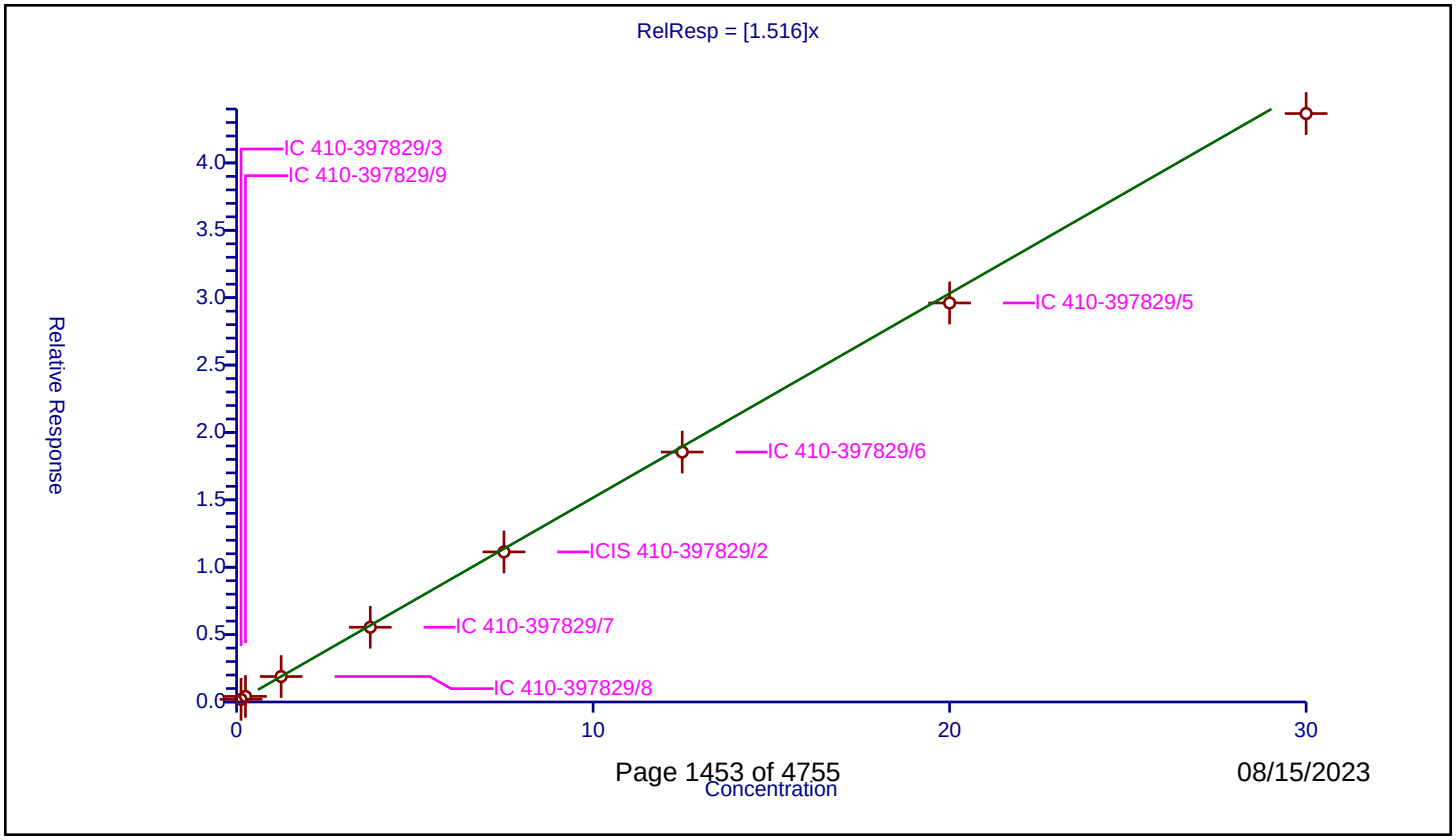
Curve Coefficients

Intercept:	0
Slope:	1.516

Error Coefficients

Standard Error:	943000
Relative Standard Error:	4.5
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.196652	5.0	217338.0	1.573218	Y
2	IC 410-397829/9	0.25	0.414585	5.0	188767.0	1.658341	Y
3	IC 410-397829/8	1.25	1.889398	5.0	234760.0	1.511518	Y
4	IC 410-397829/7	3.75	5.546166	5.0	192478.0	1.478978	Y
5	ICIS 410-397829/2	7.5	11.134692	5.0	212767.0	1.484626	Y
6	IC 410-397829/6	12.5	18.544711	5.0	230583.0	1.483577	Y
7	IC 410-397829/5	20.0	29.608846	5.0	227097.0	1.480442	Y
8	IC 410-397829/4	30.0	43.664397	5.0	211309.0	1.45548	Y



Calibration / Benzyl alcohol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

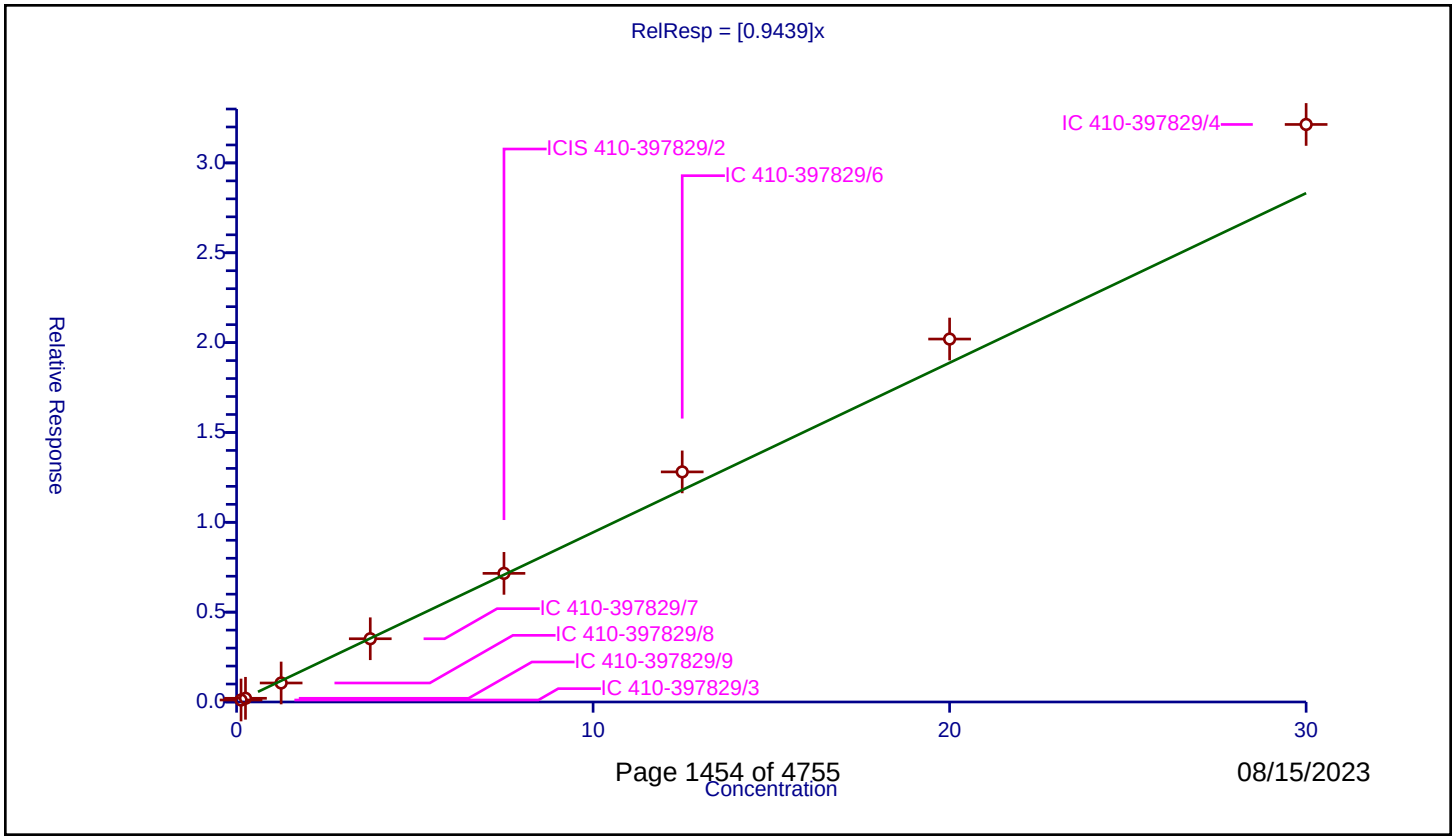
Curve Coefficients

Intercept:	0
Slope:	0.9439

Error Coefficients

Standard Error:	671000
Relative Standard Error:	9.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.11091	5.0	217338.0	0.887282	Y
2	IC 410-397829/9	0.25	0.204856	5.0	188767.0	0.819423	Y
3	IC 410-397829/8	1.25	1.057569	5.0	234760.0	0.846056	Y
4	IC 410-397829/7	3.75	3.519181	5.0	192478.0	0.938448	Y
5	ICIS 410-397829/2	7.5	7.159005	5.0	212767.0	0.954534	Y
6	IC 410-397829/6	12.5	12.805237	5.0	230583.0	1.024419	Y
7	IC 410-397829/5	20.0	20.198175	5.0	227097.0	1.009909	Y
8	IC 410-397829/4	30.0	32.141272	5.0	211309.0	1.071376	Y



Calibration / 1,2-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

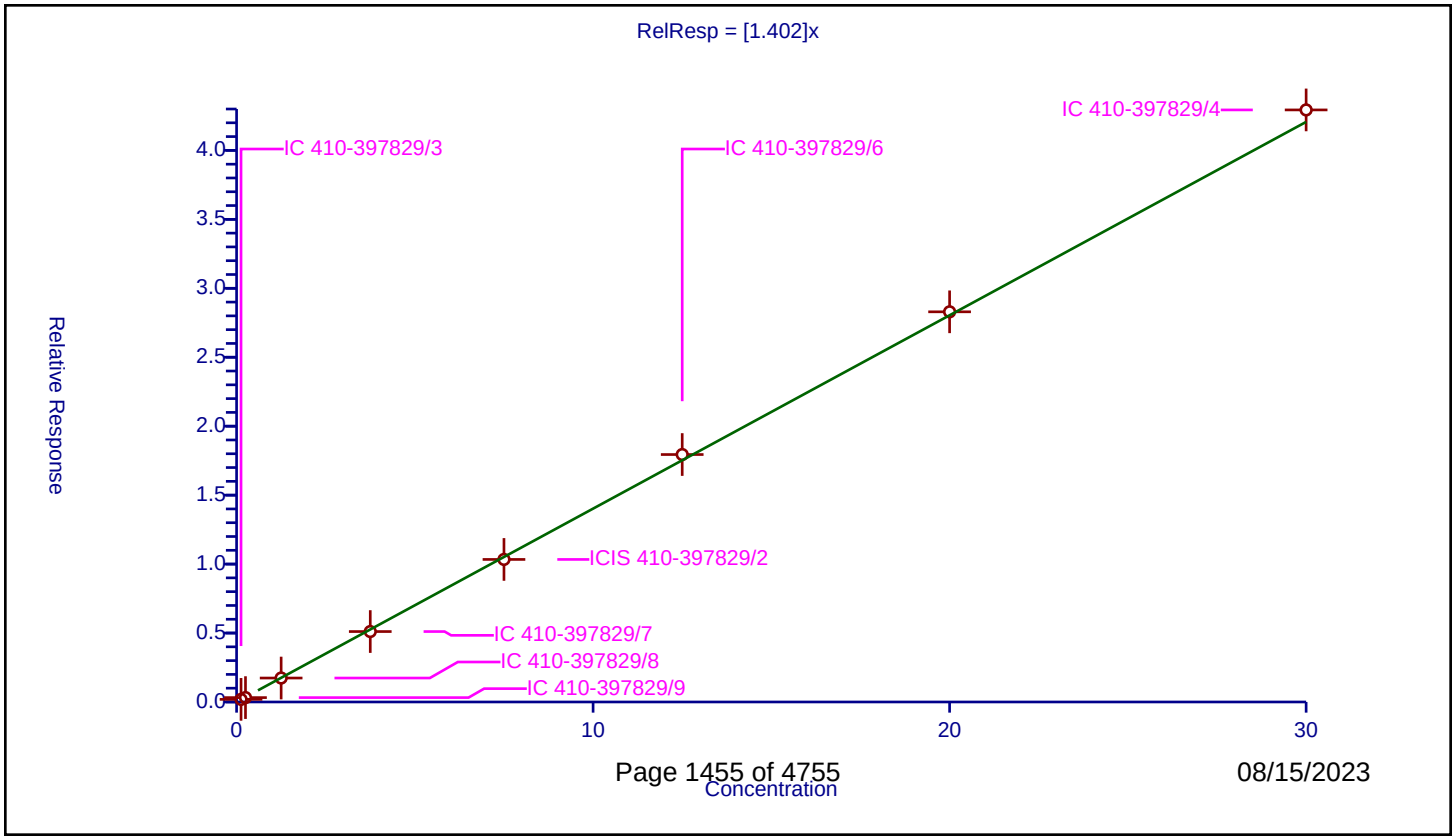
Curve Coefficients

Intercept:	0
Slope:	1.402

Error Coefficients

Standard Error:	916000
Relative Standard Error:	5.2
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.191246	5.0	217338.0	1.529967	Y
2	IC 410-397829/9	0.25	0.318806	5.0	188767.0	1.275223	Y
3	IC 410-397829/8	1.25	1.73769	5.0	234760.0	1.390152	Y
4	IC 410-397829/7	3.75	5.107207	5.0	192478.0	1.361922	Y
5	ICIS 410-397829/2	7.5	10.337834	5.0	212767.0	1.378378	Y
6	IC 410-397829/6	12.5	17.944753	5.0	230583.0	1.43558	Y
7	IC 410-397829/5	20.0	28.294715	5.0	227097.0	1.414736	Y
8	IC 410-397829/4	30.0	42.93492	5.0	211309.0	1.431164	Y



Calibration / 2,2'-oxybis[1-chloropropane]

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

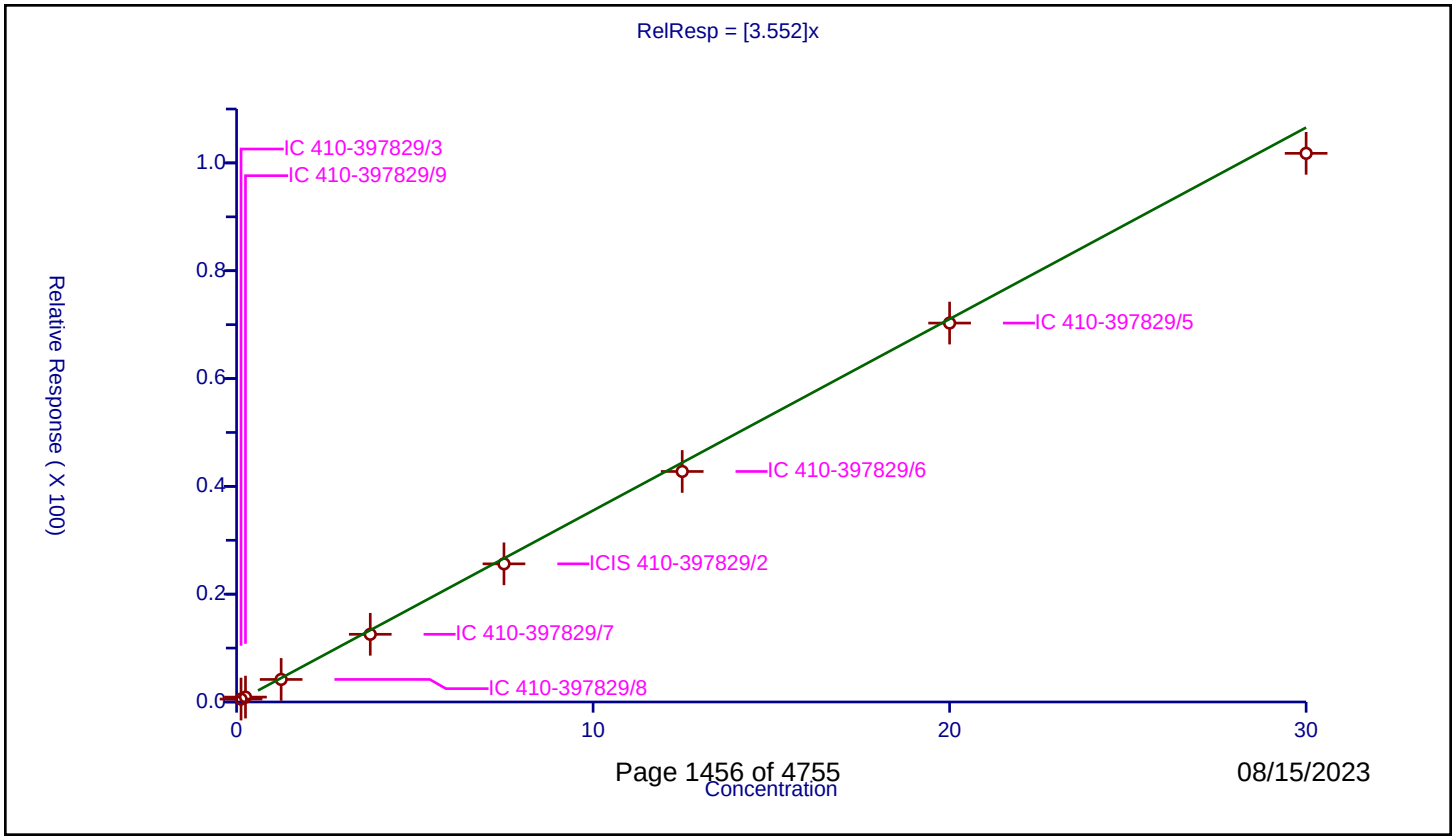
Curve Coefficients

Intercept:	0
Slope:	3.552

Error Coefficients

Standard Error:	2210000
Relative Standard Error:	9.4
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.543416	5.0	217338.0	4.34733	Y
2	IC 410-397829/9	0.25	0.907574	5.0	188767.0	3.630296	Y
3	IC 410-397829/8	1.25	4.181419	5.0	234760.0	3.345135	Y
4	IC 410-397829/7	3.75	12.559747	5.0	192478.0	3.349266	Y
5	ICIS 410-397829/2	7.5	25.627588	5.0	212767.0	3.417012	Y
6	IC 410-397829/6	12.5	42.762454	5.0	230583.0	3.420996	Y
7	IC 410-397829/5	20.0	70.29265	5.0	227097.0	3.514633	Y
8	IC 410-397829/4	30.0	101.77664	5.0	211309.0	3.392555	Y



Calibration / 2-Methylphenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

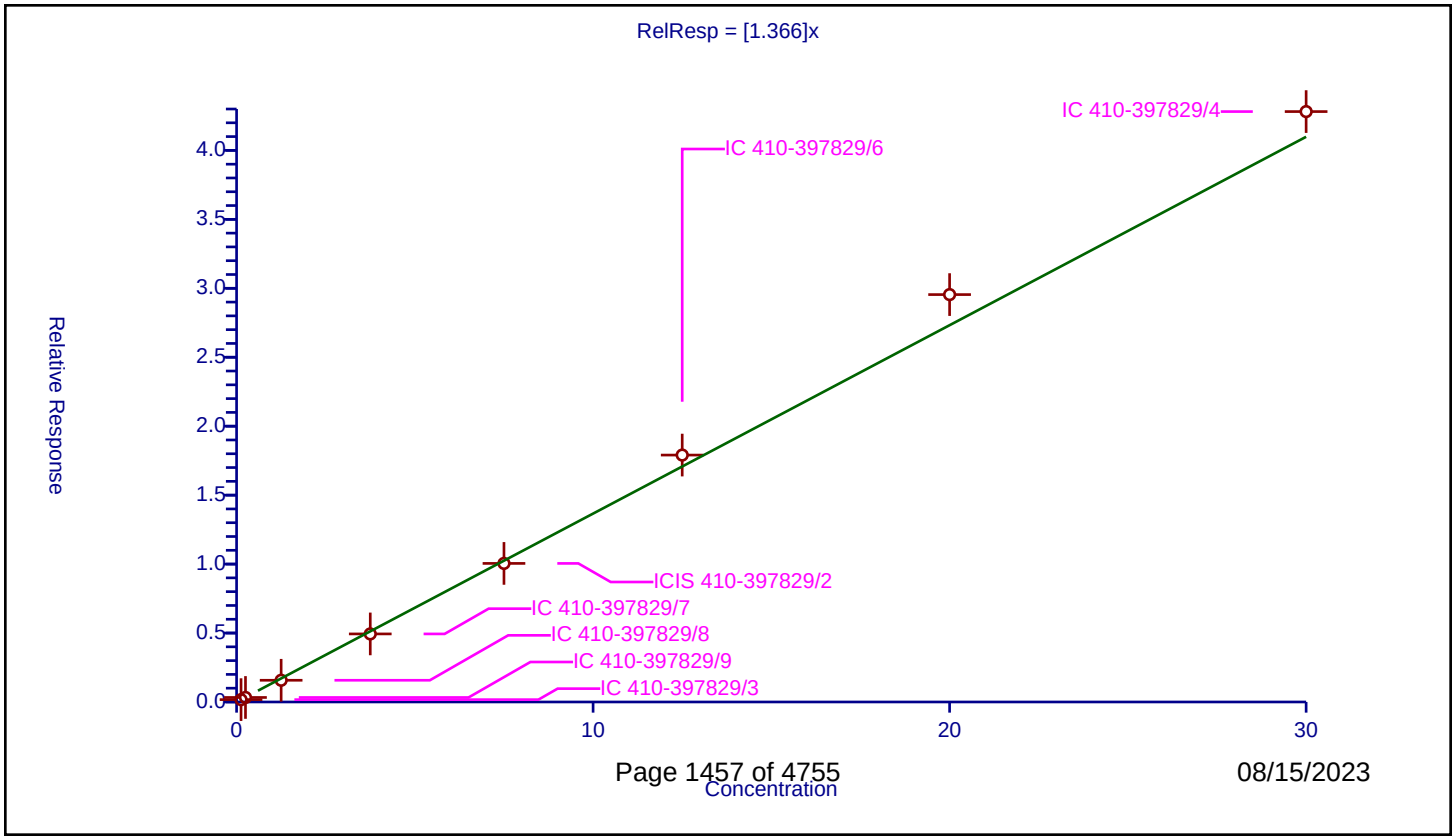
Curve Coefficients

Intercept:	0
Slope:	1.366

Error Coefficients

Standard Error:	924000
Relative Standard Error:	5.4
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.170495	5.0	217338.0	1.363958	Y
2	IC 410-397829/9	0.25	0.328023	5.0	188767.0	1.312094	Y
3	IC 410-397829/8	1.25	1.5748	5.0	234760.0	1.25984	Y
4	IC 410-397829/7	3.75	4.936876	5.0	192478.0	1.3165	Y
5	ICIS 410-397829/2	7.5	10.049655	5.0	212767.0	1.339954	Y
6	IC 410-397829/6	12.5	17.90622	5.0	230583.0	1.432498	Y
7	IC 410-397829/5	20.0	29.542618	5.0	227097.0	1.477131	Y
8	IC 410-397829/4	30.0	42.81467	5.0	211309.0	1.427156	Y



Calibration / N-Nitrosopyrrolidine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

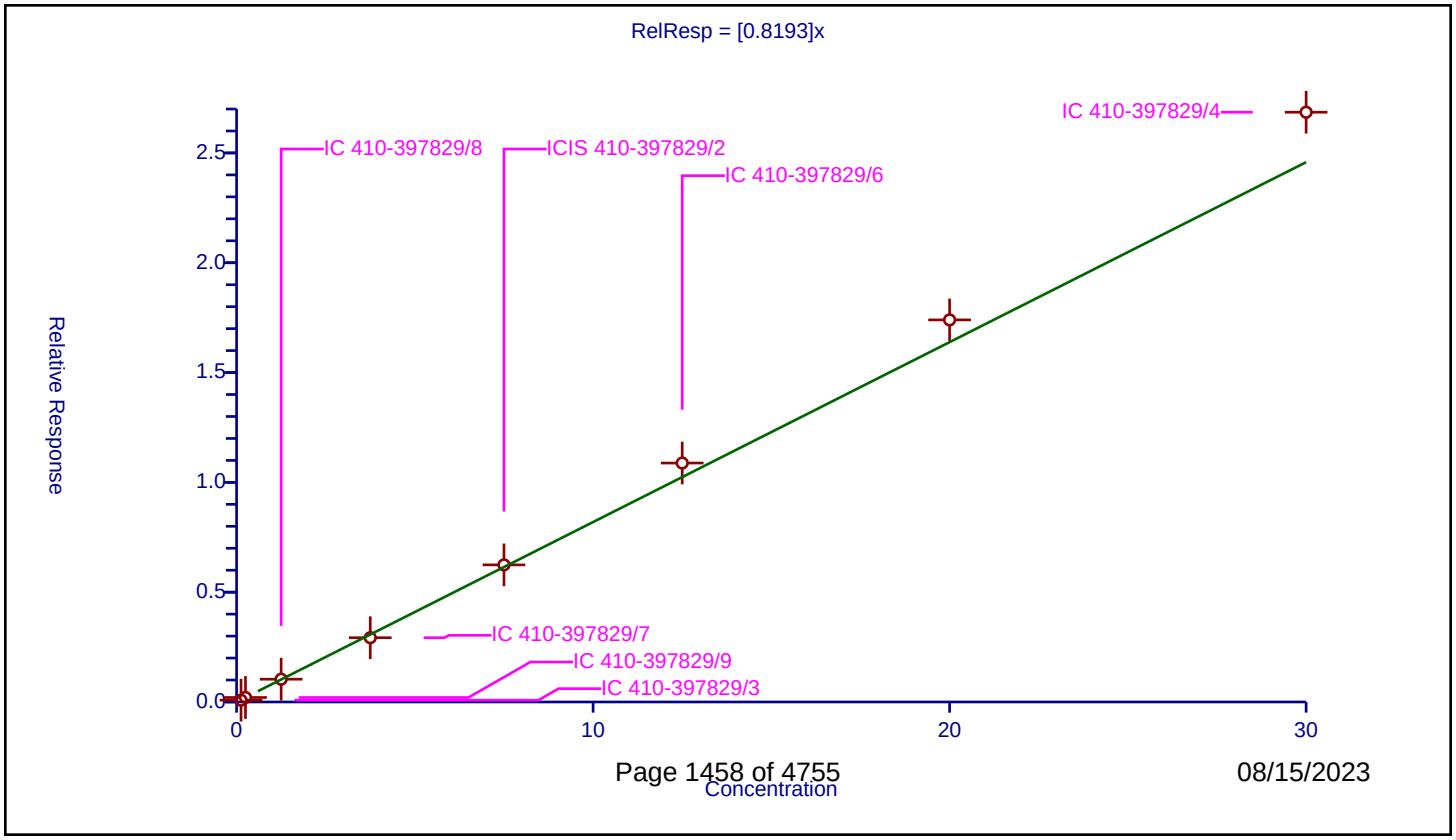
Curve Coefficients

Intercept:	0
Slope:	0.8193

Error Coefficients

Standard Error:	567000
Relative Standard Error:	9.1
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.082176	5.0	217338.0	0.657409	Y
2	IC 410-397829/9	0.25	0.20467	5.0	188767.0	0.818681	Y
3	IC 410-397829/8	1.25	1.037272	5.0	234760.0	0.829818	Y
4	IC 410-397829/7	3.75	2.92649	5.0	192478.0	0.780397	Y
5	ICIS 410-397829/2	7.5	6.243426	5.0	212767.0	0.832457	Y
6	IC 410-397829/6	12.5	10.879597	5.0	230583.0	0.870368	Y
7	IC 410-397829/5	20.0	17.398424	5.0	227097.0	0.869921	Y
8	IC 410-397829/4	30.0	26.854867	5.0	211309.0	0.895162	Y



Calibration / Acetophenone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

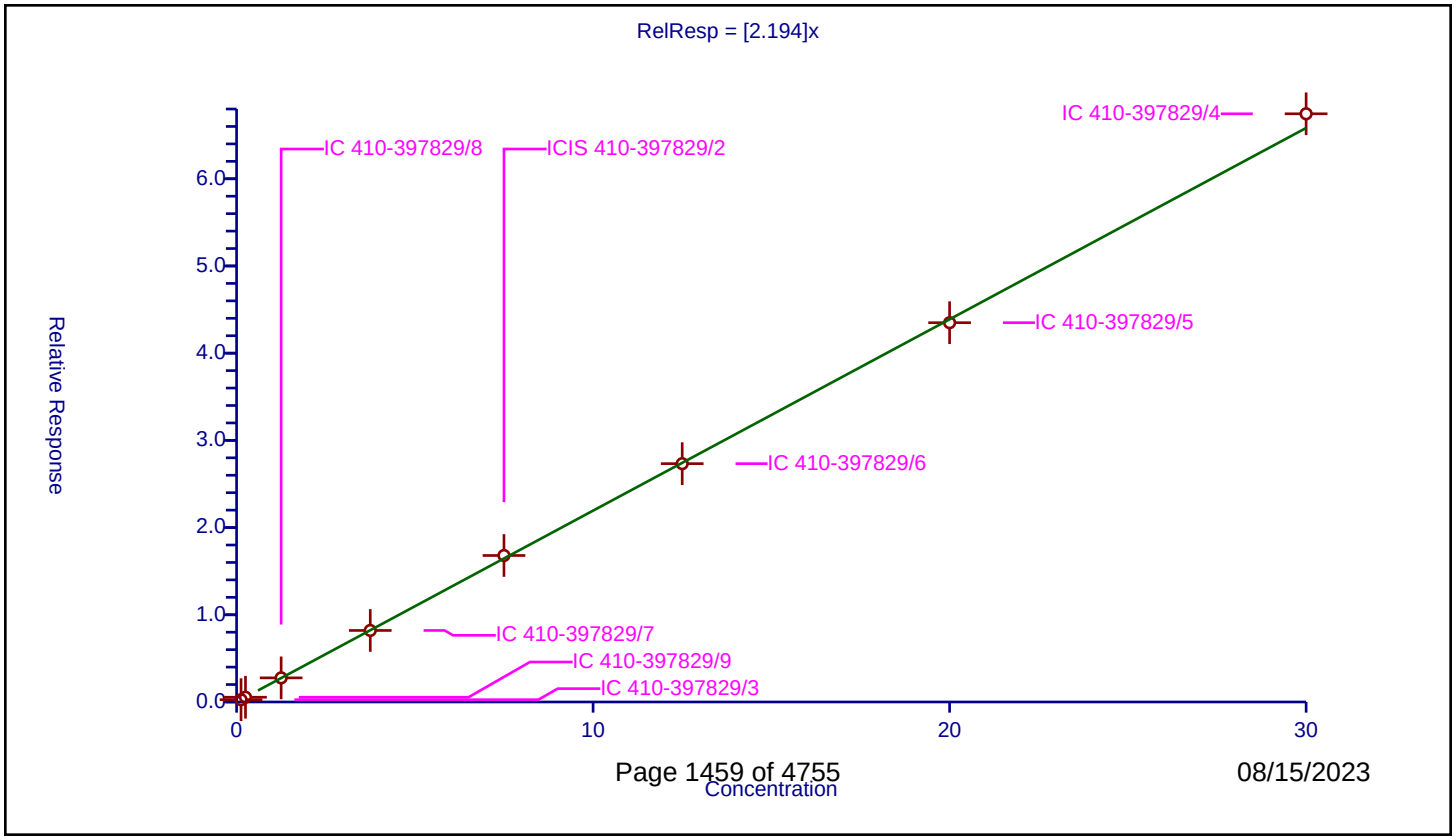
Curve Coefficients

Intercept:	0
Slope:	2.194

Error Coefficients

Standard Error:	1430000
Relative Standard Error:	1.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.264841	5.0	217338.0	2.118728	Y
2	IC 410-397829/9	0.25	0.546467	5.0	188767.0	2.185869	Y
3	IC 410-397829/8	1.25	2.76476	5.0	234760.0	2.211808	Y
4	IC 410-397829/7	3.75	8.203509	5.0	192478.0	2.187602	Y
5	ICIS 410-397829/2	7.5	16.798352	5.0	212767.0	2.23978	Y
6	IC 410-397829/6	12.5	27.330159	5.0	230583.0	2.186413	Y
7	IC 410-397829/5	20.0	43.496017	5.0	227097.0	2.174801	Y
8	IC 410-397829/4	30.0	67.453682	5.0	211309.0	2.248456	Y



Calibration / N-Nitrosodi-n-propylamine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

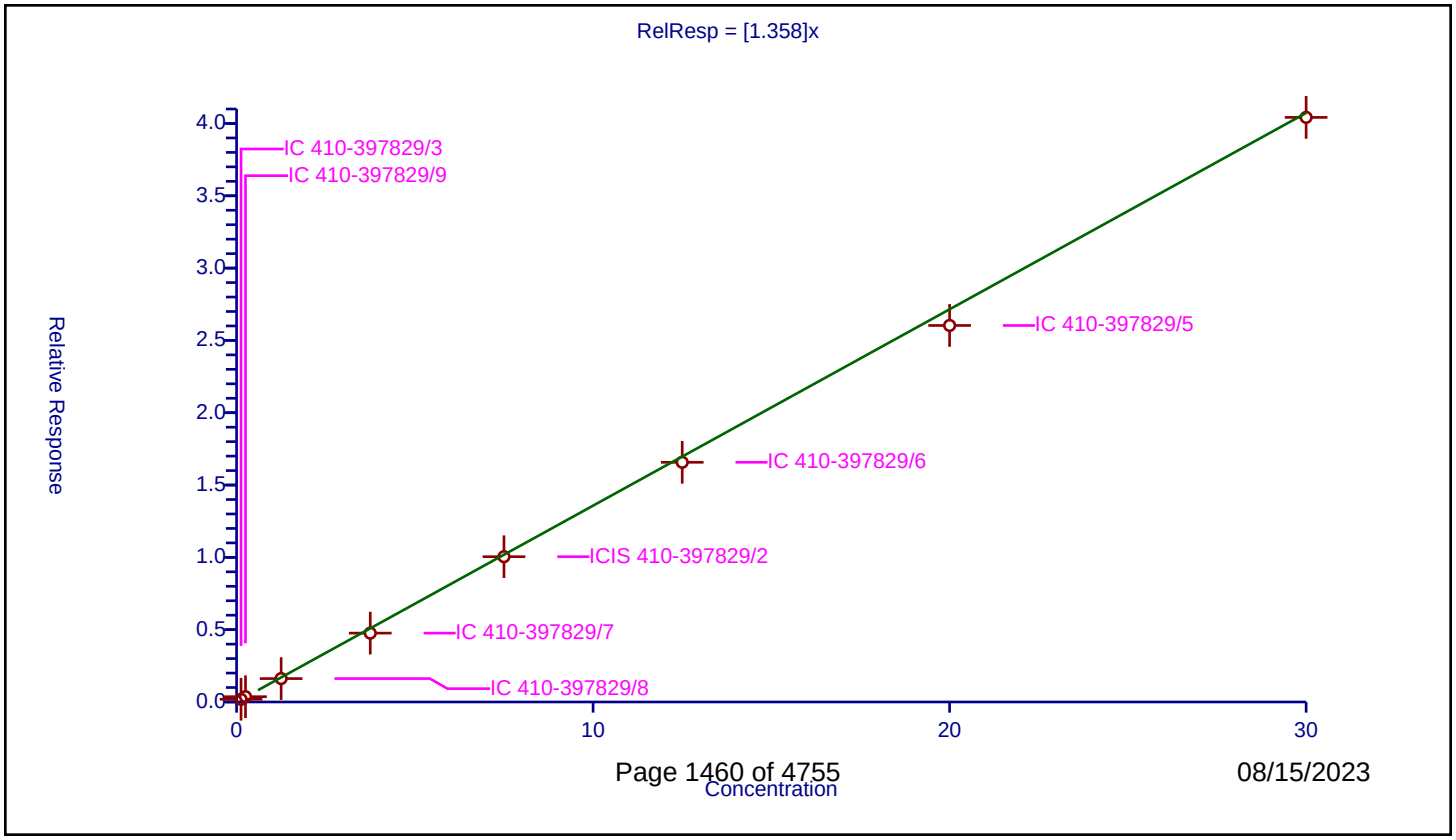
Curve Coefficients

Intercept:	0
Slope:	1.358

Error Coefficients

Standard Error:	855000
Relative Standard Error:	6.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.189336	5.0	217338.0	1.514691	Y
2	IC 410-397829/9	0.25	0.366695	5.0	188767.0	1.466782	Y
3	IC 410-397829/8	1.25	1.618738	5.0	234760.0	1.294991	Y
4	IC 410-397829/7	3.75	4.761349	5.0	192478.0	1.269693	Y
5	ICIS 410-397829/2	7.5	10.046248	5.0	212767.0	1.3395	Y
6	IC 410-397829/6	12.5	16.572666	5.0	230583.0	1.325813	Y
7	IC 410-397829/5	20.0	26.034514	5.0	227097.0	1.301726	Y
8	IC 410-397829/4	30.0	40.420735	5.0	211309.0	1.347358	Y



Calibration / N-Nitrosomorpholine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

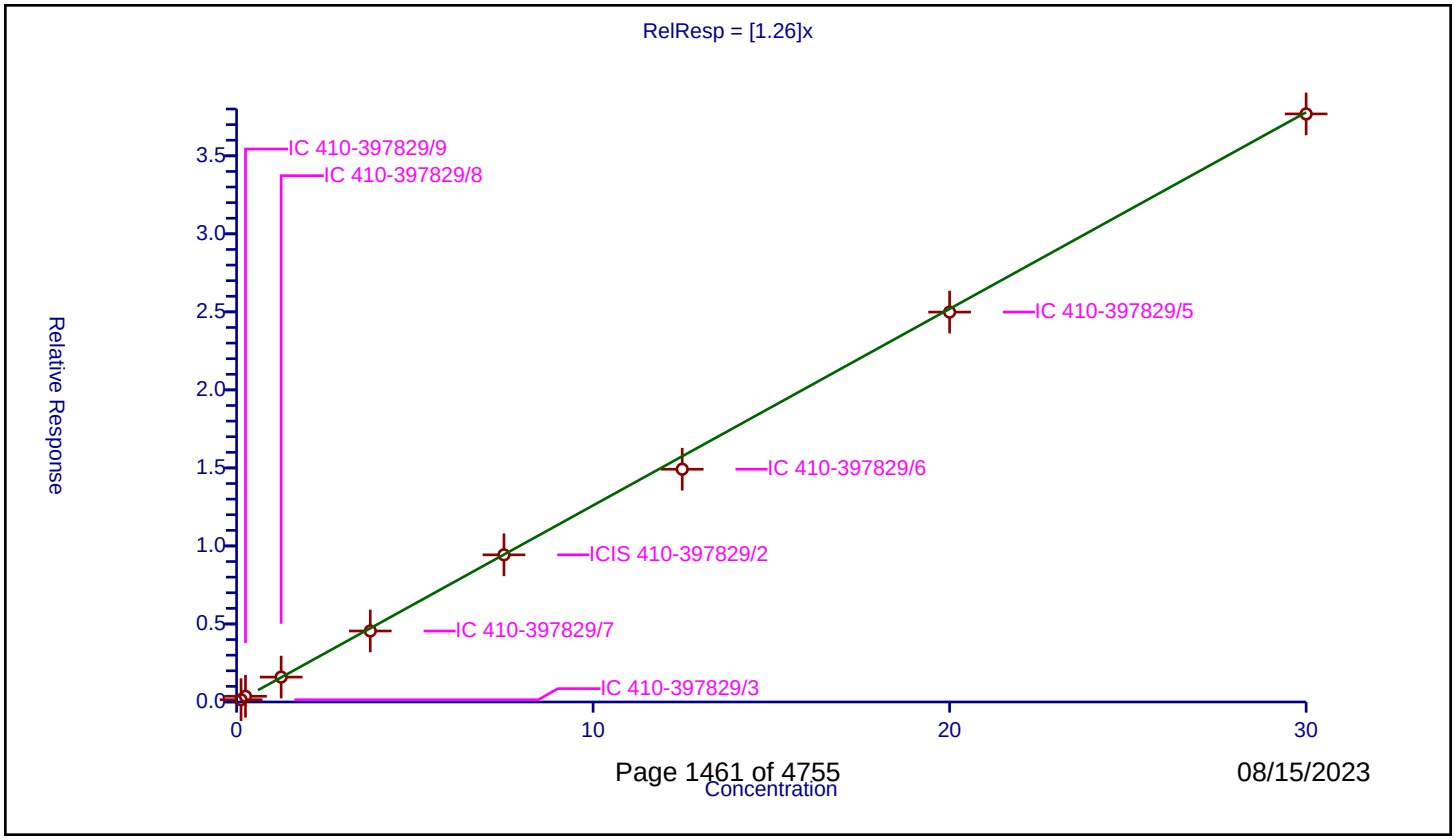
Curve Coefficients

Intercept:	0
Slope:	1.26

Error Coefficients

Standard Error:	801000
Relative Standard Error:	7.1
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.146178	5.0	217338.0	1.169423	Y
2	IC 410-397829/9	0.25	0.365345	5.0	188767.0	1.461378	Y
3	IC 410-397829/8	1.25	1.595651	5.0	234760.0	1.276521	Y
4	IC 410-397829/7	3.75	4.549767	5.0	192478.0	1.213271	Y
5	ICIS 410-397829/2	7.5	9.430974	5.0	212767.0	1.257463	Y
6	IC 410-397829/6	12.5	14.916776	5.0	230583.0	1.193342	Y
7	IC 410-397829/5	20.0	24.98668	5.0	227097.0	1.249334	Y
8	IC 410-397829/4	30.0	37.684765	5.0	211309.0	1.256159	Y



Calibration / 2-Toluidine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

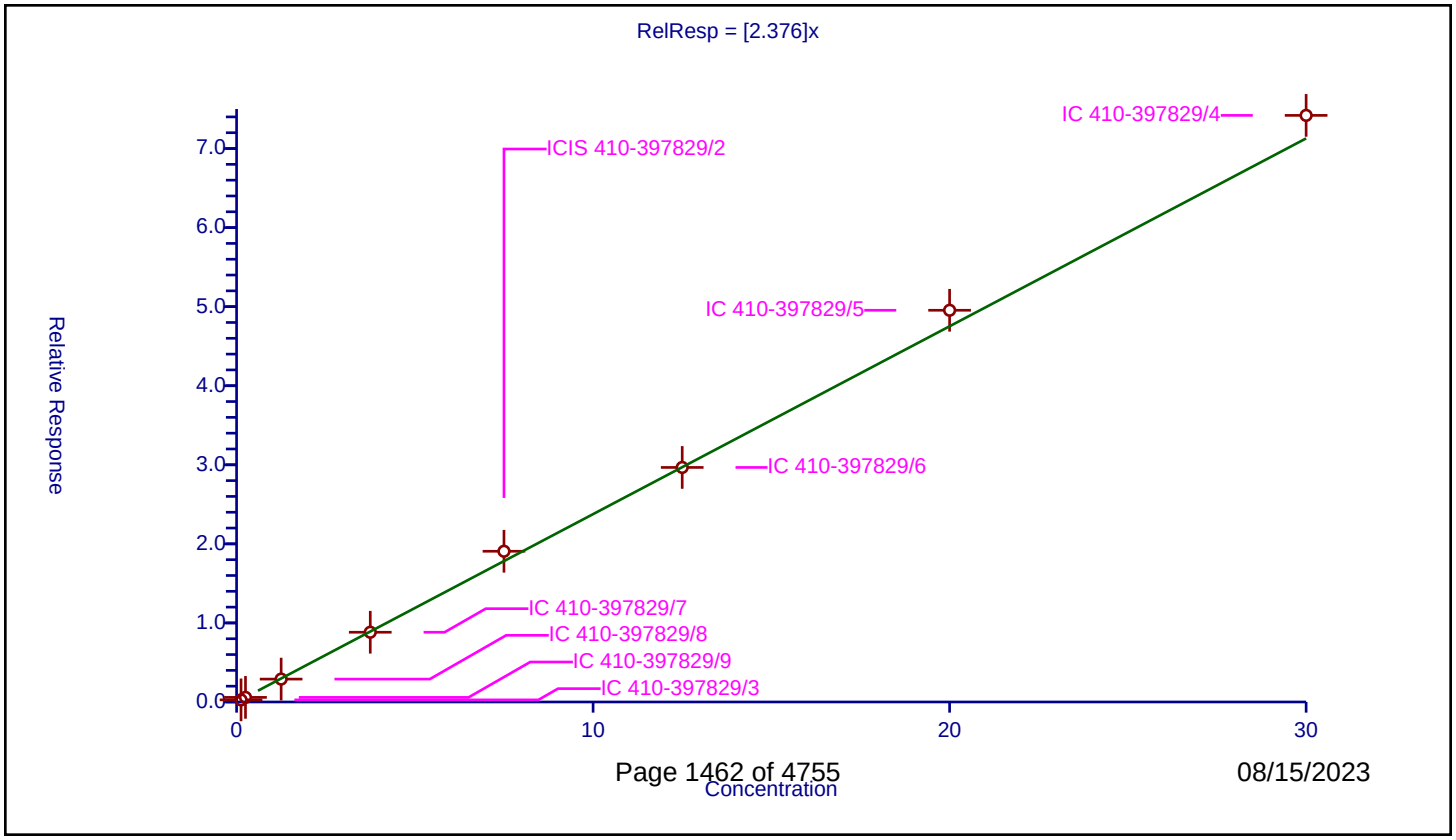
Curve Coefficients

Intercept:	0
Slope:	2.376

Error Coefficients

Standard Error:	1580000
Relative Standard Error:	5.2
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.267901	5.0	217338.0	2.143206	Y
2	IC 410-397829/9	0.25	0.582782	5.0	188767.0	2.331128	Y
3	IC 410-397829/8	1.25	2.89517	5.0	234760.0	2.316136	Y
4	IC 410-397829/7	3.75	8.820567	5.0	192478.0	2.352151	Y
5	ICIS 410-397829/2	7.5	19.066209	5.0	212767.0	2.542161	Y
6	IC 410-397829/6	12.5	29.666129	5.0	230583.0	2.37329	Y
7	IC 410-397829/5	20.0	49.546559	5.0	227097.0	2.477328	Y
8	IC 410-397829/4	30.0	74.192888	5.0	211309.0	2.473096	Y



Calibration / 4-Methylphenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

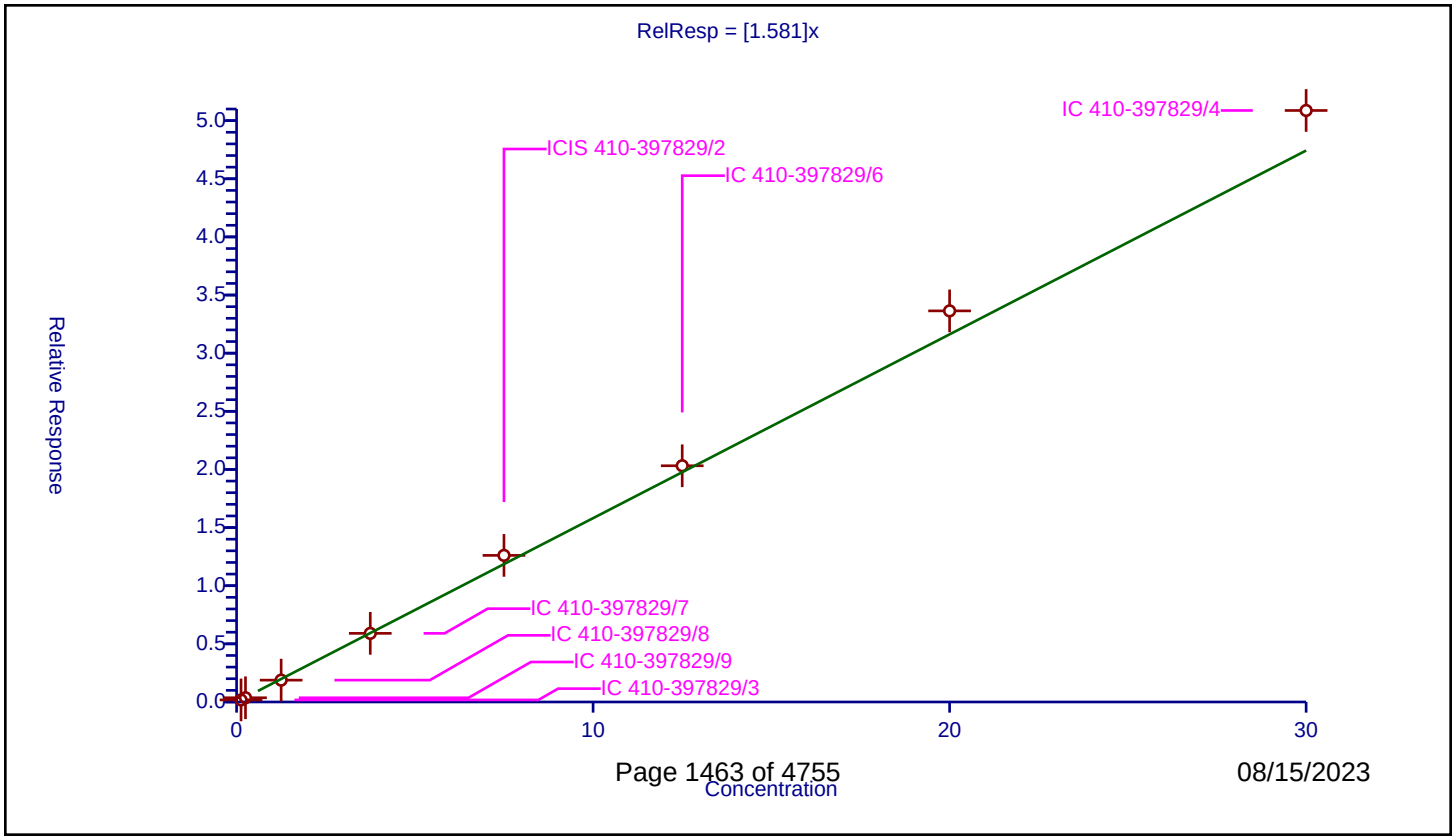
Curve Coefficients

Intercept:	0
Slope:	1.581

Error Coefficients

Standard Error:	1080000
Relative Standard Error:	6.7
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.178846	5.0	217338.0	1.430767	Y
2	IC 410-397829/9	0.25	0.363967	5.0	188767.0	1.455869	Y
3	IC 410-397829/8	1.25	1.878727	5.0	234760.0	1.502982	Y
4	IC 410-397829/7	3.75	5.901532	5.0	192478.0	1.573742	Y
5	ICIS 410-397829/2	7.5	12.607994	5.0	212767.0	1.681066	Y
6	IC 410-397829/6	12.5	20.318237	5.0	230583.0	1.625459	Y
7	IC 410-397829/5	20.0	33.63741	5.0	227097.0	1.681871	Y
8	IC 410-397829/4	30.0	50.873342	5.0	211309.0	1.695778	Y



Calibration / Hexachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

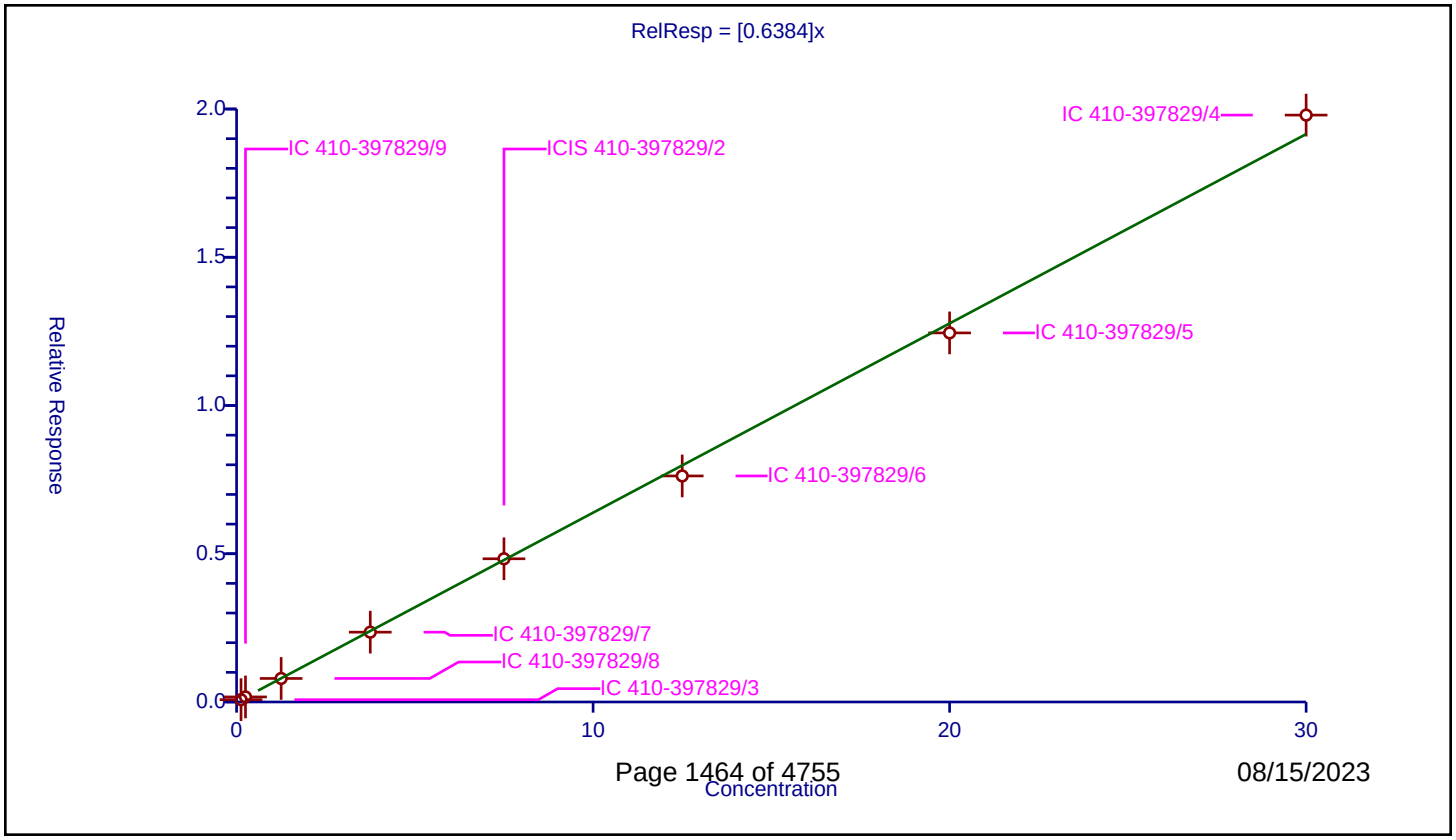
Curve Coefficients

Intercept:	0
Slope:	0.6384

Error Coefficients

Standard Error:	413000
Relative Standard Error:	3.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.078219	5.0	217338.0	0.625753	Y
2	IC 410-397829/9	0.25	0.170687	5.0	188767.0	0.682746	Y
3	IC 410-397829/8	1.25	0.79364	5.0	234760.0	0.634912	Y
4	IC 410-397829/7	3.75	2.354867	5.0	192478.0	0.627964	Y
5	ICIS 410-397829/2	7.5	4.830401	5.0	212767.0	0.644054	Y
6	IC 410-397829/6	12.5	7.623676	5.0	230583.0	0.609894	Y
7	IC 410-397829/5	20.0	12.448337	5.0	227097.0	0.622417	Y
8	IC 410-397829/4	30.0	19.795371	5.0	211309.0	0.659846	Y



Calibration / Nitrobenzene-d5

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

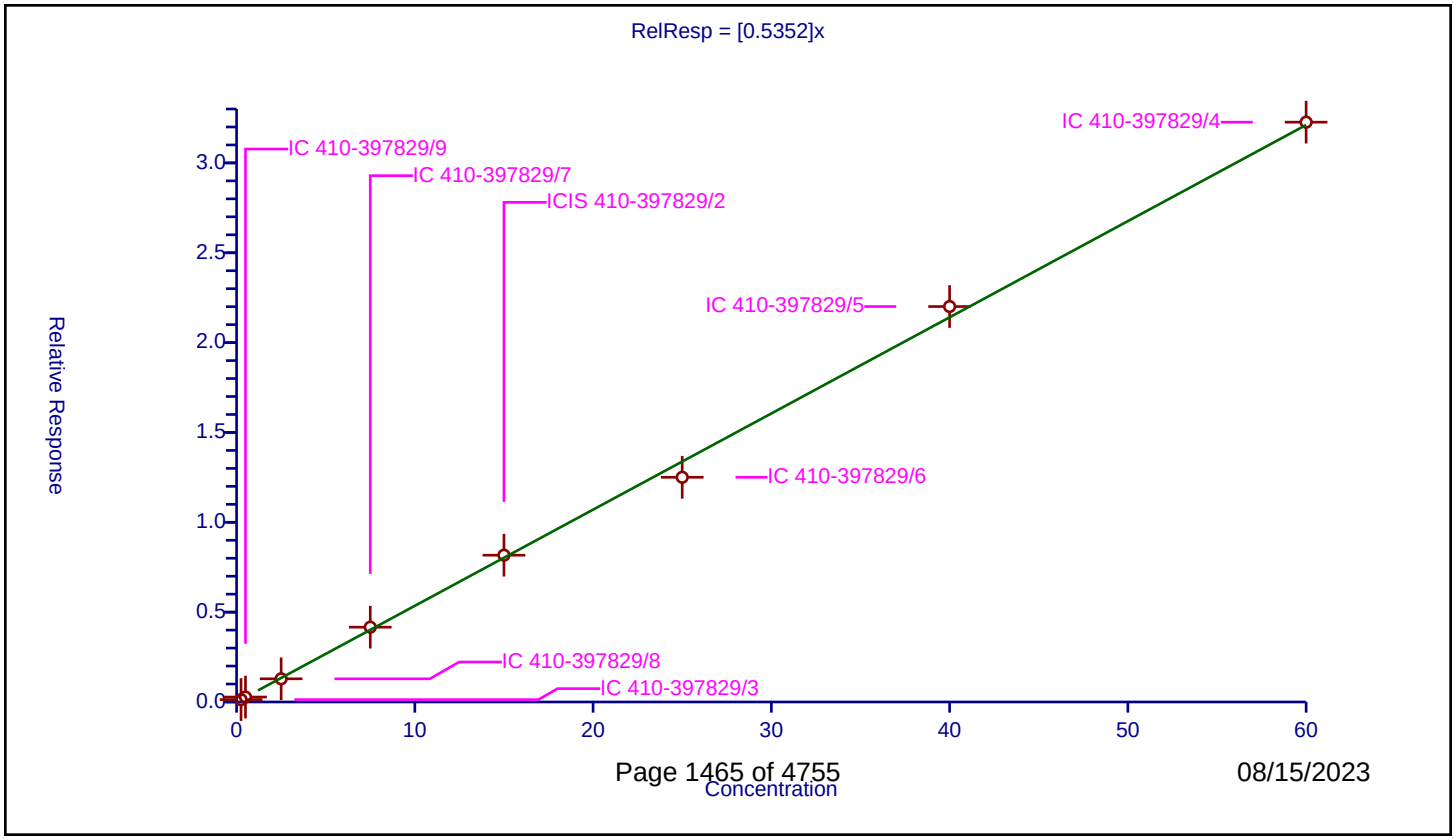
Curve Coefficients

Intercept:	0
Slope:	0.5352

Error Coefficients

Standard Error:	2660000
Relative Standard Error:	3.6
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.25	0.131551	5.0	847959.0	0.526205	Y
2	IC 410-397829/9	0.5	0.275725	5.0	717961.0	0.551451	Y
3	IC 410-397829/8	2.5	1.290104	5.0	942199.0	0.516042	Y
4	IC 410-397829/7	7.5	4.163441	5.0	708713.0	0.555126	Y
5	ICIS 410-397829/2	15.0	8.168879	5.0	781685.0	0.544592	Y
6	IC 410-397829/6	25.0	12.504677	5.0	925798.0	0.500187	Y
7	IC 410-397829/5	40.0	22.008317	5.0	853884.0	0.550208	Y
8	IC 410-397829/4	60.0	32.267888	5.0	822157.0	0.537798	Y



Calibration / Nitrobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

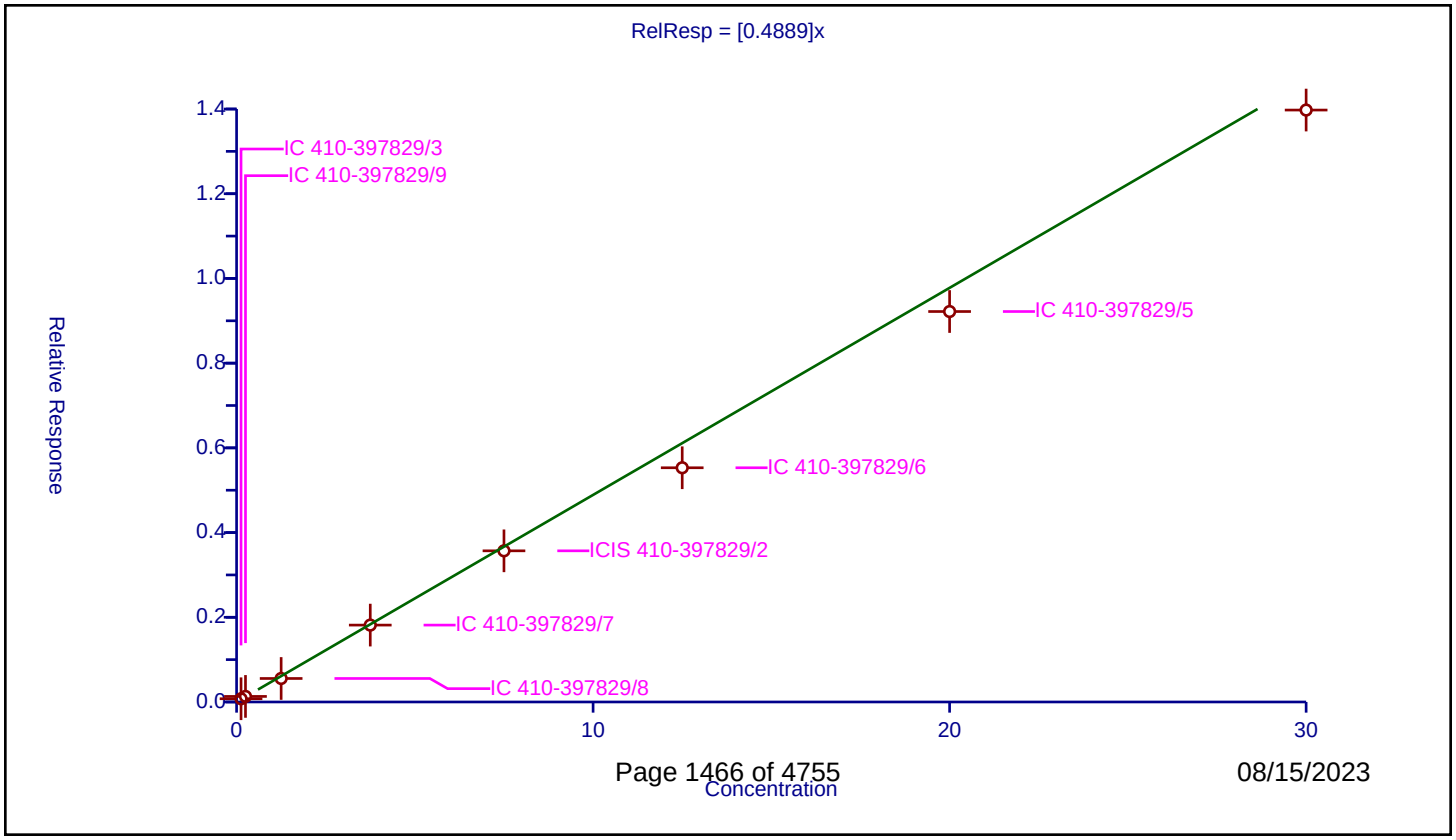
Curve Coefficients

Intercept:	0
Slope:	0.4889

Error Coefficients

Standard Error:	1150000
Relative Standard Error:	11.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.982

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.076525	5.0	847959.0	0.612199	Y
2	IC 410-397829/9	0.25	0.131414	5.0	717961.0	0.525655	Y
3	IC 410-397829/8	1.25	0.554978	5.0	942199.0	0.443983	Y
4	IC 410-397829/7	3.75	1.815552	5.0	708713.0	0.484147	Y
5	ICIS 410-397829/2	7.5	3.56881	5.0	781685.0	0.475841	Y
6	IC 410-397829/6	12.5	5.529997	5.0	925798.0	0.4424	Y
7	IC 410-397829/5	20.0	9.218577	5.0	853884.0	0.460929	Y
8	IC 410-397829/4	30.0	13.975135	5.0	822157.0	0.465838	Y



Calibration / N-Nitrosopiperidine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

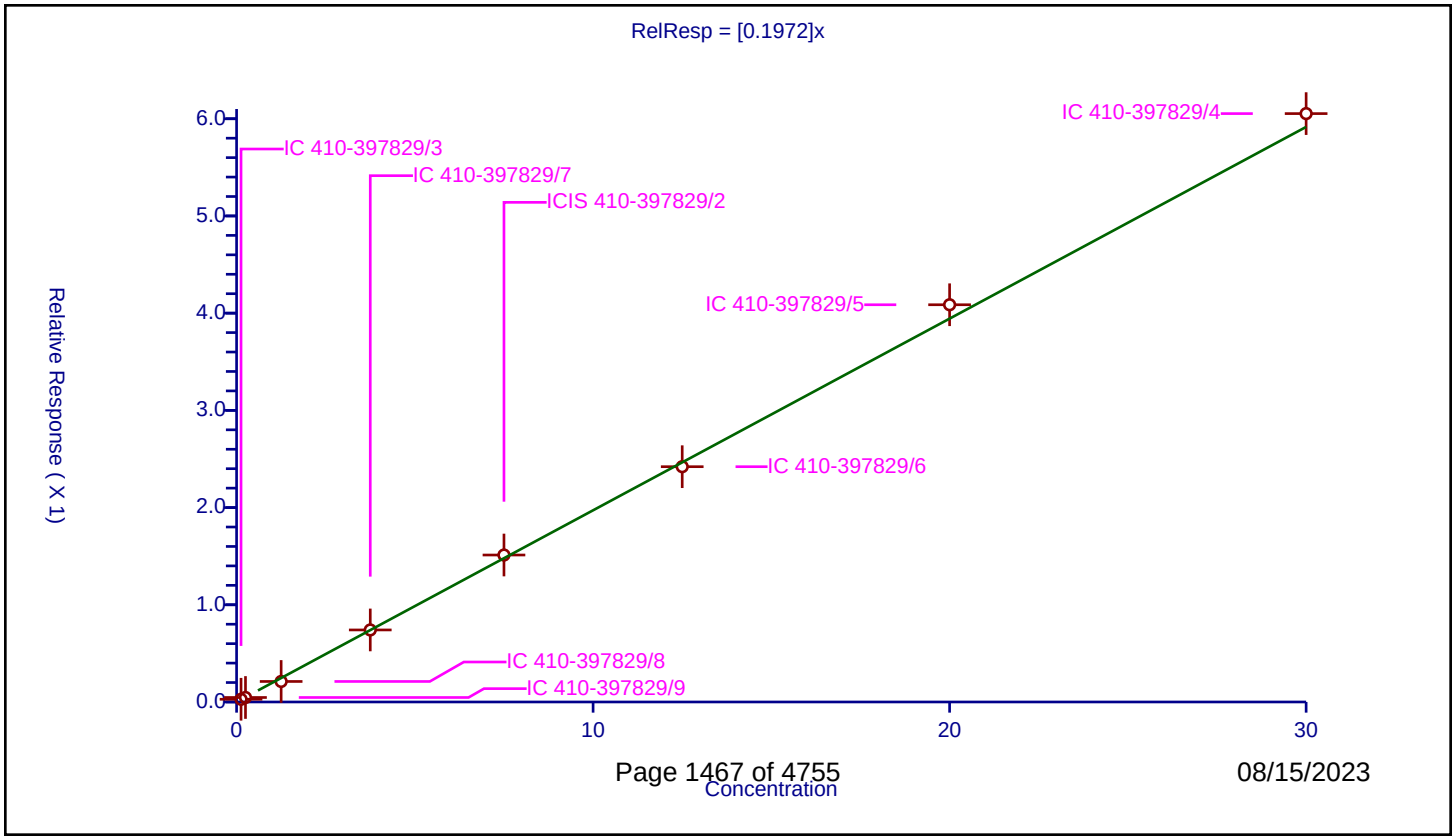
Curve Coefficients

Intercept:	0
Slope:	0.1972

Error Coefficients

Standard Error:	500000
Relative Standard Error:	8.2
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.02812	5.0	847959.0	0.224964	Y
2	IC 410-397829/9	0.25	0.046207	5.0	717961.0	0.184829	Y
3	IC 410-397829/8	1.25	0.211006	5.0	942199.0	0.168805	Y
4	IC 410-397829/7	3.75	0.740956	5.0	708713.0	0.197588	Y
5	ICIS 410-397829/2	7.5	1.511933	5.0	781685.0	0.201591	Y
6	IC 410-397829/6	12.5	2.420604	5.0	925798.0	0.193648	Y
7	IC 410-397829/5	20.0	4.08655	5.0	853884.0	0.204328	Y
8	IC 410-397829/4	30.0	6.052907	5.0	822157.0	0.201764	Y



Calibration / Isophorone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

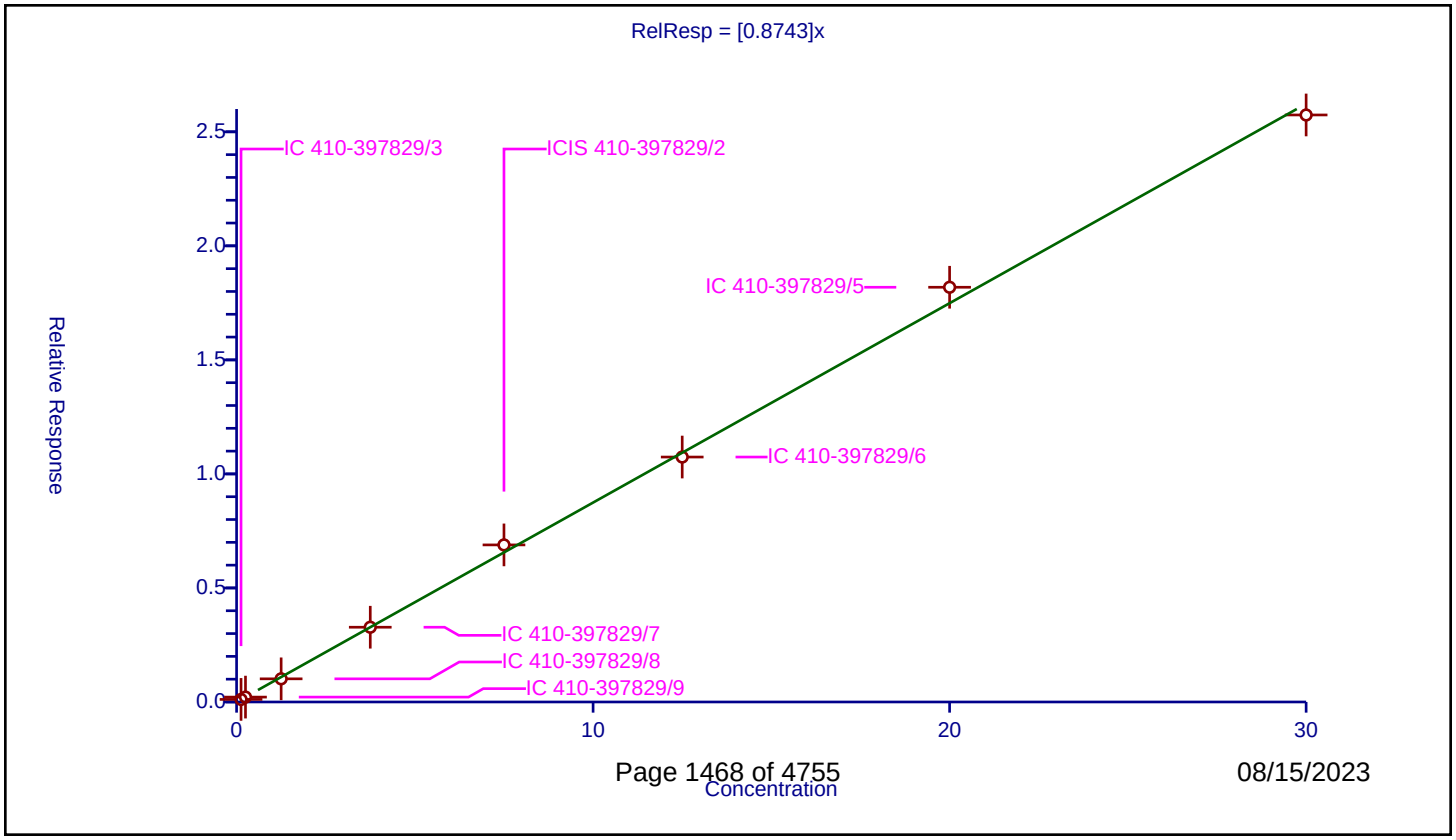
Curve Coefficients

Intercept:	0
Slope:	0.8743

Error Coefficients

Standard Error:	2170000
Relative Standard Error:	4.0
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.113166	5.0	847959.0	0.905327	Y
2	IC 410-397829/9	0.25	0.214482	5.0	717961.0	0.85793	Y
3	IC 410-397829/8	1.25	1.01547	5.0	942199.0	0.812376	Y
4	IC 410-397829/7	3.75	3.278097	5.0	708713.0	0.874159	Y
5	ICIS 410-397829/2	7.5	6.887448	5.0	781685.0	0.918326	Y
6	IC 410-397829/6	12.5	10.739584	5.0	925798.0	0.859167	Y
7	IC 410-397829/5	20.0	18.184156	5.0	853884.0	0.909208	Y
8	IC 410-397829/4	30.0	25.738661	5.0	822157.0	0.857955	Y



Calibration / 2-Nitrophenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

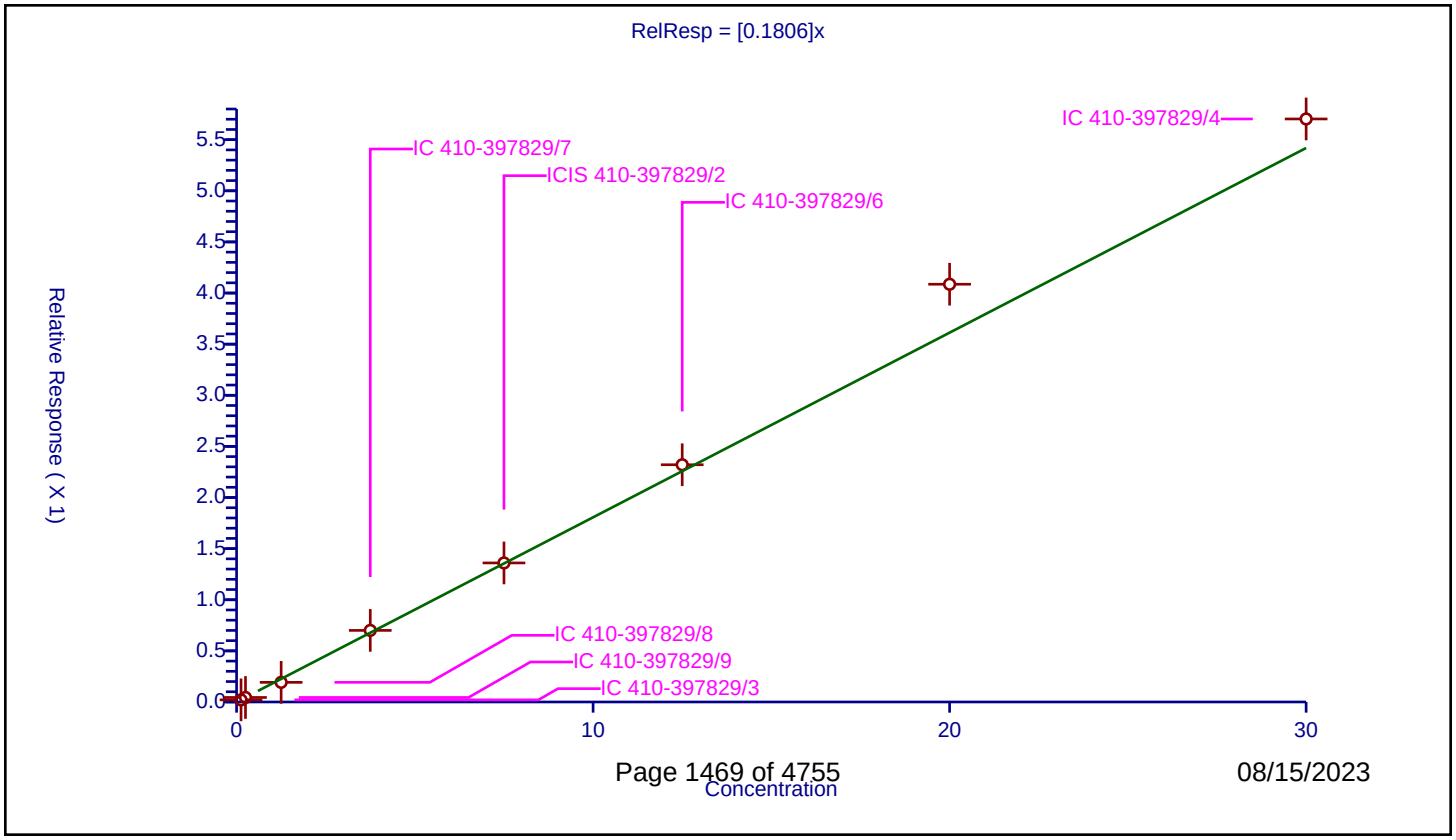
Curve Coefficients

Intercept:	0
Slope:	0.1806

Error Coefficients

Standard Error:	479000
Relative Standard Error:	8.5
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.020844	5.0	847959.0	0.166753	Y
2	IC 410-397829/9	0.25	0.044104	5.0	717961.0	0.176416	Y
3	IC 410-397829/8	1.25	0.192109	5.0	942199.0	0.153687	Y
4	IC 410-397829/7	3.75	0.700241	5.0	708713.0	0.186731	Y
5	ICIS 410-397829/2	7.5	1.360075	5.0	781685.0	0.181343	Y
6	IC 410-397829/6	12.5	2.320506	5.0	925798.0	0.18564	Y
7	IC 410-397829/5	20.0	4.086199	5.0	853884.0	0.20431	Y
8	IC 410-397829/4	30.0	5.7027	5.0	822157.0	0.19009	Y



Calibration / 2,4-Dimethylphenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

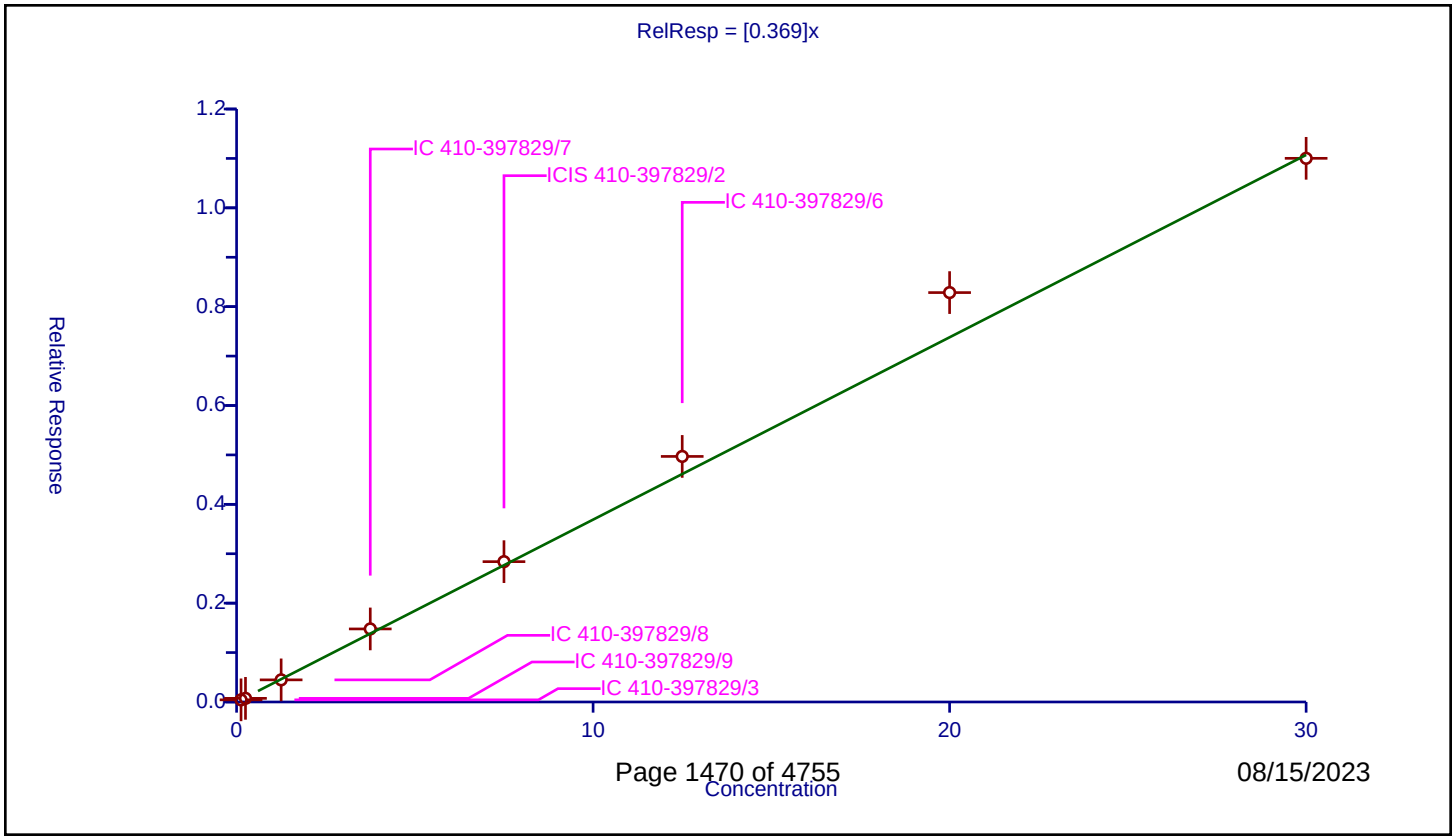
Curve Coefficients

Intercept:	0
Slope:	0.369

Error Coefficients

Standard Error:	954000
Relative Standard Error:	10.1
Correlation Coefficient:	0.986
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.043422	5.0	847959.0	0.347375	Y
2	IC 410-397829/9	0.25	0.073785	5.0	717961.0	0.295141	Y
3	IC 410-397829/8	1.25	0.447761	5.0	942199.0	0.358209	Y
4	IC 410-397829/7	3.75	1.478328	5.0	708713.0	0.394221	Y
5	ICIS 410-397829/2	7.5	2.840083	5.0	781685.0	0.378678	Y
6	IC 410-397829/6	12.5	4.969259	5.0	925798.0	0.397541	Y
7	IC 410-397829/5	20.0	8.285165	5.0	853884.0	0.414258	Y
8	IC 410-397829/4	30.0	11.002108	5.0	822157.0	0.366737	Y



Calibration

/ o,o',o''-Triethylphosphorothioate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

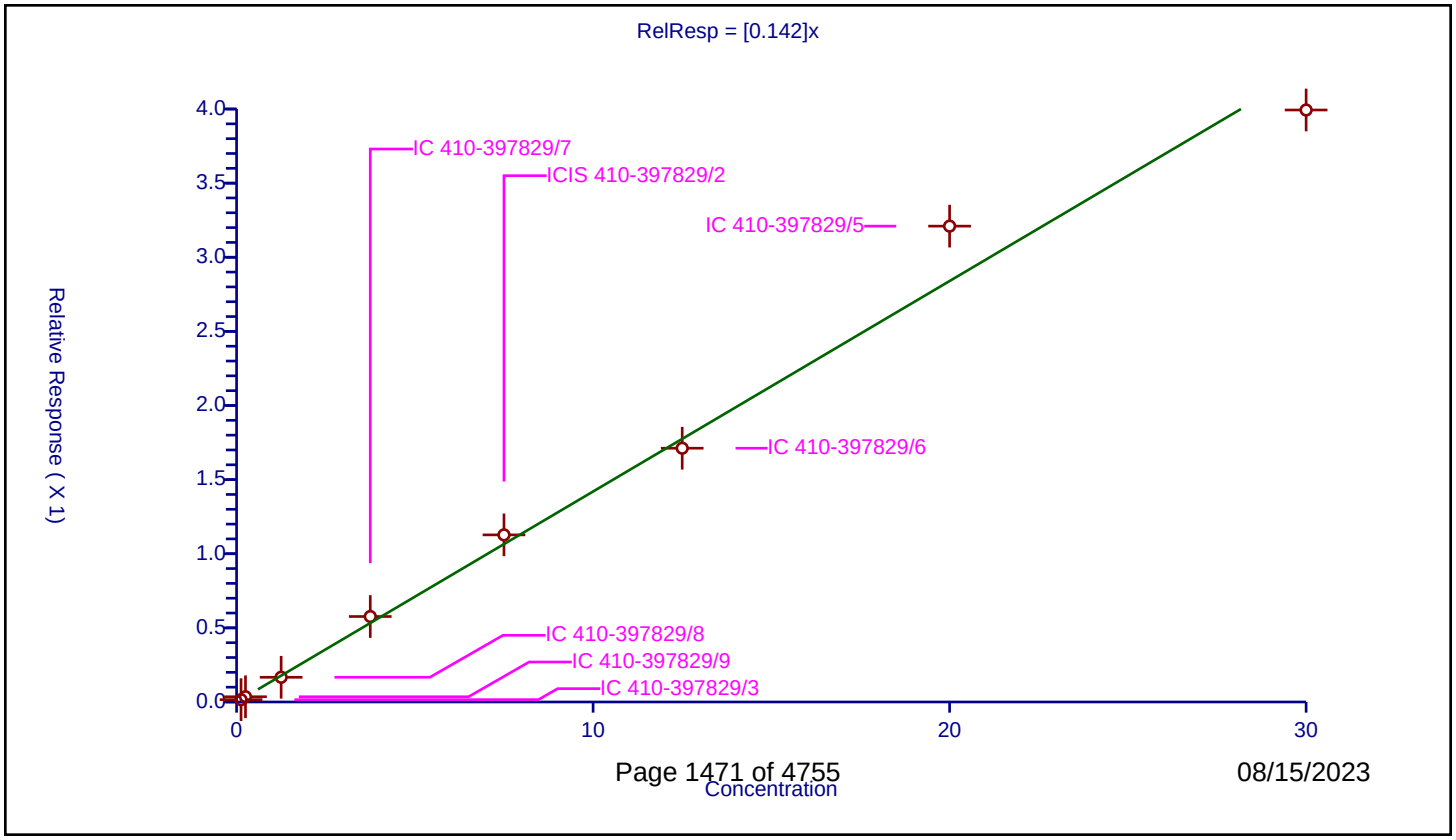
Curve Coefficients

Intercept:	0
Slope:	0.142

Error Coefficients

Standard Error:	353000
Relative Standard Error:	8.3
Correlation Coefficient:	0.981
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.015791	5.0	847959.0	0.126327	Y
2	IC 410-397829/9	0.25	0.035399	5.0	717961.0	0.141595	Y
3	IC 410-397829/8	1.25	0.16669	5.0	942199.0	0.133352	Y
4	IC 410-397829/7	3.75	0.57663	5.0	708713.0	0.153768	Y
5	ICIS 410-397829/2	7.5	1.1272	5.0	781685.0	0.150293	Y
6	IC 410-397829/6	12.5	1.711783	5.0	925798.0	0.136943	Y
7	IC 410-397829/5	20.0	3.20988	5.0	853884.0	0.160494	Y
8	IC 410-397829/4	30.0	3.993264	5.0	822157.0	0.133109	Y



Calibration / Bis(2-chloroethoxy)methane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

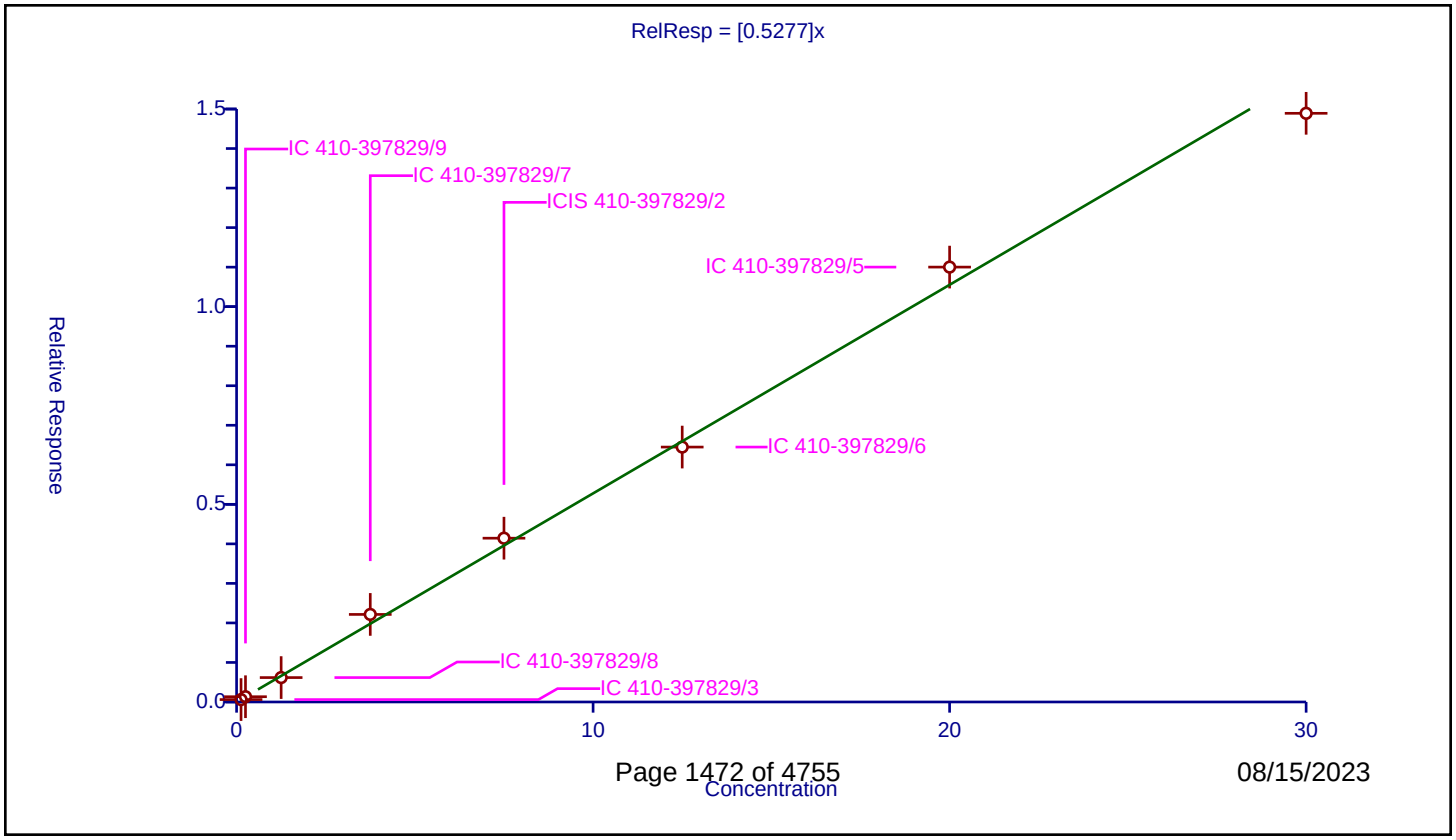
Curve Coefficients

Intercept:	0
Slope:	0.5277

Error Coefficients

Standard Error:	1280000
Relative Standard Error:	6.8
Correlation Coefficient:	0.991
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.061029	5.0	847959.0	0.488231	Y
2	IC 410-397829/9	0.25	0.133426	5.0	717961.0	0.533706	Y
3	IC 410-397829/8	1.25	0.617317	5.0	942199.0	0.493853	Y
4	IC 410-397829/7	3.75	2.215093	5.0	708713.0	0.590691	Y
5	ICIS 410-397829/2	7.5	4.14353	5.0	781685.0	0.552471	Y
6	IC 410-397829/6	12.5	6.448502	5.0	925798.0	0.51588	Y
7	IC 410-397829/5	20.0	11.001225	5.0	853884.0	0.550061	Y
8	IC 410-397829/4	30.0	14.891347	5.0	822157.0	0.496378	Y



Calibration / 2,4-Dichlorophenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

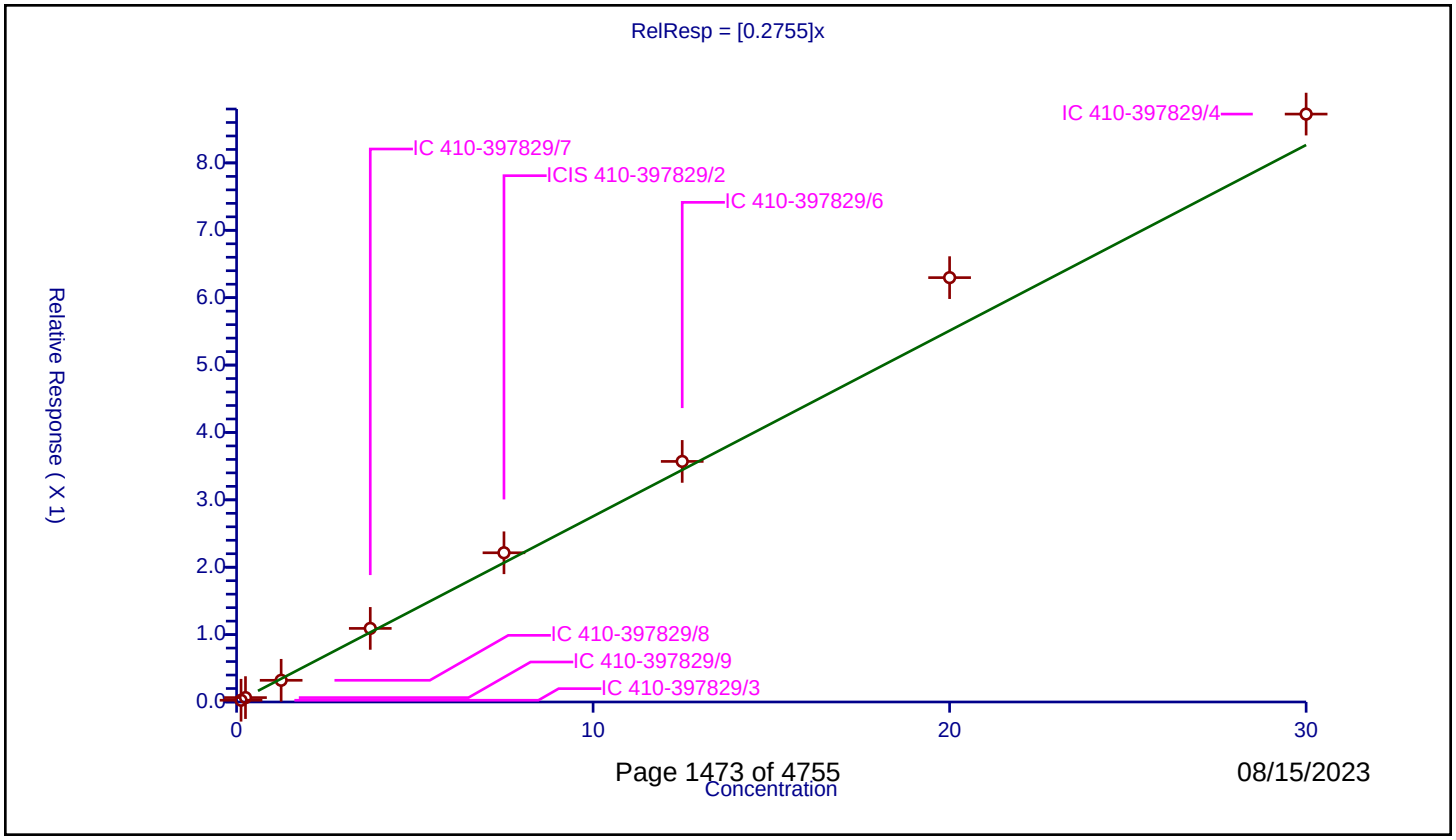
Curve Coefficients

Intercept:	0
Slope:	0.2755

Error Coefficients

Standard Error:	737000
Relative Standard Error:	12.0
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.026033	5.0	847959.0	0.208265	Y
2	IC 410-397829/9	0.25	0.065157	5.0	717961.0	0.260627	Y
3	IC 410-397829/8	1.25	0.321896	5.0	942199.0	0.257517	Y
4	IC 410-397829/7	3.75	1.092177	5.0	708713.0	0.291247	Y
5	ICIS 410-397829/2	7.5	2.214537	5.0	781685.0	0.295272	Y
6	IC 410-397829/6	12.5	3.570044	5.0	925798.0	0.285604	Y
7	IC 410-397829/5	20.0	6.297788	5.0	853884.0	0.314889	Y
8	IC 410-397829/4	30.0	8.724964	5.0	822157.0	0.290832	Y



Calibration / 1,2,4-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

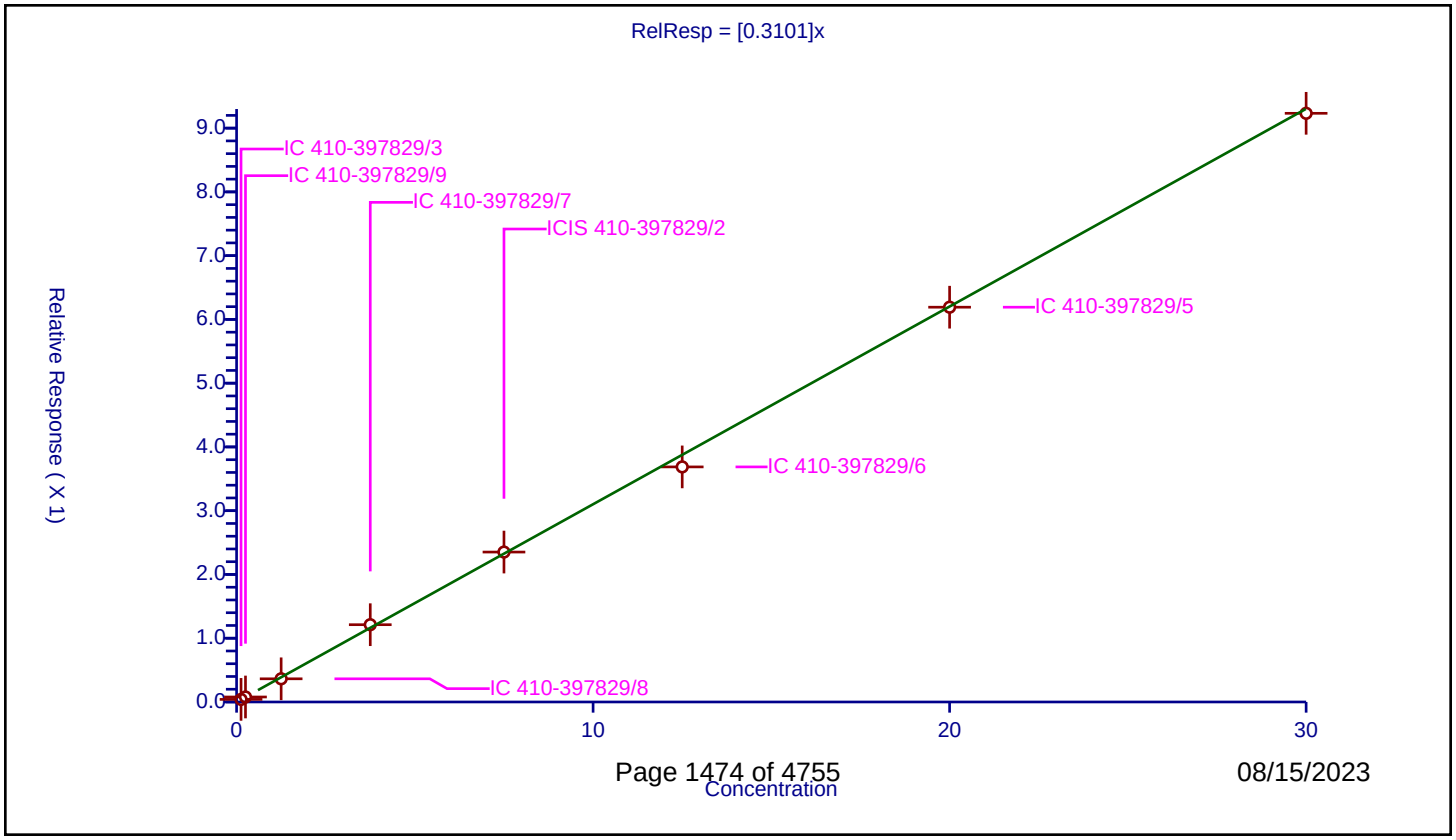
Curve Coefficients

Intercept:	0
Slope:	0.3101

Error Coefficients

Standard Error:	761000
Relative Standard Error:	4.0
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.040922	5.0	847959.0	0.327374	Y
2	IC 410-397829/9	0.25	0.078382	5.0	717961.0	0.313527	Y
3	IC 410-397829/8	1.25	0.363548	5.0	942199.0	0.290839	Y
4	IC 410-397829/7	3.75	1.212388	5.0	708713.0	0.323303	Y
5	ICIS 410-397829/2	7.5	2.351593	5.0	781685.0	0.313546	Y
6	IC 410-397829/6	12.5	3.686911	5.0	925798.0	0.294953	Y
7	IC 410-397829/5	20.0	6.191602	5.0	853884.0	0.30958	Y
8	IC 410-397829/4	30.0	9.232464	5.0	822157.0	0.307749	Y



Calibration / Naphthalene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

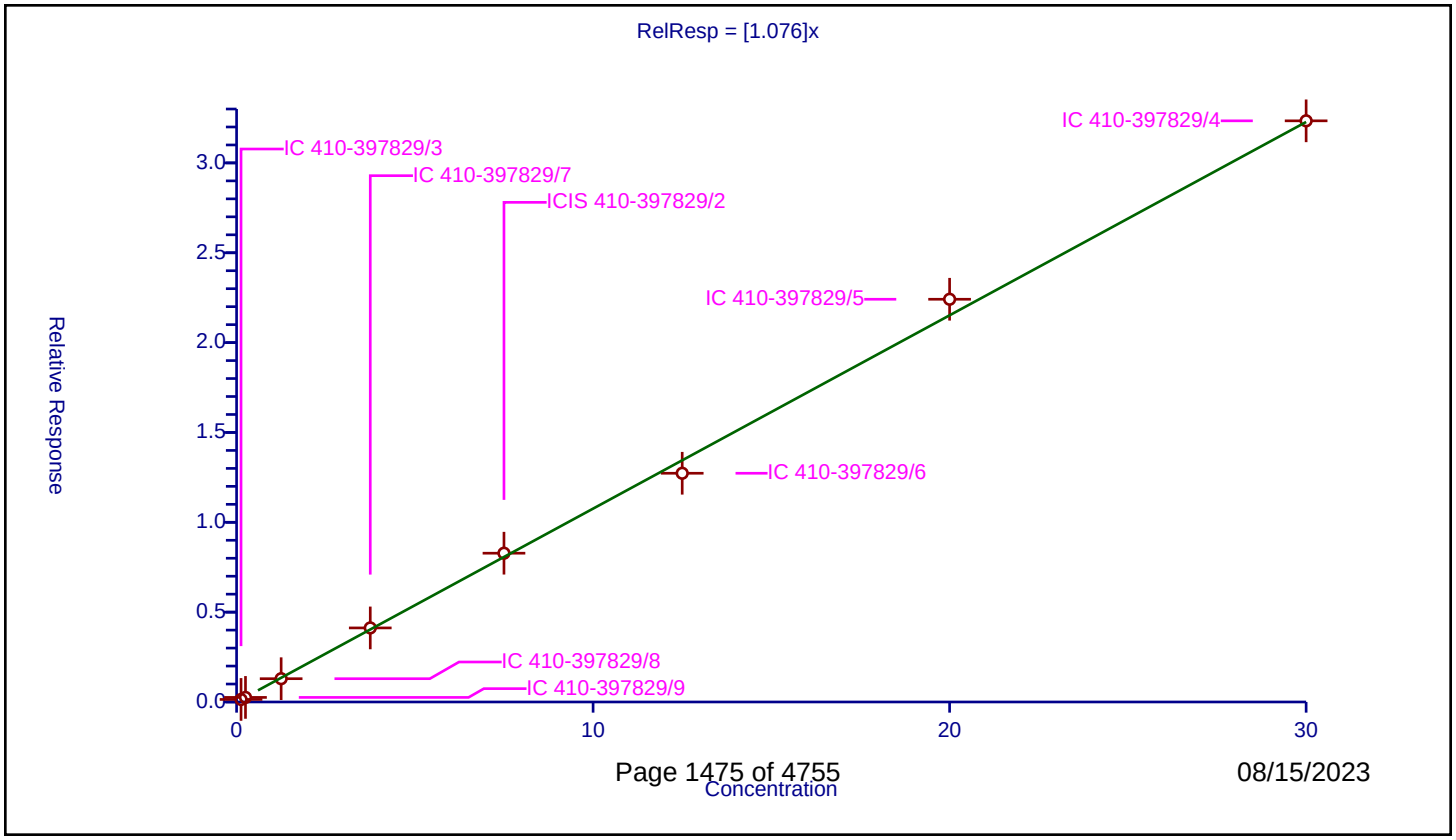
Curve Coefficients

Intercept:	0
Slope:	1.076

Error Coefficients

Standard Error:	2690000
Relative Standard Error:	4.3
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.14154	5.0	847959.0	1.132319	Y
2	IC 410-397829/9	0.25	0.254505	5.0	717961.0	1.018022	Y
3	IC 410-397829/8	1.25	1.296053	5.0	942199.0	1.036843	Y
4	IC 410-397829/7	3.75	4.122268	5.0	708713.0	1.099271	Y
5	ICIS 410-397829/2	7.5	8.280318	5.0	781685.0	1.104042	Y
6	IC 410-397829/6	12.5	12.728894	5.0	925798.0	1.018312	Y
7	IC 410-397829/5	20.0	22.412406	5.0	853884.0	1.12062	Y
8	IC 410-397829/4	30.0	32.343245	5.0	822157.0	1.078108	Y



Calibration / Alpha-Terpineol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

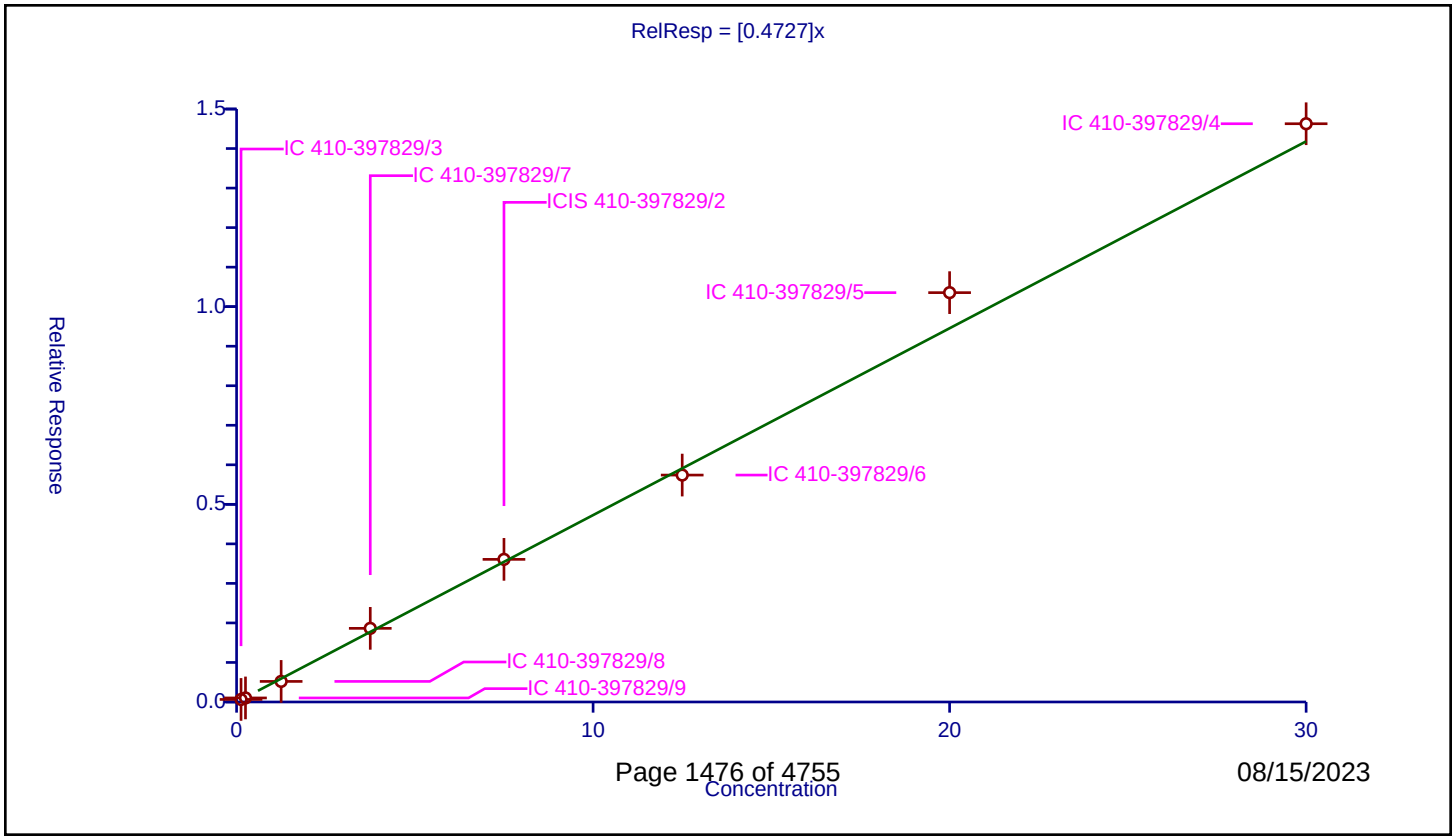
Curve Coefficients

Intercept:	0
Slope:	0.4727

Error Coefficients

Standard Error:	1220000
Relative Standard Error:	8.7
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.064136	5.0	847959.0	0.513091	Y
2	IC 410-397829/9	0.25	0.102485	5.0	717961.0	0.409939	Y
3	IC 410-397829/8	1.25	0.520347	5.0	942199.0	0.416277	Y
4	IC 410-397829/7	3.75	1.862827	5.0	708713.0	0.496754	Y
5	ICIS 410-397829/2	7.5	3.607898	5.0	781685.0	0.481053	Y
6	IC 410-397829/6	12.5	5.74034	5.0	925798.0	0.459227	Y
7	IC 410-397829/5	20.0	10.354697	5.0	853884.0	0.517735	Y
8	IC 410-397829/4	30.0	14.627401	5.0	822157.0	0.48758	Y



Calibration / 4-Chloroaniline

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

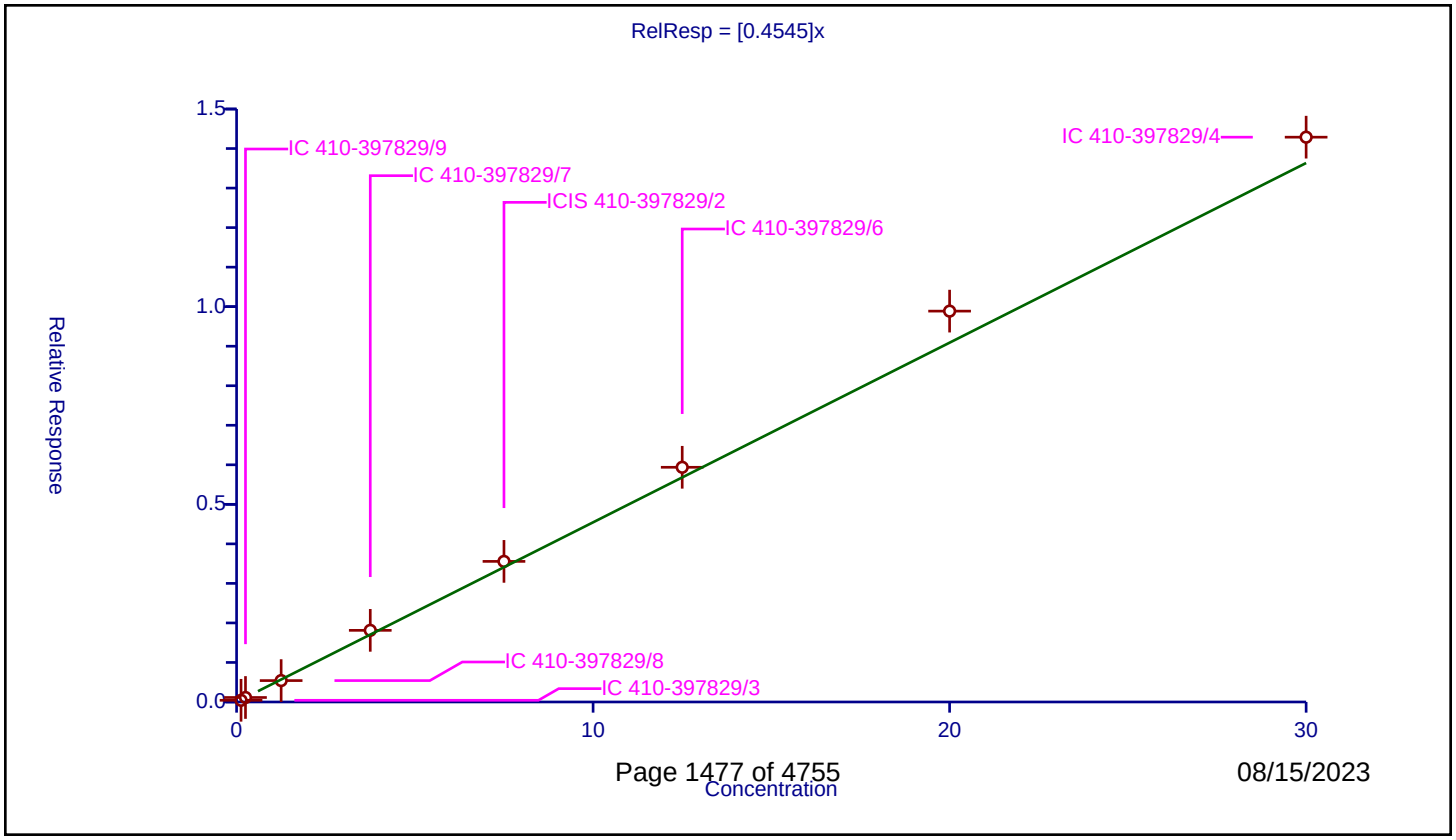
Curve Coefficients

Intercept:	0
Slope:	0.4545

Error Coefficients

Standard Error:	1190000
Relative Standard Error:	10.6
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.043056	5.0	847959.0	0.344451	Y
2	IC 410-397829/9	0.25	0.113808	5.0	717961.0	0.455234	Y
3	IC 410-397829/8	1.25	0.541175	5.0	942199.0	0.43294	Y
4	IC 410-397829/7	3.75	1.812257	5.0	708713.0	0.483268	Y
5	ICIS 410-397829/2	7.5	3.556861	5.0	781685.0	0.474248	Y
6	IC 410-397829/6	12.5	5.937197	5.0	925798.0	0.474976	Y
7	IC 410-397829/5	20.0	9.887479	5.0	853884.0	0.494374	Y
8	IC 410-397829/4	30.0	14.287691	5.0	822157.0	0.476256	Y



Calibration / 2,6-Dichlorophenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

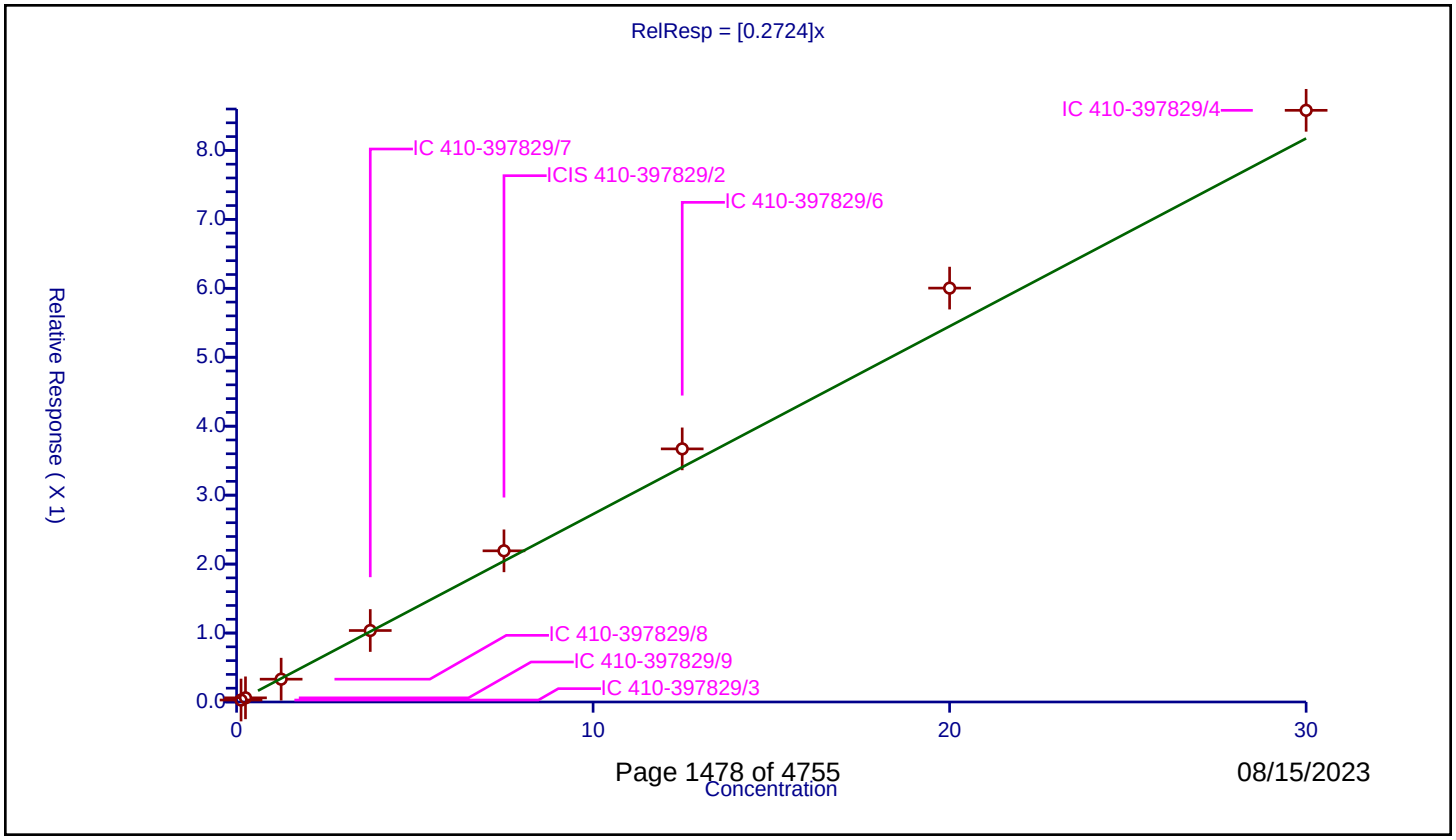
Curve Coefficients

Intercept:	0
Slope:	0.2724

Error Coefficients

Standard Error:	722000
Relative Standard Error:	9.9
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.028291	5.0	847959.0	0.226332	Y
2	IC 410-397829/9	0.25	0.060038	5.0	717961.0	0.240152	Y
3	IC 410-397829/8	1.25	0.330721	5.0	942199.0	0.264577	Y
4	IC 410-397829/7	3.75	1.036491	5.0	708713.0	0.276398	Y
5	ICIS 410-397829/2	7.5	2.192354	5.0	781685.0	0.292314	Y
6	IC 410-397829/6	12.5	3.670768	5.0	925798.0	0.293661	Y
7	IC 410-397829/5	20.0	6.002542	5.0	853884.0	0.300127	Y
8	IC 410-397829/4	30.0	8.581074	5.0	822157.0	0.286036	Y



Calibration / Hexachloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

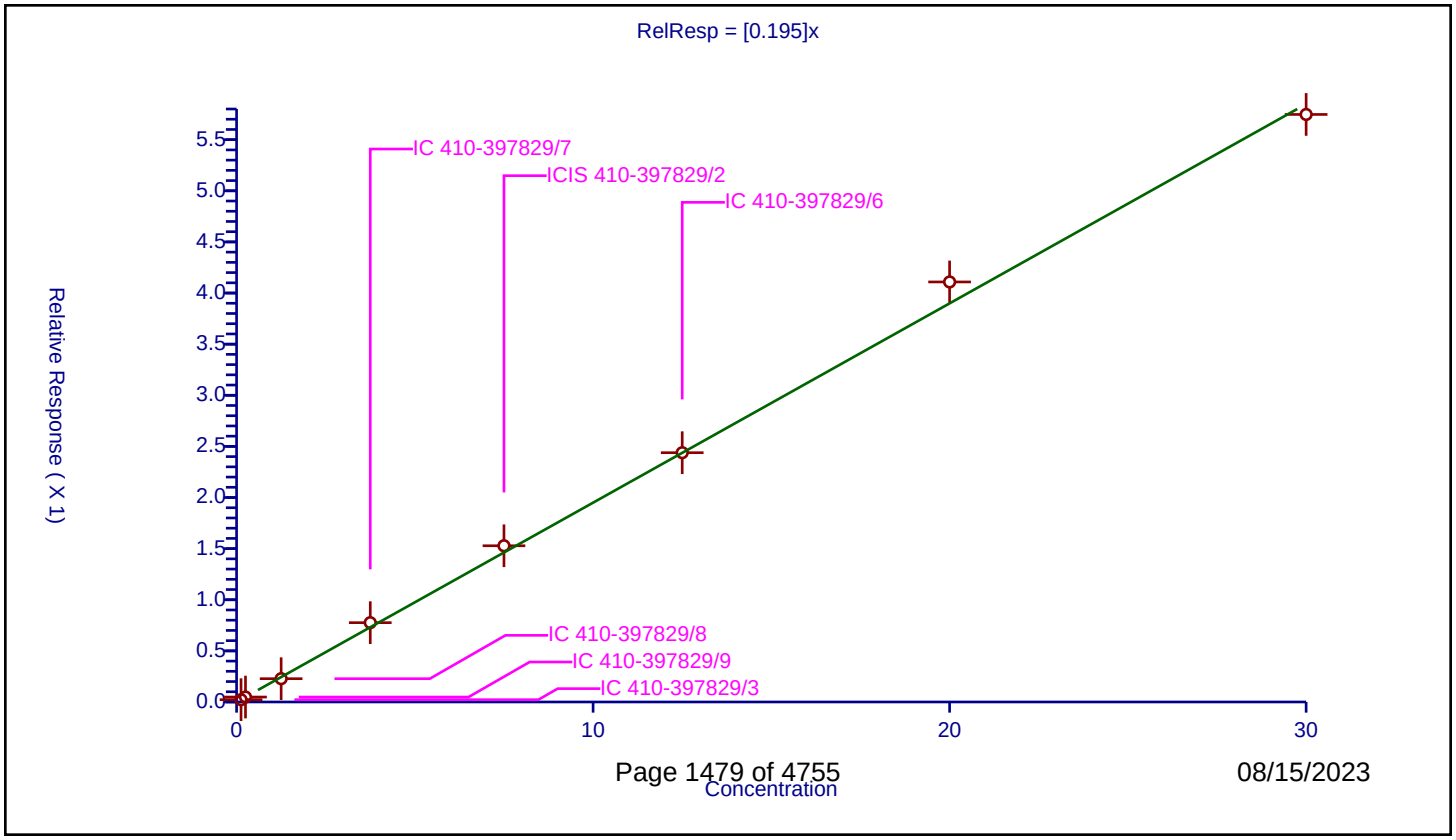
Curve Coefficients

Intercept:	0
Slope:	0.195

Error Coefficients

Standard Error:	487000
Relative Standard Error:	5.1
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.022654	5.0	847959.0	0.181235	Y
2	IC 410-397829/9	0.25	0.048331	5.0	717961.0	0.193325	Y
3	IC 410-397829/8	1.25	0.22793	5.0	942199.0	0.182344	Y
4	IC 410-397829/7	3.75	0.775921	5.0	708713.0	0.206912	Y
5	ICIS 410-397829/2	7.5	1.527988	5.0	781685.0	0.203732	Y
6	IC 410-397829/6	12.5	2.438442	5.0	925798.0	0.195075	Y
7	IC 410-397829/5	20.0	4.108503	5.0	853884.0	0.205425	Y
8	IC 410-397829/4	30.0	5.746713	5.0	822157.0	0.191557	Y



Calibration / Hexachlorobutadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

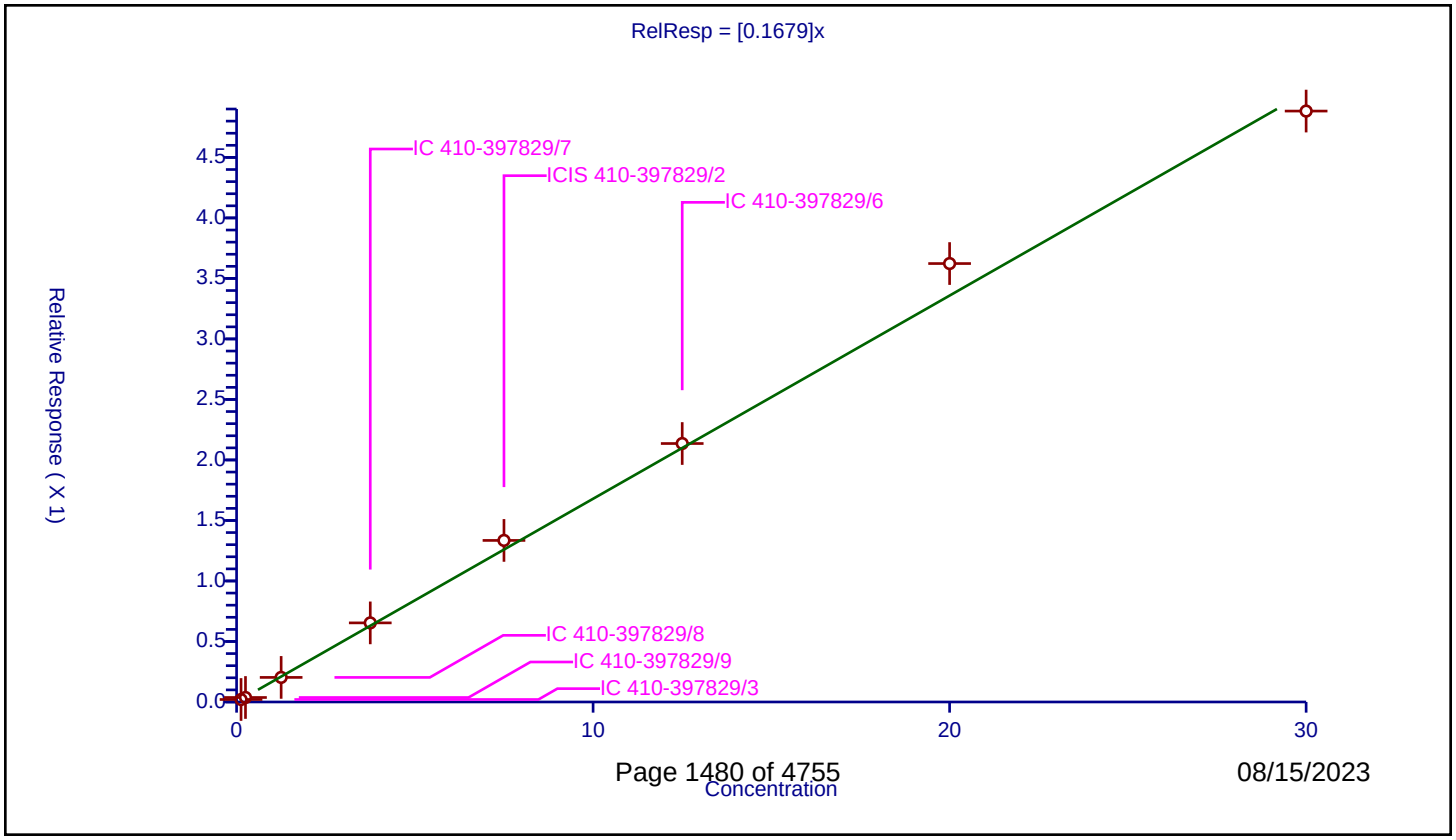
Curve Coefficients

Intercept:	0
Slope:	0.1679

Error Coefficients

Standard Error:	420000
Relative Standard Error:	6.2
Correlation Coefficient:	0.990
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.020626	5.0	847959.0	0.165008	Y
2	IC 410-397829/9	0.25	0.037175	5.0	717961.0	0.148699	Y
3	IC 410-397829/8	1.25	0.203152	5.0	942199.0	0.162522	Y
4	IC 410-397829/7	3.75	0.653636	5.0	708713.0	0.174303	Y
5	ICIS 410-397829/2	7.5	1.335129	5.0	781685.0	0.178017	Y
6	IC 410-397829/6	12.5	2.135741	5.0	925798.0	0.170859	Y
7	IC 410-397829/5	20.0	3.623115	5.0	853884.0	0.181156	Y
8	IC 410-397829/4	30.0	4.882979	5.0	822157.0	0.162766	Y



Calibration / Quinoline

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

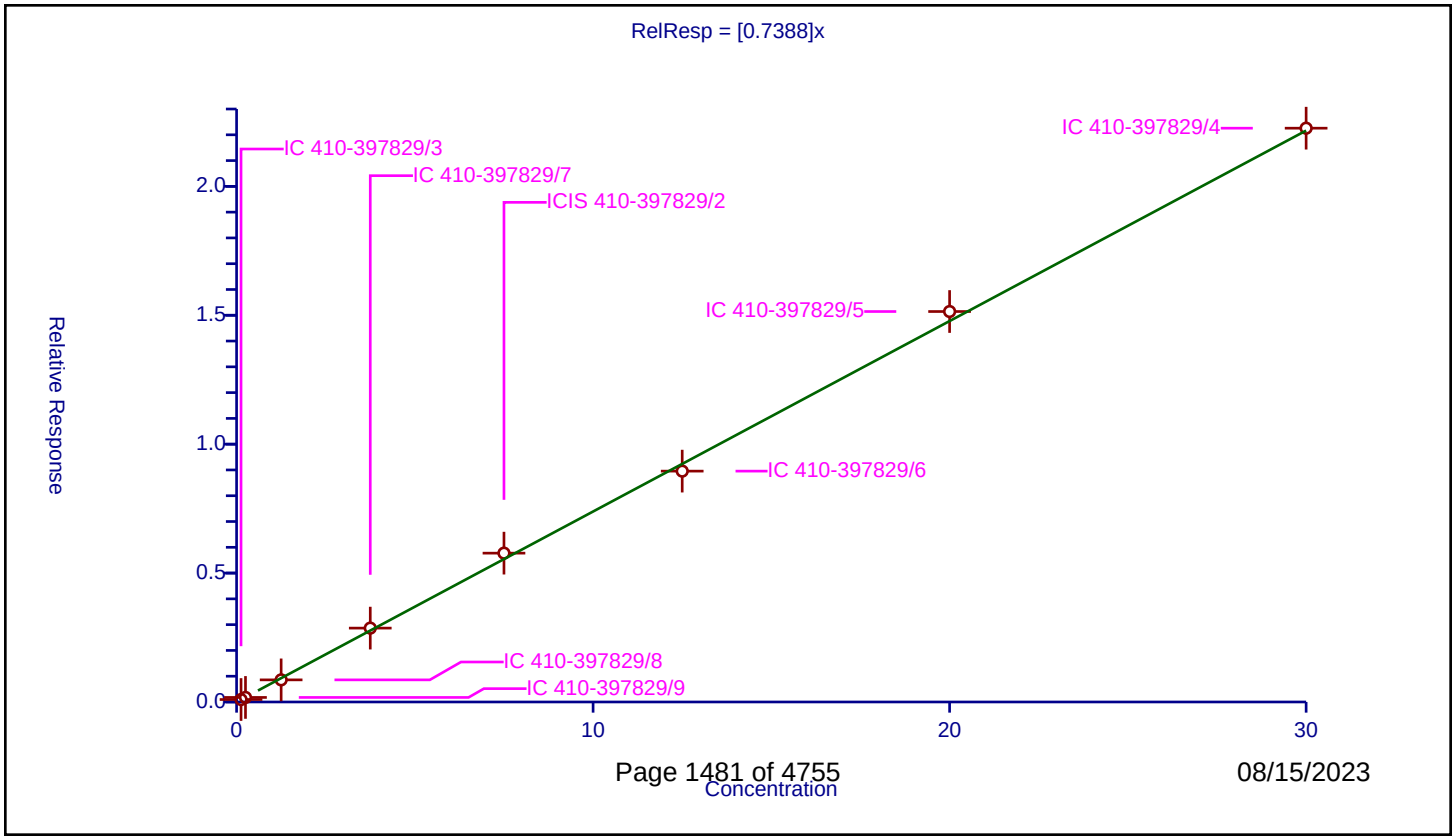
Curve Coefficients

Intercept:	0
Slope:	0.7388

Error Coefficients

Standard Error:	1850000
Relative Standard Error:	4.3
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.096054	5.0	847959.0	0.768433	Y
2	IC 410-397829/9	0.25	0.176395	5.0	717961.0	0.705582	Y
3	IC 410-397829/8	1.25	0.858359	5.0	942199.0	0.686687	Y
4	IC 410-397829/7	3.75	2.866118	5.0	708713.0	0.764298	Y
5	ICIS 410-397829/2	7.5	5.773406	5.0	781685.0	0.769787	Y
6	IC 410-397829/6	12.5	8.954389	5.0	925798.0	0.716351	Y
7	IC 410-397829/5	20.0	15.145453	5.0	853884.0	0.757273	Y
8	IC 410-397829/4	30.0	22.256668	5.0	822157.0	0.741889	Y



Calibration / Caprolactam

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

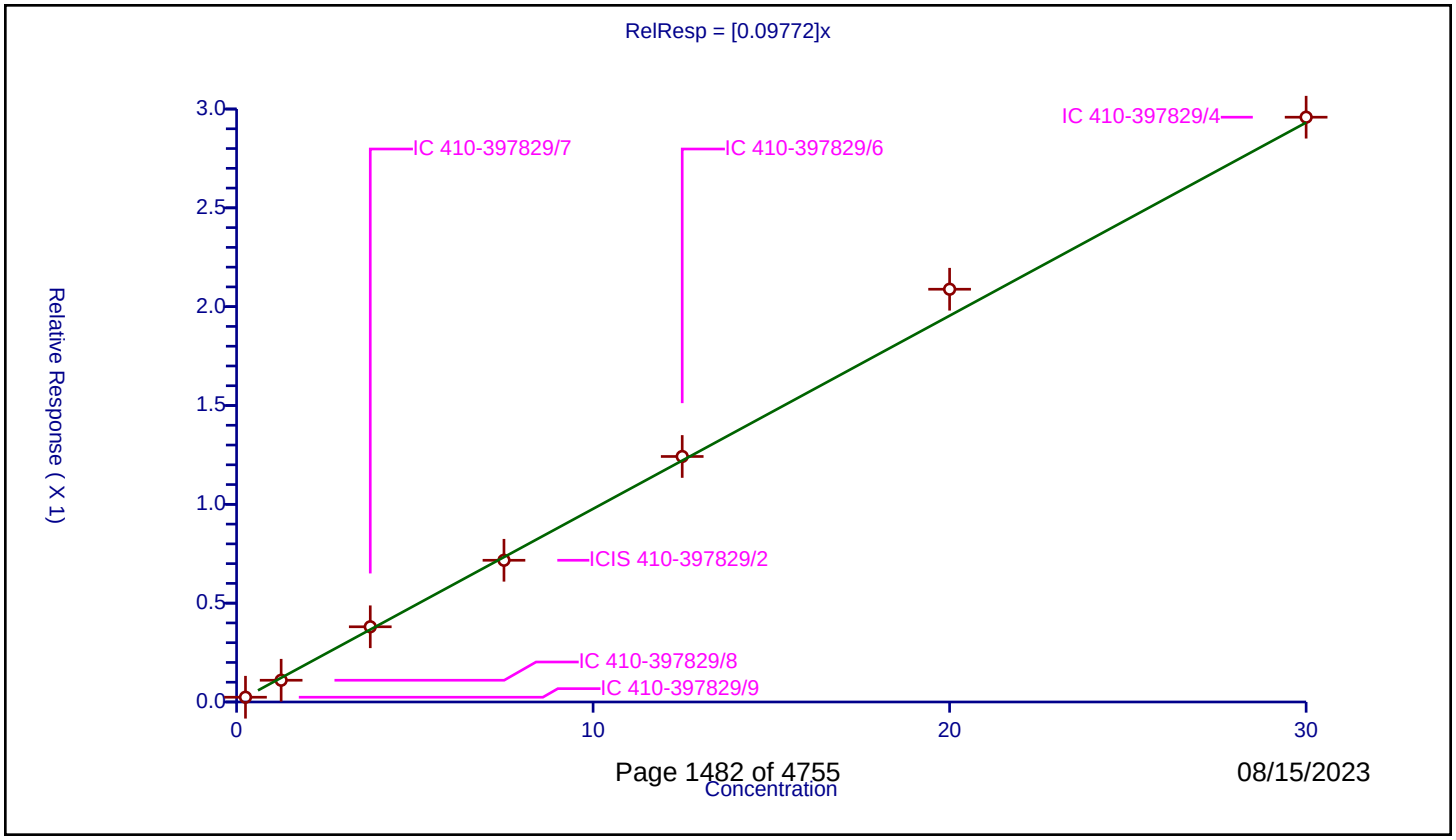
Curve Coefficients

Intercept:	0
Slope:	0.09772

Error Coefficients

Standard Error:	269000
Relative Standard Error:	5.3
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/9	0.25	0.024145	5.0	717961.0	0.096579	Y
2	IC 410-397829/8	1.25	0.109961	5.0	942199.0	0.087969	Y
3	IC 410-397829/7	3.75	0.380493	5.0	708713.0	0.101465	Y
4	ICIS 410-397829/2	7.5	0.717022	5.0	781685.0	0.095603	Y
5	IC 410-397829/6	12.5	1.242085	5.0	925798.0	0.099367	Y
6	IC 410-397829/5	20.0	2.088193	5.0	853884.0	0.10441	Y
7	IC 410-397829/4	30.0	2.958541	5.0	822157.0	0.098618	Y



Calibration / N-Nitrosodi-n-butylamine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

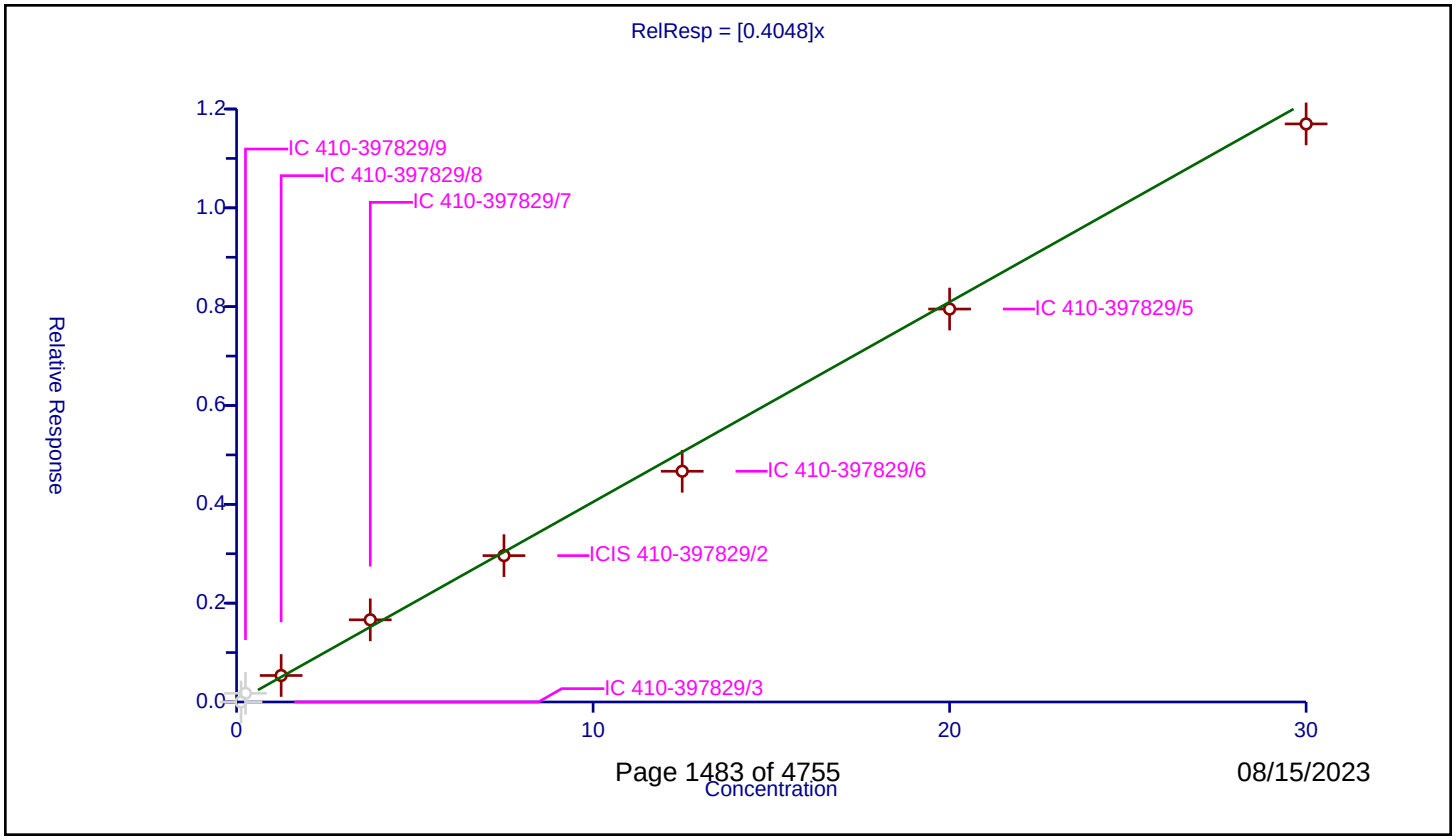
Curve Coefficients

Intercept:	0
Slope:	0.4048

Error Coefficients

Standard Error:	1150000
Relative Standard Error:	6.5
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.0	5.0	847959.0	0.0	N
2	IC 410-397829/9	0.25	0.175434	5.0	717961.0	0.701737	N
3	IC 410-397829/8	1.25	0.536373	5.0	942199.0	0.429098	Y
4	IC 410-397829/7	3.75	1.663007	5.0	708713.0	0.443469	Y
5	ICIS 410-397829/2	7.5	2.961762	5.0	781685.0	0.394902	Y
6	IC 410-397829/6	12.5	4.669345	5.0	925798.0	0.373548	Y
7	IC 410-397829/5	20.0	7.952228	5.0	853884.0	0.397611	Y
8	IC 410-397829/4	30.0	11.698088	5.0	822157.0	0.389936	Y



Calibration / p-Phenylene diamine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

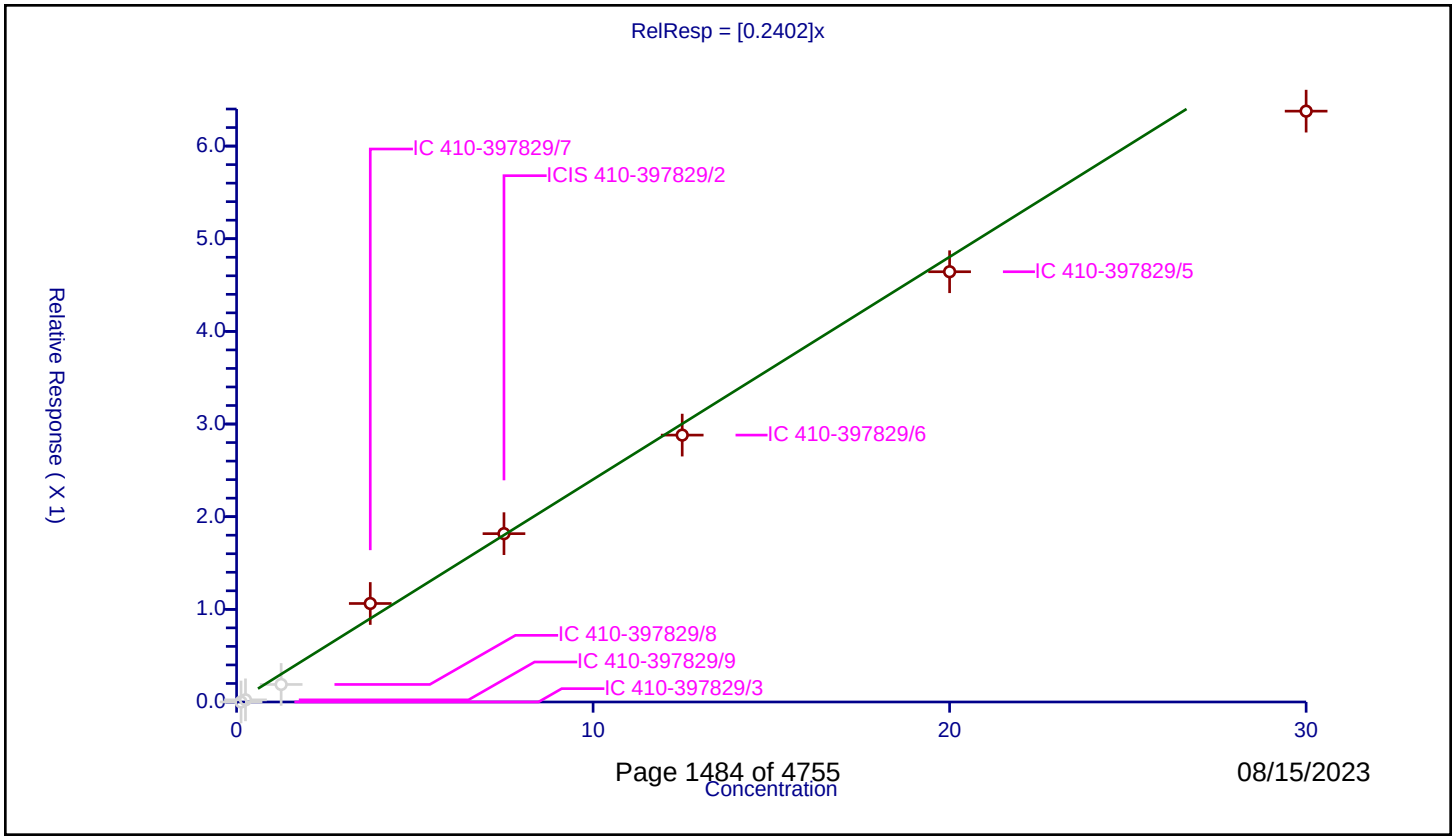
Curve Coefficients

Intercept:	0
Slope:	0.2402

Error Coefficients

Standard Error:	727000
Relative Standard Error:	11.0
Correlation Coefficient:	0.985
Coefficient of Determination (Adjusted):	0.964

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.0	5.0	847959.0	0.0	N
2	IC 410-397829/9	0.25	0.0231	5.0	717961.0	0.092401	N
3	IC 410-397829/8	1.25	0.189376	5.0	942199.0	0.151501	N
4	IC 410-397829/7	3.75	1.06304	5.0	708713.0	0.283477	Y
5	ICIS 410-397829/2	7.5	1.816729	5.0	781685.0	0.242231	Y
6	IC 410-397829/6	12.5	2.880699	5.0	925798.0	0.230456	Y
7	IC 410-397829/5	20.0	4.643839	5.0	853884.0	0.232192	Y
8	IC 410-397829/4	30.0	6.377	5.0	822157.0	0.212567	Y



Calibration / 4-Chloro-3-methylphenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

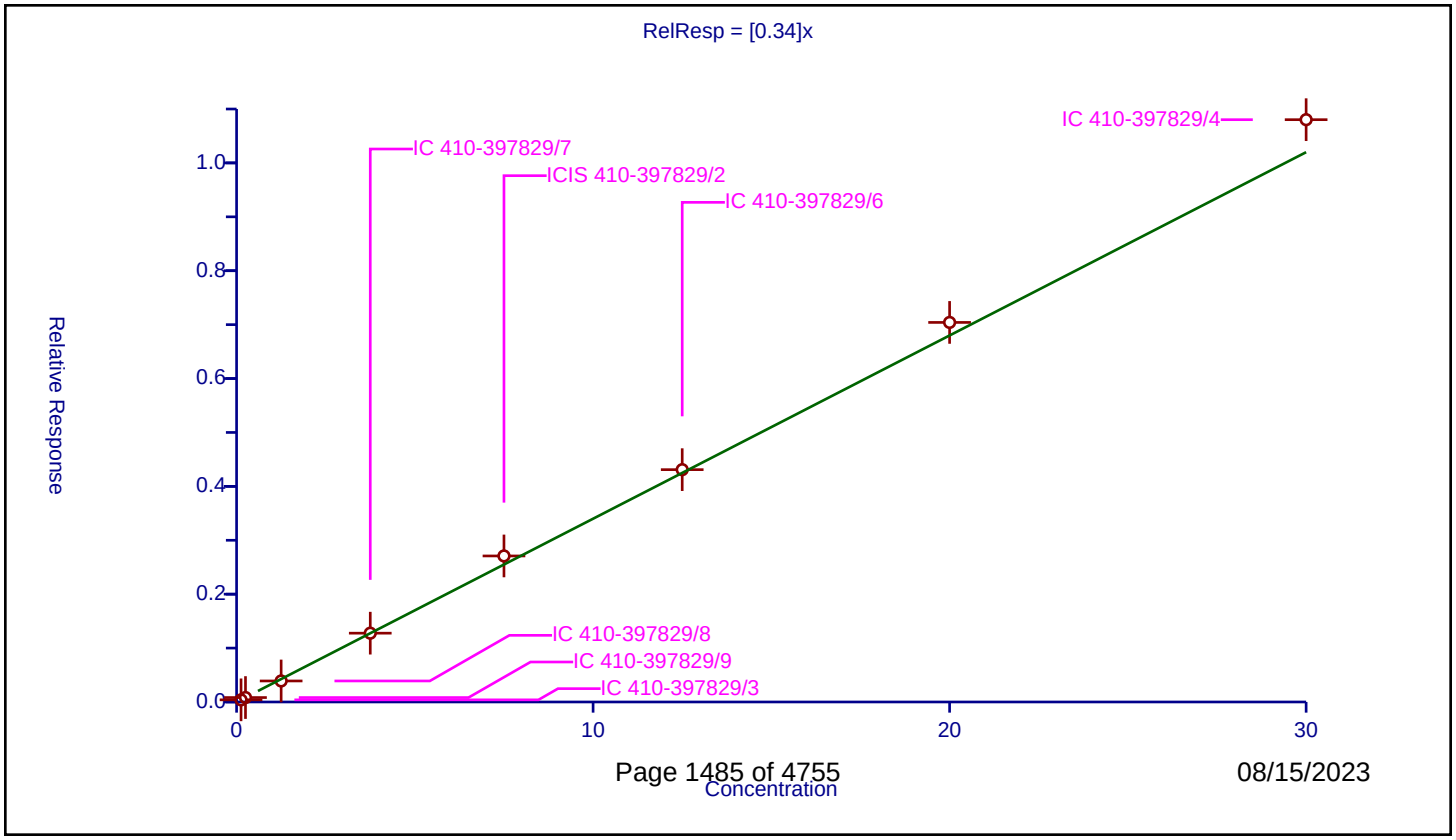
Curve Coefficients

Intercept:	0
Slope:	0.34

Error Coefficients

Standard Error:	883000
Relative Standard Error:	5.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.039849	5.0	847959.0	0.318789	Y
2	IC 410-397829/9	0.25	0.082595	5.0	717961.0	0.33038	Y
3	IC 410-397829/8	1.25	0.390077	5.0	942199.0	0.312061	Y
4	IC 410-397829/7	3.75	1.276306	5.0	708713.0	0.340348	Y
5	ICIS 410-397829/2	7.5	2.709186	5.0	781685.0	0.361225	Y
6	IC 410-397829/6	12.5	4.309725	5.0	925798.0	0.344778	Y
7	IC 410-397829/5	20.0	7.041278	5.0	853884.0	0.352064	Y
8	IC 410-397829/4	30.0	10.802292	5.0	822157.0	0.360076	Y



Calibration / Safrole, Total

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

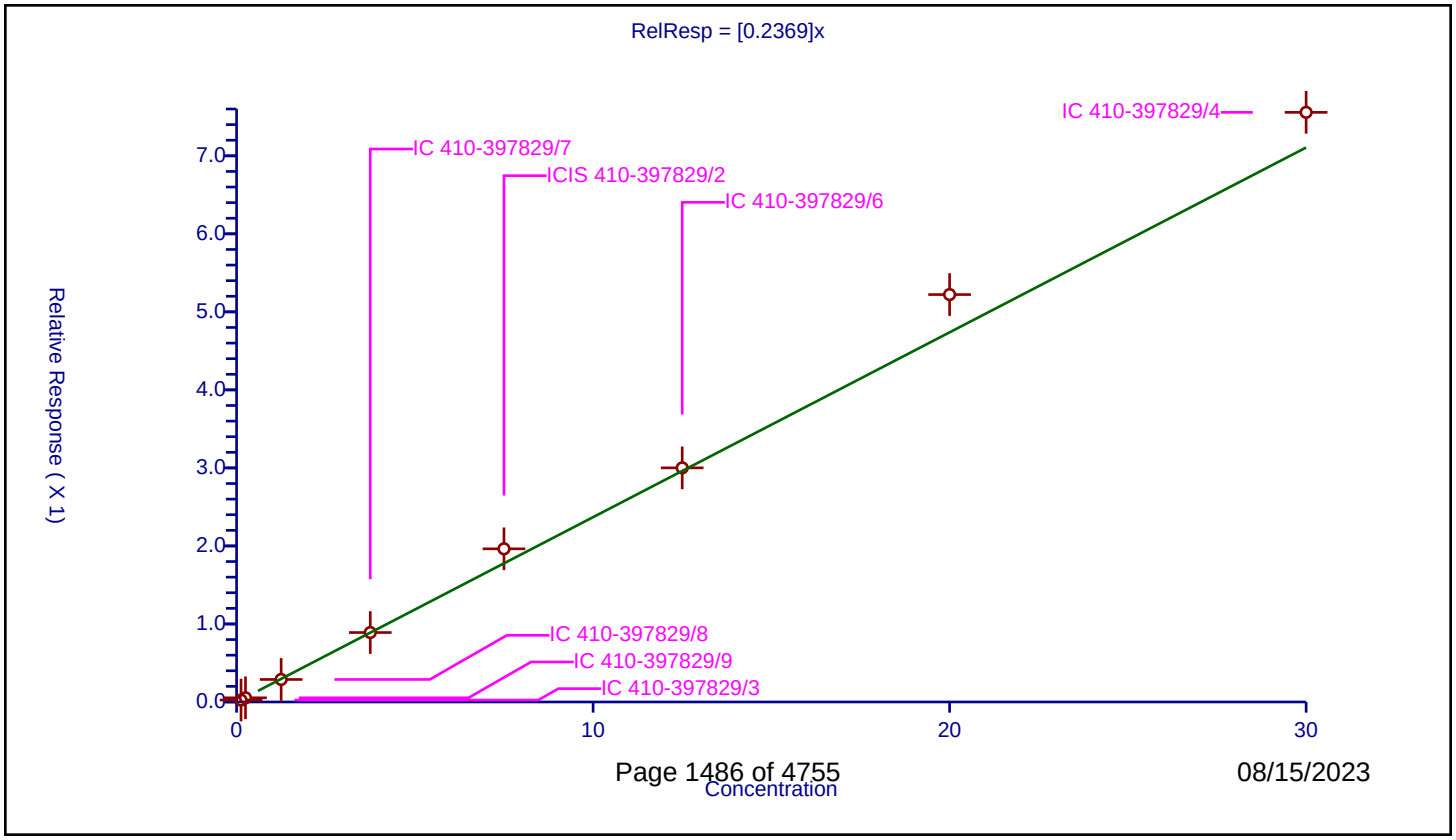
Curve Coefficients

Intercept:	0
Slope:	0.2369

Error Coefficients

Standard Error:	628000
Relative Standard Error:	9.5
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.024671	5.0	847959.0	0.197368	Y
2	IC 410-397829/9	0.25	0.053638	5.0	717961.0	0.214552	Y
3	IC 410-397829/8	1.25	0.288665	5.0	942199.0	0.230932	Y
4	IC 410-397829/7	3.75	0.890311	5.0	708713.0	0.237416	Y
5	ICIS 410-397829/2	7.5	1.963067	5.0	781685.0	0.261742	Y
6	IC 410-397829/6	12.5	3.000601	5.0	925798.0	0.240048	Y
7	IC 410-397829/5	20.0	5.221851	5.0	853884.0	0.261093	Y
8	IC 410-397829/4	30.0	7.557243	5.0	822157.0	0.251908	Y



Calibration / 2-Methylnaphthalene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

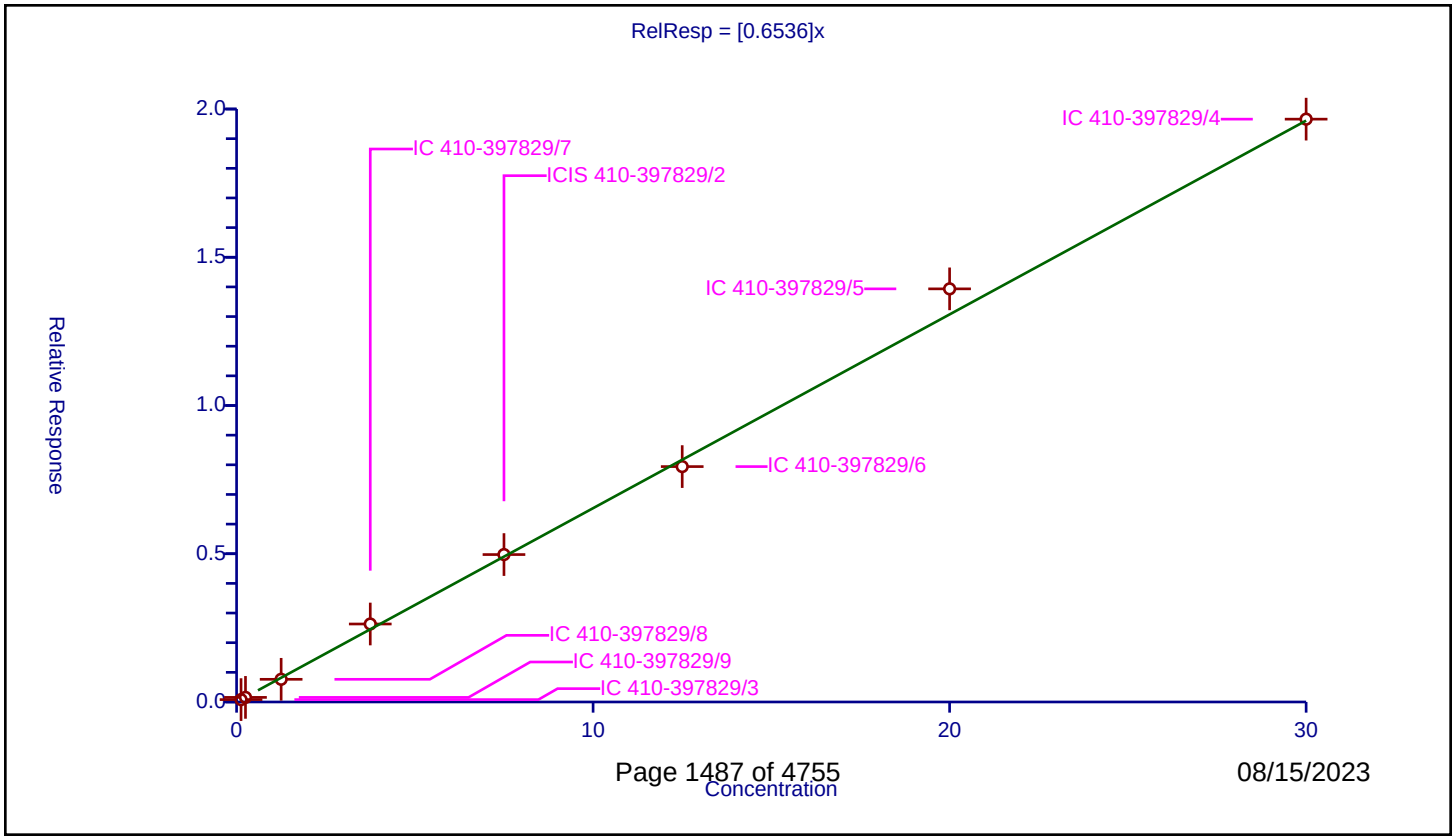
Curve Coefficients

Intercept:	0
Slope:	0.6536

Error Coefficients

Standard Error:	1650000
Relative Standard Error:	5.0
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.080399	5.0	847959.0	0.643191	Y
2	IC 410-397829/9	0.25	0.155482	5.0	717961.0	0.621928	Y
3	IC 410-397829/8	1.25	0.76538	5.0	942199.0	0.612304	Y
4	IC 410-397829/7	3.75	2.630162	5.0	708713.0	0.701377	Y
5	ICIS 410-397829/2	7.5	4.972297	5.0	781685.0	0.662973	Y
6	IC 410-397829/6	12.5	7.93941	5.0	925798.0	0.635153	Y
7	IC 410-397829/5	20.0	13.934112	5.0	853884.0	0.696706	Y
8	IC 410-397829/4	30.0	19.657821	5.0	822157.0	0.655261	Y



Calibration / 1-Methylnaphthalene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

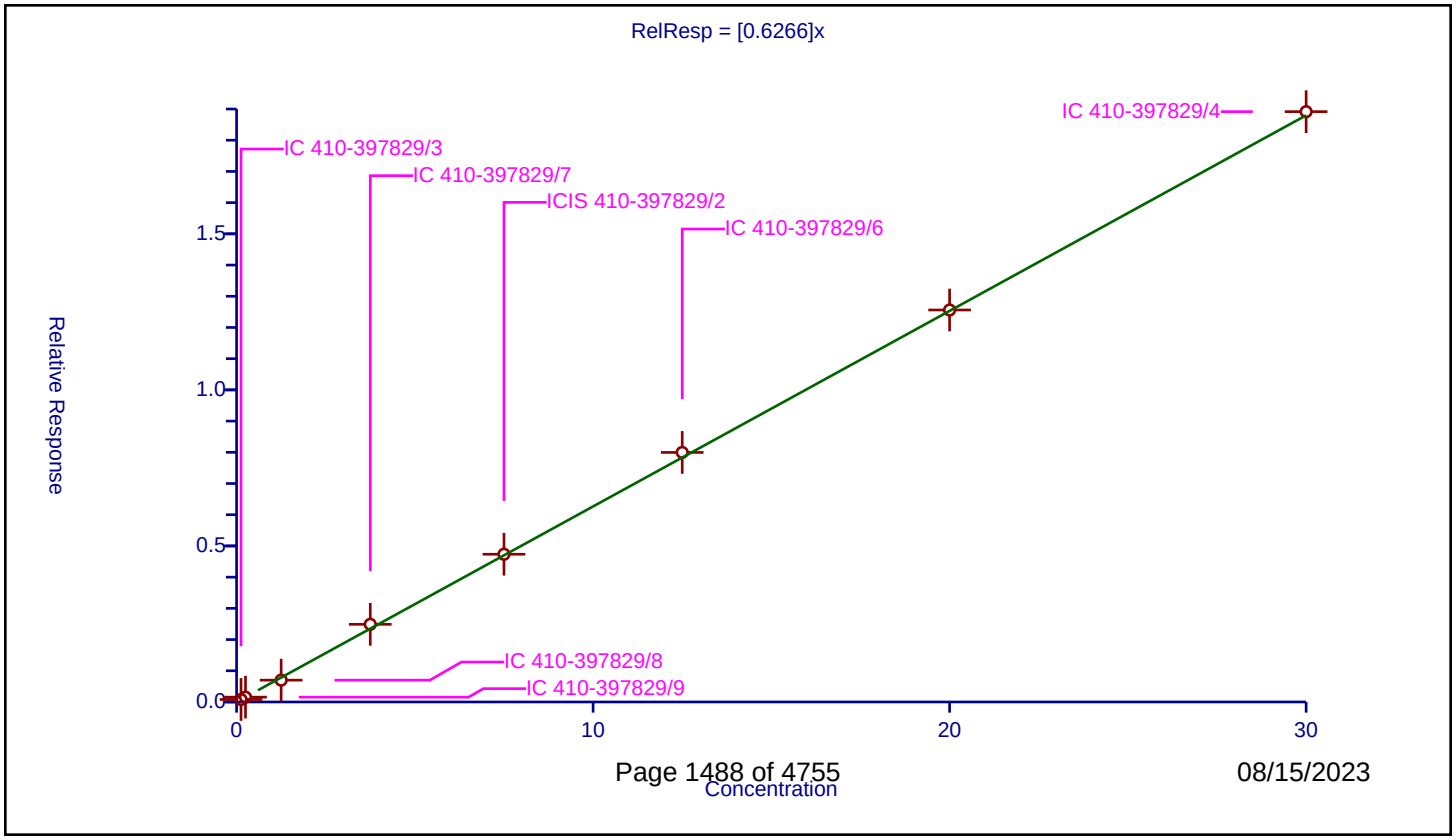
Curve Coefficients

Intercept:	0
Slope:	0.6266

Error Coefficients

Standard Error:	1570000
Relative Standard Error:	4.8
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.079945	5.0	847959.0	0.639559	Y
2	IC 410-397829/9	0.25	0.155113	5.0	717961.0	0.620452	Y
3	IC 410-397829/8	1.25	0.699513	5.0	942199.0	0.55961	Y
4	IC 410-397829/7	3.75	2.488701	5.0	708713.0	0.663654	Y
5	ICIS 410-397829/2	7.5	4.734023	5.0	781685.0	0.631203	Y
6	IC 410-397829/6	12.5	7.99642	5.0	925798.0	0.639714	Y
7	IC 410-397829/5	20.0	12.559669	5.0	853884.0	0.627983	Y
8	IC 410-397829/4	30.0	18.915396	5.0	822157.0	0.630513	Y



Calibration / Hexachlorocyclopentadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

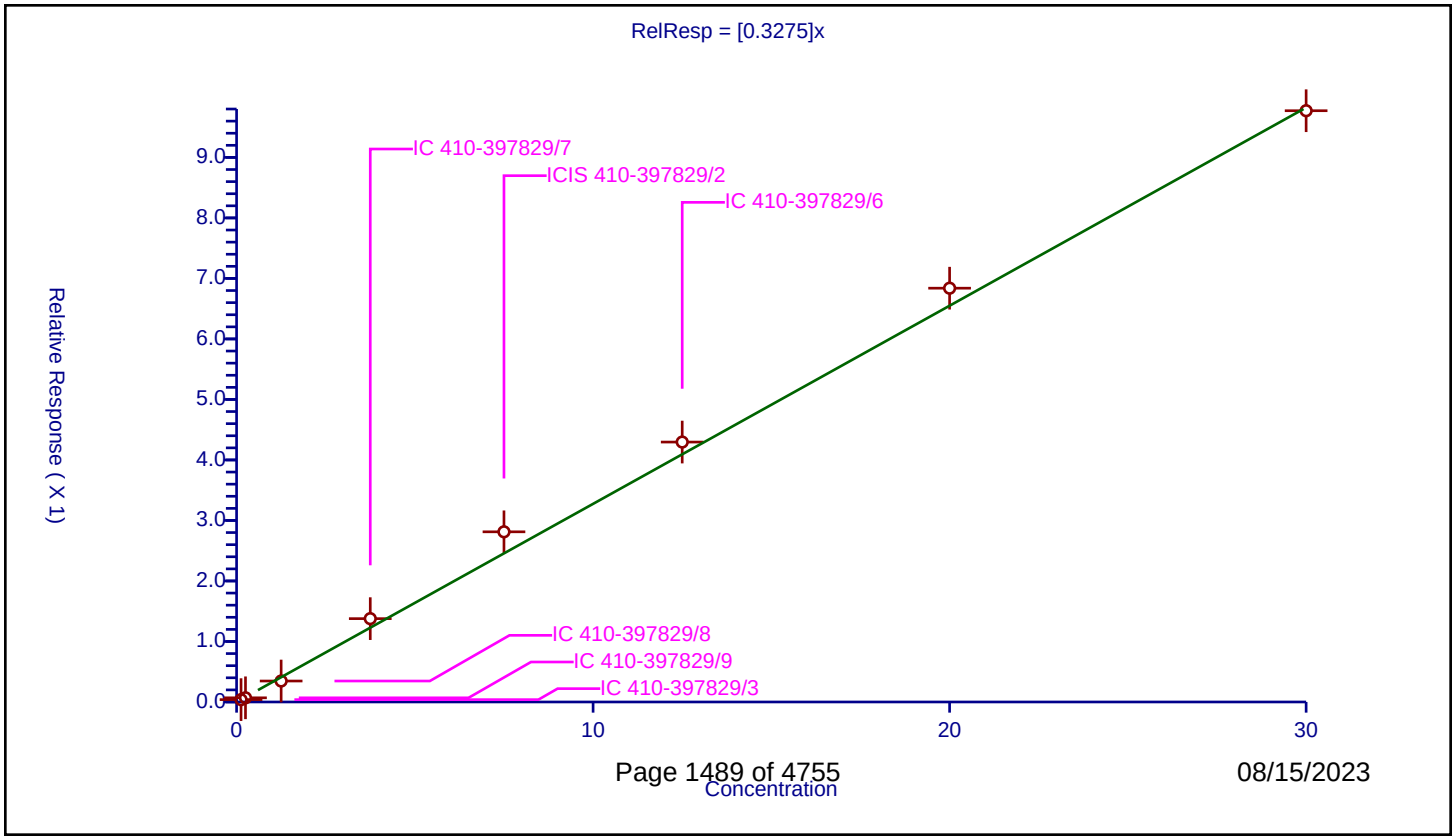
Curve Coefficients

Intercept:	0
Slope:	0.3275

Error Coefficients

Standard Error:	424000
Relative Standard Error:	11.4
Correlation Coefficient:	0.991
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.039016	5.0	437124.0	0.312131	Y
2	IC 410-397829/9	0.25	0.069115	5.0	383344.0	0.276462	Y
3	IC 410-397829/8	1.25	0.346731	5.0	465505.0	0.277385	Y
4	IC 410-397829/7	3.75	1.377604	5.0	364557.0	0.367361	Y
5	ICIS 410-397829/2	7.5	2.81258	5.0	392579.0	0.375011	Y
6	IC 410-397829/6	12.5	4.295871	5.0	478030.0	0.34367	Y
7	IC 410-397829/5	20.0	6.838836	5.0	443400.0	0.341942	Y
8	IC 410-397829/4	30.0	9.771892	5.0	416908.0	0.32573	Y



Calibration / 1,2,4,5-Tetrachlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

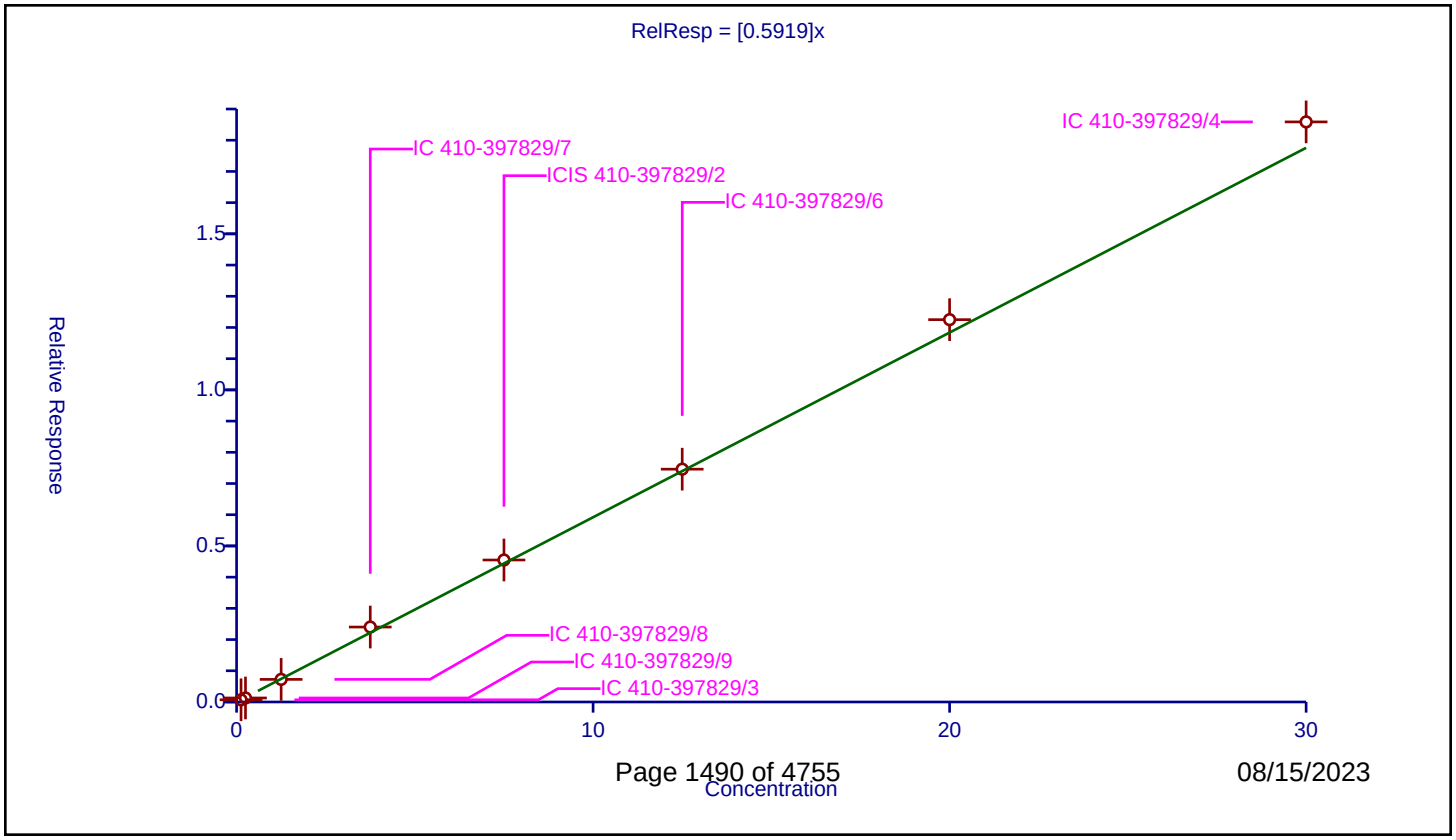
Curve Coefficients

Intercept:	0
Slope:	0.5919

Error Coefficients

Standard Error:	780000
Relative Standard Error:	6.6
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.070712	5.0	437124.0	0.565698	Y
2	IC 410-397829/9	0.25	0.128527	5.0	383344.0	0.514107	Y
3	IC 410-397829/8	1.25	0.724267	5.0	465505.0	0.579414	Y
4	IC 410-397829/7	3.75	2.401243	5.0	364557.0	0.640332	Y
5	ICIS 410-397829/2	7.5	4.549186	5.0	392579.0	0.606558	Y
6	IC 410-397829/6	12.5	7.459469	5.0	478030.0	0.596758	Y
7	IC 410-397829/5	20.0	12.250981	5.0	443400.0	0.612549	Y
8	IC 410-397829/4	30.0	18.587218	5.0	416908.0	0.619574	Y



Calibration / Isosafrole Peak 1

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

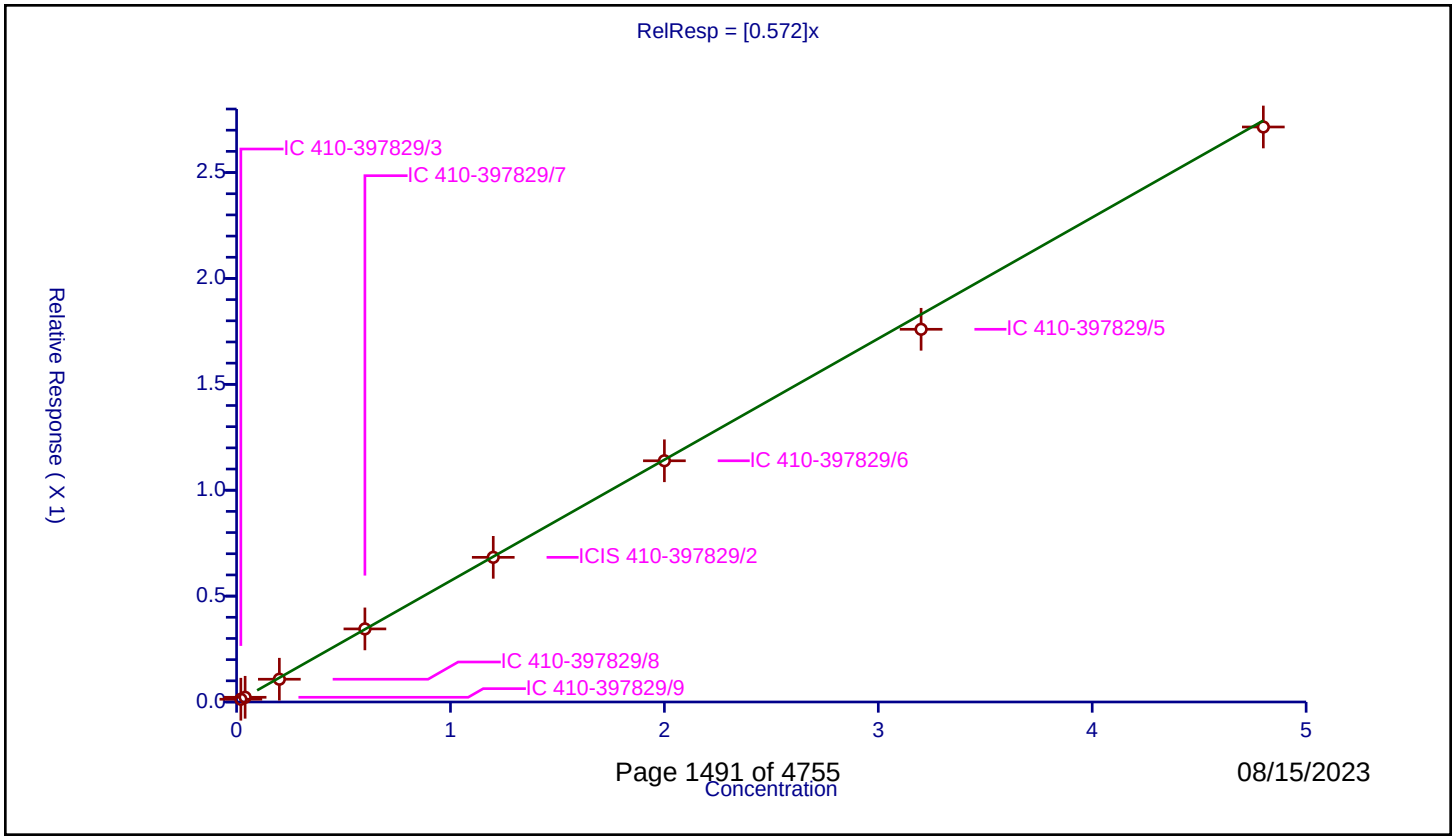
Curve Coefficients

Intercept:	0
Slope:	0.572

Error Coefficients

Standard Error:	114000
Relative Standard Error:	6.2
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.02	0.013074	5.0	437124.0	0.653705	Y
2	IC 410-397829/9	0.04	0.022225	5.0	383344.0	0.555637	Y
3	IC 410-397829/8	0.2	0.107421	5.0	465505.0	0.537105	Y
4	IC 410-397829/7	0.6	0.345063	5.0	364557.0	0.575104	Y
5	ICIS 410-397829/2	1.2	0.683047	5.0	392579.0	0.569206	Y
6	IC 410-397829/6	2.0	1.138998	5.0	478030.0	0.569499	Y
7	IC 410-397829/5	3.2	1.759867	5.0	443400.0	0.549958	Y
8	IC 410-397829/4	4.8	2.715095	5.0	416908.0	0.565645	Y



Calibration / 2,4,6-Trichlorophenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

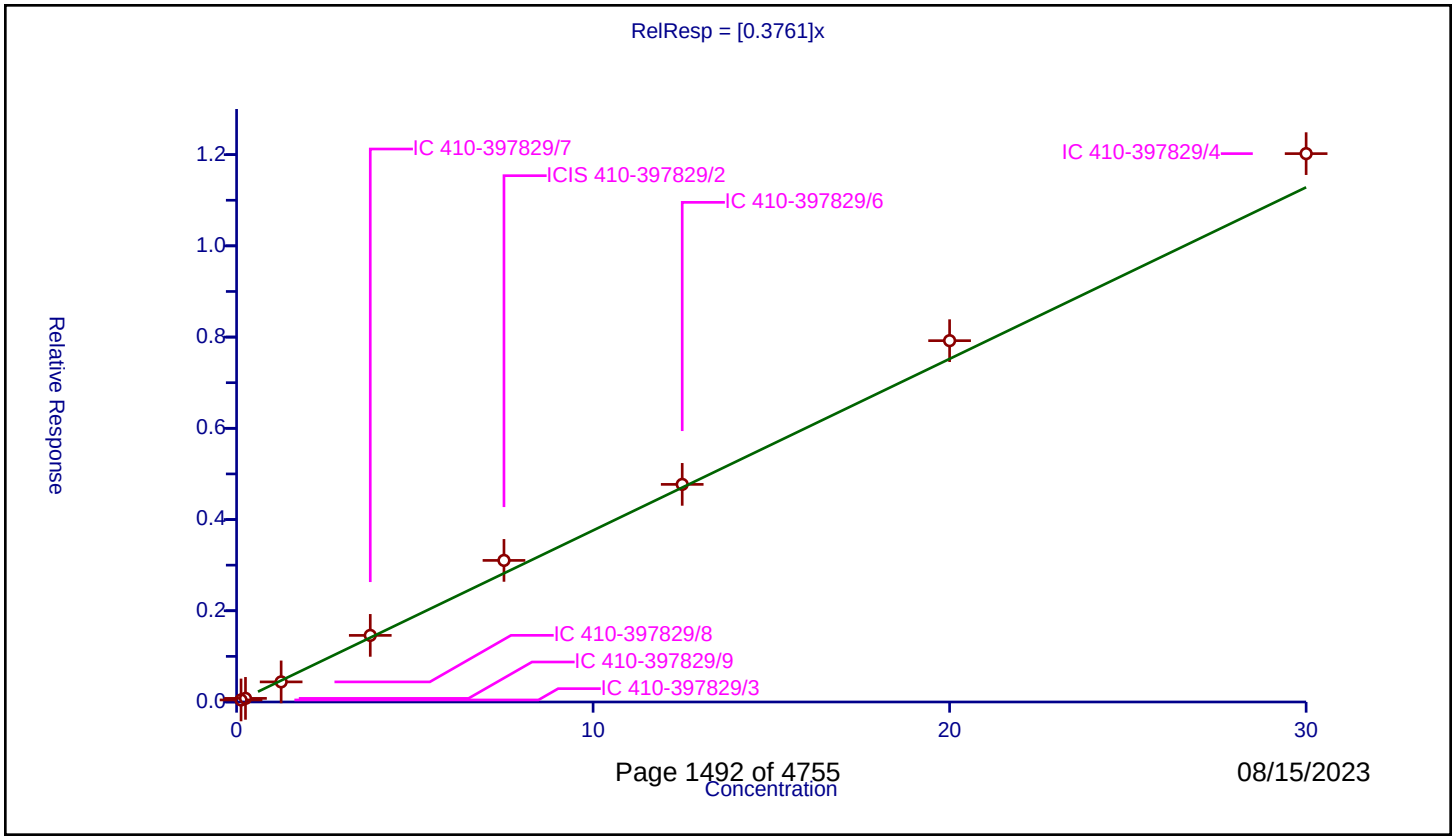
Curve Coefficients

Intercept:	0
Slope:	0.3761

Error Coefficients

Standard Error:	504000
Relative Standard Error:	8.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.044713	5.0	437124.0	0.357702	Y
2	IC 410-397829/9	0.25	0.079341	5.0	383344.0	0.317365	Y
3	IC 410-397829/8	1.25	0.440275	5.0	465505.0	0.35222	Y
4	IC 410-397829/7	3.75	1.459923	5.0	364557.0	0.389313	Y
5	ICIS 410-397829/2	7.5	3.103796	5.0	392579.0	0.413839	Y
6	IC 410-397829/6	12.5	4.770642	5.0	478030.0	0.381651	Y
7	IC 410-397829/5	20.0	7.921403	5.0	443400.0	0.39607	Y
8	IC 410-397829/4	30.0	12.022161	5.0	416908.0	0.400739	Y



Calibration / 2,4,5-Trichlorophenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

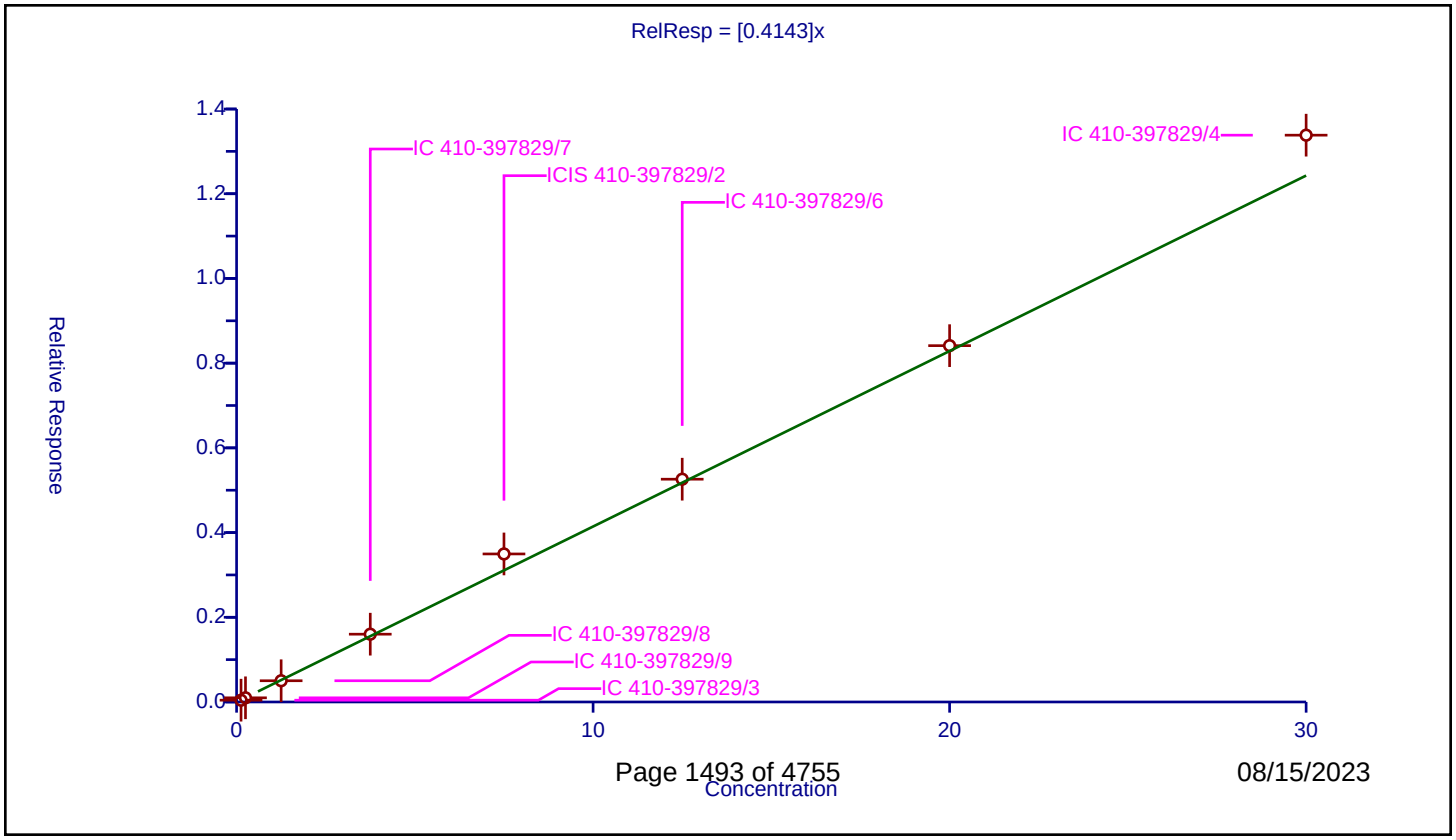
Curve Coefficients

Intercept:	0
Slope:	0.4143

Error Coefficients

Standard Error:	554000
Relative Standard Error:	9.2
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.042414	5.0	437124.0	0.339309	Y
2	IC 410-397829/9	0.25	0.098293	5.0	383344.0	0.393172	Y
3	IC 410-397829/8	1.25	0.501498	5.0	465505.0	0.401199	Y
4	IC 410-397829/7	3.75	1.601039	5.0	364557.0	0.426944	Y
5	ICIS 410-397829/2	7.5	3.495475	5.0	392579.0	0.466063	Y
6	IC 410-397829/6	12.5	5.260026	5.0	478030.0	0.420802	Y
7	IC 410-397829/5	20.0	8.413194	5.0	443400.0	0.42066	Y
8	IC 410-397829/4	30.0	13.382545	5.0	416908.0	0.446085	Y



Calibration / 2-Fluorobiphenyl (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

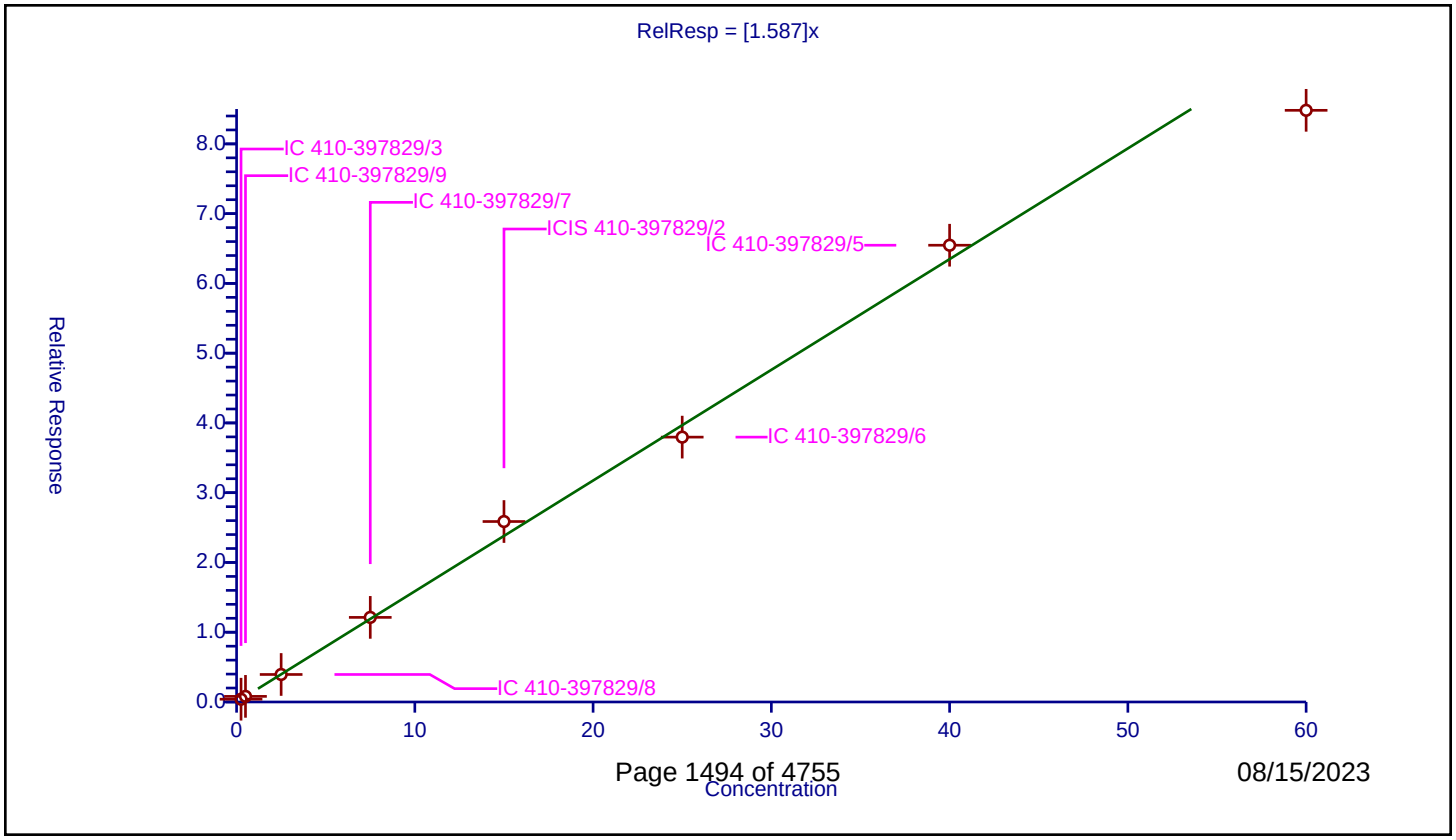
Curve Coefficients

Intercept:	0
Slope:	1.587

Error Coefficients

Standard Error:	3820000
Relative Standard Error:	5.7
Correlation Coefficient:	0.981
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.25	0.399074	5.0	437124.0	1.596298	Y
2	IC 410-397829/9	0.5	0.805738	5.0	383344.0	1.611477	Y
3	IC 410-397829/8	2.5	3.944179	5.0	465505.0	1.577672	Y
4	IC 410-397829/7	7.5	12.12691	5.0	364557.0	1.616921	Y
5	ICIS 410-397829/2	15.0	25.870003	5.0	392579.0	1.724667	Y
6	IC 410-397829/6	25.0	37.966006	5.0	478030.0	1.51864	Y
7	IC 410-397829/5	40.0	65.47518	5.0	443400.0	1.63688	Y
8	IC 410-397829/4	60.0	84.810894	5.0	416908.0	1.413515	Y



Calibration / Isosafrole Peak 2

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

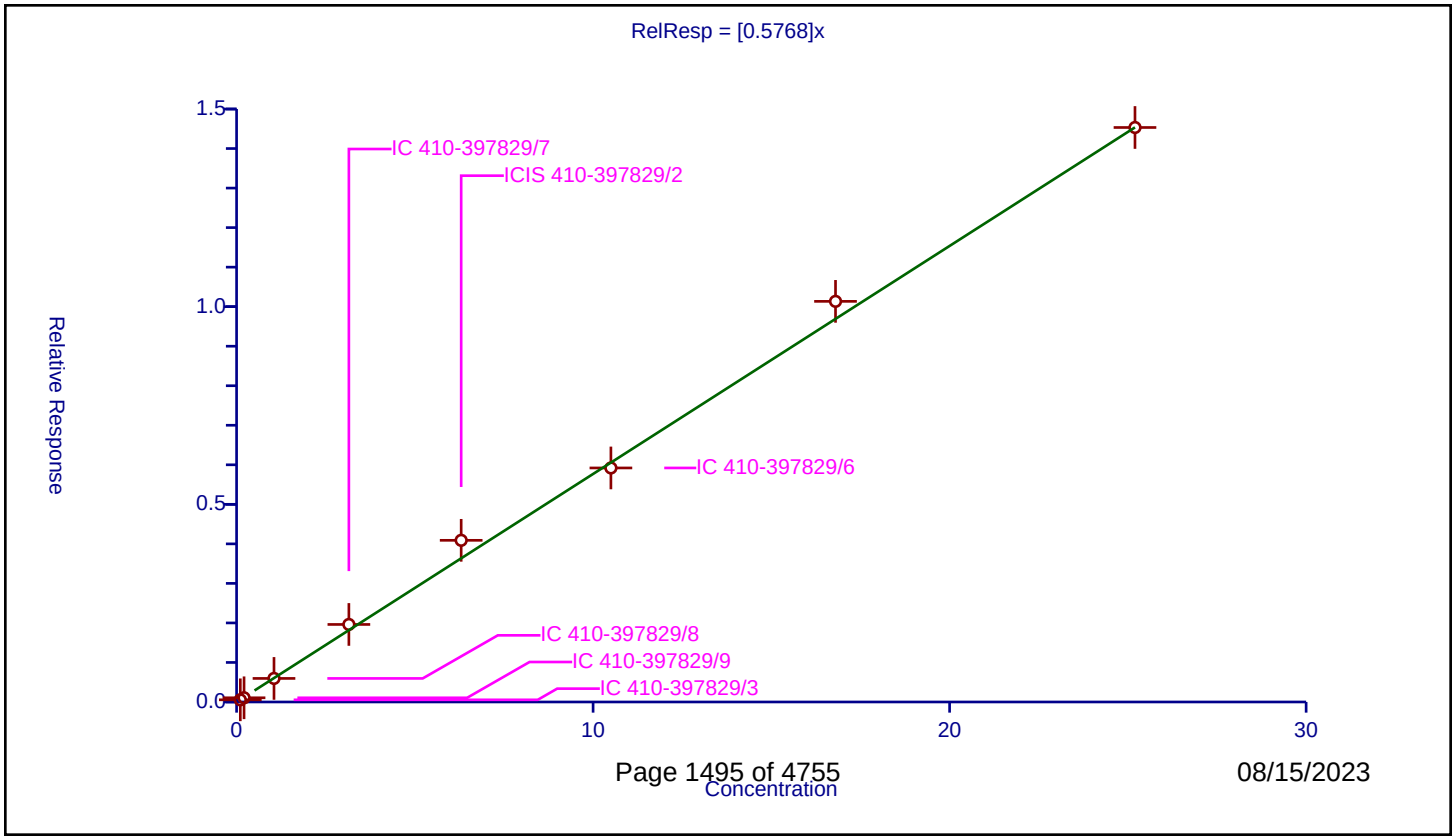
Curve Coefficients

Intercept:	0
Slope:	0.5768

Error Coefficients

Standard Error:	624000
Relative Standard Error:	8.3
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.105	0.055156	5.0	437124.0	0.525295	Y
2	IC 410-397829/9	0.21	0.106171	5.0	383344.0	0.505576	Y
3	IC 410-397829/8	1.05	0.596299	5.0	465505.0	0.567903	Y
4	IC 410-397829/7	3.15	1.961545	5.0	364557.0	0.622713	Y
5	ICIS 410-397829/2	6.3	4.089648	5.0	392579.0	0.649151	Y
6	IC 410-397829/6	10.5	5.92011	5.0	478030.0	0.56382	Y
7	IC 410-397829/5	16.8	10.134529	5.0	443400.0	0.603246	Y
8	IC 410-397829/4	25.2	14.532199	5.0	416908.0	0.576675	Y



Calibration / 1,1'-Biphenyl

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

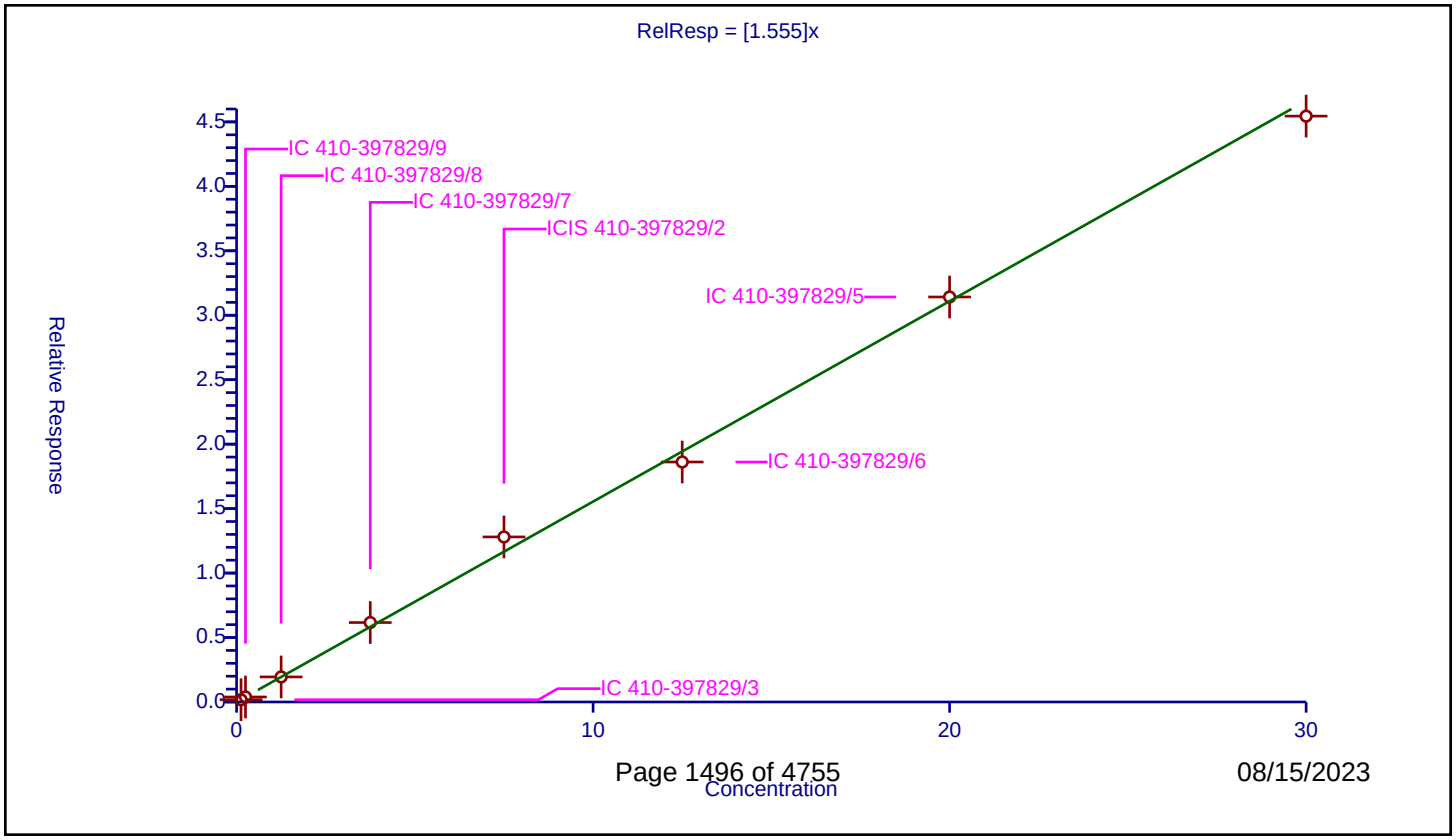
Curve Coefficients

Intercept:	0
Slope:	1.555

Error Coefficients

Standard Error:	1950000
Relative Standard Error:	6.0
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.175088	5.0	437124.0	1.400701	Y
2	IC 410-397829/9	0.25	0.388776	5.0	383344.0	1.555105	Y
3	IC 410-397829/8	1.25	1.944361	5.0	465505.0	1.555489	Y
4	IC 410-397829/7	3.75	6.163097	5.0	364557.0	1.643492	Y
5	ICIS 410-397829/2	7.5	12.803792	5.0	392579.0	1.707172	Y
6	IC 410-397829/6	12.5	18.617095	5.0	478030.0	1.489368	Y
7	IC 410-397829/5	20.0	31.417851	5.0	443400.0	1.570893	Y
8	IC 410-397829/4	30.0	45.447521	5.0	416908.0	1.514917	Y



Calibration / 2-Chloronaphthalene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

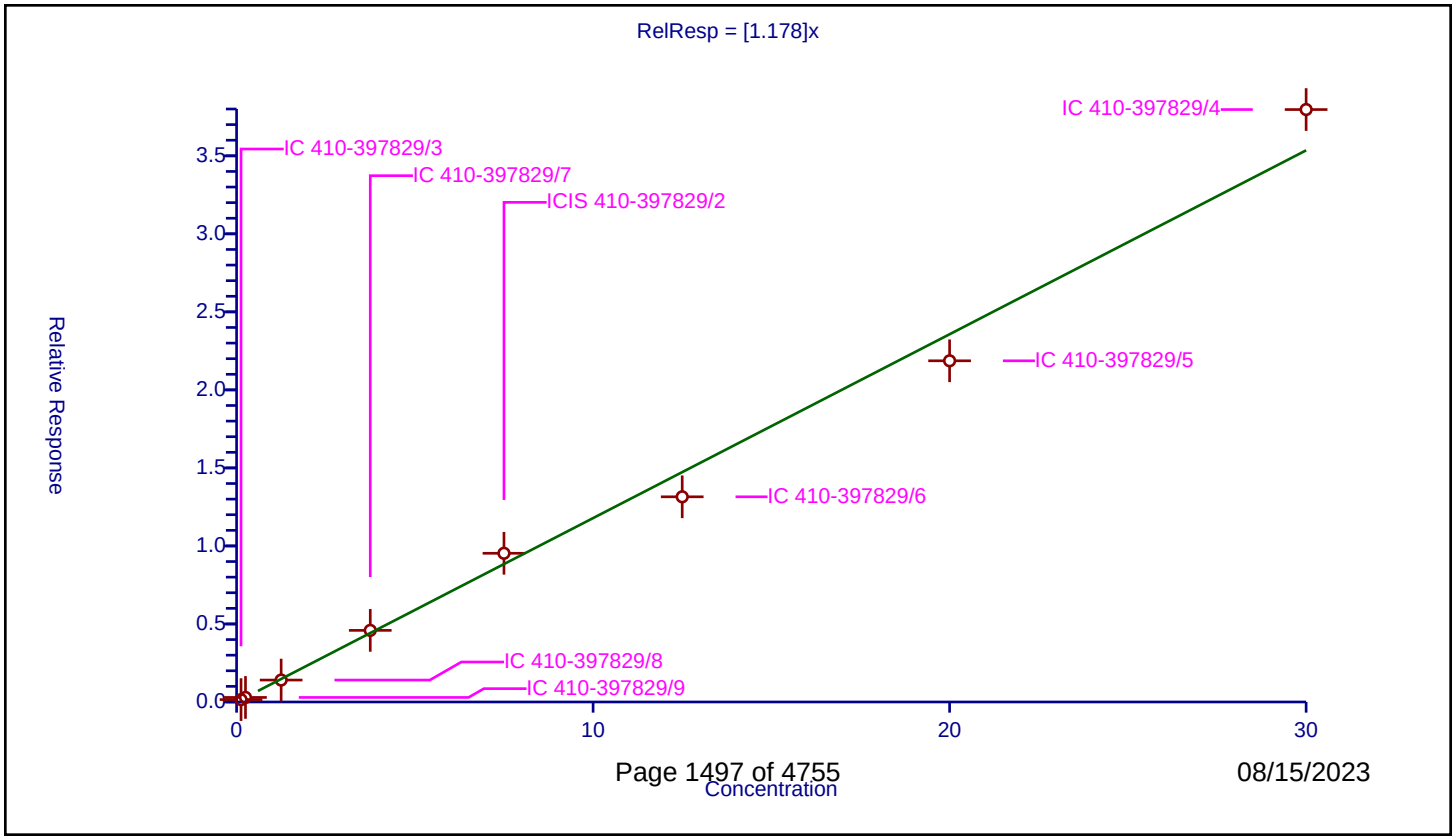
Curve Coefficients

Intercept:	0
Slope:	1.178

Error Coefficients

Standard Error:	1510000
Relative Standard Error:	7.0
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.153755	5.0	437124.0	1.23004	Y
2	IC 410-397829/9	0.25	0.291657	5.0	383344.0	1.166628	Y
3	IC 410-397829/8	1.25	1.406107	5.0	465505.0	1.124886	Y
4	IC 410-397829/7	3.75	4.589447	5.0	364557.0	1.223853	Y
5	ICIS 410-397829/2	7.5	9.530438	5.0	392579.0	1.270725	Y
6	IC 410-397829/6	12.5	13.149729	5.0	478030.0	1.051978	Y
7	IC 410-397829/5	20.0	21.863712	5.0	443400.0	1.093186	Y
8	IC 410-397829/4	30.0	37.966602	5.0	416908.0	1.265553	Y



Calibration / 1-Chloronaphthalene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

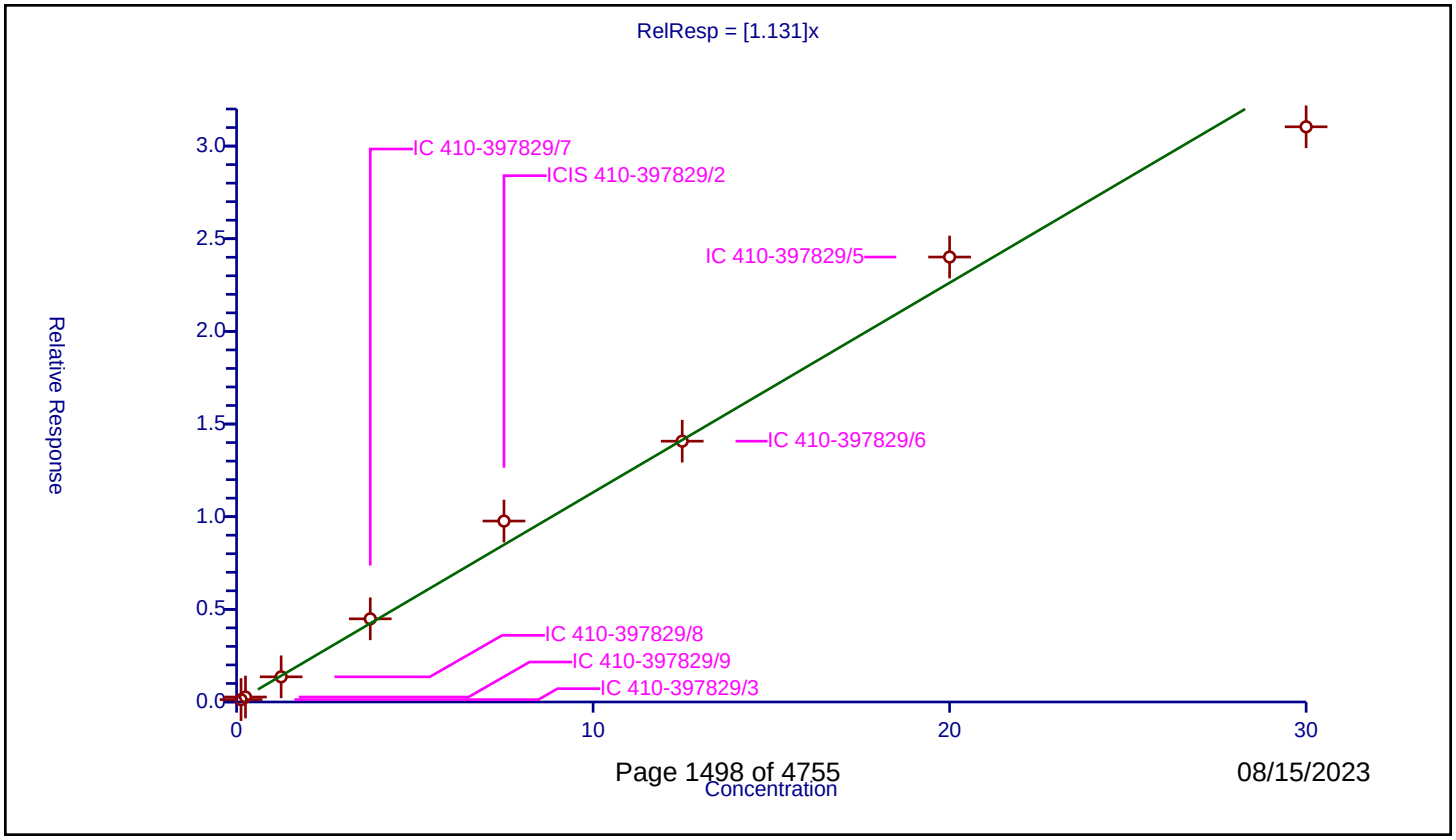
Curve Coefficients

Intercept:	0
Slope:	1.131

Error Coefficients

Standard Error:	1400000
Relative Standard Error:	8.4
Correlation Coefficient:	0.980
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.128545	5.0	437124.0	1.028358	Y
2	IC 410-397829/9	0.25	0.268688	5.0	383344.0	1.074753	Y
3	IC 410-397829/8	1.25	1.357365	5.0	465505.0	1.085892	Y
4	IC 410-397829/7	3.75	4.487474	5.0	364557.0	1.19666	Y
5	ICIS 410-397829/2	7.5	9.764353	5.0	392579.0	1.301914	Y
6	IC 410-397829/6	12.5	14.075445	5.0	478030.0	1.126036	Y
7	IC 410-397829/5	20.0	24.010983	5.0	443400.0	1.200549	Y
8	IC 410-397829/4	30.0	31.039594	5.0	416908.0	1.034653	Y



Calibration / Phenyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

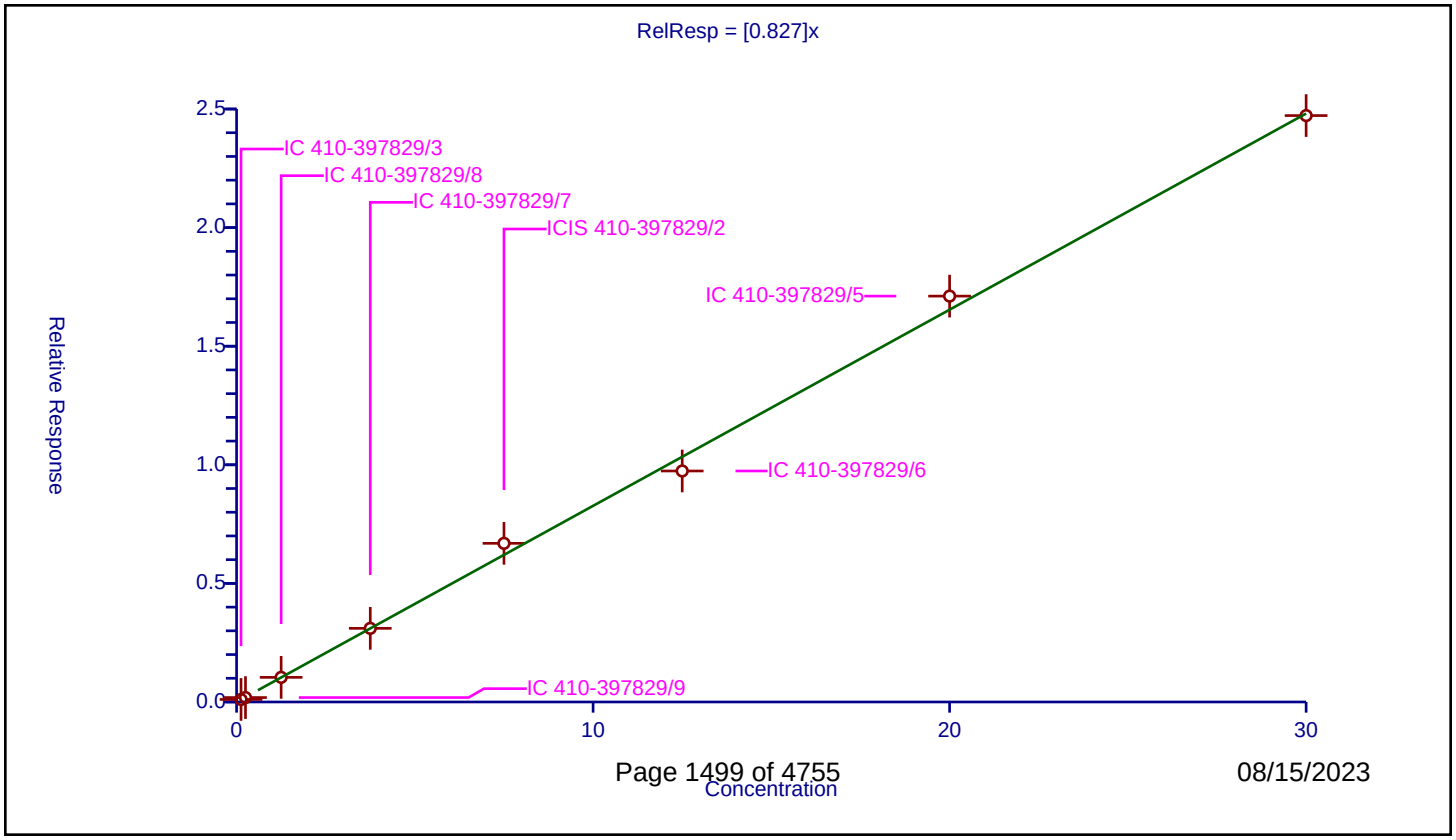
Curve Coefficients

Intercept:	0
Slope:	0.827

Error Coefficients

Standard Error:	1050000
Relative Standard Error:	5.5
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.107166	5.0	437124.0	0.857331	Y
2	IC 410-397829/9	0.25	0.187195	5.0	383344.0	0.748779	Y
3	IC 410-397829/8	1.25	1.038603	5.0	465505.0	0.830883	Y
4	IC 410-397829/7	3.75	3.105152	5.0	364557.0	0.828041	Y
5	ICIS 410-397829/2	7.5	6.688781	5.0	392579.0	0.891837	Y
6	IC 410-397829/6	12.5	9.738531	5.0	478030.0	0.779082	Y
7	IC 410-397829/5	20.0	17.112573	5.0	443400.0	0.855629	Y
8	IC 410-397829/4	30.0	24.72302	5.0	416908.0	0.824101	Y



Calibration / 2-Nitroaniline

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

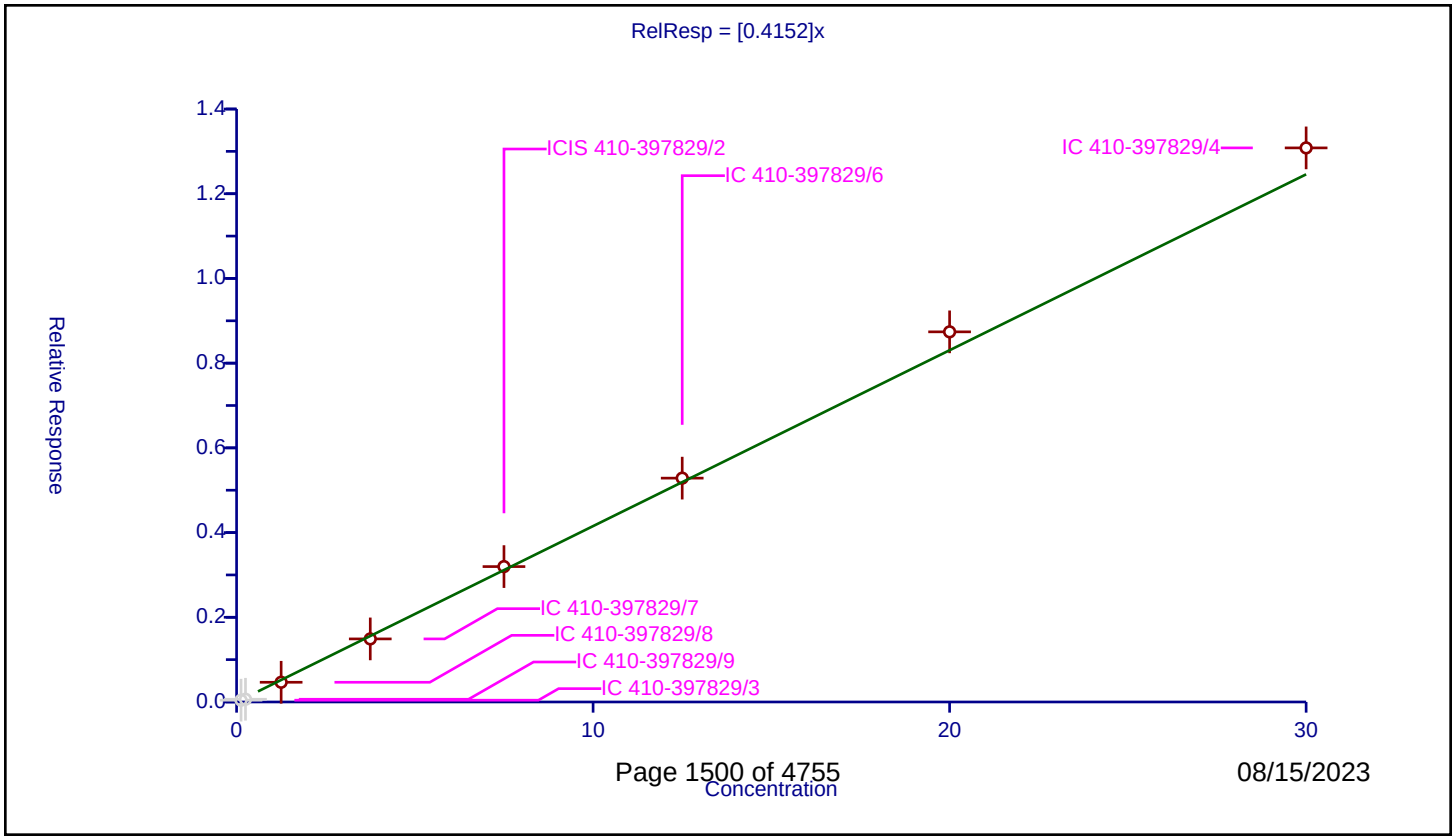
Curve Coefficients

Intercept:	0
Slope:	0.4152

Error Coefficients

Standard Error:	652000
Relative Standard Error:	6.1
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.042208	5.0	437124.0	0.337662	N
2	IC 410-397829/9	0.25	0.064511	5.0	383344.0	0.258045	N
3	IC 410-397829/8	1.25	0.465441	5.0	465505.0	0.372353	Y
4	IC 410-397829/7	3.75	1.489109	5.0	364557.0	0.397096	Y
5	ICIS 410-397829/2	7.5	3.196554	5.0	392579.0	0.426207	Y
6	IC 410-397829/6	12.5	5.285055	5.0	478030.0	0.422804	Y
7	IC 410-397829/5	20.0	8.738802	5.0	443400.0	0.43694	Y
8	IC 410-397829/4	30.0	13.081951	5.0	416908.0	0.436065	Y



Calibration / 1,4-Naphthoquinone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

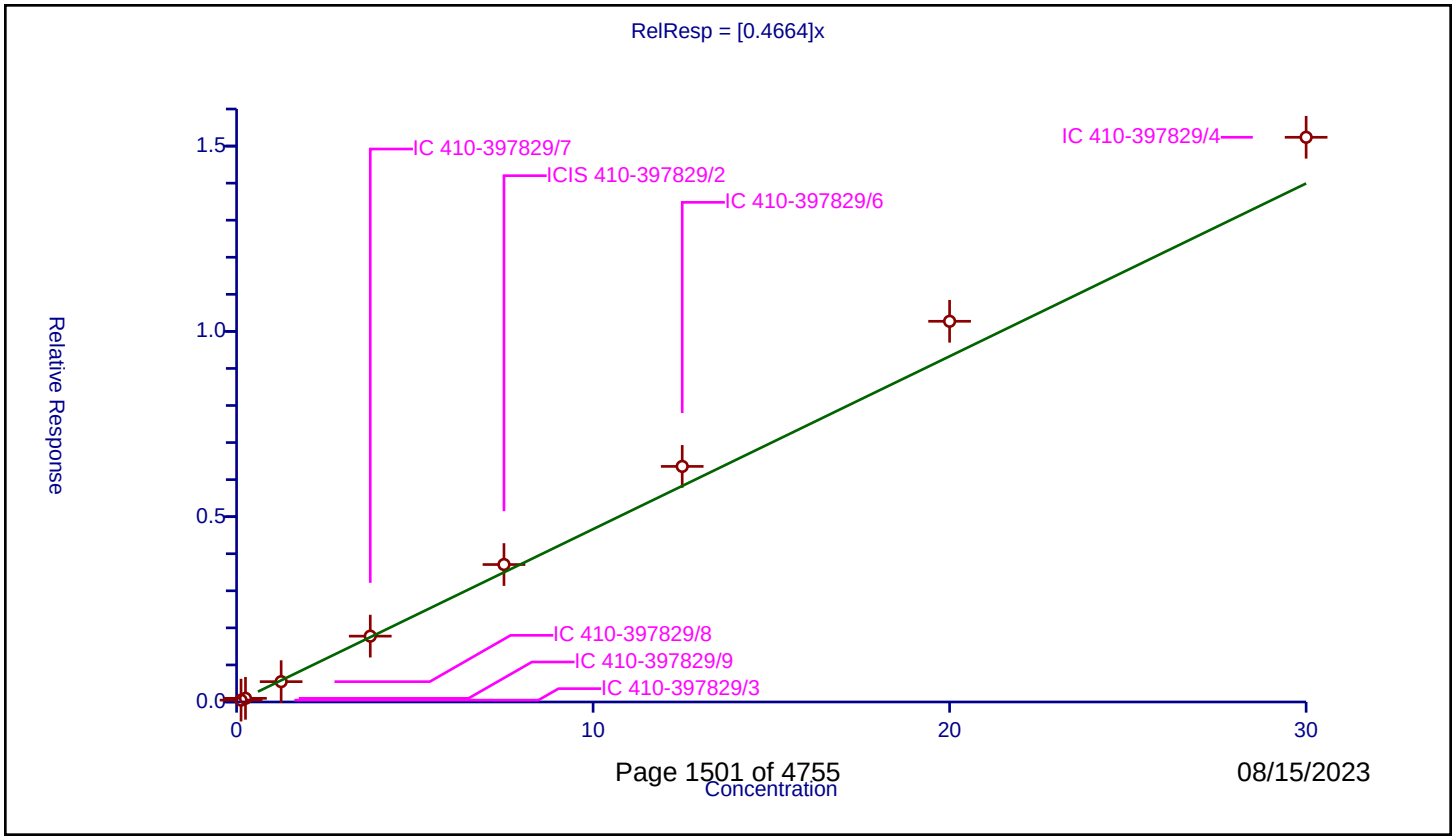
Curve Coefficients

Intercept:	0
Slope:	0.4664

Error Coefficients

Standard Error:	646000
Relative Standard Error:	10.6
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.049814	5.0	437124.0	0.398514	Y
2	IC 410-397829/9	0.25	0.098776	5.0	383344.0	0.395102	Y
3	IC 410-397829/8	1.25	0.548877	5.0	465505.0	0.439102	Y
4	IC 410-397829/7	3.75	1.77654	5.0	364557.0	0.473744	Y
5	ICIS 410-397829/2	7.5	3.70896	5.0	392579.0	0.494528	Y
6	IC 410-397829/6	12.5	6.356787	5.0	478030.0	0.508543	Y
7	IC 410-397829/5	20.0	10.272508	5.0	443400.0	0.513625	Y
8	IC 410-397829/4	30.0	15.237271	5.0	416908.0	0.507909	Y



Calibration / 1,4-Dinitrobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

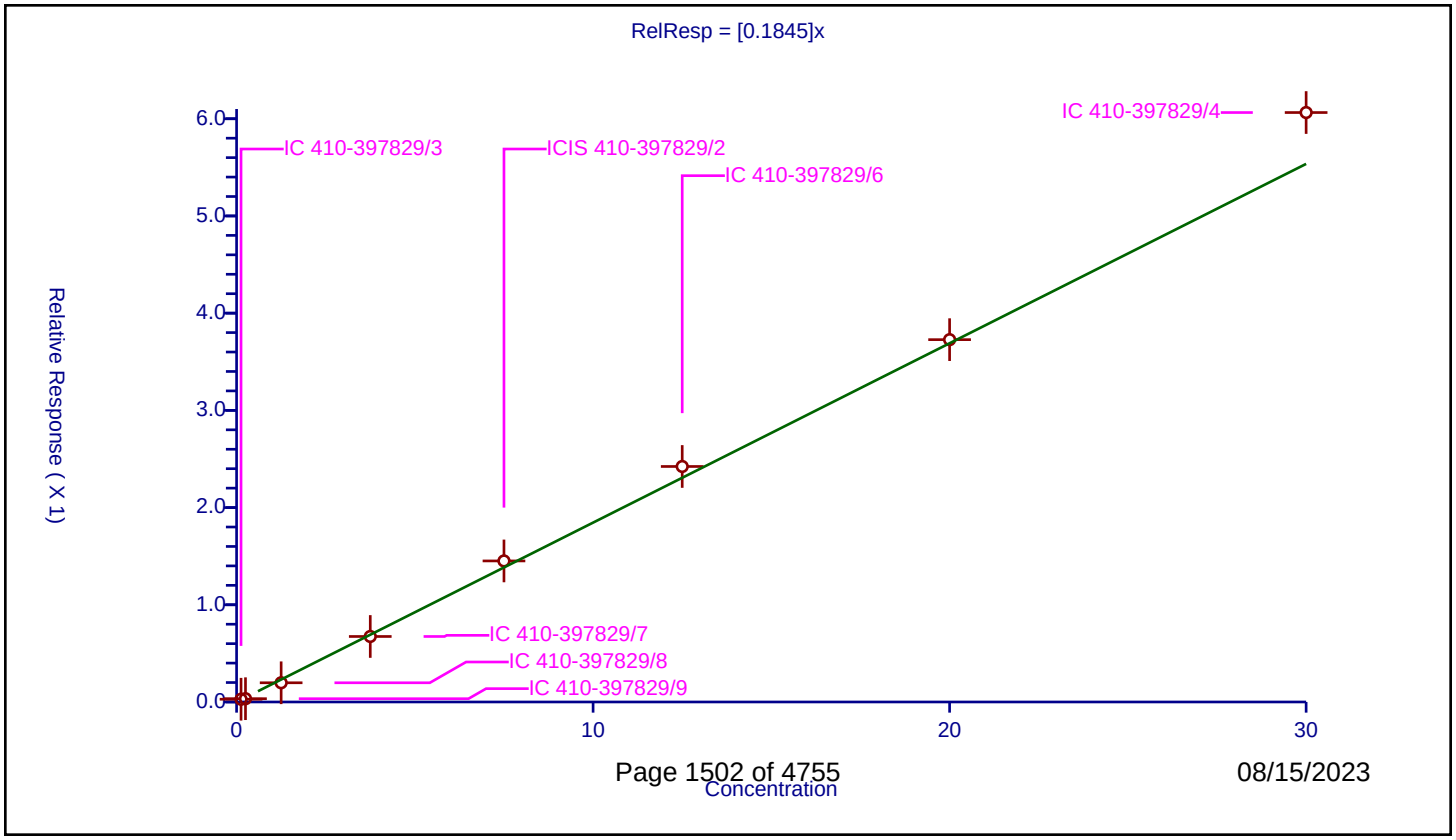
Curve Coefficients

Intercept:	0
Slope:	0.1845

Error Coefficients

Standard Error:	249000
Relative Standard Error:	15.0
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.973

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.028321	5.0	437124.0	0.226572	Y
2	IC 410-397829/9	0.25	0.033977	5.0	383344.0	0.135909	Y
3	IC 410-397829/8	1.25	0.197699	5.0	465505.0	0.158159	Y
4	IC 410-397829/7	3.75	0.673914	5.0	364557.0	0.17971	Y
5	ICIS 410-397829/2	7.5	1.450956	5.0	392579.0	0.193461	Y
6	IC 410-397829/6	12.5	2.42262	5.0	478030.0	0.19381	Y
7	IC 410-397829/5	20.0	3.727255	5.0	443400.0	0.186363	Y
8	IC 410-397829/4	30.0	6.063832	5.0	416908.0	0.202128	Y



Calibration / Dimethyl phthalate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

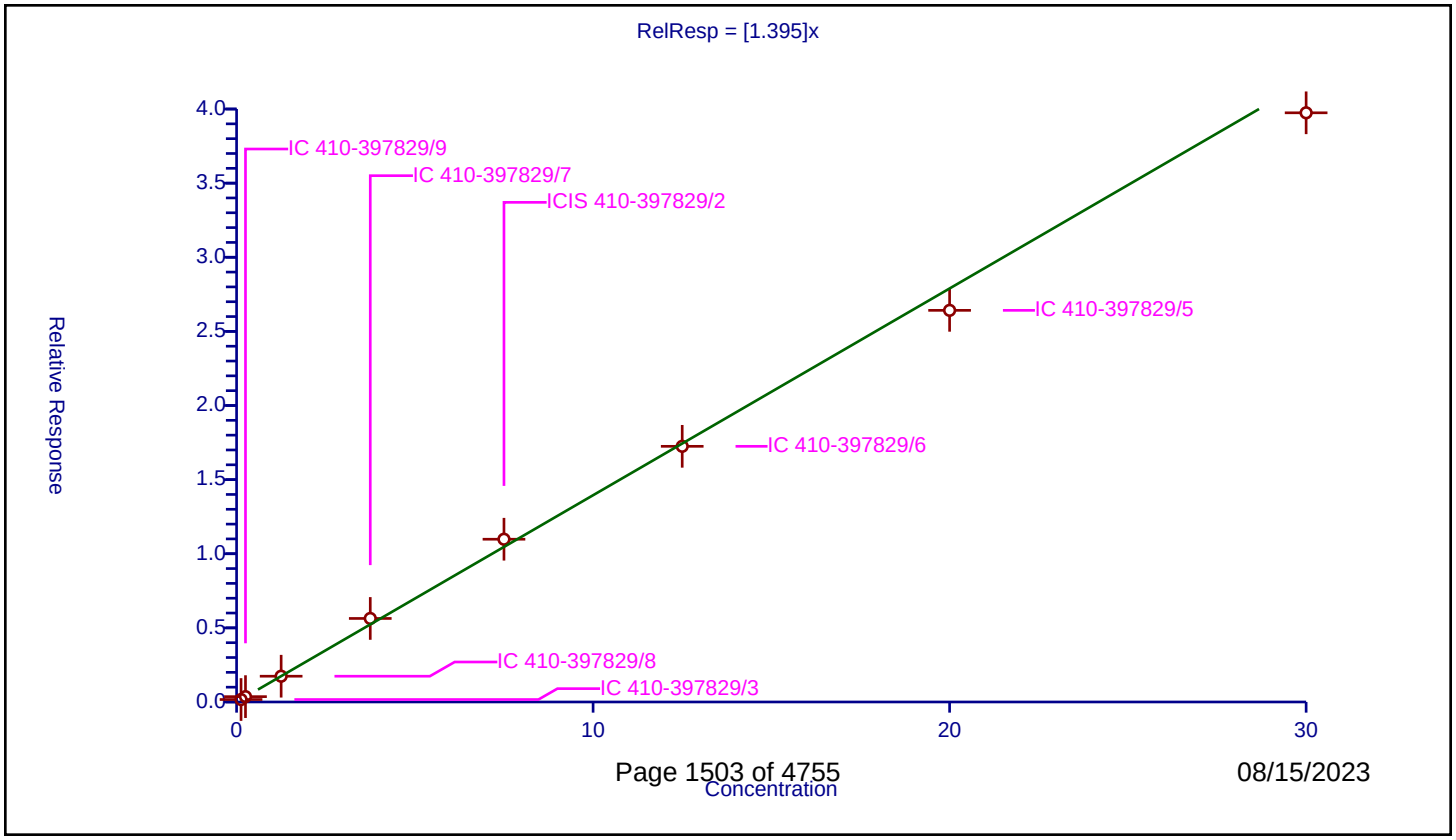
Curve Coefficients

Intercept:	0
Slope:	1.395

Error Coefficients

Standard Error:	1700000
Relative Standard Error:	5.0
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.166006	5.0	437124.0	1.328044	Y
2	IC 410-397829/9	0.25	0.361555	5.0	383344.0	1.446221	Y
3	IC 410-397829/8	1.25	1.739391	5.0	465505.0	1.391512	Y
4	IC 410-397829/7	3.75	5.634702	5.0	364557.0	1.502587	Y
5	ICIS 410-397829/2	7.5	10.979446	5.0	392579.0	1.463926	Y
6	IC 410-397829/6	12.5	17.246376	5.0	478030.0	1.37971	Y
7	IC 410-397829/5	20.0	26.419576	5.0	443400.0	1.320979	Y
8	IC 410-397829/4	30.0	39.744116	5.0	416908.0	1.324804	Y



Calibration / 1,3-Dinitrobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

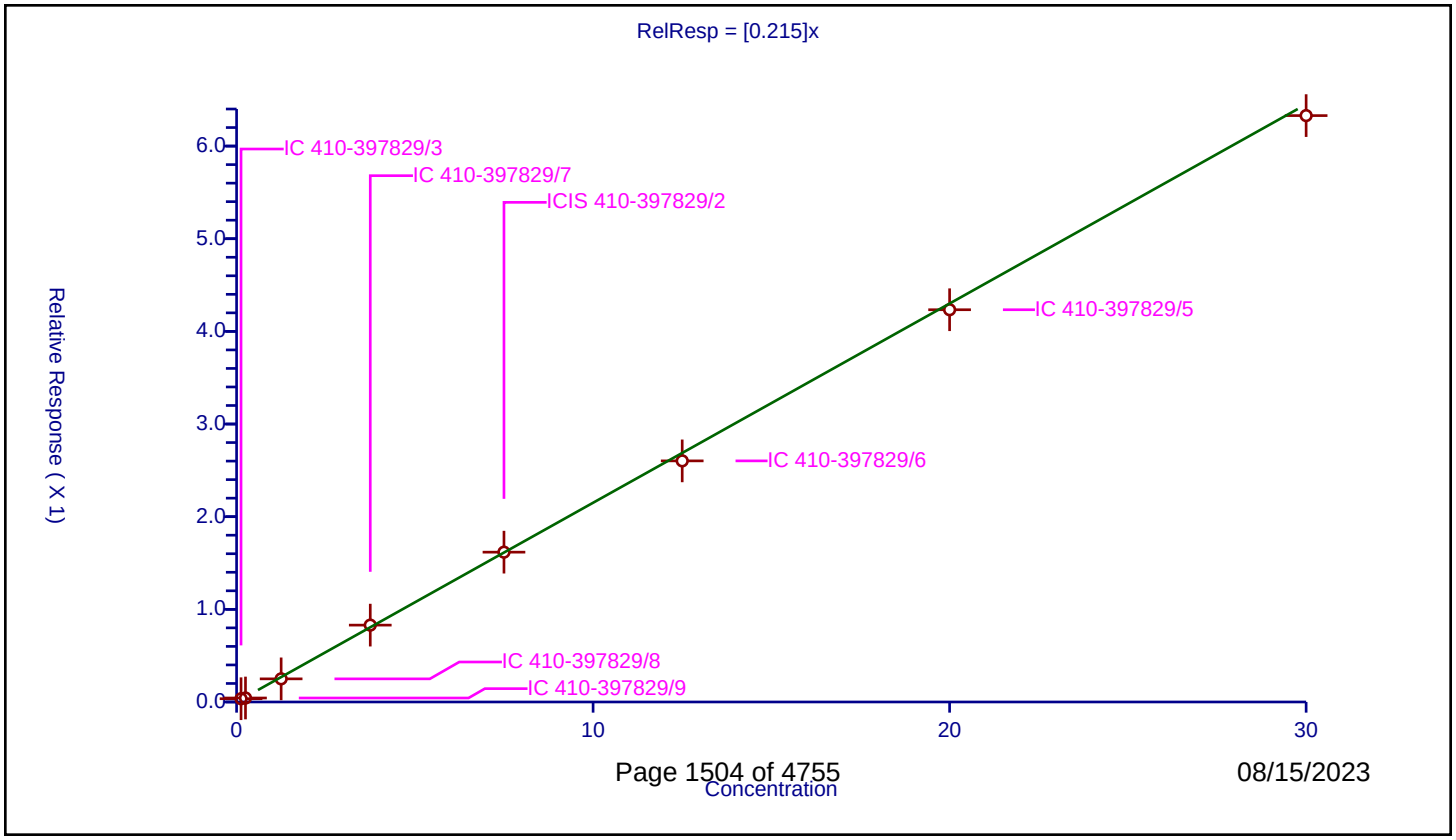
Curve Coefficients

Intercept:	0
Slope:	0.215

Error Coefficients

Standard Error:	268000
Relative Standard Error:	14.2
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.974

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.035116	5.0	437124.0	0.280927	Y
2	IC 410-397829/9	0.25	0.042951	5.0	383344.0	0.171804	Y
3	IC 410-397829/8	1.25	0.249772	5.0	465505.0	0.199817	Y
4	IC 410-397829/7	3.75	0.829637	5.0	364557.0	0.221237	Y
5	ICIS 410-397829/2	7.5	1.616948	5.0	392579.0	0.215593	Y
6	IC 410-397829/6	12.5	2.60241	5.0	478030.0	0.208193	Y
7	IC 410-397829/5	20.0	4.233705	5.0	443400.0	0.211685	Y
8	IC 410-397829/4	30.0	6.328902	5.0	416908.0	0.210963	Y



Calibration / 2,6-Dinitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

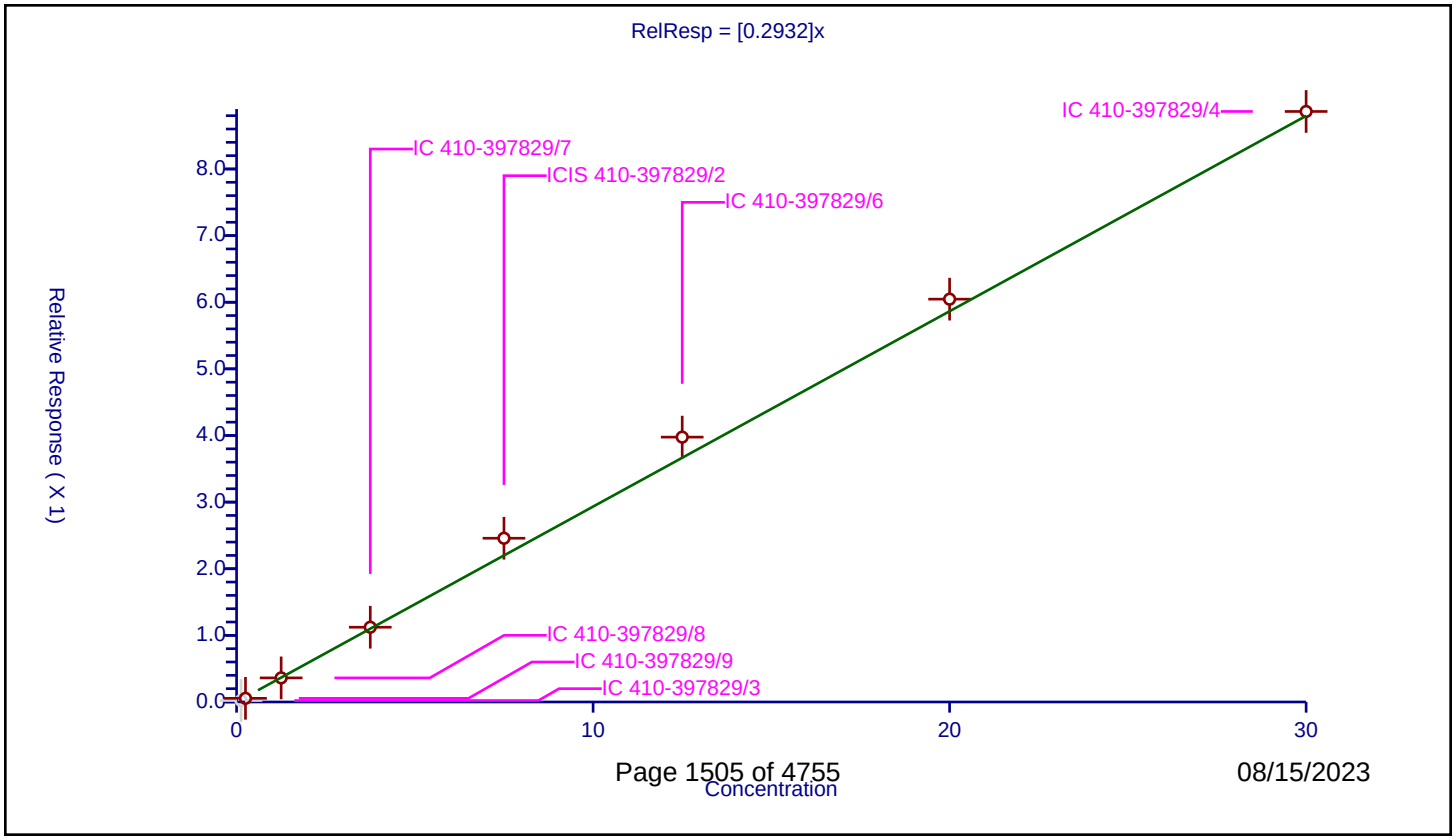
Curve Coefficients

Intercept:	0
Slope:	0.2932

Error Coefficients

Standard Error:	413000
Relative Standard Error:	11.8
Correlation Coefficient:	0.989
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.022316	5.0	437124.0	0.178531	N
2	IC 410-397829/9	0.25	0.055185	5.0	383344.0	0.220742	Y
3	IC 410-397829/8	1.25	0.3615	5.0	465505.0	0.2892	Y
4	IC 410-397829/7	3.75	1.122156	5.0	364557.0	0.299242	Y
5	ICIS 410-397829/2	7.5	2.457645	5.0	392579.0	0.327686	Y
6	IC 410-397829/6	12.5	3.97543	5.0	478030.0	0.318034	Y
7	IC 410-397829/5	20.0	6.046211	5.0	443400.0	0.302311	Y
8	IC 410-397829/4	30.0	8.863238	5.0	416908.0	0.295441	Y



Calibration / Acenaphthylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

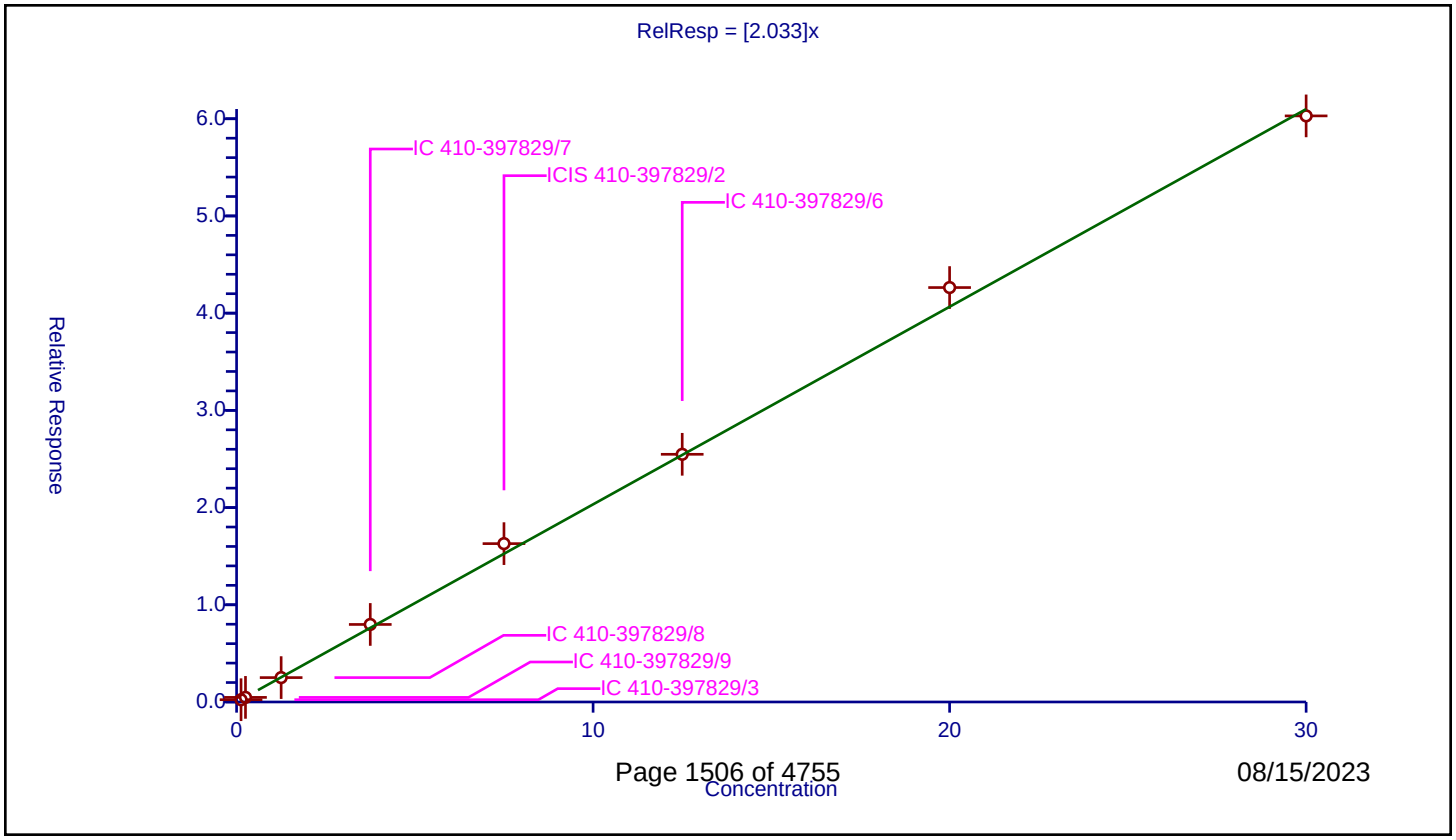
Curve Coefficients

Intercept:	0
Slope:	2.033

Error Coefficients

Standard Error:	2610000
Relative Standard Error:	5.3
Correlation Coefficient:	0.992
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.235013	5.0	437124.0	1.880107	Y
2	IC 410-397829/9	0.25	0.474365	5.0	383344.0	1.89746	Y
3	IC 410-397829/8	1.25	2.5079	5.0	465505.0	2.00632	Y
4	IC 410-397829/7	3.75	7.976791	5.0	364557.0	2.127144	Y
5	ICIS 410-397829/2	7.5	16.29132	5.0	392579.0	2.172176	Y
6	IC 410-397829/6	12.5	25.480158	5.0	478030.0	2.038413	Y
7	IC 410-397829/5	20.0	42.634596	5.0	443400.0	2.13173	Y
8	IC 410-397829/4	30.0	60.29359	5.0	416908.0	2.009786	Y



Calibration / 3-Nitroaniline

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

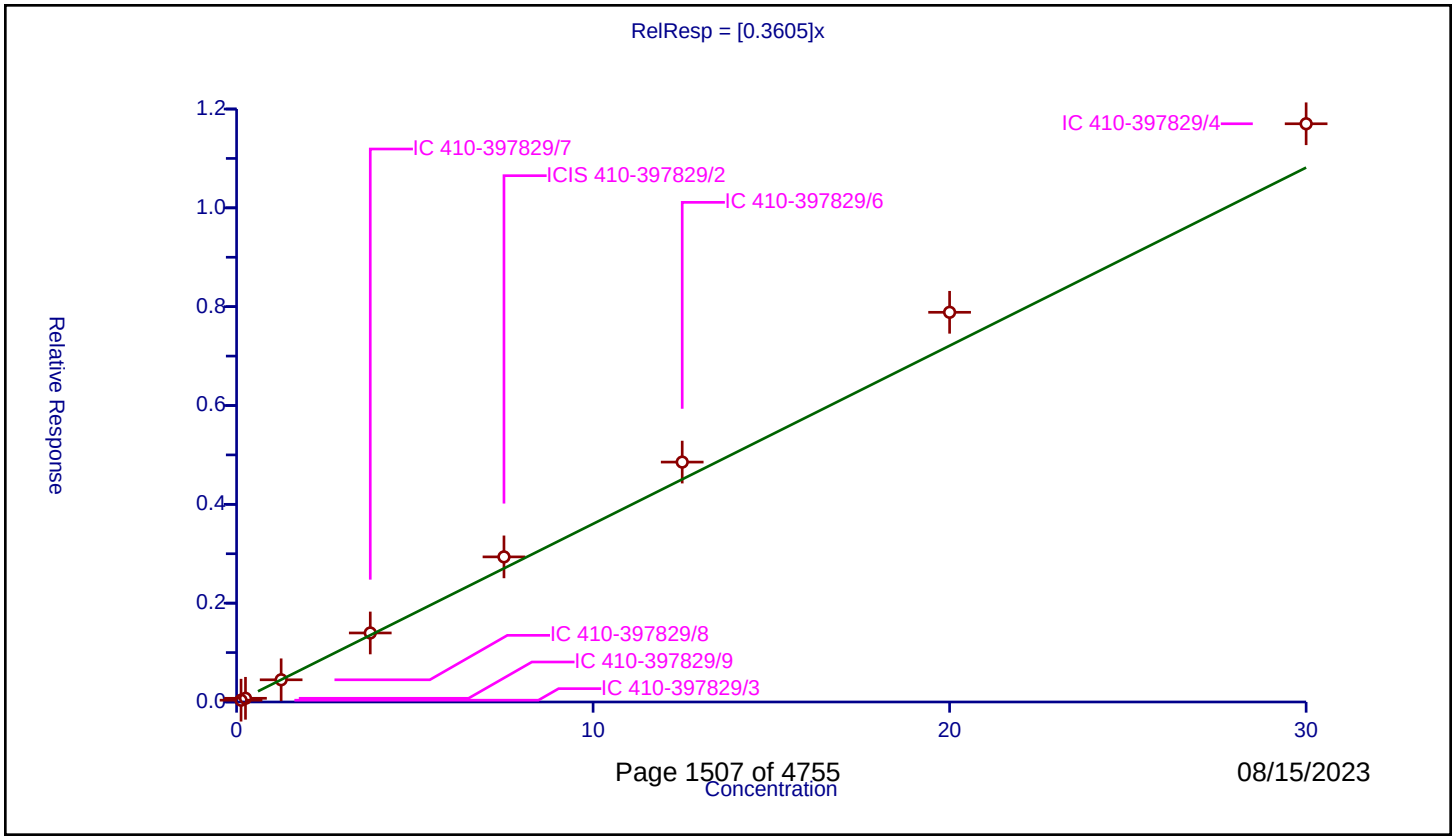
Curve Coefficients

Intercept:	0
Slope:	0.3605

Error Coefficients

Standard Error:	496000
Relative Standard Error:	11.9
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.036225	5.0	437124.0	0.289803	Y
2	IC 410-397829/9	0.25	0.074489	5.0	383344.0	0.297957	Y
3	IC 410-397829/8	1.25	0.44934	5.0	465505.0	0.359472	Y
4	IC 410-397829/7	3.75	1.396846	5.0	364557.0	0.372492	Y
5	ICIS 410-397829/2	7.5	2.93639	5.0	392579.0	0.391519	Y
6	IC 410-397829/6	12.5	4.854821	5.0	478030.0	0.388386	Y
7	IC 410-397829/5	20.0	7.886299	5.0	443400.0	0.394315	Y
8	IC 410-397829/4	30.0	11.701646	5.0	416908.0	0.390055	Y



Calibration / Acenaphthene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

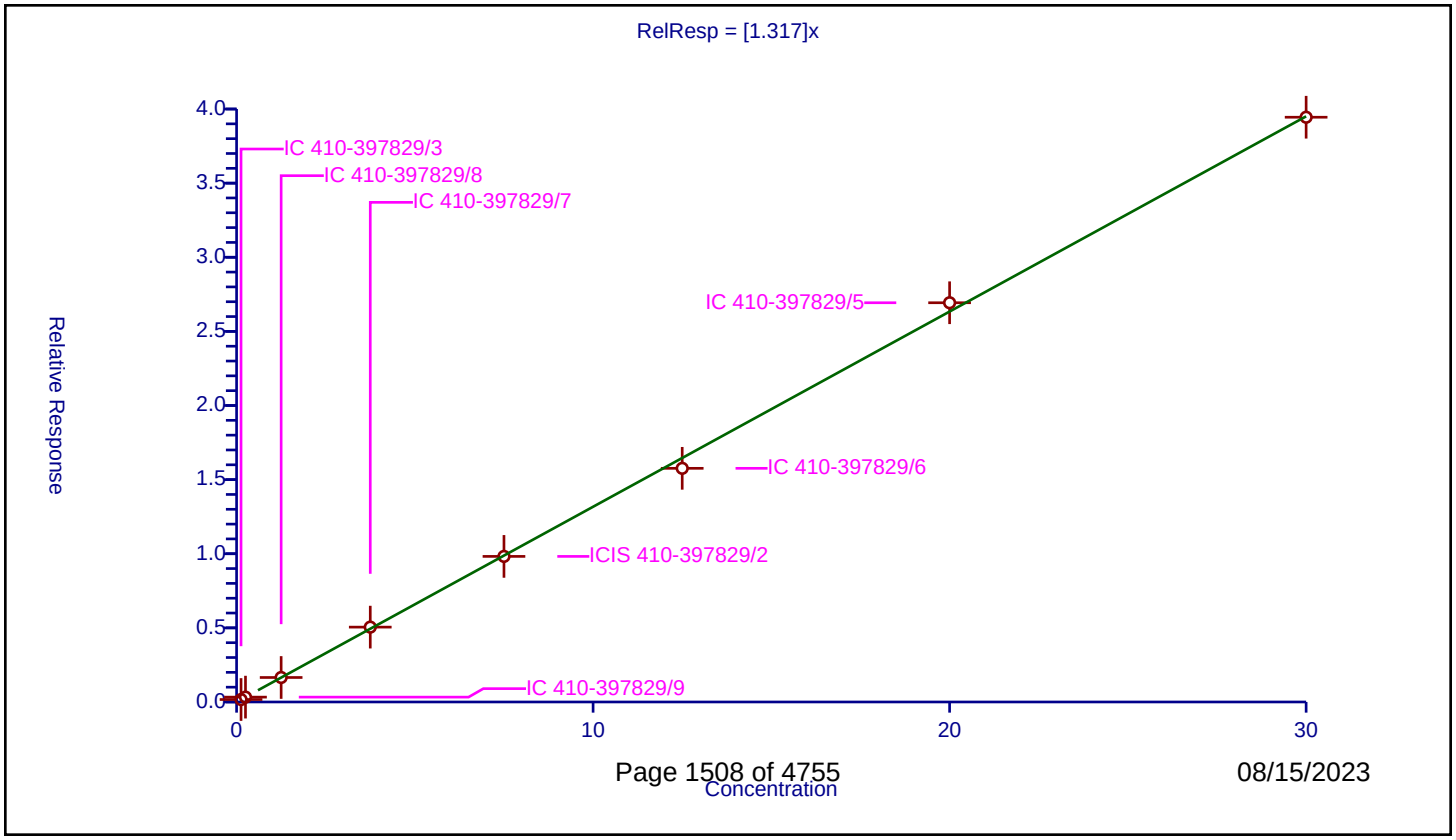
Curve Coefficients

Intercept:	0
Slope:	1.317

Error Coefficients

Standard Error:	1670000
Relative Standard Error:	2.0
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.165662	5.0	437124.0	1.325299	Y
2	IC 410-397829/9	0.25	0.327487	5.0	383344.0	1.309946	Y
3	IC 410-397829/8	1.25	1.651368	5.0	465505.0	1.321094	Y
4	IC 410-397829/7	3.75	5.050102	5.0	364557.0	1.346694	Y
5	ICIS 410-397829/2	7.5	9.820826	5.0	392579.0	1.309443	Y
6	IC 410-397829/6	12.5	15.761835	5.0	478030.0	1.260947	Y
7	IC 410-397829/5	20.0	26.932217	5.0	443400.0	1.346611	Y
8	IC 410-397829/4	30.0	39.446712	5.0	416908.0	1.31489	Y



Calibration / 2,4-Dinitrophenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

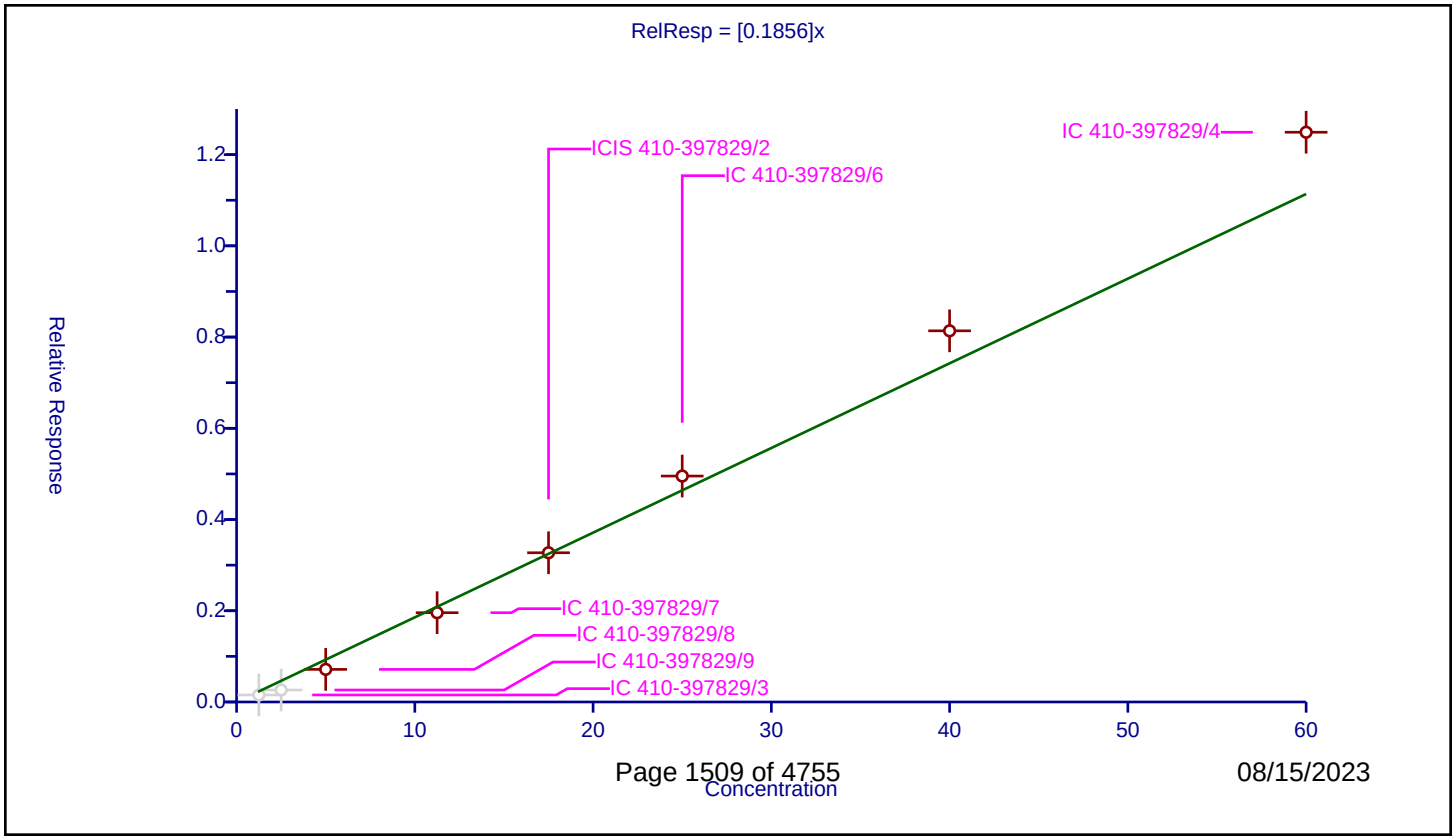
Curve Coefficients

Intercept:	0
Slope:	0.1856

Error Coefficients

Standard Error:	620000
Relative Standard Error:	13.1
Correlation Coefficient:	0.992
Coefficient of Determination (Adjusted):	0.974

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	1.25	0.153789	5.0	437124.0	0.123031	N
2	IC 410-397829/9	2.5	0.262897	5.0	383344.0	0.105159	N
3	IC 410-397829/8	5.0	0.714837	5.0	465505.0	0.142967	Y
4	IC 410-397829/7	11.25	1.95776	5.0	364557.0	0.174023	Y
5	ICIS 410-397829/2	17.5	3.271762	5.0	392579.0	0.186958	Y
6	IC 410-397829/6	25.0	4.953089	5.0	478030.0	0.198124	Y
7	IC 410-397829/5	40.0	8.136885	5.0	443400.0	0.203422	Y
8	IC 410-397829/4	60.0	12.490789	5.0	416908.0	0.20818	Y



Calibration / Pentachlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

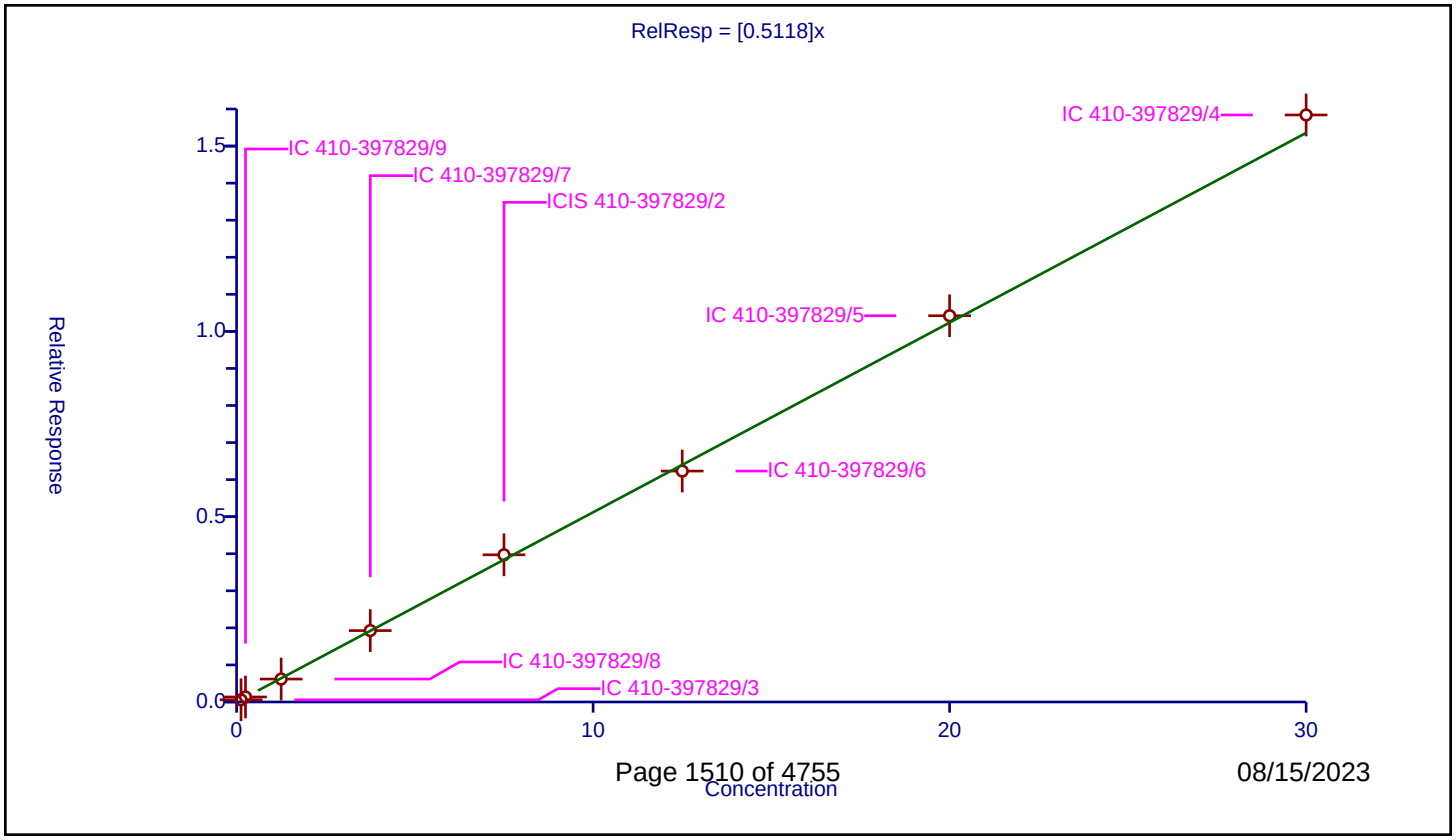
Curve Coefficients

Intercept:	0
Slope:	0.5118

Error Coefficients

Standard Error:	663000
Relative Standard Error:	4.6
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.058565	5.0	437124.0	0.468517	Y
2	IC 410-397829/9	0.25	0.135061	5.0	383344.0	0.540246	Y
3	IC 410-397829/8	1.25	0.618833	5.0	465505.0	0.495067	Y
4	IC 410-397829/7	3.75	1.926599	5.0	364557.0	0.51376	Y
5	ICIS 410-397829/2	7.5	3.97129	5.0	392579.0	0.529505	Y
6	IC 410-397829/6	12.5	6.231063	5.0	478030.0	0.498485	Y
7	IC 410-397829/5	20.0	10.422339	5.0	443400.0	0.521117	Y
8	IC 410-397829/4	30.0	15.839322	5.0	416908.0	0.527977	Y



Calibration / 4-Nitrophenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

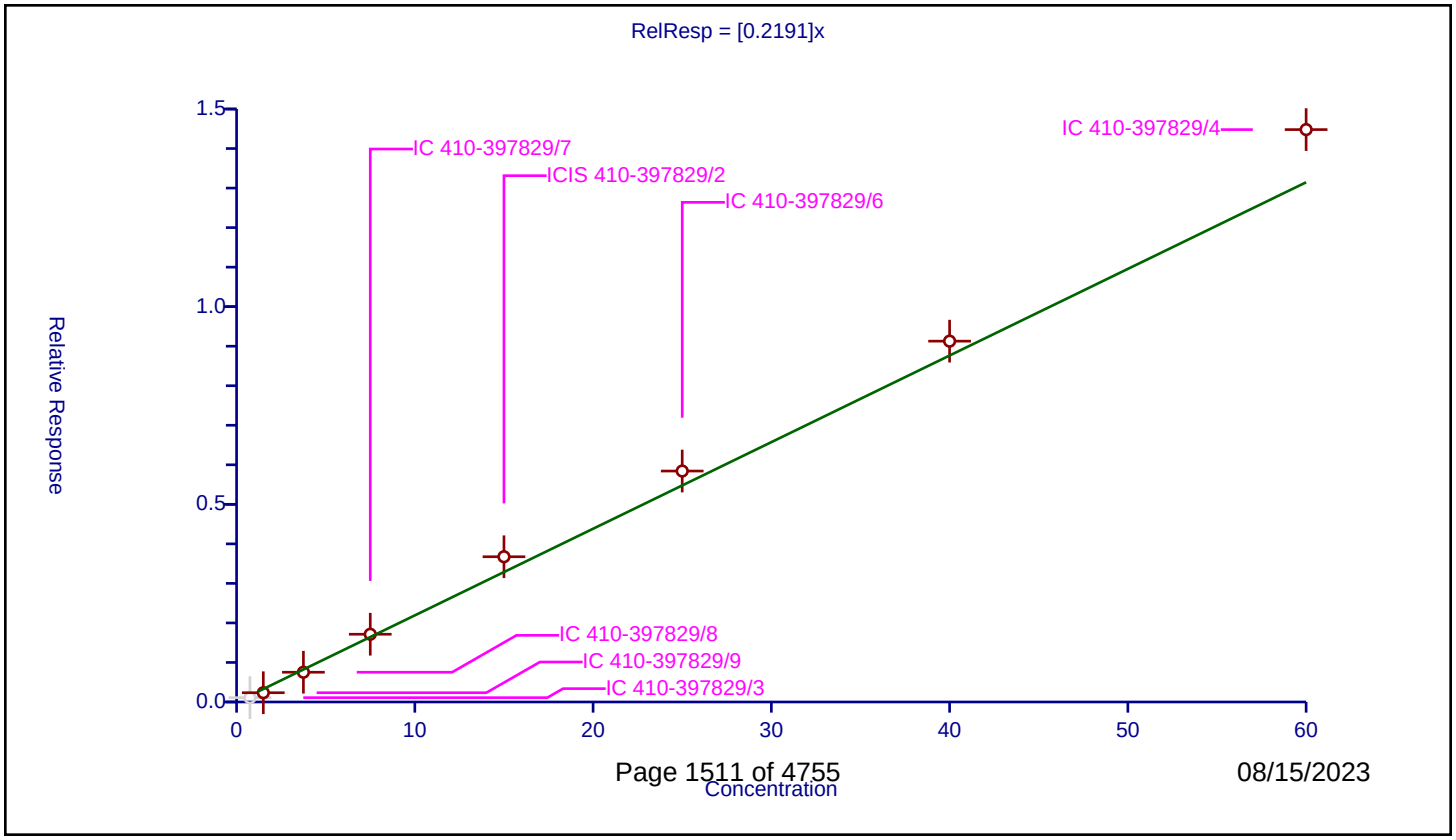
Curve Coefficients

Intercept:	0
Slope:	0.2191

Error Coefficients

Standard Error:	649000
Relative Standard Error:	14.2
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.977

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.75	0.10974	5.0	437124.0	0.14632	N
2	IC 410-397829/9	1.5	0.234607	5.0	383344.0	0.156404	Y
3	IC 410-397829/8	3.75	0.752688	5.0	465505.0	0.200717	Y
4	IC 410-397829/7	7.5	1.713436	5.0	364557.0	0.228458	Y
5	ICIS 410-397829/2	15.0	3.673987	5.0	392579.0	0.244932	Y
6	IC 410-397829/6	25.0	5.842165	5.0	478030.0	0.233687	Y
7	IC 410-397829/5	40.0	9.128135	5.0	443400.0	0.228203	Y
8	IC 410-397829/4	60.0	14.47907	5.0	416908.0	0.241318	Y



Calibration / 2,4-Dinitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

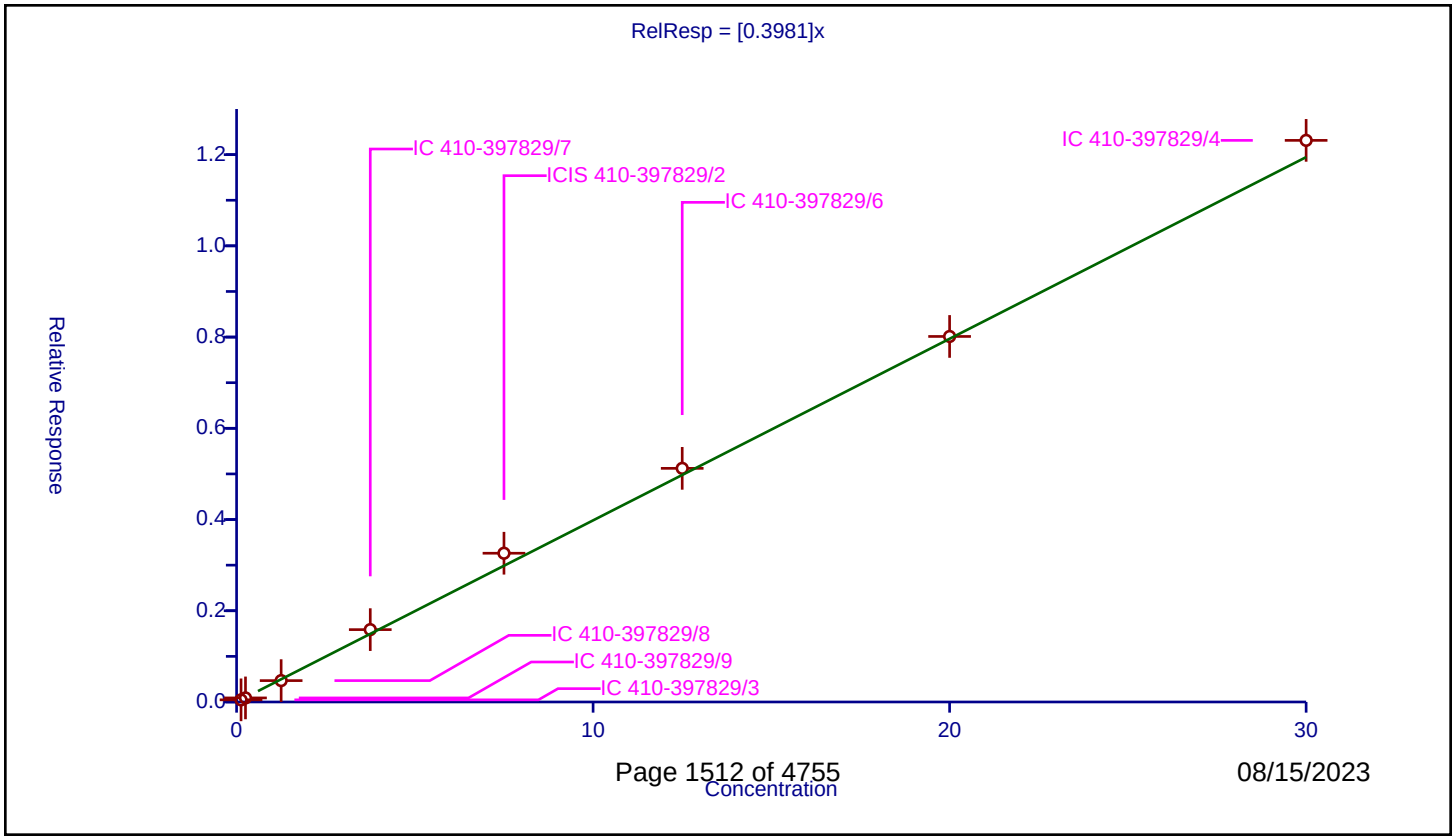
Curve Coefficients

Intercept:	0
Slope:	0.3981

Error Coefficients

Standard Error:	518000
Relative Standard Error:	6.8
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.046955	5.0	437124.0	0.375637	Y
2	IC 410-397829/9	0.25	0.089071	5.0	383344.0	0.356286	Y
3	IC 410-397829/8	1.25	0.468298	5.0	465505.0	0.374638	Y
4	IC 410-397829/7	3.75	1.586089	5.0	364557.0	0.422957	Y
5	ICIS 410-397829/2	7.5	3.261051	5.0	392579.0	0.434807	Y
6	IC 410-397829/6	12.5	5.122063	5.0	478030.0	0.409765	Y
7	IC 410-397829/5	20.0	8.013633	5.0	443400.0	0.400682	Y
8	IC 410-397829/4	30.0	12.312525	5.0	416908.0	0.410417	Y



Calibration / Dibenzofuran

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

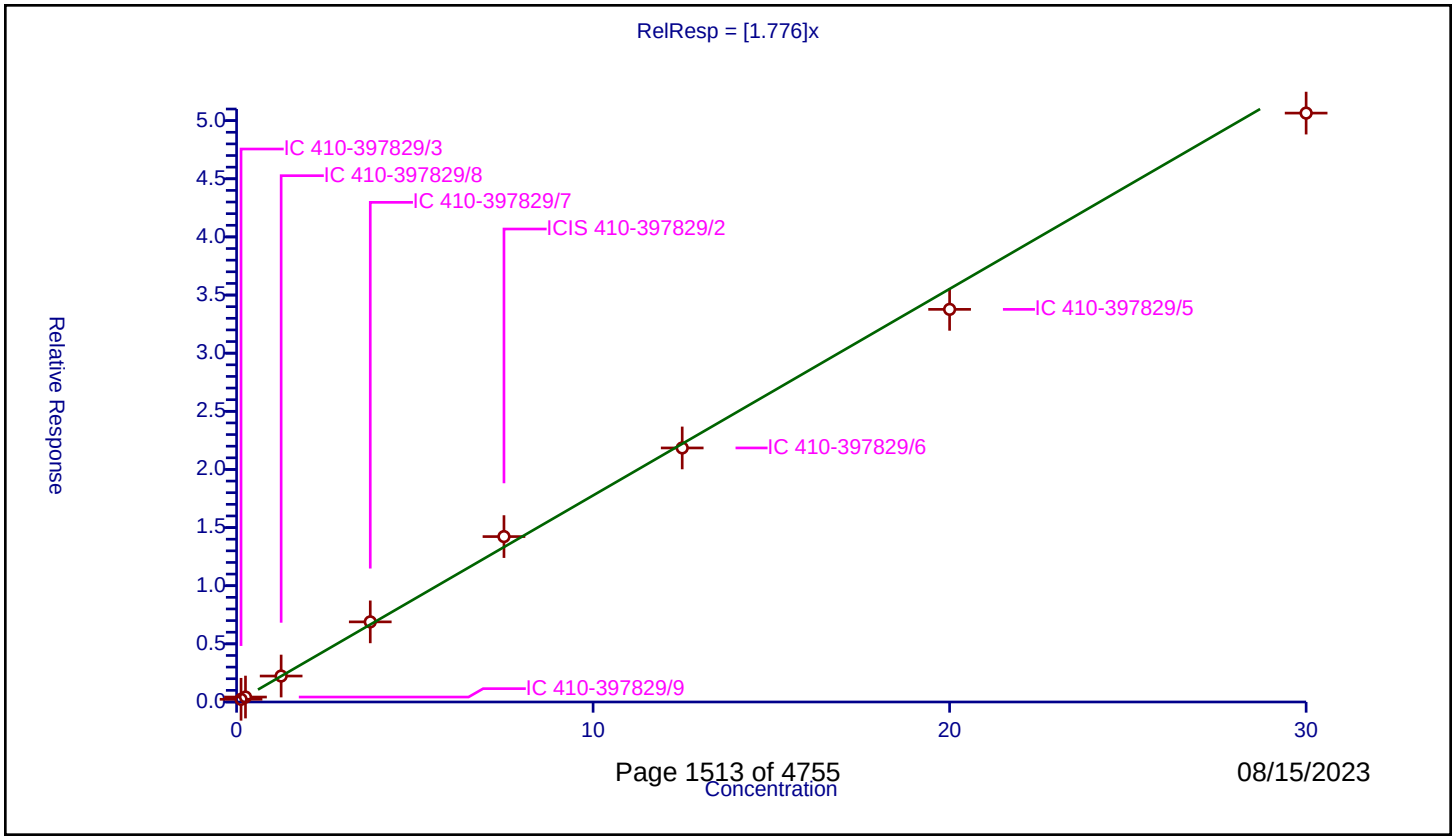
Curve Coefficients

Intercept:	0
Slope:	1.776

Error Coefficients

Standard Error:	2160000
Relative Standard Error:	4.6
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.232474	5.0	437124.0	1.859793	Y
2	IC 410-397829/9	0.25	0.426392	5.0	383344.0	1.70557	Y
3	IC 410-397829/8	1.25	2.233692	5.0	465505.0	1.786954	Y
4	IC 410-397829/7	3.75	6.890569	5.0	364557.0	1.837485	Y
5	ICIS 410-397829/2	7.5	14.225213	5.0	392579.0	1.896695	Y
6	IC 410-397829/6	12.5	21.849873	5.0	478030.0	1.74799	Y
7	IC 410-397829/5	20.0	33.768888	5.0	443400.0	1.688444	Y
8	IC 410-397829/4	30.0	50.648608	5.0	416908.0	1.688287	Y



Calibration / 1-Naphthylamine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

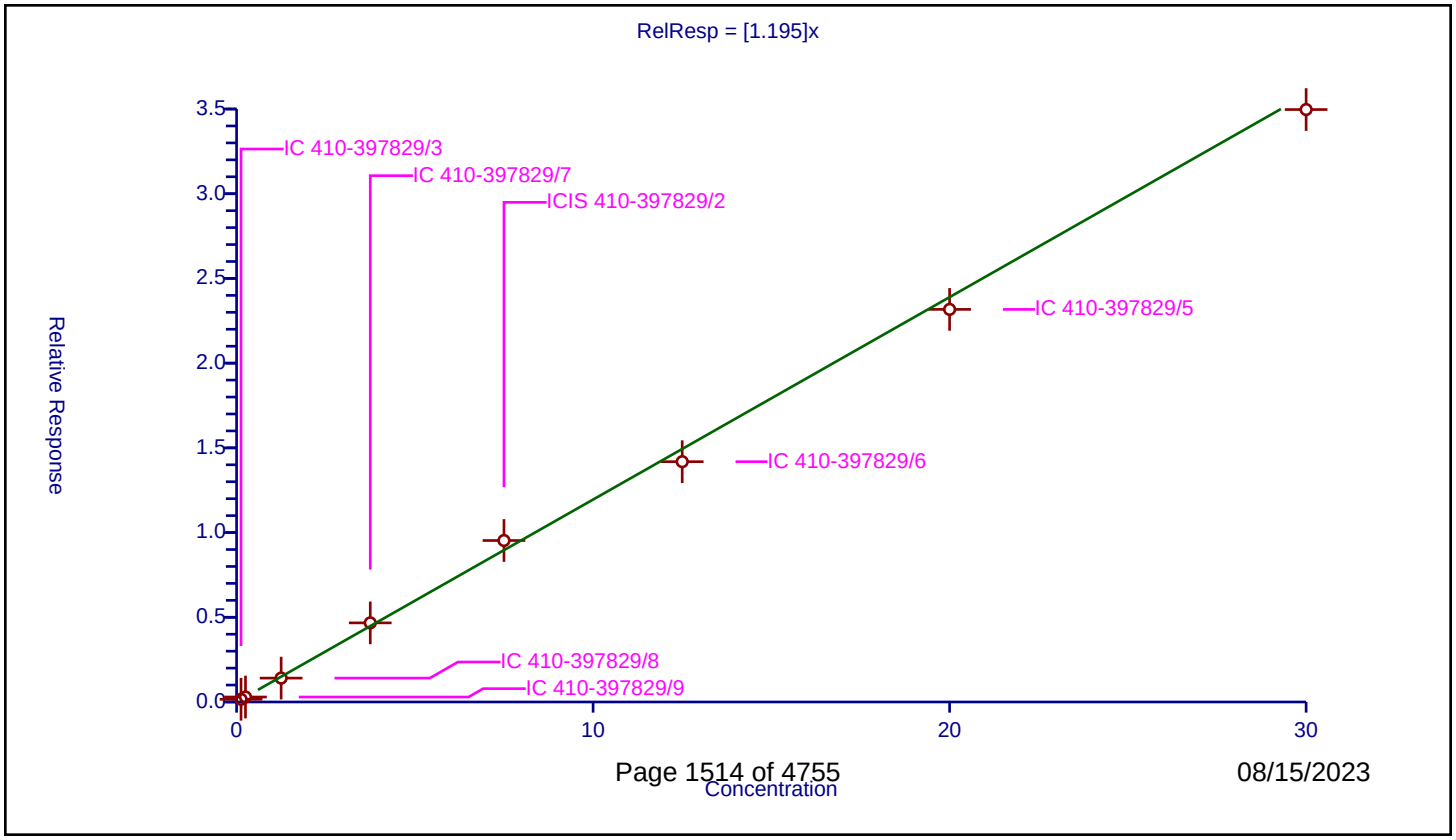
Curve Coefficients

Intercept:	0
Slope:	1.195

Error Coefficients

Standard Error:	1480000
Relative Standard Error:	5.1
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.160092	5.0	437124.0	1.280735	Y
2	IC 410-397829/9	0.25	0.293809	5.0	383344.0	1.175237	Y
3	IC 410-397829/8	1.25	1.409749	5.0	465505.0	1.127799	Y
4	IC 410-397829/7	3.75	4.669681	5.0	364557.0	1.245248	Y
5	ICIS 410-397829/2	7.5	9.530706	5.0	392579.0	1.270761	Y
6	IC 410-397829/6	12.5	14.183419	5.0	478030.0	1.134674	Y
7	IC 410-397829/5	20.0	23.17235	5.0	443400.0	1.158618	Y
8	IC 410-397829/4	30.0	34.967823	5.0	416908.0	1.165594	Y



Calibration / 2,3,4,6-Tetrachlorophenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

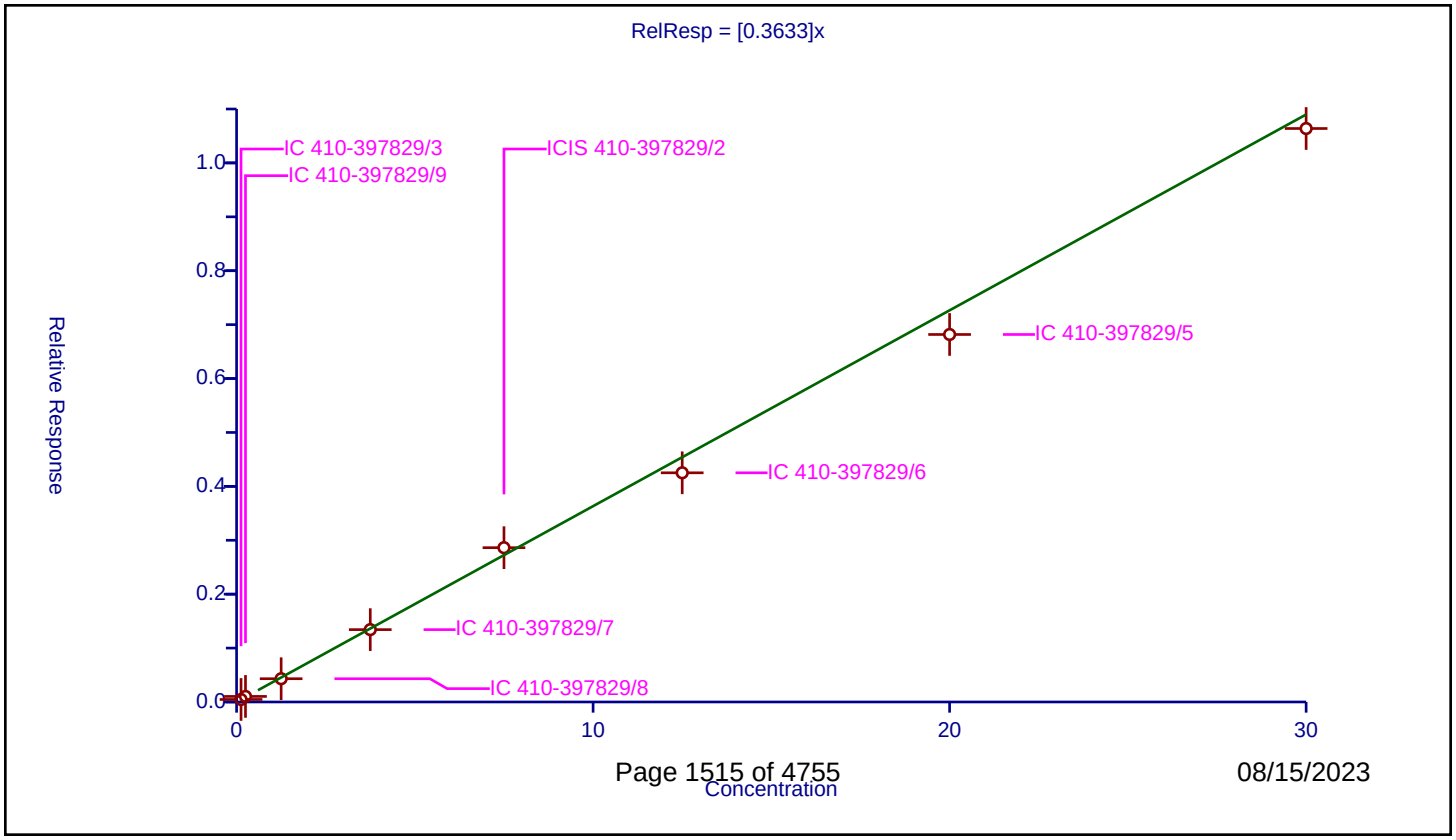
Curve Coefficients

Intercept:	0
Slope:	0.3633

Error Coefficients

Standard Error:	444000
Relative Standard Error:	6.8
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.046749	5.0	437124.0	0.37399	Y
2	IC 410-397829/9	0.25	0.102936	5.0	383344.0	0.411745	Y
3	IC 410-397829/8	1.25	0.431413	5.0	465505.0	0.345131	Y
4	IC 410-397829/7	3.75	1.342561	5.0	364557.0	0.358016	Y
5	ICIS 410-397829/2	7.5	2.862405	5.0	392579.0	0.381654	Y
6	IC 410-397829/6	12.5	4.251626	5.0	478030.0	0.34013	Y
7	IC 410-397829/5	20.0	6.817377	5.0	443400.0	0.340869	Y
8	IC 410-397829/4	30.0	10.638282	5.0	416908.0	0.354609	Y



Calibration / 2-Naphthylamine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

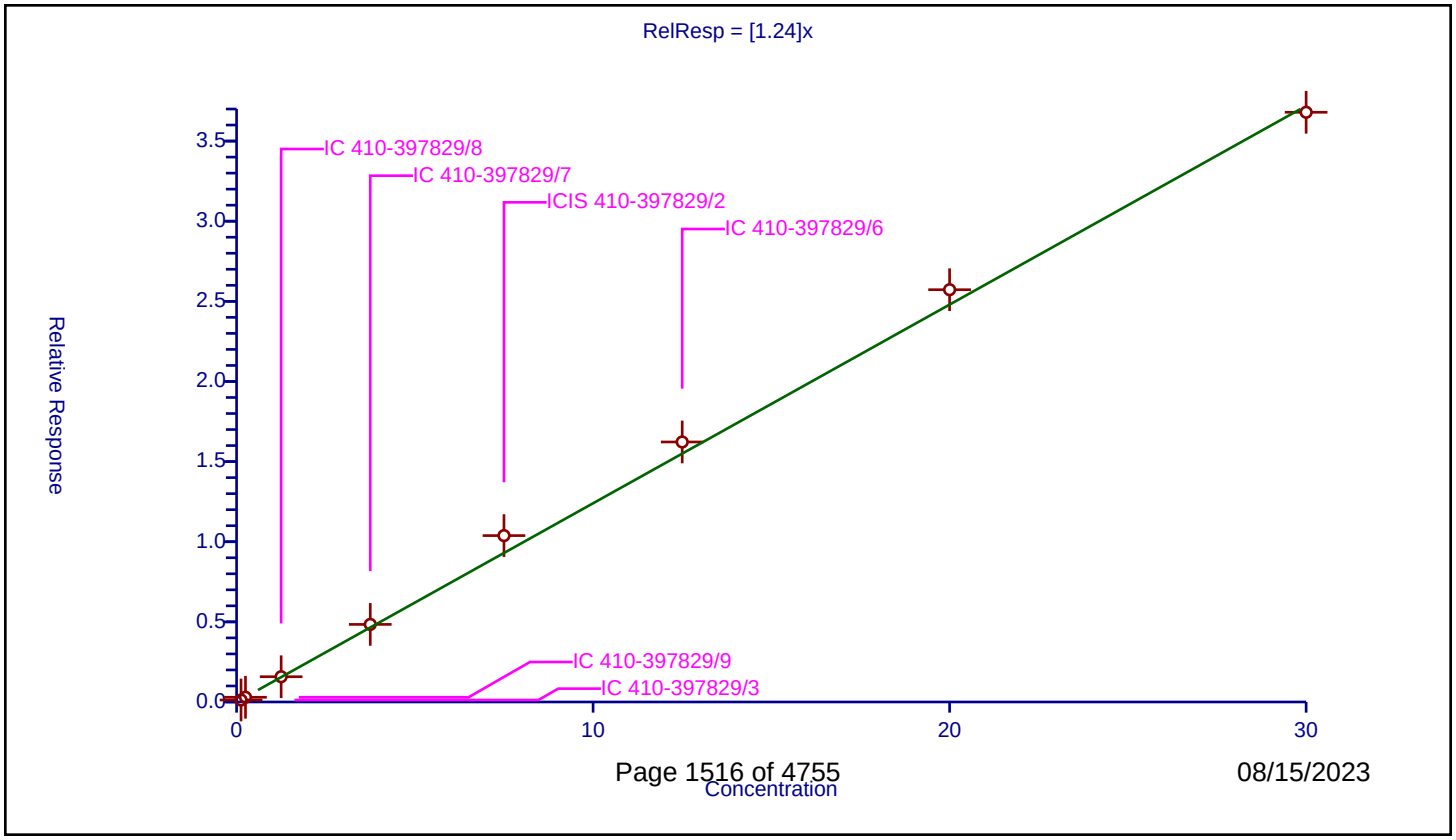
Curve Coefficients

Intercept:	0
Slope:	1.24

Error Coefficients

Standard Error:	1600000
Relative Standard Error:	9.4
Correlation Coefficient:	0.991
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.123718	5.0	437124.0	0.989742	Y
2	IC 410-397829/9	0.25	0.295414	5.0	383344.0	1.181654	Y
3	IC 410-397829/8	1.25	1.57617	5.0	465505.0	1.260936	Y
4	IC 410-397829/7	3.75	4.841835	5.0	364557.0	1.291156	Y
5	ICIS 410-397829/2	7.5	10.38214	5.0	392579.0	1.384285	Y
6	IC 410-397829/6	12.5	16.223856	5.0	478030.0	1.297908	Y
7	IC 410-397829/5	20.0	25.725383	5.0	443400.0	1.286269	Y
8	IC 410-397829/4	30.0	36.796404	5.0	416908.0	1.226547	Y



Calibration / Diethyl phthalate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

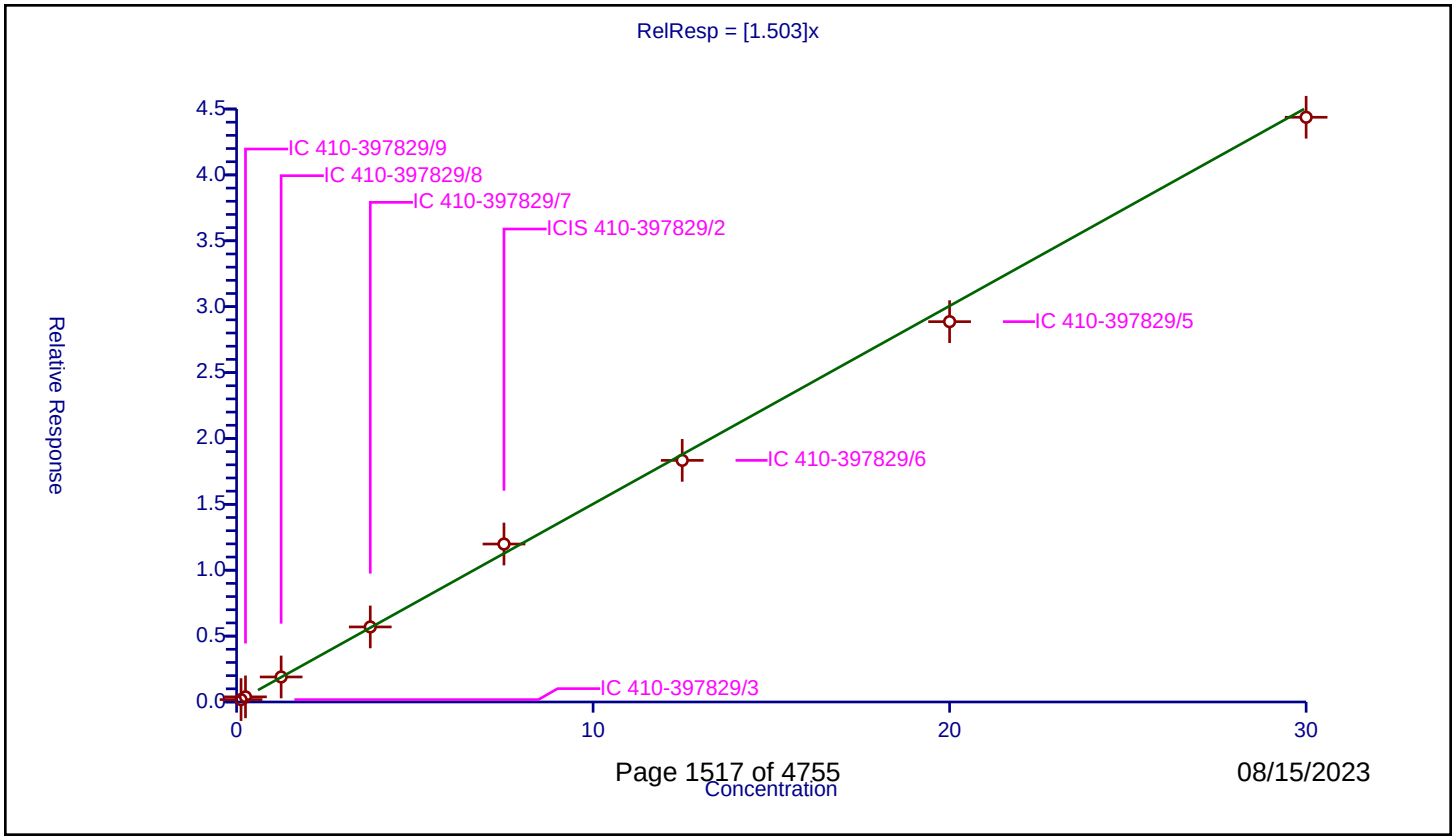
Curve Coefficients

Intercept:	0
Slope:	1.503

Error Coefficients

Standard Error:	1870000
Relative Standard Error:	3.7
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.180201	5.0	437124.0	1.441605	Y
2	IC 410-397829/9	0.25	0.388802	5.0	383344.0	1.555209	Y
3	IC 410-397829/8	1.25	1.899593	5.0	465505.0	1.519674	Y
4	IC 410-397829/7	3.75	5.694926	5.0	364557.0	1.518647	Y
5	ICIS 410-397829/2	7.5	11.987969	5.0	392579.0	1.598396	Y
6	IC 410-397829/6	12.5	18.336025	5.0	478030.0	1.466882	Y
7	IC 410-397829/5	20.0	28.863599	5.0	443400.0	1.44318	Y
8	IC 410-397829/4	30.0	44.373927	5.0	416908.0	1.479131	Y



Calibration / Thionazin

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

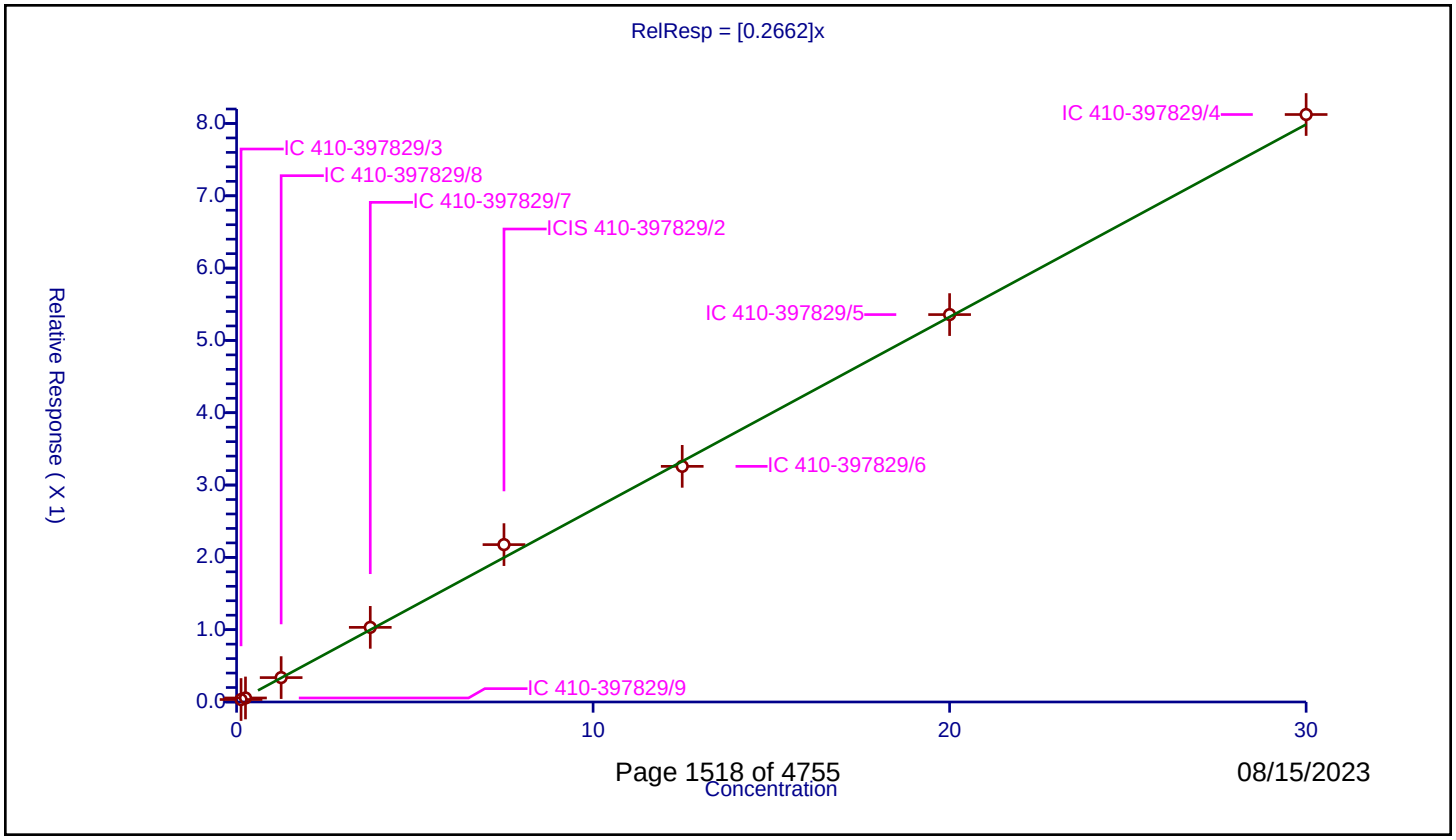
Curve Coefficients

Intercept:	0
Slope:	0.2662

Error Coefficients

Standard Error:	342000
Relative Standard Error:	7.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.034235	5.0	437124.0	0.273881	Y
2	IC 410-397829/9	0.25	0.055368	5.0	383344.0	0.221472	Y
3	IC 410-397829/8	1.25	0.337257	5.0	465505.0	0.269806	Y
4	IC 410-397829/7	3.75	1.03202	5.0	364557.0	0.275205	Y
5	ICIS 410-397829/2	7.5	2.176199	5.0	392579.0	0.29016	Y
6	IC 410-397829/6	12.5	3.258467	5.0	478030.0	0.260677	Y
7	IC 410-397829/5	20.0	5.357161	5.0	443400.0	0.267858	Y
8	IC 410-397829/4	30.0	8.123999	5.0	416908.0	0.2708	Y



Calibration / Fluorene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

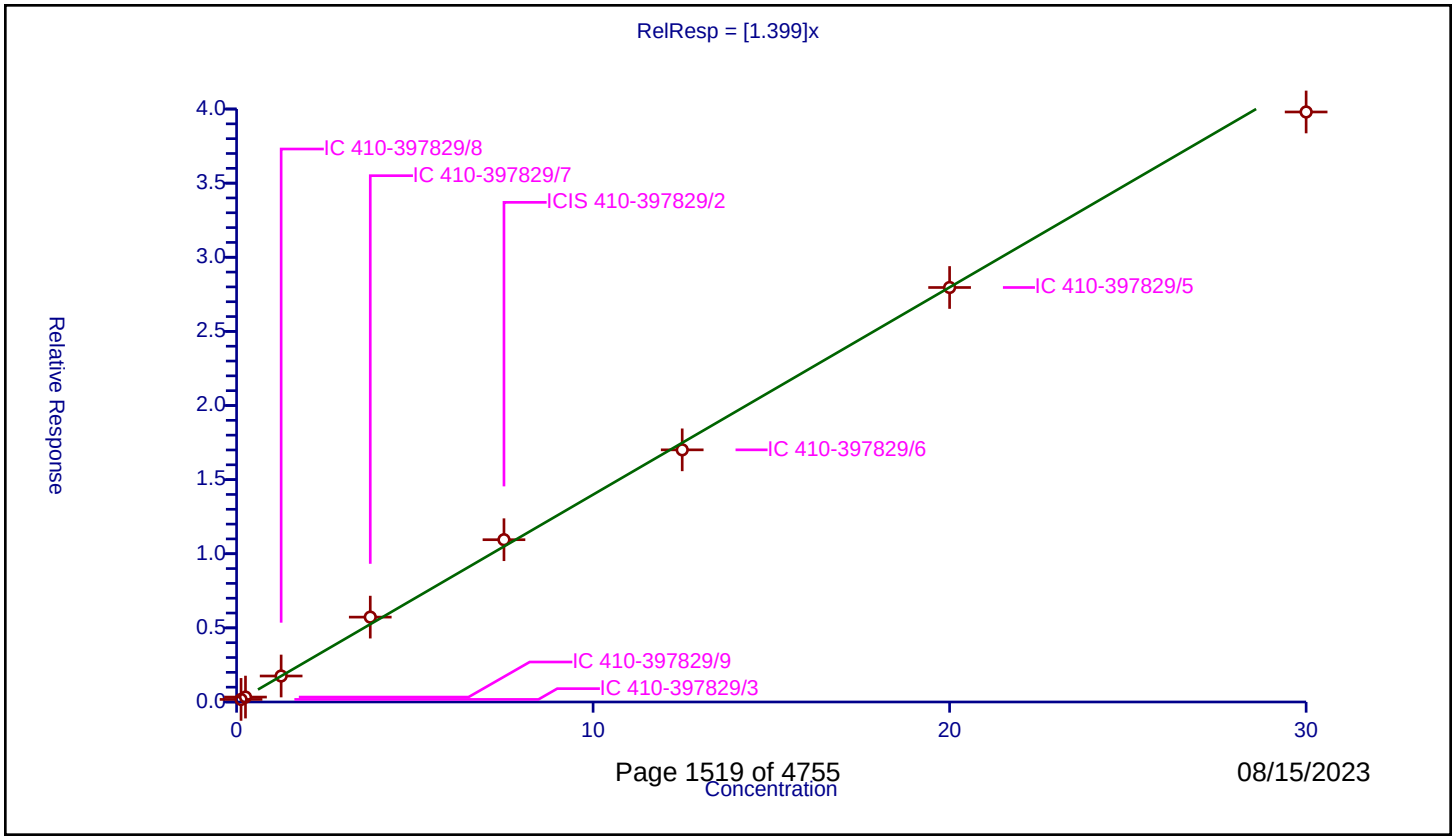
Curve Coefficients

Intercept:	0
Slope:	1.399

Error Coefficients

Standard Error:	1720000
Relative Standard Error:	4.8
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.173235	5.0	437124.0	1.385877	Y
2	IC 410-397829/9	0.25	0.33226	5.0	383344.0	1.329041	Y
3	IC 410-397829/8	1.25	1.753826	5.0	465505.0	1.403061	Y
4	IC 410-397829/7	3.75	5.725182	5.0	364557.0	1.526715	Y
5	ICIS 410-397829/2	7.5	10.946268	5.0	392579.0	1.459502	Y
6	IC 410-397829/6	12.5	17.0082	5.0	478030.0	1.360656	Y
7	IC 410-397829/5	20.0	27.96007	5.0	443400.0	1.398003	Y
8	IC 410-397829/4	30.0	39.801203	5.0	416908.0	1.326707	Y



Calibration / 4-Chlorophenyl phenyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

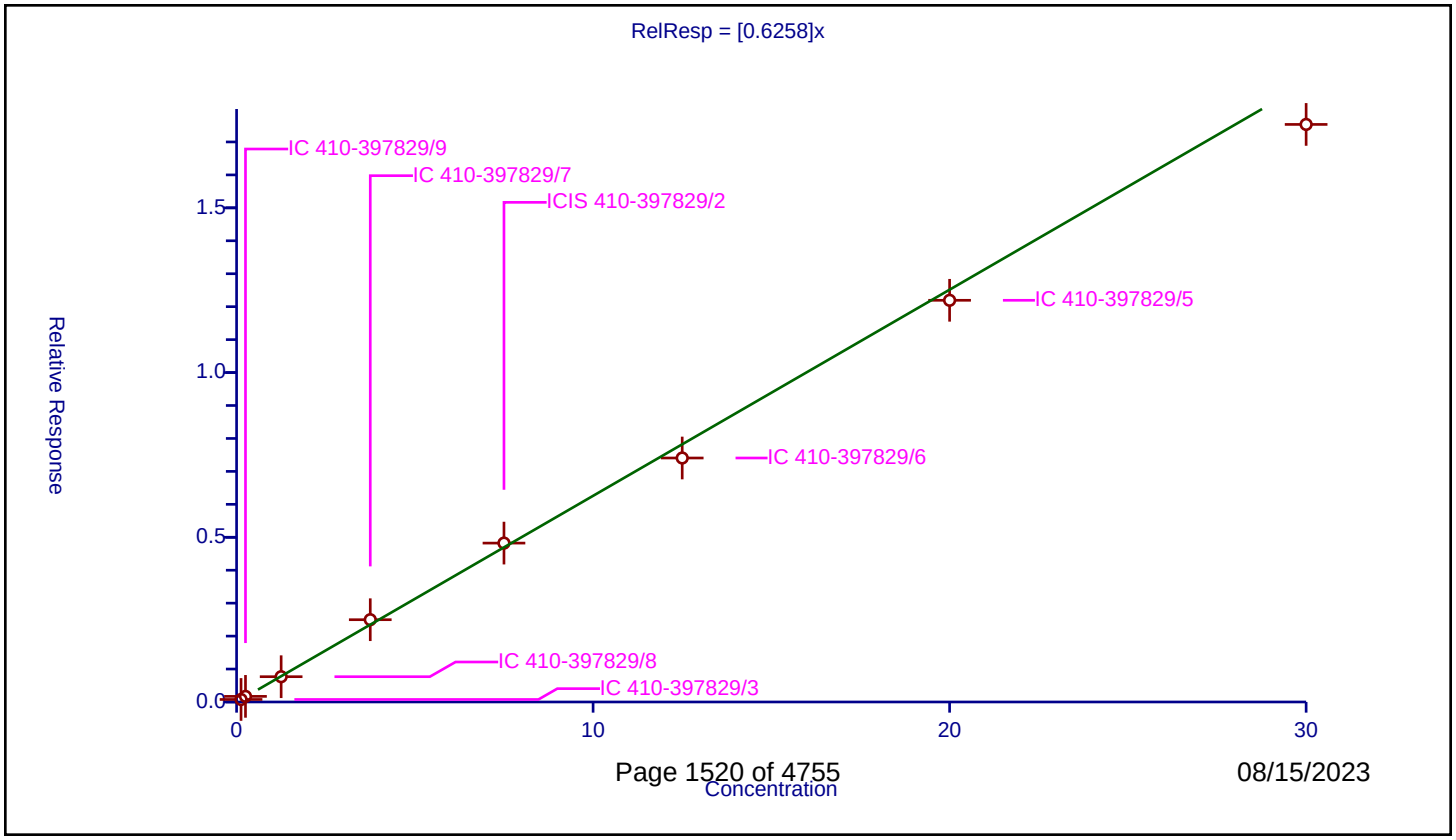
Curve Coefficients

Intercept:	0
Slope:	0.6258

Error Coefficients

Standard Error:	755000
Relative Standard Error:	5.6
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.076706	5.0	437124.0	0.613647	Y
2	IC 410-397829/9	0.25	0.170747	5.0	383344.0	0.68299	Y
3	IC 410-397829/8	1.25	0.767382	5.0	465505.0	0.613905	Y
4	IC 410-397829/7	3.75	2.497922	5.0	364557.0	0.666113	Y
5	ICIS 410-397829/2	7.5	4.823424	5.0	392579.0	0.643123	Y
6	IC 410-397829/6	12.5	7.406052	5.0	478030.0	0.592484	Y
7	IC 410-397829/5	20.0	12.193302	5.0	443400.0	0.609665	Y
8	IC 410-397829/4	30.0	17.532069	5.0	416908.0	0.584402	Y



Calibration / N-Nitro-o-toluidine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

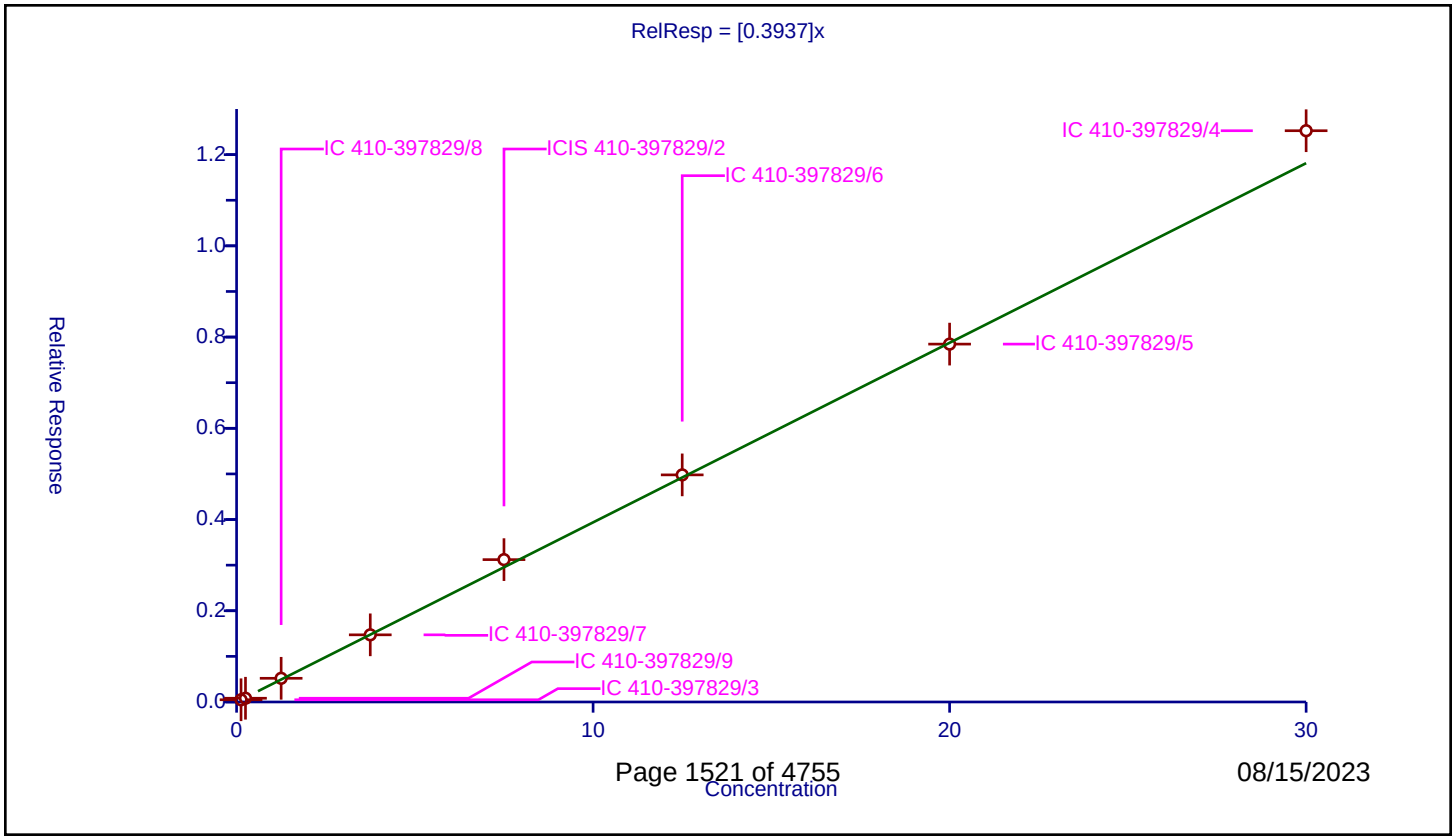
Curve Coefficients

Intercept:	0
Slope:	0.3937

Error Coefficients

Standard Error:	518000
Relative Standard Error:	7.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.048682	5.0	437124.0	0.389455	Y
2	IC 410-397829/9	0.25	0.082041	5.0	383344.0	0.328165	Y
3	IC 410-397829/8	1.25	0.519414	5.0	465505.0	0.415532	Y
4	IC 410-397829/7	3.75	1.472239	5.0	364557.0	0.392597	Y
5	ICIS 410-397829/2	7.5	3.121244	5.0	392579.0	0.416166	Y
6	IC 410-397829/6	12.5	4.978694	5.0	478030.0	0.398296	Y
7	IC 410-397829/5	20.0	7.846098	5.0	443400.0	0.392305	Y
8	IC 410-397829/4	30.0	12.524142	5.0	416908.0	0.417471	Y



Calibration / 4-Nitroaniline

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

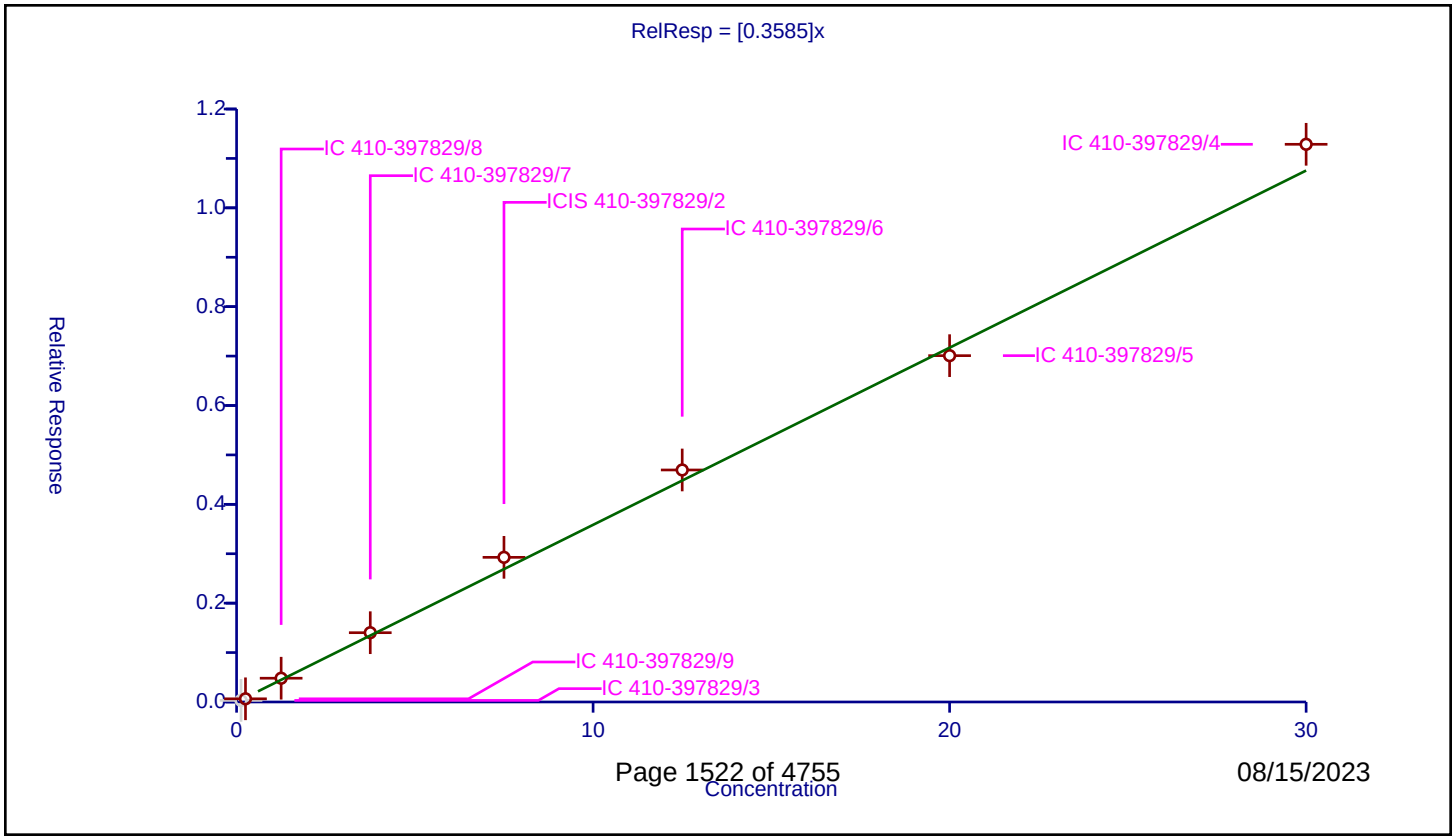
Curve Coefficients

Intercept:	0
Slope:	0.3585

Error Coefficients

Standard Error:	506000
Relative Standard Error:	12.8
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.032142	5.0	437124.0	0.257135	N
2	IC 410-397829/9	0.25	0.06455	5.0	383344.0	0.258202	Y
3	IC 410-397829/8	1.25	0.480865	5.0	465505.0	0.384692	Y
4	IC 410-397829/7	3.75	1.402442	5.0	364557.0	0.373984	Y
5	ICIS 410-397829/2	7.5	2.927589	5.0	392579.0	0.390345	Y
6	IC 410-397829/6	12.5	4.695124	5.0	478030.0	0.37561	Y
7	IC 410-397829/5	20.0	7.008536	5.0	443400.0	0.350427	Y
8	IC 410-397829/4	30.0	11.286099	5.0	416908.0	0.376203	Y



Calibration / 4,6-Dinitro-2-methylphenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

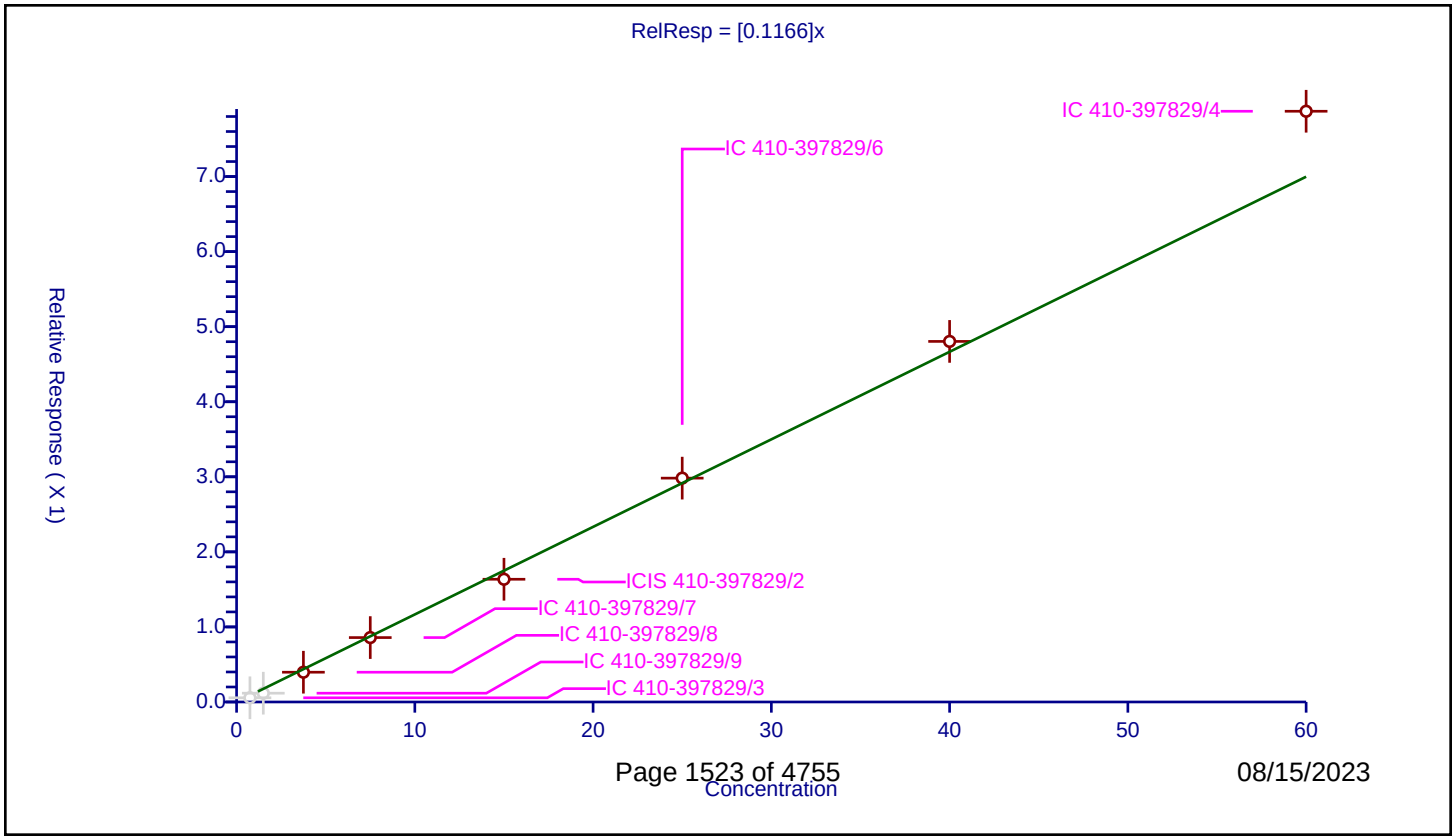
Curve Coefficients

Intercept:	0
Slope:	0.1166

Error Coefficients

Standard Error:	670000
Relative Standard Error:	7.8
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.75	0.056017	5.0	804481.0	0.07469	N
2	IC 410-397829/9	1.5	0.116956	5.0	706975.0	0.077971	N
3	IC 410-397829/8	3.75	0.396836	5.0	845790.0	0.105823	Y
4	IC 410-397829/7	7.5	0.858163	5.0	679061.0	0.114422	Y
5	ICIS 410-397829/2	15.0	1.635061	5.0	802857.0	0.109004	Y
6	IC 410-397829/6	25.0	2.982419	5.0	883382.0	0.119297	Y
7	IC 410-397829/5	40.0	4.803829	5.0	783422.0	0.120096	Y
8	IC 410-397829/4	60.0	7.870295	5.0	728871.0	0.131172	Y



Calibration / N-Nitrosodiphenylamine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

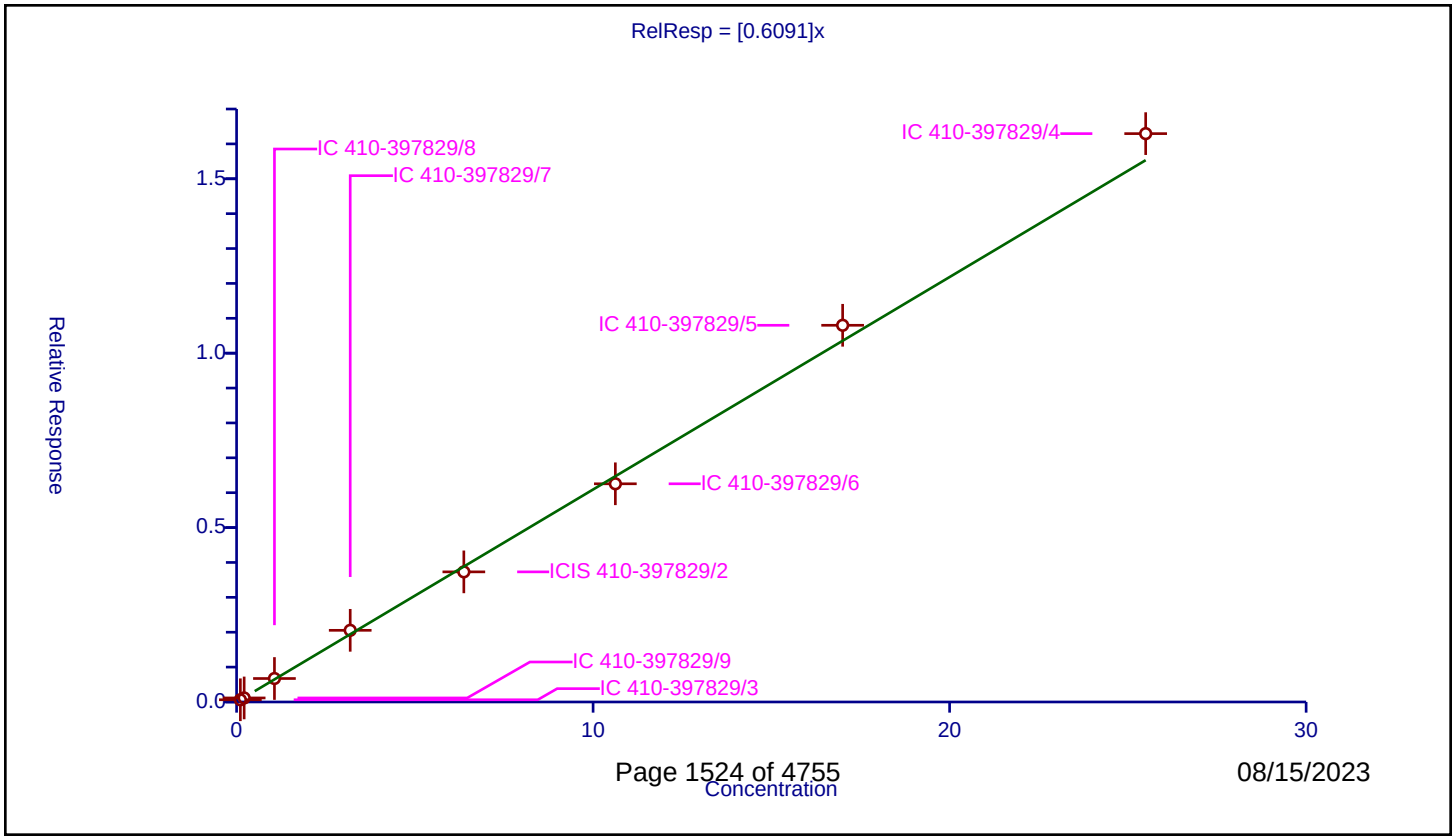
Curve Coefficients

Intercept:	0
Slope:	0.6091

Error Coefficients

Standard Error:	1210000
Relative Standard Error:	5.7
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.10625	0.063873	5.0	804481.0	0.601162	Y
2	IC 410-397829/9	0.2125	0.115931	5.0	706975.0	0.545556	Y
3	IC 410-397829/8	1.0625	0.673158	5.0	845790.0	0.63356	Y
4	IC 410-397829/7	3.1875	2.054933	5.0	679061.0	0.644685	Y
5	ICIS 410-397829/2	6.375	3.73039	5.0	802857.0	0.585159	Y
6	IC 410-397829/6	10.625	6.255238	5.0	883382.0	0.588728	Y
7	IC 410-397829/5	17.0	10.799971	5.0	783422.0	0.635292	Y
8	IC 410-397829/4	25.5	16.294399	5.0	728871.0	0.638996	Y



Calibration / 1,2-Diphenylhydrazine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

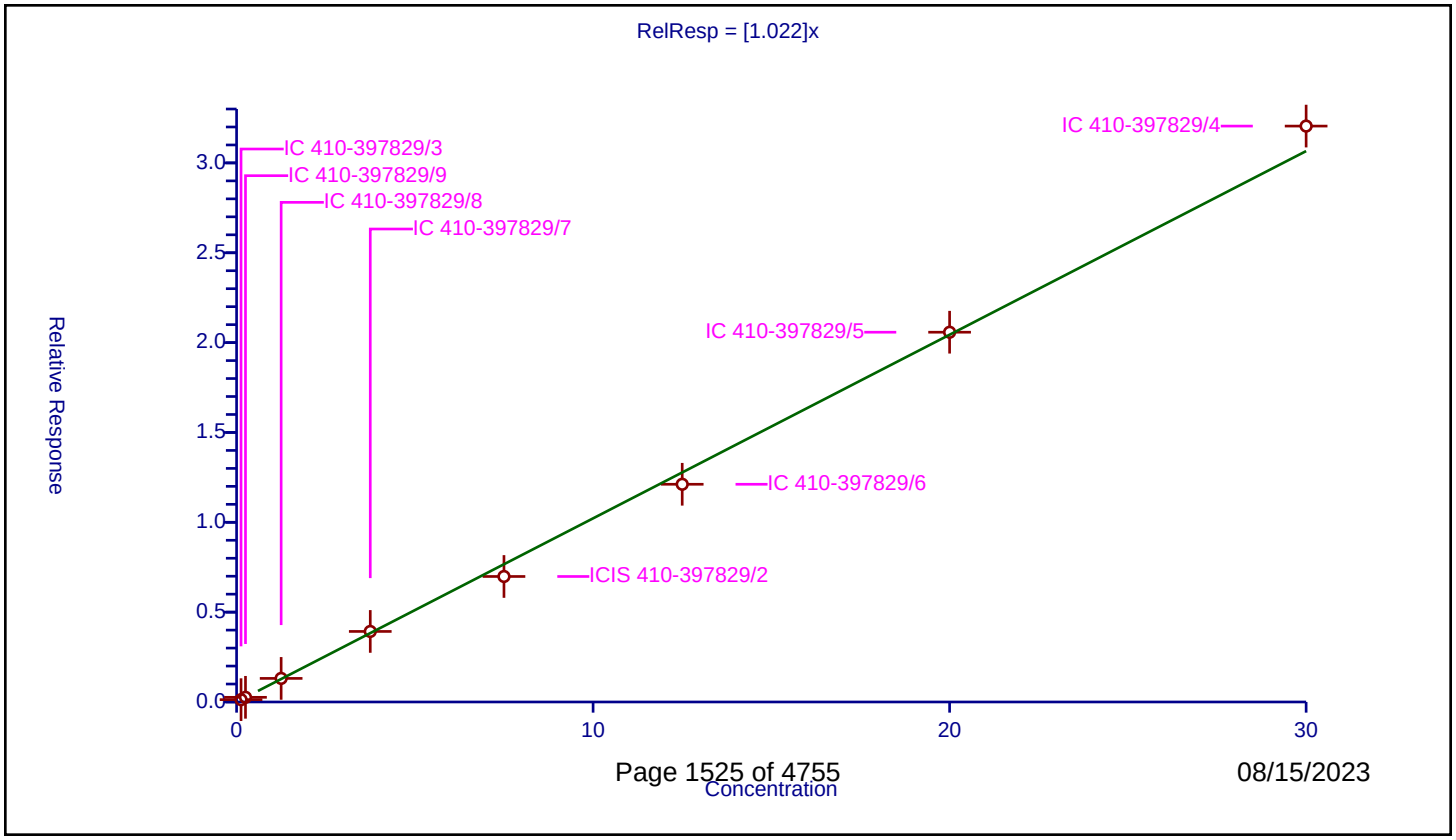
Curve Coefficients

Intercept:	0
Slope:	1.022

Error Coefficients

Standard Error:	2340000
Relative Standard Error:	4.6
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.130171	5.0	804481.0	1.041367	Y
2	IC 410-397829/9	0.25	0.259797	5.0	706975.0	1.039188	Y
3	IC 410-397829/8	1.25	1.312518	5.0	845790.0	1.050015	Y
4	IC 410-397829/7	3.75	3.926599	5.0	679061.0	1.047093	Y
5	ICIS 410-397829/2	7.5	6.984849	5.0	802857.0	0.931313	Y
6	IC 410-397829/6	12.5	12.117176	5.0	883382.0	0.969374	Y
7	IC 410-397829/5	20.0	20.577779	5.0	783422.0	1.028889	Y
8	IC 410-397829/4	30.0	32.050342	5.0	728871.0	1.068345	Y



Calibration / 2,4,6-Tribromophenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

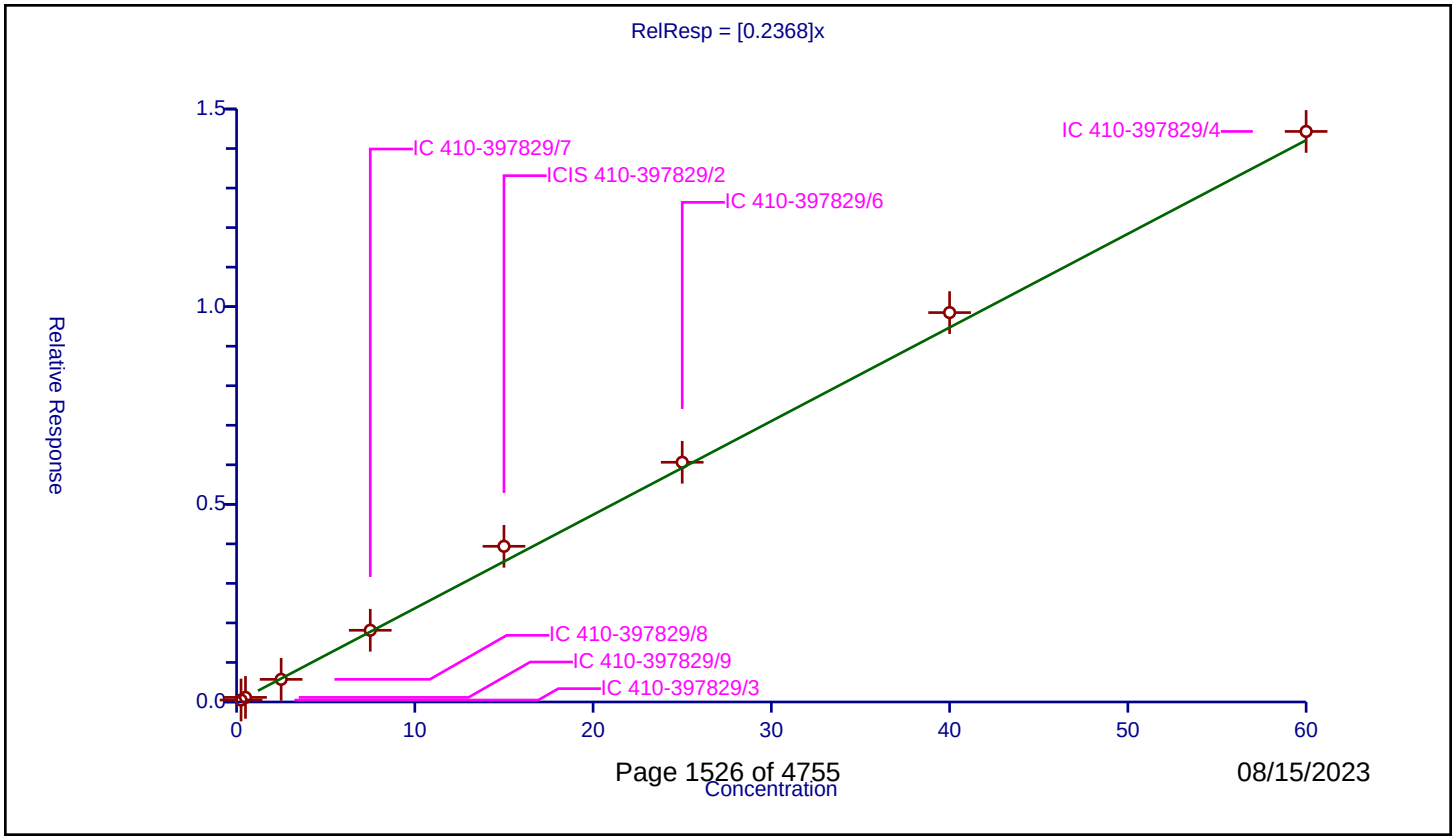
Curve Coefficients

Intercept:	0
Slope:	0.2368

Error Coefficients

Standard Error:	617000
Relative Standard Error:	7.7
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.25	0.049768	5.0	437124.0	0.199074	Y
2	IC 410-397829/9	0.5	0.116488	5.0	383344.0	0.232976	Y
3	IC 410-397829/8	2.5	0.572207	5.0	465505.0	0.228883	Y
4	IC 410-397829/7	7.5	1.814339	5.0	364557.0	0.241912	Y
5	ICIS 410-397829/2	15.0	3.938736	5.0	392579.0	0.262582	Y
6	IC 410-397829/6	25.0	6.063762	5.0	478030.0	0.24255	Y
7	IC 410-397829/5	40.0	9.850226	5.0	443400.0	0.246256	Y
8	IC 410-397829/4	60.0	14.432741	5.0	416908.0	0.240546	Y



Calibration / Sulfotepp

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

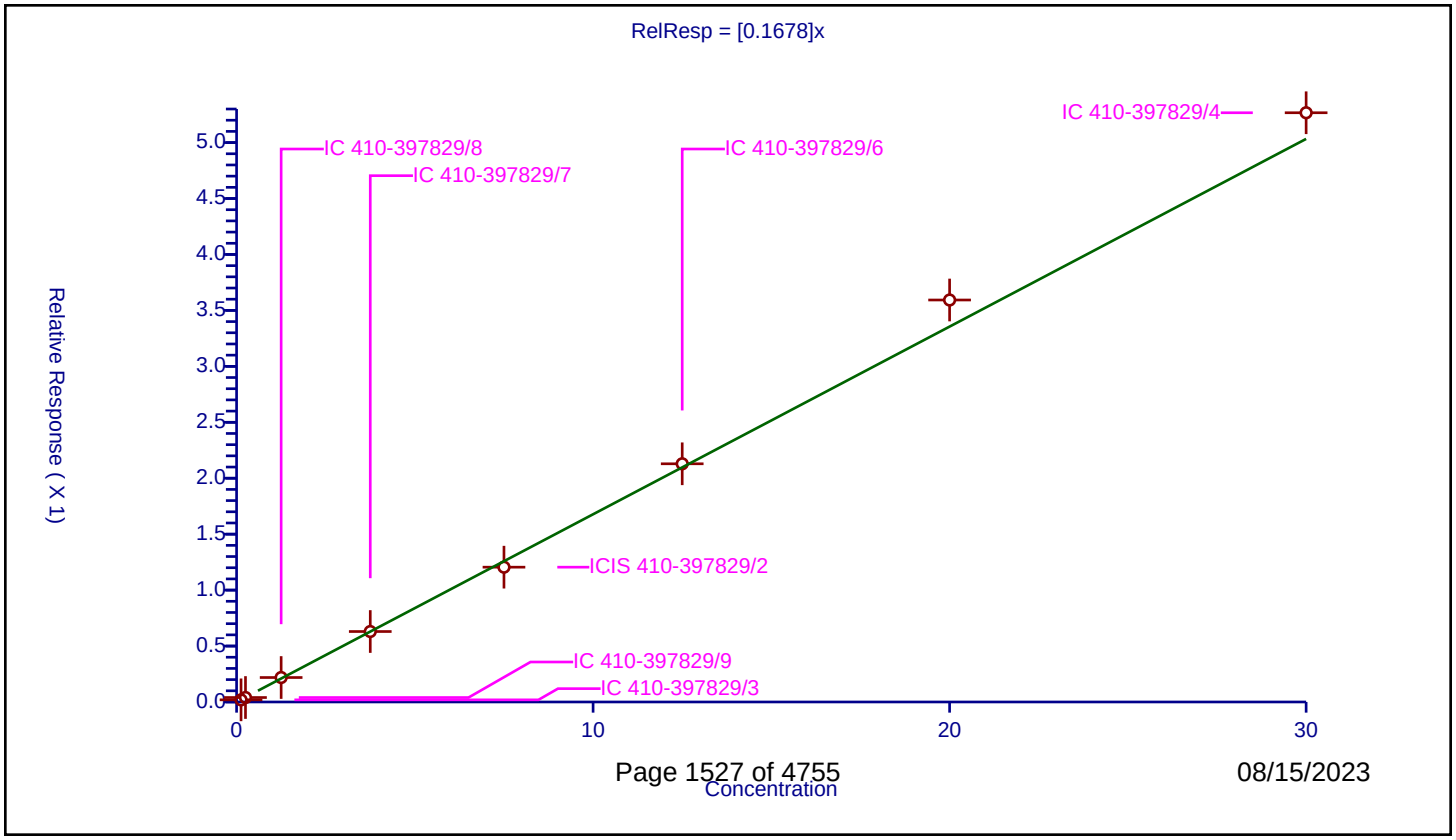
Curve Coefficients

Intercept:	0
Slope:	0.1678

Error Coefficients

Standard Error:	395000
Relative Standard Error:	5.4
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.019217	5.0	804481.0	0.153739	Y
2	IC 410-397829/9	0.25	0.039839	5.0	706975.0	0.159355	Y
3	IC 410-397829/8	1.25	0.2186	5.0	845790.0	0.17488	Y
4	IC 410-397829/7	3.75	0.62984	5.0	679061.0	0.167957	Y
5	ICIS 410-397829/2	7.5	1.204909	5.0	802857.0	0.160655	Y
6	IC 410-397829/6	12.5	2.129051	5.0	883382.0	0.170324	Y
7	IC 410-397829/5	20.0	3.592891	5.0	783422.0	0.179645	Y
8	IC 410-397829/4	30.0	5.2667	5.0	728871.0	0.175557	Y



Calibration / 1,3,5-Trinitrobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

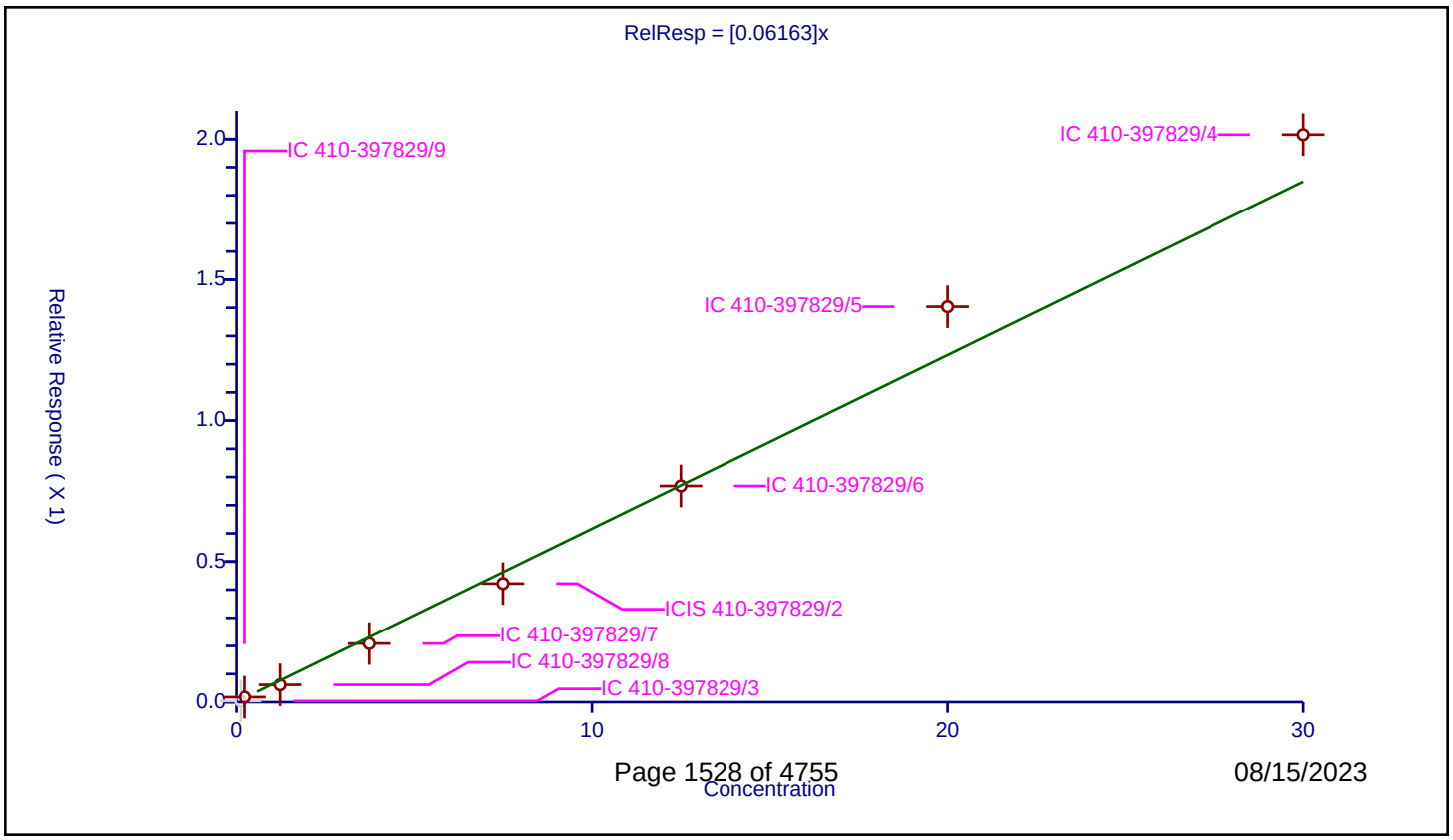
Curve Coefficients

Intercept:	0
Slope:	0.06163

Error Coefficients

Standard Error:	163000
Relative Standard Error:	13.5
Correlation Coefficient:	0.992
Coefficient of Determination (Adjusted):	0.979

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.004233	5.0	804481.0	0.03386	N
2	IC 410-397829/9	0.25	0.017829	5.0	706975.0	0.071318	Y
3	IC 410-397829/8	1.25	0.061747	5.0	845790.0	0.049398	Y
4	IC 410-397829/7	3.75	0.208479	5.0	679061.0	0.055594	Y
5	ICIS 410-397829/2	7.5	0.421763	5.0	802857.0	0.056235	Y
6	IC 410-397829/6	12.5	0.768309	5.0	883382.0	0.061465	Y
7	IC 410-397829/5	20.0	1.403918	5.0	783422.0	0.070196	Y
8	IC 410-397829/4	30.0	2.015638	5.0	728871.0	0.067188	Y



Calibration / cis-Diallate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

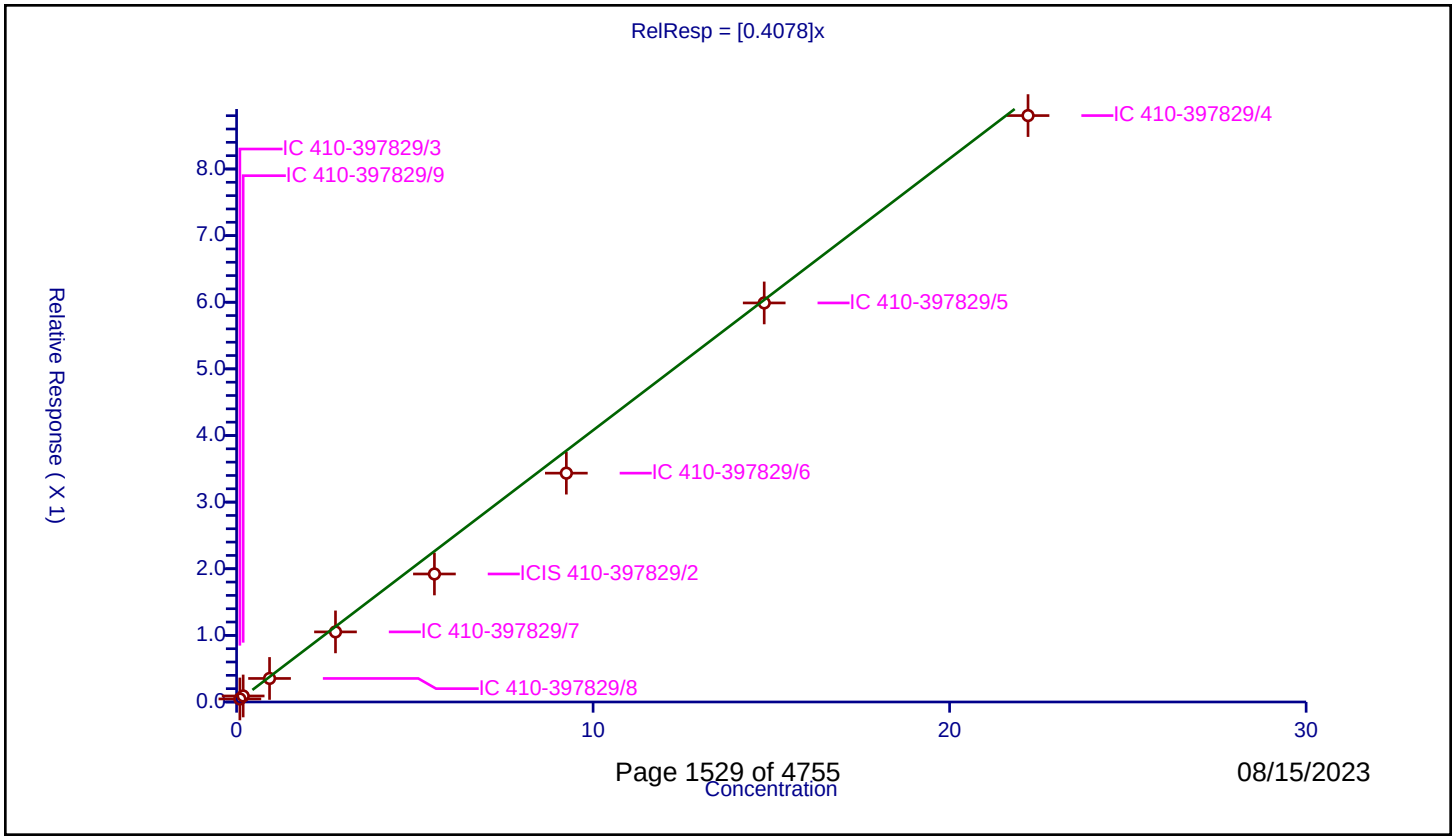
Curve Coefficients

Intercept:	0
Slope:	0.4078

Error Coefficients

Standard Error:	656000
Relative Standard Error:	13.3
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.975

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.0925	0.045775	5.0	804481.0	0.494863	Y
2	IC 410-397829/9	0.185	0.090229	5.0	706975.0	0.487727	Y
3	IC 410-397829/8	0.925	0.353273	5.0	845790.0	0.381917	Y
4	IC 410-397829/7	2.775	1.05207	5.0	679061.0	0.379124	Y
5	ICIS 410-397829/2	5.55	1.921295	5.0	802857.0	0.346179	Y
6	IC 410-397829/6	9.25	3.434533	5.0	883382.0	0.371301	Y
7	IC 410-397829/5	14.8	5.989282	5.0	783422.0	0.404681	Y
8	IC 410-397829/4	22.2	8.801571	5.0	728871.0	0.396467	Y



Calibration / Phorate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

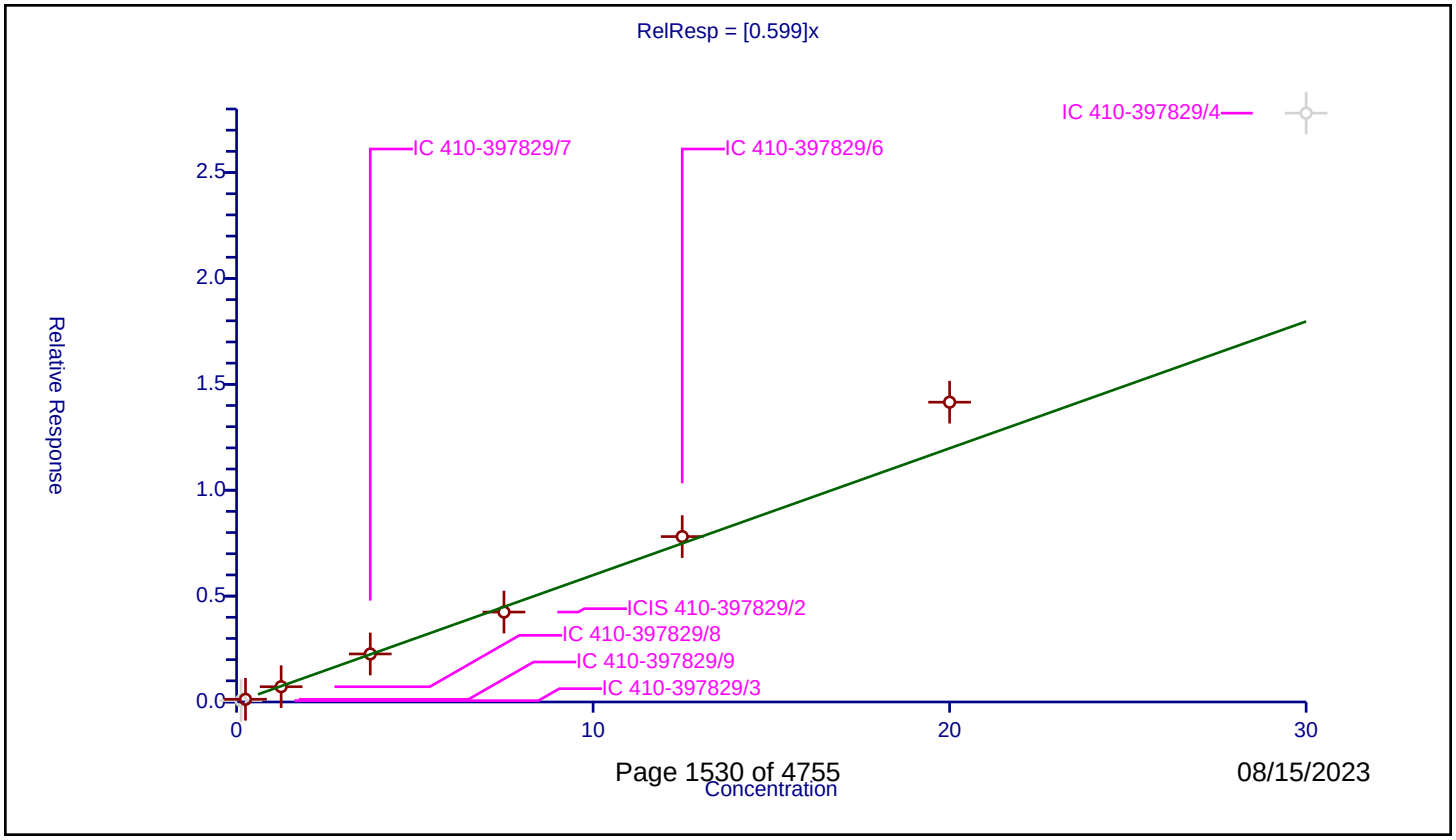
Curve Coefficients

Intercept:	0
Slope:	0.599

Error Coefficients

Standard Error:	1220000
Relative Standard Error:	10.9
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.0647	5.0	804481.0	0.517601	N
2	IC 410-397829/9	0.25	0.128272	5.0	706975.0	0.513087	Y
3	IC 410-397829/8	1.25	0.721308	5.0	845790.0	0.577046	Y
4	IC 410-397829/7	3.75	2.267999	5.0	679061.0	0.6048	Y
5	ICIS 410-397829/2	7.5	4.246186	5.0	802857.0	0.566158	Y
6	IC 410-397829/6	12.5	7.810256	5.0	883382.0	0.624821	Y
7	IC 410-397829/5	20.0	14.157012	5.0	783422.0	0.707851	Y
8	IC 410-397829/4	30.0	27.805346	5.0	728871.0	0.926845	N



Calibration / Phenacetin

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

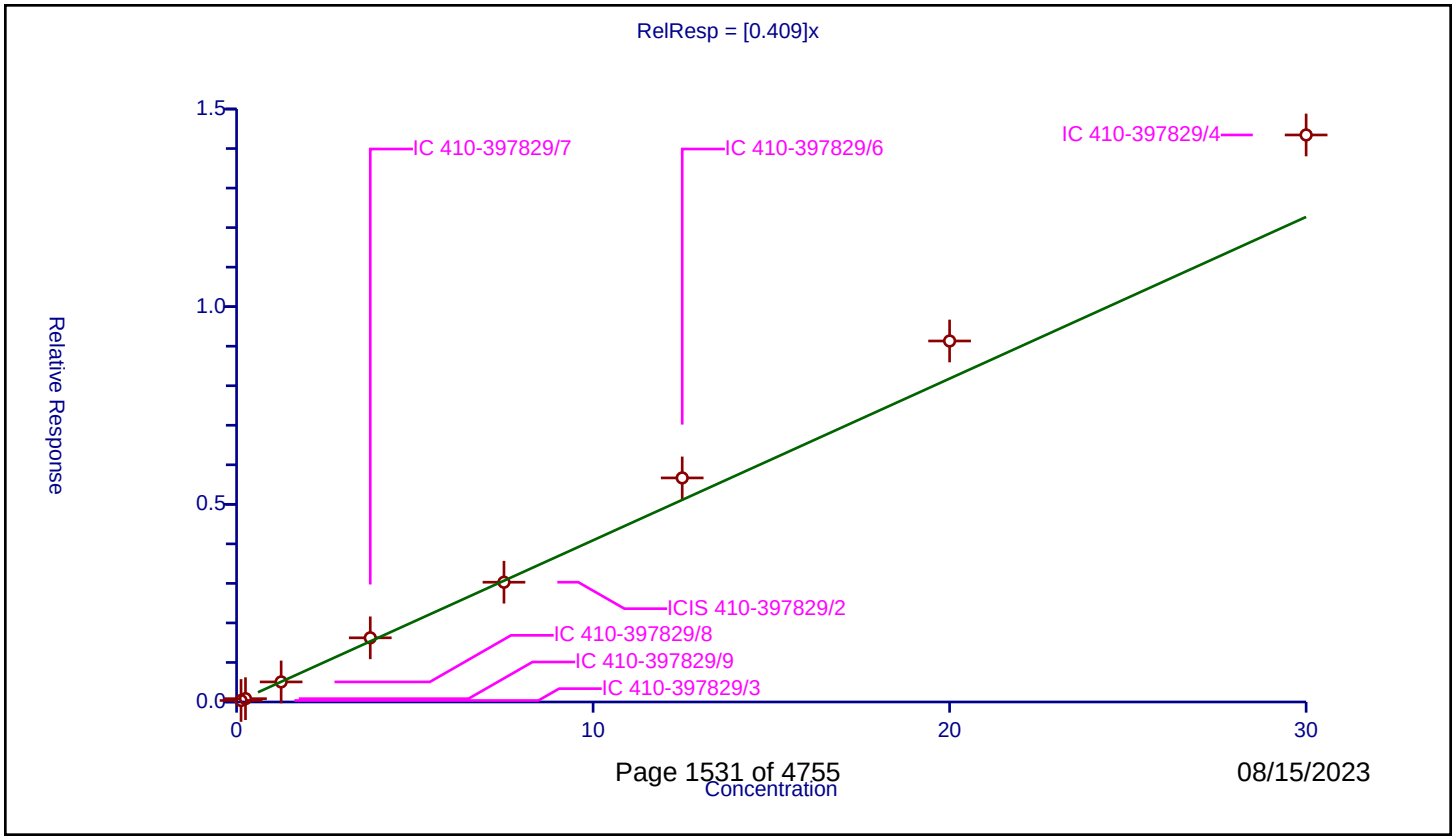
Curve Coefficients

Intercept:	0
Slope:	0.409

Error Coefficients

Standard Error:	1050000
Relative Standard Error:	14.9
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.977

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.037993	5.0	804481.0	0.303948	Y
2	IC 410-397829/9	0.25	0.084204	5.0	706975.0	0.336815	Y
3	IC 410-397829/8	1.25	0.507851	5.0	845790.0	0.406281	Y
4	IC 410-397829/7	3.75	1.623183	5.0	679061.0	0.432849	Y
5	ICIS 410-397829/2	7.5	3.029817	5.0	802857.0	0.403976	Y
6	IC 410-397829/6	12.5	5.668295	5.0	883382.0	0.453464	Y
7	IC 410-397829/5	20.0	9.132192	5.0	783422.0	0.45661	Y
8	IC 410-397829/4	30.0	14.343793	5.0	728871.0	0.478126	Y



08/15/2023

Calibration / 4-Bromophenyl phenyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

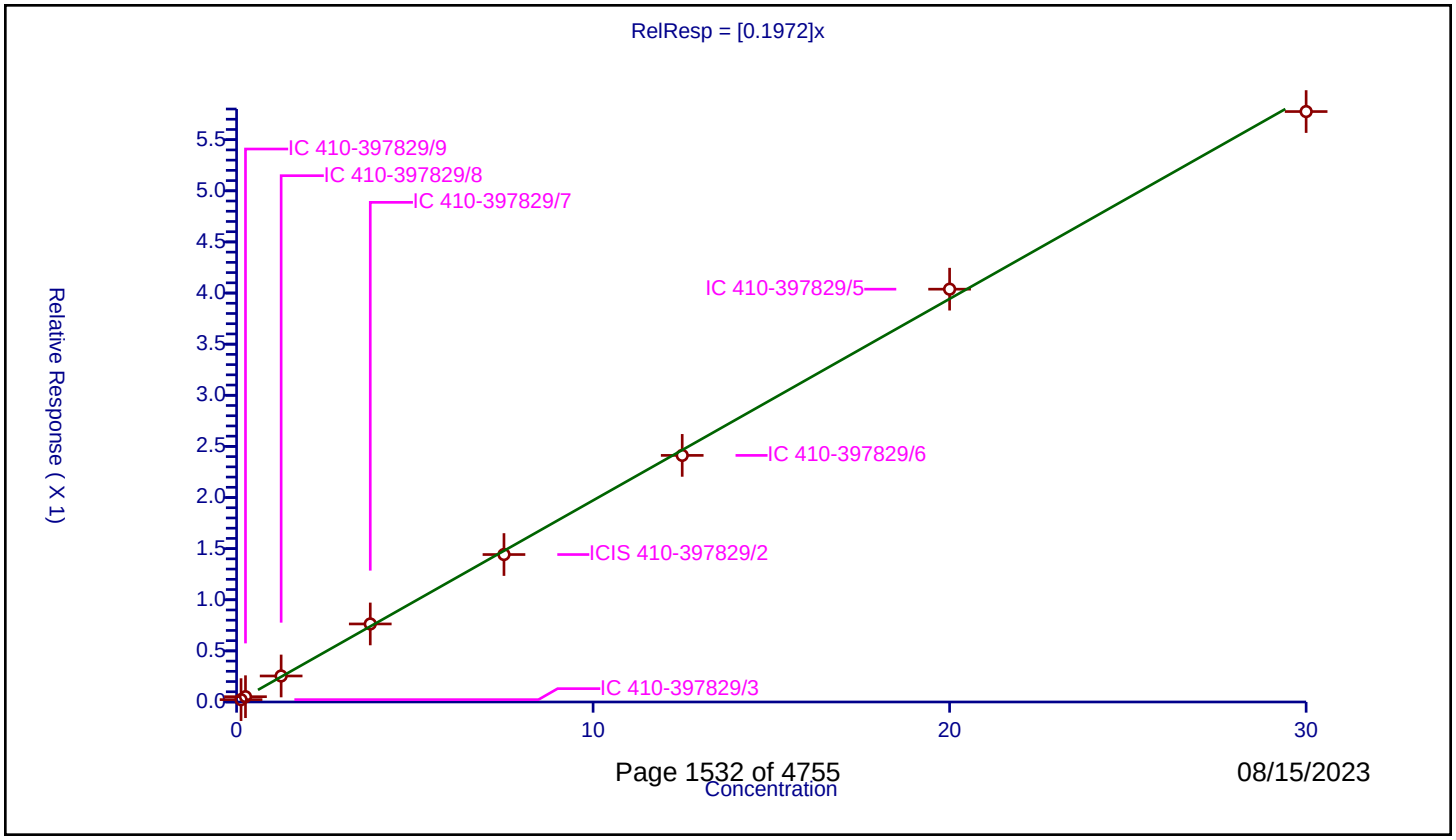
Curve Coefficients

Intercept:	0
Slope:	0.1972

Error Coefficients

Standard Error:	440000
Relative Standard Error:	4.0
Correlation Coefficient:	0.991
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.022953	5.0	804481.0	0.183621	Y
2	IC 410-397829/9	0.25	0.051742	5.0	706975.0	0.206966	Y
3	IC 410-397829/8	1.25	0.254348	5.0	845790.0	0.203478	Y
4	IC 410-397829/7	3.75	0.763326	5.0	679061.0	0.203554	Y
5	ICIS 410-397829/2	7.5	1.44238	5.0	802857.0	0.192317	Y
6	IC 410-397829/6	12.5	2.412054	5.0	883382.0	0.192964	Y
7	IC 410-397829/5	20.0	4.037798	5.0	783422.0	0.20189	Y
8	IC 410-397829/4	30.0	5.775158	5.0	728871.0	0.192505	Y



Calibration / trans-Diallate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

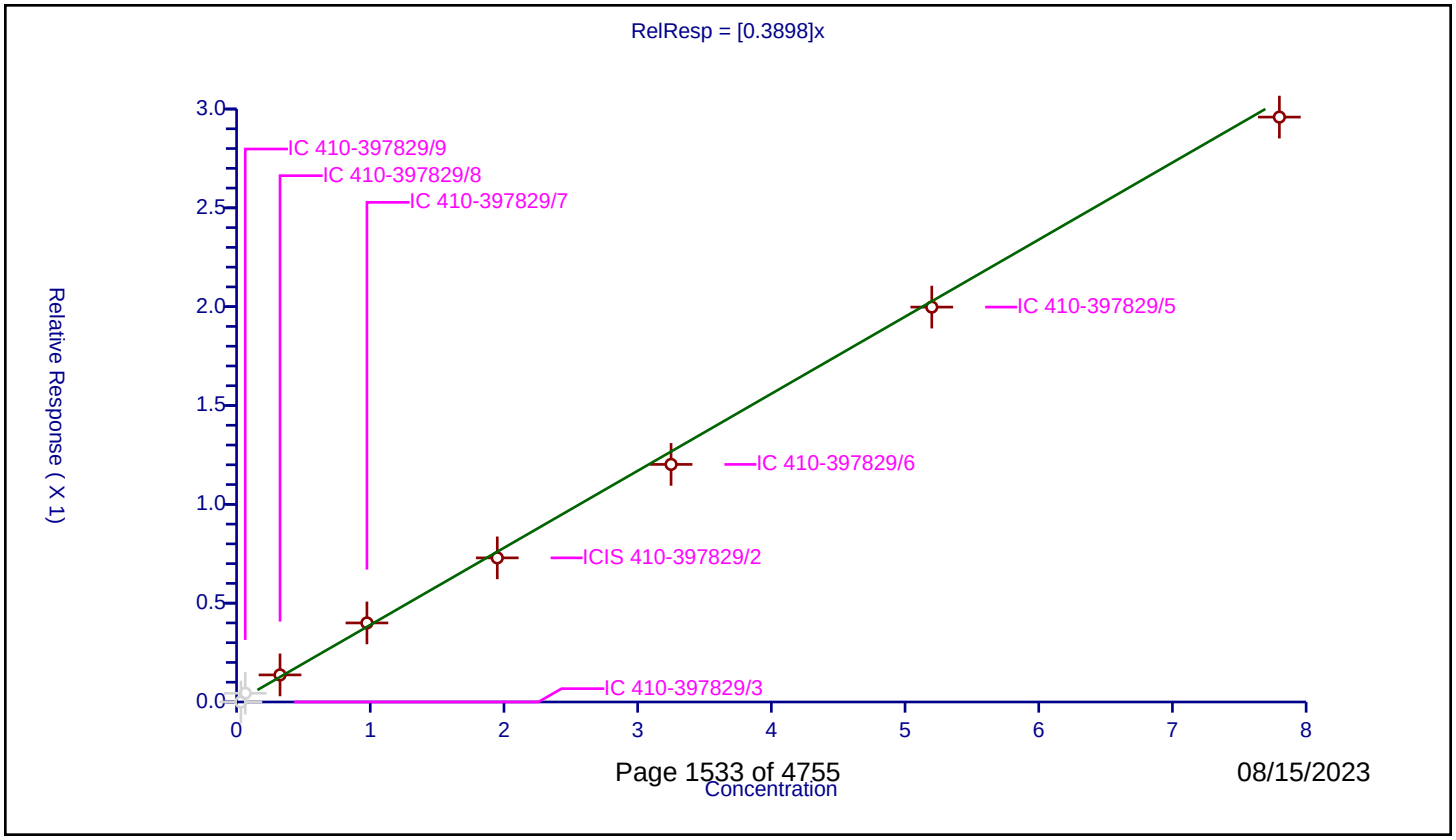
Curve Coefficients

Intercept:	0
Slope:	0.3898

Error Coefficients

Standard Error:	263000
Relative Standard Error:	5.4
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.0325	0.0	5.0	804481.0	0.0	N
2	IC 410-397829/9	0.065	0.044118	5.0	706975.0	0.678731	N
3	IC 410-397829/8	0.325	0.137002	5.0	845790.0	0.421545	Y
4	IC 410-397829/7	0.975	0.399927	5.0	679061.0	0.410182	Y
5	ICIS 410-397829/2	1.95	0.729134	5.0	802857.0	0.373915	Y
6	IC 410-397829/6	3.25	1.202051	5.0	883382.0	0.369862	Y
7	IC 410-397829/5	5.2	1.997895	5.0	783422.0	0.384211	Y
8	IC 410-397829/4	7.8	2.95907	5.0	728871.0	0.379368	Y



Calibration / Hexachlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

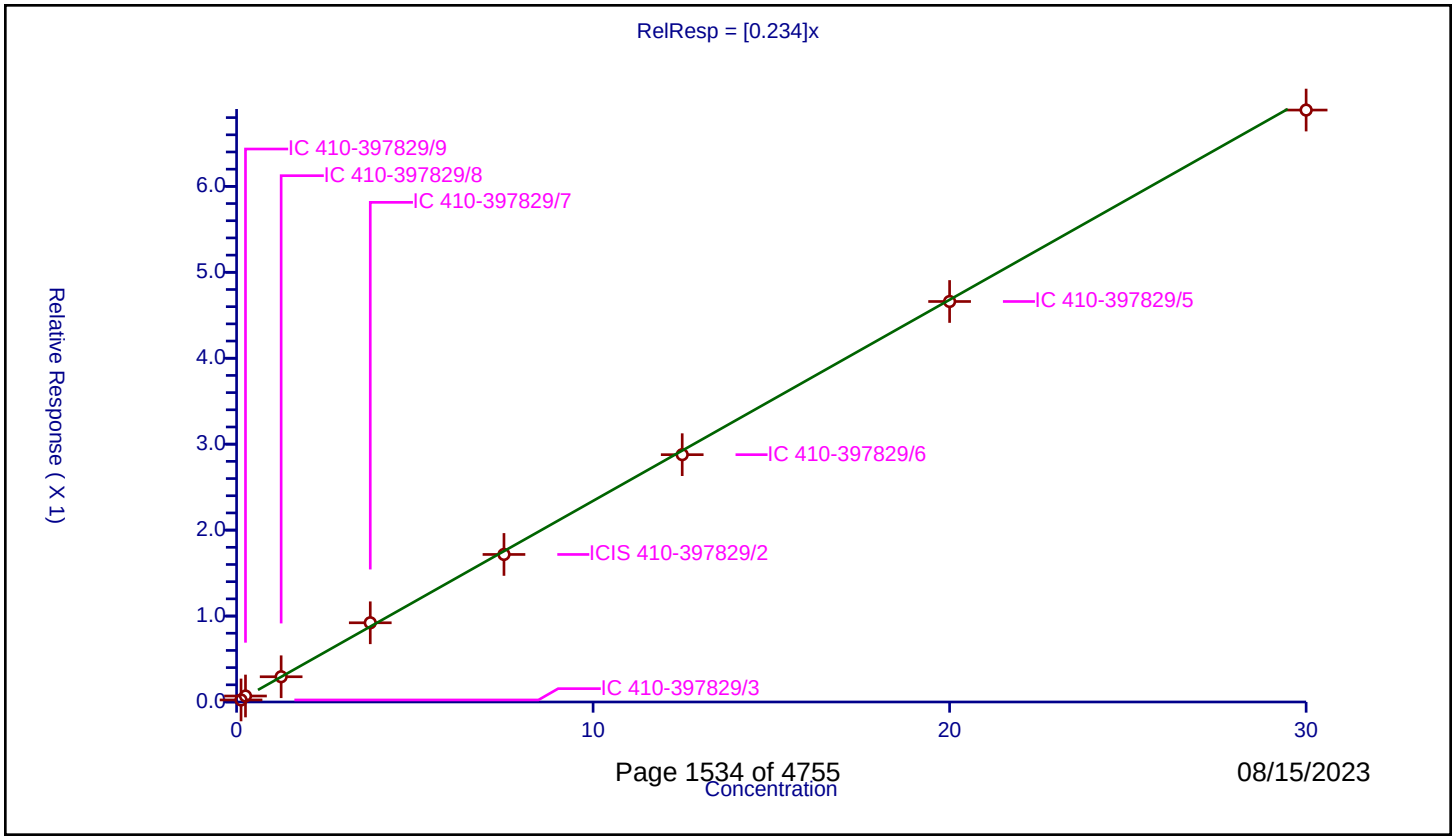
Curve Coefficients

Intercept:	0
Slope:	0.234

Error Coefficients

Standard Error:	520000
Relative Standard Error:	10.3
Correlation Coefficient:	0.992
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.023848	5.0	804481.0	0.190781	Y
2	IC 410-397829/9	0.25	0.06972	5.0	706975.0	0.278878	Y
3	IC 410-397829/8	1.25	0.293684	5.0	845790.0	0.234947	Y
4	IC 410-397829/7	3.75	0.921721	5.0	679061.0	0.245792	Y
5	ICIS 410-397829/2	7.5	1.716707	5.0	802857.0	0.228894	Y
6	IC 410-397829/6	12.5	2.877736	5.0	883382.0	0.230219	Y
7	IC 410-397829/5	20.0	4.660209	5.0	783422.0	0.23301	Y
8	IC 410-397829/4	30.0	6.887776	5.0	728871.0	0.229593	Y



Calibration / Dimethoate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

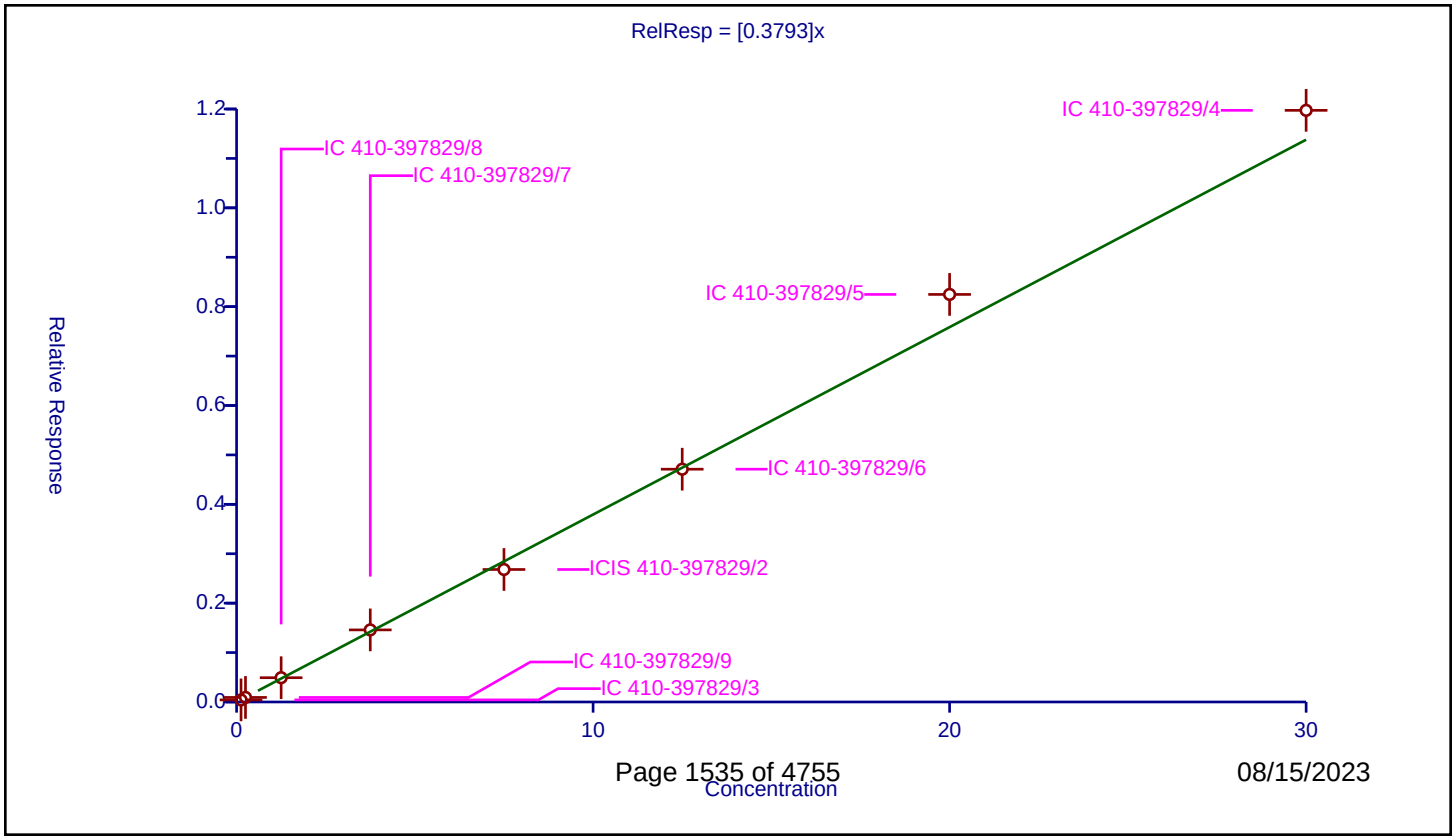
Curve Coefficients

Intercept:	0
Slope:	0.3793

Error Coefficients

Standard Error:	898000
Relative Standard Error:	6.4
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.042263	5.0	804481.0	0.338106	Y
2	IC 410-397829/9	0.25	0.092068	5.0	706975.0	0.368273	Y
3	IC 410-397829/8	1.25	0.491511	5.0	845790.0	0.393209	Y
4	IC 410-397829/7	3.75	1.458691	5.0	679061.0	0.388984	Y
5	ICIS 410-397829/2	7.5	2.68115	5.0	802857.0	0.357487	Y
6	IC 410-397829/6	12.5	4.710997	5.0	883382.0	0.37688	Y
7	IC 410-397829/5	20.0	8.247637	5.0	783422.0	0.412382	Y
8	IC 410-397829/4	30.0	11.972873	5.0	728871.0	0.399096	Y



Calibration / Atrazine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

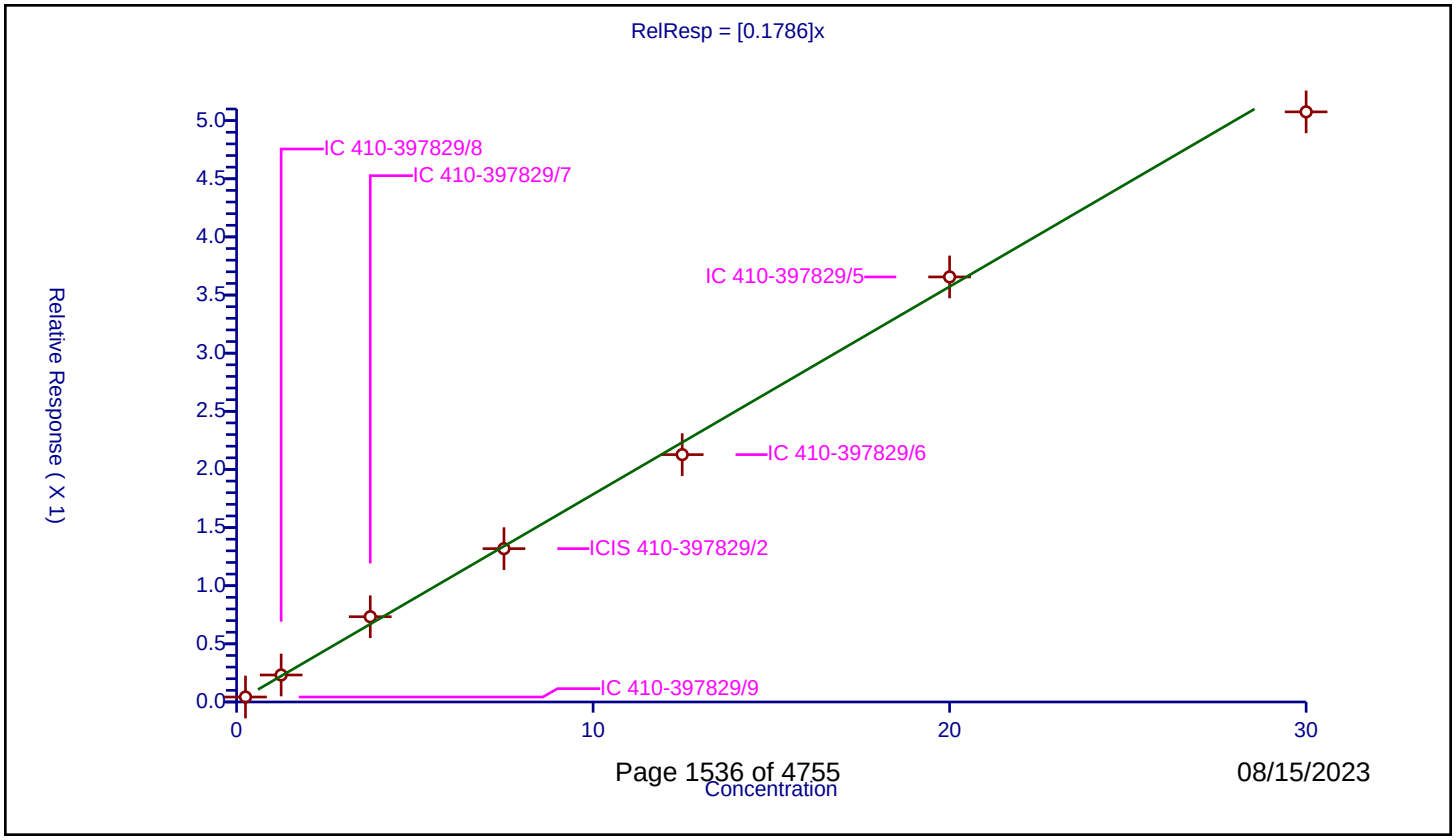
Curve Coefficients

Intercept:	0
Slope:	0.1786

Error Coefficients

Standard Error:	423000
Relative Standard Error:	5.5
Correlation Coefficient:	0.987
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/9	0.25	0.042738	5.0	706975.0	0.170954	Y
2	IC 410-397829/8	1.25	0.232209	5.0	845790.0	0.185767	Y
3	IC 410-397829/7	3.75	0.733336	5.0	679061.0	0.195556	Y
4	ICIS 410-397829/2	7.5	1.318784	5.0	802857.0	0.175838	Y
5	IC 410-397829/6	12.5	2.12759	5.0	883382.0	0.170207	Y
6	IC 410-397829/5	20.0	3.655712	5.0	783422.0	0.182786	Y
7	IC 410-397829/4	30.0	5.075404	5.0	728871.0	0.16918	Y



Calibration / Pentachloronitrobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

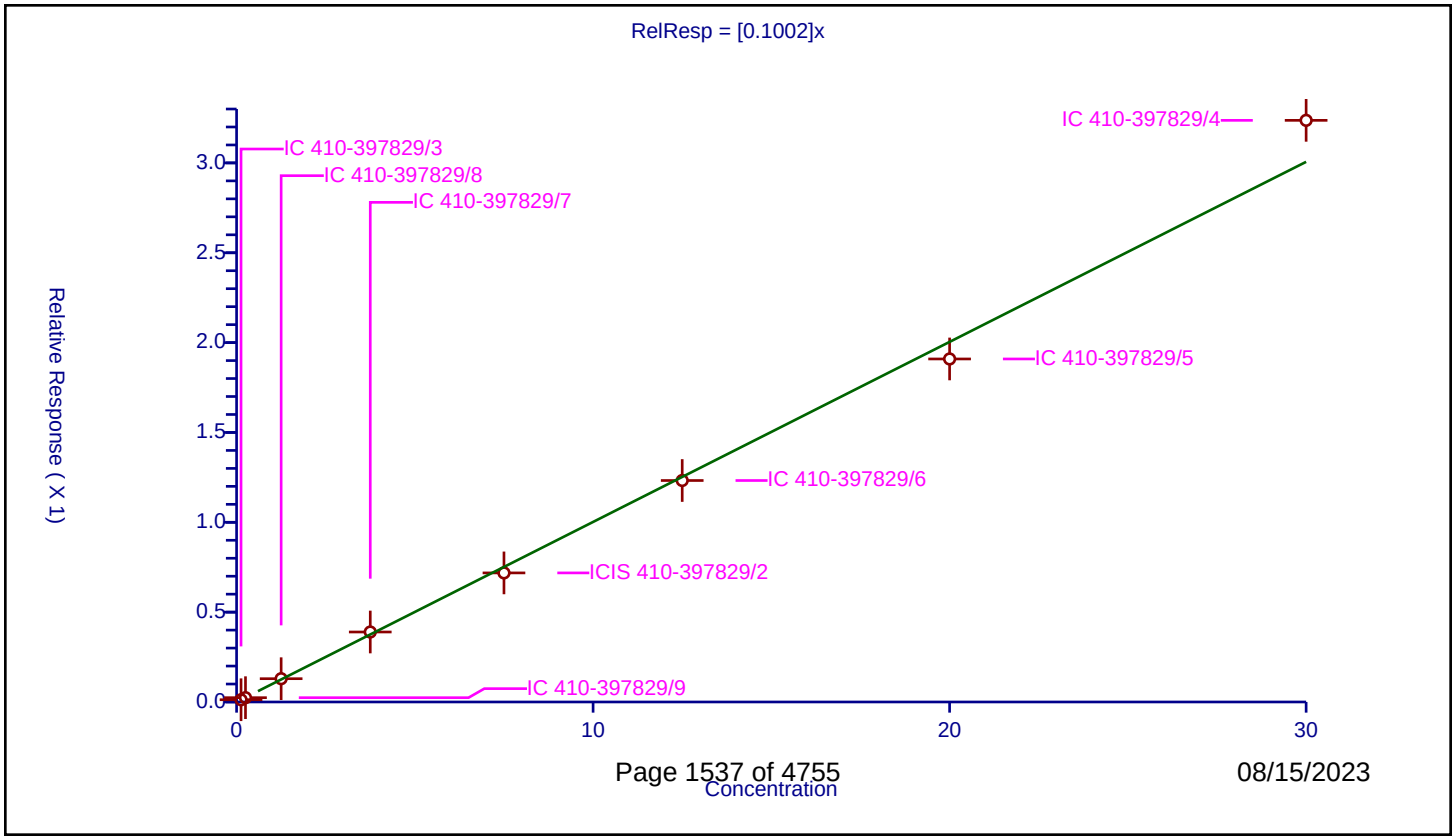
Curve Coefficients

Intercept:	0
Slope:	0.1002

Error Coefficients

Standard Error:	232000
Relative Standard Error:	4.6
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.01258	5.0	804481.0	0.100636	Y
2	IC 410-397829/9	0.25	0.023919	5.0	706975.0	0.095675	Y
3	IC 410-397829/8	1.25	0.12963	5.0	845790.0	0.103704	Y
4	IC 410-397829/7	3.75	0.389501	5.0	679061.0	0.103867	Y
5	ICIS 410-397829/2	7.5	0.718304	5.0	802857.0	0.095774	Y
6	IC 410-397829/6	12.5	1.232564	5.0	883382.0	0.098605	Y
7	IC 410-397829/5	20.0	1.909041	5.0	783422.0	0.095452	Y
8	IC 410-397829/4	30.0	3.236965	5.0	728871.0	0.107899	Y



Calibration / Pentachlorophenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

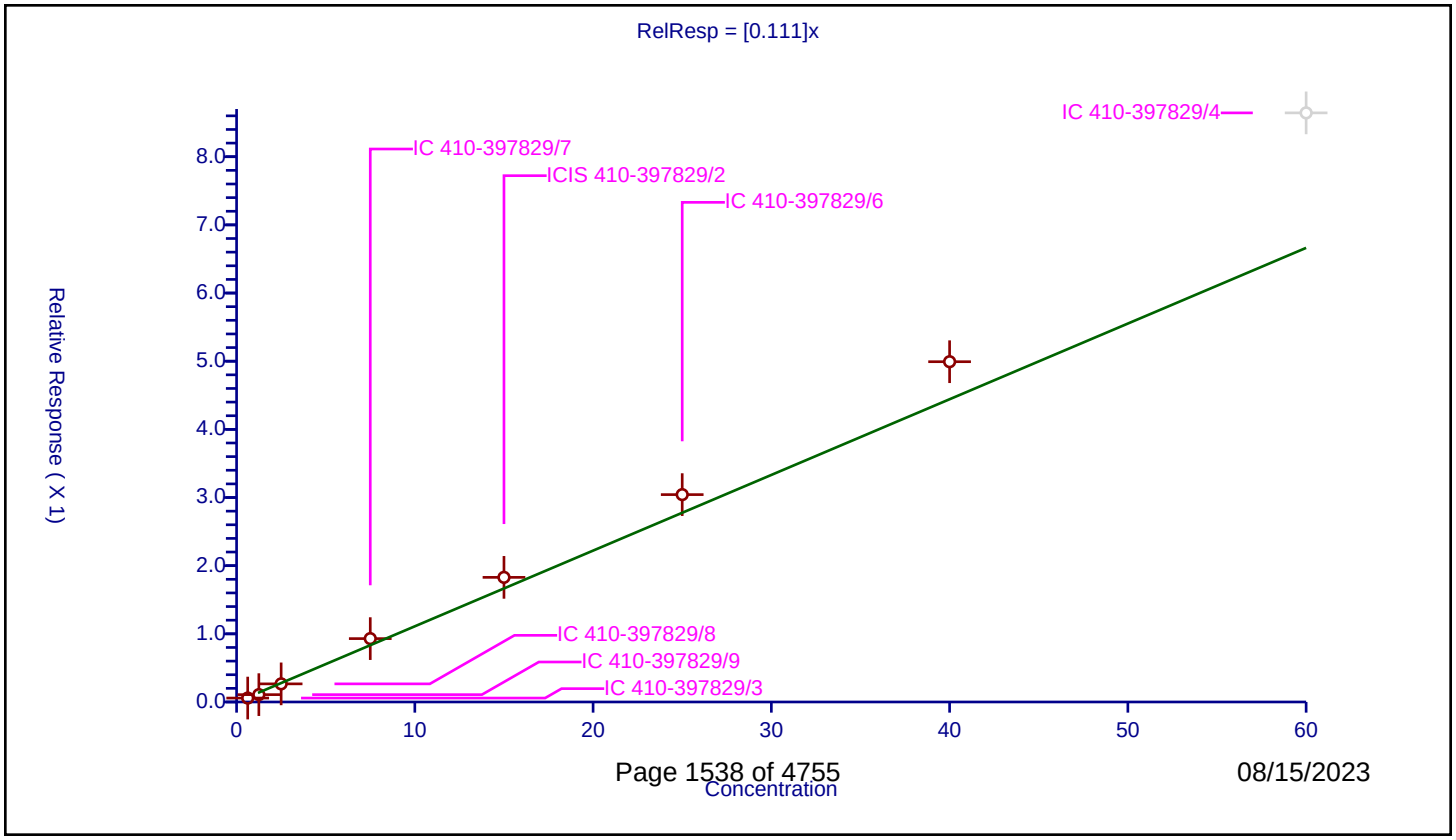
Curve Coefficients

Intercept:	0
Slope:	0.111

Error Coefficients

Standard Error:	409000
Relative Standard Error:	14.6
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.975

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.625	0.057633	5.0	804481.0	0.092213	Y
2	IC 410-397829/9	1.25	0.107939	5.0	706975.0	0.086351	Y
3	IC 410-397829/8	2.5	0.26584	5.0	845790.0	0.106336	Y
4	IC 410-397829/7	7.5	0.929843	5.0	679061.0	0.123979	Y
5	ICIS 410-397829/2	15.0	1.828682	5.0	802857.0	0.121912	Y
6	IC 410-397829/6	25.0	3.042376	5.0	883382.0	0.121695	Y
7	IC 410-397829/5	40.0	4.992622	5.0	783422.0	0.124816	Y
8	IC 410-397829/4	60.0	8.643443	5.0	728871.0	0.144057	N



Calibration / 4-Aminobiphenyl

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

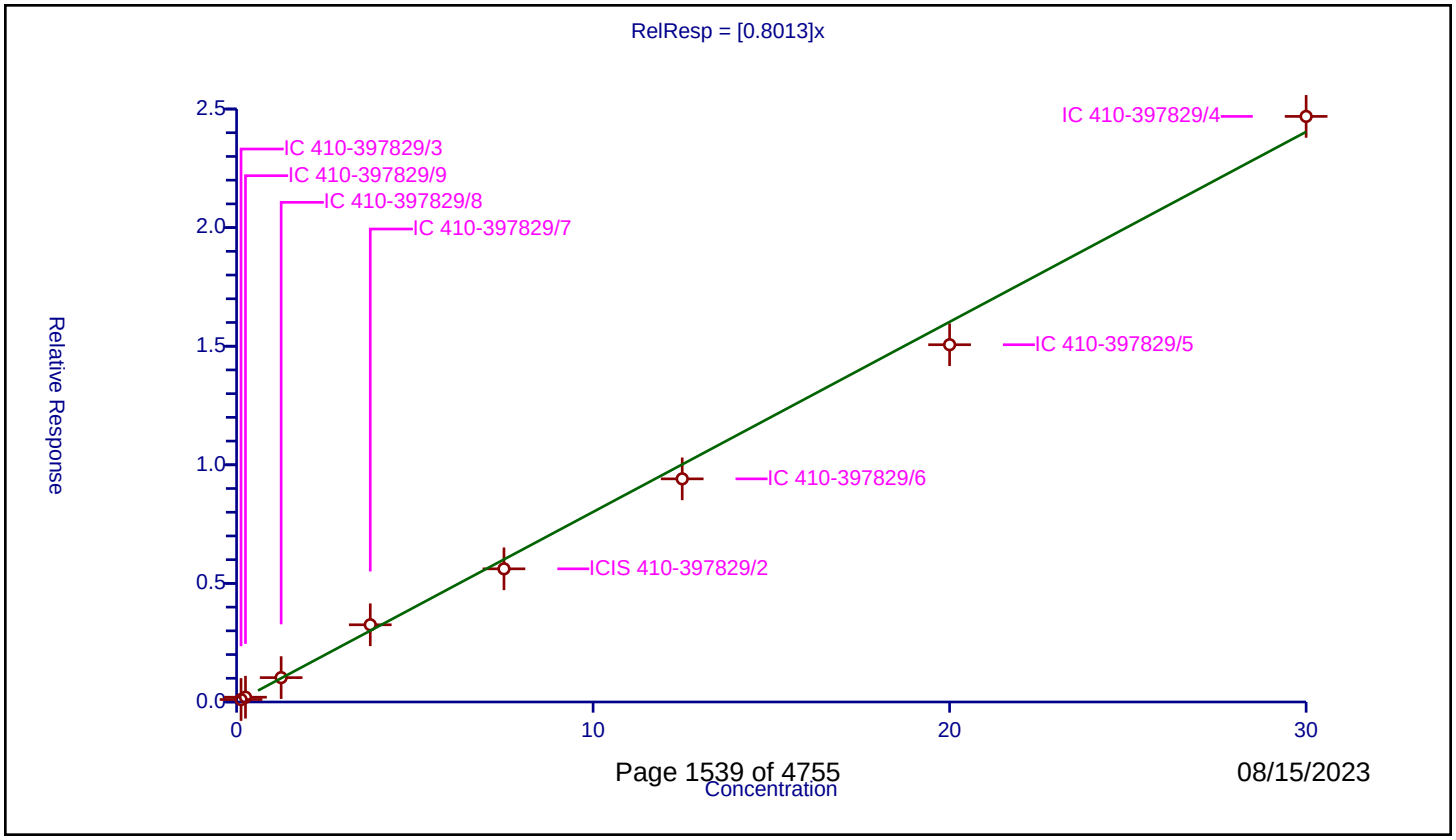
Curve Coefficients

Intercept:	0
Slope:	0.8013

Error Coefficients

Standard Error:	1790000
Relative Standard Error:	5.6
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.104285	5.0	804481.0	0.834277	Y
2	IC 410-397829/9	0.25	0.202235	5.0	706975.0	0.808939	Y
3	IC 410-397829/8	1.25	1.02691	5.0	845790.0	0.821528	Y
4	IC 410-397829/7	3.75	3.255657	5.0	679061.0	0.868175	Y
5	ICIS 410-397829/2	7.5	5.614375	5.0	802857.0	0.748583	Y
6	IC 410-397829/6	12.5	9.407538	5.0	883382.0	0.752603	Y
7	IC 410-397829/5	20.0	15.062106	5.0	783422.0	0.753105	Y
8	IC 410-397829/4	30.0	24.688525	5.0	728871.0	0.822951	Y



Calibration / Pronamide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

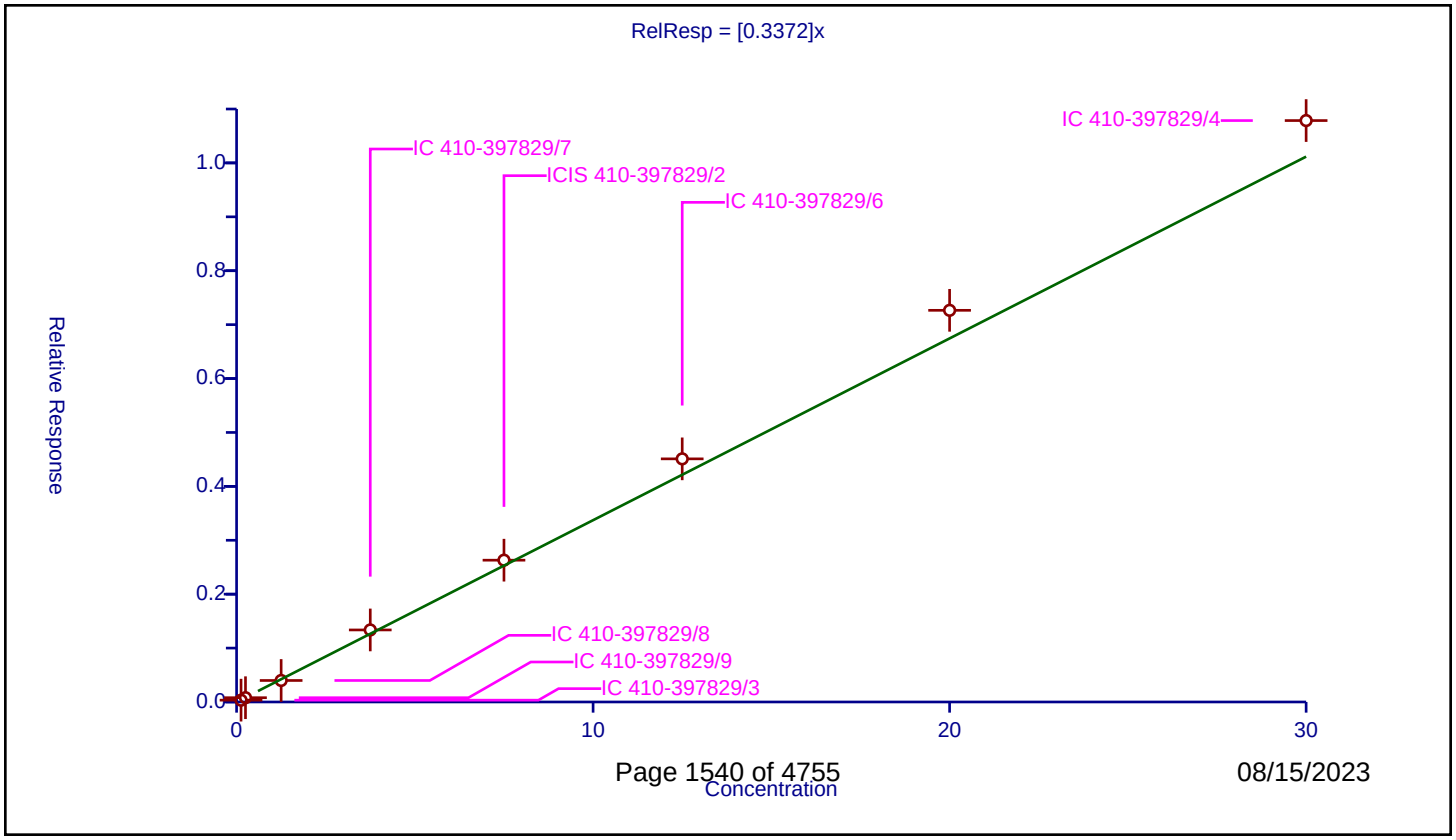
Curve Coefficients

Intercept:	0
Slope:	0.3372

Error Coefficients

Standard Error:	812000
Relative Standard Error:	9.7
Correlation Coefficient:	0.992
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.03378	5.0	804481.0	0.270236	Y
2	IC 410-397829/9	0.25	0.07943	5.0	706975.0	0.31772	Y
3	IC 410-397829/8	1.25	0.398822	5.0	845790.0	0.319058	Y
4	IC 410-397829/7	3.75	1.336559	5.0	679061.0	0.356416	Y
5	ICIS 410-397829/2	7.5	2.630363	5.0	802857.0	0.350715	Y
6	IC 410-397829/6	12.5	4.51007	5.0	883382.0	0.360806	Y
7	IC 410-397829/5	20.0	7.26558	5.0	783422.0	0.363279	Y
8	IC 410-397829/4	30.0	10.785633	5.0	728871.0	0.359521	Y



Calibration / Dinoseb

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

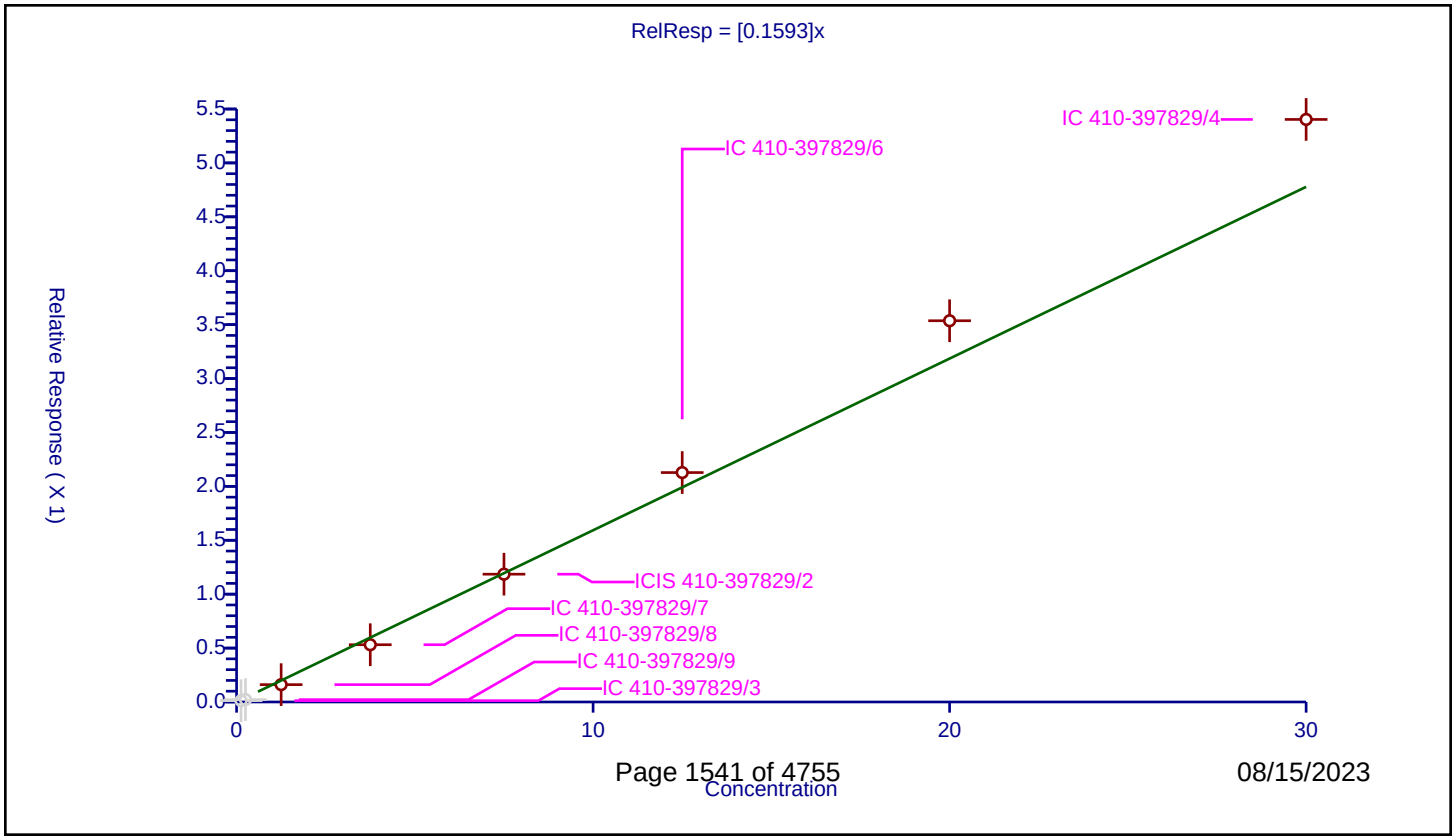
Curve Coefficients

Intercept:	0
Slope:	0.1593

Error Coefficients

Standard Error:	471000
Relative Standard Error:	12.9
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.980

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.012287	5.0	804481.0	0.098299	N
2	IC 410-397829/9	0.25	0.021847	5.0	706975.0	0.087386	N
3	IC 410-397829/8	1.25	0.160997	5.0	845790.0	0.128798	Y
4	IC 410-397829/7	3.75	0.531108	5.0	679061.0	0.141629	Y
5	ICIS 410-397829/2	7.5	1.185267	5.0	802857.0	0.158036	Y
6	IC 410-397829/6	12.5	2.12789	5.0	883382.0	0.170231	Y
7	IC 410-397829/5	20.0	3.536051	5.0	783422.0	0.176803	Y
8	IC 410-397829/4	30.0	5.403261	5.0	728871.0	0.180109	Y



Calibration / Disulfoton

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

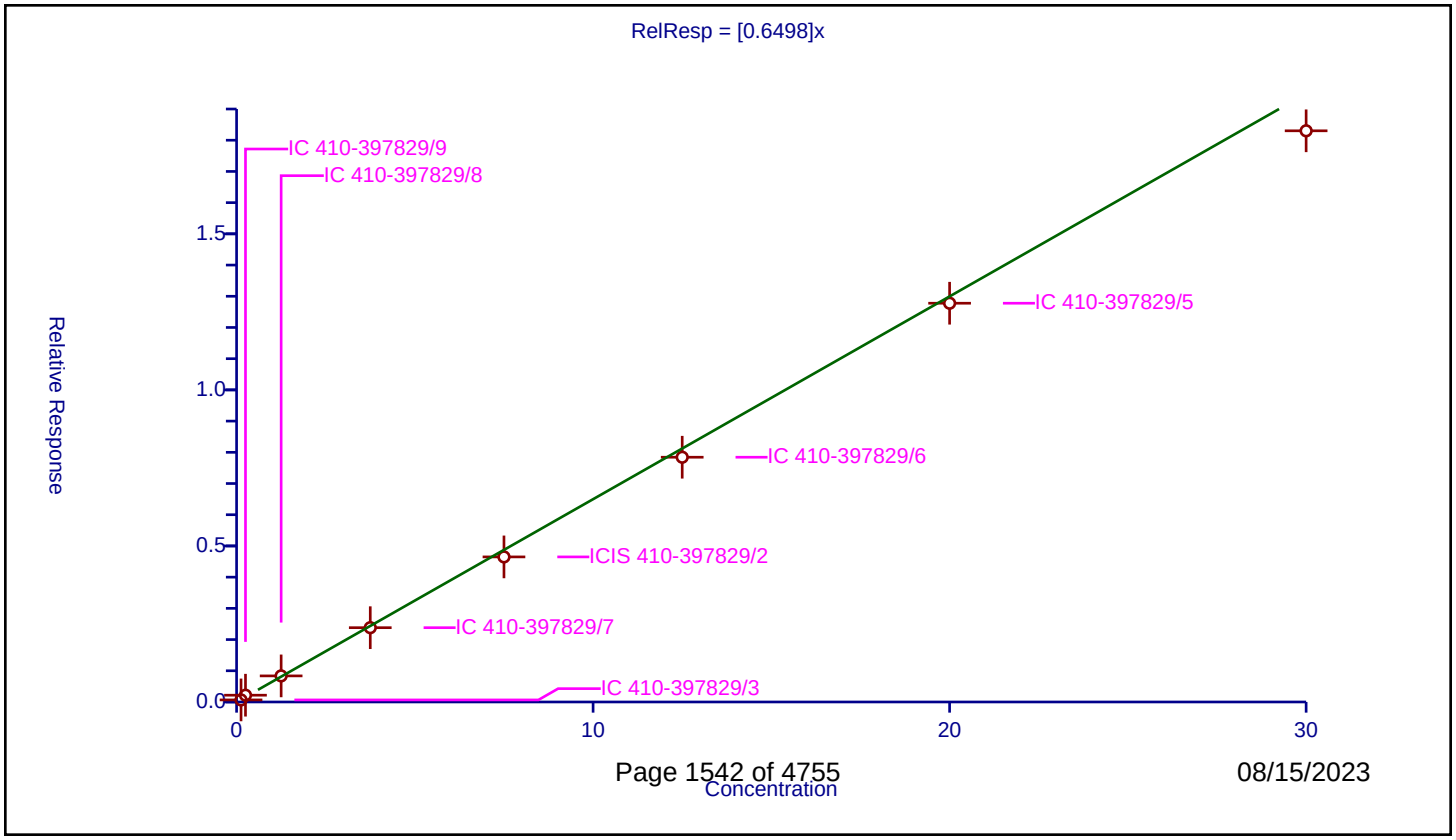
Curve Coefficients

Intercept:	0
Slope:	0.6498

Error Coefficients

Standard Error:	1400000
Relative Standard Error:	15.0
Correlation Coefficient:	0.989
Coefficient of Determination (Adjusted):	0.974

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.066161	5.0	804481.0	0.529285	Y
2	IC 410-397829/9	0.25	0.217193	5.0	706975.0	0.868772	Y
3	IC 410-397829/8	1.25	0.836189	5.0	845790.0	0.668951	Y
4	IC 410-397829/7	3.75	2.381156	5.0	679061.0	0.634975	Y
5	ICIS 410-397829/2	7.5	4.648343	5.0	802857.0	0.619779	Y
6	IC 410-397829/6	12.5	7.842672	5.0	883382.0	0.627414	Y
7	IC 410-397829/5	20.0	12.77743	5.0	783422.0	0.638872	Y
8	IC 410-397829/4	30.0	18.30175	5.0	728871.0	0.610058	Y



Calibration / Phenanthrene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

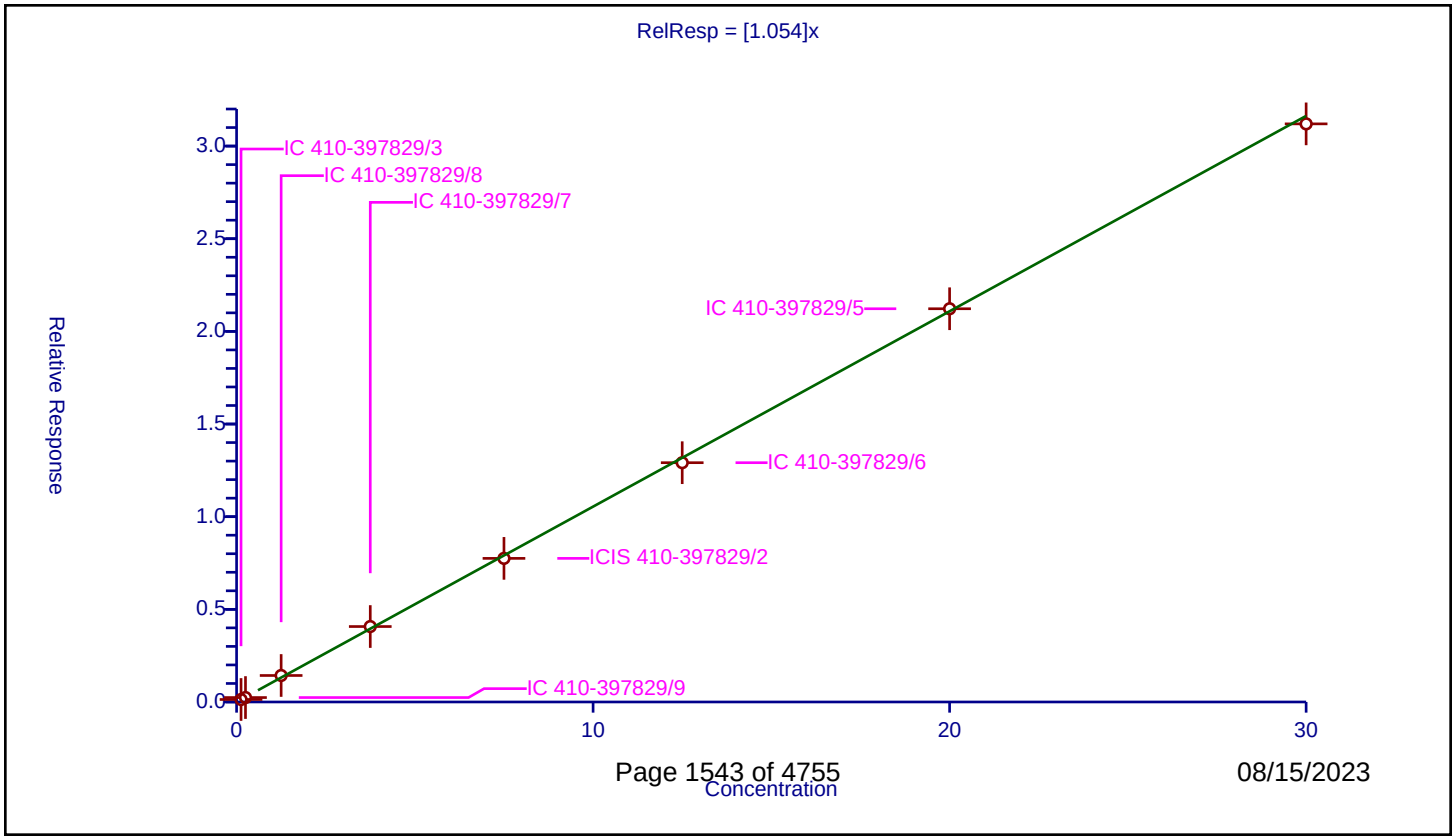
Curve Coefficients

Intercept:	0
Slope:	1.054

Error Coefficients

Standard Error:	2360000
Relative Standard Error:	5.0
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.13477	5.0	804481.0	1.078161	Y
2	IC 410-397829/9	0.25	0.239726	5.0	706975.0	0.958902	Y
3	IC 410-397829/8	1.25	1.429876	5.0	845790.0	1.143901	Y
4	IC 410-397829/7	3.75	4.071807	5.0	679061.0	1.085815	Y
5	ICIS 410-397829/2	7.5	7.749886	5.0	802857.0	1.033318	Y
6	IC 410-397829/6	12.5	12.913032	5.0	883382.0	1.033043	Y
7	IC 410-397829/5	20.0	21.220945	5.0	783422.0	1.061047	Y
8	IC 410-397829/4	30.0	31.197976	5.0	728871.0	1.039933	Y



Calibration / Anthracene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

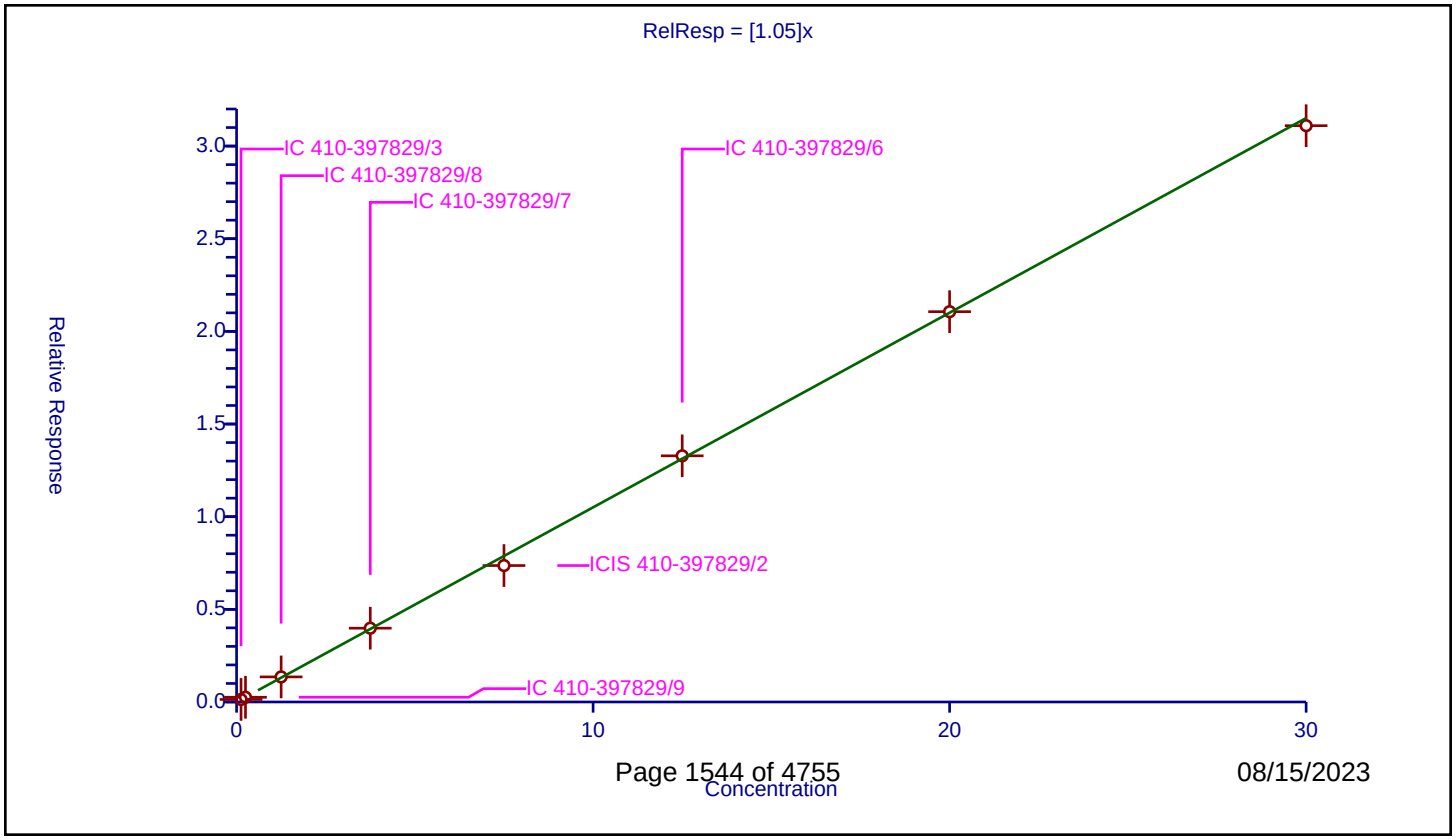
Curve Coefficients

Intercept:	0
Slope:	1.05

Error Coefficients

Standard Error:	2350000
Relative Standard Error:	3.6
Correlation Coefficient:	0.990
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.13789	5.0	804481.0	1.103121	Y
2	IC 410-397829/9	0.25	0.255066	5.0	706975.0	1.020262	Y
3	IC 410-397829/8	1.25	1.354101	5.0	845790.0	1.083281	Y
4	IC 410-397829/7	3.75	3.982278	5.0	679061.0	1.061941	Y
5	ICIS 410-397829/2	7.5	7.363055	5.0	802857.0	0.981741	Y
6	IC 410-397829/6	12.5	13.285323	5.0	883382.0	1.062826	Y
7	IC 410-397829/5	20.0	21.062684	5.0	783422.0	1.053134	Y
8	IC 410-397829/4	30.0	31.100579	5.0	728871.0	1.036686	Y



Calibration / Carbazole

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

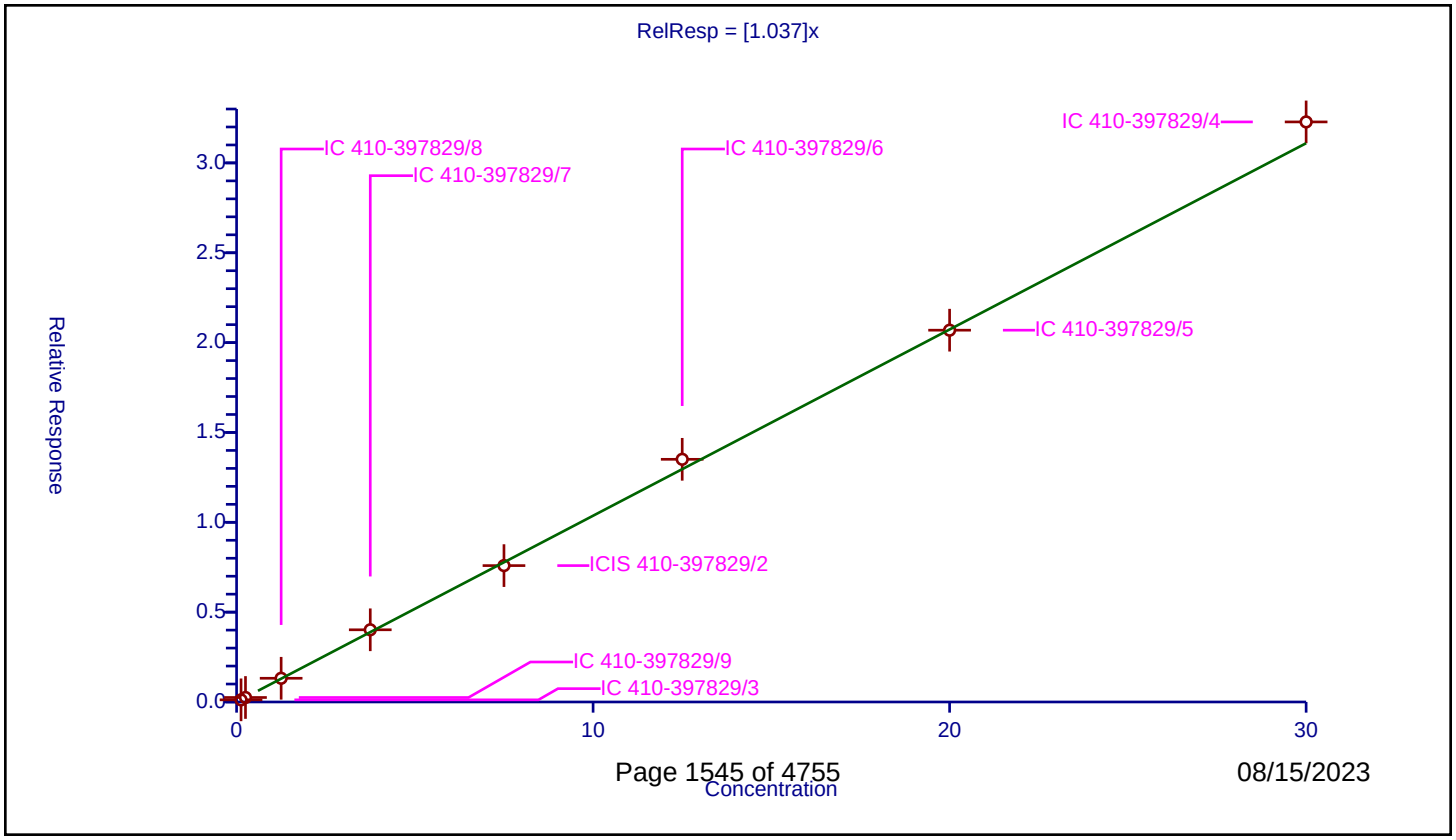
Curve Coefficients

Intercept:	0
Slope:	1.037

Error Coefficients

Standard Error:	2400000
Relative Standard Error:	4.1
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.120177	5.0	804481.0	0.961415	Y
2	IC 410-397829/9	0.25	0.25008	5.0	706975.0	1.000318	Y
3	IC 410-397829/8	1.25	1.319926	5.0	845790.0	1.055941	Y
4	IC 410-397829/7	3.75	4.017548	5.0	679061.0	1.071346	Y
5	ICIS 410-397829/2	7.5	7.590094	5.0	802857.0	1.012013	Y
6	IC 410-397829/6	12.5	13.505816	5.0	883382.0	1.080465	Y
7	IC 410-397829/5	20.0	20.691128	5.0	783422.0	1.034556	Y
8	IC 410-397829/4	30.0	32.281261	5.0	728871.0	1.076042	Y



Calibration / Methyl parathion

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

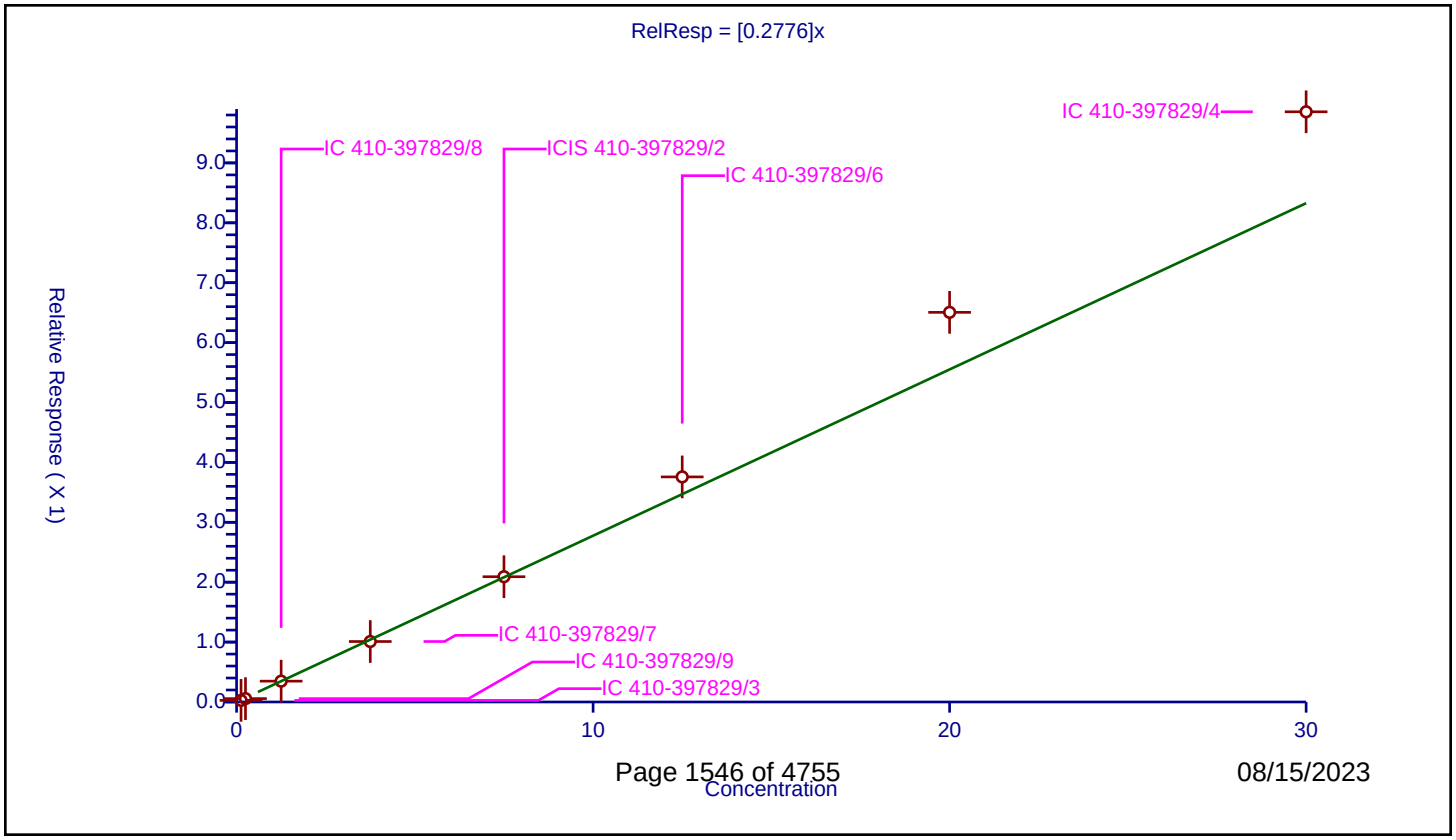
Curve Coefficients

Intercept:	0
Slope:	0.2776

Error Coefficients

Standard Error:	725000
Relative Standard Error:	15.0
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.976

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.026812	5.0	804481.0	0.214499	Y
2	IC 410-397829/9	0.25	0.056388	5.0	706975.0	0.225553	Y
3	IC 410-397829/8	1.25	0.34787	5.0	845790.0	0.278296	Y
4	IC 410-397829/7	3.75	1.009342	5.0	679061.0	0.269158	Y
5	ICIS 410-397829/2	7.5	2.091437	5.0	802857.0	0.278858	Y
6	IC 410-397829/6	12.5	3.757701	5.0	883382.0	0.300616	Y
7	IC 410-397829/5	20.0	6.505223	5.0	783422.0	0.325261	Y
8	IC 410-397829/4	30.0	9.853479	5.0	728871.0	0.328449	Y



Calibration / Di-n-butyl phthalate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

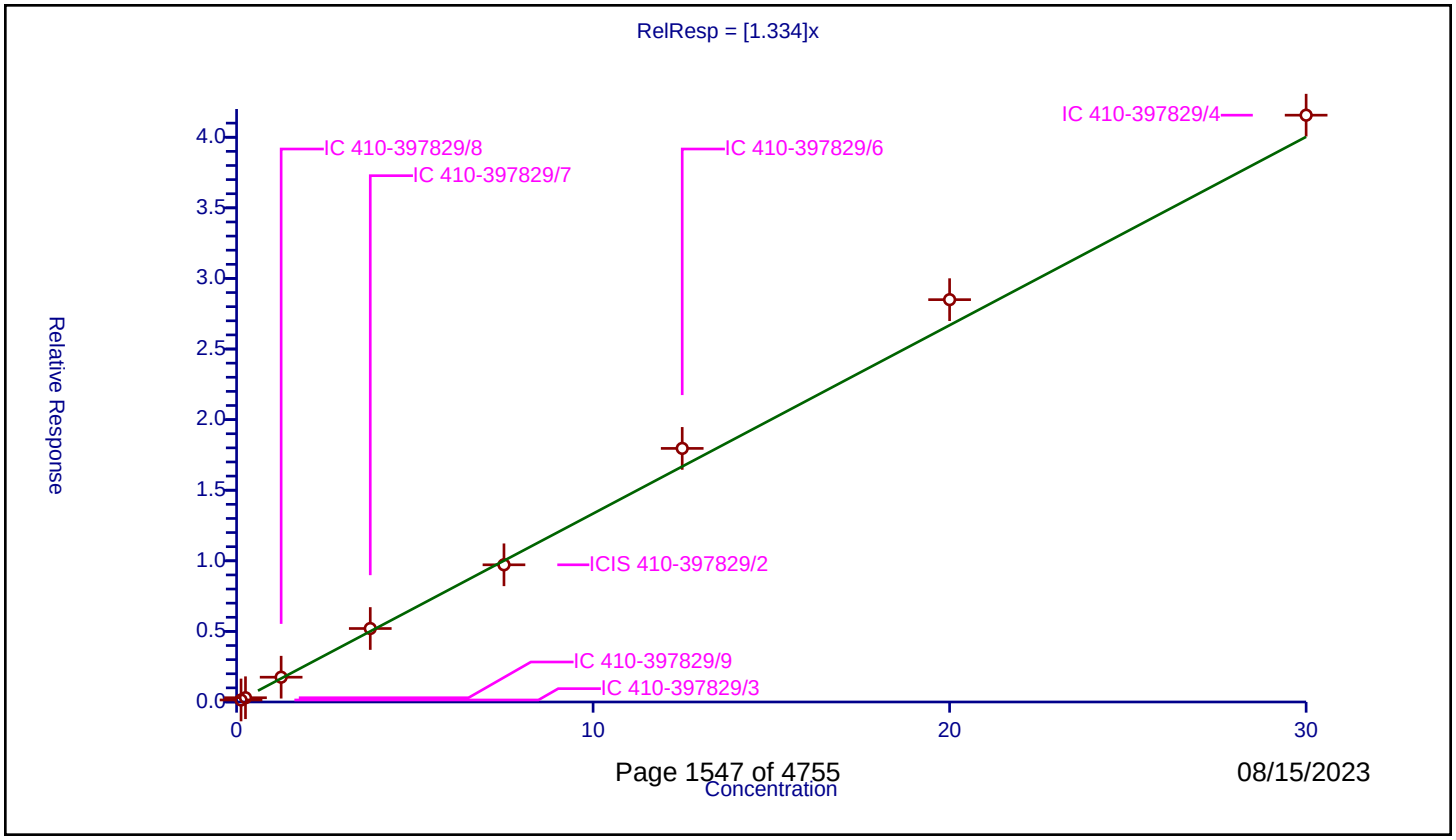
Curve Coefficients

Intercept:	0
Slope:	1.334

Error Coefficients

Standard Error:	3160000
Relative Standard Error:	8.4
Correlation Coefficient:	0.989
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.141986	5.0	804481.0	1.135888	Y
2	IC 410-397829/9	0.25	0.300767	5.0	706975.0	1.203069	Y
3	IC 410-397829/8	1.25	1.756204	5.0	845790.0	1.404963	Y
4	IC 410-397829/7	3.75	5.20384	5.0	679061.0	1.387691	Y
5	ICIS 410-397829/2	7.5	9.717123	5.0	802857.0	1.295616	Y
6	IC 410-397829/6	12.5	17.961878	5.0	883382.0	1.43695	Y
7	IC 410-397829/5	20.0	28.497113	5.0	783422.0	1.424856	Y
8	IC 410-397829/4	30.0	41.562945	5.0	728871.0	1.385431	Y



Calibration / Ethyl Parathion

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

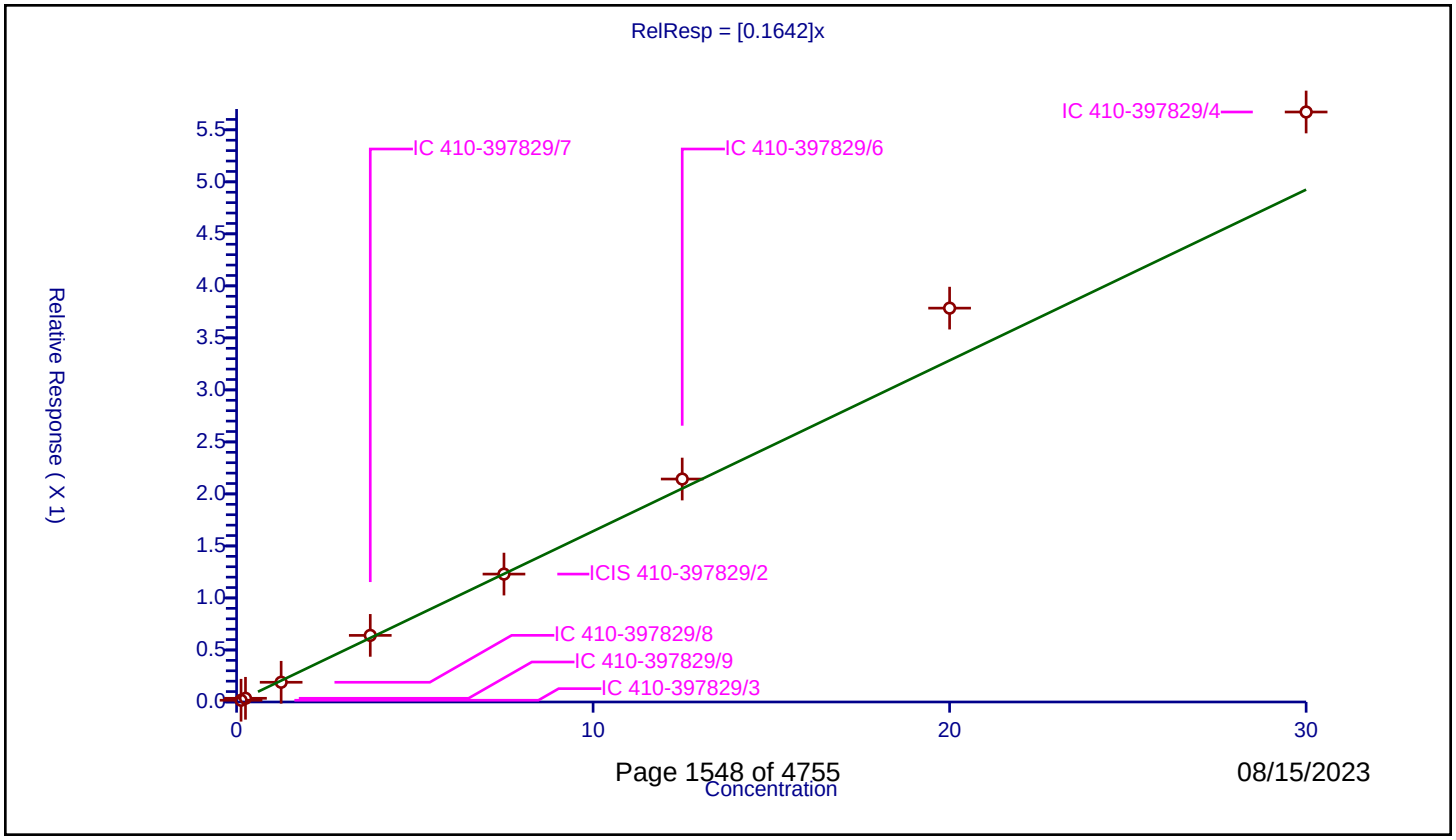
Curve Coefficients

Intercept:	0
Slope:	0.1642

Error Coefficients

Standard Error:	419000
Relative Standard Error:	12.3
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.016849	5.0	804481.0	0.134795	Y
2	IC 410-397829/9	0.25	0.035588	5.0	706975.0	0.142353	Y
3	IC 410-397829/8	1.25	0.189681	5.0	845790.0	0.151745	Y
4	IC 410-397829/7	3.75	0.640149	5.0	679061.0	0.170706	Y
5	ICIS 410-397829/2	7.5	1.229584	5.0	802857.0	0.163945	Y
6	IC 410-397829/6	12.5	2.143065	5.0	883382.0	0.171445	Y
7	IC 410-397829/5	20.0	3.786037	5.0	783422.0	0.189302	Y
8	IC 410-397829/4	30.0	5.671305	5.0	728871.0	0.189044	Y



Calibration / 4-Nitroquinoline-1-oxide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

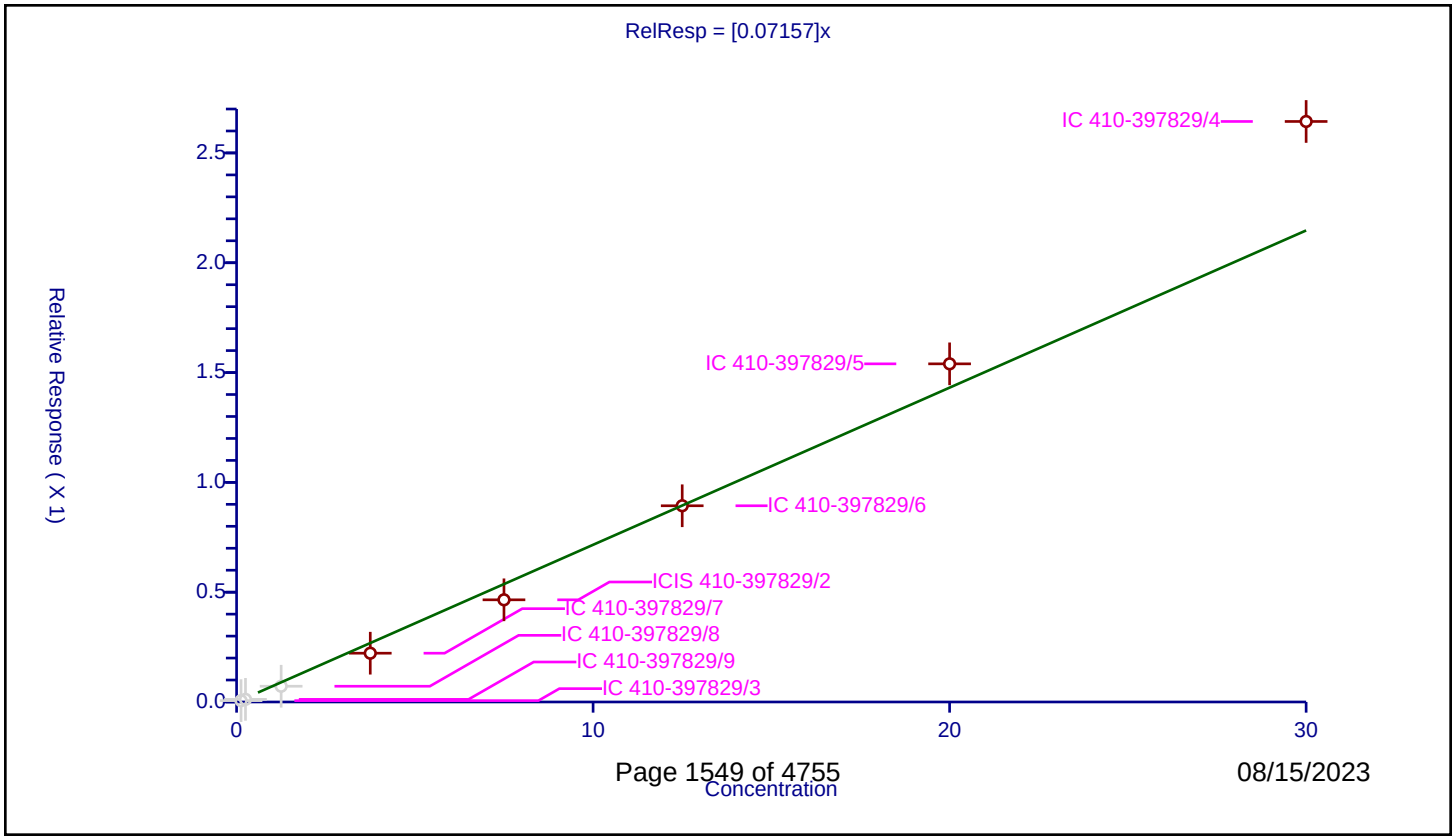
Curve Coefficients

Intercept:	0
Slope:	0.07157

Error Coefficients

Standard Error:	244000
Relative Standard Error:	16.3
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.957

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.00619	5.0	804481.0	0.049523	N
2	IC 410-397829/9	0.25	0.011995	5.0	706975.0	0.047979	N
3	IC 410-397829/8	1.25	0.071732	5.0	845790.0	0.057385	N
4	IC 410-397829/7	3.75	0.222138	5.0	679061.0	0.059237	Y
5	ICIS 410-397829/2	7.5	0.465251	5.0	802857.0	0.062033	Y
6	IC 410-397829/6	12.5	0.893538	5.0	883382.0	0.071483	Y
7	IC 410-397829/5	20.0	1.5397	5.0	783422.0	0.076985	Y
8	IC 410-397829/4	30.0	2.643259	5.0	728871.0	0.088109	Y



Calibration / Octachlorostyrene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

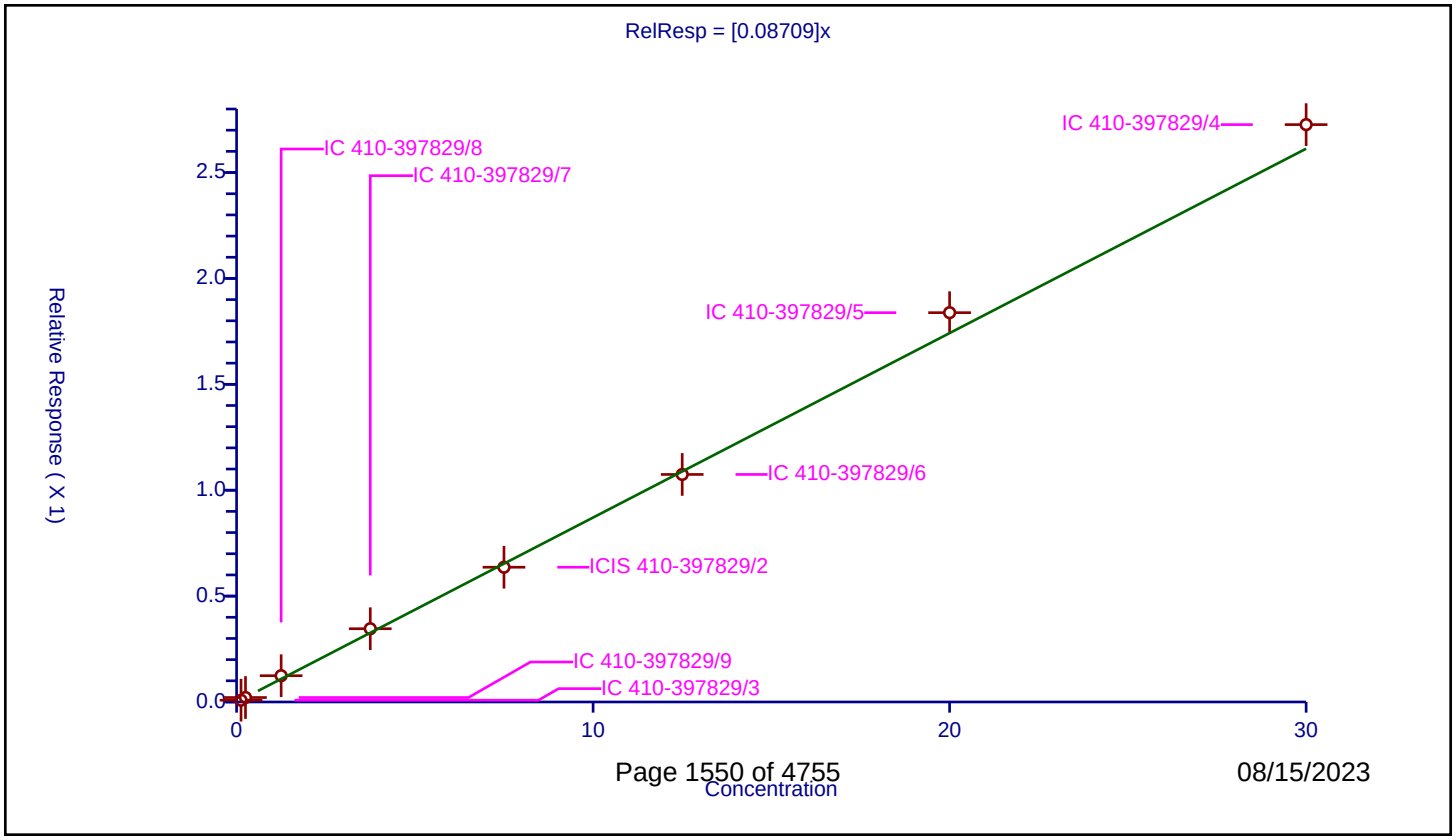
Curve Coefficients

Intercept:	0
Slope:	0.08709

Error Coefficients

Standard Error:	204000
Relative Standard Error:	10.8
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.008391	5.0	804481.0	0.067124	Y
2	IC 410-397829/9	0.25	0.021125	5.0	706975.0	0.084501	Y
3	IC 410-397829/8	1.25	0.124067	5.0	845790.0	0.099254	Y
4	IC 410-397829/7	3.75	0.345926	5.0	679061.0	0.092247	Y
5	ICIS 410-397829/2	7.5	0.636271	5.0	802857.0	0.084836	Y
6	IC 410-397829/6	12.5	1.074394	5.0	883382.0	0.085951	Y
7	IC 410-397829/5	20.0	1.838396	5.0	783422.0	0.09192	Y
8	IC 410-397829/4	30.0	2.726333	5.0	728871.0	0.090878	Y



Calibration / Isodrin

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

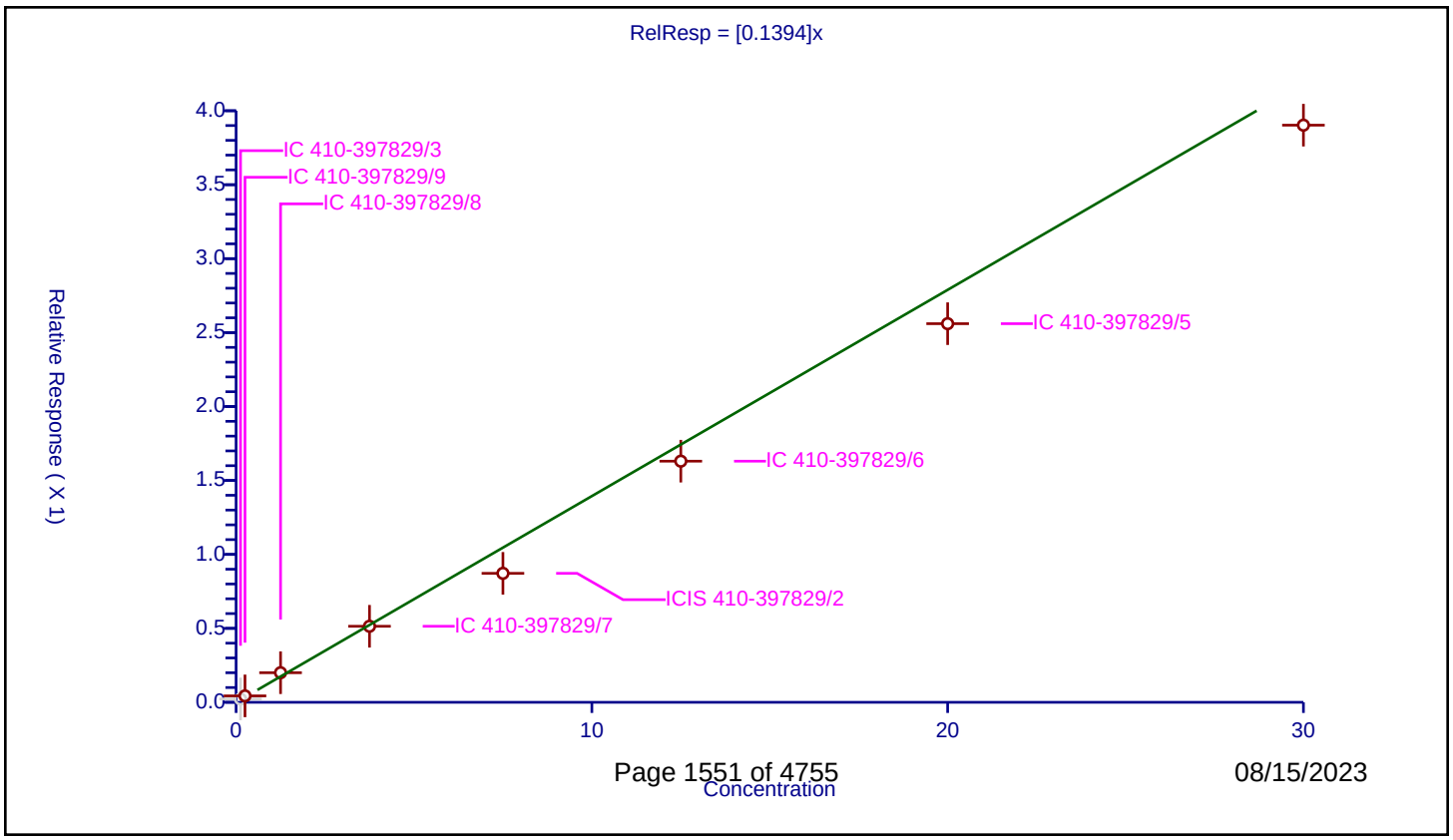
Curve Coefficients

Intercept:	0
Slope:	0.1394

Error Coefficients

Standard Error:	314000
Relative Standard Error:	14.5
Correlation Coefficient:	0.992
Coefficient of Determination (Adjusted):	0.973

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.022667	5.0	804481.0	0.181334	N
2	IC 410-397829/9	0.25	0.043516	5.0	706975.0	0.174066	Y
3	IC 410-397829/8	1.25	0.200109	5.0	845790.0	0.160087	Y
4	IC 410-397829/7	3.75	0.514262	5.0	679061.0	0.137136	Y
5	ICIS 410-397829/2	7.5	0.872098	5.0	802857.0	0.11628	Y
6	IC 410-397829/6	12.5	1.63062	5.0	883382.0	0.13045	Y
7	IC 410-397829/5	20.0	2.560217	5.0	783422.0	0.128011	Y
8	IC 410-397829/4	30.0	3.902501	5.0	728871.0	0.130083	Y



Calibration / Fluoranthene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

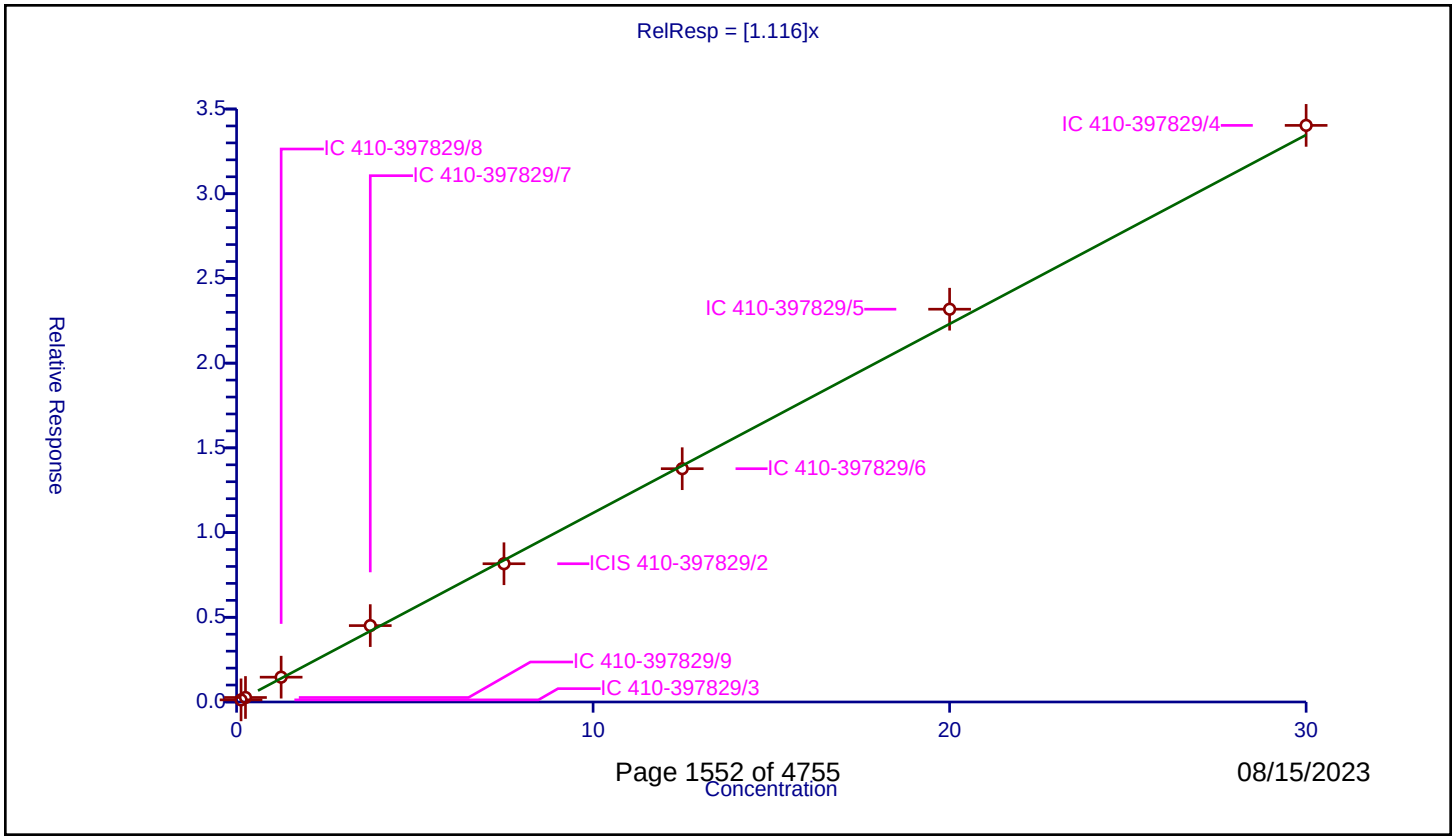
Curve Coefficients

Intercept:	0
Slope:	1.116

Error Coefficients

Standard Error:	2560000
Relative Standard Error:	5.7
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.125808	5.0	804481.0	1.006463	Y
2	IC 410-397829/9	0.25	0.265448	5.0	706975.0	1.061791	Y
3	IC 410-397829/8	1.25	1.465056	5.0	845790.0	1.172045	Y
4	IC 410-397829/7	3.75	4.508512	5.0	679061.0	1.20227	Y
5	ICIS 410-397829/2	7.5	8.160594	5.0	802857.0	1.088079	Y
6	IC 410-397829/6	12.5	13.77039	5.0	883382.0	1.101631	Y
7	IC 410-397829/5	20.0	23.184325	5.0	783422.0	1.159216	Y
8	IC 410-397829/4	30.0	34.032792	5.0	728871.0	1.134426	Y



Calibration / Benzidine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

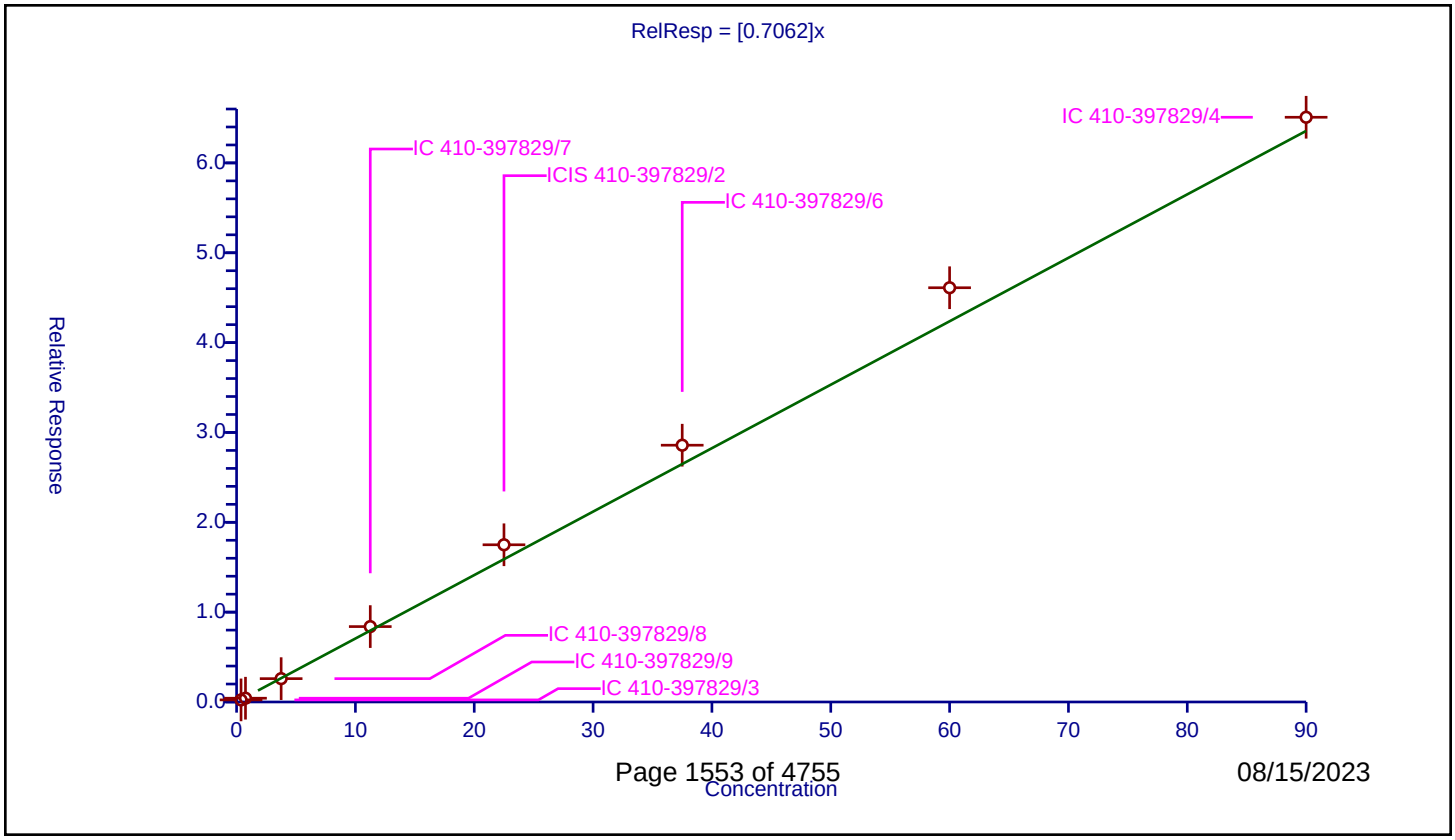
Curve Coefficients

Intercept:	0
Slope:	0.7062

Error Coefficients

Standard Error:	4580000
Relative Standard Error:	11.1
Correlation Coefficient:	0.980
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.375	0.232609	5.0	737632.0	0.620291	Y
2	IC 410-397829/9	0.75	0.419601	5.0	671472.0	0.559467	Y
3	IC 410-397829/8	3.75	2.597574	5.0	871519.0	0.692686	Y
4	IC 410-397829/7	11.25	8.391645	5.0	669358.0	0.745924	Y
5	ICIS 410-397829/2	22.5	17.499721	5.0	698430.0	0.777765	Y
6	IC 410-397829/6	37.5	28.580987	5.0	854122.0	0.76216	Y
7	IC 410-397829/5	60.0	46.107137	5.0	704339.0	0.768452	Y
8	IC 410-397829/4	90.0	65.081896	5.0	657789.0	0.723132	Y



08/15/2023

Calibration / Pyrene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

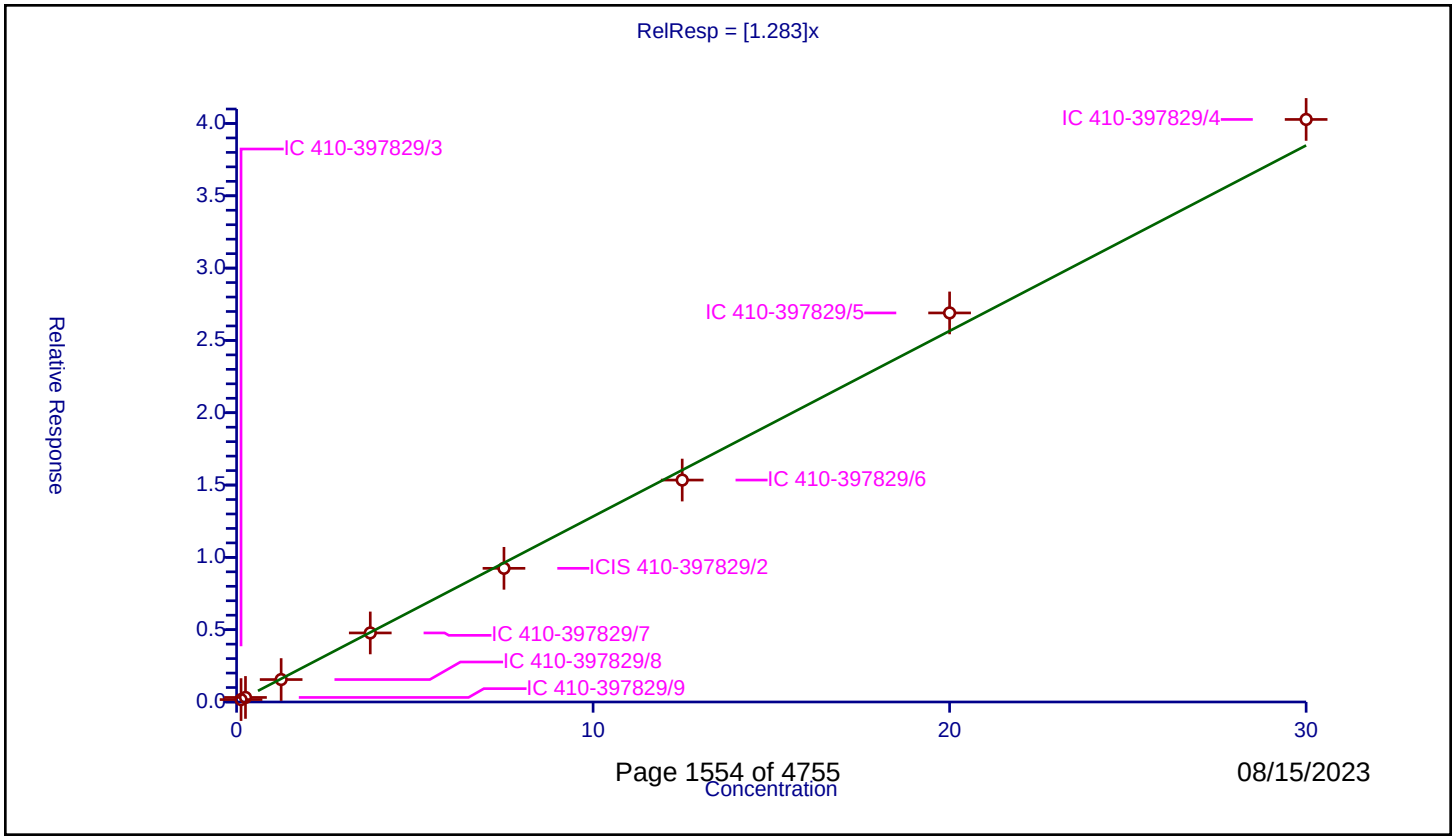
Curve Coefficients

Intercept:	0
Slope:	1.283

Error Coefficients

Standard Error:	2710000
Relative Standard Error:	4.0
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.167482	5.0	737632.0	1.339855	Y
2	IC 410-397829/9	0.25	0.315047	5.0	671472.0	1.260187	Y
3	IC 410-397829/8	1.25	1.552273	5.0	871519.0	1.241818	Y
4	IC 410-397829/7	3.75	4.773806	5.0	669358.0	1.273015	Y
5	ICIS 410-397829/2	7.5	9.241334	5.0	698430.0	1.232178	Y
6	IC 410-397829/6	12.5	15.345483	5.0	854122.0	1.227639	Y
7	IC 410-397829/5	20.0	26.899639	5.0	704339.0	1.344982	Y
8	IC 410-397829/4	30.0	40.279809	5.0	657789.0	1.34266	Y



Calibration / p-Terphenyl-d14

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

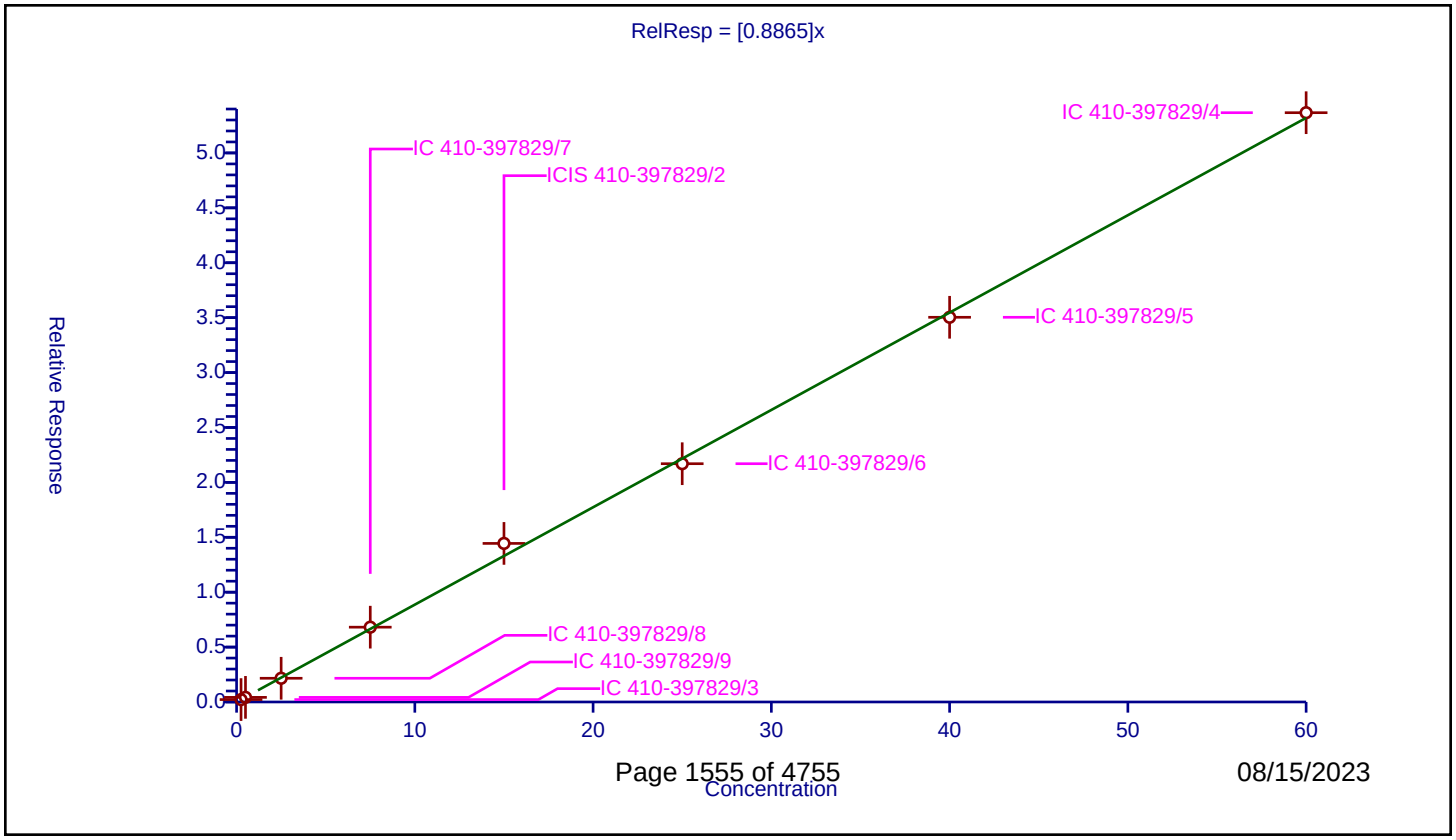
Curve Coefficients

Intercept:	0
Slope:	0.8865

Error Coefficients

Standard Error:	3640000
Relative Standard Error:	4.1
Correlation Coefficient:	0.990
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.25	0.218896	5.0	737632.0	0.875586	Y
2	IC 410-397829/9	0.5	0.421678	5.0	671472.0	0.843356	Y
3	IC 410-397829/8	2.5	2.160555	5.0	871519.0	0.864222	Y
4	IC 410-397829/7	7.5	6.812296	5.0	669358.0	0.908306	Y
5	ICIS 410-397829/2	15.0	14.439808	5.0	698430.0	0.962654	Y
6	IC 410-397829/6	25.0	21.698206	5.0	854122.0	0.867928	Y
7	IC 410-397829/5	40.0	35.034032	5.0	704339.0	0.875851	Y
8	IC 410-397829/4	60.0	53.663804	5.0	657789.0	0.894397	Y



Calibration / p-Dimethylamino azobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

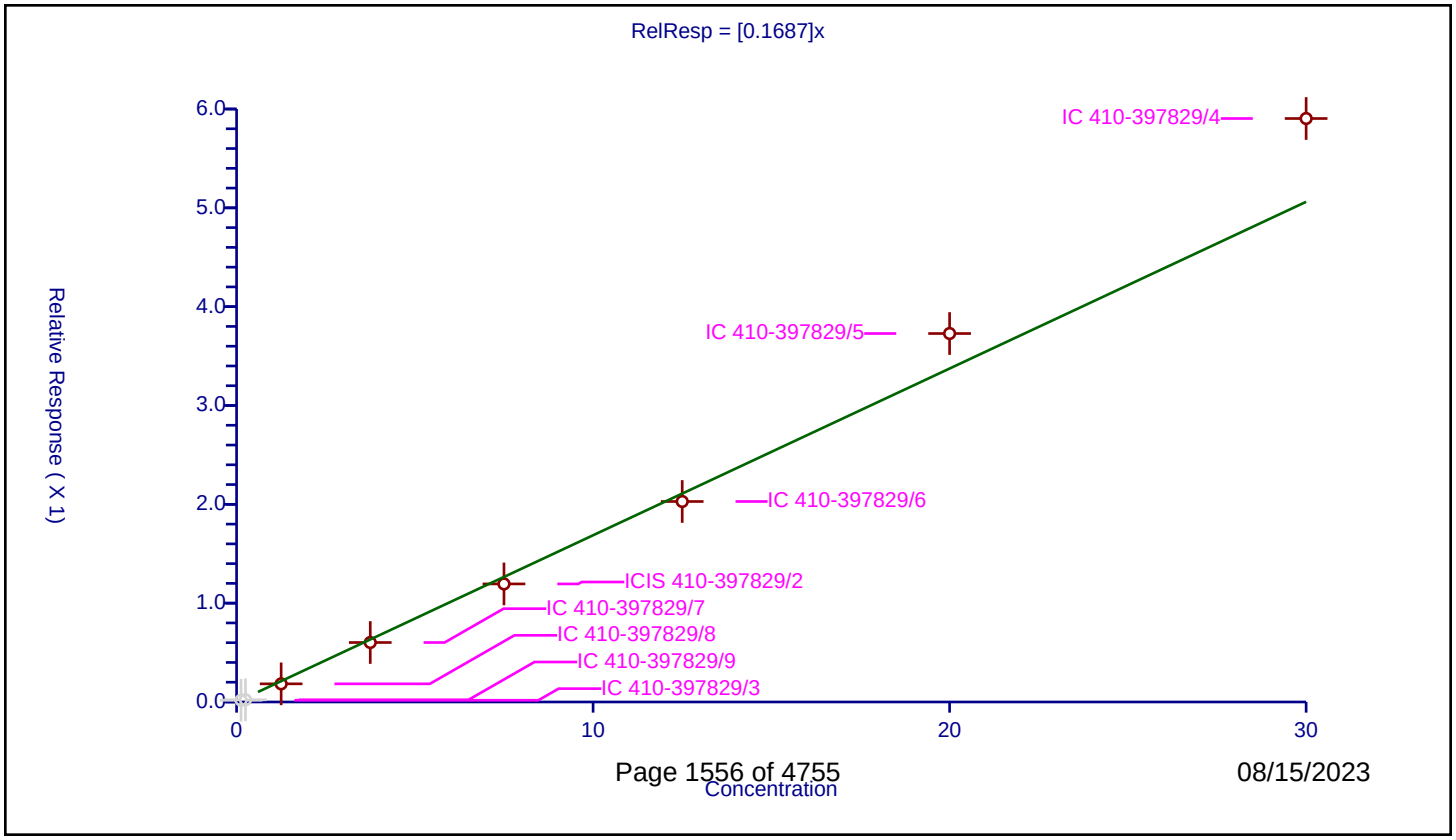
Curve Coefficients

Intercept:	0
Slope:	0.1687

Error Coefficients

Standard Error:	455000
Relative Standard Error:	11.2
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.017719	5.0	737632.0	0.141751	N
2	IC 410-397829/9	0.25	0.022056	5.0	671472.0	0.088224	N
3	IC 410-397829/8	1.25	0.183582	5.0	871519.0	0.146865	Y
4	IC 410-397829/7	3.75	0.601853	5.0	669358.0	0.160494	Y
5	ICIS 410-397829/2	7.5	1.194765	5.0	698430.0	0.159302	Y
6	IC 410-397829/6	12.5	2.028697	5.0	854122.0	0.162296	Y
7	IC 410-397829/5	20.0	3.728432	5.0	704339.0	0.186422	Y
8	IC 410-397829/4	30.0	5.90393	5.0	657789.0	0.196798	Y



Calibration / Chlorobenzilate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

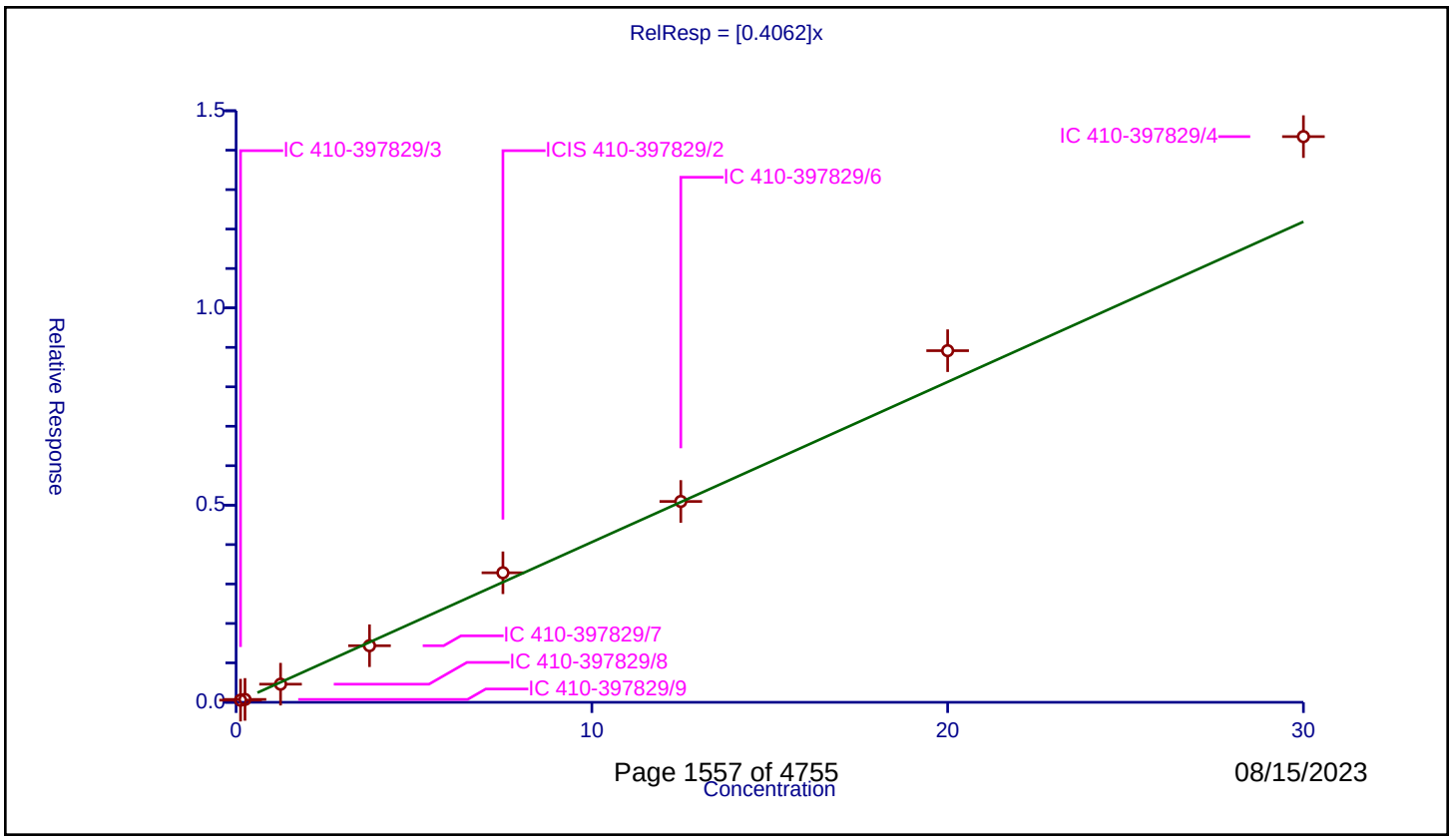
Curve Coefficients

Intercept:	0
Slope:	0.4062

Error Coefficients

Standard Error:	937000
Relative Standard Error:	14.2
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.977

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.054505	5.0	737632.0	0.436044	Y
2	IC 410-397829/9	0.25	0.073376	5.0	671472.0	0.293504	Y
3	IC 410-397829/8	1.25	0.459795	5.0	871519.0	0.367836	Y
4	IC 410-397829/7	3.75	1.435316	5.0	669358.0	0.382751	Y
5	ICIS 410-397829/2	7.5	3.284989	5.0	698430.0	0.437999	Y
6	IC 410-397829/6	12.5	5.0933	5.0	854122.0	0.407464	Y
7	IC 410-397829/5	20.0	8.916374	5.0	704339.0	0.445819	Y
8	IC 410-397829/4	30.0	14.344425	5.0	657789.0	0.478148	Y



Calibration / 3,3'-Dimethylbenzidine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

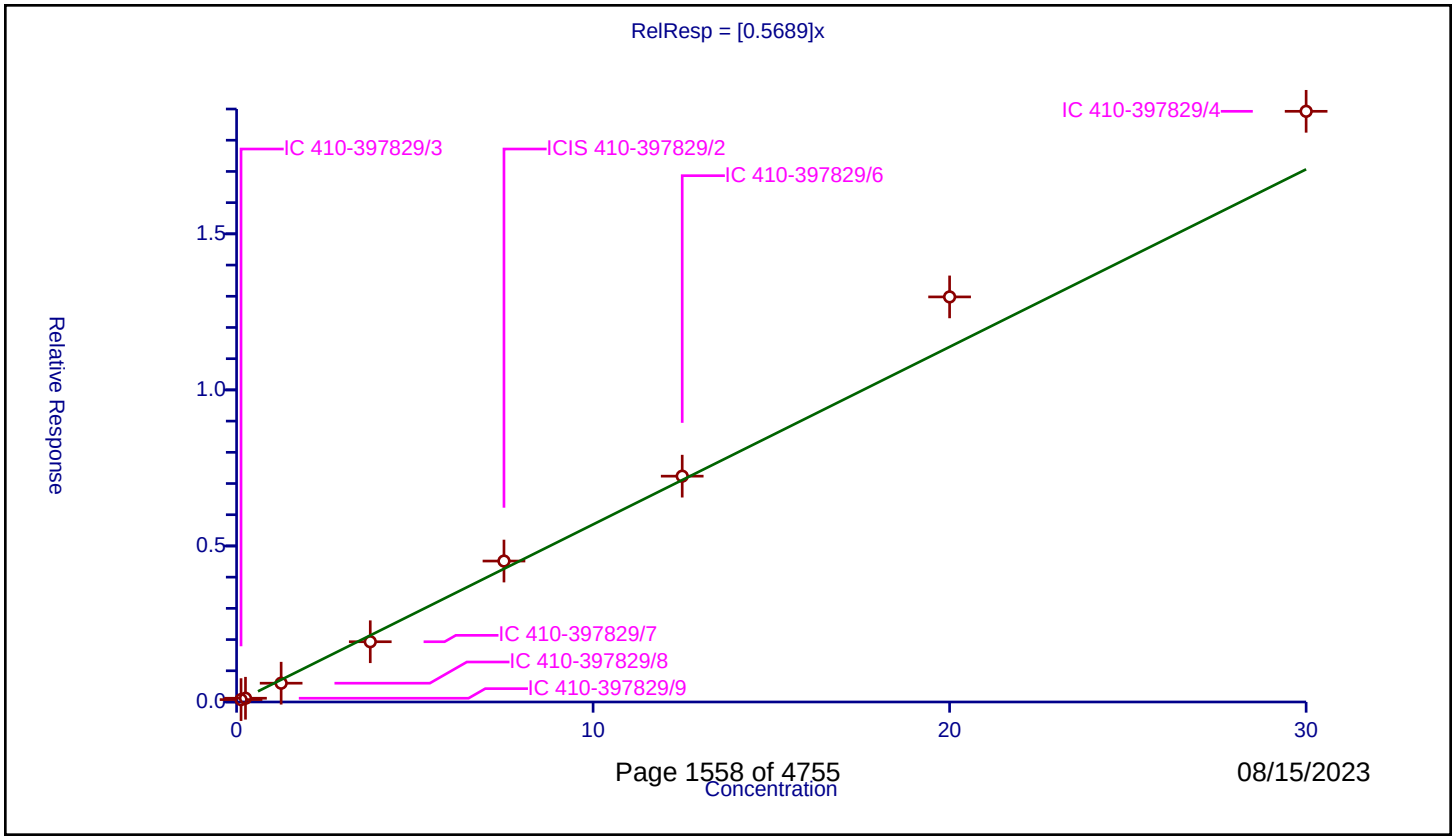
Curve Coefficients

Intercept:	0
Slope:	0.5689

Error Coefficients

Standard Error:	1280000
Relative Standard Error:	11.9
Correlation Coefficient:	0.992
Coefficient of Determination (Adjusted):	0.983

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.076766	5.0	737632.0	0.614127	Y
2	IC 410-397829/9	0.25	0.120012	5.0	671472.0	0.48005	Y
3	IC 410-397829/8	1.25	0.60211	5.0	871519.0	0.481688	Y
4	IC 410-397829/7	3.75	1.930529	5.0	669358.0	0.514808	Y
5	ICIS 410-397829/2	7.5	4.515878	5.0	698430.0	0.602117	Y
6	IC 410-397829/6	12.5	7.235793	5.0	854122.0	0.578863	Y
7	IC 410-397829/5	20.0	12.979127	5.0	704339.0	0.648956	Y
8	IC 410-397829/4	30.0	18.926487	5.0	657789.0	0.630883	Y



Calibration / Butyl benzyl phthalate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

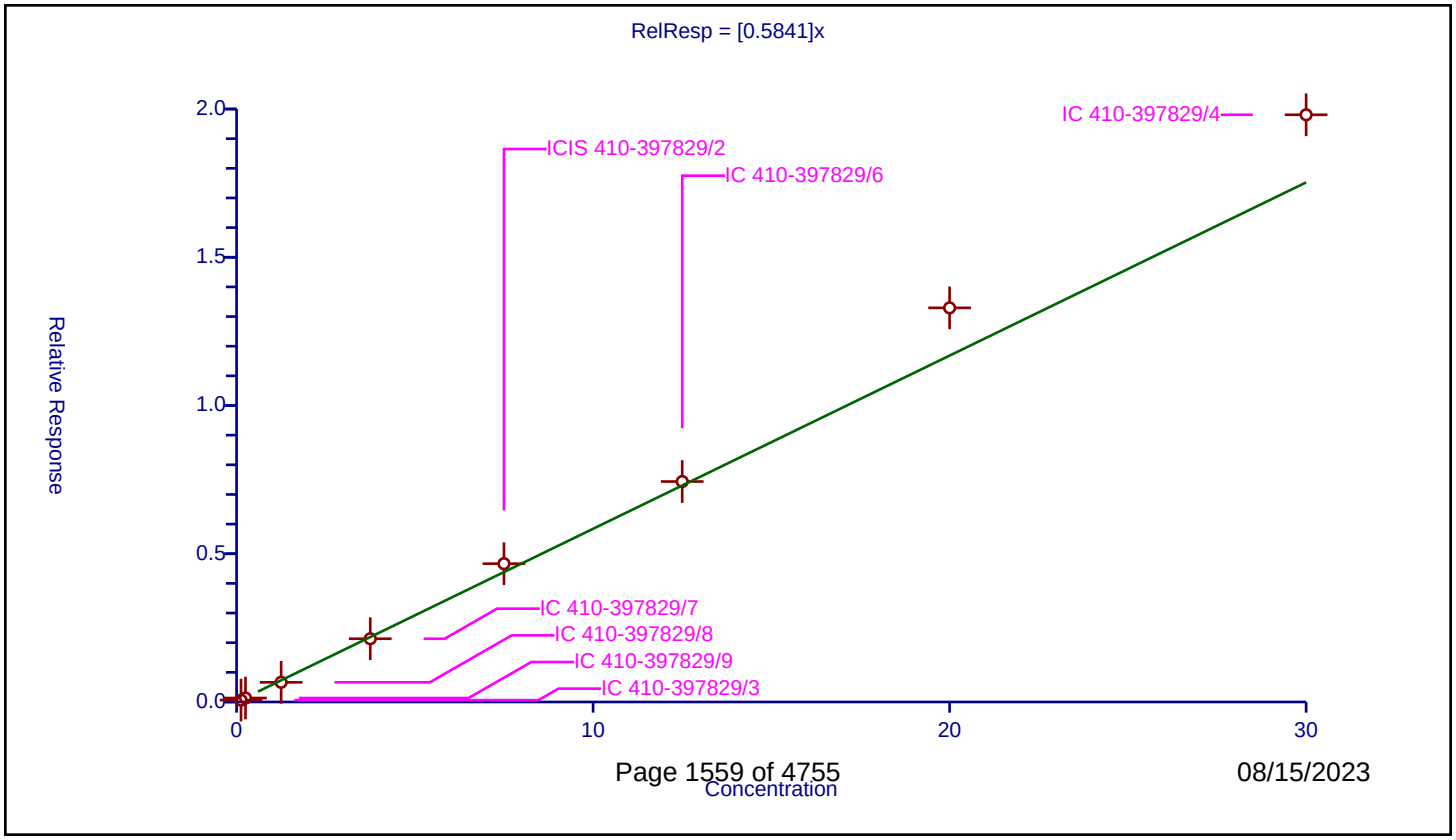
Curve Coefficients

Intercept:	0
Slope:	0.5841

Error Coefficients

Standard Error:	1330000
Relative Standard Error:	10.6
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.062294	5.0	737632.0	0.498351	Y
2	IC 410-397829/9	0.25	0.133401	5.0	671472.0	0.533604	Y
3	IC 410-397829/8	1.25	0.663405	5.0	871519.0	0.530724	Y
4	IC 410-397829/7	3.75	2.13285	5.0	669358.0	0.56876	Y
5	ICIS 410-397829/2	7.5	4.665163	5.0	698430.0	0.622022	Y
6	IC 410-397829/6	12.5	7.435202	5.0	854122.0	0.594816	Y
7	IC 410-397829/5	20.0	13.293024	5.0	704339.0	0.664651	Y
8	IC 410-397829/4	30.0	19.806116	5.0	657789.0	0.660204	Y



Calibration / 2-Acetylaminofluorene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

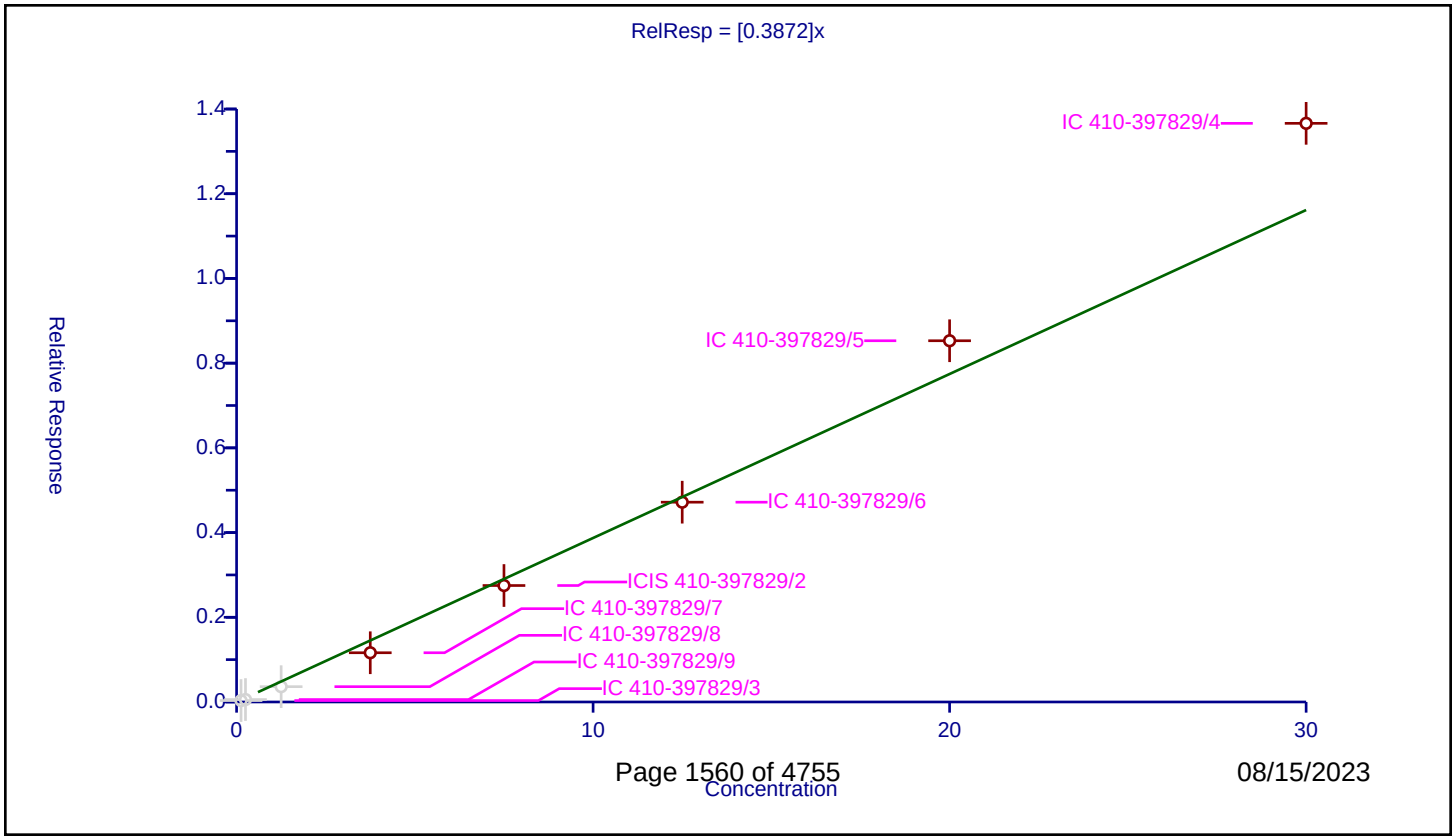
Curve Coefficients

Intercept:	0
Slope:	0.3872

Error Coefficients

Standard Error:	1170000
Relative Standard Error:	14.5
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.965

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.033614	5.0	737632.0	0.268915	N
2	IC 410-397829/9	0.25	0.057679	5.0	671472.0	0.230717	N
3	IC 410-397829/8	1.25	0.361398	5.0	871519.0	0.289118	N
4	IC 410-397829/7	3.75	1.162674	5.0	669358.0	0.310046	Y
5	ICIS 410-397829/2	7.5	2.749603	5.0	698430.0	0.366614	Y
6	IC 410-397829/6	12.5	4.717511	5.0	854122.0	0.377401	Y
7	IC 410-397829/5	20.0	8.528706	5.0	704339.0	0.426435	Y
8	IC 410-397829/4	30.0	13.662056	5.0	657789.0	0.455402	Y



Calibration / 3,3'-Dichlorobenzidine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

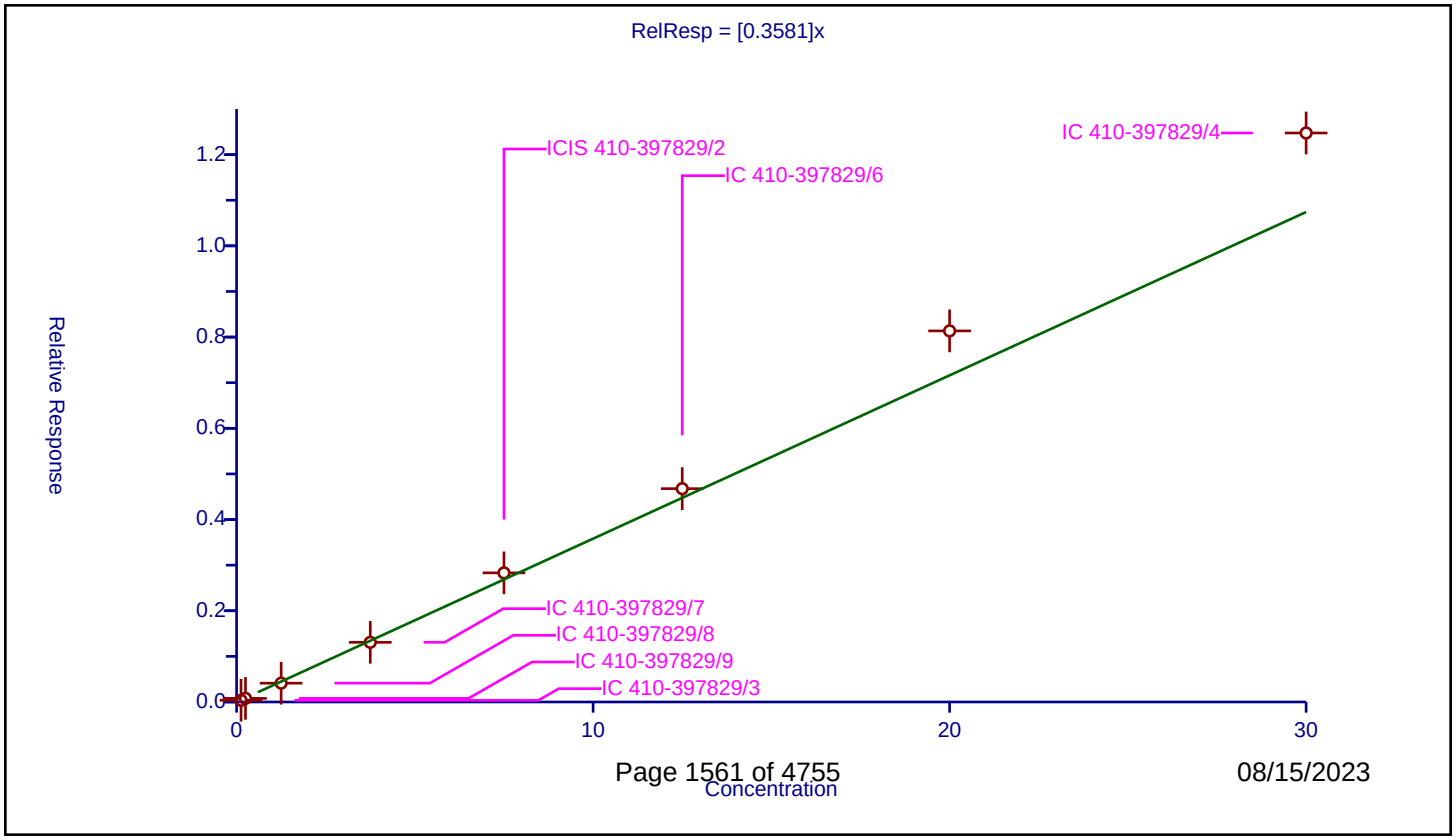
Curve Coefficients

Intercept:	0
Slope:	0.3581

Error Coefficients

Standard Error:	831000
Relative Standard Error:	12.0
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.036929	5.0	737632.0	0.295432	Y
2	IC 410-397829/9	0.25	0.078998	5.0	671472.0	0.315992	Y
3	IC 410-397829/8	1.25	0.412584	5.0	871519.0	0.330067	Y
4	IC 410-397829/7	3.75	1.307902	5.0	669358.0	0.348774	Y
5	ICIS 410-397829/2	7.5	2.830842	5.0	698430.0	0.377446	Y
6	IC 410-397829/6	12.5	4.67668	5.0	854122.0	0.374134	Y
7	IC 410-397829/5	20.0	8.135103	5.0	704339.0	0.406755	Y
8	IC 410-397829/4	30.0	12.474532	5.0	657789.0	0.415818	Y



Calibration / 4,4'-Methylene bis(2-chloroaniline)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

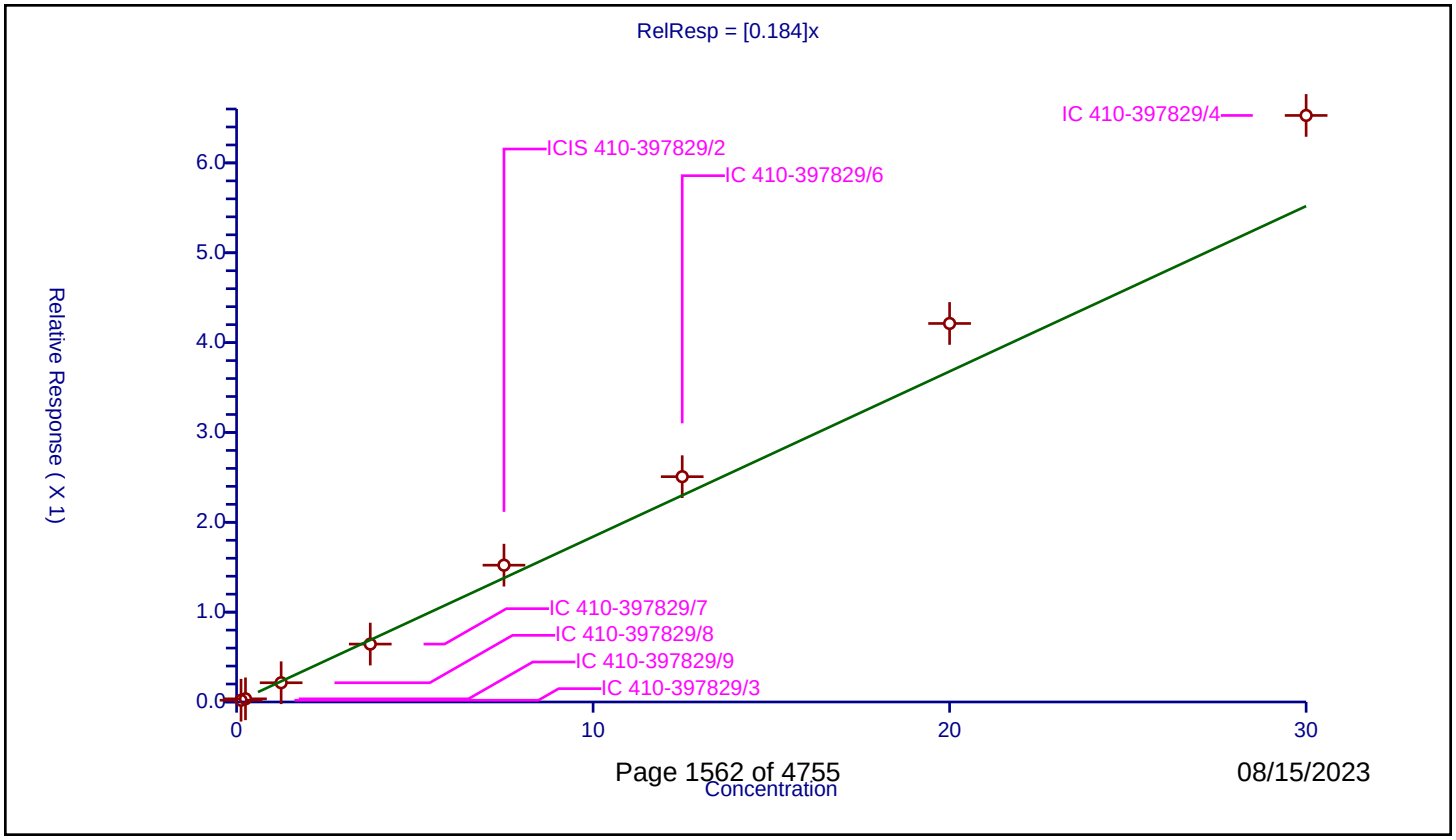
Curve Coefficients

Intercept:	0
Slope:	0.184

Error Coefficients

Standard Error:	435000
Relative Standard Error:	15.1
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.976

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.019461	5.0	737632.0	0.155687	Y
2	IC 410-397829/9	0.25	0.035251	5.0	671472.0	0.141004	Y
3	IC 410-397829/8	1.25	0.214172	5.0	871519.0	0.171338	Y
4	IC 410-397829/7	3.75	0.644394	5.0	669358.0	0.171838	Y
5	ICIS 410-397829/2	7.5	1.522658	5.0	698430.0	0.203021	Y
6	IC 410-397829/6	12.5	2.507821	5.0	854122.0	0.200626	Y
7	IC 410-397829/5	20.0	4.213014	5.0	704339.0	0.210651	Y
8	IC 410-397829/4	30.0	6.528423	5.0	657789.0	0.217614	Y



Calibration / Benzo[a]anthracene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

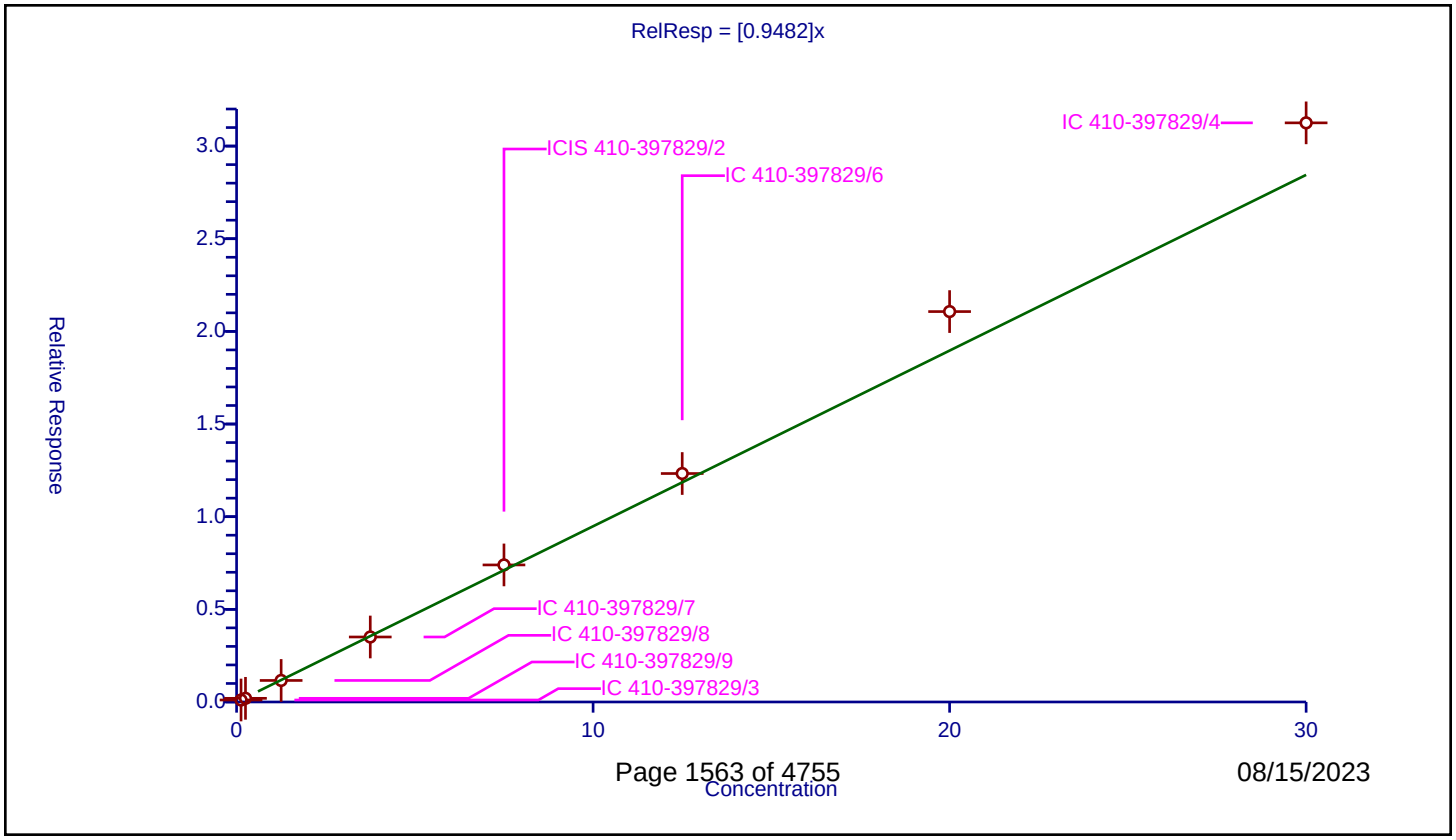
Curve Coefficients

Intercept:	0
Slope:	0.9482

Error Coefficients

Standard Error:	2120000
Relative Standard Error:	9.4
Correlation Coefficient:	0.991
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.107364	5.0	737632.0	0.858911	Y
2	IC 410-397829/9	0.25	0.198385	5.0	671472.0	0.79354	Y
3	IC 410-397829/8	1.25	1.16239	5.0	871519.0	0.929912	Y
4	IC 410-397829/7	3.75	3.507443	5.0	669358.0	0.935318	Y
5	ICIS 410-397829/2	7.5	7.396074	5.0	698430.0	0.986143	Y
6	IC 410-397829/6	12.5	12.329386	5.0	854122.0	0.986351	Y
7	IC 410-397829/5	20.0	21.069336	5.0	704339.0	1.053467	Y
8	IC 410-397829/4	30.0	31.253244	5.0	657789.0	1.041775	Y



Calibration / Chrysene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

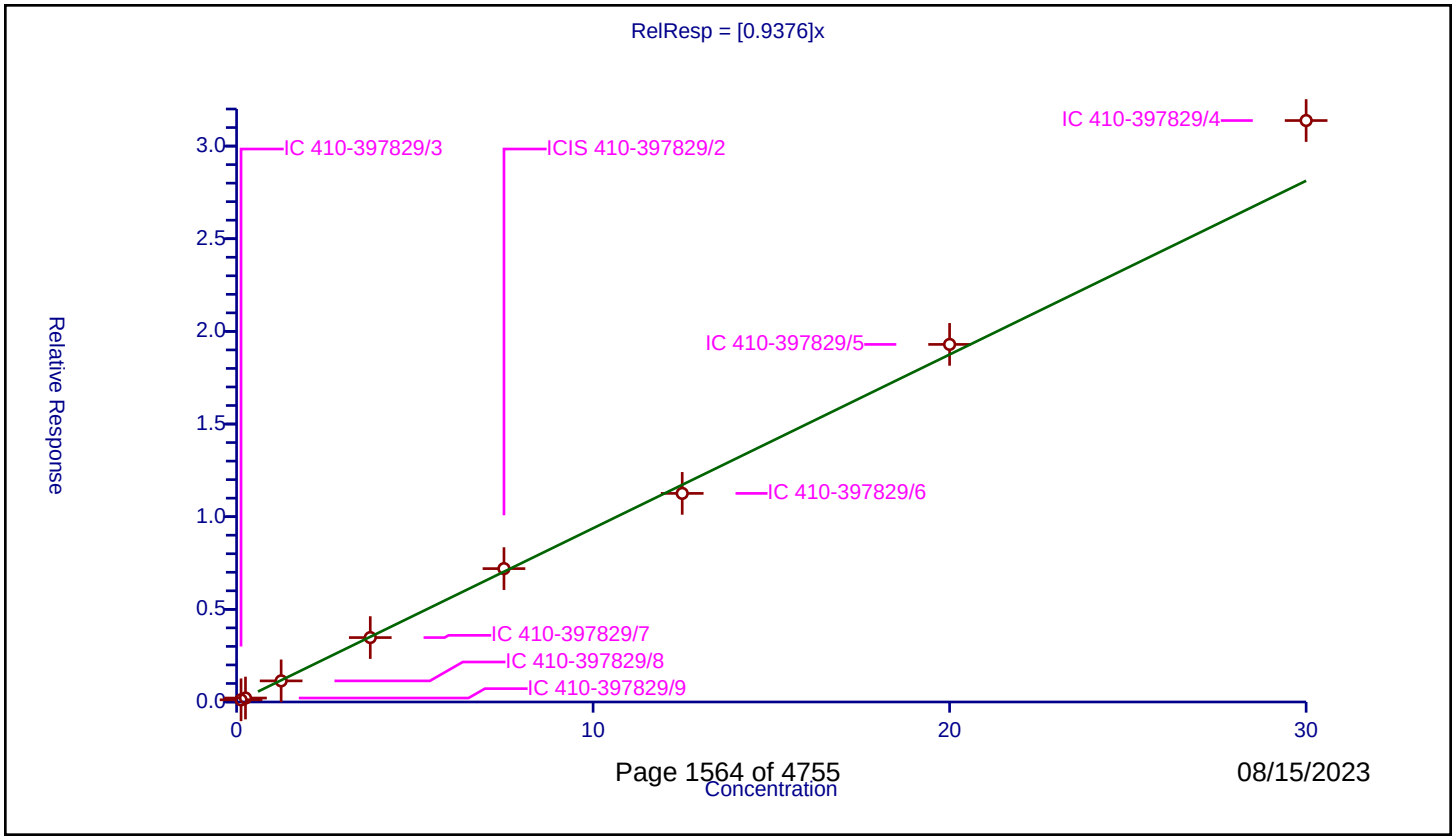
Curve Coefficients

Intercept:	0
Slope:	0.9376

Error Coefficients

Standard Error:	2050000
Relative Standard Error:	6.0
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.117416	5.0	737632.0	0.93933	Y
2	IC 410-397829/9	0.25	0.213166	5.0	671472.0	0.852664	Y
3	IC 410-397829/8	1.25	1.138593	5.0	871519.0	0.910874	Y
4	IC 410-397829/7	3.75	3.475435	5.0	669358.0	0.926783	Y
5	ICIS 410-397829/2	7.5	7.197314	5.0	698430.0	0.959642	Y
6	IC 410-397829/6	12.5	11.256454	5.0	854122.0	0.900516	Y
7	IC 410-397829/5	20.0	19.296915	5.0	704339.0	0.964846	Y
8	IC 410-397829/4	30.0	31.378831	5.0	657789.0	1.045961	Y



Calibration / Bis(2-ethylhexyl) phthalate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

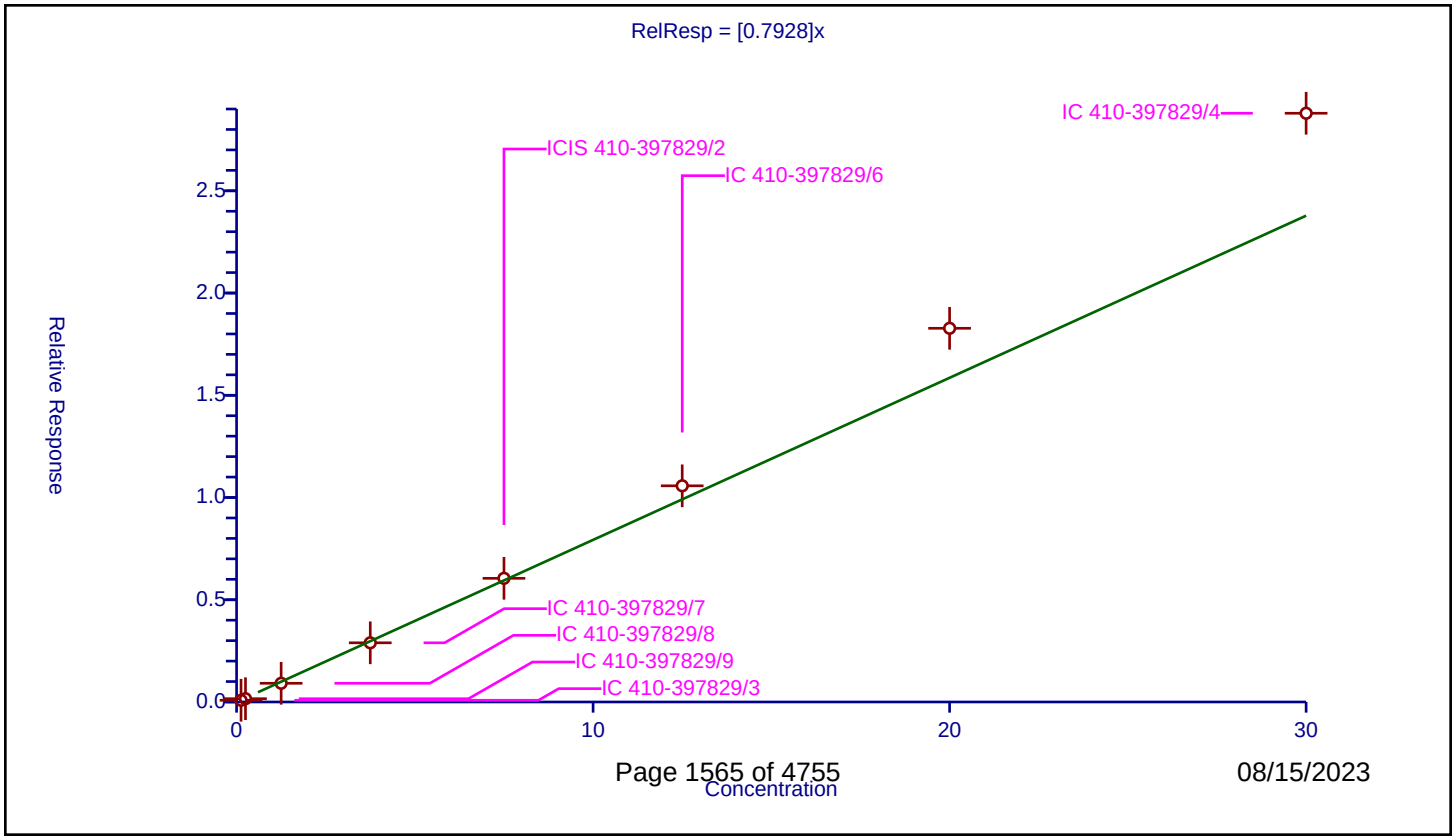
Curve Coefficients

Intercept:	0
Slope:	0.7928

Error Coefficients

Standard Error:	1890000
Relative Standard Error:	14.1
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.979

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.08368	5.0	737632.0	0.66944	Y
2	IC 410-397829/9	0.25	0.160833	5.0	671472.0	0.643333	Y
3	IC 410-397829/8	1.25	0.914541	5.0	871519.0	0.731633	Y
4	IC 410-397829/7	3.75	2.894341	5.0	669358.0	0.771824	Y
5	ICIS 410-397829/2	7.5	6.048616	5.0	698430.0	0.806482	Y
6	IC 410-397829/6	12.5	10.572325	5.0	854122.0	0.845786	Y
7	IC 410-397829/5	20.0	18.276256	5.0	704339.0	0.913813	Y
8	IC 410-397829/4	30.0	28.793002	5.0	657789.0	0.959767	Y



Calibration / 6-Methylchrysene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

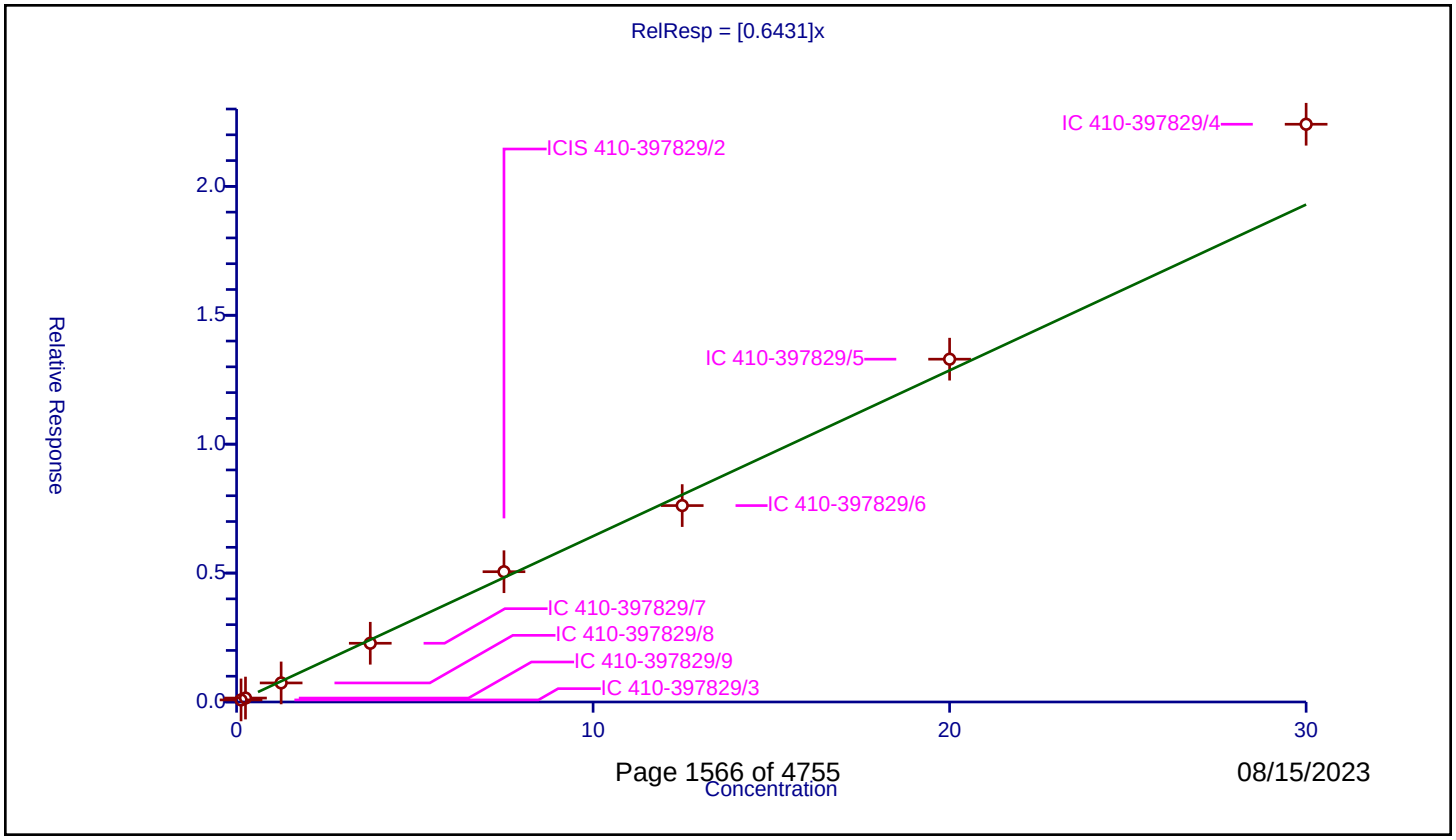
Curve Coefficients

Intercept:	0
Slope:	0.6431

Error Coefficients

Standard Error:	1440000
Relative Standard Error:	7.9
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.079959	5.0	737632.0	0.639669	Y
2	IC 410-397829/9	0.25	0.152821	5.0	671472.0	0.611284	Y
3	IC 410-397829/8	1.25	0.739416	5.0	871519.0	0.591533	Y
4	IC 410-397829/7	3.75	2.278258	5.0	669358.0	0.607535	Y
5	ICIS 410-397829/2	7.5	5.052783	5.0	698430.0	0.673704	Y
6	IC 410-397829/6	12.5	7.618484	5.0	854122.0	0.609479	Y
7	IC 410-397829/5	20.0	13.296495	5.0	704339.0	0.664825	Y
8	IC 410-397829/4	30.0	22.409374	5.0	657789.0	0.746979	Y



Calibration / Di-n-octyl phthalate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

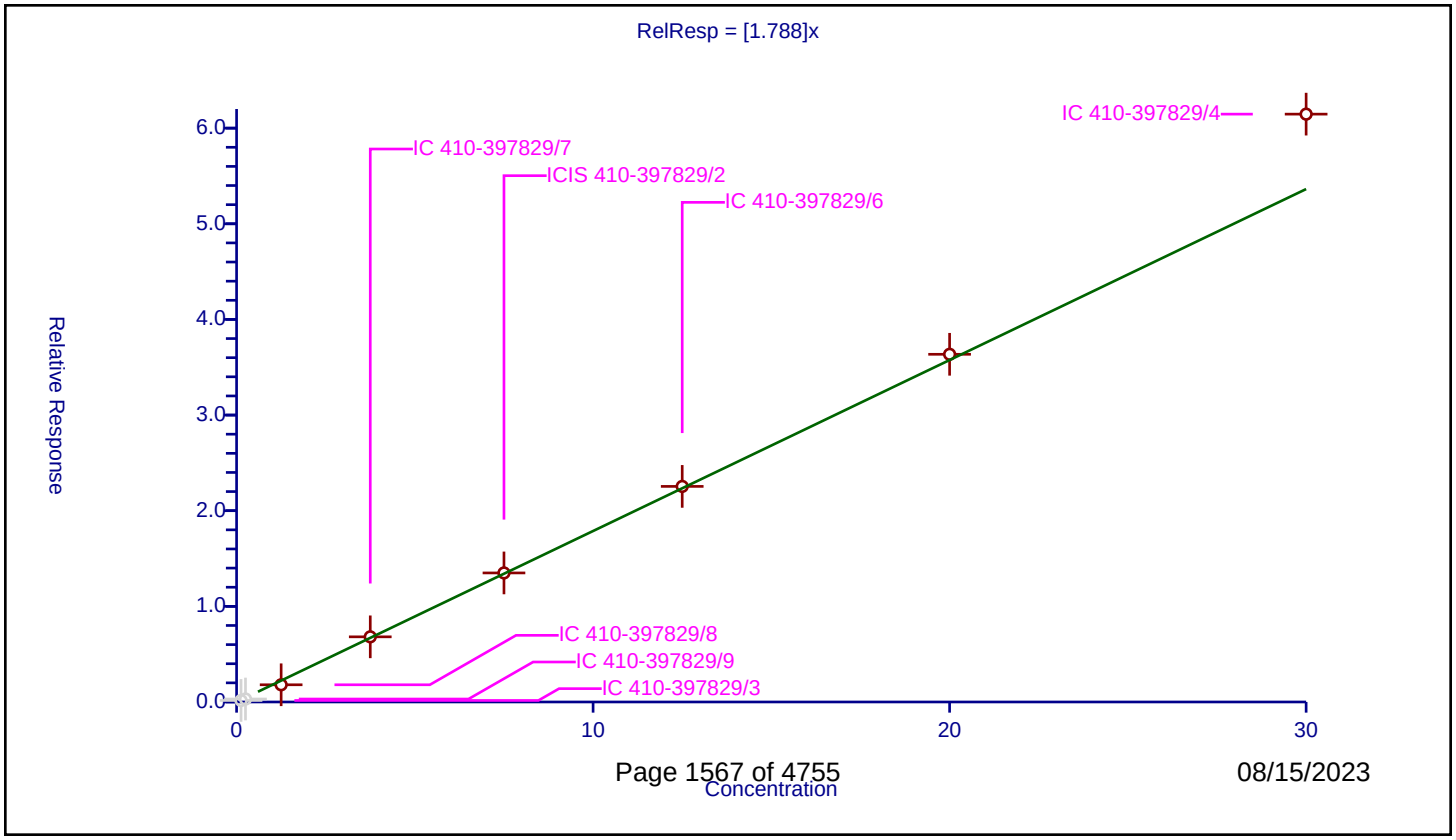
Curve Coefficients

Intercept:	0
Slope:	1.788

Error Coefficients

Standard Error:	3880000
Relative Standard Error:	10.9
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.159778	5.0	573515.0	1.278223	N
2	IC 410-397829/9	0.25	0.310202	5.0	538761.0	1.24081	N
3	IC 410-397829/8	1.25	1.800684	5.0	684118.0	1.440547	Y
4	IC 410-397829/7	3.75	6.811924	5.0	475078.0	1.816513	Y
5	ICIS 410-397829/2	7.5	13.493538	5.0	547299.0	1.799138	Y
6	IC 410-397829/6	12.5	22.540433	5.0	674017.0	1.803235	Y
7	IC 410-397829/5	20.0	36.355046	5.0	590478.0	1.817752	Y
8	IC 410-397829/4	30.0	61.464723	5.0	546233.0	2.048824	Y



Calibration / 7,12-Dimethylbenz(a)anthracene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

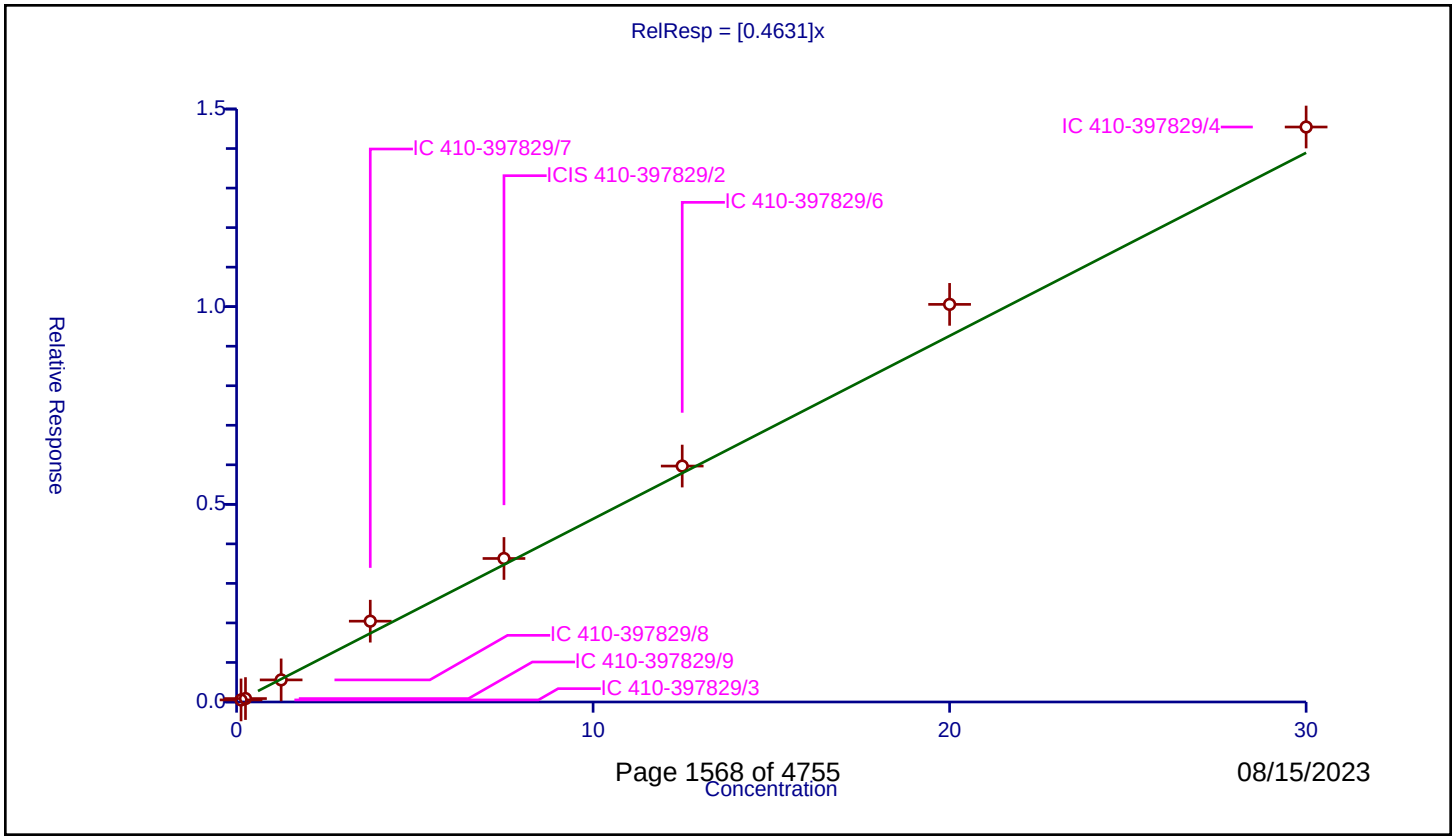
Curve Coefficients

Intercept:	0
Slope:	0.4631

Error Coefficients

Standard Error:	827000
Relative Standard Error:	13.0
Correlation Coefficient:	0.991
Coefficient of Determination (Adjusted):	0.982

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.052231	5.0	573515.0	0.417844	Y
2	IC 410-397829/9	0.25	0.086365	5.0	538761.0	0.345459	Y
3	IC 410-397829/8	1.25	0.559012	5.0	684118.0	0.447209	Y
4	IC 410-397829/7	3.75	2.044022	5.0	475078.0	0.545073	Y
5	ICIS 410-397829/2	7.5	3.62989	5.0	547299.0	0.483985	Y
6	IC 410-397829/6	12.5	5.96818	5.0	674017.0	0.477454	Y
7	IC 410-397829/5	20.0	10.058283	5.0	590478.0	0.502914	Y
8	IC 410-397829/4	30.0	14.544984	5.0	546233.0	0.484833	Y



Calibration / Benzo[b]fluoranthene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

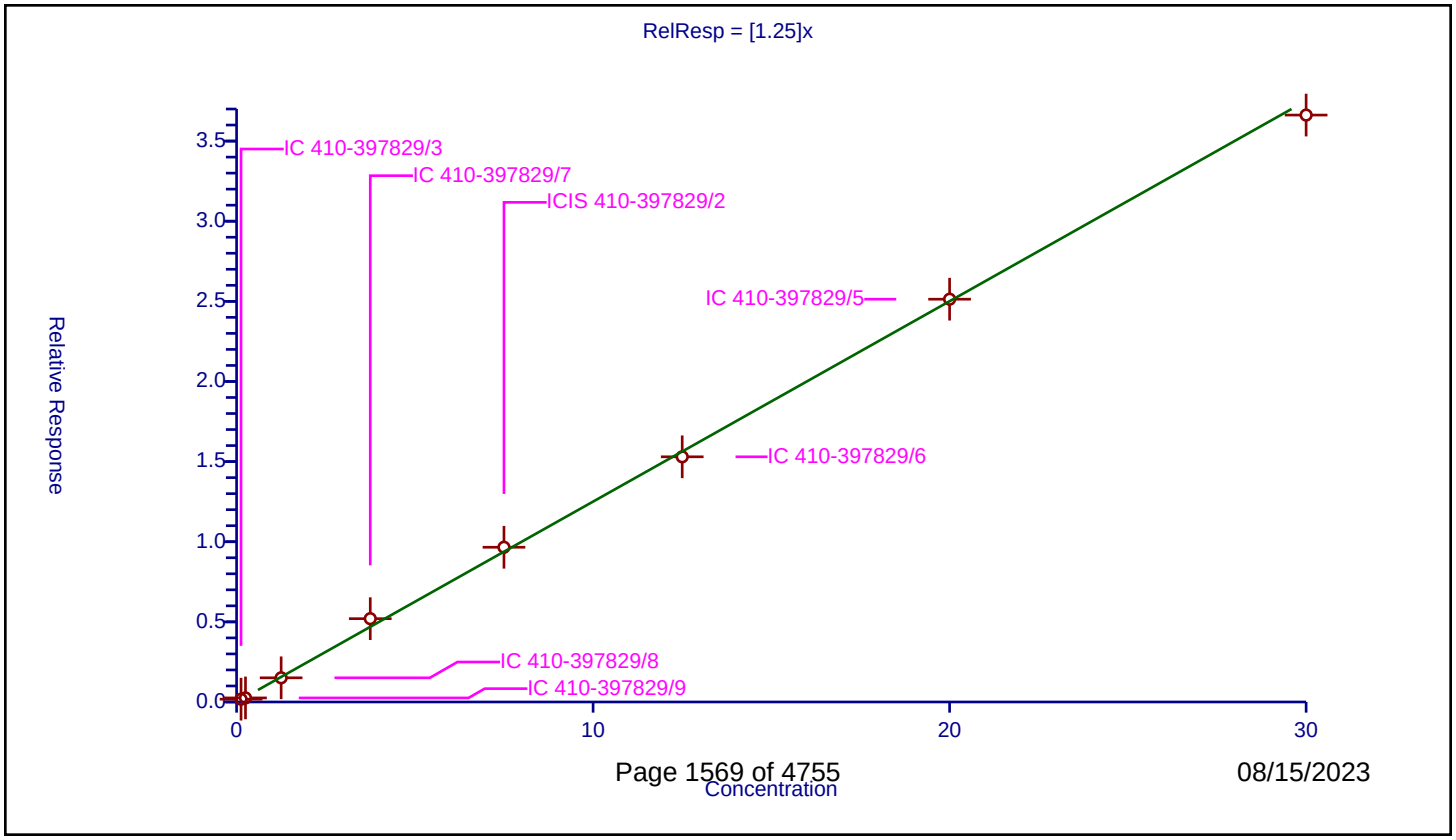
Curve Coefficients

Intercept:	0
Slope:	1.25

Error Coefficients

Standard Error:	2090000
Relative Standard Error:	9.7
Correlation Coefficient:	0.990
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.175811	5.0	573515.0	1.406485	Y
2	IC 410-397829/9	0.25	0.253805	5.0	538761.0	1.015218	Y
3	IC 410-397829/8	1.25	1.507744	5.0	684118.0	1.206195	Y
4	IC 410-397829/7	3.75	5.199325	5.0	475078.0	1.386487	Y
5	ICIS 410-397829/2	7.5	9.654741	5.0	547299.0	1.287299	Y
6	IC 410-397829/6	12.5	15.299785	5.0	674017.0	1.223983	Y
7	IC 410-397829/5	20.0	25.133561	5.0	590478.0	1.256678	Y
8	IC 410-397829/4	30.0	36.622934	5.0	546233.0	1.220764	Y



Calibration / Benzo[k]fluoranthene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

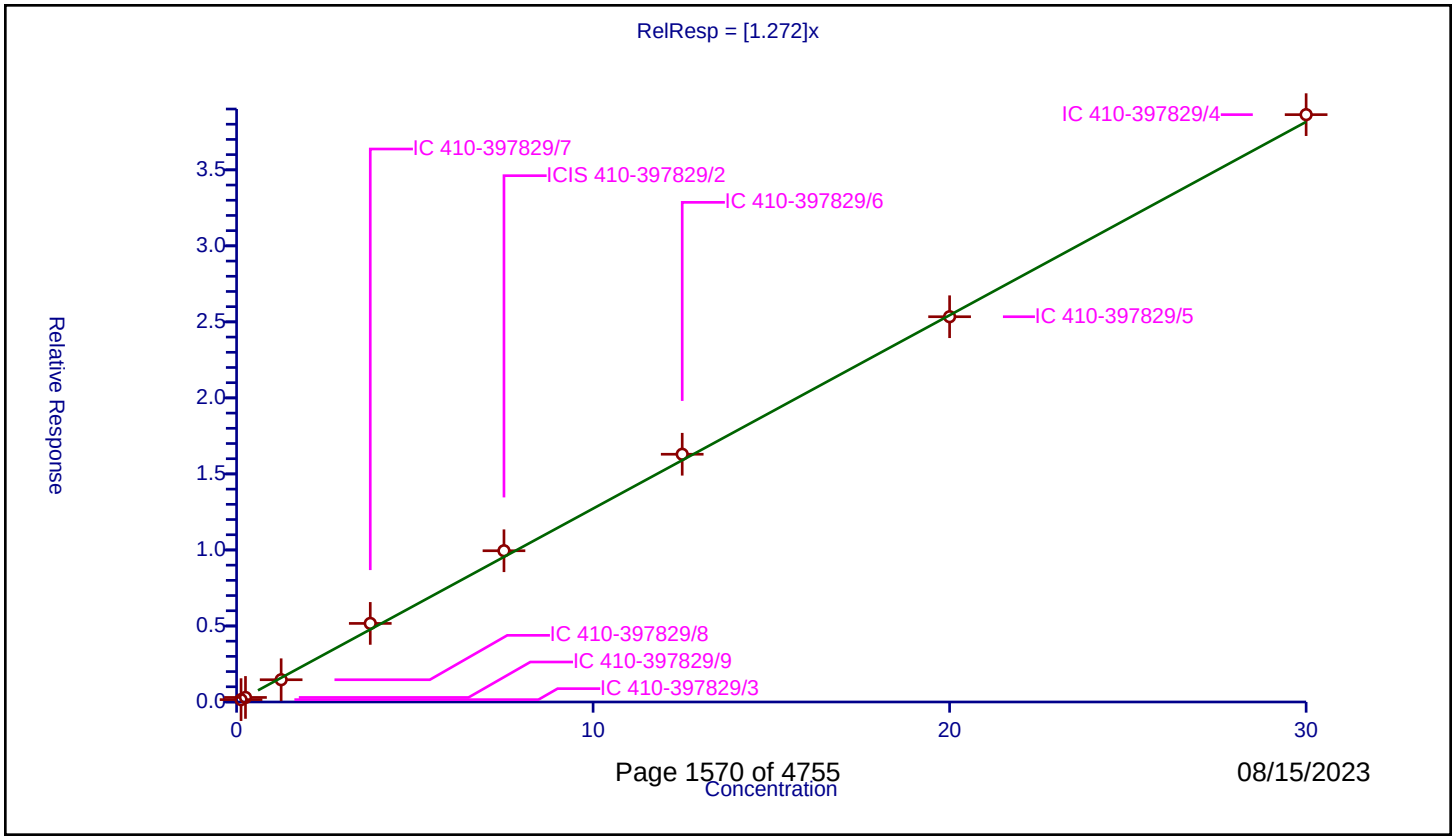
Curve Coefficients

Intercept:	0
Slope:	1.272

Error Coefficients

Standard Error:	2170000
Relative Standard Error:	5.3
Correlation Coefficient:	0.991
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.155558	5.0	573515.0	1.244466	Y
2	IC 410-397829/9	0.25	0.299391	5.0	538761.0	1.197563	Y
3	IC 410-397829/8	1.25	1.463293	5.0	684118.0	1.170634	Y
4	IC 410-397829/7	3.75	5.16813	5.0	475078.0	1.378168	Y
5	ICIS 410-397829/2	7.5	9.946574	5.0	547299.0	1.32621	Y
6	IC 410-397829/6	12.5	16.294352	5.0	674017.0	1.303548	Y
7	IC 410-397829/5	20.0	25.339928	5.0	590478.0	1.266996	Y
8	IC 410-397829/4	30.0	38.630118	5.0	546233.0	1.287671	Y



Calibration / Benzo[a]pyrene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

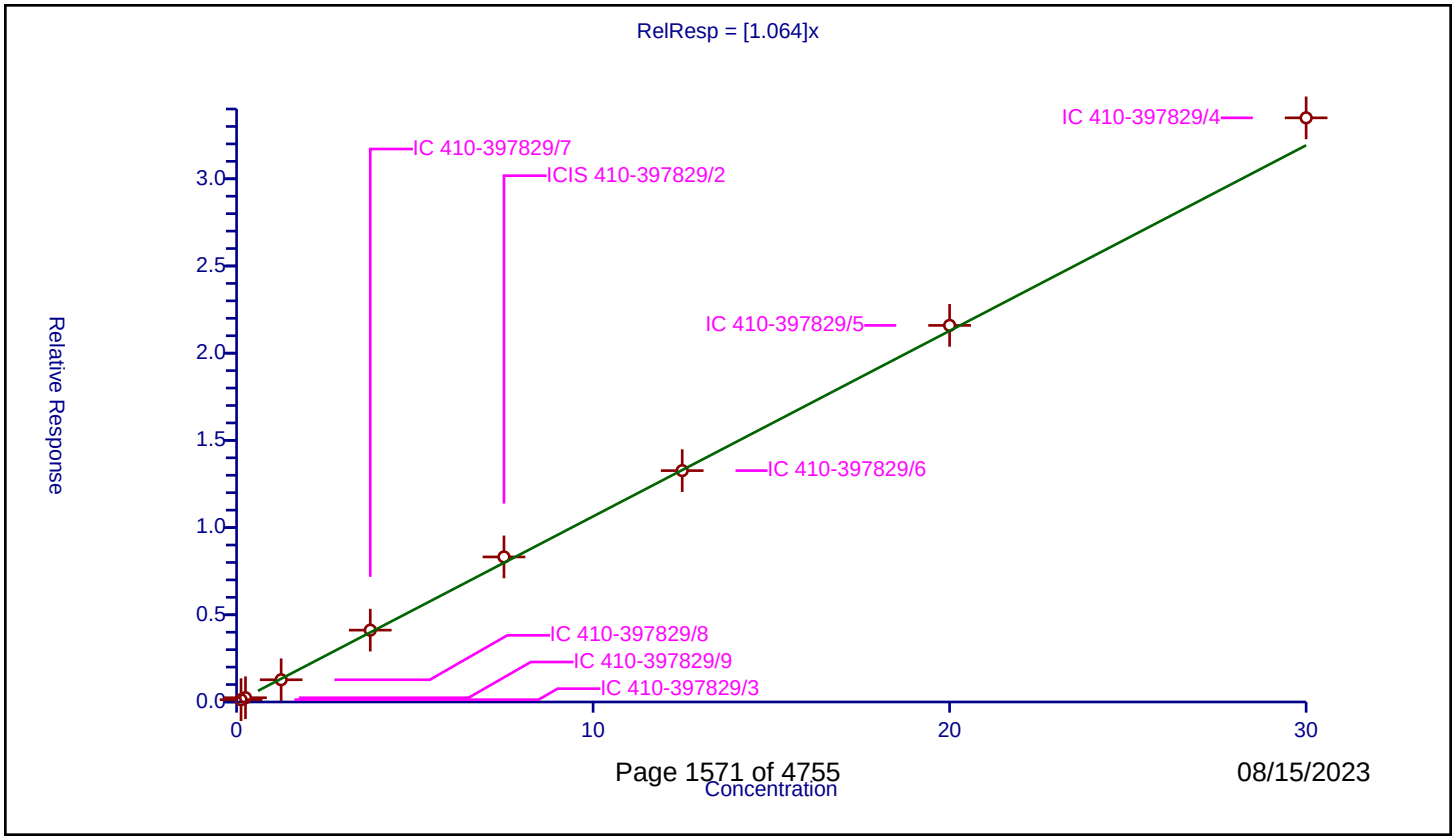
Curve Coefficients

Intercept:	0
Slope:	1.064

Error Coefficients

Standard Error:	1860000
Relative Standard Error:	4.5
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.13154	5.0	573515.0	1.052318	Y
2	IC 410-397829/9	0.25	0.243624	5.0	538761.0	0.974495	Y
3	IC 410-397829/8	1.25	1.275021	5.0	684118.0	1.020017	Y
4	IC 410-397829/7	3.75	4.119229	5.0	475078.0	1.098461	Y
5	ICIS 410-397829/2	7.5	8.31645	5.0	547299.0	1.10886	Y
6	IC 410-397829/6	12.5	13.266579	5.0	674017.0	1.061326	Y
7	IC 410-397829/5	20.0	21.592828	5.0	590478.0	1.079641	Y
8	IC 410-397829/4	30.0	33.493692	5.0	546233.0	1.116456	Y



Calibration / 3-Methylcholanthrene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

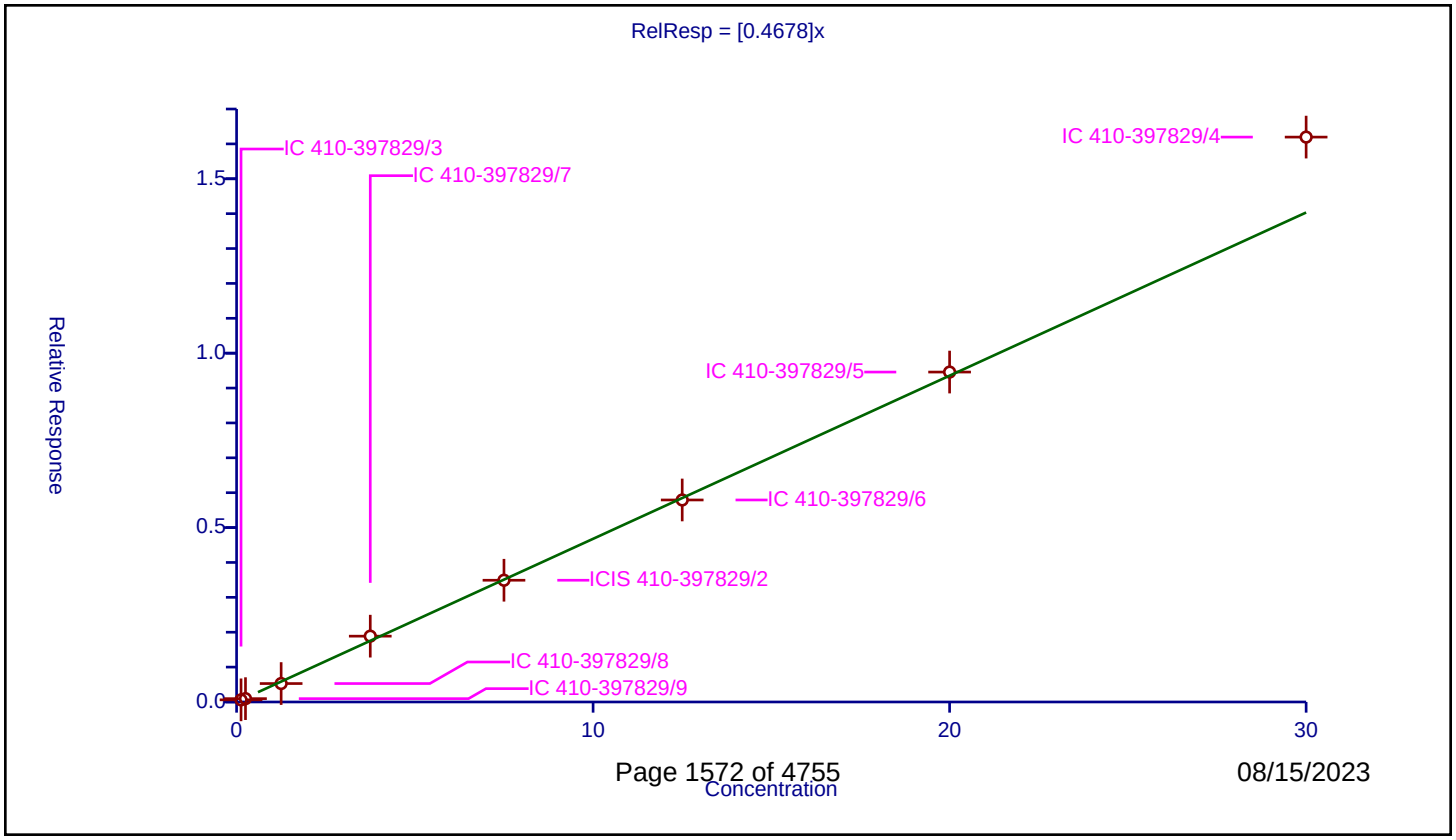
Curve Coefficients

Intercept:	0
Slope:	0.4678

Error Coefficients

Standard Error:	859000
Relative Standard Error:	10.2
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.061315	5.0	573515.0	0.490519	Y
2	IC 410-397829/9	0.25	0.095915	5.0	538761.0	0.383658	Y
3	IC 410-397829/8	1.25	0.529039	5.0	684118.0	0.423231	Y
4	IC 410-397829/7	3.75	1.887437	5.0	475078.0	0.503317	Y
5	ICIS 410-397829/2	7.5	3.49046	5.0	547299.0	0.465395	Y
6	IC 410-397829/6	12.5	5.791256	5.0	674017.0	0.4633	Y
7	IC 410-397829/5	20.0	9.458777	5.0	590478.0	0.472939	Y
8	IC 410-397829/4	30.0	16.194884	5.0	546233.0	0.539829	Y



Calibration / Dibenz[a,h]acridine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

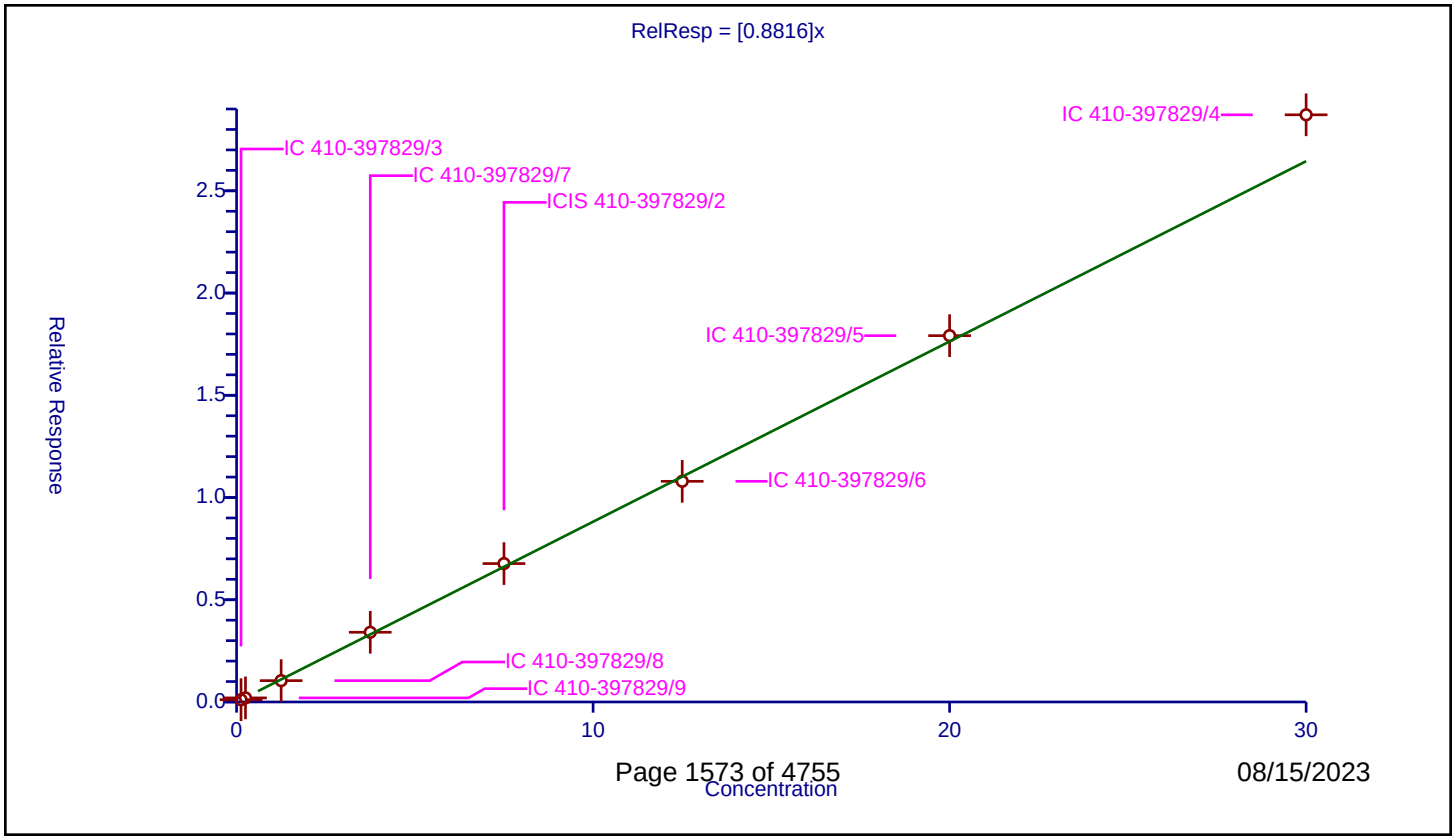
Curve Coefficients

Intercept:	0
Slope:	0.8816

Error Coefficients

Standard Error:	1560000
Relative Standard Error:	5.4
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.11086	5.0	573515.0	0.886882	Y
2	IC 410-397829/9	0.25	0.200497	5.0	538761.0	0.801988	Y
3	IC 410-397829/8	1.25	1.04433	5.0	684118.0	0.835464	Y
4	IC 410-397829/7	3.75	3.409324	5.0	475078.0	0.909153	Y
5	ICIS 410-397829/2	7.5	6.768604	5.0	547299.0	0.90248	Y
6	IC 410-397829/6	12.5	10.792895	5.0	674017.0	0.863432	Y
7	IC 410-397829/5	20.0	17.916502	5.0	590478.0	0.895825	Y
8	IC 410-397829/4	30.0	28.716619	5.0	546233.0	0.957221	Y



Calibration / Dibenz[a,j]acridine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

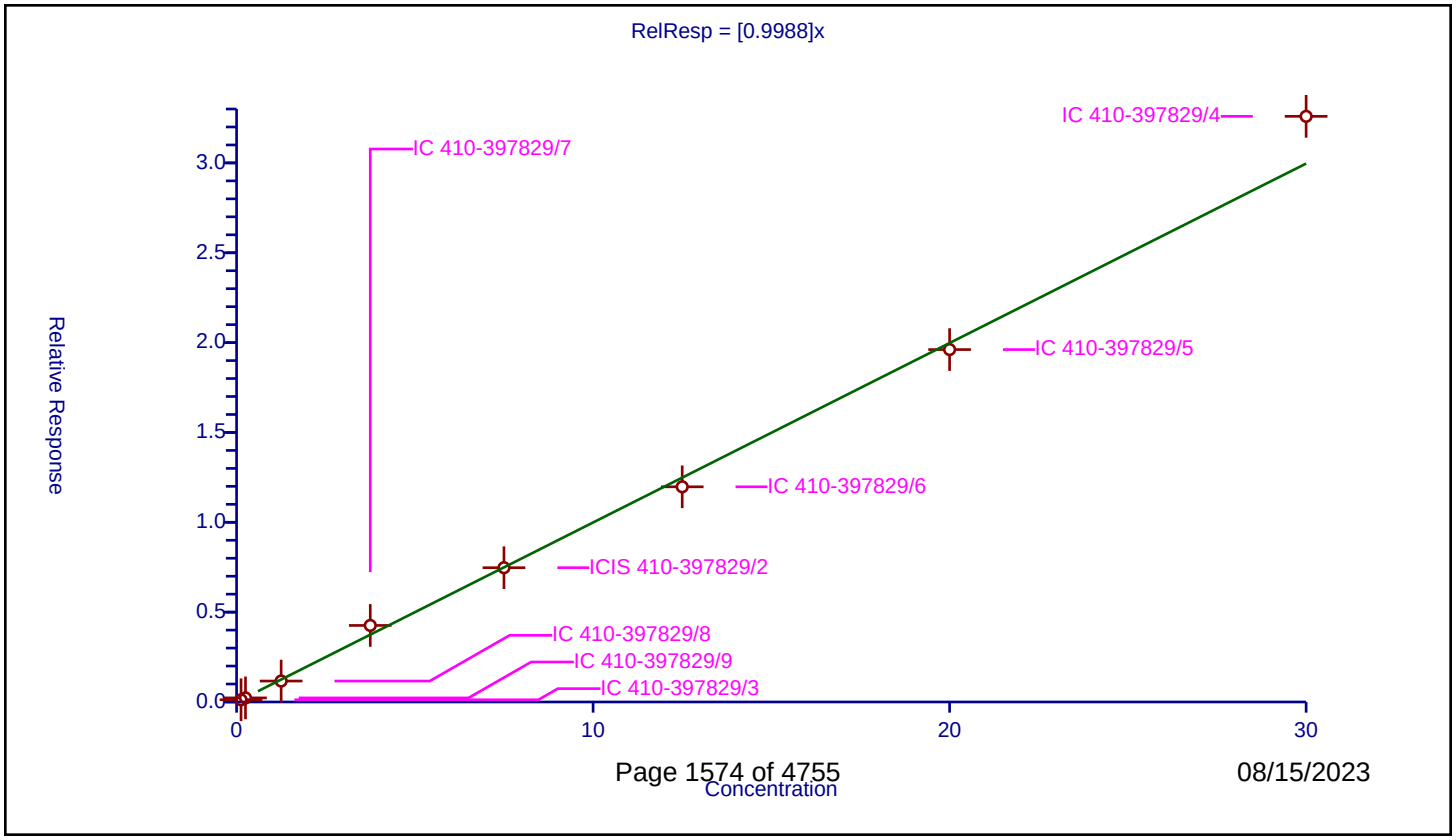
Curve Coefficients

Intercept:	0
Slope:	0.9988

Error Coefficients

Standard Error:	1750000
Relative Standard Error:	7.6
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.12338	5.0	573515.0	0.987036	Y
2	IC 410-397829/9	0.25	0.228357	5.0	538761.0	0.913429	Y
3	IC 410-397829/8	1.25	1.16583	5.0	684118.0	0.932664	Y
4	IC 410-397829/7	3.75	4.260216	5.0	475078.0	1.136058	Y
5	ICIS 410-397829/2	7.5	7.473547	5.0	547299.0	0.996473	Y
6	IC 410-397829/6	12.5	11.976004	5.0	674017.0	0.95808	Y
7	IC 410-397829/5	20.0	19.613034	5.0	590478.0	0.980652	Y
8	IC 410-397829/4	30.0	32.591879	5.0	546233.0	1.086396	Y



Calibration / Indeno[1,2,3-cd]pyrene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

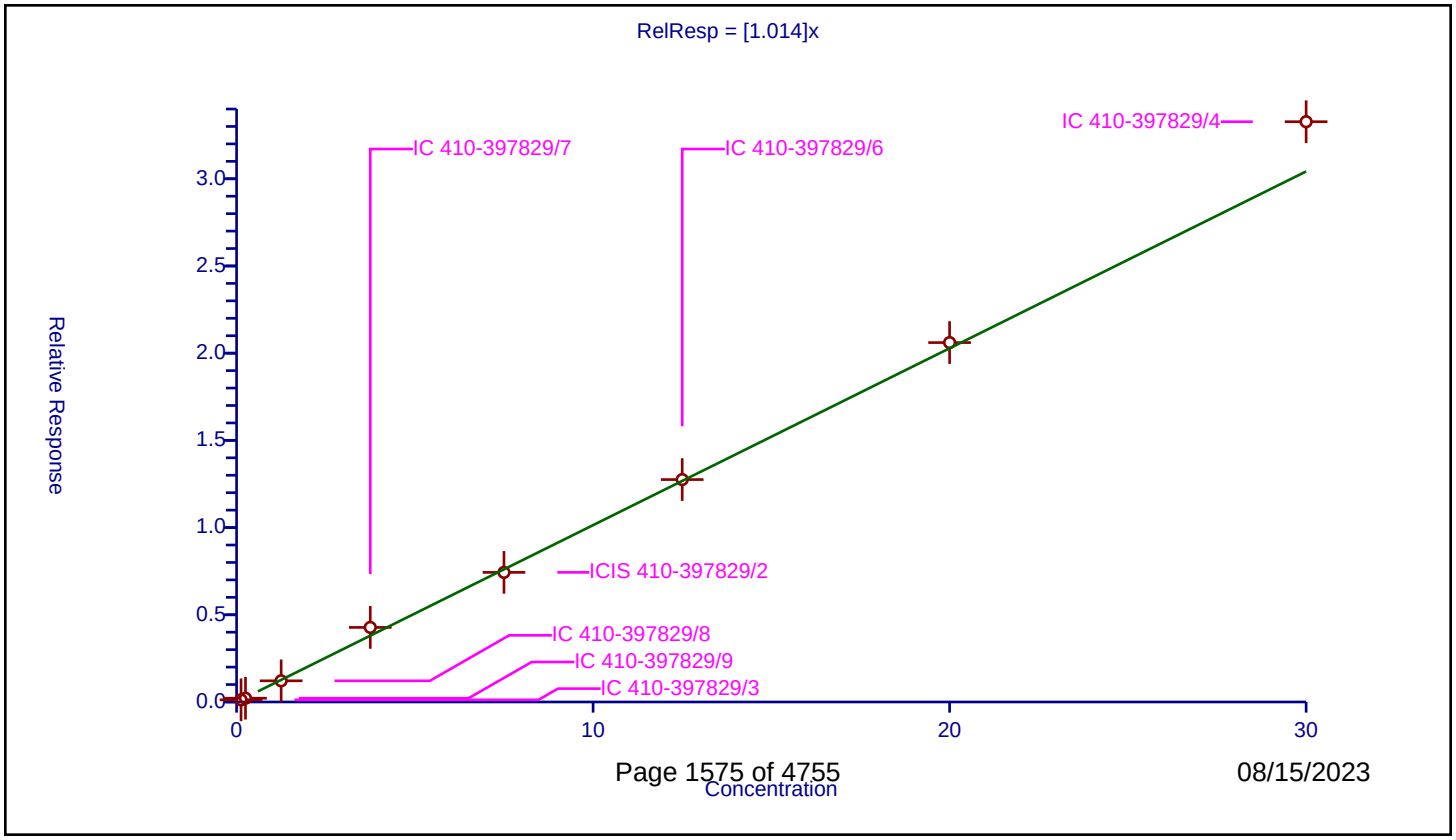
Curve Coefficients

Intercept:	0
Slope:	1.014

Error Coefficients

Standard Error:	1810000
Relative Standard Error:	8.4
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.122987	5.0	573515.0	0.983898	Y
2	IC 410-397829/9	0.25	0.216747	5.0	538761.0	0.866989	Y
3	IC 410-397829/8	1.25	1.213153	5.0	684118.0	0.970523	Y
4	IC 410-397829/7	3.75	4.275972	5.0	475078.0	1.140259	Y
5	ICIS 410-397829/2	7.5	7.431039	5.0	547299.0	0.990805	Y
6	IC 410-397829/6	12.5	12.753247	5.0	674017.0	1.02026	Y
7	IC 410-397829/5	20.0	20.607906	5.0	590478.0	1.030395	Y
8	IC 410-397829/4	30.0	33.271461	5.0	546233.0	1.109049	Y



08/15/2023

Calibration / Dibenz(a,h)anthracene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

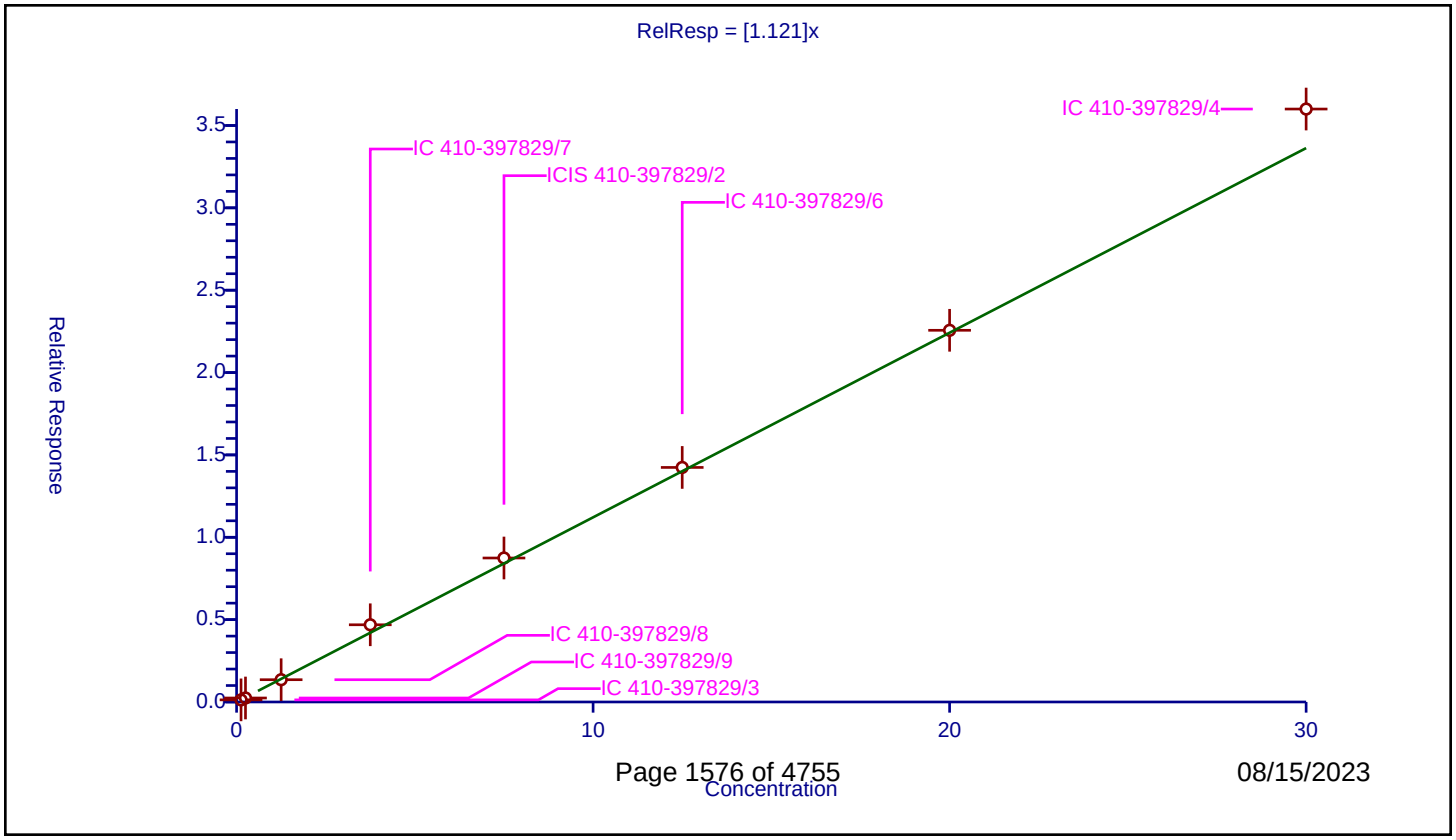
Curve Coefficients

Intercept:	0
Slope:	1.121

Error Coefficients

Standard Error:	1980000
Relative Standard Error:	8.1
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.129107	5.0	573515.0	1.032859	Y
2	IC 410-397829/9	0.25	0.242269	5.0	538761.0	0.969075	Y
3	IC 410-397829/8	1.25	1.352786	5.0	684118.0	1.082229	Y
4	IC 410-397829/7	3.75	4.688009	5.0	475078.0	1.250136	Y
5	ICIS 410-397829/2	7.5	8.740889	5.0	547299.0	1.165452	Y
6	IC 410-397829/6	12.5	14.239967	5.0	674017.0	1.139197	Y
7	IC 410-397829/5	20.0	22.565261	5.0	590478.0	1.128263	Y
8	IC 410-397829/4	30.0	35.997862	5.0	546233.0	1.199929	Y



Calibration / Benzo[g,h,i]perylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

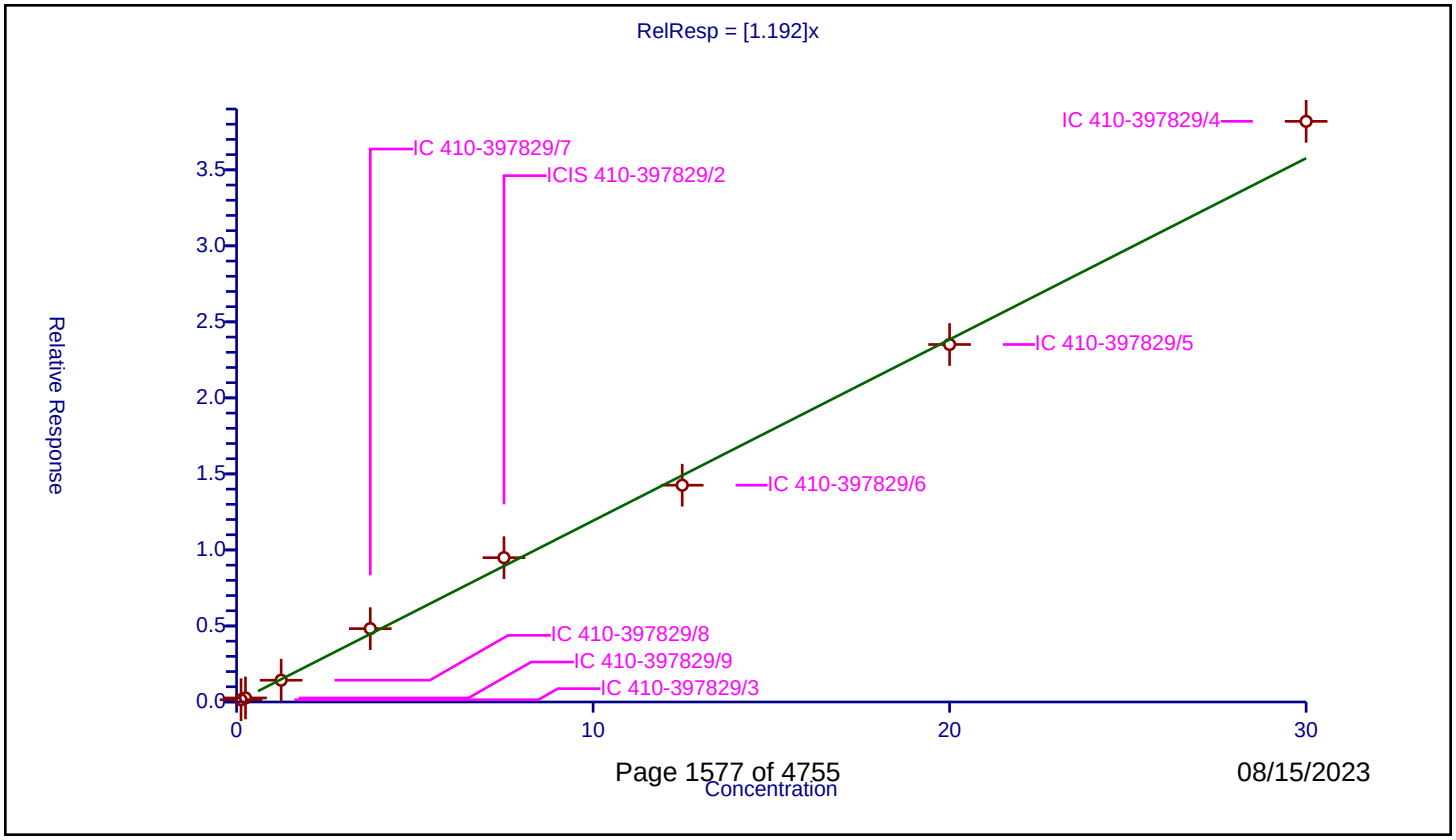
Curve Coefficients

Intercept:	0
Slope:	1.192

Error Coefficients

Standard Error:	2080000
Relative Standard Error:	6.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-397829/3	0.125	0.148104	5.0	573515.0	1.184834	Y
2	IC 410-397829/9	0.25	0.266268	5.0	538761.0	1.065073	Y
3	IC 410-397829/8	1.25	1.431895	5.0	684118.0	1.145516	Y
4	IC 410-397829/7	3.75	4.823734	5.0	475078.0	1.286329	Y
5	ICIS 410-397829/2	7.5	9.49037	5.0	547299.0	1.265383	Y
6	IC 410-397829/6	12.5	14.258357	5.0	674017.0	1.140669	Y
7	IC 410-397829/5	20.0	23.513984	5.0	590478.0	1.175699	Y
8	IC 410-397829/4	30.0	38.189545	5.0	546233.0	1.272985	Y



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Lab Sample ID: ICV 410-397829/12 Calibration Date: 07/18/2023 11:17

Instrument ID: HP23264 Calib Start Date: 04/04/2023 02:36

GC Column: DB-5MS 30m 0.25 ID: 0.25(mm) Calib End Date: 04/04/2023 04:43

Lab File ID: JG1811.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzoic acid	Ave	0.3124				18.8		
Indene	Ave	3.080				18.8		

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1811.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 18-Jul-2023 11:17:30 ALS Bottle#: 11 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 410-0089185-012
Operator ID: kel10217 Instrument ID: HP23264
Sublist:

Method: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\MSSemi_HP23264.m
Limit Group: MSSV - 8270D_E LVI
Last Update: 18-Jul-2023 15:19:23 Calib Date: 18-Jul-2023 10:14:30
Integrator: Falcon ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1808.D

Column 1 : DB-5MS 20m 0.25mm (0.25 mm) Det: MS SCAN
Process Host: CTX1640

First Level Reviewer: SJ89 Date: 18-Jul-2023 15:03:56

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 1,4-Dioxane	88	1.695	1.701	-0.006	94	273002	18.8	18.1	
2 N-Nitrosodimethylamine	74	1.928	1.928	0.000	93	454396	18.8	18.5	
3 Pyridine	79	1.964	1.969	-0.005	84	1571503	37.5	37.2	
4 Dimethylformamide	73	2.255	2.267	-0.012	94	592261	18.8	19.6	a
5 2-Picoline	93	2.553	2.559	-0.006	93	829156	18.8	20.2	
6 N-Nitrosomethylethylamine	88	2.641	2.647	-0.005	95	362646	18.8	18.0	
7 Methyl methanesulfonate	80	2.921	2.921	0.000	86	448690	18.8	18.5	a
11 N-Nitrosodiethylamine	102	3.289	3.289	0.000	87	345243	18.8	21.1	
12 Ethyl methanesulfonate	109	3.587	3.587	0.000	96	379684	18.8	18.7	a
17 Aniline	93	4.019	4.019	0.000	95	1091085	18.8	19.1	
16 Phenol	94	4.036	4.036	0.000	97	1054168	18.8	18.5	
18 Bis(2-chloroethyl)ether	93	4.077	4.077	0.000	85	722424	18.8	18.2	
19 2-Chlorophenol	128	4.141	4.147	-0.006	93	651456	18.8	18.6	
21 1,3-Dichlorobenzene	146	4.276	4.276	0.000	95	647848	18.8	18.6	
* 22 1,4-Dichlorobenzene-d4	152	4.328	4.328	0.000	96	184810	7.50	7.50	
23 1,4-Dichlorobenzene	146	4.346	4.346	0.000	92	686200	18.8	18.4	
26 Benzyl alcohol	108	4.474	4.474	0.000	90	465521	18.8	20.0	
27 1,2-Dichlorobenzene	146	4.492	4.492	0.000	96	650863	18.8	18.8	
30 2,2'-oxybis[1-chloropropane]	45	4.591	4.591	0.000	93	1570403	18.8	17.9	
29 2-Methylphenol	108	4.603	4.603	0.000	97	656506	18.8	19.5	
28 Indene	115		4.603				ND	ND	U
31 N-Nitrosopyrrolidine	100	4.696	4.696	0.000	83	431059	18.8	21.4	
33 N-Nitrosodi-n-propylamine	70	4.714	4.714	0.000	85	640891	18.8	19.2	
32 Acetophenone	105	4.714	4.714	0.000	87	1096176	18.8	20.3	
35 N-Nitrosomorpholine	56	4.737	4.737	0.000	92	648265	18.8	20.9	
36 2-Toluidine	106	4.755	4.754	0.001	83	1196649	18.8	20.4	
34 4-Methylphenol	108	4.749	4.754	-0.005	83	768524	18.8	19.7	
37 Hexachloroethane	117	4.813	4.813	0.000	97	287071	18.8	18.2	
40 Nitrobenzene	77	4.877	4.877	0.000	92	798559	18.8	17.2	
41 N-Nitrosopiperidine	114	5.023	5.023	0.000	80	356593	18.8	19.0	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
42 Isophorone	82	5.105	5.105	0.000	98	1524789	18.8	18.3	
43 2-Nitrophenol	139	5.187	5.186	0.001	92	322001	18.8	18.8	
44 2,4-Dimethylphenol	107	5.245	5.251	-0.006	98	697612	18.8	19.9	
46 o,o',o''-Triethylphosphorothioat	198	5.292	5.292	0.000	94	248888	18.8	18.4	
47 Bis(2-chloroethoxy)methane	93	5.321	5.321	0.000	91	908952	18.8	18.1	
48 Benzoic acid	105		5.386				ND	ND	U
49 2,4-Dichlorophenol	162	5.432	5.438	-0.006	97	524204	18.8	20.0	
50 1,2,4-Trichlorobenzene	180	5.490	5.490	0.000	94	518483	18.8	17.6	
* 52 Naphthalene-d8	136	5.549	5.549	0.001	98	712856	7.50	7.50	
53 Naphthalene	128	5.566	5.566	0.000	97	1897160	18.8	18.6	
56 4-Chloroaniline	127	5.630	5.630	0.000	94	803888	18.8	18.6	
57 2,6-Dichlorophenol	162	5.636	5.636	0.000	87	508915	18.8	19.7	
58 Hexachloropropene	213	5.648	5.648	0.000	95	370273	18.8	20.0	a
59 Hexachlorobutadiene	225	5.683	5.683	0.000	96	309622	18.8	19.4	
61 Quinoline	129	5.887	5.887	0.000	95	1424779	18.8	20.3	
63 N-Nitrosodi-n-butylamine	84	5.946	5.946	0.000	91	584051	18.8	15.2	
64 p-Phenylene diamine	108	5.969	5.969	0.000	95	316232	18.8	13.9	
65 4-Chloro-3-methylphenol	107	6.121	6.121	0.000	96	621980	18.8	19.2	
66 Safrole, Total	162	6.150	6.150	0.000	84	453301	18.8	20.1	
67 2-Methylnaphthalene	142	6.226	6.226	0.000	91	1157699	18.8	18.6	
69 1-Methylnaphthalene	142	6.319	6.319	0.000	92	1083224	18.8	18.2	
71 Hexachlorocyclopentadiene	237	6.372	6.372	0.000	94	357327	18.8	24.0	
70 1,2,4,5-Tetrachlorobenzene	216	6.384	6.383	0.001	98	552988	18.8	20.5	
72 Isosafrole Peak 1	162	6.425	6.430	-0.005	85	63229	2.25	2.43	a
79 2,4,6-Trichlorophenol	196	6.506	6.506	0.000	96	362087	18.8	21.1	
80 2,4,5-Trichlorophenol	196	6.553	6.553	0.000	92	401661	18.8	21.3	
82 Isosafrole Peak 2	162	6.641	6.640	0.001	88	444024	16.5	16.9	a
83 1,1'-Biphenyl	154	6.676	6.675	0.001	94	1482471	18.8	20.9	
84 2-Chloronaphthalene	162	6.687	6.687	0.000	96	1052684	18.8	19.6	
85 1-Chloronaphthalene	162	6.711	6.710	0.001	96	1099757	18.8	21.4	a
86 Phenyl ether	170	6.775	6.775	0.000	92	818986	18.8	21.7	
87 2-Nitroaniline	138	6.798	6.798	0.000	77	375176	18.8	19.8	
88 1,4-Naphthoquinone	158	6.862	6.862	0.000	80	462033	18.8	21.8	a
89 1,4-Dinitrobenzene	168	6.933	6.932	0.001	89	181556	18.8	21.6	
90 Dimethyl phthalate	163	6.968	6.967	0.001	97	1226443	18.8	19.3	
91 1,3-Dinitrobenzene	168	6.997	6.997	0.000	79	204018	18.8	20.8	
92 2,6-Dinitrotoluene	165	7.026	7.026	0.000	87	274282	18.8	20.5	
93 Acenaphthylene	152	7.079	7.078	0.001	99	1829360	18.8	19.8	
95 3-Nitroaniline	138	7.189	7.189	0.000	87	329883	18.8	20.1	
* 96 Acenaphthene-d10	164	7.213	7.213	0.000	96	341549	7.50	7.50	
97 Acenaphthene	153	7.242	7.242	0.000	98	1138600	18.8	19.0	
98 2,4-Dinitrophenol	184	7.283	7.283	0.000	79	368052	37.5	43.5	
99 Pentachlorobenzene	250	7.370	7.370	0.000	97	474136	18.8	20.3	a
100 4-Nitrophenol	109	7.400	7.399	0.001	92	433410	37.5	43.4	
102 2,4-Dinitrotoluene	165	7.406	7.405	0.001	85	380028	18.8	21.0	
101 Dibenzofuran	168	7.411	7.411	0.000	97	1578508	18.8	19.5	
104 1-Naphthylamine	143	7.487	7.487	0.000	98	1078677	18.8	19.8	
105 2,3,4,6-Tetrachlorophenol	232	7.534	7.534	0.000	76	320764	18.8	19.4	
106 2-Naphthylamine	143	7.563	7.563	0.000	96	1193924	18.8	21.1	
107 Diethyl phthalate	149	7.639	7.639	0.000	96	1414610	18.8	20.7	
109 Thionazin	107	7.715	7.715	0.000	76	256362	18.8	21.1	
108 Fluorene	166	7.733	7.732	0.000	94	1225331	18.8	19.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
110 4-Chlorophenyl phenyl ether	204	7.738	7.738	0.000	94	542524	18.8	19.0	
111 N-Nitro-o-toluidine	152	7.756	7.756	0.000	94	404252	18.8	22.5	
112 4-Nitroaniline	138	7.768	7.767	0.001	83	344166	18.8	21.1	
113 4,6-Dinitro-2-methylphenol	198	7.785	7.785	0.000	69	424347	37.5	43.4	
114 N-Nitrosodiphenylamine	169	7.855	7.855	0.000	66	878053	15.9	17.2	
115 1,2-Diphenylhydrazine	77	7.884	7.884	0.000	41	1803275	18.8	21.1	
117 Sulfotepp	97	8.007	8.013	-0.006	75	300791	18.8	21.4	
118 1,3,5-Trinitrobenzene	213	8.118	8.118	0.000	82	106665	18.8	20.6	
120 cis-Diallate	86	8.124	8.124	0.000	93	501608	14.1	14.7	
119 Phorate	75	8.135	8.135	0.000	92	1061885	18.8	21.1	E
121 Phenacetin	108	8.153	8.153	0.000	90	791910	18.8	23.1	
122 4-Bromophenyl phenyl ether	248	8.200	8.199	0.001	76	323359	18.8	19.6	
123 trans-Diallate	86	8.211	8.211	0.000	92	181493	4.69	5.55	
124 Hexachlorobenzene	284	8.246	8.246	0.000	94	390646	18.8	19.9	
125 Dimethoate	87	8.299	8.299	0.000	96	661915	18.8	20.8	
128 Pentachloronitrobenzene	237	8.451	8.445	0.006	59	170901	18.8	20.3	
127 Pentachlorophenol	266	8.451	8.451	0.000	84	448183	37.5	48.1	E
129 4-Aminobiphenyl	169	8.451	8.451	0.000	91	1249695	18.8	18.6	
130 Pronamide	173	8.515	8.515	0.000	88	651852	18.8	23.1	
* 131 Phenanthrene-d10	188	8.620	8.620	0.000	95	628690	7.50	7.50	
133 Dinoseb	211	8.620	8.620	0.000	80	265374	18.8	19.9	a
134 Disulfoton	88	8.632	8.632	0.000	97	1025881	18.8	18.8	
132 Phenanthrene	178	8.643	8.643	0.000	98	1669425	18.8	18.9	
135 Anthracene	178	8.690	8.690	0.000	98	1704650	18.8	19.4	
136 Carbazole	167	8.854	8.853	0.001	96	1742762	18.8	20.1	
137 Methyl parathion	109	8.988	8.988	0.000	89	561121	18.8	24.1	
138 Di-n-butyl phthalate	149	9.192	9.192	0.000	99	2230841	18.8	19.9	
139 Ethyl Parathion	109	9.356	9.356	0.000	81	327520	18.8	23.8	
140 4-Nitroquinoline-1-oxide	190	9.379	9.379	0.000	77	121211	18.8	20.2	
142 Octachlorostyrene	308	9.583	9.583	0.000	90	150868	18.8	20.7	
143 Isodrin	193	9.619	9.624	-0.006	89	222785	18.8	19.1	a
S 68 Diallate	86				0		18.8	20.2	
144 Fluoranthene	202	9.764	9.764	0.000	98	1890712	18.8	20.2	
145 Benzidine	184	9.910	9.910	0.000	99	941026	18.8	15.6	
* 146 Pyrene-d10 (IS)	212	9.963	9.963	0.000	97	642170	7.50	7.50	
147 Pyrene	202	9.981	9.980	0.001	96	1958096	18.8	17.8	
149 p-Dimethylamino azobenzene	225	10.278	10.278	0.000	92	320942	18.8	22.2	
150 Chlorobenzilate	139	10.331	10.331	0.000	82	661752	18.8	19.0	a
152 3,3'-Dimethylbenzidine	212	10.623	10.628	-0.005	99	1010616	18.8	20.7	
153 Butyl benzyl phthalate	149	10.646	10.646	0.000	96	969183	18.8	19.4	
155 2-Acetylaminofluorene	181	10.891	10.897	-0.006	94	675805	18.8	20.4	
S 94 Isosafrole	162				0		18.8	19.3	
157 3,3'-Dichlorobenzidine	252	11.218	11.218	0.000	79	630756	18.8	20.6	
158 4,4'-Methylene bis(2-chloroanil	231	11.230	11.230	0.000	83	337412	18.8	21.4	
156 Benzo[a]anthracene	228	11.230	11.230	0.000	98	1600731	18.8	19.7	
159 Chrysene	228	11.271	11.271	0.000	97	1613403	18.8	20.1	
160 Bis(2-ethylhexyl) phthalate	149	11.312	11.312	0.000	95	1273805	18.8	18.8	
161 6-Methylchrysene	242	11.826	11.831	-0.005	98	1050361	18.8	19.1	
162 Di-n-octyl phthalate	149	12.153	12.152	0.001	98	2234017	18.8	19.9	
163 7,12-Dimethylbenz(a)anthracene	256	12.596	12.596	0.000	85	599683	18.8	20.6	a
164 Benzo[b]fluoranthene	252	12.596	12.602	-0.006	96	1532031	18.8	19.5	
165 Benzo[k]fluoranthene	252	12.637	12.637	0.000	97	1528823	18.8	19.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
166 Benzo[a]pyrene	252	13.046	13.046	0.000	82	1502837	18.8	22.5	
* 167 Perylene-d12	264	13.128	13.128	0.000	94	471572	7.50	7.50	
168 3-Methylcholanthrene	268	13.554	13.560	-0.006	95	523305	18.8	17.8	
169 Dibenz[a,h]acridine	279	14.342	14.342	0.000	93	1267622	18.8	22.9	
170 Dibenz[a,j]acridine	279	14.412	14.412	0.000	95	1358545	18.8	21.6	
171 Indeno[1,2,3-cd]pyrene	276	14.634	14.634	0.000	95	1279785	18.8	20.1	
172 Dibenz(a,h)anthracene	278	14.675	14.675	0.000	96	1369505	18.8	19.4	
173 Benzo[g,h,i]perylene	276	14.990	14.984	0.006	92	1525463	18.8	20.4	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

E - Exceeded Maximum Amount

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

MSS_RV8270ICV_00022 Amount Added: 1.00 Units: mL

Report Date: 18-Jul-2023 15:33:47 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1811.D

Injection Date: 18-Jul-2023 11:17:30 Instrument ID: HP23264 Operator ID: kel10217

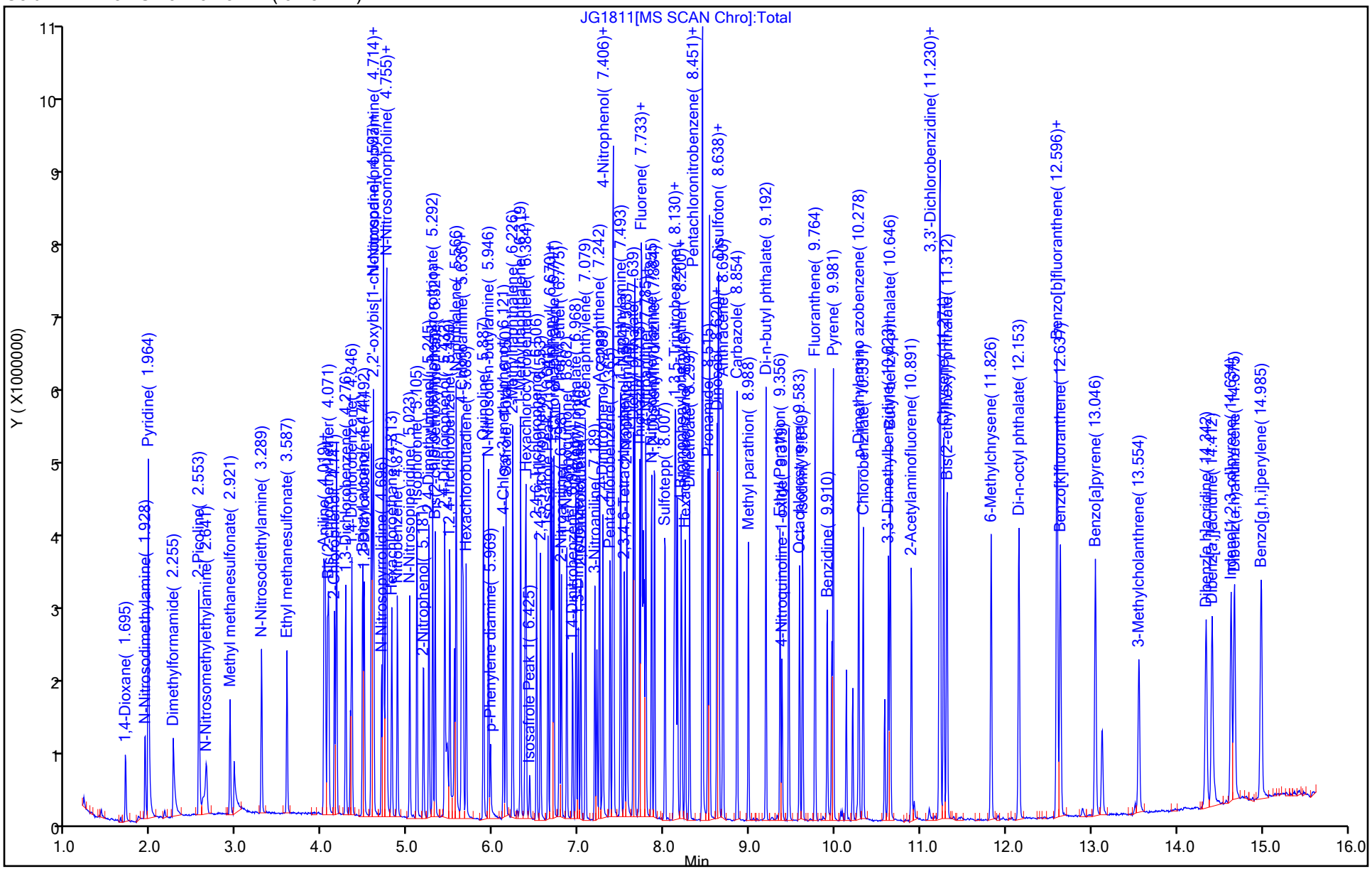
Lims ID: ICV Worklist Smp#: 12

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 11

Method: MSSemi_HP23264 Limit Group: MSSV - 8270D_E LVI

Column: DB-5MS 20m 0.25mm (0.25 mm)



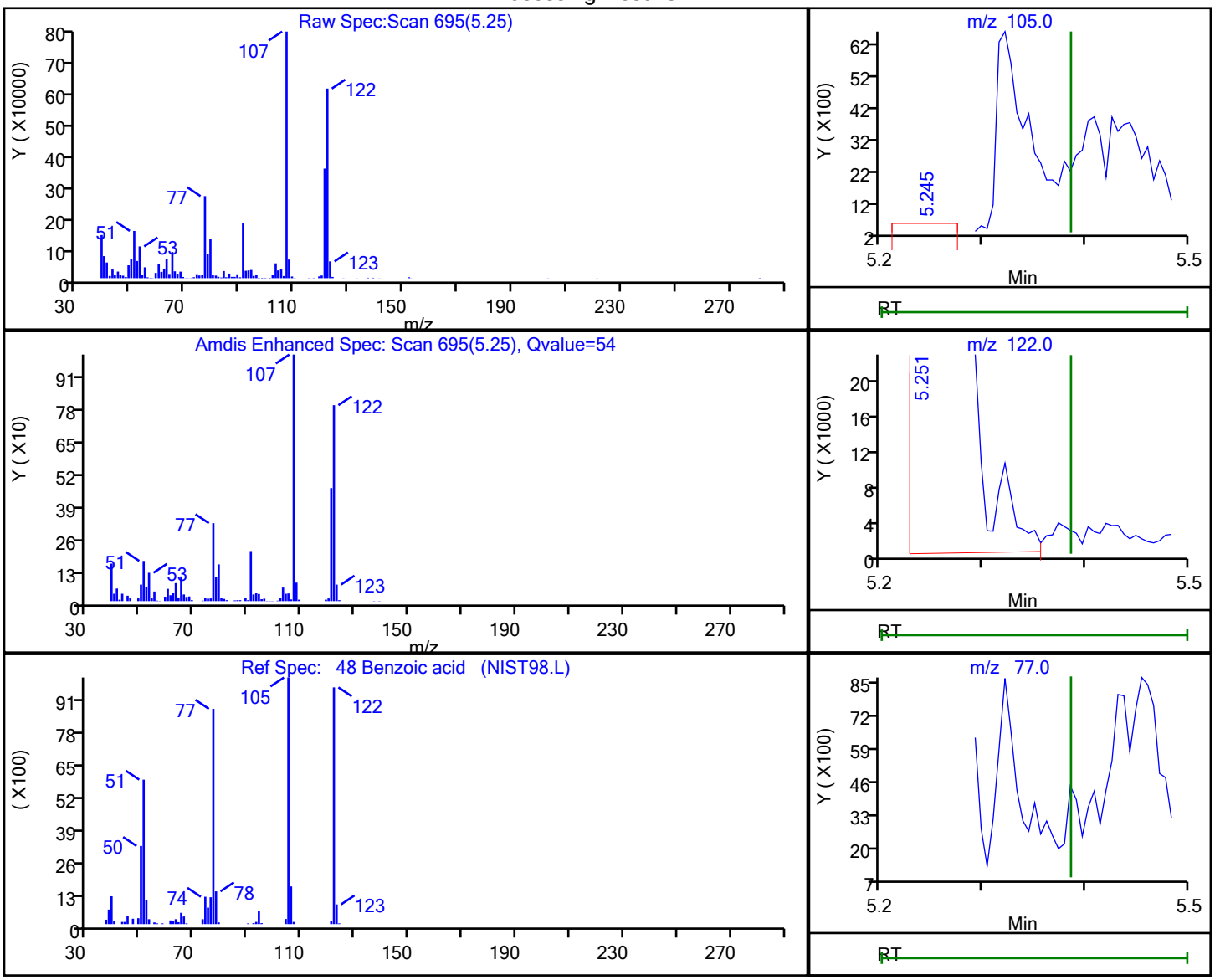
User Disabled Compound Report

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1811.D				
Injection Date:	18-Jul-2023 11:17:30	Instrument ID:	HP23264		
Lims ID:	ICV				
Client ID:					
Operator ID:	kel10217	ALS Bottle#:	11	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		
Column:	DB-5MS 20m 0.25mm (0.25 mm)	Detector	MS SCAN		

48 Benzoic acid, CAS: 65-85-0

Processing Results



RT	Mass	Response	Amount
5.25	105.00	21787	2.171671
5.25	122.00	592335	
5.25	77.00	237149	

Reviewer: SJ89, 18-Jul-2023 15:11:11 -04:00:00 (UTC)

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

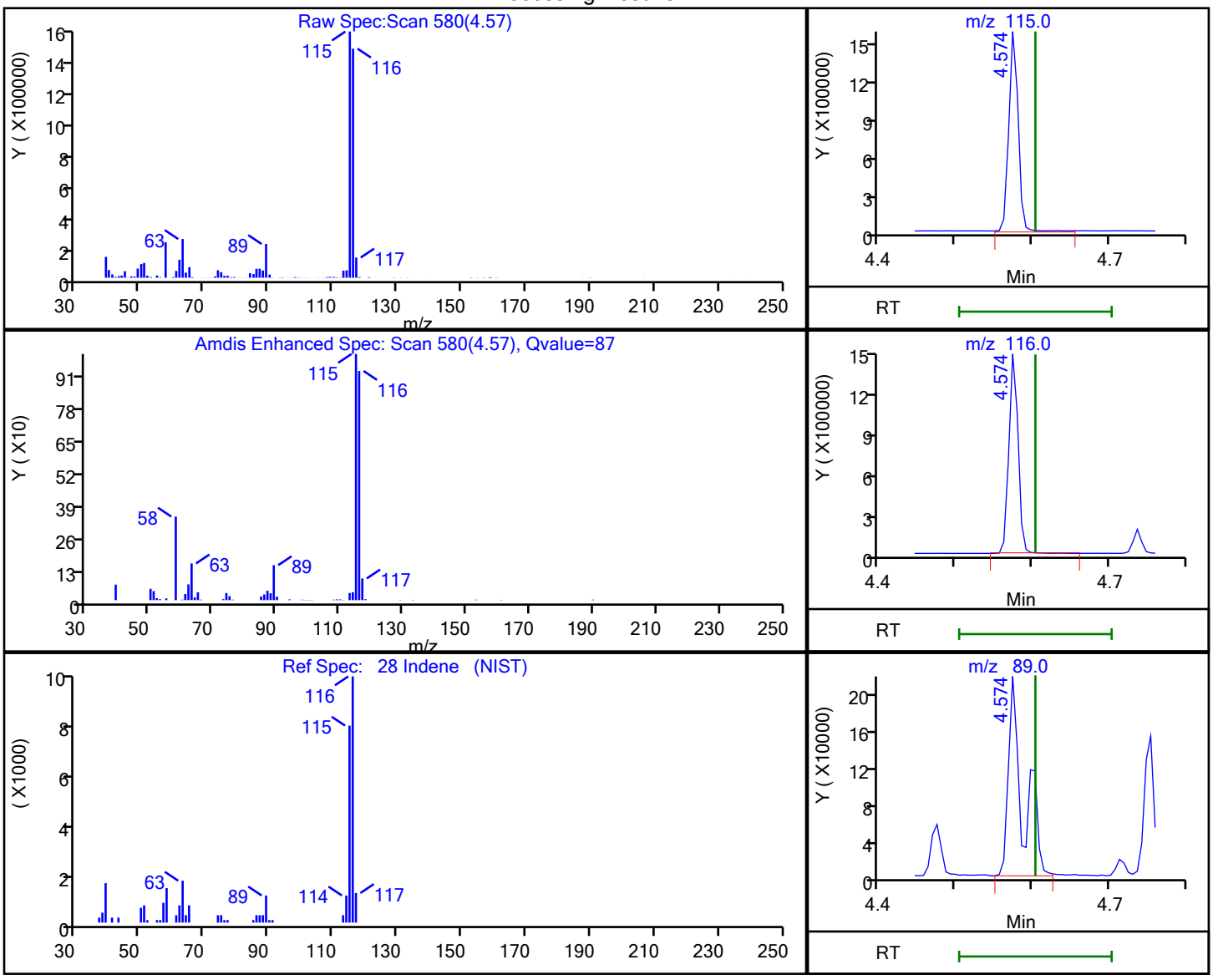
User Disabled Compound Report

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1811.D				
Injection Date:	18-Jul-2023 11:17:30	Instrument ID:	HP23264		
Lims ID:	ICV				
Client ID:					
Operator ID:	kel10217	ALS Bottle#:	11	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		
Column:	DB-5MS 20m 0.25mm (0.25 mm)	Detector	MS SCAN		

28 Indene, CAS: 95-13-6

Processing Results



RT	Mass	Response	Amount
4.57	115.00	1314511	17.320648
4.57	116.00	1219940	
4.57	89.00	283165	

Reviewer: SJ89, 18-Jul-2023 15:00:32 -04:00:00 (UTC)

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Lab Sample ID: ICV 410-397829/12 Calibration Date: 07/18/2023 11:17

Instrument ID: HP23264 Calib Start Date: 07/18/2023 07:41

GC Column: DB-5MS 30m 0.25 ID: 0.25(mm) Calib End Date: 07/18/2023 10:14

Lab File ID: JG1811.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.6104	0.5909		18.1	18.8	-3.2	30.0
N-Nitrosodimethylamine	Ave	0.9949	0.9835		18.5	18.8	-1.1	30.0
Pyridine	Ave	1.716	1.701		37.2	37.5	-0.9	30.0
N,N-dimethylformamide	Ave	1.225	1.282			18.8	4.6	30.0
2-Picoline	Ave	1.665	1.795		20.2	18.8	7.8	30.0
N-Nitrosomethylethylamine	Ave	0.8175	0.7849		18.0	18.8	-4.0	30.0
Methyl methanesulfonate	Ave	0.9846	0.9711		18.5	18.8	-1.4	30.0
N-Nitrosodiethylamine	Ave	0.6642	0.7472		21.1	18.8	12.5	30.0
Ethyl methanesulfonate	Ave	0.8229	0.8218		18.7	18.8	-0.1	30.0
Aniline	Ave	2.323	2.362		19.1	18.8	1.7	30.0
Phenol	Ave	2.313	2.282	0.8000	18.5	18.8	-1.4	30.0
Bis(2-chloroethyl)ether	Ave	1.613	1.564	0.7000	18.2	18.8	-3.0	30.0
2-Chlorophenol	Ave	1.424	1.410	0.8000	18.6	18.8	-1.0	30.0
1,3-Dichlorobenzene	Ave	1.416	1.402		18.6	18.8	-0.9	30.0
1,4-Dichlorobenzene	Ave	1.516	1.485		18.4	18.8	-2.0	30.0
Benzyl alcohol	Ave	0.9439	1.008		20.0	18.8	6.7	30.0
1,2-Dichlorobenzene	Ave	1.402	1.409		18.8	18.8	0.5	30.0
2,2'-oxybis[1-chloropropane]	Ave	3.552	3.399	0.0100	17.9	18.8	-4.3	30.0
2-Methylphenol	Ave	1.366	1.421	0.7000	19.5	18.8	4.0	30.0
N-Nitrosopyrrolidine	Ave	0.8193	0.9330		21.4	18.8	13.9	30.0
Acetophenone	Ave	2.194	2.373	0.0100	20.3	18.8	8.1	30.0
N-Nitrosodi-n-propylamine	Ave	1.358	1.387	0.5000	19.2	18.8	2.2	30.0
N-Nitrosomorpholine	Ave	1.260	1.403		20.9	18.8	11.4	30.0
4-Methylphenol (and/or 3-Methylphenol)	Ave	1.581	1.663	0.6000	19.7	18.8	5.2	30.0
o-Toluidine	Ave	2.376	2.590		20.4	18.8	9.0	30.0
Hexachloroethane	Ave	0.6384	0.6213	0.3000	18.2	18.8	-2.7	30.0
Nitrobenzene	Ave	0.4889	0.4481	0.2000	17.2	18.8	-8.3	30.0
N-Nitrosopiperidine	Ave	0.1972	0.2001		19.0	18.8	1.5	30.0
Isophorone	Ave	0.8743	0.8556	0.4000	18.3	18.8	-2.1	30.0
2-Nitrophenol	Ave	0.1806	0.1807	0.1000	18.8	18.8	0.0	30.0
2,4-Dimethylphenol	Ave	0.3690	0.3914	0.2000	19.9	18.8	6.1	30.0
o,o',o''-Triethylphosphorothioate	Ave	0.1420	0.1397		18.4	18.8	-1.6	30.0
Bis(2-chloroethoxy)methane	Ave	0.5277	0.5100	0.3000	18.1	18.8	-3.3	30.0
2,4-Dichlorophenol	Ave	0.2755	0.2941	0.2000	20.0	18.8	6.8	30.0
1,2,4-Trichlorobenzene	Ave	0.3101	0.2909		17.6	18.8	-6.2	30.0
Naphthalene	Ave	1.076	1.065	0.7000	18.6	18.8	-1.1	30.0
4-Chloroaniline	Ave	0.4545	0.4511	0.0100	18.6	18.8	-0.7	30.0
2,6-Dichlorophenol	Ave	0.2724	0.2856		19.7	18.8	4.8	30.0
Hexachloropropene	Ave	0.1950	0.2078		20.0	18.8	6.6	30.0
Hexachlorobutadiene	Ave	0.1679	0.1737	0.0100	19.4	18.8	3.5	30.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Lab Sample ID: ICV 410-397829/12 Calibration Date: 07/18/2023 11:17

Instrument ID: HP23264 Calib Start Date: 07/18/2023 07:41

GC Column: DB-5MS 30m 0.25 ID: 0.25(mm) Calib End Date: 07/18/2023 10:14

Lab File ID: JG1811.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Quinoline	Ave	0.7388	0.7995		20.3	18.8	8.2	30.0
N-Nitrosodi-n-butylamine	Ave	0.4048	0.3277		15.2	18.8	-19.0	30.0
1,4-phenylenediamine	Ave	0.2402	0.1774			18.8	-26.1	30.0
4-Chloro-3-methylphenol	Ave	0.3400	0.3490	0.2000	19.2	18.8	2.7	30.0
Safrole, Total	Ave	0.2369	0.2544		20.1	18.8	7.4	30.0
2-Methylnaphthalene	Ave	0.6536	0.6496	0.4000	18.6	18.8	-0.6	30.0
1-Methylnaphthalene	Ave	0.6266	0.6078		18.2	18.8	-3.0	30.0
Hexachlorocyclopentadiene	Ave	0.3275	0.4185	0.0500	24.0	18.8	27.8	30.0
1,2,4,5-Tetrachlorobenzene	Ave	0.5919	0.6476	0.0100	20.5	18.8	9.4	30.0
Isosafrole Peak 1	Ave	0.5720	0.6171		2.43	2.25	7.9	30.0
2,4,6-Trichlorophenol	Ave	0.3761	0.4241	0.2000	21.1	18.8	12.7	30.0
2,4,5-Trichlorophenol	Ave	0.4143	0.4704	0.2000	21.3	18.8	13.5	30.0
Isosafrole Peak 2	Ave	0.5768	0.5909		16.9	16.5	2.4	30.0
1,1'-Biphenyl	Ave	1.555	1.736	0.0100	20.9	18.8	11.7	30.0
2-Chloronaphthalene	Ave	1.178	1.233	0.8000	19.6	18.8	4.6	30.0
1-Chloronaphthalene	Ave	1.131	1.288		21.4	18.8	13.9	30.0
Diphenyl ether	Ave	0.8270	0.9591		21.7	18.8	16.0	30.0
2-Nitroaniline	Ave	0.4152	0.4394	0.0100	19.8	18.8	5.8	30.0
1,4-Naphthoquinone	Ave	0.4664	0.5411		21.8	18.8	16.0	30.0
1,4-Dinitrobenzene	Ave	0.1845	0.2126		21.6	18.8	15.2	30.0
Dimethyl phthalate	Ave	1.395	1.436	0.0100	19.3	18.8	3.0	30.0
1,3-Dinitrobenzene	Ave	0.2150	0.2389		20.8	18.8	11.1	30.0
2,6-Dinitrotoluene	Ave	0.2932	0.3212	0.2000	20.5	18.8	9.5	30.0
Acenaphthylene	Ave	2.033	2.142	0.9000	19.8	18.8	5.4	30.0
3-Nitroaniline	Ave	0.3605	0.3863	0.0100	20.1	18.8	7.2	30.0
Acenaphthene	Ave	1.317	1.333	0.9000	19.0	18.8	1.3	30.0
2,4-Dinitrophenol	Ave	0.1856	0.2155	0.0100	43.5	37.5	16.1	30.0
Pentachlorobenzene	Ave	0.5118	0.5553		20.3	18.8	8.5	30.0
4-Nitrophenol	Ave	0.2191	0.2538	0.0100	43.4	37.5	15.8	30.0
2,4-Dinitrotoluene	Ave	0.3981	0.4451	0.2000	21.0	18.8	11.8	30.0
Dibenzofuran	Ave	1.776	1.849	0.8000	19.5	18.8	4.1	30.0
1-Naphthylamine	Ave	1.195	1.263		19.8	18.8	5.7	30.0
2,3,4,6-Tetrachlorophenol	Ave	0.3633	0.3757	0.0100	19.4	18.8	3.4	30.0
2-Naphthylamine	Ave	1.240	1.398		21.1	18.8	12.8	30.0
Diethyl phthalate	Ave	1.503	1.657	0.0100	20.7	18.8	10.2	30.0
Thionazin	Ave	0.2662	0.3002		21.1	18.8	12.8	30.0
Fluorene	Ave	1.399	1.435	0.9000	19.2	18.8	2.6	30.0
4-Chlorophenyl-phenyl ether	Ave	0.6258	0.6354	0.4000	19.0	18.8	1.5	30.0
5-Nitro-o-toluidine	Ave	0.3937	0.4734		22.5	18.8	20.2	30.0
4-Nitroaniline	Ave	0.3585	0.4031	0.0100	21.1	18.8	12.4	30.0
4,6-Dinitro-2-methylphenol	Ave	0.1166	0.1350	0.0100	43.4	37.5	15.7	30.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Lab Sample ID: ICV 410-397829/12 Calibration Date: 07/18/2023 11:17

Instrument ID: HP23264 Calib Start Date: 07/18/2023 07:41

GC Column: DB-5MS 30m 0.25 ID: 0.25(mm) Calib End Date: 07/18/2023 10:14

Lab File ID: JG1811.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
N-Nitrosodiphenylamine	Ave	0.6091	0.6572	0.0100	17.2	15.9	7.9	30.0
1,2-Diphenylhydrazine	Ave	1.022	1.147		21.1	18.8	12.3	30.0
Sulfotepp	Ave	0.1678	0.1914		21.4	18.8	14.1	30.0
1,3,5-Trinitrobenzene	Ave	0.0616	0.0679			18.8	10.1	30.0
cis-Diallate	Ave	0.4078	0.4255		14.7	14.1	4.4	30.0
Phorate	Ave	0.5990	0.6756		21.1	18.8	12.8	30.0
Phenacetin	Ave	0.4090	0.5038		23.1	18.8	23.2	30.0
4-Bromophenyl-phenylether	Ave	0.1972	0.2057	0.1000	19.6	18.8	4.3	30.0
trans-Diallate	Ave	0.3898	0.4619		5.55	4.69	18.5	30.0
Hexachlorobenzene	Ave	0.2340	0.2485	0.1000	19.9	18.8	6.2	30.0
Dimethoate	Ave	0.3793	0.4211		20.8	18.8	11.0	30.0
4-Aminobiphenyl	Ave	0.8013	0.7951		18.6	18.8	-0.8	30.0
Pentachloronitrobenzene	Ave	0.1002	0.1087		20.3	18.8	8.5	30.0
Pentachlorophenol	Ave	0.1110	0.1426	0.0500	48.1	37.5	28.4	30.0
Pronamide	Ave	0.3372	0.4147		23.1	18.8	23.0	30.0
Dinoseb	Ave	0.1593	0.1688		19.9	18.8	6.0	30.0
Disulfoton	Ave	0.6498	0.6527		18.8	18.8	0.5	30.0
Phenanthrene	Ave	1.054	1.062	0.7000	18.9	18.8	0.7	30.0
Anthracene	Ave	1.050	1.085	0.7000	19.4	18.8	3.3	30.0
Carbazole	Ave	1.037	1.109	0.0100	20.1	18.8	7.0	30.0
Methyl parathion	Ave	0.2776	0.3570		24.1	18.8	28.6	30.0
Di-n-butyl phthalate	Ave	1.334	1.419	0.0100	19.9	18.8	6.4	30.0
Parathion	Ave	0.1642	0.2084		23.8	18.8	26.9	30.0
4-Nitroquinoline-1-oxide	Ave	0.0716	0.0771		20.2	18.8	7.8	30.0
Octachlorostyrene	Ave	0.0871	0.0960		20.7	18.8	10.2	30.0
Isodrin	Ave	0.1394	0.1417		19.1	18.8	1.7	30.0
Fluoranthene	Ave	1.116	1.203	0.6000	20.2	18.8	7.8	30.0
Benzidine	Ave	0.7062	0.5862		15.6	18.8	-17.0	30.0
Pyrene	Ave	1.283	1.220	0.6000	17.8	18.8	-4.9	30.0
p-Dimethylamino azobenzene	Ave	0.1687	0.1999		22.2	18.8	18.5	30.0
Chlorobenzilate	Ave	0.4062	0.4122		19.0	18.8	1.5	30.0
3,3'-Dimethylbenzidine	Ave	0.5689	0.6295		20.7	18.8	10.6	30.0
Butylbenzylphthalate	Ave	0.5841	0.6037	0.0100	19.4	18.8	3.3	30.0
2-Acetylaminofluorene	Ave	0.3872	0.4210		20.4	18.8	8.7	30.0
3,3'-Dichlorobenzidine	Ave	0.3581	0.3929	0.0100	20.6	18.8	9.7	30.0
4,4'-Methylene bis(2-chloroaniline)	Ave	0.1840	0.2102			18.8	14.2	30.0
Benzo[a]anthracene	Ave	0.9482	0.997	0.8000	19.7	18.8	5.2	30.0
Chrysene	Ave	0.9376	1.005	0.7000	20.1	18.8	7.2	30.0
Bis(2-ethylhexyl) phthalate	Ave	0.7928	0.7934	0.0100	18.8	18.8	0.0	30.0
6-Methylchrysene	Ave	0.6431	0.6543		19.1	18.8	1.7	30.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Lab Sample ID: ICV 410-397829/12 Calibration Date: 07/18/2023 11:17

Instrument ID: HP23264 Calib Start Date: 07/18/2023 07:41

GC Column: DB-5MS 30m 0.25 ID: 0.25(mm) Calib End Date: 07/18/2023 10:14

Lab File ID: JG1811.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Di-n-octyl phthalate	Ave	1.788	1.895	0.0100	19.9	18.8	6.0	30.0
7,12-Dimethylbenz(a)anthracene	Ave	0.4631	0.5087		20.6	18.8	9.8	30.0
Benzo[b]fluoranthene	Ave	1.250	1.300	0.7000	19.5	18.8	3.9	30.0
Benzo[k]fluoranthene	Ave	1.272	1.297	0.7000	19.1	18.8	2.0	30.0
Benzo[a]pyrene	Ave	1.064	1.275	0.7000	22.5	18.8	19.8	30.0
3-Methylcholanthrene	Ave	0.4678	0.4439		17.8	18.8	-5.1	30.0
Dibenz[a,h]acridine	Ave	0.8816	1.075		22.9	18.8	22.0	30.0
Dibenz[a,j]acridine	Ave	0.999	1.152		21.6	18.8	15.4	30.0
Indeno[1,2,3-cd]pyrene	Ave	1.014	1.086	0.5000	20.1	18.8	7.1	30.0
Dibenz(a,h)anthracene	Ave	1.121	1.162	0.4000	19.4	18.8	3.6	30.0
Benzo[g,h,i]perylene	Ave	1.192	1.294	0.5000	20.4	18.8	8.5	30.0

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1811.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 18-Jul-2023 11:17:30 ALS Bottle#: 11 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 410-0089185-012
Operator ID: kel10217 Instrument ID: HP23264
Sublist:

Method: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\MSSemi_HP23264.m
Limit Group: MSSV - 8270D_E LVI
Last Update: 18-Jul-2023 15:19:23 Calib Date: 18-Jul-2023 10:14:30
Integrator: Falcon ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1808.D

Column 1 : DB-5MS 20m 0.25mm (0.25 mm) Det: MS SCAN
Process Host: CTX1640

First Level Reviewer: SJ89 Date: 18-Jul-2023 15:03:56

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 1,4-Dioxane	88	1.695	1.701	-0.006	94	273002	18.8	18.1	
2 N-Nitrosodimethylamine	74	1.928	1.928	0.000	93	454396	18.8	18.5	
3 Pyridine	79	1.964	1.969	-0.005	84	1571503	37.5	37.2	
4 Dimethylformamide	73	2.255	2.267	-0.012	94	592261	18.8	19.6	a
5 2-Picoline	93	2.553	2.559	-0.006	93	829156	18.8	20.2	
6 N-Nitrosomethylethylamine	88	2.641	2.647	-0.005	95	362646	18.8	18.0	
7 Methyl methanesulfonate	80	2.921	2.921	0.000	86	448690	18.8	18.5	a
11 N-Nitrosodiethylamine	102	3.289	3.289	0.000	87	345243	18.8	21.1	
12 Ethyl methanesulfonate	109	3.587	3.587	0.000	96	379684	18.8	18.7	a
17 Aniline	93	4.019	4.019	0.000	95	1091085	18.8	19.1	
16 Phenol	94	4.036	4.036	0.000	97	1054168	18.8	18.5	
18 Bis(2-chloroethyl)ether	93	4.077	4.077	0.000	85	722424	18.8	18.2	
19 2-Chlorophenol	128	4.141	4.147	-0.006	93	651456	18.8	18.6	
21 1,3-Dichlorobenzene	146	4.276	4.276	0.000	95	647848	18.8	18.6	
* 22 1,4-Dichlorobenzene-d4	152	4.328	4.328	0.000	96	184810	7.50	7.50	
23 1,4-Dichlorobenzene	146	4.346	4.346	0.000	92	686200	18.8	18.4	
26 Benzyl alcohol	108	4.474	4.474	0.000	90	465521	18.8	20.0	
27 1,2-Dichlorobenzene	146	4.492	4.492	0.000	96	650863	18.8	18.8	
30 2,2'-oxybis[1-chloropropane]	45	4.591	4.591	0.000	93	1570403	18.8	17.9	
29 2-Methylphenol	108	4.603	4.603	0.000	97	656506	18.8	19.5	
28 Indene	115		4.603				ND	ND	U
31 N-Nitrosopyrrolidine	100	4.696	4.696	0.000	83	431059	18.8	21.4	
33 N-Nitrosodi-n-propylamine	70	4.714	4.714	0.000	85	640891	18.8	19.2	
32 Acetophenone	105	4.714	4.714	0.000	87	1096176	18.8	20.3	
35 N-Nitrosomorpholine	56	4.737	4.737	0.000	92	648265	18.8	20.9	
36 2-Toluidine	106	4.755	4.754	0.001	83	1196649	18.8	20.4	
34 4-Methylphenol	108	4.749	4.754	-0.005	83	768524	18.8	19.7	
37 Hexachloroethane	117	4.813	4.813	0.000	97	287071	18.8	18.2	
40 Nitrobenzene	77	4.877	4.877	0.000	92	798559	18.8	17.2	
41 N-Nitrosopiperidine	114	5.023	5.023	0.000	80	356593	18.8	19.0	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
42 Isophorone	82	5.105	5.105	0.000	98	1524789	18.8	18.3	
43 2-Nitrophenol	139	5.187	5.186	0.001	92	322001	18.8	18.8	
44 2,4-Dimethylphenol	107	5.245	5.251	-0.006	98	697612	18.8	19.9	
46 o,o',o''-Triethylphosphorothioat	198	5.292	5.292	0.000	94	248888	18.8	18.4	
47 Bis(2-chloroethoxy)methane	93	5.321	5.321	0.000	91	908952	18.8	18.1	
48 Benzoic acid	105		5.386				ND	ND	U
49 2,4-Dichlorophenol	162	5.432	5.438	-0.006	97	524204	18.8	20.0	
50 1,2,4-Trichlorobenzene	180	5.490	5.490	0.000	94	518483	18.8	17.6	
* 52 Naphthalene-d8	136	5.549	5.549	0.001	98	712856	7.50	7.50	
53 Naphthalene	128	5.566	5.566	0.000	97	1897160	18.8	18.6	
56 4-Chloroaniline	127	5.630	5.630	0.000	94	803888	18.8	18.6	
57 2,6-Dichlorophenol	162	5.636	5.636	0.000	87	508915	18.8	19.7	
58 Hexachloropropene	213	5.648	5.648	0.000	95	370273	18.8	20.0	a
59 Hexachlorobutadiene	225	5.683	5.683	0.000	96	309622	18.8	19.4	
61 Quinoline	129	5.887	5.887	0.000	95	1424779	18.8	20.3	
63 N-Nitrosodi-n-butylamine	84	5.946	5.946	0.000	91	584051	18.8	15.2	
64 p-Phenylene diamine	108	5.969	5.969	0.000	95	316232	18.8	13.9	
65 4-Chloro-3-methylphenol	107	6.121	6.121	0.000	96	621980	18.8	19.2	
66 Safrole, Total	162	6.150	6.150	0.000	84	453301	18.8	20.1	
67 2-Methylnaphthalene	142	6.226	6.226	0.000	91	1157699	18.8	18.6	
69 1-Methylnaphthalene	142	6.319	6.319	0.000	92	1083224	18.8	18.2	
71 Hexachlorocyclopentadiene	237	6.372	6.372	0.000	94	357327	18.8	24.0	
70 1,2,4,5-Tetrachlorobenzene	216	6.384	6.383	0.001	98	552988	18.8	20.5	
72 Isosafrole Peak 1	162	6.425	6.430	-0.005	85	63229	2.25	2.43	a
79 2,4,6-Trichlorophenol	196	6.506	6.506	0.000	96	362087	18.8	21.1	
80 2,4,5-Trichlorophenol	196	6.553	6.553	0.000	92	401661	18.8	21.3	
82 Isosafrole Peak 2	162	6.641	6.640	0.001	88	444024	16.5	16.9	a
83 1,1'-Biphenyl	154	6.676	6.675	0.001	94	1482471	18.8	20.9	
84 2-Chloronaphthalene	162	6.687	6.687	0.000	96	1052684	18.8	19.6	
85 1-Chloronaphthalene	162	6.711	6.710	0.001	96	1099757	18.8	21.4	a
86 Phenyl ether	170	6.775	6.775	0.000	92	818986	18.8	21.7	
87 2-Nitroaniline	138	6.798	6.798	0.000	77	375176	18.8	19.8	
88 1,4-Naphthoquinone	158	6.862	6.862	0.000	80	462033	18.8	21.8	a
89 1,4-Dinitrobenzene	168	6.933	6.932	0.001	89	181556	18.8	21.6	
90 Dimethyl phthalate	163	6.968	6.967	0.001	97	1226443	18.8	19.3	
91 1,3-Dinitrobenzene	168	6.997	6.997	0.000	79	204018	18.8	20.8	
92 2,6-Dinitrotoluene	165	7.026	7.026	0.000	87	274282	18.8	20.5	
93 Acenaphthylene	152	7.079	7.078	0.001	99	1829360	18.8	19.8	
95 3-Nitroaniline	138	7.189	7.189	0.000	87	329883	18.8	20.1	
* 96 Acenaphthene-d10	164	7.213	7.213	0.000	96	341549	7.50	7.50	
97 Acenaphthene	153	7.242	7.242	0.000	98	1138600	18.8	19.0	
98 2,4-Dinitrophenol	184	7.283	7.283	0.000	79	368052	37.5	43.5	
99 Pentachlorobenzene	250	7.370	7.370	0.000	97	474136	18.8	20.3	a
100 4-Nitrophenol	109	7.400	7.399	0.001	92	433410	37.5	43.4	
102 2,4-Dinitrotoluene	165	7.406	7.405	0.001	85	380028	18.8	21.0	
101 Dibenzofuran	168	7.411	7.411	0.000	97	1578508	18.8	19.5	
104 1-Naphthylamine	143	7.487	7.487	0.000	98	1078677	18.8	19.8	
105 2,3,4,6-Tetrachlorophenol	232	7.534	7.534	0.000	76	320764	18.8	19.4	
106 2-Naphthylamine	143	7.563	7.563	0.000	96	1193924	18.8	21.1	
107 Diethyl phthalate	149	7.639	7.639	0.000	96	1414610	18.8	20.7	
109 Thionazin	107	7.715	7.715	0.000	76	256362	18.8	21.1	
108 Fluorene	166	7.733	7.732	0.000	94	1225331	18.8	19.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
110 4-Chlorophenyl phenyl ether	204	7.738	7.738	0.000	94	542524	18.8	19.0	
111 N-Nitro-o-toluidine	152	7.756	7.756	0.000	94	404252	18.8	22.5	
112 4-Nitroaniline	138	7.768	7.767	0.001	83	344166	18.8	21.1	
113 4,6-Dinitro-2-methylphenol	198	7.785	7.785	0.000	69	424347	37.5	43.4	
114 N-Nitrosodiphenylamine	169	7.855	7.855	0.000	66	878053	15.9	17.2	
115 1,2-Diphenylhydrazine	77	7.884	7.884	0.000	41	1803275	18.8	21.1	
117 Sulfotepp	97	8.007	8.013	-0.006	75	300791	18.8	21.4	
118 1,3,5-Trinitrobenzene	213	8.118	8.118	0.000	82	106665	18.8	20.6	
120 cis-Diallate	86	8.124	8.124	0.000	93	501608	14.1	14.7	
119 Phorate	75	8.135	8.135	0.000	92	1061885	18.8	21.1	E
121 Phenacetin	108	8.153	8.153	0.000	90	791910	18.8	23.1	
122 4-Bromophenyl phenyl ether	248	8.200	8.199	0.001	76	323359	18.8	19.6	
123 trans-Diallate	86	8.211	8.211	0.000	92	181493	4.69	5.55	
124 Hexachlorobenzene	284	8.246	8.246	0.000	94	390646	18.8	19.9	
125 Dimethoate	87	8.299	8.299	0.000	96	661915	18.8	20.8	
128 Pentachloronitrobenzene	237	8.451	8.445	0.006	59	170901	18.8	20.3	
127 Pentachlorophenol	266	8.451	8.451	0.000	84	448183	37.5	48.1	E
129 4-Aminobiphenyl	169	8.451	8.451	0.000	91	1249695	18.8	18.6	
130 Pronamide	173	8.515	8.515	0.000	88	651852	18.8	23.1	
* 131 Phenanthrene-d10	188	8.620	8.620	0.000	95	628690	7.50	7.50	
133 Dinoseb	211	8.620	8.620	0.000	80	265374	18.8	19.9	a
134 Disulfoton	88	8.632	8.632	0.000	97	1025881	18.8	18.8	
132 Phenanthrene	178	8.643	8.643	0.000	98	1669425	18.8	18.9	
135 Anthracene	178	8.690	8.690	0.000	98	1704650	18.8	19.4	
136 Carbazole	167	8.854	8.853	0.001	96	1742762	18.8	20.1	
137 Methyl parathion	109	8.988	8.988	0.000	89	561121	18.8	24.1	
138 Di-n-butyl phthalate	149	9.192	9.192	0.000	99	2230841	18.8	19.9	
139 Ethyl Parathion	109	9.356	9.356	0.000	81	327520	18.8	23.8	
140 4-Nitroquinoline-1-oxide	190	9.379	9.379	0.000	77	121211	18.8	20.2	
142 Octachlorostyrene	308	9.583	9.583	0.000	90	150868	18.8	20.7	
143 Isodrin	193	9.619	9.624	-0.006	89	222785	18.8	19.1	a
S 68 Diallate	86				0		18.8	20.2	
144 Fluoranthene	202	9.764	9.764	0.000	98	1890712	18.8	20.2	
145 Benzidine	184	9.910	9.910	0.000	99	941026	18.8	15.6	
* 146 Pyrene-d10 (IS)	212	9.963	9.963	0.000	97	642170	7.50	7.50	
147 Pyrene	202	9.981	9.980	0.001	96	1958096	18.8	17.8	
149 p-Dimethylamino azobenzene	225	10.278	10.278	0.000	92	320942	18.8	22.2	
150 Chlorobenzilate	139	10.331	10.331	0.000	82	661752	18.8	19.0	a
152 3,3'-Dimethylbenzidine	212	10.623	10.628	-0.005	99	1010616	18.8	20.7	
153 Butyl benzyl phthalate	149	10.646	10.646	0.000	96	969183	18.8	19.4	
155 2-Acetylaminofluorene	181	10.891	10.897	-0.006	94	675805	18.8	20.4	
S 94 Isosafrole	162				0		18.8	19.3	
157 3,3'-Dichlorobenzidine	252	11.218	11.218	0.000	79	630756	18.8	20.6	
158 4,4'-Methylene bis(2-chloroaniline)	231	11.230	11.230	0.000	83	337412	18.8	21.4	
156 Benzo[a]anthracene	228	11.230	11.230	0.000	98	1600731	18.8	19.7	
159 Chrysene	228	11.271	11.271	0.000	97	1613403	18.8	20.1	
160 Bis(2-ethylhexyl) phthalate	149	11.312	11.312	0.000	95	1273805	18.8	18.8	
161 6-Methylchrysene	242	11.826	11.831	-0.005	98	1050361	18.8	19.1	
162 Di-n-octyl phthalate	149	12.153	12.152	0.001	98	2234017	18.8	19.9	
163 7,12-Dimethylbenz(a)anthracene	256	12.596	12.596	0.000	85	599683	18.8	20.6	a
164 Benzo[b]fluoranthene	252	12.596	12.602	-0.006	96	1532031	18.8	19.5	
165 Benzo[k]fluoranthene	252	12.637	12.637	0.000	97	1528823	18.8	19.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
166 Benzo[a]pyrene	252	13.046	13.046	0.000	82	1502837	18.8	22.5	
* 167 Perylene-d12	264	13.128	13.128	0.000	94	471572	7.50	7.50	
168 3-Methylcholanthrene	268	13.554	13.560	-0.006	95	523305	18.8	17.8	
169 Dibenz[a,h]acridine	279	14.342	14.342	0.000	93	1267622	18.8	22.9	
170 Dibenz[a,j]acridine	279	14.412	14.412	0.000	95	1358545	18.8	21.6	
171 Indeno[1,2,3-cd]pyrene	276	14.634	14.634	0.000	95	1279785	18.8	20.1	
172 Dibenz(a,h)anthracene	278	14.675	14.675	0.000	96	1369505	18.8	19.4	
173 Benzo[g,h,i]perylene	276	14.990	14.984	0.006	92	1525463	18.8	20.4	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

E - Exceeded Maximum Amount

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

MSS_RV8270ICV_00022 Amount Added: 1.00 Units: mL

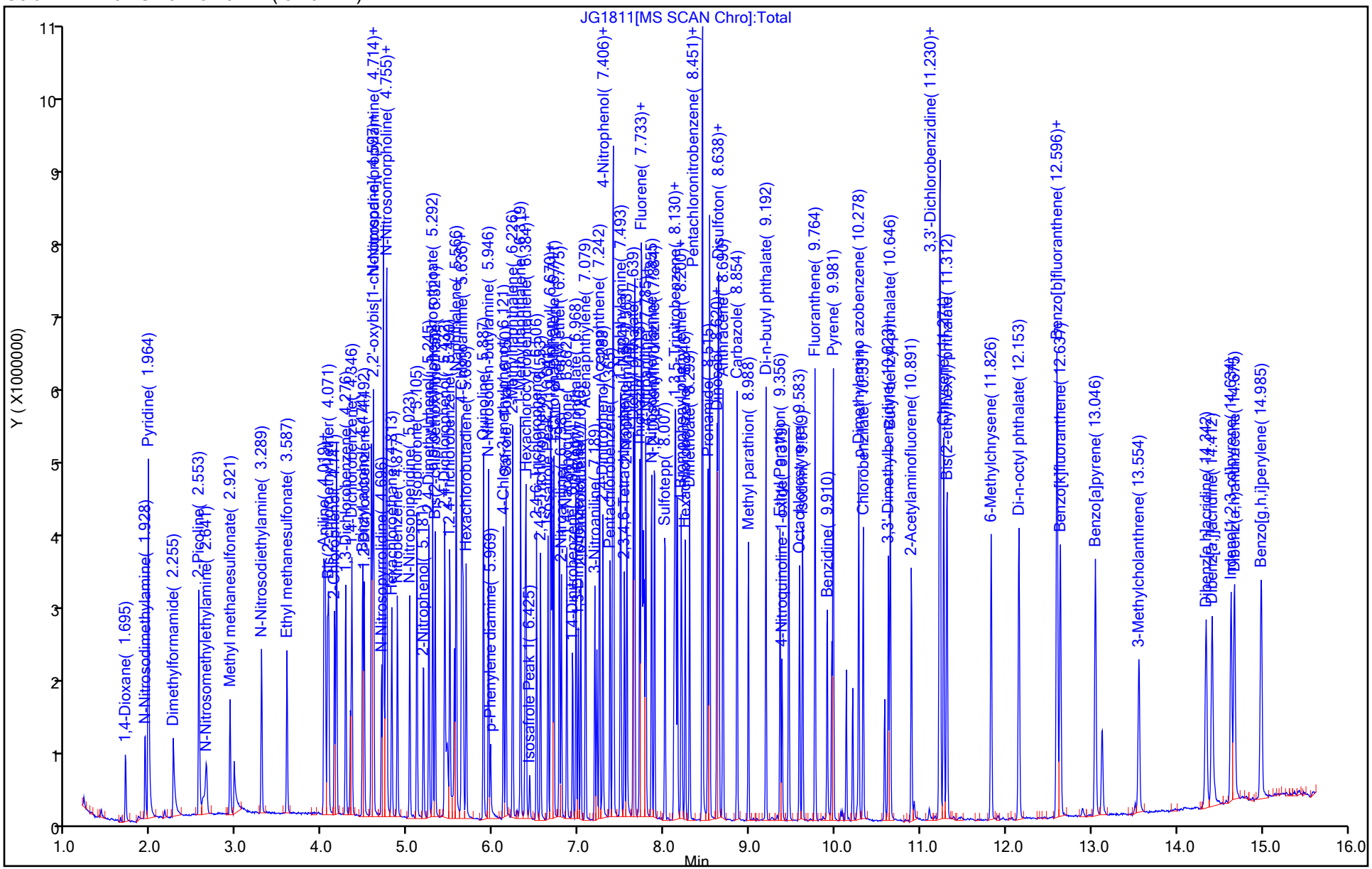
Report Date: 18-Jul-2023 15:33:47 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1811.D

Injection Date:	18-Jul-2023 11:17:30	Instrument ID:	HP23264	Operator ID:	kel10217
Lims ID:	ICV			Worklist Smp#:	12
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		

Column: DB-5MS 20m 0.25mm (0.25 mm)



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

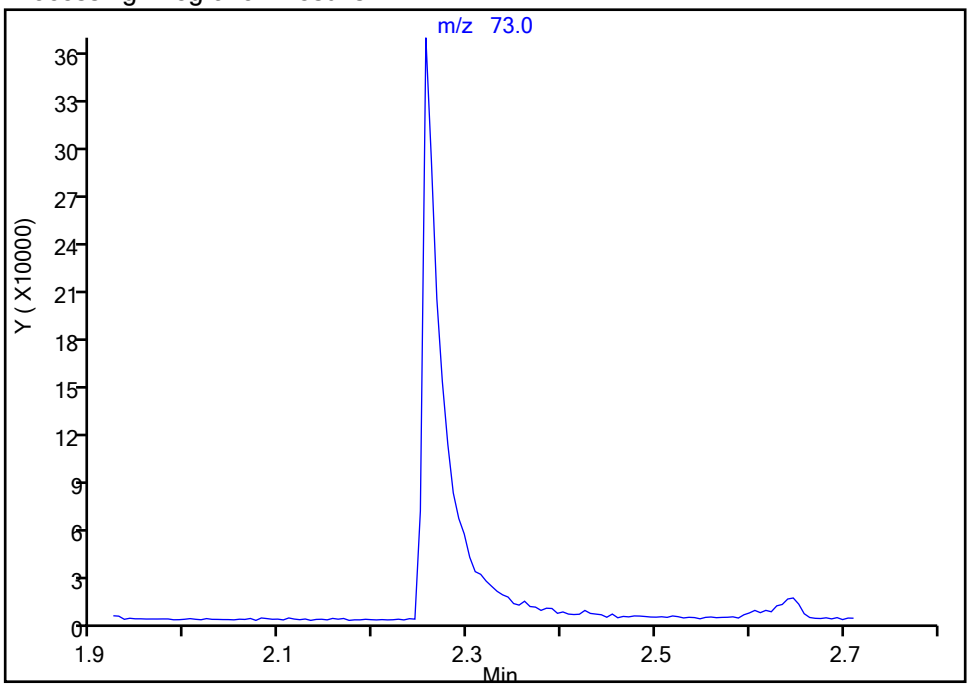
Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1811.D				
Injection Date:	18-Jul-2023 11:17:30	Instrument ID:	HP23264		
Lims ID:	ICV				
Client ID:					
Operator ID:	kel10217	ALS Bottle#:	11	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		
Column:	DB-5MS 20m 0.25mm (0.25 mm)	Detector	MS SCAN		

4 Dimethylformamide, CAS: 68-12-2

Signal: 1

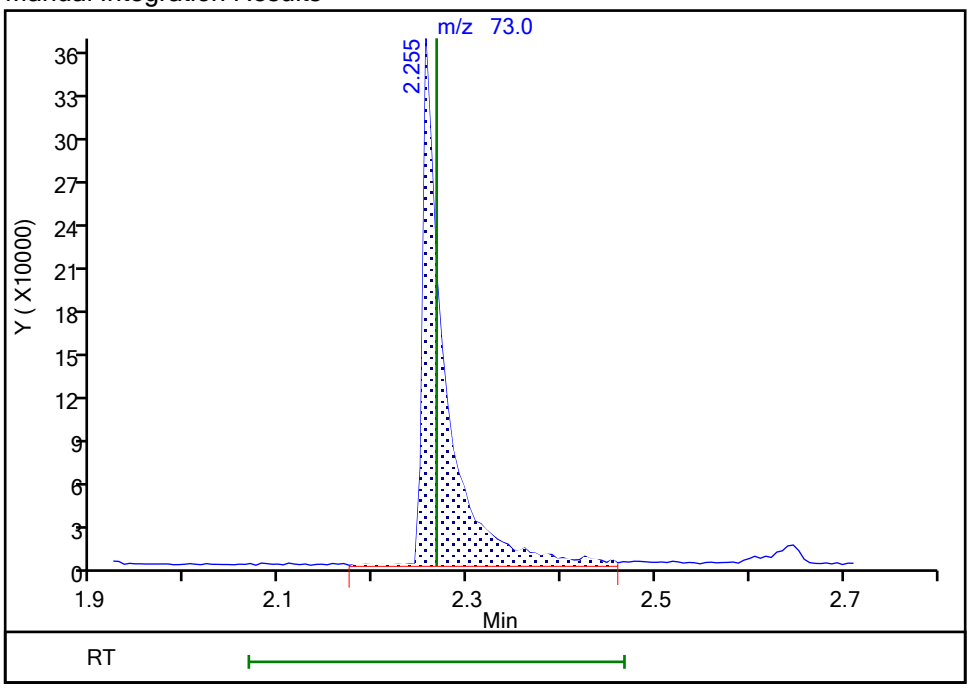
Not Detected
Expected RT: 2.27

Processing Integration Results



Manual Integration Results

RT: 2.26
Area: 592261
Amount: 19.612770
Amount Units: ug/ml



Reviewer: SJ89, 18-Jul-2023 15:00:12 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

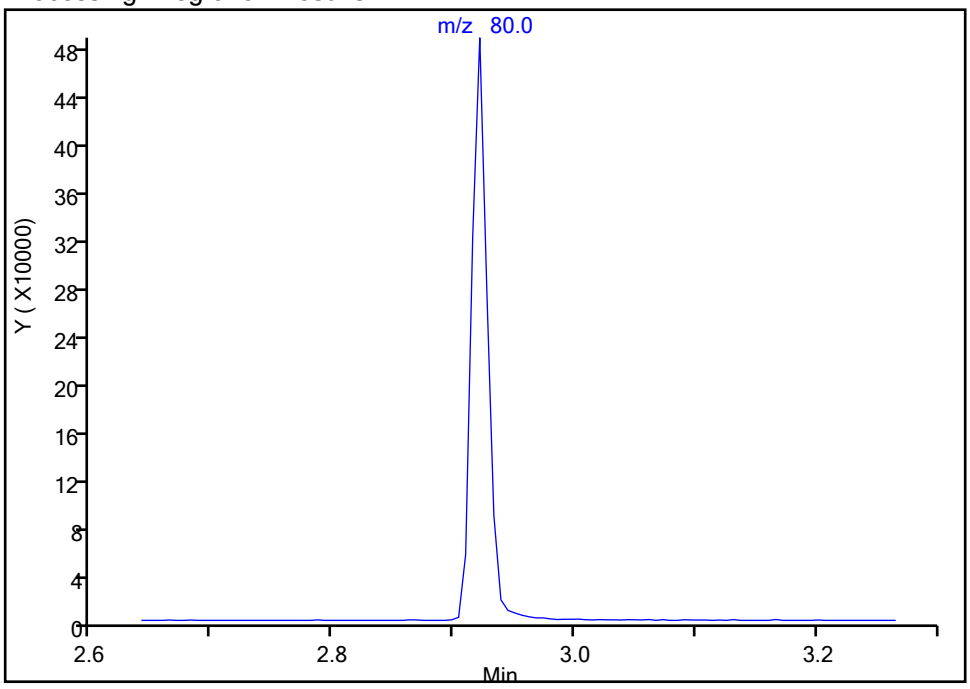
Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1811.D				
Injection Date:	18-Jul-2023 11:17:30	Instrument ID:	HP23264		
Lims ID:	ICV				
Client ID:					
Operator ID:	kel10217	ALS Bottle#:	11	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		
Column:	DB-5MS 20m 0.25mm (0.25 mm)	Detector	MS SCAN		

7 Methyl methanesulfonate, CAS: 66-27-3

Signal: 1

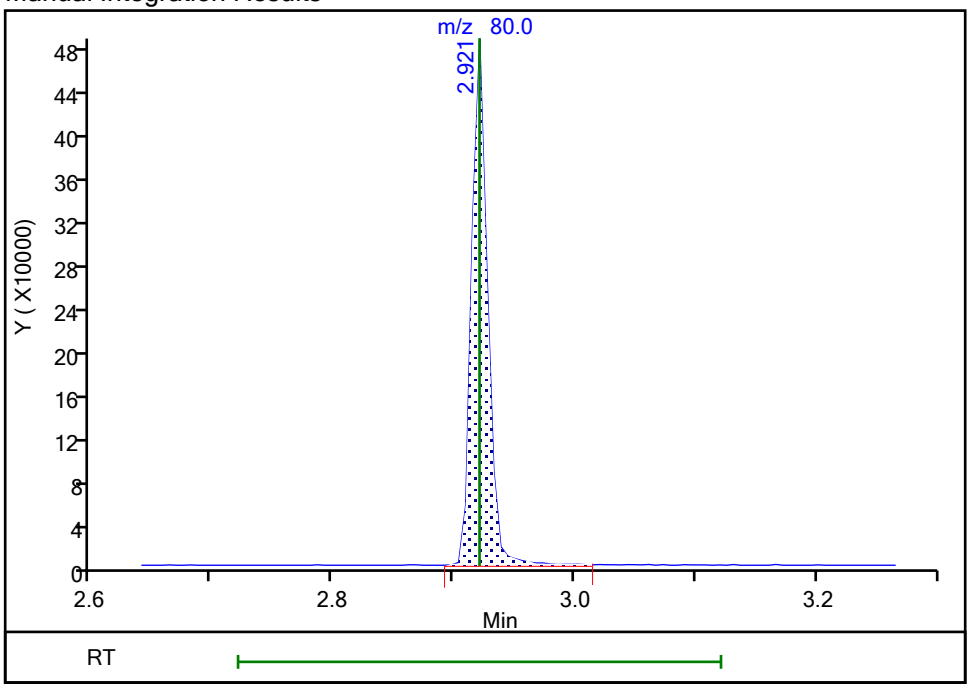
Not Detected
Expected RT: 2.92

Processing Integration Results



Manual Integration Results

RT: 2.92
Area: 448690
Amount: 18.494439
Amount Units: ug/ml



Reviewer: SJ89, 18-Jul-2023 15:00:17 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

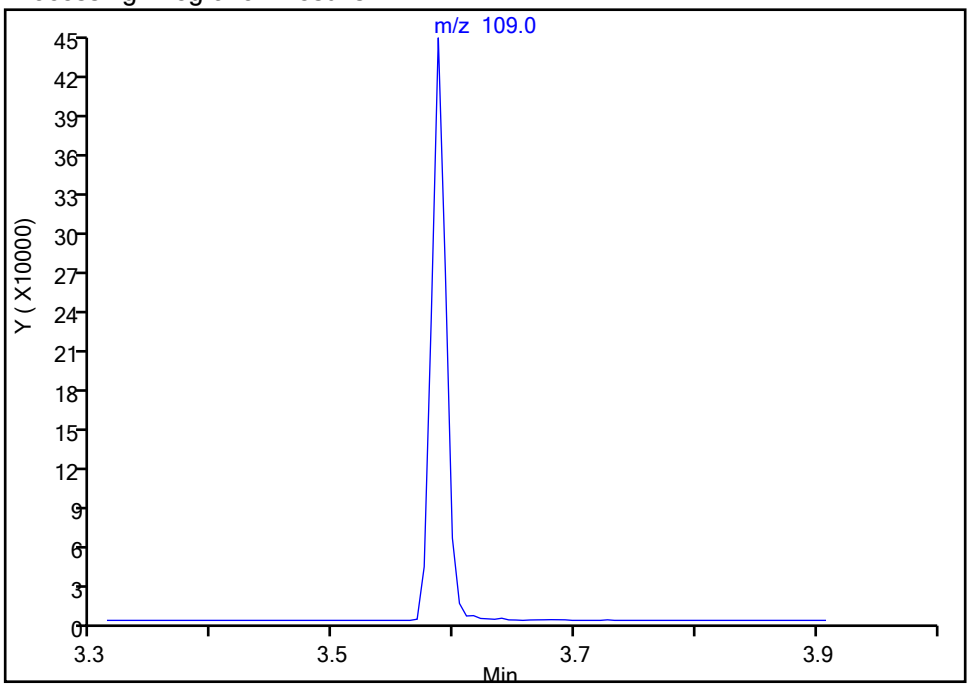
Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1811.D				
Injection Date:	18-Jul-2023 11:17:30	Instrument ID:	HP23264		
Lims ID:	ICV				
Client ID:					
Operator ID:	kel10217	ALS Bottle#:	11	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		
Column:	DB-5MS 20m 0.25mm (0.25 mm)	Detector	MS SCAN		

12 Ethyl methanesulfonate, CAS: 62-50-0

Signal: 1

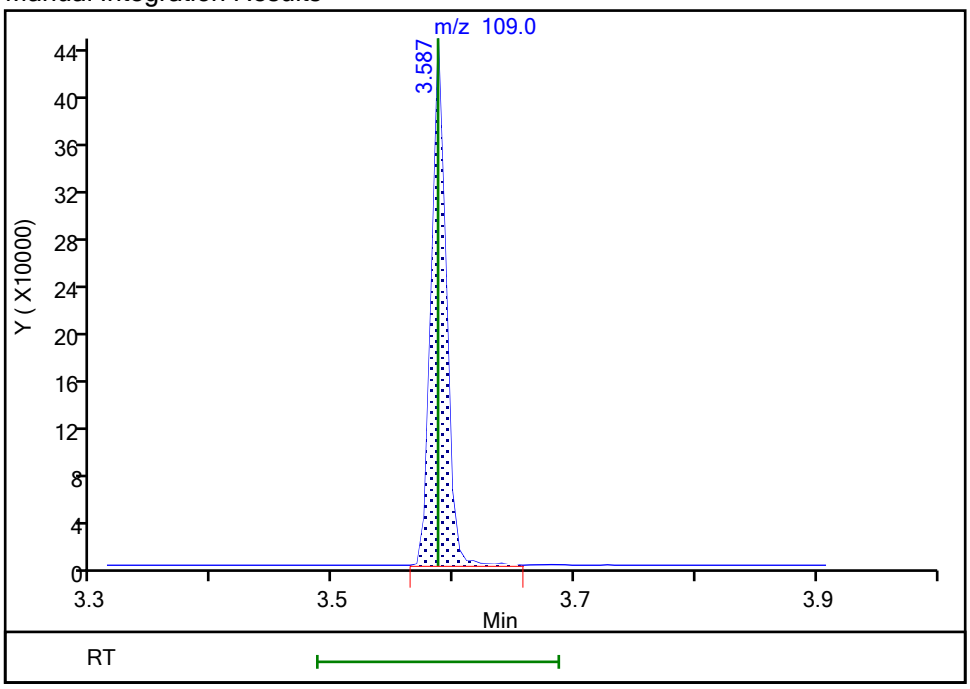
Not Detected
Expected RT: 3.59

Processing Integration Results



Manual Integration Results

RT: 3.59
Area: 379684
Amount: 18.723946
Amount Units: ug/ml



Reviewer: SJ89, 18-Jul-2023 15:00:21 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

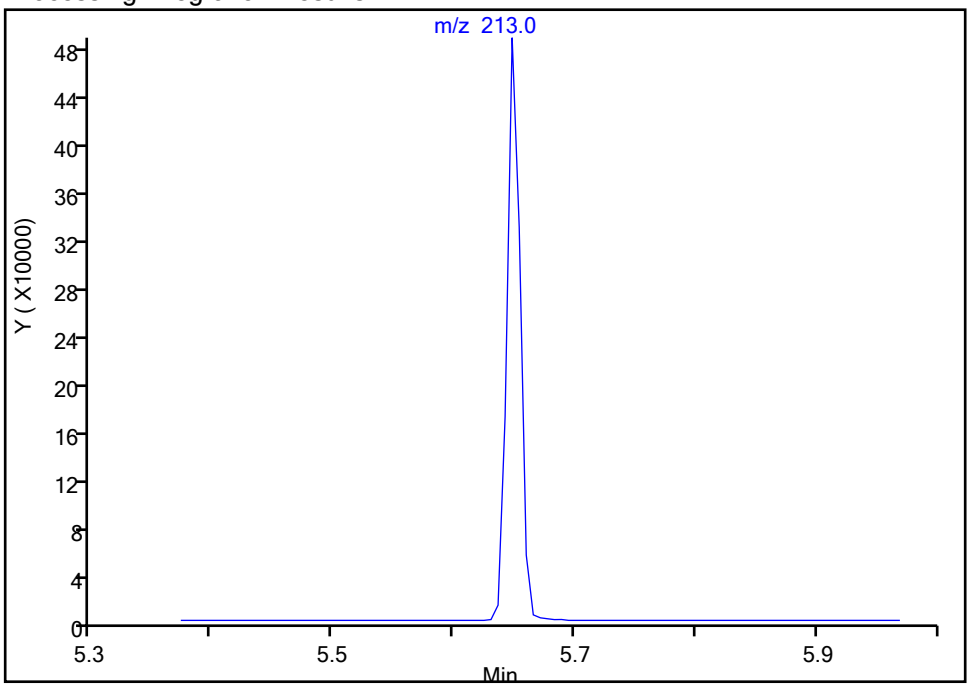
Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1811.D				
Injection Date:	18-Jul-2023 11:17:30	Instrument ID:	HP23264		
Lims ID:	ICV				
Client ID:					
Operator ID:	kel10217	ALS Bottle#:	11	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		
Column:	DB-5MS 20m 0.25mm (0.25 mm)	Detector	MS SCAN		

58 Hexachloropropene, CAS: 1888-71-7

Signal: 1

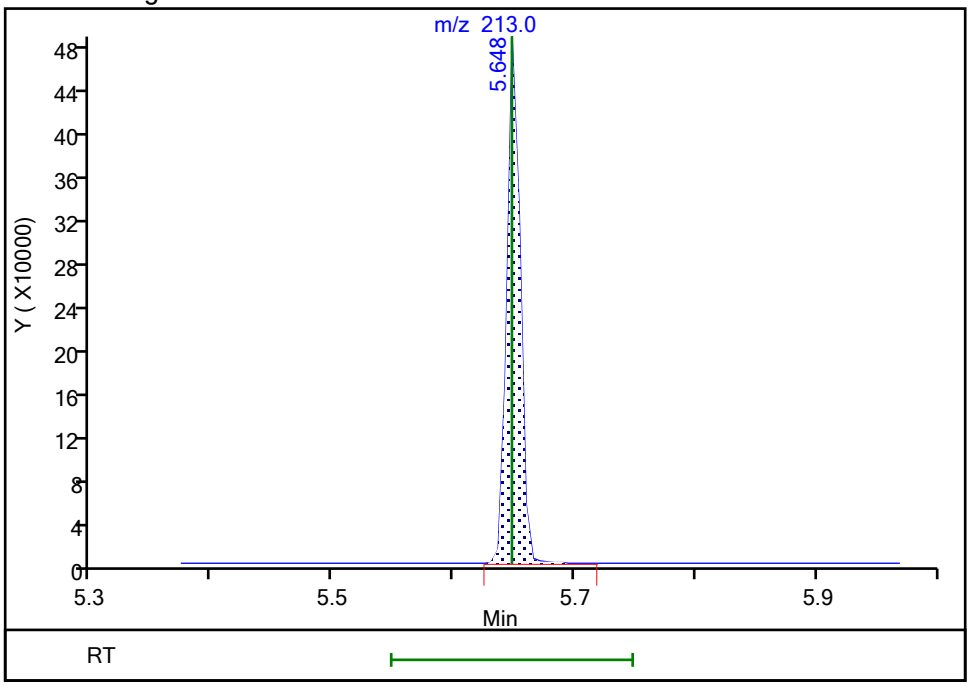
Not Detected
Expected RT: 5.65

Processing Integration Results



Manual Integration Results

RT: 5.65
Area: 370273
Amount: 19.982817
Amount Units: ug/ml



Reviewer: SJ89, 18-Jul-2023 15:00:56 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

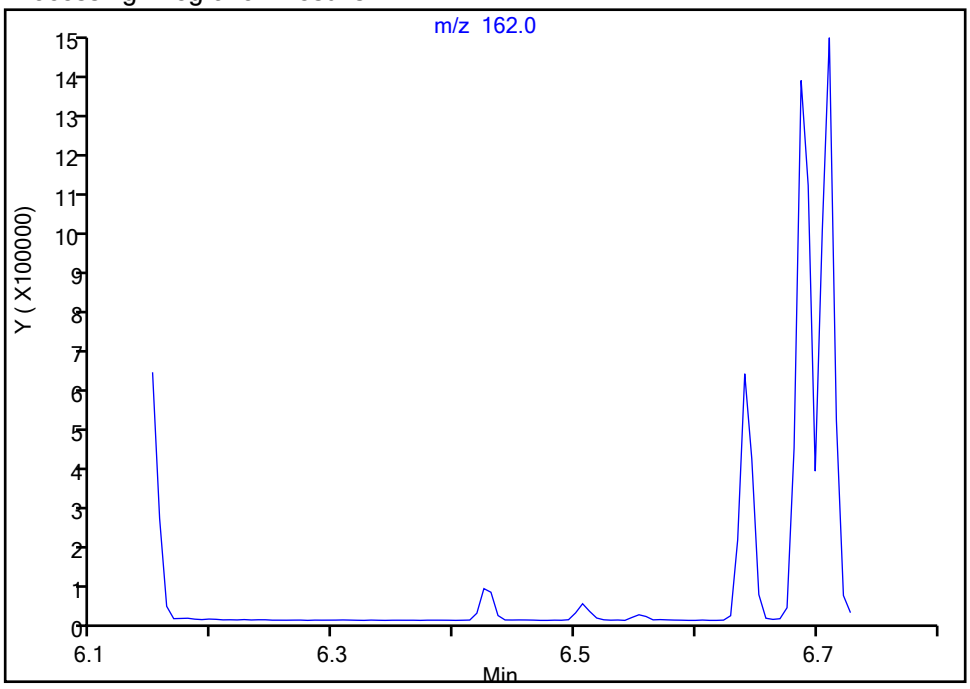
Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1811.D				
Injection Date:	18-Jul-2023 11:17:30	Instrument ID:	HP23264		
Lims ID:	ICV				
Client ID:					
Operator ID:	kel10217	ALS Bottle#:	11	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		
Column:	DB-5MS 20m 0.25mm (0.25 mm)	Detector	MS SCAN		

72 Isosafrole Peak 1, CAS: 120-58-1

Signal: 1

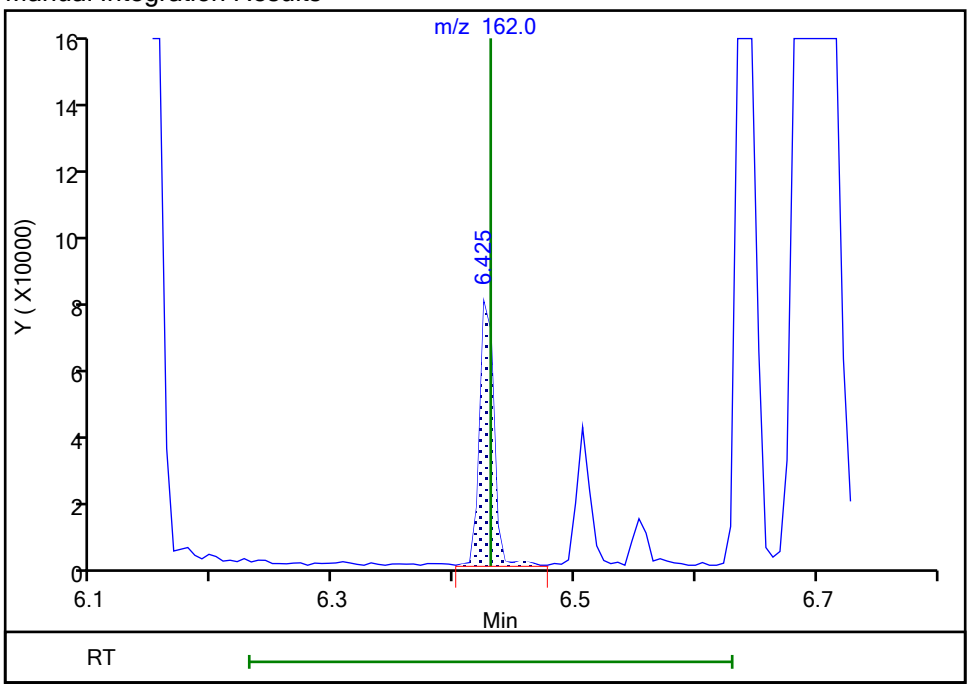
Not Detected
Expected RT: 6.43

Processing Integration Results



RT: 6.42
Area: 63229
Amount: 2.427403
Amount Units: ug/ml

Manual Integration Results



Reviewer: SJ89, 18-Jul-2023 15:01:31 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

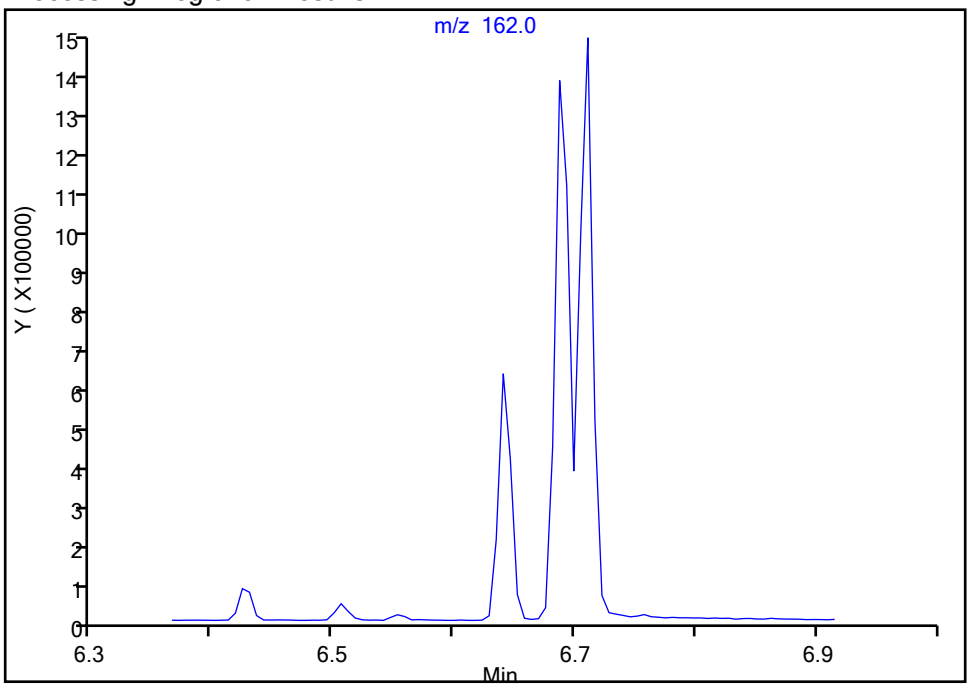
Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1811.D				
Injection Date:	18-Jul-2023 11:17:30	Instrument ID:	HP23264		
Lims ID:	ICV				
Client ID:					
Operator ID:	kel10217	ALS Bottle#:	11	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		
Column:	DB-5MS 20m 0.25mm (0.25 mm)	Detector	MS SCAN		

82 Isosafrole Peak 2, CAS: 120-58-1

Signal: 1

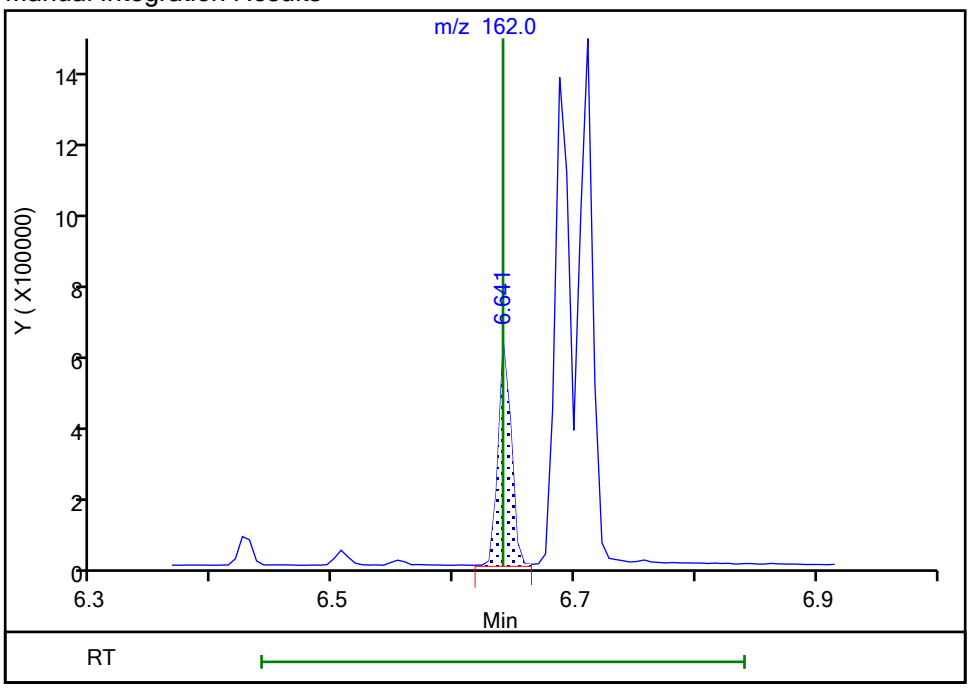
Not Detected
Expected RT: 6.64

Processing Integration Results



RT: 6.64
Area: 444024
Amount: 16.904079
Amount Units: ug/ml

Manual Integration Results



Reviewer: SJ89, 18-Jul-2023 15:01:39 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

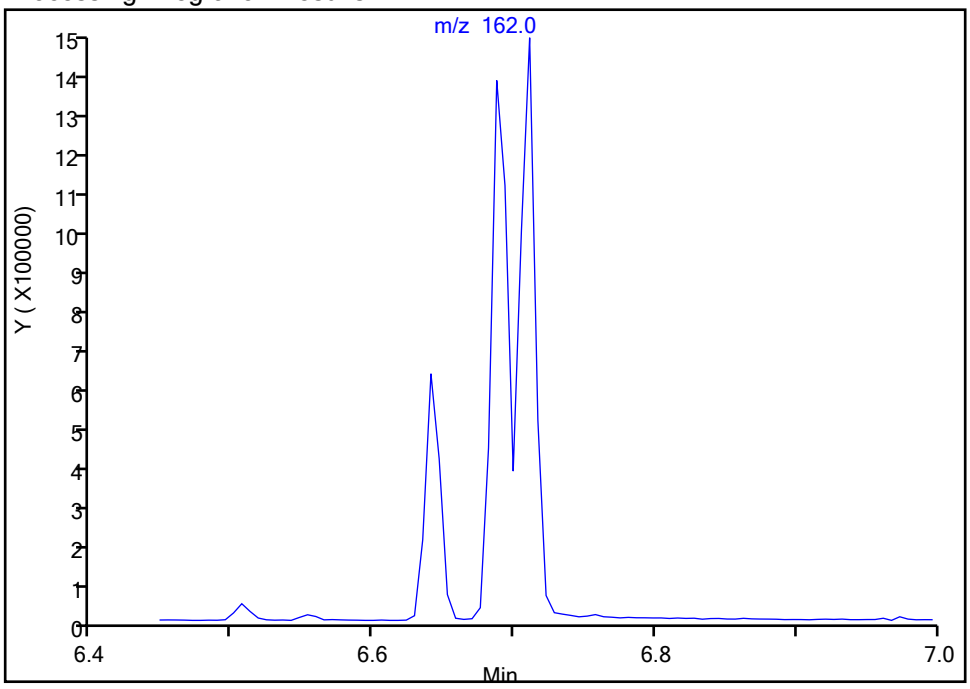
Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1811.D				
Injection Date:	18-Jul-2023 11:17:30	Instrument ID:	HP23264		
Lims ID:	ICV				
Client ID:					
Operator ID:	kel10217	ALS Bottle#:	11	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		
Column:	DB-5MS 20m 0.25mm (0.25 mm)	Detector	MS SCAN		

85 1-Chloronaphthalene, CAS: 90-13-1

Signal: 1

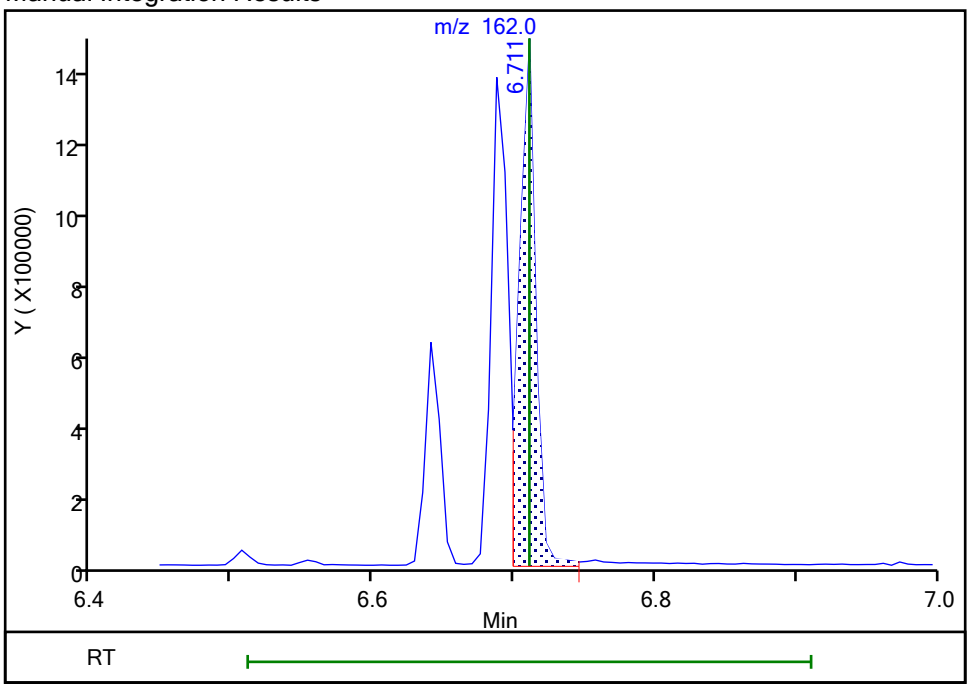
Not Detected
Expected RT: 6.71

Processing Integration Results



Manual Integration Results

RT: 6.71
Area: 1099757
Amount: 21.350267
Amount Units: ug/ml



Reviewer: SJ89, 18-Jul-2023 15:01:44 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

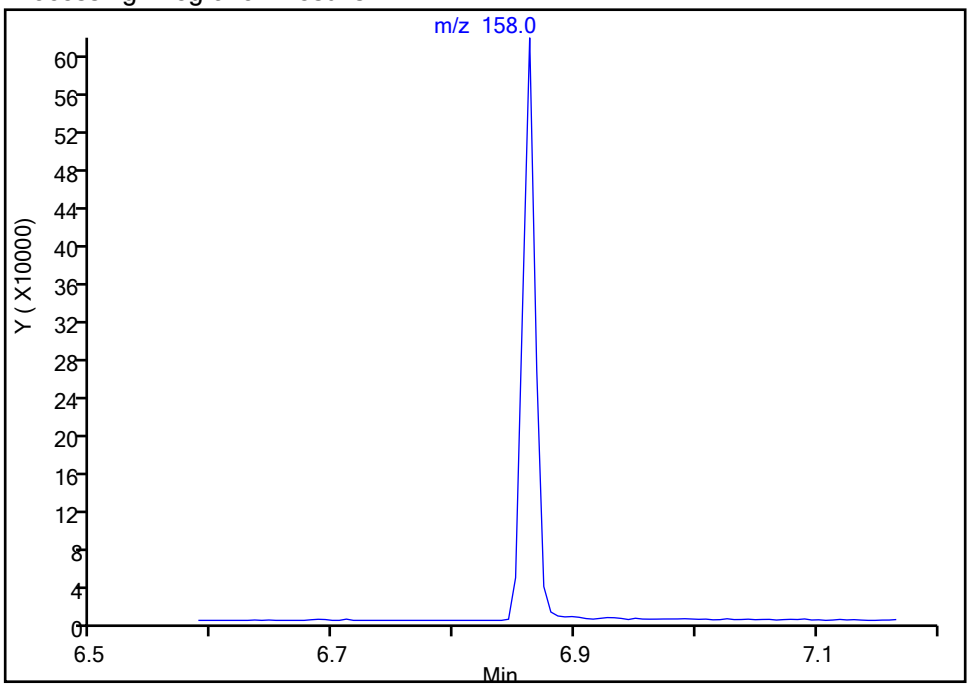
Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1811.D				
Injection Date:	18-Jul-2023 11:17:30	Instrument ID:	HP23264		
Lims ID:	ICV				
Client ID:					
Operator ID:	kel10217	ALS Bottle#:	11	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		
Column:	DB-5MS 20m 0.25mm (0.25 mm)	Detector	MS SCAN		

88 1,4-Naphthoquinone, CAS: 130-15-4

Signal: 1

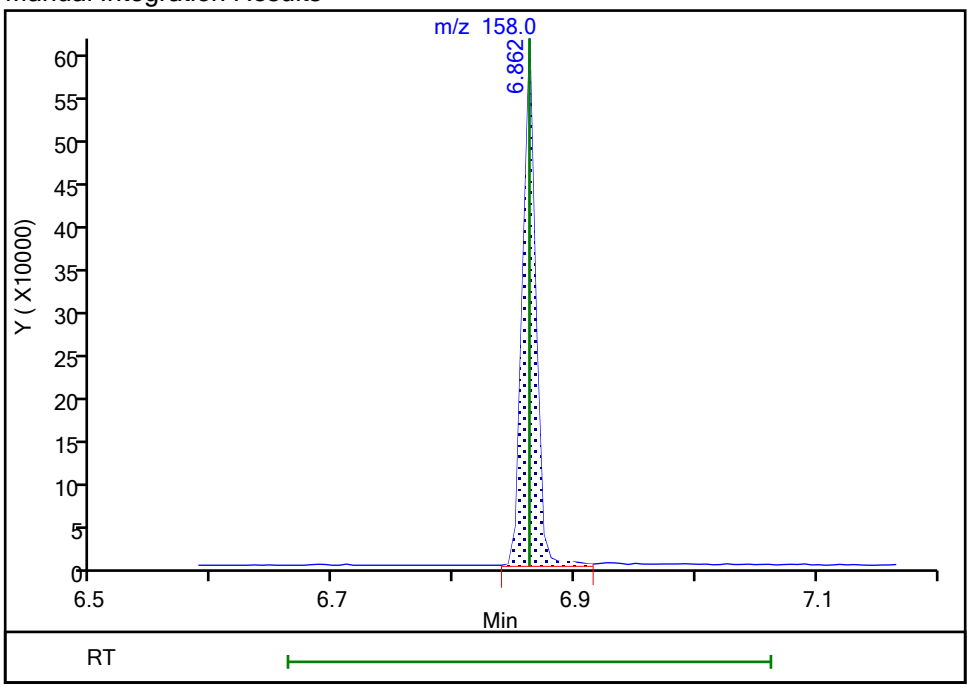
Not Detected
Expected RT: 6.86

Processing Integration Results



Manual Integration Results

RT: 6.86
Area: 462033
Amount: 21.753953
Amount Units: ug/ml



Reviewer: SJ89, 18-Jul-2023 15:01:51 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

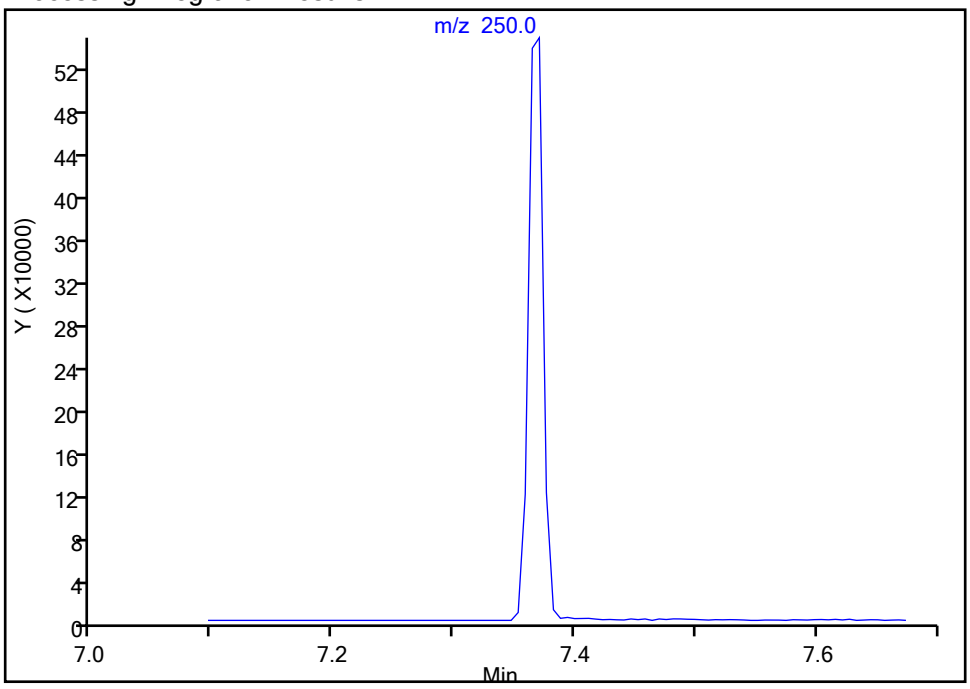
Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1811.D				
Injection Date:	18-Jul-2023 11:17:30	Instrument ID:	HP23264		
Lims ID:	ICV				
Client ID:					
Operator ID:	kel10217	ALS Bottle#:	11	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		
Column:	DB-5MS 20m 0.25mm (0.25 mm)	Detector	MS SCAN		

99 Pentachlorobenzene, CAS: 608-93-5

Signal: 1

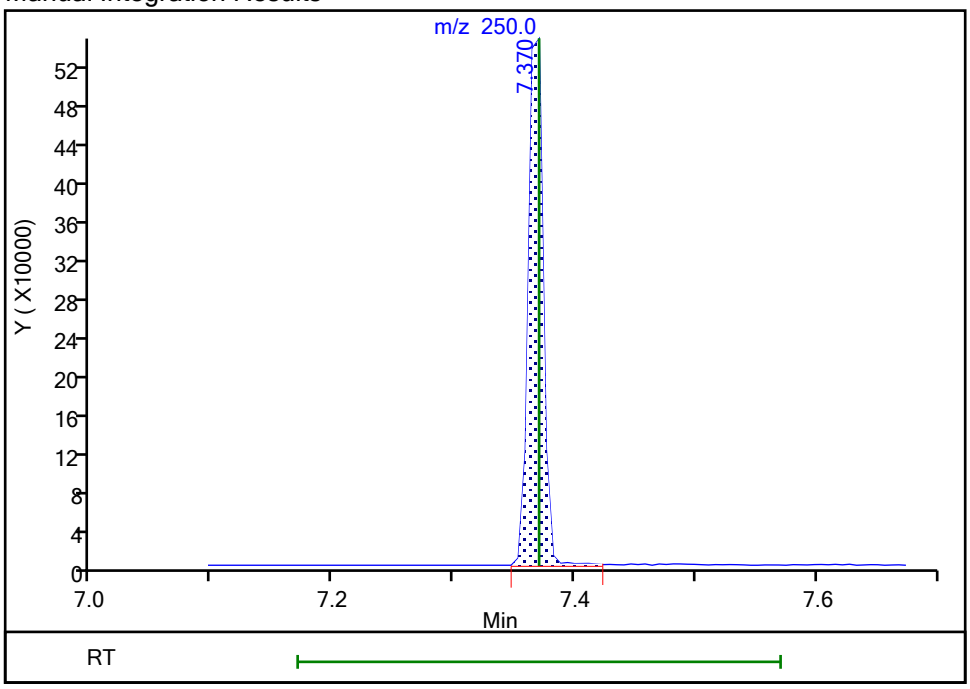
Not Detected
Expected RT: 7.37

Processing Integration Results



Manual Integration Results

RT: 7.37
Area: 474136
Amount: 20.341448
Amount Units: ug/ml



Reviewer: SJ89, 18-Jul-2023 15:02:01 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

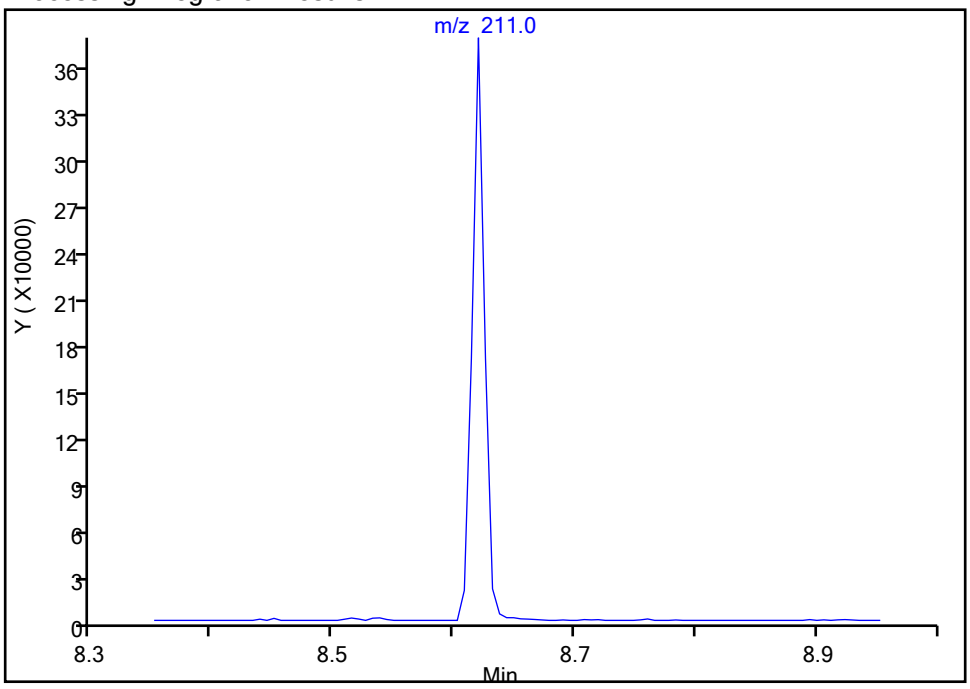
Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1811.D				
Injection Date:	18-Jul-2023 11:17:30	Instrument ID:	HP23264		
Lims ID:	ICV				
Client ID:					
Operator ID:	kel10217	ALS Bottle#:	11	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		
Column:	DB-5MS 20m 0.25mm (0.25 mm)	Detector	MS SCAN		

133 Dinoseb, CAS: 88-85-7

Signal: 1

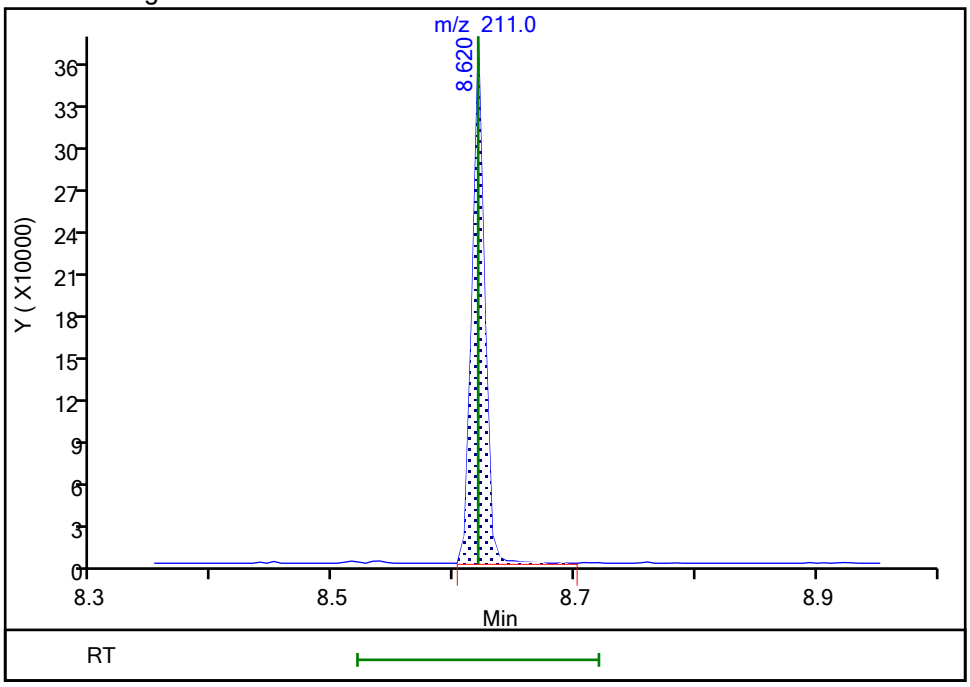
Not Detected
Expected RT: 8.62

Processing Integration Results



Manual Integration Results

RT: 8.62
Area: 265374
Amount: 19.877235
Amount Units: ug/ml



Reviewer: SJ89, 18-Jul-2023 15:02:26 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

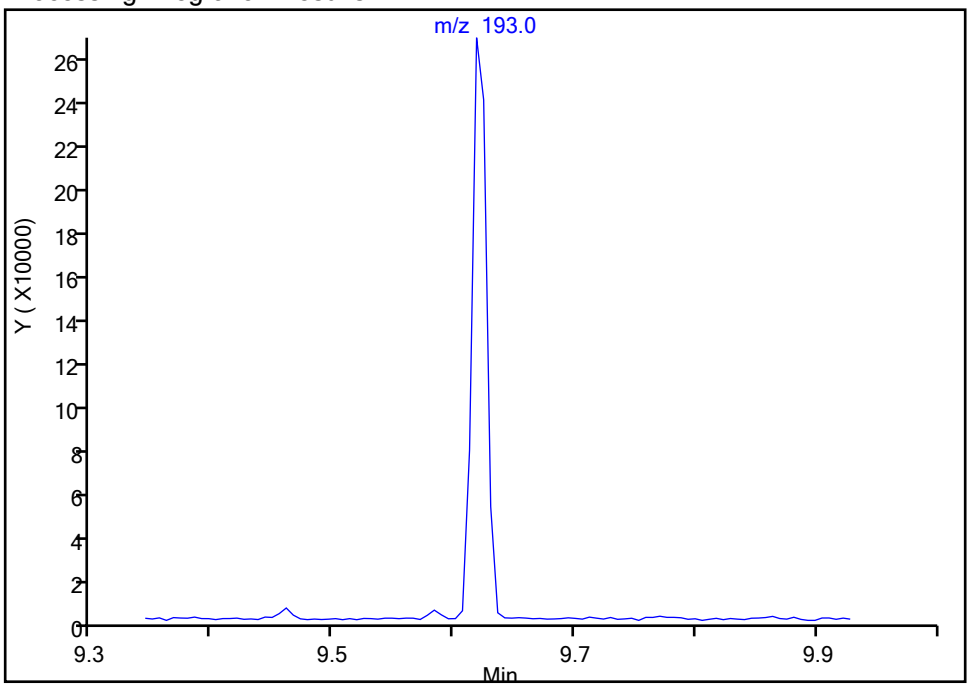
Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1811.D				
Injection Date:	18-Jul-2023 11:17:30	Instrument ID:	HP23264		
Lims ID:	ICV				
Client ID:					
Operator ID:	kel10217	ALS Bottle#:	11	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		
Column:	DB-5MS 20m 0.25mm (0.25 mm)	Detector	MS SCAN		

143 Isodrin, CAS: 465-73-6

Signal: 1

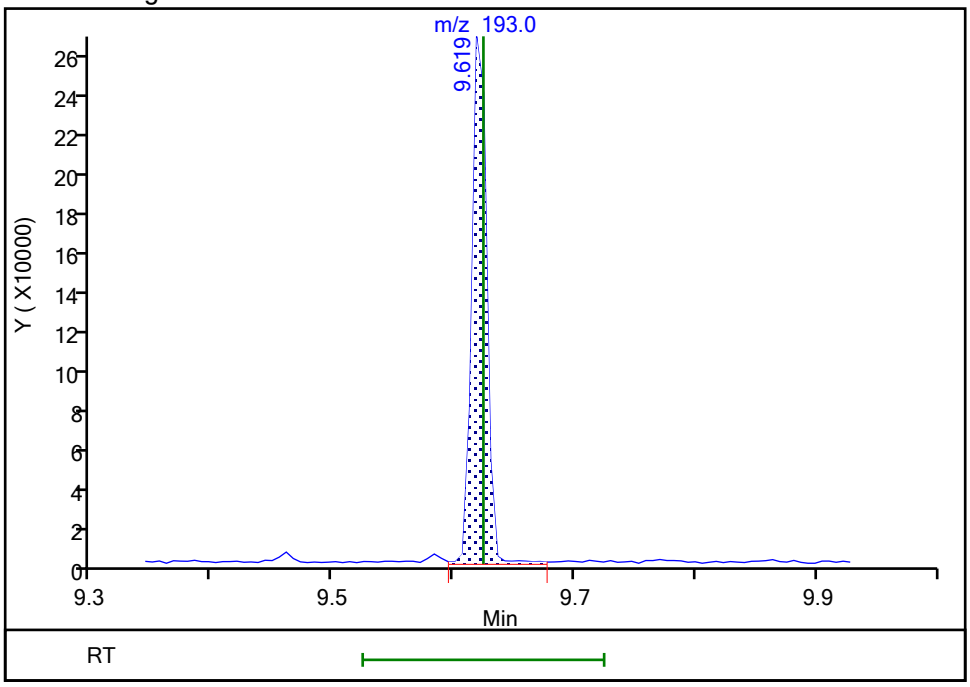
Not Detected
Expected RT: 9.62

Processing Integration Results



Manual Integration Results

RT: 9.62
Area: 222785
Amount: 19.059382
Amount Units: ug/ml



Reviewer: SJ89, 18-Jul-2023 15:02:35 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

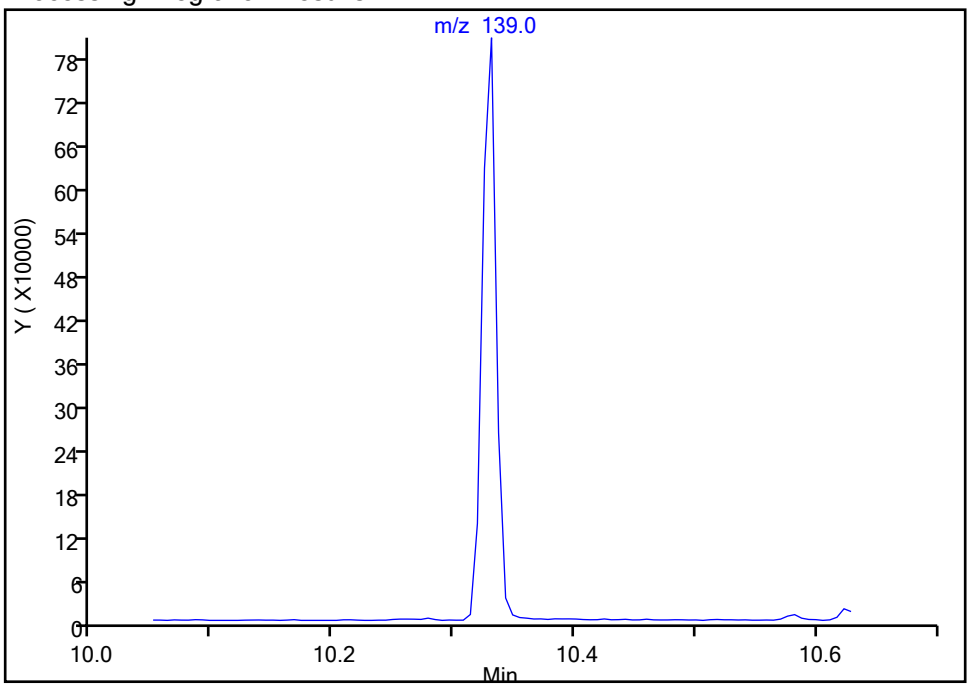
Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1811.D				
Injection Date:	18-Jul-2023 11:17:30	Instrument ID:	HP23264		
Lims ID:	ICV				
Client ID:					
Operator ID:	kel10217	ALS Bottle#:	11	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		
Column:	DB-5MS 20m 0.25mm (0.25 mm)	Detector	MS SCAN		

150 Chlorobenzilate, CAS: 510-15-6

Signal: 1

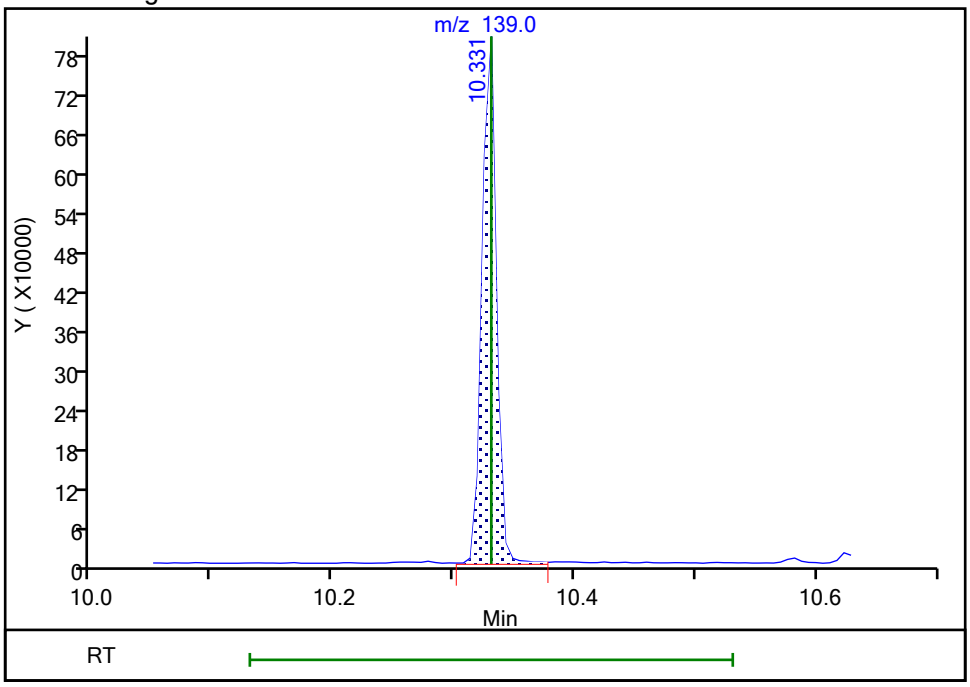
Not Detected
Expected RT: 10.33

Processing Integration Results



Manual Integration Results

RT: 10.33
Area: 661752
Amount: 19.027048
Amount Units: ug/ml



Reviewer: SJ89, 18-Jul-2023 15:02:41 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

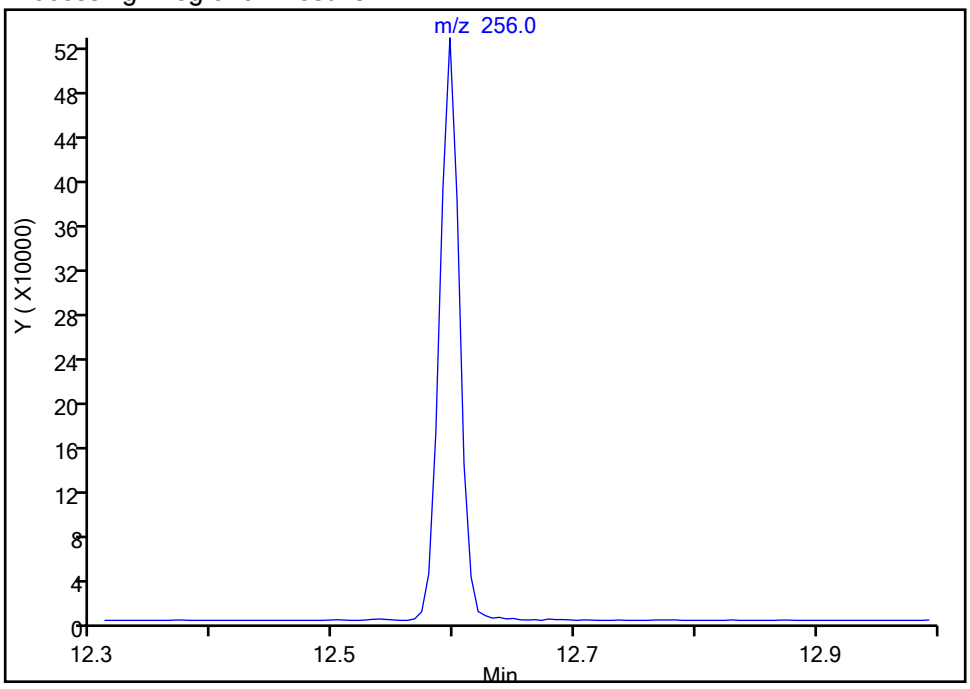
Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1811.D				
Injection Date:	18-Jul-2023 11:17:30	Instrument ID:	HP23264		
Lims ID:	ICV				
Client ID:					
Operator ID:	kel10217	ALS Bottle#:	11	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		
Column:	DB-5MS 20m 0.25mm (0.25 mm)	Detector	MS SCAN		

163 7,12-Dimethylbenz(a)anthracene, CAS: 57-97-6

Signal: 1

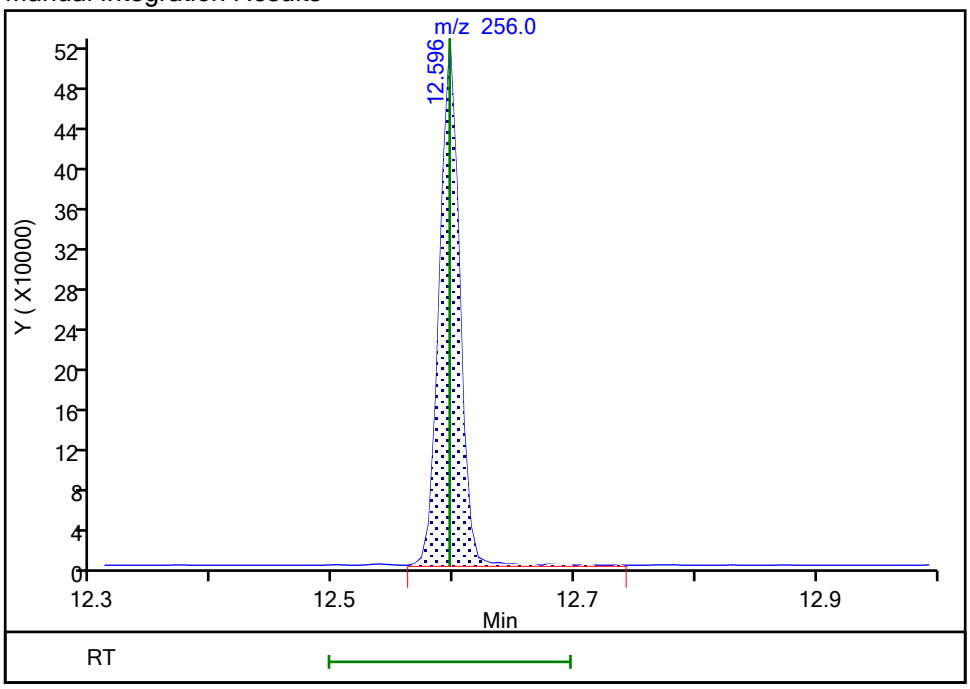
Not Detected
Expected RT: 12.60

Processing Integration Results



Manual Integration Results

RT: 12.60
Area: 599683
Amount: 20.595079
Amount Units: ug/ml



Reviewer: SJ89, 18-Jul-2023 15:02:51 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Lab Sample ID: CCVIS 410-403788/2 Calibration Date: 08/02/2023 20:32

Instrument ID: HP23264 Calib Start Date: 07/18/2023 07:41

GC Column: DB-5MS 30m 0.25 ID: 0.25(mm) Calib End Date: 07/18/2023 10:14

Lab File ID: JH0251.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.6104	0.5676		6.97	7.50	-7.0	20.0
N-Nitrosodimethylamine	Ave	0.9949	0.9666		7.29	7.50	-2.8	20.0
Pyridine	Ave	1.716	1.711		15.0	15.0	-0.3	20.0
N,N-dimethylformamide	Ave	1.225	1.204			7.50	-1.8	20.0
2-Picoline	Ave	1.665	1.629		7.34	7.50	-2.2	20.0
N-Nitrosomethylethylamine	Ave	0.8175	0.7583		6.96	7.50	-7.2	20.0
Methyl methanesulfonate	Ave	0.9846	0.9847		7.50	7.50	0.0	20.0
N-Nitrosodiethylamine	Ave	0.6642	0.6629		7.49	7.50	-0.2	20.0
Ethyl methanesulfonate	Ave	0.8229	0.7846		7.15	7.50	-4.7	20.0
Benzaldehyde	Ave	1.336	1.324	0.0100	7.43	7.50	-0.9	20.0
Phenol	Ave	2.313	2.199	0.8000	7.13	7.50	-4.9	20.0
Aniline	Ave	2.323	2.359		7.62	7.50	1.5	20.0
Bis(2-chloroethyl)ether	Ave	1.613	1.578	0.7000	7.34	7.50	-2.2	20.0
2-Chlorophenol	Ave	1.424	1.383	0.8000	7.29	7.50	-2.9	20.0
1,3-Dichlorobenzene	Ave	1.416	1.439		7.63	7.50	1.7	20.0
1,4-Dichlorobenzene	Ave	1.516	1.462		7.23	7.50	-3.6	20.0
Benzyl alcohol	Ave	0.9439	1.027		8.16	7.50	8.8	20.0
1,2-Dichlorobenzene	Ave	1.402	1.388		7.43	7.50	-1.0	20.0
2-Methylphenol	Ave	1.366	1.395	0.7000	7.66	7.50	2.1	20.0
2,2'-oxybis[1-chloropropane]	Ave	3.552	3.469	0.0100	7.32	7.50	-2.3	20.0
N-Nitrosopyrrolidine	Ave	0.8193	0.8621		7.89	7.50	5.2	20.0
Acetophenone	Ave	2.194	2.194	0.0100	7.50	7.50	0.0	20.0
N-Nitrosodi-n-propylamine	Ave	1.358	1.318	0.5000	7.28	7.50	-2.9	20.0
4-Methylphenol (and/or 3-Methylphenol)	Ave	1.581	1.651	0.6000	7.83	7.50	4.5	20.0
N-Nitrosomorpholine	Ave	1.260	1.292		7.69	7.50	2.5	20.0
o-Toluidine	Ave	2.376	2.313		7.30	7.50	-2.7	20.0
Hexachloroethane	Ave	0.6384	0.6410	0.3000	7.53	7.50	0.4	20.0
Nitrobenzene	Ave	0.4889	0.4684	0.2000	7.19	7.50	-4.2	20.0
N-Nitrosopiperidine	Ave	0.1972	0.1813		6.90	7.50	-8.0	20.0
Isophorone	Ave	0.8743	0.8859	0.4000	7.60	7.50	1.3	20.0
2-Nitrophenol	Ave	0.1806	0.1902	0.1000	7.90	7.50	5.3	20.0
2,4-Dimethylphenol	Ave	0.3690	0.3935	0.2000	8.00	7.50	6.6	20.0
o,o',o''-Triethylphosphorothioate	Ave	0.1420	0.1347		7.11	7.50	-5.1	20.0
Bis(2-chloroethoxy)methane	Ave	0.5277	0.5352	0.3000	7.61	7.50	1.4	20.0
2,4-Dichlorophenol	Ave	0.2755	0.2927	0.2000	7.97	7.50	6.2	20.0
1,2,4-Trichlorobenzene	Ave	0.3101	0.2963		7.17	7.50	-4.5	20.0
Naphthalene	Ave	1.076	1.089	0.7000	7.59	7.50	1.2	20.0
a-Terpineol	Ave	0.4727	0.4951		7.85	7.50	4.7	20.0
4-Chloroaniline	Ave	0.4545	0.4811	0.0100	7.94	7.50	5.9	20.0
2,6-Dichlorophenol	Ave	0.2724	0.2976		8.19	7.50	9.2	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Lab Sample ID: CCVIS 410-403788/2 Calibration Date: 08/02/2023 20:32

Instrument ID: HP23264 Calib Start Date: 07/18/2023 07:41

GC Column: DB-5MS 30m 0.25 ID: 0.25(mm) Calib End Date: 07/18/2023 10:14

Lab File ID: JH0251.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Hexachloropropene	Ave	0.1950	0.1965		7.56	7.50	0.8	20.0
Hexachlorobutadiene	Ave	0.1679	0.1752	0.0100	7.83	7.50	4.3	20.0
Quinoline	Ave	0.7388	0.7694		7.81	7.50	4.1	20.0
Caprolactam	Ave	0.0977	0.1074	0.0100	8.24	7.50	9.9	20.0
N-Nitrosodi-n-butylamine	Ave	0.4048	0.3993		7.40	7.50	-1.3	20.0
1,4-phenylenediamine	Ave	0.2402	0.1942			7.50	-19.2	20.0
4-Chloro-3-methylphenol	Ave	0.3400	0.3562	0.2000	7.86	7.50	4.8	20.0
Safrole, Total	Ave	0.2369	0.2394		7.58	7.50	1.0	20.0
2-Methylnaphthalene	Ave	0.6536	0.6552	0.4000	7.52	7.50	0.2	20.0
1-Methylnaphthalene	Ave	0.6266	0.6386		7.64	7.50	1.9	20.0
Hexachlorocyclopentadiene	Ave	0.3275	0.3404	0.0500	7.80	7.50	3.9	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.5919	0.6199	0.0100	7.86	7.50	4.7	20.0
Isosafrole Peak 1	Ave	0.5720	0.5560			1.20	-2.8	20.0
2,4,6-Trichlorophenol	Ave	0.3761	0.4087	0.2000	8.15	7.50	8.7	20.0
2,4,5-Trichlorophenol	Ave	0.4143	0.4537	0.2000	8.21	7.50	9.5	20.0
Isosafrole Peak 2	Ave	0.5768	0.6326		6.91	6.30	9.7	20.0
1,1'-Biphenyl	Ave	1.555	1.558	0.0100	7.52	7.50	0.2	20.0
2-Chloronaphthalene	Ave	1.178	1.136	0.8000	7.23	7.50	-3.6	20.0
1-Chloronaphthalene	Ave	1.131	1.223		8.11	7.50	8.1	20.0
Diphenyl ether	Ave	0.8270	0.8484		7.69	7.50	2.6	20.0
2-Nitroaniline	Ave	0.4152	0.4573	0.0100	8.26	7.50	10.1	20.0
1,4-Naphthoquinone	Ave	0.4664	0.5338			7.50	14.5	20.0
1,4-Dinitrobenzene	Ave	0.1845	0.1987		8.08	7.50	7.7	20.0
Dimethyl phthalate	Ave	1.395	1.483	0.0100	7.98	7.50	6.4	20.0
1,3-Dinitrobenzene	Ave	0.2150	0.2299		8.02	7.50	6.9	20.0
2,6-Dinitrotoluene	Ave	0.2932	0.3128	0.2000	8.00	7.50	6.7	20.0
Acenaphthylene	Ave	2.033	2.125	0.9000	7.84	7.50	4.6	20.0
3-Nitroaniline	Ave	0.3605	0.4079	0.0100	8.49	7.50	13.1	20.0
Acenaphthene	Ave	1.317	1.312	0.9000	7.47	7.50	-0.3	20.0
2,4-Dinitrophenol	Ave	0.1856	0.1858	0.0100	17.5	17.5	0.1	20.0
Pentachlorobenzene	Ave	0.5118	0.5771		8.46	7.50	12.7	20.0
4-Nitrophenol	Ave	0.2191	0.2552	0.0100	17.5	15.0	16.5	20.0
2,4-Dinitrotoluene	Ave	0.3981	0.4493	0.2000	8.46	7.50	12.8	20.0
Dibenzofuran	Ave	1.776	1.906	0.8000	8.05	7.50	7.3	20.0
1-Naphthylamine	Ave	1.195	1.224		7.68	7.50	2.4	20.0
2,3,4,6-Tetrachlorophenol	Ave	0.3633	0.3818	0.0100	7.88	7.50	5.1	20.0
2-Naphthylamine	Ave	1.240	1.348		8.16	7.50	8.8	20.0
Diethyl phthalate	Ave	1.503	1.546	0.0100	7.71	7.50	2.9	20.0
Thionazin	Ave	0.2662	0.2655		7.48	7.50	-0.3	20.0
Fluorene	Ave	1.399	1.426	0.9000	7.65	7.50	2.0	20.0
4-Chlorophenyl-phenyl ether	Ave	0.6258	0.6395	0.4000	7.66	7.50	2.2	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Lab Sample ID: CCVIS 410-403788/2 Calibration Date: 08/02/2023 20:32

Instrument ID: HP23264 Calib Start Date: 07/18/2023 07:41

GC Column: DB-5MS 30m 0.25 ID: 0.25(mm) Calib End Date: 07/18/2023 10:14

Lab File ID: JH0251.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
5-Nitro-o-toluidine	Ave	0.3937	0.4415		8.41	7.50	12.1	20.0
4-Nitroaniline	Ave	0.3585	0.3932	0.0100	8.23	7.50	9.7	20.0
4,6-Dinitro-2-methylphenol	Ave	0.1166	0.1228	0.0100	15.8	15.0	5.3	20.0
N-Nitrosodiphenylamine	Ave	0.6091	0.6317	0.0100	6.61	6.38	3.7	20.0
1,2-Diphenylhydrazine	Ave	1.022	1.047		7.69	7.50	2.5	20.0
Sulfotepp	Ave	0.1678	0.1669		7.46	7.50	-0.5	20.0
1,3,5-Trinitrobenzene	Ave	0.0616	0.0634			7.50	2.9	20.0
cis-Diallate	Ave	0.4078	0.3819		5.20	5.55	-6.4	20.0
Phorate	Ave	0.5990	0.6313		7.90	7.50	5.4	20.0
Phenacetin	Ave	0.4090	0.4713		8.64	7.50	15.2	20.0
4-Bromophenyl-phenylether	Ave	0.1972	0.2012	0.1000	7.65	7.50	2.1	20.0
trans-Diallate	Ave	0.3898	0.3974		1.99	1.95	1.9	20.0
Hexachlorobenzene	Ave	0.2340	0.2375	0.1000	7.61	7.50	1.5	20.0
Dimethoate	Ave	0.3793	0.3941		7.79	7.50	3.9	20.0
Atrazine	Ave	0.1786	0.1936	0.0100	8.13	7.50	8.4	20.0
Pentachlorophenol	Ave	0.1110	0.1250	0.0500	16.9	15.0	12.6	20.0
4-Aminobiphenyl	Ave	0.8013	0.8405		7.87	7.50	4.9	20.0
Pentachloronitrobenzene	Ave	0.1002	0.1004		7.51	7.50	0.2	20.0
Pronamide	Ave	0.3372	0.3619		8.05	7.50	7.3	20.0
Dinoseb	Ave	0.1593	0.1589		7.48	7.50	-0.2	20.0
Disulfoton	Ave	0.6498	0.6092			7.50	-6.2	20.0
Phenanthrene	Ave	1.054	1.039	0.7000	7.39	7.50	-1.5	20.0
Anthracene	Ave	1.050	1.014	0.7000	7.24	7.50	-3.5	20.0
Carbazole	Ave	1.037	1.125	0.0100	8.14	7.50	8.5	20.0
Methyl parathion	Ave	0.2776	0.2938		7.94	7.50	5.8	20.0
Di-n-butyl phthalate	Ave	1.334	1.374	0.0100	7.72	7.50	3.0	20.0
Parathion	Ave	0.1642	0.1880		8.59	7.50	14.5	20.0
4-Nitroquinoline-1-oxide	Ave	0.0716	0.0564			7.50	-21.2*	20.0
Octachlorostyrene	Ave	0.0871	0.0841		7.24	7.50	-3.4	20.0
Isodrin	Ave	0.1394	0.1287		6.92	7.50	-7.7	20.0
Fluoranthene	Ave	1.116	1.127	0.6000	7.57	7.50	1.0	20.0
Benzidine	Ave	0.7062	0.7138		22.7	22.5	1.1	20.0
Pyrene	Ave	1.283	1.255	0.6000	7.34	7.50	-2.1	20.0
p-Dimethylamino azobenzene	Ave	0.1687	0.1741		7.74	7.50	3.2	20.0
Chlorobenzilate	Ave	0.4062	0.4391		8.11	7.50	8.1	20.0
3,3'-Dimethylbenzidine	Ave	0.5689	0.6172			7.50	8.5	20.0
Butylbenzylphthalate	Ave	0.5841	0.6714	0.0100	8.62	7.50	14.9	20.0
2-Acetylaminofluorene	Ave	0.3872	0.3583		6.94	7.50	-7.5	20.0
3,3'-Dichlorobenzidine	Ave	0.3581	0.3851	0.0100	8.07	7.50	7.6	20.0
4,4'-Methylene bis(2-chloroaniline)	Ave	0.1840	0.1994			7.50	8.4	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Lab Sample ID: CCVIS 410-403788/2 Calibration Date: 08/02/2023 20:32

Instrument ID: HP23264 Calib Start Date: 07/18/2023 07:41

GC Column: DB-5MS 30m 0.25 ID: 0.25(mm) Calib End Date: 07/18/2023 10:14

Lab File ID: JH0251.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzo[a]anthracene	Ave	0.9482	1.072	0.8000	8.48	7.50	13.0	20.0
Chrysene	Ave	0.9376	0.9911	0.7000	7.93	7.50	5.7	20.0
Bis(2-ethylhexyl) phthalate	Ave	0.7928	0.8511	0.0100	8.05	7.50	7.4	20.0
6-Methylchrysene	Ave	0.6431	0.6666		7.77	7.50	3.6	20.0
Di-n-octyl phthalate	Ave	1.788	1.871	0.0100	7.85	7.50	4.7	20.0
7,12-Dimethylbenz(a)anthrace ne	Ave	0.4631	0.4959		8.03	7.50	7.1	20.0
Benzo[b]fluoranthene	Ave	1.250	1.263	0.7000	7.58	7.50	1.0	20.0
Benzo[k]fluoranthene	Ave	1.272	1.290	0.7000	7.61	7.50	1.4	20.0
Benzo[a]pyrene	Ave	1.064	1.102	0.7000	7.77	7.50	3.6	20.0
3-Methylcholanthrene	Ave	0.4678	0.4377		7.02	7.50	-6.4	20.0
Dibenz[a,h]acridine	Ave	0.8816	0.7077		6.02	7.50	-19.7	20.0
Dibenz[a,j]acridine	Ave	0.999	0.8144		6.11	7.50	-18.5	20.0
Indeno[1,2,3-cd]pyrene	Ave	1.014	0.8551	0.5000	6.32	7.50	-15.7	20.0
Dibenz(a,h)anthracene	Ave	1.121	0.9029	0.4000	6.04	7.50	-19.5	20.0
Benzo[g,h,i]perylene	Ave	1.192	1.035	0.5000	6.51	7.50	-13.2	20.0
2-Fluorophenol (Surr)	Ave	1.537	1.545		15.1	15.0	0.5	20.0
Phenol-d5 (Surr)	Ave	2.203	2.326		15.8	15.0	5.6	20.0
Nitrobenzene-d5 (Surr)	Ave	0.5352	0.5422		15.2	15.0	1.3	20.0
2-Fluorobiphenyl (Surr)	Ave	1.587	1.611		15.2	15.0	1.5	20.0
2,4,6-Tribromophenol (Surr)	Ave	0.2368	0.2678		17.0	15.0	13.1	20.0
p-Terphenyl-d14 (Surr)	Ave	0.8865	0.9746		16.5	15.0	9.9	20.0

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0251.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 02-Aug-2023 20:32:30 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCVIS
Operator ID: mem41592 Instrument ID: HP23264
Sublist: chrom-MSSemi_HP23264*sub27

Method: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\MSSemi_HP23264.m
Limit Group: MSSV - 8270D_E LVI
Last Update: 02-Aug-2023 22:19:31 Calib Date: 02-Aug-2023 21:45:30
Integrator: Falcon ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0254.D

Column 1 : DB-5MS 20m 0.25mm (0.25 mm) Det: MS SCAN
Process Host: CTX1634

First Level Reviewer: P7EB Date: 02-Aug-2023 20:57:24

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 1,4-Dioxane	88	1.701	1.701	0.000	94	164668	7.50	6.97	
2 N-Nitrosodimethylamine	74	1.928	1.928	0.000	89	280438	7.50	7.29	
3 Pyridine	79	1.969	1.969	0.000	82	992911	15.0	15.0	
4 Dimethylformamide	73	2.267	2.267	0.000	94	349285	7.50	7.37	
5 2-Picoline	93	2.553	2.553	0.000	93	472529	7.50	7.34	
6 N-Nitrosomethylethylamine	88	2.641	2.641	0.000	94	219997	7.50	6.96	
7 Methyl methanesulfonate	80	2.915	2.915	0.000	86	285693	7.50	7.50	
$ 9 2-Fluorophenol	112	3.090	3.090	0.000	96	896384	15.0	15.1	
11 N-Nitrosodiethylamine	102	3.283	3.283	0.000	88	192328	7.50	7.49	
12 Ethyl methanesulfonate	109	3.581	3.581	0.000	95	227643	7.50	7.15	
13 Benzaldehyde	77	3.908	3.908	0.000	91	384107	7.50	7.43	
$ 15 Phenol-d5	99	3.990	3.990	0.000	95	1349940	15.0	15.8	
16 Phenol	94	4.001	4.001	0.000	95	638107	7.50	7.13	
17 Aniline	93	4.013	4.013	0.000	91	684436	7.50	7.62	
18 Bis(2-chloroethyl)ether	93	4.071	4.071	0.000	85	457807	7.50	7.34	
19 2-Chlorophenol	128	4.130	4.130	0.000	94	401246	7.50	7.29	
21 1,3-Dichlorobenzene	146	4.270	4.270	0.000	95	417614	7.50	7.63	
* 22 1,4-Dichlorobenzene-d4	152	4.328	4.328	0.000	96	193417	5.00	5.00	
23 1,4-Dichlorobenzene	146	4.340	4.340	0.000	89	424106	7.50	7.23	
26 Benzyl alcohol	108	4.463	4.463	0.000	90	297941	7.50	8.16	
27 1,2-Dichlorobenzene	146	4.486	4.486	0.000	94	402797	7.50	7.43	
29 2-Methylphenol	108	4.579	4.579	0.000	96	404711	7.50	7.66	
30 2,2'-oxybis[1-chloropropane]	45	4.585	4.585	0.000	92	1006482	7.50	7.32	
31 N-Nitrosopyrrolidine	100	4.690	4.690	0.000	82	250106	7.50	7.89	
33 N-Nitrosodi-n-propylamine	70	4.708	4.708	0.000	91	382482	7.50	7.28	
32 Acetophenone	105	4.708	4.708	0.000	87	636638	7.50	7.50	
35 N-Nitrosomorpholine	56	4.731	4.731	0.000	92	374751	7.50	7.69	
34 4-Methylphenol	108	4.731	4.731	0.000	94	479098	7.50	7.83	
36 2-Toluidine	106	4.743	4.743	0.000	96	671038	7.50	7.30	
37 Hexachloroethane	117	4.807	4.807	0.000	96	185960	7.50	7.53	
$ 39 Nitrobenzene-d5	82	4.854	4.854	0.000	93	1226418	15.0	15.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
40 Nitrobenzene	77	4.871	4.871	0.000	94	529777	7.50	7.19	
41 N-Nitrosopiperidine	114	5.017	5.017	0.000	78	205094	7.50	6.90	
42 Isophorone	82	5.099	5.099	0.000	98	1001941	7.50	7.60	
43 2-Nitrophenol	139	5.181	5.181	0.000	90	215056	7.50	7.90	
44 2,4-Dimethylphenol	107	5.233	5.233	0.000	98	445081	7.50	8.00	
46 o,o',o''-Triethylphosphorothioat	198	5.286	5.286	0.000	94	152332	7.50	7.11	
47 Bis(2-chloroethoxy)methane	93	5.315	5.315	0.000	91	605232	7.50	7.61	
49 2,4-Dichlorophenol	162	5.420	5.420	0.000	97	331014	7.50	7.97	
50 1,2,4-Trichlorobenzene	180	5.490	5.490	0.000	93	335086	7.50	7.17	
* 52 Naphthalene-d8	136	5.543	5.543	0.000	99	753961	5.00	5.00	
53 Naphthalene	128	5.560	5.560	0.000	96	1231147	7.50	7.59	
55 Alpha-Terpineol	59	5.572	5.572	0.000	88	559906	7.50	7.85	
56 4-Chloroaniline	127	5.619	5.619	0.000	95	544046	7.50	7.94	
57 2,6-Dichlorophenol	162	5.630	5.630	0.000	91	336621	7.50	8.19	
58 Hexachloropropene	213	5.648	5.648	0.000	97	222210	7.50	7.56	
59 Hexachlorobutadiene	225	5.683	5.683	0.000	96	198153	7.50	7.83	
61 Quinoline	129	5.881	5.881	0.000	94	870162	7.50	7.81	
62 Caprolactam	113	5.928	5.928	0.000	70	121434	7.50	8.24	
63 N-Nitrosodi-n-butylamine	84	5.940	5.940	0.000	89	451608	7.50	7.40	
64 p-Phenylene diamine	108	5.957	5.957	0.000	94	219595	7.50	6.06	
65 4-Chloro-3-methylphenol	107	6.103	6.103	0.000	95	402889	7.50	7.86	
66 Safrole, Total	162	6.144	6.144	0.000	83	270701	7.50	7.58	
67 2-Methylnaphthalene	142	6.220	6.220	0.000	91	740946	7.50	7.52	
69 1-Methylnaphthalene	142	6.314	6.314	0.000	93	722251	7.50	7.64	
71 Hexachlorocyclopentadiene	237	6.372	6.372	0.000	95	195727	7.50	7.80	
70 1,2,4,5-Tetrachlorobenzene	216	6.384	6.384	0.000	97	356460	7.50	7.86	
72 Isosafrole Peak 1	162	6.424	6.424	0.000	87	51151	1.20	1.17	
79 2,4,6-Trichlorophenol	196	6.500	6.500	0.000	95	235025	7.50	8.15	
80 2,4,5-Trichlorophenol	196	6.541	6.541	0.000	91	260888	7.50	8.21	
$ 81 2-Fluorobiphenyl (Surr)	172	6.576	6.576	0.000	99	1852963	15.0	15.2	
82 Isosafrole Peak 2	162	6.635	6.635	0.000	87	305573	6.30	6.91	
83 1,1'-Biphenyl	154	6.670	6.670	0.000	97	895919	7.50	7.52	
84 2-Chloronaphthalene	162	6.681	6.681	0.000	96	652979	7.50	7.23	
85 1-Chloronaphthalene	162	6.705	6.705	0.000	96	703052	7.50	8.11	
86 Phenyl ether	170	6.769	6.769	0.000	90	487863	7.50	7.69	
87 2-Nitroaniline	138	6.786	6.786	0.000	79	262941	7.50	8.26	
88 1,4-Naphthoquinone	158	6.857	6.857	0.000	81	306950	7.50	8.58	
89 1,4-Dinitrobenzene	168	6.927	6.927	0.000	90	114248	7.50	8.08	
90 Dimethyl phthalate	163	6.962	6.962	0.000	97	853011	7.50	7.98	
91 1,3-Dinitrobenzene	168	6.991	6.991	0.000	80	132215	7.50	8.02	
92 2,6-Dinitrotoluene	165	7.020	7.020	0.000	87	179864	7.50	8.00	
93 Acenaphthylene	152	7.078	7.078	0.000	99	1222192	7.50	7.84	
95 3-Nitroaniline	138	7.178	7.178	0.000	87	234532	7.50	8.49	
* 96 Acenaphthene-d10	164	7.207	7.207	0.000	95	383345	5.00	5.00	
97 Acenaphthene	153	7.242	7.242	0.000	97	754623	7.50	7.47	
98 2,4-Dinitrophenol	184	7.277	7.277	0.000	78	249303	17.5	17.5	
99 Pentachlorobenzene	250	7.365	7.365	0.000	98	331828	7.50	8.46	
100 4-Nitrophenol	109	7.370	7.370	0.000	92	293463	15.0	17.5	
102 2,4-Dinitrotoluene	165	7.400	7.400	0.000	88	258329	7.50	8.46	
101 Dibenzofuran	168	7.405	7.405	0.000	96	1096070	7.50	8.05	
104 1-Naphthylamine	143	7.481	7.481	0.000	98	703834	7.50	7.68	
105 2,3,4,6-Tetrachlorophenol	232	7.528	7.528	0.000	75	219564	7.50	7.88	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
106 2-Naphthylamine	143	7.557	7.557	0.000	95	775360	7.50	8.16	
107 Diethyl phthalate	149	7.633	7.633	0.000	96	888841	7.50	7.71	
109 Thionazin	107	7.709	7.709	0.000	76	152669	7.50	7.48	
108 Fluorene	166	7.727	7.727	0.000	94	820081	7.50	7.65	
110 4-Chlorophenyl phenyl ether	204	7.732	7.732	0.000	92	367731	7.50	7.66	
111 N-Nitro-o-toluidine	152	7.744	7.744	0.000	91	253876	7.50	8.41	
112 4-Nitroaniline	138	7.756	7.756	0.000	82	226070	7.50	8.23	
113 4,6-Dinitro-2-methylphenol	198	7.779	7.779	0.000	67	274008	15.0	15.8	
114 N-Nitrosodiphenylamine	169	7.849	7.849	0.000	67	598938	6.38	6.61	
115 1,2-Diphenylhydrazine	77	7.884	7.884	0.000	41	1168154	7.50	7.69	
$ 116 2,4,6-Tribromophenol	330	7.960	7.960	0.000	89	307971	15.0	17.0	
117 Sulfotepp	97	8.001	8.001	0.000	77	186173	7.50	7.46	
118 1,3,5-Trinitrobenzene	213	8.112	8.112	0.000	82	70718	7.50	7.72	
120 cis-Diallate	86	8.118	8.118	0.000	94	315202	5.55	5.20	
119 Phorate	75	8.129	8.129	0.000	93	704144	7.50	7.90	
121 Phenacetin	108	8.147	8.147	0.000	90	525716	7.50	8.64	
122 4-Bromophenyl phenyl ether	248	8.194	8.194	0.000	76	224465	7.50	7.65	
123 trans-Diallate	86	8.205	8.205	0.000	91	115250	1.95	1.99	
124 Hexachlorobenzene	284	8.240	8.240	0.000	93	264875	7.50	7.61	
125 Dimethoate	87	8.287	8.287	0.000	96	439560	7.50	7.79	
126 Atrazine	200	8.357	8.357	0.000	80	215968	7.50	8.13	
127 Pentachlorophenol	266	8.439	8.439	0.000	87	278920	15.0	16.9	
129 4-Aminobiphenyl	169	8.445	8.445	0.000	91	937595	7.50	7.87	
128 Pentachloronitrobenzene	237	8.445	8.445	0.000	48	111948	7.50	7.51	
130 Pronamide	173	8.503	8.503	0.000	89	403653	7.50	8.05	
* 131 Phenanthrene-d10	188	8.614	8.614	0.000	96	743642	5.00	5.00	
133 Dinoseb	211	8.614	8.614	0.000	72	177223	7.50	7.48	
134 Disulfoton	88	8.626	8.626	0.000	98	679528	7.50	7.03	
132 Phenanthrene	178	8.637	8.637	0.000	98	1158488	7.50	7.39	
135 Anthracene	178	8.684	8.684	0.000	98	1130565	7.50	7.24	
136 Carbazole	167	8.848	8.848	0.000	96	1254422	7.50	8.14	
137 Methyl parathion	109	8.982	8.982	0.000	89	327701	7.50	7.94	
138 Di-n-butyl phthalate	149	9.186	9.186	0.000	99	1532846	7.50	7.72	
139 Ethyl Parathion	109	9.350	9.350	0.000	81	209700	7.50	8.59	
140 4-Nitroquinoline-1-oxide	190	9.373	9.373	0.000	78	62880	7.50	5.91	
142 Octachlorostyrene	308	9.578	9.578	0.000	91	93798	7.50	7.24	
143 Isodrin	193	9.618	9.618	0.000	91	143595	7.50	6.92	
S 68 Diallate	86				0		7.50	7.18	
144 Fluoranthene	202	9.759	9.759	0.000	99	1256618	7.50	7.57	
145 Benzidine	184	9.905	9.905	0.000	100	2256973	22.5	22.7	
* 146 Pyrene-d10 (IS)	212	9.957	9.957	0.000	96	702598	5.00	5.00	
147 Pyrene	202	9.975	9.975	0.000	96	1322995	7.50	7.34	
$ 148 p-Terphenyl-d14	244	10.132	10.132	0.000	98	2054249	15.0	16.5	
149 p-Dimethylamino azobenzene	225	10.272	10.272	0.000	92	183520	7.50	7.74	
150 Chlorobenzilate	139	10.325	10.325	0.000	85	462729	7.50	8.11	
152 3,3'-Dimethylbenzidine	212	10.617	10.617	0.000	98	650419	7.50	8.14	
153 Butyl benzyl phthalate	149	10.640	10.640	0.000	96	707606	7.50	8.62	
155 2-Acetylaminofluorene	181	10.885	10.885	0.000	94	377646	7.50	6.94	
S 94 Isosafrole	162				0		7.50	8.08	
157 3,3'-Dichlorobenzidine	252	11.212	11.212	0.000	79	405862	7.50	8.07	
158 4,4'-Methylene bis(2-chloroani	231	11.218	11.218	0.000	92	210199	7.50	8.13	
156 Benzo[a]anthracene	228	11.224	11.224	0.000	99	1129601	7.50	8.48	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
159 Chrysene	228	11.265	11.265	0.000	97	1044534	7.50	7.93	
160 Bis(2-ethylhexyl) phthalate	149	11.300	11.300	0.000	94	896934	7.50	8.05	
161 6-Methylchrysene	242	11.820	11.820	0.000	98	702499	7.50	7.77	
162 Di-n-octyl phthalate	149	12.141	12.141	0.000	98	1602320	7.50	7.85	
163 7,12-Dimethylbenz(a)anthracene	256	12.585	12.585	0.000	89	424648	7.50	8.03	
164 Benzo[b]fluoranthene	252	12.590	12.590	0.000	98	1081568	7.50	7.58	
165 Benzo[k]fluoranthene	252	12.631	12.631	0.000	97	1104855	7.50	7.61	
166 Benzo[a]pyrene	252	13.040	13.040	0.000	82	943809	7.50	7.77	
* 167 Perylene-d12	264	13.116	13.116	0.000	94	570903	5.00	5.00	
168 3-Methylcholanthrene	268	13.548	13.548	0.000	93	374841	7.50	7.02	
169 Dibenz[a,h]acridine	279	14.331	14.331	0.000	93	606035	7.50	6.02	
170 Dibenz[a,j]acridine	279	14.401	14.401	0.000	95	697386	7.50	6.11	
171 Indeno[1,2,3-cd]pyrene	276	14.622	14.622	0.000	93	732290	7.50	6.32	
172 Dibenz(a,h)anthracene	278	14.663	14.663	0.000	95	773182	7.50	6.04	
173 Benzo[g,h,i]perylene	276	14.973	14.973	0.000	92	886100	7.50	6.51	

QC Flag Legend

Processing Flags

Reagents:

MSS_RV8270_5_00037 Amount Added: 1.00 Units: mL

Report Date: 02-Aug-2023 22:19:32 Chrom Revision: 2.3 02-Aug-2023 16:16:36

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0251.D

Injection Date: 02-Aug-2023 20:32:30 Instrument ID: HP23264 Operator ID: mem41592

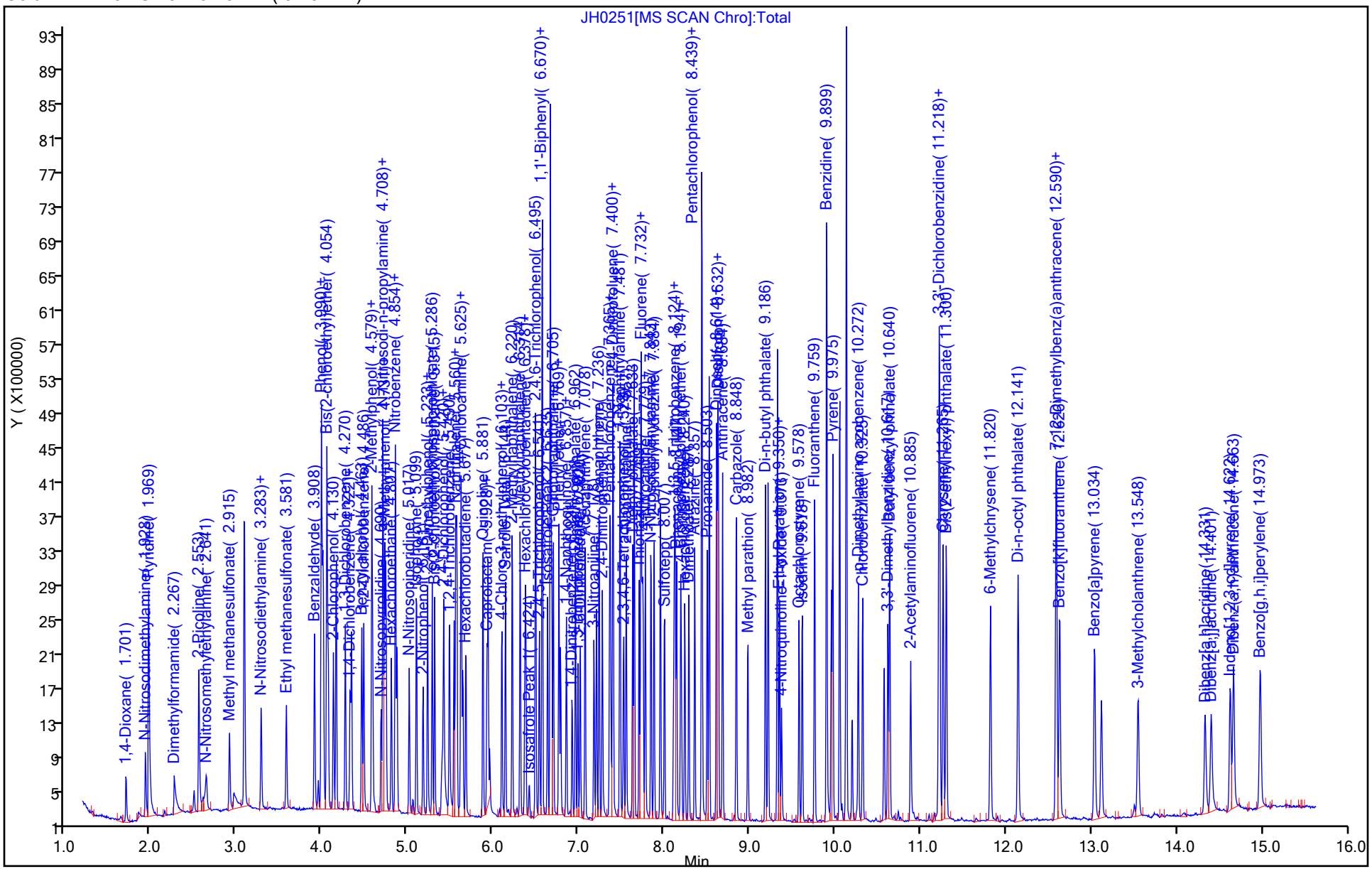
Lims ID: CCVIS Worklist Smp#: 2

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 2

Method: MSSemi_HP23264 Limit Group: MSSV - 8270D_E LVI

Column: DB-5MS 20m 0.25mm (0.25 mm)



Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1800.D
Lims ID: DFTPP
Client ID:
Sample Type: DFTPP
Inject. Date: 18-Jul-2023 07:23:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: DFTPP
Misc. Info.: 410-0089185-001
Operator ID: kel10217 Instrument ID: HP23264

Method: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\MSSemi_HP23264.m
Limit Group: MSSV - 8270D_E LVI
Last Update: 18-Jul-2023 15:34:25 Calib Date: 18-Jul-2023 10:14:30
Integrator: Falcon ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1808.D

Column 1 : DB-5MS 20m 0.25mm (0.25 mm) Det: MS SCAN
Process Host: CTX1640

First Level Reviewer: SJ89 Date: 18-Jul-2023 07:37:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
10 Pentachlorophenol_T	266	4.825	4.825	0.000	90	362808	NR	NR	
14 Benzidine_T	184	6.080	6.080	0.000	100	2483252	NR	NR	
207 DFTPP									
208 4,4'-DDE	246	6.226	6.226	0.000	5	1674		NR	
209 4,4'-DDT	235	6.758	6.758	0.000	98	1047870	NR	NR	
210 4,4'-DDD	235		6.758					ND	U

QC Flag Legend

Processing Flags
NR - Missing Quant Standard
Review Flags
U - Marked Undetected

Reagents:

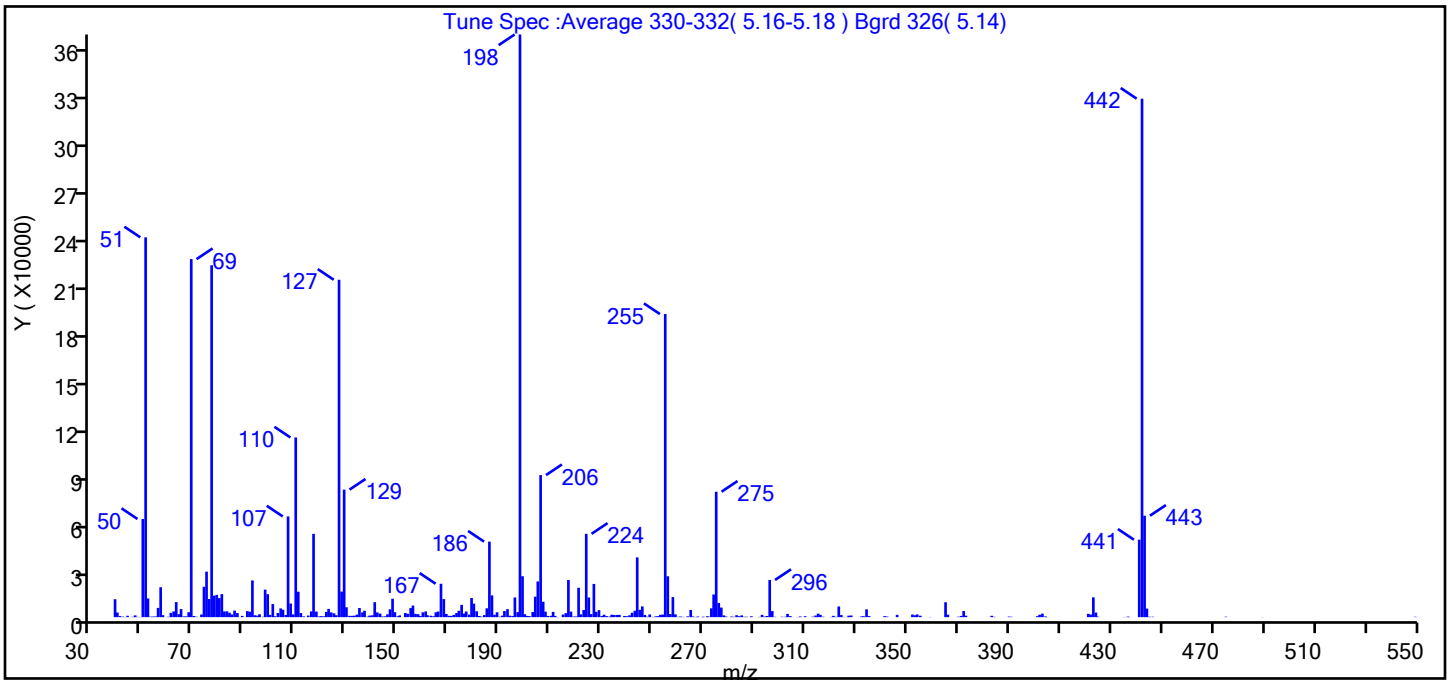
MSS_RVDFTPP_00013 Amount Added: 1.00 Units: mL

MS Tune Report

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1800.D
Injection Date: 18-Jul-2023 07:23:30 Instrument ID: HP23264
Lims ID: DFTPP
Client ID:
Operator ID: kel10217 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: MSSemi_HP23264 Limit Group: MSSV - 8270D_E LVI
Tune Method: DFTPP Method 8270D, BP 198

207 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	base peak, or >50% of 442	100.0 (112.4)
51	10-80% of the base peak	65.2
68	<2% of mass 69	0.8 (1.4)
69	Present	61.4
70	<2% of mass 69	0.2 (0.3)
127	10-80% of the base peak	57.9
197	<2% of mass 198	0.9
199	5-9% of mass 198	7.0
275	10-60% of the base peak	21.5
365	>1% of mass 198	2.6
441	present but <24% of mass 442	13.3 (14.9)
442	base peak, or >50% of 198	89.0
443	15-24% of mass 442	17.4 (19.6)

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1800.D\MSSemi_HP23264.rslt\spectra.d
Injection Date: 18-Jul-2023 07:23:30
Spectrum: Tune Spec :Average 330-332(5.16-5.18) Bgrd 326(5.14)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 312

m/z	Y	m/z	Y	m/z	Y	m/z	Y
39.00	11178	122.00	3277	201.00	750	283.00	1205
40.00	2874	123.00	5172	202.00	641	284.00	585
41.00	667	124.00	2961	203.00	3192	285.00	1081
42.00	297	125.00	2404	204.00	12749	286.00	233
43.00	90	126.00	1196	205.00	22248	287.00	256
44.00	873	127.00	210240	206.00	88512	289.00	558
46.00	244	128.00	15938	207.00	9583	292.00	144
47.00	1093	129.00	79440	208.00	3423	293.00	1450
48.00	145	130.00	6149	209.00	733	294.00	373
49.00	125	131.00	812	210.00	844	295.00	748
50.00	61160	132.00	812	211.00	3290	296.00	23168
51.00	236672	133.00	877	212.00	762	297.00	3770
52.00	11627	134.00	1563	213.00	96	298.00	201
53.00	305	135.00	5679	215.00	1594	301.00	259
54.00	375	136.00	2962	216.00	2493	302.00	243
55.00	439	137.00	3973	217.00	23168	303.00	2028
56.00	5760	138.00	271	218.00	3442	304.00	655
57.00	18632	139.00	980	219.00	405	307.00	116
58.00	1256	140.00	1177	220.00	412	308.00	424
59.00	36	141.00	9310	221.00	18296	310.00	580
60.00	235	142.00	2925	222.00	1733	313.00	305
61.00	2684	143.00	2207	223.00	4432	314.00	1004
62.00	3563	144.00	396	224.00	51928	315.00	2177
63.00	9381	145.00	508	225.00	12246	316.00	1410
64.00	1848	146.00	1770	226.00	1896	317.00	252
65.00	5015	147.00	4895	227.00	20704	320.00	152
66.00	456	148.00	11475	228.00	3333	321.00	812
67.00	460	149.00	3073	229.00	4363	322.00	213
68.00	3058	150.00	576	230.00	740	323.00	6643
69.00	223104	151.00	1095	231.00	1516	324.00	1269
70.00	720	153.00	2591	232.00	653	325.00	117
71.00	290	154.00	2100	233.00	390	327.00	135
73.00	1643	155.00	5644	234.00	1521	327.00	935

Report Date: 18-Jul-2023 15:34:26 Chrom Revision: 2.3 11-Jul-2023 11:49:10
Data File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1800.D\MSSemi_HP23264.rslt\spectra.d
Injection Date: 18-Jul-2023 07:23:30
Spectrum: Tune Spec :Average 330-332(5.16-5.18) Bgrd 326(5.14)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 312

m/z	Y	m/z	Y	m/z	Y	m/z	Y
74.00	18936	156.00	7215	235.00	1328	328.00	1019
75.00	28352	157.00	2071	236.00	1369	332.00	458
76.00	11290	158.00	1848	237.00	1428	333.00	579
77.00	219264	159.00	752	239.00	715	334.00	4854
78.00	13379	160.00	3031	240.00	583	335.00	648
79.00	13873	161.00	3545	241.00	1138	341.00	632
80.00	11862	162.00	1189	242.00	2761	342.00	362
81.00	14368	163.00	870	243.00	3995	346.00	1409
82.00	3546	164.00	571	244.00	37232	352.00	1628
83.00	3628	165.00	3026	245.00	4548	353.00	1174
84.00	2736	166.00	3522	246.00	6686	354.00	1701
85.00	1659	167.00	20800	247.00	1376	355.00	881
86.00	4072	168.00	11251	248.00	264	359.00	106
87.00	2542	169.00	1994	249.00	1674	365.00	9294
89.00	788	170.00	849	250.00	160	366.00	1514
91.00	3746	171.00	757	251.00	520	370.00	292
92.00	3376	172.00	1419	252.00	606	371.00	773
93.00	22864	173.00	2548	253.00	1430	372.00	3812
94.00	1186	174.00	3962	254.00	1597	373.00	895
95.00	919	175.00	7648	255.00	188864	383.00	825
96.00	1781	176.00	2197	256.00	25472	384.00	224
97.00	196	177.00	3525	257.00	1918	390.00	357
98.00	17160	178.00	1590	258.00	12492	391.00	220
99.00	14303	179.00	11908	259.00	1725	401.00	606
100.00	1401	180.00	8413	260.00	195	402.00	1505
101.00	8137	181.00	3652	261.00	376	403.00	2171
102.00	570	182.00	730	262.00	157	404.00	442
103.00	2565	183.00	313	264.00	497	405.00	93
104.00	5452	184.00	1273	265.00	4488	421.00	2072
105.00	4642	185.00	5513	266.00	428	422.00	1626
106.00	1333	186.00	47056	267.00	105	423.00	12367
107.00	62760	187.00	13560	268.00	401	424.00	2855
108.00	8487	188.00	1506	270.00	114	425.00	302
109.00	1712	189.00	3035	270.00	274	435.00	101

Report Date: 18-Jul-2023 15:34:26 Chrom Revision: 2.3 11-Jul-2023 11:49:10
Data File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1800.D\MSSemi_HP23264.rslt\spectra.d
Injection Date: 18-Jul-2023 07:23:30
Spectrum: Tune Spec :Average 330-332(5.16-5.18) Bgrd 326(5.14)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 312

m/z	Y	m/z	Y	m/z	Y	m/z	Y
110.00	111952	190.00	249	272.00	551	436.00	295
111.00	15842	191.00	946	272.00	328	437.00	155
112.00	2545	192.00	3854	273.00	5476	441.00	48264
113.00	476	193.00	4966	274.00	14109	442.00	323072
115.00	996	194.00	937	275.00	78152	443.00	63184
116.00	3554	195.00	697	276.00	8793	444.00	5303
117.00	51904	196.00	12269	277.00	5972	445.00	270
118.00	3460	197.00	3097	278.00	1085	446.00	253
119.00	427	198.00	363072	279.00	365	475.00	281
120.00	619	199.00	25504	281.00	376	489.00	91
121.00	522	200.00	1809	282.00	214	549.00	229

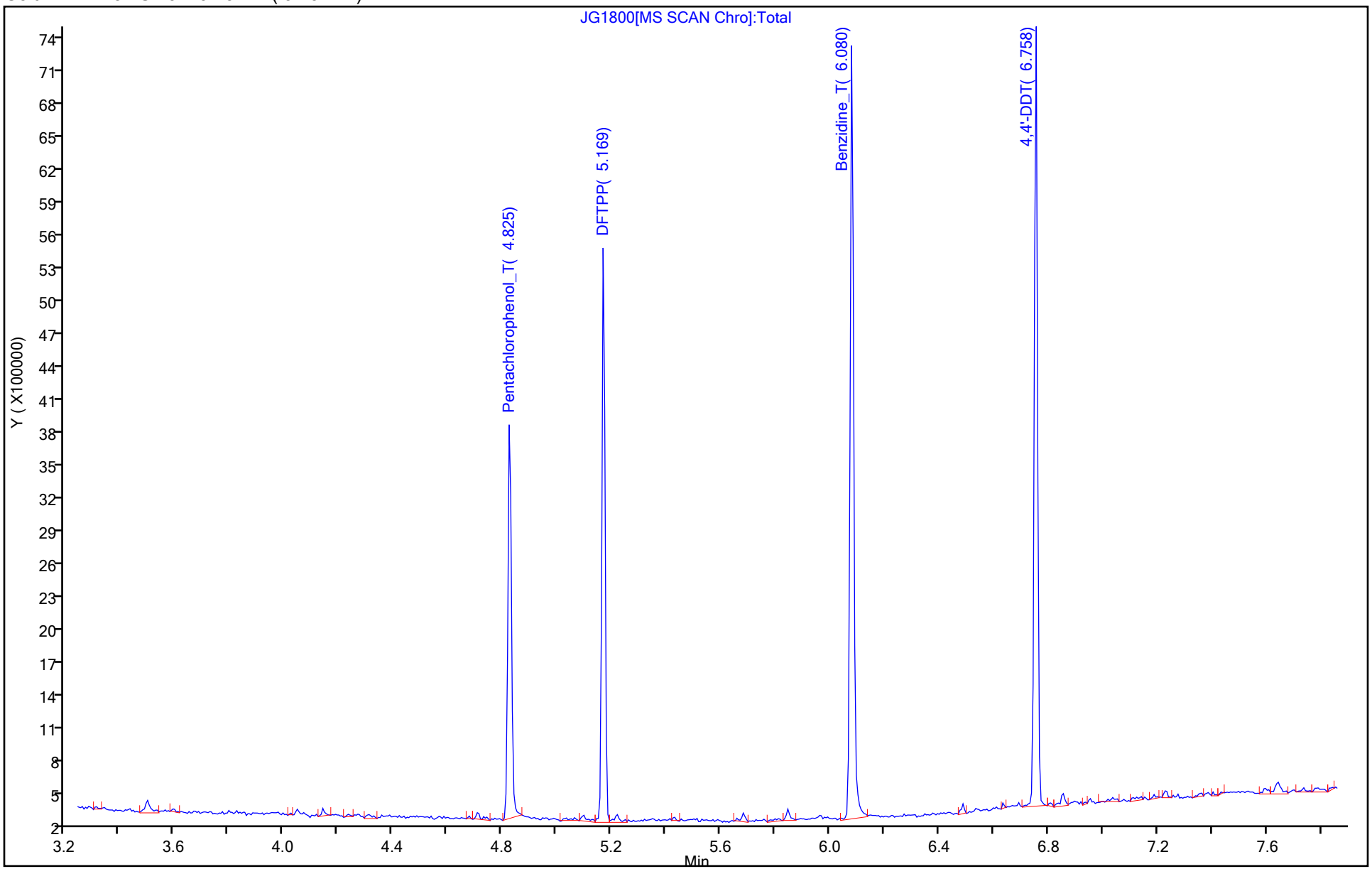
Report Date: 18-Jul-2023 15:34:26 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1800.D

Injection Date:	18-Jul-2023 07:23:30	Instrument ID:	HP23264	Operator ID:	kel10217
Lims ID:	DFTPP			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		

Column: DB-5MS 20m 0.25mm (0.25 mm)



Breakdown Report

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1800.D
Injection Date: 18-Jul-2023 07:23:30 Instrument ID: HP23264
Lims ID: DFTPP
Client ID:
Operator ID: kel10217 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: MSSemi_HP23264 Limit Group: MSSV - 8270D_E LVI

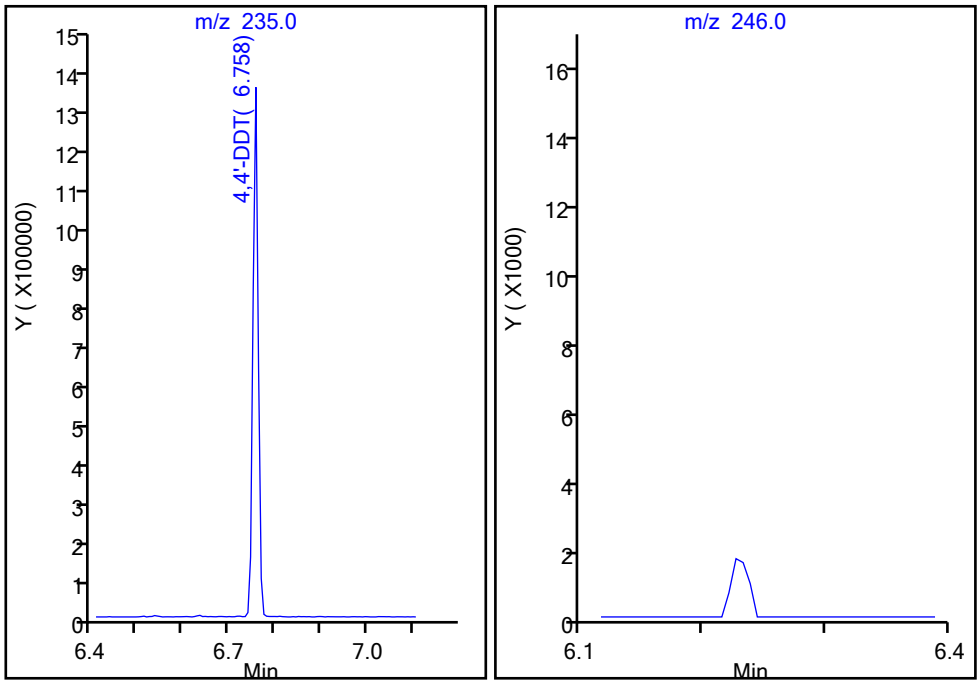
209 4,4'-DDT, Detector: MS SCAN

SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

209 4,4'-DDT, Area = 1047870
210 4,4'-DDD, Area = 0
208 4,4'-DDE, Area = 1674

%Breakdown: 0.16%, <= 20.00%
Passed



Peak Tailing Report

Eurofins Lancaster Laboratories Environment Testing, LLC

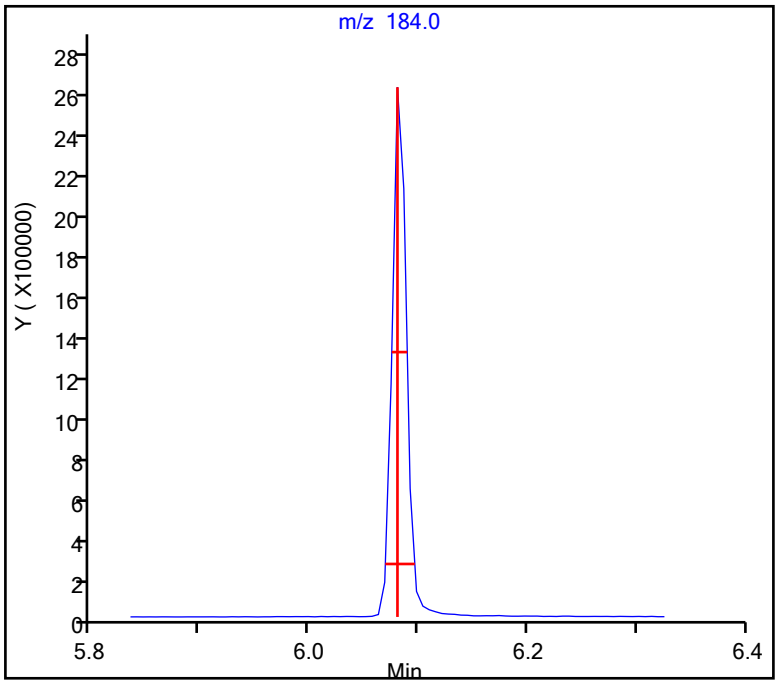
Data File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1800.D
Injection Date: 18-Jul-2023 07:23:30 Instrument ID: HP23264
Lims ID: DFTPP
Client ID:
Operator ID: kel10217 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: MSSemi_HP23264 Limit Group: MSSV - 8270D_E LVI

14 Benzidine_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.016 (min.)
Front Width = 0.011 (min.)

Tailing Factor = 1.45, Max. Tailing <= 2.00
Passed



Peak Tailing Report

Eurofins Lancaster Laboratories Environment Testing, LLC

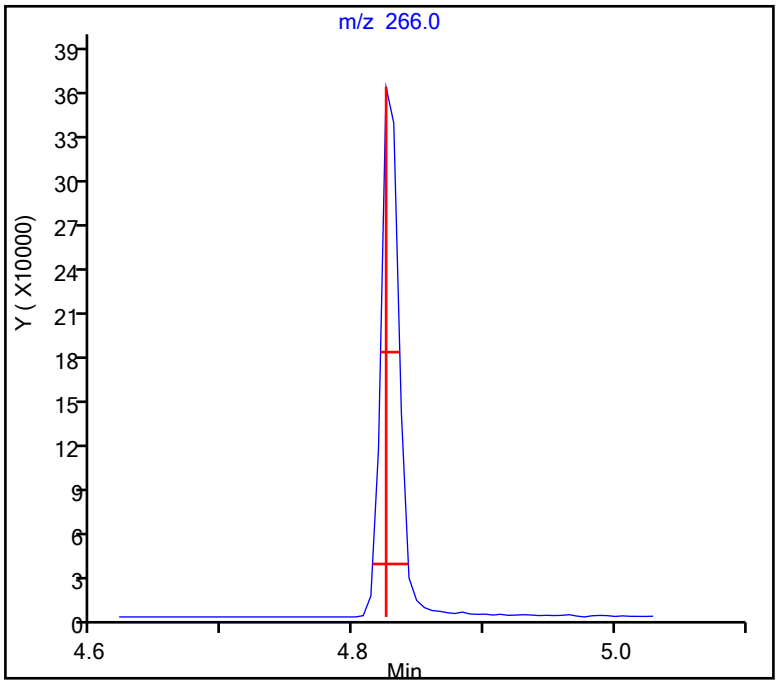
Data File: \\chromfs\Lancaster\ChromData\HP23264\20230718-89185.b\JG1800.D
Injection Date: 18-Jul-2023 07:23:30 Instrument ID: HP23264
Lims ID: DFTPP
Client ID:
Operator ID: kel10217 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: MSSemi_HP23264 Limit Group: MSSV - 8270D_E LVI

10 Pentachlorophenol_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.017 (min.)
Front Width = 0.010 (min.)

Tailing Factor = 1.70, Max. Tailing <= 2.00
Passed



Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0250.D
Lims ID: DFTPP
Client ID:
Sample Type: DFTPP
Inject. Date: 02-Aug-2023 20:15:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: DFTPP
Operator ID: mem41592 Instrument ID: HP23264

Method: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\MSSemi_HP23264.m
Limit Group: MSSV - 8270D_E LVI
Last Update: 02-Aug-2023 22:19:29 Calib Date: 02-Aug-2023 21:45:30
Integrator: Falcon ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0254.D

Column 1 : DB-5MS 20m 0.25mm (0.25 mm) Det: MS SCAN
Process Host: CTX1634

First Level Reviewer: P7EB Date: 02-Aug-2023 20:28:49

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
10 Pentachlorophenol_T	266	4.819	4.819	0.000	90	297143	NR	NR	
14 Benzidine_T	184	6.080	6.080	0.000	100	864767	NR	NR	
207 DFTPP									
208 4,4'-DDE	246	6.226	6.226	0.000	87	8708		NR	
210 4,4'-DDD	235	6.507	6.507	0.000	94	12845		NR	
209 4,4'-DDT	235	6.752	6.752	0.000	97	791563	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

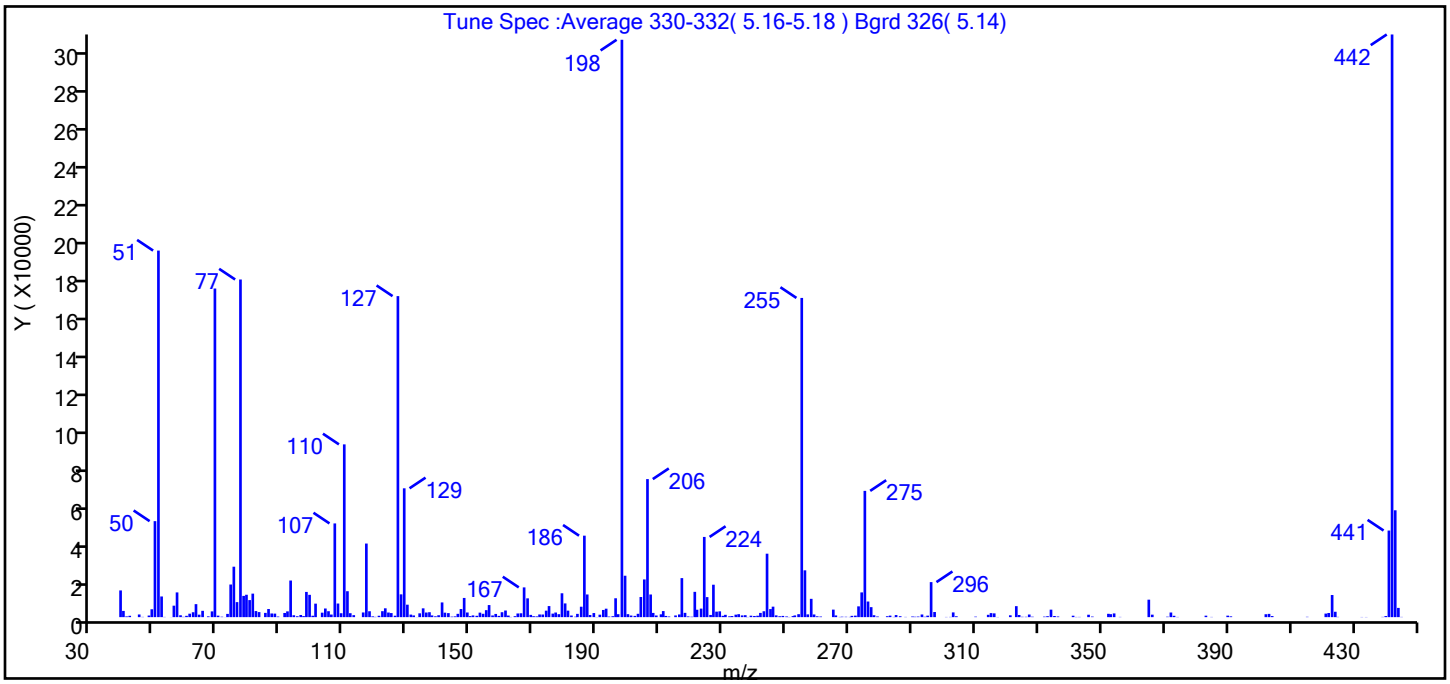
MSS_RVDFTPP_00013 Amount Added: 1.00 Units: mL

MS Tune Report

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0250.D
Injection Date: 02-Aug-2023 20:15:30 Instrument ID: HP23264
Lims ID: DFTPP
Client ID:
Operator ID: mem41592 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: MSSemi_HP23264 Limit Group: MSSV - 8270D_E LVI
Tune Method: DFTPP Method 8270D, BP 198

207 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	base peak, or >50% of 442	100.0 (99.1)
51	10-80% of the base peak	63.5
68	<2% of mass 69	1.0 (1.8)
69	Present	56.9
70	<2% of mass 69	0.3 (0.5)
127	10-80% of the base peak	55.6
197	<2% of mass 198	0.5
199	5-9% of mass 198	7.2
275	10-60% of the base peak	21.9
365	>1% of mass 198	3.0
441	present but <24% of mass 442	15.0 (14.9)
442	base peak, or >50% of 198	100.9
443	15-24% of mass 442	18.5 (18.3)

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0250.D\MSSemi_HP23264.rslt\spectra.d
Injection Date: 02-Aug-2023 20:15:30
Spectrum: Tune Spec :Average 330-332(5.16-5.18) Bgrd 326(5.14)
Base Peak: 442.10
Minimum % Base Peak: 0
Number of Points: 299

m/z	Y	m/z	Y	m/z	Y	m/z	Y
39.00	14195	124.00	2445	199.00	22000	278.00	1013
40.00	3304	125.00	2158	200.00	1583	279.00	346
41.00	386	126.00	759	201.00	852	282.00	484
42.00	720	127.00	170560	202.00	672	283.00	806
45.00	1417	128.00	12108	203.00	1777	284.00	120
46.00	129	129.00	68448	204.00	10695	285.00	1105
48.00	847	130.00	6619	205.00	20032	286.00	490
49.00	4189	131.00	1348	206.00	73344	288.00	120
50.00	51000	132.00	902	207.00	12035	290.00	337
51.00	194752	133.00	43	208.00	2245	291.00	218
52.00	10984	134.00	2023	209.00	876	292.00	311
53.00	120	135.00	4677	210.00	1502	293.00	1410
55.00	41	136.00	2452	211.00	3222	294.00	198
56.00	6092	137.00	2616	212.00	639	295.00	788
57.00	13141	138.00	907	213.00	343	296.00	18608
58.00	993	139.00	445	215.00	896	297.00	2728
59.00	158	140.00	1009	216.00	1425	301.00	105
60.00	703	141.00	7814	217.00	20736	302.00	123
61.00	1831	142.00	2374	218.00	2283	303.00	2516
62.00	2600	143.00	2138	219.00	398	304.00	463
63.00	6906	144.00	276	220.00	221	310.00	266
64.00	1318	145.00	405	221.00	13443	314.00	1240
65.00	3359	146.00	1759	222.00	3932	315.00	2142
67.00	412	147.00	4308	223.00	4539	316.00	2003
68.00	3060	148.00	10201	224.00	42616	317.00	86
69.00	174592	149.00	2468	225.00	10640	321.00	979
70.00	797	150.00	555	226.00	1167	323.00	5841
71.00	231	151.00	915	227.00	17232	324.00	1145
72.00	36	152.00	715	228.00	2925	325.00	189
73.00	1729	153.00	2387	229.00	3084	326.00	184
74.00	17336	154.00	1781	230.00	709	327.00	1394
75.00	26800	155.00	3712	231.00	1234	328.00	238
76.00	7981	156.00	6417	232.00	427	332.00	275

Report Date: 02-Aug-2023 22:19:29 Chrom Revision: 2.3 02-Aug-2023 16:16:36
Data File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0250.D\MSSemi_HP23264.rslt\spectra.d
Injection Date: 02-Aug-2023 20:15:30
Spectrum: Tune Spec :Average 330-332(5.16-5.18) Bgrd 326(5.14)
Base Peak: 442.10
Minimum % Base Peak: 0
Number of Points: 299

m/z	Y	m/z	Y	m/z	Y	m/z	Y
77.00	179392	157.00	887	233.00	584	333.00	499
78.00	11294	158.00	1702	234.00	1326	334.00	3981
79.00	11893	159.00	676	235.00	1574	335.00	602
80.00	9061	160.00	2616	236.00	920	336.00	343
81.00	12493	161.00	3514	237.00	1038	341.00	758
82.00	3227	162.00	847	238.00	99	342.00	108
83.00	2683	163.00	106	239.00	771	343.00	122
85.00	2262	164.00	510	240.00	616	346.00	1283
86.00	4314	165.00	1949	241.00	754	347.00	306
87.00	1951	166.00	2053	242.00	2249	352.00	1775
88.00	1870	167.00	15805	243.00	3135	353.00	1582
89.00	319	168.00	9988	244.00	33712	354.00	1973
91.00	2217	169.00	1199	245.00	4281	356.00	123
92.00	3067	170.00	488	246.00	5569	365.00	9277
93.00	19448	171.00	387	247.00	942	366.00	1318
94.00	1007	172.00	1426	248.00	476	371.00	238
95.00	479	173.00	1396	249.00	658	372.00	2462
96.00	1147	174.00	3440	250.00	367	373.00	720
97.00	541	175.00	5879	251.00	104	374.00	103
98.00	13398	176.00	1874	252.00	555	383.00	781
99.00	11856	177.00	2451	253.00	917	385.00	114
100.00	743	178.00	1569	254.00	1569	390.00	786
101.00	7169	179.00	12679	255.00	169600	391.00	416
103.00	2374	180.00	7287	256.00	24872	402.00	1549
104.00	4594	181.00	3453	257.00	1467	403.00	1730
105.00	3148	182.00	857	258.00	9728	404.00	576
106.00	1377	183.00	251	259.00	1419	415.00	175
107.00	49792	184.00	1744	260.00	445	421.00	1883
108.00	7235	185.00	5538	261.00	318	422.00	2206
109.00	2081	186.00	43288	265.00	3999	423.00	11754
110.00	91792	187.00	12044	266.00	902	424.00	2861
111.00	13776	188.00	1143	267.00	121	425.00	137
112.00	2096	189.00	2181	268.00	229	432.00	93
113.00	1058	190.00	70	269.00	197	434.00	87

Report Date: 02-Aug-2023 22:19:29 Chrom Revision: 2.3 02-Aug-2023 16:16:36
Data File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0250.D\MSSemi_HP23264.rslt\spectra.d
Injection Date: 02-Aug-2023 20:15:30
Spectrum: Tune Spec :Average 330-332(5.16-5.18) Bgrd 326(5.14)
Base Peak: 442.10
Minimum % Base Peak: 0
Number of Points: 299

m/z	Y	m/z	Y	m/z	Y	m/z	Y
116.00	2483	191.00	1303	270.00	125	439.00	131
117.00	39104	192.00	3812	271.00	686	440.00	576
118.00	3130	193.00	4490	272.00	797	441.00	46008
119.00	406	194.00	302	273.00	5735	442.00	309568
120.00	148	195.00	501	274.00	13142	443.00	56776
121.00	739	196.00	10029	275.00	67088	444.00	4910
122.00	3167	197.00	1560	276.00	8295	445.00	124
123.00	4691	198.00	306752	277.00	5309		

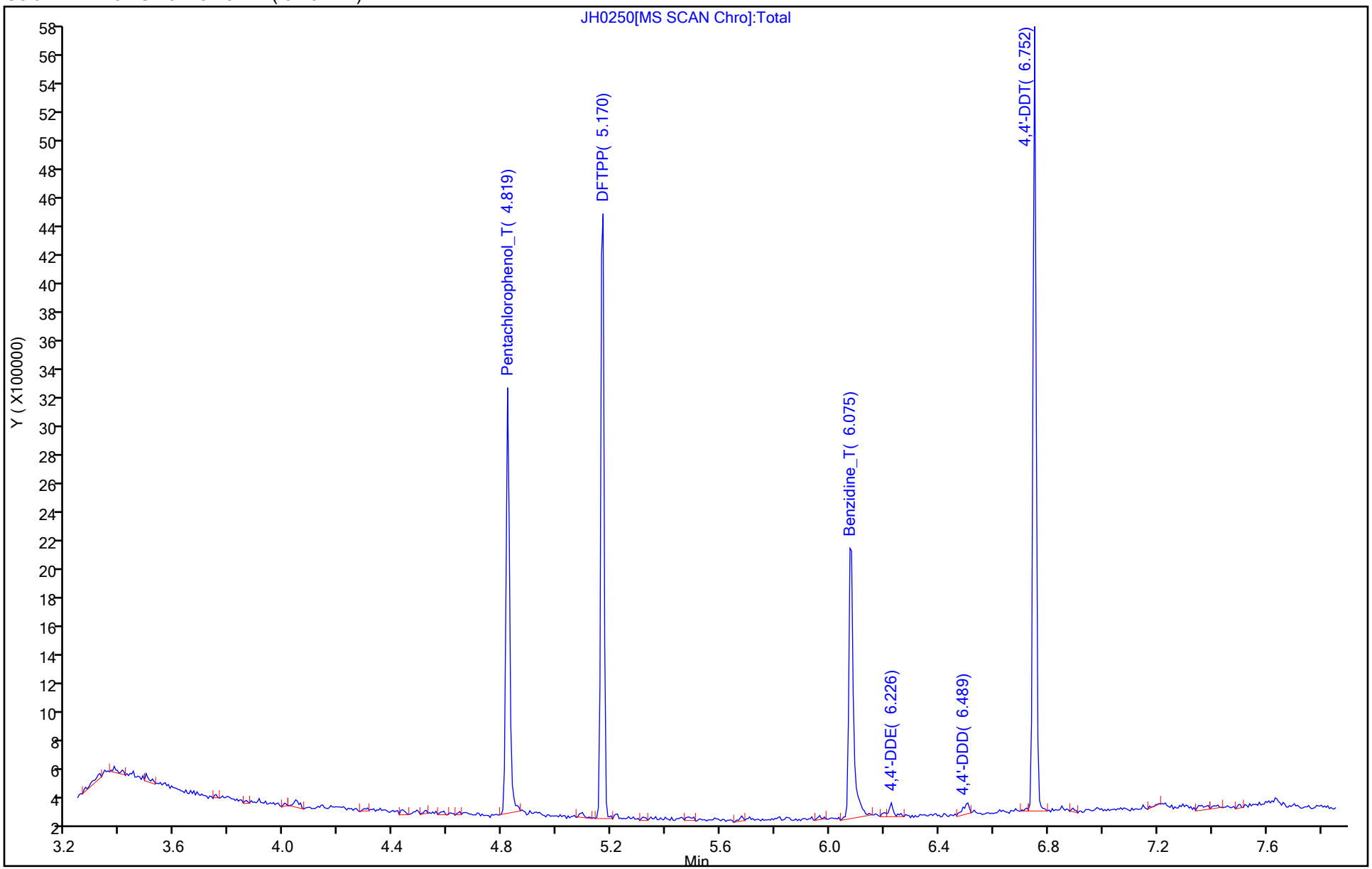
Report Date: 02-Aug-2023 22:19:29 Chrom Revision: 2.3 02-Aug-2023 16:16:36

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0250.D

Injection Date:	02-Aug-2023 20:15:30	Instrument ID:	HP23264	Operator ID:	mem41592
Lims ID:	DFTPP			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		

Column: DB-5MS 20m 0.25mm (0.25 mm)



Breakdown Report

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0250.D
Injection Date: 02-Aug-2023 20:15:30 Instrument ID: HP23264
Lims ID: DFTPP
Client ID:
Operator ID: mem41592 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: MSSemi_HP23264 Limit Group: MSSV - 8270D_E LVI

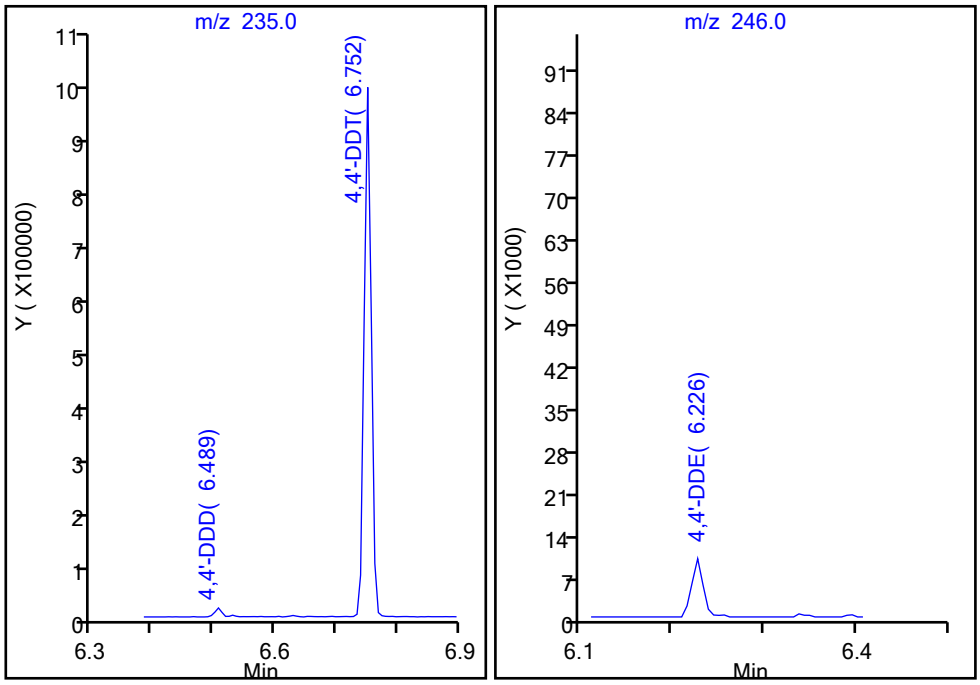
209 4,4'-DDT, Detector: MS SCAN

SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

209 4,4'-DDT, Area = 791563
210 4,4'-DDD, Area = 12845
208 4,4'-DDE, Area = 8708

%Breakdown: 2.65%, <= 20.00%
Passed



Peak Tailing Report

Eurofins Lancaster Laboratories Environment Testing, LLC

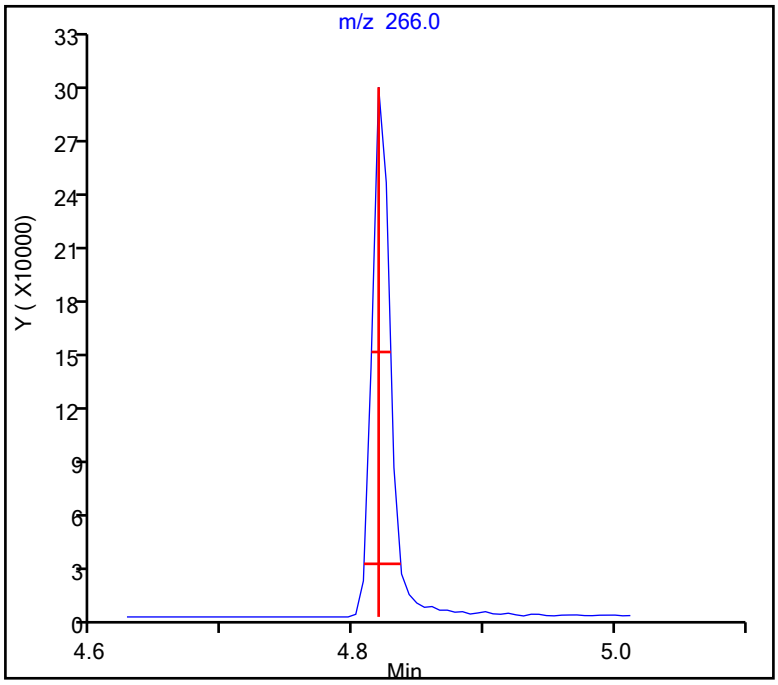
Data File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0250.D
Injection Date: 02-Aug-2023 20:15:30 Instrument ID: HP23264
Lims ID: DFTPP
Client ID:
Operator ID: mem41592 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: MSSemi_HP23264 Limit Group: MSSV - 8270D_E LVI

10 Pentachlorophenol_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.017 (min.)
Front Width = 0.011 (min.)

Tailing Factor = 1.55, Max. Tailing <= 2.00
Passed



Peak Tailing Report

Eurofins Lancaster Laboratories Environment Testing, LLC

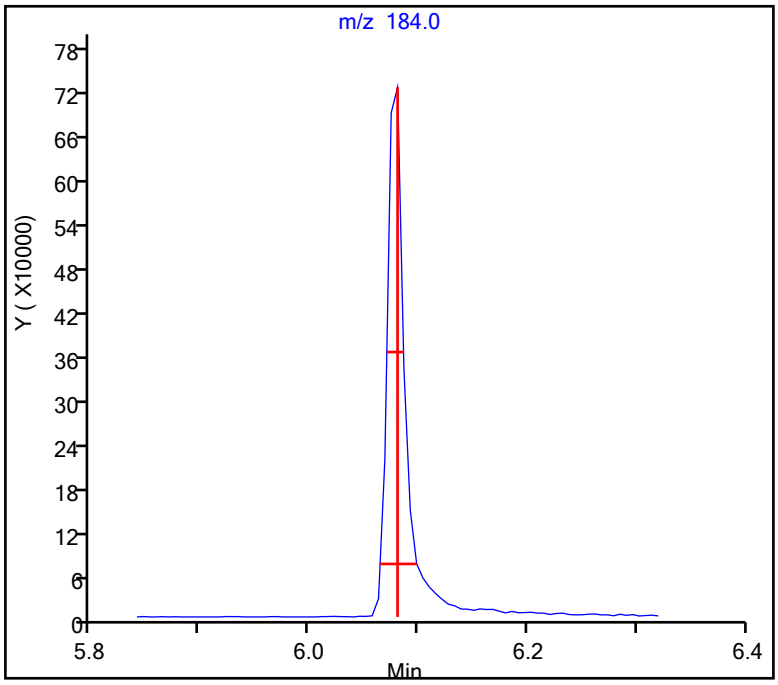
Data File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0250.D
Injection Date: 02-Aug-2023 20:15:30 Instrument ID: HP23264
Lims ID: DFTPP
Client ID:
Operator ID: mem41592 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: MSSemi_HP23264 Limit Group: MSSV - 8270D_E LVI

14 Benzidine_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.018 (min.)
Front Width = 0.016 (min.)

Tailing Factor = 1.13, Max. Tailing <= 2.00
Passed



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136514-1

SDG No.:

Client Sample ID:
Lab Sample ID: MB 410-403666/1-A

Matrix: Water
Lab File ID: JH0259.D

Analysis Method: 8270D
Date Collected:

Extract. Method: 3510C
Date Extracted: 08/02/2023 15:28

Sample wt/vol: 250(mL)
Date Analyzed: 08/02/2023 23:30

Con. Extract Vol.: 1(mL)
Dilution Factor: 1

Injection Volume: 1(uL)
GC Column: DB-5MS 30m 0.25 ID: 0.25(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:
Level: (low/med) Low

Analysis Batch No.: 403788
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
121-14-2	2,4-Dinitrotoluene	ND		10	
606-20-2	2,6-Dinitrotoluene	ND		10	
84-66-2	Diethyl phthalate	ND		5.0	

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	85		13-138
321-60-8	2-Fluorobiphenyl (Surr)	82		44-120
367-12-4	2-Fluorophenol (Surr)	43		10-120
4165-60-0	Nitrobenzene-d5 (Surr)	73		31-120
1718-51-0	p-Terphenyl-d14 (Surr)	86		30-125
4165-62-2	Phenol-d5 (Surr)	30		10-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0259.D
Lims ID: MB 410-403666/1-A
Client ID:
Sample Type: MB
Inject. Date: 02-Aug-2023 23:30:30 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: MB 410-403666/1-A
Misc. Info.: 410-0090492-010
Operator ID: mem41592 Instrument ID: HP23264

Method: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\MSSemi_HP23264.m
Limit Group: MSSV - 8270D_E LVI
Last Update: 03-Aug-2023 08:48:58 Calib Date: 02-Aug-2023 21:45:30
Integrator: Falcon ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0254.D

Column 1 : DB-5MS 20m 0.25mm (0.25 mm) Det: MS SCAN
Process Host: CTX1602

First Level Reviewer: N5QU Date: 03-Aug-2023 07:38:21

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 1,4-Dioxane	88		1.701					ND	U
	2 N-Nitrosodimethylamine	74		1.928					ND	7
$	9 2-Fluorophenol	112	3.085	3.090	-0.005	96	904265	50.0	21.6	
	11 N-Nitrosodiethylamine	102		3.283					ND	
	12 Ethyl methanesulfonate	109		3.581					ND	
	13 Benzaldehyde	77		3.908					ND	7
$	15 Phenol-d5	99	3.990	3.990	0.000	95	908100	50.0	15.2	
	16 Phenol	94		4.001					ND	7
	18 Bis(2-chloroethyl)ether	93		4.071					ND	7
	19 2-Chlorophenol	128		4.130					ND	7
*	22 1,4-Dichlorobenzene-d4	152	4.328	4.322	0.006	97	135972	5.00	5.00	
	29 2-Methylphenol	108		4.579					ND	
	30 2,2'-oxybis[1-chloropropane]	45		4.585					ND	7
	33 N-Nitrosodi-n-propylamine	70		4.708					ND	U
	32 Acetophenone	105		4.708					ND	7
	35 N-Nitrosomorpholine	56		4.731					ND	
	34 4-Methylphenol	108		4.731					ND	7
	37 Hexachloroethane	117		4.807					ND	7
$	39 Nitrobenzene-d5	82	4.854	4.854	0.000	94	1020718	25.0	18.3	
	40 Nitrobenzene	77		4.871					ND	U
	41 N-Nitrosopiperidine	114		5.017					ND	
	42 Isophorone	82		5.099					ND	7
	43 2-Nitrophenol	139		5.181					ND	7
	44 2,4-Dimethylphenol	107		5.233					ND	7
	46 o,o',o''-Triethylphosphorothioat	198		5.286					ND	
	47 Bis(2-chloroethoxy)methane	93		5.315					ND	
	54 alpha,alpha-Dimethyl phenethylam	58		5.379					ND	7
	49 2,4-Dichlorophenol	162		5.420					ND	
*	52 Naphthalene-d8	136	5.543	5.543	0.000	99	520706	5.00	5.00	
	53 Naphthalene	128		5.560					ND	7
	56 4-Chloroaniline	127		5.619					ND	7

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
57 2,6-Dichlorophenol	162		5.630					ND	
58 Hexachloropropene	213		5.648					ND	
59 Hexachlorobutadiene	225		5.683					ND	
62 Caprolactam	113		5.928					ND	
65 4-Chloro-3-methylphenol	107		6.103					ND	7
66 Safrole, Total	162		6.144					ND	7
67 2-Methylnaphthalene	142		6.220					ND	
71 Hexachlorocyclopentadiene	237		6.372					ND	
70 1,2,4,5-Tetrachlorobenzene	216		6.384					ND	
79 2,4,6-Trichlorophenol	196		6.500					ND	7
80 2,4,5-Trichlorophenol	196		6.541					ND	7
$ 81 2-Fluorobiphenyl (Surr)	172	6.576	6.576	0.000	99	1701984	25.0	20.4	
83 1,1'-Biphenyl	154		6.670					ND	7
84 2-Chloronaphthalene	162		6.681					ND	
87 2-Nitroaniline	138		6.786					ND	7
90 Dimethyl phthalate	163		6.962					ND	7
91 1,3-Dinitrobenzene	168		6.991					ND	7
92 2,6-Dinitrotoluene	165		7.020					ND	U
93 Acenaphthylene	152		7.078					ND	7
95 3-Nitroaniline	138		7.178					ND	
* 96 Acenaphthene-d10	164	7.207	7.207	0.000	95	262215	5.00	5.00	
97 Acenaphthene	153		7.242					ND	
98 2,4-Dinitrophenol	184		7.277					ND	7
99 Pentachlorobenzene	250		7.365					ND	
100 4-Nitrophenol	109		7.370					ND	7
102 2,4-Dinitrotoluene	165		7.400					ND	7
101 Dibenzofuran	168		7.405					ND	7
105 2,3,4,6-Tetrachlorophenol	232		7.528					ND	
107 Diethyl phthalate	149		7.633					ND	7
109 Thionazin	107		7.709					ND	
108 Fluorene	166		7.727					ND	
110 4-Chlorophenyl phenyl ether	204		7.732					ND	
111 N-Nitro-o-toluidine	152		7.744					ND	
112 4-Nitroaniline	138		7.756					ND	
113 4,6-Dinitro-2-methylphenol	198		7.779					ND	7
114 N-Nitrosodiphenylamine	169		7.849					ND	U
$ 116 2,4,6-Tribromophenol	330	7.960	7.960	0.000	89	528703	50.0	42.6	
117 Sulfotepp	97		8.001					ND	7
120 cis-Diallate	86		8.118					ND	7
119 Phorate	75		8.129					ND	7
121 Phenacetin	108		8.147					ND	
122 4-Bromophenyl phenyl ether	248		8.194					ND	7
123 trans-Diallate	86		8.205					ND	7
124 Hexachlorobenzene	284		8.240					ND	
125 Dimethoate	87		8.287					ND	7
126 Atrazine	200		8.357					ND	
127 Pentachlorophenol	266		8.439					ND	
* 131 Phenanthrene-d10	188	8.614	8.614	0.000	97	548571	5.00	5.00	
132 Phenanthrene	178		8.637					ND	7
135 Anthracene	178		8.684					ND	7
136 Carbazole	167		8.848					ND	7
138 Di-n-butyl phthalate	149		9.186					ND	7

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
143 Isodrin	193		9.618					ND	U
S 68 Diallate	86		9.653					ND	7
144 Fluoranthene	202		9.759					ND	7
* 146 Pyrene-d10 (IS)	212	9.957	9.957	0.000	97	509539	5.00	5.00	
147 Pyrene	202		9.975					ND	7
$ 148 p-Terphenyl-d14	244	10.132	10.132	0.000	96	1944335	25.0	21.5	
153 Butyl benzyl phthalate	149		10.640					ND	7
154 Kepone	272		10.646					ND	
157 3,3'-Dichlorobenzidine	252		11.212					ND	7
156 Benzo[a]anthracene	228		11.224					ND	7
159 Chrysene	228		11.265					ND	
160 Bis(2-ethylhexyl) phthalate	149		11.300					ND	MU
162 Di-n-octyl phthalate	149		12.141					ND	7
164 Benzo[b]fluoranthene	252		12.590					ND	7
165 Benzo[k]fluoranthene	252		12.631					ND	7
166 Benzo[a]pyrene	252		13.040					ND	U
* 167 Perylene-d12	264	13.116	13.116	0.000	95	380144	5.00	5.00	
171 Indeno[1,2,3-cd]pyrene	276		14.622					ND	7
172 Dibenz(a,h)anthracene	278		14.663					ND	7
173 Benzo[g,h,i]perylene	276		14.973					ND	

QC Flag Legend

Processing Flags
- 7 - Failed Limit of Detection

Review Flags
- M - Manually Integrated
- U - Marked Undetected

Reagents:

MSS_RV8270_IS_00059 Amount Added: 20.00 Units: uL Run Reagent

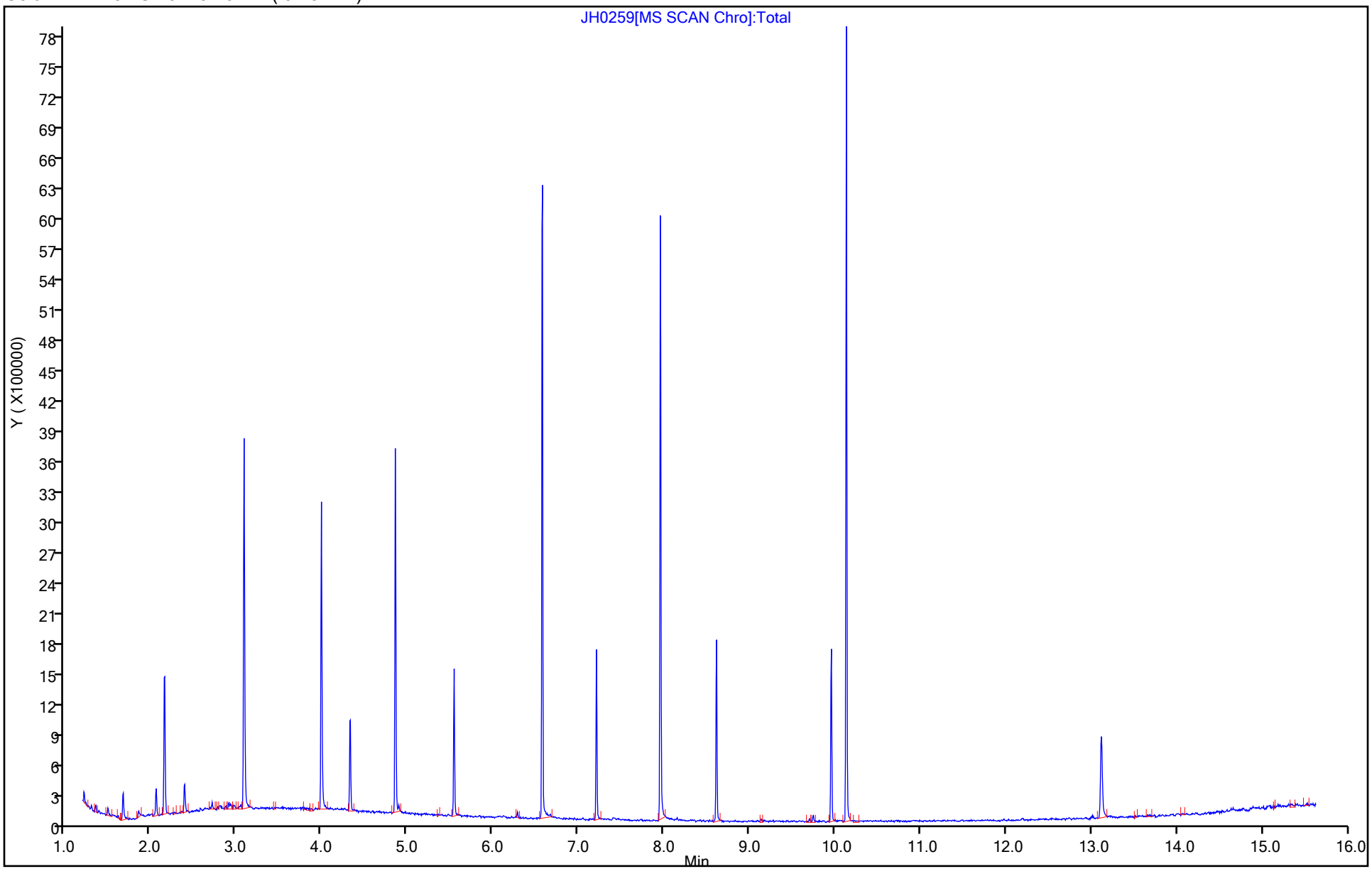
Report Date: 03-Aug-2023 08:54:03 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0259.D

Injection Date:	02-Aug-2023 23:30:30	Instrument ID:	HP23264	Operator ID:	mem41592
Lims ID:	MB 410-403666/1-A			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		

Column: DB-5MS 20m 0.25mm (0.25 mm)



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0259.D
Lims ID: MB 410-403666/1-A
Client ID:
Sample Type: MB
Inject. Date: 02-Aug-2023 23:30:30 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: MB 410-403666/1-A
Misc. Info.: 410-0090492-010
Operator ID: mem41592 Instrument ID: HP23264

Method: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\MSSemi_HP23264.m
Limit Group: MSSV - 8270D_E LVI
Last Update: 03-Aug-2023 08:48:58 Calib Date: 02-Aug-2023 21:45:30
Integrator: Falcon ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0254.D

Column 1 : DB-5MS 20m 0.25mm (0.25 mm) Det: MS SCAN
Process Host: CTX1602

First Level Reviewer: N5QU Date: 03-Aug-2023 07:38:21

Compound	Amount Added	Amount Recovered	% Rec.
$ 9 2-Fluorophenol	50.0	21.6	43.28
$ 15 Phenol-d5	50.0	15.2	30.31
$ 39 Nitrobenzene-d5	25.0	18.3	73.25
$ 81 2-Fluorobiphenyl (Surr)	25.0	20.4	81.80
$ 116 2,4,6-Tribromophenol	50.0	42.6	85.13
$ 148 p-Terphenyl-d14	25.0	21.5	86.08

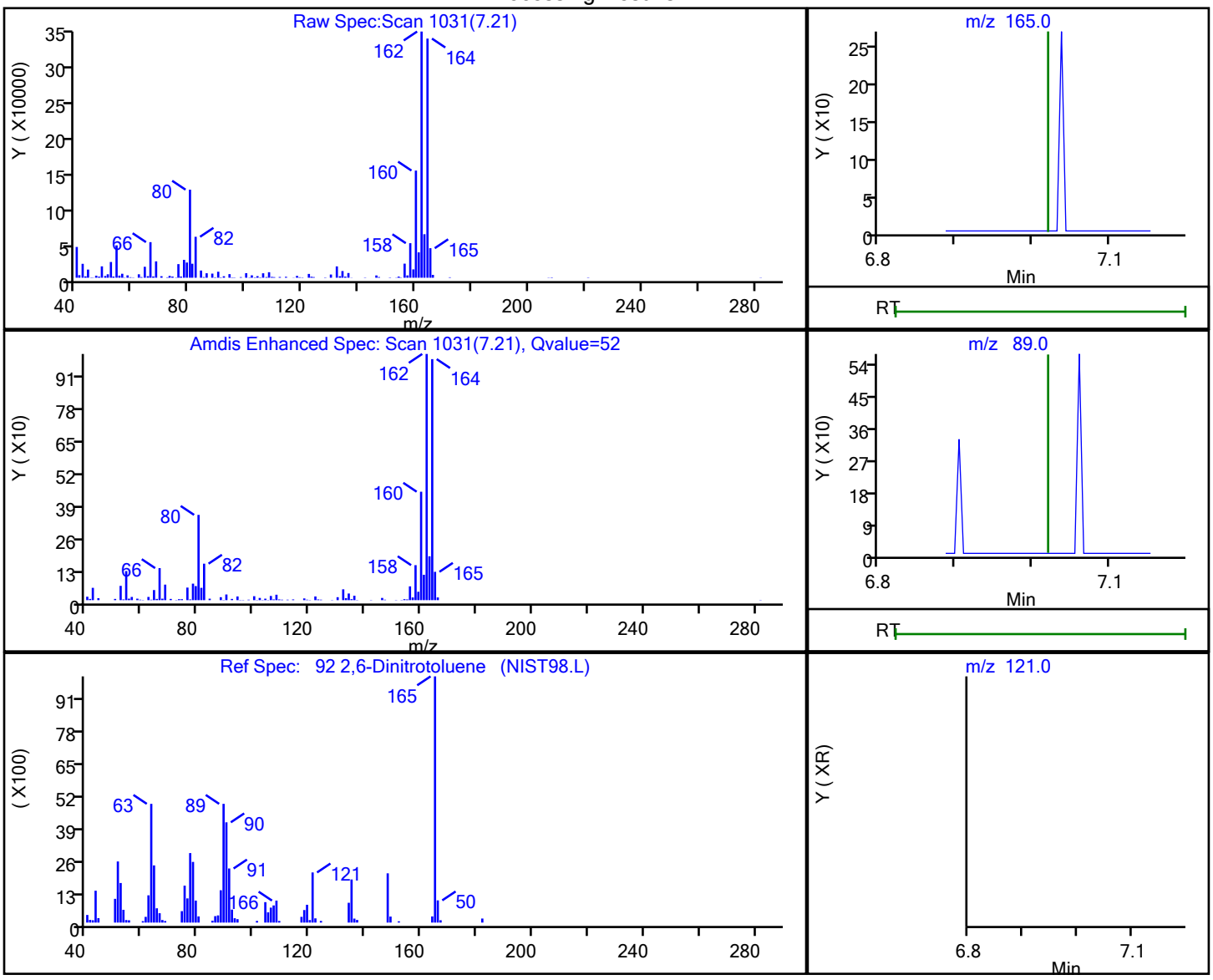
User Disabled Compound Report

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0259.D				
Injection Date:	02-Aug-2023 23:30:30	Instrument ID:	HP23264		
Lims ID:	MB 410-403666/1-A				
Client ID:					
Operator ID:	mem41592	ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		
Column:	DB-5MS 20m 0.25mm (0.25 mm)	Detector	MS SCAN		

92 2,6-Dinitrotoluene, CAS: 606-20-2

Processing Results



RT	Mass	Response	Amount
7.21	165.00	31842	2.070593
7.20	89.00	661	
7.02	121.00	0	
7.20	63.00	2123	

Reviewer: N5QU, 03-Aug-2023 07:34:32 -04:00:00 (UTC)

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136514-1

SDG No.:

Client Sample ID:
Lab Sample ID: LCS 410-403666/2-A

Matrix: Water
Lab File ID: JH0260.D

Analysis Method: 8270D
Date Collected:

Extract. Method: 3510C
Date Extracted: 08/02/2023 15:28

Sample wt/vol: 250(mL)
Date Analyzed: 08/02/2023 23:51

Con. Extract Vol.: 1(mL)
Dilution Factor: 1

Injection Volume: 1(uL)
GC Column: DB-5MS 30m 0.25 ID: 0.25(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:
Level: (low/med) Low

Analysis Batch No.: 403788
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
121-14-2	2,4-Dinitrotoluene	50.4		10	
606-20-2	2,6-Dinitrotoluene	51.6		10	
84-66-2	Diethyl phthalate	47.6		5.0	

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	79		13-138
321-60-8	2-Fluorobiphenyl (Surr)	78		44-120
367-12-4	2-Fluorophenol (Surr)	53		10-120
4165-60-0	Nitrobenzene-d5 (Surr)	74		31-120
1718-51-0	p-Terphenyl-d14 (Surr)	83		30-125
4165-62-2	Phenol-d5 (Surr)	39		10-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0260.D
Lims ID: LCS 410-403666/2-A
Client ID:
Sample Type: LCS
Inject. Date: 02-Aug-2023 23:51:30 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: LCS 410-403666/2-A
Misc. Info.: 410-0090492-011
Operator ID: mem41592 Instrument ID: HP23264

Method: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\MSSemi_HP23264.m
Limit Group: MSSV - 8270D_E LVI
Last Update: 03-Aug-2023 08:48:58 Calib Date: 02-Aug-2023 21:45:30
Integrator: Falcon ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0254.D

Column 1 : DB-5MS 20m 0.25mm (0.25 mm) Det: MS SCAN
Process Host: CTX1602

First Level Reviewer: N5QU Date: 03-Aug-2023 07:40:47

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 1,4-Dioxane	88	1.695	1.701	-0.006	93	108726	12.5	6.14	
	2 N-Nitrosodimethylamine	74	1.922	1.928	-0.006	91	226125	12.5	7.84	
$	9 2-Fluorophenol	112	3.084	3.090	-0.006	96	1190708	50.0	26.7	
	13 Benzaldehyde	77	3.908	3.896	0.000	91	458133	12.5	11.8	
$	15 Phenol-d5	99	3.989	3.990	-0.001	95	1241766	50.0	19.4	
	16 Phenol	94	4.001	4.001	0.000	90	416425	12.5	6.21	
	18 Bis(2-chloroethyl)ether	93	4.071	4.071	0.000	85	530207	12.5	11.3	
	19 2-Chlorophenol	128	4.130	4.130	0.000	94	485004	12.5	11.7	
*	22 1,4-Dichlorobenzene-d4	152	4.322	4.322	0.000	96	145029	5.00	5.00	
	29 2-Methylphenol	108	4.579	4.585	0.000	97	447633	12.5	11.3	
	30 2,2'-oxybis[1-chloropropane]	45	4.585	4.609	0.000	93	1178820	12.5	11.4	
	33 N-Nitrosodi-n-propylamine	70	4.708	4.708	0.000	90	447912	12.5	11.4	
	32 Acetophenone	105	4.708	4.708	0.000	86	818151	12.5	12.9	
	34 4-Methylphenol	108	4.731	4.737	0.000	93	469139	12.5	10.2	
	37 Hexachloroethane	117	4.807	4.801	0.000	97	203162	12.5	11.0	
$	39 Nitrobenzene-d5	82	4.854	4.854	0.000	94	1137751	25.0	18.5	
	40 Nitrobenzene	77	4.871	4.842	0.000	94	636261	12.5	11.3	
	42 Isophorone	82	5.099	5.099	0.000	98	1194682	12.5	11.9	
	43 2-Nitrophenol	139	5.181	5.181	0.000	90	236737	12.5	11.4	
	44 2,4-Dimethylphenol	107	5.233	5.239	0.000	97	492531	12.5	11.6	
	47 Bis(2-chloroethoxy)methane	93	5.315	5.315	0.000	91	729053	12.5	12.0	
	49 2,4-Dichlorophenol	162	5.420	5.420	0.000	97	416732	12.5	13.2	
*	52 Naphthalene-d8	136	5.543	5.543	0.000	98	573579	5.00	5.00	
	53 Naphthalene	128	5.560	5.566	0.000	97	1436462	12.5	11.6	
	56 4-Chloroaniline	127	5.619	5.619	0.000	95	505012	12.5	9.69	
	57 2,6-Dichlorophenol	162	5.624	5.630	-0.006	87	408133	12.5	13.1	
	59 Hexachlorobutadiene	225	5.683	5.683	0.000	97	203693	12.5	10.6	
	62 Caprolactam	113	5.928	5.928	0.000	72	38963	12.5	3.48	
	65 4-Chloro-3-methylphenol	107	6.097	6.097	-0.006	96	458712	12.5	11.8	
	67 2-Methylnaphthalene	142	6.220	6.220	0.000	91	877797	12.5	11.7	
	71 Hexachlorocyclopentadiene	237	6.372	6.372	0.000	95	135552	12.5	7.08	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
70 1,2,4,5-Tetrachlorobenzene	216	6.378	6.384	-0.006	98	409112	12.5	11.8	
79 2,4,6-Trichlorophenol	196	6.500	6.500	0.000	96	285959	12.5	13.0	
80 2,4,5-Trichlorophenol	196	6.541	6.541	0.000	91	320807	12.5	13.2	
$ 81 2-Fluorobiphenyl (Surr)	172	6.576	6.576	0.000	99	1801094	25.0	19.4	
83 1,1'-Biphenyl	154	6.670	6.670	0.000	97	1166289	12.5	12.8	
84 2-Chloronaphthalene	162	6.681	6.681	0.000	97	836477	12.5	12.1	
87 2-Nitroaniline	138	6.786	6.786	0.000	76	292027	12.5	12.0	
90 Dimethyl phthalate	163	6.962	6.962	0.000	96	881939	12.5	10.8	
91 1,3-Dinitrobenzene	168	6.991	6.991	0.000	78	147771	12.5	11.8	
92 2,6-Dinitrotoluene	165	7.020	7.020	0.000	85	221210	12.5	12.9	
93 Acenaphthylene	152	7.072	7.078	-0.006	99	1518142	12.5	12.8	
95 3-Nitroaniline	138	7.178	7.178	0.000	88	246828	12.5	11.7	
* 96 Acenaphthene-d10	164	7.207	7.207	0.000	96	292405	5.00	5.00	
97 Acenaphthene	153	7.236	7.242	-0.006	98	930654	12.5	12.1	
98 2,4-Dinitrophenol	184	7.277	7.277	0.000	76	248968	25.0	22.9	
100 4-Nitrophenol	109	7.370	7.382	0.000	94	198562	25.0	15.5	
102 2,4-Dinitrotoluene	165	7.399	7.399	-0.001	80	293470	12.5	12.6	
101 Dibenzofuran	168	7.405	7.405	0.000	96	1213848	12.5	11.7	
105 2,3,4,6-Tetrachlorophenol	232	7.528	7.528	0.000	76	250769	12.5	11.8	
107 Diethyl phthalate	149	7.633	7.633	0.000	96	1046533	12.5	11.9	
108 Fluorene	166	7.726	7.727	-0.001	95	1035913	12.5	12.7	
110 4-Chlorophenyl phenyl ether	204	7.732	7.732	0.000	94	452423	12.5	12.4	
112 4-Nitroaniline	138	7.756	7.756	0.000	81	254722	12.5	12.1	
113 4,6-Dinitro-2-methylphenol	198	7.779	7.779	0.000	68	313151	25.0	24.4	
114 N-Nitrosodiphenylamine	169	7.843	7.861	-0.006	78	718694	10.6	10.7	
$ 116 2,4,6-Tribromophenol	330	7.960	7.960	0.000	89	549842	50.0	39.7	
122 4-Bromophenyl phenyl ether	248	8.194	8.194	0.000	74	283267	12.5	13.1	
124 Hexachlorobenzene	284	8.240	8.240	0.000	93	316372	12.5	12.3	
126 Atrazine	200	8.357	8.357	0.000	81	241040	12.5	12.3	
127 Pentachlorophenol	266	8.439	8.439	0.000	90	357903	25.0	29.3	
* 131 Phenanthrene-d10	188	8.614	8.614	0.000	96	549351	5.00	5.00	
132 Phenanthrene	178	8.632	8.643	-0.005	98	1404023	12.5	12.1	
135 Anthracene	178	8.684	8.690	0.000	98	1436935	12.5	12.5	
136 Carbazole	167	8.842	8.848	-0.006	96	1481589	12.5	13.0	
138 Di-n-butyl phthalate	149	9.186	9.186	0.000	99	1770598	12.5	12.1	
144 Fluoranthene	202	9.758	9.758	-0.001	99	1489508	12.5	12.2	
* 146 Pyrene-d10 (IS)	212	9.957	9.957	0.000	97	491276	5.00	5.00	
147 Pyrene	202	9.974	9.975	-0.001	96	1604782	12.5	12.7	
$ 148 p-Terphenyl-d14	244	10.132	10.132	0.000	96	1798575	25.0	20.6	
153 Butyl benzyl phthalate	149	10.640	10.646	0.000	96	673473	12.5	11.7	
157 3,3'-Dichlorobenzidine	252	11.212	11.213	0.000	77	750989	25.0	21.3	
156 Benzo[a]anthracene	228	11.224	11.236	0.000	99	1273730	12.5	13.7	
159 Chrysene	228	11.265	11.265	0.000	96	1346151	12.5	14.6	
160 Bis(2-ethylhexyl) phthalate	149	11.300	11.300	0.000	94	1054768	12.5	13.5	
162 Di-n-octyl phthalate	149	12.141	12.141	0.000	98	1802872	12.5	12.2	
164 Benzo[b]fluoranthene	252	12.585	12.591	-0.005	98	1233572	12.5	11.9	
165 Benzo[k]fluoranthene	252	12.625	12.631	-0.006	97	1261930	12.5	12.0	
166 Benzo[a]pyrene	252	13.034	13.046	-0.006	82	1204184	12.5	13.7	
* 167 Perylene-d12	264	13.116	13.116	0.000	94	414104	5.00	5.00	
171 Indeno[1,2,3-cd]pyrene	276	14.622	14.599	0.000	95	1053578	12.5	12.5	
172 Dibenz(a,h)anthracene	278	14.663	14.669	0.000	94	1085832	12.5	11.7	
173 Benzo[g,h,i]perylene	276	14.973	14.973	0.000	93	1203360	12.5	12.2	

QC Flag Legend

Processing Flags

Reagents:

MSS_RV8270_IS_00059 Amount Added: 20.00 Units: uL Run Reagent

Report Date: 03-Aug-2023 08:54:08 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0260.D

Injection Date: 02-Aug-2023 23:51:30 Instrument ID: HP23264 Operator ID: mem41592

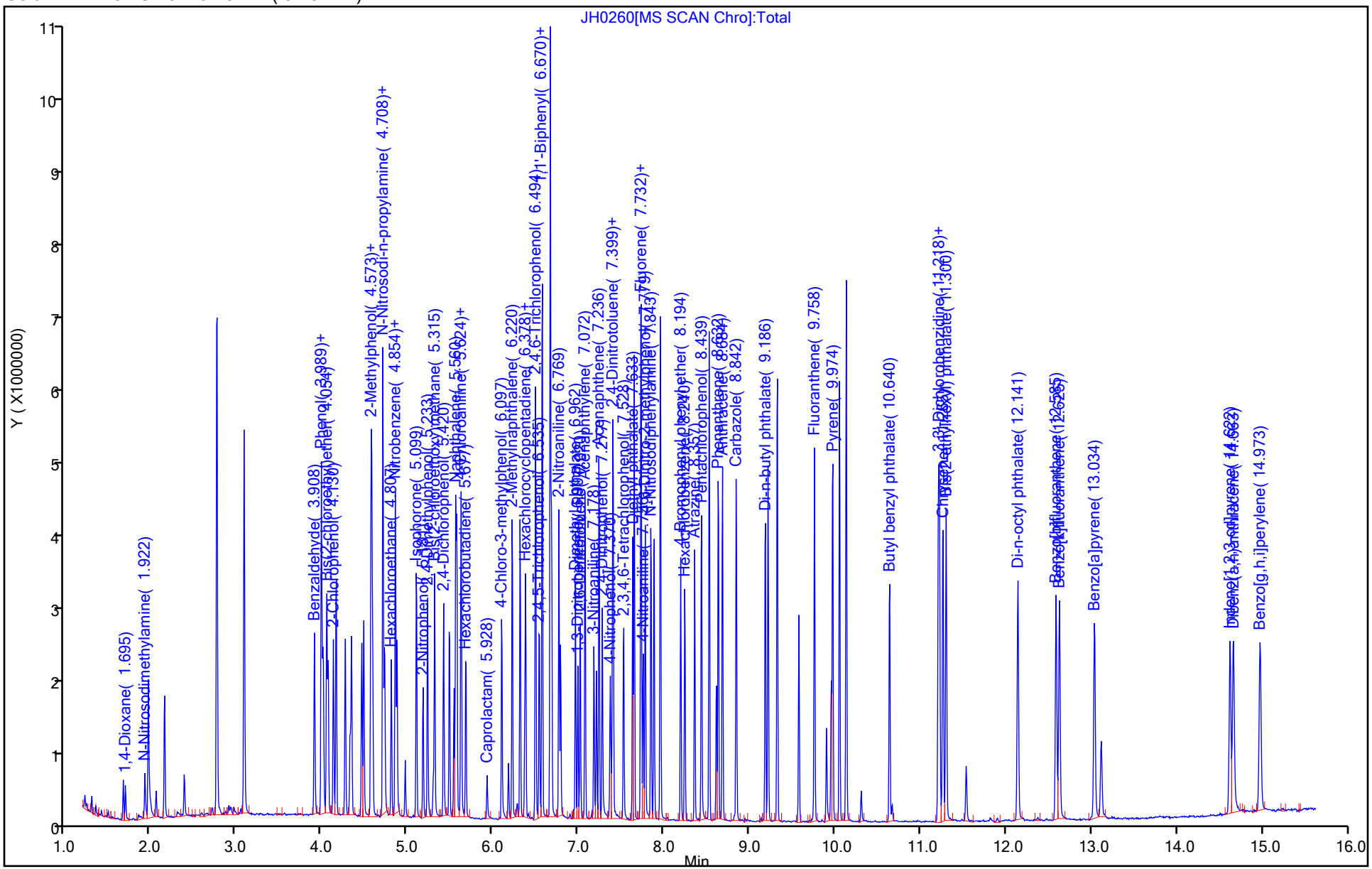
Lims ID: LCS 410-403666/2-A Worklist Smp#: 11

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 11

Method: MSSemi_HP23264 Limit Group: MSSV - 8270D_E LVI

Column: DB-5MS 20m 0.25mm (0.25 mm)



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0260.D
Lims ID: LCS 410-403666/2-A
Client ID:
Sample Type: LCS
Inject. Date: 02-Aug-2023 23:51:30 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: LCS 410-403666/2-A
Misc. Info.: 410-0090492-011
Operator ID: mem41592 Instrument ID: HP23264

Method: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\MSSemi_HP23264.m
Limit Group: MSSV - 8270D_E LVI
Last Update: 03-Aug-2023 08:48:58 Calib Date: 02-Aug-2023 21:45:30
Integrator: Falcon ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0254.D

Column 1 : DB-5MS 20m 0.25mm (0.25 mm) Det: MS SCAN
Process Host: CTX1602

First Level Reviewer: N5QU Date: 03-Aug-2023 07:40:47

Compound	Amount Added	Amount Recovered	% Rec.
$ 9 2-Fluorophenol	50.0	26.7	53.43
$ 15 Phenol-d5	50.0	19.4	38.86
$ 39 Nitrobenzene-d5	25.0	18.5	74.13
$ 81 2-Fluorobiphenyl (Surr)	25.0	19.4	77.63
$ 116 2,4,6-Tribromophenol	50.0	39.7	79.39
$ 148 p-Terphenyl-d14	25.0	20.6	82.59

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136514-1

SDG No.:

Client Sample ID:
Lab Sample ID: LCSD 410-403666/3-A

Matrix: Water
Lab File ID: JH0261.D

Analysis Method: 8270D
Date Collected:

Extract. Method: 3510C
Date Extracted: 08/02/2023 15:28

Sample wt/vol: 250(mL)
Date Analyzed: 08/03/2023 00:12

Con. Extract Vol.: 1(mL)
Dilution Factor: 1

Injection Volume: 1(uL)
GC Column: DB-5MS 30m 0.25 ID: 0.25(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:
Level: (low/med) Low

Analysis Batch No.: 403788
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
121-14-2	2,4-Dinitrotoluene	52.3		10	
606-20-2	2,6-Dinitrotoluene	49.3		10	
84-66-2	Diethyl phthalate	51.9		5.0	

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	79		13-138
321-60-8	2-Fluorobiphenyl (Surr)	80		44-120
367-12-4	2-Fluorophenol (Surr)	50		10-120
4165-60-0	Nitrobenzene-d5 (Surr)	76		31-120
1718-51-0	p-Terphenyl-d14 (Surr)	90		30-125
4165-62-2	Phenol-d5 (Surr)	38		10-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0261.D
Lims ID: LCSD 410-403666/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 03-Aug-2023 00:12:30 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: LCSD 410-403666/3-A
Misc. Info.: 410-0090492-012
Operator ID: mem41592 Instrument ID: HP23264

Method: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\MSSemi_HP23264.m
Limit Group: MSSV - 8270D_E LVI
Last Update: 03-Aug-2023 08:48:58 Calib Date: 02-Aug-2023 21:45:30
Integrator: Falcon ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0254.D

Column 1 : DB-5MS 20m 0.25mm (0.25 mm) Det: MS SCAN
Process Host: CTX1602

First Level Reviewer: N5QU Date: 03-Aug-2023 07:42:18

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 1,4-Dioxane	88	1.695	1.701	-0.006	97	99125	12.5	5.92	
	2 N-Nitrosodimethylamine	74	1.928	1.928	0.000	92	196174	12.5	7.19	
$	9 2-Fluorophenol	112	3.085	3.090	-0.006	95	1057805	50.0	25.1	
	13 Benzaldehyde	77	3.908	3.896	0.000	91	415632	12.5	11.3	
$	15 Phenol-d5	99	3.990	3.990	0.000	96	1133491	50.0	18.8	
	16 Phenol	94	4.001	4.001	0.000	91	369879	12.5	5.83	
	18 Bis(2-chloroethyl)ether	93	4.071	4.071	0.000	87	527665	12.5	11.9	
	19 2-Chlorophenol	128	4.130	4.130	0.000	93	422098	12.5	10.8	
*	22 1,4-Dichlorobenzene-d4	152	4.328	4.322	0.006	95	137160	5.00	5.00	
	29 2-Methylphenol	108	4.579	4.585	0.000	97	408854	12.5	10.9	
	30 2,2'-oxybis[1-chloropropane]	45	4.585	4.609	0.000	92	1135372	12.5	11.7	
	33 N-Nitrosodi-n-propylamine	70	4.708	4.708	0.000	88	442708	12.5	11.9	
	32 Acetophenone	105	4.708	4.708	0.000	86	761967	12.5	12.7	
	34 4-Methylphenol	108	4.731	4.737	0.000	95	397749	12.5	9.17	
	37 Hexachloroethane	117	4.807	4.801	0.000	96	186005	12.5	10.6	
$	39 Nitrobenzene-d5	82	4.854	4.854	0.000	93	1083271	25.0	19.0	
	40 Nitrobenzene	77	4.871	4.842	0.000	93	605808	12.5	11.6	
	42 Isophorone	82	5.099	5.099	0.000	98	1120898	12.5	12.0	
	43 2-Nitrophenol	139	5.181	5.181	0.000	90	203940	12.5	10.6	
	44 2,4-Dimethylphenol	107	5.233	5.239	0.000	97	451895	12.5	11.5	
	47 Bis(2-chloroethoxy)methane	93	5.315	5.315	0.000	91	675466	12.5	12.0	
	49 2,4-Dichlorophenol	162	5.420	5.420	0.000	97	354486	12.5	12.1	
*	52 Naphthalene-d8	136	5.543	5.543	0.000	98	532198	5.00	5.00	
	53 Naphthalene	128	5.560	5.566	0.000	97	1349402	12.5	11.8	
	56 4-Chloroaniline	127	5.624	5.619	0.005	94	404991	12.5	8.37	
	57 2,6-Dichlorophenol	162	5.630	5.630	0.000	93	359319	12.5	12.4	
	59 Hexachlorobutadiene	225	5.677	5.683	-0.006	96	195750	12.5	11.0	
	62 Caprolactam	113	5.928	5.928	0.000	71	28838	12.5	2.77	
	65 4-Chloro-3-methylphenol	107	6.097	6.097	-0.006	96	409877	12.5	11.3	
	67 2-Methylnaphthalene	142	6.220	6.220	0.000	91	871983	12.5	12.5	
	71 Hexachlorocyclopentadiene	237	6.372	6.372	0.000	94	119167	12.5	6.62	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
70 1,2,4,5-Tetrachlorobenzene	216	6.378	6.384	-0.006	98	395049	12.5	12.1	
79 2,4,6-Trichlorophenol	196	6.500	6.500	0.000	94	266242	12.5	12.9	
80 2,4,5-Trichlorophenol	196	6.541	6.541	0.000	91	288966	12.5	12.7	
$ 81 2-Fluorobiphenyl (Surr)	172	6.576	6.576	0.000	99	1740725	25.0	19.9	
83 1,1'-Biphenyl	154	6.670	6.670	0.000	96	1098540	12.5	12.9	
84 2-Chloronaphthalene	162	6.681	6.681	0.000	95	819296	12.5	12.6	
87 2-Nitroaniline	138	6.786	6.786	0.000	76	301193	12.5	13.2	
90 Dimethyl phthalate	163	6.962	6.962	0.000	97	897182	12.5	11.7	
91 1,3-Dinitrobenzene	168	6.991	6.991	0.000	77	150773	12.5	12.8	
92 2,6-Dinitrotoluene	165	7.020	7.020	0.000	83	198914	12.5	12.3	
93 Acenaphthylene	152	7.073	7.078	-0.005	99	1438210	12.5	12.9	
95 3-Nitroaniline	138	7.178	7.178	0.000	86	232407	12.5	11.7	
* 96 Acenaphthene-d10	164	7.207	7.207	0.000	95	274938	5.00	5.00	
97 Acenaphthene	153	7.236	7.242	-0.006	98	886060	12.5	12.2	
98 2,4-Dinitrophenol	184	7.277	7.277	0.000	76	218963	25.0	21.5	
100 4-Nitrophenol	109	7.370	7.382	0.000	93	187803	25.0	15.6	
102 2,4-Dinitrotoluene	165	7.400	7.399	0.000	79	286494	12.5	13.1	
101 Dibenzofuran	168	7.405	7.405	0.000	96	1180952	12.5	12.1	
105 2,3,4,6-Tetrachlorophenol	232	7.528	7.528	0.000	76	220046	12.5	11.0	
107 Diethyl phthalate	149	7.633	7.633	0.000	96	1072723	12.5	13.0	
108 Fluorene	166	7.727	7.727	0.000	93	923664	12.5	12.0	
110 4-Chlorophenyl phenyl ether	204	7.732	7.732	0.000	93	396476	12.5	11.5	
112 4-Nitroaniline	138	7.756	7.756	0.000	81	248133	12.5	12.6	
113 4,6-Dinitro-2-methylphenol	198	7.779	7.779	0.000	69	288195	25.0	23.7	
114 N-Nitrosodiphenylamine	169	7.843	7.861	-0.006	68	656656	10.6	10.3	
$ 116 2,4,6-Tribromophenol	330	7.960	7.960	0.000	90	514476	50.0	39.5	
122 4-Bromophenyl phenyl ether	248	8.194	8.194	0.000	76	254129	12.5	12.4	
124 Hexachlorobenzene	284	8.240	8.240	0.000	94	313652	12.5	12.9	
126 Atrazine	200	8.357	8.357	0.000	81	236924	12.5	12.7	
127 Pentachlorophenol	266	8.439	8.439	0.000	89	326625	25.0	28.2	
* 131 Phenanthrene-d10	188	8.614	8.614	0.000	96	520905	5.00	5.00	
132 Phenanthrene	178	8.632	8.643	-0.005	98	1385930	12.5	12.6	
135 Anthracene	178	8.684	8.690	0.000	98	1373704	12.5	12.6	
136 Carbazole	167	8.842	8.848	-0.006	96	1481665	12.5	13.7	
138 Di-n-butyl phthalate	149	9.186	9.186	0.000	99	1839762	12.5	13.2	
144 Fluoranthene	202	9.759	9.758	0.000	99	1571878	12.5	13.5	
* 146 Pyrene-d10 (IS)	212	9.957	9.957	0.000	96	494297	5.00	5.00	
147 Pyrene	202	9.975	9.975	0.000	96	1594501	12.5	12.6	
$ 148 p-Terphenyl-d14	244	10.132	10.132	0.000	96	1976084	25.0	22.5	
153 Butyl benzyl phthalate	149	10.640	10.646	0.000	96	736978	12.5	12.8	
157 3,3'-Dichlorobenzidine	252	11.212	11.213	0.000	76	780624	25.0	22.1	
156 Benzo[a]anthracene	228	11.224	11.236	0.000	99	1401358	12.5	15.0	
159 Chrysene	228	11.265	11.265	0.000	97	1368418	12.5	14.8	
160 Bis(2-ethylhexyl) phthalate	149	11.300	11.300	0.000	94	1136011	12.5	14.5	
162 Di-n-octyl phthalate	149	12.141	12.141	0.000	98	1867252	12.5	11.9	
164 Benzo[b]fluoranthene	252	12.590	12.591	0.000	98	1299711	12.5	11.8	
165 Benzo[k]fluoranthene	252	12.625	12.631	-0.006	98	1345191	12.5	12.0	
166 Benzo[a]pyrene	252	13.034	13.046	-0.006	83	1218586	12.5	13.0	
* 167 Perylene-d12	264	13.116	13.116	0.000	94	439036	5.00	5.00	
171 Indeno[1,2,3-cd]pyrene	276	14.622	14.599	0.000	95	1169560	12.5	13.1	
172 Dibenz(a,h)anthracene	278	14.663	14.669	0.000	95	1138022	12.5	11.6	
173 Benzo[g,h,i]perylene	276	14.973	14.973	0.000	93	1353328	12.5	12.9	

QC Flag Legend

Processing Flags

Reagents:

MSS_RV8270_IS_00059 Amount Added: 20.00 Units: uL Run Reagent

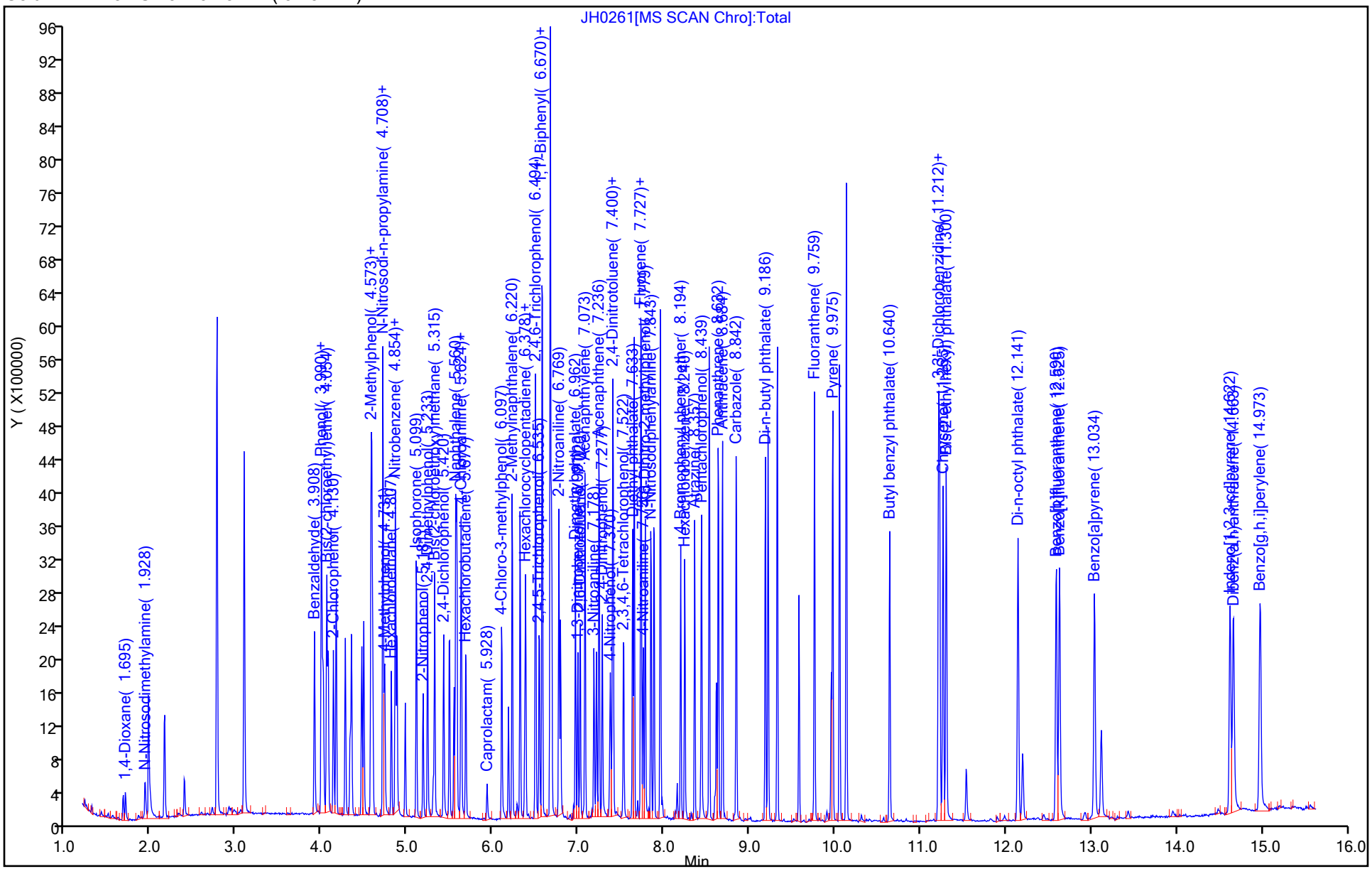
Report Date: 03-Aug-2023 08:54:15 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0261.D

Injection Date:	03-Aug-2023 00:12:30	Instrument ID:	HP23264	Operator ID:	mem41592
Lims ID:	LCSD 410-403666/3-A			Worklist Smp#:	12
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	MSSemi_HP23264	Limit Group:	MSSV - 8270D_E LVI		

Column: DB-5MS 20m 0.25mm (0.25 mm)



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0261.D
Lims ID: LCSD 410-403666/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 03-Aug-2023 00:12:30 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: LCSD 410-403666/3-A
Misc. Info.: 410-0090492-012
Operator ID: mem41592 Instrument ID: HP23264

Method: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\MSSemi_HP23264.m
Limit Group: MSSV - 8270D_E LVI
Last Update: 03-Aug-2023 08:48:58 Calib Date: 02-Aug-2023 21:45:30
Integrator: Falcon ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\HP23264\20230802-90492.b\JH0254.D

Column 1 : DB-5MS 20m 0.25mm (0.25 mm) Det: MS SCAN
Process Host: CTX1602

First Level Reviewer: N5QU Date: 03-Aug-2023 07:42:18

Compound	Amount Added	Amount Recovered	% Rec.
$ 9 2-Fluorophenol	50.0	25.1	50.19
$ 15 Phenol-d5	50.0	18.8	37.51
$ 39 Nitrobenzene-d5	25.0	19.0	76.06
$ 81 2-Fluorobiphenyl (Surr)	25.0	19.9	79.79
$ 116 2,4,6-Tribromophenol	50.0	39.5	79.01
$ 148 p-Terphenyl-d14	25.0	22.5	90.19

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Instrument ID: HP23264 Start Date: 07/18/2023 07:23

Analysis Batch Number: 397829 End Date: 07/18/2023 11:38

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 410-397829/1		07/18/2023 07:23	1	JG1800.D	DB-5MS 30m 0.25 0.25(mm)
ICIS 410-397829/2		07/18/2023 07:41	1	JG1801a.D	DB-5MS 30m 0.25 0.25(mm)
IC 410-397829/3		07/18/2023 08:07	1	JG1802.D	DB-5MS 30m 0.25 0.25(mm)
IC 410-397829/4		07/18/2023 08:28	1	JG1803.D	DB-5MS 30m 0.25 0.25(mm)
IC 410-397829/5		07/18/2023 08:49	1	JG1804.D	DB-5MS 30m 0.25 0.25(mm)
IC 410-397829/6		07/18/2023 09:10	1	JG1805.D	DB-5MS 30m 0.25 0.25(mm)
IC 410-397829/7		07/18/2023 09:31	1	JG1806.D	DB-5MS 30m 0.25 0.25(mm)
IC 410-397829/8		07/18/2023 09:52	1	JG1807.D	DB-5MS 30m 0.25 0.25(mm)
IC 410-397829/9		07/18/2023 10:14	1	JG1808.D	DB-5MS 30m 0.25 0.25(mm)
ICVL 410-397829/10		07/18/2023 10:35	1		DB-5MS 30m 0.25 0.25(mm)
ICVL 410-397829/11		07/18/2023 10:56	1		DB-5MS 30m 0.25 0.25(mm)
ICV 410-397829/12		07/18/2023 11:17	1	JG1811.D	DB-5MS 30m 0.25 0.25(mm)
ICV 410-397829/13		07/18/2023 11:38	1	JG1812.D	DB-5MS 30m 0.25 0.25(mm)

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Instrument ID: HP23264 Start Date: 08/02/2023 20:15

Analysis Batch Number: 403788 End Date: 08/03/2023 07:37

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 410-403788/1		08/02/2023 20:15	1	JH0250.D	DB-5MS 30m 0.25 0.25(mm)
CCVIS 410-403788/2		08/02/2023 20:32	1	JH0251.D	DB-5MS 30m 0.25 0.25(mm)
CCV 410-403788/4		08/02/2023 21:02	1		DB-5MS 30m 0.25 0.25(mm)
CCV 410-403788/3		08/02/2023 21:24	1		DB-5MS 30m 0.25 0.25(mm)
IC 410-403788/5		08/02/2023 21:45	1		DB-5MS 30m 0.25 0.25(mm)
ZZZZZ		08/02/2023 22:06	1		DB-5MS 30m 0.25 0.25(mm)
ZZZZZ		08/02/2023 22:27	1		DB-5MS 30m 0.25 0.25(mm)
ZZZZZ		08/02/2023 22:48	1		DB-5MS 30m 0.25 0.25(mm)
ZZZZZ		08/02/2023 23:09	1		DB-5MS 30m 0.25 0.25(mm)
MB 410-403666/1-A		08/02/2023 23:30	1	JH0259.D	DB-5MS 30m 0.25 0.25(mm)
LCS 410-403666/2-A		08/02/2023 23:51	1	JH0260.D	DB-5MS 30m 0.25 0.25(mm)
LCSD 410-403666/3-A		08/03/2023 00:12	1	JH0261.D	DB-5MS 30m 0.25 0.25(mm)
ZZZZZ		08/03/2023 00:33	1		DB-5MS 30m 0.25 0.25(mm)
ZZZZZ		08/03/2023 00:54	1		DB-5MS 30m 0.25 0.25(mm)
ZZZZZ		08/03/2023 03:01	1		DB-5MS 30m 0.25 0.25(mm)
ZZZZZ		08/03/2023 03:22	1		DB-5MS 30m 0.25 0.25(mm)
ZZZZZ		08/03/2023 03:43	1		DB-5MS 30m 0.25 0.25(mm)
ZZZZZ		08/03/2023 04:05	1		DB-5MS 30m 0.25 0.25(mm)
ZZZZZ		08/03/2023 04:26	1		DB-5MS 30m 0.25 0.25(mm)
ZZZZZ		08/03/2023 04:47	5		DB-5MS 30m 0.25 0.25(mm)
ZZZZZ		08/03/2023 05:08	1		DB-5MS 30m 0.25 0.25(mm)
ZZZZZ		08/03/2023 05:29	1		DB-5MS 30m 0.25 0.25(mm)
ZZZZZ		08/03/2023 05:51	1		DB-5MS 30m 0.25 0.25(mm)
410-136514-1	16-2	08/03/2023 06:12	1	JH0278.D	DB-5MS 30m 0.25 0.25(mm)
410-136514-2	16-3	08/03/2023 06:33	1	JH0279.D	DB-5MS 30m 0.25 0.25(mm)
410-136514-3	16-5	08/03/2023 06:54	1	JH0280.D	DB-5MS 30m 0.25 0.25(mm)
410-136514-4	16WC2B	08/03/2023 07:15	1	JH0281.D	DB-5MS 30m 0.25 0.25(mm)
410-136514-5	16SPRING	08/03/2023 07:37	1	JH0282.D	DB-5MS 30m 0.25 0.25(mm)

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136514-1

SDG No.:

Batch Number: 397829 | Batch Start Date: 07/18/23 07:23 | Batch Analyst: Lutte, Kate E

Batch Method: 8270D | Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	CalcMsg	MSS_RV8270_1 00029	MSS_RV8270_2 00030	MSS_RV8270_3 00027	MSS_RV8270_4 00027
DFTPP 410-397829/1		8270D		1 mL	Perform Calculation left blank				
ICIS 410-397829/2		8270D		1 mL	Perform Calculation left blank				
IC 410-397829/3		8270D		1 mL	Perform Calculation left blank	1 mL			
IC 410-397829/4		8270D		1 mL	Perform Calculation left blank				
IC 410-397829/5		8270D		1 mL	Perform Calculation left blank				
IC 410-397829/6		8270D		1 mL	Perform Calculation left blank				
IC 410-397829/7		8270D		1 mL	Perform Calculation left blank				1 mL
IC 410-397829/8		8270D		1 mL	Perform Calculation left blank			1 mL	
IC 410-397829/9		8270D		1 mL	Perform Calculation left blank		1 mL		
ICV 410-397829/12		8270D		1 mL	Perform Calculation left blank				
ICV 410-397829/13		8270D		1 mL	Perform Calculation left blank				

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSS_RV8270_5 00037	MSS_RV8270_6 00045	MSS_RV8270_7 00030	MSS_RV8270_8 00030	MSS_RV8270ICV 00022	MSS_RVBAS_ICV 00013
DFTPP 410-397829/1		8270D							
ICIS 410-397829/2		8270D		1 mL					
IC 410-397829/3		8270D							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136514-1

SDG No.:

Batch Number: 397829 | Batch Start Date: 07/18/23 07:23 | Batch Analyst: Lutte, Kate E

Batch Method: 8270D | Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSS_RV8270_5 00037	MSS_RV8270_6 00045	MSS_RV8270_7 00030	MSS_RV8270_8 00030	MSS_RV8270ICV 00022	MSS_RVBAS_ICV 00013
IC 410-397829/4		8270D					1 mL		
IC 410-397829/5		8270D				1 mL			
IC 410-397829/6		8270D			1 mL				
IC 410-397829/7		8270D							
IC 410-397829/8		8270D							
IC 410-397829/9		8270D							
ICV 410-397829/12		8270D						1 mL	
ICV 410-397829/13		8270D							1 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSS_RVDFTPP 00013
DFTPP 410-397829/1		8270D		1 mL
ICIS 410-397829/2		8270D		
IC 410-397829/3		8270D		
IC 410-397829/4		8270D		
IC 410-397829/5		8270D		
IC 410-397829/6		8270D		
IC 410-397829/7		8270D		
IC 410-397829/8		8270D		
IC 410-397829/9		8270D		
ICV 410-397829/12		8270D		
ICV 410-397829/13		8270D		

Batch Notes	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136514-1

SDG No.:

Batch Number: 397829 | Batch Start Date: 07/18/23 07:23 | Batch Analyst: Lutte, Kate E

Batch Method: 8270D | Batch End Date:

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-136514-1

SDG No.:

Batch Number: 403666 Batch Start Date: 08/02/23 15:28 Batch Analyst: Battle-Hilacion, Destiny

Batch Method: 3510C Batch End Date: 08/02/23 20:10

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	ReceivedpH	FirstAdjustpH
MB 410-403666/1		3510C, 8270D				250 mL	1 mL	n/a SU	11 SU
LCS 410-403666/2		3510C, 8270D				250 mL	1 mL	n/a SU	11 SU
LCSD 410-403666/3		3510C, 8270D				250 mL	1 mL	n/a SU	11 SU
410-136514-D-1	16-2	3510C, 8270D	T	417.76 g	166.71 g	251.1 mL	1 mL	n/a SU	11 SU
410-136514-D-2	16-3	3510C, 8270D	T	415.71 g	167.16 g	248.6 mL	1 mL	n/a SU	11 SU
410-136514-D-3	16-5	3510C, 8270D	T	416.28 g	166.46 g	249.8 mL	1 mL	n/a SU	11 SU
410-136514-D-4	16WC2B	3510C, 8270D	T	417.17 g	168.20 g	249 mL	1 mL	n/a SU	11 SU
410-136514-D-5	16SPRING	3510C, 8270D	T	416.24 g	169.17 g	247.1 mL	1 mL	n/a SU	11 SU

Lab Sample ID	Client Sample ID	Method Chain	Basis	SecondAdjustpH	OP_MINIBNA_SS 00094	OP_MINLCS1_MS 00178	OP_MINLCS2_MS 00102	AnalysisComment	
MB 410-403666/1		3510C, 8270D		2 SU	1 mL			tap water	
LCS 410-403666/2		3510C, 8270D		2 SU	1 mL	1 mL	1 mL	tap water	
LCSD 410-403666/3		3510C, 8270D		2 SU	1 mL	1 mL	1 mL	tap water	
410-136514-D-1	16-2	3510C, 8270D	T	2 SU	1 mL			clear	
410-136514-D-2	16-3	3510C, 8270D	T	2 SU	1 mL			clear	
410-136514-D-3	16-5	3510C, 8270D	T	2 SU	1 mL			clear	
410-136514-D-4	16WC2B	3510C, 8270D	T	2 SU	1 mL			clear	
410-136514-D-5	16SPRING	3510C, 8270D	T	2 SU	1 mL			clear	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136514-1

SDG No.:

Batch Number: 403666 | Batch Start Date: 08/02/23 15:28 | Batch Analyst: Battle-Hilacion, Destiny

Batch Method: 3510C | Batch End Date: 08/02/23 20:10

Batch Notes	
Balance ID	93158
Pipette/Syringe/Dispenser ID	4
Analyst ID - Extraction	OS11067 DBH82588 AS86224
Analyst ID - Spike Analyst	DBH82588
Acid Used for pH Adjustment ID	H2SO4: 225553
Base Used to Adjust pH ID	NaOH: 4202B64
Prep Solvent ID	MeCl2: 63055
Prep Solvent Volume Used	90 mL
Na2SO4 ID	23212A
Analyst ID - Concentration	OS11067 DBH82588 AS86224
Equipment ID - Concentration 1	BUCHI
Concentration 1 Corrected Temperature	55 Degrees C
Vial Lot Number	23112141

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS

COVER PAGE
METALS

Lab Name: Eurofins Lancaster Laboratories En Job Number: 410-136514-1

SDG No.:

Project: RFAAP, Radford HWMU16

Client Sample ID	Lab Sample ID
16-2	410-136514-1
16-3	410-136514-2
16-5	410-136514-3
16WC2B	410-136514-4
16SPRING	410-136514-5

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: 16-2 Lab Sample ID: 410-136514-1

Lab Name: Eurofins Lancaster Laboratories Environment Test Job No.: 410-136514-1

SDG ID.:

Matrix: Water Date Sampled: 07/26/2023 09:30

Reporting Basis: WET Date Received: 07/28/2023 09:25

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7439-97-6	Mercury	ND	2.0		ug/L			1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: 16-2 | Lab Sample ID: 410-136514-1

Lab Name: Eurofins Lancaster Laboratories Environment Test | Job No.: 410-136514-1

SDG ID.:

Matrix: Water | Date Sampled: 07/26/2023 09:30

Reporting Basis: WET | Date Received: 07/28/2023 09:25

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-38-2	Arsenic	ND	10		ug/L			1	6020B
7440-39-3	Barium	240	10		ug/L			1	6020B
7440-41-7	Beryllium	ND	1.0		ug/L			1	6020B
7440-43-9	Cadmium	ND	1.0		ug/L			1	6020B
7440-47-3	Chromium	ND	5.0		ug/L			1	6020B
7440-48-4	Cobalt	ND	5.0		ug/L			1	6020B
7440-50-8	Copper	ND	5.0		ug/L			1	6020B
7439-92-1	Lead	ND	3.0		ug/L			1	6020B
7440-02-0	Nickel	ND	10		ug/L			1	6020B
7440-66-6	Zinc	ND	30		ug/L			1	6020B
7440-62-2	Vanadium	ND	10		ug/L			1	6020B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: 16-3 Lab Sample ID: 410-136514-2

Lab Name: Eurofins Lancaster Laboratories Environment Test Job No.: 410-136514-1

SDG ID.:

Matrix: Water Date Sampled: 07/26/2023 11:15

Reporting Basis: WET Date Received: 07/28/2023 09:25

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7439-97-6	Mercury	ND	2.0		ug/L			1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: 16-3 | Lab Sample ID: 410-136514-2

Lab Name: Eurofins Lancaster Laboratories Environment Test | Job No.: 410-136514-1

SDG ID.:

Matrix: Water | Date Sampled: 07/26/2023 11:15

Reporting Basis: WET | Date Received: 07/28/2023 09:25

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-38-2	Arsenic	ND	10		ug/L			1	6020B
7440-39-3	Barium	800	10		ug/L			1	6020B
7440-41-7	Beryllium	ND	1.0		ug/L			1	6020B
7440-43-9	Cadmium	ND	1.0		ug/L			1	6020B
7440-47-3	Chromium	ND	5.0		ug/L			1	6020B
7440-48-4	Cobalt	ND	5.0		ug/L			1	6020B
7440-50-8	Copper	ND	5.0		ug/L			1	6020B
7439-92-1	Lead	ND	3.0		ug/L			1	6020B
7440-02-0	Nickel	ND	10		ug/L			1	6020B
7440-66-6	Zinc	ND	30		ug/L			1	6020B
7440-62-2	Vanadium	ND	10		ug/L			1	6020B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: 16-5 Lab Sample ID: 410-136514-3

Lab Name: Eurofins Lancaster Laboratories Environment Test Job No.: 410-136514-1

SDG ID.:

Matrix: Water Date Sampled: 07/26/2023 07:45

Reporting Basis: WET Date Received: 07/28/2023 09:25

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7439-97-6	Mercury	ND	2.0		ug/L			1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: 16-5 | Lab Sample ID: 410-136514-3

Lab Name: Eurofins Lancaster Laboratories Environment Test | Job No.: 410-136514-1

SDG ID.:

Matrix: Water | Date Sampled: 07/26/2023 07:45

Reporting Basis: WET | Date Received: 07/28/2023 09:25

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-38-2	Arsenic	ND	10		ug/L			1	6020B
7440-39-3	Barium	180	10		ug/L			1	6020B
7440-41-7	Beryllium	ND	1.0		ug/L			1	6020B
7440-43-9	Cadmium	ND	1.0		ug/L			1	6020B
7440-47-3	Chromium	ND	5.0		ug/L			1	6020B
7440-48-4	Cobalt	ND	5.0		ug/L			1	6020B
7440-50-8	Copper	ND	5.0		ug/L			1	6020B
7439-92-1	Lead	ND	3.0		ug/L			1	6020B
7440-02-0	Nickel	ND	10		ug/L			1	6020B
7440-66-6	Zinc	ND	30		ug/L		^3+	1	6020B
7440-62-2	Vanadium	ND	10		ug/L			1	6020B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: 16WC2B
Lab Sample ID: 410-136514-4
Lab Name: Eurofins Lancaster Laboratories Environment Test
Job No.: 410-136514-1
SDG ID.:
Matrix: Water
Date Sampled: 07/26/2023 08:40
Reporting Basis: WET
Date Received: 07/28/2023 09:25

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7439-97-6	Mercury	ND	2.0		ug/L			1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: 16WC2B
Lab Sample ID: 410-136514-4
Lab Name: Eurofins Lancaster Laboratories Environment Test
Job No.: 410-136514-1
SDG ID.:
Matrix: Water
Date Sampled: 07/26/2023 08:40
Reporting Basis: WET
Date Received: 07/28/2023 09:25

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-38-2	Arsenic	ND	10		ug/L			1	6020B
7440-39-3	Barium	120	10		ug/L			1	6020B
7440-41-7	Beryllium	ND	1.0		ug/L			1	6020B
7440-43-9	Cadmium	ND	1.0		ug/L			1	6020B
7440-47-3	Chromium	ND	5.0		ug/L			1	6020B
7440-48-4	Cobalt	ND	5.0		ug/L			1	6020B
7440-50-8	Copper	ND	5.0		ug/L			1	6020B
7439-92-1	Lead	ND	3.0		ug/L			1	6020B
7440-02-0	Nickel	ND	10		ug/L			1	6020B
7440-66-6	Zinc	ND	30		ug/L		^3+	1	6020B
7440-62-2	Vanadium	ND	10		ug/L			1	6020B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: 16SPRING
Lab Sample ID: 410-136514-5
Lab Name: Eurofins Lancaster Laboratories Environment Test
Job No.: 410-136514-1
SDG ID.:
Matrix: Water
Date Sampled: 07/26/2023 08:00
Reporting Basis: WET
Date Received: 07/28/2023 09:25

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7439-97-6	Mercury	ND	2.0		ug/L			1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: 16SPRING
Lab Sample ID: 410-136514-5
Lab Name: Eurofins Lancaster Laboratories Environment Test
Job No.: 410-136514-1
SDG ID.:
Matrix: Water
Date Sampled: 07/26/2023 08:00
Reporting Basis: WET
Date Received: 07/28/2023 09:25

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-38-2	Arsenic	ND	10		ug/L			1	6020B
7440-39-3	Barium	220	10		ug/L			1	6020B
7440-41-7	Beryllium	ND	1.0		ug/L			1	6020B
7440-43-9	Cadmium	ND	1.0		ug/L			1	6020B
7440-47-3	Chromium	ND	5.0		ug/L			1	6020B
7440-48-4	Cobalt	ND	5.0		ug/L			1	6020B
7440-50-8	Copper	ND	5.0		ug/L			1	6020B
7439-92-1	Lead	ND	3.0		ug/L			1	6020B
7440-02-0	Nickel	ND	10		ug/L			1	6020B
7440-66-6	Zinc	ND	30		ug/L			1	6020B
7440-62-2	Vanadium	ND	10		ug/L			1	6020B

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Lancaster Laboratories Envi: Job No.: 410-136514-1

SDG No.:

ICV Source: MT_MJ_ICV_00088 Concentration Units: ug/L

CCV Source: MT_MJ_CCV_00168

Analyte	ICV 410-407006/4 08/10/2023 07:45				CCV 410-407006/13 08/10/2023 09:05				CCV 410-407006/15 08/10/2023 11:30			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	52.7		50.0	105	52.7		50.0	105	52.4		50.0	105
Arsenic	485		500	97	513		500	103	532		500	106
Barium	493		500	99	514		500	103	523		500	105
Beryllium	50.5		50.0	101	49.2		50.0	98	51.1		50.0	102
Cadmium	53.3		50.0	107	52.0		50.0	104	53.1		50.0	106
Chromium	492		500	98	522		500	104	542		500	109
Cobalt	493		500	99	521		500	104	537		500	107
Copper	496		500	99	517		500	103	535		500	107
Lead	49.7		50.0	99	51.5		50.0	103	52.6		50.0	105
Nickel	494		500	99	521		500	104	538		500	108
Selenium	48.4		50.0	97	52.7		50.0	105	53.0		50.0	106
Silver	48.7		50.0	97	51.4		50.0	103	53.3		50.0	107
Thallium	49.4		50.0	99	51.7		50.0	103	52.6		50.0	105
Vanadium	495		500	99	523		500	105	539		500	108
Zinc	499		500	100	510		500	102	534		500	107

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

Lab Name: Eurofins Lancaster Laboratories Envi: Job No.: 410-136514-1

SDG No.:

ICV Source: MT_MJ_ICV_00088 Concentration Units: ug/L

CCV Source: MT_MJ_CCV_00168

Analyte	CCV 410-407006/26 08/10/2023 13:21				CCV 410-407006/37 08/10/2023 13:43				CCV 410-407006/47 08/10/2023 14:03			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	53.2		50.0	107	50.9		50.0	102	52.5		50.0	105
Arsenic	523		500	105	510		500	102	523		500	105
Barium	516		500	103	492		500	98	521		500	104
Beryllium	49.8		50.0	100	47.0		50.0	94	50.7		50.0	101
Cadmium	52.5		50.0	105	50.3		50.0	101	52.7		50.0	105
Chromium	537		500	107	522		500	104	537		500	107
Cobalt	536		500	107	517		500	103	532		500	106
Copper	532		500	106	517		500	103	532		500	106
Lead	52.7		50.0	105	50.8		50.0	102	52.1		50.0	104
Nickel	537		500	108	518		500	104	531		500	106
Selenium	53.3		50.0	106	51.1		50.0	102	53.0		50.0	106
Silver	53.2		50.0	106	50.3		50.0	101	52.9		50.0	106
Thallium	53.1		50.0	106	50.9		50.0	102	52.1		50.0	104
Vanadium	534		500	107	521		500	104	534		500	107
Zinc	531		500	106	514		500	103	524		500	105

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

Lab Name: Eurofins Lancaster Laboratories Envi: Job No.: 410-136514-1

SDG No.:

ICV Source: MT_MJ_ICV_00088 Concentration Units: ug/L

CCV Source: MT_MJ_CCV_00168

Analyte	ICV 410-406500/4 08/09/2023 13:30				CCV 410-406500/14 08/09/2023 14:17				CCV 410-406500/19 08/09/2023 14:40			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	54.4		50.0	109	51.5		50.0	103	52.3		50.0	105
Arsenic	497		500	99	522		500	104	509		500	102
Barium	500		500	100	517		500	103	518		500	104
Beryllium	50.4		50.0	101	50.7		50.0	102	51.5		50.0	103
Cadmium	54.4		50.0	109	51.5		50.0	103	51.7		50.0	103
Chromium	490		500	98	489		500	98	495		500	99
Cobalt	492		500	98	491		500	98	498		500	99
Copper	488		500	98	494		500	99	488		500	98
Lead	49.7		50.0	99	51.0		50.0	102	50.8		50.0	102
Nickel	512		500	102	519		500	104	511		500	102
Selenium	50.5		50.0	101	52.5		50.0	105	51.3		50.0	103
Silver	49.5		50.0	99	50.7		50.0	101	51.3		50.0	103
Thallium	49.5		50.0	99	51.1		50.0	102	50.9		50.0	102
Vanadium	508		500	102	507		500	101	511		500	102
Zinc	523		500	105	516		500	103	505		500	101

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Lancaster Laboratories Envi: Job No.: 410-136514-1

SDG No.:

ICV Source: MT_MJ_ICV_00088 Concentration Units: ug/L

CCV Source: MT_MJ_CCV_00168

Analyte	CCV 410-406500/28 08/09/2023 14:59				CCV 410-406500/38 08/09/2023 15:19							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	52.1		50.0	104	52.2		50.0	104				
Arsenic	517		500	103	511		500	102				
Barium	517		500	103	519		500	104				
Beryllium	50.4		50.0	101	51.2		50.0	103				
Cadmium	51.0		50.0	102	51.2		50.0	102				
Chromium	494		500	99	492		500	98				
Cobalt	497		500	99	497		500	99				
Copper	497		500	99	487		500	97				
Lead	51.4		50.0	103	51.3		50.0	103				
Nickel	520		500	104	510		500	102				
Selenium	51.8		50.0	104	50.8		50.0	102				
Silver	50.5		50.0	101	50.9		50.0	102				
Thallium	51.3		50.0	102	51.1		50.0	102				
Vanadium	512		500	102	515		500	103				
Zinc	518		500	103	515		500	103				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

Lab Name: Eurofins Lancaster Laboratories Envi: Job No.: 410-136514-1

SDG No.:

ICV Source: MT_MJ_ICV_00088 Concentration Units: ug/L

CCV Source: MT_MJ_CCV_00168

Analyte	ICV 410-407005/4 08/10/2023 08:05				CCV 410-407005/16 08/10/2023 08:48				CCV 410-407005/101 08/10/2023 16:59			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	53.3		50.0	107	50.9		50.0	102	51.5		50.0	103
Arsenic	494		500	99	533		500	107	514		500	103
Barium	502		500	100	514		500	103	518		500	104
Beryllium	50.8		50.0	102	49.9		50.0	100	46.3		50.0	93
Cadmium	54.1		50.0	108	51.3		50.0	103	51.0		50.0	102
Chromium	472		500	94	481		500	96	486		500	97
Cobalt	474		500	95	481		500	96	501		500	100
Copper	484		500	97	507		500	101	482		500	96
Lead	50.1		50.0	100	50.8		50.0	102	51.4		50.0	103
Nickel	504		500	101	537		500	107	506		500	101
Selenium	50.0		50.0	100	53.2		50.0	106	52.7		50.0	105
Silver	49.4		50.0	99	50.4		50.0	101	50.7		50.0	101
Thallium	49.9		50.0	100	50.7		50.0	101	51.0		50.0	102
Vanadium	491		500	98	499		500	100	516		500	103
Zinc	508		500	102	525		500	105	509		500	102

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

Lab Name: Eurofins Lancaster Laboratories Envi: Job No.: 410-136514-1

SDG No.:

ICV Source: MT_MJ_ICV_00088 Concentration Units: ug/L

CCV Source: MT_MJ_CCV_00168

Analyte	CCV 410-407005/106 08/10/2023 17:09				CCV 410-407005/115 08/10/2023 17:28				CCV 410-407005/136 08/10/2023 18:11			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	52.1		50.0	104	51.2		50.0	102	51.8		50.0	104
Arsenic	521		500	104	517		500	103	518		500	104
Barium	513		500	103	522		500	104	519		500	104
Beryllium	47.3		50.0	95	46.6		50.0	93	46.4		50.0	93
Cadmium	51.2		50.0	102	51.6		50.0	103	50.8		50.0	102
Chromium	487		500	97	493		500	99	486		500	97
Cobalt	485		500	97	493		500	99	486		500	97
Copper	485		500	97	488		500	98	487		500	97
Lead	51.3		50.0	103	51.8		50.0	104	51.6		50.0	103
Nickel	509		500	102	513		500	103	513		500	103
Selenium	52.0		50.0	104	54.3		50.0	109	54.0		50.0	108
Silver	50.5		50.0	101	51.0		50.0	102	50.7		50.0	101
Thallium	51.1		50.0	102	51.7		50.0	103	51.5		50.0	103
Vanadium	512		500	102	519		500	104	511		500	102
Zinc	505		500	101	516		500	103	514		500	103

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Lancaster Laboratories Envi: Job No.: 410-136514-1

SDG No.:

ICV Source: MT_MJ_ICV_00088 Concentration Units: ug/L

CCV Source: MT_MJ_CCV_00168

Analyte	CCV 410-407005/143 08/10/2023 18:25											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	51.8		50.0	104								
Arsenic	519		500	104								
Barium	522		500	104								
Beryllium	46.9		50.0	94								
Cadmium	50.9		50.0	102								
Chromium	488		500	98								
Cobalt	503		500	101								
Copper	486		500	97								
Lead	51.6		50.0	103								
Nickel	511		500	102								
Selenium	52.1		50.0	104								
Silver	50.9		50.0	102								
Thallium	51.4		50.0	103								
Vanadium	513		500	103								
Zinc	515		500	103								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

Lab Name: Eurofins Lancaster Laboratories Envi: Job No.: 410-136514-1

SDG No.:

ICV Source: Hg_1Control_00150 Concentration Units: ug/L

CCV Source: Hg_1Cal_00145

Analyte	ICV 410-403086/7-A 08/04/2023 08:19				CCV 410-403086/11-A 08/04/2023 09:14				CCV 410-403086/11-A 08/04/2023 09:39			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	2.45		2.50	98	1.06		1.00	106	1.01		1.00	101

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

Lab Name: Eurofins Lancaster Laboratories Envi: Job No.: 410-136514-1

SDG No.:

ICV Source: Hg_1Control_00150 Concentration Units: ug/L

CCV Source: Hg_1Cal_00145

Analyte	CCV 410-403086/11-A 08/04/2023 10:03				CCV 410-403086/11-A 08/04/2023 10:28				CCV 410-403086/11-A 08/04/2023 11:22			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	1.03		1.00	103	1.03		1.00	103	1.08		1.00	108

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

Lab Name: Eurofins Lancaster Laboratories Envi: Job No.: 410-136514-1

SDG No.:

ICV Source: Hg_1Control_00150 Concentration Units: ug/L

CCV Source: Hg_1Cal_00145

Analyte	CCV 410-403086/11-A 08/04/2023 11:47				CCV 410-403086/11-A 08/04/2023 12:11				CCV 410-403086/11-A 08/04/2023 12:35			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	1.09		1.00	109	1.03		1.00	103	1.09		1.00	109

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: Eurofins Lancaster Laboratories Environm Job No.: 410-136514-1

SDG No.:

Method: 6020B Instrument ID: E07 - 27813

Lab Sample ID: CRI 410-407006/6 Concentration Units: ug/L

CRQL Check Standard Source: MT_MJ_CRI-V_00152

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	1.01	0.983	J	97	80-120
Arsenic	2.02	1.96	J	97	80-120
Barium	1.99	2.29		115	80-120
Beryllium	0.499	0.436	J	87	80-120
Cadmium	0.496	0.534		108	80-120
Chromium	2.00	2.38		119	80-120
Cobalt	0.504	0.545		108	80-120
Copper	0.999	1.04		104	80-120
Lead	0.503	0.518		103	80-120
Nickel	1.00	1.09		109	80-120
Selenium	1.00	1.05		105	80-120
Silver	0.496	0.541		109	80-120
Thallium	0.500	0.517		103	80-120
Zinc	10.0	11.6		116	80-120
Vanadium	2.00	2.02	J	101	80-120

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: Eurofins Lancaster Laboratories Environm Job No.: 410-136514-1

SDG No.:

Method: 6020B Instrument ID: E09 - 30921

Lab Sample ID: CRI 410-406500/6 Concentration Units: ug/L

CRQL Check Standard Source: MT_MJ_CRI-V_00151

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	1.01	1.08		107	80-120
Arsenic	2.02	2.25		111	80-120
Barium	1.99	2.01		101	80-120
Beryllium	0.499	0.476	J	95	80-120
Cadmium	0.496	0.529		107	80-120
Chromium	2.00	2.30		115	80-120
Cobalt	0.504	0.498	J	99	80-120
Copper	0.999	1.04		104	80-120
Lead	0.503	0.510		101	80-120
Nickel	1.00	0.922	J	92	80-120
Selenium	1.00	1.05		105	80-120
Silver	0.496	0.511		103	80-120
Thallium	0.500	0.459	J	92	80-120
Zinc	10.0	11.7		117	80-120
Vanadium	2.00	1.88	J	94	80-120

Lab Sample ID: CRI 410-407005/6 Concentration Units: ug/L

CRQL Check Standard Source: MT_MJ_CRI-V_00151

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	1.01	0.912	J	90	80-120
Arsenic	2.02	2.07		102	80-120
Barium	1.99	1.98	J	100	80-120
Beryllium	0.499	0.488	J	98	80-120
Cadmium	0.496	0.453	J	91	80-120
Chromium	2.00	2.03		101	80-120
Cobalt	0.504	0.497	J	99	80-120
Copper	0.999	1.02		102	80-120
Lead	0.503	0.504		100	80-120
Nickel	1.00	1.14		114	80-120
Selenium	1.00	0.938	J	94	80-120
Silver	0.496	0.534		108	80-120
Thallium	0.500	0.502		100	80-120
Vanadium	2.00	1.89	J	94	80-120

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: Eurofins Lancaster Laboratories Environm Job No.: 410-136514-1

SDG No.:

Method: 6020B Instrument ID: E09 - 30921

Lab Sample ID: CRI 410-407005/18 Concentration Units: ug/L

CRQL Check Standard Source: MT_MJ_CRI-V_00151

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	1.01	1.04		103	80-120
Arsenic	2.02	2.05		101	80-120
Barium	1.99	1.68	J	84	80-120
Beryllium	0.499	0.460	J	92	80-120
Cadmium	0.496	0.493	J	99	80-120
Chromium	2.00	1.93	J	96	80-120
Cobalt	0.504	0.489	J	97	80-120
Copper	0.999	1.03		104	80-120
Lead	0.503	0.545		108	80-120
Nickel	1.00	1.06		106	80-120
Selenium	1.00	1.03		103	80-120
Silver	0.496	0.472	J	95	80-120
Thallium	0.500	0.489	J	98	80-120
Zinc	10.0	21.8	^3+	218	80-120
Vanadium	2.00	2.11	J	105	80-120

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: Eurofins Lancaster Laboratories Environm Job No.: 410-136514-1

SDG No.:

Method: 7470A Instrument ID: M07 - 17384

Lab Sample ID: CRA 410-403086/8-A Concentration Units: ug/L

CRQL Check Standard Source: Hg_0.1Control_00157

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.169	J	85	50-150

Lab Sample ID: CRA 410-403086/8-A Concentration Units: ug/L

CRQL Check Standard Source: Hg_0.1Control_00157

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.235		117	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 410-407006/5 08/10/2023 07:59		CCB 410-407006/14 08/10/2023 09:07		CCB 410-407006/16 08/10/2023 11:32		CCB 410-407006/27 08/10/2023 13:23	
		Found	C	Found	C	Found	C	Found	C
Antimony	1.0	ND		ND		ND		ND	
Arsenic	2.0	ND		ND		ND		ND	
Barium	2.0	ND		ND		ND		ND	
Beryllium	0.50	ND		0.158	J	ND		ND	
Cadmium	0.50	ND		ND		ND		ND	
Chromium	2.0	ND		ND		ND		ND	
Cobalt	0.50	ND		0.198	J	0.203	J	0.240	J
Copper	1.0	ND		ND		ND		ND	
Lead	0.50	ND		ND		ND		ND	
Nickel	1.0	ND		ND		0.539	J	1.04	
Selenium	1.0	ND		ND		ND		ND	
Silver	0.50	ND		ND		ND		ND	
Thallium	0.50	ND				0.281	J	0.391	J
Vanadium	4.0	ND		ND		ND		ND	
Zinc	10	ND		ND		ND		ND	

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 410-407006/38 08/10/2023 13:45		CCB 410-407006/48 08/10/2023 14:05					
		Found	C	Found	C	Found	C	Found	C
Antimony	1.0	ND		ND					
Arsenic	2.0	ND		ND					
Barium	2.0	ND		ND					
Beryllium	0.50	ND		ND					
Cadmium	0.50	ND		ND					
Chromium	2.0	ND		ND					
Cobalt	0.50	0.286	J	0.241	J				
Copper	1.0	ND		ND					
Lead	0.50	ND		ND					
Nickel	1.0	0.895	J	1.30					
Selenium	1.0	ND		ND					
Silver	0.50	ND		ND					
Thallium	0.50	0.245	J	0.226	J				
Vanadium	4.0	ND		ND					
Zinc	10	ND		ND					

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 410-406500/5 08/09/2023 13:32		CCB 410-406500/15 08/09/2023 14:19		CCB 410-406500/20 08/09/2023 14:42		CCB 410-406500/29 08/09/2023 15:01	
		Found	C	Found	C	Found	C	Found	C
Antimony	1.0	ND		ND		ND		ND	
Arsenic	2.0	ND		ND		ND		ND	
Barium	2.0	ND		ND		ND		ND	
Beryllium	0.50	ND		ND		ND		ND	
Cadmium	0.50	ND		ND		ND		ND	
Chromium	2.0	ND		ND		ND		ND	
Cobalt	0.50	0.186	J	ND		ND		ND	
Copper	1.0	ND		ND		ND		ND	
Lead	0.50	ND		ND		ND		ND	
Nickel	1.0	ND		ND		ND		ND	
Selenium	1.0	ND		ND		ND		ND	
Silver	0.50	ND		ND		ND		ND	
Thallium	0.50	ND		ND		ND		ND	
Vanadium	4.0	ND		ND		ND		ND	
Zinc	10	ND		ND		ND		ND	

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 410-406500/39 08/09/2023 15:21							
		Found	C	Found	C	Found	C	Found	C
Antimony	1.0	ND							
Arsenic	2.0	ND							
Barium	2.0	ND							
Beryllium	0.50	ND							
Cadmium	0.50	ND							
Chromium	2.0	ND							
Cobalt	0.50	ND							
Copper	1.0	ND							
Lead	0.50	ND							
Nickel	1.0	ND							
Selenium	1.0	ND							
Silver	0.50	ND							
Thallium	0.50	ND							
Vanadium	4.0	ND							
Zinc	10	ND							

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 410-407005/5 08/10/2023 08:07		CCB 410-407005/17 08/10/2023 08:50		CCB 410-407005/102 08/10/2023 17:01		CCB 410-407005/107 08/10/2023 17:11	
		Found	C	Found	C	Found	C	Found	C
Antimony	1.0	ND		ND		ND		ND	
Arsenic	2.0	ND		ND		ND		ND	
Barium	2.0	ND		ND		ND		ND	
Beryllium	0.50	ND		ND		ND		ND	
Cadmium	0.50	ND		ND		ND		ND	
Chromium	2.0	ND		ND		ND		ND	
Cobalt	0.50	ND		ND		ND		ND	
Copper	1.0	ND		ND		ND		ND	
Lead	0.50	ND		ND		ND		ND	
Nickel	1.0	ND		ND		ND		ND	
Selenium	1.0	ND		ND		ND		ND	
Silver	0.50	ND		ND		ND		ND	
Thallium	0.50	ND		ND		ND		ND	
Vanadium	4.0	ND		ND		ND		ND	
Zinc	10	ND		ND		ND		ND	

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 410-407005/116 08/10/2023 17:30		CCB 410-407005/137 08/10/2023 18:13		CCB 410-407005/144 08/10/2023 18:27			
		Found	C	Found	C	Found	C	Found	C
Antimony	1.0	ND		ND		ND			
Arsenic	2.0	ND		ND		ND			
Barium	2.0	ND		ND		ND			
Beryllium	0.50	ND		ND		ND			
Cadmium	0.50	ND		ND		ND			
Chromium	2.0	ND		ND		ND			
Cobalt	0.50	ND		ND		ND			
Copper	1.0	ND		ND		ND			
Lead	0.50	ND		ND		ND			
Nickel	1.0	ND		ND		ND			
Selenium	1.0	ND		ND		ND			
Silver	0.50	ND		ND		ND			
Thallium	0.50	ND		ND		ND			
Vanadium	4.0	ND		ND		ND			
Zinc	10	ND		ND		ND			

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 410-403086/9-A 08/04/2023 08:21		CCB 410-403086/10-A 08/04/2023 09:16		CCB 410-403086/10-A 08/04/2023 09:41		CCB 410-403086/10-A 08/04/2023 10:05	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	ND		ND		ND		ND	

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 410-403086/10-A 08/04/2023 10:30		CCB 410-403086/10-A 08/04/2023 11:24		CCB 410-403086/10-A 08/04/2023 11:49		CCB 410-403086/10-A 08/04/2023 12:13	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	ND		ND		ND		ND	

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 410-403086/10-A 08/04/2023 12:37							
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	ND							

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Lancaster Laboratories En Job No.: 410-136514-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 410-404119/1-A

Instrument Code: E09 - 30921 Batch No.: 406500

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	ND			6020B
7440-38-2	Arsenic	ND			6020B
7440-39-3	Barium	ND			6020B
7440-41-7	Beryllium	ND			6020B
7440-43-9	Cadmium	ND			6020B
7440-47-3	Chromium	ND			6020B
7440-48-4	Cobalt	ND			6020B
7440-50-8	Copper	ND			6020B
7439-92-1	Lead	ND			6020B
7440-02-0	Nickel	ND			6020B
7782-49-2	Selenium	ND			6020B
7440-22-4	Silver	ND			6020B
7440-28-0	Thallium	ND			6020B
7440-66-6	Zinc	ND			6020B
7440-62-2	Vanadium	ND			6020B

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Lancaster Laboratories En Job No.: 410-136514-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 410-403519/1-A

Instrument Code: E09 - 30921 Batch No.: 407005

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	ND			6020B
7440-38-2	Arsenic	ND			6020B
7440-39-3	Barium	ND			6020B
7440-41-7	Beryllium	ND			6020B
7440-43-9	Cadmium	ND			6020B
7440-47-3	Chromium	ND			6020B
7440-48-4	Cobalt	ND			6020B
7440-50-8	Copper	ND			6020B
7439-92-1	Lead	ND			6020B
7440-02-0	Nickel	ND			6020B
7782-49-2	Selenium	ND			6020B
7440-22-4	Silver	ND			6020B
7440-28-0	Thallium	ND			6020B
7440-66-6	Zinc	ND		^3+	6020B
7440-62-2	Vanadium	ND			6020B

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Lancaster Laboratories En Job No.: 410-136514-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 410-403837/1-A

Instrument Code: E07 - 27813 Batch No.: 407006

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	ND			6020B
7440-38-2	Arsenic	ND			6020B
7440-39-3	Barium	ND			6020B
7440-41-7	Beryllium	ND			6020B
7440-43-9	Cadmium	ND			6020B
7440-47-3	Chromium	ND			6020B
7440-48-4	Cobalt	ND			6020B
7440-50-8	Copper	ND			6020B
7439-92-1	Lead	ND			6020B
7440-02-0	Nickel	ND			6020B
7782-49-2	Selenium	ND			6020B
7440-22-4	Silver	ND			6020B
7440-28-0	Thallium	ND			6020B
7440-66-6	Zinc	ND			6020B
7440-62-2	Vanadium	ND			6020B

3-IN
METHOD BLANK
METALS

Lab Name: Eurofins Lancaster Laboratories En Job No.: 410-136514-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 410-403849/1-A

Instrument Code: M07 - 17384 Batch No.: 404633

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	ND			7470A

3-IN
METHOD BLANK
METALS

Lab Name: Eurofins Lancaster Laboratories En Job No.: 410-136514-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 410-403851/1-A

Instrument Code: M07 - 17384 Batch No.: 404633

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	ND			7470A

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-136514-1

SDG No.:

Lab Sample ID: ICSA 410-407006/7 Instrument ID: E07 - 27813

Lab File ID: 027ICSA.d ICS Source: MT_MJ_ICSA_00104

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony	**0.120**	**0.193**	
Arsenic	**7.70**	**0.160**	
Barium	**0.400**	**0.588**	
Beryllium	**0.0110**	**-0.0110**	
Cadmium	**0.450**	**0.300**	
Chromium	**3.60**	**3.14**	
Cobalt	**0.280**	**0.188**	
Copper	**0.440**	**0.0850**	
Lead	**0.0930**	**0.0660**	
Nickel	**1.20**	**0.517**	
Selenium	**0.0720**	**0.0690**	
Silver	**0.300**	**0.0090**	
Thallium	**0.0620**	**0.0180**	
Vanadium	**0.310**	**-0.0640**	
Zinc	**1.10**	**2.04**	
Aluminum	*100000*	*100307*	*100*
Calcium	*299000*	*287814*	*96*
Iron	*260000*	*245539*	*94*
Magnesium	*100000*	*104194*	*104*
Manganese	*0.600*	*-0.435*	
Molybdenum	*2000*	*2081*	*104*
Potassium	*100000*	*98894*	*99*
Sodium	*260000*	*254551*	*98*
Strontium	*1.80*	*2.08*	
Tin	*0.170*	*0.858*	
Titanium	*2000*	*2030*	*101*
Uranium	*0.110*	*0.0640*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-136514-1

SDG No.:

Lab Sample ID: ICSAB 410-407006/8 Instrument ID: E07 - 27813

Lab File ID: 028ICSB.d ICS Source: MT_MJ_ICSAB_00081

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**0.120**	**0.154**	
Arsenic	**108**	**101**	**94**
Barium	**0.400**	**0.589**	
Beryllium	**0.0110**	**-0.0110**	
Cadmium	**100**	**105**	**105**
Chromium	**204**	**210**	**103**
Cobalt	**200**	**204**	**102**
Copper	**201**	**201**	**100**
Lead	**0.0930**	**0.0690**	
Nickel	**201**	**202**	**100**
Selenium	**100**	**101**	**101**
Silver	**50.3**	**51.5**	**102**
Thallium	**0.0620**	**0.0160**	
Vanadium	**200**	**210**	**105**
Zinc	**101**	**105**	**104**
Aluminum	*100000*	*101121*	*101*
Calcium	*299000*	*294066*	*98*
Iron	*260000*	*248103*	*95*
Magnesium	*100000*	*104221*	*104*
Manganese	*201*	*204*	*102*
Molybdenum	*2000*	*2058*	*103*
Potassium	*100000*	*100293*	*100*
Sodium	*260000*	*256123*	*98*
Strontium	*1.80*	*2.02*	
Tin	*0.170*	*0.158*	
Titanium	*2000*	*2020*	*101*
Uranium	*0.110*	*0.0470*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-136514-1

SDG No.:

Lab Sample ID: ICSA 410-407006/57 Instrument ID: E07 - 27813

Lab File ID: 132ICSA.d ICS Source: MT_MJ_ICSA_00104

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony	**0.120**	**0.163**	
Arsenic	**7.70**	**0.243**	
Barium	**0.400**	**0.500**	
Beryllium	**0.0110**	**-0.0060**	
Cadmium	**0.450**	**0.296**	
Chromium	**3.60**	**3.38**	
Cobalt	**0.280**	**0.248**	
Copper	**0.440**	**0.112**	
Lead	**0.0930**	**0.0820**	
Nickel	**1.20**	**1.57**	
Selenium	**0.0720**	**0.0460**	
Silver	**0.300**	**0.0090**	
Thallium	**0.0620**	**0.0310**	
Vanadium	**0.310**	**0.0210**	
Zinc	**1.10**	**2.40**	
Aluminum	*100000*	*101215*	*101*
Calcium	*299000*	*294596*	*99*
Iron	*260000*	*253416*	*97*
Magnesium	*100000*	*105421*	*105*
Manganese	*0.600*	*-0.512*	
Molybdenum	*2000*	*2123*	*106*
Potassium	*100000*	*102122*	*102*
Sodium	*260000*	*260501*	*100*
Strontium	*1.80*	*2.25*	
Tin	*0.170*	*0.188*	
Titanium	*2000*	*2083*	*104*
Uranium	*0.110*	*0.0570*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-136514-1

SDG No.:

Lab Sample ID: ICSAB 410-407006/58 Instrument ID: E07 - 27813

Lab File ID: 133ICSB.d ICS Source: MT_MJ_ICSAB_00081

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**0.120**	**0.139**	
Arsenic	**108**	**101**	**94**
Barium	**0.400**	**0.593**	
Beryllium	**0.0110**	**-0.0040**	
Cadmium	**100**	**105**	**105**
Chromium	**204**	**214**	**105**
Cobalt	**200**	**207**	**103**
Copper	**201**	**202**	**100**
Lead	**0.0930**	**0.0530**	
Nickel	**201**	**205**	**102**
Selenium	**100**	**104**	**104**
Silver	**50.3**	**51.9**	**103**
Thallium	**0.0620**	**0.0210**	
Vanadium	**200**	**212**	**106**
Zinc	**101**	**105**	**104**
Aluminum	*100000*	*101387*	*101*
Calcium	*299000*	*297728*	*100*
Iron	*260000*	*252028*	*97*
Magnesium	*100000*	*105653*	*106*
Manganese	*201*	*207*	*103*
Molybdenum	*2000*	*2091*	*105*
Potassium	*100000*	*102337*	*102*
Sodium	*260000*	*262245*	*101*
Strontium	*1.80*	*2.25*	
Tin	*0.170*	*0.350*	
Titanium	*2000*	*2068*	*103*
Uranium	*0.110*	*0.0630*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-136514-1

SDG No.:

Lab Sample ID: ICSA 410-406500/7 Instrument ID: E09 - 30921

Lab File ID: 019ICSA.d ICS Source: MT_MJ_ICSA_00104

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony	**0.120**	**0.164**	
Arsenic	**7.70**	**0.162**	
Barium	**0.400**	**0.346**	
Beryllium	**0.0110**	**-0.0230**	
Cadmium	**0.450**	**0.298**	
Chromium	**3.60**	**3.20**	
Cobalt	**0.280**	**0.173**	
Copper	**0.440**	**-0.0360**	
Lead	**0.0930**	**0.0560**	
Nickel	**1.20**	**-0.651**	
Selenium	**0.0720**	**0.0220**	
Silver	**0.300**	**0.0100**	
Thallium	**0.0620**	**-0.0530**	
Vanadium	**0.310**	**-0.477**	
Zinc	**1.10**	**1.21**	
Aluminum	*100000*	*103379*	*103*
Calcium	*299000*	*290406*	*97*
Iron	*260000*	*247903*	*95*
Magnesium	*100000*	*99225*	*99*
Manganese	*0.600*	*0.860*	
Molybdenum	*2000*	*2125*	*106*
Potassium	*100000*	*99904*	*100*
Sodium	*260000*	*243213*	*94*
Strontium	*1.80*	*2.07*	
Tin	*0.170*	*0.295*	
Titanium	*2000*	*2016*	*101*
Uranium	*0.110*	*0.0520*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-136514-1

SDG No.:

Lab Sample ID: ICSAB 410-406500/8 Instrument ID: E09 - 30921

Lab File ID: 020ICSB.d ICS Source: MT_MJ_ICSAB_00081

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**0.120**	**0.153**	
Arsenic	**108**	**95.1**	**88**
Barium	**0.400**	**0.449**	
Beryllium	**0.0110**	**-0.0290**	
Cadmium	**100**	**102**	**101**
Chromium	**204**	**195**	**96**
Cobalt	**200**	**190**	**95**
Copper	**201**	**178**	**89**
Lead	**0.0930**	**0.0530**	
Nickel	**201**	**185**	**92**
Selenium	**100**	**97.3**	**97**
Silver	**50.3**	**49.3**	**98**
Thallium	**0.0620**	**-0.0560**	
Vanadium	**200**	**204**	**102**
Zinc	**101**	**96.3**	**95**
Aluminum	*100000*	*101119*	*101*
Calcium	*299000*	*288447*	*97*
Iron	*260000*	*243407*	*94*
Magnesium	*100000*	*97201*	*97*
Manganese	*201*	*202*	*101*
Molybdenum	*2000*	*2094*	*105*
Potassium	*100000*	*98690*	*99*
Sodium	*260000*	*236418*	*91*
Strontium	*1.80*	*2.19*	
Tin	*0.170*	*0.349*	
Titanium	*2000*	*2002*	*100*
Uranium	*0.110*	*0.0430*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-136514-1

SDG No.:

Lab Sample ID: ICSA 410-407005/7 Instrument ID: E09 - 30921

Lab File ID: 029ICSA.d ICS Source: MT_MJ_ICSA_00104

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony	**0.120**	**0.139**	
Arsenic	**7.70**	**0.184**	
Barium	**0.400**	**0.533**	
Beryllium	**0.0110**	**0.0050**	
Cadmium	**0.450**	**0.314**	
Chromium	**3.60**	**3.13**	
Cobalt	**0.280**	**0.209**	
Copper	**0.440**	**0.0400**	
Lead	**0.0930**	**0.0790**	
Nickel	**1.20**	**0.638**	
Selenium	**0.0720**	**0.0320**	
Silver	**0.300**	**0.0080**	
Thallium	**0.0620**	**0.0150**	
Vanadium	**0.310**	**-0.179**	
Zinc	**1.10**	**3.07**	
Aluminum	*100000*	*101206*	*101*
Calcium	*299000*	*288367*	*97*
Iron	*260000*	*242318*	*93*
Magnesium	*100000*	*97432*	*97*
Manganese	*0.600*	*0.854*	
Molybdenum	*2000*	*2139*	*107*
Potassium	*100000*	*98145*	*98*
Sodium	*260000*	*234347*	*90*
Strontium	*1.80*	*1.98*	
Tin	*0.170*	*0.135*	
Titanium	*2000*	*1991*	*100*
Uranium	*0.110*	*0.0550*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-136514-1

SDG No.:

Lab Sample ID: ICSAB 410-407005/8 Instrument ID: E09 - 30921

Lab File ID: 030ICSB.d ICS Source: MT_MJ_ICSAB_00081

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Antimony	**0.120**	**0.114**	
Arsenic	**108**	**97.4**	**90**
Barium	**0.400**	**0.461**	
Beryllium	**0.0110**	**0.0070**	
Cadmium	**100**	**101**	**101**
Chromium	**204**	**190**	**93**
Cobalt	**200**	**186**	**93**
Copper	**201**	**180**	**90**
Lead	**0.0930**	**0.0680**	
Nickel	**201**	**190**	**94**
Selenium	**100**	**97.8**	**98**
Silver	**50.3**	**49.3**	**98**
Thallium	**0.0620**	**0.0180**	
Vanadium	**200**	**198**	**99**
Zinc	**101**	**98.6**	**98**
Aluminum	*100000*	*99640*	*100*
Calcium	*299000*	*287493*	*96*
Iron	*260000*	*242063*	*93*
Magnesium	*100000*	*96712*	*97*
Manganese	*201*	*196*	*98*
Molybdenum	*2000*	*2102*	*105*
Potassium	*100000*	*97543*	*98*
Sodium	*260000*	*231441*	*89*
Strontium	*1.80*	*1.93*	
Tin	*0.170*	*0.145*	
Titanium	*2000*	*1970*	*98*
Uranium	*0.110*	*0.0530*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-136514-1

SDG No.:

Lab Sample ID: ICSA 410-407005/21 Instrument ID: E09 - 30921

Lab File ID: 105ICSA.d ICS Source: MT_MJ_ICSA_00104

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony	**0.120**	**0.108**	
Arsenic	**7.70**	**0.168**	
Barium	**0.400**	**0.503**	
Beryllium	**0.0110**	**0.0060**	
Cadmium	**0.450**	**0.316**	
Chromium	**3.60**	**3.10**	
Cobalt	**0.280**	**0.228**	
Copper	**0.440**	**0.0670**	
Lead	**0.0930**	**0.0850**	
Nickel	**1.20**	**0.650**	
Selenium	**0.0720**	**0.0500**	
Silver	**0.300**	**0.0060**	
Thallium	**0.0620**	**0.0110**	
Vanadium	**0.310**	**-0.203**	
Zinc	**1.10**	**6.46**	
Aluminum	*100000*	*100417*	*100*
Calcium	*299000*	*293623*	*98*
Iron	*260000*	*249988*	*96*
Magnesium	*100000*	*98259*	*98*
Manganese	*0.600*	*0.768*	
Molybdenum	*2000*	*2194*	*110*
Potassium	*100000*	*100031*	*100*
Sodium	*260000*	*238111*	*92*
Strontium	*1.80*	*1.81*	
Tin	*0.170*	*0.131*	
Titanium	*2000*	*1994*	*100*
Uranium	*0.110*	*0.0610*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-136514-1

SDG No.:

Lab Sample ID: ICSAB 410-407005/22 Instrument ID: E09 - 30921

Lab File ID: 106ICSB.d ICS Source: MT_MJ_ICSAB_00081

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**0.120**	**0.118**	
Arsenic	**108**	**93.3**	**87**
Barium	**0.400**	**0.559**	
Beryllium	**0.0110**	**0.0040**	
Cadmium	**100**	**102**	**102**
Chromium	**204**	**196**	**96**
Cobalt	**200**	**191**	**95**
Copper	**201**	**177**	**88**
Lead	**0.0930**	**0.0710**	
Nickel	**201**	**185**	**92**
Selenium	**100**	**100**	**100**
Silver	**50.3**	**50.0**	**99**
Thallium	**0.0620**	**0.0200**	
Vanadium	**200**	**205**	**102**
Zinc	**101**	**99.3**	**98**
Aluminum	*100000*	*98828*	*99*
Calcium	*299000*	*289222*	*97*
Iron	*260000*	*245923*	*95*
Magnesium	*100000*	*96879*	*97*
Manganese	*201*	*198*	*99*
Molybdenum	*2000*	*2147*	*107*
Potassium	*100000*	*98596*	*99*
Sodium	*260000*	*235833*	*91*
Strontium	*1.80*	*2.08*	
Tin	*0.170*	*0.0690*	
Titanium	*2000*	*1954*	*98*
Uranium	*0.110*	*0.0500*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

7A-IN
LINEAR RANGE CHECK STANDARD
METALS

Lab ID: LRC 410-406500/10

Lab Name: Eurofins Lancaster Laboratories Env: Job No.: 410-136514-1

Sample Matrix: LCS Source: MT_MJ_LRC_00094

Analyte	(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	2000	2050		102	90	110		6020B
Arsenic	2000	1960		98	90	110		6020B
Barium	2000	1920		96	90	110		6020B
Beryllium	2000	1810		91	90	110		6020B
Cadmium	2000	1860		93	90	110		6020B
Chromium	2000	1850		92	90	110		6020B
Cobalt	2000	1790		90	90	110	^5-	6020B
Copper	2000	1840		92	90	110		6020B
Lead	2000	2020		101	90	110		6020B
Nickel	2000	1910		96	90	110		6020B
Selenium	2000	1960		98	90	110		6020B
Silver	2000	1840		92	90	110		6020B
Thallium	2000	2020		101	90	110		6020B
Zinc	2000	1920		96	90	110		6020B
Vanadium	2000	1910		96	90	110		6020B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 410-404119/2-A

Lab Name: Eurofins Lancaster Laboratories Env: Job No.: 410-136514-1

Sample Matrix: Water LCS Source: MT_LCS-SPK-B_00029

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	100	101		101	80	120		6020B
Arsenic	500	498		100	85	120		6020B
Barium	500	510		102	80	120		6020B
Beryllium	50.0	51.4		103	90	112		6020B
Cadmium	50.0	50.6		101	86	113		6020B
Chromium	500	480		96	90	115		6020B
Cobalt	500	488		98	90	113		6020B
Copper	500	476		95	80	120		6020B
Lead	50.0	51.0		102	90	115		6020B
Nickel	500	493		99	90	114		6020B
Selenium	100	96.8		97	80	120		6020B
Silver	50.0	49.6		99	88	113		6020B
Thallium	100	101		101	80	120		6020B
Zinc	500	501		100	90	115		6020B
Vanadium	500	498		100	90	115		6020B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LINEAR RANGE CHECK STANDARD
METALS

Lab ID: LRC 410-407005/9

Lab Name: Eurofins Lancaster Laboratories Env: Job No.: 410-136514-1

Sample Matrix: LCS Source: MT_MJ_LRC_00094

Analyte	(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	2000	2030		101	90	110		6020B
Arsenic	2000	2000		100	90	110		6020B
Barium	2000	1920		96	90	110		6020B
Beryllium	2000	1790		90	90	110	^5-	6020B
Cadmium	2000	1870		93	90	110		6020B
Chromium	2000	1810		90	90	110		6020B
Cobalt	2000	1770		88	90	110	^5-	6020B
Copper	2000	1910		96	90	110		6020B
Lead	2000	2040		102	90	110		6020B
Nickel	2000	1930		97	90	110		6020B
Selenium	2000	2000		100	90	110		6020B
Silver	2000	1900		95	90	110		6020B
Thallium	2000	2030		101	90	110		6020B
Zinc	2000	1980		99	90	110		6020B
Vanadium	2000	1880		94	90	110		6020B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 410-403519/2-A

Lab Name: Eurofins Lancaster Laboratories Env: Job No.: 410-136514-1

Sample Matrix: Water LCS Source: MT_LCS-SPK-B_00029

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	100	104		104	80	120		6020B
Arsenic	500	502		100	85	120		6020B
Barium	500	520		104	80	120		6020B
Beryllium	50.0	46.8		94	90	112		6020B
Cadmium	50.0	51.5		103	86	113		6020B
Chromium	500	479		96	90	115		6020B
Cobalt	500	483		97	90	113		6020B
Copper	500	470		94	80	120		6020B
Lead	50.0	51.8		104	90	115		6020B
Nickel	500	487		97	90	114		6020B
Selenium	100	98.7		99	80	120		6020B
Silver	50.0	50.1		100	88	113		6020B
Thallium	100	103		103	80	120		6020B
Zinc	500	497		99	90	115	^3+	6020B
Vanadium	500	503		101	90	115		6020B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LINEAR RANGE CHECK STANDARD
METALS

Lab ID: LRC 410-407006/9

Lab Name: Eurofins Lancaster Laboratories Env: Job No.: 410-136514-1

Sample Matrix: LCS Source: MT_MJ_LRC_00094

Analyte	(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	2000	2090		105	90	110		6020B
Arsenic	2000	2030		101	90	110		6020B
Barium	2000	2100		105	90	110		6020B
Beryllium	2000	1960		98	90	110		6020B
Cadmium	2000	2060		103	90	110		6020B
Chromium	2000	2040		102	90	110		6020B
Cobalt	2000	2020		101	90	110		6020B
Copper	2000	1970		99	90	110		6020B
Lead	2000	2160		108	90	110		6020B
Nickel	2000	1980		99	90	110		6020B
Selenium	2000	2060		103	90	110		6020B
Silver	2000	2010		101	90	110		6020B
Thallium	2000	2190		109	90	110		6020B
Zinc	2000	2020		101	90	110		6020B
Vanadium	2000	2070		104	90	110		6020B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 410-403837/2-A

Lab Name: Eurofins Lancaster Laboratories Env: Job No.: 410-136514-1

Sample Matrix: Water LCS Source: MT_LCS-SPK-B_00029

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	100	106		106	80	120		6020B
Arsenic	500	511		102	85	120		6020B
Barium	500	522		104	80	120		6020B
Beryllium	50.0	47.2		94	90	112		6020B
Cadmium	50.0	54.1		108	86	113		6020B
Chromium	500	523		105	90	115		6020B
Cobalt	500	522		104	90	113		6020B
Copper	500	523		105	80	120		6020B
Lead	50.0	52.8		106	90	115		6020B
Nickel	500	523		105	90	114		6020B
Selenium	100	103		103	80	120		6020B
Silver	50.0	53.3		107	88	113		6020B
Thallium	100	106		106	80	120		6020B
Zinc	500	514		103	90	115		6020B
Vanadium	500	521		104	90	115		6020B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 410-403849/2-A

Lab Name: Eurofins Lancaster Laboratories Env: Job No.: 410-136514-1

Sample Matrix: Water LCS Source: MP_40Hg_IV_00164

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	1.00	1.00	J	100	80	118		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 410-403851/2-A

Lab Name: Eurofins Lancaster Laboratories Env: Job No.: 410-136514-1

Sample Matrix: Water LCS Source: MP_40Hg_IV_00164

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	1.00	0.990	J	99	80	118		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Lancaster Laboratories E Job Number: 410-136514-1

SDG Number:

Matrix: Water Instrument ID: E07 - 27813

Method: 6020B MDL Date: 02/11/2021 10:57

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Arsenic	75	10	2
Barium	137	10	1.3
Beryllium	9	1	0.3
Cadmium	111	1	0.2
Chromium	52	5	1
Cobalt	59	5	1
Copper	63	5	1.7
Lead	208	3	1
Nickel	60	10	2
Vanadium	51	10	2.5
Zinc	66	30	7.3

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Lancaster Laboratories E Job Number: 410-136514-1

SDG Number:

Matrix: Water Instrument ID: E07 - 27813

Method: 6020B XMDL Date: 07/31/2023 00:00

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Arsenic	75	2	0.68
Barium	137	2	0.746
Beryllium	9	0.5	0.119
Cadmium	111	0.5	0.151
Chromium	52	2	0.55
Cobalt	59	0.5	0.156
Copper	63	1	0.362
Lead	208	0.5	0.12
Nickel	60	1	0.4
Vanadium	51	4	0.794
Zinc	66	10	4

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Lancaster Laboratories E Job Number: 410-136514-1

SDG Number:

Matrix: Water Instrument ID: E09 - 30921

Method: 6020B MDL Date: 02/11/2021 10:57

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Arsenic	75	10	2
Barium	137	10	1.3
Beryllium	9	1	0.3
Cadmium	111	1	0.2
Chromium	52	5	1
Cobalt	59	5	1
Copper	63	5	1.7
Lead	208	3	1
Nickel	60	10	2
Vanadium	51	10	2.5
Zinc	66	30	7.3

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Lancaster Laboratories E Job Number: 410-136514-1

SDG Number:

Matrix: Water Instrument ID: E09 - 30921

Method: 6020B XMDL Date: 07/31/2023 00:00

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Arsenic	75	2	0.68
Barium	137	2	0.746
Beryllium	9	0.5	0.119
Cadmium	111	0.5	0.151
Chromium	52	2	0.55
Cobalt	59	0.5	0.156
Copper	63	1	0.362
Lead	208	0.5	0.12
Nickel	60	1	0.4
Vanadium	51	4	0.794
Zinc	66	10	4

9-IN
DETECTION LIMITS
METALS

Lab Name: Eurofins Lancaster Laboratories E Job Number: 410-136514-1

SDG Number:

Matrix: Water Instrument ID: M07 - 17384

Method: 7470A MDL Date: 02/11/2021 10:56

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Mercury		2	0.2

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: Eurofins Lancaster Laboratories E Job Number: 410-136514-1

SDG Number:

Matrix: Water Instrument ID: M07 - 17384

Method: 7470A XMDL Date: 06/27/2018 12:04

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury		0.2	0.079

11-IN
LINEAR RANGES
METALS

Lab Name: Eurofins Lancaster Laboratories Job No: 410-136514-1

SDG No.:

Instrument ID: E07 - 27813 Date: 04/07/2022 16:18

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Arsenic		1000	6020B
Barium		1000	6020B
Beryllium		1000	6020B
Cadmium		1000	6020B
Chromium		1000	6020B
Cobalt		1000	6020B
Copper		1000	6020B
Lead		1000	6020B
Nickel		1000	6020B
Zinc		1000	6020B
Vanadium		1000	6020B

11-IN
LINEAR RANGES
METALS

Lab Name: Eurofins Lancaster Laboratories Job No: 410-136514-1

SDG No.:

Instrument ID: E09 - 30921 Date: 04/07/2022 16:25

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Arsenic		1000	6020B
Barium		1000	6020B
Beryllium		1000	6020B
Cadmium		1000	6020B
Chromium		1000	6020B
Cobalt		1000	6020B
Copper		1000	6020B
Lead		1000	6020B
Nickel		1000	6020B
Zinc		1000	6020B
Vanadium		1000	6020B

11-IN
LINEAR RANGES
METALS

Lab Name: Eurofins Lancaster Laboratories Job No: 410-136514-1

SDG No.:

Instrument ID: M07 - 17384 Date: 02/20/2020 00:00

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Mercury		4.5	7470A

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins Lancaster Laboratories En Job No.: 410-136514-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 410-403519/1-A	08/02/2023 10:20	403519		50	50
LCS 410-403519/2-A	08/02/2023 10:20	403519		50	50
410-136514-4	08/02/2023 10:20	403519		50	50
410-136514-3	08/02/2023 10:20	403519		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins Lancaster Laboratories En Job No.: 410-136514-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 410-403837/1-A	08/03/2023 03:28	403837		50	50
LCS 410-403837/2-A	08/03/2023 03:28	403837		50	50
410-136514-1	08/03/2023 03:28	403837		50	50
410-136514-5	08/03/2023 03:28	403837		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins Lancaster Laboratories En Job No.: 410-136514-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 410-404119/1-A	08/07/2023 20:15	404119		50	50
LCS 410-404119/2-A	08/07/2023 20:15	404119		50	50
410-136514-2	08/07/2023 20:15	404119		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins Lancaster Laboratories En Job No.: 410-136514-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 410-403849/1-A	08/03/2023 05:59	403849		20	20
LCS 410-403849/2-A	08/03/2023 05:59	403849		20	20
410-136514-2	08/03/2023 05:59	403849		20	20
410-136514-3	08/03/2023 05:59	403849		20	20
410-136514-4	08/03/2023 05:59	403849		20	20
410-136514-1	08/03/2023 05:59	403849		20	20

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins Lancaster Laboratories En Job No.: 410-136514-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 410-403851/1-A	08/03/2023 06:08	403851		20	20
LCS 410-403851/2-A	08/03/2023 06:08	403851		20	20
410-136514-5	08/03/2023 06:08	403851		20	20

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Instrument ID: E07 - 27813 Analysis Method: 6020B

Start Date: 08/10/2023 06:41 End Date: 08/10/2023 20:41

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Ni	Pb	Sb	Se	Tl	V	Zn											
ITUNE 410-407006/1	1		06:41																									
ICIS 410-407006/2			07:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X											
STD1 410-407006/3 IC	1		07:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X											
ICV 410-407006/4	1		07:45	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X											
ICB 410-407006/5	1		07:59		X	X	X	X	X	X	X	X					X	X											
CRI 410-407006/6	1		08:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X											
ICSA 410-407006/7	1		08:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X											
ICSAB 410-407006/8	1		08:49	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X											
LRC 410-407006/9	1		08:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X											
RINSE 410-407006/10			08:59																									
RINSE 410-407006/11			09:01																									
RINSE 410-407006/12			09:03																									
CCV 410-407006/13	1		09:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X											
CCB 410-407006/14	1		09:07		X	X	X	X	X	X	X	X					X	X											
CCV 410-407006/15	1		11:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X											
CCB 410-407006/16	1		11:32		X	X	X	X	X	X	X	X					X	X											
MB 410-403837/1-A	1	R	13:03		X	X	X	X	X	X	X	X					X	X											
LCS 410-403837/2-A	1	R	13:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X											
ZZZZZZ			13:07																									
ZZZZZZ			13:09																									
ZZZZZZ			13:11																									
ZZZZZZ			13:13																									
ZZZZZZ			13:15																									
ZZZZZZ			13:17																									
RINSE 410-407006/25			13:19																									
CCV 410-407006/26	1		13:21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X											
CCB 410-407006/27	1		13:23		X	X	X	X	X	X	X	X					X	X											
410-136514-1	1	R	13:25		X	X	X	X	X	X	X	X					X	X											
ZZZZZZ			13:27																									
ZZZZZZ			13:29																									
ZZZZZZ			13:31																									
ZZZZZZ			13:33																									
ZZZZZZ			13:35																									
ZZZZZZ			13:37																									
ZZZZZZ			13:39																									
RINSE 410-407006/36			13:41																									
CCV 410-407006/37	1		13:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X											
CCB 410-407006/38	1		13:45		X	X	X	X	X	X	X	X					X	X											
410-136514-5	1	R	13:47		X	X	X	X	X	X	X	X					X	X											
ZZZZZZ			13:49																									
ZZZZZZ			13:51																									
ZZZZZZ			13:53																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Instrument ID: E07 - 27813 Analysis Method: 6020B

Start Date: 08/10/2023 06:41 End Date: 08/10/2023 20:41

Lab Sample Id	D/F	Type	Time	Analytes																							
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Ni	Pb	Sb	Se	Tl	V	Zn										
ZZZZZZ			13:55																								
ZZZZZZ			13:57																								
ZZZZZZ			13:59																								
RINSE 410-407006/46			14:01																								
CCV 410-407006/47	1		14:03	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
CCB 410-407006/48	1		14:05		X	X	X	X	X	X	X	X	X				X	X										
ZZZZZZ			14:37																								
ZZZZZZ			14:39																								
ZZZZZZ			14:41																								
RINSE 410-407006/52			14:43																								
CCV 410-407006/53			14:45																								
CCB 410-407006/54			14:47																								
RINSE 410-407006/55			14:50																								
RINSE 410-407006/56			14:52																								
ICSA 410-407006/57	1		14:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
ICSAB 410-407006/58	1		14:56	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
RINSE 410-407006/59			14:58																								
RINSE 410-407006/60			15:00																								
RINSE 410-407006/61			15:02																								
CCV 410-407006/62			15:04																								
CCB 410-407006/63			15:06																								
RINSE 410-407006/64			15:12																								
RINSE 410-407006/65			15:14																								
RINSE 410-407006/66			15:16																								
RINSE 410-407006/67			15:18																								
CCV 410-407006/68			15:20																								
CCB 410-407006/69			15:22																								
ZZZZZZ			15:25																								
ZZZZZZ			15:27																								
RINSE 410-407006/72			15:29																								
CCV 410-407006/73			15:31																								
CCB 410-407006/74			15:33																								
ZZZZZZ			15:35																								
ZZZZZZ			15:37																								
ZZZZZZ			15:39																								
ZZZZZZ			15:41																								
ZZZZZZ			15:43																								
ZZZZZZ			15:45																								
RINSE 410-407006/81			15:47																								
CCV 410-407006/82			15:49																								
CCB 410-407006/83			15:51																								
ZZZZZZ			15:53																								

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Instrument ID: E07 - 27813 Analysis Method: 6020B

Start Date: 08/10/2023 06:41 End Date: 08/10/2023 20:41

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Ni	Pb	Sb	Se	Tl	V	Zn											
ZZZZZZ			15:55																									
ZZZZZZ			15:57																									
ZZZZZZ			15:59																									
ZZZZZZ			16:01																									
ZZZZZZ			16:03																									
ZZZZZZ			16:05																									
RINSE 410-407006/91			16:21																									
RINSE 410-407006/92			16:23																									
CCV 410-407006/93			16:26																									
CCB 410-407006/94			16:28																									
ZZZZZZ			16:32																									
ZZZZZZ			16:34																									
ZZZZZZ			16:36																									
ZZZZZZ			16:38																									
ZZZZZZ			16:40																									
ZZZZZZ			16:42																									
ZZZZZZ			16:44																									
ZZZZZZ			16:46																									
RINSE 410-407006/103			16:48																									
RINSE 410-407006/104			16:50																									
CCV 410-407006/105			16:52																									
CCB 410-407006/106			16:54																									
ZZZZZZ			16:56																									
ZZZZZZ			16:58																									
ZZZZZZ			17:00																									
ZZZZZZ			17:02																									
ZZZZZZ			17:04																									
ZZZZZZ			17:06																									
ZZZZZZ			17:08																									
ZZZZZZ			17:10																									
RINSE 410-407006/115			17:12																									
RINSE 410-407006/116			17:14																									
CCV 410-407006/117			17:16																									
CCB 410-407006/118			17:18																									
ZZZZZZ			17:20																									
ZZZZZZ			17:22																									
ZZZZZZ			17:24																									
ZZZZZZ			17:26																									
ZZZZZZ			17:28																									
ZZZZZZ			17:30																									
RINSE 410-407006/125			17:32																									
ZZZZZZ			17:34																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Instrument ID: E07 - 27813 Analysis Method: 6020B

Start Date: 08/10/2023 06:41 End Date: 08/10/2023 20:41

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Ni	Pb	Sb	Se	Tl	V	Zn											
RINSE 410-407006/127			17:36																									
CCV 410-407006/128			17:38																									
CCB 410-407006/129			17:40																									
RINSE 410-407006/130			17:43																									
RINSE 410-407006/131			17:45																									
RINSE 410-407006/132			17:47																									
CCV 410-407006/133			17:49																									
CCB 410-407006/134			17:51																									
ZZZZZZ			17:53																									
ZZZZZZ			17:55																									
RINSE 410-407006/137			17:57																									
CCV 410-407006/138			17:59																									
CCB 410-407006/139			18:01																									
ZZZZZZ			18:03																									
ZZZZZZ			18:05																									
ZZZZZZ			18:07																									
ZZZZZZ			18:09																									
ZZZZZZ			18:11																									
ZZZZZZ			18:13																									
RINSE 410-407006/146			18:15																									
CCV 410-407006/147			18:17																									
CCB 410-407006/148			18:19																									
ZZZZZZ			18:21																									
ZZZZZZ			18:23																									
ZZZZZZ			18:25																									
ZZZZZZ			18:27																									
ZZZZZZ			18:29																									
ZZZZZZ			18:31																									
RINSE 410-407006/155			18:33																									
CCV 410-407006/156			18:35																									
CCB 410-407006/157			18:37																									
ZZZZZZ			18:39																									
ZZZZZZ			18:41																									
ZZZZZZ			18:43																									
ZZZZZZ			18:45																									
ZZZZZZ			18:47																									
ZZZZZZ			18:49																									
ZZZZZZ			18:51																									
ZZZZZZ			18:53																									
RINSE 410-407006/166			18:55																									
ZZZZZZ			18:57																									
CCV 410-407006/168			18:59																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Instrument ID: E07 - 27813 Analysis Method: 6020B

Start Date: 08/10/2023 06:41 End Date: 08/10/2023 20:41

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Ni	Pb	Sb	Se	Tl	V	Zn											
CCB 410-407006/169			19:01																									
ZZZZZZ			19:03																									
ZZZZZZ			19:05																									
ZZZZZZ			19:07																									
ZZZZZZ			19:09																									
ZZZZZZ			19:11																									
ZZZZZZ			19:13																									
ZZZZZZ			19:15																									
ZZZZZZ			19:17																									
RINSE 410-407006/178			19:19																									
CCV 410-407006/179			19:21																									
CCB 410-407006/180			19:23																									
ZZZZZZ			19:25																									
ZZZZZZ			19:27																									
ZZZZZZ			19:29																									
ZZZZZZ			19:31																									
ZZZZZZ			19:33																									
ZZZZZZ			19:35																									
ZZZZZZ			19:37																									
ZZZZZZ			19:39																									
RINSE 410-407006/189			19:41																									
CCV 410-407006/190			19:43																									
CCB 410-407006/191			19:45																									
ZZZZZZ			19:47																									
ZZZZZZ			19:49																									
ZZZZZZ			19:51																									
ZZZZZZ			19:53																									
RINSE 410-407006/196			19:55																									
CCV 410-407006/197			19:57																									
CCB 410-407006/198			19:59																									
ZZZZZZ			20:01																									
RINSE 410-407006/200			20:03																									
RINSE 410-407006/201			20:05																									
CCV 410-407006/202			20:07																									
CCB 410-407006/203			20:09																									
RINSE 410-407006/204			20:11																									
RINSE 410-407006/205			20:13																									
RINSE 410-407006/206			20:15																									
CCV 410-407006/207			20:17																									
CCB 410-407006/208			20:19																									
ZZZZZZ			20:27																									
ZZZZZZ			20:29																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Instrument ID: E07 - 27813 Analysis Method: 6020B

Start Date: 08/10/2023 06:41 End Date: 08/10/2023 20:41

Lab Sample Id	D/F	Type	Time	Analytes																										
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Ni	Pb	Sb	Se	Tl	V	Zn												
ZZZZZZ			20:31																											
ZZZZZZ			20:33																											
RINSE 410-407006/213			20:35																											
RINSE 410-407006/214			20:37																											
CCV 410-407006/215			20:39																											
CCB 410-407006/216			20:41																											

Prep Types:
R = Total Recoverable

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Instrument ID: E09 - 30921 Analysis Method: 6020B

Start Date: 08/09/2023 11:41 End Date: 08/09/2023 20:15

Lab Sample Id	D/F	Type	Time	Analytes																							
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Ni	Pb	Sb	Se	Tl	V	Zn										
ITUNE 410-406500/1	1		11:41																								
ICIS 410-406500/2			13:26	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
STD1 410-406500/3 IC	1		13:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
ICV 410-406500/4	1		13:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
ICB 410-406500/5	1		13:32		X	X	X	X	X	X	X	X					X	X										
CRI 410-406500/6	1		13:35	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
ICSA 410-406500/7	1		13:44	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
ICSAB 410-406500/8	1		13:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
RINSE 410-406500/9			13:51																								
LRC 410-406500/10	1		13:53	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
RINSE 410-406500/11			14:10																								
RINSE 410-406500/12			14:12																								
RINSE 410-406500/13			14:14																								
CCV 410-406500/14	1		14:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
CCB 410-406500/15	1		14:19		X	X	X	X	X	X	X	X					X	X										
MB 410-404119/1-A	1	R	14:34		X	X	X	X	X	X	X	X					X	X										
LCS 410-404119/2-A	1	R	14:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
RINSE 410-406500/18			14:38																								
CCV 410-406500/19	1		14:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
CCB 410-406500/20	1		14:42		X	X	X	X	X	X	X	X					X	X										
ZZZZZZ			14:44																								
ZZZZZZ			14:47																								
ZZZZZZ			14:49																								
ZZZZZZ			14:51																								
ZZZZZZ			14:53																								
ZZZZZZ			14:55																								
RINSE 410-406500/27			14:57																								
CCV 410-406500/28	1		14:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
CCB 410-406500/29	1		15:01		X	X	X	X	X	X	X	X					X	X										
410-136514-2	1	R	15:03		X	X	X	X	X	X	X	X					X	X										
ZZZZZZ			15:05																								
ZZZZZZ			15:07																								
ZZZZZZ			15:09																								
ZZZZZZ			15:11																								
ZZZZZZ			15:13																								
ZZZZZZ			15:15																								
RINSE 410-406500/37			15:17																								
CCV 410-406500/38	1		15:19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
CCB 410-406500/39	1		15:21		X	X	X	X	X	X	X	X					X	X										
ZZZZZZ			15:23																								
ZZZZZZ			15:25																								
ZZZZZZ			15:27																								

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Instrument ID: E09 - 30921 Analysis Method: 6020B

Start Date: 08/09/2023 11:41 End Date: 08/09/2023 20:15

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Ni	Pb	Sb	Se	Tl	V	Zn											
ZZZZZZ			15:29																									
ZZZZZZ			15:32																									
ZZZZZZ			15:34																									
ZZZZZZ			15:36																									
ZZZZZZ			15:38																									
RINSE 410-406500/48			15:40																									
CCV 410-406500/49			15:42																									
CCB 410-406500/50			15:44																									
ZZZZZZ			15:48																									
ZZZZZZ			15:50																									
ZZZZZZ			15:52																									
ZZZZZZ			15:54																									
ZZZZZZ			15:57																									
ZZZZZZ			15:59																									
ZZZZZZ			16:01																									
RINSE 410-406500/58			16:03																									
CCV 410-406500/59			16:05																									
CCB 410-406500/60			16:07																									
ZZZZZZ			16:14																									
ZZZZZZ			16:16																									
ZZZZZZ			16:18																									
ZZZZZZ			16:20																									
ZZZZZZ			16:22																									
RINSE 410-406500/66			16:24																									
CCV 410-406500/67			16:26																									
CCB 410-406500/68			16:28																									
ZZZZZZ			16:30																									
ZZZZZZ			16:32																									
RINSE 410-406500/71			16:34																									
CCV 410-406500/72			16:36																									
CCB 410-406500/73			16:39																									
ZZZZZZ			16:41																									
ZZZZZZ			16:43																									
ZZZZZZ			16:45																									
ZZZZZZ			16:47																									
RINSE 410-406500/78			16:49																									
CCV 410-406500/79			16:51																									
CCB 410-406500/80			16:53																									
ZZZZZZ			16:55																									
ZZZZZZ			16:57																									
ZZZZZZ			16:59																									
ZZZZZZ			17:01																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Instrument ID: E09 - 30921 Analysis Method: 6020B

Start Date: 08/09/2023 11:41 End Date: 08/09/2023 20:15

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Ni	Pb	Sb	Se	Tl	V	Zn											
ZZZZZZ			17:03																									
ZZZZZZ			17:05																									
ZZZZZZ			17:07																									
RINSE 410-406500/88			17:09																									
CCV 410-406500/89			17:11																									
CCB 410-406500/90			17:13																									
ZZZZZZ			17:15																									
ZZZZZZ			17:17																									
ZZZZZZ			17:19																									
ZZZZZZ			17:21																									
ZZZZZZ			17:23																									
ZZZZZZ			17:25																									
ZZZZZZ			17:28																									
RINSE 410-406500/98			17:30																									
CCV 410-406500/99			17:32																									
CCB 410-406500/100			17:34																									
ZZZZZZ			17:36																									
ZZZZZZ			17:38																									
ZZZZZZ			17:40																									
RINSE 410-406500/104			17:42																									
CCV 410-406500/105			17:44																									
CCB 410-406500/106			17:46																									
ZZZZZZ			17:49																									
ZZZZZZ			17:51																									
ZZZZZZ			17:53																									
ZZZZZZ			17:55																									
ZZZZZZ			17:57																									
RINSE 410-406500/112			17:59																									
CCV 410-406500/113			18:01																									
CCB 410-406500/114			18:03																									
ZZZZZZ			18:05																									
ZZZZZZ			18:07																									
ZZZZZZ			18:09																									
ZZZZZZ			18:11																									
ZZZZZZ			18:13																									
ZZZZZZ			18:15																									
RINSE 410-406500/121			18:17																									
CCV 410-406500/122			18:19																									
CCB 410-406500/123			18:21																									
ZZZZZZ			18:26																									
ZZZZZZ			18:28																									
RINSE 410-406500/126			18:30																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Instrument ID: E09 - 30921 Analysis Method: 6020B

Start Date: 08/09/2023 11:41 End Date: 08/09/2023 20:15

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Ni	Pb	Sb	Se	Tl	V	Zn											
CCV 410-406500/127			18:32																									
CCB 410-406500/128			18:35																									
ZZZZZZ			18:37																									
ZZZZZZ			18:39																									
ZZZZZZ			18:41																									
ZZZZZZ			18:43																									
ZZZZZZ			18:45																									
RINSE 410-406500/134			18:47																									
CCV 410-406500/135			18:49																									
CCB 410-406500/136			18:51																									
ZZZZZZ			18:53																									
ZZZZZZ			18:55																									
ZZZZZZ			18:57																									
ZZZZZZ			18:59																									
ZZZZZZ			19:01																									
ZZZZZZ			19:03																									
ZZZZZZ			19:05																									
RINSE 410-406500/144			19:07																									
CCV 410-406500/145			19:09																									
CCB 410-406500/146			19:12																									
ZZZZZZ			19:15																									
ZZZZZZ			19:17																									
RINSE 410-406500/149			19:19																									
CCV 410-406500/150			19:21																									
CCB 410-406500/151			19:23																									
ZZZZZZ			19:25																									
RINSE 410-406500/153			19:27																									
CCV 410-406500/154			19:29																									
CCB 410-406500/155			19:31																									
ZZZZZZ			19:33																									
ZZZZZZ			19:35																									
ZZZZZZ			19:37																									
ZZZZZZ			19:39																									
ZZZZZZ			19:41																									
ZZZZZZ			19:43																									
ZZZZZZ			19:45																									
RINSE 410-406500/163			19:48																									
CCV 410-406500/164			19:50																									
CCB 410-406500/165			19:52																									
ZZZZZZ			19:54																									
ZZZZZZ			19:56																									
ZZZZZZ			19:58																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Instrument ID: E09 - 30921 Analysis Method: 6020B

Start Date: 08/09/2023 11:41 End Date: 08/09/2023 20:15

Lab Sample Id	D/F	Type	Time	Analytes																									
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Ni	Pb	Sb	Se	Tl	V	Zn												
ZZZZZZ			20:00																										
ZZZZZZ			20:03																										
ZZZZZZ			20:05																										
ZZZZZZ			20:07																										
ZZZZZZ			20:09																										
RINSE 410-406500/174			20:11																										
CCV 410-406500/175			20:13																										
CCB 410-406500/176			20:15																										

Prep Types:
R = Total Recoverable

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Instrument ID: E09 - 30921 Analysis Method: 6020B

Start Date: 08/10/2023 06:41 End Date: 08/10/2023 20:28

Lab Sample Id	D/F	Type	Time	Analytes																							
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Ni	Pb	Sb	Se	Tl	V	Zn										
ITUNE 410-407005/1	1		06:41																								
ICIS 410-407005/2			08:01	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
STD1 410-407005/3 IC	1		08:03	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
ICV 410-407005/4	1		08:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
ICB 410-407005/5	1		08:07		X	X	X	X	X	X	X	X					X	X										
CRI 410-407005/6	1		08:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X											
ICSA 410-407005/7	1		08:29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
ICSAB 410-407005/8	1		08:31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
LRC 410-407005/9	1		08:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
RINSE 410-407005/10			08:35																								
RINSE 410-407005/11			08:37																								
RINSE 410-407005/12			08:39																								
RINSE 410-407005/13			08:41																								
RINSE 410-407005/14			08:44																								
RINSE 410-407005/15			08:46																								
CCV 410-407005/16	1		08:48	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
CCB 410-407005/17	1		08:50		X	X	X	X	X	X	X	X					X	X										
CRI 410-407005/18	1		11:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
RINSE 410-407005/19			14:04																								
RINSE 410-407005/20			14:06																								
ICSA 410-407005/21	1		14:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
ICSAB 410-407005/22	1		14:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
RINSE 410-407005/23			14:12																								
RINSE 410-407005/24			14:14																								
RINSE 410-407005/25			14:16																								
RINSE 410-407005/26			14:19																								
CCV 410-407005/27			14:21																								
CCB 410-407005/28			14:23																								
ZZZZZZ			14:28																								
ZZZZZZ			14:30																								
RINSE 410-407005/31			14:32																								
CCV 410-407005/32			14:34																								
CCB 410-407005/33			14:36																								
ZZZZZZ			14:38																								
ZZZZZZ			14:40																								
ZZZZZZ			14:42																								
ZZZZZZ			14:44																								
ZZZZZZ			14:47																								
ZZZZZZ			14:49																								
RINSE 410-407005/40			14:51																								
CCV 410-407005/41			14:53																								
CCB 410-407005/42			14:55																								

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Instrument ID: E09 - 30921 Analysis Method: 6020B

Start Date: 08/10/2023 06:41 End Date: 08/10/2023 20:28

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Ni	Pb	Sb	Se	Tl	V	Zn											
ZZZZZZ			14:57																									
ZZZZZZ			14:59																									
ZZZZZZ			15:01																									
ZZZZZZ			15:03																									
ZZZZZZ			15:05																									
ZZZZZZ			15:07																									
ZZZZZZ			15:10																									
ZZZZZZ			15:12																									
RINSE 410-407005/51			15:14																									
CCV 410-407005/52			15:17																									
CCB 410-407005/53			15:19																									
ZZZZZZ			15:21																									
ZZZZZZ			15:23																									
ZZZZZZ			15:25																									
ZZZZZZ			15:27																									
ZZZZZZ			15:29																									
ZZZZZZ			15:31																									
RINSE 410-407005/60			15:33																									
CCV 410-407005/61			15:35																									
CCB 410-407005/62			15:37																									
ZZZZZZ			15:39																									
ZZZZZZ			15:41																									
ZZZZZZ			15:43																									
RINSE 410-407005/66			15:45																									
CCV 410-407005/67			15:47																									
CCB 410-407005/68			15:49																									
RINSE 410-407005/69			15:53																									
RINSE 410-407005/70			15:55																									
RINSE 410-407005/71			15:57																									
CCV 410-407005/72			15:59																									
CCB 410-407005/73			16:01																									
ZZZZZZ			16:03																									
ZZZZZZ			16:05																									
RINSE 410-407005/76			16:07																									
CCV 410-407005/77			16:09																									
CCB 410-407005/78			16:11																									
ZZZZZZ			16:13																									
ZZZZZZ			16:15																									
ZZZZZZ			16:18																									
ZZZZZZ			16:20																									
ZZZZZZ			16:22																									
RINSE 410-407005/84			16:24																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Instrument ID: E09 - 30921 Analysis Method: 6020B

Start Date: 08/10/2023 06:41 End Date: 08/10/2023 20:28

Lab Sample Id	D/F	Type	Time	Analytes																							
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Ni	Pb	Sb	Se	Tl	V	Zn										
CCV 410-407005/85			16:26																								
CCB 410-407005/86			16:28																								
ZZZZZZ			16:30																								
RINSE 410-407005/88			16:32																								
RINSE 410-407005/89			16:34																								
RINSE 410-407005/90			16:36																								
CCV 410-407005/91			16:38																								
CCB 410-407005/92			16:40																								
ZZZZZZ			16:42																								
ZZZZZZ			16:44																								
ZZZZZZ			16:47																								
ZZZZZZ			16:49																								
ZZZZZZ			16:51																								
ZZZZZZ			16:53																								
ZZZZZZ			16:55																								
RINSE 410-407005/100			16:57																								
CCV 410-407005/101	1		16:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
CCB 410-407005/102	1		17:01		X	X	X	X	X	X	X	X	X				X	X									
MB 410-403519/1-A	1	R	17:03		X	X	X	X	X	X	X	X	X				X	X									
LCS 410-403519/2-A	1	R	17:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
RINSE 410-407005/105			17:07																								
CCV 410-407005/106	1		17:09	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
CCB 410-407005/107	1		17:11		X	X	X	X	X	X	X	X	X				X	X									
ZZZZZZ			17:13																								
ZZZZZZ			17:15																								
ZZZZZZ			17:17																								
ZZZZZZ			17:19																								
ZZZZZZ			17:22																								
ZZZZZZ			17:24																								
RINSE 410-407005/114			17:26																								
CCV 410-407005/115	1		17:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
CCB 410-407005/116	1		17:30		X	X	X	X	X	X	X	X	X				X	X									
ZZZZZZ			17:32																								
ZZZZZZ			17:34																								
ZZZZZZ			17:36																								
ZZZZZZ			17:38																								
ZZZZZZ			17:40																								
ZZZZZZ			17:42																								
ZZZZZZ			17:44																								
ZZZZZZ			17:46																								
RINSE 410-407005/125			17:48																								
CCV 410-407005/126			17:50																								

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Instrument ID: E09 - 30921 Analysis Method: 6020B

Start Date: 08/10/2023 06:41 End Date: 08/10/2023 20:28

Lab Sample Id	D/F	Type	Time	Analytes																							
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Ni	Pb	Sb	Se	Tl	V	Zn										
CCB 410-407005/127			17:52																								
ZZZZZZ			17:54																								
ZZZZZZ			17:57																								
ZZZZZZ			17:59																								
ZZZZZZ			18:01																								
ZZZZZZ			18:03																								
ZZZZZZ			18:05																								
ZZZZZZ			18:07																								
RINSE 410-407005/135			18:09																								
CCV 410-407005/136	1		18:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
CCB 410-407005/137	1		18:13		X	X	X	X	X	X	X	X	X				X	X									
ZZZZZZ			18:15																								
ZZZZZZ			18:17																								
410-136514-4	1	R	18:19		X	X	X	X	X	X	X	X	X				X	X									
410-136514-3	1	R	18:21		X	X	X	X	X	X	X	X	X				X	X									
RINSE 410-407005/142			18:23																								
CCV 410-407005/143	1		18:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
CCB 410-407005/144	1		18:27		X	X	X	X	X	X	X	X	X				X	X									
ZZZZZZ			18:30																								
ZZZZZZ			18:32																								
RINSE 410-407005/147			18:34																								
CCV 410-407005/148			18:36																								
CCB 410-407005/149			18:38																								
ZZZZZZ			18:40																								
ZZZZZZ			18:42																								
ZZZZZZ			18:44																								
ZZZZZZ			18:46																								
ZZZZZZ			18:48																								
RINSE 410-407005/155			18:50																								
CCV 410-407005/156			18:52																								
CCB 410-407005/157			18:54																								
ZZZZZZ			18:56																								
ZZZZZZ			18:58																								
ZZZZZZ			19:01																								
RINSE 410-407005/161			19:03																								
CCV 410-407005/162			19:05																								
CCB 410-407005/163			19:07																								
ZZZZZZ			19:09																								
ZZZZZZ			19:11																								
RINSE 410-407005/166			19:13																								
CCV 410-407005/167			19:15																								
CCB 410-407005/168			19:17																								

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Instrument ID: E09 - 30921 Analysis Method: 6020B

Start Date: 08/10/2023 06:41 End Date: 08/10/2023 20:28

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Ni	Pb	Sb	Se	Tl	V	Zn											
ZZZZZZ			19:19																									
ZZZZZZ			19:21																									
ZZZZZZ			19:23																									
RINSE 410-407005/172			19:25																									
CCV 410-407005/173			19:27																									
CCB 410-407005/174			19:29																									
ZZZZZZ			19:31																									
ZZZZZZ			19:33																									
ZZZZZZ			19:36																									
RINSE 410-407005/178			19:38																									
CCV 410-407005/179			19:40																									
CCB 410-407005/180			19:42																									
ZZZZZZ			19:46																									
ZZZZZZ			19:49																									
ZZZZZZ			19:51																									
RINSE 410-407005/184			19:53																									
CCV 410-407005/185			19:55																									
CCB 410-407005/186			19:57																									
ZZZZZZ			19:59																									
ZZZZZZ			20:01																									
ZZZZZZ			20:03																									
ZZZZZZ			20:05																									
ZZZZZZ			20:07																									
ZZZZZZ			20:09																									
RINSE 410-407005/193			20:11																									
CCV 410-407005/194			20:13																									
CCB 410-407005/195			20:15																									
ZZZZZZ			20:17																									
ZZZZZZ			20:19																									
ZZZZZZ			20:21																									
RINSE 410-407005/199			20:23																									
CCV 410-407005/200			20:26																									
CCB 410-407005/201			20:28																									

Prep Types:
R = Total Recoverable

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Instrument ID: M07 - 17384 Analysis Method: 7470A

Start Date: 08/04/2023 08:07 End Date: 08/04/2023 13:45

Lab Sample Id	D/F	Type	Time	Analytes																								
				Hg																								
IC 410-403086/1-A			08:07	X																								
IC 410-403086/2-A			08:09	X																								
IC 410-403086/3-A			08:11	X																								
IC 410-403086/4-A			08:13	X																								
IC 410-403086/5-A			08:15	X																								
IC 410-403086/6-A			08:17	X																								
ICV 410-403086/7-A	1		08:19	X																								
ICB 410-403086/9-A	1		08:21	X																								
CRA 410-403086/8-A	1		08:23	X																								
CCV 410-403086/11-A			08:26																									
CCB 410-403086/10-A			08:28																									
ZZZZZZ			08:30																									
ZZZZZZ			08:32																									
ZZZZZZ			08:34																									
ZZZZZZ			08:36																									
ZZZZZZ			08:38																									
ZZZZZZ			08:40																									
ZZZZZZ			08:42																									
ZZZZZZ			08:44																									
ZZZZZZ			08:46																									
ZZZZZZ			08:48																									
CCV 410-403086/11-A			08:50																									
CCB 410-403086/10-A			08:52																									
ZZZZZZ			08:54																									
ZZZZZZ			08:56																									
ZZZZZZ			08:58																									
ZZZZZZ			09:00																									
ZZZZZZ			09:02																									
ZZZZZZ			09:04																									
ZZZZZZ			09:06																									
ZZZZZZ			09:08																									
ZZZZZZ			09:10																									
ZZZZZZ			09:12																									
CCV 410-403086/11-A	1		09:14	X																								
CCB 410-403086/10-A	1		09:16	X																								
ZZZZZZ			09:18																									
ZZZZZZ			09:20																									
ZZZZZZ			09:22																									
ZZZZZZ			09:24																									
ZZZZZZ			09:26																									
MB 410-403849/1-A	1	T	09:28	X																								
LCS 410-403849/2-A	1	T	09:31	X																								

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Instrument ID: M07 - 17384 Analysis Method: 7470A

Start Date: 08/04/2023 08:07 End Date: 08/04/2023 13:45

Lab Sample Id	D/F	Type	Time	Analytes																								
				Hg																								
ZZZZZZ			09:33																									
ZZZZZZ			09:35																									
ZZZZZZ			09:37																									
CCV 410-403086/11-A	1		09:39	X																								
CCB 410-403086/10-A	1		09:41	X																								
ZZZZZZ			09:43																									
410-136514-2	1	T	09:45	X																								
410-136514-3	1	T	09:47	X																								
ZZZZZZ			09:49																									
ZZZZZZ			09:51																									
ZZZZZZ			09:53																									
ZZZZZZ			09:55																									
ZZZZZZ			09:57																									
ZZZZZZ			09:59																									
ZZZZZZ			10:01																									
CCV 410-403086/11-A	1		10:03	X																								
CCB 410-403086/10-A	1		10:05	X																								
410-136514-4	1	T	10:07	X																								
410-136514-1	1	T	10:09	X																								
ZZZZZZ			10:11																									
ZZZZZZ			10:13																									
ZZZZZZ			10:15																									
ZZZZZZ			10:17																									
ZZZZZZ			10:19																									
ZZZZZZ			10:21																									
ZZZZZZ			10:24																									
ZZZZZZ			10:26																									
CCV 410-403086/11-A	1		10:28	X																								
CCB 410-403086/10-A	1		10:30	X																								
ZZZZZZ			10:32																									
ZZZZZZ			10:34																									
ZZZZZZ			10:36																									
ZZZZZZ			10:38																									
ZZZZZZ			10:40																									
ZZZZZZ			10:42																									
ZZZZZZ			10:44																									
ZZZZZZ			10:46																									
ZZZZZZ			10:48																									
ZZZZZZ			10:50																									
CCV 410-403086/11-A			10:58																									
CCB 410-403086/10-A			11:00																									
ZZZZZZ			11:02																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Instrument ID: M07 - 17384 Analysis Method: 7470A

Start Date: 08/04/2023 08:07 End Date: 08/04/2023 13:45

Lab Sample Id	D/F	Type	Time	Analytes																								
				Hg																								
ZZZZZZ			11:04																									
ZZZZZZ			11:06																									
ZZZZZZ			11:08																									
ZZZZZZ			11:10																									
ZZZZZZ			11:12																									
ZZZZZZ			11:14																									
ZZZZZZ			11:16																									
ZZZZZZ			11:18																									
ZZZZZZ			11:20																									
CCV 410-403086/11-A	1		11:22	X																								
CCB 410-403086/10-A	1		11:24	X																								
ZZZZZZ			11:26																									
ZZZZZZ			11:28																									
ZZZZZZ			11:30																									
ZZZZZZ			11:32																									
ZZZZZZ			11:34																									
ZZZZZZ			11:36																									
ZZZZZZ			11:38																									
ZZZZZZ			11:40																									
ZZZZZZ			11:42																									
MB 410-403851/1-A	1	T	11:44	X																								
CCV 410-403086/11-A	1		11:47	X																								
CCB 410-403086/10-A	1		11:49	X																								
LCS 410-403851/2-A	1	T	11:51	X																								
ZZZZZZ			11:53																									
ZZZZZZ			11:55																									
ZZZZZZ			11:57																									
ZZZZZZ			11:59																									
ZZZZZZ			12:01																									
ZZZZZZ			12:03																									
ZZZZZZ			12:05																									
ZZZZZZ			12:07																									
ZZZZZZ			12:09																									
CCV 410-403086/11-A	1		12:11	X																								
CCB 410-403086/10-A	1		12:13	X																								
ZZZZZZ			12:15																									
ZZZZZZ			12:17																									
ZZZZZZ			12:19																									
ZZZZZZ			12:21																									
410-136514-5	1	T	12:23	X																								
ZZZZZZ			12:25																									
ZZZZZZ			12:27																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-1

SDG No.:

Instrument ID: M07 - 17384 Analysis Method: 7470A

Start Date: 08/04/2023 08:07 End Date: 08/04/2023 13:45

Lab Sample Id	D/F	Type	Time	Analytes																								
				Hg																								
ZZZZZZ			12:29																									
ZZZZZZ			12:31																									
ZZZZZZ			12:33																									
CCV 410-403086/11-A	1		12:35	X																								
CCB 410-403086/10-A	1		12:37	X																								
ZZZZZZ			12:39																									
ZZZZZZ			12:41																									
ZZZZZZ			12:44																									
ZZZZZZ			12:46																									
ZZZZZZ			12:48																									
ZZZZZZ			12:50																									
ZZZZZZ			12:52																									
ZZZZZZ			12:54																									
ZZZZZZ			12:56																									
ZZZZZZ			12:58																									
CCV 410-403086/11-A			13:00																									
CCB 410-403086/10-A			13:02																									
ZZZZZZ			13:04																									
ZZZZZZ			13:06																									
ZZZZZZ			13:08																									
ZZZZZZ			13:10																									
ZZZZZZ			13:12																									
ZZZZZZ			13:14																									
ZZZZZZ			13:16																									
ZZZZZZ			13:18																									
ZZZZZZ			13:20																									
ZZZZZZ			13:22																									
CCV 410-403086/11-A			13:34																									
CCB 410-403086/10-A			13:36																									
ZZZZZZ			13:38																									
CRA 410-403086/8-A	1		13:41	X																								
CCV 410-403086/11-A			13:43																									
CCB 410-403086/10-A			13:45																									

Prep Types:
T = Total/NA

FORM XIII-IN

14-IN
ICP-MS TUNE
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1

SDG No.:

ICP-MS Instrument ID: E07 - 27813 Analysis Date: 08/10/23

Lab ID: ITUNE 410-407006/1

Element - Mass	Avg. Measured Mass (amu)	Avg. Peak Width at Peak Height (amu)	% RSD	Q
Be-9	9	0.7639	0.332	
Mg-24	24	0.7716	0.147	
Co-59	59	0.7662	0.527	
In-115	115	0.7171	0.433	
Pb-208	208	0.7149	0.708	

14-IN
ICP-MS TUNE
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1

SDG No.:

ICP-MS Instrument ID: E09 - 30921 Analysis Date: 08/09/23

Lab ID: ITUNE 410-406500/1

Element - Mass	Avg. Measured Mass (amu)	Avg. Peak Width at Peak Height (amu)	% RSD	Q
Be-9	9	0.7444	0.321	
Mg-24	24	0.7387	0.191	
Co-59	59	0.7735	0.24	
In-115	115	0.7254	0.494	
Pb-208	208	0.7428	1.012	

14-IN
ICP-MS TUNE
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1

SDG No.:

ICP-MS Instrument ID: E09 - 30921 Analysis Date: 08/10/23

Lab ID: ITUNE 410-407005/1

Element - Mass	Avg. Measured Mass (amu)	Avg. Peak Width at Peak Height (amu)	% RSD	Q
Be-9	9	0.7546	0.247	
Mg-24	24	0.7809	0.365	
Co-59	59	0.7718	0.165	
In-115	115	0.7381	0.547	
Pb-208	208	0.7582	0.549	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1

SDG No.: Analysis Batch No.: 407006

ICP-MS Instrument ID: E07 - 27813 Start Date: 08/10/2023 End Date: 08/10/2023

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Sc-45/1	Q	Element Sc-45/2	Q	Element Sc-45/3	Q	Element Ge/1	Q	Element Ge/2	Q
STD1 410-407006/3	07:43	99		101		103		99		101	
IC ICV 410-407006/4	07:45	100		102		102		99		103	
ICB 410-407006/5	07:59	99		96		100		99		97	
CRI 410-407006/6	08:36	103		96		102		103		98	
ICSA 410-407006/7	08:47	100		97		102		103		98	
ICSAB 410-407006/8	08:49	99		98		103		101		99	
LRC 410-407006/9	08:51	106		100		109		100		99	
CCV 410-407006/13	09:05	102		99		105		100		97	
CCB 410-407006/14	09:07	101		99		102		100		98	
CCV 410-407006/15	11:30	99		98		103		99		97	
CCB 410-407006/16	11:32	99		97		103		98		96	
MB 410-403837/1-A	13:03	104		95		101		105		97	
LCS 410-403837/2-A	13:05	104		98		104		105		100	
CCV 410-407006/26	13:21	102		99		102		101		97	
CCB 410-407006/27	13:23	101		97		105		100		97	
410-136514-1	13:25	103		100		105		103		100	
CCV 410-407006/37	13:43	103		101		106		102		100	
CCB 410-407006/38	13:45	103		100		105		102		99	
410-136514-5	13:47	105		100		106		104		102	
CCV 410-407006/47	14:03	101		100		104		100		99	
CCB 410-407006/48	14:05	99		100		105		98		98	
ICSA 410-407006/57	14:54	101		101		106		103		100	
ICSAB 410-407006/58	14:56	102		101		109		103		99	
IS Name on Instrument											

15A-IN
ICP-MS INTERNAL STANDARDS RELATIONS
METALS

Lab Name: Eurofins Lancaster Laboratories Env: Job No.: 410-136514-1

SDG No.: Analysis Batch No.: 407006

ICP-MS Instrument ID: E07 - 27813 Start Date: 08/10/2023 End Date: 08/10/2023

Analyte	Mass	Internal Standard Used:				
		Element In-115/2 115	Element In-115/3 115	Element Tb-159 159	Element Bi-209 209	Element Sc-45/1 45
Antimony	121		X			
Arsenic	75					
Barium	137		X			
Beryllium	9					
Cadmium	111		X			
Chromium	52					
Cobalt	59					
Copper	63					
Lead	208				X	
Nickel	60					
Selenium	78					
Silver	107		X			
Thallium	205				X	
Zinc	66					
Vanadium	51					
Aluminum	27					
Calcium	44					
Iron	57					
Magnesium	24					
Manganese	55					
Molybdenum	98		X			
Potassium	39					
Sodium	23					
Strontium	88		X			
Tin	120		X			
Titanium	47					
Uranium	238				X	
Internal Standard Name on Instrument		In-115 (IS)	In-115 (IS)	Tb-159 (IS)	Bi-209 (IS)	Sc-45 (IS)

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1

SDG No.: Analysis Batch No.: 407006

ICP-MS Instrument ID: E07 - 27813 Start Date: 08/10/2023 End Date: 08/10/2023

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Ge/3	Q	Element In-115/2	Q	Element In-115/3	Q	Element Tb-159	Q	Element Bi-209	Q
STD1 410-407006/3	07:43	102		102		100		101		102	
IC ICV 410-407006/4	07:45	101		103		100		101		102	
ICB 410-407006/5	07:59	97		98		96		97		99	
CRI 410-407006/6	08:36	99		98		97		98		99	
ICSA 410-407006/7	08:47	101		93		93		98		93	
ICSAB 410-407006/8	08:49	101		93		95		99		94	
LRC 410-407006/9	08:51	102		119		98		99		95	
CCV 410-407006/13	09:05	101		100		98		99		99	
CCB 410-407006/14	09:07	99		100		97		98		98	
CCV 410-407006/15	11:30	100		100		97		98		99	
CCB 410-407006/16	11:32	100		100		98		98		97	
MB 410-403837/1-A	13:03	98		96		95		96		98	
LCS 410-403837/2-A	13:05	103		100		96		98		98	
CCV 410-407006/26	13:21	101		100		98		98		99	
CCB 410-407006/27	13:23	100		100		98		98		99	
410-136514-1	13:25	102		101		97		99		97	
CCV 410-407006/37	13:43	102		102		100		100		99	
CCB 410-407006/38	13:45	101		102		100		98		99	
410-136514-5	13:47	105		102		99		99		99	
CCV 410-407006/47	14:03	102		101		98		99		99	
CCB 410-407006/48	14:05	101		101		99		99		99	
ICSA 410-407006/57	14:54	104		97		95		98		94	
ICSAB 410-407006/58	14:56	104		96		96		99		94	
IS Name on Instrument											

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ICP-MS INTERNAL STANDARDS RELATIONS
METALS

Lab Name: Eurofins Lancaster Laboratories Env: Job No.: 410-136514-1

SDG No.: Analysis Batch No.: 407006

ICP-MS Instrument ID: E07 - 27813 Start Date: 08/10/2023 End Date: 08/10/2023

Analyte	Mass	Internal Standard Used:				
		Element Sc-45/2 45	Element Sc-45/3 45	Element Ge/1 72	Element Ge/2 72	Element Ge/3 72
Antimony	121					
Arsenic	75					X
Barium	137					
Beryllium	9			X		
Cadmium	111					
Chromium	52					X
Cobalt	59					X
Copper	63					X
Lead	208					
Nickel	60					X
Selenium	78				X	
Silver	107					
Thallium	205					
Zinc	66					X
Vanadium	51					X
Aluminum	27					X
Calcium	44					X
Iron	57					X
Magnesium	24					X
Manganese	55					X
Molybdenum	98					
Potassium	39					X
Sodium	23					X
Strontium	88					
Tin	120					
Titanium	47					X
Uranium	238					
Internal Standard Name on Instrument		Sc-45 (IS)	Sc-45 (IS)	Ge Internal Standard	Ge Internal Standard	Ge Internal Standard

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1

SDG No.: Analysis Batch No.: 406500

ICP-MS Instrument ID: E09 - 30921 Start Date: 08/09/2023 End Date: 08/09/2023

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Sc-45/1	Q	Element Sc-45/2	Q	Element Sc-45/3	Q	Element Ge/1	Q	Element Ge/2	Q
STD1 410-406500/3	13:28	101		99		100		102		100	
IC ICV 410-406500/4	13:30	101		98		99		102		101	
ICB 410-406500/5	13:32	102		98		98		100		97	
CRI 410-406500/6	13:35	100		99		99		100		99	
ICSA 410-406500/7	13:44	99		97		97		101		103	
ICSAB 410-406500/8	13:47	99		99		98		99		105	
LRC 410-406500/10	13:53	106		100		105		99		102	
CCV 410-406500/14	14:17	100		99		100		99		100	
CCB 410-406500/15	14:19	98		97		98		97		98	
MB 410-404119/1-A	14:34	99		98		98		98		100	
LCS 410-404119/2-A	14:36	99		98		100		102		104	
CCV 410-406500/19	14:40	98		97		98		98		98	
CCB 410-406500/20	14:42	97		96		97		96		97	
CCV 410-406500/28	14:59	98		95		97		97		96	
CCB 410-406500/29	15:01	97		97		96		95		96	
410-136514-2	15:03	100		97		97		101		103	
CCV 410-406500/38	15:19	97		94		95		95		95	
CCB 410-406500/39	15:21	96		94		97		93		93	
IS Name on Instrument											

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15A-IN
ICP-MS INTERNAL STANDARDS RELATIONS
METALS

Lab Name: Eurofins Lancaster Laboratories Env: Job No.: 410-136514-1

SDG No.: Analysis Batch No.: 406500

ICP-MS Instrument ID: E09 - 30921 Start Date: 08/09/2023 End Date: 08/09/2023

Analyte	Mass	Internal Standard Used:				
		Element In-115/2 115	Element In-115/3 115	Element Tb-159 159	Element Bi-209 209	Element Sc-45/1 45
Antimony	121		X			
Arsenic	75					
Barium	137		X			
Beryllium	9					X
Cadmium	111		X			
Chromium	52					
Cobalt	59					
Copper	63					
Lead	208			X		
Nickel	60					
Selenium	78					
Silver	107		X			
Thallium	205			X		
Zinc	66					
Vanadium	51					
Aluminum	27					
Calcium	44					
Iron	57					
Magnesium	24					
Manganese	55					
Molybdenum	98		X			
Potassium	39					
Sodium	23					
Strontium	88		X			
Tin	120		X			
Titanium	47					
Uranium	238				X	
Internal Standard Name on Instrument		In-115 (IS)	In-115 (IS)	Tb-159 (IS)	Bi-209 (IS)	Sc-45 (IS)

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1

SDG No.: Analysis Batch No.: 406500

ICP-MS Instrument ID: E09 - 30921 Start Date: 08/09/2023 End Date: 08/09/2023

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Ge/3	Q	Element In-115/2	Q	Element In-115/3	Q	Element Tb-159	Q	Element Bi-209	Q
STD1 410-406500/3	13:28	101		100		100		100		100	
IC ICV 410-406500/4	13:30	100		100		100		101		101	
ICB 410-406500/5	13:32	98		99		99		100		101	
CRI 410-406500/6	13:35	100		99		100		100		100	
ICSA 410-406500/7	13:44	104		94		95		98		95	
ICSAB 410-406500/8	13:47	105		95		96		99		95	
LRC 410-406500/10	13:53	103		122		106		99		95	
CCV 410-406500/14	14:17	99		98		99		100		101	
CCB 410-406500/15	14:19	97		99		98		99		101	
MB 410-404119/1-A	14:34	99		98		99		100		101	
LCS 410-404119/2-A	14:36	102		99		99		100		101	
CCV 410-406500/19	14:40	100		98		98		100		101	
CCB 410-406500/20	14:42	96		97		97		99		101	
CCV 410-406500/28	14:59	98		97		98		100		101	
CCB 410-406500/29	15:01	97		97		98		99		100	
410-136514-2	15:03	104		97		98		100		102	
CCV 410-406500/38	15:19	98		95		96		99		100	
CCB 410-406500/39	15:21	94		95		97		98		100	
IS Name on Instrument											

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ICP-MS INTERNAL STANDARDS RELATIONS
METALS

Lab Name: Eurofins Lancaster Laboratories Env: Job No.: 410-136514-1

SDG No.: Analysis Batch No.: 406500

ICP-MS Instrument ID: E09 - 30921 Start Date: 08/09/2023 End Date: 08/09/2023

Analyte	Mass	Internal Standard Used:				
		Element Sc-45/2 45	Element Sc-45/3 45	Element Ge/1 72	Element Ge/2 72	Element Ge/3 72
Antimony	121					
Arsenic	75					X
Barium	137					
Beryllium	9					
Cadmium	111					
Chromium	52		X			
Cobalt	59		X			
Copper	63					X
Lead	208					
Nickel	60					X
Selenium	78				X	
Silver	107					
Thallium	205					
Zinc	66					X
Vanadium	51		X			
Aluminum	27		X			
Calcium	44		X			
Iron	57		X			
Magnesium	24		X			
Manganese	55		X			
Molybdenum	98					
Potassium	39		X			
Sodium	23		X			
Strontium	88					
Tin	120					
Titanium	47		X			
Uranium	238					
Internal Standard Name on Instrument		Sc-45 (IS)	Sc-45 (IS)	Ge Internal Standard	Ge Internal Standard	Ge Internal Standard

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1

SDG No.: Analysis Batch No.: 407005

ICP-MS Instrument ID: E09 - 30921 Start Date: 08/10/2023 End Date: 08/10/2023

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Sc-45/1	Q	Element Sc-45/2	Q	Element Sc-45/3	Q	Element Ge/1	Q	Element Ge/2	Q
STD1 410-407005/3	08:03	101		101		100		104		99	
IC ICV 410-407005/4	08:05	99		100		101		101		99	
ICB 410-407005/5	08:07	99		99		101		100		97	
CRI 410-407005/6	08:18	100		101		102		101		99	
ICSA 410-407005/7	08:29	99		98		101		106		101	
ICSAB 410-407005/8	08:31	100		99		102		105		103	
LRC 410-407005/9	08:33	109		100		109		103		101	
CCV 410-407005/16	08:48	103		104		107		104		101	
CCB 410-407005/17	08:50	103		103		104		102		100	
CRI 410-407005/18	11:08	104		100		106		105		99	
ICSA 410-407005/21	14:08	104		100		100		109		103	
ICSAB 410-407005/22	14:10	105		97		100		110		100	
CCV 410-407005/101	16:59	106		101		105		109		101	
CCB 410-407005/102	17:01	104		101		105		107		99	
MB 410-403519/1-A	17:03	106		102		107		108		100	
LCS 410-403519/2-A	17:05	106		101		106		111		103	
CCV 410-407005/106	17:09	104		99		104		108		98	
CCB 410-407005/107	17:11	104		99		102		106		96	
CCV 410-407005/115	17:28	105		98		102		108		96	
CCB 410-407005/116	17:30	102		99		104		105		97	
CCV 410-407005/136	18:11	104		98		104		106		95	
CCB 410-407005/137	18:13	103		98		102		104		94	
410-136514-4	18:19	104		99		104		107		100	
410-136514-3	18:21	103		99		102		106		101	
CCV 410-407005/143	18:25	103		99		103		104		97	
CCB 410-407005/144	18:27	104		98		103		103		95	
IS Name on Instrument											

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ICP-MS INTERNAL STANDARDS RELATIONS
METALS

Lab Name: Eurofins Lancaster Laboratories Env: Job No.: 410-136514-1

SDG No.: Analysis Batch No.: 407005

ICP-MS Instrument ID: E09 - 30921 Start Date: 08/10/2023 End Date: 08/10/2023

Analyte	Mass	Internal Standard Used:				
		Element In-115/2 115	Element In-115/3 115	Element Tb-159 159	Element Bi-209 209	Element Sc-45/1 45
Antimony	121		X			
Arsenic	75					
Barium	137		X			
Beryllium	9					X
Cadmium	111		X			
Chromium	52					
Cobalt	59					
Copper	63					
Lead	208			X		
Nickel	60					
Selenium	78					
Silver	107		X			
Thallium	205			X		
Zinc	66					
Vanadium	51					
Aluminum	27					
Calcium	44					
Iron	57					
Magnesium	24					
Manganese	55					
Molybdenum	98		X			
Potassium	39					
Sodium	23					
Strontium	88		X			
Tin	120		X			
Titanium	47					
Uranium	238				X	
Internal Standard Name on Instrument		In-115 (IS)	In-115 (IS)	Tb-159 (IS)	Bi-209 (IS)	Sc-45 (IS)

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-1

SDG No.: Analysis Batch No.: 407005

ICP-MS Instrument ID: E09 - 30921 Start Date: 08/10/2023 End Date: 08/10/2023

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Ge/3	Q	Element In-115/2	Q	Element In-115/3	Q	Element Tb-159	Q	Element Bi-209	Q
STD1 410-407005/3	08:03	101		99		98		99		99	
IC ICV 410-407005/4	08:05	100		98		98		100		100	
ICB 410-407005/5	08:07	98		99		98		99		99	
CRI 410-407005/6	08:18	101		100		100		99		100	
ICSA 410-407005/7	08:29	103		94		94		98		93	
ICSAB 410-407005/8	08:31	105		95		97		99		95	
LRC 410-407005/9	08:33	102		124		105		99		94	
CCV 410-407005/16	08:48	102		103		104		103		101	
CCB 410-407005/17	08:50	102		102		102		102		101	
CRI 410-407005/18	11:08	106		103		106		102		101	
ICSA 410-407005/21	14:08	108		96		95		98		94	
ICSAB 410-407005/22	14:10	109		95		96		98		94	
CCV 410-407005/101	16:59	108		103		104		102		101	
CCB 410-407005/102	17:01	104		101		103		100		100	
MB 410-403519/1-A	17:03	107		104		104		102		102	
LCS 410-403519/2-A	17:05	110		102		102		101		101	
CCV 410-407005/106	17:09	104		100		102		100		101	
CCB 410-407005/107	17:11	103		100		101		100		99	
CCV 410-407005/115	17:28	105		101		101		100		100	
CCB 410-407005/116	17:30	102		101		102		100		100	
CCV 410-407005/136	18:11	104		100		102		101		100	
CCB 410-407005/137	18:13	102		100		101		101		100	
410-136514-4	18:19	109		100		100		101		101	
410-136514-3	18:21	108		100		100		101		100	
CCV 410-407005/143	18:25	105		101		101		100		100	
CCB 410-407005/144	18:27	102		100		101		100		100	
IS Name on Instrument											

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ICP-MS INTERNAL STANDARDS RELATIONS
METALS

Lab Name: Eurofins Lancaster Laboratories Env: Job No.: 410-136514-1

SDG No.: Analysis Batch No.: 407005

ICP-MS Instrument ID: E09 - 30921 Start Date: 08/10/2023 End Date: 08/10/2023

Analyte	Mass	Internal Standard Used:				
		Element Sc-45/2 45	Element Sc-45/3 45	Element Ge/1 72	Element Ge/2 72	Element Ge/3 72
Antimony	121					
Arsenic	75					X
Barium	137					
Beryllium	9					
Cadmium	111					
Chromium	52		X			
Cobalt	59		X			
Copper	63					X
Lead	208					
Nickel	60					X
Selenium	78				X	
Silver	107					
Thallium	205					
Zinc	66					X
Vanadium	51		X			
Aluminum	27		X			
Calcium	44		X			
Iron	57		X			
Magnesium	24		X			
Manganese	55		X			
Molybdenum	98					
Potassium	39		X			
Sodium	23		X			
Strontium	88					
Tin	120					
Titanium	47		X			
Uranium	238					
Internal Standard Name on Instrument		Sc-45 (IS)	Sc-45 (IS)	Ge Internal Standard	Ge Internal Standard	Ge Internal Standard

METALS BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136514-1

SDG No.:

Batch Number: 403519 | Batch Start Date: 08/07/23 20:15 | Batch Analyst: Kuhns, Annamaria M

Batch Method: 3005A | Batch End Date: 08/08/23 00:15

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MP_1:1HCl 00029	MP_1:1HNO3 00045	MT_LCS-SPK-A 00030	MT_LCS-SPK-B 00029
MB 410-403519/1		3005A, 6020B		50 mL	50 mL	5 mL	2 mL		
LCS 410-403519/2		3005A, 6020B		50 mL	50 mL	5 mL	2 mL	0.2 mL	0.2 mL
410-136514-G-4	16WC2B	3005A, 6020B	R	50 mL	50 mL	5 mL	2 mL		
410-136514-G-3	16-5	3005A, 6020B	R	50 mL	50 mL	5 mL	2 mL		

Batch Notes	
Digestion Tube/Cup ID	2206050
Pipette/Syringe/Dispenser ID	g20054g
Pipette Tip Lot ID	f169949r
Digestion Unit ID	10
Thermometer ID	3811
Temperature - Uncorrected - Start	95 Degrees C
Temperature - Corrected - Start	95 Degrees C
Temperature - Uncorrected - End	95 Degrees C
Temperature - Corrected - End	95 Degrees C

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136514-1

SDG No.:

Batch Number: 403837 | Batch Start Date: 08/04/23 08:00 | Batch Analyst: Dickens, Emily

Batch Method: 3005A | Batch End Date: 08/04/23 12:10

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MP_1:1HCl 00029	MP_1:1HNO3 00045	MT_LCS-SPK-A 00030	MT_LCS-SPK-B 00029
MB 410-403837/1		3005A, 6020B		50 mL	50 mL	5 mL	2 mL		
LCS 410-403837/2		3005A, 6020B		50 mL	50 mL	5 mL	2 mL	0.2 mL	0.2 mL
410-136514-G-1	16-2	3005A, 6020B	R	50 mL	50 mL	5 mL	2 mL		
410-136514-G-5	16SPRING	3005A, 6020B	R	50 mL	50 mL	5 mL	2 mL		

Batch Notes	
Digestion Tube/Cup ID	2206050
Pipette/Syringe/Dispenser ID	G20054G
Pipette Tip Lot ID	F169949R
Digestion Unit ID	14
Thermometer ID	3811
Temperature - Uncorrected - Start	95 Degrees C
Temperature - Corrected - Start	95 Degrees C
Temperature - Uncorrected - End	95 Degrees C
Temperature - Corrected - End	95 Degrees C

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-136514-1

SDG No.:

Batch Number: 404119 Batch Start Date: 08/07/23 20:15 Batch Analyst: Kuhns, Annamaria M

Batch Method: 3005A Batch End Date: 08/08/23 00:15

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MP_1:1HCl 00029	MP_1:1HNO3 00045	MT_LCS-SPK-A 00030	MT_LCS-SPK-B 00029
MB 410-404119/1		3005A, 6020B		50 mL	50 mL	5 mL	2 mL		
LCS 410-404119/2		3005A, 6020B		50 mL	50 mL	5 mL	2 mL	0.2 mL	0.2 mL
410-136514-G-2	16-3	3005A, 6020B	R	50 mL	50 mL	5 mL	2 mL		

Batch Notes	
Digestion Tube/Cup ID	2206050
Pipette/Syringe/Dispenser ID	g20054g
Pipette Tip Lot ID	f169949r
Digestion Unit ID	10
Thermometer ID	3811
Temperature - Uncorrected - Start	95 Degrees C
Temperature - Corrected - Start	95 Degrees C
Temperature - Uncorrected - End	95 Degrees C
Temperature - Corrected - End	95 Degrees C

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136514-1

SDG No.:

Batch Number: 403086 | Batch Start Date: 08/01/23 09:00 | Batch Analyst: Stoltzfus, Elaine F

Batch Method: 7470A | Batch End Date: 08/01/23 11:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Hg_0.1Control 00157	Hg_1Cal 00145	Hg_1Control 00150	MP_5%KMnO4 00362
ICV 410-403086/7		7470A, 7470A		100 mL	100 mL			0.25 mL	15 mL
CRA 410-403086/8		7470A, 7470A		100 mL	100 mL	0.2 mL			15 mL
ICB 410-403086/9		7470A, 7470A		100 mL	100 mL				15 mL
CCB 410-403086/10		7470A, 7470A		100 mL	100 mL				15 mL
CCV 410-403086/11		7470A, 7470A		100 mL	100 mL		0.1 mL		15 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MP_5K2S2O8 00091	MP_NaClHNO 00195	MT_HNO3_Fishe 00007	MT_SULF_FI 00019		
ICV 410-403086/7		7470A, 7470A		8 mL	6 mL	2.5 mL	5 mL		
CRA 410-403086/8		7470A, 7470A		8 mL	6 mL	2.5 mL	5 mL		
ICB 410-403086/9		7470A, 7470A		8 mL	6 mL	2.5 mL	5 mL		
CCB 410-403086/10		7470A, 7470A		8 mL	6 mL	2.5 mL	5 mL		
CCV 410-403086/11		7470A, 7470A		8 mL	6 mL	2.5 mL	5 mL		

Batch Notes	
Digestion Tube/Cup ID	2206050
Digestion Unit ID	1
Thermometer ID	3870
Temperature - Uncorrected - Start	95 Degrees C
Temperature - Corrected - Start	95 Degrees C
Temperature - Uncorrected - End	95 Degrees C
Temperature - Corrected - End	95 Degrees C
Batch Comment	Reduced 8-1-2023

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136514-1

SDG No.:

Batch Number: 403849 | Batch Start Date: 08/03/23 08:40 | Batch Analyst: Dickens, Emily

Batch Method: 7470A | Batch End Date: 08/03/23 10:40

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Hg_5%KMnO4 00200	MP_40Hg_IV 00164	MP_5K2S2O8 00092	MP_NaClHNO 00200
MB 410-403849/1		7470A, 7470A		20 mL	20 mL	3 mL		1.6 mL	1.2 mL
LCS 410-403849/2		7470A, 7470A		20 mL	20 mL	3 mL	0.5 mL	1.6 mL	1.2 mL
410-136514-H-2	16-3	7470A, 7470A	T	20 mL	20 mL	3 mL		1.6 mL	1.2 mL
410-136514-H-3	16-5	7470A, 7470A	T	20 mL	20 mL	3 mL		1.6 mL	1.2 mL
410-136514-H-4	16WC2B	7470A, 7470A	T	20 mL	20 mL	3 mL		1.6 mL	1.2 mL
410-136514-H-1	16-2	7470A, 7470A	T	20 mL	20 mL	3 mL		1.6 mL	1.2 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MT_HNO3_Fishe 00008	MT_SULF_FI 00019				
MB 410-403849/1		7470A, 7470A		0.5 mL	1 mL				
LCS 410-403849/2		7470A, 7470A		0.5 mL	1 mL				
410-136514-H-2	16-3	7470A, 7470A	T	0.5 mL	1 mL				
410-136514-H-3	16-5	7470A, 7470A	T	0.5 mL	1 mL				
410-136514-H-4	16WC2B	7470A, 7470A	T	0.5 mL	1 mL				
410-136514-H-1	16-2	7470A, 7470A	T	0.5 mL	1 mL				

Batch Notes	
Digestion Tube/Cup ID	2206050
Pipette/Syringe/Dispenser ID	S/500
Digestion Unit ID	10
Thermometer ID	3898
Temperature - Uncorrected - Start	95 Degrees C
Temperature - Corrected - Start	95 Degrees C
Temperature - Uncorrected - End	95 Degrees C
Temperature - Corrected - End	95 Degrees C
Reflux Cap ID	2204135
Pipette Tip Lot ID	F169949R

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136514-1

SDG No.:

Batch Number: 403849 | Batch Start Date: 08/03/23 08:40 | Batch Analyst: Dickens, Emily

Batch Method: 7470A | Batch End Date: 08/03/23 10:40

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136514-1

SDG No.:

Batch Number: 403851 | Batch Start Date: 08/03/23 08:40 | Batch Analyst: Dickens, Emily

Batch Method: 7470A | Batch End Date: 08/03/23 10:40

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Hg_5%KMnO4 00200	MP_40Hg_IV 00164	MP_5K2S2O8 00092	MP_NaClHNO 00200
MB 410-403851/1		7470A, 7470A		20 mL	20 mL	3 mL		1.6 mL	1.2 mL
LCS 410-403851/2		7470A, 7470A		20 mL	20 mL	3 mL	0.5 mL	1.6 mL	1.2 mL
410-136514-H-5	16SPRING	7470A, 7470A	T	20 mL	20 mL	3 mL		1.6 mL	1.2 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MT_HNO3_Fishe 00008	MT_SULF_FI 00019				
MB 410-403851/1		7470A, 7470A		0.5 mL	1 mL				
LCS 410-403851/2		7470A, 7470A		0.5 mL	1 mL				
410-136514-H-5	16SPRING	7470A, 7470A	T	0.5 mL	1 mL				

Batch Notes	
Digestion Tube/Cup ID	2206050
Pipette/Syringe/Dispenser ID	S/500
Digestion Unit ID	11
Thermometer ID	3848
Temperature - Uncorrected - Start	95 Degrees C
Temperature - Corrected - Start	95 Degrees C
Temperature - Uncorrected - End	95 Degrees C
Temperature - Corrected - End	95 Degrees C
Reflux Cap ID	2204135
Pipette Tip Lot ID	F169949R

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Quantitation Report

Data File Name	019CALB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 07:41:40
Sample Name	ICIS 4654618
Sample Type	CalBlk
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

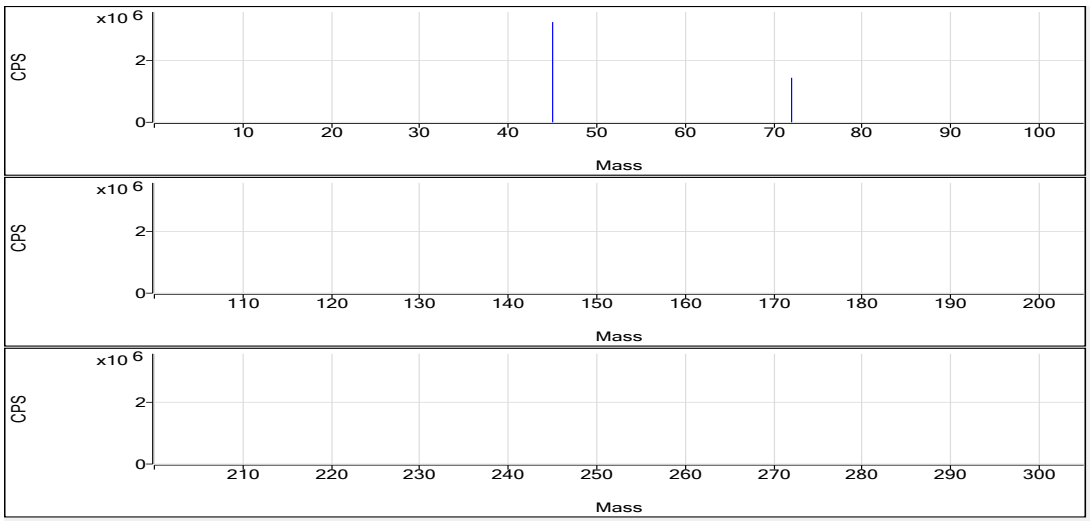
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.000	ppb	N/A	67.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.000	ppb	N/A	1.78	0.0000	Pulse	1.5000	3
Na	23	72	He	0.000	ppb	N/A	7695.61	0.1065	Pulse	0.1000	3
Mg	24	72	He	0.000	ppb	N/A	350.02	0.0048	Pulse	0.1000	3
Al	27	72	He	0.000	ppb	N/A	76.67	0.0011	Pulse	0.1000	3
K	39	72	He	0.000	ppb	N/A	10377.33	0.1436	Pulse	0.1000	3
Ca	44	72	He	0.000	ppb	N/A	116.67	0.0016	Pulse	0.1000	3
Ti	47	72	He	0.000	ppb	N/A	20.00	0.0003	Pulse	0.1000	3
V	51	72	He	0.000	ppb	N/A	529.35	0.0073	Pulse	0.5000	3
Cr	52	72	He	0.000	ppb	N/A	1833.52	0.0254	Pulse	0.1000	3
Mn	55	72	He	0.000	ppb	N/A	1000.07	0.0139	Pulse	0.1000	3
Fe	57	72	He	0.000	ppb	N/A	283.35	0.0039	Pulse	0.1000	3
Co	59	72	He	0.000	ppb	N/A	223.35	0.0031	Pulse	0.1000	3
Ni	60	72	He	0.000	ppb	N/A	650.04	0.0090	Pulse	0.1000	3
Cu	63	72	He	0.000	ppb	N/A	356.69	0.0049	Pulse	0.1000	3
Zn	66	72	He	0.000	ppb	N/A	350.01	0.0048	Pulse	0.1000	3
As	75	72	He	0.000	ppb	N/A	31.33	0.0004	Pulse	0.5000	3
Sr	88	115	He	0.000	ppb	N/A	50.00	0.0008	Pulse	0.1000	3
Mo	98	115	He	0.000	ppb	N/A	33.33	0.0005	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	N/A	30.00	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.000	ppb	N/A	3.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.000	ppb	N/A	1006.75	0.0156	Pulse	0.1000	3
Sb	121	115	He	0.000	ppb	N/A	16.67	0.0003	Pulse	0.1000	3
Ba	137	115	He	0.000	ppb	N/A	20.00	0.0003	Pulse	0.1000	3
Tl	205	209	He	0.000	ppb	N/A	223.35	0.0010	Pulse	0.1000	3
Pb	208	209	He	0.000	ppb	N/A	483.35	0.0022	Pulse	0.1000	3
U	238	209	He	0.000	ppb	N/A	53.33	0.0002	Pulse	0.1000	3

ISTD Table:

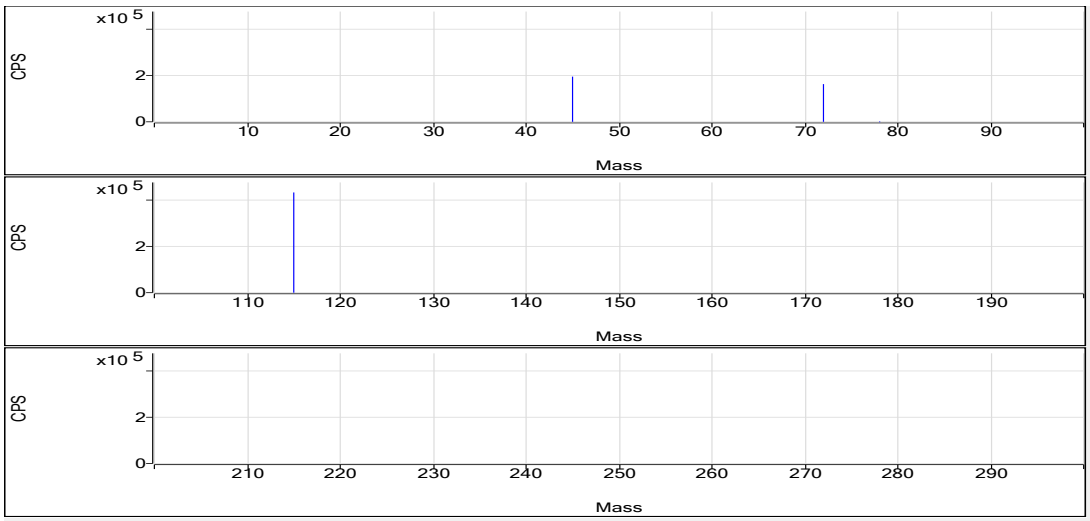
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3241180.79	1.8	100.0	Pulse	0.1000	3
No Gas	Ge	72	1439782.27	1.9	100.0	Pulse	0.1000	3
H2	Sc	45	195377.82	2.9	100.0	Pulse	0.1000	3
H2	Ge	72	163009.91	1.0	100.0	Pulse	0.1000	3
H2	In	115	433302.90	2.7	100.0	Pulse	0.1000	3
He	Sc	45	39985.52	1.6	100.0	Pulse	0.1000	3
He	Ge	72	72288.45	1.6	100.0	Pulse	0.1000	3
He	In	115	64591.54	1.0	100.0	Pulse	0.1000	3
He	Tb	159	285999.72	0.3	100.0	Pulse	0.1000	3
He	Bi	209	222191.19	0.2	100.0	Pulse	0.1000	3

No Gas

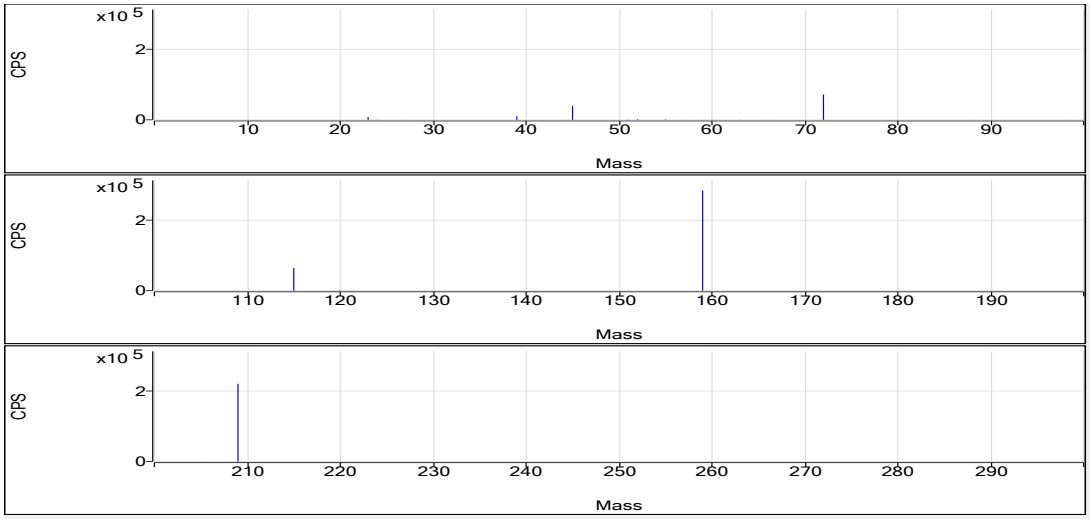


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.013	0	44.00	0.0013	4.694E-05
Be	9	1	No Gas	0.003	0.0001	74.00	0.0013	4.694E-05
Be	9	1	No Gas	0.01	0.0001	84.00	0.0013	4.694E-05
Se	78	2	H2	0.004	0	2.00	0.0004	1.089E-05
Se	78	2	H2	0.003	0	2.00	0.0004	1.089E-05
Se	78	2	H2	-0.007	0	1.33	0.0004	1.089E-05
Na	23	3	He	-0.518	0.1056	7502.18	0.0017	0.1065
Na	23	3	He	1.092	0.1083	7842.32	0.0017	0.1065
Na	23	3	He	-0.574	0.1055	7742.32	0.0017	0.1065
Mg	24	3	He	0.595	0.0053	380.02	0.0008	0.004846
Mg	24	3	He	-0.341	0.0046	330.01	0.0008	0.004846
Mg	24	3	He	-0.254	0.0046	340.02	0.0008	0.004846
Al	27	3	He	2.01	0.0015	110.00	0.0002	0.001063
Al	27	3	He	-2.686	0.0004	30.00	0.0002	0.001063
Al	27	3	He	0.676	0.0012	90.00	0.0002	0.001063
K	39	3	He	9.329	0.1488	10574.08	0.0006	0.1436
K	39	3	He	11.908	0.1502	10874.42	0.0006	0.1436
K	39	3	He	-21.237	0.1319	9683.48	0.0006	0.1436
Ca	44	3	He	-15.622	0.0011	80.00	0	0.001611
Ca	44	3	He	14.851	0.0021	150.01	0	0.001611
Ca	44	3	He	0.77	0.0016	120.01	0	0.001611
Ti	47	3	He	-1.091	0	0.00	0.0003	0.0002737
Ti	47	3	He	0.01	0.0003	20.00	0.0003	0.0002737
Ti	47	3	He	1.081	0.0005	40.00	0.0003	0.0002737
V	51	3	He	0.067	0.0081	576.02	0.0117	0.007326
V	51	3	He	-0.085	0.0063	458.01	0.0117	0.007326
V	51	3	He	0.019	0.0075	554.02	0.0117	0.007326
Cr	52	3	He	0.107	0.027	1920.18	0.0152	0.02538
Cr	52	3	He	0.039	0.026	1880.20	0.0152	0.02538
Cr	52	3	He	-0.146	0.0232	1700.17	0.0152	0.02538
Mn	55	3	He	0.252	0.0153	1090.08	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.11	0.0145	1050.07	0.0059	0.01385
Mn	55	3	He	-0.362	0.0117	860.07	0.0059	0.01385
Fe	57	3	He	-1.38	0.0035	250.01	0.0003	0.003918
Fe	57	3	He	1.736	0.0044	320.02	0.0003	0.003918
Fe	57	3	He	-0.356	0.0038	280.02	0.0003	0.003918
Co	59	3	He	0	0.0031	220.01	0.0305	0.003084
Co	59	3	He	-0.038	0.0019	140.01	0.0305	0.003084
Co	59	3	He	0.037	0.0042	310.02	0.0305	0.003084
Ni	60	3	He	0.112	0.01	710.05	0.0088	0.009003
Ni	60	3	He	-0.003	0.009	650.04	0.0088	0.009003
Ni	60	3	He	-0.11	0.008	590.03	0.0088	0.009003
Cu	63	3	He	0.005	0.0051	360.02	0.0249	0.004937
Cu	63	3	He	0.013	0.0052	380.02	0.0249	0.004937
Cu	63	3	He	-0.018	0.0045	330.02	0.0249	0.004937
Zn	66	3	He	-0.136	0.0045	320.01	0.0025	0.004836
Zn	66	3	He	-0.169	0.0044	320.01	0.0025	0.004836
Zn	66	3	He	0.305	0.0056	410.02	0.0025	0.004836
As	75	3	He	0.09	0.0006	42.00	0.0017	0.0004347
As	75	3	He	-0.059	0.0003	24.00	0.0017	0.0004347
As	75	3	He	-0.031	0.0004	28.00	0.0017	0.0004347
Sr	88	3	He	0.041	0.0011	70.00	0.0078	0.0007762
Sr	88	3	He	-0.04	0.0005	30.00	0.0078	0.0007762
Sr	88	3	He	0	0.0008	50.00	0.0078	0.0007762
Mo	98	3	He	-0.002	0.0005	30.00	0.022	0.0005162
Mo	98	3	He	-0.003	0.0005	30.00	0.022	0.0005162
Mo	98	3	He	0.005	0.0006	40.00	0.022	0.0005162
Ag	107	3	He	-0.003	0.0003	20.00	0.0455	0.0004641
Ag	107	3	He	0	0.0005	30.00	0.0455	0.0004641
Ag	107	3	He	0.003	0.0006	40.00	0.0455	0.0004641
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Sn	120	3	He	0.057	0.0164	1050.08	0.0143	0.01559
Sn	120	3	He	0.014	0.0158	1030.10	0.0143	0.01559
Sn	120	3	He	-0.071	0.0146	940.07	0.0143	0.01559
Sb	121	3	He	0.004	0.0003	20.00	0.0124	0.000258
Sb	121	3	He	0.004	0.0003	20.00	0.0124	0.000258
Sb	121	3	He	-0.008	0.0002	10.00	0.0124	0.000258
Ba	137	3	He	0.001	0.0003	20.00	0.0044	0.000309
Ba	137	3	He	0.034	0.0005	30.00	0.0044	0.000309
Ba	137	3	He	-0.035	0.0002	10.00	0.0044	0.000309
Tl	205	3	He	-0.002	0.0009	210.01	0.0276	0.001005
Tl	205	3	He	0.008	0.0012	270.02	0.0276	0.001005
Tl	205	3	He	-0.005	0.0009	190.01	0.0276	0.001005
Pb	208	3	He	-0.005	0.002	210.01	0.0364	0.002176
Pb	208	3	He	0.012	0.0026	330.02	0.0364	0.002176
Pb	208	3	He	-0.007	0.0019	220.01	0.0364	0.002176
U	238	3	He	0	0.0002	50.00	0.0421	0.00024
U	238	3	He	0	0.0002	50.00	0.0421	0.00024
U	238	3	He	0.001	0.0003	60.00	0.0421	0.00024
Sc	45	1	No Gas			3295523.70		
Sc	45	1	No Gas			3249515.89		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3178502.77		
Ge	72	1	No Gas			1461747.32		
Ge	72	1	No Gas			1449307.79		
Ge	72	1	No Gas			1408291.70		
Sc	45	2	H2			189592.73		
Sc	45	2	H2			201052.85		
Sc	45	2	H2			195487.89		
Ge	72	2	H2			162052.74		
Ge	72	2	H2			164873.77		
Ge	72	2	H2			162103.23		
In	115	2	H2			420948.82		
In	115	2	H2			443785.70		
In	115	2	H2			435174.17		
Sc	45	3	He			39624.26		
Sc	45	3	He			39604.69		
Sc	45	3	He			40727.61		
Ge	72	3	He			71065.92		
Ge	72	3	He			72391.72		
Ge	72	3	He			73407.70		
In	115	3	He			64016.75		
In	115	3	He			65281.95		
In	115	3	He			64499.48		
Tb	159	3	He			285156.21		
Tb	159	3	He			286470.89		
Tb	159	3	He			286372.07		
Bi	209	3	He			222571.23		
Bi	209	3	He			221726.97		
Bi	209	3	He			222275.37		

Quantitation Report

Data File Name	020CALS.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 07:43:41
Sample Name	STD1 4674033
Sample Type	CalStd
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

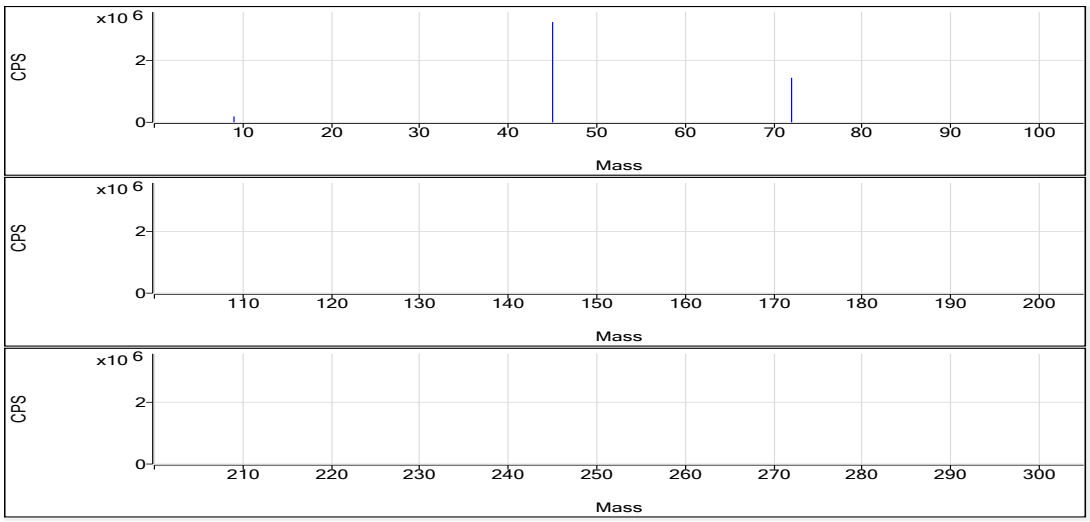
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	100.000	ppb	5.1	187850.85	0.1315	Pulse	0.5000	3
Se	78	72	H2	100.000	ppb	3.2	6430.11	0.0389	Pulse	1.5000	3
Na	23	72	He	10000.000	ppb	1.0	1269293.03	17.2847	Pulse	0.1000	3
Mg	24	72	He	10000.000	ppb	1.0	619490.81	8.4359	Pulse	0.1000	3
Al	27	72	He	10000.000	ppb	1.1	177344.93	2.4150	Pulse	0.1000	3
K	39	72	He	10000.000	ppb	0.2	416082.10	5.6658	Pulse	0.1000	3
Ca	44	72	He	10000.000	ppb	3.8	22928.63	0.3122	Pulse	0.1000	3
Ti	47	72	He	10000.000	ppb	0.9	184179.42	2.5081	Pulse	0.1000	3
V	51	72	He	1000.000	ppb	0.9	859559.81	11.7051	Pulse	0.5000	3
Cr	52	72	He	1000.000	ppb	0.6	1120092.69	15.2527	Pulse	0.1000	3
Mn	55	72	He	1000.000	ppb	0.9	434460.28	5.9163	Pulse	0.1000	3
Fe	57	72	He	10000.000	ppb	0.6	213043.23	2.9011	Pulse	0.1000	3
Co	59	72	He	1000.000	ppb	0.5	2240790.49	30.5136	Pulse	0.1000	3
Ni	60	72	He	1000.000	ppb	1.2	646387.26	8.8023	Pulse	0.1000	3
Cu	63	72	He	1000.000	ppb	0.6	1831635.29	24.9421	Pulse	0.1000	3
Zn	66	72	He	1000.000	ppb	1.0	180767.18	2.4616	Pulse	0.1000	3
As	75	72	He	1000.000	ppb	1.5	127744.59	1.7396	Pulse	0.5000	3
Sr	88	115	He	100.000	ppb	1.9	50587.37	0.7825	Pulse	0.1000	3
Mo	98	115	He	100.000	ppb	0.3	142399.16	2.2027	Pulse	0.1000	3
Ag	107	115	He	100.000	ppb	1.4	294158.91	4.5505	Pulse	0.1000	3
Cd	111	115	He	100.000	ppb	0.9	31034.81	0.4801	Pulse	0.5000	3
Sn	120	115	He	100.000	ppb	0.6	93180.16	1.4414	Pulse	0.1000	3
Sb	121	115	He	100.000	ppb	1.5	80204.47	1.2408	Pulse	0.1000	3
Ba	137	115	He	1000.000	ppb	1.2	282838.66	4.3751	Pulse	0.1000	3
Tl	205	209	He	100.000	ppb	1.5	623982.18	2.7654	Pulse	0.1000	3
Pb	208	209	He	100.000	ppb	0.6	821787.91	3.6419	Pulse	0.1000	3
U	238	209	He	100.000	ppb	1.5	949233.21	4.2070	Pulse	0.1000	3

ISTD Table:

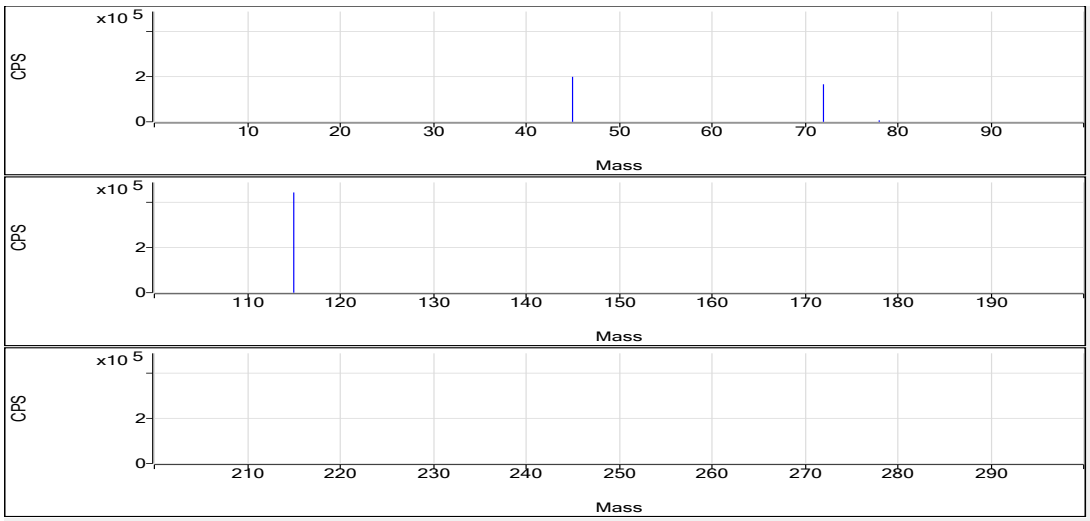
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3218469.33	2.0	99.3	Pulse	0.1000	3
No Gas	Ge	72	1429778.26	1.8	99.3	Pulse	0.1000	3
H2	Sc	45	197894.53	1.3	101.3	Pulse	0.1000	3
H2	Ge	72	165103.27	0.2	101.3	Pulse	0.1000	3
H2	In	115	440856.58	1.5	101.7	Pulse	0.1000	3
He	Sc	45	41211.95	1.8	103.1	Pulse	0.1000	3
He	Ge	72	73437.41	0.6	101.6	Pulse	0.1000	3
He	In	115	64650.01	1.3	100.1	Pulse	0.1000	3
He	Tb	159	288053.63	0.5	100.7	Pulse	0.1000	3
He	Bi	209	225656.44	1.0	101.6	Pulse	0.1000	3

No Gas

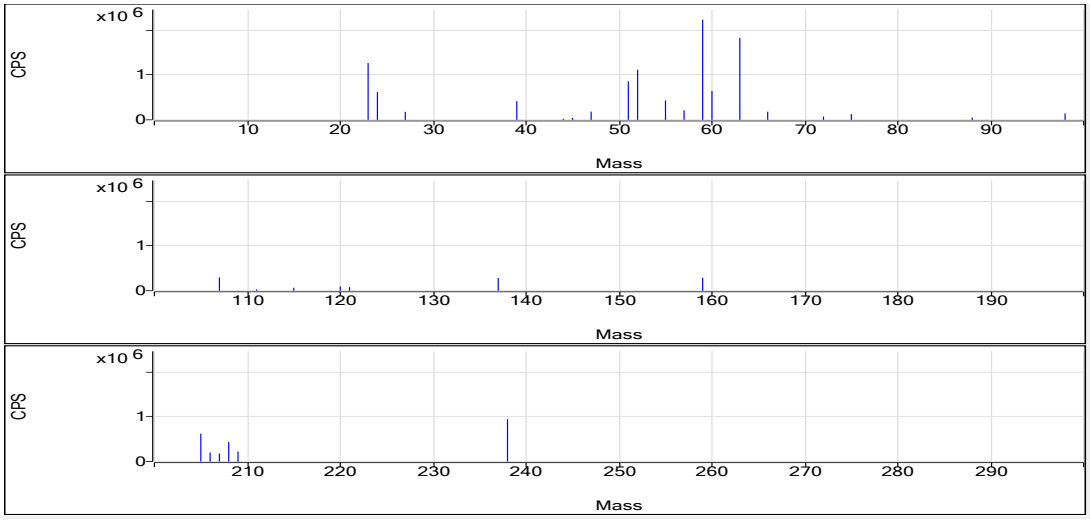


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	94.382	0.1241	179583.27	0.0013	4.694E-05
Be	9	1	No Gas	101.174	0.133	191767.59	0.0013	4.694E-05
Be	9	1	No Gas	104.444	0.1373	192201.69	0.0013	4.694E-05
Se	78	2	H2	102.45	0.0399	6570.17	0.0004	1.089E-05
Se	78	2	H2	96.424	0.0376	6206.67	0.0004	1.089E-05
Se	78	2	H2	101.126	0.0394	6513.48	0.0004	1.089E-05
Na	23	3	He	9906.135	17.1234	1265419.67	0.0017	0.1065
Na	23	3	He	9997.359	17.2801	1268312.40	0.0017	0.1065
Na	23	3	He	10096.506	17.4504	1274147.01	0.0017	0.1065
Mg	24	3	He	9963.232	8.4049	621118.66	0.0008	0.004846
Mg	24	3	He	9926.703	8.3741	614632.49	0.0008	0.004846
Mg	24	3	He	10110.066	8.5287	622721.28	0.0008	0.004846
Al	27	3	He	9927.548	2.3975	177176.19	0.0002	0.001063
Al	27	3	He	9948.19	2.4025	176336.52	0.0002	0.001063
Al	27	3	He	10124.261	2.445	178522.09	0.0002	0.001063
K	39	3	He	10022.567	5.6782	419620.03	0.0006	0.1436
K	39	3	He	9997.461	5.6644	415747.61	0.0006	0.1436
K	39	3	He	9979.972	5.6547	412878.67	0.0006	0.1436
Ca	44	3	He	10273.478	0.3207	23699.98	0	0.001611
Ca	44	3	He	9562.105	0.2986	21917.02	0	0.001611
Ca	44	3	He	10164.417	0.3173	23168.90	0	0.001611
Ti	47	3	He	9904.152	2.484	183569.61	0.0003	0.0002737
Ti	47	3	He	10019.134	2.5129	184437.13	0.0003	0.0002737
Ti	47	3	He	10076.713	2.5273	184531.52	0.0003	0.0002737
V	51	3	He	991.02	11.6	857241.38	0.0117	0.007326
V	51	3	He	1000.337	11.709	859408.56	0.0117	0.007326
V	51	3	He	1008.643	11.8062	862029.50	0.0117	0.007326
Cr	52	3	He	995.92	15.1905	1122578.73	0.0152	0.02538
Cr	52	3	He	997.758	15.2185	1116995.61	0.0152	0.02538
Cr	52	3	He	1006.322	15.3489	1120703.73	0.0152	0.02538
Mn	55	3	He	990.065	5.8576	432878.51	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1002.25	5.9296	435212.30	0.0059	0.01385
Mn	55	3	He	1007.686	5.9616	435290.03	0.0059	0.01385
Fe	57	3	He	9935.14	2.8823	212999.78	0.0003	0.003918
Fe	57	3	He	10057.59	2.9177	214154.47	0.0003	0.003918
Fe	57	3	He	10007.27	2.9032	211975.43	0.0003	0.003918
Co	59	3	He	994.719	30.3524	2243043.40	0.0305	0.003084
Co	59	3	He	999.882	30.51	2239346.06	0.0305	0.003084
Co	59	3	He	1005.399	30.6783	2239982.00	0.0305	0.003084
Ni	60	3	He	988.775	8.7036	643195.19	0.0088	0.009003
Ni	60	3	He	998.258	8.787	644939.72	0.0088	0.009003
Ni	60	3	He	1012.967	8.9163	651026.87	0.0088	0.009003
Cu	63	3	He	993.602	24.7825	1831425.44	0.0249	0.004937
Cu	63	3	He	1000.881	24.964	1832287.32	0.0249	0.004937
Cu	63	3	He	1005.517	25.0796	1831193.10	0.0249	0.004937
Zn	66	3	He	992.908	2.4442	180624.67	0.0025	0.004836
Zn	66	3	He	995.521	2.4506	179866.97	0.0025	0.004836
Zn	66	3	He	1011.571	2.49	181809.90	0.0025	0.004836
As	75	3	He	982.909	1.7099	126360.17	0.0017	0.0004347
As	75	3	He	1005.275	1.7488	128355.53	0.0017	0.0004347
As	75	3	He	1011.816	1.7602	128518.06	0.0017	0.0004347
Sr	88	3	He	97.864	0.7658	49567.07	0.0078	0.0007762
Sr	88	3	He	100.994	0.7903	50400.26	0.0078	0.0007762
Sr	88	3	He	101.142	0.7914	51794.78	0.0078	0.0007762
Mo	98	3	He	99.966	2.2019	142523.45	0.022	0.0005162
Mo	98	3	He	100.327	2.2099	140938.66	0.022	0.0005162
Mo	98	3	He	99.708	2.1962	143735.38	0.022	0.0005162
Ag	107	3	He	99.009	4.5054	291621.50	0.0455	0.0004641
Ag	107	3	He	101.655	4.6258	295019.47	0.0455	0.0004641
Ag	107	3	He	99.336	4.5203	295835.76	0.0455	0.0004641
Cd	111	3	He	99.8	0.4791	31012.09	0.0048	5.152E-05
Cd	111	3	He	101.012	0.4849	30927.86	0.0048	5.152E-05
Cd	111	3	He	99.188	0.4762	31164.47	0.0048	5.152E-05
Sn	120	3	He	99.821	1.4388	93130.67	0.0143	0.01559
Sn	120	3	He	100.714	1.4516	92575.84	0.0143	0.01559
Sn	120	3	He	99.465	1.4338	93833.97	0.0143	0.01559
Sb	121	3	He	99.839	1.2388	80180.63	0.0124	0.000258
Sb	121	3	He	101.555	1.26	80361.86	0.0124	0.000258
Sb	121	3	He	98.606	1.2235	80070.91	0.0124	0.000258
Ba	137	3	He	986.889	4.3177	279474.41	0.0044	0.000309
Ba	137	3	He	1010.482	4.421	281954.94	0.0044	0.000309
Ba	137	3	He	1002.628	4.3866	287086.64	0.0044	0.000309
Tl	205	3	He	98.615	2.7271	618522.37	0.0276	0.001005
Tl	205	3	He	99.774	2.7592	626633.47	0.0276	0.001005
Tl	205	3	He	101.611	2.81	626790.69	0.0276	0.001005
Pb	208	3	He	99.768	3.6335	441855.97	0.0364	0.002176
Pb	208	3	He	99.549	3.6255	438964.17	0.0364	0.002176
Pb	208	3	He	100.683	3.6668	438909.72	0.0364	0.002176
U	238	3	He	99.13	4.1704	945849.75	0.0421	0.00024
U	238	3	He	99.089	4.1686	946730.61	0.0421	0.00024
U	238	3	He	101.781	4.2819	955119.28	0.0421	0.00024
Sc	45	1	No Gas			3284829.95		
Sc	45	1	No Gas			3217104.33		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3153473.70		
Ge	72	1	No Gas			1447446.07		
Ge	72	1	No Gas			1441930.60		
Ge	72	1	No Gas			1399958.10		
Sc	45	2	H2			198507.61		
Sc	45	2	H2			200162.26		
Sc	45	2	H2			195013.73		
Ge	72	2	H2			164662.07		
Ge	72	2	H2			165269.35		
Ge	72	2	H2			165378.40		
In	115	2	H2			444323.31		
In	115	2	H2			444866.05		
In	115	2	H2			433380.38		
Sc	45	3	He			42010.94		
Sc	45	3	He			40496.72		
Sc	45	3	He			41128.20		
Ge	72	3	He			73899.92		
Ge	72	3	He			73397.15		
Ge	72	3	He			73015.15		
In	115	3	He			65453.33		
In	115	3	He			64498.94		
In	115	3	He			66178.17		
Tb	159	3	He			288698.32		
Tb	159	3	He			286271.77		
Tb	159	3	He			289190.80		
Bi	209	3	He			226801.81		
Bi	209	3	He			227107.75		
Bi	209	3	He			223059.76		

Quantitation Report

Data File Name	021_ICV.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 07:45:42
Sample Name	ICV 4596497
Sample Type	ICV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

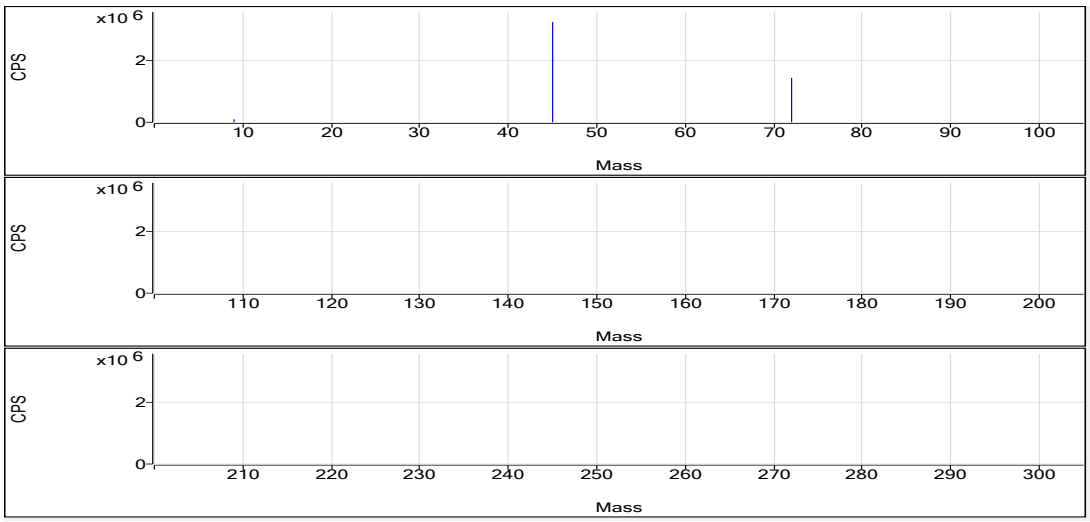
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	50.488	ppb	1.9	94999.73	0.0664	Pulse	0.5000	3
Se	78	72	H2	48.433	ppb	4.1	3172.58	0.0189	Pulse	1.5000	3
Na	23	72	He	4925.602	ppb	1.3	627812.48	8.5678	Pulse	0.1000	3
Mg	24	72	He	4972.980	ppb	0.7	307592.36	4.1976	Pulse	0.1000	3
Al	27	72	He	4887.818	ppb	0.5	86538.61	1.1810	Pulse	0.1000	3
K	39	72	He	4996.013	ppb	0.3	212691.20	2.9025	Pulse	0.1000	3
Ca	44	72	He	4912.333	ppb	1.5	11298.05	0.1542	Pulse	0.1000	3
Ti	47	72	He	4963.107	ppb	1.2	91223.74	1.2449	Pulse	0.1000	3
V	51	72	He	495.224	ppb	0.3	425039.77	5.8003	Pulse	0.5000	3
Cr	52	72	He	491.974	ppb	0.4	550838.71	7.5168	Pulse	0.1000	3
Mn	55	72	He	495.504	ppb	0.7	215327.64	2.9385	Pulse	0.1000	3
Fe	57	72	He	4925.871	ppb	1.0	104867.28	1.4310	Pulse	0.1000	3
Co	59	72	He	493.079	ppb	0.8	1102615.06	15.0472	Pulse	0.1000	3
Ni	60	72	He	494.154	ppb	0.2	319080.67	4.3542	Pulse	0.1000	3
Cu	63	72	He	496.363	ppb	0.4	907393.01	12.3828	Pulse	0.1000	3
Zn	66	72	He	498.772	ppb	0.8	90150.58	1.2302	Pulse	0.1000	3
As	75	72	He	485.017	ppb	0.3	61844.34	0.8440	Pulse	0.5000	3
Sr	88	115	He	48.893	ppb	0.4	24812.25	0.3830	Pulse	0.1000	3
Mo	98	115	He	48.413	ppb	1.0	69102.50	1.0666	Pulse	0.1000	3
Ag	107	115	He	48.728	ppb	0.8	143670.56	2.2176	Pulse	0.1000	3
Cd	111	115	He	53.306	ppb	0.6	16581.11	0.2559	Pulse	0.5000	3
Sn	120	115	He	50.257	ppb	2.7	47434.75	0.7322	Pulse	0.1000	3
Sb	121	115	He	52.728	ppb	3.2	42388.49	0.6543	Pulse	0.1000	3
Ba	137	115	He	493.189	ppb	1.1	139799.19	2.1579	Pulse	0.1000	3
Tl	205	209	He	49.417	ppb	0.4	308930.31	1.3671	Pulse	0.1000	3
Pb	208	209	He	49.683	ppb	0.1	409124.63	1.8105	Pulse	0.1000	3
U	238	209	He	49.913	ppb	0.6	474528.68	2.1000	Pulse	0.1000	3

ISTD Table:

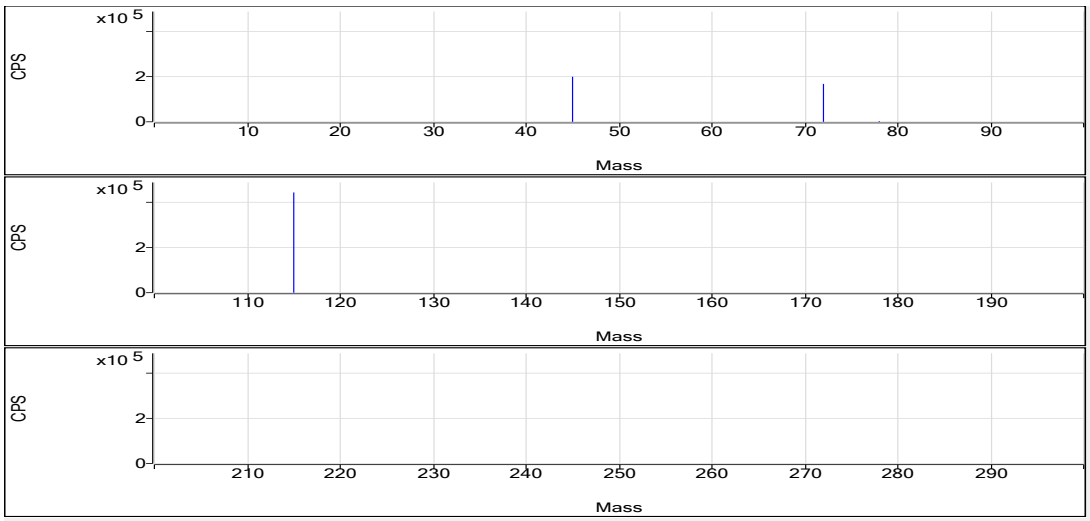
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3226086.10	1.9	99.5	Pulse	0.1000	3
No Gas	Ge	72	1430967.06	1.8	99.4	Pulse	0.1000	3
H2	Sc	45	200072.19	2.3	102.4	Pulse	0.1000	3
H2	Ge	72	168307.92	3.7	103.3	Pulse	0.1000	3
H2	In	115	444972.22	3.0	102.7	Pulse	0.1000	3
He	Sc	45	40757.61	1.1	101.9	Pulse	0.1000	3
He	Ge	72	73279.60	0.7	101.4	Pulse	0.1000	3
He	In	115	64788.87	0.9	100.3	Pulse	0.1000	3
He	Tb	159	287779.03	0.7	100.6	Pulse	0.1000	3
He	Bi	209	225974.44	0.5	101.7	Pulse	0.1000	3

No Gas

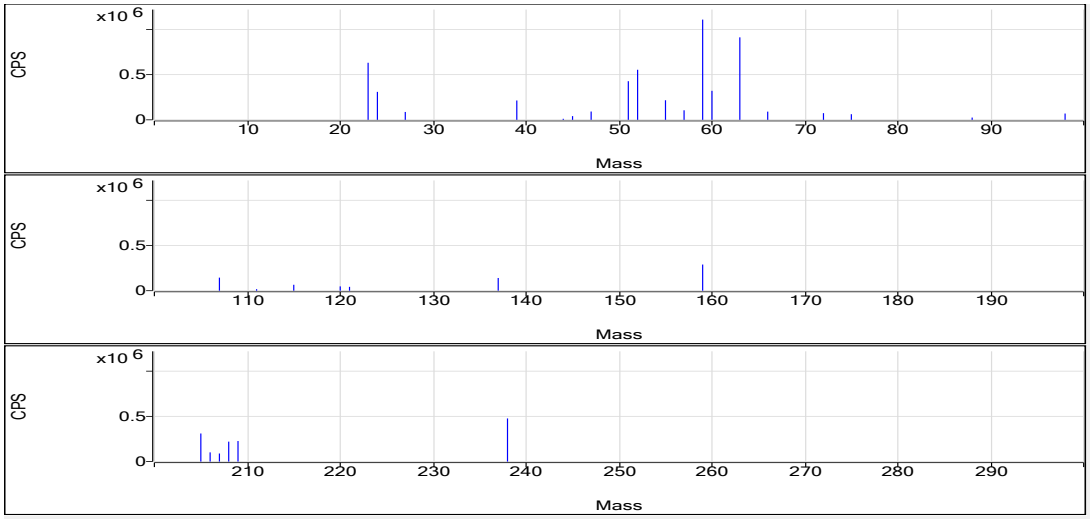


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	49.598	0.0652	94680.36	0.0013	4.694E-05
Be	9	1	No Gas	51.478	0.0677	97421.51	0.0013	4.694E-05
Be	9	1	No Gas	50.389	0.0663	92897.31	0.0013	4.694E-05
Se	78	2	H2	47.386	0.0185	3168.35	0.0004	1.089E-05
Se	78	2	H2	47.178	0.0184	3163.02	0.0004	1.089E-05
Se	78	2	H2	50.734	0.0198	3186.36	0.0004	1.089E-05
Na	23	3	He	4949.091	8.6081	632243.74	0.0017	0.1065
Na	23	3	He	4976.06	8.6544	629467.18	0.0017	0.1065
Na	23	3	He	4851.656	8.4407	621726.51	0.0017	0.1065
Mg	24	3	He	4999.317	4.2198	309931.99	0.0008	0.004846
Mg	24	3	He	4982.944	4.206	305915.05	0.0008	0.004846
Mg	24	3	He	4936.679	4.167	306930.03	0.0008	0.004846
Al	27	3	He	4864.852	1.1754	86330.86	0.0002	0.001063
Al	27	3	He	4909.247	1.1861	86271.08	0.0002	0.001063
Al	27	3	He	4889.357	1.1813	87013.90	0.0002	0.001063
K	39	3	He	5000.026	2.9047	213343.86	0.0006	0.1436
K	39	3	He	5010.976	2.9108	211709.68	0.0006	0.1436
K	39	3	He	4977.038	2.892	213020.06	0.0006	0.1436
Ca	44	3	He	4899.202	0.1538	11294.71	0	0.001611
Ca	44	3	He	4992.123	0.1567	11394.83	0	0.001611
Ca	44	3	He	4845.675	0.1521	11204.61	0	0.001611
Ti	47	3	He	4904.054	1.2301	90348.37	0.0003	0.0002737
Ti	47	3	He	5020.099	1.2592	91586.73	0.0003	0.0002737
Ti	47	3	He	4965.169	1.2454	91736.11	0.0003	0.0002737
V	51	3	He	494.643	5.7935	425520.47	0.0117	0.007326
V	51	3	He	497.113	5.8224	423485.34	0.0117	0.007326
V	51	3	He	493.916	5.785	426113.50	0.0117	0.007326
Cr	52	3	He	493.316	7.5372	553591.32	0.0152	0.02538
Cr	52	3	He	489.539	7.4797	544026.12	0.0152	0.02538
Cr	52	3	He	493.068	7.5335	554898.70	0.0152	0.02538
Mn	55	3	He	493.499	2.9267	214958.30	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	499.574	2.9626	215476.60	0.0059	0.01385
Mn	55	3	He	493.439	2.9263	215548.02	0.0059	0.01385
Fe	57	3	He	4900.486	1.4237	104564.23	0.0003	0.003918
Fe	57	3	He	4897.166	1.4227	103477.78	0.0003	0.003918
Fe	57	3	He	4979.963	1.4467	106559.83	0.0003	0.003918
Co	59	3	He	490.367	14.9644	1099098.26	0.0305	0.003084
Co	59	3	He	497.473	15.1812	1104184.20	0.0305	0.003084
Co	59	3	He	491.397	14.9959	1104562.72	0.0305	0.003084
Ni	60	3	He	494.611	4.3583	320103.86	0.0088	0.009003
Ni	60	3	He	492.881	4.3431	315885.25	0.0088	0.009003
Ni	60	3	He	494.97	4.3614	321252.91	0.0088	0.009003
Cu	63	3	He	496	12.3738	908820.69	0.0249	0.004937
Cu	63	3	He	498.273	12.4304	904108.03	0.0249	0.004937
Cu	63	3	He	494.817	12.3442	909250.30	0.0249	0.004937
Zn	66	3	He	502.992	1.2406	91116.71	0.0025	0.004836
Zn	66	3	He	495.505	1.2222	88893.07	0.0025	0.004836
Zn	66	3	He	497.821	1.2279	90441.97	0.0025	0.004836
As	75	3	He	483.864	0.842	61839.61	0.0017	0.0004347
As	75	3	He	486.853	0.8472	61616.62	0.0017	0.0004347
As	75	3	He	484.332	0.8428	62076.79	0.0017	0.0004347
Sr	88	3	He	49.099	0.3846	24822.35	0.0078	0.0007762
Sr	88	3	He	48.787	0.3822	24591.65	0.0078	0.0007762
Sr	88	3	He	48.791	0.3822	25022.75	0.0078	0.0007762
Mo	98	3	He	48.593	1.0706	69099.46	0.022	0.0005162
Mo	98	3	He	48.801	1.0752	69189.55	0.022	0.0005162
Mo	98	3	He	47.845	1.0541	69018.48	0.022	0.0005162
Ag	107	3	He	48.502	2.2073	142465.51	0.0455	0.0004641
Ag	107	3	He	49.161	2.2373	143970.95	0.0455	0.0004641
Ag	107	3	He	48.52	2.2081	144575.23	0.0455	0.0004641
Cd	111	3	He	53.335	0.2561	16527.71	0.0048	5.152E-05
Cd	111	3	He	53.617	0.2574	16565.74	0.0048	5.152E-05
Cd	111	3	He	52.965	0.2543	16649.89	0.0048	5.152E-05
Sn	120	3	He	51.747	0.7534	48625.34	0.0143	0.01559
Sn	120	3	He	49.137	0.7162	46086.87	0.0143	0.01559
Sn	120	3	He	49.888	0.7269	47592.04	0.0143	0.01559
Sb	121	3	He	54.497	0.6763	43649.14	0.0124	0.000258
Sb	121	3	He	52.536	0.652	41953.82	0.0124	0.000258
Sb	121	3	He	51.152	0.6348	41562.52	0.0124	0.000258
Ba	137	3	He	496.118	2.1707	140103.52	0.0044	0.000309
Ba	137	3	He	496.495	2.1724	139793.14	0.0044	0.000309
Ba	137	3	He	486.954	2.1306	139500.90	0.0044	0.000309
Tl	205	3	He	49.637	1.3732	309220.95	0.0276	0.001005
Tl	205	3	He	49.217	1.3616	307078.94	0.0276	0.001005
Tl	205	3	He	49.397	1.3666	310491.05	0.0276	0.001005
Pb	208	3	He	49.621	1.8082	218007.26	0.0364	0.002176
Pb	208	3	He	49.719	1.8118	218314.33	0.0364	0.002176
Pb	208	3	He	49.708	1.8114	221250.88	0.0364	0.002176
U	238	3	He	50.242	2.1138	475992.69	0.0421	0.00024
U	238	3	He	49.787	2.0946	472406.87	0.0421	0.00024
U	238	3	He	49.71	2.0914	475186.48	0.0421	0.00024
Sc	45	1	No Gas			3278891.83		
Sc	45	1	No Gas			3238362.14		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3161004.33		
Ge	72	1	No Gas			1451686.07		
Ge	72	1	No Gas			1439205.92		
Ge	72	1	No Gas			1402009.20		
Sc	45	2	H2			202390.04		
Sc	45	2	H2			203139.49		
Sc	45	2	H2			194687.05		
Ge	72	2	H2			171620.70		
Ge	72	2	H2			172089.72		
Ge	72	2	H2			161213.34		
In	115	2	H2			456507.18		
In	115	2	H2			447823.27		
In	115	2	H2			430586.20		
Sc	45	3	He			40547.24		
Sc	45	3	He			40446.71		
Sc	45	3	He			41278.88		
Ge	72	3	He			73447.46		
Ge	72	3	He			72733.46		
Ge	72	3	He			73657.88		
In	115	3	He			64921.58		
In	115	3	He			64709.89		
In	115	3	He			65845.12		
Tb	159	3	He			289100.70		
Tb	159	3	He			285472.20		
Tb	159	3	He			288764.19		
Bi	209	3	He			225183.86		
Bi	209	3	He			225531.83		
Bi	209	3	He			227207.63		

Quantitation Report

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Sample Type	ICB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

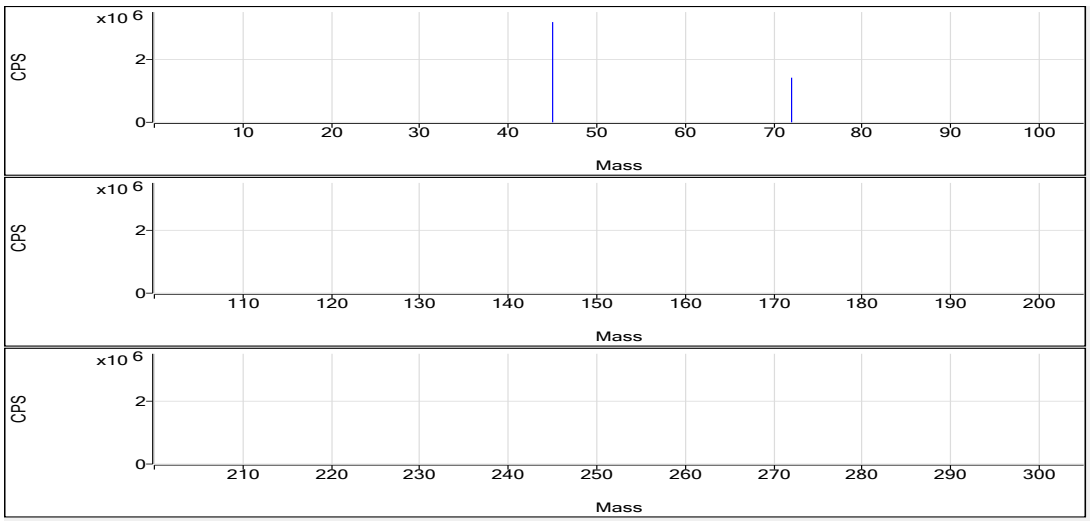
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.007	ppb	79.1	80.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.030	ppb	96.7	3.55	0.0000	Pulse	1.5000	3
Na	23	72	He	0.552	ppb	920.6	7542.18	0.1074	Pulse	0.1000	3
Mg	24	72	He	0.836	ppb	27.8	390.02	0.0056	Pulse	0.1000	3
Al	27	72	He	0.521	ppb	190.8	83.33	0.0012	Pulse	0.1000	3
K	39	72	He	5.883	ppb	401.8	10313.99	0.1469	Pulse	0.1000	3
Ca	44	72	He	10.849	ppb	97.7	136.68	0.0019	Pulse	0.1000	3
Ti	47	72	He	1.178	ppb	126.7	40.00	0.0006	Pulse	0.1000	3
V	51	72	He	0.003	ppb	1492.1	517.34	0.0074	Pulse	0.5000	3
Cr	52	72	He	0.115	ppb	24.6	1906.85	0.0271	Pulse	0.1000	3
Mn	55	72	He	0.106	ppb	365.0	1016.74	0.0145	Pulse	0.1000	3
Fe	57	72	He	2.326	ppb	207.1	323.35	0.0046	Pulse	0.1000	3
Co	59	72	He	0.073	ppb	25.9	373.35	0.0053	Pulse	0.1000	3
Ni	60	72	He	0.173	ppb	34.3	740.04	0.0105	Pulse	0.1000	3
Cu	63	72	He	0.105	ppb	47.7	530.03	0.0076	Pulse	0.1000	3
Zn	66	72	He	-0.151	ppb	N/A	313.35	0.0045	Pulse	0.1000	3
As	75	72	He	0.088	ppb	69.0	41.33	0.0006	Pulse	0.5000	3
Sr	88	115	He	0.086	ppb	37.9	90.00	0.0014	Pulse	0.1000	3
Mo	98	115	He	0.018	ppb	61.5	56.67	0.0009	Pulse	0.1000	3
Ag	107	115	He	0.009	ppb	104.7	53.33	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.012	ppb	177.7	6.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.171	ppb	17.8	1120.12	0.0180	Pulse	0.1000	3
Sb	121	115	He	0.066	ppb	61.9	66.67	0.0011	Pulse	0.1000	3
Ba	137	115	He	0.125	ppb	14.4	53.33	0.0009	Pulse	0.1000	3
Tl	205	209	He	0.080	ppb	12.1	710.04	0.0032	Pulse	0.1000	3
Pb	208	209	He	0.009	ppb	90.9	556.69	0.0025	Pulse	0.1000	3
U	238	209	He	0.013	ppb	34.7	170.01	0.0008	Pulse	0.1000	3

ISTD Table:

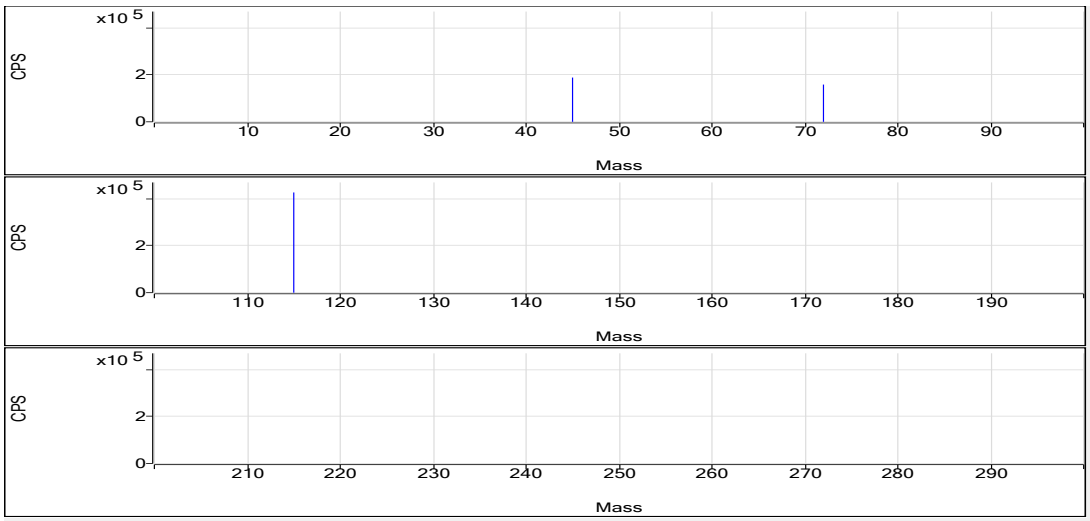
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3214459.54	1.0	99.2	Pulse	0.1000	3
No Gas	Ge	72	1430539.77	1.0	99.4	Pulse	0.1000	3
H2	Sc	45	188120.89	3.2	96.3	Pulse	0.1000	3
H2	Ge	72	158312.69	3.4	97.1	Pulse	0.1000	3
H2	In	115	426038.59	2.0	98.3	Pulse	0.1000	3
He	Sc	45	39975.25	0.8	100.0	Pulse	0.1000	3
He	Ge	72	70288.52	1.8	97.2	Pulse	0.1000	3
He	In	115	62133.10	1.6	96.2	Pulse	0.1000	3
He	Tb	159	278019.18	0.1	97.2	Pulse	0.1000	3
He	Bi	209	220883.20	0.8	99.4	Pulse	0.1000	3

No Gas

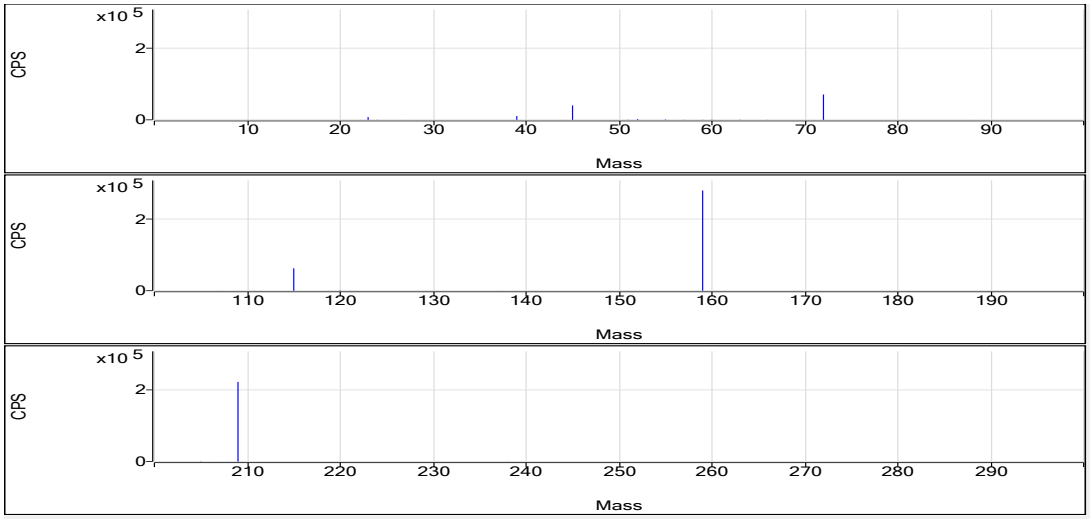


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.001	0	70.00	0.0013	4.694E-05
Be	9	1	No Gas	0.013	0.0001	90.00	0.0013	4.694E-05
Be	9	1	No Gas	0.008	0.0001	82.00	0.0013	4.694E-05
Se	78	2	H2	0.003	0	2.00	0.0004	1.089E-05
Se	78	2	H2	0.026	0	3.33	0.0004	1.089E-05
Se	78	2	H2	0.062	0	5.33	0.0004	1.089E-05
Na	23	3	He	5.531	0.116	7992.40	0.0017	0.1065
Na	23	3	He	0.746	0.1077	7602.22	0.0017	0.1065
Na	23	3	He	-4.622	0.0985	7031.91	0.0017	0.1065
Mg	24	3	He	0.964	0.0057	390.01	0.0008	0.004846
Mg	24	3	He	0.976	0.0057	400.02	0.0008	0.004846
Mg	24	3	He	0.567	0.0053	380.02	0.0008	0.004846
Al	27	3	He	1.608	0.0015	100.00	0.0002	0.001063
Al	27	3	He	0.294	0.0011	80.00	0.0002	0.001063
Al	27	3	He	-0.34	0.001	70.00	0.0002	0.001063
K	39	3	He	29.532	0.1599	11024.50	0.0006	0.1436
K	39	3	He	5.859	0.1469	10363.99	0.0006	0.1436
K	39	3	He	-17.742	0.1338	9553.48	0.0006	0.1436
Ca	44	3	He	22.878	0.0023	160.01	0	0.001611
Ca	44	3	He	2.892	0.0017	120.01	0	0.001611
Ca	44	3	He	6.778	0.0018	130.01	0	0.001611
Ti	47	3	He	0.644	0.0004	30.00	0.0003	0.0002737
Ti	47	3	He	2.864	0.001	70.00	0.0003	0.0002737
Ti	47	3	He	0.026	0.0003	20.00	0.0003	0.0002737
V	51	3	He	0.058	0.008	552.01	0.0117	0.007326
V	51	3	He	-0.04	0.0069	484.01	0.0117	0.007326
V	51	3	He	-0.008	0.0072	516.01	0.0117	0.007326
Cr	52	3	He	0.124	0.0273	1880.18	0.0152	0.02538
Cr	52	3	He	0.083	0.0266	1880.18	0.0152	0.02538
Cr	52	3	He	0.136	0.0275	1960.20	0.0152	0.02538
Mn	55	3	He	0.234	0.0152	1050.08	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.414	0.0163	1150.08	0.0059	0.01385
Mn	55	3	He	-0.329	0.0119	850.05	0.0059	0.01385
Fe	57	3	He	-2.004	0.0033	230.01	0.0003	0.003918
Fe	57	3	He	7.512	0.0061	430.02	0.0003	0.003918
Fe	57	3	He	1.469	0.0043	310.02	0.0003	0.003918
Co	59	3	He	0.089	0.0058	400.02	0.0305	0.003084
Co	59	3	He	0.052	0.0047	330.01	0.0305	0.003084
Co	59	3	He	0.078	0.0055	390.02	0.0305	0.003084
Ni	60	3	He	0.115	0.01	690.03	0.0088	0.009003
Ni	60	3	He	0.233	0.0111	780.04	0.0088	0.009003
Ni	60	3	He	0.171	0.0105	750.05	0.0088	0.009003
Cu	63	3	He	0.163	0.009	620.03	0.0249	0.004937
Cu	63	3	He	0.075	0.0068	480.02	0.0249	0.004937
Cu	63	3	He	0.077	0.0069	490.03	0.0249	0.004937
Zn	66	3	He	0.217	0.0054	370.02	0.0025	0.004836
Zn	66	3	He	-0.469	0.0037	260.01	0.0025	0.004836
Zn	66	3	He	-0.201	0.0043	310.02	0.0025	0.004836
As	75	3	He	0.034	0.0005	34.00	0.0017	0.0004347
As	75	3	He	0.076	0.0006	40.00	0.0017	0.0004347
As	75	3	He	0.153	0.0007	50.00	0.0017	0.0004347
Sr	88	3	He	0.066	0.0013	80.00	0.0078	0.0007762
Sr	88	3	He	0.067	0.0013	80.00	0.0078	0.0007762
Sr	88	3	He	0.123	0.0017	110.01	0.0078	0.0007762
Mo	98	3	He	0.028	0.0011	70.00	0.022	0.0005162
Mo	98	3	He	0.006	0.0007	40.00	0.022	0.0005162
Mo	98	3	He	0.02	0.0009	60.00	0.022	0.0005162
Ag	107	3	He	0.008	0.0008	50.00	0.0455	0.0004641
Ag	107	3	He	0.018	0.0013	80.00	0.0455	0.0004641
Ag	107	3	He	0	0.0005	30.00	0.0455	0.0004641
Cd	111	3	He	-0.011	0	0.00	0.0048	5.152E-05
Cd	111	3	He	0.03	0.0002	12.00	0.0048	5.152E-05
Cd	111	3	He	0.016	0.0001	8.00	0.0048	5.152E-05
Sn	120	3	He	0.144	0.0176	1090.08	0.0143	0.01559
Sn	120	3	He	0.164	0.0179	1100.08	0.0143	0.01559
Sn	120	3	He	0.204	0.0185	1170.19	0.0143	0.01559
Sb	121	3	He	0.058	0.001	60.00	0.0124	0.000258
Sb	121	3	He	0.111	0.0016	100.01	0.0124	0.000258
Sb	121	3	He	0.03	0.0006	40.00	0.0124	0.000258
Ba	137	3	He	0.114	0.0008	50.00	0.0044	0.000309
Ba	137	3	He	0.116	0.0008	50.00	0.0044	0.000309
Ba	137	3	He	0.146	0.0009	60.00	0.0044	0.000309
Tl	205	3	He	0.09	0.0035	770.05	0.0276	0.001005
Tl	205	3	He	0.079	0.0032	700.04	0.0276	0.001005
Tl	205	3	He	0.071	0.003	660.04	0.0276	0.001005
Pb	208	3	He	0.006	0.0024	300.01	0.0364	0.002176
Pb	208	3	He	0.003	0.0023	240.01	0.0364	0.002176
Pb	208	3	He	0.019	0.0029	310.02	0.0364	0.002176
U	238	3	He	0.008	0.0006	130.00	0.0421	0.00024
U	238	3	He	0.017	0.001	210.01	0.0421	0.00024
U	238	3	He	0.012	0.0008	170.01	0.0421	0.00024
Sc	45	1	No Gas			3229873.39		
Sc	45	1	No Gas			3176013.08		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3237492.14		
Ge	72	1	No Gas			1438386.54		
Ge	72	1	No Gas			1414006.85		
Ge	72	1	No Gas			1439225.92		
Sc	45	2	H2			193603.57		
Sc	45	2	H2			189045.60		
Sc	45	2	H2			181713.49		
Ge	72	2	H2			163427.49		
Ge	72	2	H2			158726.88		
Ge	72	2	H2			152783.70		
In	115	2	H2			435423.59		
In	115	2	H2			423849.29		
In	115	2	H2			418842.88		
Sc	45	3	He			39684.27		
Sc	45	3	He			39945.06		
Sc	45	3	He			40296.43		
Ge	72	3	He			68925.08		
Ge	72	3	He			70562.61		
Ge	72	3	He			71377.88		
In	115	3	He			61777.04		
In	115	3	He			61374.87		
In	115	3	He			63273.60		
Tb	159	3	He			278382.05		
Tb	159	3	He			277728.45		
Tb	159	3	He			277947.03		
Bi	209	3	He			220352.01		
Bi	209	3	He			219358.73		
Bi	209	3	He			222938.86		

Quantitation Report

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Auto Dilution	1.0000
Total Dilution	1.0000
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Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

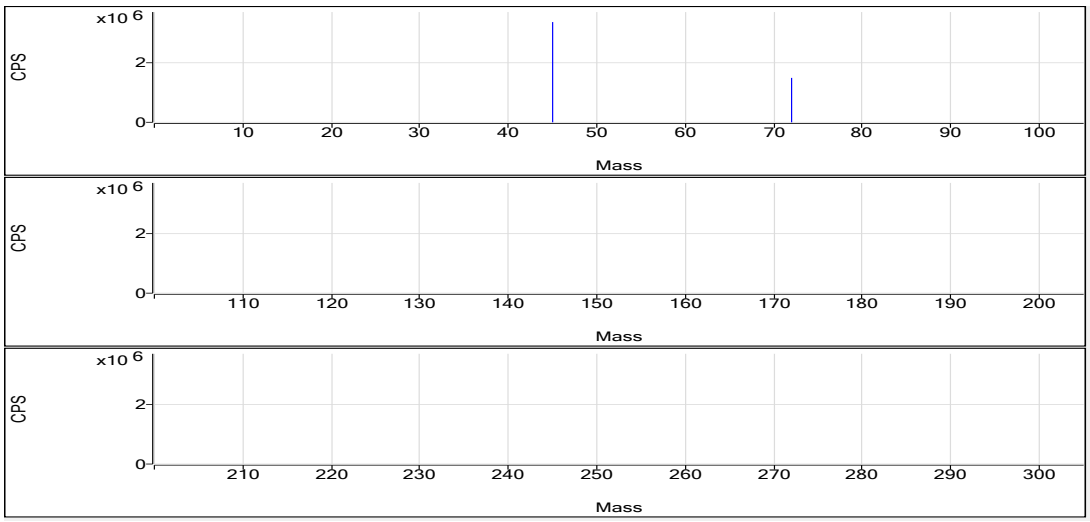
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.436	ppb	4.5	920.70	0.0006	Pulse	0.5000	3
Se	78	72	H2	1.052	ppb	6.5	67.33	0.0004	Pulse	1.5000	3
Na	23	72	He	206.978	ppb	1.8	32967.31	0.4620	Pulse	0.1000	3
Mg	24	72	He	49.381	ppb	2.7	3317.14	0.0465	Pulse	0.1000	3
Al	27	72	He	24.807	ppb	6.1	503.36	0.0071	Pulse	0.1000	3
K	39	72	He	207.795	ppb	16.3	18425.34	0.2584	Pulse	0.1000	3
Ca	44	72	He	104.700	ppb	20.7	346.68	0.0049	Pulse	0.1000	3
Ti	47	72	He	12.493	ppb	24.0	243.35	0.0034	Pulse	0.1000	3
V	51	72	He	2.024	ppb	6.3	2212.18	0.0310	Pulse	0.5000	3
Cr	52	72	He	2.380	ppb	7.4	4397.48	0.0616	Pulse	0.1000	3
Mn	55	72	He	1.747	ppb	12.6	1723.50	0.0242	Pulse	0.1000	3
Fe	57	72	He	48.523	ppb	12.3	1283.44	0.0180	Pulse	0.1000	3
Co	59	72	He	0.545	ppb	20.4	1406.78	0.0197	Pulse	0.1000	3
Ni	60	72	He	1.088	ppb	23.1	1323.44	0.0186	Pulse	0.1000	3
Cu	63	72	He	1.043	ppb	6.9	2210.25	0.0310	Pulse	0.1000	3
Zn	66	72	He	11.630	ppb	10.1	2383.62	0.0334	Pulse	0.1000	3
As	75	72	He	1.959	ppb	4.5	274.00	0.0038	Pulse	0.5000	3
Sr	88	115	He	1.087	ppb	16.7	583.37	0.0093	Pulse	0.1000	3
Mo	98	115	He	0.525	ppb	12.3	760.06	0.0121	Pulse	0.1000	3
Ag	107	115	He	0.541	ppb	5.1	1576.81	0.0251	Pulse	0.1000	3
Cd	111	115	He	0.534	ppb	6.3	164.67	0.0026	Pulse	0.5000	3
Sn	120	115	He	2.068	ppb	2.4	2837.05	0.0451	Pulse	0.1000	3
Sb	121	115	He	0.983	ppb	5.9	783.39	0.0124	Pulse	0.1000	3
Ba	137	115	He	2.290	ppb	10.8	650.04	0.0103	Pulse	0.1000	3
Tl	205	209	He	0.517	ppb	5.9	3350.54	0.0153	Pulse	0.1000	3
Pb	208	209	He	0.518	ppb	4.5	4607.18	0.0210	Pulse	0.1000	3
U	238	209	He	0.997	ppb	4.4	9243.64	0.0422	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3349549.22	1.3	103.3	Pulse	0.1000	3
No Gas	Ge	72	1484443.57	1.1	103.1	Pulse	0.1000	3
H2	Sc	45	187805.23	2.4	96.1	Pulse	0.1000	3
H2	Ge	72	160306.73	1.9	98.3	Pulse	0.1000	3
H2	In	115	423651.57	1.2	97.8	Pulse	0.1000	3
He	Sc	45	40707.15	0.4	101.8	Pulse	0.1000	3
He	Ge	72	71360.67	1.7	98.7	Pulse	0.1000	3
He	In	115	62943.33	0.8	97.4	Pulse	0.1000	3
He	Tb	159	278987.81	0.1	97.5	Pulse	0.1000	3
He	Bi	209	219187.01	1.0	98.6	Pulse	0.1000	3

No Gas



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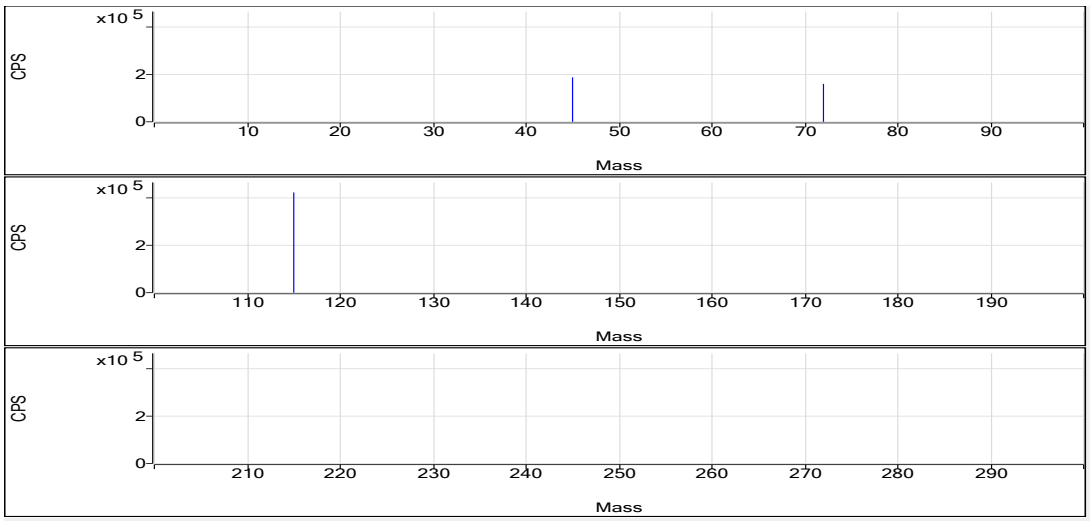
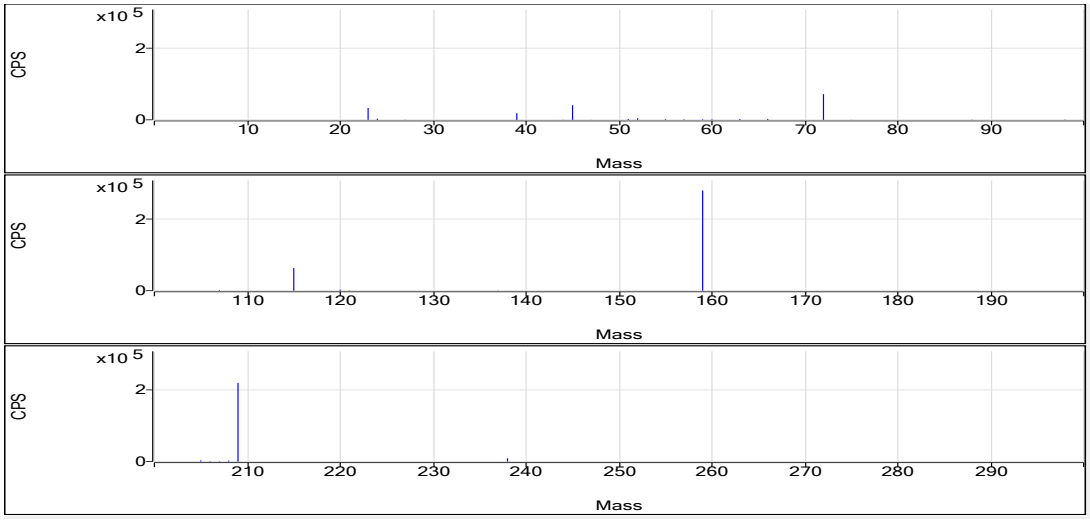


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.419	0.0006	878.03	0.0013	4.694E-05
Be	9	1	No Gas	0.432	0.0006	922.03	0.0013	4.694E-05
Be	9	1	No Gas	0.458	0.0006	962.04	0.0013	4.694E-05
Se	78	2	H2	1.069	0.0004	67.33	0.0004	1.089E-05
Se	78	2	H2	1.11	0.0004	70.67	0.0004	1.089E-05
Se	78	2	H2	0.976	0.0004	64.00	0.0004	1.089E-05
Na	23	3	He	210.321	0.4678	32827.10	0.0017	0.1065
Na	23	3	He	203.048	0.4553	32486.00	0.0017	0.1065
Na	23	3	He	207.565	0.463	33588.82	0.0017	0.1065
Mg	24	3	He	48.173	0.0455	3190.47	0.0008	0.004846
Mg	24	3	He	50.775	0.0477	3400.49	0.0008	0.004846
Mg	24	3	He	49.196	0.0463	3360.47	0.0008	0.004846
Al	27	3	He	24.522	0.007	490.02	0.0002	0.001063
Al	27	3	He	23.465	0.0067	480.02	0.0002	0.001063
Al	27	3	He	26.436	0.0074	540.03	0.0002	0.001063
K	39	3	He	230.214	0.2708	19002.70	0.0006	0.1436
K	39	3	He	224.417	0.2676	19092.89	0.0006	0.1436
K	39	3	He	168.754	0.2368	17180.43	0.0006	0.1436
Ca	44	3	He	108.709	0.005	350.02	0	0.001611
Ca	44	3	He	124.108	0.0055	390.02	0	0.001611
Ca	44	3	He	81.284	0.0041	300.01	0	0.001611
Ti	47	3	He	9.705	0.0027	190.01	0.0003	0.0002737
Ti	47	3	He	15.674	0.0042	300.02	0.0003	0.0002737
Ti	47	3	He	12.101	0.0033	240.01	0.0003	0.0002737
V	51	3	He	1.954	0.0302	2118.16	0.0117	0.007326
V	51	3	He	2.17	0.0327	2334.20	0.0117	0.007326
V	51	3	He	1.948	0.0301	2184.18	0.0117	0.007326
Cr	52	3	He	2.517	0.0637	4470.81	0.0152	0.02538
Cr	52	3	He	2.181	0.0586	4180.76	0.0152	0.02538
Cr	52	3	He	2.444	0.0626	4540.86	0.0152	0.02538
Mn	55	3	He	1.999	0.0257	1800.18	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1.595	0.0233	1660.16	0.0059	0.01385
Mn	55	3	He	1.647	0.0236	1710.16	0.0059	0.01385
Fe	57	3	He	48.453	0.018	1260.11	0.0003	0.003918
Fe	57	3	He	42.592	0.0163	1160.09	0.0003	0.003918
Fe	57	3	He	54.523	0.0197	1430.11	0.0003	0.003918
Co	59	3	He	0.623	0.0221	1550.14	0.0305	0.003084
Co	59	3	He	0.418	0.0158	1130.08	0.0305	0.003084
Co	59	3	He	0.595	0.0212	1540.13	0.0305	0.003084
Ni	60	3	He	1.375	0.0211	1480.12	0.0088	0.009003
Ni	60	3	He	0.984	0.0177	1260.09	0.0088	0.009003
Ni	60	3	He	0.905	0.017	1230.11	0.0088	0.009003
Cu	63	3	He	0.962	0.0289	2030.22	0.0249	0.004937
Cu	63	3	He	1.067	0.0315	2250.25	0.0249	0.004937
Cu	63	3	He	1.101	0.0324	2350.28	0.0249	0.004937
Zn	66	3	He	12.533	0.0356	2500.31	0.0025	0.004836
Zn	66	3	He	10.297	0.0301	2150.23	0.0025	0.004836
Zn	66	3	He	12.061	0.0345	2500.31	0.0025	0.004836
As	75	3	He	2.061	0.004	282.01	0.0017	0.0004347
As	75	3	He	1.91	0.0038	268.00	0.0017	0.0004347
As	75	3	He	1.906	0.0037	272.00	0.0017	0.0004347
Sr	88	3	He	1.074	0.0092	580.03	0.0078	0.0007762
Sr	88	3	He	0.912	0.0079	500.03	0.0078	0.0007762
Sr	88	3	He	1.275	0.0107	670.04	0.0078	0.0007762
Mo	98	3	He	0.558	0.0128	810.06	0.022	0.0005162
Mo	98	3	He	0.451	0.0104	660.05	0.022	0.0005162
Mo	98	3	He	0.566	0.013	810.06	0.022	0.0005162
Ag	107	3	He	0.518	0.024	1520.14	0.0455	0.0004641
Ag	107	3	He	0.532	0.0247	1560.14	0.0455	0.0004641
Ag	107	3	He	0.571	0.0265	1650.16	0.0455	0.0004641
Cd	111	3	He	0.503	0.0025	156.00	0.0048	5.152E-05
Cd	111	3	He	0.53	0.0026	164.00	0.0048	5.152E-05
Cd	111	3	He	0.57	0.0028	174.00	0.0048	5.152E-05
Sn	120	3	He	2.079	0.0452	2860.38	0.0143	0.01559
Sn	120	3	He	2.013	0.0443	2800.39	0.0143	0.01559
Sn	120	3	He	2.112	0.0457	2850.38	0.0143	0.01559
Sb	121	3	He	0.923	0.0117	740.05	0.0124	0.000258
Sb	121	3	He	1.038	0.0131	830.06	0.0124	0.000258
Sb	121	3	He	0.987	0.0125	780.07	0.0124	0.000258
Ba	137	3	He	2.098	0.0095	600.04	0.0044	0.000309
Ba	137	3	He	2.569	0.0115	730.05	0.0044	0.000309
Ba	137	3	He	2.202	0.0099	620.04	0.0044	0.000309
Tl	205	3	He	0.505	0.015	3270.50	0.0276	0.001005
Tl	205	3	He	0.494	0.0147	3250.52	0.0276	0.001005
Tl	205	3	He	0.552	0.0163	3530.61	0.0276	0.001005
Pb	208	3	He	0.491	0.02	2520.35	0.0364	0.002176
Pb	208	3	He	0.529	0.0214	2490.35	0.0364	0.002176
Pb	208	3	He	0.533	0.0216	2430.33	0.0364	0.002176
U	238	3	He	1.03	0.0436	9523.85	0.0421	0.00024
U	238	3	He	0.947	0.0401	8883.33	0.0421	0.00024
U	238	3	He	1.015	0.0429	9323.73	0.0421	0.00024
Sc	45	1	No Gas			3317306.83		
Sc	45	1	No Gas			3398539.32		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3332801.51		
Ge	72	1	No Gas			1468623.73		
Ge	72	1	No Gas			1500583.10		
Ge	72	1	No Gas			1484123.88		
Sc	45	2	H2			186247.52		
Sc	45	2	H2			184234.02		
Sc	45	2	H2			192934.16		
Ge	72	2	H2			157694.12		
Ge	72	2	H2			159465.38		
Ge	72	2	H2			163760.69		
In	115	2	H2			421164.56		
In	115	2	H2			420115.31		
In	115	2	H2			429674.84		
Sc	45	3	He			40697.15		
Sc	45	3	He			40546.60		
Sc	45	3	He			40877.70		
Ge	72	3	He			70180.81		
Ge	72	3	He			71357.59		
Ge	72	3	He			72543.60		
In	115	3	He			63263.59		
In	115	3	He			63242.95		
In	115	3	He			62389.82		
Tb	159	3	He			279220.21		
Tb	159	3	He			279165.60		
Tb	159	3	He			278577.61		
Bi	209	3	He			218617.61		
Bi	209	3	He			221719.08		
Bi	209	3	He			217224.35		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 08:47:22
Sample Name	ICSA 4677791
Sample Type	ICSA
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

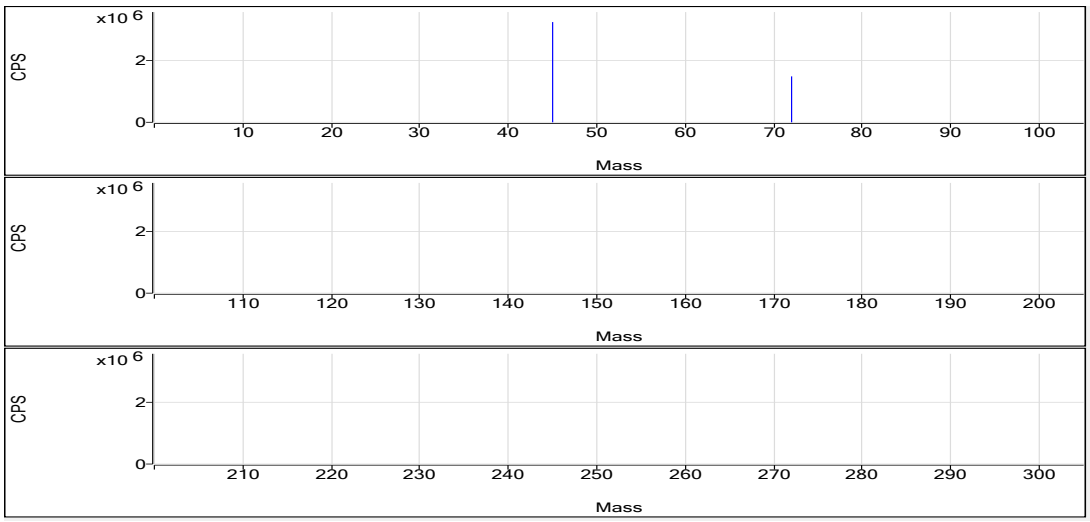
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.011	ppb	N/A	48.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.069	ppb	14.0	6.00	0.0000	Pulse	1.5000	3
Na	23	72	He	254550.711	ppb	0.4	31859793.69	437.3790	Analog	0.1000	3
Mg	24	72	He	104194.359	ppb	0.6	6399185.11	87.8513	Analog	0.1000	3
Al	27	72	He	100306.645	ppb	0.2	1763884.87	24.2145	Pulse	0.1000	3
K	39	72	He	98894.354	ppb	0.2	3988565.26	54.7543	Pulse	0.1000	3
Ca	44	72	He	287813.777	ppb	0.2	651311.42	8.9411	Pulse	0.1000	3
Ti	47	72	He	2030.463	ppb	0.9	37114.39	0.5095	Pulse	0.1000	3
V	51	72	He	-0.064	ppb	N/A	479.34	0.0066	Pulse	0.5000	3
Cr	52	72	He	3.142	ppb	1.5	5334.48	0.0732	Pulse	0.1000	3
Mn	55	72	He	-0.435	ppb	N/A	823.38	0.0113	Pulse	0.1000	3
Fe	57	72	He	245539.249	ppb	0.6	5182368.15	71.1402	Pulse	0.1000	3
Co	59	72	He	0.188	ppb	25.2	643.37	0.0088	Pulse	0.1000	3
Ni	60	72	He	0.517	ppb	21.0	986.74	0.0135	Pulse	0.1000	3
Cu	63	72	He	0.085	ppb	19.4	513.36	0.0070	Pulse	0.1000	3
Zn	66	72	He	2.038	ppb	23.8	716.71	0.0098	Pulse	0.1000	3
As	75	72	He	0.160	ppb	34.1	52.00	0.0007	Pulse	0.5000	3
Sr	88	115	He	2.077	ppb	9.1	1023.41	0.0170	Pulse	0.1000	3
Mo	98	115	He	2080.921	ppb	1.5	2757384.54	45.8257	Pulse	0.1000	3
Ag	107	115	He	0.009	ppb	96.8	53.33	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.300	ppb	20.8	90.00	0.0015	Pulse	0.5000	3
Sn	120	115	He	0.858	ppb	124.8	1676.57	0.0278	Pulse	0.1000	3
Sb	121	115	He	0.193	ppb	17.5	160.01	0.0027	Pulse	0.1000	3
Ba	137	115	He	0.588	ppb	25.7	173.34	0.0029	Pulse	0.1000	3
Tl	205	209	He	0.018	ppb	88.8	313.35	0.0015	Pulse	0.1000	3
Pb	208	209	He	0.066	ppb	40.2	953.38	0.0046	Pulse	0.1000	3
U	238	209	He	0.064	ppb	4.1	606.70	0.0029	Pulse	0.1000	3

ISTD Table:

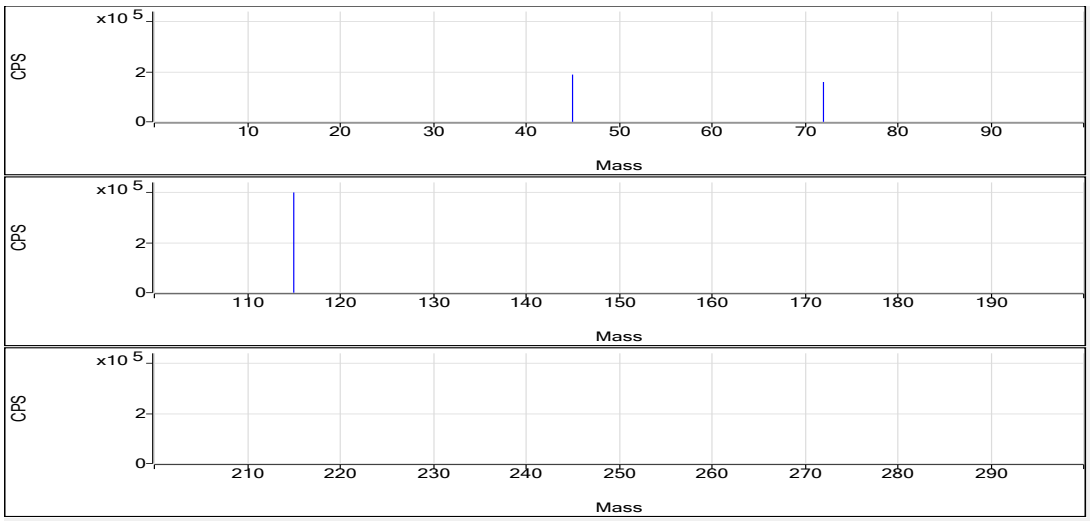
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3235124.22	0.8	99.8	Pulse	0.1000	3
No Gas	Ge	72	1482118.83	1.4	102.9	Pulse	0.1000	3
H2	Sc	45	189277.25	2.8	96.9	Pulse	0.1000	3
H2	Ge	72	159579.33	3.0	97.9	Pulse	0.1000	3
H2	In	115	401746.09	2.7	92.7	Pulse	0.1000	3
He	Sc	45	40637.34	0.8	101.6	Pulse	0.1000	3
He	Ge	72	72844.30	1.1	100.8	Pulse	0.1000	3
He	In	115	60183.73	2.0	93.2	Pulse	0.1000	3
He	Tb	159	279958.58	0.3	97.9	Pulse	0.1000	3
He	Bi	209	207561.35	0.1	93.4	Pulse	0.1000	3

No Gas

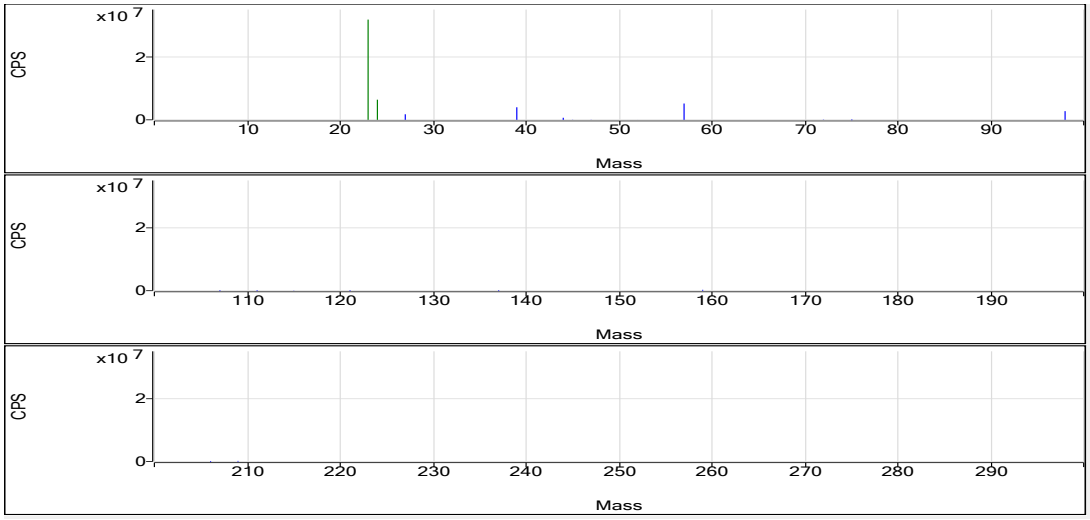


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.007	0	56.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.011	0	48.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.014	0	42.00	0.0013	4.694E-05
Se	78	2	H2	0.066	0	6.00	0.0004	1.089E-05
Se	78	2	H2	0.079	0	6.67	0.0004	1.089E-05
Se	78	2	H2	0.061	0	5.33	0.0004	1.089E-05
Na	23	3	He	255669.243	439.3005	31598862.03	0.0017	0.1065
Na	23	3	He	254437.243	437.1841	32131862.02	0.0017	0.1065
Na	23	3	He	253545.648	435.6525	31848657.03	0.0017	0.1065
Mg	24	3	He	104862.83	88.4149	6359676.78	0.0008	0.004846
Mg	24	3	He	103658.282	87.3993	6423614.90	0.0008	0.004846
Mg	24	3	He	104061.966	87.7397	6414263.65	0.0008	0.004846
Al	27	3	He	100383.512	24.2331	1743082.79	0.0002	0.001063
Al	27	3	He	100415.341	24.2407	1781629.66	0.0002	0.001063
Al	27	3	He	100121.081	24.1697	1766942.16	0.0002	0.001063
K	39	3	He	98753.728	54.6766	3932885.88	0.0006	0.1436
K	39	3	He	98873.227	54.7426	4023434.32	0.0006	0.1436
K	39	3	He	99056.107	54.8436	4009375.57	0.0006	0.1436
Ca	44	3	He	287552.94	8.933	642547.80	0	0.001611
Ca	44	3	He	288407.177	8.9595	658499.13	0	0.001611
Ca	44	3	He	287481.212	8.9307	652887.33	0	0.001611
Ti	47	3	He	2014.346	0.5054	36355.56	0.0003	0.0002737
Ti	47	3	He	2051.339	0.5147	37829.59	0.0003	0.0002737
Ti	47	3	He	2025.704	0.5083	37158.02	0.0003	0.0002737
V	51	3	He	-0.139	0.0057	410.01	0.0117	0.007326
V	51	3	He	-0.003	0.0073	536.01	0.0117	0.007326
V	51	3	He	-0.051	0.0067	492.01	0.0117	0.007326
Cr	52	3	He	3.173	0.0737	5301.13	0.0152	0.02538
Cr	52	3	He	3.088	0.0724	5321.16	0.0152	0.02538
Cr	52	3	He	3.167	0.0736	5381.16	0.0152	0.02538
Mn	55	3	He	-0.887	0.0086	620.03	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.272	0.0122	900.05	0.0059	0.01385
Mn	55	3	He	-0.145	0.013	950.06	0.0059	0.01385
Fe	57	3	He	244210.66	70.7553	5089427.11	0.0003	0.003918
Fe	57	3	He	247025.545	71.5708	5260264.92	0.0003	0.003918
Fe	57	3	He	245381.541	71.0945	5197412.42	0.0003	0.003918
Co	59	3	He	0.168	0.0082	590.03	0.0305	0.003084
Co	59	3	He	0.242	0.0105	770.05	0.0305	0.003084
Co	59	3	He	0.154	0.0078	570.03	0.0305	0.003084
Ni	60	3	He	0.589	0.0142	1020.07	0.0088	0.009003
Ni	60	3	He	0.57	0.014	1030.08	0.0088	0.009003
Ni	60	3	He	0.392	0.0124	910.06	0.0088	0.009003
Cu	63	3	He	0.07	0.0067	480.03	0.0249	0.004937
Cu	63	3	He	0.102	0.0075	550.03	0.0249	0.004937
Cu	63	3	He	0.082	0.007	510.03	0.0249	0.004937
Zn	66	3	He	2.389	0.0107	770.05	0.0025	0.004836
Zn	66	3	He	2.241	0.0103	760.05	0.0025	0.004836
Zn	66	3	He	1.484	0.0085	620.03	0.0025	0.004836
As	75	3	He	0.118	0.0006	46.00	0.0017	0.0004347
As	75	3	He	0.141	0.0007	50.00	0.0017	0.0004347
As	75	3	He	0.222	0.0008	60.00	0.0017	0.0004347
Sr	88	3	He	2.141	0.0175	1030.07	0.0078	0.0007762
Sr	88	3	He	2.226	0.0182	1100.08	0.0078	0.0007762
Sr	88	3	He	1.866	0.0154	940.07	0.0078	0.0007762
Mo	98	3	He	2115.828	46.5944	2740484.65	0.022	0.0005162
Mo	98	3	He	2073.963	45.6725	2764548.71	0.022	0.0005162
Mo	98	3	He	2052.972	45.2102	2767120.27	0.022	0.0005162
Ag	107	3	He	0.008	0.0009	50.00	0.0455	0.0004641
Ag	107	3	He	0.001	0.0005	30.00	0.0455	0.0004641
Ag	107	3	He	0.019	0.0013	80.00	0.0455	0.0004641
Cd	111	3	He	0.251	0.0013	74.00	0.0048	5.152E-05
Cd	111	3	He	0.278	0.0014	84.00	0.0048	5.152E-05
Cd	111	3	He	0.37	0.0018	112.00	0.0048	5.152E-05
Sn	120	3	He	0.278	0.0196	1150.09	0.0143	0.01559
Sn	120	3	He	2.093	0.0454	2749.54	0.0143	0.01559
Sn	120	3	He	0.202	0.0185	1130.09	0.0143	0.01559
Sb	121	3	He	0.171	0.0024	140.01	0.0124	0.000258
Sb	121	3	He	0.232	0.0031	190.01	0.0124	0.000258
Sb	121	3	He	0.177	0.0025	150.01	0.0124	0.000258
Ba	137	3	He	0.629	0.0031	180.01	0.0044	0.000309
Ba	137	3	He	0.42	0.0021	130.01	0.0044	0.000309
Ba	137	3	He	0.714	0.0034	210.01	0.0044	0.000309
Tl	205	3	He	0.023	0.0016	340.02	0.0276	0.001005
Tl	205	3	He	0	0.001	210.01	0.0276	0.001005
Tl	205	3	He	0.032	0.0019	390.02	0.0276	0.001005
Pb	208	3	He	0.037	0.0035	380.02	0.0364	0.002176
Pb	208	3	He	0.074	0.0049	570.04	0.0364	0.002176
Pb	208	3	He	0.089	0.0054	540.03	0.0364	0.002176
U	238	3	He	0.065	0.003	620.03	0.0421	0.00024
U	238	3	He	0.061	0.0028	580.04	0.0421	0.00024
U	238	3	He	0.065	0.003	620.04	0.0421	0.00024
Sc	45	1	No Gas			3265660.89		
Sc	45	1	No Gas			3220127.76		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3219584.01		
Ge	72	1	No Gas			1502929.04		
Ge	72	1	No Gas			1462226.54		
Ge	72	1	No Gas			1481200.92		
Sc	45	2	H2			195043.28		
Sc	45	2	H2			188272.95		
Sc	45	2	H2			184515.51		
Ge	72	2	H2			164215.00		
Ge	72	2	H2			159899.70		
Ge	72	2	H2			154623.28		
In	115	2	H2			412963.12		
In	115	2	H2			400815.42		
In	115	2	H2			391459.72		
Sc	45	3	He			40246.17		
Sc	45	3	He			40877.98		
Sc	45	3	He			40787.86		
Ge	72	3	He			71929.95		
Ge	72	3	He			73497.32		
Ge	72	3	He			73105.64		
In	115	3	He			58824.69		
In	115	3	He			60551.30		
In	115	3	He			61214.44		
Tb	159	3	He			279003.77		
Tb	159	3	He			280796.01		
Tb	159	3	He			280075.95		
Bi	209	3	He			207786.64		
Bi	209	3	He			207477.44		
Bi	209	3	He			207419.98		

Quantitation Report

Data File Name	028ICSB.d
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Sample Type	ICSAB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

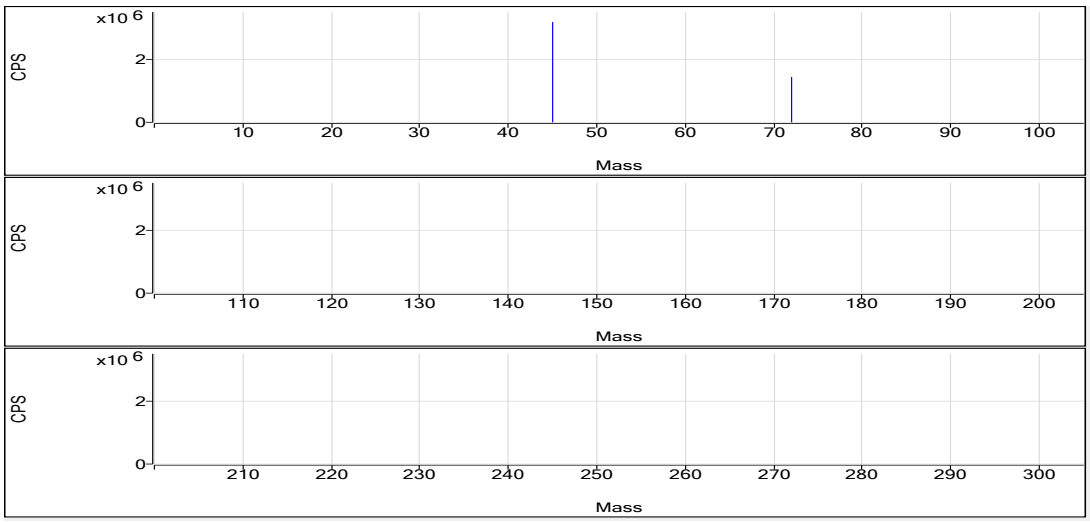
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.011	ppb	N/A	47.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	101.029	ppb	3.5	6332.51	0.0393	Pulse	1.5000	3
Na	23	72	He	256123.479	ppb	1.0	32207817.85	440.0808	Analog	0.1000	3
Mg	24	72	He	104221.257	ppb	0.3	6431516.78	87.8740	Analog	0.1000	3
Al	27	72	He	101120.745	ppb	0.6	1786583.20	24.4110	Pulse	0.1000	3
K	39	72	He	100293.248	ppb	0.7	4063885.46	55.5268	Pulse	0.1000	3
Ca	44	72	He	294066.199	ppb	1.0	668603.84	9.1353	Pulse	0.1000	3
Ti	47	72	He	2020.493	ppb	0.9	37104.72	0.5070	Pulse	0.1000	3
V	51	72	He	210.216	ppb	0.6	180509.28	2.4664	Pulse	0.5000	3
Cr	52	72	He	209.557	ppb	0.7	235399.82	3.2164	Pulse	0.1000	3
Mn	55	72	He	204.215	ppb	1.7	89226.57	1.2192	Pulse	0.1000	3
Fe	57	72	He	248102.902	ppb	0.4	5261045.24	71.8830	Pulse	0.1000	3
Co	59	72	He	204.127	ppb	1.0	456029.16	6.2311	Pulse	0.1000	3
Ni	60	72	He	201.525	ppb	0.4	130354.79	1.7811	Pulse	0.1000	3
Cu	63	72	He	201.375	ppb	0.9	367891.87	5.0267	Pulse	0.1000	3
Zn	66	72	He	104.652	ppb	1.9	19173.27	0.2619	Pulse	0.1000	3
As	75	72	He	101.373	ppb	1.8	12934.52	0.1767	Pulse	0.5000	3
Sr	88	115	He	2.022	ppb	14.6	1020.07	0.0166	Pulse	0.1000	3
Mo	98	115	He	2058.396	ppb	1.8	2785261.83	45.3297	Pulse	0.1000	3
Ag	107	115	He	51.481	ppb	2.5	143947.83	2.3429	Pulse	0.1000	3
Cd	111	115	He	105.221	ppb	1.4	31038.77	0.5051	Pulse	0.5000	3
Sn	120	115	He	0.158	ppb	70.9	1096.75	0.0178	Pulse	0.1000	3
Sb	121	115	He	0.154	ppb	36.7	133.34	0.0022	Pulse	0.1000	3
Ba	137	115	He	0.589	ppb	34.0	176.68	0.0029	Pulse	0.1000	3
Tl	205	209	He	0.016	ppb	18.4	303.35	0.0014	Pulse	0.1000	3
Pb	208	209	He	0.069	ppb	22.0	983.39	0.0047	Pulse	0.1000	3
U	238	209	He	0.047	ppb	22.0	466.69	0.0022	Pulse	0.1000	3

ISTD Table:

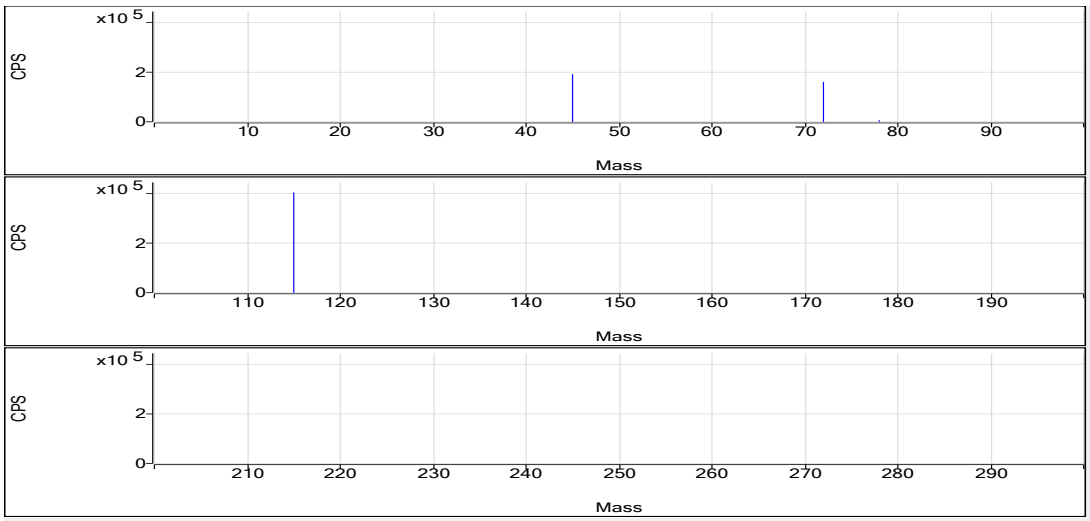
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3214615.37	2.3	99.2	Pulse	0.1000	3
No Gas	Ge	72	1451180.03	2.0	100.8	Pulse	0.1000	3
H2	Sc	45	191878.76	2.0	98.2	Pulse	0.1000	3
H2	Ge	72	160993.63	1.6	98.8	Pulse	0.1000	3
H2	In	115	404259.06	3.0	93.3	Pulse	0.1000	3
He	Sc	45	41178.70	0.9	103.0	Pulse	0.1000	3
He	Ge	72	73189.91	0.8	101.2	Pulse	0.1000	3
He	In	115	61454.02	1.6	95.1	Pulse	0.1000	3
He	Tb	159	282663.39	0.2	98.8	Pulse	0.1000	3
He	Bi	209	209514.84	0.6	94.3	Pulse	0.1000	3

No Gas

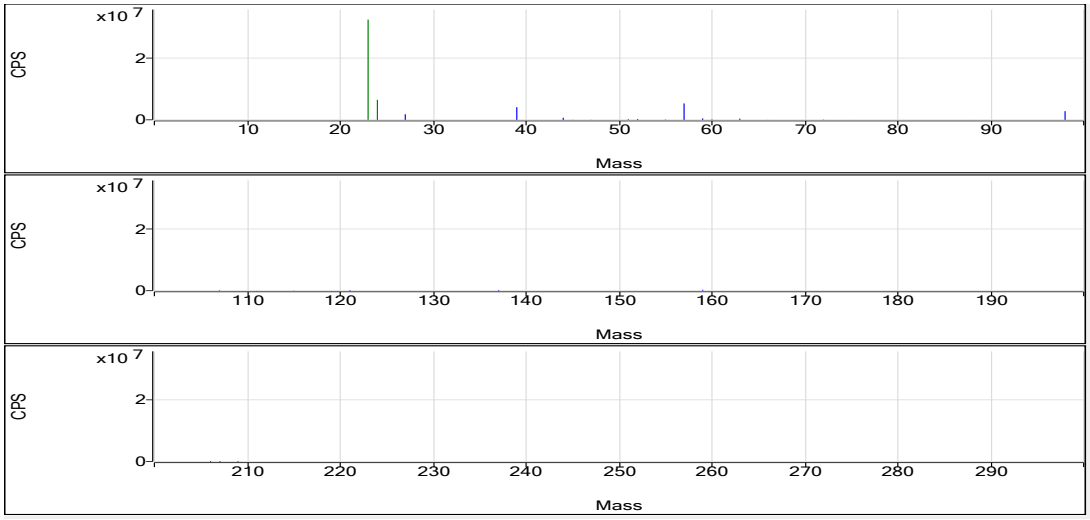


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.019	0	32.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.011	0	46.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.003	0	64.00	0.0013	4.694E-05
Se	78	2	H2	97.121	0.0378	6198.67	0.0004	1.089E-05
Se	78	2	H2	102.147	0.0398	6352.74	0.0004	1.089E-05
Se	78	2	H2	103.819	0.0404	6446.11	0.0004	1.089E-05
Na	23	3	He	256993.924	441.5761	32304472.02	0.0017	0.1065
Na	23	3	He	258050.266	443.3907	32191452.02	0.0017	0.1065
Na	23	3	He	253326.247	435.2756	32127529.52	0.0017	0.1065
Mg	24	3	He	104615.604	88.2064	6452936.15	0.0008	0.004846
Mg	24	3	He	103920.347	87.6203	6361485.53	0.0008	0.004846
Mg	24	3	He	104127.821	87.7952	6480128.65	0.0008	0.004846
Al	27	3	He	101172.28	24.4235	1786752.47	0.0002	0.001063
Al	27	3	He	101685.098	24.5473	1782202.16	0.0002	0.001063
Al	27	3	He	100504.857	24.2624	1790794.97	0.0002	0.001063
K	39	3	He	99679.644	55.1879	4037393.69	0.0006	0.1436
K	39	3	He	101132.266	55.9901	4065041.81	0.0006	0.1436
K	39	3	He	100067.834	55.4023	4089220.88	0.0006	0.1436
Ca	44	3	He	290762.336	9.0326	660803.43	0	0.001611
Ca	44	3	He	296296.923	9.2046	668277.33	0	0.001611
Ca	44	3	He	295139.337	9.1686	676730.77	0	0.001611
Ti	47	3	He	2000.782	0.502	36726.99	0.0003	0.0002737
Ti	47	3	He	2035.893	0.5108	37087.99	0.0003	0.0002737
Ti	47	3	He	2024.804	0.5081	37499.17	0.0003	0.0002737
V	51	3	He	209.671	2.46	179966.77	0.0117	0.007326
V	51	3	He	211.595	2.4825	180237.91	0.0117	0.007326
V	51	3	He	209.383	2.4566	181323.17	0.0117	0.007326
Cr	52	3	He	208.18	3.1954	233766.44	0.0152	0.02538
Cr	52	3	He	211.207	3.2415	235342.16	0.0152	0.02538
Cr	52	3	He	209.283	3.2122	237090.86	0.0152	0.02538
Mn	55	3	He	203.746	1.2164	88992.03	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	207.807	1.2404	90058.02	0.0059	0.01385
Mn	55	3	He	201.093	1.2008	88629.66	0.0059	0.01385
Fe	57	3	He	247008.74	71.566	5235566.80	0.0003	0.003918
Fe	57	3	He	249233.486	72.2105	5242693.36	0.0003	0.003918
Fe	57	3	He	248066.479	71.8724	5304875.55	0.0003	0.003918
Co	59	3	He	204.182	6.2328	455973.12	0.0305	0.003084
Co	59	3	He	206.111	6.2916	456790.77	0.0305	0.003084
Co	59	3	He	202.088	6.1689	455323.59	0.0305	0.003084
Ni	60	3	He	202.282	1.7877	130785.53	0.0088	0.009003
Ni	60	3	He	201.686	1.7825	129413.61	0.0088	0.009003
Ni	60	3	He	200.608	1.773	130865.22	0.0088	0.009003
Cu	63	3	He	199.63	4.9831	364552.61	0.0249	0.004937
Cu	63	3	He	203.138	5.0706	368141.52	0.0249	0.004937
Cu	63	3	He	201.357	5.0262	370981.48	0.0249	0.004937
Zn	66	3	He	105.546	0.2641	19323.53	0.0025	0.004836
Zn	66	3	He	102.324	0.2562	18602.55	0.0025	0.004836
Zn	66	3	He	106.085	0.2655	19593.74	0.0025	0.004836
As	75	3	He	102.648	0.179	13091.99	0.0017	0.0004347
As	75	3	He	102.165	0.1781	12931.85	0.0017	0.0004347
As	75	3	He	99.306	0.1731	12779.71	0.0017	0.0004347
Sr	88	3	He	2.276	0.0186	1140.08	0.0078	0.0007762
Sr	88	3	He	1.697	0.014	850.06	0.0078	0.0007762
Sr	88	3	He	2.093	0.0171	1070.08	0.0078	0.0007762
Mo	98	3	He	2034.063	44.7938	2750610.58	0.022	0.0005162
Mo	98	3	He	2102.128	46.2927	2801873.40	0.022	0.0005162
Mo	98	3	He	2038.998	44.9025	2803301.52	0.022	0.0005162
Ag	107	3	He	50.792	2.3115	141940.95	0.0455	0.0004641
Ag	107	3	He	52.962	2.4102	145880.29	0.0455	0.0004641
Ag	107	3	He	50.691	2.3069	144022.24	0.0455	0.0004641
Cd	111	3	He	105.62	0.5071	31136.37	0.0048	5.152E-05
Cd	111	3	He	106.481	0.5112	30939.87	0.0048	5.152E-05
Cd	111	3	He	103.564	0.4972	31040.07	0.0048	5.152E-05
Sn	120	3	He	0.266	0.0194	1190.09	0.0143	0.01559
Sn	120	3	He	0.042	0.0162	980.06	0.0143	0.01559
Sn	120	3	He	0.165	0.0179	1120.09	0.0143	0.01559
Sb	121	3	He	0.15	0.0021	130.01	0.0124	0.000258
Sb	121	3	He	0.099	0.0015	90.00	0.0124	0.000258
Sb	121	3	He	0.212	0.0029	180.01	0.0124	0.000258
Ba	137	3	He	0.637	0.0031	190.01	0.0044	0.000309
Ba	137	3	He	0.76	0.0036	220.01	0.0044	0.000309
Ba	137	3	He	0.369	0.0019	120.01	0.0044	0.000309
Tl	205	3	He	0.019	0.0015	320.02	0.0276	0.001005
Tl	205	3	He	0.013	0.0014	290.01	0.0276	0.001005
Tl	205	3	He	0.015	0.0014	300.01	0.0276	0.001005
Pb	208	3	He	0.058	0.0043	550.03	0.0364	0.002176
Pb	208	3	He	0.086	0.0053	670.06	0.0364	0.002176
Pb	208	3	He	0.063	0.0045	460.02	0.0364	0.002176
U	238	3	He	0.039	0.0019	390.02	0.0421	0.00024
U	238	3	He	0.044	0.0021	440.02	0.0421	0.00024
U	238	3	He	0.059	0.0027	570.04	0.0421	0.00024
Sc	45	1	No Gas			3210177.14		
Sc	45	1	No Gas			3141456.83		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3292212.14		
Ge	72	1	No Gas			1449904.51		
Ge	72	1	No Gas			1423314.82		
Ge	72	1	No Gas			1480320.76		
Sc	45	2	H2			196379.59		
Sc	45	2	H2			189815.86		
Sc	45	2	H2			189440.82		
Ge	72	2	H2			163872.19		
Ge	72	2	H2			159685.52		
Ge	72	2	H2			159423.18		
In	115	2	H2			417067.65		
In	115	2	H2			402597.38		
In	115	2	H2			393112.14		
Sc	45	3	He			40847.77		
Sc	45	3	He			41108.57		
Sc	45	3	He			41579.75		
Ge	72	3	He			73157.21		
Ge	72	3	He			72602.91		
Ge	72	3	He			73809.62		
In	115	3	He			61415.32		
In	115	3	He			60532.79		
In	115	3	He			62439.61		
Tb	159	3	He			282998.41		
Tb	159	3	He			282025.70		
Tb	159	3	He			282966.05		
Bi	209	3	He			208193.12		
Bi	209	3	He			210535.07		
Bi	209	3	He			209816.34		

Quantitation Report

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Sample Type	LRC
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

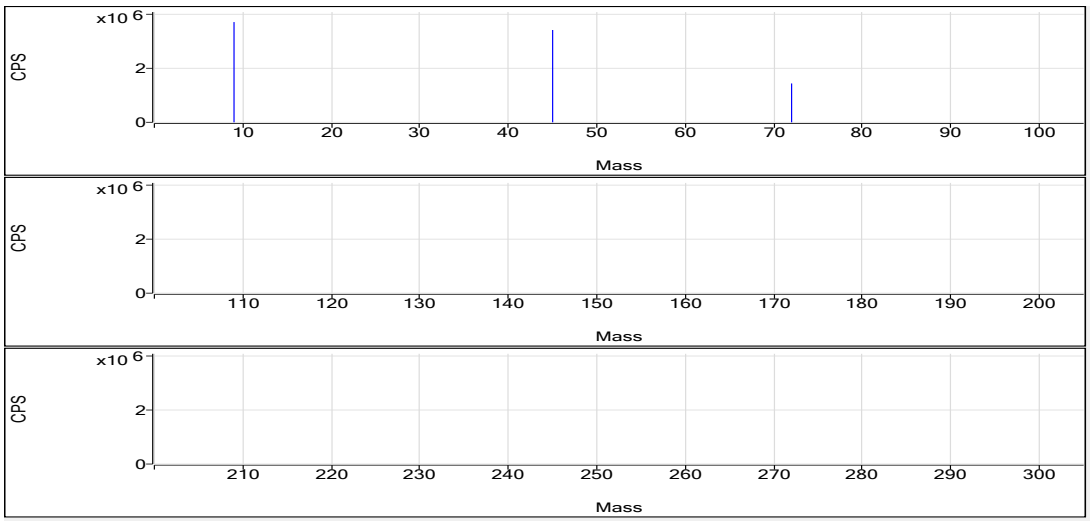
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	1964.151	ppb	3.3	3726419.17	2.5810	Pulse	0.5000	3
Se	78	72	H2	2059.862	ppb	5.9	129211.97	0.8020	Pulse	1.5000	3
Na	23	72	He	205702.684	ppb	2.9	26140872.11	353.4669	Analog	0.1000	3
Mg	24	72	He	210769.646	ppb	2.0	13143344.38	177.7051	Analog	0.1000	3
Al	27	72	He	205870.499	ppb	2.7	3675349.53	49.6970	Pulse	0.1000	3
K	39	72	He	211633.411	ppb	2.7	8653728.20	117.0101	Analog	0.1000	3
Ca	44	72	He	206626.521	ppb	2.5	474773.13	6.4194	Pulse	0.1000	3
Ti	47	72	He	2201.116	ppb	2.7	40844.25	0.5523	Pulse	0.1000	3
V	51	72	He	2073.878	ppb	2.3	1794765.54	24.2670	Pulse	0.5000	3
Cr	52	72	He	2039.664	ppb	2.3	2298944.18	31.0839	Pulse	0.1000	3
Mn	55	72	He	6101.943	ppb	2.1	2664817.46	36.0301	Pulse	0.1000	3
Fe	57	72	He	161685.982	ppb	2.1	3464826.93	46.8467	Pulse	0.1000	3
Co	59	72	He	2017.548	ppb	1.7	4553200.87	61.5595	Pulse	0.1000	3
Ni	60	72	He	1983.860	ppb	1.7	1290962.74	17.4537	Pulse	0.1000	3
Cu	63	72	He	1974.099	ppb	1.5	3641665.36	49.2333	Pulse	0.1000	3
Zn	66	72	He	2023.034	ppb	1.8	367970.31	4.9750	Pulse	0.1000	3
As	75	72	He	2029.000	ppb	1.8	261032.75	3.5292	Pulse	0.5000	3
Sr	88	115	He	2127.818	ppb	0.2	1052000.40	16.6341	Pulse	0.1000	3
Mo	98	115	He	2110.530	ppb	0.4	2939378.91	46.4777	Pulse	0.1000	3
Ag	107	115	He	2010.873	ppb	0.1	5786592.41	91.4959	Pulse	0.1000	3
Cd	111	115	He	2060.155	ppb	0.7	625422.14	9.8894	Pulse	0.5000	3
Sn	120	115	He	2089.485	ppb	0.6	1885072.89	29.8073	Pulse	0.1000	3
Sb	121	115	He	2093.297	ppb	0.1	1642271.07	25.9675	Pulse	0.1000	3
Ba	137	115	He	2099.667	ppb	0.6	580968.91	9.1859	Pulse	0.1000	3
Tl	205	209	He	2187.902	ppb	2.5	12717729.39	60.4840	Analog	0.1000	3
Pb	208	209	He	2163.328	ppb	0.8	16557363.09	78.7416	Analog	0.1000	3
U	238	209	He	215.215	ppb	0.7	1903779.97	9.0537	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3431730.47	2.1	105.9	Pulse	0.1000	3
No Gas	Ge	72	1444302.79	1.8	100.3	Pulse	0.1000	3
H2	Sc	45	196116.34	2.3	100.4	Pulse	0.1000	3
H2	Ge	72	161352.83	3.9	99.0	Pulse	0.1000	3
H2	In	115	515155.27	0.8	118.9	Pulse	0.1000	3
He	Sc	45	43498.80	1.6	108.8	Pulse	0.1000	3
He	Ge	72	73980.10	1.9	102.3	Pulse	0.1000	3
He	In	115	63243.80	0.8	97.9	Pulse	0.1000	3
He	Tb	159	284218.19	0.5	99.4	Pulse	0.1000	3
He	Bi	209	210279.46	0.4	94.6	Pulse	0.1000	3

No Gas



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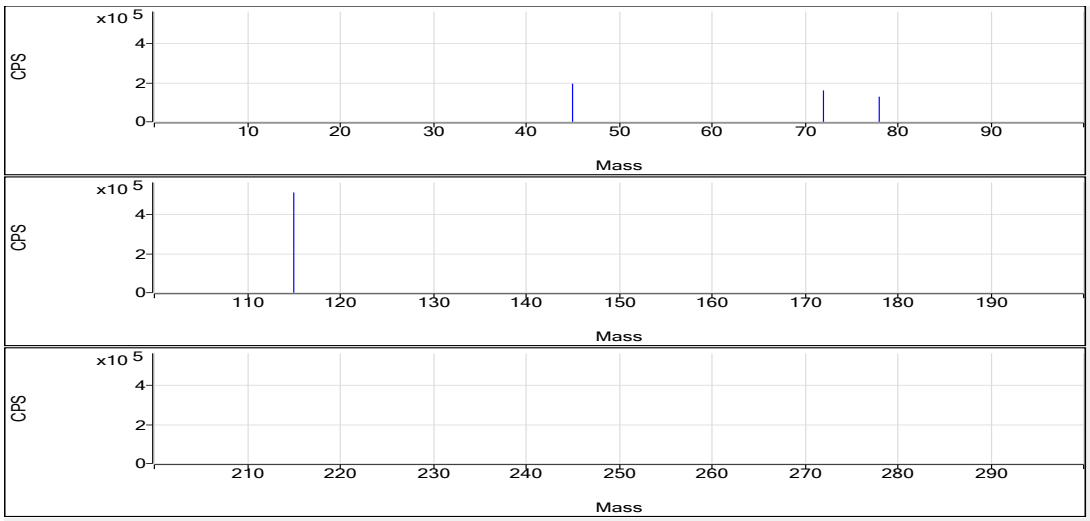
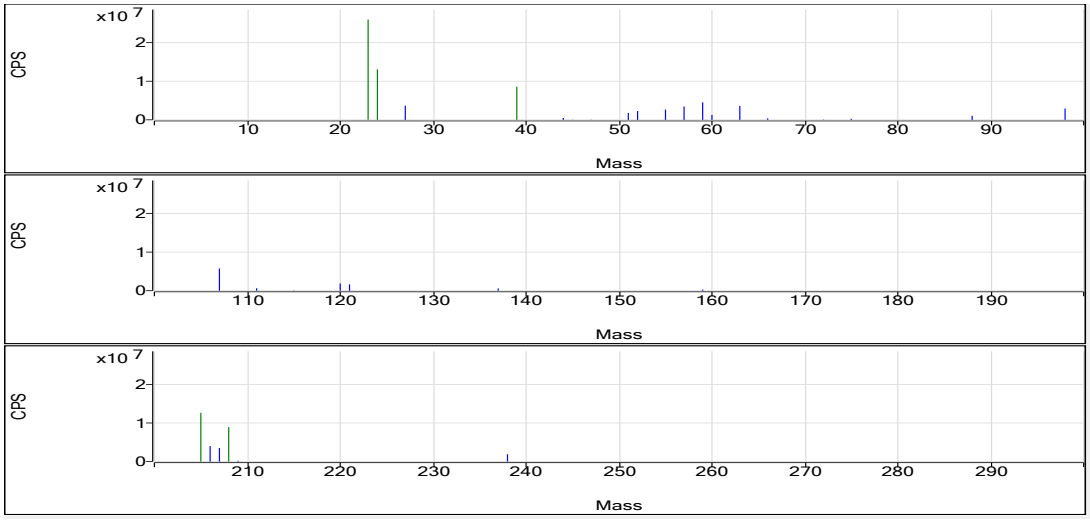


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	2021.327	2.6562	3802410.00	0.0013	4.694E-05
Be	9	1	No Gas	1977.165	2.5981	3706035.50	0.0013	4.694E-05
Be	9	1	No Gas	1893.96	2.4888	3670812.00	0.0013	4.694E-05
Se	78	2	H2	1923.776	0.7491	126062.02	0.0004	1.089E-05
Se	78	2	H2	2157.88	0.8402	130942.01	0.0004	1.089E-05
Se	78	2	H2	2097.931	0.8169	130631.89	0.0004	1.089E-05
Na	23	3	He	210084.958	360.9948	26525189.60	0.0017	0.1065
Na	23	3	He	208024.049	357.4546	26067084.61	0.0017	0.1065
Na	23	3	He	198999.044	341.9512	25830342.12	0.0017	0.1065
Mg	24	3	He	211549.498	178.3626	13105729.80	0.0008	0.004846
Mg	24	3	He	214640.488	180.9686	13196987.30	0.0008	0.004846
Mg	24	3	He	206118.951	173.7841	13127316.05	0.0008	0.004846
Al	27	3	He	208015.48	50.2148	3689684.01	0.0002	0.001063
Al	27	3	He	210076.189	50.7122	3698148.69	0.0002	0.001063
Al	27	3	He	199519.827	48.164	3638215.88	0.0002	0.001063
K	39	3	He	215820.124	119.3221	8767549.24	0.0006	0.1436
K	39	3	He	213926.722	118.2765	8625217.37	0.0006	0.1436
K	39	3	He	205153.387	113.4318	8568418.00	0.0006	0.1436
Ca	44	3	He	210637.927	6.544	480839.95	0	0.001611
Ca	44	3	He	208450.872	6.4761	472261.91	0	0.001611
Ca	44	3	He	200790.763	6.2381	471217.53	0	0.001611
Ti	47	3	He	2245.584	0.5634	41398.96	0.0003	0.0002737
Ti	47	3	He	2223.725	0.5579	40687.17	0.0003	0.0002737
Ti	47	3	He	2134.039	0.5354	40446.61	0.0003	0.0002737
V	51	3	He	2096.081	24.5268	1802177.50	0.0117	0.007326
V	51	3	He	2106.589	24.6497	1797557.75	0.0117	0.007326
V	51	3	He	2018.964	23.6247	1784561.38	0.0117	0.007326
Cr	52	3	He	2067.185	31.503	2314776.53	0.0152	0.02538
Cr	52	3	He	2066.632	31.4945	2296713.87	0.0152	0.02538
Cr	52	3	He	1985.174	30.2542	2285342.15	0.0152	0.02538
Mn	55	3	He	6154.989	36.3432	2670426.21	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	6194.798	36.5782	2667432.77	0.0059	0.01385
Mn	55	3	He	5956.042	35.1689	2656593.40	0.0059	0.01385
Fe	57	3	He	163591.831	47.3989	3482775.57	0.0003	0.003918
Fe	57	3	He	163741.644	47.4423	3459689.32	0.0003	0.003918
Fe	57	3	He	157724.471	45.699	3452015.89	0.0003	0.003918
Co	59	3	He	2035.175	62.0973	4562786.18	0.0305	0.003084
Co	59	3	He	2040.401	62.2567	4540022.74	0.0305	0.003084
Co	59	3	He	1977.069	60.3244	4556793.68	0.0305	0.003084
Ni	60	3	He	1988.6	17.4954	1285524.51	0.0088	0.009003
Ni	60	3	He	2014.323	17.7216	1292329.90	0.0088	0.009003
Ni	60	3	He	1948.656	17.1441	1295033.81	0.0088	0.009003
Cu	63	3	He	1972.72	49.1989	3615037.13	0.0249	0.004937
Cu	63	3	He	2003.559	49.9679	3643869.95	0.0249	0.004937
Cu	63	3	He	1946.017	48.533	3666089.01	0.0249	0.004937
Zn	66	3	He	2024.997	4.9798	365904.49	0.0025	0.004836
Zn	66	3	He	2057.73	5.0602	369010.93	0.0025	0.004836
Zn	66	3	He	1986.374	4.8849	368995.50	0.0025	0.004836
As	75	3	He	2048.773	3.5636	261846.50	0.0017	0.0004347
As	75	3	He	2052.287	3.5697	260318.48	0.0017	0.0004347
As	75	3	He	1985.941	3.4543	260933.27	0.0017	0.0004347
Sr	88	3	He	2125.331	16.6147	1060567.80	0.0078	0.0007762
Sr	88	3	He	2132.037	16.6671	1050158.73	0.0078	0.0007762
Sr	88	3	He	2126.084	16.6206	1045274.67	0.0078	0.0007762
Mo	98	3	He	2103.431	46.3214	2956841.83	0.022	0.0005162
Mo	98	3	He	2108.827	46.4402	2926100.27	0.022	0.0005162
Mo	98	3	He	2119.332	46.6716	2935194.64	0.022	0.0005162
Ag	107	3	He	2013.791	91.6287	5848949.29	0.0455	0.0004641
Ag	107	3	He	2010.51	91.4794	5763921.79	0.0455	0.0004641
Ag	107	3	He	2008.318	91.3797	5746906.16	0.0455	0.0004641
Cd	111	3	He	2044.252	9.8131	626399.69	0.0048	5.152E-05
Cd	111	3	He	2070.863	9.9408	626349.63	0.0048	5.152E-05
Cd	111	3	He	2065.348	9.9143	623517.13	0.0048	5.152E-05
Sn	120	3	He	2076.345	29.6199	1890734.35	0.0143	0.01559
Sn	120	3	He	2097.976	29.9284	1885721.69	0.0143	0.01559
Sn	120	3	He	2094.135	29.8736	1878762.63	0.0143	0.01559
Sb	121	3	He	2089.749	25.9235	1654778.88	0.0124	0.000258
Sb	121	3	He	2094.654	25.9843	1637217.63	0.0124	0.000258
Sb	121	3	He	2095.488	25.9947	1634816.69	0.0124	0.000258
Ba	137	3	He	2111.235	9.2365	589596.51	0.0044	0.000309
Ba	137	3	He	2102.485	9.1982	579561.63	0.0044	0.000309
Ba	137	3	He	2085.283	9.123	573748.59	0.0044	0.000309
Tl	205	3	He	2244.126	62.0383	13007797.31	0.0276	0.001005
Tl	205	3	He	2185.148	60.4079	12675764.81	0.0276	0.001005
Tl	205	3	He	2134.432	59.0059	12469626.06	0.0276	0.001005
Pb	208	3	He	2167.889	78.9076	8940446.12	0.0364	0.002176
Pb	208	3	He	2178.743	79.3027	9044669.87	0.0364	0.002176
Pb	208	3	He	2143.351	78.0145	8969866.74	0.0364	0.002176
U	238	3	He	216.621	9.1129	1910734.35	0.0421	0.00024
U	238	3	He	215.397	9.0614	1901415.91	0.0421	0.00024
U	238	3	He	213.626	8.9869	1899189.66	0.0421	0.00024
Sc	45	1	No Gas			3384588.70		
Sc	45	1	No Gas			3394521.51		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3516081.20		
Ge	72	1	No Gas			1431545.13		
Ge	72	1	No Gas			1426425.76		
Ge	72	1	No Gas			1474937.48		
Sc	45	2	H2			201163.41		
Sc	45	2	H2			194442.83		
Sc	45	2	H2			192742.77		
Ge	72	2	H2			168294.68		
Ge	72	2	H2			155845.10		
Ge	72	2	H2			159918.70		
In	115	2	H2			519172.57		
In	115	2	H2			510691.28		
In	115	2	H2			515601.95		
Sc	45	3	He			43816.19		
Sc	45	3	He			42683.34		
Sc	45	3	He			43996.87		
Ge	72	3	He			73478.03		
Ge	72	3	He			72924.19		
Ge	72	3	He			75538.09		
In	115	3	He			78580.88		
In	115	3	He			77716.48		
In	115	3	He			77544.75		
Tb	159	3	He			282540.23		
Tb	159	3	He			284841.75		
Tb	159	3	He			285272.59		
Bi	209	3	He			209673.65		
Bi	209	3	He			209836.19		
Bi	209	3	He			211328.55		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 08:59:25
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

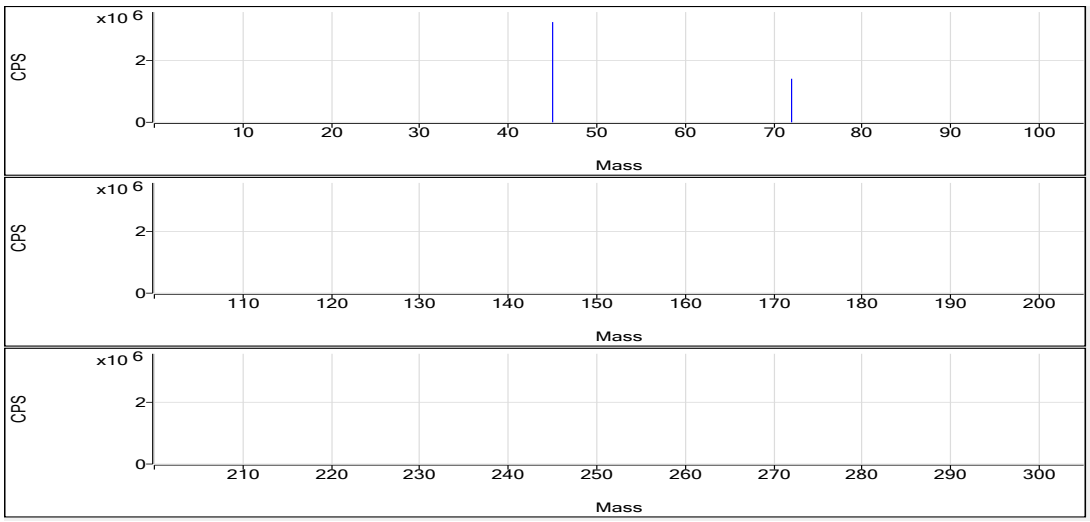
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.202	ppb	12.0	443.34	0.0003	Pulse	0.5000	3
Se	78	72	H2	0.218	ppb	26.8	15.11	0.0001	Pulse	1.5000	3
Na	23	72	He	47.995	ppb	4.7	13686.67	0.1889	Pulse	0.1000	3
Mg	24	72	He	24.693	ppb	4.4	1860.19	0.0257	Pulse	0.1000	3
Al	27	72	He	19.046	ppb	10.5	410.02	0.0057	Pulse	0.1000	3
K	39	72	He	35.156	ppb	28.9	11811.78	0.1631	Pulse	0.1000	3
Ca	44	72	He	40.054	ppb	16.6	206.68	0.0029	Pulse	0.1000	3
Ti	47	72	He	0.186	ppb	439.0	23.33	0.0003	Pulse	0.1000	3
V	51	72	He	0.094	ppb	27.0	610.68	0.0084	Pulse	0.5000	3
Cr	52	72	He	0.198	ppb	30.1	2056.88	0.0284	Pulse	0.1000	3
Mn	55	72	He	-0.265	ppb	N/A	890.06	0.0123	Pulse	0.1000	3
Fe	57	72	He	35.155	ppb	21.1	1020.07	0.0141	Pulse	0.1000	3
Co	59	72	He	0.133	ppb	36.7	516.69	0.0071	Pulse	0.1000	3
Ni	60	72	He	0.261	ppb	79.5	816.71	0.0113	Pulse	0.1000	3
Cu	63	72	He	0.087	ppb	73.4	516.69	0.0071	Pulse	0.1000	3
Zn	66	72	He	0.015	ppb	3396.0	353.35	0.0049	Pulse	0.1000	3
As	75	72	He	0.094	ppb	25.5	43.33	0.0006	Pulse	0.5000	3
Sr	88	115	He	0.136	ppb	58.8	116.67	0.0018	Pulse	0.1000	3
Mo	98	115	He	0.334	ppb	11.9	500.03	0.0079	Pulse	0.1000	3
Ag	107	115	He	0.116	ppb	9.4	363.35	0.0057	Pulse	0.1000	3
Cd	111	115	He	0.123	ppb	45.2	40.67	0.0006	Pulse	0.5000	3
Sn	120	115	He	0.192	ppb	12.2	1163.43	0.0183	Pulse	0.1000	3
Sb	121	115	He	0.127	ppb	9.9	116.67	0.0018	Pulse	0.1000	3
Ba	137	115	He	0.110	ppb	33.8	50.00	0.0008	Pulse	0.1000	3
Tl	205	209	He	0.434	ppb	6.2	2843.73	0.0130	Pulse	0.1000	3
Pb	208	209	He	0.123	ppb	23.8	1453.43	0.0066	Pulse	0.1000	3
U	238	209	He	0.013	ppb	14.6	170.01	0.0008	Pulse	0.1000	3

ISTD Table:

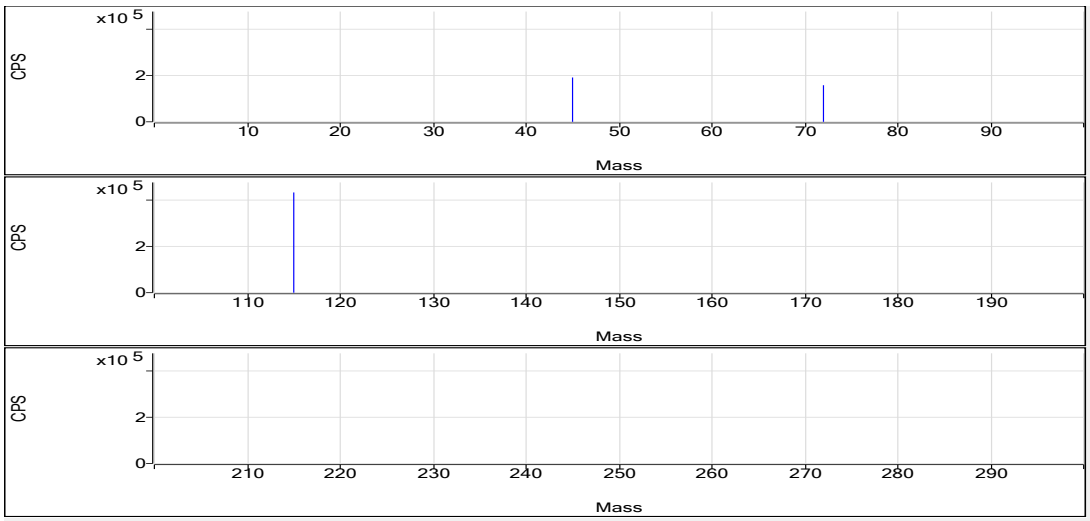
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3257014.01	3.2	100.5	Pulse	0.1000	3
No Gas	Ge	72	1415022.53	2.9	98.3	Pulse	0.1000	3
H2	Sc	45	192061.72	3.9	98.3	Pulse	0.1000	3
H2	Ge	72	158544.23	2.8	97.3	Pulse	0.1000	3
H2	In	115	434258.47	3.6	100.2	Pulse	0.1000	3
He	Sc	45	40857.66	0.5	102.2	Pulse	0.1000	3
He	Ge	72	72449.16	1.8	100.2	Pulse	0.1000	3
He	In	115	63495.63	1.6	98.3	Pulse	0.1000	3
He	Tb	159	282843.42	0.8	98.9	Pulse	0.1000	3
He	Bi	209	218652.19	0.2	98.4	Pulse	0.1000	3

No Gas

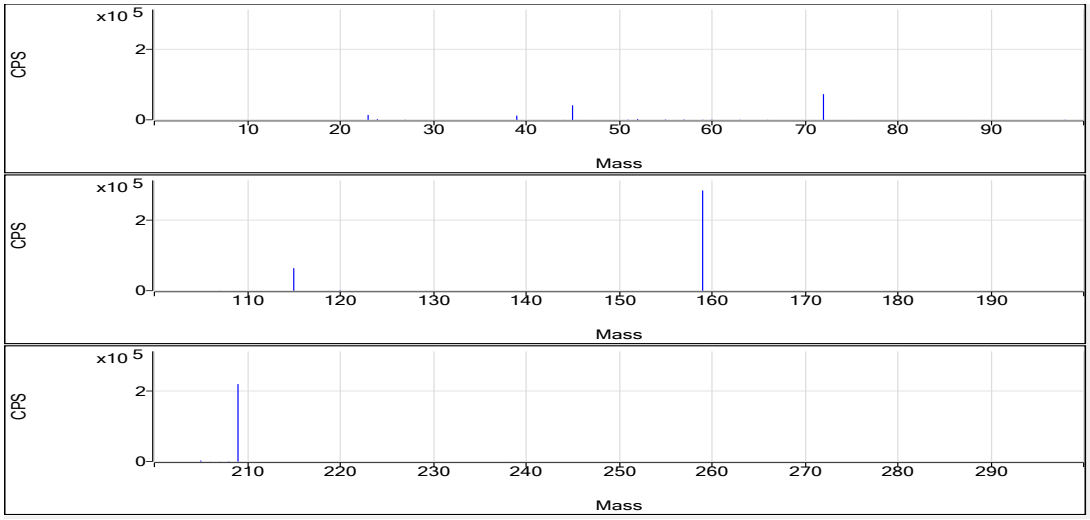


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.177	0.0003	384.01	0.0013	4.694E-05
Be	9	1	No Gas	0.204	0.0003	446.01	0.0013	4.694E-05
Be	9	1	No Gas	0.226	0.0003	500.01	0.0013	4.694E-05
Se	78	2	H2	0.194	0.0001	14.00	0.0004	1.089E-05
Se	78	2	H2	0.284	0.0001	18.67	0.0004	1.089E-05
Se	78	2	H2	0.175	0.0001	12.67	0.0004	1.089E-05
Na	23	3	He	46.054	0.1856	13206.17	0.0017	0.1065
Na	23	3	He	47.431	0.1879	13876.91	0.0017	0.1065
Na	23	3	He	50.5	0.1932	13976.94	0.0017	0.1065
Mg	24	3	He	23.755	0.0249	1770.17	0.0008	0.004846
Mg	24	3	He	25.9	0.0267	1970.21	0.0008	0.004846
Mg	24	3	He	24.423	0.0254	1840.19	0.0008	0.004846
Al	27	3	He	20.63	0.006	430.03	0.0002	0.001063
Al	27	3	He	19.723	0.0058	430.02	0.0002	0.001063
Al	27	3	He	16.786	0.0051	370.01	0.0002	0.001063
K	39	3	He	44.094	0.168	11955.19	0.0006	0.1436
K	39	3	He	37.254	0.1642	12125.40	0.0006	0.1436
K	39	3	He	24.119	0.157	11354.76	0.0006	0.1436
Ca	44	3	He	47.669	0.0031	220.01	0	0.001611
Ca	44	3	He	35.344	0.0027	200.01	0	0.001611
Ca	44	3	He	37.15	0.0028	200.01	0	0.001611
Ti	47	3	He	0.029	0.0003	20.00	0.0003	0.0002737
Ti	47	3	He	1.069	0.0005	40.00	0.0003	0.0002737
Ti	47	3	He	-0.54	0.0001	10.00	0.0003	0.0002737
V	51	3	He	0.094	0.0084	600.02	0.0117	0.007326
V	51	3	He	0.119	0.0087	644.02	0.0117	0.007326
V	51	3	He	0.069	0.0081	588.01	0.0117	0.007326
Cr	52	3	He	0.197	0.0284	2020.22	0.0152	0.02538
Cr	52	3	He	0.139	0.0275	2030.21	0.0152	0.02538
Cr	52	3	He	0.258	0.0293	2120.21	0.0152	0.02538
Mn	55	3	He	-0.347	0.0118	840.05	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.443	0.0112	830.06	0.0059	0.01385
Mn	55	3	He	-0.005	0.0138	1000.06	0.0059	0.01385
Fe	57	3	He	43.713	0.0166	1180.09	0.0003	0.003918
Fe	57	3	He	30.421	0.0127	940.06	0.0003	0.003918
Fe	57	3	He	31.331	0.013	940.07	0.0003	0.003918
Co	59	3	He	0.106	0.0063	450.02	0.0305	0.003084
Co	59	3	He	0.103	0.0062	460.03	0.0305	0.003084
Co	59	3	He	0.189	0.0088	640.03	0.0305	0.003084
Ni	60	3	He	0.494	0.0133	950.06	0.0088	0.009003
Ni	60	3	He	0.101	0.0099	730.04	0.0088	0.009003
Ni	60	3	He	0.187	0.0106	770.04	0.0088	0.009003
Cu	63	3	He	0.061	0.0065	460.02	0.0249	0.004937
Cu	63	3	He	0.16	0.0089	660.03	0.0249	0.004937
Cu	63	3	He	0.04	0.0059	430.02	0.0249	0.004937
Zn	66	3	He	0.205	0.0053	380.02	0.0025	0.004836
Zn	66	3	He	0.402	0.0058	430.02	0.0025	0.004836
Zn	66	3	He	-0.562	0.0035	250.01	0.0025	0.004836
As	75	3	He	0.122	0.0006	46.00	0.0017	0.0004347
As	75	3	He	0.077	0.0006	42.00	0.0017	0.0004347
As	75	3	He	0.084	0.0006	42.00	0.0017	0.0004347
Sr	88	3	He	0.229	0.0026	160.01	0.0078	0.0007762
Sr	88	3	He	0.099	0.0016	100.00	0.0078	0.0007762
Sr	88	3	He	0.082	0.0014	90.00	0.0078	0.0007762
Mo	98	3	He	0.369	0.0087	540.04	0.022	0.0005162
Mo	98	3	He	0.343	0.0081	520.03	0.022	0.0005162
Mo	98	3	He	0.291	0.0069	440.02	0.022	0.0005162
Ag	107	3	He	0.109	0.0054	340.02	0.0455	0.0004641
Ag	107	3	He	0.109	0.0054	350.02	0.0455	0.0004641
Ag	107	3	He	0.128	0.0063	400.02	0.0455	0.0004641
Cd	111	3	He	0.169	0.0009	54.00	0.0048	5.152E-05
Cd	111	3	He	0.138	0.0007	46.00	0.0048	5.152E-05
Cd	111	3	He	0.061	0.0003	22.00	0.0048	5.152E-05
Sn	120	3	He	0.165	0.0179	1120.08	0.0143	0.01559
Sn	120	3	He	0.201	0.0185	1190.09	0.0143	0.01559
Sn	120	3	He	0.209	0.0186	1180.11	0.0143	0.01559
Sb	121	3	He	0.121	0.0018	110.00	0.0124	0.000258
Sb	121	3	He	0.142	0.002	130.01	0.0124	0.000258
Sb	121	3	He	0.119	0.0017	110.00	0.0124	0.000258
Ba	137	3	He	0.112	0.0008	50.00	0.0044	0.000309
Ba	137	3	He	0.071	0.0006	40.00	0.0044	0.000309
Ba	137	3	He	0.145	0.0009	60.00	0.0044	0.000309
Tl	205	3	He	0.442	0.0132	2890.41	0.0276	0.001005
Tl	205	3	He	0.456	0.0136	2970.43	0.0276	0.001005
Tl	205	3	He	0.404	0.0122	2670.36	0.0276	0.001005
Pb	208	3	He	0.095	0.0056	710.05	0.0364	0.002176
Pb	208	3	He	0.12	0.0065	810.06	0.0364	0.002176
Pb	208	3	He	0.153	0.0078	910.08	0.0364	0.002176
U	238	3	He	0.011	0.0007	150.01	0.0421	0.00024
U	238	3	He	0.014	0.0008	180.01	0.0421	0.00024
U	238	3	He	0.014	0.0008	180.01	0.0421	0.00024
Sc	45	1	No Gas			3153708.08		
Sc	45	1	No Gas			3252963.39		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3364370.57		
Ge	72	1	No Gas			1371844.98		
Ge	72	1	No Gas			1418432.48		
Ge	72	1	No Gas			1454790.13		
Sc	45	2	H2			193877.99		
Sc	45	2	H2			183859.49		
Sc	45	2	H2			198447.67		
Ge	72	2	H2			161810.52		
Ge	72	2	H2			153498.74		
Ge	72	2	H2			160323.42		
In	115	2	H2			438903.20		
In	115	2	H2			416714.37		
In	115	2	H2			447157.84		
Sc	45	3	He			40948.02		
Sc	45	3	He			40607.10		
Sc	45	3	He			41017.85		
Ge	72	3	He			71166.12		
Ge	72	3	He			73839.51		
Ge	72	3	He			72341.86		
In	115	3	He			62440.08		
In	115	3	He			64498.97		
In	115	3	He			63575.07		
Tb	159	3	He			280551.93		
Tb	159	3	He			282729.18		
Tb	159	3	He			285249.14		
Bi	209	3	He			218384.27		
Bi	209	3	He			218354.78		
Bi	209	3	He			219217.52		

Quantitation Report

Data File Name	034SMPL.d
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Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

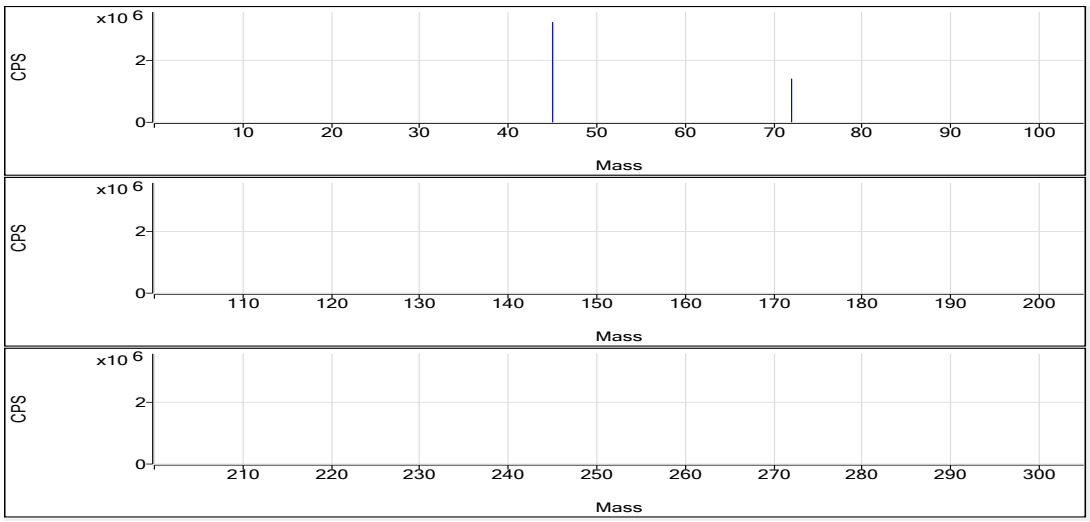
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.166	ppb	10.4	377.34	0.0003	Pulse	0.5000	3
Se	78	72	H2	0.165	ppb	30.6	11.78	0.0001	Pulse	1.5000	3
Na	23	72	He	44.586	ppb	3.3	13169.54	0.1830	Pulse	0.1000	3
Mg	24	72	He	23.603	ppb	6.4	1780.17	0.0247	Pulse	0.1000	3
Al	27	72	He	20.353	ppb	27.0	430.02	0.0060	Pulse	0.1000	3
K	39	72	He	35.029	ppb	26.7	11728.41	0.1630	Pulse	0.1000	3
Ca	44	72	He	48.020	ppb	26.8	223.34	0.0031	Pulse	0.1000	3
Ti	47	72	He	-0.351	ppb	N/A	13.33	0.0002	Pulse	0.1000	3
V	51	72	He	0.113	ppb	18.9	622.02	0.0086	Pulse	0.5000	3
Cr	52	72	He	0.166	ppb	60.2	2006.89	0.0279	Pulse	0.1000	3
Mn	55	72	He	-0.307	ppb	N/A	866.72	0.0120	Pulse	0.1000	3
Fe	57	72	He	28.718	ppb	14.0	880.06	0.0122	Pulse	0.1000	3
Co	59	72	He	0.136	ppb	28.0	520.03	0.0072	Pulse	0.1000	3
Ni	60	72	He	0.114	ppb	66.3	720.04	0.0100	Pulse	0.1000	3
Cu	63	72	He	0.121	ppb	28.1	573.37	0.0080	Pulse	0.1000	3
Zn	66	72	He	-0.137	ppb	N/A	323.35	0.0045	Pulse	0.1000	3
As	75	72	He	0.118	ppb	10.3	46.00	0.0006	Pulse	0.5000	3
Sr	88	115	He	0.208	ppb	49.5	153.34	0.0024	Pulse	0.1000	3
Mo	98	115	He	0.318	ppb	26.6	480.03	0.0075	Pulse	0.1000	3
Ag	107	115	He	0.092	ppb	6.9	296.68	0.0047	Pulse	0.1000	3
Cd	111	115	He	0.090	ppb	23.8	30.67	0.0005	Pulse	0.5000	3
Sn	120	115	He	0.262	ppb	66.1	1233.66	0.0193	Pulse	0.1000	3
Sb	121	115	He	0.089	ppb	65.2	86.67	0.0014	Pulse	0.1000	3
Ba	137	115	He	0.037	ppb	100.5	30.00	0.0005	Pulse	0.1000	3
Tl	205	209	He	0.379	ppb	11.0	2503.67	0.0115	Pulse	0.1000	3
Pb	208	209	He	0.089	ppb	14.9	1176.73	0.0054	Pulse	0.1000	3
U	238	209	He	0.007	ppb	43.8	120.01	0.0006	Pulse	0.1000	3

ISTD Table:

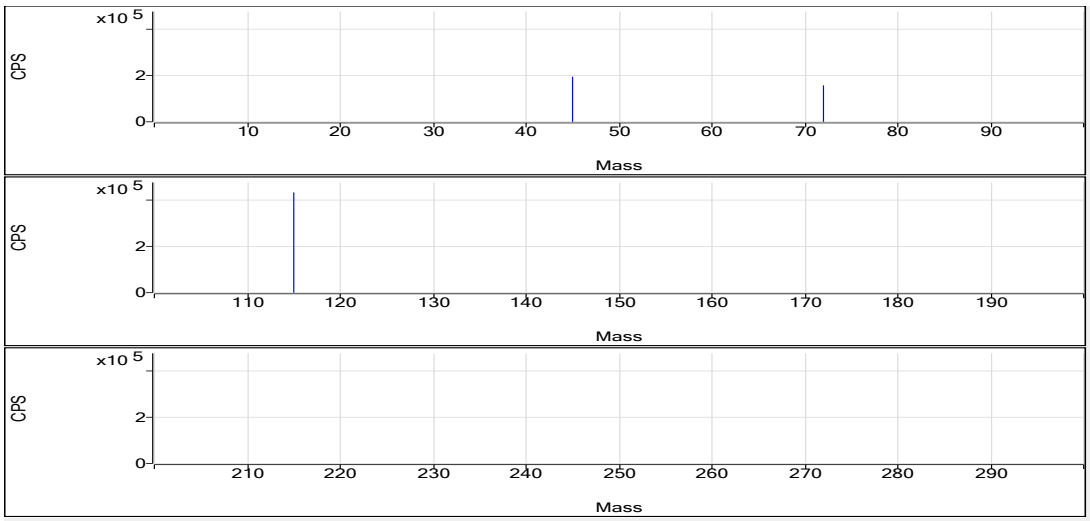
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3261060.26	2.6	100.6	Pulse	0.1000	3
No Gas	Ge	72	1421036.23	2.2	98.7	Pulse	0.1000	3
H2	Sc	45	194060.00	1.8	99.3	Pulse	0.1000	3
H2	Ge	72	156795.45	0.9	96.2	Pulse	0.1000	3
H2	In	115	431588.78	2.4	99.6	Pulse	0.1000	3
He	Sc	45	41963.99	1.0	104.9	Pulse	0.1000	3
He	Ge	72	71943.50	1.2	99.5	Pulse	0.1000	3
He	In	115	63812.87	1.5	98.8	Pulse	0.1000	3
He	Tb	159	280253.02	0.8	98.0	Pulse	0.1000	3
He	Bi	209	217820.17	0.7	98.0	Pulse	0.1000	3

No Gas

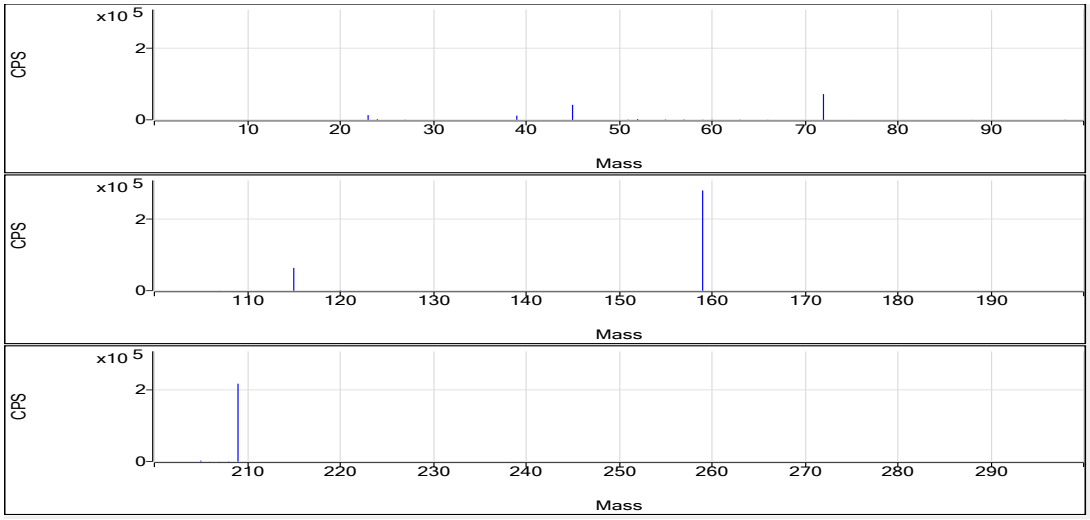


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.176	0.0003	386.01	0.0013	4.694E-05
Be	9	1	No Gas	0.146	0.0002	340.01	0.0013	4.694E-05
Be	9	1	No Gas	0.177	0.0003	406.01	0.0013	4.694E-05
Se	78	2	H2	0.223	0.0001	15.33	0.0004	1.089E-05
Se	78	2	H2	0.137	0.0001	10.00	0.0004	1.089E-05
Se	78	2	H2	0.134	0.0001	10.00	0.0004	1.089E-05
Na	23	3	He	45.366	0.1844	13446.47	0.0017	0.1065
Na	23	3	He	42.901	0.1802	12885.92	0.0017	0.1065
Na	23	3	He	45.49	0.1846	13176.23	0.0017	0.1065
Mg	24	3	He	23.206	0.0244	1780.17	0.0008	0.004846
Mg	24	3	He	25.264	0.0261	1870.16	0.0008	0.004846
Mg	24	3	He	22.338	0.0237	1690.17	0.0008	0.004846
Al	27	3	He	20.593	0.006	440.02	0.0002	0.001063
Al	27	3	He	25.715	0.0073	520.03	0.0002	0.001063
Al	27	3	He	14.751	0.0046	330.02	0.0002	0.001063
K	39	3	He	45.456	0.1687	12305.57	0.0006	0.1436
K	39	3	He	27.35	0.1587	11354.63	0.0006	0.1436
K	39	3	He	32.281	0.1615	11525.04	0.0006	0.1436
Ca	44	3	He	58.512	0.0034	250.01	0	0.001611
Ca	44	3	He	33.662	0.0027	190.01	0	0.001611
Ca	44	3	He	51.885	0.0032	230.01	0	0.001611
Ti	47	3	He	-0.545	0.0001	10.00	0.0003	0.0002737
Ti	47	3	He	0.023	0.0003	20.00	0.0003	0.0002737
Ti	47	3	He	-0.533	0.0001	10.00	0.0003	0.0002737
V	51	3	He	0.091	0.0084	612.02	0.0117	0.007326
V	51	3	He	0.134	0.0089	636.02	0.0117	0.007326
V	51	3	He	0.114	0.0087	618.02	0.0117	0.007326
Cr	52	3	He	0.053	0.0262	1910.20	0.0152	0.02538
Cr	52	3	He	0.243	0.0291	2080.25	0.0152	0.02538
Cr	52	3	He	0.201	0.0284	2030.21	0.0152	0.02538
Mn	55	3	He	-0.186	0.0128	930.06	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.263	0.0123	880.05	0.0059	0.01385
Mn	55	3	He	-0.472	0.0111	790.05	0.0059	0.01385
Fe	57	3	He	25.765	0.0114	830.05	0.0003	0.003918
Fe	57	3	He	33.289	0.0136	970.07	0.0003	0.003918
Fe	57	3	He	27.1	0.0118	840.05	0.0003	0.003918
Co	59	3	He	0.16	0.008	580.04	0.0305	0.003084
Co	59	3	He	0.156	0.0078	560.03	0.0305	0.003084
Co	59	3	He	0.092	0.0059	420.02	0.0305	0.003084
Ni	60	3	He	0.146	0.0103	750.04	0.0088	0.009003
Ni	60	3	He	0.169	0.0105	750.05	0.0088	0.009003
Ni	60	3	He	0.028	0.0092	660.04	0.0088	0.009003
Cu	63	3	He	0.159	0.0089	650.04	0.0249	0.004937
Cu	63	3	He	0.094	0.0073	520.03	0.0249	0.004937
Cu	63	3	He	0.111	0.0077	550.04	0.0249	0.004937
Zn	66	3	He	-0.406	0.0038	280.01	0.0025	0.004836
Zn	66	3	He	-0.261	0.0042	300.01	0.0025	0.004836
Zn	66	3	He	0.256	0.0055	390.02	0.0025	0.004836
As	75	3	He	0.129	0.0007	48.00	0.0017	0.0004347
As	75	3	He	0.12	0.0006	46.00	0.0017	0.0004347
As	75	3	He	0.105	0.0006	44.00	0.0017	0.0004347
Sr	88	3	He	0.101	0.0016	100.00	0.0078	0.0007762
Sr	88	3	He	0.307	0.0032	200.01	0.0078	0.0007762
Sr	88	3	He	0.217	0.0025	160.01	0.0078	0.0007762
Mo	98	3	He	0.233	0.0056	360.02	0.022	0.0005162
Mo	98	3	He	0.402	0.0094	590.03	0.022	0.0005162
Mo	98	3	He	0.32	0.0076	490.03	0.022	0.0005162
Ag	107	3	He	0.097	0.0049	310.02	0.0455	0.0004641
Ag	107	3	He	0.095	0.0048	300.02	0.0455	0.0004641
Ag	107	3	He	0.085	0.0043	280.01	0.0455	0.0004641
Cd	111	3	He	0.094	0.0005	32.00	0.0048	5.152E-05
Cd	111	3	He	0.108	0.0006	36.00	0.0048	5.152E-05
Cd	111	3	He	0.066	0.0004	24.00	0.0048	5.152E-05
Sn	120	3	He	0.459	0.0221	1410.79	0.0143	0.01559
Sn	120	3	He	0.133	0.0175	1100.08	0.0143	0.01559
Sn	120	3	He	0.195	0.0184	1190.10	0.0143	0.01559
Sb	121	3	He	0.03	0.0006	40.00	0.0124	0.000258
Sb	121	3	He	0.146	0.0021	130.01	0.0124	0.000258
Sb	121	3	He	0.091	0.0014	90.00	0.0124	0.000258
Ba	137	3	He	0.037	0.0005	30.00	0.0044	0.000309
Ba	137	3	He	0.075	0.0006	40.00	0.0044	0.000309
Ba	137	3	He	0	0.0003	20.00	0.0044	0.000309
Tl	205	3	He	0.427	0.0128	2810.40	0.0276	0.001005
Tl	205	3	He	0.358	0.0109	2360.30	0.0276	0.001005
Tl	205	3	He	0.352	0.0107	2340.30	0.0276	0.001005
Pb	208	3	He	0.099	0.0058	710.04	0.0364	0.002176
Pb	208	3	He	0.093	0.0055	650.04	0.0364	0.002176
Pb	208	3	He	0.074	0.0049	620.03	0.0364	0.002176
U	238	3	He	0.007	0.0005	120.01	0.0421	0.00024
U	238	3	He	0.004	0.0004	90.00	0.0421	0.00024
U	238	3	He	0.011	0.0007	150.01	0.0421	0.00024
Sc	45	1	No Gas			3163937.45		
Sc	45	1	No Gas			3294159.33		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3325084.01		
Ge	72	1	No Gas			1390448.73		
Ge	72	1	No Gas			1420524.20		
Ge	72	1	No Gas			1452135.76		
Sc	45	2	H2			195043.86		
Sc	45	2	H2			190241.13		
Sc	45	2	H2			196895.02		
Ge	72	2	H2			156735.20		
Ge	72	2	H2			155390.75		
Ge	72	2	H2			158260.40		
In	115	2	H2			439349.52		
In	115	2	H2			420028.27		
In	115	2	H2			435388.55		
Sc	45	3	He			41619.54		
Sc	45	3	He			42412.17		
Sc	45	3	He			41860.27		
Ge	72	3	He			72925.27		
Ge	72	3	He			71528.00		
Ge	72	3	He			71377.24		
In	115	3	He			63735.28		
In	115	3	He			62941.69		
In	115	3	He			64790.49		
Tb	159	3	He			278063.65		
Tb	159	3	He			280096.75		
Tb	159	3	He			282598.65		
Bi	209	3	He			219297.30		
Bi	209	3	He			216269.16		
Bi	209	3	He			217894.04		

Quantitation Report

Data File Name	035SMPL.d
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Acq Time	2023-08-10 09:03:25
Sample Name	RINSE
Sample Type	Sample
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Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

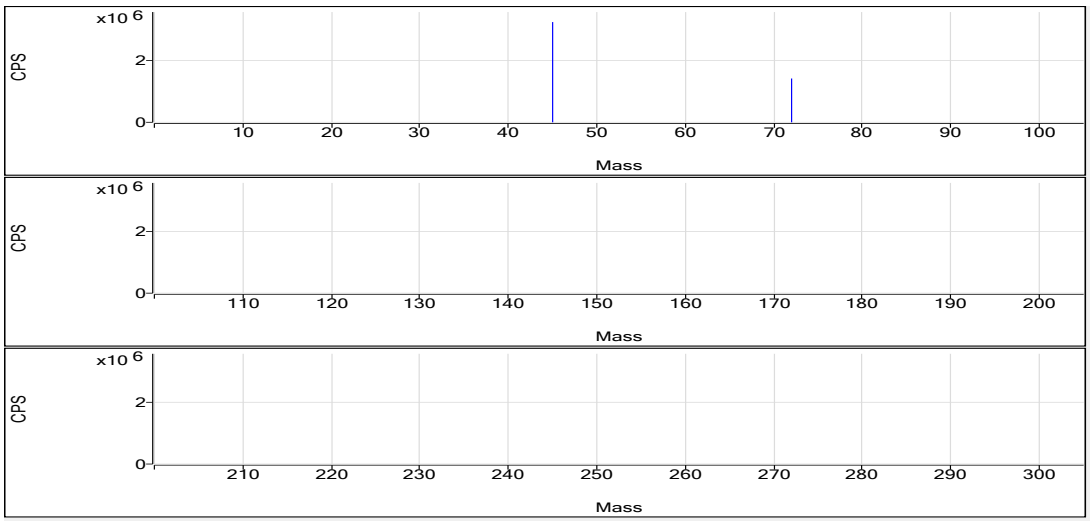
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.153	ppb	14.4	353.34	0.0002	Pulse	0.5000	3
Se	78	72	H2	0.102	ppb	32.2	8.00	0.0001	Pulse	1.5000	3
Na	23	72	He	37.568	ppb	9.1	12205.36	0.1710	Pulse	0.1000	3
Mg	24	72	He	21.601	ppb	10.3	1646.82	0.0231	Pulse	0.1000	3
Al	27	72	He	16.858	ppb	29.0	366.68	0.0051	Pulse	0.1000	3
K	39	72	He	47.589	ppb	37.4	12132.07	0.1699	Pulse	0.1000	3
Ca	44	72	He	35.472	ppb	75.7	193.34	0.0027	Pulse	0.1000	3
Ti	47	72	He	0.212	ppb	401.3	23.33	0.0003	Pulse	0.1000	3
V	51	72	He	0.069	ppb	17.1	580.69	0.0081	Pulse	0.5000	3
Cr	52	72	He	0.038	ppb	115.8	1853.53	0.0260	Pulse	0.1000	3
Mn	55	72	He	-0.558	ppb	N/A	753.38	0.0106	Pulse	0.1000	3
Fe	57	72	He	27.101	ppb	15.9	840.06	0.0118	Pulse	0.1000	3
Co	59	72	He	0.102	ppb	32.8	443.36	0.0062	Pulse	0.1000	3
Ni	60	72	He	0.352	ppb	43.4	863.39	0.0121	Pulse	0.1000	3
Cu	63	72	He	0.028	ppb	161.5	403.35	0.0056	Pulse	0.1000	3
Zn	66	72	He	-0.179	ppb	N/A	313.35	0.0044	Pulse	0.1000	3
As	75	72	He	0.024	ppb	208.1	34.00	0.0005	Pulse	0.5000	3
Sr	88	115	He	0.150	ppb	77.1	123.34	0.0020	Pulse	0.1000	3
Mo	98	115	He	0.282	ppb	16.5	423.36	0.0067	Pulse	0.1000	3
Ag	107	115	He	0.096	ppb	13.9	306.68	0.0049	Pulse	0.1000	3
Cd	111	115	He	0.105	ppb	20.7	35.33	0.0006	Pulse	0.5000	3
Sn	120	115	He	0.192	ppb	53.0	1156.76	0.0183	Pulse	0.1000	3
Sb	121	115	He	0.064	ppb	30.7	66.67	0.0011	Pulse	0.1000	3
Ba	137	115	He	0.014	ppb	159.8	23.33	0.0004	Pulse	0.1000	3
Tl	205	209	He	0.300	ppb	2.9	2013.57	0.0093	Pulse	0.1000	3
Pb	208	209	He	0.112	ppb	7.0	1353.42	0.0063	Pulse	0.1000	3
U	238	209	He	0.008	ppb	47.6	123.34	0.0006	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3258931.83	3.0	100.5	Pulse	0.1000	3
No Gas	Ge	72	1423976.28	3.3	98.9	Pulse	0.1000	3
H2	Sc	45	192765.75	1.5	98.7	Pulse	0.1000	3
H2	Ge	72	158298.59	1.7	97.1	Pulse	0.1000	3
H2	In	115	433094.73	1.5	100.0	Pulse	0.1000	3
He	Sc	45	40276.22	2.1	100.7	Pulse	0.1000	3
He	Ge	72	71390.52	0.8	98.8	Pulse	0.1000	3
He	In	115	63187.57	2.5	97.8	Pulse	0.1000	3
He	Tb	159	279850.64	0.5	97.8	Pulse	0.1000	3
He	Bi	209	216524.71	1.4	97.4	Pulse	0.1000	3

No Gas



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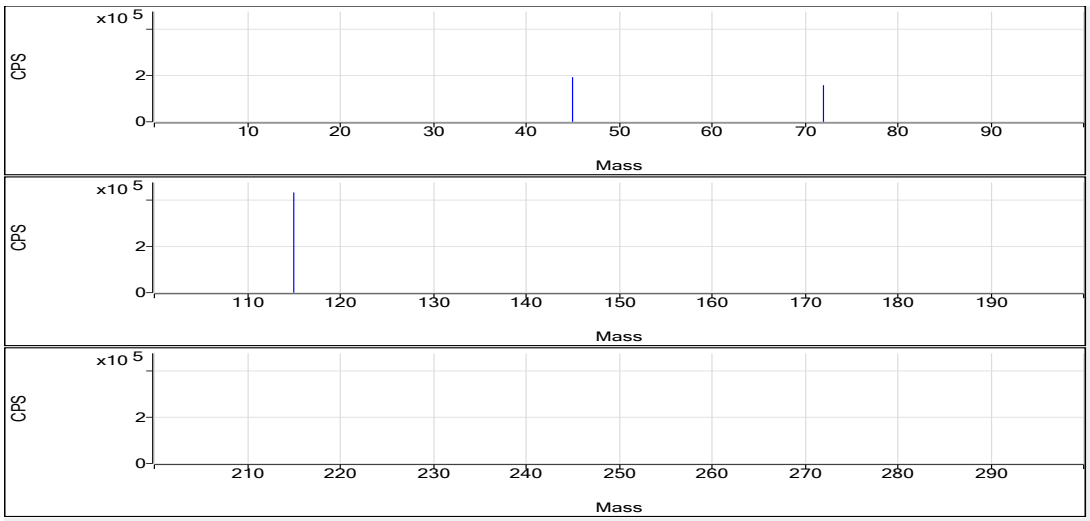
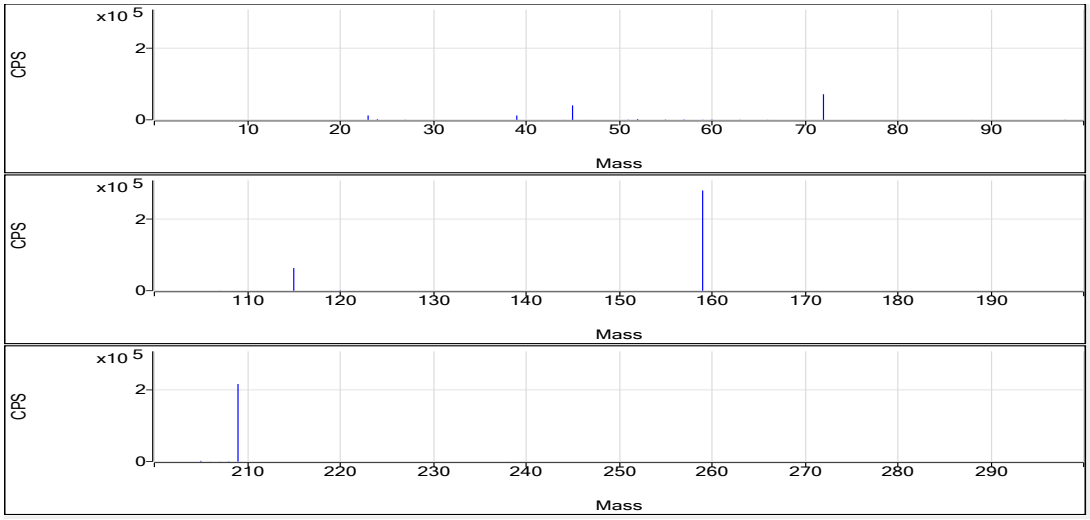


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.173	0.0003	376.01	0.0013	4.694E-05
Be	9	1	No Gas	0.129	0.0002	312.01	0.0013	4.694E-05
Be	9	1	No Gas	0.158	0.0003	372.01	0.0013	4.694E-05
Se	78	2	H2	0.134	0.0001	10.00	0.0004	1.089E-05
Se	78	2	H2	0.104	0.0001	8.00	0.0004	1.089E-05
Se	78	2	H2	0.068	0	6.00	0.0004	1.089E-05
Na	23	3	He	38.673	0.1729	12385.47	0.0017	0.1065
Na	23	3	He	33.741	0.1644	11805.00	0.0017	0.1065
Na	23	3	He	40.289	0.1757	12425.62	0.0017	0.1065
Mg	24	3	He	23.229	0.0244	1750.16	0.0008	0.004846
Mg	24	3	He	22.504	0.0238	1710.16	0.0008	0.004846
Mg	24	3	He	19.071	0.0209	1480.13	0.0008	0.004846
Al	27	3	He	22.199	0.0064	460.02	0.0002	0.001063
Al	27	3	He	15.793	0.0049	350.02	0.0002	0.001063
Al	27	3	He	12.582	0.0041	290.01	0.0002	0.001063
K	39	3	He	68.148	0.1813	12986.10	0.0006	0.1436
K	39	3	He	37.124	0.1641	11785.13	0.0006	0.1436
K	39	3	He	37.496	0.1643	11624.97	0.0006	0.1436
Ca	44	3	He	20.047	0.0022	160.01	0	0.001611
Ca	44	3	He	19.886	0.0022	160.01	0	0.001611
Ca	44	3	He	66.483	0.0037	260.01	0	0.001611
Ti	47	3	He	1.135	0.0006	40.00	0.0003	0.0002737
Ti	47	3	He	-0.536	0.0001	10.00	0.0003	0.0002737
Ti	47	3	He	0.036	0.0003	20.00	0.0003	0.0002737
V	51	3	He	0.075	0.0082	588.02	0.0117	0.007326
V	51	3	He	0.076	0.0082	590.02	0.0117	0.007326
V	51	3	He	0.055	0.008	564.02	0.0117	0.007326
Cr	52	3	He	-0.008	0.0253	1810.18	0.0152	0.02538
Cr	52	3	He	0.08	0.0266	1910.22	0.0152	0.02538
Cr	52	3	He	0.041	0.026	1840.18	0.0152	0.02538
Mn	55	3	He	-0.692	0.0098	700.04	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.695	0.0098	700.04	0.0059	0.01385
Mn	55	3	He	-0.287	0.0122	860.06	0.0059	0.01385
Fe	57	3	He	22.134	0.0103	740.04	0.0003	0.003918
Fe	57	3	He	29.747	0.0125	900.06	0.0003	0.003918
Fe	57	3	He	29.423	0.0124	880.07	0.0003	0.003918
Co	59	3	He	0.109	0.0064	460.02	0.0305	0.003084
Co	59	3	He	0.132	0.0071	510.03	0.0305	0.003084
Co	59	3	He	0.066	0.0051	360.02	0.0305	0.003084
Ni	60	3	He	0.405	0.0126	900.06	0.0088	0.009003
Ni	60	3	He	0.18	0.0106	760.06	0.0088	0.009003
Ni	60	3	He	0.471	0.0131	930.06	0.0088	0.009003
Cu	63	3	He	-0.002	0.0049	350.02	0.0249	0.004937
Cu	63	3	He	0.081	0.007	500.02	0.0249	0.004937
Cu	63	3	He	0.006	0.0051	360.02	0.0249	0.004937
Zn	66	3	He	-0.207	0.0043	310.01	0.0025	0.004836
Zn	66	3	He	-0.665	0.0032	230.01	0.0025	0.004836
Zn	66	3	He	0.333	0.0057	400.02	0.0025	0.004836
As	75	3	He	-0.025	0.0004	28.00	0.0017	0.0004347
As	75	3	He	0.022	0.0005	34.00	0.0017	0.0004347
As	75	3	He	0.075	0.0006	40.00	0.0017	0.0004347
Sr	88	3	He	0.024	0.001	60.00	0.0078	0.0007762
Sr	88	3	He	0.176	0.0022	140.01	0.0078	0.0007762
Sr	88	3	He	0.251	0.0027	170.01	0.0078	0.0007762
Mo	98	3	He	0.282	0.0067	420.02	0.022	0.0005162
Mo	98	3	He	0.235	0.0057	370.02	0.022	0.0005162
Mo	98	3	He	0.328	0.0077	480.03	0.022	0.0005162
Ag	107	3	He	0.081	0.0042	260.01	0.0455	0.0004641
Ag	107	3	He	0.101	0.0051	330.02	0.0455	0.0004641
Ag	107	3	He	0.107	0.0053	330.01	0.0455	0.0004641
Cd	111	3	He	0.089	0.0005	30.00	0.0048	5.152E-05
Cd	111	3	He	0.13	0.0007	44.00	0.0048	5.152E-05
Cd	111	3	He	0.097	0.0005	32.00	0.0048	5.152E-05
Sn	120	3	He	0.12	0.0173	1080.08	0.0143	0.01559
Sn	120	3	He	0.147	0.0177	1150.09	0.0143	0.01559
Sn	120	3	He	0.308	0.02	1240.10	0.0143	0.01559
Sb	121	3	He	0.044	0.0008	50.00	0.0124	0.000258
Sb	121	3	He	0.066	0.0011	70.01	0.0124	0.000258
Sb	121	3	He	0.083	0.0013	80.00	0.0124	0.000258
Ba	137	3	He	0.003	0.0003	20.00	0.0044	0.000309
Ba	137	3	He	0	0.0003	20.00	0.0044	0.000309
Ba	137	3	He	0.04	0.0005	30.00	0.0044	0.000309
Tl	205	3	He	0.297	0.0092	2020.23	0.0276	0.001005
Tl	205	3	He	0.293	0.0091	1980.24	0.0276	0.001005
Tl	205	3	He	0.31	0.0096	2040.25	0.0276	0.001005
Pb	208	3	He	0.103	0.0059	640.04	0.0364	0.002176
Pb	208	3	He	0.119	0.0065	860.07	0.0364	0.002176
Pb	208	3	He	0.114	0.0063	710.05	0.0364	0.002176
U	238	3	He	0.005	0.0005	100.00	0.0421	0.00024
U	238	3	He	0.006	0.0005	110.01	0.0421	0.00024
U	238	3	He	0.012	0.0008	160.01	0.0421	0.00024
Sc	45	1	No Gas			3151847.45		
Sc	45	1	No Gas			3278032.14		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3346915.89		
Ge	72	1	No Gas			1371304.35		
Ge	72	1	No Gas			1438303.42		
Ge	72	1	No Gas			1462321.07		
Sc	45	2	H2			191546.77		
Sc	45	2	H2			190643.43		
Sc	45	2	H2			196107.05		
Ge	72	2	H2			159050.87		
Ge	72	2	H2			155299.14		
Ge	72	2	H2			160545.75		
In	115	2	H2			433110.97		
In	115	2	H2			426555.23		
In	115	2	H2			439618.00		
Sc	45	3	He			41138.54		
Sc	45	3	He			40236.21		
Sc	45	3	He			39453.90		
Ge	72	3	He			71638.35		
Ge	72	3	He			71798.83		
Ge	72	3	He			70734.37		
In	115	3	He			62460.20		
In	115	3	He			65031.18		
In	115	3	He			62098.38		
Tb	159	3	He			281076.36		
Tb	159	3	He			278451.70		
Tb	159	3	He			280023.86		
Bi	209	3	He			219124.65		
Bi	209	3	He			217297.83		
Bi	209	3	He			213151.66		

Quantitation Report

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Acq Time	2023-08-10 09:05:26
Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

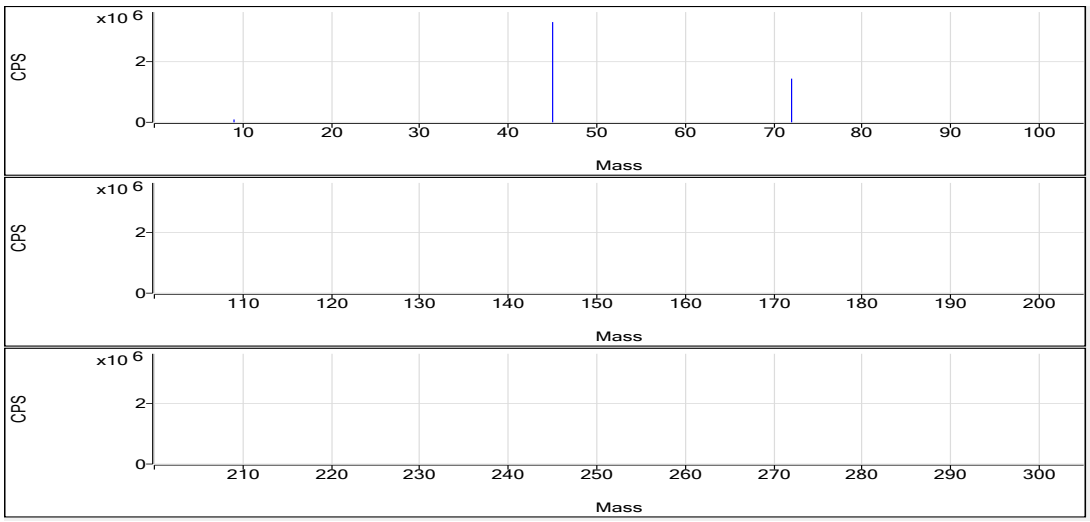
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	49.189	ppb	3.9	93047.73	0.0647	Pulse	0.5000	3
Se	78	72	H2	52.697	ppb	7.2	3238.37	0.0205	Pulse	1.5000	3
Na	23	72	He	5300.802	ppb	0.4	674504.16	9.2123	Pulse	0.1000	3
Mg	24	72	He	5298.877	ppb	0.7	327466.40	4.4723	Pulse	0.1000	3
Al	27	72	He	5187.674	ppb	1.0	91766.28	1.2533	Pulse	0.1000	3
K	39	72	He	5201.771	ppb	1.7	220839.61	3.0161	Pulse	0.1000	3
Ca	44	72	He	5226.905	ppb	4.9	12001.99	0.1640	Pulse	0.1000	3
Ti	47	72	He	5312.071	ppb	1.3	97557.18	1.3324	Pulse	0.1000	3
V	51	72	He	522.896	ppb	0.5	448385.84	6.1240	Pulse	0.5000	3
Cr	52	72	He	522.249	ppb	0.5	584114.07	7.9778	Pulse	0.1000	3
Mn	55	72	He	519.773	ppb	1.0	225654.15	3.0818	Pulse	0.1000	3
Fe	57	72	He	5122.583	ppb	2.3	108940.09	1.4880	Pulse	0.1000	3
Co	59	72	He	521.499	ppb	1.0	1165174.72	15.9143	Pulse	0.1000	3
Ni	60	72	He	520.698	ppb	1.0	335890.31	4.5877	Pulse	0.1000	3
Cu	63	72	He	517.325	ppb	0.9	944892.88	12.9055	Pulse	0.1000	3
Zn	66	72	He	510.459	ppb	0.8	92173.20	1.2589	Pulse	0.1000	3
As	75	72	He	512.615	ppb	0.3	65308.19	0.8920	Pulse	0.5000	3
Sr	88	115	He	52.227	ppb	2.9	25927.71	0.4090	Pulse	0.1000	3
Mo	98	115	He	51.608	ppb	1.5	72070.05	1.1370	Pulse	0.1000	3
Ag	107	115	He	51.432	ppb	1.6	148362.82	2.3406	Pulse	0.1000	3
Cd	111	115	He	51.985	ppb	1.4	15820.94	0.2496	Pulse	0.5000	3
Sn	120	115	He	52.740	ppb	3.6	48652.27	0.7675	Pulse	0.1000	3
Sb	121	115	He	52.698	ppb	1.6	41452.60	0.6540	Pulse	0.1000	3
Ba	137	115	He	514.238	ppb	0.1	142618.05	2.2500	Pulse	0.1000	3
Tl	205	209	He	51.683	ppb	2.0	314623.72	1.4297	Pulse	0.1000	3
Pb	208	209	He	51.511	ppb	1.3	413079.08	1.8771	Pulse	0.1000	3
U	238	209	He	51.047	ppb	1.3	472621.82	2.1476	Pulse	0.1000	3

ISTD Table:

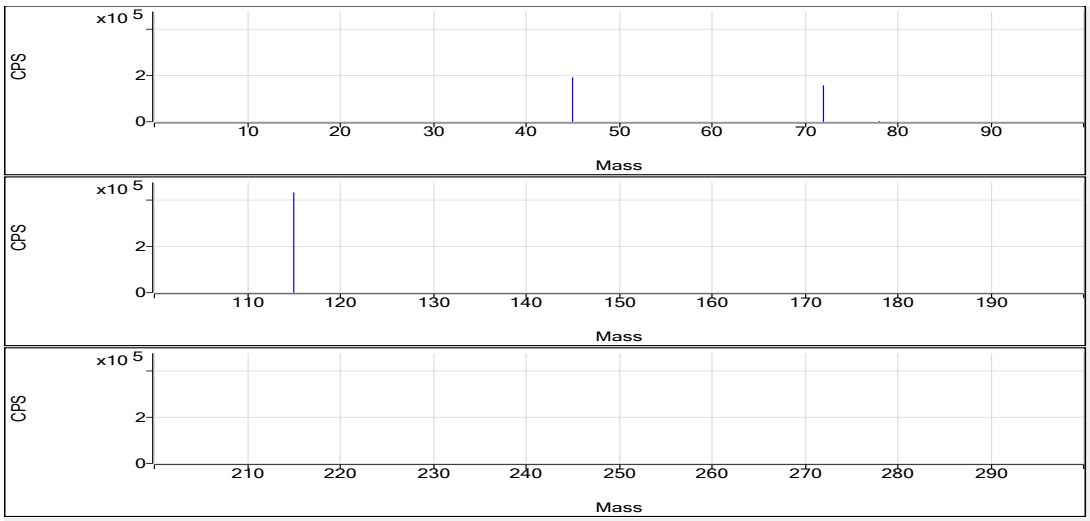
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3304520.26	1.5	102.0	Pulse	0.1000	3
No Gas	Ge	72	1439165.03	1.8	100.0	Pulse	0.1000	3
H2	Sc	45	193216.14	3.3	98.9	Pulse	0.1000	3
H2	Ge	72	158049.17	4.1	97.0	Pulse	0.1000	3
H2	In	115	434192.19	2.5	100.2	Pulse	0.1000	3
He	Sc	45	41947.48	1.0	104.9	Pulse	0.1000	3
He	Ge	72	73219.29	0.8	101.3	Pulse	0.1000	3
He	In	115	63386.04	0.1	98.1	Pulse	0.1000	3
He	Tb	159	281600.82	0.6	98.5	Pulse	0.1000	3
He	Bi	209	220087.69	1.2	99.1	Pulse	0.1000	3

No Gas

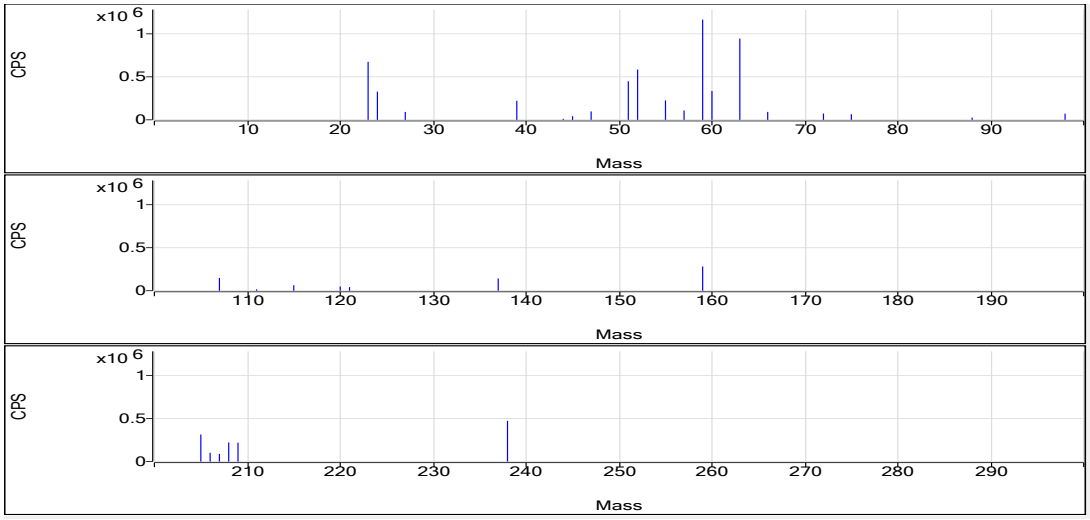


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	51.306	0.0675	95052.62	0.0013	4.694E-05
Be	9	1	No Gas	47.617	0.0626	91132.92	0.0013	4.694E-05
Be	9	1	No Gas	48.644	0.064	92957.66	0.0013	4.694E-05
Se	78	2	H2	55.032	0.0214	3337.73	0.0004	1.089E-05
Se	78	2	H2	54.715	0.0213	3261.04	0.0004	1.089E-05
Se	78	2	H2	48.344	0.0188	3116.35	0.0004	1.089E-05
Na	23	3	He	5279.946	9.1765	676934.99	0.0017	0.1065
Na	23	3	He	5320.505	9.2461	671762.49	0.0017	0.1065
Na	23	3	He	5301.956	9.2143	674814.99	0.0017	0.1065
Mg	24	3	He	5334.085	4.502	332108.04	0.0008	0.004846
Mg	24	3	He	5300.531	4.4737	325031.62	0.0008	0.004846
Mg	24	3	He	5262.015	4.4413	325259.55	0.0008	0.004846
Al	27	3	He	5189.903	1.2539	92496.69	0.0002	0.001063
Al	27	3	He	5236.405	1.2651	91913.80	0.0002	0.001063
Al	27	3	He	5136.714	1.241	90888.35	0.0002	0.001063
K	39	3	He	5156.228	2.991	220639.88	0.0006	0.1436
K	39	3	He	5146.764	2.9857	216924.35	0.0006	0.1436
K	39	3	He	5302.32	3.0716	224954.59	0.0006	0.1436
Ca	44	3	He	4951.888	0.1554	11464.82	0	0.001611
Ca	44	3	He	5454.482	0.171	12425.64	0	0.001611
Ca	44	3	He	5274.345	0.1654	12115.51	0	0.001611
Ti	47	3	He	5248.292	1.3164	97111.75	0.0003	0.0002737
Ti	47	3	He	5304.487	1.3305	96667.39	0.0003	0.0002737
Ti	47	3	He	5383.433	1.3503	98892.40	0.0003	0.0002737
V	51	3	He	520.254	6.0931	449482.00	0.0117	0.007326
V	51	3	He	525.607	6.1557	447235.06	0.0117	0.007326
V	51	3	He	522.828	6.1232	448440.47	0.0117	0.007326
Cr	52	3	He	519.286	7.9327	585184.17	0.0152	0.02538
Cr	52	3	He	524.671	8.0147	582294.29	0.0152	0.02538
Cr	52	3	He	522.789	7.986	584863.74	0.0152	0.02538
Mn	55	3	He	521.779	3.0936	228211.81	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	513.82	3.0466	221348.47	0.0059	0.01385
Mn	55	3	He	523.719	3.1051	227402.16	0.0059	0.01385
Fe	57	3	He	5063.395	1.4709	108503.17	0.0003	0.003918
Fe	57	3	He	5256.737	1.5269	110932.33	0.0003	0.003918
Fe	57	3	He	5047.617	1.4663	107384.77	0.0003	0.003918
Co	59	3	He	515.459	15.73	1160380.69	0.0305	0.003084
Co	59	3	He	525.539	16.0375	1165180.06	0.0305	0.003084
Co	59	3	He	523.498	15.9753	1169963.42	0.0305	0.003084
Ni	60	3	He	514.628	4.5343	334488.00	0.0088	0.009003
Ni	60	3	He	523.619	4.6133	335174.88	0.0088	0.009003
Ni	60	3	He	523.846	4.6153	338008.04	0.0088	0.009003
Cu	63	3	He	512.031	12.7735	942284.28	0.0249	0.004937
Cu	63	3	He	520.803	12.9923	943931.00	0.0249	0.004937
Cu	63	3	He	519.14	12.9508	948463.35	0.0249	0.004937
Zn	66	3	He	505.843	1.2476	92031.87	0.0025	0.004836
Zn	66	3	He	514.036	1.2677	92102.76	0.0025	0.004836
Zn	66	3	He	511.5	1.2615	92384.98	0.0025	0.004836
As	75	3	He	511.146	0.8894	65610.23	0.0017	0.0004347
As	75	3	He	512.923	0.8925	64842.78	0.0017	0.0004347
As	75	3	He	513.778	0.894	65471.56	0.0017	0.0004347
Sr	88	3	He	53.639	0.4201	26645.91	0.0078	0.0007762
Sr	88	3	He	50.649	0.3967	25112.89	0.0078	0.0007762
Sr	88	3	He	52.392	0.4103	26024.32	0.0078	0.0007762
Mo	98	3	He	50.796	1.1191	70988.07	0.022	0.0005162
Mo	98	3	He	51.685	1.1387	72083.27	0.022	0.0005162
Mo	98	3	He	52.343	1.1532	73138.81	0.022	0.0005162
Ag	107	3	He	50.65	2.3051	146213.23	0.0455	0.0004641
Ag	107	3	He	51.367	2.3377	147982.04	0.0455	0.0004641
Ag	107	3	He	52.278	2.3791	150893.19	0.0455	0.0004641
Cd	111	3	He	52.81	0.2536	16083.26	0.0048	5.152E-05
Cd	111	3	He	51.658	0.248	15700.79	0.0048	5.152E-05
Cd	111	3	He	51.488	0.2472	15678.77	0.0048	5.152E-05
Sn	120	3	He	54.913	0.7985	50652.31	0.0143	0.01559
Sn	120	3	He	51.647	0.752	47602.12	0.0143	0.01559
Sn	120	3	He	51.658	0.7521	47702.39	0.0143	0.01559
Sb	121	3	He	52.073	0.6462	40990.83	0.0124	0.000258
Sb	121	3	He	53.687	0.6662	42175.24	0.0124	0.000258
Sb	121	3	He	52.335	0.6495	41191.72	0.0124	0.000258
Ba	137	3	He	514.177	2.2497	142702.96	0.0044	0.000309
Ba	137	3	He	514.52	2.2512	142510.52	0.0044	0.000309
Ba	137	3	He	514.015	2.249	142640.66	0.0044	0.000309
Tl	205	3	He	51.251	1.4178	315318.84	0.0276	0.001005
Tl	205	3	He	50.935	1.4091	311014.78	0.0276	0.001005
Tl	205	3	He	52.863	1.4624	317537.55	0.0276	0.001005
Pb	208	3	He	51.263	1.868	222783.67	0.0364	0.002176
Pb	208	3	He	51.006	1.8587	220960.84	0.0364	0.002176
Pb	208	3	He	52.265	1.9045	221026.85	0.0364	0.002176
U	238	3	He	50.372	2.1192	471318.63	0.0421	0.00024
U	238	3	He	51.055	2.148	474111.01	0.0421	0.00024
U	238	3	He	51.714	2.1757	472435.81	0.0421	0.00024
Sc	45	1	No Gas			3248141.20		
Sc	45	1	No Gas			3335511.20		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3329908.39		
Ge	72	1	No Gas			1408913.89		
Ge	72	1	No Gas			1455371.54		
Ge	72	1	No Gas			1453209.67		
Sc	45	2	H2			189510.66		
Sc	45	2	H2			189531.91		
Sc	45	2	H2			200605.86		
Ge	72	2	H2			155691.68		
Ge	72	2	H2			152994.93		
Ge	72	2	H2			165460.90		
In	115	2	H2			429272.69		
In	115	2	H2			426458.43		
In	115	2	H2			446845.46		
Sc	45	3	He			41499.81		
Sc	45	3	He			41980.58		
Sc	45	3	He			42362.06		
Ge	72	3	He			73768.65		
Ge	72	3	He			72653.35		
Ge	72	3	He			73235.88		
In	115	3	He			63826.29		
In	115	3	He			63674.73		
In	115	3	He			63795.56		
Tb	159	3	He			279858.32		
Tb	159	3	He			281850.33		
Tb	159	3	He			283093.82		
Bi	209	3	He			222399.61		
Bi	209	3	He			220722.71		
Bi	209	3	He			217140.76		

Quantitation Report

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Sample Type	CCB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

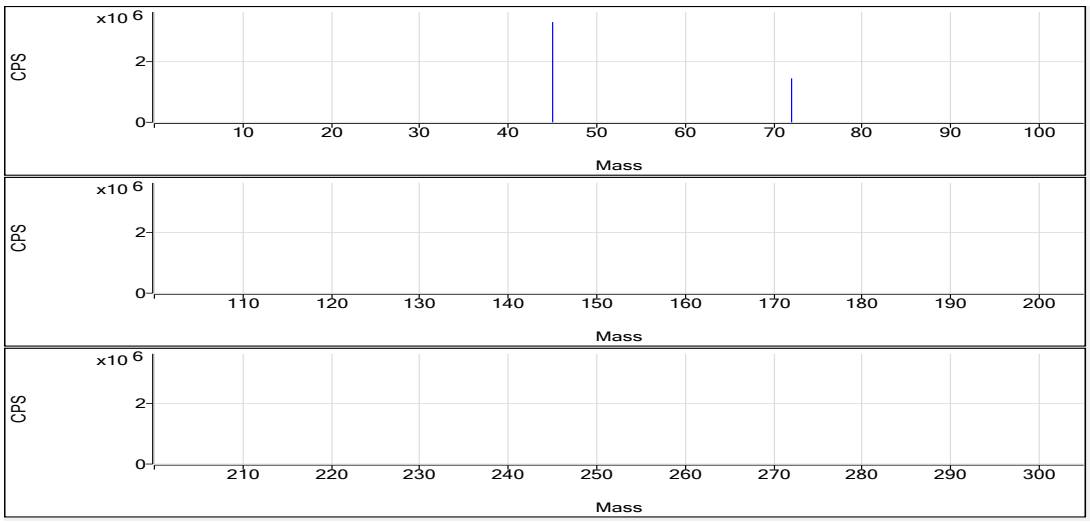
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.158	ppb	9.5	366.01	0.0003	Pulse	0.5000	3
Se	78	72	H2	0.157	ppb	14.1	11.56	0.0001	Pulse	1.5000	3
Na	23	72	He	36.671	ppb	1.9	12175.40	0.1695	Pulse	0.1000	3
Mg	24	72	He	18.130	ppb	6.8	1446.78	0.0201	Pulse	0.1000	3
Al	27	72	He	18.089	ppb	4.5	390.02	0.0054	Pulse	0.1000	3
K	39	72	He	24.590	ppb	16.9	11298.04	0.1572	Pulse	0.1000	3
Ca	44	72	He	37.715	ppb	58.3	200.01	0.0028	Pulse	0.1000	3
Ti	47	72	He	1.316	ppb	147.5	43.33	0.0006	Pulse	0.1000	3
V	51	72	He	0.145	ppb	41.0	648.02	0.0090	Pulse	0.5000	3
Cr	52	72	He	0.297	ppb	34.9	2150.23	0.0299	Pulse	0.1000	3
Mn	55	72	He	-0.248	ppb	N/A	890.06	0.0124	Pulse	0.1000	3
Fe	57	72	He	26.779	ppb	30.2	840.06	0.0117	Pulse	0.1000	3
Co	59	72	He	0.198	ppb	0.7	656.71	0.0091	Pulse	0.1000	3
Ni	60	72	He	0.280	ppb	25.6	823.38	0.0115	Pulse	0.1000	3
Cu	63	72	He	0.221	ppb	27.4	750.05	0.0104	Pulse	0.1000	3
Zn	66	72	He	-0.138	ppb	N/A	323.35	0.0045	Pulse	0.1000	3
As	75	72	He	0.150	ppb	38.4	50.00	0.0007	Pulse	0.5000	3
Sr	88	115	He	0.174	ppb	36.7	133.34	0.0021	Pulse	0.1000	3
Mo	98	115	He	0.277	ppb	12.6	413.36	0.0066	Pulse	0.1000	3
Ag	107	115	He	0.095	ppb	15.9	300.01	0.0048	Pulse	0.1000	3
Cd	111	115	He	0.124	ppb	36.6	40.67	0.0006	Pulse	0.5000	3
Sn	120	115	He	0.188	ppb	50.2	1143.42	0.0183	Pulse	0.1000	3
Sb	121	115	He	0.112	ppb	27.8	103.34	0.0016	Pulse	0.1000	3
Ba	137	115	He	0.197	ppb	27.0	73.33	0.0012	Pulse	0.1000	3
Tl	205	209	He	0.440	ppb	4.1	2877.10	0.0132	Pulse	0.1000	3
Pb	208	209	He	0.102	ppb	15.0	1290.08	0.0059	Pulse	0.1000	3
U	238	209	He	0.032	ppb	21.2	343.35	0.0016	Pulse	0.1000	3

ISTD Table:

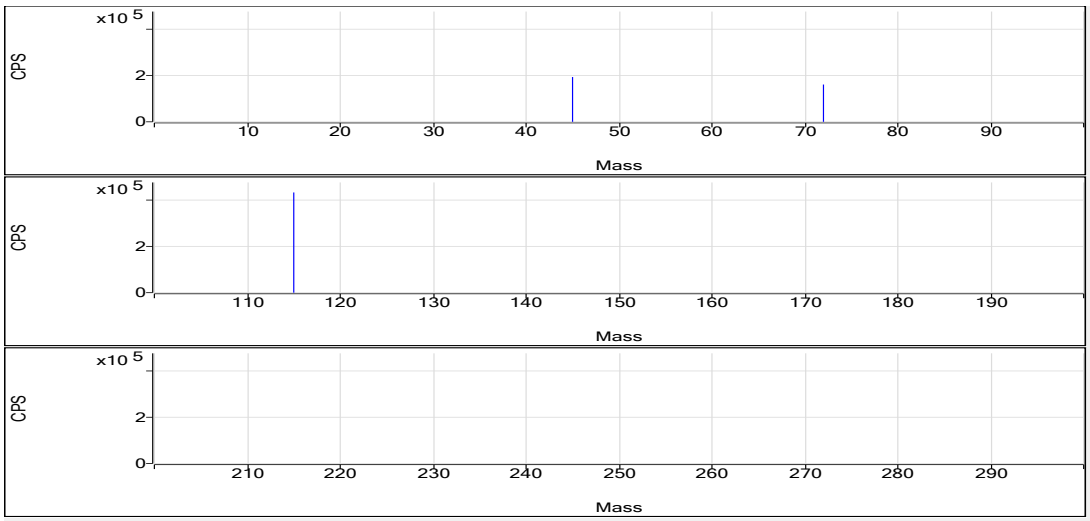
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3284632.03	2.0	101.3	Pulse	0.1000	3
No Gas	Ge	72	1439757.84	1.1	100.0	Pulse	0.1000	3
H2	Sc	45	192577.07	2.5	98.6	Pulse	0.1000	3
H2	Ge	72	160361.71	1.5	98.4	Pulse	0.1000	3
H2	In	115	431103.46	1.4	99.5	Pulse	0.1000	3
He	Sc	45	40727.66	2.9	101.9	Pulse	0.1000	3
He	Ge	72	71856.22	1.3	99.4	Pulse	0.1000	3
He	In	115	62578.66	1.0	96.9	Pulse	0.1000	3
He	Tb	159	279991.92	1.0	97.9	Pulse	0.1000	3
He	Bi	209	218720.65	0.5	98.4	Pulse	0.1000	3

No Gas

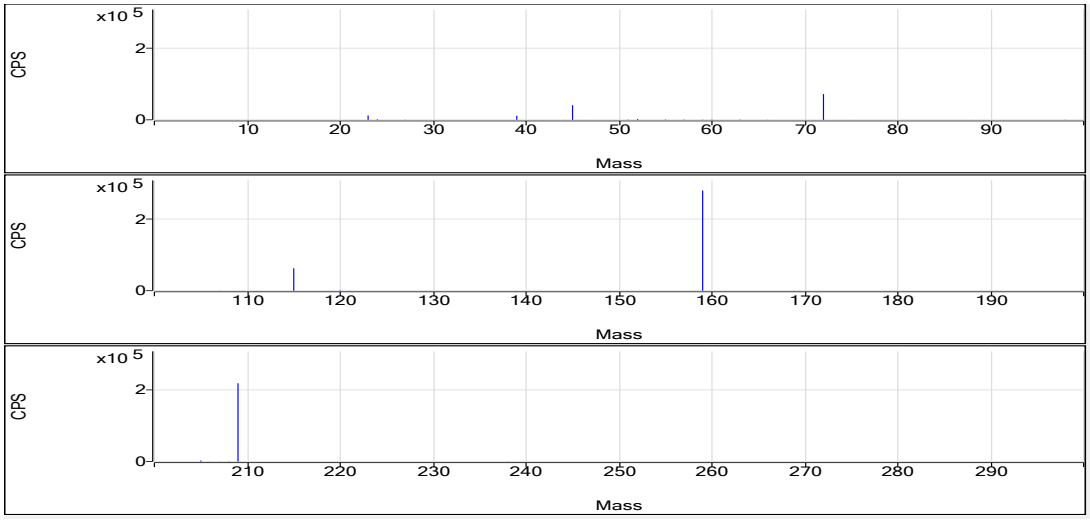


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.172	0.0003	390.01	0.0013	4.694E-05
Be	9	1	No Gas	0.159	0.0003	374.01	0.0013	4.694E-05
Be	9	1	No Gas	0.142	0.0002	334.01	0.0013	4.694E-05
Se	78	2	H2	0.143	0.0001	10.67	0.0004	1.089E-05
Se	78	2	H2	0.145	0.0001	10.67	0.0004	1.089E-05
Se	78	2	H2	0.182	0.0001	13.33	0.0004	1.089E-05
Na	23	3	He	36.213	0.1687	12245.44	0.0017	0.1065
Na	23	3	He	37.458	0.1708	12095.33	0.0017	0.1065
Na	23	3	He	36.344	0.1689	12185.42	0.0017	0.1065
Mg	24	3	He	19.413	0.0212	1540.13	0.0008	0.004846
Mg	24	3	He	18.038	0.0201	1420.11	0.0008	0.004846
Mg	24	3	He	16.94	0.0191	1380.11	0.0008	0.004846
Al	27	3	He	17.851	0.0054	390.02	0.0002	0.001063
Al	27	3	He	18.998	0.0056	400.02	0.0002	0.001063
Al	27	3	He	17.417	0.0053	380.02	0.0002	0.001063
K	39	3	He	29.338	0.1598	11604.95	0.0006	0.1436
K	39	3	He	22.826	0.1562	11064.53	0.0006	0.1436
K	39	3	He	21.606	0.1556	11224.63	0.0006	0.1436
Ca	44	3	He	59.002	0.0034	250.01	0	0.001611
Ca	44	3	He	39.069	0.0028	200.01	0	0.001611
Ca	44	3	He	15.074	0.0021	150.01	0	0.001611
Ti	47	3	He	-0.542	0.0001	10.00	0.0003	0.0002737
Ti	47	3	He	1.161	0.0006	40.00	0.0003	0.0002737
Ti	47	3	He	3.33	0.0011	80.00	0.0003	0.0002737
V	51	3	He	0.097	0.0085	614.02	0.0117	0.007326
V	51	3	He	0.211	0.0098	694.02	0.0117	0.007326
V	51	3	He	0.127	0.0088	636.02	0.0117	0.007326
Cr	52	3	He	0.405	0.0315	2290.24	0.0152	0.02538
Cr	52	3	He	0.197	0.0284	2010.21	0.0152	0.02538
Cr	52	3	He	0.29	0.0298	2150.24	0.0152	0.02538
Mn	55	3	He	-0.34	0.0118	860.06	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.17	0.0129	910.06	0.0059	0.01385
Mn	55	3	He	-0.234	0.0125	900.06	0.0059	0.01385
Fe	57	3	He	26.891	0.0117	850.06	0.0003	0.003918
Fe	57	3	He	18.649	0.0093	660.04	0.0003	0.003918
Fe	57	3	He	34.799	0.014	1010.07	0.0003	0.003918
Co	59	3	He	0.197	0.0091	660.04	0.0305	0.003084
Co	59	3	He	0.2	0.0092	650.05	0.0305	0.003084
Co	59	3	He	0.199	0.0091	660.05	0.0305	0.003084
Ni	60	3	He	0.198	0.0107	780.04	0.0088	0.009003
Ni	60	3	He	0.309	0.0117	830.05	0.0088	0.009003
Ni	60	3	He	0.332	0.0119	860.06	0.0088	0.009003
Cu	63	3	He	0.244	0.011	800.05	0.0249	0.004937
Cu	63	3	He	0.266	0.0116	820.05	0.0249	0.004937
Cu	63	3	He	0.152	0.0087	630.04	0.0249	0.004937
Zn	66	3	He	-0.062	0.0047	340.02	0.0025	0.004836
Zn	66	3	He	-0.244	0.0042	300.01	0.0025	0.004836
Zn	66	3	He	-0.107	0.0046	330.02	0.0025	0.004836
As	75	3	He	0.194	0.0008	56.00	0.0017	0.0004347
As	75	3	He	0.172	0.0007	52.00	0.0017	0.0004347
As	75	3	He	0.085	0.0006	42.00	0.0017	0.0004347
Sr	88	3	He	0.228	0.0026	160.01	0.0078	0.0007762
Sr	88	3	He	0.19	0.0023	140.01	0.0078	0.0007762
Sr	88	3	He	0.103	0.0016	100.01	0.0078	0.0007762
Mo	98	3	He	0.245	0.0059	370.02	0.022	0.0005162
Mo	98	3	He	0.314	0.0074	460.03	0.022	0.0005162
Mo	98	3	He	0.271	0.0065	410.02	0.022	0.0005162
Ag	107	3	He	0.092	0.0046	290.01	0.0455	0.0004641
Ag	107	3	He	0.082	0.0042	260.01	0.0455	0.0004641
Ag	107	3	He	0.112	0.0055	350.02	0.0455	0.0004641
Cd	111	3	He	0.129	0.0007	42.00	0.0048	5.152E-05
Cd	111	3	He	0.077	0.0004	26.00	0.0048	5.152E-05
Cd	111	3	He	0.167	0.0009	54.00	0.0048	5.152E-05
Sn	120	3	He	0.284	0.0196	1230.10	0.0143	0.01559
Sn	120	3	He	0.096	0.017	1050.08	0.0143	0.01559
Sn	120	3	He	0.184	0.0182	1150.08	0.0143	0.01559
Sb	121	3	He	0.108	0.0016	100.00	0.0124	0.000258
Sb	121	3	He	0.083	0.0013	80.00	0.0124	0.000258
Sb	121	3	He	0.145	0.0021	130.01	0.0124	0.000258
Ba	137	3	He	0.185	0.0011	70.00	0.0044	0.000309
Ba	137	3	He	0.151	0.001	60.00	0.0044	0.000309
Ba	137	3	He	0.255	0.0014	90.00	0.0044	0.000309
Tl	205	3	He	0.455	0.0136	2970.44	0.0276	0.001005
Tl	205	3	He	0.444	0.0133	2890.48	0.0276	0.001005
Tl	205	3	He	0.419	0.0126	2770.39	0.0276	0.001005
Pb	208	3	He	0.085	0.0053	640.04	0.0364	0.002176
Pb	208	3	He	0.113	0.0063	640.04	0.0364	0.002176
Pb	208	3	He	0.109	0.0061	800.05	0.0364	0.002176
U	238	3	He	0.039	0.0019	410.03	0.0421	0.00024
U	238	3	He	0.03	0.0015	330.02	0.0421	0.00024
U	238	3	He	0.026	0.0013	290.01	0.0421	0.00024
Sc	45	1	No Gas			3224798.08		
Sc	45	1	No Gas			3355685.57		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3273412.45		
Ge	72	1	No Gas			1429950.76		
Ge	72	1	No Gas			1458737.17		
Ge	72	1	No Gas			1430585.60		
Sc	45	2	H2			192012.93		
Sc	45	2	H2			188142.01		
Sc	45	2	H2			197576.27		
Ge	72	2	H2			160234.68		
Ge	72	2	H2			158080.28		
Ge	72	2	H2			162770.18		
In	115	2	H2			426841.48		
In	115	2	H2			428449.95		
In	115	2	H2			438018.94		
Sc	45	3	He			41038.33		
Sc	45	3	He			41740.69		
Sc	45	3	He			39403.96		
Ge	72	3	He			72602.88		
Ge	72	3	He			70814.95		
Ge	72	3	He			72150.82		
In	115	3	He			62640.88		
In	115	3	He			61958.70		
In	115	3	He			63163.15		
Tb	159	3	He			281716.30		
Tb	159	3	He			276660.29		
Tb	159	3	He			281599.18		
Bi	209	3	He			218698.69		
Bi	209	3	He			217594.70		
Bi	209	3	He			219868.57		

Quantitation Report

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Sample Type	CCV
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

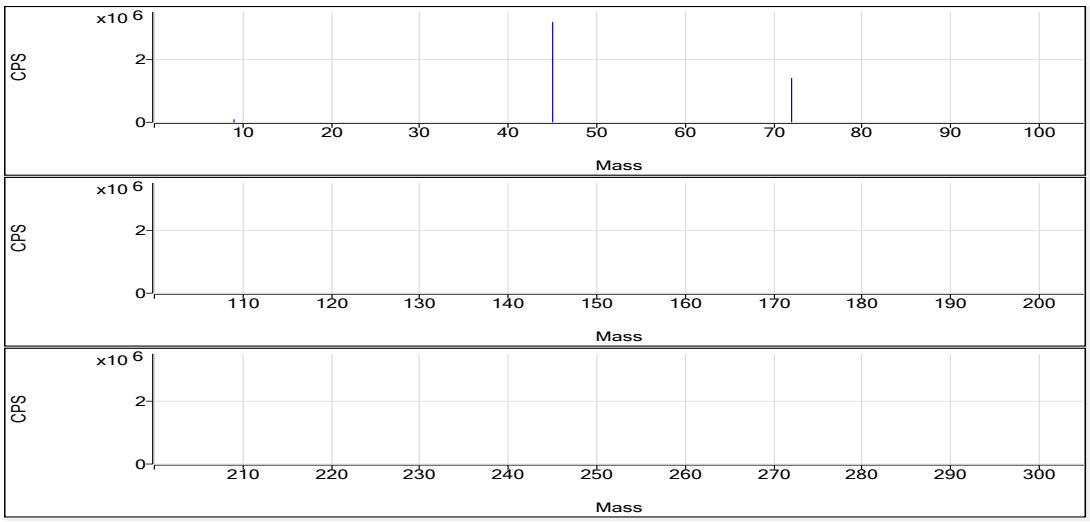
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	51.110	ppb	3.0	95258.61	0.0672	Pulse	0.5000	3
Se	78	72	H2	52.992	ppb	5.1	3263.71	0.0206	Pulse	1.5000	3
Na	23	72	He	5499.517	ppb	0.9	690144.05	9.5536	Pulse	0.1000	3
Mg	24	72	He	5501.307	ppb	1.0	335409.45	4.6430	Pulse	0.1000	3
Al	27	72	He	5349.733	ppb	1.0	93366.71	1.2925	Pulse	0.1000	3
K	39	72	He	5370.772	ppb	1.3	224619.43	3.1094	Pulse	0.1000	3
Ca	44	72	He	5272.078	ppb	3.4	11945.22	0.1654	Pulse	0.1000	3
Ti	47	72	He	5468.314	ppb	2.2	99094.87	1.3716	Pulse	0.1000	3
V	51	72	He	539.302	ppb	0.6	456265.87	6.3159	Pulse	0.5000	3
Cr	52	72	He	542.467	ppb	0.3	598578.15	8.2857	Pulse	0.1000	3
Mn	55	72	He	535.366	ppb	0.5	229280.37	3.1738	Pulse	0.1000	3
Fe	57	72	He	5313.870	ppb	1.2	111498.79	1.5434	Pulse	0.1000	3
Co	59	72	He	536.851	ppb	0.6	1183503.73	16.3827	Pulse	0.1000	3
Ni	60	72	He	538.195	ppb	0.4	342531.62	4.7415	Pulse	0.1000	3
Cu	63	72	He	535.271	ppb	0.7	964623.16	13.3531	Pulse	0.1000	3
Zn	66	72	He	533.975	ppb	1.3	95125.20	1.3167	Pulse	0.1000	3
As	75	72	He	531.658	ppb	0.6	66827.64	0.9251	Pulse	0.5000	3
Sr	88	115	He	52.993	ppb	4.5	26094.68	0.4150	Pulse	0.1000	3
Mo	98	115	He	52.646	ppb	1.4	72954.77	1.1599	Pulse	0.1000	3
Ag	107	115	He	53.295	ppb	2.0	152546.46	2.4254	Pulse	0.1000	3
Cd	111	115	He	53.058	ppb	0.8	16024.50	0.2547	Pulse	0.5000	3
Sn	120	115	He	53.004	ppb	2.5	48508.66	0.7713	Pulse	0.1000	3
Sb	121	115	He	52.403	ppb	0.6	40910.85	0.6503	Pulse	0.1000	3
Ba	137	115	He	523.193	ppb	1.1	143991.28	2.2892	Pulse	0.1000	3
Tl	205	209	He	52.587	ppb	2.0	318158.91	1.4547	Pulse	0.1000	3
Pb	208	209	He	52.570	ppb	1.8	418959.04	1.9156	Pulse	0.1000	3
U	238	209	He	52.007	ppb	1.1	478582.73	2.1880	Pulse	0.1000	3

ISTD Table:

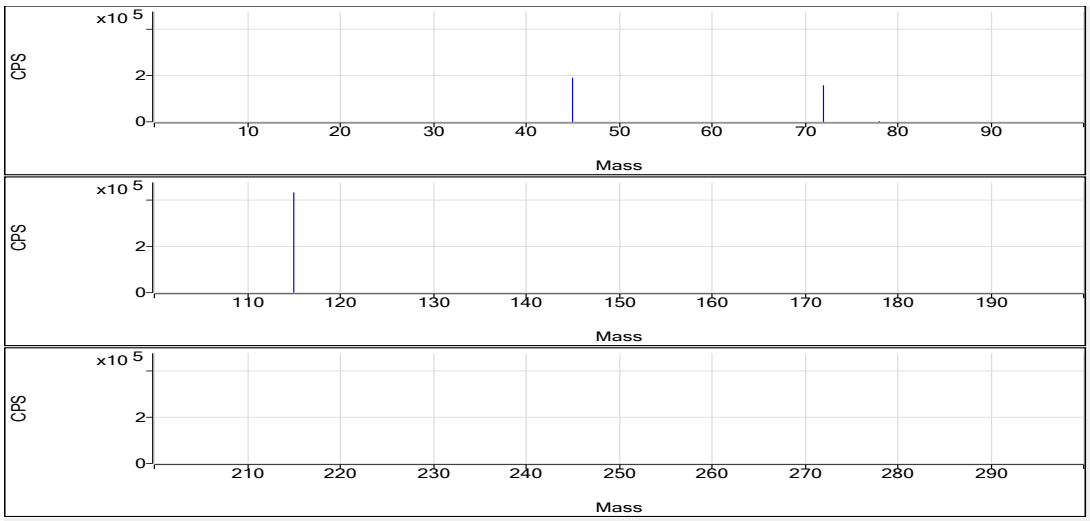
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3214157.04	2.0	99.2	Pulse	0.1000	3
No Gas	Ge	72	1417827.01	2.0	98.5	Pulse	0.1000	3
H2	Sc	45	190571.05	1.5	97.5	Pulse	0.1000	3
H2	Ge	72	158106.60	1.7	97.0	Pulse	0.1000	3
H2	In	115	433515.85	2.4	100.0	Pulse	0.1000	3
He	Sc	45	40967.89	2.8	102.5	Pulse	0.1000	3
He	Ge	72	72241.67	0.7	99.9	Pulse	0.1000	3
He	In	115	62908.52	1.8	97.4	Pulse	0.1000	3
He	Tb	159	279366.51	0.3	97.7	Pulse	0.1000	3
He	Bi	209	218749.74	1.5	98.5	Pulse	0.1000	3

No Gas

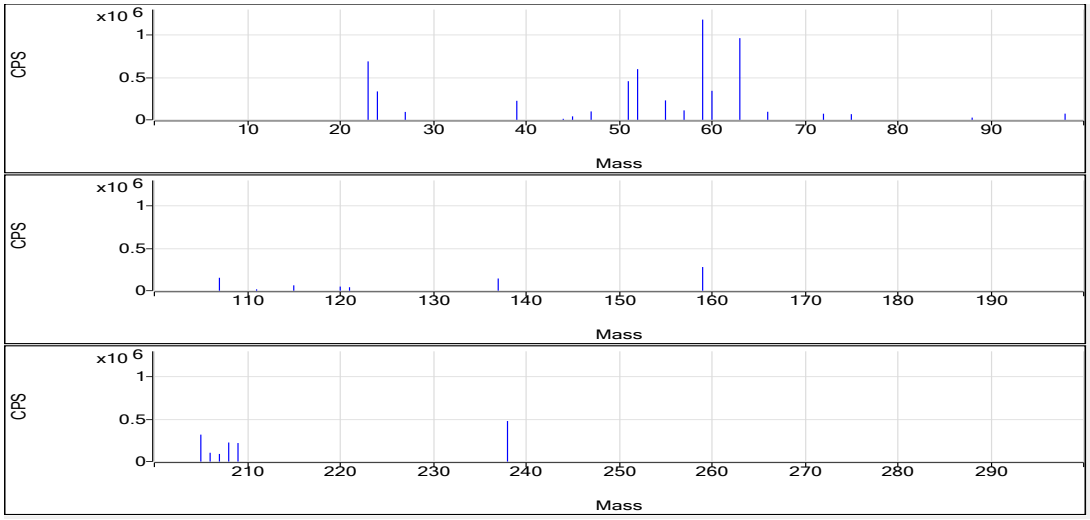


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	52.026	0.0684	97190.02	0.0013	4.694E-05
Be	9	1	No Gas	51.972	0.0683	94887.69	0.0013	4.694E-05
Be	9	1	No Gas	49.333	0.0649	93698.13	0.0013	4.694E-05
Se	78	2	H2	50.297	0.0196	3134.34	0.0004	1.089E-05
Se	78	2	H2	55.697	0.0217	3457.09	0.0004	1.089E-05
Se	78	2	H2	52.981	0.0206	3199.69	0.0004	1.089E-05
Na	23	3	He	5543.294	9.6288	691731.79	0.0017	0.1065
Na	23	3	He	5448.083	9.4653	689021.16	0.0017	0.1065
Na	23	3	He	5507.174	9.5668	689679.21	0.0017	0.1065
Mg	24	3	He	5491.072	4.6344	332931.60	0.0008	0.004846
Mg	24	3	He	5451.629	4.6011	334936.52	0.0008	0.004846
Mg	24	3	He	5561.221	4.6935	338360.23	0.0008	0.004846
Al	27	3	He	5342.232	1.2906	92719.47	0.0002	0.001063
Al	27	3	He	5301.885	1.2809	93243.01	0.0002	0.001063
Al	27	3	He	5405.083	1.3058	94137.66	0.0002	0.001063
K	39	3	He	5445.458	3.1507	226343.94	0.0006	0.1436
K	39	3	He	5304.768	3.073	223697.26	0.0006	0.1436
K	39	3	He	5362.09	3.1046	223817.09	0.0006	0.1436
Ca	44	3	He	5463.065	0.1713	12305.61	0	0.001611
Ca	44	3	He	5240.132	0.1644	11965.14	0	0.001611
Ca	44	3	He	5113.037	0.1604	11564.91	0	0.001611
Ti	47	3	He	5462.967	1.3703	98439.77	0.0003	0.0002737
Ti	47	3	He	5589.316	1.402	102054.88	0.0003	0.0002737
Ti	47	3	He	5352.658	1.3426	96789.96	0.0003	0.0002737
V	51	3	He	542.85	6.3575	456716.38	0.0117	0.007326
V	51	3	He	537.595	6.296	458312.97	0.0117	0.007326
V	51	3	He	537.459	6.2944	453768.25	0.0117	0.007326
Cr	52	3	He	540.663	8.2582	593266.20	0.0152	0.02538
Cr	52	3	He	543.972	8.3086	604819.68	0.0152	0.02538
Cr	52	3	He	542.764	8.2902	597648.58	0.0152	0.02538
Mn	55	3	He	533.748	3.1643	227319.00	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	534.021	3.1659	230458.14	0.0059	0.01385
Mn	55	3	He	538.33	3.1913	230063.98	0.0059	0.01385
Fe	57	3	He	5372.529	1.5604	112099.73	0.0003	0.003918
Fe	57	3	He	5324.404	1.5465	112574.95	0.0003	0.003918
Fe	57	3	He	5244.676	1.5234	109821.69	0.0003	0.003918
Co	59	3	He	540.187	16.4845	1184235.76	0.0305	0.003084
Co	59	3	He	536.864	16.3831	1192597.95	0.0305	0.003084
Co	59	3	He	533.503	16.2805	1173677.48	0.0305	0.003084
Ni	60	3	He	537.529	4.7357	340207.49	0.0088	0.009003
Ni	60	3	He	536.513	4.7267	344079.37	0.0088	0.009003
Ni	60	3	He	540.542	4.7622	343308.00	0.0088	0.009003
Cu	63	3	He	535.574	13.3606	959819.36	0.0249	0.004937
Cu	63	3	He	531.314	13.2544	964846.70	0.0249	0.004937
Cu	63	3	He	538.925	13.4442	969203.42	0.0249	0.004937
Zn	66	3	He	528.775	1.3039	93672.49	0.0025	0.004836
Zn	66	3	He	541.683	1.3356	97226.09	0.0025	0.004836
Zn	66	3	He	531.467	1.3105	94477.03	0.0025	0.004836
As	75	3	He	535.409	0.9316	66925.99	0.0017	0.0004347
As	75	3	He	529.034	0.9205	67008.55	0.0017	0.0004347
As	75	3	He	530.53	0.9231	66548.37	0.0017	0.0004347
Sr	88	3	He	55.72	0.4363	26886.08	0.0078	0.0007762
Sr	88	3	He	51.951	0.4069	25824.39	0.0078	0.0007762
Sr	88	3	He	51.307	0.4018	25573.58	0.0078	0.0007762
Mo	98	3	He	53.404	1.1766	72495.94	0.022	0.0005162
Mo	98	3	He	51.989	1.1454	72696.57	0.022	0.0005162
Mo	98	3	He	52.545	1.1576	73671.79	0.022	0.0005162
Ag	107	3	He	54.355	2.4736	152417.39	0.0455	0.0004641
Ag	107	3	He	53.353	2.4281	154105.86	0.0455	0.0004641
Ag	107	3	He	52.177	2.3745	151116.13	0.0455	0.0004641
Cd	111	3	He	53.471	0.2567	15818.93	0.0048	5.152E-05
Cd	111	3	He	52.654	0.2528	16045.17	0.0048	5.152E-05
Cd	111	3	He	53.049	0.2547	16209.39	0.0048	5.152E-05
Sn	120	3	He	54.507	0.7927	48846.56	0.0143	0.01559
Sn	120	3	He	52.375	0.7623	48385.00	0.0143	0.01559
Sn	120	3	He	52.131	0.7589	48294.42	0.0143	0.01559
Sb	121	3	He	52.374	0.65	40048.28	0.0124	0.000258
Sb	121	3	He	52.081	0.6463	41021.25	0.0124	0.000258
Sb	121	3	He	52.754	0.6547	41663.03	0.0124	0.000258
Ba	137	3	He	528.939	2.3143	142600.59	0.0044	0.000309
Ba	137	3	He	523.619	2.291	145408.45	0.0044	0.000309
Ba	137	3	He	517.022	2.2622	143964.80	0.0044	0.000309
Tl	205	3	He	53.204	1.4718	318181.87	0.0276	0.001005
Tl	205	3	He	53.203	1.4718	320287.34	0.0276	0.001005
Tl	205	3	He	51.353	1.4206	316007.51	0.0276	0.001005
Pb	208	3	He	53.286	1.9416	225631.23	0.0364	0.002176
Pb	208	3	He	52.949	1.9294	225042.75	0.0364	0.002176
Pb	208	3	He	51.476	1.8758	223962.44	0.0364	0.002176
U	238	3	He	52.418	2.2053	476762.45	0.0421	0.00024
U	238	3	He	52.234	2.1976	478240.85	0.0421	0.00024
U	238	3	He	51.37	2.1612	480744.88	0.0421	0.00024
Sc	45	1	No Gas			3206909.33		
Sc	45	1	No Gas			3152530.58		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3283031.20		
Ge	72	1	No Gas			1420684.67		
Ge	72	1	No Gas			1388460.14		
Ge	72	1	No Gas			1444336.23		
Sc	45	2	H2			192975.97		
Sc	45	2	H2			191354.31		
Sc	45	2	H2			187382.87		
Ge	72	2	H2			159959.28		
Ge	72	2	H2			159332.75		
Ge	72	2	H2			155027.78		
In	115	2	H2			444582.96		
In	115	2	H2			432439.56		
In	115	2	H2			423525.03		
Sc	45	3	He			39674.56		
Sc	45	3	He			41900.60		
Sc	45	3	He			41328.52		
Ge	72	3	He			71839.55		
Ge	72	3	He			72794.52		
Ge	72	3	He			72090.93		
In	115	3	He			61997.99		
In	115	3	He			63845.93		
In	115	3	He			64016.73		
Tb	159	3	He			279353.24		
Tb	159	3	He			278490.39		
Tb	159	3	He			280255.89		
Bi	209	3	He			216186.31		
Bi	209	3	He			217621.34		
Bi	209	3	He			222441.56		

Quantitation Report

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Acq Time	2023-08-10 11:32:22
Sample Name	CCB 4654618
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

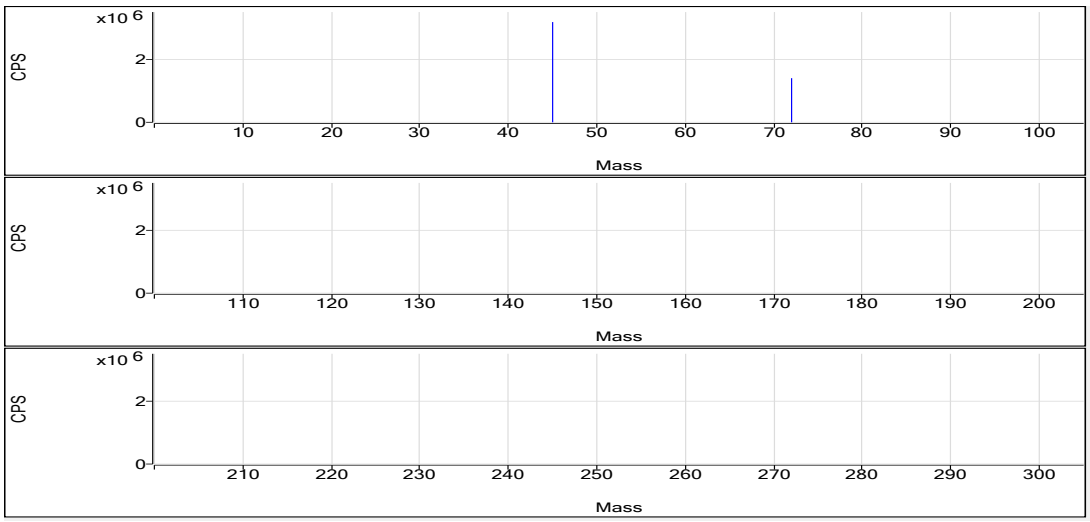
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.032	ppb	27.2	125.33	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.093	ppb	12.3	7.33	0.0000	Pulse	1.5000	3
Na	23	72	He	9.983	ppb	34.0	8959.63	0.1236	Pulse	0.1000	3
Mg	24	72	He	13.655	ppb	3.3	1186.76	0.0164	Pulse	0.1000	3
Al	27	72	He	9.844	ppb	21.8	250.01	0.0034	Pulse	0.1000	3
K	39	72	He	15.240	ppb	56.2	11024.49	0.1521	Pulse	0.1000	3
Ca	44	72	He	25.032	ppb	155.7	173.34	0.0024	Pulse	0.1000	3
Ti	47	72	He	4.763	ppb	27.4	106.67	0.0015	Pulse	0.1000	3
V	51	72	He	0.212	ppb	21.2	710.69	0.0098	Pulse	0.5000	3
Cr	52	72	He	0.080	ppb	216.8	1930.20	0.0266	Pulse	0.1000	3
Mn	55	72	He	-0.297	ppb	N/A	876.73	0.0121	Pulse	0.1000	3
Fe	57	72	He	16.010	ppb	27.4	620.04	0.0086	Pulse	0.1000	3
Co	59	72	He	0.203	ppb	10.3	673.37	0.0093	Pulse	0.1000	3
Ni	60	72	He	0.539	ppb	10.0	996.74	0.0137	Pulse	0.1000	3
Cu	63	72	He	0.234	ppb	20.1	780.05	0.0108	Pulse	0.1000	3
Zn	66	72	He	-0.399	ppb	N/A	280.01	0.0039	Pulse	0.1000	3
As	75	72	He	0.312	ppb	32.9	70.67	0.0010	Pulse	0.5000	3
Sr	88	115	He	0.157	ppb	27.9	126.67	0.0020	Pulse	0.1000	3
Mo	98	115	He	0.034	ppb	35.1	80.00	0.0013	Pulse	0.1000	3
Ag	107	115	He	0.023	ppb	8.2	96.67	0.0015	Pulse	0.1000	3
Cd	111	115	He	0.026	ppb	79.3	11.33	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.122	ppb	116.4	1096.75	0.0173	Pulse	0.1000	3
Sb	121	115	He	0.107	ppb	21.6	100.00	0.0016	Pulse	0.1000	3
Ba	137	115	He	0.338	ppb	39.9	113.34	0.0018	Pulse	0.1000	3
Tl	205	209	He	0.281	ppb	5.7	1893.55	0.0088	Pulse	0.1000	3
Pb	208	209	He	0.005	ppb	164.7	510.02	0.0024	Pulse	0.1000	3
U	238	209	He	0.025	ppb	10.7	276.68	0.0013	Pulse	0.1000	3

ISTD Table:

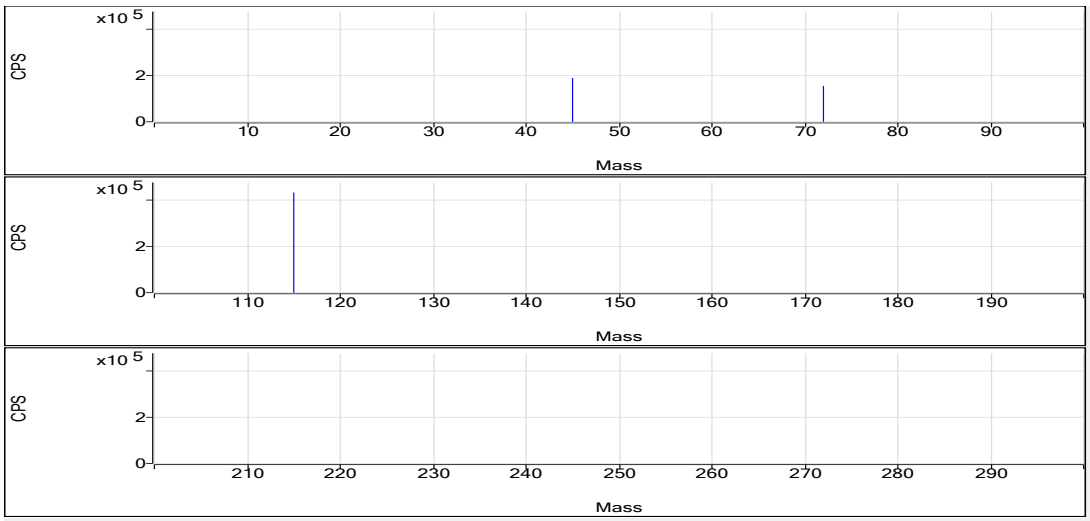
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3191669.12	2.2	98.5	Pulse	0.1000	3
No Gas	Ge	72	1405108.26	1.9	97.6	Pulse	0.1000	3
H2	Sc	45	190115.60	2.1	97.3	Pulse	0.1000	3
H2	Ge	72	155748.24	1.0	95.5	Pulse	0.1000	3
H2	In	115	434923.27	1.3	100.4	Pulse	0.1000	3
He	Sc	45	41121.62	1.8	102.8	Pulse	0.1000	3
He	Ge	72	72536.58	2.3	100.3	Pulse	0.1000	3
He	In	115	63315.06	0.8	98.0	Pulse	0.1000	3
He	Tb	159	279723.15	0.3	97.8	Pulse	0.1000	3
He	Bi	209	215695.93	0.8	97.1	Pulse	0.1000	3

No Gas

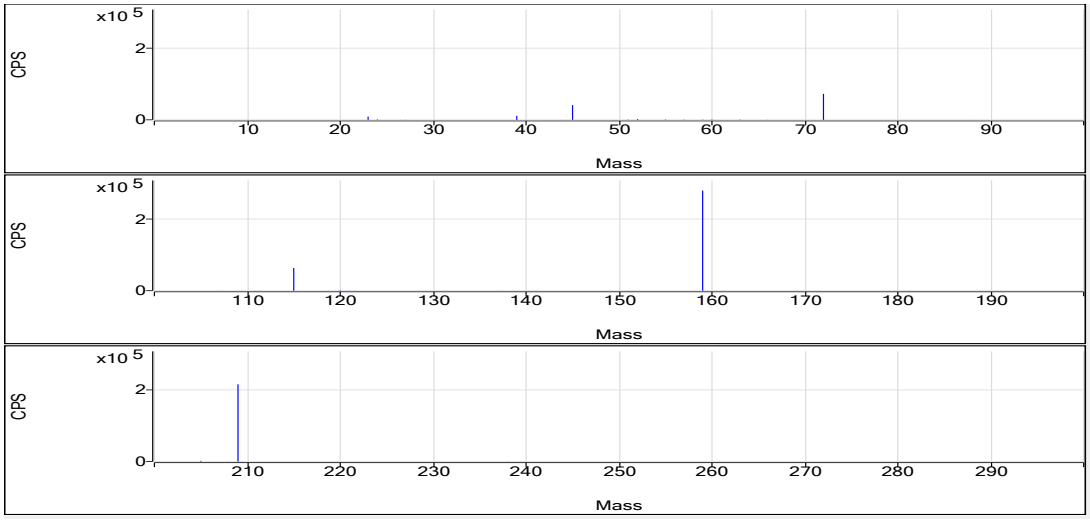


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.023	0.0001	108.00	0.0013	4.694E-05
Be	9	1	No Gas	0.041	0.0001	140.00	0.0013	4.694E-05
Be	9	1	No Gas	0.032	0.0001	128.00	0.0013	4.694E-05
Se	78	2	H2	0.081	0	6.67	0.0004	1.089E-05
Se	78	2	H2	0.094	0	7.33	0.0004	1.089E-05
Se	78	2	H2	0.104	0.0001	8.00	0.0004	1.089E-05
Na	23	3	He	9.748	0.1232	8892.92	0.0017	0.1065
Na	23	3	He	13.486	0.1296	9213.16	0.0017	0.1065
Na	23	3	He	6.715	0.118	8772.82	0.0017	0.1065
Mg	24	3	He	13.151	0.0159	1150.09	0.0008	0.004846
Mg	24	3	He	13.778	0.0165	1170.10	0.0008	0.004846
Mg	24	3	He	14.035	0.0167	1240.10	0.0008	0.004846
Al	27	3	He	8.798	0.0032	230.01	0.0002	0.001063
Al	27	3	He	8.42	0.0031	220.01	0.0002	0.001063
Al	27	3	He	12.313	0.004	300.01	0.0002	0.001063
K	39	3	He	15.209	0.152	10974.44	0.0006	0.1436
K	39	3	He	23.826	0.1568	11144.62	0.0006	0.1436
K	39	3	He	6.685	0.1473	10954.41	0.0006	0.1436
Ca	44	3	He	68.57	0.0037	270.01	0	0.001611
Ca	44	3	He	-6.567	0.0014	100.00	0	0.001611
Ca	44	3	He	13.093	0.002	150.01	0	0.001611
Ti	47	3	He	3.328	0.0011	80.00	0.0003	0.0002737
Ti	47	3	He	5.08	0.0015	110.00	0.0003	0.0002737
Ti	47	3	He	5.881	0.0017	130.00	0.0003	0.0002737
V	51	3	He	0.262	0.0104	750.02	0.0117	0.007326
V	51	3	He	0.196	0.0096	684.02	0.0117	0.007326
V	51	3	He	0.176	0.0094	698.02	0.0117	0.007326
Cr	52	3	He	-0.12	0.0236	1700.15	0.0152	0.02538
Cr	52	3	He	0.19	0.0283	2010.22	0.0152	0.02538
Cr	52	3	He	0.17	0.028	2080.23	0.0152	0.02538
Mn	55	3	He	-0.305	0.0121	870.06	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.154	0.0129	920.08	0.0059	0.01385
Mn	55	3	He	-0.433	0.0113	840.06	0.0059	0.01385
Fe	57	3	He	20.909	0.01	720.05	0.0003	0.003918
Fe	57	3	He	14.645	0.0082	580.03	0.0003	0.003918
Fe	57	3	He	12.476	0.0075	560.04	0.0003	0.003918
Co	59	3	He	0.199	0.0091	660.04	0.0305	0.003084
Co	59	3	He	0.226	0.01	710.04	0.0305	0.003084
Co	59	3	He	0.185	0.0087	650.04	0.0305	0.003084
Ni	60	3	He	0.599	0.0143	1030.07	0.0088	0.009003
Ni	60	3	He	0.496	0.0134	950.07	0.0088	0.009003
Ni	60	3	He	0.521	0.0136	1010.07	0.0088	0.009003
Cu	63	3	He	0.263	0.0115	830.05	0.0249	0.004937
Cu	63	3	He	0.259	0.0114	810.05	0.0249	0.004937
Cu	63	3	He	0.18	0.0094	700.05	0.0249	0.004937
Zn	66	3	He	-0.502	0.0036	260.01	0.0025	0.004836
Zn	66	3	He	-0.422	0.0038	270.01	0.0025	0.004836
Zn	66	3	He	-0.271	0.0042	310.02	0.0025	0.004836
As	75	3	He	0.26	0.0009	64.00	0.0017	0.0004347
As	75	3	He	0.43	0.0012	84.00	0.0017	0.0004347
As	75	3	He	0.245	0.0009	64.00	0.0017	0.0004347
Sr	88	3	He	0.205	0.0024	150.01	0.0078	0.0007762
Sr	88	3	He	0.121	0.0017	110.00	0.0078	0.0007762
Sr	88	3	He	0.144	0.0019	120.00	0.0078	0.0007762
Mo	98	3	He	0.027	0.0011	70.00	0.022	0.0005162
Mo	98	3	He	0.048	0.0016	100.00	0.022	0.0005162
Mo	98	3	He	0.027	0.0011	70.00	0.022	0.0005162
Ag	107	3	He	0.025	0.0016	100.00	0.0455	0.0004641
Ag	107	3	He	0.024	0.0016	100.00	0.0455	0.0004641
Ag	107	3	He	0.021	0.0014	90.00	0.0455	0.0004641
Cd	111	3	He	0.036	0.0002	14.00	0.0048	5.152E-05
Cd	111	3	He	0.041	0.0003	16.00	0.0048	5.152E-05
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Sn	120	3	He	0.099	0.017	1070.08	0.0143	0.01559
Sn	120	3	He	-0.007	0.0155	990.07	0.0143	0.01559
Sn	120	3	He	0.275	0.0195	1230.10	0.0143	0.01559
Sb	121	3	He	0.12	0.0017	110.01	0.0124	0.000258
Sb	121	3	He	0.08	0.0013	80.00	0.0124	0.000258
Sb	121	3	He	0.12	0.0017	110.00	0.0124	0.000258
Ba	137	3	He	0.401	0.0021	130.00	0.0044	0.000309
Ba	137	3	He	0.43	0.0022	140.01	0.0044	0.000309
Ba	137	3	He	0.183	0.0011	70.00	0.0044	0.000309
Tl	205	3	He	0.298	0.0092	2010.24	0.0276	0.001005
Tl	205	3	He	0.279	0.0087	1880.20	0.0276	0.001005
Tl	205	3	He	0.266	0.0084	1790.20	0.0276	0.001005
Pb	208	3	He	0.015	0.0027	250.01	0.0364	0.002176
Pb	208	3	He	-0.001	0.0021	220.01	0.0364	0.002176
Pb	208	3	He	0.002	0.0022	290.01	0.0364	0.002176
U	238	3	He	0.025	0.0013	280.01	0.0421	0.00024
U	238	3	He	0.027	0.0014	300.02	0.0421	0.00024
U	238	3	He	0.022	0.0012	250.01	0.0421	0.00024
Sc	45	1	No Gas			3151297.45		
Sc	45	1	No Gas			3150074.02		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3273635.89		
Ge	72	1	No Gas			1389323.89		
Ge	72	1	No Gas			1389532.01		
Ge	72	1	No Gas			1436468.88		
Sc	45	2	H2			193098.42		
Sc	45	2	H2			185649.70		
Sc	45	2	H2			191598.67		
Ge	72	2	H2			157220.63		
Ge	72	2	H2			154147.06		
Ge	72	2	H2			155877.03		
In	115	2	H2			441478.51		
In	115	2	H2			430161.20		
In	115	2	H2			433130.11		
Sc	45	3	He			41790.14		
Sc	45	3	He			41258.71		
Sc	45	3	He			40316.01		
Ge	72	3	He			72181.65		
Ge	72	3	He			71076.37		
Ge	72	3	He			74351.72		
In	115	3	He			62981.69		
In	115	3	He			63916.74		
In	115	3	He			63072.40		
Tb	159	3	He			278773.61		
Tb	159	3	He			280249.04		
Tb	159	3	He			280146.79		
Bi	209	3	He			217377.97		
Bi	209	3	He			215637.46		
Bi	209	3	He			214072.36		

Quantitation Report

Data File Name	092SMPL.d
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Acq Time	2023-08-10 13:03:46
Sample Name	MB 410-403837/1-A
Sample Type	Sample
Comment	D29
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

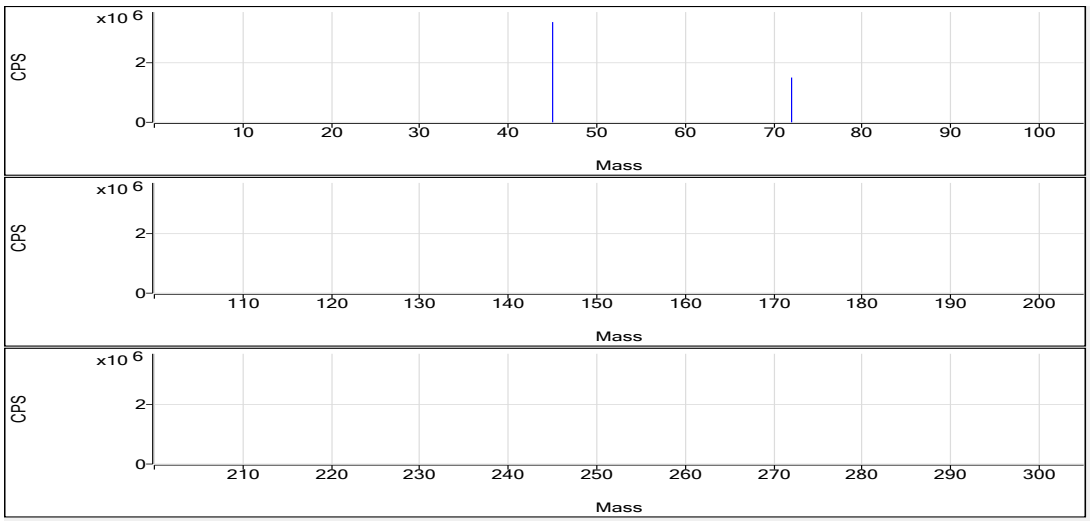
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.011	ppb	N/A	48.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.012	ppb	110.0	2.44	0.0000	Pulse	1.5000	3
Na	23	72	He	2.962	ppb	14.5	7922.42	0.1115	Pulse	0.1000	3
Mg	24	72	He	3.397	ppb	41.1	546.70	0.0077	Pulse	0.1000	3
Al	27	72	He	1.785	ppb	172.5	106.67	0.0015	Pulse	0.1000	3
K	39	72	He	5.884	ppb	242.9	10427.35	0.1469	Pulse	0.1000	3
Ca	44	72	He	32.704	ppb	55.0	186.68	0.0026	Pulse	0.1000	3
Ti	47	72	He	1.158	ppb	85.3	40.00	0.0006	Pulse	0.1000	3
V	51	72	He	-0.016	ppb	N/A	506.68	0.0071	Pulse	0.5000	3
Cr	52	72	He	0.404	ppb	20.0	2240.24	0.0315	Pulse	0.1000	3
Mn	55	72	He	-1.027	ppb	N/A	553.36	0.0078	Pulse	0.1000	3
Fe	57	72	He	3.337	ppb	77.3	346.68	0.0049	Pulse	0.1000	3
Co	59	72	He	-0.019	ppb	N/A	176.68	0.0025	Pulse	0.1000	3
Ni	60	72	He	0.804	ppb	25.0	1140.09	0.0161	Pulse	0.1000	3
Cu	63	72	He	-0.064	ppb	N/A	236.68	0.0033	Pulse	0.1000	3
Zn	66	72	He	-0.879	ppb	N/A	190.01	0.0027	Pulse	0.1000	3
As	75	72	He	0.042	ppb	149.1	36.00	0.0005	Pulse	0.5000	3
Sr	88	115	He	0.054	ppb	42.9	73.33	0.0012	Pulse	0.1000	3
Mo	98	115	He	0.004	ppb	224.5	36.67	0.0006	Pulse	0.1000	3
Ag	107	115	He	-0.005	ppb	N/A	13.33	0.0002	Pulse	0.1000	3
Cd	111	115	He	-0.002	ppb	N/A	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.111	ppb	179.0	1050.07	0.0172	Pulse	0.1000	3
Sb	121	115	He	0.019	ppb	139.9	30.00	0.0005	Pulse	0.1000	3
Ba	137	115	He	0.004	ppb	885.2	20.00	0.0003	Pulse	0.1000	3
Tl	205	209	He	0.043	ppb	18.3	480.03	0.0022	Pulse	0.1000	3
Pb	208	209	He	-0.011	ppb	N/A	386.68	0.0018	Pulse	0.1000	3
U	238	209	He	-0.001	ppb	N/A	46.67	0.0002	Pulse	0.1000	3

ISTD Table:

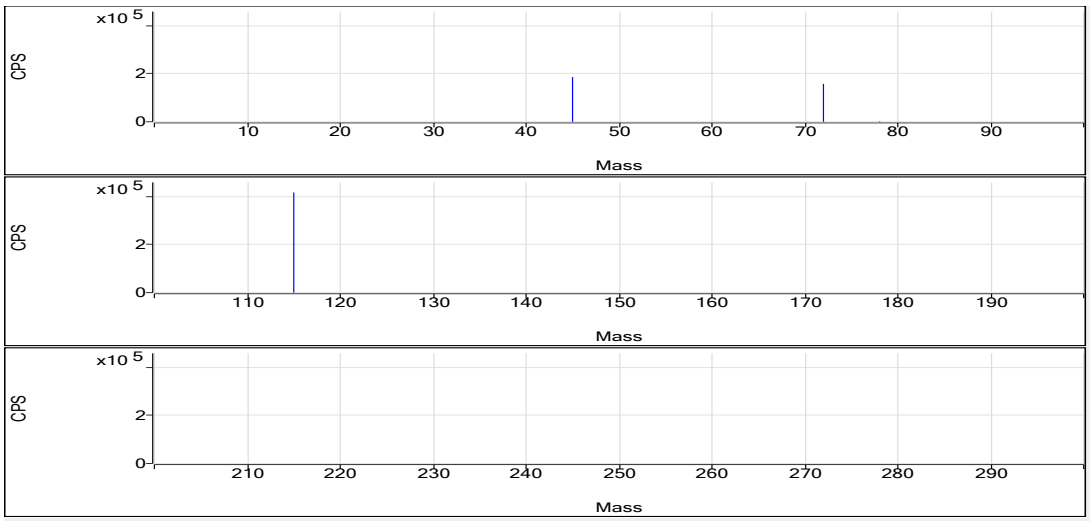
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3371617.24	0.8	104.0	Pulse	0.1000	3
No Gas	Ge	72	1505301.43	1.0	104.6	Pulse	0.1000	3
H2	Sc	45	185946.70	2.0	95.2	Pulse	0.1000	3
H2	Ge	72	158150.12	1.8	97.0	Pulse	0.1000	3
H2	In	115	417152.32	1.7	96.3	Pulse	0.1000	3
He	Sc	45	40479.77	2.6	101.2	Pulse	0.1000	3
He	Ge	72	71029.03	1.7	98.3	Pulse	0.1000	3
He	In	115	61139.07	0.7	94.7	Pulse	0.1000	3
He	Tb	159	275475.73	1.3	96.3	Pulse	0.1000	3
He	Bi	209	218020.56	0.8	98.1	Pulse	0.1000	3

No Gas

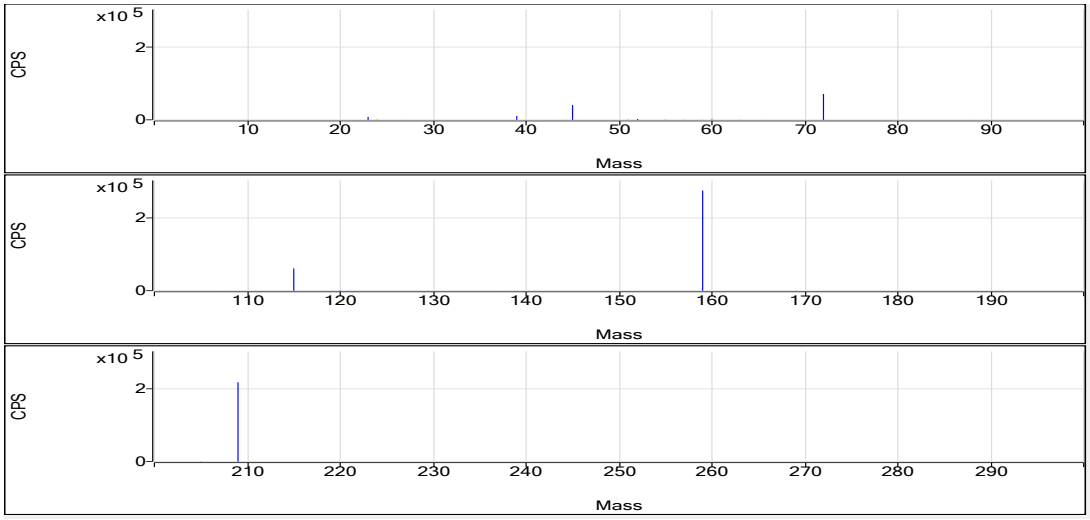


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.015	0	42.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.007	0	58.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.012	0	46.00	0.0013	4.694E-05
Se	78	2	H2	0.027	0	3.33	0.0004	1.089E-05
Se	78	2	H2	0.005	0	2.00	0.0004	1.089E-05
Se	78	2	H2	0.004	0	2.00	0.0004	1.089E-05
Na	23	3	He	3.006	0.1116	7822.41	0.0017	0.1065
Na	23	3	He	2.513	0.1108	8022.42	0.0017	0.1065
Na	23	3	He	3.368	0.1122	7922.42	0.0017	0.1065
Mg	24	3	He	4.238	0.0084	590.03	0.0008	0.004846
Mg	24	3	He	1.786	0.0064	460.02	0.0008	0.004846
Mg	24	3	He	4.167	0.0084	590.04	0.0008	0.004846
Al	27	3	He	0.326	0.0011	80.00	0.0002	0.001063
Al	27	3	He	5.322	0.0023	170.01	0.0002	0.001063
Al	27	3	He	-0.294	0.001	70.00	0.0002	0.001063
K	39	3	He	20.357	0.1549	10854.30	0.0006	0.1436
K	39	3	He	-8.226	0.1391	10073.81	0.0006	0.1436
K	39	3	He	5.521	0.1467	10353.94	0.0006	0.1436
Ca	44	3	He	44.616	0.003	210.01	0	0.001611
Ca	44	3	He	41.497	0.0029	210.01	0	0.001611
Ca	44	3	He	11.999	0.002	140.01	0	0.001611
Ti	47	3	He	0.615	0.0004	30.00	0.0003	0.0002737
Ti	47	3	He	0.56	0.0004	30.00	0.0003	0.0002737
Ti	47	3	He	2.298	0.0009	60.00	0.0003	0.0002737
V	51	3	He	0.052	0.0079	556.01	0.0117	0.007326
V	51	3	He	-0.038	0.0069	498.01	0.0117	0.007326
V	51	3	He	-0.062	0.0066	466.01	0.0117	0.007326
Cr	52	3	He	0.31	0.0301	2110.22	0.0152	0.02538
Cr	52	3	He	0.455	0.0323	2340.25	0.0152	0.02538
Cr	52	3	He	0.445	0.0322	2270.25	0.0152	0.02538
Mn	55	3	He	-0.969	0.0081	570.04	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.99	0.008	580.03	0.0059	0.01385
Mn	55	3	He	-1.123	0.0072	510.02	0.0059	0.01385
Fe	57	3	He	6.179	0.0057	400.02	0.0003	0.003918
Fe	57	3	He	2.683	0.0047	340.02	0.0003	0.003918
Fe	57	3	He	1.148	0.0043	300.01	0.0003	0.003918
Co	59	3	He	-0.026	0.0023	160.01	0.0305	0.003084
Co	59	3	He	-0.033	0.0021	150.01	0.0305	0.003084
Co	59	3	He	0.001	0.0031	220.01	0.0305	0.003084
Ni	60	3	He	1.021	0.018	1260.11	0.0088	0.009003
Ni	60	3	He	0.625	0.0145	1050.07	0.0088	0.009003
Ni	60	3	He	0.765	0.0157	1110.09	0.0088	0.009003
Cu	63	3	He	-0.078	0.003	210.01	0.0249	0.004937
Cu	63	3	He	-0.054	0.0036	260.01	0.0249	0.004937
Cu	63	3	He	-0.062	0.0034	240.01	0.0249	0.004937
Zn	66	3	He	-0.749	0.003	210.01	0.0025	0.004836
Zn	66	3	He	-0.957	0.0025	180.01	0.0025	0.004836
Zn	66	3	He	-0.931	0.0026	180.01	0.0025	0.004836
As	75	3	He	0.095	0.0006	42.00	0.0017	0.0004347
As	75	3	He	-0.028	0.0004	28.00	0.0017	0.0004347
As	75	3	He	0.06	0.0005	38.00	0.0017	0.0004347
Sr	88	3	He	0.067	0.0013	80.00	0.0078	0.0007762
Sr	88	3	He	0.068	0.0013	80.00	0.0078	0.0007762
Sr	88	3	He	0.027	0.001	60.00	0.0078	0.0007762
Mo	98	3	He	-0.001	0.0005	30.00	0.022	0.0005162
Mo	98	3	He	0.014	0.0008	50.00	0.022	0.0005162
Mo	98	3	He	-0.001	0.0005	30.00	0.022	0.0005162
Ag	107	3	He	-0.007	0.0002	10.00	0.0455	0.0004641
Ag	107	3	He	-0.007	0.0002	10.00	0.0455	0.0004641
Ag	107	3	He	-0.003	0.0003	20.00	0.0455	0.0004641
Cd	111	3	He	-0.011	0	0.00	0.0048	5.152E-05
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Cd	111	3	He	0.01	0.0001	6.00	0.0048	5.152E-05
Sn	120	3	He	-0.043	0.015	920.06	0.0143	0.01559
Sn	120	3	He	0.336	0.0204	1250.10	0.0143	0.01559
Sn	120	3	He	0.04	0.0162	980.06	0.0143	0.01559
Sb	121	3	He	0.045	0.0008	50.00	0.0124	0.000258
Sb	121	3	He	-0.008	0.0002	10.00	0.0124	0.000258
Sb	121	3	He	0.019	0.0005	30.00	0.0124	0.000258
Ba	137	3	He	0.004	0.0003	20.00	0.0044	0.000309
Ba	137	3	He	-0.033	0.0002	10.00	0.0044	0.000309
Ba	137	3	He	0.042	0.0005	30.00	0.0044	0.000309
Tl	205	3	He	0.035	0.002	430.03	0.0276	0.001005
Tl	205	3	He	0.051	0.0024	520.03	0.0276	0.001005
Tl	205	3	He	0.044	0.0022	490.02	0.0276	0.001005
Pb	208	3	He	-0.009	0.0018	220.01	0.0364	0.002176
Pb	208	3	He	-0.003	0.0021	220.01	0.0364	0.002176
Pb	208	3	He	-0.021	0.0014	150.01	0.0364	0.002176
U	238	3	He	-0.001	0.0002	40.00	0.0421	0.00024
U	238	3	He	0	0.0002	50.00	0.0421	0.00024
U	238	3	He	0	0.0002	50.00	0.0421	0.00024
Sc	45	1	No Gas			3402484.01		
Sc	45	1	No Gas			3359219.01		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3353148.70		
Ge	72	1	No Gas			1516555.29		
Ge	72	1	No Gas			1511176.38		
Ge	72	1	No Gas			1488172.63		
Sc	45	2	H2			181826.15		
Sc	45	2	H2			186766.74		
Sc	45	2	H2			189247.20		
Ge	72	2	H2			156188.74		
Ge	72	2	H2			156936.62		
Ge	72	2	H2			161325.01		
In	115	2	H2			410783.04		
In	115	2	H2			415842.57		
In	115	2	H2			424831.36		
Sc	45	3	He			40115.39		
Sc	45	3	He			39644.35		
Sc	45	3	He			41679.57		
Ge	72	3	He			70080.97		
Ge	72	3	He			72422.13		
Ge	72	3	He			70583.99		
In	115	3	He			61435.10		
In	115	3	He			61365.23		
In	115	3	He			60641.45		
Tb	159	3	He			271829.59		
Tb	159	3	He			275617.40		
Tb	159	3	He			278980.19		
Bi	209	3	He			218251.89		
Bi	209	3	He			216094.98		
Bi	209	3	He			219714.80		

Quantitation Report

Data File Name	093SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 13:05:46
Sample Name	LCS 410-403837/2-A
Sample Type	Sample
Comment	D29
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

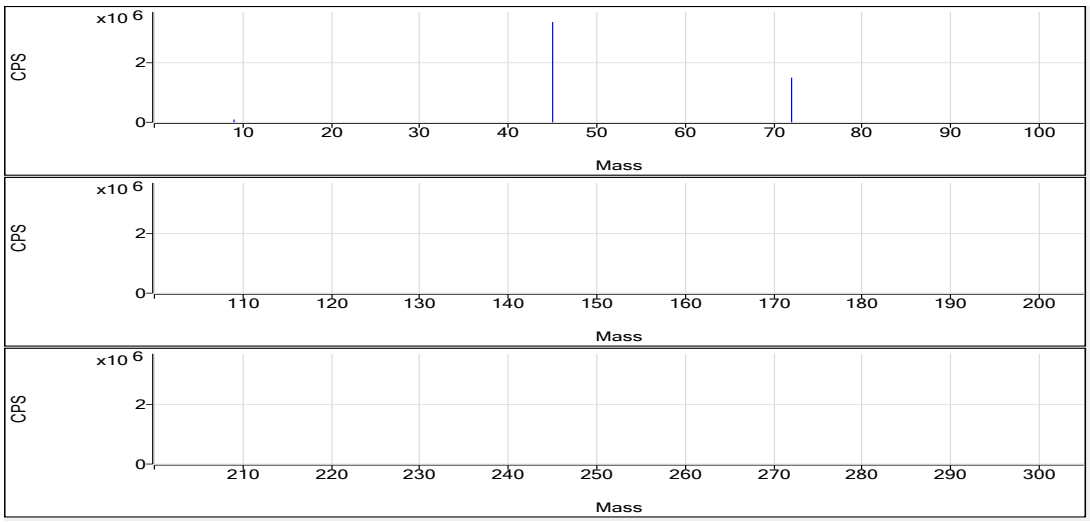
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	47.205	ppb	3.0	93586.46	0.0621	Pulse	0.5000	3
Se	78	72	H2	102.519	ppb	3.4	6483.02	0.0399	Pulse	1.5000	3
Na	23	72	He	5328.323	ppb	0.2	687765.01	9.2596	Pulse	0.1000	3
Mg	24	72	He	5315.403	ppb	0.7	333225.15	4.4863	Pulse	0.1000	3
Al	27	72	He	5145.258	ppb	1.4	92333.58	1.2431	Pulse	0.1000	3
K	39	72	He	5201.908	ppb	0.7	224024.73	3.0162	Pulse	0.1000	3
Ca	44	72	He	5206.712	ppb	3.3	12132.01	0.1633	Pulse	0.1000	3
Ti	47	72	He	534.326	ppb	6.3	9970.41	0.1343	Pulse	0.1000	3
V	51	72	He	521.489	ppb	0.5	453638.17	6.1076	Pulse	0.5000	3
Cr	52	72	He	523.151	ppb	1.1	593546.11	7.9915	Pulse	0.1000	3
Mn	55	72	He	515.353	ppb	0.3	226959.36	3.0557	Pulse	0.1000	3
Fe	57	72	He	5141.611	ppb	1.8	110934.03	1.4935	Pulse	0.1000	3
Co	59	72	He	522.029	ppb	1.0	1183191.98	15.9305	Pulse	0.1000	3
Ni	60	72	He	523.323	ppb	0.7	342477.51	4.6107	Pulse	0.1000	3
Cu	63	72	He	522.525	ppb	0.6	968172.17	13.0352	Pulse	0.1000	3
Zn	66	72	He	514.061	ppb	1.3	94162.75	1.2678	Pulse	0.1000	3
As	75	72	He	510.893	ppb	0.8	66028.03	0.8890	Pulse	0.5000	3
Sr	88	115	He	52.348	ppb	1.5	25503.52	0.4100	Pulse	0.1000	3
Mo	98	115	He	52.021	ppb	2.5	71289.94	1.1461	Pulse	0.1000	3
Ag	107	115	He	53.280	ppb	1.1	150835.26	2.4247	Pulse	0.1000	3
Cd	111	115	He	54.078	ppb	1.7	16151.31	0.2596	Pulse	0.5000	3
Sn	120	115	He	108.301	ppb	1.9	97025.96	1.5597	Pulse	0.1000	3
Sb	121	115	He	105.932	ppb	1.5	81759.24	1.3143	Pulse	0.1000	3
Ba	137	115	He	521.930	ppb	1.6	142058.55	2.2836	Pulse	0.1000	3
Tl	205	209	He	106.117	ppb	1.2	641398.88	2.9345	Pulse	0.1000	3
Pb	208	209	He	52.786	ppb	0.8	420416.20	1.9235	Pulse	0.1000	3
U	238	209	He	52.128	ppb	1.4	479354.16	2.1931	Pulse	0.1000	3

ISTD Table:

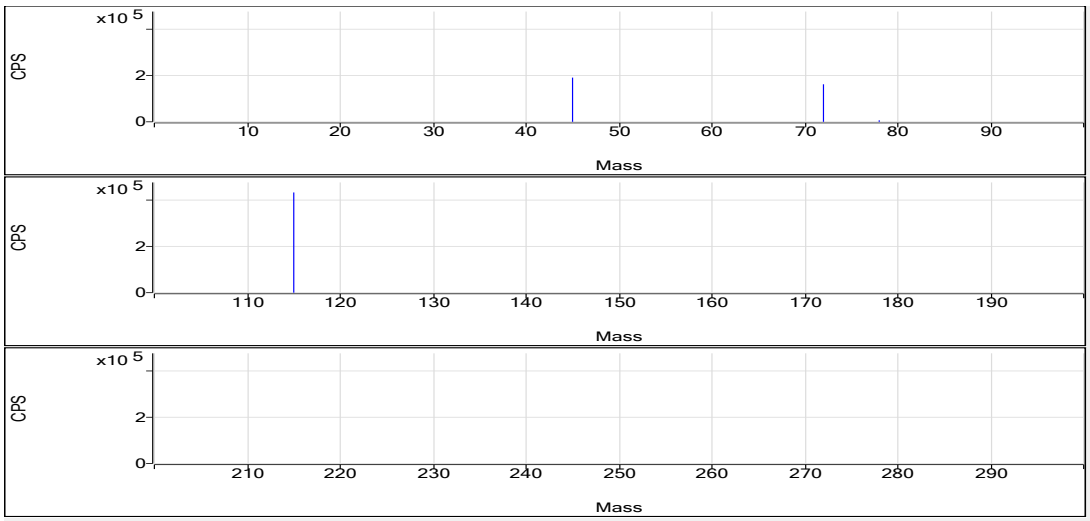
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3381212.66	1.2	104.3	Pulse	0.1000	3
No Gas	Ge	72	1507949.40	1.2	104.7	Pulse	0.1000	3
H2	Sc	45	191258.21	2.7	97.9	Pulse	0.1000	3
H2	Ge	72	162392.93	0.8	99.6	Pulse	0.1000	3
H2	In	115	433664.61	0.7	100.1	Pulse	0.1000	3
He	Sc	45	41379.28	1.5	103.5	Pulse	0.1000	3
He	Ge	72	74275.74	0.7	102.7	Pulse	0.1000	3
He	In	115	62212.04	1.0	96.3	Pulse	0.1000	3
He	Tb	159	281560.17	0.7	98.4	Pulse	0.1000	3
He	Bi	209	218587.29	1.3	98.4	Pulse	0.1000	3

No Gas

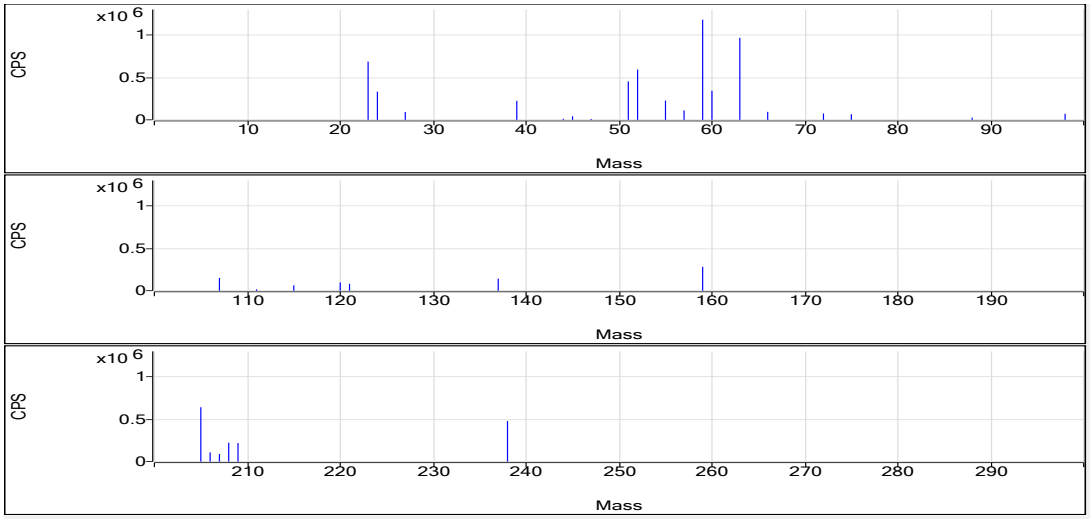


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	46.302	0.0609	92173.26	0.0013	4.694E-05
Be	9	1	No Gas	46.456	0.0611	92971.95	0.0013	4.694E-05
Be	9	1	No Gas	48.856	0.0642	95614.18	0.0013	4.694E-05
Se	78	2	H2	105.802	0.0412	6670.88	0.0004	1.089E-05
Se	78	2	H2	102.867	0.0401	6464.79	0.0004	1.089E-05
Se	78	2	H2	98.889	0.0385	6313.39	0.0004	1.089E-05
Na	23	3	He	5317.388	9.2408	686060.77	0.0017	0.1065
Na	23	3	He	5340.112	9.2798	694457.33	0.0017	0.1065
Na	23	3	He	5327.468	9.2581	682776.94	0.0017	0.1065
Mg	24	3	He	5355.036	4.5197	335553.86	0.0008	0.004846
Mg	24	3	He	5310.819	4.4824	335442.07	0.0008	0.004846
Mg	24	3	He	5280.353	4.4567	328679.53	0.0008	0.004846
Al	27	3	He	5064.746	1.2237	90848.11	0.0002	0.001063
Al	27	3	He	5199.506	1.2562	94007.57	0.0002	0.001063
Al	27	3	He	5171.522	1.2494	92145.07	0.0002	0.001063
K	39	3	He	5226.845	3.03	224953.00	0.0006	0.1436
K	39	3	He	5163.347	2.9949	224124.27	0.0006	0.1436
K	39	3	He	5215.534	3.0237	222996.93	0.0006	0.1436
Ca	44	3	He	5397.357	0.1693	12565.74	0	0.001611
Ca	44	3	He	5164.746	0.162	12125.35	0	0.001611
Ca	44	3	He	5058.034	0.1587	11704.94	0	0.001611
Ti	47	3	He	518.473	0.1303	9673.53	0.0003	0.0002737
Ti	47	3	He	511.696	0.1286	9623.55	0.0003	0.0002737
Ti	47	3	He	572.809	0.1439	10614.15	0.0003	0.0002737
V	51	3	He	519.341	6.0824	451577.38	0.0117	0.007326
V	51	3	He	521.015	6.102	456647.13	0.0117	0.007326
V	51	3	He	524.11	6.1382	452690.00	0.0117	0.007326
Cr	52	3	He	521.754	7.9703	591735.03	0.0152	0.02538
Cr	52	3	He	518.054	7.9139	592241.24	0.0152	0.02538
Cr	52	3	He	529.644	8.0904	596662.06	0.0152	0.02538
Mn	55	3	He	515.687	3.0577	227008.55	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	513.419	3.0443	227818.51	0.0059	0.01385
Mn	55	3	He	516.954	3.0651	226051.01	0.0059	0.01385
Fe	57	3	He	5036.078	1.4629	108612.94	0.0003	0.003918
Fe	57	3	He	5207.608	1.5126	113198.69	0.0003	0.003918
Fe	57	3	He	5181.146	1.505	110990.45	0.0003	0.003918
Co	59	3	He	519.619	15.8569	1177261.15	0.0305	0.003084
Co	59	3	He	518.224	15.8144	1183472.79	0.0305	0.003084
Co	59	3	He	528.244	16.1201	1188842.01	0.0305	0.003084
Ni	60	3	He	522.28	4.6016	341633.00	0.0088	0.009003
Ni	60	3	He	527.315	4.6458	347672.65	0.0088	0.009003
Ni	60	3	He	520.375	4.5848	338126.87	0.0088	0.009003
Cu	63	3	He	521.024	12.9978	964989.44	0.0249	0.004937
Cu	63	3	He	520.268	12.9789	971281.08	0.0249	0.004937
Cu	63	3	He	526.282	13.1289	968246.00	0.0249	0.004937
Zn	66	3	He	506.857	1.2501	92808.27	0.0025	0.004836
Zn	66	3	He	515.741	1.2719	95182.40	0.0025	0.004836
Zn	66	3	He	519.586	1.2813	94497.59	0.0025	0.004836
As	75	3	He	506.588	0.8815	65443.38	0.0017	0.0004347
As	75	3	He	511.992	0.8909	66669.03	0.0017	0.0004347
As	75	3	He	514.099	0.8945	65971.67	0.0017	0.0004347
Sr	88	3	He	52.062	0.4078	25353.05	0.0078	0.0007762
Sr	88	3	He	53.231	0.4169	25673.94	0.0078	0.0007762
Sr	88	3	He	51.75	0.4053	25483.57	0.0078	0.0007762
Mo	98	3	He	51.572	1.1362	70646.72	0.022	0.0005162
Mo	98	3	He	53.469	1.178	72545.86	0.022	0.0005162
Mo	98	3	He	51.022	1.1241	70677.25	0.022	0.0005162
Ag	107	3	He	53.054	2.4144	150123.67	0.0455	0.0004641
Ag	107	3	He	53.969	2.4561	151256.77	0.0455	0.0004641
Ag	107	3	He	52.816	2.4036	151125.33	0.0455	0.0004641
Cd	111	3	He	53.465	0.2567	15961.07	0.0048	5.152E-05
Cd	111	3	He	55.139	0.2647	16303.49	0.0048	5.152E-05
Cd	111	3	He	53.63	0.2575	16189.38	0.0048	5.152E-05
Sn	120	3	He	106.558	1.5349	95435.68	0.0143	0.01559
Sn	120	3	He	110.563	1.592	98041.91	0.0143	0.01559
Sn	120	3	He	107.781	1.5523	97600.30	0.0143	0.01559
Sb	121	3	He	105.68	1.3112	81528.00	0.0124	0.000258
Sb	121	3	He	107.632	1.3354	82241.77	0.0124	0.000258
Sb	121	3	He	104.484	1.2964	81507.94	0.0124	0.000258
Ba	137	3	He	516.26	2.2588	140449.32	0.0044	0.000309
Ba	137	3	He	531.24	2.3244	143145.61	0.0044	0.000309
Ba	137	3	He	518.291	2.2677	142580.71	0.0044	0.000309
Tl	205	3	He	105.766	2.9248	635847.10	0.0276	0.001005
Tl	205	3	He	107.57	2.9747	644455.15	0.0276	0.001005
Tl	205	3	He	105.016	2.9041	643894.40	0.0276	0.001005
Pb	208	3	He	52.823	1.9248	220252.54	0.0364	0.002176
Pb	208	3	He	53.186	1.938	222268.14	0.0364	0.002176
Pb	208	3	He	52.35	1.9076	226006.46	0.0364	0.002176
U	238	3	He	51.787	2.1788	473660.15	0.0421	0.00024
U	238	3	He	52.943	2.2274	482559.48	0.0421	0.00024
U	238	3	He	51.655	2.1732	481842.84	0.0421	0.00024
Sc	45	1	No Gas			3408992.14		
Sc	45	1	No Gas			3398996.82		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3335649.01		
Ge	72	1	No Gas			1513763.88		
Ge	72	1	No Gas			1521818.88		
Ge	72	1	No Gas			1488265.45		
Sc	45	2	H2			185419.88		
Sc	45	2	H2			195538.59		
Sc	45	2	H2			192816.17		
Ge	72	2	H2			161890.95		
Ge	72	2	H2			161364.84		
Ge	72	2	H2			163922.99		
In	115	2	H2			432807.69		
In	115	2	H2			431001.20		
In	115	2	H2			437184.95		
Sc	45	3	He			41449.03		
Sc	45	3	He			41981.28		
Sc	45	3	He			40707.52		
Ge	72	3	He			74242.75		
Ge	72	3	He			74835.27		
Ge	72	3	He			73749.20		
In	115	3	He			62922.02		
In	115	3	He			62349.34		
In	115	3	He			63635.17		
Tb	159	3	He			280277.07		
Tb	159	3	He			283677.44		
Tb	159	3	He			280726.01		
Bi	209	3	He			217397.05		
Bi	209	3	He			216645.93		
Bi	209	3	He			221718.90		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 13:07:46
Sample Name	410-136864-K-4-A
Sample Type	Sample
Comment	D29
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

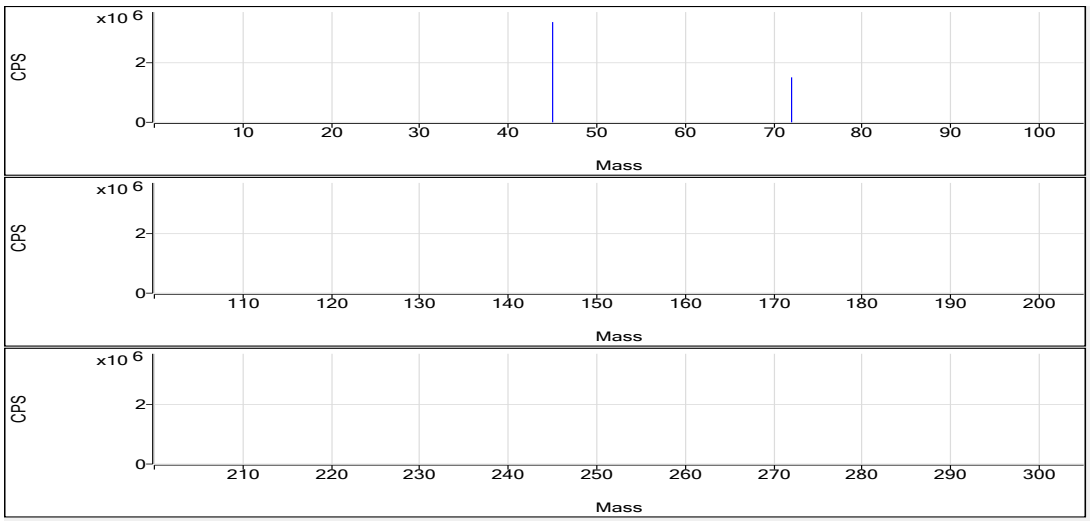
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.103	ppb	9.4	273.33	0.0002	Pulse	0.5000	3
Se	78	72	H2	0.175	ppb	14.7	12.89	0.0001	Pulse	1.5000	3
Na	23	72	He	9599.460	ppb	1.1	1233580.22	16.5966	Pulse	0.1000	3
Mg	24	72	He	41682.046	ppb	0.9	2612386.42	35.1470	Pulse	0.1000	3
Al	27	72	He	3.389	ppb	57.2	140.00	0.0019	Pulse	0.1000	3
K	39	72	He	2934.539	ppb	2.2	131113.59	1.7641	Pulse	0.1000	3
Ca	44	72	He	109551.483	ppb	2.0	253011.28	3.4043	Pulse	0.1000	3
Ti	47	72	He	0.166	ppb	505.0	23.33	0.0003	Pulse	0.1000	3
V	51	72	He	0.205	ppb	15.3	722.69	0.0097	Pulse	0.5000	3
Cr	52	72	He	0.233	ppb	46.9	2150.23	0.0289	Pulse	0.1000	3
Mn	55	72	He	3720.129	ppb	1.5	1633018.67	21.9716	Pulse	0.1000	3
Fe	57	72	He	8715.113	ppb	1.9	187964.34	2.5288	Pulse	0.1000	3
Co	59	72	He	15.204	ppb	1.3	34708.78	0.4670	Pulse	0.1000	3
Ni	60	72	He	14.915	ppb	1.0	10417.42	0.1402	Pulse	0.1000	3
Cu	63	72	He	0.361	ppb	31.5	1036.74	0.0139	Pulse	0.1000	3
Zn	66	72	He	11.387	ppb	13.2	2436.97	0.0328	Pulse	0.1000	3
As	75	72	He	5.317	ppb	7.7	720.02	0.0097	Pulse	0.5000	3
Sr	88	115	He	106.625	ppb	0.5	51674.65	0.8343	Pulse	0.1000	3
Mo	98	115	He	0.734	ppb	11.6	1033.41	0.0167	Pulse	0.1000	3
Ag	107	115	He	0.030	ppb	29.4	113.34	0.0018	Pulse	0.1000	3
Cd	111	115	He	0.014	ppb	222.9	7.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	1.530	ppb	11.8	2316.95	0.0374	Pulse	0.1000	3
Sb	121	115	He	0.114	ppb	6.9	103.33	0.0017	Pulse	0.1000	3
Ba	137	115	He	514.761	ppb	1.3	139506.22	2.2523	Pulse	0.1000	3
Tl	205	209	He	0.578	ppb	15.0	3677.33	0.0170	Pulse	0.1000	3
Pb	208	209	He	0.021	ppb	24.4	636.70	0.0029	Pulse	0.1000	3
U	238	209	He	0.830	ppb	3.6	7615.85	0.0351	Pulse	0.1000	3

ISTD Table:

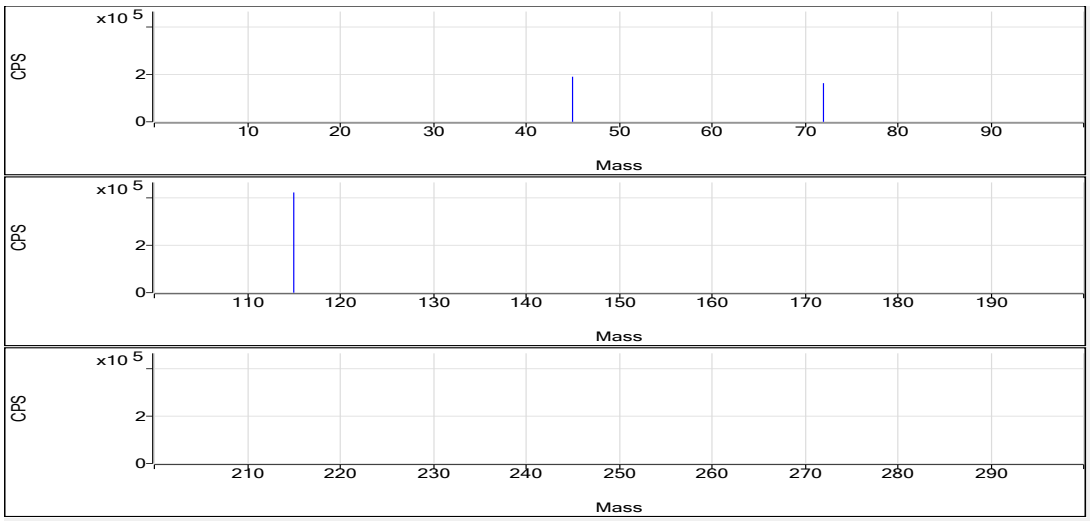
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3339870.26	0.9	103.0	Pulse	0.1000	3
No Gas	Ge	72	1497980.08	0.8	104.0	Pulse	0.1000	3
H2	Sc	45	190551.47	2.8	97.5	Pulse	0.1000	3
H2	Ge	72	163301.18	2.9	100.2	Pulse	0.1000	3
H2	In	115	423527.42	1.8	97.7	Pulse	0.1000	3
He	Sc	45	40794.31	1.4	102.0	Pulse	0.1000	3
He	Ge	72	74331.85	1.1	102.8	Pulse	0.1000	3
He	In	115	61939.36	0.3	95.9	Pulse	0.1000	3
He	Tb	159	280756.00	0.9	98.2	Pulse	0.1000	3
He	Bi	209	216716.50	0.7	97.5	Pulse	0.1000	3

No Gas

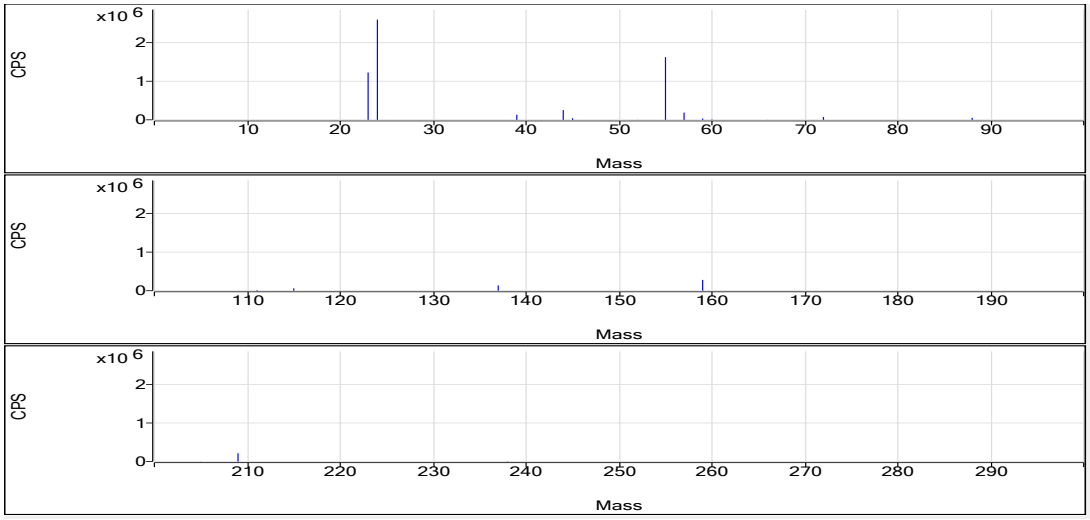


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.114	0.0002	298.00	0.0013	4.694E-05
Be	9	1	No Gas	0.098	0.0002	262.00	0.0013	4.694E-05
Be	9	1	No Gas	0.097	0.0002	260.00	0.0013	4.694E-05
Se	78	2	H2	0.178	0.0001	12.67	0.0004	1.089E-05
Se	78	2	H2	0.199	0.0001	14.67	0.0004	1.089E-05
Se	78	2	H2	0.148	0.0001	11.33	0.0004	1.089E-05
Na	23	3	He	9588.579	16.5779	1242095.53	0.0017	0.1065
Na	23	3	He	9504.43	16.4334	1226808.03	0.0017	0.1065
Na	23	3	He	9705.372	16.7785	1231837.09	0.0017	0.1065
Mg	24	3	He	41527.219	35.0165	2623601.21	0.0008	0.004846
Mg	24	3	He	41414.555	34.9215	2607013.24	0.0008	0.004846
Mg	24	3	He	42104.365	35.5031	2606544.80	0.0008	0.004846
Al	27	3	He	5.55	0.0024	180.01	0.0002	0.001063
Al	27	3	He	2.811	0.0017	130.00	0.0002	0.001063
Al	27	3	He	1.804	0.0015	110.00	0.0002	0.001063
K	39	3	He	2917.793	1.7549	131483.88	0.0006	0.1436
K	39	3	He	2878.922	1.7334	129405.49	0.0006	0.1436
K	39	3	He	3006.903	1.8041	132451.41	0.0006	0.1436
Ca	44	3	He	108842.774	3.3823	253414.23	0	0.001611
Ca	44	3	He	107755.734	3.3485	249976.38	0	0.001611
Ca	44	3	He	112055.941	3.4821	255643.22	0	0.001611
Ti	47	3	He	-0.027	0.0003	20.00	0.0003	0.0002737
Ti	47	3	He	-0.557	0.0001	10.00	0.0003	0.0002737
Ti	47	3	He	1.081	0.0005	40.00	0.0003	0.0002737
V	51	3	He	0.241	0.0101	760.02	0.0117	0.007326
V	51	3	He	0.184	0.0095	708.02	0.0117	0.007326
V	51	3	He	0.189	0.0095	700.02	0.0117	0.007326
Cr	52	3	He	0.244	0.0291	2180.24	0.0152	0.02538
Cr	52	3	He	0.119	0.0272	2030.19	0.0152	0.02538
Cr	52	3	He	0.337	0.0305	2240.25	0.0152	0.02538
Mn	55	3	He	3679.594	21.7324	1628291.07	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	3698.536	21.8442	1630743.26	0.0059	0.01385
Mn	55	3	He	3782.257	22.3383	1640021.69	0.0059	0.01385
Fe	57	3	He	8826.116	2.561	191880.11	0.0003	0.003918
Fe	57	3	He	8520.611	2.4725	184578.02	0.0003	0.003918
Fe	57	3	He	8798.611	2.553	187434.90	0.0003	0.003918
Co	59	3	He	15.22	0.4674	35023.11	0.0305	0.003084
Co	59	3	He	15.007	0.4609	34411.18	0.0305	0.003084
Co	59	3	He	15.386	0.4725	34692.06	0.0305	0.003084
Ni	60	3	He	14.783	0.139	10414.01	0.0088	0.009003
Ni	60	3	He	14.886	0.1399	10444.17	0.0088	0.009003
Ni	60	3	He	15.076	0.1416	10394.07	0.0088	0.009003
Cu	63	3	He	0.471	0.0167	1250.10	0.0249	0.004937
Cu	63	3	He	0.366	0.0141	1050.08	0.0249	0.004937
Cu	63	3	He	0.244	0.011	810.05	0.0249	0.004937
Zn	66	3	He	10.148	0.0298	2230.27	0.0025	0.004836
Zn	66	3	He	10.955	0.0318	2370.29	0.0025	0.004836
Zn	66	3	He	13.058	0.0369	2710.35	0.0025	0.004836
As	75	3	He	5.445	0.0099	742.03	0.0017	0.0004347
As	75	3	He	5.65	0.0103	766.02	0.0017	0.0004347
As	75	3	He	4.857	0.0089	652.02	0.0017	0.0004347
Sr	88	3	He	106.203	0.831	51453.45	0.0078	0.0007762
Sr	88	3	He	107.274	0.8393	52147.21	0.0078	0.0007762
Sr	88	3	He	106.397	0.8325	51423.30	0.0078	0.0007762
Mo	98	3	He	0.82	0.0186	1150.09	0.022	0.0005162
Mo	98	3	He	0.649	0.0148	920.06	0.022	0.0005162
Mo	98	3	He	0.734	0.0167	1030.07	0.022	0.0005162
Ag	107	3	He	0.029	0.0018	110.00	0.0455	0.0004641
Ag	107	3	He	0.039	0.0023	140.01	0.0455	0.0004641
Ag	107	3	He	0.022	0.0015	90.01	0.0455	0.0004641
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Cd	111	3	He	0.05	0.0003	18.00	0.0048	5.152E-05
Sn	120	3	He	1.512	0.0371	2300.26	0.0143	0.01559
Sn	120	3	He	1.718	0.0401	2490.36	0.0143	0.01559
Sn	120	3	He	1.36	0.035	2160.24	0.0143	0.01559
Sb	121	3	He	0.109	0.0016	100.00	0.0124	0.000258
Sb	121	3	He	0.109	0.0016	100.00	0.0124	0.000258
Sb	121	3	He	0.123	0.0018	110.00	0.0124	0.000258
Ba	137	3	He	521.879	2.2834	141388.57	0.0044	0.000309
Ba	137	3	He	514.101	2.2494	139751.18	0.0044	0.000309
Ba	137	3	He	508.304	2.224	137378.90	0.0044	0.000309
Tl	205	3	He	0.678	0.0197	4250.88	0.0276	0.001005
Tl	205	3	He	0.526	0.0155	3390.54	0.0276	0.001005
Tl	205	3	He	0.53	0.0157	3390.57	0.0276	0.001005
Pb	208	3	He	0.024	0.0031	350.02	0.0364	0.002176
Pb	208	3	He	0.023	0.003	360.02	0.0364	0.002176
Pb	208	3	He	0.015	0.0027	300.01	0.0364	0.002176
U	238	3	He	0.863	0.0366	7872.73	0.0421	0.00024
U	238	3	He	0.819	0.0347	7572.46	0.0421	0.00024
U	238	3	He	0.807	0.0342	7402.36	0.0421	0.00024
Sc	45	1	No Gas			3370075.89		
Sc	45	1	No Gas			3341825.26		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3307709.64		
Ge	72	1	No Gas			1511445.13		
Ge	72	1	No Gas			1493313.42		
Ge	72	1	No Gas			1489181.70		
Sc	45	2	H2			184304.96		
Sc	45	2	H2			193310.54		
Sc	45	2	H2			194038.92		
Ge	72	2	H2			157837.19		
Ge	72	2	H2			166280.33		
Ge	72	2	H2			165786.01		
In	115	2	H2			414584.80		
In	115	2	H2			428252.73		
In	115	2	H2			427744.72		
Sc	45	3	He			41278.99		
Sc	45	3	He			40165.83		
Sc	45	3	He			40938.12		
Ge	72	3	He			74924.69		
Ge	72	3	He			74653.48		
Ge	72	3	He			73417.38		
In	115	3	He			61937.55		
In	115	3	He			62147.71		
In	115	3	He			61787.04		
Tb	159	3	He			279061.70		
Tb	159	3	He			283605.41		
Tb	159	3	He			279600.89		
Bi	209	3	He			215342.81		
Bi	209	3	He			218233.51		
Bi	209	3	He			216573.18		

Quantitation Report

Data File Name	095SMPL.d
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Acq Time	2023-08-10 13:09:46
Sample Name	410-136864-K-4-A PDS
Sample Type	Sample
Comment	D29
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

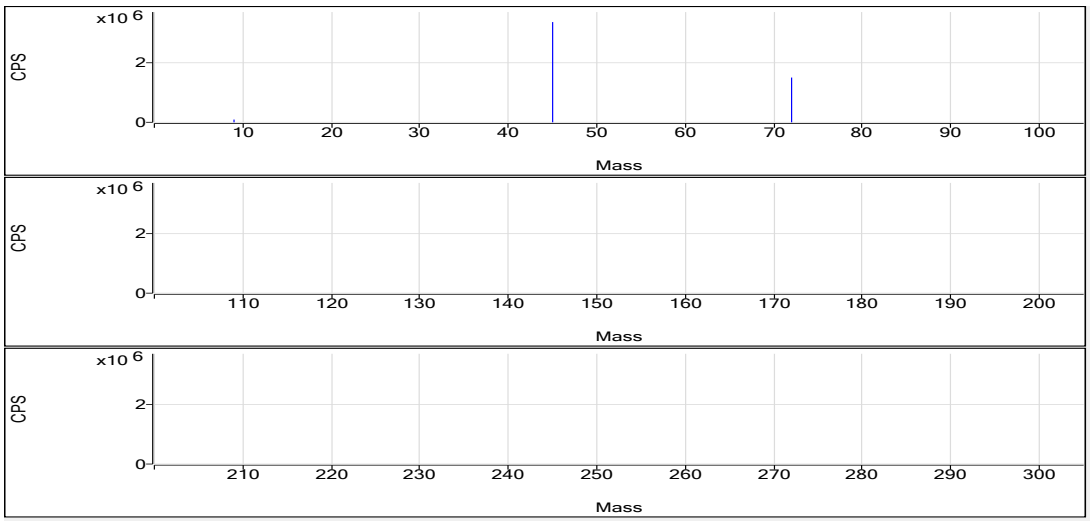
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	46.295	ppb	3.6	91996.10	0.0609	Pulse	0.5000	3
Se	78	72	H2	101.703	ppb	5.0	6451.67	0.0396	Pulse	1.5000	3
Na	23	72	He	14981.378	ppb	0.5	1920961.12	25.8418	Pulse	0.1000	3
Mg	24	72	He	46910.004	ppb	0.8	2940262.98	39.5547	Pulse	0.1000	3
Al	27	72	He	5106.872	ppb	0.9	91716.87	1.2338	Pulse	0.1000	3
K	39	72	He	8097.769	ppb	1.8	343065.46	4.6153	Pulse	0.1000	3
Ca	44	72	He	115287.165	ppb	1.6	266300.02	3.5824	Pulse	0.1000	3
Ti	47	72	He	537.012	ppb	3.5	10030.45	0.1349	Pulse	0.1000	3
V	51	72	He	522.781	ppb	0.7	455128.28	6.1227	Pulse	0.5000	3
Cr	52	72	He	514.477	ppb	0.7	584223.40	7.8595	Pulse	0.1000	3
Mn	55	72	He	4229.202	ppb	0.7	1856592.74	24.9764	Pulse	0.1000	3
Fe	57	72	He	13720.351	ppb	0.6	295769.84	3.9789	Pulse	0.1000	3
Co	59	72	He	520.241	ppb	0.6	1180117.95	15.8759	Pulse	0.1000	3
Ni	60	72	He	518.901	ppb	0.3	339847.20	4.5719	Pulse	0.1000	3
Cu	63	72	He	509.070	ppb	0.6	944027.51	12.6997	Pulse	0.1000	3
Zn	66	72	He	514.256	ppb	0.8	94273.87	1.2682	Pulse	0.1000	3
As	75	72	He	517.776	ppb	1.0	66969.55	0.9009	Pulse	0.5000	3
Sr	88	115	He	159.912	ppb	1.4	77433.67	1.2508	Pulse	0.1000	3
Mo	98	115	He	53.491	ppb	1.8	72958.19	1.1785	Pulse	0.1000	3
Ag	107	115	He	54.813	ppb	1.4	154423.42	2.4945	Pulse	0.1000	3
Cd	111	115	He	53.475	ppb	2.5	15893.68	0.2567	Pulse	0.5000	3
Sn	120	115	He	107.386	ppb	1.0	95751.28	1.5467	Pulse	0.1000	3
Sb	121	115	He	105.604	ppb	0.7	81119.39	1.3103	Pulse	0.1000	3
Ba	137	115	He	1029.621	ppb	1.3	278869.31	4.5047	Pulse	0.1000	3
Tl	205	209	He	104.531	ppb	0.7	628024.03	2.8907	Pulse	0.1000	3
Pb	208	209	He	51.508	ppb	0.6	407787.56	1.8769	Pulse	0.1000	3
U	238	209	He	52.549	ppb	1.0	480328.39	2.2108	Pulse	0.1000	3

ISTD Table:

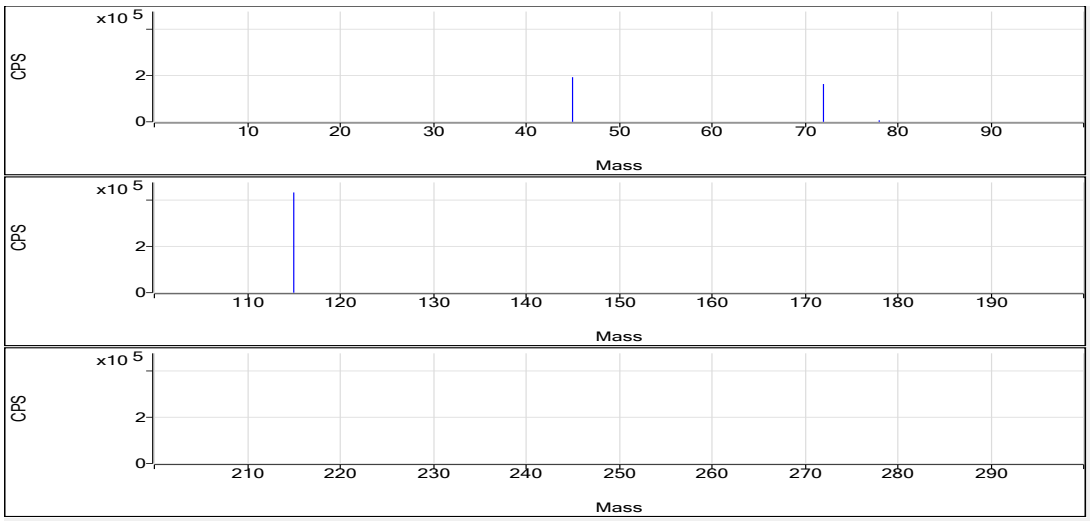
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3385091.10	1.4	104.4	Pulse	0.1000	3
No Gas	Ge	72	1511286.85	0.8	105.0	Pulse	0.1000	3
H2	Sc	45	192455.04	1.8	98.5	Pulse	0.1000	3
H2	Ge	72	162960.06	1.7	100.0	Pulse	0.1000	3
H2	In	115	432273.63	1.4	99.8	Pulse	0.1000	3
He	Sc	45	41980.76	1.3	105.0	Pulse	0.1000	3
He	Ge	72	74335.29	0.5	102.8	Pulse	0.1000	3
He	In	115	61910.24	0.8	95.8	Pulse	0.1000	3
He	Tb	159	280356.24	0.2	98.0	Pulse	0.1000	3
He	Bi	209	217264.75	0.8	97.8	Pulse	0.1000	3

No Gas

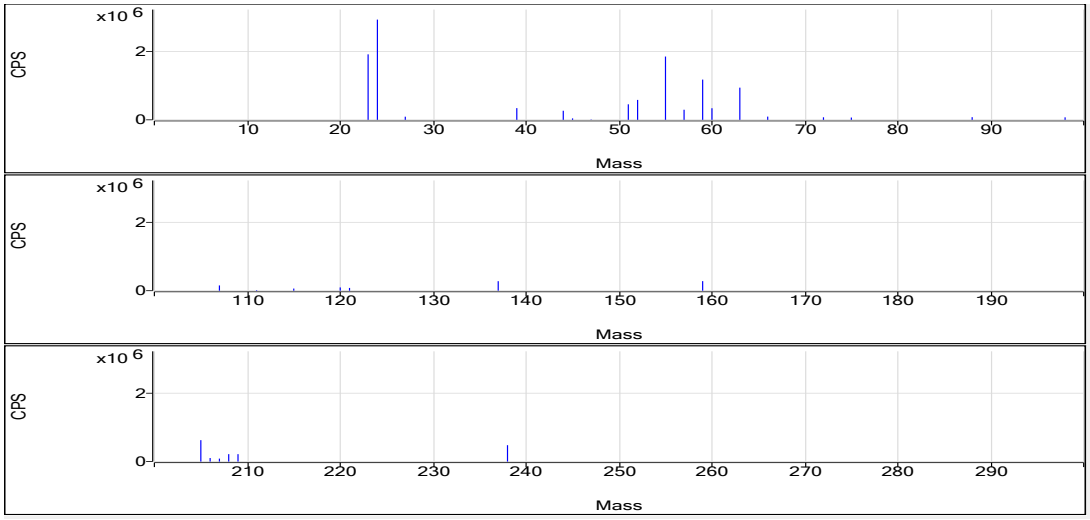


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	45.459	0.0598	90042.23	0.0013	4.694E-05
Be	9	1	No Gas	45.205	0.0594	90639.94	0.0013	4.694E-05
Be	9	1	No Gas	48.221	0.0634	95306.13	0.0013	4.694E-05
Se	78	2	H2	106.021	0.0413	6597.51	0.0004	1.089E-05
Se	78	2	H2	103.052	0.0401	6581.50	0.0004	1.089E-05
Se	78	2	H2	96.036	0.0374	6175.99	0.0004	1.089E-05
Na	23	3	He	14989.895	25.8564	1912332.94	0.0017	0.1065
Na	23	3	He	15058.168	25.9737	1937735.60	0.0017	0.1065
Na	23	3	He	14896.07	25.6952	1912814.82	0.0017	0.1065
Mg	24	3	He	47284.374	39.8704	2948801.52	0.0008	0.004846
Mg	24	3	He	46919.563	39.5628	2951534.33	0.0008	0.004846
Mg	24	3	He	46526.076	39.2311	2920453.08	0.0008	0.004846
Al	27	3	He	5126.962	1.2387	91612.54	0.0002	0.001063
Al	27	3	He	5136.861	1.2411	92588.59	0.0002	0.001063
Al	27	3	He	5056.793	1.2217	90949.48	0.0002	0.001063
K	39	3	He	8261.943	4.706	348053.12	0.0006	0.1436
K	39	3	He	8050.985	4.5895	342393.20	0.0006	0.1436
K	39	3	He	7980.38	4.5505	338750.07	0.0006	0.1436
Ca	44	3	He	115775.938	3.5976	266077.14	0	0.001611
Ca	44	3	He	116871.545	3.6316	270932.93	0	0.001611
Ca	44	3	He	113214.011	3.518	261889.98	0	0.001611
Ti	47	3	He	555.534	0.1396	10324.05	0.0003	0.0002737
Ti	47	3	He	537.885	0.1352	10083.76	0.0003	0.0002737
Ti	47	3	He	517.616	0.1301	9683.54	0.0003	0.0002737
V	51	3	He	525.426	6.1536	455120.09	0.0117	0.007326
V	51	3	He	524.637	6.1444	458394.88	0.0117	0.007326
V	51	3	He	518.282	6.0701	451869.88	0.0117	0.007326
Cr	52	3	He	518.636	7.9228	585967.65	0.0152	0.02538
Cr	52	3	He	512.554	7.8302	584160.62	0.0152	0.02538
Cr	52	3	He	512.24	7.8254	582541.94	0.0152	0.02538
Mn	55	3	He	4262.621	25.1736	1861834.82	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	4221.617	24.9316	1859992.32	0.0059	0.01385
Mn	55	3	He	4203.37	24.8239	1847951.07	0.0059	0.01385
Fe	57	3	He	13755.562	3.9891	295033.10	0.0003	0.003918
Fe	57	3	He	13622.383	3.9505	294723.82	0.0003	0.003918
Fe	57	3	He	13783.107	3.9971	297552.59	0.0003	0.003918
Co	59	3	He	523.82	15.9851	1182251.94	0.0305	0.003084
Co	59	3	He	517.912	15.8048	1179099.90	0.0305	0.003084
Co	59	3	He	518.992	15.8378	1179002.01	0.0305	0.003084
Ni	60	3	He	520.482	4.5858	339161.24	0.0088	0.009003
Ni	60	3	He	517.313	4.5579	340036.21	0.0088	0.009003
Ni	60	3	He	518.908	4.5719	340344.14	0.0088	0.009003
Cu	63	3	He	511.242	12.7538	943270.85	0.0249	0.004937
Cu	63	3	He	510.562	12.7369	950219.44	0.0249	0.004937
Cu	63	3	He	505.406	12.6083	938592.25	0.0249	0.004937
Zn	66	3	He	518.056	1.2776	94489.45	0.0025	0.004836
Zn	66	3	He	514.823	1.2696	94719.66	0.0025	0.004836
Zn	66	3	He	509.89	1.2575	93612.50	0.0025	0.004836
As	75	3	He	522.523	0.9092	67243.54	0.0017	0.0004347
As	75	3	He	512.62	0.892	66544.20	0.0017	0.0004347
As	75	3	He	518.186	0.9016	67120.91	0.0017	0.0004347
Sr	88	3	He	157.738	1.2338	76645.82	0.0078	0.0007762
Sr	88	3	He	159.729	1.2494	77823.10	0.0078	0.0007762
Sr	88	3	He	162.268	1.2692	77832.10	0.0078	0.0007762
Mo	98	3	He	52.391	1.1543	71702.25	0.022	0.0005162
Mo	98	3	He	54.198	1.194	74375.39	0.022	0.0005162
Mo	98	3	He	53.884	1.1871	72796.94	0.022	0.0005162
Ag	107	3	He	54.233	2.4681	153318.34	0.0455	0.0004641
Ag	107	3	He	54.525	2.4814	154562.23	0.0455	0.0004641
Ag	107	3	He	55.682	2.534	155389.69	0.0455	0.0004641
Cd	111	3	He	52.132	0.2503	15548.63	0.0048	5.152E-05
Cd	111	3	He	53.444	0.2566	15983.11	0.0048	5.152E-05
Cd	111	3	He	54.851	0.2634	16149.29	0.0048	5.152E-05
Sn	120	3	He	107.682	1.5509	96342.32	0.0143	0.01559
Sn	120	3	He	106.207	1.5299	95294.19	0.0143	0.01559
Sn	120	3	He	108.268	1.5593	95617.33	0.0143	0.01559
Sb	121	3	He	104.837	1.3008	80803.49	0.0124	0.000258
Sb	121	3	He	106.234	1.3181	82101.69	0.0124	0.000258
Sb	121	3	He	105.742	1.312	80452.98	0.0124	0.000258
Ba	137	3	He	1016.767	4.4485	276338.71	0.0044	0.000309
Ba	137	3	He	1028.106	4.4981	280178.16	0.0044	0.000309
Ba	137	3	He	1043.99	4.5676	280091.07	0.0044	0.000309
Tl	205	3	He	103.725	2.8684	627583.51	0.0276	0.001005
Tl	205	3	He	104.668	2.8945	630308.70	0.0276	0.001005
Tl	205	3	He	105.201	2.9092	626179.87	0.0276	0.001005
Pb	208	3	He	51.234	1.867	216979.33	0.0364	0.002176
Pb	208	3	He	51.815	1.8881	220183.16	0.0364	0.002176
Pb	208	3	He	51.474	1.8757	215192.32	0.0364	0.002176
U	238	3	He	52.025	2.1888	478892.41	0.0421	0.00024
U	238	3	He	53.038	2.2314	485919.52	0.0421	0.00024
U	238	3	He	52.583	2.2123	476173.24	0.0421	0.00024
Sc	45	1	No Gas			3372876.51		
Sc	45	1	No Gas			3436903.39		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3345493.39		
Ge	72	1	No Gas			1506175.13		
Ge	72	1	No Gas			1524691.07		
Ge	72	1	No Gas			1502994.35		
Sc	45	2	H2			189479.92		
Sc	45	2	H2			191647.67		
Sc	45	2	H2			196237.52		
Ge	72	2	H2			159779.38		
Ge	72	2	H2			163983.18		
Ge	72	2	H2			165117.63		
In	115	2	H2			426215.50		
In	115	2	H2			431988.59		
In	115	2	H2			438616.79		
Sc	45	3	He			42040.91		
Sc	45	3	He			41419.15		
Sc	45	3	He			42482.23		
Ge	72	3	He			73959.71		
Ge	72	3	He			74603.77		
Ge	72	3	He			74442.38		
In	115	3	He			62871.62		
In	115	3	He			63031.93		
In	115	3	He			62067.75		
Tb	159	3	He			280988.39		
Tb	159	3	He			280340.23		
Tb	159	3	He			279740.11		
Bi	209	3	He			218791.25		
Bi	209	3	He			217762.11		
Bi	209	3	He			215240.88		

Quantitation Report

Data File Name	096SMPL.d
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Acq Time	2023-08-10 13:11:45
Sample Name	410-136864-K-4-A SD @5
Sample Type	Sample
Comment	D29
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

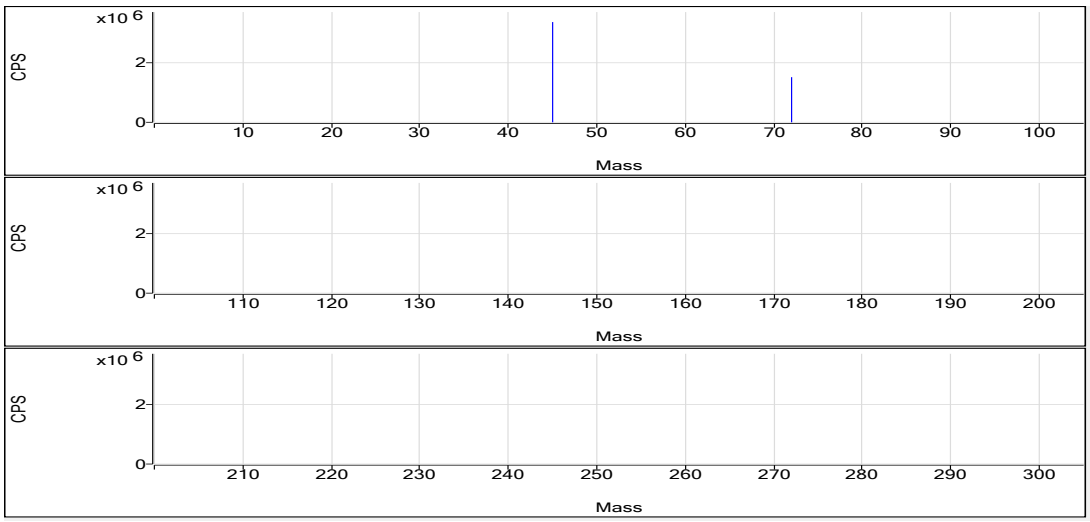
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.066	ppb	11.0	201.33	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.185	ppb	12.7	13.56	0.0001	Pulse	1.5000	3
Na	23	72	He	1862.644	ppb	1.1	247439.19	3.3061	Pulse	0.1000	3
Mg	24	72	He	8121.338	ppb	1.4	512801.01	6.8520	Pulse	0.1000	3
Al	27	72	He	3.883	ppb	59.5	150.01	0.0020	Pulse	0.1000	3
K	39	72	He	576.624	ppb	3.8	34578.08	0.4621	Pulse	0.1000	3
Ca	44	72	He	21511.872	ppb	1.1	50126.41	0.6698	Pulse	0.1000	3
Ti	47	72	He	0.338	ppb	366.5	26.67	0.0004	Pulse	0.1000	3
V	51	72	He	0.201	ppb	43.5	724.02	0.0097	Pulse	0.5000	3
Cr	52	72	He	0.188	ppb	73.0	2113.56	0.0282	Pulse	0.1000	3
Mn	55	72	He	728.095	ppb	1.3	322668.78	4.3114	Pulse	0.1000	3
Fe	57	72	He	1706.182	ppb	0.9	37288.48	0.4982	Pulse	0.1000	3
Co	59	72	He	3.090	ppb	3.1	7285.43	0.0974	Pulse	0.1000	3
Ni	60	72	He	3.892	ppb	11.3	3233.80	0.0432	Pulse	0.1000	3
Cu	63	72	He	0.400	ppb	5.9	1116.75	0.0149	Pulse	0.1000	3
Zn	66	72	He	4.376	ppb	1.6	1166.76	0.0156	Pulse	0.1000	3
As	75	72	He	1.338	ppb	12.8	206.67	0.0028	Pulse	0.5000	3
Sr	88	115	He	20.933	ppb	3.2	10414.17	0.1644	Pulse	0.1000	3
Mo	98	115	He	0.194	ppb	9.8	303.34	0.0048	Pulse	0.1000	3
Ag	107	115	He	0.029	ppb	59.8	113.34	0.0018	Pulse	0.1000	3
Cd	111	115	He	0.018	ppb	58.1	8.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.262	ppb	29.1	1223.44	0.0193	Pulse	0.1000	3
Sb	121	115	He	0.102	ppb	18.6	96.67	0.0015	Pulse	0.1000	3
Ba	137	115	He	100.587	ppb	2.7	27885.50	0.4404	Pulse	0.1000	3
Tl	205	209	He	0.599	ppb	13.7	3860.72	0.0176	Pulse	0.1000	3
Pb	208	209	He	0.030	ppb	6.5	720.04	0.0033	Pulse	0.1000	3
U	238	209	He	0.193	ppb	8.8	1833.54	0.0083	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3340423.91	1.0	103.1	Pulse	0.1000	3
No Gas	Ge	72	1503980.96	1.1	104.5	Pulse	0.1000	3
H2	Sc	45	195005.87	3.2	99.8	Pulse	0.1000	3
H2	Ge	72	163363.64	2.5	100.2	Pulse	0.1000	3
H2	In	115	437057.09	0.9	100.9	Pulse	0.1000	3
He	Sc	45	41152.09	1.5	102.9	Pulse	0.1000	3
He	Ge	72	74847.71	1.1	103.5	Pulse	0.1000	3
He	In	115	63334.54	1.2	98.1	Pulse	0.1000	3
He	Tb	159	281382.64	0.5	98.4	Pulse	0.1000	3
He	Bi	209	219667.55	0.3	98.9	Pulse	0.1000	3

No Gas



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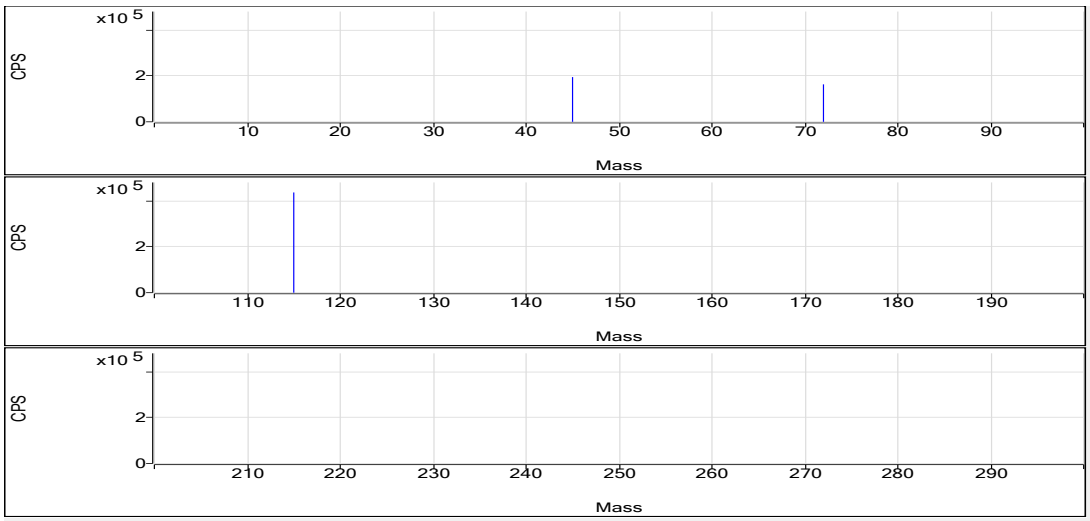
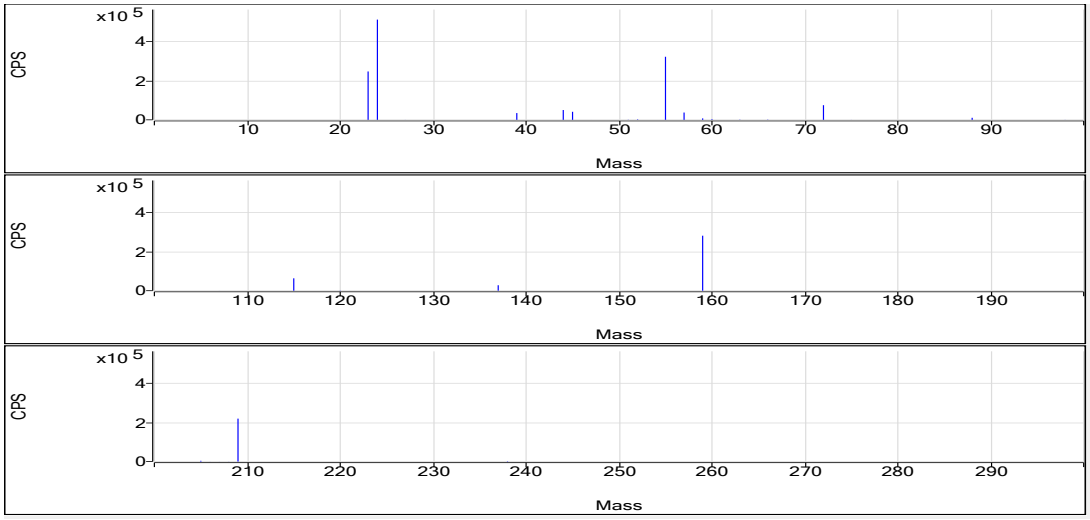


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.065	0.0001	196.00	0.0013	4.694E-05
Be	9	1	No Gas	0.074	0.0001	218.00	0.0013	4.694E-05
Be	9	1	No Gas	0.06	0.0001	190.00	0.0013	4.694E-05
Se	78	2	H2	0.161	0.0001	12.00	0.0004	1.089E-05
Se	78	2	H2	0.208	0.0001	14.67	0.0004	1.089E-05
Se	78	2	H2	0.187	0.0001	14.00	0.0004	1.089E-05
Na	23	3	He	1858.038	3.2982	246458.00	0.0017	0.1065
Na	23	3	He	1884.649	3.3439	247720.04	0.0017	0.1065
Na	23	3	He	1845.246	3.2763	248139.53	0.0017	0.1065
Mg	24	3	He	8175.096	6.8973	515394.41	0.0008	0.004846
Mg	24	3	He	8200.882	6.919	512562.22	0.0008	0.004846
Mg	24	3	He	7988.036	6.7396	510446.40	0.0008	0.004846
Al	27	3	He	2.805	0.0017	130.01	0.0002	0.001063
Al	27	3	He	2.308	0.0016	120.00	0.0002	0.001063
Al	27	3	He	6.537	0.0026	200.01	0.0002	0.001063
K	39	3	He	591.543	0.4703	35142.65	0.0006	0.1436
K	39	3	He	587.189	0.4679	34661.62	0.0006	0.1436
K	39	3	He	551.141	0.448	33929.98	0.0006	0.1436
Ca	44	3	He	21489.446	0.6691	49995.78	0	0.001611
Ca	44	3	He	21764.05	0.6776	50196.66	0	0.001611
Ca	44	3	He	21282.122	0.6626	50186.79	0	0.001611
Ti	47	3	He	1.043	0.0005	40.00	0.0003	0.0002737
Ti	47	3	He	1.062	0.0005	40.00	0.0003	0.0002737
Ti	47	3	He	-1.091	0	0.00	0.0003	0.0002737
V	51	3	He	0.289	0.0107	800.03	0.0117	0.007326
V	51	3	He	0.2	0.0097	716.02	0.0117	0.007326
V	51	3	He	0.114	0.0087	656.02	0.0117	0.007326
Cr	52	3	He	0.337	0.0305	2280.27	0.0152	0.02538
Cr	52	3	He	0.159	0.0278	2060.21	0.0152	0.02538
Cr	52	3	He	0.067	0.0264	2000.21	0.0152	0.02538
Mn	55	3	He	725.327	4.295	320943.82	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	738.288	4.3715	323844.17	0.0059	0.01385
Mn	55	3	He	720.669	4.2675	323218.34	0.0059	0.01385
Fe	57	3	He	1706.591	0.4983	37238.26	0.0003	0.003918
Fe	57	3	He	1721.082	0.5025	37228.28	0.0003	0.003918
Fe	57	3	He	1690.873	0.4938	37398.89	0.0003	0.003918
Co	59	3	He	3.137	0.0988	7382.10	0.0305	0.003084
Co	59	3	He	3.152	0.0992	7352.18	0.0305	0.003084
Co	59	3	He	2.981	0.094	7122.02	0.0305	0.003084
Ni	60	3	He	3.71	0.0416	3110.44	0.0088	0.009003
Ni	60	3	He	4.396	0.0477	3530.53	0.0088	0.009003
Ni	60	3	He	3.571	0.0404	3060.42	0.0088	0.009003
Cu	63	3	He	0.419	0.0154	1150.09	0.0249	0.004937
Cu	63	3	He	0.408	0.0151	1120.08	0.0249	0.004937
Cu	63	3	He	0.374	0.0143	1080.08	0.0249	0.004937
Zn	66	3	He	4.405	0.0157	1170.09	0.0025	0.004836
Zn	66	3	He	4.296	0.0154	1140.09	0.0025	0.004836
Zn	66	3	He	4.427	0.0157	1190.10	0.0025	0.004836
As	75	3	He	1.535	0.0031	232.00	0.0017	0.0004347
As	75	3	He	1.225	0.0026	190.00	0.0017	0.0004347
As	75	3	He	1.253	0.0026	198.00	0.0017	0.0004347
Sr	88	3	He	20.896	0.1641	10264.14	0.0078	0.0007762
Sr	88	3	He	20.282	0.1593	10093.98	0.0078	0.0007762
Sr	88	3	He	21.62	0.1698	10884.40	0.0078	0.0007762
Mo	98	3	He	0.216	0.0053	330.01	0.022	0.0005162
Mo	98	3	He	0.184	0.0046	290.01	0.022	0.0005162
Mo	98	3	He	0.182	0.0045	290.01	0.022	0.0005162
Ag	107	3	He	0.025	0.0016	100.00	0.0455	0.0004641
Ag	107	3	He	0.014	0.0011	70.00	0.0455	0.0004641
Ag	107	3	He	0.048	0.0027	170.01	0.0455	0.0004641
Cd	111	3	He	0.029	0.0002	12.00	0.0048	5.152E-05
Cd	111	3	He	0.009	0.0001	6.00	0.0048	5.152E-05
Cd	111	3	He	0.015	0.0001	8.00	0.0048	5.152E-05
Sn	120	3	He	0.342	0.0205	1280.12	0.0143	0.01559
Sn	120	3	He	0.191	0.0183	1160.10	0.0143	0.01559
Sn	120	3	He	0.253	0.0192	1230.10	0.0143	0.01559
Sb	121	3	He	0.108	0.0016	100.00	0.0124	0.000258
Sb	121	3	He	0.081	0.0013	80.00	0.0124	0.000258
Sb	121	3	He	0.118	0.0017	110.00	0.0124	0.000258
Ba	137	3	He	103.546	0.4533	28349.70	0.0044	0.000309
Ba	137	3	He	98.309	0.4304	27267.56	0.0044	0.000309
Ba	137	3	He	99.906	0.4374	28039.25	0.0044	0.000309
Tl	205	3	He	0.691	0.0201	4430.94	0.0276	0.001005
Tl	205	3	He	0.571	0.0168	3690.67	0.0276	0.001005
Tl	205	3	He	0.535	0.0158	3460.56	0.0276	0.001005
Pb	208	3	He	0.031	0.0033	390.02	0.0364	0.002176
Pb	208	3	He	0.032	0.0033	360.02	0.0364	0.002176
Pb	208	3	He	0.028	0.0032	410.02	0.0364	0.002176
U	238	3	He	0.18	0.0078	1720.18	0.0421	0.00024
U	238	3	He	0.212	0.0092	2010.23	0.0421	0.00024
U	238	3	He	0.186	0.0081	1770.20	0.0421	0.00024
Sc	45	1	No Gas			3303321.20		
Sc	45	1	No Gas			3351340.26		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3366610.26		
Ge	72	1	No Gas			1485221.85		
Ge	72	1	No Gas			1511662.16		
Ge	72	1	No Gas			1515058.88		
Sc	45	2	H2			192782.71		
Sc	45	2	H2			190260.54		
Sc	45	2	H2			201974.37		
Ge	72	2	H2			163002.70		
Ge	72	2	H2			159493.30		
Ge	72	2	H2			167594.92		
In	115	2	H2			432636.09		
In	115	2	H2			437856.83		
In	115	2	H2			440678.35		
Sc	45	3	He			41630.25		
Sc	45	3	He			40436.25		
Sc	45	3	He			41389.76		
Ge	72	3	He			74724.27		
Ge	72	3	He			74080.15		
Ge	72	3	He			75738.70		
In	115	3	He			62550.57		
In	115	3	He			63364.17		
In	115	3	He			64117.49		
Tb	159	3	He			282954.72		
Tb	159	3	He			281038.04		
Tb	159	3	He			280155.15		
Bi	209	3	He			220253.75		
Bi	209	3	He			219633.28		
Bi	209	3	He			219115.62		

Quantitation Report

Data File Name	097SMPL.d
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Acq Time	2023-08-10 13:13:44
Sample Name	410-136864-C-4-A DU
Sample Type	Sample
Comment	D29
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

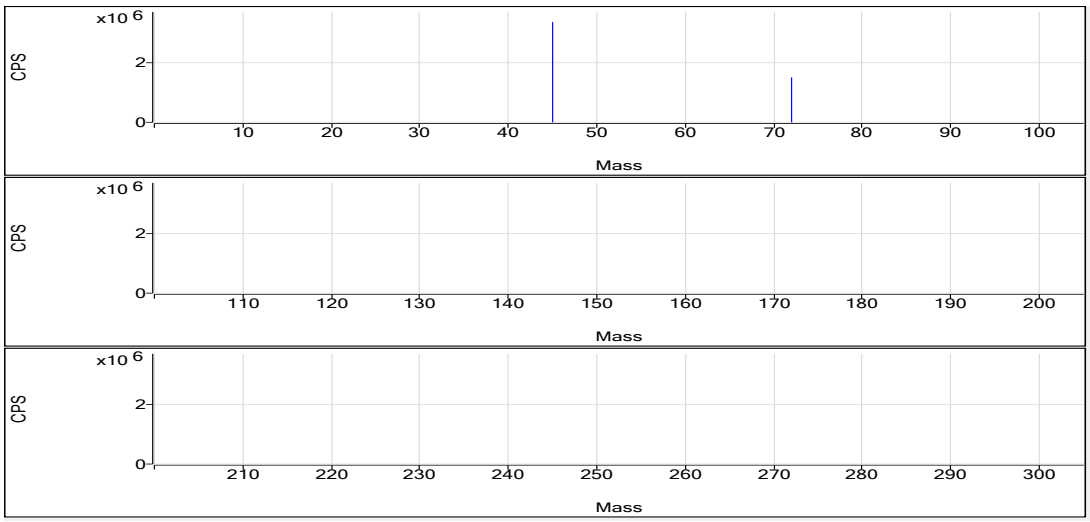
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.030	ppb	9.6	128.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.086	ppb	52.5	7.11	0.0000	Pulse	1.5000	3
Na	23	72	He	9786.665	ppb	1.3	1262924.77	16.9182	Pulse	0.1000	3
Mg	24	72	He	42474.788	ppb	1.3	2673587.88	35.8154	Pulse	0.1000	3
Al	27	72	He	4.099	ppb	26.2	153.34	0.0021	Pulse	0.1000	3
K	39	72	He	2997.148	ppb	1.6	134270.24	1.7987	Pulse	0.1000	3
Ca	44	72	He	112420.298	ppb	0.9	260793.23	3.4934	Pulse	0.1000	3
Ti	47	72	He	-0.911	ppb	N/A	3.33	0.0000	Pulse	0.1000	3
V	51	72	He	0.041	ppb	84.9	583.35	0.0078	Pulse	0.5000	3
Cr	52	72	He	0.169	ppb	64.6	2086.90	0.0280	Pulse	0.1000	3
Mn	55	72	He	3783.738	ppb	1.0	1668222.48	22.3471	Pulse	0.1000	3
Fe	57	72	He	8963.861	ppb	1.3	194153.78	2.6009	Pulse	0.1000	3
Co	59	72	He	15.414	ppb	2.6	35337.29	0.4734	Pulse	0.1000	3
Ni	60	72	He	14.681	ppb	3.2	10307.36	0.1381	Pulse	0.1000	3
Cu	63	72	He	0.105	ppb	19.3	563.37	0.0076	Pulse	0.1000	3
Zn	66	72	He	11.891	ppb	9.2	2540.30	0.0340	Pulse	0.1000	3
As	75	72	He	5.513	ppb	3.4	748.03	0.0100	Pulse	0.5000	3
Sr	88	115	He	107.592	ppb	2.2	52684.60	0.8418	Pulse	0.1000	3
Mo	98	115	He	0.642	ppb	6.6	916.73	0.0147	Pulse	0.1000	3
Ag	107	115	He	0.017	ppb	30.3	76.67	0.0012	Pulse	0.1000	3
Cd	111	115	He	0.003	ppb	451.8	4.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	1.528	ppb	29.9	2336.96	0.0374	Pulse	0.1000	3
Sb	121	115	He	0.039	ppb	76.3	46.67	0.0007	Pulse	0.1000	3
Ba	137	115	He	520.793	ppb	1.4	142611.44	2.2787	Pulse	0.1000	3
Tl	205	209	He	0.229	ppb	5.9	1596.82	0.0073	Pulse	0.1000	3
Pb	208	209	He	0.010	ppb	54.5	550.03	0.0025	Pulse	0.1000	3
U	238	209	He	0.797	ppb	4.2	7352.39	0.0338	Pulse	0.1000	3

ISTD Table:

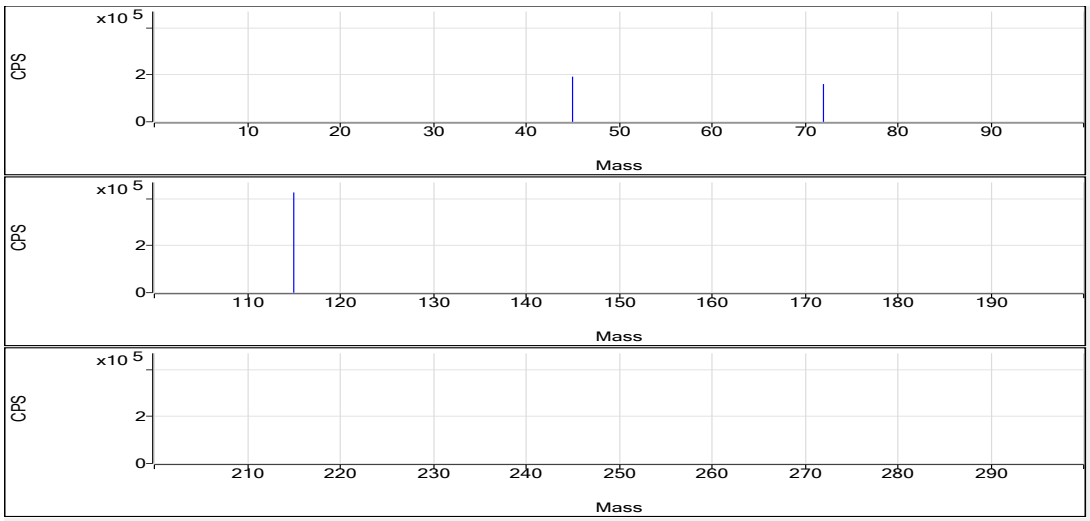
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3347404.43	0.6	103.3	Pulse	0.1000	3
No Gas	Ge	72	1499488.26	0.7	104.1	Pulse	0.1000	3
H2	Sc	45	192758.87	1.8	98.7	Pulse	0.1000	3
H2	Ge	72	161132.21	0.8	98.8	Pulse	0.1000	3
H2	In	115	427648.78	1.6	98.7	Pulse	0.1000	3
He	Sc	45	41613.04	0.4	104.1	Pulse	0.1000	3
He	Ge	72	74656.96	1.3	103.3	Pulse	0.1000	3
He	In	115	62592.60	1.3	96.9	Pulse	0.1000	3
He	Tb	159	281001.96	1.0	98.3	Pulse	0.1000	3
He	Bi	209	217656.88	0.8	98.0	Pulse	0.1000	3

No Gas

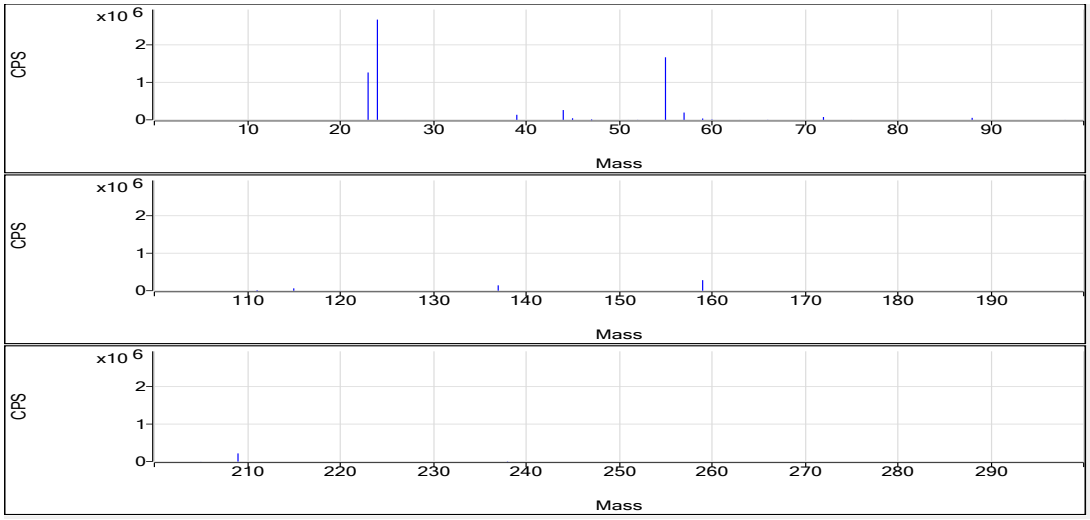


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.027	0.0001	122.00	0.0013	4.694E-05
Be	9	1	No Gas	0.032	0.0001	134.00	0.0013	4.694E-05
Be	9	1	No Gas	0.03	0.0001	130.00	0.0013	4.694E-05
Se	78	2	H2	0.122	0.0001	9.33	0.0004	1.089E-05
Se	78	2	H2	0.099	0	8.00	0.0004	1.089E-05
Se	78	2	H2	0.035	0	4.00	0.0004	1.089E-05
Na	23	3	He	9807.536	16.954	1268577.87	0.0017	0.1065
Na	23	3	He	9900.913	17.1145	1259584.04	0.0017	0.1065
Na	23	3	He	9651.547	16.6861	1260612.40	0.0017	0.1065
Mg	24	3	He	42608.405	35.9281	2688298.40	0.0008	0.004846
Mg	24	3	He	42938.489	36.2064	2664703.71	0.0008	0.004846
Mg	24	3	He	41877.47	35.3118	2667761.52	0.0008	0.004846
Al	27	3	He	5.01	0.0023	170.01	0.0002	0.001063
Al	27	3	He	2.915	0.0018	130.00	0.0002	0.001063
Al	27	3	He	4.371	0.0021	160.01	0.0002	0.001063
K	39	3	He	2962.285	1.7794	133146.37	0.0006	0.1436
K	39	3	He	3052.775	1.8294	134641.01	0.0006	0.1436
K	39	3	He	2976.385	1.7872	135023.34	0.0006	0.1436
Ca	44	3	He	111309.057	3.4589	258807.03	0	0.001611
Ca	44	3	He	113384.394	3.5233	259307.79	0	0.001611
Ca	44	3	He	112567.443	3.4979	264264.88	0	0.001611
Ti	47	3	He	-1.091	0	0.00	0.0003	0.0002737
Ti	47	3	He	-0.55	0.0001	10.00	0.0003	0.0002737
Ti	47	3	He	-1.091	0	0.00	0.0003	0.0002737
V	51	3	He	0.059	0.008	600.02	0.0117	0.007326
V	51	3	He	0.001	0.0073	540.01	0.0117	0.007326
V	51	3	He	0.064	0.0081	610.02	0.0117	0.007326
Cr	52	3	He	0.071	0.0265	1980.21	0.0152	0.02538
Cr	52	3	He	0.287	0.0298	2190.25	0.0152	0.02538
Cr	52	3	He	0.15	0.0277	2090.24	0.0152	0.02538
Mn	55	3	He	3781.101	22.3315	1670943.10	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	3821.612	22.5706	1661144.98	0.0059	0.01385
Mn	55	3	He	3748.501	22.1391	1672579.35	0.0059	0.01385
Fe	57	3	He	9005.783	2.613	195518.24	0.0003	0.003918
Fe	57	3	He	9054.388	2.6271	193348.96	0.0003	0.003918
Fe	57	3	He	8831.413	2.5625	193594.14	0.0003	0.003918
Co	59	3	He	15.78	0.4846	36256.30	0.0305	0.003084
Co	59	3	He	15.487	0.4756	35002.92	0.0305	0.003084
Co	59	3	He	14.976	0.46	34752.66	0.0305	0.003084
Ni	60	3	He	14.652	0.1378	10314.04	0.0088	0.009003
Ni	60	3	He	15.161	0.1423	10474.21	0.0088	0.009003
Ni	60	3	He	14.231	0.1341	10133.82	0.0088	0.009003
Cu	63	3	He	0.108	0.0076	570.03	0.0249	0.004937
Cu	63	3	He	0.124	0.008	590.04	0.0249	0.004937
Cu	63	3	He	0.083	0.007	530.03	0.0249	0.004937
Zn	66	3	He	11.47	0.033	2470.30	0.0025	0.004836
Zn	66	3	He	13.132	0.0371	2730.33	0.0025	0.004836
Zn	66	3	He	11.071	0.032	2420.28	0.0025	0.004836
As	75	3	He	5.56	0.0101	756.03	0.0017	0.0004347
As	75	3	He	5.672	0.0103	758.03	0.0017	0.0004347
As	75	3	He	5.306	0.0097	730.02	0.0017	0.0004347
Sr	88	3	He	105.56	0.8259	51874.95	0.0078	0.0007762
Sr	88	3	He	110.111	0.8615	53169.96	0.0078	0.0007762
Sr	88	3	He	107.103	0.838	53008.90	0.0078	0.0007762
Mo	98	3	He	0.656	0.015	940.07	0.022	0.0005162
Mo	98	3	He	0.676	0.0154	950.06	0.022	0.0005162
Mo	98	3	He	0.594	0.0136	860.05	0.022	0.0005162
Ag	107	3	He	0.018	0.0013	80.00	0.0455	0.0004641
Ag	107	3	He	0.011	0.001	60.00	0.0455	0.0004641
Ag	107	3	He	0.021	0.0014	90.00	0.0455	0.0004641
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Cd	111	3	He	0.016	0.0001	8.00	0.0048	5.152E-05
Sn	120	3	He	1.062	0.0307	1930.21	0.0143	0.01559
Sn	120	3	He	1.976	0.0438	2700.36	0.0143	0.01559
Sn	120	3	He	1.546	0.0376	2380.30	0.0143	0.01559
Sb	121	3	He	0.056	0.001	60.00	0.0124	0.000258
Sb	121	3	He	0.058	0.001	60.00	0.0124	0.000258
Sb	121	3	He	0.005	0.0003	20.00	0.0124	0.000258
Ba	137	3	He	518.595	2.2691	142511.39	0.0044	0.000309
Ba	137	3	He	528.732	2.3134	142773.91	0.0044	0.000309
Ba	137	3	He	515.05	2.2535	142549.03	0.0044	0.000309
Tl	205	3	He	0.245	0.0078	1680.16	0.0276	0.001005
Tl	205	3	He	0.221	0.0071	1540.13	0.0276	0.001005
Tl	205	3	He	0.222	0.0071	1570.17	0.0276	0.001005
Pb	208	3	He	0.004	0.0023	250.01	0.0364	0.002176
Pb	208	3	He	0.014	0.0027	310.02	0.0364	0.002176
Pb	208	3	He	0.011	0.0026	270.01	0.0364	0.002176
U	238	3	He	0.816	0.0346	7482.47	0.0421	0.00024
U	238	3	He	0.759	0.0322	6972.14	0.0421	0.00024
U	238	3	He	0.817	0.0346	7602.55	0.0421	0.00024
Sc	45	1	No Gas			3361845.57		
Sc	45	1	No Gas			3354279.01		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3326088.70		
Ge	72	1	No Gas			1489223.26		
Ge	72	1	No Gas			1498804.04		
Ge	72	1	No Gas			1510437.48		
Sc	45	2	H2			188873.26		
Sc	45	2	H2			193865.62		
Sc	45	2	H2			195537.73		
Ge	72	2	H2			159665.28		
Ge	72	2	H2			161638.34		
Ge	72	2	H2			162093.01		
In	115	2	H2			425303.24		
In	115	2	H2			422099.72		
In	115	2	H2			435543.39		
Sc	45	3	He			41780.52		
Sc	45	3	He			41569.55		
Sc	45	3	He			41489.05		
Ge	72	3	He			74824.48		
Ge	72	3	He			73597.68		
Ge	72	3	He			75548.71		
In	115	3	He			62821.50		
In	115	3	He			61737.04		
In	115	3	He			63273.95		
Tb	159	3	He			280437.48		
Tb	159	3	He			278460.93		
Tb	159	3	He			284107.48		
Bi	209	3	He			216369.65		
Bi	209	3	He			216826.68		
Bi	209	3	He			219774.31		

Quantitation Report

Data File Name	098SMPL.d
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Acq Time	2023-08-10 13:15:44
Sample Name	410-136864-K-4-B MS
Sample Type	Sample
Comment	D29
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

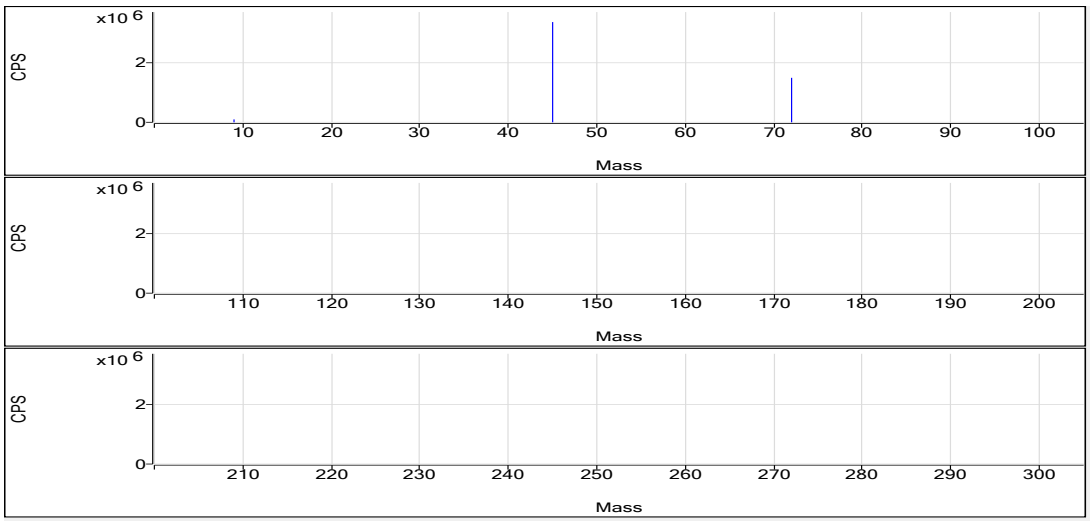
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	49.245	ppb	3.1	95916.67	0.0648	Pulse	0.5000	3
Se	78	72	H2	105.608	ppb	2.9	6723.13	0.0411	Pulse	1.5000	3
Na	23	72	He	15087.862	ppb	1.0	1945542.47	26.0247	Pulse	0.1000	3
Mg	24	72	He	47438.856	ppb	1.3	2990312.66	40.0006	Pulse	0.1000	3
Al	27	72	He	5357.310	ppb	2.4	96754.67	1.2943	Pulse	0.1000	3
K	39	72	He	8303.065	ppb	1.0	353507.75	4.7287	Pulse	0.1000	3
Ca	44	72	He	116002.003	ppb	0.7	269476.46	3.6046	Pulse	0.1000	3
Ti	47	72	He	528.563	ppb	1.2	9930.37	0.1328	Pulse	0.1000	3
V	51	72	He	530.427	ppb	1.0	464404.14	6.2121	Pulse	0.5000	3
Cr	52	72	He	529.991	ppb	0.8	605221.83	8.0957	Pulse	0.1000	3
Mn	55	72	He	4292.395	ppb	0.7	1895080.86	25.3494	Pulse	0.1000	3
Fe	57	72	He	14088.370	ppb	1.3	305426.56	4.0855	Pulse	0.1000	3
Co	59	72	He	530.986	ppb	1.3	1211345.21	16.2037	Pulse	0.1000	3
Ni	60	72	He	533.824	ppb	0.8	351592.60	4.7031	Pulse	0.1000	3
Cu	63	72	He	520.971	ppb	0.7	971601.96	12.9964	Pulse	0.1000	3
Zn	66	72	He	582.141	ppb	1.5	107276.10	1.4350	Pulse	0.1000	3
As	75	72	He	531.349	ppb	1.6	69115.85	0.9245	Pulse	0.5000	3
Sr	88	115	He	164.766	ppb	2.8	79417.57	1.2888	Pulse	0.1000	3
Mo	98	115	He	54.925	ppb	1.2	74593.65	1.2100	Pulse	0.1000	3
Ag	107	115	He	53.670	ppb	2.6	150524.63	2.4425	Pulse	0.1000	3
Cd	111	115	He	54.923	ppb	4.1	16246.07	0.2637	Pulse	0.5000	3
Sn	120	115	He	112.449	ppb	4.3	99735.73	1.6189	Pulse	0.1000	3
Sb	121	115	He	110.534	ppb	3.8	84495.82	1.3714	Pulse	0.1000	3
Ba	137	115	He	1066.580	ppb	3.9	287499.81	4.6664	Pulse	0.1000	3
Tl	205	209	He	107.616	ppb	0.2	644326.11	2.9760	Pulse	0.1000	3
Pb	208	209	He	53.071	ppb	1.8	418639.41	1.9338	Pulse	0.1000	3
U	238	209	He	54.346	ppb	1.2	494991.07	2.2864	Pulse	0.1000	3

ISTD Table:

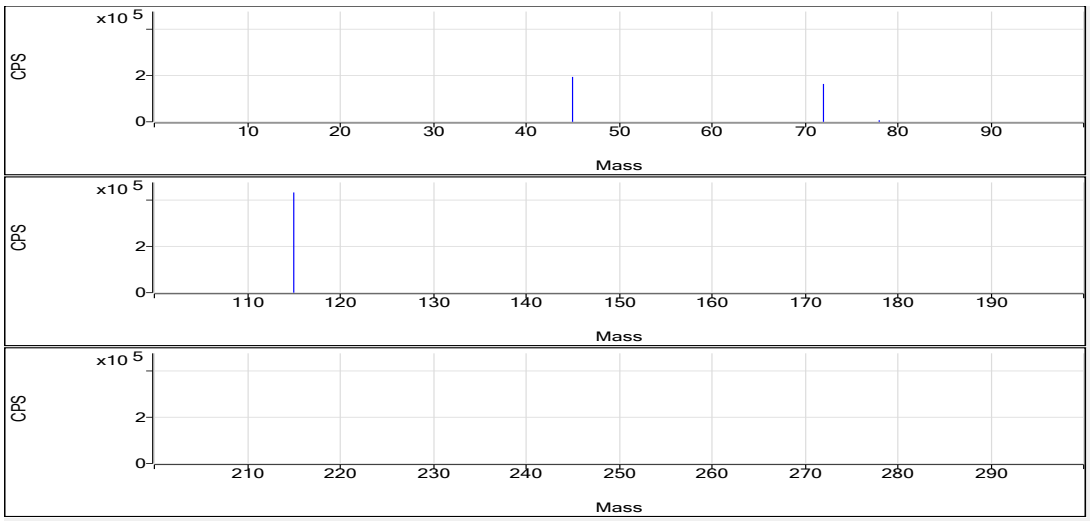
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3337879.74	1.6	103.0	Pulse	0.1000	3
No Gas	Ge	72	1481606.12	1.5	102.9	Pulse	0.1000	3
H2	Sc	45	193829.33	3.3	99.2	Pulse	0.1000	3
H2	Ge	72	163495.20	1.2	100.3	Pulse	0.1000	3
H2	In	115	432672.22	2.0	99.9	Pulse	0.1000	3
He	Sc	45	42181.35	1.7	105.5	Pulse	0.1000	3
He	Ge	72	74760.74	0.7	103.4	Pulse	0.1000	3
He	In	115	61654.98	2.8	95.5	Pulse	0.1000	3
He	Tb	159	282600.63	0.6	98.8	Pulse	0.1000	3
He	Bi	209	216511.97	1.2	97.4	Pulse	0.1000	3

No Gas

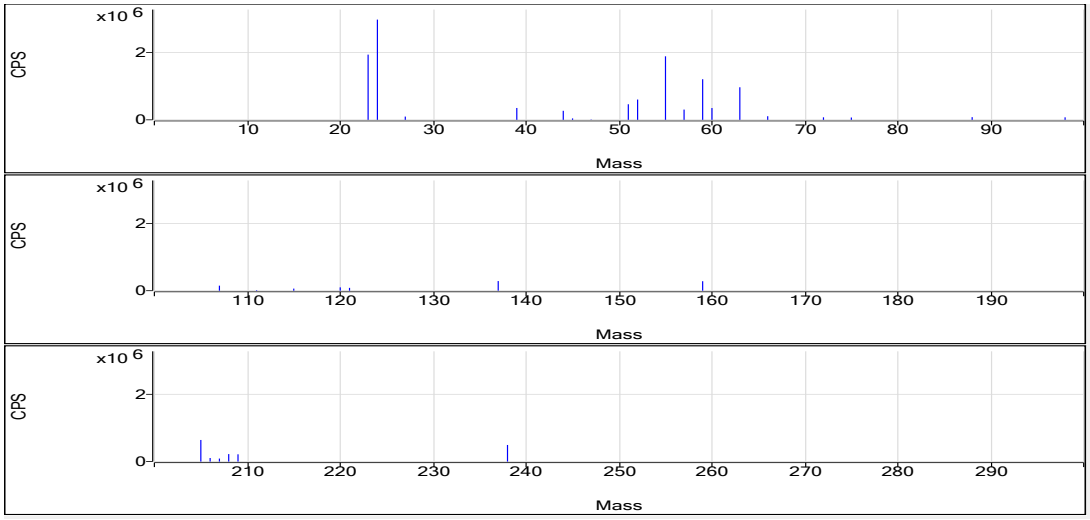


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.942	0.067	97876.43	0.0013	4.694E-05
Be	9	1	No Gas	48.729	0.0641	94728.65	0.0013	4.694E-05
Be	9	1	No Gas	48.063	0.0632	95144.92	0.0013	4.694E-05
Se	78	2	H2	106.774	0.0416	6776.26	0.0004	1.089E-05
Se	78	2	H2	107.944	0.042	6807.61	0.0004	1.089E-05
Se	78	2	H2	102.106	0.0398	6585.51	0.0004	1.089E-05
Na	23	3	He	15032.442	25.9295	1943552.31	0.0017	0.1065
Na	23	3	He	14975.021	25.8309	1940554.97	0.0017	0.1065
Na	23	3	He	15256.124	26.3137	1952520.13	0.0017	0.1065
Mg	24	3	He	47047.477	39.6706	2973523.39	0.0008	0.004846
Mg	24	3	He	47129.625	39.7399	2985478.08	0.0008	0.004846
Mg	24	3	He	48139.464	40.5913	3011936.52	0.0008	0.004846
Al	27	3	He	5224.505	1.2622	94610.62	0.0002	0.001063
Al	27	3	He	5369.735	1.2973	97459.16	0.0002	0.001063
Al	27	3	He	5477.69	1.3233	98194.24	0.0002	0.001063
K	39	3	He	8230.205	4.6885	351424.45	0.0006	0.1436
K	39	3	He	8288.1	4.7204	354624.17	0.0006	0.1436
K	39	3	He	8390.889	4.7772	354474.64	0.0006	0.1436
Ca	44	3	He	115198.373	3.5797	268314.06	0	0.001611
Ca	44	3	He	115885.549	3.601	270526.73	0	0.001611
Ca	44	3	He	116922.086	3.6332	269588.59	0	0.001611
Ti	47	3	He	523.117	0.1315	9853.67	0.0003	0.0002737
Ti	47	3	He	535.208	0.1345	10103.84	0.0003	0.0002737
Ti	47	3	He	527.363	0.1325	9833.59	0.0003	0.0002737
V	51	3	He	525.875	6.1589	461640.38	0.0117	0.007326
V	51	3	He	528.834	6.1935	465289.06	0.0117	0.007326
V	51	3	He	536.572	6.284	466282.97	0.0117	0.007326
Cr	52	3	He	531.124	8.113	608108.82	0.0152	0.02538
Cr	52	3	He	525.072	8.0208	602565.46	0.0152	0.02538
Cr	52	3	He	533.777	8.1534	604991.20	0.0152	0.02538
Mn	55	3	He	4294.29	25.3606	1900907.32	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	4259.407	25.1547	1889755.44	0.0059	0.01385
Mn	55	3	He	4323.487	25.5329	1894579.82	0.0059	0.01385
Fe	57	3	He	13889.316	4.0279	301908.98	0.0003	0.003918
Fe	57	3	He	14135.283	4.0991	307947.94	0.0003	0.003918
Fe	57	3	He	14240.509	4.1296	306422.75	0.0003	0.003918
Co	59	3	He	524.705	16.0121	1200190.06	0.0305	0.003084
Co	59	3	He	529.995	16.1735	1215041.54	0.0305	0.003084
Co	59	3	He	538.258	16.4256	1218804.04	0.0305	0.003084
Ni	60	3	He	532.032	4.6873	351339.14	0.0088	0.009003
Ni	60	3	He	530.56	4.6744	351164.29	0.0088	0.009003
Ni	60	3	He	538.88	4.7475	352274.37	0.0088	0.009003
Cu	63	3	He	517.635	12.9133	967916.94	0.0249	0.004937
Cu	63	3	He	520.828	12.9929	976096.31	0.0249	0.004937
Cu	63	3	He	524.449	13.0832	970792.64	0.0249	0.004937
Zn	66	3	He	578.13	1.4252	106823.81	0.0025	0.004836
Zn	66	3	He	575.933	1.4198	106660.83	0.0025	0.004836
Zn	66	3	He	592.36	1.4601	108343.67	0.0025	0.004836
As	75	3	He	522.623	0.9094	68161.80	0.0017	0.0004347
As	75	3	He	531.885	0.9255	69526.59	0.0017	0.0004347
As	75	3	He	539.538	0.9388	69659.15	0.0017	0.0004347
Sr	88	3	He	161.32	1.2618	79219.58	0.0078	0.0007762
Sr	88	3	He	162.914	1.2743	79632.33	0.0078	0.0007762
Sr	88	3	He	170.063	1.3302	79400.81	0.0078	0.0007762
Mo	98	3	He	54.187	1.1938	74948.47	0.022	0.0005162
Mo	98	3	He	55.162	1.2153	75944.36	0.022	0.0005162
Mo	98	3	He	55.425	1.2211	72888.13	0.022	0.0005162
Ag	107	3	He	53.283	2.4248	152235.76	0.0455	0.0004641
Ag	107	3	He	52.528	2.3905	149384.87	0.0455	0.0004641
Ag	107	3	He	55.201	2.5121	149953.27	0.0455	0.0004641
Cd	111	3	He	53.104	0.255	16007.13	0.0048	5.152E-05
Cd	111	3	He	54.225	0.2603	16269.45	0.0048	5.152E-05
Cd	111	3	He	57.439	0.2758	16461.64	0.0048	5.152E-05
Sn	120	3	He	108.154	1.5576	97791.43	0.0143	0.01559
Sn	120	3	He	111.477	1.605	100299.69	0.0143	0.01559
Sn	120	3	He	117.715	1.694	101116.06	0.0143	0.01559
Sb	121	3	He	107.711	1.3364	83901.66	0.0124	0.000258
Sb	121	3	He	108.498	1.3462	84124.35	0.0124	0.000258
Sb	121	3	He	115.393	1.4317	85461.45	0.0124	0.000258
Ba	137	3	He	1038.347	4.5429	285208.00	0.0044	0.000309
Ba	137	3	He	1047.389	4.5824	286361.79	0.0044	0.000309
Ba	137	3	He	1114.004	4.8738	290929.64	0.0044	0.000309
Tl	205	3	He	107.371	2.9692	645320.15	0.0276	0.001005
Tl	205	3	He	107.794	2.9809	636908.08	0.0276	0.001005
Tl	205	3	He	107.683	2.9778	650750.11	0.0276	0.001005
Pb	208	3	He	52.422	1.9102	223555.86	0.0364	0.002176
Pb	208	3	He	54.145	1.9729	222267.09	0.0364	0.002176
Pb	208	3	He	52.645	1.9183	223545.58	0.0364	0.002176
U	238	3	He	54.102	2.2762	494696.20	0.0421	0.00024
U	238	3	He	55.105	2.3184	495352.45	0.0421	0.00024
U	238	3	He	53.831	2.2648	494924.56	0.0421	0.00024
Sc	45	1	No Gas			3276207.76		
Sc	45	1	No Gas			3363239.32		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3374192.14		
Ge	72	1	No Gas			1461117.01		
Ge	72	1	No Gas			1478321.38		
Ge	72	1	No Gas			1505379.98		
Sc	45	2	H2			190874.98		
Sc	45	2	H2			189450.64		
Sc	45	2	H2			201162.38		
Ge	72	2	H2			162951.17		
Ge	72	2	H2			161931.39		
Ge	72	2	H2			165603.04		
In	115	2	H2			427332.38		
In	115	2	H2			427980.54		
In	115	2	H2			442703.74		
Sc	45	3	He			42903.11		
Sc	45	3	He			41489.33		
Sc	45	3	He			42151.60		
Ge	72	3	He			74955.25		
Ge	72	3	He			75125.44		
Ge	72	3	He			74201.52		
In	115	3	He			63544.34		
In	115	3	He			63273.72		
In	115	3	He			60480.70		
Tb	159	3	He			284613.71		
Tb	159	3	He			281154.55		
Tb	159	3	He			282033.63		
Bi	209	3	He			217338.84		
Bi	209	3	He			213664.27		
Bi	209	3	He			218532.79		

Quantitation Report

Data File Name	099SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 13:17:44
Sample Name	410-136864-J-4-A MSD
Sample Type	Sample
Comment	D29
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

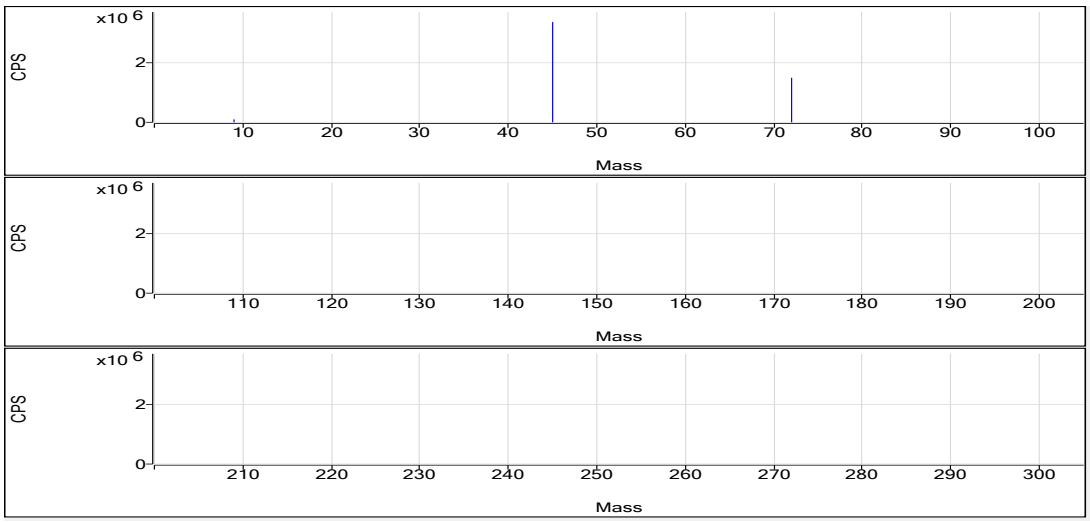
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	49.554	ppb	2.5	96600.37	0.0652	Pulse	0.5000	3
Se	78	72	H2	106.276	ppb	3.1	6647.76	0.0414	Pulse	1.5000	3
Na	23	72	He	15001.096	ppb	0.4	1956067.42	25.8757	Pulse	0.1000	3
Mg	24	72	He	47265.907	ppb	0.8	3012781.52	39.8548	Pulse	0.1000	3
Al	27	72	He	5183.505	ppb	0.2	94671.10	1.2523	Pulse	0.1000	3
K	39	72	He	8141.547	ppb	1.0	350733.68	4.6395	Pulse	0.1000	3
Ca	44	72	He	115756.878	ppb	0.5	271923.67	3.5970	Pulse	0.1000	3
Ti	47	72	He	543.473	ppb	0.5	10323.97	0.1366	Pulse	0.1000	3
V	51	72	He	527.150	ppb	0.1	466711.83	6.1738	Pulse	0.5000	3
Cr	52	72	He	522.079	ppb	0.3	602890.62	7.9752	Pulse	0.1000	3
Mn	55	72	He	4259.327	ppb	0.7	1901499.50	25.1542	Pulse	0.1000	3
Fe	57	72	He	14137.222	ppb	0.5	309919.29	4.0997	Pulse	0.1000	3
Co	59	72	He	526.836	ppb	0.6	1215368.73	16.0771	Pulse	0.1000	3
Ni	60	72	He	524.550	ppb	0.2	349365.23	4.6215	Pulse	0.1000	3
Cu	63	72	He	513.448	ppb	0.0	968290.43	12.8088	Pulse	0.1000	3
Zn	66	72	He	525.398	ppb	0.5	97941.04	1.2956	Pulse	0.1000	3
As	75	72	He	525.683	ppb	0.7	69144.39	0.9147	Pulse	0.5000	3
Sr	88	115	He	159.839	ppb	0.7	78493.30	1.2503	Pulse	0.1000	3
Mo	98	115	He	54.793	ppb	0.9	75786.50	1.2072	Pulse	0.1000	3
Ag	107	115	He	52.800	ppb	0.9	150853.95	2.4029	Pulse	0.1000	3
Cd	111	115	He	53.741	ppb	1.4	16199.37	0.2580	Pulse	0.5000	3
Sn	120	115	He	110.641	ppb	0.5	100018.20	1.5931	Pulse	0.1000	3
Sb	121	115	He	109.158	ppb	0.3	85028.63	1.3544	Pulse	0.1000	3
Ba	137	115	He	1051.796	ppb	0.8	288899.44	4.6017	Pulse	0.1000	3
Tl	205	209	He	107.541	ppb	1.2	646733.36	2.9739	Pulse	0.1000	3
Pb	208	209	He	53.399	ppb	1.0	423126.60	1.9457	Pulse	0.1000	3
U	238	209	He	53.881	ppb	0.6	492968.79	2.2669	Pulse	0.1000	3

ISTD Table:

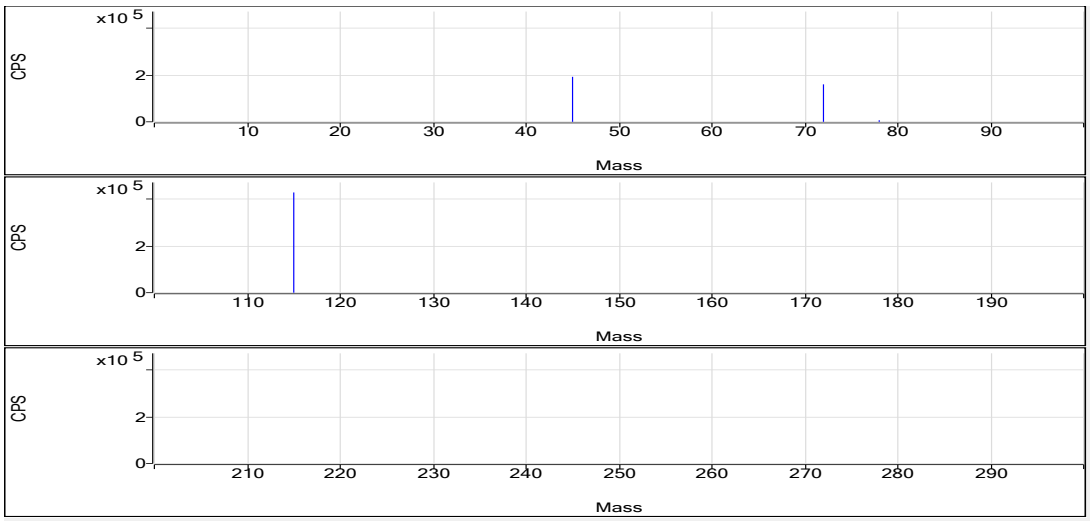
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3337585.47	1.3	103.0	Pulse	0.1000	3
No Gas	Ge	72	1482604.15	1.0	103.0	Pulse	0.1000	3
H2	Sc	45	192926.98	2.2	98.7	Pulse	0.1000	3
H2	Ge	72	160681.49	2.2	98.6	Pulse	0.1000	3
H2	In	115	429807.88	2.4	99.2	Pulse	0.1000	3
He	Sc	45	42539.31	1.2	106.4	Pulse	0.1000	3
He	Ge	72	75595.65	0.6	104.6	Pulse	0.1000	3
He	In	115	62781.61	0.5	97.2	Pulse	0.1000	3
He	Tb	159	279054.79	1.3	97.6	Pulse	0.1000	3
He	Bi	209	217471.28	0.8	97.9	Pulse	0.1000	3

No Gas

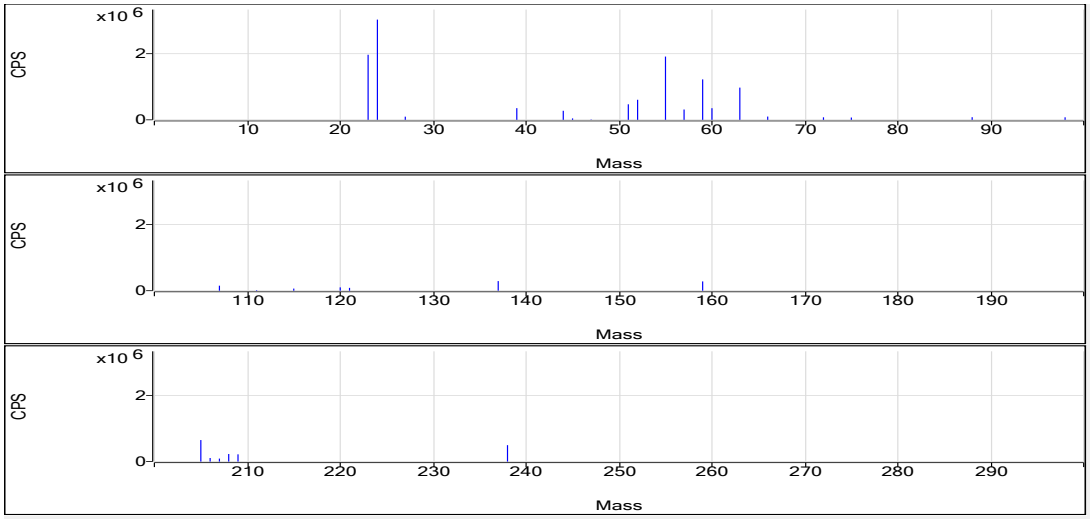


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.9	0.0669	98687.73	0.0013	4.694E-05
Be	9	1	No Gas	49.231	0.0647	95408.69	0.0013	4.694E-05
Be	9	1	No Gas	48.532	0.0638	95704.69	0.0013	4.694E-05
Se	78	2	H2	108.554	0.0423	6652.88	0.0004	1.089E-05
Se	78	2	H2	107.71	0.0419	6718.24	0.0004	1.089E-05
Se	78	2	H2	102.563	0.0399	6572.17	0.0004	1.089E-05
Na	23	3	He	15033.201	25.9308	1945749.19	0.0017	0.1065
Na	23	3	He	15040.334	25.9431	1966738.41	0.0017	0.1065
Na	23	3	He	14929.754	25.7531	1955714.66	0.0017	0.1065
Mg	24	3	He	47511.322	40.0617	3006079.02	0.0008	0.004846
Mg	24	3	He	47428.806	39.9921	3031797.14	0.0008	0.004846
Mg	24	3	He	46857.592	39.5106	3000468.39	0.0008	0.004846
Al	27	3	He	5177.193	1.2508	93855.81	0.0002	0.001063
Al	27	3	He	5194.717	1.255	95144.13	0.0002	0.001063
Al	27	3	He	5178.607	1.2511	95013.37	0.0002	0.001063
K	39	3	He	8082.215	4.6067	345671.91	0.0006	0.1436
K	39	3	He	8229.86	4.6883	355416.56	0.0006	0.1436
K	39	3	He	8112.567	4.6235	351112.57	0.0006	0.1436
Ca	44	3	He	115136.465	3.5777	268459.55	0	0.001611
Ca	44	3	He	115729.548	3.5962	272623.82	0	0.001611
Ca	44	3	He	116404.62	3.6171	274687.65	0	0.001611
Ti	47	3	He	540.631	0.1359	10193.88	0.0003	0.0002737
Ti	47	3	He	543.525	0.1366	10354.00	0.0003	0.0002737
Ti	47	3	He	546.262	0.1373	10424.02	0.0003	0.0002737
V	51	3	He	527.026	6.1723	463149.16	0.0117	0.007326
V	51	3	He	527.659	6.1798	468485.72	0.0117	0.007326
V	51	3	He	526.764	6.1693	468500.63	0.0117	0.007326
Cr	52	3	He	522.59	7.983	599014.76	0.0152	0.02538
Cr	52	3	He	520.54	7.9518	602823.55	0.0152	0.02538
Cr	52	3	He	523.106	7.9909	606833.55	0.0152	0.02538
Mn	55	3	He	4290.217	25.3365	1901156.22	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	4232.75	24.9973	1895042.47	0.0059	0.01385
Mn	55	3	He	4255.014	25.1287	1908299.82	0.0059	0.01385
Fe	57	3	He	14131.132	4.0979	307491.89	0.0003	0.003918
Fe	57	3	He	14064.06	4.0785	309188.96	0.0003	0.003918
Fe	57	3	He	14216.475	4.1226	313077.03	0.0003	0.003918
Co	59	3	He	526.226	16.0585	1204968.73	0.0305	0.003084
Co	59	3	He	524.102	15.9937	1212479.20	0.0305	0.003084
Co	59	3	He	530.18	16.1791	1228658.26	0.0305	0.003084
Ni	60	3	He	525.51	4.63	347415.50	0.0088	0.009003
Ni	60	3	He	524.056	4.6172	350027.61	0.0088	0.009003
Ni	60	3	He	524.085	4.6174	350652.57	0.0088	0.009003
Cu	63	3	He	513.736	12.816	961666.24	0.0249	0.004937
Cu	63	3	He	513.276	12.8046	970711.78	0.0249	0.004937
Cu	63	3	He	513.33	12.8059	972493.27	0.0249	0.004937
Zn	66	3	He	528.113	1.3023	97718.55	0.0025	0.004836
Zn	66	3	He	525.304	1.2954	98203.02	0.0025	0.004836
Zn	66	3	He	522.778	1.2892	97901.55	0.0025	0.004836
As	75	3	He	530.035	0.9223	69202.66	0.0017	0.0004347
As	75	3	He	522.78	0.9096	68959.52	0.0017	0.0004347
As	75	3	He	524.235	0.9122	69270.99	0.0017	0.0004347
Sr	88	3	He	158.906	1.243	77661.94	0.0078	0.0007762
Sr	88	3	He	159.618	1.2485	78758.38	0.0078	0.0007762
Sr	88	3	He	160.992	1.2593	79059.58	0.0078	0.0007762
Mo	98	3	He	54.681	1.2047	75270.73	0.022	0.0005162
Mo	98	3	He	54.385	1.1982	75581.87	0.022	0.0005162
Mo	98	3	He	55.313	1.2186	76506.91	0.022	0.0005162
Ag	107	3	He	53.144	2.4185	151113.87	0.0455	0.0004641
Ag	107	3	He	52.23	2.377	149941.47	0.0455	0.0004641
Ag	107	3	He	53.027	2.4132	151506.51	0.0455	0.0004641
Cd	111	3	He	53.138	0.2551	15941.05	0.0048	5.152E-05
Cd	111	3	He	53.506	0.2569	16205.36	0.0048	5.152E-05
Cd	111	3	He	54.578	0.262	16451.69	0.0048	5.152E-05
Sn	120	3	He	110.024	1.5843	98989.60	0.0143	0.01559
Sn	120	3	He	110.919	1.5971	100744.33	0.0143	0.01559
Sn	120	3	He	110.979	1.5979	100320.67	0.0143	0.01559
Sb	121	3	He	108.852	1.3506	84385.15	0.0124	0.000258
Sb	121	3	He	109.038	1.3529	85340.81	0.0124	0.000258
Sb	121	3	He	109.582	1.3596	85359.94	0.0124	0.000258
Ba	137	3	He	1050.146	4.5945	287070.19	0.0044	0.000309
Ba	137	3	He	1044.058	4.5678	288144.49	0.0044	0.000309
Ba	137	3	He	1061.184	4.6428	291483.63	0.0044	0.000309
Tl	205	3	He	107.147	2.963	639326.28	0.0276	0.001005
Tl	205	3	He	106.496	2.945	645053.27	0.0276	0.001005
Tl	205	3	He	108.981	3.0137	655820.54	0.0276	0.001005
Pb	208	3	He	53.676	1.9558	225945.06	0.0364	0.002176
Pb	208	3	He	52.754	1.9223	225787.79	0.0364	0.002176
Pb	208	3	He	53.766	1.9591	229002.16	0.0364	0.002176
U	238	3	He	54.103	2.2762	491139.21	0.0421	0.00024
U	238	3	He	53.523	2.2518	493218.94	0.0421	0.00024
U	238	3	He	54.017	2.2726	494548.23	0.0421	0.00024
Sc	45	1	No Gas			3301119.01		
Sc	45	1	No Gas			3326808.70		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3384828.70		
Ge	72	1	No Gas			1474446.23		
Ge	72	1	No Gas			1473749.98		
Ge	72	1	No Gas			1499616.23		
Sc	45	2	H2			191151.85		
Sc	45	2	H2			189767.09		
Sc	45	2	H2			197861.99		
Ge	72	2	H2			157361.57		
Ge	72	2	H2			160152.14		
Ge	72	2	H2			164530.76		
In	115	2	H2			424838.39		
In	115	2	H2			422922.61		
In	115	2	H2			441662.65		
Sc	45	3	He			41961.10		
Sc	45	3	He			42923.60		
Sc	45	3	He			42733.23		
Ge	72	3	He			75036.20		
Ge	72	3	He			75809.81		
Ge	72	3	He			75940.93		
In	115	3	He			63253.65		
In	115	3	He			63866.86		
In	115	3	He			63564.76		
Tb	159	3	He			275104.51		
Tb	159	3	He			279528.59		
Tb	159	3	He			282531.28		
Bi	209	3	He			215768.73		
Bi	209	3	He			219032.38		
Bi	209	3	He			217612.73		

Quantitation Report

Data File Name	100SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 13:19:43
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

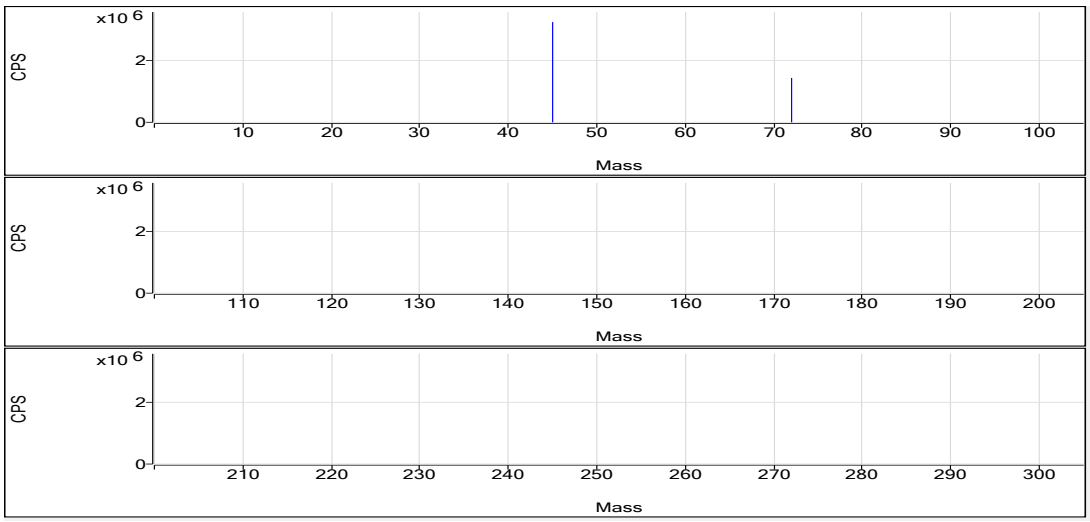
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.066	ppb	17.2	193.33	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.252	ppb	10.1	17.33	0.0001	Pulse	1.5000	3
Na	23	72	He	16.877	ppb	8.5	9803.52	0.1354	Pulse	0.1000	3
Mg	24	72	He	36.712	ppb	6.4	2590.32	0.0358	Pulse	0.1000	3
Al	27	72	He	5.921	ppb	61.5	180.01	0.0025	Pulse	0.1000	3
K	39	72	He	21.670	ppb	69.6	11261.38	0.1556	Pulse	0.1000	3
Ca	44	72	He	83.278	ppb	42.0	303.35	0.0042	Pulse	0.1000	3
Ti	47	72	He	0.374	ppb	165.8	26.67	0.0004	Pulse	0.1000	3
V	51	72	He	0.345	ppb	29.2	822.69	0.0114	Pulse	0.5000	3
Cr	52	72	He	0.387	ppb	45.5	2263.59	0.0313	Pulse	0.1000	3
Mn	55	72	He	2.822	ppb	18.5	2206.91	0.0305	Pulse	0.1000	3
Fe	57	72	He	9.526	ppb	23.0	483.36	0.0067	Pulse	0.1000	3
Co	59	72	He	0.366	ppb	22.0	1030.07	0.0142	Pulse	0.1000	3
Ni	60	72	He	1.255	ppb	5.2	1450.12	0.0200	Pulse	0.1000	3
Cu	63	72	He	0.292	ppb	16.9	883.39	0.0122	Pulse	0.1000	3
Zn	66	72	He	-0.149	ppb	N/A	323.35	0.0045	Pulse	0.1000	3
As	75	72	He	0.392	ppb	29.6	80.67	0.0011	Pulse	0.5000	3
Sr	88	115	He	0.205	ppb	17.6	150.01	0.0024	Pulse	0.1000	3
Mo	98	115	He	0.065	ppb	40.1	123.34	0.0020	Pulse	0.1000	3
Ag	107	115	He	0.022	ppb	88.6	93.34	0.0015	Pulse	0.1000	3
Cd	111	115	He	0.036	ppb	81.5	14.00	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.258	ppb	34.7	1216.77	0.0193	Pulse	0.1000	3
Sb	121	115	He	0.115	ppb	16.2	106.67	0.0017	Pulse	0.1000	3
Ba	137	115	He	0.762	ppb	15.1	230.01	0.0036	Pulse	0.1000	3
Tl	205	209	He	0.750	ppb	10.9	4784.37	0.0217	Pulse	0.1000	3
Pb	208	209	He	0.033	ppb	77.1	740.04	0.0034	Pulse	0.1000	3
U	238	209	He	0.052	ppb	1.2	536.70	0.0024	Pulse	0.1000	3

ISTD Table:

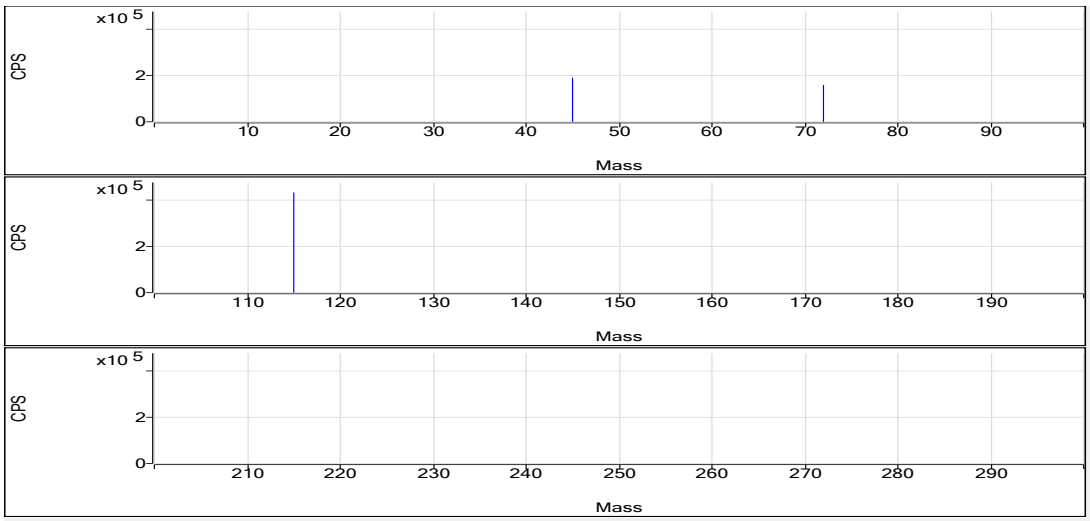
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3268892.45	2.8	100.9	Pulse	0.1000	3
No Gas	Ge	72	1445864.04	3.1	100.4	Pulse	0.1000	3
H2	Sc	45	190849.06	2.6	97.7	Pulse	0.1000	3
H2	Ge	72	159053.18	2.1	97.6	Pulse	0.1000	3
H2	In	115	432651.18	1.1	99.8	Pulse	0.1000	3
He	Sc	45	41643.18	0.6	104.1	Pulse	0.1000	3
He	Ge	72	72371.85	0.9	100.1	Pulse	0.1000	3
He	In	115	63157.44	1.2	97.8	Pulse	0.1000	3
He	Tb	159	280221.01	0.3	98.0	Pulse	0.1000	3
He	Bi	209	220214.42	0.8	99.1	Pulse	0.1000	3

No Gas

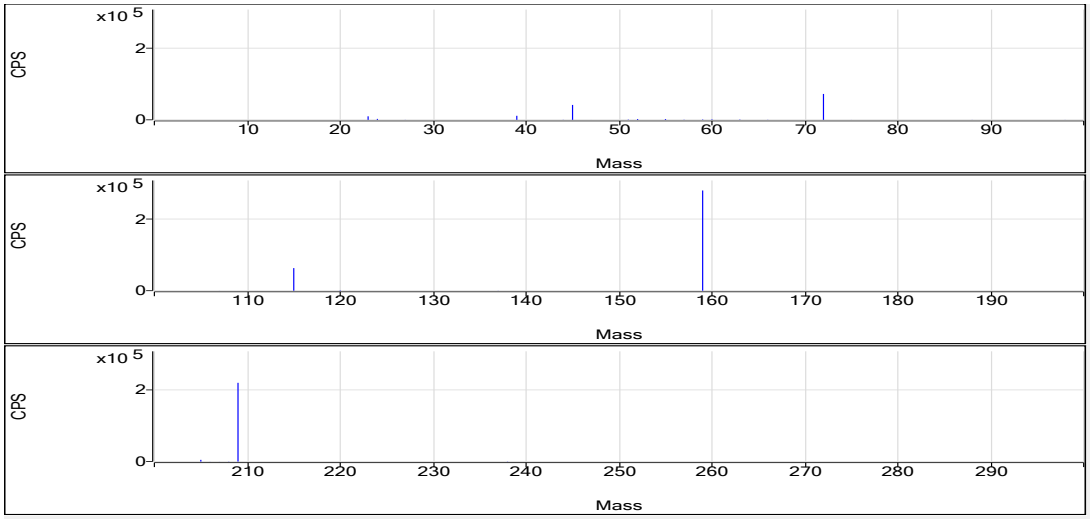


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.054	0.0001	164.00	0.0013	4.694E-05
Be	9	1	No Gas	0.068	0.0001	198.00	0.0013	4.694E-05
Be	9	1	No Gas	0.076	0.0001	218.00	0.0013	4.694E-05
Se	78	2	H2	0.279	0.0001	19.33	0.0004	1.089E-05
Se	78	2	H2	0.247	0.0001	16.67	0.0004	1.089E-05
Se	78	2	H2	0.229	0.0001	16.00	0.0004	1.089E-05
Na	23	3	He	15.393	0.1329	9563.32	0.0017	0.1065
Na	23	3	He	18.266	0.1378	10073.69	0.0017	0.1065
Na	23	3	He	16.972	0.1356	9773.56	0.0017	0.1065
Mg	24	3	He	39.421	0.0381	2740.35	0.0008	0.004846
Mg	24	3	He	35.478	0.0348	2540.29	0.0008	0.004846
Mg	24	3	He	35.236	0.0346	2490.31	0.0008	0.004846
Al	27	3	He	7.112	0.0028	200.01	0.0002	0.001063
Al	27	3	He	1.832	0.0015	110.00	0.0002	0.001063
Al	27	3	He	8.818	0.0032	230.01	0.0002	0.001063
K	39	3	He	36.46	0.1638	11785.15	0.0006	0.1436
K	39	3	He	22.219	0.1559	11394.77	0.0006	0.1436
K	39	3	He	6.33	0.1471	10604.22	0.0006	0.1436
Ca	44	3	He	113.688	0.0051	370.02	0	0.001611
Ca	44	3	He	45.055	0.003	220.01	0	0.001611
Ca	44	3	He	91.092	0.0044	320.01	0	0.001611
Ti	47	3	He	0.017	0.0003	20.00	0.0003	0.0002737
Ti	47	3	He	1.091	0.0005	40.00	0.0003	0.0002737
Ti	47	3	He	0.015	0.0003	20.00	0.0003	0.0002737
V	51	3	He	0.441	0.0125	898.03	0.0117	0.007326
V	51	3	He	0.356	0.0115	840.03	0.0117	0.007326
V	51	3	He	0.24	0.0101	730.02	0.0117	0.007326
Cr	52	3	He	0.551	0.0338	2430.28	0.0152	0.02538
Cr	52	3	He	0.409	0.0316	2310.26	0.0152	0.02538
Cr	52	3	He	0.201	0.0284	2050.22	0.0152	0.02538
Mn	55	3	He	3.375	0.0338	2430.30	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2.336	0.0276	2020.20	0.0059	0.01385
Mn	55	3	He	2.755	0.0301	2170.24	0.0059	0.01385
Fe	57	3	He	7.104	0.006	430.02	0.0003	0.003918
Fe	57	3	He	10.092	0.0068	500.02	0.0003	0.003918
Fe	57	3	He	11.383	0.0072	520.03	0.0003	0.003918
Co	59	3	He	0.455	0.017	1220.10	0.0305	0.003084
Co	59	3	He	0.298	0.0122	890.05	0.0305	0.003084
Co	59	3	He	0.345	0.0136	980.07	0.0305	0.003084
Ni	60	3	He	1.331	0.0207	1490.13	0.0088	0.009003
Ni	60	3	He	1.217	0.0197	1440.13	0.0088	0.009003
Ni	60	3	He	1.217	0.0197	1420.11	0.0088	0.009003
Cu	63	3	He	0.348	0.0136	980.07	0.0249	0.004937
Cu	63	3	He	0.257	0.0114	830.06	0.0249	0.004937
Cu	63	3	He	0.269	0.0117	840.05	0.0249	0.004937
Zn	66	3	He	0.181	0.0053	380.02	0.0025	0.004836
Zn	66	3	He	-0.409	0.0038	280.01	0.0025	0.004836
Zn	66	3	He	-0.218	0.0043	310.02	0.0025	0.004836
As	75	3	He	0.405	0.0011	82.00	0.0017	0.0004347
As	75	3	He	0.269	0.0009	66.00	0.0017	0.0004347
As	75	3	He	0.5	0.0013	94.00	0.0017	0.0004347
Sr	88	3	He	0.181	0.0022	140.00	0.0078	0.0007762
Sr	88	3	He	0.246	0.0027	170.01	0.0078	0.0007762
Sr	88	3	He	0.187	0.0022	140.01	0.0078	0.0007762
Mo	98	3	He	0.04	0.0014	90.00	0.022	0.0005162
Mo	98	3	He	0.063	0.0019	120.00	0.022	0.0005162
Mo	98	3	He	0.093	0.0026	160.01	0.022	0.0005162
Ag	107	3	He	0.045	0.0025	160.01	0.0455	0.0004641
Ag	107	3	He	0.011	0.001	60.00	0.0455	0.0004641
Ag	107	3	He	0.011	0.001	60.00	0.0455	0.0004641
Cd	111	3	He	0.015	0.0001	8.00	0.0048	5.152E-05
Cd	111	3	He	0.069	0.0004	24.00	0.0048	5.152E-05
Cd	111	3	He	0.023	0.0002	10.00	0.0048	5.152E-05
Sn	120	3	He	0.31	0.02	1280.11	0.0143	0.01559
Sn	120	3	He	0.155	0.0178	1120.09	0.0143	0.01559
Sn	120	3	He	0.309	0.02	1250.11	0.0143	0.01559
Sb	121	3	He	0.13	0.0019	120.01	0.0124	0.000258
Sb	121	3	He	0.094	0.0014	90.00	0.0124	0.000258
Sb	121	3	He	0.121	0.0018	110.00	0.0124	0.000258
Ba	137	3	He	0.644	0.0031	200.01	0.0044	0.000309
Ba	137	3	He	0.873	0.0041	260.01	0.0044	0.000309
Ba	137	3	He	0.77	0.0037	230.01	0.0044	0.000309
Tl	205	3	He	0.831	0.024	5261.23	0.0276	0.001005
Tl	205	3	He	0.75	0.0217	4761.00	0.0276	0.001005
Tl	205	3	He	0.668	0.0195	4330.88	0.0276	0.001005
Pb	208	3	He	0.029	0.0032	470.02	0.0364	0.002176
Pb	208	3	He	0.059	0.0043	580.03	0.0364	0.002176
Pb	208	3	He	0.009	0.0025	370.02	0.0364	0.002176
U	238	3	He	0.052	0.0024	530.03	0.0421	0.00024
U	238	3	He	0.053	0.0025	540.04	0.0421	0.00024
U	238	3	He	0.052	0.0024	540.03	0.0421	0.00024
Sc	45	1	No Gas			3172477.14		
Sc	45	1	No Gas			3279112.14		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3355088.08		
Ge	72	1	No Gas			1396741.70		
Ge	72	1	No Gas			1454924.35		
Ge	72	1	No Gas			1485926.07		
Sc	45	2	H2			189937.59		
Sc	45	2	H2			186391.60		
Sc	45	2	H2			196218.00		
Ge	72	2	H2			161749.48		
Ge	72	2	H2			155421.00		
Ge	72	2	H2			159989.06		
In	115	2	H2			430720.54		
In	115	2	H2			429130.27		
In	115	2	H2			438102.73		
Sc	45	3	He			41349.03		
Sc	45	3	He			41730.24		
Sc	45	3	He			41850.28		
Ge	72	3	He			71959.52		
Ge	72	3	He			73085.35		
Ge	72	3	He			72070.67		
In	115	3	He			63987.09		
In	115	3	He			62962.62		
In	115	3	He			62551.07		
Tb	159	3	He			279768.32		
Tb	159	3	He			279799.84		
Tb	159	3	He			281094.88		
Bi	209	3	He			219410.97		
Bi	209	3	He			218909.72		
Bi	209	3	He			222322.57		

Quantitation Report

Data File Name	101_CCV.d
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Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

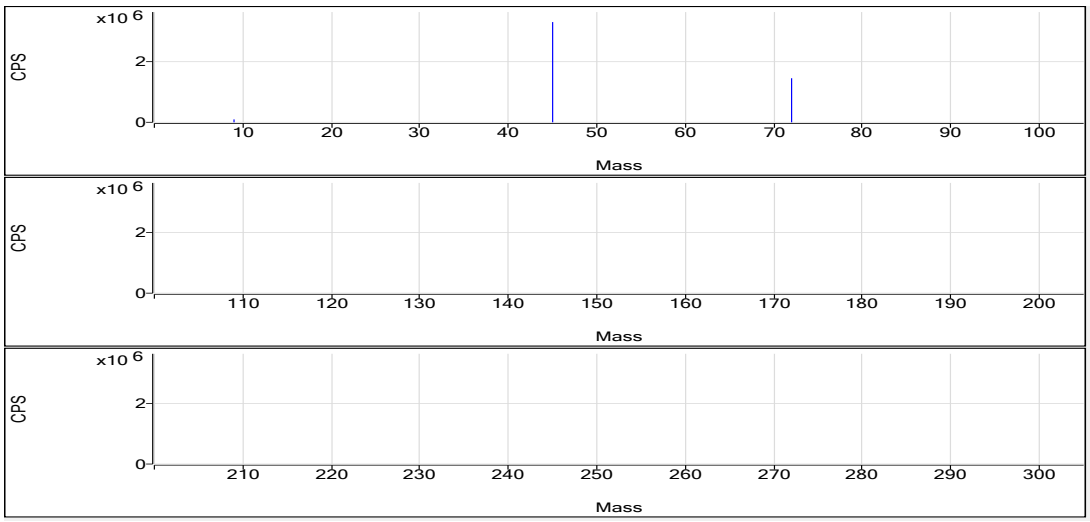
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	49.809	ppb	2.8	95210.38	0.0655	Pulse	0.5000	3
Se	78	72	H2	53.250	ppb	4.9	3283.05	0.0207	Pulse	1.5000	3
Na	23	72	He	5412.240	ppb	1.1	686672.47	9.4037	Pulse	0.1000	3
Mg	24	72	He	5453.869	ppb	1.5	336108.99	4.6030	Pulse	0.1000	3
Al	27	72	He	5267.646	ppb	1.6	92926.93	1.2726	Pulse	0.1000	3
K	39	72	He	5346.128	ppb	1.9	226054.55	3.0958	Pulse	0.1000	3
Ca	44	72	He	5351.837	ppb	2.5	12255.52	0.1678	Pulse	0.1000	3
Ti	47	72	He	5394.465	ppb	1.5	98806.10	1.3531	Pulse	0.1000	3
V	51	72	He	534.360	ppb	1.4	456965.20	6.2581	Pulse	0.5000	3
Cr	52	72	He	537.353	ppb	2.0	599316.27	8.2078	Pulse	0.1000	3
Mn	55	72	He	528.095	ppb	1.3	228617.72	3.1309	Pulse	0.1000	3
Fe	57	72	He	5299.445	ppb	1.2	112395.82	1.5392	Pulse	0.1000	3
Co	59	72	He	535.724	ppb	0.7	1193795.32	16.3483	Pulse	0.1000	3
Ni	60	72	He	537.489	ppb	1.3	345777.01	4.7353	Pulse	0.1000	3
Cu	63	72	He	531.992	ppb	1.2	969071.55	13.2713	Pulse	0.1000	3
Zn	66	72	He	531.397	ppb	0.6	95685.72	1.3104	Pulse	0.1000	3
As	75	72	He	523.111	ppb	0.9	66465.38	0.9102	Pulse	0.5000	3
Sr	88	115	He	52.896	ppb	1.6	26101.18	0.4143	Pulse	0.1000	3
Mo	98	115	He	52.648	ppb	1.6	73082.38	1.1599	Pulse	0.1000	3
Ag	107	115	He	53.245	ppb	1.2	152674.08	2.4231	Pulse	0.1000	3
Cd	111	115	He	52.493	ppb	0.9	15880.32	0.2520	Pulse	0.5000	3
Sn	120	115	He	53.105	ppb	3.2	48683.43	0.7728	Pulse	0.1000	3
Sb	121	115	He	53.219	ppb	3.5	41606.51	0.6604	Pulse	0.1000	3
Ba	137	115	He	515.823	ppb	1.0	142204.18	2.2569	Pulse	0.1000	3
Tl	205	209	He	53.074	ppb	0.9	321785.89	1.4682	Pulse	0.1000	3
Pb	208	209	He	52.714	ppb	0.7	420991.45	1.9208	Pulse	0.1000	3
U	238	209	He	52.451	ppb	1.0	483656.84	2.2067	Pulse	0.1000	3

ISTD Table:

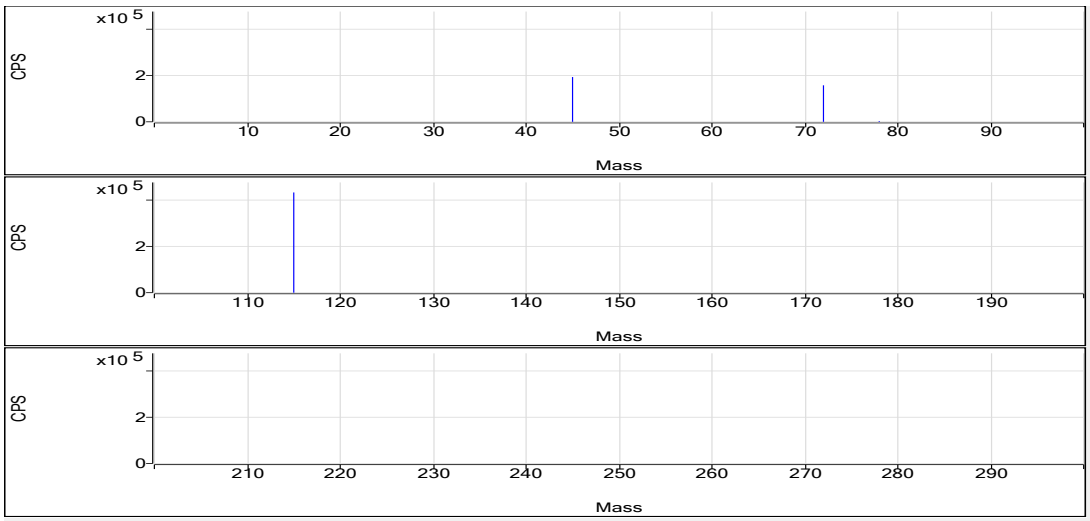
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3306613.18	0.4	102.0	Pulse	0.1000	3
No Gas	Ge	72	1453532.11	0.5	101.0	Pulse	0.1000	3
H2	Sc	45	194194.75	2.5	99.4	Pulse	0.1000	3
H2	Ge	72	158373.76	2.4	97.2	Pulse	0.1000	3
H2	In	115	434802.01	2.3	100.3	Pulse	0.1000	3
He	Sc	45	40871.38	3.7	102.2	Pulse	0.1000	3
He	Ge	72	73025.56	0.9	101.0	Pulse	0.1000	3
He	In	115	63011.17	0.9	97.6	Pulse	0.1000	3
He	Tb	159	280065.66	0.7	97.9	Pulse	0.1000	3
He	Bi	209	219176.51	0.6	98.6	Pulse	0.1000	3

No Gas

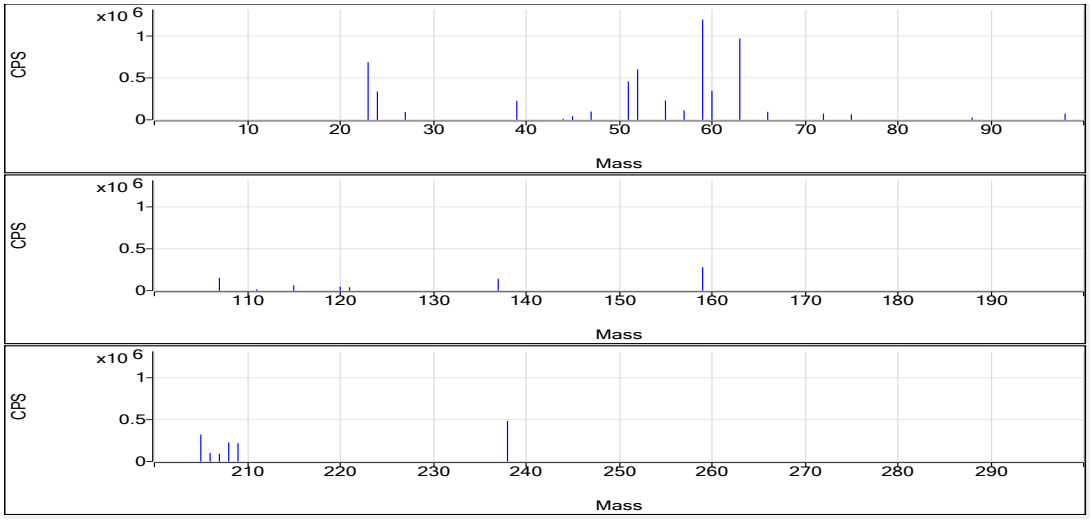


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.995	0.0671	97926.77	0.0013	4.694E-05
Be	9	1	No Gas	48.297	0.0635	91915.20	0.0013	4.694E-05
Be	9	1	No Gas	50.133	0.0659	95789.18	0.0013	4.694E-05
Se	78	2	H2	54.425	0.0212	3365.73	0.0004	1.089E-05
Se	78	2	H2	55.089	0.0215	3313.72	0.0004	1.089E-05
Se	78	2	H2	50.235	0.0196	3169.69	0.0004	1.089E-05
Na	23	3	He	5431.748	9.4372	690208.04	0.0017	0.1065
Na	23	3	He	5348.064	9.2935	684266.71	0.0017	0.1065
Na	23	3	He	5456.909	9.4804	685542.65	0.0017	0.1065
Mg	24	3	He	5405.349	4.5621	333657.42	0.0008	0.004846
Mg	24	3	He	5407.25	4.5637	336019.99	0.0008	0.004846
Mg	24	3	He	5549.009	4.6832	338649.57	0.0008	0.004846
Al	27	3	He	5223.991	1.2621	92306.17	0.0002	0.001063
Al	27	3	He	5215.108	1.26	92769.23	0.0002	0.001063
Al	27	3	He	5363.84	1.2959	93705.38	0.0002	0.001063
K	39	3	He	5399.642	3.1254	228580.60	0.0006	0.1436
K	39	3	He	5227.69	3.0304	223126.95	0.0006	0.1436
K	39	3	He	5411.052	3.1317	226456.09	0.0006	0.1436
Ca	44	3	He	5470.941	0.1715	12545.70	0	0.001611
Ca	44	3	He	5206.523	0.1633	12025.40	0	0.001611
Ca	44	3	He	5378.046	0.1687	12195.45	0	0.001611
Ti	47	3	He	5309.018	1.3317	97393.66	0.0003	0.0002737
Ti	47	3	He	5408.74	1.3567	99890.17	0.0003	0.0002737
Ti	47	3	He	5465.637	1.3709	99134.47	0.0003	0.0002737
V	51	3	He	533.844	6.2521	457258.44	0.0117	0.007326
V	51	3	He	527.24	6.1748	454646.25	0.0117	0.007326
V	51	3	He	541.994	6.3474	458990.91	0.0117	0.007326
Cr	52	3	He	541.644	8.2732	605071.24	0.0152	0.02538
Cr	52	3	He	525.18	8.0224	590682.61	0.0152	0.02538
Cr	52	3	He	545.235	8.3278	602194.95	0.0152	0.02538
Mn	55	3	He	526.221	3.1198	228174.31	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	522.553	3.0982	228115.41	0.0059	0.01385
Mn	55	3	He	535.51	3.1747	229563.45	0.0059	0.01385
Fe	57	3	He	5299.85	1.5394	112583.92	0.0003	0.003918
Fe	57	3	He	5233.195	1.5201	111919.45	0.0003	0.003918
Fe	57	3	He	5365.291	1.5583	112684.08	0.0003	0.003918
Co	59	3	He	536.333	16.3669	1197019.75	0.0305	0.003084
Co	59	3	He	531.748	16.227	1194771.39	0.0305	0.003084
Co	59	3	He	539.092	16.451	1189594.83	0.0305	0.003084
Ni	60	3	He	532.164	4.6885	342900.50	0.0088	0.009003
Ni	60	3	He	535.263	4.7157	347213.08	0.0088	0.009003
Ni	60	3	He	545.041	4.8017	347217.46	0.0088	0.009003
Cu	63	3	He	529.915	13.2195	966831.00	0.0249	0.004937
Cu	63	3	He	526.712	13.1396	967453.27	0.0249	0.004937
Cu	63	3	He	539.35	13.4548	972930.38	0.0249	0.004937
Zn	66	3	He	530.951	1.3093	95755.01	0.0025	0.004836
Zn	66	3	He	528.238	1.3026	95908.35	0.0025	0.004836
Zn	66	3	He	535.002	1.3192	95393.81	0.0025	0.004836
As	75	3	He	523.682	0.9112	66642.73	0.0017	0.0004347
As	75	3	He	518.08	0.9015	66373.72	0.0017	0.0004347
As	75	3	He	527.572	0.918	66379.70	0.0017	0.0004347
Sr	88	3	He	53.767	0.4211	26254.79	0.0078	0.0007762
Sr	88	3	He	52.083	0.4079	25854.10	0.0078	0.0007762
Sr	88	3	He	52.838	0.4138	26194.64	0.0078	0.0007762
Mo	98	3	He	53.236	1.1729	73129.38	0.022	0.0005162
Mo	98	3	He	51.708	1.1392	72205.12	0.022	0.0005162
Mo	98	3	He	53	1.1677	73912.63	0.022	0.0005162
Ag	107	3	He	54	2.4575	153227.65	0.0455	0.0004641
Ag	107	3	He	52.845	2.4049	152427.08	0.0455	0.0004641
Ag	107	3	He	52.892	2.4071	152367.50	0.0455	0.0004641
Cd	111	3	He	52.895	0.254	15834.94	0.0048	5.152E-05
Cd	111	3	He	52.002	0.2497	15824.92	0.0048	5.152E-05
Cd	111	3	He	52.583	0.2525	15981.11	0.0048	5.152E-05
Sn	120	3	He	55.04	0.8003	49902.49	0.0143	0.01559
Sn	120	3	He	52.049	0.7577	48023.69	0.0143	0.01559
Sn	120	3	He	52.228	0.7603	48124.10	0.0143	0.01559
Sb	121	3	He	55.271	0.6859	42767.00	0.0124	0.000258
Sb	121	3	He	51.694	0.6415	40660.29	0.0124	0.000258
Sb	121	3	He	52.692	0.6539	41392.23	0.0124	0.000258
Ba	137	3	He	521.117	2.2801	142167.60	0.0044	0.000309
Ba	137	3	He	515.307	2.2547	142904.62	0.0044	0.000309
Ba	137	3	He	511.043	2.236	141540.32	0.0044	0.000309
Tl	205	3	He	53.162	1.4706	321012.75	0.0276	0.001005
Tl	205	3	He	52.572	1.4543	320776.40	0.0276	0.001005
Tl	205	3	He	53.489	1.4797	323568.51	0.0276	0.001005
Pb	208	3	He	53.002	1.9313	228786.42	0.0364	0.002176
Pb	208	3	He	52.306	1.906	225794.86	0.0364	0.002176
Pb	208	3	He	52.835	1.9252	224310.95	0.0364	0.002176
U	238	3	He	52.105	2.1921	478508.43	0.0421	0.00024
U	238	3	He	52.163	2.1946	484063.31	0.0421	0.00024
U	238	3	He	53.086	2.2334	488398.78	0.0421	0.00024
Sc	45	1	No Gas			3290967.14		
Sc	45	1	No Gas			3315310.89		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3313561.51		
Ge	72	1	No Gas			1460347.63		
Ge	72	1	No Gas			1447224.67		
Ge	72	1	No Gas			1453024.04		
Sc	45	2	H2			193300.54		
Sc	45	2	H2			189853.69		
Sc	45	2	H2			199430.02		
Ge	72	2	H2			158747.28		
Ge	72	2	H2			154411.03		
Ge	72	2	H2			161962.97		
In	115	2	H2			435871.24		
In	115	2	H2			424471.48		
In	115	2	H2			444063.31		
Sc	45	3	He			39604.69		
Sc	45	3	He			42522.59		
Sc	45	3	He			40486.85		
Ge	72	3	He			73136.74		
Ge	72	3	He			73628.74		
Ge	72	3	He			72311.20		
In	115	3	He			62741.07		
In	115	3	He			63756.11		
In	115	3	He			63675.52		
Tb	159	3	He			281607.30		
Tb	159	3	He			280578.12		
Tb	159	3	He			278011.56		
Bi	209	3	He			218283.24		
Bi	209	3	He			220568.81		
Bi	209	3	He			218677.48		

Quantitation Report

Data File Name	102_CCB.d
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Sample Name	CCB 4654618
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

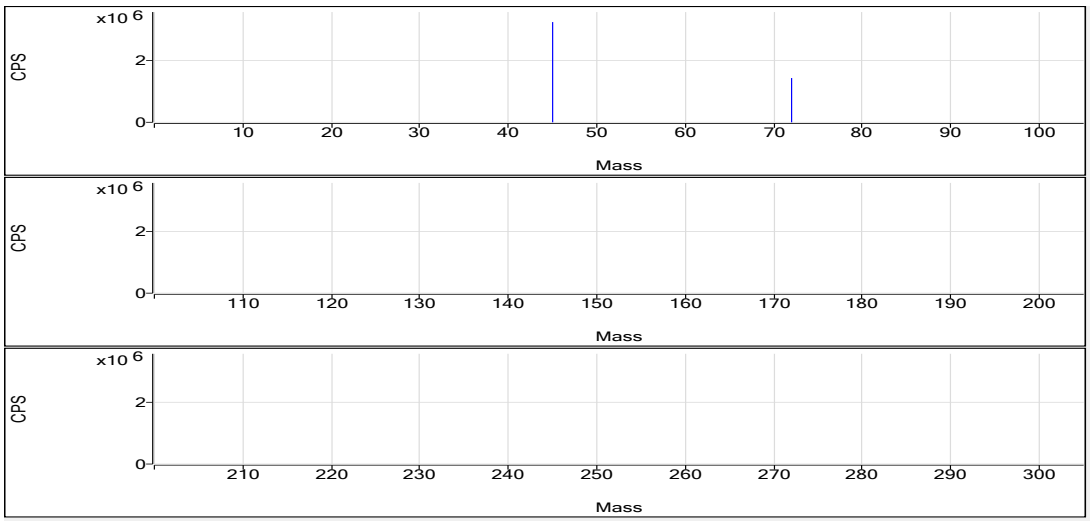
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.046	ppb	21.2	154.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.103	ppb	30.0	8.00	0.0001	Pulse	1.5000	3
Na	23	72	He	12.140	ppb	22.6	9226.49	0.1273	Pulse	0.1000	3
Mg	24	72	He	14.638	ppb	28.5	1246.76	0.0172	Pulse	0.1000	3
Al	27	72	He	6.434	ppb	74.3	190.01	0.0026	Pulse	0.1000	3
K	39	72	He	13.785	ppb	114.6	10961.15	0.1513	Pulse	0.1000	3
Ca	44	72	He	29.470	ppb	74.7	183.34	0.0025	Pulse	0.1000	3
Ti	47	72	He	2.035	ppb	69.1	56.67	0.0008	Pulse	0.1000	3
V	51	72	He	0.278	ppb	6.0	766.70	0.0106	Pulse	0.5000	3
Cr	52	72	He	0.274	ppb	101.1	2143.58	0.0296	Pulse	0.1000	3
Mn	55	72	He	0.375	ppb	131.8	1163.42	0.0161	Pulse	0.1000	3
Fe	57	72	He	6.016	ppb	64.0	410.02	0.0057	Pulse	0.1000	3
Co	59	72	He	0.240	ppb	23.6	753.38	0.0104	Pulse	0.1000	3
Ni	60	72	He	1.036	ppb	23.1	1313.43	0.0181	Pulse	0.1000	3
Cu	63	72	He	0.239	ppb	3.8	790.05	0.0109	Pulse	0.1000	3
Zn	66	72	He	-0.171	ppb	N/A	320.01	0.0044	Pulse	0.1000	3
As	75	72	He	0.268	ppb	44.4	65.33	0.0009	Pulse	0.5000	3
Sr	88	115	He	0.143	ppb	62.2	120.01	0.0019	Pulse	0.1000	3
Mo	98	115	He	0.060	ppb	25.0	116.67	0.0018	Pulse	0.1000	3
Ag	107	115	He	0.026	ppb	8.3	103.33	0.0016	Pulse	0.1000	3
Cd	111	115	He	0.013	ppb	29.9	7.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.183	ppb	126.5	1153.43	0.0182	Pulse	0.1000	3
Sb	121	115	He	0.089	ppb	42.2	86.67	0.0014	Pulse	0.1000	3
Ba	137	115	He	0.266	ppb	29.3	93.34	0.0015	Pulse	0.1000	3
Tl	205	209	He	0.391	ppb	10.2	2600.36	0.0118	Pulse	0.1000	3
Pb	208	209	He	0.014	ppb	42.5	593.37	0.0027	Pulse	0.1000	3
U	238	209	He	0.031	ppb	24.0	336.68	0.0015	Pulse	0.1000	3

ISTD Table:

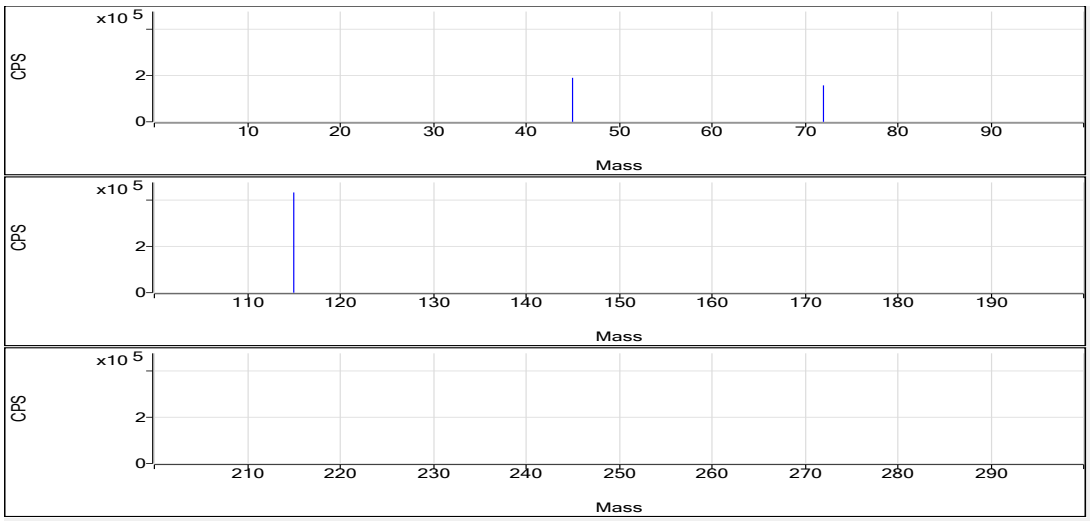
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3274455.27	1.4	101.0	Pulse	0.1000	3
No Gas	Ge	72	1445643.67	1.2	100.4	Pulse	0.1000	3
H2	Sc	45	190348.93	2.0	97.4	Pulse	0.1000	3
H2	Ge	72	157692.39	2.1	96.7	Pulse	0.1000	3
H2	In	115	433686.45	3.0	100.1	Pulse	0.1000	3
He	Sc	45	41860.66	1.7	104.7	Pulse	0.1000	3
He	Ge	72	72462.94	0.9	100.2	Pulse	0.1000	3
He	In	115	63434.91	1.0	98.2	Pulse	0.1000	3
He	Tb	159	279690.30	0.4	97.8	Pulse	0.1000	3
He	Bi	209	219908.45	0.3	99.0	Pulse	0.1000	3

No Gas

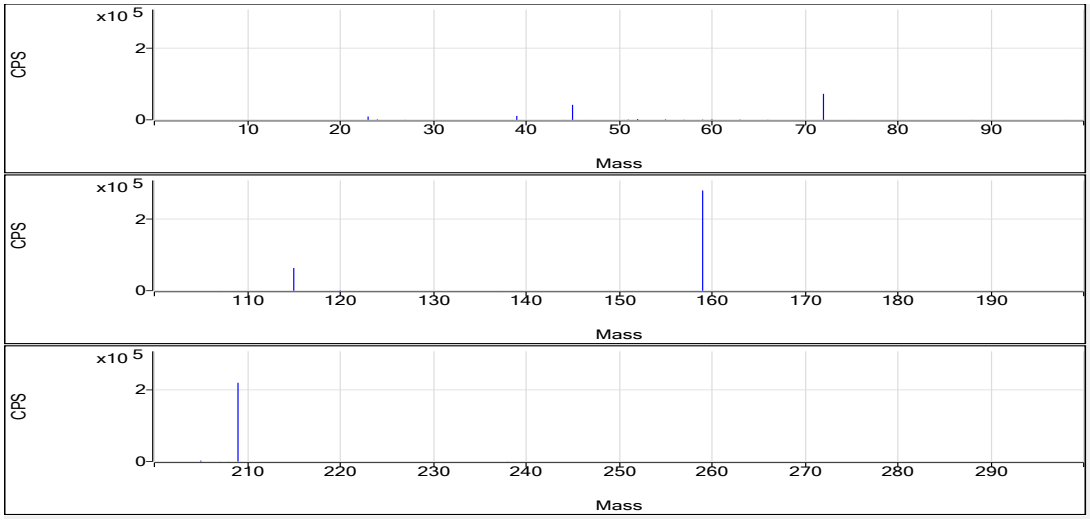


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.049	0.0001	160.00	0.0013	4.694E-05
Be	9	1	No Gas	0.035	0.0001	136.00	0.0013	4.694E-05
Be	9	1	No Gas	0.053	0.0001	168.00	0.0013	4.694E-05
Se	78	2	H2	0.081	0	6.67	0.0004	1.089E-05
Se	78	2	H2	0.138	0.0001	10.00	0.0004	1.089E-05
Se	78	2	H2	0.089	0	7.33	0.0004	1.089E-05
Na	23	3	He	13.242	0.1292	9313.18	0.0017	0.1065
Na	23	3	He	14.156	0.1308	9573.41	0.0017	0.1065
Na	23	3	He	9.021	0.122	8792.89	0.0017	0.1065
Mg	24	3	He	14.493	0.0171	1230.09	0.0008	0.004846
Mg	24	3	He	18.881	0.0208	1520.13	0.0008	0.004846
Mg	24	3	He	10.539	0.0137	990.07	0.0008	0.004846
Al	27	3	He	1.919	0.0015	110.00	0.0002	0.001063
Al	27	3	He	11.443	0.0038	280.01	0.0002	0.001063
Al	27	3	He	5.94	0.0025	180.01	0.0002	0.001063
K	39	3	He	26.656	0.1584	11414.82	0.0006	0.1436
K	39	3	He	18.536	0.1539	11264.76	0.0006	0.1436
K	39	3	He	-3.838	0.1415	10203.88	0.0006	0.1436
Ca	44	3	He	10.668	0.0019	140.00	0	0.001611
Ca	44	3	He	53.69	0.0033	240.01	0	0.001611
Ca	44	3	He	24.051	0.0024	170.01	0	0.001611
Ti	47	3	He	3.334	0.0011	80.00	0.0003	0.0002737
Ti	47	3	He	0.543	0.0004	30.00	0.0003	0.0002737
Ti	47	3	He	2.227	0.0008	60.00	0.0003	0.0002737
V	51	3	He	0.294	0.0108	776.03	0.0117	0.007326
V	51	3	He	0.28	0.0106	776.03	0.0117	0.007326
V	51	3	He	0.261	0.0104	748.03	0.0117	0.007326
Cr	52	3	He	0.119	0.0272	1960.21	0.0152	0.02538
Cr	52	3	He	0.594	0.0344	2520.33	0.0152	0.02538
Cr	52	3	He	0.109	0.027	1950.21	0.0152	0.02538
Mn	55	3	He	0.944	0.0194	1400.11	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.06	0.0142	1040.07	0.0059	0.01385
Mn	55	3	He	0.12	0.0146	1050.07	0.0059	0.01385
Fe	57	3	He	3.238	0.0049	350.02	0.0003	0.003918
Fe	57	3	He	4.395	0.0052	380.02	0.0003	0.003918
Fe	57	3	He	10.415	0.0069	500.03	0.0003	0.003918
Co	59	3	He	0.176	0.0085	610.04	0.0305	0.003084
Co	59	3	He	0.257	0.0109	800.05	0.0305	0.003084
Co	59	3	He	0.285	0.0118	850.05	0.0305	0.003084
Ni	60	3	He	0.948	0.0173	1250.09	0.0088	0.009003
Ni	60	3	He	1.307	0.0205	1500.13	0.0088	0.009003
Ni	60	3	He	0.853	0.0165	1190.08	0.0088	0.009003
Cu	63	3	He	0.247	0.0111	800.05	0.0249	0.004937
Cu	63	3	He	0.229	0.0107	780.05	0.0249	0.004937
Cu	63	3	He	0.241	0.011	790.05	0.0249	0.004937
Zn	66	3	He	-0.218	0.0043	310.01	0.0025	0.004836
Zn	66	3	He	-0.078	0.0046	340.01	0.0025	0.004836
Zn	66	3	He	-0.218	0.0043	310.02	0.0025	0.004836
As	75	3	He	0.356	0.0011	76.00	0.0017	0.0004347
As	75	3	He	0.316	0.001	72.00	0.0017	0.0004347
As	75	3	He	0.133	0.0007	48.00	0.0017	0.0004347
Sr	88	3	He	0.245	0.0027	170.01	0.0078	0.0007762
Sr	88	3	He	0.104	0.0016	100.01	0.0078	0.0007762
Sr	88	3	He	0.08	0.0014	90.00	0.0078	0.0007762
Mo	98	3	He	0.077	0.0022	140.00	0.022	0.0005162
Mo	98	3	He	0.049	0.0016	100.00	0.022	0.0005162
Mo	98	3	He	0.054	0.0017	110.00	0.022	0.0005162
Ag	107	3	He	0.028	0.0017	110.00	0.0455	0.0004641
Ag	107	3	He	0.025	0.0016	100.00	0.0455	0.0004641
Ag	107	3	He	0.024	0.0016	100.00	0.0455	0.0004641
Cd	111	3	He	0.016	0.0001	8.00	0.0048	5.152E-05
Cd	111	3	He	0.016	0.0001	8.00	0.0048	5.152E-05
Cd	111	3	He	0.009	0.0001	6.00	0.0048	5.152E-05
Sn	120	3	He	0.449	0.022	1390.12	0.0143	0.01559
Sn	120	3	He	0.055	0.0164	1030.08	0.0143	0.01559
Sn	120	3	He	0.044	0.0162	1040.08	0.0143	0.01559
Sb	121	3	He	0.081	0.0013	80.00	0.0124	0.000258
Sb	121	3	He	0.056	0.001	60.00	0.0124	0.000258
Sb	121	3	He	0.13	0.0019	120.00	0.0124	0.000258
Ba	137	3	He	0.291	0.0016	100.01	0.0044	0.000309
Ba	137	3	He	0.329	0.0017	110.01	0.0044	0.000309
Ba	137	3	He	0.179	0.0011	70.00	0.0044	0.000309
Tl	205	3	He	0.431	0.0129	2830.39	0.0276	0.001005
Tl	205	3	He	0.35	0.0107	2360.32	0.0276	0.001005
Tl	205	3	He	0.393	0.0119	2610.38	0.0276	0.001005
Pb	208	3	He	0.017	0.0028	330.02	0.0364	0.002176
Pb	208	3	He	0.007	0.0024	220.01	0.0364	0.002176
Pb	208	3	He	0.019	0.0029	330.02	0.0364	0.002176
U	238	3	He	0.037	0.0018	390.02	0.0421	0.00024
U	238	3	He	0.033	0.0016	360.02	0.0421	0.00024
U	238	3	He	0.022	0.0012	260.01	0.0421	0.00024
Sc	45	1	No Gas			3264779.33		
Sc	45	1	No Gas			3325299.33		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3233287.14		
Ge	72	1	No Gas			1438365.29		
Ge	72	1	No Gas			1465428.10		
Ge	72	1	No Gas			1433137.63		
Sc	45	2	H2			186511.72		
Sc	45	2	H2			190241.23		
Sc	45	2	H2			194293.84		
Ge	72	2	H2			157007.27		
Ge	72	2	H2			154855.69		
Ge	72	2	H2			161214.20		
In	115	2	H2			425697.22		
In	115	2	H2			426850.27		
In	115	2	H2			448511.87		
Sc	45	3	He			42653.14		
Sc	45	3	He			41549.65		
Sc	45	3	He			41379.20		
Ge	72	3	He			72081.19		
Ge	72	3	He			73206.45		
Ge	72	3	He			72101.17		
In	115	3	He			63222.84		
In	115	3	He			62951.63		
In	115	3	He			64157.25		
Tb	159	3	He			280567.87		
Tb	159	3	He			280097.11		
Tb	159	3	He			278405.91		
Bi	209	3	He			219298.96		
Bi	209	3	He			220700.97		
Bi	209	3	He			219725.41		

Quantitation Report

Data File Name	103SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 13:25:44
Sample Name	410-136514-G-1-A
Sample Type	Sample
Comment	D29
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

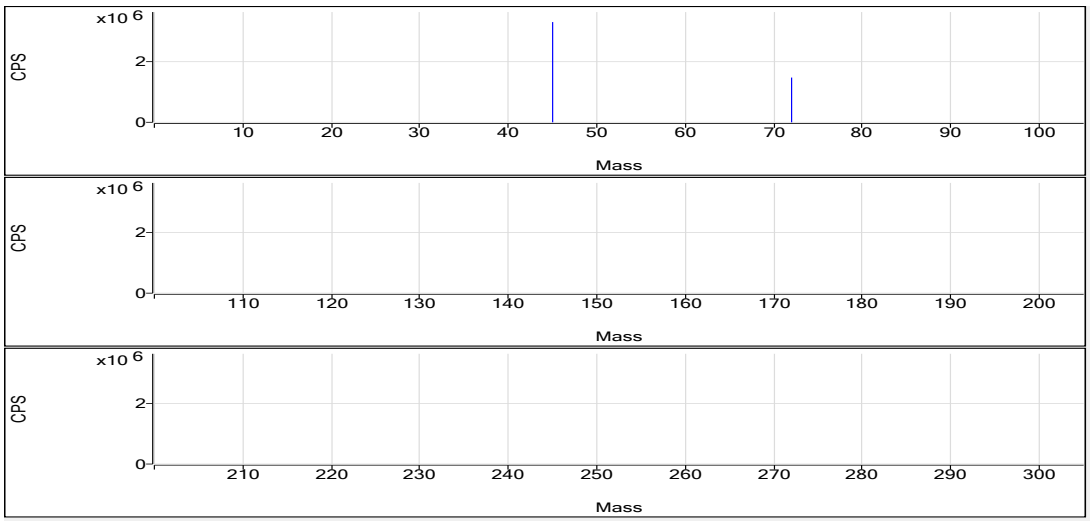
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.009	ppb	33.1	88.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.183	ppb	29.7	13.33	0.0001	Pulse	1.5000	3
Na	23	72	He	6240.520	ppb	0.1	794492.49	10.8266	Pulse	0.1000	3
Mg	24	72	He	24640.608	ppb	0.5	1524860.29	20.7794	Pulse	0.1000	3
Al	27	72	He	15.922	ppb	25.6	360.01	0.0049	Pulse	0.1000	3
K	39	72	He	3802.649	ppb	1.1	164634.25	2.2435	Pulse	0.1000	3
Ca	44	72	He	86872.092	ppb	0.6	198124.16	2.6998	Pulse	0.1000	3
Ti	47	72	He	0.720	ppb	115.3	33.33	0.0005	Pulse	0.1000	3
V	51	72	He	0.309	ppb	34.7	802.69	0.0109	Pulse	0.5000	3
Cr	52	72	He	1.084	ppb	7.6	3073.75	0.0419	Pulse	0.1000	3
Mn	55	72	He	1.425	ppb	34.8	1633.50	0.0223	Pulse	0.1000	3
Fe	57	72	He	33.825	ppb	8.1	1006.73	0.0137	Pulse	0.1000	3
Co	59	72	He	0.183	ppb	5.9	636.71	0.0087	Pulse	0.1000	3
Ni	60	72	He	1.347	ppb	12.7	1530.13	0.0208	Pulse	0.1000	3
Cu	63	72	He	0.228	ppb	31.2	780.05	0.0106	Pulse	0.1000	3
Zn	66	72	He	-0.009	ppb	N/A	353.35	0.0048	Pulse	0.1000	3
As	75	72	He	0.220	ppb	49.4	60.00	0.0008	Pulse	0.5000	3
Sr	88	115	He	48.431	ppb	3.7	23700.31	0.3794	Pulse	0.1000	3
Mo	98	115	He	0.323	ppb	12.1	476.69	0.0076	Pulse	0.1000	3
Ag	107	115	He	0.019	ppb	56.5	83.34	0.0013	Pulse	0.1000	3
Cd	111	115	He	0.023	ppb	29.7	10.00	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.228	ppb	32.3	1176.76	0.0188	Pulse	0.1000	3
Sb	121	115	He	0.057	ppb	47.0	60.00	0.0010	Pulse	0.1000	3
Ba	137	115	He	239.704	ppb	1.8	65542.80	1.0490	Pulse	0.1000	3
Tl	205	209	He	0.119	ppb	4.4	926.73	0.0043	Pulse	0.1000	3
Pb	208	209	He	0.028	ppb	78.6	690.03	0.0032	Pulse	0.1000	3
U	238	209	He	0.309	ppb	6.3	2860.41	0.0132	Pulse	0.1000	3

ISTD Table:

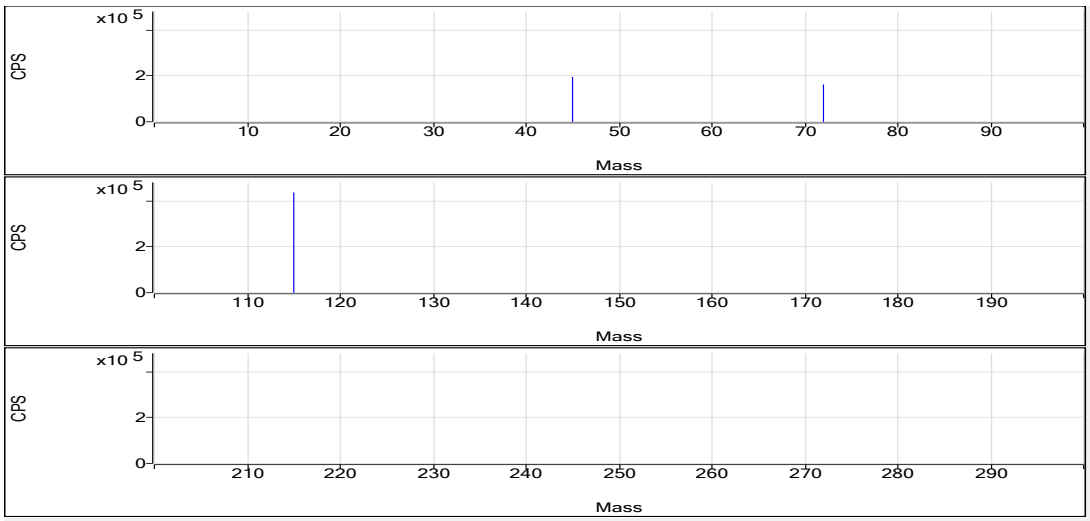
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3322997.24	1.0	102.5	Pulse	0.1000	3
No Gas	Ge	72	1483146.80	0.9	103.0	Pulse	0.1000	3
H2	Sc	45	195408.45	1.8	100.0	Pulse	0.1000	3
H2	Ge	72	162397.74	2.4	99.6	Pulse	0.1000	3
H2	In	115	435732.14	1.6	100.6	Pulse	0.1000	3
He	Sc	45	41820.19	1.9	104.6	Pulse	0.1000	3
He	Ge	72	73383.82	0.3	101.5	Pulse	0.1000	3
He	In	115	62494.32	1.5	96.8	Pulse	0.1000	3
He	Tb	159	282063.92	0.6	98.6	Pulse	0.1000	3
He	Bi	209	215917.23	0.9	97.2	Pulse	0.1000	3

No Gas

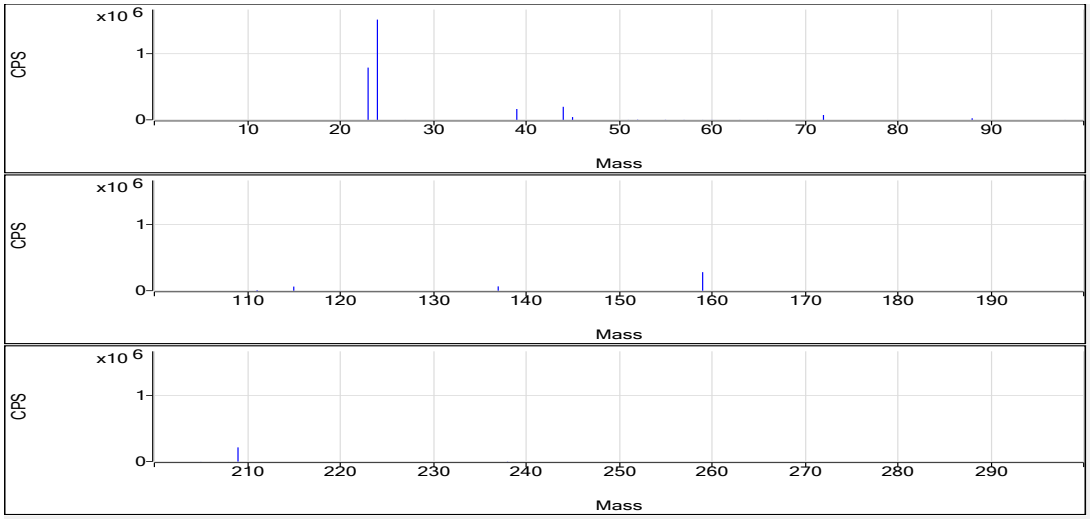


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.01	0.0001	88.00	0.0013	4.694E-05
Be	9	1	No Gas	0.012	0.0001	94.00	0.0013	4.694E-05
Be	9	1	No Gas	0.006	0.0001	82.00	0.0013	4.694E-05
Se	78	2	H2	0.12	0.0001	9.33	0.0004	1.089E-05
Se	78	2	H2	0.219	0.0001	15.33	0.0004	1.089E-05
Se	78	2	H2	0.208	0.0001	15.33	0.0004	1.089E-05
Na	23	3	He	6242.541	10.83	795111.79	0.0017	0.1065
Na	23	3	He	6245.858	10.8357	792915.69	0.0017	0.1065
Na	23	3	He	6233.16	10.8139	795449.99	0.0017	0.1065
Mg	24	3	He	24546.611	20.7001	1519748.88	0.0008	0.004846
Mg	24	3	He	24769.377	20.8879	1528498.10	0.0008	0.004846
Mg	24	3	He	24605.835	20.7501	1526333.88	0.0008	0.004846
Al	27	3	He	20.426	0.006	440.02	0.0002	0.001063
Al	27	3	He	14.846	0.0046	340.01	0.0002	0.001063
Al	27	3	He	12.493	0.0041	300.01	0.0002	0.001063
K	39	3	He	3807.895	2.2464	164925.11	0.0006	0.1436
K	39	3	He	3843.056	2.2658	165803.94	0.0006	0.1436
K	39	3	He	3756.997	2.2183	163173.69	0.0006	0.1436
Ca	44	3	He	86283.929	2.6816	196874.35	0	0.001611
Ca	44	3	He	87308.381	2.7134	198555.78	0	0.001611
Ca	44	3	He	87023.967	2.7046	198942.36	0	0.001611
Ti	47	3	He	1.624	0.0007	50.00	0.0003	0.0002737
Ti	47	3	He	0.543	0.0004	30.00	0.0003	0.0002737
Ti	47	3	He	-0.007	0.0003	20.00	0.0003	0.0002737
V	51	3	He	0.431	0.0124	908.04	0.0117	0.007326
V	51	3	He	0.264	0.0104	762.02	0.0117	0.007326
V	51	3	He	0.231	0.01	738.02	0.0117	0.007326
Cr	52	3	He	1.044	0.0413	3030.42	0.0152	0.02538
Cr	52	3	He	1.178	0.0433	3170.45	0.0152	0.02538
Cr	52	3	He	1.03	0.0411	3020.39	0.0152	0.02538
Mn	55	3	He	1.553	0.023	1690.17	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1.844	0.0247	1810.19	0.0059	0.01385
Mn	55	3	He	0.878	0.019	1400.13	0.0059	0.01385
Fe	57	3	He	34.435	0.0139	1020.06	0.0003	0.003918
Fe	57	3	He	30.819	0.0128	940.06	0.0003	0.003918
Fe	57	3	He	36.221	0.0144	1060.08	0.0003	0.003918
Co	59	3	He	0.194	0.009	660.04	0.0305	0.003084
Co	59	3	He	0.172	0.0083	610.04	0.0305	0.003084
Co	59	3	He	0.184	0.0087	640.04	0.0305	0.003084
Ni	60	3	He	1.47	0.0219	1610.14	0.0088	0.009003
Ni	60	3	He	1.152	0.0191	1400.12	0.0088	0.009003
Ni	60	3	He	1.419	0.0215	1580.14	0.0088	0.009003
Cu	63	3	He	0.255	0.0113	830.05	0.0249	0.004937
Cu	63	3	He	0.147	0.0086	630.04	0.0249	0.004937
Cu	63	3	He	0.282	0.012	880.06	0.0249	0.004937
Zn	66	3	He	-0.361	0.004	290.01	0.0025	0.004836
Zn	66	3	He	0.145	0.0052	380.02	0.0025	0.004836
Zn	66	3	He	0.19	0.0053	390.02	0.0025	0.004836
As	75	3	He	0.142	0.0007	50.00	0.0017	0.0004347
As	75	3	He	0.174	0.0007	54.00	0.0017	0.0004347
As	75	3	He	0.344	0.001	76.00	0.0017	0.0004347
Sr	88	3	He	46.468	0.364	23139.43	0.0078	0.0007762
Sr	88	3	He	50.018	0.3918	24301.31	0.0078	0.0007762
Sr	88	3	He	48.808	0.3823	23660.19	0.0078	0.0007762
Mo	98	3	He	0.362	0.0085	540.03	0.022	0.0005162
Mo	98	3	He	0.284	0.0068	420.02	0.022	0.0005162
Mo	98	3	He	0.321	0.0076	470.02	0.022	0.0005162
Ag	107	3	He	0.021	0.0014	90.00	0.0455	0.0004641
Ag	107	3	He	0.008	0.0008	50.00	0.0455	0.0004641
Ag	107	3	He	0.029	0.0018	110.01	0.0455	0.0004641
Cd	111	3	He	0.022	0.0002	10.00	0.0048	5.152E-05
Cd	111	3	He	0.03	0.0002	12.00	0.0048	5.152E-05
Cd	111	3	He	0.016	0.0001	8.00	0.0048	5.152E-05
Sn	120	3	He	0.154	0.0178	1130.08	0.0143	0.01559
Sn	120	3	He	0.23	0.0189	1170.10	0.0143	0.01559
Sn	120	3	He	0.301	0.0199	1230.10	0.0143	0.01559
Sb	121	3	He	0.03	0.0006	40.00	0.0124	0.000258
Sb	121	3	He	0.057	0.001	60.00	0.0124	0.000258
Sb	121	3	He	0.083	0.0013	80.00	0.0124	0.000258
Ba	137	3	He	234.799	1.0275	65314.70	0.0044	0.000309
Ba	137	3	He	241.844	1.0583	65646.88	0.0044	0.000309
Ba	137	3	He	242.47	1.0611	65666.81	0.0044	0.000309
Tl	205	3	He	0.124	0.0044	960.07	0.0276	0.001005
Tl	205	3	He	0.113	0.0041	900.06	0.0276	0.001005
Tl	205	3	He	0.119	0.0043	920.07	0.0276	0.001005
Pb	208	3	He	0.004	0.0023	250.01	0.0364	0.002176
Pb	208	3	He	0.046	0.0039	380.03	0.0364	0.002176
Pb	208	3	He	0.034	0.0034	490.03	0.0364	0.002176
U	238	3	He	0.331	0.0142	3070.49	0.0421	0.00024
U	238	3	He	0.303	0.013	2820.40	0.0421	0.00024
U	238	3	He	0.294	0.0126	2690.35	0.0421	0.00024
Sc	45	1	No Gas			3283221.51		
Sc	45	1	No Gas			3347456.83		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3338313.39		
Ge	72	1	No Gas			1467916.38		
Ge	72	1	No Gas			1489478.73		
Ge	72	1	No Gas			1492045.29		
Sc	45	2	H2			194164.51		
Sc	45	2	H2			192651.85		
Sc	45	2	H2			199409.00		
Ge	72	2	H2			161396.59		
Ge	72	2	H2			159171.72		
Ge	72	2	H2			166624.92		
In	115	2	H2			438270.85		
In	115	2	H2			428043.70		
In	115	2	H2			440881.87		
Sc	45	3	He			42582.44		
Sc	45	3	He			41900.32		
Sc	45	3	He			40977.80		
Ge	72	3	He			73417.35		
Ge	72	3	He			73176.08		
Ge	72	3	He			73558.03		
In	115	3	He			63575.17		
In	115	3	He			62038.14		
In	115	3	He			61897.19		
Tb	159	3	He			280195.05		
Tb	159	3	He			282643.53		
Tb	159	3	He			283353.18		
Bi	209	3	He			216760.06		
Bi	209	3	He			217355.19		
Bi	209	3	He			213636.44		

Quantitation Report

Data File Name	104SMPL.d
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Acq Time	2023-08-10 13:27:45
Sample Name	410-136864-K-6-A
Sample Type	Sample
Comment	D29
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

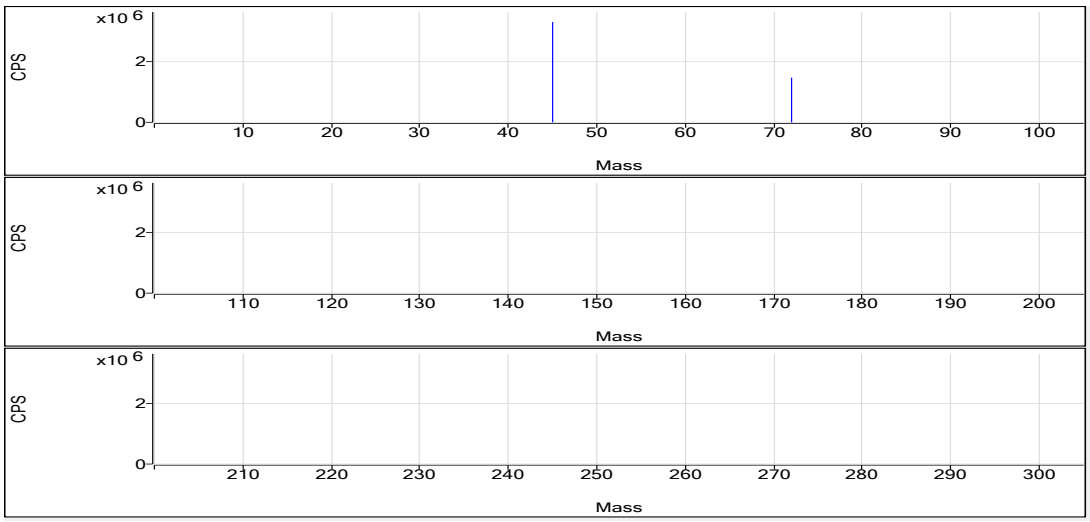
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.030	ppb	20.6	126.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.078	ppb	48.5	6.67	0.0000	Pulse	1.5000	3
Na	23	72	He	2542.998	ppb	1.1	334831.72	4.4749	Pulse	0.1000	3
Mg	24	72	He	22982.678	ppb	1.1	1450192.68	19.3816	Pulse	0.1000	3
Al	27	72	He	33.990	ppb	13.8	693.38	0.0093	Pulse	0.1000	3
K	39	72	He	3640.674	ppb	0.7	161180.65	2.1541	Pulse	0.1000	3
Ca	44	72	He	48527.545	ppb	1.7	112895.17	1.5089	Pulse	0.1000	3
Ti	47	72	He	2.115	ppb	76.8	60.00	0.0008	Pulse	0.1000	3
V	51	72	He	0.339	ppb	38.0	844.70	0.0113	Pulse	0.5000	3
Cr	52	72	He	3.273	ppb	7.9	5627.97	0.0752	Pulse	0.1000	3
Mn	55	72	He	2085.606	ppb	0.4	922153.69	12.3240	Pulse	0.1000	3
Fe	57	72	He	455.549	ppb	4.6	10167.24	0.1359	Pulse	0.1000	3
Co	59	72	He	3.504	ppb	10.7	8225.95	0.1100	Pulse	0.1000	3
Ni	60	72	He	5.758	ppb	7.1	4460.83	0.0596	Pulse	0.1000	3
Cu	63	72	He	2.866	ppb	3.5	5718.01	0.0764	Pulse	0.1000	3
Zn	66	72	He	10.872	ppb	9.1	2360.28	0.0315	Pulse	0.1000	3
As	75	72	He	0.354	ppb	36.7	78.67	0.0011	Pulse	0.5000	3
Sr	88	115	He	177.536	ppb	2.1	86864.24	1.3886	Pulse	0.1000	3
Mo	98	115	He	0.168	ppb	12.7	263.34	0.0042	Pulse	0.1000	3
Ag	107	115	He	0.343	ppb	11.1	1006.74	0.0161	Pulse	0.1000	3
Cd	111	115	He	0.708	ppb	3.0	216.00	0.0035	Pulse	0.5000	3
Sn	120	115	He	0.501	ppb	24.7	1423.46	0.0227	Pulse	0.1000	3
Sb	121	115	He	0.495	ppb	21.3	400.02	0.0064	Pulse	0.1000	3
Ba	137	115	He	89.471	ppb	1.2	24508.93	0.3917	Pulse	0.1000	3
Tl	205	209	He	0.087	ppb	20.7	753.39	0.0034	Pulse	0.1000	3
Pb	208	209	He	0.458	ppb	3.4	4157.08	0.0188	Pulse	0.1000	3
U	238	209	He	0.096	ppb	11.6	943.41	0.0043	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3302949.12	1.5	101.9	Pulse	0.1000	3
No Gas	Ge	72	1470020.03	0.9	102.1	Pulse	0.1000	3
H2	Sc	45	196661.18	2.0	100.7	Pulse	0.1000	3
H2	Ge	72	162024.12	2.3	99.4	Pulse	0.1000	3
H2	In	115	434619.13	1.6	100.3	Pulse	0.1000	3
He	Sc	45	41623.32	2.3	104.1	Pulse	0.1000	3
He	Ge	72	74827.59	0.8	103.5	Pulse	0.1000	3
He	In	115	62565.93	1.2	96.9	Pulse	0.1000	3
He	Tb	159	282637.26	0.7	98.8	Pulse	0.1000	3
He	Bi	209	220591.55	1.1	99.3	Pulse	0.1000	3

No Gas



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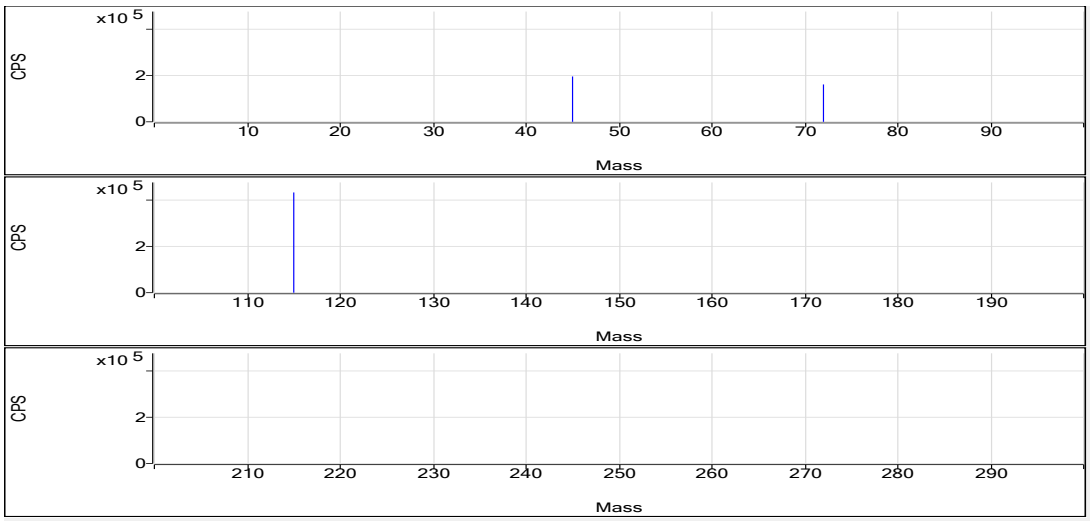
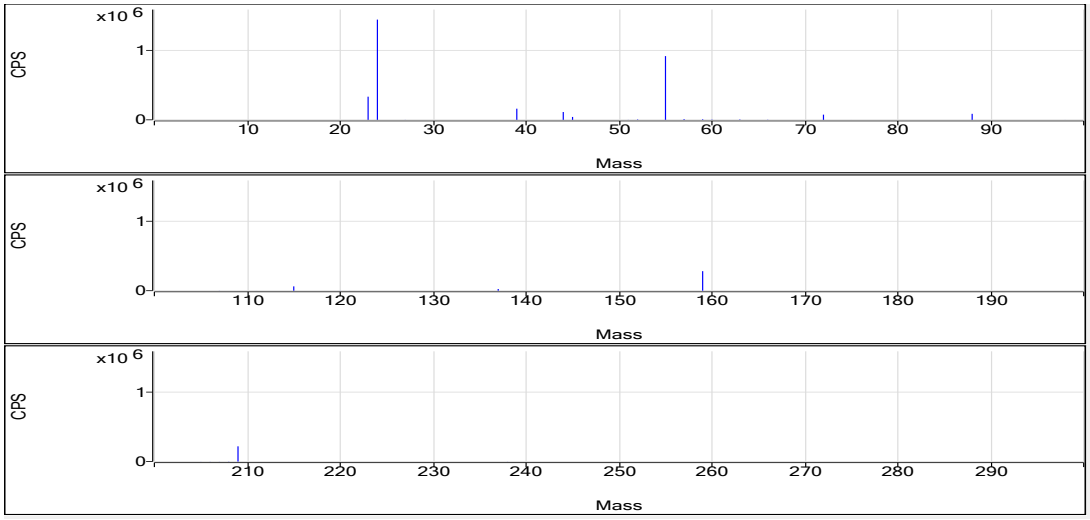


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.024	0.0001	114.00	0.0013	4.694E-05
Be	9	1	No Gas	0.036	0.0001	140.00	0.0013	4.694E-05
Be	9	1	No Gas	0.029	0.0001	126.00	0.0013	4.694E-05
Se	78	2	H2	0.091	0	7.33	0.0004	1.089E-05
Se	78	2	H2	0.035	0	4.00	0.0004	1.089E-05
Se	78	2	H2	0.107	0.0001	8.67	0.0004	1.089E-05
Na	23	3	He	2573.841	4.5279	336200.23	0.0017	0.1065
Na	23	3	He	2519.799	4.435	331579.14	0.0017	0.1065
Na	23	3	He	2535.353	4.4617	336715.78	0.0017	0.1065
Mg	24	3	He	23262.932	19.6179	1456656.38	0.0008	0.004846
Mg	24	3	He	22923.91	19.332	1445336.85	0.0008	0.004846
Mg	24	3	He	22761.194	19.1948	1448584.82	0.0008	0.004846
Al	27	3	He	31.865	0.0088	650.06	0.0002	0.001063
Al	27	3	He	39.373	0.0106	790.05	0.0002	0.001063
Al	27	3	He	30.73	0.0085	640.03	0.0002	0.001063
K	39	3	He	3636.922	2.152	159788.70	0.0006	0.1436
K	39	3	He	3668.535	2.1694	162196.36	0.0006	0.1436
K	39	3	He	3616.566	2.1408	161556.89	0.0006	0.1436
Ca	44	3	He	49388.101	1.5356	114020.56	0	0.001611
Ca	44	3	He	48402.728	1.505	112519.06	0	0.001611
Ca	44	3	He	47791.805	1.486	112145.89	0	0.001611
Ti	47	3	He	3.742	0.0012	90.01	0.0003	0.0002737
Ti	47	3	He	2.109	0.0008	60.00	0.0003	0.0002737
Ti	47	3	He	0.494	0.0004	30.00	0.0003	0.0002737
V	51	3	He	0.477	0.0129	958.04	0.0117	0.007326
V	51	3	He	0.32	0.0111	828.03	0.0117	0.007326
V	51	3	He	0.221	0.0099	748.02	0.0117	0.007326
Cr	52	3	He	3.225	0.0745	5531.28	0.0152	0.02538
Cr	52	3	He	3.552	0.0795	5941.40	0.0152	0.02538
Cr	52	3	He	3.042	0.0717	5411.22	0.0152	0.02538
Mn	55	3	He	2093.674	12.3716	918610.30	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2086.175	12.3273	921639.13	0.0059	0.01385
Mn	55	3	He	2076.97	12.273	926211.63	0.0059	0.01385
Fe	57	3	He	457.566	0.1365	10133.94	0.0003	0.003918
Fe	57	3	He	475.587	0.1417	10594.20	0.0003	0.003918
Fe	57	3	He	433.494	0.1295	9773.57	0.0003	0.003918
Co	59	3	He	3.935	0.1231	9143.12	0.0305	0.003084
Co	59	3	He	3.297	0.1037	7752.31	0.0305	0.003084
Co	59	3	He	3.279	0.1031	7782.43	0.0305	0.003084
Ni	60	3	He	6.191	0.0634	4710.94	0.0088	0.009003
Ni	60	3	He	5.701	0.0591	4420.80	0.0088	0.009003
Ni	60	3	He	5.382	0.0563	4250.75	0.0088	0.009003
Cu	63	3	He	2.941	0.0783	5811.34	0.0249	0.004937
Cu	63	3	He	2.753	0.0736	5501.27	0.0249	0.004937
Cu	63	3	He	2.906	0.0774	5841.42	0.0249	0.004937
Zn	66	3	He	11.738	0.0337	2500.30	0.0025	0.004836
Zn	66	3	He	9.792	0.0289	2160.23	0.0025	0.004836
Zn	66	3	He	11.086	0.0321	2420.31	0.0025	0.004836
As	75	3	He	0.385	0.0011	82.00	0.0017	0.0004347
As	75	3	He	0.212	0.0008	60.00	0.0017	0.0004347
As	75	3	He	0.466	0.0012	94.00	0.0017	0.0004347
Sr	88	3	He	180.712	1.4134	87528.49	0.0078	0.0007762
Sr	88	3	He	173.361	1.356	85928.70	0.0078	0.0007762
Sr	88	3	He	178.536	1.3964	87135.54	0.0078	0.0007762
Mo	98	3	He	0.16	0.004	250.01	0.022	0.0005162
Mo	98	3	He	0.192	0.0047	300.01	0.022	0.0005162
Mo	98	3	He	0.151	0.0038	240.01	0.022	0.0005162
Ag	107	3	He	0.359	0.0168	1040.07	0.0455	0.0004641
Ag	107	3	He	0.371	0.0174	1100.08	0.0455	0.0004641
Ag	107	3	He	0.3	0.0141	880.07	0.0455	0.0004641
Cd	111	3	He	0.723	0.0035	218.00	0.0048	5.152E-05
Cd	111	3	He	0.719	0.0035	222.00	0.0048	5.152E-05
Cd	111	3	He	0.684	0.0033	208.00	0.0048	5.152E-05
Sn	120	3	He	0.425	0.0216	1340.11	0.0143	0.01559
Sn	120	3	He	0.644	0.0248	1570.14	0.0143	0.01559
Sn	120	3	He	0.435	0.0218	1360.12	0.0143	0.01559
Sb	121	3	He	0.617	0.0079	490.02	0.0124	0.000258
Sb	121	3	He	0.437	0.0057	360.02	0.0124	0.000258
Sb	121	3	He	0.431	0.0056	350.02	0.0124	0.000258
Ba	137	3	He	88.559	0.3877	24011.35	0.0044	0.000309
Ba	137	3	He	89.177	0.3904	24742.56	0.0044	0.000309
Ba	137	3	He	90.677	0.397	24772.88	0.0044	0.000309
Tl	205	3	He	0.107	0.004	870.06	0.0276	0.001005
Tl	205	3	He	0.072	0.003	660.05	0.0276	0.001005
Tl	205	3	He	0.082	0.0033	730.05	0.0276	0.001005
Pb	208	3	He	0.476	0.0195	2310.29	0.0364	0.002176
Pb	208	3	He	0.451	0.0186	2210.27	0.0364	0.002176
Pb	208	3	He	0.447	0.0185	2130.25	0.0364	0.002176
U	238	3	He	0.102	0.0045	990.08	0.0421	0.00024
U	238	3	He	0.083	0.0037	820.06	0.0421	0.00024
U	238	3	He	0.103	0.0046	1020.08	0.0421	0.00024
Sc	45	1	No Gas			3267705.89		
Sc	45	1	No Gas			3357879.64		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3283261.83		
Ge	72	1	No Gas			1456500.45		
Ge	72	1	No Gas			1482556.70		
Ge	72	1	No Gas			1471002.95		
Sc	45	2	H2			192114.27		
Sc	45	2	H2			199216.68		
Sc	45	2	H2			198652.59		
Ge	72	2	H2			157918.14		
Ge	72	2	H2			162773.85		
Ge	72	2	H2			165380.37		
In	115	2	H2			426772.92		
In	115	2	H2			437816.79		
In	115	2	H2			439267.69		
Sc	45	3	He			42401.86		
Sc	45	3	He			40566.87		
Sc	45	3	He			41901.23		
Ge	72	3	He			74251.54		
Ge	72	3	He			74763.84		
Ge	72	3	He			75467.39		
In	115	3	He			61937.31		
In	115	3	He			63383.53		
In	115	3	He			62410.26		
Tb	159	3	He			280656.58		
Tb	159	3	He			284643.24		
Tb	159	3	He			282611.97		
Bi	209	3	He			219026.31		
Bi	209	3	He			219461.81		
Bi	209	3	He			223286.54		

Quantitation Report

Data File Name	105SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 13:29:44
Sample Name	410-136864-K-2-A
Sample Type	Sample
Comment	D29
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

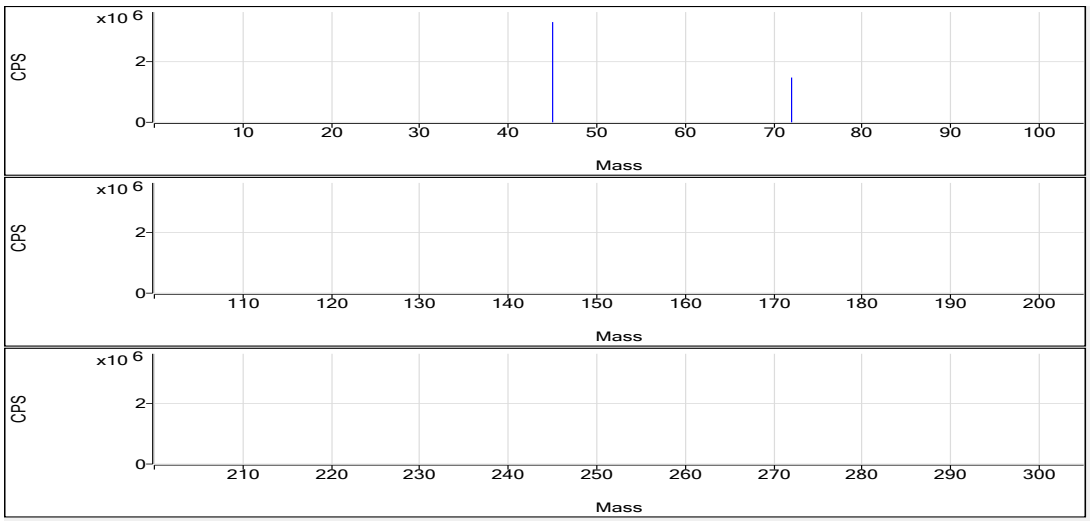
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.312	ppb	4.2	680.02	0.0005	Pulse	0.5000	3
Se	78	72	H2	0.050	ppb	33.5	4.89	0.0000	Pulse	1.5000	3
Na	23	72	He	7201.975	ppb	1.1	925562.17	12.4782	Pulse	0.1000	3
Mg	24	72	He	5485.811	ppb	1.5	343411.19	4.6299	Pulse	0.1000	3
Al	27	72	He	24.276	ppb	15.8	513.36	0.0069	Pulse	0.1000	3
K	39	72	He	4270.677	ppb	2.5	185565.94	2.5020	Pulse	0.1000	3
Ca	44	72	He	9593.659	ppb	2.0	22220.74	0.2996	Pulse	0.1000	3
Ti	47	72	He	-0.380	ppb	N/A	13.33	0.0002	Pulse	0.1000	3
V	51	72	He	0.010	ppb	585.1	551.35	0.0074	Pulse	0.5000	3
Cr	52	72	He	0.393	ppb	45.2	2326.95	0.0314	Pulse	0.1000	3
Mn	55	72	He	276.578	ppb	1.6	122115.87	1.6463	Pulse	0.1000	3
Fe	57	72	He	20.869	ppb	27.4	740.05	0.0100	Pulse	0.1000	3
Co	59	72	He	0.657	ppb	8.6	1716.83	0.0231	Pulse	0.1000	3
Ni	60	72	He	3.800	ppb	13.2	3147.12	0.0424	Pulse	0.1000	3
Cu	63	72	He	10.609	ppb	1.7	19994.47	0.2695	Pulse	0.1000	3
Zn	66	72	He	25.456	ppb	6.3	4997.70	0.0674	Pulse	0.1000	3
As	75	72	He	0.157	ppb	70.3	52.67	0.0007	Pulse	0.5000	3
Sr	88	115	He	41.308	ppb	1.1	20875.90	0.3237	Pulse	0.1000	3
Mo	98	115	He	0.028	ppb	59.9	73.33	0.0011	Pulse	0.1000	3
Ag	107	115	He	0.046	ppb	55.4	166.67	0.0026	Pulse	0.1000	3
Cd	111	115	He	0.267	ppb	8.1	86.00	0.0013	Pulse	0.5000	3
Sn	120	115	He	0.162	ppb	85.0	1153.42	0.0179	Pulse	0.1000	3
Sb	121	115	He	0.063	ppb	113.9	66.67	0.0010	Pulse	0.1000	3
Ba	137	115	He	149.742	ppb	3.4	42258.85	0.6554	Pulse	0.1000	3
Tl	205	209	He	0.124	ppb	9.1	976.74	0.0044	Pulse	0.1000	3
Pb	208	209	He	0.345	ppb	4.8	3253.62	0.0147	Pulse	0.1000	3
U	238	209	He	0.012	ppb	36.3	166.67	0.0008	Pulse	0.1000	3

ISTD Table:

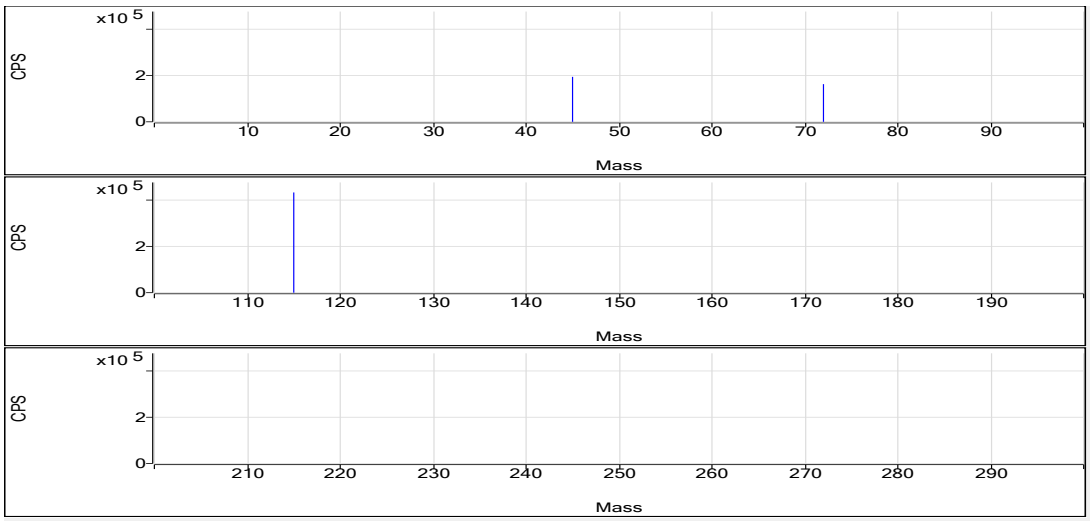
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3335082.87	0.7	102.9	Pulse	0.1000	3
No Gas	Ge	72	1488993.94	0.8	103.4	Pulse	0.1000	3
H2	Sc	45	193509.83	2.5	99.0	Pulse	0.1000	3
H2	Ge	72	162143.62	1.9	99.5	Pulse	0.1000	3
H2	In	115	431337.66	1.7	99.5	Pulse	0.1000	3
He	Sc	45	41486.18	3.1	103.8	Pulse	0.1000	3
He	Ge	72	74181.89	1.4	102.6	Pulse	0.1000	3
He	In	115	64503.26	1.8	99.9	Pulse	0.1000	3
He	Tb	159	285745.88	0.7	99.9	Pulse	0.1000	3
He	Bi	209	220782.31	0.8	99.4	Pulse	0.1000	3

No Gas

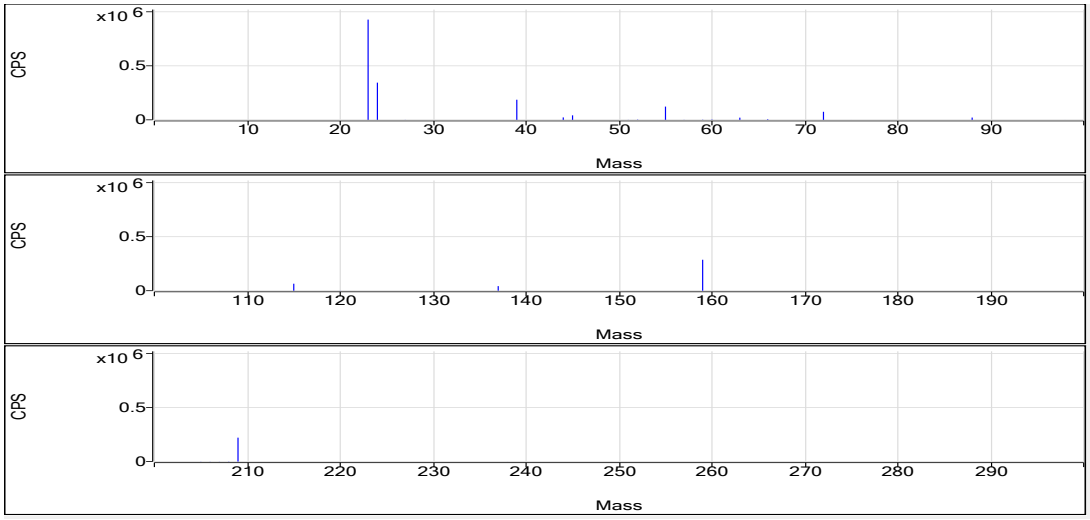


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.297	0.0004	646.02	0.0013	4.694E-05
Be	9	1	No Gas	0.315	0.0005	688.02	0.0013	4.694E-05
Be	9	1	No Gas	0.323	0.0005	706.02	0.0013	4.694E-05
Se	78	2	H2	0.036	0	4.00	0.0004	1.089E-05
Se	78	2	H2	0.068	0	6.00	0.0004	1.089E-05
Se	78	2	H2	0.044	0	4.67	0.0004	1.089E-05
Na	23	3	He	7209.051	12.4903	924792.33	0.0017	0.1065
Na	23	3	He	7121.29	12.3396	928884.99	0.0017	0.1065
Na	23	3	He	7275.584	12.6046	923009.20	0.0017	0.1065
Mg	24	3	He	5513.559	4.6533	344536.52	0.0008	0.004846
Mg	24	3	He	5393.839	4.5524	342691.01	0.0008	0.004846
Mg	24	3	He	5550.034	4.6841	343006.05	0.0008	0.004846
Al	27	3	He	20.217	0.0059	440.02	0.0002	0.001063
Al	27	3	He	24.766	0.007	530.04	0.0002	0.001063
Al	27	3	He	27.845	0.0078	570.03	0.0002	0.001063
K	39	3	He	4347.838	2.5446	188401.74	0.0006	0.1436
K	39	3	He	4149.638	2.4351	183308.49	0.0006	0.1436
K	39	3	He	4314.556	2.5262	184987.58	0.0006	0.1436
Ca	44	3	He	9744.153	0.3043	22527.86	0	0.001611
Ca	44	3	He	9377.673	0.2929	22047.14	0	0.001611
Ca	44	3	He	9659.15	0.3016	22087.21	0	0.001611
Ti	47	3	He	-1.091	0	0.00	0.0003	0.0002737
Ti	47	3	He	0.498	0.0004	30.00	0.0003	0.0002737
Ti	47	3	He	-0.547	0.0001	10.00	0.0003	0.0002737
V	51	3	He	-0.007	0.0072	536.01	0.0117	0.007326
V	51	3	He	-0.036	0.0069	520.01	0.0117	0.007326
V	51	3	He	0.072	0.0082	598.02	0.0117	0.007326
Cr	52	3	He	0.205	0.0285	2110.24	0.0152	0.02538
Cr	52	3	He	0.418	0.0318	2390.29	0.0152	0.02538
Cr	52	3	He	0.557	0.0339	2480.31	0.0152	0.02538
Mn	55	3	He	280.459	1.6692	123591.93	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	271.951	1.619	121875.32	0.0059	0.01385
Mn	55	3	He	277.325	1.6507	120880.35	0.0059	0.01385
Fe	57	3	He	16.315	0.0086	640.04	0.0003	0.003918
Fe	57	3	He	27.289	0.0118	890.06	0.0003	0.003918
Fe	57	3	He	19.003	0.0094	690.04	0.0003	0.003918
Co	59	3	He	0.629	0.0223	1650.16	0.0305	0.003084
Co	59	3	He	0.722	0.0251	1890.19	0.0305	0.003084
Co	59	3	He	0.62	0.022	1610.14	0.0305	0.003084
Ni	60	3	He	4.337	0.0471	3490.54	0.0088	0.009003
Ni	60	3	He	3.721	0.0417	3140.49	0.0088	0.009003
Ni	60	3	He	3.341	0.0384	2810.34	0.0088	0.009003
Cu	63	3	He	10.658	0.2707	20044.49	0.0249	0.004937
Cu	63	3	He	10.763	0.2733	20575.37	0.0249	0.004937
Cu	63	3	He	10.406	0.2644	19363.54	0.0249	0.004937
Zn	66	3	He	23.655	0.063	4660.88	0.0025	0.004836
Zn	66	3	He	25.939	0.0686	5161.11	0.0025	0.004836
Zn	66	3	He	26.775	0.0706	5171.11	0.0025	0.004836
As	75	3	He	0.154	0.0007	52.00	0.0017	0.0004347
As	75	3	He	0.269	0.0009	68.00	0.0017	0.0004347
As	75	3	He	0.048	0.0005	38.00	0.0017	0.0004347
Sr	88	3	He	41.67	0.3265	20905.94	0.0078	0.0007762
Sr	88	3	He	41.464	0.3249	20675.56	0.0078	0.0007762
Sr	88	3	He	40.789	0.3196	21046.20	0.0078	0.0007762
Mo	98	3	He	0.019	0.0009	60.00	0.022	0.0005162
Mo	98	3	He	0.048	0.0016	100.00	0.022	0.0005162
Mo	98	3	He	0.018	0.0009	60.00	0.022	0.0005162
Ag	107	3	He	0.055	0.003	190.01	0.0455	0.0004641
Ag	107	3	He	0.017	0.0013	80.00	0.0455	0.0004641
Ag	107	3	He	0.067	0.0035	230.01	0.0455	0.0004641
Cd	111	3	He	0.282	0.0014	90.00	0.0048	5.152E-05
Cd	111	3	He	0.277	0.0014	88.00	0.0048	5.152E-05
Cd	111	3	He	0.242	0.0012	80.00	0.0048	5.152E-05
Sn	120	3	He	0.32	0.0201	1290.11	0.0143	0.01559
Sn	120	3	He	0.086	0.0168	1070.08	0.0143	0.01559
Sn	120	3	He	0.078	0.0167	1100.08	0.0143	0.01559
Sb	121	3	He	0.143	0.002	130.00	0.0124	0.000258
Sb	121	3	He	0.043	0.0008	50.00	0.0124	0.000258
Sb	121	3	He	0.004	0.0003	20.00	0.0124	0.000258
Ba	137	3	He	149.784	0.6556	41974.84	0.0044	0.000309
Ba	137	3	He	154.845	0.6777	43128.10	0.0044	0.000309
Ba	137	3	He	144.597	0.6329	41673.60	0.0044	0.000309
Tl	205	3	He	0.122	0.0044	970.07	0.0276	0.001005
Tl	205	3	He	0.136	0.0048	1040.08	0.0276	0.001005
Tl	205	3	He	0.113	0.0041	920.07	0.0276	0.001005
Pb	208	3	He	0.364	0.0154	1750.19	0.0364	0.002176
Pb	208	3	He	0.332	0.0143	1560.15	0.0364	0.002176
Pb	208	3	He	0.339	0.0145	1590.15	0.0364	0.002176
U	238	3	He	0.015	0.0009	190.01	0.0421	0.00024
U	238	3	He	0.015	0.0009	190.01	0.0421	0.00024
U	238	3	He	0.007	0.0005	120.00	0.0421	0.00024
Sc	45	1	No Gas			3318891.20		
Sc	45	1	No Gas			3362495.57		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3323861.83		
Ge	72	1	No Gas			1476353.73		
Ge	72	1	No Gas			1492584.67		
Ge	72	1	No Gas			1498043.42		
Sc	45	2	H2			190697.01		
Sc	45	2	H2			190643.49		
Sc	45	2	H2			199189.00		
Ge	72	2	H2			160201.94		
Ge	72	2	H2			160454.30		
Ge	72	2	H2			165774.61		
In	115	2	H2			434773.51		
In	115	2	H2			423077.45		
In	115	2	H2			436162.02		
Sc	45	3	He			41539.96		
Sc	45	3	He			40165.72		
Sc	45	3	He			42752.86		
Ge	72	3	He			74040.75		
Ge	72	3	He			75277.00		
Ge	72	3	He			73227.92		
In	115	3	He			64036.97		
In	115	3	He			63644.86		
In	115	3	He			65854.95		
Tb	159	3	He			283338.16		
Tb	159	3	He			287300.91		
Tb	159	3	He			286598.57		
Bi	209	3	He			221149.06		
Bi	209	3	He			218749.76		
Bi	209	3	He			222448.12		

Quantitation Report

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Acq Time	2023-08-10 13:31:44
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Sample Type	Sample
Comment	D29
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

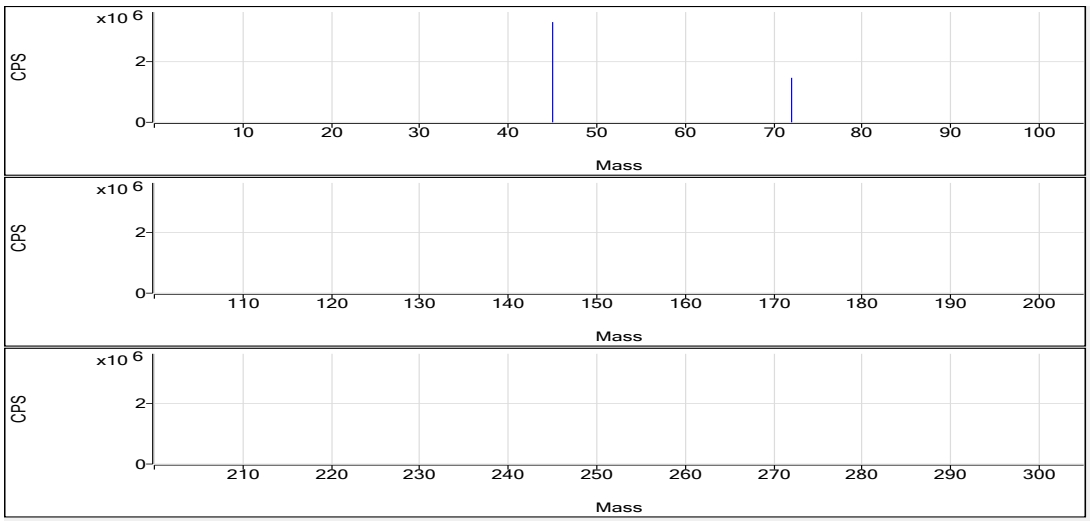
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.006	ppb	241.4	80.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.053	ppb	8.2	5.11	0.0000	Pulse	1.5000	3
Na	23	72	He	5576.366	ppb	1.1	719196.37	9.6857	Pulse	0.1000	3
Mg	24	72	He	31599.071	ppb	0.9	1978501.90	26.6461	Pulse	0.1000	3
Al	27	72	He	1.732	ppb	111.0	110.00	0.0015	Pulse	0.1000	3
K	39	72	He	3897.866	ppb	1.1	170485.12	2.2961	Pulse	0.1000	3
Ca	44	72	He	93893.944	ppb	1.1	216657.59	2.9179	Pulse	0.1000	3
Ti	47	72	He	-0.375	ppb	N/A	13.33	0.0002	Pulse	0.1000	3
V	51	72	He	0.114	ppb	30.0	643.35	0.0087	Pulse	0.5000	3
Cr	52	72	He	0.192	ppb	124.1	2100.23	0.0283	Pulse	0.1000	3
Mn	55	72	He	134.320	ppb	1.5	59893.83	0.8067	Pulse	0.1000	3
Fe	57	72	He	42.100	ppb	10.8	1196.75	0.0161	Pulse	0.1000	3
Co	59	72	He	0.762	ppb	5.1	1956.86	0.0263	Pulse	0.1000	3
Ni	60	72	He	5.147	ppb	9.0	4030.69	0.0543	Pulse	0.1000	3
Cu	63	72	He	0.133	ppb	18.0	613.37	0.0083	Pulse	0.1000	3
Zn	66	72	He	0.224	ppb	146.6	400.02	0.0054	Pulse	0.1000	3
As	75	72	He	0.096	ppb	94.0	44.67	0.0006	Pulse	0.5000	3
Sr	88	115	He	52.684	ppb	0.3	26084.57	0.4126	Pulse	0.1000	3
Mo	98	115	He	0.046	ppb	70.8	96.67	0.0015	Pulse	0.1000	3
Ag	107	115	He	0.004	ppb	247.8	40.00	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.055	ppb	37.2	20.00	0.0003	Pulse	0.5000	3
Sn	120	115	He	3.223	ppb	12.2	3890.70	0.0615	Pulse	0.1000	3
Sb	121	115	He	0.017	ppb	221.0	30.00	0.0005	Pulse	0.1000	3
Ba	137	115	He	196.931	ppb	2.4	54474.80	0.8618	Pulse	0.1000	3
Tl	205	209	He	0.067	ppb	6.0	623.37	0.0029	Pulse	0.1000	3
Pb	208	209	He	0.000	ppb	3912.4	476.68	0.0022	Pulse	0.1000	3
U	238	209	He	0.211	ppb	2.0	1993.57	0.0091	Pulse	0.1000	3

ISTD Table:

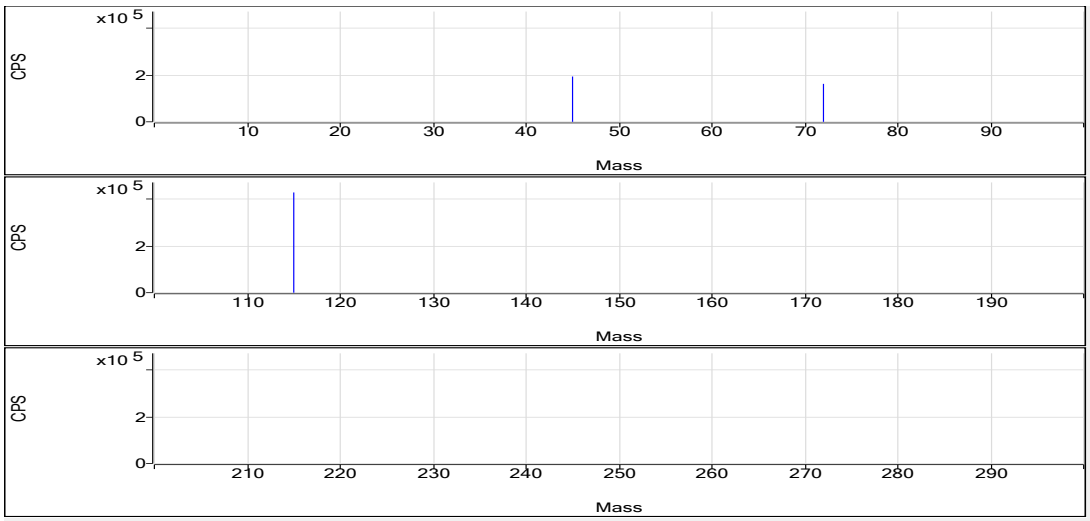
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3313974.95	1.8	102.2	Pulse	0.1000	3
No Gas	Ge	72	1471006.54	1.6	102.2	Pulse	0.1000	3
H2	Sc	45	193677.81	1.7	99.1	Pulse	0.1000	3
H2	Ge	72	162281.55	2.2	99.6	Pulse	0.1000	3
H2	In	115	428534.51	1.8	98.9	Pulse	0.1000	3
He	Sc	45	41780.30	2.4	104.5	Pulse	0.1000	3
He	Ge	72	74254.84	0.9	102.7	Pulse	0.1000	3
He	In	115	63219.43	1.2	97.9	Pulse	0.1000	3
He	Tb	159	281468.97	0.9	98.4	Pulse	0.1000	3
He	Bi	209	218380.41	1.7	98.3	Pulse	0.1000	3

No Gas

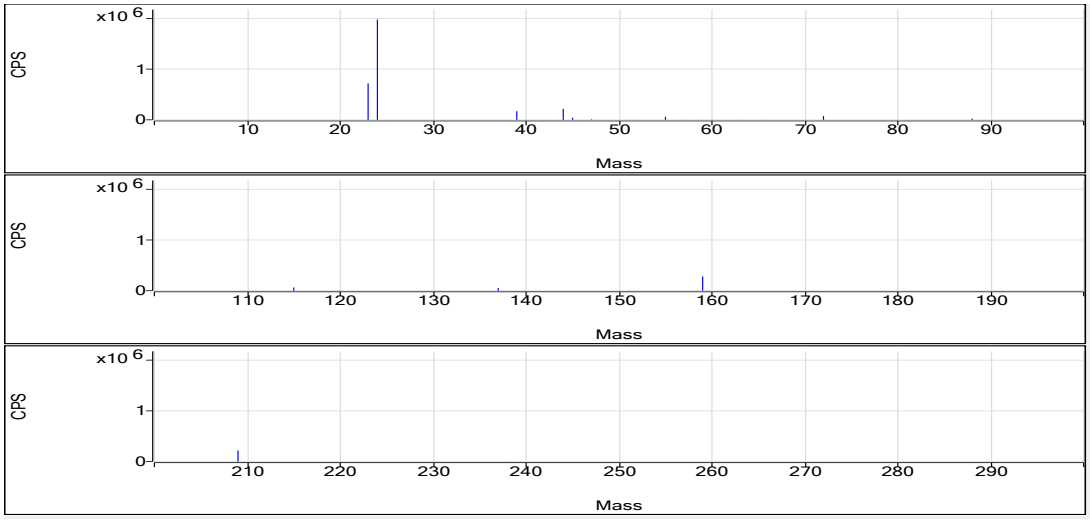


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.016	0.0001	98.00	0.0013	4.694E-05
Be	9	1	No Gas	0.011	0.0001	92.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.01	0	50.00	0.0013	4.694E-05
Se	78	2	H2	0.056	0	5.33	0.0004	1.089E-05
Se	78	2	H2	0.048	0	4.67	0.0004	1.089E-05
Se	78	2	H2	0.055	0	5.33	0.0004	1.089E-05
Na	23	3	He	5634.317	9.7852	721353.11	0.0017	0.1065
Na	23	3	He	5577.961	9.6884	726479.83	0.0017	0.1065
Na	23	3	He	5516.821	9.5834	709756.16	0.0017	0.1065
Mg	24	3	He	31919.361	26.9161	1984222.00	0.0008	0.004846
Mg	24	3	He	31340.009	26.4277	1981665.44	0.0008	0.004846
Mg	24	3	He	31537.842	26.5945	1969618.25	0.0008	0.004846
Al	27	3	He	2.903	0.0018	130.00	0.0002	0.001063
Al	27	3	He	2.78	0.0017	130.01	0.0002	0.001063
Al	27	3	He	-0.487	0.0009	70.00	0.0002	0.001063
K	39	3	He	3927.145	2.3123	170456.66	0.0006	0.1436
K	39	3	He	3846.503	2.2677	170044.29	0.0006	0.1436
K	39	3	He	3919.951	2.3083	170954.41	0.0006	0.1436
Ca	44	3	He	94801.076	2.9461	217184.24	0	0.001611
Ca	44	3	He	92777.521	2.8833	216200.50	0	0.001611
Ca	44	3	He	94103.235	2.9244	216588.02	0	0.001611
Ti	47	3	He	-0.551	0.0001	10.00	0.0003	0.0002737
Ti	47	3	He	-0.56	0.0001	10.00	0.0003	0.0002737
Ti	47	3	He	-0.015	0.0003	20.00	0.0003	0.0002737
V	51	3	He	0.093	0.0084	620.02	0.0117	0.007326
V	51	3	He	0.097	0.0085	634.02	0.0117	0.007326
V	51	3	He	0.154	0.0091	676.02	0.0117	0.007326
Cr	52	3	He	0.453	0.0323	2380.29	0.0152	0.02538
Cr	52	3	He	-0.012	0.0252	1890.19	0.0152	0.02538
Cr	52	3	He	0.133	0.0274	2030.21	0.0152	0.02538
Mn	55	3	He	135.856	0.8157	60134.80	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	132.094	0.7935	59502.28	0.0059	0.01385
Mn	55	3	He	135.01	0.8107	60044.42	0.0059	0.01385
Fe	57	3	He	37.517	0.0148	1090.07	0.0003	0.003918
Fe	57	3	He	42.179	0.0161	1210.08	0.0003	0.003918
Fe	57	3	He	46.604	0.0174	1290.11	0.0003	0.003918
Co	59	3	He	0.726	0.0252	1860.18	0.0305	0.003084
Co	59	3	He	0.804	0.0276	2070.22	0.0305	0.003084
Co	59	3	He	0.758	0.0262	1940.19	0.0305	0.003084
Ni	60	3	He	5.086	0.0537	3960.67	0.0088	0.009003
Ni	60	3	He	5.635	0.0586	4390.82	0.0088	0.009003
Ni	60	3	He	4.72	0.0505	3740.59	0.0088	0.009003
Cu	63	3	He	0.128	0.0081	600.03	0.0249	0.004937
Cu	63	3	He	0.112	0.0077	580.03	0.0249	0.004937
Cu	63	3	He	0.159	0.0089	660.05	0.0249	0.004937
Zn	66	3	He	0.406	0.0058	430.03	0.0025	0.004836
Zn	66	3	He	0.42	0.0059	440.03	0.0025	0.004836
Zn	66	3	He	-0.155	0.0045	330.01	0.0025	0.004836
As	75	3	He	0.046	0.0005	38.00	0.0017	0.0004347
As	75	3	He	0.041	0.0005	38.00	0.0017	0.0004347
As	75	3	He	0.2	0.0008	58.00	0.0017	0.0004347
Sr	88	3	He	52.809	0.4136	25804.18	0.0078	0.0007762
Sr	88	3	He	52.717	0.4129	26184.58	0.0078	0.0007762
Sr	88	3	He	52.525	0.4114	26264.95	0.0078	0.0007762
Mo	98	3	He	0.028	0.0011	70.00	0.022	0.0005162
Mo	98	3	He	0.027	0.0011	70.00	0.022	0.0005162
Mo	98	3	He	0.083	0.0023	150.01	0.022	0.0005162
Ag	107	3	He	-0.003	0.0003	20.00	0.0455	0.0004641
Ag	107	3	He	0	0.0005	30.00	0.0455	0.0004641
Ag	107	3	He	0.014	0.0011	70.00	0.0455	0.0004641
Cd	111	3	He	0.076	0.0004	26.00	0.0048	5.152E-05
Cd	111	3	He	0.055	0.0003	20.00	0.0048	5.152E-05
Cd	111	3	He	0.035	0.0002	14.00	0.0048	5.152E-05
Sn	120	3	He	3.033	0.0588	3670.62	0.0143	0.01559
Sn	120	3	He	3.674	0.068	4310.85	0.0143	0.01559
Sn	120	3	He	2.961	0.0578	3690.62	0.0143	0.01559
Sb	121	3	He	-0.021	0	0.00	0.0124	0.000258
Sb	121	3	He	0.055	0.0009	60.00	0.0124	0.000258
Sb	121	3	He	0.017	0.0005	30.00	0.0124	0.000258
Ba	137	3	He	202.282	0.8853	55231.33	0.0044	0.000309
Ba	137	3	He	195.411	0.8552	54236.86	0.0044	0.000309
Ba	137	3	He	193.101	0.8451	53956.22	0.0044	0.000309
Tl	205	3	He	0.067	0.0029	620.04	0.0276	0.001005
Tl	205	3	He	0.063	0.0027	610.03	0.0276	0.001005
Tl	205	3	He	0.071	0.003	640.04	0.0276	0.001005
Pb	208	3	He	0.011	0.0026	290.02	0.0364	0.002176
Pb	208	3	He	-0.005	0.002	220.01	0.0364	0.002176
Pb	208	3	He	-0.005	0.002	290.01	0.0364	0.002176
U	238	3	He	0.215	0.0093	2010.23	0.0421	0.00024
U	238	3	He	0.207	0.0089	1990.24	0.0421	0.00024
U	238	3	He	0.212	0.0092	1980.24	0.0421	0.00024
Sc	45	1	No Gas			3256101.51		
Sc	45	1	No Gas			3376890.57		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3308932.76		
Ge	72	1	No Gas			1443316.85		
Ge	72	1	No Gas			1485575.45		
Ge	72	1	No Gas			1484127.32		
Sc	45	2	H2			193583.61		
Sc	45	2	H2			190412.22		
Sc	45	2	H2			197037.59		
Ge	72	2	H2			163691.43		
Ge	72	2	H2			158178.87		
Ge	72	2	H2			164974.35		
In	115	2	H2			429519.25		
In	115	2	H2			420444.21		
In	115	2	H2			435640.07		
Sc	45	3	He			40677.44		
Sc	45	3	He			42602.51		
Sc	45	3	He			42060.96		
Ge	72	3	He			73718.75		
Ge	72	3	He			74984.53		
Ge	72	3	He			74061.25		
In	115	3	He			62419.15		
In	115	3	He			63454.24		
In	115	3	He			63875.93		
Tb	159	3	He			278522.38		
Tb	159	3	He			282981.54		
Tb	159	3	He			282903.00		
Bi	209	3	He			216300.06		
Bi	209	3	He			222603.55		
Bi	209	3	He			216237.63		

Quantitation Report

Data File Name	107SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 13:33:44
Sample Name	410-136864-K-5-A
Sample Type	Sample
Comment	D29
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

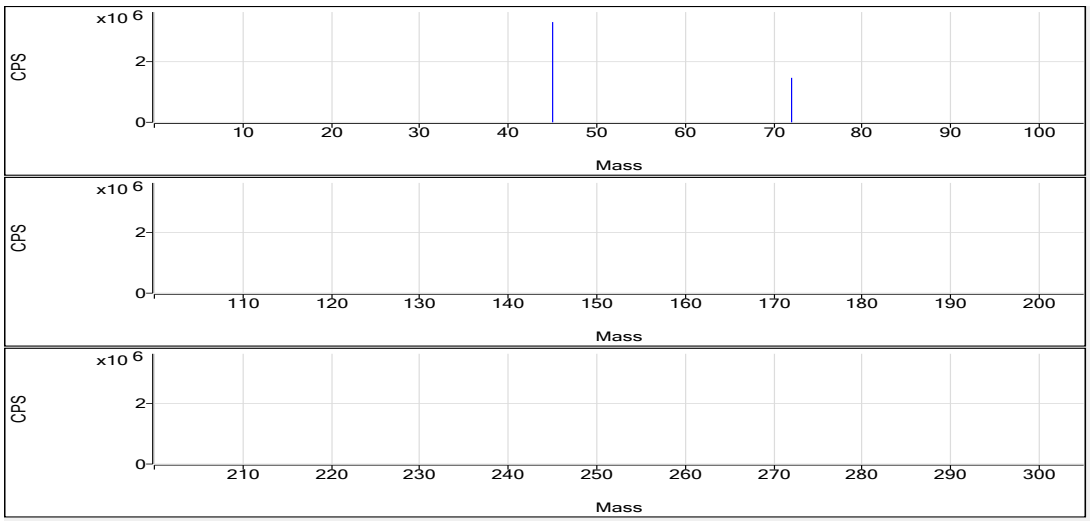
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.025	ppb	43.1	117.33	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.022	ppb	31.8	3.11	0.0000	Pulse	1.5000	3
Na	23	72	He	9614.149	ppb	1.0	1245843.08	16.6218	Pulse	0.1000	3
Mg	24	72	He	42136.065	ppb	0.6	2663065.80	35.5298	Pulse	0.1000	3
Al	27	72	He	1.692	ppb	166.1	110.00	0.0015	Pulse	0.1000	3
K	39	72	He	2942.010	ppb	1.5	132535.16	1.7683	Pulse	0.1000	3
Ca	44	72	He	111237.421	ppb	1.8	259070.61	3.4566	Pulse	0.1000	3
Ti	47	72	He	-0.562	ppb	N/A	10.00	0.0001	Pulse	0.1000	3
V	51	72	He	0.063	ppb	53.7	604.68	0.0081	Pulse	0.5000	3
Cr	52	72	He	0.036	ppb	705.6	1943.53	0.0259	Pulse	0.1000	3
Mn	55	72	He	3740.324	ppb	0.9	1655753.73	22.0908	Pulse	0.1000	3
Fe	57	72	He	8937.927	ppb	1.5	194371.07	2.5934	Pulse	0.1000	3
Co	59	72	He	15.439	ppb	0.3	35537.65	0.4741	Pulse	0.1000	3
Ni	60	72	He	15.491	ppb	6.7	10881.06	0.1452	Pulse	0.1000	3
Cu	63	72	He	0.143	ppb	34.0	636.70	0.0085	Pulse	0.1000	3
Zn	66	72	He	11.859	ppb	5.7	2546.99	0.0340	Pulse	0.1000	3
As	75	72	He	5.136	ppb	1.3	702.02	0.0094	Pulse	0.5000	3
Sr	88	115	He	106.502	ppb	5.5	52510.74	0.8333	Pulse	0.1000	3
Mo	98	115	He	0.669	ppb	10.3	963.41	0.0152	Pulse	0.1000	3
Ag	107	115	He	0.009	ppb	194.9	53.33	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.009	ppb	78.1	6.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	1.511	ppb	9.4	2340.28	0.0371	Pulse	0.1000	3
Sb	121	115	He	0.077	ppb	25.5	76.67	0.0012	Pulse	0.1000	3
Ba	137	115	He	520.667	ppb	2.8	143631.54	2.2781	Pulse	0.1000	3
Tl	205	209	He	0.114	ppb	12.2	903.40	0.0041	Pulse	0.1000	3
Pb	208	209	He	0.015	ppb	30.6	590.02	0.0027	Pulse	0.1000	3
U	238	209	He	0.776	ppb	3.1	7168.89	0.0329	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3331204.64	1.2	102.8	Pulse	0.1000	3
No Gas	Ge	72	1478151.80	0.9	102.7	Pulse	0.1000	3
H2	Sc	45	193724.22	3.2	99.2	Pulse	0.1000	3
H2	Ge	72	160958.45	2.0	98.7	Pulse	0.1000	3
H2	In	115	429469.42	2.1	99.1	Pulse	0.1000	3
He	Sc	45	41629.89	1.3	104.1	Pulse	0.1000	3
He	Ge	72	74955.37	0.8	103.7	Pulse	0.1000	3
He	In	115	63085.05	3.1	97.7	Pulse	0.1000	3
He	Tb	159	280281.41	1.1	98.0	Pulse	0.1000	3
He	Bi	209	217980.25	0.3	98.1	Pulse	0.1000	3

No Gas



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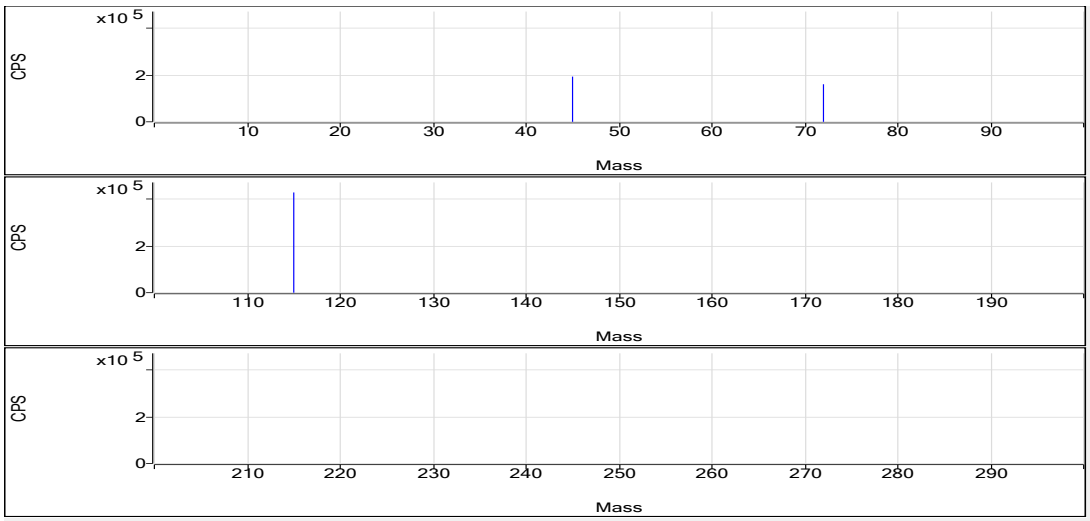
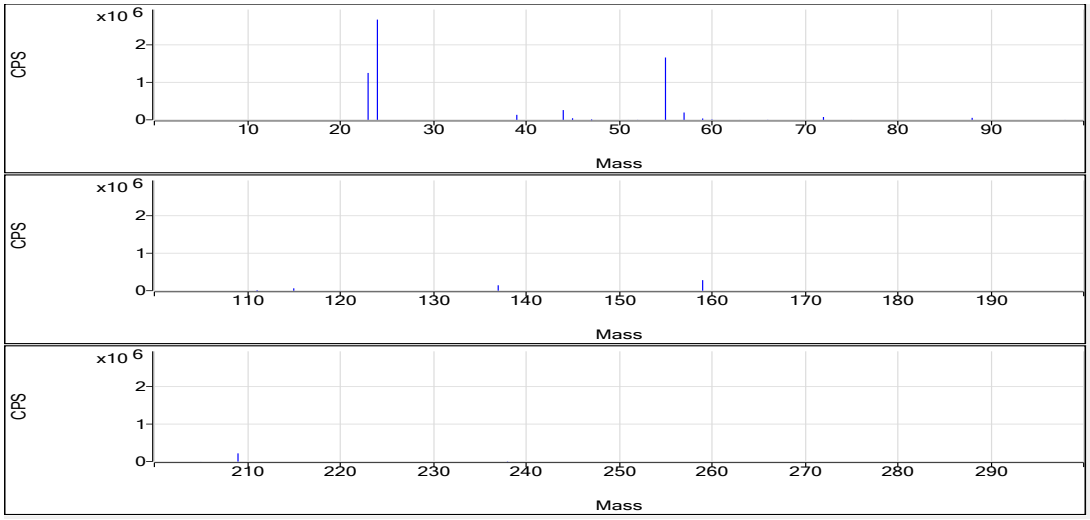


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.024	0.0001	114.00	0.0013	4.694E-05
Be	9	1	No Gas	0.036	0.0001	140.00	0.0013	4.694E-05
Be	9	1	No Gas	0.015	0.0001	98.00	0.0013	4.694E-05
Se	78	2	H2	0.025	0	3.33	0.0004	1.089E-05
Se	78	2	H2	0.026	0	3.33	0.0004	1.089E-05
Se	78	2	H2	0.014	0	2.67	0.0004	1.089E-05
Na	23	3	He	9689.254	16.7509	1254224.04	0.0017	0.1065
Na	23	3	He	9647.515	16.6792	1240969.51	0.0017	0.1065
Na	23	3	He	9505.677	16.4355	1242335.68	0.0017	0.1065
Mg	24	3	He	42280.961	35.652	2669449.96	0.0008	0.004846
Mg	24	3	He	42305.606	35.6728	2654139.34	0.0008	0.004846
Mg	24	3	He	41821.627	35.2647	2665608.09	0.0008	0.004846
Al	27	3	He	1.683	0.0015	110.00	0.0002	0.001063
Al	27	3	He	4.506	0.0022	160.01	0.0002	0.001063
Al	27	3	He	-1.114	0.0008	60.00	0.0002	0.001063
K	39	3	He	2990.396	1.795	134398.94	0.0006	0.1436
K	39	3	He	2935.407	1.7646	131290.99	0.0006	0.1436
K	39	3	He	2900.226	1.7452	131915.54	0.0006	0.1436
Ca	44	3	He	112423.252	3.4935	261573.65	0	0.001611
Ca	44	3	He	112345.397	3.491	259741.99	0	0.001611
Ca	44	3	He	108943.616	3.3854	255896.19	0	0.001611
Ti	47	3	He	-0.559	0.0001	10.00	0.0003	0.0002737
Ti	47	3	He	-1.091	0	0.00	0.0003	0.0002737
Ti	47	3	He	-0.036	0.0003	20.00	0.0003	0.0002737
V	51	3	He	0.082	0.0083	620.02	0.0117	0.007326
V	51	3	He	0.024	0.0076	566.01	0.0117	0.007326
V	51	3	He	0.084	0.0083	628.02	0.0117	0.007326
Cr	52	3	He	0.315	0.0302	2260.25	0.0152	0.02538
Cr	52	3	He	-0.016	0.0251	1870.18	0.0152	0.02538
Cr	52	3	He	-0.19	0.0225	1700.16	0.0152	0.02538
Mn	55	3	He	3732.271	22.0433	1650495.76	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	3776.01	22.3015	1659281.54	0.0059	0.01385
Mn	55	3	He	3712.691	21.9277	1657483.88	0.0059	0.01385
Fe	57	3	He	8980.022	2.6056	195091.97	0.0003	0.003918
Fe	57	3	He	9049.159	2.6256	195350.31	0.0003	0.003918
Fe	57	3	He	8784.598	2.5489	192670.92	0.0003	0.003918
Co	59	3	He	15.427	0.4738	35474.19	0.0305	0.003084
Co	59	3	He	15.491	0.4757	35393.83	0.0305	0.003084
Co	59	3	He	15.398	0.4729	35744.94	0.0305	0.003084
Ni	60	3	He	15.705	0.1471	11014.44	0.0088	0.009003
Ni	60	3	He	16.408	0.1533	11404.82	0.0088	0.009003
Ni	60	3	He	14.358	0.1353	10223.92	0.0088	0.009003
Cu	63	3	He	0.182	0.0095	710.04	0.0249	0.004937
Cu	63	3	He	0.158	0.0089	660.04	0.0249	0.004937
Cu	63	3	He	0.089	0.0071	540.03	0.0249	0.004937
Zn	66	3	He	11.569	0.0333	2490.30	0.0025	0.004836
Zn	66	3	He	11.382	0.0328	2440.31	0.0025	0.004836
Zn	66	3	He	12.627	0.0359	2710.36	0.0025	0.004836
As	75	3	He	5.172	0.0094	706.02	0.0017	0.0004347
As	75	3	He	5.175	0.0094	702.02	0.0017	0.0004347
As	75	3	He	5.06	0.0092	698.02	0.0017	0.0004347
Sr	88	3	He	113.107	0.8849	53852.50	0.0078	0.0007762
Sr	88	3	He	102.127	0.7991	51503.82	0.0078	0.0007762
Sr	88	3	He	104.274	0.8159	52175.89	0.0078	0.0007762
Mo	98	3	He	0.611	0.014	850.06	0.022	0.0005162
Mo	98	3	He	0.745	0.0169	1090.08	0.022	0.0005162
Mo	98	3	He	0.651	0.0149	950.08	0.022	0.0005162
Ag	107	3	He	0.022	0.0015	90.00	0.0455	0.0004641
Ag	107	3	He	-0.01	0	0.00	0.0455	0.0004641
Ag	107	3	He	0.014	0.0011	70.00	0.0455	0.0004641
Cd	111	3	He	0.017	0.0001	8.00	0.0048	5.152E-05
Cd	111	3	He	0.009	0.0001	6.00	0.0048	5.152E-05
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Sn	120	3	He	1.673	0.0394	2400.31	0.0143	0.01559
Sn	120	3	He	1.453	0.0363	2340.28	0.0143	0.01559
Sn	120	3	He	1.408	0.0357	2280.25	0.0143	0.01559
Sb	121	3	He	0.085	0.0013	80.00	0.0124	0.000258
Sb	121	3	He	0.092	0.0014	90.00	0.0124	0.000258
Sb	121	3	He	0.055	0.0009	60.00	0.0124	0.000258
Ba	137	3	He	537.349	2.3511	143074.76	0.0044	0.000309
Ba	137	3	He	509.083	2.2274	143561.55	0.0044	0.000309
Ba	137	3	He	515.569	2.2558	144258.30	0.0044	0.000309
Tl	205	3	He	0.098	0.0037	810.06	0.0276	0.001005
Tl	205	3	He	0.12	0.0043	940.07	0.0276	0.001005
Tl	205	3	He	0.123	0.0044	960.07	0.0276	0.001005
Pb	208	3	He	0.013	0.0027	330.01	0.0364	0.002176
Pb	208	3	He	0.011	0.0026	320.01	0.0364	0.002176
Pb	208	3	He	0.02	0.0029	380.02	0.0364	0.002176
U	238	3	He	0.75	0.0318	6952.09	0.0421	0.00024
U	238	3	He	0.799	0.0338	7352.33	0.0421	0.00024
U	238	3	He	0.779	0.033	7202.25	0.0421	0.00024
Sc	45	1	No Gas			3292986.20		
Sc	45	1	No Gas			3375571.20		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3325056.51		
Ge	72	1	No Gas			1462597.17		
Ge	72	1	No Gas			1489887.63		
Ge	72	1	No Gas			1481970.60		
Sc	45	2	H2			190826.23		
Sc	45	2	H2			189569.29		
Sc	45	2	H2			200777.15		
Ge	72	2	H2			160921.45		
Ge	72	2	H2			157746.67		
Ge	72	2	H2			164207.22		
In	115	2	H2			428748.27		
In	115	2	H2			421008.47		
In	115	2	H2			438651.52		
Sc	45	3	He			40998.03		
Sc	45	3	He			41940.90		
Sc	45	3	He			41950.73		
Ge	72	3	He			74875.20		
Ge	72	3	He			74402.39		
Ge	72	3	He			75588.51		
In	115	3	He			60873.09		
In	115	3	He			64469.54		
In	115	3	He			63967.27		
Tb	159	3	He			281663.53		
Tb	159	3	He			276676.42		
Tb	159	3	He			282504.27		
Bi	209	3	He			218557.56		
Bi	209	3	He			217294.80		
Bi	209	3	He			218088.40		

Quantitation Report

Data File Name	108SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 13:35:44
Sample Name	410-136848-W-3-A
Sample Type	Sample
Comment	D29
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

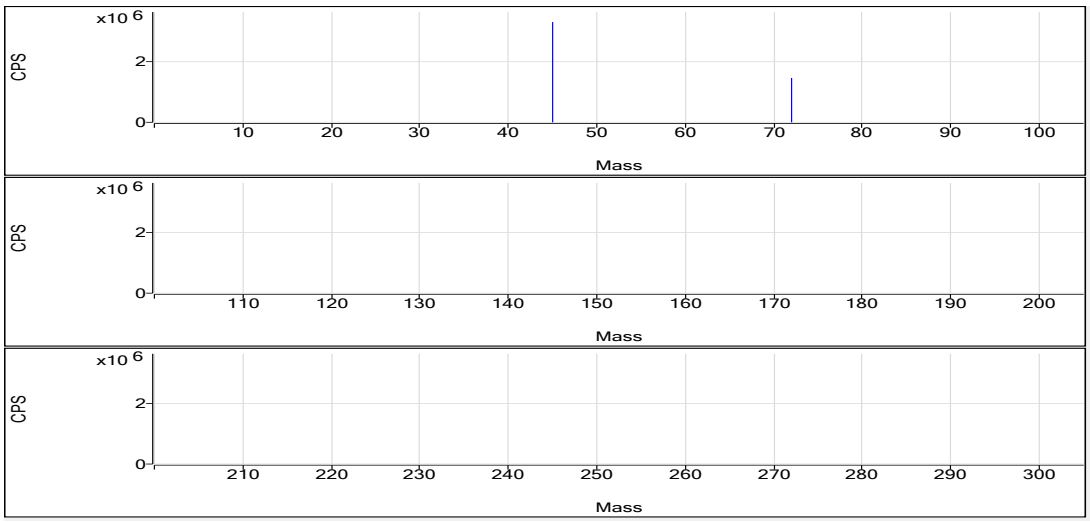
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.003	ppb	92.8	75.33	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.114	ppb	49.6	8.89	0.0001	Pulse	1.5000	3
Na	23	72	He	71508.656	ppb	0.5	9157525.70	122.9455	Analog	0.1000	3
Mg	24	72	He	11947.274	ppb	1.0	750599.65	10.0776	Pulse	0.1000	3
Al	27	72	He	41.372	ppb	11.8	823.39	0.0110	Pulse	0.1000	3
K	39	72	He	2279.778	ppb	1.8	104462.37	1.4026	Pulse	0.1000	3
Ca	44	72	He	89720.694	ppb	0.8	207681.92	2.7883	Pulse	0.1000	3
Ti	47	72	He	0.331	ppb	243.8	26.67	0.0004	Pulse	0.1000	3
V	51	72	He	0.112	ppb	43.4	642.69	0.0086	Pulse	0.5000	3
Cr	52	72	He	0.255	ppb	64.3	2180.25	0.0293	Pulse	0.1000	3
Mn	55	72	He	877.136	ppb	1.3	386634.07	5.1911	Pulse	0.1000	3
Fe	57	72	He	243.751	ppb	2.3	5551.26	0.0745	Pulse	0.1000	3
Co	59	72	He	0.179	ppb	17.3	636.70	0.0086	Pulse	0.1000	3
Ni	60	72	He	1.052	ppb	29.7	1360.12	0.0183	Pulse	0.1000	3
Cu	63	72	He	0.428	ppb	4.0	1163.42	0.0156	Pulse	0.1000	3
Zn	66	72	He	4.697	ppb	15.8	1220.10	0.0164	Pulse	0.1000	3
As	75	72	He	0.548	ppb	18.1	103.33	0.0014	Pulse	0.5000	3
Sr	88	115	He	298.369	ppb	3.2	148573.11	2.3332	Pulse	0.1000	3
Mo	98	115	He	0.642	ppb	13.3	933.40	0.0146	Pulse	0.1000	3
Ag	107	115	He	0.008	ppb	159.2	53.33	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.011	ppb	88.8	6.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.159	ppb	56.8	1136.76	0.0178	Pulse	0.1000	3
Sb	121	115	He	0.076	ppb	26.1	76.67	0.0012	Pulse	0.1000	3
Ba	137	115	He	29.154	ppb	7.1	8142.70	0.1279	Pulse	0.1000	3
Tl	205	209	He	0.030	ppb	35.0	390.02	0.0018	Pulse	0.1000	3
Pb	208	209	He	0.145	ppb	5.4	1593.43	0.0074	Pulse	0.1000	3
U	238	209	He	0.333	ppb	1.0	3047.14	0.0142	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3328454.33	1.5	102.7	Pulse	0.1000	3
No Gas	Ge	72	1471943.26	1.0	102.2	Pulse	0.1000	3
H2	Sc	45	194176.50	4.8	99.4	Pulse	0.1000	3
H2	Ge	72	161779.37	3.5	99.2	Pulse	0.1000	3
H2	In	115	435120.46	2.2	100.4	Pulse	0.1000	3
He	Sc	45	42732.90	0.9	106.9	Pulse	0.1000	3
He	Ge	72	74486.05	1.0	103.0	Pulse	0.1000	3
He	In	115	63686.40	0.8	98.6	Pulse	0.1000	3
He	Tb	159	282066.79	0.8	98.6	Pulse	0.1000	3
He	Bi	209	214117.64	0.8	96.4	Pulse	0.1000	3

No Gas



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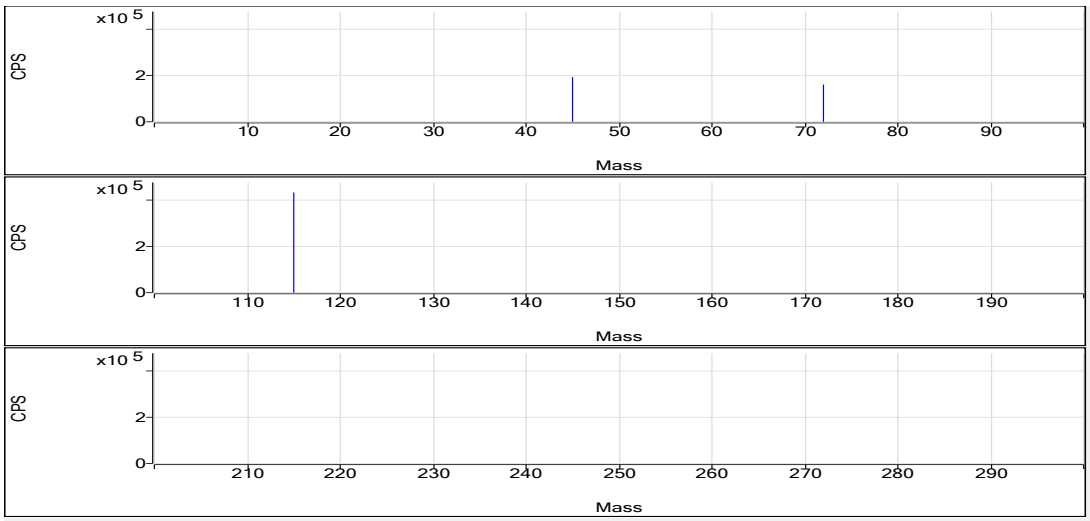
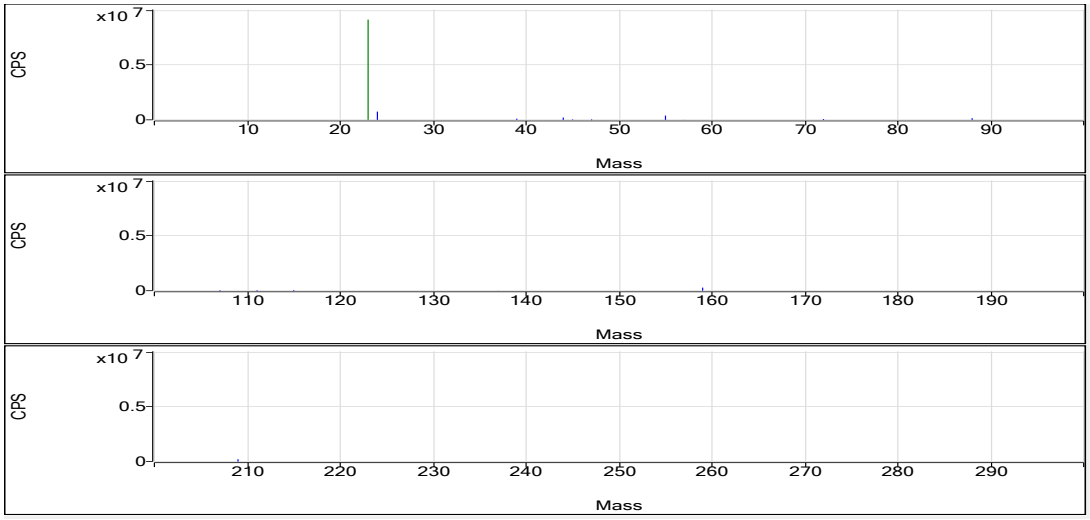


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.003	0.0001	74.00	0.0013	4.694E-05
Be	9	1	No Gas	0.006	0.0001	82.00	0.0013	4.694E-05
Be	9	1	No Gas	0	0	70.00	0.0013	4.694E-05
Se	78	2	H2	0.09	0	7.33	0.0004	1.089E-05
Se	78	2	H2	0.179	0.0001	12.67	0.0004	1.089E-05
Se	78	2	H2	0.074	0	6.67	0.0004	1.089E-05
Na	23	3	He	71870.841	123.5677	9105604.24	0.0017	0.1065
Na	23	3	He	71517.764	122.9612	9233928.61	0.0017	0.1065
Na	23	3	He	71137.363	122.3077	9133044.24	0.0017	0.1065
Mg	24	3	He	12084.842	10.1936	751157.80	0.0008	0.004846
Mg	24	3	He	11915.307	10.0507	754767.33	0.0008	0.004846
Mg	24	3	He	11841.672	9.9886	745873.82	0.0008	0.004846
Al	27	3	He	39.45	0.0106	780.05	0.0002	0.001063
Al	27	3	He	46.903	0.0124	930.06	0.0002	0.001063
Al	27	3	He	37.763	0.0102	760.05	0.0002	0.001063
K	39	3	He	2324.262	1.4271	105163.73	0.0006	0.1436
K	39	3	He	2269.286	1.3968	104892.06	0.0006	0.1436
K	39	3	He	2245.786	1.3838	103331.32	0.0006	0.1436
Ca	44	3	He	90496.884	2.8124	207245.82	0	0.001611
Ca	44	3	He	89407.909	2.7786	208663.18	0	0.001611
Ca	44	3	He	89257.289	2.7739	207136.77	0	0.001611
Ti	47	3	He	-0.55	0.0001	10.00	0.0003	0.0002737
Ti	47	3	He	1.032	0.0005	40.00	0.0003	0.0002737
Ti	47	3	He	0.511	0.0004	30.00	0.0003	0.0002737
V	51	3	He	0.167	0.0093	684.02	0.0117	0.007326
V	51	3	He	0.089	0.0084	628.02	0.0117	0.007326
V	51	3	He	0.079	0.0082	616.02	0.0117	0.007326
Cr	52	3	He	0.347	0.0307	2260.26	0.0152	0.02538
Cr	52	3	He	0.353	0.0308	2310.27	0.0152	0.02538
Cr	52	3	He	0.066	0.0264	1970.23	0.0152	0.02538
Mn	55	3	He	889.926	5.2666	388089.41	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	871.951	5.1605	387532.73	0.0059	0.01385
Mn	55	3	He	869.531	5.1462	384280.07	0.0059	0.01385
Fe	57	3	He	249.783	0.0763	5621.28	0.0003	0.003918
Fe	57	3	He	242.552	0.0742	5571.28	0.0003	0.003918
Fe	57	3	He	238.917	0.0731	5461.23	0.0003	0.003918
Co	59	3	He	0.197	0.0091	670.04	0.0305	0.003084
Co	59	3	He	0.143	0.0075	560.03	0.0305	0.003084
Co	59	3	He	0.197	0.0091	680.04	0.0305	0.003084
Ni	60	3	He	0.859	0.0166	1220.10	0.0088	0.009003
Ni	60	3	He	0.884	0.0168	1260.11	0.0088	0.009003
Ni	60	3	He	1.413	0.0214	1600.14	0.0088	0.009003
Cu	63	3	He	0.417	0.0153	1130.08	0.0249	0.004937
Cu	63	3	He	0.448	0.0161	1210.09	0.0249	0.004937
Cu	63	3	He	0.42	0.0154	1150.08	0.0249	0.004937
Zn	66	3	He	4.66	0.0163	1200.10	0.0025	0.004836
Zn	66	3	He	5.458	0.0182	1370.11	0.0025	0.004836
Zn	66	3	He	3.973	0.0146	1090.08	0.0025	0.004836
As	75	3	He	0.655	0.0016	116.00	0.0017	0.0004347
As	75	3	He	0.531	0.0014	102.00	0.0017	0.0004347
As	75	3	He	0.458	0.0012	92.00	0.0017	0.0004347
Sr	88	3	He	292.359	2.2862	146953.44	0.0078	0.0007762
Sr	88	3	He	309.489	2.4201	153225.75	0.0078	0.0007762
Sr	88	3	He	293.259	2.2932	145540.13	0.0078	0.0007762
Mo	98	3	He	0.733	0.0166	1070.08	0.022	0.0005162
Mo	98	3	He	0.629	0.0144	910.07	0.022	0.0005162
Mo	98	3	He	0.563	0.0129	820.05	0.022	0.0005162
Ag	107	3	He	0.017	0.0012	80.00	0.0455	0.0004641
Ag	107	3	He	-0.007	0.0002	10.00	0.0455	0.0004641
Ag	107	3	He	0.014	0.0011	70.00	0.0455	0.0004641
Cd	111	3	He	0.022	0.0002	10.00	0.0048	5.152E-05
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Cd	111	3	He	0.009	0.0001	6.00	0.0048	5.152E-05
Sn	120	3	He	0.194	0.0184	1180.11	0.0143	0.01559
Sn	120	3	He	0.225	0.0188	1190.09	0.0143	0.01559
Sn	120	3	He	0.056	0.0164	1040.09	0.0143	0.01559
Sb	121	3	He	0.054	0.0009	60.00	0.0124	0.000258
Sb	121	3	He	0.081	0.0013	80.00	0.0124	0.000258
Sb	121	3	He	0.094	0.0014	90.00	0.0124	0.000258
Ba	137	3	He	28.992	0.1271	8172.67	0.0044	0.000309
Ba	137	3	He	27.159	0.1191	7542.38	0.0044	0.000309
Ba	137	3	He	31.311	0.1373	8713.04	0.0044	0.000309
Tl	205	3	He	0.03	0.0018	390.02	0.0276	0.001005
Tl	205	3	He	0.019	0.0015	330.02	0.0276	0.001005
Tl	205	3	He	0.04	0.0021	450.02	0.0276	0.001005
Pb	208	3	He	0.154	0.0078	800.06	0.0364	0.002176
Pb	208	3	He	0.14	0.0073	880.07	0.0364	0.002176
Pb	208	3	He	0.14	0.0073	790.05	0.0364	0.002176
U	238	3	He	0.329	0.0141	2990.44	0.0421	0.00024
U	238	3	He	0.333	0.0142	3070.47	0.0421	0.00024
U	238	3	He	0.336	0.0144	3080.51	0.0421	0.00024
Sc	45	1	No Gas			3274825.89		
Sc	45	1	No Gas			3373693.70		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3336843.39		
Ge	72	1	No Gas			1455483.57		
Ge	72	1	No Gas			1483965.45		
Ge	72	1	No Gas			1476380.76		
Sc	45	2	H2			191768.69		
Sc	45	2	H2			186270.47		
Sc	45	2	H2			204490.35		
Ge	72	2	H2			160060.15		
Ge	72	2	H2			157259.69		
Ge	72	2	H2			168018.26		
In	115	2	H2			429236.71		
In	115	2	H2			429713.67		
In	115	2	H2			446411.01		
Sc	45	3	He			43013.49		
Sc	45	3	He			42281.73		
Sc	45	3	He			42903.47		
Ge	72	3	He			73689.19		
Ge	72	3	He			75096.29		
Ge	72	3	He			74672.67		
In	115	3	He			64288.45		
In	115	3	He			63323.52		
In	115	3	He			63473.81		
Tb	159	3	He			282884.39		
Tb	159	3	He			279527.26		
Tb	159	3	He			283788.73		
Bi	209	3	He			212297.50		
Bi	209	3	He			215789.41		
Bi	209	3	He			214266.01		

Quantitation Report

Data File Name	109SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 13:37:43
Sample Name	410-136848-U-5-A
Sample Type	Sample
Comment	D29
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

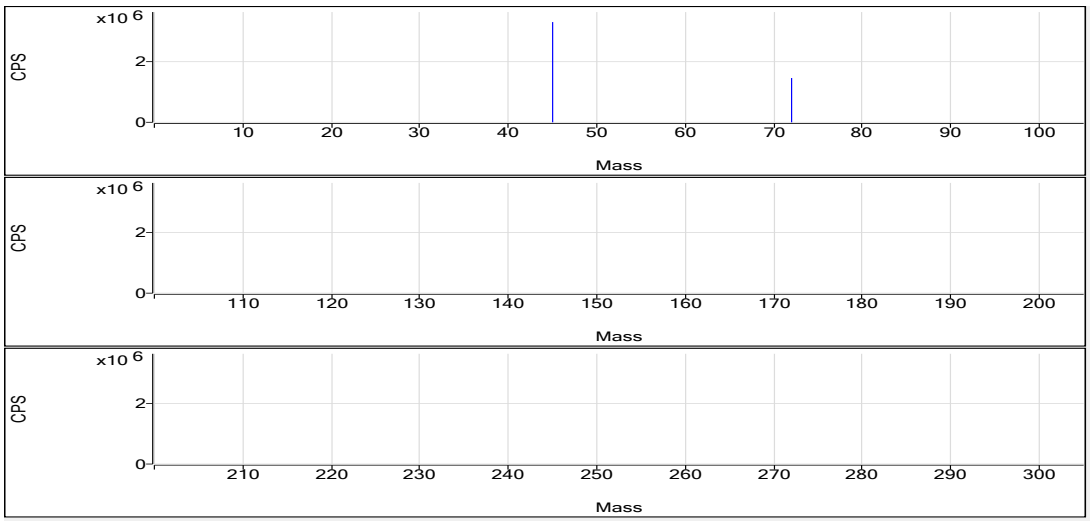
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.000	ppb	2864.3	68.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.133	ppb	14.1	10.00	0.0001	Pulse	1.5000	3
Na	23	72	He	8739.887	ppb	0.9	1131309.36	15.1200	Pulse	0.1000	3
Mg	24	72	He	14892.022	ppb	0.8	939791.62	12.5603	Pulse	0.1000	3
Al	27	72	He	15.512	ppb	31.9	360.02	0.0048	Pulse	0.1000	3
K	39	72	He	2104.370	ppb	1.8	97696.48	1.3057	Pulse	0.1000	3
Ca	44	72	He	141208.345	ppb	0.5	328290.52	4.3875	Pulse	0.1000	3
Ti	47	72	He	-0.204	ppb	N/A	16.67	0.0002	Pulse	0.1000	3
V	51	72	He	0.161	ppb	30.1	689.35	0.0092	Pulse	0.5000	3
Cr	52	72	He	0.270	ppb	50.7	2206.90	0.0295	Pulse	0.1000	3
Mn	55	72	He	2713.643	ppb	0.9	1199461.05	16.0309	Pulse	0.1000	3
Fe	57	72	He	7678.309	ppb	1.4	166733.28	2.2284	Pulse	0.1000	3
Co	59	72	He	0.768	ppb	3.0	1983.55	0.0265	Pulse	0.1000	3
Ni	60	72	He	2.497	ppb	10.6	2316.93	0.0310	Pulse	0.1000	3
Cu	63	72	He	0.541	ppb	10.3	1380.11	0.0184	Pulse	0.1000	3
Zn	66	72	He	7.461	ppb	9.9	1733.50	0.0232	Pulse	0.1000	3
As	75	72	He	1.242	ppb	16.7	194.00	0.0026	Pulse	0.5000	3
Sr	88	115	He	487.640	ppb	2.3	241286.66	3.8127	Pulse	0.1000	3
Mo	98	115	He	0.412	ppb	12.4	606.70	0.0096	Pulse	0.1000	3
Ag	107	115	He	-0.003	ppb	N/A	20.00	0.0003	Pulse	0.1000	3
Cd	111	115	He	0.077	ppb	29.3	26.67	0.0004	Pulse	0.5000	3
Sn	120	115	He	0.215	ppb	70.6	1180.10	0.0186	Pulse	0.1000	3
Sb	121	115	He	0.064	ppb	44.6	66.67	0.0010	Pulse	0.1000	3
Ba	137	115	He	87.462	ppb	2.0	24235.33	0.3829	Pulse	0.1000	3
Tl	205	209	He	0.026	ppb	40.7	373.35	0.0017	Pulse	0.1000	3
Pb	208	209	He	0.229	ppb	2.8	2290.16	0.0105	Pulse	0.1000	3
U	238	209	He	0.316	ppb	8.2	2943.79	0.0135	Pulse	0.1000	3

ISTD Table:

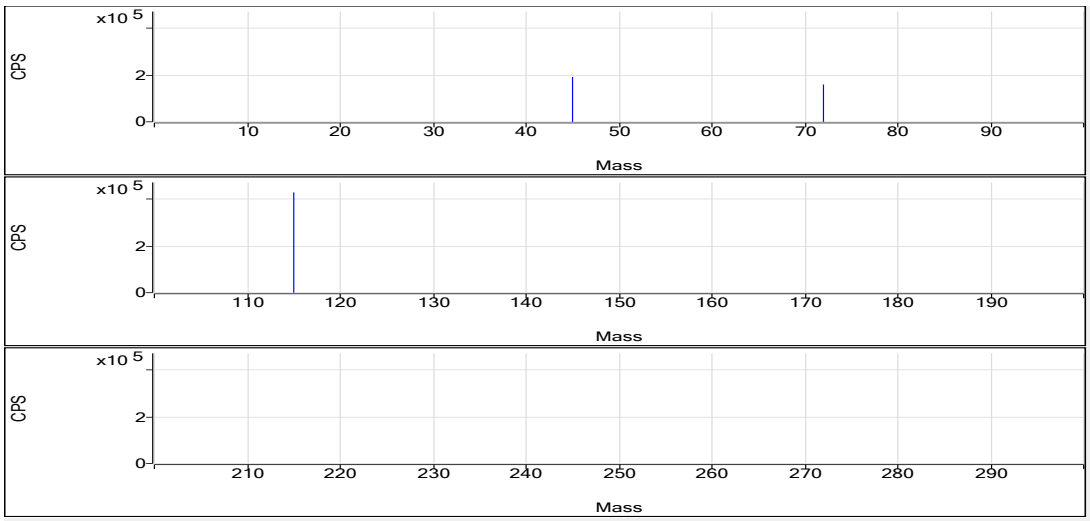
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3296189.74	3.0	101.7	Pulse	0.1000	3
No Gas	Ge	72	1455723.52	2.8	101.1	Pulse	0.1000	3
H2	Sc	45	191773.48	2.3	98.2	Pulse	0.1000	3
H2	Ge	72	159744.51	2.6	98.0	Pulse	0.1000	3
H2	In	115	428956.06	2.4	99.0	Pulse	0.1000	3
He	Sc	45	42402.14	1.5	106.0	Pulse	0.1000	3
He	Ge	72	74824.35	0.6	103.5	Pulse	0.1000	3
He	In	115	63301.31	1.7	98.0	Pulse	0.1000	3
He	Tb	159	283853.59	0.9	99.2	Pulse	0.1000	3
He	Bi	209	217844.01	0.8	98.0	Pulse	0.1000	3

No Gas

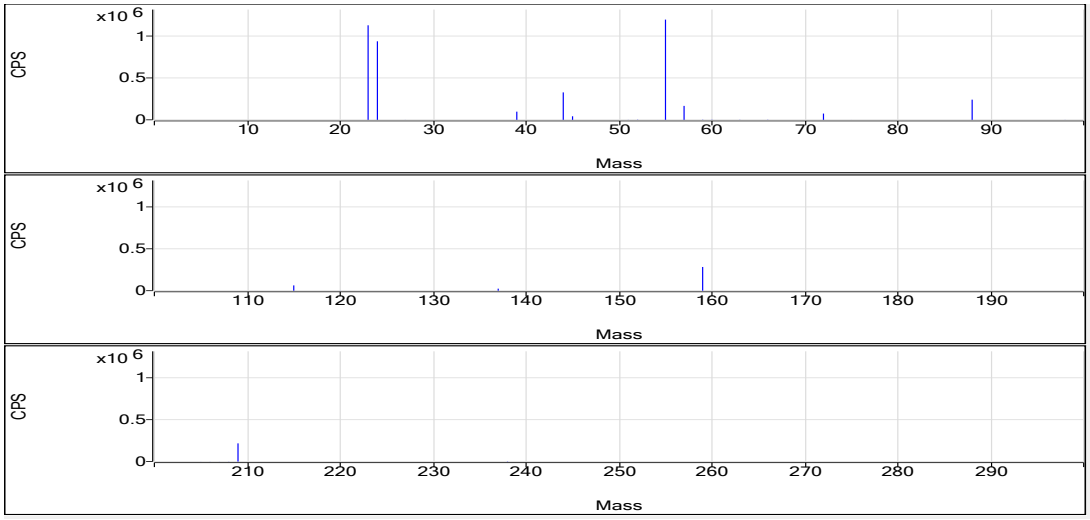


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.001	0	64.00	0.0013	4.694E-05
Be	9	1	No Gas	0.007	0.0001	82.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.005	0	60.00	0.0013	4.694E-05
Se	78	2	H2	0.118	0.0001	9.33	0.0004	1.089E-05
Se	78	2	H2	0.126	0.0001	9.33	0.0004	1.089E-05
Se	78	2	H2	0.154	0.0001	11.33	0.0004	1.089E-05
Na	23	3	He	8765.26	15.1636	1131717.64	0.0017	0.1065
Na	23	3	He	8654.946	14.9741	1127658.58	0.0017	0.1065
Na	23	3	He	8799.456	15.2223	1134551.86	0.0017	0.1065
Mg	24	3	He	14922.375	12.5859	939335.45	0.0008	0.004846
Mg	24	3	He	14763.664	12.4521	937734.36	0.0008	0.004846
Mg	24	3	He	14990.027	12.643	942305.06	0.0008	0.004846
Al	27	3	He	14.47	0.0046	340.02	0.0002	0.001063
Al	27	3	He	20.903	0.0061	460.03	0.0002	0.001063
Al	27	3	He	11.161	0.0038	280.01	0.0002	0.001063
K	39	3	He	2147.401	1.3295	99222.75	0.0006	0.1436
K	39	3	He	2087.639	1.2965	97632.79	0.0006	0.1436
K	39	3	He	2078.07	1.2912	96233.89	0.0006	0.1436
Ca	44	3	He	140741.458	4.373	326375.25	0	0.001611
Ca	44	3	He	140894.909	4.3778	329679.10	0	0.001611
Ca	44	3	He	141988.667	4.4118	328817.22	0	0.001611
Ti	47	3	He	-0.023	0.0003	20.00	0.0003	0.0002737
Ti	47	3	He	-0.032	0.0003	20.00	0.0003	0.0002737
Ti	47	3	He	-0.556	0.0001	10.00	0.0003	0.0002737
V	51	3	He	0.143	0.009	672.02	0.0117	0.007326
V	51	3	He	0.216	0.0099	742.02	0.0117	0.007326
V	51	3	He	0.124	0.0088	654.02	0.0117	0.007326
Cr	52	3	He	0.155	0.0277	2070.20	0.0152	0.02538
Cr	52	3	He	0.234	0.029	2180.23	0.0152	0.02538
Cr	52	3	He	0.421	0.0318	2370.27	0.0152	0.02538
Mn	55	3	He	2720.105	16.0691	1199295.14	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2685.443	15.8645	1194709.59	0.0059	0.01385
Mn	55	3	He	2735.379	16.1592	1204378.42	0.0059	0.01385
Fe	57	3	He	7757.121	2.2513	168020.82	0.0003	0.003918
Fe	57	3	He	7560.684	2.1944	165251.11	0.0003	0.003918
Fe	57	3	He	7717.123	2.2397	166927.91	0.0003	0.003918
Co	59	3	He	0.742	0.0257	1920.21	0.0305	0.003084
Co	59	3	He	0.787	0.0271	2040.23	0.0305	0.003084
Co	59	3	He	0.774	0.0267	1990.20	0.0305	0.003084
Ni	60	3	He	2.237	0.0287	2140.23	0.0088	0.009003
Ni	60	3	He	2.767	0.0333	2510.31	0.0088	0.009003
Ni	60	3	He	2.486	0.0309	2300.26	0.0088	0.009003
Cu	63	3	He	0.49	0.0172	1280.11	0.0249	0.004937
Cu	63	3	He	0.601	0.0199	1500.11	0.0249	0.004937
Cu	63	3	He	0.534	0.0182	1360.12	0.0249	0.004937
Zn	66	3	He	8.122	0.0248	1850.19	0.0025	0.004836
Zn	66	3	He	7.599	0.0235	1770.16	0.0025	0.004836
Zn	66	3	He	6.661	0.0212	1580.14	0.0025	0.004836
As	75	3	He	1.353	0.0028	208.00	0.0017	0.0004347
As	75	3	He	1.002	0.0022	164.00	0.0017	0.0004347
As	75	3	He	1.37	0.0028	210.00	0.0017	0.0004347
Sr	88	3	He	486.079	3.8005	240134.82	0.0078	0.0007762
Sr	88	3	He	477.173	3.7309	240415.88	0.0078	0.0007762
Sr	88	3	He	499.669	3.9067	243309.27	0.0078	0.0007762
Mo	98	3	He	0.422	0.0098	620.03	0.022	0.0005162
Mo	98	3	He	0.357	0.0084	540.03	0.022	0.0005162
Mo	98	3	He	0.458	0.0106	660.04	0.022	0.0005162
Ag	107	3	He	0.004	0.0006	40.00	0.0455	0.0004641
Ag	107	3	He	-0.01	0	0.00	0.0455	0.0004641
Ag	107	3	He	-0.003	0.0003	20.00	0.0455	0.0004641
Cd	111	3	He	0.068	0.0004	24.00	0.0048	5.152E-05
Cd	111	3	He	0.06	0.0003	22.00	0.0048	5.152E-05
Cd	111	3	He	0.103	0.0005	34.00	0.0048	5.152E-05
Sn	120	3	He	0.05	0.0163	1030.08	0.0143	0.01559
Sn	120	3	He	0.246	0.0191	1230.10	0.0143	0.01559
Sn	120	3	He	0.348	0.0206	1280.11	0.0143	0.01559
Sb	121	3	He	0.081	0.0013	80.00	0.0124	0.000258
Sb	121	3	He	0.079	0.0012	80.00	0.0124	0.000258
Sb	121	3	He	0.031	0.0006	40.00	0.0124	0.000258
Ba	137	3	He	86.868	0.3803	24031.72	0.0044	0.000309
Ba	137	3	He	86.098	0.377	24291.80	0.0044	0.000309
Ba	137	3	He	89.42	0.3915	24382.48	0.0044	0.000309
Tl	205	3	He	0.015	0.0014	310.01	0.0276	0.001005
Tl	205	3	He	0.026	0.0017	380.02	0.0276	0.001005
Tl	205	3	He	0.036	0.002	430.03	0.0276	0.001005
Pb	208	3	He	0.234	0.0107	1180.10	0.0364	0.002176
Pb	208	3	He	0.231	0.0106	1140.09	0.0364	0.002176
Pb	208	3	He	0.222	0.0102	1240.10	0.0364	0.002176
U	238	3	He	0.288	0.0123	2700.41	0.0421	0.00024
U	238	3	He	0.32	0.0137	3000.46	0.0421	0.00024
U	238	3	He	0.339	0.0145	3130.50	0.0421	0.00024
Sc	45	1	No Gas			3196630.89		
Sc	45	1	No Gas			3298126.51		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3393811.82		
Ge	72	1	No Gas			1416627.32		
Ge	72	1	No Gas			1452378.42		
Ge	72	1	No Gas			1498164.82		
Sc	45	2	H2			193623.71		
Sc	45	2	H2			186746.81		
Sc	45	2	H2			194949.92		
Ge	72	2	H2			163791.87		
Ge	72	2	H2			155472.29		
Ge	72	2	H2			159969.37		
In	115	2	H2			436176.09		
In	115	2	H2			417213.16		
In	115	2	H2			433478.94		
Sc	45	3	He			42111.37		
Sc	45	3	He			43154.28		
Sc	45	3	He			41940.77		
Ge	72	3	He			74633.81		
Ge	72	3	He			75307.24		
Ge	72	3	He			74531.99		
In	115	3	He			63193.14		
In	115	3	He			64449.01		
In	115	3	He			62289.38		
Tb	159	3	He			285111.91		
Tb	159	3	He			285465.17		
Tb	159	3	He			280983.69		
Bi	209	3	He			218758.24		
Bi	209	3	He			219051.42		
Bi	209	3	He			215722.36		

Quantitation Report

Data File Name	110SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 13:39:43
Sample Name	410-136848-W-2-A
Sample Type	Sample
Comment	D29
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

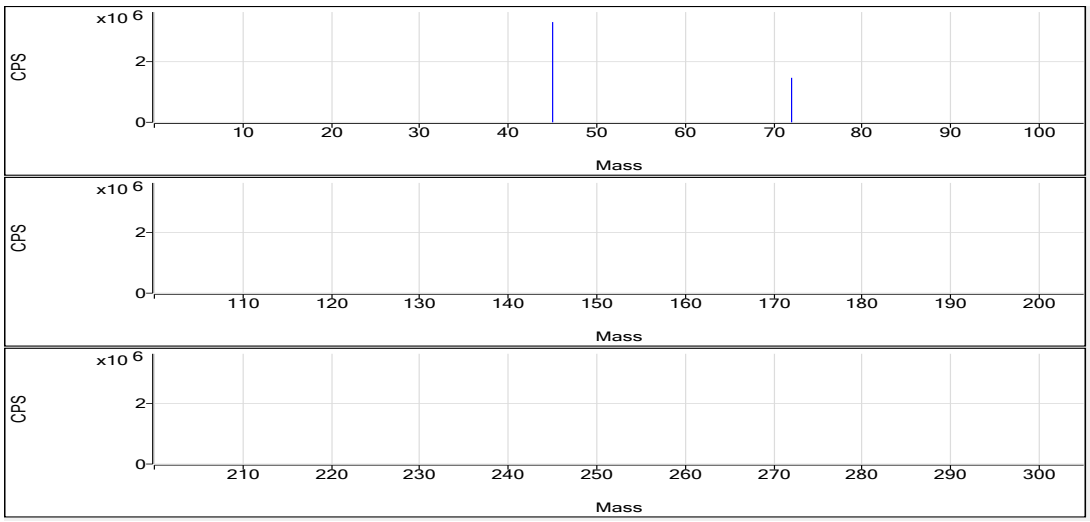
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.006	ppb	N/A	58.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.126	ppb	28.1	9.78	0.0001	Pulse	1.5000	3
Na	23	72	He	28882.150	ppb	0.4	3729747.65	49.7208	Pulse	0.1000	3
Mg	24	72	He	7188.422	ppb	0.5	454995.74	6.0654	Pulse	0.1000	3
Al	27	72	He	6.467	ppb	33.4	196.68	0.0026	Pulse	0.1000	3
K	39	72	He	2536.850	ppb	1.9	115870.73	1.5445	Pulse	0.1000	3
Ca	44	72	He	45285.344	ppb	0.3	105635.18	1.4082	Pulse	0.1000	3
Ti	47	72	He	-0.024	ppb	N/A	20.00	0.0003	Pulse	0.1000	3
V	51	72	He	0.096	ppb	30.4	634.02	0.0085	Pulse	0.5000	3
Cr	52	72	He	0.008	ppb	560.9	1913.52	0.0255	Pulse	0.1000	3
Mn	55	72	He	1136.415	ppb	2.0	504165.31	6.7215	Pulse	0.1000	3
Fe	57	72	He	59.976	ppb	8.0	1596.82	0.0213	Pulse	0.1000	3
Co	59	72	He	0.505	ppb	14.0	1386.79	0.0185	Pulse	0.1000	3
Ni	60	72	He	1.144	ppb	5.1	1430.13	0.0191	Pulse	0.1000	3
Cu	63	72	He	0.761	ppb	8.4	1793.51	0.0239	Pulse	0.1000	3
Zn	66	72	He	6.228	ppb	8.4	1510.14	0.0201	Pulse	0.1000	3
As	75	72	He	0.654	ppb	19.9	118.00	0.0016	Pulse	0.5000	3
Sr	88	115	He	155.944	ppb	1.1	78188.02	1.2198	Pulse	0.1000	3
Mo	98	115	He	1.016	ppb	6.0	1466.80	0.0229	Pulse	0.1000	3
Ag	107	115	He	0.005	ppb	86.9	43.33	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.002	ppb	285.7	4.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.239	ppb	54.8	1216.77	0.0190	Pulse	0.1000	3
Sb	121	115	He	0.184	ppb	23.0	163.34	0.0025	Pulse	0.1000	3
Ba	137	115	He	18.785	ppb	2.0	5287.87	0.0825	Pulse	0.1000	3
Tl	205	209	He	0.034	ppb	50.1	426.69	0.0019	Pulse	0.1000	3
Pb	208	209	He	-0.011	ppb	N/A	386.68	0.0018	Pulse	0.1000	3
U	238	209	He	0.438	ppb	6.3	4080.81	0.0187	Pulse	0.1000	3

ISTD Table:

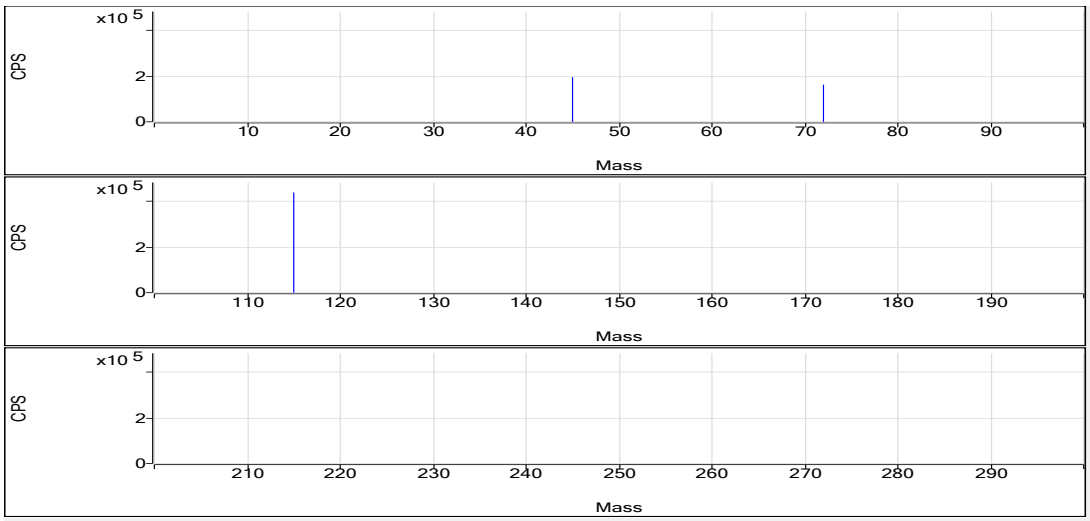
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3305469.53	1.9	102.0	Pulse	0.1000	3
No Gas	Ge	72	1467404.56	1.9	101.9	Pulse	0.1000	3
H2	Sc	45	196063.87	3.0	100.4	Pulse	0.1000	3
H2	Ge	72	163141.63	2.1	100.1	Pulse	0.1000	3
H2	In	115	440386.96	2.5	101.6	Pulse	0.1000	3
He	Sc	45	41389.18	0.3	103.5	Pulse	0.1000	3
He	Ge	72	75015.56	0.8	103.8	Pulse	0.1000	3
He	In	115	64098.12	0.9	99.2	Pulse	0.1000	3
He	Tb	159	283549.52	0.5	99.1	Pulse	0.1000	3
He	Bi	209	218576.59	0.9	98.4	Pulse	0.1000	3

No Gas

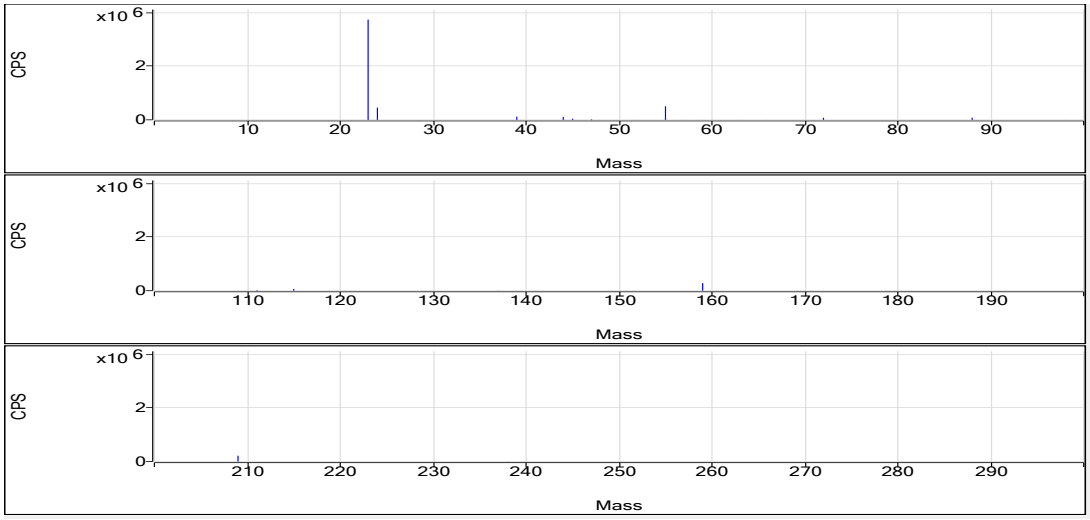


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.001	0	66.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.004	0	62.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.012	0	46.00	0.0013	4.694E-05
Se	78	2	H2	0.119	0.0001	9.33	0.0004	1.089E-05
Se	78	2	H2	0.165	0.0001	12.00	0.0004	1.089E-05
Se	78	2	H2	0.096	0	8.00	0.0004	1.089E-05
Na	23	3	He	28737.354	49.4721	3744008.69	0.0017	0.1065
Na	23	3	He	28977.184	49.8841	3714994.32	0.0017	0.1065
Na	23	3	He	28931.913	49.8063	3730239.94	0.0017	0.1065
Mg	24	3	He	7187.096	6.0643	458941.28	0.0008	0.004846
Mg	24	3	He	7226.778	6.0978	454115.27	0.0008	0.004846
Mg	24	3	He	7151.392	6.0342	451930.66	0.0008	0.004846
Al	27	3	He	5.451	0.0024	180.01	0.0002	0.001063
Al	27	3	He	8.948	0.0032	240.01	0.0002	0.001063
Al	27	3	He	5.001	0.0023	170.01	0.0002	0.001063
K	39	3	He	2587.839	1.5727	119018.88	0.0006	0.1436
K	39	3	He	2532.013	1.5418	114825.38	0.0006	0.1436
K	39	3	He	2490.699	1.519	113767.94	0.0006	0.1436
Ca	44	3	He	45292.08	1.4084	106584.84	0	0.001611
Ca	44	3	He	45138.867	1.4036	104531.01	0	0.001611
Ca	44	3	He	45425.086	1.4125	105789.68	0	0.001611
Ti	47	3	He	-1.091	0	0.00	0.0003	0.0002737
Ti	47	3	He	0.515	0.0004	30.00	0.0003	0.0002737
Ti	47	3	He	0.506	0.0004	30.00	0.0003	0.0002737
V	51	3	He	0.115	0.0087	656.02	0.0117	0.007326
V	51	3	He	0.062	0.0081	600.02	0.0117	0.007326
V	51	3	He	0.111	0.0086	646.02	0.0117	0.007326
Cr	52	3	He	-0.027	0.025	1890.18	0.0152	0.02538
Cr	52	3	He	-0.009	0.0252	1880.18	0.0152	0.02538
Cr	52	3	He	0.061	0.0263	1970.19	0.0152	0.02538
Mn	55	3	He	1118.929	6.6182	500863.55	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1162.02	6.8726	511818.82	0.0059	0.01385
Mn	55	3	He	1128.296	6.6735	499813.55	0.0059	0.01385
Fe	57	3	He	54.441	0.0197	1490.13	0.0003	0.003918
Fe	57	3	He	62.96	0.0222	1650.18	0.0003	0.003918
Fe	57	3	He	62.527	0.022	1650.15	0.0003	0.003918
Co	59	3	He	0.432	0.0163	1230.11	0.0305	0.003084
Co	59	3	He	0.572	0.0205	1530.14	0.0305	0.003084
Co	59	3	He	0.512	0.0187	1400.13	0.0305	0.003084
Ni	60	3	He	1.08	0.0185	1400.14	0.0088	0.009003
Ni	60	3	He	1.16	0.0192	1430.12	0.0088	0.009003
Ni	60	3	He	1.193	0.0195	1460.12	0.0088	0.009003
Cu	63	3	He	0.687	0.0221	1670.15	0.0249	0.004937
Cu	63	3	He	0.798	0.0248	1850.18	0.0249	0.004937
Cu	63	3	He	0.798	0.0248	1860.20	0.0249	0.004937
Zn	66	3	He	5.938	0.0194	1470.13	0.0025	0.004836
Zn	66	3	He	6.832	0.0216	1610.15	0.0025	0.004836
Zn	66	3	He	5.913	0.0194	1450.14	0.0025	0.004836
As	75	3	He	0.753	0.0017	132.00	0.0017	0.0004347
As	75	3	He	0.507	0.0013	98.00	0.0017	0.0004347
As	75	3	He	0.702	0.0017	124.00	0.0017	0.0004347
Sr	88	3	He	156.178	1.2216	79079.26	0.0078	0.0007762
Sr	88	3	He	157.502	1.232	78607.34	0.0078	0.0007762
Sr	88	3	He	154.152	1.2058	76877.46	0.0078	0.0007762
Mo	98	3	He	1.05	0.0236	1530.14	0.022	0.0005162
Mo	98	3	He	1.051	0.0237	1510.14	0.022	0.0005162
Mo	98	3	He	0.945	0.0213	1360.12	0.022	0.0005162
Ag	107	3	He	0	0.0005	30.00	0.0455	0.0004641
Ag	107	3	He	0.007	0.0008	50.00	0.0455	0.0004641
Ag	107	3	He	0.007	0.0008	50.00	0.0455	0.0004641
Cd	111	3	He	0.009	0.0001	6.00	0.0048	5.152E-05
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Sn	120	3	He	0.099	0.017	1100.10	0.0143	0.01559
Sn	120	3	He	0.358	0.0207	1320.11	0.0143	0.01559
Sn	120	3	He	0.26	0.0193	1230.10	0.0143	0.01559
Sb	121	3	He	0.228	0.0031	200.01	0.0124	0.000258
Sb	121	3	He	0.143	0.002	130.01	0.0124	0.000258
Sb	121	3	He	0.182	0.0025	160.01	0.0124	0.000258
Ba	137	3	He	19.179	0.0842	5451.29	0.0044	0.000309
Ba	137	3	He	18.455	0.081	5171.11	0.0044	0.000309
Ba	137	3	He	18.72	0.0822	5241.20	0.0044	0.000309
Tl	205	3	He	0.049	0.0024	520.03	0.0276	0.001005
Tl	205	3	He	0.015	0.0014	310.02	0.0276	0.001005
Tl	205	3	He	0.038	0.0021	450.02	0.0276	0.001005
Pb	208	3	He	-0.022	0.0014	220.01	0.0364	0.002176
Pb	208	3	He	0.002	0.0023	260.01	0.0364	0.002176
Pb	208	3	He	-0.013	0.0017	150.01	0.0364	0.002176
U	238	3	He	0.459	0.0195	4300.89	0.0421	0.00024
U	238	3	He	0.449	0.0191	4140.84	0.0421	0.00024
U	238	3	He	0.407	0.0173	3800.69	0.0421	0.00024
Sc	45	1	No Gas			3231641.20		
Sc	45	1	No Gas			3336300.89		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3348466.51		
Ge	72	1	No Gas			1437390.29		
Ge	72	1	No Gas			1474336.38		
Ge	72	1	No Gas			1490487.01		
Sc	45	2	H2			194679.92		
Sc	45	2	H2			190928.86		
Sc	45	2	H2			202582.83		
Ge	72	2	H2			163457.97		
Ge	72	2	H2			159585.14		
Ge	72	2	H2			166381.77		
In	115	2	H2			437012.38		
In	115	2	H2			431419.76		
In	115	2	H2			452728.74		
Sc	45	3	He			41519.76		
Sc	45	3	He			41368.94		
Sc	45	3	He			41278.83		
Ge	72	3	He			75679.21		
Ge	72	3	He			74472.55		
Ge	72	3	He			74894.93		
In	115	3	He			64740.89		
In	115	3	He			63815.84		
In	115	3	He			63766.10		
Tb	159	3	He			284125.29		
Tb	159	3	He			282020.39		
Tb	159	3	He			284502.89		
Bi	209	3	He			220171.03		
Bi	209	3	He			216389.82		
Bi	209	3	He			219168.92		

Quantitation Report

Data File Name	111SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 13:41:44
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

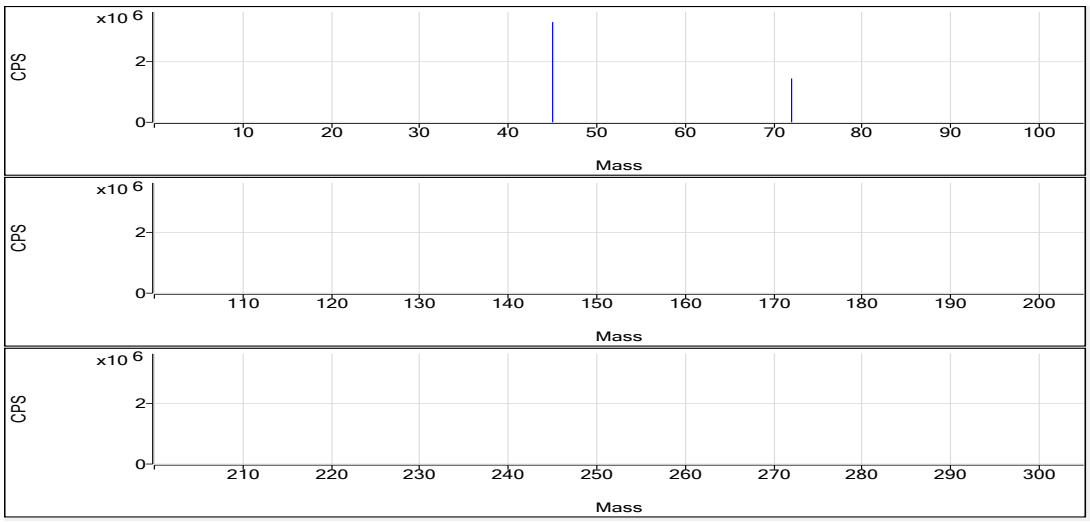
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.007	ppb	47.0	80.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.012	ppb	144.5	2.44	0.0000	Pulse	1.5000	3
Na	23	72	He	30.549	ppb	23.9	11428.10	0.1589	Pulse	0.1000	3
Mg	24	72	He	22.139	ppb	13.6	1690.16	0.0235	Pulse	0.1000	3
Al	27	72	He	4.614	ppb	35.2	156.68	0.0022	Pulse	0.1000	3
K	39	72	He	11.859	ppb	135.4	10800.99	0.1502	Pulse	0.1000	3
Ca	44	72	He	68.778	ppb	34.5	270.01	0.0037	Pulse	0.1000	3
Ti	47	72	He	0.572	ppb	97.0	30.00	0.0004	Pulse	0.1000	3
V	51	72	He	0.064	ppb	30.2	581.35	0.0081	Pulse	0.5000	3
Cr	52	72	He	0.025	ppb	174.8	1853.52	0.0258	Pulse	0.1000	3
Mn	55	72	He	1.059	ppb	13.3	1446.79	0.0201	Pulse	0.1000	3
Fe	57	72	He	4.580	ppb	81.6	376.69	0.0052	Pulse	0.1000	3
Co	59	72	He	0.055	ppb	49.0	343.35	0.0048	Pulse	0.1000	3
Ni	60	72	He	0.766	ppb	18.2	1133.41	0.0157	Pulse	0.1000	3
Cu	63	72	He	0.056	ppb	51.7	456.69	0.0063	Pulse	0.1000	3
Zn	66	72	He	-0.366	ppb	N/A	283.35	0.0039	Pulse	0.1000	3
As	75	72	He	0.054	ppb	59.1	38.00	0.0005	Pulse	0.5000	3
Sr	88	115	He	0.373	ppb	68.0	236.68	0.0037	Pulse	0.1000	3
Mo	98	115	He	0.012	ppb	3.0	50.00	0.0008	Pulse	0.1000	3
Ag	107	115	He	0.009	ppb	78.3	56.67	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.006	ppb	229.7	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.119	ppb	144.4	1110.09	0.0173	Pulse	0.1000	3
Sb	121	115	He	0.008	ppb	225.2	23.33	0.0004	Pulse	0.1000	3
Ba	137	115	He	0.262	ppb	40.2	93.33	0.0015	Pulse	0.1000	3
Tl	205	209	He	0.065	ppb	2.5	620.04	0.0028	Pulse	0.1000	3
Pb	208	209	He	-0.007	ppb	N/A	423.35	0.0019	Pulse	0.1000	3
U	238	209	He	0.010	ppb	31.9	146.68	0.0007	Pulse	0.1000	3

ISTD Table:

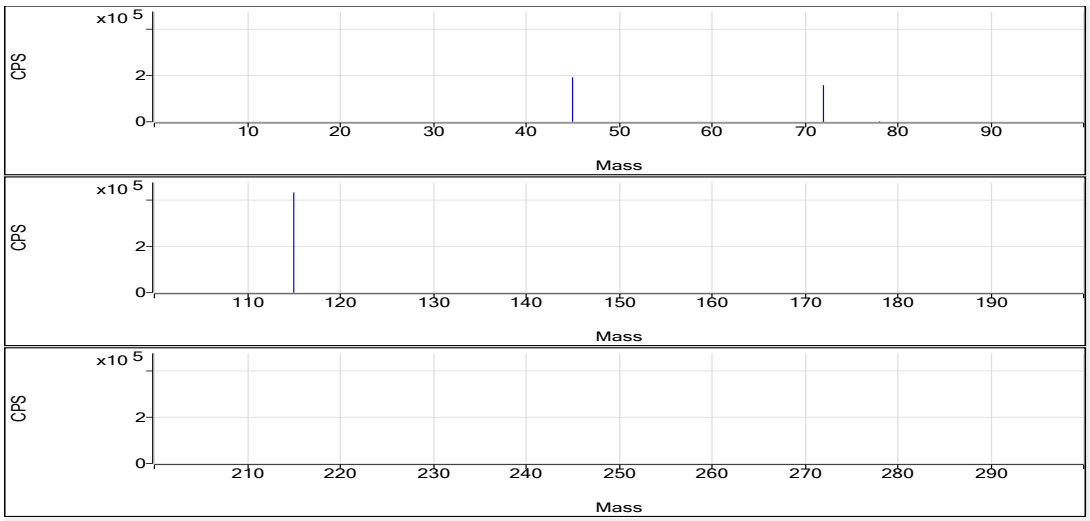
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3295631.51	2.7	101.7	Pulse	0.1000	3
No Gas	Ge	72	1440971.80	2.9	100.1	Pulse	0.1000	3
H2	Sc	45	192043.58	2.9	98.3	Pulse	0.1000	3
H2	Ge	72	158294.98	2.3	97.1	Pulse	0.1000	3
H2	In	115	432845.98	2.2	99.9	Pulse	0.1000	3
He	Sc	45	42131.31	1.2	105.4	Pulse	0.1000	3
He	Ge	72	71953.51	1.3	99.5	Pulse	0.1000	3
He	In	115	64286.32	1.0	99.5	Pulse	0.1000	3
He	Tb	159	284215.39	2.1	99.4	Pulse	0.1000	3
He	Bi	209	221795.58	0.6	99.8	Pulse	0.1000	3

No Gas

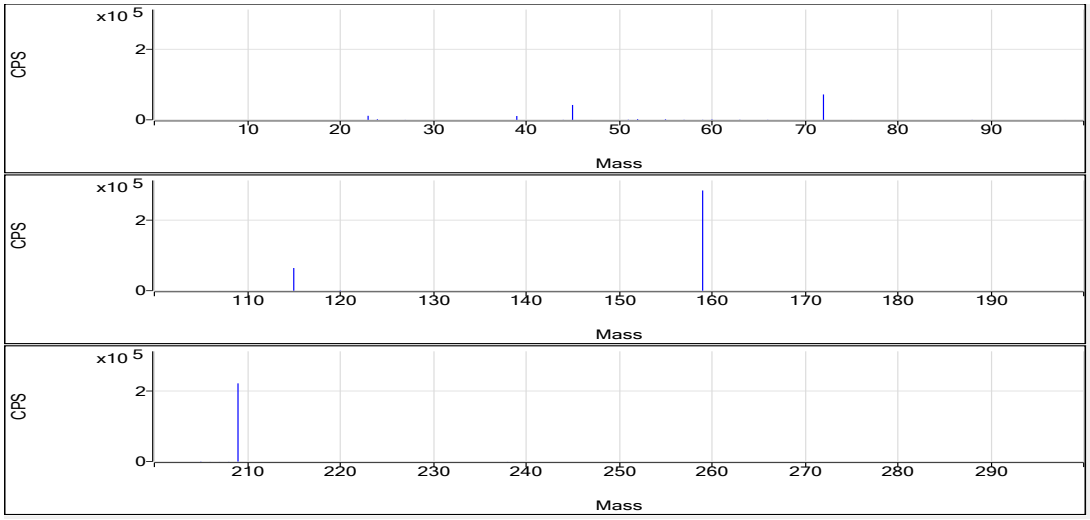


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.008	0.0001	80.00	0.0013	4.694E-05
Be	9	1	No Gas	0.003	0.0001	74.00	0.0013	4.694E-05
Be	9	1	No Gas	0.009	0.0001	86.00	0.0013	4.694E-05
Se	78	2	H2	0.016	0	2.67	0.0004	1.089E-05
Se	78	2	H2	0.027	0	3.33	0.0004	1.089E-05
Se	78	2	H2	-0.007	0	1.33	0.0004	1.089E-05
Na	23	3	He	38.949	0.1734	12285.49	0.0017	0.1065
Na	23	3	He	25.905	0.151	10914.38	0.0017	0.1065
Na	23	3	He	26.792	0.1525	11084.44	0.0017	0.1065
Mg	24	3	He	25.219	0.0261	1850.18	0.0008	0.004846
Mg	24	3	He	21.979	0.0234	1690.16	0.0008	0.004846
Mg	24	3	He	19.218	0.021	1530.13	0.0008	0.004846
Al	27	3	He	3.782	0.002	140.01	0.0002	0.001063
Al	27	3	He	6.484	0.0026	190.01	0.0002	0.001063
Al	27	3	He	3.576	0.0019	140.01	0.0002	0.001063
K	39	3	He	29.786	0.1601	11344.73	0.0006	0.1436
K	39	3	He	6.984	0.1475	10664.26	0.0006	0.1436
K	39	3	He	-1.192	0.143	10393.99	0.0006	0.1436
Ca	44	3	He	43.548	0.003	210.01	0	0.001611
Ca	44	3	He	90.636	0.0044	320.01	0	0.001611
Ca	44	3	He	72.15	0.0039	280.01	0	0.001611
Ti	47	3	He	0.597	0.0004	30.00	0.0003	0.0002737
Ti	47	3	He	1.115	0.0006	40.00	0.0003	0.0002737
Ti	47	3	He	0.006	0.0003	20.00	0.0003	0.0002737
V	51	3	He	0.044	0.0078	556.01	0.0117	0.007326
V	51	3	He	0.083	0.0083	600.02	0.0117	0.007326
V	51	3	He	0.065	0.0081	588.02	0.0117	0.007326
Cr	52	3	He	0.075	0.0265	1880.19	0.0152	0.02538
Cr	52	3	He	0.004	0.0255	1840.18	0.0152	0.02538
Cr	52	3	He	-0.005	0.0253	1840.18	0.0152	0.02538
Mn	55	3	He	1	0.0198	1400.11	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.957	0.0195	1410.12	0.0059	0.01385
Mn	55	3	He	1.219	0.021	1530.15	0.0059	0.01385
Fe	57	3	He	8.884	0.0065	460.02	0.0003	0.003918
Fe	57	3	He	2.71	0.0047	340.02	0.0003	0.003918
Fe	57	3	He	2.147	0.0045	330.02	0.0003	0.003918
Co	59	3	He	0.079	0.0055	390.02	0.0305	0.003084
Co	59	3	He	0.026	0.0039	280.01	0.0305	0.003084
Co	59	3	He	0.061	0.005	360.02	0.0305	0.003084
Ni	60	3	He	0.613	0.0144	1020.07	0.0088	0.009003
Ni	60	3	He	0.801	0.016	1160.08	0.0088	0.009003
Ni	60	3	He	0.885	0.0168	1220.09	0.0088	0.009003
Cu	63	3	He	0.023	0.0055	390.02	0.0249	0.004937
Cu	63	3	He	0.074	0.0068	490.03	0.0249	0.004937
Cu	63	3	He	0.072	0.0067	490.03	0.0249	0.004937
Zn	66	3	He	-0.36	0.004	280.02	0.0025	0.004836
Zn	66	3	He	-0.786	0.0029	210.01	0.0025	0.004836
Zn	66	3	He	0.047	0.005	360.02	0.0025	0.004836
As	75	3	He	0.091	0.0006	42.00	0.0017	0.0004347
As	75	3	He	0.036	0.0005	36.00	0.0017	0.0004347
As	75	3	He	0.035	0.0005	36.00	0.0017	0.0004347
Sr	88	3	He	0.137	0.0018	120.00	0.0078	0.0007762
Sr	88	3	He	0.641	0.0058	370.02	0.0078	0.0007762
Sr	88	3	He	0.341	0.0034	220.01	0.0078	0.0007762
Mo	98	3	He	0.011	0.0008	50.00	0.022	0.0005162
Mo	98	3	He	0.012	0.0008	50.00	0.022	0.0005162
Mo	98	3	He	0.012	0.0008	50.00	0.022	0.0005162
Ag	107	3	He	0.007	0.0008	50.00	0.0455	0.0004641
Ag	107	3	He	0.017	0.0013	80.00	0.0455	0.0004641
Ag	107	3	He	0.004	0.0006	40.00	0.0455	0.0004641
Cd	111	3	He	0.015	0.0001	8.00	0.0048	5.152E-05
Cd	111	3	He	0.015	0.0001	8.00	0.0048	5.152E-05
Cd	111	3	He	-0.011	0	0.00	0.0048	5.152E-05
Sn	120	3	He	-0.069	0.0146	950.07	0.0143	0.01559
Sn	120	3	He	0.157	0.0178	1140.09	0.0143	0.01559
Sn	120	3	He	0.269	0.0194	1240.10	0.0143	0.01559
Sb	121	3	He	0.029	0.0006	40.00	0.0124	0.000258
Sb	121	3	He	-0.008	0.0002	10.00	0.0124	0.000258
Sb	121	3	He	0.004	0.0003	20.00	0.0124	0.000258
Ba	137	3	He	0.14	0.0009	60.00	0.0044	0.000309
Ba	137	3	He	0.322	0.0017	110.00	0.0044	0.000309
Ba	137	3	He	0.323	0.0017	110.00	0.0044	0.000309
Tl	205	3	He	0.066	0.0028	630.04	0.0276	0.001005
Tl	205	3	He	0.063	0.0027	610.04	0.0276	0.001005
Tl	205	3	He	0.065	0.0028	620.04	0.0276	0.001005
Pb	208	3	He	-0.008	0.0019	260.01	0.0364	0.002176
Pb	208	3	He	0.003	0.0023	280.01	0.0364	0.002176
Pb	208	3	He	-0.017	0.0015	170.01	0.0364	0.002176
U	238	3	He	0.013	0.0008	180.01	0.0421	0.00024
U	238	3	He	0.009	0.0006	140.01	0.0421	0.00024
U	238	3	He	0.007	0.0005	120.01	0.0421	0.00024
Sc	45	1	No Gas			3198494.95		
Sc	45	1	No Gas			3367673.70		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3320725.89		
Ge	72	1	No Gas			1394479.67		
Ge	72	1	No Gas			1453838.42		
Ge	72	1	No Gas			1474597.32		
Sc	45	2	H2			188163.10		
Sc	45	2	H2			189559.39		
Sc	45	2	H2			198408.24		
Ge	72	2	H2			156239.69		
Ge	72	2	H2			156158.10		
Ge	72	2	H2			162487.16		
In	115	2	H2			431728.63		
In	115	2	H2			423925.58		
In	115	2	H2			442883.74		
Sc	45	3	He			42662.91		
Sc	45	3	He			41700.28		
Sc	45	3	He			42030.75		
Ge	72	3	He			70865.14		
Ge	72	3	He			72301.39		
Ge	72	3	He			72694.01		
In	115	3	He			65041.91		
In	115	3	He			63967.13		
In	115	3	He			63875.90		
Tb	159	3	He			287136.48		
Tb	159	3	He			288015.13		
Tb	159	3	He			277494.55		
Bi	209	3	He			222815.19		
Bi	209	3	He			222245.74		
Bi	209	3	He			220325.82		

Quantitation Report

Data File Name	112_CCV.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 13:43:45
Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

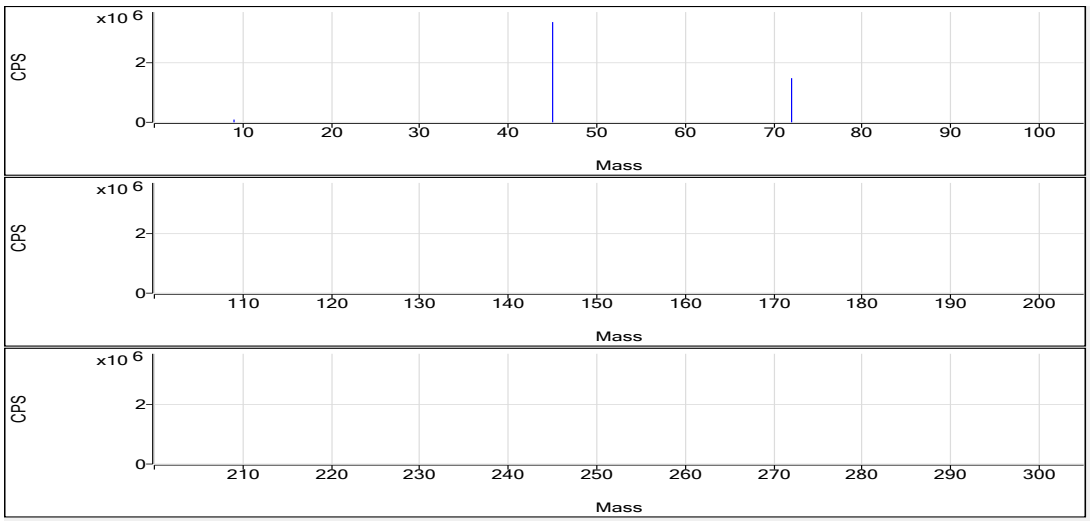
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	47.015	ppb	4.0	90929.75	0.0618	Pulse	0.5000	3
Se	78	72	H2	51.118	ppb	4.4	3243.93	0.0199	Pulse	1.5000	3
Na	23	72	He	5297.868	ppb	1.0	677191.08	9.2072	Pulse	0.1000	3
Mg	24	72	He	5310.185	ppb	1.1	329638.86	4.4819	Pulse	0.1000	3
Al	27	72	He	5177.233	ppb	2.0	91991.28	1.2508	Pulse	0.1000	3
K	39	72	He	5236.493	ppb	0.4	223257.36	3.0353	Pulse	0.1000	3
Ca	44	72	He	5150.797	ppb	4.2	11885.16	0.1616	Pulse	0.1000	3
Ti	47	72	He	5247.392	ppb	1.8	96802.36	1.3162	Pulse	0.1000	3
V	51	72	He	520.540	ppb	1.1	448391.98	6.0965	Pulse	0.5000	3
Cr	52	72	He	522.240	ppb	1.6	586732.85	7.9777	Pulse	0.1000	3
Mn	55	72	He	516.323	ppb	1.0	225166.96	3.0614	Pulse	0.1000	3
Fe	57	72	He	5134.922	ppb	2.8	109691.17	1.4916	Pulse	0.1000	3
Co	59	72	He	516.515	ppb	1.1	1159301.39	15.7622	Pulse	0.1000	3
Ni	60	72	He	518.120	ppb	1.2	335749.84	4.5650	Pulse	0.1000	3
Cu	63	72	He	516.668	ppb	1.6	947953.76	12.8891	Pulse	0.1000	3
Zn	66	72	He	513.718	ppb	1.9	93176.56	1.2669	Pulse	0.1000	3
As	75	72	He	509.845	ppb	0.6	65251.41	0.8871	Pulse	0.5000	3
Sr	88	115	He	51.112	ppb	2.6	25753.94	0.4003	Pulse	0.1000	3
Mo	98	115	He	50.264	ppb	0.4	71256.04	1.1074	Pulse	0.1000	3
Ag	107	115	He	50.260	ppb	1.8	147158.74	2.2873	Pulse	0.1000	3
Cd	111	115	He	50.257	ppb	2.0	15524.60	0.2413	Pulse	0.5000	3
Sn	120	115	He	50.636	ppb	1.7	47451.97	0.7375	Pulse	0.1000	3
Sb	121	115	He	50.917	ppb	0.5	40656.85	0.6319	Pulse	0.1000	3
Ba	137	115	He	491.806	ppb	0.7	138452.75	2.1519	Pulse	0.1000	3
Tl	205	209	He	50.886	ppb	1.2	310930.82	1.4077	Pulse	0.1000	3
Pb	208	209	He	50.754	ppb	1.3	408507.16	1.8495	Pulse	0.1000	3
U	238	209	He	50.301	ppb	0.9	467457.86	2.1163	Pulse	0.1000	3

ISTD Table:

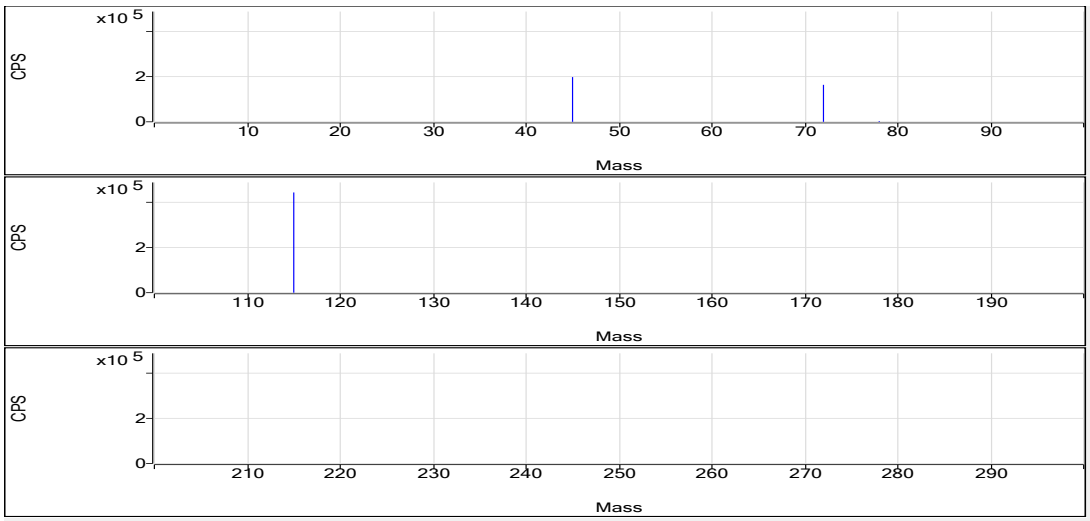
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3341692.14	1.3	103.1	Pulse	0.1000	3
No Gas	Ge	72	1471283.00	1.5	102.2	Pulse	0.1000	3
H2	Sc	45	197031.42	3.1	100.8	Pulse	0.1000	3
H2	Ge	72	162942.70	1.1	100.0	Pulse	0.1000	3
H2	In	115	441623.11	1.4	101.9	Pulse	0.1000	3
He	Sc	45	42174.87	0.5	105.5	Pulse	0.1000	3
He	Ge	72	73555.11	1.1	101.8	Pulse	0.1000	3
He	In	115	64343.32	1.0	99.6	Pulse	0.1000	3
He	Tb	159	284797.38	0.6	99.6	Pulse	0.1000	3
He	Bi	209	220900.83	1.4	99.4	Pulse	0.1000	3

No Gas

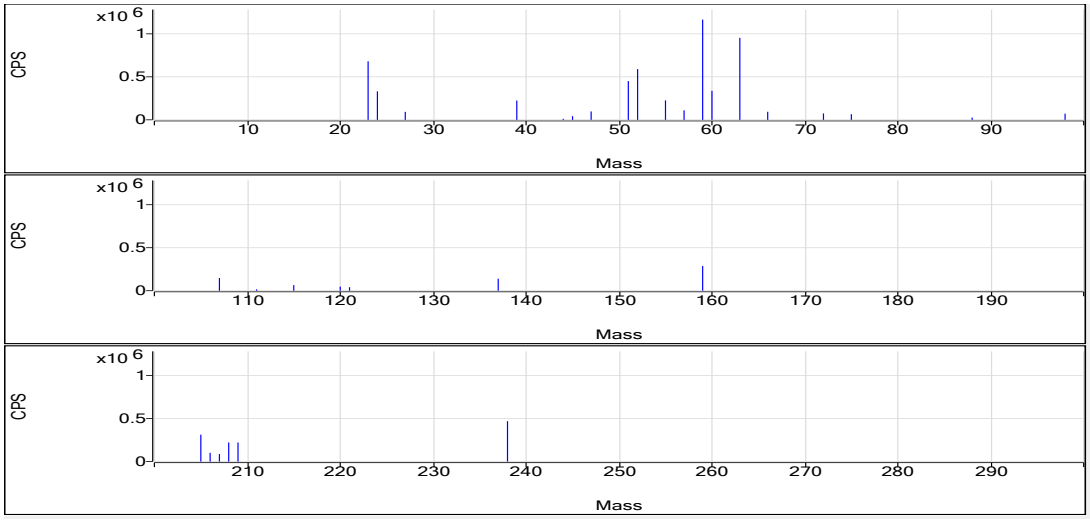


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	47.865	0.0629	91718.29	0.0013	4.694E-05
Be	9	1	No Gas	44.87	0.059	88316.30	0.0013	4.694E-05
Be	9	1	No Gas	48.311	0.0635	92754.65	0.0013	4.694E-05
Se	78	2	H2	52.99	0.0206	3325.05	0.0004	1.089E-05
Se	78	2	H2	51.728	0.0202	3287.05	0.0004	1.089E-05
Se	78	2	H2	48.637	0.0189	3119.68	0.0004	1.089E-05
Na	23	3	He	5250.932	9.1266	677304.29	0.0017	0.1065
Na	23	3	He	5286.457	9.1876	677949.83	0.0017	0.1065
Na	23	3	He	5356.217	9.3075	676319.13	0.0017	0.1065
Mg	24	3	He	5251.952	4.4328	328964.96	0.0008	0.004846
Mg	24	3	He	5309.1	4.481	330646.67	0.0008	0.004846
Mg	24	3	He	5369.503	4.5319	329304.96	0.0008	0.004846
Al	27	3	He	5078.603	1.227	91058.68	0.0002	0.001063
Al	27	3	He	5172.707	1.2497	92216.29	0.0002	0.001063
Al	27	3	He	5280.39	1.2757	92698.86	0.0002	0.001063
K	39	3	He	5210.585	3.021	224193.40	0.0006	0.1436
K	39	3	He	5252.671	3.0442	224631.44	0.0006	0.1436
K	39	3	He	5246.225	3.0407	220947.24	0.0006	0.1436
Ca	44	3	He	5278.012	0.1655	12285.44	0	0.001611
Ca	44	3	He	4898.059	0.1537	11344.66	0	0.001611
Ca	44	3	He	5276.32	0.1655	12025.37	0	0.001611
Ti	47	3	He	5143.32	1.2901	95741.73	0.0003	0.0002737
Ti	47	3	He	5266.377	1.321	97473.61	0.0003	0.0002737
Ti	47	3	He	5332.48	1.3375	97191.75	0.0003	0.0002737
V	51	3	He	516.315	6.0471	448763.69	0.0117	0.007326
V	51	3	He	518.452	6.0721	448052.53	0.0117	0.007326
V	51	3	He	526.852	6.1703	448359.72	0.0117	0.007326
Cr	52	3	He	516.049	7.8834	585043.23	0.0152	0.02538
Cr	52	3	He	519.214	7.9316	585267.06	0.0152	0.02538
Cr	52	3	He	531.457	8.118	589888.27	0.0152	0.02538
Mn	55	3	He	513.041	3.042	225755.45	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	513.891	3.0471	224840.21	0.0059	0.01385
Mn	55	3	He	522.037	3.0951	224905.23	0.0059	0.01385
Fe	57	3	He	5013.376	1.4564	108079.81	0.0003	0.003918
Fe	57	3	He	5098.225	1.4809	109278.15	0.0003	0.003918
Fe	57	3	He	5293.165	1.5374	111715.55	0.0003	0.003918
Co	59	3	He	510.433	15.5766	1155973.50	0.0305	0.003084
Co	59	3	He	517.095	15.7799	1164389.44	0.0305	0.003084
Co	59	3	He	522.016	15.93	1157541.23	0.0305	0.003084
Ni	60	3	He	513.066	4.5205	335478.90	0.0088	0.009003
Ni	60	3	He	516.399	4.5499	335730.46	0.0088	0.009003
Ni	60	3	He	524.896	4.6246	336040.15	0.0088	0.009003
Cu	63	3	He	510.011	12.7231	944208.89	0.0249	0.004937
Cu	63	3	He	514.238	12.8285	946609.75	0.0249	0.004937
Cu	63	3	He	525.755	13.1157	953042.64	0.0249	0.004937
Zn	66	3	He	508.771	1.2548	93118.87	0.0025	0.004836
Zn	66	3	He	507.595	1.2519	92375.19	0.0025	0.004836
Zn	66	3	He	524.787	1.2941	94035.62	0.0025	0.004836
As	75	3	He	506.443	0.8812	65397.54	0.0017	0.0004347
As	75	3	He	510.705	0.8886	65571.98	0.0017	0.0004347
As	75	3	He	512.388	0.8916	64784.71	0.0017	0.0004347
Sr	88	3	He	52.341	0.4099	26094.62	0.0078	0.0007762
Sr	88	3	He	49.71	0.3894	25253.00	0.0078	0.0007762
Sr	88	3	He	51.284	0.4017	25914.21	0.0078	0.0007762
Mo	98	3	He	50.179	1.1055	70374.74	0.022	0.0005162
Mo	98	3	He	50.51	1.1128	72174.41	0.022	0.0005162
Mo	98	3	He	50.104	1.1039	71218.97	0.022	0.0005162
Ag	107	3	He	51.264	2.333	148510.12	0.0455	0.0004641
Ag	107	3	He	50.04	2.2773	147700.52	0.0455	0.0004641
Ag	107	3	He	49.475	2.2516	145265.58	0.0455	0.0004641
Cd	111	3	He	50.9	0.2444	15556.64	0.0048	5.152E-05
Cd	111	3	He	49.108	0.2358	15292.36	0.0048	5.152E-05
Cd	111	3	He	50.764	0.2437	15724.81	0.0048	5.152E-05
Sn	120	3	He	51.3	0.747	47552.74	0.0143	0.01559
Sn	120	3	He	49.635	0.7233	46909.51	0.0143	0.01559
Sn	120	3	He	50.972	0.7423	47893.66	0.0143	0.01559
Sb	121	3	He	51.039	0.6334	40319.10	0.0124	0.000258
Sb	121	3	He	50.629	0.6283	40750.42	0.0124	0.000258
Sb	121	3	He	51.085	0.634	40901.04	0.0124	0.000258
Ba	137	3	He	494.077	2.1618	137611.43	0.0044	0.000309
Ba	137	3	He	487.737	2.1341	138409.25	0.0044	0.000309
Ba	137	3	He	493.603	2.1597	139337.57	0.0044	0.000309
Tl	205	3	He	51.512	1.425	310144.21	0.0276	0.001005
Tl	205	3	He	50.829	1.4061	311450.23	0.0276	0.001005
Tl	205	3	He	50.317	1.392	311198.02	0.0276	0.001005
Pb	208	3	He	51.513	1.8771	219959.76	0.0364	0.002176
Pb	208	3	He	50.471	1.8392	220412.67	0.0364	0.002176
Pb	208	3	He	50.279	1.8322	221558.34	0.0364	0.002176
U	238	3	He	50.795	2.137	465108.35	0.0421	0.00024
U	238	3	He	49.968	2.1023	465639.52	0.0421	0.00024
U	238	3	He	50.142	2.1096	471625.70	0.0421	0.00024
Sc	45	1	No Gas			3326582.14		
Sc	45	1	No Gas			3391313.39		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3307180.89		
Ge	72	1	No Gas			1457149.35		
Ge	72	1	No Gas			1496684.82		
Ge	72	1	No Gas			1460014.82		
Sc	45	2	H2			190412.71		
Sc	45	2	H2			198389.90		
Sc	45	2	H2			202291.66		
Ge	72	2	H2			161071.80		
Ge	72	2	H2			163115.12		
Ge	72	2	H2			164641.17		
In	115	2	H2			440252.42		
In	115	2	H2			436283.98		
In	115	2	H2			448332.92		
Sc	45	3	He			41921.14		
Sc	45	3	He			42251.47		
Sc	45	3	He			42352.00		
Ge	72	3	He			74211.97		
Ge	72	3	He			73789.31		
Ge	72	3	He			72664.05		
In	115	3	He			64027.08		
In	115	3	He			65223.16		
In	115	3	He			64890.09		
Tb	159	3	He			286565.70		
Tb	159	3	He			284949.25		
Tb	159	3	He			282877.18		
Bi	209	3	He			217641.74		
Bi	209	3	He			221495.19		
Bi	209	3	He			223565.56		

Quantitation Report

Data File Name	113_CCB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 13:45:45
Sample Name	CCB 4654618
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

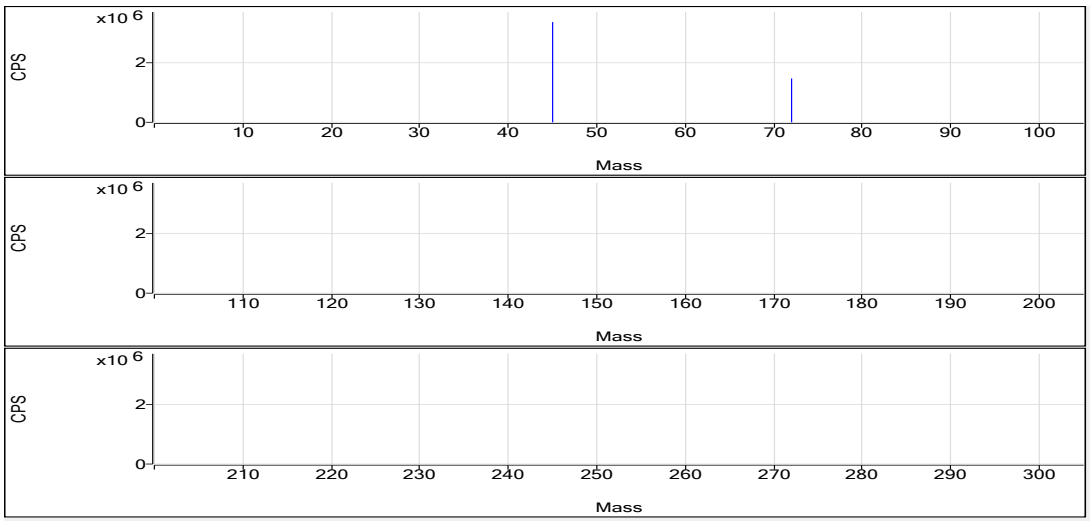
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.032	ppb	41.3	130.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.065	ppb	37.1	5.78	0.0000	Pulse	1.5000	3
Na	23	72	He	16.659	ppb	13.9	9890.21	0.1351	Pulse	0.1000	3
Mg	24	72	He	17.078	ppb	17.8	1410.13	0.0192	Pulse	0.1000	3
Al	27	72	He	1.435	ppb	78.6	103.34	0.0014	Pulse	0.1000	3
K	39	72	He	1.859	ppb	449.8	10597.49	0.1447	Pulse	0.1000	3
Ca	44	72	He	33.120	ppb	55.1	193.34	0.0026	Pulse	0.1000	3
Ti	47	72	He	1.816	ppb	19.7	53.33	0.0007	Pulse	0.1000	3
V	51	72	He	0.201	ppb	9.2	708.69	0.0097	Pulse	0.5000	3
Cr	52	72	He	0.158	ppb	61.2	2036.88	0.0278	Pulse	0.1000	3
Mn	55	72	He	0.624	ppb	39.9	1283.44	0.0175	Pulse	0.1000	3
Fe	57	72	He	5.028	ppb	49.9	393.35	0.0054	Pulse	0.1000	3
Co	59	72	He	0.286	ppb	21.9	866.73	0.0118	Pulse	0.1000	3
Ni	60	72	He	0.895	ppb	15.7	1236.77	0.0169	Pulse	0.1000	3
Cu	63	72	He	0.215	ppb	19.7	753.38	0.0103	Pulse	0.1000	3
Zn	66	72	He	-0.172	ppb	N/A	323.35	0.0044	Pulse	0.1000	3
As	75	72	He	0.289	ppb	27.8	68.67	0.0009	Pulse	0.5000	3
Sr	88	115	He	0.230	ppb	45.9	166.68	0.0026	Pulse	0.1000	3
Mo	98	115	He	0.042	ppb	26.5	93.33	0.0014	Pulse	0.1000	3
Ag	107	115	He	0.022	ppb	73.5	93.34	0.0015	Pulse	0.1000	3
Cd	111	115	He	0.024	ppb	113.8	10.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.193	ppb	45.5	1183.42	0.0183	Pulse	0.1000	3
Sb	121	115	He	0.121	ppb	43.7	113.34	0.0018	Pulse	0.1000	3
Ba	137	115	He	0.319	ppb	11.2	110.00	0.0017	Pulse	0.1000	3
Tl	205	209	He	0.245	ppb	11.7	1720.18	0.0078	Pulse	0.1000	3
Pb	208	209	He	0.007	ppb	256.0	536.69	0.0024	Pulse	0.1000	3
U	238	209	He	0.021	ppb	26.3	250.01	0.0011	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3351835.06	0.8	103.4	Pulse	0.1000	3
No Gas	Ge	72	1466041.75	1.1	101.8	Pulse	0.1000	3
H2	Sc	45	194390.72	2.0	99.5	Pulse	0.1000	3
H2	Ge	72	160785.91	2.2	98.6	Pulse	0.1000	3
H2	In	115	441370.71	2.4	101.9	Pulse	0.1000	3
He	Sc	45	42070.97	0.9	105.2	Pulse	0.1000	3
He	Ge	72	73236.77	1.7	101.3	Pulse	0.1000	3
He	In	115	64550.01	0.9	99.9	Pulse	0.1000	3
He	Tb	159	281469.72	0.4	98.4	Pulse	0.1000	3
He	Bi	209	220779.45	0.6	99.4	Pulse	0.1000	3

No Gas



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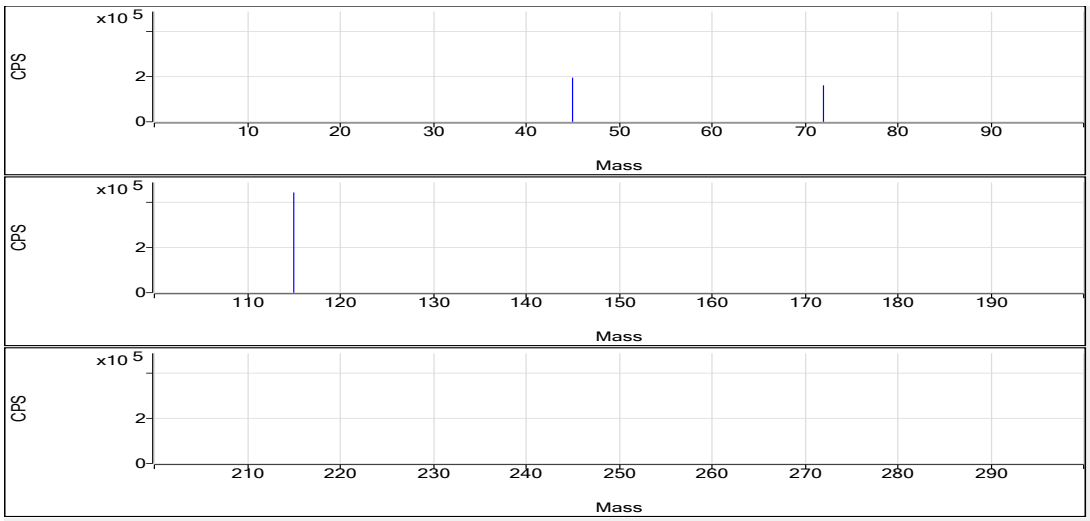
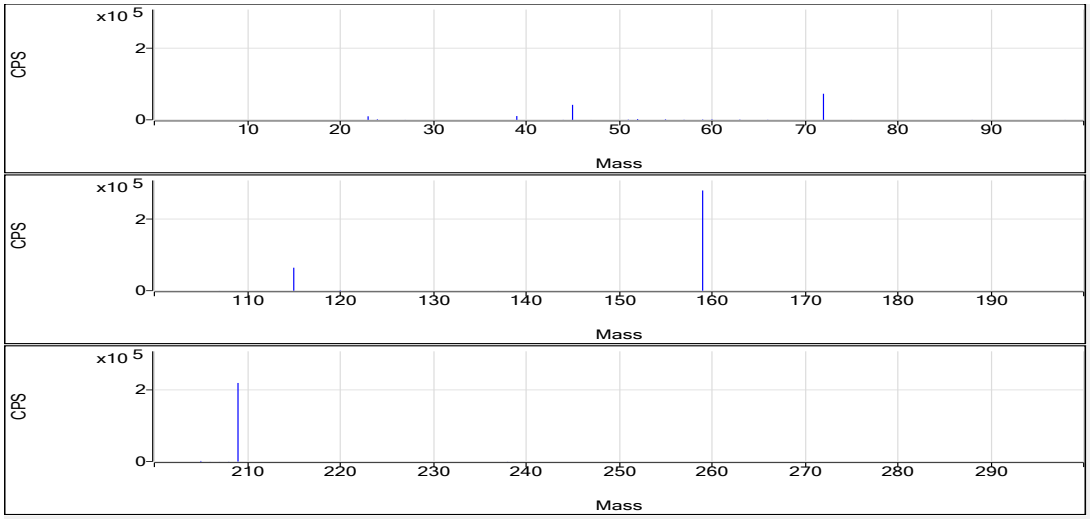


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.045	0.0001	156.00	0.0013	4.694E-05
Be	9	1	No Gas	0.032	0.0001	132.00	0.0013	4.694E-05
Be	9	1	No Gas	0.019	0.0001	104.00	0.0013	4.694E-05
Se	78	2	H2	0.058	0	5.33	0.0004	1.089E-05
Se	78	2	H2	0.091	0	7.33	0.0004	1.089E-05
Se	78	2	H2	0.045	0	4.67	0.0004	1.089E-05
Na	23	3	He	15.952	0.1339	9983.66	0.0017	0.1065
Na	23	3	He	19.246	0.1395	10053.71	0.0017	0.1065
Na	23	3	He	14.779	0.1318	9633.27	0.0017	0.1065
Mg	24	3	He	16.836	0.019	1420.13	0.0008	0.004846
Mg	24	3	He	14.17	0.0168	1210.11	0.0008	0.004846
Mg	24	3	He	20.228	0.0219	1600.15	0.0008	0.004846
Al	27	3	He	1.708	0.0015	110.01	0.0002	0.001063
Al	27	3	He	0.196	0.0011	80.00	0.0002	0.001063
Al	27	3	He	2.401	0.0016	120.00	0.0002	0.001063
K	39	3	He	10.473	0.1494	11144.58	0.0006	0.1436
K	39	3	He	1.334	0.1444	10403.94	0.0006	0.1436
K	39	3	He	-6.228	0.1402	10243.96	0.0006	0.1436
Ca	44	3	He	25.841	0.0024	180.01	0	0.001611
Ca	44	3	He	19.626	0.0022	160.01	0	0.001611
Ca	44	3	He	53.893	0.0033	240.01	0	0.001611
Ti	47	3	He	1.582	0.0007	50.00	0.0003	0.0002737
Ti	47	3	He	2.229	0.0008	60.00	0.0003	0.0002737
Ti	47	3	He	1.637	0.0007	50.00	0.0003	0.0002737
V	51	3	He	0.206	0.0097	726.02	0.0117	0.007326
V	51	3	He	0.18	0.0094	680.02	0.0117	0.007326
V	51	3	He	0.216	0.0099	720.02	0.0117	0.007326
Cr	52	3	He	0.27	0.0295	2200.23	0.0152	0.02538
Cr	52	3	He	0.101	0.0269	1940.20	0.0152	0.02538
Cr	52	3	He	0.104	0.027	1970.22	0.0152	0.02538
Mn	55	3	He	0.379	0.0161	1200.09	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.616	0.0175	1260.10	0.0059	0.01385
Mn	55	3	He	0.876	0.019	1390.12	0.0059	0.01385
Fe	57	3	He	4.99	0.0054	400.02	0.0003	0.003918
Fe	57	3	He	7.554	0.0061	440.02	0.0003	0.003918
Fe	57	3	He	2.539	0.0047	340.01	0.0003	0.003918
Co	59	3	He	0.352	0.0138	1030.07	0.0305	0.003084
Co	59	3	He	0.226	0.01	720.05	0.0305	0.003084
Co	59	3	He	0.28	0.0116	850.06	0.0305	0.003084
Ni	60	3	He	1.05	0.0182	1360.12	0.0088	0.009003
Ni	60	3	He	0.775	0.0158	1140.08	0.0088	0.009003
Ni	60	3	He	0.86	0.0166	1210.11	0.0088	0.009003
Cu	63	3	He	0.173	0.0093	690.04	0.0249	0.004937
Cu	63	3	He	0.214	0.0103	740.04	0.0249	0.004937
Cu	63	3	He	0.258	0.0114	830.06	0.0249	0.004937
Zn	66	3	He	-0.058	0.0047	350.02	0.0025	0.004836
Zn	66	3	He	-0.217	0.0043	310.02	0.0025	0.004836
Zn	66	3	He	-0.242	0.0042	310.02	0.0025	0.004836
As	75	3	He	0.367	0.0011	80.00	0.0017	0.0004347
As	75	3	He	0.293	0.0009	68.00	0.0017	0.0004347
As	75	3	He	0.207	0.0008	58.00	0.0017	0.0004347
Sr	88	3	He	0.18	0.0022	140.01	0.0078	0.0007762
Sr	88	3	He	0.16	0.002	130.01	0.0078	0.0007762
Sr	88	3	He	0.352	0.0035	230.01	0.0078	0.0007762
Mo	98	3	He	0.054	0.0017	110.00	0.022	0.0005162
Mo	98	3	He	0.04	0.0014	90.00	0.022	0.0005162
Mo	98	3	He	0.032	0.0012	80.00	0.022	0.0005162
Ag	107	3	He	0.031	0.0019	120.01	0.0455	0.0004641
Ag	107	3	He	0.031	0.0019	120.00	0.0455	0.0004641
Ag	107	3	He	0.003	0.0006	40.00	0.0455	0.0004641
Cd	111	3	He	0.054	0.0003	20.00	0.0048	5.152E-05
Cd	111	3	He	0.015	0.0001	8.00	0.0048	5.152E-05
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Sn	120	3	He	0.141	0.0176	1130.08	0.0143	0.01559
Sn	120	3	He	0.294	0.0198	1270.10	0.0143	0.01559
Sn	120	3	He	0.143	0.0176	1150.08	0.0143	0.01559
Sb	121	3	He	0.18	0.0025	160.01	0.0124	0.000258
Sb	121	3	He	0.105	0.0016	100.00	0.0124	0.000258
Sb	121	3	He	0.078	0.0012	80.00	0.0124	0.000258
Ba	137	3	He	0.285	0.0016	100.00	0.0044	0.000309
Ba	137	3	He	0.357	0.0019	120.01	0.0044	0.000309
Ba	137	3	He	0.315	0.0017	110.00	0.0044	0.000309
Tl	205	3	He	0.256	0.0081	1790.19	0.0276	0.001005
Tl	205	3	He	0.267	0.0084	1860.19	0.0276	0.001005
Tl	205	3	He	0.213	0.0069	1510.15	0.0276	0.001005
Pb	208	3	He	-0.013	0.0017	160.01	0.0364	0.002176
Pb	208	3	He	0.011	0.0026	300.02	0.0364	0.002176
Pb	208	3	He	0.023	0.003	410.02	0.0364	0.002176
U	238	3	He	0.025	0.0013	290.01	0.0421	0.00024
U	238	3	He	0.023	0.0012	270.01	0.0421	0.00024
U	238	3	He	0.015	0.0009	190.01	0.0421	0.00024
Sc	45	1	No Gas			3328557.14		
Sc	45	1	No Gas			3382960.89		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3343987.14		
Ge	72	1	No Gas			1464176.54		
Ge	72	1	No Gas			1483660.92		
Ge	72	1	No Gas			1450287.79		
Sc	45	2	H2			190877.20		
Sc	45	2	H2			193696.36		
Sc	45	2	H2			198598.61		
Ge	72	2	H2			159644.95		
Ge	72	2	H2			157928.21		
Ge	72	2	H2			164784.57		
In	115	2	H2			430468.98		
In	115	2	H2			442427.69		
In	115	2	H2			451215.46		
Sc	45	3	He			41950.69		
Sc	45	3	He			41769.96		
Sc	45	3	He			42492.27		
Ge	72	3	He			74583.60		
Ge	72	3	He			72060.74		
Ge	72	3	He			73065.96		
In	115	3	He			64227.41		
In	115	3	He			64217.97		
In	115	3	He			65232.34		
Tb	159	3	He			281400.82		
Tb	159	3	He			280353.55		
Tb	159	3	He			282654.80		
Bi	209	3	He			221239.63		
Bi	209	3	He			221789.00		
Bi	209	3	He			219309.72		

Quantitation Report

Data File Name	114SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 13:47:45
Sample Name	410-136514-G-5-A
Sample Type	Sample
Comment	D29
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

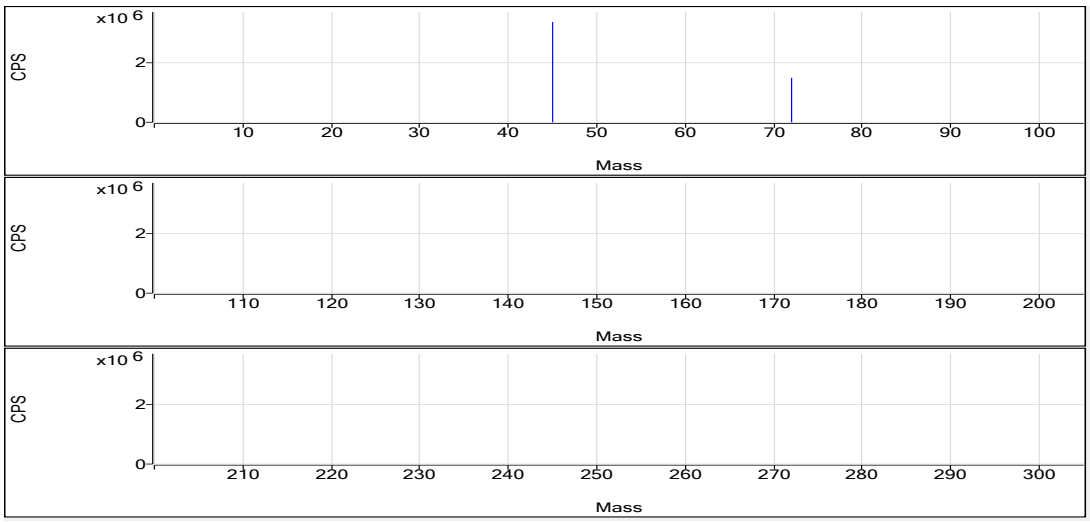
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.003	ppb	284.0	76.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.193	ppb	11.0	14.22	0.0001	Pulse	1.5000	3
Na	23	72	He	5801.519	ppb	0.5	763856.68	10.0724	Pulse	0.1000	3
Mg	24	72	He	27393.178	ppb	1.0	1751773.05	23.1001	Pulse	0.1000	3
Al	27	72	He	96.270	ppb	9.0	1843.52	0.0243	Pulse	0.1000	3
K	39	72	He	2587.821	ppb	0.7	119263.91	1.5727	Pulse	0.1000	3
Ca	44	72	He	77017.263	ppb	0.7	181530.62	2.3938	Pulse	0.1000	3
Ti	47	72	He	1.709	ppb	46.1	53.33	0.0007	Pulse	0.1000	3
V	51	72	He	0.442	ppb	3.1	947.37	0.0125	Pulse	0.5000	3
Cr	52	72	He	0.844	ppb	29.8	2897.04	0.0382	Pulse	0.1000	3
Mn	55	72	He	32.327	ppb	2.2	15518.76	0.2047	Pulse	0.1000	3
Fe	57	72	He	247.818	ppb	3.6	5741.33	0.0757	Pulse	0.1000	3
Co	59	72	He	0.128	ppb	26.6	530.03	0.0070	Pulse	0.1000	3
Ni	60	72	He	3.505	ppb	2.5	3020.43	0.0398	Pulse	0.1000	3
Cu	63	72	He	0.184	ppb	30.7	723.38	0.0095	Pulse	0.1000	3
Zn	66	72	He	0.107	ppb	678.6	386.69	0.0051	Pulse	0.1000	3
As	75	72	He	0.194	ppb	26.5	58.67	0.0008	Pulse	0.5000	3
Sr	88	115	He	70.993	ppb	1.9	35418.28	0.5557	Pulse	0.1000	3
Mo	98	115	He	0.514	ppb	8.8	753.38	0.0118	Pulse	0.1000	3
Ag	107	115	He	0.007	ppb	48.4	50.00	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.029	ppb	64.1	12.00	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.309	ppb	87.4	1276.87	0.0200	Pulse	0.1000	3
Sb	121	115	He	0.051	ppb	38.3	56.67	0.0009	Pulse	0.1000	3
Ba	137	115	He	224.144	ppb	2.3	62502.00	0.9809	Pulse	0.1000	3
Tl	205	209	He	0.065	ppb	21.2	616.71	0.0028	Pulse	0.1000	3
Pb	208	209	He	0.075	ppb	12.1	1080.07	0.0049	Pulse	0.1000	3
U	238	209	He	0.514	ppb	5.3	4804.42	0.0219	Pulse	0.1000	3

ISTD Table:

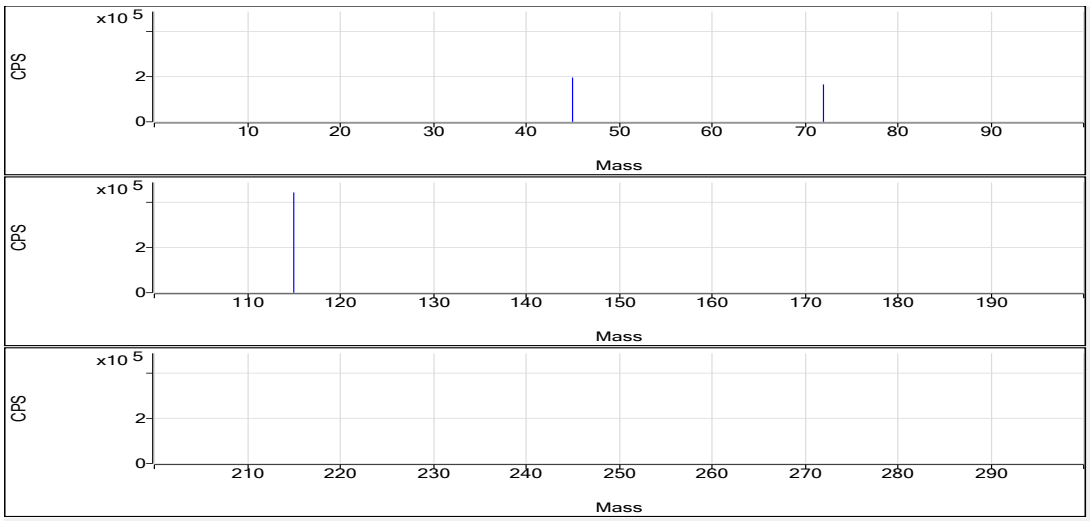
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3385546.62	2.0	104.5	Pulse	0.1000	3
No Gas	Ge	72	1501503.41	1.0	104.3	Pulse	0.1000	3
H2	Sc	45	195657.90	2.0	100.1	Pulse	0.1000	3
H2	Ge	72	165475.36	0.8	101.5	Pulse	0.1000	3
H2	In	115	443205.96	1.5	102.3	Pulse	0.1000	3
He	Sc	45	42352.20	1.4	105.9	Pulse	0.1000	3
He	Ge	72	75839.55	1.4	104.9	Pulse	0.1000	3
He	In	115	63742.60	2.3	98.7	Pulse	0.1000	3
He	Tb	159	283573.42	0.6	99.2	Pulse	0.1000	3
He	Bi	209	219753.78	1.2	98.9	Pulse	0.1000	3

No Gas

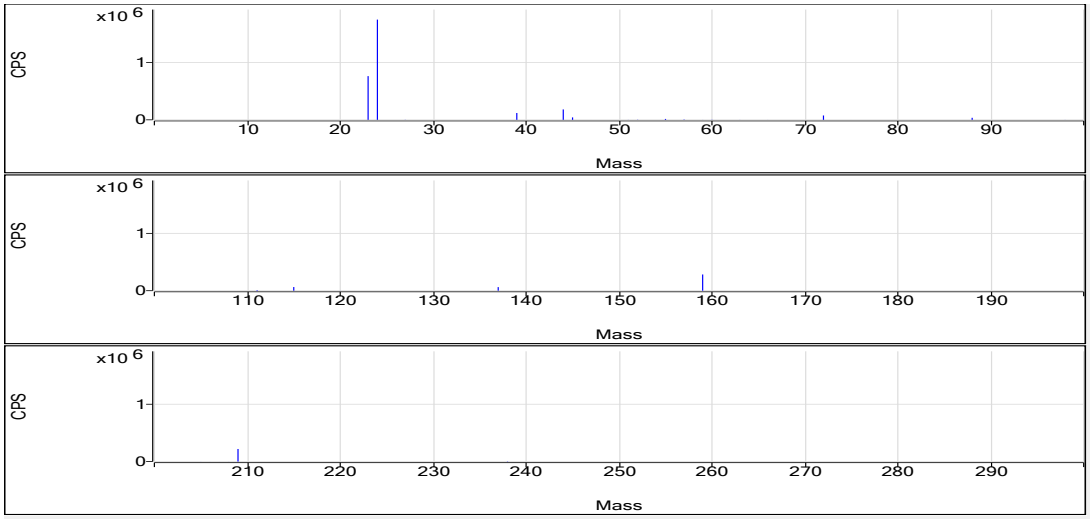


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.004	0.0001	78.00	0.0013	4.694E-05
Be	9	1	No Gas	0.011	0.0001	94.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.006	0	58.00	0.0013	4.694E-05
Se	78	2	H2	0.17	0.0001	12.67	0.0004	1.089E-05
Se	78	2	H2	0.211	0.0001	15.33	0.0004	1.089E-05
Se	78	2	H2	0.198	0.0001	14.67	0.0004	1.089E-05
Na	23	3	He	5824.814	10.1124	755027.72	0.0017	0.1065
Na	23	3	He	5808.395	10.0842	766812.64	0.0017	0.1065
Na	23	3	He	5771.347	10.0206	769729.68	0.0017	0.1065
Mg	24	3	He	27546.853	23.2296	1734399.82	0.0008	0.004846
Mg	24	3	He	27547.79	23.2304	1766458.25	0.0008	0.004846
Mg	24	3	He	27084.892	22.8402	1754461.07	0.0008	0.004846
Al	27	3	He	89.929	0.0228	1700.16	0.0002	0.001063
Al	27	3	He	106.201	0.0267	2030.22	0.0002	0.001063
Al	27	3	He	92.68	0.0234	1800.17	0.0002	0.001063
K	39	3	He	2600.68	1.5798	117950.47	0.0006	0.1436
K	39	3	He	2596.842	1.5776	119965.43	0.0006	0.1436
K	39	3	He	2565.941	1.5606	119875.84	0.0006	0.1436
Ca	44	3	He	77468.199	2.4078	179771.31	0	0.001611
Ca	44	3	He	77112.453	2.3967	182247.75	0	0.001611
Ca	44	3	He	76471.135	2.3768	182572.81	0	0.001611
Ti	47	3	He	1.045	0.0005	40.00	0.0003	0.0002737
Ti	47	3	He	2.579	0.0009	70.00	0.0003	0.0002737
Ti	47	3	He	1.504	0.0007	50.00	0.0003	0.0002737
V	51	3	He	0.457	0.0127	946.04	0.0117	0.007326
V	51	3	He	0.437	0.0124	946.04	0.0117	0.007326
V	51	3	He	0.431	0.0124	950.04	0.0117	0.007326
Cr	52	3	He	1.13	0.0426	3180.47	0.0152	0.02538
Cr	52	3	He	0.743	0.0367	2790.34	0.0152	0.02538
Cr	52	3	He	0.659	0.0354	2720.32	0.0152	0.02538
Mn	55	3	He	32.89	0.208	15528.75	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	32.541	0.2059	15658.84	0.0059	0.01385
Mn	55	3	He	31.55	0.2001	15368.68	0.0059	0.01385
Fe	57	3	He	248.664	0.076	5671.36	0.0003	0.003918
Fe	57	3	He	256.173	0.0781	5941.42	0.0003	0.003918
Fe	57	3	He	238.617	0.073	5611.22	0.0003	0.003918
Co	59	3	He	0.167	0.0082	610.03	0.0305	0.003084
Co	59	3	He	0.101	0.0062	470.02	0.0305	0.003084
Co	59	3	He	0.117	0.0066	510.03	0.0305	0.003084
Ni	60	3	He	3.409	0.039	2910.39	0.0088	0.009003
Ni	60	3	He	3.583	0.0405	3080.44	0.0088	0.009003
Ni	60	3	He	3.522	0.04	3070.45	0.0088	0.009003
Cu	63	3	He	0.119	0.0079	590.03	0.0249	0.004937
Cu	63	3	He	0.219	0.0104	790.05	0.0249	0.004937
Cu	63	3	He	0.214	0.0103	790.06	0.0249	0.004937
Zn	66	3	He	-0.115	0.0046	340.02	0.0025	0.004836
Zn	66	3	He	0.922	0.0071	540.03	0.0025	0.004836
Zn	66	3	He	-0.485	0.0036	280.01	0.0025	0.004836
As	75	3	He	0.135	0.0007	50.00	0.0017	0.0004347
As	75	3	He	0.219	0.0008	62.00	0.0017	0.0004347
As	75	3	He	0.229	0.0008	64.00	0.0017	0.0004347
Sr	88	3	He	71.759	0.5617	34843.67	0.0078	0.0007762
Sr	88	3	He	69.414	0.5434	35134.23	0.0078	0.0007762
Sr	88	3	He	71.805	0.5621	36276.95	0.0078	0.0007762
Mo	98	3	He	0.533	0.0123	760.05	0.022	0.0005162
Mo	98	3	He	0.545	0.0125	810.05	0.022	0.0005162
Mo	98	3	He	0.462	0.0107	690.04	0.022	0.0005162
Ag	107	3	He	0.008	0.0008	50.00	0.0455	0.0004641
Ag	107	3	He	0.01	0.0009	60.00	0.0455	0.0004641
Ag	107	3	He	0.003	0.0006	40.00	0.0455	0.0004641
Cd	111	3	He	0.05	0.0003	18.00	0.0048	5.152E-05
Cd	111	3	He	0.021	0.0002	10.00	0.0048	5.152E-05
Cd	111	3	He	0.015	0.0001	8.00	0.0048	5.152E-05
Sn	120	3	He	0.139	0.0176	1090.08	0.0143	0.01559
Sn	120	3	He	0.621	0.0244	1580.45	0.0143	0.01559
Sn	120	3	He	0.167	0.018	1160.08	0.0143	0.01559
Sb	121	3	He	0.057	0.001	60.00	0.0124	0.000258
Sb	121	3	He	0.029	0.0006	40.00	0.0124	0.000258
Sb	121	3	He	0.067	0.0011	70.00	0.0124	0.000258
Ba	137	3	He	230.177	1.0073	62481.94	0.0044	0.000309
Ba	137	3	He	221.21	0.9681	62592.23	0.0044	0.000309
Ba	137	3	He	221.045	0.9673	62431.83	0.0044	0.000309
Tl	205	3	He	0.08	0.0032	700.04	0.0276	0.001005
Tl	205	3	He	0.053	0.0025	550.04	0.0276	0.001005
Tl	205	3	He	0.062	0.0027	600.04	0.0276	0.001005
Pb	208	3	He	0.07	0.0047	620.04	0.0364	0.002176
Pb	208	3	He	0.07	0.0047	540.04	0.0364	0.002176
Pb	208	3	He	0.086	0.0053	680.05	0.0364	0.002176
U	238	3	He	0.482	0.0205	4450.89	0.0421	0.00024
U	238	3	He	0.53	0.0225	4991.21	0.0421	0.00024
U	238	3	He	0.529	0.0225	4971.16	0.0421	0.00024
Sc	45	1	No Gas			3380044.64		
Sc	45	1	No Gas			3454297.76		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3322297.45		
Ge	72	1	No Gas			1498598.88		
Ge	72	1	No Gas			1518440.13		
Ge	72	1	No Gas			1487471.23		
Sc	45	2	H2			191487.01		
Sc	45	2	H2			199463.06		
Sc	45	2	H2			196023.63		
Ge	72	2	H2			164735.17		
Ge	72	2	H2			164722.09		
Ge	72	2	H2			166968.83		
In	115	2	H2			436106.79		
In	115	2	H2			444125.27		
In	115	2	H2			449385.81		
Sc	45	3	He			42993.75		
Sc	45	3	He			41770.61		
Sc	45	3	He			42292.24		
Ge	72	3	He			74663.22		
Ge	72	3	He			76040.70		
Ge	72	3	He			76814.74		
In	115	3	He			62038.61		
In	115	3	He			64669.94		
In	115	3	He			64549.13		
Tb	159	3	He			282638.08		
Tb	159	3	He			282469.88		
Tb	159	3	He			285612.30		
Bi	209	3	He			216768.82		
Bi	209	3	He			221607.83		
Bi	209	3	He			220884.70		

Quantitation Report

Data File Name	115SMPL.d
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Acq Time	2023-08-10 13:49:45
Sample Name	410-136848-W-8-A
Sample Type	Sample
Comment	D29
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

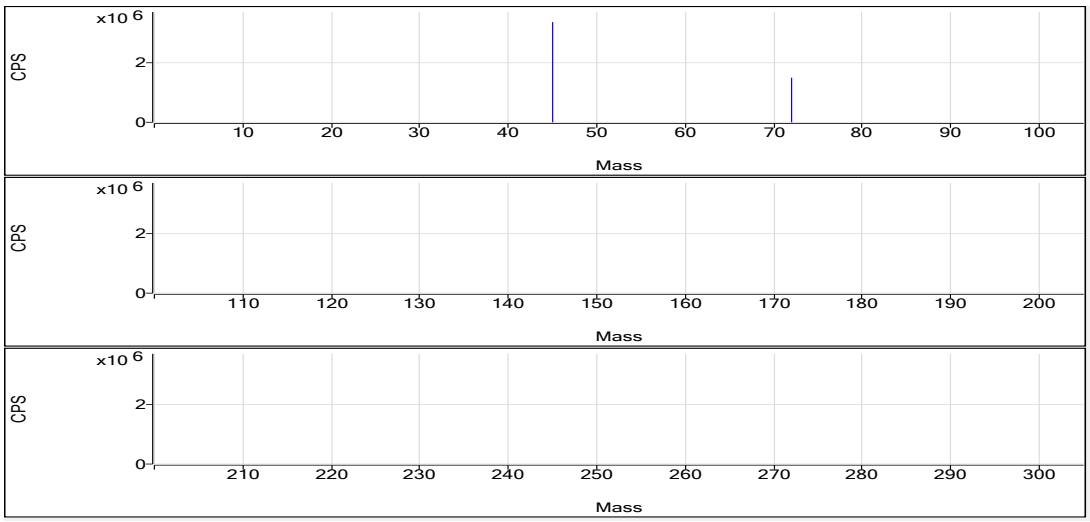
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.002	ppb	147.7	73.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.013	ppb	136.1	2.67	0.0000	Pulse	1.5000	3
Na	23	72	He	12435.735	ppb	0.5	1610121.17	21.4688	Pulse	0.1000	3
Mg	24	72	He	17818.619	ppb	0.7	1127047.17	15.0278	Pulse	0.1000	3
Al	27	72	He	4.065	ppb	43.2	153.34	0.0020	Pulse	0.1000	3
K	39	72	He	6690.105	ppb	0.7	287850.63	3.8380	Pulse	0.1000	3
Ca	44	72	He	104024.494	ppb	0.9	242446.91	3.2326	Pulse	0.1000	3
Ti	47	72	He	-0.029	ppb	N/A	20.00	0.0003	Pulse	0.1000	3
V	51	72	He	0.145	ppb	45.2	676.69	0.0090	Pulse	0.5000	3
Cr	52	72	He	0.135	ppb	119.2	2056.89	0.0274	Pulse	0.1000	3
Mn	55	72	He	451.556	ppb	0.7	200927.43	2.6791	Pulse	0.1000	3
Fe	57	72	He	232.422	ppb	5.7	5344.50	0.0713	Pulse	0.1000	3
Co	59	72	He	0.286	ppb	1.8	886.73	0.0118	Pulse	0.1000	3
Ni	60	72	He	1.402	ppb	11.2	1600.14	0.0213	Pulse	0.1000	3
Cu	63	72	He	0.233	ppb	16.8	806.72	0.0108	Pulse	0.1000	3
Zn	66	72	He	7.292	ppb	9.2	1706.83	0.0228	Pulse	0.1000	3
As	75	72	He	0.589	ppb	45.5	109.33	0.0015	Pulse	0.5000	3
Sr	88	115	He	350.254	ppb	2.6	175344.32	2.7387	Pulse	0.1000	3
Mo	98	115	He	0.211	ppb	13.1	330.01	0.0052	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	15662.0	30.00	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.052	ppb	46.2	19.33	0.0003	Pulse	0.5000	3
Sn	120	115	He	0.354	ppb	171.1	1317.15	0.0206	Pulse	0.1000	3
Sb	121	115	He	0.071	ppb	35.5	73.34	0.0011	Pulse	0.1000	3
Ba	137	115	He	46.315	ppb	2.4	12996.61	0.2029	Pulse	0.1000	3
Tl	205	209	He	0.041	ppb	25.8	470.03	0.0021	Pulse	0.1000	3
Pb	208	209	He	0.049	ppb	39.6	876.71	0.0040	Pulse	0.1000	3
U	238	209	He	0.785	ppb	2.8	7348.98	0.0332	Pulse	0.1000	3

ISTD Table:

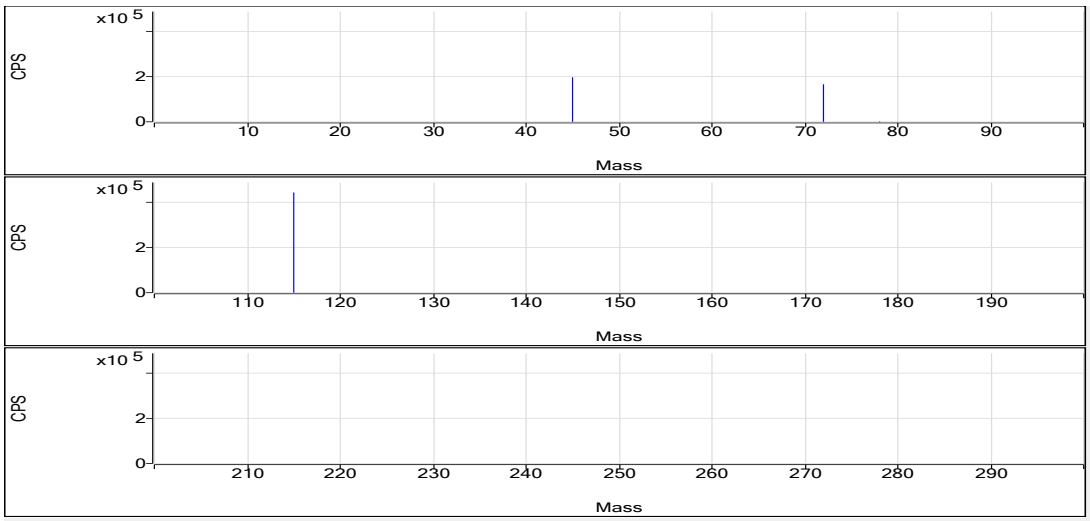
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3352298.91	0.8	103.4	Pulse	0.1000	3
No Gas	Ge	72	1491545.13	1.1	103.6	Pulse	0.1000	3
H2	Sc	45	196570.74	0.9	100.6	Pulse	0.1000	3
H2	Ge	72	165670.12	1.1	101.6	Pulse	0.1000	3
H2	In	115	442787.69	1.7	102.2	Pulse	0.1000	3
He	Sc	45	42275.09	0.4	105.7	Pulse	0.1000	3
He	Ge	72	74998.53	0.6	103.7	Pulse	0.1000	3
He	In	115	64036.79	1.3	99.1	Pulse	0.1000	3
He	Tb	159	285760.95	1.2	99.9	Pulse	0.1000	3
He	Bi	209	221058.13	0.8	99.5	Pulse	0.1000	3

No Gas

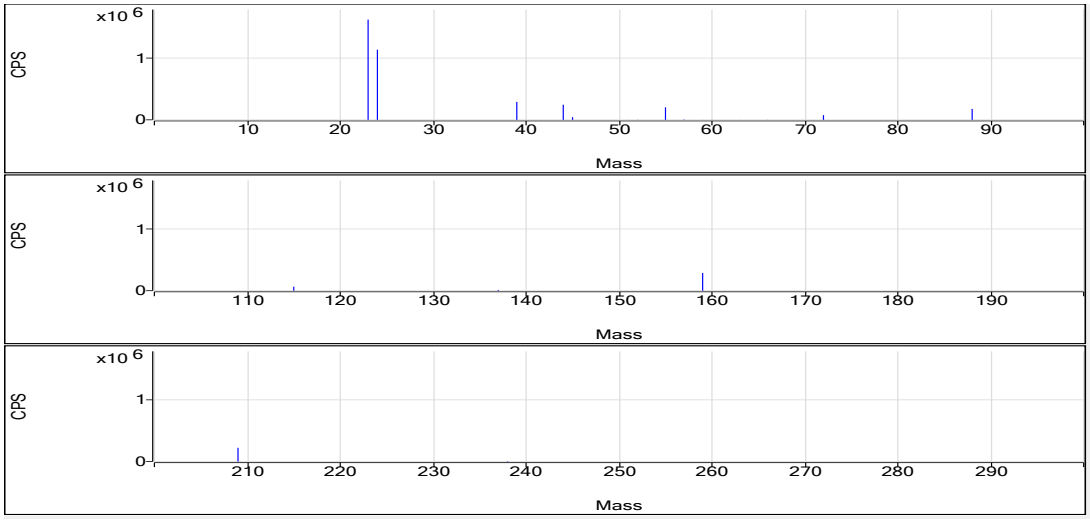


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.001	0	68.00	0.0013	4.694E-05
Be	9	1	No Gas	0.002	0	74.00	0.0013	4.694E-05
Be	9	1	No Gas	0.004	0.0001	78.00	0.0013	4.694E-05
Se	78	2	H2	0.035	0	4.00	0.0004	1.089E-05
Se	78	2	H2	0.003	0	2.00	0.0004	1.089E-05
Se	78	2	H2	0.003	0	2.00	0.0004	1.089E-05
Na	23	3	He	12475.162	21.5366	1605184.82	0.0017	0.1065
Na	23	3	He	12365.219	21.3477	1603542.01	0.0017	0.1065
Na	23	3	He	12466.824	21.5222	1621636.69	0.0017	0.1065
Mg	24	3	He	17914.086	15.1082	1126063.11	0.0008	0.004846
Mg	24	3	He	17669.134	14.9017	1119349.91	0.0008	0.004846
Mg	24	3	He	17872.638	15.0733	1135728.50	0.0008	0.004846
Al	27	3	He	2.823	0.0017	130.01	0.0002	0.001063
Al	27	3	He	6.076	0.0025	190.01	0.0002	0.001063
Al	27	3	He	3.295	0.0019	140.01	0.0002	0.001063
K	39	3	He	6646.373	3.8138	284257.55	0.0006	0.1436
K	39	3	He	6688.691	3.8372	288234.21	0.0006	0.1436
K	39	3	He	6735.252	3.8629	291060.13	0.0006	0.1436
Ca	44	3	He	103320.818	3.2107	239306.32	0	0.001611
Ca	44	3	He	103636.052	3.2205	241911.85	0	0.001611
Ca	44	3	He	105116.612	3.2665	246122.57	0	0.001611
Ti	47	3	He	-0.556	0.0001	10.00	0.0003	0.0002737
Ti	47	3	He	0.501	0.0004	30.00	0.0003	0.0002737
Ti	47	3	He	-0.033	0.0003	20.00	0.0003	0.0002737
V	51	3	He	0.073	0.0082	610.02	0.0117	0.007326
V	51	3	He	0.159	0.0092	690.02	0.0117	0.007326
V	51	3	He	0.202	0.0097	730.02	0.0117	0.007326
Cr	52	3	He	0.307	0.0301	2240.27	0.0152	0.02538
Cr	52	3	He	0.108	0.027	2030.21	0.0152	0.02538
Cr	52	3	He	-0.011	0.0252	1900.19	0.0152	0.02538
Mn	55	3	He	454.437	2.6961	200951.05	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	448.263	2.6597	199784.08	0.0059	0.01385
Mn	55	3	He	451.967	2.6816	202047.15	0.0059	0.01385
Fe	57	3	He	228.271	0.0701	5221.12	0.0003	0.003918
Fe	57	3	He	221.798	0.0682	5121.07	0.0003	0.003918
Fe	57	3	He	247.198	0.0755	5691.32	0.0003	0.003918
Co	59	3	He	0.282	0.0117	870.06	0.0305	0.003084
Co	59	3	He	0.292	0.012	900.06	0.0305	0.003084
Co	59	3	He	0.286	0.0118	890.06	0.0305	0.003084
Ni	60	3	He	1.265	0.0201	1500.14	0.0088	0.009003
Ni	60	3	He	1.368	0.021	1580.13	0.0088	0.009003
Ni	60	3	He	1.572	0.0228	1720.16	0.0088	0.009003
Cu	63	3	He	0.189	0.0097	720.04	0.0249	0.004937
Cu	63	3	He	0.245	0.0111	830.06	0.0249	0.004937
Cu	63	3	He	0.265	0.0115	870.06	0.0249	0.004937
Zn	66	3	He	6.552	0.0209	1560.14	0.0025	0.004836
Zn	66	3	He	7.461	0.0232	1740.18	0.0025	0.004836
Zn	66	3	He	7.864	0.0242	1820.18	0.0025	0.004836
As	75	3	He	0.876	0.002	146.00	0.0017	0.0004347
As	75	3	He	0.546	0.0014	104.00	0.0017	0.0004347
As	75	3	He	0.345	0.001	78.00	0.0017	0.0004347
Sr	88	3	He	346.245	2.7074	175094.26	0.0078	0.0007762
Sr	88	3	He	343.874	2.6889	172948.90	0.0078	0.0007762
Sr	88	3	He	360.644	2.82	177989.80	0.0078	0.0007762
Mo	98	3	He	0.194	0.0048	310.01	0.022	0.0005162
Mo	98	3	He	0.195	0.0048	310.01	0.022	0.0005162
Mo	98	3	He	0.243	0.0059	370.02	0.022	0.0005162
Ag	107	3	He	0.01	0.0009	60.00	0.0455	0.0004641
Ag	107	3	He	-0.007	0.0002	10.00	0.0455	0.0004641
Ag	107	3	He	-0.003	0.0003	20.00	0.0455	0.0004641
Cd	111	3	He	0.079	0.0004	28.00	0.0048	5.152E-05
Cd	111	3	He	0.035	0.0002	14.00	0.0048	5.152E-05
Cd	111	3	He	0.042	0.0003	16.00	0.0048	5.152E-05
Sn	120	3	He	-0.041	0.015	970.08	0.0143	0.01559
Sn	120	3	He	0.052	0.0163	1050.07	0.0143	0.01559
Sn	120	3	He	1.053	0.0306	1931.29	0.0143	0.01559
Sb	121	3	He	0.079	0.0012	80.00	0.0124	0.000258
Sb	121	3	He	0.092	0.0014	90.01	0.0124	0.000258
Sb	121	3	He	0.043	0.0008	50.00	0.0124	0.000258
Ba	137	3	He	47.599	0.2085	13487.05	0.0044	0.000309
Ba	137	3	He	45.726	0.2004	12886.60	0.0044	0.000309
Ba	137	3	He	45.619	0.1999	12616.18	0.0044	0.000309
Tl	205	3	He	0.048	0.0023	520.03	0.0276	0.001005
Tl	205	3	He	0.045	0.0022	490.03	0.0276	0.001005
Tl	205	3	He	0.029	0.0018	400.03	0.0276	0.001005
Pb	208	3	He	0.042	0.0037	430.02	0.0364	0.002176
Pb	208	3	He	0.034	0.0034	340.02	0.0364	0.002176
Pb	208	3	He	0.071	0.0048	590.04	0.0364	0.002176
U	238	3	He	0.776	0.0329	7292.30	0.0421	0.00024
U	238	3	He	0.81	0.0343	7512.39	0.0421	0.00024
U	238	3	He	0.768	0.0326	7242.26	0.0421	0.00024
Sc	45	1	No Gas			3332690.26		
Sc	45	1	No Gas			3381809.64		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3342396.83		
Ge	72	1	No Gas			1479657.95		
Ge	72	1	No Gas			1510148.41		
Ge	72	1	No Gas			1484829.04		
Sc	45	2	H2			195153.14		
Sc	45	2	H2			198475.19		
Sc	45	2	H2			196083.88		
Ge	72	2	H2			164115.74		
Ge	72	2	H2			165269.20		
Ge	72	2	H2			167625.43		
In	115	2	H2			434880.89		
In	115	2	H2			443924.17		
In	115	2	H2			449558.00		
Sc	45	3	He			42181.50		
Sc	45	3	He			42452.27		
Sc	45	3	He			42191.50		
Ge	72	3	He			74533.04		
Ge	72	3	He			75115.48		
Ge	72	3	He			75347.06		
In	115	3	He			64679.95		
In	115	3	He			64328.40		
In	115	3	He			63132.83		
Tb	159	3	He			284087.59		
Tb	159	3	He			283392.73		
Tb	159	3	He			289802.52		
Bi	209	3	He			221780.19		
Bi	209	3	He			218955.80		
Bi	209	3	He			222438.40		

Quantitation Report

Data File Name	116SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 13:51:44
Sample Name	410-136848-W-7-A
Sample Type	Sample
Comment	D29
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

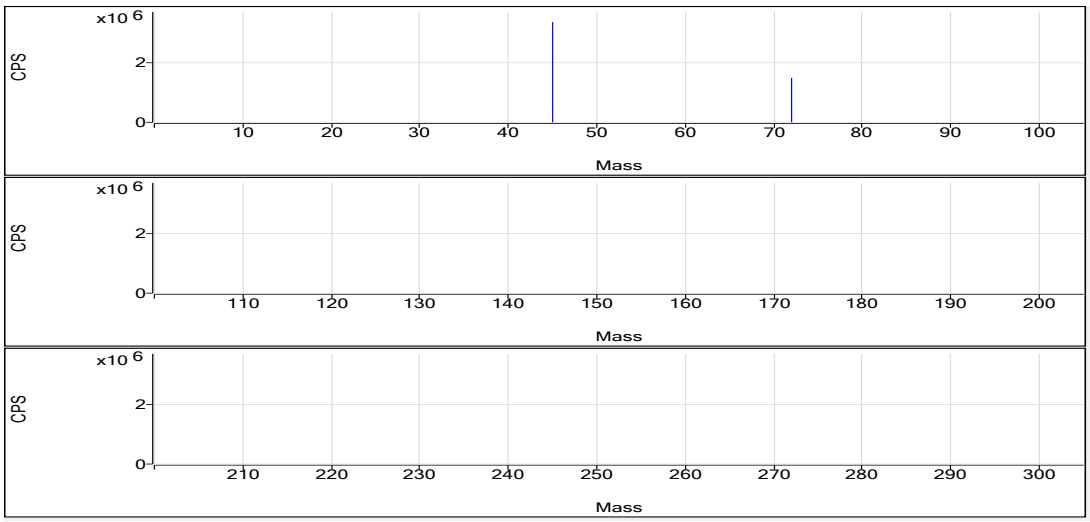
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.002	ppb	N/A	66.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.084	ppb	17.3	7.11	0.0000	Pulse	1.5000	3
Na	23	72	He	11852.741	ppb	0.8	1561422.74	20.4673	Pulse	0.1000	3
Mg	24	72	He	14198.132	ppb	0.9	913575.04	11.9753	Pulse	0.1000	3
Al	27	72	He	60.375	ppb	6.5	1193.42	0.0156	Pulse	0.1000	3
K	39	72	He	3005.314	ppb	0.1	137571.48	1.8032	Pulse	0.1000	3
Ca	44	72	He	127701.795	ppb	1.2	302704.90	3.9680	Pulse	0.1000	3
Ti	47	72	He	0.298	ppb	264.2	26.67	0.0003	Pulse	0.1000	3
V	51	72	He	0.118	ppb	37.1	664.02	0.0087	Pulse	0.5000	3
Cr	52	72	He	0.167	ppb	108.3	2130.24	0.0279	Pulse	0.1000	3
Mn	55	72	He	445.273	ppb	0.7	201558.57	2.6420	Pulse	0.1000	3
Fe	57	72	He	441.086	ppb	2.4	10047.13	0.1317	Pulse	0.1000	3
Co	59	72	He	0.306	ppb	3.3	946.74	0.0124	Pulse	0.1000	3
Ni	60	72	He	1.601	ppb	14.2	1760.17	0.0231	Pulse	0.1000	3
Cu	63	72	He	1.193	ppb	10.2	2647.00	0.0347	Pulse	0.1000	3
Zn	66	72	He	4.945	ppb	18.9	1296.77	0.0170	Pulse	0.1000	3
As	75	72	He	0.719	ppb	34.7	128.67	0.0017	Pulse	0.5000	3
Sr	88	115	He	471.818	ppb	1.0	237896.11	3.6890	Pulse	0.1000	3
Mo	98	115	He	0.301	ppb	12.5	460.03	0.0071	Pulse	0.1000	3
Ag	107	115	He	0.010	ppb	66.4	60.00	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.024	ppb	15.1	10.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.114	ppb	53.7	1110.09	0.0172	Pulse	0.1000	3
Sb	121	115	He	0.175	ppb	29.9	156.67	0.0024	Pulse	0.1000	3
Ba	137	115	He	41.030	ppb	1.5	11595.24	0.1798	Pulse	0.1000	3
Tl	205	209	He	0.020	ppb	19.1	343.35	0.0016	Pulse	0.1000	3
Pb	208	209	He	0.199	ppb	13.3	2076.81	0.0094	Pulse	0.1000	3
U	238	209	He	0.591	ppb	4.2	5524.75	0.0251	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3383476.30	1.3	104.4	Pulse	0.1000	3
No Gas	Ge	72	1497976.80	1.2	104.0	Pulse	0.1000	3
H2	Sc	45	197059.30	0.3	100.9	Pulse	0.1000	3
H2	Ge	72	163452.42	1.6	100.3	Pulse	0.1000	3
H2	In	115	442056.38	0.3	102.0	Pulse	0.1000	3
He	Sc	45	42459.15	1.3	106.2	Pulse	0.1000	3
He	Ge	72	76292.32	1.0	105.5	Pulse	0.1000	3
He	In	115	64490.18	0.7	99.8	Pulse	0.1000	3
He	Tb	159	284716.13	0.5	99.6	Pulse	0.1000	3
He	Bi	209	220167.62	0.6	99.1	Pulse	0.1000	3

No Gas



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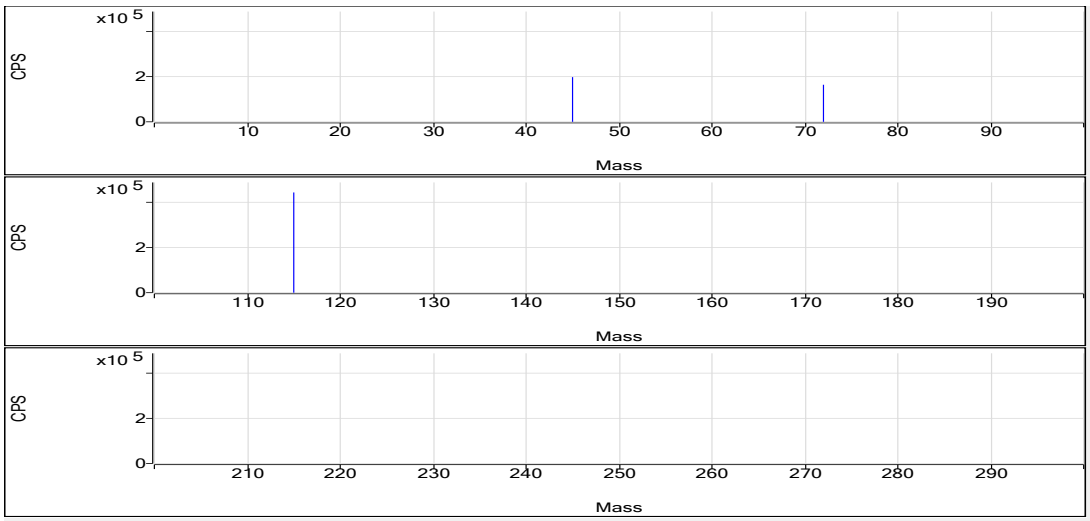
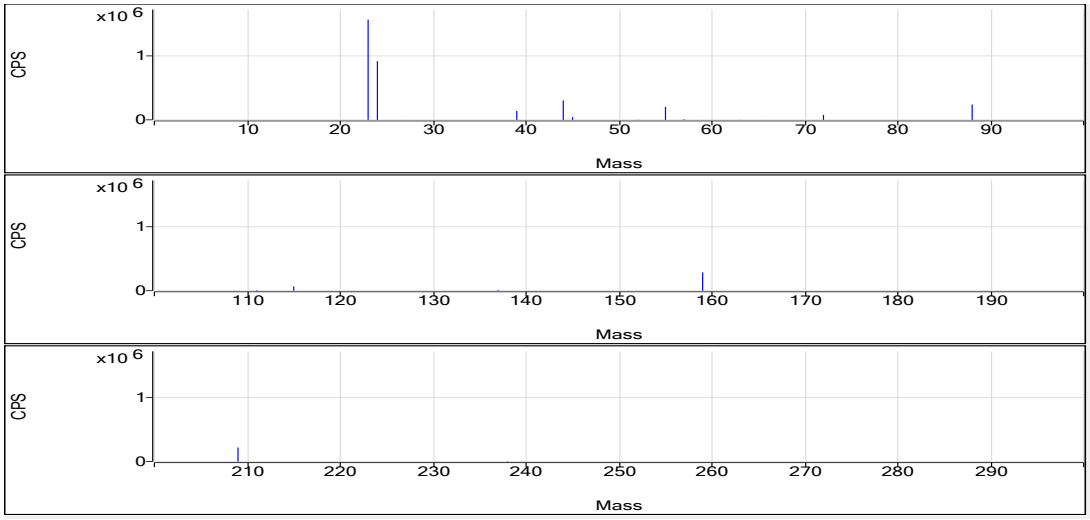


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.001	0	68.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.004	0	62.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.001	0	68.00	0.0013	4.694E-05
Se	78	2	H2	0.088	0	7.33	0.0004	1.089E-05
Se	78	2	H2	0.068	0	6.00	0.0004	1.089E-05
Se	78	2	H2	0.096	0	8.00	0.0004	1.089E-05
Na	23	3	He	11753.615	20.2971	1565238.10	0.0017	0.1065
Na	23	3	He	11953.922	20.6412	1563353.26	0.0017	0.1065
Na	23	3	He	11850.688	20.4638	1555676.85	0.0017	0.1065
Mg	24	3	He	14062.421	11.8609	914670.53	0.0008	0.004846
Mg	24	3	He	14294.066	12.0562	913131.71	0.0008	0.004846
Mg	24	3	He	14237.908	12.0088	912922.88	0.0008	0.004846
Al	27	3	He	64.9	0.0167	1290.11	0.0002	0.001063
Al	27	3	He	58.501	0.0152	1150.08	0.0002	0.001063
Al	27	3	He	57.724	0.015	1140.08	0.0002	0.001063
K	39	3	He	3007.324	1.8043	139142.85	0.0006	0.1436
K	39	3	He	3005.912	1.8035	136599.51	0.0006	0.1436
K	39	3	He	3002.705	1.8018	136972.08	0.0006	0.1436
Ca	44	3	He	125924.439	3.9128	301741.89	0	0.001611
Ca	44	3	He	128976.372	4.0076	303534.06	0	0.001611
Ca	44	3	He	128204.574	3.9836	302838.75	0	0.001611
Ti	47	3	He	0.977	0.0005	40.00	0.0003	0.0002737
Ti	47	3	He	-0.565	0.0001	10.00	0.0003	0.0002737
Ti	47	3	He	0.482	0.0004	30.00	0.0003	0.0002737
V	51	3	He	0.132	0.0089	684.02	0.0117	0.007326
V	51	3	He	0.153	0.0091	690.02	0.0117	0.007326
V	51	3	He	0.069	0.0081	618.02	0.0117	0.007326
Cr	52	3	He	0.028	0.0258	1990.20	0.0152	0.02538
Cr	52	3	He	0.102	0.0269	2040.21	0.0152	0.02538
Cr	52	3	He	0.372	0.031	2360.30	0.0152	0.02538
Mn	55	3	He	442.028	2.6229	202267.93	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	448.498	2.6611	201549.02	0.0059	0.01385
Mn	55	3	He	445.292	2.6422	200858.77	0.0059	0.01385
Fe	57	3	He	430.657	0.1287	9923.77	0.0003	0.003918
Fe	57	3	He	440.553	0.1316	9963.73	0.0003	0.003918
Fe	57	3	He	452.047	0.1349	10253.88	0.0003	0.003918
Co	59	3	He	0.298	0.0122	940.07	0.0305	0.003084
Co	59	3	He	0.301	0.0123	930.06	0.0305	0.003084
Co	59	3	He	0.317	0.0128	970.08	0.0305	0.003084
Ni	60	3	He	1.365	0.021	1620.14	0.0088	0.009003
Ni	60	3	He	1.619	0.0232	1760.17	0.0088	0.009003
Ni	60	3	He	1.819	0.025	1900.19	0.0088	0.009003
Cu	63	3	He	1.331	0.0381	2940.40	0.0249	0.004937
Cu	63	3	He	1.147	0.0335	2540.31	0.0249	0.004937
Cu	63	3	He	1.1	0.0324	2460.30	0.0249	0.004937
Zn	66	3	He	5.897	0.0193	1490.13	0.0025	0.004836
Zn	66	3	He	4.911	0.0169	1280.10	0.0025	0.004836
Zn	66	3	He	4.029	0.0147	1120.09	0.0025	0.004836
As	75	3	He	0.868	0.0019	150.00	0.0017	0.0004347
As	75	3	He	0.858	0.0019	146.00	0.0017	0.0004347
As	75	3	He	0.431	0.0012	90.00	0.0017	0.0004347
Sr	88	3	He	471.436	3.686	238456.13	0.0078	0.0007762
Sr	88	3	He	467.514	3.6554	236833.38	0.0078	0.0007762
Sr	88	3	He	476.505	3.7257	238398.81	0.0078	0.0007762
Mo	98	3	He	0.257	0.0062	400.03	0.022	0.0005162
Mo	98	3	He	0.32	0.0076	490.02	0.022	0.0005162
Mo	98	3	He	0.324	0.0077	490.03	0.022	0.0005162
Ag	107	3	He	0.017	0.0012	80.00	0.0455	0.0004641
Ag	107	3	He	0.003	0.0006	40.00	0.0455	0.0004641
Ag	107	3	He	0.01	0.0009	60.00	0.0455	0.0004641
Cd	111	3	He	0.021	0.0002	10.00	0.0048	5.152E-05
Cd	111	3	He	0.028	0.0002	12.00	0.0048	5.152E-05
Cd	111	3	He	0.022	0.0002	10.00	0.0048	5.152E-05
Sn	120	3	He	0.045	0.0162	1050.08	0.0143	0.01559
Sn	120	3	He	0.163	0.0179	1160.09	0.0143	0.01559
Sn	120	3	He	0.134	0.0175	1120.10	0.0143	0.01559
Sb	121	3	He	0.216	0.0029	190.01	0.0124	0.000258
Sb	121	3	He	0.116	0.0017	110.00	0.0124	0.000258
Sb	121	3	He	0.193	0.0027	170.01	0.0124	0.000258
Ba	137	3	He	41.43	0.1816	11745.32	0.0044	0.000309
Ba	137	3	He	40.308	0.1766	11445.09	0.0044	0.000309
Ba	137	3	He	41.351	0.1812	11595.32	0.0044	0.000309
Tl	205	3	He	0.017	0.0015	320.02	0.0276	0.001005
Tl	205	3	He	0.019	0.0015	340.02	0.0276	0.001005
Tl	205	3	He	0.024	0.0017	370.02	0.0276	0.001005
Pb	208	3	He	0.228	0.0105	1100.10	0.0364	0.002176
Pb	208	3	He	0.176	0.0086	850.06	0.0364	0.002176
Pb	208	3	He	0.195	0.0093	1120.09	0.0364	0.002176
U	238	3	He	0.57	0.0242	5291.30	0.0421	0.00024
U	238	3	He	0.585	0.0248	5481.38	0.0421	0.00024
U	238	3	He	0.618	0.0262	5801.56	0.0421	0.00024
Sc	45	1	No Gas			3339616.51		
Sc	45	1	No Gas			3429165.89		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3381646.51		
Ge	72	1	No Gas			1477384.04		
Ge	72	1	No Gas			1504380.29		
Ge	72	1	No Gas			1512166.07		
Sc	45	2	H2			196666.03		
Sc	45	2	H2			196703.49		
Sc	45	2	H2			197808.38		
Ge	72	2	H2			162689.70		
Ge	72	2	H2			161295.52		
Ge	72	2	H2			166372.03		
In	115	2	H2			441748.67		
In	115	2	H2			440976.87		
In	115	2	H2			443443.59		
Sc	45	3	He			42562.75		
Sc	45	3	He			41880.82		
Sc	45	3	He			42933.87		
Ge	72	3	He			77116.48		
Ge	72	3	He			75739.62		
Ge	72	3	He			76020.85		
In	115	3	He			64699.99		
In	115	3	He			64799.50		
In	115	3	He			63997.02		
Tb	159	3	He			285268.43		
Tb	159	3	He			283110.48		
Tb	159	3	He			285769.49		
Bi	209	3	He			218645.29		
Bi	209	3	He			220660.04		
Bi	209	3	He			221197.52		

Quantitation Report

Data File Name	117SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 13:53:43
Sample Name	410-136848-X-11-A
Sample Type	Sample
Comment	D29
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

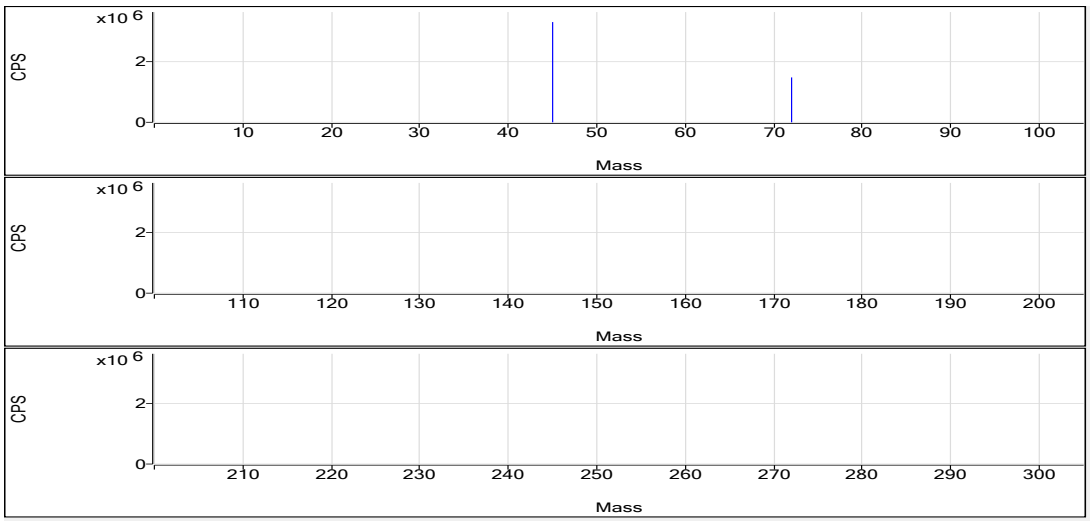
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.006	ppb	34.4	81.33	0.0001	Pulse	0.5000	3
Se	78	72	H2	6.133	ppb	7.7	397.12	0.0024	Pulse	1.5000	3
Na	23	72	He	4297.471	ppb	1.2	575317.36	7.4887	Pulse	0.1000	3
Mg	24	72	He	7371.710	ppb	1.0	477845.27	6.2199	Pulse	0.1000	3
Al	27	72	He	127.380	ppb	2.4	2443.66	0.0318	Pulse	0.1000	3
K	39	72	He	2889.922	ppb	1.8	133629.47	1.7395	Pulse	0.1000	3
Ca	44	72	He	70350.531	ppb	1.7	167982.22	2.1867	Pulse	0.1000	3
Ti	47	72	He	0.987	ppb	54.3	40.00	0.0005	Pulse	0.1000	3
V	51	72	He	0.403	ppb	11.2	924.70	0.0120	Pulse	0.5000	3
Cr	52	72	He	0.396	ppb	24.8	2413.61	0.0314	Pulse	0.1000	3
Mn	55	72	He	1223.850	ppb	1.8	555983.34	7.2375	Pulse	0.1000	3
Fe	57	72	He	152.579	ppb	0.4	3697.28	0.0481	Pulse	0.1000	3
Co	59	72	He	0.828	ppb	0.2	2176.91	0.0283	Pulse	0.1000	3
Ni	60	72	He	2.923	ppb	7.1	2667.01	0.0347	Pulse	0.1000	3
Cu	63	72	He	0.695	ppb	6.1	1710.16	0.0223	Pulse	0.1000	3
Zn	66	72	He	0.893	ppb	21.1	540.03	0.0070	Pulse	0.1000	3
As	75	72	He	0.320	ppb	28.4	76.00	0.0010	Pulse	0.5000	3
Sr	88	115	He	237.987	ppb	3.4	119579.11	1.8611	Pulse	0.1000	3
Mo	98	115	He	4.146	ppb	4.9	5898.11	0.0918	Pulse	0.1000	3
Ag	107	115	He	0.006	ppb	189.9	46.67	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.039	ppb	10.5	15.33	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.741	ppb	79.1	1674.20	0.0262	Pulse	0.1000	3
Sb	121	115	He	0.129	ppb	65.5	120.00	0.0019	Pulse	0.1000	3
Ba	137	115	He	34.641	ppb	6.7	9750.46	0.1519	Pulse	0.1000	3
Tl	205	209	He	0.029	ppb	71.6	396.69	0.0018	Pulse	0.1000	3
Pb	208	209	He	0.130	ppb	13.3	1523.43	0.0069	Pulse	0.1000	3
U	238	209	He	1.015	ppb	3.4	9457.16	0.0429	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3330584.22	1.9	102.8	Pulse	0.1000	3
No Gas	Ge	72	1491370.76	2.1	103.6	Pulse	0.1000	3
H2	Sc	45	197238.29	1.9	101.0	Pulse	0.1000	3
H2	Ge	72	165676.66	1.4	101.6	Pulse	0.1000	3
H2	In	115	446376.80	1.0	103.0	Pulse	0.1000	3
He	Sc	45	42268.07	2.5	105.7	Pulse	0.1000	3
He	Ge	72	76831.58	1.3	106.3	Pulse	0.1000	3
He	In	115	64291.68	3.0	99.5	Pulse	0.1000	3
He	Tb	159	284165.46	0.9	99.4	Pulse	0.1000	3
He	Bi	209	220260.68	0.4	99.1	Pulse	0.1000	3

No Gas



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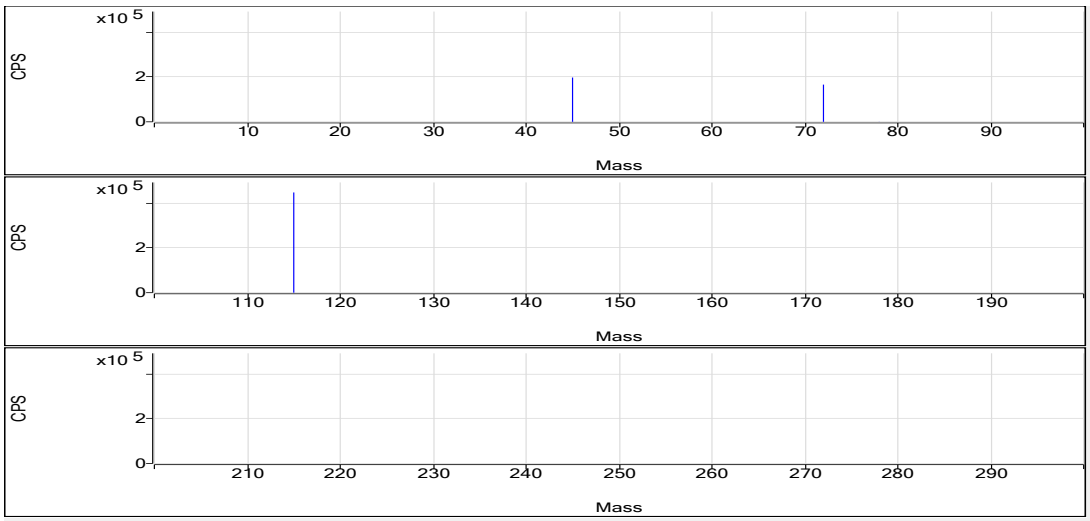
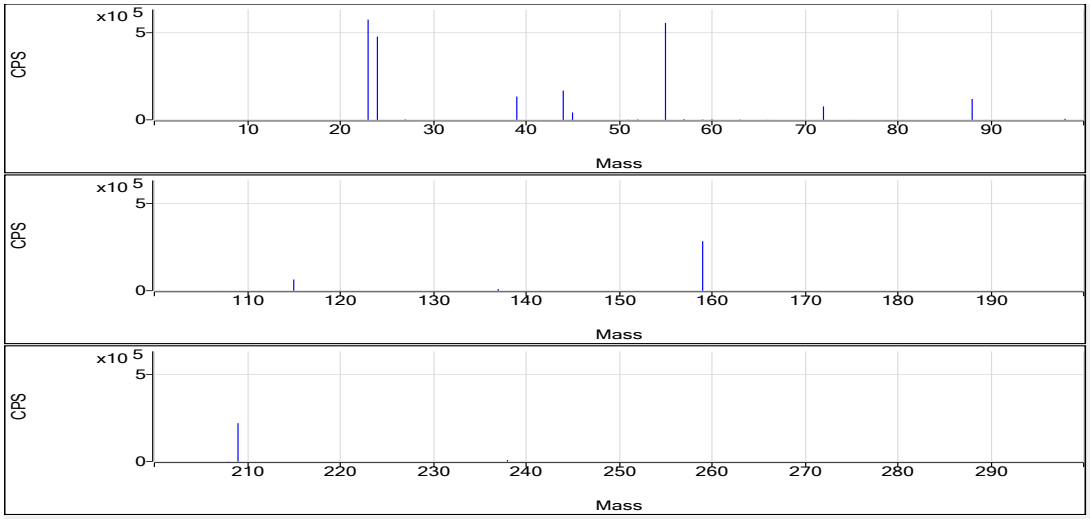


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.008	0.0001	84.00	0.0013	4.694E-05
Be	9	1	No Gas	0.005	0.0001	80.00	0.0013	4.694E-05
Be	9	1	No Gas	0.004	0.0001	80.00	0.0013	4.694E-05
Se	78	2	H2	5.852	0.0023	382.01	0.0004	1.089E-05
Se	78	2	H2	6.675	0.0026	425.34	0.0004	1.089E-05
Se	78	2	H2	5.871	0.0023	384.01	0.0004	1.089E-05
Na	23	3	He	4356.134	7.5895	575821.55	0.0017	0.1065
Na	23	3	He	4258.058	7.421	577729.52	0.0017	0.1065
Na	23	3	He	4278.222	7.4557	572401.01	0.0017	0.1065
Mg	24	3	He	7445.948	6.2825	476660.23	0.0008	0.004846
Mg	24	3	He	7291.579	6.1524	478964.76	0.0008	0.004846
Mg	24	3	He	7377.604	6.2249	477910.81	0.0008	0.004846
Al	27	3	He	130.482	0.0326	2470.37	0.0002	0.001063
Al	27	3	He	124.387	0.0311	2420.30	0.0002	0.001063
Al	27	3	He	127.272	0.0318	2440.30	0.0002	0.001063
K	39	3	He	2928.03	1.7605	133572.84	0.0006	0.1436
K	39	3	He	2829.585	1.7062	132825.78	0.0006	0.1436
K	39	3	He	2912.152	1.7518	134489.79	0.0006	0.1436
Ca	44	3	He	71536.869	2.2235	168701.19	0	0.001611
Ca	44	3	He	69143.312	2.1492	167315.13	0	0.001611
Ca	44	3	He	70371.41	2.1873	167930.33	0	0.001611
Ti	47	3	He	1.536	0.0007	50.00	0.0003	0.0002737
Ti	47	3	He	0.957	0.0005	40.00	0.0003	0.0002737
Ti	47	3	He	0.467	0.0004	30.00	0.0003	0.0002737
V	51	3	He	0.442	0.0125	948.04	0.0117	0.007326
V	51	3	He	0.413	0.0122	946.04	0.0117	0.007326
V	51	3	He	0.354	0.0115	880.03	0.0117	0.007326
Cr	52	3	He	0.497	0.033	2500.29	0.0152	0.02538
Cr	52	3	He	0.392	0.0313	2440.28	0.0152	0.02538
Cr	52	3	He	0.301	0.03	2300.27	0.0152	0.02538
Mn	55	3	He	1244.235	7.3579	558245.07	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1199.612	7.0945	552305.93	0.0059	0.01385
Mn	55	3	He	1227.702	7.2603	557399.02	0.0059	0.01385
Fe	57	3	He	153.012	0.0482	3660.57	0.0003	0.003918
Fe	57	3	He	152.772	0.0482	3750.66	0.0003	0.003918
Fe	57	3	He	151.954	0.0479	3680.61	0.0003	0.003918
Co	59	3	He	0.828	0.0283	2150.23	0.0305	0.003084
Co	59	3	He	0.829	0.0284	2210.26	0.0305	0.003084
Co	59	3	He	0.825	0.0283	2170.25	0.0305	0.003084
Ni	60	3	He	2.709	0.0328	2490.31	0.0088	0.009003
Ni	60	3	He	2.935	0.0348	2710.36	0.0088	0.009003
Ni	60	3	He	3.124	0.0365	2800.36	0.0088	0.009003
Cu	63	3	He	0.743	0.0235	1780.17	0.0249	0.004937
Cu	63	3	He	0.678	0.0218	1700.16	0.0249	0.004937
Cu	63	3	He	0.664	0.0215	1650.15	0.0249	0.004937
Zn	66	3	He	0.821	0.0069	520.03	0.0025	0.004836
Zn	66	3	He	0.75	0.0067	520.03	0.0025	0.004836
Zn	66	3	He	1.107	0.0076	580.04	0.0025	0.004836
As	75	3	He	0.417	0.0012	88.00	0.0017	0.0004347
As	75	3	He	0.238	0.0008	66.00	0.0017	0.0004347
As	75	3	He	0.304	0.001	74.00	0.0017	0.0004347
Sr	88	3	He	231.663	1.8117	119961.60	0.0078	0.0007762
Sr	88	3	He	246.952	1.9312	120416.39	0.0078	0.0007762
Sr	88	3	He	235.347	1.8405	118359.35	0.0078	0.0007762
Mo	98	3	He	3.921	0.0869	5751.39	0.022	0.0005162
Mo	98	3	He	4.318	0.0956	5961.49	0.022	0.0005162
Mo	98	3	He	4.2	0.093	5981.44	0.022	0.0005162
Ag	107	3	He	0.013	0.0011	70.00	0.0455	0.0004641
Ag	107	3	He	0.011	0.001	60.00	0.0455	0.0004641
Ag	107	3	He	-0.007	0.0002	10.00	0.0455	0.0004641
Cd	111	3	He	0.04	0.0002	16.00	0.0048	5.152E-05
Cd	111	3	He	0.043	0.0003	16.00	0.0048	5.152E-05
Cd	111	3	He	0.035	0.0002	14.00	0.0048	5.152E-05
Sn	120	3	He	0.602	0.0242	1600.15	0.0143	0.01559
Sn	120	3	He	1.384	0.0353	2202.34	0.0143	0.01559
Sn	120	3	He	0.237	0.019	1220.10	0.0143	0.01559
Sb	121	3	He	0.211	0.0029	190.01	0.0124	0.000258
Sb	121	3	He	0.134	0.0019	120.00	0.0124	0.000258
Sb	121	3	He	0.042	0.0008	50.00	0.0124	0.000258
Ba	137	3	He	32.703	0.1434	9493.59	0.0044	0.000309
Ba	137	3	He	37.228	0.1632	10174.20	0.0044	0.000309
Ba	137	3	He	33.994	0.149	9583.58	0.0044	0.000309
Tl	205	3	He	0.021	0.0016	350.02	0.0276	0.001005
Tl	205	3	He	0.052	0.0024	540.03	0.0276	0.001005
Tl	205	3	He	0.013	0.0014	300.01	0.0276	0.001005
Pb	208	3	He	0.113	0.0063	800.05	0.0364	0.002176
Pb	208	3	He	0.148	0.0076	950.08	0.0364	0.002176
Pb	208	3	He	0.13	0.0069	960.07	0.0364	0.002176
U	238	3	He	0.979	0.0414	9143.58	0.0421	0.00024
U	238	3	He	1.019	0.0431	9523.84	0.0421	0.00024
U	238	3	He	1.047	0.0443	9704.05	0.0421	0.00024
Sc	45	1	No Gas			3267242.76		
Sc	45	1	No Gas			3331899.01		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3392610.89		
Ge	72	1	No Gas			1459940.92		
Ge	72	1	No Gas			1492010.13		
Ge	72	1	No Gas			1522161.23		
Sc	45	2	H2			197452.28		
Sc	45	2	H2			193432.03		
Sc	45	2	H2			200830.56		
Ge	72	2	H2			166865.17		
Ge	72	2	H2			162974.74		
Ge	72	2	H2			167190.08		
In	115	2	H2			446717.61		
In	115	2	H2			441689.72		
In	115	2	H2			450723.08		
Sc	45	3	He			41088.27		
Sc	45	3	He			43093.70		
Sc	45	3	He			42622.24		
Ge	72	3	He			75870.67		
Ge	72	3	He			77850.22		
Ge	72	3	He			76773.86		
In	115	3	He			66227.17		
In	115	3	He			62369.47		
In	115	3	He			64317.58		
Tb	159	3	He			281452.77		
Tb	159	3	He			286522.83		
Tb	159	3	He			284520.78		
Bi	209	3	He			220731.87		
Bi	209	3	He			220882.89		
Bi	209	3	He			219167.28		

Quantitation Report

Data File Name	118SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 13:55:42
Sample Name	410-136848-W-10-A
Sample Type	Sample
Comment	D29
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

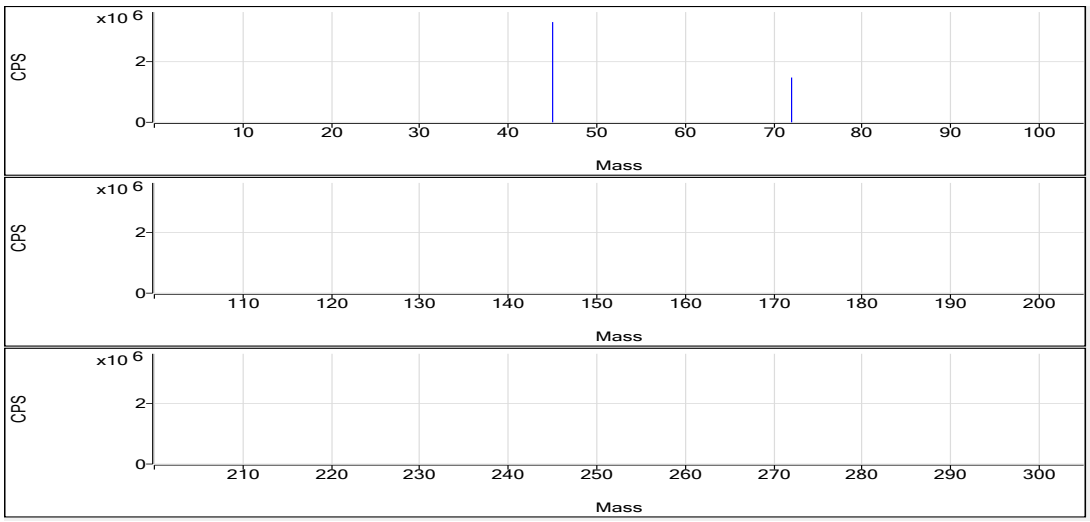
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.033	ppb	30.1	134.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.347	ppb	33.0	24.22	0.0001	Pulse	1.5000	3
Na	23	72	He	4767.278	ppb	1.5	630844.81	8.2958	Pulse	0.1000	3
Mg	24	72	He	8024.438	ppb	2.0	514821.51	6.7703	Pulse	0.1000	3
Al	27	72	He	856.294	ppb	1.9	15798.86	0.2078	Pulse	0.1000	3
K	39	72	He	23872.977	ppb	2.1	1013351.00	13.3266	Pulse	0.1000	3
Ca	44	72	He	28632.762	ppb	2.0	67750.13	0.8909	Pulse	0.1000	3
Ti	47	72	He	8.169	ppb	6.5	176.68	0.0023	Pulse	0.1000	3
V	51	72	He	1.473	ppb	5.1	1868.13	0.0246	Pulse	0.5000	3
Cr	52	72	He	1.126	ppb	22.7	3233.80	0.0425	Pulse	0.1000	3
Mn	55	72	He	545.096	ppb	1.7	245718.98	3.2312	Pulse	0.1000	3
Fe	57	72	He	1118.823	ppb	2.0	24948.85	0.3281	Pulse	0.1000	3
Co	59	72	He	1.158	ppb	7.7	2920.40	0.0384	Pulse	0.1000	3
Ni	60	72	He	3.707	ppb	0.6	3163.79	0.0416	Pulse	0.1000	3
Cu	63	72	He	2.000	ppb	4.5	4170.74	0.0548	Pulse	0.1000	3
Zn	66	72	He	12.713	ppb	4.1	2743.68	0.0361	Pulse	0.1000	3
As	75	72	He	0.813	ppb	16.6	140.67	0.0018	Pulse	0.5000	3
Sr	88	115	He	81.308	ppb	2.3	41748.73	0.6364	Pulse	0.1000	3
Mo	98	115	He	0.399	ppb	15.8	610.03	0.0093	Pulse	0.1000	3
Ag	107	115	He	0.003	ppb	211.8	40.00	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.081	ppb	40.9	28.67	0.0004	Pulse	0.5000	3
Sn	120	115	He	0.358	ppb	49.5	1356.78	0.0207	Pulse	0.1000	3
Sb	121	115	He	0.184	ppb	10.2	166.68	0.0025	Pulse	0.1000	3
Ba	137	115	He	67.127	ppb	2.9	19284.06	0.2940	Pulse	0.1000	3
Tl	205	209	He	0.044	ppb	15.2	486.69	0.0022	Pulse	0.1000	3
Pb	208	209	He	0.824	ppb	2.5	7064.33	0.0322	Pulse	0.1000	3
U	238	209	He	0.081	ppb	1.8	803.39	0.0037	Pulse	0.1000	3

ISTD Table:

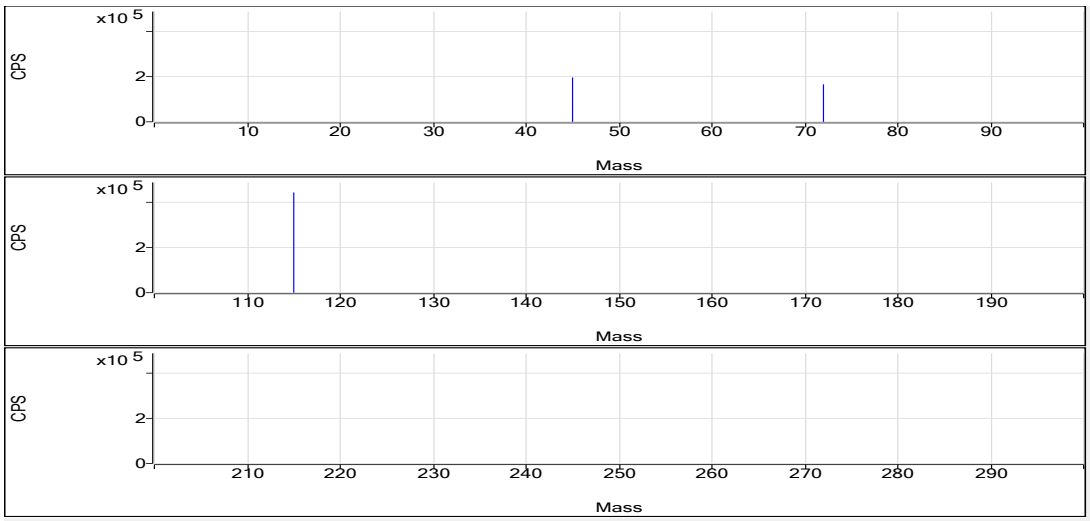
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3328965.99	3.1	102.7	Pulse	0.1000	3
No Gas	Ge	72	1486708.10	2.6	103.3	Pulse	0.1000	3
H2	Sc	45	195275.62	2.3	99.9	Pulse	0.1000	3
H2	Ge	72	165262.00	2.2	101.4	Pulse	0.1000	3
H2	In	115	441571.00	2.3	101.9	Pulse	0.1000	3
He	Sc	45	42154.71	2.1	105.4	Pulse	0.1000	3
He	Ge	72	76054.04	1.4	105.2	Pulse	0.1000	3
He	In	115	65613.52	1.6	101.6	Pulse	0.1000	3
He	Tb	159	283231.52	0.2	99.0	Pulse	0.1000	3
He	Bi	209	219724.96	1.4	98.9	Pulse	0.1000	3

No Gas

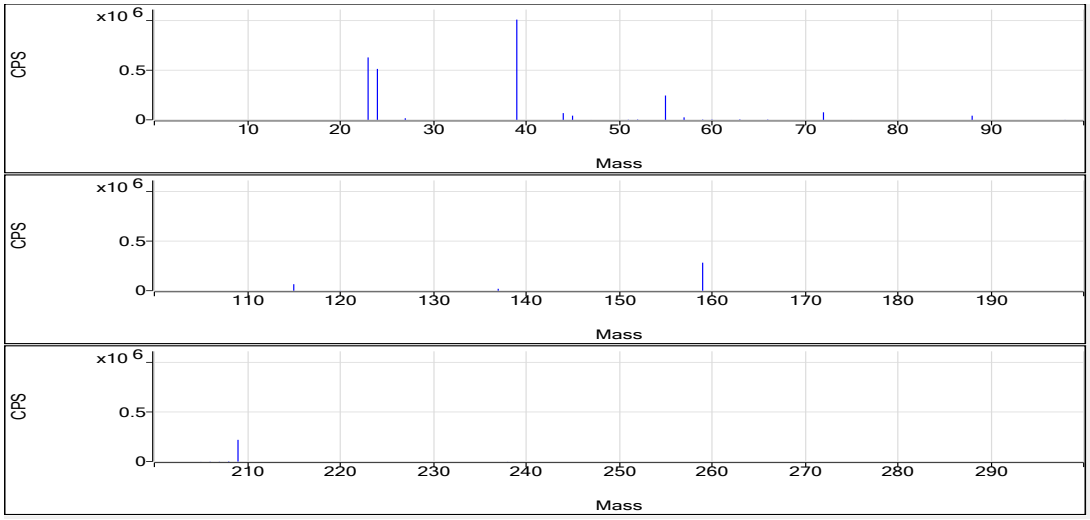


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.039	0.0001	142.00	0.0013	4.694E-05
Be	9	1	No Gas	0.022	0.0001	112.00	0.0013	4.694E-05
Be	9	1	No Gas	0.039	0.0001	150.00	0.0013	4.694E-05
Se	78	2	H2	0.429	0.0002	30.00	0.0004	1.089E-05
Se	78	2	H2	0.216	0.0001	15.33	0.0004	1.089E-05
Se	78	2	H2	0.395	0.0002	27.33	0.0004	1.089E-05
Na	23	3	He	4848.472	8.4353	631502.26	0.0017	0.1065
Na	23	3	He	4728.181	8.2286	629184.83	0.0017	0.1065
Na	23	3	He	4725.18	8.2235	631847.33	0.0017	0.1065
Mg	24	3	He	8203.319	6.9211	518143.35	0.0008	0.004846
Mg	24	3	He	7883.021	6.651	508557.49	0.0008	0.004846
Mg	24	3	He	7986.973	6.7387	517763.70	0.0008	0.004846
Al	27	3	He	873.693	0.212	15868.82	0.0002	0.001063
Al	27	3	He	853.717	0.2071	15838.92	0.0002	0.001063
Al	27	3	He	841.473	0.2042	15688.83	0.0002	0.001063
K	39	3	He	24433.608	13.6362	1020865.45	0.0006	0.1436
K	39	3	He	23667.238	13.213	1010302.25	0.0006	0.1436
K	39	3	He	23518.087	13.1306	1008885.30	0.0006	0.1436
Ca	44	3	He	29208.379	0.9088	68038.34	0	0.001611
Ca	44	3	He	28050.812	0.8729	66741.84	0	0.001611
Ca	44	3	He	28639.093	0.8911	68470.21	0	0.001611
Ti	47	3	He	7.964	0.0023	170.01	0.0003	0.0002737
Ti	47	3	He	7.775	0.0022	170.01	0.0003	0.0002737
Ti	47	3	He	8.77	0.0025	190.01	0.0003	0.0002737
V	51	3	He	1.486	0.0247	1850.13	0.0117	0.007326
V	51	3	He	1.393	0.0236	1806.12	0.0117	0.007326
V	51	3	He	1.541	0.0254	1948.14	0.0117	0.007326
Cr	52	3	He	1.246	0.0444	3320.49	0.0152	0.02538
Cr	52	3	He	0.833	0.0381	2910.37	0.0152	0.02538
Cr	52	3	He	1.299	0.0452	3470.55	0.0152	0.02538
Mn	55	3	He	554.608	3.2874	246108.28	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	535.672	3.1756	242816.89	0.0059	0.01385
Mn	55	3	He	545.009	3.2307	248231.77	0.0059	0.01385
Fe	57	3	He	1121.199	0.3287	24611.38	0.0003	0.003918
Fe	57	3	He	1140.46	0.3343	25563.53	0.0003	0.003918
Fe	57	3	He	1094.81	0.3211	24671.63	0.0003	0.003918
Co	59	3	He	1.16	0.0385	2880.39	0.0305	0.003084
Co	59	3	He	1.245	0.0411	3140.44	0.0305	0.003084
Co	59	3	He	1.068	0.0357	2740.38	0.0305	0.003084
Ni	60	3	He	3.731	0.0418	3130.45	0.0088	0.009003
Ni	60	3	He	3.692	0.0415	3170.46	0.0088	0.009003
Ni	60	3	He	3.698	0.0415	3190.45	0.0088	0.009003
Cu	63	3	He	1.907	0.0525	3930.64	0.0249	0.004937
Cu	63	3	He	2.005	0.0549	4200.76	0.0249	0.004937
Cu	63	3	He	2.088	0.057	4380.81	0.0249	0.004937
Zn	66	3	He	12.55	0.0357	2670.32	0.0025	0.004836
Zn	66	3	He	12.3	0.0351	2680.36	0.0025	0.004836
Zn	66	3	He	13.29	0.0375	2880.36	0.0025	0.004836
As	75	3	He	0.749	0.0017	130.00	0.0017	0.0004347
As	75	3	He	0.968	0.0021	162.00	0.0017	0.0004347
As	75	3	He	0.723	0.0017	130.00	0.0017	0.0004347
Sr	88	3	He	79.239	0.6202	40899.66	0.0078	0.0007762
Sr	88	3	He	82.883	0.6487	41812.26	0.0078	0.0007762
Sr	88	3	He	81.8	0.6402	42534.26	0.0078	0.0007762
Mo	98	3	He	0.348	0.0082	540.03	0.022	0.0005162
Mo	98	3	He	0.47	0.0109	700.04	0.022	0.0005162
Mo	98	3	He	0.38	0.0089	590.03	0.022	0.0005162
Ag	107	3	He	0.003	0.0006	40.00	0.0455	0.0004641
Ag	107	3	He	0.01	0.0009	60.00	0.0455	0.0004641
Ag	107	3	He	-0.004	0.0003	20.00	0.0455	0.0004641
Cd	111	3	He	0.059	0.0003	22.00	0.0048	5.152E-05
Cd	111	3	He	0.119	0.0006	40.00	0.0048	5.152E-05
Cd	111	3	He	0.065	0.0004	24.00	0.0048	5.152E-05
Sn	120	3	He	0.162	0.0179	1180.09	0.0143	0.01559
Sn	120	3	He	0.506	0.0228	1470.14	0.0143	0.01559
Sn	120	3	He	0.406	0.0214	1420.12	0.0143	0.01559
Sb	121	3	He	0.163	0.0023	150.01	0.0124	0.000258
Sb	121	3	He	0.192	0.0026	170.01	0.0124	0.000258
Sb	121	3	He	0.198	0.0027	180.01	0.0124	0.000258
Ba	137	3	He	65.418	0.2865	18893.48	0.0044	0.000309
Ba	137	3	He	69.203	0.3031	19534.34	0.0044	0.000309
Ba	137	3	He	66.76	0.2924	19424.35	0.0044	0.000309
Tl	205	3	He	0.045	0.0023	490.03	0.0276	0.001005
Tl	205	3	He	0.037	0.002	450.02	0.0276	0.001005
Tl	205	3	He	0.05	0.0024	520.03	0.0276	0.001005
Pb	208	3	He	0.829	0.0323	3920.72	0.0364	0.002176
Pb	208	3	He	0.801	0.0313	3660.61	0.0364	0.002176
Pb	208	3	He	0.842	0.0328	3920.70	0.0364	0.002176
U	238	3	He	0.08	0.0036	780.05	0.0421	0.00024
U	238	3	He	0.082	0.0037	820.06	0.0421	0.00024
U	238	3	He	0.082	0.0037	810.06	0.0421	0.00024
Sc	45	1	No Gas			3225886.20		
Sc	45	1	No Gas			3331694.95		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3429316.82		
Ge	72	1	No Gas			1449574.20		
Ge	72	1	No Gas			1485116.07		
Ge	72	1	No Gas			1525434.04		
Sc	45	2	H2			195812.75		
Sc	45	2	H2			190492.44		
Sc	45	2	H2			199521.68		
Ge	72	2	H2			168638.34		
Ge	72	2	H2			161385.13		
Ge	72	2	H2			165762.54		
In	115	2	H2			445441.75		
In	115	2	H2			429844.88		
In	115	2	H2			449426.36		
Sc	45	3	He			42171.56		
Sc	45	3	He			41279.00		
Sc	45	3	He			43013.56		
Ge	72	3	He			74864.55		
Ge	72	3	He			76462.93		
Ge	72	3	He			76834.64		
In	115	3	He			65955.41		
In	115	3	He			64468.64		
In	115	3	He			66448.27		
Tb	159	3	He			282725.60		
Tb	159	3	He			283870.33		
Tb	159	3	He			283098.63		
Bi	209	3	He			217385.33		
Bi	209	3	He			223211.48		
Bi	209	3	He			218578.08		

Quantitation Report

Data File Name	119SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 13:57:41
Sample Name	410-136848-U-4-A
Sample Type	Sample
Comment	D29
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

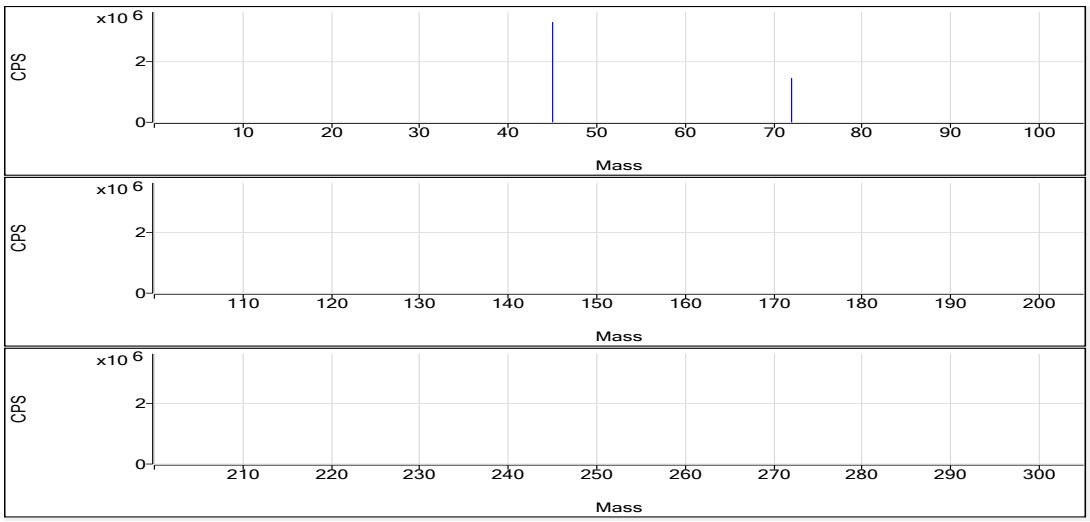
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.004	ppb	N/A	61.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.039	ppb	16.5	4.22	0.0000	Pulse	1.5000	3
Na	23	72	He	67782.947	ppb	0.7	8760202.99	116.5454	Analog	0.1000	3
Mg	24	72	He	11859.966	ppb	0.7	751963.37	10.0040	Pulse	0.1000	3
Al	27	72	He	20.219	ppb	12.8	446.69	0.0059	Pulse	0.1000	3
K	39	72	He	1962.295	ppb	1.2	92248.33	1.2272	Pulse	0.1000	3
Ca	44	72	He	87020.140	ppb	1.9	203284.31	2.7044	Pulse	0.1000	3
Ti	47	72	He	-0.383	ppb	N/A	13.33	0.0002	Pulse	0.1000	3
V	51	72	He	0.119	ppb	15.0	655.35	0.0087	Pulse	0.5000	3
Cr	52	72	He	0.002	ppb	8272.3	1910.21	0.0254	Pulse	0.1000	3
Mn	55	72	He	14.060	ppb	6.3	7278.74	0.0968	Pulse	0.1000	3
Fe	57	72	He	21.983	ppb	22.9	773.38	0.0103	Pulse	0.1000	3
Co	59	72	He	0.159	ppb	23.3	596.70	0.0079	Pulse	0.1000	3
Ni	60	72	He	1.125	ppb	28.1	1420.12	0.0189	Pulse	0.1000	3
Cu	63	72	He	0.320	ppb	12.0	970.07	0.0129	Pulse	0.1000	3
Zn	66	72	He	1.859	ppb	44.5	706.71	0.0094	Pulse	0.1000	3
As	75	72	He	0.418	ppb	25.8	87.33	0.0012	Pulse	0.5000	3
Sr	88	115	He	294.004	ppb	1.8	147608.91	2.2990	Pulse	0.1000	3
Mo	98	115	He	0.632	ppb	5.0	926.73	0.0144	Pulse	0.1000	3
Ag	107	115	He	-0.002	ppb	N/A	23.33	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.011	ppb	149.5	6.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.218	ppb	19.1	1200.10	0.0187	Pulse	0.1000	3
Sb	121	115	He	0.092	ppb	34.6	90.00	0.0014	Pulse	0.1000	3
Ba	137	115	He	14.030	ppb	7.2	3964.06	0.0617	Pulse	0.1000	3
Tl	205	209	He	0.019	ppb	52.5	333.35	0.0015	Pulse	0.1000	3
Pb	208	209	He	0.027	ppb	13.2	686.70	0.0031	Pulse	0.1000	3
U	238	209	He	0.583	ppb	3.7	5404.65	0.0248	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3319952.76	1.9	102.4	Pulse	0.1000	3
No Gas	Ge	72	1464375.66	1.6	101.7	Pulse	0.1000	3
H2	Sc	45	195482.19	2.3	100.1	Pulse	0.1000	3
H2	Ge	72	162955.93	1.6	100.0	Pulse	0.1000	3
H2	In	115	438533.03	2.2	101.2	Pulse	0.1000	3
He	Sc	45	41957.16	0.9	104.9	Pulse	0.1000	3
He	Ge	72	75166.39	0.3	104.0	Pulse	0.1000	3
He	In	115	64215.34	1.6	99.4	Pulse	0.1000	3
He	Tb	159	287966.38	0.6	100.7	Pulse	0.1000	3
He	Bi	209	218293.94	0.9	98.2	Pulse	0.1000	3

No Gas



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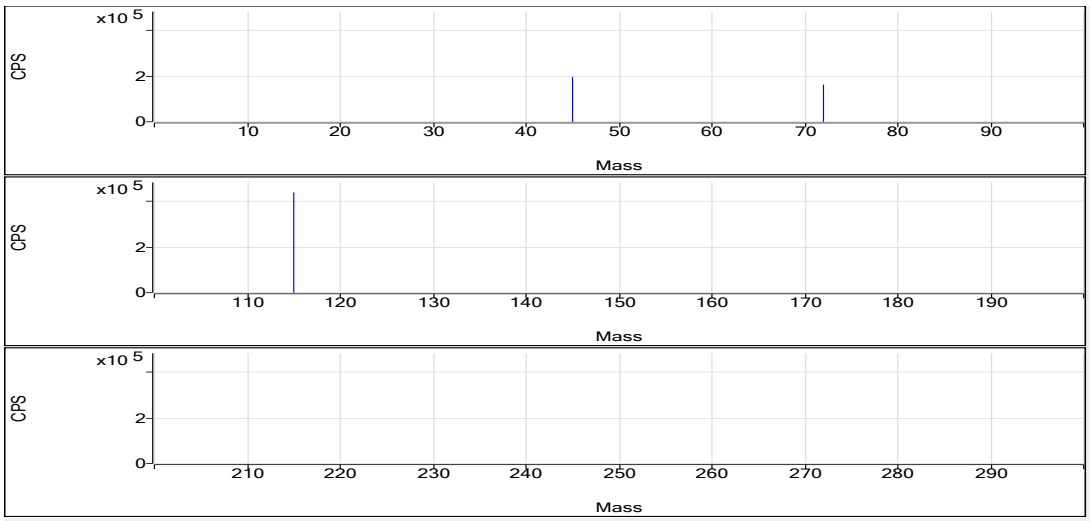
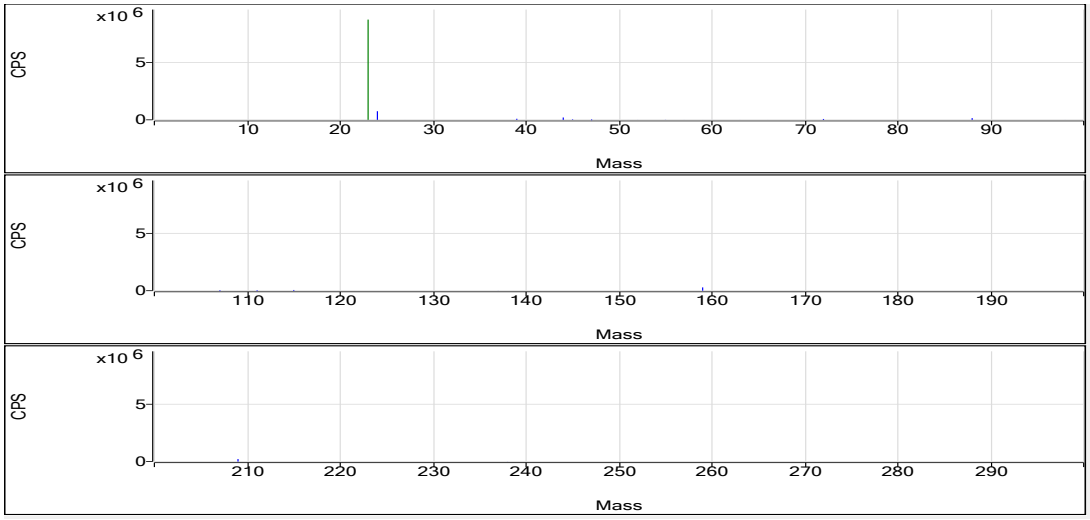


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.007	0	54.00	0.0013	4.694E-05
Be	9	1	No Gas	0.001	0	70.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.005	0	60.00	0.0013	4.694E-05
Se	78	2	H2	0.034	0	4.00	0.0004	1.089E-05
Se	78	2	H2	0.036	0	4.00	0.0004	1.089E-05
Se	78	2	H2	0.046	0	4.67	0.0004	1.089E-05
Na	23	3	He	67214.026	115.5681	8710127.37	0.0017	0.1065
Na	23	3	He	68089.92	117.0728	8796421.12	0.0017	0.1065
Na	23	3	He	68044.894	116.9954	8774060.49	0.0017	0.1065
Mg	24	3	He	11812.868	9.9643	750987.88	0.0008	0.004846
Mg	24	3	He	11950.095	10.08	757373.74	0.0008	0.004846
Mg	24	3	He	11816.936	9.9677	747528.50	0.0008	0.004846
Al	27	3	He	18.684	0.0056	420.02	0.0002	0.001063
Al	27	3	He	18.755	0.0056	420.02	0.0002	0.001063
Al	27	3	He	23.218	0.0067	500.02	0.0002	0.001063
K	39	3	He	1967.496	1.2301	92711.19	0.0006	0.1436
K	39	3	He	1982.125	1.2382	93033.36	0.0006	0.1436
K	39	3	He	1937.265	1.2134	91000.43	0.0006	0.1436
Ca	44	3	He	86591.282	2.6911	202824.39	0	0.001611
Ca	44	3	He	88817.321	2.7603	207396.25	0	0.001611
Ca	44	3	He	85651.816	2.6619	199632.30	0	0.001611
Ti	47	3	He	-1.091	0	0.00	0.0003	0.0002737
Ti	47	3	He	-0.03	0.0003	20.00	0.0003	0.0002737
Ti	47	3	He	-0.028	0.0003	20.00	0.0003	0.0002737
V	51	3	He	0.102	0.0085	642.02	0.0117	0.007326
V	51	3	He	0.118	0.0087	654.02	0.0117	0.007326
V	51	3	He	0.137	0.0089	670.02	0.0117	0.007326
Cr	52	3	He	0.032	0.0259	1950.21	0.0152	0.02538
Cr	52	3	He	-0.172	0.0228	1710.18	0.0152	0.02538
Cr	52	3	He	0.146	0.0276	2070.24	0.0152	0.02538
Mn	55	3	He	13.055	0.0909	6851.87	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	14.727	0.1008	7572.20	0.0059	0.01385
Mn	55	3	He	14.398	0.0988	7412.15	0.0059	0.01385
Fe	57	3	He	27.698	0.0119	900.06	0.0003	0.003918
Fe	57	3	He	20.014	0.0097	730.04	0.0003	0.003918
Fe	57	3	He	18.237	0.0092	690.05	0.0003	0.003918
Co	59	3	He	0.199	0.0092	690.04	0.0305	0.003084
Co	59	3	He	0.126	0.0069	520.03	0.0305	0.003084
Co	59	3	He	0.152	0.0077	580.03	0.0305	0.003084
Ni	60	3	He	0.802	0.0161	1210.09	0.0088	0.009003
Ni	60	3	He	1.141	0.019	1430.12	0.0088	0.009003
Ni	60	3	He	1.433	0.0216	1620.15	0.0088	0.009003
Cu	63	3	He	0.276	0.0118	890.06	0.0249	0.004937
Cu	63	3	He	0.346	0.0136	1020.08	0.0249	0.004937
Cu	63	3	He	0.337	0.0133	1000.07	0.0249	0.004937
Zn	66	3	He	1.488	0.0085	640.03	0.0025	0.004836
Zn	66	3	He	1.282	0.008	600.03	0.0025	0.004836
Zn	66	3	He	2.808	0.0117	880.07	0.0025	0.004836
As	75	3	He	0.513	0.0013	100.00	0.0017	0.0004347
As	75	3	He	0.301	0.001	72.00	0.0017	0.0004347
As	75	3	He	0.44	0.0012	90.00	0.0017	0.0004347
Sr	88	3	He	295.734	2.3126	146465.39	0.0078	0.0007762
Sr	88	3	He	288.104	2.2529	147236.66	0.0078	0.0007762
Sr	88	3	He	298.174	2.3316	149124.67	0.0078	0.0007762
Mo	98	3	He	0.665	0.0152	960.07	0.022	0.0005162
Mo	98	3	He	0.602	0.0138	900.07	0.022	0.0005162
Mo	98	3	He	0.63	0.0144	920.06	0.022	0.0005162
Ag	107	3	He	-0.003	0.0003	20.00	0.0455	0.0004641
Ag	107	3	He	-0.007	0.0002	10.00	0.0455	0.0004641
Ag	107	3	He	0.004	0.0006	40.00	0.0455	0.0004641
Cd	111	3	He	0.009	0.0001	6.00	0.0048	5.152E-05
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Cd	111	3	He	0.028	0.0002	12.00	0.0048	5.152E-05
Sn	120	3	He	0.225	0.0188	1190.11	0.0143	0.01559
Sn	120	3	He	0.173	0.0181	1180.10	0.0143	0.01559
Sn	120	3	He	0.256	0.0192	1230.10	0.0143	0.01559
Sb	121	3	He	0.056	0.0009	60.00	0.0124	0.000258
Sb	121	3	He	0.115	0.0017	110.00	0.0124	0.000258
Sb	121	3	He	0.105	0.0016	100.00	0.0124	0.000258
Ba	137	3	He	13.61	0.0599	3790.66	0.0044	0.000309
Ba	137	3	He	15.182	0.0667	4360.84	0.0044	0.000309
Ba	137	3	He	13.299	0.0585	3740.69	0.0044	0.000309
Tl	205	3	He	0.03	0.0018	400.02	0.0276	0.001005
Tl	205	3	He	0.016	0.0015	320.02	0.0276	0.001005
Tl	205	3	He	0.011	0.0013	280.01	0.0276	0.001005
Pb	208	3	He	0.031	0.0033	240.01	0.0364	0.002176
Pb	208	3	He	0.025	0.0031	330.02	0.0364	0.002176
Pb	208	3	He	0.024	0.0031	340.02	0.0364	0.002176
U	238	3	He	0.607	0.0258	5641.44	0.0421	0.00024
U	238	3	He	0.567	0.0241	5301.26	0.0421	0.00024
U	238	3	He	0.574	0.0244	5271.25	0.0421	0.00024
Sc	45	1	No Gas			3285286.51		
Sc	45	1	No Gas			3280259.33		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3394312.45		
Ge	72	1	No Gas			1447570.45		
Ge	72	1	No Gas			1454379.98		
Ge	72	1	No Gas			1491176.54		
Sc	45	2	H2			200443.41		
Sc	45	2	H2			191560.08		
Sc	45	2	H2			194443.08		
Ge	72	2	H2			165763.67		
Ge	72	2	H2			160717.64		
Ge	72	2	H2			162386.48		
In	115	2	H2			448365.46		
In	115	2	H2			429540.70		
In	115	2	H2			437692.92		
Sc	45	3	He			42281.21		
Sc	45	3	He			42030.77		
Sc	45	3	He			41559.49		
Ge	72	3	He			75367.90		
Ge	72	3	He			75136.36		
Ge	72	3	He			74994.91		
In	115	3	He			63344.09		
In	115	3	He			65363.14		
In	115	3	He			63966.87		
Tb	159	3	He			288412.98		
Tb	159	3	He			289523.00		
Tb	159	3	He			285963.16		
Bi	209	3	He			218739.08		
Bi	209	3	He			220077.99		
Bi	209	3	He			216064.74		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 13:59:40
Sample Name	410-136848-V-1-A
Sample Type	Sample
Comment	D29
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

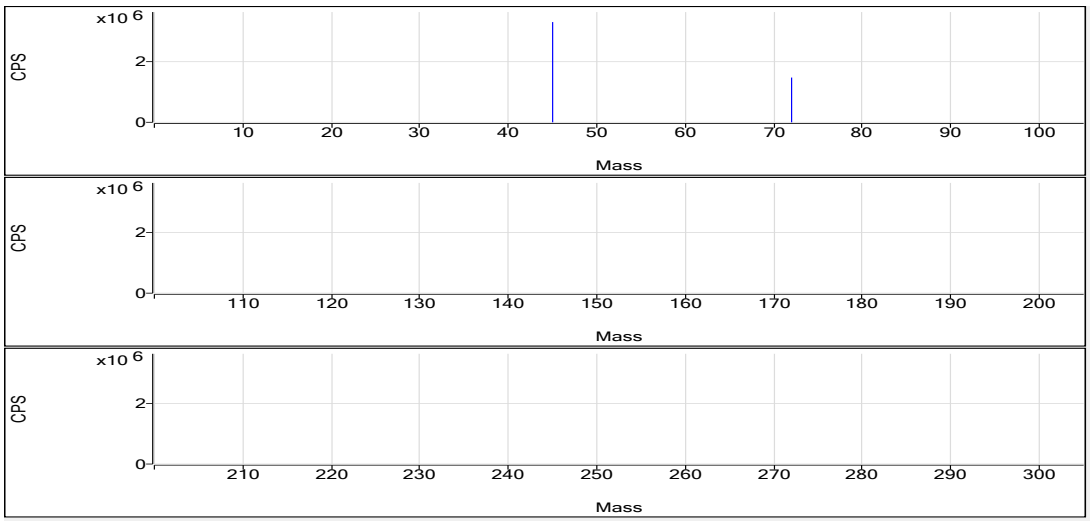
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.008	ppb	N/A	52.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.117	ppb	24.6	9.33	0.0001	Pulse	1.5000	3
Na	23	72	He	31360.419	ppb	1.1	4073873.27	53.9780	Pulse	0.1000	3
Mg	24	72	He	7865.190	ppb	0.8	500845.30	6.6360	Pulse	0.1000	3
Al	27	72	He	20.310	ppb	15.0	450.02	0.0060	Pulse	0.1000	3
K	39	72	He	3076.303	ppb	2.0	139050.85	1.8424	Pulse	0.1000	3
Ca	44	72	He	50584.644	ppb	1.0	118700.74	1.5728	Pulse	0.1000	3
Ti	47	72	He	0.852	ppb	181.1	36.67	0.0005	Pulse	0.1000	3
V	51	72	He	0.631	ppb	5.5	1110.05	0.0147	Pulse	0.5000	3
Cr	52	72	He	0.203	ppb	56.9	2150.24	0.0285	Pulse	0.1000	3
Mn	55	72	He	48.771	ppb	1.5	22771.79	0.3017	Pulse	0.1000	3
Fe	57	72	He	45.915	ppb	5.6	1300.10	0.0172	Pulse	0.1000	3
Co	59	72	He	0.107	ppb	12.6	480.02	0.0064	Pulse	0.1000	3
Ni	60	72	He	1.212	ppb	23.0	1483.46	0.0197	Pulse	0.1000	3
Cu	63	72	He	0.850	ppb	14.9	1973.53	0.0261	Pulse	0.1000	3
Zn	66	72	He	1.590	ppb	16.9	660.04	0.0087	Pulse	0.1000	3
As	75	72	He	0.999	ppb	6.1	164.00	0.0022	Pulse	0.5000	3
Sr	88	115	He	182.893	ppb	2.9	90714.98	1.4305	Pulse	0.1000	3
Mo	98	115	He	1.507	ppb	11.1	2140.24	0.0337	Pulse	0.1000	3
Ag	107	115	He	0.002	ppb	152.2	36.67	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.007	ppb	116.1	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.310	ppb	27.8	1270.18	0.0200	Pulse	0.1000	3
Sb	121	115	He	0.234	ppb	17.8	200.01	0.0032	Pulse	0.1000	3
Ba	137	115	He	18.216	ppb	2.1	5074.45	0.0800	Pulse	0.1000	3
Tl	205	209	He	0.008	ppb	71.9	270.01	0.0012	Pulse	0.1000	3
Pb	208	209	He	0.034	ppb	15.8	750.03	0.0034	Pulse	0.1000	3
U	238	209	He	0.583	ppb	2.3	5451.32	0.0248	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3281748.39	1.7	101.3	Pulse	0.1000	3
No Gas	Ge	72	1464791.91	1.3	101.7	Pulse	0.1000	3
H2	Sc	45	198248.69	2.0	101.5	Pulse	0.1000	3
H2	Ge	72	165281.53	1.2	101.4	Pulse	0.1000	3
H2	In	115	439165.98	2.4	101.4	Pulse	0.1000	3
He	Sc	45	42726.73	2.0	106.9	Pulse	0.1000	3
He	Ge	72	75478.09	1.1	104.4	Pulse	0.1000	3
He	In	115	63440.99	2.1	98.2	Pulse	0.1000	3
He	Tb	159	284207.94	0.6	99.4	Pulse	0.1000	3
He	Bi	209	220107.29	0.5	99.1	Pulse	0.1000	3

No Gas



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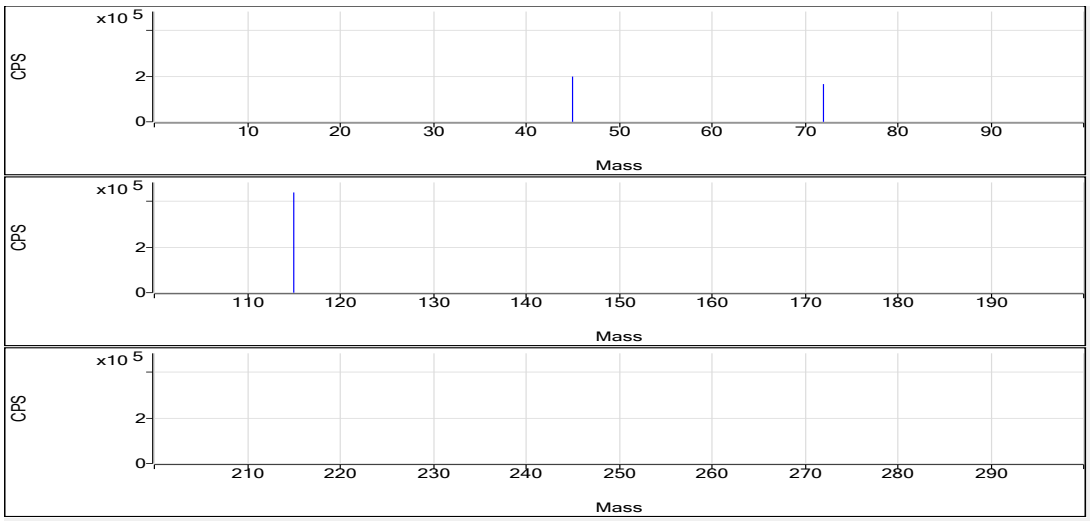
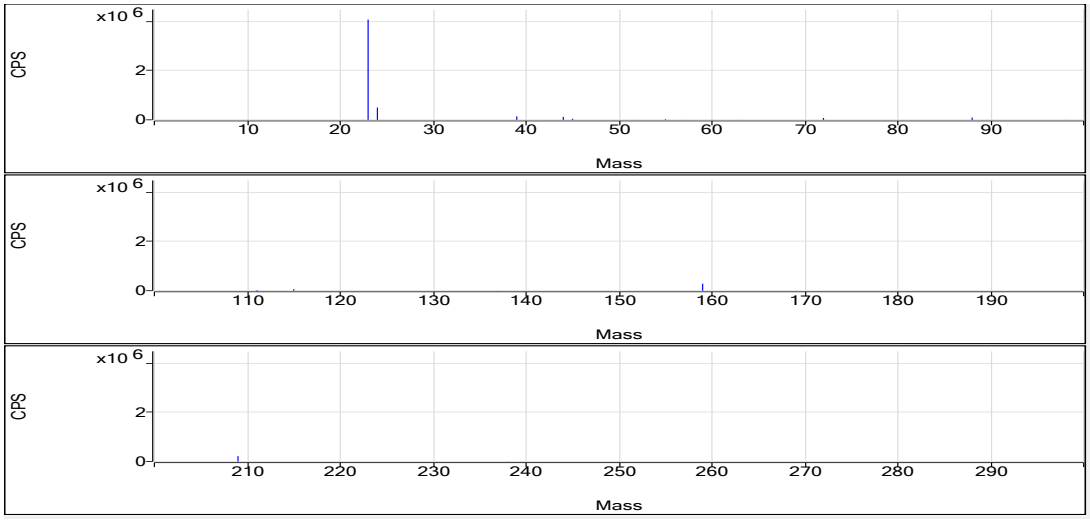


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.006	0	58.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.007	0	54.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.012	0	46.00	0.0013	4.694E-05
Se	78	2	H2	0.095	0	8.00	0.0004	1.089E-05
Se	78	2	H2	0.107	0.0001	8.67	0.0004	1.089E-05
Se	78	2	H2	0.15	0.0001	11.33	0.0004	1.089E-05
Na	23	3	He	31734.525	54.6207	4092444.63	0.0017	0.1065
Na	23	3	He	31322.491	53.9129	4049750.56	0.0017	0.1065
Na	23	3	He	31024.24	53.4006	4079424.63	0.0017	0.1065
Mg	24	3	He	7907.242	6.6715	499857.41	0.0008	0.004846
Mg	24	3	He	7893.031	6.6595	500236.63	0.0008	0.004846
Mg	24	3	He	7795.297	6.5771	502441.87	0.0008	0.004846
Al	27	3	He	19.373	0.0057	430.02	0.0002	0.001063
Al	27	3	He	23.724	0.0068	510.02	0.0002	0.001063
Al	27	3	He	17.832	0.0054	410.02	0.0002	0.001063
K	39	3	He	3148.499	1.8823	141029.39	0.0006	0.1436
K	39	3	He	3039.524	1.8221	136869.98	0.0006	0.1436
K	39	3	He	3040.887	1.8229	139253.18	0.0006	0.1436
Ca	44	3	He	50897.005	1.5825	118565.87	0	0.001611
Ca	44	3	He	50862.494	1.5814	118788.79	0	0.001611
Ca	44	3	He	49994.432	1.5544	118747.55	0	0.001611
Ti	47	3	He	2.634	0.0009	70.00	0.0003	0.0002737
Ti	47	3	He	-0.03	0.0003	20.00	0.0003	0.0002737
Ti	47	3	He	-0.048	0.0003	20.00	0.0003	0.0002737
V	51	3	He	0.665	0.0151	1132.05	0.0117	0.007326
V	51	3	He	0.596	0.0143	1074.05	0.0117	0.007326
V	51	3	He	0.632	0.0147	1124.05	0.0117	0.007326
Cr	52	3	He	0.244	0.0291	2180.27	0.0152	0.02538
Cr	52	3	He	0.073	0.0265	1990.19	0.0152	0.02538
Cr	52	3	He	0.293	0.0298	2280.27	0.0152	0.02538
Mn	55	3	He	49.636	0.3068	22988.82	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	48.419	0.2996	22508.01	0.0059	0.01385
Mn	55	3	He	48.259	0.2987	22818.54	0.0059	0.01385
Fe	57	3	He	44.989	0.017	1270.10	0.0003	0.003918
Fe	57	3	He	43.92	0.0166	1250.09	0.0003	0.003918
Fe	57	3	He	48.835	0.0181	1380.12	0.0003	0.003918
Co	59	3	He	0.113	0.0065	490.02	0.0305	0.003084
Co	59	3	He	0.117	0.0067	500.02	0.0305	0.003084
Co	59	3	He	0.092	0.0059	450.02	0.0305	0.003084
Ni	60	3	He	1.511	0.0223	1670.14	0.0088	0.009003
Ni	60	3	He	0.96	0.0174	1310.11	0.0088	0.009003
Ni	60	3	He	1.165	0.0192	1470.13	0.0088	0.009003
Cu	63	3	He	0.931	0.0282	2110.23	0.0249	0.004937
Cu	63	3	He	0.704	0.0225	1690.15	0.0249	0.004937
Cu	63	3	He	0.915	0.0278	2120.22	0.0249	0.004937
Zn	66	3	He	1.78	0.0092	690.04	0.0025	0.004836
Zn	66	3	He	1.283	0.008	600.03	0.0025	0.004836
Zn	66	3	He	1.708	0.009	690.05	0.0025	0.004836
As	75	3	He	0.932	0.0021	154.00	0.0017	0.0004347
As	75	3	He	1.051	0.0023	170.00	0.0017	0.0004347
As	75	3	He	1.015	0.0022	168.00	0.0017	0.0004347
Sr	88	3	He	187.725	1.4682	91190.26	0.0078	0.0007762
Sr	88	3	He	177.217	1.3861	89692.94	0.0078	0.0007762
Sr	88	3	He	183.738	1.4371	91261.75	0.0078	0.0007762
Mo	98	3	He	1.49	0.0333	2070.23	0.022	0.0005162
Mo	98	3	He	1.682	0.0376	2430.31	0.022	0.0005162
Mo	98	3	He	1.35	0.0302	1920.19	0.022	0.0005162
Ag	107	3	He	0	0.0005	30.00	0.0455	0.0004641
Ag	107	3	He	0.007	0.0008	50.00	0.0455	0.0004641
Ag	107	3	He	0	0.0005	30.00	0.0455	0.0004641
Cd	111	3	He	0.016	0.0001	8.00	0.0048	5.152E-05
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Sn	120	3	He	0.296	0.0198	1230.11	0.0143	0.01559
Sn	120	3	He	0.403	0.0213	1380.33	0.0143	0.01559
Sn	120	3	He	0.232	0.0189	1200.10	0.0143	0.01559
Sb	121	3	He	0.278	0.0037	230.01	0.0124	0.000258
Sb	121	3	He	0.228	0.0031	200.01	0.0124	0.000258
Sb	121	3	He	0.195	0.0027	170.01	0.0124	0.000258
Ba	137	3	He	18.63	0.0818	5081.07	0.0044	0.000309
Ba	137	3	He	18.161	0.0798	5161.19	0.0044	0.000309
Ba	137	3	He	17.858	0.0784	4981.10	0.0044	0.000309
Tl	205	3	He	0.011	0.0013	290.01	0.0276	0.001005
Tl	205	3	He	0.012	0.0013	290.01	0.0276	0.001005
Tl	205	3	He	0.001	0.001	230.01	0.0276	0.001005
Pb	208	3	He	0.033	0.0034	370.02	0.0364	0.002176
Pb	208	3	He	0.039	0.0036	410.02	0.0364	0.002176
Pb	208	3	He	0.029	0.0032	290.01	0.0364	0.002176
U	238	3	He	0.57	0.0242	5351.24	0.0421	0.00024
U	238	3	He	0.597	0.0254	5551.39	0.0421	0.00024
U	238	3	He	0.582	0.0247	5451.34	0.0421	0.00024
Sc	45	1	No Gas			3324766.83		
Sc	45	1	No Gas			3217681.51		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3302796.83		
Ge	72	1	No Gas			1481967.17		
Ge	72	1	No Gas			1443415.13		
Ge	72	1	No Gas			1468993.42		
Sc	45	2	H2			201733.20		
Sc	45	2	H2			199086.62		
Sc	45	2	H2			193926.25		
Ge	72	2	H2			167534.88		
Ge	72	2	H2			164548.98		
Ge	72	2	H2			163760.72		
In	115	2	H2			449075.62		
In	115	2	H2			440102.22		
In	115	2	H2			428320.11		
Sc	45	3	He			42041.09		
Sc	45	3	He			42462.65		
Sc	45	3	He			43676.44		
Ge	72	3	He			74924.80		
Ge	72	3	He			75116.55		
Ge	72	3	He			76392.93		
In	115	3	He			62118.27		
In	115	3	He			64719.74		
In	115	3	He			63514.67		
Tb	159	3	He			285249.21		
Tb	159	3	He			285056.83		
Tb	159	3	He			282317.79		
Bi	209	3	He			220976.95		
Bi	209	3	He			218859.70		
Bi	209	3	He			220485.21		

Quantitation Report

Data File Name	121SMPL.d
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Acq Time	2023-08-10 14:01:40
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Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

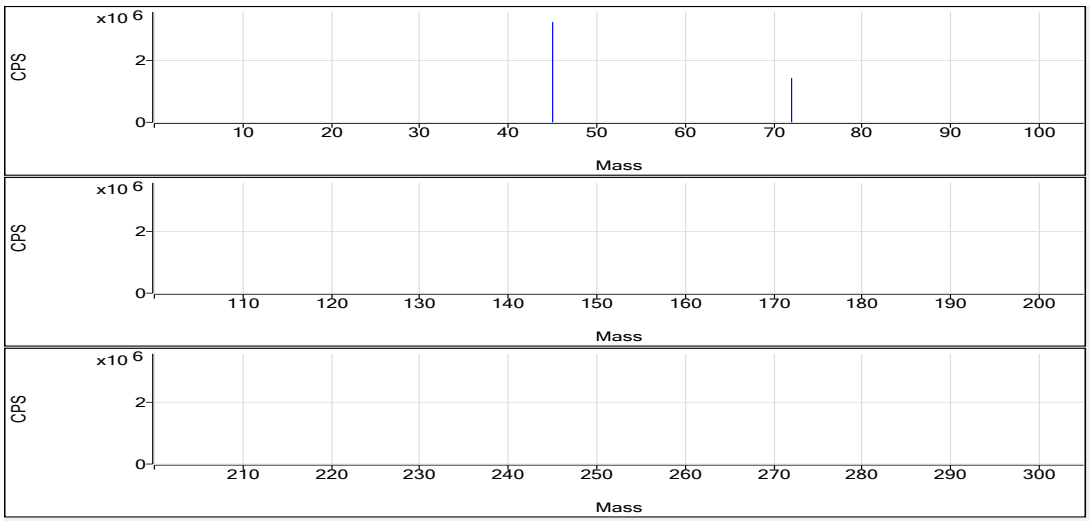
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.008	ppb	N/A	52.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.010	ppb	N/A	1.11	0.0000	Pulse	1.5000	3
Na	23	72	He	36.652	ppb	9.3	12562.31	0.1694	Pulse	0.1000	3
Mg	24	72	He	23.109	ppb	7.9	1803.50	0.0243	Pulse	0.1000	3
Al	27	72	He	3.038	ppb	86.5	133.34	0.0018	Pulse	0.1000	3
K	39	72	He	11.115	ppb	121.9	11104.53	0.1498	Pulse	0.1000	3
Ca	44	72	He	98.297	ppb	33.5	346.68	0.0047	Pulse	0.1000	3
Ti	47	72	He	0.517	ppb	99.7	30.00	0.0004	Pulse	0.1000	3
V	51	72	He	0.032	ppb	159.7	571.35	0.0077	Pulse	0.5000	3
Cr	52	72	He	0.010	ppb	1065.6	1893.52	0.0255	Pulse	0.1000	3
Mn	55	72	He	0.051	ppb	180.1	1050.07	0.0142	Pulse	0.1000	3
Fe	57	72	He	5.529	ppb	79.5	410.02	0.0055	Pulse	0.1000	3
Co	59	72	He	0.061	ppb	64.4	366.68	0.0050	Pulse	0.1000	3
Ni	60	72	He	0.924	ppb	5.1	1270.10	0.0171	Pulse	0.1000	3
Cu	63	72	He	0.062	ppb	74.6	480.03	0.0065	Pulse	0.1000	3
Zn	66	72	He	-0.159	ppb	N/A	330.02	0.0044	Pulse	0.1000	3
As	75	72	He	0.060	ppb	51.4	40.00	0.0005	Pulse	0.5000	3
Sr	88	115	He	0.288	ppb	26.2	193.34	0.0030	Pulse	0.1000	3
Mo	98	115	He	0.036	ppb	31.4	83.33	0.0013	Pulse	0.1000	3
Ag	107	115	He	0.008	ppb	28.4	53.33	0.0008	Pulse	0.1000	3
Cd	111	115	He	-0.002	ppb	N/A	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.107	ppb	179.0	1090.08	0.0171	Pulse	0.1000	3
Sb	121	115	He	0.021	ppb	87.1	33.33	0.0005	Pulse	0.1000	3
Ba	137	115	He	0.183	ppb	122.9	70.00	0.0011	Pulse	0.1000	3
Tl	205	209	He	0.048	ppb	19.4	510.03	0.0023	Pulse	0.1000	3
Pb	208	209	He	-0.008	ppb	N/A	413.34	0.0019	Pulse	0.1000	3
U	238	209	He	0.008	ppb	33.2	130.01	0.0006	Pulse	0.1000	3

ISTD Table:

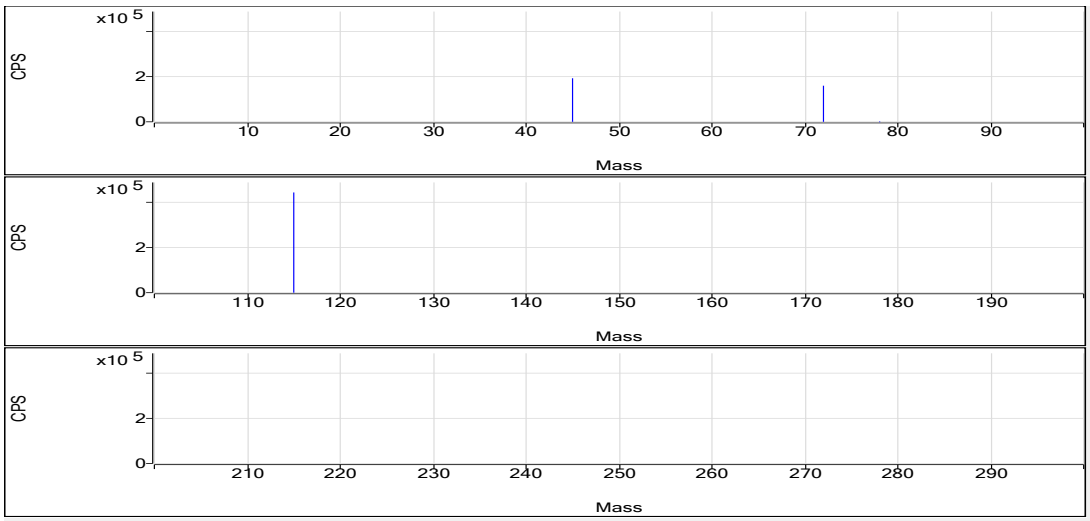
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3230111.31	1.7	99.7	Pulse	0.1000	3
No Gas	Ge	72	1425397.84	1.3	99.0	Pulse	0.1000	3
H2	Sc	45	193080.11	1.2	98.8	Pulse	0.1000	3
H2	Ge	72	160060.82	2.5	98.2	Pulse	0.1000	3
H2	In	115	444344.69	1.4	102.5	Pulse	0.1000	3
He	Sc	45	41315.63	0.7	103.3	Pulse	0.1000	3
He	Ge	72	74175.04	1.5	102.6	Pulse	0.1000	3
He	In	115	63743.93	2.0	98.7	Pulse	0.1000	3
He	Tb	159	284222.64	1.0	99.4	Pulse	0.1000	3
He	Bi	209	219072.16	0.6	98.6	Pulse	0.1000	3

No Gas

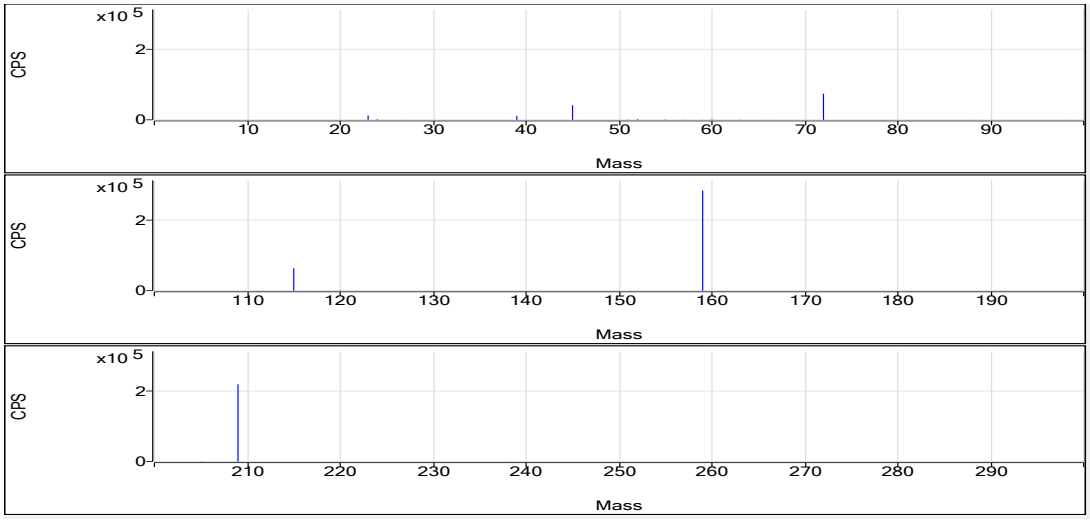


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.007	0	54.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.006	0	54.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.01	0	48.00	0.0013	4.694E-05
Se	78	2	H2	-0.007	0	1.33	0.0004	1.089E-05
Se	78	2	H2	0.004	0	2.00	0.0004	1.089E-05
Se	78	2	H2	-0.028	0	0.00	0.0004	1.089E-05
Na	23	3	He	38.673	0.1729	12715.73	0.0017	0.1065
Na	23	3	He	38.58	0.1727	12705.79	0.0017	0.1065
Na	23	3	He	32.702	0.1626	12265.41	0.0017	0.1065
Mg	24	3	He	24.251	0.0253	1860.18	0.0008	0.004846
Mg	24	3	He	24.085	0.0252	1850.17	0.0008	0.004846
Mg	24	3	He	20.991	0.0225	1700.16	0.0008	0.004846
Al	27	3	He	5.173	0.0023	170.01	0.0002	0.001063
Al	27	3	He	0.103	0.0011	80.00	0.0002	0.001063
Al	27	3	He	3.837	0.002	150.01	0.0002	0.001063
K	39	3	He	21.18	0.1553	11424.79	0.0006	0.1436
K	39	3	He	16.459	0.1527	11234.62	0.0006	0.1436
K	39	3	He	-4.295	0.1413	10654.18	0.0006	0.1436
Ca	44	3	He	83.842	0.0042	310.01	0	0.001611
Ca	44	3	He	75.069	0.0039	290.01	0	0.001611
Ca	44	3	He	135.98	0.0058	440.02	0	0.001611
Ti	47	3	He	0.535	0.0004	30.00	0.0003	0.0002737
Ti	47	3	He	-0.007	0.0003	20.00	0.0003	0.0002737
Ti	47	3	He	1.023	0.0005	40.00	0.0003	0.0002737
V	51	3	He	-0.01	0.0072	530.01	0.0117	0.007326
V	51	3	He	0.09	0.0084	616.02	0.0117	0.007326
V	51	3	He	0.018	0.0075	568.01	0.0117	0.007326
Cr	52	3	He	0.056	0.0262	1930.20	0.0152	0.02538
Cr	52	3	He	0.092	0.0268	1970.21	0.0152	0.02538
Cr	52	3	He	-0.117	0.0236	1780.16	0.0152	0.02538
Mn	55	3	He	0.141	0.0147	1080.07	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.044	0.0136	1000.07	0.0059	0.01385
Mn	55	3	He	0.057	0.0142	1070.08	0.0059	0.01385
Fe	57	3	He	0.557	0.0041	300.01	0.0003	0.003918
Fe	57	3	He	7.125	0.006	440.02	0.0003	0.003918
Fe	57	3	He	8.905	0.0065	490.03	0.0003	0.003918
Co	59	3	He	0.099	0.0061	450.02	0.0305	0.003084
Co	59	3	He	0.064	0.005	370.02	0.0305	0.003084
Co	59	3	He	0.021	0.0037	280.01	0.0305	0.003084
Ni	60	3	He	0.925	0.0171	1260.11	0.0088	0.009003
Ni	60	3	He	0.971	0.0175	1290.10	0.0088	0.009003
Ni	60	3	He	0.876	0.0167	1260.10	0.0088	0.009003
Cu	63	3	He	0.08	0.0069	510.03	0.0249	0.004937
Cu	63	3	He	0.096	0.0073	540.03	0.0249	0.004937
Cu	63	3	He	0.009	0.0052	390.02	0.0249	0.004937
Zn	66	3	He	-0.198	0.0044	320.02	0.0025	0.004836
Zn	66	3	He	-0.253	0.0042	310.01	0.0025	0.004836
Zn	66	3	He	-0.026	0.0048	360.02	0.0025	0.004836
As	75	3	He	0.078	0.0006	42.00	0.0017	0.0004347
As	75	3	He	0.078	0.0006	42.00	0.0017	0.0004347
As	75	3	He	0.025	0.0005	36.00	0.0017	0.0004347
Sr	88	3	He	0.373	0.0037	240.01	0.0078	0.0007762
Sr	88	3	He	0.228	0.0026	160.01	0.0078	0.0007762
Sr	88	3	He	0.262	0.0028	180.01	0.0078	0.0007762
Mo	98	3	He	0.025	0.0011	70.00	0.022	0.0005162
Mo	98	3	He	0.035	0.0013	80.00	0.022	0.0005162
Mo	98	3	He	0.048	0.0016	100.00	0.022	0.0005162
Ag	107	3	He	0.007	0.0008	50.00	0.0455	0.0004641
Ag	107	3	He	0.011	0.001	60.00	0.0455	0.0004641
Ag	107	3	He	0.007	0.0008	50.00	0.0455	0.0004641
Cd	111	3	He	-0.011	0	0.00	0.0048	5.152E-05
Cd	111	3	He	0.003	0.0001	4.00	0.0048	5.152E-05
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Sn	120	3	He	-0.059	0.0148	960.07	0.0143	0.01559
Sn	120	3	He	0.063	0.0165	1030.07	0.0143	0.01559
Sn	120	3	He	0.317	0.0201	1280.10	0.0143	0.01559
Sb	121	3	He	0.041	0.0008	50.00	0.0124	0.000258
Sb	121	3	He	0.005	0.0003	20.00	0.0124	0.000258
Sb	121	3	He	0.017	0.0005	30.00	0.0124	0.000258
Ba	137	3	He	0.07	0.0006	40.00	0.0044	0.000309
Ba	137	3	He	0.441	0.0022	140.01	0.0044	0.000309
Ba	137	3	He	0.037	0.0005	30.00	0.0044	0.000309
Tl	205	3	He	0.046	0.0023	500.03	0.0276	0.001005
Tl	205	3	He	0.058	0.0026	570.03	0.0276	0.001005
Tl	205	3	He	0.04	0.0021	460.03	0.0276	0.001005
Pb	208	3	He	-0.002	0.0021	270.01	0.0364	0.002176
Pb	208	3	He	-0.012	0.0017	190.01	0.0364	0.002176
Pb	208	3	He	-0.009	0.0018	230.01	0.0364	0.002176
U	238	3	He	0.012	0.0007	160.01	0.0421	0.00024
U	238	3	He	0.006	0.0005	110.01	0.0421	0.00024
U	238	3	He	0.007	0.0005	120.01	0.0421	0.00024
Sc	45	1	No Gas			3242821.51		
Sc	45	1	No Gas			3171002.77		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3276509.64		
Ge	72	1	No Gas			1434639.20		
Ge	72	1	No Gas			1403860.29		
Ge	72	1	No Gas			1437694.04		
Sc	45	2	H2			192953.22		
Sc	45	2	H2			195539.25		
Sc	45	2	H2			190747.85		
Ge	72	2	H2			163124.27		
Ge	72	2	H2			161456.52		
Ge	72	2	H2			155601.66		
In	115	2	H2			450063.59		
In	115	2	H2			444984.09		
In	115	2	H2			437986.40		
Sc	45	3	He			41028.13		
Sc	45	3	He			41569.81		
Sc	45	3	He			41348.95		
Ge	72	3	He			73548.60		
Ge	72	3	He			73558.84		
Ge	72	3	He			75417.69		
In	115	3	He			65081.93		
In	115	3	He			62510.34		
In	115	3	He			63665.03		
Tb	159	3	He			281133.86		
Tb	159	3	He			286888.98		
Tb	159	3	He			284645.09		
Bi	209	3	He			220500.19		
Bi	209	3	He			218414.35		
Bi	209	3	He			218301.95		

Quantitation Report

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Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

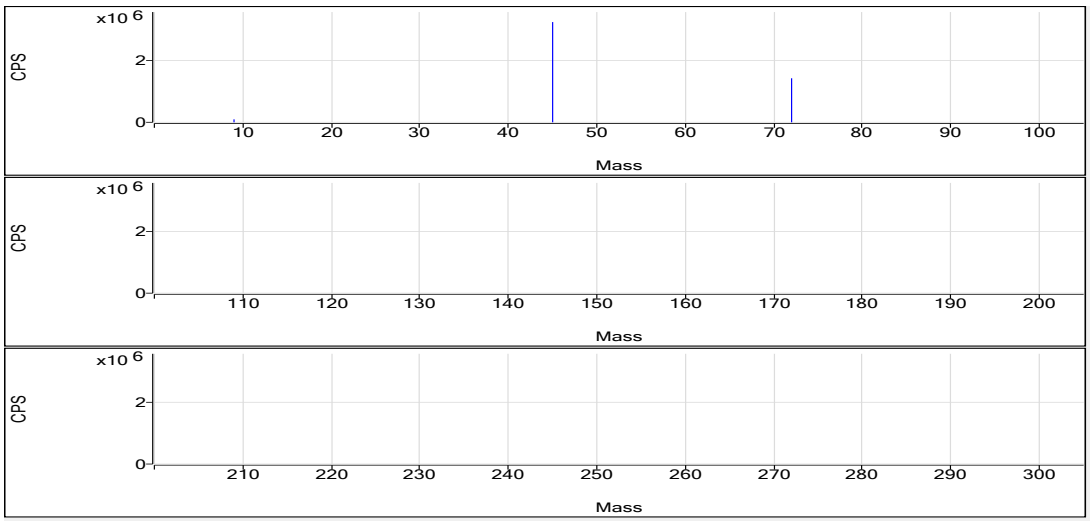
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	50.727	ppb	3.5	95496.10	0.0667	Pulse	0.5000	3
Se	78	72	H2	53.021	ppb	6.3	3323.72	0.0207	Pulse	1.5000	3
Na	23	72	He	5458.469	ppb	0.9	697824.08	9.4831	Pulse	0.1000	3
Mg	24	72	He	5381.238	ppb	0.8	334210.48	4.5418	Pulse	0.1000	3
Al	27	72	He	5288.934	ppb	0.7	94027.67	1.2778	Pulse	0.1000	3
K	39	72	He	5344.495	ppb	1.3	227744.20	3.0949	Pulse	0.1000	3
Ca	44	72	He	5343.204	ppb	4.2	12328.90	0.1676	Pulse	0.1000	3
Ti	47	72	He	5408.759	ppb	0.7	99832.50	1.3567	Pulse	0.1000	3
V	51	72	He	534.005	ppb	0.8	460205.43	6.2540	Pulse	0.5000	3
Cr	52	72	He	536.857	ppb	0.5	603435.76	8.2003	Pulse	0.1000	3
Mn	55	72	He	528.862	ppb	2.5	230720.34	3.1354	Pulse	0.1000	3
Fe	57	72	He	5281.768	ppb	0.7	112890.11	1.5341	Pulse	0.1000	3
Co	59	72	He	531.867	ppb	1.3	1194325.74	16.2306	Pulse	0.1000	3
Ni	60	72	He	530.720	ppb	1.8	344057.85	4.6758	Pulse	0.1000	3
Cu	63	72	He	531.548	ppb	1.2	975742.69	13.2602	Pulse	0.1000	3
Zn	66	72	He	523.527	ppb	0.7	95001.53	1.2910	Pulse	0.1000	3
As	75	72	He	522.605	ppb	0.2	66916.80	0.9093	Pulse	0.5000	3
Sr	88	115	He	53.801	ppb	1.4	26679.08	0.4213	Pulse	0.1000	3
Mo	98	115	He	53.202	ppb	2.1	74191.51	1.1721	Pulse	0.1000	3
Ag	107	115	He	52.924	ppb	1.5	152465.87	2.4085	Pulse	0.1000	3
Cd	111	115	He	52.652	ppb	0.4	16005.81	0.2528	Pulse	0.5000	3
Sn	120	115	He	52.145	ppb	0.8	48056.95	0.7591	Pulse	0.1000	3
Sb	121	115	He	52.534	ppb	1.7	41268.50	0.6519	Pulse	0.1000	3
Ba	137	115	He	520.978	ppb	2.0	144284.22	2.2795	Pulse	0.1000	3
Tl	205	209	He	52.091	ppb	0.6	317605.43	1.4410	Pulse	0.1000	3
Pb	208	209	He	52.100	ppb	0.3	418440.52	1.8985	Pulse	0.1000	3
U	238	209	He	51.917	ppb	0.6	481408.17	2.1842	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3260400.79	2.2	100.6	Pulse	0.1000	3
No Gas	Ge	72	1432181.49	1.8	99.5	Pulse	0.1000	3
H2	Sc	45	195207.41	2.9	99.9	Pulse	0.1000	3
H2	Ge	72	161071.45	2.5	98.8	Pulse	0.1000	3
H2	In	115	439334.17	1.3	101.4	Pulse	0.1000	3
He	Sc	45	41395.83	1.7	103.5	Pulse	0.1000	3
He	Ge	72	73588.42	0.7	101.8	Pulse	0.1000	3
He	In	115	63317.15	2.4	98.0	Pulse	0.1000	3
He	Tb	159	283818.71	0.5	99.2	Pulse	0.1000	3
He	Bi	209	220409.77	1.0	99.2	Pulse	0.1000	3

No Gas



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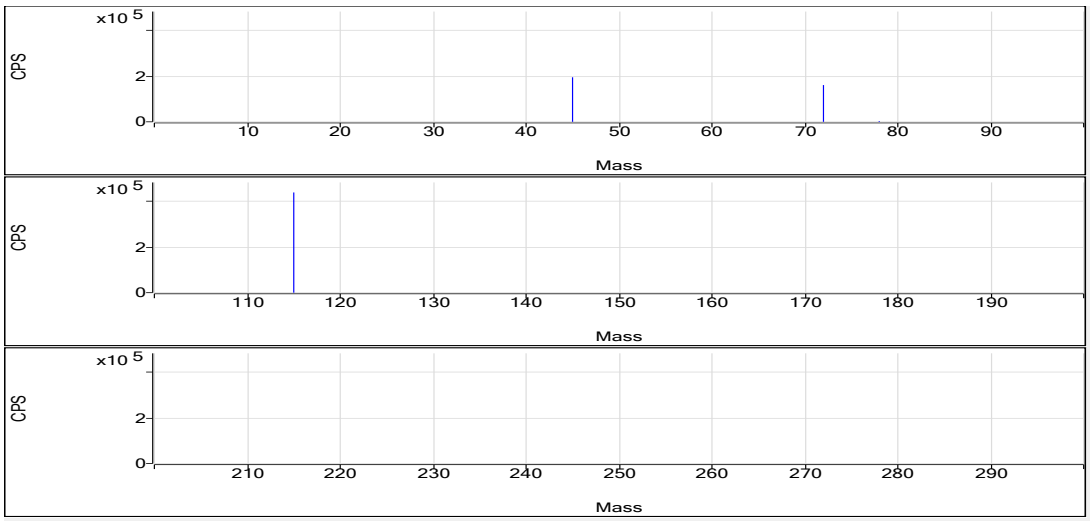
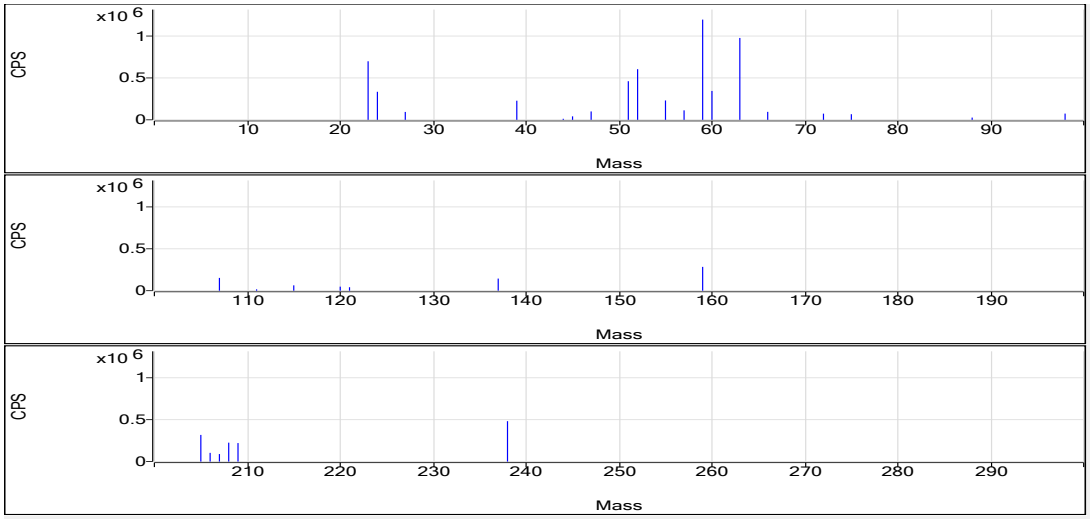


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	52.101	0.0685	97419.59	0.0013	4.694E-05
Be	9	1	No Gas	51.374	0.0676	95489.36	0.0013	4.694E-05
Be	9	1	No Gas	48.707	0.0641	93579.34	0.0013	4.694E-05
Se	78	2	H2	49.185	0.0192	3165.69	0.0004	1.089E-05
Se	78	2	H2	54.636	0.0213	3423.08	0.0004	1.089E-05
Se	78	2	H2	55.241	0.0215	3382.40	0.0004	1.089E-05
Na	23	3	He	5403.676	9.389	694325.77	0.0017	0.1065
Na	23	3	He	5501.331	9.5568	697501.16	0.0017	0.1065
Na	23	3	He	5470.401	9.5036	701645.30	0.0017	0.1065
Mg	24	3	He	5370.332	4.5326	335188.63	0.0008	0.004846
Mg	24	3	He	5429.019	4.5821	334422.22	0.0008	0.004846
Mg	24	3	He	5344.365	4.5107	333020.58	0.0008	0.004846
Al	27	3	He	5248.155	1.2679	93765.13	0.0002	0.001063
Al	27	3	He	5315.423	1.2842	93725.66	0.0002	0.001063
Al	27	3	He	5303.225	1.2812	94592.23	0.0002	0.001063
K	39	3	He	5264.005	3.0505	225586.34	0.0006	0.1436
K	39	3	He	5378.604	3.1138	227258.81	0.0006	0.1436
K	39	3	He	5390.876	3.1205	230387.44	0.0006	0.1436
Ca	44	3	He	5261.957	0.165	12205.35	0	0.001611
Ca	44	3	He	5597.231	0.1755	12805.98	0	0.001611
Ca	44	3	He	5170.423	0.1622	11975.36	0	0.001611
Ti	47	3	He	5393.297	1.3528	100040.90	0.0003	0.0002737
Ti	47	3	He	5453.678	1.3679	99839.50	0.0003	0.0002737
Ti	47	3	He	5379.302	1.3493	99617.11	0.0003	0.0002737
V	51	3	He	529.155	6.1973	458292.69	0.0117	0.007326
V	51	3	He	537.942	6.3	459808.59	0.0117	0.007326
V	51	3	He	534.918	6.2647	462515.00	0.0117	0.007326
Cr	52	3	He	533.827	8.1541	603003.78	0.0152	0.02538
Cr	52	3	He	538.349	8.223	600154.33	0.0152	0.02538
Cr	52	3	He	538.397	8.2237	607149.17	0.0152	0.02538
Mn	55	3	He	514.208	3.0489	225471.03	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	532.934	3.1595	230593.26	0.0059	0.01385
Mn	55	3	He	539.444	3.1979	236096.72	0.0059	0.01385
Fe	57	3	He	5246.114	1.5238	112686.00	0.0003	0.003918
Fe	57	3	He	5320.888	1.5455	112795.36	0.0003	0.003918
Fe	57	3	He	5278.301	1.5331	113188.96	0.0003	0.003918
Co	59	3	He	524.17	15.9958	1182902.72	0.0305	0.003084
Co	59	3	He	537.604	16.4057	1197368.89	0.0305	0.003084
Co	59	3	He	533.826	16.2904	1202705.61	0.0305	0.003084
Ni	60	3	He	520.795	4.5885	339324.68	0.0088	0.009003
Ni	60	3	He	539.673	4.7545	347008.16	0.0088	0.009003
Ni	60	3	He	531.692	4.6843	345840.70	0.0088	0.009003
Cu	63	3	He	525.178	13.1014	968858.50	0.0249	0.004937
Cu	63	3	He	538.382	13.4306	980236.24	0.0249	0.004937
Cu	63	3	He	531.082	13.2486	978133.34	0.0249	0.004937
Zn	66	3	He	523.323	1.2905	95435.07	0.0025	0.004836
Zn	66	3	He	527.179	1.3	94880.10	0.0025	0.004836
Zn	66	3	He	520.078	1.2825	94689.41	0.0025	0.004836
As	75	3	He	522.21	0.9086	67195.36	0.0017	0.0004347
As	75	3	He	521.986	0.9083	66289.33	0.0017	0.0004347
As	75	3	He	523.619	0.9111	67265.70	0.0017	0.0004347
Sr	88	3	He	54.26	0.4249	26325.19	0.0078	0.0007762
Sr	88	3	He	52.952	0.4147	26154.90	0.0078	0.0007762
Sr	88	3	He	54.192	0.4244	27557.14	0.0078	0.0007762
Mo	98	3	He	54.405	1.1986	74254.96	0.022	0.0005162
Mo	98	3	He	52.956	1.1667	73581.86	0.022	0.0005162
Mo	98	3	He	52.244	1.151	74737.72	0.022	0.0005162
Ag	107	3	He	53.797	2.4482	151671.73	0.0455	0.0004641
Ag	107	3	He	52.73	2.3997	151345.96	0.0455	0.0004641
Ag	107	3	He	52.244	2.3776	154379.93	0.0455	0.0004641
Cd	111	3	He	52.873	0.2539	15726.82	0.0048	5.152E-05
Cd	111	3	He	52.525	0.2522	15905.03	0.0048	5.152E-05
Cd	111	3	He	52.559	0.2524	16385.57	0.0048	5.152E-05
Sn	120	3	He	52.344	0.7619	47200.82	0.0143	0.01559
Sn	120	3	He	52.413	0.7629	48113.88	0.0143	0.01559
Sn	120	3	He	51.679	0.7524	48856.14	0.0143	0.01559
Sb	121	3	He	53.461	0.6634	41101.13	0.0124	0.000258
Sb	121	3	He	52.45	0.6509	41051.46	0.0124	0.000258
Sb	121	3	He	51.691	0.6415	41652.91	0.0124	0.000258
Ba	137	3	He	531.83	2.327	144157.59	0.0044	0.000309
Ba	137	3	He	520.494	2.2774	143629.86	0.0044	0.000309
Ba	137	3	He	510.609	2.2341	145065.22	0.0044	0.000309
Tl	205	3	He	52.267	1.4459	316939.00	0.0276	0.001005
Tl	205	3	He	52.25	1.4454	316695.95	0.0276	0.001005
Tl	205	3	He	51.757	1.4318	319181.34	0.0276	0.001005
Pb	208	3	He	52.257	1.9042	225255.47	0.0364	0.002176
Pb	208	3	He	51.98	1.8941	222181.70	0.0364	0.002176
Pb	208	3	He	52.062	1.8971	228247.81	0.0364	0.002176
U	238	3	He	52.068	2.1906	480174.13	0.0421	0.00024
U	238	3	He	52.11	2.1924	480356.16	0.0421	0.00024
U	238	3	He	51.572	2.1697	483694.21	0.0421	0.00024
Sc	45	1	No Gas			3220513.39		
Sc	45	1	No Gas			3217722.14		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3342966.83		
Ge	72	1	No Gas			1421986.07		
Ge	72	1	No Gas			1413524.98		
Ge	72	1	No Gas			1461033.42		
Sc	45	2	H2			201609.82		
Sc	45	2	H2			190490.92		
Sc	45	2	H2			193521.50		
Ge	72	2	H2			165208.79		
Ge	72	2	H2			160827.10		
Ge	72	2	H2			157178.45		
In	115	2	H2			445251.99		
In	115	2	H2			439011.63		
In	115	2	H2			433738.90		
Sc	45	3	He			40586.86		
Sc	45	3	He			41660.01		
Sc	45	3	He			41940.62		
Ge	72	3	He			73950.94		
Ge	72	3	He			72985.12		
Ge	72	3	He			73829.21		
In	115	3	He			62319.34		
In	115	3	He			63443.80		
In	115	3	He			65312.86		
Tb	159	3	He			282317.18		
Tb	159	3	He			285134.02		
Tb	159	3	He			284004.94		
Bi	209	3	He			219198.20		
Bi	209	3	He			219104.59		
Bi	209	3	He			222926.52		

Quantitation Report

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Sample Name	CCB 4654618
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

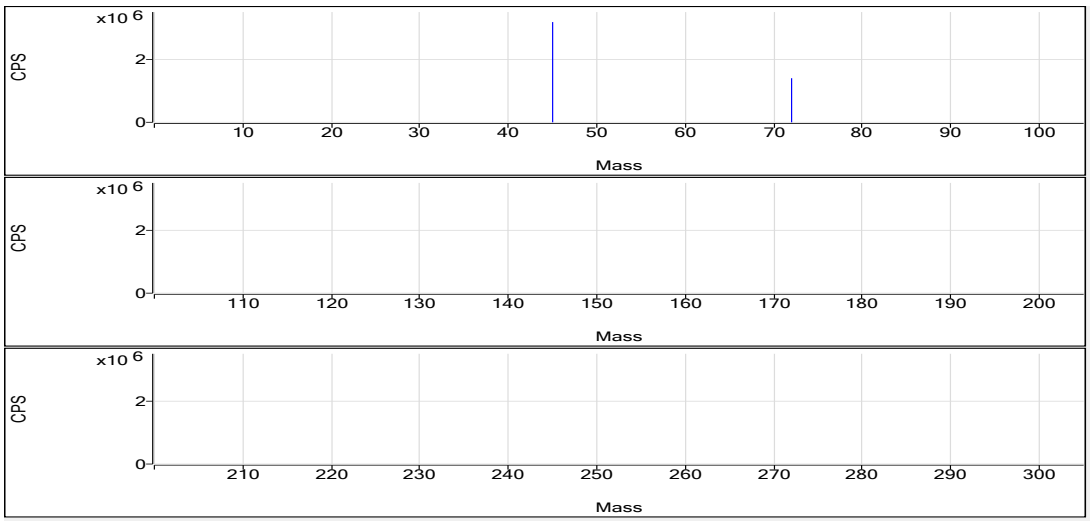
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.037	ppb	8.5	136.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.084	ppb	33.6	6.89	0.0000	Pulse	1.5000	3
Na	23	72	He	23.000	ppb	14.0	10680.86	0.1460	Pulse	0.1000	3
Mg	24	72	He	17.915	ppb	10.1	1460.12	0.0199	Pulse	0.1000	3
Al	27	72	He	3.713	ppb	47.3	143.34	0.0020	Pulse	0.1000	3
K	39	72	He	11.289	ppb	93.2	10971.10	0.1499	Pulse	0.1000	3
Ca	44	72	He	65.317	ppb	67.3	266.68	0.0036	Pulse	0.1000	3
Ti	47	72	He	2.887	ppb	102.7	73.34	0.0010	Pulse	0.1000	3
V	51	72	He	0.184	ppb	21.0	694.02	0.0095	Pulse	0.5000	3
Cr	52	72	He	0.170	ppb	55.3	2046.87	0.0280	Pulse	0.1000	3
Mn	55	72	He	0.030	ppb	443.1	1026.74	0.0140	Pulse	0.1000	3
Fe	57	72	He	4.700	ppb	61.4	386.69	0.0053	Pulse	0.1000	3
Co	59	72	He	0.241	ppb	8.8	763.38	0.0104	Pulse	0.1000	3
Ni	60	72	He	1.296	ppb	18.4	1493.47	0.0204	Pulse	0.1000	3
Cu	63	72	He	0.231	ppb	18.8	783.38	0.0107	Pulse	0.1000	3
Zn	66	72	He	-0.133	ppb	N/A	330.02	0.0045	Pulse	0.1000	3
As	75	72	He	0.191	ppb	84.3	56.00	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.240	ppb	13.8	170.01	0.0027	Pulse	0.1000	3
Mo	98	115	He	0.043	ppb	56.8	93.34	0.0015	Pulse	0.1000	3
Ag	107	115	He	0.022	ppb	15.5	93.33	0.0015	Pulse	0.1000	3
Cd	111	115	He	0.031	ppb	25.5	12.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.276	ppb	7.6	1250.10	0.0195	Pulse	0.1000	3
Sb	121	115	He	0.106	ppb	34.1	100.00	0.0016	Pulse	0.1000	3
Ba	137	115	He	0.300	ppb	44.2	103.34	0.0016	Pulse	0.1000	3
Tl	205	209	He	0.226	ppb	26.2	1593.48	0.0073	Pulse	0.1000	3
Pb	208	209	He	0.005	ppb	156.6	516.69	0.0024	Pulse	0.1000	3
U	238	209	He	0.026	ppb	9.5	290.02	0.0013	Pulse	0.1000	3

ISTD Table:

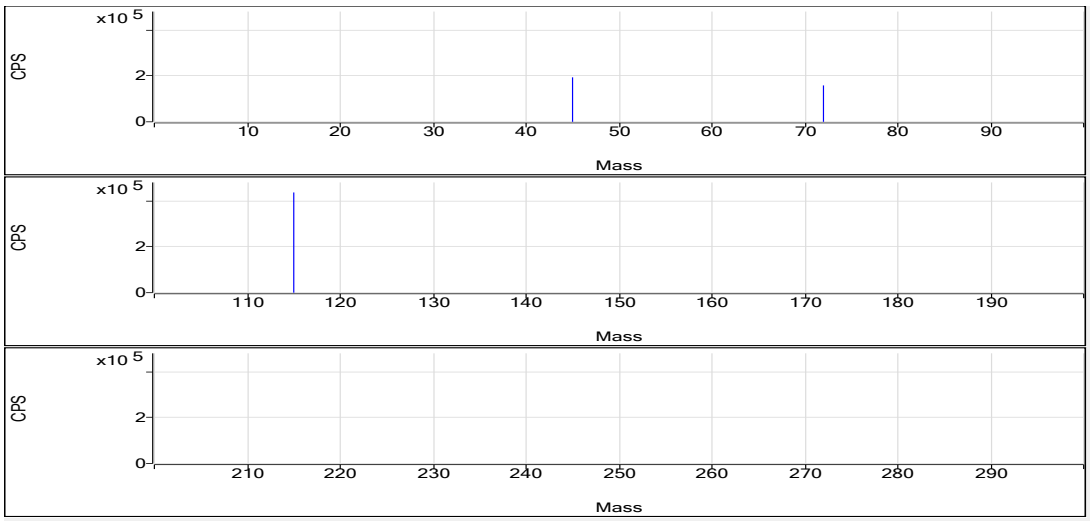
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3215961.20	2.3	99.2	Pulse	0.1000	3
No Gas	Ge	72	1414381.39	1.6	98.2	Pulse	0.1000	3
H2	Sc	45	194323.46	2.2	99.5	Pulse	0.1000	3
H2	Ge	72	159006.40	1.9	97.5	Pulse	0.1000	3
H2	In	115	437861.50	2.4	101.1	Pulse	0.1000	3
He	Sc	45	42101.09	2.0	105.3	Pulse	0.1000	3
He	Ge	72	73189.27	0.9	101.2	Pulse	0.1000	3
He	In	115	64027.46	2.0	99.1	Pulse	0.1000	3
He	Tb	159	282316.06	1.2	98.7	Pulse	0.1000	3
He	Bi	209	219219.94	0.9	98.7	Pulse	0.1000	3

No Gas

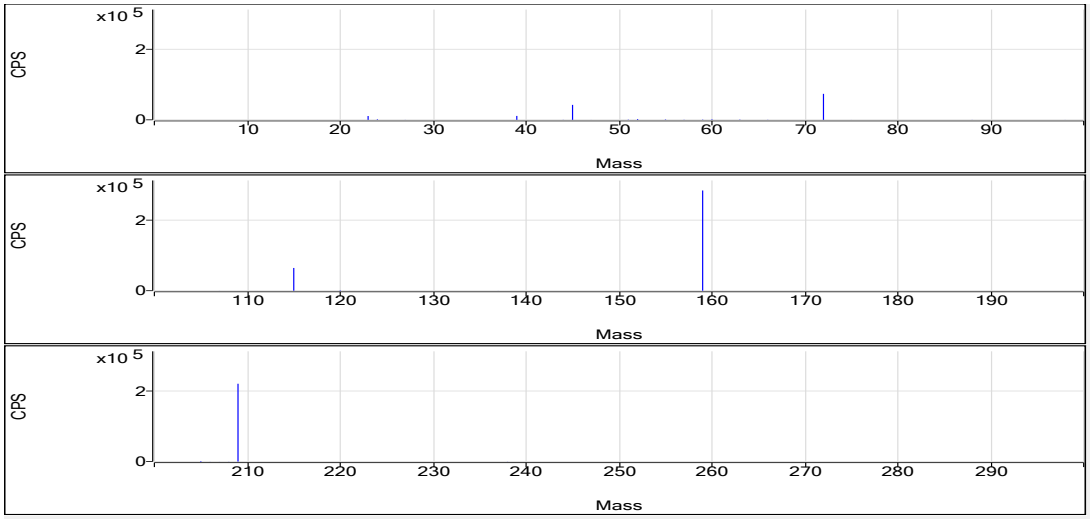


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.041	0.0001	142.00	0.0013	4.694E-05
Be	9	1	No Gas	0.035	0.0001	130.00	0.0013	4.694E-05
Be	9	1	No Gas	0.036	0.0001	136.00	0.0013	4.694E-05
Se	78	2	H2	0.056	0	5.33	0.0004	1.089E-05
Se	78	2	H2	0.112	0.0001	8.67	0.0004	1.089E-05
Se	78	2	H2	0.082	0	6.67	0.0004	1.089E-05
Na	23	3	He	19.319	0.1396	10314.00	0.0017	0.1065
Na	23	3	He	25.244	0.1498	10874.31	0.0017	0.1065
Na	23	3	He	24.436	0.1484	10854.27	0.0017	0.1065
Mg	24	3	He	18.824	0.0207	1530.12	0.0008	0.004846
Mg	24	3	He	19.093	0.0209	1520.13	0.0008	0.004846
Mg	24	3	He	15.826	0.0182	1330.11	0.0008	0.004846
Al	27	3	He	4.011	0.002	150.00	0.0002	0.001063
Al	27	3	He	5.301	0.0023	170.01	0.0002	0.001063
Al	27	3	He	1.829	0.0015	110.00	0.0002	0.001063
K	39	3	He	22.939	0.1563	11544.83	0.0006	0.1436
K	39	3	He	8.447	0.1483	10764.36	0.0006	0.1436
K	39	3	He	2.483	0.145	10604.10	0.0006	0.1436
Ca	44	3	He	70.193	0.0038	280.01	0	0.001611
Ca	44	3	He	19.112	0.0022	160.01	0	0.001611
Ca	44	3	He	106.645	0.0049	360.02	0	0.001611
Ti	47	3	He	5.928	0.0018	130.01	0.0003	0.0002737
Ti	47	3	He	0.007	0.0003	20.00	0.0003	0.0002737
Ti	47	3	He	2.726	0.001	70.00	0.0003	0.0002737
V	51	3	He	0.214	0.0098	726.02	0.0117	0.007326
V	51	3	He	0.198	0.0096	700.02	0.0117	0.007326
V	51	3	He	0.141	0.009	656.02	0.0117	0.007326
Cr	52	3	He	0.111	0.0271	2000.20	0.0152	0.02538
Cr	52	3	He	0.278	0.0296	2150.21	0.0152	0.02538
Cr	52	3	He	0.12	0.0272	1990.21	0.0152	0.02538
Mn	55	3	He	-0.076	0.0134	990.07	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.013	0.0138	1000.08	0.0059	0.01385
Mn	55	3	He	0.178	0.0149	1090.08	0.0059	0.01385
Fe	57	3	He	7.976	0.0062	460.03	0.0003	0.003918
Fe	57	3	He	3.598	0.005	360.02	0.0003	0.003918
Fe	57	3	He	2.527	0.0046	340.02	0.0003	0.003918
Co	59	3	He	0.241	0.0104	770.05	0.0305	0.003084
Co	59	3	He	0.22	0.0098	710.05	0.0305	0.003084
Co	59	3	He	0.262	0.0111	810.05	0.0305	0.003084
Ni	60	3	He	1.563	0.0227	1680.17	0.0088	0.009003
Ni	60	3	He	1.217	0.0197	1430.13	0.0088	0.009003
Ni	60	3	He	1.107	0.0187	1370.10	0.0088	0.009003
Cu	63	3	He	0.242	0.011	810.05	0.0249	0.004937
Cu	63	3	He	0.183	0.0095	690.04	0.0249	0.004937
Cu	63	3	He	0.268	0.0116	850.06	0.0249	0.004937
Zn	66	3	He	-0.15	0.0045	330.01	0.0025	0.004836
Zn	66	3	He	0.106	0.0051	370.02	0.0025	0.004836
Zn	66	3	He	-0.354	0.004	290.02	0.0025	0.004836
As	75	3	He	0.03	0.0005	36.00	0.0017	0.0004347
As	75	3	He	0.352	0.001	76.00	0.0017	0.0004347
As	75	3	He	0.19	0.0008	56.00	0.0017	0.0004347
Sr	88	3	He	0.228	0.0026	160.01	0.0078	0.0007762
Sr	88	3	He	0.215	0.0025	160.01	0.0078	0.0007762
Sr	88	3	He	0.278	0.0029	190.01	0.0078	0.0007762
Mo	98	3	He	0.042	0.0014	90.00	0.022	0.0005162
Mo	98	3	He	0.067	0.002	130.01	0.022	0.0005162
Mo	98	3	He	0.019	0.0009	60.00	0.022	0.0005162
Ag	107	3	He	0.018	0.0013	80.00	0.0455	0.0004641
Ag	107	3	He	0.024	0.0015	100.00	0.0455	0.0004641
Ag	107	3	He	0.024	0.0016	100.00	0.0455	0.0004641
Cd	111	3	He	0.036	0.0002	14.00	0.0048	5.152E-05
Cd	111	3	He	0.034	0.0002	14.00	0.0048	5.152E-05
Cd	111	3	He	0.022	0.0002	10.00	0.0048	5.152E-05
Sn	120	3	He	0.296	0.0198	1240.10	0.0143	0.01559
Sn	120	3	He	0.254	0.0192	1250.10	0.0143	0.01559
Sn	120	3	He	0.279	0.0196	1260.11	0.0143	0.01559
Sb	121	3	He	0.147	0.0021	130.01	0.0124	0.000258
Sb	121	3	He	0.091	0.0014	90.00	0.0124	0.000258
Sb	121	3	He	0.079	0.0012	80.00	0.0124	0.000258
Ba	137	3	He	0.441	0.0022	140.01	0.0044	0.000309
Ba	137	3	He	0.281	0.0015	100.00	0.0044	0.000309
Ba	137	3	He	0.178	0.0011	70.00	0.0044	0.000309
Tl	205	3	He	0.29	0.009	2000.21	0.0276	0.001005
Tl	205	3	He	0.216	0.007	1520.13	0.0276	0.001005
Tl	205	3	He	0.173	0.0058	1260.11	0.0276	0.001005
Pb	208	3	He	0.013	0.0027	280.02	0.0364	0.002176
Pb	208	3	He	0.003	0.0023	220.01	0.0364	0.002176
Pb	208	3	He	-0.002	0.0021	250.01	0.0364	0.002176
U	238	3	He	0.023	0.0012	270.01	0.0421	0.00024
U	238	3	He	0.026	0.0013	290.02	0.0421	0.00024
U	238	3	He	0.028	0.0014	310.02	0.0421	0.00024
Sc	45	1	No Gas			3201589.33		
Sc	45	1	No Gas			3150234.64		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3296059.64		
Ge	72	1	No Gas			1407064.04		
Ge	72	1	No Gas			1396833.89		
Ge	72	1	No Gas			1439246.23		
Sc	45	2	H2			199311.68		
Sc	45	2	H2			191395.25		
Sc	45	2	H2			192263.45		
Ge	72	2	H2			162215.91		
Ge	72	2	H2			158523.08		
Ge	72	2	H2			156280.20		
In	115	2	H2			449756.83		
In	115	2	H2			433212.22		
In	115	2	H2			430615.46		
Sc	45	3	He			41268.42		
Sc	45	3	He			42953.56		
Sc	45	3	He			42081.29		
Ge	72	3	He			73859.54		
Ge	72	3	He			72582.49		
Ge	72	3	He			73125.79		
In	115	3	He			62611.01		
In	115	3	He			65071.84		
In	115	3	He			64428.79		
Tb	159	3	He			286086.68		
Tb	159	3	He			279600.37		
Tb	159	3	He			281261.13		
Bi	209	3	He			221573.53		
Bi	209	3	He			218321.05		
Bi	209	3	He			217765.25		

Quantitation Report

Data File Name	124SMPL.d
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Acq Time	2023-08-10 14:37:22
Sample Name	410-136848-U-5-A @5
Sample Type	Sample
Comment	D29
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

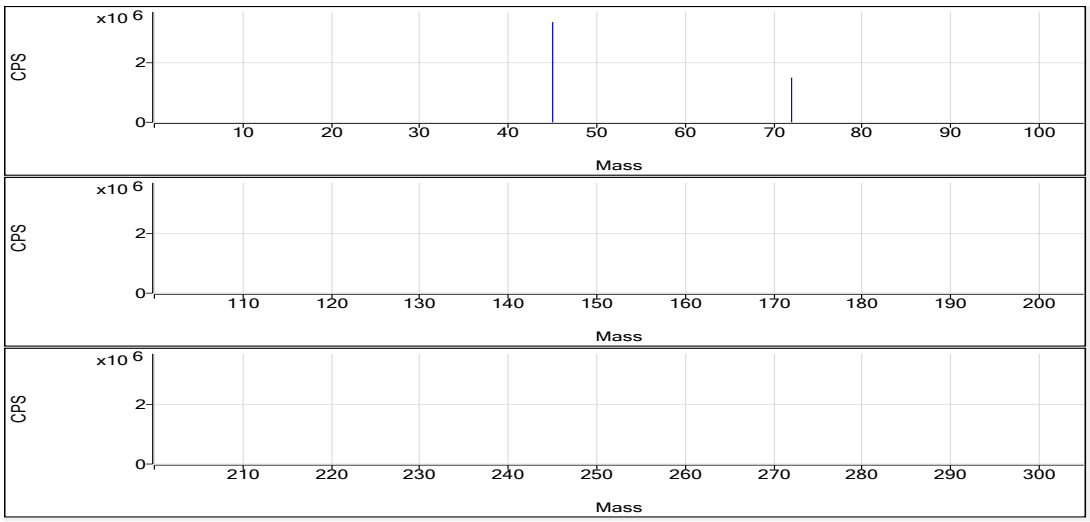
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.013	ppb	N/A	44.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.022	ppb	50.9	3.11	0.0000	Pulse	1.5000	3
Na	23	72	He	1703.290	ppb	1.4	219226.19	3.0324	Pulse	0.1000	3
Mg	24	72	He	2933.170	ppb	2.2	179113.09	2.4778	Pulse	0.1000	3
Al	27	72	He	3.823	ppb	54.3	143.34	0.0020	Pulse	0.1000	3
K	39	72	He	405.951	ppb	5.5	26594.62	0.3678	Pulse	0.1000	3
Ca	44	72	He	27667.637	ppb	1.2	62242.39	0.8610	Pulse	0.1000	3
Ti	47	72	He	0.747	ppb	154.6	33.33	0.0005	Pulse	0.1000	3
V	51	72	He	-0.037	ppb	N/A	498.68	0.0069	Pulse	0.5000	3
Cr	52	72	He	0.109	ppb	140.3	1953.54	0.0270	Pulse	0.1000	3
Mn	55	72	He	529.710	ppb	1.9	227025.17	3.1404	Pulse	0.1000	3
Fe	57	72	He	1469.696	ppb	1.9	31063.89	0.4297	Pulse	0.1000	3
Co	59	72	He	0.127	ppb	17.1	503.36	0.0070	Pulse	0.1000	3
Ni	60	72	He	1.450	ppb	9.8	1573.48	0.0218	Pulse	0.1000	3
Cu	63	72	He	0.218	ppb	24.4	750.05	0.0104	Pulse	0.1000	3
Zn	66	72	He	1.425	ppb	27.2	603.37	0.0083	Pulse	0.1000	3
As	75	72	He	0.311	ppb	50.4	70.67	0.0010	Pulse	0.5000	3
Sr	88	115	He	92.691	ppb	1.4	45035.41	0.7254	Pulse	0.1000	3
Mo	98	115	He	0.050	ppb	25.7	100.00	0.0016	Pulse	0.1000	3
Ag	107	115	He	0.006	ppb	116.5	46.67	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.009	ppb	140.2	6.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.092	ppb	68.1	1050.08	0.0169	Pulse	0.1000	3
Sb	121	115	He	0.036	ppb	214.7	43.34	0.0007	Pulse	0.1000	3
Ba	137	115	He	17.655	ppb	7.4	4811.02	0.0775	Pulse	0.1000	3
Tl	205	209	He	0.056	ppb	18.3	560.04	0.0025	Pulse	0.1000	3
Pb	208	209	He	0.026	ppb	49.3	690.04	0.0031	Pulse	0.1000	3
U	238	209	He	0.065	ppb	21.1	653.38	0.0030	Pulse	0.1000	3

ISTD Table:

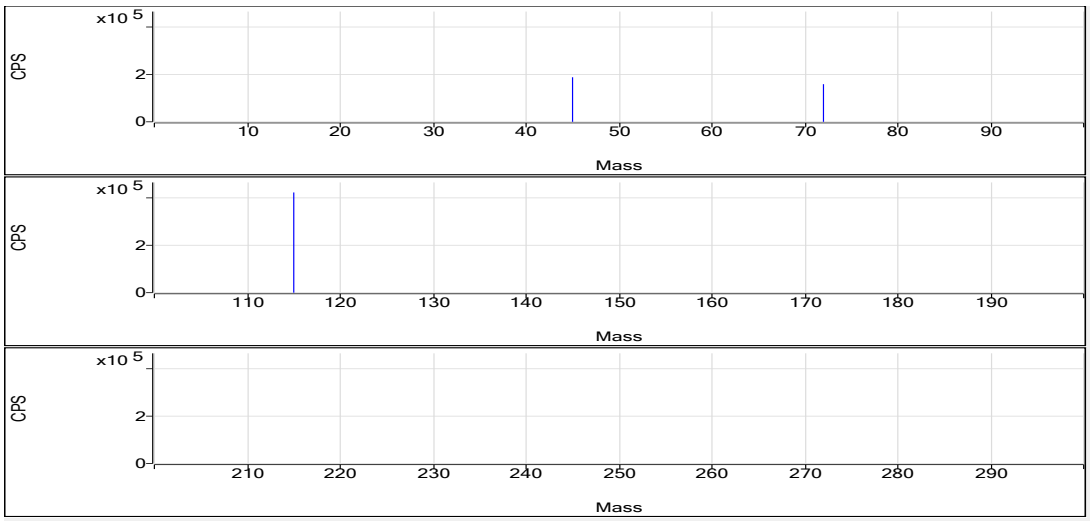
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3394349.74	3.4	104.7	Pulse	0.1000	3
No Gas	Ge	72	1509894.46	3.2	104.9	Pulse	0.1000	3
H2	Sc	45	187769.76	2.3	96.1	Pulse	0.1000	3
H2	Ge	72	158618.47	2.2	97.3	Pulse	0.1000	3
H2	In	115	422409.80	1.7	97.5	Pulse	0.1000	3
He	Sc	45	41208.70	1.4	103.1	Pulse	0.1000	3
He	Ge	72	72301.60	1.4	100.0	Pulse	0.1000	3
He	In	115	62100.50	2.4	96.1	Pulse	0.1000	3
He	Tb	159	278860.50	0.3	97.5	Pulse	0.1000	3
He	Bi	209	220298.73	0.3	99.1	Pulse	0.1000	3

No Gas

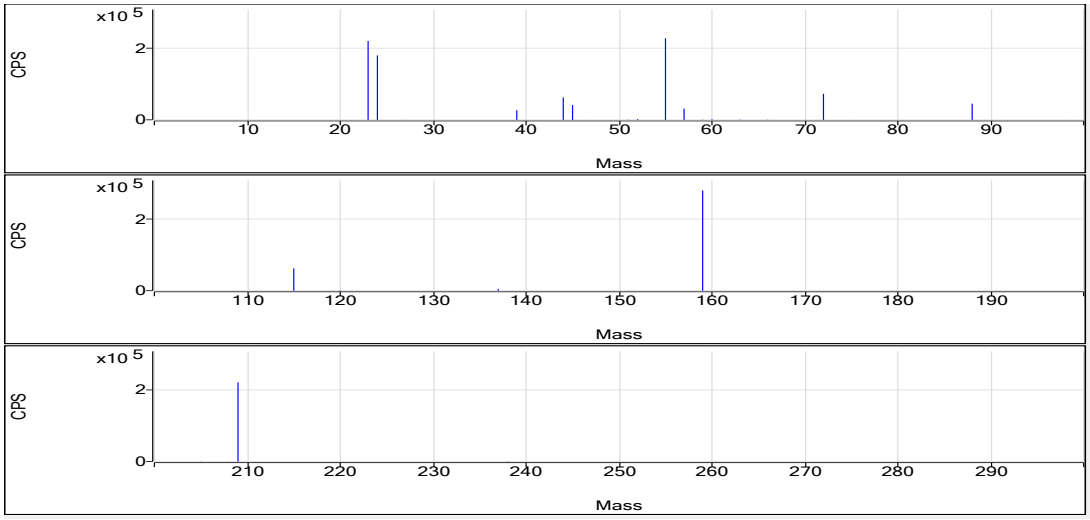


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.01	0	50.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.018	0	36.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.012	0	48.00	0.0013	4.694E-05
Se	78	2	H2	0.015	0	2.67	0.0004	1.089E-05
Se	78	2	H2	0.016	0	2.67	0.0004	1.089E-05
Se	78	2	H2	0.035	0	4.00	0.0004	1.089E-05
Na	23	3	He	1706.256	3.0375	216990.76	0.0017	0.1065
Na	23	3	He	1725.648	3.0708	221191.05	0.0017	0.1065
Na	23	3	He	1677.966	2.9889	219496.77	0.0017	0.1065
Mg	24	3	He	2980.612	2.5178	179865.23	0.0008	0.004846
Mg	24	3	He	2957.375	2.4982	179946.77	0.0008	0.004846
Mg	24	3	He	2861.522	2.4174	177527.26	0.0008	0.004846
Al	27	3	He	3.716	0.002	140.01	0.0002	0.001063
Al	27	3	He	5.95	0.0025	180.01	0.0002	0.001063
Al	27	3	He	1.802	0.0015	110.00	0.0002	0.001063
K	39	3	He	420.639	0.3759	26854.90	0.0006	0.1436
K	39	3	He	380.285	0.3536	25472.66	0.0006	0.1436
K	39	3	He	416.929	0.3739	27456.29	0.0006	0.1436
Ca	44	3	He	27877.798	0.8675	61971.27	0	0.001611
Ca	44	3	He	27827.509	0.8659	62373.07	0	0.001611
Ca	44	3	He	27297.603	0.8495	62382.82	0	0.001611
Ti	47	3	He	1.699	0.0007	50.00	0.0003	0.0002737
Ti	47	3	He	-0.538	0.0001	10.00	0.0003	0.0002737
Ti	47	3	He	1.08	0.0005	40.00	0.0003	0.0002737
V	51	3	He	-0.033	0.0069	496.01	0.0117	0.007326
V	51	3	He	-0.021	0.0071	510.01	0.0117	0.007326
V	51	3	He	-0.056	0.0067	490.01	0.0117	0.007326
Cr	52	3	He	0.282	0.0297	2120.23	0.0152	0.02538
Cr	52	3	He	0.047	0.0261	1880.20	0.0152	0.02538
Cr	52	3	He	-0.004	0.0253	1860.19	0.0152	0.02538
Mn	55	3	He	531.685	3.1521	225176.21	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	538.667	3.1933	230013.41	0.0059	0.01385
Mn	55	3	He	518.778	3.0759	225885.90	0.0059	0.01385
Fe	57	3	He	1479.178	0.4325	30893.59	0.0003	0.003918
Fe	57	3	He	1491.855	0.4361	31414.53	0.0003	0.003918
Fe	57	3	He	1438.054	0.4205	30883.54	0.0003	0.003918
Co	59	3	He	0.147	0.0076	540.03	0.0305	0.003084
Co	59	3	He	0.104	0.0062	450.02	0.0305	0.003084
Co	59	3	He	0.131	0.0071	520.03	0.0305	0.003084
Ni	60	3	He	1.476	0.022	1570.15	0.0088	0.009003
Ni	60	3	He	1.297	0.0204	1470.12	0.0088	0.009003
Ni	60	3	He	1.578	0.0229	1680.16	0.0088	0.009003
Cu	63	3	He	0.201	0.0099	710.05	0.0249	0.004937
Cu	63	3	He	0.175	0.0093	670.04	0.0249	0.004937
Cu	63	3	He	0.277	0.0118	870.07	0.0249	0.004937
Zn	66	3	He	0.994	0.0073	520.03	0.0025	0.004836
Zn	66	3	He	1.535	0.0086	620.04	0.0025	0.004836
Zn	66	3	He	1.745	0.0091	670.03	0.0025	0.004836
As	75	3	He	0.185	0.0008	54.00	0.0017	0.0004347
As	75	3	He	0.261	0.0009	64.00	0.0017	0.0004347
As	75	3	He	0.486	0.0013	94.00	0.0017	0.0004347
Sr	88	3	He	93.117	0.7287	45222.28	0.0078	0.0007762
Sr	88	3	He	91.265	0.7142	45413.33	0.0078	0.0007762
Sr	88	3	He	93.691	0.7332	44470.63	0.0078	0.0007762
Mo	98	3	He	0.064	0.0019	120.00	0.022	0.0005162
Mo	98	3	He	0.041	0.0014	90.00	0.022	0.0005162
Mo	98	3	He	0.044	0.0015	90.00	0.022	0.0005162
Ag	107	3	He	0.015	0.0011	70.00	0.0455	0.0004641
Ag	107	3	He	0.004	0.0006	40.00	0.0455	0.0004641
Ag	107	3	He	0.001	0.0005	30.00	0.0455	0.0004641
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Cd	111	3	He	0.022	0.0002	10.00	0.0048	5.152E-05
Cd	111	3	He	0.01	0.0001	6.00	0.0048	5.152E-05
Sn	120	3	He	0.093	0.0169	1050.09	0.0143	0.01559
Sn	120	3	He	0.153	0.0178	1130.08	0.0143	0.01559
Sn	120	3	He	0.028	0.016	970.07	0.0143	0.01559
Sb	121	3	He	-0.021	0	0.00	0.0124	0.000258
Sb	121	3	He	0.005	0.0003	20.00	0.0124	0.000258
Sb	121	3	He	0.125	0.0018	110.01	0.0124	0.000258
Ba	137	3	He	16.876	0.0741	4600.92	0.0044	0.000309
Ba	137	3	He	16.937	0.0744	4731.00	0.0044	0.000309
Ba	137	3	He	19.153	0.0841	5101.13	0.0044	0.000309
Tl	205	3	He	0.067	0.0029	630.04	0.0276	0.001005
Tl	205	3	He	0.048	0.0023	510.03	0.0276	0.001005
Tl	205	3	He	0.052	0.0024	540.04	0.0276	0.001005
Pb	208	3	He	0.041	0.0037	410.02	0.0364	0.002176
Pb	208	3	He	0.018	0.0028	300.01	0.0364	0.002176
Pb	208	3	He	0.02	0.0029	380.02	0.0364	0.002176
U	238	3	He	0.049	0.0023	510.03	0.0421	0.00024
U	238	3	He	0.07	0.0032	700.05	0.0421	0.00024
U	238	3	He	0.075	0.0034	750.06	0.0421	0.00024
Sc	45	1	No Gas			3267510.26		
Sc	45	1	No Gas			3427897.45		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3487641.51		
Ge	72	1	No Gas			1454202.95		
Ge	72	1	No Gas			1530609.51		
Ge	72	1	No Gas			1544870.91		
Sc	45	2	H2			190725.25		
Sc	45	2	H2			182897.28		
Sc	45	2	H2			189686.74		
Ge	72	2	H2			158613.82		
Ge	72	2	H2			155137.29		
Ge	72	2	H2			162104.31		
In	115	2	H2			421635.35		
In	115	2	H2			415764.13		
In	115	2	H2			429829.92		
Sc	45	3	He			41860.73		
Sc	45	3	He			41008.19		
Sc	45	3	He			40757.19		
Ge	72	3	He			71437.32		
Ge	72	3	He			72030.19		
Ge	72	3	He			73437.28		
In	115	3	He			62068.69		
In	115	3	He			63594.63		
In	115	3	He			60662.75		
Tb	159	3	He			279639.12		
Tb	159	3	He			278040.11		
Tb	159	3	He			278902.26		
Bi	209	3	He			220457.40		
Bi	209	3	He			219674.82		
Bi	209	3	He			220763.96		

Quantitation Report

Data File Name	125SMPL.d
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Sample Name	410-136848-W-8-A @5
Sample Type	Sample
Comment	D29
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

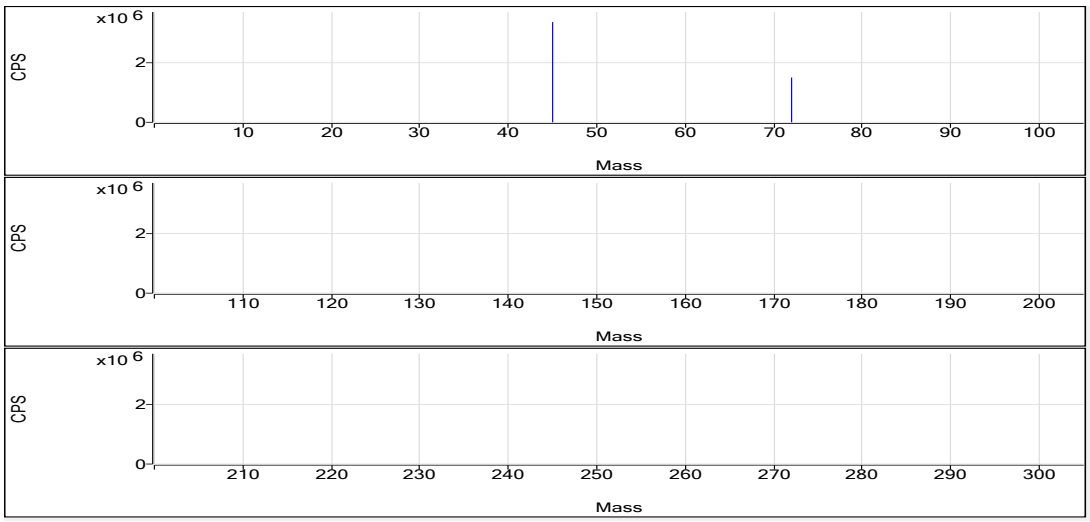
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.076	ppb	28.0	220.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.106	ppb	27.7	8.67	0.0001	Pulse	1.5000	3
Na	23	72	He	2516.594	ppb	1.6	327186.87	4.4295	Pulse	0.1000	3
Mg	24	72	He	3594.923	ppb	0.9	224237.13	3.0357	Pulse	0.1000	3
Al	27	72	He	26.422	ppb	12.8	550.03	0.0074	Pulse	0.1000	3
K	39	72	He	1315.844	ppb	1.9	64280.70	0.8703	Pulse	0.1000	3
Ca	44	72	He	20453.295	ppb	3.3	47036.38	0.6369	Pulse	0.1000	3
Ti	47	72	He	2.689	ppb	53.6	70.00	0.0009	Pulse	0.1000	3
V	51	72	He	0.609	ppb	20.8	1067.38	0.0144	Pulse	0.5000	3
Cr	52	72	He	0.879	ppb	11.4	2863.73	0.0388	Pulse	0.1000	3
Mn	55	72	He	95.342	ppb	0.3	42593.14	0.5766	Pulse	0.1000	3
Fe	57	72	He	98.964	ppb	5.1	2406.94	0.0326	Pulse	0.1000	3
Co	59	72	He	0.496	ppb	8.8	1346.78	0.0182	Pulse	0.1000	3
Ni	60	72	He	2.041	ppb	6.8	1990.21	0.0270	Pulse	0.1000	3
Cu	63	72	He	0.619	ppb	10.0	1503.47	0.0204	Pulse	0.1000	3
Zn	66	72	He	19.511	ppb	5.5	3897.34	0.0528	Pulse	0.1000	3
As	75	72	He	0.694	ppb	6.7	121.33	0.0016	Pulse	0.5000	3
Sr	88	115	He	69.867	ppb	1.4	34388.99	0.5469	Pulse	0.1000	3
Mo	98	115	He	0.261	ppb	5.3	393.35	0.0063	Pulse	0.1000	3
Ag	107	115	He	0.081	ppb	47.1	260.01	0.0041	Pulse	0.1000	3
Cd	111	115	He	0.086	ppb	12.3	29.33	0.0005	Pulse	0.5000	3
Sn	120	115	He	0.183	ppb	31.5	1143.43	0.0182	Pulse	0.1000	3
Sb	121	115	He	0.120	ppb	30.9	110.01	0.0017	Pulse	0.1000	3
Ba	137	115	He	10.639	ppb	7.7	2947.08	0.0469	Pulse	0.1000	3
Tl	205	209	He	0.111	ppb	7.0	903.40	0.0041	Pulse	0.1000	3
Pb	208	209	He	0.218	ppb	3.4	2246.83	0.0101	Pulse	0.1000	3
U	238	209	He	0.194	ppb	2.1	1860.21	0.0084	Pulse	0.1000	3

ISTD Table:

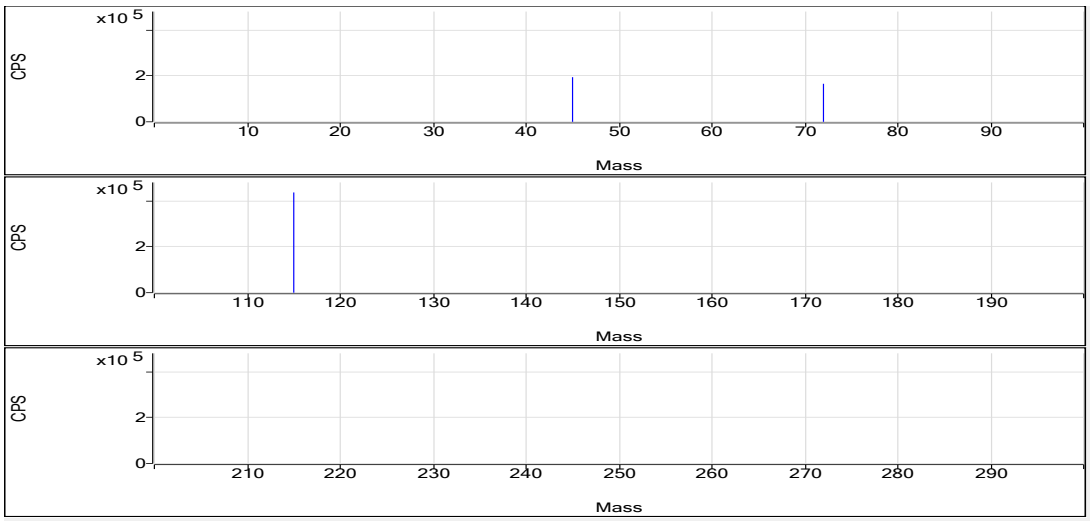
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3350383.39	2.0	103.4	Pulse	0.1000	3
No Gas	Ge	72	1497017.95	1.6	104.0	Pulse	0.1000	3
H2	Sc	45	194836.86	1.5	99.7	Pulse	0.1000	3
H2	Ge	72	166058.51	1.7	101.9	Pulse	0.1000	3
H2	In	115	437569.65	2.4	101.0	Pulse	0.1000	3
He	Sc	45	41773.92	1.6	104.5	Pulse	0.1000	3
He	Ge	72	73869.79	1.1	102.2	Pulse	0.1000	3
He	In	115	62876.12	1.0	97.3	Pulse	0.1000	3
He	Tb	159	284096.45	0.2	99.3	Pulse	0.1000	3
He	Bi	209	221938.58	0.2	99.9	Pulse	0.1000	3

No Gas

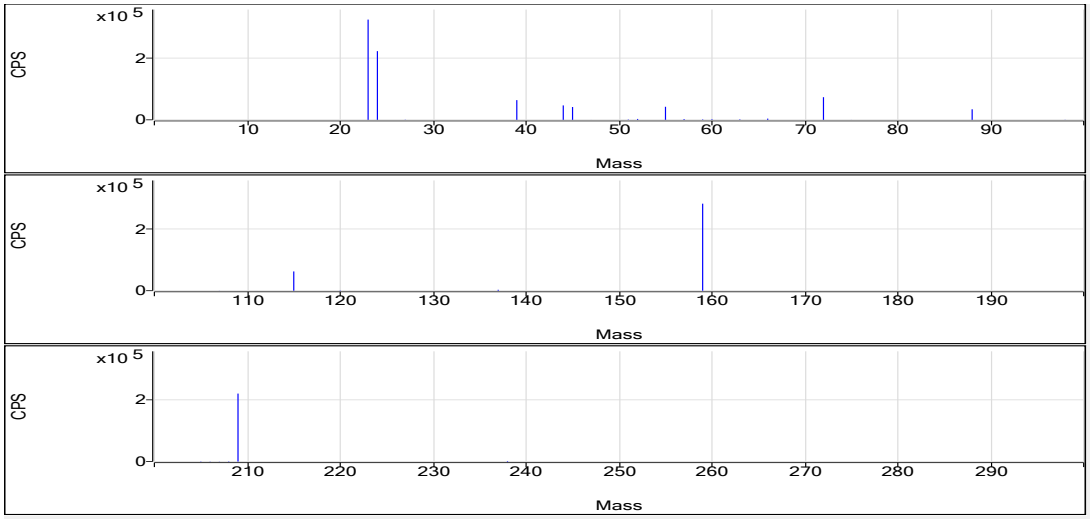


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.098	0.0002	260.00	0.0013	4.694E-05
Be	9	1	No Gas	0.055	0.0001	178.00	0.0013	4.694E-05
Be	9	1	No Gas	0.075	0.0001	222.00	0.0013	4.694E-05
Se	78	2	H2	0.083	0	7.33	0.0004	1.089E-05
Se	78	2	H2	0.14	0.0001	10.67	0.0004	1.089E-05
Se	78	2	H2	0.096	0	8.00	0.0004	1.089E-05
Na	23	3	He	2497.326	4.3964	328651.40	0.0017	0.1065
Na	23	3	He	2490.644	4.3849	322594.60	0.0017	0.1065
Na	23	3	He	2561.812	4.5072	330314.60	0.0017	0.1065
Mg	24	3	He	3560.376	3.0066	224756.95	0.0008	0.004846
Mg	24	3	He	3627.269	3.063	225341.44	0.0008	0.004846
Mg	24	3	He	3597.124	3.0376	222613.00	0.0008	0.004846
Al	27	3	He	29.403	0.0082	610.03	0.0002	0.001063
Al	27	3	He	27.132	0.0076	560.03	0.0002	0.001063
Al	27	3	He	22.732	0.0066	480.03	0.0002	0.001063
K	39	3	He	1290.248	0.8561	63999.56	0.0006	0.1436
K	39	3	He	1340.936	0.8841	65043.77	0.0006	0.1436
K	39	3	He	1316.347	0.8705	63798.76	0.0006	0.1436
Ca	44	3	He	19769.882	0.6157	46023.35	0	0.001611
Ca	44	3	He	20462.188	0.6372	46875.38	0	0.001611
Ca	44	3	He	21127.817	0.6578	48210.41	0	0.001611
Ti	47	3	He	2.109	0.0008	60.00	0.0003	0.0002737
Ti	47	3	He	4.329	0.0014	100.00	0.0003	0.0002737
Ti	47	3	He	1.629	0.0007	50.00	0.0003	0.0002737
V	51	3	He	0.636	0.0148	1104.05	0.0117	0.007326
V	51	3	He	0.471	0.0128	944.04	0.0117	0.007326
V	51	3	He	0.72	0.0157	1154.05	0.0117	0.007326
Cr	52	3	He	0.811	0.0377	2820.37	0.0152	0.02538
Cr	52	3	He	0.833	0.0381	2800.37	0.0152	0.02538
Cr	52	3	He	0.995	0.0405	2970.45	0.0152	0.02538
Mn	55	3	He	95.344	0.5766	43104.48	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	95.048	0.5749	42292.26	0.0059	0.01385
Mn	55	3	He	95.633	0.5783	42382.68	0.0059	0.01385
Fe	57	3	He	96.844	0.032	2390.27	0.0003	0.003918
Fe	57	3	He	95.338	0.0315	2320.25	0.0003	0.003918
Fe	57	3	He	104.709	0.0343	2510.30	0.0003	0.003918
Co	59	3	He	0.495	0.0182	1360.11	0.0305	0.003084
Co	59	3	He	0.541	0.0196	1440.14	0.0305	0.003084
Co	59	3	He	0.454	0.0169	1240.10	0.0305	0.003084
Ni	60	3	He	1.882	0.0256	1910.20	0.0088	0.009003
Ni	60	3	He	2.13	0.0277	2040.22	0.0088	0.009003
Ni	60	3	He	2.111	0.0276	2020.22	0.0088	0.009003
Cu	63	3	He	0.548	0.0186	1390.11	0.0249	0.004937
Cu	63	3	He	0.647	0.0211	1550.15	0.0249	0.004937
Cu	63	3	He	0.661	0.0214	1570.14	0.0249	0.004937
Zn	66	3	He	18.944	0.0514	3840.65	0.0025	0.004836
Zn	66	3	He	18.838	0.0511	3760.62	0.0025	0.004836
Zn	66	3	He	20.752	0.0558	4090.74	0.0025	0.004836
As	75	3	He	0.719	0.0017	126.00	0.0017	0.0004347
As	75	3	He	0.641	0.0015	114.00	0.0017	0.0004347
As	75	3	He	0.723	0.0017	124.00	0.0017	0.0004347
Sr	88	3	He	69.522	0.5442	33850.97	0.0078	0.0007762
Sr	88	3	He	69.115	0.5411	34322.43	0.0078	0.0007762
Sr	88	3	He	70.964	0.5555	34993.56	0.0078	0.0007762
Mo	98	3	He	0.276	0.0066	410.02	0.022	0.0005162
Mo	98	3	He	0.249	0.006	380.02	0.022	0.0005162
Mo	98	3	He	0.258	0.0062	390.02	0.022	0.0005162
Ag	107	3	He	0.082	0.0042	260.01	0.0455	0.0004641
Ag	107	3	He	0.118	0.0058	370.02	0.0455	0.0004641
Ag	107	3	He	0.042	0.0024	150.01	0.0455	0.0004641
Cd	111	3	He	0.09	0.0005	30.00	0.0048	5.152E-05
Cd	111	3	He	0.075	0.0004	26.00	0.0048	5.152E-05
Cd	111	3	He	0.095	0.0005	32.00	0.0048	5.152E-05
Sn	120	3	He	0.249	0.0191	1190.10	0.0143	0.01559
Sn	120	3	He	0.145	0.0177	1120.09	0.0143	0.01559
Sn	120	3	He	0.154	0.0178	1120.09	0.0143	0.01559
Sb	121	3	He	0.083	0.0013	80.00	0.0124	0.000258
Sb	121	3	He	0.157	0.0022	140.01	0.0124	0.000258
Sb	121	3	He	0.12	0.0017	110.01	0.0124	0.000258
Ba	137	3	He	9.743	0.0429	2670.33	0.0044	0.000309
Ba	137	3	He	10.813	0.0476	3020.44	0.0044	0.000309
Ba	137	3	He	11.361	0.05	3150.47	0.0044	0.000309
Tl	205	3	He	0.102	0.0038	850.07	0.0276	0.001005
Tl	205	3	He	0.116	0.0042	930.08	0.0276	0.001005
Tl	205	3	He	0.115	0.0042	930.06	0.0276	0.001005
Pb	208	3	He	0.226	0.0104	1170.09	0.0364	0.002176
Pb	208	3	He	0.211	0.0098	1190.10	0.0364	0.002176
Pb	208	3	He	0.219	0.0101	1020.09	0.0364	0.002176
U	238	3	He	0.19	0.0082	1830.22	0.0421	0.00024
U	238	3	He	0.193	0.0084	1850.20	0.0421	0.00024
U	238	3	He	0.198	0.0086	1900.22	0.0421	0.00024
Sc	45	1	No Gas			3298808.08		
Sc	45	1	No Gas			3326228.70		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3426113.39		
Ge	72	1	No Gas			1479385.92		
Ge	72	1	No Gas			1487347.32		
Ge	72	1	No Gas			1524320.60		
Sc	45	2	H2			194140.06		
Sc	45	2	H2			192407.67		
Sc	45	2	H2			197962.85		
Ge	72	2	H2			168971.60		
Ge	72	2	H2			163521.44		
Ge	72	2	H2			165682.48		
In	115	2	H2			448334.92		
In	115	2	H2			427630.35		
In	115	2	H2			436743.67		
Sc	45	3	He			42512.96		
Sc	45	3	He			41560.17		
Sc	45	3	He			41248.63		
Ge	72	3	He			74754.40		
Ge	72	3	He			73568.82		
Ge	72	3	He			73286.14		
In	115	3	He			62208.18		
In	115	3	He			63444.84		
In	115	3	He			63002.09		
Tb	159	3	He			283668.16		
Tb	159	3	He			284906.05		
Tb	159	3	He			283715.15		
Bi	209	3	He			222431.13		
Bi	209	3	He			221440.39		
Bi	209	3	He			221944.22		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
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Sample Name	410-136848-W-7-A @5
Sample Type	Sample
Comment	D29
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

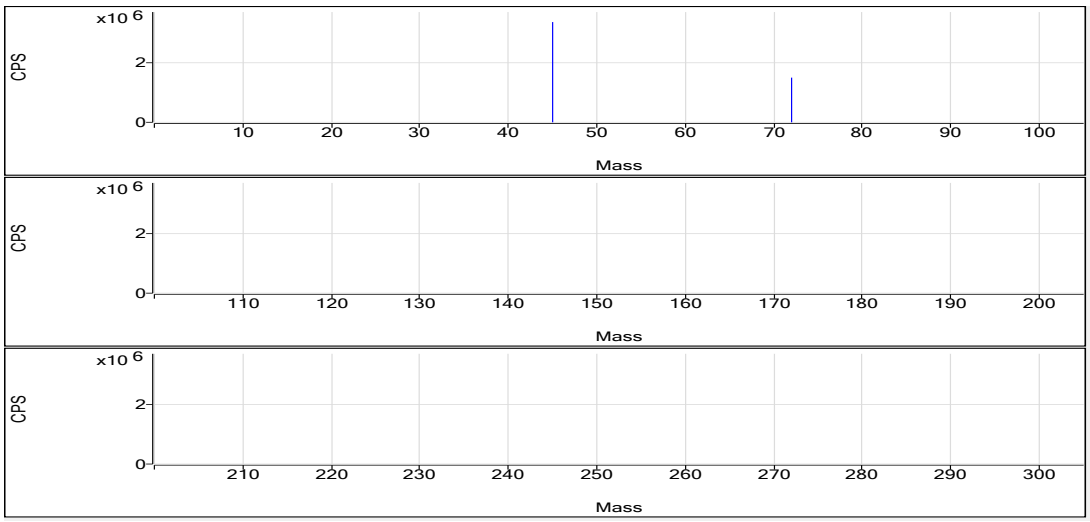
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.017	ppb	31.2	103.33	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.084	ppb	6.1	7.11	0.0000	Pulse	1.5000	3
Na	23	72	He	2370.193	ppb	0.5	312903.17	4.1780	Pulse	0.1000	3
Mg	24	72	He	2863.862	ppb	1.4	181178.48	2.4194	Pulse	0.1000	3
Al	27	72	He	21.787	ppb	14.9	473.36	0.0063	Pulse	0.1000	3
K	39	72	He	593.131	ppb	3.1	35286.15	0.4712	Pulse	0.1000	3
Ca	44	72	He	24981.310	ppb	2.0	58222.86	0.7775	Pulse	0.1000	3
Ti	47	72	He	1.219	ppb	68.1	43.33	0.0006	Pulse	0.1000	3
V	51	72	He	0.196	ppb	20.5	720.69	0.0096	Pulse	0.5000	3
Cr	52	72	He	0.386	ppb	20.6	2340.28	0.0313	Pulse	0.1000	3
Mn	55	72	He	88.579	ppb	1.4	40196.42	0.5367	Pulse	0.1000	3
Fe	57	72	He	108.288	ppb	7.1	2643.67	0.0353	Pulse	0.1000	3
Co	59	72	He	0.246	ppb	13.4	793.38	0.0106	Pulse	0.1000	3
Ni	60	72	He	1.458	ppb	13.3	1633.49	0.0218	Pulse	0.1000	3
Cu	63	72	He	0.443	ppb	11.2	1196.76	0.0160	Pulse	0.1000	3
Zn	66	72	He	8.128	ppb	9.0	1856.85	0.0248	Pulse	0.1000	3
As	75	72	He	0.328	ppb	12.6	75.33	0.0010	Pulse	0.5000	3
Sr	88	115	He	93.428	ppb	2.9	46396.29	0.7311	Pulse	0.1000	3
Mo	98	115	He	0.125	ppb	31.9	206.68	0.0033	Pulse	0.1000	3
Ag	107	115	He	0.024	ppb	37.6	100.00	0.0016	Pulse	0.1000	3
Cd	111	115	He	0.022	ppb	59.1	10.00	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.171	ppb	78.5	1143.43	0.0180	Pulse	0.1000	3
Sb	121	115	He	0.077	ppb	58.4	76.67	0.0012	Pulse	0.1000	3
Ba	137	115	He	8.708	ppb	6.9	2436.98	0.0384	Pulse	0.1000	3
Tl	205	209	He	0.052	ppb	19.0	536.70	0.0024	Pulse	0.1000	3
Pb	208	209	He	0.133	ppb	17.1	1543.43	0.0070	Pulse	0.1000	3
U	238	209	He	0.144	ppb	9.0	1386.79	0.0063	Pulse	0.1000	3

ISTD Table:

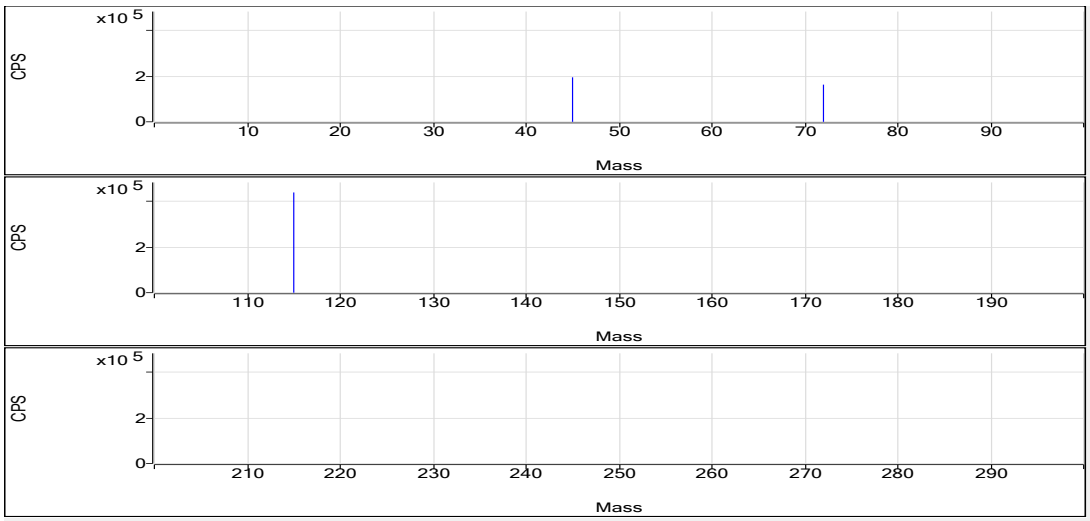
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3361831.20	2.5	103.7	Pulse	0.1000	3
No Gas	Ge	72	1498147.58	2.4	104.1	Pulse	0.1000	3
H2	Sc	45	195393.27	2.1	100.0	Pulse	0.1000	3
H2	Ge	72	163245.28	1.6	100.1	Pulse	0.1000	3
H2	In	115	440140.12	0.9	101.6	Pulse	0.1000	3
He	Sc	45	42124.77	1.7	105.4	Pulse	0.1000	3
He	Ge	72	74891.55	1.0	103.6	Pulse	0.1000	3
He	In	115	63462.19	0.3	98.3	Pulse	0.1000	3
He	Tb	159	284321.53	0.7	99.4	Pulse	0.1000	3
He	Bi	209	219464.01	1.1	98.8	Pulse	0.1000	3

No Gas

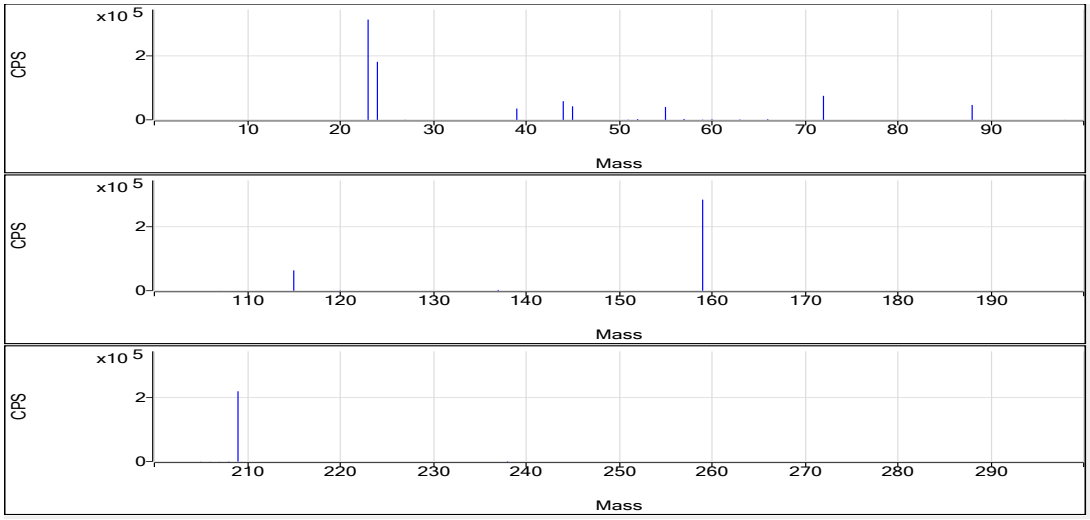


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.021	0.0001	108.00	0.0013	4.694E-05
Be	9	1	No Gas	0.011	0.0001	92.00	0.0013	4.694E-05
Be	9	1	No Gas	0.019	0.0001	110.00	0.0013	4.694E-05
Se	78	2	H2	0.085	0	7.33	0.0004	1.089E-05
Se	78	2	H2	0.078	0	6.67	0.0004	1.089E-05
Se	78	2	H2	0.088	0	7.33	0.0004	1.089E-05
Na	23	3	He	2372.496	4.182	316490.41	0.0017	0.1065
Na	23	3	He	2379.973	4.1948	313493.20	0.0017	0.1065
Na	23	3	He	2358.11	4.1573	308725.91	0.0017	0.1065
Mg	24	3	He	2821.943	2.384	180422.38	0.0008	0.004846
Mg	24	3	He	2898.732	2.4488	183004.88	0.0008	0.004846
Mg	24	3	He	2870.911	2.4253	180108.18	0.0008	0.004846
Al	27	3	He	19.684	0.0058	440.02	0.0002	0.001063
Al	27	3	He	25.533	0.0072	540.04	0.0002	0.001063
Al	27	3	He	20.143	0.0059	440.02	0.0002	0.001063
K	39	3	He	596.379	0.473	35794.02	0.0006	0.1436
K	39	3	He	573.463	0.4603	34400.81	0.0006	0.1436
K	39	3	He	609.551	0.4802	35663.61	0.0006	0.1436
Ca	44	3	He	24441.11	0.7607	57573.11	0	0.001611
Ca	44	3	He	25101.636	0.7813	58386.50	0	0.001611
Ca	44	3	He	25401.183	0.7906	58708.97	0	0.001611
Ti	47	3	He	1.016	0.0005	40.00	0.0003	0.0002737
Ti	47	3	He	0.509	0.0004	30.00	0.0003	0.0002737
Ti	47	3	He	2.13	0.0008	60.00	0.0003	0.0002737
V	51	3	He	0.234	0.0101	762.03	0.0117	0.007326
V	51	3	He	0.2	0.0097	722.02	0.0117	0.007326
V	51	3	He	0.154	0.0091	678.02	0.0117	0.007326
Cr	52	3	He	0.294	0.0299	2260.26	0.0152	0.02538
Cr	52	3	He	0.425	0.0319	2380.27	0.0152	0.02538
Cr	52	3	He	0.438	0.0321	2380.30	0.0152	0.02538
Mn	55	3	He	89.997	0.5451	41249.50	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	87.961	0.533	39835.38	0.0059	0.01385
Mn	55	3	He	87.779	0.532	39504.39	0.0059	0.01385
Fe	57	3	He	116.024	0.0375	2840.38	0.0003	0.003918
Fe	57	3	He	100.572	0.0331	2470.30	0.0003	0.003918
Fe	57	3	He	108.269	0.0353	2620.32	0.0003	0.003918
Co	59	3	He	0.267	0.0112	850.05	0.0305	0.003084
Co	59	3	He	0.263	0.0111	830.05	0.0305	0.003084
Co	59	3	He	0.208	0.0094	700.04	0.0305	0.003084
Ni	60	3	He	1.245	0.02	1510.13	0.0088	0.009003
Ni	60	3	He	1.624	0.0233	1740.17	0.0088	0.009003
Ni	60	3	He	1.503	0.0222	1650.16	0.0088	0.009003
Cu	63	3	He	0.449	0.0161	1220.10	0.0249	0.004937
Cu	63	3	He	0.489	0.0171	1280.10	0.0249	0.004937
Cu	63	3	He	0.391	0.0147	1090.08	0.0249	0.004937
Zn	66	3	He	7.283	0.0227	1720.16	0.0025	0.004836
Zn	66	3	He	8.599	0.026	1940.21	0.0025	0.004836
Zn	66	3	He	8.501	0.0257	1910.19	0.0025	0.004836
As	75	3	He	0.373	0.0011	82.00	0.0017	0.0004347
As	75	3	He	0.319	0.001	74.00	0.0017	0.0004347
As	75	3	He	0.292	0.0009	70.00	0.0017	0.0004347
Sr	88	3	He	92.003	0.72	45824.24	0.0078	0.0007762
Sr	88	3	He	96.574	0.7557	47861.12	0.0078	0.0007762
Sr	88	3	He	91.706	0.7177	45503.52	0.0078	0.0007762
Mo	98	3	He	0.084	0.0024	150.01	0.022	0.0005162
Mo	98	3	He	0.163	0.0041	260.01	0.022	0.0005162
Mo	98	3	He	0.127	0.0033	210.01	0.022	0.0005162
Ag	107	3	He	0.021	0.0014	90.00	0.0455	0.0004641
Ag	107	3	He	0.018	0.0013	80.00	0.0455	0.0004641
Ag	107	3	He	0.035	0.0021	130.01	0.0455	0.0004641
Cd	111	3	He	0.035	0.0002	14.00	0.0048	5.152E-05
Cd	111	3	He	0.009	0.0001	6.00	0.0048	5.152E-05
Cd	111	3	He	0.022	0.0002	10.00	0.0048	5.152E-05
Sn	120	3	He	0.108	0.0171	1090.09	0.0143	0.01559
Sn	120	3	He	0.324	0.0202	1280.11	0.0143	0.01559
Sn	120	3	He	0.079	0.0167	1060.09	0.0143	0.01559
Sb	121	3	He	0.081	0.0013	80.00	0.0124	0.000258
Sb	121	3	He	0.119	0.0017	110.00	0.0124	0.000258
Sb	121	3	He	0.03	0.0006	40.00	0.0124	0.000258
Ba	137	3	He	8.226	0.0363	2310.27	0.0044	0.000309
Ba	137	3	He	9.387	0.0414	2620.34	0.0044	0.000309
Ba	137	3	He	8.511	0.0375	2380.32	0.0044	0.000309
Tl	205	3	He	0.061	0.0027	600.03	0.0276	0.001005
Tl	205	3	He	0.053	0.0025	540.03	0.0276	0.001005
Tl	205	3	He	0.042	0.0022	470.03	0.0276	0.001005
Pb	208	3	He	0.158	0.0079	980.07	0.0364	0.002176
Pb	208	3	He	0.129	0.0069	890.06	0.0364	0.002176
Pb	208	3	He	0.113	0.0063	610.04	0.0364	0.002176
U	238	3	He	0.152	0.0066	1470.14	0.0421	0.00024
U	238	3	He	0.129	0.0057	1240.10	0.0421	0.00024
U	238	3	He	0.152	0.0067	1450.14	0.0421	0.00024
Sc	45	1	No Gas			3271007.14		
Sc	45	1	No Gas			3378648.39		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3435838.07		
Ge	72	1	No Gas			1459645.60		
Ge	72	1	No Gas			1504752.79		
Ge	72	1	No Gas			1530044.35		
Sc	45	2	H2			195335.23		
Sc	45	2	H2			191355.23		
Sc	45	2	H2			199489.35		
Ge	72	2	H2			166137.79		
Ge	72	2	H2			161334.57		
Ge	72	2	H2			162263.48		
In	115	2	H2			444617.18		
In	115	2	H2			437133.27		
In	115	2	H2			438669.92		
Sc	45	3	He			41639.99		
Sc	45	3	He			41790.45		
Sc	45	3	He			42943.88		
Ge	72	3	He			75679.56		
Ge	72	3	He			74733.35		
Ge	72	3	He			74261.74		
In	115	3	He			63655.68		
In	115	3	He			63343.29		
In	115	3	He			63414.36		
Tb	159	3	He			282117.01		
Tb	159	3	He			284729.66		
Tb	159	3	He			286117.93		
Bi	209	3	He			222264.47		
Bi	209	3	He			218088.41		
Bi	209	3	He			218039.14		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

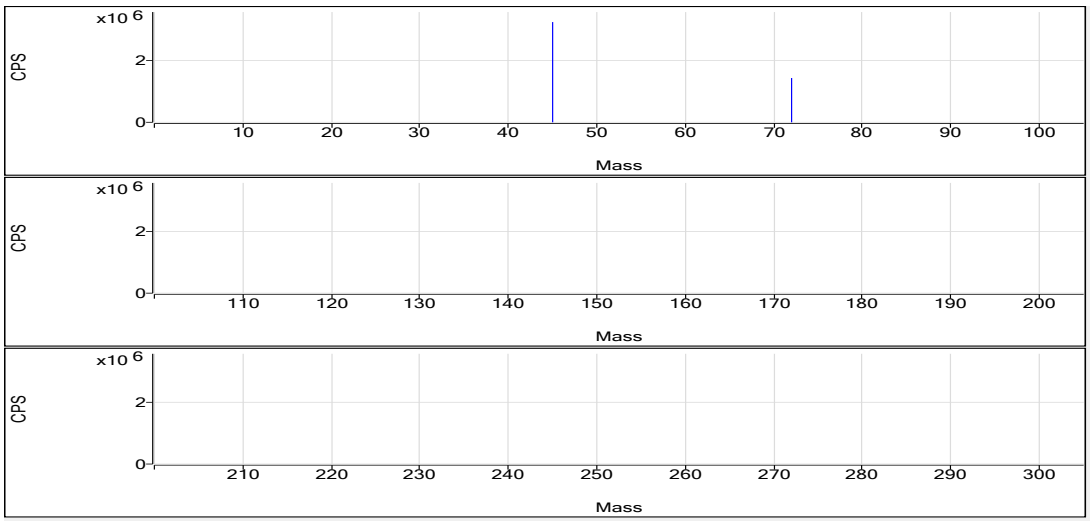
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.005	ppb	75.3	76.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.040	ppb	68.6	4.22	0.0000	Pulse	1.5000	3
Na	23	72	He	23.435	ppb	23.1	10604.14	0.1467	Pulse	0.1000	3
Mg	24	72	He	18.101	ppb	2.7	1453.46	0.0201	Pulse	0.1000	3
Al	27	72	He	4.765	ppb	31.4	160.01	0.0022	Pulse	0.1000	3
K	39	72	He	13.687	ppb	100.4	10931.10	0.1512	Pulse	0.1000	3
Ca	44	72	He	52.120	ppb	50.1	233.34	0.0032	Pulse	0.1000	3
Ti	47	72	He	-0.539	ppb	N/A	10.00	0.0001	Pulse	0.1000	3
V	51	72	He	0.037	ppb	86.2	560.68	0.0078	Pulse	0.5000	3
Cr	52	72	He	0.120	ppb	145.0	1966.88	0.0272	Pulse	0.1000	3
Mn	55	72	He	0.426	ppb	54.9	1183.42	0.0164	Pulse	0.1000	3
Fe	57	72	He	7.642	ppb	46.7	443.36	0.0061	Pulse	0.1000	3
Co	59	72	He	0.055	ppb	30.1	343.35	0.0048	Pulse	0.1000	3
Ni	60	72	He	1.137	ppb	29.3	1373.45	0.0190	Pulse	0.1000	3
Cu	63	72	He	0.087	ppb	41.4	513.36	0.0071	Pulse	0.1000	3
Zn	66	72	He	2.273	ppb	34.5	753.38	0.0104	Pulse	0.1000	3
As	75	72	He	0.031	ppb	299.4	35.33	0.0005	Pulse	0.5000	3
Sr	88	115	He	0.182	ppb	57.3	140.01	0.0022	Pulse	0.1000	3
Mo	98	115	He	0.029	ppb	74.3	73.33	0.0012	Pulse	0.1000	3
Ag	107	115	He	0.011	ppb	34.5	60.00	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.000	ppb	3035.7	3.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.126	ppb	85.9	1103.43	0.0174	Pulse	0.1000	3
Sb	121	115	He	0.009	ppb	86.5	23.33	0.0004	Pulse	0.1000	3
Ba	137	115	He	0.097	ppb	149.5	46.67	0.0007	Pulse	0.1000	3
Tl	205	209	He	0.019	ppb	38.3	336.68	0.0015	Pulse	0.1000	3
Pb	208	209	He	0.018	ppb	51.3	620.04	0.0028	Pulse	0.1000	3
U	238	209	He	0.005	ppb	91.0	100.00	0.0005	Pulse	0.1000	3

ISTD Table:

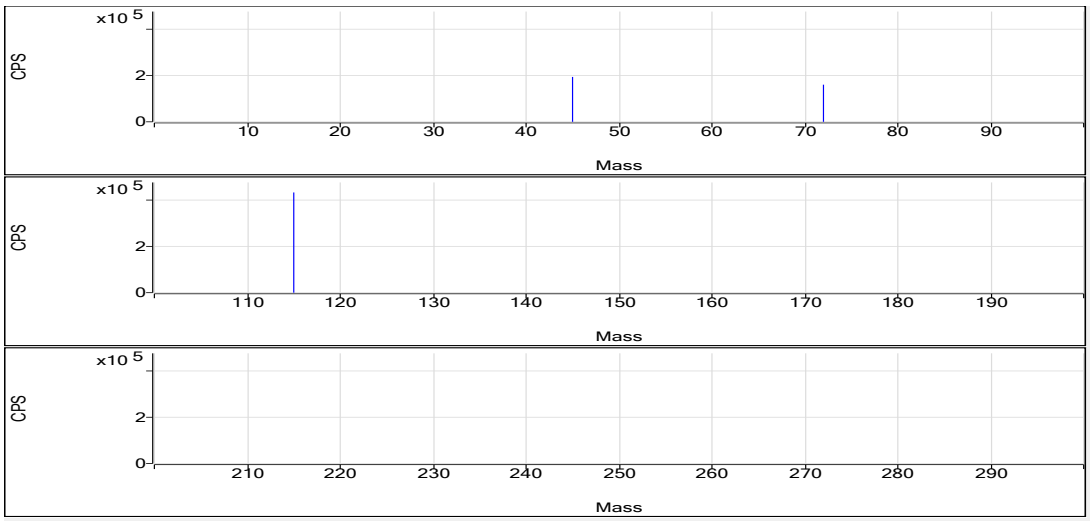
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3232083.70	1.6	99.7	Pulse	0.1000	3
No Gas	Ge	72	1427724.56	1.1	99.2	Pulse	0.1000	3
H2	Sc	45	194054.44	0.6	99.3	Pulse	0.1000	3
H2	Ge	72	160536.81	0.9	98.5	Pulse	0.1000	3
H2	In	115	433339.81	2.1	100.0	Pulse	0.1000	3
He	Sc	45	41275.32	2.0	103.2	Pulse	0.1000	3
He	Ge	72	72288.18	0.3	100.0	Pulse	0.1000	3
He	In	115	63506.35	1.0	98.3	Pulse	0.1000	3
He	Tb	159	280128.63	0.9	97.9	Pulse	0.1000	3
He	Bi	209	218613.23	1.4	98.4	Pulse	0.1000	3

No Gas

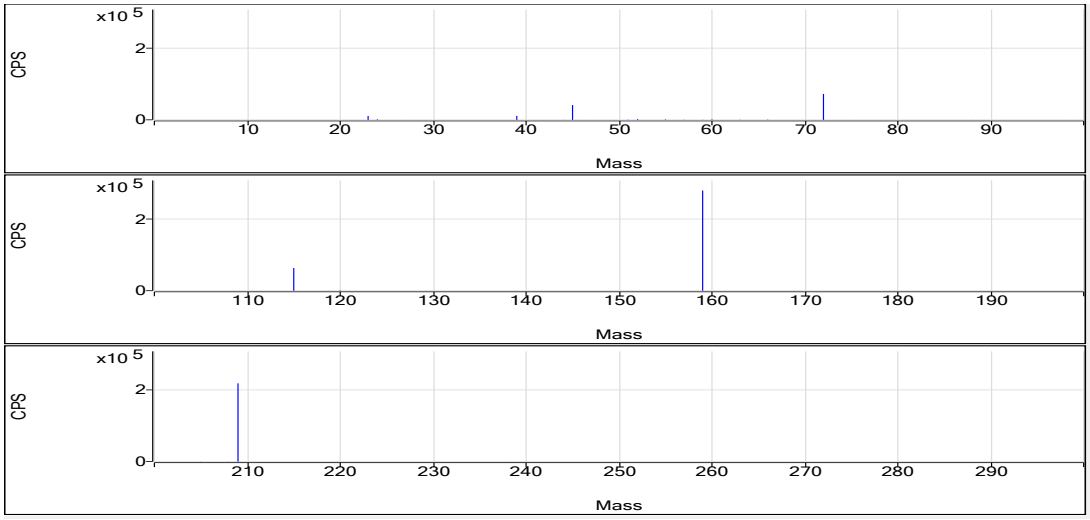


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.001	0	70.00	0.0013	4.694E-05
Be	9	1	No Gas	0.004	0.0001	74.00	0.0013	4.694E-05
Be	9	1	No Gas	0.009	0.0001	84.00	0.0013	4.694E-05
Se	78	2	H2	0.014	0	2.67	0.0004	1.089E-05
Se	78	2	H2	0.036	0	4.00	0.0004	1.089E-05
Se	78	2	H2	0.069	0	6.00	0.0004	1.089E-05
Na	23	3	He	19.726	0.1403	10163.81	0.0017	0.1065
Na	23	3	He	20.92	0.1424	10313.90	0.0017	0.1065
Na	23	3	He	29.659	0.1574	11334.70	0.0017	0.1065
Mg	24	3	He	17.674	0.0197	1430.12	0.0008	0.004846
Mg	24	3	He	17.998	0.02	1450.13	0.0008	0.004846
Mg	24	3	He	18.632	0.0206	1480.13	0.0008	0.004846
Al	27	3	He	4.178	0.0021	150.01	0.0002	0.001063
Al	27	3	He	6.465	0.0026	190.01	0.0002	0.001063
Al	27	3	He	3.651	0.0019	140.00	0.0002	0.001063
K	39	3	He	23.556	0.1566	11344.82	0.0006	0.1436
K	39	3	He	19.506	0.1544	11184.52	0.0006	0.1436
K	39	3	He	-2.001	0.1425	10263.96	0.0006	0.1436
Ca	44	3	He	37.051	0.0028	200.01	0	0.001611
Ca	44	3	He	37.038	0.0028	200.01	0	0.001611
Ca	44	3	He	82.271	0.0042	300.01	0	0.001611
Ti	47	3	He	-1.091	0	0.00	0.0003	0.0002737
Ti	47	3	He	-0.541	0.0001	10.00	0.0003	0.0002737
Ti	47	3	He	0.016	0.0003	20.00	0.0003	0.0002737
V	51	3	He	0.063	0.0081	584.02	0.0117	0.007326
V	51	3	He	0.002	0.0073	532.01	0.0117	0.007326
V	51	3	He	0.046	0.0079	566.02	0.0117	0.007326
Cr	52	3	He	0.038	0.026	1880.21	0.0152	0.02538
Cr	52	3	He	0.319	0.0302	2190.24	0.0152	0.02538
Cr	52	3	He	0.002	0.0254	1830.19	0.0152	0.02538
Mn	55	3	He	0.694	0.018	1300.10	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.32	0.0157	1140.09	0.0059	0.01385
Mn	55	3	He	0.265	0.0154	1110.08	0.0059	0.01385
Fe	57	3	He	6.019	0.0057	410.02	0.0003	0.003918
Fe	57	3	He	11.735	0.0073	530.03	0.0003	0.003918
Fe	57	3	He	5.172	0.0054	390.02	0.0003	0.003918
Co	59	3	He	0.053	0.0047	340.01	0.0305	0.003084
Co	59	3	He	0.039	0.0043	310.01	0.0305	0.003084
Co	59	3	He	0.072	0.0053	380.02	0.0305	0.003084
Ni	60	3	He	0.766	0.0157	1140.09	0.0088	0.009003
Ni	60	3	He	1.41	0.0214	1550.13	0.0088	0.009003
Ni	60	3	He	1.235	0.0199	1430.12	0.0088	0.009003
Cu	63	3	He	0.112	0.0077	560.04	0.0249	0.004937
Cu	63	3	He	0.046	0.0061	440.02	0.0249	0.004937
Cu	63	3	He	0.103	0.0075	540.03	0.0249	0.004937
Zn	66	3	He	3.146	0.0126	910.06	0.0025	0.004836
Zn	66	3	He	1.628	0.0088	640.03	0.0025	0.004836
Zn	66	3	He	2.045	0.0099	710.04	0.0025	0.004836
As	75	3	He	-0.075	0.0003	22.00	0.0017	0.0004347
As	75	3	He	0.099	0.0006	44.00	0.0017	0.0004347
As	75	3	He	0.069	0.0006	40.00	0.0017	0.0004347
Sr	88	3	He	0.064	0.0013	80.00	0.0078	0.0007762
Sr	88	3	He	0.261	0.0028	180.01	0.0078	0.0007762
Sr	88	3	He	0.221	0.0025	160.01	0.0078	0.0007762
Mo	98	3	He	0.006	0.0006	40.00	0.022	0.0005162
Mo	98	3	He	0.033	0.0013	80.00	0.022	0.0005162
Mo	98	3	He	0.048	0.0016	100.00	0.022	0.0005162
Ag	107	3	He	0.014	0.0011	70.00	0.0455	0.0004641
Ag	107	3	He	0.01	0.0009	60.00	0.0455	0.0004641
Ag	107	3	He	0.007	0.0008	50.00	0.0455	0.0004641
Cd	111	3	He	0.009	0.0001	6.00	0.0048	5.152E-05
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Sn	120	3	He	0.158	0.0178	1120.08	0.0143	0.01559
Sn	120	3	He	0.213	0.0186	1190.13	0.0143	0.01559
Sn	120	3	He	0.005	0.0157	1000.08	0.0143	0.01559
Sb	121	3	He	0.018	0.0005	30.00	0.0124	0.000258
Sb	121	3	He	0.004	0.0003	20.00	0.0124	0.000258
Sb	121	3	He	0.004	0.0003	20.00	0.0124	0.000258
Ba	137	3	He	-0.034	0.0002	10.00	0.0044	0.000309
Ba	137	3	He	0.072	0.0006	40.00	0.0044	0.000309
Ba	137	3	He	0.252	0.0014	90.00	0.0044	0.000309
Tl	205	3	He	0.027	0.0018	390.02	0.0276	0.001005
Tl	205	3	He	0.017	0.0015	320.02	0.0276	0.001005
Tl	205	3	He	0.013	0.0014	300.01	0.0276	0.001005
Pb	208	3	He	0.01	0.0025	300.02	0.0364	0.002176
Pb	208	3	He	0.028	0.0032	390.02	0.0364	0.002176
Pb	208	3	He	0.017	0.0028	310.02	0.0364	0.002176
U	238	3	He	0.002	0.0003	70.00	0.0421	0.00024
U	238	3	He	0.003	0.0004	80.00	0.0421	0.00024
U	238	3	He	0.011	0.0007	150.01	0.0421	0.00024
Sc	45	1	No Gas			3230974.01		
Sc	45	1	No Gas			3181348.39		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3283928.70		
Ge	72	1	No Gas			1431687.01		
Ge	72	1	No Gas			1409739.51		
Ge	72	1	No Gas			1441747.17		
Sc	45	2	H2			195496.29		
Sc	45	2	H2			193501.87		
Sc	45	2	H2			193165.15		
Ge	72	2	H2			162277.09		
Ge	72	2	H2			159605.66		
Ge	72	2	H2			159727.67		
In	115	2	H2			443490.46		
In	115	2	H2			429793.90		
In	115	2	H2			426735.07		
Sc	45	3	He			41910.13		
Sc	45	3	He			41589.75		
Sc	45	3	He			40326.08		
Ge	72	3	He			72422.09		
Ge	72	3	He			72432.70		
Ge	72	3	He			72009.74		
In	115	3	He			62771.63		
In	115	3	He			63907.04		
In	115	3	He			63866.21		
Tb	159	3	He			282929.10		
Tb	159	3	He			278258.77		
Tb	159	3	He			279198.02		
Bi	209	3	He			221006.32		
Bi	209	3	He			215232.44		
Bi	209	3	He			219600.93		

Quantitation Report

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Sample Type	CCV
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

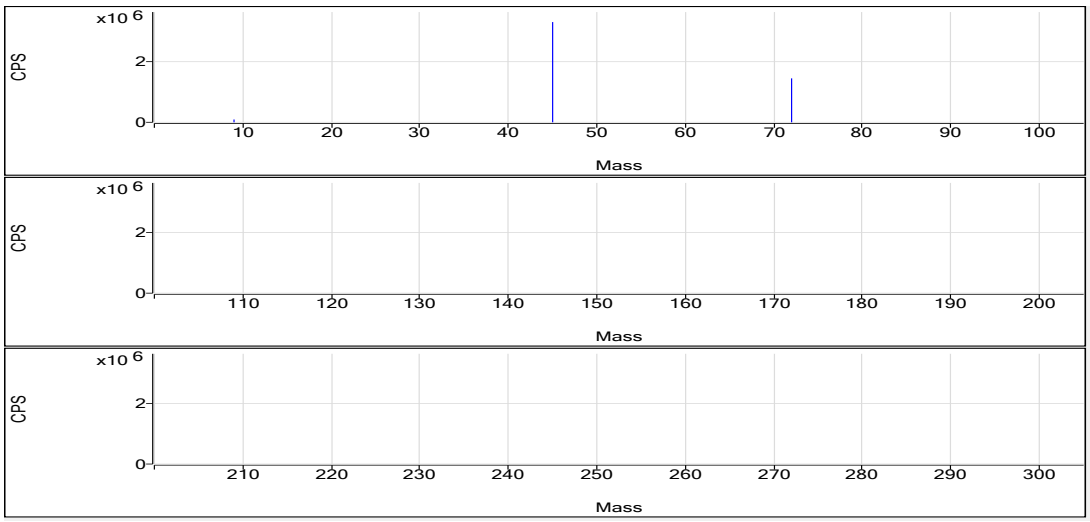
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	48.368	ppb	4.8	92499.79	0.0636	Pulse	0.5000	3
Se	78	72	H2	52.111	ppb	3.4	3292.60	0.0203	Pulse	1.5000	3
Na	23	72	He	5409.203	ppb	1.2	688321.08	9.3985	Pulse	0.1000	3
Mg	24	72	He	5348.155	ppb	1.8	330562.08	4.5139	Pulse	0.1000	3
Al	27	72	He	5206.041	ppb	1.9	92118.53	1.2578	Pulse	0.1000	3
K	39	72	He	5308.465	ppb	1.0	225214.01	3.0750	Pulse	0.1000	3
Ca	44	72	He	5154.155	ppb	1.8	11845.19	0.1617	Pulse	0.1000	3
Ti	47	72	He	5364.716	ppb	1.5	98557.14	1.3456	Pulse	0.1000	3
V	51	72	He	531.530	ppb	0.9	455915.72	6.2250	Pulse	0.5000	3
Cr	52	72	He	532.097	ppb	1.3	595244.41	8.1278	Pulse	0.1000	3
Mn	55	72	He	519.317	ppb	1.0	225511.85	3.0791	Pulse	0.1000	3
Fe	57	72	He	5196.596	ppb	0.6	110554.70	1.5094	Pulse	0.1000	3
Co	59	72	He	529.235	ppb	0.6	1182877.64	16.1503	Pulse	0.1000	3
Ni	60	72	He	528.236	ppb	1.2	340843.80	4.6539	Pulse	0.1000	3
Cu	63	72	He	526.307	ppb	1.9	961495.43	13.1295	Pulse	0.1000	3
Zn	66	72	He	525.852	ppb	1.3	94971.43	1.2967	Pulse	0.1000	3
As	75	72	He	519.200	ppb	1.3	66162.02	0.9034	Pulse	0.5000	3
Sr	88	115	He	51.839	ppb	3.5	25560.21	0.4060	Pulse	0.1000	3
Mo	98	115	He	52.369	ppb	1.2	72643.69	1.1538	Pulse	0.1000	3
Ag	107	115	He	52.163	ppb	2.2	149456.84	2.3739	Pulse	0.1000	3
Cd	111	115	He	52.964	ppb	1.3	16011.81	0.2543	Pulse	0.5000	3
Sn	120	115	He	52.195	ppb	2.4	47849.46	0.7598	Pulse	0.1000	3
Sb	121	115	He	51.664	ppb	2.7	40362.52	0.6412	Pulse	0.1000	3
Ba	137	115	He	520.353	ppb	0.7	143358.99	2.2767	Pulse	0.1000	3
Tl	205	209	He	52.180	ppb	0.4	318175.01	1.4435	Pulse	0.1000	3
Pb	208	209	He	51.673	ppb	1.2	415021.11	1.8829	Pulse	0.1000	3
U	238	209	He	51.638	ppb	0.4	478863.45	2.1725	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3319701.41	1.2	102.4	Pulse	0.1000	3
No Gas	Ge	72	1455244.98	2.2	101.1	Pulse	0.1000	3
H2	Sc	45	196156.70	2.3	100.4	Pulse	0.1000	3
H2	Ge	72	162201.71	0.4	99.5	Pulse	0.1000	3
H2	In	115	444053.94	1.3	102.5	Pulse	0.1000	3
He	Sc	45	41767.10	0.9	104.5	Pulse	0.1000	3
He	Ge	72	73246.26	1.6	101.3	Pulse	0.1000	3
He	In	115	62971.01	1.7	97.5	Pulse	0.1000	3
He	Tb	159	282971.83	0.7	98.9	Pulse	0.1000	3
He	Bi	209	220423.08	0.6	99.2	Pulse	0.1000	3

No Gas



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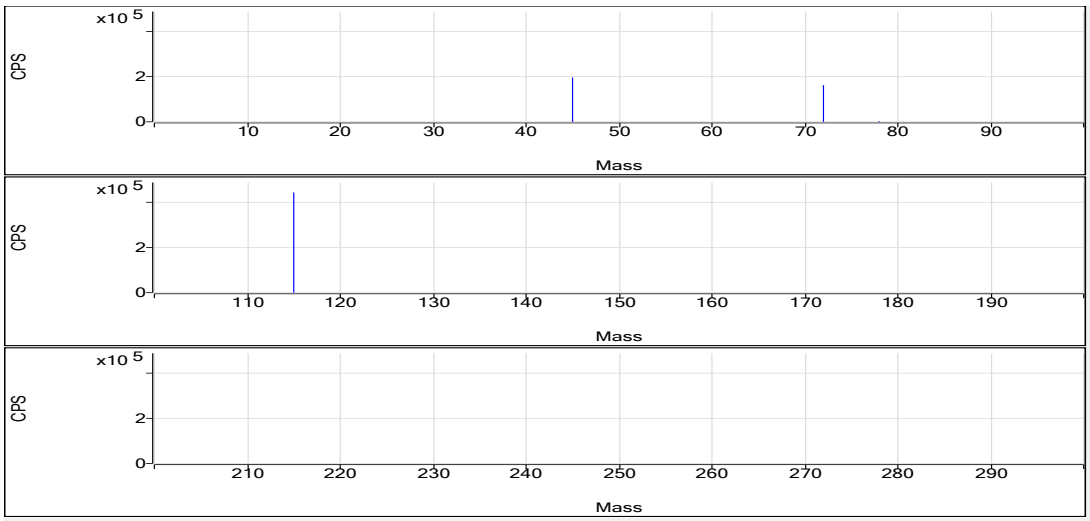
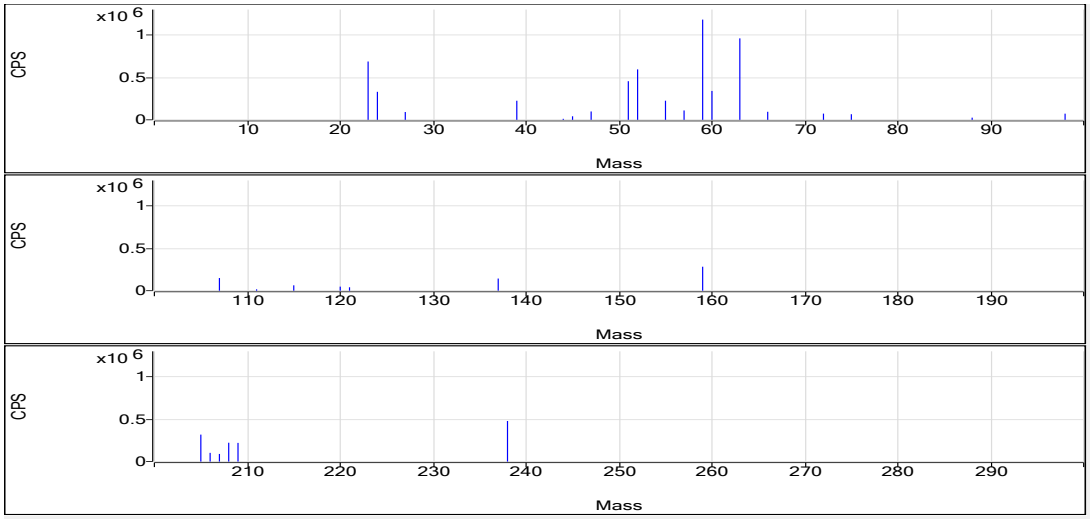


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.3	0.0661	93960.05	0.0013	4.694E-05
Be	9	1	No Gas	48.979	0.0644	94090.44	0.0013	4.694E-05
Be	9	1	No Gas	45.825	0.0603	89448.89	0.0013	4.694E-05
Se	78	2	H2	51.858	0.0202	3283.71	0.0004	1.089E-05
Se	78	2	H2	54.021	0.021	3398.40	0.0004	1.089E-05
Se	78	2	H2	50.455	0.0197	3195.69	0.0004	1.089E-05
Na	23	3	He	5425.005	9.4256	682624.29	0.0017	0.1065
Na	23	3	He	5336.238	9.2732	692086.55	0.0017	0.1065
Na	23	3	He	5466.365	9.4967	690252.41	0.0017	0.1065
Mg	24	3	He	5384.988	4.5449	329153.63	0.0008	0.004846
Mg	24	3	He	5237.99	4.421	329954.21	0.0008	0.004846
Mg	24	3	He	5421.487	4.5757	332578.39	0.0008	0.004846
Al	27	3	He	5153.033	1.245	90163.61	0.0002	0.001063
Al	27	3	He	5144.814	1.243	92768.55	0.0002	0.001063
Al	27	3	He	5320.277	1.2853	93423.42	0.0002	0.001063
K	39	3	He	5316.679	3.0796	223028.98	0.0006	0.1436
K	39	3	He	5250.975	3.0433	227130.91	0.0006	0.1436
K	39	3	He	5357.742	3.1022	225482.13	0.0006	0.1436
Ca	44	3	He	5049.445	0.1584	11474.98	0	0.001611
Ca	44	3	He	5209.088	0.1634	12195.42	0	0.001611
Ca	44	3	He	5203.932	0.1632	11865.16	0	0.001611
Ti	47	3	He	5455.626	1.3684	99104.60	0.0003	0.0002737
Ti	47	3	He	5343.399	1.3403	100030.11	0.0003	0.0002737
Ti	47	3	He	5295.121	1.3282	96536.72	0.0003	0.0002737
V	51	3	He	534.053	6.2545	452966.38	0.0117	0.007326
V	51	3	He	525.977	6.1601	459746.63	0.0117	0.007326
V	51	3	He	534.562	6.2605	455034.16	0.0117	0.007326
Cr	52	3	He	535.324	8.1769	592188.16	0.0152	0.02538
Cr	52	3	He	524.042	8.0051	597448.23	0.0152	0.02538
Cr	52	3	He	536.924	8.2013	596096.83	0.0152	0.02538
Mn	55	3	He	525.236	3.114	225523.51	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	515.024	3.0537	227910.91	0.0059	0.01385
Mn	55	3	He	517.692	3.0695	223101.13	0.0059	0.01385
Fe	57	3	He	5225.439	1.5178	109922.46	0.0003	0.003918
Fe	57	3	He	5164.826	1.5002	111968.16	0.0003	0.003918
Fe	57	3	He	5199.522	1.5103	109773.47	0.0003	0.003918
Co	59	3	He	529.833	16.1686	1170960.30	0.0305	0.003084
Co	59	3	He	525.668	16.0415	1197228.42	0.0305	0.003084
Co	59	3	He	532.204	16.2409	1180444.20	0.0305	0.003084
Ni	60	3	He	534.814	4.7118	341237.07	0.0088	0.009003
Ni	60	3	He	522.136	4.6003	343335.78	0.0088	0.009003
Ni	60	3	He	527.757	4.6497	337958.55	0.0088	0.009003
Cu	63	3	He	530.176	13.226	957853.58	0.0249	0.004937
Cu	63	3	He	514.897	12.845	958663.58	0.0249	0.004937
Cu	63	3	He	533.849	13.3176	967969.13	0.0249	0.004937
Zn	66	3	He	524.509	1.2934	93673.07	0.0025	0.004836
Zn	66	3	He	519.833	1.2819	95675.85	0.0025	0.004836
Zn	66	3	He	533.213	1.3148	95565.38	0.0025	0.004836
As	75	3	He	523.463	0.9108	65963.95	0.0017	0.0004347
As	75	3	He	511.288	0.8897	66397.65	0.0017	0.0004347
As	75	3	He	522.85	0.9098	66124.47	0.0017	0.0004347
Sr	88	3	He	52.994	0.415	25623.52	0.0078	0.0007762
Sr	88	3	He	52.786	0.4134	26234.72	0.0078	0.0007762
Sr	88	3	He	49.738	0.3896	24822.40	0.0078	0.0007762
Mo	98	3	He	53.04	1.1685	72143.60	0.022	0.0005162
Mo	98	3	He	52.227	1.1506	73019.38	0.022	0.0005162
Mo	98	3	He	51.838	1.1421	72768.10	0.022	0.0005162
Ag	107	3	He	53.079	2.4156	149133.77	0.0455	0.0004641
Ag	107	3	He	52.504	2.3894	151629.74	0.0455	0.0004641
Ag	107	3	He	50.905	2.3167	147607.02	0.0455	0.0004641
Cd	111	3	He	53.333	0.2561	15808.93	0.0048	5.152E-05
Cd	111	3	He	53.417	0.2565	16275.42	0.0048	5.152E-05
Cd	111	3	He	52.142	0.2503	15951.09	0.0048	5.152E-05
Sn	120	3	He	51.48	0.7496	46277.61	0.0143	0.01559
Sn	120	3	He	53.646	0.7805	49528.30	0.0143	0.01559
Sn	120	3	He	51.461	0.7493	47742.47	0.0143	0.01559
Sb	121	3	He	53.083	0.6587	40669.99	0.0124	0.000258
Sb	121	3	He	51.592	0.6403	40630.01	0.0124	0.000258
Sb	121	3	He	50.319	0.6245	39787.57	0.0124	0.000258
Ba	137	3	He	524.201	2.2936	141601.44	0.0044	0.000309
Ba	137	3	He	517.081	2.2624	143572.41	0.0044	0.000309
Ba	137	3	He	519.776	2.2742	144903.12	0.0044	0.000309
Tl	205	3	He	52.367	1.4486	317818.35	0.0276	0.001005
Tl	205	3	He	52.217	1.4445	317588.39	0.0276	0.001005
Tl	205	3	He	51.957	1.4373	319118.28	0.0276	0.001005
Pb	208	3	He	51.783	1.8869	221158.08	0.0364	0.002176
Pb	208	3	He	52.216	1.9027	223527.26	0.0364	0.002176
Pb	208	3	He	51.019	1.8591	222203.90	0.0364	0.002176
U	238	3	He	51.867	2.1821	478738.39	0.0421	0.00024
U	238	3	He	51.6	2.1709	477290.34	0.0421	0.00024
U	238	3	He	51.447	2.1645	480561.63	0.0421	0.00024
Sc	45	1	No Gas			3275871.20		
Sc	45	1	No Gas			3332589.33		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3350643.70		
Ge	72	1	No Gas			1420565.14		
Ge	72	1	No Gas			1460871.07		
Ge	72	1	No Gas			1484298.73		
Sc	45	2	H2			196692.83		
Sc	45	2	H2			191495.41		
Sc	45	2	H2			200281.85		
Ge	72	2	H2			162539.04		
Ge	72	2	H2			161485.32		
Ge	72	2	H2			162580.78		
In	115	2	H2			446465.38		
In	115	2	H2			437473.63		
In	115	2	H2			448222.81		
Sc	45	3	He			42121.43		
Sc	45	3	He			41379.19		
Sc	45	3	He			41800.68		
Ge	72	3	He			72422.03		
Ge	72	3	He			74633.32		
Ge	72	3	He			72683.44		
In	115	3	He			62099.16		
In	115	3	He			63845.70		
In	115	3	He			64087.84		
Tb	159	3	He			283724.96		
Tb	159	3	He			284482.59		
Tb	159	3	He			280707.93		
Bi	209	3	He			219389.74		
Bi	209	3	He			219858.14		
Bi	209	3	He			222021.36		

Quantitation Report

Data File Name	129_CCB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 14:47:22
Sample Name	CCB 4654618
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

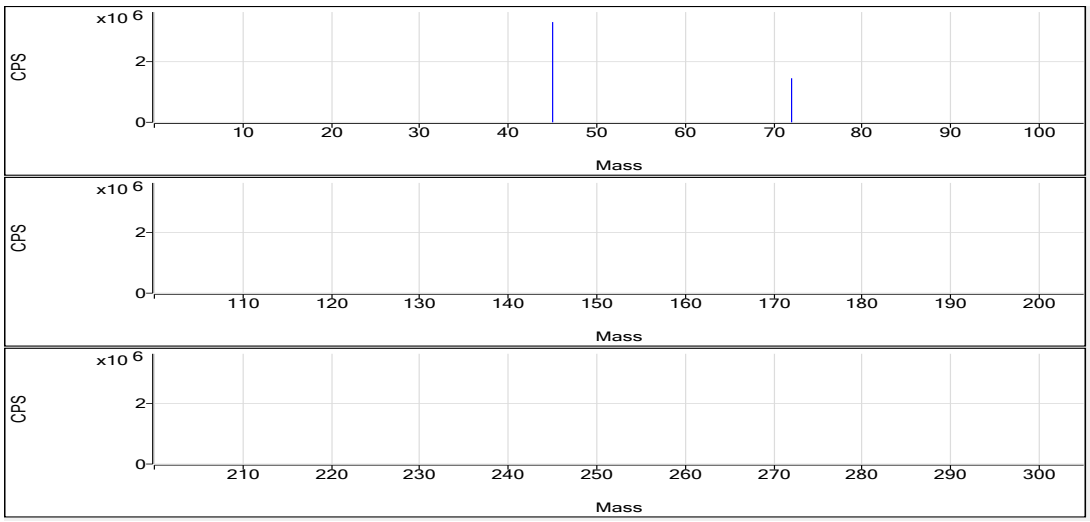
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.031	ppb	16.1	126.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.037	ppb	75.9	4.00	0.0000	Pulse	1.5000	3
Na	23	72	He	16.354	ppb	2.5	9866.90	0.1345	Pulse	0.1000	3
Mg	24	72	He	10.080	ppb	24.7	976.73	0.0133	Pulse	0.1000	3
Al	27	72	He	1.413	ppb	71.1	103.33	0.0014	Pulse	0.1000	3
K	39	72	He	6.215	ppb	314.9	10780.95	0.1471	Pulse	0.1000	3
Ca	44	72	He	33.620	ppb	86.7	193.34	0.0027	Pulse	0.1000	3
Ti	47	72	He	3.790	ppb	21.5	90.00	0.0012	Pulse	0.1000	3
V	51	72	He	0.155	ppb	3.4	670.02	0.0091	Pulse	0.5000	3
Cr	52	72	He	0.296	ppb	29.6	2190.25	0.0299	Pulse	0.1000	3
Mn	55	72	He	-0.124	ppb	N/A	963.40	0.0131	Pulse	0.1000	3
Fe	57	72	He	4.051	ppb	65.7	373.35	0.0051	Pulse	0.1000	3
Co	59	72	He	0.185	ppb	4.1	640.04	0.0087	Pulse	0.1000	3
Ni	60	72	He	1.333	ppb	13.2	1520.14	0.0207	Pulse	0.1000	3
Cu	63	72	He	0.205	ppb	5.4	736.71	0.0100	Pulse	0.1000	3
Zn	66	72	He	0.557	ppb	81.7	456.69	0.0062	Pulse	0.1000	3
As	75	72	He	0.301	ppb	39.8	70.00	0.0010	Pulse	0.5000	3
Sr	88	115	He	0.098	ppb	57.3	100.00	0.0015	Pulse	0.1000	3
Mo	98	115	He	0.063	ppb	16.8	123.34	0.0019	Pulse	0.1000	3
Ag	107	115	He	0.019	ppb	24.6	86.67	0.0013	Pulse	0.1000	3
Cd	111	115	He	0.019	ppb	125.2	9.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.072	ppb	251.5	1080.09	0.0166	Pulse	0.1000	3
Sb	121	115	He	0.057	ppb	85.8	63.34	0.0010	Pulse	0.1000	3
Ba	137	115	He	0.198	ppb	39.0	76.67	0.0012	Pulse	0.1000	3
Tl	205	209	He	0.237	ppb	15.1	1683.51	0.0076	Pulse	0.1000	3
Pb	208	209	He	0.023	ppb	33.1	670.03	0.0030	Pulse	0.1000	3
U	238	209	He	0.030	ppb	40.3	330.02	0.0015	Pulse	0.1000	3

ISTD Table:

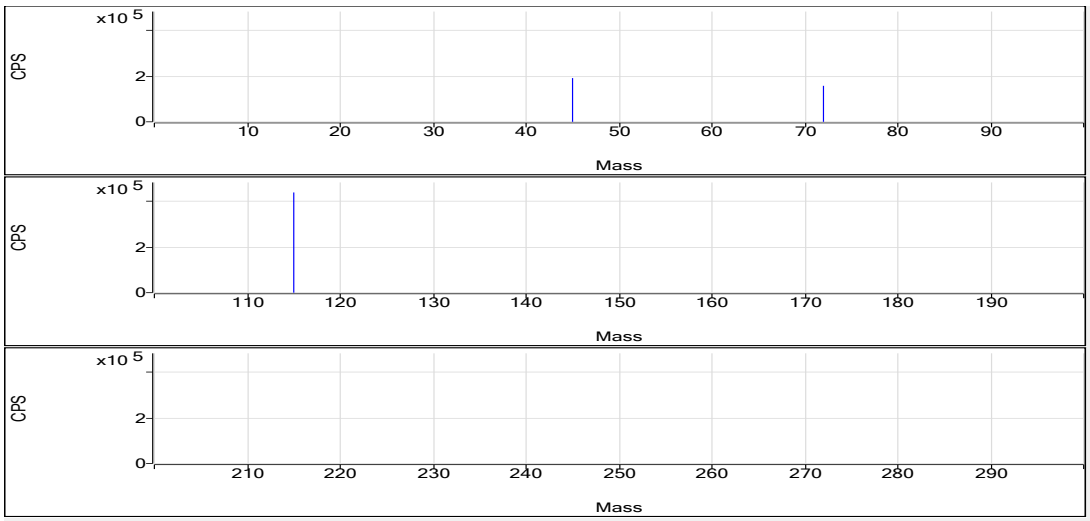
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3282431.41	2.3	101.3	Pulse	0.1000	3
No Gas	Ge	72	1442410.40	1.8	100.2	Pulse	0.1000	3
H2	Sc	45	191616.35	1.3	98.1	Pulse	0.1000	3
H2	Ge	72	157775.79	1.3	96.8	Pulse	0.1000	3
H2	In	115	439319.26	1.2	101.4	Pulse	0.1000	3
He	Sc	45	41877.24	2.4	104.7	Pulse	0.1000	3
He	Ge	72	73337.04	3.2	101.5	Pulse	0.1000	3
He	In	115	65123.46	1.8	100.8	Pulse	0.1000	3
He	Tb	159	282903.14	0.3	98.9	Pulse	0.1000	3
He	Bi	209	222353.54	0.7	100.1	Pulse	0.1000	3

No Gas

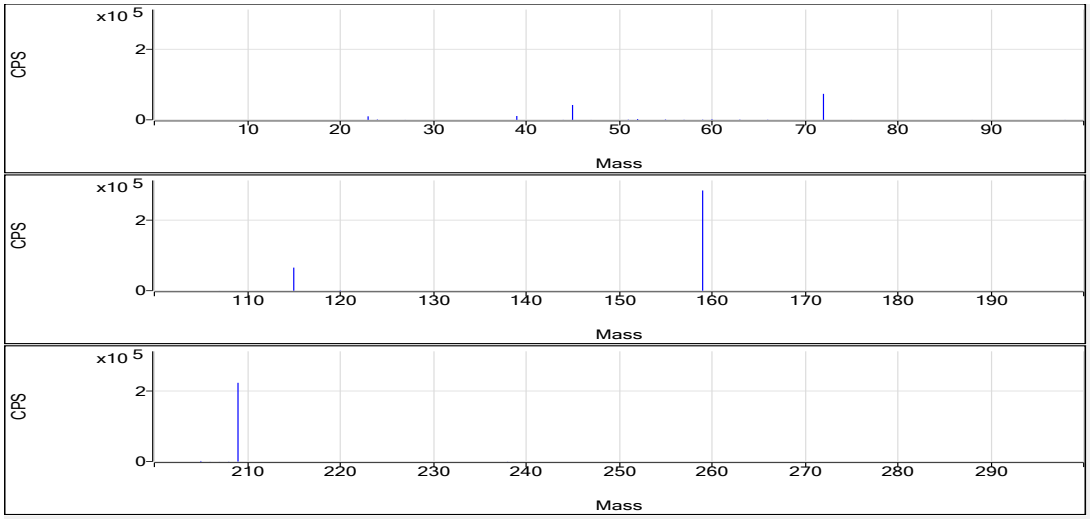


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.036	0.0001	134.00	0.0013	4.694E-05
Be	9	1	No Gas	0.027	0.0001	120.00	0.0013	4.694E-05
Be	9	1	No Gas	0.029	0.0001	124.00	0.0013	4.694E-05
Se	78	2	H2	0.058	0	5.33	0.0004	1.089E-05
Se	78	2	H2	0.005	0	2.00	0.0004	1.089E-05
Se	78	2	H2	0.048	0	4.67	0.0004	1.089E-05
Na	23	3	He	16.744	0.1352	9973.61	0.0017	0.1065
Na	23	3	He	16.398	0.1346	9533.36	0.0017	0.1065
Na	23	3	He	15.919	0.1338	10093.73	0.0017	0.1065
Mg	24	3	He	12.103	0.0151	1110.08	0.0008	0.004846
Mg	24	3	He	10.835	0.014	990.07	0.0008	0.004846
Mg	24	3	He	7.303	0.011	830.05	0.0008	0.004846
Al	27	3	He	1.775	0.0015	110.00	0.0002	0.001063
Al	27	3	He	0.277	0.0011	80.00	0.0002	0.001063
Al	27	3	He	2.187	0.0016	120.00	0.0002	0.001063
K	39	3	He	26.519	0.1583	11674.92	0.0006	0.1436
K	39	3	He	4.661	0.1462	10354.05	0.0006	0.1436
K	39	3	He	-12.533	0.1367	10313.88	0.0006	0.1436
Ca	44	3	He	35.44	0.0027	200.01	0	0.001611
Ca	44	3	He	61.803	0.0035	250.01	0	0.001611
Ca	44	3	He	3.617	0.0017	130.00	0	0.001611
Ti	47	3	He	3.233	0.0011	80.00	0.0003	0.0002737
Ti	47	3	He	3.413	0.0011	80.00	0.0003	0.0002737
Ti	47	3	He	4.723	0.0015	110.00	0.0003	0.0002737
V	51	3	He	0.153	0.0091	672.02	0.0117	0.007326
V	51	3	He	0.161	0.0092	652.02	0.0117	0.007326
V	51	3	He	0.151	0.0091	686.02	0.0117	0.007326
Cr	52	3	He	0.221	0.0287	2120.22	0.0152	0.02538
Cr	52	3	He	0.392	0.0314	2220.26	0.0152	0.02538
Cr	52	3	He	0.274	0.0296	2230.26	0.0152	0.02538
Mn	55	3	He	-0.119	0.0132	970.06	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.242	0.0124	880.06	0.0059	0.01385
Mn	55	3	He	-0.011	0.0138	1040.07	0.0059	0.01385
Fe	57	3	He	7.069	0.006	440.02	0.0003	0.003918
Fe	57	3	He	3.05	0.0048	340.01	0.0003	0.003918
Fe	57	3	He	2.034	0.0045	340.01	0.0003	0.003918
Co	59	3	He	0.192	0.0089	660.04	0.0305	0.003084
Co	59	3	He	0.186	0.0088	620.04	0.0305	0.003084
Co	59	3	He	0.177	0.0085	640.04	0.0305	0.003084
Ni	60	3	He	1.536	0.0225	1660.17	0.0088	0.009003
Ni	60	3	He	1.241	0.0199	1410.11	0.0088	0.009003
Ni	60	3	He	1.223	0.0198	1490.13	0.0088	0.009003
Cu	63	3	He	0.193	0.0098	720.04	0.0249	0.004937
Cu	63	3	He	0.215	0.0103	730.04	0.0249	0.004937
Cu	63	3	He	0.206	0.0101	760.05	0.0249	0.004937
Zn	66	3	He	0.46	0.006	440.02	0.0025	0.004836
Zn	66	3	He	0.158	0.0052	370.02	0.0025	0.004836
Zn	66	3	He	1.053	0.0074	560.04	0.0025	0.004836
As	75	3	He	0.311	0.001	72.00	0.0017	0.0004347
As	75	3	He	0.416	0.0012	82.00	0.0017	0.0004347
As	75	3	He	0.177	0.0007	56.00	0.0017	0.0004347
Sr	88	3	He	0.162	0.002	130.01	0.0078	0.0007762
Sr	88	3	He	0.056	0.0012	80.00	0.0078	0.0007762
Sr	88	3	He	0.075	0.0014	90.00	0.0078	0.0007762
Mo	98	3	He	0.062	0.0019	120.00	0.022	0.0005162
Mo	98	3	He	0.073	0.0021	140.01	0.022	0.0005162
Mo	98	3	He	0.052	0.0017	110.00	0.022	0.0005162
Ag	107	3	He	0.014	0.0011	70.00	0.0455	0.0004641
Ag	107	3	He	0.02	0.0014	90.00	0.0455	0.0004641
Ag	107	3	He	0.023	0.0015	100.00	0.0455	0.0004641
Cd	111	3	He	0.009	0.0001	6.00	0.0048	5.152E-05
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Cd	111	3	He	0.046	0.0003	18.00	0.0048	5.152E-05
Sn	120	3	He	0.26	0.0193	1230.10	0.0143	0.01559
Sn	120	3	He	-0.1	0.0142	930.07	0.0143	0.01559
Sn	120	3	He	0.056	0.0164	1080.09	0.0143	0.01559
Sb	121	3	He	0.03	0.0006	40.00	0.0124	0.000258
Sb	121	3	He	0.114	0.0017	110.01	0.0124	0.000258
Sb	121	3	He	0.028	0.0006	40.00	0.0124	0.000258
Ba	137	3	He	0.109	0.0008	50.00	0.0044	0.000309
Ba	137	3	He	0.242	0.0014	90.00	0.0044	0.000309
Ba	137	3	He	0.241	0.0014	90.00	0.0044	0.000309
Tl	205	3	He	0.276	0.0086	1930.21	0.0276	0.001005
Tl	205	3	He	0.232	0.0074	1650.18	0.0276	0.001005
Tl	205	3	He	0.204	0.0067	1470.14	0.0276	0.001005
Pb	208	3	He	0.026	0.0031	370.02	0.0364	0.002176
Pb	208	3	He	0.014	0.0027	350.02	0.0364	0.002176
Pb	208	3	He	0.029	0.0032	390.02	0.0364	0.002176
U	238	3	He	0.043	0.0021	460.03	0.0421	0.00024
U	238	3	He	0.024	0.0013	280.01	0.0421	0.00024
U	238	3	He	0.021	0.0011	250.01	0.0421	0.00024
Sc	45	1	No Gas			3204469.33		
Sc	45	1	No Gas			3290809.33		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3352015.58		
Ge	72	1	No Gas			1412731.23		
Ge	72	1	No Gas			1451555.76		
Ge	72	1	No Gas			1462944.20		
Sc	45	2	H2			192516.79		
Sc	45	2	H2			188811.01		
Sc	45	2	H2			193521.25		
Ge	72	2	H2			159797.30		
Ge	72	2	H2			155641.94		
Ge	72	2	H2			157888.14		
In	115	2	H2			440977.53		
In	115	2	H2			433586.32		
In	115	2	H2			443393.94		
Sc	45	3	He			40747.79		
Sc	45	3	He			42572.23		
Sc	45	3	He			42311.69		
Ge	72	3	He			73758.98		
Ge	72	3	He			70814.11		
Ge	72	3	He			75438.03		
In	115	3	He			63765.30		
In	115	3	He			65704.72		
In	115	3	He			65925.61		
Tb	159	3	He			283156.58		
Tb	159	3	He			282010.33		
Tb	159	3	He			283542.52		
Bi	209	3	He			223791.56		
Bi	209	3	He			222478.86		
Bi	209	3	He			220790.19		

Quantitation Report

Data File Name	130SMPL.d
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Acq Time	2023-08-10 14:50:04
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

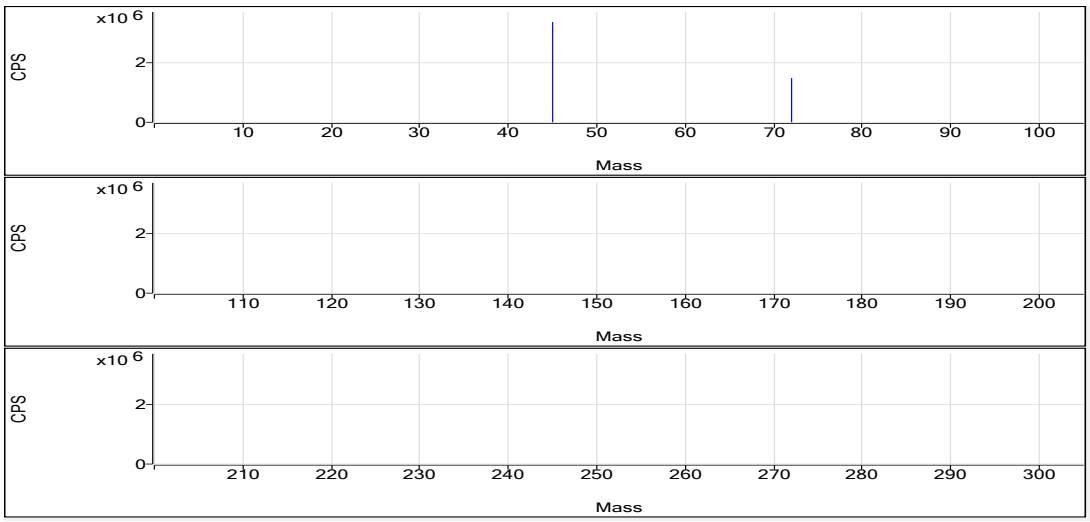
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.004	ppb	N/A	62.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.032	ppb	52.4	3.78	0.0000	Pulse	1.5000	3
Na	23	72	He	12.115	ppb	9.6	9193.12	0.1273	Pulse	0.1000	3
Mg	24	72	He	8.347	ppb	22.6	856.72	0.0119	Pulse	0.1000	3
Al	27	72	He	0.925	ppb	204.1	93.33	0.0013	Pulse	0.1000	3
K	39	72	He	14.484	ppb	143.0	10941.12	0.1516	Pulse	0.1000	3
Ca	44	72	He	28.505	ppb	83.9	180.01	0.0025	Pulse	0.1000	3
Ti	47	72	He	0.746	ppb	84.3	33.33	0.0005	Pulse	0.1000	3
V	51	72	He	0.054	ppb	63.3	574.68	0.0080	Pulse	0.5000	3
Cr	52	72	He	0.080	ppb	251.8	1920.20	0.0266	Pulse	0.1000	3
Mn	55	72	He	-0.465	ppb	N/A	800.05	0.0111	Pulse	0.1000	3
Fe	57	72	He	1.142	ppb	74.9	306.68	0.0042	Pulse	0.1000	3
Co	59	72	He	0.075	ppb	54.4	386.68	0.0054	Pulse	0.1000	3
Ni	60	72	He	1.201	ppb	8.3	1413.45	0.0196	Pulse	0.1000	3
Cu	63	72	He	0.059	ppb	31.0	463.36	0.0064	Pulse	0.1000	3
Zn	66	72	He	0.776	ppb	21.1	486.69	0.0067	Pulse	0.1000	3
As	75	72	He	0.041	ppb	104.8	36.67	0.0005	Pulse	0.5000	3
Sr	88	115	He	0.198	ppb	5.1	146.68	0.0023	Pulse	0.1000	3
Mo	98	115	He	0.005	ppb	130.2	40.00	0.0006	Pulse	0.1000	3
Ag	107	115	He	0.014	ppb	25.1	70.00	0.0011	Pulse	0.1000	3
Cd	111	115	He	0.000	ppb	3487.0	3.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	1.123	ppb	175.1	2007.46	0.0316	Pulse	0.1000	3
Sb	121	115	He	0.018	ppb	74.2	30.00	0.0005	Pulse	0.1000	3
Ba	137	115	He	0.171	ppb	32.1	66.67	0.0011	Pulse	0.1000	3
Tl	205	209	He	0.060	ppb	15.4	583.37	0.0027	Pulse	0.1000	3
Pb	208	209	He	-0.003	ppb	N/A	453.35	0.0021	Pulse	0.1000	3
U	238	209	He	0.008	ppb	49.1	123.34	0.0006	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3348928.08	1.9	103.3	Pulse	0.1000	3
No Gas	Ge	72	1474823.89	1.7	102.4	Pulse	0.1000	3
H2	Sc	45	194591.72	2.6	99.6	Pulse	0.1000	3
H2	Ge	72	161258.06	3.0	98.9	Pulse	0.1000	3
H2	In	115	443991.49	1.9	102.5	Pulse	0.1000	3
He	Sc	45	41379.49	0.9	103.5	Pulse	0.1000	3
He	Ge	72	72244.79	2.6	99.9	Pulse	0.1000	3
He	In	115	63127.25	1.1	97.7	Pulse	0.1000	3
He	Tb	159	281800.64	0.9	98.5	Pulse	0.1000	3
He	Bi	209	219805.39	0.8	98.9	Pulse	0.1000	3

No Gas



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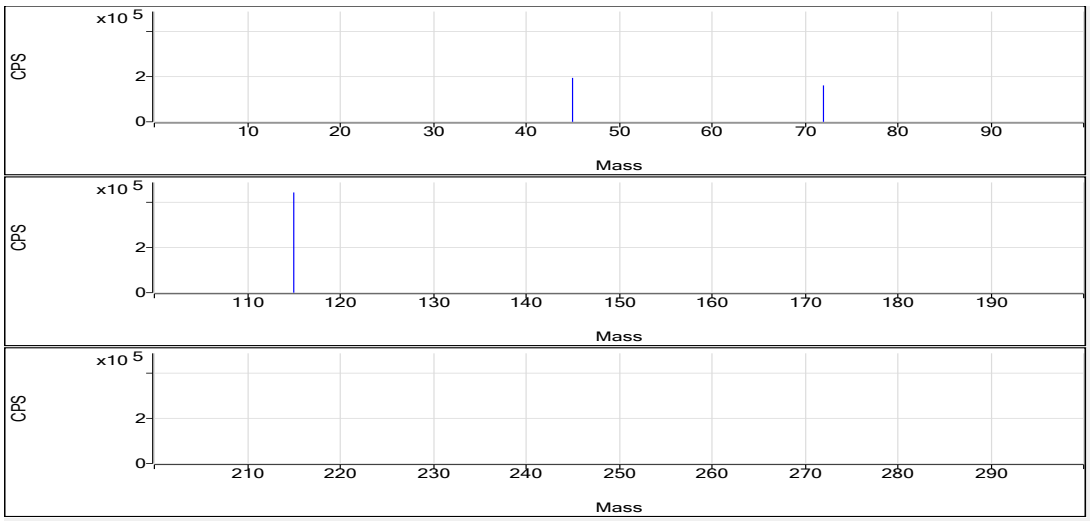
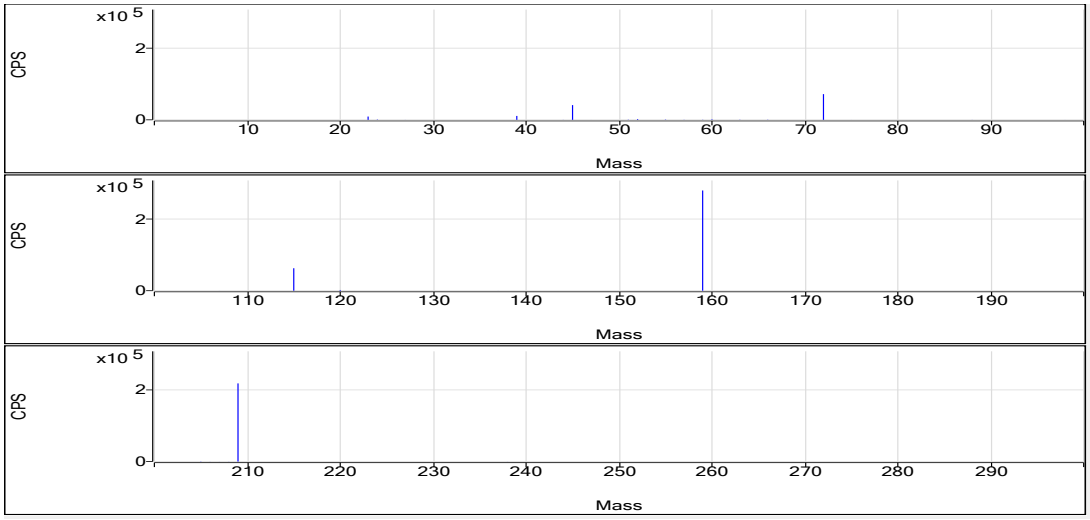


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.004	0	62.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.005	0	60.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.002	0	64.00	0.0013	4.694E-05
Se	78	2	H2	0.038	0	4.00	0.0004	1.089E-05
Se	78	2	H2	0.046	0	4.67	0.0004	1.089E-05
Se	78	2	H2	0.013	0	2.67	0.0004	1.089E-05
Na	23	3	He	11.74	0.1266	8962.92	0.0017	0.1065
Na	23	3	He	13.415	0.1295	9273.23	0.0017	0.1065
Na	23	3	He	11.19	0.1257	9343.20	0.0017	0.1065
Mg	24	3	He	8.999	0.0124	880.06	0.0008	0.004846
Mg	24	3	He	9.823	0.0131	940.06	0.0008	0.004846
Mg	24	3	He	6.219	0.0101	750.05	0.0008	0.004846
Al	27	3	He	0.865	0.0013	90.00	0.0002	0.001063
Al	27	3	He	-0.932	0.0008	60.00	0.0002	0.001063
Al	27	3	He	2.841	0.0017	130.00	0.0002	0.001063
K	39	3	He	27.811	0.159	11254.65	0.0006	0.1436
K	39	3	He	25.011	0.1575	11274.78	0.0006	0.1436
K	39	3	He	-9.37	0.1385	10293.93	0.0006	0.1436
Ca	44	3	He	16.366	0.0021	150.01	0	0.001611
Ca	44	3	He	56.047	0.0034	240.01	0	0.001611
Ca	44	3	He	13.101	0.002	150.01	0	0.001611
Ti	47	3	He	1.162	0.0006	40.00	0.0003	0.0002737
Ti	47	3	He	0.022	0.0003	20.00	0.0003	0.0002737
Ti	47	3	He	1.054	0.0005	40.00	0.0003	0.0002737
V	51	3	He	0.067	0.0081	574.02	0.0117	0.007326
V	51	3	He	0.08	0.0083	592.02	0.0117	0.007326
V	51	3	He	0.015	0.0075	558.01	0.0117	0.007326
Cr	52	3	He	0.291	0.0298	2110.24	0.0152	0.02538
Cr	52	3	He	-0.108	0.0237	1700.16	0.0152	0.02538
Cr	52	3	He	0.056	0.0262	1950.21	0.0152	0.02538
Mn	55	3	He	-0.241	0.0124	880.05	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.265	0.0123	880.06	0.0059	0.01385
Mn	55	3	He	-0.888	0.0086	640.04	0.0059	0.01385
Fe	57	3	He	2.082	0.0045	320.01	0.0003	0.003918
Fe	57	3	He	0.938	0.0042	300.01	0.0003	0.003918
Fe	57	3	He	0.407	0.004	300.01	0.0003	0.003918
Co	59	3	He	0.121	0.0068	480.02	0.0305	0.003084
Co	59	3	He	0.059	0.0049	350.01	0.0305	0.003084
Co	59	3	He	0.044	0.0044	330.01	0.0305	0.003084
Ni	60	3	He	1.097	0.0186	1320.11	0.0088	0.009003
Ni	60	3	He	1.295	0.0204	1460.11	0.0088	0.009003
Ni	60	3	He	1.21	0.0196	1460.13	0.0088	0.009003
Cu	63	3	He	0.04	0.0059	420.02	0.0249	0.004937
Cu	63	3	He	0.076	0.0068	490.02	0.0249	0.004937
Cu	63	3	He	0.061	0.0065	480.03	0.0249	0.004937
Zn	66	3	He	0.792	0.0068	480.03	0.0025	0.004836
Zn	66	3	He	0.931	0.0071	510.03	0.0025	0.004836
Zn	66	3	He	0.605	0.0063	470.02	0.0025	0.004836
As	75	3	He	0.01	0.0005	32.00	0.0017	0.0004347
As	75	3	He	0.023	0.0005	34.00	0.0017	0.0004347
As	75	3	He	0.09	0.0006	44.00	0.0017	0.0004347
Sr	88	3	He	0.201	0.0023	150.01	0.0078	0.0007762
Sr	88	3	He	0.206	0.0024	150.01	0.0078	0.0007762
Sr	88	3	He	0.187	0.0022	140.01	0.0078	0.0007762
Mo	98	3	He	0.012	0.0008	50.00	0.022	0.0005162
Mo	98	3	He	0.005	0.0006	40.00	0.022	0.0005162
Mo	98	3	He	-0.002	0.0005	30.00	0.022	0.0005162
Ag	107	3	He	0.014	0.0011	70.00	0.0455	0.0004641
Ag	107	3	He	0.011	0.001	60.00	0.0455	0.0004641
Ag	107	3	He	0.018	0.0013	80.00	0.0455	0.0004641
Cd	111	3	He	0.009	0.0001	6.00	0.0048	5.152E-05
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Sn	120	3	He	3.386	0.0639	4082.26	0.0143	0.01559
Sn	120	3	He	-0.167	0.0132	830.05	0.0143	0.01559
Sn	120	3	He	0.15	0.0177	1110.08	0.0143	0.01559
Sb	121	3	He	0.004	0.0003	20.00	0.0124	0.000258
Sb	121	3	He	0.031	0.0006	40.00	0.0124	0.000258
Sb	121	3	He	0.018	0.0005	30.00	0.0124	0.000258
Ba	137	3	He	0.18	0.0011	70.00	0.0044	0.000309
Ba	137	3	He	0.22	0.0013	80.00	0.0044	0.000309
Ba	137	3	He	0.112	0.0008	50.00	0.0044	0.000309
Tl	205	3	He	0.07	0.0029	650.03	0.0276	0.001005
Tl	205	3	He	0.052	0.0025	540.04	0.0276	0.001005
Tl	205	3	He	0.057	0.0026	560.03	0.0276	0.001005
Pb	208	3	He	-0.011	0.0018	210.01	0.0364	0.002176
Pb	208	3	He	0.005	0.0024	270.01	0.0364	0.002176
Pb	208	3	He	-0.003	0.0021	190.01	0.0364	0.002176
U	238	3	He	0.007	0.0005	120.01	0.0421	0.00024
U	238	3	He	0.012	0.0007	160.01	0.0421	0.00024
U	238	3	He	0.004	0.0004	90.00	0.0421	0.00024
Sc	45	1	No Gas			3329601.83		
Sc	45	1	No Gas			3420853.70		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3296328.70		
Ge	72	1	No Gas			1465497.17		
Ge	72	1	No Gas			1503519.98		
Ge	72	1	No Gas			1455454.51		
Sc	45	2	H2			188984.14		
Sc	45	2	H2			196311.27		
Sc	45	2	H2			198479.74		
Ge	72	2	H2			156200.85		
Ge	72	2	H2			161830.01		
Ge	72	2	H2			165743.32		
In	115	2	H2			434246.32		
In	115	2	H2			447858.70		
In	115	2	H2			449869.45		
Sc	45	3	He			41119.08		
Sc	45	3	He			41188.79		
Sc	45	3	He			41830.59		
Ge	72	3	He			70784.55		
Ge	72	3	He			71607.64		
Ge	72	3	He			74342.17		
In	115	3	He			63956.33		
In	115	3	He			62831.62		
In	115	3	He			62640.77		
Tb	159	3	He			280644.04		
Tb	159	3	He			279940.86		
Tb	159	3	He			284817.03		
Bi	209	3	He			221261.60		
Bi	209	3	He			220250.99		
Bi	209	3	He			217903.59		

Quantitation Report

Data File Name	131SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 14:52:04
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

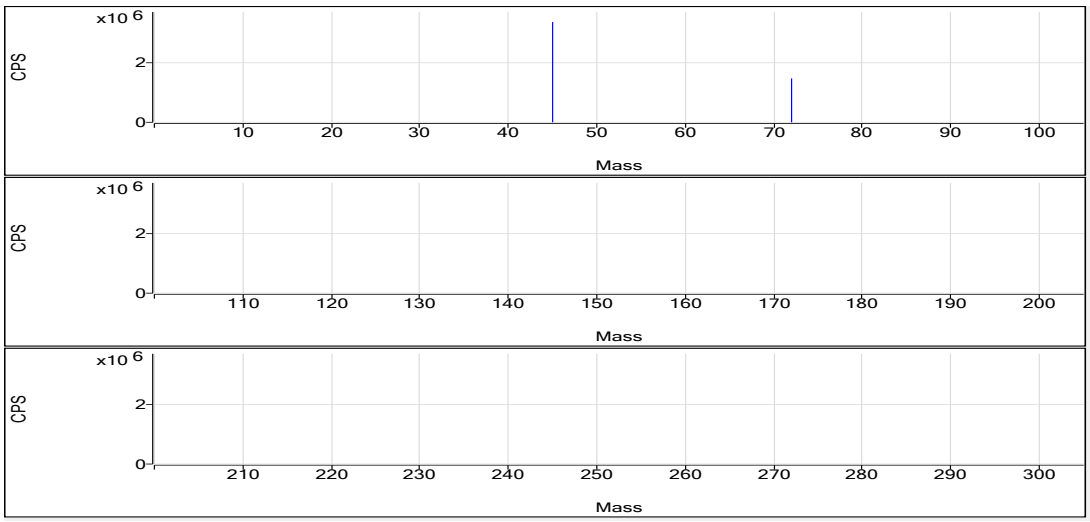
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.008	ppb	N/A	53.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.003	ppb	N/A	1.55	0.0000	Pulse	1.5000	3
Na	23	72	He	14.116	ppb	10.8	9433.31	0.1307	Pulse	0.1000	3
Mg	24	72	He	8.316	ppb	19.2	856.72	0.0119	Pulse	0.1000	3
Al	27	72	He	1.922	ppb	64.7	110.00	0.0015	Pulse	0.1000	3
K	39	72	He	13.699	ppb	55.1	10911.05	0.1512	Pulse	0.1000	3
Ca	44	72	He	22.165	ppb	111.1	166.67	0.0023	Pulse	0.1000	3
Ti	47	72	He	0.013	ppb	7570.1	20.00	0.0003	Pulse	0.1000	3
V	51	72	He	-0.011	ppb	N/A	519.34	0.0072	Pulse	0.5000	3
Cr	52	72	He	-0.065	ppb	N/A	1760.16	0.0244	Pulse	0.1000	3
Mn	55	72	He	-0.859	ppb	N/A	633.37	0.0088	Pulse	0.1000	3
Fe	57	72	He	3.839	ppb	27.9	363.35	0.0050	Pulse	0.1000	3
Co	59	72	He	0.023	ppb	61.8	273.34	0.0038	Pulse	0.1000	3
Ni	60	72	He	1.156	ppb	14.9	1383.46	0.0192	Pulse	0.1000	3
Cu	63	72	He	0.039	ppb	33.7	426.69	0.0059	Pulse	0.1000	3
Zn	66	72	He	0.763	ppb	97.7	483.36	0.0067	Pulse	0.1000	3
As	75	72	He	0.053	ppb	42.3	38.00	0.0005	Pulse	0.5000	3
Sr	88	115	He	0.132	ppb	60.9	116.67	0.0018	Pulse	0.1000	3
Mo	98	115	He	0.007	ppb	119.4	43.33	0.0007	Pulse	0.1000	3
Ag	107	115	He	-0.003	ppb	N/A	20.00	0.0003	Pulse	0.1000	3
Cd	111	115	He	0.015	ppb	115.6	8.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.027	ppb	N/A	983.41	0.0152	Pulse	0.1000	3
Sb	121	115	He	0.004	ppb	297.3	20.00	0.0003	Pulse	0.1000	3
Ba	137	115	He	0.095	ppb	59.6	46.67	0.0007	Pulse	0.1000	3
Tl	205	209	He	0.028	ppb	69.0	393.35	0.0018	Pulse	0.1000	3
Pb	208	209	He	0.001	ppb	782.6	493.35	0.0022	Pulse	0.1000	3
U	238	209	He	0.002	ppb	130.7	76.67	0.0003	Pulse	0.1000	3

ISTD Table:

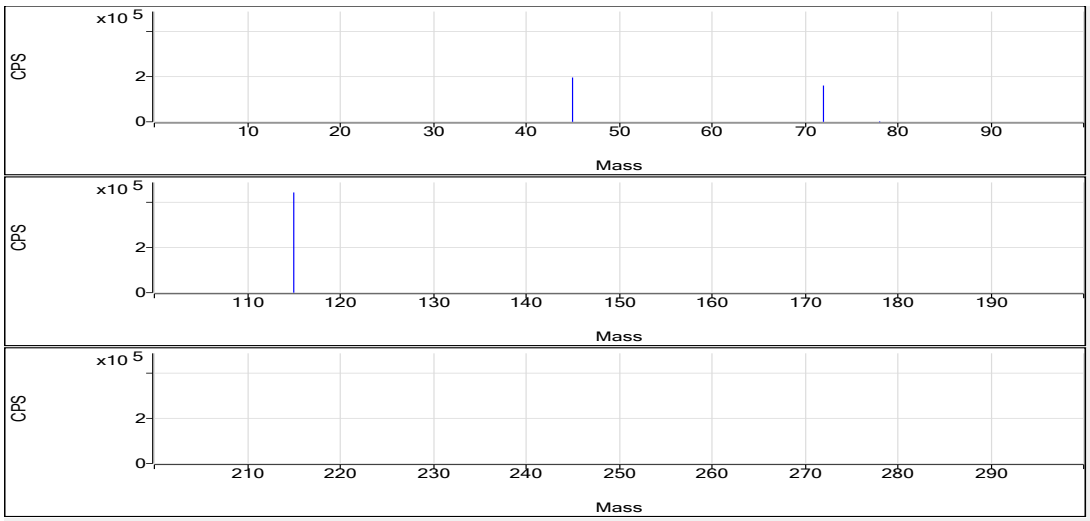
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3345300.26	0.3	103.2	Pulse	0.1000	3
No Gas	Ge	72	1464967.22	0.3	101.7	Pulse	0.1000	3
H2	Sc	45	196101.48	3.5	100.4	Pulse	0.1000	3
H2	Ge	72	160548.44	3.3	98.5	Pulse	0.1000	3
H2	In	115	443587.29	2.5	102.4	Pulse	0.1000	3
He	Sc	45	41195.39	2.2	103.0	Pulse	0.1000	3
He	Ge	72	72184.12	2.1	99.9	Pulse	0.1000	3
He	In	115	64615.61	1.7	100.0	Pulse	0.1000	3
He	Tb	159	282629.62	0.6	98.8	Pulse	0.1000	3
He	Bi	209	222006.08	1.4	99.9	Pulse	0.1000	3

No Gas

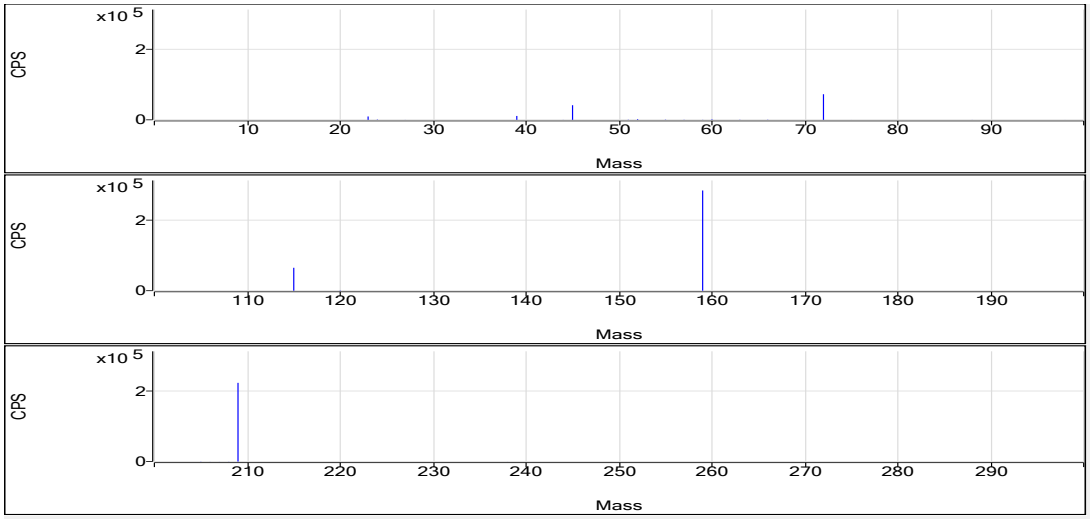


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.008	0	54.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.008	0	54.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.009	0	52.00	0.0013	4.694E-05
Se	78	2	H2	-0.006	0	1.33	0.0004	1.089E-05
Se	78	2	H2	-0.007	0	1.33	0.0004	1.089E-05
Se	78	2	H2	0.003	0	2.00	0.0004	1.089E-05
Na	23	3	He	12.61	0.1281	9263.14	0.0017	0.1065
Na	23	3	He	14.074	0.1306	9623.51	0.0017	0.1065
Na	23	3	He	15.664	0.1334	9413.28	0.0017	0.1065
Mg	24	3	He	6.885	0.0107	770.04	0.0008	0.004846
Mg	24	3	He	10.032	0.0133	980.07	0.0008	0.004846
Mg	24	3	He	8.033	0.0116	820.05	0.0008	0.004846
Al	27	3	He	0.754	0.0012	90.00	0.0002	0.001063
Al	27	3	He	1.783	0.0015	110.00	0.0002	0.001063
Al	27	3	He	3.228	0.0018	130.01	0.0002	0.001063
K	39	3	He	18.011	0.1536	11104.52	0.0006	0.1436
K	39	3	He	4.979	0.1464	10784.31	0.0006	0.1436
K	39	3	He	18.106	0.1536	10844.31	0.0006	0.1436
Ca	44	3	He	37.2	0.0028	200.01	0	0.001611
Ca	44	3	He	35.547	0.0027	200.01	0	0.001611
Ca	44	3	He	-6.251	0.0014	100.00	0	0.001611
Ti	47	3	He	1.115	0.0006	40.00	0.0003	0.0002737
Ti	47	3	He	-0.55	0.0001	10.00	0.0003	0.0002737
Ti	47	3	He	-0.527	0.0001	10.00	0.0003	0.0002737
V	51	3	He	0.01	0.0074	538.01	0.0117	0.007326
V	51	3	He	-0.009	0.0072	532.01	0.0117	0.007326
V	51	3	He	-0.035	0.0069	488.01	0.0117	0.007326
Cr	52	3	He	-0.105	0.0238	1720.17	0.0152	0.02538
Cr	52	3	He	-0.08	0.0242	1780.17	0.0152	0.02538
Cr	52	3	He	-0.011	0.0252	1780.15	0.0152	0.02538
Mn	55	3	He	-0.707	0.0097	700.04	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-1.082	0.0075	550.03	0.0059	0.01385
Mn	55	3	He	-0.787	0.0092	650.04	0.0059	0.01385
Fe	57	3	He	4.619	0.0053	380.02	0.0003	0.003918
Fe	57	3	He	4.283	0.0052	380.02	0.0003	0.003918
Fe	57	3	He	2.616	0.0047	330.02	0.0003	0.003918
Co	59	3	He	0.039	0.0043	310.01	0.0305	0.003084
Co	59	3	He	0.015	0.0035	260.01	0.0305	0.003084
Co	59	3	He	0.015	0.0035	250.01	0.0305	0.003084
Ni	60	3	He	0.958	0.0174	1260.12	0.0088	0.009003
Ni	60	3	He	1.277	0.0202	1490.14	0.0088	0.009003
Ni	60	3	He	1.232	0.0198	1400.12	0.0088	0.009003
Cu	63	3	He	0.024	0.0055	400.02	0.0249	0.004937
Cu	63	3	He	0.047	0.0061	450.03	0.0249	0.004937
Cu	63	3	He	0.046	0.0061	430.02	0.0249	0.004937
Zn	66	3	He	0.002	0.0048	350.02	0.0025	0.004836
Zn	66	3	He	0.794	0.0068	500.03	0.0025	0.004836
Zn	66	3	He	1.492	0.0085	600.03	0.0025	0.004836
As	75	3	He	0.052	0.0005	38.00	0.0017	0.0004347
As	75	3	He	0.031	0.0005	36.00	0.0017	0.0004347
As	75	3	He	0.076	0.0006	40.00	0.0017	0.0004347
Sr	88	3	He	0.217	0.0025	160.01	0.0078	0.0007762
Sr	88	3	He	0.057	0.0012	80.00	0.0078	0.0007762
Sr	88	3	He	0.123	0.0017	110.00	0.0078	0.0007762
Mo	98	3	He	0.012	0.0008	50.00	0.022	0.0005162
Mo	98	3	He	-0.003	0.0005	30.00	0.022	0.0005162
Mo	98	3	He	0.012	0.0008	50.00	0.022	0.0005162
Ag	107	3	He	0	0.0005	30.00	0.0455	0.0004641
Ag	107	3	He	-0.004	0.0003	20.00	0.0455	0.0004641
Ag	107	3	He	-0.007	0.0002	10.00	0.0455	0.0004641
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Cd	111	3	He	0.008	0.0001	6.00	0.0048	5.152E-05
Cd	111	3	He	0.035	0.0002	14.00	0.0048	5.152E-05
Sn	120	3	He	-0.119	0.0139	900.07	0.0143	0.01559
Sn	120	3	He	0.115	0.0172	1130.09	0.0143	0.01559
Sn	120	3	He	-0.076	0.0145	920.06	0.0143	0.01559
Sb	121	3	He	-0.008	0.0002	10.00	0.0124	0.000258
Sb	121	3	He	0.016	0.0005	30.00	0.0124	0.000258
Sb	121	3	He	0.005	0.0003	20.00	0.0124	0.000258
Ba	137	3	He	0.106	0.0008	50.00	0.0044	0.000309
Ba	137	3	He	0.034	0.0005	30.00	0.0044	0.000309
Ba	137	3	He	0.146	0.0009	60.00	0.0044	0.000309
Tl	205	3	He	0.006	0.0012	260.01	0.0276	0.001005
Tl	205	3	He	0.042	0.0022	490.03	0.0276	0.001005
Tl	205	3	He	0.035	0.002	430.02	0.0276	0.001005
Pb	208	3	He	0.012	0.0026	280.01	0.0364	0.002176
Pb	208	3	He	-0.009	0.0019	210.01	0.0364	0.002176
Pb	208	3	He	0	0.0022	290.01	0.0364	0.002176
U	238	3	He	0.006	0.0005	110.00	0.0421	0.00024
U	238	3	He	0.002	0.0003	70.00	0.0421	0.00024
U	238	3	He	0	0.0002	50.00	0.0421	0.00024
Sc	45	1	No Gas			3334965.89		
Sc	45	1	No Gas			3346648.70		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3354286.20		
Ge	72	1	No Gas			1460264.51		
Ge	72	1	No Gas			1464280.76		
Ge	72	1	No Gas			1470356.38		
Sc	45	2	H2			188711.42		
Sc	45	2	H2			197273.83		
Sc	45	2	H2			202319.18		
Ge	72	2	H2			154676.60		
Ge	72	2	H2			162184.76		
Ge	72	2	H2			164783.96		
In	115	2	H2			433497.02		
In	115	2	H2			441849.52		
In	115	2	H2			455415.34		
Sc	45	3	He			41168.34		
Sc	45	3	He			42121.84		
Sc	45	3	He			40295.98		
Ge	72	3	He			72301.24		
Ge	72	3	He			73668.21		
Ge	72	3	He			70582.92		
In	115	3	He			64790.54		
In	115	3	He			65634.56		
In	115	3	He			63444.75		
Tb	159	3	He			280895.07		
Tb	159	3	He			284441.13		
Tb	159	3	He			282552.65		
Bi	209	3	He			221645.31		
Bi	209	3	He			225206.21		
Bi	209	3	He			219166.72		

Quantitation Report

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Acq Time	2023-08-10 14:54:05
Sample Name	ICSA 4677791
Sample Type	ICSA
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

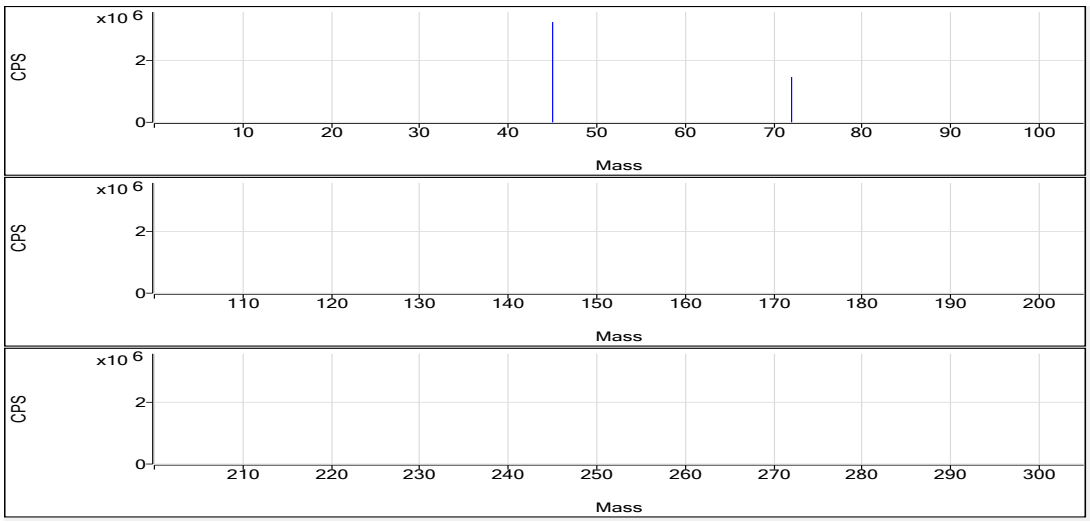
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.006	ppb	N/A	57.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.046	ppb	38.7	4.66	0.0000	Pulse	1.5000	3
Na	23	72	He	260500.769	ppb	0.9	33763625.33	447.6002	Analog	0.1000	3
Mg	24	72	He	105420.699	ppb	1.4	6704233.23	88.8852	Analog	0.1000	3
Al	27	72	He	101214.797	ppb	1.4	1842928.98	24.4337	Pulse	0.1000	3
K	39	72	He	102121.562	ppb	1.3	4264320.46	56.5364	Pulse	0.1000	3
Ca	44	72	He	294595.771	ppb	1.1	690300.09	9.1517	Pulse	0.1000	3
Ti	47	72	He	2082.698	ppb	3.2	39424.07	0.5226	Pulse	0.1000	3
V	51	72	He	0.021	ppb	52.5	571.35	0.0076	Pulse	0.5000	3
Cr	52	72	He	3.375	ppb	2.9	5791.36	0.0768	Pulse	0.1000	3
Mn	55	72	He	-0.512	ppb	N/A	816.72	0.0108	Pulse	0.1000	3
Fe	57	72	He	253415.837	ppb	1.5	5538420.33	73.4222	Mix	0.1000	3
Co	59	72	He	0.248	ppb	29.6	803.39	0.0106	Pulse	0.1000	3
Ni	60	72	He	1.571	ppb	9.5	1720.16	0.0228	Pulse	0.1000	3
Cu	63	72	He	0.112	ppb	49.0	583.36	0.0077	Pulse	0.1000	3
Zn	66	72	He	2.402	ppb	2.7	810.05	0.0107	Pulse	0.1000	3
As	75	72	He	0.243	ppb	29.7	64.67	0.0009	Pulse	0.5000	3
Sr	88	115	He	2.252	ppb	5.8	1130.09	0.0184	Pulse	0.1000	3
Mo	98	115	He	2123.033	ppb	0.5	2874227.87	46.7531	Pulse	0.1000	3
Ag	107	115	He	0.009	ppb	116.6	53.33	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.296	ppb	8.3	90.67	0.0015	Pulse	0.5000	3
Sn	120	115	He	0.188	ppb	42.6	1123.43	0.0183	Pulse	0.1000	3
Sb	121	115	He	0.163	ppb	28.9	140.01	0.0023	Pulse	0.1000	3
Ba	137	115	He	0.500	ppb	24.1	153.34	0.0025	Pulse	0.1000	3
Tl	205	209	He	0.031	ppb	43.0	390.02	0.0019	Pulse	0.1000	3
Pb	208	209	He	0.082	ppb	23.9	1080.06	0.0052	Pulse	0.1000	3
U	238	209	He	0.057	ppb	16.9	553.37	0.0026	Pulse	0.1000	3

ISTD Table:

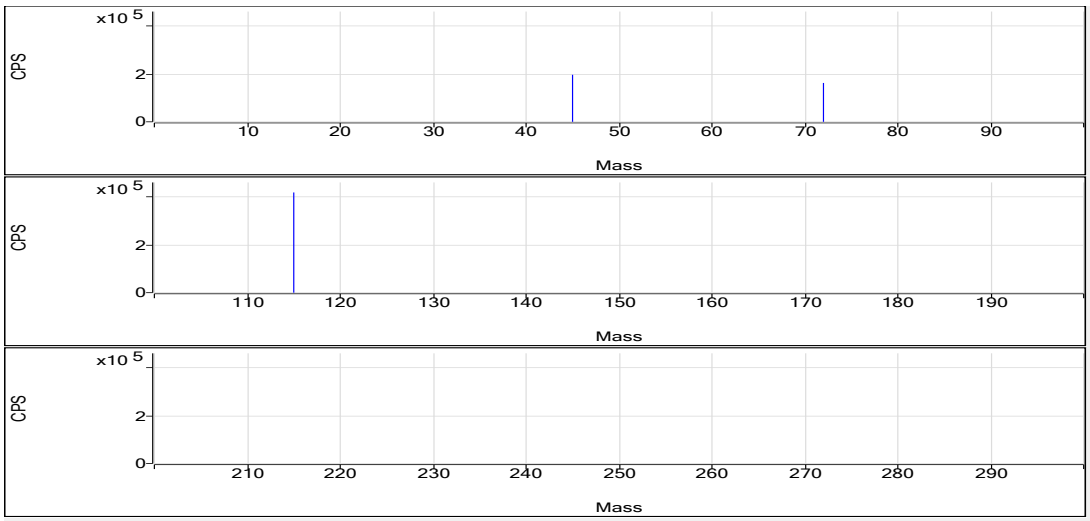
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3268955.47	1.0	100.9	Pulse	0.1000	3
No Gas	Ge	72	1476019.67	1.2	102.5	Pulse	0.1000	3
H2	Sc	45	196376.66	2.9	100.5	Pulse	0.1000	3
H2	Ge	72	162254.47	2.0	99.5	Pulse	0.1000	3
H2	In	115	418443.11	1.5	96.6	Pulse	0.1000	3
He	Sc	45	42275.14	2.8	105.7	Pulse	0.1000	3
He	Ge	72	75434.46	1.3	104.4	Pulse	0.1000	3
He	In	115	61477.57	0.4	95.2	Pulse	0.1000	3
He	Tb	159	281219.60	0.6	98.3	Pulse	0.1000	3
He	Bi	209	208868.71	1.4	94.0	Pulse	0.1000	3

No Gas

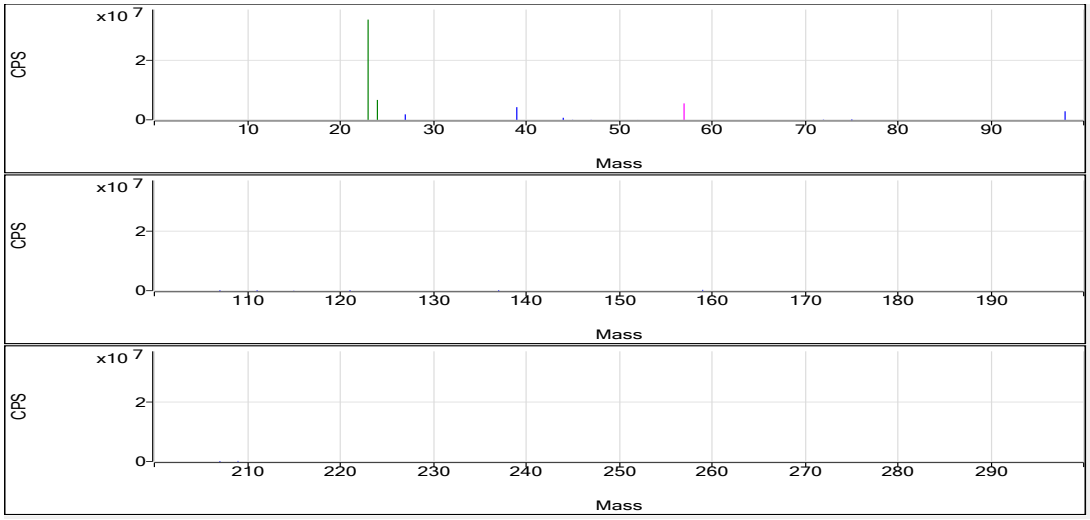


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.009	0	52.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.002	0	66.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.007	0	54.00	0.0013	4.694E-05
Se	78	2	H2	0.057	0	5.33	0.0004	1.089E-05
Se	78	2	H2	0.055	0	5.33	0.0004	1.089E-05
Se	78	2	H2	0.025	0	3.33	0.0004	1.089E-05
Na	23	3	He	261575.583	449.4465	34284791.99	0.0017	0.1065
Na	23	3	He	257889.515	443.1145	33543414.50	0.0017	0.1065
Na	23	3	He	262037.208	450.2395	33462669.50	0.0017	0.1065
Mg	24	3	He	104750.88	88.3205	6737284.90	0.0008	0.004846
Mg	24	3	He	104373.821	88.0026	6661724.90	0.0008	0.004846
Mg	24	3	He	107137.397	90.3326	6713689.90	0.0008	0.004846
Al	27	3	He	100428	24.2438	1849371.53	0.0002	0.001063
Al	27	3	He	100385.231	24.2335	1834454.66	0.0002	0.001063
Al	27	3	He	102831.16	24.8239	1844960.75	0.0002	0.001063
K	39	3	He	101366.561	56.1194	4280917.75	0.0006	0.1436
K	39	3	He	101342.523	56.1062	4247192.44	0.0006	0.1436
K	39	3	He	103655.602	57.3835	4264851.19	0.0006	0.1436
Ca	44	3	He	293843.11	9.1283	696330.15	0	0.001611
Ca	44	3	He	291836.863	9.066	686290.77	0	0.001611
Ca	44	3	He	298107.341	9.2608	688279.36	0	0.001611
Ti	47	3	He	2055.026	0.5156	39333.54	0.0003	0.0002737
Ti	47	3	He	2158.57	0.5416	40998.57	0.0003	0.0002737
Ti	47	3	He	2034.496	0.5105	37940.10	0.0003	0.0002737
V	51	3	He	0.017	0.0075	574.02	0.0117	0.007326
V	51	3	He	0.013	0.0075	566.02	0.0117	0.007326
V	51	3	He	0.034	0.0077	574.01	0.0117	0.007326
Cr	52	3	He	3.388	0.077	5871.42	0.0152	0.02538
Cr	52	3	He	3.27	0.0752	5691.28	0.0152	0.02538
Cr	52	3	He	3.468	0.0782	5811.38	0.0152	0.02538
Mn	55	3	He	-0.57	0.0105	800.05	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.557	0.0106	800.05	0.0059	0.01385
Mn	55	3	He	-0.409	0.0114	850.06	0.0059	0.01385
Fe	57	3	He	255681.94	74.0787	5650891.79	0.0003	0.003918
Fe	57	3	He	249109.433	72.1746	5463557.42	0.0003	0.003918
Fe	57	3	He	255456.139	74.0133	5500811.79	0.0003	0.003918
Co	59	3	He	0.195	0.009	690.04	0.0305	0.003084
Co	59	3	He	0.332	0.0132	1000.07	0.0305	0.003084
Co	59	3	He	0.216	0.0097	720.05	0.0305	0.003084
Ni	60	3	He	1.406	0.0214	1630.15	0.0088	0.009003
Ni	60	3	He	1.605	0.0231	1750.16	0.0088	0.009003
Ni	60	3	He	1.7	0.024	1780.18	0.0088	0.009003
Cu	63	3	He	0.096	0.0073	560.03	0.0249	0.004937
Cu	63	3	He	0.173	0.0092	700.04	0.0249	0.004937
Cu	63	3	He	0.066	0.0066	490.02	0.0249	0.004937
Zn	66	3	He	2.461	0.0109	830.06	0.0025	0.004836
Zn	66	3	He	2.333	0.0106	800.05	0.0025	0.004836
Zn	66	3	He	2.413	0.0108	800.05	0.0025	0.004836
As	75	3	He	0.278	0.0009	70.00	0.0017	0.0004347
As	75	3	He	0.16	0.0007	54.00	0.0017	0.0004347
As	75	3	He	0.292	0.0009	70.00	0.0017	0.0004347
Sr	88	3	He	2.109	0.0173	1060.09	0.0078	0.0007762
Sr	88	3	He	2.283	0.0186	1150.09	0.0078	0.0007762
Sr	88	3	He	2.365	0.0193	1180.10	0.0078	0.0007762
Mo	98	3	He	2127.013	46.8407	2876378.71	0.022	0.0005162
Mo	98	3	He	2111.864	46.5071	2872636.52	0.022	0.0005162
Mo	98	3	He	2130.222	46.9114	2873668.39	0.022	0.0005162
Ag	107	3	He	0.015	0.0011	70.00	0.0455	0.0004641
Ag	107	3	He	-0.003	0.0003	20.00	0.0455	0.0004641
Ag	107	3	He	0.015	0.0011	70.00	0.0455	0.0004641
Cd	111	3	He	0.308	0.0015	94.00	0.0048	5.152E-05
Cd	111	3	He	0.313	0.0016	96.00	0.0048	5.152E-05
Cd	111	3	He	0.268	0.0013	82.00	0.0048	5.152E-05
Sn	120	3	He	0.186	0.0182	1120.09	0.0143	0.01559
Sn	120	3	He	0.269	0.0194	1200.11	0.0143	0.01559
Sn	120	3	He	0.109	0.0171	1050.08	0.0143	0.01559
Sb	121	3	He	0.202	0.0028	170.01	0.0124	0.000258
Sb	121	3	He	0.175	0.0024	150.01	0.0124	0.000258
Sb	121	3	He	0.111	0.0016	100.00	0.0124	0.000258
Ba	137	3	He	0.637	0.0031	190.01	0.0044	0.000309
Ba	137	3	He	0.41	0.0021	130.00	0.0044	0.000309
Ba	137	3	He	0.452	0.0023	140.01	0.0044	0.000309
Tl	205	3	He	0.016	0.0015	300.01	0.0276	0.001005
Tl	205	3	He	0.034	0.0019	410.02	0.0276	0.001005
Tl	205	3	He	0.043	0.0022	460.03	0.0276	0.001005
Pb	208	3	He	0.098	0.0057	670.05	0.0364	0.002176
Pb	208	3	He	0.06	0.0044	460.03	0.0364	0.002176
Pb	208	3	He	0.089	0.0054	640.04	0.0364	0.002176
U	238	3	He	0.049	0.0023	470.03	0.0421	0.00024
U	238	3	He	0.055	0.0026	540.04	0.0421	0.00024
U	238	3	He	0.068	0.0031	650.04	0.0421	0.00024
Sc	45	1	No Gas			3297695.89		
Sc	45	1	No Gas			3277796.20		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3231374.33		
Ge	72	1	No Gas			1486457.32		
Ge	72	1	No Gas			1486057.95		
Ge	72	1	No Gas			1455543.73		
Sc	45	2	H2			191040.72		
Sc	45	2	H2			202377.03		
Sc	45	2	H2			195712.24		
Ge	72	2	H2			160495.70		
Ge	72	2	H2			165976.62		
Ge	72	2	H2			160291.08		
In	115	2	H2			411832.77		
In	115	2	H2			424252.92		
In	115	2	H2			419243.63		
Sc	45	3	He			42251.67		
Sc	45	3	He			41088.66		
Sc	45	3	He			43485.09		
Ge	72	3	He			76282.25		
Ge	72	3	He			75699.20		
Ge	72	3	He			74321.93		
In	115	3	He			61416.39		
In	115	3	He			61777.04		
In	115	3	He			61265.56		
Tb	159	3	He			279358.16		
Tb	159	3	He			282677.09		
Tb	159	3	He			281623.55		
Bi	209	3	He			205456.56		
Bi	209	3	He			210580.29		
Bi	209	3	He			210569.29		

Quantitation Report

Data File Name	133ICSB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 14:56:06
Sample Name	ICSAB 4677744
Sample Type	ICSAB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

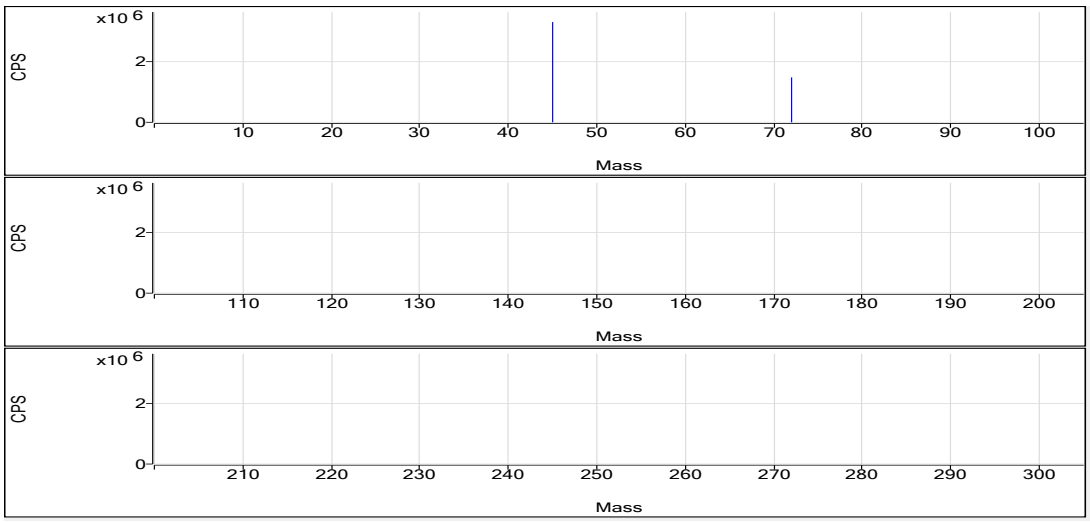
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.004	ppb	N/A	62.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	104.094	ppb	5.9	6563.50	0.0405	Pulse	1.5000	3
Na	23	72	He	262244.558	ppb	1.4	33726489.50	450.5957	Analog	0.1000	3
Mg	24	72	He	105652.801	ppb	1.7	6667147.82	89.0809	Analog	0.1000	3
Al	27	72	He	101386.558	ppb	1.4	1831894.19	24.4752	Pulse	0.1000	3
K	39	72	He	102336.624	ppb	1.4	4240363.58	56.6551	Pulse	0.1000	3
Ca	44	72	He	297728.150	ppb	1.4	692243.25	9.2490	Pulse	0.1000	3
Ti	47	72	He	2067.522	ppb	0.8	38829.20	0.5188	Pulse	0.1000	3
V	51	72	He	212.493	ppb	1.0	186594.94	2.4930	Pulse	0.5000	3
Cr	52	72	He	214.476	ppb	0.9	246348.61	3.2913	Pulse	0.1000	3
Mn	55	72	He	207.383	ppb	0.2	92660.44	1.2379	Pulse	0.1000	3
Fe	57	72	He	252027.576	ppb	0.8	5465402.83	73.0200	Mix	0.1000	3
Co	59	72	He	207.162	ppb	1.3	473302.91	6.3237	Pulse	0.1000	3
Ni	60	72	He	204.750	ppb	1.3	135430.15	1.8094	Pulse	0.1000	3
Cu	63	72	He	201.529	ppb	0.6	376531.27	5.0305	Pulse	0.1000	3
Zn	66	72	He	105.460	ppb	1.2	19754.12	0.2639	Pulse	0.1000	3
As	75	72	He	100.797	ppb	2.1	13152.71	0.1757	Pulse	0.5000	3
Sr	88	115	He	2.248	ppb	8.4	1140.10	0.0184	Pulse	0.1000	3
Mo	98	115	He	2091.424	ppb	1.1	2861579.02	46.0570	Pulse	0.1000	3
Ag	107	115	He	51.883	ppb	1.1	146708.63	2.3612	Pulse	0.1000	3
Cd	111	115	He	104.972	ppb	0.2	31312.71	0.5039	Pulse	0.5000	3
Sn	120	115	He	0.350	ppb	89.6	1280.11	0.0206	Pulse	0.1000	3
Sb	121	115	He	0.139	ppb	14.2	123.34	0.0020	Pulse	0.1000	3
Ba	137	115	He	0.593	ppb	45.9	180.01	0.0029	Pulse	0.1000	3
Tl	205	209	He	0.021	ppb	27.3	330.02	0.0016	Pulse	0.1000	3
Pb	208	209	He	0.053	ppb	28.3	863.38	0.0041	Pulse	0.1000	3
U	238	209	He	0.063	ppb	21.2	603.37	0.0029	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3304208.28	2.1	101.9	Pulse	0.1000	3
No Gas	Ge	72	1480808.21	1.9	102.8	Pulse	0.1000	3
H2	Sc	45	197500.21	2.0	101.1	Pulse	0.1000	3
H2	Ge	72	162079.46	2.9	99.4	Pulse	0.1000	3
H2	In	115	417720.04	2.1	96.4	Pulse	0.1000	3
He	Sc	45	43528.69	3.0	108.9	Pulse	0.1000	3
He	Ge	72	74851.62	0.9	103.5	Pulse	0.1000	3
He	In	115	62135.09	0.9	96.2	Pulse	0.1000	3
He	Tb	159	284142.82	1.3	99.4	Pulse	0.1000	3
He	Bi	209	209512.92	0.6	94.3	Pulse	0.1000	3

No Gas



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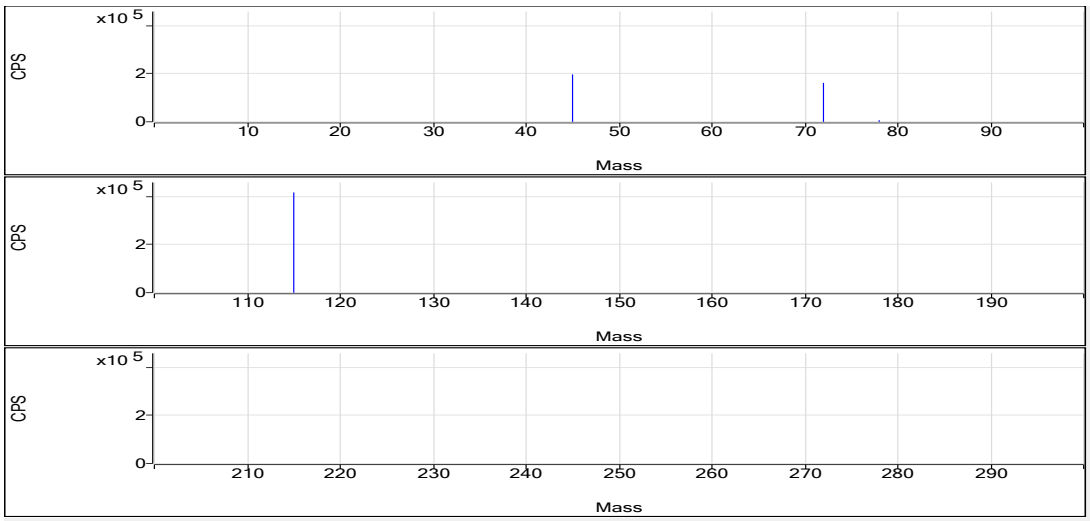
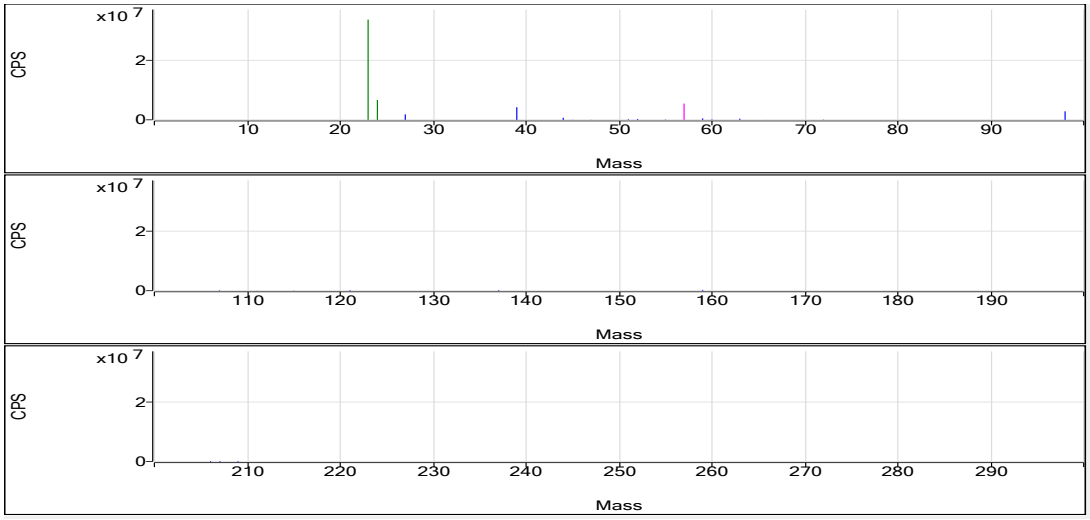


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.006	0.0001	82.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.008	0	54.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.008	0	52.00	0.0013	4.694E-05
Se	78	2	H2	108.406	0.0422	6697.57	0.0004	1.089E-05
Se	78	2	H2	97.069	0.0378	6326.06	0.0004	1.089E-05
Se	78	2	H2	106.807	0.0416	6666.88	0.0004	1.089E-05
Na	23	3	He	263981.038	453.5787	34180649.49	0.0017	0.1065
Na	23	3	He	264820.046	455.0199	33703444.50	0.0017	0.1065
Na	23	3	He	257932.589	443.1885	33295374.50	0.0017	0.1065
Mg	24	3	He	104023.755	87.7074	6609431.78	0.0008	0.004846
Mg	24	3	He	107658.108	90.7716	6723473.65	0.0008	0.004846
Mg	24	3	He	105276.54	88.7637	6668538.03	0.0008	0.004846
Al	27	3	He	99701.692	24.0685	1813744.97	0.0002	0.001063
Al	27	3	He	102352.09	24.7083	1830147.47	0.0002	0.001063
Al	27	3	He	102105.892	24.6488	1851790.13	0.0002	0.001063
K	39	3	He	101004.193	55.9193	4213953.69	0.0006	0.1436
K	39	3	He	103919.839	57.5294	4261217.44	0.0006	0.1436
K	39	3	He	102085.842	56.5166	4245919.62	0.0006	0.1436
Ca	44	3	He	293950.781	9.1317	688142.65	0	0.001611
Ca	44	3	He	302377.079	9.3934	695771.71	0	0.001611
Ca	44	3	He	296856.59	9.2219	692815.38	0	0.001611
Ti	47	3	He	2047.904	0.5138	38722.23	0.0003	0.0002737
Ti	47	3	He	2077.05	0.5212	38602.07	0.0003	0.0002737
Ti	47	3	He	2077.611	0.5213	39163.31	0.0003	0.0002737
V	51	3	He	211.15	2.4773	186683.67	0.0117	0.007326
V	51	3	He	215.029	2.5227	186855.61	0.0117	0.007326
V	51	3	He	211.302	2.4791	186245.53	0.0117	0.007326
Cr	52	3	He	214.976	3.2989	248596.11	0.0152	0.02538
Cr	52	3	He	216.044	3.3151	245553.92	0.0152	0.02538
Cr	52	3	He	212.407	3.2598	244895.80	0.0152	0.02538
Mn	55	3	He	207.75	1.2401	93449.53	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	207.256	1.2372	91637.37	0.0059	0.01385
Mn	55	3	He	207.143	1.2365	92894.43	0.0059	0.01385
Fe	57	3	He	251048.252	72.7363	5481239.29	0.0003	0.003918
Fe	57	3	He	254387.05	73.7036	5459243.04	0.0003	0.003918
Fe	57	3	He	250647.426	72.6202	5455726.17	0.0003	0.003918
Co	59	3	He	205.43	6.2709	472557.18	0.0305	0.003084
Co	59	3	He	210.187	6.416	475234.80	0.0305	0.003084
Co	59	3	He	205.869	6.2843	472116.75	0.0305	0.003084
Ni	60	3	He	204.629	1.8084	136274.43	0.0088	0.009003
Ni	60	3	He	207.49	1.8335	135809.98	0.0088	0.009003
Ni	60	3	He	202.13	1.7864	134206.03	0.0088	0.009003
Cu	63	3	He	201.621	5.0328	379259.21	0.0249	0.004937
Cu	63	3	He	202.607	5.0574	374601.28	0.0249	0.004937
Cu	63	3	He	200.359	5.0013	375733.31	0.0249	0.004937
Zn	66	3	He	105.219	0.2633	19844.22	0.0025	0.004836
Zn	66	3	He	106.862	0.2674	19804.27	0.0025	0.004836
Zn	66	3	He	104.3	0.2611	19613.87	0.0025	0.004836
As	75	3	He	98.788	0.1722	12979.87	0.0017	0.0004347
As	75	3	He	102.996	0.1796	13300.19	0.0017	0.0004347
As	75	3	He	100.609	0.1754	13178.07	0.0017	0.0004347
Sr	88	3	He	2.424	0.0197	1230.10	0.0078	0.0007762
Sr	88	3	He	2.272	0.0185	1140.11	0.0078	0.0007762
Sr	88	3	He	2.049	0.0168	1050.09	0.0078	0.0007762
Mo	98	3	He	2074.232	45.6784	2848375.27	0.022	0.0005162
Mo	98	3	He	2117.815	46.6382	2868617.46	0.022	0.0005162
Mo	98	3	He	2082.225	45.8544	2867744.33	0.022	0.0005162
Ag	107	3	He	51.22	2.331	145354.67	0.0455	0.0004641
Ag	107	3	He	52.22	2.3765	146173.47	0.0455	0.0004641
Ag	107	3	He	52.21	2.376	148597.75	0.0455	0.0004641
Cd	111	3	He	104.718	0.5027	31348.79	0.0048	5.152E-05
Cd	111	3	He	105.044	0.5043	31018.05	0.0048	5.152E-05
Cd	111	3	He	105.153	0.5048	31571.29	0.0048	5.152E-05
Sn	120	3	He	0.65	0.0249	1550.16	0.0143	0.01559
Sn	120	3	He	0.024	0.0159	980.07	0.0143	0.01559
Sn	120	3	He	0.376	0.0209	1310.10	0.0143	0.01559
Sb	121	3	He	0.16	0.0022	140.01	0.0124	0.000258
Sb	121	3	He	0.136	0.002	120.00	0.0124	0.000258
Sb	121	3	He	0.121	0.0018	110.00	0.0124	0.000258
Ba	137	3	He	0.516	0.0026	160.01	0.0044	0.000309
Ba	137	3	He	0.896	0.0042	260.01	0.0044	0.000309
Ba	137	3	He	0.368	0.0019	120.00	0.0044	0.000309
Tl	205	3	He	0.017	0.0015	310.02	0.0276	0.001005
Tl	205	3	He	0.027	0.0018	370.02	0.0276	0.001005
Tl	205	3	He	0.017	0.0015	310.02	0.0276	0.001005
Pb	208	3	He	0.06	0.0044	470.03	0.0364	0.002176
Pb	208	3	He	0.064	0.0045	490.03	0.0364	0.002176
Pb	208	3	He	0.036	0.0035	500.03	0.0364	0.002176
U	238	3	He	0.078	0.0035	730.05	0.0421	0.00024
U	238	3	He	0.052	0.0024	510.03	0.0421	0.00024
U	238	3	He	0.059	0.0027	570.04	0.0421	0.00024
Sc	45	1	No Gas			3378073.39		
Sc	45	1	No Gas			3292374.95		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3242176.51		
Ge	72	1	No Gas			1508802.48		
Ge	72	1	No Gas			1480479.98		
Ge	72	1	No Gas			1453142.17		
Sc	45	2	H2			194240.29		
Sc	45	2	H2			202004.12		
Sc	45	2	H2			196256.21		
Ge	72	2	H2			158635.48		
Ge	72	2	H2			167331.15		
Ge	72	2	H2			160271.74		
In	115	2	H2			408155.89		
In	115	2	H2			425633.43		
In	115	2	H2			419370.81		
Sc	45	3	He			43705.74		
Sc	45	3	He			44718.87		
Sc	45	3	He			42161.47		
Ge	72	3	He			75357.71		
Ge	72	3	He			74070.26		
Ge	72	3	He			75126.89		
In	115	3	He			62369.25		
In	115	3	He			61515.58		
In	115	3	He			62550.40		
Tb	159	3	He			280462.93		
Tb	159	3	He			284112.59		
Tb	159	3	He			287852.93		
Bi	209	3	He			208291.19		
Bi	209	3	He			210976.66		
Bi	209	3	He			209270.91		

Quantitation Report

Data File Name	134SMPL.d
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Acq Time	2023-08-10 14:58:06
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

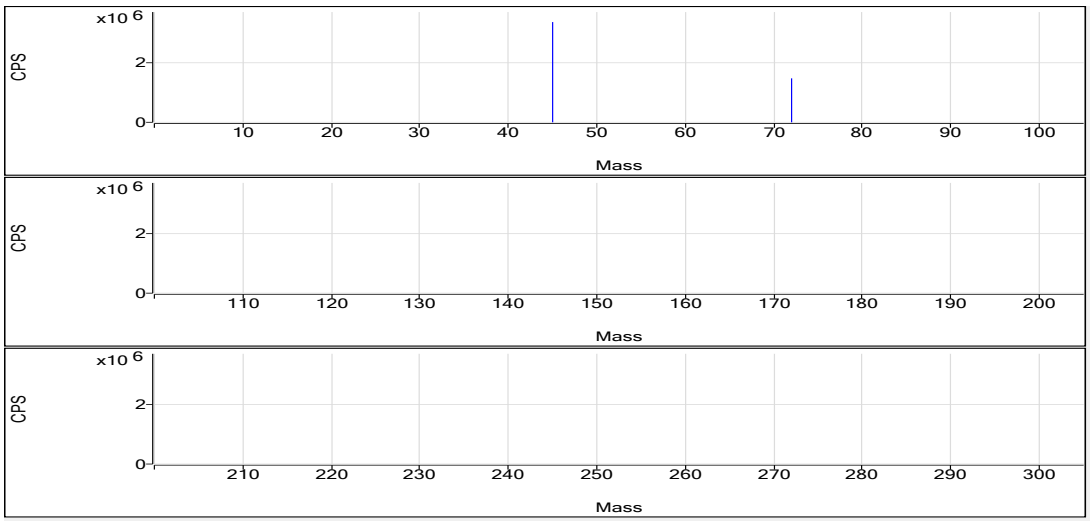
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.001	ppb	N/A	68.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.083	ppb	31.3	6.89	0.0000	Pulse	1.5000	3
Na	23	72	He	111.713	ppb	7.6	22427.37	0.2984	Pulse	0.1000	3
Mg	24	72	He	38.638	ppb	12.6	2813.69	0.0374	Pulse	0.1000	3
Al	27	72	He	30.470	ppb	6.9	633.37	0.0084	Pulse	0.1000	3
K	39	72	He	36.108	ppb	57.8	12295.55	0.1636	Pulse	0.1000	3
Ca	44	72	He	118.022	ppb	5.1	396.69	0.0053	Pulse	0.1000	3
Ti	47	72	He	0.337	ppb	336.8	26.67	0.0004	Pulse	0.1000	3
V	51	72	He	0.070	ppb	68.3	612.02	0.0081	Pulse	0.5000	3
Cr	52	72	He	0.093	ppb	91.6	2016.88	0.0268	Pulse	0.1000	3
Mn	55	72	He	-1.046	ppb	N/A	576.70	0.0077	Pulse	0.1000	3
Fe	57	72	He	74.501	ppb	21.1	1913.54	0.0255	Pulse	0.1000	3
Co	59	72	He	0.088	ppb	15.1	433.36	0.0058	Pulse	0.1000	3
Ni	60	72	He	1.210	ppb	15.0	1476.80	0.0196	Pulse	0.1000	3
Cu	63	72	He	0.097	ppb	18.6	553.37	0.0074	Pulse	0.1000	3
Zn	66	72	He	0.476	ppb	157.3	450.03	0.0060	Pulse	0.1000	3
As	75	72	He	0.071	ppb	74.5	42.00	0.0006	Pulse	0.5000	3
Sr	88	115	He	0.072	ppb	41.6	86.67	0.0013	Pulse	0.1000	3
Mo	98	115	He	1.237	ppb	8.1	1790.18	0.0278	Pulse	0.1000	3
Ag	107	115	He	0.018	ppb	67.8	83.33	0.0013	Pulse	0.1000	3
Cd	111	115	He	0.024	ppb	42.8	10.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.148	ppb	42.2	1143.42	0.0177	Pulse	0.1000	3
Sb	121	115	He	0.000	ppb	N/A	16.67	0.0003	Pulse	0.1000	3
Ba	137	115	He	0.127	ppb	147.9	56.67	0.0009	Pulse	0.1000	3
Tl	205	209	He	0.000	ppb	2862.2	223.34	0.0010	Pulse	0.1000	3
Pb	208	209	He	-0.009	ppb	N/A	406.69	0.0018	Pulse	0.1000	3
U	238	209	He	0.008	ppb	44.5	123.34	0.0006	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3385321.72	1.6	104.4	Pulse	0.1000	3
No Gas	Ge	72	1484688.57	1.4	103.1	Pulse	0.1000	3
H2	Sc	45	193278.33	1.5	98.9	Pulse	0.1000	3
H2	Ge	72	159805.26	1.1	98.0	Pulse	0.1000	3
H2	In	115	443939.67	1.8	102.5	Pulse	0.1000	3
He	Sc	45	42401.89	1.2	106.0	Pulse	0.1000	3
He	Ge	72	75182.73	2.2	104.0	Pulse	0.1000	3
He	In	115	64553.86	2.3	99.9	Pulse	0.1000	3
He	Tb	159	283036.46	1.5	99.0	Pulse	0.1000	3
He	Bi	209	220002.31	0.8	99.0	Pulse	0.1000	3

No Gas



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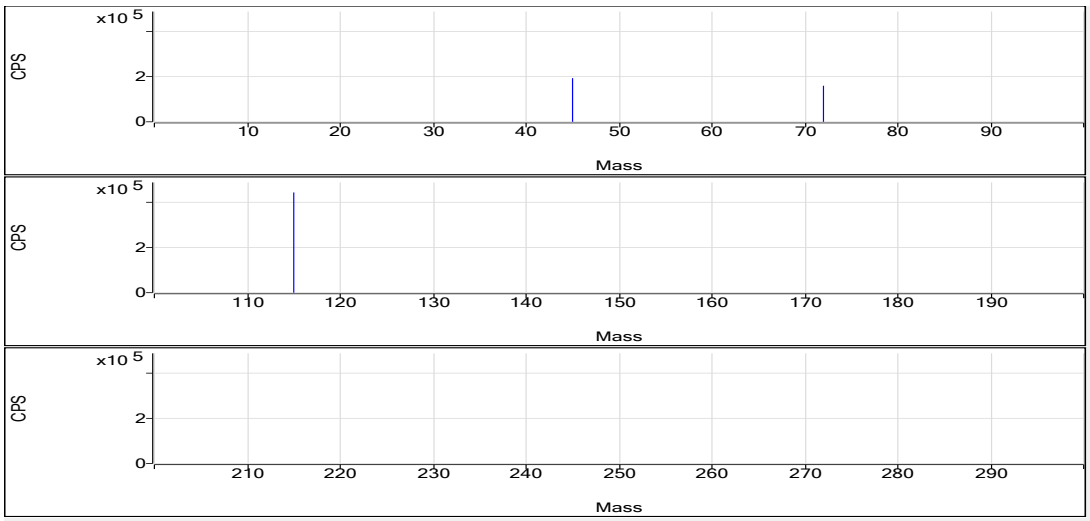
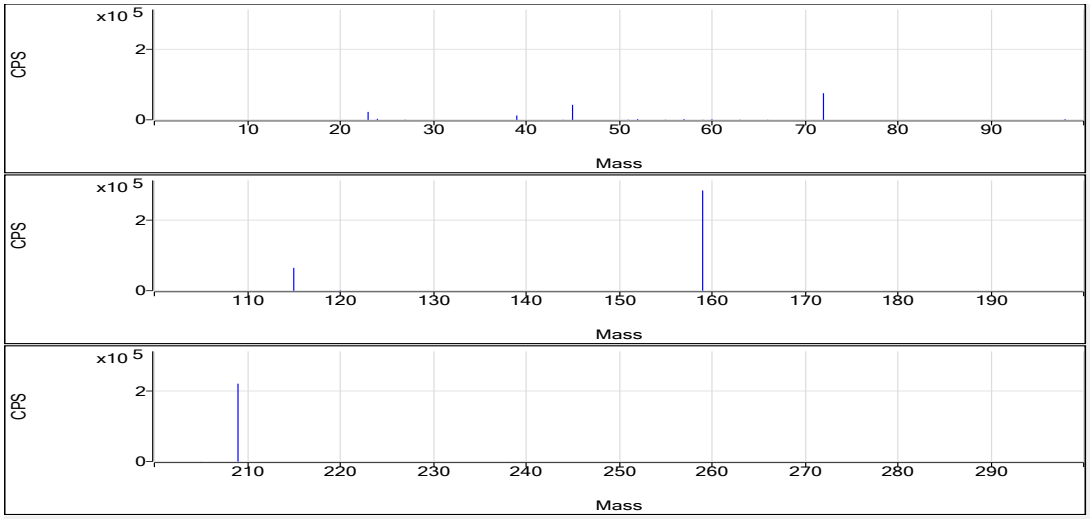


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.001	0	72.00	0.0013	4.694E-05
Be	9	1	No Gas	0	0	70.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.004	0	62.00	0.0013	4.694E-05
Se	78	2	H2	0.069	0	6.00	0.0004	1.089E-05
Se	78	2	H2	0.067	0	6.00	0.0004	1.089E-05
Se	78	2	H2	0.113	0.0001	8.67	0.0004	1.089E-05
Na	23	3	He	120.214	0.313	23118.41	0.0017	0.1065
Na	23	3	He	111.582	0.2981	22958.04	0.0017	0.1065
Na	23	3	He	103.343	0.284	21205.67	0.0017	0.1065
Mg	24	3	He	42.428	0.0406	3000.40	0.0008	0.004846
Mg	24	3	He	40.312	0.0388	2990.40	0.0008	0.004846
Mg	24	3	He	33.172	0.0328	2450.27	0.0008	0.004846
Al	27	3	He	28.125	0.0079	580.03	0.0002	0.001063
Al	27	3	He	32.181	0.0088	680.04	0.0002	0.001063
Al	27	3	He	31.105	0.0086	640.04	0.0002	0.001063
K	39	3	He	56.762	0.175	12926.09	0.0006	0.1436
K	39	3	He	36.559	0.1638	12615.77	0.0006	0.1436
K	39	3	He	15.004	0.1519	11344.78	0.0006	0.1436
Ca	44	3	He	113.766	0.0051	380.02	0	0.001611
Ca	44	3	He	115.382	0.0052	400.02	0	0.001611
Ca	44	3	He	124.919	0.0055	410.02	0	0.001611
Ti	47	3	He	1.608	0.0007	50.00	0.0003	0.0002737
Ti	47	3	He	-0.574	0.0001	10.00	0.0003	0.0002737
Ti	47	3	He	-0.023	0.0003	20.00	0.0003	0.0002737
V	51	3	He	0.091	0.0084	620.02	0.0117	0.007326
V	51	3	He	0.015	0.0075	578.02	0.0117	0.007326
V	51	3	He	0.104	0.0085	638.02	0.0117	0.007326
Cr	52	3	He	0.013	0.0256	1890.18	0.0152	0.02538
Cr	52	3	He	0.184	0.0282	2170.24	0.0152	0.02538
Cr	52	3	He	0.083	0.0267	1990.22	0.0152	0.02538
Mn	55	3	He	-1.017	0.0079	580.03	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-1.159	0.007	540.03	0.0059	0.01385
Mn	55	3	He	-0.963	0.0082	610.03	0.0059	0.01385
Fe	57	3	He	92.559	0.0307	2270.26	0.0003	0.003918
Fe	57	3	He	64.03	0.0225	1730.17	0.0003	0.003918
Fe	57	3	He	66.915	0.0233	1740.18	0.0003	0.003918
Co	59	3	He	0.103	0.0062	460.03	0.0305	0.003084
Co	59	3	He	0.078	0.0055	420.02	0.0305	0.003084
Co	59	3	He	0.083	0.0056	420.02	0.0305	0.003084
Ni	60	3	He	1.378	0.0211	1560.15	0.0088	0.009003
Ni	60	3	He	1.236	0.0199	1530.16	0.0088	0.009003
Ni	60	3	He	1.017	0.0179	1340.10	0.0088	0.009003
Cu	63	3	He	0.117	0.0079	580.04	0.0249	0.004937
Cu	63	3	He	0.094	0.0073	560.03	0.0249	0.004937
Cu	63	3	He	0.081	0.007	520.03	0.0249	0.004937
Zn	66	3	He	1.338	0.0081	600.04	0.0025	0.004836
Zn	66	3	He	-0.013	0.0048	370.02	0.0025	0.004836
Zn	66	3	He	0.103	0.0051	380.02	0.0025	0.004836
As	75	3	He	0.015	0.0005	34.00	0.0017	0.0004347
As	75	3	He	0.079	0.0006	44.00	0.0017	0.0004347
As	75	3	He	0.12	0.0006	48.00	0.0017	0.0004347
Sr	88	3	He	0.041	0.0011	70.00	0.0078	0.0007762
Sr	88	3	He	0.101	0.0016	100.00	0.0078	0.0007762
Sr	88	3	He	0.075	0.0014	90.00	0.0078	0.0007762
Mo	98	3	He	1.324	0.0297	1890.21	0.022	0.0005162
Mo	98	3	He	1.259	0.0282	1800.17	0.022	0.0005162
Mo	98	3	He	1.128	0.0254	1680.17	0.022	0.0005162
Ag	107	3	He	0.017	0.0013	80.00	0.0455	0.0004641
Ag	107	3	He	0.031	0.0019	120.00	0.0455	0.0004641
Ag	107	3	He	0.006	0.0008	50.00	0.0455	0.0004641
Cd	111	3	He	0.035	0.0002	14.00	0.0048	5.152E-05
Cd	111	3	He	0.015	0.0001	8.00	0.0048	5.152E-05
Cd	111	3	He	0.021	0.0002	10.00	0.0048	5.152E-05
Sn	120	3	He	0.151	0.0177	1130.09	0.0143	0.01559
Sn	120	3	He	0.084	0.0168	1070.08	0.0143	0.01559
Sn	120	3	He	0.209	0.0186	1230.10	0.0143	0.01559
Sb	121	3	He	-0.021	0	0.00	0.0124	0.000258
Sb	121	3	He	0.004	0.0003	20.00	0.0124	0.000258
Sb	121	3	He	0.016	0.0005	30.00	0.0124	0.000258
Ba	137	3	He	0.037	0.0005	30.00	0.0044	0.000309
Ba	137	3	He	0.001	0.0003	20.00	0.0044	0.000309
Ba	137	3	He	0.344	0.0018	120.01	0.0044	0.000309
Tl	205	3	He	0.006	0.0012	260.01	0.0276	0.001005
Tl	205	3	He	0.005	0.0011	250.01	0.0276	0.001005
Tl	205	3	He	-0.01	0.0007	160.01	0.0276	0.001005
Pb	208	3	He	-0.016	0.0016	220.01	0.0364	0.002176
Pb	208	3	He	0	0.0022	290.02	0.0364	0.002176
Pb	208	3	He	-0.011	0.0018	180.01	0.0364	0.002176
U	238	3	He	0.004	0.0004	90.00	0.0421	0.00024
U	238	3	He	0.008	0.0006	130.01	0.0421	0.00024
U	238	3	He	0.011	0.0007	150.01	0.0421	0.00024
Sc	45	1	No Gas			3448021.20		
Sc	45	1	No Gas			3357567.76		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3350376.20		
Ge	72	1	No Gas			1507919.67		
Ge	72	1	No Gas			1478664.35		
Ge	72	1	No Gas			1467481.70		
Sc	45	2	H2			190158.47		
Sc	45	2	H2			193833.55		
Sc	45	2	H2			195842.97		
Ge	72	2	H2			159555.99		
Ge	72	2	H2			161728.65		
Ge	72	2	H2			158131.14		
In	115	2	H2			438017.02		
In	115	2	H2			453184.17		
In	115	2	H2			440617.81		
Sc	45	3	He			42191.17		
Sc	45	3	He			42050.61		
Sc	45	3	He			42963.90		
Ge	72	3	He			73869.55		
Ge	72	3	He			77005.67		
Ge	72	3	He			74672.97		
In	115	3	He			63695.36		
In	115	3	He			63745.85		
In	115	3	He			66247.13		
Tb	159	3	He			286646.13		
Tb	159	3	He			284299.18		
Tb	159	3	He			278164.08		
Bi	209	3	He			221646.31		
Bi	209	3	He			220313.45		
Bi	209	3	He			218047.16		

Quantitation Report

Data File Name	135SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 15:00:06
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

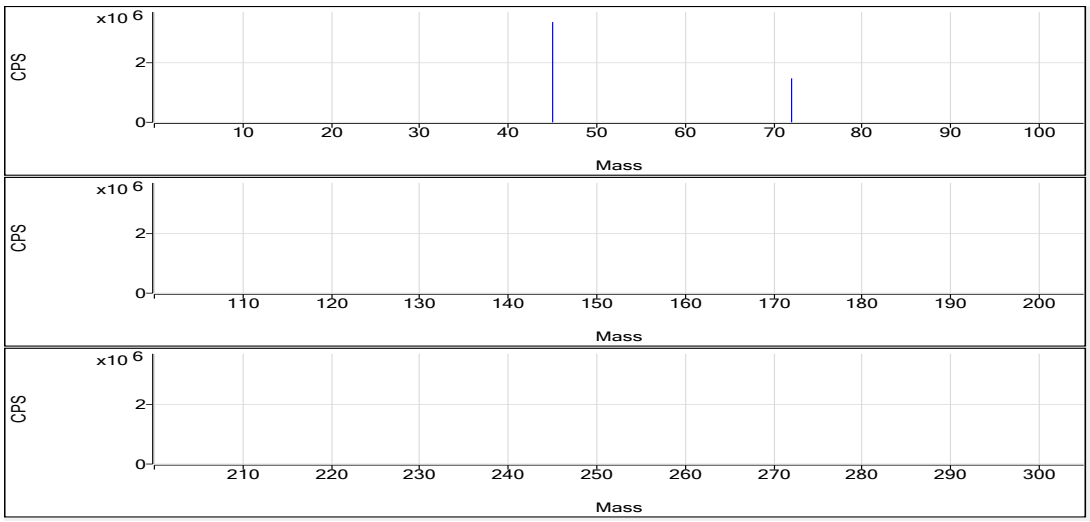
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.005	ppb	N/A	60.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.008	ppb	316.8	2.22	0.0000	Pulse	1.5000	3
Na	23	72	He	59.825	ppb	5.1	15441.80	0.2092	Pulse	0.1000	3
Mg	24	72	He	20.523	ppb	10.6	1633.48	0.0221	Pulse	0.1000	3
Al	27	72	He	11.339	ppb	18.1	280.01	0.0038	Pulse	0.1000	3
K	39	72	He	24.106	ppb	47.7	11594.95	0.1570	Pulse	0.1000	3
Ca	44	72	He	71.775	ppb	22.0	283.35	0.0038	Pulse	0.1000	3
Ti	47	72	He	0.153	ppb	1110.3	23.33	0.0003	Pulse	0.1000	3
V	51	72	He	0.029	ppb	137.8	565.35	0.0077	Pulse	0.5000	3
Cr	52	72	He	0.075	ppb	225.1	1960.20	0.0265	Pulse	0.1000	3
Mn	55	72	He	-1.139	ppb	N/A	526.70	0.0071	Pulse	0.1000	3
Fe	57	72	He	30.091	ppb	9.4	933.40	0.0126	Pulse	0.1000	3
Co	59	72	He	0.055	ppb	44.5	353.35	0.0048	Pulse	0.1000	3
Ni	60	72	He	0.870	ppb	3.8	1230.09	0.0167	Pulse	0.1000	3
Cu	63	72	He	0.067	ppb	22.6	486.69	0.0066	Pulse	0.1000	3
Zn	66	72	He	-0.122	ppb	N/A	336.68	0.0045	Pulse	0.1000	3
As	75	72	He	0.036	ppb	206.9	36.67	0.0005	Pulse	0.5000	3
Sr	88	115	He	0.126	ppb	64.4	113.34	0.0018	Pulse	0.1000	3
Mo	98	115	He	0.327	ppb	14.9	496.69	0.0077	Pulse	0.1000	3
Ag	107	115	He	0.001	ppb	912.1	33.33	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.009	ppb	73.6	6.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.030	ppb	709.0	1030.08	0.0160	Pulse	0.1000	3
Sb	121	115	He	0.004	ppb	294.4	20.00	0.0003	Pulse	0.1000	3
Ba	137	115	He	0.084	ppb	50.0	43.33	0.0007	Pulse	0.1000	3
Tl	205	209	He	0.002	ppb	464.4	233.35	0.0011	Pulse	0.1000	3
Pb	208	209	He	-0.010	ppb	N/A	396.68	0.0018	Pulse	0.1000	3
U	238	209	He	0.003	ppb	81.4	83.34	0.0004	Pulse	0.1000	3

ISTD Table:

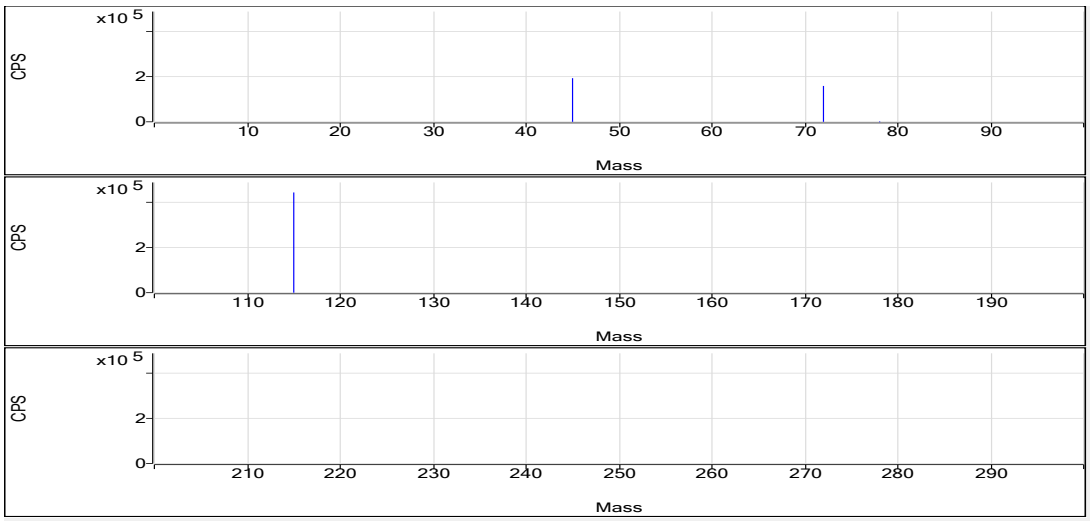
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3359346.51	1.4	103.6	Pulse	0.1000	3
No Gas	Ge	72	1473891.54	1.1	102.4	Pulse	0.1000	3
H2	Sc	45	193669.93	2.5	99.1	Pulse	0.1000	3
H2	Ge	72	159234.84	1.7	97.7	Pulse	0.1000	3
H2	In	115	444896.52	2.4	102.7	Pulse	0.1000	3
He	Sc	45	42559.38	2.3	106.4	Pulse	0.1000	3
He	Ge	72	73836.31	2.7	102.1	Pulse	0.1000	3
He	In	115	64319.91	0.5	99.6	Pulse	0.1000	3
He	Tb	159	280999.52	0.9	98.3	Pulse	0.1000	3
He	Bi	209	218007.11	1.1	98.1	Pulse	0.1000	3

No Gas

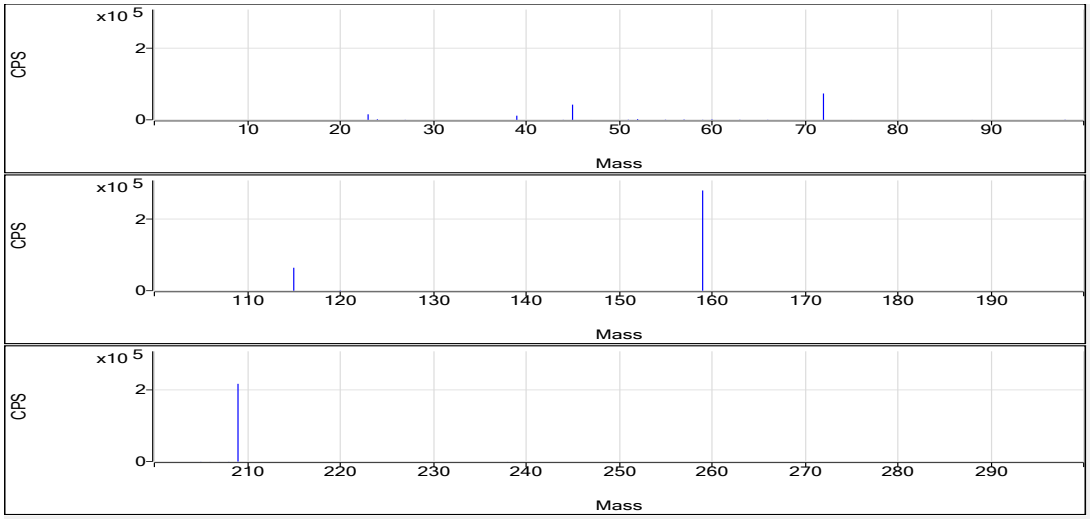


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0	0	70.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.003	0	64.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.012	0	46.00	0.0013	4.694E-05
Se	78	2	H2	0.038	0	4.00	0.0004	1.089E-05
Se	78	2	H2	-0.007	0	1.33	0.0004	1.089E-05
Se	78	2	H2	-0.007	0	1.33	0.0004	1.089E-05
Na	23	3	He	58.697	0.2073	15618.57	0.0017	0.1065
Na	23	3	He	57.48	0.2052	15308.36	0.0017	0.1065
Na	23	3	He	63.297	0.2152	15398.46	0.0017	0.1065
Mg	24	3	He	20.386	0.022	1660.15	0.0008	0.004846
Mg	24	3	He	18.42	0.0204	1520.14	0.0008	0.004846
Mg	24	3	He	22.764	0.024	1720.16	0.0008	0.004846
Al	27	3	He	10.992	0.0037	280.01	0.0002	0.001063
Al	27	3	He	9.48	0.0034	250.01	0.0002	0.001063
Al	27	3	He	13.545	0.0043	310.02	0.0002	0.001063
K	39	3	He	37.316	0.1642	12375.63	0.0006	0.1436
K	39	3	He	18.659	0.1539	11484.80	0.0006	0.1436
K	39	3	He	16.343	0.1527	10924.43	0.0006	0.1436
Ca	44	3	He	54.964	0.0033	250.01	0	0.001611
Ca	44	3	He	86.243	0.0043	320.02	0	0.001611
Ca	44	3	He	74.12	0.0039	280.01	0	0.001611
Ti	47	3	He	2.084	0.0008	60.00	0.0003	0.0002737
Ti	47	3	He	-1.091	0	0.00	0.0003	0.0002737
Ti	47	3	He	-0.534	0.0001	10.00	0.0003	0.0002737
V	51	3	He	0.048	0.0079	594.02	0.0117	0.007326
V	51	3	He	-0.017	0.0071	532.01	0.0117	0.007326
V	51	3	He	0.055	0.008	570.02	0.0117	0.007326
Cr	52	3	He	0.268	0.0295	2220.24	0.0152	0.02538
Cr	52	3	He	-0.03	0.0249	1860.17	0.0152	0.02538
Cr	52	3	He	-0.015	0.0252	1800.18	0.0152	0.02538
Mn	55	3	He	-1.335	0.006	450.03	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.871	0.0087	650.04	0.0059	0.01385
Mn	55	3	He	-1.211	0.0067	480.03	0.0059	0.01385
Fe	57	3	He	33.207	0.0135	1020.07	0.0003	0.003918
Fe	57	3	He	27.657	0.0119	890.06	0.0003	0.003918
Fe	57	3	He	29.41	0.0124	890.06	0.0003	0.003918
Co	59	3	He	0.073	0.0053	400.02	0.0305	0.003084
Co	59	3	He	0.066	0.0051	380.02	0.0305	0.003084
Co	59	3	He	0.027	0.0039	280.01	0.0305	0.003084
Ni	60	3	He	0.908	0.017	1280.10	0.0088	0.009003
Ni	60	3	He	0.851	0.0165	1230.09	0.0088	0.009003
Ni	60	3	He	0.852	0.0165	1180.09	0.0088	0.009003
Cu	63	3	He	0.052	0.0062	470.03	0.0249	0.004937
Cu	63	3	He	0.065	0.0066	490.03	0.0249	0.004937
Cu	63	3	He	0.082	0.007	500.02	0.0249	0.004937
Zn	66	3	He	0.462	0.006	450.02	0.0025	0.004836
Zn	66	3	He	-0.168	0.0044	330.01	0.0025	0.004836
Zn	66	3	He	-0.66	0.0032	230.01	0.0025	0.004836
As	75	3	He	0.086	0.0006	44.00	0.0017	0.0004347
As	75	3	He	-0.05	0.0003	26.00	0.0017	0.0004347
As	75	3	He	0.071	0.0006	40.00	0.0017	0.0004347
Sr	88	3	He	0.14	0.0019	120.00	0.0078	0.0007762
Sr	88	3	He	0.039	0.0011	70.00	0.0078	0.0007762
Sr	88	3	He	0.2	0.0023	150.01	0.0078	0.0007762
Mo	98	3	He	0.316	0.0075	480.03	0.022	0.0005162
Mo	98	3	He	0.285	0.0068	440.02	0.022	0.0005162
Mo	98	3	He	0.381	0.0089	570.03	0.022	0.0005162
Ag	107	3	He	0.014	0.0011	70.00	0.0455	0.0004641
Ag	107	3	He	-0.007	0.0002	10.00	0.0455	0.0004641
Ag	107	3	He	-0.003	0.0003	20.00	0.0455	0.0004641
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Cd	111	3	He	0.015	0.0001	8.00	0.0048	5.152E-05
Cd	111	3	He	0.009	0.0001	6.00	0.0048	5.152E-05
Sn	120	3	He	0.196	0.0184	1180.11	0.0143	0.01559
Sn	120	3	He	0.099	0.017	1100.09	0.0143	0.01559
Sn	120	3	He	-0.206	0.0126	810.05	0.0143	0.01559
Sb	121	3	He	-0.008	0.0002	10.00	0.0124	0.000258
Sb	121	3	He	0.004	0.0003	20.00	0.0124	0.000258
Sb	121	3	He	0.017	0.0005	30.00	0.0124	0.000258
Ba	137	3	He	0.107	0.0008	50.00	0.0044	0.000309
Ba	137	3	He	0.035	0.0005	30.00	0.0044	0.000309
Ba	137	3	He	0.108	0.0008	50.00	0.0044	0.000309
Tl	205	3	He	0.014	0.0014	310.02	0.0276	0.001005
Tl	205	3	He	-0.005	0.0009	190.01	0.0276	0.001005
Tl	205	3	He	-0.003	0.0009	200.01	0.0276	0.001005
Pb	208	3	He	-0.006	0.0019	240.01	0.0364	0.002176
Pb	208	3	He	-0.008	0.0019	230.01	0.0364	0.002176
Pb	208	3	He	-0.015	0.0016	180.01	0.0364	0.002176
U	238	3	He	0.003	0.0004	80.00	0.0421	0.00024
U	238	3	He	0.006	0.0005	110.01	0.0421	0.00024
U	238	3	He	0.001	0.0003	60.00	0.0421	0.00024
Sc	45	1	No Gas			3400116.82		
Sc	45	1	No Gas			3372219.01		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3305703.70		
Ge	72	1	No Gas			1490510.92		
Ge	72	1	No Gas			1473160.92		
Ge	72	1	No Gas			1458002.79		
Sc	45	2	H2			188751.64		
Sc	45	2	H2			198432.79		
Sc	45	2	H2			193825.35		
Ge	72	2	H2			156240.17		
Ge	72	2	H2			161212.81		
Ge	72	2	H2			160251.53		
In	115	2	H2			437646.05		
In	115	2	H2			457180.89		
In	115	2	H2			439862.61		
Sc	45	3	He			42492.30		
Sc	45	3	He			41620.17		
Sc	45	3	He			43565.67		
Ge	72	3	He			75347.61		
Ge	72	3	He			74603.54		
Ge	72	3	He			71557.77		
In	115	3	He			64217.53		
In	115	3	He			64719.80		
In	115	3	He			64046.49		
Tb	159	3	He			278185.89		
Tb	159	3	He			281586.60		
Tb	159	3	He			283226.07		
Bi	209	3	He			220832.65		
Bi	209	3	He			217124.24		
Bi	209	3	He			216064.43		

Quantitation Report

Data File Name	136SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 15:02:06
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

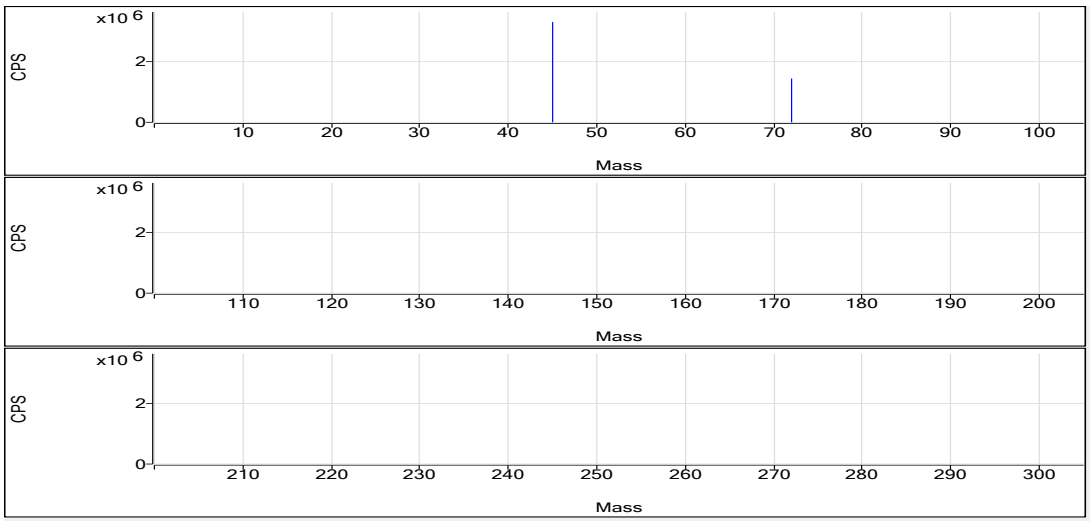
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.009	ppb	N/A	51.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.015	ppb	189.2	2.67	0.0000	Pulse	1.5000	3
Na	23	72	He	46.274	ppb	0.7	13826.80	0.1859	Pulse	0.1000	3
Mg	24	72	He	18.024	ppb	5.8	1490.13	0.0200	Pulse	0.1000	3
Al	27	72	He	10.445	ppb	16.1	266.68	0.0036	Pulse	0.1000	3
K	39	72	He	13.252	ppb	82.8	11227.97	0.1510	Pulse	0.1000	3
Ca	44	72	He	43.318	ppb	32.6	220.01	0.0030	Pulse	0.1000	3
Ti	47	72	He	0.691	ppb	115.9	33.33	0.0004	Pulse	0.1000	3
V	51	72	He	0.013	ppb	399.4	556.02	0.0075	Pulse	0.5000	3
Cr	52	72	He	0.062	ppb	252.8	1956.87	0.0263	Pulse	0.1000	3
Mn	55	72	He	-1.132	ppb	N/A	533.36	0.0072	Pulse	0.1000	3
Fe	57	72	He	26.977	ppb	23.0	873.39	0.0117	Pulse	0.1000	3
Co	59	72	He	0.056	ppb	62.7	356.68	0.0048	Pulse	0.1000	3
Ni	60	72	He	0.782	ppb	27.2	1180.09	0.0159	Pulse	0.1000	3
Cu	63	72	He	0.020	ppb	131.7	403.36	0.0054	Pulse	0.1000	3
Zn	66	72	He	0.259	ppb	75.7	406.69	0.0055	Pulse	0.1000	3
As	75	72	He	0.045	ppb	224.0	38.00	0.0005	Pulse	0.5000	3
Sr	88	115	He	0.084	ppb	11.4	93.33	0.0014	Pulse	0.1000	3
Mo	98	115	He	0.262	ppb	28.5	410.02	0.0063	Pulse	0.1000	3
Ag	107	115	He	0.007	ppb	48.5	50.00	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.011	ppb	71.1	6.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.054	ppb	135.6	1066.74	0.0164	Pulse	0.1000	3
Sb	121	115	He	-0.008	ppb	N/A	10.00	0.0002	Pulse	0.1000	3
Ba	137	115	He	0.093	ppb	21.2	46.67	0.0007	Pulse	0.1000	3
Tl	205	209	He	-0.002	ppb	N/A	206.68	0.0009	Pulse	0.1000	3
Pb	208	209	He	-0.008	ppb	N/A	413.35	0.0019	Pulse	0.1000	3
U	238	209	He	0.002	ppb	362.9	70.00	0.0003	Pulse	0.1000	3

ISTD Table:

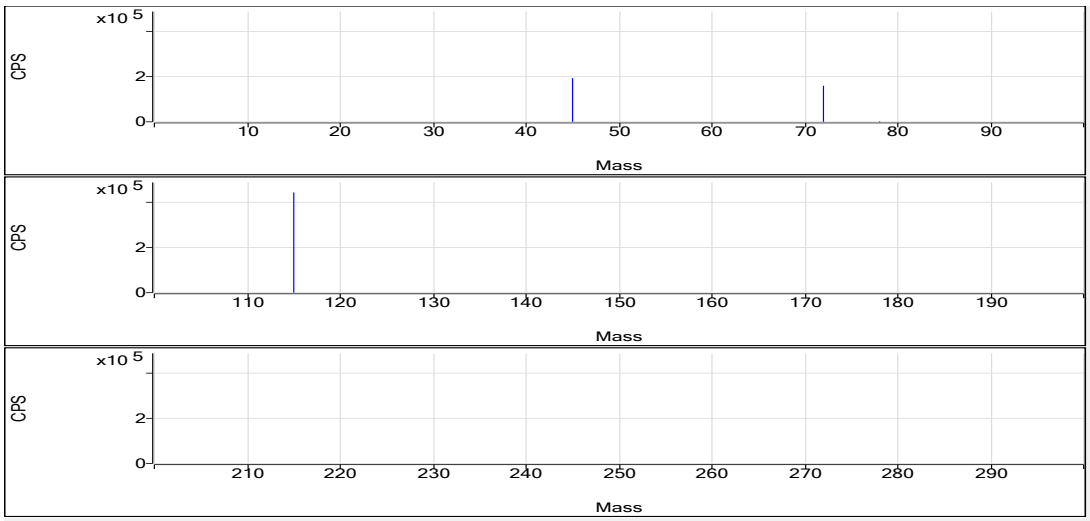
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3330524.01	1.5	102.8	Pulse	0.1000	3
No Gas	Ge	72	1453699.14	1.5	101.0	Pulse	0.1000	3
H2	Sc	45	193242.36	0.9	98.9	Pulse	0.1000	3
H2	Ge	72	159465.07	1.3	97.8	Pulse	0.1000	3
H2	In	115	443239.13	2.3	102.3	Pulse	0.1000	3
He	Sc	45	43057.27	0.7	107.7	Pulse	0.1000	3
He	Ge	72	74358.94	1.0	102.9	Pulse	0.1000	3
He	In	115	65220.81	1.0	101.0	Pulse	0.1000	3
He	Tb	159	283237.27	0.9	99.0	Pulse	0.1000	3
He	Bi	209	220194.90	0.6	99.1	Pulse	0.1000	3

No Gas

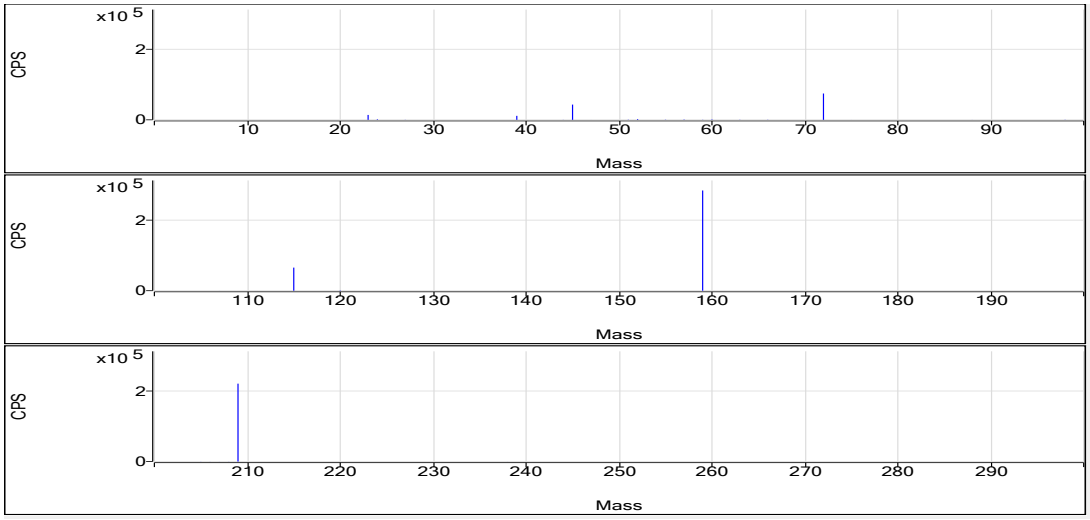


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.008	0	54.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.008	0	54.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.011	0	46.00	0.0013	4.694E-05
Se	78	2	H2	0.005	0	2.00	0.0004	1.089E-05
Se	78	2	H2	-0.007	0	1.33	0.0004	1.089E-05
Se	78	2	H2	0.047	0	4.67	0.0004	1.089E-05
Na	23	3	He	46.094	0.1856	13936.84	0.0017	0.1065
Na	23	3	He	46.637	0.1866	13886.85	0.0017	0.1065
Na	23	3	He	46.091	0.1856	13656.70	0.0017	0.1065
Mg	24	3	He	18.268	0.0202	1520.14	0.0008	0.004846
Mg	24	3	He	16.882	0.0191	1420.11	0.0008	0.004846
Mg	24	3	He	18.921	0.0208	1530.13	0.0008	0.004846
Al	27	3	He	11.048	0.0037	280.01	0.0002	0.001063
Al	27	3	He	11.739	0.0039	290.02	0.0002	0.001063
Al	27	3	He	8.549	0.0031	230.01	0.0002	0.001063
K	39	3	He	25.595	0.1578	11845.07	0.0006	0.1436
K	39	3	He	9.561	0.1489	11084.55	0.0006	0.1436
K	39	3	He	4.6	0.1462	10754.29	0.0006	0.1436
Ca	44	3	He	59.639	0.0035	260.01	0	0.001611
Ca	44	3	He	34.65	0.0027	200.01	0	0.001611
Ca	44	3	He	35.666	0.0027	200.01	0	0.001611
Ti	47	3	He	1.564	0.0007	50.00	0.0003	0.0002737
Ti	47	3	He	0.516	0.0004	30.00	0.0003	0.0002737
Ti	47	3	He	-0.007	0.0003	20.00	0.0003	0.0002737
V	51	3	He	0.016	0.0075	564.02	0.0117	0.007326
V	51	3	He	-0.041	0.0069	510.01	0.0117	0.007326
V	51	3	He	0.064	0.0081	594.02	0.0117	0.007326
Cr	52	3	He	-0.11	0.0237	1780.18	0.0152	0.02538
Cr	52	3	He	0.098	0.0269	2000.20	0.0152	0.02538
Cr	52	3	He	0.199	0.0284	2090.22	0.0152	0.02538
Mn	55	3	He	-1.151	0.0071	530.03	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.959	0.0082	610.04	0.0059	0.01385
Mn	55	3	He	-1.288	0.0063	460.02	0.0059	0.01385
Fe	57	3	He	32.456	0.0133	1000.07	0.0003	0.003918
Fe	57	3	He	28.216	0.0121	900.06	0.0003	0.003918
Fe	57	3	He	20.26	0.0098	720.05	0.0003	0.003918
Co	59	3	He	0.026	0.0039	290.01	0.0305	0.003084
Co	59	3	He	0.049	0.0046	340.02	0.0305	0.003084
Co	59	3	He	0.095	0.006	440.02	0.0305	0.003084
Ni	60	3	He	0.552	0.0139	1040.08	0.0088	0.009003
Ni	60	3	He	0.825	0.0163	1210.10	0.0088	0.009003
Ni	60	3	He	0.97	0.0175	1290.10	0.0088	0.009003
Cu	63	3	He	0.016	0.0053	400.02	0.0249	0.004937
Cu	63	3	He	-0.004	0.0048	360.02	0.0249	0.004937
Cu	63	3	He	0.047	0.0061	450.03	0.0249	0.004937
Zn	66	3	He	0.038	0.0049	370.02	0.0025	0.004836
Zn	66	3	He	0.328	0.0056	420.02	0.0025	0.004836
Zn	66	3	He	0.411	0.0058	430.02	0.0025	0.004836
As	75	3	He	-0.035	0.0004	28.00	0.0017	0.0004347
As	75	3	He	0.013	0.0005	34.00	0.0017	0.0004347
As	75	3	He	0.156	0.0007	52.00	0.0017	0.0004347
Sr	88	3	He	0.078	0.0014	90.00	0.0078	0.0007762
Sr	88	3	He	0.078	0.0014	90.00	0.0078	0.0007762
Sr	88	3	He	0.095	0.0015	100.00	0.0078	0.0007762
Mo	98	3	He	0.208	0.0051	330.01	0.022	0.0005162
Mo	98	3	He	0.347	0.0082	530.03	0.022	0.0005162
Mo	98	3	He	0.231	0.0056	370.02	0.022	0.0005162
Ag	107	3	He	0.003	0.0006	40.00	0.0455	0.0004641
Ag	107	3	He	0.007	0.0008	50.00	0.0455	0.0004641
Ag	107	3	He	0.01	0.0009	60.00	0.0455	0.0004641
Cd	111	3	He	0.015	0.0001	8.00	0.0048	5.152E-05
Cd	111	3	He	0.015	0.0001	8.00	0.0048	5.152E-05
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Sn	120	3	He	0.108	0.0171	1110.08	0.0143	0.01559
Sn	120	3	He	0.085	0.0168	1090.08	0.0143	0.01559
Sn	120	3	He	-0.03	0.0152	1000.07	0.0143	0.01559
Sb	121	3	He	-0.008	0.0002	10.00	0.0124	0.000258
Sb	121	3	He	-0.008	0.0002	10.00	0.0124	0.000258
Sb	121	3	He	-0.009	0.0002	10.00	0.0124	0.000258
Ba	137	3	He	0.106	0.0008	50.00	0.0044	0.000309
Ba	137	3	He	0.07	0.0006	40.00	0.0044	0.000309
Ba	137	3	He	0.103	0.0008	50.00	0.0044	0.000309
Tl	205	3	He	-0.008	0.0008	170.01	0.0276	0.001005
Tl	205	3	He	0.001	0.001	230.01	0.0276	0.001005
Tl	205	3	He	0	0.001	220.01	0.0276	0.001005
Pb	208	3	He	-0.021	0.0014	150.01	0.0364	0.002176
Pb	208	3	He	-0.001	0.0021	280.01	0.0364	0.002176
Pb	208	3	He	-0.003	0.0021	170.01	0.0364	0.002176
U	238	3	He	0.01	0.0006	140.01	0.0421	0.00024
U	238	3	He	-0.004	0.0001	20.00	0.0421	0.00024
U	238	3	He	0	0.0002	50.00	0.0421	0.00024
Sc	45	1	No Gas			3388446.51		
Sc	45	1	No Gas			3302884.64		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3300240.89		
Ge	72	1	No Gas			1474678.88		
Ge	72	1	No Gas			1456385.29		
Ge	72	1	No Gas			1430033.26		
Sc	45	2	H2			191356.72		
Sc	45	2	H2			194861.91		
Sc	45	2	H2			193508.45		
Ge	72	2	H2			157269.78		
Ge	72	2	H2			161174.36		
Ge	72	2	H2			159951.08		
In	115	2	H2			435819.52		
In	115	2	H2			454652.88		
In	115	2	H2			439244.99		
Sc	45	3	He			43073.99		
Sc	45	3	He			42733.21		
Sc	45	3	He			43364.61		
Ge	72	3	He			75075.88		
Ge	72	3	He			74432.51		
Ge	72	3	He			73568.43		
In	115	3	He			64820.81		
In	115	3	He			64910.44		
In	115	3	He			65956.14		
Tb	159	3	He			285689.25		
Tb	159	3	He			283278.53		
Tb	159	3	He			280744.02		
Bi	209	3	He			218757.13		
Bi	209	3	He			220618.34		
Bi	209	3	He			221209.23		

Quantitation Report

Data File Name	137_CCV.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 15:04:07
Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

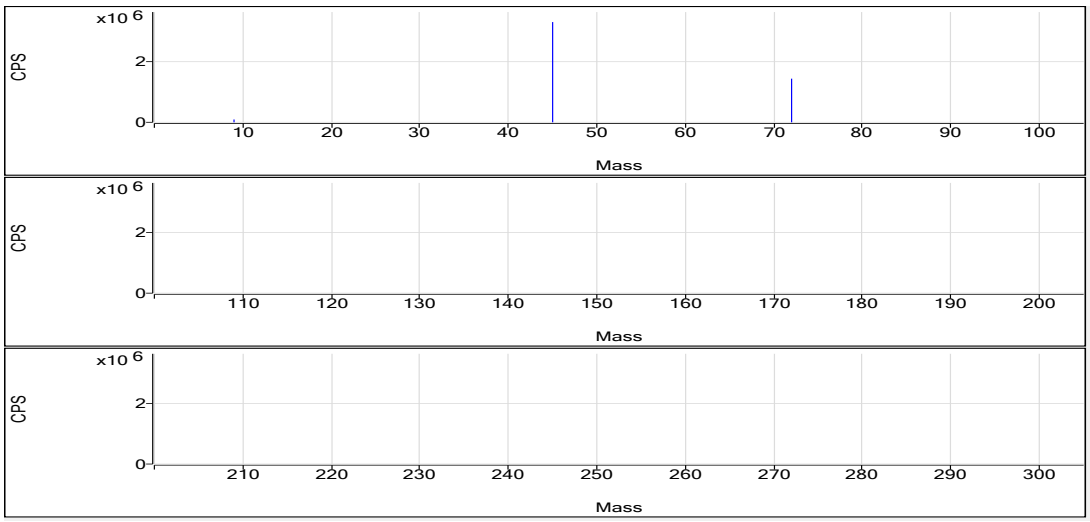
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	48.806	ppb	4.5	92358.10	0.0642	Pulse	0.5000	3
Se	78	72	H2	52.194	ppb	3.2	3260.60	0.0203	Pulse	1.5000	3
Na	23	72	He	5475.030	ppb	2.0	700928.22	9.5116	Pulse	0.1000	3
Mg	24	72	He	5444.299	ppb	2.4	338591.26	4.5949	Pulse	0.1000	3
Al	27	72	He	5308.127	ppb	2.4	94503.40	1.2824	Pulse	0.1000	3
K	39	72	He	5357.757	ppb	3.7	228563.23	3.1023	Pulse	0.1000	3
Ca	44	72	He	5435.163	ppb	4.1	12555.72	0.1704	Pulse	0.1000	3
Ti	47	72	He	5391.139	ppb	2.2	99650.92	1.3523	Pulse	0.1000	3
V	51	72	He	536.982	ppb	2.0	463433.21	6.2888	Pulse	0.5000	3
Cr	52	72	He	538.293	ppb	2.1	605892.45	8.2221	Pulse	0.1000	3
Mn	55	72	He	526.446	ppb	1.5	230035.44	3.1212	Pulse	0.1000	3
Fe	57	72	He	5281.171	ppb	1.7	113044.25	1.5340	Pulse	0.1000	3
Co	59	72	He	533.355	ppb	1.0	1199572.38	16.2760	Pulse	0.1000	3
Ni	60	72	He	533.017	ppb	1.3	346088.51	4.6960	Pulse	0.1000	3
Cu	63	72	He	533.424	ppb	1.4	980704.70	13.3070	Pulse	0.1000	3
Zn	66	72	He	530.639	ppb	2.4	96420.72	1.3085	Pulse	0.1000	3
As	75	72	He	522.457	ppb	2.4	66989.89	0.9091	Pulse	0.5000	3
Sr	88	115	He	52.155	ppb	2.6	26111.36	0.4085	Pulse	0.1000	3
Mo	98	115	He	51.990	ppb	2.9	73219.63	1.1454	Pulse	0.1000	3
Ag	107	115	He	52.325	ppb	2.3	152227.25	2.3813	Pulse	0.1000	3
Cd	111	115	He	52.185	ppb	1.4	16019.16	0.2506	Pulse	0.5000	3
Sn	120	115	He	51.831	ppb	3.1	48237.35	0.7546	Pulse	0.1000	3
Sb	121	115	He	51.798	ppb	4.9	41078.29	0.6428	Pulse	0.1000	3
Ba	137	115	He	518.969	ppb	2.4	145161.07	2.2707	Pulse	0.1000	3
Tl	205	209	He	51.439	ppb	0.7	315478.80	1.4230	Pulse	0.1000	3
Pb	208	209	He	51.749	ppb	0.5	418069.27	1.8857	Pulse	0.1000	3
U	238	209	He	50.886	ppb	1.4	474625.42	2.1409	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3308007.24	2.4	102.1	Pulse	0.1000	3
No Gas	Ge	72	1439735.86	1.7	100.0	Pulse	0.1000	3
H2	Sc	45	194847.22	2.3	99.7	Pulse	0.1000	3
H2	Ge	72	160426.33	2.1	98.4	Pulse	0.1000	3
H2	In	115	443444.21	2.3	102.3	Pulse	0.1000	3
He	Sc	45	42488.83	1.6	106.3	Pulse	0.1000	3
He	Ge	72	73711.99	2.1	102.0	Pulse	0.1000	3
He	In	115	63945.68	2.1	99.0	Pulse	0.1000	3
He	Tb	159	288128.93	1.9	100.7	Pulse	0.1000	3
He	Bi	209	221704.03	0.5	99.8	Pulse	0.1000	3

No Gas



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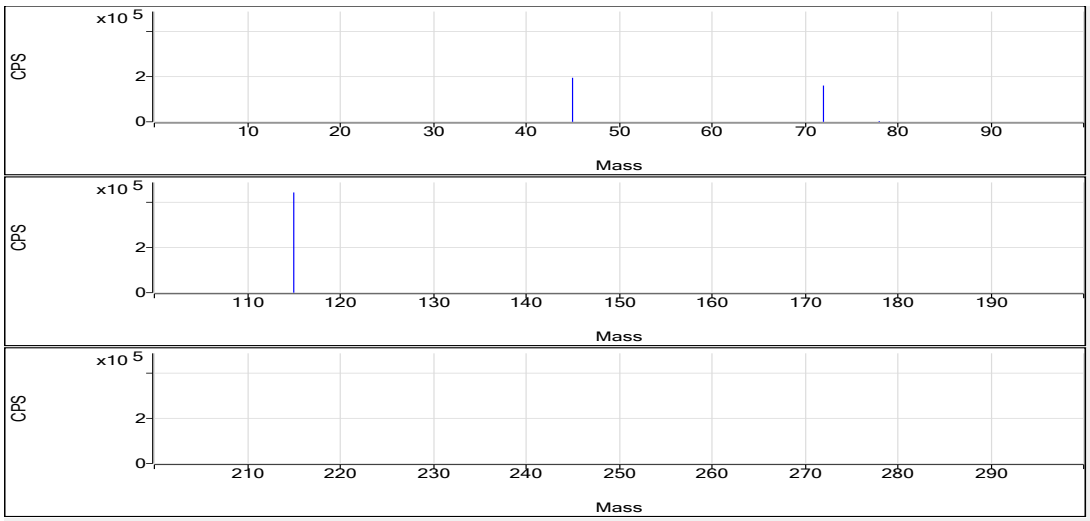
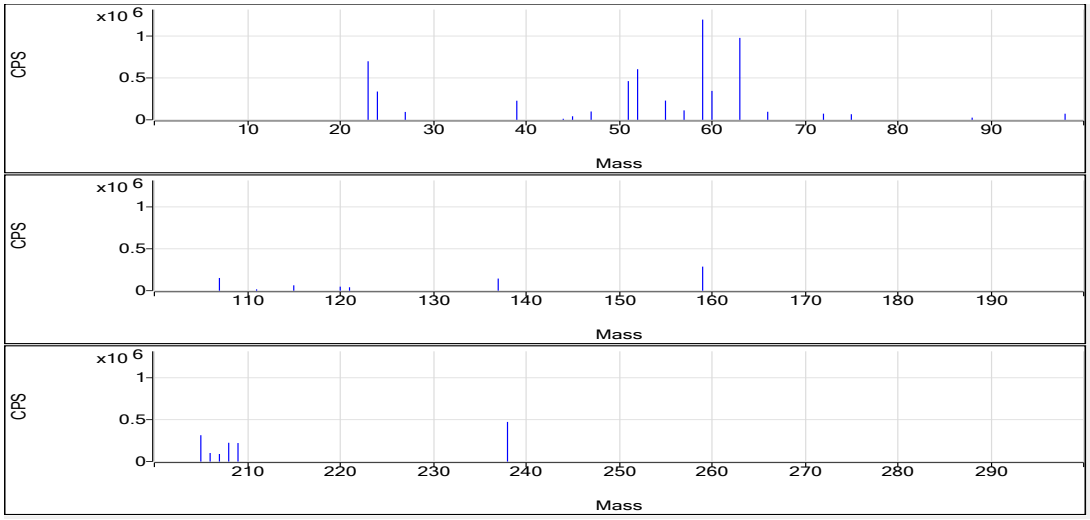


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	46.337	0.0609	89309.83	0.0013	4.694E-05
Be	9	1	No Gas	49.646	0.0653	93714.37	0.0013	4.694E-05
Be	9	1	No Gas	50.436	0.0663	94050.10	0.0013	4.694E-05
Se	78	2	H2	52.161	0.0203	3235.04	0.0004	1.089E-05
Se	78	2	H2	50.562	0.0197	3235.70	0.0004	1.089E-05
Se	78	2	H2	53.859	0.021	3311.05	0.0004	1.089E-05
Na	23	3	He	5445.573	9.461	703062.72	0.0017	0.1065
Na	23	3	He	5595.093	9.7178	699393.51	0.0017	0.1065
Na	23	3	He	5384.424	9.3559	700328.43	0.0017	0.1065
Mg	24	3	He	5399.396	4.5571	338645.50	0.0008	0.004846
Mg	24	3	He	5589.888	4.7177	339532.92	0.0008	0.004846
Mg	24	3	He	5343.614	4.5101	337595.35	0.0008	0.004846
Al	27	3	He	5346.67	1.2917	95989.95	0.0002	0.001063
Al	27	3	He	5412.357	1.3076	94106.34	0.0002	0.001063
Al	27	3	He	5165.354	1.2479	93413.91	0.0002	0.001063
K	39	3	He	5238.323	3.0363	225633.41	0.0006	0.1436
K	39	3	He	5588.023	3.2294	232421.40	0.0006	0.1436
K	39	3	He	5246.925	3.0411	227634.88	0.0006	0.1436
Ca	44	3	He	5422.634	0.17	12635.78	0	0.001611
Ca	44	3	He	5663.436	0.1775	12775.89	0	0.001611
Ca	44	3	He	5219.42	0.1637	12255.49	0	0.001611
Ti	47	3	He	5404.312	1.3556	100734.43	0.0003	0.0002737
Ti	47	3	He	5499.933	1.3795	99285.94	0.0003	0.0002737
Ti	47	3	He	5269.172	1.3217	98932.40	0.0003	0.0002737
V	51	3	He	532.216	6.2331	463189.78	0.0117	0.007326
V	51	3	He	549.177	6.4315	462873.34	0.0117	0.007326
V	51	3	He	529.553	6.2019	464236.50	0.0117	0.007326
Cr	52	3	He	536.169	8.1898	608597.88	0.0152	0.02538
Cr	52	3	He	550.739	8.4116	605386.87	0.0152	0.02538
Cr	52	3	He	527.971	8.0649	603692.61	0.0152	0.02538
Mn	55	3	He	531.11	3.1487	233984.70	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	531.106	3.1487	226609.76	0.0059	0.01385
Mn	55	3	He	517.123	3.0661	229511.87	0.0059	0.01385
Fe	57	3	He	5241.134	1.5224	113128.74	0.0003	0.003918
Fe	57	3	He	5383.047	1.5635	112522.86	0.0003	0.003918
Fe	57	3	He	5219.332	1.516	113481.16	0.0003	0.003918
Co	59	3	He	533.095	16.2681	1208911.23	0.0305	0.003084
Co	59	3	He	539.01	16.4485	1183804.67	0.0305	0.003084
Co	59	3	He	527.96	16.1114	1206001.23	0.0305	0.003084
Ni	60	3	He	531.262	4.6805	347820.19	0.0088	0.009003
Ni	60	3	He	540.67	4.7633	342813.67	0.0088	0.009003
Ni	60	3	He	527.121	4.6441	347631.67	0.0088	0.009003
Cu	63	3	He	533.627	13.312	989242.95	0.0249	0.004937
Cu	63	3	He	540.921	13.4939	971161.78	0.0249	0.004937
Cu	63	3	He	525.725	13.115	981709.36	0.0249	0.004937
Zn	66	3	He	529.256	1.3051	96984.04	0.0025	0.004836
Zn	66	3	He	543.982	1.3413	96531.71	0.0025	0.004836
Zn	66	3	He	518.679	1.2791	95746.40	0.0025	0.004836
As	75	3	He	524.042	0.9118	67760.12	0.0017	0.0004347
As	75	3	He	534.134	0.9294	66888.06	0.0017	0.0004347
As	75	3	He	509.195	0.886	66321.50	0.0017	0.0004347
Sr	88	3	He	50.58	0.3962	25924.42	0.0078	0.0007762
Sr	88	3	He	53.097	0.4158	26405.21	0.0078	0.0007762
Sr	88	3	He	52.788	0.4134	26004.46	0.0078	0.0007762
Mo	98	3	He	50.744	1.118	73158.62	0.022	0.0005162
Mo	98	3	He	51.591	1.1366	72174.04	0.022	0.0005162
Mo	98	3	He	53.635	1.1817	74326.24	0.022	0.0005162
Ag	107	3	He	51.157	2.3281	152348.20	0.0455	0.0004641
Ag	107	3	He	52.276	2.379	151065.13	0.0455	0.0004641
Ag	107	3	He	53.543	2.4367	153268.43	0.0455	0.0004641
Cd	111	3	He	51.502	0.2473	16181.33	0.0048	5.152E-05
Cd	111	3	He	52.09	0.2501	15881.02	0.0048	5.152E-05
Cd	111	3	He	52.964	0.2543	15995.12	0.0048	5.152E-05
Sn	120	3	He	50.733	0.7389	48354.33	0.0143	0.01559
Sn	120	3	He	51.108	0.7443	47260.79	0.0143	0.01559
Sn	120	3	He	53.652	0.7806	49096.93	0.0143	0.01559
Sb	121	3	He	49.203	0.6106	39958.21	0.0124	0.000258
Sb	121	3	He	51.892	0.644	40891.47	0.0124	0.000258
Sb	121	3	He	54.3	0.6738	42385.20	0.0124	0.000258
Ba	137	3	He	505.531	2.2119	144743.12	0.0044	0.000309
Ba	137	3	He	530.365	2.3205	147351.05	0.0044	0.000309
Ba	137	3	He	521.011	2.2796	143389.05	0.0044	0.000309
Tl	205	3	He	51.202	1.4164	315014.10	0.0276	0.001005
Tl	205	3	He	51.237	1.4174	315126.87	0.0276	0.001005
Tl	205	3	He	51.88	1.4352	316295.42	0.0276	0.001005
Pb	208	3	He	51.659	1.8824	225001.50	0.0364	0.002176
Pb	208	3	He	52.057	1.8969	228380.35	0.0364	0.002176
Pb	208	3	He	51.529	1.8777	221354.86	0.0364	0.002176
U	238	3	He	51.223	2.155	479278.08	0.0421	0.00024
U	238	3	He	50.071	2.1066	468350.19	0.0421	0.00024
U	238	3	He	51.364	2.161	476248.00	0.0421	0.00024
Sc	45	1	No Gas			3397503.70		
Sc	45	1	No Gas			3286098.08		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3240419.95		
Ge	72	1	No Gas			1465635.29		
Ge	72	1	No Gas			1435498.73		
Ge	72	1	No Gas			1418073.57		
Sc	45	2	H2			194435.37		
Sc	45	2	H2			199612.58		
Sc	45	2	H2			190493.71		
Ge	72	2	H2			159202.77		
Ge	72	2	H2			164268.24		
Ge	72	2	H2			157807.99		
In	115	2	H2			443860.11		
In	115	2	H2			453209.29		
In	115	2	H2			433263.24		
Sc	45	3	He			41980.52		
Sc	45	3	He			42201.24		
Sc	45	3	He			43284.74		
Ge	72	3	He			74311.86		
Ge	72	3	He			71970.17		
Ge	72	3	He			74853.93		
In	115	3	He			65815.45		
In	115	3	He			63867.10		
In	115	3	He			63283.24		
Tb	159	3	He			283983.20		
Tb	159	3	He			294223.57		
Tb	159	3	He			286180.02		
Bi	209	3	He			222398.98		
Bi	209	3	He			222326.89		
Bi	209	3	He			220386.23		

Quantitation Report

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Sample Type	CCB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

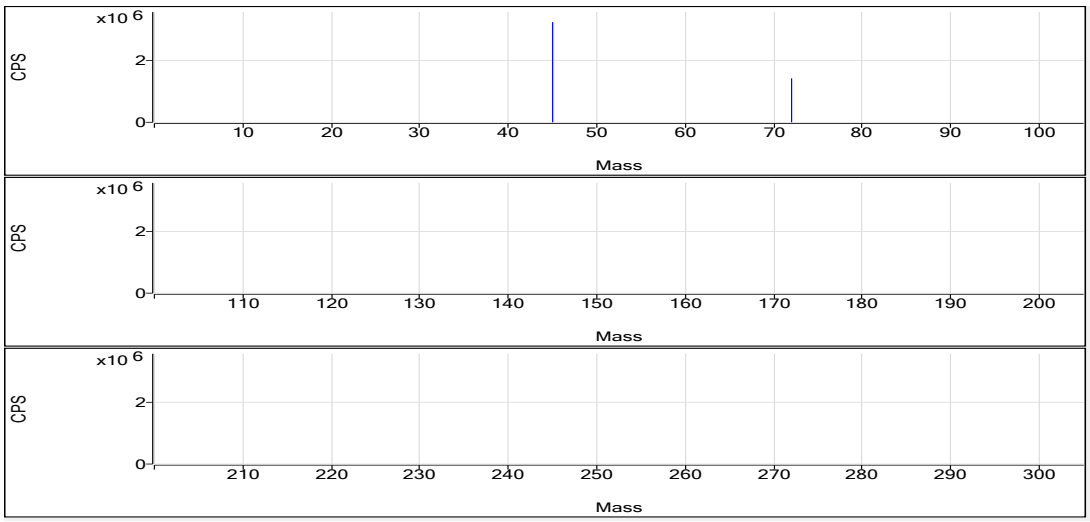
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.038	ppb	20.2	137.33	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.071	ppb	44.8	6.22	0.0000	Pulse	1.5000	3
Na	23	72	He	42.515	ppb	11.6	13192.91	0.1795	Pulse	0.1000	3
Mg	24	72	He	17.870	ppb	11.5	1463.45	0.0199	Pulse	0.1000	3
Al	27	72	He	12.515	ppb	20.3	300.01	0.0041	Pulse	0.1000	3
K	39	72	He	18.607	ppb	89.1	11314.71	0.1539	Pulse	0.1000	3
Ca	44	72	He	28.472	ppb	24.9	183.34	0.0025	Pulse	0.1000	3
Ti	47	72	He	2.341	ppb	52.7	63.33	0.0009	Pulse	0.1000	3
V	51	72	He	0.181	ppb	43.1	694.02	0.0094	Pulse	0.5000	3
Cr	52	72	He	0.219	ppb	39.0	2110.22	0.0287	Pulse	0.1000	3
Mn	55	72	He	-0.910	ppb	N/A	623.37	0.0085	Pulse	0.1000	3
Fe	57	72	He	22.658	ppb	27.6	770.05	0.0105	Pulse	0.1000	3
Co	59	72	He	0.172	ppb	15.7	613.37	0.0083	Pulse	0.1000	3
Ni	60	72	He	1.030	ppb	14.6	1326.78	0.0181	Pulse	0.1000	3
Cu	63	72	He	0.133	ppb	20.5	606.70	0.0083	Pulse	0.1000	3
Zn	66	72	He	0.301	ppb	106.5	410.02	0.0056	Pulse	0.1000	3
As	75	72	He	0.235	ppb	22.9	62.00	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.135	ppb	38.0	116.67	0.0018	Pulse	0.1000	3
Mo	98	115	He	0.247	ppb	12.0	380.02	0.0060	Pulse	0.1000	3
Ag	107	115	He	0.012	ppb	104.3	63.33	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.024	ppb	31.1	10.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.099	ppb	70.4	1083.45	0.0170	Pulse	0.1000	3
Sb	121	115	He	0.059	ppb	32.6	63.33	0.0010	Pulse	0.1000	3
Ba	137	115	He	0.121	ppb	46.1	53.33	0.0008	Pulse	0.1000	3
Tl	205	209	He	0.201	ppb	5.3	1443.47	0.0066	Pulse	0.1000	3
Pb	208	209	He	-0.001	ppb	N/A	466.68	0.0021	Pulse	0.1000	3
U	238	209	He	0.026	ppb	23.7	290.02	0.0013	Pulse	0.1000	3

ISTD Table:

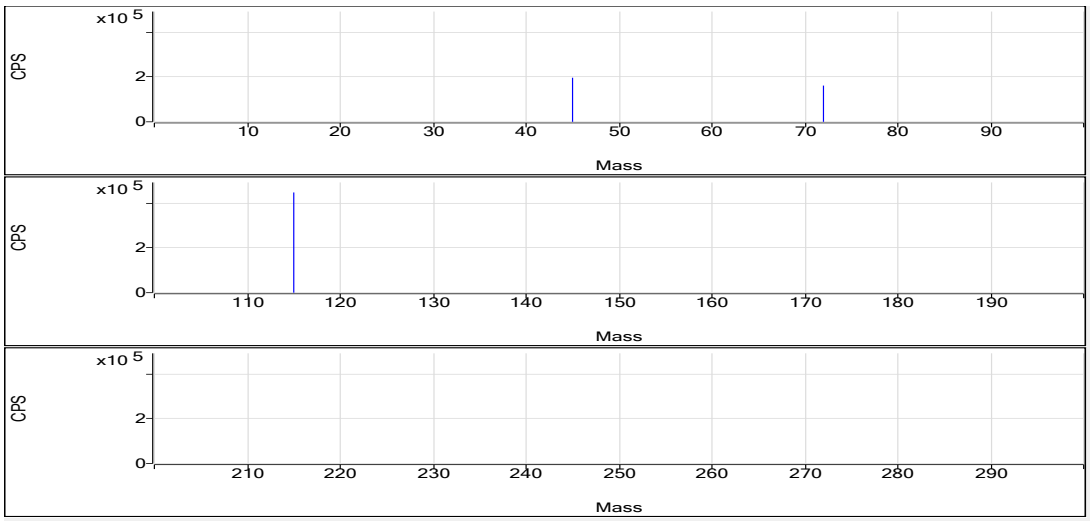
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3250413.70	1.4	100.3	Pulse	0.1000	3
No Gas	Ge	72	1425599.77	1.4	99.0	Pulse	0.1000	3
H2	Sc	45	196319.53	1.9	100.5	Pulse	0.1000	3
H2	Ge	72	161322.72	2.5	99.0	Pulse	0.1000	3
H2	In	115	446323.61	2.3	103.0	Pulse	0.1000	3
He	Sc	45	41867.36	2.2	104.7	Pulse	0.1000	3
He	Ge	72	73497.55	0.5	101.7	Pulse	0.1000	3
He	In	115	63770.94	0.5	98.7	Pulse	0.1000	3
He	Tb	159	281524.05	0.8	98.4	Pulse	0.1000	3
He	Bi	209	219588.76	0.3	98.8	Pulse	0.1000	3

No Gas

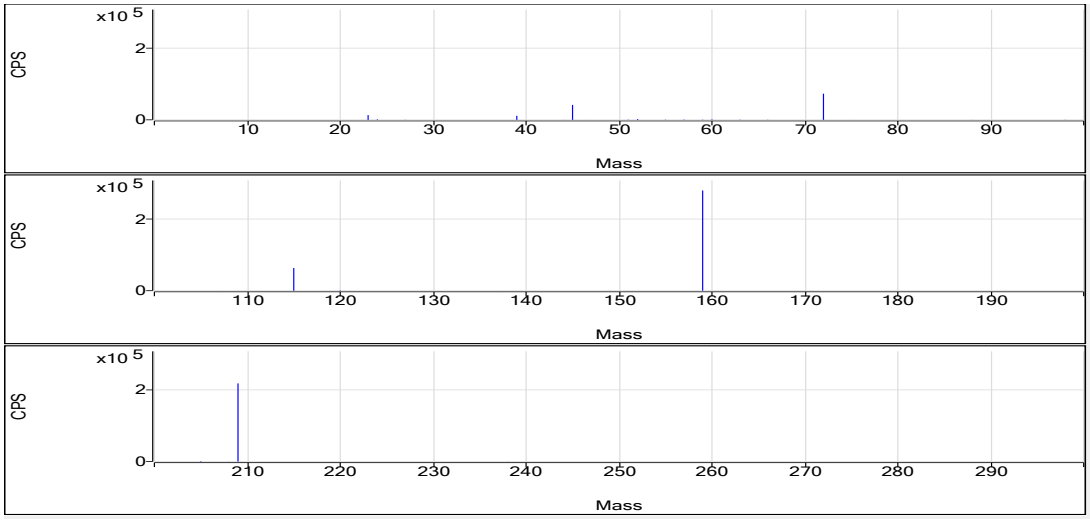


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.046	0.0001	156.00	0.0013	4.694E-05
Be	9	1	No Gas	0.033	0.0001	128.00	0.0013	4.694E-05
Be	9	1	No Gas	0.033	0.0001	128.00	0.0013	4.694E-05
Se	78	2	H2	0.035	0	4.00	0.0004	1.089E-05
Se	78	2	H2	0.097	0	8.00	0.0004	1.089E-05
Se	78	2	H2	0.081	0	6.67	0.0004	1.089E-05
Na	23	3	He	42.927	0.1802	13316.35	0.0017	0.1065
Na	23	3	He	47.237	0.1876	13776.81	0.0017	0.1065
Na	23	3	He	37.38	0.1707	12485.56	0.0017	0.1065
Mg	24	3	He	18.49	0.0204	1510.12	0.0008	0.004846
Mg	24	3	He	15.573	0.018	1320.10	0.0008	0.004846
Mg	24	3	He	19.547	0.0213	1560.13	0.0008	0.004846
Al	27	3	He	10.733	0.0037	270.01	0.0002	0.001063
Al	27	3	He	11.393	0.0038	280.01	0.0002	0.001063
Al	27	3	He	15.418	0.0048	350.02	0.0002	0.001063
K	39	3	He	35.294	0.1631	12055.23	0.0006	0.1436
K	39	3	He	18.402	0.1538	11294.75	0.0006	0.1436
K	39	3	He	2.125	0.1448	10594.15	0.0006	0.1436
Ca	44	3	He	22.204	0.0023	170.01	0	0.001611
Ca	44	3	He	27.055	0.0025	180.01	0	0.001611
Ca	44	3	He	36.158	0.0027	200.01	0	0.001611
Ti	47	3	He	3.765	0.0012	90.00	0.0003	0.0002737
Ti	47	3	He	1.623	0.0007	50.00	0.0003	0.0002737
Ti	47	3	He	1.634	0.0007	50.00	0.0003	0.0002737
V	51	3	He	0.253	0.0103	760.03	0.0117	0.007326
V	51	3	He	0.191	0.0096	702.02	0.0117	0.007326
V	51	3	He	0.098	0.0085	620.02	0.0117	0.007326
Cr	52	3	He	0.164	0.0279	2060.22	0.0152	0.02538
Cr	52	3	He	0.175	0.0281	2060.23	0.0152	0.02538
Cr	52	3	He	0.317	0.0302	2210.22	0.0152	0.02538
Mn	55	3	He	-0.994	0.008	590.04	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.801	0.0091	670.05	0.0059	0.01385
Mn	55	3	He	-0.934	0.0083	610.03	0.0059	0.01385
Fe	57	3	He	19.175	0.0095	700.04	0.0003	0.003918
Fe	57	3	He	18.911	0.0094	690.05	0.0003	0.003918
Fe	57	3	He	29.887	0.0126	920.06	0.0003	0.003918
Co	59	3	He	0.161	0.008	590.03	0.0305	0.003084
Co	59	3	He	0.153	0.0078	570.03	0.0305	0.003084
Co	59	3	He	0.204	0.0093	680.04	0.0305	0.003084
Ni	60	3	He	0.885	0.0168	1240.10	0.0088	0.009003
Ni	60	3	He	1.02	0.018	1320.11	0.0088	0.009003
Ni	60	3	He	1.184	0.0194	1420.12	0.0088	0.009003
Cu	63	3	He	0.155	0.0088	650.04	0.0249	0.004937
Cu	63	3	He	0.102	0.0075	550.03	0.0249	0.004937
Cu	63	3	He	0.142	0.0085	620.04	0.0249	0.004937
Zn	66	3	He	0.62	0.0064	470.03	0.0025	0.004836
Zn	66	3	He	0.304	0.0056	410.02	0.0025	0.004836
Zn	66	3	He	-0.021	0.0048	350.02	0.0025	0.004836
As	75	3	He	0.264	0.0009	66.00	0.0017	0.0004347
As	75	3	He	0.173	0.0007	54.00	0.0017	0.0004347
As	75	3	He	0.269	0.0009	66.00	0.0017	0.0004347
Sr	88	3	He	0.142	0.0019	120.01	0.0078	0.0007762
Sr	88	3	He	0.08	0.0014	90.00	0.0078	0.0007762
Sr	88	3	He	0.182	0.0022	140.01	0.0078	0.0007762
Mo	98	3	He	0.227	0.0055	350.02	0.022	0.0005162
Mo	98	3	He	0.281	0.0067	430.02	0.022	0.0005162
Mo	98	3	He	0.233	0.0057	360.02	0.022	0.0005162
Ag	107	3	He	0	0.0005	30.00	0.0455	0.0004641
Ag	107	3	He	0.01	0.0009	60.00	0.0455	0.0004641
Ag	107	3	He	0.024	0.0016	100.00	0.0455	0.0004641
Cd	111	3	He	0.029	0.0002	12.00	0.0048	5.152E-05
Cd	111	3	He	0.028	0.0002	12.00	0.0048	5.152E-05
Cd	111	3	He	0.015	0.0001	8.00	0.0048	5.152E-05
Sn	120	3	He	0.177	0.0181	1150.09	0.0143	0.01559
Sn	120	3	He	0.045	0.0162	1040.17	0.0143	0.01559
Sn	120	3	He	0.074	0.0166	1060.09	0.0143	0.01559
Sb	121	3	He	0.043	0.0008	50.00	0.0124	0.000258
Sb	121	3	He	0.055	0.0009	60.00	0.0124	0.000258
Sb	121	3	He	0.08	0.0013	80.00	0.0124	0.000258
Ba	137	3	He	0.181	0.0011	70.00	0.0044	0.000309
Ba	137	3	He	0.072	0.0006	40.00	0.0044	0.000309
Ba	137	3	He	0.109	0.0008	50.00	0.0044	0.000309
Tl	205	3	He	0.197	0.0064	1410.13	0.0276	0.001005
Tl	205	3	He	0.194	0.0064	1400.13	0.0276	0.001005
Tl	205	3	He	0.214	0.0069	1520.14	0.0276	0.001005
Pb	208	3	He	0.002	0.0022	280.01	0.0364	0.002176
Pb	208	3	He	-0.007	0.0019	260.01	0.0364	0.002176
Pb	208	3	He	0.001	0.0022	250.01	0.0364	0.002176
U	238	3	He	0.031	0.0016	340.02	0.0421	0.00024
U	238	3	He	0.027	0.0014	300.02	0.0421	0.00024
U	238	3	He	0.019	0.001	230.01	0.0421	0.00024
Sc	45	1	No Gas			3299757.14		
Sc	45	1	No Gas			3244380.58		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3207103.39		
Ge	72	1	No Gas			1447682.95		
Ge	72	1	No Gas			1417663.10		
Ge	72	1	No Gas			1411453.26		
Sc	45	2	H2			196389.12		
Sc	45	2	H2			200048.00		
Sc	45	2	H2			192521.48		
Ge	72	2	H2			162114.68		
Ge	72	2	H2			164824.00		
Ge	72	2	H2			157029.48		
In	115	2	H2			445814.95		
In	115	2	H2			456838.35		
In	115	2	H2			436317.53		
Sc	45	3	He			42121.13		
Sc	45	3	He			42633.01		
Sc	45	3	He			40847.93		
Ge	72	3	He			73899.17		
Ge	72	3	He			73436.61		
Ge	72	3	He			73156.88		
In	115	3	He			63524.85		
In	115	3	He			64127.86		
In	115	3	He			63685.45		
Tb	159	3	He			283962.48		
Tb	159	3	He			280017.32		
Tb	159	3	He			280592.34		
Bi	209	3	He			218896.85		
Bi	209	3	He			219959.20		
Bi	209	3	He			219910.23		

Quantitation Report

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Auto Dilution	1.0000
Total Dilution	1.0000
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Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

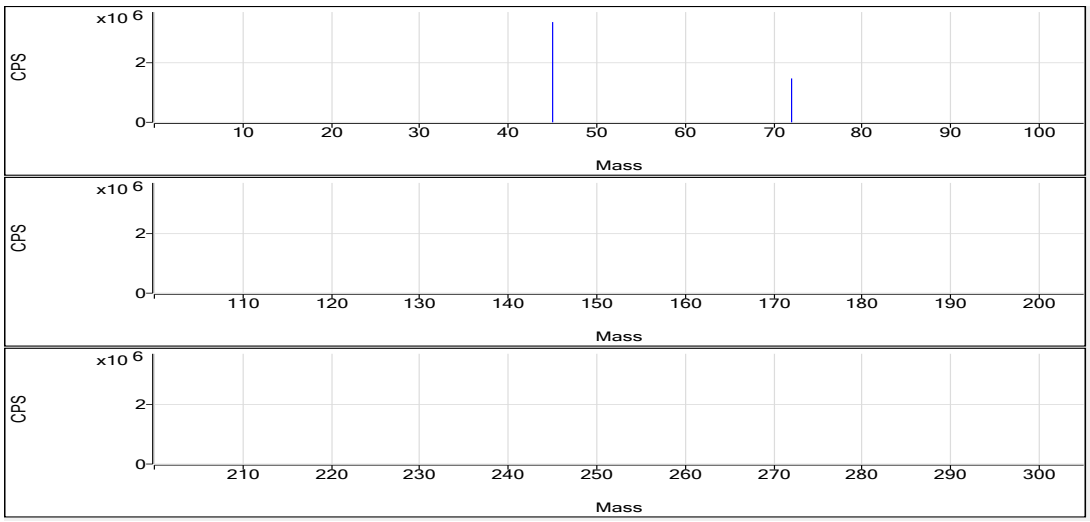
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.006	ppb	N/A	57.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.038	ppb	49.6	4.00	0.0000	Pulse	1.5000	3
Na	23	72	He	31.006	ppb	13.2	11644.87	0.1597	Pulse	0.1000	3
Mg	24	72	He	13.506	ppb	7.3	1183.42	0.0162	Pulse	0.1000	3
Al	27	72	He	9.612	ppb	4.4	246.68	0.0034	Pulse	0.1000	3
K	39	72	He	13.699	ppb	96.2	11024.46	0.1512	Pulse	0.1000	3
Ca	44	72	He	26.121	ppb	75.5	176.67	0.0024	Pulse	0.1000	3
Ti	47	72	He	0.729	ppb	113.1	33.33	0.0005	Pulse	0.1000	3
V	51	72	He	0.058	ppb	38.9	584.02	0.0080	Pulse	0.5000	3
Cr	52	72	He	0.218	ppb	36.2	2093.56	0.0287	Pulse	0.1000	3
Mn	55	72	He	-0.869	ppb	N/A	636.70	0.0087	Pulse	0.1000	3
Fe	57	72	He	21.052	ppb	24.3	730.05	0.0100	Pulse	0.1000	3
Co	59	72	He	0.019	ppb	40.3	266.68	0.0037	Pulse	0.1000	3
Ni	60	72	He	0.900	ppb	13.1	1233.43	0.0169	Pulse	0.1000	3
Cu	63	72	He	0.022	ppb	156.3	400.02	0.0055	Pulse	0.1000	3
Zn	66	72	He	-0.048	ppb	N/A	343.35	0.0047	Pulse	0.1000	3
As	75	72	He	0.039	ppb	158.6	36.67	0.0005	Pulse	0.5000	3
Sr	88	115	He	0.091	ppb	27.7	93.33	0.0015	Pulse	0.1000	3
Mo	98	115	He	0.179	ppb	25.7	280.01	0.0045	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	41.2	30.00	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.009	ppb	124.6	6.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.623	ppb	190.2	1526.20	0.0245	Pulse	0.1000	3
Sb	121	115	He	0.022	ppb	87.5	33.33	0.0005	Pulse	0.1000	3
Ba	137	115	He	0.112	ppb	67.0	50.00	0.0008	Pulse	0.1000	3
Tl	205	209	He	0.049	ppb	15.6	510.03	0.0024	Pulse	0.1000	3
Pb	208	209	He	-0.010	ppb	N/A	393.35	0.0018	Pulse	0.1000	3
U	238	209	He	0.003	ppb	92.1	80.00	0.0004	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3352441.51	3.4	103.4	Pulse	0.1000	3
No Gas	Ge	72	1467166.91	3.0	101.9	Pulse	0.1000	3
H2	Sc	45	189833.27	2.4	97.2	Pulse	0.1000	3
H2	Ge	72	155253.01	2.2	95.2	Pulse	0.1000	3
H2	In	115	427884.25	1.5	98.7	Pulse	0.1000	3
He	Sc	45	41633.40	2.2	104.1	Pulse	0.1000	3
He	Ge	72	72924.53	0.9	100.9	Pulse	0.1000	3
He	In	115	62688.90	1.2	97.1	Pulse	0.1000	3
He	Tb	159	278872.18	1.0	97.5	Pulse	0.1000	3
He	Bi	209	215073.90	0.5	96.8	Pulse	0.1000	3

No Gas



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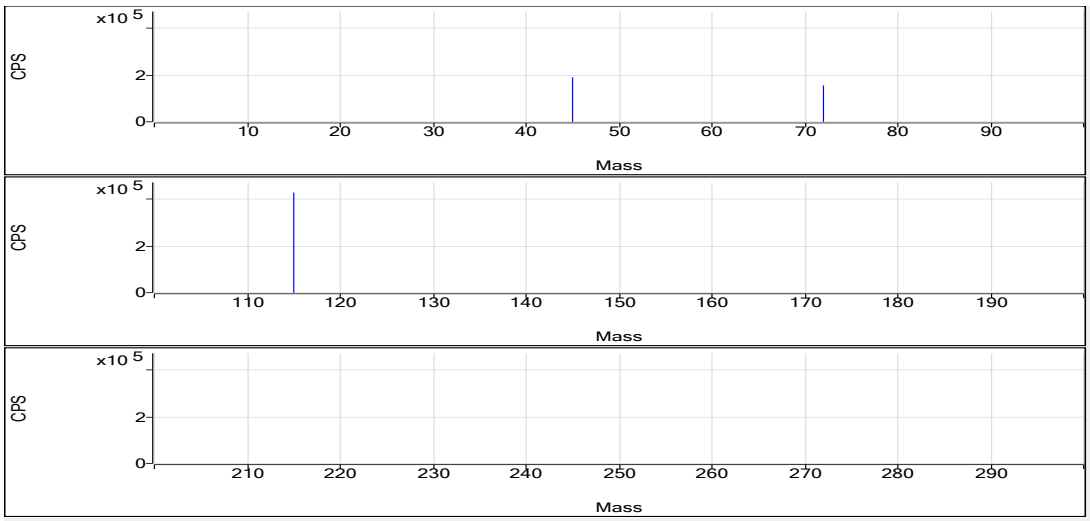
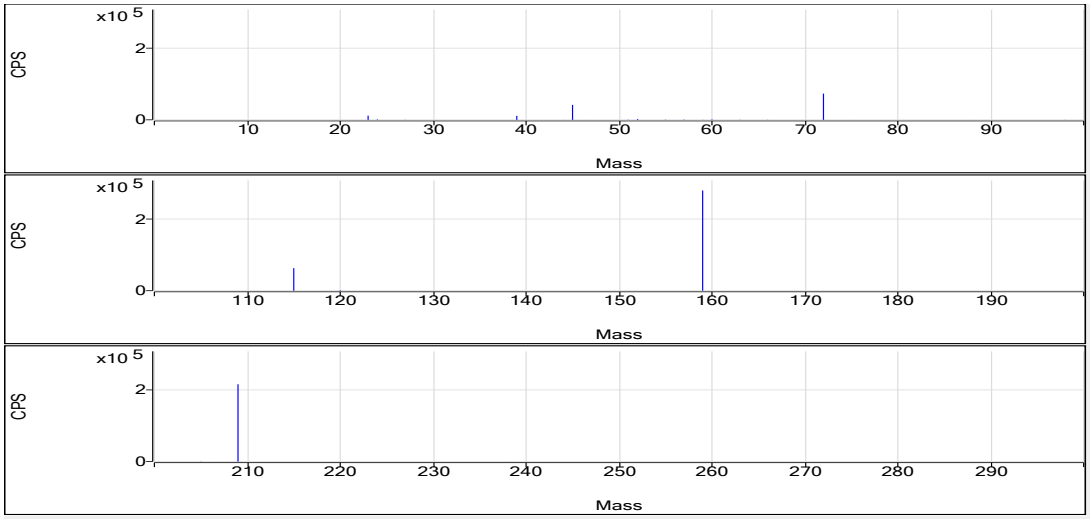


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.004	0	60.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.001	0	68.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.014	0	44.00	0.0013	4.694E-05
Se	78	2	H2	0.028	0	3.33	0.0004	1.089E-05
Se	78	2	H2	0.06	0	5.33	0.0004	1.089E-05
Se	78	2	H2	0.026	0	3.33	0.0004	1.089E-05
Na	23	3	He	34.189	0.1652	11925.10	0.0017	0.1065
Na	23	3	He	26.371	0.1518	11144.52	0.0017	0.1065
Na	23	3	He	32.457	0.1622	11865.00	0.0017	0.1065
Mg	24	3	He	14.463	0.017	1230.10	0.0008	0.004846
Mg	24	3	He	12.504	0.0154	1130.08	0.0008	0.004846
Mg	24	3	He	13.55	0.0163	1190.08	0.0008	0.004846
Al	27	3	He	9.944	0.0035	250.01	0.0002	0.001063
Al	27	3	He	9.136	0.0033	240.01	0.0002	0.001063
Al	27	3	He	9.757	0.0034	250.01	0.0002	0.001063
K	39	3	He	26.218	0.1581	11414.82	0.0006	0.1436
K	39	3	He	14.943	0.1519	11154.51	0.0006	0.1436
K	39	3	He	-0.064	0.1436	10504.06	0.0006	0.1436
Ca	44	3	He	28.416	0.0025	180.01	0	0.001611
Ca	44	3	He	44.591	0.003	220.01	0	0.001611
Ca	44	3	He	5.356	0.0018	130.00	0	0.001611
Ti	47	3	He	0.566	0.0004	30.00	0.0003	0.0002737
Ti	47	3	He	1.623	0.0007	50.00	0.0003	0.0002737
Ti	47	3	He	-0.001	0.0003	20.00	0.0003	0.0002737
V	51	3	He	0.034	0.0077	558.01	0.0117	0.007326
V	51	3	He	0.061	0.008	590.02	0.0117	0.007326
V	51	3	He	0.08	0.0083	604.02	0.0117	0.007326
Cr	52	3	He	0.143	0.0276	1990.21	0.0152	0.02538
Cr	52	3	He	0.301	0.03	2200.24	0.0152	0.02538
Cr	52	3	He	0.21	0.0286	2090.22	0.0152	0.02538
Mn	55	3	He	-1.127	0.0072	520.03	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.801	0.0091	670.03	0.0059	0.01385
Mn	55	3	He	-0.679	0.0098	720.04	0.0059	0.01385
Fe	57	3	He	23.774	0.0108	780.05	0.0003	0.003918
Fe	57	3	He	15.15	0.0083	610.04	0.0003	0.003918
Fe	57	3	He	24.231	0.0109	800.05	0.0003	0.003918
Co	59	3	He	0.026	0.0039	280.01	0.0305	0.003084
Co	59	3	He	0.019	0.0037	270.01	0.0305	0.003084
Co	59	3	He	0.011	0.0034	250.01	0.0305	0.003084
Ni	60	3	He	0.961	0.0175	1260.11	0.0088	0.009003
Ni	60	3	He	0.974	0.0176	1290.10	0.0088	0.009003
Ni	60	3	He	0.764	0.0157	1150.09	0.0088	0.009003
Cu	63	3	He	0.035	0.0058	420.02	0.0249	0.004937
Cu	63	3	He	0.048	0.0061	450.02	0.0249	0.004937
Cu	63	3	He	-0.017	0.0045	330.01	0.0249	0.004937
Zn	66	3	He	0.682	0.0065	470.02	0.0025	0.004836
Zn	66	3	He	-0.805	0.0029	210.01	0.0025	0.004836
Zn	66	3	He	-0.021	0.0048	350.02	0.0025	0.004836
As	75	3	He	0.005	0.0004	32.00	0.0017	0.0004347
As	75	3	He	0.11	0.0006	46.00	0.0017	0.0004347
As	75	3	He	0.002	0.0004	32.00	0.0017	0.0004347
Sr	88	3	He	0.104	0.0016	100.00	0.0078	0.0007762
Sr	88	3	He	0.062	0.0013	80.00	0.0078	0.0007762
Sr	88	3	He	0.108	0.0016	100.00	0.0078	0.0007762
Mo	98	3	He	0.136	0.0035	220.01	0.022	0.0005162
Mo	98	3	He	0.227	0.0055	350.02	0.022	0.0005162
Mo	98	3	He	0.175	0.0044	270.01	0.022	0.0005162
Ag	107	3	He	0	0.0005	30.00	0.0455	0.0004641
Ag	107	3	He	0	0.0005	30.00	0.0455	0.0004641
Ag	107	3	He	0	0.0005	30.00	0.0455	0.0004641
Cd	111	3	He	0.016	0.0001	8.00	0.0048	5.152E-05
Cd	111	3	He	0.016	0.0001	8.00	0.0048	5.152E-05
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Sn	120	3	He	-0.133	0.0137	860.06	0.0143	0.01559
Sn	120	3	He	0.013	0.0158	1000.08	0.0143	0.01559
Sn	120	3	He	1.99	0.044	2718.47	0.0143	0.01559
Sb	121	3	He	0.005	0.0003	20.00	0.0124	0.000258
Sb	121	3	He	0.043	0.0008	50.00	0.0124	0.000258
Sb	121	3	He	0.018	0.0005	30.00	0.0124	0.000258
Ba	137	3	He	0.111	0.0008	50.00	0.0044	0.000309
Ba	137	3	He	0.038	0.0005	30.00	0.0044	0.000309
Ba	137	3	He	0.188	0.0011	70.00	0.0044	0.000309
Tl	205	3	He	0.044	0.0022	480.03	0.0276	0.001005
Tl	205	3	He	0.046	0.0023	490.03	0.0276	0.001005
Tl	205	3	He	0.058	0.0026	560.04	0.0276	0.001005
Pb	208	3	He	-0.009	0.0019	230.01	0.0364	0.002176
Pb	208	3	He	-0.013	0.0017	190.01	0.0364	0.002176
Pb	208	3	He	-0.007	0.0019	210.01	0.0364	0.002176
U	238	3	He	0.006	0.0005	110.00	0.0421	0.00024
U	238	3	He	0.002	0.0003	70.00	0.0421	0.00024
U	238	3	He	0.001	0.0003	60.00	0.0421	0.00024
Sc	45	1	No Gas			3233193.70		
Sc	45	1	No Gas			3363228.39		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3460902.45		
Ge	72	1	No Gas			1420453.73		
Ge	72	1	No Gas			1471433.73		
Ge	72	1	No Gas			1509613.26		
Sc	45	2	H2			186736.99		
Sc	45	2	H2			187628.22		
Sc	45	2	H2			195134.61		
Ge	72	2	H2			151662.02		
Ge	72	2	H2			155795.81		
Ge	72	2	H2			158301.19		
In	115	2	H2			427880.89		
In	115	2	H2			421639.88		
In	115	2	H2			434131.99		
Sc	45	3	He			42522.68		
Sc	45	3	He			40667.33		
Sc	45	3	He			41710.19		
Ge	72	3	He			72191.43		
Ge	72	3	He			73436.92		
Ge	72	3	He			73145.24		
In	115	3	He			62841.49		
In	115	3	He			63393.96		
In	115	3	He			61866.97		
Tb	159	3	He			279468.34		
Tb	159	3	He			275858.12		
Tb	159	3	He			281290.07		
Bi	209	3	He			216026.83		
Bi	209	3	He			215160.86		
Bi	209	3	He			214034.00		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 15:14:02
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

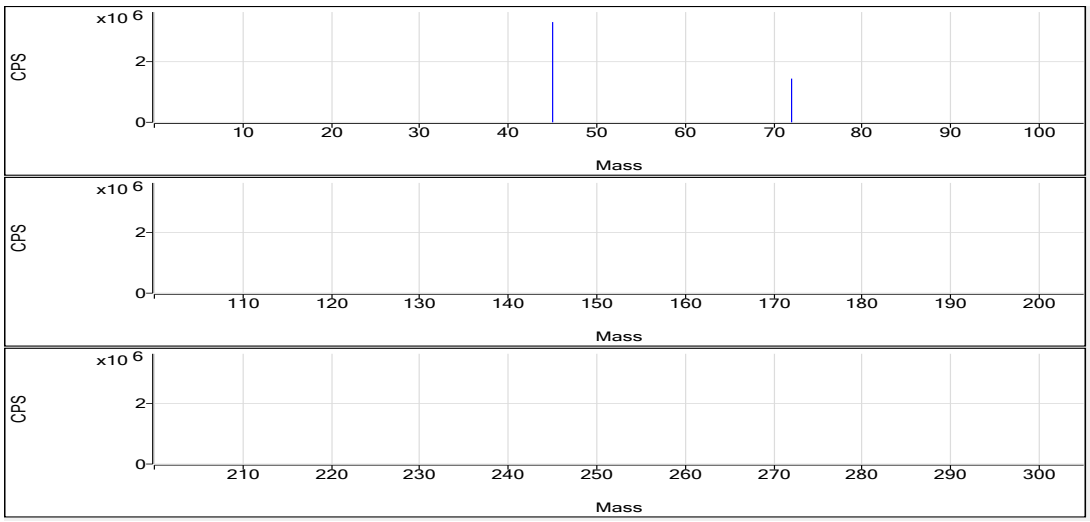
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.002	ppb	N/A	63.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.023	ppb	97.6	3.11	0.0000	Pulse	1.5000	3
Na	23	72	He	33.149	ppb	8.9	11931.80	0.1634	Pulse	0.1000	3
Mg	24	72	He	12.987	ppb	9.8	1153.42	0.0158	Pulse	0.1000	3
Al	27	72	He	9.801	ppb	33.5	250.01	0.0034	Pulse	0.1000	3
K	39	72	He	12.257	ppb	118.5	10984.44	0.1504	Pulse	0.1000	3
Ca	44	72	He	30.385	ppb	34.1	186.68	0.0026	Pulse	0.1000	3
Ti	47	72	He	0.726	ppb	85.5	33.33	0.0005	Pulse	0.1000	3
V	51	72	He	0.023	ppb	204.6	554.01	0.0076	Pulse	0.5000	3
Cr	52	72	He	-0.023	ppb	N/A	1826.85	0.0250	Pulse	0.1000	3
Mn	55	72	He	-1.071	ppb	N/A	550.03	0.0075	Pulse	0.1000	3
Fe	57	72	He	19.412	ppb	23.5	696.70	0.0095	Pulse	0.1000	3
Co	59	72	He	0.045	ppb	62.7	326.68	0.0045	Pulse	0.1000	3
Ni	60	72	He	0.955	ppb	6.4	1270.11	0.0174	Pulse	0.1000	3
Cu	63	72	He	0.040	ppb	60.1	433.36	0.0059	Pulse	0.1000	3
Zn	66	72	He	0.317	ppb	43.6	410.02	0.0056	Pulse	0.1000	3
As	75	72	He	0.050	ppb	60.7	38.00	0.0005	Pulse	0.5000	3
Sr	88	115	He	0.102	ppb	17.0	100.00	0.0016	Pulse	0.1000	3
Mo	98	115	He	0.163	ppb	20.4	260.01	0.0041	Pulse	0.1000	3
Ag	107	115	He	0.004	ppb	98.6	40.00	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.020	ppb	50.6	9.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.150	ppb	33.9	1123.42	0.0177	Pulse	0.1000	3
Sb	121	115	He	0.022	ppb	91.4	33.33	0.0005	Pulse	0.1000	3
Ba	137	115	He	-0.022	ppb	N/A	13.33	0.0002	Pulse	0.1000	3
Tl	205	209	He	0.012	ppb	52.4	290.02	0.0013	Pulse	0.1000	3
Pb	208	209	He	-0.001	ppb	N/A	463.35	0.0021	Pulse	0.1000	3
U	238	209	He	0.002	ppb	254.8	70.00	0.0003	Pulse	0.1000	3

ISTD Table:

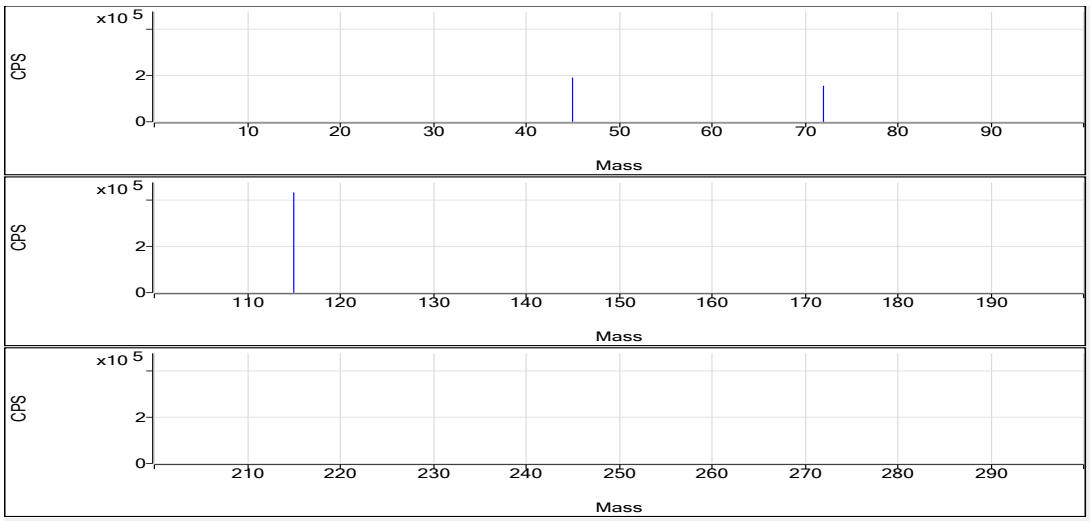
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3291165.99	2.8	101.5	Pulse	0.1000	3
No Gas	Ge	72	1434444.62	2.7	99.6	Pulse	0.1000	3
H2	Sc	45	190773.91	1.3	97.6	Pulse	0.1000	3
H2	Ge	72	155674.42	1.6	95.5	Pulse	0.1000	3
H2	In	115	432714.46	0.9	99.9	Pulse	0.1000	3
He	Sc	45	41215.30	1.4	103.1	Pulse	0.1000	3
He	Ge	72	73018.57	1.0	101.0	Pulse	0.1000	3
He	In	115	63418.91	1.6	98.2	Pulse	0.1000	3
He	Tb	159	279641.22	0.8	97.8	Pulse	0.1000	3
He	Bi	209	216879.90	0.7	97.6	Pulse	0.1000	3

No Gas

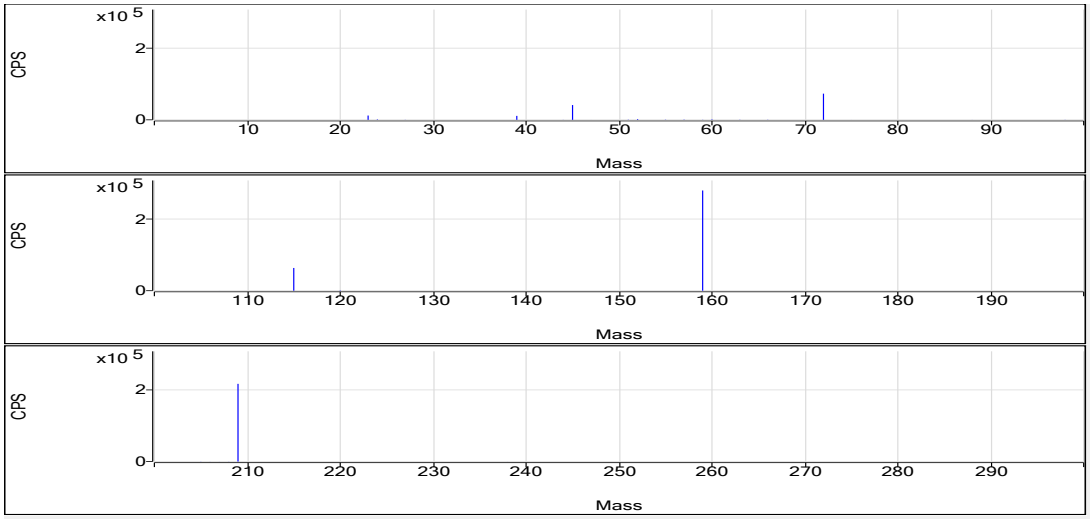


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.005	0	56.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.002	0	64.00	0.0013	4.694E-05
Be	9	1	No Gas	0.001	0	70.00	0.0013	4.694E-05
Se	78	2	H2	0.049	0	4.67	0.0004	1.089E-05
Se	78	2	H2	0.006	0	2.00	0.0004	1.089E-05
Se	78	2	H2	0.015	0	2.67	0.0004	1.089E-05
Na	23	3	He	34.476	0.1657	12235.34	0.0017	0.1065
Na	23	3	He	35.198	0.1669	12095.31	0.0017	0.1065
Na	23	3	He	29.774	0.1576	11464.74	0.0017	0.1065
Mg	24	3	He	12.884	0.0157	1160.08	0.0008	0.004846
Mg	24	3	He	11.768	0.0148	1070.08	0.0008	0.004846
Mg	24	3	He	14.309	0.0169	1230.10	0.0008	0.004846
Al	27	3	He	6.817	0.0027	200.01	0.0002	0.001063
Al	27	3	He	13.321	0.0043	310.02	0.0002	0.001063
Al	27	3	He	9.265	0.0033	240.01	0.0002	0.001063
K	39	3	He	22.488	0.1561	11524.83	0.0006	0.1436
K	39	3	He	18.645	0.1539	11154.57	0.0006	0.1436
K	39	3	He	-4.361	0.1412	10273.92	0.0006	0.1436
Ca	44	3	He	39.693	0.0028	210.01	0	0.001611
Ca	44	3	He	19.23	0.0022	160.01	0	0.001611
Ca	44	3	He	32.231	0.0026	190.01	0	0.001611
Ti	47	3	He	1.068	0.0005	40.00	0.0003	0.0002737
Ti	47	3	He	0.009	0.0003	20.00	0.0003	0.0002737
Ti	47	3	He	1.101	0.0005	40.00	0.0003	0.0002737
V	51	3	He	-0.029	0.007	516.01	0.0117	0.007326
V	51	3	He	0.06	0.008	582.02	0.0117	0.007326
V	51	3	He	0.036	0.0078	564.01	0.0117	0.007326
Cr	52	3	He	-0.164	0.0229	1690.16	0.0152	0.02538
Cr	52	3	He	-0.063	0.0244	1770.17	0.0152	0.02538
Cr	52	3	He	0.157	0.0278	2020.21	0.0152	0.02538
Mn	55	3	He	-1.039	0.0077	570.03	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.921	0.0084	610.04	0.0059	0.01385
Mn	55	3	He	-1.252	0.0065	470.02	0.0059	0.01385
Fe	57	3	He	18.261	0.0092	680.03	0.0003	0.003918
Fe	57	3	He	15.536	0.0084	610.03	0.0003	0.003918
Fe	57	3	He	24.439	0.011	800.05	0.0003	0.003918
Co	59	3	He	0.076	0.0054	400.02	0.0305	0.003084
Co	59	3	He	0.039	0.0043	310.02	0.0305	0.003084
Co	59	3	He	0.021	0.0037	270.01	0.0305	0.003084
Ni	60	3	He	0.886	0.0168	1240.10	0.0088	0.009003
Ni	60	3	He	1.001	0.0178	1290.11	0.0088	0.009003
Ni	60	3	He	0.977	0.0176	1280.11	0.0088	0.009003
Cu	63	3	He	0.052	0.0062	460.03	0.0249	0.004937
Cu	63	3	He	0.012	0.0052	380.02	0.0249	0.004937
Cu	63	3	He	0.056	0.0063	460.02	0.0249	0.004937
Zn	66	3	He	0.347	0.0057	420.03	0.0025	0.004836
Zn	66	3	He	0.166	0.0052	380.02	0.0025	0.004836
Zn	66	3	He	0.438	0.0059	430.02	0.0025	0.004836
As	75	3	He	0.015	0.0005	34.00	0.0017	0.0004347
As	75	3	He	0.067	0.0006	40.00	0.0017	0.0004347
As	75	3	He	0.066	0.0005	40.00	0.0017	0.0004347
Sr	88	3	He	0.104	0.0016	100.00	0.0078	0.0007762
Sr	88	3	He	0.084	0.0014	90.00	0.0078	0.0007762
Sr	88	3	He	0.119	0.0017	110.01	0.0078	0.0007762
Mo	98	3	He	0.15	0.0038	240.01	0.022	0.0005162
Mo	98	3	He	0.201	0.0049	310.02	0.022	0.0005162
Mo	98	3	He	0.138	0.0036	230.01	0.022	0.0005162
Ag	107	3	He	0.004	0.0006	40.00	0.0455	0.0004641
Ag	107	3	He	0.007	0.0008	50.00	0.0455	0.0004641
Ag	107	3	He	0	0.0005	30.00	0.0455	0.0004641
Cd	111	3	He	0.009	0.0001	6.00	0.0048	5.152E-05
Cd	111	3	He	0.029	0.0002	12.00	0.0048	5.152E-05
Cd	111	3	He	0.022	0.0002	10.00	0.0048	5.152E-05
Sn	120	3	He	0.144	0.0176	1110.07	0.0143	0.01559
Sn	120	3	He	0.203	0.0185	1160.09	0.0143	0.01559
Sn	120	3	He	0.102	0.017	1100.09	0.0143	0.01559
Sb	121	3	He	0.005	0.0003	20.00	0.0124	0.000258
Sb	121	3	He	0.043	0.0008	50.00	0.0124	0.000258
Sb	121	3	He	0.017	0.0005	30.00	0.0124	0.000258
Ba	137	3	He	0.002	0.0003	20.00	0.0044	0.000309
Ba	137	3	He	0.002	0.0003	20.00	0.0044	0.000309
Ba	137	3	He	-0.071	0	0.00	0.0044	0.000309
Tl	205	3	He	0.019	0.0015	330.02	0.0276	0.001005
Tl	205	3	He	0.01	0.0013	280.02	0.0276	0.001005
Tl	205	3	He	0.007	0.0012	260.01	0.0276	0.001005
Pb	208	3	He	-0.006	0.0019	220.01	0.0364	0.002176
Pb	208	3	He	-0.005	0.002	240.01	0.0364	0.002176
Pb	208	3	He	0.008	0.0025	250.02	0.0364	0.002176
U	238	3	He	0.001	0.0003	60.00	0.0421	0.00024
U	238	3	He	0.007	0.0006	120.01	0.0421	0.00024
U	238	3	He	-0.002	0.0001	30.00	0.0421	0.00024
Sc	45	1	No Gas			3191819.33		
Sc	45	1	No Gas			3312185.58		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3369493.07		
Ge	72	1	No Gas			1393277.17		
Ge	72	1	No Gas			1441293.26		
Ge	72	1	No Gas			1468763.42		
Sc	45	2	H2			191667.30		
Sc	45	2	H2			187962.63		
Sc	45	2	H2			192691.81		
Ge	72	2	H2			155856.08		
Ge	72	2	H2			153115.66		
Ge	72	2	H2			158051.52		
In	115	2	H2			431720.35		
In	115	2	H2			429408.67		
In	115	2	H2			437014.37		
Sc	45	3	He			41399.02		
Sc	45	3	He			40556.89		
Sc	45	3	He			41689.98		
Ge	72	3	He			73849.23		
Ge	72	3	He			72461.96		
Ge	72	3	He			72744.51		
In	115	3	He			62942.07		
In	115	3	He			62781.56		
In	115	3	He			64559.40		
Tb	159	3	He			277502.28		
Tb	159	3	He			279552.14		
Tb	159	3	He			281869.25		
Bi	209	3	He			215732.99		
Bi	209	3	He			216280.07		
Bi	209	3	He			218626.64		

Quantitation Report

Data File Name	141SMPL.d
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Acq Time	2023-08-10 15:16:02
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

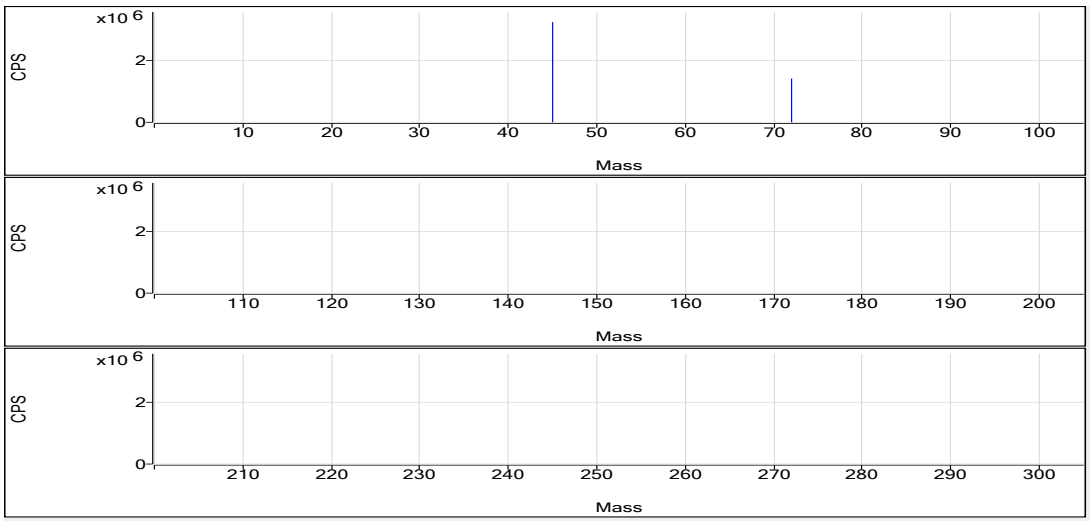
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.006	ppb	N/A	55.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.034	ppb	69.6	3.78	0.0000	Pulse	1.5000	3
Na	23	72	He	30.215	ppb	6.4	11618.21	0.1584	Pulse	0.1000	3
Mg	24	72	He	11.241	ppb	24.1	1050.07	0.0143	Pulse	0.1000	3
Al	27	72	He	7.085	ppb	74.3	203.34	0.0028	Pulse	0.1000	3
K	39	72	He	17.441	ppb	25.6	11244.70	0.1533	Pulse	0.1000	3
Ca	44	72	He	28.595	ppb	17.6	183.34	0.0025	Pulse	0.1000	3
Ti	47	72	He	0.177	ppb	640.1	23.33	0.0003	Pulse	0.1000	3
V	51	72	He	0.078	ppb	25.2	604.02	0.0082	Pulse	0.5000	3
Cr	52	72	He	0.070	ppb	35.0	1940.20	0.0264	Pulse	0.1000	3
Mn	55	72	He	-1.023	ppb	N/A	573.36	0.0078	Pulse	0.1000	3
Fe	57	72	He	18.176	ppb	22.6	673.38	0.0092	Pulse	0.1000	3
Co	59	72	He	0.051	ppb	38.4	340.02	0.0046	Pulse	0.1000	3
Ni	60	72	He	1.007	ppb	9.5	1310.11	0.0179	Pulse	0.1000	3
Cu	63	72	He	0.030	ppb	55.0	416.69	0.0057	Pulse	0.1000	3
Zn	66	72	He	0.120	ppb	364.6	376.68	0.0051	Pulse	0.1000	3
As	75	72	He	0.032	ppb	85.2	36.00	0.0005	Pulse	0.5000	3
Sr	88	115	He	0.109	ppb	22.1	103.33	0.0016	Pulse	0.1000	3
Mo	98	115	He	0.117	ppb	43.6	196.68	0.0031	Pulse	0.1000	3
Ag	107	115	He	0.012	ppb	45.4	63.33	0.0010	Pulse	0.1000	3
Cd	111	115	He	-0.004	ppb	N/A	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.057	ppb	217.3	1040.08	0.0164	Pulse	0.1000	3
Sb	121	115	He	0.022	ppb	68.6	33.33	0.0005	Pulse	0.1000	3
Ba	137	115	He	0.025	ppb	162.1	26.67	0.0004	Pulse	0.1000	3
Tl	205	209	He	0.012	ppb	43.6	286.68	0.0013	Pulse	0.1000	3
Pb	208	209	He	-0.010	ppb	N/A	390.01	0.0018	Pulse	0.1000	3
U	238	209	He	0.005	ppb	89.9	96.67	0.0004	Pulse	0.1000	3

ISTD Table:

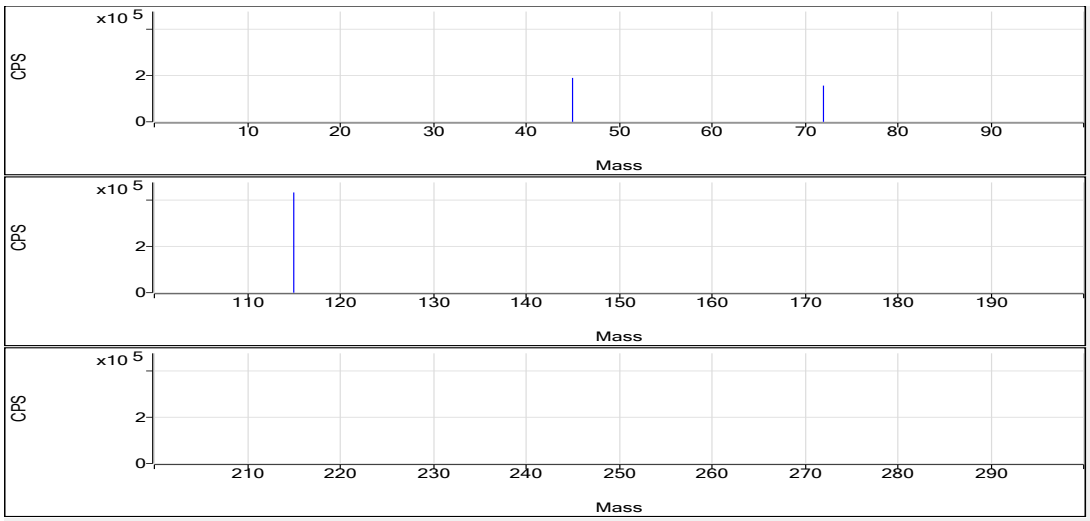
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3255333.28	2.6	100.4	Pulse	0.1000	3
No Gas	Ge	72	1421073.47	2.4	98.7	Pulse	0.1000	3
H2	Sc	45	189577.76	2.5	97.0	Pulse	0.1000	3
H2	Ge	72	156304.35	3.8	95.9	Pulse	0.1000	3
H2	In	115	432816.75	1.4	99.9	Pulse	0.1000	3
He	Sc	45	42522.35	1.2	106.3	Pulse	0.1000	3
He	Ge	72	73363.87	0.6	101.5	Pulse	0.1000	3
He	In	115	63413.06	0.4	98.2	Pulse	0.1000	3
He	Tb	159	279876.29	0.5	97.9	Pulse	0.1000	3
He	Bi	209	216243.31	0.5	97.3	Pulse	0.1000	3

No Gas

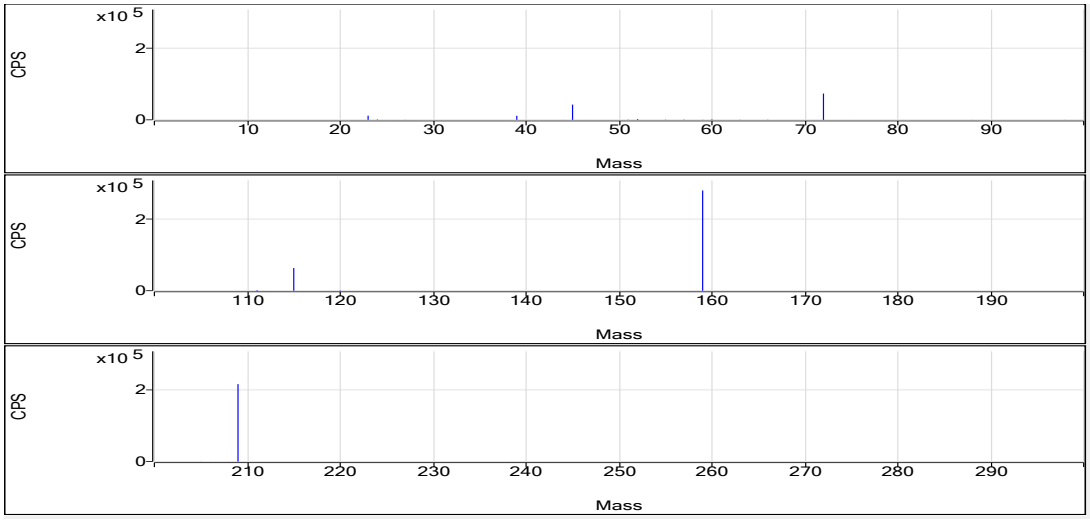


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.002	0	62.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.01	0	48.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.006	0	56.00	0.0013	4.694E-05
Se	78	2	H2	0.061	0	5.33	0.0004	1.089E-05
Se	78	2	H2	0.028	0	3.33	0.0004	1.089E-05
Se	78	2	H2	0.014	0	2.67	0.0004	1.089E-05
Na	23	3	He	31.532	0.1606	11865.06	0.0017	0.1065
Na	23	3	He	31.132	0.1599	11664.91	0.0017	0.1065
Na	23	3	He	27.982	0.1545	11324.66	0.0017	0.1065
Mg	24	3	He	8.383	0.0119	880.05	0.0008	0.004846
Mg	24	3	He	13.768	0.0165	1200.09	0.0008	0.004846
Mg	24	3	He	11.571	0.0146	1070.08	0.0008	0.004846
Al	27	3	He	3.449	0.0019	140.01	0.0002	0.001063
Al	27	3	He	4.686	0.0022	160.01	0.0002	0.001063
Al	27	3	He	13.121	0.0042	310.01	0.0002	0.001063
K	39	3	He	19.716	0.1545	11414.84	0.0006	0.1436
K	39	3	He	20.316	0.1549	11294.71	0.0006	0.1436
K	39	3	He	12.292	0.1504	11024.54	0.0006	0.1436
Ca	44	3	He	30.951	0.0026	190.01	0	0.001611
Ca	44	3	He	32.011	0.0026	190.01	0	0.001611
Ca	44	3	He	22.822	0.0023	170.01	0	0.001611
Ti	47	3	He	0.528	0.0004	30.00	0.0003	0.0002737
Ti	47	3	He	1.095	0.0005	40.00	0.0003	0.0002737
Ti	47	3	He	-1.091	0	0.00	0.0003	0.0002737
V	51	3	He	0.089	0.0084	618.02	0.0117	0.007326
V	51	3	He	0.089	0.0084	610.02	0.0117	0.007326
V	51	3	He	0.055	0.008	584.02	0.0117	0.007326
Cr	52	3	He	0.093	0.0268	1980.21	0.0152	0.02538
Cr	52	3	He	0.071	0.0265	1930.21	0.0152	0.02538
Cr	52	3	He	0.045	0.0261	1910.19	0.0152	0.02538
Mn	55	3	He	-1.04	0.0077	570.03	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.814	0.009	660.04	0.0059	0.01385
Mn	55	3	He	-1.214	0.0067	490.02	0.0059	0.01385
Fe	57	3	He	13.58	0.0079	580.03	0.0003	0.003918
Fe	57	3	He	21.5	0.0101	740.05	0.0003	0.003918
Fe	57	3	He	19.448	0.0096	700.05	0.0003	0.003918
Co	59	3	He	0.072	0.0053	390.02	0.0305	0.003084
Co	59	3	He	0.034	0.0041	300.01	0.0305	0.003084
Co	59	3	He	0.046	0.0045	330.02	0.0305	0.003084
Ni	60	3	He	1.116	0.0188	1390.12	0.0088	0.009003
Ni	60	3	He	0.941	0.0173	1260.10	0.0088	0.009003
Ni	60	3	He	0.963	0.0175	1280.10	0.0088	0.009003
Cu	63	3	He	0.041	0.006	440.03	0.0249	0.004937
Cu	63	3	He	0.011	0.0052	380.02	0.0249	0.004937
Cu	63	3	He	0.037	0.0059	430.02	0.0249	0.004937
Zn	66	3	He	0.511	0.0061	450.02	0.0025	0.004836
Zn	66	3	He	-0.35	0.004	290.01	0.0025	0.004836
Zn	66	3	He	0.198	0.0053	390.02	0.0025	0.004836
As	75	3	He	0.015	0.0005	34.00	0.0017	0.0004347
As	75	3	He	0.018	0.0005	34.00	0.0017	0.0004347
As	75	3	He	0.064	0.0005	40.00	0.0017	0.0004347
Sr	88	3	He	0.123	0.0017	110.00	0.0078	0.0007762
Sr	88	3	He	0.123	0.0017	110.00	0.0078	0.0007762
Sr	88	3	He	0.081	0.0014	90.00	0.0078	0.0007762
Mo	98	3	He	0.084	0.0024	150.01	0.022	0.0005162
Mo	98	3	He	0.092	0.0025	160.01	0.022	0.0005162
Mo	98	3	He	0.176	0.0044	280.01	0.022	0.0005162
Ag	107	3	He	0.018	0.0013	80.00	0.0455	0.0004641
Ag	107	3	He	0.011	0.0009	60.00	0.0455	0.0004641
Ag	107	3	He	0.007	0.0008	50.00	0.0455	0.0004641
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Cd	111	3	He	-0.011	0	0.00	0.0048	5.152E-05
Sn	120	3	He	-0.086	0.0144	910.06	0.0143	0.01559
Sn	120	3	He	0.139	0.0176	1110.09	0.0143	0.01559
Sn	120	3	He	0.117	0.0173	1100.08	0.0143	0.01559
Sb	121	3	He	0.03	0.0006	40.00	0.0124	0.000258
Sb	121	3	He	0.03	0.0006	40.00	0.0124	0.000258
Sb	121	3	He	0.005	0.0003	20.00	0.0124	0.000258
Ba	137	3	He	0.002	0.0003	20.00	0.0044	0.000309
Ba	137	3	He	0.002	0.0003	20.00	0.0044	0.000309
Ba	137	3	He	0.073	0.0006	40.00	0.0044	0.000309
Tl	205	3	He	0.009	0.0012	270.01	0.0276	0.001005
Tl	205	3	He	0.009	0.0012	270.01	0.0276	0.001005
Tl	205	3	He	0.017	0.0015	320.02	0.0276	0.001005
Pb	208	3	He	-0.008	0.0019	240.01	0.0364	0.002176
Pb	208	3	He	-0.01	0.0018	180.01	0.0364	0.002176
Pb	208	3	He	-0.013	0.0017	210.01	0.0364	0.002176
U	238	3	He	0.004	0.0004	90.00	0.0421	0.00024
U	238	3	He	0.01	0.0006	140.01	0.0421	0.00024
U	238	3	He	0.001	0.0003	60.00	0.0421	0.00024
Sc	45	1	No Gas			3165184.64		
Sc	45	1	No Gas			3270094.01		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3330721.20		
Ge	72	1	No Gas			1382403.89		
Ge	72	1	No Gas			1436539.67		
Ge	72	1	No Gas			1444276.85		
Sc	45	2	H2			186804.80		
Sc	45	2	H2			186895.99		
Sc	45	2	H2			195032.50		
Ge	72	2	H2			154065.98		
Ge	72	2	H2			151731.87		
Ge	72	2	H2			163115.19		
In	115	2	H2			432889.25		
In	115	2	H2			426678.55		
In	115	2	H2			438882.45		
Sc	45	3	He			41950.70		
Sc	45	3	He			42622.88		
Sc	45	3	He			42993.48		
Ge	72	3	He			73868.86		
Ge	72	3	He			72935.27		
Ge	72	3	He			73287.47		
In	115	3	He			63344.37		
In	115	3	He			63183.73		
In	115	3	He			63735.42		
Tb	159	3	He			279944.08		
Tb	159	3	He			281101.66		
Tb	159	3	He			278583.14		
Bi	209	3	He			216950.88		
Bi	209	3	He			216647.69		
Bi	209	3	He			215131.36		

Quantitation Report

Data File Name	142SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 15:18:02
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

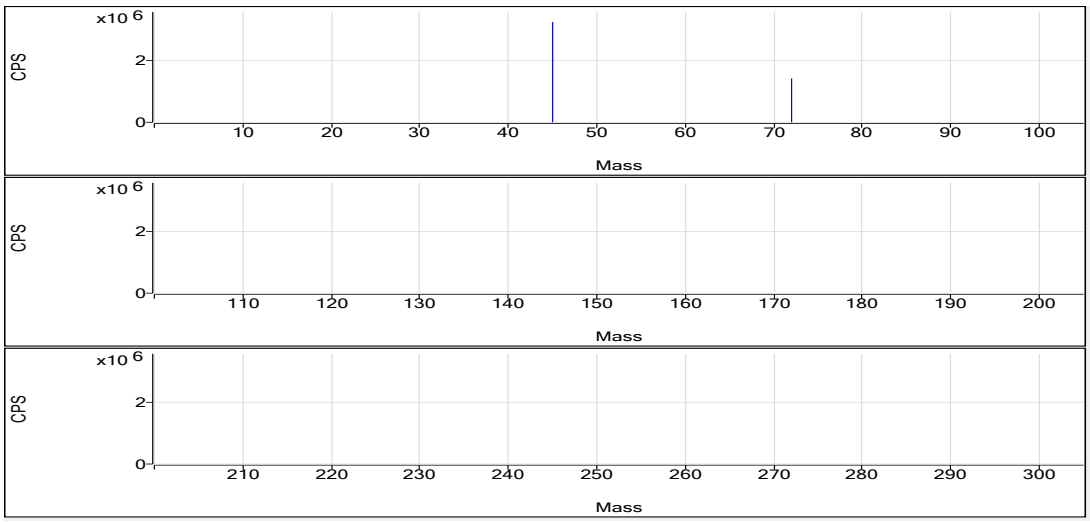
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.008	ppb	N/A	52.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.019	ppb	115.5	2.89	0.0000	Pulse	1.5000	3
Na	23	72	He	29.206	ppb	7.1	11277.97	0.1566	Pulse	0.1000	3
Mg	24	72	He	12.804	ppb	17.2	1126.75	0.0156	Pulse	0.1000	3
Al	27	72	He	7.308	ppb	30.9	203.34	0.0028	Pulse	0.1000	3
K	39	72	He	27.155	ppb	46.1	11421.48	0.1586	Pulse	0.1000	3
Ca	44	72	He	30.068	ppb	28.6	183.34	0.0025	Pulse	0.1000	3
Ti	47	72	He	-0.354	ppb	N/A	13.33	0.0002	Pulse	0.1000	3
V	51	72	He	0.007	ppb	473.9	533.34	0.0074	Pulse	0.5000	3
Cr	52	72	He	0.087	ppb	283.8	1923.52	0.0267	Pulse	0.1000	3
Mn	55	72	He	-1.084	ppb	N/A	536.70	0.0075	Pulse	0.1000	3
Fe	57	72	He	18.306	ppb	25.8	663.37	0.0092	Pulse	0.1000	3
Co	59	72	He	0.044	ppb	79.6	320.01	0.0044	Pulse	0.1000	3
Ni	60	72	He	1.140	ppb	18.6	1370.12	0.0190	Pulse	0.1000	3
Cu	63	72	He	0.028	ppb	142.0	406.68	0.0056	Pulse	0.1000	3
Zn	66	72	He	0.273	ppb	90.2	396.69	0.0055	Pulse	0.1000	3
As	75	72	He	0.000	ppb	21160.2	31.33	0.0004	Pulse	0.5000	3
Sr	88	115	He	0.172	ppb	23.1	133.34	0.0021	Pulse	0.1000	3
Mo	98	115	He	0.140	ppb	25.7	226.68	0.0036	Pulse	0.1000	3
Ag	107	115	He	0.008	ppb	26.6	53.33	0.0008	Pulse	0.1000	3
Cd	111	115	He	-0.002	ppb	N/A	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.278	ppb	63.7	1230.24	0.0195	Pulse	0.1000	3
Sb	121	115	He	0.001	ppb	1426.2	16.67	0.0003	Pulse	0.1000	3
Ba	137	115	He	0.074	ppb	127.8	40.00	0.0006	Pulse	0.1000	3
Tl	205	209	He	0.014	ppb	63.6	303.35	0.0014	Pulse	0.1000	3
Pb	208	209	He	-0.009	ppb	N/A	400.02	0.0019	Pulse	0.1000	3
U	238	209	He	0.002	ppb	71.5	73.33	0.0003	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3263393.08	2.2	100.7	Pulse	0.1000	3
No Gas	Ge	72	1426512.27	2.2	99.1	Pulse	0.1000	3
H2	Sc	45	189490.39	1.2	97.0	Pulse	0.1000	3
H2	Ge	72	155869.72	1.6	95.6	Pulse	0.1000	3
H2	In	115	435923.91	1.8	100.6	Pulse	0.1000	3
He	Sc	45	42161.30	1.2	105.4	Pulse	0.1000	3
He	Ge	72	72000.00	1.0	99.6	Pulse	0.1000	3
He	In	115	62912.37	1.1	97.4	Pulse	0.1000	3
He	Tb	159	278507.43	0.2	97.4	Pulse	0.1000	3
He	Bi	209	216079.99	0.1	97.2	Pulse	0.1000	3

No Gas



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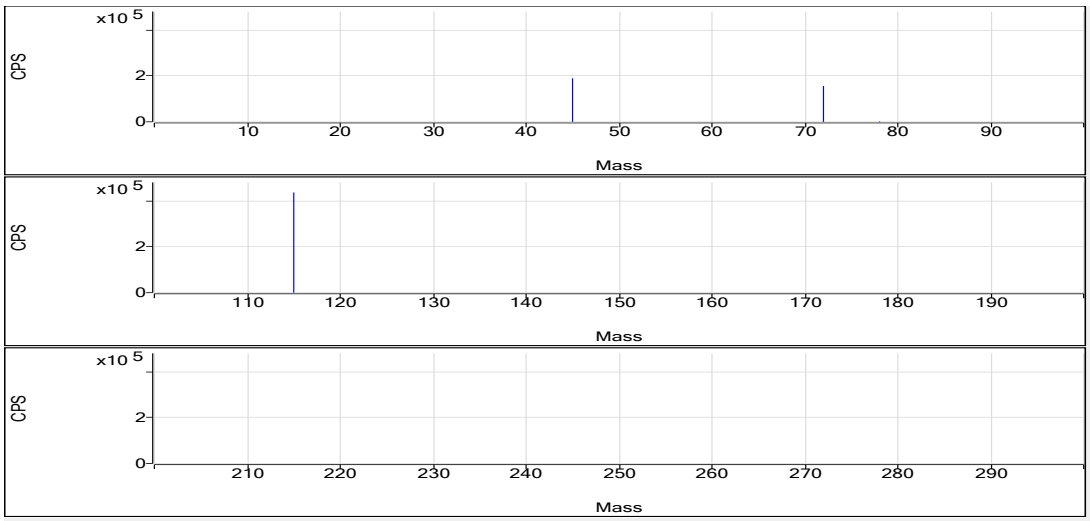
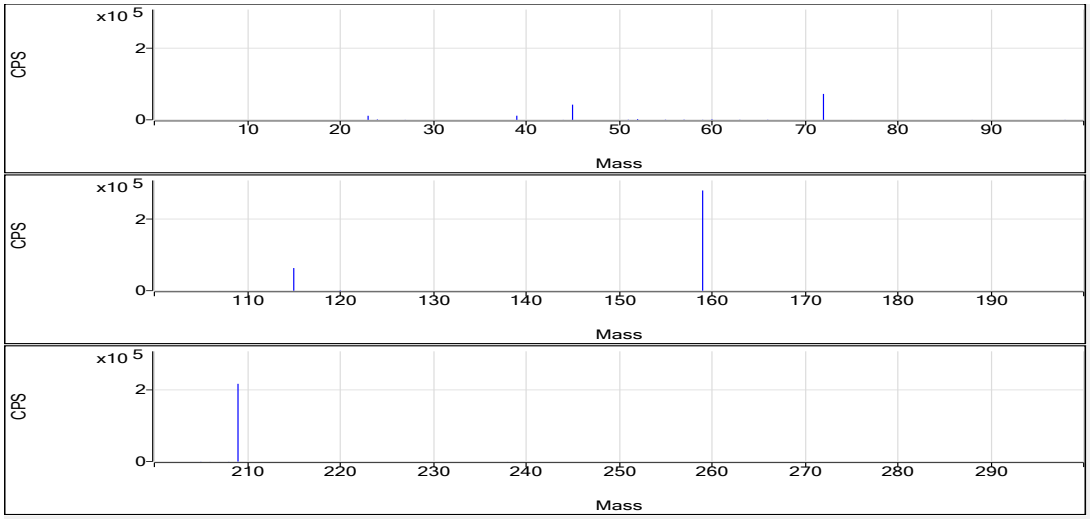


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.004	0	58.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.014	0	42.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.006	0	56.00	0.0013	4.694E-05
Se	78	2	H2	0.026	0	3.33	0.0004	1.089E-05
Se	78	2	H2	-0.006	0	1.33	0.0004	1.089E-05
Se	78	2	H2	0.037	0	4.00	0.0004	1.089E-05
Na	23	3	He	27.691	0.154	11134.59	0.0017	0.1065
Na	23	3	He	28.358	0.1552	11044.42	0.0017	0.1065
Na	23	3	He	31.569	0.1607	11654.91	0.0017	0.1065
Mg	24	3	He	11.645	0.0147	1060.08	0.0008	0.004846
Mg	24	3	He	11.418	0.0145	1030.08	0.0008	0.004846
Mg	24	3	He	15.349	0.0178	1290.10	0.0008	0.004846
Al	27	3	He	8.205	0.003	220.01	0.0002	0.001063
Al	27	3	He	8.984	0.0032	230.01	0.0002	0.001063
Al	27	3	He	4.736	0.0022	160.01	0.0002	0.001063
K	39	3	He	40.112	0.1658	11985.17	0.0006	0.1436
K	39	3	He	26.226	0.1581	11254.68	0.0006	0.1436
K	39	3	He	15.128	0.152	11024.58	0.0006	0.1436
Ca	44	3	He	37.213	0.0028	200.01	0	0.001611
Ca	44	3	He	20.514	0.0022	160.01	0	0.001611
Ca	44	3	He	32.477	0.0026	190.01	0	0.001611
Ti	47	3	He	0.012	0.0003	20.00	0.0003	0.0002737
Ti	47	3	He	-0.531	0.0001	10.00	0.0003	0.0002737
Ti	47	3	He	-0.542	0.0001	10.00	0.0003	0.0002737
V	51	3	He	-0.028	0.007	506.01	0.0117	0.007326
V	51	3	He	0.039	0.0078	554.01	0.0117	0.007326
V	51	3	He	0.01	0.0074	540.01	0.0117	0.007326
Cr	52	3	He	-0.15	0.0231	1670.16	0.0152	0.02538
Cr	52	3	He	0.068	0.0264	1880.18	0.0152	0.02538
Cr	52	3	He	0.343	0.0306	2220.23	0.0152	0.02538
Mn	55	3	He	-1.246	0.0065	470.03	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.943	0.0083	590.03	0.0059	0.01385
Mn	55	3	He	-1.062	0.0076	550.03	0.0059	0.01385
Fe	57	3	He	19.425	0.0095	690.04	0.0003	0.003918
Fe	57	3	He	22.366	0.0104	740.05	0.0003	0.003918
Fe	57	3	He	13.128	0.0077	560.03	0.0003	0.003918
Co	59	3	He	0.085	0.0057	410.02	0.0305	0.003084
Co	59	3	He	0.019	0.0037	260.01	0.0305	0.003084
Co	59	3	He	0.03	0.004	290.01	0.0305	0.003084
Ni	60	3	He	1.383	0.0212	1530.14	0.0088	0.009003
Ni	60	3	He	1.037	0.0181	1290.10	0.0088	0.009003
Ni	60	3	He	0.999	0.0178	1290.12	0.0088	0.009003
Cu	63	3	He	0.046	0.0061	440.02	0.0249	0.004937
Cu	63	3	He	-0.018	0.0045	320.01	0.0249	0.004937
Cu	63	3	He	0.056	0.0063	460.02	0.0249	0.004937
Zn	66	3	He	0.115	0.0051	370.02	0.0025	0.004836
Zn	66	3	He	0.147	0.0052	370.02	0.0025	0.004836
Zn	66	3	He	0.557	0.0062	450.02	0.0025	0.004836
As	75	3	He	0.052	0.0005	38.00	0.0017	0.0004347
As	75	3	He	-0.024	0.0004	28.00	0.0017	0.0004347
As	75	3	He	-0.028	0.0004	28.00	0.0017	0.0004347
Sr	88	3	He	0.204	0.0024	150.01	0.0078	0.0007762
Sr	88	3	He	0.183	0.0022	140.01	0.0078	0.0007762
Sr	88	3	He	0.127	0.0018	110.00	0.0078	0.0007762
Mo	98	3	He	0.177	0.0044	280.01	0.022	0.0005162
Mo	98	3	He	0.106	0.0028	180.01	0.022	0.0005162
Mo	98	3	He	0.137	0.0035	220.01	0.022	0.0005162
Ag	107	3	He	0.007	0.0008	50.00	0.0455	0.0004641
Ag	107	3	He	0.007	0.0008	50.00	0.0455	0.0004641
Ag	107	3	He	0.011	0.001	60.00	0.0455	0.0004641
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Cd	111	3	He	-0.011	0	0.00	0.0048	5.152E-05
Cd	111	3	He	0.009	0.0001	6.00	0.0048	5.152E-05
Sn	120	3	He	0.148	0.0177	1120.09	0.0143	0.01559
Sn	120	3	He	0.479	0.0224	1420.54	0.0143	0.01559
Sn	120	3	He	0.206	0.0185	1150.09	0.0143	0.01559
Sb	121	3	He	0.005	0.0003	20.00	0.0124	0.000258
Sb	121	3	He	0.005	0.0003	20.00	0.0124	0.000258
Sb	121	3	He	-0.008	0.0002	10.00	0.0124	0.000258
Ba	137	3	He	0.182	0.0011	70.00	0.0044	0.000309
Ba	137	3	He	0.002	0.0003	20.00	0.0044	0.000309
Ba	137	3	He	0.04	0.0005	30.00	0.0044	0.000309
Tl	205	3	He	0.014	0.0014	300.01	0.0276	0.001005
Tl	205	3	He	0.006	0.0012	250.01	0.0276	0.001005
Tl	205	3	He	0.024	0.0017	360.02	0.0276	0.001005
Pb	208	3	He	-0.003	0.0021	270.02	0.0364	0.002176
Pb	208	3	He	-0.022	0.0014	150.01	0.0364	0.002176
Pb	208	3	He	-0.003	0.0021	260.01	0.0364	0.002176
U	238	3	He	0.002	0.0003	70.00	0.0421	0.00024
U	238	3	He	0.004	0.0004	90.00	0.0421	0.00024
U	238	3	He	0.001	0.0003	60.00	0.0421	0.00024
Sc	45	1	No Gas			3182565.89		
Sc	45	1	No Gas			3289582.14		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3318031.20		
Ge	72	1	No Gas			1390564.82		
Ge	72	1	No Gas			1441000.29		
Ge	72	1	No Gas			1447971.70		
Sc	45	2	H2			191495.08		
Sc	45	2	H2			187131.40		
Sc	45	2	H2			189844.70		
Ge	72	2	H2			157543.29		
Ge	72	2	H2			153055.31		
Ge	72	2	H2			157010.55		
In	115	2	H2			439151.13		
In	115	2	H2			426851.87		
In	115	2	H2			441768.74		
Sc	45	3	He			41770.14		
Sc	45	3	He			42713.10		
Sc	45	3	He			42000.67		
Ge	72	3	He			72290.87		
Ge	72	3	He			71176.59		
Ge	72	3	He			72532.55		
In	115	3	He			63303.58		
In	115	3	He			63374.24		
In	115	3	He			62088.07		
Tb	159	3	He			278134.61		
Tb	159	3	He			278116.17		
Tb	159	3	He			279271.52		
Bi	209	3	He			216037.05		
Bi	209	3	He			215834.31		
Bi	209	3	He			216368.61		

Quantitation Report

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Acq Time	2023-08-10 15:20:02
Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

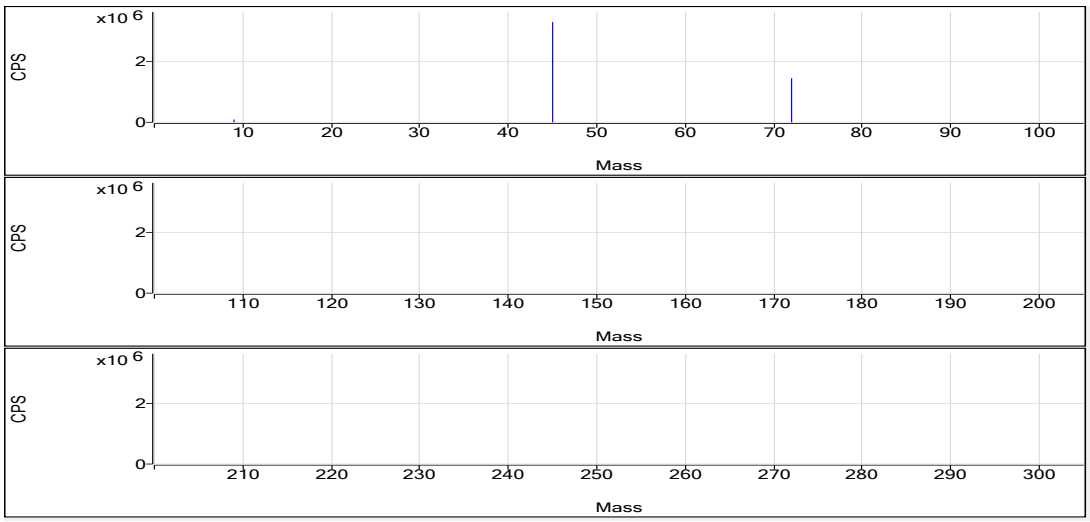
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	47.754	ppb	3.4	90593.57	0.0628	Pulse	0.5000	3
Se	78	72	H2	53.848	ppb	2.6	3318.17	0.0210	Pulse	1.5000	3
Na	23	72	He	5536.765	ppb	1.1	705182.49	9.6176	Pulse	0.1000	3
Mg	24	72	He	5431.794	ppb	1.0	336140.96	4.5844	Pulse	0.1000	3
Al	27	72	He	5341.088	ppb	1.7	94611.24	1.2904	Pulse	0.1000	3
K	39	72	He	5326.937	ppb	1.5	226210.69	3.0852	Pulse	0.1000	3
Ca	44	72	He	5439.955	ppb	3.2	12509.07	0.1706	Pulse	0.1000	3
Ti	47	72	He	5422.179	ppb	0.2	99728.79	1.3600	Pulse	0.1000	3
V	51	72	He	537.686	ppb	0.6	461724.97	6.2970	Pulse	0.5000	3
Cr	52	72	He	536.555	ppb	1.2	600917.22	8.1957	Pulse	0.1000	3
Mn	55	72	He	525.643	ppb	1.5	228500.84	3.1164	Pulse	0.1000	3
Fe	57	72	He	5329.580	ppb	0.6	113510.63	1.5480	Pulse	0.1000	3
Co	59	72	He	534.970	ppb	1.1	1196999.07	16.3253	Pulse	0.1000	3
Ni	60	72	He	532.433	ppb	1.2	343939.15	4.6909	Pulse	0.1000	3
Cu	63	72	He	535.053	ppb	1.3	978668.66	13.3476	Pulse	0.1000	3
Zn	66	72	He	527.947	ppb	0.7	95460.49	1.3019	Pulse	0.1000	3
As	75	72	He	529.623	ppb	1.5	67567.20	0.9215	Pulse	0.5000	3
Sr	88	115	He	54.119	ppb	1.6	26692.37	0.4238	Pulse	0.1000	3
Mo	98	115	He	53.331	ppb	3.5	73963.50	1.1749	Pulse	0.1000	3
Ag	107	115	He	53.285	ppb	2.5	152675.59	2.4250	Pulse	0.1000	3
Cd	111	115	He	52.952	ppb	3.3	16004.48	0.2542	Pulse	0.5000	3
Sn	120	115	He	52.956	ppb	2.6	48518.46	0.7706	Pulse	0.1000	3
Sb	121	115	He	53.299	ppb	3.4	41639.58	0.6614	Pulse	0.1000	3
Ba	137	115	He	523.942	ppb	2.0	144352.43	2.2924	Pulse	0.1000	3
Tl	205	209	He	52.651	ppb	1.0	317661.79	1.4565	Pulse	0.1000	3
Pb	208	209	He	52.301	ppb	0.7	415661.80	1.9058	Pulse	0.1000	3
U	238	209	He	52.028	ppb	1.4	477402.79	2.1889	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3281858.18	2.5	101.3	Pulse	0.1000	3
No Gas	Ge	72	1443305.60	2.1	100.2	Pulse	0.1000	3
H2	Sc	45	192826.64	1.3	98.7	Pulse	0.1000	3
H2	Ge	72	158217.26	1.4	97.1	Pulse	0.1000	3
H2	In	115	436324.75	2.2	100.7	Pulse	0.1000	3
He	Sc	45	42422.07	1.2	106.1	Pulse	0.1000	3
He	Ge	72	73327.04	1.0	101.4	Pulse	0.1000	3
He	In	115	62989.19	2.8	97.5	Pulse	0.1000	3
He	Tb	159	283896.89	1.1	99.3	Pulse	0.1000	3
He	Bi	209	218108.11	0.7	98.2	Pulse	0.1000	3

No Gas



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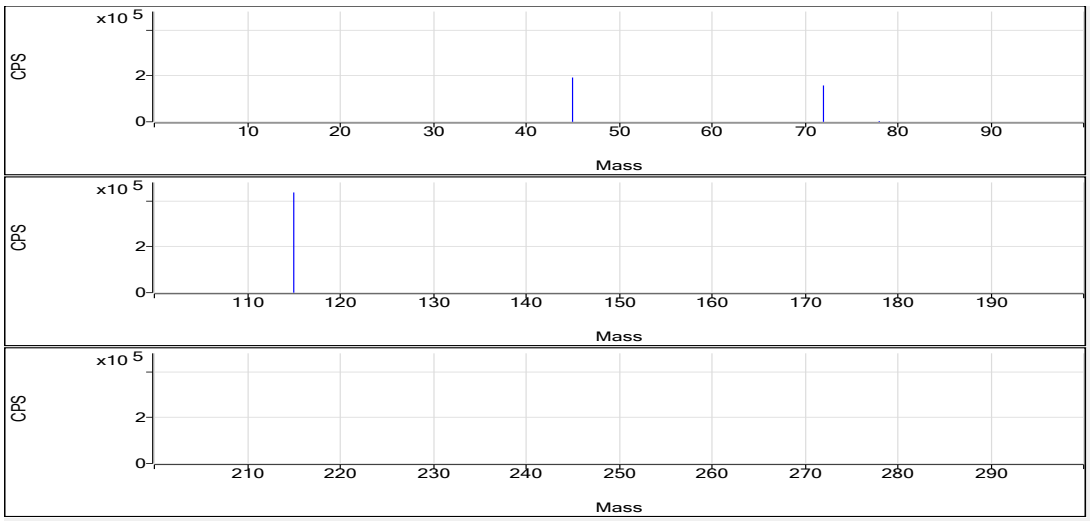
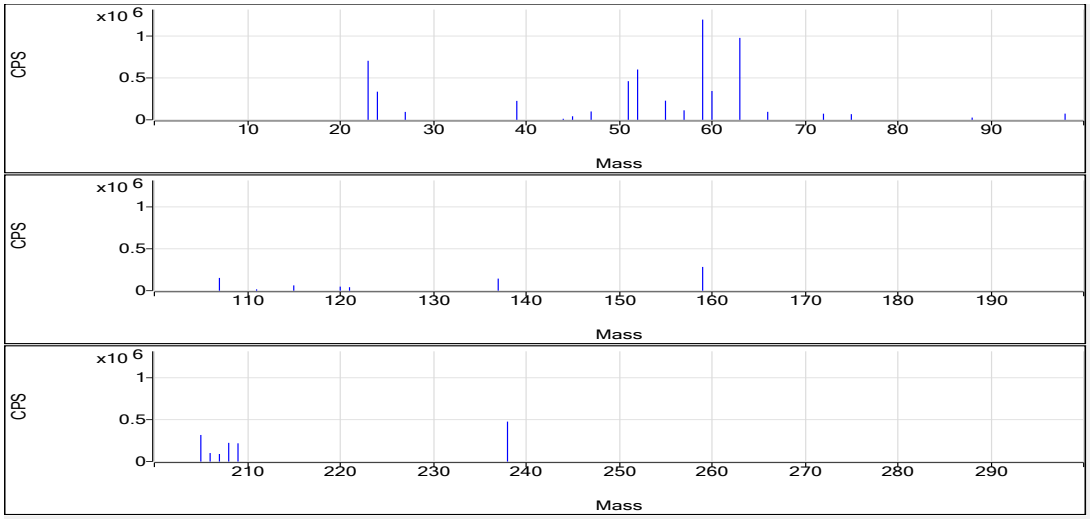


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	49.582	0.0652	91850.85	0.0013	4.694E-05
Be	9	1	No Gas	47.097	0.0619	89992.14	0.0013	4.694E-05
Be	9	1	No Gas	46.583	0.0613	89937.73	0.0013	4.694E-05
Se	78	2	H2	53.835	0.021	3329.72	0.0004	1.089E-05
Se	78	2	H2	55.262	0.0215	3352.40	0.0004	1.089E-05
Se	78	2	H2	52.447	0.0204	3272.38	0.0004	1.089E-05
Na	23	3	He	5482.926	9.5251	703622.18	0.0017	0.1065
Na	23	3	He	5599.982	9.7262	704784.91	0.0017	0.1065
Na	23	3	He	5527.388	9.6015	707140.38	0.0017	0.1065
Mg	24	3	He	5372.31	4.5342	334944.96	0.0008	0.004846
Mg	24	3	He	5479.397	4.6245	335104.57	0.0008	0.004846
Mg	24	3	He	5443.676	4.5944	338373.35	0.0008	0.004846
Al	27	3	He	5236.5	1.2651	93454.66	0.0002	0.001063
Al	27	3	He	5403.283	1.3054	94591.18	0.0002	0.001063
Al	27	3	He	5383.479	1.3006	95787.88	0.0002	0.001063
K	39	3	He	5303.061	3.0721	226932.57	0.0006	0.1436
K	39	3	He	5417.311	3.1351	227179.84	0.0006	0.1436
K	39	3	He	5260.44	3.0485	224519.66	0.0006	0.1436
Ca	44	3	He	5638.654	0.1767	13056.28	0	0.001611
Ca	44	3	He	5371.177	0.1684	12205.48	0	0.001611
Ca	44	3	He	5310.034	0.1665	12265.46	0	0.001611
Ti	47	3	He	5420.951	1.3597	100443.67	0.0003	0.0002737
Ti	47	3	He	5413.804	1.3579	98399.76	0.0003	0.0002737
Ti	47	3	He	5431.781	1.3625	100342.95	0.0003	0.0002737
V	51	3	He	534.752	6.2627	462626.84	0.0117	0.007326
V	51	3	He	541.192	6.3381	459270.22	0.0117	0.007326
V	51	3	He	537.115	6.2904	463277.84	0.0117	0.007326
Cr	52	3	He	529.856	8.0936	597877.84	0.0152	0.02538
Cr	52	3	He	542.958	8.2931	600940.85	0.0152	0.02538
Cr	52	3	He	536.852	8.2002	603932.96	0.0152	0.02538
Mn	55	3	He	516.557	3.0628	226248.18	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	531.334	3.15	228256.97	0.0059	0.01385
Mn	55	3	He	529.04	3.1365	230997.38	0.0059	0.01385
Fe	57	3	He	5313.969	1.5435	114014.83	0.0003	0.003918
Fe	57	3	He	5307.539	1.5416	111707.20	0.0003	0.003918
Fe	57	3	He	5367.23	1.5589	114809.86	0.0003	0.003918
Co	59	3	He	529.287	16.1519	1193139.98	0.0305	0.003084
Co	59	3	He	541.102	16.5124	1196524.90	0.0305	0.003084
Co	59	3	He	534.523	16.3116	1201332.33	0.0305	0.003084
Ni	60	3	He	529.364	4.6639	344518.94	0.0088	0.009003
Ni	60	3	He	539.632	4.7541	344496.75	0.0088	0.009003
Ni	60	3	He	528.305	4.6545	342801.75	0.0088	0.009003
Cu	63	3	He	527.278	13.1537	971665.38	0.0249	0.004937
Cu	63	3	He	540.969	13.4951	977889.99	0.0249	0.004937
Cu	63	3	He	536.912	13.394	986450.61	0.0249	0.004937
Zn	66	3	He	523.892	1.2919	95433.83	0.0025	0.004836
Zn	66	3	He	529.64	1.306	94638.62	0.0025	0.004836
Zn	66	3	He	530.308	1.3077	96309.02	0.0025	0.004836
As	75	3	He	521.438	0.9073	67022.59	0.0017	0.0004347
As	75	3	He	537.63	0.9355	67786.04	0.0017	0.0004347
As	75	3	He	529.8	0.9218	67892.98	0.0017	0.0004347
Sr	88	3	He	54.46	0.4265	26024.39	0.0078	0.0007762
Sr	88	3	He	54.736	0.4287	27226.71	0.0078	0.0007762
Sr	88	3	He	53.161	0.4163	26826.01	0.0078	0.0007762
Mo	98	3	He	55.117	1.2143	74094.19	0.022	0.0005162
Mo	98	3	He	53.459	1.1778	74808.25	0.022	0.0005162
Mo	98	3	He	51.416	1.1328	72988.05	0.022	0.0005162
Ag	107	3	He	54.772	2.4926	152096.40	0.0455	0.0004641
Ag	107	3	He	52.817	2.4036	152671.18	0.0455	0.0004641
Ag	107	3	He	52.266	2.3786	153259.19	0.0455	0.0004641
Cd	111	3	He	54.754	0.2629	16041.20	0.0048	5.152E-05
Cd	111	3	He	52.844	0.2537	16115.27	0.0048	5.152E-05
Cd	111	3	He	51.257	0.2461	15856.97	0.0048	5.152E-05
Sn	120	3	He	54.383	0.791	48264.31	0.0143	0.01559
Sn	120	3	He	52.799	0.7684	48805.87	0.0143	0.01559
Sn	120	3	He	51.684	0.7525	48485.20	0.0143	0.01559
Sb	121	3	He	54.862	0.6808	41542.68	0.0124	0.000258
Sb	121	3	He	53.697	0.6664	42324.85	0.0124	0.000258
Sb	121	3	He	51.339	0.6371	41051.20	0.0124	0.000258
Ba	137	3	He	535.795	2.3443	143046.61	0.0044	0.000309
Ba	137	3	He	514.972	2.2532	143115.47	0.0044	0.000309
Ba	137	3	He	521.06	2.2798	146895.21	0.0044	0.000309
Tl	205	3	He	53.219	1.4722	318648.04	0.0276	0.001005
Tl	205	3	He	52.21	1.4443	317128.76	0.0276	0.001005
Tl	205	3	He	52.524	1.453	317208.57	0.0276	0.001005
Pb	208	3	He	52.483	1.9124	221891.11	0.0364	0.002176
Pb	208	3	He	51.892	1.8909	223252.20	0.0364	0.002176
Pb	208	3	He	52.529	1.9141	225294.31	0.0364	0.002176
U	238	3	He	52.304	2.2005	476285.27	0.0421	0.00024
U	238	3	He	51.211	2.1546	473081.91	0.0421	0.00024
U	238	3	He	52.57	2.2117	482841.20	0.0421	0.00024
Sc	45	1	No Gas			3188113.39		
Sc	45	1	No Gas			3310388.08		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3347073.08		
Ge	72	1	No Gas			1408749.35		
Ge	72	1	No Gas			1453015.29		
Ge	72	1	No Gas			1468152.17		
Sc	45	2	H2			192073.67		
Sc	45	2	H2			190757.07		
Sc	45	2	H2			195649.18		
Ge	72	2	H2			158767.24		
Ge	72	2	H2			155723.86		
Ge	72	2	H2			160160.68		
In	115	2	H2			436108.51		
In	115	2	H2			426724.10		
In	115	2	H2			446141.63		
Sc	45	3	He			42913.25		
Sc	45	3	He			41910.40		
Sc	45	3	He			42442.56		
Ge	72	3	He			73869.99		
Ge	72	3	He			72462.34		
Ge	72	3	He			73648.80		
In	115	3	He			61395.30		
In	115	3	He			63897.11		
In	115	3	He			64810.48		
Tb	159	3	He			280454.37		
Tb	159	3	He			284373.37		
Tb	159	3	He			286862.94		
Bi	209	3	He			216441.25		
Bi	209	3	He			219571.48		
Bi	209	3	He			218311.60		

Quantitation Report

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Sample Type	CCB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

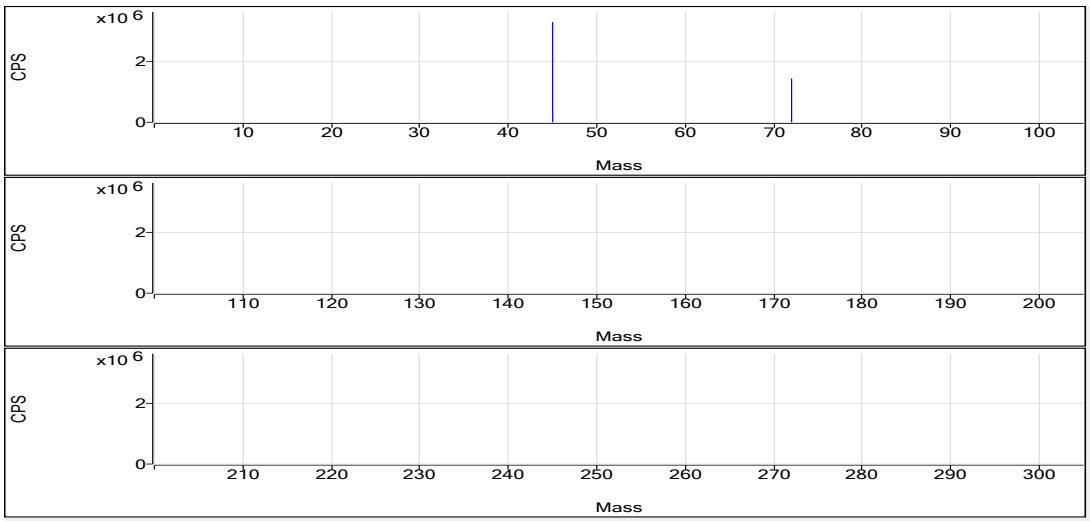
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.026	ppb	18.9	116.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.070	ppb	54.1	6.00	0.0000	Pulse	1.5000	3
Na	23	72	He	26.766	ppb	7.2	11107.80	0.1524	Pulse	0.1000	3
Mg	24	72	He	12.494	ppb	10.0	1120.08	0.0154	Pulse	0.1000	3
Al	27	72	He	8.684	ppb	13.6	230.01	0.0032	Pulse	0.1000	3
K	39	72	He	27.540	ppb	56.1	11574.91	0.1588	Pulse	0.1000	3
Ca	44	72	He	51.569	ppb	68.3	233.35	0.0032	Pulse	0.1000	3
Ti	47	72	He	2.378	ppb	58.1	63.33	0.0009	Pulse	0.1000	3
V	51	72	He	0.176	ppb	18.8	683.35	0.0094	Pulse	0.5000	3
Cr	52	72	He	0.070	ppb	117.5	1926.85	0.0265	Pulse	0.1000	3
Mn	55	72	He	-0.874	ppb	N/A	633.37	0.0087	Pulse	0.1000	3
Fe	57	72	He	14.772	ppb	24.4	596.70	0.0082	Pulse	0.1000	3
Co	59	72	He	0.197	ppb	3.8	663.38	0.0091	Pulse	0.1000	3
Ni	60	72	He	1.094	ppb	3.1	1356.78	0.0186	Pulse	0.1000	3
Cu	63	72	He	0.145	ppb	54.4	623.37	0.0086	Pulse	0.1000	3
Zn	66	72	He	0.062	ppb	391.5	363.35	0.0050	Pulse	0.1000	3
As	75	72	He	0.187	ppb	51.3	55.33	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.178	ppb	28.4	136.67	0.0022	Pulse	0.1000	3
Mo	98	115	He	0.150	ppb	4.6	240.01	0.0038	Pulse	0.1000	3
Ag	107	115	He	0.024	ppb	22.4	96.67	0.0015	Pulse	0.1000	3
Cd	111	115	He	0.009	ppb	251.5	6.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.140	ppb	75.4	1106.76	0.0176	Pulse	0.1000	3
Sb	121	115	He	0.090	ppb	59.3	86.67	0.0014	Pulse	0.1000	3
Ba	137	115	He	0.232	ppb	45.2	83.34	0.0013	Pulse	0.1000	3
Tl	205	209	He	0.246	ppb	15.8	1706.85	0.0078	Pulse	0.1000	3
Pb	208	209	He	0.013	ppb	80.4	576.70	0.0026	Pulse	0.1000	3
U	238	209	He	0.029	ppb	26.0	323.35	0.0015	Pulse	0.1000	3

ISTD Table:

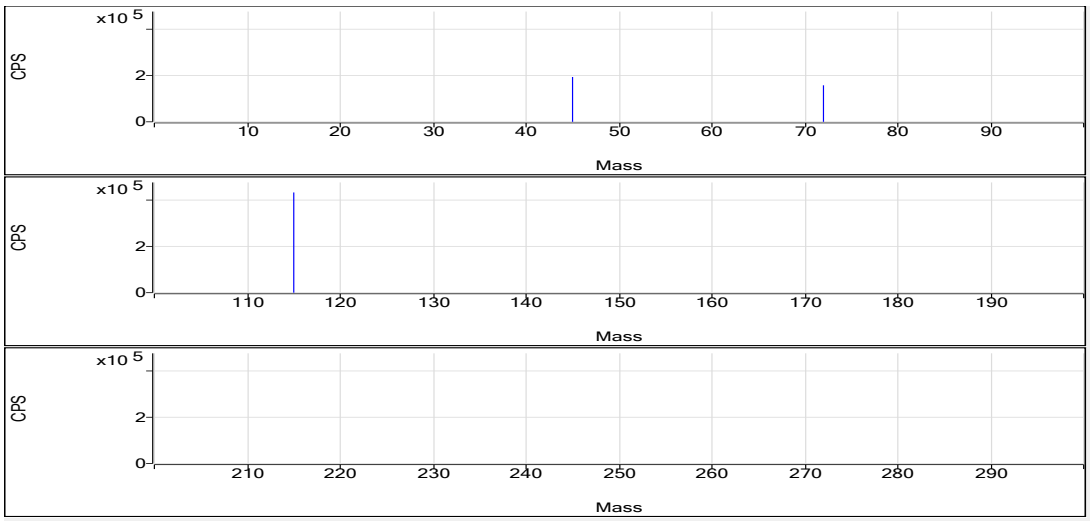
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3298272.77	1.5	101.8	Pulse	0.1000	3
No Gas	Ge	72	1443967.27	1.2	100.3	Pulse	0.1000	3
H2	Sc	45	193654.87	1.7	99.1	Pulse	0.1000	3
H2	Ge	72	157778.79	0.2	96.8	Pulse	0.1000	3
H2	In	115	433081.76	1.1	99.9	Pulse	0.1000	3
He	Sc	45	42937.06	1.7	107.4	Pulse	0.1000	3
He	Ge	72	72874.57	1.5	100.8	Pulse	0.1000	3
He	In	115	62953.63	0.4	97.5	Pulse	0.1000	3
He	Tb	159	280903.91	0.8	98.2	Pulse	0.1000	3
He	Bi	209	218460.99	0.9	98.3	Pulse	0.1000	3

No Gas

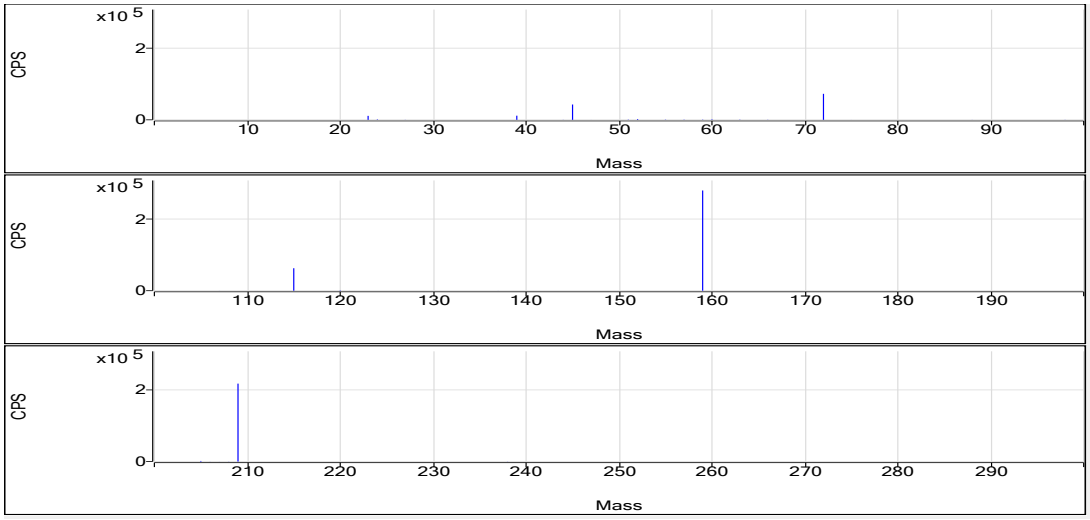


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.031	0.0001	126.00	0.0013	4.694E-05
Be	9	1	No Gas	0.023	0.0001	112.00	0.0013	4.694E-05
Be	9	1	No Gas	0.023	0.0001	112.00	0.0013	4.694E-05
Se	78	2	H2	0.026	0	3.33	0.0004	1.089E-05
Se	78	2	H2	0.092	0	7.33	0.0004	1.089E-05
Se	78	2	H2	0.091	0	7.33	0.0004	1.089E-05
Na	23	3	He	28.721	0.1558	11384.72	0.0017	0.1065
Na	23	3	He	26.723	0.1524	10924.29	0.0017	0.1065
Na	23	3	He	24.853	0.1491	11014.40	0.0017	0.1065
Mg	24	3	He	11.783	0.0148	1080.08	0.0008	0.004846
Mg	24	3	He	13.939	0.0166	1190.09	0.0008	0.004846
Mg	24	3	He	11.76	0.0148	1090.08	0.0008	0.004846
Al	27	3	He	8.07	0.003	220.01	0.0002	0.001063
Al	27	3	He	10.043	0.0035	250.02	0.0002	0.001063
Al	27	3	He	7.939	0.003	220.01	0.0002	0.001063
K	39	3	He	44.33	0.1681	12285.52	0.0006	0.1436
K	39	3	He	24.389	0.1571	11264.63	0.0006	0.1436
K	39	3	He	13.901	0.1513	11174.57	0.0006	0.1436
Ca	44	3	He	36.256	0.0027	200.01	0	0.001611
Ca	44	3	He	91.837	0.0045	320.02	0	0.001611
Ca	44	3	He	26.614	0.0024	180.01	0	0.001611
Ti	47	3	He	3.82	0.0012	90.00	0.0003	0.0002737
Ti	47	3	He	2.245	0.0008	60.00	0.0003	0.0002737
Ti	47	3	He	1.068	0.0005	40.00	0.0003	0.0002737
V	51	3	He	0.15	0.0091	664.02	0.0117	0.007326
V	51	3	He	0.213	0.0098	704.02	0.0117	0.007326
V	51	3	He	0.163	0.0092	682.02	0.0117	0.007326
Cr	52	3	He	0.095	0.0268	1960.18	0.0152	0.02538
Cr	52	3	He	0.138	0.0275	1970.19	0.0152	0.02538
Cr	52	3	He	-0.022	0.0251	1850.19	0.0152	0.02538
Mn	55	3	He	-0.701	0.0097	710.05	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.906	0.0085	610.04	0.0059	0.01385
Mn	55	3	He	-1.016	0.0079	580.03	0.0059	0.01385
Fe	57	3	He	15.764	0.0085	620.04	0.0003	0.003918
Fe	57	3	He	17.77	0.0091	650.03	0.0003	0.003918
Fe	57	3	He	10.783	0.007	520.02	0.0003	0.003918
Co	59	3	He	0.19	0.0089	650.05	0.0305	0.003084
Co	59	3	He	0.196	0.0091	650.04	0.0305	0.003084
Co	59	3	He	0.205	0.0093	690.04	0.0305	0.003084
Ni	60	3	He	1.108	0.0187	1370.11	0.0088	0.009003
Ni	60	3	He	1.118	0.0188	1350.12	0.0088	0.009003
Ni	60	3	He	1.055	0.0183	1350.11	0.0088	0.009003
Cu	63	3	He	0.06	0.0064	470.02	0.0249	0.004937
Cu	63	3	He	0.216	0.0103	740.04	0.0249	0.004937
Cu	63	3	He	0.16	0.0089	660.04	0.0249	0.004937
Zn	66	3	He	-0.186	0.0044	320.02	0.0025	0.004836
Zn	66	3	He	0.302	0.0056	400.02	0.0025	0.004836
Zn	66	3	He	0.071	0.005	370.02	0.0025	0.004836
As	75	3	He	0.254	0.0009	64.00	0.0017	0.0004347
As	75	3	He	0.231	0.0008	60.00	0.0017	0.0004347
As	75	3	He	0.077	0.0006	42.00	0.0017	0.0004347
Sr	88	3	He	0.184	0.0022	140.01	0.0078	0.0007762
Sr	88	3	He	0.125	0.0018	110.00	0.0078	0.0007762
Sr	88	3	He	0.226	0.0025	160.01	0.0078	0.0007762
Mo	98	3	He	0.156	0.004	250.01	0.022	0.0005162
Mo	98	3	He	0.15	0.0038	240.02	0.022	0.0005162
Mo	98	3	He	0.143	0.0037	230.01	0.022	0.0005162
Ag	107	3	He	0.028	0.0017	110.00	0.0455	0.0004641
Ag	107	3	He	0.025	0.0016	100.00	0.0455	0.0004641
Ag	107	3	He	0.018	0.0013	80.00	0.0455	0.0004641
Cd	111	3	He	0.035	0.0002	14.00	0.0048	5.152E-05
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Sn	120	3	He	0.26	0.0193	1220.11	0.0143	0.01559
Sn	120	3	He	0.07	0.0166	1040.08	0.0143	0.01559
Sn	120	3	He	0.088	0.0168	1060.08	0.0143	0.01559
Sb	121	3	He	0.03	0.0006	40.00	0.0124	0.000258
Sb	121	3	He	0.108	0.0016	100.00	0.0124	0.000258
Sb	121	3	He	0.133	0.0019	120.01	0.0124	0.000258
Ba	137	3	He	0.291	0.0016	100.01	0.0044	0.000309
Ba	137	3	He	0.294	0.0016	100.01	0.0044	0.000309
Ba	137	3	He	0.111	0.0008	50.00	0.0044	0.000309
Tl	205	3	He	0.286	0.0089	1930.22	0.0276	0.001005
Tl	205	3	He	0.245	0.0078	1700.18	0.0276	0.001005
Tl	205	3	He	0.208	0.0068	1490.15	0.0276	0.001005
Pb	208	3	He	0.007	0.0024	270.01	0.0364	0.002176
Pb	208	3	He	0.025	0.0031	350.02	0.0364	0.002176
Pb	208	3	He	0.006	0.0024	310.02	0.0364	0.002176
U	238	3	He	0.021	0.0011	240.01	0.0421	0.00024
U	238	3	He	0.035	0.0017	370.02	0.0421	0.00024
U	238	3	He	0.033	0.0016	360.02	0.0421	0.00024
Sc	45	1	No Gas			3243299.64		
Sc	45	1	No Gas			3313591.83		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3337926.83		
Ge	72	1	No Gas			1428445.60		
Ge	72	1	No Gas			1440991.23		
Ge	72	1	No Gas			1462464.98		
Sc	45	2	H2			192874.82		
Sc	45	2	H2			190909.14		
Sc	45	2	H2			197180.64		
Ge	72	2	H2			158027.37		
Ge	72	2	H2			157473.09		
Ge	72	2	H2			157835.91		
In	115	2	H2			436123.27		
In	115	2	H2			427714.88		
In	115	2	H2			435407.14		
Sc	45	3	He			43575.64		
Sc	45	3	He			43104.11		
Sc	45	3	He			42131.43		
Ge	72	3	He			73075.64		
Ge	72	3	He			71699.45		
Ge	72	3	He			73848.62		
In	115	3	He			63223.13		
In	115	3	He			62731.60		
In	115	3	He			62932.07		
Tb	159	3	He			278594.70		
Tb	159	3	He			283279.72		
Tb	159	3	He			280837.30		
Bi	209	3	He			216594.80		
Bi	209	3	He			218229.74		
Bi	209	3	He			220558.43		

Quantitation Report

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Comment	G3 ICP
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

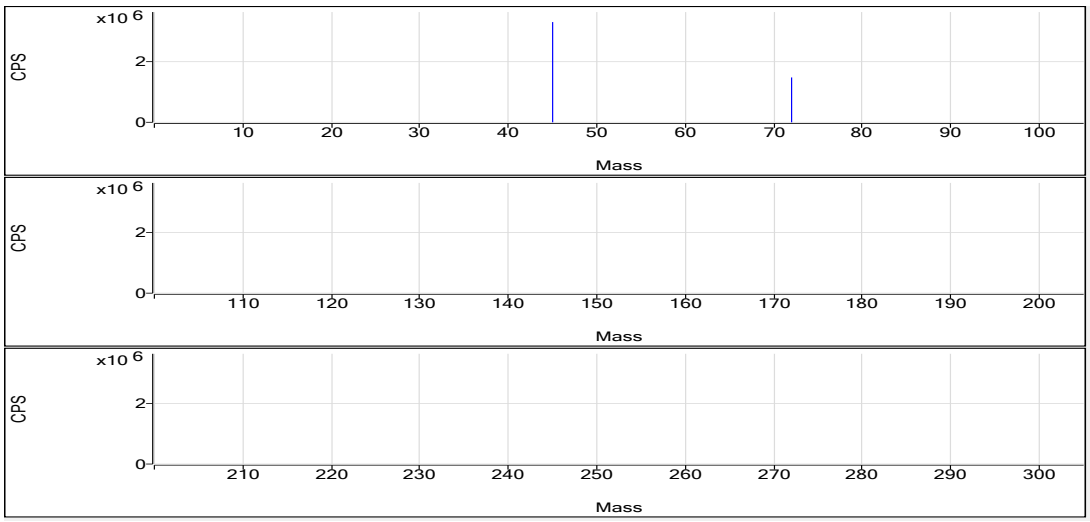
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.009	ppb	N/A	52.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.000	ppb	3399.0	1.78	0.0000	Pulse	1.5000	3
Na	23	72	He	27.348	ppb	7.6	11391.36	0.1534	Pulse	0.1000	3
Mg	24	72	He	9.550	ppb	19.4	956.73	0.0129	Pulse	0.1000	3
Al	27	72	He	8.216	ppb	32.7	226.68	0.0030	Pulse	0.1000	3
K	39	72	He	18.739	ppb	51.5	11431.46	0.1540	Pulse	0.1000	3
Ca	44	72	He	15.997	ppb	79.5	156.68	0.0021	Pulse	0.1000	3
Ti	47	72	He	-0.017	ppb	N/A	20.00	0.0003	Pulse	0.1000	3
V	51	72	He	-0.013	ppb	N/A	532.68	0.0072	Pulse	0.5000	3
Cr	52	72	He	0.193	ppb	56.3	2103.56	0.0283	Pulse	0.1000	3
Mn	55	72	He	-1.183	ppb	N/A	510.03	0.0069	Pulse	0.1000	3
Fe	57	72	He	28.327	ppb	14.8	900.06	0.0121	Pulse	0.1000	3
Co	59	72	He	0.033	ppb	26.7	303.34	0.0041	Pulse	0.1000	3
Ni	60	72	He	1.090	ppb	5.8	1380.12	0.0186	Pulse	0.1000	3
Cu	63	72	He	0.234	ppb	13.2	800.05	0.0108	Pulse	0.1000	3
Zn	66	72	He	1.592	ppb	15.9	650.04	0.0087	Pulse	0.1000	3
As	75	72	He	0.024	ppb	240.8	35.33	0.0005	Pulse	0.5000	3
Sr	88	115	He	0.108	ppb	56.5	103.33	0.0016	Pulse	0.1000	3
Mo	98	115	He	0.107	ppb	39.6	183.35	0.0029	Pulse	0.1000	3
Ag	107	115	He	0.004	ppb	169.0	40.00	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.015	ppb	40.2	8.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.135	ppb	85.2	1116.75	0.0175	Pulse	0.1000	3
Sb	121	115	He	0.034	ppb	57.4	43.33	0.0007	Pulse	0.1000	3
Ba	137	115	He	0.108	ppb	31.1	50.00	0.0008	Pulse	0.1000	3
Tl	205	209	He	0.033	ppb	21.7	420.02	0.0019	Pulse	0.1000	3
Pb	208	209	He	0.004	ppb	415.0	506.69	0.0023	Pulse	0.1000	3
U	238	209	He	0.002	ppb	103.7	73.33	0.0003	Pulse	0.1000	3

ISTD Table:

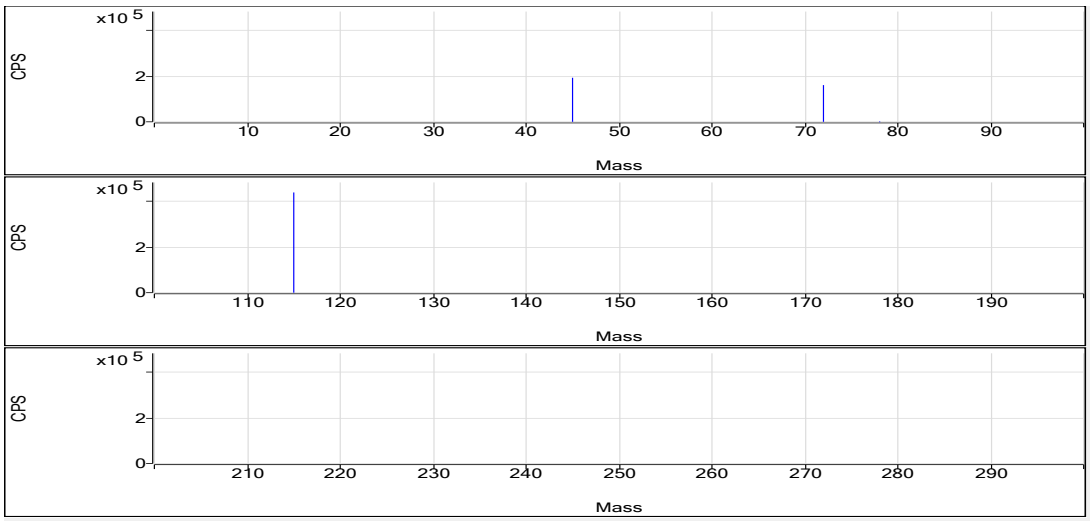
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3312269.33	1.9	102.2	Pulse	0.1000	3
No Gas	Ge	72	1482340.29	1.3	103.0	Pulse	0.1000	3
H2	Sc	45	192620.98	1.5	98.6	Pulse	0.1000	3
H2	Ge	72	160515.78	0.6	98.5	Pulse	0.1000	3
H2	In	115	438224.68	0.9	101.1	Pulse	0.1000	3
He	Sc	45	41382.79	2.4	103.5	Pulse	0.1000	3
He	Ge	72	74258.28	1.5	102.7	Pulse	0.1000	3
He	In	115	63771.12	1.4	98.7	Pulse	0.1000	3
He	Tb	159	280607.17	0.5	98.1	Pulse	0.1000	3
He	Bi	209	219948.45	1.0	99.0	Pulse	0.1000	3

No Gas

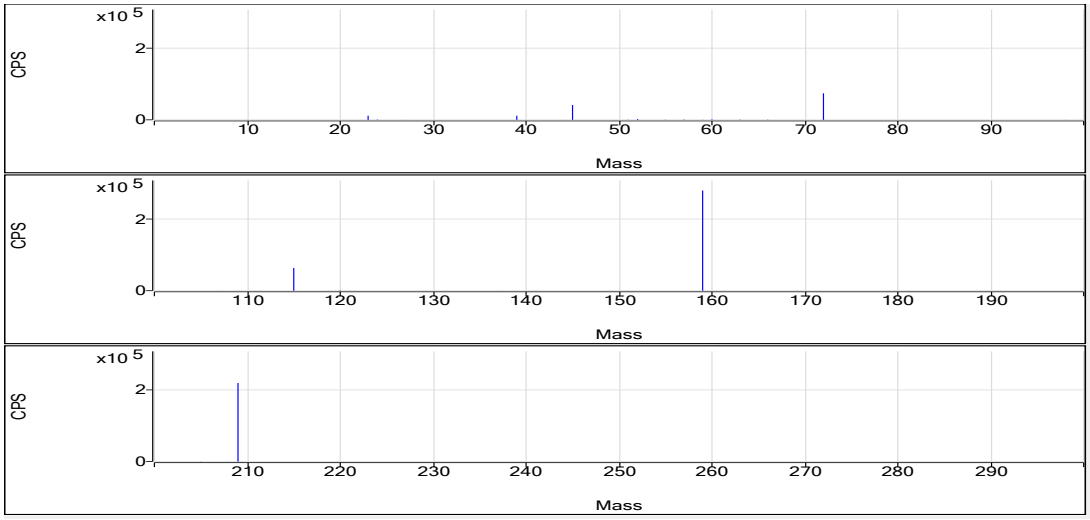


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.001	0	68.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.012	0	46.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.014	0	42.00	0.0013	4.694E-05
Se	78	2	H2	-0.017	0	0.67	0.0004	1.089E-05
Se	78	2	H2	0.015	0	2.67	0.0004	1.089E-05
Se	78	2	H2	0.004	0	2.00	0.0004	1.089E-05
Na	23	3	He	29.354	0.1569	11454.67	0.0017	0.1065
Na	23	3	He	27.464	0.1536	11464.75	0.0017	0.1065
Na	23	3	He	25.227	0.1498	11254.67	0.0017	0.1065
Mg	24	3	He	11.148	0.0142	1040.07	0.0008	0.004846
Mg	24	3	He	9.989	0.0133	990.06	0.0008	0.004846
Mg	24	3	He	7.513	0.0112	840.05	0.0008	0.004846
Al	27	3	He	5.243	0.0023	170.01	0.0002	0.001063
Al	27	3	He	8.921	0.0032	240.01	0.0002	0.001063
Al	27	3	He	10.484	0.0036	270.01	0.0002	0.001063
K	39	3	He	27.206	0.1587	11584.92	0.0006	0.1436
K	39	3	He	20.769	0.1551	11574.88	0.0006	0.1436
K	39	3	He	8.243	0.1482	11134.59	0.0006	0.1436
Ca	44	3	He	5.463	0.0018	130.01	0	0.001611
Ca	44	3	He	30.113	0.0025	190.01	0	0.001611
Ca	44	3	He	12.415	0.002	150.01	0	0.001611
Ti	47	3	He	0.001	0.0003	20.00	0.0003	0.0002737
Ti	47	3	He	-0.023	0.0003	20.00	0.0003	0.0002737
Ti	47	3	He	-0.03	0.0003	20.00	0.0003	0.0002737
V	51	3	He	0.006	0.0074	540.01	0.0117	0.007326
V	51	3	He	-0.024	0.007	526.01	0.0117	0.007326
V	51	3	He	-0.021	0.0071	532.01	0.0117	0.007326
Cr	52	3	He	0.141	0.0275	2010.20	0.0152	0.02538
Cr	52	3	He	0.12	0.0272	2030.22	0.0152	0.02538
Cr	52	3	He	0.317	0.0302	2270.26	0.0152	0.02538
Mn	55	3	He	-1.164	0.007	510.03	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-1.121	0.0072	540.03	0.0059	0.01385
Mn	55	3	He	-1.265	0.0064	480.02	0.0059	0.01385
Fe	57	3	He	30.917	0.0129	940.06	0.0003	0.003918
Fe	57	3	He	23.483	0.0107	800.05	0.0003	0.003918
Fe	57	3	He	30.582	0.0128	960.06	0.0003	0.003918
Co	59	3	He	0.043	0.0044	320.01	0.0305	0.003084
Co	59	3	He	0.031	0.004	300.01	0.0305	0.003084
Co	59	3	He	0.025	0.0039	290.01	0.0305	0.003084
Ni	60	3	He	1.11	0.0188	1370.11	0.0088	0.009003
Ni	60	3	He	1.14	0.019	1420.13	0.0088	0.009003
Ni	60	3	He	1.02	0.018	1350.13	0.0088	0.009003
Cu	63	3	He	0.214	0.0103	750.05	0.0249	0.004937
Cu	63	3	He	0.27	0.0117	870.07	0.0249	0.004937
Cu	63	3	He	0.218	0.0104	780.04	0.0249	0.004937
Zn	66	3	He	1.321	0.0081	590.04	0.0025	0.004836
Zn	66	3	He	1.632	0.0088	660.04	0.0025	0.004836
Zn	66	3	He	1.824	0.0093	700.05	0.0025	0.004836
As	75	3	He	0.081	0.0006	42.00	0.0017	0.0004347
As	75	3	He	0.027	0.0005	36.00	0.0017	0.0004347
As	75	3	He	-0.036	0.0004	28.00	0.0017	0.0004347
Sr	88	3	He	0.043	0.0011	70.00	0.0078	0.0007762
Sr	88	3	He	0.118	0.0017	110.00	0.0078	0.0007762
Sr	88	3	He	0.163	0.0021	130.00	0.0078	0.0007762
Mo	98	3	He	0.156	0.004	250.02	0.022	0.0005162
Mo	98	3	He	0.082	0.0023	150.01	0.022	0.0005162
Mo	98	3	He	0.084	0.0024	150.01	0.022	0.0005162
Ag	107	3	He	0.011	0.001	60.00	0.0455	0.0004641
Ag	107	3	He	0	0.0005	30.00	0.0455	0.0004641
Ag	107	3	He	0	0.0005	30.00	0.0455	0.0004641
Cd	111	3	He	0.009	0.0001	6.00	0.0048	5.152E-05
Cd	111	3	He	0.021	0.0002	10.00	0.0048	5.152E-05
Cd	111	3	He	0.016	0.0001	8.00	0.0048	5.152E-05
Sn	120	3	He	0.207	0.0185	1170.10	0.0143	0.01559
Sn	120	3	He	0.195	0.0184	1190.09	0.0143	0.01559
Sn	120	3	He	0.002	0.0156	990.06	0.0143	0.01559
Sb	121	3	He	0.018	0.0005	30.00	0.0124	0.000258
Sb	121	3	He	0.029	0.0006	40.00	0.0124	0.000258
Sb	121	3	He	0.056	0.0009	60.00	0.0124	0.000258
Ba	137	3	He	0.11	0.0008	50.00	0.0044	0.000309
Ba	137	3	He	0.141	0.0009	60.00	0.0044	0.000309
Ba	137	3	He	0.074	0.0006	40.00	0.0044	0.000309
Tl	205	3	He	0.037	0.002	440.02	0.0276	0.001005
Tl	205	3	He	0.025	0.0017	370.02	0.0276	0.001005
Tl	205	3	He	0.037	0.002	450.03	0.0276	0.001005
Pb	208	3	He	0.018	0.0028	340.02	0.0364	0.002176
Pb	208	3	He	0.004	0.0023	250.01	0.0364	0.002176
Pb	208	3	He	-0.012	0.0018	160.01	0.0364	0.002176
U	238	3	He	0.004	0.0004	90.00	0.0421	0.00024
U	238	3	He	0.003	0.0004	80.00	0.0421	0.00024
U	238	3	He	0	0.0002	50.00	0.0421	0.00024
Sc	45	1	No Gas			3357112.45		
Sc	45	1	No Gas			3337262.45		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3242433.08		
Ge	72	1	No Gas			1497208.88		
Ge	72	1	No Gas			1488552.32		
Ge	72	1	No Gas			1461259.67		
Sc	45	2	H2			194393.42		
Sc	45	2	H2			189377.65		
Sc	45	2	H2			194091.87		
Ge	72	2	H2			159758.64		
Ge	72	2	H2			160262.19		
Ge	72	2	H2			161526.51		
In	115	2	H2			435230.50		
In	115	2	H2			437015.23		
In	115	2	H2			442428.31		
Sc	45	3	He			40296.61		
Sc	45	3	He			41590.05		
Sc	45	3	He			42261.71		
Ge	72	3	He			73015.25		
Ge	72	3	He			74623.82		
Ge	72	3	He			75135.77		
In	115	3	He			63133.03		
In	115	3	He			64821.52		
In	115	3	He			63384.93		
Tb	159	3	He			279138.55		
Tb	159	3	He			282207.52		
Tb	159	3	He			280475.45		
Bi	209	3	He			217864.31		
Bi	209	3	He			219846.25		
Bi	209	3	He			222134.80		

Quantitation Report

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Acq Time	2023-08-10 15:27:17
Sample Name	LCS 410-402409/2-A @2
Sample Type	Sample
Comment	G3 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

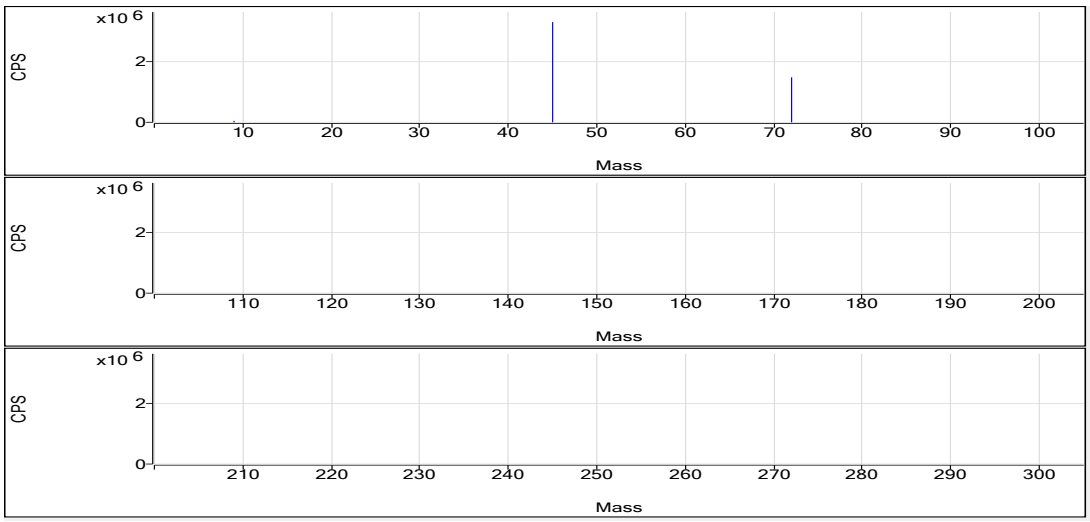
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	25.040	ppb	4.3	48414.62	0.0330	Pulse	0.5000	3
Se	78	72	H2	52.306	ppb	3.1	3325.72	0.0204	Pulse	1.5000	3
Na	23	72	He	2726.313	ppb	1.8	358440.45	4.7898	Pulse	0.1000	3
Mg	24	72	He	2688.706	ppb	1.3	170005.19	2.2717	Pulse	0.1000	3
Al	27	72	He	2651.436	ppb	1.0	47981.71	0.6411	Pulse	0.1000	3
K	39	72	He	2644.703	ppb	2.4	120032.67	1.6041	Pulse	0.1000	3
Ca	44	72	He	2731.270	ppb	4.3	6471.66	0.0864	Pulse	0.1000	3
Ti	47	72	He	271.383	ppb	0.4	5114.38	0.0683	Pulse	0.1000	3
V	51	72	He	265.800	ppb	1.7	233228.63	3.1166	Pulse	0.5000	3
Cr	52	72	He	269.074	ppb	2.0	308506.35	4.1226	Pulse	0.1000	3
Mn	55	72	He	263.895	ppb	1.4	117612.43	1.5715	Pulse	0.1000	3
Fe	57	72	He	2665.056	ppb	0.7	58079.69	0.7760	Pulse	0.1000	3
Co	59	72	He	264.980	ppb	1.3	605261.78	8.0878	Pulse	0.1000	3
Ni	60	72	He	266.528	ppb	1.9	176060.83	2.3527	Pulse	0.1000	3
Cu	63	72	He	266.745	ppb	1.2	498194.35	6.6568	Pulse	0.1000	3
Zn	66	72	He	261.954	ppb	3.0	48515.59	0.6484	Pulse	0.1000	3
As	75	72	He	261.122	ppb	1.6	34018.66	0.4546	Pulse	0.5000	3
Sr	88	115	He	27.624	ppb	2.2	13730.40	0.2167	Pulse	0.1000	3
Mo	98	115	He	26.345	ppb	0.6	36802.15	0.5807	Pulse	0.1000	3
Ag	107	115	He	26.428	ppb	1.6	76216.96	1.2030	Pulse	0.1000	3
Cd	111	115	He	26.836	ppb	2.4	8165.07	0.1289	Pulse	0.5000	3
Sn	120	115	He	53.900	ppb	0.6	49692.73	0.7841	Pulse	0.1000	3
Sb	121	115	He	53.268	ppb	2.6	41876.93	0.6610	Pulse	0.1000	3
Ba	137	115	He	264.493	ppb	1.6	73355.90	1.1574	Pulse	0.1000	3
Tl	205	209	He	52.839	ppb	1.0	320358.29	1.4617	Pulse	0.1000	3
Pb	208	209	He	26.630	ppb	0.9	212912.39	0.9714	Pulse	0.1000	3
U	238	209	He	26.295	ppb	1.1	242487.64	1.1064	Pulse	0.1000	3

ISTD Table:

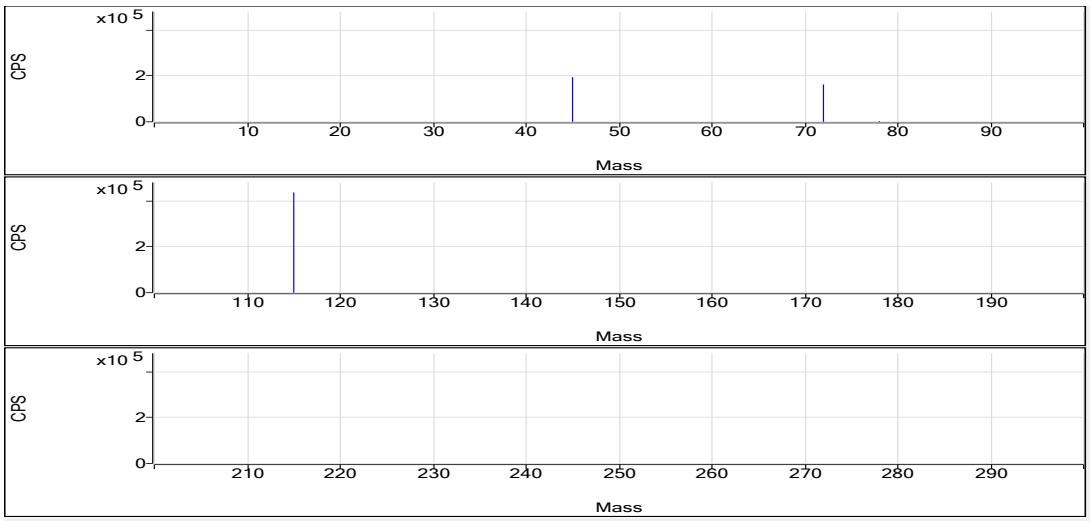
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3276104.02	1.0	101.1	Pulse	0.1000	3
No Gas	Ge	72	1469915.91	1.4	102.1	Pulse	0.1000	3
H2	Sc	45	194767.86	1.9	99.7	Pulse	0.1000	3
H2	Ge	72	163286.45	2.4	100.2	Pulse	0.1000	3
H2	In	115	437853.64	1.3	101.1	Pulse	0.1000	3
He	Sc	45	42756.62	0.8	106.9	Pulse	0.1000	3
He	Ge	72	74844.66	1.4	103.5	Pulse	0.1000	3
He	In	115	63371.99	2.2	98.1	Pulse	0.1000	3
He	Tb	159	281692.94	0.6	98.5	Pulse	0.1000	3
He	Bi	209	219173.77	0.8	98.6	Pulse	0.1000	3

No Gas

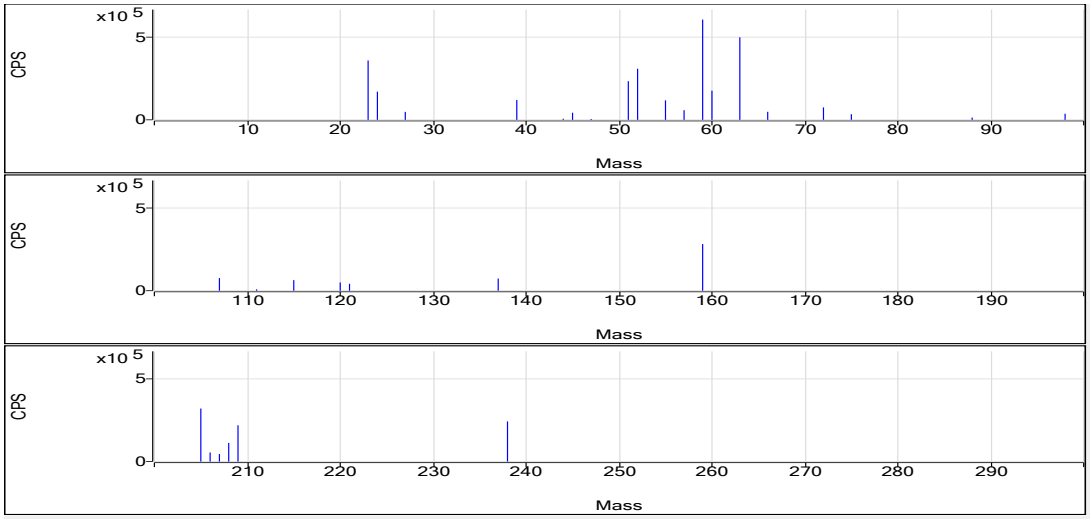


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	23.836	0.0314	46818.18	0.0013	4.694E-05
Be	9	1	No Gas	25.354	0.0334	48898.85	0.0013	4.694E-05
Be	9	1	No Gas	25.929	0.0341	49526.84	0.0013	4.694E-05
Se	78	2	H2	53.284	0.0208	3316.39	0.0004	1.089E-05
Se	78	2	H2	50.463	0.0197	3294.38	0.0004	1.089E-05
Se	78	2	H2	53.172	0.0207	3366.40	0.0004	1.089E-05
Na	23	3	He	2707.568	4.7576	354548.43	0.0017	0.1065
Na	23	3	He	2689.466	4.7265	359310.15	0.0017	0.1065
Na	23	3	He	2781.904	4.8853	361462.77	0.0017	0.1065
Mg	24	3	He	2684.025	2.2678	168999.51	0.0008	0.004846
Mg	24	3	He	2656.143	2.2442	170609.06	0.0008	0.004846
Mg	24	3	He	2725.949	2.3031	170407.01	0.0008	0.004846
Al	27	3	He	2625.823	0.6349	47316.19	0.0002	0.001063
Al	27	3	He	2648.915	0.6405	48690.91	0.0002	0.001063
Al	27	3	He	2679.572	0.6479	47938.04	0.0002	0.001063
K	39	3	He	2675.342	1.621	120801.41	0.0006	0.1436
K	39	3	He	2572.629	1.5643	118917.43	0.0006	0.1436
K	39	3	He	2686.138	1.627	120379.17	0.0006	0.1436
Ca	44	3	He	2800.271	0.0886	6601.76	0	0.001611
Ca	44	3	He	2799.143	0.0886	6731.78	0	0.001611
Ca	44	3	He	2594.395	0.0822	6081.45	0	0.001611
Ti	47	3	He	271.854	0.0684	5101.02	0.0003	0.0002737
Ti	47	3	He	272.25	0.0685	5211.10	0.0003	0.0002737
Ti	47	3	He	270.046	0.068	5031.03	0.0003	0.0002737
V	51	3	He	264.071	3.0964	230750.11	0.0117	0.007326
V	51	3	He	262.329	3.076	233838.75	0.0117	0.007326
V	51	3	He	270.999	3.1774	235097.03	0.0117	0.007326
Cr	52	3	He	268.089	4.1076	306113.98	0.0152	0.02538
Cr	52	3	He	264.362	4.0509	307951.75	0.0152	0.02538
Cr	52	3	He	274.77	4.2094	311453.32	0.0152	0.02538
Mn	55	3	He	260.269	1.5501	115516.05	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	263.855	1.5712	119446.46	0.0059	0.01385
Mn	55	3	He	267.561	1.5931	117874.79	0.0059	0.01385
Fe	57	3	He	2684.766	0.7817	58257.11	0.0003	0.003918
Fe	57	3	He	2652.114	0.7723	58708.81	0.0003	0.003918
Fe	57	3	He	2658.287	0.7741	57273.15	0.0003	0.003918
Co	59	3	He	263.848	8.0532	600150.23	0.0305	0.003084
Co	59	3	He	262.193	8.0027	608373.00	0.0305	0.003084
Co	59	3	He	268.899	8.2073	607262.10	0.0305	0.003084
Ni	60	3	He	263.874	2.3293	173587.95	0.0088	0.009003
Ni	60	3	He	263.24	2.3238	176653.47	0.0088	0.009003
Ni	60	3	He	272.471	2.4049	177941.07	0.0088	0.009003
Cu	63	3	He	264.254	6.5947	491453.98	0.0249	0.004937
Cu	63	3	He	265.609	6.6285	503900.73	0.0249	0.004937
Cu	63	3	He	270.371	6.7472	499228.35	0.0249	0.004937
Zn	66	3	He	263.712	0.6527	48642.26	0.0025	0.004836
Zn	66	3	He	253.485	0.6276	47709.87	0.0025	0.004836
Zn	66	3	He	268.663	0.6649	49194.64	0.0025	0.004836
As	75	3	He	258.552	0.4501	33542.91	0.0017	0.0004347
As	75	3	He	258.806	0.4505	34250.54	0.0017	0.0004347
As	75	3	He	266.008	0.4631	34262.52	0.0017	0.0004347
Sr	88	3	He	28.259	0.2217	13707.18	0.0078	0.0007762
Sr	88	3	He	27.045	0.2122	13536.77	0.0078	0.0007762
Sr	88	3	He	27.568	0.2163	13947.24	0.0078	0.0007762
Mo	98	3	He	26.184	0.5771	35685.91	0.022	0.0005162
Mo	98	3	He	26.327	0.5803	37019.63	0.022	0.0005162
Mo	98	3	He	26.525	0.5846	37700.91	0.022	0.0005162
Ag	107	3	He	26.919	1.2253	75764.30	0.0455	0.0004641
Ag	107	3	He	26.133	1.1895	75885.75	0.0455	0.0004641
Ag	107	3	He	26.233	1.1941	77000.82	0.0455	0.0004641
Cd	111	3	He	27.125	0.1303	8054.34	0.0048	5.152E-05
Cd	111	3	He	27.29	0.1311	8360.53	0.0048	5.152E-05
Cd	111	3	He	26.092	0.1253	8080.35	0.0048	5.152E-05
Sn	120	3	He	53.561	0.7793	48184.03	0.0143	0.01559
Sn	120	3	He	54.207	0.7885	50301.26	0.0143	0.01559
Sn	120	3	He	53.932	0.7845	50592.90	0.0143	0.01559
Sb	121	3	He	54.544	0.6769	41853.42	0.0124	0.000258
Sb	121	3	He	53.448	0.6633	42314.91	0.0124	0.000258
Sb	121	3	He	51.81	0.643	41462.47	0.0124	0.000258
Ba	137	3	He	261.074	1.1425	70641.64	0.0044	0.000309
Ba	137	3	He	269.357	1.1787	75195.73	0.0044	0.000309
Ba	137	3	He	263.049	1.1511	74230.33	0.0044	0.000309
Tl	205	3	He	52.579	1.4545	316664.90	0.0276	0.001005
Tl	205	3	He	52.48	1.4518	321044.35	0.0276	0.001005
Tl	205	3	He	53.457	1.4788	323365.62	0.0276	0.001005
Pb	208	3	He	26.825	0.9786	112700.37	0.0364	0.002176
Pb	208	3	He	26.699	0.9739	113959.50	0.0364	0.002176
Pb	208	3	He	26.365	0.9618	111125.93	0.0364	0.002176
U	238	3	He	26.202	1.1025	240023.73	0.0421	0.00024
U	238	3	He	26.059	1.0965	242473.71	0.0421	0.00024
U	238	3	He	26.624	1.1203	244965.48	0.0421	0.00024
Sc	45	1	No Gas			3308125.58		
Sc	45	1	No Gas			3244832.14		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3275354.33		
Ge	72	1	No Gas			1492499.04		
Ge	72	1	No Gas			1465673.57		
Ge	72	1	No Gas			1451575.13		
Sc	45	2	H2			191212.54		
Sc	45	2	H2			198677.34		
Sc	45	2	H2			194413.71		
Ge	72	2	H2			159767.52		
Ge	72	2	H2			167574.16		
Ge	72	2	H2			162517.66		
In	115	2	H2			436160.38		
In	115	2	H2			444085.93		
In	115	2	H2			433314.60		
Sc	45	3	He			42382.29		
Sc	45	3	He			43003.91		
Sc	45	3	He			42883.67		
Ge	72	3	He			74522.94		
Ge	72	3	He			76020.70		
Ge	72	3	He			73990.35		
In	115	3	He			62209.06		
In	115	3	He			64188.42		
In	115	3	He			64881.29		
Tb	159	3	He			279882.69		
Tb	159	3	He			282624.08		
Tb	159	3	He			282572.05		
Bi	209	3	He			217713.06		
Bi	209	3	He			221139.86		
Bi	209	3	He			218668.40		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

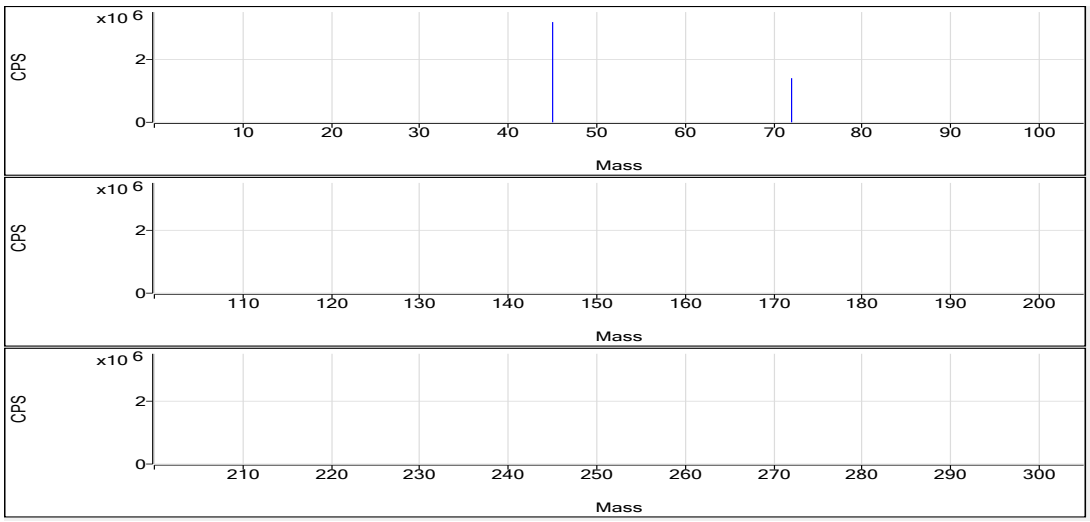
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.016	ppb	72.1	96.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.071	ppb	32.3	6.00	0.0000	Pulse	1.5000	3
Na	23	72	He	25.478	ppb	8.5	10867.62	0.1502	Pulse	0.1000	3
Mg	24	72	He	10.445	ppb	15.3	986.73	0.0137	Pulse	0.1000	3
Al	27	72	He	6.107	ppb	21.2	183.34	0.0025	Pulse	0.1000	3
K	39	72	He	11.018	ppb	106.1	10827.60	0.1497	Pulse	0.1000	3
Ca	44	72	He	4.454	ppb	542.7	126.67	0.0017	Pulse	0.1000	3
Ti	47	72	He	0.575	ppb	259.2	30.00	0.0004	Pulse	0.1000	3
V	51	72	He	0.123	ppb	24.9	634.02	0.0088	Pulse	0.5000	3
Cr	52	72	He	0.171	ppb	58.7	2023.56	0.0280	Pulse	0.1000	3
Mn	55	72	He	-1.174	ppb	N/A	500.03	0.0069	Pulse	0.1000	3
Fe	57	72	He	10.779	ppb	42.4	510.03	0.0070	Pulse	0.1000	3
Co	59	72	He	0.145	ppb	9.9	543.36	0.0075	Pulse	0.1000	3
Ni	60	72	He	1.252	ppb	7.4	1446.79	0.0200	Pulse	0.1000	3
Cu	63	72	He	0.157	ppb	10.7	640.04	0.0088	Pulse	0.1000	3
Zn	66	72	He	0.206	ppb	237.3	386.69	0.0053	Pulse	0.1000	3
As	75	72	He	0.127	ppb	34.7	47.33	0.0007	Pulse	0.5000	3
Sr	88	115	He	0.096	ppb	29.1	96.67	0.0015	Pulse	0.1000	3
Mo	98	115	He	0.142	ppb	46.0	230.01	0.0037	Pulse	0.1000	3
Ag	107	115	He	0.006	ppb	33.1	46.67	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.024	ppb	13.3	10.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.006	ppb	1784.8	990.08	0.0157	Pulse	0.1000	3
Sb	121	115	He	0.077	ppb	64.5	76.67	0.0012	Pulse	0.1000	3
Ba	137	115	He	0.111	ppb	88.1	50.00	0.0008	Pulse	0.1000	3
Tl	205	209	He	0.236	ppb	22.1	1633.50	0.0075	Pulse	0.1000	3
Pb	208	209	He	0.006	ppb	140.3	520.03	0.0024	Pulse	0.1000	3
U	238	209	He	0.016	ppb	16.1	196.68	0.0009	Pulse	0.1000	3

ISTD Table:

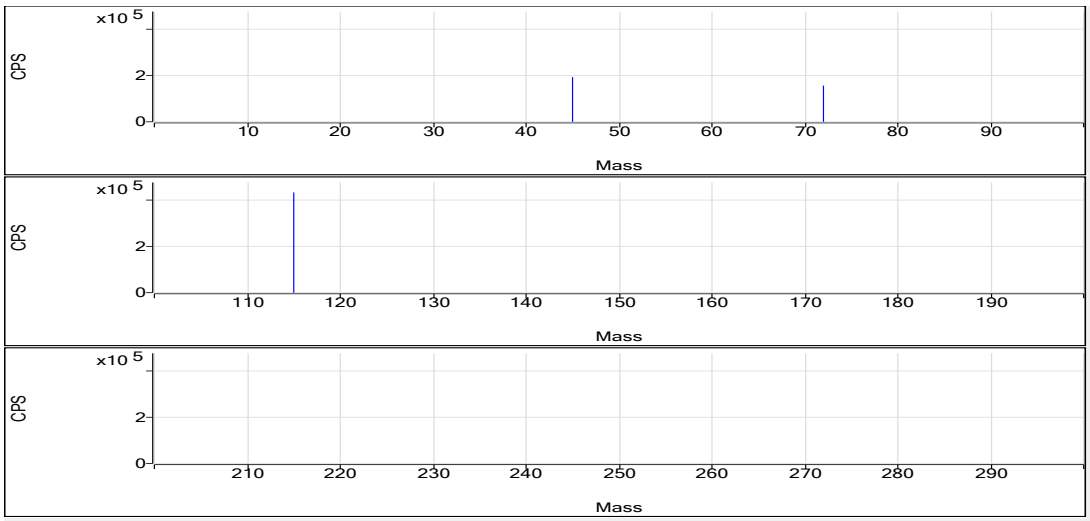
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3197454.64	1.1	98.7	Pulse	0.1000	3
No Gas	Ge	72	1407326.44	0.7	97.7	Pulse	0.1000	3
H2	Sc	45	192763.13	2.0	98.7	Pulse	0.1000	3
H2	Ge	72	156227.65	2.2	95.8	Pulse	0.1000	3
H2	In	115	432423.47	1.8	99.8	Pulse	0.1000	3
He	Sc	45	41258.82	1.3	103.2	Pulse	0.1000	3
He	Ge	72	72328.47	1.3	100.1	Pulse	0.1000	3
He	In	115	63235.86	1.7	97.9	Pulse	0.1000	3
He	Tb	159	276348.48	1.2	96.6	Pulse	0.1000	3
He	Bi	209	217048.52	0.6	97.7	Pulse	0.1000	3

No Gas

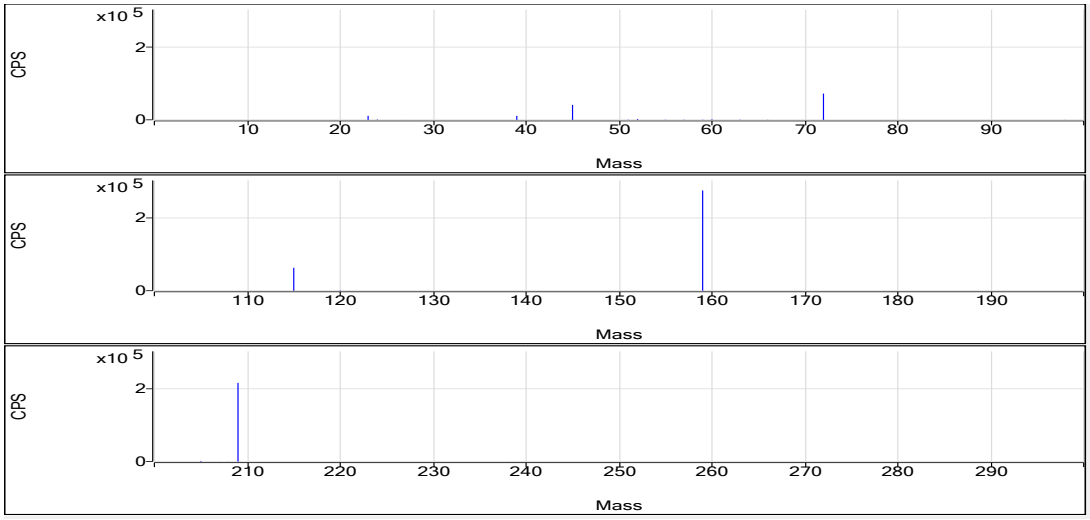


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.003	0.0001	72.00	0.0013	4.694E-05
Be	9	1	No Gas	0.02	0.0001	104.00	0.0013	4.694E-05
Be	9	1	No Gas	0.025	0.0001	112.00	0.0013	4.694E-05
Se	78	2	H2	0.093	0	7.33	0.0004	1.089E-05
Se	78	2	H2	0.047	0	4.67	0.0004	1.089E-05
Se	78	2	H2	0.073	0	6.00	0.0004	1.089E-05
Na	23	3	He	23.024	0.146	10403.90	0.0017	0.1065
Na	23	3	He	27.163	0.1531	11144.57	0.0017	0.1065
Na	23	3	He	26.247	0.1515	11054.39	0.0017	0.1065
Mg	24	3	He	11.898	0.0149	1060.07	0.0008	0.004846
Mg	24	3	He	10.712	0.0139	1010.07	0.0008	0.004846
Mg	24	3	He	8.725	0.0122	890.06	0.0008	0.004846
Al	27	3	He	7.225	0.0028	200.01	0.0002	0.001063
Al	27	3	He	6.412	0.0026	190.01	0.0002	0.001063
Al	27	3	He	4.684	0.0022	160.01	0.0002	0.001063
K	39	3	He	15.983	0.1525	10864.21	0.0006	0.1436
K	39	3	He	19.4	0.1544	11234.57	0.0006	0.1436
K	39	3	He	-2.33	0.1424	10384.01	0.0006	0.1436
Ca	44	3	He	-6.682	0.0014	100.00	0	0.001611
Ca	44	3	He	32.185	0.0026	190.01	0	0.001611
Ca	44	3	He	-12.141	0.0012	90.00	0	0.001611
Ti	47	3	He	2.266	0.0008	60.00	0.0003	0.0002737
Ti	47	3	He	-0.544	0.0001	10.00	0.0003	0.0002737
Ti	47	3	He	0.002	0.0003	20.00	0.0003	0.0002737
V	51	3	He	0.139	0.009	638.02	0.0117	0.007326
V	51	3	He	0.088	0.0084	608.02	0.0117	0.007326
V	51	3	He	0.142	0.009	656.02	0.0117	0.007326
Cr	52	3	He	0.287	0.0298	2120.25	0.0152	0.02538
Cr	52	3	He	0.111	0.0271	1970.22	0.0152	0.02538
Cr	52	3	He	0.116	0.0271	1980.20	0.0152	0.02538
Mn	55	3	He	-0.944	0.0083	590.03	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-1.3	0.0062	450.02	0.0059	0.01385
Mn	55	3	He	-1.279	0.0063	460.03	0.0059	0.01385
Fe	57	3	He	5.854	0.0056	400.02	0.0003	0.003918
Fe	57	3	He	11.613	0.0073	530.03	0.0003	0.003918
Fe	57	3	He	14.87	0.0082	600.03	0.0003	0.003918
Co	59	3	He	0.161	0.008	570.03	0.0305	0.003084
Co	59	3	He	0.133	0.0071	520.03	0.0305	0.003084
Co	59	3	He	0.142	0.0074	540.03	0.0305	0.003084
Ni	60	3	He	1.354	0.0209	1490.12	0.0088	0.009003
Ni	60	3	He	1.226	0.0198	1440.13	0.0088	0.009003
Ni	60	3	He	1.175	0.0193	1410.12	0.0088	0.009003
Cu	63	3	He	0.162	0.009	640.04	0.0249	0.004937
Cu	63	3	He	0.138	0.0084	610.03	0.0249	0.004937
Cu	63	3	He	0.17	0.0092	670.04	0.0249	0.004937
Zn	66	3	He	-0.026	0.0048	340.01	0.0025	0.004836
Zn	66	3	He	-0.123	0.0045	330.02	0.0025	0.004836
Zn	66	3	He	0.766	0.0067	490.03	0.0025	0.004836
As	75	3	He	0.17	0.0007	52.00	0.0017	0.0004347
As	75	3	He	0.082	0.0006	42.00	0.0017	0.0004347
As	75	3	He	0.128	0.0007	48.00	0.0017	0.0004347
Sr	88	3	He	0.104	0.0016	100.00	0.0078	0.0007762
Sr	88	3	He	0.119	0.0017	110.00	0.0078	0.0007762
Sr	88	3	He	0.065	0.0013	80.00	0.0078	0.0007762
Mo	98	3	He	0.193	0.0048	300.01	0.022	0.0005162
Mo	98	3	He	0.068	0.002	130.01	0.022	0.0005162
Mo	98	3	He	0.166	0.0042	260.01	0.022	0.0005162
Ag	107	3	He	0.004	0.0006	40.00	0.0455	0.0004641
Ag	107	3	He	0.007	0.0008	50.00	0.0455	0.0004641
Ag	107	3	He	0.007	0.0008	50.00	0.0455	0.0004641
Cd	111	3	He	0.022	0.0002	10.00	0.0048	5.152E-05
Cd	111	3	He	0.028	0.0002	12.00	0.0048	5.152E-05
Cd	111	3	He	0.023	0.0002	10.00	0.0048	5.152E-05
Sn	120	3	He	-0.059	0.0148	930.07	0.0143	0.01559
Sn	120	3	He	-0.047	0.0149	960.08	0.0143	0.01559
Sn	120	3	He	0.123	0.0173	1080.09	0.0143	0.01559
Sb	121	3	He	0.056	0.001	60.00	0.0124	0.000258
Sb	121	3	He	0.042	0.0008	50.00	0.0124	0.000258
Sb	121	3	He	0.135	0.0019	120.01	0.0124	0.000258
Ba	137	3	He	0.147	0.001	60.00	0.0044	0.000309
Ba	137	3	He	0	0.0003	20.00	0.0044	0.000309
Ba	137	3	He	0.186	0.0011	70.00	0.0044	0.000309
Tl	205	3	He	0.293	0.0091	1980.23	0.0276	0.001005
Tl	205	3	He	0.222	0.0072	1560.14	0.0276	0.001005
Tl	205	3	He	0.192	0.0063	1360.13	0.0276	0.001005
Pb	208	3	He	0.011	0.0026	290.02	0.0364	0.002176
Pb	208	3	He	0.011	0.0026	280.02	0.0364	0.002176
Pb	208	3	He	-0.004	0.002	220.01	0.0364	0.002176
U	238	3	He	0.013	0.0008	170.01	0.0421	0.00024
U	238	3	He	0.017	0.001	210.01	0.0421	0.00024
U	238	3	He	0.017	0.001	210.01	0.0421	0.00024
Sc	45	1	No Gas			3236204.95		
Sc	45	1	No Gas			3187897.14		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3168261.83		
Ge	72	1	No Gas			1414014.98		
Ge	72	1	No Gas			1411152.48		
Ge	72	1	No Gas			1396811.85		
Sc	45	2	H2			192399.45		
Sc	45	2	H2			196785.49		
Sc	45	2	H2			189104.45		
Ge	72	2	H2			155948.18		
Ge	72	2	H2			159738.26		
Ge	72	2	H2			152996.51		
In	115	2	H2			429517.34		
In	115	2	H2			441370.42		
In	115	2	H2			426382.65		
Sc	45	3	He			41680.21		
Sc	45	3	He			41449.18		
Sc	45	3	He			40647.06		
Ge	72	3	He			71256.15		
Ge	72	3	He			72784.44		
Ge	72	3	He			72944.83		
In	115	3	He			63053.38		
In	115	3	He			64378.44		
In	115	3	He			62298.91		
Tb	159	3	He			279831.87		
Tb	159	3	He			276138.34		
Tb	159	3	He			273075.23		
Bi	209	3	He			217315.49		
Bi	209	3	He			218149.24		
Bi	209	3	He			215680.82		

Quantitation Report

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Sample Type	CCV
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

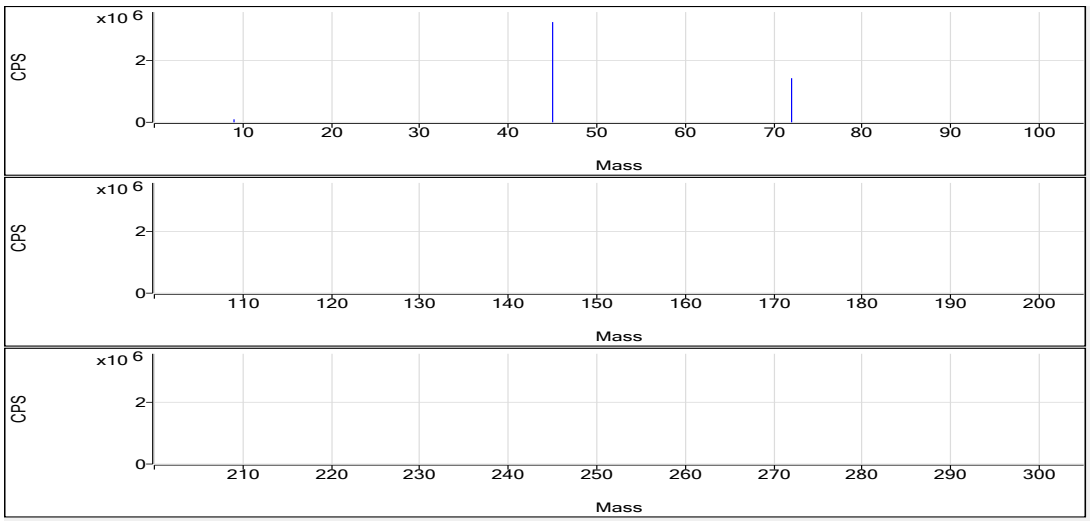
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	51.356	ppb	1.5	95912.67	0.0675	Pulse	0.5000	3
Se	78	72	H2	53.786	ppb	4.6	3329.50	0.0210	Pulse	1.5000	3
Na	23	72	He	5508.557	ppb	1.0	701104.78	9.5692	Pulse	0.1000	3
Mg	24	72	He	5459.499	ppb	1.1	337591.92	4.6078	Pulse	0.1000	3
Al	27	72	He	5330.951	ppb	2.0	94352.80	1.2879	Pulse	0.1000	3
K	39	72	He	5399.246	ppb	0.9	228969.07	3.1252	Pulse	0.1000	3
Ca	44	72	He	5321.858	ppb	2.1	12232.14	0.1669	Pulse	0.1000	3
Ti	47	72	He	5432.154	ppb	0.8	99829.25	1.3625	Pulse	0.1000	3
V	51	72	He	539.867	ppb	1.5	463196.43	6.3226	Pulse	0.5000	3
Cr	52	72	He	540.489	ppb	1.1	604840.21	8.2556	Pulse	0.1000	3
Mn	55	72	He	532.428	ppb	1.5	231249.76	3.1565	Pulse	0.1000	3
Fe	57	72	He	5336.195	ppb	1.0	113554.58	1.5499	Pulse	0.1000	3
Co	59	72	He	538.102	ppb	1.3	1203044.07	16.4209	Pulse	0.1000	3
Ni	60	72	He	539.086	ppb	0.3	348000.97	4.7493	Pulse	0.1000	3
Cu	63	72	He	533.687	ppb	1.2	975414.65	13.3136	Pulse	0.1000	3
Zn	66	72	He	527.757	ppb	0.7	95356.81	1.3014	Pulse	0.1000	3
As	75	72	He	528.112	ppb	1.5	67320.62	0.9189	Pulse	0.5000	3
Sr	88	115	He	51.716	ppb	1.7	25981.20	0.4050	Pulse	0.1000	3
Mo	98	115	He	52.176	ppb	2.4	73731.80	1.1495	Pulse	0.1000	3
Ag	107	115	He	52.088	ppb	1.2	152054.98	2.3705	Pulse	0.1000	3
Cd	111	115	He	52.474	ppb	0.9	16161.99	0.2519	Pulse	0.5000	3
Sn	120	115	He	52.211	ppb	1.5	48749.39	0.7600	Pulse	0.1000	3
Sb	121	115	He	52.257	ppb	1.7	41599.53	0.6485	Pulse	0.1000	3
Ba	137	115	He	513.539	ppb	2.0	144122.37	2.2469	Pulse	0.1000	3
Tl	205	209	He	52.825	ppb	0.4	318846.47	1.4613	Pulse	0.1000	3
Pb	208	209	He	52.895	ppb	1.1	420532.81	1.9274	Pulse	0.1000	3
U	238	209	He	52.335	ppb	0.6	480410.98	2.2018	Pulse	0.1000	3

ISTD Table:

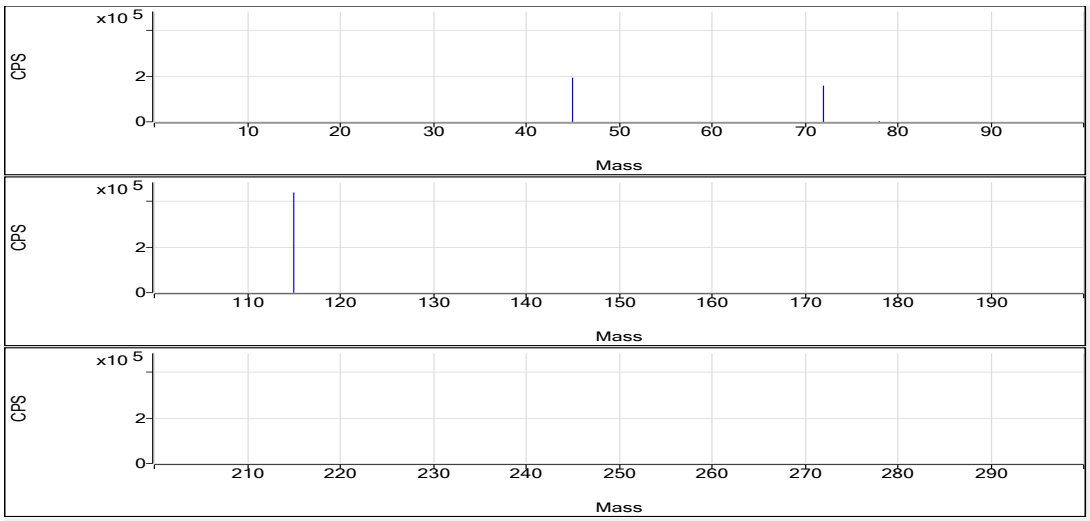
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3228556.83	0.7	99.6	Pulse	0.1000	3
No Gas	Ge	72	1420313.52	0.3	98.6	Pulse	0.1000	3
H2	Sc	45	194051.71	2.7	99.3	Pulse	0.1000	3
H2	Ge	72	158986.48	1.8	97.5	Pulse	0.1000	3
H2	In	115	440542.01	2.1	101.7	Pulse	0.1000	3
He	Sc	45	41639.73	1.7	104.1	Pulse	0.1000	3
He	Ge	72	73273.40	1.7	101.4	Pulse	0.1000	3
He	In	115	64149.27	0.9	99.3	Pulse	0.1000	3
He	Tb	159	280872.17	1.2	98.2	Pulse	0.1000	3
He	Bi	209	218190.03	0.3	98.2	Pulse	0.1000	3

No Gas

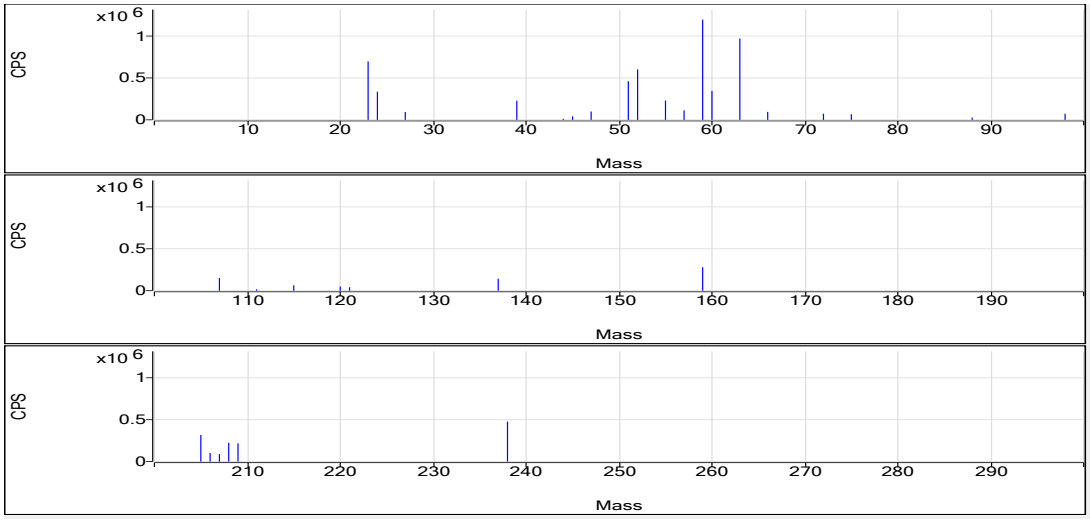


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	51.361	0.0675	95958.26	0.0013	4.694E-05
Be	9	1	No Gas	52.142	0.0686	97051.25	0.0013	4.694E-05
Be	9	1	No Gas	50.566	0.0665	94728.49	0.0013	4.694E-05
Se	78	2	H2	50.913	0.0198	3217.03	0.0004	1.089E-05
Se	78	2	H2	55.342	0.0216	3401.07	0.0004	1.089E-05
Se	78	2	H2	55.105	0.0215	3370.40	0.0004	1.089E-05
Na	23	3	He	5462.249	9.4896	708629.21	0.0017	0.1065
Na	23	3	He	5496.471	9.5484	694202.88	0.0017	0.1065
Na	23	3	He	5566.951	9.6695	700482.26	0.0017	0.1065
Mg	24	3	He	5397.624	4.5556	340184.76	0.0008	0.004846
Mg	24	3	He	5522.275	4.6607	338848.12	0.0008	0.004846
Mg	24	3	He	5458.598	4.607	333742.89	0.0008	0.004846
Al	27	3	He	5220.745	1.2613	94187.98	0.0002	0.001063
Al	27	3	He	5428.937	1.3116	95356.22	0.0002	0.001063
Al	27	3	He	5343.172	1.2909	93514.21	0.0002	0.001063
K	39	3	He	5341.867	3.0935	231003.06	0.0006	0.1436
K	39	3	He	5419.034	3.1361	228005.11	0.0006	0.1436
K	39	3	He	5436.838	3.1459	227899.04	0.0006	0.1436
Ca	44	3	He	5417.669	0.1699	12685.86	0	0.001611
Ca	44	3	He	5348.755	0.1677	12195.47	0	0.001611
Ca	44	3	He	5199.149	0.1631	11815.08	0	0.001611
Ti	47	3	He	5379.763	1.3494	100765.76	0.0003	0.0002737
Ti	47	3	He	5463.708	1.3705	99637.14	0.0003	0.0002737
Ti	47	3	He	5452.99	1.3678	99084.84	0.0003	0.0002737
V	51	3	He	530.426	6.2121	463884.50	0.0117	0.007326
V	51	3	He	543.247	6.3621	462546.63	0.0117	0.007326
V	51	3	He	545.928	6.3935	463158.16	0.0117	0.007326
Cr	52	3	He	533.847	8.1544	608923.86	0.0152	0.02538
Cr	52	3	He	542.703	8.2893	602658.94	0.0152	0.02538
Cr	52	3	He	544.917	8.323	602937.84	0.0152	0.02538
Mn	55	3	He	524.308	3.1085	232127.52	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	533.022	3.16	229740.99	0.0059	0.01385
Mn	55	3	He	539.954	3.2009	231880.78	0.0059	0.01385
Fe	57	3	He	5278.96	1.5333	114498.56	0.0003	0.003918
Fe	57	3	He	5379.362	1.5624	113591.81	0.0003	0.003918
Fe	57	3	He	5350.261	1.554	112573.36	0.0003	0.003918
Co	59	3	He	530.223	16.1805	1208261.54	0.0305	0.003084
Co	59	3	He	542.299	16.5489	1203163.03	0.0305	0.003084
Co	59	3	He	541.784	16.5332	1197707.64	0.0305	0.003084
Ni	60	3	He	538.887	4.7476	354522.49	0.0088	0.009003
Ni	60	3	He	540.891	4.7652	346448.24	0.0088	0.009003
Ni	60	3	He	537.48	4.7352	343032.18	0.0088	0.009003
Cu	63	3	He	526.796	13.1417	981345.45	0.0249	0.004937
Cu	63	3	He	539.844	13.4671	979105.30	0.0249	0.004937
Cu	63	3	He	534.421	13.3318	965793.19	0.0249	0.004937
Zn	66	3	He	526.953	1.2994	97034.33	0.0025	0.004836
Zn	66	3	He	524.777	1.2941	94084.97	0.0025	0.004836
Zn	66	3	He	531.541	1.3107	94951.12	0.0025	0.004836
As	75	3	He	518.991	0.903	67434.42	0.0017	0.0004347
As	75	3	He	532.272	0.9261	67334.09	0.0017	0.0004347
As	75	3	He	533.073	0.9275	67193.35	0.0017	0.0004347
Sr	88	3	He	52.033	0.4075	25944.40	0.0078	0.0007762
Sr	88	3	He	50.728	0.3973	25744.13	0.0078	0.0007762
Sr	88	3	He	52.389	0.4103	26255.06	0.0078	0.0007762
Mo	98	3	He	53.535	1.1794	75088.69	0.022	0.0005162
Mo	98	3	He	51.15	1.1269	73017.86	0.022	0.0005162
Mo	98	3	He	51.844	1.1422	73088.85	0.022	0.0005162
Ag	107	3	He	52.757	2.4009	152853.84	0.0455	0.0004641
Ag	107	3	He	51.463	2.3421	151752.24	0.0455	0.0004641
Ag	107	3	He	52.045	2.3685	151558.86	0.0455	0.0004641
Cd	111	3	He	52.793	0.2535	16137.32	0.0048	5.152E-05
Cd	111	3	He	52.709	0.2531	16397.57	0.0048	5.152E-05
Cd	111	3	He	51.919	0.2493	15951.07	0.0048	5.152E-05
Sn	120	3	He	52.951	0.7706	49057.16	0.0143	0.01559
Sn	120	3	He	51.421	0.7488	48515.01	0.0143	0.01559
Sn	120	3	He	52.259	0.7607	48675.99	0.0143	0.01559
Sb	121	3	He	51.908	0.6442	41010.94	0.0124	0.000258
Sb	121	3	He	51.589	0.6402	41482.74	0.0124	0.000258
Sb	121	3	He	53.275	0.6611	42304.92	0.0124	0.000258
Ba	137	3	He	520.451	2.2772	144974.44	0.0044	0.000309
Ba	137	3	He	501.998	2.1964	142317.93	0.0044	0.000309
Ba	137	3	He	518.167	2.2672	145074.73	0.0044	0.000309
Tl	205	3	He	52.621	1.4557	316520.29	0.0276	0.001005
Tl	205	3	He	52.841	1.4617	319607.34	0.0276	0.001005
Tl	205	3	He	53.013	1.4665	320411.77	0.0276	0.001005
Pb	208	3	He	53.507	1.9497	227991.34	0.0364	0.002176
Pb	208	3	He	52.418	1.9101	224001.60	0.0364	0.002176
Pb	208	3	He	52.759	1.9225	224544.27	0.0364	0.002176
U	238	3	He	52.707	2.2175	482168.08	0.0421	0.00024
U	238	3	He	52.142	2.1937	479646.32	0.0421	0.00024
U	238	3	He	52.156	2.1943	479418.55	0.0421	0.00024
Sc	45	1	No Gas			3208759.64		
Sc	45	1	No Gas			3221860.26		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3255050.58		
Ge	72	1	No Gas			1420813.57		
Ge	72	1	No Gas			1415485.76		
Ge	72	1	No Gas			1424641.23		
Sc	45	2	H2			200015.06		
Sc	45	2	H2			192111.50		
Sc	45	2	H2			190028.57		
Ge	72	2	H2			162195.10		
Ge	72	2	H2			157757.27		
Ge	72	2	H2			157007.08		
In	115	2	H2			448342.88		
In	115	2	H2			442972.65		
In	115	2	H2			430310.50		
Sc	45	3	He			40997.76		
Sc	45	3	He			41539.53		
Sc	45	3	He			42381.89		
Ge	72	3	He			74674.11		
Ge	72	3	He			72703.51		
Ge	72	3	He			72442.58		
In	115	3	He			64046.83		
In	115	3	He			65173.02		
In	115	3	He			64368.71		
Tb	159	3	He			278736.64		
Tb	159	3	He			279111.32		
Tb	159	3	He			284768.55		
Bi	209	3	He			217437.93		
Bi	209	3	He			218647.50		
Bi	209	3	He			218484.66		

Quantitation Report

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Sample Name	CCB 4654618
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

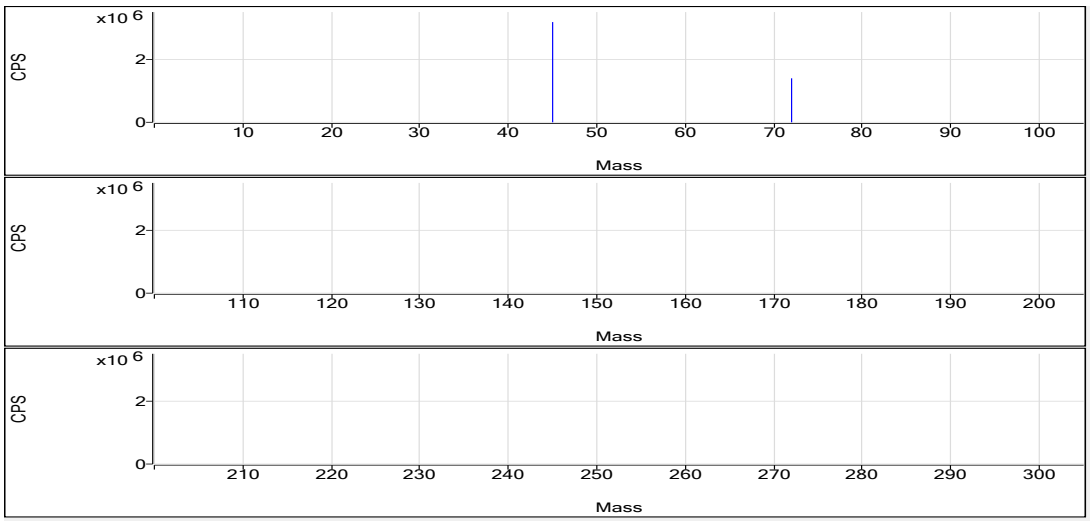
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.035	ppb	33.6	130.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.081	ppb	50.6	6.67	0.0000	Pulse	1.5000	3
Na	23	72	He	23.597	ppb	14.9	10610.76	0.1470	Pulse	0.1000	3
Mg	24	72	He	10.631	ppb	10.1	996.74	0.0138	Pulse	0.1000	3
Al	27	72	He	7.645	ppb	22.1	210.01	0.0029	Pulse	0.1000	3
K	39	72	He	11.408	ppb	58.6	10824.30	0.1499	Pulse	0.1000	3
Ca	44	72	He	38.777	ppb	39.6	203.34	0.0028	Pulse	0.1000	3
Ti	47	72	He	2.587	ppb	31.7	66.67	0.0009	Pulse	0.1000	3
V	51	72	He	0.162	ppb	15.8	666.02	0.0092	Pulse	0.5000	3
Cr	52	72	He	0.298	ppb	28.2	2160.23	0.0299	Pulse	0.1000	3
Mn	55	72	He	-0.883	ppb	N/A	623.37	0.0086	Pulse	0.1000	3
Fe	57	72	He	13.087	ppb	26.5	556.70	0.0077	Pulse	0.1000	3
Co	59	72	He	0.229	ppb	8.3	726.72	0.0101	Pulse	0.1000	3
Ni	60	72	He	1.313	ppb	15.3	1483.46	0.0205	Pulse	0.1000	3
Cu	63	72	He	0.234	ppb	23.1	776.72	0.0108	Pulse	0.1000	3
Zn	66	72	He	0.174	ppb	174.2	380.02	0.0053	Pulse	0.1000	3
As	75	72	He	0.233	ppb	24.3	60.67	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.058	ppb	73.8	76.67	0.0012	Pulse	0.1000	3
Mo	98	115	He	0.122	ppb	9.0	200.01	0.0032	Pulse	0.1000	3
Ag	107	115	He	0.025	ppb	26.2	100.00	0.0016	Pulse	0.1000	3
Cd	111	115	He	0.016	ppb	43.0	8.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.137	ppb	86.1	1096.75	0.0175	Pulse	0.1000	3
Sb	121	115	He	0.078	ppb	35.9	76.67	0.0012	Pulse	0.1000	3
Ba	137	115	He	0.186	ppb	21.8	70.00	0.0011	Pulse	0.1000	3
Tl	205	209	He	0.298	ppb	5.6	2000.23	0.0092	Pulse	0.1000	3
Pb	208	209	He	0.011	ppb	106.8	556.69	0.0026	Pulse	0.1000	3
U	238	209	He	0.027	ppb	7.5	300.01	0.0014	Pulse	0.1000	3

ISTD Table:

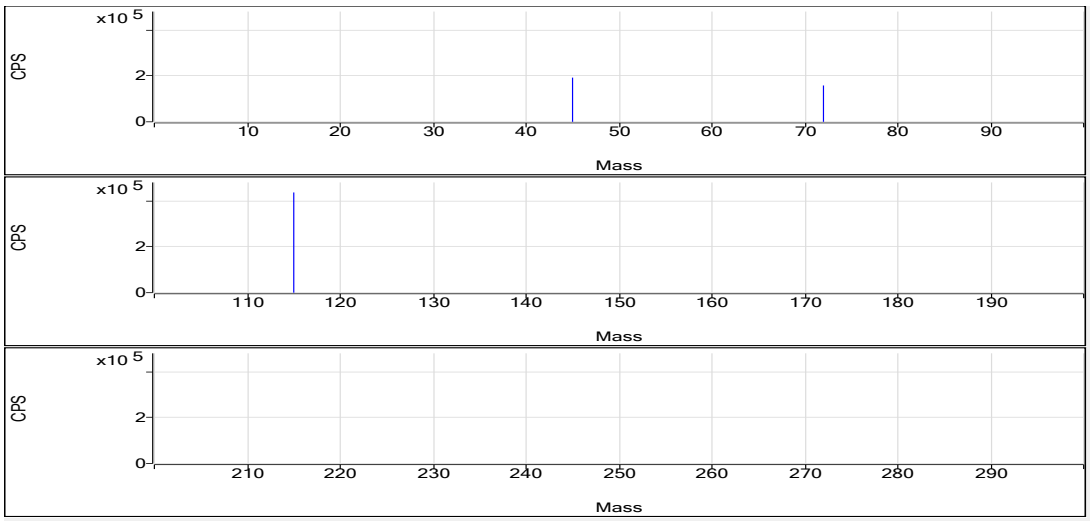
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3214699.85	1.9	99.2	Pulse	0.1000	3
No Gas	Ge	72	1410928.11	1.9	98.0	Pulse	0.1000	3
H2	Sc	45	192480.64	2.8	98.5	Pulse	0.1000	3
H2	Ge	72	158282.44	3.2	97.1	Pulse	0.1000	3
H2	In	115	436561.18	2.0	100.8	Pulse	0.1000	3
He	Sc	45	41726.71	2.3	104.4	Pulse	0.1000	3
He	Ge	72	72197.44	0.7	99.9	Pulse	0.1000	3
He	In	115	62451.56	1.6	96.7	Pulse	0.1000	3
He	Tb	159	278924.34	0.4	97.5	Pulse	0.1000	3
He	Bi	209	216657.30	0.6	97.5	Pulse	0.1000	3

No Gas

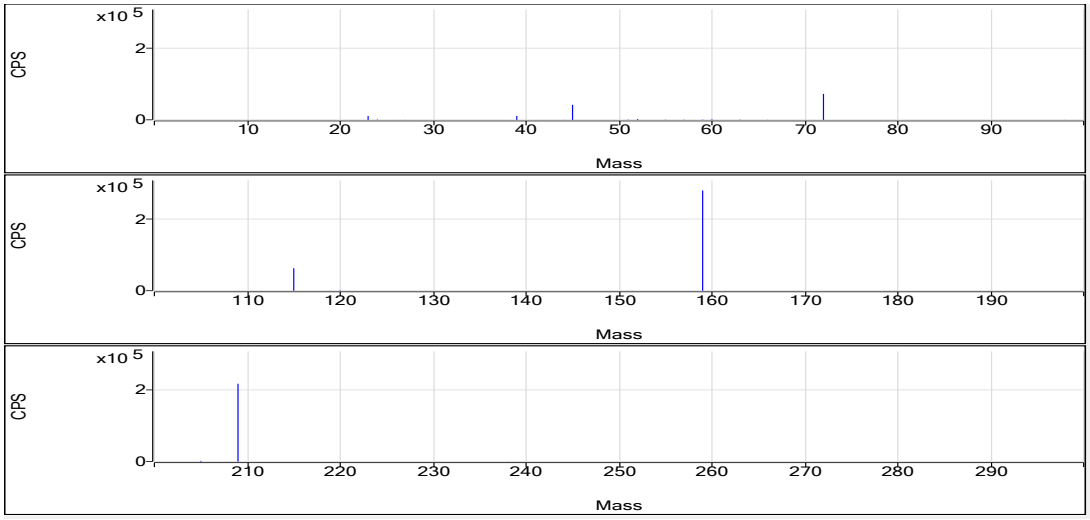


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.035	0.0001	132.00	0.0013	4.694E-05
Be	9	1	No Gas	0.046	0.0001	148.00	0.0013	4.694E-05
Be	9	1	No Gas	0.023	0.0001	110.00	0.0013	4.694E-05
Se	78	2	H2	0.035	0	4.00	0.0004	1.089E-05
Se	78	2	H2	0.113	0.0001	8.67	0.0004	1.089E-05
Se	78	2	H2	0.095	0	7.33	0.0004	1.089E-05
Na	23	3	He	20.852	0.1423	10283.87	0.0017	0.1065
Na	23	3	He	27.576	0.1538	11024.42	0.0017	0.1065
Na	23	3	He	22.363	0.1449	10524.00	0.0017	0.1065
Mg	24	3	He	9.678	0.013	940.07	0.0008	0.004846
Mg	24	3	He	11.796	0.0148	1060.08	0.0008	0.004846
Mg	24	3	He	10.418	0.0136	990.07	0.0008	0.004846
Al	27	3	He	5.914	0.0025	180.01	0.0002	0.001063
Al	27	3	He	7.736	0.0029	210.01	0.0002	0.001063
Al	27	3	He	9.284	0.0033	240.01	0.0002	0.001063
K	39	3	He	14.582	0.1517	10964.47	0.0006	0.1436
K	39	3	He	15.915	0.1524	10924.31	0.0006	0.1436
K	39	3	He	3.728	0.1457	10584.12	0.0006	0.1436
Ca	44	3	He	55.042	0.0033	240.01	0	0.001611
Ca	44	3	He	24.51	0.0024	170.01	0	0.001611
Ca	44	3	He	36.78	0.0028	200.01	0	0.001611
Ti	47	3	He	2.77	0.001	70.00	0.0003	0.0002737
Ti	47	3	He	1.69	0.0007	50.00	0.0003	0.0002737
Ti	47	3	He	3.3	0.0011	80.00	0.0003	0.0002737
V	51	3	He	0.14	0.009	648.02	0.0117	0.007326
V	51	3	He	0.156	0.0092	656.02	0.0117	0.007326
V	51	3	He	0.19	0.0096	694.02	0.0117	0.007326
Cr	52	3	He	0.323	0.0303	2190.23	0.0152	0.02538
Cr	52	3	He	0.367	0.031	2220.26	0.0152	0.02538
Cr	52	3	He	0.204	0.0285	2070.21	0.0152	0.02538
Mn	55	3	He	-0.988	0.008	580.03	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.621	0.0102	730.04	0.0059	0.01385
Mn	55	3	He	-1.041	0.0077	560.03	0.0059	0.01385
Fe	57	3	He	17.041	0.0089	640.04	0.0003	0.003918
Fe	57	3	He	10.559	0.007	500.02	0.0003	0.003918
Fe	57	3	He	11.662	0.0073	530.03	0.0003	0.003918
Co	59	3	He	0.248	0.0107	770.06	0.0305	0.003084
Co	59	3	He	0.21	0.0095	680.05	0.0305	0.003084
Co	59	3	He	0.228	0.01	730.04	0.0305	0.003084
Ni	60	3	He	1.541	0.0226	1630.15	0.0088	0.009003
Ni	60	3	He	1.166	0.0193	1380.12	0.0088	0.009003
Ni	60	3	He	1.231	0.0198	1440.12	0.0088	0.009003
Cu	63	3	He	0.29	0.0122	880.06	0.0249	0.004937
Cu	63	3	He	0.227	0.0106	760.05	0.0249	0.004937
Cu	63	3	He	0.183	0.0095	690.04	0.0249	0.004937
Zn	66	3	He	-0.166	0.0044	320.01	0.0025	0.004836
Zn	66	3	He	0.417	0.0059	420.02	0.0025	0.004836
Zn	66	3	He	0.273	0.0055	400.02	0.0025	0.004836
As	75	3	He	0.291	0.0009	68.00	0.0017	0.0004347
As	75	3	He	0.231	0.0008	60.00	0.0017	0.0004347
As	75	3	He	0.177	0.0007	54.00	0.0017	0.0004347
Sr	88	3	He	0.025	0.001	60.00	0.0078	0.0007762
Sr	88	3	He	0.042	0.0011	70.00	0.0078	0.0007762
Sr	88	3	He	0.106	0.0016	100.01	0.0078	0.0007762
Mo	98	3	He	0.109	0.0029	180.01	0.022	0.0005162
Mo	98	3	He	0.127	0.0033	210.01	0.022	0.0005162
Mo	98	3	He	0.13	0.0034	210.01	0.022	0.0005162
Ag	107	3	He	0.029	0.0018	110.00	0.0455	0.0004641
Ag	107	3	He	0.017	0.0013	80.00	0.0455	0.0004641
Ag	107	3	He	0.029	0.0018	110.01	0.0455	0.0004641
Cd	111	3	He	0.016	0.0001	8.00	0.0048	5.152E-05
Cd	111	3	He	0.009	0.0001	6.00	0.0048	5.152E-05
Cd	111	3	He	0.023	0.0002	10.00	0.0048	5.152E-05
Sn	120	3	He	0.001	0.0156	960.07	0.0143	0.01559
Sn	120	3	He	0.21	0.0186	1180.09	0.0143	0.01559
Sn	120	3	He	0.201	0.0185	1150.09	0.0143	0.01559
Sb	121	3	He	0.11	0.0016	100.00	0.0124	0.000258
Sb	121	3	He	0.068	0.0011	70.00	0.0124	0.000258
Sb	121	3	He	0.057	0.001	60.00	0.0124	0.000258
Ba	137	3	He	0.227	0.0013	80.00	0.0044	0.000309
Ba	137	3	He	0.145	0.0009	60.00	0.0044	0.000309
Ba	137	3	He	0.186	0.0011	70.00	0.0044	0.000309
Tl	205	3	He	0.308	0.0095	2070.23	0.0276	0.001005
Tl	205	3	He	0.307	0.0095	2040.24	0.0276	0.001005
Tl	205	3	He	0.278	0.0087	1890.23	0.0276	0.001005
Pb	208	3	He	0.007	0.0024	200.01	0.0364	0.002176
Pb	208	3	He	0.002	0.0022	210.01	0.0364	0.002176
Pb	208	3	He	0.024	0.003	330.01	0.0364	0.002176
U	238	3	He	0.027	0.0014	300.01	0.0421	0.00024
U	238	3	He	0.025	0.0013	280.01	0.0421	0.00024
U	238	3	He	0.029	0.0015	320.02	0.0421	0.00024
Sc	45	1	No Gas			3229059.01		
Sc	45	1	No Gas			3147847.14		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3267193.39		
Ge	72	1	No Gas			1417706.39		
Ge	72	1	No Gas			1381247.17		
Ge	72	1	No Gas			1433830.76		
Sc	45	2	H2			197668.88		
Sc	45	2	H2			192985.88		
Sc	45	2	H2			186787.15		
Ge	72	2	H2			163530.33		
Ge	72	2	H2			157927.60		
Ge	72	2	H2			153389.39		
In	115	2	H2			445996.75		
In	115	2	H2			434807.26		
In	115	2	H2			428879.52		
Sc	45	3	He			41699.81		
Sc	45	3	He			42702.88		
Sc	45	3	He			40777.44		
Ge	72	3	He			72280.68		
Ge	72	3	He			71668.14		
Ge	72	3	He			72643.50		
In	115	3	He			61546.29		
In	115	3	He			63504.45		
In	115	3	He			62329.61		
Tb	159	3	He			279562.53		
Tb	159	3	He			279547.67		
Tb	159	3	He			277662.81		
Bi	209	3	He			217497.91		
Bi	209	3	He			215179.59		
Bi	209	3	He			217294.39		

Quantitation Report

Data File Name	150SMPL.d
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Sample Name	410-136624-C-1-C @2
Sample Type	Sample
Comment	G3 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

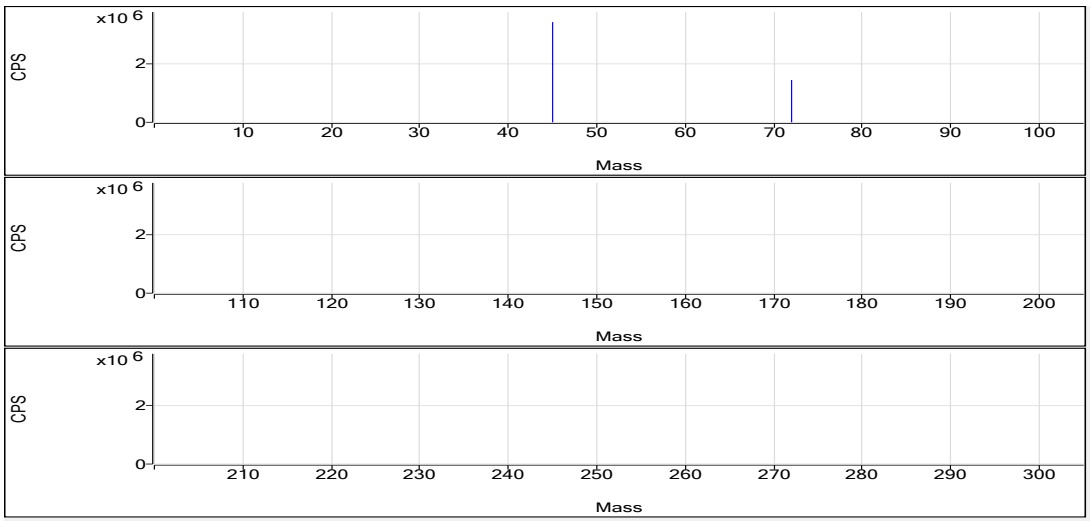
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	1.516	ppb	2.9	2960.31	0.0020	Pulse	0.5000	3
Se	78	72	H2	2.230	ppb	5.0	142.00	0.0009	Pulse	1.5000	3
Na	23	72	He	419.015	ppb	4.5	62649.21	0.8262	Pulse	0.1000	3
Mg	24	72	He	8280.256	ppb	2.6	529757.27	6.9859	Pulse	0.1000	3
Al	27	72	He	41509.482	ppb	1.8	759985.95	10.0212	Pulse	0.1000	3
K	39	72	He	4584.004	ppb	3.6	202833.78	2.6750	Pulse	0.1000	3
Ca	44	72	He	12554.612	ppb	3.1	29697.66	0.3916	Pulse	0.1000	3
Ti	47	72	He	259.893	ppb	0.4	4964.36	0.0654	Pulse	0.1000	3
V	51	72	He	82.437	ppb	2.2	73685.21	0.9717	Pulse	0.5000	3
Cr	52	72	He	46.375	ppb	0.5	55486.34	0.7316	Pulse	0.1000	3
Mn	55	72	He	376.404	ppb	1.5	169543.51	2.2355	Pulse	0.1000	3
Fe	57	72	He	33160.139	ppb	2.2	728838.09	9.6109	Pulse	0.1000	3
Co	59	72	He	13.633	ppb	1.1	31782.02	0.4190	Pulse	0.1000	3
Ni	60	72	He	41.900	ppb	2.6	28622.40	0.3774	Pulse	0.1000	3
Cu	63	72	He	68.277	ppb	2.5	129489.31	1.7076	Pulse	0.1000	3
Zn	66	72	He	217.279	ppb	2.0	40848.34	0.5386	Pulse	0.1000	3
As	75	72	He	9.411	ppb	4.8	1274.07	0.0168	Pulse	0.5000	3
Sr	88	115	He	75.555	ppb	2.9	37680.87	0.5914	Pulse	0.1000	3
Mo	98	115	He	2.061	ppb	5.5	2927.07	0.0459	Pulse	0.1000	3
Ag	107	115	He	0.409	ppb	1.2	1216.77	0.0191	Pulse	0.1000	3
Cd	111	115	He	1.784	ppb	8.5	549.35	0.0086	Pulse	0.5000	3
Sn	120	115	He	4.176	ppb	3.9	4787.68	0.0751	Pulse	0.1000	3
Sb	121	115	He	1.055	ppb	3.6	850.06	0.0133	Pulse	0.1000	3
Ba	137	115	He	262.756	ppb	3.0	73258.07	1.1498	Pulse	0.1000	3
Tl	205	209	He	0.576	ppb	2.7	3780.67	0.0169	Pulse	0.1000	3
Pb	208	209	He	109.304	ppb	0.4	889366.44	3.9806	Pulse	0.1000	3
U	238	209	He	3.225	ppb	2.9	30363.02	0.1359	Pulse	0.1000	3

ISTD Table:

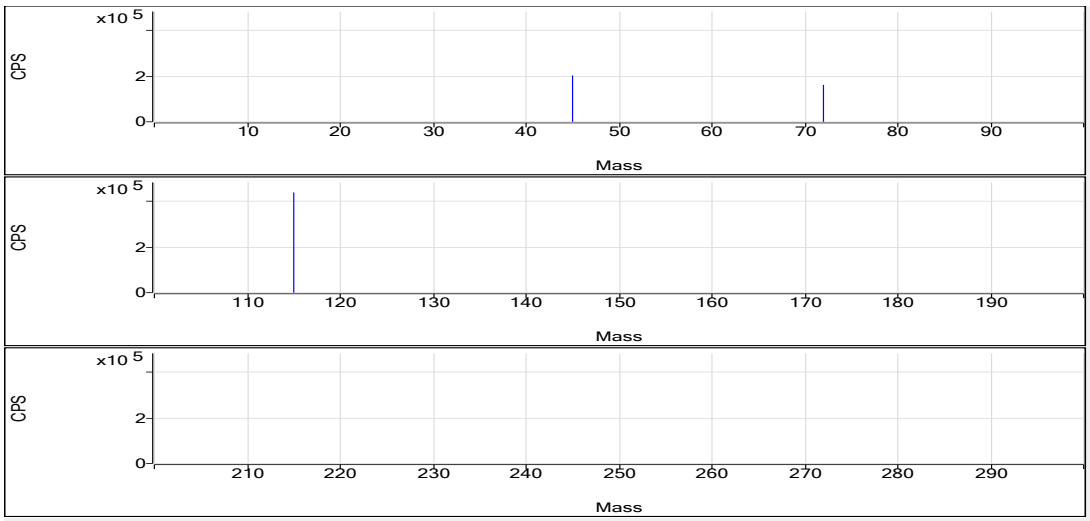
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3443224.95	1.7	106.2	Pulse	0.1000	3
No Gas	Ge	72	1452322.84	0.9	100.9	Pulse	0.1000	3
H2	Sc	45	202813.77	1.4	103.8	Pulse	0.1000	3
H2	Ge	72	161527.03	0.2	99.1	Pulse	0.1000	3
H2	In	115	438707.65	2.0	101.2	Pulse	0.1000	3
He	Sc	45	43354.73	0.9	108.4	Pulse	0.1000	3
He	Ge	72	75849.98	1.4	104.9	Pulse	0.1000	3
He	In	115	63741.74	2.4	98.7	Pulse	0.1000	3
He	Tb	159	293291.06	0.7	102.5	Pulse	0.1000	3
He	Bi	209	223426.94	1.0	100.6	Pulse	0.1000	3

No Gas

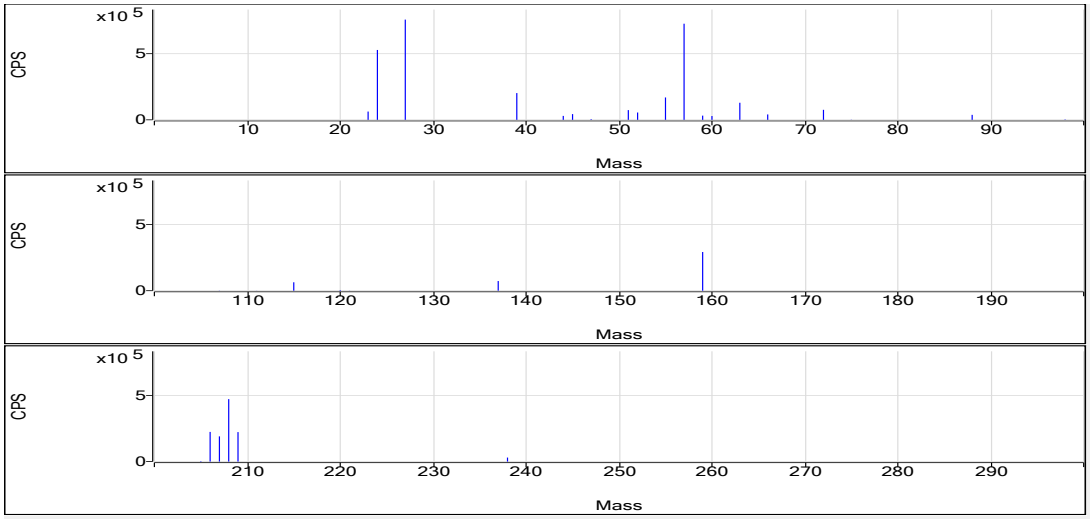


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	1.484	0.002	2912.30	0.0013	4.694E-05
Be	9	1	No Gas	1.567	0.0021	3026.32	0.0013	4.694E-05
Be	9	1	No Gas	1.496	0.002	2942.30	0.0013	4.694E-05
Se	78	2	H2	2.322	0.0009	148.00	0.0004	1.089E-05
Se	78	2	H2	2.107	0.0008	134.00	0.0004	1.089E-05
Se	78	2	H2	2.26	0.0009	144.00	0.0004	1.089E-05
Na	23	3	He	439.148	0.8608	64228.85	0.0017	0.1065
Na	23	3	He	415.648	0.8205	62702.68	0.0017	0.1065
Na	23	3	He	402.249	0.7974	61016.10	0.0017	0.1065
Mg	24	3	He	8519.213	7.1874	536270.03	0.0008	0.004846
Mg	24	3	He	8228.109	6.942	530529.05	0.0008	0.004846
Mg	24	3	He	8093.446	6.8284	522472.73	0.0008	0.004846
Al	27	3	He	42319.626	10.2168	762298.50	0.0002	0.001063
Al	27	3	He	41339.042	9.9801	762709.99	0.0002	0.001063
Al	27	3	He	40869.779	9.8668	754949.36	0.0002	0.001063
K	39	3	He	4768.226	2.7767	207177.22	0.0006	0.1436
K	39	3	He	4526.589	2.6433	202007.99	0.0006	0.1436
K	39	3	He	4457.196	2.605	199316.13	0.0006	0.1436
Ca	44	3	He	12630.248	0.3939	29390.19	0	0.001611
Ca	44	3	He	12903.994	0.4024	30753.30	0	0.001611
Ca	44	3	He	12129.594	0.3784	28949.48	0	0.001611
Ti	47	3	He	259.768	0.0654	4881.01	0.0003	0.0002737
Ti	47	3	He	260.894	0.0657	5021.06	0.0003	0.0002737
Ti	47	3	He	259.018	0.0652	4991.02	0.0003	0.0002737
V	51	3	He	84.519	0.996	74315.05	0.0117	0.007326
V	51	3	He	81.49	0.9606	73410.41	0.0117	0.007326
V	51	3	He	81.303	0.9584	73330.18	0.0117	0.007326
Cr	52	3	He	46.596	0.7349	54833.70	0.0152	0.02538
Cr	52	3	He	46.367	0.7314	55898.18	0.0152	0.02538
Cr	52	3	He	46.163	0.7283	55727.13	0.0152	0.02538
Mn	55	3	He	382.575	2.272	169517.56	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	375.224	2.2286	170315.62	0.0059	0.01385
Mn	55	3	He	371.413	2.2061	168797.34	0.0059	0.01385
Fe	57	3	He	33983.956	9.8496	734900.30	0.0003	0.003918
Fe	57	3	He	32810.145	9.5095	726747.49	0.0003	0.003918
Fe	57	3	He	32686.316	9.4736	724866.47	0.0003	0.003918
Co	59	3	He	13.778	0.4235	31595.05	0.0305	0.003084
Co	59	3	He	13.483	0.4145	31675.09	0.0305	0.003084
Co	59	3	He	13.639	0.4192	32075.92	0.0305	0.003084
Ni	60	3	He	43.116	0.3881	28959.77	0.0088	0.009003
Ni	60	3	He	41.608	0.3749	28649.10	0.0088	0.009003
Ni	60	3	He	40.976	0.3693	28258.33	0.0088	0.009003
Cu	63	3	He	70.258	1.757	131091.20	0.0249	0.004937
Cu	63	3	He	67.036	1.6766	128133.69	0.0249	0.004937
Cu	63	3	He	67.538	1.6891	129243.04	0.0249	0.004937
Zn	66	3	He	222.188	0.5507	41089.13	0.0025	0.004836
Zn	66	3	He	215.434	0.5341	40818.35	0.0025	0.004836
Zn	66	3	He	214.214	0.5311	40637.53	0.0025	0.004836
As	75	3	He	9.8	0.0175	1304.07	0.0017	0.0004347
As	75	3	He	8.914	0.0159	1218.06	0.0017	0.0004347
As	75	3	He	9.52	0.017	1300.07	0.0017	0.0004347
Sr	88	3	He	77.384	0.6057	38272.42	0.0078	0.0007762
Sr	88	3	He	73.098	0.5722	37470.28	0.0078	0.0007762
Sr	88	3	He	76.183	0.5963	37299.92	0.0078	0.0007762
Mo	98	3	He	1.932	0.0431	2720.35	0.022	0.0005162
Mo	98	3	He	2.147	0.0478	3130.47	0.022	0.0005162
Mo	98	3	He	2.104	0.0468	2930.39	0.022	0.0005162
Ag	107	3	He	0.407	0.019	1200.10	0.0455	0.0004641
Ag	107	3	He	0.406	0.0189	1240.11	0.0455	0.0004641
Ag	107	3	He	0.415	0.0193	1210.10	0.0455	0.0004641
Cd	111	3	He	1.611	0.0078	492.01	0.0048	5.152E-05
Cd	111	3	He	1.892	0.0091	598.02	0.0048	5.152E-05
Cd	111	3	He	1.848	0.0089	558.02	0.0048	5.152E-05
Sn	120	3	He	4.047	0.0733	4630.93	0.0143	0.01559
Sn	120	3	He	4.124	0.0744	4871.05	0.0143	0.01559
Sn	120	3	He	4.357	0.0777	4861.05	0.0143	0.01559
Sb	121	3	He	1.089	0.0138	870.06	0.0124	0.000258
Sb	121	3	He	1.013	0.0128	840.06	0.0124	0.000258
Sb	121	3	He	1.062	0.0134	840.06	0.0124	0.000258
Ba	137	3	He	268.239	1.1738	74169.58	0.0044	0.000309
Ba	137	3	He	253.837	1.1108	72741.35	0.0044	0.000309
Ba	137	3	He	266.192	1.1648	72863.27	0.0044	0.000309
Tl	205	3	He	0.589	0.0173	3900.73	0.0276	0.001005
Tl	205	3	He	0.559	0.0165	3640.63	0.0276	0.001005
Tl	205	3	He	0.579	0.017	3800.64	0.0276	0.001005
Pb	208	3	He	109.576	3.9904	480188.16	0.0364	0.002176
Pb	208	3	He	109.47	3.9866	470035.74	0.0364	0.002176
Pb	208	3	He	108.867	3.9646	470063.24	0.0364	0.002176
U	238	3	He	3.234	0.1363	30747.40	0.0421	0.00024
U	238	3	He	3.315	0.1397	30897.47	0.0421	0.00024
U	238	3	He	3.126	0.1317	29444.19	0.0421	0.00024
Sc	45	1	No Gas			3458260.89		
Sc	45	1	No Gas			3380200.89		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3491213.07		
Ge	72	1	No Gas			1457968.88		
Ge	72	1	No Gas			1437376.70		
Ge	72	1	No Gas			1461622.95		
Sc	45	2	H2			205970.62		
Sc	45	2	H2			200210.47		
Sc	45	2	H2			202260.23		
Ge	72	2	H2			161729.71		
Ge	72	2	H2			161203.56		
Ge	72	2	H2			161647.81		
In	115	2	H2			447634.68		
In	115	2	H2			438321.17		
In	115	2	H2			430167.10		
Sc	45	3	He			43605.31		
Sc	45	3	He			43545.34		
Sc	45	3	He			42913.55		
Ge	72	3	He			74612.44		
Ge	72	3	He			76423.33		
Ge	72	3	He			76514.18		
In	115	3	He			63223.62		
In	115	3	He			65523.84		
In	115	3	He			62589.80		
Tb	159	3	He			290837.96		
Tb	159	3	He			293961.56		
Tb	159	3	He			295073.65		
Bi	209	3	He			225605.62		
Bi	209	3	He			221180.29		
Bi	209	3	He			223494.92		

Quantitation Report

Data File Name	151SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 15:37:19
Sample Name	410-136624-C-1-C @10
Sample Type	Sample
Comment	G3 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

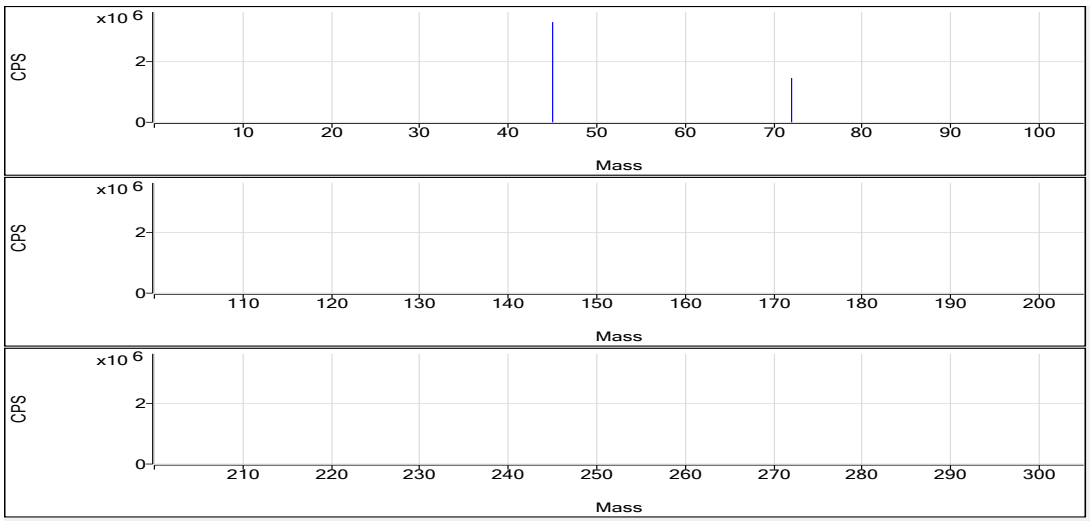
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.287	ppb	5.6	615.35	0.0004	Pulse	0.5000	3
Se	78	72	H2	0.415	ppb	27.6	27.55	0.0002	Pulse	1.5000	3
Na	23	72	He	93.437	ppb	1.7	19770.46	0.2670	Pulse	0.1000	3
Mg	24	72	He	1618.942	ppb	0.8	101434.92	1.3698	Pulse	0.1000	3
Al	27	72	He	8079.543	ppb	0.5	144508.20	1.9514	Pulse	0.1000	3
K	39	72	He	911.616	ppb	2.0	47915.17	0.6470	Pulse	0.1000	3
Ca	44	72	He	2348.737	ppb	3.4	5521.23	0.0746	Pulse	0.1000	3
Ti	47	72	He	49.367	ppb	10.5	936.73	0.0127	Pulse	0.1000	3
V	51	72	He	15.843	ppb	0.5	14266.34	0.1927	Pulse	0.5000	3
Cr	52	72	He	8.847	ppb	4.4	11855.20	0.1601	Pulse	0.1000	3
Mn	55	72	He	72.540	ppb	3.6	32734.16	0.4420	Pulse	0.1000	3
Fe	57	72	He	6466.283	ppb	1.0	139016.64	1.8773	Pulse	0.1000	3
Co	59	72	He	2.609	ppb	6.5	6124.82	0.0827	Pulse	0.1000	3
Ni	60	72	He	9.473	ppb	3.5	6835.20	0.0923	Pulse	0.1000	3
Cu	63	72	He	13.064	ppb	1.5	24491.42	0.3307	Pulse	0.1000	3
Zn	66	72	He	43.219	ppb	5.0	8222.62	0.1110	Pulse	0.1000	3
As	75	72	He	2.147	ppb	1.8	308.68	0.0042	Pulse	0.5000	3
Sr	88	115	He	14.447	ppb	2.4	7275.44	0.1137	Pulse	0.1000	3
Mo	98	115	He	0.476	ppb	9.1	703.38	0.0110	Pulse	0.1000	3
Ag	107	115	He	0.077	ppb	9.4	253.34	0.0040	Pulse	0.1000	3
Cd	111	115	He	0.334	ppb	19.3	106.00	0.0017	Pulse	0.5000	3
Sn	120	115	He	0.771	ppb	35.3	1700.16	0.0266	Pulse	0.1000	3
Sb	121	115	He	0.206	ppb	23.7	180.01	0.0028	Pulse	0.1000	3
Ba	137	115	He	50.070	ppb	2.4	14034.27	0.2194	Pulse	0.1000	3
Tl	205	209	He	0.153	ppb	9.0	1166.76	0.0052	Pulse	0.1000	3
Pb	208	209	He	20.807	ppb	1.2	168966.96	0.7595	Pulse	0.1000	3
U	238	209	He	0.637	ppb	5.7	6011.61	0.0270	Pulse	0.1000	3

ISTD Table:

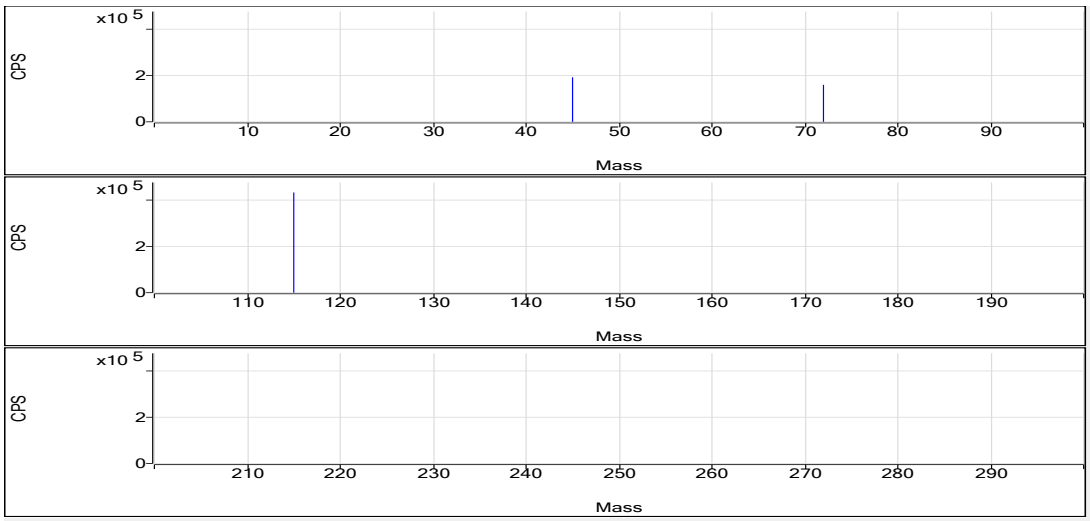
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3280717.55	1.0	101.2	Pulse	0.1000	3
No Gas	Ge	72	1448752.58	1.4	100.6	Pulse	0.1000	3
H2	Sc	45	192847.91	1.5	98.7	Pulse	0.1000	3
H2	Ge	72	160098.74	1.4	98.2	Pulse	0.1000	3
H2	In	115	434239.58	2.2	100.2	Pulse	0.1000	3
He	Sc	45	41709.98	1.0	104.3	Pulse	0.1000	3
He	Ge	72	74054.00	0.5	102.4	Pulse	0.1000	3
He	In	115	63987.06	1.1	99.1	Pulse	0.1000	3
He	Tb	159	286413.03	0.5	100.1	Pulse	0.1000	3
He	Bi	209	222482.97	0.8	100.1	Pulse	0.1000	3

No Gas

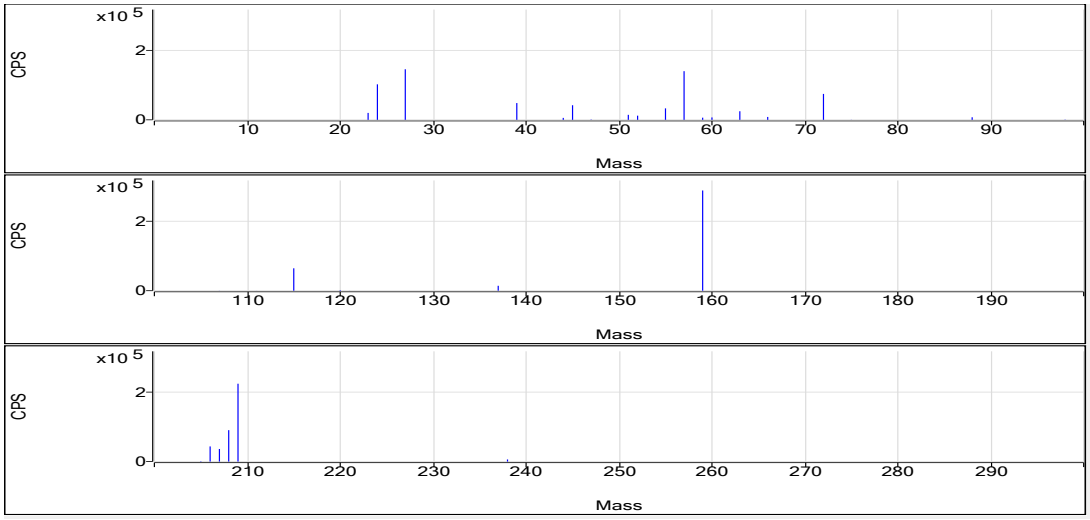


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.289	0.0004	620.02	0.0013	4.694E-05
Be	9	1	No Gas	0.271	0.0004	574.02	0.0013	4.694E-05
Be	9	1	No Gas	0.303	0.0004	652.02	0.0013	4.694E-05
Se	78	2	H2	0.288	0.0001	20.00	0.0004	1.089E-05
Se	78	2	H2	0.509	0.0002	33.33	0.0004	1.089E-05
Se	78	2	H2	0.448	0.0002	29.33	0.0004	1.089E-05
Na	23	3	He	91.6	0.2638	19413.26	0.0017	0.1065
Na	23	3	He	94.556	0.2689	19984.01	0.0017	0.1065
Na	23	3	He	94.154	0.2682	19914.10	0.0017	0.1065
Mg	24	3	He	1633.232	1.3818	101686.22	0.0008	0.004846
Mg	24	3	He	1617.538	1.3686	101716.16	0.0008	0.004846
Mg	24	3	He	1606.057	1.3589	100902.38	0.0008	0.004846
Al	27	3	He	8114.134	1.9598	144215.91	0.0002	0.001063
Al	27	3	He	8038.523	1.9415	144296.53	0.0002	0.001063
Al	27	3	He	8085.971	1.953	145012.16	0.0002	0.001063
K	39	3	He	922.293	0.6529	48048.86	0.0006	0.1436
K	39	3	He	922.361	0.653	48530.46	0.0006	0.1436
K	39	3	He	890.194	0.6352	47166.18	0.0006	0.1436
Ca	44	3	He	2398.777	0.0761	5601.29	0	0.001611
Ca	44	3	He	2257.569	0.0717	5331.14	0	0.001611
Ca	44	3	He	2389.866	0.0758	5631.27	0	0.001611
Ti	47	3	He	55.267	0.0141	1040.07	0.0003	0.0002737
Ti	47	3	He	47.199	0.0121	900.06	0.0003	0.0002737
Ti	47	3	He	45.633	0.0117	870.06	0.0003	0.0002737
V	51	3	He	15.917	0.1935	14240.98	0.0117	0.007326
V	51	3	He	15.77	0.1918	14254.97	0.0117	0.007326
V	51	3	He	15.841	0.1926	14303.06	0.0117	0.007326
Cr	52	3	He	9.127	0.1644	12095.38	0.0152	0.02538
Cr	52	3	He	8.402	0.1533	11394.83	0.0152	0.02538
Cr	52	3	He	9.013	0.1626	12075.39	0.0152	0.02538
Mn	55	3	He	72.032	0.439	32306.40	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	75.343	0.4586	34080.71	0.0059	0.01385
Mn	55	3	He	70.246	0.4285	31815.36	0.0059	0.01385
Fe	57	3	He	6535.629	1.8974	139625.30	0.0003	0.003918
Fe	57	3	He	6448.551	1.8722	139141.73	0.0003	0.003918
Fe	57	3	He	6414.67	1.8623	138282.88	0.0003	0.003918
Co	59	3	He	2.461	0.0782	5751.34	0.0305	0.003084
Co	59	3	He	2.793	0.0883	6561.65	0.0305	0.003084
Co	59	3	He	2.574	0.0816	6061.46	0.0305	0.003084
Ni	60	3	He	9.689	0.0942	6931.91	0.0088	0.009003
Ni	60	3	He	9.644	0.0938	6971.98	0.0088	0.009003
Ni	60	3	He	9.087	0.0889	6601.70	0.0088	0.009003
Cu	63	3	He	12.924	0.3272	24080.66	0.0249	0.004937
Cu	63	3	He	13.287	0.3363	24992.32	0.0249	0.004937
Cu	63	3	He	12.98	0.3286	24401.28	0.0249	0.004937
Zn	66	3	He	40.746	0.1049	7722.36	0.0025	0.004836
Zn	66	3	He	44.544	0.1143	8492.70	0.0025	0.004836
Zn	66	3	He	44.368	0.1138	8452.80	0.0025	0.004836
As	75	3	He	2.172	0.0042	310.01	0.0017	0.0004347
As	75	3	He	2.102	0.0041	304.01	0.0017	0.0004347
As	75	3	He	2.166	0.0042	312.01	0.0017	0.0004347
Sr	88	3	He	14.781	0.1163	7472.22	0.0078	0.0007762
Sr	88	3	He	14.1	0.111	7162.05	0.0078	0.0007762
Sr	88	3	He	14.459	0.1138	7192.04	0.0078	0.0007762
Mo	98	3	He	0.45	0.0104	670.04	0.022	0.0005162
Mo	98	3	He	0.526	0.0121	780.06	0.022	0.0005162
Mo	98	3	He	0.451	0.0104	660.04	0.022	0.0005162
Ag	107	3	He	0.068	0.0036	230.01	0.0455	0.0004641
Ag	107	3	He	0.082	0.0042	270.01	0.0455	0.0004641
Ag	107	3	He	0.08	0.0041	260.01	0.0455	0.0004641
Cd	111	3	He	0.275	0.0014	88.00	0.0048	5.152E-05
Cd	111	3	He	0.403	0.002	128.00	0.0048	5.152E-05
Cd	111	3	He	0.325	0.0016	102.00	0.0048	5.152E-05
Sn	120	3	He	0.457	0.0221	1420.12	0.0143	0.01559
Sn	120	3	He	0.918	0.0287	1850.18	0.0143	0.01559
Sn	120	3	He	0.938	0.029	1830.18	0.0143	0.01559
Sb	121	3	He	0.255	0.0034	220.01	0.0124	0.000258
Sb	121	3	He	0.204	0.0028	180.01	0.0124	0.000258
Sb	121	3	He	0.158	0.0022	140.01	0.0124	0.000258
Ba	137	3	He	50.843	0.2227	14307.98	0.0044	0.000309
Ba	137	3	He	48.7	0.2134	13767.27	0.0044	0.000309
Ba	137	3	He	50.665	0.222	14027.56	0.0044	0.000309
Tl	205	3	He	0.145	0.005	1120.09	0.0276	0.001005
Tl	205	3	He	0.169	0.0057	1270.10	0.0276	0.001005
Tl	205	3	He	0.146	0.005	1110.09	0.0276	0.001005
Pb	208	3	He	20.579	0.7512	89323.28	0.0364	0.002176
Pb	208	3	He	20.778	0.7585	90449.02	0.0364	0.002176
Pb	208	3	He	21.065	0.7689	89423.73	0.0364	0.002176
U	238	3	He	0.595	0.0253	5651.43	0.0421	0.00024
U	238	3	He	0.663	0.0281	6281.74	0.0421	0.00024
U	238	3	He	0.652	0.0277	6101.66	0.0421	0.00024
Sc	45	1	No Gas			3294048.70		
Sc	45	1	No Gas			3242878.70		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3305225.26		
Ge	72	1	No Gas			1455193.10		
Ge	72	1	No Gas			1425324.82		
Ge	72	1	No Gas			1465739.82		
Sc	45	2	H2			195518.98		
Sc	45	2	H2			193279.33		
Sc	45	2	H2			189745.43		
Ge	72	2	H2			162639.28		
Ge	72	2	H2			159302.68		
Ge	72	2	H2			158354.27		
In	115	2	H2			445345.27		
In	115	2	H2			429666.48		
In	115	2	H2			427706.99		
Sc	45	3	He			41559.71		
Sc	45	3	He			41378.76		
Sc	45	3	He			42191.48		
Ge	72	3	He			73588.27		
Ge	72	3	He			74321.59		
Ge	72	3	He			74252.15		
In	115	3	He			64248.23		
In	115	3	He			64539.81		
In	115	3	He			63212.94		
Tb	159	3	He			287903.10		
Tb	159	3	He			285553.00		
Tb	159	3	He			285783.00		
Bi	209	3	He			223660.11		
Bi	209	3	He			223416.03		
Bi	209	3	He			220372.77		

Quantitation Report

Data File Name	152SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 15:39:20
Sample Name	410-136624-C-1-C PDS @2
Sample Type	Sample
Comment	G3 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

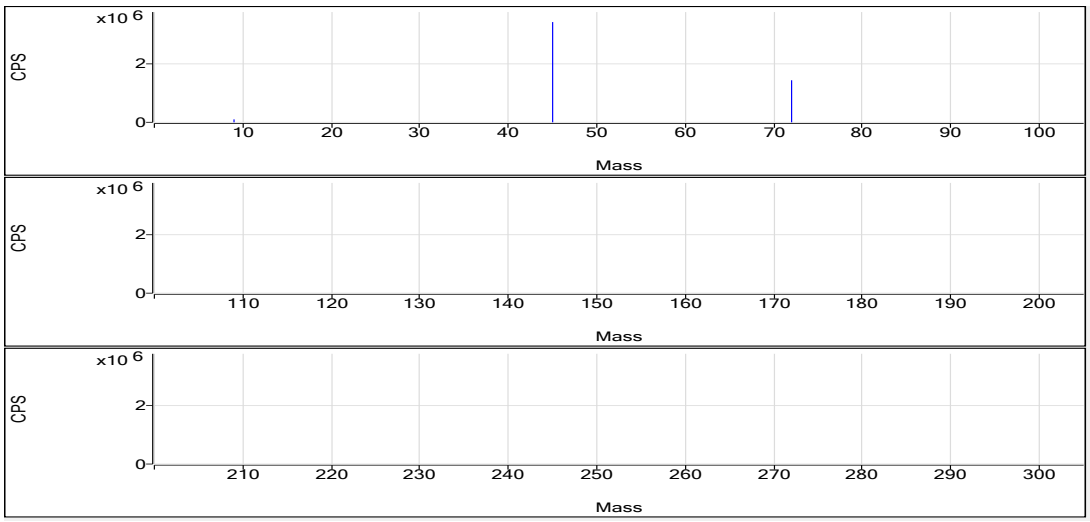
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	52.682	ppb	2.3	100456.13	0.0693	Pulse	0.5000	3
Se	78	72	H2	108.405	ppb	5.1	6798.72	0.0422	Pulse	1.5000	3
Na	23	72	He	5753.693	ppb	0.2	753170.75	9.9903	Pulse	0.1000	3
Mg	24	72	He	13979.255	ppb	0.6	888922.98	11.7908	Pulse	0.1000	3
Al	27	72	He	48757.932	ppb	0.4	887417.75	11.7709	Pulse	0.1000	3
K	39	72	He	10019.630	ppb	0.7	427967.87	5.6766	Pulse	0.1000	3
Ca	44	72	He	18074.611	ppb	0.1	42445.69	0.5630	Pulse	0.1000	3
Ti	47	72	He	815.069	ppb	3.0	15432.01	0.2047	Pulse	0.1000	3
V	51	72	He	616.121	ppb	0.3	543914.85	7.2146	Pulse	0.5000	3
Cr	52	72	He	576.119	ppb	0.8	663313.56	8.7981	Pulse	0.1000	3
Mn	55	72	He	913.972	ppb	0.9	407740.61	5.4085	Pulse	0.1000	3
Fe	57	72	He	39905.849	ppb	0.7	871912.46	11.5652	Pulse	0.1000	3
Co	59	72	He	538.301	ppb	0.9	1238420.42	16.4269	Pulse	0.1000	3
Ni	60	72	He	568.055	ppb	0.9	377269.72	5.0041	Pulse	0.1000	3
Cu	63	72	He	598.400	ppb	0.6	1125367.98	14.9273	Pulse	0.1000	3
Zn	66	72	He	753.282	ppb	0.9	139881.02	1.8555	Pulse	0.1000	3
As	75	72	He	525.354	ppb	0.1	68916.06	0.9141	Pulse	0.5000	3
Sr	88	115	He	129.950	ppb	0.5	65715.23	1.0166	Pulse	0.1000	3
Mo	98	115	He	53.943	ppb	2.4	76818.67	1.1884	Pulse	0.1000	3
Ag	107	115	He	52.243	ppb	1.8	153671.10	2.3775	Pulse	0.1000	3
Cd	111	115	He	53.867	ppb	1.0	16717.97	0.2586	Pulse	0.5000	3
Sn	120	115	He	107.766	ppb	2.2	100319.53	1.5521	Pulse	0.1000	3
Sb	121	115	He	104.179	ppb	0.8	83550.14	1.2926	Pulse	0.1000	3
Ba	137	115	He	780.665	ppb	1.6	220785.04	3.4156	Pulse	0.1000	3
Tl	205	209	He	103.610	ppb	0.3	648735.03	2.8652	Pulse	0.1000	3
Pb	208	209	He	163.919	ppb	0.4	1351345.99	5.9684	Pulse	0.1000	3
U	238	209	He	54.658	ppb	0.7	520676.75	2.2996	Pulse	0.1000	3

ISTD Table:

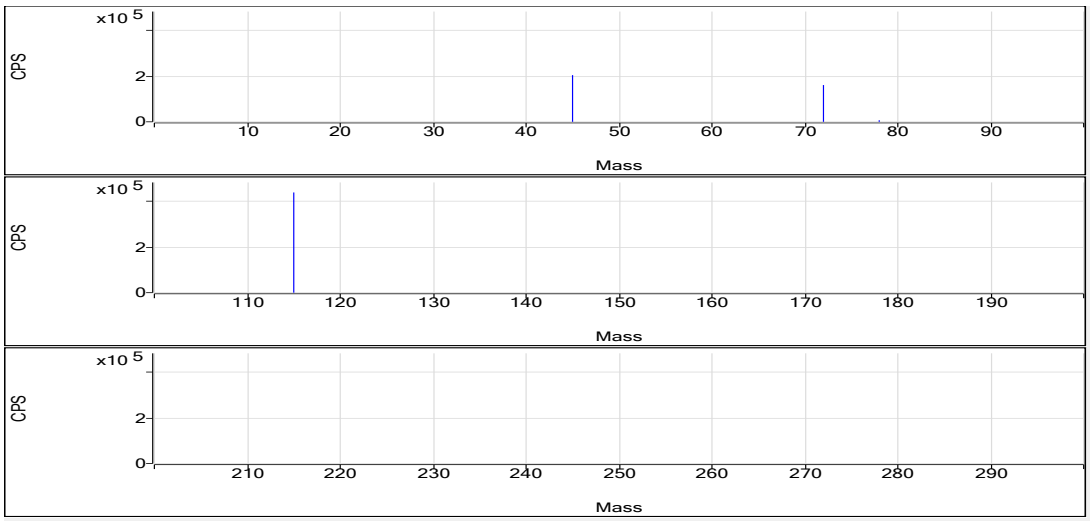
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3457547.24	1.6	106.7	Pulse	0.1000	3
No Gas	Ge	72	1450485.92	2.0	100.7	Pulse	0.1000	3
H2	Sc	45	204757.07	1.3	104.8	Pulse	0.1000	3
H2	Ge	72	161170.01	2.6	98.9	Pulse	0.1000	3
H2	In	115	439501.16	2.0	101.4	Pulse	0.1000	3
He	Sc	45	44334.57	1.8	110.9	Pulse	0.1000	3
He	Ge	72	75391.18	0.8	104.3	Pulse	0.1000	3
He	In	115	64640.95	1.0	100.1	Pulse	0.1000	3
He	Tb	159	295410.65	0.9	103.3	Pulse	0.1000	3
He	Bi	209	226418.12	0.6	101.9	Pulse	0.1000	3

No Gas

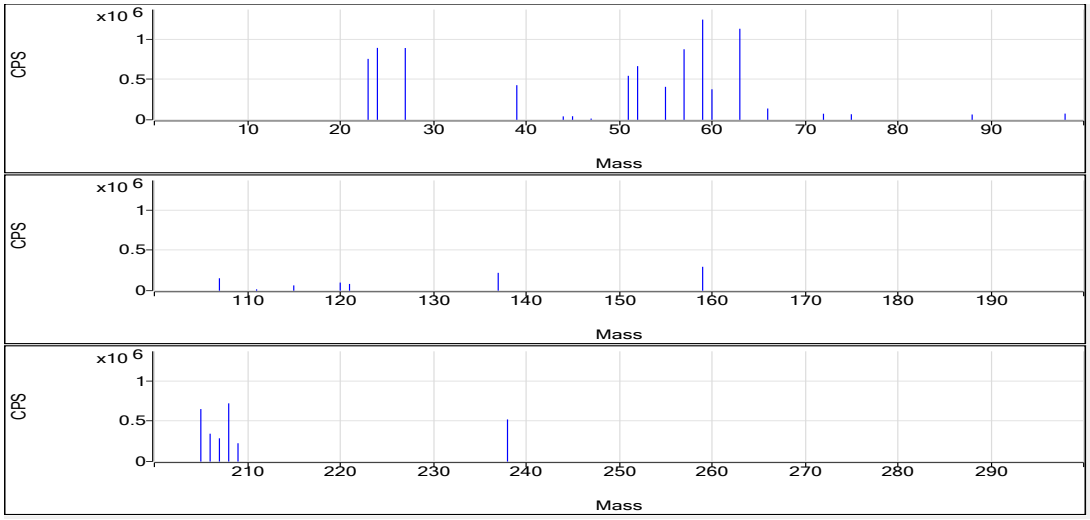


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	53.508	0.0704	102358.00	0.0013	4.694E-05
Be	9	1	No Gas	53.276	0.0701	99402.36	0.0013	4.694E-05
Be	9	1	No Gas	51.261	0.0674	99608.03	0.0013	4.694E-05
Se	78	2	H2	102.212	0.0398	6610.85	0.0004	1.089E-05
Se	78	2	H2	112.649	0.0439	6973.02	0.0004	1.089E-05
Se	78	2	H2	110.355	0.043	6812.28	0.0004	1.089E-05
Na	23	3	He	5766.326	10.012	747731.24	0.0017	0.1065
Na	23	3	He	5744.201	9.974	755232.18	0.0017	0.1065
Na	23	3	He	5750.551	9.9849	756548.82	0.0017	0.1065
Mg	24	3	He	13975.436	11.7876	880338.58	0.0008	0.004846
Mg	24	3	He	13899.668	11.7237	887721.00	0.0008	0.004846
Mg	24	3	He	14062.661	11.8611	898709.36	0.0008	0.004846
Al	27	3	He	48856.259	11.7947	880870.46	0.0002	0.001063
Al	27	3	He	48527.33	11.7153	887084.99	0.0002	0.001063
Al	27	3	He	48890.206	11.8029	894297.80	0.0002	0.001063
K	39	3	He	10010.623	5.6716	423577.96	0.0006	0.1436
K	39	3	He	9954.174	5.6405	427097.06	0.0006	0.1436
K	39	3	He	10094.094	5.7177	433228.59	0.0006	0.1436
Ca	44	3	He	18072.108	0.5629	42041.56	0	0.001611
Ca	44	3	He	18100.943	0.5638	42692.93	0	0.001611
Ca	44	3	He	18050.782	0.5623	42602.59	0	0.001611
Ti	47	3	He	800.241	0.201	15008.25	0.0003	0.0002737
Ti	47	3	He	843.043	0.2117	16029.35	0.0003	0.0002737
Ti	47	3	He	801.924	0.2014	15258.44	0.0003	0.0002737
V	51	3	He	615.876	7.2117	538595.69	0.0117	0.007326
V	51	3	He	614.659	7.1975	544993.56	0.0117	0.007326
V	51	3	He	617.827	7.2345	548155.31	0.0117	0.007326
Cr	52	3	He	573.621	8.7601	654234.52	0.0152	0.02538
Cr	52	3	He	573.475	8.7578	663147.10	0.0152	0.02538
Cr	52	3	He	581.26	8.8764	672559.05	0.0152	0.02538
Mn	55	3	He	920.442	5.4467	406778.94	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	904.805	5.3544	405436.52	0.0059	0.01385
Mn	55	3	He	916.671	5.4244	411006.36	0.0059	0.01385
Fe	57	3	He	39955.589	11.5796	864810.30	0.0003	0.003918
Fe	57	3	He	39588.466	11.4733	868760.53	0.0003	0.003918
Fe	57	3	He	40173.492	11.6428	882166.55	0.0003	0.003918
Co	59	3	He	540.667	16.4991	1232213.42	0.0305	0.003084
Co	59	3	He	532.447	16.2483	1230327.56	0.0305	0.003084
Co	59	3	He	541.788	16.5333	1252720.29	0.0305	0.003084
Ni	60	3	He	566.304	4.9887	372573.31	0.0088	0.009003
Ni	60	3	He	564.124	4.9695	376293.24	0.0088	0.009003
Ni	60	3	He	573.737	5.054	382942.61	0.0088	0.009003
Cu	63	3	He	600.676	14.9841	1119065.06	0.0249	0.004937
Cu	63	3	He	593.926	14.8157	1121852.80	0.0249	0.004937
Cu	63	3	He	600.597	14.9821	1135186.08	0.0249	0.004937
Zn	66	3	He	759.255	1.8701	139669.63	0.0025	0.004836
Zn	66	3	He	754.202	1.8577	140668.32	0.0025	0.004836
Zn	66	3	He	746.388	1.8385	139305.12	0.0025	0.004836
As	75	3	He	525.561	0.9145	68296.44	0.0017	0.0004347
As	75	3	He	525.444	0.9143	69228.98	0.0017	0.0004347
As	75	3	He	525.056	0.9136	69222.75	0.0017	0.0004347
Sr	88	3	He	129.304	1.0116	65370.96	0.0078	0.0007762
Sr	88	3	He	130.048	1.0174	65128.63	0.0078	0.0007762
Sr	88	3	He	130.498	1.0209	66646.09	0.0078	0.0007762
Mo	98	3	He	52.501	1.1567	74748.32	0.022	0.0005162
Mo	98	3	He	54.917	1.2099	77451.68	0.022	0.0005162
Mo	98	3	He	54.411	1.1987	78256.02	0.022	0.0005162
Ag	107	3	He	51.746	2.3549	152185.29	0.0455	0.0004641
Ag	107	3	He	53.299	2.4256	155277.93	0.0455	0.0004641
Ag	107	3	He	51.684	2.3521	153550.08	0.0455	0.0004641
Cd	111	3	He	53.255	0.2557	16523.75	0.0048	5.152E-05
Cd	111	3	He	54.223	0.2603	16665.88	0.0048	5.152E-05
Cd	111	3	He	54.124	0.2599	16964.29	0.0048	5.152E-05
Sn	120	3	He	105.848	1.5248	98536.81	0.0143	0.01559
Sn	120	3	He	110.395	1.5896	101760.11	0.0143	0.01559
Sn	120	3	He	107.054	1.5419	100661.66	0.0143	0.01559
Sb	121	3	He	103.824	1.2882	83248.33	0.0124	0.000258
Sb	121	3	He	105.178	1.305	83540.53	0.0124	0.000258
Sb	121	3	He	103.535	1.2846	83861.56	0.0124	0.000258
Ba	137	3	He	766.178	3.3522	216632.01	0.0044	0.000309
Ba	137	3	He	788.133	3.4482	220743.71	0.0044	0.000309
Ba	137	3	He	787.684	3.4463	224979.41	0.0044	0.000309
Tl	205	3	He	103.32	2.8572	645116.20	0.0276	0.001005
Tl	205	3	He	103.966	2.8751	648351.20	0.0276	0.001005
Tl	205	3	He	103.543	2.8634	652737.69	0.0276	0.001005
Pb	208	3	He	163.313	5.9463	716159.68	0.0364	0.002176
Pb	208	3	He	164.697	5.9967	719586.79	0.0364	0.002176
Pb	208	3	He	163.748	5.9622	722661.63	0.0364	0.002176
U	238	3	He	54.354	2.2868	516317.38	0.0421	0.00024
U	238	3	He	54.527	2.294	517320.58	0.0421	0.00024
U	238	3	He	55.094	2.3179	528392.30	0.0421	0.00024
Sc	45	1	No Gas			3461840.26		
Sc	45	1	No Gas			3399247.76		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3511553.70		
Ge	72	1	No Gas			1454796.38		
Ge	72	1	No Gas			1418941.39		
Ge	72	1	No Gas			1477719.98		
Sc	45	2	H2			206584.51		
Sc	45	2	H2			205968.02		
Sc	45	2	H2			201718.67		
Ge	72	2	H2			166067.50		
Ge	72	2	H2			158939.41		
Ge	72	2	H2			158503.12		
In	115	2	H2			449516.20		
In	115	2	H2			435398.59		
In	115	2	H2			433588.70		
Sc	45	3	He			43514.96		
Sc	45	3	He			45120.48		
Sc	45	3	He			44368.28		
Ge	72	3	He			74683.71		
Ge	72	3	He			75720.35		
Ge	72	3	He			75769.49		
In	115	3	He			65392.78		
In	115	3	He			64810.27		
In	115	3	He			66067.27		
Tb	159	3	He			292508.32		
Tb	159	3	He			296423.02		
Tb	159	3	He			297300.62		
Bi	209	3	He			225785.06		
Bi	209	3	He			225507.85		
Bi	209	3	He			227961.46		

Quantitation Report

Data File Name	153SMPL.d
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Acq Time	2023-08-10 15:41:21
Sample Name	410-136624-C-1-C PDS @10
Sample Type	Sample
Comment	G3 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

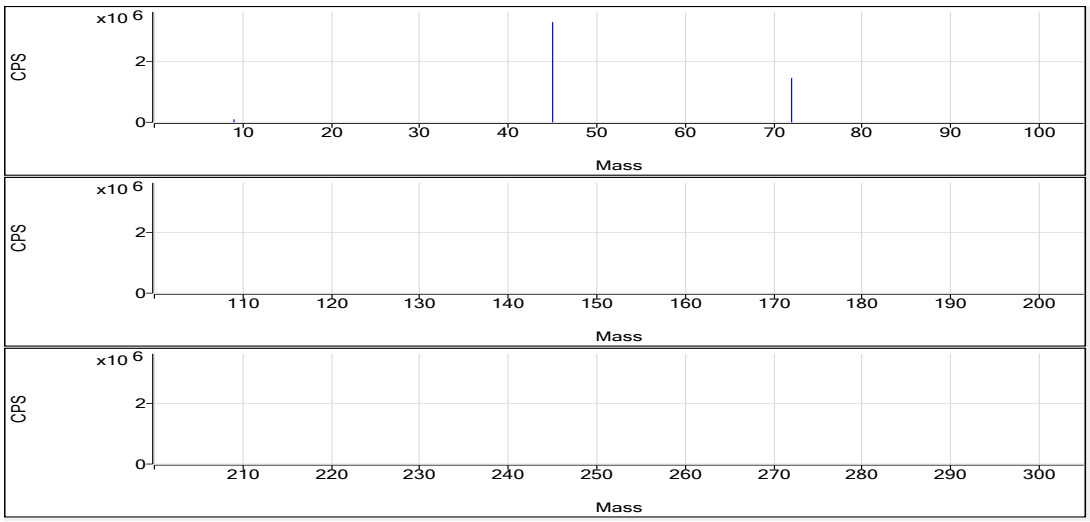
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	51.531	ppb	3.7	98548.48	0.0678	Pulse	0.5000	3
Se	78	72	H2	108.027	ppb	3.6	6751.14	0.0421	Pulse	1.5000	3
Na	23	72	He	5536.925	ppb	0.7	723018.40	9.6179	Pulse	0.1000	3
Mg	24	72	He	7062.636	ppb	1.0	447993.47	5.9594	Pulse	0.1000	3
Al	27	72	He	13370.986	ppb	0.8	242717.88	3.2287	Pulse	0.1000	3
K	39	72	He	6253.612	ppb	0.5	270401.53	3.5970	Pulse	0.1000	3
Ca	44	72	He	7904.646	ppb	3.0	18575.67	0.2471	Pulse	0.1000	3
Ti	47	72	He	598.679	ppb	5.1	11308.07	0.1504	Pulse	0.1000	3
V	51	72	He	555.345	ppb	0.8	488903.19	6.5036	Pulse	0.5000	3
Cr	52	72	He	547.326	ppb	0.7	628429.09	8.3597	Pulse	0.1000	3
Mn	55	72	He	604.363	ppb	0.6	269204.46	3.5811	Pulse	0.1000	3
Fe	57	72	He	11706.007	ppb	0.7	255241.16	3.3953	Pulse	0.1000	3
Co	59	72	He	539.561	ppb	0.3	1237782.82	16.4654	Pulse	0.1000	3
Ni	60	72	He	545.068	ppb	0.3	360997.52	4.8020	Pulse	0.1000	3
Cu	63	72	He	552.136	ppb	0.3	1035438.81	13.7736	Pulse	0.1000	3
Zn	66	72	He	571.815	ppb	0.6	105972.95	1.4097	Pulse	0.1000	3
As	75	72	He	532.257	ppb	0.5	69620.84	0.9261	Pulse	0.5000	3
Sr	88	115	He	68.125	ppb	3.5	33790.86	0.5333	Pulse	0.1000	3
Mo	98	115	He	53.802	ppb	1.7	75106.24	1.1853	Pulse	0.1000	3
Ag	107	115	He	54.110	ppb	1.8	156027.86	2.4625	Pulse	0.1000	3
Cd	111	115	He	55.008	ppb	1.7	16734.65	0.2641	Pulse	0.5000	3
Sn	120	115	He	110.925	ppb	3.6	101189.70	1.5971	Pulse	0.1000	3
Sb	121	115	He	108.413	ppb	2.0	85233.21	1.3451	Pulse	0.1000	3
Ba	137	115	He	580.709	ppb	1.0	161014.81	2.5408	Pulse	0.1000	3
Tl	205	209	He	108.743	ppb	0.8	664093.27	3.0071	Pulse	0.1000	3
Pb	208	209	He	75.464	ppb	0.4	607065.74	2.7489	Pulse	0.1000	3
U	238	209	He	53.904	ppb	1.2	500820.07	2.2678	Pulse	0.1000	3

ISTD Table:

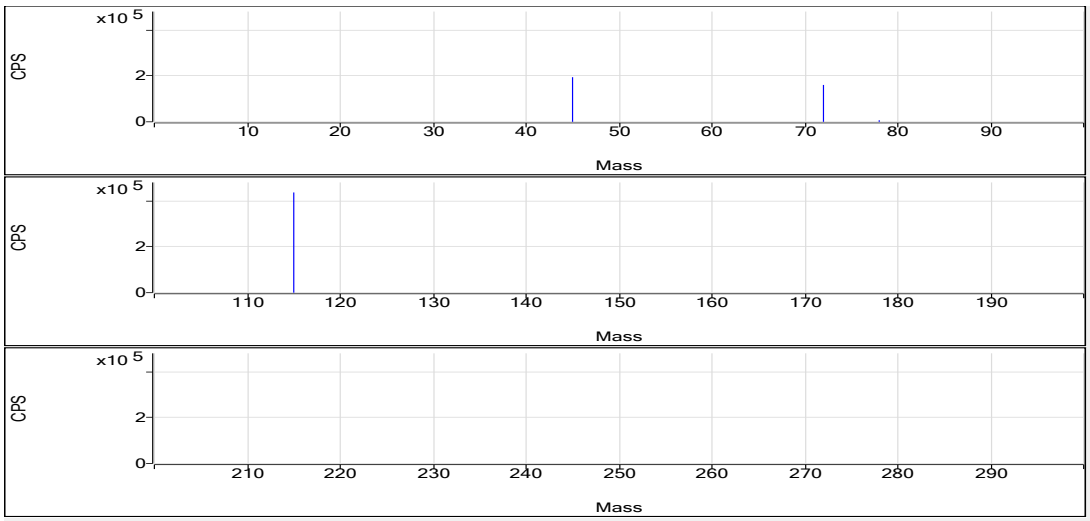
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3300546.51	0.9	101.8	Pulse	0.1000	3
No Gas	Ge	72	1454703.78	1.1	101.0	Pulse	0.1000	3
H2	Sc	45	194201.48	1.5	99.4	Pulse	0.1000	3
H2	Ge	72	160498.47	1.3	98.5	Pulse	0.1000	3
H2	In	115	436258.39	2.3	100.7	Pulse	0.1000	3
He	Sc	45	43468.30	1.1	108.7	Pulse	0.1000	3
He	Ge	72	75176.18	0.7	104.0	Pulse	0.1000	3
He	In	115	63371.91	1.4	98.1	Pulse	0.1000	3
He	Tb	159	284841.65	0.6	99.6	Pulse	0.1000	3
He	Bi	209	220846.38	0.8	99.4	Pulse	0.1000	3

No Gas

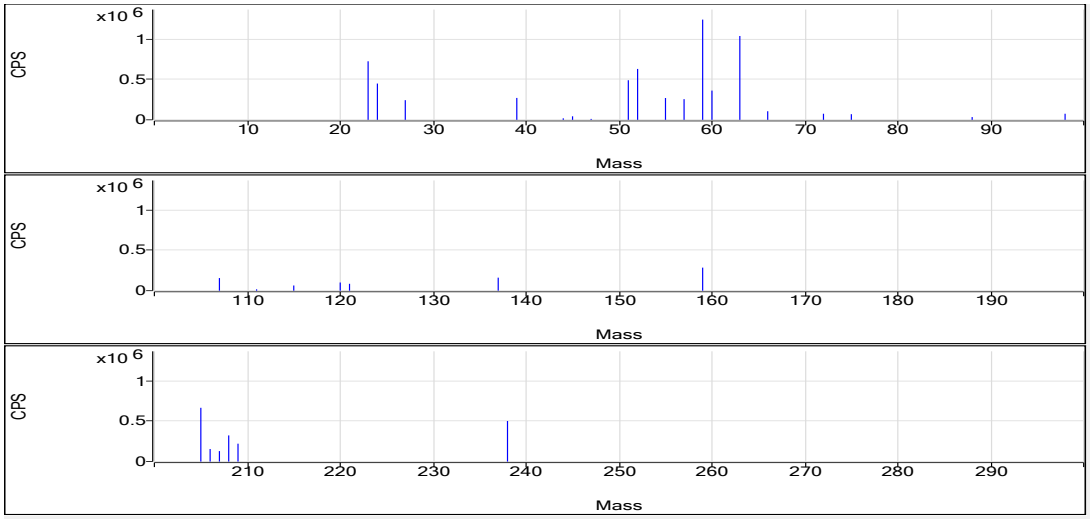


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	52.855	0.0695	100747.45	0.0013	4.694E-05
Be	9	1	No Gas	52.388	0.0689	99370.11	0.0013	4.694E-05
Be	9	1	No Gas	49.351	0.0649	95527.89	0.0013	4.694E-05
Se	78	2	H2	105.41	0.0411	6688.89	0.0004	1.089E-05
Se	78	2	H2	112.456	0.0438	6967.69	0.0004	1.089E-05
Se	78	2	H2	106.214	0.0414	6596.85	0.0004	1.089E-05
Na	23	3	He	5553.561	9.6465	720045.30	0.0017	0.1065
Na	23	3	He	5566.506	9.6687	726952.10	0.0017	0.1065
Na	23	3	He	5490.707	9.5385	722057.80	0.0017	0.1065
Mg	24	3	He	7056.651	5.9543	444450.19	0.0008	0.004846
Mg	24	3	He	7136.348	6.0215	452733.35	0.0008	0.004846
Mg	24	3	He	6994.908	5.9023	446796.87	0.0008	0.004846
Al	27	3	He	13406.981	3.2374	241652.54	0.0002	0.001063
Al	27	3	He	13455.554	3.2492	244290.97	0.0002	0.001063
Al	27	3	He	13250.423	3.1996	242210.13	0.0002	0.001063
K	39	3	He	6262.59	3.6019	268859.04	0.0006	0.1436
K	39	3	He	6278.468	3.6107	271472.91	0.0006	0.1436
K	39	3	He	6219.777	3.5783	270872.65	0.0006	0.1436
Ca	44	3	He	8170.537	0.2554	19062.91	0	0.001611
Ca	44	3	He	7823.917	0.2446	18392.05	0	0.001611
Ca	44	3	He	7719.486	0.2414	18272.06	0	0.001611
Ti	47	3	He	572.884	0.1439	10744.24	0.0003	0.0002737
Ti	47	3	He	632.44	0.1589	11945.29	0.0003	0.0002737
Ti	47	3	He	590.713	0.1484	11234.69	0.0003	0.0002737
V	51	3	He	560.215	6.5606	489703.56	0.0117	0.007326
V	51	3	He	551.961	6.464	486004.56	0.0117	0.007326
V	51	3	He	553.858	6.4862	491001.44	0.0117	0.007326
Cr	52	3	He	549.962	8.3998	626989.56	0.0152	0.02538
Cr	52	3	He	548.948	8.3844	630386.12	0.0152	0.02538
Cr	52	3	He	543.068	8.2948	627911.59	0.0152	0.02538
Mn	55	3	He	608.49	3.6054	269120.43	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	601.67	3.5652	268050.15	0.0059	0.01385
Mn	55	3	He	602.929	3.5726	270442.81	0.0059	0.01385
Fe	57	3	He	11799.58	3.4224	255461.46	0.0003	0.003918
Fe	57	3	He	11634.448	3.3746	253721.73	0.0003	0.003918
Fe	57	3	He	11683.993	3.3889	256540.29	0.0003	0.003918
Co	59	3	He	541.219	16.5159	1232804.67	0.0305	0.003084
Co	59	3	He	539.933	16.4767	1238816.86	0.0305	0.003084
Co	59	3	He	537.531	16.4034	1241726.93	0.0305	0.003084
Ni	60	3	He	542.897	4.7829	357008.24	0.0088	0.009003
Ni	60	3	He	546.144	4.8114	361750.39	0.0088	0.009003
Ni	60	3	He	546.165	4.8116	364233.94	0.0088	0.009003
Cu	63	3	He	553.825	13.8157	1031252.25	0.0249	0.004937
Cu	63	3	He	550.753	13.7391	1032990.38	0.0249	0.004937
Cu	63	3	He	551.83	13.766	1042073.81	0.0249	0.004937
Zn	66	3	He	572.859	1.4122	105412.53	0.0025	0.004836
Zn	66	3	He	568.164	1.4007	105311.64	0.0025	0.004836
Zn	66	3	He	574.423	1.4161	107194.69	0.0025	0.004836
As	75	3	He	535.213	0.9313	69512.48	0.0017	0.0004347
As	75	3	He	530.779	0.9235	69438.00	0.0017	0.0004347
As	75	3	He	530.779	0.9236	69912.03	0.0017	0.0004347
Sr	88	3	He	67.745	0.5303	34091.81	0.0078	0.0007762
Sr	88	3	He	70.677	0.5533	34582.82	0.0078	0.0007762
Sr	88	3	He	65.953	0.5163	32697.95	0.0078	0.0007762
Mo	98	3	He	52.78	1.1628	74748.23	0.022	0.0005162
Mo	98	3	He	54.221	1.1945	74667.14	0.022	0.0005162
Mo	98	3	He	54.405	1.1986	75903.35	0.022	0.0005162
Ag	107	3	He	53.203	2.4212	155643.20	0.0455	0.0004641
Ag	107	3	He	55.099	2.5075	156735.14	0.0455	0.0004641
Ag	107	3	He	54.028	2.4588	155705.23	0.0455	0.0004641
Cd	111	3	He	53.96	0.2591	16653.87	0.0048	5.152E-05
Cd	111	3	He	55.439	0.2662	16637.88	0.0048	5.152E-05
Cd	111	3	He	55.624	0.2671	16912.21	0.0048	5.152E-05
Sn	120	3	He	106.55	1.5348	98658.23	0.0143	0.01559
Sn	120	3	He	112.025	1.6128	100813.69	0.0143	0.01559
Sn	120	3	He	114.199	1.6438	104097.17	0.0143	0.01559
Sb	121	3	He	106.168	1.3173	84676.91	0.0124	0.000258
Sb	121	3	He	108.639	1.3479	84254.16	0.0124	0.000258
Sb	121	3	He	110.434	1.3702	86768.57	0.0124	0.000258
Ba	137	3	He	577.759	2.5279	162498.52	0.0044	0.000309
Ba	137	3	He	577.266	2.5257	157875.82	0.0044	0.000309
Ba	137	3	He	587.102	2.5688	162670.10	0.0044	0.000309
Tl	205	3	He	109.21	3.02	667235.62	0.0276	0.001005
Tl	205	3	He	109.256	3.0213	661981.24	0.0276	0.001005
Tl	205	3	He	107.764	2.9801	663062.96	0.0276	0.001005
Pb	208	3	He	75.469	2.749	323931.40	0.0364	0.002176
Pb	208	3	He	75.774	2.7602	319987.73	0.0364	0.002176
Pb	208	3	He	75.149	2.7374	324942.38	0.0364	0.002176
U	238	3	He	53.456	2.249	496883.08	0.0421	0.00024
U	238	3	He	54.623	2.2981	503523.23	0.0421	0.00024
U	238	3	He	53.633	2.2564	502053.90	0.0421	0.00024
Sc	45	1	No Gas			3299765.89		
Sc	45	1	No Gas			3271605.26		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3330268.39		
Ge	72	1	No Gas			1449586.38		
Ge	72	1	No Gas			1442508.10		
Ge	72	1	No Gas			1472016.85		
Sc	45	2	H2			197452.97		
Sc	45	2	H2			193248.18		
Sc	45	2	H2			191903.28		
Ge	72	2	H2			162930.87		
Ge	72	2	H2			159091.32		
Ge	72	2	H2			159473.22		
In	115	2	H2			445219.41		
In	115	2	H2			425349.17		
In	115	2	H2			438206.60		
Sc	45	3	He			43845.89		
Sc	45	3	He			43625.39		
Sc	45	3	He			42933.63		
Ge	72	3	He			74643.32		
Ge	72	3	He			75185.99		
Ge	72	3	He			75699.23		
In	115	3	He			65051.87		
In	115	3	He			63293.39		
In	115	3	He			64138.30		
Tb	159	3	He			283096.27		
Tb	159	3	He			284723.61		
Tb	159	3	He			286705.07		
Bi	209	3	He			220936.21		
Bi	209	3	He			219104.25		
Bi	209	3	He			222498.69		

Quantitation Report

Data File Name	154SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 15:43:20
Sample Name	410-136624-C-1-C SD @10
Sample Type	Sample
Comment	G3 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

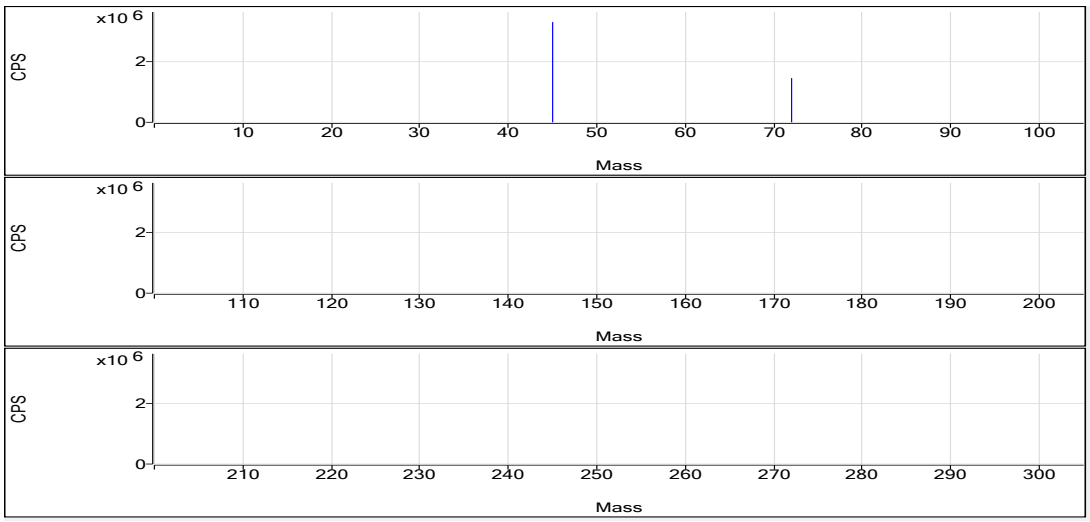
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.329	ppb	8.5	694.69	0.0005	Pulse	0.5000	3
Se	78	72	H2	0.579	ppb	18.9	38.44	0.0002	Pulse	1.5000	3
Na	23	72	He	96.745	ppb	1.1	20447.86	0.2726	Pulse	0.1000	3
Mg	24	72	He	1605.508	ppb	1.9	101863.70	1.3585	Pulse	0.1000	3
Al	27	72	He	7937.284	ppb	0.6	143773.92	1.9171	Pulse	0.1000	3
K	39	72	He	896.310	ppb	1.1	47888.64	0.6386	Pulse	0.1000	3
Ca	44	72	He	2436.226	ppb	2.2	5794.69	0.0773	Pulse	0.1000	3
Ti	47	72	He	46.039	ppb	6.4	886.73	0.0118	Pulse	0.1000	3
V	51	72	He	15.815	ppb	2.1	14421.14	0.1923	Pulse	0.5000	3
Cr	52	72	He	9.106	ppb	1.0	12302.22	0.1640	Pulse	0.1000	3
Mn	55	72	He	70.944	ppb	1.2	32443.33	0.4326	Pulse	0.1000	3
Fe	57	72	He	6414.468	ppb	0.3	139659.26	1.8623	Pulse	0.1000	3
Co	59	72	He	2.880	ppb	7.3	6818.51	0.0909	Pulse	0.1000	3
Ni	60	72	He	9.121	ppb	4.4	6688.46	0.0892	Pulse	0.1000	3
Cu	63	72	He	13.316	ppb	1.8	25269.45	0.3370	Pulse	0.1000	3
Zn	66	72	He	43.373	ppb	2.9	8352.70	0.1114	Pulse	0.1000	3
As	75	72	He	2.044	ppb	9.7	299.34	0.0040	Pulse	0.5000	3
Sr	88	115	He	14.322	ppb	3.4	7085.38	0.1127	Pulse	0.1000	3
Mo	98	115	He	0.501	ppb	7.8	726.71	0.0115	Pulse	0.1000	3
Ag	107	115	He	0.122	ppb	9.3	376.69	0.0060	Pulse	0.1000	3
Cd	111	115	He	0.404	ppb	14.0	125.33	0.0020	Pulse	0.5000	3
Sn	120	115	He	1.395	ppb	23.3	2230.26	0.0355	Pulse	0.1000	3
Sb	121	115	He	0.334	ppb	5.8	276.68	0.0044	Pulse	0.1000	3
Ba	137	115	He	51.075	ppb	2.5	14074.33	0.2238	Pulse	0.1000	3
Tl	205	209	He	0.495	ppb	5.9	3267.19	0.0147	Pulse	0.1000	3
Pb	208	209	He	20.888	ppb	0.8	169490.80	0.7624	Pulse	0.1000	3
U	238	209	He	0.655	ppb	7.1	6181.71	0.0278	Pulse	0.1000	3

ISTD Table:

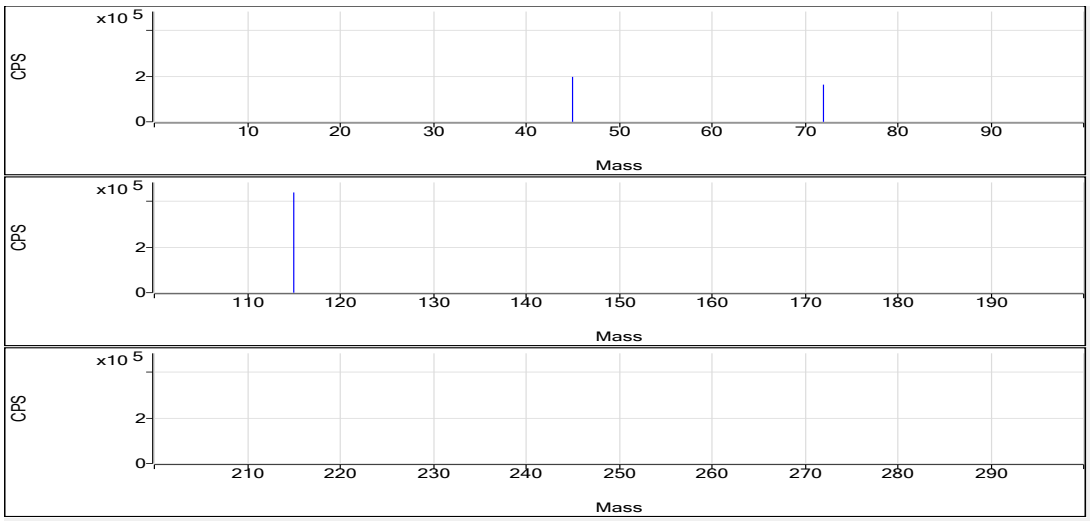
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3291690.16	1.8	101.6	Pulse	0.1000	3
No Gas	Ge	72	1450024.35	1.7	100.7	Pulse	0.1000	3
H2	Sc	45	196625.24	2.1	100.6	Pulse	0.1000	3
H2	Ge	72	162684.56	1.4	99.8	Pulse	0.1000	3
H2	In	115	438599.59	1.3	101.2	Pulse	0.1000	3
He	Sc	45	42020.98	1.3	105.1	Pulse	0.1000	3
He	Ge	72	74995.25	1.1	103.7	Pulse	0.1000	3
He	In	115	62880.99	2.1	97.4	Pulse	0.1000	3
He	Tb	159	286378.78	1.2	100.1	Pulse	0.1000	3
He	Bi	209	222314.13	1.2	100.1	Pulse	0.1000	3

No Gas

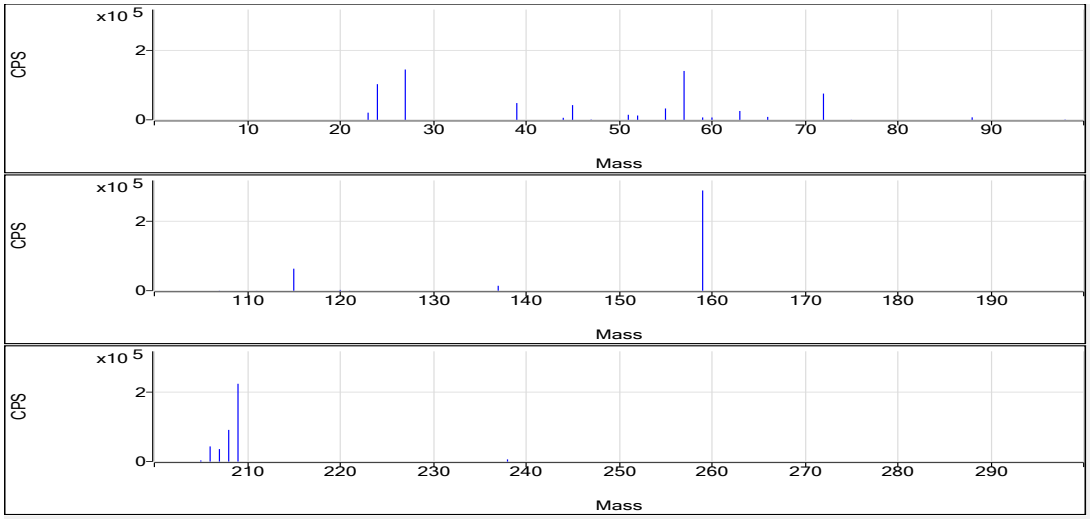


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.361	0.0005	744.02	0.0013	4.694E-05
Be	9	1	No Gas	0.319	0.0005	674.02	0.0013	4.694E-05
Be	9	1	No Gas	0.308	0.0005	666.02	0.0013	4.694E-05
Se	78	2	H2	0.573	0.0002	38.67	0.0004	1.089E-05
Se	78	2	H2	0.691	0.0003	45.33	0.0004	1.089E-05
Se	78	2	H2	0.472	0.0002	31.33	0.0004	1.089E-05
Na	23	3	He	96.705	0.2726	20644.91	0.0017	0.1065
Na	23	3	He	95.694	0.2708	20063.91	0.0017	0.1065
Na	23	3	He	97.837	0.2745	20634.77	0.0017	0.1065
Mg	24	3	He	1574.061	1.3319	100880.53	0.0008	0.004846
Mg	24	3	He	1634.1	1.3826	102419.97	0.0008	0.004846
Mg	24	3	He	1608.364	1.3609	102290.60	0.0008	0.004846
Al	27	3	He	7919.354	1.9127	144870.78	0.0002	0.001063
Al	27	3	He	7902.057	1.9086	141387.20	0.0002	0.001063
Al	27	3	He	7990.441	1.9299	145063.78	0.0002	0.001063
K	39	3	He	891.59	0.636	48169.40	0.0006	0.1436
K	39	3	He	908.077	0.6451	47788.43	0.0006	0.1436
K	39	3	He	889.262	0.6347	47708.08	0.0006	0.1436
Ca	44	3	He	2384.461	0.0757	5731.36	0	0.001611
Ca	44	3	He	2491.192	0.079	5851.36	0	0.001611
Ca	44	3	He	2433.026	0.0772	5801.35	0	0.001611
Ti	47	3	He	49.455	0.0127	960.07	0.0003	0.0002737
Ti	47	3	He	44.127	0.0113	840.06	0.0003	0.0002737
Ti	47	3	He	44.534	0.0114	860.05	0.0003	0.0002737
V	51	3	He	15.581	0.1896	14359.07	0.0117	0.007326
V	51	3	He	16.202	0.1969	14583.29	0.0117	0.007326
V	51	3	He	15.661	0.1905	14321.06	0.0117	0.007326
Cr	52	3	He	9.185	0.1652	12515.77	0.0152	0.02538
Cr	52	3	He	9.126	0.1644	12175.41	0.0152	0.02538
Cr	52	3	He	9.005	0.1625	12215.48	0.0152	0.02538
Mn	55	3	He	71.78	0.4375	33138.09	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	71.011	0.433	32076.00	0.0059	0.01385
Mn	55	3	He	70.041	0.4273	32115.89	0.0059	0.01385
Fe	57	3	He	6402.545	1.8588	140786.90	0.0003	0.003918
Fe	57	3	He	6438.064	1.8691	138464.44	0.0003	0.003918
Fe	57	3	He	6402.796	1.8589	139726.44	0.0003	0.003918
Co	59	3	He	2.903	0.0917	6941.93	0.0305	0.003084
Co	59	3	He	3.076	0.0969	7182.01	0.0305	0.003084
Co	59	3	He	2.66	0.0842	6331.58	0.0305	0.003084
Ni	60	3	He	8.663	0.0852	6451.69	0.0088	0.009003
Ni	60	3	He	9.295	0.0907	6721.79	0.0088	0.009003
Ni	60	3	He	9.403	0.0917	6891.90	0.0088	0.009003
Cu	63	3	He	13.098	0.3316	25112.62	0.0249	0.004937
Cu	63	3	He	13.569	0.3433	25432.99	0.0249	0.004937
Cu	63	3	He	13.28	0.3361	25262.73	0.0249	0.004937
Zn	66	3	He	43.243	0.1111	8412.76	0.0025	0.004836
Zn	66	3	He	44.696	0.1146	8492.75	0.0025	0.004836
Zn	66	3	He	42.179	0.1085	8152.59	0.0025	0.004836
As	75	3	He	2.271	0.0044	332.01	0.0017	0.0004347
As	75	3	He	1.954	0.0038	284.01	0.0017	0.0004347
As	75	3	He	1.907	0.0038	282.00	0.0017	0.0004347
Sr	88	3	He	14.651	0.1153	7182.07	0.0078	0.0007762
Sr	88	3	He	14.556	0.1146	7102.08	0.0078	0.0007762
Sr	88	3	He	13.758	0.1083	6971.98	0.0078	0.0007762
Mo	98	3	He	0.458	0.0106	660.04	0.022	0.0005162
Mo	98	3	He	0.511	0.0118	730.04	0.022	0.0005162
Mo	98	3	He	0.534	0.0123	790.05	0.022	0.0005162
Ag	107	3	He	0.124	0.0061	380.02	0.0455	0.0004641
Ag	107	3	He	0.132	0.0065	400.02	0.0455	0.0004641
Ag	107	3	He	0.109	0.0054	350.02	0.0455	0.0004641
Cd	111	3	He	0.364	0.0018	112.00	0.0048	5.152E-05
Cd	111	3	He	0.379	0.0019	116.00	0.0048	5.152E-05
Cd	111	3	He	0.468	0.0023	148.00	0.0048	5.152E-05
Sn	120	3	He	1.756	0.0406	2530.31	0.0143	0.01559
Sn	120	3	He	1.124	0.0316	1960.20	0.0143	0.01559
Sn	120	3	He	1.304	0.0342	2200.27	0.0143	0.01559
Sb	121	3	He	0.329	0.0043	270.01	0.0124	0.000258
Sb	121	3	He	0.317	0.0042	260.01	0.0124	0.000258
Sb	121	3	He	0.355	0.0047	300.02	0.0124	0.000258
Ba	137	3	He	50.194	0.2199	13697.18	0.0044	0.000309
Ba	137	3	He	50.509	0.2213	13717.31	0.0044	0.000309
Ba	137	3	He	52.522	0.2301	14808.51	0.0044	0.000309
Tl	205	3	He	0.529	0.0156	3510.59	0.0276	0.001005
Tl	205	3	He	0.478	0.0142	3120.49	0.0276	0.001005
Tl	205	3	He	0.479	0.0142	3170.50	0.0276	0.001005
Pb	208	3	He	20.704	0.7557	91507.84	0.0364	0.002176
Pb	208	3	He	20.967	0.7653	90670.45	0.0364	0.002176
Pb	208	3	He	20.992	0.7662	89422.11	0.0364	0.002176
U	238	3	He	0.627	0.0266	5981.57	0.0421	0.00024
U	238	3	He	0.63	0.0267	5871.57	0.0421	0.00024
U	238	3	He	0.709	0.0301	6692.00	0.0421	0.00024
Sc	45	1	No Gas			3246859.01		
Sc	45	1	No Gas			3269572.45		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3358639.01		
Ge	72	1	No Gas			1428491.85		
Ge	72	1	No Gas			1444900.92		
Ge	72	1	No Gas			1476680.29		
Sc	45	2	H2			201226.95		
Sc	45	2	H2			193079.86		
Sc	45	2	H2			195568.92		
Ge	72	2	H2			165319.86		
Ge	72	2	H2			161882.64		
Ge	72	2	H2			160851.19		
In	115	2	H2			445005.74		
In	115	2	H2			435154.88		
In	115	2	H2			435638.16		
Sc	45	3	He			42432.34		
Sc	45	3	He			41419.28		
Sc	45	3	He			42211.31		
Ge	72	3	He			75739.57		
Ge	72	3	He			74080.04		
Ge	72	3	He			75166.13		
In	115	3	He			62308.71		
In	115	3	He			62007.67		
In	115	3	He			64378.79		
Tb	159	3	He			287796.56		
Tb	159	3	He			282469.55		
Tb	159	3	He			288870.23		
Bi	209	3	He			224780.56		
Bi	209	3	He			219652.59		
Bi	209	3	He			222509.23		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 15:45:22
Sample Name	410-136624-C-1-C SD@50
Sample Type	Sample
Comment	G3 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

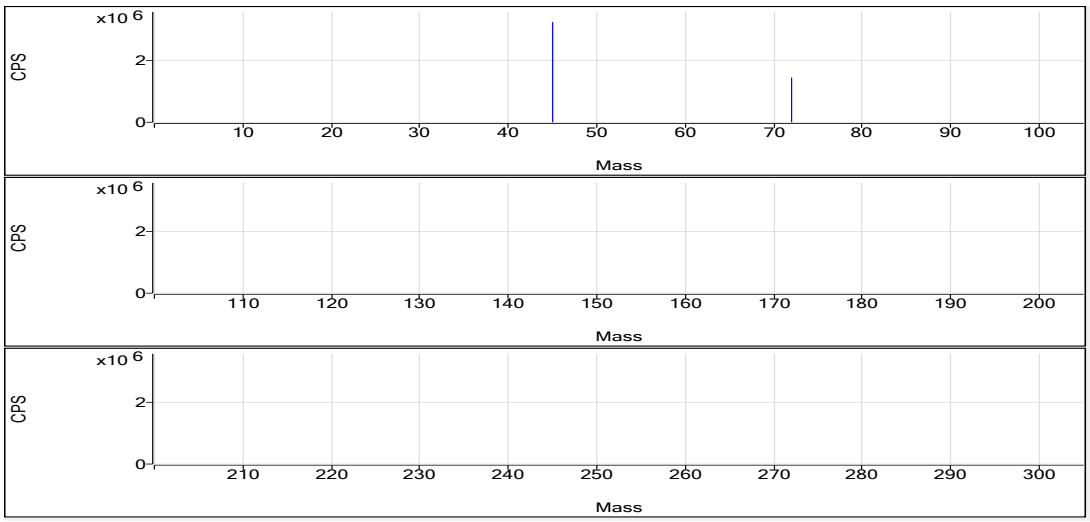
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.068	ppb	9.2	198.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.141	ppb	24.4	10.67	0.0001	Pulse	1.5000	3
Na	23	72	He	30.590	ppb	17.7	11895.15	0.1590	Pulse	0.1000	3
Mg	24	72	He	364.241	ppb	1.4	23345.50	0.3119	Pulse	0.1000	3
Al	27	72	He	1764.847	ppb	1.6	31964.99	0.4271	Pulse	0.1000	3
K	39	72	He	206.491	ppb	7.9	19279.79	0.2577	Pulse	0.1000	3
Ca	44	72	He	518.827	ppb	2.6	1326.78	0.0177	Pulse	0.1000	3
Ti	47	72	He	9.011	ppb	25.6	190.01	0.0025	Pulse	0.1000	3
V	51	72	He	3.553	ppb	0.8	3659.81	0.0489	Pulse	0.5000	3
Cr	52	72	He	2.057	ppb	3.5	4244.10	0.0567	Pulse	0.1000	3
Mn	55	72	He	14.371	ppb	3.0	7385.50	0.0987	Pulse	0.1000	3
Fe	57	72	He	1428.612	ppb	1.9	31267.55	0.4178	Pulse	0.1000	3
Co	59	72	He	0.631	ppb	7.0	1670.15	0.0223	Pulse	0.1000	3
Ni	60	72	He	3.044	ppb	7.8	2677.01	0.0358	Pulse	0.1000	3
Cu	63	72	He	3.150	ppb	5.5	6251.57	0.0835	Pulse	0.1000	3
Zn	66	72	He	9.635	ppb	7.7	2133.56	0.0285	Pulse	0.1000	3
As	75	72	He	0.565	ppb	13.1	106.00	0.0014	Pulse	0.5000	3
Sr	88	115	He	3.343	ppb	1.7	1733.51	0.0269	Pulse	0.1000	3
Mo	98	115	He	0.143	ppb	7.8	236.68	0.0037	Pulse	0.1000	3
Ag	107	115	He	0.033	ppb	27.2	126.67	0.0020	Pulse	0.1000	3
Cd	111	115	He	0.058	ppb	53.6	21.33	0.0003	Pulse	0.5000	3
Sn	120	115	He	0.103	ppb	145.4	1096.75	0.0170	Pulse	0.1000	3
Sb	121	115	He	0.096	ppb	9.9	93.33	0.0015	Pulse	0.1000	3
Ba	137	115	He	11.315	ppb	7.9	3207.18	0.0498	Pulse	0.1000	3
Tl	205	209	He	0.178	ppb	10.5	1300.12	0.0059	Pulse	0.1000	3
Pb	208	209	He	4.700	ppb	1.4	38026.05	0.1732	Pulse	0.1000	3
U	238	209	He	0.136	ppb	3.9	1306.78	0.0060	Pulse	0.1000	3

ISTD Table:

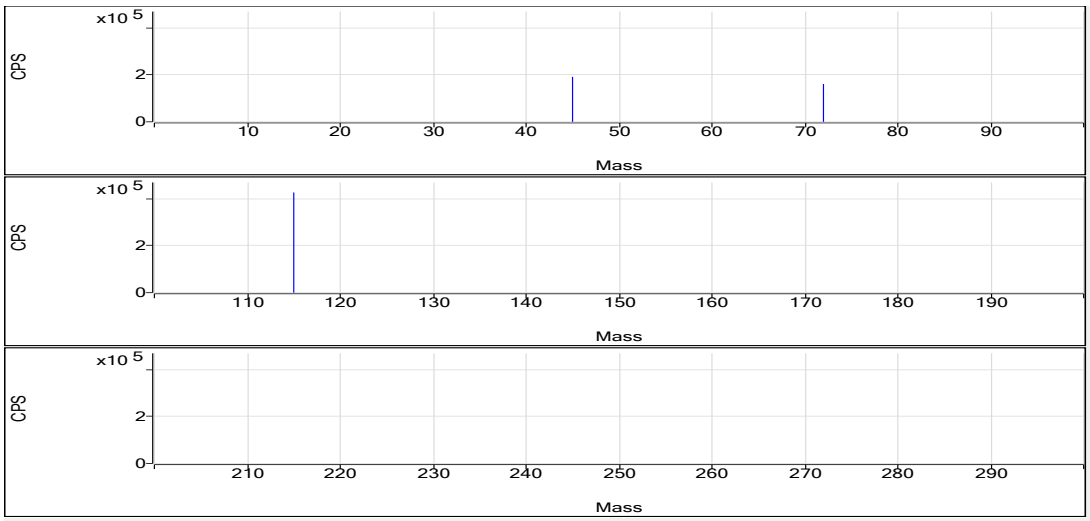
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3257542.24	1.3	100.5	Pulse	0.1000	3
No Gas	Ge	72	1453530.13	1.5	101.0	Pulse	0.1000	3
H2	Sc	45	191717.52	2.1	98.1	Pulse	0.1000	3
H2	Ge	72	161368.49	2.6	99.0	Pulse	0.1000	3
H2	In	115	427693.80	1.5	98.7	Pulse	0.1000	3
He	Sc	45	40897.88	1.8	102.3	Pulse	0.1000	3
He	Ge	72	74851.34	1.7	103.5	Pulse	0.1000	3
He	In	115	64427.10	2.2	99.7	Pulse	0.1000	3
He	Tb	159	280354.76	0.9	98.0	Pulse	0.1000	3
He	Bi	209	219505.09	0.7	98.8	Pulse	0.1000	3

No Gas

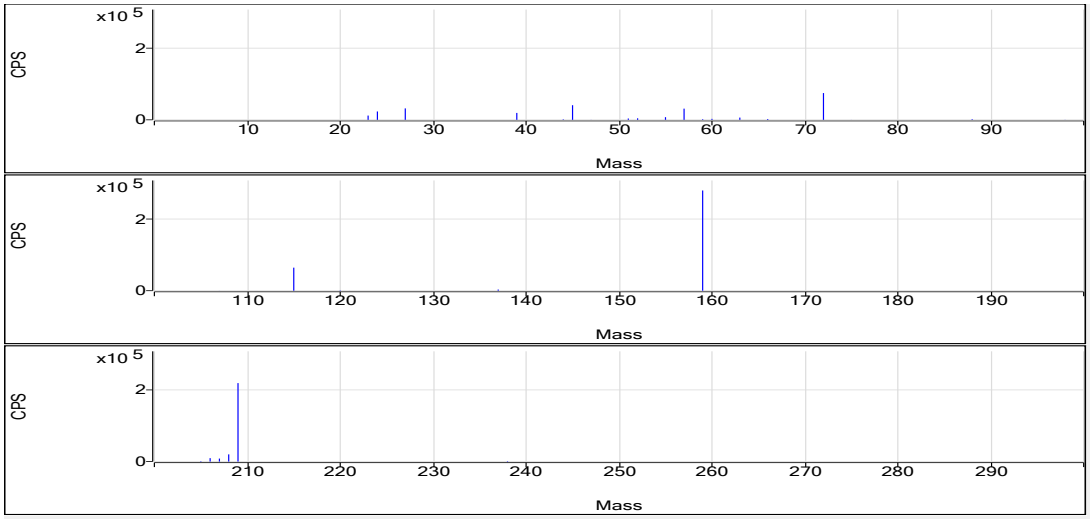


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.062	0.0001	184.00	0.0013	4.694E-05
Be	9	1	No Gas	0.075	0.0001	212.00	0.0013	4.694E-05
Be	9	1	No Gas	0.067	0.0001	198.00	0.0013	4.694E-05
Se	78	2	H2	0.171	0.0001	12.67	0.0004	1.089E-05
Se	78	2	H2	0.103	0.0001	8.00	0.0004	1.089E-05
Se	78	2	H2	0.15	0.0001	11.33	0.0004	1.089E-05
Na	23	3	He	35.613	0.1676	12305.53	0.0017	0.1065
Na	23	3	He	31.291	0.1602	12095.31	0.0017	0.1065
Na	23	3	He	24.866	0.1492	11284.61	0.0017	0.1065
Mg	24	3	He	369.899	0.3167	23248.84	0.0008	0.004846
Mg	24	3	He	361.857	0.3099	23398.88	0.0008	0.004846
Mg	24	3	He	360.965	0.3092	23388.78	0.0008	0.004846
Al	27	3	He	1783.648	0.4316	31684.57	0.0002	0.001063
Al	27	3	He	1733.027	0.4194	31664.12	0.0002	0.001063
Al	27	3	He	1777.865	0.4302	32546.28	0.0002	0.001063
K	39	3	He	223.484	0.2671	19603.60	0.0006	0.1436
K	39	3	He	204.81	0.2567	19383.22	0.0006	0.1436
K	39	3	He	191.178	0.2492	18852.55	0.0006	0.1436
Ca	44	3	He	518.351	0.0177	1300.11	0	0.001611
Ca	44	3	He	532.417	0.0181	1370.11	0	0.001611
Ca	44	3	He	505.714	0.0173	1310.11	0	0.001611
Ti	47	3	He	7.057	0.002	150.01	0.0003	0.0002737
Ti	47	3	He	8.416	0.0024	180.01	0.0003	0.0002737
Ti	47	3	He	11.56	0.0032	240.01	0.0003	0.0002737
V	51	3	He	3.541	0.0487	3578.46	0.0117	0.007326
V	51	3	He	3.586	0.0493	3720.49	0.0117	0.007326
V	51	3	He	3.533	0.0487	3680.48	0.0117	0.007326
Cr	52	3	He	2.136	0.0579	4250.77	0.0152	0.02538
Cr	52	3	He	2.039	0.0564	4260.79	0.0152	0.02538
Cr	52	3	He	1.997	0.0558	4220.75	0.0152	0.02538
Mn	55	3	He	14.529	0.0996	7312.22	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	13.882	0.0958	7232.03	0.0059	0.01385
Mn	55	3	He	14.701	0.1006	7612.24	0.0059	0.01385
Fe	57	3	He	1457.481	0.4262	31284.22	0.0003	0.003918
Fe	57	3	He	1404.386	0.4108	31013.60	0.0003	0.003918
Fe	57	3	He	1423.968	0.4165	31504.84	0.0003	0.003918
Co	59	3	He	0.671	0.0236	1730.15	0.0305	0.003084
Co	59	3	He	0.637	0.0225	1700.16	0.0305	0.003084
Co	59	3	He	0.584	0.0209	1580.14	0.0305	0.003084
Ni	60	3	He	3.144	0.0366	2690.33	0.0088	0.009003
Ni	60	3	He	2.773	0.0334	2520.32	0.0088	0.009003
Ni	60	3	He	3.216	0.0373	2820.39	0.0088	0.009003
Cu	63	3	He	3.08	0.0818	6001.47	0.0249	0.004937
Cu	63	3	He	3.022	0.0803	6061.47	0.0249	0.004937
Cu	63	3	He	3.349	0.0885	6691.77	0.0249	0.004937
Zn	66	3	He	9.843	0.029	2130.23	0.0025	0.004836
Zn	66	3	He	8.815	0.0265	2000.20	0.0025	0.004836
Zn	66	3	He	10.247	0.03	2270.25	0.0025	0.004836
As	75	3	He	0.612	0.0015	110.00	0.0017	0.0004347
As	75	3	He	0.603	0.0015	112.00	0.0017	0.0004347
As	75	3	He	0.48	0.0013	96.00	0.0017	0.0004347
Sr	88	3	He	3.28	0.0264	1700.18	0.0078	0.0007762
Sr	88	3	He	3.39	0.0273	1720.19	0.0078	0.0007762
Sr	88	3	He	3.359	0.027	1780.17	0.0078	0.0007762
Mo	98	3	He	0.139	0.0036	230.01	0.022	0.0005162
Mo	98	3	He	0.135	0.0035	220.01	0.022	0.0005162
Mo	98	3	He	0.156	0.0039	260.01	0.022	0.0005162
Ag	107	3	He	0.027	0.0017	110.00	0.0455	0.0004641
Ag	107	3	He	0.028	0.0017	110.00	0.0455	0.0004641
Ag	107	3	He	0.043	0.0024	160.01	0.0455	0.0004641
Cd	111	3	He	0.054	0.0003	20.00	0.0048	5.152E-05
Cd	111	3	He	0.029	0.0002	12.00	0.0048	5.152E-05
Cd	111	3	He	0.091	0.0005	32.00	0.0048	5.152E-05
Sn	120	3	He	0.018	0.0158	1020.08	0.0143	0.01559
Sn	120	3	He	0.275	0.0195	1230.10	0.0143	0.01559
Sn	120	3	He	0.015	0.0158	1040.07	0.0143	0.01559
Sb	121	3	He	0.092	0.0014	90.00	0.0124	0.000258
Sb	121	3	He	0.107	0.0016	100.00	0.0124	0.000258
Sb	121	3	He	0.089	0.0014	90.00	0.0124	0.000258
Ba	137	3	He	10.479	0.0462	2970.44	0.0044	0.000309
Ba	137	3	He	12.253	0.0539	3400.56	0.0044	0.000309
Ba	137	3	He	11.213	0.0494	3250.53	0.0044	0.000309
Tl	205	3	He	0.173	0.0058	1280.10	0.0276	0.001005
Tl	205	3	He	0.162	0.0055	1200.10	0.0276	0.001005
Tl	205	3	He	0.198	0.0065	1420.15	0.0276	0.001005
Pb	208	3	He	4.714	0.1738	20146.00	0.0364	0.002176
Pb	208	3	He	4.759	0.1754	20306.25	0.0364	0.002176
Pb	208	3	He	4.627	0.1706	19865.56	0.0364	0.002176
U	238	3	He	0.142	0.0062	1370.14	0.0421	0.00024
U	238	3	He	0.135	0.0059	1290.10	0.0421	0.00024
U	238	3	He	0.131	0.0058	1260.11	0.0421	0.00024
Sc	45	1	No Gas			3213305.26		
Sc	45	1	No Gas			3263399.64		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3295921.83		
Ge	72	1	No Gas			1428602.01		
Ge	72	1	No Gas			1462445.60		
Ge	72	1	No Gas			1469542.79		
Sc	45	2	H2			194138.45		
Sc	45	2	H2			186965.15		
Sc	45	2	H2			194048.96		
Ge	72	2	H2			163842.71		
Ge	72	2	H2			156562.52		
Ge	72	2	H2			163700.23		
In	115	2	H2			432501.75		
In	115	2	H2			420358.08		
In	115	2	H2			430221.56		
Sc	45	3	He			40326.06		
Sc	45	3	He			41720.21		
Sc	45	3	He			40647.37		
Ge	72	3	He			73407.63		
Ge	72	3	He			75497.64		
Ge	72	3	He			75648.74		
In	115	3	He			64368.42		
In	115	3	He			63082.74		
In	115	3	He			65855.80		
Tb	159	3	He			278505.80		
Tb	159	3	He			283221.32		
Tb	159	3	He			279337.16		
Bi	209	3	He			221187.89		
Bi	209	3	He			218578.73		
Bi	209	3	He			218748.65		

Quantitation Report

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Sample Type	Sample
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

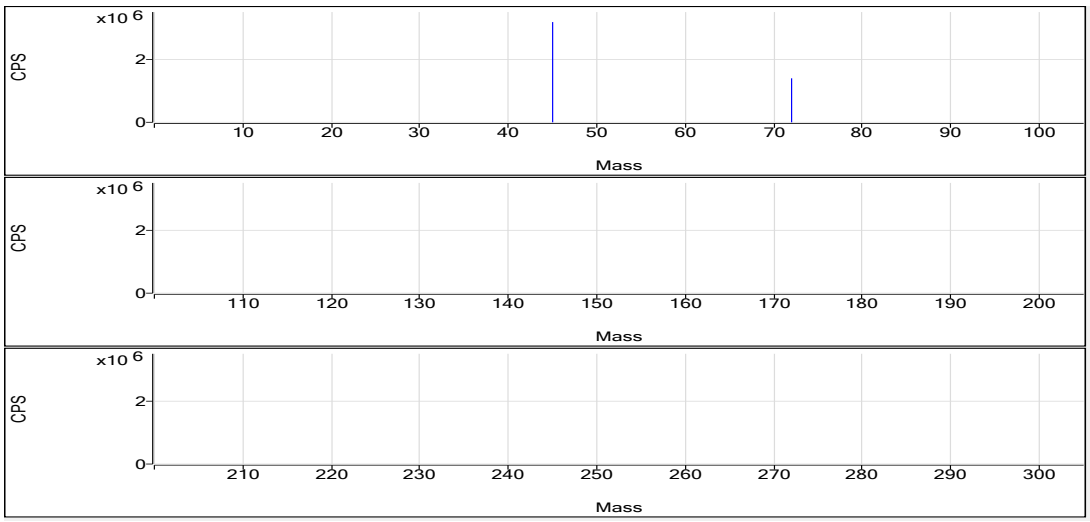
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.003	ppb	99.2	72.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.048	ppb	58.5	4.67	0.0000	Pulse	1.5000	3
Na	23	72	He	15.300	ppb	8.6	9533.40	0.1327	Pulse	0.1000	3
Mg	24	72	He	9.516	ppb	23.0	923.39	0.0129	Pulse	0.1000	3
Al	27	72	He	14.831	ppb	21.6	333.35	0.0046	Pulse	0.1000	3
K	39	72	He	18.102	ppb	100.0	11027.83	0.1536	Pulse	0.1000	3
Ca	44	72	He	-2.679	ppb	N/A	110.00	0.0015	Pulse	0.1000	3
Ti	47	72	He	0.395	ppb	168.5	26.67	0.0004	Pulse	0.1000	3
V	51	72	He	0.135	ppb	18.9	640.02	0.0089	Pulse	0.5000	3
Cr	52	72	He	0.223	ppb	22.5	2066.90	0.0288	Pulse	0.1000	3
Mn	55	72	He	-0.979	ppb	N/A	580.03	0.0081	Pulse	0.1000	3
Fe	57	72	He	15.811	ppb	15.6	610.03	0.0085	Pulse	0.1000	3
Co	59	72	He	0.126	ppb	25.7	496.69	0.0069	Pulse	0.1000	3
Ni	60	72	He	1.034	ppb	40.0	1300.10	0.0181	Pulse	0.1000	3
Cu	63	72	He	0.118	ppb	39.3	566.70	0.0079	Pulse	0.1000	3
Zn	66	72	He	-0.327	ppb	N/A	290.01	0.0040	Pulse	0.1000	3
As	75	72	He	0.157	ppb	63.6	50.67	0.0007	Pulse	0.5000	3
Sr	88	115	He	0.143	ppb	86.8	120.00	0.0019	Pulse	0.1000	3
Mo	98	115	He	0.115	ppb	33.5	193.34	0.0030	Pulse	0.1000	3
Ag	107	115	He	0.008	ppb	106.1	53.33	0.0008	Pulse	0.1000	3
Cd	111	115	He	-0.004	ppb	N/A	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.036	ppb	227.3	1020.08	0.0161	Pulse	0.1000	3
Sb	121	115	He	0.030	ppb	41.0	40.00	0.0006	Pulse	0.1000	3
Ba	137	115	He	0.157	ppb	92.6	63.33	0.0010	Pulse	0.1000	3
Tl	205	209	He	0.098	ppb	9.6	806.72	0.0037	Pulse	0.1000	3
Pb	208	209	He	0.010	ppb	15.0	553.35	0.0026	Pulse	0.1000	3
U	238	209	He	0.011	ppb	37.6	153.34	0.0007	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3213316.10	1.9	99.1	Pulse	0.1000	3
No Gas	Ge	72	1410287.22	2.0	98.0	Pulse	0.1000	3
H2	Sc	45	191162.11	1.0	97.8	Pulse	0.1000	3
H2	Ge	72	156603.05	1.3	96.1	Pulse	0.1000	3
H2	In	115	430501.53	2.0	99.4	Pulse	0.1000	3
He	Sc	45	40807.94	1.4	102.1	Pulse	0.1000	3
He	Ge	72	71819.54	1.3	99.4	Pulse	0.1000	3
He	In	115	63389.38	0.8	98.1	Pulse	0.1000	3
He	Tb	159	279439.34	1.3	97.7	Pulse	0.1000	3
He	Bi	209	216513.55	0.7	97.4	Pulse	0.1000	3

No Gas



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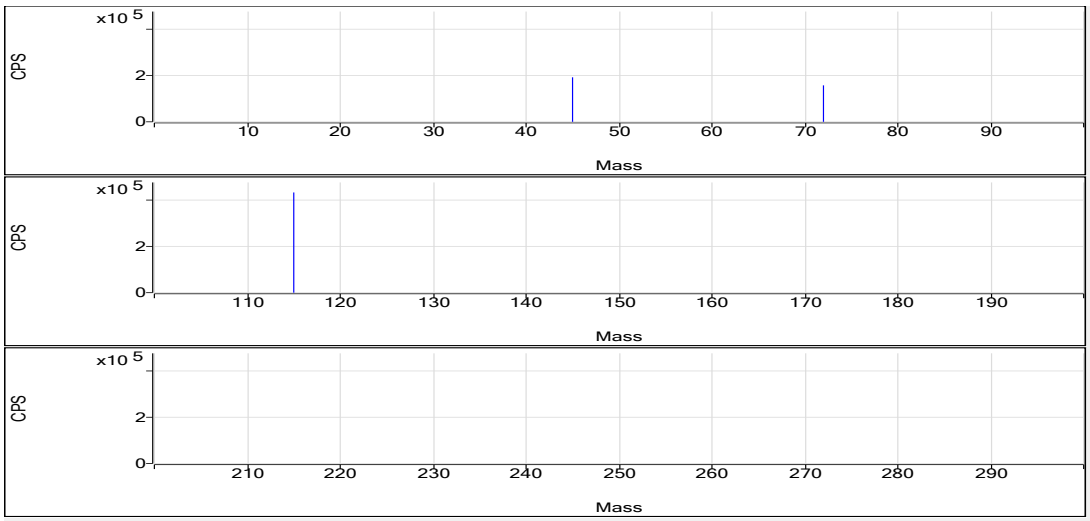
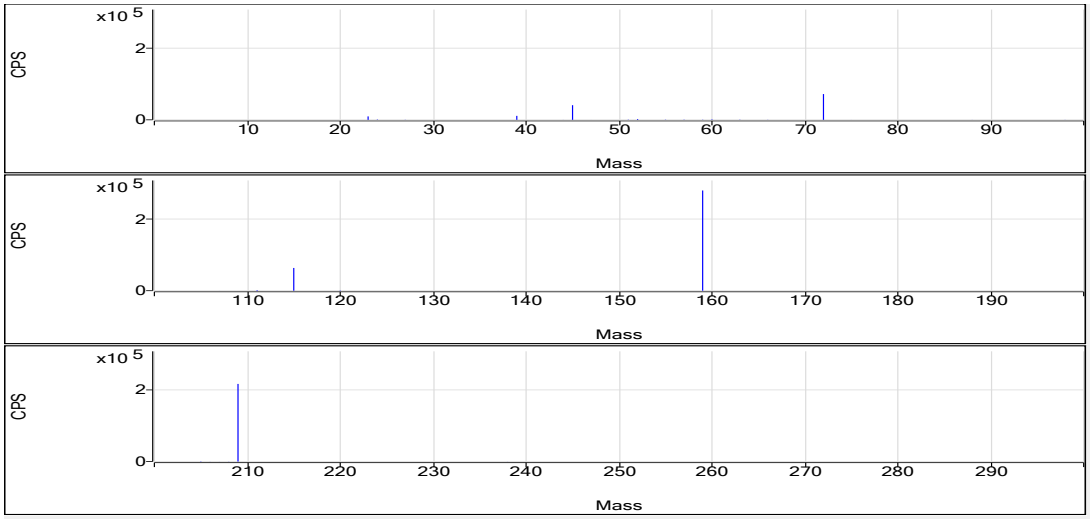


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.003	0.0001	70.00	0.0013	4.694E-05
Be	9	1	No Gas	0.006	0.0001	78.00	0.0013	4.694E-05
Be	9	1	No Gas	0	0	68.00	0.0013	4.694E-05
Se	78	2	H2	0.08	0	6.67	0.0004	1.089E-05
Se	78	2	H2	0.039	0	4.00	0.0004	1.089E-05
Se	78	2	H2	0.026	0	3.33	0.0004	1.089E-05
Na	23	3	He	14.91	0.1321	9343.22	0.0017	0.1065
Na	23	3	He	16.772	0.1353	9763.65	0.0017	0.1065
Na	23	3	He	14.219	0.1309	9493.32	0.0017	0.1065
Mg	24	3	He	11.019	0.0141	1000.07	0.0008	0.004846
Mg	24	3	He	10.521	0.0137	990.06	0.0008	0.004846
Mg	24	3	He	7.008	0.0108	780.05	0.0008	0.004846
Al	27	3	He	14.922	0.0047	330.01	0.0002	0.001063
Al	27	3	He	17.981	0.0054	390.02	0.0002	0.001063
Al	27	3	He	11.59	0.0039	280.01	0.0002	0.001063
K	39	3	He	38.478	0.1649	11665.03	0.0006	0.1436
K	39	3	He	11.947	0.1502	10844.31	0.0006	0.1436
K	39	3	He	3.881	0.1458	10574.16	0.0006	0.1436
Ca	44	3	He	-10.906	0.0013	90.00	0	0.001611
Ca	44	3	He	-38.484	0.0004	30.00	0	0.001611
Ca	44	3	He	41.354	0.0029	210.01	0	0.001611
Ti	47	3	He	1.163	0.0006	40.00	0.0003	0.0002737
Ti	47	3	He	0.013	0.0003	20.00	0.0003	0.0002737
Ti	47	3	He	0.008	0.0003	20.00	0.0003	0.0002737
V	51	3	He	0.14	0.009	634.02	0.0117	0.007326
V	51	3	He	0.108	0.0086	620.02	0.0117	0.007326
V	51	3	He	0.159	0.0092	666.02	0.0117	0.007326
Cr	52	3	He	0.227	0.0288	2040.23	0.0152	0.02538
Cr	52	3	He	0.271	0.0295	2130.25	0.0152	0.02538
Cr	52	3	He	0.171	0.028	2030.21	0.0152	0.02538
Mn	55	3	He	-0.958	0.0082	580.03	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.962	0.0082	590.04	0.0059	0.01385
Mn	55	3	He	-1.016	0.0079	570.03	0.0059	0.01385
Fe	57	3	He	18.192	0.0092	650.03	0.0003	0.003918
Fe	57	3	He	13.258	0.0078	560.03	0.0003	0.003918
Fe	57	3	He	15.983	0.0085	620.03	0.0003	0.003918
Co	59	3	He	0.112	0.0065	460.02	0.0305	0.003084
Co	59	3	He	0.162	0.008	580.03	0.0305	0.003084
Co	59	3	He	0.102	0.0062	450.02	0.0305	0.003084
Ni	60	3	He	0.905	0.017	1200.09	0.0088	0.009003
Ni	60	3	He	1.497	0.0222	1600.13	0.0088	0.009003
Ni	60	3	He	0.701	0.0152	1100.08	0.0088	0.009003
Cu	63	3	He	0.114	0.0078	550.03	0.0249	0.004937
Cu	63	3	He	0.074	0.0068	490.03	0.0249	0.004937
Cu	63	3	He	0.167	0.0091	660.04	0.0249	0.004937
Zn	66	3	He	-0.588	0.0034	240.01	0.0025	0.004836
Zn	66	3	He	-0.051	0.0047	340.02	0.0025	0.004836
Zn	66	3	He	-0.341	0.004	290.01	0.0025	0.004836
As	75	3	He	0.27	0.0009	64.00	0.0017	0.0004347
As	75	3	He	0.085	0.0006	42.00	0.0017	0.0004347
As	75	3	He	0.115	0.0006	46.00	0.0017	0.0004347
Sr	88	3	He	0.081	0.0014	90.00	0.0078	0.0007762
Sr	88	3	He	0.063	0.0013	80.00	0.0078	0.0007762
Sr	88	3	He	0.287	0.003	190.01	0.0078	0.0007762
Mo	98	3	He	0.154	0.0039	250.01	0.022	0.0005162
Mo	98	3	He	0.077	0.0022	140.01	0.022	0.0005162
Mo	98	3	He	0.114	0.003	190.01	0.022	0.0005162
Ag	107	3	He	0.007	0.0008	50.00	0.0455	0.0004641
Ag	107	3	He	0	0.0005	30.00	0.0455	0.0004641
Ag	107	3	He	0.018	0.0013	80.00	0.0455	0.0004641
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Cd	111	3	He	-0.011	0	0.00	0.0048	5.152E-05
Sn	120	3	He	-0.052	0.0149	950.06	0.0143	0.01559
Sn	120	3	He	0.05	0.0163	1030.07	0.0143	0.01559
Sn	120	3	He	0.11	0.0171	1080.10	0.0143	0.01559
Sb	121	3	He	0.042	0.0008	50.00	0.0124	0.000258
Sb	121	3	He	0.03	0.0006	40.00	0.0124	0.000258
Sb	121	3	He	0.018	0.0005	30.00	0.0124	0.000258
Ba	137	3	He	0.179	0.0011	70.00	0.0044	0.000309
Ba	137	3	He	0.291	0.0016	100.00	0.0044	0.000309
Ba	137	3	He	0.002	0.0003	20.00	0.0044	0.000309
Tl	205	3	He	0.107	0.004	850.06	0.0276	0.001005
Tl	205	3	He	0.088	0.0034	750.05	0.0276	0.001005
Tl	205	3	He	0.101	0.0038	820.06	0.0276	0.001005
Pb	208	3	He	0.012	0.0026	280.01	0.0364	0.002176
Pb	208	3	He	0.011	0.0026	410.02	0.0364	0.002176
Pb	208	3	He	0.009	0.0025	250.01	0.0364	0.002176
U	238	3	He	0.014	0.0008	180.01	0.0421	0.00024
U	238	3	He	0.013	0.0008	170.01	0.0421	0.00024
U	238	3	He	0.006	0.0005	110.01	0.0421	0.00024
Sc	45	1	No Gas			3146987.77		
Sc	45	1	No Gas			3227814.95		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3265145.58		
Ge	72	1	No Gas			1383830.60		
Ge	72	1	No Gas			1407488.26		
Ge	72	1	No Gas			1439542.79		
Sc	45	2	H2			191011.83		
Sc	45	2	H2			189296.27		
Sc	45	2	H2			193178.24		
Ge	72	2	H2			158038.54		
Ge	72	2	H2			154358.90		
Ge	72	2	H2			157411.71		
In	115	2	H2			430588.47		
In	115	2	H2			421751.95		
In	115	2	H2			439164.17		
Sc	45	3	He			40376.64		
Sc	45	3	He			40597.28		
Sc	45	3	He			41449.89		
Ge	72	3	He			70744.74		
Ge	72	3	He			72180.73		
Ge	72	3	He			72533.16		
In	115	3	He			63976.80		
In	115	3	He			63223.22		
In	115	3	He			62991.97		
Tb	159	3	He			277312.48		
Tb	159	3	He			277331.09		
Tb	159	3	He			283674.45		
Bi	209	3	He			214999.29		
Bi	209	3	He			217925.88		
Bi	209	3	He			216615.47		

Quantitation Report

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Sample Type	CCV
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

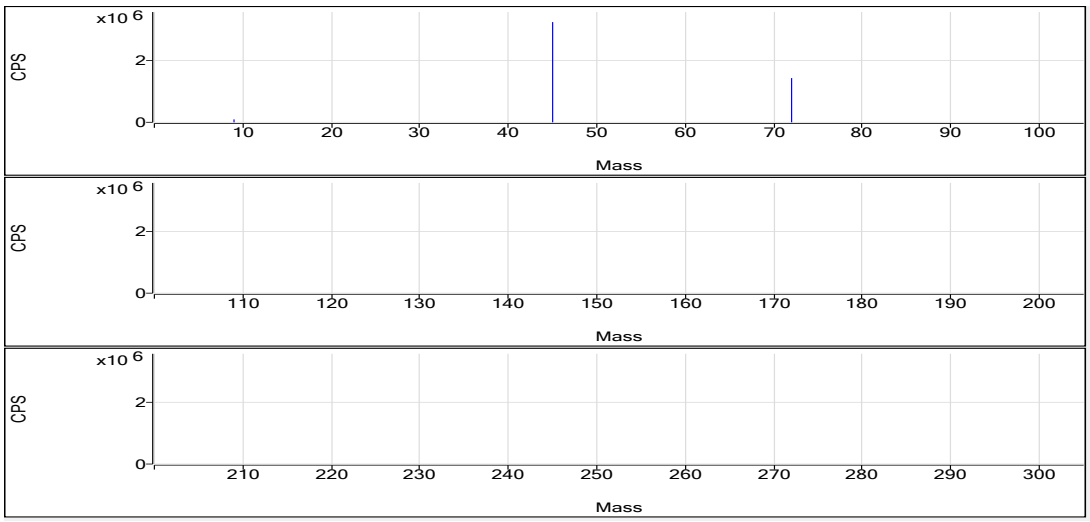
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	49.990	ppb	3.6	93709.80	0.0657	Pulse	0.5000	3
Se	78	72	H2	53.806	ppb	3.7	3291.05	0.0210	Pulse	1.5000	3
Na	23	72	He	5468.872	ppb	2.6	697567.21	9.5010	Pulse	0.1000	3
Mg	24	72	He	5442.304	ppb	2.9	337227.35	4.5933	Pulse	0.1000	3
Al	27	72	He	5277.147	ppb	1.1	93624.44	1.2749	Pulse	0.1000	3
K	39	72	He	5369.788	ppb	0.6	228313.37	3.1089	Pulse	0.1000	3
Ca	44	72	He	5345.889	ppb	3.5	12308.85	0.1677	Pulse	0.1000	3
Ti	47	72	He	5361.475	ppb	2.2	98752.51	1.3448	Pulse	0.1000	3
V	51	72	He	535.842	ppb	1.9	460782.91	6.2755	Pulse	0.5000	3
Cr	52	72	He	535.251	ppb	2.4	600276.33	8.1758	Pulse	0.1000	3
Mn	55	72	He	531.517	ppb	1.6	231380.93	3.1511	Pulse	0.1000	3
Fe	57	72	He	5261.863	ppb	1.7	112235.28	1.5284	Pulse	0.1000	3
Co	59	72	He	533.254	ppb	2.1	1194827.48	16.2729	Pulse	0.1000	3
Ni	60	72	He	533.887	ppb	2.4	345377.44	4.7036	Pulse	0.1000	3
Cu	63	72	He	530.723	ppb	1.5	972205.46	13.2396	Pulse	0.1000	3
Zn	66	72	He	531.507	ppb	2.2	96235.46	1.3106	Pulse	0.1000	3
As	75	72	He	526.248	ppb	2.0	67232.88	0.9157	Pulse	0.5000	3
Sr	88	115	He	54.232	ppb	0.4	26345.05	0.4247	Pulse	0.1000	3
Mo	98	115	He	54.311	ppb	1.4	74221.61	1.1965	Pulse	0.1000	3
Ag	107	115	He	53.608	ppb	1.1	151326.62	2.4396	Pulse	0.1000	3
Cd	111	115	He	54.225	ppb	1.9	16147.98	0.2604	Pulse	0.5000	3
Sn	120	115	He	54.546	ppb	1.0	49207.60	0.7933	Pulse	0.1000	3
Sb	121	115	He	54.256	ppb	2.2	41760.02	0.6733	Pulse	0.1000	3
Ba	137	115	He	538.164	ppb	1.3	146059.22	2.3547	Pulse	0.1000	3
Tl	205	209	He	53.315	ppb	2.0	319820.03	1.4749	Pulse	0.1000	3
Pb	208	209	He	53.225	ppb	1.4	420581.98	1.9394	Pulse	0.1000	3
U	238	209	He	52.534	ppb	2.0	479283.99	2.2102	Pulse	0.1000	3

ISTD Table:

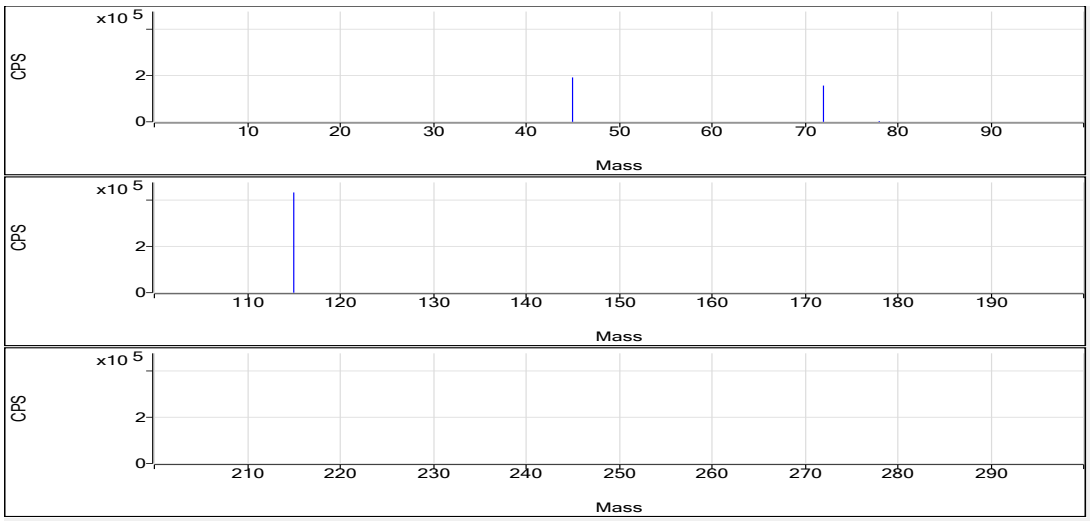
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3234296.83	1.7	99.8	Pulse	0.1000	3
No Gas	Ge	72	1426123.10	1.7	99.1	Pulse	0.1000	3
H2	Sc	45	192398.05	2.6	98.5	Pulse	0.1000	3
H2	Ge	72	157051.74	1.1	96.3	Pulse	0.1000	3
H2	In	115	434432.47	0.8	100.3	Pulse	0.1000	3
He	Sc	45	41188.46	1.3	103.0	Pulse	0.1000	3
He	Ge	72	73443.69	1.9	101.6	Pulse	0.1000	3
He	In	115	62032.34	1.0	96.0	Pulse	0.1000	3
He	Tb	159	282232.64	0.4	98.7	Pulse	0.1000	3
He	Bi	209	216878.52	1.0	97.6	Pulse	0.1000	3

No Gas

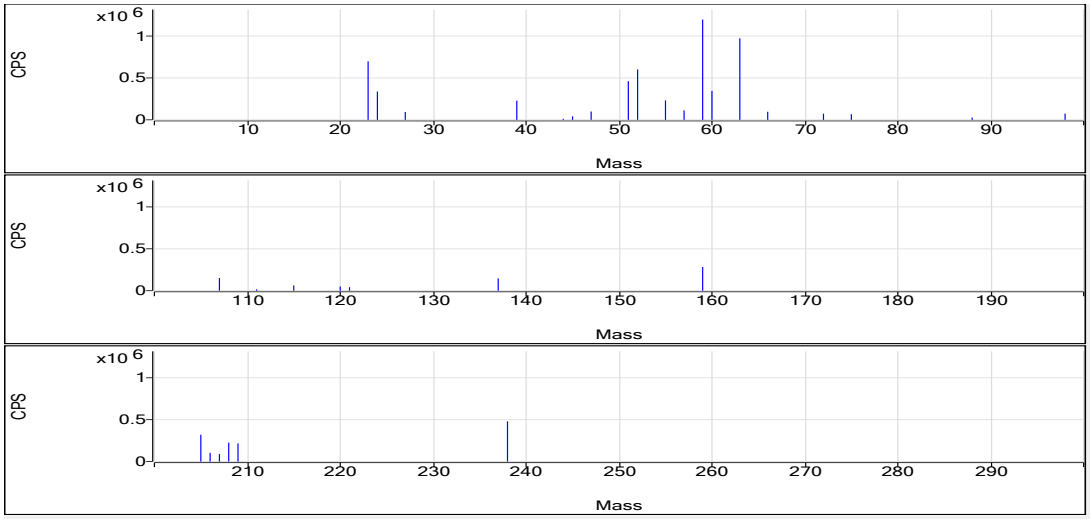


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	52.069	0.0685	95757.01	0.0013	4.694E-05
Be	9	1	No Gas	49.089	0.0646	92547.38	0.0013	4.694E-05
Be	9	1	No Gas	48.813	0.0642	92825.00	0.0013	4.694E-05
Se	78	2	H2	55.497	0.0216	3367.07	0.0004	1.089E-05
Se	78	2	H2	54.3	0.0212	3307.72	0.0004	1.089E-05
Se	78	2	H2	51.622	0.0201	3198.36	0.0004	1.089E-05
Na	23	3	He	5518.302	9.5859	696148.90	0.0017	0.1065
Na	23	3	He	5577.407	9.6874	703625.54	0.0017	0.1065
Na	23	3	He	5310.907	9.2296	692927.18	0.0017	0.1065
Mg	24	3	He	5481.871	4.6266	335994.80	0.0008	0.004846
Mg	24	3	He	5575.392	4.7055	341771.01	0.0008	0.004846
Mg	24	3	He	5269.648	4.4477	333916.25	0.0008	0.004846
Al	27	3	He	5337.376	1.2895	93644.31	0.0002	0.001063
Al	27	3	He	5275.263	1.2745	92569.02	0.0002	0.001063
Al	27	3	He	5218.802	1.2609	94660.00	0.0002	0.001063
K	39	3	He	5383.84	3.1167	226338.36	0.0006	0.1436
K	39	3	He	5390.761	3.1205	226649.20	0.0006	0.1436
K	39	3	He	5334.762	3.0896	231952.56	0.0006	0.1436
Ca	44	3	He	5314.835	0.1667	12105.30	0	0.001611
Ca	44	3	He	5544.743	0.1738	12625.74	0	0.001611
Ca	44	3	He	5178.088	0.1624	12195.51	0	0.001611
Ti	47	3	He	5303.524	1.3303	96608.25	0.0003	0.0002737
Ti	47	3	He	5498.409	1.3792	100172.22	0.0003	0.0002737
Ti	47	3	He	5282.493	1.325	99477.06	0.0003	0.0002737
V	51	3	He	541.648	6.3434	460670.38	0.0117	0.007326
V	51	3	He	541.66	6.3435	460748.13	0.0117	0.007326
V	51	3	He	524.218	6.1395	460930.22	0.0117	0.007326
Cr	52	3	He	545.044	8.3249	604572.45	0.0152	0.02538
Cr	52	3	He	540.231	8.2516	599338.27	0.0152	0.02538
Cr	52	3	He	520.477	7.9508	596918.27	0.0152	0.02538
Mn	55	3	He	536.5	3.1805	230974.59	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	536.226	3.1789	230891.34	0.0059	0.01385
Mn	55	3	He	521.824	3.0939	232276.85	0.0059	0.01385
Fe	57	3	He	5211.111	1.5137	109924.62	0.0003	0.003918
Fe	57	3	He	5367.391	1.5589	113229.34	0.0003	0.003918
Fe	57	3	He	5207.086	1.5125	113551.87	0.0003	0.003918
Co	59	3	He	537.576	16.4048	1191349.90	0.0305	0.003084
Co	59	3	He	541.632	16.5285	1200513.11	0.0305	0.003084
Co	59	3	He	520.554	15.8854	1192619.44	0.0305	0.003084
Ni	60	3	He	529.845	4.6681	339006.60	0.0088	0.009003
Ni	60	3	He	548.335	4.8307	350865.07	0.0088	0.009003
Ni	60	3	He	523.48	4.6121	346260.66	0.0088	0.009003
Cu	63	3	He	530.357	13.2305	960827.41	0.0249	0.004937
Cu	63	3	He	539.051	13.4473	976715.38	0.0249	0.004937
Cu	63	3	He	522.76	13.0411	979073.58	0.0249	0.004937
Zn	66	3	He	529.708	1.3062	94859.35	0.0025	0.004836
Zn	66	3	He	544.189	1.3418	97457.29	0.0025	0.004836
Zn	66	3	He	520.625	1.2839	96389.73	0.0025	0.004836
As	75	3	He	531.342	0.9245	67141.33	0.0017	0.0004347
As	75	3	He	533.378	0.9281	67408.34	0.0017	0.0004347
As	75	3	He	514.024	0.8944	67148.98	0.0017	0.0004347
Sr	88	3	He	54.262	0.425	26395.02	0.0078	0.0007762
Sr	88	3	He	54.442	0.4264	26154.86	0.0078	0.0007762
Sr	88	3	He	53.99	0.4228	26485.26	0.0078	0.0007762
Mo	98	3	He	53.448	1.1775	73139.47	0.022	0.0005162
Mo	98	3	He	54.839	1.2082	74114.17	0.022	0.0005162
Mo	98	3	He	54.646	1.2039	75411.20	0.022	0.0005162
Ag	107	3	He	53.188	2.4205	150346.29	0.0455	0.0004641
Ag	107	3	He	54.28	2.4702	151536.83	0.0455	0.0004641
Ag	107	3	He	53.355	2.4281	152096.74	0.0455	0.0004641
Cd	111	3	He	54.266	0.2605	16183.35	0.0048	5.152E-05
Cd	111	3	He	55.245	0.2652	16271.44	0.0048	5.152E-05
Cd	111	3	He	53.165	0.2553	15989.14	0.0048	5.152E-05
Sn	120	3	He	54.856	0.7977	49549.05	0.0143	0.01559
Sn	120	3	He	54.891	0.7982	48966.45	0.0143	0.01559
Sn	120	3	He	53.892	0.784	49107.30	0.0143	0.01559
Sb	121	3	He	53.999	0.6701	41622.62	0.0124	0.000258
Sb	121	3	He	55.533	0.6891	42275.30	0.0124	0.000258
Sb	121	3	He	53.236	0.6606	41382.13	0.0124	0.000258
Ba	137	3	He	544.797	2.3837	148057.96	0.0044	0.000309
Ba	137	3	He	538.733	2.3572	144599.24	0.0044	0.000309
Ba	137	3	He	530.962	2.3232	145520.47	0.0044	0.000309
Tl	205	3	He	52.147	1.4426	316442.59	0.0276	0.001005
Tl	205	3	He	53.611	1.483	320746.62	0.0276	0.001005
Tl	205	3	He	54.186	1.4989	322270.89	0.0276	0.001005
Pb	208	3	He	52.352	1.9077	224086.34	0.0364	0.002176
Pb	208	3	He	53.643	1.9546	227932.34	0.0364	0.002176
Pb	208	3	He	53.681	1.956	225620.35	0.0364	0.002176
U	238	3	He	51.324	2.1593	473666.79	0.0421	0.00024
U	238	3	He	53.269	2.2411	484701.40	0.0421	0.00024
U	238	3	He	53.008	2.2302	479483.78	0.0421	0.00024
Sc	45	1	No Gas			3171206.20		
Sc	45	1	No Gas			3264528.08		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3267156.20		
Ge	72	1	No Gas			1398559.35		
Ge	72	1	No Gas			1433686.38		
Ge	72	1	No Gas			1446123.57		
Sc	45	2	H2			191039.67		
Sc	45	2	H2			188235.08		
Sc	45	2	H2			197919.39		
Ge	72	2	H2			155744.13		
Ge	72	2	H2			156370.88		
Ge	72	2	H2			159040.20		
In	115	2	H2			434046.99		
In	115	2	H2			431025.54		
In	115	2	H2			438224.88		
Sc	45	3	He			41569.79		
Sc	45	3	He			40566.43		
Sc	45	3	He			41429.16		
Ge	72	3	He			72622.08		
Ge	72	3	He			72632.74		
Ge	72	3	He			75076.26		
In	115	3	He			62499.62		
In	115	3	He			61726.74		
In	115	3	He			63022.12		
Tb	159	3	He			281601.91		
Tb	159	3	He			281583.43		
Tb	159	3	He			283512.59		
Bi	209	3	He			219359.12		
Bi	209	3	He			216277.26		
Bi	209	3	He			214999.18		

Quantitation Report

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Acq Time	2023-08-10 15:51:22
Sample Name	CCB 4654618
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

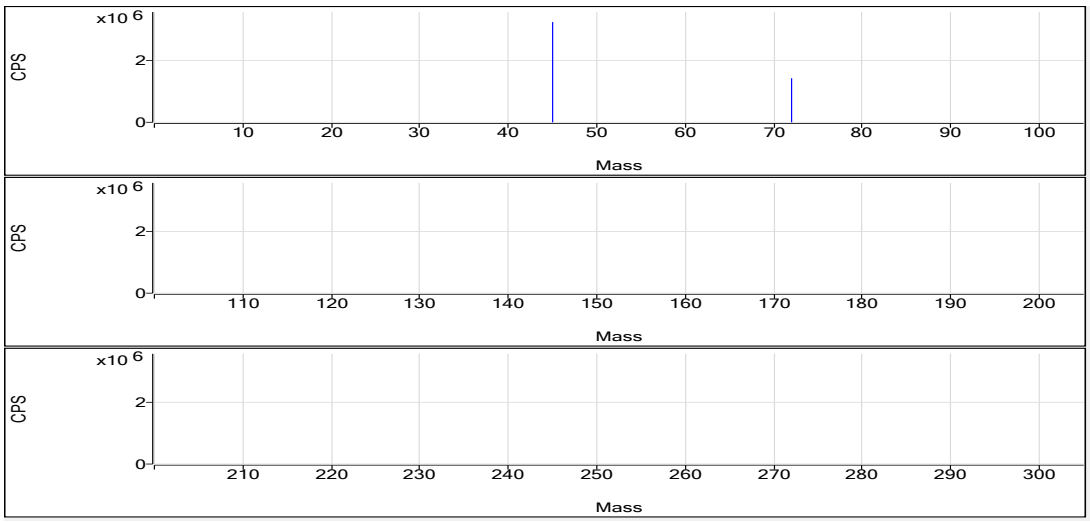
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.036	ppb	36.7	132.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.063	ppb	52.4	5.55	0.0000	Pulse	1.5000	3
Na	23	72	He	16.015	ppb	22.6	9626.75	0.1340	Pulse	0.1000	3
Mg	24	72	He	7.841	ppb	16.2	823.38	0.0115	Pulse	0.1000	3
Al	27	72	He	10.975	ppb	6.7	266.68	0.0037	Pulse	0.1000	3
K	39	72	He	21.485	ppb	69.6	11171.21	0.1555	Pulse	0.1000	3
Ca	44	72	He	25.848	ppb	62.1	173.34	0.0024	Pulse	0.1000	3
Ti	47	72	He	3.160	ppb	43.8	76.67	0.0011	Pulse	0.1000	3
V	51	72	He	0.225	ppb	24.3	716.02	0.0100	Pulse	0.5000	3
Cr	52	72	He	0.310	ppb	42.0	2163.56	0.0301	Pulse	0.1000	3
Mn	55	72	He	-1.097	ppb	N/A	530.03	0.0074	Pulse	0.1000	3
Fe	57	72	He	9.857	ppb	13.9	486.69	0.0068	Pulse	0.1000	3
Co	59	72	He	0.285	ppb	4.5	846.72	0.0118	Pulse	0.1000	3
Ni	60	72	He	0.992	ppb	5.8	1273.43	0.0177	Pulse	0.1000	3
Cu	63	72	He	0.198	ppb	34.8	710.04	0.0099	Pulse	0.1000	3
Zn	66	72	He	0.203	ppb	184.9	383.35	0.0053	Pulse	0.1000	3
As	75	72	He	0.215	ppb	49.9	58.00	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.137	ppb	84.3	116.67	0.0018	Pulse	0.1000	3
Mo	98	115	He	0.089	ppb	27.7	156.67	0.0025	Pulse	0.1000	3
Ag	107	115	He	0.035	ppb	10.6	130.01	0.0021	Pulse	0.1000	3
Cd	111	115	He	0.018	ppb	55.6	8.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.322	ppb	74.0	1273.44	0.0202	Pulse	0.1000	3
Sb	121	115	He	0.090	ppb	41.2	86.67	0.0014	Pulse	0.1000	3
Ba	137	115	He	0.279	ppb	60.6	96.67	0.0015	Pulse	0.1000	3
Tl	205	209	He	0.262	ppb	6.1	1790.19	0.0082	Pulse	0.1000	3
Pb	208	209	He	0.021	ppb	18.7	640.03	0.0029	Pulse	0.1000	3
U	238	209	He	0.021	ppb	28.9	243.34	0.0011	Pulse	0.1000	3

ISTD Table:

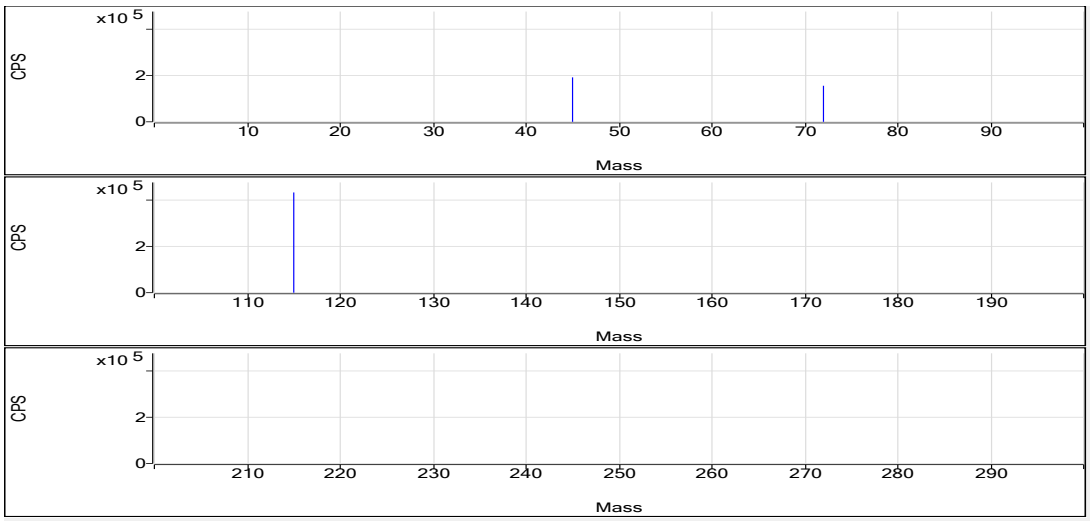
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3218241.72	1.5	99.3	Pulse	0.1000	3
No Gas	Ge	72	1414661.59	1.5	98.3	Pulse	0.1000	3
H2	Sc	45	192422.79	3.6	98.5	Pulse	0.1000	3
H2	Ge	72	156054.70	1.9	95.7	Pulse	0.1000	3
H2	In	115	433869.54	1.8	100.1	Pulse	0.1000	3
He	Sc	45	40366.30	2.4	101.0	Pulse	0.1000	3
He	Ge	72	71849.91	0.5	99.4	Pulse	0.1000	3
He	In	115	63136.49	0.5	97.7	Pulse	0.1000	3
He	Tb	159	278806.25	0.4	97.5	Pulse	0.1000	3
He	Bi	209	217157.32	0.8	97.7	Pulse	0.1000	3

No Gas

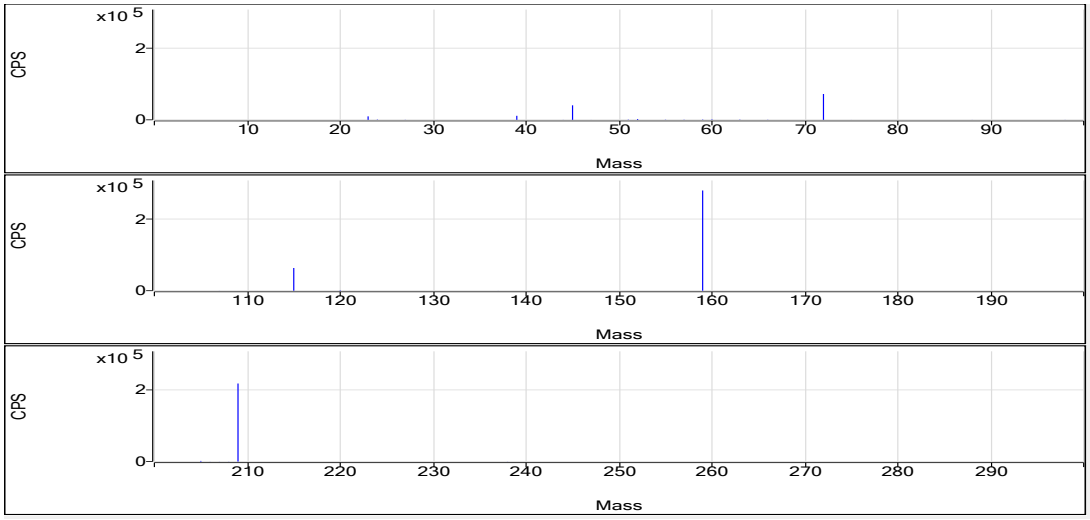


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.021	0.0001	104.00	0.0013	4.694E-05
Be	9	1	No Gas	0.047	0.0001	154.00	0.0013	4.694E-05
Be	9	1	No Gas	0.039	0.0001	140.00	0.0013	4.694E-05
Se	78	2	H2	0.093	0	7.33	0.0004	1.089E-05
Se	78	2	H2	0.028	0	3.33	0.0004	1.089E-05
Se	78	2	H2	0.069	0	6.00	0.0004	1.089E-05
Na	23	3	He	11.932	0.127	9073.09	0.0017	0.1065
Na	23	3	He	17.276	0.1361	9823.51	0.0017	0.1065
Na	23	3	He	18.837	0.1388	9983.65	0.0017	0.1065
Mg	24	3	He	6.7	0.0105	750.04	0.0008	0.004846
Mg	24	3	He	9.211	0.0126	910.06	0.0008	0.004846
Mg	24	3	He	7.611	0.0113	810.04	0.0008	0.004846
Al	27	3	He	11.828	0.0039	280.01	0.0002	0.001063
Al	27	3	He	10.524	0.0036	260.01	0.0002	0.001063
Al	27	3	He	10.574	0.0036	260.01	0.0002	0.001063
K	39	3	He	34.694	0.1628	11634.96	0.0006	0.1436
K	39	3	He	5.24	0.1465	10574.12	0.0006	0.1436
K	39	3	He	24.52	0.1572	11304.54	0.0006	0.1436
Ca	44	3	He	42.743	0.0029	210.01	0	0.001611
Ca	44	3	He	23.988	0.0024	170.01	0	0.001611
Ca	44	3	He	10.812	0.0019	140.01	0	0.001611
Ti	47	3	He	1.698	0.0007	50.00	0.0003	0.0002737
Ti	47	3	He	3.329	0.0011	80.00	0.0003	0.0002737
Ti	47	3	He	4.453	0.0014	100.00	0.0003	0.0002737
V	51	3	He	0.187	0.0095	680.02	0.0117	0.007326
V	51	3	He	0.288	0.0107	772.03	0.0117	0.007326
V	51	3	He	0.201	0.0097	696.02	0.0117	0.007326
Cr	52	3	He	0.244	0.0291	2080.22	0.0152	0.02538
Cr	52	3	He	0.226	0.0288	2080.21	0.0152	0.02538
Cr	52	3	He	0.461	0.0324	2330.26	0.0152	0.02538
Mn	55	3	He	-1.162	0.007	500.03	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-1.22	0.0067	480.02	0.0059	0.01385
Mn	55	3	He	-0.91	0.0085	610.03	0.0059	0.01385
Fe	57	3	He	9.178	0.0066	470.02	0.0003	0.003918
Fe	57	3	He	8.96	0.0065	470.02	0.0003	0.003918
Fe	57	3	He	11.435	0.0072	520.03	0.0003	0.003918
Co	59	3	He	0.28	0.0116	830.06	0.0305	0.003084
Co	59	3	He	0.276	0.0115	830.06	0.0305	0.003084
Co	59	3	He	0.3	0.0122	880.05	0.0305	0.003084
Ni	60	3	He	1.045	0.0182	1300.11	0.0088	0.009003
Ni	60	3	He	0.93	0.0172	1240.09	0.0088	0.009003
Ni	60	3	He	1	0.0178	1280.09	0.0088	0.009003
Cu	63	3	He	0.195	0.0098	700.04	0.0249	0.004937
Cu	63	3	He	0.269	0.0116	840.05	0.0249	0.004937
Cu	63	3	He	0.131	0.0082	590.03	0.0249	0.004937
Zn	66	3	He	0.31	0.0056	400.02	0.0025	0.004836
Zn	66	3	He	0.513	0.0061	440.02	0.0025	0.004836
Zn	66	3	He	-0.214	0.0043	310.01	0.0025	0.004836
As	75	3	He	0.313	0.001	70.00	0.0017	0.0004347
As	75	3	He	0.101	0.0006	44.00	0.0017	0.0004347
As	75	3	He	0.23	0.0008	60.00	0.0017	0.0004347
Sr	88	3	He	0.266	0.0029	180.01	0.0078	0.0007762
Sr	88	3	He	0.042	0.0011	70.00	0.0078	0.0007762
Sr	88	3	He	0.104	0.0016	100.00	0.0078	0.0007762
Mo	98	3	He	0.092	0.0025	160.01	0.022	0.0005162
Mo	98	3	He	0.112	0.003	190.01	0.022	0.0005162
Mo	98	3	He	0.063	0.0019	120.00	0.022	0.0005162
Ag	107	3	He	0.035	0.0021	130.01	0.0455	0.0004641
Ag	107	3	He	0.031	0.0019	120.00	0.0455	0.0004641
Ag	107	3	He	0.039	0.0022	140.01	0.0455	0.0004641
Cd	111	3	He	0.016	0.0001	8.00	0.0048	5.152E-05
Cd	111	3	He	0.029	0.0002	12.00	0.0048	5.152E-05
Cd	111	3	He	0.009	0.0001	6.00	0.0048	5.152E-05
Sn	120	3	He	0.564	0.0236	1490.15	0.0143	0.01559
Sn	120	3	He	0.088	0.0168	1070.08	0.0143	0.01559
Sn	120	3	He	0.313	0.0201	1260.10	0.0143	0.01559
Sb	121	3	He	0.133	0.0019	120.00	0.0124	0.000258
Sb	121	3	He	0.068	0.0011	70.00	0.0124	0.000258
Sb	121	3	He	0.069	0.0011	70.00	0.0124	0.000258
Ba	137	3	He	0.219	0.0013	80.00	0.0044	0.000309
Ba	137	3	He	0.469	0.0024	150.01	0.0044	0.000309
Ba	137	3	He	0.148	0.001	60.00	0.0044	0.000309
Tl	205	3	He	0.28	0.0087	1910.21	0.0276	0.001005
Tl	205	3	He	0.251	0.0079	1730.19	0.0276	0.001005
Tl	205	3	He	0.255	0.008	1730.17	0.0276	0.001005
Pb	208	3	He	0.022	0.003	350.02	0.0364	0.002176
Pb	208	3	He	0.025	0.0031	230.01	0.0364	0.002176
Pb	208	3	He	0.017	0.0028	280.01	0.0364	0.002176
U	238	3	He	0.023	0.0012	260.01	0.0421	0.00024
U	238	3	He	0.026	0.0013	290.01	0.0421	0.00024
U	238	3	He	0.014	0.0008	180.01	0.0421	0.00024
Sc	45	1	No Gas			3177701.83		
Sc	45	1	No Gas			3206914.01		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3270109.33		
Ge	72	1	No Gas			1390270.14		
Ge	72	1	No Gas			1421204.04		
Ge	72	1	No Gas			1432510.60		
Sc	45	2	H2			187687.48		
Sc	45	2	H2			189176.03		
Sc	45	2	H2			200404.86		
Ge	72	2	H2			155227.65		
Ge	72	2	H2			153661.62		
Ge	72	2	H2			159274.82		
In	115	2	H2			437862.18		
In	115	2	H2			424662.88		
In	115	2	H2			439083.55		
Sc	45	3	He			39584.19		
Sc	45	3	He			40065.34		
Sc	45	3	He			41449.37		
Ge	72	3	He			71468.14		
Ge	72	3	He			72161.20		
Ge	72	3	He			71920.40		
In	115	3	He			63063.07		
In	115	3	He			63524.68		
In	115	3	He			62851.52		
Tb	159	3	He			277854.70		
Tb	159	3	He			279870.13		
Tb	159	3	He			278693.92		
Bi	209	3	He			218394.31		
Bi	209	3	He			218008.77		
Bi	209	3	He			215068.88		

Quantitation Report

Data File Name	159SMPL.d
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Acq Time	2023-08-10 15:53:23
Sample Name	410-136624-C-1-D DU @2
Sample Type	Sample
Comment	G3 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

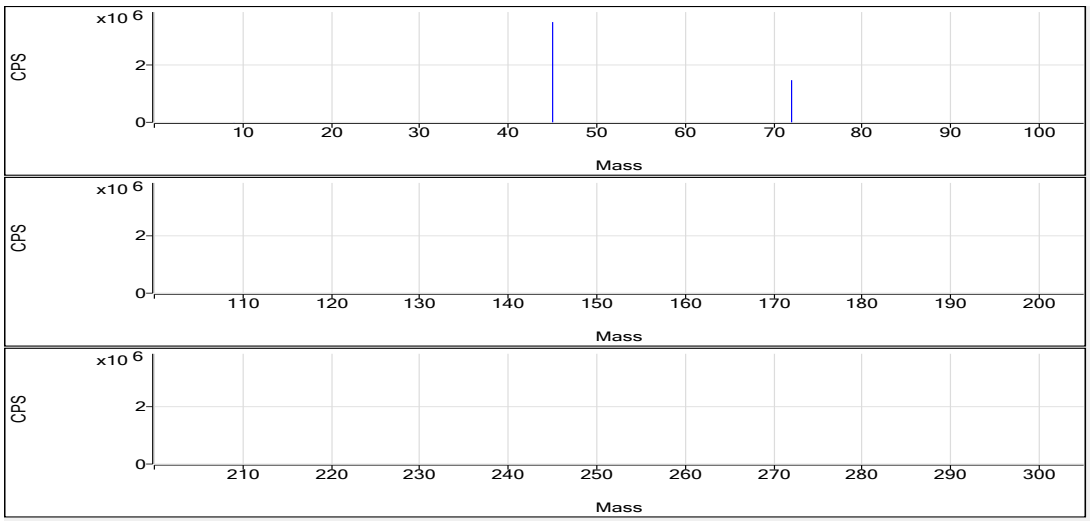
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	1.527	ppb	4.0	3022.32	0.0021	Pulse	0.5000	3
Se	78	72	H2	2.604	ppb	7.5	165.78	0.0010	Pulse	1.5000	3
Na	23	72	He	429.715	ppb	1.1	62421.46	0.8446	Pulse	0.1000	3
Mg	24	72	He	9189.320	ppb	0.6	572947.71	7.7524	Pulse	0.1000	3
Al	27	72	He	43336.497	ppb	1.3	773168.55	10.4622	Pulse	0.1000	3
K	39	72	He	4898.470	ppb	1.8	210513.23	2.8486	Pulse	0.1000	3
Ca	44	72	He	12915.179	ppb	2.5	29774.26	0.4028	Pulse	0.1000	3
Ti	47	72	He	262.414	ppb	0.4	4884.29	0.0661	Pulse	0.1000	3
V	51	72	He	93.325	ppb	1.0	81220.47	1.0990	Pulse	0.5000	3
Cr	52	72	He	49.743	ppb	2.1	57848.50	0.7828	Pulse	0.1000	3
Mn	55	72	He	405.618	ppb	0.3	177968.46	2.4080	Pulse	0.1000	3
Fe	57	72	He	36911.977	ppb	0.6	790636.66	10.6979	Pulse	0.1000	3
Co	59	72	He	14.371	ppb	2.9	32627.45	0.4416	Pulse	0.1000	3
Ni	60	72	He	45.721	ppb	1.5	30375.98	0.4110	Pulse	0.1000	3
Cu	63	72	He	76.113	ppb	0.6	140640.21	1.9030	Pulse	0.1000	3
Zn	66	72	He	230.419	ppb	3.0	42188.87	0.5709	Pulse	0.1000	3
As	75	72	He	8.971	ppb	5.5	1184.72	0.0160	Pulse	0.5000	3
Sr	88	115	He	76.771	ppb	2.7	38024.73	0.6009	Pulse	0.1000	3
Mo	98	115	He	1.583	ppb	2.8	2240.27	0.0354	Pulse	0.1000	3
Ag	107	115	He	0.720	ppb	1.6	2103.57	0.0332	Pulse	0.1000	3
Cd	111	115	He	1.892	ppb	1.4	578.02	0.0091	Pulse	0.5000	3
Sn	120	115	He	5.239	ppb	1.9	5714.72	0.0903	Pulse	0.1000	3
Sb	121	115	He	1.106	ppb	8.4	883.40	0.0140	Pulse	0.1000	3
Ba	137	115	He	259.143	ppb	3.2	71743.64	1.1340	Pulse	0.1000	3
Tl	205	209	He	0.555	ppb	2.6	3694.00	0.0163	Pulse	0.1000	3
Pb	208	209	He	107.182	ppb	1.3	882532.69	3.9033	Pulse	0.1000	3
U	238	209	He	3.367	ppb	1.8	32080.73	0.1419	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3500474.01	1.1	108.0	Pulse	0.1000	3
No Gas	Ge	72	1471837.11	1.2	102.2	Pulse	0.1000	3
H2	Sc	45	205765.81	2.0	105.3	Pulse	0.1000	3
H2	Ge	72	161884.55	2.6	99.3	Pulse	0.1000	3
H2	In	115	435212.16	1.2	100.4	Pulse	0.1000	3
He	Sc	45	43344.61	0.8	108.4	Pulse	0.1000	3
He	Ge	72	73909.79	1.4	102.2	Pulse	0.1000	3
He	In	115	63298.98	2.6	98.0	Pulse	0.1000	3
He	Tb	159	291934.72	0.7	102.1	Pulse	0.1000	3
He	Bi	209	226110.84	0.8	101.8	Pulse	0.1000	3

No Gas



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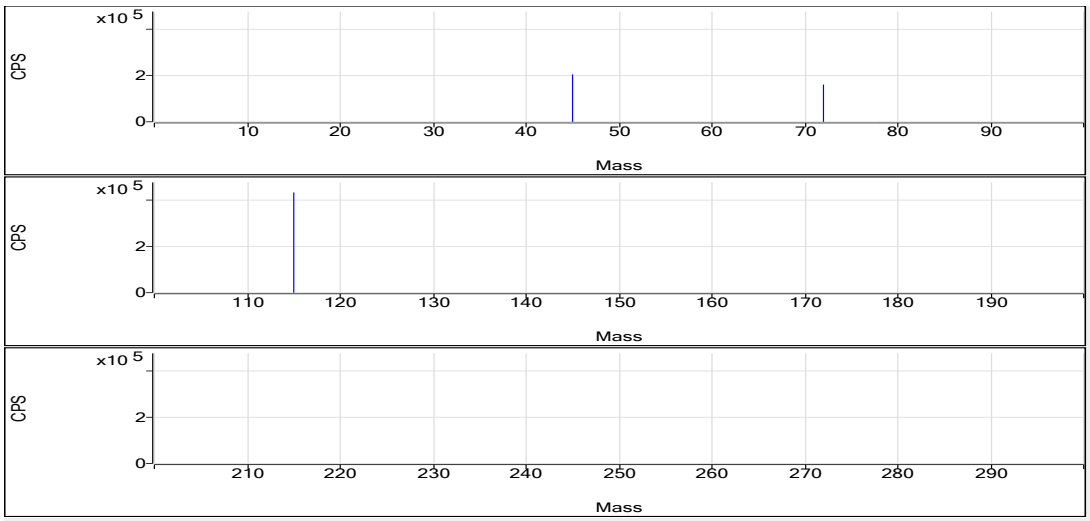
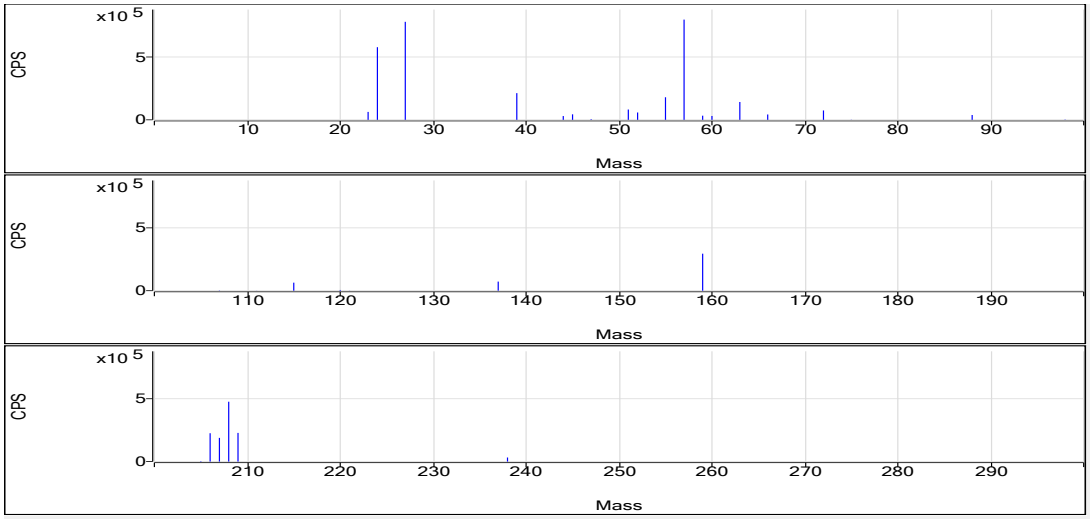


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	1.576	0.0021	3078.34	0.0013	4.694E-05
Be	9	1	No Gas	1.46	0.002	2926.30	0.0013	4.694E-05
Be	9	1	No Gas	1.547	0.0021	3062.33	0.0013	4.694E-05
Se	78	2	H2	2.677	0.0011	174.00	0.0004	1.089E-05
Se	78	2	H2	2.752	0.0011	170.00	0.0004	1.089E-05
Se	78	2	H2	2.383	0.0009	153.33	0.0004	1.089E-05
Na	23	3	He	430.908	0.8467	62994.15	0.0017	0.1065
Na	23	3	He	424.296	0.8353	62351.29	0.0017	0.1065
Na	23	3	He	433.941	0.8519	61918.94	0.0017	0.1065
Mg	24	3	He	9136.35	7.7077	573465.58	0.0008	0.004846
Mg	24	3	He	9183.384	7.7474	578291.63	0.0008	0.004846
Mg	24	3	He	9248.227	7.802	567085.93	0.0008	0.004846
Al	27	3	He	42968.61	10.3734	771798.97	0.0002	0.001063
Al	27	3	He	43065.466	10.3968	776055.69	0.0002	0.001063
Al	27	3	He	43975.415	10.6165	771651.00	0.0002	0.001063
K	39	3	He	4915.467	2.858	212640.90	0.0006	0.1436
K	39	3	He	4804.019	2.7965	208739.04	0.0006	0.1436
K	39	3	He	4975.924	2.8914	210159.76	0.0006	0.1436
Ca	44	3	He	13182.235	0.411	30582.68	0	0.001611
Ca	44	3	He	13014	0.4058	30292.16	0	0.001611
Ca	44	3	He	12549.302	0.3914	28447.95	0	0.001611
Ti	47	3	He	262.65	0.0661	4920.98	0.0003	0.0002737
Ti	47	3	He	263.398	0.0663	4950.99	0.0003	0.0002737
Ti	47	3	He	261.196	0.0658	4780.90	0.0003	0.0002737
V	51	3	He	93.008	1.0953	81492.73	0.0117	0.007326
V	51	3	He	92.58	1.0903	81383.93	0.0117	0.007326
V	51	3	He	94.387	1.1114	80784.74	0.0117	0.007326
Cr	52	3	He	49.364	0.7771	57814.87	0.0152	0.02538
Cr	52	3	He	48.952	0.7708	57534.22	0.0152	0.02538
Cr	52	3	He	50.915	0.8007	58196.40	0.0152	0.02538
Mn	55	3	He	405.254	2.4058	178997.58	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	404.667	2.4024	179321.25	0.0059	0.01385
Mn	55	3	He	406.933	2.4157	175586.56	0.0059	0.01385
Fe	57	3	He	36905.451	10.696	795795.85	0.0003	0.003918
Fe	57	3	He	36706.939	10.6385	794092.57	0.0003	0.003918
Fe	57	3	He	37123.542	10.7592	782021.55	0.0003	0.003918
Co	59	3	He	13.998	0.4302	32006.20	0.0305	0.003084
Co	59	3	He	14.291	0.4391	32777.75	0.0305	0.003084
Co	59	3	He	14.824	0.4554	33098.40	0.0305	0.003084
Ni	60	3	He	45.738	0.4112	30592.98	0.0088	0.009003
Ni	60	3	He	45.021	0.4049	30222.41	0.0088	0.009003
Ni	60	3	He	46.404	0.417	30312.56	0.0088	0.009003
Cu	63	3	He	76.043	1.9012	141453.80	0.0249	0.004937
Cu	63	3	He	75.71	1.8929	141293.90	0.0249	0.004937
Cu	63	3	He	76.586	1.9148	139172.94	0.0249	0.004937
Zn	66	3	He	222.714	0.552	41068.98	0.0025	0.004836
Zn	66	3	He	232.319	0.5756	42964.15	0.0025	0.004836
Zn	66	3	He	236.223	0.5852	42533.49	0.0025	0.004836
As	75	3	He	8.669	0.0155	1154.05	0.0017	0.0004347
As	75	3	He	8.702	0.0156	1162.06	0.0017	0.0004347
As	75	3	He	9.544	0.017	1238.06	0.0017	0.0004347
Sr	88	3	He	78.249	0.6125	38964.34	0.0078	0.0007762
Sr	88	3	He	74.429	0.5826	37720.34	0.0078	0.0007762
Sr	88	3	He	77.633	0.6076	37389.52	0.0078	0.0007762
Mo	98	3	He	1.597	0.0357	2270.28	0.022	0.0005162
Mo	98	3	He	1.618	0.0361	2340.29	0.022	0.0005162
Mo	98	3	He	1.534	0.0343	2110.24	0.022	0.0005162
Ag	107	3	He	0.719	0.0332	2110.25	0.0455	0.0004641
Ag	107	3	He	0.71	0.0327	2120.24	0.0455	0.0004641
Ag	107	3	He	0.733	0.0338	2080.23	0.0455	0.0004641
Cd	111	3	He	1.862	0.009	572.02	0.0048	5.152E-05
Cd	111	3	He	1.913	0.0092	598.02	0.0048	5.152E-05
Cd	111	3	He	1.899	0.0092	564.01	0.0048	5.152E-05
Sn	120	3	He	5.336	0.0917	5831.48	0.0143	0.01559
Sn	120	3	He	5.137	0.0888	5751.39	0.0143	0.01559
Sn	120	3	He	5.246	0.0904	5561.30	0.0143	0.01559
Sb	121	3	He	1.107	0.014	890.07	0.0124	0.000258
Sb	121	3	He	1.013	0.0128	830.05	0.0124	0.000258
Sb	121	3	He	1.198	0.0151	930.07	0.0124	0.000258
Ba	137	3	He	259.735	1.1366	72309.88	0.0044	0.000309
Ba	137	3	He	250.679	1.097	71023.74	0.0044	0.000309
Ba	137	3	He	267.016	1.1684	71897.29	0.0044	0.000309
Tl	205	3	He	0.551	0.0162	3640.63	0.0276	0.001005
Tl	205	3	He	0.542	0.016	3640.66	0.0276	0.001005
Tl	205	3	He	0.571	0.0168	3800.70	0.0276	0.001005
Pb	208	3	He	108.752	3.9605	473885.66	0.0364	0.002176
Pb	208	3	He	106.472	3.8775	472261.16	0.0364	0.002176
Pb	208	3	He	106.324	3.8721	470175.81	0.0364	0.002176
U	238	3	He	3.397	0.1431	32090.89	0.0421	0.00024
U	238	3	He	3.299	0.139	31639.62	0.0421	0.00024
U	238	3	He	3.406	0.1435	32511.67	0.0421	0.00024
Sc	45	1	No Gas			3459958.07		
Sc	45	1	No Gas			3534796.51		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3506667.45		
Ge	72	1	No Gas			1453337.79		
Ge	72	1	No Gas			1489287.17		
Ge	72	1	No Gas			1472886.38		
Sc	45	2	H2			208565.08		
Sc	45	2	H2			200981.46		
Sc	45	2	H2			207750.90		
Ge	72	2	H2			165238.61		
Ge	72	2	H2			157058.84		
Ge	72	2	H2			163356.21		
In	115	2	H2			436720.66		
In	115	2	H2			429419.33		
In	115	2	H2			439496.48		
Sc	45	3	He			43184.01		
Sc	45	3	He			43735.91		
Sc	45	3	He			43113.92		
Ge	72	3	He			74401.48		
Ge	72	3	He			74643.59		
Ge	72	3	He			72684.31		
In	115	3	He			63665.20		
In	115	3	He			64789.89		
In	115	3	He			61575.58		
Tb	159	3	He			289752.89		
Tb	159	3	He			292732.36		
Tb	159	3	He			293318.90		
Bi	209	3	He			224210.04		
Bi	209	3	He			227613.90		
Bi	209	3	He			226508.59		

Quantitation Report

Data File Name	160SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 15:55:24
Sample Name	410-136624-C-1-D DU @10
Sample Type	Sample
Comment	G3 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

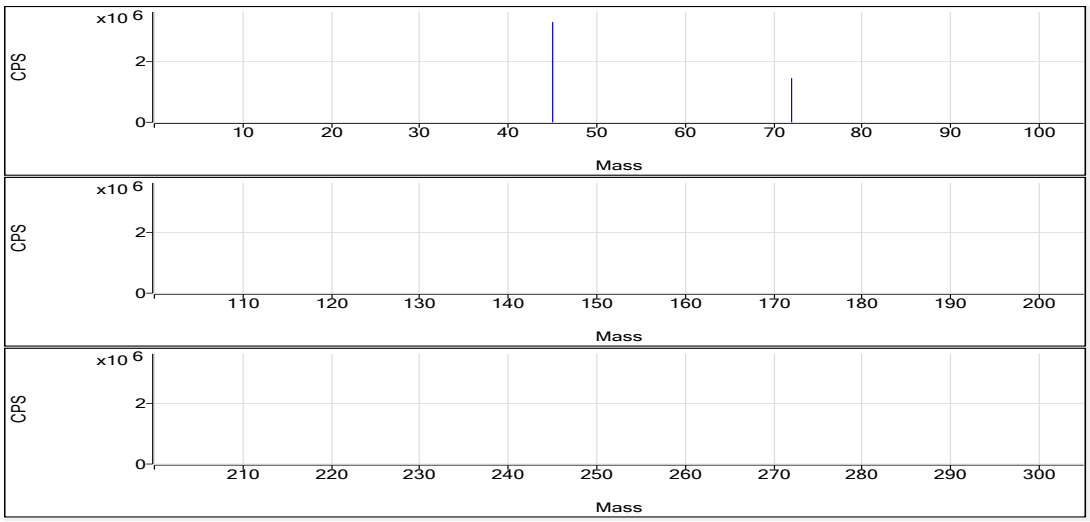
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.255	ppb	11.1	561.35	0.0004	Pulse	0.5000	3
Se	78	72	H2	0.368	ppb	11.6	25.11	0.0002	Pulse	1.5000	3
Na	23	72	He	80.204	ppb	5.2	18154.93	0.2442	Pulse	0.1000	3
Mg	24	72	He	1548.247	ppb	1.4	97398.28	1.3102	Pulse	0.1000	3
Al	27	72	He	7255.003	ppb	1.6	130271.44	1.7524	Pulse	0.1000	3
K	39	72	He	835.083	ppb	5.5	44952.68	0.6048	Pulse	0.1000	3
Ca	44	72	He	2127.143	ppb	2.5	5031.03	0.0677	Pulse	0.1000	3
Ti	47	72	He	45.353	ppb	24.0	866.72	0.0116	Pulse	0.1000	3
V	51	72	He	15.642	ppb	1.3	14146.86	0.1903	Pulse	0.5000	3
Cr	52	72	He	8.373	ppb	3.4	11364.76	0.1529	Pulse	0.1000	3
Mn	55	72	He	66.629	ppb	1.2	30268.73	0.4071	Pulse	0.1000	3
Fe	57	72	He	6153.755	ppb	1.2	132835.66	1.7868	Pulse	0.1000	3
Co	59	72	He	2.550	ppb	2.1	6014.78	0.0809	Pulse	0.1000	3
Ni	60	72	He	8.626	ppb	2.9	6308.26	0.0849	Pulse	0.1000	3
Cu	63	72	He	12.777	ppb	1.6	24053.97	0.3236	Pulse	0.1000	3
Zn	66	72	He	39.330	ppb	3.0	7542.26	0.1015	Pulse	0.1000	3
As	75	72	He	1.534	ppb	10.7	230.67	0.0031	Pulse	0.5000	3
Sr	88	115	He	13.779	ppb	5.0	6878.57	0.1085	Pulse	0.1000	3
Mo	98	115	He	0.306	ppb	19.7	460.03	0.0073	Pulse	0.1000	3
Ag	107	115	He	0.108	ppb	27.4	340.01	0.0054	Pulse	0.1000	3
Cd	111	115	He	0.272	ppb	9.7	86.00	0.0014	Pulse	0.5000	3
Sn	120	115	He	0.748	ppb	26.1	1663.50	0.0263	Pulse	0.1000	3
Sb	121	115	He	0.182	ppb	47.5	160.00	0.0025	Pulse	0.1000	3
Ba	137	115	He	43.808	ppb	6.4	12169.11	0.1920	Pulse	0.1000	3
Tl	205	209	He	0.155	ppb	22.2	1173.44	0.0053	Pulse	0.1000	3
Pb	208	209	He	18.377	ppb	1.8	148728.33	0.6711	Pulse	0.1000	3
U	238	209	He	0.574	ppb	5.0	5404.68	0.0244	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3335410.89	0.3	102.9	Pulse	0.1000	3
No Gas	Ge	72	1469829.87	1.1	102.1	Pulse	0.1000	3
H2	Sc	45	195051.65	1.2	99.8	Pulse	0.1000	3
H2	Ge	72	162878.83	1.2	99.9	Pulse	0.1000	3
H2	In	115	433837.86	0.9	100.1	Pulse	0.1000	3
He	Sc	45	41713.30	1.9	104.3	Pulse	0.1000	3
He	Ge	72	74345.56	0.8	102.8	Pulse	0.1000	3
He	In	115	63444.94	1.9	98.2	Pulse	0.1000	3
He	Tb	159	282799.92	0.9	98.9	Pulse	0.1000	3
He	Bi	209	221648.88	0.7	99.8	Pulse	0.1000	3

No Gas



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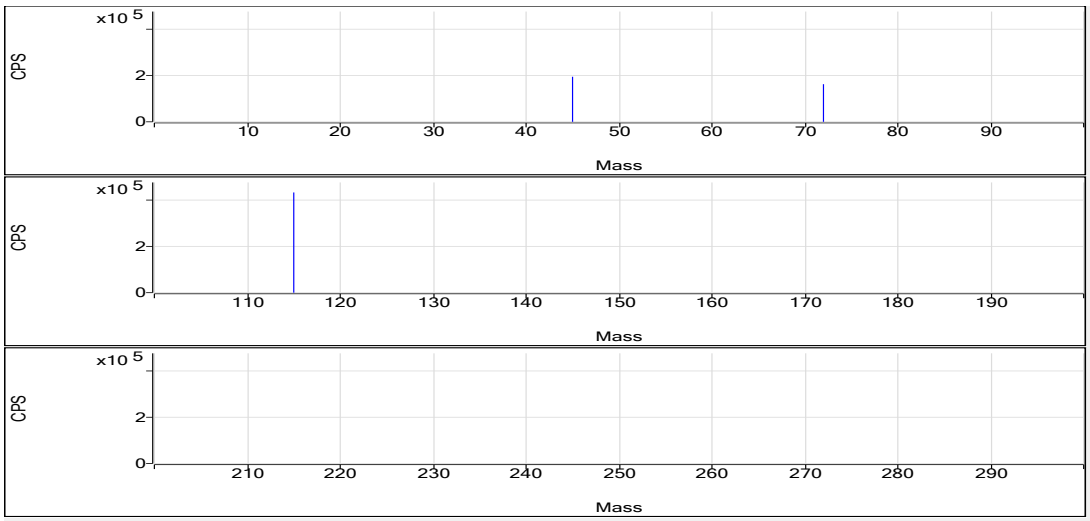
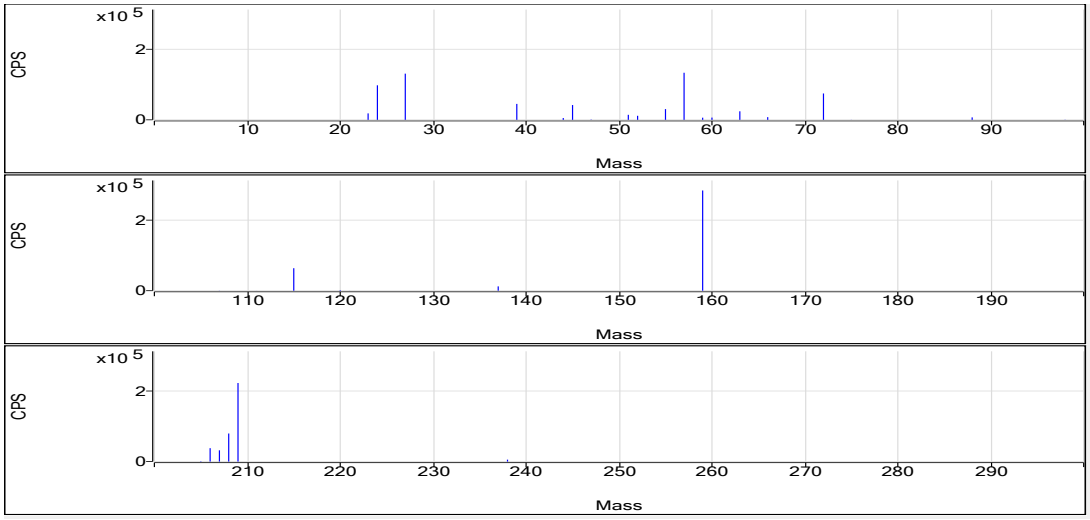


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.278	0.0004	600.02	0.0013	4.694E-05
Be	9	1	No Gas	0.224	0.0003	506.01	0.0013	4.694E-05
Be	9	1	No Gas	0.263	0.0004	578.02	0.0013	4.694E-05
Se	78	2	H2	0.371	0.0002	25.33	0.0004	1.089E-05
Se	78	2	H2	0.408	0.0002	28.00	0.0004	1.089E-05
Se	78	2	H2	0.323	0.0001	22.00	0.0004	1.089E-05
Na	23	3	He	84.37	0.2514	18512.06	0.0017	0.1065
Na	23	3	He	80.273	0.2444	18241.78	0.0017	0.1065
Na	23	3	He	75.968	0.237	17710.94	0.0017	0.1065
Mg	24	3	He	1573.075	1.3311	98021.54	0.0008	0.004846
Mg	24	3	He	1537.24	1.3009	97116.85	0.0008	0.004846
Mg	24	3	He	1534.425	1.2985	97056.46	0.0008	0.004846
Al	27	3	He	7377.747	1.782	131225.38	0.0002	0.001063
Al	27	3	He	7143.692	1.7255	128815.86	0.0002	0.001063
Al	27	3	He	7243.569	1.7496	130773.08	0.0002	0.001063
K	39	3	He	886.948	0.6334	46644.76	0.0006	0.1436
K	39	3	He	819.764	0.5963	44517.90	0.0006	0.1436
K	39	3	He	798.536	0.5846	43695.37	0.0006	0.1436
Ca	44	3	He	2187.129	0.0695	5121.07	0	0.001611
Ca	44	3	He	2091.973	0.0666	4971.00	0	0.001611
Ca	44	3	He	2102.325	0.0669	5001.02	0	0.001611
Ti	47	3	He	35.733	0.0092	680.04	0.0003	0.0002737
Ti	47	3	He	57.134	0.0146	1090.08	0.0003	0.0002737
Ti	47	3	He	43.192	0.0111	830.05	0.0003	0.0002737
V	51	3	He	15.855	0.1928	14196.90	0.0117	0.007326
V	51	3	He	15.628	0.1901	14194.91	0.0117	0.007326
V	51	3	He	15.442	0.188	14048.78	0.0117	0.007326
Cr	52	3	He	8.682	0.1576	11605.07	0.0152	0.02538
Cr	52	3	He	8.128	0.1491	11134.58	0.0152	0.02538
Cr	52	3	He	8.309	0.1519	11354.64	0.0152	0.02538
Mn	55	3	He	66.378	0.4056	29871.23	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	65.967	0.4032	30101.86	0.0059	0.01385
Mn	55	3	He	67.542	0.4125	30833.09	0.0059	0.01385
Fe	57	3	He	6172.989	1.7923	131984.98	0.0003	0.003918
Fe	57	3	He	6070.691	1.7627	131591.30	0.0003	0.003918
Fe	57	3	He	6217.585	1.8052	134930.71	0.0003	0.003918
Co	59	3	He	2.49	0.0791	5821.34	0.0305	0.003084
Co	59	3	He	2.565	0.0813	6071.56	0.0305	0.003084
Co	59	3	He	2.596	0.0823	6151.45	0.0305	0.003084
Ni	60	3	He	8.692	0.0854	6291.57	0.0088	0.009003
Ni	60	3	He	8.347	0.0824	6151.49	0.0088	0.009003
Ni	60	3	He	8.838	0.0867	6481.71	0.0088	0.009003
Cu	63	3	He	13.008	0.3293	24250.83	0.0249	0.004937
Cu	63	3	He	12.705	0.3218	24020.92	0.0249	0.004937
Cu	63	3	He	12.619	0.3196	23890.16	0.0249	0.004937
Zn	66	3	He	40.495	0.1043	7682.30	0.0025	0.004836
Zn	66	3	He	38.118	0.0985	7352.11	0.0025	0.004836
Zn	66	3	He	39.378	0.1016	7592.38	0.0025	0.004836
As	75	3	He	1.515	0.0031	226.00	0.0017	0.0004347
As	75	3	He	1.706	0.0034	254.00	0.0017	0.0004347
As	75	3	He	1.381	0.0028	212.00	0.0017	0.0004347
Sr	88	3	He	14.573	0.1147	7122.03	0.0078	0.0007762
Sr	88	3	He	13.355	0.1052	6771.86	0.0078	0.0007762
Sr	88	3	He	13.407	0.1056	6741.83	0.0078	0.0007762
Mo	98	3	He	0.357	0.0084	520.03	0.022	0.0005162
Mo	98	3	He	0.322	0.0076	490.03	0.022	0.0005162
Mo	98	3	He	0.24	0.0058	370.02	0.022	0.0005162
Ag	107	3	He	0.142	0.0069	430.02	0.0455	0.0004641
Ag	107	3	He	0.089	0.0045	290.01	0.0455	0.0004641
Ag	107	3	He	0.093	0.0047	300.01	0.0455	0.0004641
Cd	111	3	He	0.284	0.0014	88.00	0.0048	5.152E-05
Cd	111	3	He	0.242	0.0012	78.00	0.0048	5.152E-05
Cd	111	3	He	0.289	0.0014	92.00	0.0048	5.152E-05
Sn	120	3	He	0.929	0.0288	1790.18	0.0143	0.01559
Sn	120	3	He	0.541	0.0233	1500.12	0.0143	0.01559
Sn	120	3	He	0.774	0.0266	1700.19	0.0143	0.01559
Sb	121	3	He	0.135	0.0019	120.00	0.0124	0.000258
Sb	121	3	He	0.129	0.0019	120.00	0.0124	0.000258
Sb	121	3	He	0.282	0.0038	240.01	0.0124	0.000258
Ba	137	3	He	47.035	0.2061	12796.24	0.0044	0.000309
Ba	137	3	He	42.054	0.1843	11865.58	0.0044	0.000309
Ba	137	3	He	42.334	0.1855	11845.52	0.0044	0.000309
Tl	205	3	He	0.128	0.0045	1010.09	0.0276	0.001005
Tl	205	3	He	0.144	0.005	1110.08	0.0276	0.001005
Tl	205	3	He	0.194	0.0064	1400.14	0.0276	0.001005
Pb	208	3	He	18.109	0.6613	79036.85	0.0364	0.002176
Pb	208	3	He	18.287	0.6678	78613.99	0.0364	0.002176
Pb	208	3	He	18.735	0.6841	79932.77	0.0364	0.002176
U	238	3	He	0.605	0.0257	5721.48	0.0421	0.00024
U	238	3	He	0.569	0.0242	5371.32	0.0421	0.00024
U	238	3	He	0.548	0.0233	5121.23	0.0421	0.00024
Sc	45	1	No Gas			3325550.58		
Sc	45	1	No Gas			3346640.89		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3334041.20		
Ge	72	1	No Gas			1453354.35		
Ge	72	1	No Gas			1485506.70		
Ge	72	1	No Gas			1470628.57		
Sc	45	2	H2			193227.54		
Sc	45	2	H2			197685.33		
Sc	45	2	H2			194242.09		
Ge	72	2	H2			163034.58		
Ge	72	2	H2			164784.70		
Ge	72	2	H2			160817.21		
In	115	2	H2			429435.38		
In	115	2	H2			436869.29		
In	115	2	H2			435208.90		
Sc	45	3	He			41037.96		
Sc	45	3	He			41519.58		
Sc	45	3	He			42582.37		
Ge	72	3	He			73639.05		
Ge	72	3	He			74653.85		
Ge	72	3	He			74743.78		
In	115	3	He			62108.17		
In	115	3	He			64399.01		
In	115	3	He			63866.55		
Tb	159	3	He			280831.85		
Tb	159	3	He			282013.94		
Tb	159	3	He			285553.98		
Bi	209	3	He			222722.15		
Bi	209	3	He			222224.96		
Bi	209	3	He			219999.53		

Quantitation Report

Data File Name	161SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 15:57:24
Sample Name	410-136624-J-1-A MS @2
Sample Type	Sample
Comment	G3 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

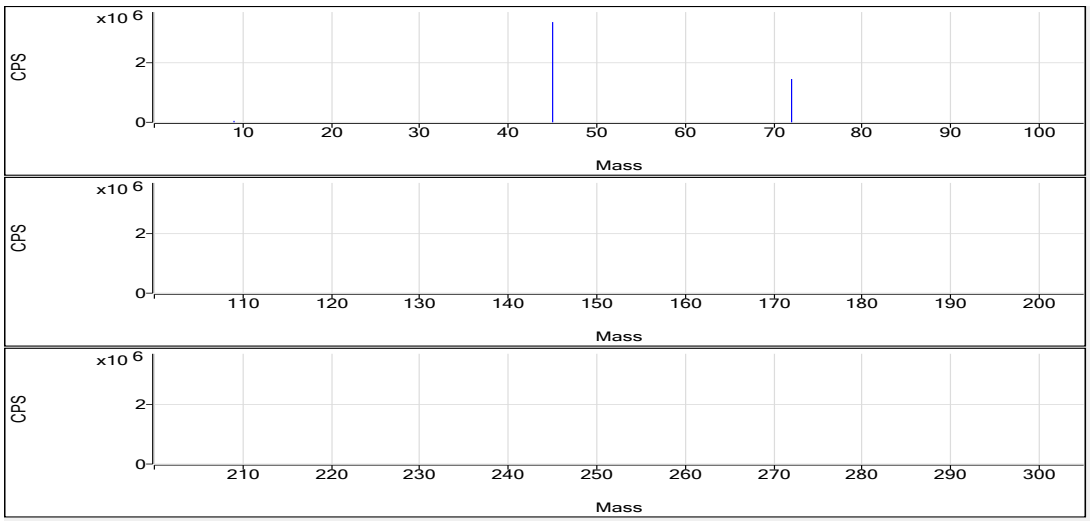
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	25.216	ppb	2.8	48543.03	0.0332	Pulse	0.5000	3
Se	78	72	H2	53.302	ppb	3.5	3343.95	0.0208	Pulse	1.5000	3
Na	23	72	He	3061.202	ppb	2.5	395695.77	5.3651	Pulse	0.1000	3
Mg	24	72	He	7539.927	ppb	1.3	469257.65	6.3618	Pulse	0.1000	3
Al	27	72	He	28176.596	ppb	1.3	501784.56	6.8027	Pulse	0.1000	3
K	39	72	He	8042.889	ppb	2.7	338158.03	4.5850	Pulse	0.1000	3
Ca	44	72	He	10562.503	ppb	3.4	24314.15	0.3297	Pulse	0.1000	3
Ti	47	72	He	485.959	ppb	2.5	9009.75	0.1221	Pulse	0.1000	3
V	51	72	He	312.584	ppb	1.3	270256.77	3.6639	Pulse	0.5000	3
Cr	52	72	He	290.755	ppb	1.4	328443.76	4.4528	Pulse	0.1000	3
Mn	55	72	He	477.816	ppb	1.8	209044.78	2.8341	Pulse	0.1000	3
Fe	57	72	He	22339.057	ppb	1.6	477664.93	6.4759	Pulse	0.1000	3
Co	59	72	He	267.471	ppb	1.1	602192.06	8.1638	Pulse	0.1000	3
Ni	60	72	He	283.660	ppb	1.1	184657.72	2.5033	Pulse	0.1000	3
Cu	63	72	He	301.027	ppb	1.8	554067.71	7.5117	Pulse	0.1000	3
Zn	66	72	He	374.641	ppb	1.8	68244.68	0.9252	Pulse	0.1000	3
As	75	72	He	261.033	ppb	0.8	33524.18	0.4544	Pulse	0.5000	3
Sr	88	115	He	76.418	ppb	2.4	37861.47	0.5981	Pulse	0.1000	3
Mo	98	115	He	27.286	ppb	2.7	38058.85	0.6014	Pulse	0.1000	3
Ag	107	115	He	25.810	ppb	2.9	74350.02	1.1748	Pulse	0.1000	3
Cd	111	115	He	26.672	ppb	2.2	8107.70	0.1281	Pulse	0.5000	3
Sn	120	115	He	54.393	ppb	3.5	50060.80	0.7911	Pulse	0.1000	3
Sb	121	115	He	49.997	ppb	2.6	39272.88	0.6205	Pulse	0.1000	3
Ba	137	115	He	431.214	ppb	2.0	119420.63	1.8868	Pulse	0.1000	3
Tl	205	209	He	51.463	ppb	0.5	316304.80	1.4237	Pulse	0.1000	3
Pb	208	209	He	60.431	ppb	0.2	489164.11	2.2017	Pulse	0.1000	3
U	238	209	He	27.638	ppb	0.4	258361.09	1.1629	Pulse	0.1000	3

ISTD Table:

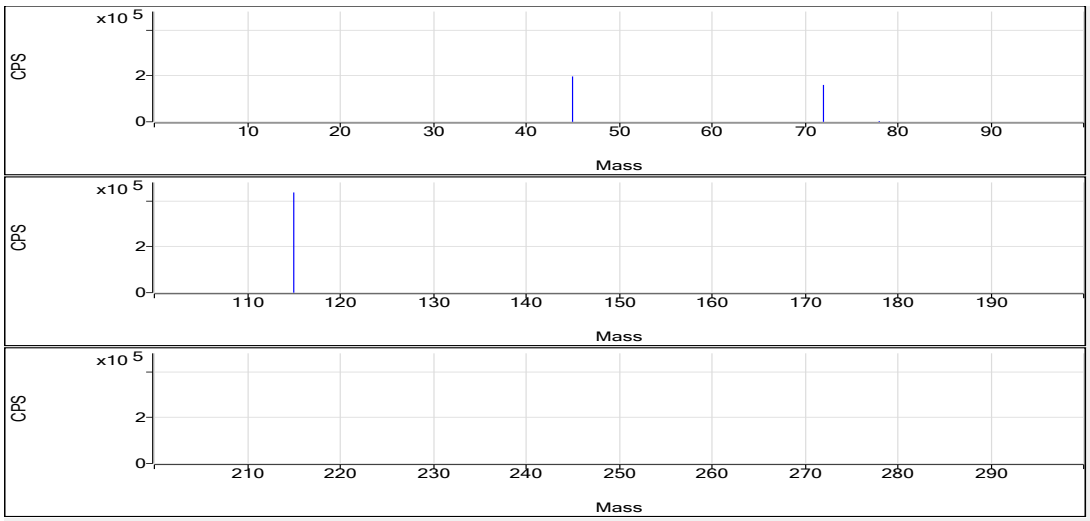
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3387452.97	0.7	104.5	Pulse	0.1000	3
No Gas	Ge	72	1462852.64	0.9	101.6	Pulse	0.1000	3
H2	Sc	45	198176.74	1.9	101.4	Pulse	0.1000	3
H2	Ge	72	161095.91	1.5	98.8	Pulse	0.1000	3
H2	In	115	437760.49	2.3	101.0	Pulse	0.1000	3
He	Sc	45	43605.68	1.5	109.1	Pulse	0.1000	3
He	Ge	72	73772.09	1.5	102.1	Pulse	0.1000	3
He	In	115	63315.19	2.6	98.0	Pulse	0.1000	3
He	Tb	159	288073.86	1.0	100.7	Pulse	0.1000	3
He	Bi	209	222174.16	0.3	100.0	Pulse	0.1000	3

No Gas

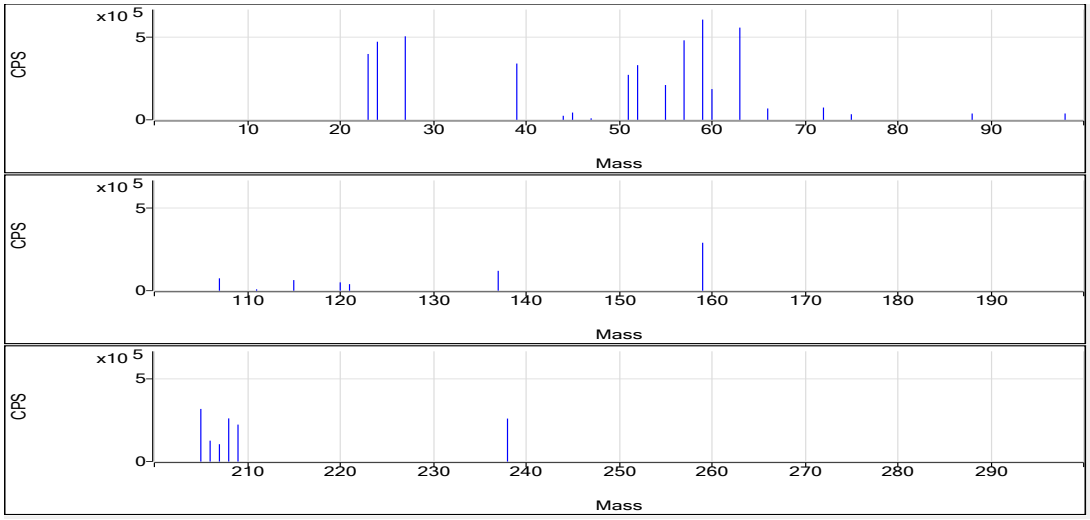


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	24.647	0.0324	47016.88	0.0013	4.694E-05
Be	9	1	No Gas	25.005	0.0329	48539.64	0.0013	4.694E-05
Be	9	1	No Gas	25.997	0.0342	50072.57	0.0013	4.694E-05
Se	78	2	H2	54.629	0.0213	3396.41	0.0004	1.089E-05
Se	78	2	H2	54.093	0.0211	3369.07	0.0004	1.089E-05
Se	78	2	H2	51.183	0.0199	3266.38	0.0004	1.089E-05
Na	23	3	He	3146.713	5.5119	400737.53	0.0017	0.1065
Na	23	3	He	2996.286	5.2535	393882.53	0.0017	0.1065
Na	23	3	He	3040.607	5.3297	392467.26	0.0017	0.1065
Mg	24	3	He	7639.285	6.4455	468613.04	0.0008	0.004846
Mg	24	3	He	7440.434	6.2779	470682.69	0.0008	0.004846
Mg	24	3	He	7540.062	6.3619	468477.22	0.0008	0.004846
Al	27	3	He	28540.582	6.8906	500969.99	0.0002	0.001063
Al	27	3	He	27808.071	6.7138	503362.80	0.0002	0.001063
Al	27	3	He	28181.135	6.8038	501020.89	0.0002	0.001063
K	39	3	He	8264.105	4.7072	342228.04	0.0006	0.1436
K	39	3	He	7838.249	4.472	335287.89	0.0006	0.1436
K	39	3	He	8026.314	4.5759	336958.16	0.0006	0.1436
Ca	44	3	He	10713.862	0.3344	24310.73	0	0.001611
Ca	44	3	He	10155.57	0.317	23770.09	0	0.001611
Ca	44	3	He	10818.076	0.3376	24861.62	0	0.001611
Ti	47	3	He	498.188	0.1252	9103.12	0.0003	0.0002737
Ti	47	3	He	486.258	0.1222	9163.19	0.0003	0.0002737
Ti	47	3	He	473.43	0.119	8762.95	0.0003	0.0002737
V	51	3	He	316.962	3.7151	270098.38	0.0117	0.007326
V	51	3	He	309.148	3.6237	271683.16	0.0117	0.007326
V	51	3	He	311.643	3.6528	268988.78	0.0117	0.007326
Cr	52	3	He	294.781	4.5141	328189.92	0.0152	0.02538
Cr	52	3	He	286.595	4.3894	329096.64	0.0152	0.02538
Cr	52	3	He	290.889	4.4548	328044.72	0.0152	0.02538
Mn	55	3	He	482.157	2.8597	207913.61	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	467.667	2.7742	207996.50	0.0059	0.01385
Mn	55	3	He	483.624	2.8684	211224.24	0.0059	0.01385
Fe	57	3	He	22549.279	6.5368	475246.13	0.0003	0.003918
Fe	57	3	He	21916.355	6.3534	476344.72	0.0003	0.003918
Fe	57	3	He	22551.536	6.5374	481403.94	0.0003	0.003918
Co	59	3	He	269.937	8.239	599003.19	0.0305	0.003084
Co	59	3	He	264.319	8.0676	604864.09	0.0305	0.003084
Co	59	3	He	268.159	8.1847	602708.90	0.0305	0.003084
Ni	60	3	He	284.735	2.5128	182686.68	0.0088	0.009003
Ni	60	3	He	280.116	2.4721	185348.57	0.0088	0.009003
Ni	60	3	He	286.129	2.525	185937.91	0.0088	0.009003
Cu	63	3	He	303.205	7.566	550074.17	0.0249	0.004937
Cu	63	3	He	294.918	7.3593	551763.74	0.0249	0.004937
Cu	63	3	He	304.958	7.6097	560365.23	0.0249	0.004937
Zn	66	3	He	380.033	0.9385	68231.36	0.0025	0.004836
Zn	66	3	He	367.099	0.9067	67980.59	0.0025	0.004836
Zn	66	3	He	376.791	0.9305	68522.10	0.0025	0.004836
As	75	3	He	261.7	0.4556	33121.94	0.0017	0.0004347
As	75	3	He	262.758	0.4574	34294.62	0.0017	0.0004347
As	75	3	He	258.641	0.4503	33155.99	0.0017	0.0004347
Sr	88	3	He	75.674	0.5923	36909.04	0.0078	0.0007762
Sr	88	3	He	78.544	0.6148	38352.69	0.0078	0.0007762
Sr	88	3	He	75.037	0.5873	38322.67	0.0078	0.0007762
Mo	98	3	He	27.817	0.6131	38202.33	0.022	0.0005162
Mo	98	3	He	27.608	0.6085	37961.91	0.022	0.0005162
Mo	98	3	He	26.432	0.5826	38012.31	0.022	0.0005162
Ag	107	3	He	26.496	1.206	75150.50	0.0455	0.0004641
Ag	107	3	He	25.916	1.1796	73593.16	0.0455	0.0004641
Ag	107	3	He	25.019	1.1388	74306.39	0.0455	0.0004641
Cd	111	3	He	27.331	0.1313	8178.42	0.0048	5.152E-05
Cd	111	3	He	26.47	0.1271	7930.26	0.0048	5.152E-05
Cd	111	3	He	26.216	0.1259	8214.43	0.0048	5.152E-05
Sn	120	3	He	55.085	0.801	49910.47	0.0143	0.01559
Sn	120	3	He	55.83	0.8116	50633.00	0.0143	0.01559
Sn	120	3	He	52.265	0.7608	49638.93	0.0143	0.01559
Sb	121	3	He	51.452	0.6385	39787.48	0.0124	0.000258
Sb	121	3	He	49.525	0.6146	38343.64	0.0124	0.000258
Sb	121	3	He	49.013	0.6083	39687.52	0.0124	0.000258
Ba	137	3	He	438.014	1.9165	119422.25	0.0044	0.000309
Ba	137	3	He	434.139	1.8996	118507.96	0.0044	0.000309
Ba	137	3	He	421.49	1.8442	120331.69	0.0044	0.000309
Tl	205	3	He	51.184	1.4159	314417.09	0.0276	0.001005
Tl	205	3	He	51.506	1.4248	315619.88	0.0276	0.001005
Tl	205	3	He	51.7	1.4302	318877.44	0.0276	0.001005
Pb	208	3	He	60.27	2.1959	259877.79	0.0364	0.002176
Pb	208	3	He	60.51	2.2046	257594.96	0.0364	0.002176
Pb	208	3	He	60.514	2.2047	260622.20	0.0364	0.002176
U	238	3	He	27.555	1.1594	257454.59	0.0421	0.00024
U	238	3	He	27.757	1.1679	258702.98	0.0421	0.00024
U	238	3	He	27.601	1.1613	258925.70	0.0421	0.00024
Sc	45	1	No Gas			3384464.32		
Sc	45	1	No Gas			3413098.70		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3364795.89		
Ge	72	1	No Gas			1449635.45		
Ge	72	1	No Gas			1475157.17		
Ge	72	1	No Gas			1463765.29		
Sc	45	2	H2			194314.51		
Sc	45	2	H2			198506.72		
Sc	45	2	H2			201708.98		
Ge	72	2	H2			159595.79		
Ge	72	2	H2			159879.57		
Ge	72	2	H2			163812.38		
In	115	2	H2			431228.86		
In	115	2	H2			432789.13		
In	115	2	H2			449263.47		
Sc	45	3	He			44157.04		
Sc	45	3	He			42903.44		
Sc	45	3	He			43756.55		
Ge	72	3	He			72703.46		
Ge	72	3	He			74974.69		
Ge	72	3	He			73638.12		
In	115	3	He			62701.05		
In	115	3	He			62781.42		
In	115	3	He			65634.51		
Tb	159	3	He			288067.67		
Tb	159	3	He			290883.63		
Tb	159	3	He			285270.27		
Bi	209	3	He			222055.37		
Bi	209	3	He			221511.60		
Bi	209	3	He			222955.52		

Quantitation Report

Data File Name	162SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 15:59:25
Sample Name	Z410-136624-J-1-A MS @10
Sample Type	Sample
Comment	G3 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

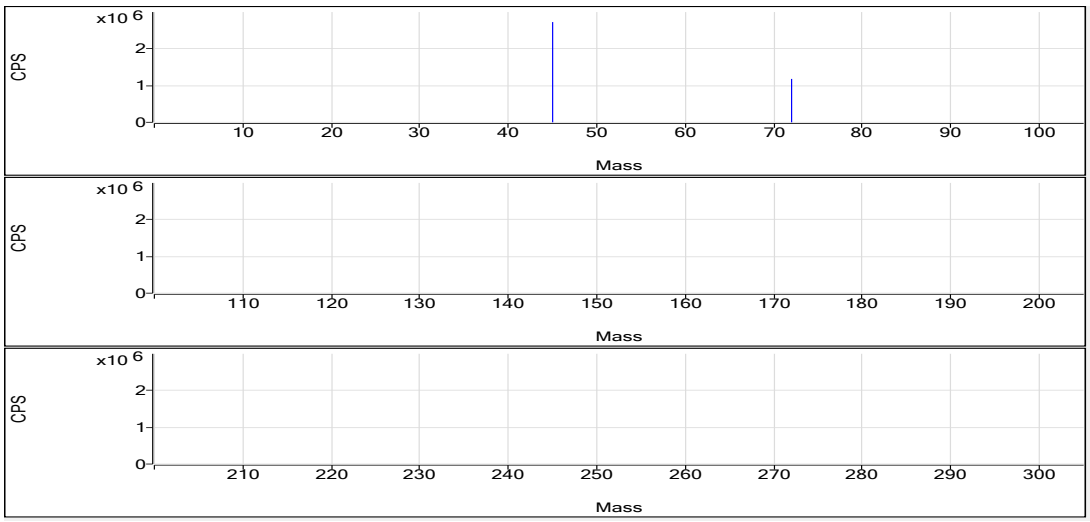
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas		ppb	0.0166846177008839			Pulse	0.5000	3
Se	78	72	H2		ppb	0.0102980350114202			Pulse	1.5000	3
Na	23	72	He		ppb	1.22043983836455			Pulse	0.1000	3
Mg	24	72	He		ppb	4.39137059401543			Pulse	0.1000	3
Al	27	72	He		ppb	9.30289006794839			Pulse	0.1000	3
K	39	72	He		ppb	11.2089298322962			Pulse	0.1000	3
Ca	44	72	He		ppb	11.2645131320175			Pulse	0.1000	3
Ti	47	72	He		ppb	0.755533471908958			Pulse	0.1000	3
V	51	72	He		ppb	0.126737549918007			Pulse	0.5000	3
Cr	52	72	He		ppb	0.12281542387312			Pulse	0.1000	3
Mn	55	72	He		ppb	0.266869391205535			Pulse	0.1000	3
Fe	57	72	He		ppb	8.83959362275316			Pulse	0.1000	3
Co	59	72	He		ppb	0.0991789625483277			Pulse	0.1000	3
Ni	60	72	He		ppb	0.042575984603097			Pulse	0.1000	3
Cu	63	72	He		ppb	0.120111351312831			Pulse	0.1000	3
Zn	66	72	He		ppb	0.200294288144121			Pulse	0.1000	3
As	75	72	He		ppb	0.083308877831158			Pulse	0.5000	3
Sr	88	115	He		ppb	0.0586578034584313			Pulse	0.1000	3
Mo	98	115	He		ppb	0.0169439279901295			Pulse	0.1000	3
Ag	107	115	He		ppb	0.0291012560284636			Pulse	0.1000	3
Cd	111	115	He		ppb	0.0188009563962153			Pulse	0.5000	3
Sn	120	115	He		ppb	0.0860714971042724			Pulse	0.1000	3
Sb	121	115	He		ppb	0.0446408235425343			Pulse	0.1000	3
Ba	137	115	He		ppb	0.0839919326072803			Pulse	0.1000	3
Tl	205	209	He		ppb	0.162938135860108			Pulse	0.1000	3
Pb	208	209	He		ppb	0.0247026009805416			Pulse	0.1000	3
U	238	209	He		ppb	0.013153382986492			Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45				Pulse	0.1000	3
No Gas	Ge	72				Pulse	0.1000	3
H2	Sc	45				Pulse	0.1000	3
H2	Ge	72				Pulse	0.1000	3
H2	In	115				Pulse	0.1000	3
He	Sc	45				Pulse	0.1000	3
He	Ge	72				Pulse	0.1000	3
He	In	115				Pulse	0.1000	3
He	Tb	159				Pulse	0.1000	3
He	Bi	209				Pulse	0.1000	3

No Gas



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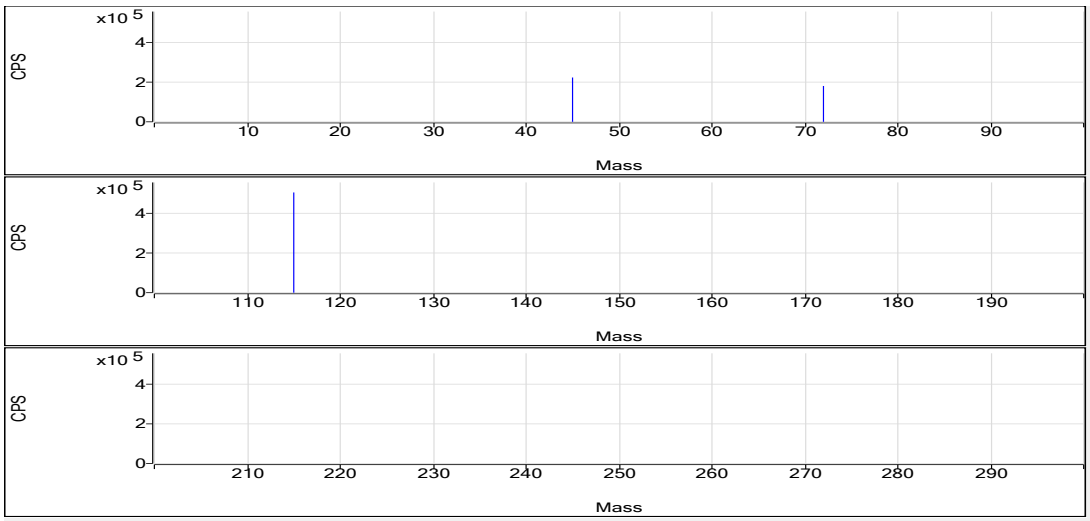
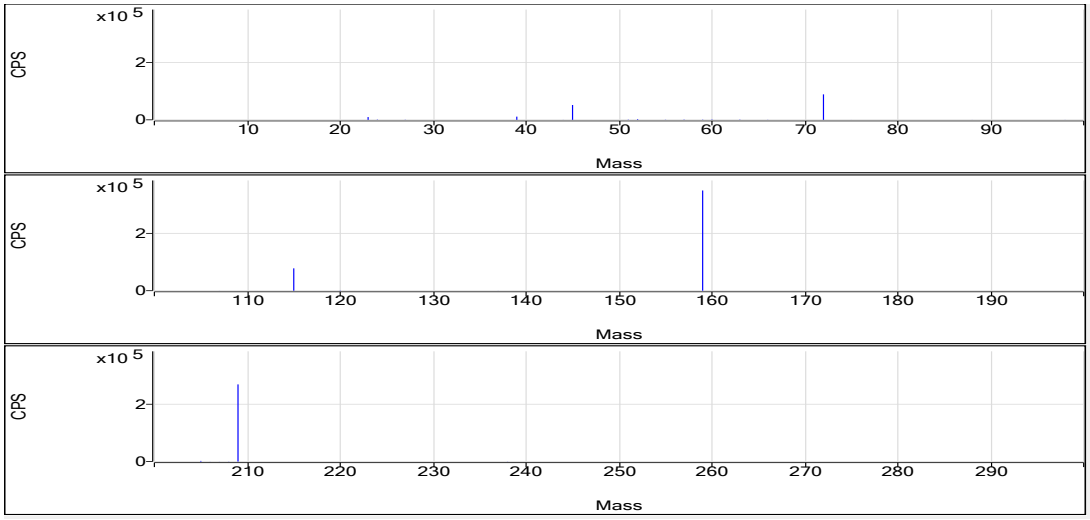


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.057		124.00		
Be	9	1	No Gas	0.035		116.00		
Be	9	1	No Gas	0.025		108.00		
Se	78	2	H2	0.049		5.33		
Se	78	2	H2	0.068		6.67		
Se	78	2	H2	0.066		6.67		
Na	23	3	He	-1.883		9363.27		
Na	23	3	He	-0.908		9663.45		
Na	23	3	He	-3.333		9583.33		
Mg	24	3	He	3.993		740.04		
Mg	24	3	He	2.926		670.04		
Mg	24	3	He	11.009		1330.12		
Al	27	3	He	9.456		300.01		
Al	27	3	He	16.085		450.02		
Al	27	3	He	27.826		730.05		
K	39	3	He	-34.866		11304.57		
K	39	3	He	-45.019		10974.49		
K	39	3	He	-57.251		10694.16		
Ca	44	3	He	-5.877		130.01		
Ca	44	3	He	0.49		150.01		
Ca	44	3	He	16.022		200.01		
Ti	47	3	He	0.229		30.00		
Ti	47	3	He	-1.109		0.00		
Ti	47	3	He	0.168		30.00		
V	51	3	He	-0.032		630.02		
V	51	3	He	0.045		722.02		
V	51	3	He	0.215		932.04		
Cr	52	3	He	-0.177		2060.23		
Cr	52	3	He	-0.374		1820.17		
Cr	52	3	He	-0.149		2200.23		
Mn	55	3	He	-1.509		460.03		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-1.597		420.02		
Mn	55	3	He	-1.097		710.04		
Fe	57	3	He	16.011		770.04		
Fe	57	3	He	12.126		680.04		
Fe	57	3	He	29.005		1160.10		
Co	59	3	He	0.114		590.04		
Co	59	3	He	0.114		600.04		
Co	59	3	He	0.286		1110.08		
Ni	60	3	He	0.564		1220.09		
Ni	60	3	He	0.516		1190.10		
Ni	60	3	He	0.601		1270.11		
Cu	63	3	He	0.105		660.04		
Cu	63	3	He	0.144		750.04		
Cu	63	3	He	0.33		1170.09		
Zn	66	3	He	-0.431		330.02		
Zn	66	3	He	-0.579		300.01		
Zn	66	3	He	-0.183		390.02		
As	75	3	He	0.066		48.00		
As	75	3	He	0.116		56.00		
As	75	3	He	0.229		74.00		
Sr	88	3	He	0.003		60.00		
Sr	88	3	He	0.099		120.00		
Sr	88	3	He	0.11		130.01		
Mo	98	3	He	0.055		130.00		
Mo	98	3	He	0.088		190.01		
Mo	98	3	He	0.079		180.01		
Ag	107	3	He	0.007		60.00		
Ag	107	3	He	0.004		50.00		
Ag	107	3	He	0.056		240.01		
Cd	111	3	He	-0.005		2.00		
Cd	111	3	He	0.032		16.00		
Cd	111	3	He	0.015		10.00		
Sn	120	3	He	-0.213		940.07		
Sn	120	3	He	-0.213		970.07		
Sn	120	3	He	-0.362		830.06		
Sb	121	3	He	0.011		30.00		
Sb	121	3	He	0.052		70.00		
Sb	121	3	He	0.101		120.00		
Ba	137	3	He	0.326		130.01		
Ba	137	3	He	0.284		120.01		
Ba	137	3	He	0.446		180.01		
Tl	205	3	He	0.094		940.08		
Tl	205	3	He	0.288		2400.31		
Tl	205	3	He	0.418		3410.58		
Pb	208	3	He	0.007		360.02		
Pb	208	3	He	0.02		430.02		
Pb	208	3	He	0.054		570.04		
U	238	3	He	0.015		230.01		
U	238	3	He	0.029		390.02		
U	238	3	He	0.042		540.03		
Sc	45	1	No Gas			2283683.40		
Sc	45	1	No Gas			2817666.52		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3062402.45		
Ge	72	1	No Gas			992688.97		
Ge	72	1	No Gas			1218333.26		
Ge	72	1	No Gas			1322612.79		
Sc	45	2	H2			219032.34		
Sc	45	2	H2			222949.65		
Sc	45	2	H2			223877.48		
Ge	72	2	H2			177330.08		
Ge	72	2	H2			178148.30		
Ge	72	2	H2			182948.04		
In	115	2	H2			495535.66		
In	115	2	H2			501132.41		
In	115	2	H2			509356.24		
Sc	45	3	He			50146.59		
Sc	45	3	He			50939.58		
Sc	45	3	He			52575.11		
Ge	72	3	He			87385.16		
Ge	72	3	He			87897.66		
Ge	72	3	He			88904.62		
In	115	3	He			74921.14		
In	115	3	He			77333.90		
In	115	3	He			79656.46		
Tb	159	3	He			339400.70		
Tb	159	3	He			345981.75		
Tb	159	3	He			354420.39		
Bi	209	3	He			261082.61		
Bi	209	3	He			267871.48		
Bi	209	3	He			271733.18		

Quantitation Report

Data File Name	163SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 16:01:26
Sample Name	410-136624-J-1-B MSD @2
Sample Type	Sample
Comment	G3 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

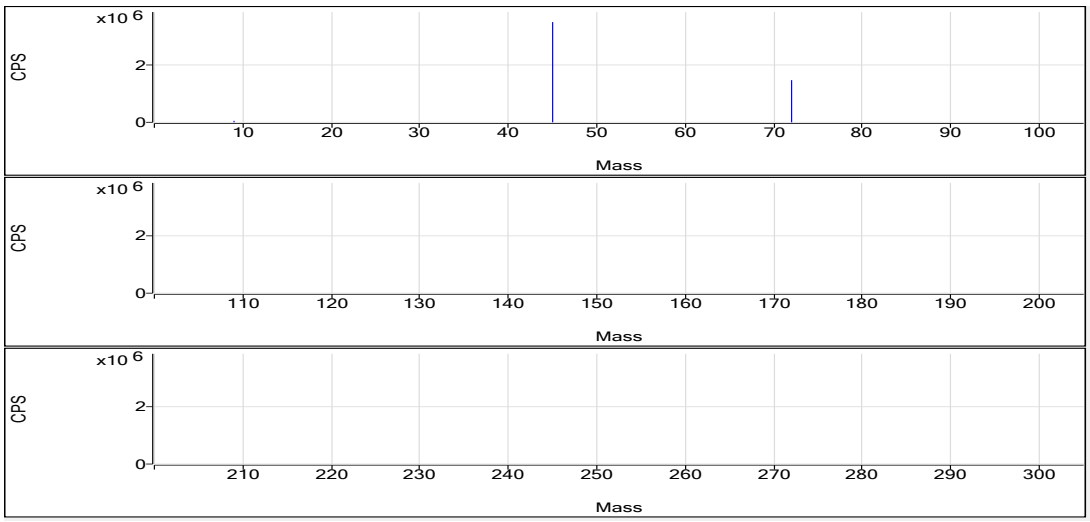
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	26.489	ppb	4.7	51162.30	0.0349	Pulse	0.5000	3
Se	78	72	H2	54.490	ppb	3.5	3439.31	0.0212	Pulse	1.5000	3
Na	23	72	He	3314.665	ppb	1.5	435992.56	5.8005	Pulse	0.1000	3
Mg	24	72	He	11593.199	ppb	2.0	735007.96	9.7791	Pulse	0.1000	3
Al	27	72	He	50832.840	ppb	2.3	922325.97	12.2718	Pulse	0.1000	3
K	39	72	He	12326.078	ppb	1.7	522408.82	6.9502	Pulse	0.1000	3
Ca	44	72	He	16014.263	ppb	0.7	37512.17	0.4990	Pulse	0.1000	3
Ti	47	72	He	628.855	ppb	3.5	11871.94	0.1580	Pulse	0.1000	3
V	51	72	He	362.210	ppb	2.1	319007.08	4.2444	Pulse	0.5000	3
Cr	52	72	He	312.875	ppb	1.7	360003.94	4.7896	Pulse	0.1000	3
Mn	55	72	He	628.363	ppb	2.5	279787.95	3.7227	Pulse	0.1000	3
Fe	57	72	He	33566.638	ppb	2.3	731195.02	9.7287	Pulse	0.1000	3
Co	59	72	He	270.564	ppb	2.0	620696.56	8.2581	Pulse	0.1000	3
Ni	60	72	He	299.558	ppb	3.0	198638.42	2.6431	Pulse	0.1000	3
Cu	63	72	He	323.014	ppb	1.7	605833.42	8.0600	Pulse	0.1000	3
Zn	66	72	He	484.894	ppb	0.5	89916.14	1.1961	Pulse	0.1000	3
As	75	72	He	267.574	ppb	2.3	35008.31	0.4658	Pulse	0.5000	3
Sr	88	115	He	106.852	ppb	1.5	53400.77	0.8360	Pulse	0.1000	3
Mo	98	115	He	28.076	ppb	2.7	39519.49	0.6188	Pulse	0.1000	3
Ag	107	115	He	26.145	ppb	0.9	76006.23	1.1901	Pulse	0.1000	3
Cd	111	115	He	28.138	ppb	2.9	8629.35	0.1351	Pulse	0.5000	3
Sn	120	115	He	53.455	ppb	1.5	49672.49	0.7777	Pulse	0.1000	3
Sb	121	115	He	47.567	ppb	1.4	37701.94	0.5903	Pulse	0.1000	3
Ba	137	115	He	546.105	ppb	1.9	152599.26	2.3894	Pulse	0.1000	3
Tl	205	209	He	52.250	ppb	1.2	321945.70	1.4454	Pulse	0.1000	3
Pb	208	209	He	100.492	ppb	0.9	815177.27	3.6598	Pulse	0.1000	3
U	238	209	He	28.442	ppb	1.2	266555.12	1.1967	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3492519.74	1.2	107.8	Pulse	0.1000	3
No Gas	Ge	72	1468709.67	1.8	102.0	Pulse	0.1000	3
H2	Sc	45	205963.13	1.7	105.4	Pulse	0.1000	3
H2	Ge	72	162039.15	0.5	99.4	Pulse	0.1000	3
H2	In	115	441426.65	0.8	101.9	Pulse	0.1000	3
He	Sc	45	44725.77	0.5	111.9	Pulse	0.1000	3
He	Ge	72	75176.33	1.6	104.0	Pulse	0.1000	3
He	In	115	63870.44	0.7	98.9	Pulse	0.1000	3
He	Tb	159	291862.33	0.4	102.0	Pulse	0.1000	3
He	Bi	209	222747.54	0.7	100.3	Pulse	0.1000	3

No Gas



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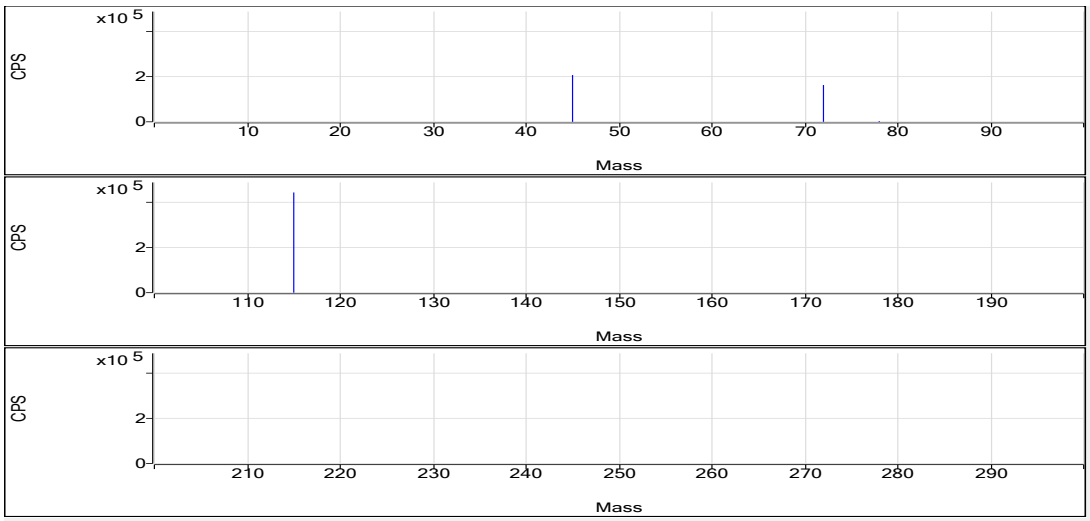
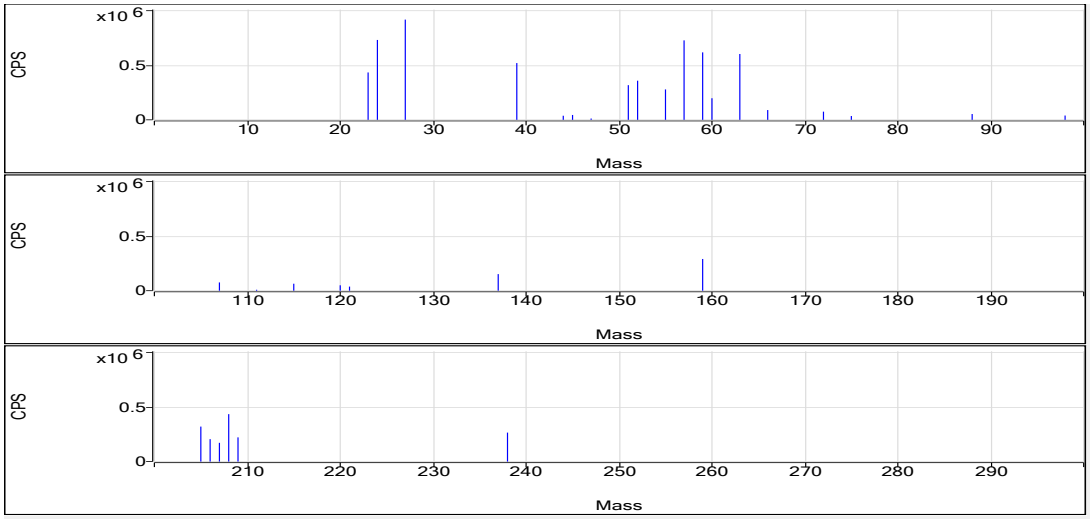


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	25.26	0.0332	49657.25	0.0013	4.694E-05
Be	9	1	No Gas	26.475	0.0348	51216.32	0.0013	4.694E-05
Be	9	1	No Gas	27.731	0.0365	52613.34	0.0013	4.694E-05
Se	78	2	H2	54.707	0.0213	3442.42	0.0004	1.089E-05
Se	78	2	H2	52.479	0.0204	3330.39	0.0004	1.089E-05
Se	78	2	H2	56.283	0.0219	3545.11	0.0004	1.089E-05
Na	23	3	He	3306.564	5.7865	436060.62	0.0017	0.1065
Na	23	3	He	3366.497	5.8895	435404.88	0.0017	0.1065
Na	23	3	He	3270.933	5.7253	436512.18	0.0017	0.1065
Mg	24	3	He	11626.812	9.8074	739065.54	0.0008	0.004846
Mg	24	3	He	11808.265	9.9604	736363.90	0.0008	0.004846
Mg	24	3	He	11344.519	9.5694	729594.44	0.0008	0.004846
Al	27	3	He	50715.404	12.2435	922639.75	0.0002	0.001063
Al	27	3	He	52081.585	12.5733	929528.81	0.0002	0.001063
Al	27	3	He	49701.532	11.9987	914809.36	0.0002	0.001063
K	39	3	He	12216.151	6.8895	519180.27	0.0006	0.1436
K	39	3	He	12568.104	7.0839	523705.66	0.0006	0.1436
K	39	3	He	12193.978	6.8773	524340.54	0.0006	0.1436
Ca	44	3	He	16101.874	0.5017	37809.45	0	0.001611
Ca	44	3	He	16051.692	0.5002	36977.41	0	0.001611
Ca	44	3	He	15889.223	0.4951	37749.66	0	0.001611
Ti	47	3	He	623.054	0.1565	11795.20	0.0003	0.0002737
Ti	47	3	He	652.936	0.164	12125.58	0.0003	0.0002737
Ti	47	3	He	610.575	0.1534	11695.04	0.0003	0.0002737
V	51	3	He	360.295	4.222	318158.13	0.0117	0.007326
V	51	3	He	370.534	4.3417	320980.75	0.0117	0.007326
V	51	3	He	355.799	4.1694	317882.38	0.0117	0.007326
Cr	52	3	He	311.663	4.7712	359543.47	0.0152	0.02538
Cr	52	3	He	318.63	4.8773	360570.70	0.0152	0.02538
Cr	52	3	He	308.333	4.7205	359897.65	0.0152	0.02538
Mn	55	3	He	625.756	3.7073	279375.72	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	645.252	3.8224	282586.46	0.0059	0.01385
Mn	55	3	He	614.082	3.6384	277401.68	0.0059	0.01385
Fe	57	3	He	33271.246	9.6431	726680.93	0.0003	0.003918
Fe	57	3	He	34442.004	9.9823	737979.83	0.0003	0.003918
Fe	57	3	He	32986.665	9.5606	728924.29	0.0003	0.003918
Co	59	3	He	268.003	8.18	616425.65	0.0305	0.003084
Co	59	3	He	276.635	8.4433	624208.78	0.0305	0.003084
Co	59	3	He	267.055	8.1511	621455.26	0.0305	0.003084
Ni	60	3	He	296.285	2.6143	197009.72	0.0088	0.009003
Ni	60	3	He	309.702	2.7323	201996.79	0.0088	0.009003
Ni	60	3	He	292.685	2.5827	196908.75	0.0088	0.009003
Cu	63	3	He	318.604	7.95	599093.04	0.0249	0.004937
Cu	63	3	He	329.182	8.2138	607237.10	0.0249	0.004937
Cu	63	3	He	321.257	8.0162	611170.11	0.0249	0.004937
Zn	66	3	He	482.477	1.1902	89688.54	0.0025	0.004836
Zn	66	3	He	487.292	1.202	88862.59	0.0025	0.004836
Zn	66	3	He	484.912	1.1962	91197.30	0.0025	0.004836
As	75	3	He	264.694	0.4608	34723.54	0.0017	0.0004347
As	75	3	He	274.758	0.4783	35359.18	0.0017	0.0004347
As	75	3	He	263.269	0.4583	34942.20	0.0017	0.0004347
Sr	88	3	He	106.46	0.833	53491.23	0.0078	0.0007762
Sr	88	3	He	105.523	0.8257	52336.77	0.0078	0.0007762
Sr	88	3	He	108.573	0.8495	54374.30	0.0078	0.0007762
Mo	98	3	He	28.189	0.6213	39897.24	0.022	0.0005162
Mo	98	3	He	28.774	0.6342	40198.23	0.022	0.0005162
Mo	98	3	He	27.264	0.6009	38463.01	0.022	0.0005162
Ag	107	3	He	25.968	1.182	75905.39	0.0455	0.0004641
Ag	107	3	He	26.42	1.2026	76228.27	0.0455	0.0004641
Ag	107	3	He	26.046	1.1856	75885.03	0.0455	0.0004641
Cd	111	3	He	27.617	0.1326	8516.63	0.0048	5.152E-05
Cd	111	3	He	29.07	0.1396	8848.82	0.0048	5.152E-05
Cd	111	3	He	27.727	0.1332	8522.61	0.0048	5.152E-05
Sn	120	3	He	52.508	0.7642	49077.05	0.0143	0.01559
Sn	120	3	He	53.953	0.7848	49749.51	0.0143	0.01559
Sn	120	3	He	53.904	0.7841	50190.90	0.0143	0.01559
Sb	121	3	He	46.804	0.5809	37300.34	0.0124	0.000258
Sb	121	3	He	48.08	0.5967	37822.55	0.0124	0.000258
Sb	121	3	He	47.816	0.5934	37982.93	0.0124	0.000258
Ba	137	3	He	539.395	2.3601	151554.21	0.0044	0.000309
Ba	137	3	He	558.228	2.4424	154820.58	0.0044	0.000309
Ba	137	3	He	540.69	2.3657	151423.00	0.0044	0.000309
Tl	205	3	He	52.773	1.4599	323677.01	0.0276	0.001005
Tl	205	3	He	52.415	1.45	321781.21	0.0276	0.001005
Tl	205	3	He	51.562	1.4264	320378.88	0.0276	0.001005
Pb	208	3	He	100.872	3.6736	435513.55	0.0364	0.002176
Pb	208	3	He	101.161	3.6842	437037.30	0.0364	0.002176
Pb	208	3	He	99.441	3.6216	436645.03	0.0364	0.002176
U	238	3	He	28.555	1.2015	266386.36	0.0421	0.00024
U	238	3	He	28.726	1.2087	268231.05	0.0421	0.00024
U	238	3	He	28.046	1.1801	265047.95	0.0421	0.00024
Sc	45	1	No Gas			3539966.20		
Sc	45	1	No Gas			3475925.89		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3461667.14		
Ge	72	1	No Gas			1493931.85		
Ge	72	1	No Gas			1470190.45		
Ge	72	1	No Gas			1442006.70		
Sc	45	2	H2			202392.63		
Sc	45	2	H2			206251.34		
Sc	45	2	H2			209245.41		
Ge	72	2	H2			161527.17		
Ge	72	2	H2			162901.40		
Ge	72	2	H2			161688.88		
In	115	2	H2			437523.94		
In	115	2	H2			444020.07		
In	115	2	H2			442735.93		
Sc	45	3	He			44708.89		
Sc	45	3	He			44959.82		
Sc	45	3	He			44508.61		
Ge	72	3	He			75357.72		
Ge	72	3	He			73929.05		
Ge	72	3	He			76242.22		
In	115	3	He			64599.25		
In	115	3	He			63775.67		
In	115	3	He			64398.73		
Tb	159	3	He			293235.27		
Tb	159	3	He			291515.89		
Tb	159	3	He			290835.84		
Bi	209	3	He			221715.04		
Bi	209	3	He			221920.76		
Bi	209	3	He			224606.83		

Quantitation Report

Data File Name	164SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 16:03:26
Sample Name	410-136624-J-1-B MSD @10
Sample Type	Sample
Comment	G3 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

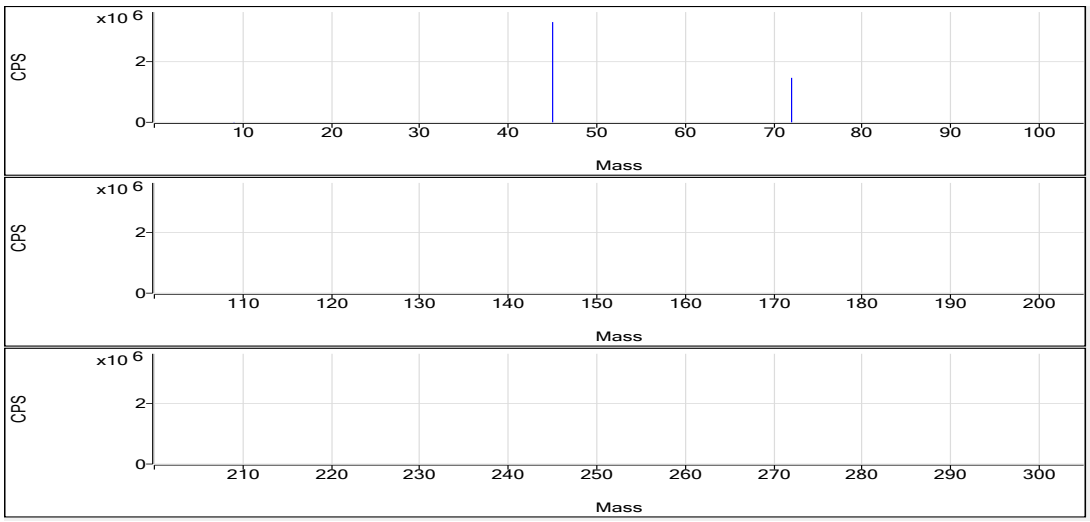
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	5.268	ppb	5.1	10188.16	0.0070	Pulse	0.5000	3
Se	78	72	H2	11.271	ppb	3.5	714.02	0.0044	Pulse	1.5000	3
Na	23	72	He	663.473	ppb	2.4	92959.43	1.2462	Pulse	0.1000	3
Mg	24	72	He	2336.768	ppb	0.5	147323.27	1.9750	Pulse	0.1000	3
Al	27	72	He	10310.543	ppb	1.0	185732.38	2.4900	Pulse	0.1000	3
K	39	72	He	2455.170	ppb	2.0	111838.80	1.4994	Pulse	0.1000	3
Ca	44	72	He	3224.388	ppb	4.4	7592.26	0.1018	Pulse	0.1000	3
Ti	47	72	He	128.427	ppb	4.9	2423.61	0.0325	Pulse	0.1000	3
V	51	72	He	73.249	ppb	0.6	64463.49	0.8642	Pulse	0.5000	3
Cr	52	72	He	62.921	ppb	1.6	73357.74	0.9835	Pulse	0.1000	3
Mn	55	72	He	127.601	ppb	0.7	57213.28	0.7670	Pulse	0.1000	3
Fe	57	72	He	6831.212	ppb	1.0	147918.68	1.9830	Pulse	0.1000	3
Co	59	72	He	54.732	ppb	1.8	124782.89	1.6730	Pulse	0.1000	3
Ni	60	72	He	61.365	ppb	3.4	40915.16	0.5486	Pulse	0.1000	3
Cu	63	72	He	65.315	ppb	1.2	121858.60	1.6337	Pulse	0.1000	3
Zn	66	72	He	98.070	ppb	5.2	18332.17	0.2458	Pulse	0.1000	3
As	75	72	He	52.842	ppb	1.4	6887.68	0.0923	Pulse	0.5000	3
Sr	88	115	He	21.941	ppb	3.7	10951.25	0.1723	Pulse	0.1000	3
Mo	98	115	He	5.692	ppb	6.5	7995.88	0.1259	Pulse	0.1000	3
Ag	107	115	He	5.264	ppb	3.8	15248.64	0.2400	Pulse	0.1000	3
Cd	111	115	He	5.803	ppb	6.4	1772.79	0.0279	Pulse	0.5000	3
Sn	120	115	He	10.994	ppb	7.4	10944.69	0.1723	Pulse	0.1000	3
Sb	121	115	He	9.620	ppb	1.9	7602.34	0.1196	Pulse	0.1000	3
Ba	137	115	He	110.164	ppb	3.4	30651.38	0.4823	Pulse	0.1000	3
Tl	205	209	He	10.696	ppb	2.0	65773.59	0.2967	Pulse	0.1000	3
Pb	208	209	He	20.103	ppb	2.1	162695.46	0.7339	Pulse	0.1000	3
U	238	209	He	5.783	ppb	3.1	53979.74	0.2435	Pulse	0.1000	3

ISTD Table:

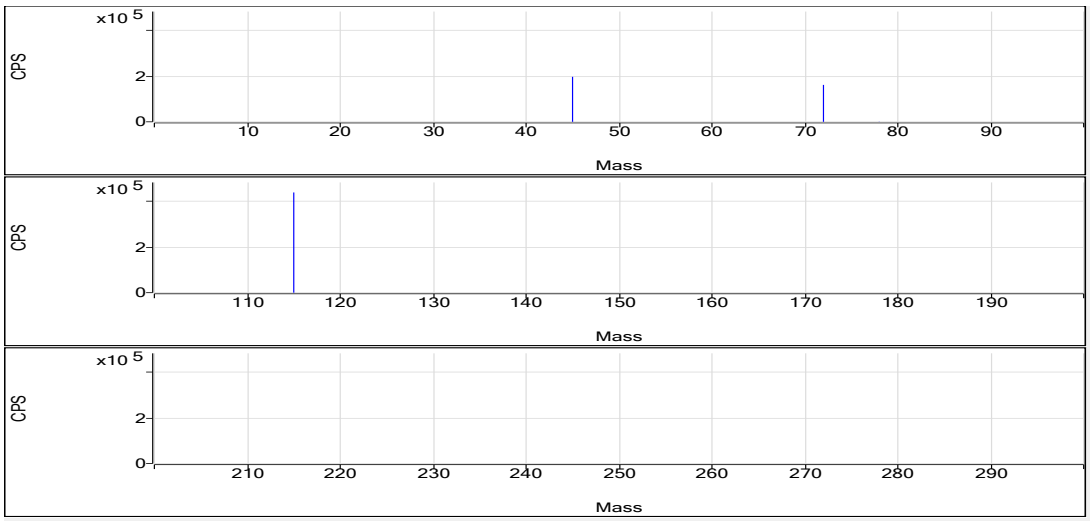
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3296088.81	1.3	101.7	Pulse	0.1000	3
No Gas	Ge	72	1462200.76	0.8	101.6	Pulse	0.1000	3
H2	Sc	45	197822.12	1.4	101.3	Pulse	0.1000	3
H2	Ge	72	162322.17	0.8	99.6	Pulse	0.1000	3
H2	In	115	440651.14	2.0	101.7	Pulse	0.1000	3
He	Sc	45	43110.91	2.1	107.8	Pulse	0.1000	3
He	Ge	72	74596.74	1.1	103.2	Pulse	0.1000	3
He	In	115	63589.88	3.2	98.4	Pulse	0.1000	3
He	Tb	159	282881.09	0.0	98.9	Pulse	0.1000	3
He	Bi	209	221741.36	1.7	99.8	Pulse	0.1000	3

No Gas

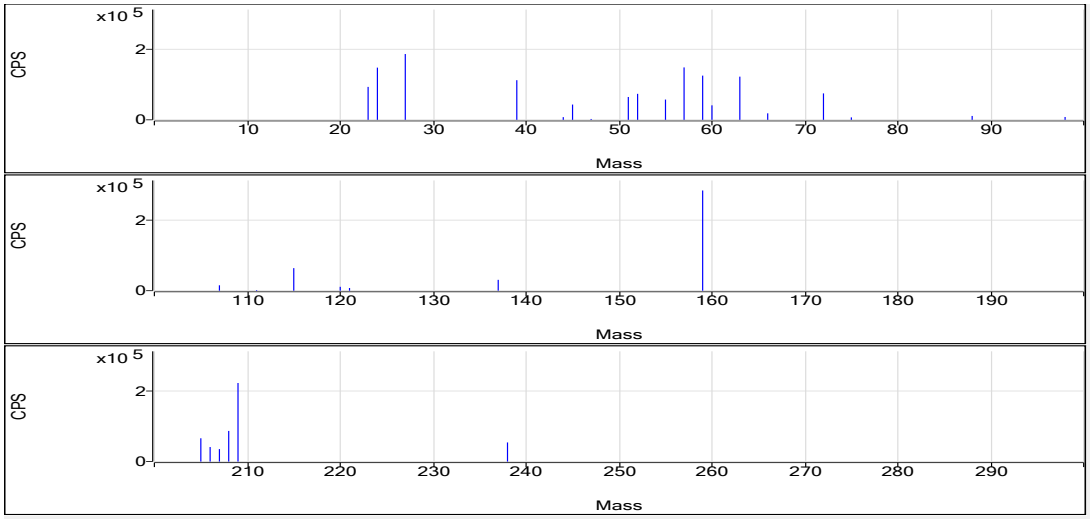


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	4.958	0.0066	9645.13	0.0013	4.694E-05
Be	9	1	No Gas	5.406	0.0072	10491.70	0.0013	4.694E-05
Be	9	1	No Gas	5.439	0.0072	10427.65	0.0013	4.694E-05
Se	78	2	H2	11.634	0.0045	731.35	0.0004	1.089E-05
Se	78	2	H2	10.847	0.0042	692.69	0.0004	1.089E-05
Se	78	2	H2	11.333	0.0044	718.02	0.0004	1.089E-05
Na	23	3	He	645.483	1.2153	90957.21	0.0017	0.1065
Na	23	3	He	674.828	1.2657	95213.39	0.0017	0.1065
Na	23	3	He	670.107	1.2576	92707.70	0.0017	0.1065
Mg	24	3	He	2342.409	1.9797	148172.56	0.0008	0.004846
Mg	24	3	He	2323.785	1.964	147747.25	0.0008	0.004846
Mg	24	3	He	2344.109	1.9812	146049.99	0.0008	0.004846
Al	27	3	He	10222.344	2.4687	184767.28	0.0002	0.001063
Al	27	3	He	10284.712	2.4837	186842.40	0.0002	0.001063
Al	27	3	He	10424.573	2.5175	185587.46	0.0002	0.001063
K	39	3	He	2465.701	1.5052	112658.41	0.0006	0.1436
K	39	3	He	2401.658	1.4699	110572.73	0.0006	0.1436
K	39	3	He	2498.152	1.5231	112285.26	0.0006	0.1436
Ca	44	3	He	3119.384	0.0985	7372.09	0	0.001611
Ca	44	3	He	3385.926	0.1068	8032.48	0	0.001611
Ca	44	3	He	3167.854	0.1	7372.21	0	0.001611
Ti	47	3	He	125.724	0.0318	2380.27	0.0003	0.0002737
Ti	47	3	He	135.683	0.0343	2580.29	0.0003	0.0002737
Ti	47	3	He	123.874	0.0313	2310.26	0.0003	0.0002737
V	51	3	He	73.526	0.8674	64921.02	0.0117	0.007326
V	51	3	He	72.783	0.8587	64599.16	0.0117	0.007326
V	51	3	He	73.439	0.8664	63870.29	0.0117	0.007326
Cr	52	3	He	62.829	0.9821	73505.37	0.0152	0.02538
Cr	52	3	He	61.975	0.9691	72901.84	0.0152	0.02538
Cr	52	3	He	63.957	0.9993	73666.01	0.0152	0.02538
Mn	55	3	He	127.324	0.7654	57284.13	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	126.845	0.7625	57363.81	0.0059	0.01385
Mn	55	3	He	128.632	0.7731	56991.90	0.0059	0.01385
Fe	57	3	He	6764.692	1.9637	146976.05	0.0003	0.003918
Fe	57	3	He	6824.882	1.9812	149037.63	0.0003	0.003918
Fe	57	3	He	6904.061	2.0041	147742.37	0.0003	0.003918
Co	59	3	He	54.419	1.6634	124500.17	0.0305	0.003084
Co	59	3	He	53.923	1.6483	123996.28	0.0305	0.003084
Co	59	3	He	55.853	1.7072	125852.23	0.0305	0.003084
Ni	60	3	He	60.023	0.5368	40176.64	0.0088	0.009003
Ni	60	3	He	60.319	0.5394	40577.51	0.0088	0.009003
Ni	60	3	He	63.754	0.5696	41991.33	0.0088	0.009003
Cu	63	3	He	64.984	1.6255	121656.71	0.0249	0.004937
Cu	63	3	He	64.772	1.6202	121879.23	0.0249	0.004937
Cu	63	3	He	66.188	1.6555	122039.86	0.0249	0.004937
Zn	66	3	He	103.177	0.2583	19333.64	0.0025	0.004836
Zn	66	3	He	92.998	0.2333	17551.05	0.0025	0.004836
Zn	66	3	He	98.036	0.2457	18111.83	0.0025	0.004836
As	75	3	He	53.54	0.0936	7001.74	0.0017	0.0004347
As	75	3	He	52.059	0.091	6843.66	0.0017	0.0004347
As	75	3	He	52.926	0.0925	6817.64	0.0017	0.0004347
Sr	88	3	He	21.024	0.1651	10754.43	0.0078	0.0007762
Sr	88	3	He	22.522	0.1768	11385.02	0.0078	0.0007762
Sr	88	3	He	22.275	0.1749	10714.30	0.0078	0.0007762
Mo	98	3	He	5.27	0.1166	7592.37	0.022	0.0005162
Mo	98	3	He	5.854	0.1294	8332.71	0.022	0.0005162
Mo	98	3	He	5.953	0.1316	8062.55	0.022	0.0005162
Ag	107	3	He	5.166	0.2355	15338.68	0.0455	0.0004641
Ag	107	3	He	5.13	0.2339	15058.41	0.0455	0.0004641
Ag	107	3	He	5.497	0.2506	15348.82	0.0455	0.0004641
Cd	111	3	He	5.382	0.0259	1686.11	0.0048	5.152E-05
Cd	111	3	He	5.95	0.0286	1842.13	0.0048	5.152E-05
Cd	111	3	He	6.077	0.0292	1790.13	0.0048	5.152E-05
Sn	120	3	He	10.143	0.1602	10434.22	0.0143	0.01559
Sn	120	3	He	11.081	0.1736	11174.92	0.0143	0.01559
Sn	120	3	He	11.759	0.1832	11224.94	0.0143	0.01559
Sb	121	3	He	9.599	0.1193	7772.44	0.0124	0.000258
Sb	121	3	He	9.448	0.1175	7562.35	0.0124	0.000258
Sb	121	3	He	9.812	0.122	7472.23	0.0124	0.000258
Ba	137	3	He	105.862	0.4634	30183.57	0.0044	0.000309
Ba	137	3	He	112.183	0.4911	31616.85	0.0044	0.000309
Ba	137	3	He	112.448	0.4922	30153.71	0.0044	0.000309
Tl	205	3	He	10.694	0.2966	66476.90	0.0276	0.001005
Tl	205	3	He	10.484	0.2908	65070.25	0.0276	0.001005
Tl	205	3	He	10.909	0.3026	65773.61	0.0276	0.001005
Pb	208	3	He	19.713	0.7197	86432.51	0.0364	0.002176
Pb	208	3	He	20.037	0.7315	86624.76	0.0364	0.002176
Pb	208	3	He	20.561	0.7505	86453.43	0.0364	0.002176
U	238	3	He	5.652	0.238	53340.90	0.0421	0.00024
U	238	3	He	5.709	0.2404	53792.16	0.0421	0.00024
U	238	3	He	5.988	0.2521	54806.15	0.0421	0.00024
Sc	45	1	No Gas			3328747.76		
Sc	45	1	No Gas			3313051.83		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3246466.83		
Ge	72	1	No Gas			1469935.45		
Ge	72	1	No Gas			1467149.98		
Ge	72	1	No Gas			1449516.85		
Sc	45	2	H2			197949.20		
Sc	45	2	H2			200585.04		
Sc	45	2	H2			194932.11		
Ge	72	2	H2			161061.62		
Ge	72	2	H2			163588.52		
Ge	72	2	H2			162316.38		
In	115	2	H2			437127.77		
In	115	2	H2			450913.98		
In	115	2	H2			433911.67		
Sc	45	3	He			44087.03		
Sc	45	3	He			42361.99		
Sc	45	3	He			42883.70		
Ge	72	3	He			74844.65		
Ge	72	3	He			75226.46		
Ge	72	3	He			73719.12		
In	115	3	He			65211.77		
In	115	3	He			64468.76		
In	115	3	He			61345.22		
Tb	159	3	He			282976.71		
Tb	159	3	He			282724.21		
Tb	159	3	He			282942.34		
Bi	209	3	He			224106.38		
Bi	209	3	He			223741.89		
Bi	209	3	He			217375.80		

Quantitation Report

Data File Name	165SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 16:05:26
Sample Name	410-136624-J-1-A MS @10
Sample Type	Sample
Comment	G3 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

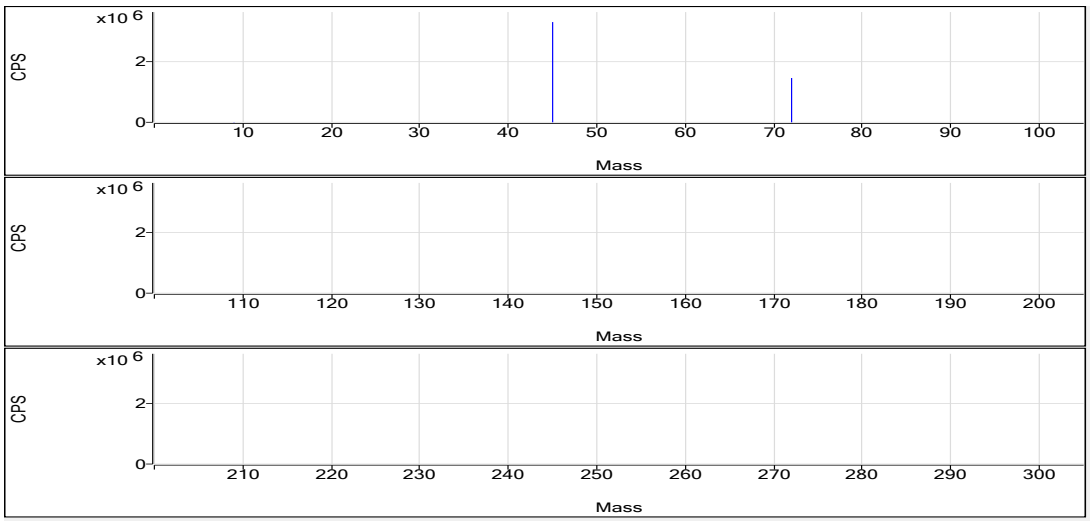
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	4.745	ppb	2.6	9088.77	0.0063	Pulse	0.5000	3
Se	78	72	H2	9.623	ppb	5.8	606.01	0.0038	Pulse	1.5000	3
Na	23	72	He	581.155	ppb	0.6	81479.36	1.1048	Pulse	0.1000	3
Mg	24	72	He	1411.190	ppb	0.9	88103.99	1.1946	Pulse	0.1000	3
Al	27	72	He	5249.694	ppb	1.3	93537.18	1.2683	Pulse	0.1000	3
K	39	72	He	1504.247	ppb	2.7	71852.13	0.9743	Pulse	0.1000	3
Ca	44	72	He	1935.103	ppb	6.9	4550.87	0.0617	Pulse	0.1000	3
Ti	47	72	He	95.878	ppb	8.7	1793.51	0.0243	Pulse	0.1000	3
V	51	72	He	57.481	ppb	1.2	50129.32	0.6797	Pulse	0.5000	3
Cr	52	72	He	53.513	ppb	0.4	61968.58	0.8402	Pulse	0.1000	3
Mn	55	72	He	87.189	ppb	0.2	38976.55	0.5285	Pulse	0.1000	3
Fe	57	72	He	4129.643	ppb	0.7	88525.85	1.2003	Pulse	0.1000	3
Co	59	72	He	49.031	ppb	1.1	110555.14	1.4991	Pulse	0.1000	3
Ni	60	72	He	53.421	ppb	2.1	35307.07	0.4788	Pulse	0.1000	3
Cu	63	72	He	55.413	ppb	0.5	102280.16	1.3868	Pulse	0.1000	3
Zn	66	72	He	68.459	ppb	3.8	12759.46	0.1730	Pulse	0.1000	3
As	75	72	He	47.507	ppb	2.3	6125.34	0.0831	Pulse	0.5000	3
Sr	88	115	He	13.947	ppb	7.9	7005.32	0.1098	Pulse	0.1000	3
Mo	98	115	He	5.179	ppb	7.6	7315.53	0.1146	Pulse	0.1000	3
Ag	107	115	He	4.726	ppb	5.1	13757.17	0.2155	Pulse	0.1000	3
Cd	111	115	He	4.843	ppb	6.5	1486.76	0.0233	Pulse	0.5000	3
Sn	120	115	He	9.928	ppb	5.4	10033.98	0.1571	Pulse	0.1000	3
Sb	121	115	He	9.489	ppb	1.7	7535.61	0.1180	Pulse	0.1000	3
Ba	137	115	He	76.445	ppb	6.4	21360.50	0.3347	Pulse	0.1000	3
Tl	205	209	He	9.570	ppb	1.2	58610.52	0.2656	Pulse	0.1000	3
Pb	208	209	He	11.133	ppb	0.6	89915.69	0.4074	Pulse	0.1000	3
U	238	209	He	5.014	ppb	0.9	46604.52	0.2112	Pulse	0.1000	3

ISTD Table:

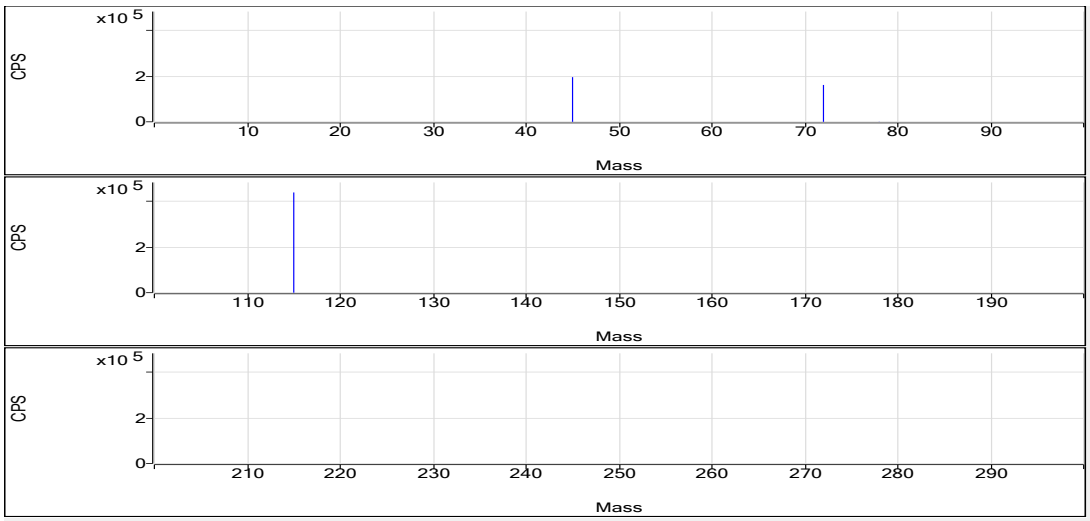
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3276468.39	1.9	101.1	Pulse	0.1000	3
No Gas	Ge	72	1447399.09	2.0	100.5	Pulse	0.1000	3
H2	Sc	45	195426.49	1.3	100.0	Pulse	0.1000	3
H2	Ge	72	161310.39	0.8	99.0	Pulse	0.1000	3
H2	In	115	438587.76	1.1	101.2	Pulse	0.1000	3
He	Sc	45	42552.60	1.6	106.4	Pulse	0.1000	3
He	Ge	72	73752.41	0.5	102.0	Pulse	0.1000	3
He	In	115	63875.05	2.4	98.9	Pulse	0.1000	3
He	Tb	159	281653.15	0.7	98.5	Pulse	0.1000	3
He	Bi	209	220708.07	0.2	99.3	Pulse	0.1000	3

No Gas

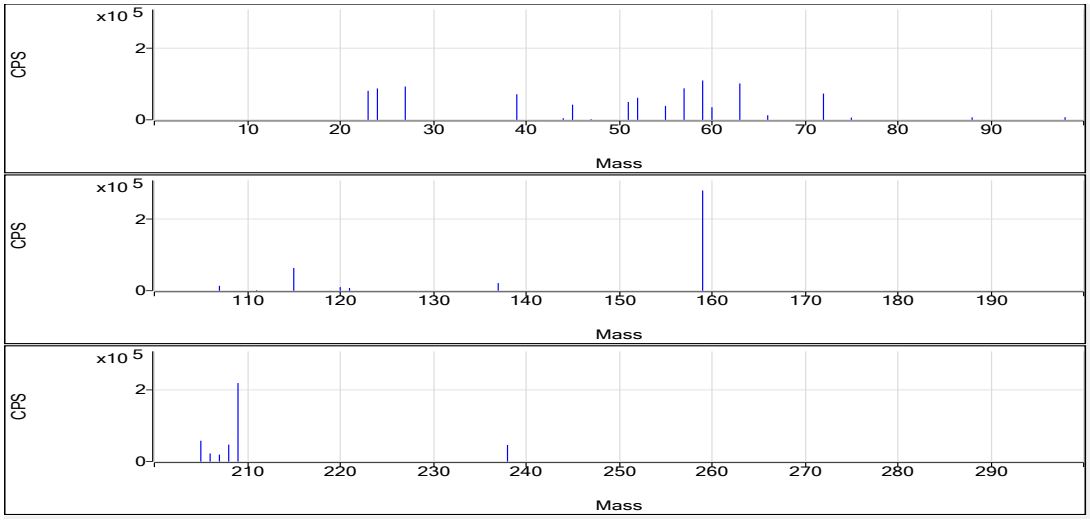


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	4.621	0.0061	9026.73	0.0013	4.694E-05
Be	9	1	No Gas	4.744	0.0063	9104.78	0.0013	4.694E-05
Be	9	1	No Gas	4.868	0.0064	9134.81	0.0013	4.694E-05
Se	78	2	H2	9.677	0.0038	612.68	0.0004	1.089E-05
Se	78	2	H2	9.043	0.0035	572.01	0.0004	1.089E-05
Se	78	2	H2	10.149	0.004	633.35	0.0004	1.089E-05
Na	23	3	He	580.763	1.1041	81060.65	0.0017	0.1065
Na	23	3	He	577.991	1.0993	81472.53	0.0017	0.1065
Na	23	3	He	584.713	1.1109	81904.89	0.0017	0.1065
Mg	24	3	He	1419.007	1.2012	88190.30	0.0008	0.004846
Mg	24	3	He	1395.897	1.1817	87578.35	0.0008	0.004846
Mg	24	3	He	1418.667	1.2009	88543.33	0.0008	0.004846
Al	27	3	He	5298.244	1.28	93976.69	0.0002	0.001063
Al	27	3	He	5171.082	1.2493	92588.46	0.0002	0.001063
Al	27	3	He	5279.757	1.2756	94046.39	0.0002	0.001063
K	39	3	He	1547.943	0.9984	73302.66	0.0006	0.1436
K	39	3	He	1466.716	0.9536	70670.08	0.0006	0.1436
K	39	3	He	1498.083	0.9709	71583.65	0.0006	0.1436
Ca	44	3	He	2088.589	0.0665	4880.97	0	0.001611
Ca	44	3	He	1868.679	0.0597	4420.82	0	0.001611
Ca	44	3	He	1848.041	0.059	4350.82	0	0.001611
Ti	47	3	He	90.707	0.023	1690.16	0.0003	0.0002737
Ti	47	3	He	91.463	0.0232	1720.16	0.0003	0.0002737
Ti	47	3	He	105.465	0.0267	1970.20	0.0003	0.0002737
V	51	3	He	58.185	0.688	50508.54	0.0117	0.007326
V	51	3	He	56.832	0.6721	49812.15	0.0117	0.007326
V	51	3	He	57.425	0.6791	50067.27	0.0117	0.007326
Cr	52	3	He	53.668	0.8426	61861.31	0.0152	0.02538
Cr	52	3	He	53.284	0.8368	62012.40	0.0152	0.02538
Cr	52	3	He	53.586	0.8413	62032.04	0.0152	0.02538
Mn	55	3	He	87.358	0.5295	38873.04	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	87.207	0.5286	39173.88	0.0059	0.01385
Mn	55	3	He	87.001	0.5274	38882.74	0.0059	0.01385
Fe	57	3	He	4164.681	1.2105	88871.14	0.0003	0.003918
Fe	57	3	He	4109.271	1.1944	88519.93	0.0003	0.003918
Fe	57	3	He	4114.976	1.1961	88186.49	0.0003	0.003918
Co	59	3	He	49.637	1.5175	111414.76	0.0305	0.003084
Co	59	3	He	48.638	1.4871	110205.97	0.0305	0.003084
Co	59	3	He	48.818	1.4926	110044.70	0.0305	0.003084
Ni	60	3	He	53.987	0.4837	35514.16	0.0088	0.009003
Ni	60	3	He	52.15	0.4676	34652.29	0.0088	0.009003
Ni	60	3	He	54.126	0.4849	35754.77	0.0088	0.009003
Cu	63	3	He	55.084	1.3786	101212.47	0.0249	0.004937
Cu	63	3	He	55.543	1.39	103015.27	0.0249	0.004937
Cu	63	3	He	55.612	1.3918	102612.74	0.0249	0.004937
Zn	66	3	He	71.251	0.1799	13206.57	0.0025	0.004836
Zn	66	3	He	66.168	0.1674	12405.76	0.0025	0.004836
Zn	66	3	He	67.957	0.1718	12666.04	0.0025	0.004836
As	75	3	He	48.741	0.0852	6255.40	0.0017	0.0004347
As	75	3	He	46.979	0.0821	6087.32	0.0017	0.0004347
As	75	3	He	46.802	0.0818	6033.30	0.0017	0.0004347
Sr	88	3	He	14.343	0.1129	7212.11	0.0078	0.0007762
Sr	88	3	He	12.7	0.1001	6541.77	0.0078	0.0007762
Sr	88	3	He	14.798	0.1165	7262.09	0.0078	0.0007762
Mo	98	3	He	4.74	0.1049	6701.75	0.022	0.0005162
Mo	98	3	He	5.291	0.117	7652.48	0.022	0.0005162
Mo	98	3	He	5.505	0.1218	7592.36	0.022	0.0005162
Ag	107	3	He	4.554	0.2077	13266.64	0.0455	0.0004641
Ag	107	3	He	4.624	0.2109	13787.16	0.0455	0.0004641
Ag	107	3	He	5.001	0.228	14217.70	0.0455	0.0004641
Cd	111	3	He	4.848	0.0233	1490.09	0.0048	5.152E-05
Cd	111	3	He	4.527	0.0218	1424.08	0.0048	5.152E-05
Cd	111	3	He	5.154	0.0248	1546.10	0.0048	5.152E-05
Sn	120	3	He	9.374	0.1492	9533.62	0.0143	0.01559
Sn	120	3	He	9.96	0.1576	10304.21	0.0143	0.01559
Sn	120	3	He	10.451	0.1646	10264.10	0.0143	0.01559
Sb	121	3	He	9.307	0.1157	7392.21	0.0124	0.000258
Sb	121	3	He	9.587	0.1192	7792.36	0.0124	0.000258
Sb	121	3	He	9.574	0.119	7422.27	0.0124	0.000258
Ba	137	3	He	75.059	0.3287	20996.54	0.0044	0.000309
Ba	137	3	He	72.389	0.317	20726.14	0.0044	0.000309
Ba	137	3	He	81.887	0.3585	22358.83	0.0044	0.000309
Tl	205	3	He	9.626	0.2671	59021.92	0.0276	0.001005
Tl	205	3	He	9.439	0.262	57857.58	0.0276	0.001005
Tl	205	3	He	9.644	0.2676	58952.05	0.0276	0.001005
Pb	208	3	He	11.193	0.4096	48159.31	0.0364	0.002176
Pb	208	3	He	11.066	0.4049	47085.52	0.0364	0.002176
Pb	208	3	He	11.14	0.4077	47616.64	0.0364	0.002176
U	238	3	He	4.993	0.2103	46464.00	0.0421	0.00024
U	238	3	He	4.981	0.2098	46333.74	0.0421	0.00024
U	238	3	He	5.068	0.2134	47015.81	0.0421	0.00024
Sc	45	1	No Gas			3347955.58		
Sc	45	1	No Gas			3255025.58		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3226424.01		
Ge	72	1	No Gas			1475077.32		
Ge	72	1	No Gas			1449527.01		
Ge	72	1	No Gas			1417592.95		
Sc	45	2	H2			198354.78		
Sc	45	2	H2			194625.50		
Sc	45	2	H2			193299.18		
Ge	72	2	H2			162143.12		
Ge	72	2	H2			161960.14		
Ge	72	2	H2			159827.92		
In	115	2	H2			441234.37		
In	115	2	H2			441514.06		
In	115	2	H2			433014.84		
Sc	45	3	He			42482.17		
Sc	45	3	He			41900.72		
Sc	45	3	He			43274.90		
Ge	72	3	He			73417.68		
Ge	72	3	He			74110.37		
Ge	72	3	He			73729.18		
In	115	3	He			63956.78		
In	115	3	He			65463.61		
In	115	3	He			62439.56		
Tb	159	3	He			283780.23		
Tb	159	3	He			280083.51		
Tb	159	3	He			281095.70		
Bi	209	3	He			220965.21		
Bi	209	3	He			220872.56		
Bi	209	3	He			220286.44		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 16:21:59
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

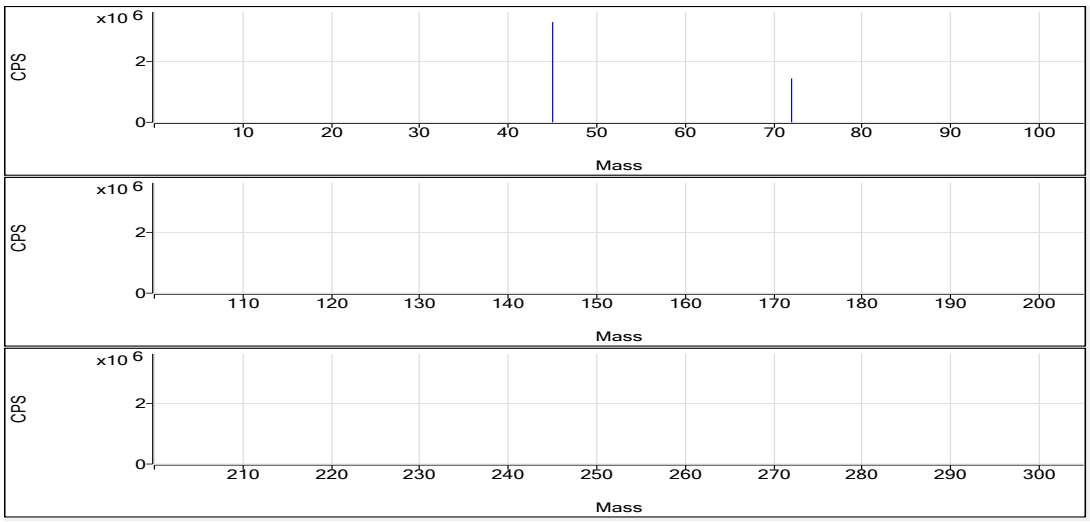
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.005	ppb	N/A	57.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.031	ppb	49.6	3.56	0.0000	Pulse	1.5000	3
Na	23	72	He	9.570	ppb	15.4	8646.15	0.1229	Pulse	0.1000	3
Mg	24	72	He	4.490	ppb	33.7	606.70	0.0086	Pulse	0.1000	3
Al	27	72	He	9.925	ppb	39.5	243.34	0.0035	Pulse	0.1000	3
K	39	72	He	21.722	ppb	62.3	10951.13	0.1556	Pulse	0.1000	3
Ca	44	72	He	12.266	ppb	78.5	140.01	0.0020	Pulse	0.1000	3
Ti	47	72	He	0.040	ppb	1410.2	20.00	0.0003	Pulse	0.1000	3
V	51	72	He	0.070	ppb	37.5	573.35	0.0081	Pulse	0.5000	3
Cr	52	72	He	0.051	ppb	176.5	1840.18	0.0262	Pulse	0.1000	3
Mn	55	72	He	-1.159	ppb	N/A	493.36	0.0070	Pulse	0.1000	3
Fe	57	72	He	4.759	ppb	136.0	373.35	0.0053	Pulse	0.1000	3
Co	59	72	He	0.051	ppb	75.6	326.68	0.0047	Pulse	0.1000	3
Ni	60	72	He	0.845	ppb	30.0	1156.75	0.0164	Pulse	0.1000	3
Cu	63	72	He	0.064	ppb	90.5	460.03	0.0065	Pulse	0.1000	3
Zn	66	72	He	-0.134	ppb	N/A	316.68	0.0045	Pulse	0.1000	3
As	75	72	He	0.034	ppb	189.4	34.67	0.0005	Pulse	0.5000	3
Sr	88	115	He	0.106	ppb	121.1	100.00	0.0016	Pulse	0.1000	3
Mo	98	115	He	0.030	ppb	27.8	73.33	0.0012	Pulse	0.1000	3
Ag	107	115	He	0.006	ppb	32.1	46.67	0.0007	Pulse	0.1000	3
Cd	111	115	He	-0.002	ppb	N/A	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.044	ppb	298.4	1010.08	0.0162	Pulse	0.1000	3
Sb	121	115	He	0.009	ppb	285.5	23.33	0.0004	Pulse	0.1000	3
Ba	137	115	He	0.149	ppb	42.3	60.00	0.0010	Pulse	0.1000	3
Tl	205	209	He	0.014	ppb	13.0	300.02	0.0014	Pulse	0.1000	3
Pb	208	209	He	0.005	ppb	320.0	506.69	0.0023	Pulse	0.1000	3
U	238	209	He	0.012	ppb	11.0	163.34	0.0008	Pulse	0.1000	3

ISTD Table:

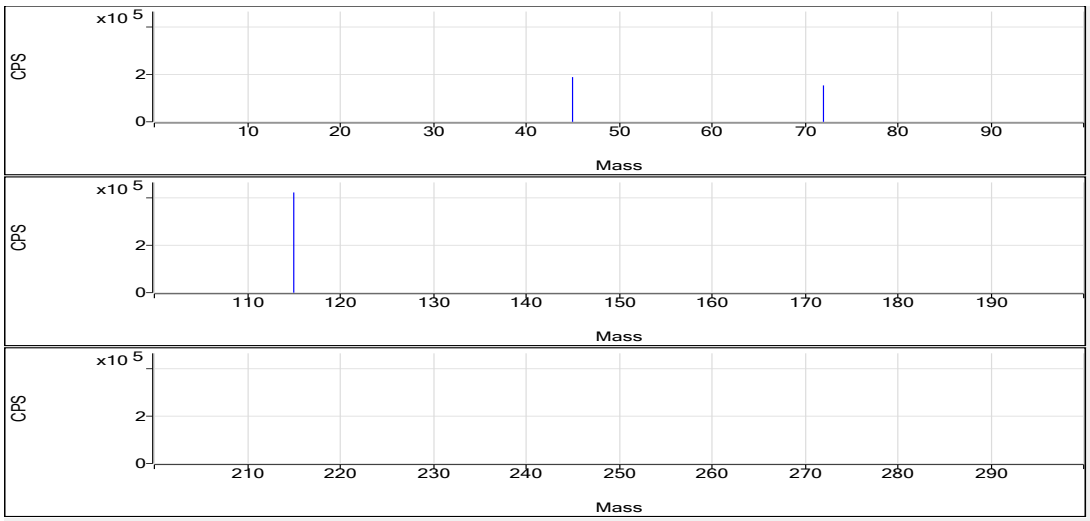
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3288083.18	1.9	101.4	Pulse	0.1000	3
No Gas	Ge	72	1438104.25	1.9	99.9	Pulse	0.1000	3
H2	Sc	45	188707.03	1.2	96.6	Pulse	0.1000	3
H2	Ge	72	153642.38	2.4	94.3	Pulse	0.1000	3
H2	In	115	423015.30	1.7	97.6	Pulse	0.1000	3
He	Sc	45	39541.03	0.6	98.9	Pulse	0.1000	3
He	Ge	72	70345.37	0.9	97.3	Pulse	0.1000	3
He	In	115	62287.98	0.3	96.4	Pulse	0.1000	3
He	Tb	159	277787.85	0.5	97.1	Pulse	0.1000	3
He	Bi	209	216290.34	0.5	97.3	Pulse	0.1000	3

No Gas

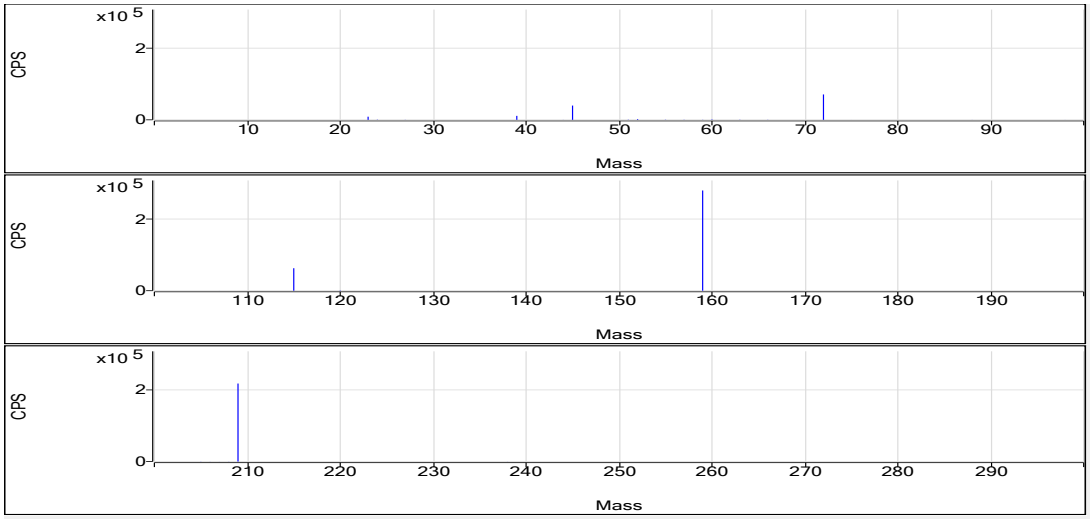


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.009	0	50.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.01	0	48.00	0.0013	4.694E-05
Be	9	1	No Gas	0.003	0.0001	74.00	0.0013	4.694E-05
Se	78	2	H2	0.048	0	4.67	0.0004	1.089E-05
Se	78	2	H2	0.028	0	3.33	0.0004	1.089E-05
Se	78	2	H2	0.017	0	2.67	0.0004	1.089E-05
Na	23	3	He	11.213	0.1257	8932.97	0.0017	0.1065
Na	23	3	He	9.134	0.1221	8552.76	0.0017	0.1065
Na	23	3	He	8.363	0.1208	8452.73	0.0017	0.1065
Mg	24	3	He	2.933	0.0073	520.03	0.0008	0.004846
Mg	24	3	He	4.586	0.0087	610.04	0.0008	0.004846
Mg	24	3	He	5.951	0.0099	690.04	0.0008	0.004846
Al	27	3	He	10.756	0.0037	260.01	0.0002	0.001063
Al	27	3	He	5.656	0.0024	170.01	0.0002	0.001063
Al	27	3	He	13.362	0.0043	300.01	0.0002	0.001063
K	39	3	He	35.898	0.1635	11615.05	0.0006	0.1436
K	39	3	He	20.342	0.1549	10844.33	0.0006	0.1436
K	39	3	He	8.928	0.1486	10394.01	0.0006	0.1436
Ca	44	3	He	2.513	0.0017	120.01	0	0.001611
Ca	44	3	He	12.513	0.002	140.01	0	0.001611
Ca	44	3	He	21.772	0.0023	160.01	0	0.001611
Ti	47	3	He	0.592	0.0004	30.00	0.0003	0.0002737
Ti	47	3	He	-0.522	0.0001	10.00	0.0003	0.0002737
Ti	47	3	He	0.048	0.0003	20.00	0.0003	0.0002737
V	51	3	He	0.081	0.0083	588.02	0.0117	0.007326
V	51	3	He	0.04	0.0078	546.01	0.0117	0.007326
V	51	3	He	0.09	0.0084	586.02	0.0117	0.007326
Cr	52	3	He	0.108	0.027	1920.19	0.0152	0.02538
Cr	52	3	He	0.096	0.0269	1880.19	0.0152	0.02538
Cr	52	3	He	-0.052	0.0246	1720.15	0.0152	0.02538
Mn	55	3	He	-1.083	0.0075	530.02	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-1.186	0.0069	480.02	0.0059	0.01385
Mn	55	3	He	-1.209	0.0067	470.03	0.0059	0.01385
Fe	57	3	He	12.224	0.0075	530.03	0.0003	0.003918
Fe	57	3	He	0.773	0.0041	290.01	0.0003	0.003918
Fe	57	3	He	1.279	0.0043	300.01	0.0003	0.003918
Co	59	3	He	0.01	0.0034	240.01	0.0305	0.003084
Co	59	3	He	0.058	0.0049	340.02	0.0305	0.003084
Co	59	3	He	0.086	0.0057	400.02	0.0305	0.003084
Ni	60	3	He	1.137	0.019	1350.12	0.0088	0.009003
Ni	60	3	He	0.682	0.015	1050.07	0.0088	0.009003
Ni	60	3	He	0.716	0.0153	1070.07	0.0088	0.009003
Cu	63	3	He	0.129	0.0082	580.04	0.0249	0.004937
Cu	63	3	He	0.02	0.0054	380.02	0.0249	0.004937
Cu	63	3	He	0.043	0.006	420.02	0.0249	0.004937
Zn	66	3	He	-0.536	0.0035	250.01	0.0025	0.004836
Zn	66	3	He	0.415	0.0059	410.03	0.0025	0.004836
Zn	66	3	He	-0.281	0.0041	290.01	0.0025	0.004836
As	75	3	He	-0.04	0.0004	26.00	0.0017	0.0004347
As	75	3	He	0.079	0.0006	40.00	0.0017	0.0004347
As	75	3	He	0.062	0.0005	38.00	0.0017	0.0004347
Sr	88	3	He	0.25	0.0027	170.01	0.0078	0.0007762
Sr	88	3	He	0.003	0.0008	50.00	0.0078	0.0007762
Sr	88	3	He	0.065	0.0013	80.00	0.0078	0.0007762
Mo	98	3	He	0.035	0.0013	80.00	0.022	0.0005162
Mo	98	3	He	0.035	0.0013	80.00	0.022	0.0005162
Mo	98	3	He	0.02	0.001	60.00	0.022	0.0005162
Ag	107	3	He	0.007	0.0008	50.00	0.0455	0.0004641
Ag	107	3	He	0.007	0.0008	50.00	0.0455	0.0004641
Ag	107	3	He	0.004	0.0006	40.00	0.0455	0.0004641
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Cd	111	3	He	0.009	0.0001	6.00	0.0048	5.152E-05
Cd	111	3	He	-0.011	0	0.00	0.0048	5.152E-05
Sn	120	3	He	0.192	0.0183	1140.09	0.0143	0.01559
Sn	120	3	He	-0.061	0.0147	920.06	0.0143	0.01559
Sn	120	3	He	0.001	0.0156	970.08	0.0143	0.01559
Sb	121	3	He	0.031	0.0006	40.00	0.0124	0.000258
Sb	121	3	He	-0.021	0	0.00	0.0124	0.000258
Sb	121	3	He	0.018	0.0005	30.00	0.0124	0.000258
Ba	137	3	He	0.187	0.0011	70.00	0.0044	0.000309
Ba	137	3	He	0.185	0.0011	70.00	0.0044	0.000309
Ba	137	3	He	0.076	0.0006	40.00	0.0044	0.000309
Tl	205	3	He	0.014	0.0014	300.02	0.0276	0.001005
Tl	205	3	He	0.015	0.0014	310.02	0.0276	0.001005
Tl	205	3	He	0.012	0.0013	290.01	0.0276	0.001005
Pb	208	3	He	-0.009	0.0019	180.01	0.0364	0.002176
Pb	208	3	He	0.02	0.0029	360.02	0.0364	0.002176
Pb	208	3	He	0.002	0.0023	220.01	0.0364	0.002176
U	238	3	He	0.013	0.0008	170.01	0.0421	0.00024
U	238	3	He	0.013	0.0008	170.01	0.0421	0.00024
U	238	3	He	0.011	0.0007	150.01	0.0421	0.00024
Sc	45	1	No Gas			3283554.95		
Sc	45	1	No Gas			3228592.45		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3352102.14		
Ge	72	1	No Gas			1428209.51		
Ge	72	1	No Gas			1416536.54		
Ge	72	1	No Gas			1469566.70		
Sc	45	2	H2			191050.17		
Sc	45	2	H2			188335.66		
Sc	45	2	H2			186735.27		
Ge	72	2	H2			157816.82		
Ge	72	2	H2			152176.95		
Ge	72	2	H2			150933.37		
In	115	2	H2			430959.99		
In	115	2	H2			420337.53		
In	115	2	H2			417748.39		
Sc	45	3	He			39644.68		
Sc	45	3	He			39704.96		
Sc	45	3	He			39273.44		
Ge	72	3	He			71055.69		
Ge	72	3	He			70020.47		
Ge	72	3	He			69959.95		
In	115	3	He			62199.20		
In	115	3	He			62509.85		
In	115	3	He			62178.53		
Tb	159	3	He			279074.82		
Tb	159	3	He			276507.44		
Tb	159	3	He			277781.30		
Bi	209	3	He			215082.42		
Bi	209	3	He			216422.79		
Bi	209	3	He			217365.80		

Quantitation Report

Data File Name	167SMPL.d
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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

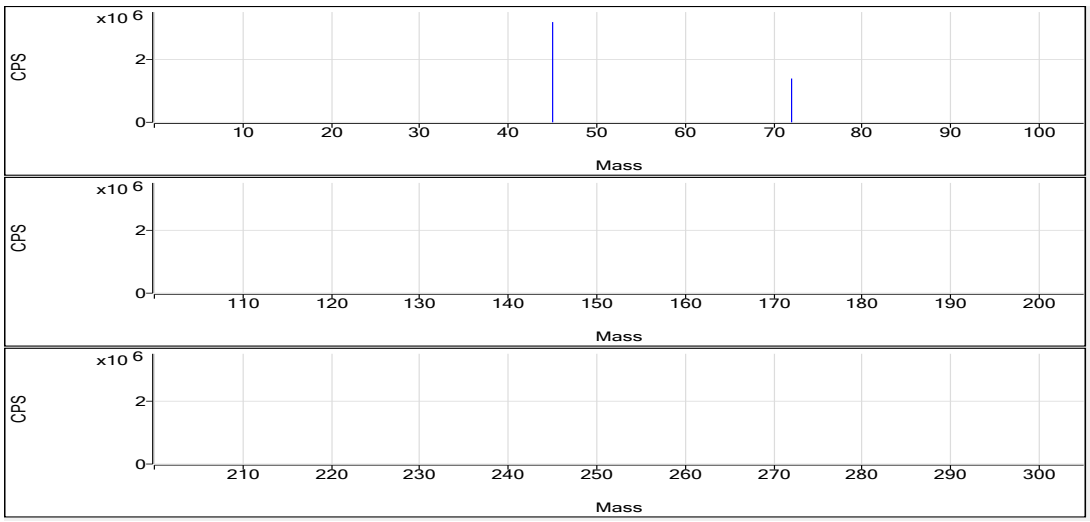
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.006	ppb	N/A	55.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.019	ppb	81.3	2.89	0.0000	Pulse	1.5000	3
Na	23	72	He	10.996	ppb	23.1	9039.69	0.1253	Pulse	0.1000	3
Mg	24	72	He	5.544	ppb	4.4	686.71	0.0095	Pulse	0.1000	3
Al	27	72	He	8.832	ppb	42.2	230.01	0.0032	Pulse	0.1000	3
K	39	72	He	17.245	ppb	86.8	11044.58	0.1532	Pulse	0.1000	3
Ca	44	72	He	13.451	ppb	110.2	146.67	0.0020	Pulse	0.1000	3
Ti	47	72	He	-0.173	ppb	N/A	16.67	0.0002	Pulse	0.1000	3
V	51	72	He	0.093	ppb	26.7	607.35	0.0084	Pulse	0.5000	3
Cr	52	72	He	0.044	ppb	221.4	1880.19	0.0260	Pulse	0.1000	3
Mn	55	72	He	-1.042	ppb	N/A	556.82	0.0077	Pulse	0.1000	3
Fe	57	72	He	3.219	ppb	90.6	350.01	0.0049	Pulse	0.1000	3
Co	59	72	He	0.065	ppb	69.7	366.68	0.0051	Pulse	0.1000	3
Ni	60	72	He	0.726	ppb	2.1	1110.08	0.0154	Pulse	0.1000	3
Cu	63	72	He	0.032	ppb	27.2	413.35	0.0057	Pulse	0.1000	3
Zn	66	72	He	-0.444	ppb	N/A	270.01	0.0037	Pulse	0.1000	3
As	75	72	He	0.048	ppb	85.4	37.33	0.0005	Pulse	0.5000	3
Sr	88	115	He	0.074	ppb	90.1	86.67	0.0014	Pulse	0.1000	3
Mo	98	115	He	0.032	ppb	56.7	76.67	0.0012	Pulse	0.1000	3
Ag	107	115	He	0.007	ppb	93.4	50.00	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.011	ppb	121.2	6.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.047	ppb	264.1	1033.41	0.0163	Pulse	0.1000	3
Sb	121	115	He	-0.008	ppb	N/A	10.00	0.0002	Pulse	0.1000	3
Ba	137	115	He	0.085	ppb	22.2	43.33	0.0007	Pulse	0.1000	3
Tl	205	209	He	0.011	ppb	61.3	280.01	0.0013	Pulse	0.1000	3
Pb	208	209	He	0.007	ppb	204.8	523.36	0.0024	Pulse	0.1000	3
U	238	209	He	0.005	ppb	90.0	100.00	0.0005	Pulse	0.1000	3

ISTD Table:

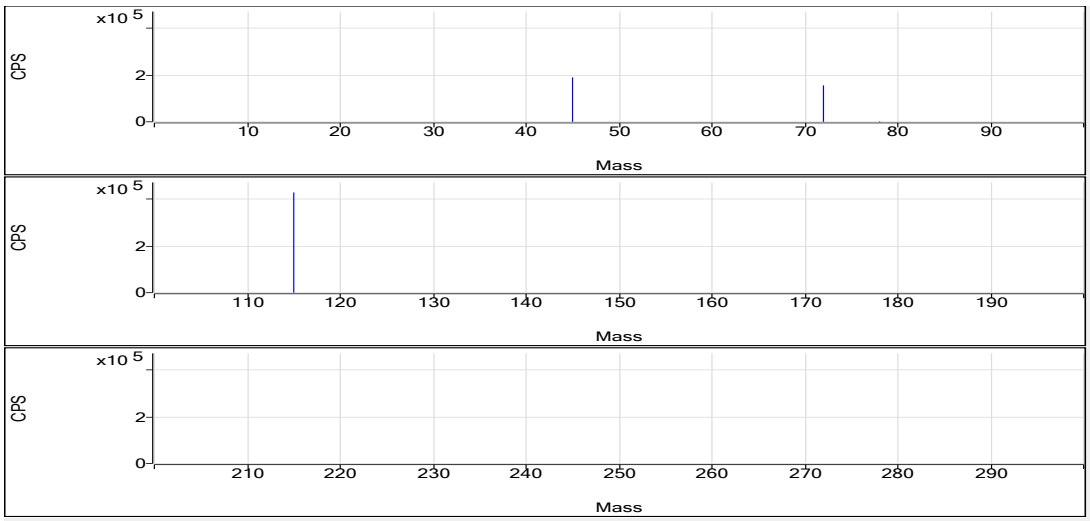
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3190413.70	2.2	98.4	Pulse	0.1000	3
No Gas	Ge	72	1393375.14	2.1	96.8	Pulse	0.1000	3
H2	Sc	45	190617.35	1.8	97.6	Pulse	0.1000	3
H2	Ge	72	156400.44	2.2	95.9	Pulse	0.1000	3
H2	In	115	430146.28	2.3	99.3	Pulse	0.1000	3
He	Sc	45	41175.02	1.4	103.0	Pulse	0.1000	3
He	Ge	72	72144.22	1.5	99.8	Pulse	0.1000	3
He	In	115	63406.03	3.1	98.2	Pulse	0.1000	3
He	Tb	159	277116.39	1.5	96.9	Pulse	0.1000	3
He	Bi	209	215052.33	0.3	96.8	Pulse	0.1000	3

No Gas

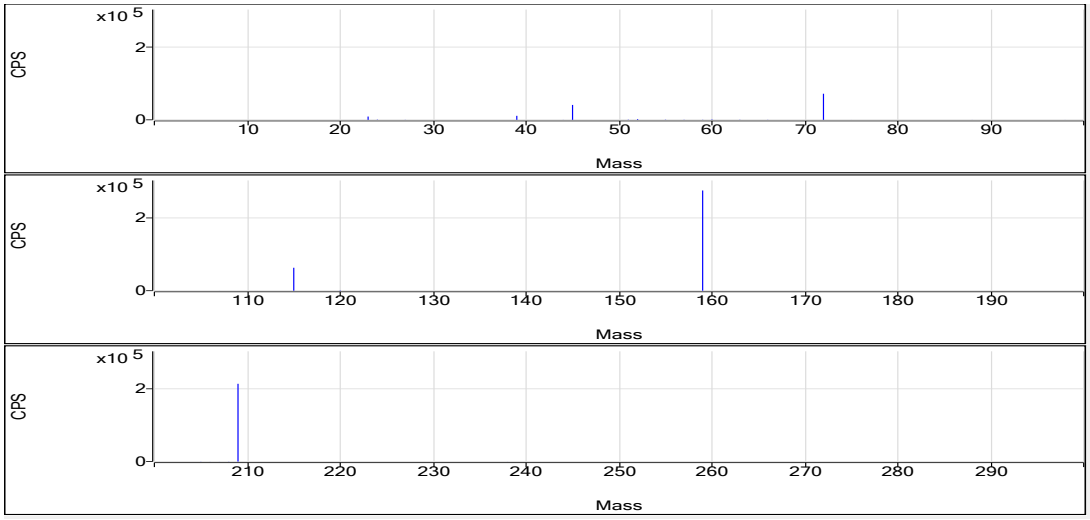


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.006	0	54.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.013	0	40.00	0.0013	4.694E-05
Be	9	1	No Gas	0.003	0.0001	72.00	0.0013	4.694E-05
Se	78	2	H2	0.036	0	4.00	0.0004	1.089E-05
Se	78	2	H2	0.016	0	2.67	0.0004	1.089E-05
Se	78	2	H2	0.006	0	2.00	0.0004	1.089E-05
Na	23	3	He	13.887	0.1303	9233.16	0.0017	0.1065
Na	23	3	He	10.004	0.1236	8992.97	0.0017	0.1065
Na	23	3	He	9.097	0.1221	8892.93	0.0017	0.1065
Mg	24	3	He	5.803	0.0097	690.04	0.0008	0.004846
Mg	24	3	He	5.505	0.0095	690.04	0.0008	0.004846
Mg	24	3	He	5.325	0.0093	680.04	0.0008	0.004846
Al	27	3	He	11.968	0.004	280.01	0.0002	0.001063
Al	27	3	He	4.711	0.0022	160.01	0.0002	0.001063
Al	27	3	He	9.815	0.0034	250.01	0.0002	0.001063
K	39	3	He	31.622	0.1611	11414.90	0.0006	0.1436
K	39	3	He	18.352	0.1538	11184.71	0.0006	0.1436
K	39	3	He	1.76	0.1446	10534.13	0.0006	0.1436
Ca	44	3	He	-1.882	0.0016	110.00	0	0.001611
Ca	44	3	He	14.537	0.0021	150.01	0	0.001611
Ca	44	3	He	27.697	0.0025	180.01	0	0.001611
Ti	47	3	He	-0.529	0.0001	10.00	0.0003	0.0002737
Ti	47	3	He	0.005	0.0003	20.00	0.0003	0.0002737
Ti	47	3	He	0.003	0.0003	20.00	0.0003	0.0002737
V	51	3	He	0.073	0.0082	580.02	0.0117	0.007326
V	51	3	He	0.121	0.0087	636.02	0.0117	0.007326
V	51	3	He	0.085	0.0083	606.02	0.0117	0.007326
Cr	52	3	He	-0.054	0.0246	1740.17	0.0152	0.02538
Cr	52	3	He	0.139	0.0275	2000.19	0.0152	0.02538
Cr	52	3	He	0.046	0.0261	1900.20	0.0152	0.02538
Mn	55	3	He	-1.343	0.0059	420.02	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.599	0.0103	750.43	0.0059	0.01385
Mn	55	3	He	-1.184	0.0069	500.02	0.0059	0.01385
Fe	57	3	He	2.554	0.0047	330.01	0.0003	0.003918
Fe	57	3	He	6.41	0.0058	420.02	0.0003	0.003918
Fe	57	3	He	0.693	0.0041	300.01	0.0003	0.003918
Co	59	3	He	0.056	0.0048	340.01	0.0305	0.003084
Co	59	3	He	0.025	0.0038	280.01	0.0305	0.003084
Co	59	3	He	0.115	0.0066	480.02	0.0305	0.003084
Ni	60	3	He	0.71	0.0152	1080.08	0.0088	0.009003
Ni	60	3	He	0.727	0.0154	1120.09	0.0088	0.009003
Ni	60	3	He	0.74	0.0155	1130.08	0.0088	0.009003
Cu	63	3	He	0.04	0.0059	420.02	0.0249	0.004937
Cu	63	3	He	0.023	0.0055	400.02	0.0249	0.004937
Cu	63	3	He	0.033	0.0058	420.02	0.0249	0.004937
Zn	66	3	He	-0.36	0.004	280.01	0.0025	0.004836
Zn	66	3	He	-0.346	0.004	290.01	0.0025	0.004836
Zn	66	3	He	-0.627	0.0033	240.01	0.0025	0.004836
As	75	3	He	0.058	0.0005	38.00	0.0017	0.0004347
As	75	3	He	0.082	0.0006	42.00	0.0017	0.0004347
As	75	3	He	0.003	0.0004	32.00	0.0017	0.0004347
Sr	88	3	He	0.079	0.0014	90.00	0.0078	0.0007762
Sr	88	3	He	0.139	0.0019	120.00	0.0078	0.0007762
Sr	88	3	He	0.005	0.0008	50.00	0.0078	0.0007762
Mo	98	3	He	0.047	0.0015	100.00	0.022	0.0005162
Mo	98	3	He	0.012	0.0008	50.00	0.022	0.0005162
Mo	98	3	He	0.036	0.0013	80.00	0.022	0.0005162
Ag	107	3	He	0.007	0.0008	50.00	0.0455	0.0004641
Ag	107	3	He	0.014	0.0011	70.00	0.0455	0.0004641
Ag	107	3	He	0.001	0.0005	30.00	0.0455	0.0004641
Cd	111	3	He	0.021	0.0002	10.00	0.0048	5.152E-05
Cd	111	3	He	0.015	0.0001	8.00	0.0048	5.152E-05
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Sn	120	3	He	0.099	0.017	1100.09	0.0143	0.01559
Sn	120	3	He	0.138	0.0176	1130.09	0.0143	0.01559
Sn	120	3	He	-0.095	0.0142	870.05	0.0143	0.01559
Sb	121	3	He	-0.008	0.0002	10.00	0.0124	0.000258
Sb	121	3	He	-0.008	0.0002	10.00	0.0124	0.000258
Sb	121	3	He	-0.008	0.0002	10.00	0.0124	0.000258
Ba	137	3	He	0.071	0.0006	40.00	0.0044	0.000309
Ba	137	3	He	0.107	0.0008	50.00	0.0044	0.000309
Ba	137	3	He	0.079	0.0007	40.00	0.0044	0.000309
Tl	205	3	He	0.017	0.0015	320.02	0.0276	0.001005
Tl	205	3	He	0.011	0.0013	280.01	0.0276	0.001005
Tl	205	3	He	0.004	0.0011	240.01	0.0276	0.001005
Pb	208	3	He	-0.009	0.0019	310.02	0.0364	0.002176
Pb	208	3	He	0.011	0.0026	350.02	0.0364	0.002176
Pb	208	3	He	0.02	0.0029	330.01	0.0364	0.002176
U	238	3	He	0.009	0.0006	130.00	0.0421	0.00024
U	238	3	He	0	0.0002	50.00	0.0421	0.00024
U	238	3	He	0.008	0.0006	120.00	0.0421	0.00024
Sc	45	1	No Gas			3202301.20		
Sc	45	1	No Gas			3113879.64		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3255060.26		
Ge	72	1	No Gas			1396671.54		
Ge	72	1	No Gas			1363244.20		
Ge	72	1	No Gas			1420209.67		
Sc	45	2	H2			194170.29		
Sc	45	2	H2			190249.57		
Sc	45	2	H2			187432.18		
Ge	72	2	H2			159715.52		
Ge	72	2	H2			156561.59		
Ge	72	2	H2			152924.20		
In	115	2	H2			440981.87		
In	115	2	H2			428156.91		
In	115	2	H2			421300.07		
Sc	45	3	He			41840.38		
Sc	45	3	He			40726.97		
Sc	45	3	He			40957.70		
Ge	72	3	He			70854.80		
Ge	72	3	He			72734.17		
Ge	72	3	He			72843.70		
In	115	3	He			64699.92		
In	115	3	He			64388.74		
In	115	3	He			61153.62		
Tb	159	3	He			272473.65		
Tb	159	3	He			278328.67		
Tb	159	3	He			280546.85		
Bi	209	3	He			215803.10		
Bi	209	3	He			214978.22		
Bi	209	3	He			214375.66		

Quantitation Report

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Sample Type	CCV
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

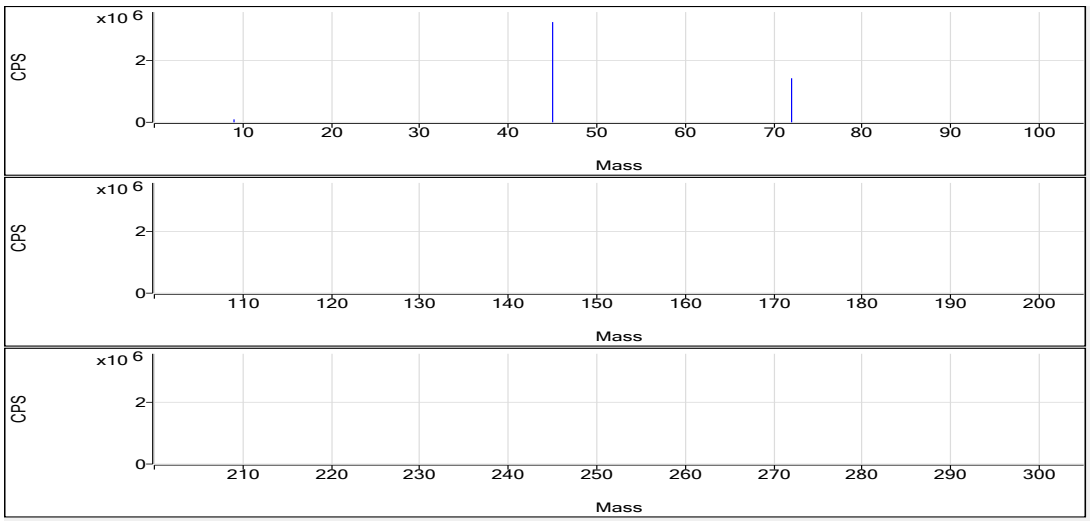
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	50.657	ppb	4.1	94375.38	0.0666	Pulse	0.5000	3
Se	78	72	H2	51.661	ppb	6.6	3159.02	0.0201	Pulse	1.5000	3
Na	23	72	He	5376.680	ppb	2.1	675536.32	9.3426	Pulse	0.1000	3
Mg	24	72	He	5327.149	ppb	1.9	325108.11	4.4962	Pulse	0.1000	3
Al	27	72	He	5261.727	ppb	1.0	91924.63	1.2712	Pulse	0.1000	3
K	39	72	He	5289.254	ppb	2.1	221580.60	3.0644	Pulse	0.1000	3
Ca	44	72	He	5315.724	ppb	3.0	12055.32	0.1667	Pulse	0.1000	3
Ti	47	72	He	5333.064	ppb	1.3	96728.88	1.3377	Pulse	0.1000	3
V	51	72	He	525.480	ppb	1.0	445025.28	6.1543	Pulse	0.5000	3
Cr	52	72	He	525.767	ppb	1.5	580745.43	8.0314	Pulse	0.1000	3
Mn	55	72	He	516.942	ppb	1.6	221631.03	3.0651	Pulse	0.1000	3
Fe	57	72	He	5202.831	ppb	0.3	109285.52	1.5113	Pulse	0.1000	3
Co	59	72	He	524.332	ppb	0.8	1157039.46	16.0007	Pulse	0.1000	3
Ni	60	72	He	525.351	ppb	0.8	334701.69	4.6286	Pulse	0.1000	3
Cu	63	72	He	520.600	ppb	0.6	939141.86	12.9872	Pulse	0.1000	3
Zn	66	72	He	508.705	ppb	1.2	90720.84	1.2546	Pulse	0.1000	3
As	75	72	He	511.507	ppb	1.0	64359.87	0.8900	Pulse	0.5000	3
Sr	88	115	He	52.006	ppb	3.8	25944.42	0.4073	Pulse	0.1000	3
Mo	98	115	He	50.774	ppb	2.4	71266.47	1.1186	Pulse	0.1000	3
Ag	107	115	He	50.489	ppb	1.8	146399.28	2.2977	Pulse	0.1000	3
Cd	111	115	He	50.660	ppb	1.4	15497.93	0.2432	Pulse	0.5000	3
Sn	120	115	He	50.940	ppb	2.1	47271.06	0.7419	Pulse	0.1000	3
Sb	121	115	He	51.107	ppb	4.2	40395.96	0.6342	Pulse	0.1000	3
Ba	137	115	He	498.959	ppb	1.2	139106.98	2.1831	Pulse	0.1000	3
Tl	205	209	He	50.603	ppb	0.8	303937.75	1.3999	Pulse	0.1000	3
Pb	208	209	He	50.941	ppb	0.4	403031.20	1.8563	Pulse	0.1000	3
U	238	209	He	50.607	ppb	0.7	462288.01	2.1291	Pulse	0.1000	3

ISTD Table:

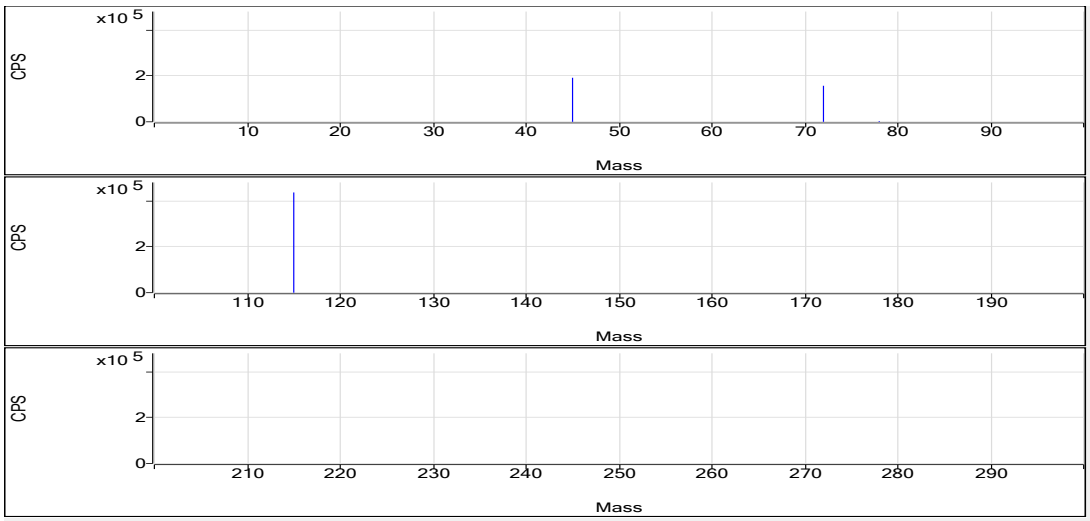
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3225659.43	1.6	99.5	Pulse	0.1000	3
No Gas	Ge	72	1417329.82	1.4	98.4	Pulse	0.1000	3
H2	Sc	45	191876.13	1.6	98.2	Pulse	0.1000	3
H2	Ge	72	157007.21	0.7	96.3	Pulse	0.1000	3
H2	In	115	436628.19	1.7	100.8	Pulse	0.1000	3
He	Sc	45	41215.41	2.0	103.1	Pulse	0.1000	3
He	Ge	72	72315.19	0.8	100.0	Pulse	0.1000	3
He	In	115	63728.65	2.1	98.7	Pulse	0.1000	3
He	Tb	159	280545.72	0.4	98.1	Pulse	0.1000	3
He	Bi	209	217119.21	0.7	97.7	Pulse	0.1000	3

No Gas

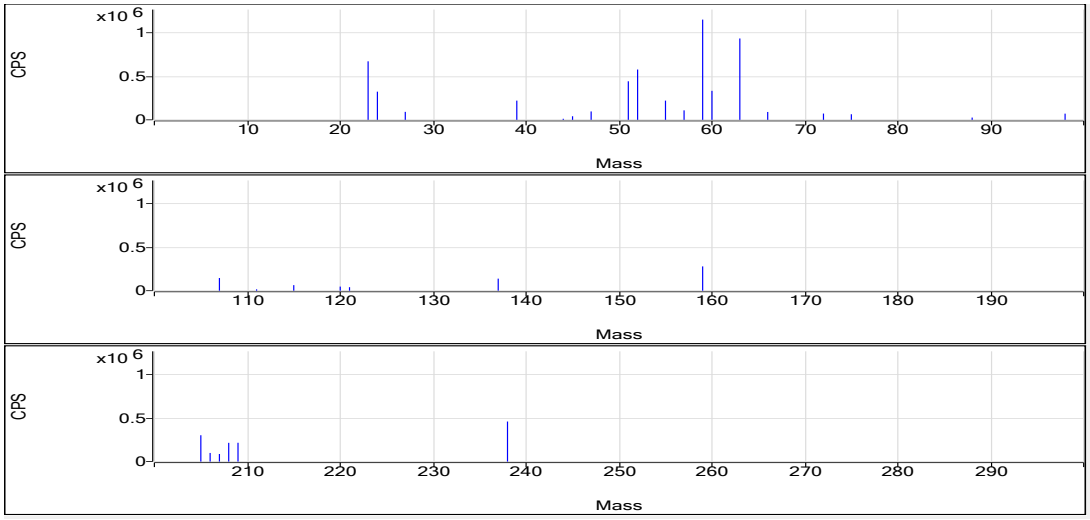


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	52.369	0.0689	96733.22	0.0013	4.694E-05
Be	9	1	No Gas	51.268	0.0674	94825.53	0.0013	4.694E-05
Be	9	1	No Gas	48.333	0.0636	91567.38	0.0013	4.694E-05
Se	78	2	H2	48.093	0.0187	2965.64	0.0004	1.089E-05
Se	78	2	H2	54.927	0.0214	3345.73	0.0004	1.089E-05
Se	78	2	H2	51.964	0.0202	3165.69	0.0004	1.089E-05
Na	23	3	He	5506.124	9.565	685026.86	0.0017	0.1065
Na	23	3	He	5298.245	9.2079	669266.87	0.0017	0.1065
Na	23	3	He	5325.671	9.255	672315.22	0.0017	0.1065
Mg	24	3	He	5440.691	4.5919	328863.39	0.0008	0.004846
Mg	24	3	He	5255.17	4.4355	322389.21	0.0008	0.004846
Mg	24	3	He	5285.584	4.4611	324071.73	0.0008	0.004846
Al	27	3	He	5300.583	1.2806	91713.65	0.0002	0.001063
Al	27	3	He	5203.254	1.2571	91370.97	0.0002	0.001063
Al	27	3	He	5281.345	1.2759	92689.28	0.0002	0.001063
K	39	3	He	5415.735	3.1343	224470.80	0.0006	0.1436
K	39	3	He	5246.763	3.041	221029.63	0.0006	0.1436
K	39	3	He	5205.265	3.018	219241.38	0.0006	0.1436
Ca	44	3	He	5385.611	0.1689	12095.39	0	0.001611
Ca	44	3	He	5132.962	0.161	11705.04	0	0.001611
Ca	44	3	He	5428.599	0.1702	12365.54	0	0.001611
Ti	47	3	He	5412.065	1.3575	97222.15	0.0003	0.0002737
Ti	47	3	He	5312.807	1.3326	96859.89	0.0003	0.0002737
Ti	47	3	He	5274.32	1.323	96104.61	0.0003	0.0002737
V	51	3	He	530.598	6.2141	445044.31	0.0117	0.007326
V	51	3	He	520.429	6.0952	443021.44	0.0117	0.007326
V	51	3	He	525.414	6.1535	447010.09	0.0117	0.007326
Cr	52	3	He	534.399	8.1628	584605.93	0.0152	0.02538
Cr	52	3	He	523.369	7.9949	581098.74	0.0152	0.02538
Cr	52	3	He	519.534	7.9365	576531.63	0.0152	0.02538
Mn	55	3	He	526.523	3.1216	223564.12	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	511.924	3.0354	220628.51	0.0059	0.01385
Mn	55	3	He	512.38	3.0381	220700.47	0.0059	0.01385
Fe	57	3	He	5214.385	1.5146	108472.92	0.0003	0.003918
Fe	57	3	He	5209.934	1.5133	109993.64	0.0003	0.003918
Fe	57	3	He	5184.174	1.5058	109390.00	0.0003	0.003918
Co	59	3	He	529.432	16.1563	1157085.22	0.0305	0.003084
Co	59	3	He	521.612	15.9177	1156964.83	0.0305	0.003084
Co	59	3	He	521.951	15.9281	1157068.34	0.0305	0.003084
Ni	60	3	He	530.073	4.6701	334463.16	0.0088	0.009003
Ni	60	3	He	523.85	4.6154	335463.75	0.0088	0.009003
Ni	60	3	He	522.131	4.6003	334178.16	0.0088	0.009003
Cu	63	3	He	523.91	13.0697	936030.45	0.0249	0.004937
Cu	63	3	He	517.271	12.9042	937928.66	0.0249	0.004937
Cu	63	3	He	520.618	12.9876	943466.47	0.0249	0.004937
Zn	66	3	He	515.831	1.2721	91106.33	0.0025	0.004836
Zn	66	3	He	504.072	1.2432	90362.49	0.0025	0.004836
Zn	66	3	He	506.211	1.2485	90693.70	0.0025	0.004836
As	75	3	He	516.63	0.8989	64380.66	0.0017	0.0004347
As	75	3	He	511.069	0.8893	64635.80	0.0017	0.0004347
As	75	3	He	506.822	0.8819	64063.16	0.0017	0.0004347
Sr	88	3	He	54.212	0.4246	26405.24	0.0078	0.0007762
Sr	88	3	He	51.42	0.4027	26014.57	0.0078	0.0007762
Sr	88	3	He	50.385	0.3946	25413.46	0.0078	0.0007762
Mo	98	3	He	52.138	1.1487	71440.91	0.022	0.0005162
Mo	98	3	He	49.719	1.0954	70757.76	0.022	0.0005162
Mo	98	3	He	50.467	1.1119	71600.75	0.022	0.0005162
Ag	107	3	He	51.373	2.3379	145406.71	0.0455	0.0004641
Ag	107	3	He	49.538	2.2545	145627.94	0.0455	0.0004641
Ag	107	3	He	50.556	2.3008	148163.20	0.0455	0.0004641
Cd	111	3	He	51.493	0.2472	15376.45	0.0048	5.152E-05
Cd	111	3	He	50.354	0.2418	15616.74	0.0048	5.152E-05
Cd	111	3	He	50.133	0.2407	15500.59	0.0048	5.152E-05
Sn	120	3	He	51.762	0.7536	46869.81	0.0143	0.01559
Sn	120	3	He	51.301	0.747	48254.86	0.0143	0.01559
Sn	120	3	He	49.757	0.725	46688.52	0.0143	0.01559
Sb	121	3	He	53.564	0.6647	41341.86	0.0124	0.000258
Sb	121	3	He	49.746	0.6174	39877.82	0.0124	0.000258
Sb	121	3	He	50.012	0.6207	39968.21	0.0124	0.000258
Ba	137	3	He	505.358	2.2111	137521.36	0.0044	0.000309
Ba	137	3	He	493.185	2.1579	139388.88	0.0044	0.000309
Ba	137	3	He	498.332	2.1804	140410.69	0.0044	0.000309
Tl	205	3	He	50.391	1.394	304999.43	0.0276	0.001005
Tl	205	3	He	50.339	1.3926	301612.85	0.0276	0.001005
Tl	205	3	He	51.08	1.4131	305200.97	0.0276	0.001005
Pb	208	3	He	50.797	1.851	217294.02	0.0364	0.002176
Pb	208	3	He	50.832	1.8523	214472.30	0.0364	0.002176
Pb	208	3	He	51.194	1.8655	217184.68	0.0364	0.002176
U	238	3	He	50.918	2.1422	468699.17	0.0421	0.00024
U	238	3	He	50.257	2.1144	457950.31	0.0421	0.00024
U	238	3	He	50.646	2.1308	460214.56	0.0421	0.00024
Sc	45	1	No Gas			3208434.33		
Sc	45	1	No Gas			3184579.02		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3283964.95		
Ge	72	1	No Gas			1404727.95		
Ge	72	1	No Gas			1406588.10		
Ge	72	1	No Gas			1440673.42		
Sc	45	2	H2			192033.38		
Sc	45	2	H2			194876.42		
Sc	45	2	H2			188718.59		
Ge	72	2	H2			158281.58		
Ge	72	2	H2			156360.83		
Ge	72	2	H2			156379.23		
In	115	2	H2			444687.73		
In	115	2	H2			435555.74		
In	115	2	H2			429641.09		
Sc	45	3	He			40556.77		
Sc	45	3	He			40978.08		
Sc	45	3	He			42111.38		
Ge	72	3	He			71618.13		
Ge	72	3	He			72684.04		
Ge	72	3	He			72643.41		
In	115	3	He			62560.15		
In	115	3	He			64971.30		
In	115	3	He			64760.64		
Tb	159	3	He			281377.65		
Tb	159	3	He			279299.43		
Tb	159	3	He			280960.09		
Bi	209	3	He			218791.40		
Bi	209	3	He			216582.75		
Bi	209	3	He			215983.47		

Quantitation Report

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Sample Name	CCB 4654618
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

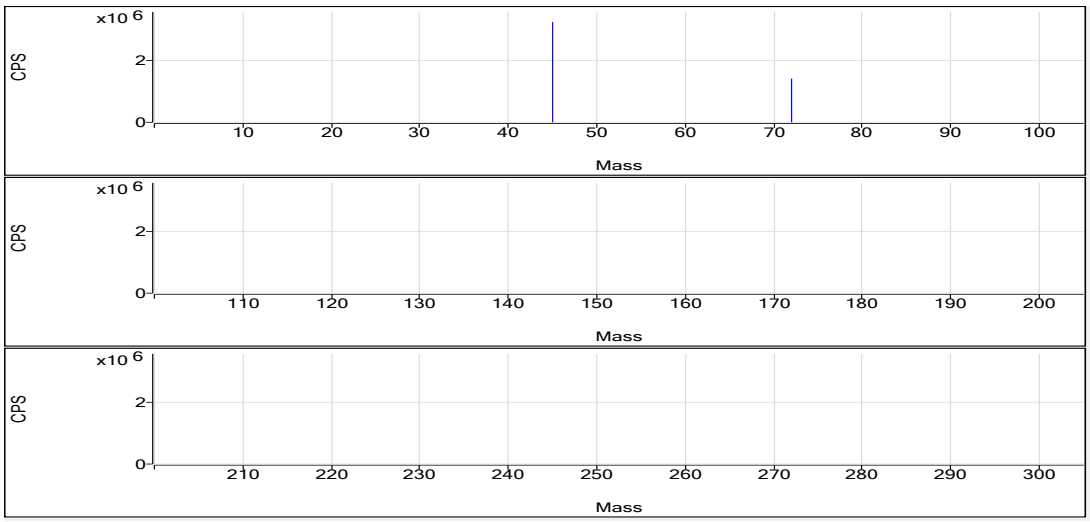
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.026	ppb	27.6	115.33	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.023	ppb	69.2	3.11	0.0000	Pulse	1.5000	3
Na	23	72	He	8.260	ppb	32.9	8809.57	0.1206	Pulse	0.1000	3
Mg	24	72	He	4.869	ppb	30.8	653.37	0.0090	Pulse	0.1000	3
Al	27	72	He	5.428	ppb	33.1	173.34	0.0024	Pulse	0.1000	3
K	39	72	He	19.217	ppb	84.5	11264.73	0.1543	Pulse	0.1000	3
Ca	44	72	He	15.781	ppb	99.6	153.34	0.0021	Pulse	0.1000	3
Ti	47	72	He	0.730	ppb	44.1	33.33	0.0005	Pulse	0.1000	3
V	51	72	He	0.104	ppb	12.5	624.02	0.0085	Pulse	0.5000	3
Cr	52	72	He	0.210	ppb	30.9	2086.89	0.0286	Pulse	0.1000	3
Mn	55	72	He	-1.202	ppb	N/A	493.36	0.0068	Pulse	0.1000	3
Fe	57	72	He	8.554	ppb	81.5	466.69	0.0064	Pulse	0.1000	3
Co	59	72	He	0.144	ppb	21.1	546.69	0.0075	Pulse	0.1000	3
Ni	60	72	He	1.006	ppb	15.9	1303.44	0.0178	Pulse	0.1000	3
Cu	63	72	He	0.106	ppb	81.1	553.36	0.0076	Pulse	0.1000	3
Zn	66	72	He	-0.259	ppb	N/A	306.68	0.0042	Pulse	0.1000	3
As	75	72	He	0.107	ppb	104.1	45.33	0.0006	Pulse	0.5000	3
Sr	88	115	He	0.096	ppb	65.0	96.67	0.0015	Pulse	0.1000	3
Mo	98	115	He	0.094	ppb	60.0	163.34	0.0026	Pulse	0.1000	3
Ag	107	115	He	0.018	ppb	35.6	80.00	0.0013	Pulse	0.1000	3
Cd	111	115	He	0.013	ppb	30.0	7.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.119	ppb	78.7	1093.42	0.0173	Pulse	0.1000	3
Sb	121	115	He	0.013	ppb	58.0	26.67	0.0004	Pulse	0.1000	3
Ba	137	115	He	0.242	ppb	36.4	86.67	0.0014	Pulse	0.1000	3
Tl	205	209	He	0.133	ppb	15.1	1026.75	0.0047	Pulse	0.1000	3
Pb	208	209	He	0.015	ppb	100.5	593.36	0.0027	Pulse	0.1000	3
U	238	209	He	0.016	ppb	14.0	203.34	0.0009	Pulse	0.1000	3

ISTD Table:

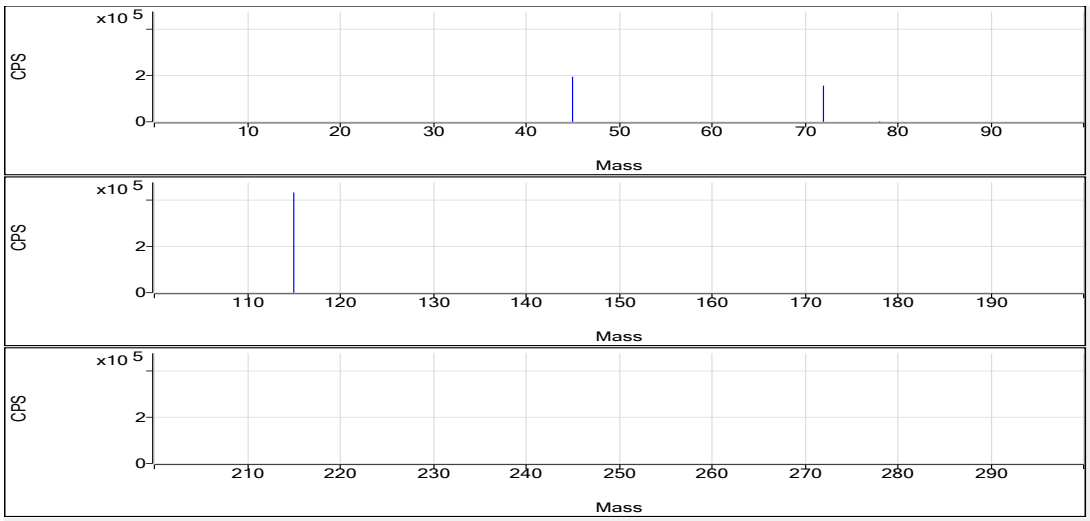
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3274158.18	2.6	101.0	Pulse	0.1000	3
No Gas	Ge	72	1427150.66	1.9	99.1	Pulse	0.1000	3
H2	Sc	45	195758.64	2.0	100.2	Pulse	0.1000	3
H2	Ge	72	157174.42	2.3	96.4	Pulse	0.1000	3
H2	In	115	435000.85	2.0	100.4	Pulse	0.1000	3
He	Sc	45	42074.60	1.4	105.2	Pulse	0.1000	3
He	Ge	72	73018.67	0.3	101.0	Pulse	0.1000	3
He	In	115	63298.43	1.0	98.0	Pulse	0.1000	3
He	Tb	159	281420.14	1.1	98.4	Pulse	0.1000	3
He	Bi	209	218625.86	0.3	98.4	Pulse	0.1000	3

No Gas

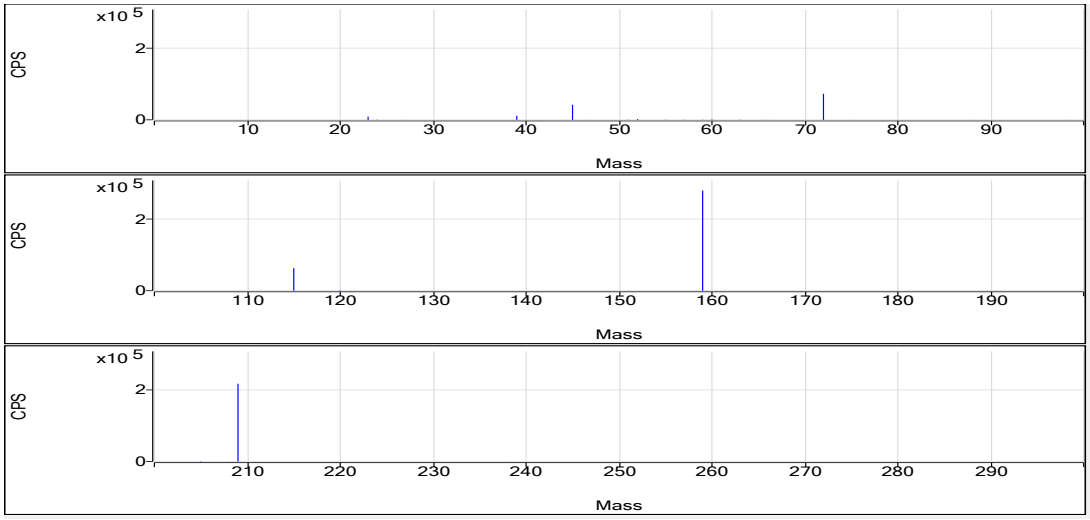


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.034	0.0001	128.00	0.0013	4.694E-05
Be	9	1	No Gas	0.024	0.0001	112.00	0.0013	4.694E-05
Be	9	1	No Gas	0.02	0.0001	106.00	0.0013	4.694E-05
Se	78	2	H2	0.036	0	4.00	0.0004	1.089E-05
Se	78	2	H2	0.005	0	2.00	0.0004	1.089E-05
Se	78	2	H2	0.027	0	3.33	0.0004	1.089E-05
Na	23	3	He	10.952	0.1253	9173.09	0.0017	0.1065
Na	23	3	He	5.523	0.1159	8472.72	0.0017	0.1065
Na	23	3	He	8.304	0.1207	8782.90	0.0017	0.1065
Mg	24	3	He	3.323	0.0076	560.03	0.0008	0.004846
Mg	24	3	He	4.965	0.009	660.04	0.0008	0.004846
Mg	24	3	He	6.317	0.0102	740.04	0.0008	0.004846
Al	27	3	He	7.478	0.0029	210.01	0.0002	0.001063
Al	27	3	He	4.668	0.0022	160.01	0.0002	0.001063
Al	27	3	He	4.139	0.0021	150.01	0.0002	0.001063
K	39	3	He	30.34	0.1604	11745.12	0.0006	0.1436
K	39	3	He	26.72	0.1584	11574.95	0.0006	0.1436
K	39	3	He	0.59	0.144	10474.13	0.0006	0.1436
Ca	44	3	He	0.896	0.0016	120.00	0	0.001611
Ca	44	3	He	14.227	0.0021	150.01	0	0.001611
Ca	44	3	He	32.221	0.0026	190.01	0	0.001611
Ti	47	3	He	0.542	0.0004	30.00	0.0003	0.0002737
Ti	47	3	He	0.546	0.0004	30.00	0.0003	0.0002737
Ti	47	3	He	1.101	0.0005	40.00	0.0003	0.0002737
V	51	3	He	0.091	0.0084	614.02	0.0117	0.007326
V	51	3	He	0.106	0.0086	626.02	0.0117	0.007326
V	51	3	He	0.116	0.0087	632.02	0.0117	0.007326
Cr	52	3	He	0.225	0.0288	2110.22	0.0152	0.02538
Cr	52	3	He	0.265	0.0294	2150.22	0.0152	0.02538
Cr	52	3	He	0.138	0.0275	2000.23	0.0152	0.02538
Mn	55	3	He	-1.26	0.0064	470.03	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-1.42	0.0055	400.02	0.0059	0.01385
Mn	55	3	He	-0.926	0.0084	610.04	0.0059	0.01385
Fe	57	3	He	2.976	0.0048	350.02	0.0003	0.003918
Fe	57	3	He	6.316	0.0057	420.02	0.0003	0.003918
Fe	57	3	He	16.368	0.0087	630.04	0.0003	0.003918
Co	59	3	He	0.109	0.0064	470.02	0.0305	0.003084
Co	59	3	He	0.164	0.0081	590.03	0.0305	0.003084
Co	59	3	He	0.16	0.008	580.03	0.0305	0.003084
Ni	60	3	He	0.995	0.0178	1300.10	0.0088	0.009003
Ni	60	3	He	1.171	0.0193	1410.12	0.0088	0.009003
Ni	60	3	He	0.852	0.0165	1200.09	0.0088	0.009003
Cu	63	3	He	0.076	0.0068	500.02	0.0249	0.004937
Cu	63	3	He	0.203	0.01	730.05	0.0249	0.004937
Cu	63	3	He	0.039	0.0059	430.02	0.0249	0.004937
Zn	66	3	He	-0.412	0.0038	280.01	0.0025	0.004836
Zn	66	3	He	-0.353	0.004	290.01	0.0025	0.004836
Zn	66	3	He	-0.01	0.0048	350.02	0.0025	0.004836
As	75	3	He	0.096	0.0006	44.00	0.0017	0.0004347
As	75	3	He	0.002	0.0004	32.00	0.0017	0.0004347
As	75	3	He	0.224	0.0008	60.00	0.0017	0.0004347
Sr	88	3	He	0.043	0.0011	70.00	0.0078	0.0007762
Sr	88	3	He	0.08	0.0014	90.00	0.0078	0.0007762
Sr	88	3	He	0.165	0.0021	130.01	0.0078	0.0007762
Mo	98	3	He	0.157	0.004	250.01	0.022	0.0005162
Mo	98	3	He	0.076	0.0022	140.01	0.022	0.0005162
Mo	98	3	He	0.049	0.0016	100.00	0.022	0.0005162
Ag	107	3	He	0.021	0.0014	90.00	0.0455	0.0004641
Ag	107	3	He	0.01	0.0009	60.00	0.0455	0.0004641
Ag	107	3	He	0.021	0.0014	90.00	0.0455	0.0004641
Cd	111	3	He	0.016	0.0001	8.00	0.0048	5.152E-05
Cd	111	3	He	0.009	0.0001	6.00	0.0048	5.152E-05
Cd	111	3	He	0.016	0.0001	8.00	0.0048	5.152E-05
Sn	120	3	He	0.155	0.0178	1120.09	0.0143	0.01559
Sn	120	3	He	0.013	0.0158	1010.08	0.0143	0.01559
Sn	120	3	He	0.189	0.0183	1150.09	0.0143	0.01559
Sb	121	3	He	0.018	0.0005	30.00	0.0124	0.000258
Sb	121	3	He	0.004	0.0003	20.00	0.0124	0.000258
Sb	121	3	He	0.018	0.0005	30.00	0.0124	0.000258
Ba	137	3	He	0.256	0.0014	90.00	0.0044	0.000309
Ba	137	3	He	0.322	0.0017	110.00	0.0044	0.000309
Ba	137	3	He	0.147	0.001	60.00	0.0044	0.000309
Tl	205	3	He	0.153	0.0052	1150.10	0.0276	0.001005
Tl	205	3	He	0.134	0.0047	1030.08	0.0276	0.001005
Tl	205	3	He	0.113	0.0041	900.07	0.0276	0.001005
Pb	208	3	He	0.012	0.0026	280.01	0.0364	0.002176
Pb	208	3	He	0.002	0.0022	260.01	0.0364	0.002176
Pb	208	3	He	0.031	0.0033	480.03	0.0364	0.002176
U	238	3	He	0.014	0.0008	180.01	0.0421	0.00024
U	238	3	He	0.018	0.001	220.01	0.0421	0.00024
U	238	3	He	0.017	0.001	210.01	0.0421	0.00024
Sc	45	1	No Gas			3215250.26		
Sc	45	1	No Gas			3236392.45		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3370831.82		
Ge	72	1	No Gas			1403582.48		
Ge	72	1	No Gas			1422063.26		
Ge	72	1	No Gas			1455806.23		
Sc	45	2	H2			195142.85		
Sc	45	2	H2			192094.16		
Sc	45	2	H2			200038.92		
Ge	72	2	H2			161155.31		
Ge	72	2	H2			154379.57		
Ge	72	2	H2			155988.38		
In	115	2	H2			443421.05		
In	115	2	H2			425712.92		
In	115	2	H2			435868.59		
Sc	45	3	He			42612.82		
Sc	45	3	He			41449.57		
Sc	45	3	He			42161.42		
Ge	72	3	He			73226.26		
Ge	72	3	He			73075.95		
Ge	72	3	He			72753.80		
In	115	3	He			62931.76		
In	115	3	He			64066.99		
In	115	3	He			62922.13		
Tb	159	3	He			278057.63		
Tb	159	3	He			282522.57		
Tb	159	3	He			283680.23		
Bi	209	3	He			219276.05		
Bi	209	3	He			218767.52		
Bi	209	3	He			217834.02		

Quantitation Report

Data File Name	170SMPL.d
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Acq Time	2023-08-10 16:32:04
Sample Name	410-136258-J-13-A @2
Sample Type	Sample
Comment	G3 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

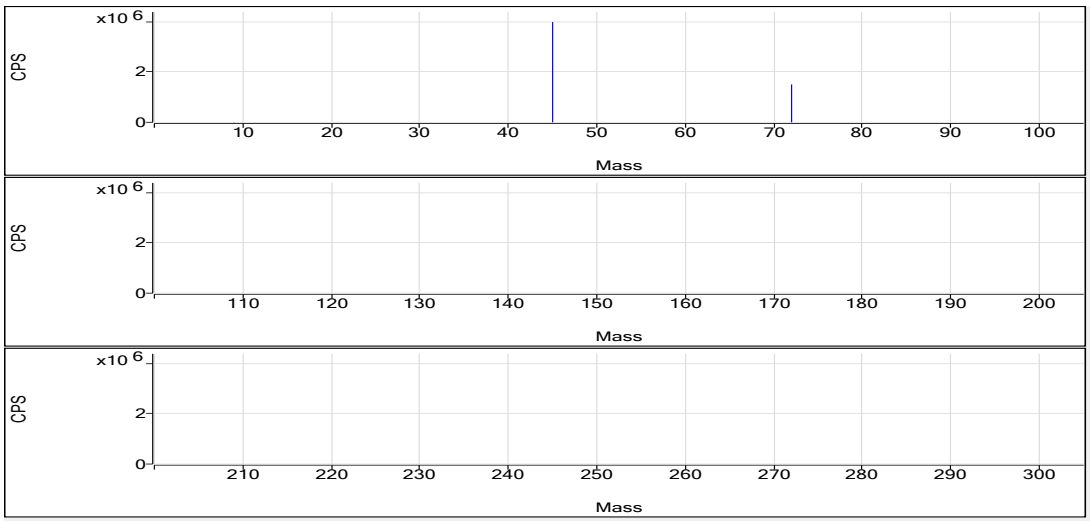
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	5.040	ppb	5.3	10052.06	0.0067	Pulse	0.5000	3
Se	78	72	H2	1.015	ppb	12.8	64.22	0.0004	Pulse	1.5000	3
Na	23	72	He	244.280	ppb	4.6	39706.88	0.5261	Pulse	0.1000	3
Mg	24	72	He	48308.500	ppb	1.6	3075029.43	40.7338	Pulse	0.1000	3
Al	27	72	He	127427.689	ppb	1.9	2322146.58	30.7614	Pulse	0.1000	3
K	39	72	He	17197.661	ppb	1.3	727789.81	9.6404	Pulse	0.1000	3
Ca	44	72	He	3084.530	ppb	3.5	7355.43	0.0974	Pulse	0.1000	3
Ti	47	72	He	628.847	ppb	1.0	11928.66	0.1580	Pulse	0.1000	3
V	51	72	He	176.527	ppb	1.7	156437.65	2.0723	Pulse	0.5000	3
Cr	52	72	He	144.716	ppb	1.7	168267.82	2.2290	Pulse	0.1000	3
Mn	55	72	He	4986.467	ppb	1.7	2222889.55	29.4461	Pulse	0.1000	3
Fe	57	72	He	207098.035	ppb	1.2	4529903.27	60.0033	Pulse	0.1000	3
Co	59	72	He	78.197	ppb	2.1	180330.93	2.3889	Pulse	0.1000	3
Ni	60	72	He	184.063	ppb	1.6	122864.23	1.6275	Pulse	0.1000	3
Cu	63	72	He	249.325	ppb	1.7	469738.69	6.2224	Pulse	0.1000	3
Zn	66	72	He	620.793	ppb	1.1	115505.89	1.5300	Pulse	0.1000	3
As	75	72	He	47.448	ppb	0.5	6263.40	0.0830	Pulse	0.5000	3
Sr	88	115	He	36.579	ppb	2.9	18041.98	0.2867	Pulse	0.1000	3
Mo	98	115	He	4.179	ppb	1.3	5824.70	0.0925	Pulse	0.1000	3
Ag	107	115	He	0.533	ppb	9.3	1553.48	0.0247	Pulse	0.1000	3
Cd	111	115	He	1.499	ppb	3.1	456.01	0.0072	Pulse	0.5000	3
Sn	120	115	He	10.612	ppb	3.6	10500.97	0.1669	Pulse	0.1000	3
Sb	121	115	He	1.813	ppb	13.2	1430.13	0.0227	Pulse	0.1000	3
Ba	137	115	He	401.315	ppb	1.4	110507.89	1.7560	Pulse	0.1000	3
Tl	205	209	He	0.744	ppb	11.3	4751.03	0.0216	Pulse	0.1000	3
Pb	208	209	He	112.725	ppb	1.5	904160.06	4.1051	Pulse	0.1000	3
U	238	209	He	4.615	ppb	1.8	42821.63	0.1944	Pulse	0.1000	3

ISTD Table:

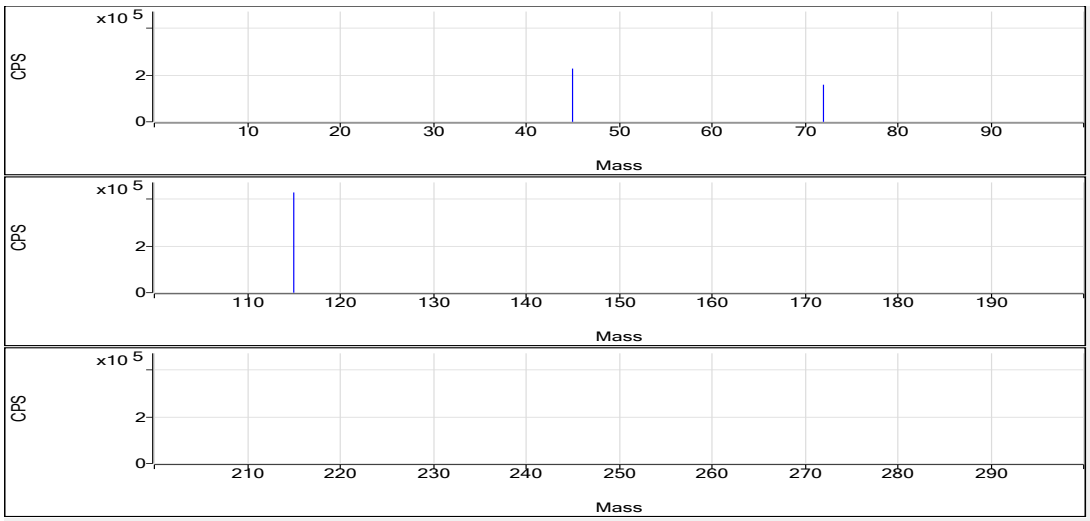
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3991277.86	1.6	123.1	Pulse	0.1000	3
No Gas	Ge	72	1507973.57	1.6	104.7	Pulse	0.1000	3
H2	Sc	45	227461.02	2.5	116.4	Pulse	0.1000	3
H2	Ge	72	158534.66	2.7	97.3	Pulse	0.1000	3
H2	In	115	428261.18	2.5	98.8	Pulse	0.1000	3
He	Sc	45	49313.83	1.5	123.3	Pulse	0.1000	3
He	Ge	72	75504.77	1.7	104.4	Pulse	0.1000	3
He	In	115	62937.29	1.7	97.4	Pulse	0.1000	3
He	Tb	159	312554.41	0.7	109.3	Pulse	0.1000	3
He	Bi	209	220268.35	0.7	99.1	Pulse	0.1000	3

No Gas

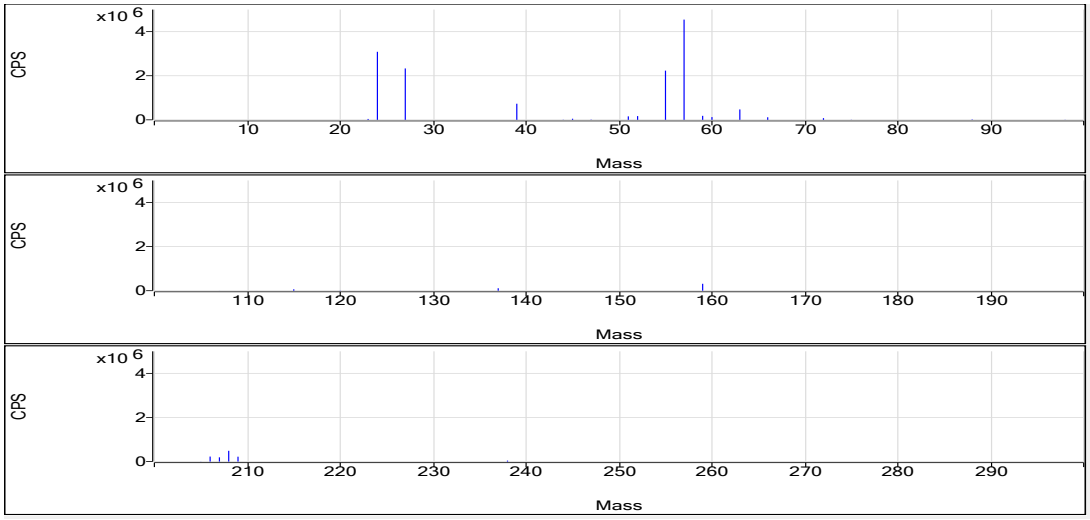


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	4.839	0.0064	9791.24	0.0013	4.694E-05
Be	9	1	No Gas	4.938	0.0065	9893.28	0.0013	4.694E-05
Be	9	1	No Gas	5.342	0.0071	10471.67	0.0013	4.694E-05
Se	78	2	H2	1.165	0.0005	71.33	0.0004	1.089E-05
Se	78	2	H2	0.929	0.0004	60.00	0.0004	1.089E-05
Se	78	2	H2	0.951	0.0004	61.33	0.0004	1.089E-05
Na	23	3	He	231.88	0.5048	38861.29	0.0017	0.1065
Na	23	3	He	254.139	0.543	40686.10	0.0017	0.1065
Na	23	3	He	246.821	0.5304	39573.26	0.0017	0.1065
Mg	24	3	He	47426.573	39.9903	3078682.14	0.0008	0.004846
Mg	24	3	He	48553.269	40.9402	3067455.58	0.0008	0.004846
Mg	24	3	He	48945.659	41.271	3078950.58	0.0008	0.004846
Al	27	3	He	124834.676	30.1354	2319999.81	0.0002	0.001063
Al	27	3	He	127953.338	30.8883	2314311.84	0.0002	0.001063
Al	27	3	He	129495.054	31.2604	2332128.09	0.0002	0.001063
K	39	3	He	16944.078	9.5004	731392.72	0.0006	0.1436
K	39	3	He	17289.565	9.6911	726111.71	0.0006	0.1436
K	39	3	He	17359.34	9.7297	725864.99	0.0006	0.1436
Ca	44	3	He	3102.326	0.098	7542.20	0	0.001611
Ca	44	3	He	2969.784	0.0939	7031.89	0	0.001611
Ca	44	3	He	3181.481	0.1004	7492.20	0	0.001611
Ti	47	3	He	632.148	0.1588	12225.61	0.0003	0.0002737
Ti	47	3	He	632.516	0.1589	11905.31	0.0003	0.0002737
Ti	47	3	He	621.876	0.1562	11655.06	0.0003	0.0002737
V	51	3	He	173.103	2.0322	156453.61	0.0117	0.007326
V	51	3	He	177.472	2.0834	156095.92	0.0117	0.007326
V	51	3	He	179.006	2.1013	156763.42	0.0117	0.007326
Cr	52	3	He	141.839	2.1852	168229.68	0.0152	0.02538
Cr	52	3	He	145.894	2.2469	168353.38	0.0152	0.02538
Cr	52	3	He	146.414	2.2549	168220.39	0.0152	0.02538
Mn	55	3	He	4891.008	28.8826	2223553.09	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	5013.563	29.606	2218239.50	0.0059	0.01385
Mn	55	3	He	5054.831	29.8496	2226876.06	0.0059	0.01385
Fe	57	3	He	204294.046	59.1909	4556858.06	0.0003	0.003918
Fe	57	3	He	207621.366	60.1549	4507121.81	0.0003	0.003918
Fe	57	3	He	209378.691	60.664	4525729.93	0.0003	0.003918
Co	59	3	He	76.287	2.3306	179425.47	0.0305	0.003084
Co	59	3	He	78.925	2.4111	180653.42	0.0305	0.003084
Co	59	3	He	79.38	2.425	180913.90	0.0305	0.003084
Ni	60	3	He	180.771	1.5986	123067.79	0.0088	0.009003
Ni	60	3	He	185.362	1.6389	122798.37	0.0088	0.009003
Ni	60	3	He	186.057	1.6451	122726.53	0.0088	0.009003
Cu	63	3	He	245.316	6.1224	471339.37	0.0249	0.004937
Cu	63	3	He	248.893	6.2116	465406.44	0.0249	0.004937
Cu	63	3	He	253.765	6.3331	472470.27	0.0249	0.004937
Zn	66	3	He	612.799	1.5103	116274.78	0.0025	0.004836
Zn	66	3	He	623.467	1.5365	115126.45	0.0025	0.004836
Zn	66	3	He	626.113	1.543	115116.44	0.0025	0.004836
As	75	3	He	47.382	0.0828	6377.45	0.0017	0.0004347
As	75	3	He	47.233	0.0826	6187.36	0.0017	0.0004347
As	75	3	He	47.731	0.0834	6225.38	0.0017	0.0004347
Sr	88	3	He	37.569	0.2945	18562.73	0.0078	0.0007762
Sr	88	3	He	36.723	0.2878	17801.68	0.0078	0.0007762
Sr	88	3	He	35.443	0.2778	17761.52	0.0078	0.0007762
Mo	98	3	He	4.119	0.0912	5751.32	0.022	0.0005162
Mo	98	3	He	4.2	0.093	5751.34	0.022	0.0005162
Mo	98	3	He	4.218	0.0934	5971.45	0.022	0.0005162
Ag	107	3	He	0.537	0.0249	1570.15	0.0455	0.0004641
Ag	107	3	He	0.58	0.0268	1660.15	0.0455	0.0004641
Ag	107	3	He	0.481	0.0224	1430.13	0.0455	0.0004641
Cd	111	3	He	1.476	0.0071	450.01	0.0048	5.152E-05
Cd	111	3	He	1.552	0.0075	464.01	0.0048	5.152E-05
Cd	111	3	He	1.469	0.0071	454.01	0.0048	5.152E-05
Sn	120	3	He	10.816	0.1698	10704.33	0.0143	0.01559
Sn	120	3	He	10.853	0.1703	10534.37	0.0143	0.01559
Sn	120	3	He	10.168	0.1606	10264.21	0.0143	0.01559
Sb	121	3	He	2	0.0251	1580.16	0.0124	0.000258
Sb	121	3	He	1.895	0.0238	1470.14	0.0124	0.000258
Sb	121	3	He	1.543	0.0194	1240.10	0.0124	0.000258
Ba	137	3	He	406.453	1.7785	112113.67	0.0044	0.000309
Ba	137	3	He	402.011	1.759	108786.84	0.0044	0.000309
Ba	137	3	He	395.482	1.7305	110623.17	0.0044	0.000309
Tl	205	3	He	0.807	0.0233	5111.16	0.0276	0.001005
Tl	205	3	He	0.648	0.0189	4200.81	0.0276	0.001005
Tl	205	3	He	0.777	0.0225	4941.11	0.0276	0.001005
Pb	208	3	He	113.653	4.1388	489858.16	0.0364	0.002176
Pb	208	3	He	110.736	4.0327	483005.38	0.0364	0.002176
Pb	208	3	He	113.788	4.1437	487371.83	0.0364	0.002176
U	238	3	He	4.624	0.1948	42701.13	0.0421	0.00024
U	238	3	He	4.694	0.1977	43875.13	0.0421	0.00024
U	238	3	He	4.528	0.1907	41888.62	0.0421	0.00024
Sc	45	1	No Gas			4031039.00		
Sc	45	1	No Gas			4027126.50		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3915668.07		
Ge	72	1	No Gas			1528570.29		
Ge	72	1	No Gas			1513584.20		
Ge	72	1	No Gas			1481766.23		
Sc	45	2	H2			221045.82		
Sc	45	2	H2			229378.20		
Sc	45	2	H2			231959.04		
Ge	72	2	H2			153612.62		
Ge	72	2	H2			161051.10		
Ge	72	2	H2			160940.25		
In	115	2	H2			417205.46		
In	115	2	H2			438208.74		
In	115	2	H2			429369.33		
Sc	45	3	He			49464.67		
Sc	45	3	He			49945.66		
Sc	45	3	He			48531.16		
Ge	72	3	He			76985.79		
Ge	72	3	He			74925.30		
Ge	72	3	He			74603.23		
In	115	3	He			63123.37		
In	115	3	He			61927.18		
In	115	3	He			64007.04		
Tb	159	3	He			309891.68		
Tb	159	3	He			314210.33		
Tb	159	3	He			313561.23		
Bi	209	3	He			219257.09		
Bi	209	3	He			221925.04		
Bi	209	3	He			219622.93		

Quantitation Report

Data File Name	171SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 16:34:04
Sample Name	410-136258-J-13-A @10
Sample Type	Sample
Comment	G3 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

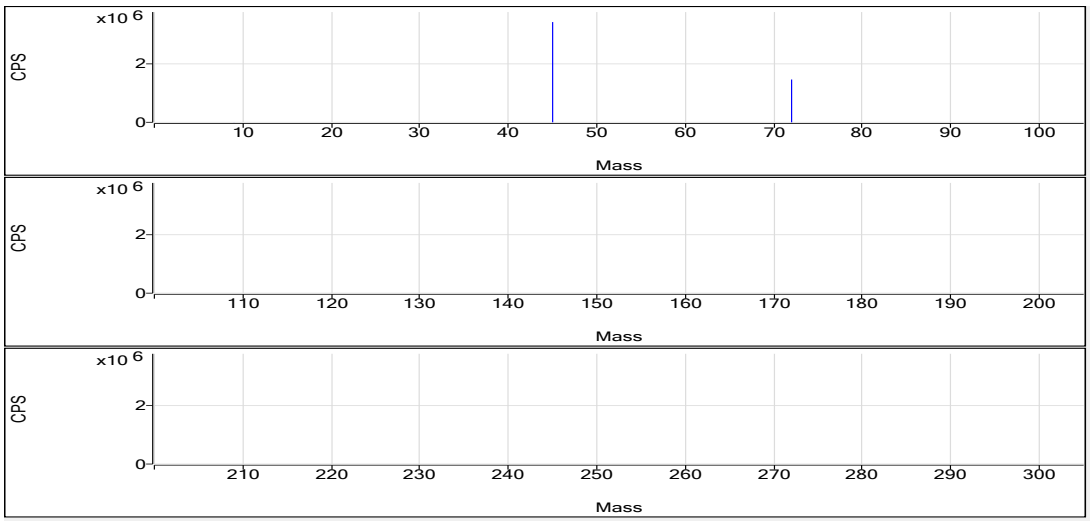
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	1.018	ppb	4.6	2044.15	0.0014	Pulse	0.5000	3
Se	78	72	H2	0.249	ppb	30.2	17.33	0.0001	Pulse	1.5000	3
Na	23	72	He	50.870	ppb	6.6	14344.00	0.1938	Pulse	0.1000	3
Mg	24	72	He	9879.543	ppb	1.2	616767.32	8.3343	Pulse	0.1000	3
Al	27	72	He	26043.057	ppb	1.6	465297.86	6.2877	Pulse	0.1000	3
K	39	72	He	3541.711	ppb	1.6	155365.87	2.0994	Pulse	0.1000	3
Ca	44	72	He	655.893	ppb	2.6	1626.81	0.0220	Pulse	0.1000	3
Ti	47	72	He	120.336	ppb	1.2	2253.58	0.0305	Pulse	0.1000	3
V	51	72	He	36.066	ppb	0.9	31765.03	0.4292	Pulse	0.5000	3
Cr	52	72	He	30.160	ppb	5.1	35854.85	0.4846	Pulse	0.1000	3
Mn	55	72	He	1027.412	ppb	1.3	449793.75	6.0781	Pulse	0.1000	3
Fe	57	72	He	42469.179	ppb	1.4	910813.66	12.3079	Pulse	0.1000	3
Co	59	72	He	15.993	ppb	2.1	36336.25	0.4910	Pulse	0.1000	3
Ni	60	72	He	38.014	ppb	0.7	25406.22	0.3433	Pulse	0.1000	3
Cu	63	72	He	51.490	ppb	1.7	95407.08	1.2889	Pulse	0.1000	3
Zn	66	72	He	125.995	ppb	1.7	23265.96	0.3144	Pulse	0.1000	3
As	75	72	He	9.596	ppb	2.9	1267.40	0.0171	Pulse	0.5000	3
Sr	88	115	He	7.176	ppb	5.7	3627.29	0.0569	Pulse	0.1000	3
Mo	98	115	He	0.862	ppb	10.3	1243.44	0.0195	Pulse	0.1000	3
Ag	107	115	He	0.117	ppb	17.0	370.02	0.0058	Pulse	0.1000	3
Cd	111	115	He	0.335	ppb	7.8	106.00	0.0017	Pulse	0.5000	3
Sn	120	115	He	1.922	ppb	14.6	2743.72	0.0430	Pulse	0.1000	3
Sb	121	115	He	0.409	ppb	13.7	340.02	0.0053	Pulse	0.1000	3
Ba	137	115	He	80.223	ppb	3.0	22405.56	0.3513	Pulse	0.1000	3
Tl	205	209	He	0.169	ppb	2.1	1260.10	0.0057	Pulse	0.1000	3
Pb	208	209	He	22.447	ppb	1.0	181696.09	0.8192	Pulse	0.1000	3
U	238	209	He	0.943	ppb	1.5	8853.33	0.0399	Pulse	0.1000	3

ISTD Table:

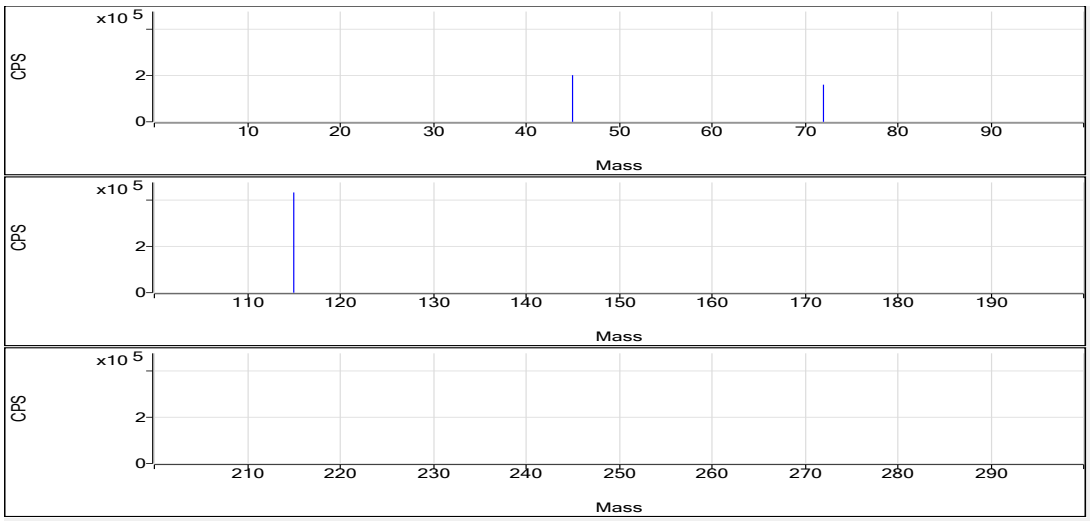
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3461348.80	2.4	106.8	Pulse	0.1000	3
No Gas	Ge	72	1477706.12	2.4	102.6	Pulse	0.1000	3
H2	Sc	45	202173.88	2.9	103.5	Pulse	0.1000	3
H2	Ge	72	160930.93	1.9	98.7	Pulse	0.1000	3
H2	In	115	434307.69	1.2	100.2	Pulse	0.1000	3
He	Sc	45	44137.34	0.9	110.4	Pulse	0.1000	3
He	Ge	72	74010.49	1.2	102.4	Pulse	0.1000	3
He	In	115	63791.40	0.7	98.8	Pulse	0.1000	3
He	Tb	159	290625.05	0.4	101.6	Pulse	0.1000	3
He	Bi	209	221811.42	1.2	99.8	Pulse	0.1000	3

No Gas

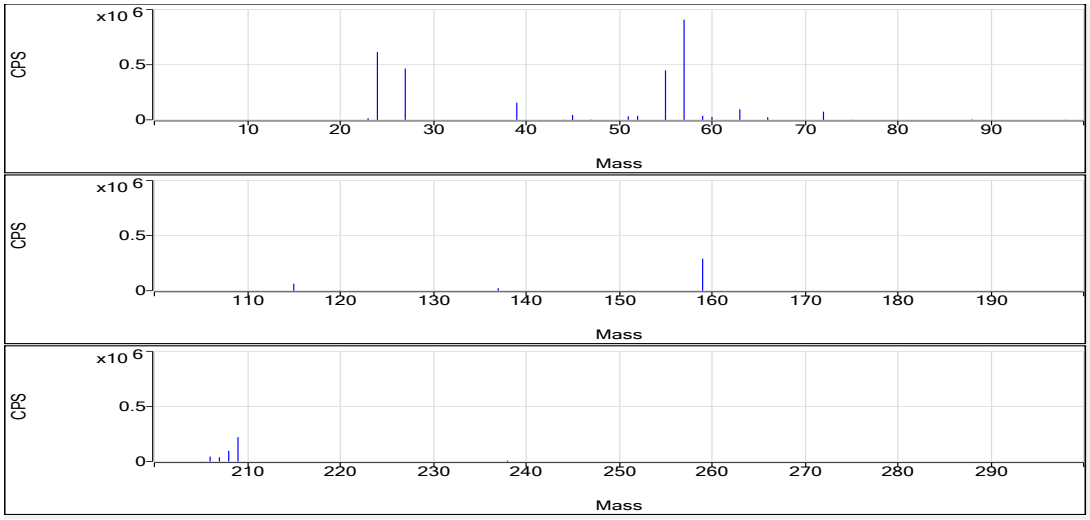


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.989	0.0013	2028.15	0.0013	4.694E-05
Be	9	1	No Gas	0.992	0.0014	2012.15	0.0013	4.694E-05
Be	9	1	No Gas	1.072	0.0015	2092.16	0.0013	4.694E-05
Se	78	2	H2	0.308	0.0001	20.67	0.0004	1.089E-05
Se	78	2	H2	0.275	0.0001	19.33	0.0004	1.089E-05
Se	78	2	H2	0.164	0.0001	12.00	0.0004	1.089E-05
Na	23	3	He	53.246	0.1979	14447.37	0.0017	0.1065
Na	23	3	He	47.012	0.1872	13967.02	0.0017	0.1065
Na	23	3	He	52.353	0.1964	14617.60	0.0017	0.1065
Mg	24	3	He	10018.236	8.4512	616898.08	0.0008	0.004846
Mg	24	3	He	9825.677	8.2889	618387.88	0.0008	0.004846
Mg	24	3	He	9794.718	8.2628	615016.01	0.0008	0.004846
Al	27	3	He	26523.049	6.4036	467428.86	0.0002	0.001063
Al	27	3	He	25841.707	6.2391	465464.56	0.0002	0.001063
Al	27	3	He	25764.416	6.2204	463000.15	0.0002	0.001063
K	39	3	He	3591.69	2.127	155261.45	0.0006	0.1436
K	39	3	He	3552.974	2.1056	157089.70	0.0006	0.1436
K	39	3	He	3480.467	2.0656	153746.46	0.0006	0.1436
Ca	44	3	He	667.145	0.0223	1630.15	0	0.001611
Ca	44	3	He	664.581	0.0223	1660.15	0	0.001611
Ca	44	3	He	635.953	0.0214	1590.13	0	0.001611
Ti	47	3	He	121.288	0.0307	2240.24	0.0003	0.0002737
Ti	47	3	He	118.649	0.03	2240.26	0.0003	0.0002737
Ti	47	3	He	121.069	0.0306	2280.25	0.0003	0.0002737
V	51	3	He	36.346	0.4325	31569.98	0.0117	0.007326
V	51	3	He	35.702	0.425	31704.21	0.0117	0.007326
V	51	3	He	36.15	0.4302	32020.91	0.0117	0.007326
Cr	52	3	He	31.925	0.5115	37338.41	0.0152	0.02538
Cr	52	3	He	29.162	0.4694	35022.82	0.0152	0.02538
Cr	52	3	He	29.393	0.473	35203.32	0.0152	0.02538
Mn	55	3	He	1042.846	6.1692	450318.55	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1016.6	6.0143	448689.92	0.0059	0.01385
Mn	55	3	He	1022.79	6.0508	450372.77	0.0059	0.01385
Fe	57	3	He	43131.344	12.4997	912415.77	0.0003	0.003918
Fe	57	3	He	42152.114	12.216	911367.96	0.0003	0.003918
Fe	57	3	He	42124.079	12.2079	908657.25	0.0003	0.003918
Co	59	3	He	16.34	0.5016	36616.89	0.0305	0.003084
Co	59	3	He	15.682	0.4815	35925.17	0.0305	0.003084
Co	59	3	He	15.957	0.4899	36466.69	0.0305	0.003084
Ni	60	3	He	37.991	0.3431	25042.41	0.0088	0.009003
Ni	60	3	He	38.279	0.3456	25783.48	0.0088	0.009003
Ni	60	3	He	37.773	0.3412	25392.78	0.0088	0.009003
Cu	63	3	He	50.521	1.2648	92323.28	0.0249	0.004937
Cu	63	3	He	51.835	1.2976	96803.28	0.0249	0.004937
Cu	63	3	He	52.113	1.3045	97094.69	0.0249	0.004937
Zn	66	3	He	127.229	0.3174	23169.17	0.0025	0.004836
Zn	66	3	He	127.283	0.3175	23689.96	0.0025	0.004836
Zn	66	3	He	123.474	0.3082	22938.75	0.0025	0.004836
As	75	3	He	9.487	0.0169	1236.06	0.0017	0.0004347
As	75	3	He	9.384	0.0168	1250.06	0.0017	0.0004347
As	75	3	He	9.917	0.0177	1316.07	0.0017	0.0004347
Sr	88	3	He	7.641	0.0605	3850.69	0.0078	0.0007762
Sr	88	3	He	6.999	0.0555	3520.60	0.0078	0.0007762
Sr	88	3	He	6.887	0.0546	3510.59	0.0078	0.0007762
Mo	98	3	He	0.761	0.0173	1100.09	0.022	0.0005162
Mo	98	3	He	0.929	0.021	1330.11	0.022	0.0005162
Mo	98	3	He	0.895	0.0202	1300.11	0.022	0.0005162
Ag	107	3	He	0.121	0.006	380.02	0.0455	0.0004641
Ag	107	3	He	0.135	0.0066	420.02	0.0455	0.0004641
Ag	107	3	He	0.096	0.0048	310.02	0.0455	0.0004641
Cd	111	3	He	0.323	0.0016	102.00	0.0048	5.152E-05
Cd	111	3	He	0.318	0.0016	100.00	0.0048	5.152E-05
Cd	111	3	He	0.365	0.0018	116.00	0.0048	5.152E-05
Sn	120	3	He	1.838	0.0418	2660.37	0.0143	0.01559
Sn	120	3	He	1.693	0.0397	2520.32	0.0143	0.01559
Sn	120	3	He	2.235	0.0475	3050.46	0.0143	0.01559
Sb	121	3	He	0.347	0.0046	290.01	0.0124	0.000258
Sb	121	3	He	0.424	0.0055	350.02	0.0124	0.000258
Sb	121	3	He	0.456	0.0059	380.02	0.0124	0.000258
Ba	137	3	He	79.08	0.3463	22038.25	0.0044	0.000309
Ba	137	3	He	82.975	0.3633	23050.02	0.0044	0.000309
Ba	137	3	He	78.614	0.3442	22128.42	0.0044	0.000309
Tl	205	3	He	0.17	0.0057	1250.10	0.0276	0.001005
Tl	205	3	He	0.165	0.0056	1240.10	0.0276	0.001005
Tl	205	3	He	0.172	0.0058	1290.11	0.0276	0.001005
Pb	208	3	He	22.575	0.8239	97419.21	0.0364	0.002176
Pb	208	3	He	22.588	0.8243	98979.31	0.0364	0.002176
Pb	208	3	He	22.178	0.8094	96601.62	0.0364	0.002176
U	238	3	He	0.936	0.0396	8673.18	0.0421	0.00024
U	238	3	He	0.959	0.0406	9033.48	0.0421	0.00024
U	238	3	He	0.934	0.0395	8853.34	0.0421	0.00024
Sc	45	1	No Gas			3538766.82		
Sc	45	1	No Gas			3472648.70		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3372630.89		
Ge	72	1	No Gas			1506618.10		
Ge	72	1	No Gas			1489278.42		
Ge	72	1	No Gas			1437221.85		
Sc	45	2	H2			195852.44		
Sc	45	2	H2			207499.63		
Sc	45	2	H2			203169.57		
Ge	72	2	H2			158212.08		
Ge	72	2	H2			164125.58		
Ge	72	2	H2			160455.13		
In	115	2	H2			428751.13		
In	115	2	H2			438722.85		
In	115	2	H2			435449.10		
Sc	45	3	He			44578.43		
Sc	45	3	He			44087.10		
Sc	45	3	He			43746.48		
Ge	72	3	He			72995.01		
Ge	72	3	He			74604.43		
Ge	72	3	He			74432.02		
In	115	3	He			63665.50		
In	115	3	He			63464.75		
In	115	3	He			64308.15		
Tb	159	3	He			289691.52		
Tb	159	3	He			291951.48		
Tb	159	3	He			290232.16		
Bi	209	3	He			218913.00		
Bi	209	3	He			222518.14		
Bi	209	3	He			224003.12		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 16:36:05
Sample Name	410-136610-H-7-A @2
Sample Type	Sample
Comment	G3 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

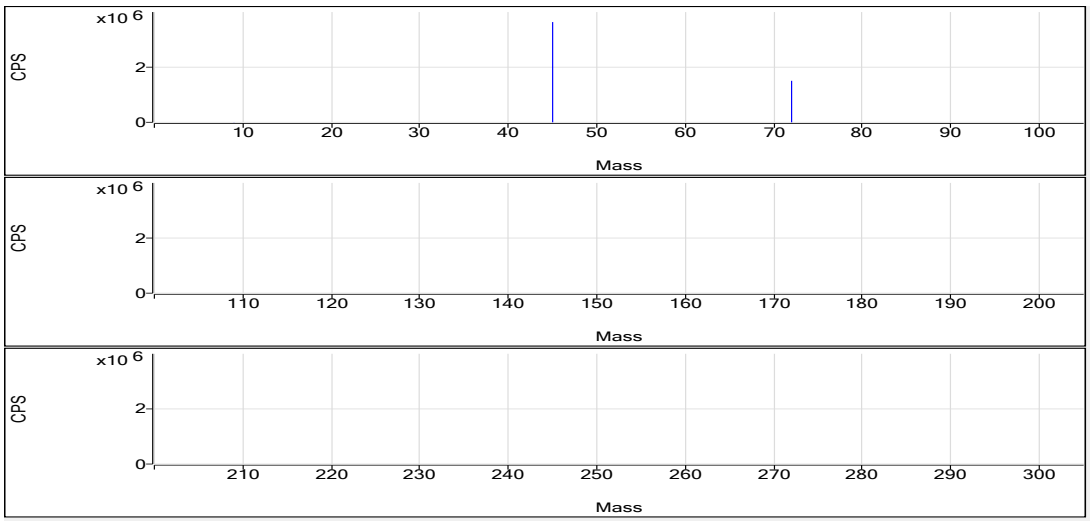
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	2.376	ppb	6.8	4721.43	0.0032	Pulse	0.5000	3
Se	78	72	H2	0.347	ppb	7.5	23.56	0.0001	Pulse	1.5000	3
Na	23	72	He	84.543	ppb	4.4	19089.36	0.2517	Pulse	0.1000	3
Mg	24	72	He	4339.135	ppb	0.8	277838.31	3.6632	Pulse	0.1000	3
Al	27	72	He	40152.242	ppb	1.3	735205.17	9.6936	Pulse	0.1000	3
K	39	72	He	6238.286	ppb	1.1	272168.31	3.5885	Pulse	0.1000	3
Ca	44	72	He	5595.455	ppb	4.4	13303.13	0.1754	Pulse	0.1000	3
Ti	47	72	He	643.116	ppb	5.3	12252.17	0.1616	Pulse	0.1000	3
V	51	72	He	194.542	ppb	1.3	173155.62	2.2830	Pulse	0.5000	3
Cr	52	72	He	128.163	ppb	1.8	149939.81	1.9770	Pulse	0.1000	3
Mn	55	72	He	2110.881	ppb	1.0	946029.28	12.4732	Pulse	0.1000	3
Fe	57	72	He	123089.875	ppb	1.5	2704986.31	35.6649	Pulse	0.1000	3
Co	59	72	He	18.624	ppb	2.3	43331.99	0.5713	Pulse	0.1000	3
Ni	60	72	He	36.164	ppb	0.4	24801.98	0.3270	Pulse	0.1000	3
Cu	63	72	He	20.029	ppb	1.4	38258.01	0.5044	Pulse	0.1000	3
Zn	66	72	He	121.444	ppb	1.7	22995.65	0.3032	Pulse	0.1000	3
As	75	72	He	33.578	ppb	2.6	4462.04	0.0588	Pulse	0.5000	3
Sr	88	115	He	52.697	ppb	1.8	26214.74	0.4127	Pulse	0.1000	3
Mo	98	115	He	1.366	ppb	3.9	1943.53	0.0306	Pulse	0.1000	3
Ag	107	115	He	0.050	ppb	26.6	173.34	0.0027	Pulse	0.1000	3
Cd	111	115	He	0.490	ppb	4.0	152.67	0.0024	Pulse	0.5000	3
Sn	120	115	He	2.014	ppb	2.9	2813.72	0.0443	Pulse	0.1000	3
Sb	121	115	He	1.620	ppb	6.0	1293.45	0.0204	Pulse	0.1000	3
Ba	137	115	He	102.996	ppb	0.3	28640.42	0.4509	Pulse	0.1000	3
Tl	205	209	He	0.322	ppb	15.5	2203.59	0.0099	Pulse	0.1000	3
Pb	208	209	He	31.956	ppb	0.9	259478.26	1.1653	Pulse	0.1000	3
U	238	209	He	3.511	ppb	1.4	32942.57	0.1479	Pulse	0.1000	3

ISTD Table:

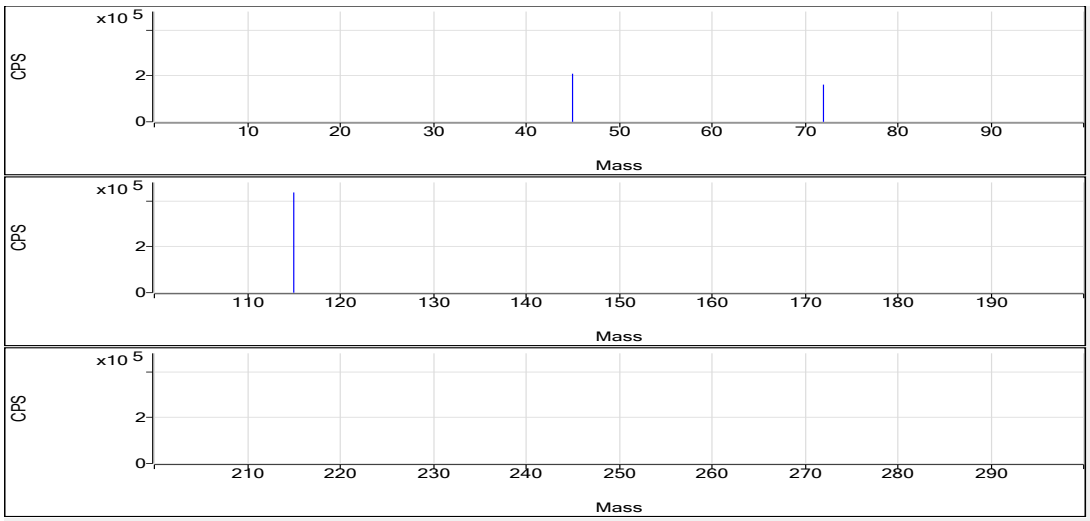
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3601267.86	2.0	111.1	Pulse	0.1000	3
No Gas	Ge	72	1490897.27	1.9	103.6	Pulse	0.1000	3
H2	Sc	45	209233.41	2.8	107.1	Pulse	0.1000	3
H2	Ge	72	161808.34	4.2	99.3	Pulse	0.1000	3
H2	In	115	436007.87	3.1	100.6	Pulse	0.1000	3
He	Sc	45	45511.38	0.9	113.8	Pulse	0.1000	3
He	Ge	72	75845.87	0.2	104.9	Pulse	0.1000	3
He	In	115	63519.45	0.4	98.3	Pulse	0.1000	3
He	Tb	159	294596.60	0.3	103.0	Pulse	0.1000	3
He	Bi	209	222668.76	0.2	100.2	Pulse	0.1000	3

No Gas

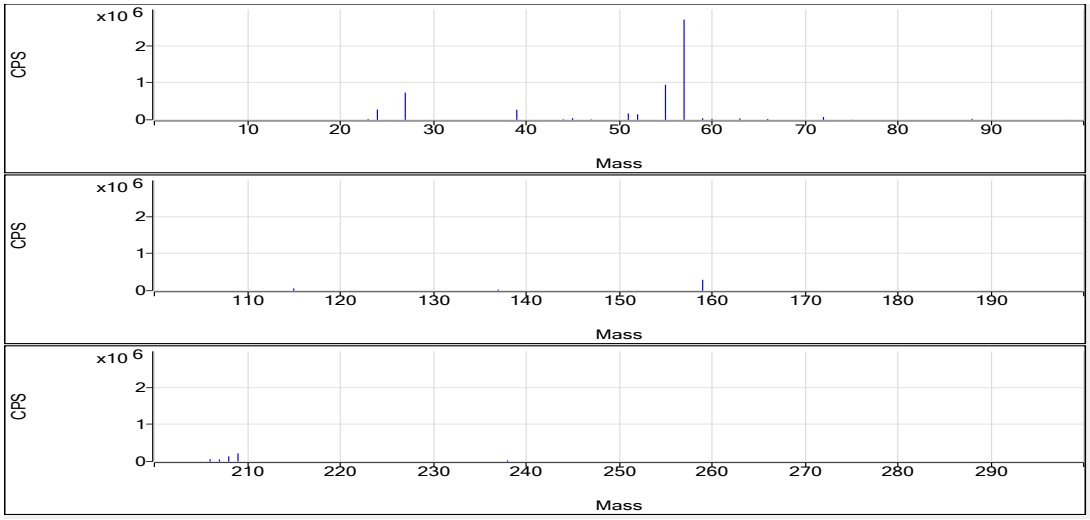


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	2.237	0.003	4510.70	0.0013	4.694E-05
Be	9	1	No Gas	2.337	0.0031	4686.75	0.0013	4.694E-05
Be	9	1	No Gas	2.554	0.0034	4966.85	0.0013	4.694E-05
Se	78	2	H2	0.376	0.0002	24.67	0.0004	1.089E-05
Se	78	2	H2	0.325	0.0001	23.33	0.0004	1.089E-05
Se	78	2	H2	0.339	0.0001	22.67	0.0004	1.089E-05
Na	23	3	He	80.24	0.2443	18532.01	0.0017	0.1065
Na	23	3	He	86.993	0.2559	19453.11	0.0017	0.1065
Na	23	3	He	86.397	0.2549	19282.97	0.0017	0.1065
Mg	24	3	He	4303.982	3.6335	275638.82	0.0008	0.004846
Mg	24	3	He	4373.007	3.6917	280645.56	0.0008	0.004846
Mg	24	3	He	4340.415	3.6643	277230.56	0.0008	0.004846
Al	27	3	He	39835.534	9.6171	729551.40	0.0002	0.001063
Al	27	3	He	39886.563	9.6294	732030.22	0.0002	0.001063
Al	27	3	He	40734.629	9.8342	744033.90	0.0002	0.001063
K	39	3	He	6204.672	3.5699	270813.69	0.0006	0.1436
K	39	3	He	6193.11	3.5635	270900.84	0.0006	0.1436
K	39	3	He	6317.076	3.632	274790.41	0.0006	0.1436
Ca	44	3	He	5374.722	0.1685	12786.06	0	0.001611
Ca	44	3	He	5554.005	0.1741	13236.41	0	0.001611
Ca	44	3	He	5857.637	0.1835	13886.91	0	0.001611
Ti	47	3	He	634.703	0.1594	12095.36	0.0003	0.0002737
Ti	47	3	He	613.937	0.1542	11725.04	0.0003	0.0002737
Ti	47	3	He	680.709	0.171	12936.12	0.0003	0.0002737
V	51	3	He	192.336	2.2572	171231.95	0.0117	0.007326
V	51	3	He	194.093	2.2778	173156.14	0.0117	0.007326
V	51	3	He	197.196	2.3141	175078.77	0.0117	0.007326
Cr	52	3	He	126.845	1.9569	148448.80	0.0152	0.02538
Cr	52	3	He	126.878	1.9574	148801.15	0.0152	0.02538
Cr	52	3	He	130.764	2.0166	152569.48	0.0152	0.02538
Mn	55	3	He	2089.123	12.3447	936466.55	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2111.218	12.4752	948360.61	0.0059	0.01385
Mn	55	3	He	2132.301	12.5996	953260.69	0.0059	0.01385
Fe	57	3	He	121559.383	35.2215	2671884.65	0.0003	0.003918
Fe	57	3	He	122630.437	35.5318	2701122.46	0.0003	0.003918
Fe	57	3	He	125079.805	36.2414	2741951.83	0.0003	0.003918
Co	59	3	He	18.167	0.5574	42282.39	0.0305	0.003084
Co	59	3	He	19.002	0.5828	44308.13	0.0305	0.003084
Co	59	3	He	18.702	0.5737	43405.46	0.0305	0.003084
Ni	60	3	He	36.338	0.3285	24922.19	0.0088	0.009003
Ni	60	3	He	36.019	0.3257	24762.00	0.0088	0.009003
Ni	60	3	He	36.136	0.3268	24721.75	0.0088	0.009003
Cu	63	3	He	19.975	0.5031	38161.35	0.0249	0.004937
Cu	63	3	He	20.329	0.5119	38913.04	0.0249	0.004937
Cu	63	3	He	19.784	0.4983	37699.65	0.0249	0.004937
Zn	66	3	He	120.363	0.3005	22798.84	0.0025	0.004836
Zn	66	3	He	120.211	0.3002	22818.57	0.0025	0.004836
Zn	66	3	He	123.759	0.3089	23369.53	0.0025	0.004836
As	75	3	He	34.349	0.0602	4564.75	0.0017	0.0004347
As	75	3	He	32.642	0.0572	4348.67	0.0017	0.0004347
As	75	3	He	33.742	0.0591	4472.71	0.0017	0.0004347
Sr	88	3	He	52.81	0.4136	26164.55	0.0078	0.0007762
Sr	88	3	He	51.719	0.4051	25804.13	0.0078	0.0007762
Sr	88	3	He	53.561	0.4195	26675.53	0.0078	0.0007762
Mo	98	3	He	1.427	0.0319	2020.22	0.022	0.0005162
Mo	98	3	He	1.331	0.0298	1900.20	0.022	0.0005162
Mo	98	3	He	1.341	0.03	1910.18	0.022	0.0005162
Ag	107	3	He	0.059	0.0032	200.01	0.0455	0.0004641
Ag	107	3	He	0.035	0.002	130.01	0.0455	0.0004641
Ag	107	3	He	0.055	0.003	190.01	0.0455	0.0004641
Cd	111	3	He	0.477	0.0023	148.00	0.0048	5.152E-05
Cd	111	3	He	0.512	0.0025	160.00	0.0048	5.152E-05
Cd	111	3	He	0.481	0.0024	150.00	0.0048	5.152E-05
Sn	120	3	He	2.078	0.0452	2860.41	0.0143	0.01559
Sn	120	3	He	2.001	0.0441	2810.36	0.0143	0.01559
Sn	120	3	He	1.962	0.0436	2770.38	0.0143	0.01559
Sb	121	3	He	1.508	0.019	1200.10	0.0124	0.000258
Sb	121	3	He	1.675	0.021	1340.13	0.0124	0.000258
Sb	121	3	He	1.678	0.0211	1340.11	0.0124	0.000258
Ba	137	3	He	103.344	0.4524	28620.34	0.0044	0.000309
Ba	137	3	He	102.77	0.4499	28660.62	0.0044	0.000309
Ba	137	3	He	102.874	0.4504	28640.30	0.0044	0.000309
Tl	205	3	He	0.377	0.0114	2540.32	0.0276	0.001005
Tl	205	3	He	0.28	0.0088	1950.21	0.0276	0.001005
Tl	205	3	He	0.307	0.0095	2120.25	0.0276	0.001005
Pb	208	3	He	31.643	1.1539	138623.45	0.0364	0.002176
Pb	208	3	He	32.125	1.1715	140602.77	0.0364	0.002176
Pb	208	3	He	32.101	1.1706	139632.94	0.0364	0.002176
U	238	3	He	3.458	0.1457	32391.17	0.0421	0.00024
U	238	3	He	3.519	0.1483	33012.82	0.0421	0.00024
U	238	3	He	3.556	0.1498	33423.73	0.0421	0.00024
Sc	45	1	No Gas			3656093.70		
Sc	45	1	No Gas			3628689.63		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3519020.26		
Ge	72	1	No Gas			1510366.23		
Ge	72	1	No Gas			1503002.32		
Ge	72	1	No Gas			1459323.26		
Sc	45	2	H2			204710.64		
Sc	45	2	H2			215744.86		
Sc	45	2	H2			207244.74		
Ge	72	2	H2			156990.83		
Ge	72	2	H2			169618.10		
Ge	72	2	H2			158816.09		
In	115	2	H2			424839.21		
In	115	2	H2			450771.01		
In	115	2	H2			432413.39		
Sc	45	3	He			45561.23		
Sc	45	3	He			45882.61		
Sc	45	3	He			45090.31		
Ge	72	3	He			75859.58		
Ge	72	3	He			76019.96		
Ge	72	3	He			75658.06		
In	115	3	He			63283.02		
In	115	3	He			63725.36		
In	115	3	He			63615.81		
Tb	159	3	He			294843.12		
Tb	159	3	He			293710.15		
Tb	159	3	He			295236.54		
Bi	209	3	He			222276.15		
Bi	209	3	He			222654.74		
Bi	209	3	He			223075.39		

Quantitation Report

Data File Name	173SMPL.d
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Acq Time	2023-08-10 16:38:04
Sample Name	410-136610-H-7-A @10
Sample Type	Sample
Comment	G3 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

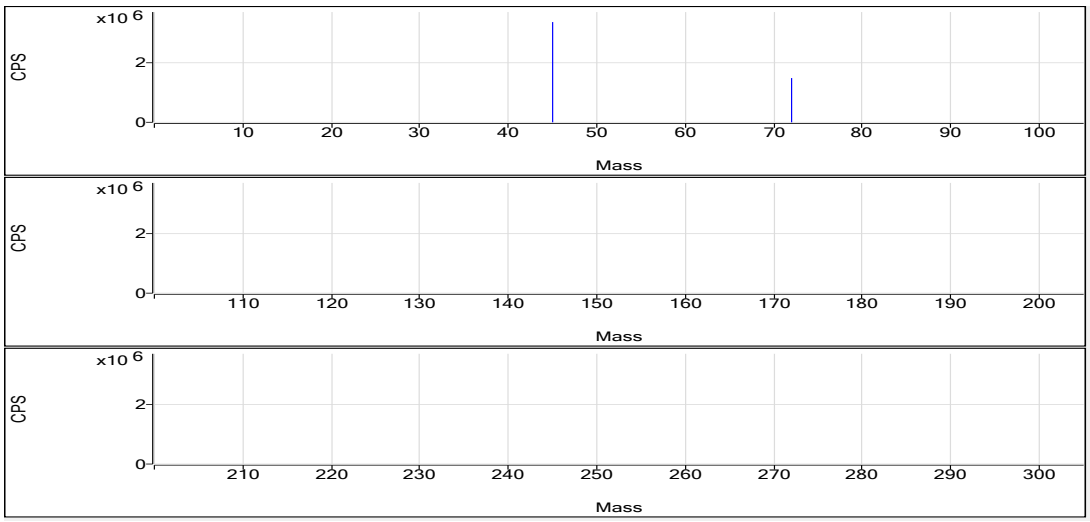
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.413	ppb	14.6	869.36	0.0006	Pulse	0.5000	3
Se	78	72	H2	0.068	ppb	41.9	6.00	0.0000	Pulse	1.5000	3
Na	23	72	He	14.900	ppb	22.5	9957.01	0.1321	Pulse	0.1000	3
Mg	24	72	He	769.563	ppb	0.4	49295.64	0.6537	Pulse	0.1000	3
Al	27	72	He	7112.266	ppb	1.0	129550.76	1.7179	Pulse	0.1000	3
K	39	72	He	1117.072	ppb	2.9	57349.50	0.7605	Pulse	0.1000	3
Ca	44	72	He	917.509	ppb	5.1	2270.26	0.0301	Pulse	0.1000	3
Ti	47	72	He	119.257	ppb	12.5	2276.94	0.0302	Pulse	0.1000	3
V	51	72	He	34.649	ppb	0.7	31118.31	0.4126	Pulse	0.5000	3
Cr	52	72	He	22.060	ppb	1.1	27246.08	0.3613	Pulse	0.1000	3
Mn	55	72	He	376.184	ppb	0.7	168494.94	2.2342	Pulse	0.1000	3
Fe	57	72	He	21811.736	ppb	0.6	476847.12	6.3231	Pulse	0.1000	3
Co	59	72	He	3.216	ppb	3.7	7632.33	0.1012	Pulse	0.1000	3
Ni	60	72	He	7.201	ppb	5.1	5454.53	0.0723	Pulse	0.1000	3
Cu	63	72	He	3.705	ppb	5.1	7338.76	0.0973	Pulse	0.1000	3
Zn	66	72	He	22.613	ppb	2.8	4554.20	0.0604	Pulse	0.1000	3
As	75	72	He	5.757	ppb	7.4	788.03	0.0104	Pulse	0.5000	3
Sr	88	115	He	9.730	ppb	4.1	4891.02	0.0768	Pulse	0.1000	3
Mo	98	115	He	0.298	ppb	14.5	450.02	0.0071	Pulse	0.1000	3
Ag	107	115	He	0.008	ppb	96.6	53.33	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.077	ppb	47.9	26.67	0.0004	Pulse	0.5000	3
Sn	120	115	He	0.300	ppb	18.9	1263.44	0.0199	Pulse	0.1000	3
Sb	121	115	He	0.355	ppb	15.6	296.68	0.0047	Pulse	0.1000	3
Ba	137	115	He	18.302	ppb	5.7	5111.15	0.0804	Pulse	0.1000	3
Tl	205	209	He	0.070	ppb	14.8	650.04	0.0029	Pulse	0.1000	3
Pb	208	209	He	5.765	ppb	2.5	46723.96	0.2120	Pulse	0.1000	3
U	238	209	He	0.640	ppb	3.1	5991.63	0.0272	Pulse	0.1000	3

ISTD Table:

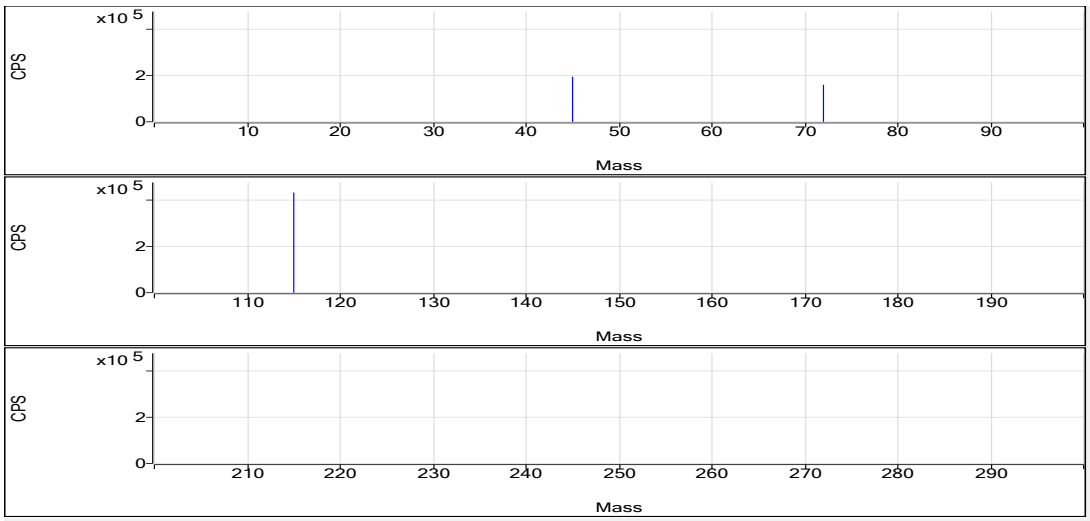
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3348215.26	2.0	103.3	Pulse	0.1000	3
No Gas	Ge	72	1477395.24	1.3	102.6	Pulse	0.1000	3
H2	Sc	45	196215.30	3.2	100.4	Pulse	0.1000	3
H2	Ge	72	160610.46	2.2	98.5	Pulse	0.1000	3
H2	In	115	435246.65	2.9	100.4	Pulse	0.1000	3
He	Sc	45	43538.63	0.9	108.9	Pulse	0.1000	3
He	Ge	72	75414.22	0.6	104.3	Pulse	0.1000	3
He	In	115	63628.77	1.6	98.5	Pulse	0.1000	3
He	Tb	159	285801.62	0.3	99.9	Pulse	0.1000	3
He	Bi	209	220430.57	1.1	99.2	Pulse	0.1000	3

No Gas

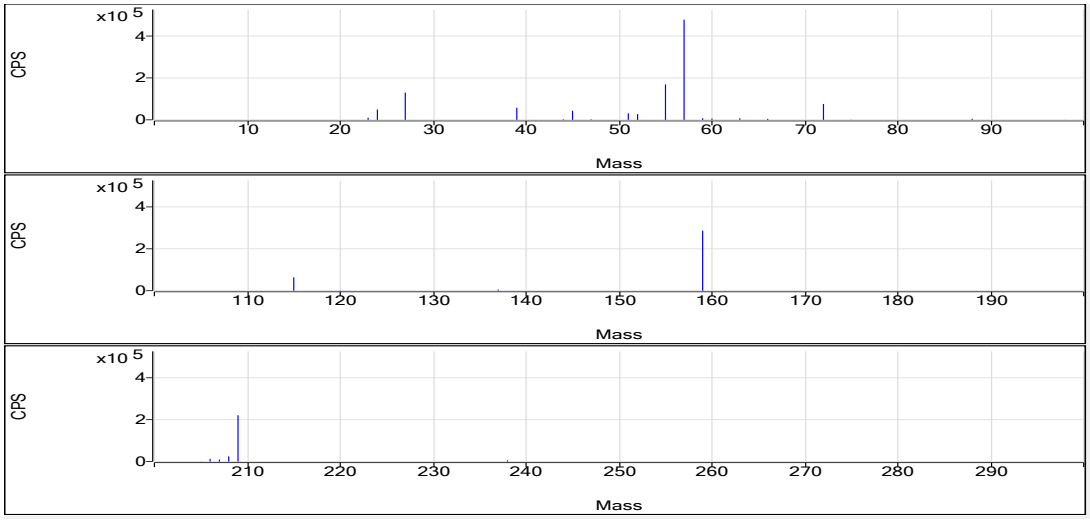


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.345	0.0005	748.02	0.0013	4.694E-05
Be	9	1	No Gas	0.434	0.0006	912.03	0.0013	4.694E-05
Be	9	1	No Gas	0.459	0.0007	948.04	0.0013	4.694E-05
Se	78	2	H2	0.081	0	6.67	0.0004	1.089E-05
Se	78	2	H2	0.087	0	7.33	0.0004	1.089E-05
Se	78	2	H2	0.035	0	4.00	0.0004	1.089E-05
Na	23	3	He	11.071	0.1255	9523.41	0.0017	0.1065
Na	23	3	He	16.361	0.1346	10103.74	0.0017	0.1065
Na	23	3	He	17.268	0.1361	10243.88	0.0017	0.1065
Mg	24	3	He	768.463	0.6527	49542.78	0.0008	0.004846
Mg	24	3	He	766.87	0.6514	48911.02	0.0008	0.004846
Mg	24	3	He	773.356	0.6569	49433.12	0.0008	0.004846
Al	27	3	He	7028.512	1.6977	128855.57	0.0002	0.001063
Al	27	3	He	7162.484	1.73	129903.07	0.0002	0.001063
Al	27	3	He	7145.802	1.726	129893.65	0.0002	0.001063
K	39	3	He	1100.83	0.7515	57041.21	0.0006	0.1436
K	39	3	He	1154.083	0.7809	58638.02	0.0006	0.1436
K	39	3	He	1096.301	0.749	56369.28	0.0006	0.1436
Ca	44	3	He	877.219	0.0289	2190.26	0	0.001611
Ca	44	3	He	968.761	0.0317	2380.28	0	0.001611
Ca	44	3	He	906.547	0.0298	2240.24	0	0.001611
Ti	47	3	He	134.997	0.0341	2590.33	0.0003	0.0002737
Ti	47	3	He	117.349	0.0297	2230.26	0.0003	0.0002737
Ti	47	3	He	105.424	0.0267	2010.23	0.0003	0.0002737
V	51	3	He	34.468	0.4105	31159.04	0.0117	0.007326
V	51	3	He	34.536	0.4113	30884.51	0.0117	0.007326
V	51	3	He	34.942	0.4161	31311.38	0.0117	0.007326
Cr	52	3	He	21.916	0.3591	27256.21	0.0152	0.02538
Cr	52	3	He	22.329	0.3654	27436.54	0.0152	0.02538
Cr	52	3	He	21.934	0.3594	27045.49	0.0152	0.02538
Mn	55	3	He	377.354	2.2412	170103.51	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	377.975	2.2448	168555.97	0.0059	0.01385
Mn	55	3	He	373.221	2.2168	166825.35	0.0059	0.01385
Fe	57	3	He	21782.16	6.3145	479271.91	0.0003	0.003918
Fe	57	3	He	21965.466	6.3676	478123.63	0.0003	0.003918
Fe	57	3	He	21687.584	6.2871	473145.81	0.0003	0.003918
Co	59	3	He	3.333	0.1048	7952.52	0.0305	0.003084
Co	59	3	He	3.095	0.0975	7322.13	0.0305	0.003084
Co	59	3	He	3.219	0.1013	7622.33	0.0305	0.003084
Ni	60	3	He	7.144	0.0718	5451.19	0.0088	0.009003
Ni	60	3	He	6.869	0.0694	5211.13	0.0088	0.009003
Ni	60	3	He	7.592	0.0758	5701.27	0.0088	0.009003
Cu	63	3	He	3.586	0.0944	7162.04	0.0249	0.004937
Cu	63	3	He	3.921	0.1027	7712.29	0.0249	0.004937
Cu	63	3	He	3.608	0.0949	7141.94	0.0249	0.004937
Zn	66	3	He	22.169	0.0593	4500.85	0.0025	0.004836
Zn	66	3	He	22.322	0.0597	4480.83	0.0025	0.004836
Zn	66	3	He	23.349	0.0622	4680.93	0.0025	0.004836
As	75	3	He	6.22	0.0113	854.03	0.0017	0.0004347
As	75	3	He	5.677	0.0103	774.03	0.0017	0.0004347
As	75	3	He	5.374	0.0098	736.02	0.0017	0.0004347
Sr	88	3	He	9.271	0.0732	4580.94	0.0078	0.0007762
Sr	88	3	He	9.932	0.0784	5001.08	0.0078	0.0007762
Sr	88	3	He	9.987	0.0788	5091.05	0.0078	0.0007762
Mo	98	3	He	0.282	0.0067	420.02	0.022	0.0005162
Mo	98	3	He	0.347	0.0082	520.03	0.022	0.0005162
Mo	98	3	He	0.265	0.0064	410.02	0.022	0.0005162
Ag	107	3	He	0.004	0.0006	40.00	0.0455	0.0004641
Ag	107	3	He	0.017	0.0013	80.00	0.0455	0.0004641
Ag	107	3	He	0.003	0.0006	40.00	0.0455	0.0004641
Cd	111	3	He	0.096	0.0005	32.00	0.0048	5.152E-05
Cd	111	3	He	0.1	0.0005	34.00	0.0048	5.152E-05
Cd	111	3	He	0.034	0.0002	14.00	0.0048	5.152E-05
Sn	120	3	He	0.365	0.0208	1300.12	0.0143	0.01559
Sn	120	3	He	0.26	0.0193	1230.10	0.0143	0.01559
Sn	120	3	He	0.275	0.0195	1260.09	0.0143	0.01559
Sb	121	3	He	0.405	0.0053	330.02	0.0124	0.000258
Sb	121	3	He	0.295	0.0039	250.01	0.0124	0.000258
Sb	121	3	He	0.366	0.0048	310.02	0.0124	0.000258
Ba	137	3	He	19.305	0.0848	5301.28	0.0044	0.000309
Ba	137	3	He	18.392	0.0808	5151.14	0.0044	0.000309
Ba	137	3	He	17.209	0.0756	4881.02	0.0044	0.000309
Tl	205	3	He	0.062	0.0027	600.04	0.0276	0.001005
Tl	205	3	He	0.066	0.0028	620.04	0.0276	0.001005
Tl	205	3	He	0.082	0.0033	730.05	0.0276	0.001005
Pb	208	3	He	5.717	0.2103	24623.72	0.0364	0.002176
Pb	208	3	He	5.927	0.2179	25174.53	0.0364	0.002176
Pb	208	3	He	5.65	0.2078	24483.46	0.0364	0.002176
U	238	3	He	0.618	0.0262	5761.54	0.0421	0.00024
U	238	3	He	0.652	0.0277	6041.61	0.0421	0.00024
U	238	3	He	0.652	0.0277	6171.74	0.0421	0.00024
Sc	45	1	No Gas			3391483.07		
Sc	45	1	No Gas			3381252.45		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3271910.26		
Ge	72	1	No Gas			1496196.07		
Ge	72	1	No Gas			1479083.42		
Ge	72	1	No Gas			1456906.23		
Sc	45	2	H2			189065.13		
Sc	45	2	H2			199500.47		
Sc	45	2	H2			200080.29		
Ge	72	2	H2			156582.95		
Ge	72	2	H2			163054.12		
Ge	72	2	H2			162194.30		
In	115	2	H2			426065.15		
In	115	2	H2			449478.08		
In	115	2	H2			430196.71		
Sc	45	3	He			43976.43		
Sc	45	3	He			43324.74		
Sc	45	3	He			43314.73		
Ge	72	3	He			75899.87		
Ge	72	3	He			75086.53		
Ge	72	3	He			75256.26		
In	115	3	He			62549.96		
In	115	3	He			63786.16		
In	115	3	He			64579.74		
Tb	159	3	He			286149.66		
Tb	159	3	He			284811.07		
Tb	159	3	He			286444.12		
Bi	209	3	He			219745.93		
Bi	209	3	He			218416.13		
Bi	209	3	He			223129.65		

Quantitation Report

Data File Name	174SMPL.d
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Sample Name	410-136610-H-3-A @2
Sample Type	Sample
Comment	G3 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

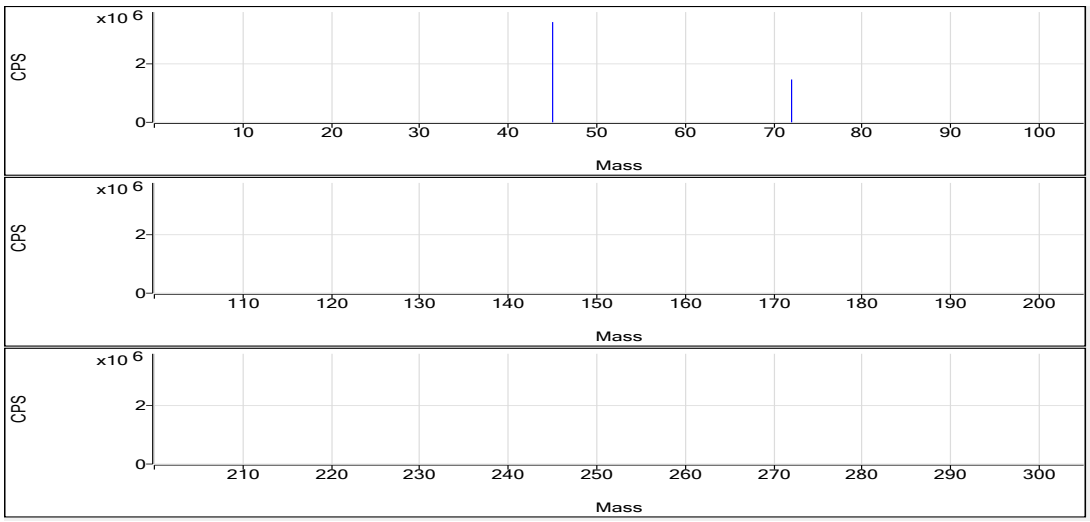
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	1.126	ppb	3.9	2248.85	0.0015	Pulse	0.5000	3
Se	78	72	H2	0.200	ppb	2.9	14.22	0.0001	Pulse	1.5000	3
Na	23	72	He	118.879	ppb	2.3	23285.37	0.3107	Pulse	0.1000	3
Mg	24	72	He	2547.618	ppb	1.2	161350.85	2.1527	Pulse	0.1000	3
Al	27	72	He	31638.790	ppb	0.6	572519.76	7.6385	Pulse	0.1000	3
K	39	72	He	3123.791	ppb	0.6	140057.65	1.8686	Pulse	0.1000	3
Ca	44	72	He	3838.233	ppb	5.5	9056.43	0.1208	Pulse	0.1000	3
Ti	47	72	He	618.101	ppb	3.3	11638.34	0.1553	Pulse	0.1000	3
V	51	72	He	66.056	ppb	0.6	58465.21	0.7800	Pulse	0.5000	3
Cr	52	72	He	49.790	ppb	0.7	58728.88	0.7836	Pulse	0.1000	3
Mn	55	72	He	163.399	ppb	1.3	73325.03	0.9783	Pulse	0.1000	3
Fe	57	72	He	30139.569	ppb	0.3	654764.22	8.7358	Pulse	0.1000	3
Co	59	72	He	8.020	ppb	3.9	18572.45	0.2478	Pulse	0.1000	3
Ni	60	72	He	18.811	ppb	5.3	13072.96	0.1744	Pulse	0.1000	3
Cu	63	72	He	10.833	ppb	3.3	20618.54	0.2751	Pulse	0.1000	3
Zn	66	72	He	50.838	ppb	2.5	9723.61	0.1297	Pulse	0.1000	3
As	75	72	He	6.056	ppb	8.2	822.03	0.0110	Pulse	0.5000	3
Sr	88	115	He	36.629	ppb	2.4	18242.31	0.2871	Pulse	0.1000	3
Mo	98	115	He	1.258	ppb	9.9	1790.18	0.0282	Pulse	0.1000	3
Ag	107	115	He	0.054	ppb	10.3	186.68	0.0029	Pulse	0.1000	3
Cd	111	115	He	0.105	ppb	38.4	35.33	0.0006	Pulse	0.5000	3
Sn	120	115	He	2.440	ppb	4.4	3200.49	0.0504	Pulse	0.1000	3
Sb	121	115	He	0.327	ppb	23.9	273.35	0.0043	Pulse	0.1000	3
Ba	137	115	He	75.988	ppb	4.5	21123.50	0.3327	Pulse	0.1000	3
Tl	205	209	He	0.309	ppb	13.6	2136.93	0.0095	Pulse	0.1000	3
Pb	208	209	He	29.343	ppb	1.8	239798.27	1.0702	Pulse	0.1000	3
U	238	209	He	2.033	ppb	1.7	19221.53	0.0858	Pulse	0.1000	3

ISTD Table:

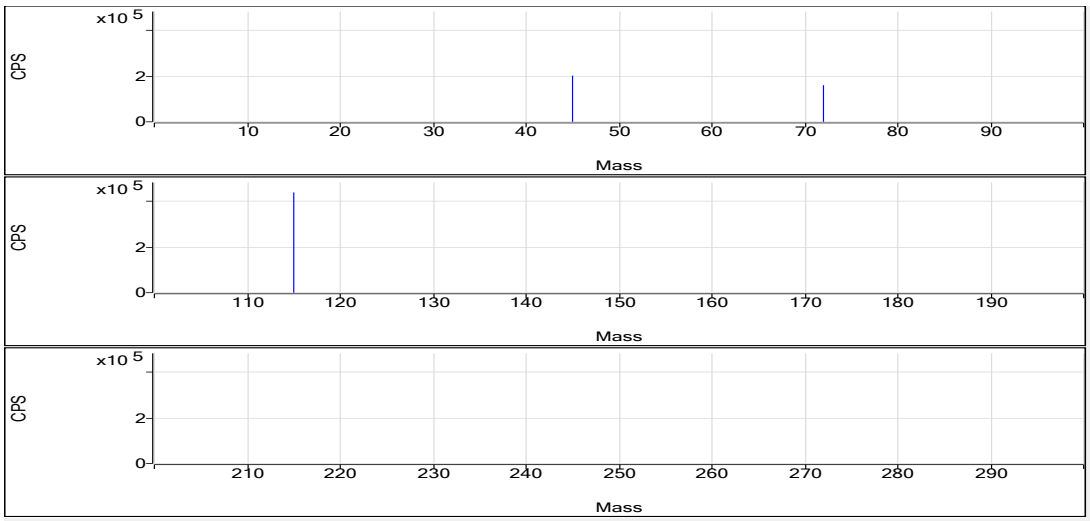
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3448625.47	1.7	106.4	Pulse	0.1000	3
No Gas	Ge	72	1473499.98	1.5	102.3	Pulse	0.1000	3
H2	Sc	45	201689.54	2.3	103.2	Pulse	0.1000	3
H2	Ge	72	160151.41	1.1	98.2	Pulse	0.1000	3
H2	In	115	438330.70	1.4	101.2	Pulse	0.1000	3
He	Sc	45	43786.07	1.3	109.5	Pulse	0.1000	3
He	Ge	72	74951.72	0.1	103.7	Pulse	0.1000	3
He	In	115	63526.62	2.4	98.4	Pulse	0.1000	3
He	Tb	159	291481.50	0.6	101.9	Pulse	0.1000	3
He	Bi	209	224103.55	1.8	100.9	Pulse	0.1000	3

No Gas

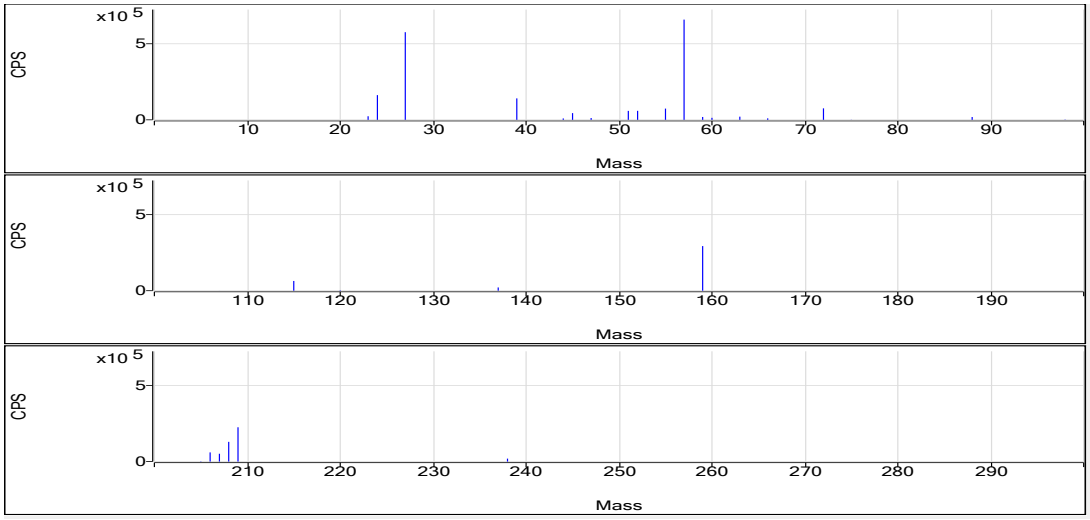


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	1.079	0.0015	2190.17	0.0013	4.694E-05
Be	9	1	No Gas	1.165	0.0016	2324.19	0.0013	4.694E-05
Be	9	1	No Gas	1.134	0.0015	2232.18	0.0013	4.694E-05
Se	78	2	H2	0.199	0.0001	14.00	0.0004	1.089E-05
Se	78	2	H2	0.206	0.0001	14.67	0.0004	1.089E-05
Se	78	2	H2	0.195	0.0001	14.00	0.0004	1.089E-05
Na	23	3	He	117.249	0.3079	23048.41	0.0017	0.1065
Na	23	3	He	122.093	0.3162	23719.25	0.0017	0.1065
Na	23	3	He	117.295	0.3079	23088.46	0.0017	0.1065
Mg	24	3	He	2574.553	2.1755	162863.72	0.0008	0.004846
Mg	24	3	He	2515.005	2.1253	159427.18	0.0008	0.004846
Mg	24	3	He	2553.295	2.1575	161761.66	0.0008	0.004846
Al	27	3	He	31428.125	7.5876	568041.67	0.0002	0.001063
Al	27	3	He	31772.573	7.6708	575428.66	0.0002	0.001063
Al	27	3	He	31715.672	7.657	574088.94	0.0002	0.001063
K	39	3	He	3118.552	1.8657	139677.26	0.0006	0.1436
K	39	3	He	3143.901	1.8797	141010.00	0.0006	0.1436
K	39	3	He	3108.919	1.8604	139485.70	0.0006	0.1436
Ca	44	3	He	3643.549	0.1148	8592.84	0	0.001611
Ca	44	3	He	4065.536	0.1279	9593.45	0	0.001611
Ca	44	3	He	3805.615	0.1198	8983.00	0	0.001611
Ti	47	3	He	639.959	0.1608	12035.33	0.0003	0.0002737
Ti	47	3	He	615.258	0.1546	11595.01	0.0003	0.0002737
Ti	47	3	He	599.086	0.1505	11284.68	0.0003	0.0002737
V	51	3	He	65.624	0.775	58018.18	0.0117	0.007326
V	51	3	He	66.229	0.7821	58666.60	0.0117	0.007326
V	51	3	He	66.316	0.7831	58710.86	0.0117	0.007326
Cr	52	3	He	49.727	0.7826	58588.20	0.0152	0.02538
Cr	52	3	He	49.465	0.7786	58407.55	0.0152	0.02538
Cr	52	3	He	50.179	0.7895	59190.88	0.0152	0.02538
Mn	55	3	He	165.867	0.9929	74330.25	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	161.757	0.9686	72661.04	0.0059	0.01385
Mn	55	3	He	162.575	0.9734	72983.81	0.0059	0.01385
Fe	57	3	He	30027.043	8.7032	651557.37	0.0003	0.003918
Fe	57	3	He	30219.025	8.7588	657048.35	0.0003	0.003918
Fe	57	3	He	30172.64	8.7454	655686.94	0.0003	0.003918
Co	59	3	He	7.701	0.2381	17821.60	0.0305	0.003084
Co	59	3	He	8.324	0.2571	19283.22	0.0305	0.003084
Co	59	3	He	8.035	0.2482	18612.53	0.0305	0.003084
Ni	60	3	He	18.125	0.1684	12605.87	0.0088	0.009003
Ni	60	3	He	19.953	0.1845	13837.05	0.0088	0.009003
Ni	60	3	He	18.355	0.1704	12775.95	0.0088	0.009003
Cu	63	3	He	10.946	0.2779	20805.41	0.0249	0.004937
Cu	63	3	He	11.117	0.2822	21165.99	0.0249	0.004937
Cu	63	3	He	10.437	0.2652	19884.21	0.0249	0.004937
Zn	66	3	He	51.933	0.1324	9913.80	0.0025	0.004836
Zn	66	3	He	51.172	0.1306	9793.65	0.0025	0.004836
Zn	66	3	He	49.408	0.1262	9463.38	0.0025	0.004836
As	75	3	He	6.34	0.0115	858.03	0.0017	0.0004347
As	75	3	He	5.484	0.01	748.02	0.0017	0.0004347
As	75	3	He	6.346	0.0115	860.03	0.0017	0.0004347
Sr	88	3	He	36.082	0.2828	18232.35	0.0078	0.0007762
Sr	88	3	He	37.662	0.2952	18993.32	0.0078	0.0007762
Sr	88	3	He	36.144	0.2833	17501.25	0.0078	0.0007762
Mo	98	3	He	1.139	0.0256	1650.15	0.022	0.0005162
Mo	98	3	He	1.247	0.028	1800.18	0.022	0.0005162
Mo	98	3	He	1.388	0.0311	1920.22	0.022	0.0005162
Ag	107	3	He	0.051	0.0028	180.01	0.0455	0.0004641
Ag	107	3	He	0.051	0.0028	180.01	0.0455	0.0004641
Ag	107	3	He	0.061	0.0032	200.01	0.0455	0.0004641
Cd	111	3	He	0.151	0.0008	50.00	0.0048	5.152E-05
Cd	111	3	He	0.086	0.0005	30.00	0.0048	5.152E-05
Cd	111	3	He	0.077	0.0004	26.00	0.0048	5.152E-05
Sn	120	3	He	2.563	0.0521	3360.54	0.0143	0.01559
Sn	120	3	He	2.363	0.0493	3170.50	0.0143	0.01559
Sn	120	3	He	2.393	0.0497	3070.44	0.0143	0.01559
Sb	121	3	He	0.254	0.0034	220.01	0.0124	0.000258
Sb	121	3	He	0.317	0.0042	270.01	0.0124	0.000258
Sb	121	3	He	0.41	0.0053	330.02	0.0124	0.000258
Ba	137	3	He	75.023	0.3285	21177.06	0.0044	0.000309
Ba	137	3	He	73.168	0.3204	20615.97	0.0044	0.000309
Ba	137	3	He	79.773	0.3493	21577.46	0.0044	0.000309
Tl	205	3	He	0.312	0.0096	2190.26	0.0276	0.001005
Tl	205	3	He	0.265	0.0083	1880.21	0.0276	0.001005
Tl	205	3	He	0.349	0.0107	2340.31	0.0276	0.001005
Pb	208	3	He	28.737	1.0481	127441.43	0.0364	0.002176
Pb	208	3	He	29.638	1.0809	131370.96	0.0364	0.002176
Pb	208	3	He	29.655	1.0815	127593.66	0.0364	0.002176
U	238	3	He	2.042	0.0861	19575.46	0.0421	0.00024
U	238	3	He	2.061	0.0869	19595.46	0.0421	0.00024
U	238	3	He	1.995	0.0842	18493.66	0.0421	0.00024
Sc	45	1	No Gas			3507332.76		
Sc	45	1	No Gas			3444832.45		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3393711.20		
Ge	72	1	No Gas			1495002.48		
Ge	72	1	No Gas			1473270.92		
Ge	72	1	No Gas			1452226.54		
Sc	45	2	H2			196398.04		
Sc	45	2	H2			205116.07		
Sc	45	2	H2			203554.51		
Ge	72	2	H2			158170.98		
Ge	72	2	H2			160858.83		
Ge	72	2	H2			161424.43		
In	115	2	H2			435009.33		
In	115	2	H2			445295.74		
In	115	2	H2			434687.02		
Sc	45	3	He			44448.06		
Sc	45	3	He			43344.35		
Sc	45	3	He			43565.79		
Ge	72	3	He			74864.18		
Ge	72	3	He			75015.69		
Ge	72	3	He			74975.29		
In	115	3	He			64488.74		
In	115	3	He			64368.61		
In	115	3	He			61797.41		
Tb	159	3	He			290045.15		
Tb	159	3	He			290894.68		
Tb	159	3	He			293504.66		
Bi	209	3	He			227248.79		
Bi	209	3	He			225377.67		
Bi	209	3	He			219684.18		

Quantitation Report

Data File Name	175SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 16:42:05
Sample Name	410-136610-H-3-A @10
Sample Type	Sample
Comment	G3 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

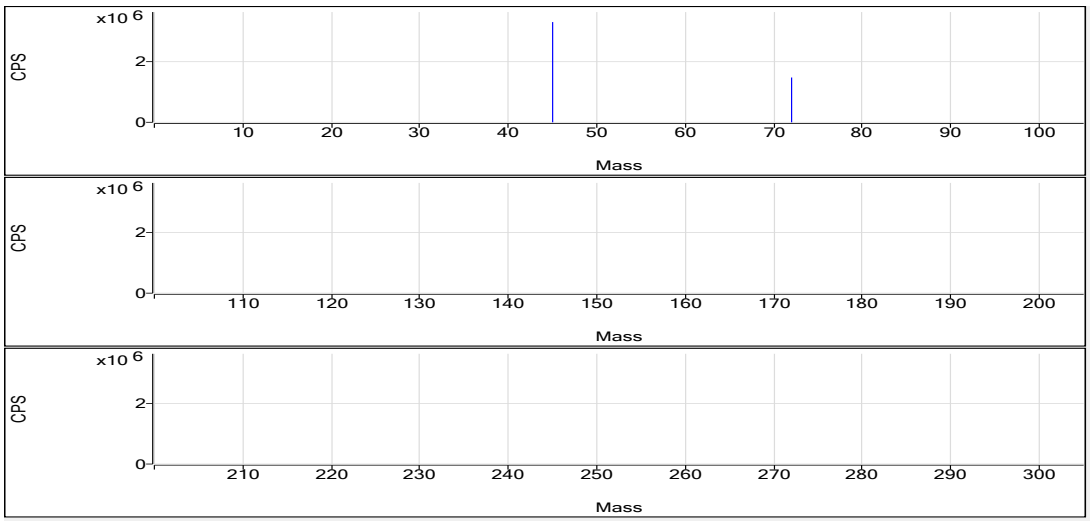
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.178	ppb	14.2	414.01	0.0003	Pulse	0.5000	3
Se	78	72	H2	0.068	ppb	16.4	6.00	0.0000	Pulse	1.5000	3
Na	23	72	He	22.988	ppb	10.8	10884.27	0.1459	Pulse	0.1000	3
Mg	24	72	He	483.126	ppb	0.6	30735.69	0.4122	Pulse	0.1000	3
Al	27	72	He	6000.999	ppb	0.8	108106.34	1.4497	Pulse	0.1000	3
K	39	72	He	585.114	ppb	3.1	34798.46	0.4667	Pulse	0.1000	3
Ca	44	72	He	676.534	ppb	11.6	1686.83	0.0226	Pulse	0.1000	3
Ti	47	72	He	114.087	ppb	2.6	2153.56	0.0289	Pulse	0.1000	3
V	51	72	He	12.389	ppb	1.3	11352.44	0.1523	Pulse	0.5000	3
Cr	52	72	He	9.389	ppb	6.1	12549.13	0.1684	Pulse	0.1000	3
Mn	55	72	He	29.323	ppb	0.8	13940.49	0.1869	Pulse	0.1000	3
Fe	57	72	He	5771.010	ppb	1.2	124960.25	1.6759	Pulse	0.1000	3
Co	59	72	He	1.592	ppb	6.2	3850.64	0.0517	Pulse	0.1000	3
Ni	60	72	He	4.042	ppb	6.2	3320.51	0.0445	Pulse	0.1000	3
Cu	63	72	He	2.137	ppb	7.2	4340.82	0.0582	Pulse	0.1000	3
Zn	66	72	He	14.261	ppb	7.6	2973.75	0.0399	Pulse	0.1000	3
As	75	72	He	1.201	ppb	23.7	188.00	0.0025	Pulse	0.5000	3
Sr	88	115	He	7.066	ppb	4.8	3573.91	0.0560	Pulse	0.1000	3
Mo	98	115	He	0.273	ppb	4.4	416.69	0.0065	Pulse	0.1000	3
Ag	107	115	He	0.010	ppb	56.6	60.00	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.026	ppb	58.2	11.33	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.445	ppb	12.9	1400.13	0.0219	Pulse	0.1000	3
Sb	121	115	He	0.038	ppb	18.2	46.67	0.0007	Pulse	0.1000	3
Ba	137	115	He	14.208	ppb	3.4	3987.41	0.0625	Pulse	0.1000	3
Tl	205	209	He	0.058	ppb	17.2	576.70	0.0026	Pulse	0.1000	3
Pb	208	209	He	5.533	ppb	2.6	45198.50	0.2036	Pulse	0.1000	3
U	238	209	He	0.373	ppb	6.5	3537.30	0.0159	Pulse	0.1000	3

ISTD Table:

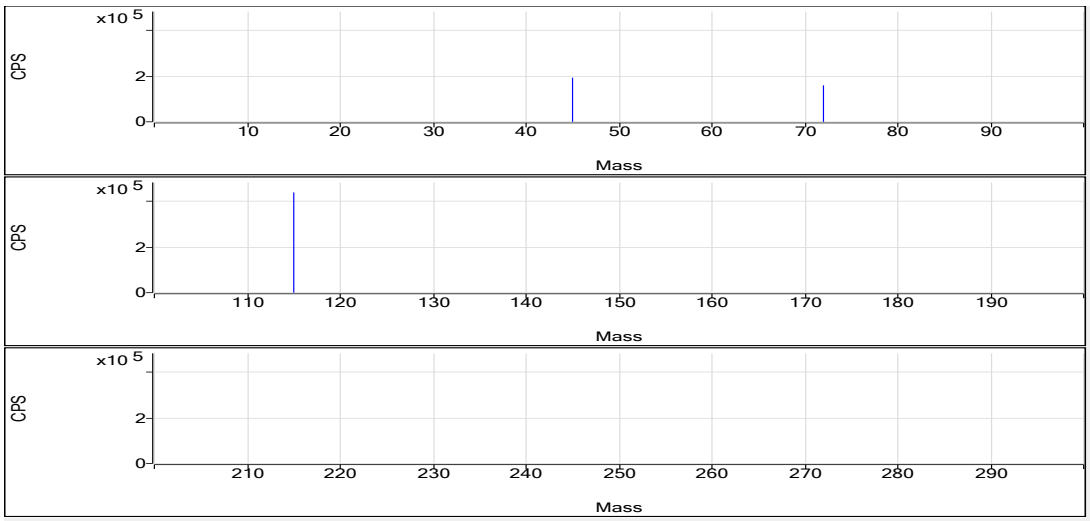
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3307503.28	2.1	102.0	Pulse	0.1000	3
No Gas	Ge	72	1478202.58	1.7	102.7	Pulse	0.1000	3
H2	Sc	45	193079.62	2.2	98.8	Pulse	0.1000	3
H2	Ge	72	159847.69	0.7	98.1	Pulse	0.1000	3
H2	In	115	438927.09	0.6	101.3	Pulse	0.1000	3
He	Sc	45	42188.12	1.9	105.5	Pulse	0.1000	3
He	Ge	72	74569.95	1.4	103.2	Pulse	0.1000	3
He	In	115	63822.28	1.0	98.8	Pulse	0.1000	3
He	Tb	159	286220.55	0.5	100.1	Pulse	0.1000	3
He	Bi	209	222064.88	1.0	99.9	Pulse	0.1000	3

No Gas

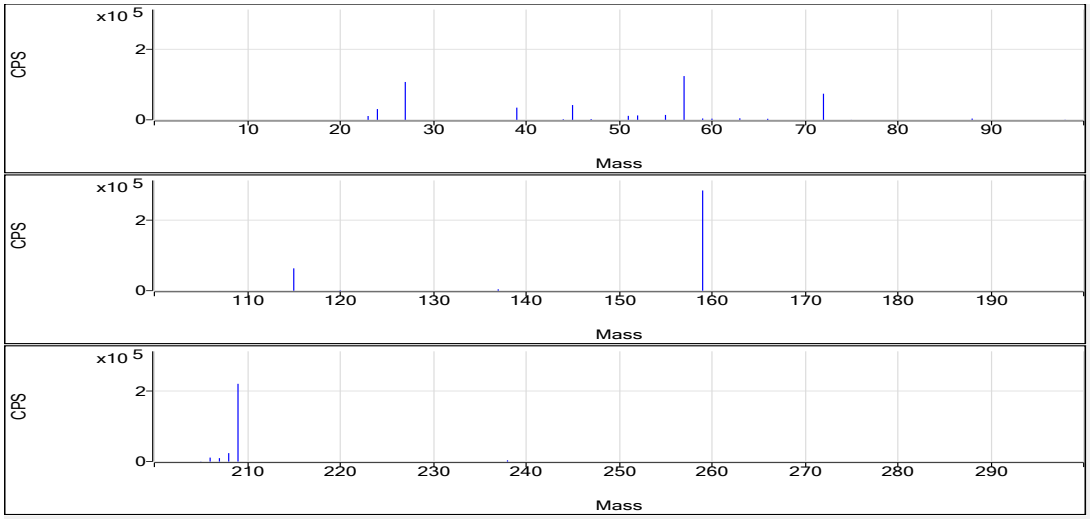


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.156	0.0003	378.01	0.0013	4.694E-05
Be	9	1	No Gas	0.172	0.0003	404.01	0.0013	4.694E-05
Be	9	1	No Gas	0.205	0.0003	460.01	0.0013	4.694E-05
Se	78	2	H2	0.069	0	6.00	0.0004	1.089E-05
Se	78	2	H2	0.057	0	5.33	0.0004	1.089E-05
Se	78	2	H2	0.079	0	6.67	0.0004	1.089E-05
Na	23	3	He	23.205	0.1463	10754.15	0.0017	0.1065
Na	23	3	He	25.345	0.15	11334.66	0.0017	0.1065
Na	23	3	He	20.415	0.1415	10564.00	0.0017	0.1065
Mg	24	3	He	484.222	0.4131	30361.66	0.0008	0.004846
Mg	24	3	He	485.114	0.4138	31273.39	0.0008	0.004846
Mg	24	3	He	480.042	0.4096	30572.02	0.0008	0.004846
Al	27	3	He	5991.592	1.4474	106381.10	0.0002	0.001063
Al	27	3	He	6051.051	1.4618	110461.03	0.0002	0.001063
Al	27	3	He	5960.353	1.4399	107476.89	0.0002	0.001063
K	39	3	He	602.785	0.4765	35022.29	0.0006	0.1436
K	39	3	He	566.427	0.4564	34491.21	0.0006	0.1436
K	39	3	He	586.13	0.4673	34881.87	0.0006	0.1436
Ca	44	3	He	727.944	0.0242	1780.18	0	0.001611
Ca	44	3	He	715.105	0.0238	1800.17	0	0.001611
Ca	44	3	He	586.552	0.0198	1480.13	0	0.001611
Ti	47	3	He	115.025	0.0291	2140.23	0.0003	0.0002737
Ti	47	3	He	110.789	0.0281	2120.23	0.0003	0.0002737
Ti	47	3	He	116.447	0.0295	2200.22	0.0003	0.0002737
V	51	3	He	12.473	0.1532	11262.36	0.0117	0.007326
V	51	3	He	12.205	0.1501	11342.44	0.0117	0.007326
V	51	3	He	12.49	0.1534	11452.52	0.0117	0.007326
Cr	52	3	He	9.793	0.1745	12825.96	0.0152	0.02538
Cr	52	3	He	8.731	0.1583	11965.33	0.0152	0.02538
Cr	52	3	He	9.644	0.1722	12856.10	0.0152	0.02538
Mn	55	3	He	29.064	0.1854	13626.84	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	29.528	0.1881	14217.48	0.0059	0.01385
Mn	55	3	He	29.377	0.1873	13977.16	0.0059	0.01385
Fe	57	3	He	5790.697	1.6816	123592.11	0.0003	0.003918
Fe	57	3	He	5696.242	1.6542	125004.10	0.0003	0.003918
Fe	57	3	He	5826.091	1.6918	126284.54	0.0003	0.003918
Co	59	3	He	1.705	0.0551	4050.71	0.0305	0.003084
Co	59	3	He	1.547	0.0503	3800.61	0.0305	0.003084
Co	59	3	He	1.524	0.0496	3700.61	0.0305	0.003084
Ni	60	3	He	4.331	0.0471	3460.53	0.0088	0.009003
Ni	60	3	He	3.868	0.043	3250.50	0.0088	0.009003
Ni	60	3	He	3.928	0.0435	3250.50	0.0088	0.009003
Cu	63	3	He	2.198	0.0597	4390.79	0.0249	0.004937
Cu	63	3	He	1.962	0.0539	4070.76	0.0249	0.004937
Cu	63	3	He	2.252	0.0611	4560.92	0.0249	0.004937
Zn	66	3	He	13.429	0.0378	2780.37	0.0025	0.004836
Zn	66	3	He	13.87	0.0389	2940.42	0.0025	0.004836
Zn	66	3	He	15.484	0.0429	3200.46	0.0025	0.004836
As	75	3	He	1.502	0.003	224.00	0.0017	0.0004347
As	75	3	He	1.165	0.0025	186.00	0.0017	0.0004347
As	75	3	He	0.936	0.0021	154.00	0.0017	0.0004347
Sr	88	3	He	6.901	0.0547	3480.54	0.0078	0.0007762
Sr	88	3	He	6.842	0.0543	3500.59	0.0078	0.0007762
Sr	88	3	He	7.455	0.0591	3740.61	0.0078	0.0007762
Mo	98	3	He	0.269	0.0064	410.02	0.022	0.0005162
Mo	98	3	He	0.286	0.0068	440.03	0.022	0.0005162
Mo	98	3	He	0.263	0.0063	400.02	0.022	0.0005162
Ag	107	3	He	0.004	0.0006	40.00	0.0455	0.0004641
Ag	107	3	He	0.014	0.0011	70.00	0.0455	0.0004641
Ag	107	3	He	0.014	0.0011	70.00	0.0455	0.0004641
Cd	111	3	He	0.035	0.0002	14.00	0.0048	5.152E-05
Cd	111	3	He	0.009	0.0001	6.00	0.0048	5.152E-05
Cd	111	3	He	0.035	0.0002	14.00	0.0048	5.152E-05
Sn	120	3	He	0.44	0.0219	1390.12	0.0143	0.01559
Sn	120	3	He	0.505	0.0228	1470.13	0.0143	0.01559
Sn	120	3	He	0.391	0.0212	1340.13	0.0143	0.01559
Sb	121	3	He	0.043	0.0008	50.00	0.0124	0.000258
Sb	121	3	He	0.042	0.0008	50.00	0.0124	0.000258
Sb	121	3	He	0.03	0.0006	40.00	0.0124	0.000258
Ba	137	3	He	14.307	0.0629	4000.76	0.0044	0.000309
Ba	137	3	He	14.635	0.0643	4150.80	0.0044	0.000309
Ba	137	3	He	13.68	0.0602	3810.67	0.0044	0.000309
Tl	205	3	He	0.05	0.0024	530.03	0.0276	0.001005
Tl	205	3	He	0.054	0.0025	550.03	0.0276	0.001005
Tl	205	3	He	0.069	0.0029	650.04	0.0276	0.001005
Pb	208	3	He	5.446	0.2004	24262.95	0.0364	0.002176
Pb	208	3	He	5.698	0.2096	24052.73	0.0364	0.002176
Pb	208	3	He	5.455	0.2007	23962.34	0.0364	0.002176
U	238	3	He	0.399	0.017	3790.69	0.0421	0.00024
U	238	3	He	0.351	0.015	3300.58	0.0421	0.00024
U	238	3	He	0.368	0.0157	3520.63	0.0421	0.00024
Sc	45	1	No Gas			3369310.57		
Sc	45	1	No Gas			3322887.45		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3230311.83		
Ge	72	1	No Gas			1502133.73		
Ge	72	1	No Gas			1479581.23		
Ge	72	1	No Gas			1452892.79		
Sc	45	2	H2			189084.61		
Sc	45	2	H2			197492.07		
Sc	45	2	H2			192662.17		
Ge	72	2	H2			158856.39		
Ge	72	2	H2			161101.87		
Ge	72	2	H2			159584.81		
In	115	2	H2			436256.95		
In	115	2	H2			441889.64		
In	115	2	H2			438634.68		
Sc	45	3	He			41389.35		
Sc	45	3	He			42191.01		
Sc	45	3	He			42984.00		
Ge	72	3	He			73498.15		
Ge	72	3	He			75567.59		
Ge	72	3	He			74644.12		
In	115	3	He			63614.68		
In	115	3	He			64530.38		
In	115	3	He			63354.54		
Tb	159	3	He			287781.60		
Tb	159	3	He			285167.26		
Tb	159	3	He			285712.79		
Bi	209	3	He			222569.18		
Bi	209	3	He			219733.49		
Bi	209	3	He			223891.97		

Quantitation Report

Data File Name	176SMPL.d
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Acq Time	2023-08-10 16:44:06
Sample Name	410-136610-H-6-A @2
Sample Type	Sample
Comment	G3 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

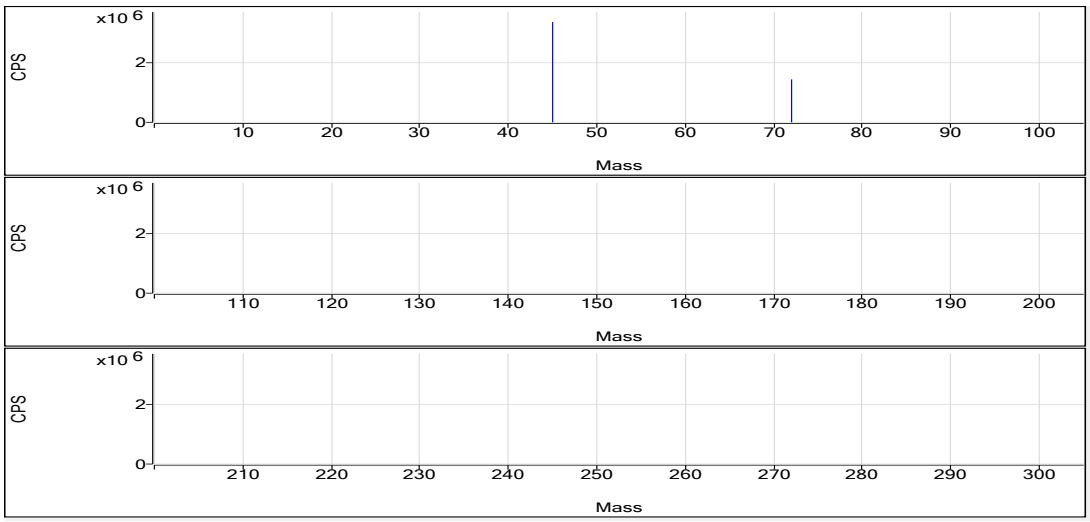
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	1.272	ppb	5.4	2498.22	0.0017	Pulse	0.5000	3
Se	78	72	H2	0.264	ppb	14.4	18.45	0.0001	Pulse	1.5000	3
Na	23	72	He	81.176	ppb	2.1	18248.34	0.2459	Pulse	0.1000	3
Mg	24	72	He	2843.985	ppb	1.0	178286.70	2.4026	Pulse	0.1000	3
Al	27	72	He	30458.766	ppb	1.3	545667.61	7.3536	Pulse	0.1000	3
K	39	72	He	3623.596	ppb	2.3	159120.72	2.1446	Pulse	0.1000	3
Ca	44	72	He	3404.446	ppb	1.6	7965.78	0.1074	Pulse	0.1000	3
Ti	47	72	He	584.071	ppb	2.9	10887.72	0.1467	Pulse	0.1000	3
V	51	72	He	69.460	ppb	0.5	60837.48	0.8199	Pulse	0.5000	3
Cr	52	72	He	50.994	ppb	1.7	59498.60	0.8019	Pulse	0.1000	3
Mn	55	72	He	272.574	ppb	1.5	120411.69	1.6227	Pulse	0.1000	3
Fe	57	72	He	43282.728	ppb	0.8	930780.82	12.5436	Pulse	0.1000	3
Co	59	72	He	10.563	ppb	1.9	24144.12	0.3254	Pulse	0.1000	3
Ni	60	72	He	29.203	ppb	2.9	19720.65	0.2658	Pulse	0.1000	3
Cu	63	72	He	19.596	ppb	2.0	36623.99	0.4936	Pulse	0.1000	3
Zn	66	72	He	70.318	ppb	2.8	13176.40	0.1776	Pulse	0.1000	3
As	75	72	He	17.107	ppb	1.9	2240.19	0.0302	Pulse	0.5000	3
Sr	88	115	He	34.326	ppb	2.6	17134.10	0.2691	Pulse	0.1000	3
Mo	98	115	He	1.070	ppb	2.6	1533.47	0.0241	Pulse	0.1000	3
Ag	107	115	He	0.059	ppb	15.5	200.01	0.0031	Pulse	0.1000	3
Cd	111	115	He	0.177	ppb	14.9	57.33	0.0009	Pulse	0.5000	3
Sn	120	115	He	2.234	ppb	9.1	3020.44	0.0474	Pulse	0.1000	3
Sb	121	115	He	0.465	ppb	12.7	383.35	0.0060	Pulse	0.1000	3
Ba	137	115	He	73.222	ppb	1.9	20415.70	0.3206	Pulse	0.1000	3
Tl	205	209	He	0.258	ppb	0.3	1806.85	0.0082	Pulse	0.1000	3
Pb	208	209	He	31.810	ppb	0.6	257127.32	1.1600	Pulse	0.1000	3
U	238	209	He	2.694	ppb	0.4	25172.02	0.1136	Pulse	0.1000	3

ISTD Table:

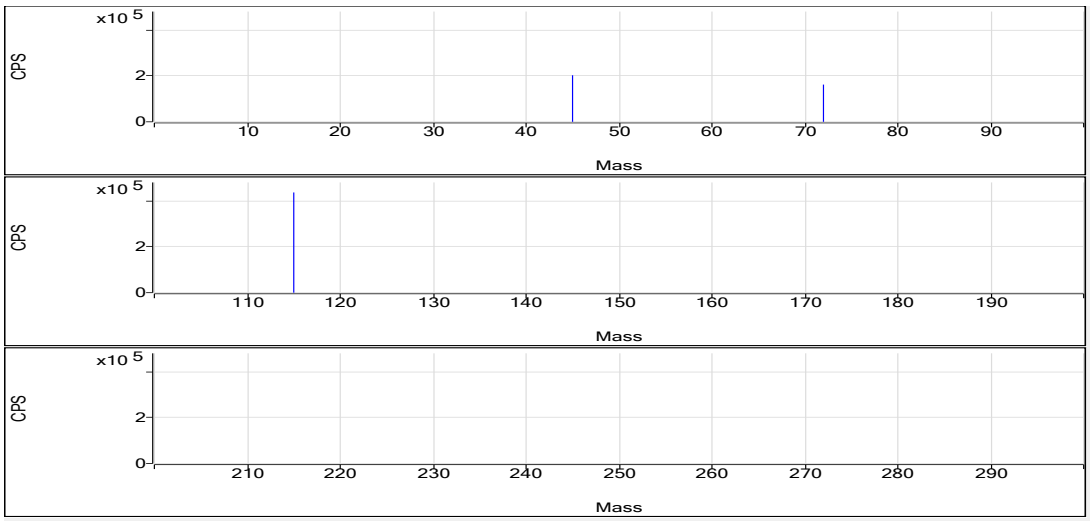
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3398282.35	2.0	104.8	Pulse	0.1000	3
No Gas	Ge	72	1454363.99	1.4	101.0	Pulse	0.1000	3
H2	Sc	45	202826.52	2.2	103.8	Pulse	0.1000	3
H2	Ge	72	162210.21	1.8	99.5	Pulse	0.1000	3
H2	In	115	436747.08	1.5	100.8	Pulse	0.1000	3
He	Sc	45	43130.95	1.1	107.9	Pulse	0.1000	3
He	Ge	72	74207.89	1.3	102.7	Pulse	0.1000	3
He	In	115	63671.63	0.1	98.6	Pulse	0.1000	3
He	Tb	159	287581.68	0.2	100.6	Pulse	0.1000	3
He	Bi	209	221669.18	0.4	99.8	Pulse	0.1000	3

No Gas

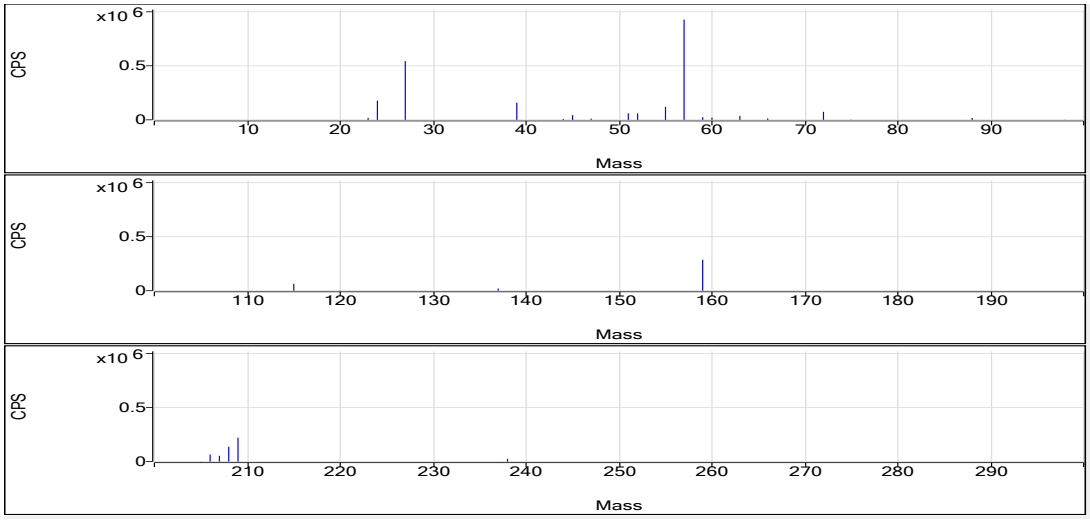


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	1.194	0.0016	2388.20	0.0013	4.694E-05
Be	9	1	No Gas	1.305	0.0018	2544.22	0.0013	4.694E-05
Be	9	1	No Gas	1.318	0.0018	2562.23	0.0013	4.694E-05
Se	78	2	H2	0.303	0.0001	20.67	0.0004	1.089E-05
Se	78	2	H2	0.262	0.0001	18.67	0.0004	1.089E-05
Se	78	2	H2	0.227	0.0001	16.00	0.0004	1.089E-05
Na	23	3	He	79.922	0.2437	17851.20	0.0017	0.1065
Na	23	3	He	83.065	0.2491	18511.98	0.0017	0.1065
Na	23	3	He	80.541	0.2448	18381.84	0.0017	0.1065
Mg	24	3	He	2868.442	2.4232	177468.42	0.0008	0.004846
Mg	24	3	He	2814.617	2.3779	176678.08	0.0008	0.004846
Mg	24	3	He	2848.896	2.4068	180713.59	0.0008	0.004846
Al	27	3	He	30834.226	7.4443	545189.68	0.0002	0.001063
Al	27	3	He	30047.303	7.2543	539005.70	0.0002	0.001063
Al	27	3	He	30494.769	7.3623	552807.45	0.0002	0.001063
K	39	3	He	3715.693	2.1955	160789.33	0.0006	0.1436
K	39	3	He	3600.067	2.1316	158384.01	0.0006	0.1436
K	39	3	He	3555.027	2.1068	158188.83	0.0006	0.1436
Ca	44	3	He	3417.748	0.1078	7892.35	0	0.001611
Ca	44	3	He	3450.428	0.1088	8082.57	0	0.001611
Ca	44	3	He	3345.16	0.1055	7922.41	0	0.001611
Ti	47	3	He	592.632	0.1489	10904.39	0.0003	0.0002737
Ti	47	3	He	594.857	0.1495	11104.46	0.0003	0.0002737
Ti	47	3	He	564.724	0.1419	10654.32	0.0003	0.0002737
V	51	3	He	69.769	0.8235	60307.29	0.0117	0.007326
V	51	3	He	69.492	0.8202	60943.95	0.0117	0.007326
V	51	3	He	69.12	0.8159	61261.19	0.0117	0.007326
Cr	52	3	He	51.833	0.8147	59662.18	0.0152	0.02538
Cr	52	3	He	51.03	0.8024	59622.29	0.0152	0.02538
Cr	52	3	He	50.12	0.7886	59211.34	0.0152	0.02538
Mn	55	3	He	276.054	1.6432	120344.50	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	268.041	1.5959	118580.81	0.0059	0.01385
Mn	55	3	He	273.629	1.6289	122309.77	0.0059	0.01385
Fe	57	3	He	43686.084	12.6604	927200.69	0.0003	0.003918
Fe	57	3	He	42994.398	12.46	925798.19	0.0003	0.003918
Fe	57	3	He	43167.703	12.5102	939343.58	0.0003	0.003918
Co	59	3	He	10.492	0.3232	23670.07	0.0305	0.003084
Co	59	3	He	10.791	0.3323	24691.79	0.0305	0.003084
Co	59	3	He	10.406	0.3206	24070.51	0.0305	0.003084
Ni	60	3	He	29.495	0.2684	19653.90	0.0088	0.009003
Ni	60	3	He	29.87	0.2717	20184.67	0.0088	0.009003
Ni	60	3	He	28.243	0.2573	19323.37	0.0088	0.009003
Cu	63	3	He	20.022	0.5042	36927.88	0.0249	0.004937
Cu	63	3	He	19.283	0.4858	36095.93	0.0249	0.004937
Cu	63	3	He	19.481	0.4907	36848.16	0.0249	0.004937
Zn	66	3	He	71.32	0.1801	13186.32	0.0025	0.004836
Zn	66	3	He	71.585	0.1807	13426.63	0.0025	0.004836
Zn	66	3	He	68.05	0.172	12916.26	0.0025	0.004836
As	75	3	He	16.883	0.0298	2182.18	0.0017	0.0004347
As	75	3	He	17.473	0.0308	2290.20	0.0017	0.0004347
As	75	3	He	16.966	0.0299	2248.19	0.0017	0.0004347
Sr	88	3	He	33.368	0.2616	16670.19	0.0078	0.0007762
Sr	88	3	He	34.461	0.2702	17190.81	0.0078	0.0007762
Sr	88	3	He	35.148	0.2755	17541.30	0.0078	0.0007762
Mo	98	3	He	1.096	0.0246	1570.14	0.022	0.0005162
Mo	98	3	He	1.04	0.0234	1490.12	0.022	0.0005162
Mo	98	3	He	1.075	0.0242	1540.14	0.022	0.0005162
Ag	107	3	He	0.062	0.0033	210.01	0.0455	0.0004641
Ag	107	3	He	0.066	0.0035	220.01	0.0455	0.0004641
Ag	107	3	He	0.048	0.0027	170.01	0.0455	0.0004641
Cd	111	3	He	0.192	0.001	62.00	0.0048	5.152E-05
Cd	111	3	He	0.192	0.001	62.00	0.0048	5.152E-05
Cd	111	3	He	0.146	0.0008	48.00	0.0048	5.152E-05
Sn	120	3	He	2.429	0.0502	3200.49	0.0143	0.01559
Sn	120	3	He	2.247	0.0476	3030.45	0.0143	0.01559
Sn	120	3	He	2.025	0.0445	2830.39	0.0143	0.01559
Sb	121	3	He	0.397	0.0052	330.02	0.0124	0.000258
Sb	121	3	He	0.499	0.0064	410.02	0.0124	0.000258
Sb	121	3	He	0.498	0.0064	410.02	0.0124	0.000258
Ba	137	3	He	72.017	0.3154	20095.23	0.0044	0.000309
Ba	137	3	He	72.944	0.3194	20325.59	0.0044	0.000309
Ba	137	3	He	74.706	0.3271	20826.28	0.0044	0.000309
Tl	205	3	He	0.258	0.0081	1800.18	0.0276	0.001005
Tl	205	3	He	0.258	0.0081	1810.21	0.0276	0.001005
Tl	205	3	He	0.259	0.0082	1810.17	0.0276	0.001005
Pb	208	3	He	31.646	1.154	136369.79	0.0364	0.002176
Pb	208	3	He	31.767	1.1584	139401.29	0.0364	0.002176
Pb	208	3	He	32.015	1.1674	137419.38	0.0364	0.002176
U	238	3	He	2.682	0.1131	24974.93	0.0421	0.00024
U	238	3	He	2.694	0.1136	25285.74	0.0421	0.00024
U	238	3	He	2.705	0.114	25255.38	0.0421	0.00024
Sc	45	1	No Gas			3473539.64		
Sc	45	1	No Gas			3379474.01		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3341833.39		
Ge	72	1	No Gas			1478156.23		
Ge	72	1	No Gas			1444041.23		
Ge	72	1	No Gas			1440894.51		
Sc	45	2	H2			200415.00		
Sc	45	2	H2			207925.37		
Sc	45	2	H2			200139.18		
Ge	72	2	H2			160202.92		
Ge	72	2	H2			165458.45		
Ge	72	2	H2			160969.25		
In	115	2	H2			432122.14		
In	115	2	H2			444382.81		
In	115	2	H2			433736.28		
Sc	45	3	He			43314.76		
Sc	45	3	He			42612.79		
Sc	45	3	He			43465.29		
Ge	72	3	He			73236.19		
Ge	72	3	He			74301.47		
Ge	72	3	He			75086.01		
In	115	3	He			63745.12		
In	115	3	He			63655.27		
In	115	3	He			63685.17		
Tb	159	3	He			287340.58		
Tb	159	3	He			287079.84		
Tb	159	3	He			288324.62		
Bi	209	3	He			220914.94		
Bi	209	3	He			222639.66		
Bi	209	3	He			221452.95		

Quantitation Report

Data File Name	177SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 16:46:07
Sample Name	410-136610-H-6-A @10
Sample Type	Sample
Comment	G3 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

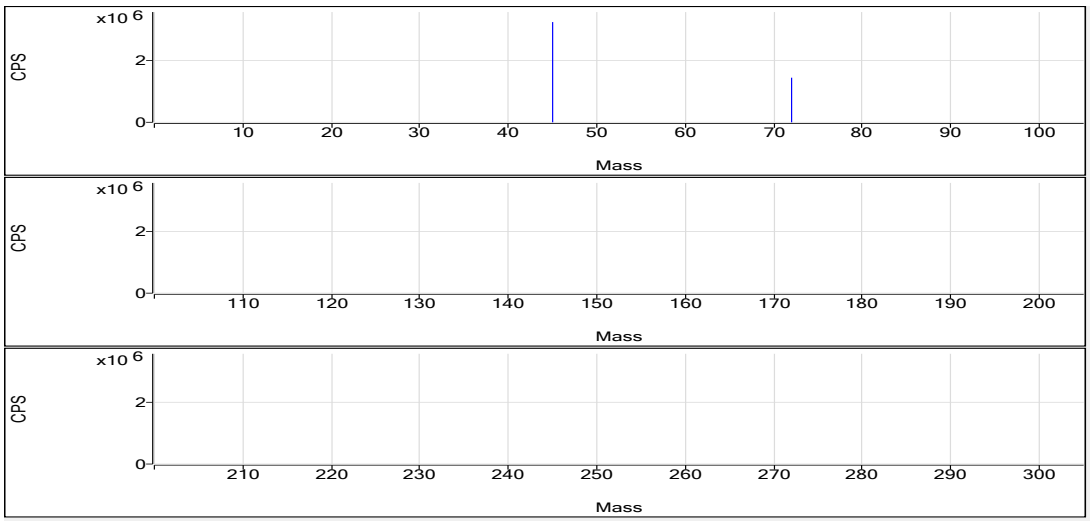
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.233	ppb	6.3	509.34	0.0004	Pulse	0.5000	3
Se	78	72	H2	0.044	ppb	54.5	4.44	0.0000	Pulse	1.5000	3
Na	23	72	He	19.339	ppb	9.4	10303.90	0.1397	Pulse	0.1000	3
Mg	24	72	He	520.883	ppb	2.7	32750.18	0.4440	Pulse	0.1000	3
Al	27	72	He	5621.839	ppb	0.7	100200.84	1.3581	Pulse	0.1000	3
K	39	72	He	670.332	ppb	1.4	37909.34	0.5138	Pulse	0.1000	3
Ca	44	72	He	626.480	ppb	8.6	1553.47	0.0211	Pulse	0.1000	3
Ti	47	72	He	102.825	ppb	10.9	1923.53	0.0261	Pulse	0.1000	3
V	51	72	He	12.848	ppb	1.1	11627.98	0.1576	Pulse	0.5000	3
Cr	52	72	He	9.331	ppb	3.4	12352.31	0.1675	Pulse	0.1000	3
Mn	55	72	He	48.587	ppb	1.5	22177.57	0.3006	Pulse	0.1000	3
Fe	57	72	He	7863.014	ppb	0.8	168343.45	2.2819	Pulse	0.1000	3
Co	59	72	He	1.981	ppb	4.8	4684.25	0.0635	Pulse	0.1000	3
Ni	60	72	He	6.010	ppb	4.0	4564.19	0.0618	Pulse	0.1000	3
Cu	63	72	He	3.579	ppb	2.2	6948.55	0.0942	Pulse	0.1000	3
Zn	66	72	He	13.489	ppb	8.2	2800.37	0.0380	Pulse	0.1000	3
As	75	72	He	3.272	ppb	11.1	452.01	0.0061	Pulse	0.5000	3
Sr	88	115	He	6.287	ppb	6.9	3183.79	0.0499	Pulse	0.1000	3
Mo	98	115	He	0.285	ppb	18.0	433.36	0.0068	Pulse	0.1000	3
Ag	107	115	He	0.009	ppb	57.0	56.67	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.024	ppb	68.5	10.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.256	ppb	17.9	1226.77	0.0192	Pulse	0.1000	3
Sb	121	115	He	0.084	ppb	56.5	83.33	0.0013	Pulse	0.1000	3
Ba	137	115	He	13.122	ppb	8.2	3680.62	0.0577	Pulse	0.1000	3
Tl	205	209	He	0.037	ppb	36.5	443.36	0.0020	Pulse	0.1000	3
Pb	208	209	He	5.829	ppb	3.5	47091.19	0.2143	Pulse	0.1000	3
U	238	209	He	0.497	ppb	6.1	4644.35	0.0211	Pulse	0.1000	3

ISTD Table:

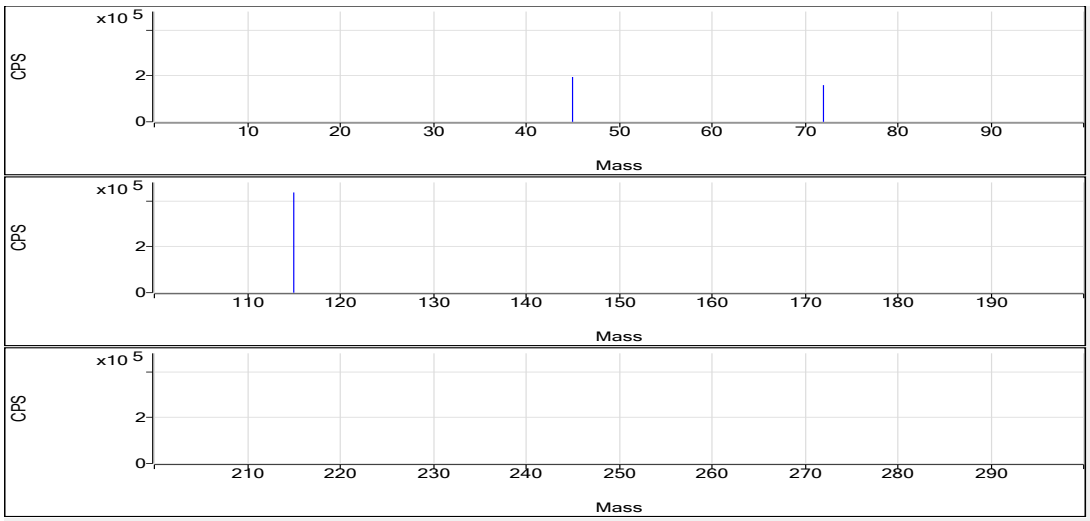
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3237962.14	1.3	99.9	Pulse	0.1000	3
No Gas	Ge	72	1440905.08	1.4	100.1	Pulse	0.1000	3
H2	Sc	45	195788.34	0.8	100.2	Pulse	0.1000	3
H2	Ge	72	160314.56	2.1	98.3	Pulse	0.1000	3
H2	In	115	437872.34	2.7	101.1	Pulse	0.1000	3
He	Sc	45	41683.48	1.7	104.2	Pulse	0.1000	3
He	Ge	72	73775.81	1.1	102.1	Pulse	0.1000	3
He	In	115	63782.92	0.3	98.7	Pulse	0.1000	3
He	Tb	159	280342.67	0.1	98.0	Pulse	0.1000	3
He	Bi	209	219801.18	2.0	98.9	Pulse	0.1000	3

No Gas

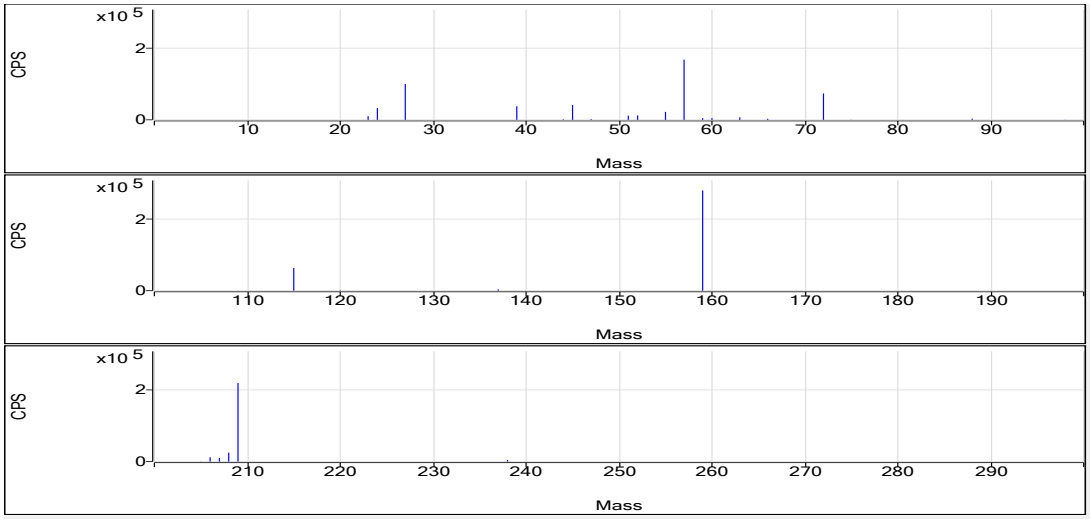


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.217	0.0003	484.01	0.0013	4.694E-05
Be	9	1	No Gas	0.238	0.0004	520.01	0.0013	4.694E-05
Be	9	1	No Gas	0.245	0.0004	524.01	0.0013	4.694E-05
Se	78	2	H2	0.024	0	3.33	0.0004	1.089E-05
Se	78	2	H2	0.036	0	4.00	0.0004	1.089E-05
Se	78	2	H2	0.07	0	6.00	0.0004	1.089E-05
Na	23	3	He	18.056	0.1375	10273.85	0.0017	0.1065
Na	23	3	He	21.429	0.1433	10514.10	0.0017	0.1065
Na	23	3	He	18.533	0.1383	10123.76	0.0017	0.1065
Mg	24	3	He	504.913	0.4305	32175.82	0.0008	0.004846
Mg	24	3	He	527.23	0.4494	32977.16	0.0008	0.004846
Mg	24	3	He	530.506	0.4521	33097.55	0.0008	0.004846
Al	27	3	He	5650.079	1.365	102008.61	0.0002	0.001063
Al	27	3	He	5576.588	1.3472	98869.41	0.0002	0.001063
Al	27	3	He	5638.849	1.3622	99724.49	0.0002	0.001063
K	39	3	He	681.313	0.5199	38851.85	0.0006	0.1436
K	39	3	He	664.191	0.5104	37458.21	0.0006	0.1436
K	39	3	He	665.492	0.5111	37417.95	0.0006	0.1436
Ca	44	3	He	564.241	0.0191	1430.12	0	0.001611
Ca	44	3	He	654.523	0.0219	1610.15	0	0.001611
Ca	44	3	He	660.676	0.0221	1620.15	0	0.001611
Ti	47	3	He	111.503	0.0282	2110.21	0.0003	0.0002737
Ti	47	3	He	90.202	0.0229	1680.17	0.0003	0.0002737
Ti	47	3	He	106.772	0.027	1980.21	0.0003	0.0002737
V	51	3	He	12.765	0.1566	11706.71	0.0117	0.007326
V	51	3	He	13.008	0.1595	11704.70	0.0117	0.007326
V	51	3	He	12.771	0.1567	11472.53	0.0117	0.007326
Cr	52	3	He	8.97	0.162	12105.42	0.0152	0.02538
Cr	52	3	He	9.578	0.1712	12565.86	0.0152	0.02538
Cr	52	3	He	9.444	0.1692	12385.66	0.0152	0.02538
Mn	55	3	He	47.862	0.2964	22147.68	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	48.551	0.3004	22047.17	0.0059	0.01385
Mn	55	3	He	49.35	0.3051	22337.87	0.0059	0.01385
Fe	57	3	He	7794.876	2.2622	169063.43	0.0003	0.003918
Fe	57	3	He	7915.281	2.2971	168578.42	0.0003	0.003918
Fe	57	3	He	7878.886	2.2865	167388.51	0.0003	0.003918
Co	59	3	He	1.882	0.0605	4520.83	0.0305	0.003084
Co	59	3	He	2.07	0.0662	4860.97	0.0305	0.003084
Co	59	3	He	1.99	0.0638	4670.94	0.0305	0.003084
Ni	60	3	He	6.282	0.0642	4800.91	0.0088	0.009003
Ni	60	3	He	5.92	0.0611	4480.86	0.0088	0.009003
Ni	60	3	He	5.828	0.0603	4410.81	0.0088	0.009003
Cu	63	3	He	3.581	0.0942	7041.92	0.0249	0.004937
Cu	63	3	He	3.655	0.0961	7051.87	0.0249	0.004937
Cu	63	3	He	3.501	0.0922	6751.85	0.0249	0.004937
Zn	66	3	He	12.303	0.0351	2620.33	0.0025	0.004836
Zn	66	3	He	14.506	0.0405	2970.39	0.0025	0.004836
Zn	66	3	He	13.658	0.0384	2810.40	0.0025	0.004836
As	75	3	He	3.412	0.0064	476.01	0.0017	0.0004347
As	75	3	He	3.542	0.0066	484.01	0.0017	0.0004347
As	75	3	He	2.86	0.0054	396.01	0.0017	0.0004347
Sr	88	3	He	6.608	0.0524	3340.47	0.0078	0.0007762
Sr	88	3	He	5.797	0.0461	2950.41	0.0078	0.0007762
Sr	88	3	He	6.456	0.0512	3260.49	0.0078	0.0007762
Mo	98	3	He	0.226	0.0055	350.01	0.022	0.0005162
Mo	98	3	He	0.317	0.0075	480.03	0.022	0.0005162
Mo	98	3	He	0.312	0.0074	470.03	0.022	0.0005162
Ag	107	3	He	0.01	0.0009	60.00	0.0455	0.0004641
Ag	107	3	He	0.004	0.0006	40.00	0.0455	0.0004641
Ag	107	3	He	0.014	0.0011	70.00	0.0455	0.0004641
Cd	111	3	He	0.022	0.0002	10.00	0.0048	5.152E-05
Cd	111	3	He	0.009	0.0001	6.00	0.0048	5.152E-05
Cd	111	3	He	0.042	0.0003	16.00	0.0048	5.152E-05
Sn	120	3	He	0.261	0.0193	1230.09	0.0143	0.01559
Sn	120	3	He	0.298	0.0198	1270.11	0.0143	0.01559
Sn	120	3	He	0.208	0.0185	1180.11	0.0143	0.01559
Sb	121	3	He	0.03	0.0006	40.00	0.0124	0.000258
Sb	121	3	He	0.118	0.0017	110.00	0.0124	0.000258
Sb	121	3	He	0.106	0.0016	100.00	0.0124	0.000258
Ba	137	3	He	13.887	0.0611	3890.65	0.0044	0.000309
Ba	137	3	He	11.895	0.0523	3350.54	0.0044	0.000309
Ba	137	3	He	13.584	0.0597	3800.67	0.0044	0.000309
Tl	205	3	He	0.042	0.0022	470.03	0.0276	0.001005
Tl	205	3	He	0.047	0.0023	500.03	0.0276	0.001005
Tl	205	3	He	0.022	0.0016	360.02	0.0276	0.001005
Pb	208	3	He	6.025	0.2215	25785.92	0.0364	0.002176
Pb	208	3	He	5.843	0.2149	24724.02	0.0364	0.002176
Pb	208	3	He	5.618	0.2067	24282.98	0.0364	0.002176
U	238	3	He	0.476	0.0203	4410.96	0.0421	0.00024
U	238	3	He	0.531	0.0226	4901.09	0.0421	0.00024
U	238	3	He	0.483	0.0206	4621.00	0.0421	0.00024
Sc	45	1	No Gas			3271901.51		
Sc	45	1	No Gas			3251440.26		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3190544.64		
Ge	72	1	No Gas			1456669.98		
Ge	72	1	No Gas			1447917.63		
Ge	72	1	No Gas			1418127.64		
Sc	45	2	H2			196916.56		
Sc	45	2	H2			196530.00		
Sc	45	2	H2			193918.45		
Ge	72	2	H2			164087.71		
Ge	72	2	H2			159465.83		
Ge	72	2	H2			157390.14		
In	115	2	H2			443133.86		
In	115	2	H2			445959.45		
In	115	2	H2			424523.70		
Sc	45	3	He			40847.47		
Sc	45	3	He			42181.50		
Sc	45	3	He			42021.46		
Ge	72	3	He			74733.83		
Ge	72	3	He			73387.79		
Ge	72	3	He			73205.82		
In	115	3	He			63725.44		
In	115	3	He			64017.26		
In	115	3	He			63634.76		
Tb	159	3	He			280617.95		
Tb	159	3	He			279939.88		
Tb	159	3	He			280470.19		
Bi	209	3	He			217672.71		
Bi	209	3	He			216910.11		
Bi	209	3	He			224820.72		

Quantitation Report

Data File Name	178SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 16:48:08
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

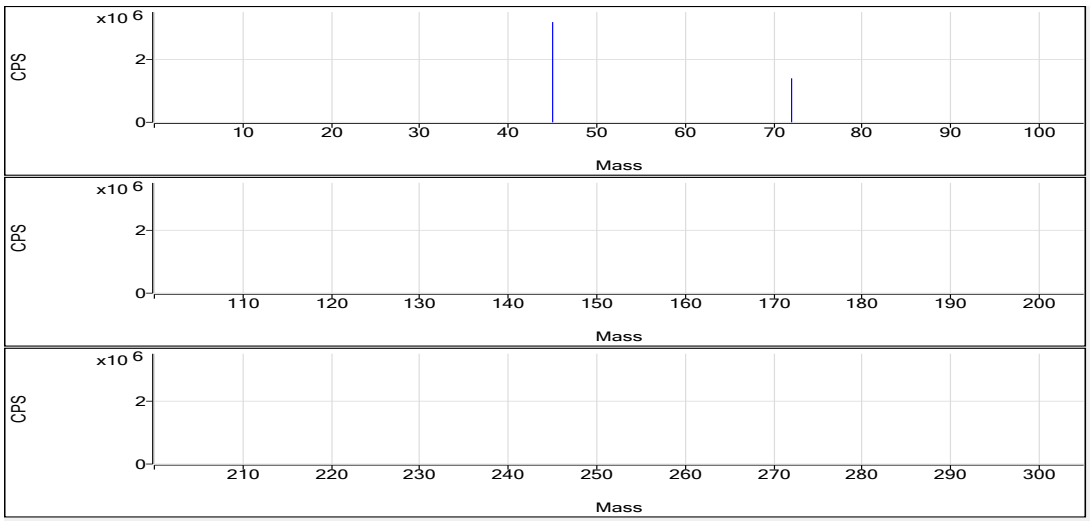
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.004	ppb	N/A	58.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.001	ppb	2111.3	1.78	0.0000	Pulse	1.5000	3
Na	23	72	He	5.767	ppb	25.2	8396.02	0.1164	Pulse	0.1000	3
Mg	24	72	He	6.419	ppb	10.9	740.04	0.0103	Pulse	0.1000	3
Al	27	72	He	15.324	ppb	21.4	343.35	0.0048	Pulse	0.1000	3
K	39	72	He	8.126	ppb	256.3	10680.90	0.1481	Pulse	0.1000	3
Ca	44	72	He	11.968	ppb	237.2	143.34	0.0020	Pulse	0.1000	3
Ti	47	72	He	-0.167	ppb	N/A	16.67	0.0002	Pulse	0.1000	3
V	51	72	He	0.082	ppb	107.8	597.35	0.0083	Pulse	0.5000	3
Cr	52	72	He	0.103	ppb	104.5	1943.54	0.0269	Pulse	0.1000	3
Mn	55	72	He	-0.936	ppb	N/A	600.04	0.0083	Pulse	0.1000	3
Fe	57	72	He	23.003	ppb	15.1	763.38	0.0106	Pulse	0.1000	3
Co	59	72	He	0.044	ppb	73.9	320.02	0.0044	Pulse	0.1000	3
Ni	60	72	He	0.993	ppb	19.2	1280.11	0.0177	Pulse	0.1000	3
Cu	63	72	He	0.025	ppb	225.4	400.02	0.0056	Pulse	0.1000	3
Zn	66	72	He	-0.404	ppb	N/A	276.68	0.0038	Pulse	0.1000	3
As	75	72	He	0.075	ppb	90.6	40.67	0.0006	Pulse	0.5000	3
Sr	88	115	He	0.056	ppb	57.0	76.67	0.0012	Pulse	0.1000	3
Mo	98	115	He	0.041	ppb	60.2	90.00	0.0014	Pulse	0.1000	3
Ag	107	115	He	0.005	ppb	48.8	43.33	0.0007	Pulse	0.1000	3
Cd	111	115	He	-0.004	ppb	N/A	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.056	ppb	56.8	1036.74	0.0164	Pulse	0.1000	3
Sb	121	115	He	0.005	ppb	12.9	20.00	0.0003	Pulse	0.1000	3
Ba	137	115	He	0.063	ppb	92.5	36.67	0.0006	Pulse	0.1000	3
Tl	205	209	He	0.009	ppb	199.6	273.35	0.0013	Pulse	0.1000	3
Pb	208	209	He	-0.002	ppb	N/A	453.36	0.0021	Pulse	0.1000	3
U	238	209	He	0.007	ppb	72.5	113.34	0.0005	Pulse	0.1000	3

ISTD Table:

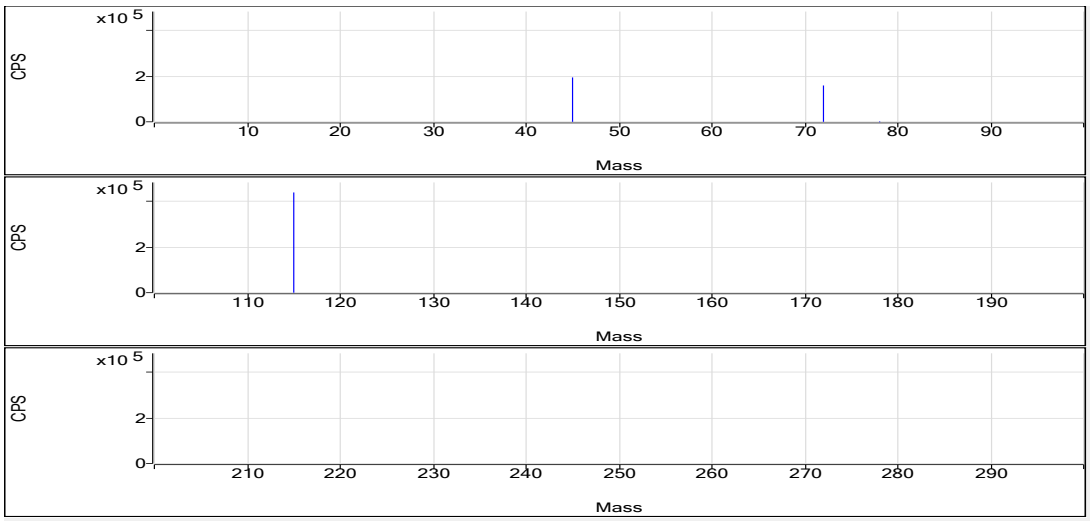
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3166487.66	1.0	97.7	Pulse	0.1000	3
No Gas	Ge	72	1389185.71	0.8	96.5	Pulse	0.1000	3
H2	Sc	45	194214.50	1.9	99.4	Pulse	0.1000	3
H2	Ge	72	158986.65	2.6	97.5	Pulse	0.1000	3
H2	In	115	438581.63	2.5	101.2	Pulse	0.1000	3
He	Sc	45	41703.36	0.9	104.3	Pulse	0.1000	3
He	Ge	72	72143.84	1.0	99.8	Pulse	0.1000	3
He	In	115	63255.56	2.4	97.9	Pulse	0.1000	3
He	Tb	159	280927.80	1.4	98.2	Pulse	0.1000	3
He	Bi	209	216970.41	0.8	97.7	Pulse	0.1000	3

No Gas

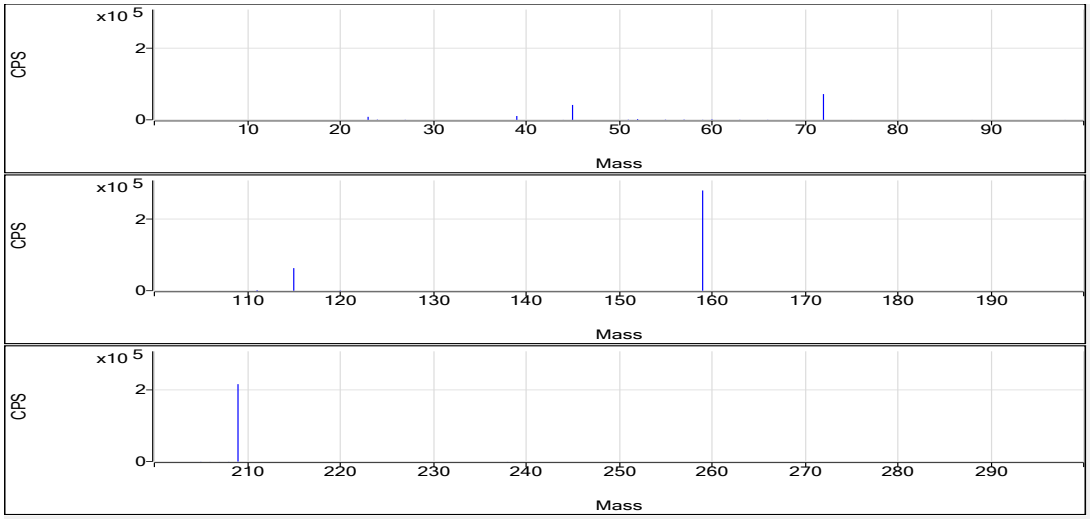


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.006	0	54.00	0.0013	4.694E-05
Be	9	1	No Gas	0.01	0.0001	82.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.014	0	40.00	0.0013	4.694E-05
Se	78	2	H2	0.014	0	2.67	0.0004	1.089E-05
Se	78	2	H2	-0.007	0	1.33	0.0004	1.089E-05
Se	78	2	H2	-0.006	0	1.33	0.0004	1.089E-05
Na	23	3	He	4.698	0.1145	8182.53	0.0017	0.1065
Na	23	3	He	7.422	0.1192	8692.91	0.0017	0.1065
Na	23	3	He	5.181	0.1154	8312.62	0.0017	0.1065
Mg	24	3	He	6.87	0.0106	760.04	0.0008	0.004846
Mg	24	3	He	6.777	0.0106	770.04	0.0008	0.004846
Mg	24	3	He	5.61	0.0096	690.04	0.0008	0.004846
Al	27	3	He	18.791	0.0056	400.02	0.0002	0.001063
Al	27	3	He	14.913	0.0047	340.02	0.0002	0.001063
Al	27	3	He	12.269	0.004	290.01	0.0002	0.001063
K	39	3	He	29.199	0.1598	11414.73	0.0006	0.1436
K	39	3	He	-12.445	0.1368	9973.71	0.0006	0.1436
K	39	3	He	7.625	0.1479	10654.25	0.0006	0.1436
Ca	44	3	He	-20.321	0.001	70.00	0	0.001611
Ca	44	3	He	23.194	0.0023	170.01	0	0.001611
Ca	44	3	He	33.03	0.0026	190.01	0	0.001611
Ti	47	3	He	0.583	0.0004	30.00	0.0003	0.0002737
Ti	47	3	He	-0.545	0.0001	10.00	0.0003	0.0002737
Ti	47	3	He	-0.538	0.0001	10.00	0.0003	0.0002737
V	51	3	He	0.183	0.0095	676.02	0.0117	0.007326
V	51	3	He	0.016	0.0075	548.01	0.0117	0.007326
V	51	3	He	0.048	0.0079	568.02	0.0117	0.007326
Cr	52	3	He	0.227	0.0288	2060.23	0.0152	0.02538
Cr	52	3	He	0.035	0.0259	1890.20	0.0152	0.02538
Cr	52	3	He	0.046	0.0261	1880.20	0.0152	0.02538
Mn	55	3	He	-0.569	0.0105	750.05	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-1.116	0.0073	530.03	0.0059	0.01385
Mn	55	3	He	-1.124	0.0072	520.03	0.0059	0.01385
Fe	57	3	He	25.611	0.0113	810.05	0.0003	0.003918
Fe	57	3	He	24.346	0.011	800.05	0.0003	0.003918
Fe	57	3	He	19.051	0.0094	680.04	0.0003	0.003918
Co	59	3	He	0.059	0.0049	350.02	0.0305	0.003084
Co	59	3	He	0.007	0.0033	240.01	0.0305	0.003084
Co	59	3	He	0.067	0.0051	370.02	0.0305	0.003084
Ni	60	3	He	0.839	0.0164	1170.09	0.0088	0.009003
Ni	60	3	He	1.206	0.0196	1430.13	0.0088	0.009003
Ni	60	3	He	0.933	0.0172	1240.10	0.0088	0.009003
Cu	63	3	He	0.088	0.0071	510.03	0.0249	0.004937
Cu	63	3	He	0	0.0049	360.02	0.0249	0.004937
Cu	63	3	He	-0.014	0.0046	330.02	0.0249	0.004937
Zn	66	3	He	0.139	0.0052	370.02	0.0025	0.004836
Zn	66	3	He	-0.852	0.0027	200.01	0.0025	0.004836
Zn	66	3	He	-0.5	0.0036	260.01	0.0025	0.004836
As	75	3	He	0.136	0.0007	48.00	0.0017	0.0004347
As	75	3	He	0.002	0.0004	32.00	0.0017	0.0004347
As	75	3	He	0.085	0.0006	42.00	0.0017	0.0004347
Sr	88	3	He	0.081	0.0014	90.00	0.0078	0.0007762
Sr	88	3	He	0.067	0.0013	80.00	0.0078	0.0007762
Sr	88	3	He	0.02	0.0009	60.00	0.0078	0.0007762
Mo	98	3	He	0.033	0.0013	80.00	0.022	0.0005162
Mo	98	3	He	0.021	0.001	60.00	0.022	0.0005162
Mo	98	3	He	0.068	0.002	130.01	0.022	0.0005162
Ag	107	3	He	0.004	0.0006	40.00	0.0455	0.0004641
Ag	107	3	He	0.008	0.0008	50.00	0.0455	0.0004641
Ag	107	3	He	0.003	0.0006	40.00	0.0455	0.0004641
Cd	111	3	He	-0.011	0	0.00	0.0048	5.152E-05
Cd	111	3	He	0.01	0.0001	6.00	0.0048	5.152E-05
Cd	111	3	He	-0.011	0	0.00	0.0048	5.152E-05
Sn	120	3	He	0.093	0.0169	1080.08	0.0143	0.01559
Sn	120	3	He	0.035	0.0161	990.07	0.0143	0.01559
Sn	120	3	He	0.041	0.0162	1040.08	0.0143	0.01559
Sb	121	3	He	0.004	0.0003	20.00	0.0124	0.000258
Sb	121	3	He	0.005	0.0003	20.00	0.0124	0.000258
Sb	121	3	He	0.004	0.0003	20.00	0.0124	0.000258
Ba	137	3	He	0.072	0.0006	40.00	0.0044	0.000309
Ba	137	3	He	0.115	0.0008	50.00	0.0044	0.000309
Ba	137	3	He	0	0.0003	20.00	0.0044	0.000309
Tl	205	3	He	0.015	0.0014	310.01	0.0276	0.001005
Tl	205	3	He	-0.011	0.0007	150.01	0.0276	0.001005
Tl	205	3	He	0.024	0.0017	360.02	0.0276	0.001005
Pb	208	3	He	-0.002	0.0021	240.01	0.0364	0.002176
Pb	208	3	He	-0.008	0.0019	180.01	0.0364	0.002176
Pb	208	3	He	0.003	0.0023	200.01	0.0364	0.002176
U	238	3	He	0.012	0.0007	160.01	0.0421	0.00024
U	238	3	He	0.006	0.0005	110.00	0.0421	0.00024
U	238	3	He	0.002	0.0003	70.00	0.0421	0.00024
Sc	45	1	No Gas			3198846.83		
Sc	45	1	No Gas			3163712.77		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3136903.39		
Ge	72	1	No Gas			1401098.89		
Ge	72	1	No Gas			1379794.51		
Ge	72	1	No Gas			1386663.73		
Sc	45	2	H2			196634.04		
Sc	45	2	H2			195991.15		
Sc	45	2	H2			190018.30		
Ge	72	2	H2			163075.76		
Ge	72	2	H2			159079.12		
Ge	72	2	H2			154805.07		
In	115	2	H2			449388.00		
In	115	2	H2			439228.20		
In	115	2	H2			427128.70		
Sc	45	3	He			41269.08		
Sc	45	3	He			41890.38		
Sc	45	3	He			41950.62		
Ge	72	3	He			71447.10		
Ge	72	3	He			72923.91		
Ge	72	3	He			72060.50		
In	115	3	He			63885.87		
In	115	3	He			61566.05		
In	115	3	He			64339.02		
Tb	159	3	He			284200.02		
Tb	159	3	He			276624.92		
Tb	159	3	He			281958.47		
Bi	209	3	He			218576.52		
Bi	209	3	He			217072.81		
Bi	209	3	He			215261.91		

Quantitation Report

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Sample Type	Sample
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

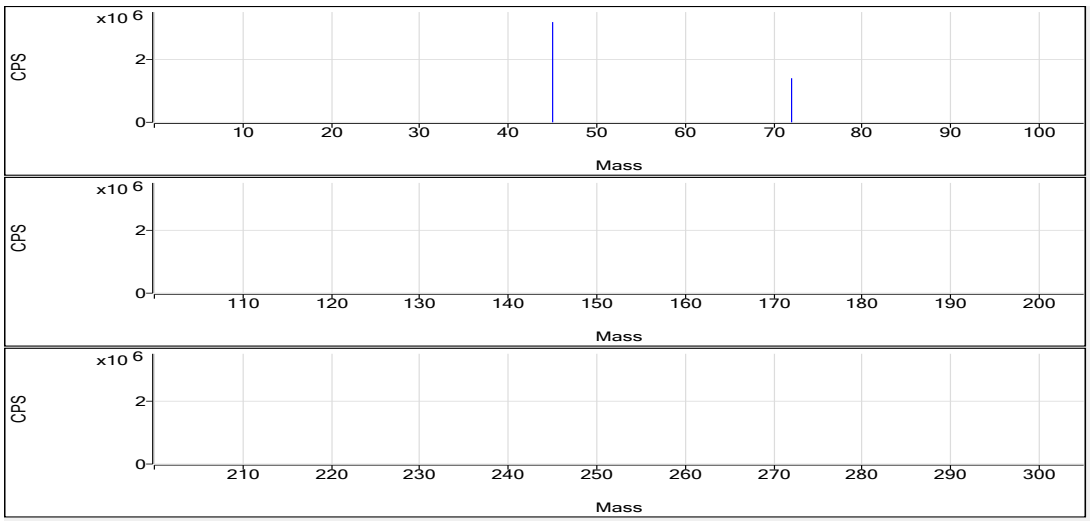
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.007	ppb	N/A	52.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.027	ppb	85.9	3.33	0.0000	Pulse	1.5000	3
Na	23	72	He	6.251	ppb	58.3	8659.42	0.1172	Pulse	0.1000	3
Mg	24	72	He	6.123	ppb	11.4	740.04	0.0100	Pulse	0.1000	3
Al	27	72	He	17.265	ppb	21.3	386.68	0.0052	Pulse	0.1000	3
K	39	72	He	7.739	ppb	240.2	10934.44	0.1479	Pulse	0.1000	3
Ca	44	72	He	11.942	ppb	142.0	146.68	0.0020	Pulse	0.1000	3
Ti	47	72	He	-0.010	ppb	N/A	20.00	0.0003	Pulse	0.1000	3
V	51	72	He	0.012	ppb	411.7	551.35	0.0075	Pulse	0.5000	3
Cr	52	72	He	0.066	ppb	93.0	1950.20	0.0264	Pulse	0.1000	3
Mn	55	72	He	-0.828	ppb	N/A	663.37	0.0090	Pulse	0.1000	3
Fe	57	72	He	19.461	ppb	16.3	706.71	0.0096	Pulse	0.1000	3
Co	59	72	He	0.020	ppb	72.8	273.35	0.0037	Pulse	0.1000	3
Ni	60	72	He	0.878	ppb	25.0	1236.76	0.0167	Pulse	0.1000	3
Cu	63	72	He	0.022	ppb	108.6	406.69	0.0055	Pulse	0.1000	3
Zn	66	72	He	-0.238	ppb	N/A	313.35	0.0043	Pulse	0.1000	3
As	75	72	He	-0.001	ppb	N/A	32.00	0.0004	Pulse	0.5000	3
Sr	88	115	He	0.054	ppb	115.2	76.67	0.0012	Pulse	0.1000	3
Mo	98	115	He	0.010	ppb	154.7	46.67	0.0007	Pulse	0.1000	3
Ag	107	115	He	0.008	ppb	25.9	53.33	0.0008	Pulse	0.1000	3
Cd	111	115	He	-0.004	ppb	N/A	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.085	ppb	72.9	1076.75	0.0168	Pulse	0.1000	3
Sb	121	115	He	0.017	ppb	2.7	30.00	0.0005	Pulse	0.1000	3
Ba	137	115	He	0.084	ppb	87.4	43.33	0.0007	Pulse	0.1000	3
Tl	205	209	He	0.000	ppb	N/A	216.68	0.0010	Pulse	0.1000	3
Pb	208	209	He	0.002	ppb	444.1	490.02	0.0023	Pulse	0.1000	3
U	238	209	He	0.005	ppb	92.1	93.34	0.0004	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3168614.95	0.7	97.8	Pulse	0.1000	3
No Gas	Ge	72	1393173.10	0.5	96.8	Pulse	0.1000	3
H2	Sc	45	194657.33	3.3	99.6	Pulse	0.1000	3
H2	Ge	72	157733.06	2.5	96.8	Pulse	0.1000	3
H2	In	115	435780.76	2.3	100.6	Pulse	0.1000	3
He	Sc	45	41974.18	3.0	105.0	Pulse	0.1000	3
He	Ge	72	73906.20	1.3	102.2	Pulse	0.1000	3
He	In	115	64092.70	1.2	99.2	Pulse	0.1000	3
He	Tb	159	282479.70	0.5	98.8	Pulse	0.1000	3
He	Bi	209	216997.65	0.7	97.7	Pulse	0.1000	3

No Gas



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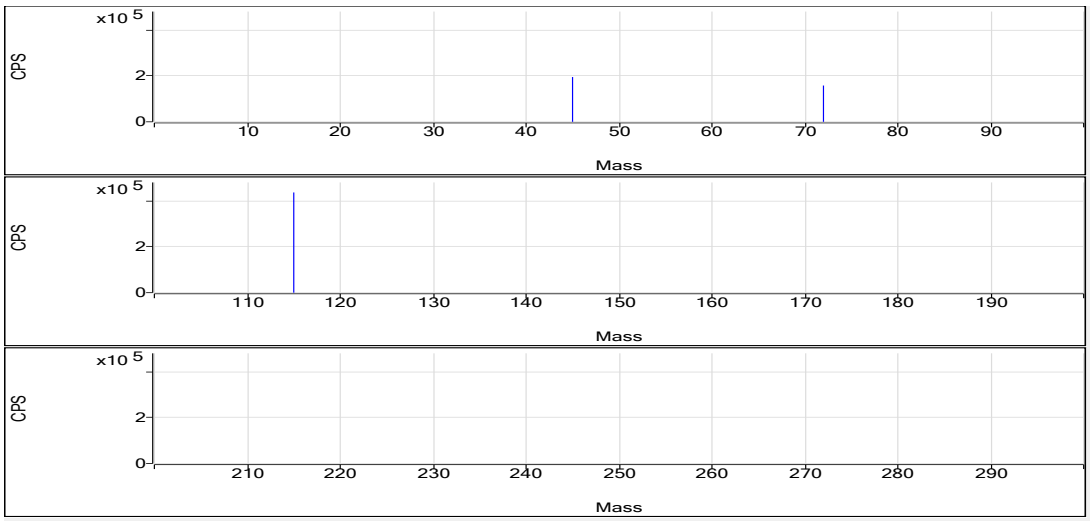
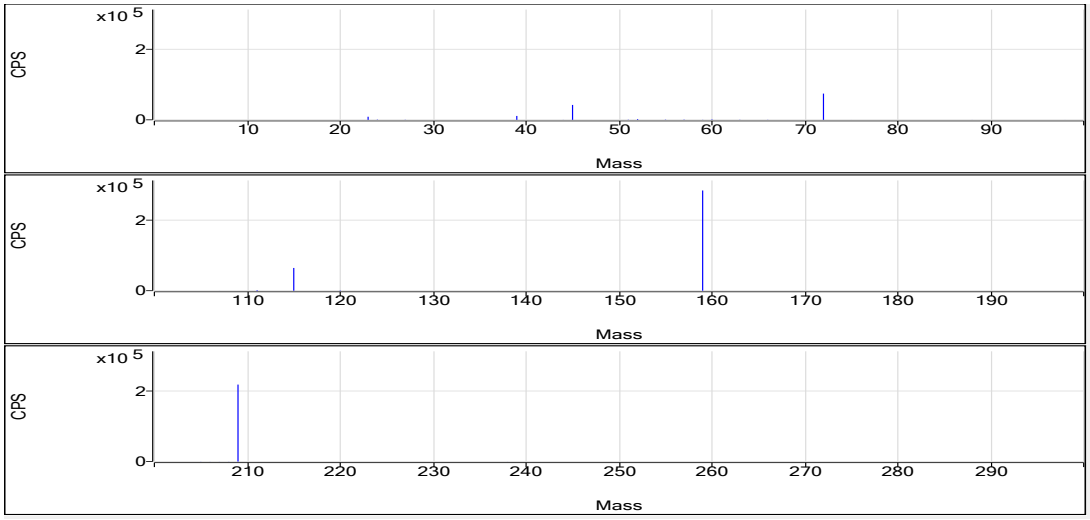


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.005	0	56.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.007	0	52.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.008	0	50.00	0.0013	4.694E-05
Se	78	2	H2	0.025	0	3.33	0.0004	1.089E-05
Se	78	2	H2	0.005	0	2.00	0.0004	1.089E-05
Se	78	2	H2	0.05	0	4.67	0.0004	1.089E-05
Na	23	3	He	2.725	0.1111	8322.52	0.0017	0.1065
Na	23	3	He	6.024	0.1168	8522.64	0.0017	0.1065
Na	23	3	He	10.003	0.1236	9133.10	0.0017	0.1065
Mg	24	3	He	6.924	0.0107	800.05	0.0008	0.004846
Mg	24	3	He	5.632	0.0096	700.04	0.0008	0.004846
Mg	24	3	He	5.814	0.0097	720.04	0.0008	0.004846
Al	27	3	He	16.067	0.0049	370.02	0.0002	0.001063
Al	27	3	He	14.334	0.0045	330.01	0.0002	0.001063
Al	27	3	He	21.396	0.0062	460.02	0.0002	0.001063
K	39	3	He	24.632	0.1572	11775.12	0.0006	0.1436
K	39	3	He	10.764	0.1496	10914.46	0.0006	0.1436
K	39	3	He	-12.18	0.1369	10113.75	0.0006	0.1436
Ca	44	3	He	29.828	0.0025	190.01	0	0.001611
Ca	44	3	He	9.915	0.0019	140.01	0	0.001611
Ca	44	3	He	-3.917	0.0015	110.01	0	0.001611
Ti	47	3	He	-1.091	0	0.00	0.0003	0.0002737
Ti	47	3	He	-0.545	0.0001	10.00	0.0003	0.0002737
Ti	47	3	He	1.608	0.0007	50.00	0.0003	0.0002737
V	51	3	He	-0.042	0.0068	512.01	0.0117	0.007326
V	51	3	He	0.025	0.0076	556.01	0.0117	0.007326
V	51	3	He	0.052	0.0079	586.02	0.0117	0.007326
Cr	52	3	He	0.061	0.0263	1970.20	0.0152	0.02538
Cr	52	3	He	0.007	0.0255	1860.18	0.0152	0.02538
Cr	52	3	He	0.129	0.0273	2020.23	0.0152	0.02538
Mn	55	3	He	-0.695	0.0097	730.05	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-1.07	0.0075	550.03	0.0059	0.01385
Mn	55	3	He	-0.719	0.0096	710.04	0.0059	0.01385
Fe	57	3	He	21.049	0.01	750.05	0.0003	0.003918
Fe	57	3	He	15.809	0.0085	620.04	0.0003	0.003918
Fe	57	3	He	21.524	0.0102	750.04	0.0003	0.003918
Co	59	3	He	0.035	0.0041	310.02	0.0305	0.003084
Co	59	3	He	0.02	0.0037	270.01	0.0305	0.003084
Co	59	3	He	0.005	0.0032	240.01	0.0305	0.003084
Ni	60	3	He	0.966	0.0175	1310.10	0.0088	0.009003
Ni	60	3	He	0.628	0.0145	1060.07	0.0088	0.009003
Ni	60	3	He	1.039	0.0181	1340.10	0.0088	0.009003
Cu	63	3	He	0.048	0.0061	460.02	0.0249	0.004937
Cu	63	3	He	0	0.0049	360.02	0.0249	0.004937
Cu	63	3	He	0.019	0.0054	400.02	0.0249	0.004937
Zn	66	3	He	-0.718	0.0031	230.01	0.0025	0.004836
Zn	66	3	He	0.375	0.0058	420.02	0.0025	0.004836
Zn	66	3	He	-0.371	0.0039	290.01	0.0025	0.004836
As	75	3	He	-0.035	0.0004	28.00	0.0017	0.0004347
As	75	3	He	-0.029	0.0004	28.00	0.0017	0.0004347
As	75	3	He	0.061	0.0005	40.00	0.0017	0.0004347
Sr	88	3	He	-0.001	0.0008	50.00	0.0078	0.0007762
Sr	88	3	He	0.122	0.0017	110.00	0.0078	0.0007762
Sr	88	3	He	0.041	0.0011	70.00	0.0078	0.0007762
Mo	98	3	He	-0.002	0.0005	30.00	0.022	0.0005162
Mo	98	3	He	0.005	0.0006	40.00	0.022	0.0005162
Mo	98	3	He	0.026	0.0011	70.00	0.022	0.0005162
Ag	107	3	He	0.007	0.0008	50.00	0.0455	0.0004641
Ag	107	3	He	0.007	0.0008	50.00	0.0455	0.0004641
Ag	107	3	He	0.011	0.0009	60.00	0.0455	0.0004641
Cd	111	3	He	-0.011	0	0.00	0.0048	5.152E-05
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Sn	120	3	He	0.072	0.0166	1080.08	0.0143	0.01559
Sn	120	3	He	0.153	0.0178	1130.09	0.0143	0.01559
Sn	120	3	He	0.03	0.016	1020.09	0.0143	0.01559
Sb	121	3	He	0.016	0.0005	30.00	0.0124	0.000258
Sb	121	3	He	0.017	0.0005	30.00	0.0124	0.000258
Sb	121	3	He	0.017	0.0005	30.00	0.0124	0.000258
Ba	137	3	He	0.14	0.0009	60.00	0.0044	0.000309
Ba	137	3	He	0.109	0.0008	50.00	0.0044	0.000309
Ba	137	3	He	0.001	0.0003	20.00	0.0044	0.000309
Tl	205	3	He	-0.008	0.0008	170.01	0.0276	0.001005
Tl	205	3	He	0.006	0.0012	250.01	0.0276	0.001005
Tl	205	3	He	0.002	0.0011	230.01	0.0276	0.001005
Pb	208	3	He	0.007	0.0024	270.01	0.0364	0.002176
Pb	208	3	He	0.009	0.0025	230.01	0.0364	0.002176
Pb	208	3	He	-0.009	0.0018	190.01	0.0364	0.002176
U	238	3	He	0	0.0002	50.00	0.0421	0.00024
U	238	3	He	0.008	0.0006	120.01	0.0421	0.00024
U	238	3	He	0.006	0.0005	110.00	0.0421	0.00024
Sc	45	1	No Gas			3195362.14		
Sc	45	1	No Gas			3159227.14		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3151255.58		
Ge	72	1	No Gas			1399652.01		
Ge	72	1	No Gas			1393698.26		
Ge	72	1	No Gas			1386169.04		
Sc	45	2	H2			201800.11		
Sc	45	2	H2			193106.48		
Sc	45	2	H2			189065.41		
Ge	72	2	H2			161537.41		
Ge	72	2	H2			157928.39		
Ge	72	2	H2			153733.37		
In	115	2	H2			445400.42		
In	115	2	H2			436394.45		
In	115	2	H2			425547.42		
Sc	45	3	He			40606.90		
Sc	45	3	He			42281.85		
Sc	45	3	He			43033.79		
Ge	72	3	He			74884.85		
Ge	72	3	He			72964.96		
Ge	72	3	He			73868.80		
In	115	3	He			65002.21		
In	115	3	He			63625.31		
In	115	3	He			63675.78		
Tb	159	3	He			284093.59		
Tb	159	3	He			282334.53		
Tb	159	3	He			281010.99		
Bi	209	3	He			217154.24		
Bi	209	3	He			215426.07		
Bi	209	3	He			218412.63		

Quantitation Report

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Sample Type	CCV
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

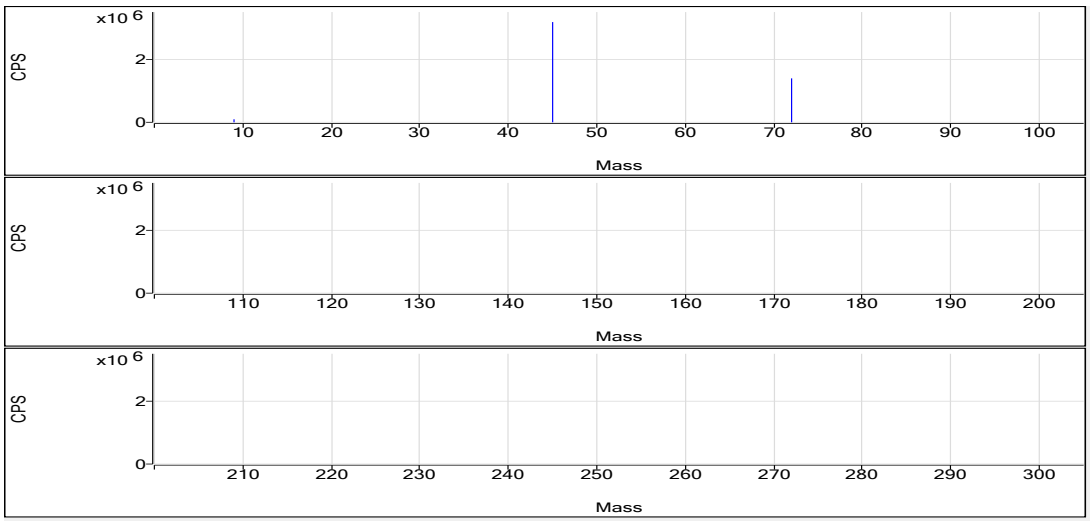
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	51.919	ppb	1.2	96195.22	0.0683	Pulse	0.5000	3
Se	78	72	H2	52.804	ppb	4.9	3253.04	0.0206	Pulse	1.5000	3
Na	23	72	He	5461.679	ppb	1.7	689462.75	9.4886	Pulse	0.1000	3
Mg	24	72	He	5435.251	ppb	2.6	333280.94	4.5873	Pulse	0.1000	3
Al	27	72	He	5396.538	ppb	1.2	94735.85	1.3038	Pulse	0.1000	3
K	39	72	He	5361.881	ppb	2.8	225567.71	3.1045	Pulse	0.1000	3
Ca	44	72	He	5170.354	ppb	3.5	11791.81	0.1622	Pulse	0.1000	3
Ti	47	72	He	5505.165	ppb	2.2	100330.28	1.3809	Pulse	0.1000	3
V	51	72	He	538.790	ppb	1.9	458462.41	6.3100	Pulse	0.5000	3
Cr	52	72	He	538.067	ppb	1.9	597140.36	8.2187	Pulse	0.1000	3
Mn	55	72	He	533.132	ppb	1.1	229663.88	3.1606	Pulse	0.1000	3
Fe	57	72	He	5372.622	ppb	1.2	113389.80	1.5604	Pulse	0.1000	3
Co	59	72	He	536.969	ppb	1.3	1190666.78	16.3863	Pulse	0.1000	3
Ni	60	72	He	539.314	ppb	2.5	345194.19	4.7514	Pulse	0.1000	3
Cu	63	72	He	534.403	ppb	1.9	968618.79	13.3314	Pulse	0.1000	3
Zn	66	72	He	526.401	ppb	1.7	94319.82	1.2981	Pulse	0.1000	3
As	75	72	He	529.671	ppb	1.8	66963.06	0.9216	Pulse	0.5000	3
Sr	88	115	He	52.883	ppb	1.9	26575.46	0.4142	Pulse	0.1000	3
Mo	98	115	He	51.204	ppb	2.0	72385.34	1.1281	Pulse	0.1000	3
Ag	107	115	He	51.327	ppb	2.0	149881.17	2.3358	Pulse	0.1000	3
Cd	111	115	He	51.859	ppb	1.9	15976.44	0.2490	Pulse	0.5000	3
Sn	120	115	He	51.909	ppb	1.2	48491.75	0.7557	Pulse	0.1000	3
Sb	121	115	He	51.546	ppb	2.9	41044.71	0.6397	Pulse	0.1000	3
Ba	137	115	He	515.047	ppb	0.0	144604.43	2.2535	Pulse	0.1000	3
Tl	205	209	He	53.115	ppb	1.1	317912.13	1.4693	Pulse	0.1000	3
Pb	208	209	He	52.802	ppb	0.9	416286.03	1.9240	Pulse	0.1000	3
U	238	209	He	52.373	ppb	0.2	476742.77	2.2034	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3214694.22	2.2	99.2	Pulse	0.1000	3
No Gas	Ge	72	1409179.61	1.7	97.9	Pulse	0.1000	3
H2	Sc	45	192495.92	2.5	98.5	Pulse	0.1000	3
H2	Ge	72	158225.14	1.7	97.1	Pulse	0.1000	3
H2	In	115	434939.30	2.2	100.4	Pulse	0.1000	3
He	Sc	45	42312.04	1.2	105.8	Pulse	0.1000	3
He	Ge	72	72673.53	1.9	100.5	Pulse	0.1000	3
He	In	115	64167.89	0.4	99.3	Pulse	0.1000	3
He	Tb	159	282012.05	0.6	98.6	Pulse	0.1000	3
He	Bi	209	216365.86	0.4	97.4	Pulse	0.1000	3

No Gas



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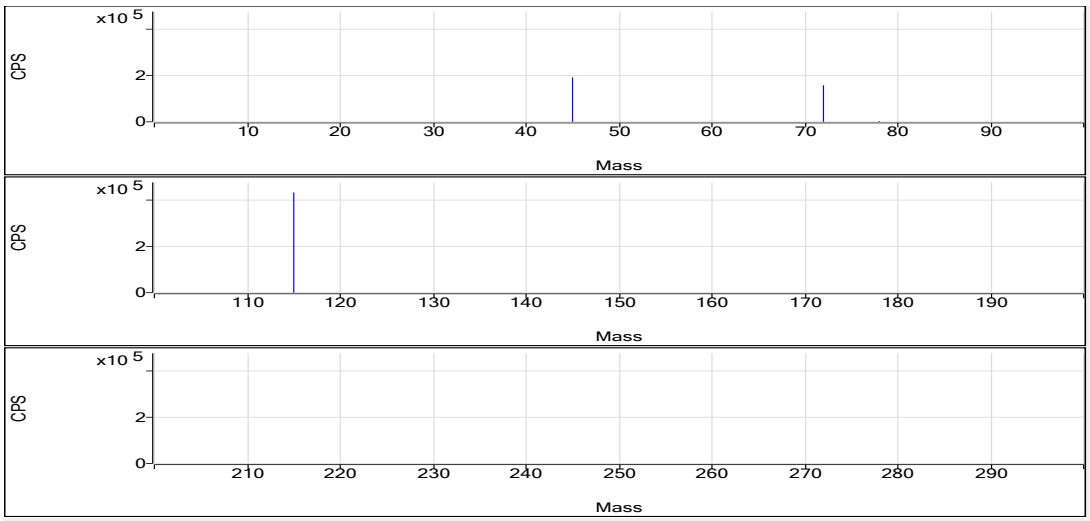
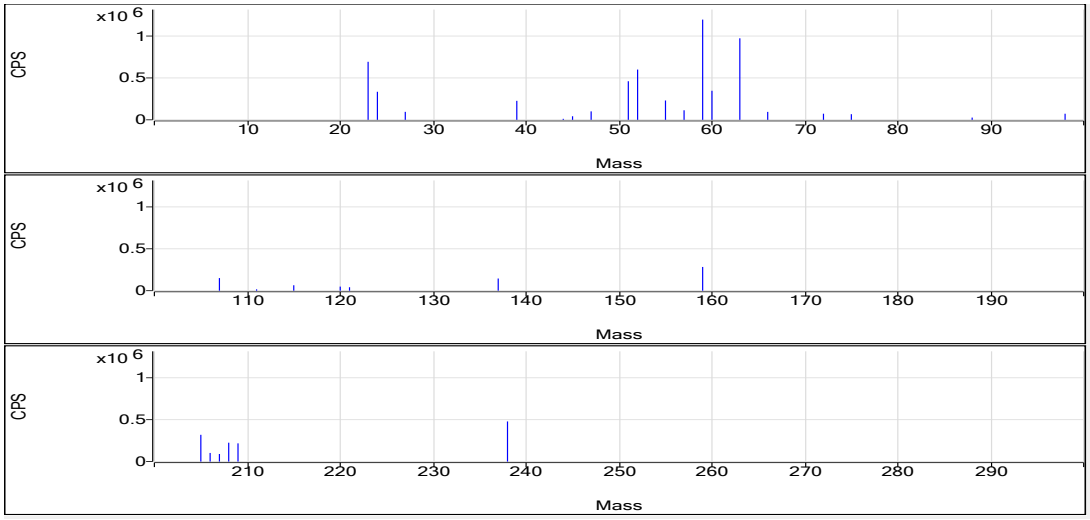


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	52.06	0.0685	96900.33	0.0013	4.694E-05
Be	9	1	No Gas	52.438	0.069	95390.89	0.0013	4.694E-05
Be	9	1	No Gas	51.26	0.0674	96294.43	0.0013	4.694E-05
Se	78	2	H2	49.925	0.0194	3137.68	0.0004	1.089E-05
Se	78	2	H2	53.632	0.0209	3281.05	0.0004	1.089E-05
Se	78	2	H2	54.857	0.0214	3340.39	0.0004	1.089E-05
Na	23	3	He	5526.057	9.5992	683141.94	0.0017	0.1065
Na	23	3	He	5501.033	9.5562	698518.51	0.0017	0.1065
Na	23	3	He	5357.948	9.3105	686727.80	0.0017	0.1065
Mg	24	3	He	5559.627	4.6922	333924.84	0.0008	0.004846
Mg	24	3	He	5460.884	4.6089	336891.67	0.0008	0.004846
Mg	24	3	He	5285.242	4.4608	329026.32	0.0008	0.004846
Al	27	3	He	5471.358	1.3218	94068.81	0.0002	0.001063
Al	27	3	He	5341.626	1.2905	94329.73	0.0002	0.001063
Al	27	3	He	5376.63	1.299	95809.00	0.0002	0.001063
K	39	3	He	5443.433	3.1496	224143.16	0.0006	0.1436
K	39	3	He	5450.901	3.1537	230520.66	0.0006	0.1436
K	39	3	He	5191.31	3.0103	222039.31	0.0006	0.1436
Ca	44	3	He	4976.416	0.1562	11114.59	0	0.001611
Ca	44	3	He	5337.426	0.1674	12235.50	0	0.001611
Ca	44	3	He	5197.22	0.163	12025.33	0	0.001611
Ti	47	3	He	5589.748	1.4021	99779.90	0.0003	0.0002737
Ti	47	3	He	5559.19	1.3944	101924.58	0.0003	0.0002737
Ti	47	3	He	5366.557	1.3461	99286.36	0.0003	0.0002737
V	51	3	He	550.35	6.4452	458680.03	0.0117	0.007326
V	51	3	He	533.962	6.2535	457100.78	0.0117	0.007326
V	51	3	He	532.058	6.2312	459606.41	0.0117	0.007326
Cr	52	3	He	549.086	8.3865	596833.27	0.0152	0.02538
Cr	52	3	He	536.398	8.1933	598890.50	0.0152	0.02538
Cr	52	3	He	528.716	8.0763	595697.30	0.0152	0.02538
Mn	55	3	He	539.207	3.1965	227481.77	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	532.221	3.1552	230634.18	0.0059	0.01385
Mn	55	3	He	527.968	3.1301	230875.68	0.0059	0.01385
Fe	57	3	He	5419.023	1.5739	112007.79	0.0003	0.003918
Fe	57	3	He	5398.065	1.5678	114600.29	0.0003	0.003918
Fe	57	3	He	5300.778	1.5396	113561.33	0.0003	0.003918
Co	59	3	He	543.561	16.5874	1180464.83	0.0305	0.003084
Co	59	3	He	538.136	16.4219	1200364.59	0.0305	0.003084
Co	59	3	He	529.21	16.1495	1191170.92	0.0305	0.003084
Ni	60	3	He	553.355	4.8748	346922.69	0.0088	0.009003
Ni	60	3	He	537.616	4.7364	346211.21	0.0088	0.009003
Ni	60	3	He	526.971	4.6428	342448.67	0.0088	0.009003
Cu	63	3	He	544.62	13.5862	966878.03	0.0249	0.004937
Cu	63	3	He	534.615	13.3367	974852.56	0.0249	0.004937
Cu	63	3	He	523.974	13.0713	964125.77	0.0249	0.004937
Zn	66	3	He	536.039	1.3218	94064.73	0.0025	0.004836
Zn	66	3	He	518.531	1.2787	93470.63	0.0025	0.004836
Zn	66	3	He	524.631	1.2937	95424.10	0.0025	0.004836
As	75	3	He	539.78	0.9392	66839.79	0.0017	0.0004347
As	75	3	He	528.009	0.9187	67155.26	0.0017	0.0004347
As	75	3	He	521.223	0.9069	66894.14	0.0017	0.0004347
Sr	88	3	He	53.755	0.421	27046.37	0.0078	0.0007762
Sr	88	3	He	53.139	0.4162	26585.63	0.0078	0.0007762
Sr	88	3	He	51.755	0.4053	26094.38	0.0078	0.0007762
Mo	98	3	He	50.422	1.1109	71370.26	0.022	0.0005162
Mo	98	3	He	52.338	1.1531	73661.71	0.022	0.0005162
Mo	98	3	He	50.852	1.1204	72124.06	0.022	0.0005162
Ag	107	3	He	50.201	2.2846	146779.19	0.0455	0.0004641
Ag	107	3	He	52.257	2.3782	151922.55	0.0455	0.0004641
Ag	107	3	He	51.522	2.3447	150941.78	0.0455	0.0004641
Cd	111	3	He	51.198	0.2458	15792.91	0.0048	5.152E-05
Cd	111	3	He	52.966	0.2543	16245.38	0.0048	5.152E-05
Cd	111	3	He	51.413	0.2468	15891.04	0.0048	5.152E-05
Sn	120	3	He	52.582	0.7653	49167.27	0.0143	0.01559
Sn	120	3	He	51.83	0.7546	48204.08	0.0143	0.01559
Sn	120	3	He	51.316	0.7472	48103.90	0.0143	0.01559
Sb	121	3	He	49.991	0.6204	39857.92	0.0124	0.000258
Sb	121	3	He	52.959	0.6572	41984.02	0.0124	0.000258
Sb	121	3	He	51.687	0.6414	41292.20	0.0124	0.000258
Ba	137	3	He	515.16	2.254	144812.58	0.0044	0.000309
Ba	137	3	He	515.063	2.2536	143965.19	0.0044	0.000309
Ba	137	3	He	514.917	2.253	145035.52	0.0044	0.000309
Tl	205	3	He	53.146	1.4702	316650.85	0.0276	0.001005
Tl	205	3	He	53.708	1.4857	322130.11	0.0276	0.001005
Tl	205	3	He	52.491	1.4521	314955.44	0.0276	0.001005
Pb	208	3	He	53.047	1.9329	224218.00	0.0364	0.002176
Pb	208	3	He	53.106	1.9351	226145.07	0.0364	0.002176
Pb	208	3	He	52.252	1.904	221957.59	0.0364	0.002176
U	238	3	He	52.447	2.2065	475245.50	0.0421	0.00024
U	238	3	He	52.41	2.205	478084.02	0.0421	0.00024
U	238	3	He	52.261	2.1987	476898.78	0.0421	0.00024
Sc	45	1	No Gas			3218683.70		
Sc	45	1	No Gas			3143434.95		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3281964.01		
Ge	72	1	No Gas			1415509.98		
Ge	72	1	No Gas			1383416.07		
Ge	72	1	No Gas			1428612.79		
Sc	45	2	H2			198062.65		
Sc	45	2	H2			190208.32		
Sc	45	2	H2			189216.79		
Ge	72	2	H2			161323.42		
Ge	72	2	H2			157039.78		
Ge	72	2	H2			156312.21		
In	115	2	H2			444815.97		
In	115	2	H2			434022.02		
In	115	2	H2			425979.92		
Sc	45	3	He			41880.63		
Sc	45	3	He			42883.87		
Sc	45	3	He			42171.61		
Ge	72	3	He			71166.30		
Ge	72	3	He			73095.48		
Ge	72	3	He			73758.80		
In	115	3	He			64629.61		
In	115	3	He			64258.17		
In	115	3	He			64750.58		
Tb	159	3	He			281121.56		
Tb	159	3	He			280860.27		
Tb	159	3	He			284054.33		
Bi	209	3	He			215379.88		
Bi	209	3	He			216818.57		
Bi	209	3	He			216899.14		

Quantitation Report

Data File Name	181_CCB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 16:54:09
Sample Name	CCB 4654618
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

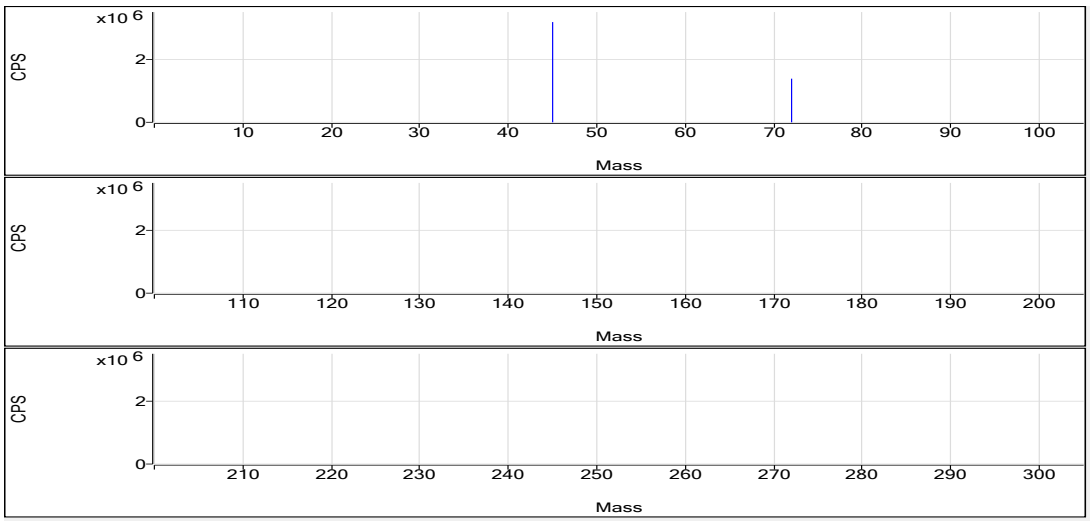
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.030	ppb	31.1	120.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.033	ppb	112.2	3.78	0.0000	Pulse	1.5000	3
Na	23	72	He	6.027	ppb	37.3	8382.69	0.1168	Pulse	0.1000	3
Mg	24	72	He	5.820	ppb	9.1	700.04	0.0098	Pulse	0.1000	3
Al	27	72	He	14.078	ppb	19.4	320.02	0.0045	Pulse	0.1000	3
K	39	72	He	17.227	ppb	70.6	10991.10	0.1532	Pulse	0.1000	3
Ca	44	72	He	-1.079	ppb	N/A	113.34	0.0016	Pulse	0.1000	3
Ti	47	72	He	0.205	ppb	313.2	23.33	0.0003	Pulse	0.1000	3
V	51	72	He	0.153	ppb	13.7	654.02	0.0091	Pulse	0.5000	3
Cr	52	72	He	0.141	ppb	98.5	1976.87	0.0275	Pulse	0.1000	3
Mn	55	72	He	-0.844	ppb	N/A	636.71	0.0089	Pulse	0.1000	3
Fe	57	72	He	20.616	ppb	22.7	710.05	0.0099	Pulse	0.1000	3
Co	59	72	He	0.117	ppb	27.0	476.69	0.0066	Pulse	0.1000	3
Ni	60	72	He	0.942	ppb	23.3	1240.10	0.0173	Pulse	0.1000	3
Cu	63	72	He	0.124	ppb	50.9	576.70	0.0080	Pulse	0.1000	3
Zn	66	72	He	-0.474	ppb	N/A	263.34	0.0037	Pulse	0.1000	3
As	75	72	He	0.146	ppb	57.4	49.33	0.0007	Pulse	0.5000	3
Sr	88	115	He	0.002	ppb	1630.5	50.00	0.0008	Pulse	0.1000	3
Mo	98	115	He	0.041	ppb	19.2	90.00	0.0014	Pulse	0.1000	3
Ag	107	115	He	0.007	ppb	128.0	50.00	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.005	ppb	294.8	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.167	ppb	16.7	1133.44	0.0180	Pulse	0.1000	3
Sb	121	115	He	0.048	ppb	68.4	53.33	0.0008	Pulse	0.1000	3
Ba	137	115	He	0.184	ppb	72.7	70.00	0.0011	Pulse	0.1000	3
Tl	205	209	He	0.141	ppb	13.6	1076.75	0.0049	Pulse	0.1000	3
Pb	208	209	He	0.016	ppb	84.2	603.36	0.0027	Pulse	0.1000	3
U	238	209	He	0.015	ppb	8.1	190.01	0.0009	Pulse	0.1000	3

ISTD Table:

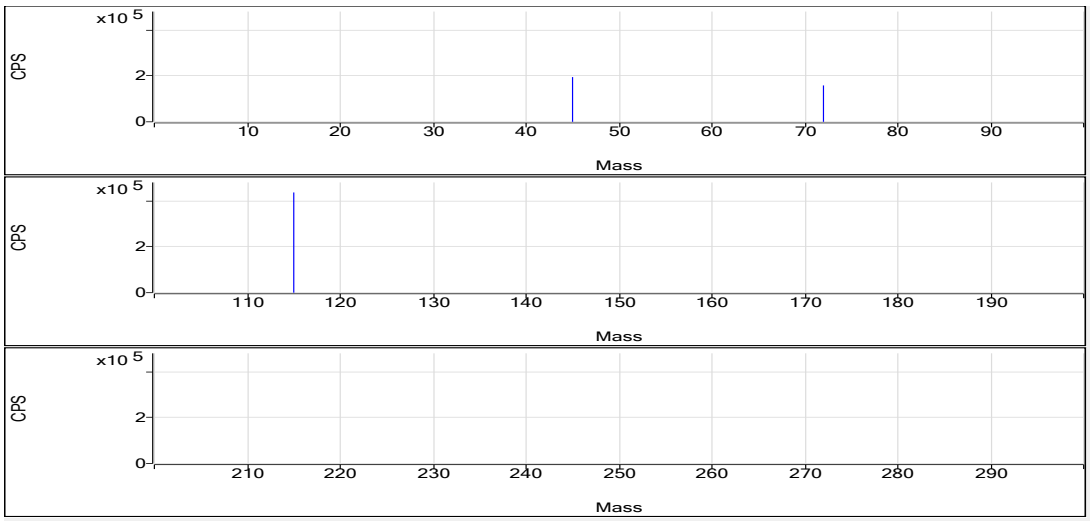
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3206683.60	1.8	98.9	Pulse	0.1000	3
No Gas	Ge	72	1395628.26	1.7	96.9	Pulse	0.1000	3
H2	Sc	45	194766.50	2.9	99.7	Pulse	0.1000	3
H2	Ge	72	158471.34	3.1	97.2	Pulse	0.1000	3
H2	In	115	436535.18	2.9	100.7	Pulse	0.1000	3
He	Sc	45	41091.77	2.0	102.8	Pulse	0.1000	3
He	Ge	72	71768.96	0.5	99.3	Pulse	0.1000	3
He	In	115	63076.74	1.2	97.7	Pulse	0.1000	3
He	Tb	159	280427.27	0.8	98.1	Pulse	0.1000	3
He	Bi	209	219724.53	0.7	98.9	Pulse	0.1000	3

No Gas

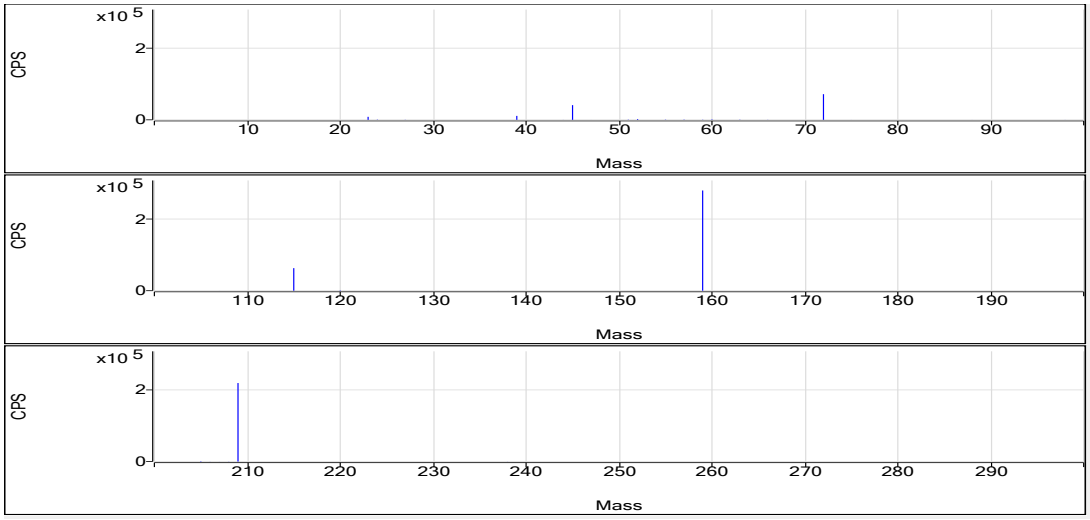


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.02	0.0001	102.00	0.0013	4.694E-05
Be	9	1	No Gas	0.038	0.0001	132.00	0.0013	4.694E-05
Be	9	1	No Gas	0.032	0.0001	126.00	0.0013	4.694E-05
Se	78	2	H2	0.067	0	6.00	0.0004	1.089E-05
Se	78	2	H2	-0.007	0	1.33	0.0004	1.089E-05
Se	78	2	H2	0.039	0	4.00	0.0004	1.089E-05
Na	23	3	He	6.011	0.1168	8342.65	0.0017	0.1065
Na	23	3	He	3.787	0.113	8152.56	0.0017	0.1065
Na	23	3	He	8.282	0.1207	8652.86	0.0017	0.1065
Mg	24	3	He	5.211	0.0092	660.03	0.0008	0.004846
Mg	24	3	He	6.086	0.01	720.04	0.0008	0.004846
Mg	24	3	He	6.164	0.01	720.04	0.0008	0.004846
Al	27	3	He	17.055	0.0052	370.02	0.0002	0.001063
Al	27	3	He	11.671	0.0039	280.02	0.0002	0.001063
Al	27	3	He	13.509	0.0043	310.01	0.0002	0.001063
K	39	3	He	29.493	0.1599	11424.78	0.0006	0.1436
K	39	3	He	17.006	0.153	11044.44	0.0006	0.1436
K	39	3	He	5.183	0.1465	10504.07	0.0006	0.1436
Ca	44	3	He	-20.317	0.001	70.00	0	0.001611
Ca	44	3	He	15.055	0.0021	150.01	0	0.001611
Ca	44	3	He	2.025	0.0017	120.01	0	0.001611
Ti	47	3	He	0.583	0.0004	30.00	0.0003	0.0002737
Ti	47	3	He	0.566	0.0004	30.00	0.0003	0.0002737
Ti	47	3	He	-0.535	0.0001	10.00	0.0003	0.0002737
V	51	3	He	0.175	0.0094	670.02	0.0117	0.007326
V	51	3	He	0.148	0.0091	654.02	0.0117	0.007326
V	51	3	He	0.134	0.0089	638.02	0.0117	0.007326
Cr	52	3	He	0.034	0.0259	1850.18	0.0152	0.02538
Cr	52	3	He	0.299	0.0299	2160.24	0.0152	0.02538
Cr	52	3	He	0.092	0.0268	1920.19	0.0152	0.02538
Mn	55	3	He	-0.877	0.0087	620.04	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.68	0.0098	710.05	0.0059	0.01385
Mn	55	3	He	-0.977	0.0081	580.03	0.0059	0.01385
Fe	57	3	He	20.785	0.0099	710.04	0.0003	0.003918
Fe	57	3	He	25.219	0.0112	810.06	0.0003	0.003918
Fe	57	3	He	15.845	0.0085	610.04	0.0003	0.003918
Co	59	3	He	0.151	0.0077	550.03	0.0305	0.003084
Co	59	3	He	0.09	0.0058	420.02	0.0305	0.003084
Co	59	3	He	0.109	0.0064	460.02	0.0305	0.003084
Ni	60	3	He	1.11	0.0188	1340.11	0.0088	0.009003
Ni	60	3	He	0.694	0.0151	1090.09	0.0088	0.009003
Ni	60	3	He	1.022	0.018	1290.10	0.0088	0.009003
Cu	63	3	He	0.184	0.0095	680.05	0.0249	0.004937
Cu	63	3	He	0.058	0.0064	460.02	0.0249	0.004937
Cu	63	3	He	0.132	0.0082	590.04	0.0249	0.004937
Zn	66	3	He	-0.145	0.0045	320.01	0.0025	0.004836
Zn	66	3	He	-0.559	0.0035	250.01	0.0025	0.004836
Zn	66	3	He	-0.72	0.0031	220.01	0.0025	0.004836
As	75	3	He	0.169	0.0007	52.00	0.0017	0.0004347
As	75	3	He	0.053	0.0005	38.00	0.0017	0.0004347
As	75	3	He	0.215	0.0008	58.00	0.0017	0.0004347
Sr	88	3	He	0.043	0.0011	70.00	0.0078	0.0007762
Sr	88	3	He	-0.019	0.0006	40.00	0.0078	0.0007762
Sr	88	3	He	-0.017	0.0006	40.00	0.0078	0.0007762
Mo	98	3	He	0.042	0.0014	90.00	0.022	0.0005162
Mo	98	3	He	0.033	0.0013	80.00	0.022	0.0005162
Mo	98	3	He	0.049	0.0016	100.01	0.022	0.0005162
Ag	107	3	He	0.018	0.0013	80.01	0.0455	0.0004641
Ag	107	3	He	0	0.0005	30.00	0.0455	0.0004641
Ag	107	3	He	0.004	0.0006	40.00	0.0455	0.0004641
Cd	111	3	He	-0.011	0	0.00	0.0048	5.152E-05
Cd	111	3	He	0.009	0.0001	6.00	0.0048	5.152E-05
Cd	111	3	He	0.016	0.0001	8.00	0.0048	5.152E-05
Sn	120	3	He	0.155	0.0178	1120.08	0.0143	0.01559
Sn	120	3	He	0.147	0.0177	1130.09	0.0143	0.01559
Sn	120	3	He	0.199	0.0184	1150.15	0.0143	0.01559
Sb	121	3	He	0.082	0.0013	80.00	0.0124	0.000258
Sb	121	3	He	0.017	0.0005	30.00	0.0124	0.000258
Sb	121	3	He	0.044	0.0008	50.00	0.0124	0.000258
Ba	137	3	He	0.147	0.001	60.00	0.0044	0.000309
Ba	137	3	He	0.072	0.0006	40.00	0.0044	0.000309
Ba	137	3	He	0.332	0.0018	110.00	0.0044	0.000309
Tl	205	3	He	0.159	0.0054	1180.09	0.0276	0.001005
Tl	205	3	He	0.144	0.005	1090.09	0.0276	0.001005
Tl	205	3	He	0.12	0.0043	960.07	0.0276	0.001005
Pb	208	3	He	0.022	0.003	310.01	0.0364	0.002176
Pb	208	3	He	0.001	0.0022	300.01	0.0364	0.002176
Pb	208	3	He	0.025	0.0031	370.03	0.0364	0.002176
U	238	3	He	0.015	0.0009	190.01	0.0421	0.00024
U	238	3	He	0.016	0.0009	200.01	0.0421	0.00024
U	238	3	He	0.014	0.0008	180.01	0.0421	0.00024
Sc	45	1	No Gas			3219952.76		
Sc	45	1	No Gas			3142627.14		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3257470.89		
Ge	72	1	No Gas			1402982.32		
Ge	72	1	No Gas			1368526.39		
Ge	72	1	No Gas			1415376.07		
Sc	45	2	H2			199310.43		
Sc	45	2	H2			196500.82		
Sc	45	2	H2			188488.26		
Ge	72	2	H2			161995.00		
Ge	72	2	H2			160646.95		
Ge	72	2	H2			152772.07		
In	115	2	H2			448025.58		
In	115	2	H2			438504.88		
In	115	2	H2			423075.07		
Sc	45	3	He			40266.11		
Sc	45	3	He			41910.39		
Sc	45	3	He			41098.82		
Ge	72	3	He			71437.32		
Ge	72	3	He			72170.86		
Ge	72	3	He			71698.70		
In	115	3	He			62931.69		
In	115	3	He			63895.41		
In	115	3	He			62429.64		
Tb	159	3	He			282678.94		
Tb	159	3	He			280345.68		
Tb	159	3	He			278257.18		
Bi	209	3	He			218999.45		
Bi	209	3	He			218718.94		
Bi	209	3	He			221455.19		

Quantitation Report

Data File Name	182SMPL.d
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Acq Time	2023-08-10 16:56:09
Sample Name	410-136531-H-1-A @2
Sample Type	Sample
Comment	G3 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

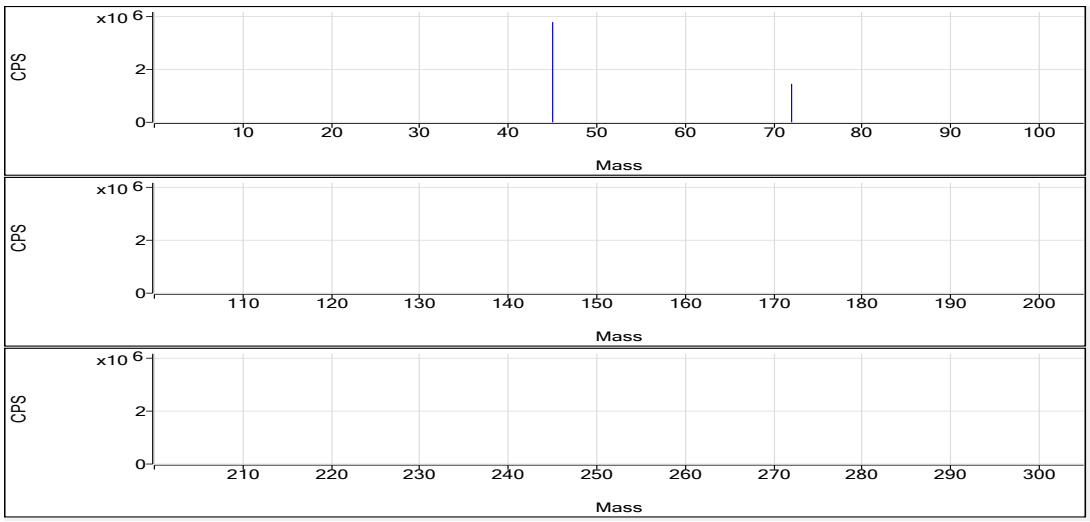
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	2.169	ppb	5.2	4205.94	0.0029	Pulse	0.5000	3
Se	78	72	H2	2.392	ppb	3.2	152.89	0.0009	Pulse	1.5000	3
Na	23	72	He	410.258	ppb	4.9	60721.28	0.8112	Pulse	0.1000	3
Mg	24	72	He	14474.417	ppb	1.7	914023.11	12.2082	Pulse	0.1000	3
Al	27	72	He	53524.565	ppb	1.4	967438.53	12.9216	Pulse	0.1000	3
K	39	72	He	4027.786	ppb	2.1	177271.55	2.3678	Pulse	0.1000	3
Ca	44	72	He	64946.048	ppb	3.4	151124.64	2.0188	Pulse	0.1000	3
Ti	47	72	He	1167.708	ppb	1.9	21950.52	0.2931	Pulse	0.1000	3
V	51	72	He	156.879	ppb	1.6	137942.58	1.8425	Pulse	0.5000	3
Cr	52	72	He	160.584	ppb	0.6	185002.74	2.4706	Pulse	0.1000	3
Mn	55	72	He	837.957	ppb	1.3	371345.07	4.9598	Pulse	0.1000	3
Fe	57	72	He	63827.636	ppb	1.3	1384792.69	18.4957	Pulse	0.1000	3
Co	59	72	He	21.461	ppb	1.0	49257.44	0.6579	Pulse	0.1000	3
Ni	60	72	He	59.771	ppb	1.4	40029.50	0.5346	Pulse	0.1000	3
Cu	63	72	He	144.647	ppb	0.8	270444.05	3.6120	Pulse	0.1000	3
Zn	66	72	He	430.619	ppb	1.6	79568.69	1.0628	Pulse	0.1000	3
As	75	72	He	14.462	ppb	4.1	1915.47	0.0256	Pulse	0.5000	3
Sr	88	115	He	104.035	ppb	2.3	52397.30	0.8140	Pulse	0.1000	3
Mo	98	115	He	6.296	ppb	4.8	8956.50	0.1392	Pulse	0.1000	3
Ag	107	115	He	0.637	ppb	8.0	1896.86	0.0295	Pulse	0.1000	3
Cd	111	115	He	1.377	ppb	4.6	428.68	0.0067	Pulse	0.5000	3
Sn	120	115	He	9.389	ppb	5.7	9620.31	0.1495	Pulse	0.1000	3
Sb	121	115	He	6.889	ppb	1.0	5517.96	0.0857	Pulse	0.1000	3
Ba	137	115	He	630.788	ppb	0.7	177660.46	2.7599	Pulse	0.1000	3
Tl	205	209	He	0.529	ppb	3.8	3460.60	0.0156	Pulse	0.1000	3
Pb	208	209	He	1282.245	ppb	1.0	10337695.26	46.6725	Pulse	0.1000	3
U	238	209	He	8.414	ppb	2.4	78447.69	0.3542	Pulse	0.1000	3

ISTD Table:

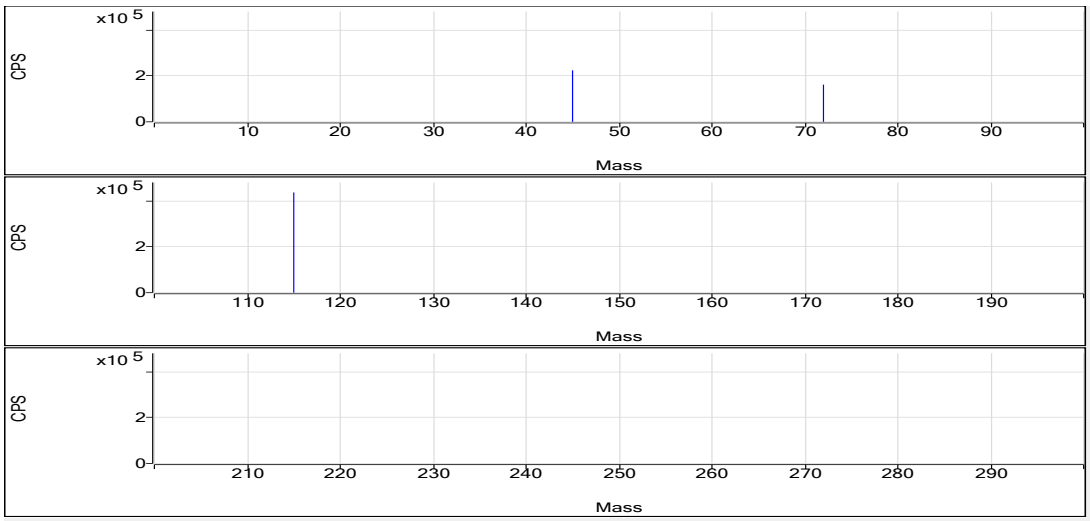
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3785977.03	1.4	116.8	Pulse	0.1000	3
No Gas	Ge	72	1452040.81	1.3	100.9	Pulse	0.1000	3
H2	Sc	45	224643.71	1.1	115.0	Pulse	0.1000	3
H2	Ge	72	162315.50	1.9	99.6	Pulse	0.1000	3
H2	In	115	437279.56	2.9	100.9	Pulse	0.1000	3
He	Sc	45	48089.91	1.3	120.3	Pulse	0.1000	3
He	Ge	72	74878.25	1.2	103.6	Pulse	0.1000	3
He	In	115	64373.78	0.6	99.7	Pulse	0.1000	3
He	Tb	159	299007.28	0.2	104.5	Pulse	0.1000	3
He	Bi	209	221509.08	1.1	99.7	Pulse	0.1000	3

No Gas

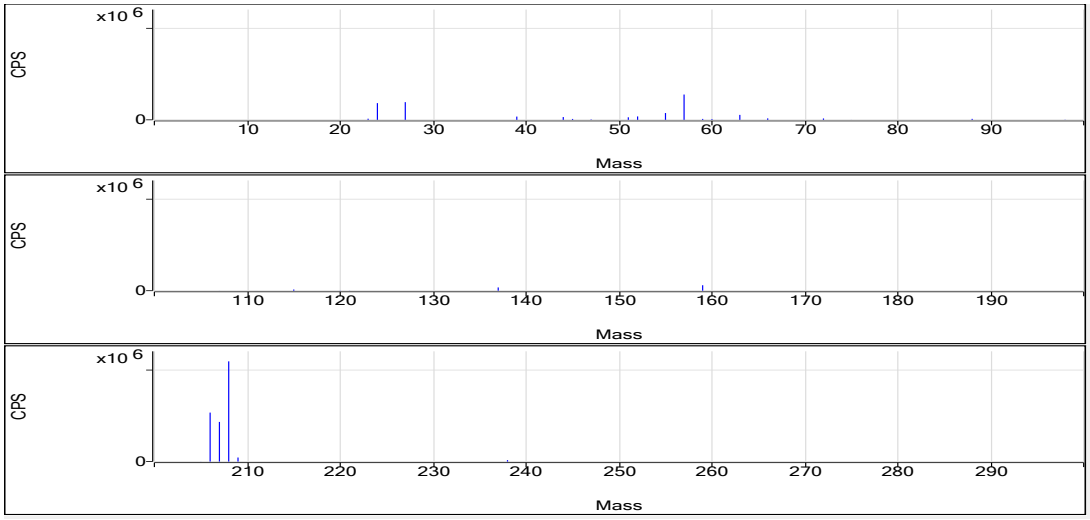


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	2.296	0.0031	4468.68	0.0013	4.694E-05
Be	9	1	No Gas	2.129	0.0028	4068.57	0.0013	4.694E-05
Be	9	1	No Gas	2.08	0.0028	4080.57	0.0013	4.694E-05
Se	78	2	H2	2.306	0.0009	149.33	0.0004	1.089E-05
Se	78	2	H2	2.449	0.001	158.00	0.0004	1.089E-05
Se	78	2	H2	2.42	0.001	151.33	0.0004	1.089E-05
Na	23	3	He	432.426	0.8493	62813.10	0.0017	0.1065
Na	23	3	He	405.037	0.8022	60092.32	0.0017	0.1065
Na	23	3	He	393.31	0.7821	59258.42	0.0017	0.1065
Mg	24	3	He	14765.085	12.4533	921044.52	0.0008	0.004846
Mg	24	3	He	14315.524	12.0743	904435.22	0.0008	0.004846
Mg	24	3	He	14342.64	12.0971	916589.60	0.0008	0.004846
Al	27	3	He	54259.24	13.0989	968794.13	0.0002	0.001063
Al	27	3	He	53524.264	12.9215	967897.17	0.0002	0.001063
Al	27	3	He	52790.191	12.7443	965624.28	0.0002	0.001063
K	39	3	He	4104.009	2.4099	178237.42	0.0006	0.1436
K	39	3	He	4041.264	2.3753	177922.05	0.0006	0.1436
K	39	3	He	3938.083	2.3183	175655.17	0.0006	0.1436
Ca	44	3	He	67321.372	2.0926	154768.54	0	0.001611
Ca	44	3	He	64615.956	2.0086	150454.00	0	0.001611
Ca	44	3	He	62900.816	1.9553	148151.37	0	0.001611
Ti	47	3	He	1154.118	0.2897	21426.35	0.0003	0.0002737
Ti	47	3	He	1156.057	0.2902	21736.86	0.0003	0.0002737
Ti	47	3	He	1192.95	0.2994	22688.35	0.0003	0.0002737
V	51	3	He	159.444	1.8725	138486.95	0.0117	0.007326
V	51	3	He	156.736	1.8408	137885.36	0.0117	0.007326
V	51	3	He	154.458	1.8141	137455.44	0.0117	0.007326
Cr	52	3	He	159.481	2.4538	181485.64	0.0152	0.02538
Cr	52	3	He	161.555	2.4854	186173.14	0.0152	0.02538
Cr	52	3	He	160.715	2.4726	187349.45	0.0152	0.02538
Mn	55	3	He	849.683	5.029	371946.67	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	835.949	4.948	370632.77	0.0059	0.01385
Mn	55	3	He	828.24	4.9025	371455.78	0.0059	0.01385
Fe	57	3	He	64770.285	18.7688	1388138.10	0.0003	0.003918
Fe	57	3	He	63464.528	18.3905	1377558.42	0.0003	0.003918
Fe	57	3	He	63248.094	18.3278	1388681.54	0.0003	0.003918
Co	59	3	He	21.695	0.665	49183.67	0.0305	0.003084
Co	59	3	He	21.402	0.6561	49144.55	0.0305	0.003084
Co	59	3	He	21.287	0.6526	49444.10	0.0305	0.003084
Ni	60	3	He	60.074	0.5373	39735.28	0.0088	0.009003
Ni	60	3	He	58.846	0.5265	39434.34	0.0088	0.009003
Ni	60	3	He	60.392	0.54	40918.89	0.0088	0.009003
Cu	63	3	He	145.984	3.6453	269609.04	0.0249	0.004937
Cu	63	3	He	144.226	3.6015	269774.16	0.0249	0.004937
Cu	63	3	He	143.731	3.5892	271948.94	0.0249	0.004937
Zn	66	3	He	435.94	1.0758	79568.82	0.0025	0.004836
Zn	66	3	He	432.864	1.0683	80020.67	0.0025	0.004836
Zn	66	3	He	423.054	1.0442	79116.59	0.0025	0.004836
As	75	3	He	14.6	0.0258	1910.14	0.0017	0.0004347
As	75	3	He	14.981	0.0265	1984.15	0.0017	0.0004347
As	75	3	He	13.805	0.0244	1852.13	0.0017	0.0004347
Sr	88	3	He	104.637	0.8187	52808.64	0.0078	0.0007762
Sr	88	3	He	101.364	0.7931	51323.58	0.0078	0.0007762
Sr	88	3	He	106.103	0.8302	53059.67	0.0078	0.0007762
Mo	98	3	He	6.047	0.1337	8622.88	0.022	0.0005162
Mo	98	3	He	6.203	0.1371	8873.09	0.022	0.0005162
Mo	98	3	He	6.637	0.1467	9373.54	0.022	0.0005162
Ag	107	3	He	0.593	0.0274	1770.18	0.0455	0.0004641
Ag	107	3	He	0.693	0.032	2070.22	0.0455	0.0004641
Ag	107	3	He	0.626	0.0289	1850.19	0.0455	0.0004641
Cd	111	3	He	1.372	0.0066	428.01	0.0048	5.152E-05
Cd	111	3	He	1.316	0.0064	412.01	0.0048	5.152E-05
Cd	111	3	He	1.443	0.007	446.01	0.0048	5.152E-05
Sn	120	3	He	9.937	0.1573	10144.07	0.0143	0.01559
Sn	120	3	He	8.86	0.1419	9183.34	0.0143	0.01559
Sn	120	3	He	9.369	0.1492	9533.52	0.0143	0.01559
Sb	121	3	He	6.955	0.0865	5581.33	0.0124	0.000258
Sb	121	3	He	6.895	0.0858	5551.31	0.0124	0.000258
Sb	121	3	He	6.817	0.0848	5421.24	0.0124	0.000258
Ba	137	3	He	626.38	2.7406	176768.90	0.0044	0.000309
Ba	137	3	He	631.34	2.7623	178744.43	0.0044	0.000309
Ba	137	3	He	634.644	2.7767	177468.04	0.0044	0.000309
Tl	205	3	He	0.511	0.0151	3390.57	0.0276	0.001005
Tl	205	3	He	0.526	0.0155	3410.58	0.0276	0.001005
Tl	205	3	He	0.55	0.0162	3580.64	0.0276	0.001005
Pb	208	3	He	1268.13	46.1587	5498806.17	0.0364	0.002176
Pb	208	3	He	1289.839	46.9489	5465257.42	0.0364	0.002176
Pb	208	3	He	1288.765	46.9098	5496172.42	0.0364	0.002176
U	238	3	He	8.251	0.3473	77853.62	0.0421	0.00024
U	238	3	He	8.639	0.3636	79846.18	0.0421	0.00024
U	238	3	He	8.353	0.3516	77643.26	0.0421	0.00024
Sc	45	1	No Gas			3793459.63		
Sc	45	1	No Gas			3728914.94		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3835556.51		
Ge	72	1	No Gas			1458516.07		
Ge	72	1	No Gas			1430064.67		
Ge	72	1	No Gas			1467541.70		
Sc	45	2	H2			226738.51		
Sc	45	2	H2			225193.88		
Sc	45	2	H2			221998.75		
Ge	72	2	H2			164356.81		
Ge	72	2	H2			163793.77		
Ge	72	2	H2			158795.91		
In	115	2	H2			446944.09		
In	115	2	H2			441927.06		
In	115	2	H2			422967.53		
Sc	45	3	He			47808.80		
Sc	45	3	He			47668.51		
Sc	45	3	He			48792.42		
Ge	72	3	He			73959.80		
Ge	72	3	He			74905.89		
Ge	72	3	He			75769.06		
In	115	3	He			64579.40		
In	115	3	He			64780.42		
In	115	3	He			63986.64		
Tb	159	3	He			299048.80		
Tb	159	3	He			298459.62		
Tb	159	3	He			299513.43		
Bi	209	3	He			224137.52		
Bi	209	3	He			219573.98		
Bi	209	3	He			220815.74		

Quantitation Report

Data File Name	183SMPL.d
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Sample Name	410-136531-H-1-A @10
Sample Type	Sample
Comment	G3 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

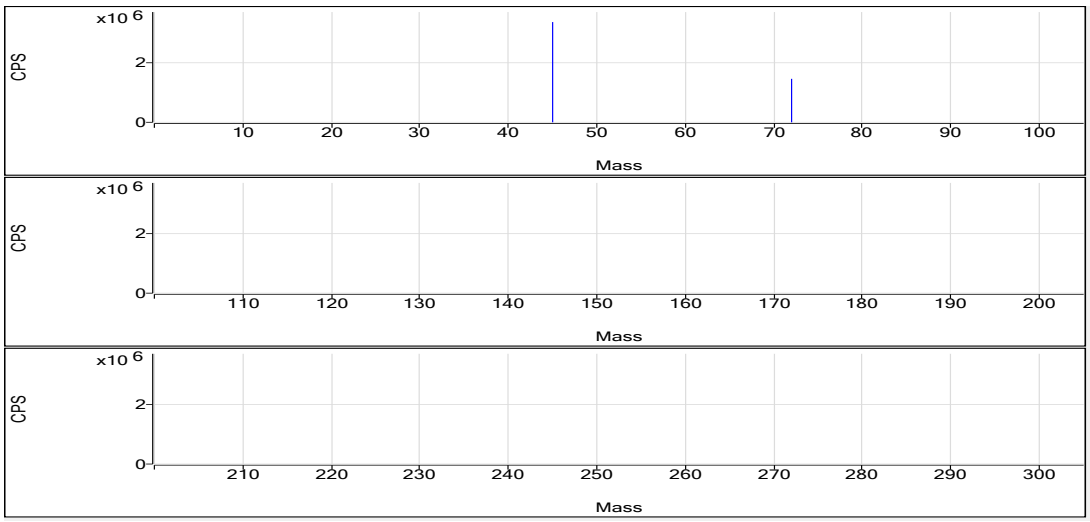
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.380	ppb	6.5	794.69	0.0005	Pulse	0.5000	3
Se	78	72	H2	0.522	ppb	32.9	33.78	0.0002	Pulse	1.5000	3
Na	23	72	He	79.851	ppb	5.7	18031.49	0.2436	Pulse	0.1000	3
Mg	24	72	He	2755.613	ppb	2.4	172321.42	2.3281	Pulse	0.1000	3
Al	27	72	He	10184.017	ppb	2.1	182058.69	2.4594	Pulse	0.1000	3
K	39	72	He	752.978	ppb	2.7	41412.38	0.5594	Pulse	0.1000	3
Ca	44	72	He	12456.291	ppb	2.5	28755.60	0.3885	Pulse	0.1000	3
Ti	47	72	He	211.098	ppb	1.6	3940.66	0.0532	Pulse	0.1000	3
V	51	72	He	29.747	ppb	1.5	26301.55	0.3553	Pulse	0.5000	3
Cr	52	72	He	30.535	ppb	0.2	36305.92	0.4903	Pulse	0.1000	3
Mn	55	72	He	159.962	ppb	2.1	70913.27	0.9580	Pulse	0.1000	3
Fe	57	72	He	12214.357	ppb	1.4	262250.96	3.5426	Pulse	0.1000	3
Co	59	72	He	4.211	ppb	2.8	9736.95	0.1316	Pulse	0.1000	3
Ni	60	72	He	11.882	ppb	7.3	8396.01	0.1135	Pulse	0.1000	3
Cu	63	72	He	27.779	ppb	0.9	51649.39	0.6977	Pulse	0.1000	3
Zn	66	72	He	82.588	ppb	0.8	15382.02	0.2077	Pulse	0.1000	3
As	75	72	He	2.612	ppb	7.5	368.68	0.0050	Pulse	0.5000	3
Sr	88	115	He	19.794	ppb	5.4	9890.46	0.1555	Pulse	0.1000	3
Mo	98	115	He	1.231	ppb	8.4	1756.85	0.0276	Pulse	0.1000	3
Ag	107	115	He	0.104	ppb	4.1	330.02	0.0052	Pulse	0.1000	3
Cd	111	115	He	0.251	ppb	18.0	80.00	0.0013	Pulse	0.5000	3
Sn	120	115	He	1.770	ppb	12.0	2597.00	0.0408	Pulse	0.1000	3
Sb	121	115	He	1.390	ppb	3.3	1113.42	0.0175	Pulse	0.1000	3
Ba	137	115	He	119.551	ppb	1.0	33294.23	0.5233	Pulse	0.1000	3
Tl	205	209	He	0.119	ppb	11.3	953.41	0.0043	Pulse	0.1000	3
Pb	208	209	He	238.118	ppb	0.2	1917793.64	8.6690	Pulse	0.1000	3
U	238	209	He	1.585	ppb	2.0	14805.61	0.0669	Pulse	0.1000	3

ISTD Table:

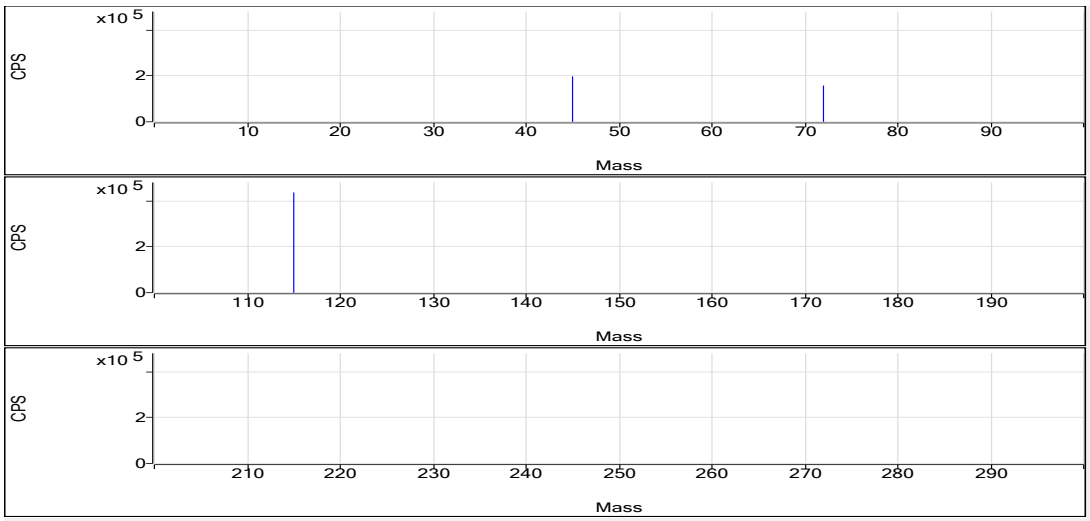
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3355731.41	2.9	103.5	Pulse	0.1000	3
No Gas	Ge	72	1455325.03	3.0	101.1	Pulse	0.1000	3
H2	Sc	45	197346.60	0.4	101.0	Pulse	0.1000	3
H2	Ge	72	157689.08	0.8	96.7	Pulse	0.1000	3
H2	In	115	435527.73	1.1	100.5	Pulse	0.1000	3
He	Sc	45	43575.65	3.1	109.0	Pulse	0.1000	3
He	Ge	72	74040.46	1.9	102.4	Pulse	0.1000	3
He	In	115	63625.05	1.1	98.5	Pulse	0.1000	3
He	Tb	159	283641.22	0.6	99.2	Pulse	0.1000	3
He	Bi	209	221224.89	0.6	99.6	Pulse	0.1000	3

No Gas

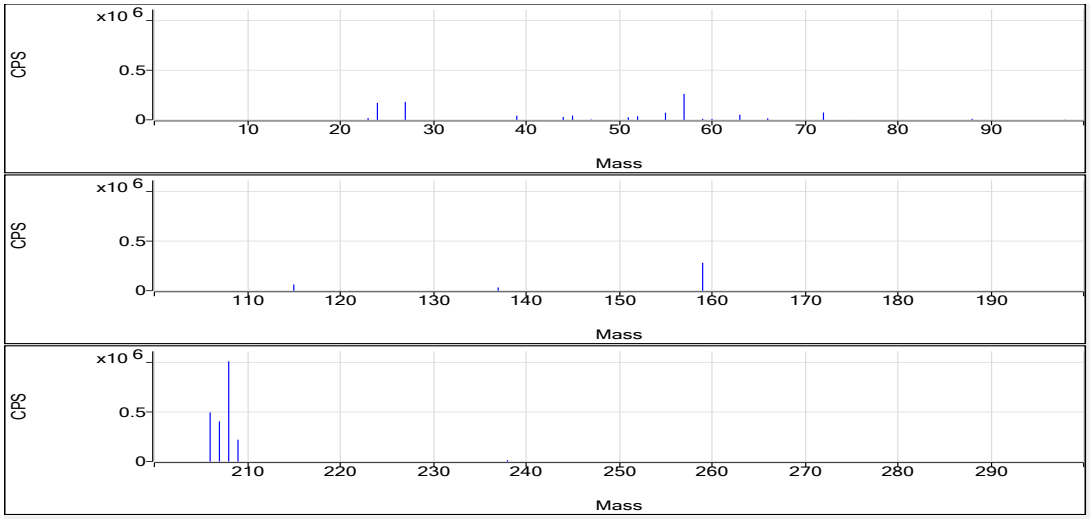


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.379	0.0005	766.02	0.0013	4.694E-05
Be	9	1	No Gas	0.405	0.0006	854.03	0.0013	4.694E-05
Be	9	1	No Gas	0.355	0.0005	764.03	0.0013	4.694E-05
Se	78	2	H2	0.447	0.0002	29.33	0.0004	1.089E-05
Se	78	2	H2	0.718	0.0003	46.00	0.0004	1.089E-05
Se	78	2	H2	0.399	0.0002	26.00	0.0004	1.089E-05
Na	23	3	He	75.765	0.2366	17901.32	0.0017	0.1065
Na	23	3	He	78.982	0.2421	17801.21	0.0017	0.1065
Na	23	3	He	84.805	0.2521	18391.94	0.0017	0.1065
Mg	24	3	He	2680.467	2.2648	171347.34	0.0008	0.004846
Mg	24	3	He	2783.787	2.3519	172904.96	0.0008	0.004846
Mg	24	3	He	2802.586	2.3677	172711.95	0.0008	0.004846
Al	27	3	He	9965.084	2.4066	182077.54	0.0002	0.001063
Al	27	3	He	10390.198	2.5092	184471.97	0.0002	0.001063
Al	27	3	He	10196.769	2.4625	179626.56	0.0002	0.001063
K	39	3	He	731.009	0.5473	41408.76	0.0006	0.1436
K	39	3	He	770.488	0.5691	41840.28	0.0006	0.1436
K	39	3	He	757.437	0.5619	40988.11	0.0006	0.1436
Ca	44	3	He	12113.812	0.3779	28588.58	0	0.001611
Ca	44	3	He	12520.602	0.3905	28708.85	0	0.001611
Ca	44	3	He	12734.458	0.3971	28969.36	0	0.001611
Ti	47	3	He	214.509	0.0541	4090.70	0.0003	0.0002737
Ti	47	3	He	211.018	0.0532	3910.63	0.0003	0.0002737
Ti	47	3	He	207.767	0.0524	3820.66	0.0003	0.0002737
V	51	3	He	29.241	0.3494	26433.75	0.0117	0.007326
V	51	3	He	29.88	0.3569	26235.48	0.0117	0.007326
V	51	3	He	30.12	0.3597	26235.41	0.0117	0.007326
Cr	52	3	He	30.595	0.4913	37168.24	0.0152	0.02538
Cr	52	3	He	30.459	0.4892	35965.11	0.0152	0.02538
Cr	52	3	He	30.549	0.4906	35784.40	0.0152	0.02538
Mn	55	3	He	156.18	0.9357	70793.12	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	161.164	0.9651	70953.43	0.0059	0.01385
Mn	55	3	He	162.542	0.9732	70993.25	0.0059	0.01385
Fe	57	3	He	12015.375	3.4849	263665.35	0.0003	0.003918
Fe	57	3	He	12352.898	3.5827	263396.64	0.0003	0.003918
Fe	57	3	He	12274.798	3.5601	259690.89	0.0003	0.003918
Co	59	3	He	4.077	0.1275	9643.61	0.0305	0.003084
Co	59	3	He	4.283	0.1338	9833.70	0.0305	0.003084
Co	59	3	He	4.272	0.1334	9733.55	0.0305	0.003084
Ni	60	3	He	11.11	0.1067	8072.47	0.0088	0.009003
Ni	60	3	He	11.711	0.112	8232.61	0.0088	0.009003
Ni	60	3	He	12.825	0.1218	8882.96	0.0088	0.009003
Cu	63	3	He	27.514	0.6911	52284.72	0.0249	0.004937
Cu	63	3	He	27.818	0.6986	51361.79	0.0249	0.004937
Cu	63	3	He	28.005	0.7033	51301.67	0.0249	0.004937
Zn	66	3	He	83.084	0.209	15809.05	0.0025	0.004836
Zn	66	3	He	82.844	0.2084	15318.70	0.0025	0.004836
Zn	66	3	He	81.835	0.2059	15018.30	0.0025	0.004836
As	75	3	He	2.775	0.0053	398.01	0.0017	0.0004347
As	75	3	He	2.394	0.0046	338.01	0.0017	0.0004347
As	75	3	He	2.667	0.0051	370.01	0.0017	0.0004347
Sr	88	3	He	18.577	0.146	9393.40	0.0078	0.0007762
Sr	88	3	He	20.555	0.1615	10174.05	0.0078	0.0007762
Sr	88	3	He	20.248	0.1591	10103.92	0.0078	0.0007762
Mo	98	3	He	1.113	0.025	1610.15	0.022	0.0005162
Mo	98	3	He	1.274	0.0286	1800.19	0.022	0.0005162
Mo	98	3	He	1.306	0.0293	1860.20	0.022	0.0005162
Ag	107	3	He	0.099	0.005	320.02	0.0455	0.0004641
Ag	107	3	He	0.105	0.0052	330.02	0.0455	0.0004641
Ag	107	3	He	0.107	0.0054	340.01	0.0455	0.0004641
Cd	111	3	He	0.274	0.0014	88.00	0.0048	5.152E-05
Cd	111	3	He	0.28	0.0014	88.00	0.0048	5.152E-05
Cd	111	3	He	0.199	0.001	64.00	0.0048	5.152E-05
Sn	120	3	He	1.578	0.0381	2450.32	0.0143	0.01559
Sn	120	3	He	1.734	0.0403	2540.30	0.0143	0.01559
Sn	120	3	He	1.999	0.0441	2800.38	0.0143	0.01559
Sb	121	3	He	1.408	0.0177	1140.09	0.0124	0.000258
Sb	121	3	He	1.425	0.0179	1130.09	0.0124	0.000258
Sb	121	3	He	1.337	0.0168	1070.09	0.0124	0.000258
Ba	137	3	He	118.809	0.5201	33461.26	0.0044	0.000309
Ba	137	3	He	120.912	0.5293	33351.17	0.0044	0.000309
Ba	137	3	He	118.93	0.5206	33070.27	0.0044	0.000309
Tl	205	3	He	0.121	0.0044	970.08	0.0276	0.001005
Tl	205	3	He	0.132	0.0047	1030.07	0.0276	0.001005
Tl	205	3	He	0.105	0.0039	860.07	0.0276	0.001005
Pb	208	3	He	237.482	8.6459	1019252.02	0.0364	0.002176
Pb	208	3	He	238.347	8.6774	1017921.08	0.0364	0.002176
Pb	208	3	He	238.525	8.6839	1006212.64	0.0364	0.002176
U	238	3	He	1.574	0.0664	14779.02	0.0421	0.00024
U	238	3	He	1.62	0.0684	15149.30	0.0421	0.00024
U	238	3	He	1.561	0.0659	14488.52	0.0421	0.00024
Sc	45	1	No Gas			3245645.58		
Sc	45	1	No Gas			3395871.20		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3425677.45		
Ge	72	1	No Gas			1404579.51		
Ge	72	1	No Gas			1475175.29		
Ge	72	1	No Gas			1486220.29		
Sc	45	2	H2			197636.58		
Sc	45	2	H2			196443.08		
Sc	45	2	H2			197960.15		
Ge	72	2	H2			158463.16		
Ge	72	2	H2			158342.83		
Ge	72	2	H2			156261.26		
In	115	2	H2			440035.50		
In	115	2	H2			430372.61		
In	115	2	H2			436175.07		
Sc	45	3	He			45130.52		
Sc	45	3	He			42983.34		
Sc	45	3	He			42613.09		
Ge	72	3	He			75658.33		
Ge	72	3	He			73518.35		
Ge	72	3	He			72944.69		
In	115	3	He			64358.66		
In	115	3	He			63032.64		
In	115	3	He			63544.61		
Tb	159	3	He			284889.62		
Tb	159	3	He			284450.39		
Tb	159	3	He			281583.65		
Bi	209	3	He			222439.90		
Bi	209	3	He			221450.80		
Bi	209	3	He			219783.96		

Quantitation Report

Data File Name	184SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 17:00:10
Sample Name	410-136610-H-4-A @2
Sample Type	Sample
Comment	G3 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

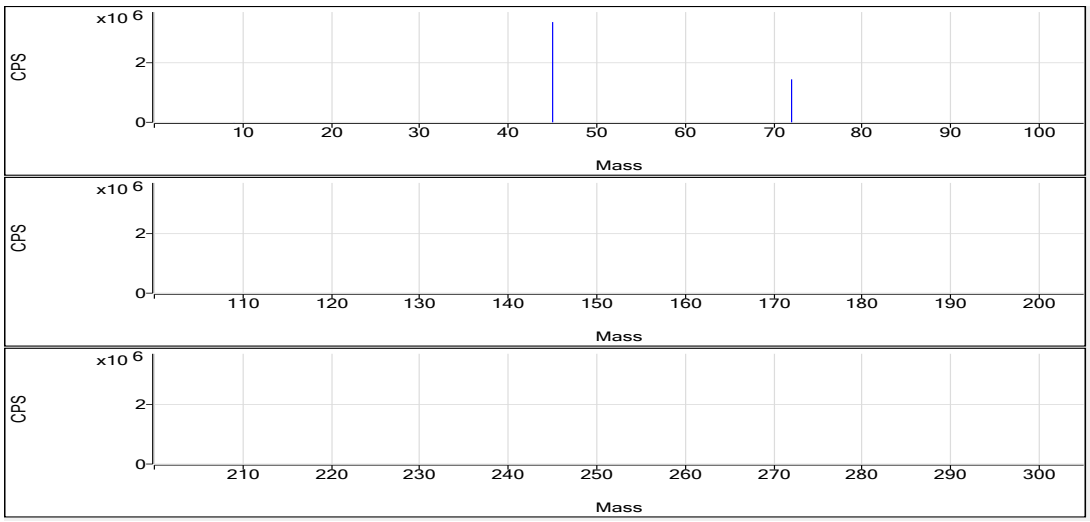
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	1.233	ppb	6.4	2412.88	0.0017	Pulse	0.5000	3
Se	78	72	H2	0.521	ppb	17.9	34.44	0.0002	Pulse	1.5000	3
Na	23	72	He	63.463	ppb	7.1	16015.73	0.2155	Pulse	0.1000	3
Mg	24	72	He	2451.014	ppb	1.0	153984.13	2.0713	Pulse	0.1000	3
Al	27	72	He	29273.191	ppb	0.8	525404.73	7.0674	Pulse	0.1000	3
K	39	72	He	3222.009	ppb	0.6	142951.76	1.9229	Pulse	0.1000	3
Ca	44	72	He	1981.067	ppb	2.1	4694.26	0.0631	Pulse	0.1000	3
Ti	47	72	He	612.860	ppb	2.5	11444.81	0.1540	Pulse	0.1000	3
V	51	72	He	74.187	ppb	0.8	65066.18	0.8751	Pulse	0.5000	3
Cr	52	72	He	44.877	ppb	0.7	52689.46	0.7087	Pulse	0.1000	3
Mn	55	72	He	148.729	ppb	2.3	66287.99	0.8917	Pulse	0.1000	3
Fe	57	72	He	43617.646	ppb	0.7	939731.13	12.6406	Pulse	0.1000	3
Co	59	72	He	10.095	ppb	2.9	23132.37	0.3111	Pulse	0.1000	3
Ni	60	72	He	46.323	ppb	1.6	30950.46	0.4163	Pulse	0.1000	3
Cu	63	72	He	9.798	ppb	3.0	18529.15	0.2493	Pulse	0.1000	3
Zn	66	72	He	51.713	ppb	3.3	9806.94	0.1319	Pulse	0.1000	3
As	75	72	He	18.656	ppb	3.0	2444.89	0.0329	Pulse	0.5000	3
Sr	88	115	He	23.248	ppb	1.6	11725.19	0.1825	Pulse	0.1000	3
Mo	98	115	He	1.552	ppb	6.6	2226.92	0.0347	Pulse	0.1000	3
Ag	107	115	He	0.037	ppb	52.2	136.67	0.0021	Pulse	0.1000	3
Cd	111	115	He	0.115	ppb	35.1	38.67	0.0006	Pulse	0.5000	3
Sn	120	115	He	4.986	ppb	2.2	5571.32	0.0867	Pulse	0.1000	3
Sb	121	115	He	0.519	ppb	10.5	430.02	0.0067	Pulse	0.1000	3
Ba	137	115	He	72.813	ppb	2.6	20482.62	0.3188	Pulse	0.1000	3
Tl	205	209	He	0.264	ppb	10.3	1840.20	0.0083	Pulse	0.1000	3
Pb	208	209	He	87.564	ppb	1.7	707884.22	3.1893	Pulse	0.1000	3
U	238	209	He	2.311	ppb	4.3	21625.47	0.0974	Pulse	0.1000	3

ISTD Table:

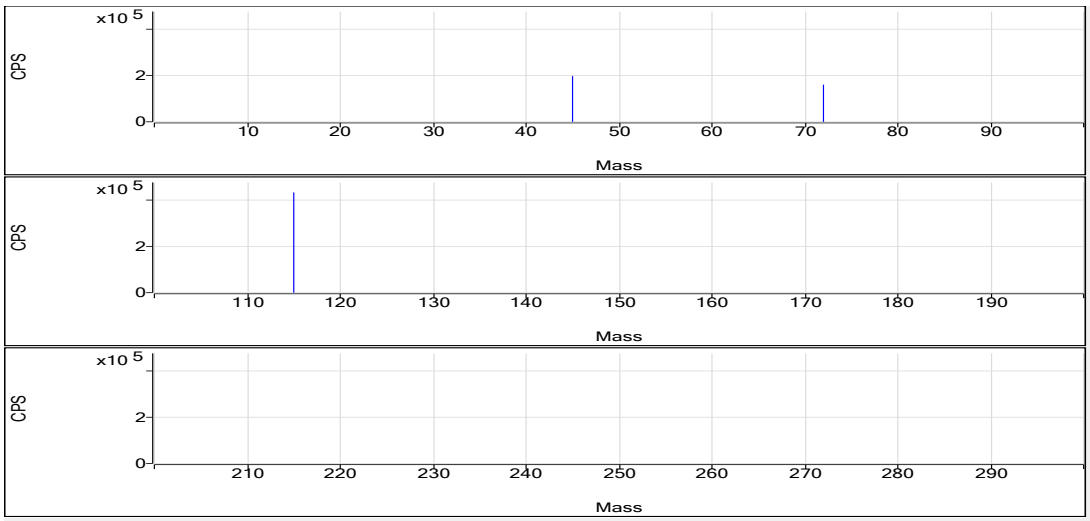
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3376694.85	1.7	104.2	Pulse	0.1000	3
No Gas	Ge	72	1447607.74	1.5	100.5	Pulse	0.1000	3
H2	Sc	45	197973.01	1.7	101.3	Pulse	0.1000	3
H2	Ge	72	160856.16	0.9	98.7	Pulse	0.1000	3
H2	In	115	434376.80	2.2	100.2	Pulse	0.1000	3
He	Sc	45	43629.27	1.0	109.1	Pulse	0.1000	3
He	Ge	72	74345.26	1.0	102.8	Pulse	0.1000	3
He	In	115	64258.03	2.0	99.5	Pulse	0.1000	3
He	Tb	159	287961.93	0.8	100.7	Pulse	0.1000	3
He	Bi	209	221981.57	0.9	99.9	Pulse	0.1000	3

No Gas

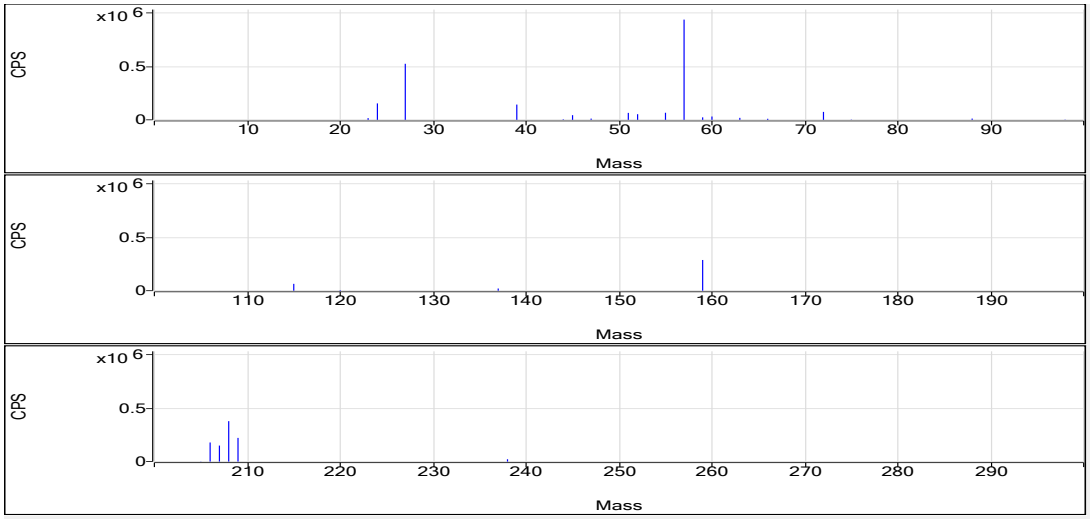


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	1.287	0.0017	2478.22	0.0013	4.694E-05
Be	9	1	No Gas	1.271	0.0017	2486.22	0.0013	4.694E-05
Be	9	1	No Gas	1.142	0.0015	2274.19	0.0013	4.694E-05
Se	78	2	H2	0.625	0.0003	41.33	0.0004	1.089E-05
Se	78	2	H2	0.495	0.0002	32.67	0.0004	1.089E-05
Se	78	2	H2	0.444	0.0002	29.33	0.0004	1.089E-05
Na	23	3	He	65.65	0.2192	16269.49	0.0017	0.1065
Na	23	3	He	66.432	0.2206	16249.26	0.0017	0.1065
Na	23	3	He	58.306	0.2066	15528.44	0.0017	0.1065
Mg	24	3	He	2472.547	2.0895	155061.39	0.0008	0.004846
Mg	24	3	He	2454.571	2.0743	152809.62	0.0008	0.004846
Mg	24	3	He	2425.924	2.0501	154081.38	0.0008	0.004846
Al	27	3	He	29204.847	7.0509	523260.58	0.0002	0.001063
Al	27	3	He	29534.062	7.1304	525283.98	0.0002	0.001063
Al	27	3	He	29080.664	7.021	527669.64	0.0002	0.001063
K	39	3	He	3233.249	1.9291	143159.69	0.0006	0.1436
K	39	3	He	3231.96	1.9284	142059.13	0.0006	0.1436
K	39	3	He	3200.819	1.9112	143636.45	0.0006	0.1436
Ca	44	3	He	1935.522	0.0617	4580.92	0	0.001611
Ca	44	3	He	2015.736	0.0642	4730.92	0	0.001611
Ca	44	3	He	1991.943	0.0635	4770.95	0	0.001611
Ti	47	3	He	619.246	0.1556	11544.90	0.0003	0.0002737
Ti	47	3	He	623.822	0.1567	11544.92	0.0003	0.0002737
Ti	47	3	He	595.514	0.1496	11244.60	0.0003	0.0002737
V	51	3	He	74.403	0.8777	65133.86	0.0117	0.007326
V	51	3	He	73.523	0.8674	63898.39	0.0117	0.007326
V	51	3	He	74.635	0.8804	66166.29	0.0117	0.007326
Cr	52	3	He	45.151	0.7129	52906.66	0.0152	0.02538
Cr	52	3	He	44.915	0.7093	52254.42	0.0152	0.02538
Cr	52	3	He	44.563	0.704	52907.30	0.0152	0.02538
Mn	55	3	He	146.401	0.878	65155.88	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	152.583	0.9145	67366.93	0.0059	0.01385
Mn	55	3	He	147.203	0.8827	66341.16	0.0059	0.01385
Fe	57	3	He	43507.165	12.6086	935700.85	0.0003	0.003918
Fe	57	3	He	43943.835	12.7351	938169.83	0.0003	0.003918
Fe	57	3	He	43401.937	12.5781	945322.72	0.0003	0.003918
Co	59	3	He	10.061	0.31	23008.73	0.0305	0.003084
Co	59	3	He	9.819	0.3027	22297.78	0.0305	0.003084
Co	59	3	He	10.405	0.3205	24090.60	0.0305	0.003084
Ni	60	3	He	45.766	0.4114	30533.09	0.0088	0.009003
Ni	60	3	He	47.162	0.4237	31214.26	0.0088	0.009003
Ni	60	3	He	46.041	0.4139	31104.04	0.0088	0.009003
Cu	63	3	He	9.697	0.2468	18312.03	0.0249	0.004937
Cu	63	3	He	10.125	0.2574	18963.21	0.0249	0.004937
Cu	63	3	He	9.573	0.2437	18312.21	0.0249	0.004937
Zn	66	3	He	51.968	0.1325	9833.64	0.0025	0.004836
Zn	66	3	He	49.877	0.1274	9383.28	0.0025	0.004836
Zn	66	3	He	53.295	0.1358	10203.91	0.0025	0.004836
As	75	3	He	18.161	0.032	2376.21	0.0017	0.0004347
As	75	3	He	18.546	0.0327	2408.22	0.0017	0.0004347
As	75	3	He	19.261	0.0339	2550.24	0.0017	0.0004347
Sr	88	3	He	23.665	0.1858	11705.20	0.0078	0.0007762
Sr	88	3	He	22.911	0.1799	11785.22	0.0078	0.0007762
Sr	88	3	He	23.168	0.1819	11685.14	0.0078	0.0007762
Mo	98	3	He	1.642	0.0367	2310.26	0.022	0.0005162
Mo	98	3	He	1.439	0.0322	2110.23	0.022	0.0005162
Mo	98	3	He	1.574	0.0352	2260.28	0.022	0.0005162
Ag	107	3	He	0.039	0.0022	140.01	0.0455	0.0004641
Ag	107	3	He	0.017	0.0012	80.00	0.0455	0.0004641
Ag	107	3	He	0.055	0.003	190.01	0.0455	0.0004641
Cd	111	3	He	0.161	0.0008	52.00	0.0048	5.152E-05
Cd	111	3	He	0.097	0.0005	34.00	0.0048	5.152E-05
Cd	111	3	He	0.087	0.0005	30.00	0.0048	5.152E-05
Sn	120	3	He	4.863	0.0849	5351.18	0.0143	0.01559
Sn	120	3	He	5.074	0.0879	5761.42	0.0143	0.01559
Sn	120	3	He	5.022	0.0872	5601.37	0.0143	0.01559
Sb	121	3	He	0.555	0.0071	450.02	0.0124	0.000258
Sb	121	3	He	0.545	0.007	460.03	0.0124	0.000258
Sb	121	3	He	0.456	0.0059	380.02	0.0124	0.000258
Ba	137	3	He	73.92	0.3237	20395.98	0.0044	0.000309
Ba	137	3	He	70.632	0.3093	20265.61	0.0044	0.000309
Ba	137	3	He	73.886	0.3235	20786.26	0.0044	0.000309
Tl	205	3	He	0.251	0.008	1770.18	0.0276	0.001005
Tl	205	3	He	0.245	0.0078	1740.18	0.0276	0.001005
Tl	205	3	He	0.295	0.0092	2010.25	0.0276	0.001005
Pb	208	3	He	87.584	3.19	382091.01	0.0364	0.002176
Pb	208	3	He	86.037	3.1337	375565.62	0.0364	0.002176
Pb	208	3	He	89.071	3.2441	379212.49	0.0364	0.002176
U	238	3	He	2.307	0.0973	21648.79	0.0421	0.00024
U	238	3	He	2.212	0.0933	20877.52	0.0421	0.00024
U	238	3	He	2.413	0.1017	22350.10	0.0421	0.00024
Sc	45	1	No Gas			3314611.51		
Sc	45	1	No Gas			3383443.39		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3432029.64		
Ge	72	1	No Gas			1425522.64		
Ge	72	1	No Gas			1448079.35		
Ge	72	1	No Gas			1469221.23		
Sc	45	2	H2			201841.29		
Sc	45	2	H2			196601.99		
Sc	45	2	H2			195475.74		
Ge	72	2	H2			162506.47		
Ge	72	2	H2			160434.14		
Ge	72	2	H2			159627.87		
In	115	2	H2			443164.52		
In	115	2	H2			424432.49		
In	115	2	H2			435533.39		
Sc	45	3	He			43104.22		
Sc	45	3	He			43876.88		
Sc	45	3	He			43906.71		
Ge	72	3	He			74211.43		
Ge	72	3	He			73668.09		
Ge	72	3	He			75156.27		
In	115	3	He			63051.81		
In	115	3	He			65563.95		
In	115	3	He			64288.70		
Tb	159	3	He			285451.87		
Tb	159	3	He			288751.52		
Tb	159	3	He			289682.40		
Bi	209	3	He			222519.29		
Bi	209	3	He			223760.68		
Bi	209	3	He			219664.74		

Quantitation Report

Data File Name	185SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 17:02:10
Sample Name	410-136610-H-4-A @10
Sample Type	Sample
Comment	G3 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

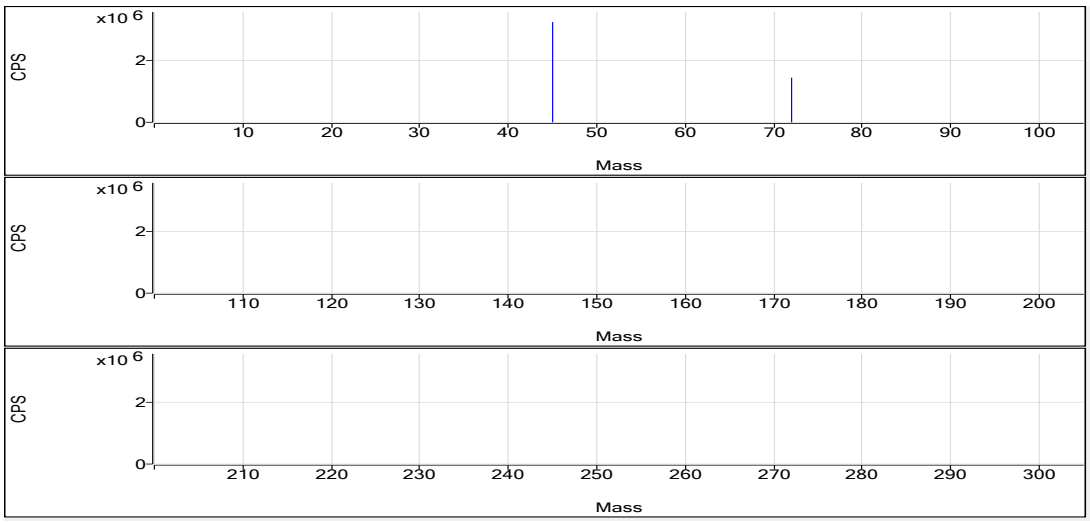
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.219	ppb	3.3	483.34	0.0003	Pulse	0.5000	3
Se	78	72	H2	0.119	ppb	45.8	9.33	0.0001	Pulse	1.5000	3
Na	23	72	He	11.071	ppb	28.5	9329.90	0.1255	Pulse	0.1000	3
Mg	24	72	He	438.895	ppb	2.3	27876.96	0.3749	Pulse	0.1000	3
Al	27	72	He	5298.819	ppb	1.9	95198.34	1.2802	Pulse	0.1000	3
K	39	72	He	574.584	ppb	3.7	34280.66	0.4609	Pulse	0.1000	3
Ca	44	72	He	373.826	ppb	6.4	983.40	0.0132	Pulse	0.1000	3
Ti	47	72	He	110.066	ppb	8.9	2073.55	0.0279	Pulse	0.1000	3
V	51	72	He	13.076	ppb	1.9	11919.58	0.1603	Pulse	0.5000	3
Cr	52	72	He	8.158	ppb	4.0	11127.95	0.1496	Pulse	0.1000	3
Mn	55	72	He	26.424	ppb	0.4	12629.16	0.1698	Pulse	0.1000	3
Fe	57	72	He	7788.242	ppb	1.6	168084.60	2.2603	Pulse	0.1000	3
Co	59	72	He	1.749	ppb	4.1	4197.41	0.0564	Pulse	0.1000	3
Ni	60	72	He	9.015	ppb	0.9	6565.02	0.0883	Pulse	0.1000	3
Cu	63	72	He	1.824	ppb	4.5	3750.61	0.0504	Pulse	0.1000	3
Zn	66	72	He	8.504	ppb	6.0	1913.53	0.0257	Pulse	0.1000	3
As	75	72	He	3.268	ppb	20.2	454.68	0.0061	Pulse	0.5000	3
Sr	88	115	He	4.605	ppb	5.8	2333.60	0.0368	Pulse	0.1000	3
Mo	98	115	He	0.266	ppb	25.4	403.35	0.0064	Pulse	0.1000	3
Ag	107	115	He	0.002	ppb	70.8	36.67	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.022	ppb	48.9	10.00	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.840	ppb	10.3	1750.17	0.0276	Pulse	0.1000	3
Sb	121	115	He	0.127	ppb	20.7	116.67	0.0018	Pulse	0.1000	3
Ba	137	115	He	13.070	ppb	3.7	3650.64	0.0575	Pulse	0.1000	3
Tl	205	209	He	0.054	ppb	9.9	553.36	0.0025	Pulse	0.1000	3
Pb	208	209	He	15.600	ppb	1.5	126840.52	0.5700	Pulse	0.1000	3
U	238	209	He	0.402	ppb	0.9	3817.37	0.0172	Pulse	0.1000	3

ISTD Table:

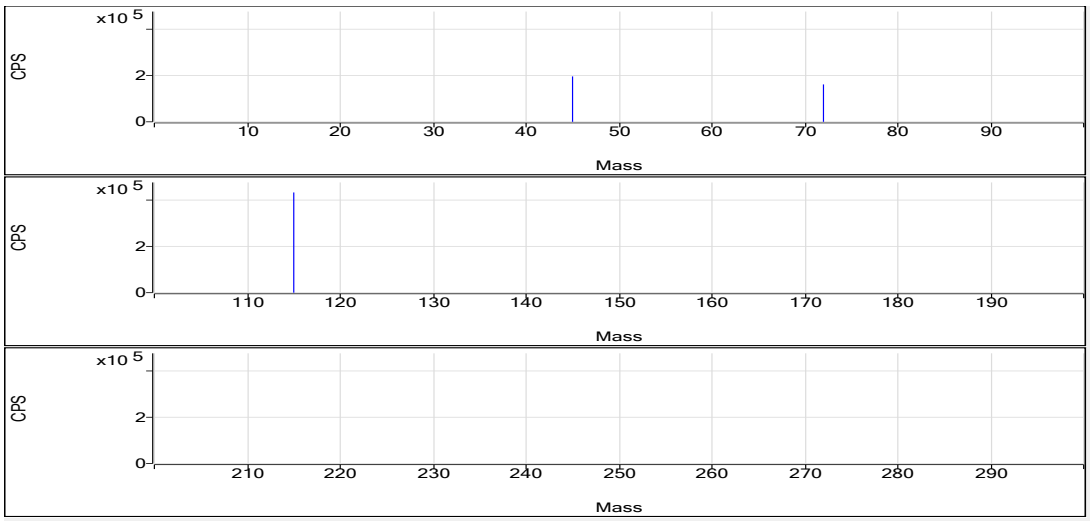
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3245923.39	2.1	100.1	Pulse	0.1000	3
No Gas	Ge	72	1445034.25	1.4	100.4	Pulse	0.1000	3
H2	Sc	45	196101.20	2.6	100.4	Pulse	0.1000	3
H2	Ge	72	161489.02	2.7	99.1	Pulse	0.1000	3
H2	In	115	432826.97	1.8	99.9	Pulse	0.1000	3
He	Sc	45	42669.51	1.6	106.7	Pulse	0.1000	3
He	Ge	72	74368.61	0.6	102.9	Pulse	0.1000	3
He	In	115	63477.30	2.2	98.3	Pulse	0.1000	3
He	Tb	159	281212.49	0.4	98.3	Pulse	0.1000	3
He	Bi	209	222528.17	0.3	100.2	Pulse	0.1000	3

No Gas

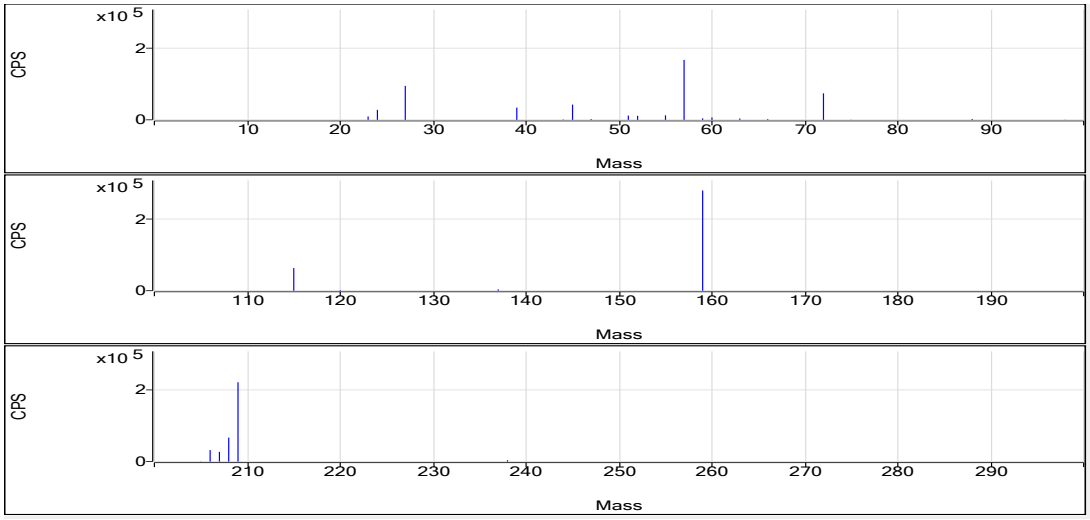


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.224	0.0003	490.01	0.0013	4.694E-05
Be	9	1	No Gas	0.221	0.0003	484.01	0.0013	4.694E-05
Be	9	1	No Gas	0.211	0.0003	476.01	0.0013	4.694E-05
Se	78	2	H2	0.178	0.0001	13.33	0.0004	1.089E-05
Se	78	2	H2	0.07	0	6.00	0.0004	1.089E-05
Se	78	2	H2	0.11	0.0001	8.67	0.0004	1.089E-05
Na	23	3	He	8.999	0.1219	9083.14	0.0017	0.1065
Na	23	3	He	14.703	0.1317	9733.46	0.0017	0.1065
Na	23	3	He	9.511	0.1228	9173.10	0.0017	0.1065
Mg	24	3	He	438.53	0.3746	27906.99	0.0008	0.004846
Mg	24	3	He	449.082	0.3835	28337.84	0.0008	0.004846
Mg	24	3	He	429.073	0.3666	27386.04	0.0008	0.004846
Al	27	3	He	5218.156	1.2607	93926.55	0.0002	0.001063
Al	27	3	He	5409.876	1.307	96584.04	0.0002	0.001063
Al	27	3	He	5268.424	1.2728	95084.43	0.0002	0.001063
K	39	3	He	598.439	0.4741	35322.66	0.0006	0.1436
K	39	3	He	557.096	0.4513	33348.78	0.0006	0.1436
K	39	3	He	568.218	0.4574	34170.53	0.0006	0.1436
Ca	44	3	He	354.37	0.0126	940.06	0	0.001611
Ca	44	3	He	366.409	0.013	960.06	0	0.001611
Ca	44	3	He	400.699	0.0141	1050.07	0	0.001611
Ti	47	3	He	120.416	0.0305	2270.24	0.0003	0.0002737
Ti	47	3	He	100.903	0.0256	1890.20	0.0003	0.0002737
Ti	47	3	He	108.88	0.0276	2060.20	0.0003	0.0002737
V	51	3	He	13.102	0.1606	11964.93	0.0117	0.007326
V	51	3	He	13.31	0.163	12047.03	0.0117	0.007326
V	51	3	He	12.816	0.1572	11746.77	0.0117	0.007326
Cr	52	3	He	8.421	0.1536	11444.88	0.0152	0.02538
Cr	52	3	He	7.792	0.144	10644.25	0.0152	0.02538
Cr	52	3	He	8.262	0.1512	11294.72	0.0152	0.02538
Mn	55	3	He	26.364	0.1695	12625.81	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	26.553	0.1706	12605.83	0.0059	0.01385
Mn	55	3	He	26.356	0.1694	12655.84	0.0059	0.01385
Fe	57	3	He	7765.486	2.2537	167908.61	0.0003	0.003918
Fe	57	3	He	7919.023	2.2982	169832.56	0.0003	0.003918
Fe	57	3	He	7680.219	2.229	166512.63	0.0003	0.003918
Co	59	3	He	1.76	0.0568	4230.74	0.0305	0.003084
Co	59	3	He	1.815	0.0585	4320.82	0.0305	0.003084
Co	59	3	He	1.672	0.0541	4040.66	0.0305	0.003084
Ni	60	3	He	9.068	0.0887	6611.70	0.0088	0.009003
Ni	60	3	He	8.92	0.0874	6461.64	0.0088	0.009003
Ni	60	3	He	9.057	0.0886	6621.72	0.0088	0.009003
Cu	63	3	He	1.896	0.0522	3890.65	0.0249	0.004937
Cu	63	3	He	1.734	0.0482	3560.57	0.0249	0.004937
Cu	63	3	He	1.842	0.0509	3800.61	0.0249	0.004937
Zn	66	3	He	8.03	0.0246	1830.18	0.0025	0.004836
Zn	66	3	He	8.443	0.0256	1890.18	0.0025	0.004836
Zn	66	3	He	9.039	0.027	2020.22	0.0025	0.004836
As	75	3	He	2.914	0.0055	410.01	0.0017	0.0004347
As	75	3	He	4.03	0.0074	550.01	0.0017	0.0004347
As	75	3	He	2.86	0.0054	404.01	0.0017	0.0004347
Sr	88	3	He	4.307	0.0344	2200.25	0.0078	0.0007762
Sr	88	3	He	4.82	0.0385	2380.27	0.0078	0.0007762
Sr	88	3	He	4.689	0.0374	2420.29	0.0078	0.0007762
Mo	98	3	He	0.261	0.0063	400.02	0.022	0.0005162
Mo	98	3	He	0.336	0.0079	490.02	0.022	0.0005162
Mo	98	3	He	0.201	0.0049	320.02	0.022	0.0005162
Ag	107	3	He	0.004	0.0006	40.00	0.0455	0.0004641
Ag	107	3	He	0	0.0005	30.00	0.0455	0.0004641
Ag	107	3	He	0.003	0.0006	40.00	0.0455	0.0004641
Cd	111	3	He	0.015	0.0001	8.00	0.0048	5.152E-05
Cd	111	3	He	0.016	0.0001	8.00	0.0048	5.152E-05
Cd	111	3	He	0.034	0.0002	14.00	0.0048	5.152E-05
Sn	120	3	He	0.927	0.0288	1840.17	0.0143	0.01559
Sn	120	3	He	0.754	0.0263	1630.15	0.0143	0.01559
Sn	120	3	He	0.838	0.0275	1780.18	0.0143	0.01559
Sb	121	3	He	0.156	0.0022	140.01	0.0124	0.000258
Sb	121	3	He	0.122	0.0018	110.00	0.0124	0.000258
Sb	121	3	He	0.104	0.0015	100.00	0.0124	0.000258
Ba	137	3	He	13.529	0.0595	3800.69	0.0044	0.000309
Ba	137	3	He	12.562	0.0553	3420.58	0.0044	0.000309
Ba	137	3	He	13.119	0.0577	3730.66	0.0044	0.000309
Tl	205	3	He	0.051	0.0024	540.03	0.0276	0.001005
Tl	205	3	He	0.06	0.0027	590.03	0.0276	0.001005
Tl	205	3	He	0.05	0.0024	530.03	0.0276	0.001005
Pb	208	3	He	15.847	0.579	68477.93	0.0364	0.002176
Pb	208	3	He	15.391	0.5624	65704.35	0.0364	0.002176
Pb	208	3	He	15.562	0.5686	67180.93	0.0364	0.002176
U	238	3	He	0.401	0.0171	3820.71	0.0421	0.00024
U	238	3	He	0.406	0.0173	3850.72	0.0421	0.00024
U	238	3	He	0.399	0.017	3780.69	0.0421	0.00024
Sc	45	1	No Gas			3219850.58		
Sc	45	1	No Gas			3196134.64		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3321784.95		
Ge	72	1	No Gas			1433220.29		
Ge	72	1	No Gas			1432819.04		
Ge	72	1	No Gas			1469063.42		
Sc	45	2	H2			201670.47		
Sc	45	2	H2			191923.24		
Sc	45	2	H2			194709.90		
Ge	72	2	H2			165904.04		
Ge	72	2	H2			157087.76		
Ge	72	2	H2			161475.26		
In	115	2	H2			441779.13		
In	115	2	H2			428676.28		
In	115	2	H2			428025.50		
Sc	45	3	He			42793.34		
Sc	45	3	He			43294.71		
Sc	45	3	He			41920.49		
Ge	72	3	He			74503.77		
Ge	72	3	He			73898.89		
Ge	72	3	He			74703.18		
In	115	3	He			63896.18		
In	115	3	He			61907.09		
In	115	3	He			64669.60		
Tb	159	3	He			280868.34		
Tb	159	3	He			280390.84		
Tb	159	3	He			282378.30		
Bi	209	3	He			223346.23		
Bi	209	3	He			222206.52		
Bi	209	3	He			222031.75		

Quantitation Report

Data File Name	186SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 17:04:10
Sample Name	410-136610-H-2-A @2
Sample Type	Sample
Comment	G3 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

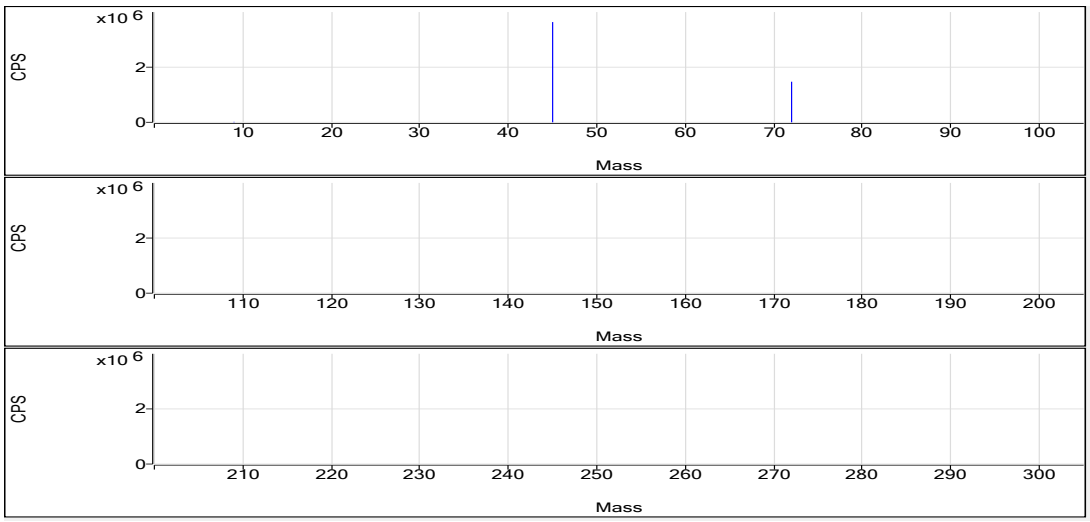
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	8.334	ppb	6.6	16142.71	0.0110	Pulse	0.5000	3
Se	78	72	H2	1.743	ppb	5.0	108.22	0.0007	Pulse	1.5000	3
Na	23	72	He	193.199	ppb	0.8	32877.07	0.4383	Pulse	0.1000	3
Mg	24	72	He	4993.339	ppb	0.6	316105.89	4.2147	Pulse	0.1000	3
Al	27	72	He	79265.433	ppb	0.6	1435139.93	19.1353	Pulse	0.1000	3
K	39	72	He	8031.497	ppb	1.0	343394.87	4.5787	Pulse	0.1000	3
Ca	44	72	He	34254.852	ppb	2.2	79924.66	1.0656	Pulse	0.1000	3
Ti	47	72	He	700.465	ppb	5.3	13193.04	0.1759	Pulse	0.1000	3
V	51	72	He	202.735	ppb	1.1	178408.06	2.3789	Pulse	0.5000	3
Cr	52	72	He	162.761	ppb	1.5	187771.72	2.5038	Pulse	0.1000	3
Mn	55	72	He	3791.708	ppb	0.4	1679571.18	22.3941	Pulse	0.1000	3
Fe	57	72	He	688999.925	ppb	1.0	14970793.11	199.6173	Analog	0.1000	3
Co	59	72	He	69.278	ppb	0.8	158756.96	2.1168	Pulse	0.1000	3
Ni	60	72	He	65.222	ppb	0.9	43690.07	0.5825	Pulse	0.1000	3
Cu	63	72	He	24.169	ppb	1.2	45572.18	0.6076	Pulse	0.1000	3
Zn	66	72	He	371.273	ppb	0.6	68773.93	0.9170	Pulse	0.1000	3
As	75	72	He	251.329	ppb	2.1	32811.89	0.4375	Pulse	0.5000	3
Sr	88	115	He	113.243	ppb	1.1	55542.48	0.8860	Pulse	0.1000	3
Mo	98	115	He	6.905	ppb	3.3	9563.57	0.1526	Pulse	0.1000	3
Ag	107	115	He	0.034	ppb	84.6	126.67	0.0020	Pulse	0.1000	3
Cd	111	115	He	0.568	ppb	9.7	174.00	0.0028	Pulse	0.5000	3
Sn	120	115	He	2.085	ppb	9.2	2840.39	0.0453	Pulse	0.1000	3
Sb	121	115	He	0.652	ppb	17.1	523.36	0.0083	Pulse	0.1000	3
Ba	137	115	He	145.807	ppb	0.3	40008.97	0.6382	Pulse	0.1000	3
Tl	205	209	He	0.742	ppb	7.5	4664.33	0.0215	Pulse	0.1000	3
Pb	208	209	He	53.685	ppb	1.0	423969.79	1.9562	Pulse	0.1000	3
U	238	209	He	12.214	ppb	0.7	111419.77	0.5141	Pulse	0.1000	3

ISTD Table:

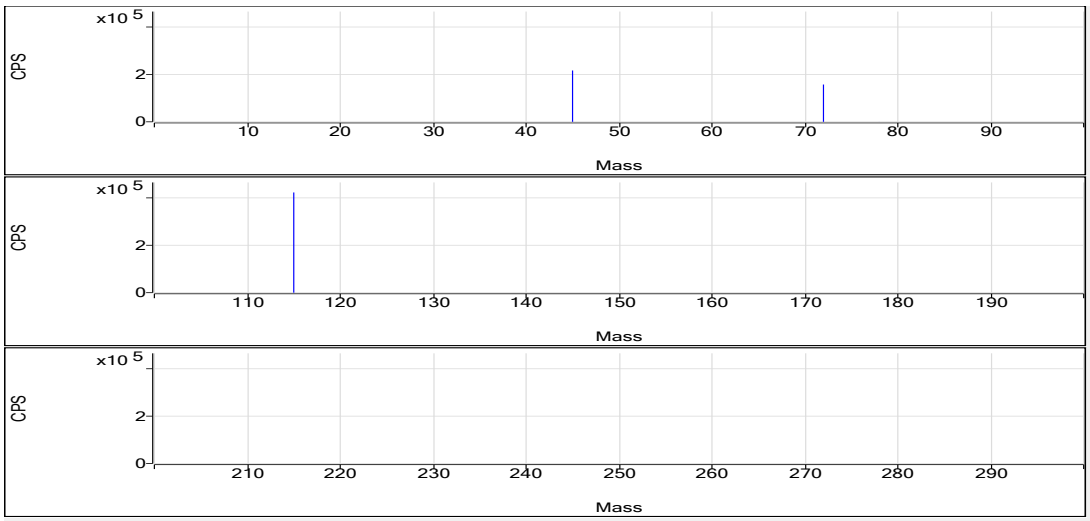
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3626400.15	0.6	111.9	Pulse	0.1000	3
No Gas	Ge	72	1468202.11	0.7	102.0	Pulse	0.1000	3
H2	Sc	45	216087.38	1.2	110.6	Pulse	0.1000	3
H2	Ge	72	156973.03	1.0	96.3	Pulse	0.1000	3
H2	In	115	421900.83	1.2	97.4	Pulse	0.1000	3
He	Sc	45	46564.59	1.6	116.5	Pulse	0.1000	3
He	Ge	72	75002.54	1.0	103.8	Pulse	0.1000	3
He	In	115	62692.34	0.9	97.1	Pulse	0.1000	3
He	Tb	159	343068.45	0.4	120.0	Pulse	0.1000	3
He	Bi	209	216742.77	0.7	97.5	Pulse	0.1000	3

No Gas

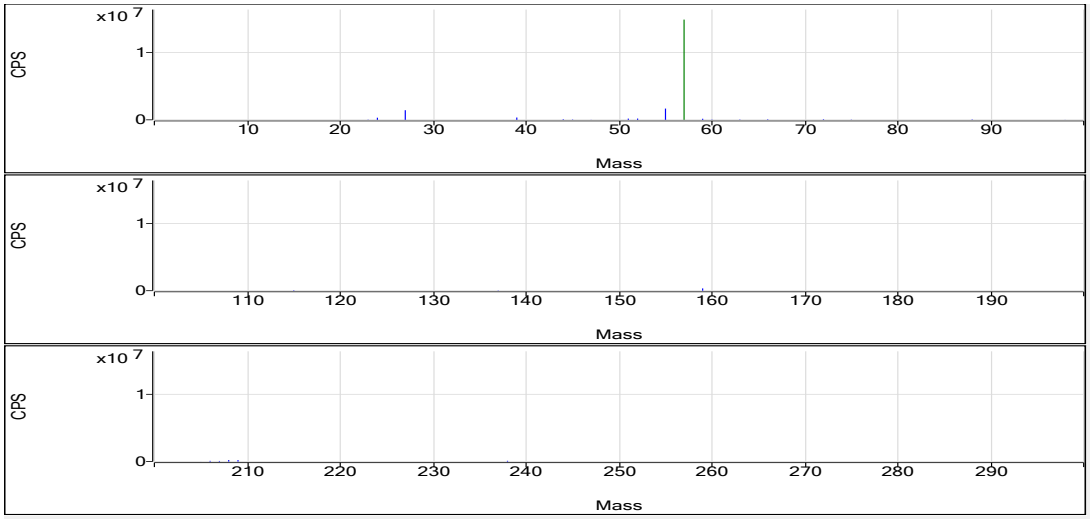


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	8.91	0.0118	17161.83	0.0013	4.694E-05
Be	9	1	No Gas	8.276	0.0109	16004.50	0.0013	4.694E-05
Be	9	1	No Gas	7.816	0.0103	15261.79	0.0013	4.694E-05
Se	78	2	H2	1.752	0.0007	110.00	0.0004	1.089E-05
Se	78	2	H2	1.825	0.0007	112.67	0.0004	1.089E-05
Se	78	2	H2	1.651	0.0007	102.00	0.0004	1.089E-05
Na	23	3	He	193.579	0.439	33297.57	0.0017	0.1065
Na	23	3	He	191.411	0.4353	32376.21	0.0017	0.1065
Na	23	3	He	194.608	0.4408	32957.43	0.0017	0.1065
Mg	24	3	He	4961.811	4.1882	317673.39	0.0008	0.004846
Mg	24	3	He	4998.919	4.2194	313853.53	0.0008	0.004846
Mg	24	3	He	5019.285	4.2366	316790.74	0.0008	0.004846
Al	27	3	He	78817.872	19.0272	1443223.73	0.0002	0.001063
Al	27	3	He	79766.283	19.2562	1432326.70	0.0002	0.001063
Al	27	3	He	79212.143	19.1224	1429869.35	0.0002	0.001063
K	39	3	He	7956.675	4.5374	344164.41	0.0006	0.1436
K	39	3	He	8122.035	4.6287	344296.99	0.0006	0.1436
K	39	3	He	8015.78	4.57	341723.20	0.0006	0.1436
Ca	44	3	He	34796.614	1.0824	82099.64	0	0.001611
Ca	44	3	He	34557.557	1.075	79958.72	0	0.001611
Ca	44	3	He	33410.385	1.0393	77715.62	0	0.001611
Ti	47	3	He	668.458	0.1679	12735.97	0.0003	0.0002737
Ti	47	3	He	691.862	0.1738	12926.10	0.0003	0.0002737
Ti	47	3	He	741.075	0.1861	13917.04	0.0003	0.0002737
V	51	3	He	200.418	2.3518	178381.95	0.0117	0.007326
V	51	3	He	204.822	2.4033	178762.34	0.0117	0.007326
V	51	3	He	202.965	2.3816	178079.88	0.0117	0.007326
Cr	52	3	He	160.297	2.4663	187067.73	0.0152	0.02538
Cr	52	3	He	165.254	2.5417	189061.91	0.0152	0.02538
Cr	52	3	He	162.731	2.5033	187185.51	0.0152	0.02538
Mn	55	3	He	3776.096	22.302	1691612.79	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	3806.08	22.4789	1672044.51	0.0059	0.01385
Mn	55	3	He	3792.948	22.4014	1675056.23	0.0059	0.01385
Fe	57	3	He	681568.363	197.4643	14977743.53	0.0003	0.003918
Fe	57	3	He	695320.004	201.4483	14984269.78	0.0003	0.003918
Fe	57	3	He	690111.409	199.9393	14950366.03	0.0003	0.003918
Co	59	3	He	68.653	2.0977	159114.16	0.0305	0.003084
Co	59	3	He	69.743	2.131	158506.88	0.0305	0.003084
Co	59	3	He	69.439	2.1217	158649.83	0.0305	0.003084
Ni	60	3	He	65.258	0.5828	44208.38	0.0088	0.009003
Ni	60	3	He	65.814	0.5877	43716.64	0.0088	0.009003
Ni	60	3	He	64.595	0.577	43145.20	0.0088	0.009003
Cu	63	3	He	23.922	0.6015	45622.35	0.0249	0.004937
Cu	63	3	He	24.079	0.6054	45030.76	0.0249	0.004937
Cu	63	3	He	24.505	0.616	46063.42	0.0249	0.004937
Zn	66	3	He	369.848	0.9135	69286.83	0.0025	0.004836
Zn	66	3	He	370.309	0.9146	68030.26	0.0025	0.004836
Zn	66	3	He	373.662	0.9228	69004.71	0.0025	0.004836
As	75	3	He	245.909	0.4281	32472.46	0.0017	0.0004347
As	75	3	He	256.685	0.4469	33238.21	0.0017	0.0004347
As	75	3	He	251.392	0.4376	32725.00	0.0017	0.0004347
Sr	88	3	He	112.736	0.882	55569.22	0.0078	0.0007762
Sr	88	3	He	112.287	0.8785	55358.28	0.0078	0.0007762
Sr	88	3	He	114.707	0.8974	55699.95	0.0078	0.0007762
Mo	98	3	He	6.891	0.1523	9593.56	0.022	0.0005162
Mo	98	3	He	6.681	0.1476	9303.39	0.022	0.0005162
Mo	98	3	He	7.142	0.1578	9793.76	0.022	0.0005162
Ag	107	3	He	0.021	0.0014	90.00	0.0455	0.0004641
Ag	107	3	He	0.014	0.0011	70.00	0.0455	0.0004641
Ag	107	3	He	0.068	0.0035	220.01	0.0455	0.0004641
Cd	111	3	He	0.518	0.0025	160.00	0.0048	5.152E-05
Cd	111	3	He	0.558	0.0027	172.00	0.0048	5.152E-05
Cd	111	3	He	0.627	0.0031	190.00	0.0048	5.152E-05
Sn	120	3	He	2.091	0.0454	2860.38	0.0143	0.01559
Sn	120	3	He	1.89	0.0425	2680.36	0.0143	0.01559
Sn	120	3	He	2.275	0.048	2980.43	0.0143	0.01559
Sb	121	3	He	0.747	0.0095	600.03	0.0124	0.000258
Sb	121	3	He	0.529	0.0068	430.02	0.0124	0.000258
Sb	121	3	He	0.681	0.0087	540.03	0.0124	0.000258
Ba	137	3	He	145.384	0.6363	40089.37	0.0044	0.000309
Ba	137	3	He	146.047	0.6392	40279.44	0.0044	0.000309
Ba	137	3	He	145.989	0.639	39658.10	0.0044	0.000309
Tl	205	3	He	0.744	0.0216	4681.00	0.0276	0.001005
Tl	205	3	He	0.796	0.023	5021.13	0.0276	0.001005
Tl	205	3	He	0.685	0.0199	4290.85	0.0276	0.001005
Pb	208	3	He	53.722	1.9575	226213.96	0.0364	0.002176
Pb	208	3	He	53.138	1.9363	225436.95	0.0364	0.002176
Pb	208	3	He	54.196	1.9748	228488.69	0.0364	0.002176
U	238	3	He	12.123	0.5102	110680.26	0.0421	0.00024
U	238	3	He	12.271	0.5165	112646.74	0.0421	0.00024
U	238	3	He	12.249	0.5155	110932.32	0.0421	0.00024
Sc	45	1	No Gas			3612519.63		
Sc	45	1	No Gas			3615704.01		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3650976.82		
Ge	72	1	No Gas			1459900.29		
Ge	72	1	No Gas			1465411.70		
Ge	72	1	No Gas			1479294.35		
Sc	45	2	H2			219147.48		
Sc	45	2	H2			214708.40		
Sc	45	2	H2			214406.25		
Ge	72	2	H2			158706.23		
Ge	72	2	H2			156197.89		
Ge	72	2	H2			156014.96		
In	115	2	H2			427515.81		
In	115	2	H2			417635.62		
In	115	2	H2			420551.05		
Sc	45	3	He			45751.64		
Sc	45	3	He			46675.26		
Sc	45	3	He			47266.88		
Ge	72	3	He			75850.40		
Ge	72	3	He			74382.70		
Ge	72	3	He			74774.52		
In	115	3	He			63022.63		
In	115	3	He			63032.86		
In	115	3	He			62088.01		
Tb	159	3	He			341860.35		
Tb	159	3	He			342652.81		
Tb	159	3	He			344692.18		
Bi	209	3	He			216930.45		
Bi	209	3	He			218117.05		
Bi	209	3	He			215180.80		

Quantitation Report

Data File Name	187SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 17:06:10
Sample Name	410-136610-H-2-A @10
Sample Type	Sample
Comment	G3 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

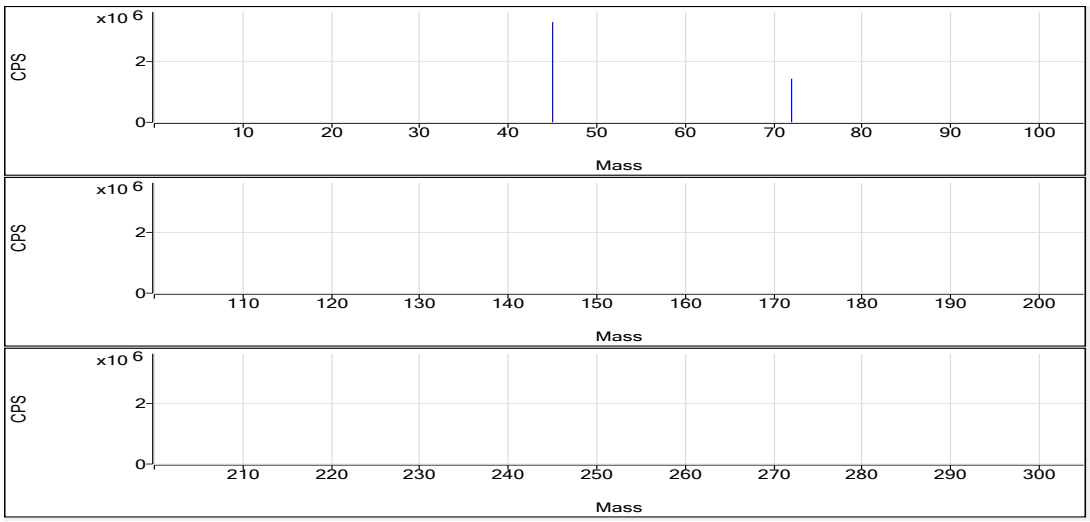
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	1.670	ppb	7.0	3234.37	0.0022	Pulse	0.5000	3
Se	78	72	H2	0.330	ppb	15.6	22.00	0.0001	Pulse	1.5000	3
Na	23	72	He	45.320	ppb	13.8	13199.65	0.1843	Pulse	0.1000	3
Mg	24	72	He	1020.585	ppb	2.4	62000.09	0.8653	Pulse	0.1000	3
Al	27	72	He	16269.048	ppb	1.8	281491.80	3.9283	Pulse	0.1000	3
K	39	72	He	1640.445	ppb	3.6	75195.34	1.0495	Pulse	0.1000	3
Ca	44	72	He	6922.404	ppb	3.7	15518.73	0.2166	Pulse	0.1000	3
Ti	47	72	He	151.786	ppb	3.1	2747.01	0.0383	Pulse	0.1000	3
V	51	72	He	41.401	ppb	1.7	35228.88	0.4916	Pulse	0.5000	3
Cr	52	72	He	33.294	ppb	1.9	38147.34	0.5324	Pulse	0.1000	3
Mn	55	72	He	783.832	ppb	2.2	332504.53	4.6404	Pulse	0.1000	3
Fe	57	72	He	138502.875	ppb	1.8	2875629.33	40.1302	Pulse	0.1000	3
Co	59	72	He	14.155	ppb	1.8	31167.74	0.4350	Pulse	0.1000	3
Ni	60	72	He	14.517	ppb	4.4	9790.30	0.1367	Pulse	0.1000	3
Cu	63	72	He	4.869	ppb	3.3	9053.11	0.1263	Pulse	0.1000	3
Zn	66	72	He	78.116	ppb	1.0	14100.65	0.1967	Pulse	0.1000	3
As	75	72	He	52.087	ppb	4.4	6520.18	0.0910	Pulse	0.5000	3
Sr	88	115	He	22.535	ppb	2.5	11194.75	0.1769	Pulse	0.1000	3
Mo	98	115	He	1.326	ppb	5.9	1880.19	0.0297	Pulse	0.1000	3
Ag	107	115	He	0.003	ppb	210.0	36.67	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.084	ppb	32.4	28.67	0.0005	Pulse	0.5000	3
Sn	120	115	He	0.407	ppb	48.1	1353.46	0.0214	Pulse	0.1000	3
Sb	121	115	He	0.145	ppb	23.9	130.00	0.0021	Pulse	0.1000	3
Ba	137	115	He	29.324	ppb	3.1	8135.99	0.1286	Pulse	0.1000	3
Tl	205	209	He	0.157	ppb	7.1	1186.77	0.0053	Pulse	0.1000	3
Pb	208	209	He	10.390	ppb	1.1	84378.32	0.3803	Pulse	0.1000	3
U	238	209	He	2.366	ppb	0.6	22132.91	0.0998	Pulse	0.1000	3

ISTD Table:

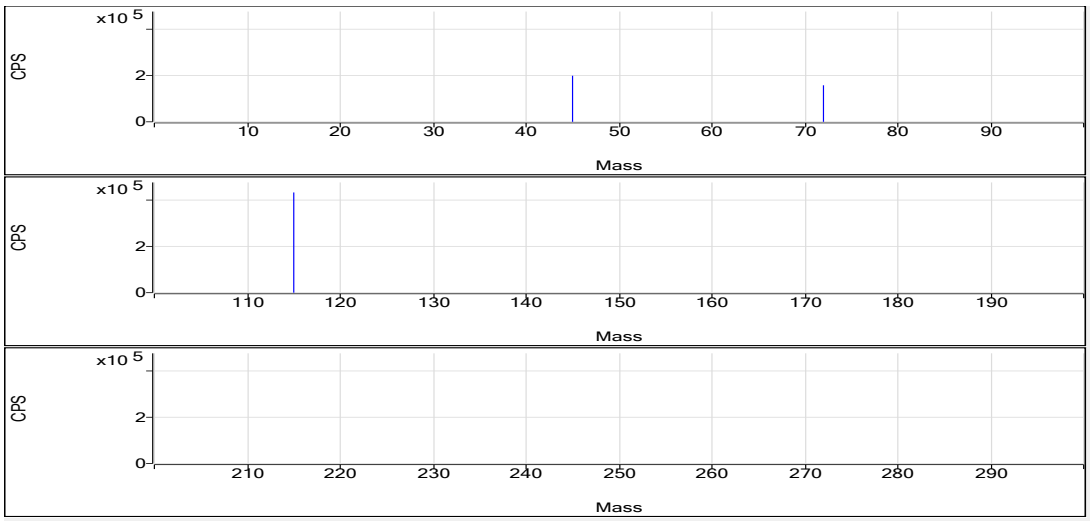
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3327273.08	2.4	102.7	Pulse	0.1000	3
No Gas	Ge	72	1444084.93	1.7	100.3	Pulse	0.1000	3
H2	Sc	45	199436.23	0.8	102.1	Pulse	0.1000	3
H2	Ge	72	158088.50	1.8	97.0	Pulse	0.1000	3
H2	In	115	433775.75	2.2	100.1	Pulse	0.1000	3
He	Sc	45	42412.16	2.4	106.1	Pulse	0.1000	3
He	Ge	72	71675.82	2.2	99.2	Pulse	0.1000	3
He	In	115	63265.98	0.5	97.9	Pulse	0.1000	3
He	Tb	159	296867.64	1.1	103.8	Pulse	0.1000	3
He	Bi	209	221852.52	0.2	99.8	Pulse	0.1000	3

No Gas

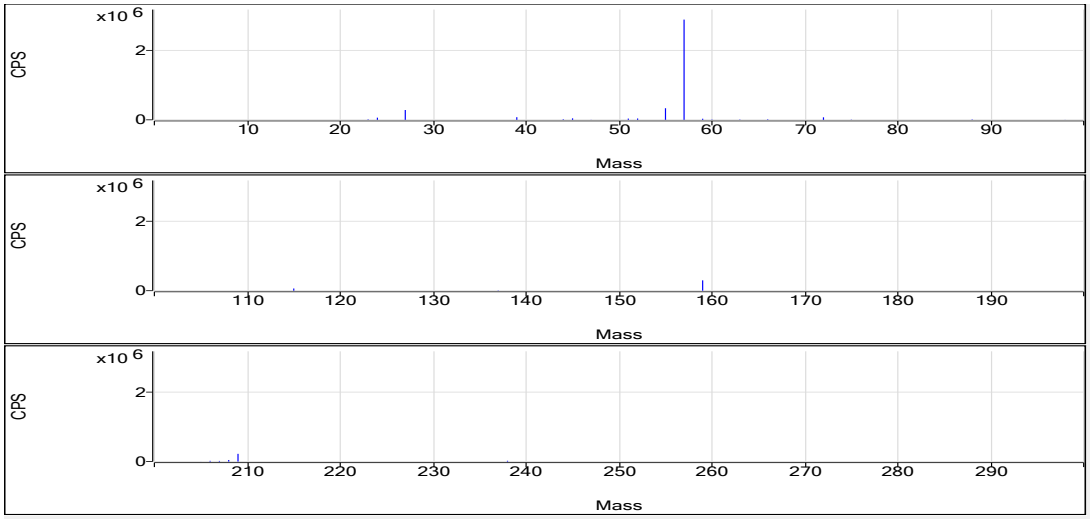


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	1.797	0.0024	3428.41	0.0013	4.694E-05
Be	9	1	No Gas	1.645	0.0022	3172.35	0.0013	4.694E-05
Be	9	1	No Gas	1.568	0.0021	3102.34	0.0013	4.694E-05
Se	78	2	H2	0.27	0.0001	18.67	0.0004	1.089E-05
Se	78	2	H2	0.358	0.0002	23.33	0.0004	1.089E-05
Se	78	2	H2	0.361	0.0002	24.00	0.0004	1.089E-05
Na	23	3	He	46.058	0.1856	13186.27	0.0017	0.1065
Na	23	3	He	51.154	0.1943	13706.72	0.0017	0.1065
Na	23	3	He	38.747	0.173	12705.97	0.0017	0.1065
Mg	24	3	He	1031.19	0.8742	62120.59	0.0008	0.004846
Mg	24	3	He	1037.865	0.8799	62060.40	0.0008	0.004846
Mg	24	3	He	992.701	0.8418	61819.28	0.0008	0.004846
Al	27	3	He	16341.508	3.9458	280374.86	0.0002	0.001063
Al	27	3	He	16524.269	3.9899	281423.36	0.0002	0.001063
Al	27	3	He	15941.368	3.8492	282677.18	0.0002	0.001063
K	39	3	He	1691.527	1.0777	76579.02	0.0006	0.1436
K	39	3	He	1653.611	1.0568	74538.70	0.0006	0.1436
K	39	3	He	1576.197	1.014	74468.31	0.0006	0.1436
Ca	44	3	He	6916.263	0.2164	15378.67	0	0.001611
Ca	44	3	He	7182.586	0.2247	15848.95	0	0.001611
Ca	44	3	He	6668.362	0.2087	15328.58	0	0.001611
Ti	47	3	He	149.887	0.0379	2690.36	0.0003	0.0002737
Ti	47	3	He	157.224	0.0397	2800.34	0.0003	0.0002737
Ti	47	3	He	148.248	0.0375	2750.33	0.0003	0.0002737
V	51	3	He	41.546	0.4933	35053.84	0.0117	0.007326
V	51	3	He	42.039	0.4991	35202.12	0.0117	0.007326
V	51	3	He	40.618	0.4825	35430.69	0.0117	0.007326
Cr	52	3	He	33.528	0.5359	38080.80	0.0152	0.02538
Cr	52	3	He	33.788	0.5399	38080.35	0.0152	0.02538
Cr	52	3	He	32.566	0.5213	38280.87	0.0152	0.02538
Mn	55	3	He	797.634	4.7218	335515.74	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	789.478	4.6737	329651.40	0.0059	0.01385
Mn	55	3	He	764.383	4.5256	332346.44	0.0059	0.01385
Fe	57	3	He	139599.549	40.448	2874085.58	0.0003	0.003918
Fe	57	3	He	140235.247	40.6321	2865925.58	0.0003	0.003918
Fe	57	3	He	135673.828	39.3106	2886876.83	0.0003	0.003918
Co	59	3	He	14.168	0.4353	30934.13	0.0305	0.003084
Co	59	3	He	14.404	0.4425	31214.27	0.0305	0.003084
Co	59	3	He	13.893	0.427	31354.81	0.0305	0.003084
Ni	60	3	He	15.163	0.1423	10113.86	0.0088	0.009003
Ni	60	3	He	14.492	0.1364	9623.57	0.0088	0.009003
Ni	60	3	He	13.894	0.1312	9633.46	0.0088	0.009003
Cu	63	3	He	5.035	0.1305	9273.30	0.0249	0.004937
Cu	63	3	He	4.858	0.1261	8892.98	0.0249	0.004937
Cu	63	3	He	4.713	0.1225	8993.06	0.0249	0.004937
Zn	66	3	He	78.843	0.1985	14107.20	0.0025	0.004836
Zn	66	3	He	78.173	0.1969	13887.23	0.0025	0.004836
Zn	66	3	He	77.333	0.1948	14307.53	0.0025	0.004836
As	75	3	He	53.736	0.0939	6671.58	0.0017	0.0004347
As	75	3	He	53.076	0.0927	6541.52	0.0017	0.0004347
As	75	3	He	49.448	0.0864	6347.44	0.0017	0.0004347
Sr	88	3	He	22.802	0.179	11344.80	0.0078	0.0007762
Sr	88	3	He	21.894	0.1719	10814.48	0.0078	0.0007762
Sr	88	3	He	22.908	0.1799	11424.97	0.0078	0.0007762
Mo	98	3	He	1.238	0.0278	1760.18	0.022	0.0005162
Mo	98	3	He	1.384	0.031	1950.20	0.022	0.0005162
Mo	98	3	He	1.356	0.0304	1930.20	0.022	0.0005162
Ag	107	3	He	0.004	0.0006	40.00	0.0455	0.0004641
Ag	107	3	He	0.007	0.0008	50.00	0.0455	0.0004641
Ag	107	3	He	-0.003	0.0003	20.00	0.0455	0.0004641
Cd	111	3	He	0.068	0.0004	24.00	0.0048	5.152E-05
Cd	111	3	He	0.115	0.0006	38.00	0.0048	5.152E-05
Cd	111	3	He	0.068	0.0004	24.00	0.0048	5.152E-05
Sn	120	3	He	0.611	0.0243	1540.15	0.0143	0.01559
Sn	120	3	He	0.39	0.0211	1330.12	0.0143	0.01559
Sn	120	3	He	0.221	0.0187	1190.11	0.0143	0.01559
Sb	121	3	He	0.132	0.0019	120.00	0.0124	0.000258
Sb	121	3	He	0.184	0.0025	160.01	0.0124	0.000258
Sb	121	3	He	0.119	0.0017	110.00	0.0124	0.000258
Ba	137	3	He	28.434	0.1247	7902.46	0.0044	0.000309
Ba	137	3	He	29.301	0.1285	8082.65	0.0044	0.000309
Ba	137	3	He	30.237	0.1326	8422.85	0.0044	0.000309
Tl	205	3	He	0.159	0.0054	1200.11	0.0276	0.001005
Tl	205	3	He	0.145	0.005	1110.09	0.0276	0.001005
Tl	205	3	He	0.167	0.0056	1250.10	0.0276	0.001005
Pb	208	3	He	10.45	0.3825	45007.78	0.0364	0.002176
Pb	208	3	He	10.459	0.3828	45498.99	0.0364	0.002176
Pb	208	3	He	10.261	0.3757	44917.00	0.0364	0.002176
U	238	3	He	2.351	0.0991	21999.18	0.0421	0.00024
U	238	3	He	2.366	0.0998	22079.47	0.0421	0.00024
U	238	3	He	2.381	0.1004	22320.09	0.0421	0.00024
Sc	45	1	No Gas			3262449.95		
Sc	45	1	No Gas			3303791.83		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3415577.45		
Ge	72	1	No Gas			1423934.20		
Ge	72	1	No Gas			1436518.26		
Ge	72	1	No Gas			1471802.32		
Sc	45	2	H2			200026.36		
Sc	45	2	H2			197654.20		
Sc	45	2	H2			200628.12		
Ge	72	2	H2			160717.28		
Ge	72	2	H2			155086.67		
Ge	72	2	H2			158461.56		
In	115	2	H2			439190.15		
In	115	2	H2			422902.06		
In	115	2	H2			439235.03		
Sc	45	3	He			41529.63		
Sc	45	3	He			42211.41		
Sc	45	3	He			43495.44		
Ge	72	3	He			71056.39		
Ge	72	3	He			70533.49		
Ge	72	3	He			73437.59		
In	115	3	He			63383.55		
In	115	3	He			62912.00		
In	115	3	He			63534.04		
Tb	159	3	He			297171.95		
Tb	159	3	He			293522.57		
Tb	159	3	He			299908.41		
Bi	209	3	He			221893.59		
Bi	209	3	He			221345.58		
Bi	209	3	He			222318.38		

Quantitation Report

Data File Name	188SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 17:08:10
Sample Name	410-136610-H-8-A @2
Sample Type	Sample
Comment	G3 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

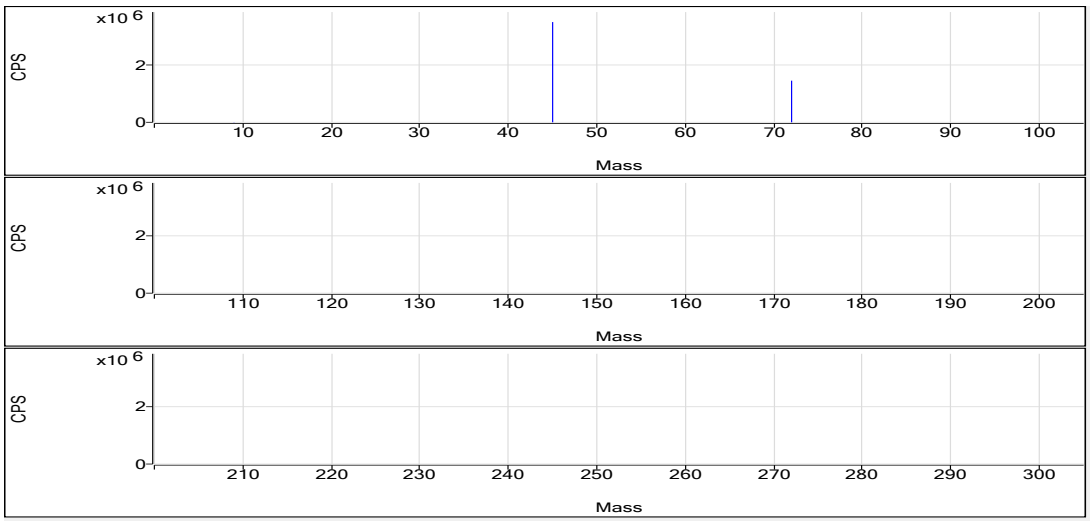
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	3.514	ppb	4.1	6754.89	0.0047	Pulse	0.5000	3
Se	78	72	H2	0.651	ppb	7.2	42.44	0.0003	Pulse	1.5000	3
Na	23	72	He	517.709	ppb	2.1	74365.79	0.9958	Pulse	0.1000	3
Mg	24	72	He	5035.302	ppb	0.3	317398.76	4.2501	Pulse	0.1000	3
Al	27	72	He	63057.383	ppb	0.9	1136844.07	15.2227	Pulse	0.1000	3
K	39	72	He	6108.983	ppb	0.9	262643.60	3.5171	Pulse	0.1000	3
Ca	44	72	He	40583.801	ppb	1.7	94248.74	1.2621	Pulse	0.1000	3
Ti	47	72	He	903.810	ppb	3.4	16943.56	0.2269	Pulse	0.1000	3
V	51	72	He	174.424	ppb	1.1	152911.46	2.0477	Pulse	0.5000	3
Cr	52	72	He	111.741	ppb	1.2	128958.55	1.7269	Pulse	0.1000	3
Mn	55	72	He	581.677	ppb	0.4	257428.88	3.4472	Pulse	0.1000	3
Fe	57	72	He	127960.523	ppb	1.0	2768680.48	37.0760	Pulse	0.1000	3
Co	59	72	He	28.131	ppb	0.8	64329.67	0.8614	Pulse	0.1000	3
Ni	60	72	He	43.208	ppb	2.5	29042.98	0.3889	Pulse	0.1000	3
Cu	63	72	He	16.182	ppb	2.4	30509.53	0.4085	Pulse	0.1000	3
Zn	66	72	He	126.422	ppb	1.8	23553.17	0.3154	Pulse	0.1000	3
As	75	72	He	36.205	ppb	0.9	4734.80	0.0634	Pulse	0.5000	3
Sr	88	115	He	292.046	ppb	1.6	145541.90	2.2837	Pulse	0.1000	3
Mo	98	115	He	1.554	ppb	10.7	2213.58	0.0347	Pulse	0.1000	3
Ag	107	115	He	0.043	ppb	56.9	153.34	0.0024	Pulse	0.1000	3
Cd	111	115	He	0.419	ppb	4.4	131.33	0.0021	Pulse	0.5000	3
Sn	120	115	He	2.590	ppb	3.9	3347.22	0.0525	Pulse	0.1000	3
Sb	121	115	He	0.819	ppb	12.4	663.37	0.0104	Pulse	0.1000	3
Ba	137	115	He	150.172	ppb	2.1	41887.88	0.6573	Pulse	0.1000	3
Tl	205	209	He	0.514	ppb	5.0	3410.56	0.0152	Pulse	0.1000	3
Pb	208	209	He	41.689	ppb	0.4	340547.91	1.5196	Pulse	0.1000	3
U	238	209	He	5.617	ppb	3.5	53012.90	0.2365	Pulse	0.1000	3

ISTD Table:

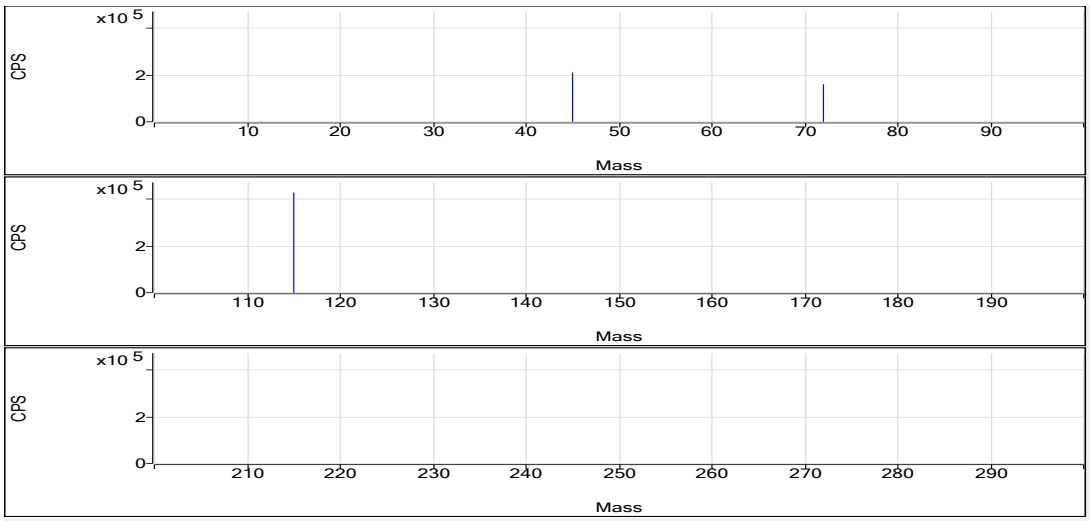
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3488337.76	2.5	107.6	Pulse	0.1000	3
No Gas	Ge	72	1449039.04	2.0	100.6	Pulse	0.1000	3
H2	Sc	45	210945.42	0.9	108.0	Pulse	0.1000	3
H2	Ge	72	160581.08	1.0	98.5	Pulse	0.1000	3
H2	In	115	428982.89	1.5	99.0	Pulse	0.1000	3
He	Sc	45	44568.42	3.1	111.5	Pulse	0.1000	3
He	Ge	72	74680.73	1.1	103.3	Pulse	0.1000	3
He	In	115	63732.91	0.5	98.7	Pulse	0.1000	3
He	Tb	159	305517.84	0.3	106.8	Pulse	0.1000	3
He	Bi	209	224116.65	1.1	100.9	Pulse	0.1000	3

No Gas

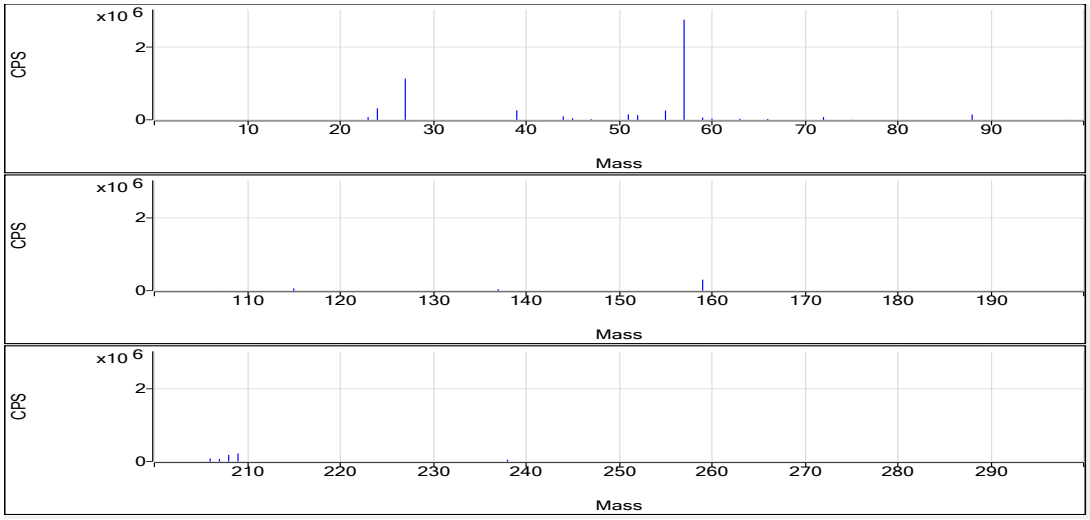


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	3.608	0.0048	6823.58	0.0013	4.694E-05
Be	9	1	No Gas	3.584	0.0048	6849.60	0.0013	4.694E-05
Be	9	1	No Gas	3.349	0.0044	6591.48	0.0013	4.694E-05
Se	78	2	H2	0.702	0.0003	46.00	0.0004	1.089E-05
Se	78	2	H2	0.641	0.0003	41.33	0.0004	1.089E-05
Se	78	2	H2	0.61	0.0002	40.00	0.0004	1.089E-05
Na	23	3	He	526.362	1.0107	74747.87	0.0017	0.1065
Na	23	3	He	521.422	1.0022	75742.52	0.0017	0.1065
Na	23	3	He	505.344	0.9745	72606.98	0.0017	0.1065
Mg	24	3	He	5053.045	4.2651	315445.19	0.0008	0.004846
Mg	24	3	He	5033.965	4.249	321133.84	0.0008	0.004846
Mg	24	3	He	5018.897	4.2363	315617.26	0.0008	0.004846
Al	27	3	He	63503.339	15.3304	1133837.01	0.0002	0.001063
Al	27	3	He	63259.661	15.2716	1154208.58	0.0002	0.001063
Al	27	3	He	62409.149	15.0663	1122486.62	0.0002	0.001063
K	39	3	He	6145.084	3.537	261598.77	0.0006	0.1436
K	39	3	He	6048.848	3.4839	263308.14	0.0006	0.1436
K	39	3	He	6133.019	3.5304	263023.88	0.0006	0.1436
Ca	44	3	He	41358.35	1.2862	95127.08	0	0.001611
Ca	44	3	He	40196.758	1.2501	94482.41	0	0.001611
Ca	44	3	He	40196.296	1.2501	93136.74	0	0.001611
Ti	47	3	He	938.69	0.2357	17430.73	0.0003	0.0002737
Ti	47	3	He	879.48	0.2208	16690.01	0.0003	0.0002737
Ti	47	3	He	893.259	0.2243	16709.94	0.0003	0.0002737
V	51	3	He	176.472	2.0717	153219.36	0.0117	0.007326
V	51	3	He	172.578	2.0261	153130.25	0.0117	0.007326
V	51	3	He	174.223	2.0453	152384.77	0.0117	0.007326
Cr	52	3	He	113.32	1.7509	129499.72	0.0152	0.02538
Cr	52	3	He	111.217	1.7189	129913.46	0.0152	0.02538
Cr	52	3	He	110.686	1.7108	127462.47	0.0152	0.02538
Mn	55	3	He	583.761	3.4595	255861.73	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	579.358	3.4335	259497.69	0.0059	0.01385
Mn	55	3	He	581.911	3.4485	256927.22	0.0059	0.01385
Fe	57	3	He	129373.252	37.4852	2772410.27	0.0003	0.003918
Fe	57	3	He	126948.768	36.7828	2780005.27	0.0003	0.003918
Fe	57	3	He	127559.549	36.9598	2753625.90	0.0003	0.003918
Co	59	3	He	28.266	0.8655	64011.99	0.0305	0.003084
Co	59	3	He	28.255	0.8652	65387.19	0.0305	0.003084
Co	59	3	He	27.873	0.8535	63589.82	0.0305	0.003084
Ni	60	3	He	44.43	0.3997	29560.77	0.0088	0.009003
Ni	60	3	He	42.657	0.3841	29029.54	0.0088	0.009003
Ni	60	3	He	42.538	0.3831	28538.62	0.0088	0.009003
Cu	63	3	He	15.868	0.4006	29630.95	0.0249	0.004937
Cu	63	3	He	16.608	0.4191	31675.18	0.0249	0.004937
Cu	63	3	He	16.069	0.4057	30222.46	0.0249	0.004937
Zn	66	3	He	127.858	0.319	23589.87	0.0025	0.004836
Zn	66	3	He	123.783	0.3089	23349.58	0.0025	0.004836
Zn	66	3	He	127.623	0.3184	23720.07	0.0025	0.004836
As	75	3	He	36.544	0.064	4732.80	0.0017	0.0004347
As	75	3	He	36.198	0.0634	4790.82	0.0017	0.0004347
As	75	3	He	35.875	0.0628	4680.79	0.0017	0.0004347
Sr	88	3	He	288.656	2.2572	144417.15	0.0078	0.0007762
Sr	88	3	He	297.307	2.3249	147437.28	0.0078	0.0007762
Sr	88	3	He	290.177	2.2691	144771.28	0.0078	0.0007762
Mo	98	3	He	1.623	0.0363	2320.27	0.022	0.0005162
Mo	98	3	He	1.674	0.0374	2370.28	0.022	0.0005162
Mo	98	3	He	1.365	0.0306	1950.19	0.022	0.0005162
Ag	107	3	He	0.069	0.0036	230.01	0.0455	0.0004641
Ag	107	3	He	0.021	0.0014	90.00	0.0455	0.0004641
Ag	107	3	He	0.038	0.0022	140.00	0.0455	0.0004641
Cd	111	3	He	0.4	0.002	126.00	0.0048	5.152E-05
Cd	111	3	He	0.436	0.0021	136.00	0.0048	5.152E-05
Cd	111	3	He	0.42	0.0021	132.00	0.0048	5.152E-05
Sn	120	3	He	2.678	0.0538	3440.59	0.0143	0.01559
Sn	120	3	He	2.612	0.0528	3350.54	0.0143	0.01559
Sn	120	3	He	2.48	0.0509	3250.53	0.0143	0.01559
Sb	121	3	He	0.786	0.01	640.04	0.0124	0.000258
Sb	121	3	He	0.933	0.0118	750.04	0.0124	0.000258
Sb	121	3	He	0.737	0.0094	600.03	0.0124	0.000258
Ba	137	3	He	147.349	0.6449	41262.65	0.0044	0.000309
Ba	137	3	He	153.499	0.6718	42606.37	0.0044	0.000309
Ba	137	3	He	149.669	0.6551	41794.62	0.0044	0.000309
Tl	205	3	He	0.502	0.0149	3340.54	0.0276	0.001005
Tl	205	3	He	0.498	0.0148	3340.54	0.0276	0.001005
Tl	205	3	He	0.544	0.016	3550.61	0.0276	0.001005
Pb	208	3	He	41.594	1.5161	182697.75	0.0364	0.002176
Pb	208	3	He	41.577	1.5155	183664.55	0.0364	0.002176
Pb	208	3	He	41.897	1.5271	181707.79	0.0364	0.002176
U	238	3	He	5.843	0.2461	55258.89	0.0421	0.00024
U	238	3	He	5.516	0.2323	52567.15	0.0421	0.00024
U	238	3	He	5.492	0.2313	51212.66	0.0421	0.00024
Sc	45	1	No Gas			3412445.26		
Sc	45	1	No Gas			3470505.57		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3582062.45		
Ge	72	1	No Gas			1425284.67		
Ge	72	1	No Gas			1439971.54		
Ge	72	1	No Gas			1481860.92		
Sc	45	2	H2			210774.80		
Sc	45	2	H2			209092.54		
Sc	45	2	H2			212968.92		
Ge	72	2	H2			161933.35		
Ge	72	2	H2			158767.97		
Ge	72	2	H2			161041.91		
In	115	2	H2			431824.60		
In	115	2	H2			421807.45		
In	115	2	H2			433316.63		
Sc	45	3	He			44708.86		
Sc	45	3	He			45892.54		
Sc	45	3	He			43103.87		
Ge	72	3	He			73960.04		
Ge	72	3	He			75578.87		
Ge	72	3	He			74503.29		
In	115	3	He			64006.83		
In	115	3	He			63444.06		
In	115	3	He			63826.16		
Tb	159	3	He			305891.36		
Tb	159	3	He			306169.62		
Tb	159	3	He			304492.55		
Bi	209	3	He			224574.86		
Bi	209	3	He			226322.15		
Bi	209	3	He			221452.93		

Quantitation Report

Data File Name	189SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 17:10:11
Sample Name	410-136610-H-8-A @10
Sample Type	Sample
Comment	G3 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

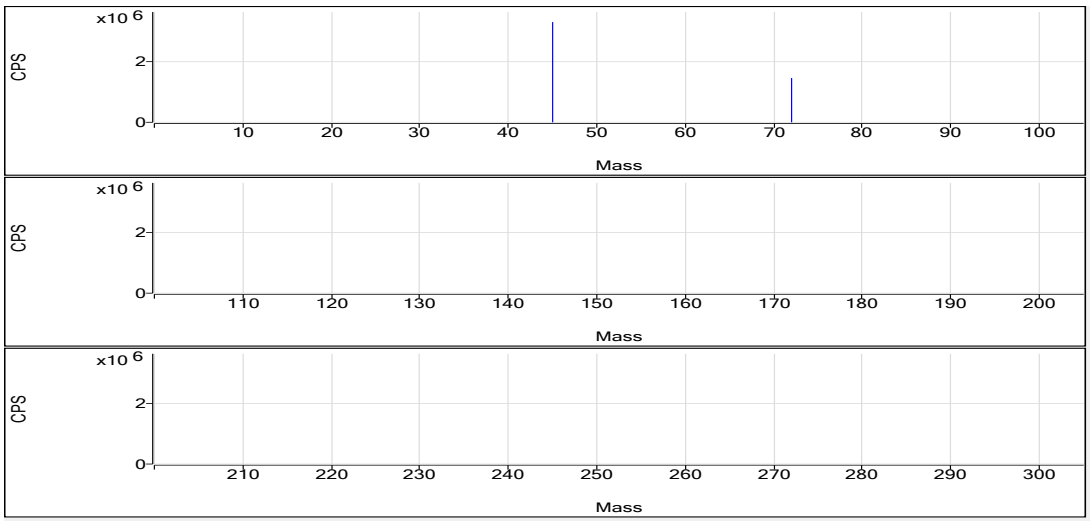
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.679	ppb	3.0	1362.74	0.0009	Pulse	0.5000	3
Se	78	72	H2	0.088	ppb	65.6	7.33	0.0000	Pulse	1.5000	3
Na	23	72	He	101.078	ppb	3.0	20875.21	0.2801	Pulse	0.1000	3
Mg	24	72	He	997.440	ppb	1.5	63040.31	0.8458	Pulse	0.1000	3
Al	27	72	He	12365.844	ppb	1.6	222562.29	2.9861	Pulse	0.1000	3
K	39	72	He	1204.322	ppb	2.9	60267.26	0.8087	Pulse	0.1000	3
Ca	44	72	He	7939.714	ppb	1.7	18505.47	0.2482	Pulse	0.1000	3
Ti	47	72	He	163.349	ppb	1.9	3073.77	0.0412	Pulse	0.1000	3
V	51	72	He	34.826	ppb	1.7	30909.90	0.4147	Pulse	0.5000	3
Cr	52	72	He	22.313	ppb	4.0	27209.29	0.3651	Pulse	0.1000	3
Mn	55	72	He	114.911	ppb	2.0	51582.36	0.6921	Pulse	0.1000	3
Fe	57	72	He	25431.311	ppb	1.7	549446.22	7.3717	Pulse	0.1000	3
Co	59	72	He	5.605	ppb	1.8	12976.15	0.1741	Pulse	0.1000	3
Ni	60	72	He	9.976	ppb	3.9	7208.75	0.0967	Pulse	0.1000	3
Cu	63	72	He	3.388	ppb	4.1	6665.06	0.0894	Pulse	0.1000	3
Zn	66	72	He	24.229	ppb	8.8	4800.98	0.0644	Pulse	0.1000	3
As	75	72	He	7.157	ppb	3.2	960.70	0.0129	Pulse	0.5000	3
Sr	88	115	He	57.461	ppb	1.9	28883.36	0.4500	Pulse	0.1000	3
Mo	98	115	He	0.302	ppb	23.0	460.03	0.0072	Pulse	0.1000	3
Ag	107	115	He	0.016	ppb	76.0	76.67	0.0012	Pulse	0.1000	3
Cd	111	115	He	0.052	ppb	20.2	19.33	0.0003	Pulse	0.5000	3
Sn	120	115	He	0.421	ppb	30.5	1386.80	0.0216	Pulse	0.1000	3
Sb	121	115	He	0.218	ppb	11.2	190.01	0.0030	Pulse	0.1000	3
Ba	137	115	He	29.398	ppb	4.5	8279.41	0.1289	Pulse	0.1000	3
Tl	205	209	He	0.095	ppb	9.7	806.72	0.0036	Pulse	0.1000	3
Pb	208	209	He	8.484	ppb	0.6	69146.83	0.3110	Pulse	0.1000	3
U	238	209	He	1.112	ppb	4.5	10454.56	0.0470	Pulse	0.1000	3

ISTD Table:

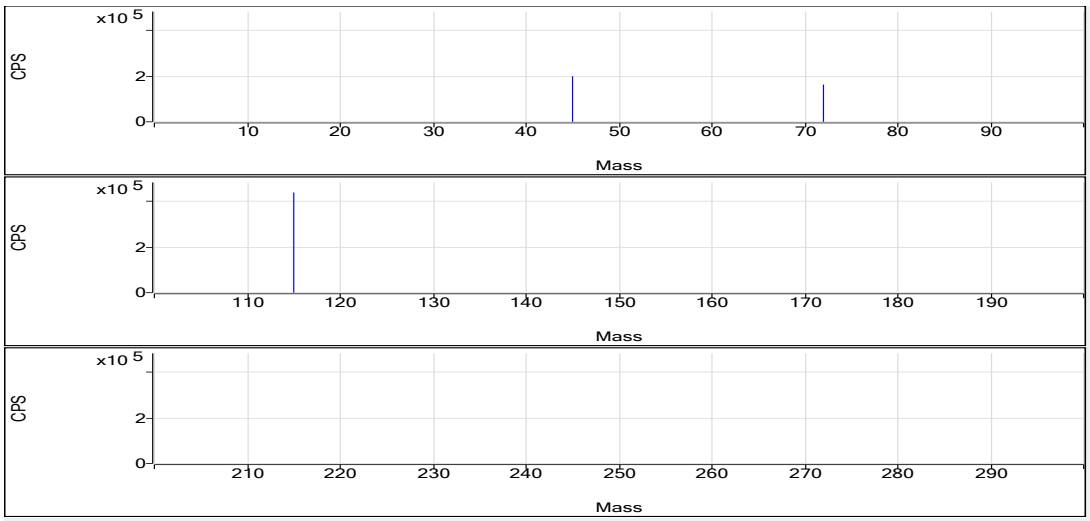
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3287963.28	3.3	101.4	Pulse	0.1000	3
No Gas	Ge	72	1451918.05	3.6	100.8	Pulse	0.1000	3
H2	Sc	45	199278.11	1.3	102.0	Pulse	0.1000	3
H2	Ge	72	163000.67	1.7	100.0	Pulse	0.1000	3
H2	In	115	438780.19	3.2	101.3	Pulse	0.1000	3
He	Sc	45	41623.18	2.2	104.1	Pulse	0.1000	3
He	Ge	72	74546.40	1.8	103.1	Pulse	0.1000	3
He	In	115	64200.24	1.2	99.4	Pulse	0.1000	3
He	Tb	159	287440.09	1.5	100.5	Pulse	0.1000	3
He	Bi	209	222361.51	0.5	100.1	Pulse	0.1000	3

No Gas

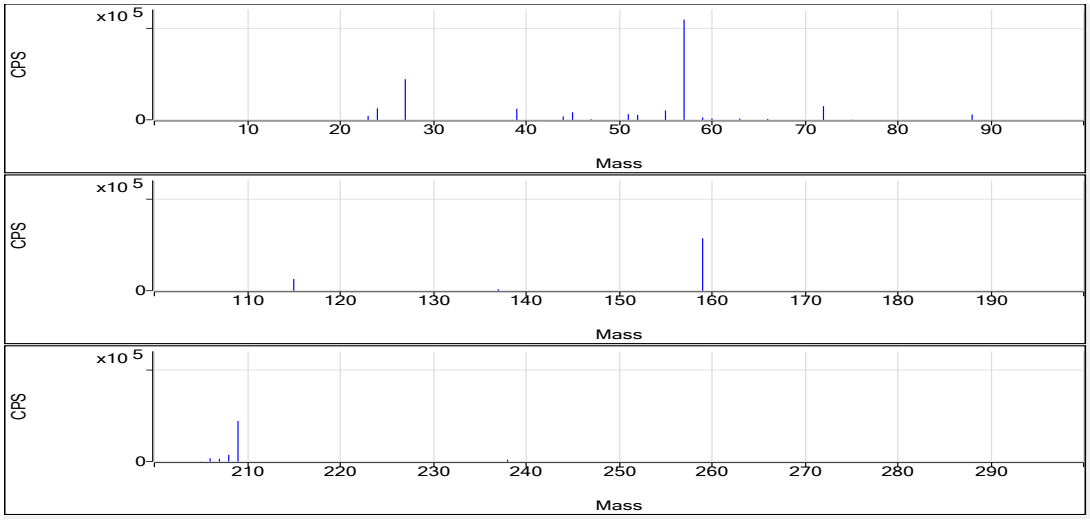


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.701	0.001	1352.07	0.0013	4.694E-05
Be	9	1	No Gas	0.674	0.0009	1362.07	0.0013	4.694E-05
Be	9	1	No Gas	0.662	0.0009	1374.07	0.0013	4.694E-05
Se	78	2	H2	0.066	0	6.00	0.0004	1.089E-05
Se	78	2	H2	0.154	0.0001	11.33	0.0004	1.089E-05
Se	78	2	H2	0.045	0	4.67	0.0004	1.089E-05
Na	23	3	He	103.673	0.2845	20844.95	0.0017	0.1065
Na	23	3	He	97.787	0.2744	20835.31	0.0017	0.1065
Na	23	3	He	101.775	0.2813	20945.36	0.0017	0.1065
Mg	24	3	He	1007.352	0.8541	62571.67	0.0008	0.004846
Mg	24	3	He	980.59	0.8316	63133.84	0.0008	0.004846
Mg	24	3	He	1004.379	0.8516	63415.41	0.0008	0.004846
Al	27	3	He	12525.895	3.0247	221581.64	0.0002	0.001063
Al	27	3	He	12147.632	2.9334	222706.29	0.0002	0.001063
Al	27	3	He	12424.004	3.0001	223398.94	0.0002	0.001063
K	39	3	He	1240.028	0.8284	60685.52	0.0006	0.1436
K	39	3	He	1170.39	0.7899	59972.59	0.0006	0.1436
K	39	3	He	1202.548	0.8077	60143.66	0.0006	0.1436
Ca	44	3	He	7802.53	0.244	17871.37	0	0.001611
Ca	44	3	He	7943.051	0.2483	18852.55	0	0.001611
Ca	44	3	He	8073.562	0.2524	18792.50	0	0.001611
Ti	47	3	He	163.32	0.0412	3020.44	0.0003	0.0002737
Ti	47	3	He	160.178	0.0404	3070.44	0.0003	0.0002737
Ti	47	3	He	166.547	0.042	3130.44	0.0003	0.0002737
V	51	3	He	35.508	0.4227	30964.67	0.0117	0.007326
V	51	3	He	34.405	0.4098	31111.01	0.0117	0.007326
V	51	3	He	34.566	0.4117	30654.02	0.0117	0.007326
Cr	52	3	He	22.83	0.373	27326.11	0.0152	0.02538
Cr	52	3	He	21.277	0.3494	26524.92	0.0152	0.02538
Cr	52	3	He	22.83	0.373	27776.83	0.0152	0.02538
Mn	55	3	He	117.321	0.7063	51743.31	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	112.762	0.6794	51581.83	0.0059	0.01385
Mn	55	3	He	114.651	0.6906	51421.94	0.0059	0.01385
Fe	57	3	He	25612.192	7.4241	543866.16	0.0003	0.003918
Fe	57	3	He	24937.639	7.2287	548804.80	0.0003	0.003918
Fe	57	3	He	25744.103	7.4624	555667.69	0.0003	0.003918
Co	59	3	He	5.705	0.1771	12976.22	0.0305	0.003084
Co	59	3	He	5.605	0.1741	13216.35	0.0305	0.003084
Co	59	3	He	5.505	0.171	12735.88	0.0305	0.003084
Ni	60	3	He	10.405	0.1005	7362.17	0.0088	0.009003
Ni	60	3	He	9.884	0.0959	7282.11	0.0088	0.009003
Ni	60	3	He	9.639	0.0938	6981.97	0.0088	0.009003
Cu	63	3	He	3.405	0.0898	6581.66	0.0249	0.004937
Cu	63	3	He	3.241	0.0858	6511.67	0.0249	0.004937
Cu	63	3	He	3.519	0.0927	6901.85	0.0249	0.004937
Zn	66	3	He	21.872	0.0586	4290.75	0.0025	0.004836
Zn	66	3	He	24.79	0.0657	4991.02	0.0025	0.004836
Zn	66	3	He	26.025	0.0688	5121.16	0.0025	0.004836
As	75	3	He	6.971	0.0126	920.03	0.0017	0.0004347
As	75	3	He	7.415	0.0133	1012.04	0.0017	0.0004347
As	75	3	He	7.086	0.0128	950.04	0.0017	0.0004347
Sr	88	3	He	58.606	0.4589	29220.79	0.0078	0.0007762
Sr	88	3	He	57.377	0.4493	28699.58	0.0078	0.0007762
Sr	88	3	He	56.4	0.4417	28729.70	0.0078	0.0007762
Mo	98	3	He	0.255	0.0061	390.02	0.022	0.0005162
Mo	98	3	He	0.382	0.0089	570.04	0.022	0.0005162
Mo	98	3	He	0.27	0.0065	420.02	0.022	0.0005162
Ag	107	3	He	0.028	0.0017	110.00	0.0455	0.0004641
Ag	107	3	He	0.017	0.0013	80.00	0.0455	0.0004641
Ag	107	3	He	0.003	0.0006	40.00	0.0455	0.0004641
Cd	111	3	He	0.055	0.0003	20.00	0.0048	5.152E-05
Cd	111	3	He	0.061	0.0003	22.00	0.0048	5.152E-05
Cd	111	3	He	0.041	0.0002	16.00	0.0048	5.152E-05
Sn	120	3	He	0.328	0.0203	1290.12	0.0143	0.01559
Sn	120	3	He	0.367	0.0208	1330.12	0.0143	0.01559
Sn	120	3	He	0.567	0.0237	1540.15	0.0143	0.01559
Sb	121	3	He	0.232	0.0031	200.01	0.0124	0.000258
Sb	121	3	He	0.232	0.0031	200.01	0.0124	0.000258
Sb	121	3	He	0.19	0.0026	170.01	0.0124	0.000258
Ba	137	3	He	28.442	0.1247	7942.50	0.0044	0.000309
Ba	137	3	He	28.853	0.1265	8082.66	0.0044	0.000309
Ba	137	3	He	30.898	0.1355	8813.08	0.0044	0.000309
Tl	205	3	He	0.088	0.0034	760.05	0.0276	0.001005
Tl	205	3	He	0.105	0.0039	870.06	0.0276	0.001005
Tl	205	3	He	0.091	0.0035	790.05	0.0276	0.001005
Pb	208	3	He	8.468	0.3104	36892.27	0.0364	0.002176
Pb	208	3	He	8.544	0.3132	37323.79	0.0364	0.002176
Pb	208	3	He	8.439	0.3093	36441.49	0.0364	0.002176
U	238	3	He	1.165	0.0492	10894.90	0.0421	0.00024
U	238	3	He	1.106	0.0468	10394.44	0.0421	0.00024
U	238	3	He	1.066	0.0451	10074.33	0.0421	0.00024
Sc	45	1	No Gas			3170178.70		
Sc	45	1	No Gas			3307495.26		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3386215.89		
Ge	72	1	No Gas			1396333.57		
Ge	72	1	No Gas			1459962.01		
Ge	72	1	No Gas			1499458.57		
Sc	45	2	H2			199912.93		
Sc	45	2	H2			196471.34		
Sc	45	2	H2			201450.06		
Ge	72	2	H2			163640.99		
Ge	72	2	H2			160021.77		
Ge	72	2	H2			165339.26		
In	115	2	H2			439567.81		
In	115	2	H2			424479.72		
In	115	2	H2			452293.04		
Sc	45	3	He			42662.61		
Sc	45	3	He			41208.72		
Sc	45	3	He			40998.21		
Ge	72	3	He			73256.40		
Ge	72	3	He			75920.08		
Ge	72	3	He			74462.71		
In	115	3	He			63685.12		
In	115	3	He			63886.53		
In	115	3	He			65061.52		
Tb	159	3	He			286312.14		
Tb	159	3	He			292263.49		
Tb	159	3	He			283744.64		
Bi	209	3	He			221310.72		
Bi	209	3	He			222256.75		
Bi	209	3	He			223517.05		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

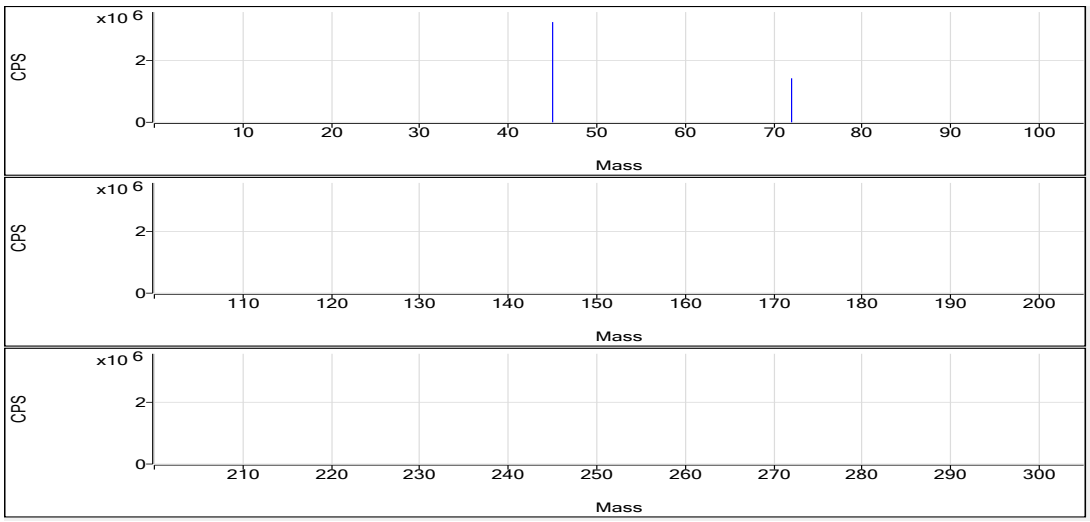
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.001	ppb	741.4	68.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.003	ppb	N/A	1.56	0.0000	Pulse	1.5000	3
Na	23	72	He	4.629	ppb	52.4	8199.20	0.1144	Pulse	0.1000	3
Mg	24	72	He	4.405	ppb	6.0	613.37	0.0086	Pulse	0.1000	3
Al	27	72	He	17.768	ppb	10.4	383.35	0.0054	Pulse	0.1000	3
K	39	72	He	10.092	ppb	138.7	10694.22	0.1492	Pulse	0.1000	3
Ca	44	72	He	-7.009	ppb	N/A	100.01	0.0014	Pulse	0.1000	3
Ti	47	72	He	0.394	ppb	215.1	26.67	0.0004	Pulse	0.1000	3
V	51	72	He	0.031	ppb	76.5	550.68	0.0077	Pulse	0.5000	3
Cr	52	72	He	-0.104	ppb	N/A	1703.49	0.0238	Pulse	0.1000	3
Mn	55	72	He	-0.827	ppb	N/A	643.38	0.0090	Pulse	0.1000	3
Fe	57	72	He	72.833	ppb	4.1	1793.51	0.0250	Pulse	0.1000	3
Co	59	72	He	0.036	ppb	54.0	300.02	0.0042	Pulse	0.1000	3
Ni	60	72	He	0.836	ppb	41.9	1170.09	0.0164	Pulse	0.1000	3
Cu	63	72	He	0.056	ppb	67.8	453.36	0.0063	Pulse	0.1000	3
Zn	66	72	He	-0.470	ppb	N/A	263.34	0.0037	Pulse	0.1000	3
As	75	72	He	-0.009	ppb	N/A	30.00	0.0004	Pulse	0.5000	3
Sr	88	115	He	0.129	ppb	49.8	113.34	0.0018	Pulse	0.1000	3
Mo	98	115	He	0.010	ppb	180.9	46.67	0.0007	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	3217.3	30.00	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.002	ppb	5.8	4.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.094	ppb	158.5	1076.75	0.0169	Pulse	0.1000	3
Sb	121	115	He	0.009	ppb	218.9	23.33	0.0004	Pulse	0.1000	3
Ba	137	115	He	0.085	ppb	23.1	43.33	0.0007	Pulse	0.1000	3
Tl	205	209	He	-0.001	ppb	N/A	213.34	0.0010	Pulse	0.1000	3
Pb	208	209	He	0.112	ppb	9.0	1370.08	0.0063	Pulse	0.1000	3
U	238	209	He	0.008	ppb	33.4	130.01	0.0006	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3233715.79	2.5	99.8	Pulse	0.1000	3
No Gas	Ge	72	1419671.86	2.1	98.6	Pulse	0.1000	3
H2	Sc	45	193666.42	3.4	99.1	Pulse	0.1000	3
H2	Ge	72	158052.05	1.7	97.0	Pulse	0.1000	3
H2	In	115	433263.19	2.4	100.0	Pulse	0.1000	3
He	Sc	45	41689.98	0.8	104.3	Pulse	0.1000	3
He	Ge	72	71665.40	1.5	99.1	Pulse	0.1000	3
He	In	115	63570.07	1.0	98.4	Pulse	0.1000	3
He	Tb	159	280039.04	0.8	97.9	Pulse	0.1000	3
He	Bi	209	218703.41	0.8	98.4	Pulse	0.1000	3

No Gas



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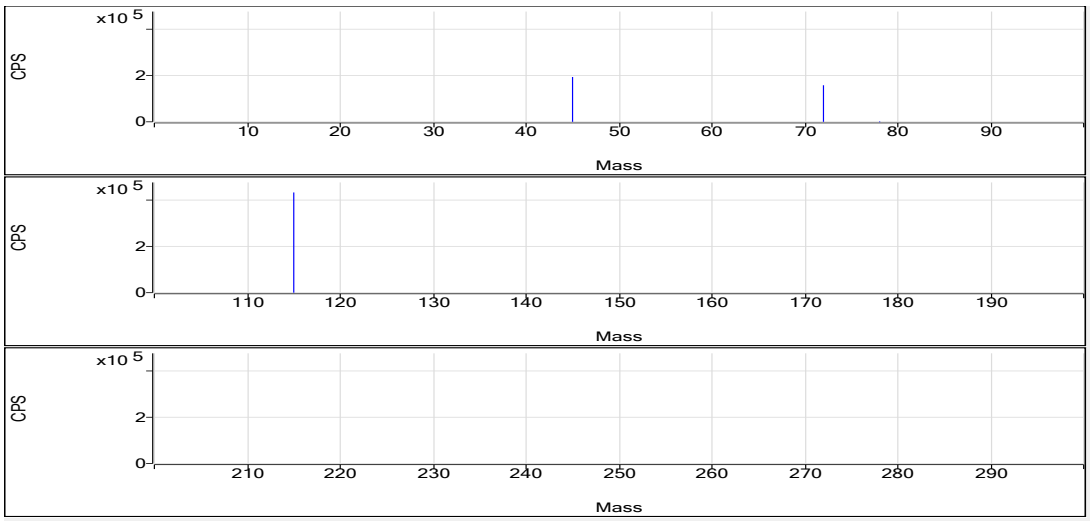
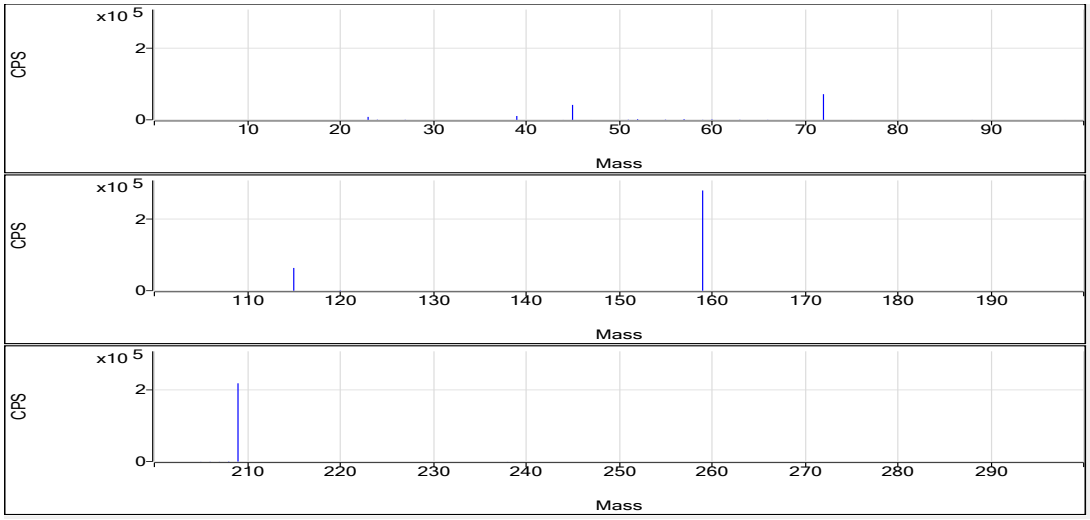


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.006	0	54.00	0.0013	4.694E-05
Be	9	1	No Gas	0.009	0.0001	84.00	0.0013	4.694E-05
Be	9	1	No Gas	0	0	68.00	0.0013	4.694E-05
Se	78	2	H2	0.016	0	2.67	0.0004	1.089E-05
Se	78	2	H2	-0.017	0	0.67	0.0004	1.089E-05
Se	78	2	H2	-0.007	0	1.33	0.0004	1.089E-05
Na	23	3	He	2.191	0.1102	7962.47	0.0017	0.1065
Na	23	3	He	4.656	0.1145	8062.40	0.0017	0.1065
Na	23	3	He	7.041	0.1186	8572.72	0.0017	0.1065
Mg	24	3	He	4.104	0.0083	600.03	0.0008	0.004846
Mg	24	3	He	4.524	0.0087	610.03	0.0008	0.004846
Mg	24	3	He	4.586	0.0087	630.04	0.0008	0.004846
Al	27	3	He	15.669	0.0048	350.02	0.0002	0.001063
Al	27	3	He	19.122	0.0057	400.02	0.0002	0.001063
Al	27	3	He	18.514	0.0055	400.02	0.0002	0.001063
K	39	3	He	25.265	0.1576	11384.73	0.0006	0.1436
K	39	3	He	7.342	0.1477	10403.98	0.0006	0.1436
K	39	3	He	-2.33	0.1424	10293.95	0.0006	0.1436
Ca	44	3	He	-7.294	0.0014	100.01	0	0.001611
Ca	44	3	He	-15.301	0.0011	80.00	0	0.001611
Ca	44	3	He	1.568	0.0017	120.01	0	0.001611
Ti	47	3	He	-0.54	0.0001	10.00	0.0003	0.0002737
Ti	47	3	He	0.607	0.0004	30.00	0.0003	0.0002737
Ti	47	3	He	1.114	0.0006	40.00	0.0003	0.0002737
V	51	3	He	0.008	0.0074	536.01	0.0117	0.007326
V	51	3	He	0.029	0.0077	540.01	0.0117	0.007326
V	51	3	He	0.055	0.008	576.02	0.0117	0.007326
Cr	52	3	He	-0.067	0.0244	1760.16	0.0152	0.02538
Cr	52	3	He	0.086	0.0267	1880.19	0.0152	0.02538
Cr	52	3	He	-0.332	0.0203	1470.13	0.0152	0.02538
Mn	55	3	He	-0.752	0.0094	680.04	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.976	0.0081	570.04	0.0059	0.01385
Mn	55	3	He	-0.754	0.0094	680.05	0.0059	0.01385
Fe	57	3	He	72.967	0.0251	1810.19	0.0003	0.003918
Fe	57	3	He	69.785	0.0241	1700.16	0.0003	0.003918
Fe	57	3	He	75.747	0.0259	1870.19	0.0003	0.003918
Co	59	3	He	0.03	0.004	290.02	0.0305	0.003084
Co	59	3	He	0.02	0.0037	260.01	0.0305	0.003084
Co	59	3	He	0.058	0.0048	350.02	0.0305	0.003084
Ni	60	3	He	0.487	0.0133	960.06	0.0088	0.009003
Ni	60	3	He	1.188	0.0195	1370.12	0.0088	0.009003
Ni	60	3	He	0.832	0.0163	1180.09	0.0088	0.009003
Cu	63	3	He	0.024	0.0055	400.02	0.0249	0.004937
Cu	63	3	He	0.098	0.0074	520.03	0.0249	0.004937
Cu	63	3	He	0.046	0.0061	440.02	0.0249	0.004937
Zn	66	3	He	-0.785	0.0029	210.01	0.0025	0.004836
Zn	66	3	He	-0.119	0.0045	320.01	0.0025	0.004836
Zn	66	3	He	-0.505	0.0036	260.01	0.0025	0.004836
As	75	3	He	0.005	0.0004	32.00	0.0017	0.0004347
As	75	3	He	-0.038	0.0004	26.00	0.0017	0.0004347
As	75	3	He	0.005	0.0004	32.00	0.0017	0.0004347
Sr	88	3	He	0.201	0.0024	150.01	0.0078	0.0007762
Sr	88	3	He	0.104	0.0016	100.00	0.0078	0.0007762
Sr	88	3	He	0.08	0.0014	90.00	0.0078	0.0007762
Mo	98	3	He	0.026	0.0011	70.00	0.022	0.0005162
Mo	98	3	He	0.013	0.0008	50.00	0.022	0.0005162
Mo	98	3	He	-0.009	0.0003	20.00	0.022	0.0005162
Ag	107	3	He	-0.007	0.0002	10.00	0.0455	0.0004641
Ag	107	3	He	0.004	0.0006	40.00	0.0455	0.0004641
Ag	107	3	He	0.004	0.0006	40.00	0.0455	0.0004641
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Cd	111	3	He	0.003	0.0001	4.00	0.0048	5.152E-05
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Sn	120	3	He	0.094	0.0169	1080.08	0.0143	0.01559
Sn	120	3	He	-0.055	0.0148	930.07	0.0143	0.01559
Sn	120	3	He	0.242	0.019	1220.09	0.0143	0.01559
Sb	121	3	He	-0.008	0.0002	10.00	0.0124	0.000258
Sb	121	3	He	0.005	0.0003	20.00	0.0124	0.000258
Sb	121	3	He	0.03	0.0006	40.00	0.0124	0.000258
Ba	137	3	He	0.073	0.0006	40.00	0.0044	0.000309
Ba	137	3	He	0.075	0.0006	40.00	0.0044	0.000309
Ba	137	3	He	0.108	0.0008	50.00	0.0044	0.000309
Tl	205	3	He	0.007	0.0012	260.01	0.0276	0.001005
Tl	205	3	He	-0.01	0.0007	160.01	0.0276	0.001005
Tl	205	3	He	0	0.001	220.01	0.0276	0.001005
Pb	208	3	He	0.122	0.0066	840.05	0.0364	0.002176
Pb	208	3	He	0.112	0.0063	730.05	0.0364	0.002176
Pb	208	3	He	0.102	0.0059	710.05	0.0364	0.002176
U	238	3	He	0.011	0.0007	150.01	0.0421	0.00024
U	238	3	He	0.005	0.0005	100.00	0.0421	0.00024
U	238	3	He	0.009	0.0006	140.01	0.0421	0.00024
Sc	45	1	No Gas			3146166.52		
Sc	45	1	No Gas			3251958.39		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3303022.45		
Ge	72	1	No Gas			1385989.20		
Ge	72	1	No Gas			1432641.70		
Ge	72	1	No Gas			1440384.67		
Sc	45	2	H2			190107.73		
Sc	45	2	H2			189645.08		
Sc	45	2	H2			201246.46		
Ge	72	2	H2			156987.14		
Ge	72	2	H2			156016.49		
Ge	72	2	H2			161152.53		
In	115	2	H2			431726.20		
In	115	2	H2			423808.27		
In	115	2	H2			444255.11		
Sc	45	3	He			41750.16		
Sc	45	3	He			41319.35		
Sc	45	3	He			42000.42		
Ge	72	3	He			72241.70		
Ge	72	3	He			70442.22		
Ge	72	3	He			72312.28		
In	115	3	He			63836.86		
In	115	3	He			62821.35		
In	115	3	He			64077.18		
Tb	159	3	He			279748.22		
Tb	159	3	He			277986.27		
Tb	159	3	He			282382.63		
Bi	209	3	He			218619.33		
Bi	209	3	He			217000.78		
Bi	209	3	He			220490.13		

Quantitation Report

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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

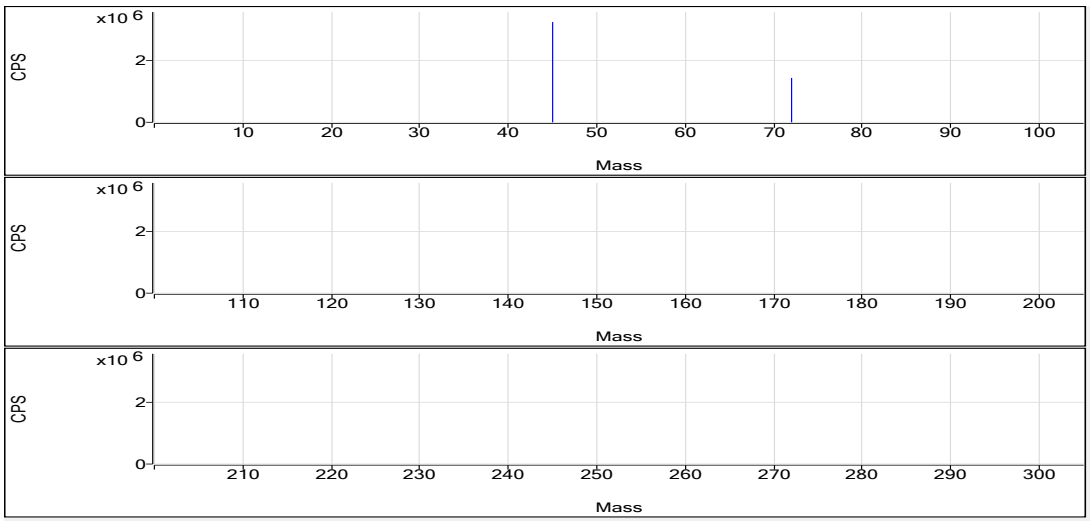
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.006	ppb	N/A	55.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.003	ppb	N/A	1.56	0.0000	Pulse	1.5000	3
Na	23	72	He	5.578	ppb	8.1	8415.98	0.1160	Pulse	0.1000	3
Mg	24	72	He	4.705	ppb	23.9	640.03	0.0088	Pulse	0.1000	3
Al	27	72	He	23.417	ppb	10.2	486.69	0.0067	Pulse	0.1000	3
K	39	72	He	1.249	ppb	491.9	10470.79	0.1443	Pulse	0.1000	3
Ca	44	72	He	-9.006	ppb	N/A	96.67	0.0013	Pulse	0.1000	3
Ti	47	72	He	0.189	ppb	158.2	23.33	0.0003	Pulse	0.1000	3
V	51	72	He	0.032	ppb	189.1	558.68	0.0077	Pulse	0.5000	3
Cr	52	72	He	0.045	ppb	342.1	1890.19	0.0261	Pulse	0.1000	3
Mn	55	72	He	-0.734	ppb	N/A	690.04	0.0095	Pulse	0.1000	3
Fe	57	72	He	63.920	ppb	7.6	1626.82	0.0224	Pulse	0.1000	3
Co	59	72	He	0.034	ppb	86.3	300.01	0.0041	Pulse	0.1000	3
Ni	60	72	He	1.024	ppb	11.8	1306.77	0.0180	Pulse	0.1000	3
Cu	63	72	He	0.036	ppb	104.5	423.36	0.0058	Pulse	0.1000	3
Zn	66	72	He	-0.532	ppb	N/A	256.68	0.0035	Pulse	0.1000	3
As	75	72	He	0.035	ppb	110.2	36.00	0.0005	Pulse	0.5000	3
Sr	88	115	He	0.197	ppb	38.8	146.67	0.0023	Pulse	0.1000	3
Mo	98	115	He	0.020	ppb	60.6	60.00	0.0009	Pulse	0.1000	3
Ag	107	115	He	0.001	ppb	579.1	33.33	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.004	ppb	365.6	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.244	ppb	44.2	1203.43	0.0191	Pulse	0.1000	3
Sb	121	115	He	0.018	ppb	76.8	30.00	0.0005	Pulse	0.1000	3
Ba	137	115	He	0.134	ppb	38.5	56.67	0.0009	Pulse	0.1000	3
Tl	205	209	He	0.001	ppb	437.0	226.68	0.0010	Pulse	0.1000	3
Pb	208	209	He	0.096	ppb	12.1	1240.07	0.0057	Pulse	0.1000	3
U	238	209	He	0.006	ppb	19.2	110.00	0.0005	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3224466.52	2.9	99.5	Pulse	0.1000	3
No Gas	Ge	72	1426720.76	3.0	99.1	Pulse	0.1000	3
H2	Sc	45	195786.22	1.3	100.2	Pulse	0.1000	3
H2	Ge	72	159133.86	0.7	97.6	Pulse	0.1000	3
H2	In	115	437537.35	1.6	101.0	Pulse	0.1000	3
He	Sc	45	41532.92	0.1	103.9	Pulse	0.1000	3
He	Ge	72	72533.61	1.9	100.3	Pulse	0.1000	3
He	In	115	63069.96	2.2	97.6	Pulse	0.1000	3
He	Tb	159	280983.39	0.1	98.2	Pulse	0.1000	3
He	Bi	209	218274.53	1.1	98.2	Pulse	0.1000	3

No Gas



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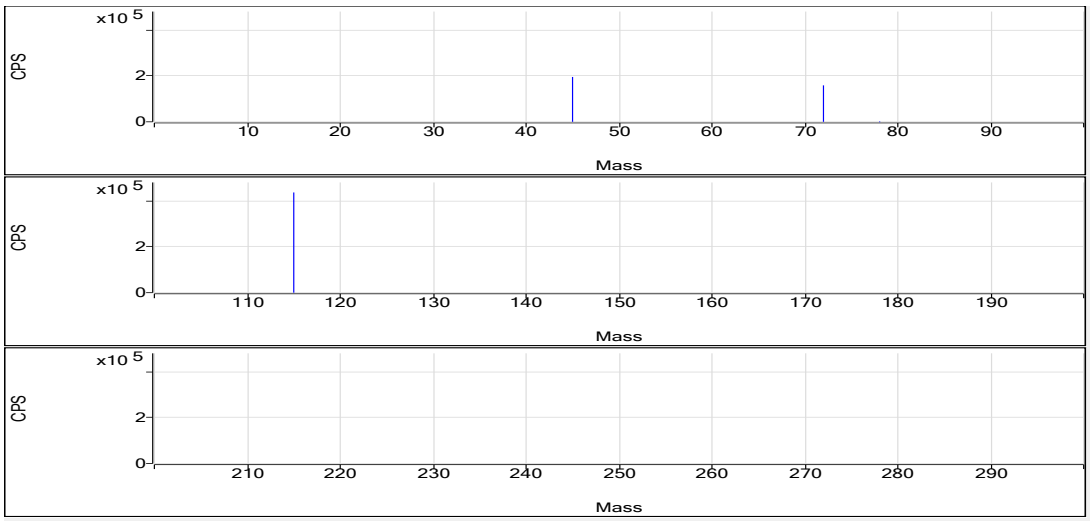
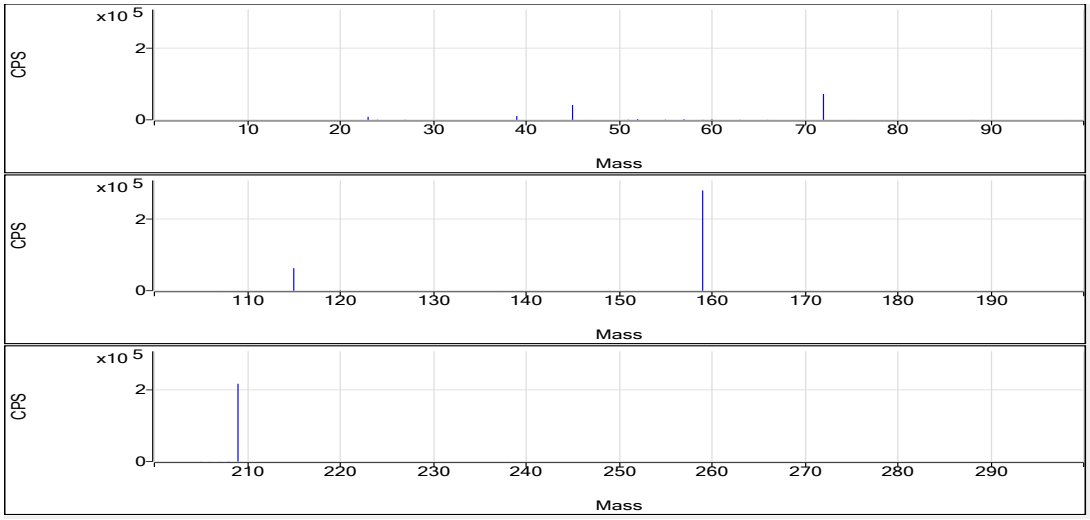


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.007	0	52.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.009	0	50.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.002	0	64.00	0.0013	4.694E-05
Se	78	2	H2	0.015	0	2.67	0.0004	1.089E-05
Se	78	2	H2	-0.017	0	0.67	0.0004	1.089E-05
Se	78	2	H2	-0.007	0	1.33	0.0004	1.089E-05
Na	23	3	He	5.174	0.1153	8492.68	0.0017	0.1065
Na	23	3	He	6.067	0.1169	8302.54	0.0017	0.1065
Na	23	3	He	5.493	0.1159	8452.71	0.0017	0.1065
Mg	24	3	He	5.851	0.0098	720.04	0.0008	0.004846
Mg	24	3	He	3.603	0.0079	560.03	0.0008	0.004846
Mg	24	3	He	4.66	0.0088	640.03	0.0008	0.004846
Al	27	3	He	23.168	0.0067	490.03	0.0002	0.001063
Al	27	3	He	25.924	0.0073	520.03	0.0002	0.001063
Al	27	3	He	21.158	0.0062	450.02	0.0002	0.001063
K	39	3	He	8.321	0.1482	10914.46	0.0006	0.1436
K	39	3	He	-1.78	0.1427	10133.87	0.0006	0.1436
K	39	3	He	-2.794	0.1421	10364.03	0.0006	0.1436
Ca	44	3	He	0.608	0.0016	120.00	0	0.001611
Ca	44	3	He	-11.074	0.0013	90.00	0	0.001611
Ca	44	3	He	-16.551	0.0011	80.00	0	0.001611
Ti	47	3	He	0.533	0.0004	30.00	0.0003	0.0002737
Ti	47	3	He	0.031	0.0003	20.00	0.0003	0.0002737
Ti	47	3	He	0.002	0.0003	20.00	0.0003	0.0002737
V	51	3	He	0.073	0.0082	602.02	0.0117	0.007326
V	51	3	He	0.062	0.0081	572.02	0.0117	0.007326
V	51	3	He	-0.038	0.0069	502.01	0.0117	0.007326
Cr	52	3	He	0.09	0.0268	1970.19	0.0152	0.02538
Cr	52	3	He	0.173	0.028	1990.21	0.0152	0.02538
Cr	52	3	He	-0.127	0.0234	1710.16	0.0152	0.02538
Mn	55	3	He	-0.736	0.0095	700.04	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.558	0.0106	750.05	0.0059	0.01385
Mn	55	3	He	-0.907	0.0085	620.04	0.0059	0.01385
Fe	57	3	He	65.711	0.023	1690.16	0.0003	0.003918
Fe	57	3	He	67.631	0.0235	1670.17	0.0003	0.003918
Fe	57	3	He	58.418	0.0208	1520.14	0.0003	0.003918
Co	59	3	He	0.068	0.0052	380.02	0.0305	0.003084
Co	59	3	He	0.014	0.0035	250.01	0.0305	0.003084
Co	59	3	He	0.02	0.0037	270.01	0.0305	0.003084
Ni	60	3	He	1.139	0.019	1400.12	0.0088	0.009003
Ni	60	3	He	0.897	0.0169	1200.08	0.0088	0.009003
Ni	60	3	He	1.034	0.0181	1320.10	0.0088	0.009003
Cu	63	3	He	-0.007	0.0048	350.01	0.0249	0.004937
Cu	63	3	He	0.062	0.0065	460.03	0.0249	0.004937
Cu	63	3	He	0.055	0.0063	460.03	0.0249	0.004937
Zn	66	3	He	-0.089	0.0046	340.02	0.0025	0.004836
Zn	66	3	He	-0.823	0.0028	200.01	0.0025	0.004836
Zn	66	3	He	-0.685	0.0032	230.01	0.0025	0.004836
As	75	3	He	0.078	0.0006	42.00	0.0017	0.0004347
As	75	3	He	0.025	0.0005	34.00	0.0017	0.0004347
As	75	3	He	0.002	0.0004	32.00	0.0017	0.0004347
Sr	88	3	He	0.241	0.0027	170.01	0.0078	0.0007762
Sr	88	3	He	0.109	0.0016	100.00	0.0078	0.0007762
Sr	88	3	He	0.241	0.0027	170.01	0.0078	0.0007762
Mo	98	3	He	0.033	0.0013	80.00	0.022	0.0005162
Mo	98	3	He	0.013	0.0008	50.00	0.022	0.0005162
Mo	98	3	He	0.012	0.0008	50.00	0.022	0.0005162
Ag	107	3	He	0.01	0.0009	60.00	0.0455	0.0004641
Ag	107	3	He	-0.003	0.0003	20.00	0.0455	0.0004641
Ag	107	3	He	-0.003	0.0003	20.00	0.0455	0.0004641
Cd	111	3	He	0.022	0.0002	10.00	0.0048	5.152E-05
Cd	111	3	He	-0.011	0	0.00	0.0048	5.152E-05
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Sn	120	3	He	0.191	0.0183	1170.10	0.0143	0.01559
Sn	120	3	He	0.173	0.0181	1110.09	0.0143	0.01559
Sn	120	3	He	0.368	0.0208	1330.11	0.0143	0.01559
Sb	121	3	He	0.004	0.0003	20.00	0.0124	0.000258
Sb	121	3	He	0.032	0.0007	40.00	0.0124	0.000258
Sb	121	3	He	0.017	0.0005	30.00	0.0124	0.000258
Ba	137	3	He	0.18	0.0011	70.00	0.0044	0.000309
Ba	137	3	He	0.078	0.0007	40.00	0.0044	0.000309
Ba	137	3	He	0.144	0.0009	60.00	0.0044	0.000309
Tl	205	3	He	0	0.001	220.01	0.0276	0.001005
Tl	205	3	He	0.007	0.0012	260.01	0.0276	0.001005
Tl	205	3	He	-0.004	0.0009	200.01	0.0276	0.001005
Pb	208	3	He	0.109	0.0061	710.05	0.0364	0.002176
Pb	208	3	He	0.086	0.0053	700.04	0.0364	0.002176
Pb	208	3	He	0.094	0.0056	740.05	0.0364	0.002176
U	238	3	He	0.007	0.0006	120.00	0.0421	0.00024
U	238	3	He	0.006	0.0005	110.00	0.0421	0.00024
U	238	3	He	0.005	0.0005	100.00	0.0421	0.00024
Sc	45	1	No Gas			3117930.27		
Sc	45	1	No Gas			3259788.70		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3295680.58		
Ge	72	1	No Gas			1377762.64		
Ge	72	1	No Gas			1445719.67		
Ge	72	1	No Gas			1456679.98		
Sc	45	2	H2			197027.46		
Sc	45	2	H2			192761.48		
Sc	45	2	H2			197569.72		
Ge	72	2	H2			157826.82		
Ge	72	2	H2			160019.52		
Ge	72	2	H2			159555.23		
In	115	2	H2			443283.39		
In	115	2	H2			430041.52		
In	115	2	H2			439287.14		
Sc	45	3	He			41519.67		
Sc	45	3	He			41489.26		
Sc	45	3	He			41589.84		
Ge	72	3	He			73629.03		
Ge	72	3	He			71036.09		
Ge	72	3	He			72935.71		
In	115	3	He			63896.21		
In	115	3	He			61506.00		
In	115	3	He			63835.82		
Tb	159	3	He			280626.38		
Tb	159	3	He			280972.40		
Tb	159	3	He			281351.38		
Bi	209	3	He			216666.93		
Bi	209	3	He			217029.82		
Bi	209	3	He			221126.85		

Quantitation Report

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Acq Time	2023-08-10 17:16:12
Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

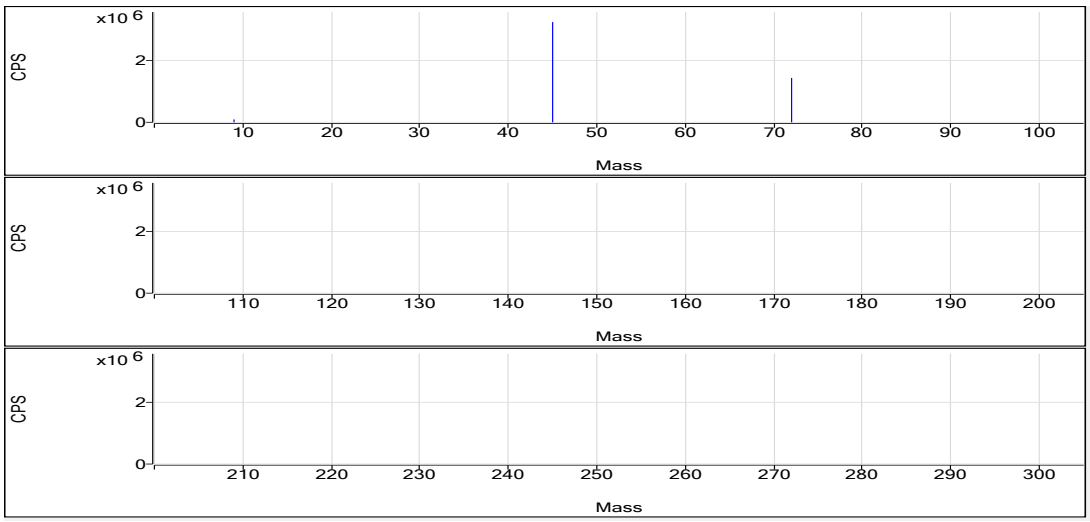
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	49.350	ppb	4.1	93499.87	0.0649	Pulse	0.5000	3
Se	78	72	H2	51.190	ppb	3.6	3244.15	0.0199	Pulse	1.5000	3
Na	23	72	He	5371.617	ppb	0.6	679344.28	9.3339	Pulse	0.1000	3
Mg	24	72	He	5379.684	ppb	0.7	330464.76	4.5405	Pulse	0.1000	3
Al	27	72	He	5319.723	ppb	0.5	93540.69	1.2852	Pulse	0.1000	3
K	39	72	He	5371.311	ppb	0.5	226346.19	3.1097	Pulse	0.1000	3
Ca	44	72	He	5396.960	ppb	2.7	12318.89	0.1692	Pulse	0.1000	3
Ti	47	72	He	5446.073	ppb	1.8	99423.41	1.3660	Pulse	0.1000	3
V	51	72	He	537.935	ppb	0.4	458528.48	6.3000	Pulse	0.5000	3
Cr	52	72	He	538.140	ppb	0.7	598274.95	8.2198	Pulse	0.1000	3
Mn	55	72	He	534.193	ppb	0.9	230495.23	3.1669	Pulse	0.1000	3
Fe	57	72	He	5345.896	ppb	1.4	113010.63	1.5527	Pulse	0.1000	3
Co	59	72	He	533.690	ppb	1.2	1185329.28	16.2862	Pulse	0.1000	3
Ni	60	72	He	531.838	ppb	1.3	341014.72	4.6856	Pulse	0.1000	3
Cu	63	72	He	534.830	ppb	0.9	971051.76	13.3421	Pulse	0.1000	3
Zn	66	72	He	532.209	ppb	1.3	95518.52	1.3123	Pulse	0.1000	3
As	75	72	He	525.689	ppb	0.2	66575.19	0.9147	Pulse	0.5000	3
Sr	88	115	He	52.932	ppb	3.7	26645.58	0.4145	Pulse	0.1000	3
Mo	98	115	He	51.912	ppb	1.6	73514.82	1.1437	Pulse	0.1000	3
Ag	107	115	He	52.512	ppb	0.7	153610.92	2.3898	Pulse	0.1000	3
Cd	111	115	He	52.400	ppb	1.5	16171.34	0.2516	Pulse	0.5000	3
Sn	120	115	He	51.975	ppb	2.4	48635.72	0.7566	Pulse	0.1000	3
Sb	121	115	He	51.911	ppb	1.9	41409.01	0.6442	Pulse	0.1000	3
Ba	137	115	He	524.792	ppb	1.5	147585.83	2.2962	Pulse	0.1000	3
Tl	205	209	He	52.709	ppb	0.7	322075.88	1.4581	Pulse	0.1000	3
Pb	208	209	He	52.592	ppb	1.1	423292.32	1.9164	Pulse	0.1000	3
U	238	209	He	52.183	ppb	1.1	484933.43	2.1954	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3254998.91	1.2	100.4	Pulse	0.1000	3
No Gas	Ge	72	1441324.87	1.5	100.1	Pulse	0.1000	3
H2	Sc	45	197960.66	0.7	101.3	Pulse	0.1000	3
H2	Ge	72	162692.08	0.5	99.8	Pulse	0.1000	3
H2	In	115	439806.52	1.5	101.5	Pulse	0.1000	3
He	Sc	45	41218.68	2.6	103.1	Pulse	0.1000	3
He	Ge	72	72784.40	0.8	100.7	Pulse	0.1000	3
He	In	115	64280.15	0.8	99.5	Pulse	0.1000	3
He	Tb	159	284306.97	0.9	99.4	Pulse	0.1000	3
He	Bi	209	220890.69	0.6	99.4	Pulse	0.1000	3

No Gas



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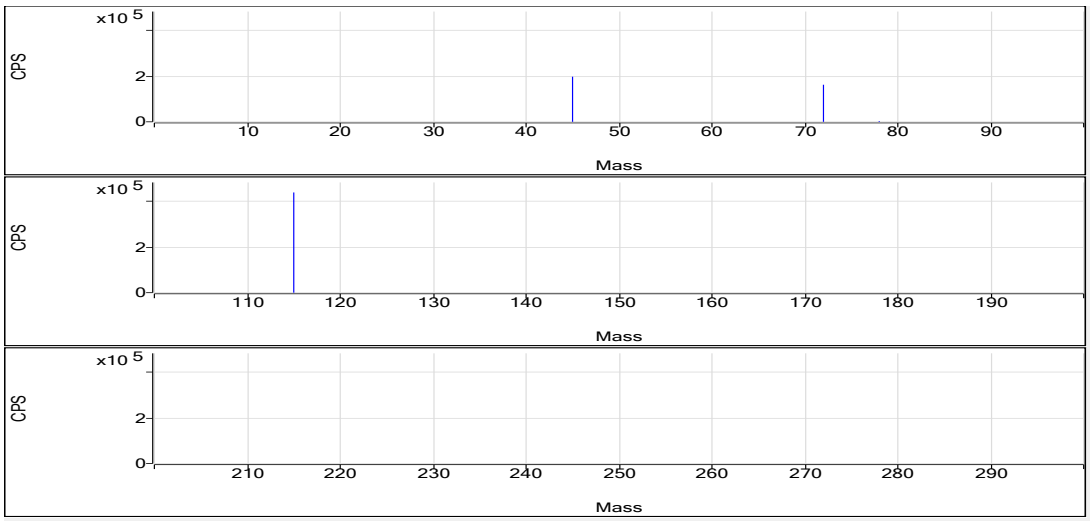
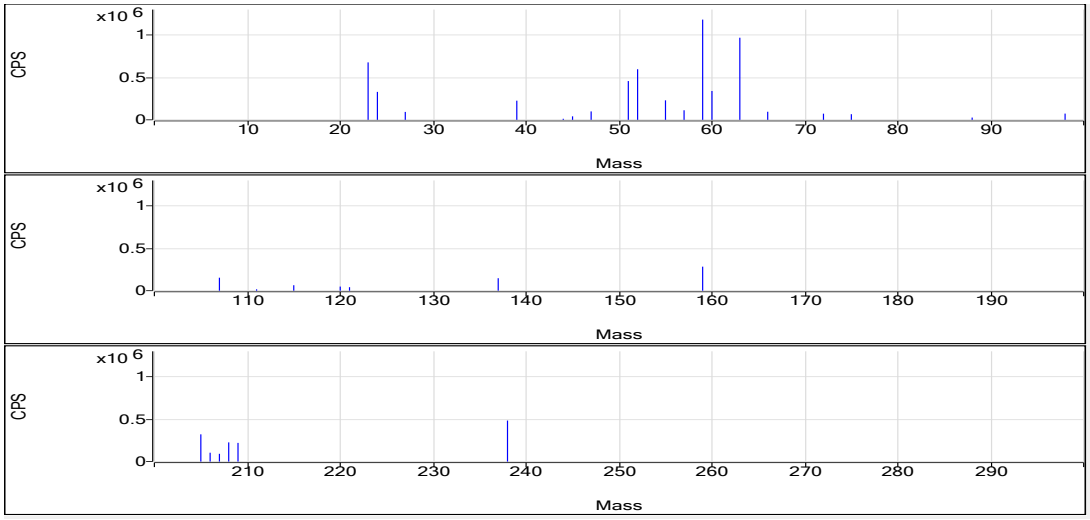


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	51.092	0.0672	95366.52	0.0013	4.694E-05
Be	9	1	No Gas	47.124	0.062	90553.37	0.0013	4.694E-05
Be	9	1	No Gas	49.835	0.0655	94579.73	0.0013	4.694E-05
Se	78	2	H2	53.268	0.0208	3365.06	0.0004	1.089E-05
Se	78	2	H2	50.573	0.0197	3198.36	0.0004	1.089E-05
Se	78	2	H2	49.728	0.0194	3169.02	0.0004	1.089E-05
Na	23	3	He	5380.763	9.3496	675998.97	0.0017	0.1065
Na	23	3	He	5399.921	9.3826	681019.44	0.0017	0.1065
Na	23	3	He	5334.167	9.2696	681014.44	0.0017	0.1065
Mg	24	3	He	5388.745	4.5481	328837.65	0.0008	0.004846
Mg	24	3	He	5409.328	4.5655	331377.38	0.0008	0.004846
Mg	24	3	He	5340.978	4.5078	331179.25	0.0008	0.004846
Al	27	3	He	5344.84	1.2913	93361.99	0.0002	0.001063
Al	27	3	He	5325.306	1.2866	93383.18	0.0002	0.001063
Al	27	3	He	5289.022	1.2778	93876.91	0.0002	0.001063
K	39	3	He	5341.331	3.0932	223643.92	0.0006	0.1436
K	39	3	He	5376.909	3.1128	225940.60	0.0006	0.1436
K	39	3	He	5395.691	3.1232	229454.06	0.0006	0.1436
Ca	44	3	He	5236.127	0.1642	11875.21	0	0.001611
Ca	44	3	He	5513.026	0.1728	12545.69	0	0.001611
Ca	44	3	He	5441.729	0.1706	12535.78	0	0.001611
Ti	47	3	He	5547.398	1.3914	100604.50	0.0003	0.0002737
Ti	47	3	He	5348.892	1.3417	97382.85	0.0003	0.0002737
Ti	47	3	He	5441.927	1.365	100282.87	0.0003	0.0002737
V	51	3	He	539.242	6.3152	456605.66	0.0117	0.007326
V	51	3	He	539.003	6.3124	458179.69	0.0117	0.007326
V	51	3	He	535.559	6.2722	460800.09	0.0117	0.007326
Cr	52	3	He	540.956	8.2627	597408.62	0.0152	0.02538
Cr	52	3	He	533.773	8.1533	591795.11	0.0152	0.02538
Cr	52	3	He	539.69	8.2434	605621.12	0.0152	0.02538
Mn	55	3	He	539.319	3.1971	231160.04	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	530.129	3.1429	228122.67	0.0059	0.01385
Mn	55	3	He	533.132	3.1606	232202.98	0.0059	0.01385
Fe	57	3	He	5421.816	1.5747	113853.94	0.0003	0.003918
Fe	57	3	He	5267.531	1.53	111052.78	0.0003	0.003918
Fe	57	3	He	5348.34	1.5534	114125.17	0.0003	0.003918
Co	59	3	He	540.944	16.5075	1193530.22	0.0305	0.003084
Co	59	3	He	530.165	16.1787	1174307.40	0.0305	0.003084
Co	59	3	He	529.961	16.1725	1188150.22	0.0305	0.003084
Ni	60	3	He	538.262	4.7421	342864.14	0.0088	0.009003
Ni	60	3	He	532.927	4.6952	340793.94	0.0088	0.009003
Ni	60	3	He	524.324	4.6195	339386.09	0.0088	0.009003
Cu	63	3	He	539.884	13.4681	973771.24	0.0249	0.004937
Cu	63	3	He	533.888	13.3186	966708.81	0.0249	0.004937
Cu	63	3	He	530.719	13.2395	972675.22	0.0249	0.004937
Zn	66	3	He	538.249	1.3272	95958.59	0.0025	0.004836
Zn	66	3	He	524.351	1.293	93853.77	0.0025	0.004836
Zn	66	3	He	534.027	1.3168	96743.21	0.0025	0.004836
As	75	3	He	526.567	0.9162	66244.95	0.0017	0.0004347
As	75	3	He	525.718	0.9147	66395.73	0.0017	0.0004347
As	75	3	He	524.784	0.9131	67084.90	0.0017	0.0004347
Sr	88	3	He	50.674	0.3969	25623.78	0.0078	0.0007762
Sr	88	3	He	53.74	0.4209	26795.87	0.0078	0.0007762
Sr	88	3	He	54.381	0.4259	27517.09	0.0078	0.0007762
Mo	98	3	He	50.983	1.1232	72515.90	0.022	0.0005162
Mo	98	3	He	52.393	1.1543	73491.68	0.022	0.0005162
Mo	98	3	He	52.361	1.1536	74536.87	0.022	0.0005162
Ag	107	3	He	52.118	2.3718	153125.36	0.0455	0.0004641
Ag	107	3	He	52.827	2.4041	153066.32	0.0455	0.0004641
Ag	107	3	He	52.591	2.3934	154641.09	0.0455	0.0004641
Cd	111	3	He	52.778	0.2534	16359.56	0.0048	5.152E-05
Cd	111	3	He	52.901	0.254	16171.34	0.0048	5.152E-05
Cd	111	3	He	51.521	0.2474	15983.11	0.0048	5.152E-05
Sn	120	3	He	50.567	0.7366	47552.08	0.0143	0.01559
Sn	120	3	He	52.417	0.7629	48575.63	0.0143	0.01559
Sn	120	3	He	52.942	0.7704	49779.45	0.0143	0.01559
Sb	121	3	He	50.8	0.6304	40700.03	0.0124	0.000258
Sb	121	3	He	52.235	0.6482	41272.22	0.0124	0.000258
Sb	121	3	He	52.698	0.654	42254.77	0.0124	0.000258
Ba	137	3	He	518.456	2.2684	146449.99	0.0044	0.000309
Ba	137	3	He	533.877	2.3359	148723.78	0.0044	0.000309
Ba	137	3	He	522.042	2.2841	147583.72	0.0044	0.000309
Tl	205	3	He	52.921	1.464	321839.33	0.0276	0.001005
Tl	205	3	He	52.909	1.4636	322728.04	0.0276	0.001005
Tl	205	3	He	52.297	1.4467	321660.27	0.0276	0.001005
Pb	208	3	He	53.245	1.9402	228879.16	0.0364	0.002176
Pb	208	3	He	52.46	1.9116	225305.76	0.0364	0.002176
Pb	208	3	He	52.07	1.8974	226376.13	0.0364	0.002176
U	238	3	He	52.769	2.2201	488061.32	0.0421	0.00024
U	238	3	He	52.174	2.1951	484002.22	0.0421	0.00024
U	238	3	He	51.607	2.1712	482736.75	0.0421	0.00024
Sc	45	1	No Gas			3210901.20		
Sc	45	1	No Gas			3289060.58		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3265034.95		
Ge	72	1	No Gas			1419486.70		
Ge	72	1	No Gas			1461242.63		
Ge	72	1	No Gas			1443245.29		
Sc	45	2	H2			198436.62		
Sc	45	2	H2			196420.74		
Sc	45	2	H2			199024.61		
Ge	72	2	H2			162162.11		
Ge	72	2	H2			162335.46		
Ge	72	2	H2			163578.67		
In	115	2	H2			440941.40		
In	115	2	H2			432773.94		
In	115	2	H2			445704.21		
Sc	45	3	He			41640.15		
Sc	45	3	He			40015.22		
Sc	45	3	He			42000.68		
Ge	72	3	He			72302.11		
Ge	72	3	He			72583.58		
Ge	72	3	He			73467.50		
In	115	3	He			64930.44		
In	115	3	He			64047.33		
In	115	3	He			65000.76		
Tb	159	3	He			282147.53		
Tb	159	3	He			283521.46		
Tb	159	3	He			287251.91		
Bi	209	3	He			219838.18		
Bi	209	3	He			220496.34		
Bi	209	3	He			222337.54		

Quantitation Report

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Sample Type	CCB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

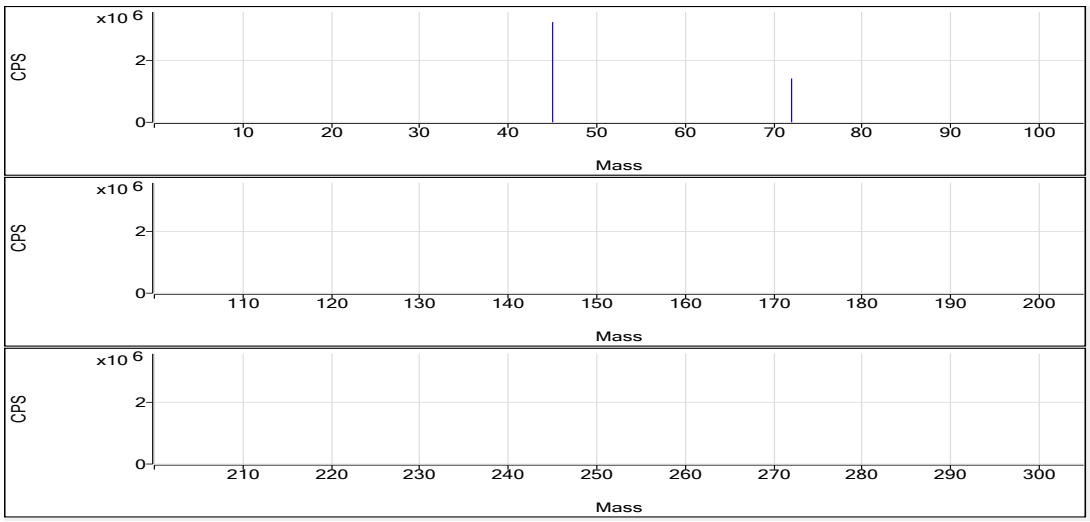
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.026	ppb	33.9	116.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.037	ppb	86.4	4.00	0.0000	Pulse	1.5000	3
Na	23	72	He	5.771	ppb	47.4	8469.35	0.1164	Pulse	0.1000	3
Mg	24	72	He	3.495	ppb	21.0	566.70	0.0078	Pulse	0.1000	3
Al	27	72	He	17.984	ppb	6.3	393.35	0.0054	Pulse	0.1000	3
K	39	72	He	14.248	ppb	97.8	11021.09	0.1515	Pulse	0.1000	3
Ca	44	72	He	7.083	ppb	276.8	133.34	0.0018	Pulse	0.1000	3
Ti	47	72	He	1.098	ppb	98.5	40.00	0.0005	Pulse	0.1000	3
V	51	72	He	0.098	ppb	49.6	616.02	0.0085	Pulse	0.5000	3
Cr	52	72	He	0.082	ppb	180.8	1936.86	0.0266	Pulse	0.1000	3
Mn	55	72	He	-0.835	ppb	N/A	650.04	0.0089	Pulse	0.1000	3
Fe	57	72	He	55.465	ppb	10.9	1453.45	0.0200	Pulse	0.1000	3
Co	59	72	He	0.117	ppb	18.4	483.36	0.0066	Pulse	0.1000	3
Ni	60	72	He	0.846	ppb	6.6	1196.76	0.0164	Pulse	0.1000	3
Cu	63	72	He	0.109	ppb	66.6	556.70	0.0077	Pulse	0.1000	3
Zn	66	72	He	-0.383	ppb	N/A	283.34	0.0039	Pulse	0.1000	3
As	75	72	He	0.150	ppb	126.4	50.67	0.0007	Pulse	0.5000	3
Sr	88	115	He	0.086	ppb	65.9	93.33	0.0014	Pulse	0.1000	3
Mo	98	115	He	0.038	ppb	65.9	86.67	0.0013	Pulse	0.1000	3
Ag	107	115	He	0.009	ppb	151.1	56.67	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.009	ppb	147.9	6.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.088	ppb	97.9	1083.41	0.0168	Pulse	0.1000	3
Sb	121	115	He	0.017	ppb	258.1	30.00	0.0005	Pulse	0.1000	3
Ba	137	115	He	0.273	ppb	40.3	96.67	0.0015	Pulse	0.1000	3
Tl	205	209	He	0.131	ppb	11.1	1013.41	0.0046	Pulse	0.1000	3
Pb	208	209	He	0.104	ppb	5.3	1306.74	0.0060	Pulse	0.1000	3
U	238	209	He	0.015	ppb	41.1	186.68	0.0009	Pulse	0.1000	3

ISTD Table:

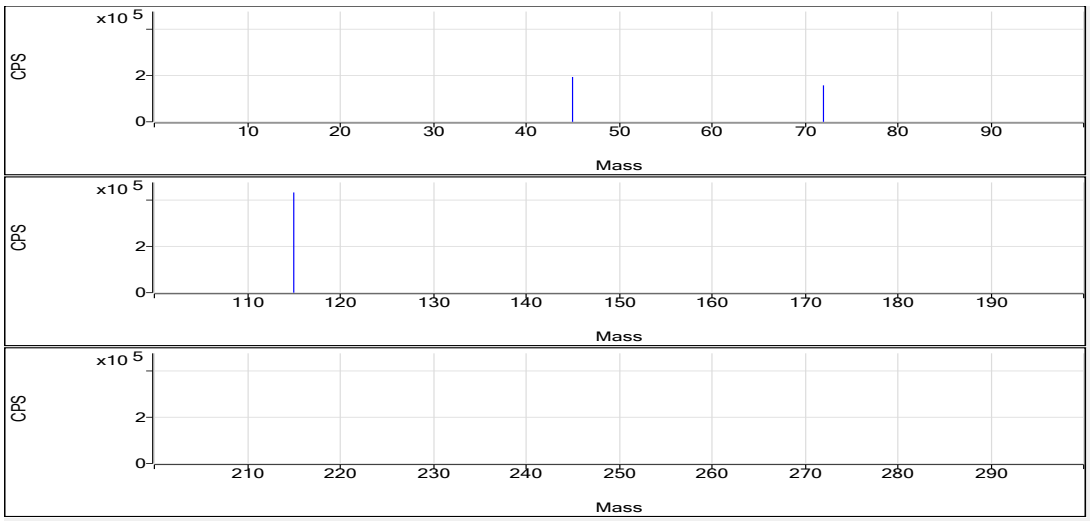
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3262045.68	1.1	100.6	Pulse	0.1000	3
No Gas	Ge	72	1426583.36	1.1	99.1	Pulse	0.1000	3
H2	Sc	45	194617.10	1.4	99.6	Pulse	0.1000	3
H2	Ge	72	158298.36	2.5	97.1	Pulse	0.1000	3
H2	In	115	435104.81	1.7	100.4	Pulse	0.1000	3
He	Sc	45	40476.81	0.2	101.2	Pulse	0.1000	3
He	Ge	72	72771.14	1.2	100.7	Pulse	0.1000	3
He	In	115	64350.17	1.0	99.6	Pulse	0.1000	3
He	Tb	159	281849.53	0.4	98.5	Pulse	0.1000	3
He	Bi	209	219503.85	0.3	98.8	Pulse	0.1000	3

No Gas

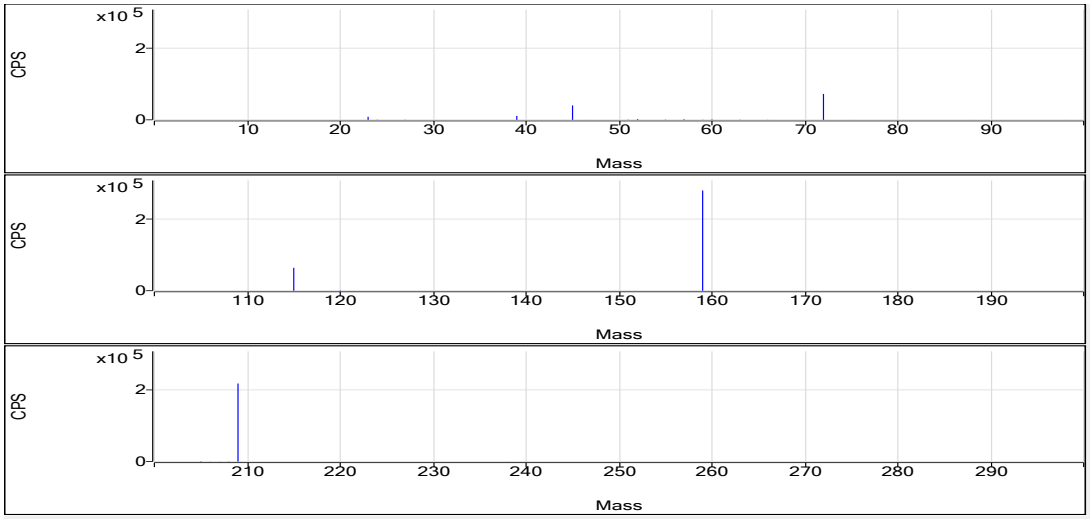


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.035	0.0001	132.00	0.0013	4.694E-05
Be	9	1	No Gas	0.025	0.0001	116.00	0.0013	4.694E-05
Be	9	1	No Gas	0.018	0.0001	100.00	0.0013	4.694E-05
Se	78	2	H2	0.004	0	2.00	0.0004	1.089E-05
Se	78	2	H2	0.039	0	4.00	0.0004	1.089E-05
Se	78	2	H2	0.068	0	6.00	0.0004	1.089E-05
Na	23	3	He	8.91	0.1218	8892.96	0.0017	0.1065
Na	23	3	He	3.893	0.1131	8122.48	0.0017	0.1065
Na	23	3	He	4.51	0.1142	8392.62	0.0017	0.1065
Mg	24	3	He	3.185	0.0075	550.04	0.0008	0.004846
Mg	24	3	He	4.331	0.0085	610.03	0.0008	0.004846
Mg	24	3	He	2.968	0.0073	540.03	0.0008	0.004846
Al	27	3	He	17.152	0.0052	380.02	0.0002	0.001063
Al	27	3	He	17.526	0.0053	380.02	0.0002	0.001063
Al	27	3	He	19.274	0.0057	420.02	0.0002	0.001063
K	39	3	He	13.97	0.1514	11054.38	0.0006	0.1436
K	39	3	He	28.323	0.1593	11434.75	0.0006	0.1436
K	39	3	He	0.45	0.1439	10574.13	0.0006	0.1436
Ca	44	3	He	-12.191	0.0012	90.00	0	0.001611
Ca	44	3	He	6.441	0.0018	130.01	0	0.001611
Ca	44	3	He	27	0.0024	180.01	0	0.001611
Ti	47	3	He	0	0.0003	20.00	0.0003	0.0002737
Ti	47	3	He	1.13	0.0006	40.00	0.0003	0.0002737
Ti	47	3	He	2.164	0.0008	60.00	0.0003	0.0002737
V	51	3	He	0.099	0.0085	620.02	0.0117	0.007326
V	51	3	He	0.145	0.009	648.02	0.0117	0.007326
V	51	3	He	0.048	0.0079	580.02	0.0117	0.007326
Cr	52	3	He	0.105	0.027	1970.19	0.0152	0.02538
Cr	52	3	He	0.218	0.0287	2060.22	0.0152	0.02538
Cr	52	3	He	-0.076	0.0242	1780.17	0.0152	0.02538
Mn	55	3	He	-0.955	0.0082	600.03	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.978	0.0081	580.03	0.0059	0.01385
Mn	55	3	He	-0.572	0.0105	770.05	0.0059	0.01385
Fe	57	3	He	52.174	0.019	1390.12	0.0003	0.003918
Fe	57	3	He	62.451	0.022	1580.14	0.0003	0.003918
Fe	57	3	He	51.769	0.0189	1390.10	0.0003	0.003918
Co	59	3	He	0.11	0.0064	470.03	0.0305	0.003084
Co	59	3	He	0.141	0.0074	530.03	0.0305	0.003084
Co	59	3	He	0.1	0.0061	450.02	0.0305	0.003084
Ni	60	3	He	0.814	0.0162	1180.09	0.0088	0.009003
Ni	60	3	He	0.814	0.0162	1160.10	0.0088	0.009003
Ni	60	3	He	0.911	0.017	1250.09	0.0088	0.009003
Cu	63	3	He	0.142	0.0085	620.04	0.0249	0.004937
Cu	63	3	He	0.16	0.0089	640.04	0.0249	0.004937
Cu	63	3	He	0.026	0.0056	410.02	0.0249	0.004937
Zn	66	3	He	-0.241	0.0042	310.01	0.0025	0.004836
Zn	66	3	He	-0.268	0.0042	300.01	0.0025	0.004836
Zn	66	3	He	-0.639	0.0033	240.01	0.0025	0.004836
As	75	3	He	0.364	0.0011	78.00	0.0017	0.0004347
As	75	3	He	0.086	0.0006	42.00	0.0017	0.0004347
As	75	3	He	0	0.0004	32.00	0.0017	0.0004347
Sr	88	3	He	0.117	0.0017	110.00	0.0078	0.0007762
Sr	88	3	He	0.021	0.0009	60.00	0.0078	0.0007762
Sr	88	3	He	0.121	0.0017	110.00	0.0078	0.0007762
Mo	98	3	He	0.039	0.0014	90.00	0.022	0.0005162
Mo	98	3	He	0.062	0.0019	120.00	0.022	0.0005162
Mo	98	3	He	0.012	0.0008	50.00	0.022	0.0005162
Ag	107	3	He	-0.003	0.0003	20.00	0.0455	0.0004641
Ag	107	3	He	0.007	0.0008	50.00	0.0455	0.0004641
Ag	107	3	He	0.024	0.0016	100.00	0.0455	0.0004641
Cd	111	3	He	0.021	0.0002	10.00	0.0048	5.152E-05
Cd	111	3	He	0.009	0.0001	6.00	0.0048	5.152E-05
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Sn	120	3	He	0.006	0.0157	1020.06	0.0143	0.01559
Sn	120	3	He	0.178	0.0181	1160.09	0.0143	0.01559
Sn	120	3	He	0.081	0.0167	1070.09	0.0143	0.01559
Sb	121	3	He	-0.008	0.0002	10.00	0.0124	0.000258
Sb	121	3	He	-0.008	0.0002	10.00	0.0124	0.000258
Sb	121	3	He	0.067	0.0011	70.00	0.0124	0.000258
Ba	137	3	He	0.245	0.0014	90.00	0.0044	0.000309
Ba	137	3	He	0.179	0.0011	70.00	0.0044	0.000309
Ba	137	3	He	0.394	0.002	130.01	0.0044	0.000309
Tl	205	3	He	0.128	0.0045	1000.08	0.0276	0.001005
Tl	205	3	He	0.146	0.005	1110.09	0.0276	0.001005
Tl	205	3	He	0.117	0.0043	930.07	0.0276	0.001005
Pb	208	3	He	0.098	0.0057	630.04	0.0364	0.002176
Pb	208	3	He	0.105	0.006	710.05	0.0364	0.002176
Pb	208	3	He	0.109	0.0061	690.05	0.0364	0.002176
U	238	3	He	0.02	0.0011	240.01	0.0421	0.00024
U	238	3	He	0.008	0.0006	130.01	0.0421	0.00024
U	238	3	He	0.015	0.0009	190.01	0.0421	0.00024
Sc	45	1	No Gas			3227742.45		
Sc	45	1	No Gas			3301617.14		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3256777.45		
Ge	72	1	No Gas			1412034.98		
Ge	72	1	No Gas			1443185.13		
Ge	72	1	No Gas			1424529.98		
Sc	45	2	H2			195631.31		
Sc	45	2	H2			191626.97		
Sc	45	2	H2			196593.02		
Ge	72	2	H2			160303.80		
Ge	72	2	H2			153661.03		
Ge	72	2	H2			160930.26		
In	115	2	H2			435963.35		
In	115	2	H2			427137.73		
In	115	2	H2			442213.35		
Sc	45	3	He			40527.23		
Sc	45	3	He			40396.43		
Sc	45	3	He			40506.76		
Ge	72	3	He			73035.94		
Ge	72	3	He			71789.66		
Ge	72	3	He			73487.83		
In	115	3	He			65102.77		
In	115	3	He			64026.95		
In	115	3	He			63946.15		
Tb	159	3	He			282118.36		
Tb	159	3	He			282897.71		
Tb	159	3	He			280532.53		
Bi	209	3	He			219804.68		
Bi	209	3	He			219968.04		
Bi	209	3	He			218738.84		

Quantitation Report

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Auto Dilution	1.0000
Total Dilution	1.0000
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Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

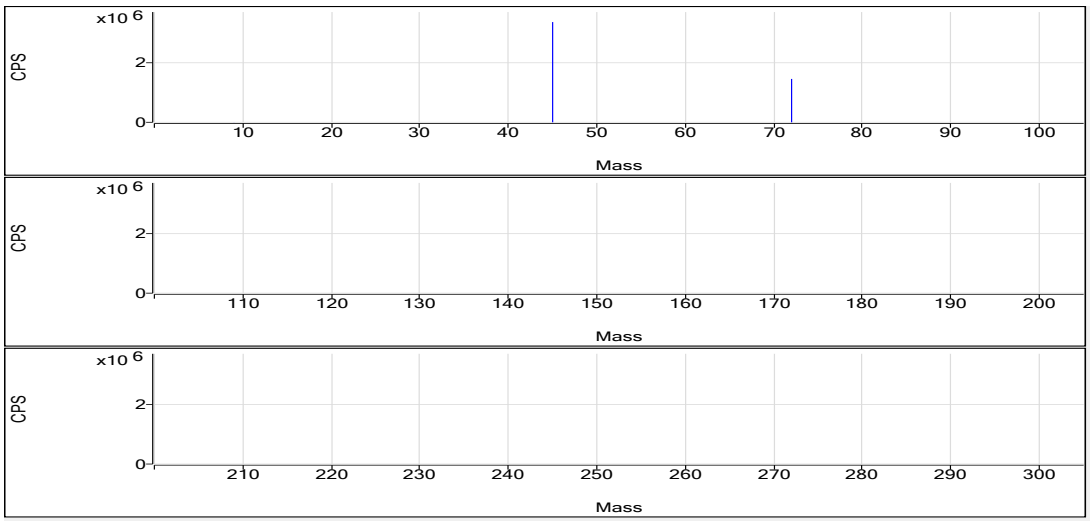
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	1.157	ppb	4.3	2298.86	0.0016	Pulse	0.5000	3
Se	78	72	H2	0.470	ppb	12.6	31.56	0.0002	Pulse	1.5000	3
Na	23	72	He	44.882	ppb	1.1	13576.61	0.1836	Pulse	0.1000	3
Mg	24	72	He	1800.943	ppb	1.1	112661.13	1.5232	Pulse	0.1000	3
Al	27	72	He	19518.989	ppb	1.2	348577.02	4.7128	Pulse	0.1000	3
K	39	72	He	2592.063	ppb	1.5	116495.63	1.5750	Pulse	0.1000	3
Ca	44	72	He	1417.819	ppb	11.1	3373.84	0.0456	Pulse	0.1000	3
Ti	47	72	He	352.882	ppb	2.5	6565.01	0.0888	Pulse	0.1000	3
V	51	72	He	53.149	ppb	1.1	46528.86	0.6291	Pulse	0.5000	3
Cr	52	72	He	35.031	ppb	2.6	41332.40	0.5588	Pulse	0.1000	3
Mn	55	72	He	78.041	ppb	1.4	35099.71	0.4745	Pulse	0.1000	3
Fe	57	72	He	67520.102	ppb	1.0	1447125.03	19.5655	Pulse	0.1000	3
Co	59	72	He	7.417	ppb	1.2	16967.10	0.2294	Pulse	0.1000	3
Ni	60	72	He	11.587	ppb	5.8	8202.57	0.1109	Pulse	0.1000	3
Cu	63	72	He	8.428	ppb	5.1	15912.71	0.2151	Pulse	0.1000	3
Zn	66	72	He	685.658	ppb	0.7	124960.76	1.6893	Pulse	0.1000	3
As	75	72	He	15.942	ppb	3.6	2082.84	0.0282	Pulse	0.5000	3
Sr	88	115	He	16.490	ppb	3.0	8296.09	0.1297	Pulse	0.1000	3
Mo	98	115	He	3.077	ppb	5.6	4370.82	0.0683	Pulse	0.1000	3
Ag	107	115	He	0.022	ppb	11.3	93.33	0.0015	Pulse	0.1000	3
Cd	111	115	He	0.197	ppb	16.1	64.00	0.0010	Pulse	0.5000	3
Sn	120	115	He	0.912	ppb	17.3	1830.19	0.0286	Pulse	0.1000	3
Sb	121	115	He	0.357	ppb	26.3	300.02	0.0047	Pulse	0.1000	3
Ba	137	115	He	42.394	ppb	3.7	11885.51	0.1858	Pulse	0.1000	3
Tl	205	209	He	0.203	ppb	14.7	1490.14	0.0066	Pulse	0.1000	3
Pb	208	209	He	120.322	ppb	0.5	985367.15	4.3816	Pulse	0.1000	3
U	238	209	He	4.228	ppb	1.5	40053.08	0.1781	Pulse	0.1000	3

ISTD Table:

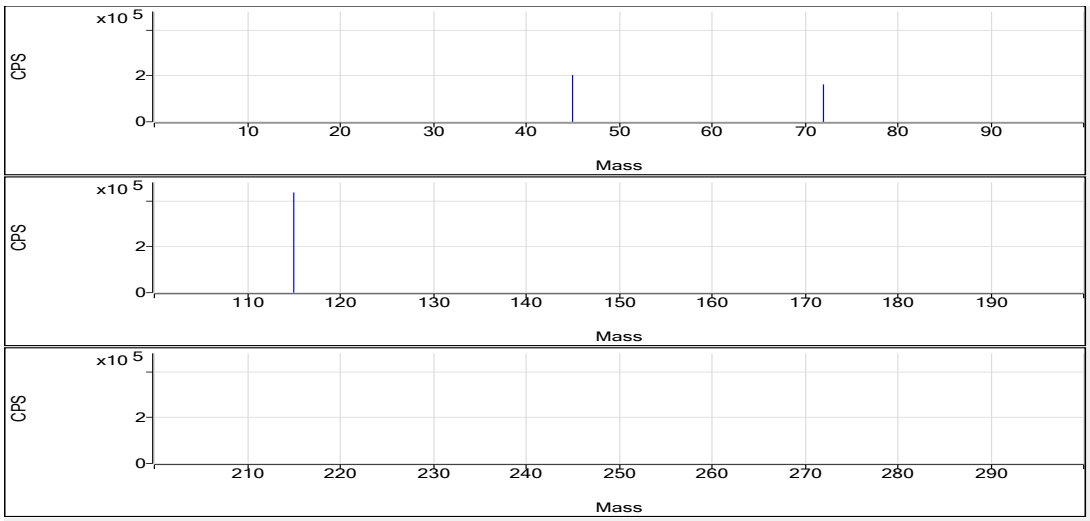
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3391544.12	1.1	104.6	Pulse	0.1000	3
No Gas	Ge	72	1467545.65	1.0	101.9	Pulse	0.1000	3
H2	Sc	45	203319.77	2.3	104.1	Pulse	0.1000	3
H2	Ge	72	162666.57	2.4	99.8	Pulse	0.1000	3
H2	In	115	435861.80	1.5	100.6	Pulse	0.1000	3
He	Sc	45	42432.46	1.8	106.1	Pulse	0.1000	3
He	Ge	72	73967.39	1.1	102.3	Pulse	0.1000	3
He	In	115	63989.42	1.4	99.1	Pulse	0.1000	3
He	Tb	159	291469.88	0.6	101.9	Pulse	0.1000	3
He	Bi	209	224888.56	0.6	101.2	Pulse	0.1000	3

No Gas

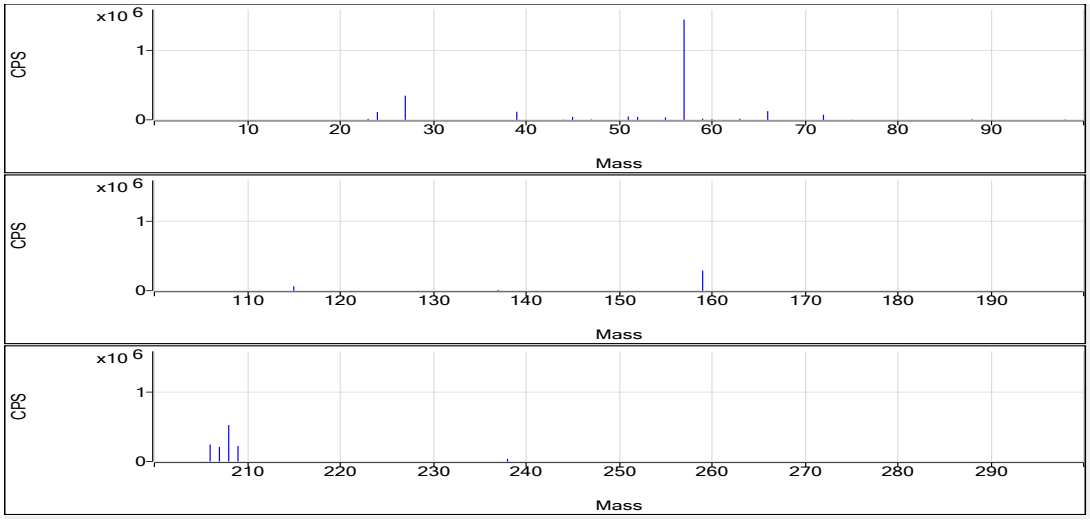


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	1.198	0.0016	2352.20	0.0013	4.694E-05
Be	9	1	No Gas	1.101	0.0015	2198.17	0.0013	4.694E-05
Be	9	1	No Gas	1.171	0.0016	2346.20	0.0013	4.694E-05
Se	78	2	H2	0.528	0.0002	34.67	0.0004	1.089E-05
Se	78	2	H2	0.409	0.0002	27.33	0.0004	1.089E-05
Se	78	2	H2	0.474	0.0002	32.67	0.0004	1.089E-05
Na	23	3	He	44.637	0.1831	13616.62	0.0017	0.1065
Na	23	3	He	45.444	0.1845	13476.60	0.0017	0.1065
Na	23	3	He	44.564	0.183	13636.61	0.0017	0.1065
Mg	24	3	He	1783.301	1.5083	112151.01	0.0008	0.004846
Mg	24	3	He	1821.613	1.5407	112522.39	0.0008	0.004846
Mg	24	3	He	1797.916	1.5207	113309.98	0.0008	0.004846
Al	27	3	He	19252.298	4.6485	345628.67	0.0002	0.001063
Al	27	3	He	19707.569	4.7584	347529.49	0.0002	0.001063
Al	27	3	He	19597.102	4.7317	352572.89	0.0002	0.001063
K	39	3	He	2624.139	1.5927	118424.30	0.0006	0.1436
K	39	3	He	2601.967	1.5805	115431.19	0.0006	0.1436
K	39	3	He	2550.082	1.5518	115631.41	0.0006	0.1436
Ca	44	3	He	1355.634	0.0437	3250.49	0	0.001611
Ca	44	3	He	1597.083	0.0512	3740.60	0	0.001611
Ca	44	3	He	1300.738	0.042	3130.42	0	0.001611
Ti	47	3	He	344.372	0.0866	6441.61	0.0003	0.0002737
Ti	47	3	He	362.075	0.0911	6651.69	0.0003	0.0002737
Ti	47	3	He	352.201	0.0886	6601.74	0.0003	0.0002737
V	51	3	He	52.522	0.6217	46226.71	0.0117	0.007326
V	51	3	He	53.29	0.6307	46063.91	0.0117	0.007326
V	51	3	He	53.635	0.6347	47295.97	0.0117	0.007326
Cr	52	3	He	35.899	0.572	42532.49	0.0152	0.02538
Cr	52	3	He	35.089	0.5597	40877.73	0.0152	0.02538
Cr	52	3	He	34.104	0.5447	40586.97	0.0152	0.02538
Mn	55	3	He	78.028	0.4744	35273.67	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	76.966	0.4681	34190.76	0.0059	0.01385
Mn	55	3	He	79.131	0.4809	35834.70	0.0059	0.01385
Fe	57	3	He	66772.718	19.349	1438661.23	0.0003	0.003918
Fe	57	3	He	68179.982	19.7567	1442939.98	0.0003	0.003918
Fe	57	3	He	67607.607	19.5908	1459773.88	0.0003	0.003918
Co	59	3	He	7.508	0.2321	17260.98	0.0305	0.003084
Co	59	3	He	7.42	0.2295	16760.09	0.0305	0.003084
Co	59	3	He	7.324	0.2265	16880.23	0.0305	0.003084
Ni	60	3	He	10.925	0.1051	7812.35	0.0088	0.009003
Ni	60	3	He	11.577	0.1108	8092.46	0.0088	0.009003
Ni	60	3	He	12.259	0.1168	8702.89	0.0088	0.009003
Cu	63	3	He	8.08	0.2064	15348.75	0.0249	0.004937
Cu	63	3	He	8.301	0.2119	15478.85	0.0249	0.004937
Cu	63	3	He	8.903	0.2269	16910.52	0.0249	0.004937
Zn	66	3	He	683.921	1.6851	125290.72	0.0025	0.004836
Zn	66	3	He	681.792	1.6798	122688.13	0.0025	0.004836
Zn	66	3	He	691.261	1.7031	126903.42	0.0025	0.004836
As	75	3	He	16.424	0.029	2156.20	0.0017	0.0004347
As	75	3	He	16.095	0.0284	2076.17	0.0017	0.0004347
As	75	3	He	15.308	0.0271	2016.15	0.0017	0.0004347
Sr	88	3	He	16.421	0.1291	8332.73	0.0078	0.0007762
Sr	88	3	He	17.023	0.1338	8422.85	0.0078	0.0007762
Sr	88	3	He	16.027	0.1261	8132.69	0.0078	0.0007762
Mo	98	3	He	3.179	0.0705	4550.90	0.022	0.0005162
Mo	98	3	He	2.878	0.0639	4020.68	0.022	0.0005162
Mo	98	3	He	3.173	0.0704	4540.87	0.022	0.0005162
Ag	107	3	He	0.02	0.0014	90.00	0.0455	0.0004641
Ag	107	3	He	0.025	0.0016	100.00	0.0455	0.0004641
Ag	107	3	He	0.02	0.0014	90.00	0.0455	0.0004641
Cd	111	3	He	0.222	0.0011	72.00	0.0048	5.152E-05
Cd	111	3	He	0.161	0.0008	52.00	0.0048	5.152E-05
Cd	111	3	He	0.209	0.0011	68.00	0.0048	5.152E-05
Sn	120	3	He	0.798	0.027	1740.18	0.0143	0.01559
Sn	120	3	He	0.846	0.0277	1740.17	0.0143	0.01559
Sn	120	3	He	1.092	0.0312	2010.22	0.0143	0.01559
Sb	121	3	He	0.454	0.0059	380.02	0.0124	0.000258
Sb	121	3	He	0.351	0.0046	290.02	0.0124	0.000258
Sb	121	3	He	0.267	0.0036	230.01	0.0124	0.000258
Ba	137	3	He	40.58	0.1778	11475.08	0.0044	0.000309
Ba	137	3	He	43.284	0.1897	11935.59	0.0044	0.000309
Ba	137	3	He	43.319	0.1898	12245.85	0.0044	0.000309
Tl	205	3	He	0.193	0.0064	1420.14	0.0276	0.001005
Tl	205	3	He	0.18	0.006	1350.13	0.0276	0.001005
Tl	205	3	He	0.237	0.0076	1700.16	0.0276	0.001005
Pb	208	3	He	120.174	4.3762	522861.67	0.0364	0.002176
Pb	208	3	He	119.789	4.3622	530666.98	0.0364	0.002176
Pb	208	3	He	121.004	4.4064	530131.55	0.0364	0.002176
U	238	3	He	4.188	0.1764	39431.74	0.0421	0.00024
U	238	3	He	4.196	0.1768	39962.79	0.0421	0.00024
U	238	3	He	4.299	0.1811	40764.71	0.0421	0.00024
Sc	45	1	No Gas			3348057.45		
Sc	45	1	No Gas			3412213.70		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3414361.20		
Ge	72	1	No Gas			1450785.13		
Ge	72	1	No Gas			1471957.32		
Ge	72	1	No Gas			1479894.51		
Sc	45	2	H2			199502.38		
Sc	45	2	H2			202002.63		
Sc	45	2	H2			208454.29		
Ge	72	2	H2			160282.76		
Ge	72	2	H2			160597.19		
Ge	72	2	H2			167119.76		
In	115	2	H2			432149.52		
In	115	2	H2			431802.53		
In	115	2	H2			443633.35		
Sc	45	3	He			41810.60		
Sc	45	3	He			42181.81		
Sc	45	3	He			43304.97		
Ge	72	3	He			74353.44		
Ge	72	3	He			73035.63		
Ge	72	3	He			74513.11		
In	115	3	He			64539.42		
In	115	3	He			62942.75		
In	115	3	He			64528.90		
Tb	159	3	He			292177.24		
Tb	159	3	He			289459.35		
Tb	159	3	He			292773.06		
Bi	209	3	He			223507.67		
Bi	209	3	He			226069.31		
Bi	209	3	He			225088.69		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 17:22:13
Sample Name	410-136610-H-5-A @10
Sample Type	Sample
Comment	G3 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

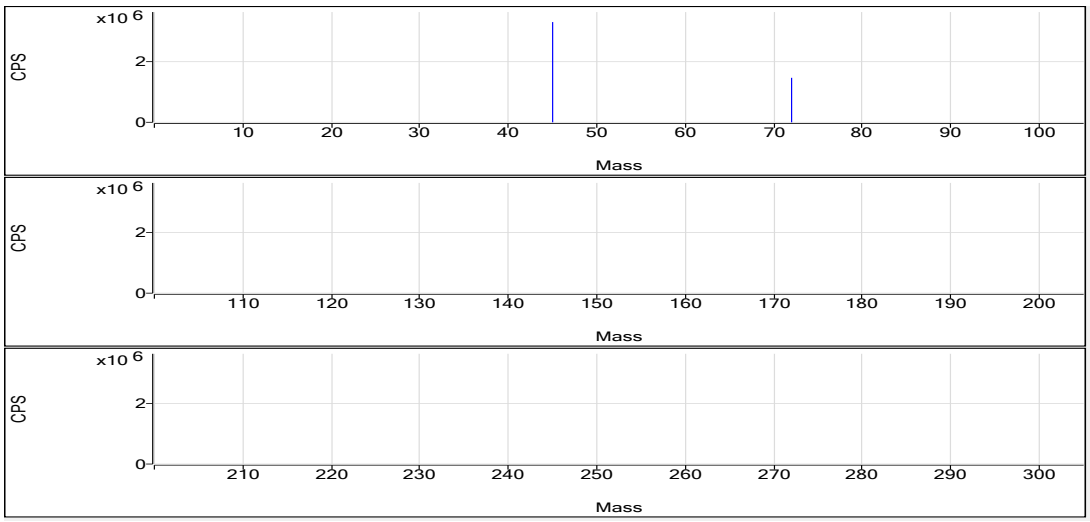
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.221	ppb	4.8	494.01	0.0003	Pulse	0.5000	3
Se	78	72	H2	0.092	ppb	8.1	7.55	0.0000	Pulse	1.5000	3
Na	23	72	He	7.671	ppb	22.9	8842.93	0.1196	Pulse	0.1000	3
Mg	24	72	He	352.976	ppb	1.3	22360.81	0.3024	Pulse	0.1000	3
Al	27	72	He	3845.188	ppb	2.4	68682.95	0.9293	Pulse	0.1000	3
K	39	72	He	507.488	ppb	3.0	31344.17	0.4239	Pulse	0.1000	3
Ca	44	72	He	294.659	ppb	22.1	793.38	0.0108	Pulse	0.1000	3
Ti	47	72	He	64.721	ppb	1.3	1220.10	0.0165	Pulse	0.1000	3
V	51	72	He	10.197	ppb	3.5	9356.37	0.1266	Pulse	0.5000	3
Cr	52	72	He	6.656	ppb	3.3	9373.34	0.1267	Pulse	0.1000	3
Mn	55	72	He	14.243	ppb	3.1	7238.68	0.0979	Pulse	0.1000	3
Fe	57	72	He	13274.003	ppb	2.4	284528.72	3.8496	Pulse	0.1000	3
Co	59	72	He	1.376	ppb	7.0	3330.49	0.0451	Pulse	0.1000	3
Ni	60	72	He	2.963	ppb	7.0	2590.30	0.0351	Pulse	0.1000	3
Cu	63	72	He	1.692	ppb	4.5	3483.90	0.0471	Pulse	0.1000	3
Zn	66	72	He	132.984	ppb	3.3	24501.32	0.3315	Pulse	0.1000	3
As	75	72	He	3.023	ppb	5.5	420.68	0.0057	Pulse	0.5000	3
Sr	88	115	He	3.527	ppb	7.0	1836.86	0.0283	Pulse	0.1000	3
Mo	98	115	He	0.626	ppb	10.7	926.73	0.0143	Pulse	0.1000	3
Ag	107	115	He	0.001	ppb	191.7	33.33	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.041	ppb	46.1	16.00	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.399	ppb	63.1	1380.13	0.0213	Pulse	0.1000	3
Sb	121	115	He	0.062	ppb	65.3	66.67	0.0010	Pulse	0.1000	3
Ba	137	115	He	8.256	ppb	6.4	2360.28	0.0364	Pulse	0.1000	3
Tl	205	209	He	0.044	ppb	17.5	493.36	0.0022	Pulse	0.1000	3
Pb	208	209	He	23.687	ppb	1.1	192834.67	0.8643	Pulse	0.1000	3
U	238	209	He	0.865	ppb	2.0	8169.53	0.0366	Pulse	0.1000	3

ISTD Table:

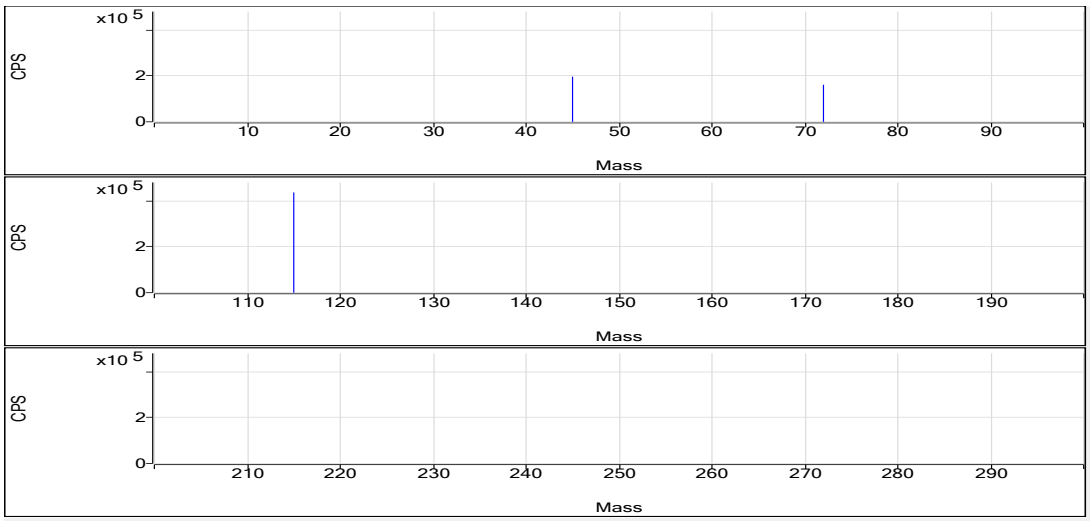
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3297447.76	1.2	101.7	Pulse	0.1000	3
No Gas	Ge	72	1463794.61	0.9	101.7	Pulse	0.1000	3
H2	Sc	45	196400.20	2.3	100.5	Pulse	0.1000	3
H2	Ge	72	161145.77	1.3	98.9	Pulse	0.1000	3
H2	In	115	436257.21	2.3	100.7	Pulse	0.1000	3
He	Sc	45	41629.91	0.4	104.1	Pulse	0.1000	3
He	Ge	72	73940.02	2.5	102.3	Pulse	0.1000	3
He	In	115	64819.57	1.6	100.4	Pulse	0.1000	3
He	Tb	159	285147.19	1.1	99.7	Pulse	0.1000	3
He	Bi	209	223112.11	0.6	100.4	Pulse	0.1000	3

No Gas

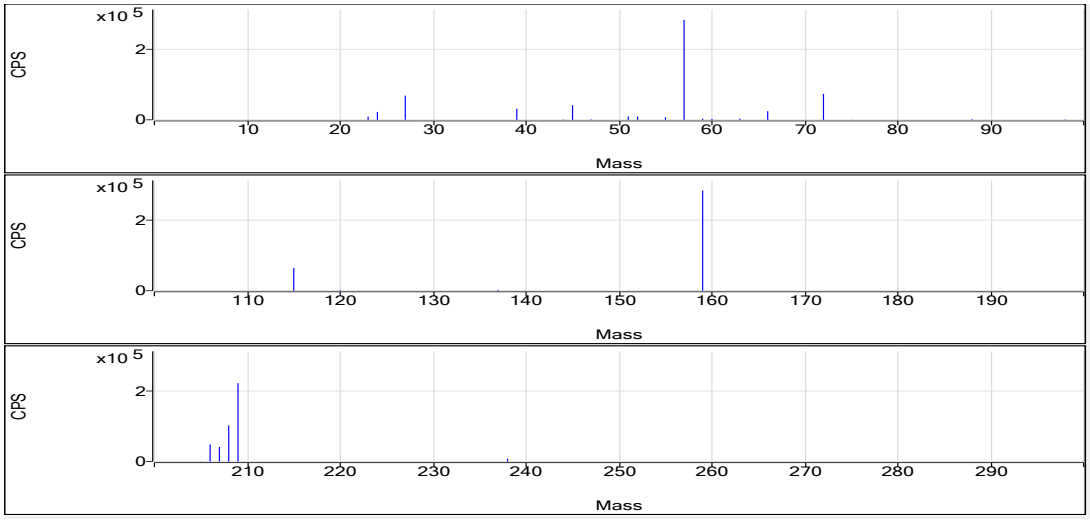


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.214	0.0003	478.01	0.0013	4.694E-05
Be	9	1	No Gas	0.217	0.0003	490.01	0.0013	4.694E-05
Be	9	1	No Gas	0.233	0.0004	514.01	0.0013	4.694E-05
Se	78	2	H2	0.101	0.0001	8.00	0.0004	1.089E-05
Se	78	2	H2	0.089	0	7.33	0.0004	1.089E-05
Se	78	2	H2	0.087	0	7.33	0.0004	1.089E-05
Na	23	3	He	6.7	0.118	8962.99	0.0017	0.1065
Na	23	3	He	6.613	0.1178	8662.81	0.0017	0.1065
Na	23	3	He	9.7	0.1231	8902.98	0.0017	0.1065
Mg	24	3	He	349.679	0.2997	22768.20	0.0008	0.004846
Mg	24	3	He	358.136	0.3068	22557.72	0.0008	0.004846
Mg	24	3	He	351.112	0.3009	21756.52	0.0008	0.004846
Al	27	3	He	3737.442	0.9033	68629.54	0.0002	0.001063
Al	27	3	He	3892.216	0.9406	69161.92	0.0002	0.001063
Al	27	3	He	3905.906	0.9439	68257.40	0.0002	0.001063
K	39	3	He	516.79	0.429	32596.74	0.0006	0.1436
K	39	3	He	489.881	0.4142	30452.24	0.0006	0.1436
K	39	3	He	515.795	0.4285	30983.54	0.0006	0.1436
Ca	44	3	He	232.055	0.0088	670.03	0	0.001611
Ca	44	3	He	289.693	0.0106	780.04	0	0.001611
Ca	44	3	He	362.23	0.0129	930.06	0	0.001611
Ti	47	3	He	63.992	0.0163	1240.11	0.0003	0.0002737
Ti	47	3	He	64.534	0.0165	1210.09	0.0003	0.0002737
Ti	47	3	He	65.637	0.0167	1210.09	0.0003	0.0002737
V	51	3	He	9.8	0.122	9266.98	0.0117	0.007326
V	51	3	He	10.304	0.1279	9401.07	0.0117	0.007326
V	51	3	He	10.487	0.13	9401.05	0.0117	0.007326
Cr	52	3	He	6.85	0.1297	9853.71	0.0152	0.02538
Cr	52	3	He	6.419	0.1231	9053.13	0.0152	0.02538
Cr	52	3	He	6.7	0.1274	9213.17	0.0152	0.02538
Mn	55	3	He	14.158	0.0974	7402.09	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	13.856	0.0956	7031.85	0.0059	0.01385
Mn	55	3	He	14.714	0.1007	7282.10	0.0059	0.01385
Fe	57	3	He	12906.677	3.7432	284405.66	0.0003	0.003918
Fe	57	3	He	13444.309	3.8989	286680.35	0.0003	0.003918
Fe	57	3	He	13471.021	3.9067	282500.15	0.0003	0.003918
Co	59	3	He	1.366	0.0448	3400.52	0.0305	0.003084
Co	59	3	He	1.285	0.0423	3110.43	0.0305	0.003084
Co	59	3	He	1.476	0.0481	3480.53	0.0305	0.003084
Ni	60	3	He	2.733	0.033	2510.30	0.0088	0.009003
Ni	60	3	He	3.137	0.0366	2690.33	0.0088	0.009003
Ni	60	3	He	3.018	0.0355	2570.28	0.0088	0.009003
Cu	63	3	He	1.687	0.047	3570.63	0.0249	0.004937
Cu	63	3	He	1.618	0.0453	3330.51	0.0249	0.004937
Cu	63	3	He	1.771	0.0491	3550.55	0.0249	0.004937
Zn	66	3	He	128.055	0.3194	24270.90	0.0025	0.004836
Zn	66	3	He	134.499	0.3353	24651.62	0.0025	0.004836
Zn	66	3	He	136.398	0.3399	24581.44	0.0025	0.004836
As	75	3	He	2.883	0.0054	414.01	0.0017	0.0004347
As	75	3	He	3.207	0.006	442.01	0.0017	0.0004347
As	75	3	He	2.978	0.0056	406.01	0.0017	0.0004347
Sr	88	3	He	3.62	0.0291	1850.18	0.0078	0.0007762
Sr	88	3	He	3.713	0.0298	1950.22	0.0078	0.0007762
Sr	88	3	He	3.247	0.0262	1710.17	0.0078	0.0007762
Mo	98	3	He	0.683	0.0156	990.08	0.022	0.0005162
Mo	98	3	He	0.553	0.0127	830.05	0.022	0.0005162
Mo	98	3	He	0.643	0.0147	960.06	0.022	0.0005162
Ag	107	3	He	0.004	0.0006	40.00	0.0455	0.0004641
Ag	107	3	He	0	0.0005	30.00	0.0455	0.0004641
Ag	107	3	He	0	0.0005	30.00	0.0455	0.0004641
Cd	111	3	He	0.022	0.0002	10.00	0.0048	5.152E-05
Cd	111	3	He	0.04	0.0002	16.00	0.0048	5.152E-05
Cd	111	3	He	0.059	0.0003	22.00	0.0048	5.152E-05
Sn	120	3	He	0.296	0.0198	1260.11	0.0143	0.01559
Sn	120	3	He	0.686	0.0254	1660.18	0.0143	0.01559
Sn	120	3	He	0.216	0.0187	1220.10	0.0143	0.01559
Sb	121	3	He	0.093	0.0014	90.00	0.0124	0.000258
Sb	121	3	He	0.078	0.0012	80.00	0.0124	0.000258
Sb	121	3	He	0.016	0.0005	30.00	0.0124	0.000258
Ba	137	3	He	8.551	0.0377	2400.30	0.0044	0.000309
Ba	137	3	He	7.65	0.0338	2210.23	0.0044	0.000309
Ba	137	3	He	8.566	0.0378	2470.32	0.0044	0.000309
Tl	205	3	He	0.037	0.002	450.02	0.0276	0.001005
Tl	205	3	He	0.043	0.0022	490.03	0.0276	0.001005
Tl	205	3	He	0.052	0.0024	540.03	0.0276	0.001005
Pb	208	3	He	23.911	0.8725	103624.42	0.0364	0.002176
Pb	208	3	He	23.385	0.8533	102042.75	0.0364	0.002176
Pb	208	3	He	23.764	0.8671	102638.17	0.0364	0.002176
U	238	3	He	0.864	0.0366	8172.85	0.0421	0.00024
U	238	3	He	0.848	0.0359	8052.81	0.0421	0.00024
U	238	3	He	0.882	0.0373	8282.93	0.0421	0.00024
Sc	45	1	No Gas			3271581.20		
Sc	45	1	No Gas			3341635.26		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3279126.83		
Ge	72	1	No Gas			1458257.48		
Ge	72	1	No Gas			1478488.73		
Ge	72	1	No Gas			1454637.63		
Sc	45	2	H2			191577.05		
Sc	45	2	H2			197291.83		
Sc	45	2	H2			200331.72		
Ge	72	2	H2			159342.81		
Ge	72	2	H2			160557.22		
Ge	72	2	H2			163537.29		
In	115	2	H2			426177.38		
In	115	2	H2			436777.61		
In	115	2	H2			445816.63		
Sc	45	3	He			41449.57		
Sc	45	3	He			41770.39		
Sc	45	3	He			41669.78		
Ge	72	3	He			75979.87		
Ge	72	3	He			73527.93		
Ge	72	3	He			72312.26		
In	115	3	He			63645.15		
In	115	3	He			65452.71		
In	115	3	He			65393.16		
Tb	159	3	He			281441.44		
Tb	159	3	He			287138.41		
Tb	159	3	He			286861.71		
Bi	209	3	He			223356.58		
Bi	209	3	He			224199.16		
Bi	209	3	He			221780.58		

Quantitation Report

Data File Name	196SMPL.d
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Sample Name	410-136610-H-1-A @2
Sample Type	Sample
Comment	G3 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

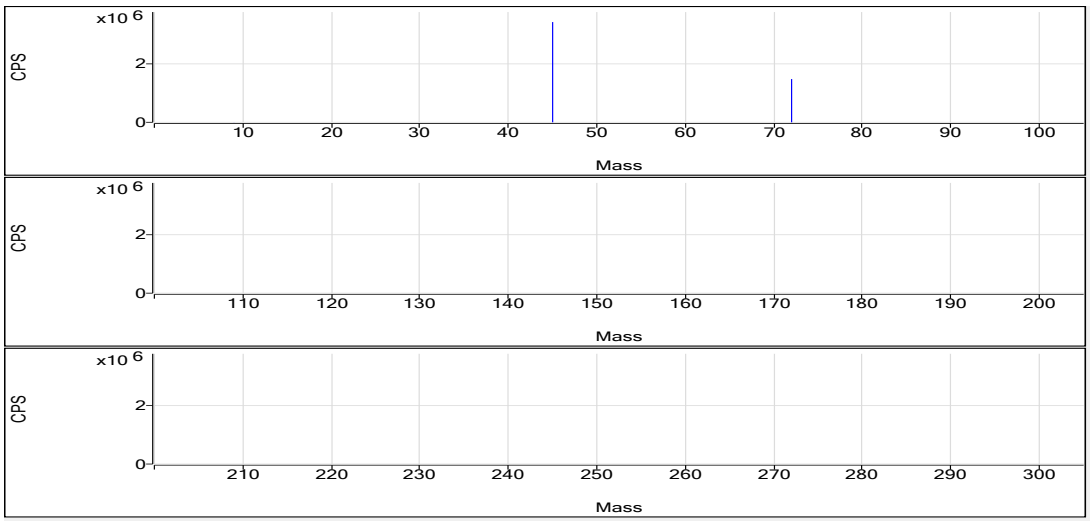
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	1.311	ppb	1.7	2619.58	0.0018	Pulse	0.5000	3
Se	78	72	H2	0.306	ppb	24.7	21.33	0.0001	Pulse	1.5000	3
Na	23	72	He	73.715	ppb	2.7	17490.70	0.2331	Pulse	0.1000	3
Mg	24	72	He	2672.450	ppb	0.1	169424.50	2.2580	Pulse	0.1000	3
Al	27	72	He	35265.890	ppb	2.9	638560.03	8.5140	Pulse	0.1000	3
K	39	72	He	2868.030	ppb	2.6	129565.31	1.7274	Pulse	0.1000	3
Ca	44	72	He	2209.422	ppb	2.3	5271.12	0.0702	Pulse	0.1000	3
Ti	47	72	He	664.287	ppb	0.8	12519.07	0.1669	Pulse	0.1000	3
V	51	72	He	69.195	ppb	2.2	61265.85	0.8167	Pulse	0.5000	3
Cr	52	72	He	45.810	ppb	4.0	54214.91	0.7229	Pulse	0.1000	3
Mn	55	72	He	117.853	ppb	3.6	53211.24	0.7095	Pulse	0.1000	3
Fe	57	72	He	31803.807	ppb	2.9	691355.74	9.2179	Pulse	0.1000	3
Co	59	72	He	15.150	ppb	4.4	34896.09	0.4653	Pulse	0.1000	3
Ni	60	72	He	56.484	ppb	3.5	37923.64	0.5057	Pulse	0.1000	3
Cu	63	72	He	16.527	ppb	2.3	31284.55	0.4171	Pulse	0.1000	3
Zn	66	72	He	59.778	ppb	3.0	11384.91	0.1517	Pulse	0.1000	3
As	75	72	He	10.246	ppb	4.9	1368.74	0.0183	Pulse	0.5000	3
Sr	88	115	He	29.809	ppb	2.6	15271.97	0.2338	Pulse	0.1000	3
Mo	98	115	He	1.372	ppb	10.1	2006.88	0.0307	Pulse	0.1000	3
Ag	107	115	He	0.080	ppb	35.3	270.01	0.0041	Pulse	0.1000	3
Cd	111	115	He	0.359	ppb	23.4	116.00	0.0018	Pulse	0.5000	3
Sn	120	115	He	2.383	ppb	5.2	3237.15	0.0496	Pulse	0.1000	3
Sb	121	115	He	0.391	ppb	13.2	333.35	0.0051	Pulse	0.1000	3
Ba	137	115	He	134.815	ppb	4.4	38534.66	0.5901	Pulse	0.1000	3
Tl	205	209	He	0.317	ppb	6.1	2193.60	0.0098	Pulse	0.1000	3
Pb	208	209	He	24.369	ppb	0.1	199851.35	0.8891	Pulse	0.1000	3
U	238	209	He	2.931	ppb	0.7	27770.47	0.1236	Pulse	0.1000	3

ISTD Table:

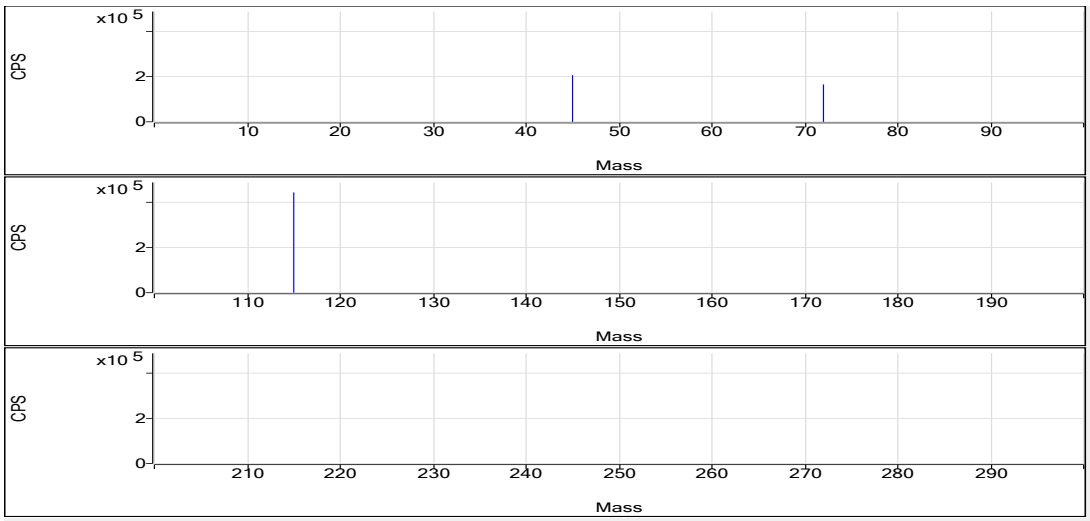
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3433028.49	1.1	105.9	Pulse	0.1000	3
No Gas	Ge	72	1480590.03	0.9	102.8	Pulse	0.1000	3
H2	Sc	45	205094.68	2.4	105.0	Pulse	0.1000	3
H2	Ge	72	164341.36	0.9	100.8	Pulse	0.1000	3
H2	In	115	440795.51	1.4	101.7	Pulse	0.1000	3
He	Sc	45	43572.27	2.2	109.0	Pulse	0.1000	3
He	Ge	72	75032.26	2.2	103.8	Pulse	0.1000	3
He	In	115	65321.05	1.0	101.1	Pulse	0.1000	3
He	Tb	159	293668.19	0.5	102.7	Pulse	0.1000	3
He	Bi	209	224768.19	1.1	101.2	Pulse	0.1000	3

No Gas

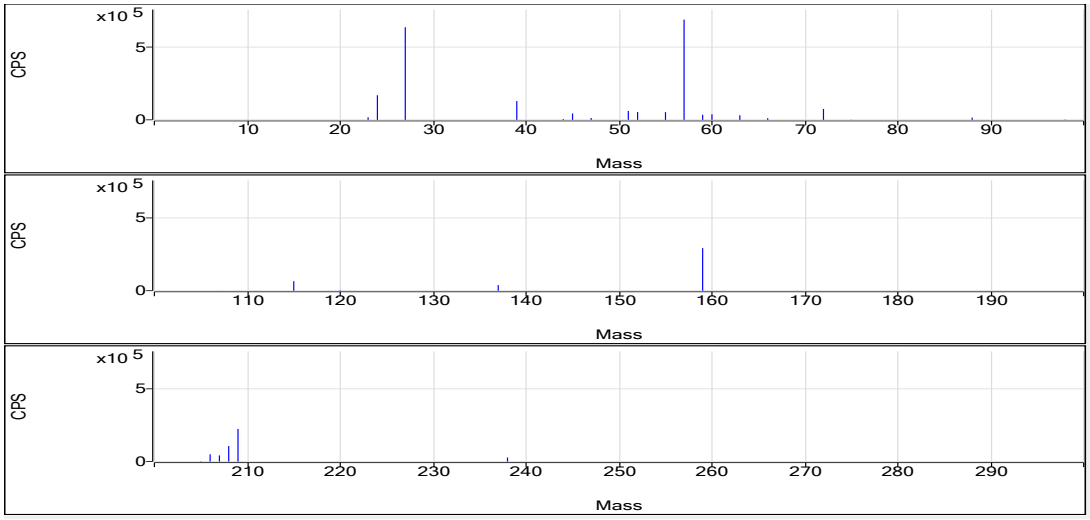


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	1.331	0.0018	2632.24	0.0013	4.694E-05
Be	9	1	No Gas	1.286	0.0017	2592.24	0.0013	4.694E-05
Be	9	1	No Gas	1.316	0.0018	2634.25	0.0013	4.694E-05
Se	78	2	H2	0.338	0.0001	23.33	0.0004	1.089E-05
Se	78	2	H2	0.36	0.0002	24.67	0.0004	1.089E-05
Se	78	2	H2	0.22	0.0001	16.00	0.0004	1.089E-05
Na	23	3	He	75.711	0.2365	17720.93	0.0017	0.1065
Na	23	3	He	71.714	0.2296	16859.99	0.0017	0.1065
Na	23	3	He	73.721	0.2331	17891.19	0.0017	0.1065
Mg	24	3	He	2670.532	2.2564	169059.53	0.0008	0.004846
Mg	24	3	He	2671.128	2.2569	165692.67	0.0008	0.004846
Mg	24	3	He	2675.689	2.2607	173521.31	0.0008	0.004846
Al	27	3	He	35151.792	8.4865	635853.31	0.0002	0.001063
Al	27	3	He	36325.964	8.7699	643860.46	0.0002	0.001063
Al	27	3	He	34319.916	8.2857	635966.32	0.0002	0.001063
K	39	3	He	2873.105	1.7302	129635.92	0.0006	0.1436
K	39	3	He	2939.241	1.7667	129707.16	0.0006	0.1436
K	39	3	He	2791.743	1.6853	129352.85	0.0006	0.1436
Ca	44	3	He	2165.89	0.0689	5161.09	0	0.001611
Ca	44	3	He	2198.29	0.0699	5131.06	0	0.001611
Ca	44	3	He	2264.086	0.0719	5521.21	0	0.001611
Ti	47	3	He	660.738	0.166	12435.58	0.0003	0.0002737
Ti	47	3	He	669.997	0.1683	12355.67	0.0003	0.0002737
Ti	47	3	He	662.127	0.1663	12765.97	0.0003	0.0002737
V	51	3	He	68.367	0.8071	60469.90	0.0117	0.007326
V	51	3	He	70.924	0.837	61447.86	0.0117	0.007326
V	51	3	He	68.293	0.8062	61879.80	0.0117	0.007326
Cr	52	3	He	45.234	0.7142	53509.19	0.0152	0.02538
Cr	52	3	He	47.867	0.7543	55375.57	0.0152	0.02538
Cr	52	3	He	44.33	0.7004	53759.97	0.0152	0.02538
Mn	55	3	He	115.039	0.6929	51912.90	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	122.733	0.7383	54201.91	0.0059	0.01385
Mn	55	3	He	115.786	0.6973	53518.92	0.0059	0.01385
Fe	57	3	He	31547.108	9.1436	685084.91	0.0003	0.003918
Fe	57	3	He	32836.832	9.5172	698724.05	0.0003	0.003918
Fe	57	3	He	31027.482	8.993	690258.27	0.0003	0.003918
Co	59	3	He	14.742	0.4529	33930.54	0.0305	0.003084
Co	59	3	He	15.915	0.4886	35875.08	0.0305	0.003084
Co	59	3	He	14.794	0.4545	34882.66	0.0305	0.003084
Ni	60	3	He	56.304	0.5041	37769.92	0.0088	0.009003
Ni	60	3	He	58.553	0.5239	38461.59	0.0088	0.009003
Ni	60	3	He	54.596	0.4891	37539.40	0.0088	0.009003
Cu	63	3	He	16.734	0.4222	31635.18	0.0249	0.004937
Cu	63	3	He	16.764	0.423	31053.73	0.0249	0.004937
Cu	63	3	He	16.084	0.406	31164.75	0.0249	0.004937
Zn	66	3	He	58.033	0.1474	11044.65	0.0025	0.004836
Zn	66	3	He	59.709	0.1515	11124.63	0.0025	0.004836
Zn	66	3	He	61.592	0.1562	11985.44	0.0025	0.004836
As	75	3	He	10.141	0.0181	1354.07	0.0017	0.0004347
As	75	3	He	10.794	0.0192	1410.08	0.0017	0.0004347
As	75	3	He	9.804	0.0175	1342.08	0.0017	0.0004347
Sr	88	3	He	28.925	0.2269	14858.19	0.0078	0.0007762
Sr	88	3	He	30.104	0.2361	15248.58	0.0078	0.0007762
Sr	88	3	He	30.399	0.2384	15709.13	0.0078	0.0007762
Mo	98	3	He	1.253	0.0281	1840.19	0.022	0.0005162
Mo	98	3	He	1.524	0.0341	2200.23	0.022	0.0005162
Mo	98	3	He	1.341	0.0301	1980.22	0.022	0.0005162
Ag	107	3	He	0.097	0.0049	320.01	0.0455	0.0004641
Ag	107	3	He	0.048	0.0026	170.01	0.0455	0.0004641
Ag	107	3	He	0.097	0.0049	320.02	0.0455	0.0004641
Cd	111	3	He	0.441	0.0022	142.00	0.0048	5.152E-05
Cd	111	3	He	0.273	0.0014	88.00	0.0048	5.152E-05
Cd	111	3	He	0.362	0.0018	118.00	0.0048	5.152E-05
Sn	120	3	He	2.506	0.0513	3360.52	0.0143	0.01559
Sn	120	3	He	2.382	0.0496	3200.47	0.0143	0.01559
Sn	120	3	He	2.26	0.0478	3150.46	0.0143	0.01559
Sb	121	3	He	0.435	0.0057	370.02	0.0124	0.000258
Sb	121	3	He	0.404	0.0053	340.01	0.0124	0.000258
Sb	121	3	He	0.334	0.0044	290.02	0.0124	0.000258
Ba	137	3	He	131.179	0.5742	37602.15	0.0044	0.000309
Ba	137	3	He	141.708	0.6203	40058.78	0.0044	0.000309
Ba	137	3	He	131.557	0.5758	37943.06	0.0044	0.000309
Tl	205	3	He	0.295	0.0092	2070.23	0.0276	0.001005
Tl	205	3	He	0.332	0.0102	2310.29	0.0276	0.001005
Tl	205	3	He	0.322	0.0099	2200.28	0.0276	0.001005
Pb	208	3	He	24.358	0.8887	107607.06	0.0364	0.002176
Pb	208	3	He	24.409	0.8906	108564.58	0.0364	0.002176
Pb	208	3	He	24.34	0.8881	104744.83	0.0364	0.002176
U	238	3	He	2.944	0.1241	28031.07	0.0421	0.00024
U	238	3	He	2.909	0.1226	27780.47	0.0421	0.00024
U	238	3	He	2.941	0.124	27499.88	0.0421	0.00024
Sc	45	1	No Gas			3392385.89		
Sc	45	1	No Gas			3469534.95		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3437164.64		
Ge	72	1	No Gas			1465957.17		
Ge	72	1	No Gas			1492293.57		
Ge	72	1	No Gas			1483519.35		
Sc	45	2	H2			202897.05		
Sc	45	2	H2			201679.88		
Sc	45	2	H2			210707.11		
Ge	72	2	H2			163802.90		
Ge	72	2	H2			163215.73		
Ge	72	2	H2			166005.45		
In	115	2	H2			436547.49		
In	115	2	H2			437956.71		
In	115	2	H2			447882.34		
Sc	45	3	He			42592.49		
Sc	45	3	He			43645.84		
Sc	45	3	He			44478.47		
Ge	72	3	He			74925.26		
Ge	72	3	He			73416.75		
Ge	72	3	He			76754.77		
In	115	3	He			65513.62		
In	115	3	He			64609.65		
In	115	3	He			65915.61		
Tb	159	3	He			292594.88		
Tb	159	3	He			295489.68		
Tb	159	3	He			292920.00		
Bi	209	3	He			225887.75		
Bi	209	3	He			226578.30		
Bi	209	3	He			221838.53		

Quantitation Report

Data File Name	197SMPL.d
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Acq Time	2023-08-10 17:26:13
Sample Name	410-136610-H-1-A @10
Sample Type	Sample
Comment	G3 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

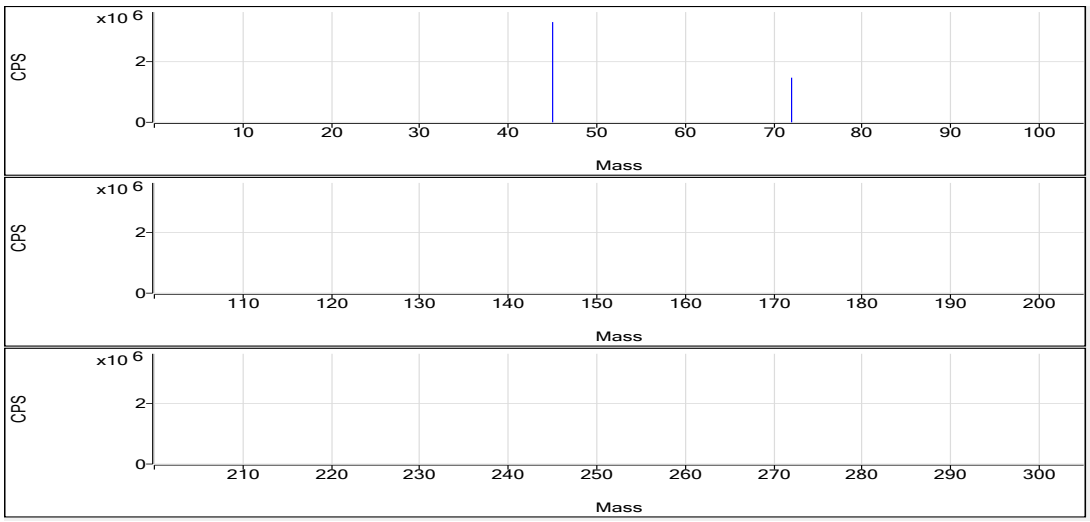
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.245	ppb	5.7	538.68	0.0004	Pulse	0.5000	3
Se	78	72	H2	0.068	ppb	60.1	6.22	0.0000	Pulse	1.5000	3
Na	23	72	He	16.095	ppb	4.9	9987.07	0.1341	Pulse	0.1000	3
Mg	24	72	He	514.104	ppb	1.8	32643.32	0.4383	Pulse	0.1000	3
Al	27	72	He	6737.204	ppb	1.8	121185.37	1.6274	Pulse	0.1000	3
K	39	72	He	534.219	ppb	7.9	32653.53	0.4386	Pulse	0.1000	3
Ca	44	72	He	383.907	ppb	16.9	1006.74	0.0135	Pulse	0.1000	3
Ti	47	72	He	129.167	ppb	10.1	2433.63	0.0327	Pulse	0.1000	3
V	51	72	He	13.180	ppb	2.4	12025.65	0.1615	Pulse	0.5000	3
Cr	52	72	He	8.840	ppb	5.7	11918.63	0.1600	Pulse	0.1000	3
Mn	55	72	He	21.715	ppb	3.0	10577.53	0.1420	Pulse	0.1000	3
Fe	57	72	He	6103.187	ppb	2.9	131944.97	1.7721	Pulse	0.1000	3
Co	59	72	He	2.928	ppb	4.2	6885.25	0.0924	Pulse	0.1000	3
Ni	60	72	He	11.154	ppb	3.7	7975.77	0.1071	Pulse	0.1000	3
Cu	63	72	He	3.217	ppb	7.4	6338.26	0.0852	Pulse	0.1000	3
Zn	66	72	He	10.772	ppb	6.3	2330.27	0.0313	Pulse	0.1000	3
As	75	72	He	1.979	ppb	3.3	288.68	0.0039	Pulse	0.5000	3
Sr	88	115	He	5.587	ppb	5.4	2853.72	0.0444	Pulse	0.1000	3
Mo	98	115	He	0.293	ppb	3.6	446.69	0.0070	Pulse	0.1000	3
Ag	107	115	He	0.011	ppb	35.2	63.33	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.054	ppb	41.9	20.00	0.0003	Pulse	0.5000	3
Sn	120	115	He	0.329	ppb	18.6	1303.44	0.0203	Pulse	0.1000	3
Sb	121	115	He	0.059	ppb	35.2	63.33	0.0010	Pulse	0.1000	3
Ba	137	115	He	25.712	ppb	2.6	7242.22	0.1128	Pulse	0.1000	3
Tl	205	209	He	0.065	ppb	19.2	630.04	0.0028	Pulse	0.1000	3
Pb	208	209	He	4.724	ppb	3.1	39040.81	0.1741	Pulse	0.1000	3
U	238	209	He	0.550	ppb	4.8	5244.57	0.0234	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3285088.18	1.1	101.4	Pulse	0.1000	3
No Gas	Ge	72	1462251.65	0.8	101.6	Pulse	0.1000	3
H2	Sc	45	199542.81	2.2	102.1	Pulse	0.1000	3
H2	Ge	72	165814.84	1.5	101.7	Pulse	0.1000	3
H2	In	115	443838.78	1.7	102.4	Pulse	0.1000	3
He	Sc	45	42308.50	0.9	105.8	Pulse	0.1000	3
He	Ge	72	74480.04	1.6	103.0	Pulse	0.1000	3
He	In	115	64231.24	2.2	99.4	Pulse	0.1000	3
He	Tb	159	289362.08	0.7	101.2	Pulse	0.1000	3
He	Bi	209	224260.31	0.8	100.9	Pulse	0.1000	3

No Gas



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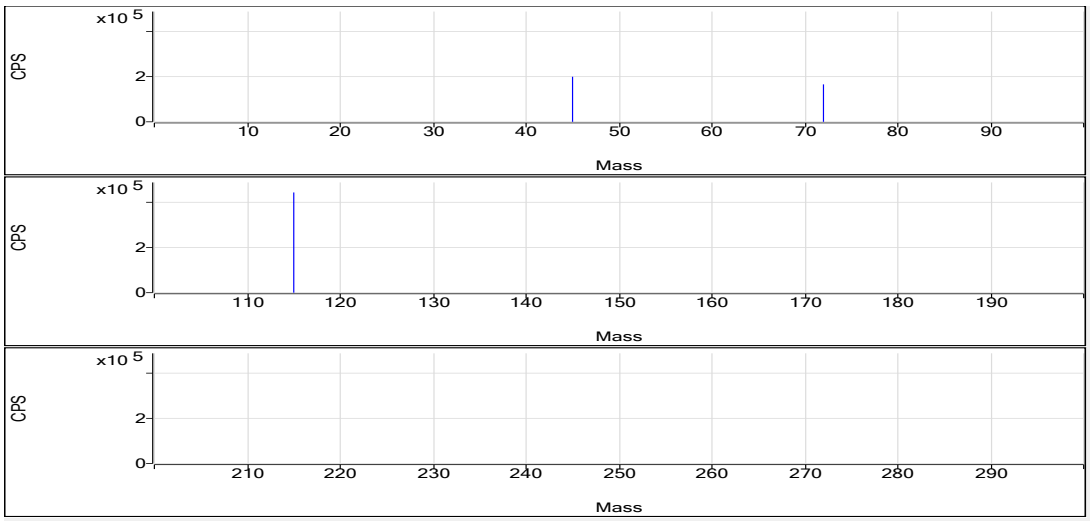
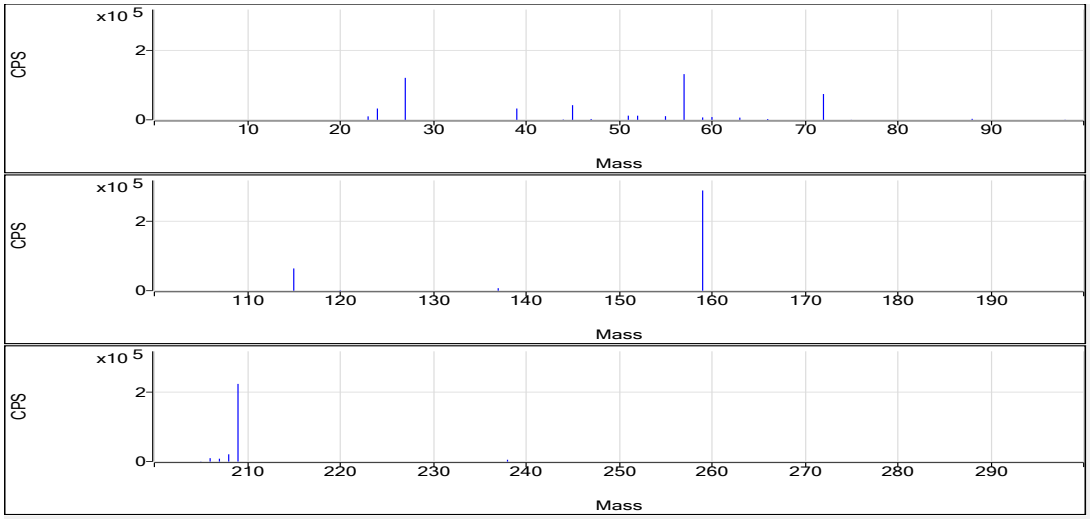


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.245	0.0004	536.01	0.0013	4.694E-05
Be	9	1	No Gas	0.23	0.0003	516.01	0.0013	4.694E-05
Be	9	1	No Gas	0.259	0.0004	564.01	0.0013	4.694E-05
Se	78	2	H2	0.077	0	6.67	0.0004	1.089E-05
Se	78	2	H2	0.024	0	3.33	0.0004	1.089E-05
Se	78	2	H2	0.104	0.0001	8.67	0.0004	1.089E-05
Na	23	3	He	16.023	0.134	10073.74	0.0017	0.1065
Na	23	3	He	15.348	0.1328	9983.73	0.0017	0.1065
Na	23	3	He	16.912	0.1355	9903.75	0.0017	0.1065
Mg	24	3	He	523.009	0.4458	33518.35	0.0008	0.004846
Mg	24	3	He	504.502	0.4302	32336.13	0.0008	0.004846
Mg	24	3	He	514.799	0.4389	32075.47	0.0008	0.004846
Al	27	3	He	6634.663	1.6026	120498.27	0.0002	0.001063
Al	27	3	He	6707.559	1.6202	121787.06	0.0002	0.001063
Al	27	3	He	6869.39	1.6593	121270.79	0.0002	0.001063
K	39	3	He	532.212	0.4375	32897.25	0.0006	0.1436
K	39	3	He	492.846	0.4158	31253.98	0.0006	0.1436
K	39	3	He	577.6	0.4626	33809.36	0.0006	0.1436
Ca	44	3	He	316.418	0.0114	860.06	0	0.001611
Ca	44	3	He	389.338	0.0137	1030.06	0	0.001611
Ca	44	3	He	445.964	0.0155	1130.09	0	0.001611
Ti	47	3	He	143.713	0.0363	2730.36	0.0003	0.0002737
Ti	47	3	He	118.285	0.0299	2250.28	0.0003	0.0002737
Ti	47	3	He	125.502	0.0317	2320.26	0.0003	0.0002737
V	51	3	He	13.032	0.1598	12012.97	0.0117	0.007326
V	51	3	He	12.97	0.159	11954.94	0.0117	0.007326
V	51	3	He	13.537	0.1657	12109.05	0.0117	0.007326
Cr	52	3	He	9.413	0.1687	12685.95	0.0152	0.02538
Cr	52	3	He	8.472	0.1544	11605.00	0.0152	0.02538
Cr	52	3	He	8.635	0.1569	11464.93	0.0152	0.02538
Mn	55	3	He	21.029	0.138	10374.06	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	22.344	0.1457	10954.48	0.0059	0.01385
Mn	55	3	He	21.771	0.1424	10404.05	0.0059	0.01385
Fe	57	3	He	6021.005	1.7483	131450.07	0.0003	0.003918
Fe	57	3	He	5981.497	1.7368	130552.73	0.0003	0.003918
Fe	57	3	He	6307.057	1.8312	133832.12	0.0003	0.003918
Co	59	3	He	2.895	0.0914	6871.94	0.0305	0.003084
Co	59	3	He	3.065	0.0966	7262.08	0.0305	0.003084
Co	59	3	He	2.824	0.0892	6521.72	0.0305	0.003084
Ni	60	3	He	11.579	0.1108	8332.59	0.0088	0.009003
Ni	60	3	He	10.751	0.1035	7782.42	0.0088	0.009003
Ni	60	3	He	11.132	0.1069	7812.31	0.0088	0.009003
Cu	63	3	He	3.232	0.0855	6431.64	0.0249	0.004937
Cu	63	3	He	2.972	0.079	5941.44	0.0249	0.004937
Cu	63	3	He	3.446	0.0909	6641.70	0.0249	0.004937
Zn	66	3	He	10.863	0.0315	2370.27	0.0025	0.004836
Zn	66	3	He	10.055	0.0295	2220.27	0.0025	0.004836
Zn	66	3	He	11.399	0.0328	2400.28	0.0025	0.004836
As	75	3	He	1.998	0.0039	294.01	0.0017	0.0004347
As	75	3	He	1.907	0.0038	282.01	0.0017	0.0004347
As	75	3	He	2.032	0.004	290.01	0.0017	0.0004347
Sr	88	3	He	5.25	0.0418	2740.36	0.0078	0.0007762
Sr	88	3	He	5.671	0.0451	2830.38	0.0078	0.0007762
Sr	88	3	He	5.84	0.0464	2990.41	0.0078	0.0007762
Mo	98	3	He	0.281	0.0067	440.02	0.022	0.0005162
Mo	98	3	He	0.302	0.0072	450.02	0.022	0.0005162
Mo	98	3	He	0.294	0.007	450.02	0.022	0.0005162
Ag	107	3	He	0.013	0.0011	70.00	0.0455	0.0004641
Ag	107	3	He	0.014	0.0011	70.00	0.0455	0.0004641
Ag	107	3	He	0.007	0.0008	50.00	0.0455	0.0004641
Cd	111	3	He	0.059	0.0003	22.00	0.0048	5.152E-05
Cd	111	3	He	0.029	0.0002	12.00	0.0048	5.152E-05
Cd	111	3	He	0.073	0.0004	26.00	0.0048	5.152E-05
Sn	120	3	He	0.373	0.0209	1370.11	0.0143	0.01559
Sn	120	3	He	0.259	0.0193	1210.10	0.0143	0.01559
Sn	120	3	He	0.355	0.0207	1330.12	0.0143	0.01559
Sb	121	3	He	0.053	0.0009	60.00	0.0124	0.000258
Sb	121	3	He	0.082	0.0013	80.00	0.0124	0.000258
Sb	121	3	He	0.042	0.0008	50.00	0.0124	0.000258
Ba	137	3	He	24.946	0.1094	7172.14	0.0044	0.000309
Ba	137	3	He	26.237	0.1151	7222.23	0.0044	0.000309
Ba	137	3	He	25.951	0.1138	7332.28	0.0044	0.000309
Tl	205	3	He	0.069	0.0029	660.05	0.0276	0.001005
Tl	205	3	He	0.075	0.0031	690.05	0.0276	0.001005
Tl	205	3	He	0.051	0.0024	540.03	0.0276	0.001005
Pb	208	3	He	4.598	0.1695	20456.40	0.0364	0.002176
Pb	208	3	He	4.69	0.1729	20596.95	0.0364	0.002176
Pb	208	3	He	4.884	0.1799	21818.54	0.0364	0.002176
U	238	3	He	0.556	0.0236	5351.27	0.0421	0.00024
U	238	3	He	0.573	0.0244	5441.36	0.0421	0.00024
U	238	3	He	0.521	0.0222	4941.08	0.0421	0.00024
Sc	45	1	No Gas			3269293.39		
Sc	45	1	No Gas			3327138.39		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3258832.76		
Ge	72	1	No Gas			1452252.79		
Ge	72	1	No Gas			1475680.92		
Ge	72	1	No Gas			1458821.23		
Sc	45	2	H2			196267.52		
Sc	45	2	H2			197829.43		
Sc	45	2	H2			204531.48		
Ge	72	2	H2			163254.51		
Ge	72	2	H2			165845.23		
Ge	72	2	H2			168344.78		
In	115	2	H2			436900.19		
In	115	2	H2			442855.11		
In	115	2	H2			451761.05		
Sc	45	3	He			42562.40		
Sc	45	3	He			41860.23		
Sc	45	3	He			42502.88		
Ge	72	3	He			75187.74		
Ge	72	3	He			75166.59		
Ge	72	3	He			73085.79		
In	115	3	He			65544.06		
In	115	3	He			62761.58		
In	115	3	He			64418.59		
Tb	159	3	He			289943.14		
Tb	159	3	He			287120.03		
Tb	159	3	He			291023.08		
Bi	209	3	He			226365.25		
Bi	209	3	He			223404.27		
Bi	209	3	He			223011.42		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 17:28:13
Sample Name	410-136541-F-1-A @2
Sample Type	Sample
Comment	G3 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

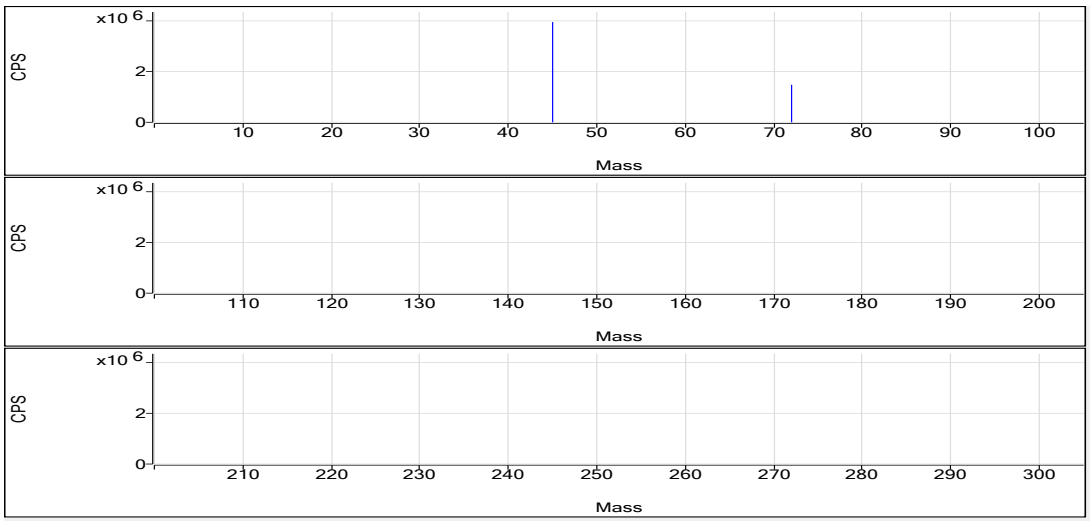
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.416	ppb	4.2	874.70	0.0006	Pulse	0.5000	3
Se	78	72	H2	0.207	ppb	24.6	15.11	0.0001	Pulse	1.5000	3
Na	23	72	He	409.451	ppb	1.7	61119.54	0.8098	Pulse	0.1000	3
Mg	24	72	He	12320.820	ppb	0.3	784365.14	10.3925	Pulse	0.1000	3
Al	27	72	He	31741.515	ppb	0.7	578397.67	7.6633	Pulse	0.1000	3
K	39	72	He	1011.319	ppb	1.2	52992.34	0.7021	Pulse	0.1000	3
Ca	44	72	He	21426.097	ppb	3.0	50343.82	0.6671	Pulse	0.1000	3
Ti	47	72	He	2257.030	ppb	2.8	42746.67	0.5663	Pulse	0.1000	3
V	51	72	He	68.994	ppb	0.4	61466.03	0.8144	Pulse	0.5000	3
Cr	52	72	He	175.274	ppb	0.3	203350.39	2.6943	Pulse	0.1000	3
Mn	55	72	He	3570.650	ppb	0.6	1591671.33	21.0893	Pulse	0.1000	3
Fe	57	72	He	92566.812	ppb	0.1	2024378.15	26.8219	Pulse	0.1000	3
Co	59	72	He	17.639	ppb	1.6	40855.14	0.5413	Pulse	0.1000	3
Ni	60	72	He	138.501	ppb	0.8	92594.80	1.2269	Pulse	0.1000	3
Cu	63	72	He	172.416	ppb	0.8	324872.73	4.3045	Pulse	0.1000	3
Zn	66	72	He	15579.763	ppb	0.7	2889114.02	38.2807	Pulse	0.1000	3
As	75	72	He	9.865	ppb	5.4	1327.40	0.0176	Pulse	0.5000	3
Sr	88	115	He	85.900	ppb	1.1	43604.29	0.6723	Pulse	0.1000	3
Mo	98	115	He	19.939	ppb	2.7	28512.74	0.4396	Pulse	0.1000	3
Ag	107	115	He	0.133	ppb	7.3	423.35	0.0065	Pulse	0.1000	3
Cd	111	115	He	0.514	ppb	11.4	163.33	0.0025	Pulse	0.5000	3
Sn	120	115	He	4.769	ppb	2.4	5421.26	0.0836	Pulse	0.1000	3
Sb	121	115	He	2.154	ppb	10.0	1750.18	0.0270	Pulse	0.1000	3
Ba	137	115	He	264.425	ppb	0.4	75047.50	1.1571	Pulse	0.1000	3
Tl	205	209	He	0.044	ppb	19.9	536.70	0.0022	Pulse	0.1000	3
Pb	208	209	He	19.914	ppb	0.2	174741.79	0.7270	Pulse	0.1000	3
U	238	209	He	2.119	ppb	2.3	21481.71	0.0894	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3944196.19	0.9	121.7	Pulse	0.1000	3
No Gas	Ge	72	1474899.51	0.5	102.4	Pulse	0.1000	3
H2	Sc	45	239410.07	1.0	122.5	Pulse	0.1000	3
H2	Ge	72	165268.55	1.7	101.4	Pulse	0.1000	3
H2	In	115	437496.88	0.9	101.0	Pulse	0.1000	3
He	Sc	45	50216.90	1.5	125.6	Pulse	0.1000	3
He	Ge	72	75474.68	0.8	104.4	Pulse	0.1000	3
He	In	115	64858.45	0.8	100.4	Pulse	0.1000	3
He	Tb	159	305932.00	0.6	107.0	Pulse	0.1000	3
He	Bi	209	240360.71	0.9	108.2	Pulse	0.1000	3

No Gas



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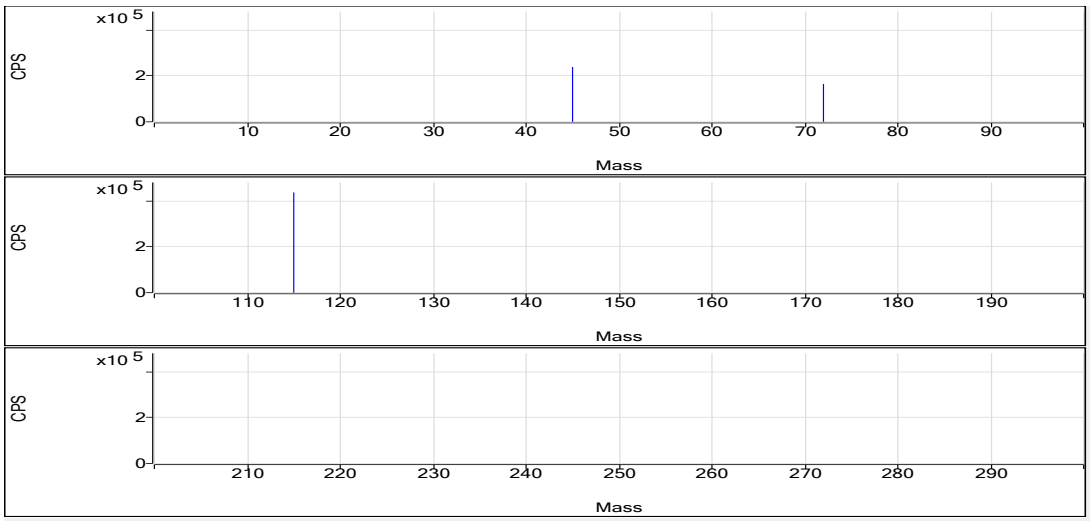
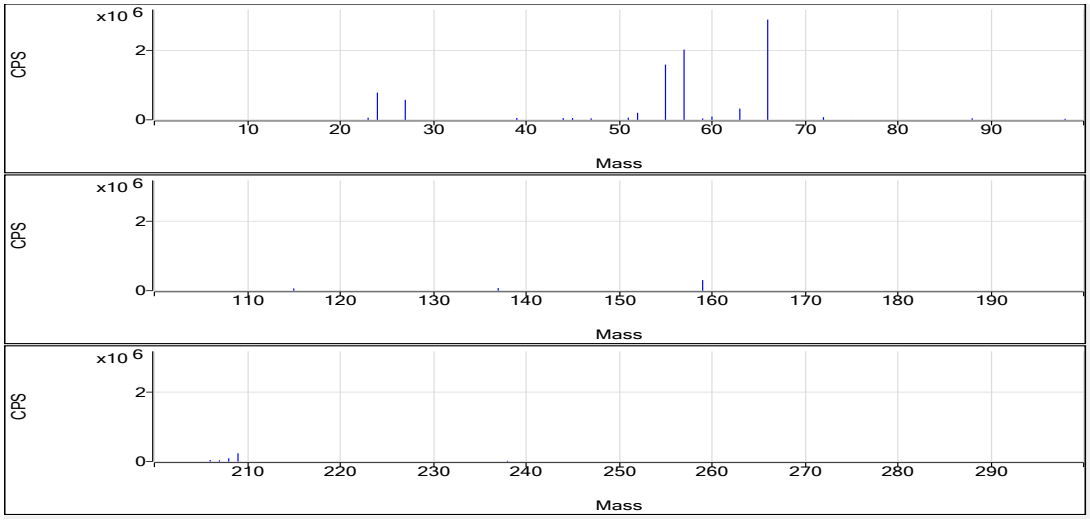


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.434	0.0006	916.03	0.0013	4.694E-05
Be	9	1	No Gas	0.4	0.0006	842.03	0.0013	4.694E-05
Be	9	1	No Gas	0.412	0.0006	866.03	0.0013	4.694E-05
Se	78	2	H2	0.266	0.0001	18.67	0.0004	1.089E-05
Se	78	2	H2	0.18	0.0001	13.33	0.0004	1.089E-05
Se	78	2	H2	0.175	0.0001	13.33	0.0004	1.089E-05
Na	23	3	He	402.526	0.7979	60634.29	0.0017	0.1065
Na	23	3	He	416.639	0.8222	62180.55	0.0017	0.1065
Na	23	3	He	409.187	0.8094	60543.77	0.0017	0.1065
Mg	24	3	He	12315.238	10.3878	789373.74	0.0008	0.004846
Mg	24	3	He	12289.349	10.366	783981.55	0.0008	0.004846
Mg	24	3	He	12357.872	10.4238	779740.14	0.0008	0.004846
Al	27	3	He	31994.814	7.7244	586980.23	0.0002	0.001063
Al	27	3	He	31588.741	7.6264	576784.60	0.0002	0.001063
Al	27	3	He	31640.989	7.639	571428.19	0.0002	0.001063
K	39	3	He	1025.047	0.7097	53928.98	0.0006	0.1436
K	39	3	He	1000.404	0.6961	52644.20	0.0006	0.1436
K	39	3	He	1008.505	0.7005	52403.83	0.0006	0.1436
Ca	44	3	He	21411.279	0.6666	50658.25	0	0.001611
Ca	44	3	He	20800.04	0.6477	48982.31	0	0.001611
Ca	44	3	He	22066.974	0.687	51390.90	0	0.001611
Ti	47	3	He	2321.336	0.5824	44257.93	0.0003	0.0002737
Ti	47	3	He	2253.061	0.5653	42753.22	0.0003	0.0002737
Ti	47	3	He	2196.694	0.5512	41228.85	0.0003	0.0002737
V	51	3	He	68.715	0.8111	61638.72	0.0117	0.007326
V	51	3	He	69.323	0.8182	61883.79	0.0117	0.007326
V	51	3	He	68.943	0.8138	60875.57	0.0117	0.007326
Cr	52	3	He	175.025	2.6905	204453.81	0.0152	0.02538
Cr	52	3	He	174.961	2.6896	203411.36	0.0152	0.02538
Cr	52	3	He	175.836	2.7029	202186.01	0.0152	0.02538
Mn	55	3	He	3567.925	21.0733	1601359.51	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	3550.375	20.9697	1585935.29	0.0059	0.01385
Mn	55	3	He	3593.648	21.2251	1587719.20	0.0059	0.01385
Fe	57	3	He	92617.742	26.8366	2039319.97	0.0003	0.003918
Fe	57	3	He	92559.066	26.8196	2028368.56	0.0003	0.003918
Fe	57	3	He	92523.628	26.8094	2005445.91	0.0003	0.003918
Co	59	3	He	17.677	0.5424	41219.18	0.0305	0.003084
Co	59	3	He	17.901	0.5493	41540.80	0.0305	0.003084
Co	59	3	He	17.34	0.5321	39805.44	0.0305	0.003084
Ni	60	3	He	137.7	1.2198	92695.79	0.0088	0.009003
Ni	60	3	He	138.013	1.2226	92464.64	0.0088	0.009003
Ni	60	3	He	139.791	1.2382	92623.96	0.0088	0.009003
Cu	63	3	He	170.854	4.2656	324140.01	0.0249	0.004937
Cu	63	3	He	173.494	4.3314	327581.75	0.0249	0.004937
Cu	63	3	He	172.9	4.3166	322896.44	0.0249	0.004937
Zn	66	3	He	15486.32	38.0511	2891509.33	0.0025	0.004836
Zn	66	3	He	15554.63	38.2189	2890496.83	0.0025	0.004836
Zn	66	3	He	15698.339	38.572	2885335.89	0.0025	0.004836
As	75	3	He	9.436	0.0168	1280.06	0.0017	0.0004347
As	75	3	He	9.695	0.0173	1308.07	0.0017	0.0004347
As	75	3	He	10.466	0.0186	1394.08	0.0017	0.0004347
Sr	88	3	He	86.565	0.6775	44339.99	0.0078	0.0007762
Sr	88	3	He	84.774	0.6635	42744.98	0.0078	0.0007762
Sr	88	3	He	86.361	0.6759	43727.91	0.0078	0.0007762
Mo	98	3	He	20.257	0.4466	29230.99	0.022	0.0005162
Mo	98	3	He	20.233	0.4461	28739.77	0.022	0.0005162
Mo	98	3	He	19.325	0.4261	27567.46	0.022	0.0005162
Ag	107	3	He	0.144	0.007	460.02	0.0455	0.0004641
Ag	107	3	He	0.126	0.0062	400.02	0.0455	0.0004641
Ag	107	3	He	0.129	0.0063	410.02	0.0455	0.0004641
Cd	111	3	He	0.581	0.0028	186.00	0.0048	5.152E-05
Cd	111	3	He	0.481	0.0024	152.00	0.0048	5.152E-05
Cd	111	3	He	0.479	0.0023	152.00	0.0048	5.152E-05
Sn	120	3	He	4.898	0.0854	5591.37	0.0143	0.01559
Sn	120	3	He	4.721	0.0829	5341.19	0.0143	0.01559
Sn	120	3	He	4.686	0.0824	5331.22	0.0143	0.01559
Sb	121	3	He	2.295	0.0287	1880.20	0.0124	0.000258
Sb	121	3	He	1.906	0.0239	1540.14	0.0124	0.000258
Sb	121	3	He	2.26	0.0283	1830.20	0.0124	0.000258
Ba	137	3	He	263.879	1.1547	75576.63	0.0044	0.000309
Ba	137	3	He	265.683	1.1626	74903.96	0.0044	0.000309
Ba	137	3	He	263.712	1.154	74661.90	0.0044	0.000309
Tl	205	3	He	0.055	0.0025	610.04	0.0276	0.001005
Tl	205	3	He	0.039	0.0021	500.03	0.0276	0.001005
Tl	205	3	He	0.039	0.0021	500.03	0.0276	0.001005
Pb	208	3	He	19.922	0.7273	95625.41	0.0364	0.002176
Pb	208	3	He	19.88	0.7258	92633.28	0.0364	0.002176
Pb	208	3	He	19.94	0.7279	95312.86	0.0364	0.002176
U	238	3	He	2.175	0.0917	22269.87	0.0421	0.00024
U	238	3	He	2.093	0.0883	21117.60	0.0421	0.00024
U	238	3	He	2.087	0.088	21057.66	0.0421	0.00024
Sc	45	1	No Gas			3984394.00		
Sc	45	1	No Gas			3913176.19		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3935018.38		
Ge	72	1	No Gas			1483084.35		
Ge	72	1	No Gas			1469989.20		
Ge	72	1	No Gas			1471624.98		
Sc	45	2	H2			238450.64		
Sc	45	2	H2			237548.22		
Sc	45	2	H2			242231.34		
Ge	72	2	H2			163021.77		
Ge	72	2	H2			164287.75		
Ge	72	2	H2			168496.13		
In	115	2	H2			433316.24		
In	115	2	H2			438357.69		
In	115	2	H2			440816.71		
Sc	45	3	He			51009.54		
Sc	45	3	He			50136.65		
Sc	45	3	He			49504.51		
Ge	72	3	He			75990.15		
Ge	72	3	He			75629.98		
Ge	72	3	He			74803.92		
In	115	3	He			65493.46		
In	115	3	He			64468.60		
In	115	3	He			64740.15		
Tb	159	3	He			306725.72		
Tb	159	3	He			303985.76		
Tb	159	3	He			307084.51		
Bi	209	3	He			242768.94		
Bi	209	3	He			239157.14		
Bi	209	3	He			239156.05		

Quantitation Report

Data File Name	199SMPL.d
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Sample Name	410-136541-F-1-A @10
Sample Type	Sample
Comment	G3 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

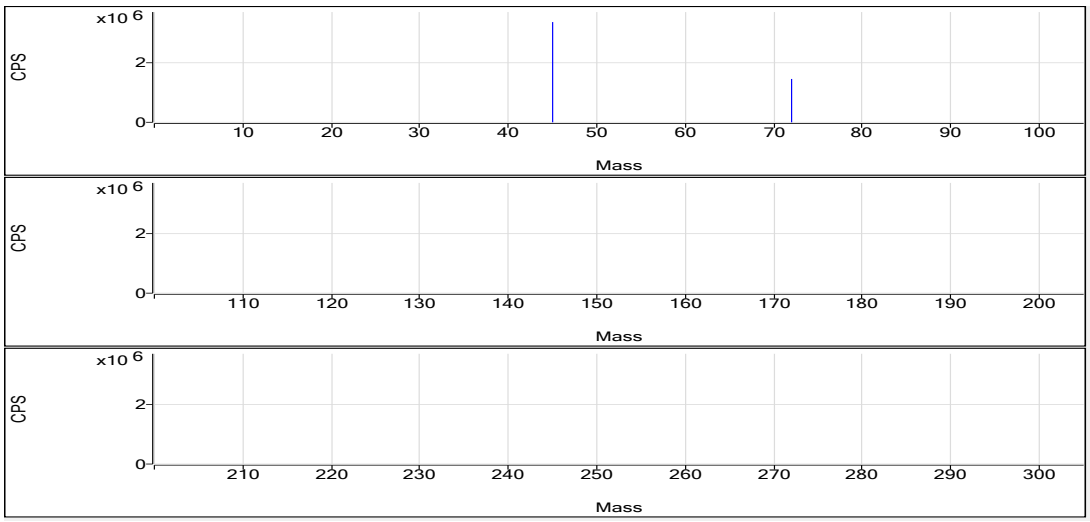
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.075	ppb	20.4	214.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.017	ppb	71.8	2.89	0.0000	Pulse	1.5000	3
Na	23	72	He	79.514	ppb	3.3	17927.93	0.2430	Pulse	0.1000	3
Mg	24	72	He	2328.442	ppb	2.3	145132.13	1.9680	Pulse	0.1000	3
Al	27	72	He	6028.759	ppb	1.8	107410.68	1.4564	Pulse	0.1000	3
K	39	72	He	196.225	ppb	15.4	18575.57	0.2520	Pulse	0.1000	3
Ca	44	72	He	4152.138	ppb	5.1	9630.14	0.1306	Pulse	0.1000	3
Ti	47	72	He	428.796	ppb	3.6	7949.07	0.1078	Pulse	0.1000	3
V	51	72	He	12.978	ppb	1.1	11738.07	0.1591	Pulse	0.5000	3
Cr	52	72	He	32.963	ppb	1.5	38892.85	0.5273	Pulse	0.1000	3
Mn	55	72	He	682.657	ppb	1.9	298187.10	4.0432	Pulse	0.1000	3
Fe	57	72	He	17711.820	ppb	2.1	378719.10	5.1353	Pulse	0.1000	3
Co	59	72	He	3.385	ppb	3.4	7849.06	0.1064	Pulse	0.1000	3
Ni	60	72	He	27.185	ppb	2.9	18292.08	0.2480	Pulse	0.1000	3
Cu	63	72	He	32.433	ppb	3.4	60001.36	0.8137	Pulse	0.1000	3
Zn	66	72	He	2924.743	ppb	1.7	530305.41	7.1902	Pulse	0.1000	3
As	75	72	He	1.870	ppb	21.9	271.34	0.0037	Pulse	0.5000	3
Sr	88	115	He	16.305	ppb	5.5	8179.29	0.1282	Pulse	0.1000	3
Mo	98	115	He	3.790	ppb	2.6	5357.86	0.0840	Pulse	0.1000	3
Ag	107	115	He	0.016	ppb	65.0	76.67	0.0012	Pulse	0.1000	3
Cd	111	115	He	0.091	ppb	58.8	31.33	0.0005	Pulse	0.5000	3
Sn	120	115	He	0.941	ppb	25.7	1850.20	0.0290	Pulse	0.1000	3
Sb	121	115	He	0.379	ppb	5.6	316.68	0.0050	Pulse	0.1000	3
Ba	137	115	He	50.028	ppb	2.4	13980.91	0.2192	Pulse	0.1000	3
Tl	205	209	He	0.005	ppb	76.2	256.68	0.0011	Pulse	0.1000	3
Pb	208	209	He	3.942	ppb	0.5	32560.31	0.1457	Pulse	0.1000	3
U	238	209	He	0.418	ppb	5.1	3984.10	0.0178	Pulse	0.1000	3

ISTD Table:

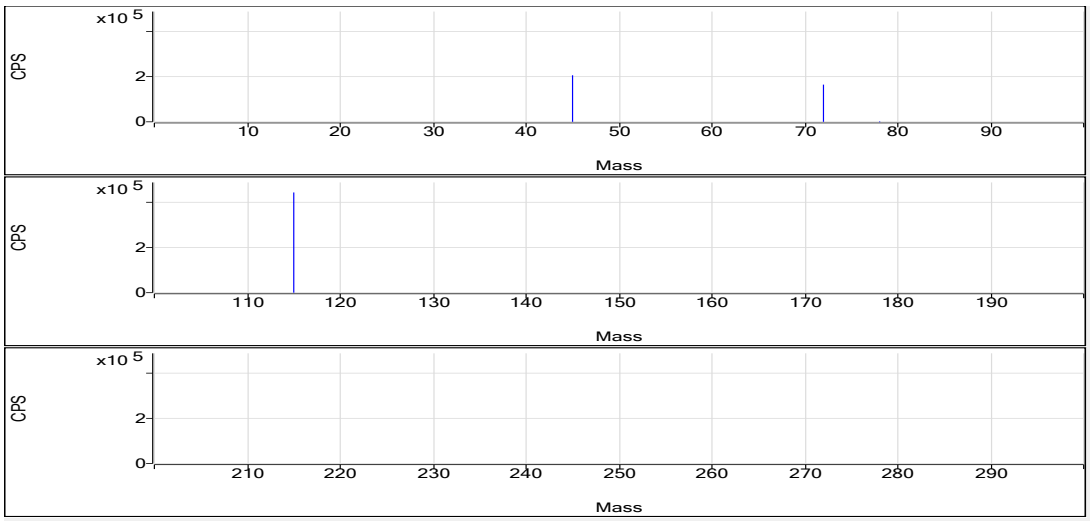
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3396567.97	1.0	104.8	Pulse	0.1000	3
No Gas	Ge	72	1468750.60	1.4	102.0	Pulse	0.1000	3
H2	Sc	45	204838.06	2.3	104.8	Pulse	0.1000	3
H2	Ge	72	163660.75	2.0	100.4	Pulse	0.1000	3
H2	In	115	441047.84	2.0	101.8	Pulse	0.1000	3
He	Sc	45	42710.02	2.0	106.8	Pulse	0.1000	3
He	Ge	72	73769.42	2.0	102.0	Pulse	0.1000	3
He	In	115	63795.25	0.5	98.8	Pulse	0.1000	3
He	Tb	159	288492.16	1.0	100.9	Pulse	0.1000	3
He	Bi	209	223537.50	0.7	100.6	Pulse	0.1000	3

No Gas

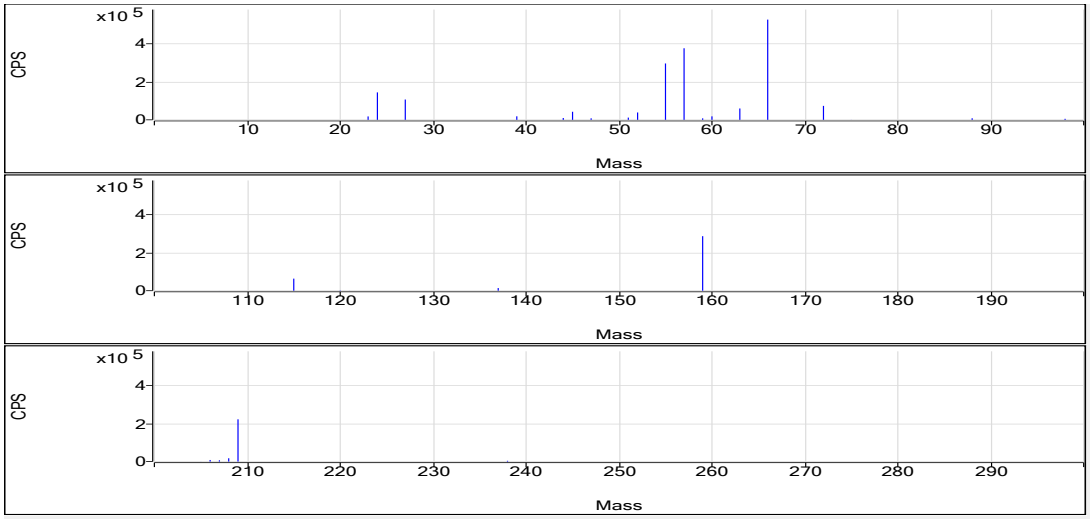


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.069	0.0001	204.00	0.0013	4.694E-05
Be	9	1	No Gas	0.064	0.0001	194.00	0.0013	4.694E-05
Be	9	1	No Gas	0.093	0.0002	244.00	0.0013	4.694E-05
Se	78	2	H2	0.026	0	3.33	0.0004	1.089E-05
Se	78	2	H2	0.024	0	3.33	0.0004	1.089E-05
Se	78	2	H2	0.003	0	2.00	0.0004	1.089E-05
Na	23	3	He	81.388	0.2463	17760.97	0.0017	0.1065
Na	23	3	He	80.656	0.245	18391.89	0.0017	0.1065
Na	23	3	He	76.498	0.2379	17630.94	0.0017	0.1065
Mg	24	3	He	2378.123	2.0098	144951.63	0.0008	0.004846
Mg	24	3	He	2271.312	1.9198	144111.60	0.0008	0.004846
Mg	24	3	He	2335.892	1.9742	146333.16	0.0008	0.004846
Al	27	3	He	6151.122	1.4859	107164.86	0.0002	0.001063
Al	27	3	He	5960.213	1.4398	108082.12	0.0002	0.001063
Al	27	3	He	5974.943	1.4434	106985.06	0.0002	0.001063
K	39	3	He	230.099	0.2707	19523.42	0.0006	0.1436
K	39	3	He	186.229	0.2465	18502.22	0.0006	0.1436
K	39	3	He	172.346	0.2388	17701.08	0.0006	0.1436
Ca	44	3	He	4306.777	0.1354	9763.63	0	0.001611
Ca	44	3	He	4238.716	0.1333	10003.69	0	0.001611
Ca	44	3	He	3910.922	0.1231	9123.11	0	0.001611
Ti	47	3	He	444.131	0.1117	8052.48	0.0003	0.0002737
Ti	47	3	He	413.373	0.1039	7802.31	0.0003	0.0002737
Ti	47	3	He	428.884	0.1078	7992.41	0.0003	0.0002737
V	51	3	He	13.146	0.1611	11618.63	0.0117	0.007326
V	51	3	He	12.913	0.1584	11888.86	0.0117	0.007326
V	51	3	He	12.875	0.1579	11706.71	0.0117	0.007326
Cr	52	3	He	33.456	0.5348	38572.09	0.0152	0.02538
Cr	52	3	He	32.472	0.5198	39023.10	0.0152	0.02538
Cr	52	3	He	32.961	0.5273	39083.35	0.0152	0.02538
Mn	55	3	He	696.578	4.1253	297523.41	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	671.226	3.9757	298441.83	0.0059	0.01385
Mn	55	3	He	680.166	4.0285	298596.07	0.0059	0.01385
Fe	57	3	He	18096.799	5.2468	378405.27	0.0003	0.003918
Fe	57	3	He	17338.743	5.0272	377373.39	0.0003	0.003918
Fe	57	3	He	17699.919	5.1318	380378.63	0.0003	0.003918
Co	59	3	He	3.258	0.1025	7392.17	0.0305	0.003084
Co	59	3	He	3.415	0.1073	8052.46	0.0305	0.003084
Co	59	3	He	3.482	0.1093	8102.56	0.0305	0.003084
Ni	60	3	He	27.804	0.2535	18281.98	0.0088	0.009003
Ni	60	3	He	26.309	0.2403	18041.91	0.0088	0.009003
Ni	60	3	He	27.441	0.2503	18552.34	0.0088	0.009003
Cu	63	3	He	33.456	0.8392	60526.78	0.0249	0.004937
Cu	63	3	He	31.267	0.7846	58900.19	0.0249	0.004937
Cu	63	3	He	32.575	0.8173	60577.11	0.0249	0.004937
Zn	66	3	He	2980.751	7.3278	528490.11	0.0025	0.004836
Zn	66	3	He	2894.801	7.1167	534222.88	0.0025	0.004836
Zn	66	3	He	2898.676	7.1262	528203.23	0.0025	0.004836
As	75	3	He	2.174	0.0042	304.01	0.0017	0.0004347
As	75	3	He	1.405	0.0029	216.00	0.0017	0.0004347
As	75	3	He	2.031	0.004	294.01	0.0017	0.0004347
Sr	88	3	He	17.169	0.135	8572.84	0.0078	0.0007762
Sr	88	3	He	15.374	0.121	7762.31	0.0078	0.0007762
Sr	88	3	He	16.373	0.1288	8202.71	0.0078	0.0007762
Mo	98	3	He	3.681	0.0816	5181.12	0.022	0.0005162
Mo	98	3	He	3.869	0.0857	5501.24	0.022	0.0005162
Mo	98	3	He	3.82	0.0846	5391.21	0.022	0.0005162
Ag	107	3	He	0.007	0.0008	50.00	0.0455	0.0004641
Ag	107	3	He	0.014	0.0011	70.00	0.0455	0.0004641
Ag	107	3	He	0.028	0.0017	110.00	0.0455	0.0004641
Cd	111	3	He	0.075	0.0004	26.00	0.0048	5.152E-05
Cd	111	3	He	0.152	0.0008	50.00	0.0048	5.152E-05
Cd	111	3	He	0.048	0.0003	18.00	0.0048	5.152E-05
Sn	120	3	He	1.215	0.0329	2090.25	0.0143	0.01559
Sn	120	3	He	0.852	0.0277	1780.18	0.0143	0.01559
Sn	120	3	He	0.757	0.0264	1680.17	0.0143	0.01559
Sb	121	3	He	0.398	0.0052	330.02	0.0124	0.000258
Sb	121	3	He	0.356	0.0047	300.01	0.0124	0.000258
Sb	121	3	He	0.384	0.005	320.01	0.0124	0.000258
Ba	137	3	He	51.103	0.2239	14218.00	0.0044	0.000309
Ba	137	3	He	48.717	0.2134	13697.08	0.0044	0.000309
Ba	137	3	He	50.264	0.2202	14027.65	0.0044	0.000309
Tl	205	3	He	0.001	0.001	230.01	0.0276	0.001005
Tl	205	3	He	0.009	0.0012	280.01	0.0276	0.001005
Tl	205	3	He	0.006	0.0012	260.02	0.0276	0.001005
Pb	208	3	He	3.955	0.1461	17922.67	0.0364	0.002176
Pb	208	3	He	3.922	0.1449	17171.70	0.0364	0.002176
Pb	208	3	He	3.95	0.1459	17301.83	0.0364	0.002176
U	238	3	He	0.42	0.0179	4000.79	0.0421	0.00024
U	238	3	He	0.396	0.0169	3800.68	0.0421	0.00024
U	238	3	He	0.438	0.0187	4150.83	0.0421	0.00024
Sc	45	1	No Gas			3425480.89		
Sc	45	1	No Gas			3403001.51		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3361221.51		
Ge	72	1	No Gas			1484094.67		
Ge	72	1	No Gas			1477474.04		
Ge	72	1	No Gas			1444683.10		
Sc	45	2	H2			199545.84		
Sc	45	2	H2			208484.59		
Sc	45	2	H2			206483.75		
Ge	72	2	H2			159929.24		
Ge	72	2	H2			165267.42		
Ge	72	2	H2			165785.60		
In	115	2	H2			431011.01		
In	115	2	H2			448098.31		
In	115	2	H2			444034.21		
Sc	45	3	He			41730.41		
Sc	45	3	He			43124.62		
Sc	45	3	He			43275.04		
Ge	72	3	He			72120.80		
Ge	72	3	He			75066.23		
Ge	72	3	He			74121.24		
In	115	3	He			63524.91		
In	115	3	He			64188.05		
In	115	3	He			63716.10		
Tb	159	3	He			291785.00		
Tb	159	3	He			287226.97		
Tb	159	3	He			286464.51		
Bi	209	3	He			223333.41		
Bi	209	3	He			225145.19		
Bi	209	3	He			222133.90		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

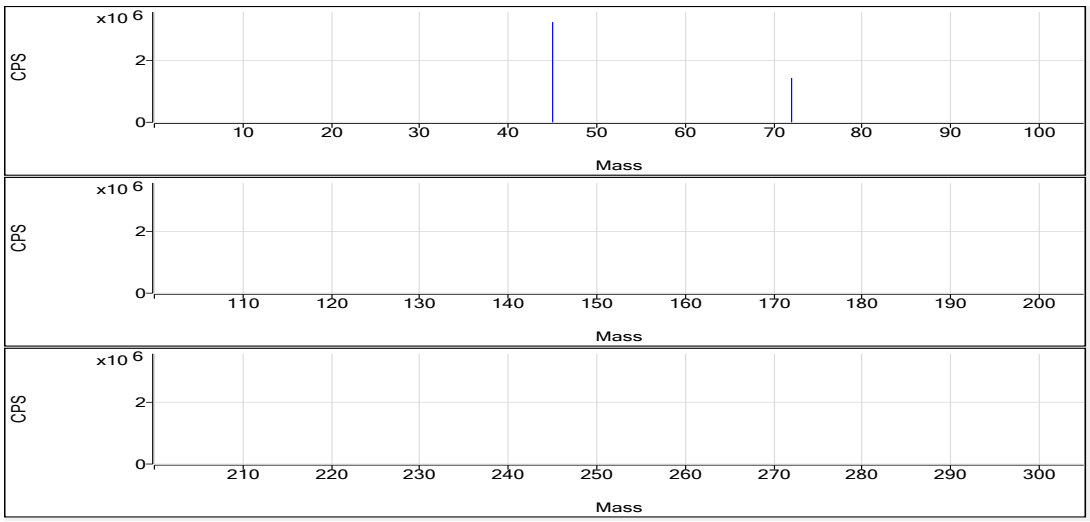
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.011	ppb	N/A	47.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.000	ppb	8332.0	1.78	0.0000	Pulse	1.5000	3
Na	23	72	He	3.205	ppb	85.9	8045.78	0.1120	Pulse	0.1000	3
Mg	24	72	He	5.824	ppb	30.9	700.06	0.0098	Pulse	0.1000	3
Al	27	72	He	18.254	ppb	18.8	393.35	0.0055	Pulse	0.1000	3
K	39	72	He	6.093	ppb	190.2	10557.46	0.1470	Pulse	0.1000	3
Ca	44	72	He	6.430	ppb	77.8	130.01	0.0018	Pulse	0.1000	3
Ti	47	72	He	-0.158	ppb	N/A	16.67	0.0002	Pulse	0.1000	3
V	51	72	He	0.045	ppb	103.8	564.68	0.0079	Pulse	0.5000	3
Cr	52	72	He	0.070	ppb	147.8	1900.20	0.0264	Pulse	0.1000	3
Mn	55	72	He	-0.680	ppb	N/A	706.71	0.0098	Pulse	0.1000	3
Fe	57	72	He	49.572	ppb	3.7	1313.44	0.0183	Pulse	0.1000	3
Co	59	72	He	0.023	ppb	146.7	273.35	0.0038	Pulse	0.1000	3
Ni	60	72	He	0.656	ppb	26.1	1060.08	0.0148	Pulse	0.1000	3
Cu	63	72	He	0.030	ppb	203.5	410.02	0.0057	Pulse	0.1000	3
Zn	66	72	He	1.411	ppb	14.5	596.70	0.0083	Pulse	0.1000	3
As	75	72	He	0.038	ppb	219.8	36.00	0.0005	Pulse	0.5000	3
Sr	88	115	He	0.026	ppb	165.3	63.33	0.0010	Pulse	0.1000	3
Mo	98	115	He	0.018	ppb	35.1	60.00	0.0009	Pulse	0.1000	3
Ag	107	115	He	-0.002	ppb	N/A	23.33	0.0004	Pulse	0.1000	3
Cd	111	115	He	-0.002	ppb	N/A	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.190	ppb	49.9	1190.13	0.0183	Pulse	0.1000	3
Sb	121	115	He	0.005	ppb	566.4	20.00	0.0003	Pulse	0.1000	3
Ba	137	115	He	0.128	ppb	27.4	56.67	0.0009	Pulse	0.1000	3
Tl	205	209	He	-0.003	ppb	N/A	203.34	0.0009	Pulse	0.1000	3
Pb	208	209	He	0.062	ppb	4.2	973.38	0.0044	Pulse	0.1000	3
U	238	209	He	0.011	ppb	18.1	150.01	0.0007	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3232391.83	1.6	99.7	Pulse	0.1000	3
No Gas	Ge	72	1431281.85	1.2	99.4	Pulse	0.1000	3
H2	Sc	45	195792.26	1.6	100.2	Pulse	0.1000	3
H2	Ge	72	160239.49	2.7	98.3	Pulse	0.1000	3
H2	In	115	441899.59	1.3	102.0	Pulse	0.1000	3
He	Sc	45	40560.13	2.6	101.4	Pulse	0.1000	3
He	Ge	72	71839.90	1.2	99.4	Pulse	0.1000	3
He	In	115	65009.36	3.0	100.6	Pulse	0.1000	3
He	Tb	159	283019.96	0.5	99.0	Pulse	0.1000	3
He	Bi	209	219346.77	0.5	98.7	Pulse	0.1000	3

No Gas



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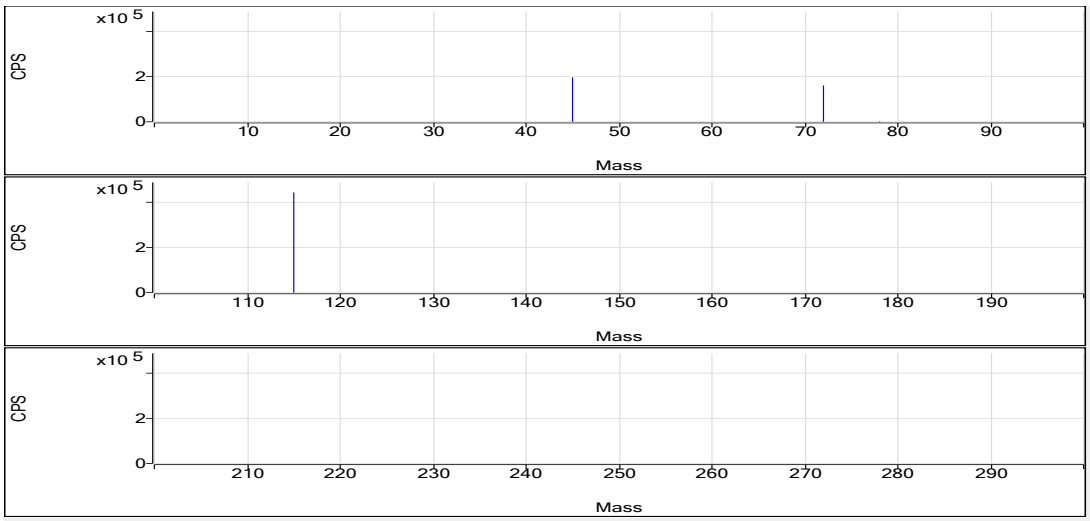
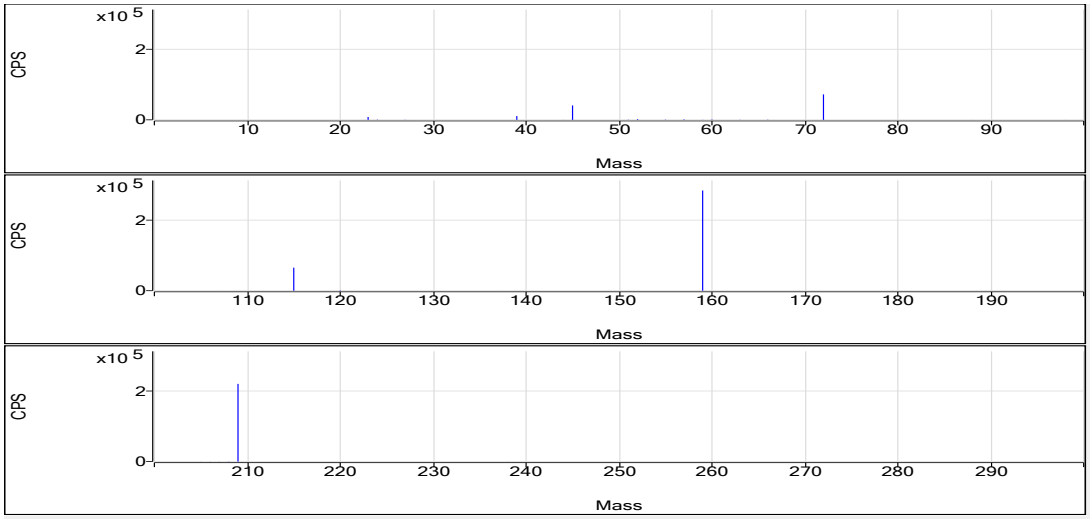


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.014	0	42.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.01	0	48.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.008	0	52.00	0.0013	4.694E-05
Se	78	2	H2	-0.017	0	0.67	0.0004	1.089E-05
Se	78	2	H2	-0.007	0	1.33	0.0004	1.089E-05
Se	78	2	H2	0.025	0	3.33	0.0004	1.089E-05
Na	23	3	He	0.032	0.1065	7552.21	0.0017	0.1065
Na	23	3	He	4.938	0.1149	8282.56	0.0017	0.1065
Na	23	3	He	4.644	0.1144	8302.58	0.0017	0.1065
Mg	24	3	He	7.469	0.0111	790.11	0.0008	0.004846
Mg	24	3	He	6.104	0.01	720.04	0.0008	0.004846
Mg	24	3	He	3.898	0.0081	590.03	0.0008	0.004846
Al	27	3	He	14.294	0.0045	320.02	0.0002	0.001063
Al	27	3	He	20.318	0.006	430.02	0.0002	0.001063
Al	27	3	He	20.15	0.0059	430.02	0.0002	0.001063
K	39	3	He	16.842	0.1529	10844.30	0.0006	0.1436
K	39	3	He	7.622	0.1478	10654.21	0.0006	0.1436
K	39	3	He	-6.184	0.1402	10173.87	0.0006	0.1436
Ca	44	3	He	11.709	0.002	140.01	0	0.001611
Ca	44	3	He	1.754	0.0017	120.01	0	0.001611
Ca	44	3	He	5.827	0.0018	130.01	0	0.001611
Ti	47	3	He	1.158	0.0006	40.00	0.0003	0.0002737
Ti	47	3	He	-1.091	0	0.00	0.0003	0.0002737
Ti	47	3	He	-0.542	0.0001	10.00	0.0003	0.0002737
V	51	3	He	0.005	0.0074	524.01	0.0117	0.007326
V	51	3	He	0.033	0.0077	556.01	0.0117	0.007326
V	51	3	He	0.097	0.0085	614.02	0.0117	0.007326
Cr	52	3	He	0.074	0.0265	1880.18	0.0152	0.02538
Cr	52	3	He	-0.036	0.0248	1790.18	0.0152	0.02538
Cr	52	3	He	0.171	0.028	2030.23	0.0152	0.02538
Mn	55	3	He	-0.579	0.0104	740.05	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.936	0.0083	600.04	0.0059	0.01385
Mn	55	3	He	-0.526	0.0108	780.05	0.0059	0.01385
Fe	57	3	He	48.306	0.0179	1270.10	0.0003	0.003918
Fe	57	3	He	48.751	0.018	1300.10	0.0003	0.003918
Fe	57	3	He	51.659	0.0189	1370.11	0.0003	0.003918
Co	59	3	He	0.014	0.0035	250.01	0.0305	0.003084
Co	59	3	He	-0.006	0.0029	210.01	0.0305	0.003084
Co	59	3	He	0.062	0.005	360.02	0.0305	0.003084
Ni	60	3	He	0.853	0.0165	1170.08	0.0088	0.009003
Ni	60	3	He	0.57	0.014	1010.07	0.0088	0.009003
Ni	60	3	He	0.544	0.0138	1000.08	0.0088	0.009003
Cu	63	3	He	-0.034	0.0041	290.01	0.0249	0.004937
Cu	63	3	He	0.036	0.0058	420.02	0.0249	0.004937
Cu	63	3	He	0.089	0.0072	520.02	0.0249	0.004937
Zn	66	3	He	1.189	0.0078	550.03	0.0025	0.004836
Zn	66	3	He	1.59	0.0087	630.04	0.0025	0.004836
Zn	66	3	He	1.454	0.0084	610.03	0.0025	0.004836
As	75	3	He	-0.023	0.0004	28.00	0.0017	0.0004347
As	75	3	He	0.133	0.0007	48.00	0.0017	0.0004347
As	75	3	He	0.004	0.0004	32.00	0.0017	0.0004347
Sr	88	3	He	0.043	0.0011	70.00	0.0078	0.0007762
Sr	88	3	He	0.058	0.0012	80.00	0.0078	0.0007762
Sr	88	3	He	-0.023	0.0006	40.00	0.0078	0.0007762
Mo	98	3	He	0.013	0.0008	50.00	0.022	0.0005162
Mo	98	3	He	0.025	0.0011	70.00	0.022	0.0005162
Mo	98	3	He	0.017	0.0009	60.00	0.022	0.0005162
Ag	107	3	He	-0.003	0.0003	20.00	0.0455	0.0004641
Ag	107	3	He	0.003	0.0006	40.00	0.0455	0.0004641
Ag	107	3	He	-0.007	0.0001	10.00	0.0455	0.0004641
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Cd	111	3	He	-0.011	0	0.00	0.0048	5.152E-05
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Sn	120	3	He	0.176	0.0181	1140.20	0.0143	0.01559
Sn	120	3	He	0.103	0.0171	1110.07	0.0143	0.01559
Sn	120	3	He	0.29	0.0197	1320.12	0.0143	0.01559
Sb	121	3	He	0.03	0.0006	40.00	0.0124	0.000258
Sb	121	3	He	0.004	0.0003	20.00	0.0124	0.000258
Sb	121	3	He	-0.021	0	0.00	0.0124	0.000258
Ba	137	3	He	0.111	0.0008	50.00	0.0044	0.000309
Ba	137	3	He	0.105	0.0008	50.00	0.0044	0.000309
Ba	137	3	He	0.168	0.001	70.00	0.0044	0.000309
Tl	205	3	He	-0.003	0.0009	200.01	0.0276	0.001005
Tl	205	3	He	-0.005	0.0009	190.01	0.0276	0.001005
Tl	205	3	He	0	0.001	220.01	0.0276	0.001005
Pb	208	3	He	0.06	0.0044	550.03	0.0364	0.002176
Pb	208	3	He	0.061	0.0044	400.02	0.0364	0.002176
Pb	208	3	He	0.065	0.0045	550.03	0.0364	0.002176
U	238	3	He	0.012	0.0007	160.01	0.0421	0.00024
U	238	3	He	0.008	0.0006	130.01	0.0421	0.00024
U	238	3	He	0.012	0.0007	160.01	0.0421	0.00024
Sc	45	1	No Gas			3292600.89		
Sc	45	1	No Gas			3203960.26		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3200614.33		
Ge	72	1	No Gas			1449951.38		
Ge	72	1	No Gas			1425265.45		
Ge	72	1	No Gas			1418628.73		
Sc	45	2	H2			193744.76		
Sc	45	2	H2			199420.72		
Sc	45	2	H2			194211.29		
Ge	72	2	H2			155248.67		
Ge	72	2	H2			163134.82		
Ge	72	2	H2			162334.98		
In	115	2	H2			438061.95		
In	115	2	H2			448498.24		
In	115	2	H2			439138.59		
Sc	45	3	He			39333.48		
Sc	45	3	He			41048.09		
Sc	45	3	He			41298.83		
Ge	72	3	He			70905.03		
Ge	72	3	He			72061.16		
Ge	72	3	He			72553.50		
In	115	3	He			63011.63		
In	115	3	He			65112.77		
In	115	3	He			66931.53		
Tb	159	3	He			284423.69		
Tb	159	3	He			282839.98		
Tb	159	3	He			281796.21		
Bi	209	3	He			218036.72		
Bi	209	3	He			219895.97		
Bi	209	3	He			220107.63		

Quantitation Report

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Acq Time	2023-08-10 17:34:25
Sample Name	410-136541-F-1-A @50
Sample Type	Sample
Comment	G3 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

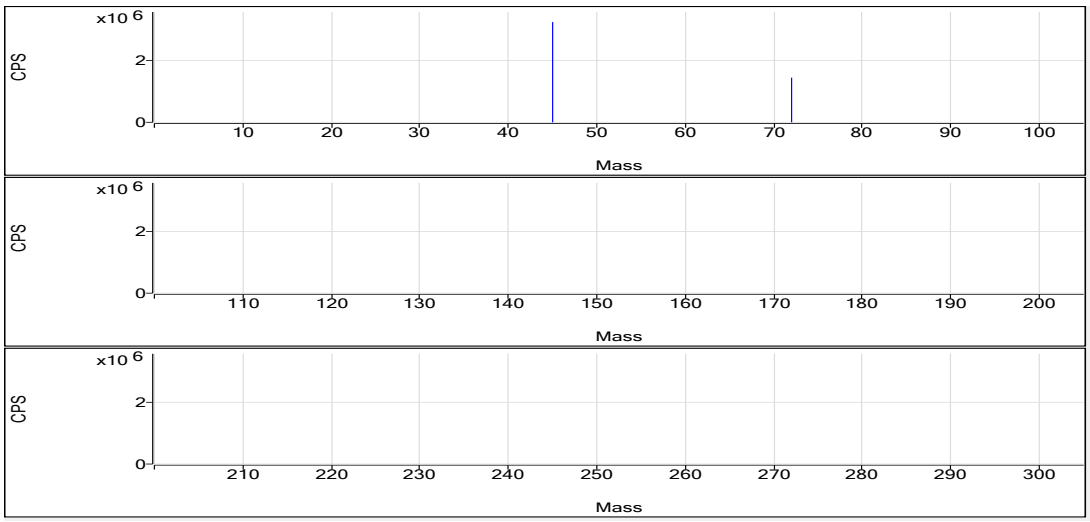
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.007	ppb	92.5	80.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.018	ppb	71.8	2.89	0.0000	Pulse	1.5000	3
Na	23	72	He	13.369	ppb	18.7	9663.48	0.1294	Pulse	0.1000	3
Mg	24	72	He	441.749	ppb	2.6	28170.77	0.3773	Pulse	0.1000	3
Al	27	72	He	1150.767	ppb	1.3	20821.90	0.2789	Pulse	0.1000	3
K	39	72	He	32.263	ppb	27.4	12055.33	0.1615	Pulse	0.1000	3
Ca	44	72	He	777.330	ppb	4.9	1923.53	0.0258	Pulse	0.1000	3
Ti	47	72	He	79.910	ppb	3.0	1516.79	0.0203	Pulse	0.1000	3
V	51	72	He	2.422	ppb	2.1	2662.93	0.0357	Pulse	0.5000	3
Cr	52	72	He	6.187	ppb	6.3	8929.72	0.1196	Pulse	0.1000	3
Mn	55	72	He	128.101	ppb	3.3	57487.66	0.7700	Pulse	0.1000	3
Fe	57	72	He	3375.078	ppb	1.2	73305.45	0.9817	Pulse	0.1000	3
Co	59	72	He	0.654	ppb	2.8	1720.17	0.0230	Pulse	0.1000	3
Ni	60	72	He	5.653	ppb	4.7	4384.16	0.0587	Pulse	0.1000	3
Cu	63	72	He	6.217	ppb	2.0	11945.32	0.1600	Pulse	0.1000	3
Zn	66	72	He	554.842	ppb	1.0	102146.20	1.3680	Pulse	0.1000	3
As	75	72	He	0.273	ppb	19.0	68.00	0.0009	Pulse	0.5000	3
Sr	88	115	He	3.125	ppb	9.5	1616.82	0.0252	Pulse	0.1000	3
Mo	98	115	He	0.709	ppb	2.5	1033.40	0.0161	Pulse	0.1000	3
Ag	107	115	He	0.005	ppb	150.9	43.33	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.015	ppb	83.1	8.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.109	ppb	150.9	1096.76	0.0171	Pulse	0.1000	3
Sb	121	115	He	0.071	ppb	24.4	73.33	0.0011	Pulse	0.1000	3
Ba	137	115	He	9.594	ppb	7.6	2710.38	0.0423	Pulse	0.1000	3
Tl	205	209	He	-0.012	ppb	N/A	153.34	0.0007	Pulse	0.1000	3
Pb	208	209	He	0.804	ppb	3.1	7037.69	0.0314	Pulse	0.1000	3
U	238	209	He	0.088	ppb	2.0	886.74	0.0040	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3260287.24	1.5	100.6	Pulse	0.1000	3
No Gas	Ge	72	1451990.92	1.4	100.8	Pulse	0.1000	3
H2	Sc	45	195303.90	1.6	100.0	Pulse	0.1000	3
H2	Ge	72	162464.13	1.9	99.7	Pulse	0.1000	3
H2	In	115	441109.19	1.3	101.8	Pulse	0.1000	3
He	Sc	45	41282.31	2.0	103.2	Pulse	0.1000	3
He	Ge	72	74673.97	0.7	103.3	Pulse	0.1000	3
He	In	115	64068.98	1.9	99.2	Pulse	0.1000	3
He	Tb	159	284493.42	0.6	99.5	Pulse	0.1000	3
He	Bi	209	223842.86	0.2	100.7	Pulse	0.1000	3

No Gas



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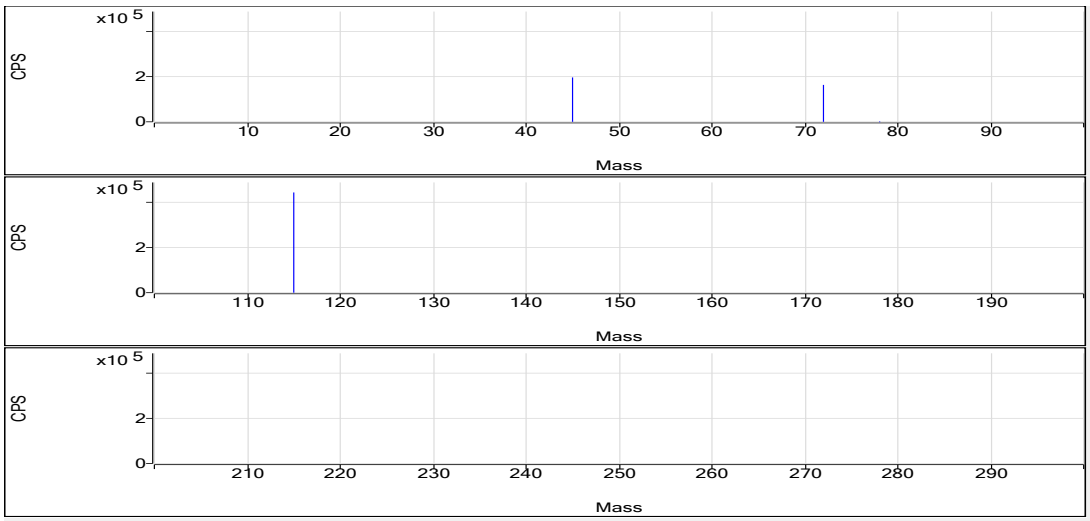
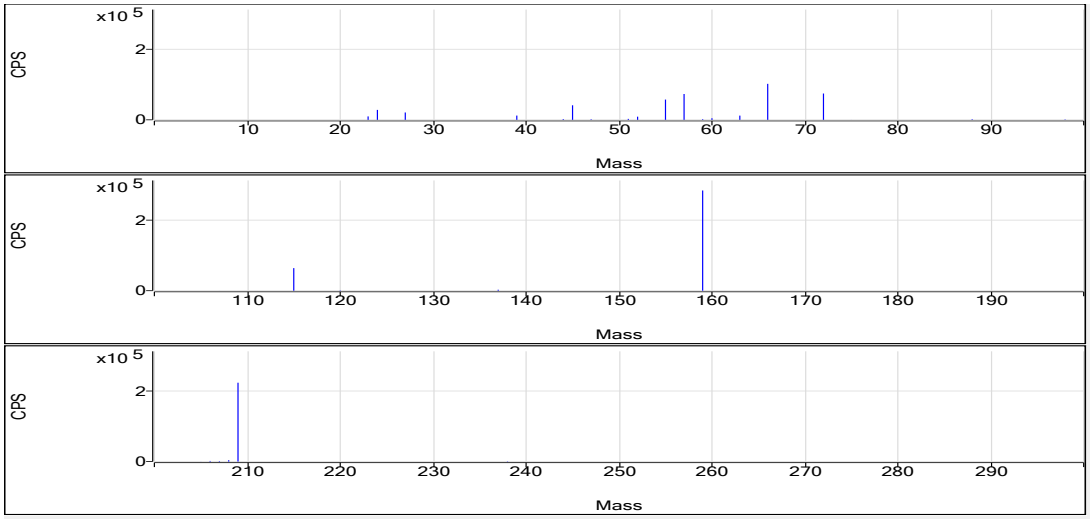


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0	0	70.00	0.0013	4.694E-05
Be	9	1	No Gas	0.013	0.0001	92.00	0.0013	4.694E-05
Be	9	1	No Gas	0.007	0.0001	80.00	0.0013	4.694E-05
Se	78	2	H2	0.026	0	3.33	0.0004	1.089E-05
Se	78	2	H2	0.003	0	2.00	0.0004	1.089E-05
Se	78	2	H2	0.025	0	3.33	0.0004	1.089E-05
Na	23	3	He	11.06	0.1255	9373.30	0.0017	0.1065
Na	23	3	He	13.023	0.1288	9683.47	0.0017	0.1065
Na	23	3	He	16.024	0.134	9933.68	0.0017	0.1065
Mg	24	3	He	432.985	0.3699	27636.39	0.0008	0.004846
Mg	24	3	He	437.458	0.3737	28087.34	0.0008	0.004846
Mg	24	3	He	454.805	0.3883	28788.57	0.0008	0.004846
Al	27	3	He	1160.265	0.2811	21005.37	0.0002	0.001063
Al	27	3	He	1132.845	0.2745	20635.11	0.0002	0.001063
Al	27	3	He	1159.193	0.2809	20825.21	0.0002	0.001063
K	39	3	He	38.141	0.1647	12305.59	0.0006	0.1436
K	39	3	He	22.115	0.1559	11714.96	0.0006	0.1436
K	39	3	He	36.532	0.1638	12145.43	0.0006	0.1436
Ca	44	3	He	805.752	0.0266	1990.19	0	0.001611
Ca	44	3	He	792.038	0.0262	1970.23	0	0.001611
Ca	44	3	He	734.201	0.0244	1810.17	0	0.001611
Ti	47	3	He	82.175	0.0209	1560.14	0.0003	0.0002737
Ti	47	3	He	77.428	0.0197	1480.12	0.0003	0.0002737
Ti	47	3	He	80.128	0.0204	1510.12	0.0003	0.0002737
V	51	3	He	2.479	0.0363	2714.27	0.0117	0.007326
V	51	3	He	2.401	0.0354	2662.26	0.0117	0.007326
V	51	3	He	2.386	0.0352	2612.25	0.0117	0.007326
Cr	52	3	He	5.745	0.1129	8432.69	0.0152	0.02538
Cr	52	3	He	6.33	0.1218	9153.21	0.0152	0.02538
Cr	52	3	He	6.485	0.1241	9203.26	0.0152	0.02538
Mn	55	3	He	128.824	0.7742	57845.44	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	123.532	0.743	55848.38	0.0059	0.01385
Mn	55	3	He	131.948	0.7927	58769.16	0.0059	0.01385
Fe	57	3	He	3370.276	0.9803	73244.74	0.0003	0.003918
Fe	57	3	He	3336.968	0.9707	72963.20	0.0003	0.003918
Fe	57	3	He	3417.992	0.9942	73708.40	0.0003	0.003918
Co	59	3	He	0.667	0.0234	1750.17	0.0305	0.003084
Co	59	3	He	0.662	0.0233	1750.18	0.0305	0.003084
Co	59	3	He	0.633	0.0224	1660.15	0.0305	0.003084
Ni	60	3	He	5.934	0.0612	4570.89	0.0088	0.009003
Ni	60	3	He	5.407	0.0566	4250.79	0.0088	0.009003
Ni	60	3	He	5.619	0.0584	4330.79	0.0088	0.009003
Cu	63	3	He	6.084	0.1567	11705.10	0.0249	0.004937
Cu	63	3	He	6.239	0.1605	12065.46	0.0249	0.004937
Cu	63	3	He	6.328	0.1627	12065.40	0.0249	0.004937
Zn	66	3	He	556.184	1.3713	102451.57	0.0025	0.004836
Zn	66	3	He	548.949	1.3535	101736.22	0.0025	0.004836
Zn	66	3	He	559.392	1.3791	102250.81	0.0025	0.004836
As	75	3	He	0.258	0.0009	66.00	0.0017	0.0004347
As	75	3	He	0.331	0.001	76.00	0.0017	0.0004347
As	75	3	He	0.231	0.0008	62.00	0.0017	0.0004347
Sr	88	3	He	3.425	0.0275	1800.17	0.0078	0.0007762
Sr	88	3	He	3.12	0.0252	1610.14	0.0078	0.0007762
Sr	88	3	He	2.83	0.0229	1440.14	0.0078	0.0007762
Mo	98	3	He	0.692	0.0158	1030.07	0.022	0.0005162
Mo	98	3	He	0.708	0.0161	1030.07	0.022	0.0005162
Mo	98	3	He	0.728	0.0165	1040.07	0.022	0.0005162
Ag	107	3	He	0.01	0.0009	60.00	0.0455	0.0004641
Ag	107	3	He	0.007	0.0008	50.00	0.0455	0.0004641
Ag	107	3	He	-0.003	0.0003	20.00	0.0455	0.0004641
Cd	111	3	He	0.028	0.0002	12.00	0.0048	5.152E-05
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Cd	111	3	He	0.016	0.0001	8.00	0.0048	5.152E-05
Sn	120	3	He	0.066	0.0165	1080.09	0.0143	0.01559
Sn	120	3	He	-0.03	0.0152	970.08	0.0143	0.01559
Sn	120	3	He	0.29	0.0197	1240.11	0.0143	0.01559
Sb	121	3	He	0.09	0.0014	90.00	0.0124	0.000258
Sb	121	3	He	0.067	0.0011	70.00	0.0124	0.000258
Sb	121	3	He	0.056	0.001	60.00	0.0124	0.000258
Ba	137	3	He	10.32	0.0455	2970.45	0.0044	0.000309
Ba	137	3	He	8.862	0.0391	2500.32	0.0044	0.000309
Ba	137	3	He	9.6	0.0423	2660.37	0.0044	0.000309
Tl	205	3	He	-0.012	0.0007	150.01	0.0276	0.001005
Tl	205	3	He	-0.002	0.0009	210.01	0.0276	0.001005
Tl	205	3	He	-0.02	0.0004	100.00	0.0276	0.001005
Pb	208	3	He	0.825	0.0322	4030.76	0.0364	0.002176
Pb	208	3	He	0.776	0.0304	3500.58	0.0364	0.002176
Pb	208	3	He	0.812	0.0317	3950.73	0.0364	0.002176
U	238	3	He	0.09	0.004	900.07	0.0421	0.00024
U	238	3	He	0.089	0.004	890.07	0.0421	0.00024
U	238	3	He	0.087	0.0039	870.07	0.0421	0.00024
Sc	45	1	No Gas			3310004.95		
Sc	45	1	No Gas			3260025.26		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3210831.51		
Ge	72	1	No Gas			1473720.76		
Ge	72	1	No Gas			1447851.70		
Ge	72	1	No Gas			1434400.29		
Sc	45	2	H2			192286.38		
Sc	45	2	H2			198494.45		
Sc	45	2	H2			195130.86		
Ge	72	2	H2			159443.86		
Ge	72	2	H2			165540.99		
Ge	72	2	H2			162407.54		
In	115	2	H2			436696.40		
In	115	2	H2			447457.10		
In	115	2	H2			439174.06		
Sc	45	3	He			41379.08		
Sc	45	3	He			40416.36		
Sc	45	3	He			42051.49		
Ge	72	3	He			74713.91		
Ge	72	3	He			75166.62		
Ge	72	3	He			74141.38		
In	115	3	He			65353.19		
In	115	3	He			63986.91		
In	115	3	He			62892.51		
Tb	159	3	He			286194.14		
Tb	159	3	He			282757.07		
Tb	159	3	He			284529.04		
Bi	209	3	He			223397.95		
Bi	209	3	He			223912.87		
Bi	209	3	He			224217.77		

US EPA Tune Check Report

Operator Name	us19_usr_ins21905
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA_ICPMS.b
Acq. Date-Time	2023-08-10 06:41:30
Report Comment	E07 Tune Report
Instrument Name	G8403A SG18254097

[No Gas]

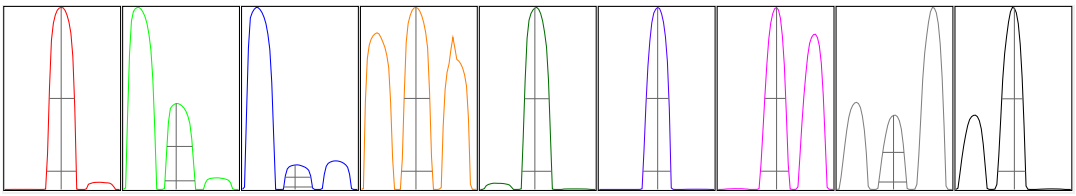
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)	RSD% (Flag)
9	10.00	5901	59010.60			0.332	5.000	
24	10.00	29668	296677.99			0.147	5.000	
25	10.00	4030	40301.68			0.348	5.000	
26	10.00	4655	46550.20			0.476	5.000	
59	10.00	48519	485194.01			0.527	5.000	
115	10.00	66364	663636.93			0.433	5.000	
206	10.00	13010	130101.89			0.646	5.000	
207	10.00	11230	112301.51			0.976	5.000	
208	10.00	27344	273443.84			0.708	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
9	5880	5930	5895	5910	5890
24	29639	29707	29617	29718	29658
25	4051	4022	4019	4038	4021
26	4633	4658	4632	4681	4671
59	48160	48337	48721	48685	48695
115	66029	66541	66729	66386	66135
206	12872	12989	13049	13073	13067
207	11046	11286	11239	11333	11247
208	27061	27228	27444	27468	27521

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	9461.64	9.00	8.90 - 9.10	
24	47212.98	23.90	23.90 - 24.10	
25	6337.91	24.90	24.90 - 25.10	
26	7409.25	25.95	25.90 - 26.10	
59	79669.42	58.95	58.90 - 59.10	

US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
115	119456.44	115.05	114.90 - 115.10	
206	24992.29	206.05	205.90 - 206.10	
207	21260.48	207.00	206.90 - 207.10	
208	52021.79	208.05	207.90 - 208.10	

Mass	W-50%	W-10%	W-10% (Required)	W-10% (Flag)
9	0.65	0.764	0.900	
24	0.65	0.772	0.900	
25	0.66	0.737	0.900	
26	0.66	0.793	0.900	
59	0.63	0.766	0.900	
115	0.58	0.717	0.900	
206	0.54	0.728	0.900	
207	0.55	0.715	0.900	
208	0.55	0.715	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	235
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	General Purpose	Nebulizer Gas	1.07 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	0.90 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	10.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	8.3 V	Deflect	16.2 V
Extract 2	-190.0 V	Cell Entrance	-40 V	Plate Bias	-50 V
Omega Bias	-105 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.5 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	126	Axis Gain	0.9995	QP Bias	-2.5 V
Mass Offset	125	Axis Offset	0.10		

Hardware Settings

Torch

Torch H	0.7 mm	Torch V	-0.8 mm		

EM

Discriminator	3.8 mV	Analog HV	2165 V	Pulse HV	1340 V

Quantitation Report

Data File Name	202SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 17:36:26
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

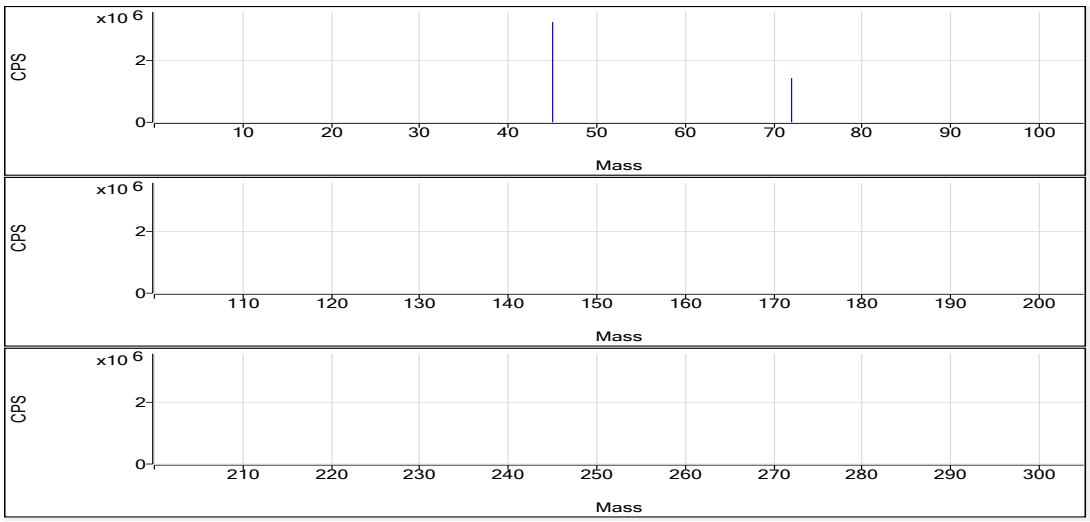
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.010	ppb	N/A	48.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.019	ppb	36.2	2.89	0.0000	Pulse	1.5000	3
Na	23	72	He	4.755	ppb	72.6	8275.91	0.1146	Pulse	0.1000	3
Mg	24	72	He	2.623	ppb	18.4	510.03	0.0071	Pulse	0.1000	3
Al	27	72	He	17.047	ppb	24.6	373.35	0.0052	Pulse	0.1000	3
K	39	72	He	19.377	ppb	46.8	11144.58	0.1543	Pulse	0.1000	3
Ca	44	72	He	-5.667	ppb	N/A	103.34	0.0014	Pulse	0.1000	3
Ti	47	72	He	0.013	ppb	132.5	20.00	0.0003	Pulse	0.1000	3
V	51	72	He	0.063	ppb	12.3	582.69	0.0081	Pulse	0.5000	3
Cr	52	72	He	0.043	ppb	123.3	1880.19	0.0260	Pulse	0.1000	3
Mn	55	72	He	-0.870	ppb	N/A	630.04	0.0087	Pulse	0.1000	3
Fe	57	72	He	51.131	ppb	20.1	1353.44	0.0187	Pulse	0.1000	3
Co	59	72	He	0.020	ppb	96.9	266.68	0.0037	Pulse	0.1000	3
Ni	60	72	He	0.887	ppb	3.7	1213.43	0.0168	Pulse	0.1000	3
Cu	63	72	He	0.037	ppb	17.6	423.35	0.0059	Pulse	0.1000	3
Zn	66	72	He	1.051	ppb	56.2	536.70	0.0074	Pulse	0.1000	3
As	75	72	He	0.073	ppb	116.4	40.67	0.0006	Pulse	0.5000	3
Sr	88	115	He	0.062	ppb	130.7	80.00	0.0013	Pulse	0.1000	3
Mo	98	115	He	0.017	ppb	48.6	56.67	0.0009	Pulse	0.1000	3
Ag	107	115	He	-0.001	ppb	N/A	26.67	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.002	ppb	276.9	4.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.017	ppb	N/A	976.74	0.0154	Pulse	0.1000	3
Sb	121	115	He	0.005	ppb	738.0	20.00	0.0003	Pulse	0.1000	3
Ba	137	115	He	0.145	ppb	42.9	60.00	0.0009	Pulse	0.1000	3
Tl	205	209	He	-0.011	ppb	N/A	153.34	0.0007	Pulse	0.1000	3
Pb	208	209	He	0.043	ppb	39.9	830.04	0.0038	Pulse	0.1000	3
U	238	209	He	0.004	ppb	75.0	93.34	0.0004	Pulse	0.1000	3

ISTD Table:

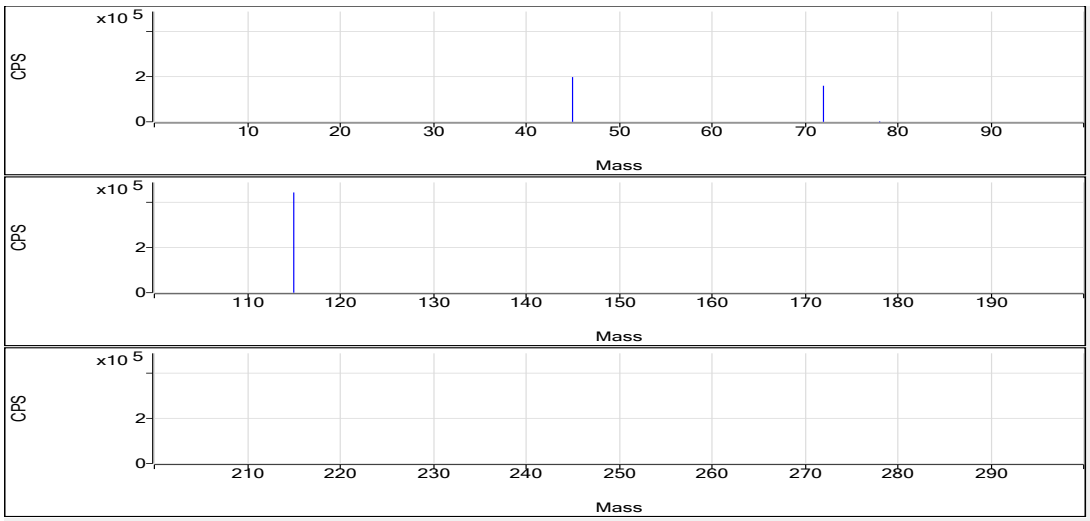
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3221242.45	2.5	99.4	Pulse	0.1000	3
No Gas	Ge	72	1419957.64	2.0	98.6	Pulse	0.1000	3
H2	Sc	45	197308.58	2.1	101.0	Pulse	0.1000	3
H2	Ge	72	159104.48	2.0	97.6	Pulse	0.1000	3
H2	In	115	442229.42	1.8	102.1	Pulse	0.1000	3
He	Sc	45	42091.03	1.7	105.3	Pulse	0.1000	3
He	Ge	72	72231.30	1.5	99.9	Pulse	0.1000	3
He	In	115	63631.24	0.1	98.5	Pulse	0.1000	3
He	Tb	159	284321.92	0.5	99.4	Pulse	0.1000	3
He	Bi	209	221238.90	0.7	99.6	Pulse	0.1000	3

No Gas

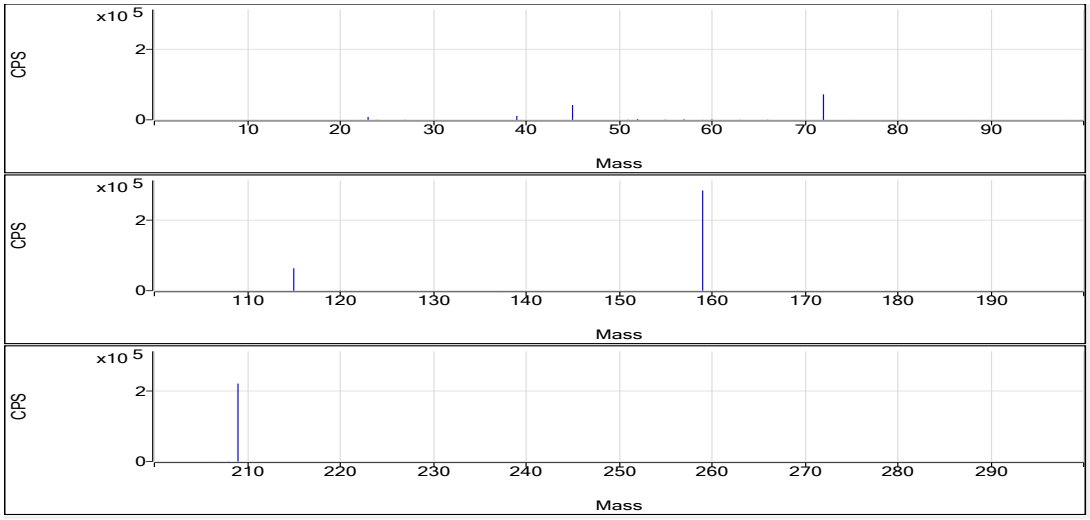


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.004	0	60.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.013	0	42.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.012	0	44.00	0.0013	4.694E-05
Se	78	2	H2	0.015	0	2.67	0.0004	1.089E-05
Se	78	2	H2	0.014	0	2.67	0.0004	1.089E-05
Se	78	2	H2	0.027	0	3.33	0.0004	1.089E-05
Na	23	3	He	7.851	0.1199	8622.72	0.0017	0.1065
Na	23	3	He	5.382	0.1157	8252.61	0.0017	0.1065
Na	23	3	He	1.032	0.1082	7952.39	0.0017	0.1065
Mg	24	3	He	2.172	0.0067	480.02	0.0008	0.004846
Mg	24	3	He	2.567	0.007	500.03	0.0008	0.004846
Mg	24	3	He	3.131	0.0075	550.03	0.0008	0.004846
Al	27	3	He	15.767	0.0049	350.02	0.0002	0.001063
Al	27	3	He	21.734	0.0063	450.02	0.0002	0.001063
Al	27	3	He	13.639	0.0044	320.01	0.0002	0.001063
K	39	3	He	20.362	0.1549	11134.67	0.0006	0.1436
K	39	3	He	27.912	0.1591	11344.75	0.0006	0.1436
K	39	3	He	9.857	0.1491	10954.33	0.0006	0.1436
Ca	44	3	He	-16.037	0.0011	80.00	0	0.001611
Ca	44	3	He	15.848	0.0021	150.01	0	0.001611
Ca	44	3	He	-16.811	0.0011	80.00	0	0.001611
Ti	47	3	He	0.018	0.0003	20.00	0.0003	0.0002737
Ti	47	3	He	0.027	0.0003	20.00	0.0003	0.0002737
Ti	47	3	He	-0.006	0.0003	20.00	0.0003	0.0002737
V	51	3	He	0.066	0.0081	582.02	0.0117	0.007326
V	51	3	He	0.054	0.008	568.02	0.0117	0.007326
V	51	3	He	0.069	0.0081	598.02	0.0117	0.007326
Cr	52	3	He	0.051	0.0262	1880.21	0.0152	0.02538
Cr	52	3	He	0.092	0.0268	1910.19	0.0152	0.02538
Cr	52	3	He	-0.013	0.0252	1850.18	0.0152	0.02538
Mn	55	3	He	-1.074	0.0075	540.03	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.779	0.0093	660.04	0.0059	0.01385
Mn	55	3	He	-0.756	0.0094	690.04	0.0059	0.01385
Fe	57	3	He	39.296	0.0153	1100.08	0.0003	0.003918
Fe	57	3	He	57.62	0.0206	1470.12	0.0003	0.003918
Fe	57	3	He	56.477	0.0203	1490.12	0.0003	0.003918
Co	59	3	He	-0.001	0.0031	220.01	0.0305	0.003084
Co	59	3	He	0.023	0.0038	270.01	0.0305	0.003084
Co	59	3	He	0.037	0.0042	310.01	0.0305	0.003084
Ni	60	3	He	0.922	0.0171	1230.10	0.0088	0.009003
Ni	60	3	He	0.858	0.0165	1180.09	0.0088	0.009003
Ni	60	3	He	0.88	0.0167	1230.10	0.0088	0.009003
Cu	63	3	He	0.031	0.0057	410.02	0.0249	0.004937
Cu	63	3	He	0.044	0.006	430.02	0.0249	0.004937
Cu	63	3	He	0.037	0.0059	430.02	0.0249	0.004937
Zn	66	3	He	0.523	0.0061	440.02	0.0025	0.004836
Zn	66	3	He	0.942	0.0072	510.03	0.0025	0.004836
Zn	66	3	He	1.688	0.009	660.04	0.0025	0.004836
As	75	3	He	0.134	0.0007	48.00	0.0017	0.0004347
As	75	3	He	-0.024	0.0004	28.00	0.0017	0.0004347
As	75	3	He	0.11	0.0006	46.00	0.0017	0.0004347
Sr	88	3	He	0.062	0.0013	80.00	0.0078	0.0007762
Sr	88	3	He	0.142	0.0019	120.00	0.0078	0.0007762
Sr	88	3	He	-0.019	0.0006	40.00	0.0078	0.0007762
Mo	98	3	He	0.012	0.0008	50.00	0.022	0.0005162
Mo	98	3	He	0.027	0.0011	70.00	0.022	0.0005162
Mo	98	3	He	0.012	0.0008	50.00	0.022	0.0005162
Ag	107	3	He	-0.007	0.0002	10.00	0.0455	0.0004641
Ag	107	3	He	0.011	0.0009	60.00	0.0455	0.0004641
Ag	107	3	He	-0.007	0.0002	10.00	0.0455	0.0004641
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Cd	111	3	He	0.009	0.0001	6.00	0.0048	5.152E-05
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Sn	120	3	He	0.109	0.0171	1090.09	0.0143	0.01559
Sn	120	3	He	0.02	0.0159	1010.07	0.0143	0.01559
Sn	120	3	He	-0.179	0.013	830.05	0.0143	0.01559
Sb	121	3	He	-0.021	0	0.00	0.0124	0.000258
Sb	121	3	He	0.043	0.0008	50.00	0.0124	0.000258
Sb	121	3	He	-0.008	0.0002	10.00	0.0124	0.000258
Ba	137	3	He	0.073	0.0006	40.00	0.0044	0.000309
Ba	137	3	He	0.181	0.0011	70.00	0.0044	0.000309
Ba	137	3	He	0.181	0.0011	70.00	0.0044	0.000309
Tl	205	3	He	-0.014	0.0006	140.01	0.0276	0.001005
Tl	205	3	He	-0.01	0.0007	160.01	0.0276	0.001005
Tl	205	3	He	-0.01	0.0007	160.01	0.0276	0.001005
Pb	208	3	He	0.05	0.004	430.02	0.0364	0.002176
Pb	208	3	He	0.056	0.0042	570.03	0.0364	0.002176
Pb	208	3	He	0.024	0.003	350.02	0.0364	0.002176
U	238	3	He	0.007	0.0005	120.01	0.0421	0.00024
U	238	3	He	0.005	0.0005	100.00	0.0421	0.00024
U	238	3	He	0.001	0.0003	60.00	0.0421	0.00024
Sc	45	1	No Gas			3304246.20		
Sc	45	1	No Gas			3219369.01		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3140112.14		
Ge	72	1	No Gas			1448284.04		
Ge	72	1	No Gas			1420144.67		
Ge	72	1	No Gas			1391444.20		
Sc	45	2	H2			197999.82		
Sc	45	2	H2			200992.36		
Sc	45	2	H2			192933.55		
Ge	72	2	H2			157756.20		
Ge	72	2	H2			162669.30		
Ge	72	2	H2			156887.93		
In	115	2	H2			440776.17		
In	115	2	H2			450623.43		
In	115	2	H2			435288.67		
Sc	45	3	He			42692.65		
Sc	45	3	He			41319.01		
Sc	45	3	He			42261.44		
Ge	72	3	He			71889.93		
Ge	72	3	He			71326.29		
Ge	72	3	He			73477.69		
In	115	3	He			63585.55		
In	115	3	He			63615.75		
In	115	3	He			63715.26		
Tb	159	3	He			282865.39		
Tb	159	3	He			284762.73		
Tb	159	3	He			285337.65		
Bi	209	3	He			222915.99		
Bi	209	3	He			220263.69		
Bi	209	3	He			220537.03		

Quantitation Report

Data File Name	203_CCV.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 17:38:27
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Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

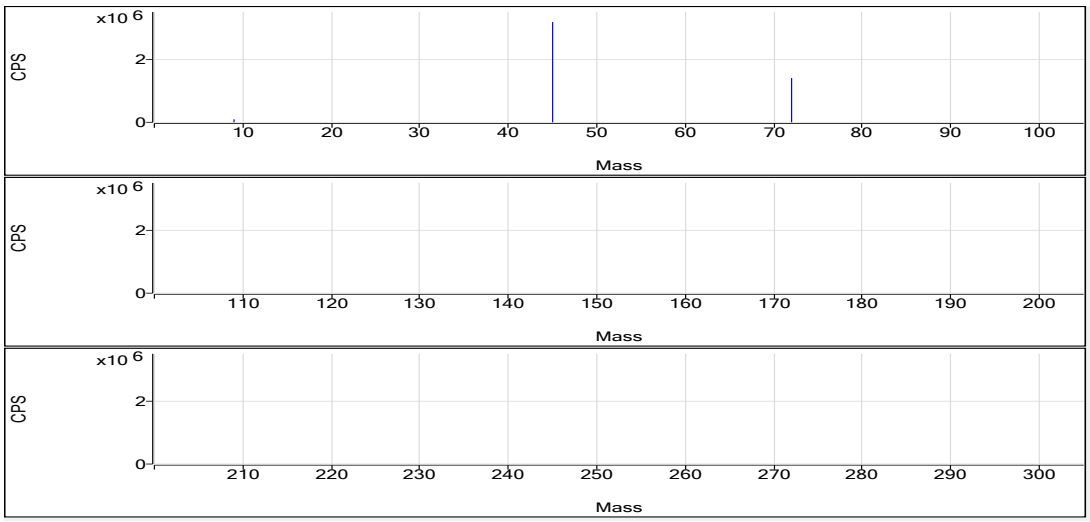
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	51.458	ppb	2.1	95431.03	0.0677	Pulse	0.5000	3
Se	78	72	H2	52.153	ppb	4.6	3237.70	0.0203	Pulse	1.5000	3
Na	23	72	He	5258.983	ppb	1.8	671324.13	9.1404	Pulse	0.1000	3
Mg	24	72	He	5263.970	ppb	2.8	326292.36	4.4429	Pulse	0.1000	3
Al	27	72	He	5229.233	ppb	1.7	92789.29	1.2634	Pulse	0.1000	3
K	39	72	He	5217.326	ppb	2.2	222146.68	3.0247	Pulse	0.1000	3
Ca	44	72	He	5139.421	ppb	2.8	11841.82	0.1612	Pulse	0.1000	3
Ti	47	72	He	5288.416	ppb	1.2	97433.46	1.3265	Pulse	0.1000	3
V	51	72	He	525.830	ppb	2.1	452294.91	6.1584	Pulse	0.5000	3
Cr	52	72	He	525.873	ppb	2.0	589980.81	8.0330	Pulse	0.1000	3
Mn	55	72	He	525.924	ppb	1.3	229016.34	3.1181	Pulse	0.1000	3
Fe	57	72	He	5237.644	ppb	1.9	111734.64	1.5213	Pulse	0.1000	3
Co	59	72	He	524.420	ppb	1.2	1175430.84	16.0034	Pulse	0.1000	3
Ni	60	72	He	521.751	ppb	1.7	337626.74	4.5969	Pulse	0.1000	3
Cu	63	72	He	523.563	ppb	1.9	959275.06	13.0611	Pulse	0.1000	3
Zn	66	72	He	521.761	ppb	1.0	94508.37	1.2867	Pulse	0.1000	3
As	75	72	He	515.841	ppb	1.4	65924.92	0.8976	Pulse	0.5000	3
Sr	88	115	He	52.360	ppb	3.2	26518.81	0.4101	Pulse	0.1000	3
Mo	98	115	He	50.733	ppb	1.2	72274.98	1.1177	Pulse	0.1000	3
Ag	107	115	He	50.769	ppb	0.7	149406.86	2.3105	Pulse	0.1000	3
Cd	111	115	He	51.902	ppb	0.8	16114.59	0.2492	Pulse	0.5000	3
Sn	120	115	He	51.524	ppb	1.0	48512.03	0.7502	Pulse	0.1000	3
Sb	121	115	He	51.960	ppb	1.9	41703.39	0.6448	Pulse	0.1000	3
Ba	137	115	He	514.825	ppb	0.3	145662.93	2.2526	Pulse	0.1000	3
Tl	205	209	He	51.795	ppb	1.1	317281.92	1.4328	Pulse	0.1000	3
Pb	208	209	He	51.888	ppb	0.6	418688.15	1.8908	Pulse	0.1000	3
U	238	209	He	51.317	ppb	1.1	478072.96	2.1590	Pulse	0.1000	3

ISTD Table:

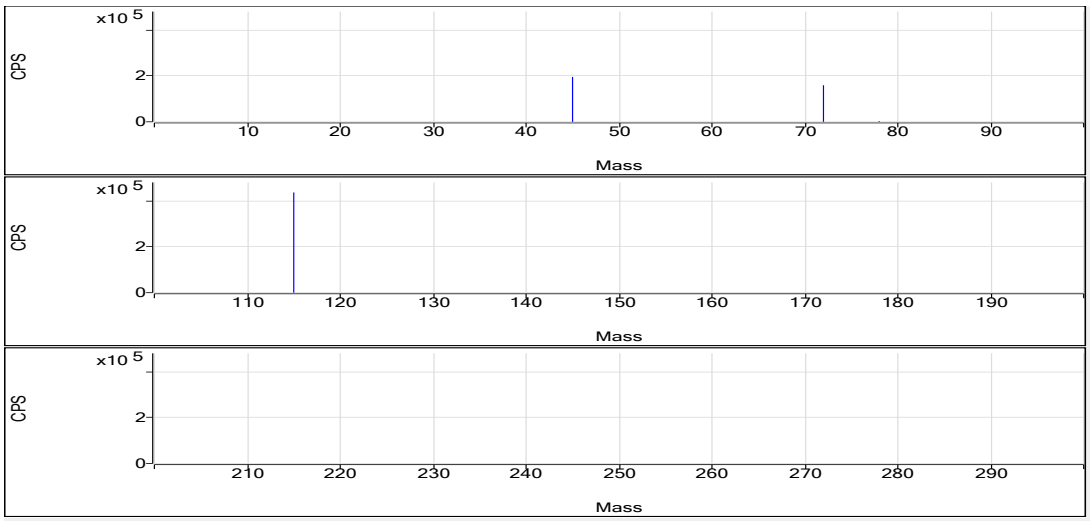
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3196048.18	1.5	98.6	Pulse	0.1000	3
No Gas	Ge	72	1410512.59	1.5	98.0	Pulse	0.1000	3
H2	Sc	45	195764.68	3.3	100.2	Pulse	0.1000	3
H2	Ge	72	159562.64	4.2	97.9	Pulse	0.1000	3
H2	In	115	437160.83	4.1	100.9	Pulse	0.1000	3
He	Sc	45	42004.16	0.3	105.0	Pulse	0.1000	3
He	Ge	72	73454.15	1.0	101.6	Pulse	0.1000	3
He	In	115	64666.71	1.0	100.1	Pulse	0.1000	3
He	Tb	159	285809.87	0.6	99.9	Pulse	0.1000	3
He	Bi	209	221439.05	0.6	99.7	Pulse	0.1000	3

No Gas

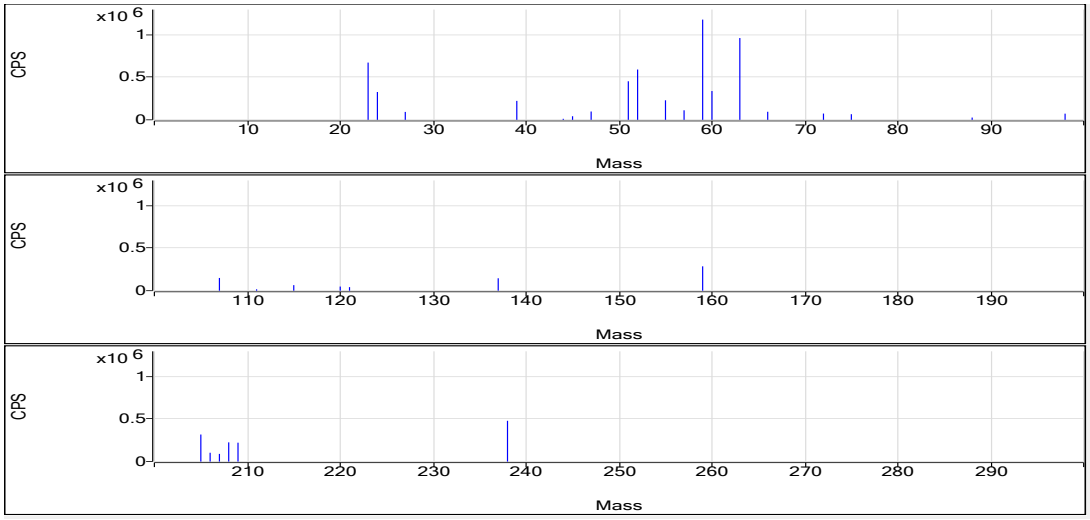


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.278	0.0661	94589.77	0.0013	4.694E-05
Be	9	1	No Gas	52.385	0.0689	97352.93	0.0013	4.694E-05
Be	9	1	No Gas	51.712	0.068	94350.40	0.0013	4.694E-05
Se	78	2	H2	49.76	0.0194	3217.70	0.0004	1.089E-05
Se	78	2	H2	52.094	0.0203	3247.71	0.0004	1.089E-05
Se	78	2	H2	54.606	0.0213	3247.70	0.0004	1.089E-05
Na	23	3	He	5256.004	9.1353	672340.93	0.0017	0.1065
Na	23	3	He	5165.398	8.9797	665493.43	0.0017	0.1065
Na	23	3	He	5355.548	9.3063	676138.04	0.0017	0.1065
Mg	24	3	He	5188.964	4.3797	322334.43	0.0008	0.004846
Mg	24	3	He	5171.907	4.3653	323515.87	0.0008	0.004846
Mg	24	3	He	5431.039	4.5838	333026.79	0.0008	0.004846
Al	27	3	He	5212.195	1.2593	92678.60	0.0002	0.001063
Al	27	3	He	5151.35	1.2446	92236.22	0.0002	0.001063
Al	27	3	He	5324.155	1.2863	93453.04	0.0002	0.001063
K	39	3	He	5177.239	3.0026	220983.00	0.0006	0.1436
K	39	3	He	5128.528	2.9757	220530.19	0.0006	0.1436
K	39	3	He	5346.211	3.0959	224926.85	0.0006	0.1436
Ca	44	3	He	5182.419	0.1626	11965.26	0	0.001611
Ca	44	3	He	4980.953	0.1563	11584.93	0	0.001611
Ca	44	3	He	5254.892	0.1648	11975.28	0	0.001611
Ti	47	3	He	5217.941	1.3088	96326.75	0.0003	0.0002737
Ti	47	3	He	5306.351	1.331	98641.48	0.0003	0.0002737
Ti	47	3	He	5340.956	1.3397	97332.16	0.0003	0.0002737
V	51	3	He	520.734	6.0987	448854.03	0.0117	0.007326
V	51	3	He	518.245	6.0696	449826.25	0.0117	0.007326
V	51	3	He	538.512	6.3067	458204.44	0.0117	0.007326
Cr	52	3	He	520.791	7.9556	585515.85	0.0152	0.02538
Cr	52	3	He	518.951	7.9276	587522.06	0.0152	0.02538
Cr	52	3	He	537.876	8.2158	596904.52	0.0152	0.02538
Mn	55	3	He	526.895	3.1238	229905.97	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	518.554	3.0746	227860.21	0.0059	0.01385
Mn	55	3	He	532.321	3.1558	229282.83	0.0059	0.01385
Fe	57	3	He	5212.259	1.514	111426.14	0.0003	0.003918
Fe	57	3	He	5153.997	1.4971	110952.03	0.0003	0.003918
Fe	57	3	He	5346.675	1.5529	112825.75	0.0003	0.003918
Co	59	3	He	520.701	15.8899	1169466.08	0.0305	0.003084
Co	59	3	He	521.142	15.9034	1178615.22	0.0305	0.003084
Co	59	3	He	531.416	16.2168	1178211.23	0.0305	0.003084
Ni	60	3	He	523.592	4.6131	339514.60	0.0088	0.009003
Ni	60	3	He	512.206	4.513	334461.52	0.0088	0.009003
Ni	60	3	He	529.455	4.6647	338904.10	0.0088	0.009003
Cu	63	3	He	517.534	12.9107	950203.27	0.0249	0.004937
Cu	63	3	He	517.882	12.9194	957470.45	0.0249	0.004937
Cu	63	3	He	535.274	13.3531	970151.47	0.0249	0.004937
Zn	66	3	He	525.672	1.2963	95404.17	0.0025	0.004836
Zn	66	3	He	516.103	1.2728	94327.01	0.0025	0.004836
Zn	66	3	He	523.509	1.291	93793.93	0.0025	0.004836
As	75	3	He	510.873	0.8889	65423.38	0.0017	0.0004347
As	75	3	He	512.758	0.8922	66122.48	0.0017	0.0004347
As	75	3	He	523.891	0.9116	66228.90	0.0017	0.0004347
Sr	88	3	He	53.806	0.4214	27076.53	0.0078	0.0007762
Sr	88	3	He	50.546	0.3959	25483.62	0.0078	0.0007762
Sr	88	3	He	52.727	0.4129	26996.27	0.0078	0.0007762
Mo	98	3	He	51.267	1.1295	72576.75	0.022	0.0005162
Mo	98	3	He	50.83	1.1199	72084.39	0.022	0.0005162
Mo	98	3	He	50.102	1.1038	72163.81	0.022	0.0005162
Ag	107	3	He	50.702	2.3074	148265.46	0.0455	0.0004641
Ag	107	3	He	51.13	2.3269	149779.78	0.0455	0.0004641
Ag	107	3	He	50.476	2.2971	150175.33	0.0455	0.0004641
Cd	111	3	He	52.294	0.2511	16133.25	0.0048	5.152E-05
Cd	111	3	He	51.509	0.2473	15919.04	0.0048	5.152E-05
Cd	111	3	He	51.903	0.2492	16291.47	0.0048	5.152E-05
Sn	120	3	He	51.216	0.7458	47923.38	0.0143	0.01559
Sn	120	3	He	52.141	0.759	48856.44	0.0143	0.01559
Sn	120	3	He	51.214	0.7458	48756.27	0.0143	0.01559
Sb	121	3	He	51.631	0.6407	41171.54	0.0124	0.000258
Sb	121	3	He	51.202	0.6354	40901.06	0.0124	0.000258
Sb	121	3	He	53.048	0.6583	43037.58	0.0124	0.000258
Ba	137	3	He	515.95	2.2575	145057.54	0.0044	0.000309
Ba	137	3	He	515.472	2.2554	145177.01	0.0044	0.000309
Ba	137	3	He	513.053	2.2448	146754.25	0.0044	0.000309
Tl	205	3	He	51.157	1.4152	314069.57	0.0276	0.001005
Tl	205	3	He	52.117	1.4418	317055.46	0.0276	0.001005
Tl	205	3	He	52.11	1.4416	320720.74	0.0276	0.001005
Pb	208	3	He	51.53	1.8777	225442.38	0.0364	0.002176
Pb	208	3	He	52.051	1.8967	221820.39	0.0364	0.002176
Pb	208	3	He	52.083	1.8979	228400.23	0.0364	0.002176
U	238	3	He	50.913	2.142	475363.16	0.0421	0.00024
U	238	3	He	51.944	2.1854	480587.53	0.0421	0.00024
U	238	3	He	51.095	2.1497	478268.20	0.0421	0.00024
Sc	45	1	No Gas			3238041.20		
Sc	45	1	No Gas			3205245.89		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3144857.45		
Ge	72	1	No Gas			1430684.98		
Ge	72	1	No Gas			1413310.14		
Ge	72	1	No Gas			1387542.64		
Sc	45	2	H2			202184.92		
Sc	45	2	H2			196004.65		
Sc	45	2	H2			189104.47		
Ge	72	2	H2			165985.64		
Ge	72	2	H2			160029.61		
Ge	72	2	H2			152672.68		
In	115	2	H2			456826.40		
In	115	2	H2			433516.95		
In	115	2	H2			421139.13		
Sc	45	3	He			41910.51		
Sc	45	3	He			41960.98		
Sc	45	3	He			42140.99		
Ge	72	3	He			73597.88		
Ge	72	3	He			74110.99		
Ge	72	3	He			72653.57		
In	115	3	He			64630.14		
In	115	3	He			64749.97		
In	115	3	He			65755.19		
Tb	159	3	He			284639.59		
Tb	159	3	He			285156.42		
Tb	159	3	He			287633.61		
Bi	209	3	He			221925.21		
Bi	209	3	He			219909.39		
Bi	209	3	He			222482.56		

Quantitation Report

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Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

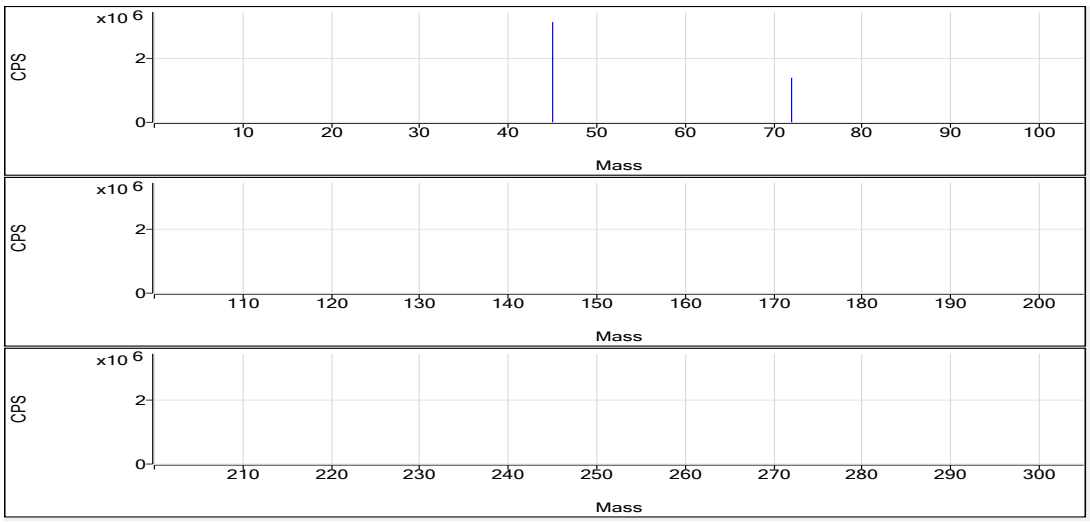
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.008	ppb	27.7	81.33	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.050	ppb	25.8	4.89	0.0000	Pulse	1.5000	3
Na	23	72	He	0.650	ppb	615.8	7892.32	0.1076	Pulse	0.1000	3
Mg	24	72	He	4.811	ppb	19.5	653.37	0.0089	Pulse	0.1000	3
Al	27	72	He	15.368	ppb	19.1	350.01	0.0048	Pulse	0.1000	3
K	39	72	He	3.562	ppb	775.7	10684.24	0.1456	Pulse	0.1000	3
Ca	44	72	He	11.000	ppb	238.9	143.34	0.0020	Pulse	0.1000	3
Ti	47	72	He	0.904	ppb	92.9	36.67	0.0005	Pulse	0.1000	3
V	51	72	He	0.081	ppb	60.5	607.35	0.0083	Pulse	0.5000	3
Cr	52	72	He	0.090	ppb	50.6	1963.53	0.0268	Pulse	0.1000	3
Mn	55	72	He	-0.792	ppb	N/A	673.38	0.0092	Pulse	0.1000	3
Fe	57	72	He	46.560	ppb	13.9	1276.78	0.0174	Pulse	0.1000	3
Co	59	72	He	0.097	ppb	22.5	443.36	0.0060	Pulse	0.1000	3
Ni	60	72	He	0.945	ppb	19.4	1270.10	0.0173	Pulse	0.1000	3
Cu	63	72	He	0.090	ppb	45.7	526.69	0.0072	Pulse	0.1000	3
Zn	66	72	He	1.063	ppb	39.1	546.70	0.0074	Pulse	0.1000	3
As	75	72	He	0.189	ppb	28.9	56.00	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.191	ppb	4.6	146.68	0.0023	Pulse	0.1000	3
Mo	98	115	He	0.021	ppb	70.2	63.33	0.0010	Pulse	0.1000	3
Ag	107	115	He	0.012	ppb	17.1	66.67	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.009	ppb	73.2	6.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.131	ppb	37.5	1130.08	0.0175	Pulse	0.1000	3
Sb	121	115	He	0.050	ppb	77.7	56.67	0.0009	Pulse	0.1000	3
Ba	137	115	He	0.200	ppb	39.8	76.67	0.0012	Pulse	0.1000	3
Tl	205	209	He	0.131	ppb	26.7	1020.08	0.0046	Pulse	0.1000	3
Pb	208	209	He	0.066	ppb	6.5	1006.72	0.0046	Pulse	0.1000	3
U	238	209	He	0.020	ppb	37.0	236.68	0.0011	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3152187.56	1.2	97.3	Pulse	0.1000	3
No Gas	Ge	72	1400859.51	1.5	97.3	Pulse	0.1000	3
H2	Sc	45	195632.18	1.6	100.1	Pulse	0.1000	3
H2	Ge	72	161811.58	0.9	99.3	Pulse	0.1000	3
H2	In	115	442721.15	2.2	102.2	Pulse	0.1000	3
He	Sc	45	41670.19	1.3	104.2	Pulse	0.1000	3
He	Ge	72	73377.18	0.5	101.5	Pulse	0.1000	3
He	In	115	64718.15	1.0	100.2	Pulse	0.1000	3
He	Tb	159	284739.74	0.4	99.6	Pulse	0.1000	3
He	Bi	209	220208.61	0.5	99.1	Pulse	0.1000	3

No Gas



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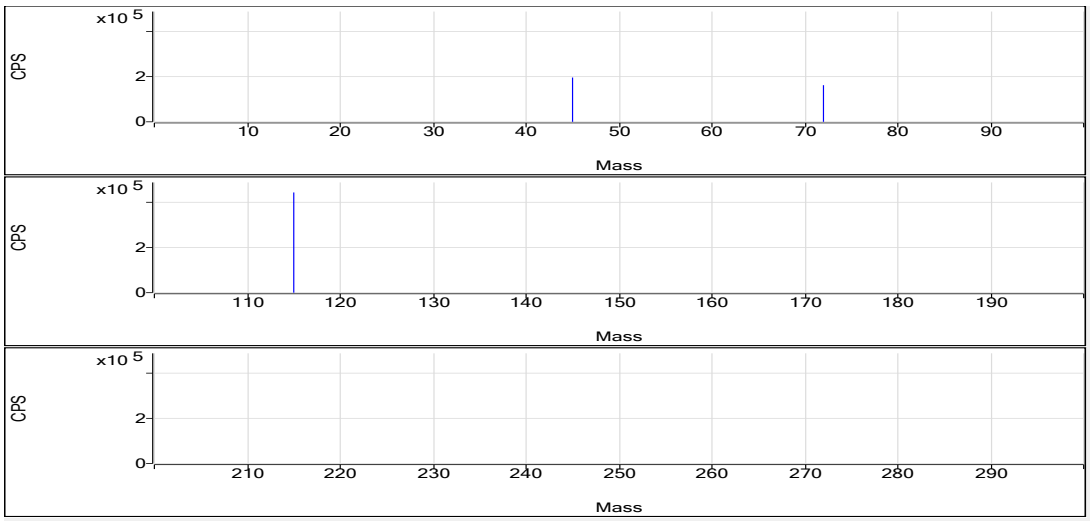
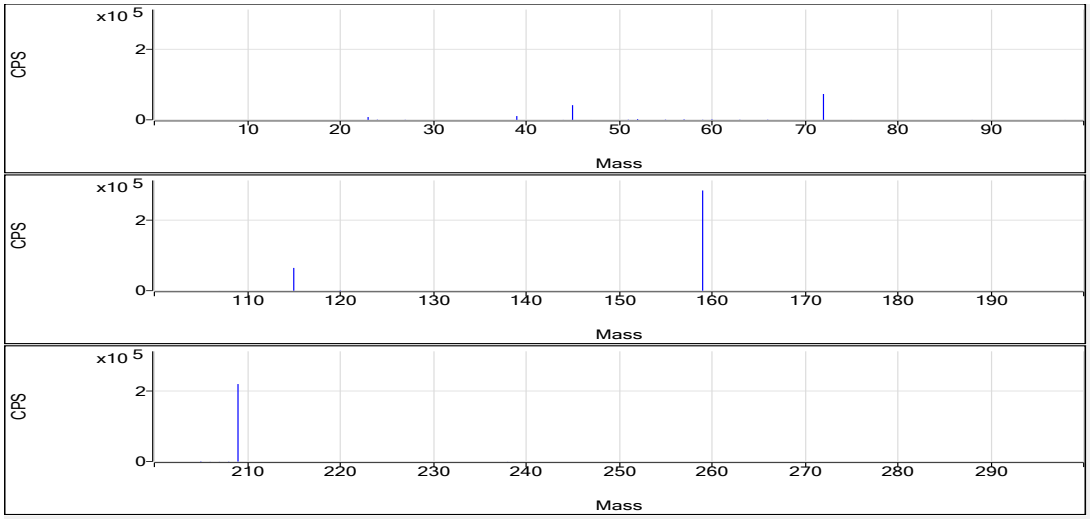


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.01	0.0001	86.00	0.0013	4.694E-05
Be	9	1	No Gas	0.006	0.0001	76.00	0.0013	4.694E-05
Be	9	1	No Gas	0.009	0.0001	82.00	0.0013	4.694E-05
Se	78	2	H2	0.035	0	4.00	0.0004	1.089E-05
Se	78	2	H2	0.057	0	5.33	0.0004	1.089E-05
Se	78	2	H2	0.057	0	5.33	0.0004	1.089E-05
Na	23	3	He	4.168	0.1136	8342.60	0.0017	0.1065
Na	23	3	He	1.483	0.109	7952.36	0.0017	0.1065
Na	23	3	He	-3.702	0.1001	7382.01	0.0017	0.1065
Mg	24	3	He	5.722	0.0097	710.04	0.0008	0.004846
Mg	24	3	He	3.845	0.0081	590.04	0.0008	0.004846
Mg	24	3	He	4.867	0.0089	660.04	0.0008	0.004846
Al	27	3	He	15.344	0.0048	350.01	0.0002	0.001063
Al	27	3	He	18.312	0.0055	400.02	0.0002	0.001063
Al	27	3	He	12.449	0.0041	300.01	0.0002	0.001063
K	39	3	He	35.218	0.1631	11975.27	0.0006	0.1436
K	39	3	He	-8.823	0.1388	10123.82	0.0006	0.1436
K	39	3	He	-15.709	0.135	9953.63	0.0006	0.1436
Ca	44	3	He	-16.787	0.0011	80.00	0	0.001611
Ca	44	3	He	14.337	0.0021	150.01	0	0.001611
Ca	44	3	He	35.451	0.0027	200.01	0	0.001611
Ti	47	3	He	1.081	0.0005	40.00	0.0003	0.0002737
Ti	47	3	He	1.641	0.0007	50.00	0.0003	0.0002737
Ti	47	3	He	-0.01	0.0003	20.00	0.0003	0.0002737
V	51	3	He	0.13	0.0089	650.02	0.0117	0.007326
V	51	3	He	0.032	0.0077	562.01	0.0117	0.007326
V	51	3	He	0.081	0.0083	610.02	0.0117	0.007326
Cr	52	3	He	0.077	0.0266	1950.19	0.0152	0.02538
Cr	52	3	He	0.052	0.0262	1910.19	0.0152	0.02538
Cr	52	3	He	0.141	0.0275	2030.22	0.0152	0.02538
Mn	55	3	He	-0.778	0.0093	680.04	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.791	0.0092	670.05	0.0059	0.01385
Mn	55	3	He	-0.808	0.0091	670.04	0.0059	0.01385
Fe	57	3	He	47.123	0.0176	1290.12	0.0003	0.003918
Fe	57	3	He	52.721	0.0192	1400.13	0.0003	0.003918
Fe	57	3	He	39.836	0.0155	1140.08	0.0003	0.003918
Co	59	3	He	0.122	0.0068	500.03	0.0305	0.003084
Co	59	3	He	0.083	0.0056	410.02	0.0305	0.003084
Co	59	3	He	0.086	0.0057	420.02	0.0305	0.003084
Ni	60	3	He	1.036	0.0181	1330.11	0.0088	0.009003
Ni	60	3	He	1.065	0.0184	1340.10	0.0088	0.009003
Ni	60	3	He	0.734	0.0155	1140.09	0.0088	0.009003
Cu	63	3	He	0.102	0.0075	550.03	0.0249	0.004937
Cu	63	3	He	0.044	0.006	440.02	0.0249	0.004937
Cu	63	3	He	0.123	0.008	590.03	0.0249	0.004937
Zn	66	3	He	1.191	0.0078	570.03	0.0025	0.004836
Zn	66	3	He	0.598	0.0063	460.02	0.0025	0.004836
Zn	66	3	He	1.398	0.0083	610.04	0.0025	0.004836
As	75	3	He	0.126	0.0007	48.00	0.0017	0.0004347
As	75	3	He	0.223	0.0008	60.00	0.0017	0.0004347
As	75	3	He	0.218	0.0008	60.00	0.0017	0.0004347
Sr	88	3	He	0.195	0.0023	150.01	0.0078	0.0007762
Sr	88	3	He	0.197	0.0023	150.01	0.0078	0.0007762
Sr	88	3	He	0.181	0.0022	140.01	0.0078	0.0007762
Mo	98	3	He	0.004	0.0006	40.00	0.022	0.0005162
Mo	98	3	He	0.033	0.0012	80.00	0.022	0.0005162
Mo	98	3	He	0.026	0.0011	70.00	0.022	0.0005162
Ag	107	3	He	0.01	0.0009	60.00	0.0455	0.0004641
Ag	107	3	He	0.014	0.0011	70.00	0.0455	0.0004641
Ag	107	3	He	0.014	0.0011	70.00	0.0455	0.0004641
Cd	111	3	He	0.015	0.0001	8.00	0.0048	5.152E-05
Cd	111	3	He	0.009	0.0001	6.00	0.0048	5.152E-05
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Sn	120	3	He	0.163	0.0179	1170.09	0.0143	0.01559
Sn	120	3	He	0.075	0.0167	1080.08	0.0143	0.01559
Sn	120	3	He	0.156	0.0178	1140.08	0.0143	0.01559
Sb	121	3	He	0.016	0.0005	30.00	0.0124	0.000258
Sb	121	3	He	0.041	0.0008	50.00	0.0124	0.000258
Sb	121	3	He	0.093	0.0014	90.00	0.0124	0.000258
Ba	137	3	He	0.244	0.0014	90.00	0.0044	0.000309
Ba	137	3	He	0.247	0.0014	90.00	0.0044	0.000309
Ba	137	3	He	0.108	0.0008	50.00	0.0044	0.000309
Tl	205	3	He	0.16	0.0054	1200.10	0.0276	0.001005
Tl	205	3	He	0.142	0.0049	1080.08	0.0276	0.001005
Tl	205	3	He	0.092	0.0036	780.05	0.0276	0.001005
Pb	208	3	He	0.062	0.0044	510.03	0.0364	0.002176
Pb	208	3	He	0.065	0.0046	550.03	0.0364	0.002176
Pb	208	3	He	0.07	0.0047	530.03	0.0364	0.002176
U	238	3	He	0.022	0.0012	260.01	0.0421	0.00024
U	238	3	He	0.026	0.0013	290.01	0.0421	0.00024
U	238	3	He	0.012	0.0007	160.01	0.0421	0.00024
Sc	45	1	No Gas			3194328.70		
Sc	45	1	No Gas			3126531.83		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3135702.14		
Ge	72	1	No Gas			1425039.35		
Ge	72	1	No Gas			1393066.85		
Ge	72	1	No Gas			1384472.32		
Sc	45	2	H2			198920.33		
Sc	45	2	H2			195275.80		
Sc	45	2	H2			192700.41		
Ge	72	2	H2			163460.64		
Ge	72	2	H2			161468.32		
Ge	72	2	H2			160505.79		
In	115	2	H2			448969.25		
In	115	2	H2			447503.78		
In	115	2	H2			431690.42		
Sc	45	3	He			41600.28		
Sc	45	3	He			41148.46		
Sc	45	3	He			42261.84		
Ge	72	3	He			73427.87		
Ge	72	3	He			72954.50		
Ge	72	3	He			73749.16		
In	115	3	He			65312.89		
In	115	3	He			64871.30		
In	115	3	He			63996.70		
Tb	159	3	He			284520.99		
Tb	159	3	He			283704.92		
Tb	159	3	He			285993.30		
Bi	209	3	He			221502.87		
Bi	209	3	He			219437.83		
Bi	209	3	He			219685.13		

Quantitation Report

Data File Name	205SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 17:43:07
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

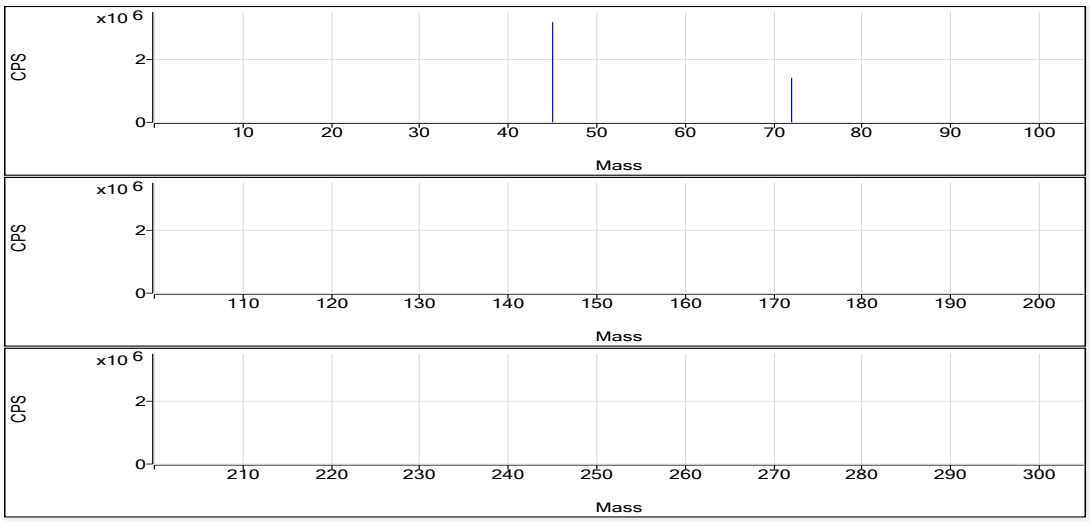
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.006	ppb	N/A	54.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.015	ppb	143.5	2.67	0.0000	Pulse	1.5000	3
Na	23	72	He	0.842	ppb	169.3	7825.63	0.1079	Pulse	0.1000	3
Mg	24	72	He	3.693	ppb	53.2	576.70	0.0080	Pulse	0.1000	3
Al	27	72	He	12.374	ppb	30.7	293.35	0.0040	Pulse	0.1000	3
K	39	72	He	13.588	ppb	23.0	10964.42	0.1511	Pulse	0.1000	3
Ca	44	72	He	7.250	ppb	117.9	133.34	0.0018	Pulse	0.1000	3
Ti	47	72	He	0.558	ppb	3.7	30.00	0.0004	Pulse	0.1000	3
V	51	72	He	0.054	ppb	39.0	577.35	0.0080	Pulse	0.5000	3
Cr	52	72	He	-0.022	ppb	N/A	1816.85	0.0250	Pulse	0.1000	3
Mn	55	72	He	-1.002	ppb	N/A	576.70	0.0079	Pulse	0.1000	3
Fe	57	72	He	35.236	ppb	25.7	1023.41	0.0141	Pulse	0.1000	3
Co	59	72	He	0.043	ppb	64.5	320.02	0.0044	Pulse	0.1000	3
Ni	60	72	He	0.928	ppb	33.2	1243.43	0.0172	Pulse	0.1000	3
Cu	63	72	He	0.047	ppb	74.5	443.36	0.0061	Pulse	0.1000	3
Zn	66	72	He	0.741	ppb	82.9	483.36	0.0067	Pulse	0.1000	3
As	75	72	He	0.046	ppb	44.9	37.33	0.0005	Pulse	0.5000	3
Sr	88	115	He	0.080	ppb	148.2	90.00	0.0014	Pulse	0.1000	3
Mo	98	115	He	0.014	ppb	76.1	53.33	0.0008	Pulse	0.1000	3
Ag	107	115	He	0.005	ppb	153.6	43.33	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.009	ppb	75.3	6.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.004	ppb	1282.1	1003.41	0.0156	Pulse	0.1000	3
Sb	121	115	He	0.000	ppb	21360.8	16.67	0.0003	Pulse	0.1000	3
Ba	137	115	He	0.156	ppb	67.0	63.33	0.0010	Pulse	0.1000	3
Tl	205	209	He	0.042	ppb	29.5	476.70	0.0022	Pulse	0.1000	3
Pb	208	209	He	0.050	ppb	14.4	883.38	0.0040	Pulse	0.1000	3
U	238	209	He	0.006	ppb	93.3	110.00	0.0005	Pulse	0.1000	3

ISTD Table:

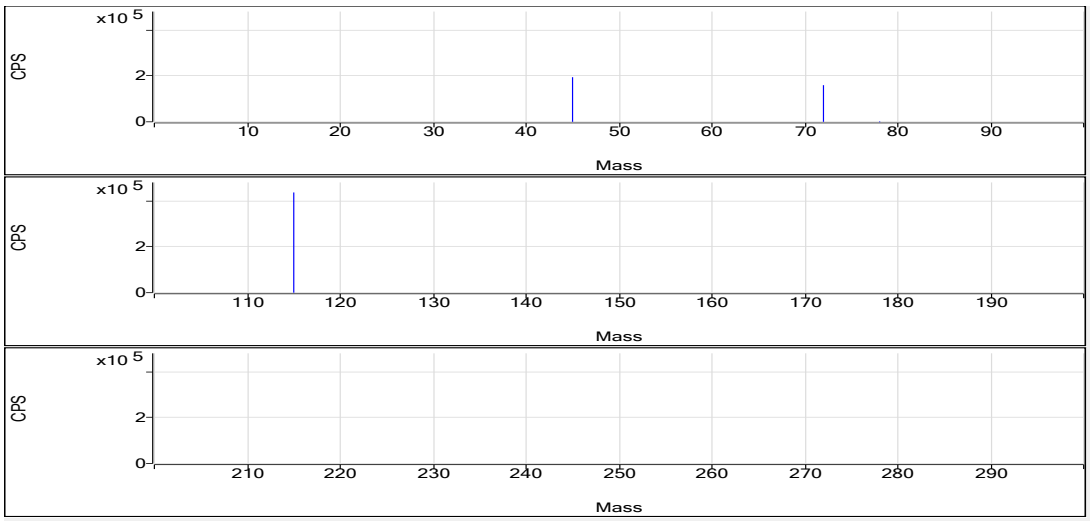
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3182948.91	2.0	98.2	Pulse	0.1000	3
No Gas	Ge	72	1406527.84	1.9	97.7	Pulse	0.1000	3
H2	Sc	45	194909.21	1.9	99.8	Pulse	0.1000	3
H2	Ge	72	160070.94	1.9	98.2	Pulse	0.1000	3
H2	In	115	437890.41	1.7	101.1	Pulse	0.1000	3
He	Sc	45	41760.27	1.6	104.4	Pulse	0.1000	3
He	Ge	72	72536.31	1.3	100.3	Pulse	0.1000	3
He	In	115	64143.28	0.9	99.3	Pulse	0.1000	3
He	Tb	159	282786.78	0.8	98.9	Pulse	0.1000	3
He	Bi	209	220392.95	0.9	99.2	Pulse	0.1000	3

No Gas

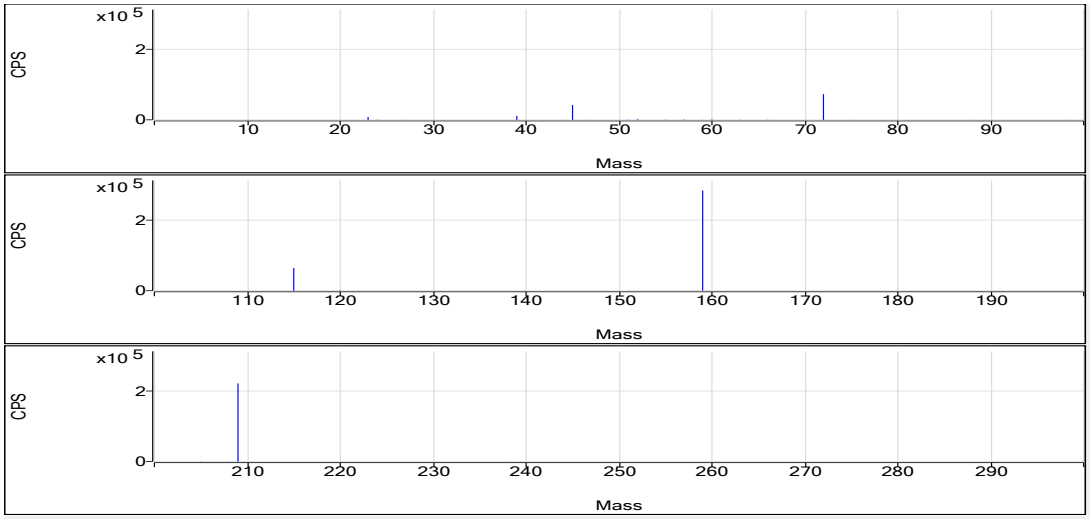


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.009	0	50.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.005	0	56.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.005	0	56.00	0.0013	4.694E-05
Se	78	2	H2	0.014	0	2.67	0.0004	1.089E-05
Se	78	2	H2	0.036	0	4.00	0.0004	1.089E-05
Se	78	2	H2	-0.006	0	1.33	0.0004	1.089E-05
Na	23	3	He	-0.195	0.1061	7712.23	0.0017	0.1065
Na	23	3	He	0.253	0.1069	7842.32	0.0017	0.1065
Na	23	3	He	2.469	0.1107	7922.35	0.0017	0.1065
Mg	24	3	He	1.76	0.0063	460.02	0.0008	0.004846
Mg	24	3	He	3.629	0.0079	580.03	0.0008	0.004846
Mg	24	3	He	5.688	0.0096	690.04	0.0008	0.004846
Al	27	3	He	14.979	0.0047	340.02	0.0002	0.001063
Al	27	3	He	8.02	0.003	220.01	0.0002	0.001063
Al	27	3	He	14.121	0.0045	320.02	0.0002	0.001063
K	39	3	He	15.339	0.1521	11054.49	0.0006	0.1436
K	39	3	He	15.45	0.1522	11164.57	0.0006	0.1436
K	39	3	He	9.974	0.1491	10674.21	0.0006	0.1436
Ca	44	3	He	10.162	0.0019	140.01	0	0.001611
Ca	44	3	He	13.964	0.002	150.01	0	0.001611
Ca	44	3	He	-2.375	0.0015	110.01	0	0.001611
Ti	47	3	He	0.555	0.0004	30.00	0.0003	0.0002737
Ti	47	3	He	0.539	0.0004	30.00	0.0003	0.0002737
Ti	47	3	He	0.58	0.0004	30.00	0.0003	0.0002737
V	51	3	He	0.077	0.0082	598.02	0.0117	0.007326
V	51	3	He	0.036	0.0077	568.02	0.0117	0.007326
V	51	3	He	0.05	0.0079	566.02	0.0117	0.007326
Cr	52	3	He	-0.076	0.0242	1760.18	0.0152	0.02538
Cr	52	3	He	0.007	0.0255	1870.18	0.0152	0.02538
Cr	52	3	He	0.003	0.0254	1820.19	0.0152	0.02538
Mn	55	3	He	-1.018	0.0078	570.04	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.8	0.0091	670.04	0.0059	0.01385
Mn	55	3	He	-1.187	0.0068	490.02	0.0059	0.01385
Fe	57	3	He	27.801	0.012	870.06	0.0003	0.003918
Fe	57	3	He	32.586	0.0134	980.07	0.0003	0.003918
Fe	57	3	He	45.322	0.017	1220.09	0.0003	0.003918
Co	59	3	He	0.048	0.0045	330.02	0.0305	0.003084
Co	59	3	He	0.069	0.0052	380.02	0.0305	0.003084
Co	59	3	He	0.013	0.0035	250.01	0.0305	0.003084
Ni	60	3	He	0.792	0.016	1160.09	0.0088	0.009003
Ni	60	3	He	0.712	0.0153	1120.09	0.0088	0.009003
Ni	60	3	He	1.28	0.0203	1450.12	0.0088	0.009003
Cu	63	3	He	0.012	0.0052	380.02	0.0249	0.004937
Cu	63	3	He	0.048	0.0061	450.02	0.0249	0.004937
Cu	63	3	He	0.082	0.007	500.03	0.0249	0.004937
Zn	66	3	He	0.216	0.0054	390.02	0.0025	0.004836
Zn	66	3	He	1.416	0.0083	610.04	0.0025	0.004836
Zn	66	3	He	0.591	0.0063	450.02	0.0025	0.004836
As	75	3	He	0.051	0.0005	38.00	0.0017	0.0004347
As	75	3	He	0.064	0.0005	40.00	0.0017	0.0004347
As	75	3	He	0.023	0.0005	34.00	0.0017	0.0004347
Sr	88	3	He	-0.039	0.0005	30.00	0.0078	0.0007762
Sr	88	3	He	0.081	0.0014	90.00	0.0078	0.0007762
Sr	88	3	He	0.197	0.0023	150.01	0.0078	0.0007762
Mo	98	3	He	0.026	0.0011	70.00	0.022	0.0005162
Mo	98	3	He	0.005	0.0006	40.00	0.022	0.0005162
Mo	98	3	He	0.012	0.0008	50.00	0.022	0.0005162
Ag	107	3	He	0.01	0.0009	60.00	0.0455	0.0004641
Ag	107	3	He	-0.003	0.0003	20.00	0.0455	0.0004641
Ag	107	3	He	0.007	0.0008	50.00	0.0455	0.0004641
Cd	111	3	He	0.015	0.0001	8.00	0.0048	5.152E-05
Cd	111	3	He	0.009	0.0001	6.00	0.0048	5.152E-05
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Sn	120	3	He	-0.006	0.0155	990.08	0.0143	0.01559
Sn	120	3	He	0.062	0.0165	1050.08	0.0143	0.01559
Sn	120	3	He	-0.043	0.015	970.06	0.0143	0.01559
Sb	121	3	He	-0.008	0.0002	10.00	0.0124	0.000258
Sb	121	3	He	-0.008	0.0002	10.00	0.0124	0.000258
Sb	121	3	He	0.017	0.0005	30.00	0.0124	0.000258
Ba	137	3	He	0.216	0.0013	80.00	0.0044	0.000309
Ba	137	3	He	0.216	0.0013	80.00	0.0044	0.000309
Ba	137	3	He	0.035	0.0005	30.00	0.0044	0.000309
Tl	205	3	He	0.034	0.002	430.02	0.0276	0.001005
Tl	205	3	He	0.035	0.002	440.03	0.0276	0.001005
Tl	205	3	He	0.056	0.0026	560.04	0.0276	0.001005
Pb	208	3	He	0.044	0.0038	410.03	0.0364	0.002176
Pb	208	3	He	0.049	0.004	470.02	0.0364	0.002176
Pb	208	3	He	0.058	0.0043	470.02	0.0364	0.002176
U	238	3	He	0.013	0.0008	170.01	0.0421	0.00024
U	238	3	He	0.002	0.0003	70.00	0.0421	0.00024
U	238	3	He	0.004	0.0004	90.00	0.0421	0.00024
Sc	45	1	No Gas			3257186.51		
Sc	45	1	No Gas			3143209.02		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3148451.20		
Ge	72	1	No Gas			1436344.04		
Ge	72	1	No Gas			1397665.45		
Ge	72	1	No Gas			1385574.04		
Sc	45	2	H2			198465.33		
Sc	45	2	H2			195192.01		
Sc	45	2	H2			191070.29		
Ge	72	2	H2			162477.11		
Ge	72	2	H2			161153.84		
Ge	72	2	H2			156581.88		
In	115	2	H2			438869.52		
In	115	2	H2			444937.45		
In	115	2	H2			429864.25		
Sc	45	3	He			41940.55		
Sc	45	3	He			41008.33		
Sc	45	3	He			42331.93		
Ge	72	3	He			72673.60		
Ge	72	3	He			73367.82		
Ge	72	3	He			71567.51		
In	115	3	He			63886.28		
In	115	3	He			63766.09		
In	115	3	He			64800.94		
Tb	159	3	He			283390.35		
Tb	159	3	He			284793.26		
Tb	159	3	He			280176.73		
Bi	209	3	He			219644.10		
Bi	209	3	He			222704.31		
Bi	209	3	He			218830.45		

Quantitation Report

Data File Name	206SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 17:45:07
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

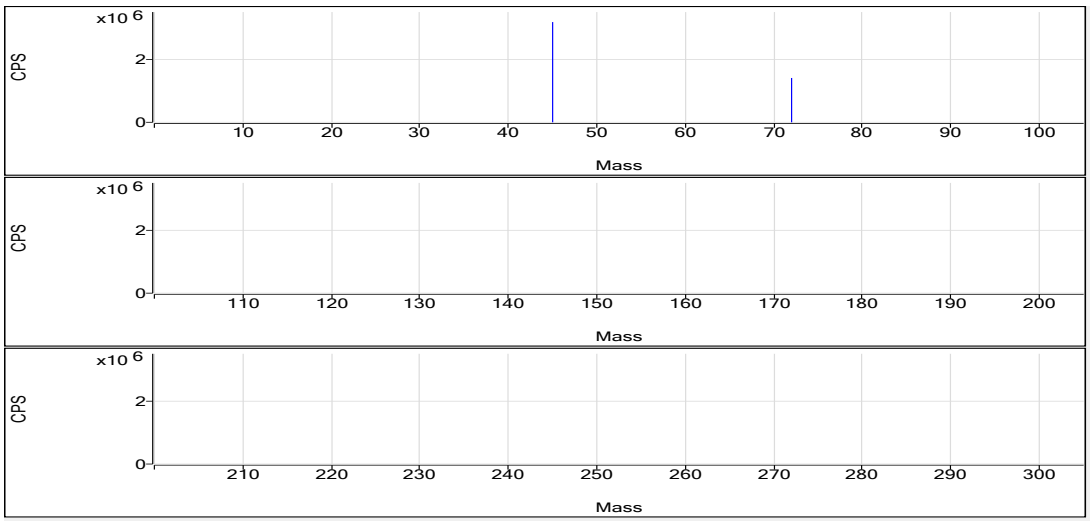
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.000	ppb	522.6	66.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.004	ppb	248.2	2.00	0.0000	Pulse	1.5000	3
Na	23	72	He	2.768	ppb	46.3	8089.10	0.1112	Pulse	0.1000	3
Mg	24	72	He	2.956	ppb	31.2	533.36	0.0073	Pulse	0.1000	3
Al	27	72	He	12.287	ppb	19.4	293.35	0.0040	Pulse	0.1000	3
K	39	72	He	-0.730	ppb	N/A	10424.04	0.1432	Pulse	0.1000	3
Ca	44	72	He	10.137	ppb	177.2	140.01	0.0019	Pulse	0.1000	3
Ti	47	72	He	0.547	ppb	197.1	30.00	0.0004	Pulse	0.1000	3
V	51	72	He	0.056	ppb	18.0	580.69	0.0080	Pulse	0.5000	3
Cr	52	72	He	-0.057	ppb	N/A	1783.51	0.0245	Pulse	0.1000	3
Mn	55	72	He	-1.121	ppb	N/A	526.69	0.0072	Pulse	0.1000	3
Fe	57	72	He	31.740	ppb	10.1	953.40	0.0131	Pulse	0.1000	3
Co	59	72	He	0.034	ppb	77.2	300.02	0.0041	Pulse	0.1000	3
Ni	60	72	He	0.873	ppb	16.9	1213.43	0.0167	Pulse	0.1000	3
Cu	63	72	He	0.056	ppb	15.1	460.02	0.0063	Pulse	0.1000	3
Zn	66	72	He	0.256	ppb	231.5	396.69	0.0055	Pulse	0.1000	3
As	75	72	He	0.087	ppb	85.0	42.67	0.0006	Pulse	0.5000	3
Sr	88	115	He	0.129	ppb	34.5	116.67	0.0018	Pulse	0.1000	3
Mo	98	115	He	0.007	ppb	259.9	43.33	0.0007	Pulse	0.1000	3
Ag	107	115	He	0.002	ppb	96.4	36.67	0.0006	Pulse	0.1000	3
Cd	111	115	He	-0.006	ppb	N/A	1.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.063	ppb	255.9	1076.75	0.0165	Pulse	0.1000	3
Sb	121	115	He	0.016	ppb	73.5	30.00	0.0005	Pulse	0.1000	3
Ba	137	115	He	0.080	ppb	137.0	43.33	0.0007	Pulse	0.1000	3
Tl	205	209	He	0.026	ppb	55.0	380.02	0.0017	Pulse	0.1000	3
Pb	208	209	He	0.042	ppb	23.8	816.71	0.0037	Pulse	0.1000	3
U	238	209	He	0.007	ppb	40.3	120.00	0.0005	Pulse	0.1000	3

ISTD Table:

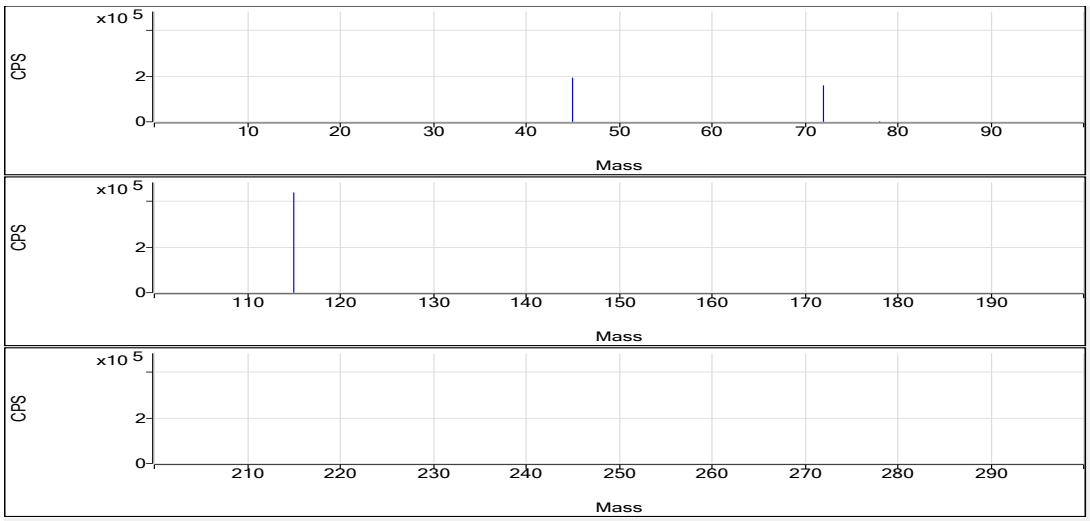
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3172774.02	1.9	97.9	Pulse	0.1000	3
No Gas	Ge	72	1403030.45	1.5	97.4	Pulse	0.1000	3
H2	Sc	45	193522.07	2.7	99.1	Pulse	0.1000	3
H2	Ge	72	159608.48	2.2	97.9	Pulse	0.1000	3
H2	In	115	439292.43	2.9	101.4	Pulse	0.1000	3
He	Sc	45	41830.29	1.1	104.6	Pulse	0.1000	3
He	Ge	72	72737.28	1.1	100.6	Pulse	0.1000	3
He	In	115	65267.74	1.3	101.0	Pulse	0.1000	3
He	Tb	159	282697.93	0.6	98.8	Pulse	0.1000	3
He	Bi	209	219547.72	0.7	98.8	Pulse	0.1000	3

No Gas

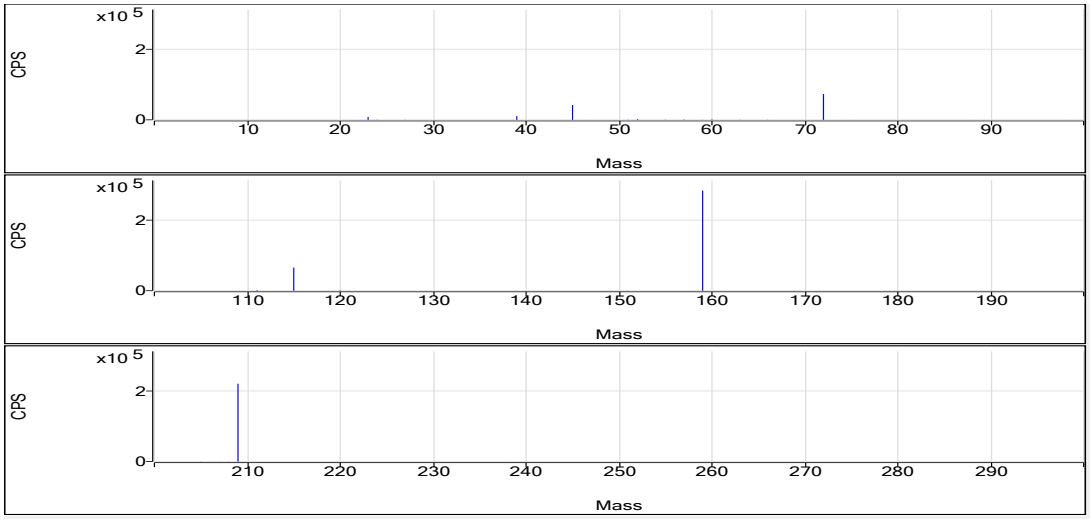


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.001	0	68.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.002	0	62.00	0.0013	4.694E-05
Be	9	1	No Gas	0.003	0.0001	70.00	0.0013	4.694E-05
Se	78	2	H2	0.014	0	2.67	0.0004	1.089E-05
Se	78	2	H2	-0.006	0	1.33	0.0004	1.089E-05
Se	78	2	H2	0.005	0	2.00	0.0004	1.089E-05
Na	23	3	He	2.37	0.1105	8142.48	0.0017	0.1065
Na	23	3	He	4.202	0.1137	8232.59	0.0017	0.1065
Na	23	3	He	1.732	0.1094	7892.24	0.0017	0.1065
Mg	24	3	He	2.142	0.0067	490.03	0.0008	0.004846
Mg	24	3	He	2.769	0.0072	520.03	0.0008	0.004846
Mg	24	3	He	3.956	0.0082	590.03	0.0008	0.004846
Al	27	3	He	14.718	0.0046	340.02	0.0002	0.001063
Al	27	3	He	12.186	0.004	290.01	0.0002	0.001063
Al	27	3	He	9.958	0.0035	250.01	0.0002	0.001063
K	39	3	He	19.738	0.1545	11384.82	0.0006	0.1436
K	39	3	He	-9.98	0.1381	10003.70	0.0006	0.1436
K	39	3	He	-11.948	0.137	9883.59	0.0006	0.1436
Ca	44	3	He	9.324	0.0019	140.01	0	0.001611
Ca	44	3	He	-7.409	0.0014	100.00	0	0.001611
Ca	44	3	He	28.495	0.0025	180.01	0	0.001611
Ti	47	3	He	1.615	0.0007	50.00	0.0003	0.0002737
Ti	47	3	He	-0.541	0.0001	10.00	0.0003	0.0002737
Ti	47	3	He	0.567	0.0004	30.00	0.0003	0.0002737
V	51	3	He	0.068	0.0081	598.02	0.0117	0.007326
V	51	3	He	0.049	0.0079	572.02	0.0117	0.007326
V	51	3	He	0.052	0.0079	572.02	0.0117	0.007326
Cr	52	3	He	0.009	0.0255	1880.18	0.0152	0.02538
Cr	52	3	He	-0.062	0.0244	1770.18	0.0152	0.02538
Cr	52	3	He	-0.119	0.0236	1700.16	0.0152	0.02538
Mn	55	3	He	-1.013	0.0079	580.03	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.967	0.0081	590.03	0.0059	0.01385
Mn	55	3	He	-1.384	0.0057	410.02	0.0059	0.01385
Fe	57	3	He	29.117	0.0124	910.06	0.0003	0.003918
Fe	57	3	He	30.804	0.0128	930.06	0.0003	0.003918
Fe	57	3	He	35.298	0.0141	1020.07	0.0003	0.003918
Co	59	3	He	0.006	0.0033	240.01	0.0305	0.003084
Co	59	3	He	0.039	0.0043	310.02	0.0305	0.003084
Co	59	3	He	0.058	0.0049	350.02	0.0305	0.003084
Ni	60	3	He	0.844	0.0164	1210.10	0.0088	0.009003
Ni	60	3	He	1.033	0.0181	1310.09	0.0088	0.009003
Ni	60	3	He	0.742	0.0155	1120.10	0.0088	0.009003
Cu	63	3	He	0.063	0.0065	480.02	0.0249	0.004937
Cu	63	3	He	0.057	0.0064	460.02	0.0249	0.004937
Cu	63	3	He	0.047	0.0061	440.02	0.0249	0.004937
Zn	66	3	He	-0.421	0.0038	280.01	0.0025	0.004836
Zn	66	3	He	0.673	0.0065	470.03	0.0025	0.004836
Zn	66	3	He	0.515	0.0061	440.02	0.0025	0.004836
As	75	3	He	0.172	0.0007	54.00	0.0017	0.0004347
As	75	3	He	0.052	0.0005	38.00	0.0017	0.0004347
As	75	3	He	0.037	0.0005	36.00	0.0017	0.0004347
Sr	88	3	He	0.158	0.002	130.01	0.0078	0.0007762
Sr	88	3	He	0.078	0.0014	90.00	0.0078	0.0007762
Sr	88	3	He	0.152	0.002	130.01	0.0078	0.0007762
Mo	98	3	He	-0.009	0.0003	20.00	0.022	0.0005162
Mo	98	3	He	0.005	0.0006	40.00	0.022	0.0005162
Mo	98	3	He	0.025	0.0011	70.00	0.022	0.0005162
Ag	107	3	He	0.003	0.0006	40.00	0.0455	0.0004641
Ag	107	3	He	0.003	0.0006	40.00	0.0455	0.0004641
Ag	107	3	He	0	0.0005	30.00	0.0455	0.0004641
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Cd	111	3	He	-0.011	0	0.00	0.0048	5.152E-05
Sn	120	3	He	0.046	0.0162	1050.08	0.0143	0.01559
Sn	120	3	He	-0.089	0.0143	930.06	0.0143	0.01559
Sn	120	3	He	0.231	0.0189	1250.12	0.0143	0.01559
Sb	121	3	He	0.004	0.0003	20.00	0.0124	0.000258
Sb	121	3	He	0.016	0.0005	30.00	0.0124	0.000258
Sb	121	3	He	0.028	0.0006	40.00	0.0124	0.000258
Ba	137	3	He	0.035	0.0005	30.00	0.0044	0.000309
Ba	137	3	He	0	0.0003	20.00	0.0044	0.000309
Ba	137	3	He	0.205	0.0012	80.00	0.0044	0.000309
Tl	205	3	He	0.041	0.0021	470.03	0.0276	0.001005
Tl	205	3	He	0.012	0.0013	290.02	0.0276	0.001005
Tl	205	3	He	0.026	0.0017	380.02	0.0276	0.001005
Pb	208	3	He	0.031	0.0033	390.02	0.0364	0.002176
Pb	208	3	He	0.046	0.0039	440.03	0.0364	0.002176
Pb	208	3	He	0.05	0.004	430.03	0.0364	0.002176
U	238	3	He	0.004	0.0004	90.00	0.0421	0.00024
U	238	3	He	0.01	0.0006	140.01	0.0421	0.00024
U	238	3	He	0.008	0.0006	130.00	0.0421	0.00024
Sc	45	1	No Gas			3229838.39		
Sc	45	1	No Gas			3177161.83		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3111321.83		
Ge	72	1	No Gas			1427049.04		
Ge	72	1	No Gas			1396733.26		
Ge	72	1	No Gas			1385309.04		
Sc	45	2	H2			198761.74		
Sc	45	2	H2			193328.77		
Sc	45	2	H2			188475.70		
Ge	72	2	H2			163660.05		
Ge	72	2	H2			158289.97		
Ge	72	2	H2			156875.42		
In	115	2	H2			451761.95		
In	115	2	H2			440032.81		
In	115	2	H2			426082.53		
Sc	45	3	He			42341.80		
Sc	45	3	He			41619.70		
Sc	45	3	He			41529.38		
Ge	72	3	He			73668.97		
Ge	72	3	He			72422.43		
Ge	72	3	He			72120.45		
In	115	3	He			64629.79		
In	115	3	He			64961.69		
In	115	3	He			66236.94		
Tb	159	3	He			280809.55		
Tb	159	3	He			283667.30		
Tb	159	3	He			283616.93		
Bi	209	3	He			220947.36		
Bi	209	3	He			217754.37		
Bi	209	3	He			219941.44		

Quantitation Report

Data File Name	207SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 17:47:07
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

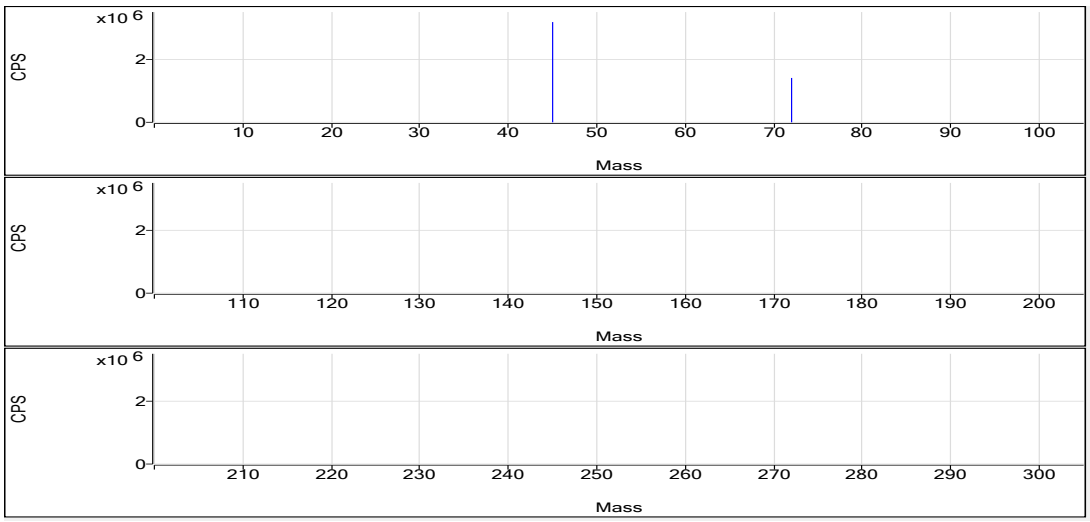
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.005	ppb	N/A	56.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.012	ppb	57.0	2.45	0.0000	Pulse	1.5000	3
Na	23	72	He	2.472	ppb	23.6	7992.40	0.1107	Pulse	0.1000	3
Mg	24	72	He	3.390	ppb	33.9	556.70	0.0077	Pulse	0.1000	3
Al	27	72	He	9.749	ppb	21.9	246.68	0.0034	Pulse	0.1000	3
K	39	72	He	12.469	ppb	135.7	10864.34	0.1505	Pulse	0.1000	3
Ca	44	72	He	-5.804	ppb	N/A	103.33	0.0014	Pulse	0.1000	3
Ti	47	72	He	0.381	ppb	220.2	26.67	0.0004	Pulse	0.1000	3
V	51	72	He	0.078	ppb	38.1	594.68	0.0082	Pulse	0.5000	3
Cr	52	72	He	0.089	ppb	202.1	1930.20	0.0267	Pulse	0.1000	3
Mn	55	72	He	-1.018	ppb	N/A	566.70	0.0078	Pulse	0.1000	3
Fe	57	72	He	29.857	ppb	15.9	906.72	0.0126	Pulse	0.1000	3
Co	59	72	He	0.049	ppb	32.3	330.02	0.0046	Pulse	0.1000	3
Ni	60	72	He	0.909	ppb	19.3	1226.76	0.0170	Pulse	0.1000	3
Cu	63	72	He	0.039	ppb	88.3	426.69	0.0059	Pulse	0.1000	3
Zn	66	72	He	0.586	ppb	65.7	453.36	0.0063	Pulse	0.1000	3
As	75	72	He	0.075	ppb	130.1	40.67	0.0006	Pulse	0.5000	3
Sr	88	115	He	0.133	ppb	44.5	116.67	0.0018	Pulse	0.1000	3
Mo	98	115	He	0.024	ppb	45.5	66.67	0.0010	Pulse	0.1000	3
Ag	107	115	He	0.001	ppb	432.4	33.33	0.0005	Pulse	0.1000	3
Cd	111	115	He	-0.002	ppb	N/A	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.154	ppb	72.7	1143.43	0.0178	Pulse	0.1000	3
Sb	121	115	He	-0.004	ppb	N/A	13.33	0.0002	Pulse	0.1000	3
Ba	137	115	He	0.096	ppb	141.6	46.67	0.0007	Pulse	0.1000	3
Tl	205	209	He	0.002	ppb	658.1	230.01	0.0010	Pulse	0.1000	3
Pb	208	209	He	0.032	ppb	27.5	730.04	0.0033	Pulse	0.1000	3
U	238	209	He	0.011	ppb	62.5	150.01	0.0007	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3171342.97	1.3	97.8	Pulse	0.1000	3
No Gas	Ge	72	1403381.70	1.1	97.5	Pulse	0.1000	3
H2	Sc	45	193107.75	1.2	98.8	Pulse	0.1000	3
H2	Ge	72	158863.99	1.6	97.5	Pulse	0.1000	3
H2	In	115	437252.90	2.2	100.9	Pulse	0.1000	3
He	Sc	45	41456.02	1.2	103.7	Pulse	0.1000	3
He	Ge	72	72197.67	1.0	99.9	Pulse	0.1000	3
He	In	115	64249.08	0.7	99.5	Pulse	0.1000	3
He	Tb	159	283791.49	1.3	99.2	Pulse	0.1000	3
He	Bi	209	219291.11	0.5	98.7	Pulse	0.1000	3

No Gas



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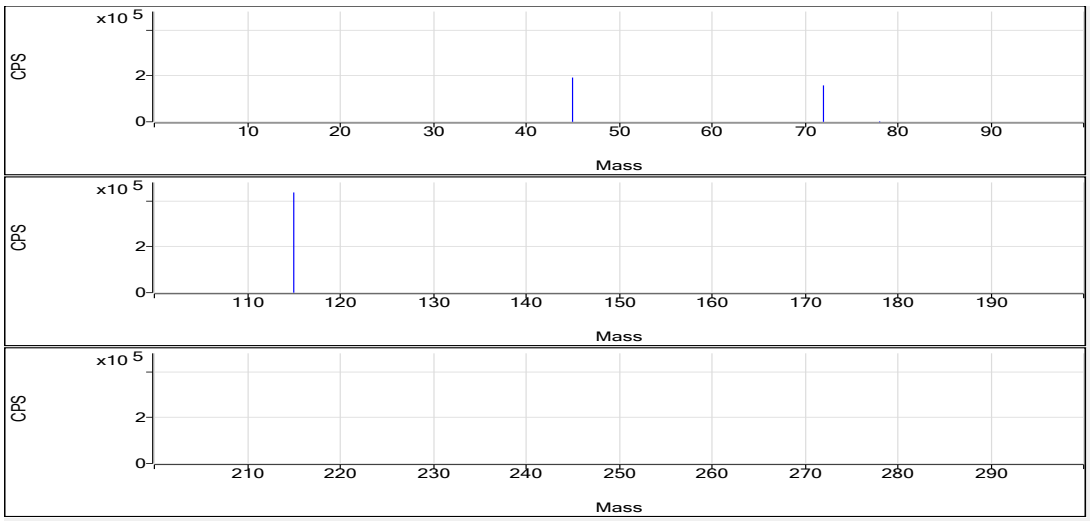
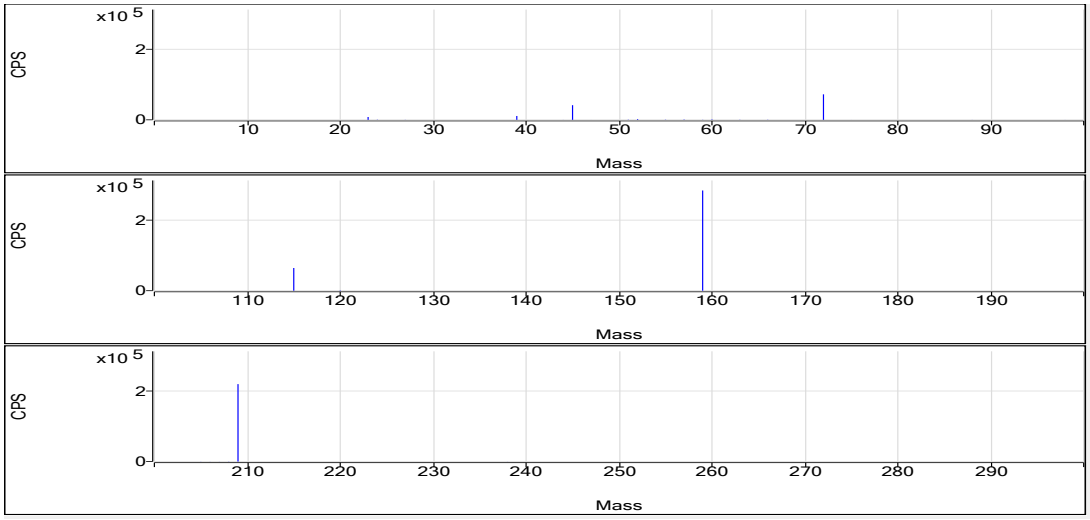


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.007	0	54.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.007	0	52.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.002	0	62.00	0.0013	4.694E-05
Se	78	2	H2	0.015	0	2.67	0.0004	1.089E-05
Se	78	2	H2	0.004	0	2.00	0.0004	1.089E-05
Se	78	2	H2	0.016	0	2.67	0.0004	1.089E-05
Na	23	3	He	2.632	0.111	7922.37	0.0017	0.1065
Na	23	3	He	1.825	0.1096	7942.35	0.0017	0.1065
Na	23	3	He	2.958	0.1115	8112.49	0.0017	0.1065
Mg	24	3	He	2.062	0.0066	470.02	0.0008	0.004846
Mg	24	3	He	4.072	0.0083	600.03	0.0008	0.004846
Mg	24	3	He	4.037	0.0082	600.04	0.0008	0.004846
Al	27	3	He	8.945	0.0032	230.01	0.0002	0.001063
Al	27	3	He	12.175	0.004	290.01	0.0002	0.001063
Al	27	3	He	8.128	0.003	220.01	0.0002	0.001063
K	39	3	He	29.191	0.1598	11404.80	0.0006	0.1436
K	39	3	He	-4.652	0.1411	10223.81	0.0006	0.1436
K	39	3	He	12.868	0.1507	10964.40	0.0006	0.1436
Ca	44	3	He	-11.274	0.0013	90.00	0	0.001611
Ca	44	3	He	5.888	0.0018	130.00	0	0.001611
Ca	44	3	He	-12.026	0.0012	90.00	0	0.001611
Ti	47	3	He	0.584	0.0004	30.00	0.0003	0.0002737
Ti	47	3	He	-0.541	0.0001	10.00	0.0003	0.0002737
Ti	47	3	He	1.101	0.0005	40.00	0.0003	0.0002737
V	51	3	He	0.097	0.0085	604.02	0.0117	0.007326
V	51	3	He	0.044	0.0078	568.01	0.0117	0.007326
V	51	3	He	0.093	0.0084	612.02	0.0117	0.007326
Cr	52	3	He	0.099	0.0269	1920.23	0.0152	0.02538
Cr	52	3	He	0.263	0.0294	2130.21	0.0152	0.02538
Cr	52	3	He	-0.096	0.0239	1740.17	0.0152	0.02538
Mn	55	3	He	-1.065	0.0076	540.03	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-1.038	0.0077	560.03	0.0059	0.01385
Mn	55	3	He	-0.949	0.0082	600.04	0.0059	0.01385
Fe	57	3	He	35.316	0.0141	1010.07	0.0003	0.003918
Fe	57	3	He	27.439	0.0119	860.05	0.0003	0.003918
Fe	57	3	He	26.817	0.0117	850.05	0.0003	0.003918
Co	59	3	He	0.046	0.0045	320.01	0.0305	0.003084
Co	59	3	He	0.035	0.0041	300.02	0.0305	0.003084
Co	59	3	He	0.066	0.0051	370.02	0.0305	0.003084
Ni	60	3	He	1.047	0.0182	1300.10	0.0088	0.009003
Ni	60	3	He	0.969	0.0175	1270.10	0.0088	0.009003
Ni	60	3	He	0.712	0.0153	1110.09	0.0088	0.009003
Cu	63	3	He	0.027	0.0056	400.02	0.0249	0.004937
Cu	63	3	He	0.012	0.0052	380.02	0.0249	0.004937
Cu	63	3	He	0.078	0.0069	500.03	0.0249	0.004937
Zn	66	3	He	0.255	0.0055	390.02	0.0025	0.004836
Zn	66	3	He	1.008	0.0073	530.03	0.0025	0.004836
Zn	66	3	He	0.494	0.006	440.02	0.0025	0.004836
As	75	3	He	0.185	0.0008	54.00	0.0017	0.0004347
As	75	3	He	0.036	0.0005	36.00	0.0017	0.0004347
As	75	3	He	0.003	0.0004	32.00	0.0017	0.0004347
Sr	88	3	He	0.197	0.0023	150.01	0.0078	0.0007762
Sr	88	3	He	0.121	0.0017	110.00	0.0078	0.0007762
Sr	88	3	He	0.081	0.0014	90.00	0.0078	0.0007762
Mo	98	3	He	0.026	0.0011	70.00	0.022	0.0005162
Mo	98	3	He	0.012	0.0008	50.00	0.022	0.0005162
Mo	98	3	He	0.033	0.0013	80.00	0.022	0.0005162
Ag	107	3	He	-0.003	0.0003	20.00	0.0455	0.0004641
Ag	107	3	He	0.007	0.0008	50.00	0.0455	0.0004641
Ag	107	3	He	0	0.0005	30.00	0.0455	0.0004641
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Cd	111	3	He	-0.011	0	0.00	0.0048	5.152E-05
Sn	120	3	He	0.281	0.0196	1270.11	0.0143	0.01559
Sn	120	3	He	0.113	0.0172	1100.08	0.0143	0.01559
Sn	120	3	He	0.069	0.0166	1060.10	0.0143	0.01559
Sb	121	3	He	0.004	0.0003	20.00	0.0124	0.000258
Sb	121	3	He	-0.008	0.0002	10.00	0.0124	0.000258
Sb	121	3	He	-0.008	0.0002	10.00	0.0124	0.000258
Ba	137	3	He	0	0.0003	20.00	0.0044	0.000309
Ba	137	3	He	0.251	0.0014	90.00	0.0044	0.000309
Ba	137	3	He	0.037	0.0005	30.00	0.0044	0.000309
Tl	205	3	He	-0.01	0.0007	160.01	0.0276	0.001005
Tl	205	3	He	0.01	0.0013	280.02	0.0276	0.001005
Tl	205	3	He	0.005	0.0011	250.01	0.0276	0.001005
Pb	208	3	He	0.026	0.0031	430.02	0.0364	0.002176
Pb	208	3	He	0.042	0.0037	500.03	0.0364	0.002176
Pb	208	3	He	0.028	0.0032	340.02	0.0364	0.002176
U	238	3	He	0.007	0.0005	120.01	0.0421	0.00024
U	238	3	He	0.018	0.001	220.01	0.0421	0.00024
U	238	3	He	0.006	0.0005	110.00	0.0421	0.00024
Sc	45	1	No Gas			3214295.58		
Sc	45	1	No Gas			3165133.70		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3134599.64		
Ge	72	1	No Gas			1420686.39		
Ge	72	1	No Gas			1390792.01		
Ge	72	1	No Gas			1398666.70		
Sc	45	2	H2			194891.44		
Sc	45	2	H2			193956.95		
Sc	45	2	H2			190474.86		
Ge	72	2	H2			160049.03		
Ge	72	2	H2			160635.97		
Ge	72	2	H2			155906.98		
In	115	2	H2			447968.31		
In	115	2	H2			434140.15		
In	115	2	H2			429650.23		
Sc	45	3	He			41990.85		
Sc	45	3	He			41319.08		
Sc	45	3	He			41058.12		
Ge	72	3	He			71386.92		
Ge	72	3	He			72472.22		
Ge	72	3	He			72733.88		
In	115	3	He			64810.69		
In	115	3	He			63976.24		
In	115	3	He			63987.08		
Tb	159	3	He			288117.40		
Tb	159	3	He			281022.44		
Tb	159	3	He			282234.64		
Bi	209	3	He			218209.92		
Bi	209	3	He			219308.14		
Bi	209	3	He			220355.27		

Quantitation Report

Data File Name	208_CCV.d
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Sample Type	CCV
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

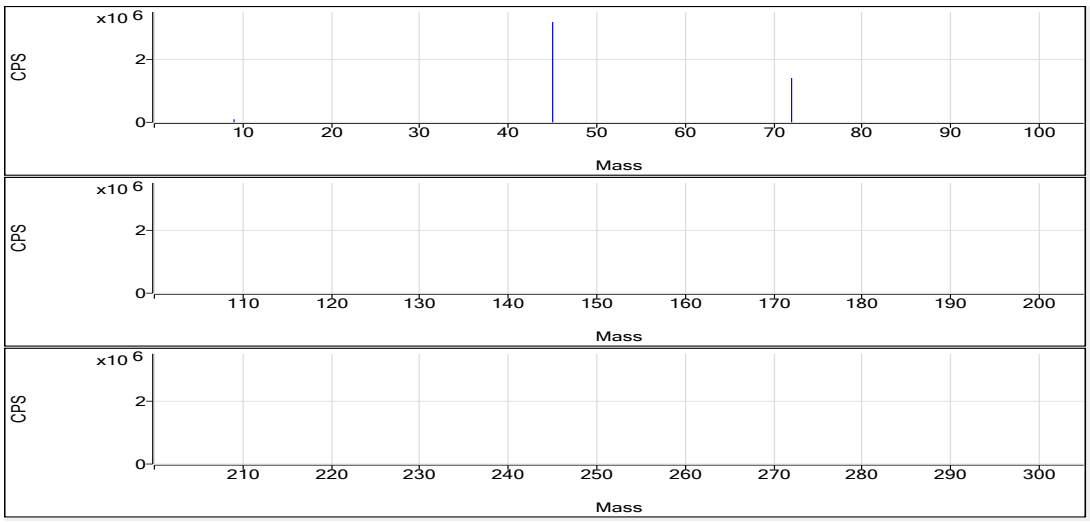
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	52.127	ppb	2.0	96167.57	0.0685	Pulse	0.5000	3
Se	78	72	H2	51.629	ppb	5.5	3224.81	0.0201	Pulse	1.5000	3
Na	23	72	He	5329.356	ppb	1.3	679241.65	9.2613	Pulse	0.1000	3
Mg	24	72	He	5302.694	ppb	1.3	328251.84	4.4756	Pulse	0.1000	3
Al	27	72	He	5269.248	ppb	1.4	93366.45	1.2730	Pulse	0.1000	3
K	39	72	He	5316.621	ppb	1.8	225858.81	3.0795	Pulse	0.1000	3
Ca	44	72	He	5347.084	ppb	1.6	12298.88	0.1677	Pulse	0.1000	3
Ti	47	72	He	5329.202	ppb	1.1	98040.42	1.3367	Pulse	0.1000	3
V	51	72	He	530.097	ppb	0.8	455328.01	6.2083	Pulse	0.5000	3
Cr	52	72	He	531.538	ppb	1.0	595481.66	8.1193	Pulse	0.1000	3
Mn	55	72	He	527.060	ppb	1.1	229179.76	3.1248	Pulse	0.1000	3
Fe	57	72	He	5253.671	ppb	0.9	111919.14	1.5260	Pulse	0.1000	3
Co	59	72	He	528.795	ppb	0.6	1183527.19	16.1369	Pulse	0.1000	3
Ni	60	72	He	528.313	ppb	1.4	341382.17	4.6546	Pulse	0.1000	3
Cu	63	72	He	526.561	ppb	0.8	963420.25	13.1359	Pulse	0.1000	3
Zn	66	72	He	526.622	ppb	0.6	95246.53	1.2986	Pulse	0.1000	3
As	75	72	He	521.168	ppb	0.2	66510.22	0.9068	Pulse	0.5000	3
Sr	88	115	He	52.820	ppb	1.2	26575.57	0.4137	Pulse	0.1000	3
Mo	98	115	He	50.869	ppb	0.8	71993.74	1.1207	Pulse	0.1000	3
Ag	107	115	He	51.587	ppb	2.2	150784.20	2.3477	Pulse	0.1000	3
Cd	111	115	He	51.778	ppb	2.1	15967.10	0.2486	Pulse	0.5000	3
Sn	120	115	He	52.322	ppb	1.8	48919.71	0.7616	Pulse	0.1000	3
Sb	121	115	He	52.264	ppb	1.7	41662.93	0.6486	Pulse	0.1000	3
Ba	137	115	He	514.103	ppb	0.9	144493.74	2.2494	Pulse	0.1000	3
Tl	205	209	He	52.087	ppb	1.2	317706.10	1.4409	Pulse	0.1000	3
Pb	208	209	He	52.404	ppb	0.8	421038.53	1.9095	Pulse	0.1000	3
U	238	209	He	51.701	ppb	1.1	479599.24	2.1752	Pulse	0.1000	3

ISTD Table:

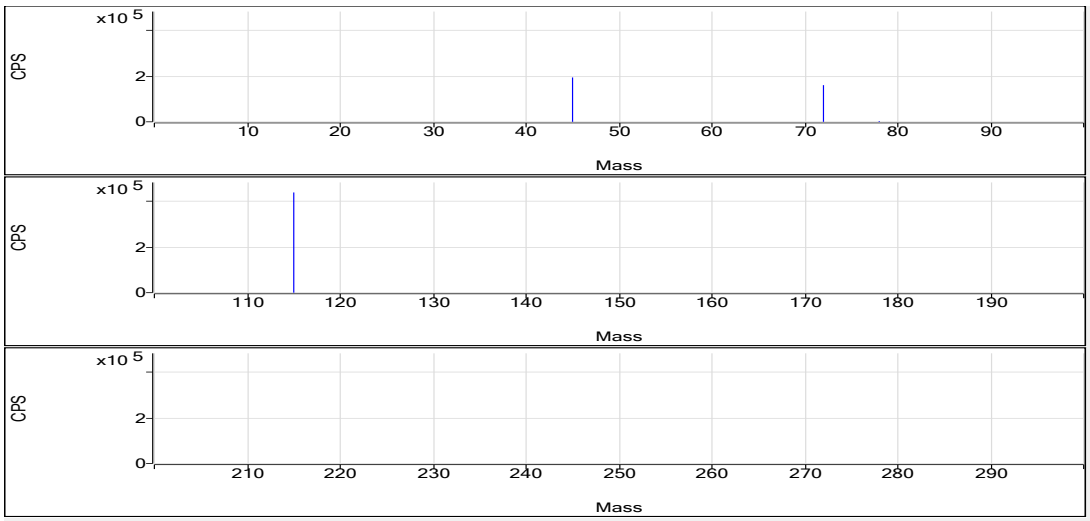
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3175599.74	0.8	98.0	Pulse	0.1000	3
No Gas	Ge	72	1403255.60	1.4	97.5	Pulse	0.1000	3
H2	Sc	45	194104.10	0.9	99.3	Pulse	0.1000	3
H2	Ge	72	160421.44	1.7	98.4	Pulse	0.1000	3
H2	In	115	438559.23	2.5	101.2	Pulse	0.1000	3
He	Sc	45	41583.14	2.2	104.0	Pulse	0.1000	3
He	Ge	72	73343.22	0.3	101.5	Pulse	0.1000	3
He	In	115	64241.40	1.6	99.5	Pulse	0.1000	3
He	Tb	159	285569.53	0.8	99.8	Pulse	0.1000	3
He	Bi	209	220496.77	0.5	99.2	Pulse	0.1000	3

No Gas

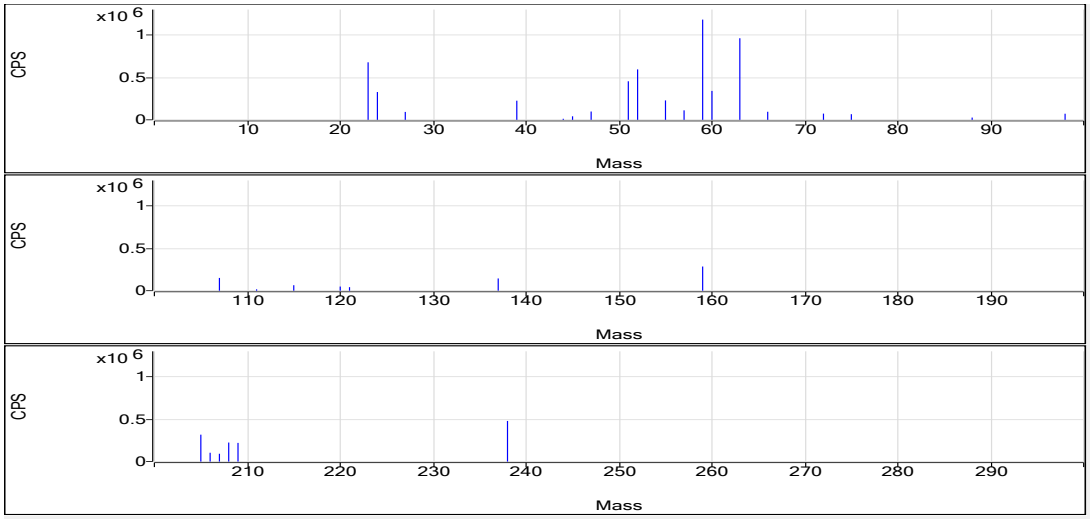


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	52.664	0.0692	96954.55	0.0013	4.694E-05
Be	9	1	No Gas	52.816	0.0694	96201.98	0.0013	4.694E-05
Be	9	1	No Gas	50.902	0.0669	95346.18	0.0013	4.694E-05
Se	78	2	H2	48.422	0.0189	3084.34	0.0004	1.089E-05
Se	78	2	H2	52.617	0.0205	3239.03	0.0004	1.089E-05
Se	78	2	H2	53.849	0.021	3351.06	0.0004	1.089E-05
Na	23	3	He	5407.253	9.3952	686837.80	0.0017	0.1065
Na	23	3	He	5282.335	9.1806	673172.80	0.0017	0.1065
Na	23	3	He	5298.481	9.2083	677714.36	0.0017	0.1065
Mg	24	3	He	5344.686	4.511	329776.25	0.0008	0.004846
Mg	24	3	He	5224.561	4.4097	323343.82	0.0008	0.004846
Mg	24	3	He	5338.834	4.506	331635.46	0.0008	0.004846
Al	27	3	He	5347.779	1.292	94451.34	0.0002	0.001063
Al	27	3	He	5199.08	1.2561	92103.94	0.0002	0.001063
Al	27	3	He	5260.885	1.271	93544.07	0.0002	0.001063
K	39	3	He	5416.664	3.1348	229170.35	0.0006	0.1436
K	39	3	He	5229.33	3.0313	222275.54	0.0006	0.1436
K	39	3	He	5303.87	3.0725	226130.54	0.0006	0.1436
Ca	44	3	He	5416.012	0.1698	12415.63	0	0.001611
Ca	44	3	He	5254.556	0.1648	12085.33	0	0.001611
Ca	44	3	He	5370.684	0.1684	12395.68	0	0.001611
Ti	47	3	He	5352.4	1.3425	98147.49	0.0003	0.0002737
Ti	47	3	He	5263.539	1.3203	96809.24	0.0003	0.0002737
Ti	47	3	He	5371.669	1.3474	99164.54	0.0003	0.0002737
V	51	3	He	535.122	6.267	458155.75	0.0117	0.007326
V	51	3	He	526.605	6.1674	452231.53	0.0117	0.007326
V	51	3	He	528.563	6.1903	455596.75	0.0117	0.007326
Cr	52	3	He	537.846	8.2153	600585.15	0.0152	0.02538
Cr	52	3	He	528.174	8.068	591595.85	0.0152	0.02538
Cr	52	3	He	528.594	8.0744	594263.98	0.0152	0.02538
Mn	55	3	He	532.266	3.1555	230685.35	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	521.194	3.0902	226588.71	0.0059	0.01385
Mn	55	3	He	527.72	3.1287	230265.21	0.0059	0.01385
Fe	57	3	He	5304.057	1.5406	112625.03	0.0003	0.003918
Fe	57	3	He	5215.041	1.5148	111073.43	0.0003	0.003918
Fe	57	3	He	5241.914	1.5226	112058.96	0.0003	0.003918
Co	59	3	He	531.604	16.2226	1185961.15	0.0305	0.003084
Co	59	3	He	525.464	16.0352	1175798.42	0.0305	0.003084
Co	59	3	He	529.319	16.1529	1188822.01	0.0305	0.003084
Ni	60	3	He	534.323	4.7075	344141.79	0.0088	0.009003
Ni	60	3	He	520.203	4.5833	336074.80	0.0088	0.009003
Ni	60	3	He	530.412	4.6731	343929.92	0.0088	0.009003
Cu	63	3	He	530.591	13.2364	967651.08	0.0249	0.004937
Cu	63	3	He	521.803	13.0172	954497.41	0.0249	0.004937
Cu	63	3	He	527.29	13.154	968112.25	0.0249	0.004937
Zn	66	3	He	523.173	1.2901	94317.09	0.0025	0.004836
Zn	66	3	He	527.41	1.3006	95364.73	0.0025	0.004836
Zn	66	3	He	529.284	1.3052	96057.77	0.0025	0.004836
As	75	3	He	520.319	0.9054	66186.77	0.0017	0.0004347
As	75	3	He	522.473	0.9091	66660.87	0.0017	0.0004347
As	75	3	He	520.711	0.906	66683.03	0.0017	0.0004347
Sr	88	3	He	52.185	0.4087	25994.58	0.0078	0.0007762
Sr	88	3	He	53.418	0.4183	26645.58	0.0078	0.0007762
Sr	88	3	He	52.858	0.414	27086.56	0.0078	0.0007762
Mo	98	3	He	50.754	1.1182	71119.57	0.022	0.0005162
Mo	98	3	He	51.305	1.1303	71993.90	0.022	0.0005162
Mo	98	3	He	50.548	1.1137	72867.74	0.022	0.0005162
Ag	107	3	He	52.187	2.375	151053.84	0.0455	0.0004641
Ag	107	3	He	52.284	2.3794	151550.12	0.0455	0.0004641
Ag	107	3	He	50.29	2.2887	149748.65	0.0455	0.0004641
Cd	111	3	He	52.105	0.2502	15911.06	0.0048	5.152E-05
Cd	111	3	He	52.672	0.2529	16107.26	0.0048	5.152E-05
Cd	111	3	He	50.558	0.2427	15882.98	0.0048	5.152E-05
Sn	120	3	He	53.392	0.7768	49408.14	0.0143	0.01559
Sn	120	3	He	51.866	0.7551	48093.52	0.0143	0.01559
Sn	120	3	He	51.707	0.7528	49257.46	0.0143	0.01559
Sb	121	3	He	53.269	0.6611	42043.95	0.0124	0.000258
Sb	121	3	He	51.734	0.642	40891.13	0.0124	0.000258
Sb	121	3	He	51.791	0.6427	42053.71	0.0124	0.000258
Ba	137	3	He	513.889	2.2485	143005.33	0.0044	0.000309
Ba	137	3	He	518.703	2.2695	144551.03	0.0044	0.000309
Ba	137	3	He	509.718	2.2302	145924.86	0.0044	0.000309
Tl	205	3	He	52.813	1.461	320493.55	0.0276	0.001005
Tl	205	3	He	51.768	1.4321	317183.94	0.0276	0.001005
Tl	205	3	He	51.68	1.4297	315440.80	0.0276	0.001005
Pb	208	3	He	52.803	1.9241	224735.84	0.0364	0.002176
Pb	208	3	He	51.975	1.8939	222785.64	0.0364	0.002176
Pb	208	3	He	52.434	1.9106	226271.60	0.0364	0.002176
U	238	3	He	52.1	2.192	480844.52	0.0421	0.00024
U	238	3	He	51.033	2.1471	475541.67	0.0421	0.00024
U	238	3	He	51.969	2.1864	482411.52	0.0421	0.00024
Sc	45	1	No Gas			3168357.45		
Sc	45	1	No Gas			3154655.58		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3203786.20		
Ge	72	1	No Gas			1400080.60		
Ge	72	1	No Gas			1385207.17		
Ge	72	1	No Gas			1424479.04		
Sc	45	2	H2			196047.65		
Sc	45	2	H2			193702.59		
Sc	45	2	H2			192562.07		
Ge	72	2	H2			163499.96		
Ge	72	2	H2			158018.92		
Ge	72	2	H2			159745.43		
In	115	2	H2			449180.11		
In	115	2	H2			439469.37		
In	115	2	H2			427028.20		
Sc	45	3	He			41820.70		
Sc	45	3	He			40576.74		
Sc	45	3	He			42351.97		
Ge	72	3	He			73105.57		
Ge	72	3	He			73325.88		
Ge	72	3	He			73598.22		
In	115	3	He			63986.67		
In	115	3	He			64067.31		
In	115	3	He			65814.95		
Tb	159	3	He			283359.45		
Tb	159	3	He			287648.02		
Tb	159	3	He			285701.11		
Bi	209	3	He			219367.09		
Bi	209	3	He			221484.18		
Bi	209	3	He			220639.04		

Quantitation Report

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Sample Type	CCB
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Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

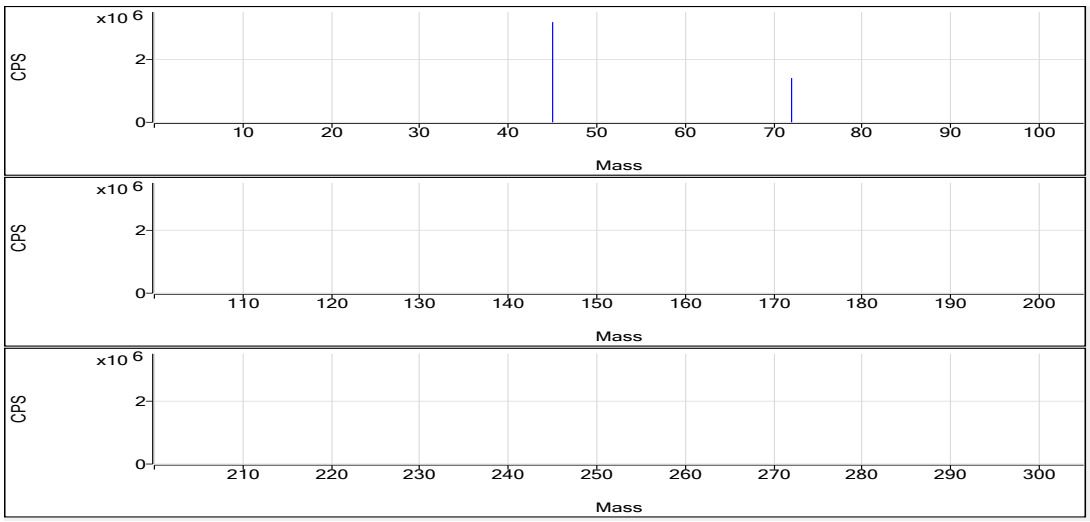
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.023	ppb	20.9	109.33	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.026	ppb	38.7	3.33	0.0000	Pulse	1.5000	3
Na	23	72	He	4.020	ppb	70.2	8219.19	0.1134	Pulse	0.1000	3
Mg	24	72	He	3.367	ppb	53.0	556.70	0.0077	Pulse	0.1000	3
Al	27	72	He	9.507	ppb	18.3	243.34	0.0034	Pulse	0.1000	3
K	39	72	He	14.446	ppb	143.2	10994.48	0.1516	Pulse	0.1000	3
Ca	44	72	He	4.452	ppb	387.3	126.67	0.0017	Pulse	0.1000	3
Ti	47	72	He	2.023	ppb	14.8	56.67	0.0008	Pulse	0.1000	3
V	51	72	He	0.093	ppb	53.2	610.02	0.0084	Pulse	0.5000	3
Cr	52	72	He	0.057	ppb	378.2	1903.53	0.0262	Pulse	0.1000	3
Mn	55	72	He	-0.820	ppb	N/A	653.37	0.0090	Pulse	0.1000	3
Fe	57	72	He	26.001	ppb	11.3	830.05	0.0115	Pulse	0.1000	3
Co	59	72	He	0.093	ppb	8.6	430.02	0.0059	Pulse	0.1000	3
Ni	60	72	He	1.024	ppb	25.5	1306.78	0.0180	Pulse	0.1000	3
Cu	63	72	He	0.097	ppb	12.1	533.37	0.0074	Pulse	0.1000	3
Zn	66	72	He	0.633	ppb	55.2	463.36	0.0064	Pulse	0.1000	3
As	75	72	He	0.099	ppb	57.5	44.00	0.0006	Pulse	0.5000	3
Sr	88	115	He	0.115	ppb	124.4	106.67	0.0017	Pulse	0.1000	3
Mo	98	115	He	0.007	ppb	61.6	43.33	0.0007	Pulse	0.1000	3
Ag	107	115	He	0.009	ppb	95.4	56.67	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.011	ppb	36.9	6.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.126	ppb	29.1	1113.42	0.0174	Pulse	0.1000	3
Sb	121	115	He	0.047	ppb	79.3	53.33	0.0008	Pulse	0.1000	3
Ba	137	115	He	0.143	ppb	47.6	60.00	0.0009	Pulse	0.1000	3
Tl	205	209	He	0.128	ppb	11.9	1003.41	0.0045	Pulse	0.1000	3
Pb	208	209	He	0.052	ppb	19.4	900.05	0.0041	Pulse	0.1000	3
U	238	209	He	0.015	ppb	14.2	190.01	0.0009	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3195738.39	2.2	98.6	Pulse	0.1000	3
No Gas	Ge	72	1410258.94	2.5	97.9	Pulse	0.1000	3
H2	Sc	45	194600.17	2.7	99.6	Pulse	0.1000	3
H2	Ge	72	158220.45	1.8	97.1	Pulse	0.1000	3
H2	In	115	438481.40	2.8	101.2	Pulse	0.1000	3
He	Sc	45	40861.08	2.0	102.2	Pulse	0.1000	3
He	Ge	72	72516.62	0.7	100.3	Pulse	0.1000	3
He	In	115	64024.99	1.6	99.1	Pulse	0.1000	3
He	Tb	159	281548.63	0.8	98.4	Pulse	0.1000	3
He	Bi	209	220974.31	0.4	99.5	Pulse	0.1000	3

No Gas



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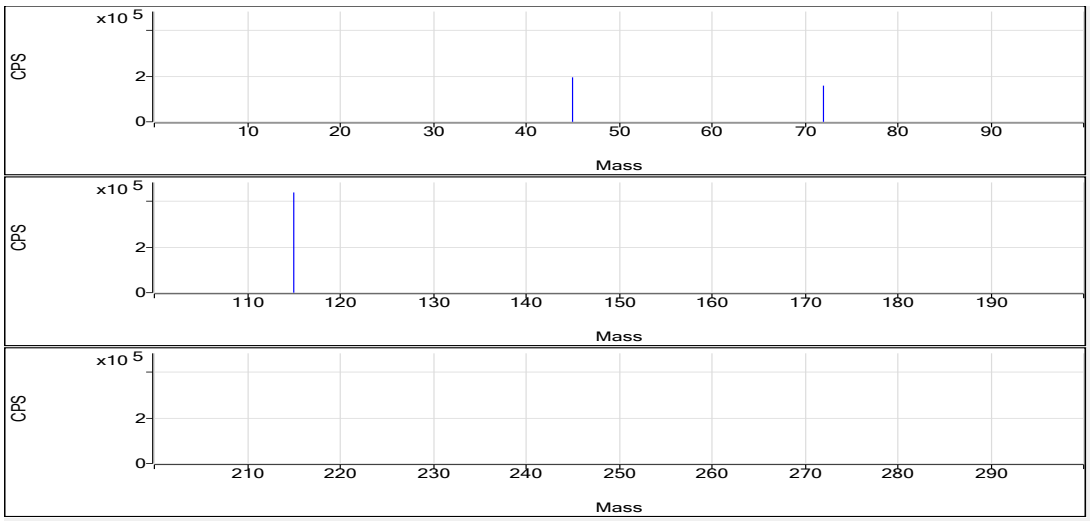
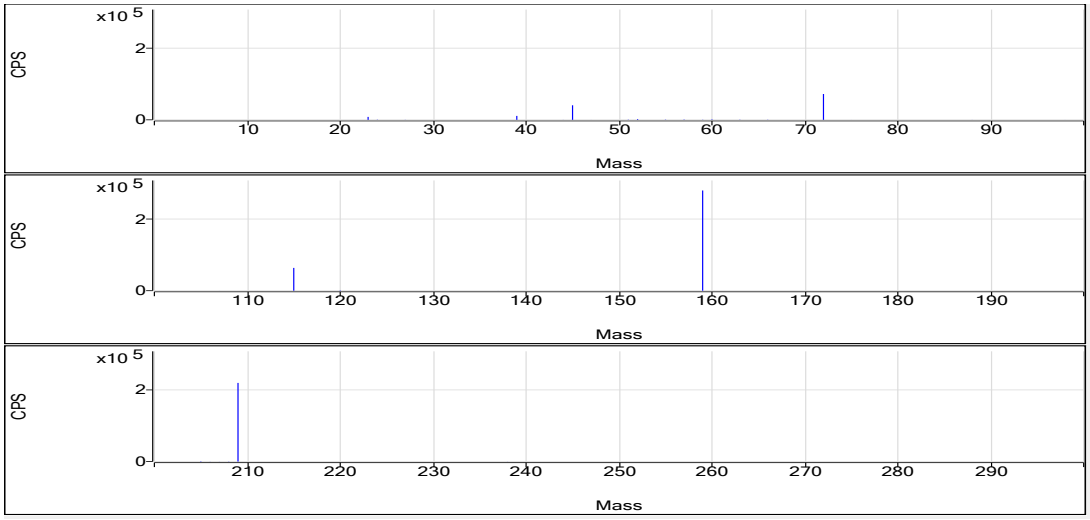


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.025	0.0001	112.00	0.0013	4.694E-05
Be	9	1	No Gas	0.027	0.0001	114.00	0.0013	4.694E-05
Be	9	1	No Gas	0.018	0.0001	102.00	0.0013	4.694E-05
Se	78	2	H2	0.036	0	4.00	0.0004	1.089E-05
Se	78	2	H2	0.025	0	3.33	0.0004	1.089E-05
Se	78	2	H2	0.016	0	2.67	0.0004	1.089E-05
Na	23	3	He	6.155	0.117	8482.70	0.0017	0.1065
Na	23	3	He	5.084	0.1152	8292.53	0.0017	0.1065
Na	23	3	He	0.82	0.1079	7882.35	0.0017	0.1065
Mg	24	3	He	3.416	0.0077	560.03	0.0008	0.004846
Mg	24	3	He	5.127	0.0092	660.04	0.0008	0.004846
Mg	24	3	He	1.556	0.0062	450.02	0.0008	0.004846
Al	27	3	He	10.458	0.0036	260.01	0.0002	0.001063
Al	27	3	He	10.559	0.0036	260.01	0.0002	0.001063
Al	27	3	He	7.503	0.0029	210.01	0.0002	0.001063
K	39	3	He	38.314	0.1648	11945.19	0.0006	0.1436
K	39	3	He	3.105	0.1454	10464.18	0.0006	0.1436
K	39	3	He	1.917	0.1447	10574.07	0.0006	0.1436
Ca	44	3	He	-3.005	0.0015	110.00	0	0.001611
Ca	44	3	He	24.168	0.0024	170.01	0	0.001611
Ca	44	3	He	-7.807	0.0014	100.00	0	0.001611
Ti	47	3	He	2.209	0.0008	60.00	0.0003	0.0002737
Ti	47	3	He	1.678	0.0007	50.00	0.0003	0.0002737
Ti	47	3	He	2.183	0.0008	60.00	0.0003	0.0002737
V	51	3	He	0.15	0.0091	658.02	0.0117	0.007326
V	51	3	He	0.062	0.0081	580.02	0.0117	0.007326
V	51	3	He	0.066	0.0081	592.02	0.0117	0.007326
Cr	52	3	He	0.299	0.0299	2170.23	0.0152	0.02538
Cr	52	3	He	-0.107	0.0238	1710.16	0.0152	0.02538
Cr	52	3	He	-0.022	0.025	1830.19	0.0152	0.02538
Mn	55	3	He	-0.664	0.0099	720.05	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.723	0.0096	690.04	0.0059	0.01385
Mn	55	3	He	-1.072	0.0075	550.03	0.0059	0.01385
Fe	57	3	He	25.528	0.0113	820.05	0.0003	0.003918
Fe	57	3	He	29.152	0.0124	890.06	0.0003	0.003918
Fe	57	3	He	23.322	0.0107	780.05	0.0003	0.003918
Co	59	3	He	0.102	0.0062	450.02	0.0305	0.003084
Co	59	3	He	0.09	0.0058	420.02	0.0305	0.003084
Co	59	3	He	0.087	0.0057	420.02	0.0305	0.003084
Ni	60	3	He	0.875	0.0167	1210.09	0.0088	0.009003
Ni	60	3	He	0.872	0.0167	1200.10	0.0088	0.009003
Ni	60	3	He	1.326	0.0207	1510.14	0.0088	0.009003
Cu	63	3	He	0.095	0.0073	530.03	0.0249	0.004937
Cu	63	3	He	0.086	0.0071	510.03	0.0249	0.004937
Cu	63	3	He	0.109	0.0077	560.04	0.0249	0.004937
Zn	66	3	He	0.952	0.0072	520.03	0.0025	0.004836
Zn	66	3	He	0.689	0.0065	470.02	0.0025	0.004836
Zn	66	3	He	0.26	0.0055	400.02	0.0025	0.004836
As	75	3	He	0.131	0.0007	48.00	0.0017	0.0004347
As	75	3	He	0.133	0.0007	48.00	0.0017	0.0004347
As	75	3	He	0.033	0.0005	36.00	0.0017	0.0004347
Sr	88	3	He	0.144	0.0019	120.00	0.0078	0.0007762
Sr	88	3	He	0.241	0.0027	170.01	0.0078	0.0007762
Sr	88	3	He	-0.04	0.0005	30.00	0.0078	0.0007762
Mo	98	3	He	0.013	0.0008	50.00	0.022	0.0005162
Mo	98	3	He	0.005	0.0006	40.00	0.022	0.0005162
Mo	98	3	He	0.004	0.0006	40.00	0.022	0.0005162
Ag	107	3	He	0.018	0.0013	80.00	0.0455	0.0004641
Ag	107	3	He	0.01	0.0009	60.00	0.0455	0.0004641
Ag	107	3	He	0	0.0005	30.00	0.0455	0.0004641
Cd	111	3	He	0.016	0.0001	8.00	0.0048	5.152E-05
Cd	111	3	He	0.009	0.0001	6.00	0.0048	5.152E-05
Cd	111	3	He	0.008	0.0001	6.00	0.0048	5.152E-05
Sn	120	3	He	0.096	0.017	1070.09	0.0143	0.01559
Sn	120	3	He	0.115	0.0172	1100.09	0.0143	0.01559
Sn	120	3	He	0.167	0.018	1170.09	0.0143	0.01559
Sb	121	3	He	0.069	0.0011	70.00	0.0124	0.000258
Sb	121	3	He	0.068	0.0011	70.00	0.0124	0.000258
Sb	121	3	He	0.004	0.0003	20.00	0.0124	0.000258
Ba	137	3	He	0.074	0.0006	40.00	0.0044	0.000309
Ba	137	3	He	0.144	0.0009	60.00	0.0044	0.000309
Ba	137	3	He	0.21	0.0012	80.00	0.0044	0.000309
Tl	205	3	He	0.133	0.0047	1040.08	0.0276	0.001005
Tl	205	3	He	0.14	0.0049	1070.08	0.0276	0.001005
Tl	205	3	He	0.111	0.0041	900.07	0.0276	0.001005
Pb	208	3	He	0.043	0.0037	490.03	0.0364	0.002176
Pb	208	3	He	0.05	0.004	540.03	0.0364	0.002176
Pb	208	3	He	0.063	0.0045	530.03	0.0364	0.002176
U	238	3	He	0.015	0.0009	190.01	0.0421	0.00024
U	238	3	He	0.013	0.0008	170.01	0.0421	0.00024
U	238	3	He	0.017	0.0009	210.01	0.0421	0.00024
Sc	45	1	No Gas			3183537.45		
Sc	45	1	No Gas			3130918.39		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3272759.33		
Ge	72	1	No Gas			1406604.82		
Ge	72	1	No Gas			1376382.64		
Ge	72	1	No Gas			1447789.35		
Sc	45	2	H2			197421.40		
Sc	45	2	H2			197779.98		
Sc	45	2	H2			188599.12		
Ge	72	2	H2			159585.01		
Ge	72	2	H2			160191.97		
Ge	72	2	H2			154884.38		
In	115	2	H2			450085.34		
In	115	2	H2			439515.46		
In	115	2	H2			425843.39		
Sc	45	3	He			41800.08		
Sc	45	3	He			40316.71		
Sc	45	3	He			40466.44		
Ge	72	3	He			72483.70		
Ge	72	3	He			71990.15		
Ge	72	3	He			73076.00		
In	115	3	He			63112.90		
In	115	3	He			63855.93		
In	115	3	He			65132.19		
Tb	159	3	He			283953.04		
Tb	159	3	He			280943.55		
Tb	159	3	He			279749.29		
Bi	209	3	He			221491.11		
Bi	209	3	He			220058.79		
Bi	209	3	He			221373.02		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 17:53:08
Sample Name	MB 410-402395/1-A @2
Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

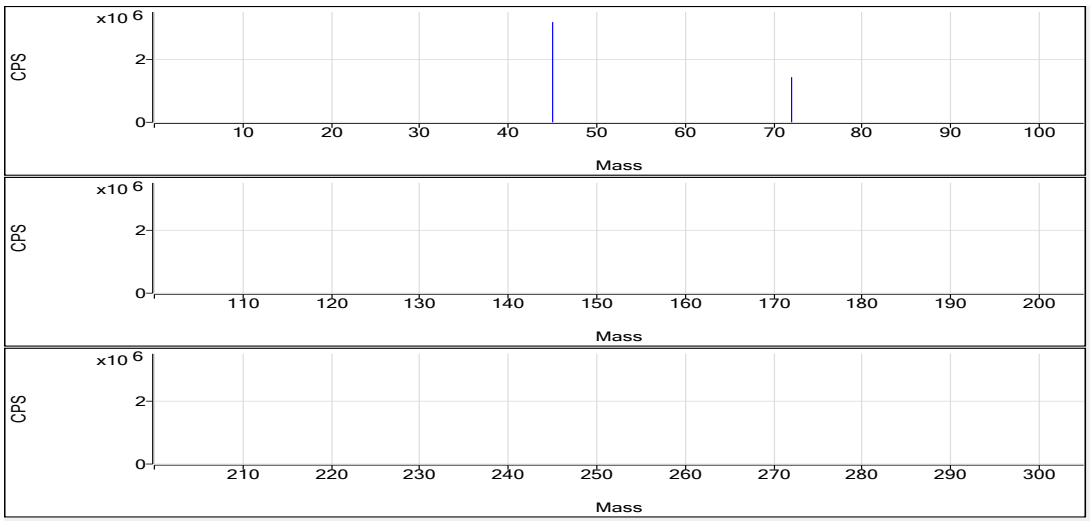
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.004	ppb	N/A	60.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.028	ppb	78.5	3.56	0.0000	Pulse	1.5000	3
Na	23	72	He	105.333	ppb	2.4	21539.45	0.2874	Pulse	0.1000	3
Mg	24	72	He	3.965	ppb	52.0	613.37	0.0082	Pulse	0.1000	3
Al	27	72	He	15.860	ppb	9.3	366.69	0.0049	Pulse	0.1000	3
K	39	72	He	4.758	ppb	301.3	10964.43	0.1463	Pulse	0.1000	3
Ca	44	72	He	8.319	ppb	140.4	140.01	0.0019	Pulse	0.1000	3
Ti	47	72	He	0.684	ppb	90.9	33.33	0.0004	Pulse	0.1000	3
V	51	72	He	-0.041	ppb	N/A	512.68	0.0068	Pulse	0.5000	3
Cr	52	72	He	0.229	ppb	20.9	2163.57	0.0289	Pulse	0.1000	3
Mn	55	72	He	-0.463	ppb	N/A	833.39	0.0111	Pulse	0.1000	3
Fe	57	72	He	35.626	ppb	15.4	1066.75	0.0142	Pulse	0.1000	3
Co	59	72	He	0.036	ppb	49.8	313.34	0.0042	Pulse	0.1000	3
Ni	60	72	He	0.919	ppb	23.2	1280.10	0.0171	Pulse	0.1000	3
Cu	63	72	He	0.155	ppb	40.4	660.04	0.0088	Pulse	0.1000	3
Zn	66	72	He	2.090	ppb	40.3	746.71	0.0100	Pulse	0.1000	3
As	75	72	He	0.011	ppb	505.7	34.00	0.0005	Pulse	0.5000	3
Sr	88	115	He	0.080	ppb	65.6	90.00	0.0014	Pulse	0.1000	3
Mo	98	115	He	0.014	ppb	173.9	53.33	0.0008	Pulse	0.1000	3
Ag	107	115	He	0.005	ppb	43.2	43.33	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.011	ppb	90.2	6.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.906	ppb	25.4	1830.20	0.0285	Pulse	0.1000	3
Sb	121	115	He	0.025	ppb	104.0	36.67	0.0006	Pulse	0.1000	3
Ba	137	115	He	0.191	ppb	47.4	73.33	0.0011	Pulse	0.1000	3
Tl	205	209	He	0.034	ppb	16.2	436.69	0.0020	Pulse	0.1000	3
Pb	208	209	He	0.047	ppb	23.6	870.04	0.0039	Pulse	0.1000	3
U	238	209	He	0.005	ppb	37.5	100.00	0.0004	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3187488.08	1.3	98.3	Pulse	0.1000	3
No Gas	Ge	72	1435092.89	1.2	99.7	Pulse	0.1000	3
H2	Sc	45	196084.93	1.1	100.4	Pulse	0.1000	3
H2	Ge	72	163483.48	3.3	100.3	Pulse	0.1000	3
H2	In	115	440125.66	2.5	101.6	Pulse	0.1000	3
He	Sc	45	42408.96	1.3	106.1	Pulse	0.1000	3
He	Ge	72	74945.23	0.6	103.7	Pulse	0.1000	3
He	In	115	64210.23	0.4	99.4	Pulse	0.1000	3
He	Tb	159	284060.90	0.8	99.3	Pulse	0.1000	3
He	Bi	209	223992.28	0.6	100.8	Pulse	0.1000	3

No Gas



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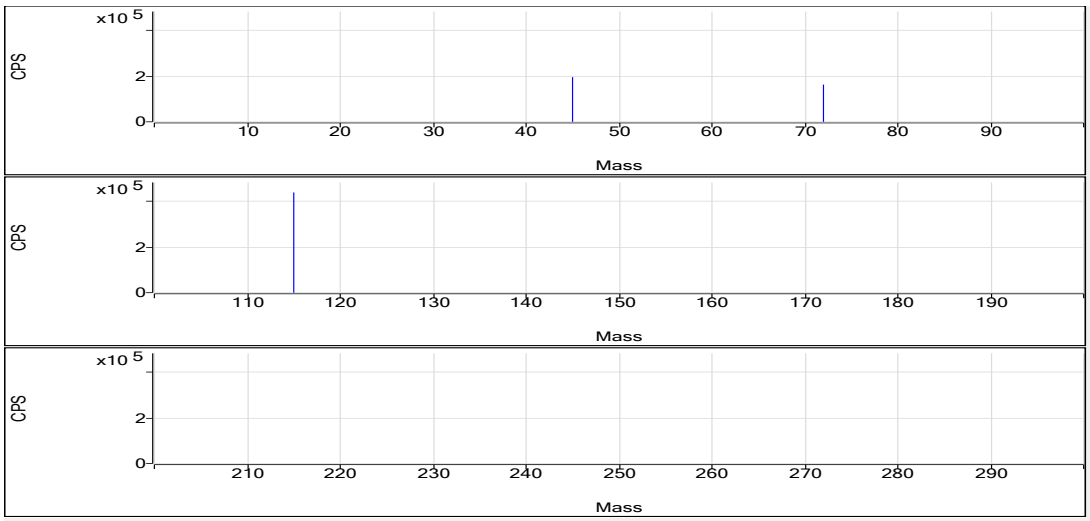
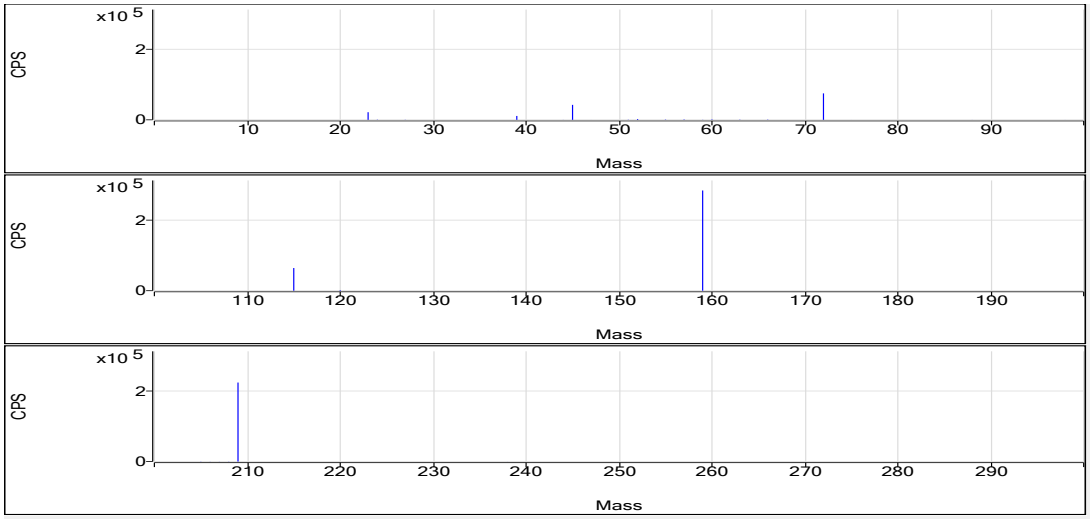


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.007	0	54.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.008	0	52.00	0.0013	4.694E-05
Be	9	1	No Gas	0.003	0.0001	74.00	0.0013	4.694E-05
Se	78	2	H2	0.044	0	4.67	0.0004	1.089E-05
Se	78	2	H2	0.003	0	2.00	0.0004	1.089E-05
Se	78	2	H2	0.037	0	4.00	0.0004	1.089E-05
Na	23	3	He	104.99	0.2868	21636.29	0.0017	0.1065
Na	23	3	He	108.016	0.292	21846.58	0.0017	0.1065
Na	23	3	He	102.994	0.2834	21135.48	0.0017	0.1065
Mg	24	3	He	2.9	0.0073	550.03	0.0008	0.004846
Mg	24	3	He	2.655	0.0071	530.03	0.0008	0.004846
Mg	24	3	He	6.339	0.0102	760.05	0.0008	0.004846
Al	27	3	He	17.564	0.0053	400.02	0.0002	0.001063
Al	27	3	He	14.978	0.0047	350.02	0.0002	0.001063
Al	27	3	He	15.039	0.0047	350.02	0.0002	0.001063
K	39	3	He	20.623	0.155	11695.02	0.0006	0.1436
K	39	3	He	0.914	0.1441	10784.26	0.0006	0.1436
K	39	3	He	-7.264	0.1396	10414.02	0.0006	0.1436
Ca	44	3	He	-0.65	0.0016	120.00	0	0.001611
Ca	44	3	He	4.084	0.0017	130.01	0	0.001611
Ca	44	3	He	21.525	0.0023	170.01	0	0.001611
Ti	47	3	He	-0.034	0.0003	20.00	0.0003	0.0002737
Ti	47	3	He	1.04	0.0005	40.00	0.0003	0.0002737
Ti	47	3	He	1.047	0.0005	40.00	0.0003	0.0002737
V	51	3	He	-0.064	0.0066	496.01	0.0117	0.007326
V	51	3	He	-0.021	0.0071	530.01	0.0117	0.007326
V	51	3	He	-0.039	0.0069	512.01	0.0117	0.007326
Cr	52	3	He	0.24	0.029	2190.24	0.0152	0.02538
Cr	52	3	He	0.177	0.0281	2100.23	0.0152	0.02538
Cr	52	3	He	0.27	0.0295	2200.24	0.0152	0.02538
Mn	55	3	He	-0.46	0.0111	840.05	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.241	0.0124	930.06	0.0059	0.01385
Mn	55	3	He	-0.689	0.0098	730.05	0.0059	0.01385
Fe	57	3	He	29.491	0.0125	940.08	0.0003	0.003918
Fe	57	3	He	39.999	0.0155	1160.08	0.0003	0.003918
Fe	57	3	He	37.389	0.0147	1100.09	0.0003	0.003918
Co	59	3	He	0.025	0.0038	290.01	0.0305	0.003084
Co	59	3	He	0.057	0.0048	360.01	0.0305	0.003084
Co	59	3	He	0.026	0.0039	290.01	0.0305	0.003084
Ni	60	3	He	0.876	0.0167	1260.09	0.0088	0.009003
Ni	60	3	He	1.15	0.0191	1430.14	0.0088	0.009003
Ni	60	3	He	0.73	0.0154	1150.08	0.0088	0.009003
Cu	63	3	He	0.227	0.0106	800.05	0.0249	0.004937
Cu	63	3	He	0.118	0.0079	590.03	0.0249	0.004937
Cu	63	3	He	0.119	0.0079	590.03	0.0249	0.004937
Zn	66	3	He	1.485	0.0085	640.03	0.0025	0.004836
Zn	66	3	He	1.731	0.0091	680.04	0.0025	0.004836
Zn	66	3	He	3.053	0.0123	920.07	0.0025	0.004836
As	75	3	He	0.024	0.0005	36.00	0.0017	0.0004347
As	75	3	He	0.057	0.0005	40.00	0.0017	0.0004347
As	75	3	He	-0.049	0.0003	26.00	0.0017	0.0004347
Sr	88	3	He	0.12	0.0017	110.00	0.0078	0.0007762
Sr	88	3	He	0.099	0.0015	100.00	0.0078	0.0007762
Sr	88	3	He	0.021	0.0009	60.00	0.0078	0.0007762
Mo	98	3	He	0.04	0.0014	90.00	0.022	0.0005162
Mo	98	3	He	-0.009	0.0003	20.00	0.022	0.0005162
Mo	98	3	He	0.012	0.0008	50.00	0.022	0.0005162
Ag	107	3	He	0.007	0.0008	50.00	0.0455	0.0004641
Ag	107	3	He	0.003	0.0006	40.00	0.0455	0.0004641
Ag	107	3	He	0.004	0.0006	40.00	0.0455	0.0004641
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Cd	111	3	He	0.022	0.0002	10.00	0.0048	5.152E-05
Cd	111	3	He	0.009	0.0001	6.00	0.0048	5.152E-05
Sn	120	3	He	1.15	0.032	2050.25	0.0143	0.01559
Sn	120	3	He	0.874	0.028	1810.19	0.0143	0.01559
Sn	120	3	He	0.693	0.0255	1630.17	0.0143	0.01559
Sb	121	3	He	0.017	0.0005	30.00	0.0124	0.000258
Sb	121	3	He	0.004	0.0003	20.00	0.0124	0.000258
Sb	121	3	He	0.055	0.0009	60.00	0.0124	0.000258
Ba	137	3	He	0.286	0.0016	100.00	0.0044	0.000309
Ba	137	3	He	0.106	0.0008	50.00	0.0044	0.000309
Ba	137	3	He	0.179	0.0011	70.00	0.0044	0.000309
Tl	205	3	He	0.038	0.0021	460.03	0.0276	0.001005
Tl	205	3	He	0.028	0.0018	400.02	0.0276	0.001005
Tl	205	3	He	0.036	0.002	450.03	0.0276	0.001005
Pb	208	3	He	0.038	0.0035	420.02	0.0364	0.002176
Pb	208	3	He	0.044	0.0038	390.02	0.0364	0.002176
Pb	208	3	He	0.059	0.0043	460.02	0.0364	0.002176
U	238	3	He	0.004	0.0004	90.00	0.0421	0.00024
U	238	3	He	0.004	0.0004	90.00	0.0421	0.00024
U	238	3	He	0.007	0.0005	120.01	0.0421	0.00024
Sc	45	1	No Gas			3176172.14		
Sc	45	1	No Gas			3154489.33		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3231802.76		
Ge	72	1	No Gas			1429513.88		
Ge	72	1	No Gas			1420680.60		
Ge	72	1	No Gas			1455084.20		
Sc	45	2	H2			198375.04		
Sc	45	2	H2			195952.65		
Sc	45	2	H2			193927.09		
Ge	72	2	H2			166937.38		
Ge	72	2	H2			166312.24		
Ge	72	2	H2			157200.83		
In	115	2	H2			451180.54		
In	115	2	H2			439774.41		
In	115	2	H2			429422.02		
Sc	45	3	He			42412.07		
Sc	45	3	He			42943.91		
Sc	45	3	He			41870.90		
Ge	72	3	He			75437.56		
Ge	72	3	He			74814.98		
Ge	72	3	He			74583.15		
In	115	3	He			64117.60		
In	115	3	He			64549.33		
In	115	3	He			64006.59		
Tb	159	3	He			284564.80		
Tb	159	3	He			285910.37		
Tb	159	3	He			281707.52		
Bi	209	3	He			222754.55		
Bi	209	3	He			225255.48		
Bi	209	3	He			223966.81		

Quantitation Report

Data File Name	211SMPL.d
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Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

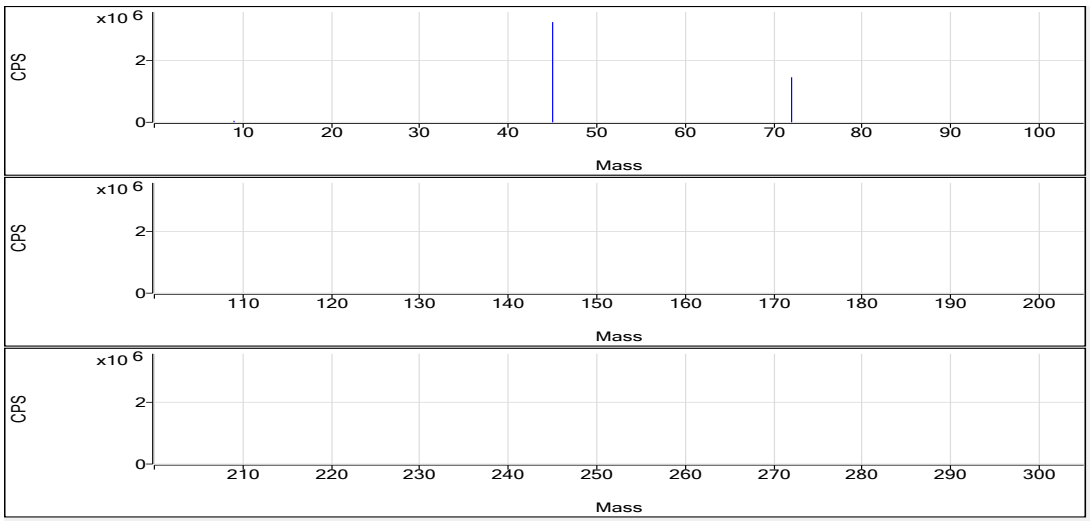
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	25.339	ppb	1.1	48500.29	0.0333	Pulse	0.5000	3
Se	78	72	H2	51.884	ppb	1.9	3337.95	0.0202	Pulse	1.5000	3
Na	23	72	He	2707.102	ppb	1.7	358270.18	4.7568	Pulse	0.1000	3
Mg	24	72	He	2613.682	ppb	1.0	166351.63	2.2084	Pulse	0.1000	3
Al	27	72	He	2578.687	ppb	2.8	46958.48	0.6235	Pulse	0.1000	3
K	39	72	He	2599.315	ppb	1.6	118930.67	1.5790	Pulse	0.1000	3
Ca	44	72	He	2547.957	ppb	5.8	6081.47	0.0808	Pulse	0.1000	3
Ti	47	72	He	253.933	ppb	0.9	4817.65	0.0640	Pulse	0.1000	3
V	51	72	He	258.764	ppb	1.4	228540.77	3.0343	Pulse	0.5000	3
Cr	52	72	He	259.878	ppb	1.4	299971.30	3.9826	Pulse	0.1000	3
Mn	55	72	He	254.827	ppb	1.7	114339.30	1.5179	Pulse	0.1000	3
Fe	57	72	He	2617.709	ppb	2.3	57414.10	0.7623	Pulse	0.1000	3
Co	59	72	He	258.319	ppb	1.4	593864.93	7.8845	Pulse	0.1000	3
Ni	60	72	He	257.687	ppb	0.5	171365.18	2.2749	Pulse	0.1000	3
Cu	63	72	He	258.887	ppb	1.6	486628.91	6.4608	Pulse	0.1000	3
Zn	66	72	He	258.152	ppb	1.2	48134.34	0.6391	Pulse	0.1000	3
As	75	72	He	256.009	ppb	0.7	33571.67	0.4457	Pulse	0.5000	3
Sr	88	115	He	27.125	ppb	2.6	13543.57	0.2128	Pulse	0.1000	3
Mo	98	115	He	26.035	ppb	1.1	36524.72	0.5738	Pulse	0.1000	3
Ag	107	115	He	25.813	ppb	1.8	74778.61	1.1750	Pulse	0.1000	3
Cd	111	115	He	26.297	ppb	1.4	8037.67	0.1263	Pulse	0.5000	3
Sn	120	115	He	54.377	ppb	1.8	50335.13	0.7909	Pulse	0.1000	3
Sb	121	115	He	51.958	ppb	1.5	41037.87	0.6448	Pulse	0.1000	3
Ba	137	115	He	259.850	ppb	0.9	72376.94	1.1371	Pulse	0.1000	3
Tl	205	209	He	51.980	ppb	0.5	319099.78	1.4380	Pulse	0.1000	3
Pb	208	209	He	26.042	ppb	0.6	210826.82	0.9500	Pulse	0.1000	3
U	238	209	He	25.803	ppb	1.2	240925.15	1.0857	Pulse	0.1000	3

ISTD Table:

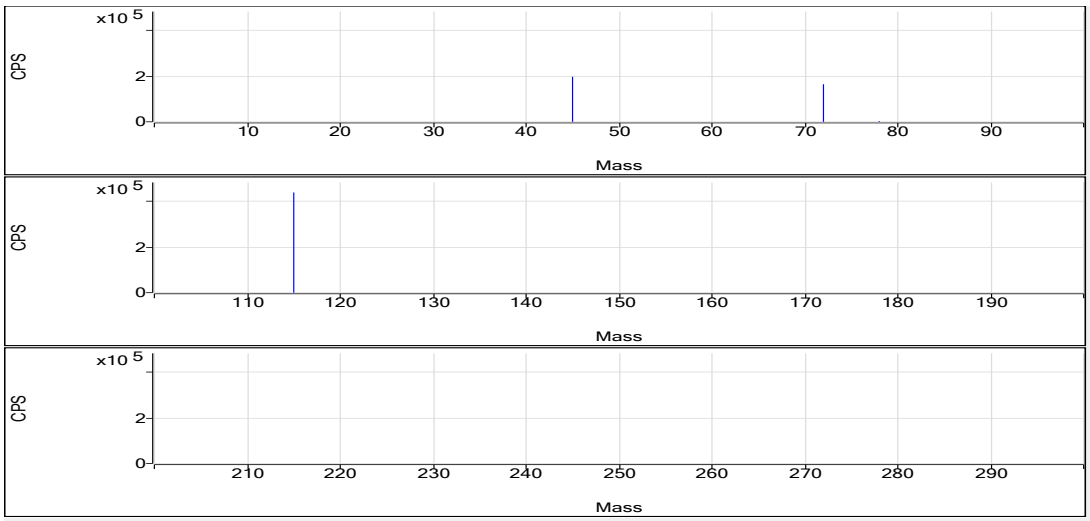
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3237024.01	1.0	99.9	Pulse	0.1000	3
No Gas	Ge	72	1454728.57	1.5	101.0	Pulse	0.1000	3
H2	Sc	45	197655.87	0.9	101.2	Pulse	0.1000	3
H2	Ge	72	165171.43	1.5	101.3	Pulse	0.1000	3
H2	In	115	440469.58	2.2	101.7	Pulse	0.1000	3
He	Sc	45	42348.48	1.3	105.9	Pulse	0.1000	3
He	Ge	72	75330.59	1.5	104.2	Pulse	0.1000	3
He	In	115	63654.52	1.5	98.5	Pulse	0.1000	3
He	Tb	159	284113.69	0.0	99.3	Pulse	0.1000	3
He	Bi	209	221917.35	0.7	99.9	Pulse	0.1000	3

No Gas

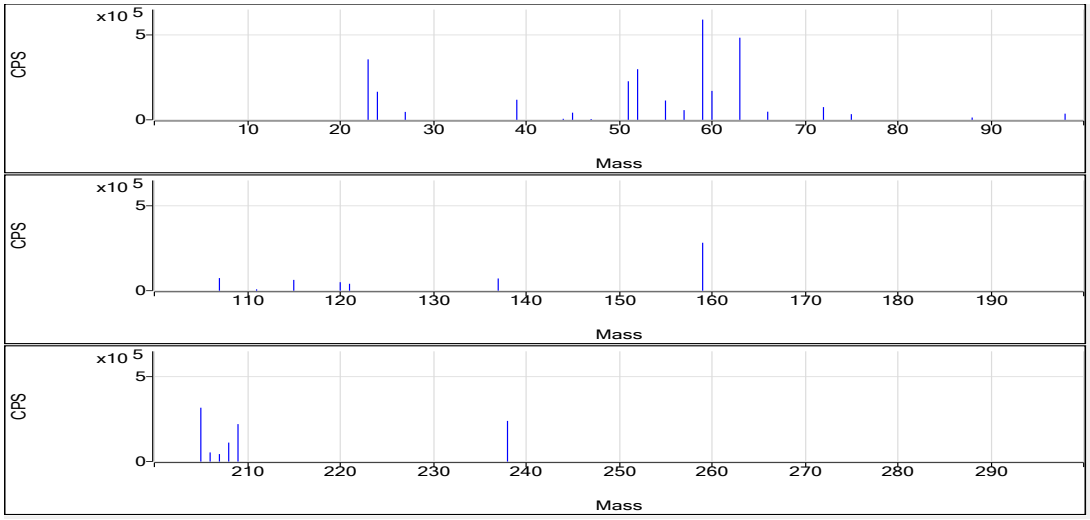


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	25.429	0.0335	48762.50	0.0013	4.694E-05
Be	9	1	No Gas	25.563	0.0336	48146.38	0.0013	4.694E-05
Be	9	1	No Gas	25.025	0.0329	48591.98	0.0013	4.694E-05
Se	78	2	H2	50.906	0.0198	3329.73	0.0004	1.089E-05
Se	78	2	H2	51.905	0.0202	3327.72	0.0004	1.089E-05
Se	78	2	H2	52.842	0.0206	3356.39	0.0004	1.089E-05
Na	23	3	He	2729.201	4.7947	359386.71	0.0017	0.1065
Na	23	3	He	2654.358	4.6662	357587.42	0.0017	0.1065
Na	23	3	He	2737.748	4.8094	357836.40	0.0017	0.1065
Mg	24	3	He	2640.077	2.2307	167200.82	0.0008	0.004846
Mg	24	3	He	2588.19	2.187	167595.08	0.0008	0.004846
Mg	24	3	He	2612.78	2.2077	164258.98	0.0008	0.004846
Al	27	3	He	2610.136	0.6311	47306.32	0.0002	0.001063
Al	27	3	He	2496.427	0.6037	46262.89	0.0002	0.001063
Al	27	3	He	2629.498	0.6358	47306.23	0.0002	0.001063
K	39	3	He	2619.766	1.5903	119200.53	0.0006	0.1436
K	39	3	He	2552.083	1.5529	119007.40	0.0006	0.1436
K	39	3	He	2626.096	1.5938	118584.09	0.0006	0.1436
Ca	44	3	He	2418.563	0.0767	5751.34	0	0.001611
Ca	44	3	He	2515.717	0.0797	6111.47	0	0.001611
Ca	44	3	He	2709.59	0.0858	6381.60	0	0.001611
Ti	47	3	He	251.659	0.0634	4750.96	0.0003	0.0002737
Ti	47	3	He	253.927	0.064	4901.01	0.0003	0.0002737
Ti	47	3	He	256.212	0.0645	4800.97	0.0003	0.0002737
V	51	3	He	259.605	3.0441	228170.61	0.0117	0.007326
V	51	3	He	254.742	2.9872	228923.52	0.0117	0.007326
V	51	3	He	261.944	3.0715	228528.19	0.0117	0.007326
Cr	52	3	He	260.199	3.9875	298881.03	0.0152	0.02538
Cr	52	3	He	256.134	3.9256	300835.46	0.0152	0.02538
Cr	52	3	He	263.301	4.0347	300197.42	0.0152	0.02538
Mn	55	3	He	251.148	1.4962	112149.27	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	253.744	1.5116	115836.93	0.0059	0.01385
Mn	55	3	He	259.589	1.5461	115031.71	0.0059	0.01385
Fe	57	3	He	2596.197	0.7561	56671.10	0.0003	0.003918
Fe	57	3	He	2572.47	0.7492	57414.23	0.0003	0.003918
Fe	57	3	He	2684.461	0.7816	58156.98	0.0003	0.003918
Co	59	3	He	258.491	7.8898	591372.96	0.0305	0.003084
Co	59	3	He	254.731	7.775	595833.08	0.0305	0.003084
Co	59	3	He	261.735	7.9887	594388.74	0.0305	0.003084
Ni	60	3	He	256.82	2.2673	169944.20	0.0088	0.009003
Ni	60	3	He	256.982	2.2687	173861.19	0.0088	0.009003
Ni	60	3	He	259.259	2.2887	170290.15	0.0088	0.009003
Cu	63	3	He	257.664	6.4303	481982.53	0.0249	0.004937
Cu	63	3	He	255.433	6.3747	488518.43	0.0249	0.004937
Cu	63	3	He	263.565	6.5775	489385.77	0.0249	0.004937
Zn	66	3	He	258.588	0.6401	47980.41	0.0025	0.004836
Zn	66	3	He	254.743	0.6307	48331.51	0.0025	0.004836
Zn	66	3	He	261.124	0.6464	48091.10	0.0025	0.004836
As	75	3	He	257.847	0.4489	33645.18	0.0017	0.0004347
As	75	3	He	254.372	0.4428	33935.89	0.0017	0.0004347
As	75	3	He	255.808	0.4453	33133.95	0.0017	0.0004347
Sr	88	3	He	27.743	0.2176	13747.08	0.0078	0.0007762
Sr	88	3	He	26.348	0.2067	13386.75	0.0078	0.0007762
Sr	88	3	He	27.285	0.2141	13496.88	0.0078	0.0007762
Mo	98	3	He	25.914	0.5712	36076.88	0.022	0.0005162
Mo	98	3	He	25.826	0.5692	36858.94	0.022	0.0005162
Mo	98	3	He	26.364	0.5811	36638.33	0.022	0.0005162
Ag	107	3	He	25.887	1.1784	74426.51	0.0455	0.0004641
Ag	107	3	He	25.323	1.1527	74637.65	0.0455	0.0004641
Ag	107	3	He	26.227	1.1938	75271.68	0.0455	0.0004641
Cd	111	3	He	26.627	0.1279	8076.38	0.0048	5.152E-05
Cd	111	3	He	25.909	0.1244	8056.35	0.0048	5.152E-05
Cd	111	3	He	26.356	0.1266	7980.29	0.0048	5.152E-05
Sn	120	3	He	54.93	0.7988	50452.03	0.0143	0.01559
Sn	120	3	He	53.273	0.7751	50191.39	0.0143	0.01559
Sn	120	3	He	54.928	0.7987	50361.96	0.0143	0.01559
Sb	121	3	He	52.283	0.6488	40981.18	0.0124	0.000258
Sb	121	3	He	51.074	0.6338	41041.18	0.0124	0.000258
Sb	121	3	He	52.516	0.6517	41091.25	0.0124	0.000258
Ba	137	3	He	262.31	1.1479	72500.78	0.0044	0.000309
Ba	137	3	He	257.894	1.1285	73073.89	0.0044	0.000309
Ba	137	3	He	259.345	1.1349	71556.15	0.0044	0.000309
Tl	205	3	He	52.053	1.44	318505.15	0.0276	0.001005
Tl	205	3	He	52.172	1.4433	318865.42	0.0276	0.001005
Tl	205	3	He	51.715	1.4306	319928.78	0.0276	0.001005
Pb	208	3	He	26.093	0.9519	112629.61	0.0364	0.002176
Pb	208	3	He	26.16	0.9543	112526.87	0.0364	0.002176
Pb	208	3	He	25.874	0.9439	111810.92	0.0364	0.002176
U	238	3	He	26.063	1.0967	242567.38	0.0421	0.00024
U	238	3	He	25.895	1.0896	240727.46	0.0421	0.00024
U	238	3	He	25.451	1.0709	239480.60	0.0421	0.00024
Sc	45	1	No Gas			3246603.70		
Sc	45	1	No Gas			3200428.08		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3264040.26		
Ge	72	1	No Gas			1457273.26		
Ge	72	1	No Gas			1431322.32		
Ge	72	1	No Gas			1475590.13		
Sc	45	2	H2			198911.97		
Sc	45	2	H2			195678.02		
Sc	45	2	H2			198377.61		
Ge	72	2	H2			167897.89		
Ge	72	2	H2			164570.52		
Ge	72	2	H2			163045.87		
In	115	2	H2			451736.83		
In	115	2	H2			435834.95		
In	115	2	H2			433836.95		
Sc	45	3	He			42502.64		
Sc	45	3	He			42812.94		
Sc	45	3	He			41729.87		
Ge	72	3	He			74954.44		
Ge	72	3	He			76634.05		
Ge	72	3	He			74403.28		
In	115	3	He			63555.07		
In	115	3	He			65142.29		
In	115	3	He			63444.03		
Tb	159	3	He			284006.21		
Tb	159	3	He			284127.40		
Tb	159	3	He			284207.46		
Bi	209	3	He			221188.69		
Bi	209	3	He			220934.96		
Bi	209	3	He			223628.41		

Quantitation Report

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Sample Type	Sample
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Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

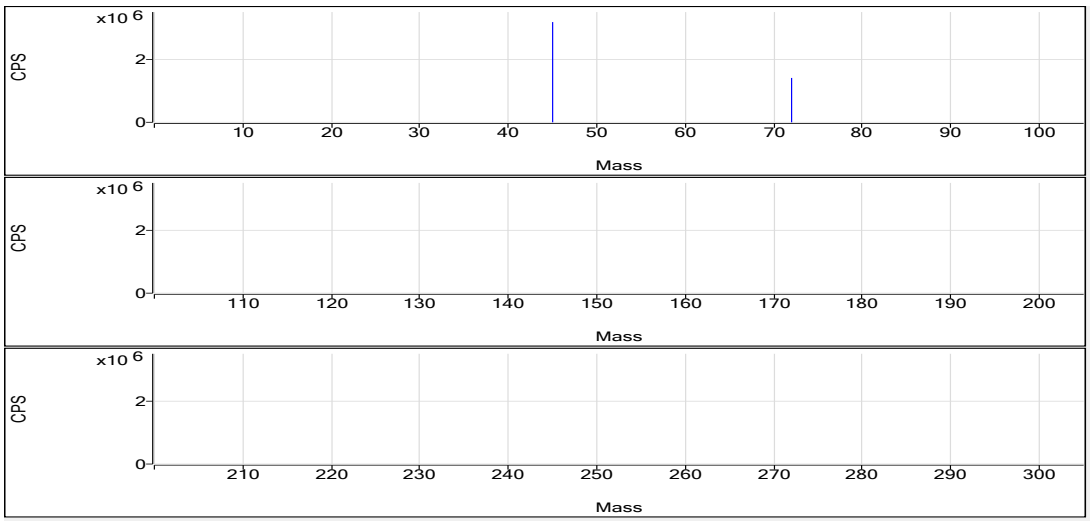
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.012	ppb	42.4	88.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.043	ppb	55.2	4.44	0.0000	Pulse	1.5000	3
Na	23	72	He	4.756	ppb	35.8	8385.97	0.1146	Pulse	0.1000	3
Mg	24	72	He	4.145	ppb	22.1	610.04	0.0083	Pulse	0.1000	3
Al	27	72	He	11.051	ppb	27.9	273.35	0.0037	Pulse	0.1000	3
K	39	72	He	14.021	ppb	100.1	11081.22	0.1514	Pulse	0.1000	3
Ca	44	72	He	-13.765	ppb	N/A	86.67	0.0012	Pulse	0.1000	3
Ti	47	72	He	0.546	ppb	174.5	30.00	0.0004	Pulse	0.1000	3
V	51	72	He	0.120	ppb	8.2	638.69	0.0087	Pulse	0.5000	3
Cr	52	72	He	0.024	ppb	202.5	1883.53	0.0257	Pulse	0.1000	3
Mn	55	72	He	-0.926	ppb	N/A	613.37	0.0084	Pulse	0.1000	3
Fe	57	72	He	28.297	ppb	17.5	886.72	0.0121	Pulse	0.1000	3
Co	59	72	He	0.117	ppb	15.9	486.69	0.0067	Pulse	0.1000	3
Ni	60	72	He	0.956	ppb	17.3	1273.44	0.0174	Pulse	0.1000	3
Cu	63	72	He	0.054	ppb	65.7	460.02	0.0063	Pulse	0.1000	3
Zn	66	72	He	0.293	ppb	42.1	406.69	0.0056	Pulse	0.1000	3
As	75	72	He	0.059	ppb	103.6	39.33	0.0005	Pulse	0.5000	3
Sr	88	115	He	0.122	ppb	62.9	110.00	0.0017	Pulse	0.1000	3
Mo	98	115	He	0.005	ppb	242.3	40.00	0.0006	Pulse	0.1000	3
Ag	107	115	He	0.005	ppb	104.3	43.33	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.009	ppb	76.0	6.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.023	ppb	680.7	1013.41	0.0159	Pulse	0.1000	3
Sb	121	115	He	0.025	ppb	122.4	36.67	0.0006	Pulse	0.1000	3
Ba	137	115	He	0.217	ppb	29.6	80.00	0.0013	Pulse	0.1000	3
Tl	205	209	He	0.144	ppb	19.6	1096.76	0.0050	Pulse	0.1000	3
Pb	208	209	He	0.036	ppb	9.8	766.71	0.0035	Pulse	0.1000	3
U	238	209	He	0.011	ppb	43.9	153.34	0.0007	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3165055.27	2.4	97.7	Pulse	0.1000	3
No Gas	Ge	72	1400972.01	2.2	97.3	Pulse	0.1000	3
H2	Sc	45	195434.89	3.2	100.0	Pulse	0.1000	3
H2	Ge	72	161072.00	2.9	98.8	Pulse	0.1000	3
H2	In	115	439407.61	2.0	101.4	Pulse	0.1000	3
He	Sc	45	41459.22	2.8	103.7	Pulse	0.1000	3
He	Ge	72	73172.76	1.1	101.2	Pulse	0.1000	3
He	In	115	63690.86	2.7	98.6	Pulse	0.1000	3
He	Tb	159	283725.91	0.5	99.2	Pulse	0.1000	3
He	Bi	209	220215.48	0.8	99.1	Pulse	0.1000	3

No Gas



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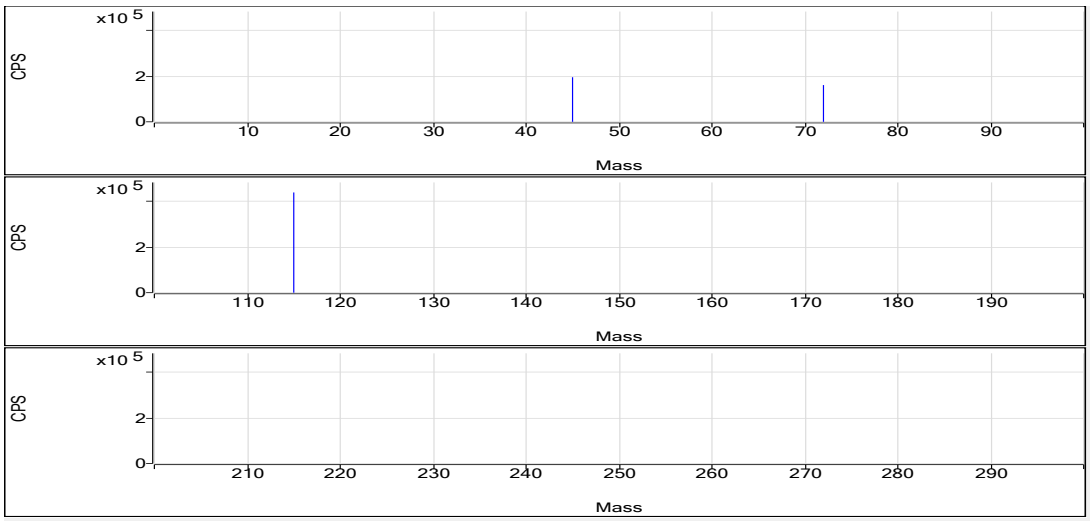
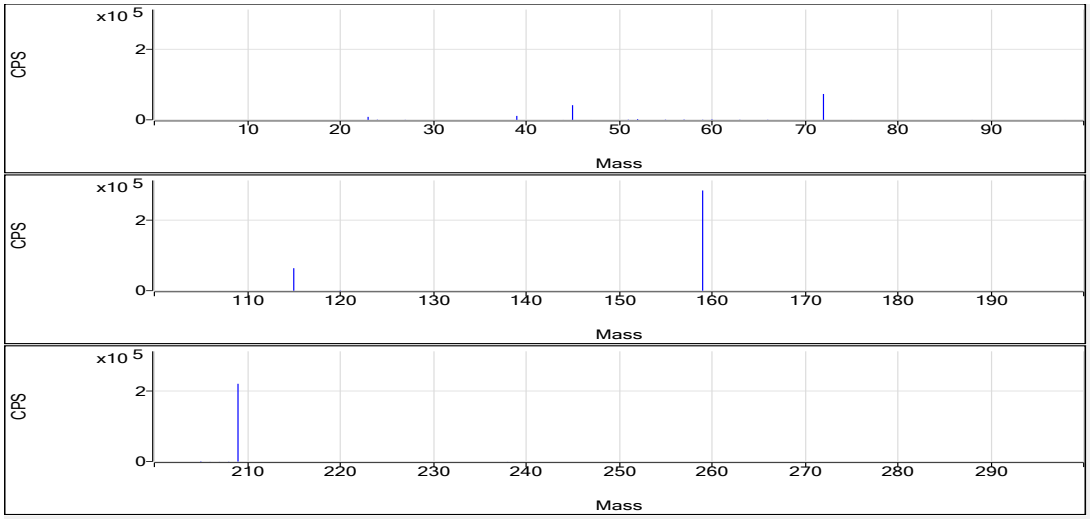


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.017	0.0001	98.00	0.0013	4.694E-05
Be	9	1	No Gas	0.007	0.0001	76.00	0.0013	4.694E-05
Be	9	1	No Gas	0.014	0.0001	92.00	0.0013	4.694E-05
Se	78	2	H2	0.023	0	3.33	0.0004	1.089E-05
Se	78	2	H2	0.037	0	4.00	0.0004	1.089E-05
Se	78	2	H2	0.07	0	6.00	0.0004	1.089E-05
Na	23	3	He	2.799	0.1113	8242.55	0.0017	0.1065
Na	23	3	He	5.552	0.116	8422.69	0.0017	0.1065
Na	23	3	He	5.916	0.1166	8492.67	0.0017	0.1065
Mg	24	3	He	3.539	0.0078	580.04	0.0008	0.004846
Mg	24	3	He	5.197	0.0092	670.04	0.0008	0.004846
Mg	24	3	He	3.699	0.008	580.03	0.0008	0.004846
Al	27	3	He	14.611	0.0046	340.02	0.0002	0.001063
Al	27	3	He	9.29	0.0033	240.01	0.0002	0.001063
Al	27	3	He	9.25	0.0033	240.01	0.0002	0.001063
K	39	3	He	29.925	0.1602	11865.14	0.0006	0.1436
K	39	3	He	3.34	0.1455	10564.20	0.0006	0.1436
K	39	3	He	8.798	0.1485	10814.32	0.0006	0.1436
Ca	44	3	He	-8.404	0.0013	100.00	0	0.001611
Ca	44	3	He	-16.394	0.0011	80.00	0	0.001611
Ca	44	3	He	-16.497	0.0011	80.00	0	0.001611
Ti	47	3	He	-0.015	0.0003	20.00	0.0003	0.0002737
Ti	47	3	He	0.007	0.0003	20.00	0.0003	0.0002737
Ti	47	3	He	1.646	0.0007	50.00	0.0003	0.0002737
V	51	3	He	0.126	0.0088	652.02	0.0117	0.007326
V	51	3	He	0.125	0.0088	638.02	0.0117	0.007326
V	51	3	He	0.109	0.0086	626.02	0.0117	0.007326
Cr	52	3	He	0	0.0254	1880.19	0.0152	0.02538
Cr	52	3	He	0.079	0.0266	1930.21	0.0152	0.02538
Cr	52	3	He	-0.008	0.0253	1840.19	0.0152	0.02538
Mn	55	3	He	-1.021	0.0078	580.03	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.76	0.0094	680.05	0.0059	0.01385
Mn	55	3	He	-0.998	0.008	580.03	0.0059	0.01385
Fe	57	3	He	28.88	0.0123	910.06	0.0003	0.003918
Fe	57	3	He	23.081	0.0106	770.05	0.0003	0.003918
Fe	57	3	He	32.929	0.0135	980.06	0.0003	0.003918
Co	59	3	He	0.12	0.0067	500.03	0.0305	0.003084
Co	59	3	He	0.134	0.0072	520.03	0.0305	0.003084
Co	59	3	He	0.097	0.006	440.02	0.0305	0.003084
Ni	60	3	He	0.865	0.0166	1230.10	0.0088	0.009003
Ni	60	3	He	0.856	0.0165	1200.10	0.0088	0.009003
Ni	60	3	He	1.147	0.0191	1390.12	0.0088	0.009003
Cu	63	3	He	0.056	0.0063	470.02	0.0249	0.004937
Cu	63	3	He	0.017	0.0054	390.02	0.0249	0.004937
Cu	63	3	He	0.088	0.0071	520.03	0.0249	0.004937
Zn	66	3	He	0.394	0.0058	430.02	0.0025	0.004836
Zn	66	3	He	0.33	0.0056	410.02	0.0025	0.004836
Zn	66	3	He	0.155	0.0052	380.02	0.0025	0.004836
As	75	3	He	0.029	0.0005	36.00	0.0017	0.0004347
As	75	3	He	0.13	0.0007	48.00	0.0017	0.0004347
As	75	3	He	0.019	0.0005	34.00	0.0017	0.0004347
Sr	88	3	He	0.062	0.0013	80.00	0.0078	0.0007762
Sr	88	3	He	0.209	0.0024	150.01	0.0078	0.0007762
Sr	88	3	He	0.096	0.0015	100.00	0.0078	0.0007762
Mo	98	3	He	0.012	0.0008	50.00	0.022	0.0005162
Mo	98	3	He	-0.009	0.0003	20.00	0.022	0.0005162
Mo	98	3	He	0.011	0.0008	50.00	0.022	0.0005162
Ag	107	3	He	0	0.0005	30.00	0.0455	0.0004641
Ag	107	3	He	0.004	0.0006	40.00	0.0455	0.0004641
Ag	107	3	He	0.01	0.0009	60.00	0.0455	0.0004641
Cd	111	3	He	0.016	0.0001	8.00	0.0048	5.152E-05
Cd	111	3	He	0.009	0.0001	6.00	0.0048	5.152E-05
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Sn	120	3	He	-0.151	0.0134	850.05	0.0143	0.01559
Sn	120	3	He	0.147	0.0177	1100.09	0.0143	0.01559
Sn	120	3	He	0.072	0.0166	1090.08	0.0143	0.01559
Sb	121	3	He	0.03	0.0006	40.00	0.0124	0.000258
Sb	121	3	He	-0.008	0.0002	10.00	0.0124	0.000258
Sb	121	3	He	0.053	0.0009	60.00	0.0124	0.000258
Ba	137	3	He	0.291	0.0016	100.00	0.0044	0.000309
Ba	137	3	He	0.187	0.0011	70.00	0.0044	0.000309
Ba	137	3	He	0.173	0.0011	70.00	0.0044	0.000309
Tl	205	3	He	0.161	0.0055	1210.09	0.0276	0.001005
Tl	205	3	He	0.159	0.0054	1180.11	0.0276	0.001005
Tl	205	3	He	0.111	0.0041	900.07	0.0276	0.001005
Pb	208	3	He	0.034	0.0034	380.02	0.0364	0.002176
Pb	208	3	He	0.033	0.0034	400.02	0.0364	0.002176
Pb	208	3	He	0.04	0.0036	470.03	0.0364	0.002176
U	238	3	He	0.016	0.0009	200.01	0.0421	0.00024
U	238	3	He	0.006	0.0005	110.00	0.0421	0.00024
U	238	3	He	0.01	0.0007	150.01	0.0421	0.00024
Sc	45	1	No Gas			3177676.83		
Sc	45	1	No Gas			3083884.64		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3233604.33		
Ge	72	1	No Gas			1417283.57		
Ge	72	1	No Gas			1365696.54		
Ge	72	1	No Gas			1419935.92		
Sc	45	2	H2			202684.61		
Sc	45	2	H2			192265.33		
Sc	45	2	H2			191354.74		
Ge	72	2	H2			166442.60		
Ge	72	2	H2			159129.57		
Ge	72	2	H2			157643.82		
In	115	2	H2			448880.42		
In	115	2	H2			437806.09		
In	115	2	H2			431536.32		
Sc	45	3	He			42381.62		
Sc	45	3	He			40155.70		
Sc	45	3	He			41840.35		
Ge	72	3	He			74080.48		
Ge	72	3	He			72613.67		
Ge	72	3	He			72824.14		
In	115	3	He			63293.54		
In	115	3	He			62198.76		
In	115	3	He			65603.99		
Tb	159	3	He			285309.59		
Tb	159	3	He			282443.32		
Tb	159	3	He			283424.82		
Bi	209	3	He			221664.47		
Bi	209	3	He			218403.20		
Bi	209	3	He			220578.77		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 17:59:09
Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

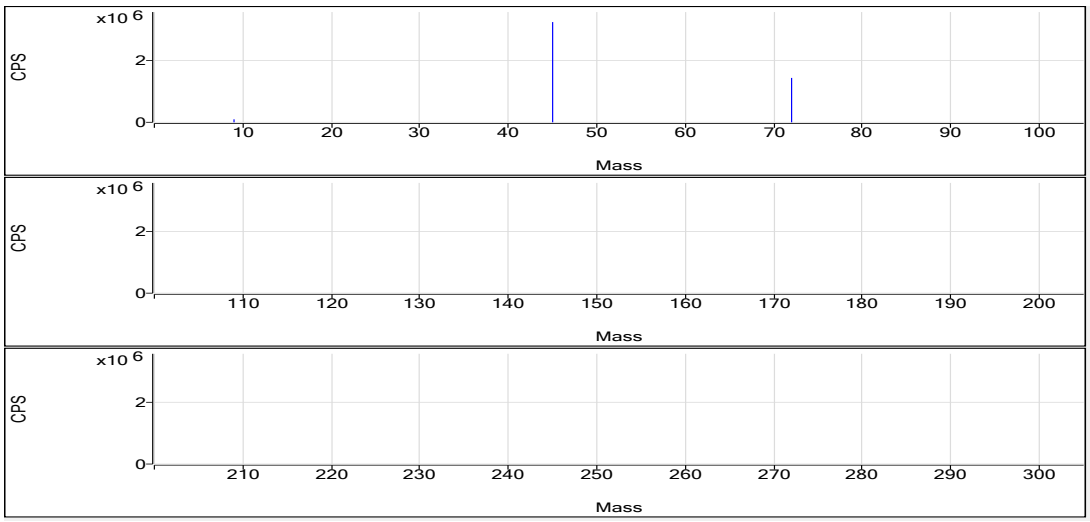
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	50.895	ppb	3.3	95860.61	0.0669	Pulse	0.5000	3
Se	78	72	H2	53.343	ppb	5.3	3337.50	0.0208	Pulse	1.5000	3
Na	23	72	He	5308.727	ppb	2.8	678267.59	9.2259	Pulse	0.1000	3
Mg	24	72	He	5366.496	ppb	1.4	333027.77	4.5293	Pulse	0.1000	3
Al	27	72	He	5249.071	ppb	1.5	93242.40	1.2682	Pulse	0.1000	3
K	39	72	He	5341.829	ppb	2.2	227442.52	3.0935	Pulse	0.1000	3
Ca	44	72	He	5246.630	ppb	2.7	12098.69	0.1646	Pulse	0.1000	3
Ti	47	72	He	5419.582	ppb	2.5	99939.79	1.3594	Pulse	0.1000	3
V	51	72	He	531.781	ppb	1.9	457904.74	6.2280	Pulse	0.5000	3
Cr	52	72	He	532.146	ppb	1.6	597655.63	8.1285	Pulse	0.1000	3
Mn	55	72	He	524.290	ppb	2.0	228540.29	3.1084	Pulse	0.1000	3
Fe	57	72	He	5270.110	ppb	2.5	112549.71	1.5307	Pulse	0.1000	3
Co	59	72	He	529.698	ppb	1.8	1188475.74	16.1644	Pulse	0.1000	3
Ni	60	72	He	530.550	ppb	2.0	343670.92	4.6743	Pulse	0.1000	3
Cu	63	72	He	530.323	ppb	1.4	972738.01	13.2297	Pulse	0.1000	3
Zn	66	72	He	529.733	ppb	1.6	96067.73	1.3063	Pulse	0.1000	3
As	75	72	He	522.589	ppb	1.9	66858.53	0.9093	Pulse	0.5000	3
Sr	88	115	He	53.004	ppb	1.6	26675.65	0.4151	Pulse	0.1000	3
Mo	98	115	He	51.605	ppb	1.6	73048.92	1.1369	Pulse	0.1000	3
Ag	107	115	He	51.619	ppb	0.7	150966.16	2.3492	Pulse	0.1000	3
Cd	111	115	He	52.236	ppb	1.8	16115.94	0.2508	Pulse	0.5000	3
Sn	120	115	He	52.302	ppb	1.5	48916.58	0.7613	Pulse	0.1000	3
Sb	121	115	He	53.104	ppb	0.2	42351.95	0.6590	Pulse	0.1000	3
Ba	137	115	He	520.062	ppb	1.8	146201.02	2.2755	Pulse	0.1000	3
Tl	205	209	He	52.856	ppb	1.2	322359.67	1.4622	Pulse	0.1000	3
Pb	208	209	He	52.854	ppb	0.7	424603.43	1.9259	Pulse	0.1000	3
U	238	209	He	52.102	ppb	0.2	483277.42	2.1920	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3234780.68	2.3	99.8	Pulse	0.1000	3
No Gas	Ge	72	1432699.51	1.3	99.5	Pulse	0.1000	3
H2	Sc	45	197599.80	1.8	101.1	Pulse	0.1000	3
H2	Ge	72	160681.78	1.5	98.6	Pulse	0.1000	3
H2	In	115	439918.82	1.3	101.5	Pulse	0.1000	3
He	Sc	45	41843.92	2.0	104.6	Pulse	0.1000	3
He	Ge	72	73538.27	1.7	101.7	Pulse	0.1000	3
He	In	115	64264.73	2.1	99.5	Pulse	0.1000	3
He	Tb	159	285277.77	1.4	99.7	Pulse	0.1000	3
He	Bi	209	220473.15	0.5	99.2	Pulse	0.1000	3

No Gas



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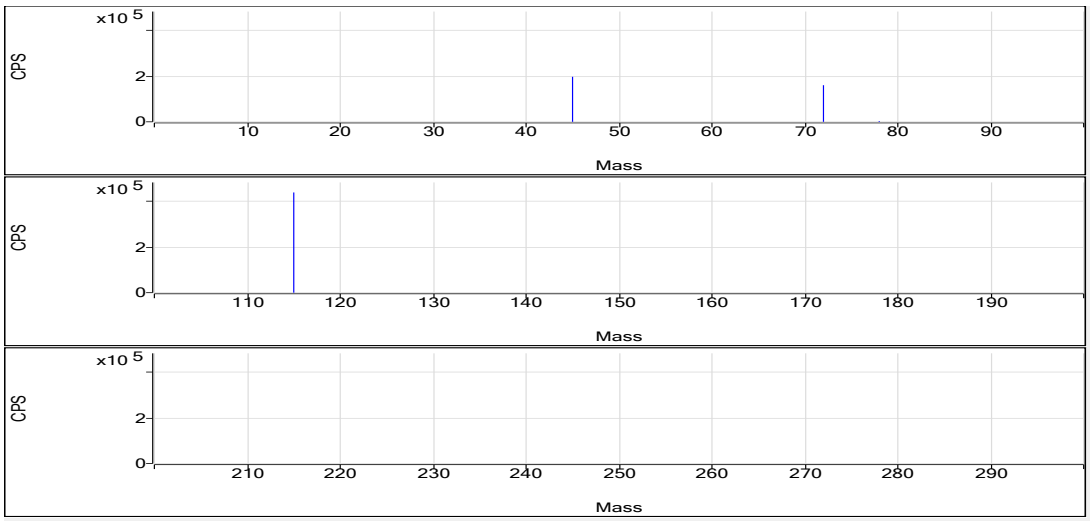
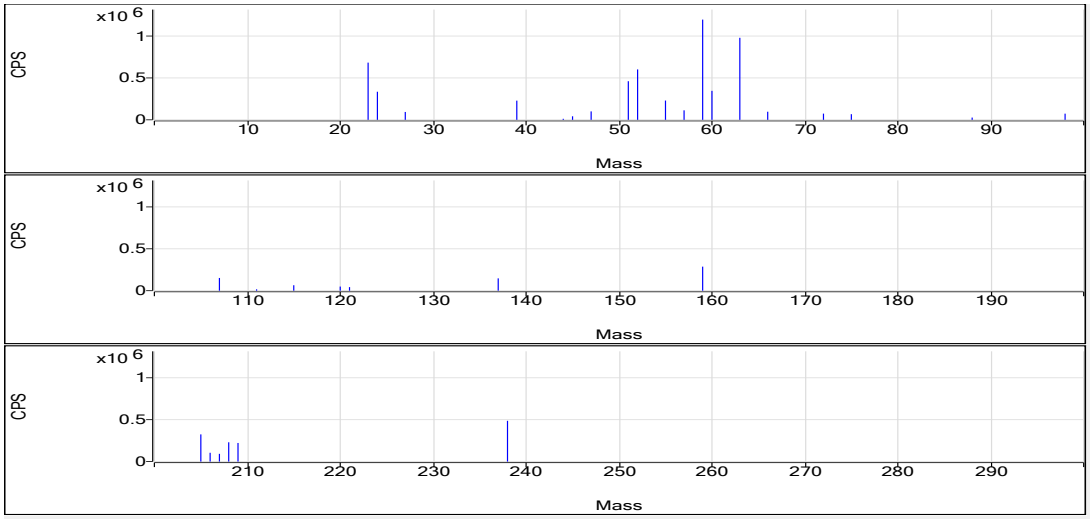


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	52.465	0.069	98335.47	0.0013	4.694E-05
Be	9	1	No Gas	51.125	0.0672	95421.22	0.0013	4.694E-05
Be	9	1	No Gas	49.094	0.0646	93825.15	0.0013	4.694E-05
Se	78	2	H2	50.329	0.0196	3184.36	0.0004	1.089E-05
Se	78	2	H2	55.997	0.0218	3445.75	0.0004	1.089E-05
Se	78	2	H2	53.703	0.0209	3382.40	0.0004	1.089E-05
Na	23	3	He	5430.376	9.4349	681209.05	0.0017	0.1065
Na	23	3	He	5144.593	8.9439	667436.24	0.0017	0.1065
Na	23	3	He	5351.214	9.2989	686157.49	0.0017	0.1065
Mg	24	3	He	5443.974	4.5947	331740.70	0.0008	0.004846
Mg	24	3	He	5289.873	4.4647	333178.86	0.0008	0.004846
Mg	24	3	He	5365.639	4.5286	334163.75	0.0008	0.004846
Al	27	3	He	5330.424	1.2878	92980.45	0.0002	0.001063
Al	27	3	He	5169.538	1.249	93202.79	0.0002	0.001063
Al	27	3	He	5247.25	1.2677	93543.97	0.0002	0.001063
K	39	3	He	5426.309	3.1401	226719.92	0.0006	0.1436
K	39	3	He	5207.946	3.0195	225330.47	0.0006	0.1436
K	39	3	He	5391.231	3.1207	230277.16	0.0006	0.1436
Ca	44	3	He	5399.7	0.1693	12225.46	0	0.001611
Ca	44	3	He	5127.703	0.1609	12005.32	0	0.001611
Ca	44	3	He	5212.487	0.1635	12065.28	0	0.001611
Ti	47	3	He	5557.945	1.3941	100655.06	0.0003	0.0002737
Ti	47	3	He	5287.573	1.3263	98973.35	0.0003	0.0002737
Ti	47	3	He	5413.228	1.3578	100190.96	0.0003	0.0002737
V	51	3	He	540.509	6.3301	457038.56	0.0117	0.007326
V	51	3	He	520.939	6.1011	455293.56	0.0117	0.007326
V	51	3	He	533.896	6.2527	461382.09	0.0117	0.007326
Cr	52	3	He	541.775	8.2751	597475.46	0.0152	0.02538
Cr	52	3	He	526.508	8.0427	600178.12	0.0152	0.02538
Cr	52	3	He	528.156	8.0678	595313.31	0.0152	0.02538
Mn	55	3	He	533.738	3.1642	228458.92	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	512.686	3.0399	226853.82	0.0059	0.01385
Mn	55	3	He	526.446	3.1212	230308.14	0.0059	0.01385
Fe	57	3	He	5314.803	1.5437	111456.58	0.0003	0.003918
Fe	57	3	He	5123.508	1.4883	111061.43	0.0003	0.003918
Fe	57	3	He	5372.018	1.5603	115131.13	0.0003	0.003918
Co	59	3	He	538.79	16.4418	1187119.67	0.0305	0.003084
Co	59	3	He	519.947	15.8669	1184059.75	0.0305	0.003084
Co	59	3	He	530.358	16.1846	1194247.79	0.0305	0.003084
Ni	60	3	He	538.71	4.746	342669.72	0.0088	0.009003
Ni	60	3	He	518.288	4.5665	340769.64	0.0088	0.009003
Ni	60	3	He	534.651	4.7104	347573.39	0.0088	0.009003
Cu	63	3	He	537.802	13.4162	968662.72	0.0249	0.004937
Cu	63	3	He	523.062	13.0486	973742.33	0.0249	0.004937
Cu	63	3	He	530.107	13.2243	975808.97	0.0249	0.004937
Zn	66	3	He	522.82	1.2893	93087.79	0.0025	0.004836
Zn	66	3	He	527.141	1.2999	97004.03	0.0025	0.004836
Zn	66	3	He	539.237	1.3296	98111.38	0.0025	0.004836
As	75	3	He	527.96	0.9186	66327.52	0.0017	0.0004347
As	75	3	He	511.427	0.8899	66407.82	0.0017	0.0004347
As	75	3	He	528.38	0.9194	67840.25	0.0017	0.0004347
Sr	88	3	He	52.474	0.411	25974.43	0.0078	0.0007762
Sr	88	3	He	53.961	0.4226	26966.00	0.0078	0.0007762
Sr	88	3	He	52.576	0.4118	27086.51	0.0078	0.0007762
Mo	98	3	He	52.042	1.1466	72466.14	0.022	0.0005162
Mo	98	3	He	52.14	1.1487	73300.34	0.022	0.0005162
Mo	98	3	He	50.633	1.1155	73380.28	0.022	0.0005162
Ag	107	3	He	51.957	2.3645	149446.38	0.0455	0.0004641
Ag	107	3	He	51.254	2.3325	148840.99	0.0455	0.0004641
Ag	107	3	He	51.647	2.3504	154611.12	0.0455	0.0004641
Cd	111	3	He	53.251	0.2557	16159.33	0.0048	5.152E-05
Cd	111	3	He	51.391	0.2467	15744.85	0.0048	5.152E-05
Cd	111	3	He	52.064	0.25	16443.65	0.0048	5.152E-05
Sn	120	3	He	53.201	0.7741	48926.53	0.0143	0.01559
Sn	120	3	He	52.033	0.7575	48334.73	0.0143	0.01559
Sn	120	3	He	51.672	0.7523	49488.49	0.0143	0.01559
Sb	121	3	He	52.966	0.6573	41542.81	0.0124	0.000258
Sb	121	3	He	53.196	0.6602	42124.94	0.0124	0.000258
Sb	121	3	He	53.15	0.6596	43388.09	0.0124	0.000258
Ba	137	3	He	530.17	2.3197	146611.50	0.0044	0.000309
Ba	137	3	He	517.849	2.2658	144581.37	0.0044	0.000309
Ba	137	3	He	512.167	2.2409	147410.20	0.0044	0.000309
Tl	205	3	He	52.581	1.4546	321958.75	0.0276	0.001005
Tl	205	3	He	52.395	1.4494	319884.98	0.0276	0.001005
Tl	205	3	He	53.592	1.4825	325235.27	0.0276	0.001005
Pb	208	3	He	52.458	1.9115	226640.06	0.0364	0.002176
Pb	208	3	He	52.992	1.931	229323.20	0.0364	0.002176
Pb	208	3	He	53.11	1.9352	230037.89	0.0364	0.002176
U	238	3	He	51.997	2.1876	484212.30	0.0421	0.00024
U	238	3	He	52.111	2.1924	483860.15	0.0421	0.00024
U	238	3	He	52.196	2.196	481759.80	0.0421	0.00024
Sc	45	1	No Gas			3183805.27		
Sc	45	1	No Gas			3199722.45		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3320814.33		
Ge	72	1	No Gas			1425388.10		
Ge	72	1	No Gas			1419383.73		
Ge	72	1	No Gas			1453326.70		
Sc	45	2	H2			201783.10		
Sc	45	2	H2			195214.51		
Sc	45	2	H2			195801.79		
Ge	72	2	H2			162407.30		
Ge	72	2	H2			157960.57		
Ge	72	2	H2			161677.47		
In	115	2	H2			445460.70		
In	115	2	H2			434069.72		
In	115	2	H2			440226.05		
Sc	45	3	He			42281.54		
Sc	45	3	He			42352.60		
Sc	45	3	He			40897.62		
Ge	72	3	He			72201.21		
Ge	72	3	He			74624.36		
Ge	72	3	He			73789.23		
In	115	3	He			63584.54		
In	115	3	He			64187.53		
In	115	3	He			66166.77		
Tb	159	3	He			285269.64		
Tb	159	3	He			281318.61		
Tb	159	3	He			289245.05		
Bi	209	3	He			221341.36		
Bi	209	3	He			220697.83		
Bi	209	3	He			219380.27		

Quantitation Report

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Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

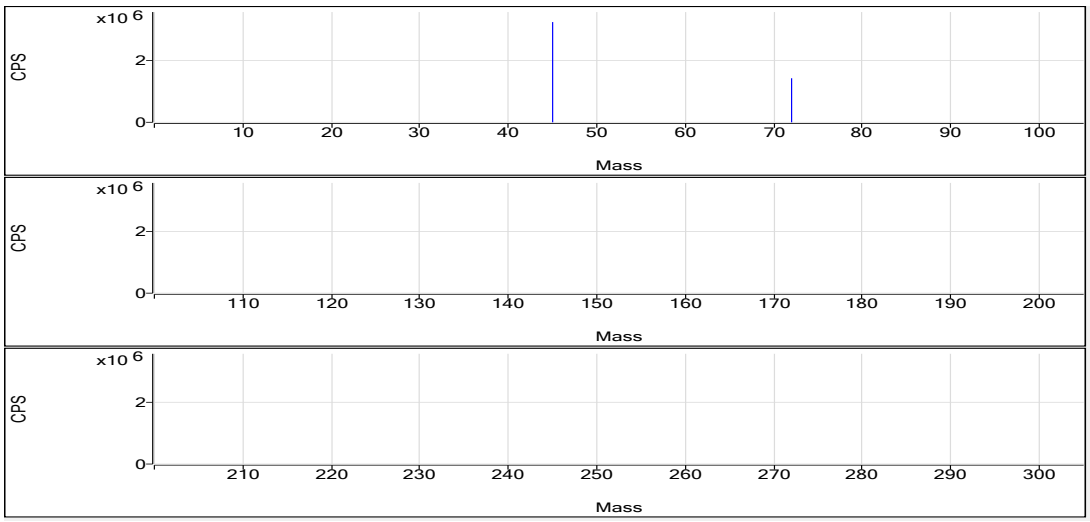
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.017	ppb	42.1	98.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.037	ppb	52.9	4.00	0.0000	Pulse	1.5000	3
Na	23	72	He	3.644	ppb	18.0	8285.93	0.1127	Pulse	0.1000	3
Mg	24	72	He	3.123	ppb	21.1	550.03	0.0075	Pulse	0.1000	3
Al	27	72	He	9.885	ppb	18.6	253.34	0.0034	Pulse	0.1000	3
K	39	72	He	3.296	ppb	321.2	10694.26	0.1455	Pulse	0.1000	3
Ca	44	72	He	21.105	ppb	28.9	166.68	0.0023	Pulse	0.1000	3
Ti	47	72	He	2.345	ppb	58.0	63.33	0.0009	Pulse	0.1000	3
V	51	72	He	0.182	ppb	32.9	694.69	0.0095	Pulse	0.5000	3
Cr	52	72	He	0.023	ppb	810.2	1893.52	0.0257	Pulse	0.1000	3
Mn	55	72	He	-0.963	ppb	N/A	600.03	0.0082	Pulse	0.1000	3
Fe	57	72	He	25.351	ppb	33.1	826.72	0.0113	Pulse	0.1000	3
Co	59	72	He	0.132	ppb	8.4	523.36	0.0071	Pulse	0.1000	3
Ni	60	72	He	1.069	ppb	19.7	1353.45	0.0184	Pulse	0.1000	3
Cu	63	72	He	0.100	ppb	32.9	546.70	0.0074	Pulse	0.1000	3
Zn	66	72	He	0.060	ppb	838.7	366.69	0.0050	Pulse	0.1000	3
As	75	72	He	0.146	ppb	79.2	50.67	0.0007	Pulse	0.5000	3
Sr	88	115	He	0.075	ppb	45.0	86.67	0.0014	Pulse	0.1000	3
Mo	98	115	He	0.033	ppb	20.0	80.00	0.0013	Pulse	0.1000	3
Ag	107	115	He	0.006	ppb	67.7	46.67	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.018	ppb	44.9	8.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.094	ppb	74.3	1080.08	0.0169	Pulse	0.1000	3
Sb	121	115	He	0.055	ppb	20.5	60.00	0.0009	Pulse	0.1000	3
Ba	137	115	He	0.156	ppb	11.0	63.33	0.0010	Pulse	0.1000	3
Tl	205	209	He	0.178	ppb	15.2	1306.78	0.0059	Pulse	0.1000	3
Pb	208	209	He	0.028	ppb	74.0	703.37	0.0032	Pulse	0.1000	3
U	238	209	He	0.017	ppb	34.2	213.34	0.0010	Pulse	0.1000	3

ISTD Table:

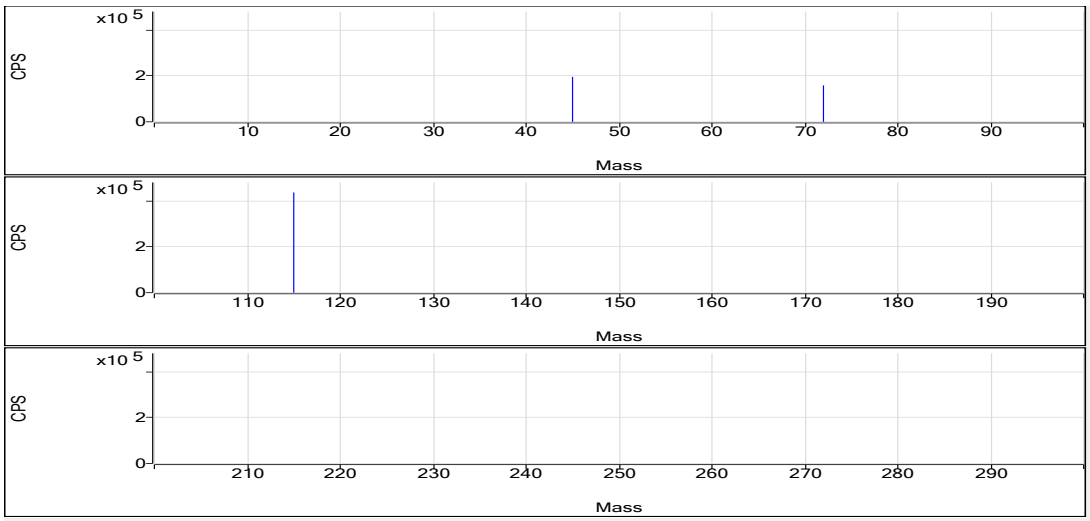
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3234914.95	1.4	99.8	Pulse	0.1000	3
No Gas	Ge	72	1421607.69	0.7	98.7	Pulse	0.1000	3
H2	Sc	45	195691.55	0.8	100.2	Pulse	0.1000	3
H2	Ge	72	158642.57	2.2	97.3	Pulse	0.1000	3
H2	In	115	436745.19	0.8	100.8	Pulse	0.1000	3
He	Sc	45	42198.35	0.2	105.5	Pulse	0.1000	3
He	Ge	72	73507.58	1.0	101.7	Pulse	0.1000	3
He	In	115	63864.50	1.8	98.9	Pulse	0.1000	3
He	Tb	159	284363.25	0.5	99.4	Pulse	0.1000	3
He	Bi	209	220597.59	0.1	99.3	Pulse	0.1000	3

No Gas

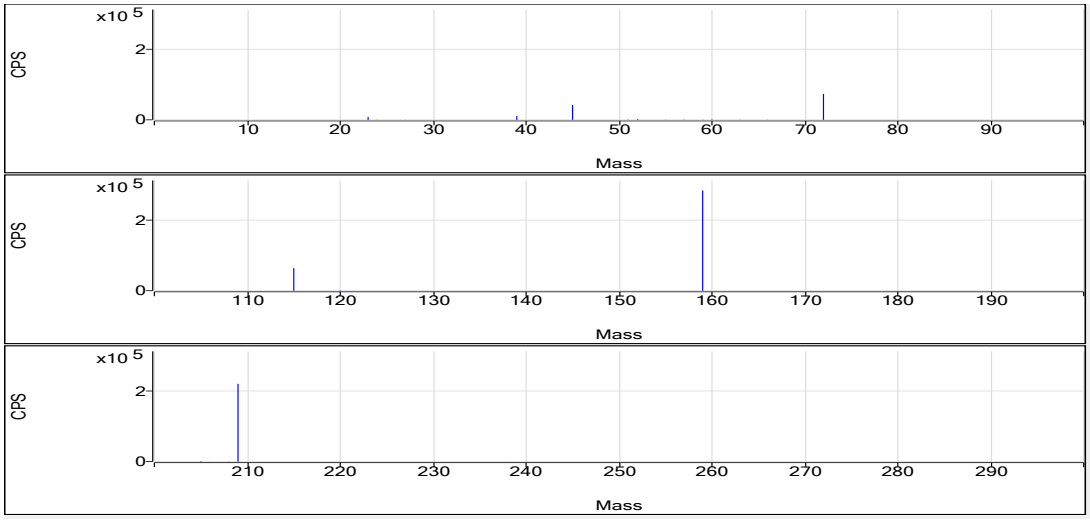


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.011	0.0001	88.00	0.0013	4.694E-05
Be	9	1	No Gas	0.025	0.0001	112.00	0.0013	4.694E-05
Be	9	1	No Gas	0.014	0.0001	94.00	0.0013	4.694E-05
Se	78	2	H2	0.025	0	3.33	0.0004	1.089E-05
Se	78	2	H2	0.027	0	3.33	0.0004	1.089E-05
Se	78	2	H2	0.059	0	5.33	0.0004	1.089E-05
Na	23	3	He	3.648	0.1127	8342.62	0.0017	0.1065
Na	23	3	He	4.299	0.1138	8402.62	0.0017	0.1065
Na	23	3	He	2.986	0.1116	8112.56	0.0017	0.1065
Mg	24	3	He	3.708	0.008	590.03	0.0008	0.004846
Mg	24	3	He	3.252	0.0076	560.03	0.0008	0.004846
Mg	24	3	He	2.41	0.0069	500.03	0.0008	0.004846
Al	27	3	He	7.912	0.003	220.01	0.0002	0.001063
Al	27	3	He	10.191	0.0035	260.01	0.0002	0.001063
Al	27	3	He	11.552	0.0039	280.01	0.0002	0.001063
K	39	3	He	15.511	0.1522	11264.76	0.0006	0.1436
K	39	3	He	-2.406	0.1423	10504.05	0.0006	0.1436
K	39	3	He	-3.216	0.1419	10313.98	0.0006	0.1436
Ca	44	3	He	22.093	0.0023	170.01	0	0.001611
Ca	44	3	He	26.655	0.0024	180.01	0	0.001611
Ca	44	3	He	14.566	0.0021	150.01	0	0.001611
Ti	47	3	He	1.064	0.0005	40.00	0.0003	0.0002737
Ti	47	3	He	3.771	0.0012	90.00	0.0003	0.0002737
Ti	47	3	He	2.199	0.0008	60.00	0.0003	0.0002737
V	51	3	He	0.152	0.0091	674.02	0.0117	0.007326
V	51	3	He	0.143	0.009	664.02	0.0117	0.007326
V	51	3	He	0.251	0.0103	746.02	0.0117	0.007326
Cr	52	3	He	0.152	0.0277	2050.21	0.0152	0.02538
Cr	52	3	He	0.113	0.0271	2000.20	0.0152	0.02538
Cr	52	3	He	-0.195	0.0224	1630.14	0.0152	0.02538
Mn	55	3	He	-1.134	0.0072	530.03	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.993	0.008	590.03	0.0059	0.01385
Mn	55	3	He	-0.762	0.0094	680.04	0.0059	0.01385
Fe	57	3	He	19.126	0.0095	700.04	0.0003	0.003918
Fe	57	3	He	22.02	0.0103	760.05	0.0003	0.003918
Fe	57	3	He	34.906	0.014	1020.07	0.0003	0.003918
Co	59	3	He	0.12	0.0068	500.03	0.0305	0.003084
Co	59	3	He	0.134	0.0072	530.03	0.0305	0.003084
Co	59	3	He	0.142	0.0074	540.03	0.0305	0.003084
Ni	60	3	He	1.251	0.02	1480.13	0.0088	0.009003
Ni	60	3	He	1.118	0.0188	1390.11	0.0088	0.009003
Ni	60	3	He	0.838	0.0164	1190.10	0.0088	0.009003
Cu	63	3	He	0.078	0.0069	510.02	0.0249	0.004937
Cu	63	3	He	0.085	0.007	520.03	0.0249	0.004937
Cu	63	3	He	0.139	0.0084	610.04	0.0249	0.004937
Zn	66	3	He	-0.099	0.0046	340.02	0.0025	0.004836
Zn	66	3	He	0.623	0.0064	470.03	0.0025	0.004836
Zn	66	3	He	-0.345	0.004	290.01	0.0025	0.004836
As	75	3	He	0.076	0.0006	42.00	0.0017	0.0004347
As	75	3	He	0.28	0.0009	68.00	0.0017	0.0004347
As	75	3	He	0.082	0.0006	42.00	0.0017	0.0004347
Sr	88	3	He	0.105	0.0016	100.00	0.0078	0.0007762
Sr	88	3	He	0.081	0.0014	90.00	0.0078	0.0007762
Sr	88	3	He	0.038	0.0011	70.00	0.0078	0.0007762
Mo	98	3	He	0.027	0.0011	70.00	0.022	0.0005162
Mo	98	3	He	0.041	0.0014	90.00	0.022	0.0005162
Mo	98	3	He	0.032	0.0012	80.00	0.022	0.0005162
Ag	107	3	He	0.004	0.0006	40.00	0.0455	0.0004641
Ag	107	3	He	0.01	0.0009	60.00	0.0455	0.0004641
Ag	107	3	He	0.003	0.0006	40.00	0.0455	0.0004641
Cd	111	3	He	0.023	0.0002	10.00	0.0048	5.152E-05
Cd	111	3	He	0.022	0.0002	10.00	0.0048	5.152E-05
Cd	111	3	He	0.008	0.0001	6.00	0.0048	5.152E-05
Sn	120	3	He	0.171	0.018	1130.08	0.0143	0.01559
Sn	120	3	He	0.037	0.0161	1030.09	0.0143	0.01559
Sn	120	3	He	0.072	0.0166	1080.08	0.0143	0.01559
Sb	121	3	He	0.044	0.0008	50.00	0.0124	0.000258
Sb	121	3	He	0.055	0.0009	60.00	0.0124	0.000258
Sb	121	3	He	0.066	0.0011	70.00	0.0124	0.000258
Ba	137	3	He	0.148	0.001	60.00	0.0044	0.000309
Ba	137	3	He	0.144	0.0009	60.00	0.0044	0.000309
Ba	137	3	He	0.175	0.0011	70.00	0.0044	0.000309
Tl	205	3	He	0.171	0.0057	1260.10	0.0276	0.001005
Tl	205	3	He	0.208	0.0068	1490.15	0.0276	0.001005
Tl	205	3	He	0.155	0.0053	1170.10	0.0276	0.001005
Pb	208	3	He	0.051	0.004	490.03	0.0364	0.002176
Pb	208	3	He	0.02	0.0029	360.02	0.0364	0.002176
Pb	208	3	He	0.012	0.0026	270.01	0.0364	0.002176
U	238	3	He	0.01	0.0007	150.01	0.0421	0.00024
U	238	3	He	0.02	0.0011	240.01	0.0421	0.00024
U	238	3	He	0.021	0.0011	250.01	0.0421	0.00024
Sc	45	1	No Gas			3215790.89		
Sc	45	1	No Gas			3203234.95		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3285719.01		
Ge	72	1	No Gas			1425749.67		
Ge	72	1	No Gas			1409752.95		
Ge	72	1	No Gas			1429320.45		
Sc	45	2	H2			196684.47		
Sc	45	2	H2			196401.21		
Sc	45	2	H2			193988.96		
Ge	72	2	H2			162630.43		
Ge	72	2	H2			156624.11		
Ge	72	2	H2			156673.18		
In	115	2	H2			437756.40		
In	115	2	H2			439805.11		
In	115	2	H2			432674.06		
Sc	45	3	He			42171.56		
Sc	45	3	He			42111.76		
Sc	45	3	He			42311.74		
Ge	72	3	He			74009.95		
Ge	72	3	He			73809.89		
Ge	72	3	He			72702.91		
In	115	3	He			62691.05		
In	115	3	He			63906.82		
In	115	3	He			65020.89		
Tb	159	3	He			283432.16		
Tb	159	3	He			285871.17		
Tb	159	3	He			283786.42		
Bi	209	3	He			220298.41		
Bi	209	3	He			220762.50		
Bi	209	3	He			220731.85		

Quantitation Report

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Comment	H2 ICP
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

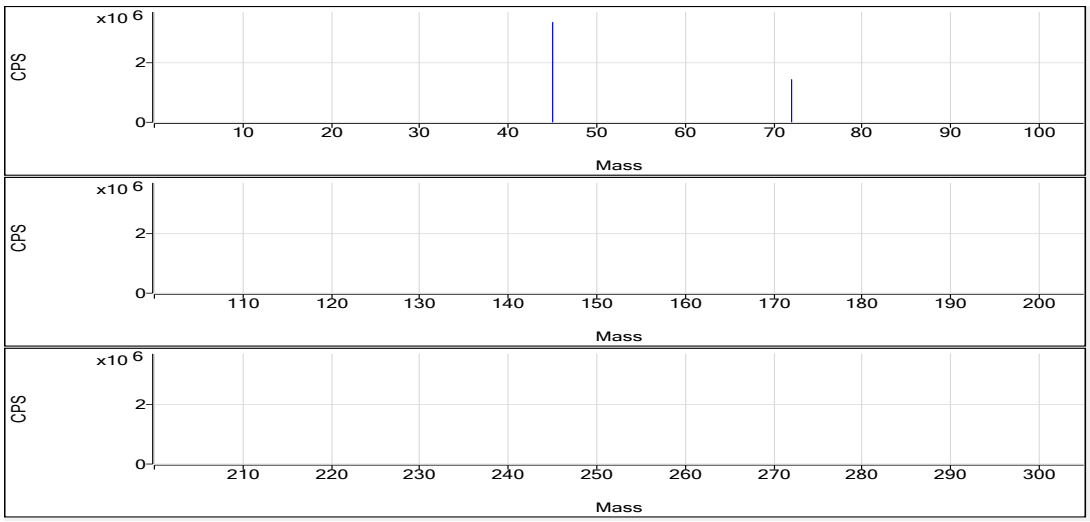
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	1.683	ppb	2.0	3287.71	0.0023	Pulse	0.5000	3
Se	78	72	H2	0.934	ppb	18.4	62.00	0.0004	Pulse	1.5000	3
Na	23	72	He	8025.150	ppb	1.8	1051106.89	13.8922	Pulse	0.1000	3
Mg	24	72	He	13977.886	ppb	2.1	891994.70	11.7896	Pulse	0.1000	3
Al	27	72	He	29917.484	ppb	2.4	546472.16	7.2230	Pulse	0.1000	3
K	39	72	He	5505.880	ppb	2.0	240911.98	3.1841	Pulse	0.1000	3
Ca	44	72	He	61154.029	ppb	1.3	143845.73	1.9010	Pulse	0.1000	3
Ti	47	72	He	1506.022	ppb	2.2	28595.23	0.3780	Pulse	0.1000	3
V	51	72	He	77.266	ppb	1.3	68944.29	0.9112	Pulse	0.5000	3
Cr	52	72	He	38.867	ppb	3.8	46692.03	0.6172	Pulse	0.1000	3
Mn	55	72	He	2174.314	ppb	1.9	972056.23	12.8476	Pulse	0.1000	3
Fe	57	72	He	37349.791	ppb	2.1	818992.18	10.8247	Pulse	0.1000	3
Co	59	72	He	12.547	ppb	5.4	29186.63	0.3859	Pulse	0.1000	3
Ni	60	72	He	33.827	ppb	3.7	23182.51	0.3065	Pulse	0.1000	3
Cu	63	72	He	193.685	ppb	2.0	365811.96	4.8349	Pulse	0.1000	3
Zn	66	72	He	258.514	ppb	2.8	48415.25	0.6399	Pulse	0.1000	3
As	75	72	He	8.379	ppb	5.6	1135.39	0.0150	Pulse	0.5000	3
Sr	88	115	He	173.491	ppb	1.3	87713.34	1.3570	Pulse	0.1000	3
Mo	98	115	He	2.394	ppb	1.0	3440.55	0.0532	Pulse	0.1000	3
Ag	107	115	He	0.442	ppb	5.2	1330.11	0.0206	Pulse	0.1000	3
Cd	111	115	He	1.053	ppb	3.6	330.01	0.0051	Pulse	0.5000	3
Sn	120	115	He	39.192	ppb	1.2	37126.99	0.5744	Pulse	0.1000	3
Sb	121	115	He	9.419	ppb	4.8	7568.97	0.1171	Pulse	0.1000	3
Ba	137	115	He	519.320	ppb	1.0	146872.49	2.2722	Pulse	0.1000	3
Tl	205	209	He	0.305	ppb	4.2	2120.25	0.0094	Pulse	0.1000	3
Pb	208	209	He	177.447	ppb	0.7	1451233.52	6.4608	Pulse	0.1000	3
U	238	209	He	3.194	ppb	3.7	30226.18	0.1346	Pulse	0.1000	3

ISTD Table:

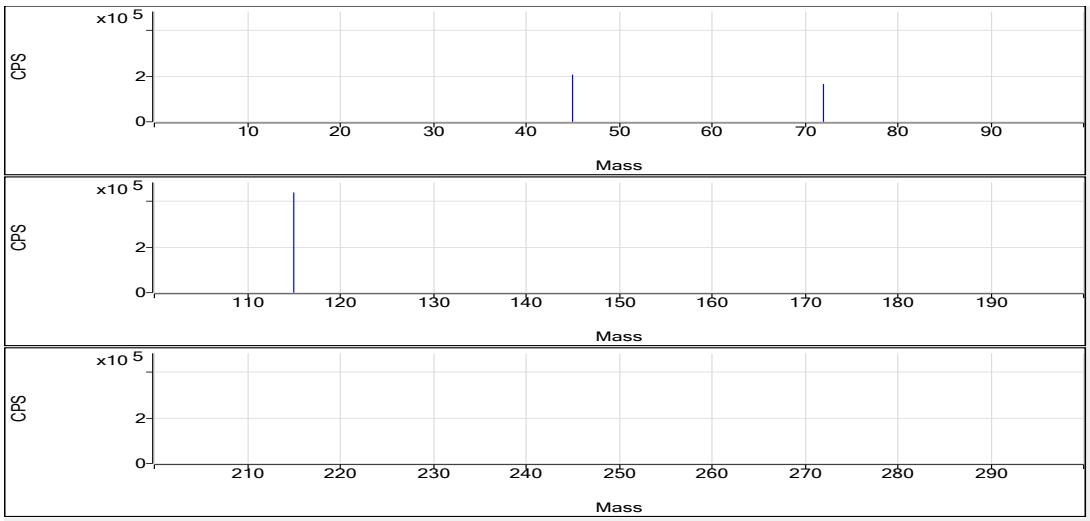
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3390902.35	2.4	104.6	Pulse	0.1000	3
No Gas	Ge	72	1456320.71	2.1	101.1	Pulse	0.1000	3
H2	Sc	45	206564.65	2.2	105.7	Pulse	0.1000	3
H2	Ge	72	165473.60	1.6	101.5	Pulse	0.1000	3
H2	In	115	438384.20	2.2	101.2	Pulse	0.1000	3
He	Sc	45	43455.03	1.6	108.7	Pulse	0.1000	3
He	Ge	72	75675.39	1.5	104.7	Pulse	0.1000	3
He	In	115	64638.01	0.2	100.1	Pulse	0.1000	3
He	Tb	159	297668.23	0.5	104.1	Pulse	0.1000	3
He	Bi	209	224633.90	1.1	101.1	Pulse	0.1000	3

No Gas

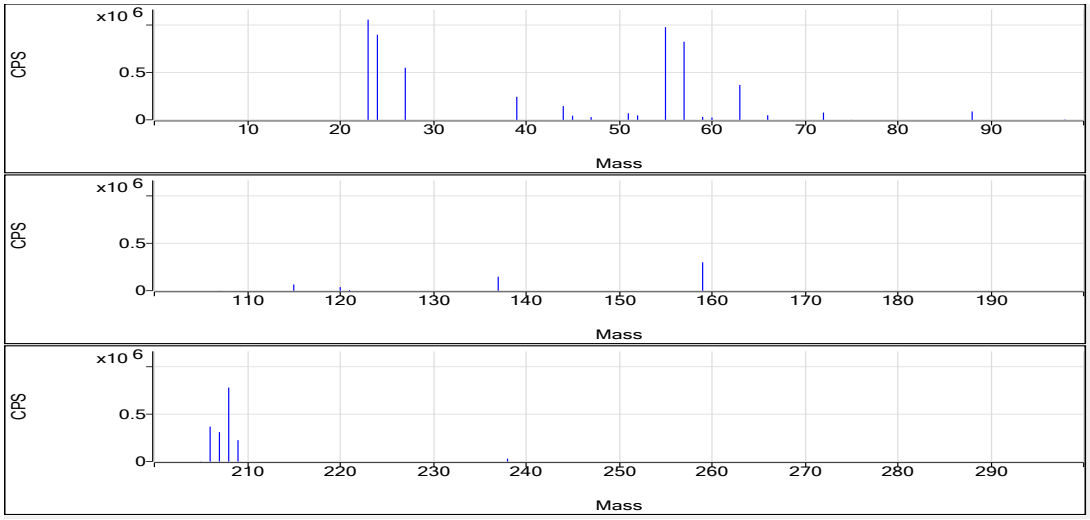


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	1.692	0.0023	3302.38	0.0013	4.694E-05
Be	9	1	No Gas	1.71	0.0023	3272.38	0.0013	4.694E-05
Be	9	1	No Gas	1.646	0.0022	3288.38	0.0013	4.694E-05
Se	78	2	H2	0.858	0.0003	58.00	0.0004	1.089E-05
Se	78	2	H2	0.813	0.0003	53.33	0.0004	1.089E-05
Se	78	2	H2	1.131	0.0005	74.67	0.0004	1.089E-05
Na	23	3	He	7989.503	13.831	1051574.83	0.0017	0.1065
Na	23	3	He	8184.118	14.1653	1053497.72	0.0017	0.1065
Na	23	3	He	7901.829	13.6804	1048248.11	0.0017	0.1065
Mg	24	3	He	13837.137	11.671	887346.71	0.0008	0.004846
Mg	24	3	He	14314.617	12.0735	897928.11	0.0008	0.004846
Mg	24	3	He	13781.903	11.6244	890709.28	0.0008	0.004846
Al	27	3	He	29459.95	7.1125	540767.45	0.0002	0.001063
Al	27	3	He	30749.225	7.4237	552116.55	0.0002	0.001063
Al	27	3	He	29543.277	7.1326	546532.49	0.0002	0.001063
K	39	3	He	5526.128	3.1952	242934.63	0.0006	0.1436
K	39	3	He	5602.933	3.2376	240789.18	0.0006	0.1436
K	39	3	He	5388.581	3.1193	239012.13	0.0006	0.1436
Ca	44	3	He	61367.513	1.9077	145041.33	0	0.001611
Ca	44	3	He	61814.656	1.9216	142910.07	0	0.001611
Ca	44	3	He	60279.919	1.8739	143585.80	0	0.001611
Ti	47	3	He	1500.925	0.3767	28638.70	0.0003	0.0002737
Ti	47	3	He	1541.943	0.387	28778.94	0.0003	0.0002737
Ti	47	3	He	1475.199	0.3702	28368.04	0.0003	0.0002737
V	51	3	He	76.83	0.9061	68888.66	0.0117	0.007326
V	51	3	He	78.378	0.9242	68732.17	0.0117	0.007326
V	51	3	He	76.591	0.9033	69212.03	0.0117	0.007326
Cr	52	3	He	38.805	0.6163	46855.87	0.0152	0.02538
Cr	52	3	He	40.372	0.6401	47608.41	0.0152	0.02538
Cr	52	3	He	37.425	0.5953	45611.82	0.0152	0.02538
Mn	55	3	He	2151.657	12.7138	966637.09	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2222.843	13.134	976798.34	0.0059	0.01385
Mn	55	3	He	2148.442	12.6949	972733.27	0.0059	0.01385
Fe	57	3	He	36841.234	10.6774	811803.35	0.0003	0.003918
Fe	57	3	He	38270.963	11.0916	824899.21	0.0003	0.003918
Fe	57	3	He	36937.177	10.7052	820273.97	0.0003	0.003918
Co	59	3	He	12.327	0.3792	28829.06	0.0305	0.003084
Co	59	3	He	13.311	0.4092	30432.54	0.0305	0.003084
Co	59	3	He	12.003	0.3693	28298.28	0.0305	0.003084
Ni	60	3	He	33.392	0.3026	23008.91	0.0088	0.009003
Ni	60	3	He	35.247	0.3189	23720.20	0.0088	0.009003
Ni	60	3	He	32.842	0.2978	22818.42	0.0088	0.009003
Cu	63	3	He	190.872	4.7647	362263.98	0.0249	0.004937
Cu	63	3	He	198.155	4.9463	367867.73	0.0249	0.004937
Cu	63	3	He	192.029	4.7936	367304.17	0.0249	0.004937
Zn	66	3	He	259.036	0.6412	48752.78	0.0025	0.004836
Zn	66	3	He	265.355	0.6568	48843.67	0.0025	0.004836
Zn	66	3	He	251.152	0.6219	47649.31	0.0025	0.004836
As	75	3	He	7.858	0.0141	1072.05	0.0017	0.0004347
As	75	3	He	8.765	0.0157	1166.06	0.0017	0.0004347
As	75	3	He	8.515	0.0152	1168.06	0.0017	0.0004347
Sr	88	3	He	171.111	1.3384	86341.67	0.0078	0.0007762
Sr	88	3	He	175.735	1.3745	89018.22	0.0078	0.0007762
Sr	88	3	He	173.627	1.358	87780.13	0.0078	0.0007762
Mo	98	3	He	2.412	0.0536	3460.56	0.022	0.0005162
Mo	98	3	He	2.368	0.0527	3410.53	0.022	0.0005162
Mo	98	3	He	2.401	0.0534	3450.56	0.022	0.0005162
Ag	107	3	He	0.467	0.0217	1400.12	0.0455	0.0004641
Ag	107	3	He	0.438	0.0204	1320.11	0.0455	0.0004641
Ag	107	3	He	0.422	0.0196	1270.11	0.0455	0.0004641
Cd	111	3	He	1.023	0.005	320.01	0.0048	5.152E-05
Cd	111	3	He	1.096	0.0053	344.01	0.0048	5.152E-05
Cd	111	3	He	1.04	0.005	326.01	0.0048	5.152E-05
Sn	120	3	He	38.936	0.5707	36819.61	0.0143	0.01559
Sn	120	3	He	38.911	0.5704	36939.88	0.0143	0.01559
Sn	120	3	He	39.729	0.582	37621.48	0.0143	0.01559
Sb	121	3	He	9.929	0.1234	7962.53	0.0124	0.000258
Sb	121	3	He	9.056	0.1126	7292.10	0.0124	0.000258
Sb	121	3	He	9.273	0.1153	7452.28	0.0124	0.000258
Ba	137	3	He	515.577	2.2559	145531.47	0.0044	0.000309
Ba	137	3	He	517.254	2.2632	146571.78	0.0044	0.000309
Ba	137	3	He	525.129	2.2976	148514.21	0.0044	0.000309
Tl	205	3	He	0.316	0.0097	2170.28	0.0276	0.001005
Tl	205	3	He	0.309	0.0095	2170.26	0.0276	0.001005
Tl	205	3	He	0.291	0.009	2020.22	0.0276	0.001005
Pb	208	3	He	178.186	6.4877	772921.16	0.0364	0.002176
Pb	208	3	He	176.083	6.4111	783568.50	0.0364	0.002176
Pb	208	3	He	178.07	6.4835	770927.96	0.0364	0.002176
U	238	3	He	3.225	0.1359	30296.52	0.0421	0.00024
U	238	3	He	3.064	0.1291	29384.02	0.0421	0.00024
U	238	3	He	3.293	0.1388	30998.00	0.0421	0.00024
Sc	45	1	No Gas			3367070.57		
Sc	45	1	No Gas			3324330.58		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3481305.89		
Ge	72	1	No Gas			1454356.07		
Ge	72	1	No Gas			1426605.29		
Ge	72	1	No Gas			1488000.76		
Sc	45	2	H2			210452.01		
Sc	45	2	H2			201660.13		
Sc	45	2	H2			207581.81		
Ge	72	2	H2			168129.67		
Ge	72	2	H2			162871.62		
Ge	72	2	H2			165419.51		
In	115	2	H2			449330.85		
In	115	2	H2			433842.85		
In	115	2	H2			431978.90		
Sc	45	3	He			42913.31		
Sc	45	3	He			44237.44		
Sc	45	3	He			43214.35		
Ge	72	3	He			76030.32		
Ge	72	3	He			74371.68		
Ge	72	3	He			76624.17		
In	115	3	He			64800.01		
In	115	3	He			65051.59		
In	115	3	He			64931.19		
Tb	159	3	He			296246.46		
Tb	159	3	He			297514.23		
Tb	159	3	He			299244.00		
Bi	209	3	He			222946.81		
Bi	209	3	He			227557.36		
Bi	209	3	He			223397.52		

Quantitation Report

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Acq Time	2023-08-10 18:05:09
Sample Name	410-136577-H-21-A @10
Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

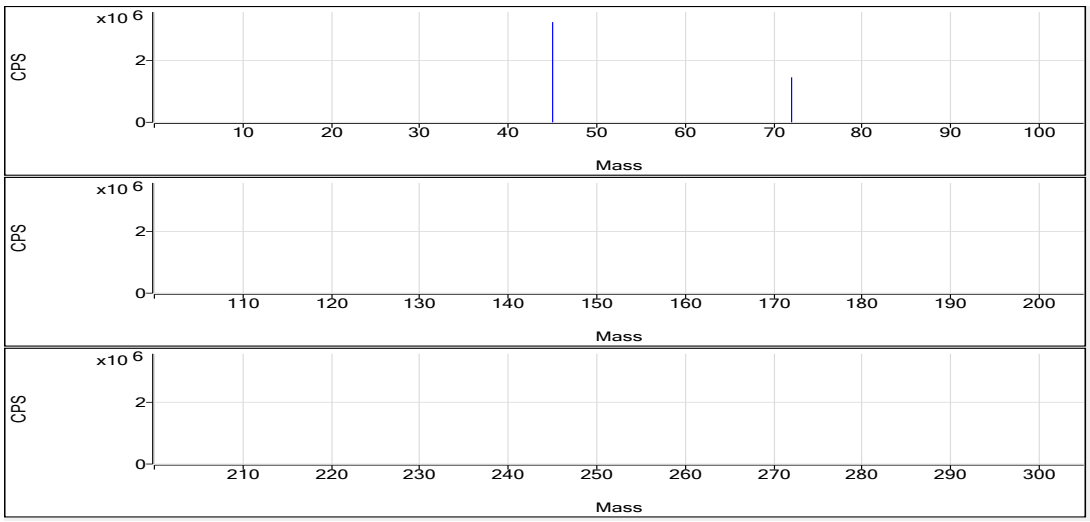
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.262	ppb	2.1	573.35	0.0004	Pulse	0.5000	3
Se	78	72	H2	0.138	ppb	12.5	10.66	0.0001	Pulse	1.5000	3
Na	23	72	He	1215.958	ppb	1.7	164027.56	2.1953	Pulse	0.1000	3
Mg	24	72	He	2138.807	ppb	0.9	135098.78	1.8081	Pulse	0.1000	3
Al	27	72	He	4580.416	ppb	1.3	82696.85	1.1067	Pulse	0.1000	3
K	39	72	He	825.458	ppb	1.6	44791.99	0.5995	Pulse	0.1000	3
Ca	44	72	He	9367.190	ppb	3.1	21860.15	0.2926	Pulse	0.1000	3
Ti	47	72	He	241.410	ppb	5.9	4544.20	0.0608	Pulse	0.1000	3
V	51	72	He	11.967	ppb	1.5	11007.51	0.1473	Pulse	0.5000	3
Cr	52	72	He	6.073	ppb	9.3	8806.32	0.1179	Pulse	0.1000	3
Mn	55	72	He	330.115	ppb	0.4	146625.95	1.9623	Pulse	0.1000	3
Fe	57	72	He	5723.417	ppb	2.1	124187.14	1.6621	Pulse	0.1000	3
Co	59	72	He	2.002	ppb	2.6	4794.28	0.0642	Pulse	0.1000	3
Ni	60	72	He	6.081	ppb	6.2	4667.54	0.0625	Pulse	0.1000	3
Cu	63	72	He	30.180	ppb	0.5	56604.80	0.7576	Pulse	0.1000	3
Zn	66	72	He	39.464	ppb	3.0	7605.57	0.1018	Pulse	0.1000	3
As	75	72	He	1.140	ppb	9.4	180.67	0.0024	Pulse	0.5000	3
Sr	88	115	He	26.638	ppb	1.2	13353.38	0.2090	Pulse	0.1000	3
Mo	98	115	He	0.408	ppb	11.4	606.70	0.0095	Pulse	0.1000	3
Ag	107	115	He	0.085	ppb	15.0	276.68	0.0043	Pulse	0.1000	3
Cd	111	115	He	0.141	ppb	21.3	46.67	0.0007	Pulse	0.5000	3
Sn	120	115	He	5.954	ppb	4.2	6418.36	0.1005	Pulse	0.1000	3
Sb	121	115	He	1.401	ppb	7.9	1126.75	0.0176	Pulse	0.1000	3
Ba	137	115	He	77.369	ppb	1.4	21644.16	0.3388	Pulse	0.1000	3
Tl	205	209	He	0.071	ppb	9.9	670.04	0.0030	Pulse	0.1000	3
Pb	208	209	He	26.799	ppb	0.1	220544.62	0.9776	Pulse	0.1000	3
U	238	209	He	0.471	ppb	3.9	4527.62	0.0201	Pulse	0.1000	3

ISTD Table:

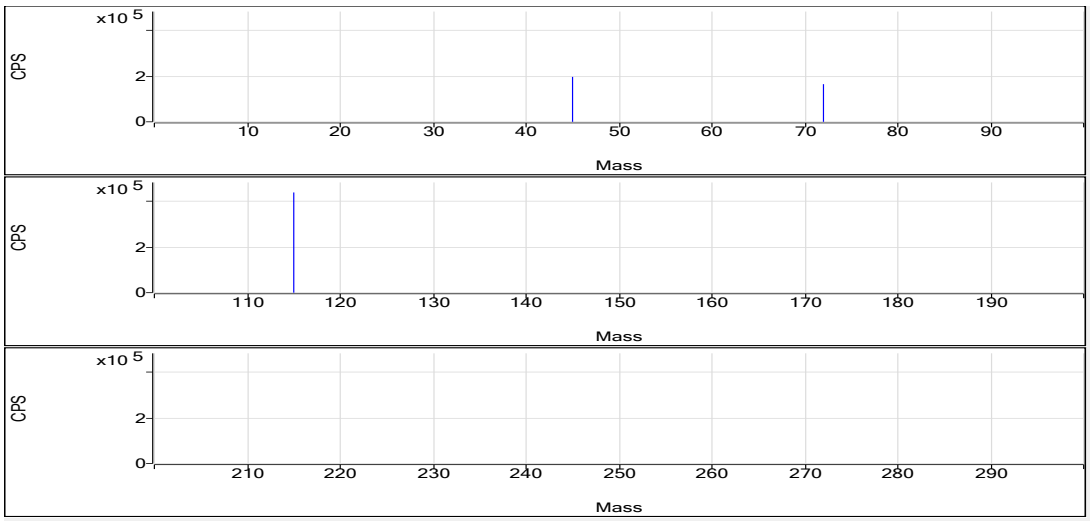
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3262117.03	1.5	100.6	Pulse	0.1000	3
No Gas	Ge	72	1464626.96	0.9	101.7	Pulse	0.1000	3
H2	Sc	45	197150.19	0.9	100.9	Pulse	0.1000	3
H2	Ge	72	165241.88	1.3	101.4	Pulse	0.1000	3
H2	In	115	439935.15	0.7	101.5	Pulse	0.1000	3
He	Sc	45	42358.59	1.8	105.9	Pulse	0.1000	3
He	Ge	72	74720.64	0.2	103.4	Pulse	0.1000	3
He	In	115	63886.35	0.5	98.9	Pulse	0.1000	3
He	Tb	159	285335.66	0.9	99.8	Pulse	0.1000	3
He	Bi	209	225602.03	0.3	101.5	Pulse	0.1000	3

No Gas

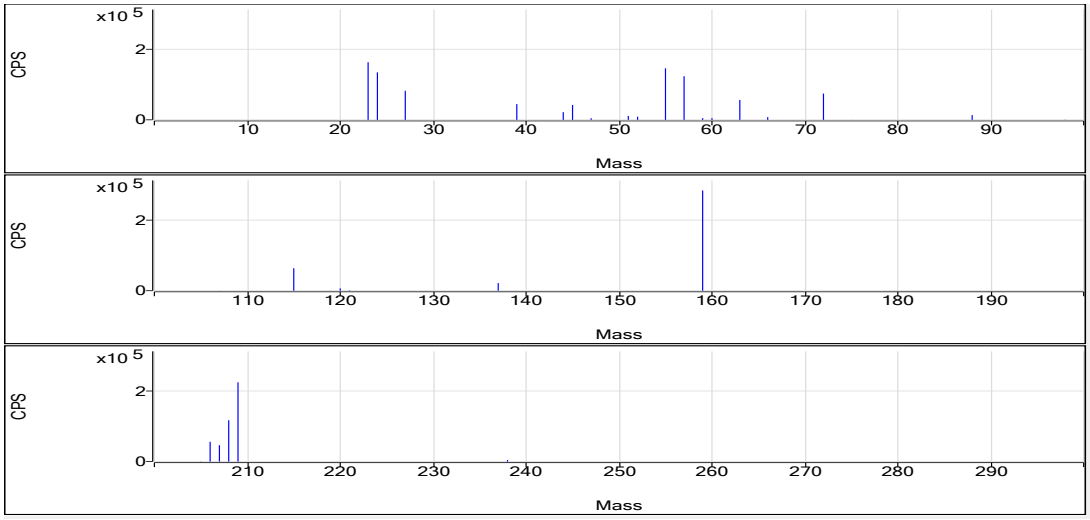


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.256	0.0004	558.01	0.0013	4.694E-05
Be	9	1	No Gas	0.264	0.0004	574.02	0.0013	4.694E-05
Be	9	1	No Gas	0.267	0.0004	588.02	0.0013	4.694E-05
Se	78	2	H2	0.118	0.0001	9.33	0.0004	1.089E-05
Se	78	2	H2	0.15	0.0001	11.33	0.0004	1.089E-05
Se	78	2	H2	0.146	0.0001	11.33	0.0004	1.089E-05
Na	23	3	He	1204.566	2.1757	162486.98	0.0017	0.1065
Na	23	3	He	1239.507	2.2357	166702.93	0.0017	0.1065
Na	23	3	He	1203.801	2.1744	162892.77	0.0017	0.1065
Mg	24	3	He	2149.293	1.8169	135693.19	0.0008	0.004846
Mg	24	3	He	2151.324	1.8186	135604.11	0.0008	0.004846
Mg	24	3	He	2115.803	1.7887	133999.03	0.0008	0.004846
Al	27	3	He	4512.606	1.0904	81432.99	0.0002	0.001063
Al	27	3	He	4629.334	1.1186	83403.93	0.0002	0.001063
Al	27	3	He	4599.308	1.1113	83253.62	0.0002	0.001063
K	39	3	He	837.333	0.606	45259.94	0.0006	0.1436
K	39	3	He	827.893	0.6008	44798.92	0.0006	0.1436
K	39	3	He	811.147	0.5916	44317.11	0.0006	0.1436
Ca	44	3	He	9664.188	0.3018	22537.83	0	0.001611
Ca	44	3	He	9091.629	0.284	21175.81	0	0.001611
Ca	44	3	He	9345.753	0.2919	21866.82	0	0.001611
Ti	47	3	He	256.314	0.0646	4820.95	0.0003	0.0002737
Ti	47	3	He	227.838	0.0574	4280.77	0.0003	0.0002737
Ti	47	3	He	240.078	0.0605	4530.87	0.0003	0.0002737
V	51	3	He	12.093	0.1488	11112.25	0.0117	0.007326
V	51	3	He	12.047	0.1483	11054.21	0.0117	0.007326
V	51	3	He	11.762	0.1449	10856.06	0.0117	0.007326
Cr	52	3	He	5.643	0.1113	8312.63	0.0152	0.02538
Cr	52	3	He	6.712	0.1276	9513.46	0.0152	0.02538
Cr	52	3	He	5.866	0.1147	8592.87	0.0152	0.02538
Mn	55	3	He	330.43	1.9642	146691.93	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	331.081	1.968	146744.22	0.0059	0.01385
Mn	55	3	He	328.835	1.9548	146441.71	0.0059	0.01385
Fe	57	3	He	5756.836	1.6718	124852.13	0.0003	0.003918
Fe	57	3	He	5825.429	1.6916	126134.44	0.0003	0.003918
Fe	57	3	He	5587.985	1.6228	121574.85	0.0003	0.003918
Co	59	3	He	2.041	0.0654	4880.95	0.0305	0.003084
Co	59	3	He	2.022	0.0648	4830.99	0.0305	0.003084
Co	59	3	He	1.942	0.0623	4670.91	0.0305	0.003084
Ni	60	3	He	6.378	0.0651	4860.93	0.0088	0.009003
Ni	60	3	He	6.207	0.0636	4740.91	0.0088	0.009003
Ni	60	3	He	5.657	0.0587	4400.78	0.0088	0.009003
Cu	63	3	He	30	0.7531	56240.17	0.0249	0.004937
Cu	63	3	He	30.275	0.7599	56661.96	0.0249	0.004937
Cu	63	3	He	30.266	0.7597	56912.27	0.0249	0.004937
Zn	66	3	He	38.647	0.0998	7452.13	0.0025	0.004836
Zn	66	3	He	40.842	0.1052	7842.35	0.0025	0.004836
Zn	66	3	He	38.902	0.1004	7522.22	0.0025	0.004836
As	75	3	He	1.244	0.0026	194.00	0.0017	0.0004347
As	75	3	He	1.03	0.0022	166.00	0.0017	0.0004347
As	75	3	He	1.147	0.0024	182.00	0.0017	0.0004347
Sr	88	3	He	26.323	0.2065	13116.50	0.0078	0.0007762
Sr	88	3	He	26.937	0.2113	13546.94	0.0078	0.0007762
Sr	88	3	He	26.655	0.2091	13396.70	0.0078	0.0007762
Mo	98	3	He	0.413	0.0096	610.03	0.022	0.0005162
Mo	98	3	He	0.359	0.0084	540.03	0.022	0.0005162
Mo	98	3	He	0.452	0.0105	670.04	0.022	0.0005162
Ag	107	3	He	0.08	0.0041	260.01	0.0455	0.0004641
Ag	107	3	He	0.1	0.005	320.02	0.0455	0.0004641
Ag	107	3	He	0.076	0.0039	250.01	0.0455	0.0004641
Cd	111	3	He	0.107	0.0006	36.00	0.0048	5.152E-05
Cd	111	3	He	0.152	0.0008	50.00	0.0048	5.152E-05
Cd	111	3	He	0.165	0.0008	54.00	0.0048	5.152E-05
Sn	120	3	He	6.209	0.1041	6611.79	0.0143	0.01559
Sn	120	3	He	5.703	0.0969	6211.62	0.0143	0.01559
Sn	120	3	He	5.949	0.1004	6431.68	0.0143	0.01559
Sb	121	3	He	1.528	0.0192	1220.09	0.0124	0.000258
Sb	121	3	He	1.325	0.0167	1070.08	0.0124	0.000258
Sb	121	3	He	1.351	0.017	1090.09	0.0124	0.000258
Ba	137	3	He	76.696	0.3358	21326.81	0.0044	0.000309
Ba	137	3	He	76.805	0.3363	21557.39	0.0044	0.000309
Ba	137	3	He	78.608	0.3442	22048.27	0.0044	0.000309
Tl	205	3	He	0.079	0.0032	720.05	0.0276	0.001005
Tl	205	3	He	0.07	0.0029	660.04	0.0276	0.001005
Tl	205	3	He	0.065	0.0028	630.04	0.0276	0.001005
Pb	208	3	He	26.842	0.9792	118700.12	0.0364	0.002176
Pb	208	3	He	26.767	0.9764	116593.45	0.0364	0.002176
Pb	208	3	He	26.787	0.9772	117307.76	0.0364	0.002176
U	238	3	He	0.491	0.0209	4731.06	0.0421	0.00024
U	238	3	He	0.468	0.0199	4490.94	0.0421	0.00024
U	238	3	He	0.455	0.0194	4360.85	0.0421	0.00024
Sc	45	1	No Gas			3247478.08		
Sc	45	1	No Gas			3223136.51		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3315736.51		
Ge	72	1	No Gas			1456040.29		
Ge	72	1	No Gas			1457192.17		
Ge	72	1	No Gas			1480648.42		
Sc	45	2	H2			196632.87		
Sc	45	2	H2			195761.83		
Sc	45	2	H2			199055.86		
Ge	72	2	H2			164157.63		
Ge	72	2	H2			163901.54		
Ge	72	2	H2			167666.46		
In	115	2	H2			442514.25		
In	115	2	H2			436818.51		
In	115	2	H2			440472.69		
Sc	45	3	He			43124.37		
Sc	45	3	He			42321.76		
Sc	45	3	He			41629.63		
Ge	72	3	He			74683.16		
Ge	72	3	He			74563.85		
Ge	72	3	He			74914.92		
In	115	3	He			63555.00		
In	115	3	He			64147.64		
In	115	3	He			64106.61		
Tb	159	3	He			284686.36		
Tb	159	3	He			283020.19		
Tb	159	3	He			288300.43		
Bi	209	3	He			226373.43		
Bi	209	3	He			225359.74		
Bi	209	3	He			225072.91		

Quantitation Report

Data File Name	217SMPL.d
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Acq Time	2023-08-10 18:07:09
Sample Name	410-136577-H-21-A PDS @2
Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

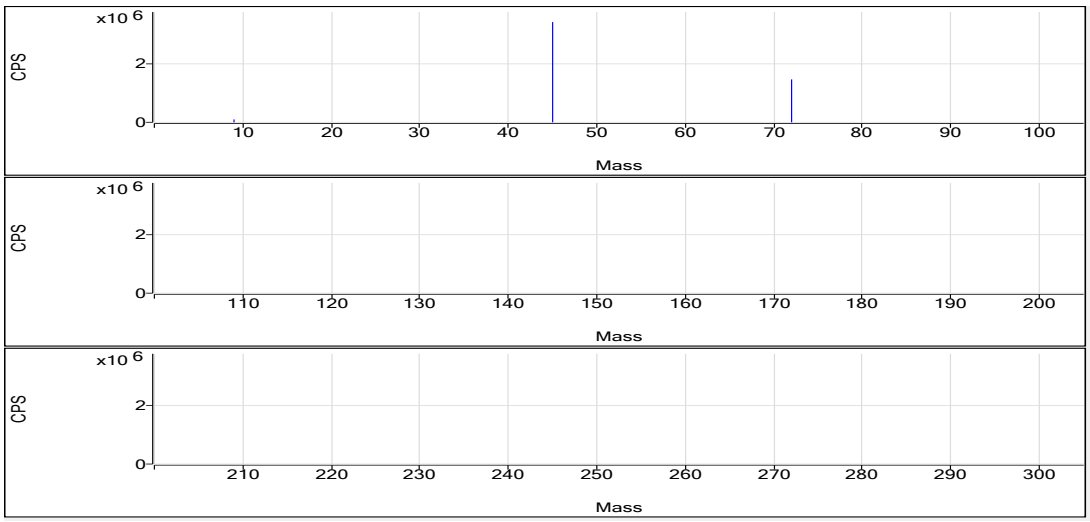
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	50.712	ppb	4.3	97510.25	0.0667	Pulse	0.5000	3
Se	78	72	H2	105.288	ppb	4.4	6708.01	0.0410	Pulse	1.5000	3
Na	23	72	He	12923.384	ppb	1.9	1664759.04	22.3065	Pulse	0.1000	3
Mg	24	72	He	18603.442	ppb	1.9	1170899.23	15.6894	Pulse	0.1000	3
Al	27	72	He	33885.010	ppb	2.0	610522.28	8.1807	Pulse	0.1000	3
K	39	72	He	10385.183	ppb	1.2	438750.24	5.8785	Pulse	0.1000	3
Ca	44	72	He	64563.894	ppb	1.5	149784.79	2.0070	Pulse	0.1000	3
Ti	47	72	He	1974.808	ppb	1.9	36980.73	0.4955	Pulse	0.1000	3
V	51	72	He	593.717	ppb	1.4	518890.48	6.9525	Pulse	0.5000	3
Cr	52	72	He	551.765	ppb	0.2	629030.58	8.4273	Pulse	0.1000	3
Mn	55	72	He	2618.687	ppb	1.6	1154595.79	15.4704	Pulse	0.1000	3
Fe	57	72	He	41173.461	ppb	0.9	890605.48	11.9325	Pulse	0.1000	3
Co	59	72	He	523.579	ppb	1.9	1192417.25	15.9777	Pulse	0.1000	3
Ni	60	72	He	538.689	ppb	1.2	354215.48	4.7459	Pulse	0.1000	3
Cu	63	72	He	697.405	ppb	1.4	1298356.13	17.3962	Pulse	0.1000	3
Zn	66	72	He	756.972	ppb	1.3	139160.36	1.8645	Pulse	0.1000	3
As	75	72	He	519.038	ppb	1.6	67402.99	0.9031	Pulse	0.5000	3
Sr	88	115	He	218.416	ppb	2.5	111120.68	1.7082	Pulse	0.1000	3
Mo	98	115	He	52.202	ppb	2.5	74818.13	1.1501	Pulse	0.1000	3
Ag	107	115	He	53.708	ppb	0.8	159026.52	2.4442	Pulse	0.1000	3
Cd	111	115	He	52.502	ppb	0.8	16400.27	0.2521	Pulse	0.5000	3
Sn	120	115	He	140.701	ppb	1.2	131528.64	2.0217	Pulse	0.1000	3
Sb	121	115	He	111.609	ppb	1.2	90090.64	1.3848	Pulse	0.1000	3
Ba	137	115	He	980.679	ppb	1.8	279130.46	4.2906	Pulse	0.1000	3
Tl	205	209	He	101.750	ppb	1.1	633459.03	2.8138	Pulse	0.1000	3
Pb	208	209	He	220.396	ppb	1.1	1806403.37	8.0240	Pulse	0.1000	3
U	238	209	He	53.001	ppb	1.4	501992.87	2.2298	Pulse	0.1000	3

ISTD Table:

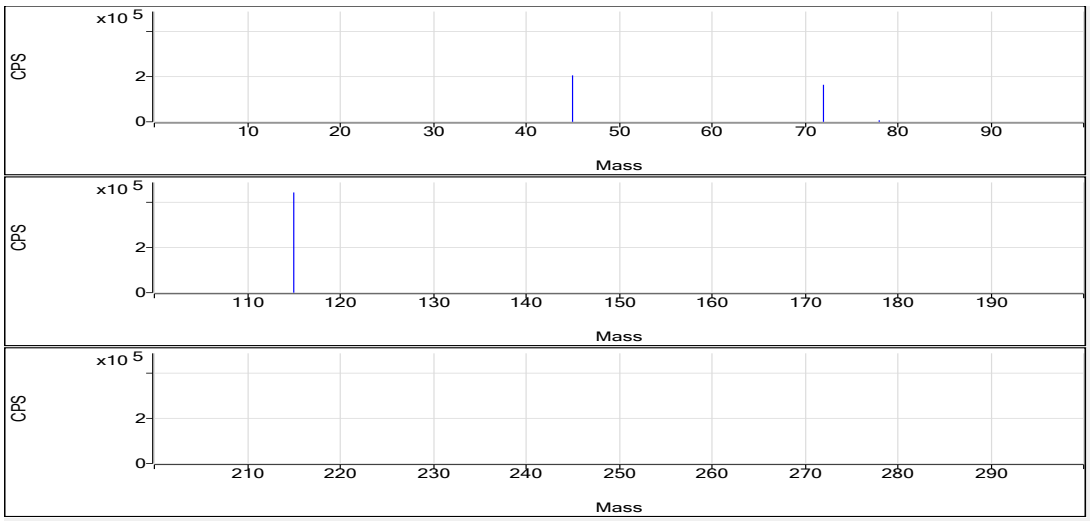
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3418602.86	1.8	105.5	Pulse	0.1000	3
No Gas	Ge	72	1462988.63	1.7	101.6	Pulse	0.1000	3
H2	Sc	45	205340.97	0.5	105.1	Pulse	0.1000	3
H2	Ge	72	163699.24	2.7	100.4	Pulse	0.1000	3
H2	In	115	442981.25	0.7	102.2	Pulse	0.1000	3
He	Sc	45	44892.76	0.8	112.3	Pulse	0.1000	3
He	Ge	72	74643.56	1.4	103.3	Pulse	0.1000	3
He	In	115	65063.98	1.0	100.7	Pulse	0.1000	3
He	Tb	159	299025.19	0.6	104.6	Pulse	0.1000	3
He	Bi	209	225138.48	0.8	101.3	Pulse	0.1000	3

No Gas

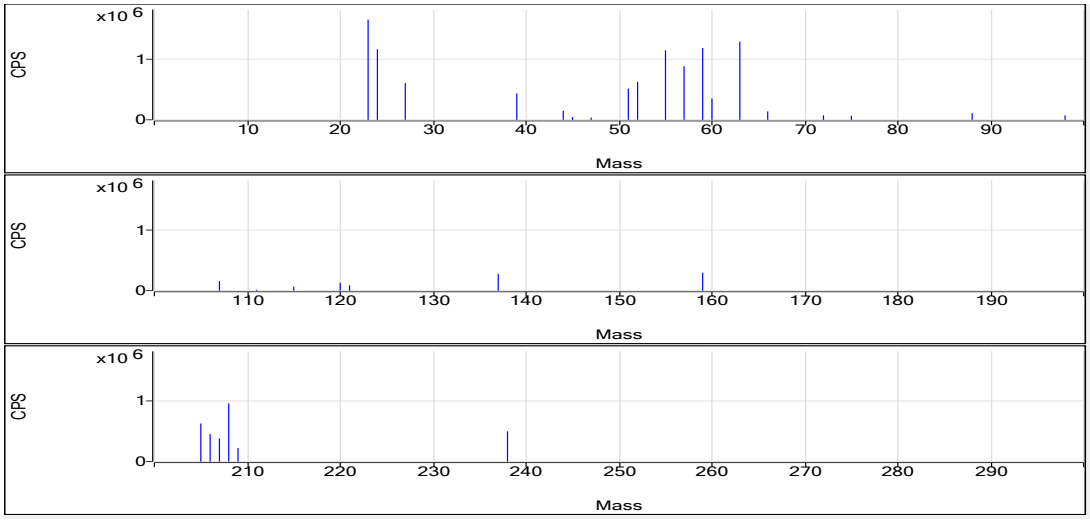


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	52.197	0.0686	99170.89	0.0013	4.694E-05
Be	9	1	No Gas	51.72	0.068	98769.96	0.0013	4.694E-05
Be	9	1	No Gas	48.218	0.0634	94589.91	0.0013	4.694E-05
Se	78	2	H2	101.404	0.0395	6522.81	0.0004	1.089E-05
Se	78	2	H2	110.423	0.043	6825.62	0.0004	1.089E-05
Se	78	2	H2	104.036	0.0405	6775.60	0.0004	1.089E-05
Na	23	3	He	13021.044	22.4743	1658573.88	0.0017	0.1065
Na	23	3	He	13103.277	22.6155	1679690.76	0.0017	0.1065
Na	23	3	He	12645.831	21.8297	1656012.48	0.0017	0.1065
Mg	24	3	He	18897.572	15.9374	1176161.62	0.0008	0.004846
Mg	24	3	He	18706.011	15.7759	1171701.08	0.0008	0.004846
Mg	24	3	He	18206.741	15.355	1164834.98	0.0008	0.004846
Al	27	3	He	34295.656	8.2798	611041.48	0.0002	0.001063
Al	27	3	He	34250.468	8.2689	614145.77	0.0002	0.001063
Al	27	3	He	33108.906	7.9934	606379.60	0.0002	0.001063
K	39	3	He	10400.28	5.8868	434438.31	0.0006	0.1436
K	39	3	He	10499.01	5.9413	441270.70	0.0006	0.1436
K	39	3	He	10256.259	5.8073	440541.71	0.0006	0.1436
Ca	44	3	He	65325.932	2.0306	149857.62	0	0.001611
Ca	44	3	He	64888.342	2.017	149808.18	0	0.001611
Ca	44	3	He	63477.407	1.9732	149688.56	0	0.001611
Ti	47	3	He	1990.956	0.4996	36867.21	0.0003	0.0002737
Ti	47	3	He	2000.861	0.502	37287.89	0.0003	0.0002737
Ti	47	3	He	1932.606	0.4849	36787.08	0.0003	0.0002737
V	51	3	He	598.477	7.0082	517193.25	0.0117	0.007326
V	51	3	He	598.462	7.008	520493.41	0.0117	0.007326
V	51	3	He	584.214	6.8413	518984.78	0.0117	0.007326
Cr	52	3	He	553.053	8.4469	623368.27	0.0152	0.02538
Cr	52	3	He	551.333	8.4207	625416.32	0.0152	0.02538
Cr	52	3	He	550.91	8.4142	638307.14	0.0152	0.02538
Mn	55	3	He	2652.837	15.672	1156575.22	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2629.891	15.5366	1153925.22	0.0059	0.01385
Mn	55	3	He	2573.333	15.2028	1153286.94	0.0059	0.01385
Fe	57	3	He	41477.784	12.0206	887108.19	0.0003	0.003918
Fe	57	3	He	41278.955	11.963	888512.88	0.0003	0.003918
Fe	57	3	He	40763.643	11.8137	896195.38	0.0003	0.003918
Co	59	3	He	531.411	16.2167	1196771.39	0.0305	0.003084
Co	59	3	He	526.956	16.0808	1194343.03	0.0305	0.003084
Co	59	3	He	512.371	15.6358	1186137.33	0.0305	0.003084
Ni	60	3	He	546.414	4.8138	355251.52	0.0088	0.009003
Ni	60	3	He	535.524	4.718	350414.92	0.0088	0.009003
Ni	60	3	He	534.128	4.7057	356979.99	0.0088	0.009003
Cu	63	3	He	700.402	17.4709	1289332.95	0.0249	0.004937
Cu	63	3	He	705.578	17.6	1307179.82	0.0249	0.004937
Cu	63	3	He	686.237	17.1177	1298555.61	0.0249	0.004937
Zn	66	3	He	759.916	1.8718	138134.50	0.0025	0.004836
Zn	66	3	He	765.076	1.8845	139960.97	0.0025	0.004836
Zn	66	3	He	745.923	1.8374	139385.60	0.0025	0.004836
As	75	3	He	523.725	0.9113	67251.49	0.0017	0.0004347
As	75	3	He	523.704	0.9112	67679.66	0.0017	0.0004347
As	75	3	He	509.684	0.8869	67277.82	0.0017	0.0004347
Sr	88	3	He	214.102	1.6744	109850.11	0.0078	0.0007762
Sr	88	3	He	224.515	1.7558	112944.76	0.0078	0.0007762
Sr	88	3	He	216.631	1.6942	110567.17	0.0078	0.0007762
Mo	98	3	He	50.79	1.119	73410.81	0.022	0.0005162
Mo	98	3	He	53.297	1.1742	75531.49	0.022	0.0005162
Mo	98	3	He	52.519	1.1571	75512.08	0.022	0.0005162
Ag	107	3	He	53.272	2.4244	159048.74	0.0455	0.0004641
Ag	107	3	He	53.71	2.4443	157230.62	0.0455	0.0004641
Ag	107	3	He	54.141	2.4639	160800.21	0.0455	0.0004641
Cd	111	3	He	52.268	0.251	16463.67	0.0048	5.152E-05
Cd	111	3	He	52.957	0.2543	16355.53	0.0048	5.152E-05
Cd	111	3	He	52.28	0.251	16381.60	0.0048	5.152E-05
Sn	120	3	He	139.377	2.0028	131393.04	0.0143	0.01559
Sn	120	3	He	142.578	2.0485	131768.18	0.0143	0.01559
Sn	120	3	He	140.148	2.0138	131424.69	0.0143	0.01559
Sb	121	3	He	110.741	1.374	90140.17	0.0124	0.000258
Sb	121	3	He	113.159	1.404	90312.64	0.0124	0.000258
Sb	121	3	He	110.926	1.3763	89819.10	0.0124	0.000258
Ba	137	3	He	962.019	4.2089	276125.09	0.0044	0.000309
Ba	137	3	He	996.913	4.3616	280562.34	0.0044	0.000309
Ba	137	3	He	983.104	4.3012	280703.96	0.0044	0.000309
Tl	205	3	He	100.629	2.7828	630306.63	0.0276	0.001005
Tl	205	3	He	102.937	2.8466	635030.54	0.0276	0.001005
Tl	205	3	He	101.683	2.812	635039.91	0.0276	0.001005
Pb	208	3	He	219.036	7.9745	961429.13	0.0364	0.002176
Pb	208	3	He	223.232	8.1272	971663.42	0.0364	0.002176
Pb	208	3	He	218.919	7.9702	963548.89	0.0364	0.002176
U	238	3	He	52.179	2.1953	497222.18	0.0421	0.00024
U	238	3	He	53.541	2.2526	502507.26	0.0421	0.00024
U	238	3	He	53.282	2.2417	506249.17	0.0421	0.00024
Sc	45	1	No Gas			3363994.95		
Sc	45	1	No Gas			3405624.32		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3486189.32		
Ge	72	1	No Gas			1444868.42		
Ge	72	1	No Gas			1452312.17		
Ge	72	1	No Gas			1491785.29		
Sc	45	2	H2			206052.61		
Sc	45	2	H2			204112.87		
Sc	45	2	H2			205857.42		
Ge	72	2	H2			165160.04		
Ge	72	2	H2			158715.90		
Ge	72	2	H2			167221.79		
In	115	2	H2			444033.63		
In	115	2	H2			439459.02		
In	115	2	H2			445451.09		
Sc	45	3	He			44779.04		
Sc	45	3	He			44608.49		
Sc	45	3	He			45290.74		
Ge	72	3	He			73798.75		
Ge	72	3	He			74271.52		
Ge	72	3	He			75860.41		
In	115	3	He			66629.23		
In	115	3	He			65353.35		
In	115	3	He			66287.12		
Tb	159	3	He			299843.94		
Tb	159	3	He			297017.10		
Tb	159	3	He			300214.53		
Bi	209	3	He			226497.95		
Bi	209	3	He			223081.85		
Bi	209	3	He			225835.64		

Quantitation Report

Data File Name	218SMPL.d
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Acq Time	2023-08-10 18:09:09
Sample Name	410-136577-H-21-A PDS @10
Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

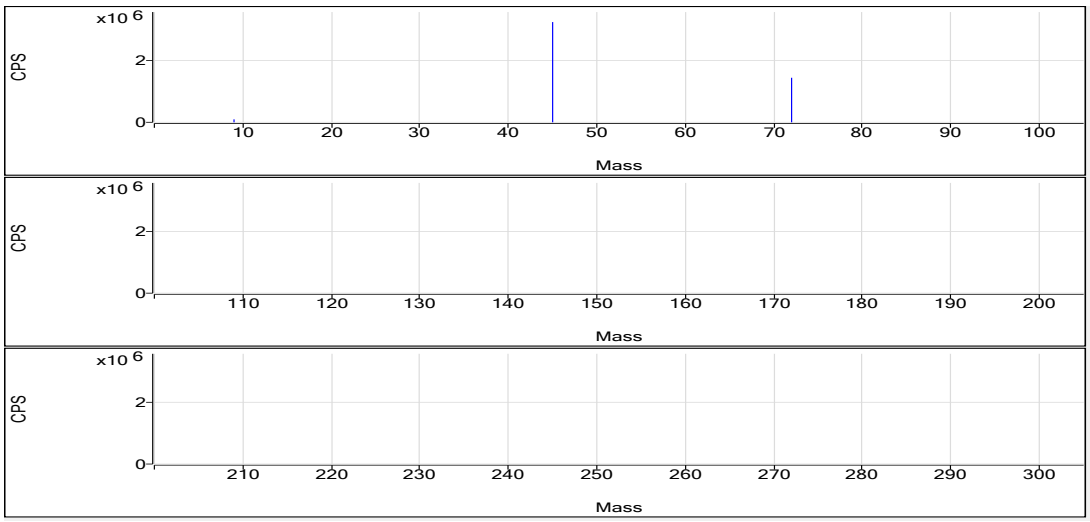
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	50.096	ppb	4.1	95376.92	0.0659	Pulse	0.5000	3
Se	78	72	H2	103.618	ppb	3.6	6612.64	0.0404	Pulse	1.5000	3
Na	23	72	He	6150.201	ppb	1.6	805107.43	10.6714	Pulse	0.1000	3
Mg	24	72	He	6868.098	ppb	1.4	437241.44	5.7954	Pulse	0.1000	3
Al	27	72	He	8729.360	ppb	1.8	159058.26	2.1083	Pulse	0.1000	3
K	39	72	He	5782.116	ppb	1.5	251744.48	3.3366	Pulse	0.1000	3
Ca	44	72	He	12539.601	ppb	1.3	29507.07	0.3911	Pulse	0.1000	3
Ti	47	72	He	701.446	ppb	0.8	13293.21	0.1762	Pulse	0.1000	3
V	51	72	He	525.399	ppb	1.0	464269.02	6.1533	Pulse	0.5000	3
Cr	52	72	He	522.502	ppb	1.3	602201.00	7.9817	Pulse	0.1000	3
Mn	55	72	He	777.816	ppb	1.7	347413.10	4.6049	Pulse	0.1000	3
Fe	57	72	He	9692.893	ppb	1.2	212177.38	2.8121	Pulse	0.1000	3
Co	59	72	He	514.165	ppb	1.0	1183871.99	15.6905	Pulse	0.1000	3
Ni	60	72	He	514.998	ppb	1.2	342351.19	4.5375	Pulse	0.1000	3
Cu	63	72	He	538.204	ppb	1.3	1012973.40	13.4262	Pulse	0.1000	3
Zn	66	72	He	544.188	ppb	1.4	101236.23	1.3418	Pulse	0.1000	3
As	75	72	He	509.770	ppb	0.7	66931.55	0.8870	Pulse	0.5000	3
Sr	88	115	He	73.200	ppb	0.1	37109.10	0.5730	Pulse	0.1000	3
Mo	98	115	He	51.075	ppb	1.9	72875.14	1.1253	Pulse	0.1000	3
Ag	107	115	He	55.129	ppb	0.3	162482.55	2.5089	Pulse	0.1000	3
Cd	111	115	He	51.590	ppb	1.3	16041.85	0.2477	Pulse	0.5000	3
Sn	120	115	He	109.086	ppb	0.1	101739.49	1.5709	Pulse	0.1000	3
Sb	121	115	He	103.962	ppb	0.7	83539.63	1.2899	Pulse	0.1000	3
Ba	137	115	He	570.978	ppb	0.8	161794.24	2.4982	Pulse	0.1000	3
Tl	205	209	He	104.536	ppb	0.8	642050.67	2.8908	Pulse	0.1000	3
Pb	208	209	He	73.936	ppb	0.9	598161.65	2.6932	Pulse	0.1000	3
U	238	209	He	51.786	ppb	0.4	483900.81	2.1787	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3259569.01	2.6	100.6	Pulse	0.1000	3
No Gas	Ge	72	1448640.86	2.2	100.6	Pulse	0.1000	3
H2	Sc	45	198007.48	4.7	101.3	Pulse	0.1000	3
H2	Ge	72	163961.94	2.8	100.6	Pulse	0.1000	3
H2	In	115	442561.15	1.8	102.1	Pulse	0.1000	3
He	Sc	45	42525.88	1.7	106.4	Pulse	0.1000	3
He	Ge	72	75458.14	1.6	104.4	Pulse	0.1000	3
He	In	115	64763.90	0.4	100.3	Pulse	0.1000	3
He	Tb	159	287369.21	0.4	100.5	Pulse	0.1000	3
He	Bi	209	222099.61	0.5	100.0	Pulse	0.1000	3

No Gas



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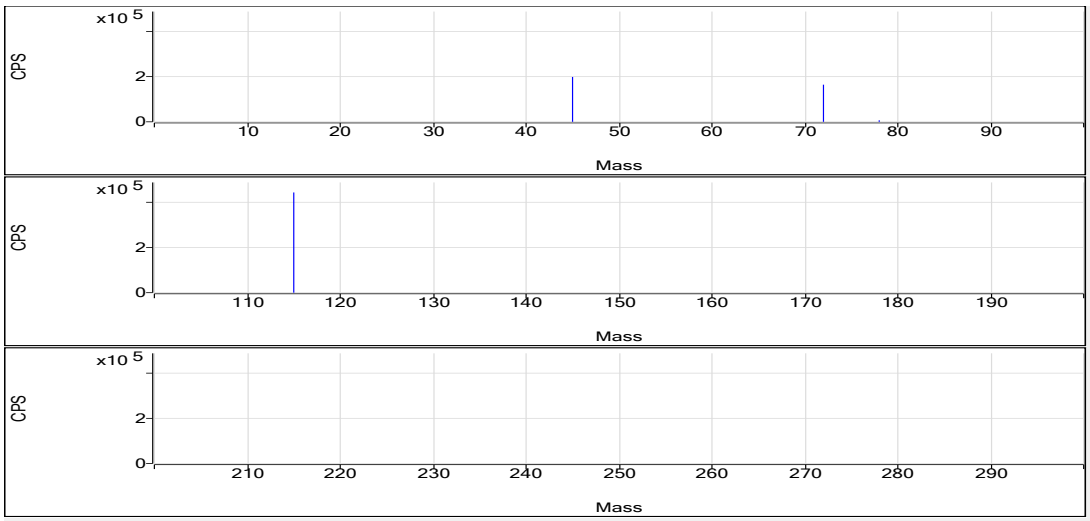
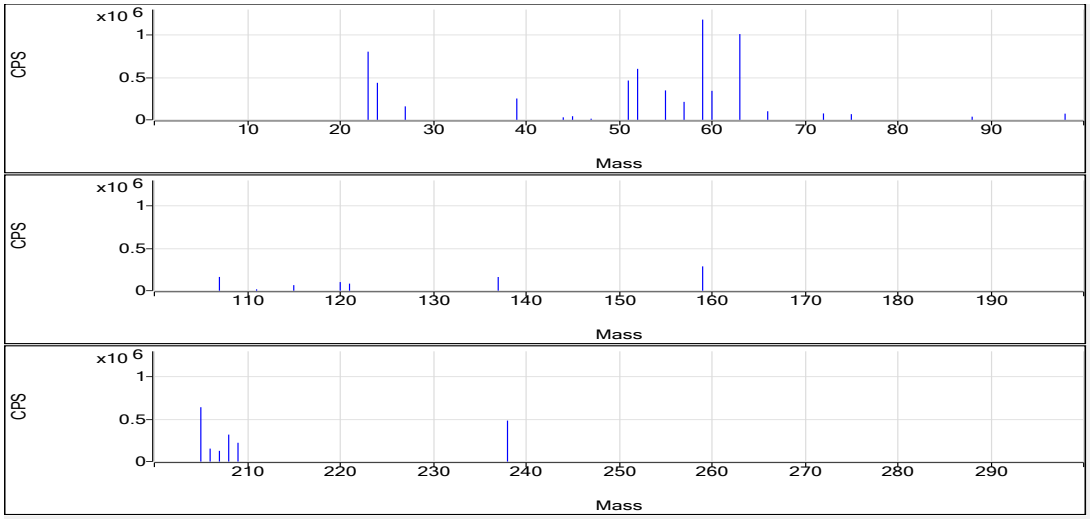


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	51.691	0.068	96185.98	0.0013	4.694E-05
Be	9	1	No Gas	50.824	0.0668	97063.30	0.0013	4.694E-05
Be	9	1	No Gas	47.773	0.0628	92881.48	0.0013	4.694E-05
Se	78	2	H2	99.884	0.0389	6583.51	0.0004	1.089E-05
Se	78	2	H2	107.252	0.0418	6706.24	0.0004	1.089E-05
Se	78	2	H2	103.719	0.0404	6548.16	0.0004	1.089E-05
Na	23	3	He	6159.065	10.6866	805105.14	0.0017	0.1065
Na	23	3	He	6241.561	10.8283	804344.13	0.0017	0.1065
Na	23	3	He	6049.976	10.4992	805873.03	0.0017	0.1065
Mg	24	3	He	6903.278	5.825	438842.45	0.0008	0.004846
Mg	24	3	He	6941.306	5.8571	435071.40	0.0008	0.004846
Mg	24	3	He	6759.71	5.704	437810.46	0.0008	0.004846
Al	27	3	He	8658.208	2.0911	157538.80	0.0002	0.001063
Al	27	3	He	8913.832	2.1528	159913.71	0.0002	0.001063
Al	27	3	He	8616.04	2.0809	159722.26	0.0002	0.001063
K	39	3	He	5853.784	3.3762	254352.57	0.0006	0.1436
K	39	3	He	5803.969	3.3487	248743.14	0.0006	0.1436
K	39	3	He	5688.595	3.285	252137.73	0.0006	0.1436
Ca	44	3	He	12632.324	0.394	29680.70	0	0.001611
Ca	44	3	He	12634.619	0.394	29269.87	0	0.001611
Ca	44	3	He	12351.86	0.3853	29570.64	0	0.001611
Ti	47	3	He	703.745	0.1768	13316.55	0.0003	0.0002737
Ti	47	3	He	705.703	0.1772	13166.34	0.0003	0.0002737
Ti	47	3	He	694.891	0.1745	13396.73	0.0003	0.0002737
V	51	3	He	526.538	6.1666	464579.78	0.0117	0.007326
V	51	3	He	529.732	6.204	460841.25	0.0117	0.007326
V	51	3	He	519.926	6.0893	467386.03	0.0117	0.007326
Cr	52	3	He	520.867	7.9568	599444.13	0.0152	0.02538
Cr	52	3	He	529.812	8.093	601157.33	0.0152	0.02538
Cr	52	3	He	516.826	7.8952	606001.55	0.0152	0.02538
Mn	55	3	He	773.193	4.5776	344862.77	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	792.863	4.6937	348651.99	0.0059	0.01385
Mn	55	3	He	767.391	4.5433	348724.53	0.0059	0.01385
Fe	57	3	He	9603.568	2.7862	209906.60	0.0003	0.003918
Fe	57	3	He	9818.486	2.8485	211588.81	0.0003	0.003918
Fe	57	3	He	9656.625	2.8016	215036.72	0.0003	0.003918
Co	59	3	He	510.66	15.5836	1174028.89	0.0305	0.003084
Co	59	3	He	520.311	15.878	1179441.15	0.0305	0.003084
Co	59	3	He	511.523	15.6099	1198145.92	0.0305	0.003084
Ni	60	3	He	517.312	4.5579	343379.76	0.0088	0.009003
Ni	60	3	He	519.56	4.5776	340034.10	0.0088	0.009003
Ni	60	3	He	508.122	4.4771	343639.72	0.0088	0.009003
Cu	63	3	He	538.488	13.4333	1012031.00	0.0249	0.004937
Cu	63	3	He	544.988	13.5954	1009882.02	0.0249	0.004937
Cu	63	3	He	531.137	13.25	1017007.17	0.0249	0.004937
Zn	66	3	He	550.634	1.3576	102279.45	0.0025	0.004836
Zn	66	3	He	546.415	1.3473	100075.67	0.0025	0.004836
Zn	66	3	He	535.516	1.3205	101353.57	0.0025	0.004836
As	75	3	He	505.708	0.8799	66293.21	0.0017	0.0004347
As	75	3	He	512.609	0.8919	66255.21	0.0017	0.0004347
As	75	3	He	510.993	0.8891	68246.23	0.0017	0.0004347
Sr	88	3	He	73.253	0.5734	37179.30	0.0078	0.0007762
Sr	88	3	He	73.084	0.5721	36888.58	0.0078	0.0007762
Sr	88	3	He	73.264	0.5735	37259.42	0.0078	0.0007762
Mo	98	3	He	49.953	1.1006	71360.20	0.022	0.0005162
Mo	98	3	He	51.774	1.1407	73551.65	0.022	0.0005162
Mo	98	3	He	51.498	1.1346	73713.58	0.022	0.0005162
Ag	107	3	He	54.974	2.5018	162216.23	0.0455	0.0004641
Ag	107	3	He	55.245	2.5141	162115.57	0.0455	0.0004641
Ag	107	3	He	55.168	2.5106	163115.86	0.0455	0.0004641
Cd	111	3	He	52.247	0.2509	16265.46	0.0048	5.152E-05
Cd	111	3	He	51.645	0.248	15989.10	0.0048	5.152E-05
Cd	111	3	He	50.878	0.2443	15871.00	0.0048	5.152E-05
Sn	120	3	He	109.119	1.5714	101890.07	0.0143	0.01559
Sn	120	3	He	109.164	1.572	101367.35	0.0143	0.01559
Sn	120	3	He	108.976	1.5694	101961.05	0.0143	0.01559
Sb	121	3	He	104.753	1.2997	84273.85	0.0124	0.000258
Sb	121	3	He	103.412	1.2831	82735.00	0.0124	0.000258
Sb	121	3	He	103.72	1.2869	83610.05	0.0124	0.000258
Ba	137	3	He	566.122	2.477	160607.77	0.0044	0.000309
Ba	137	3	He	572.462	2.5047	161507.48	0.0044	0.000309
Ba	137	3	He	574.349	2.513	163267.46	0.0044	0.000309
Tl	205	3	He	105.125	2.9071	642590.81	0.0276	0.001005
Tl	205	3	He	103.537	2.8632	635738.51	0.0276	0.001005
Tl	205	3	He	104.945	2.9021	647822.69	0.0276	0.001005
Pb	208	3	He	74.549	2.7156	319262.77	0.0364	0.002176
Pb	208	3	He	73.269	2.669	315975.33	0.0364	0.002176
Pb	208	3	He	73.99	2.6952	320090.05	0.0364	0.002176
U	238	3	He	51.601	2.1709	479863.70	0.0421	0.00024
U	238	3	He	51.976	2.1868	485537.41	0.0421	0.00024
U	238	3	He	51.781	2.1785	486301.32	0.0421	0.00024
Sc	45	1	No Gas			3175113.39		
Sc	45	1	No Gas			3259042.76		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3344550.89		
Ge	72	1	No Gas			1415096.23		
Ge	72	1	No Gas			1452342.01		
Ge	72	1	No Gas			1478484.35		
Sc	45	2	H2			207728.16		
Sc	45	2	H2			188984.47		
Sc	45	2	H2			197309.80		
Ge	72	2	H2			169233.96		
Ge	72	2	H2			160548.44		
Ge	72	2	H2			162103.43		
In	115	2	H2			450784.41		
In	115	2	H2			434943.67		
In	115	2	H2			441955.38		
Sc	45	3	He			42452.12		
Sc	45	3	He			41840.74		
Sc	45	3	He			43284.79		
Ge	72	3	He			75337.62		
Ge	72	3	He			74281.38		
Ge	72	3	He			76755.42		
In	115	3	He			65634.99		
In	115	3	He			65272.14		
In	115	3	He			65765.29		
Tb	159	3	He			288497.67		
Tb	159	3	He			285982.34		
Tb	159	3	He			287627.61		
Bi	209	3	He			221040.04		
Bi	209	3	He			222036.07		
Bi	209	3	He			223222.71		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 18:11:09
Sample Name	410-136577-H-21-A SD @10
Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

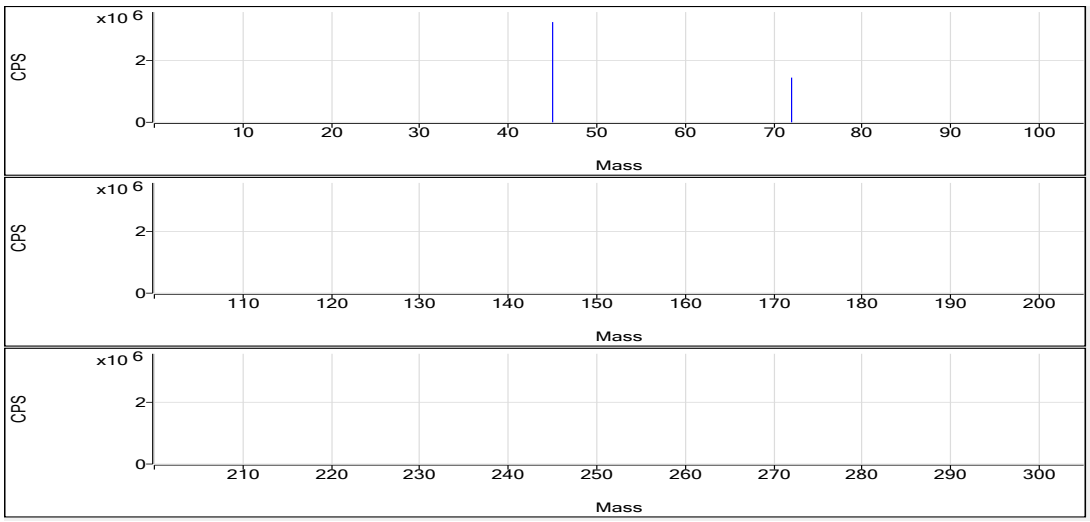
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.270	ppb	13.0	584.01	0.0004	Pulse	0.5000	3
Se	78	72	H2	0.253	ppb	43.6	18.00	0.0001	Pulse	1.5000	3
Na	23	72	He	1225.345	ppb	0.5	165373.60	2.2114	Pulse	0.1000	3
Mg	24	72	He	2126.879	ppb	1.1	134465.82	1.7980	Pulse	0.1000	3
Al	27	72	He	4492.393	ppb	0.8	81178.84	1.0855	Pulse	0.1000	3
K	39	72	He	833.683	ppb	3.8	45173.47	0.6040	Pulse	0.1000	3
Ca	44	72	He	9092.942	ppb	3.3	21239.36	0.2840	Pulse	0.1000	3
Ti	47	72	He	222.564	ppb	3.7	4194.08	0.0561	Pulse	0.1000	3
V	51	72	He	11.881	ppb	1.8	10940.78	0.1463	Pulse	0.5000	3
Cr	52	72	He	5.920	ppb	8.3	8639.51	0.1155	Pulse	0.1000	3
Mn	55	72	He	329.338	ppb	0.7	146406.58	1.9577	Pulse	0.1000	3
Fe	57	72	He	5665.954	ppb	1.2	123047.57	1.6454	Pulse	0.1000	3
Co	59	72	He	1.994	ppb	2.5	4780.97	0.0639	Pulse	0.1000	3
Ni	60	72	He	5.938	ppb	2.8	4577.54	0.0612	Pulse	0.1000	3
Cu	63	72	He	29.450	ppb	1.3	55289.55	0.7393	Pulse	0.1000	3
Zn	66	72	He	42.279	ppb	1.8	8129.21	0.1087	Pulse	0.1000	3
As	75	72	He	1.252	ppb	8.1	195.33	0.0026	Pulse	0.5000	3
Sr	88	115	He	26.140	ppb	2.4	13239.93	0.2051	Pulse	0.1000	3
Mo	98	115	He	0.413	ppb	12.7	620.03	0.0096	Pulse	0.1000	3
Ag	107	115	He	0.078	ppb	10.4	260.01	0.0040	Pulse	0.1000	3
Cd	111	115	He	0.131	ppb	6.3	44.00	0.0007	Pulse	0.5000	3
Sn	120	115	He	6.154	ppb	4.0	6668.50	0.1033	Pulse	0.1000	3
Sb	121	115	He	1.579	ppb	11.2	1280.11	0.0198	Pulse	0.1000	3
Ba	137	115	He	76.693	ppb	4.0	21670.91	0.3358	Pulse	0.1000	3
Tl	205	209	He	0.326	ppb	13.8	2240.27	0.0100	Pulse	0.1000	3
Pb	208	209	He	26.765	ppb	1.3	218554.13	0.9764	Pulse	0.1000	3
U	238	209	He	0.488	ppb	2.6	4651.00	0.0208	Pulse	0.1000	3

ISTD Table:

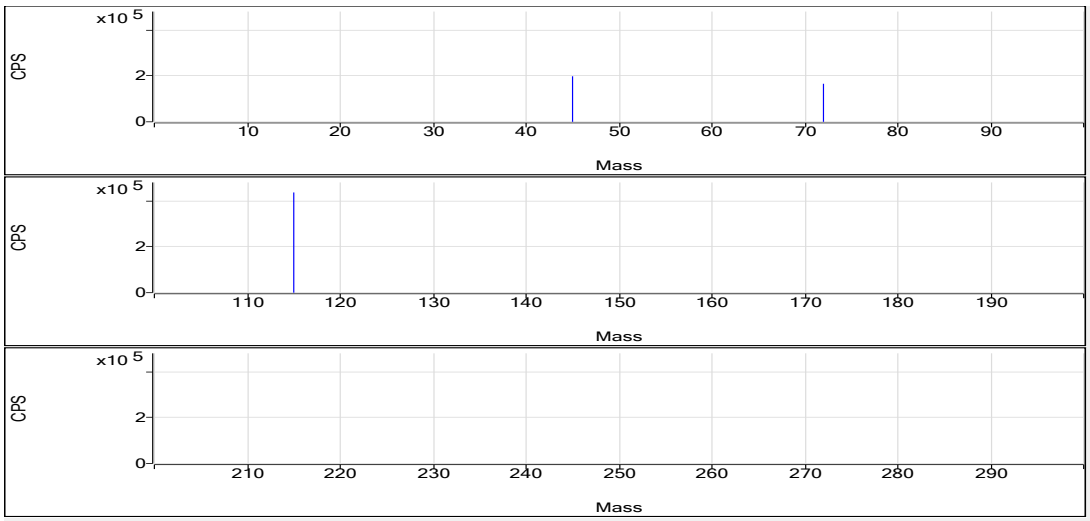
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3260852.97	1.6	100.6	Pulse	0.1000	3
No Gas	Ge	72	1453609.04	2.0	101.0	Pulse	0.1000	3
H2	Sc	45	198058.28	0.9	101.4	Pulse	0.1000	3
H2	Ge	72	165479.08	2.0	101.5	Pulse	0.1000	3
H2	In	115	435858.60	2.2	100.6	Pulse	0.1000	3
He	Sc	45	42141.47	0.4	105.4	Pulse	0.1000	3
He	Ge	72	74783.96	0.4	103.5	Pulse	0.1000	3
He	In	115	64551.06	1.3	99.9	Pulse	0.1000	3
He	Tb	159	289965.63	1.0	101.4	Pulse	0.1000	3
He	Bi	209	223858.72	1.2	100.8	Pulse	0.1000	3

No Gas

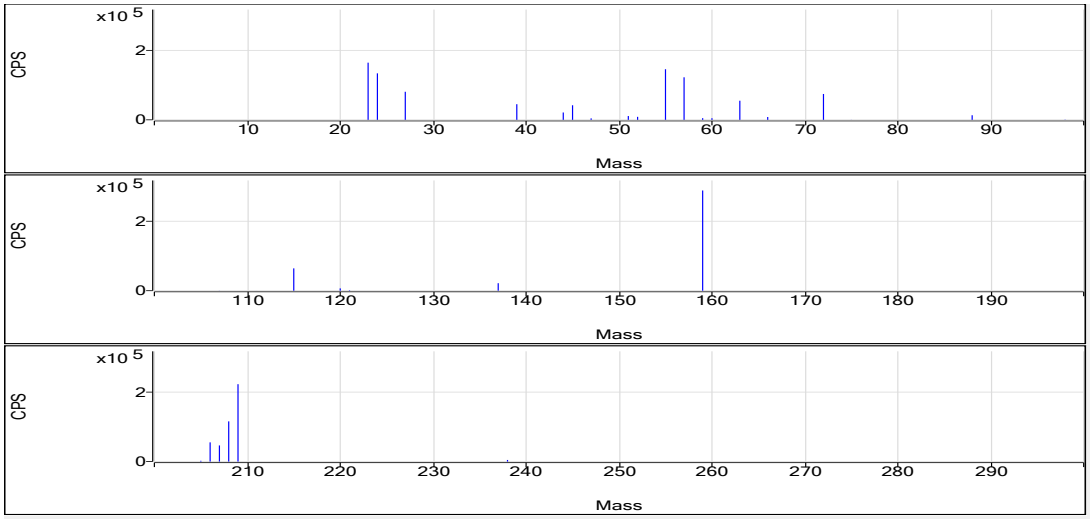


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.308	0.0005	650.02	0.0013	4.694E-05
Be	9	1	No Gas	0.266	0.0004	568.01	0.0013	4.694E-05
Be	9	1	No Gas	0.238	0.0004	534.01	0.0013	4.694E-05
Se	78	2	H2	0.154	0.0001	12.00	0.0004	1.089E-05
Se	78	2	H2	0.372	0.0002	25.33	0.0004	1.089E-05
Se	78	2	H2	0.232	0.0001	16.67	0.0004	1.089E-05
Na	23	3	He	1218.446	2.1995	165307.69	0.0017	0.1065
Na	23	3	He	1230.125	2.2196	165744.47	0.0017	0.1065
Na	23	3	He	1227.463	2.215	165068.65	0.0017	0.1065
Mg	24	3	He	2147.994	1.8158	136469.98	0.0008	0.004846
Mg	24	3	He	2101.173	1.7763	132645.99	0.0008	0.004846
Mg	24	3	He	2131.471	1.8019	134281.50	0.0008	0.004846
Al	27	3	He	4518.024	1.0917	82046.86	0.0002	0.001063
Al	27	3	He	4453.006	1.076	80348.06	0.0002	0.001063
Al	27	3	He	4506.149	1.0888	81141.61	0.0002	0.001063
K	39	3	He	867.669	0.6228	46805.49	0.0006	0.1436
K	39	3	He	804.894	0.5881	43916.41	0.0006	0.1436
K	39	3	He	828.487	0.6011	44798.51	0.0006	0.1436
Ca	44	3	He	8770.863	0.274	20595.20	0	0.001611
Ca	44	3	He	9155.996	0.286	21356.22	0	0.001611
Ca	44	3	He	9351.967	0.2921	21766.65	0	0.001611
Ti	47	3	He	215.421	0.0543	4080.74	0.0003	0.0002737
Ti	47	3	He	220.558	0.0556	4150.73	0.0003	0.0002737
Ti	47	3	He	231.711	0.0584	4350.78	0.0003	0.0002737
V	51	3	He	11.651	0.1436	10794.01	0.0117	0.007326
V	51	3	He	12.081	0.1487	11100.23	0.0117	0.007326
V	51	3	He	11.91	0.1466	10928.11	0.0117	0.007326
Cr	52	3	He	5.85	0.1145	8602.83	0.0152	0.02538
Cr	52	3	He	6.444	0.1235	9223.20	0.0152	0.02538
Cr	52	3	He	5.464	0.1086	8092.50	0.0152	0.02538
Mn	55	3	He	327.746	1.9483	146430.10	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	331.962	1.9732	147348.03	0.0059	0.01385
Mn	55	3	He	328.305	1.9516	145441.61	0.0059	0.01385
Fe	57	3	He	5601.103	1.6266	122251.69	0.0003	0.003918
Fe	57	3	He	5662.446	1.6444	122793.84	0.0003	0.003918
Fe	57	3	He	5734.312	1.6652	124097.19	0.0003	0.003918
Co	59	3	He	1.953	0.0627	4710.94	0.0305	0.003084
Co	59	3	He	2.05	0.0656	4901.00	0.0305	0.003084
Co	59	3	He	1.98	0.0635	4730.96	0.0305	0.003084
Ni	60	3	He	5.756	0.0596	4480.81	0.0088	0.009003
Ni	60	3	He	6.074	0.0624	4660.92	0.0088	0.009003
Ni	60	3	He	5.982	0.0616	4590.90	0.0088	0.009003
Cu	63	3	He	29.114	0.7309	54934.99	0.0249	0.004937
Cu	63	3	He	29.858	0.7495	55968.33	0.0249	0.004937
Cu	63	3	He	29.379	0.7376	54965.33	0.0249	0.004937
Zn	66	3	He	41.481	0.1067	8022.51	0.0025	0.004836
Zn	66	3	He	42.961	0.1104	8242.55	0.0025	0.004836
Zn	66	3	He	42.397	0.109	8122.58	0.0025	0.004836
As	75	3	He	1.357	0.0028	210.00	0.0017	0.0004347
As	75	3	He	1.244	0.0026	194.00	0.0017	0.0004347
As	75	3	He	1.154	0.0024	182.00	0.0017	0.0004347
Sr	88	3	He	26.069	0.2046	13016.42	0.0078	0.0007762
Sr	88	3	He	26.79	0.2102	13626.94	0.0078	0.0007762
Sr	88	3	He	25.56	0.2006	13076.43	0.0078	0.0007762
Mo	98	3	He	0.426	0.0099	630.03	0.022	0.0005162
Mo	98	3	He	0.355	0.0083	540.03	0.022	0.0005162
Mo	98	3	He	0.457	0.0106	690.04	0.022	0.0005162
Ag	107	3	He	0.073	0.0038	240.01	0.0455	0.0004641
Ag	107	3	He	0.075	0.0039	250.01	0.0455	0.0004641
Ag	107	3	He	0.088	0.0044	290.01	0.0455	0.0004641
Cd	111	3	He	0.14	0.0007	46.00	0.0048	5.152E-05
Cd	111	3	He	0.131	0.0007	44.00	0.0048	5.152E-05
Cd	111	3	He	0.123	0.0006	42.00	0.0048	5.152E-05
Sn	120	3	He	6.437	0.1074	6831.89	0.0143	0.01559
Sn	120	3	He	6.049	0.1018	6601.86	0.0143	0.01559
Sn	120	3	He	5.977	0.1008	6571.75	0.0143	0.01559
Sb	121	3	He	1.652	0.0207	1320.11	0.0124	0.000258
Sb	121	3	He	1.708	0.0214	1390.12	0.0124	0.000258
Sb	121	3	He	1.377	0.0173	1130.09	0.0124	0.000258
Ba	137	3	He	79.744	0.3492	22218.61	0.0044	0.000309
Ba	137	3	He	76.786	0.3362	21797.65	0.0044	0.000309
Ba	137	3	He	73.55	0.3221	20996.48	0.0044	0.000309
Tl	205	3	He	0.374	0.0114	2530.32	0.0276	0.001005
Tl	205	3	He	0.318	0.0098	2170.26	0.0276	0.001005
Tl	205	3	He	0.286	0.0089	2020.24	0.0276	0.001005
Pb	208	3	He	26.504	0.9669	114957.47	0.0364	0.002176
Pb	208	3	He	27.149	0.9903	117208.63	0.0364	0.002176
Pb	208	3	He	26.642	0.9719	116722.97	0.0364	0.002176
U	238	3	He	0.495	0.0211	4691.00	0.0421	0.00024
U	238	3	He	0.474	0.0202	4470.95	0.0421	0.00024
U	238	3	He	0.496	0.0211	4791.06	0.0421	0.00024
Sc	45	1	No Gas			3235922.45		
Sc	45	1	No Gas			3227555.89		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3319080.58		
Ge	72	1	No Gas			1440280.29		
Ge	72	1	No Gas			1434155.13		
Ge	72	1	No Gas			1486391.70		
Sc	45	2	H2			200169.41		
Sc	45	2	H2			196813.57		
Sc	45	2	H2			197191.85		
Ge	72	2	H2			169063.81		
Ge	72	2	H2			162760.71		
Ge	72	2	H2			164612.73		
In	115	2	H2			445704.76		
In	115	2	H2			426880.93		
In	115	2	H2			434990.11		
Sc	45	3	He			42001.38		
Sc	45	3	He			42332.03		
Sc	45	3	He			42091.00		
Ge	72	3	He			75155.99		
Ge	72	3	He			74673.43		
Ge	72	3	He			74522.46		
In	115	3	He			63685.41		
In	115	3	He			64881.04		
In	115	3	He			65242.76		
Tb	159	3	He			287397.40		
Tb	159	3	He			292961.91		
Tb	159	3	He			289537.59		
Bi	209	3	He			222825.06		
Bi	209	3	He			221737.03		
Bi	209	3	He			227014.08		

Quantitation Report

Data File Name	220SMPL.d
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Sample Name	410-136577-H-21-A SD@50
Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

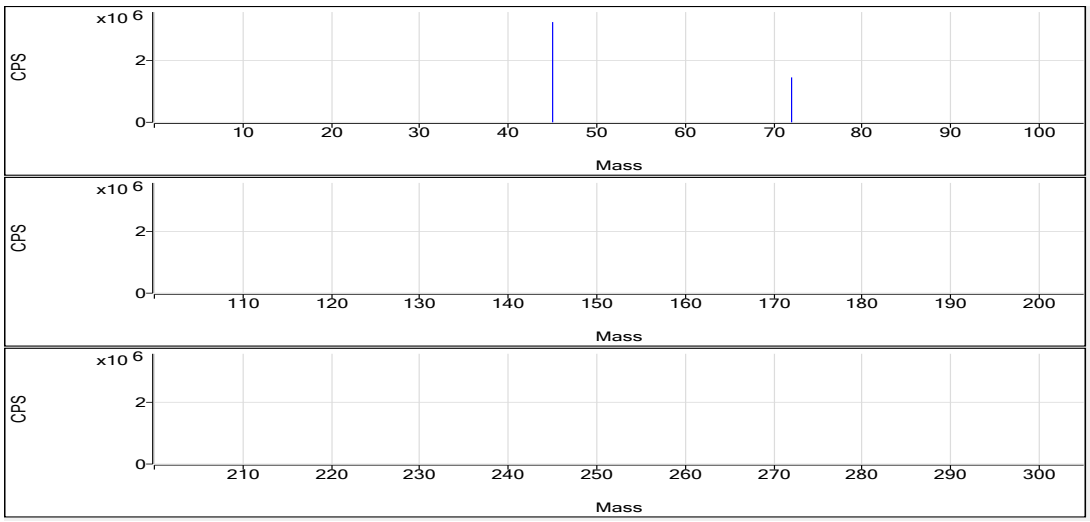
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.084	ppb	8.1	226.67	0.0002	Pulse	0.5000	3
Se	78	72	H2	0.077	ppb	50.2	6.67	0.0000	Pulse	1.5000	3
Na	23	72	He	330.413	ppb	0.9	49920.90	0.6740	Pulse	0.1000	3
Mg	24	72	He	594.225	ppb	1.8	37461.35	0.5058	Pulse	0.1000	3
Al	27	72	He	1276.162	ppb	0.7	22894.93	0.3091	Pulse	0.1000	3
K	39	72	He	243.763	ppb	7.0	20611.73	0.2782	Pulse	0.1000	3
Ca	44	72	He	2610.513	ppb	1.9	6124.85	0.0827	Pulse	0.1000	3
Ti	47	72	He	61.902	ppb	19.8	1170.09	0.0158	Pulse	0.1000	3
V	51	72	He	3.253	ppb	3.0	3361.74	0.0454	Pulse	0.5000	3
Cr	52	72	He	1.703	ppb	8.4	3800.62	0.0513	Pulse	0.1000	3
Mn	55	72	He	90.632	ppb	2.0	40644.10	0.5488	Pulse	0.1000	3
Fe	57	72	He	1571.933	ppb	3.2	34014.13	0.4593	Pulse	0.1000	3
Co	59	72	He	0.630	ppb	11.4	1650.16	0.0223	Pulse	0.1000	3
Ni	60	72	He	2.427	ppb	3.7	2246.92	0.0303	Pulse	0.1000	3
Cu	63	72	He	8.379	ppb	1.9	15842.60	0.2139	Pulse	0.1000	3
Zn	66	72	He	12.227	ppb	5.5	2583.66	0.0349	Pulse	0.1000	3
As	75	72	He	0.355	ppb	14.6	78.00	0.0011	Pulse	0.5000	3
Sr	88	115	He	7.407	ppb	3.0	3790.65	0.0587	Pulse	0.1000	3
Mo	98	115	He	0.138	ppb	10.5	230.01	0.0036	Pulse	0.1000	3
Ag	107	115	He	0.027	ppb	43.4	110.00	0.0017	Pulse	0.1000	3
Cd	111	115	He	0.047	ppb	35.8	18.00	0.0003	Pulse	0.5000	3
Sn	120	115	He	1.603	ppb	3.7	2483.64	0.0384	Pulse	0.1000	3
Sb	121	115	He	0.395	ppb	7.8	333.35	0.0052	Pulse	0.1000	3
Ba	137	115	He	20.768	ppb	8.0	5891.47	0.0912	Pulse	0.1000	3
Tl	205	209	He	0.102	ppb	25.0	860.06	0.0038	Pulse	0.1000	3
Pb	208	209	He	7.341	ppb	1.4	60496.44	0.2694	Pulse	0.1000	3
U	238	209	He	0.142	ppb	7.4	1393.47	0.0062	Pulse	0.1000	3

ISTD Table:

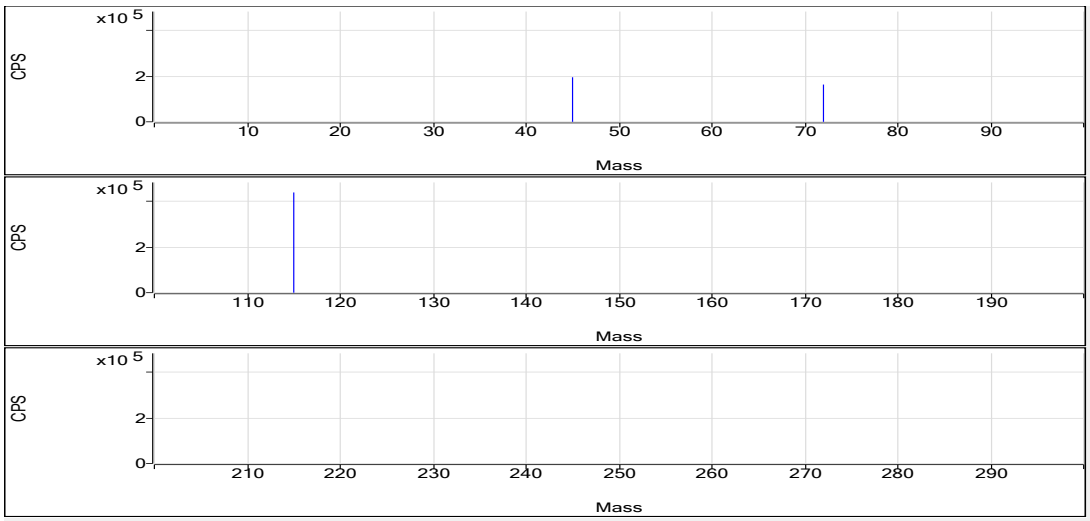
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3220259.12	2.7	99.4	Pulse	0.1000	3
No Gas	Ge	72	1442719.93	1.8	100.2	Pulse	0.1000	3
H2	Sc	45	195044.72	2.0	99.8	Pulse	0.1000	3
H2	Ge	72	163107.23	2.0	100.1	Pulse	0.1000	3
H2	In	115	438814.82	1.7	101.3	Pulse	0.1000	3
He	Sc	45	41422.55	0.9	103.6	Pulse	0.1000	3
He	Ge	72	74063.43	0.8	102.5	Pulse	0.1000	3
He	In	115	64606.73	0.6	100.0	Pulse	0.1000	3
He	Tb	159	285284.55	0.4	99.7	Pulse	0.1000	3
He	Bi	209	224594.70	0.6	101.1	Pulse	0.1000	3

No Gas

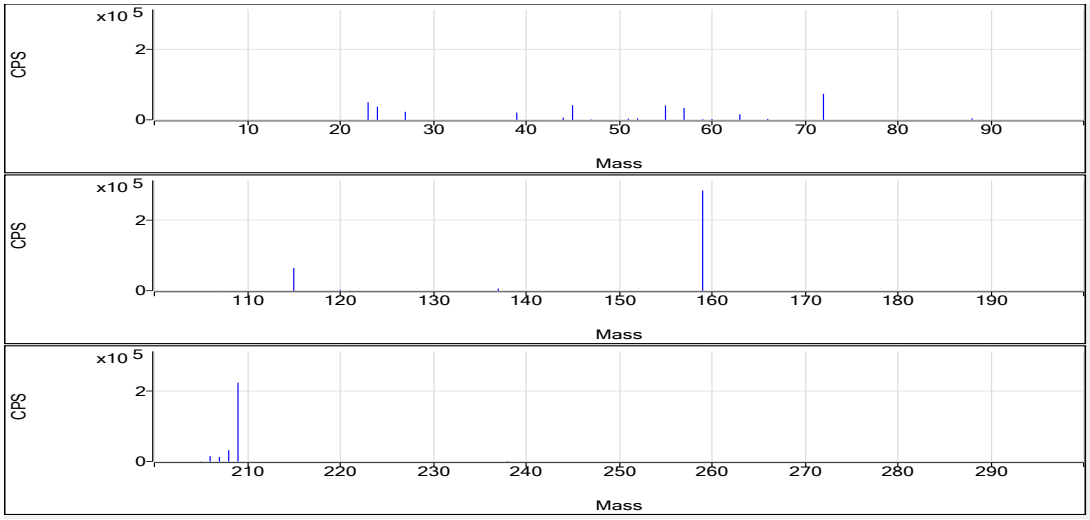


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.083	0.0002	222.00	0.0013	4.694E-05
Be	9	1	No Gas	0.077	0.0001	214.00	0.0013	4.694E-05
Be	9	1	No Gas	0.091	0.0002	244.00	0.0013	4.694E-05
Se	78	2	H2	0.108	0.0001	8.67	0.0004	1.089E-05
Se	78	2	H2	0.09	0	7.33	0.0004	1.089E-05
Se	78	2	H2	0.034	0	4.00	0.0004	1.089E-05
Na	23	3	He	326.948	0.6681	49673.63	0.0017	0.1065
Na	23	3	He	331.437	0.6758	50315.30	0.0017	0.1065
Na	23	3	He	332.854	0.6782	49773.78	0.0017	0.1065
Mg	24	3	He	582.686	0.4961	36886.38	0.0008	0.004846
Mg	24	3	He	595.468	0.5069	37738.82	0.0008	0.004846
Mg	24	3	He	604.522	0.5145	37758.84	0.0008	0.004846
Al	27	3	He	1287.035	0.3117	23178.67	0.0002	0.001063
Al	27	3	He	1270.795	0.3078	22918.32	0.0002	0.001063
Al	27	3	He	1270.655	0.3078	22587.80	0.0002	0.001063
K	39	3	He	248.075	0.2806	20865.24	0.0006	0.1436
K	39	3	He	258.351	0.2863	21316.11	0.0006	0.1436
K	39	3	He	224.862	0.2678	19653.85	0.0006	0.1436
Ca	44	3	He	2668.232	0.0845	6281.63	0	0.001611
Ca	44	3	He	2586.632	0.082	6101.47	0	0.001611
Ca	44	3	He	2576.674	0.0816	5991.44	0	0.001611
Ti	47	3	He	75.072	0.0191	1420.12	0.0003	0.0002737
Ti	47	3	He	50.864	0.013	970.07	0.0003	0.0002737
Ti	47	3	He	59.77	0.0153	1120.08	0.0003	0.0002737
V	51	3	He	3.309	0.046	3422.42	0.0117	0.007326
V	51	3	He	3.31	0.046	3428.42	0.0117	0.007326
V	51	3	He	3.141	0.0441	3234.38	0.0117	0.007326
Cr	52	3	He	1.867	0.0538	4000.69	0.0152	0.02538
Cr	52	3	He	1.641	0.0504	3750.58	0.0152	0.02538
Cr	52	3	He	1.6	0.0497	3650.58	0.0152	0.02538
Mn	55	3	He	91.783	0.5556	41309.29	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	88.552	0.5365	39945.47	0.0059	0.01385
Mn	55	3	He	91.562	0.5543	40677.55	0.0059	0.01385
Fe	57	3	He	1532.351	0.4479	33299.13	0.0003	0.003918
Fe	57	3	He	1555.336	0.4545	33840.19	0.0003	0.003918
Fe	57	3	He	1628.11	0.4756	34903.08	0.0003	0.003918
Co	59	3	He	0.626	0.0222	1650.18	0.0305	0.003084
Co	59	3	He	0.559	0.0201	1500.14	0.0305	0.003084
Co	59	3	He	0.703	0.0245	1800.17	0.0305	0.003084
Ni	60	3	He	2.403	0.0301	2240.27	0.0088	0.009003
Ni	60	3	He	2.352	0.0297	2210.24	0.0088	0.009003
Ni	60	3	He	2.525	0.0312	2290.26	0.0088	0.009003
Cu	63	3	He	8.28	0.2114	15718.98	0.0249	0.004937
Cu	63	3	He	8.56	0.2184	16259.85	0.0249	0.004937
Cu	63	3	He	8.298	0.2119	15548.97	0.0249	0.004937
Zn	66	3	He	12.322	0.0351	2610.35	0.0025	0.004836
Zn	66	3	He	12.849	0.0364	2710.33	0.0025	0.004836
Zn	66	3	He	11.511	0.0331	2430.29	0.0025	0.004836
As	75	3	He	0.4	0.0011	84.00	0.0017	0.0004347
As	75	3	He	0.368	0.0011	80.00	0.0017	0.0004347
As	75	3	He	0.299	0.001	70.00	0.0017	0.0004347
Sr	88	3	He	7.665	0.0607	3900.68	0.0078	0.0007762
Sr	88	3	He	7.281	0.0577	3750.64	0.0078	0.0007762
Sr	88	3	He	7.275	0.0576	3720.63	0.0078	0.0007762
Mo	98	3	He	0.153	0.0039	250.01	0.022	0.0005162
Mo	98	3	He	0.137	0.0035	230.01	0.022	0.0005162
Mo	98	3	He	0.124	0.0033	210.01	0.022	0.0005162
Ag	107	3	He	0.021	0.0014	90.00	0.0455	0.0004641
Ag	107	3	He	0.02	0.0014	90.00	0.0455	0.0004641
Ag	107	3	He	0.041	0.0023	150.01	0.0455	0.0004641
Cd	111	3	He	0.028	0.0002	12.00	0.0048	5.152E-05
Cd	111	3	He	0.053	0.0003	20.00	0.0048	5.152E-05
Cd	111	3	He	0.06	0.0003	22.00	0.0048	5.152E-05
Sn	120	3	He	1.668	0.0394	2530.31	0.0143	0.01559
Sn	120	3	He	1.55	0.0377	2450.31	0.0143	0.01559
Sn	120	3	He	1.591	0.0383	2470.30	0.0143	0.01559
Sb	121	3	He	0.431	0.0056	360.02	0.0124	0.000258
Sb	121	3	He	0.376	0.0049	320.02	0.0124	0.000258
Sb	121	3	He	0.379	0.005	320.02	0.0124	0.000258
Ba	137	3	He	18.855	0.0828	5321.20	0.0044	0.000309
Ba	137	3	He	21.804	0.0957	6221.59	0.0044	0.000309
Ba	137	3	He	21.646	0.095	6131.61	0.0044	0.000309
Tl	205	3	He	0.127	0.0045	1020.08	0.0276	0.001005
Tl	205	3	He	0.103	0.0039	860.06	0.0276	0.001005
Tl	205	3	He	0.076	0.0031	700.04	0.0276	0.001005
Pb	208	3	He	7.353	0.2698	32360.60	0.0364	0.002176
Pb	208	3	He	7.436	0.2728	32771.18	0.0364	0.002176
Pb	208	3	He	7.234	0.2655	31779.24	0.0364	0.002176
U	238	3	He	0.144	0.0063	1420.14	0.0421	0.00024
U	238	3	He	0.151	0.0066	1470.15	0.0421	0.00024
U	238	3	He	0.13	0.0057	1290.12	0.0421	0.00024
Sc	45	1	No Gas			3144252.77		
Sc	45	1	No Gas			3199859.01		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3316665.58		
Ge	72	1	No Gas			1417286.85		
Ge	72	1	No Gas			1442680.76		
Ge	72	1	No Gas			1468192.17		
Sc	45	2	H2			195658.55		
Sc	45	2	H2			190827.87		
Sc	45	2	H2			198647.75		
Ge	72	2	H2			163305.52		
Ge	72	2	H2			159726.51		
Ge	72	2	H2			166289.65		
In	115	2	H2			447221.95		
In	115	2	H2			432736.20		
In	115	2	H2			436486.32		
Sc	45	3	He			41088.21		
Sc	45	3	He			41790.24		
Sc	45	3	He			41389.19		
Ge	72	3	He			74351.27		
Ge	72	3	He			74452.34		
Ge	72	3	He			73386.67		
In	115	3	He			64287.73		
In	115	3	He			65031.56		
In	115	3	He			64559.01		
Tb	159	3	He			286209.78		
Tb	159	3	He			285519.74		
Tb	159	3	He			284124.12		
Bi	209	3	He			225680.07		
Bi	209	3	He			222936.97		
Bi	209	3	He			225167.07		

Quantitation Report

Data File Name	221SMPL.d
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Sample Name	RINSE
Sample Type	Sample
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

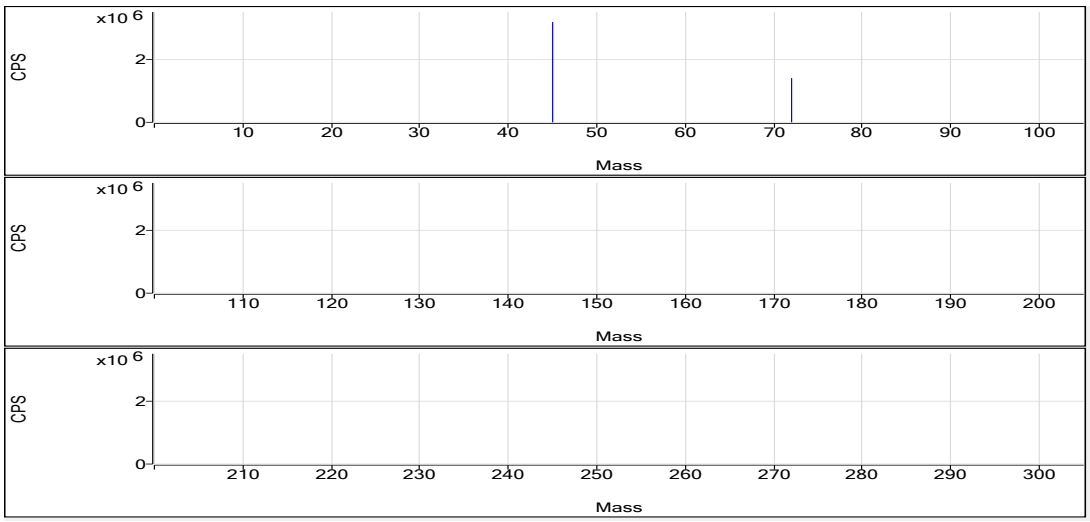
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.002	ppb	N/A	62.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.059	ppb	57.6	5.33	0.0000	Pulse	1.5000	3
Na	23	72	He	4.837	ppb	74.9	8302.57	0.1148	Pulse	0.1000	3
Mg	24	72	He	3.934	ppb	17.3	590.04	0.0082	Pulse	0.1000	3
Al	27	72	He	10.331	ppb	37.8	256.68	0.0036	Pulse	0.1000	3
K	39	72	He	11.408	ppb	195.5	10837.72	0.1499	Pulse	0.1000	3
Ca	44	72	He	13.500	ppb	74.3	146.67	0.0020	Pulse	0.1000	3
Ti	47	72	He	1.478	ppb	56.4	46.67	0.0006	Pulse	0.1000	3
V	51	72	He	0.131	ppb	69.1	640.68	0.0089	Pulse	0.5000	3
Cr	52	72	He	0.222	ppb	53.0	2080.22	0.0288	Pulse	0.1000	3
Mn	55	72	He	-0.871	ppb	N/A	630.04	0.0087	Pulse	0.1000	3
Fe	57	72	He	18.767	ppb	9.8	676.71	0.0094	Pulse	0.1000	3
Co	59	72	He	0.124	ppb	54.1	496.69	0.0069	Pulse	0.1000	3
Ni	60	72	He	0.959	ppb	25.0	1260.10	0.0174	Pulse	0.1000	3
Cu	63	72	He	0.135	ppb	5.3	600.03	0.0083	Pulse	0.1000	3
Zn	66	72	He	0.019	ppb	834.3	353.35	0.0049	Pulse	0.1000	3
As	75	72	He	0.063	ppb	94.2	39.33	0.0005	Pulse	0.5000	3
Sr	88	115	He	0.061	ppb	149.5	80.00	0.0013	Pulse	0.1000	3
Mo	98	115	He	0.012	ppb	233.7	50.00	0.0008	Pulse	0.1000	3
Ag	107	115	He	0.008	ppb	87.5	53.33	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.013	ppb	76.5	7.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.170	ppb	95.7	1150.10	0.0180	Pulse	0.1000	3
Sb	121	115	He	0.025	ppb	103.0	36.67	0.0006	Pulse	0.1000	3
Ba	137	115	He	0.132	ppb	153.6	56.67	0.0009	Pulse	0.1000	3
Tl	205	209	He	0.075	ppb	18.2	676.71	0.0031	Pulse	0.1000	3
Pb	208	209	He	0.052	ppb	18.5	896.71	0.0041	Pulse	0.1000	3
U	238	209	He	0.009	ppb	51.6	140.01	0.0006	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3192263.18	2.2	98.5	Pulse	0.1000	3
No Gas	Ge	72	1407358.94	2.7	97.7	Pulse	0.1000	3
H2	Sc	45	196647.64	0.8	100.6	Pulse	0.1000	3
H2	Ge	72	158282.00	1.6	97.1	Pulse	0.1000	3
H2	In	115	434789.89	2.2	100.3	Pulse	0.1000	3
He	Sc	45	41369.15	1.0	103.5	Pulse	0.1000	3
He	Ge	72	72328.66	1.3	100.1	Pulse	0.1000	3
He	In	115	63874.06	0.8	98.9	Pulse	0.1000	3
He	Tb	159	285276.93	0.4	99.7	Pulse	0.1000	3
He	Bi	209	219686.73	1.0	98.9	Pulse	0.1000	3

No Gas



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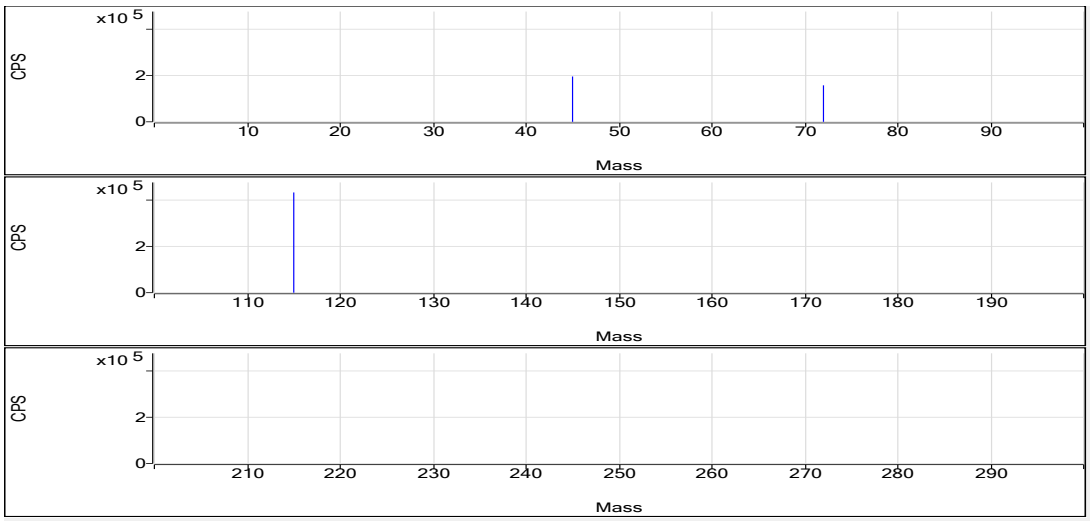
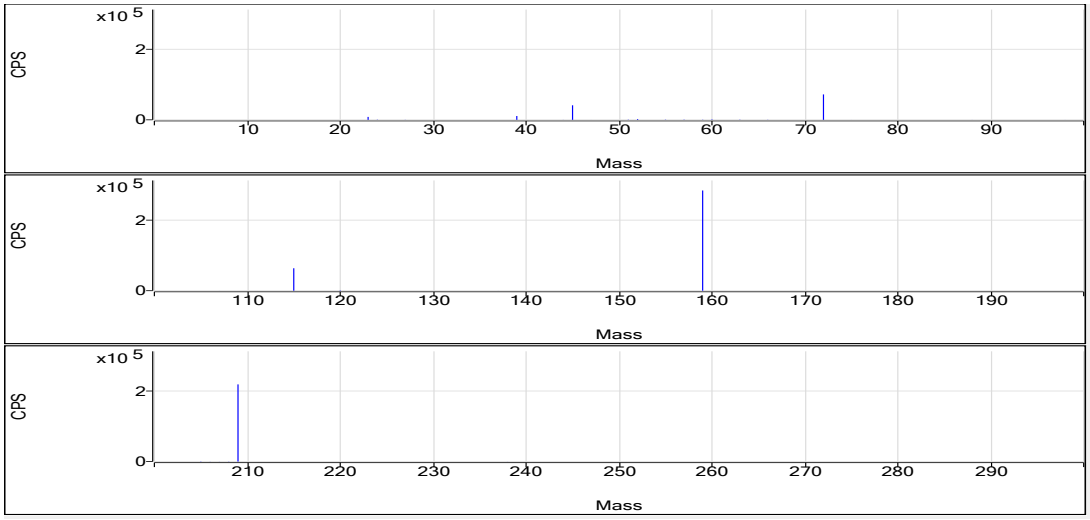


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.002	0	60.00	0.0013	4.694E-05
Be	9	1	No Gas	0.001	0	68.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.005	0	58.00	0.0013	4.694E-05
Se	78	2	H2	0.025	0	3.33	0.0004	1.089E-05
Se	78	2	H2	0.059	0	5.33	0.0004	1.089E-05
Se	78	2	H2	0.093	0	7.33	0.0004	1.089E-05
Na	23	3	He	0.948	0.1081	7732.23	0.0017	0.1065
Na	23	3	He	5.441	0.1158	8492.68	0.0017	0.1065
Na	23	3	He	8.123	0.1204	8682.80	0.0017	0.1065
Mg	24	3	He	4.367	0.0085	610.04	0.0008	0.004846
Mg	24	3	He	3.148	0.0075	550.03	0.0008	0.004846
Mg	24	3	He	4.286	0.0085	610.04	0.0008	0.004846
Al	27	3	He	14.128	0.0045	320.01	0.0002	0.001063
Al	27	3	He	6.33	0.0026	190.01	0.0002	0.001063
Al	27	3	He	10.534	0.0036	260.01	0.0002	0.001063
K	39	3	He	34.409	0.1626	11635.12	0.0006	0.1436
K	39	3	He	-10.137	0.138	10123.74	0.0006	0.1436
K	39	3	He	9.952	0.1491	10754.29	0.0006	0.1436
Ca	44	3	He	24.648	0.0024	170.01	0	0.001611
Ca	44	3	He	5.211	0.0018	130.01	0	0.001611
Ca	44	3	He	10.642	0.0019	140.00	0	0.001611
Ti	47	3	He	0.581	0.0004	30.00	0.0003	0.0002737
Ti	47	3	He	1.627	0.0007	50.00	0.0003	0.0002737
Ti	47	3	He	2.226	0.0008	60.00	0.0003	0.0002737
V	51	3	He	0.148	0.0091	648.02	0.0117	0.007326
V	51	3	He	0.211	0.0098	718.02	0.0117	0.007326
V	51	3	He	0.033	0.0077	556.01	0.0117	0.007326
Cr	52	3	He	0.132	0.0274	1960.19	0.0152	0.02538
Cr	52	3	He	0.178	0.0281	2060.21	0.0152	0.02538
Cr	52	3	He	0.355	0.0308	2220.25	0.0152	0.02538
Mn	55	3	He	-0.76	0.0094	670.04	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.845	0.0089	650.04	0.0059	0.01385
Mn	55	3	He	-1.008	0.0079	570.03	0.0059	0.01385
Fe	57	3	He	19.771	0.0096	690.04	0.0003	0.003918
Fe	57	3	He	19.896	0.0097	710.04	0.0003	0.003918
Fe	57	3	He	16.635	0.0087	630.04	0.0003	0.003918
Co	59	3	He	0.105	0.0063	450.02	0.0305	0.003084
Co	59	3	He	0.069	0.0052	380.02	0.0305	0.003084
Co	59	3	He	0.199	0.0092	660.04	0.0305	0.003084
Ni	60	3	He	1.091	0.0186	1330.12	0.0088	0.009003
Ni	60	3	He	0.682	0.015	1100.07	0.0088	0.009003
Ni	60	3	He	1.105	0.0187	1350.12	0.0088	0.009003
Cu	63	3	He	0.127	0.0081	580.03	0.0249	0.004937
Cu	63	3	He	0.136	0.0083	610.03	0.0249	0.004937
Cu	63	3	He	0.141	0.0085	610.03	0.0249	0.004937
Zn	66	3	He	-0.148	0.0045	320.02	0.0025	0.004836
Zn	66	3	He	0.03	0.0049	360.02	0.0025	0.004836
Zn	66	3	He	0.177	0.0053	380.02	0.0025	0.004836
As	75	3	He	0.12	0.0006	46.00	0.0017	0.0004347
As	75	3	He	0.001	0.0004	32.00	0.0017	0.0004347
As	75	3	He	0.069	0.0006	40.00	0.0017	0.0004347
Sr	88	3	He	-0.019	0.0006	40.00	0.0078	0.0007762
Sr	88	3	He	0.159	0.002	130.01	0.0078	0.0007762
Sr	88	3	He	0.042	0.0011	70.00	0.0078	0.0007762
Mo	98	3	He	0.04	0.0014	90.00	0.022	0.0005162
Mo	98	3	He	-0.016	0.0002	10.00	0.022	0.0005162
Mo	98	3	He	0.012	0.0008	50.00	0.022	0.0005162
Ag	107	3	He	0	0.0005	30.00	0.0455	0.0004641
Ag	107	3	He	0.014	0.0011	70.00	0.0455	0.0004641
Ag	107	3	He	0.011	0.0009	60.00	0.0455	0.0004641
Cd	111	3	He	0.015	0.0001	8.00	0.0048	5.152E-05
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Cd	111	3	He	0.022	0.0002	10.00	0.0048	5.152E-05
Sn	120	3	He	0.355	0.0206	1320.12	0.0143	0.01559
Sn	120	3	He	0.052	0.0163	1050.08	0.0143	0.01559
Sn	120	3	He	0.102	0.017	1080.09	0.0143	0.01559
Sb	121	3	He	0.055	0.0009	60.00	0.0124	0.000258
Sb	121	3	He	0.017	0.0005	30.00	0.0124	0.000258
Sb	121	3	He	0.005	0.0003	20.00	0.0124	0.000258
Ba	137	3	He	0.358	0.0019	120.01	0.0044	0.000309
Ba	137	3	He	-0.035	0.0002	10.00	0.0044	0.000309
Ba	137	3	He	0.074	0.0006	40.00	0.0044	0.000309
Tl	205	3	He	0.087	0.0034	750.05	0.0276	0.001005
Tl	205	3	He	0.079	0.0032	690.04	0.0276	0.001005
Tl	205	3	He	0.06	0.0027	590.04	0.0276	0.001005
Pb	208	3	He	0.041	0.0037	440.02	0.0364	0.002176
Pb	208	3	He	0.058	0.0043	560.03	0.0364	0.002176
Pb	208	3	He	0.058	0.0043	440.02	0.0364	0.002176
U	238	3	He	0.014	0.0008	180.01	0.0421	0.00024
U	238	3	He	0.004	0.0004	90.00	0.0421	0.00024
U	238	3	He	0.01	0.0007	150.01	0.0421	0.00024
Sc	45	1	No Gas			3116948.39		
Sc	45	1	No Gas			3202306.51		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3257534.64		
Ge	72	1	No Gas			1364767.95		
Ge	72	1	No Gas			1417226.54		
Ge	72	1	No Gas			1440082.32		
Sc	45	2	H2			198224.55		
Sc	45	2	H2			196552.89		
Sc	45	2	H2			195165.47		
Ge	72	2	H2			160890.26		
Ge	72	2	H2			158281.97		
Ge	72	2	H2			155673.78		
In	115	2	H2			445623.67		
In	115	2	H2			429385.35		
In	115	2	H2			429360.66		
Sc	45	3	He			41028.03		
Sc	45	3	He			41228.72		
Sc	45	3	He			41850.71		
Ge	72	3	He			71538.19		
Ge	72	3	He			73337.51		
Ge	72	3	He			72110.27		
In	115	3	He			63946.32		
In	115	3	He			64328.39		
In	115	3	He			63374.38		
Tb	159	3	He			286718.84		
Tb	159	3	He			284290.43		
Tb	159	3	He			284821.52		
Bi	209	3	He			220426.05		
Bi	209	3	He			217201.74		
Bi	209	3	He			221432.40		

Quantitation Report

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Acq Time	2023-08-10 18:17:10
Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

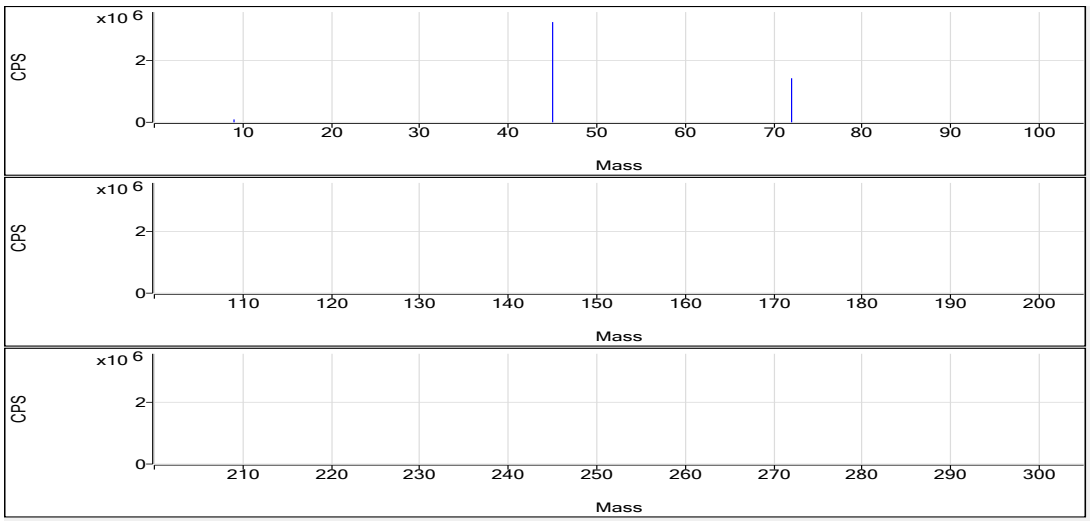
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	49.675	ppb	4.8	93397.40	0.0653	Pulse	0.5000	3
Se	78	72	H2	54.130	ppb	1.0	3403.08	0.0211	Pulse	1.5000	3
Na	23	72	He	5355.467	ppb	1.6	682417.75	9.3062	Pulse	0.1000	3
Mg	24	72	He	5351.347	ppb	3.0	331156.86	4.5166	Pulse	0.1000	3
Al	27	72	He	5318.528	ppb	2.6	94217.96	1.2849	Pulse	0.1000	3
K	39	72	He	5351.086	ppb	1.4	227220.57	3.0986	Pulse	0.1000	3
Ca	44	72	He	5292.151	ppb	4.9	12168.80	0.1660	Pulse	0.1000	3
Ti	47	72	He	5402.162	ppb	2.1	99359.38	1.3550	Pulse	0.1000	3
V	51	72	He	535.104	ppb	1.7	459534.22	6.2668	Pulse	0.5000	3
Cr	52	72	He	535.900	ppb	1.9	600235.95	8.1857	Pulse	0.1000	3
Mn	55	72	He	532.452	ppb	2.4	231456.38	3.1566	Pulse	0.1000	3
Fe	57	72	He	5331.838	ppb	1.8	113557.81	1.5486	Pulse	0.1000	3
Co	59	72	He	534.696	ppb	1.1	1196562.51	16.3169	Pulse	0.1000	3
Ni	60	72	He	537.476	ppb	1.1	347245.61	4.7352	Pulse	0.1000	3
Cu	63	72	He	531.978	ppb	1.3	973203.55	13.2709	Pulse	0.1000	3
Zn	66	72	He	526.879	ppb	2.0	95269.89	1.2993	Pulse	0.1000	3
As	75	72	He	522.652	ppb	1.7	66685.79	0.9094	Pulse	0.5000	3
Sr	88	115	He	53.699	ppb	2.4	26912.79	0.4205	Pulse	0.1000	3
Mo	98	115	He	53.324	ppb	2.2	75179.84	1.1748	Pulse	0.1000	3
Ag	107	115	He	52.217	ppb	1.6	152078.01	2.3764	Pulse	0.1000	3
Cd	111	115	He	52.975	ppb	0.6	16279.45	0.2543	Pulse	0.5000	3
Sn	120	115	He	52.765	ppb	2.3	49140.76	0.7679	Pulse	0.1000	3
Sb	121	115	He	52.101	ppb	1.9	41385.50	0.6466	Pulse	0.1000	3
Ba	137	115	He	522.451	ppb	2.1	146284.86	2.2859	Pulse	0.1000	3
Tl	205	209	He	52.636	ppb	0.3	321697.96	1.4561	Pulse	0.1000	3
Pb	208	209	He	52.441	ppb	0.5	422189.96	1.9109	Pulse	0.1000	3
U	238	209	He	52.346	ppb	0.6	486567.74	2.2023	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3255442.76	2.5	100.4	Pulse	0.1000	3
No Gas	Ge	72	1430694.09	2.0	99.4	Pulse	0.1000	3
H2	Sc	45	196083.45	2.5	100.4	Pulse	0.1000	3
H2	Ge	72	161379.06	2.1	99.0	Pulse	0.1000	3
H2	In	115	440993.70	3.9	101.8	Pulse	0.1000	3
He	Sc	45	42201.70	0.8	105.5	Pulse	0.1000	3
He	Ge	72	73340.05	1.4	101.5	Pulse	0.1000	3
He	In	115	64005.25	1.3	99.1	Pulse	0.1000	3
He	Tb	159	288661.13	0.6	100.9	Pulse	0.1000	3
He	Bi	209	220937.31	0.7	99.4	Pulse	0.1000	3

No Gas



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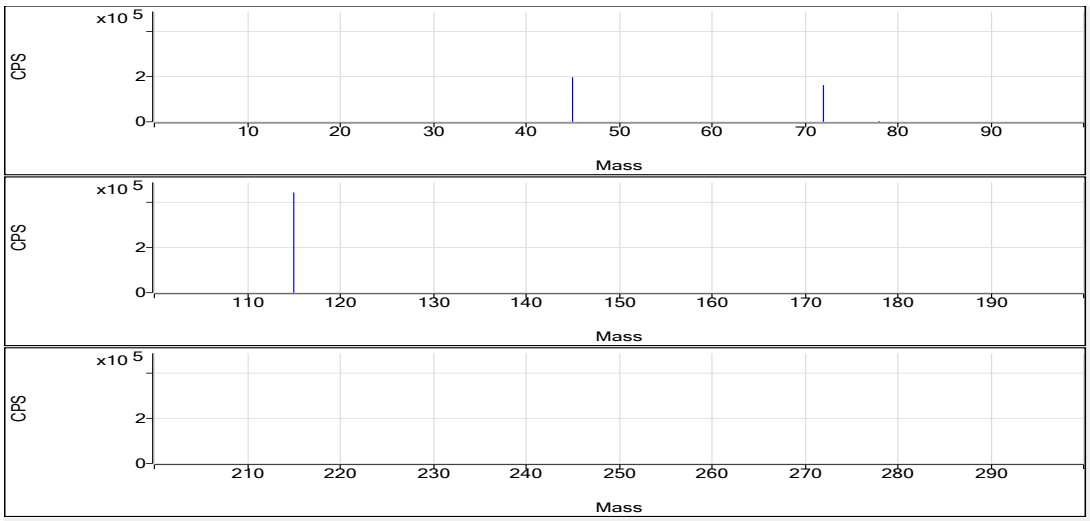
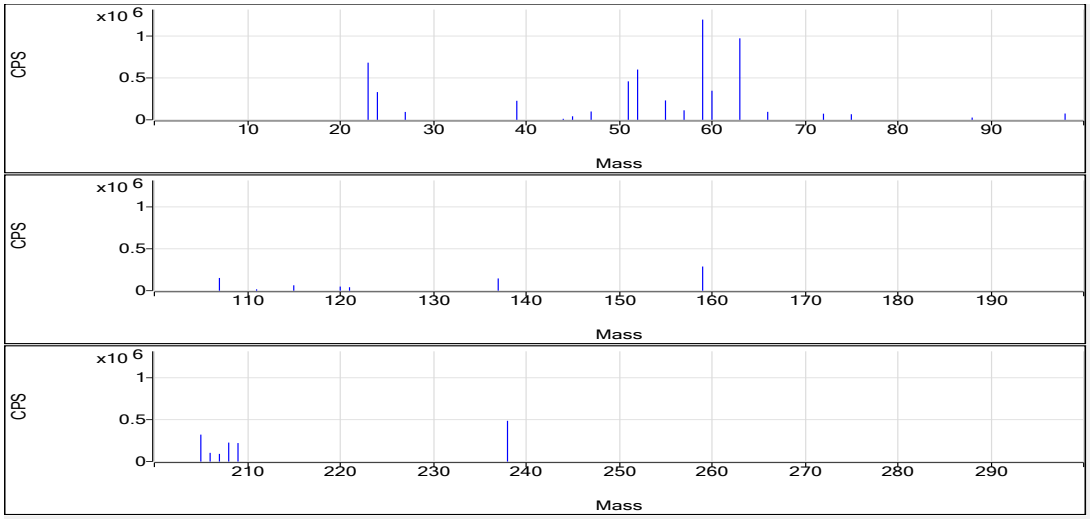


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	51.748	0.068	95854.06	0.0013	4.694E-05
Be	9	1	No Gas	50.202	0.066	93782.84	0.0013	4.694E-05
Be	9	1	No Gas	47.076	0.0619	90555.30	0.0013	4.694E-05
Se	78	2	H2	54.687	0.0213	3491.10	0.0004	1.089E-05
Se	78	2	H2	54.12	0.0211	3323.06	0.0004	1.089E-05
Se	78	2	H2	53.582	0.0209	3395.07	0.0004	1.089E-05
Na	23	3	He	5342.848	9.2845	684438.35	0.0017	0.1065
Na	23	3	He	5278.341	9.1737	680149.21	0.0017	0.1065
Na	23	3	He	5445.213	9.4604	682665.69	0.0017	0.1065
Mg	24	3	He	5344.582	4.5109	332533.67	0.0008	0.004846
Mg	24	3	He	5196.774	4.3863	325202.18	0.0008	0.004846
Mg	24	3	He	5512.686	4.6526	335734.72	0.0008	0.004846
Al	27	3	He	5190.685	1.2541	92447.44	0.0002	0.001063
Al	27	3	He	5303.263	1.2812	94992.65	0.0002	0.001063
Al	27	3	He	5461.635	1.3195	95213.80	0.0002	0.001063
K	39	3	He	5335.156	3.0898	227773.04	0.0006	0.1436
K	39	3	He	5284.208	3.0616	226993.86	0.0006	0.1436
K	39	3	He	5433.894	3.1443	226894.82	0.0006	0.1436
Ca	44	3	He	5383.734	0.1688	12445.78	0	0.001611
Ca	44	3	He	5000.646	0.1569	11635.00	0	0.001611
Ca	44	3	He	5492.073	0.1722	12425.63	0	0.001611
Ti	47	3	He	5322.063	1.3349	98409.25	0.0003	0.0002737
Ti	47	3	He	5355.616	1.3434	99597.67	0.0003	0.0002737
Ti	47	3	He	5528.806	1.3868	100071.23	0.0003	0.0002737
V	51	3	He	531.853	6.2288	459177.25	0.0117	0.007326
V	51	3	He	527.867	6.1822	458354.72	0.0117	0.007326
V	51	3	He	545.59	6.3895	461070.69	0.0117	0.007326
Cr	52	3	He	529.95	8.0951	596755.30	0.0152	0.02538
Cr	52	3	He	530.393	8.1018	600679.25	0.0152	0.02538
Cr	52	3	He	547.357	8.3601	603273.31	0.0152	0.02538
Mn	55	3	He	522.774	3.0995	228488.63	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	527.384	3.1267	231817.18	0.0059	0.01385
Mn	55	3	He	547.197	3.2436	234063.34	0.0059	0.01385
Fe	57	3	He	5272.03	1.5313	112884.97	0.0003	0.003918
Fe	57	3	He	5280.9	1.5339	113723.10	0.0003	0.003918
Fe	57	3	He	5442.584	1.5807	114065.37	0.0003	0.003918
Co	59	3	He	530.227	16.1806	1192804.67	0.0305	0.003084
Co	59	3	He	532.174	16.24	1204052.33	0.0305	0.003084
Co	59	3	He	541.686	16.5302	1192830.53	0.0305	0.003084
Ni	60	3	He	533.714	4.7021	346631.67	0.0088	0.009003
Ni	60	3	He	534.649	4.7103	349229.84	0.0088	0.009003
Ni	60	3	He	544.065	4.7931	345875.31	0.0088	0.009003
Cu	63	3	He	524.826	13.0926	965162.33	0.0249	0.004937
Cu	63	3	He	532.265	13.2781	984453.66	0.0249	0.004937
Cu	63	3	He	538.844	13.4422	969994.67	0.0249	0.004937
Zn	66	3	He	520.426	1.2834	94610.16	0.0025	0.004836
Zn	66	3	He	521.14	1.2852	95282.93	0.0025	0.004836
Zn	66	3	He	539.071	1.3292	95916.57	0.0025	0.004836
As	75	3	He	519.753	0.9044	66668.89	0.0017	0.0004347
As	75	3	He	515.495	0.897	66502.37	0.0017	0.0004347
As	75	3	He	532.708	0.9269	66886.11	0.0017	0.0004347
Sr	88	3	He	52.602	0.412	26425.03	0.0078	0.0007762
Sr	88	3	He	55.091	0.4314	27226.78	0.0078	0.0007762
Sr	88	3	He	53.404	0.4182	27086.55	0.0078	0.0007762
Mo	98	3	He	52.709	1.1612	74486.02	0.022	0.0005162
Mo	98	3	He	54.665	1.2043	76004.59	0.022	0.0005162
Mo	98	3	He	52.598	1.1588	75048.91	0.022	0.0005162
Ag	107	3	He	51.847	2.3595	151346.61	0.0455	0.0004641
Ag	107	3	He	53.193	2.4207	152771.10	0.0455	0.0004641
Ag	107	3	He	51.611	2.3488	152116.31	0.0455	0.0004641
Cd	111	3	He	53.303	0.2559	16415.60	0.0048	5.152E-05
Cd	111	3	He	52.921	0.2541	16035.16	0.0048	5.152E-05
Cd	111	3	He	52.702	0.253	16387.59	0.0048	5.152E-05
Sn	120	3	He	53.031	0.7717	49498.99	0.0143	0.01559
Sn	120	3	He	53.85	0.7834	49438.49	0.0143	0.01559
Sn	120	3	He	51.414	0.7486	48484.79	0.0143	0.01559
Sb	121	3	He	51.041	0.6334	40629.66	0.0124	0.000258
Sb	121	3	He	52.301	0.649	40960.89	0.0124	0.000258
Sb	121	3	He	52.962	0.6573	42565.96	0.0124	0.000258
Ba	137	3	He	518.836	2.2701	145611.86	0.0044	0.000309
Ba	137	3	He	534.767	2.3398	147662.98	0.0044	0.000309
Ba	137	3	He	513.751	2.2479	145579.74	0.0044	0.000309
Tl	205	3	He	52.791	1.4604	320040.00	0.0276	0.001005
Tl	205	3	He	52.453	1.451	322007.22	0.0276	0.001005
Tl	205	3	He	52.663	1.4568	323046.66	0.0276	0.001005
Pb	208	3	He	52.433	1.9106	224106.95	0.0364	0.002176
Pb	208	3	He	52.687	1.9198	227401.34	0.0364	0.002176
Pb	208	3	He	52.204	1.9023	227715.76	0.0364	0.002176
U	238	3	He	52.48	2.2079	483858.90	0.0421	0.00024
U	238	3	He	52.013	2.1883	485616.75	0.0421	0.00024
U	238	3	He	52.547	2.2108	490227.57	0.0421	0.00024
Sc	45	1	No Gas			3181828.39		
Sc	45	1	No Gas			3242982.76		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3341517.14		
Ge	72	1	No Gas			1408675.60		
Ge	72	1	No Gas			1420653.42		
Ge	72	1	No Gas			1462753.26		
Sc	45	2	H2			195712.59		
Sc	45	2	H2			191283.36		
Sc	45	2	H2			201254.39		
Ge	72	2	H2			163872.61		
Ge	72	2	H2			157616.12		
Ge	72	2	H2			162648.46		
In	115	2	H2			453275.62		
In	115	2	H2			421410.07		
In	115	2	H2			448295.42		
Sc	45	3	He			41931.04		
Sc	45	3	He			42592.91		
Sc	45	3	He			42081.15		
Ge	72	3	He			73718.28		
Ge	72	3	He			74141.20		
Ge	72	3	He			72160.66		
In	115	3	He			64529.18		
In	115	3	He			63494.71		
In	115	3	He			65141.76		
Tb	159	3	He			286557.26		
Tb	159	3	He			289465.11		
Tb	159	3	He			289961.01		
Bi	209	3	He			219147.28		
Bi	209	3	He			221917.79		
Bi	209	3	He			221746.87		

Quantitation Report

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Sample Type	CCB
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

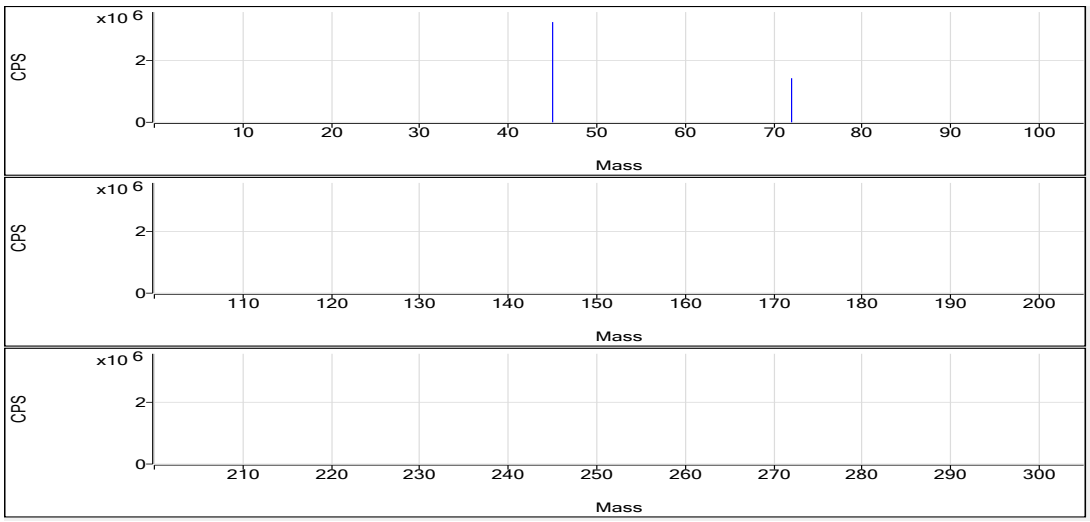
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.028	ppb	3.7	118.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.036	ppb	27.3	4.00	0.0000	Pulse	1.5000	3
Na	23	72	He	6.250	ppb	9.8	8432.64	0.1172	Pulse	0.1000	3
Mg	24	72	He	2.929	ppb	22.4	526.69	0.0073	Pulse	0.1000	3
Al	27	72	He	10.553	ppb	17.1	260.01	0.0036	Pulse	0.1000	3
K	39	72	He	18.746	ppb	36.1	11077.89	0.1540	Pulse	0.1000	3
Ca	44	72	He	7.873	ppb	258.2	133.34	0.0019	Pulse	0.1000	3
Ti	47	72	He	0.942	ppb	122.2	36.67	0.0005	Pulse	0.1000	3
V	51	72	He	0.179	ppb	27.7	677.35	0.0094	Pulse	0.5000	3
Cr	52	72	He	0.219	ppb	63.4	2066.89	0.0287	Pulse	0.1000	3
Mn	55	72	He	-0.832	ppb	N/A	643.37	0.0089	Pulse	0.1000	3
Fe	57	72	He	19.593	ppb	8.4	690.04	0.0096	Pulse	0.1000	3
Co	59	72	He	0.175	ppb	23.5	606.70	0.0084	Pulse	0.1000	3
Ni	60	72	He	0.928	ppb	29.3	1236.77	0.0172	Pulse	0.1000	3
Cu	63	72	He	0.146	ppb	24.8	616.70	0.0086	Pulse	0.1000	3
Zn	66	72	He	0.168	ppb	324.8	376.68	0.0052	Pulse	0.1000	3
As	75	72	He	0.279	ppb	66.9	66.00	0.0009	Pulse	0.5000	3
Sr	88	115	He	0.171	ppb	44.8	136.67	0.0021	Pulse	0.1000	3
Mo	98	115	He	0.033	ppb	34.8	80.00	0.0012	Pulse	0.1000	3
Ag	107	115	He	0.027	ppb	31.2	110.00	0.0017	Pulse	0.1000	3
Cd	111	115	He	0.024	ppb	44.0	10.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.181	ppb	38.2	1170.09	0.0182	Pulse	0.1000	3
Sb	121	115	He	0.067	ppb	36.1	70.00	0.0011	Pulse	0.1000	3
Ba	137	115	He	0.318	ppb	54.5	110.00	0.0017	Pulse	0.1000	3
Tl	205	209	He	0.185	ppb	5.9	1340.12	0.0061	Pulse	0.1000	3
Pb	208	209	He	0.030	ppb	32.8	720.04	0.0033	Pulse	0.1000	3
U	238	209	He	0.019	ppb	30.6	223.34	0.0010	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3243470.99	2.1	100.1	Pulse	0.1000	3
No Gas	Ge	72	1426408.05	2.2	99.1	Pulse	0.1000	3
H2	Sc	45	195722.62	1.5	100.2	Pulse	0.1000	3
H2	Ge	72	160634.86	1.9	98.5	Pulse	0.1000	3
H2	In	115	437417.01	1.6	100.9	Pulse	0.1000	3
He	Sc	45	40637.39	3.9	101.6	Pulse	0.1000	3
He	Ge	72	71953.38	1.5	99.5	Pulse	0.1000	3
He	In	115	64423.01	1.6	99.7	Pulse	0.1000	3
He	Tb	159	281495.70	0.3	98.4	Pulse	0.1000	3
He	Bi	209	219098.97	0.4	98.6	Pulse	0.1000	3

No Gas



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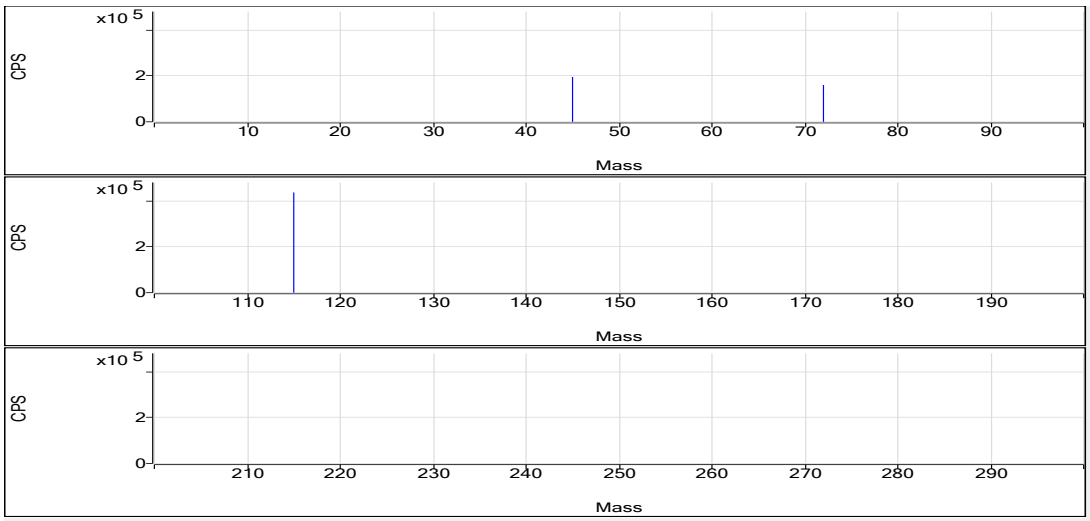
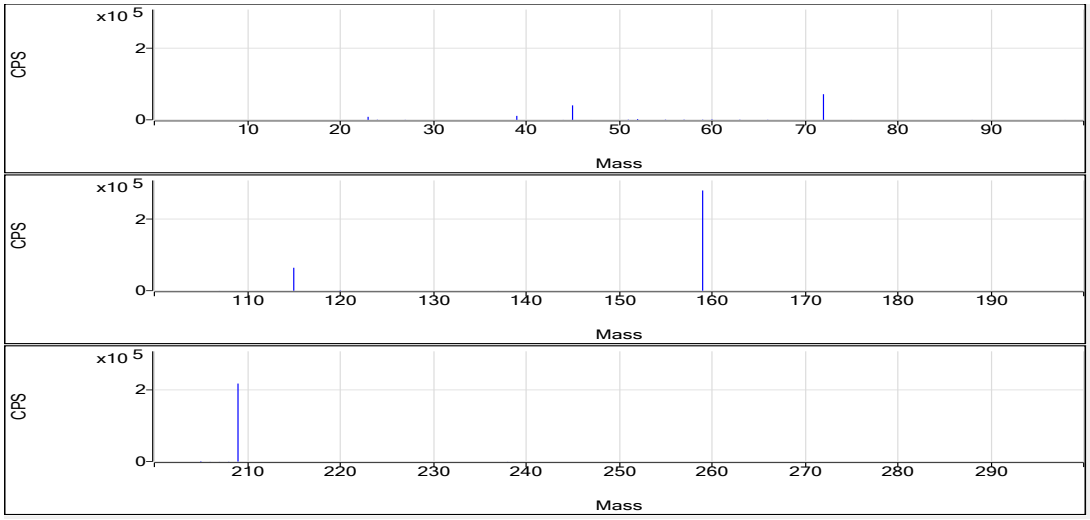


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.027	0.0001	114.00	0.0013	4.694E-05
Be	9	1	No Gas	0.029	0.0001	122.00	0.0013	4.694E-05
Be	9	1	No Gas	0.027	0.0001	120.00	0.0013	4.694E-05
Se	78	2	H2	0.035	0	4.00	0.0004	1.089E-05
Se	78	2	H2	0.026	0	3.33	0.0004	1.089E-05
Se	78	2	H2	0.046	0	4.67	0.0004	1.089E-05
Na	23	3	He	5.608	0.1161	8372.54	0.0017	0.1065
Na	23	3	He	6.823	0.1182	8622.74	0.0017	0.1065
Na	23	3	He	6.32	0.1173	8302.65	0.0017	0.1065
Mg	24	3	He	2.475	0.0069	500.02	0.0008	0.004846
Mg	24	3	He	3.681	0.0079	580.03	0.0008	0.004846
Mg	24	3	He	2.632	0.0071	500.02	0.0008	0.004846
Al	27	3	He	9.383	0.0033	240.01	0.0002	0.001063
Al	27	3	He	12.63	0.0041	300.01	0.0002	0.001063
Al	27	3	He	9.646	0.0034	240.01	0.0002	0.001063
K	39	3	He	21.723	0.1556	11224.66	0.0006	0.1436
K	39	3	He	11.01	0.1497	10924.39	0.0006	0.1436
K	39	3	He	23.504	0.1566	11084.63	0.0006	0.1436
Ca	44	3	He	28.494	0.0025	180.01	0	0.001611
Ca	44	3	He	-12.152	0.0012	90.00	0	0.001611
Ca	44	3	He	7.278	0.0018	130.01	0	0.001611
Ti	47	3	He	2.226	0.0008	60.00	0.0003	0.0002737
Ti	47	3	He	0.002	0.0003	20.00	0.0003	0.0002737
Ti	47	3	He	0.599	0.0004	30.00	0.0003	0.0002737
V	51	3	He	0.194	0.0096	692.02	0.0117	0.007326
V	51	3	He	0.124	0.0088	640.02	0.0117	0.007326
V	51	3	He	0.219	0.0099	700.02	0.0117	0.007326
Cr	52	3	He	0.355	0.0308	2220.25	0.0152	0.02538
Cr	52	3	He	0.223	0.0288	2100.23	0.0152	0.02538
Cr	52	3	He	0.078	0.0266	1880.18	0.0152	0.02538
Mn	55	3	He	-1.29	0.0062	450.02	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.536	0.0107	780.05	0.0059	0.01385
Mn	55	3	He	-0.671	0.0099	700.04	0.0059	0.01385
Fe	57	3	He	20.459	0.0098	710.04	0.0003	0.003918
Fe	57	3	He	17.701	0.009	660.04	0.0003	0.003918
Fe	57	3	He	20.618	0.0099	700.04	0.0003	0.003918
Co	59	3	He	0.149	0.0076	550.03	0.0305	0.003084
Co	59	3	He	0.222	0.0099	720.04	0.0305	0.003084
Co	59	3	He	0.154	0.0078	550.03	0.0305	0.003084
Ni	60	3	He	0.947	0.0173	1250.10	0.0088	0.009003
Ni	60	3	He	1.19	0.0195	1420.13	0.0088	0.009003
Ni	60	3	He	0.647	0.0147	1040.07	0.0088	0.009003
Cu	63	3	He	0.169	0.0092	660.04	0.0249	0.004937
Cu	63	3	He	0.104	0.0075	550.03	0.0249	0.004937
Cu	63	3	He	0.165	0.009	640.04	0.0249	0.004937
Zn	66	3	He	0.233	0.0054	390.02	0.0025	0.004836
Zn	66	3	He	-0.407	0.0038	280.01	0.0025	0.004836
Zn	66	3	He	0.677	0.0065	460.02	0.0025	0.004836
As	75	3	He	0.244	0.0009	62.00	0.0017	0.0004347
As	75	3	He	0.113	0.0006	46.00	0.0017	0.0004347
As	75	3	He	0.481	0.0013	90.00	0.0017	0.0004347
Sr	88	3	He	0.215	0.0025	160.01	0.0078	0.0007762
Sr	88	3	He	0.083	0.0014	90.00	0.0078	0.0007762
Sr	88	3	He	0.216	0.0025	160.01	0.0078	0.0007762
Mo	98	3	He	0.039	0.0014	90.00	0.022	0.0005162
Mo	98	3	He	0.02	0.0009	60.00	0.022	0.0005162
Mo	98	3	He	0.04	0.0014	90.00	0.022	0.0005162
Ag	107	3	He	0.034	0.002	130.00	0.0455	0.0004641
Ag	107	3	He	0.018	0.0013	80.00	0.0455	0.0004641
Ag	107	3	He	0.03	0.0019	120.00	0.0455	0.0004641
Cd	111	3	He	0.015	0.0001	8.00	0.0048	5.152E-05
Cd	111	3	He	0.035	0.0002	14.00	0.0048	5.152E-05
Cd	111	3	He	0.021	0.0002	10.00	0.0048	5.152E-05
Sn	120	3	He	0.102	0.017	1110.09	0.0143	0.01559
Sn	120	3	He	0.227	0.0188	1190.09	0.0143	0.01559
Sn	120	3	He	0.215	0.0187	1210.10	0.0143	0.01559
Sb	121	3	He	0.066	0.0011	70.00	0.0124	0.000258
Sb	121	3	He	0.043	0.0008	50.00	0.0124	0.000258
Sb	121	3	He	0.091	0.0014	90.00	0.0124	0.000258
Ba	137	3	He	0.315	0.0017	110.00	0.0044	0.000309
Ba	137	3	He	0.146	0.0009	60.00	0.0044	0.000309
Ba	137	3	He	0.493	0.0025	160.01	0.0044	0.000309
Tl	205	3	He	0.179	0.006	1300.12	0.0276	0.001005
Tl	205	3	He	0.178	0.0059	1300.10	0.0276	0.001005
Tl	205	3	He	0.198	0.0065	1420.13	0.0276	0.001005
Pb	208	3	He	0.022	0.003	280.02	0.0364	0.002176
Pb	208	3	He	0.042	0.0037	460.03	0.0364	0.002176
Pb	208	3	He	0.028	0.0032	370.02	0.0364	0.002176
U	238	3	He	0.025	0.0013	280.01	0.0421	0.00024
U	238	3	He	0.017	0.001	210.01	0.0421	0.00024
U	238	3	He	0.014	0.0008	180.01	0.0421	0.00024
Sc	45	1	No Gas			3164974.64		
Sc	45	1	No Gas			3284726.83		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3280711.51		
Ge	72	1	No Gas			1389759.82		
Ge	72	1	No Gas			1440931.54		
Ge	72	1	No Gas			1448532.79		
Sc	45	2	H2			195480.37		
Sc	45	2	H2			192977.40		
Sc	45	2	H2			198710.08		
Ge	72	2	H2			162499.27		
Ge	72	2	H2			157191.03		
Ge	72	2	H2			162214.27		
In	115	2	H2			439201.56		
In	115	2	H2			429878.08		
In	115	2	H2			443171.40		
Sc	45	3	He			41450.08		
Sc	45	3	He			38822.17		
Sc	45	3	He			41639.93		
Ge	72	3	He			72121.01		
Ge	72	3	He			72965.10		
Ge	72	3	He			70774.04		
In	115	3	He			65172.12		
In	115	3	He			63253.09		
In	115	3	He			64871.20		
Tb	159	3	He			280541.54		
Tb	159	3	He			281604.49		
Tb	159	3	He			282341.07		
Bi	209	3	He			218068.96		
Bi	209	3	He			219584.66		
Bi	209	3	He			219643.28		

Quantitation Report

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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

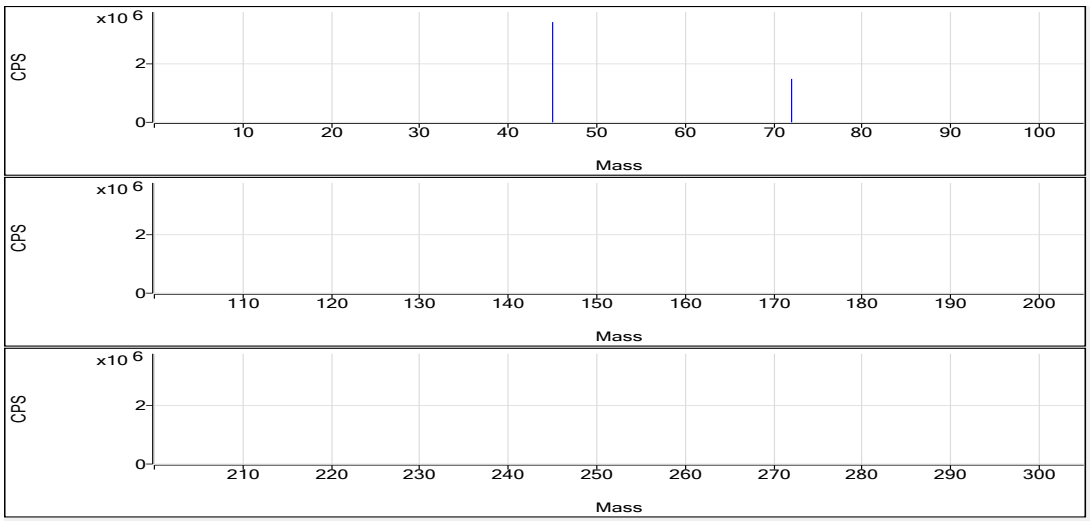
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	1.609	ppb	2.5	3189.02	0.0022	Pulse	0.5000	3
Se	78	72	H2	0.841	ppb	6.4	55.11	0.0003	Pulse	1.5000	3
Na	23	72	He	8460.355	ppb	1.0	1091915.87	14.6398	Pulse	0.1000	3
Mg	24	72	He	12056.774	ppb	1.0	758528.35	10.1699	Pulse	0.1000	3
Al	27	72	He	28520.356	ppb	1.1	513576.24	6.8857	Pulse	0.1000	3
K	39	72	He	5489.665	ppb	2.0	236822.56	3.1751	Pulse	0.1000	3
Ca	44	72	He	56368.560	ppb	0.8	130709.27	1.7524	Pulse	0.1000	3
Ti	47	72	He	1317.324	ppb	3.5	24661.41	0.3306	Pulse	0.1000	3
V	51	72	He	75.104	ppb	0.5	66073.90	0.8859	Pulse	0.5000	3
Cr	52	72	He	38.814	ppb	1.8	45976.63	0.6164	Pulse	0.1000	3
Mn	55	72	He	2062.635	ppb	0.2	909085.56	12.1884	Pulse	0.1000	3
Fe	57	72	He	38397.786	ppb	0.6	830013.87	11.1283	Pulse	0.1000	3
Co	59	72	He	11.267	ppb	2.3	25870.45	0.3469	Pulse	0.1000	3
Ni	60	72	He	30.542	ppb	2.8	20702.12	0.2776	Pulse	0.1000	3
Cu	63	72	He	208.281	ppb	0.5	387767.44	5.1989	Pulse	0.1000	3
Zn	66	72	He	267.516	ppb	1.0	49382.15	0.6621	Pulse	0.1000	3
As	75	72	He	8.581	ppb	4.3	1145.39	0.0154	Pulse	0.5000	3
Sr	88	115	He	168.975	ppb	1.3	85063.70	1.3217	Pulse	0.1000	3
Mo	98	115	He	2.835	ppb	6.0	4050.73	0.0629	Pulse	0.1000	3
Ag	107	115	He	0.348	ppb	14.9	1050.07	0.0163	Pulse	0.1000	3
Cd	111	115	He	0.881	ppb	11.7	275.34	0.0043	Pulse	0.5000	3
Sn	120	115	He	36.569	ppb	2.6	34568.79	0.5370	Pulse	0.1000	3
Sb	121	115	He	11.863	ppb	2.7	9486.88	0.1474	Pulse	0.1000	3
Ba	137	115	He	466.500	ppb	2.4	131361.24	2.0412	Pulse	0.1000	3
Tl	205	209	He	0.292	ppb	11.8	2020.22	0.0091	Pulse	0.1000	3
Pb	208	209	He	174.449	ppb	0.6	1412198.30	6.3516	Pulse	0.1000	3
U	238	209	He	3.049	ppb	3.3	28565.62	0.1285	Pulse	0.1000	3

ISTD Table:

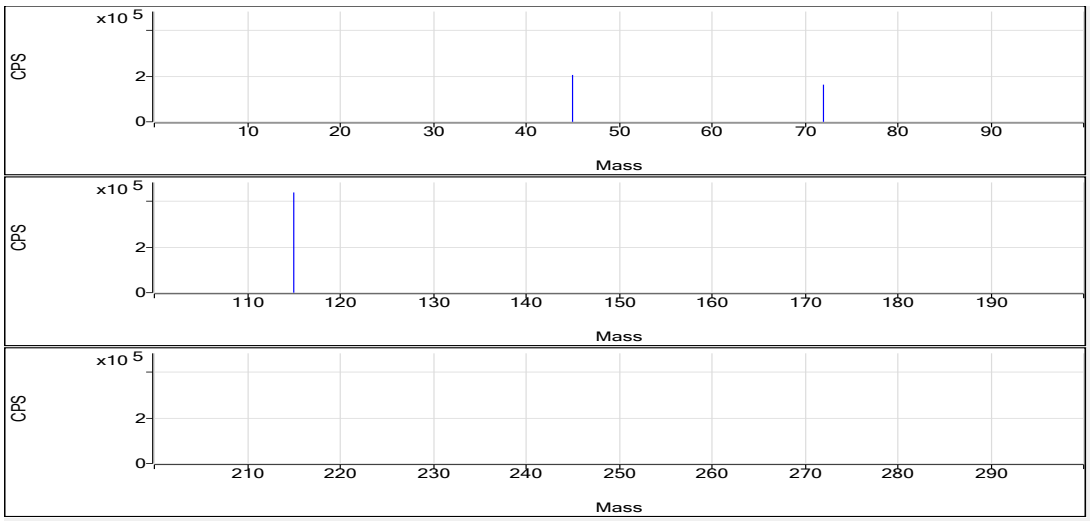
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3408257.45	1.9	105.2	Pulse	0.1000	3
No Gas	Ge	72	1475771.33	1.6	102.5	Pulse	0.1000	3
H2	Sc	45	205426.68	2.1	105.1	Pulse	0.1000	3
H2	Ge	72	162864.07	1.2	99.9	Pulse	0.1000	3
H2	In	115	439302.83	0.6	101.4	Pulse	0.1000	3
He	Sc	45	43625.65	1.5	109.1	Pulse	0.1000	3
He	Ge	72	74586.50	0.4	103.2	Pulse	0.1000	3
He	In	115	64366.72	1.1	99.7	Pulse	0.1000	3
He	Tb	159	293702.28	0.4	102.7	Pulse	0.1000	3
He	Bi	209	222337.67	0.9	100.1	Pulse	0.1000	3

No Gas

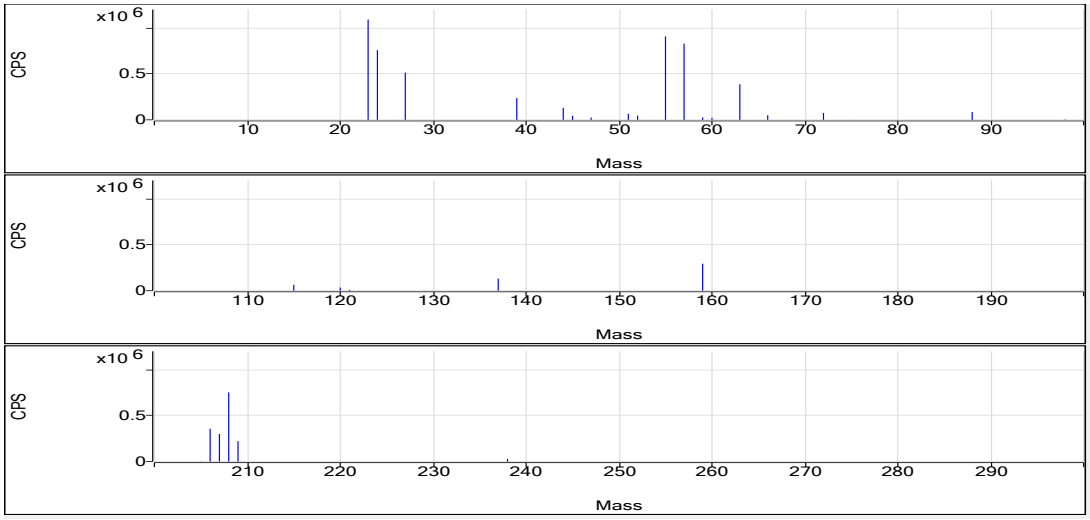


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	1.652	0.0022	3214.36	0.0013	4.694E-05
Be	9	1	No Gas	1.575	0.0021	3140.34	0.0013	4.694E-05
Be	9	1	No Gas	1.601	0.0022	3212.36	0.0013	4.694E-05
Se	78	2	H2	0.855	0.0003	56.00	0.0004	1.089E-05
Se	78	2	H2	0.781	0.0003	50.67	0.0004	1.089E-05
Se	78	2	H2	0.886	0.0004	58.67	0.0004	1.089E-05
Na	23	3	He	8495.753	14.7006	1099222.09	0.0017	0.1065
Na	23	3	He	8519.169	14.7409	1094081.47	0.0017	0.1065
Na	23	3	He	8366.145	14.478	1082444.05	0.0017	0.1065
Mg	24	3	He	12121.29	10.2243	764511.24	0.0008	0.004846
Mg	24	3	He	12131.376	10.2328	759490.54	0.0008	0.004846
Mg	24	3	He	11917.654	10.0526	751583.27	0.0008	0.004846
Al	27	3	He	28751.697	6.9416	519046.20	0.0002	0.001063
Al	27	3	He	28635.588	6.9135	513128.78	0.0002	0.001063
Al	27	3	He	28173.783	6.8021	508553.74	0.0002	0.001063
K	39	3	He	5609.825	3.2415	242375.56	0.0006	0.1436
K	39	3	He	5460.873	3.1592	234478.84	0.0006	0.1436
K	39	3	He	5398.297	3.1246	233613.28	0.0006	0.1436
Ca	44	3	He	56662.839	1.7616	131717.79	0	0.001611
Ca	44	3	He	55825.05	1.7355	128812.69	0	0.001611
Ca	44	3	He	56617.789	1.7602	131597.34	0	0.001611
Ti	47	3	He	1369.618	0.3437	25703.15	0.0003	0.0002737
Ti	47	3	He	1301.255	0.3266	24240.68	0.0003	0.0002737
Ti	47	3	He	1281.1	0.3215	24040.39	0.0003	0.0002737
V	51	3	He	75.284	0.888	66397.30	0.0117	0.007326
V	51	3	He	75.368	0.889	65979.54	0.0117	0.007326
V	51	3	He	74.661	0.8807	65844.85	0.0117	0.007326
Cr	52	3	He	38.305	0.6087	45512.14	0.0152	0.02538
Cr	52	3	He	38.513	0.6118	45411.28	0.0152	0.02538
Cr	52	3	He	39.622	0.6287	47006.48	0.0152	0.02538
Mn	55	3	He	2059.05	12.1672	909789.91	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2066.598	12.2118	906370.69	0.0059	0.01385
Mn	55	3	He	2062.258	12.1862	911096.08	0.0059	0.01385
Fe	57	3	He	38154.837	11.0579	826843.27	0.0003	0.003918
Fe	57	3	He	38556.808	11.1744	829374.21	0.0003	0.003918
Fe	57	3	He	38481.713	11.1526	833824.13	0.0003	0.003918
Co	59	3	He	11.477	0.3533	26414.66	0.0305	0.003084
Co	59	3	He	11.342	0.3491	25913.85	0.0305	0.003084
Co	59	3	He	10.982	0.3382	25282.85	0.0305	0.003084
Ni	60	3	He	31.198	0.2833	21186.35	0.0088	0.009003
Ni	60	3	He	30.87	0.2805	20815.53	0.0088	0.009003
Ni	60	3	He	29.557	0.2689	20104.48	0.0088	0.009003
Cu	63	3	He	207.644	5.183	387550.58	0.0249	0.004937
Cu	63	3	He	207.758	5.1858	384895.93	0.0249	0.004937
Cu	63	3	He	209.442	5.2278	390855.81	0.0249	0.004937
Zn	66	3	He	269.815	0.6677	49927.15	0.0025	0.004836
Zn	66	3	He	264.577	0.6548	48602.88	0.0025	0.004836
Zn	66	3	He	268.156	0.6636	49616.42	0.0025	0.004836
As	75	3	He	8.271	0.0148	1108.05	0.0017	0.0004347
As	75	3	He	8.985	0.0161	1192.06	0.0017	0.0004347
As	75	3	He	8.487	0.0152	1136.05	0.0017	0.0004347
Sr	88	3	He	169.597	1.3265	84802.50	0.0078	0.0007762
Sr	88	3	He	166.562	1.3028	84962.42	0.0078	0.0007762
Sr	88	3	He	170.766	1.3357	85426.17	0.0078	0.0007762
Mo	98	3	He	2.747	0.061	3900.68	0.022	0.0005162
Mo	98	3	He	2.727	0.0606	3950.69	0.022	0.0005162
Mo	98	3	He	3.03	0.0672	4300.82	0.022	0.0005162
Ag	107	3	He	0.292	0.0138	880.05	0.0455	0.0004641
Ag	107	3	He	0.357	0.0167	1090.08	0.0455	0.0004641
Ag	107	3	He	0.395	0.0185	1180.09	0.0455	0.0004641
Cd	111	3	He	0.837	0.0041	260.00	0.0048	5.152E-05
Cd	111	3	He	0.807	0.0039	256.00	0.0048	5.152E-05
Cd	111	3	He	0.999	0.0048	310.01	0.0048	5.152E-05
Sn	120	3	He	36.816	0.5405	34553.37	0.0143	0.01559
Sn	120	3	He	37.379	0.5485	35772.69	0.0143	0.01559
Sn	120	3	He	35.512	0.5219	33380.32	0.0143	0.01559
Sb	121	3	He	11.85	0.1473	9413.50	0.0124	0.000258
Sb	121	3	He	11.553	0.1436	9363.41	0.0124	0.000258
Sb	121	3	He	12.185	0.1514	9683.73	0.0124	0.000258
Ba	137	3	He	466.67	2.0419	130533.99	0.0044	0.000309
Ba	137	3	He	455.053	1.9911	129847.53	0.0044	0.000309
Ba	137	3	He	477.778	2.0905	133702.21	0.0044	0.000309
Tl	205	3	He	0.289	0.009	2000.22	0.0276	0.001005
Tl	205	3	He	0.259	0.0082	1800.18	0.0276	0.001005
Tl	205	3	He	0.328	0.0101	2260.25	0.0276	0.001005
Pb	208	3	He	175.619	6.3943	756618.35	0.0364	0.002176
Pb	208	3	He	173.991	6.335	749034.29	0.0364	0.002176
Pb	208	3	He	173.736	6.3257	754373.19	0.0364	0.002176
U	238	3	He	3.149	0.1327	29474.39	0.0421	0.00024
U	238	3	He	3.049	0.1285	28331.86	0.0421	0.00024
U	238	3	He	2.948	0.1243	27890.61	0.0421	0.00024
Sc	45	1	No Gas			3335529.95		
Sc	45	1	No Gas			3454587.14		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3434655.26		
Ge	72	1	No Gas			1449315.29		
Ge	72	1	No Gas			1484135.45		
Ge	72	1	No Gas			1493863.26		
Sc	45	2	H2			203035.50		
Sc	45	2	H2			202793.49		
Sc	45	2	H2			210451.05		
Ge	72	2	H2			162819.53		
Ge	72	2	H2			160928.45		
Ge	72	2	H2			164844.24		
In	115	2	H2			436523.27		
In	115	2	H2			440153.20		
In	115	2	H2			441232.02		
Sc	45	3	He			44287.44		
Sc	45	3	He			43565.26		
Sc	45	3	He			43024.24		
Ge	72	3	He			74773.76		
Ge	72	3	He			74220.98		
Ge	72	3	He			74764.77		
In	115	3	He			64197.47		
In	115	3	He			65493.86		
In	115	3	He			64217.75		
Tb	159	3	He			294417.87		
Tb	159	3	He			292312.44		
Tb	159	3	He			294376.54		
Bi	209	3	He			222074.06		
Bi	209	3	He			220506.62		
Bi	209	3	He			224432.32		

Quantitation Report

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Acq Time	2023-08-10 18:23:11
Sample Name	410-136577-K-21-A DU @10
Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

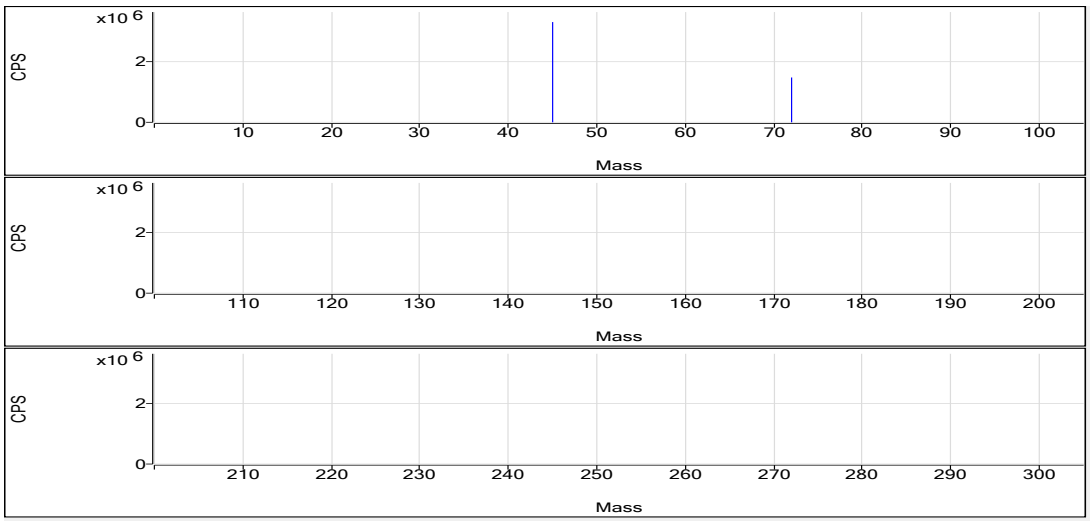
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.295	ppb	8.8	636.02	0.0004	Pulse	0.5000	3
Se	78	72	H2	0.153	ppb	15.6	11.55	0.0001	Pulse	1.5000	3
Na	23	72	He	1578.763	ppb	2.7	212347.75	2.8185	Pulse	0.1000	3
Mg	24	72	He	2244.646	ppb	2.1	142954.86	1.8973	Pulse	0.1000	3
Al	27	72	He	5343.131	ppb	2.3	97257.90	1.2909	Pulse	0.1000	3
K	39	72	He	1037.589	ppb	3.0	53992.89	0.7166	Pulse	0.1000	3
Ca	44	72	He	10545.144	ppb	1.6	24801.46	0.3291	Pulse	0.1000	3
Ti	47	72	He	247.839	ppb	6.3	4700.92	0.0624	Pulse	0.1000	3
V	51	72	He	13.851	ppb	1.3	12761.61	0.1694	Pulse	0.5000	3
Cr	52	72	He	7.550	ppb	2.1	10577.53	0.1404	Pulse	0.1000	3
Mn	55	72	He	385.482	ppb	2.8	172460.50	2.2891	Pulse	0.1000	3
Fe	57	72	He	7274.913	ppb	2.4	159093.29	2.1116	Pulse	0.1000	3
Co	59	72	He	2.088	ppb	11.1	5027.72	0.0668	Pulse	0.1000	3
Ni	60	72	He	6.654	ppb	5.5	5087.74	0.0675	Pulse	0.1000	3
Cu	63	72	He	39.566	ppb	2.1	74720.01	0.9916	Pulse	0.1000	3
Zn	66	72	He	52.620	ppb	2.3	10110.57	0.1341	Pulse	0.1000	3
As	75	72	He	1.654	ppb	18.1	250.00	0.0033	Pulse	0.5000	3
Sr	88	115	He	31.831	ppb	2.1	15705.90	0.2496	Pulse	0.1000	3
Mo	98	115	He	0.550	ppb	21.0	793.39	0.0126	Pulse	0.1000	3
Ag	107	115	He	0.076	ppb	22.6	246.68	0.0039	Pulse	0.1000	3
Cd	111	115	He	0.199	ppb	13.1	63.33	0.0010	Pulse	0.5000	3
Sn	120	115	He	6.516	ppb	7.8	6825.24	0.1085	Pulse	0.1000	3
Sb	121	115	He	2.349	ppb	1.2	1850.18	0.0294	Pulse	0.1000	3
Ba	137	115	He	90.300	ppb	3.0	24883.11	0.3954	Pulse	0.1000	3
Tl	205	209	He	0.078	ppb	15.0	706.71	0.0032	Pulse	0.1000	3
Pb	208	209	He	33.025	ppb	1.0	268716.40	1.2042	Pulse	0.1000	3
U	238	209	He	0.597	ppb	3.2	5654.81	0.0253	Pulse	0.1000	3

ISTD Table:

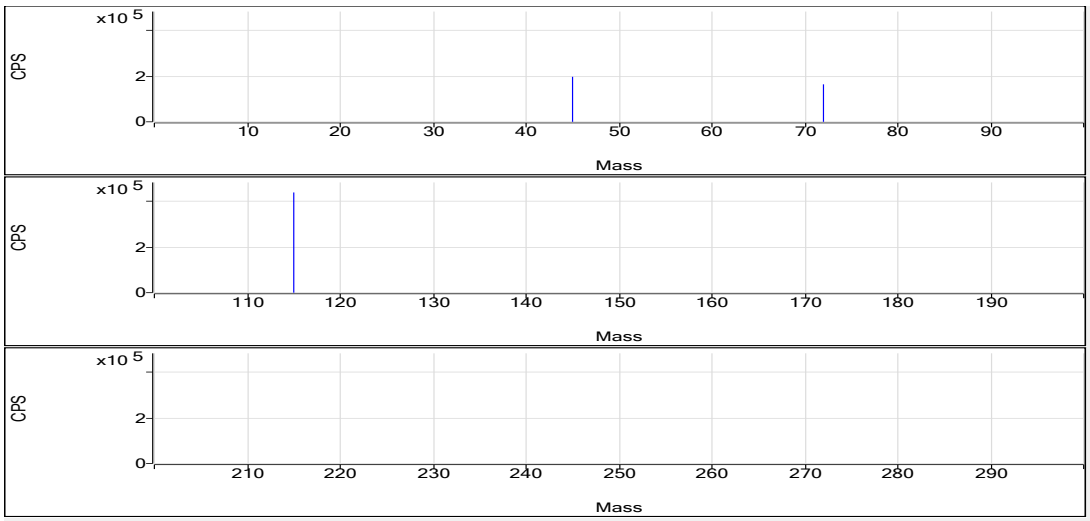
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3278340.26	1.7	101.1	Pulse	0.1000	3
No Gas	Ge	72	1465875.87	1.5	101.8	Pulse	0.1000	3
H2	Sc	45	197073.12	0.4	100.9	Pulse	0.1000	3
H2	Ge	72	164118.88	1.3	100.7	Pulse	0.1000	3
H2	In	115	438833.38	1.7	101.3	Pulse	0.1000	3
He	Sc	45	42696.32	1.4	106.8	Pulse	0.1000	3
He	Ge	72	75367.42	2.1	104.3	Pulse	0.1000	3
He	In	115	62929.16	0.8	97.4	Pulse	0.1000	3
He	Tb	159	286342.12	0.3	100.1	Pulse	0.1000	3
He	Bi	209	223161.67	0.8	100.4	Pulse	0.1000	3

No Gas

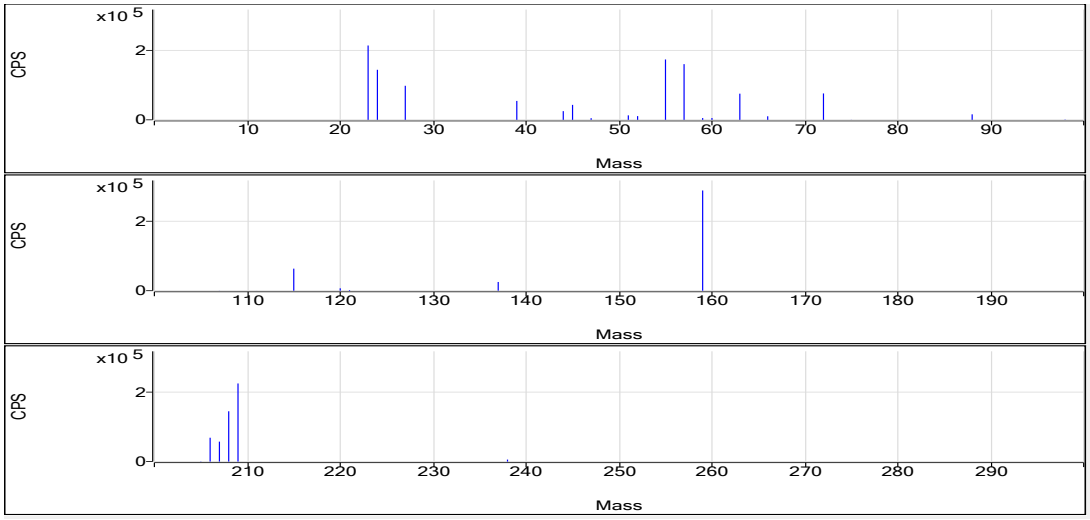


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.322	0.0005	678.02	0.0013	4.694E-05
Be	9	1	No Gas	0.271	0.0004	596.02	0.0013	4.694E-05
Be	9	1	No Gas	0.291	0.0004	634.02	0.0013	4.694E-05
Se	78	2	H2	0.15	0.0001	11.33	0.0004	1.089E-05
Se	78	2	H2	0.13	0.0001	10.00	0.0004	1.089E-05
Se	78	2	H2	0.178	0.0001	13.33	0.0004	1.089E-05
Na	23	3	He	1552.719	2.7737	212618.18	0.0017	0.1065
Na	23	3	He	1554.726	2.7772	210511.40	0.0017	0.1065
Na	23	3	He	1628.843	2.9045	213913.67	0.0017	0.1065
Mg	24	3	He	2202.908	1.8621	142738.55	0.0008	0.004846
Mg	24	3	He	2235.885	1.8899	143256.12	0.0008	0.004846
Mg	24	3	He	2295.145	1.9399	142869.90	0.0008	0.004846
Al	27	3	He	5242.42	1.2666	97085.96	0.0002	0.001063
Al	27	3	He	5303.794	1.2814	97127.61	0.0002	0.001063
Al	27	3	He	5483.18	1.3247	97560.13	0.0002	0.001063
K	39	3	He	1024.833	0.7096	54390.86	0.0006	0.1436
K	39	3	He	1014.608	0.7039	53357.03	0.0006	0.1436
K	39	3	He	1073.327	0.7363	54230.77	0.0006	0.1436
Ca	44	3	He	10453.474	0.3263	25011.68	0	0.001611
Ca	44	3	He	10444.31	0.326	24711.52	0	0.001611
Ca	44	3	He	10737.649	0.3351	24681.18	0	0.001611
Ti	47	3	He	233.044	0.0587	4500.83	0.0003	0.0002737
Ti	47	3	He	246.208	0.062	4700.93	0.0003	0.0002737
Ti	47	3	He	264.264	0.0665	4900.99	0.0003	0.0002737
V	51	3	He	13.684	0.1674	12831.67	0.0117	0.007326
V	51	3	He	13.832	0.1691	12819.64	0.0117	0.007326
V	51	3	He	14.038	0.1715	12633.51	0.0117	0.007326
Cr	52	3	He	7.392	0.1379	10574.23	0.0152	0.02538
Cr	52	3	He	7.711	0.1428	10824.43	0.0152	0.02538
Cr	52	3	He	7.548	0.1403	10333.94	0.0152	0.02538
Mn	55	3	He	376.013	2.2332	171186.09	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	383.235	2.2759	172510.84	0.0059	0.01385
Mn	55	3	He	397.199	2.3583	173684.57	0.0059	0.01385
Fe	57	3	He	7174.487	2.0825	159629.22	0.0003	0.003918
Fe	57	3	He	7174.342	2.0824	157848.06	0.0003	0.003918
Fe	57	3	He	7475.908	2.1698	159802.58	0.0003	0.003918
Co	59	3	He	2.093	0.0669	5131.09	0.0305	0.003084
Co	59	3	He	1.854	0.0596	4520.87	0.0305	0.003084
Co	59	3	He	2.316	0.0737	5431.19	0.0305	0.003084
Ni	60	3	He	6.307	0.0645	4941.01	0.0088	0.009003
Ni	60	3	He	7.035	0.0709	5371.18	0.0088	0.009003
Ni	60	3	He	6.621	0.0672	4951.03	0.0088	0.009003
Cu	63	3	He	38.588	0.9672	74139.54	0.0249	0.004937
Cu	63	3	He	40.121	1.0054	76211.73	0.0249	0.004937
Cu	63	3	He	39.99	1.0022	73808.76	0.0249	0.004937
Zn	66	3	He	53.863	0.1372	10514.29	0.0025	0.004836
Zn	66	3	He	52.503	0.1338	10143.81	0.0025	0.004836
Zn	66	3	He	51.495	0.1313	9673.62	0.0025	0.004836
As	75	3	He	2	0.0039	300.00	0.0017	0.0004347
As	75	3	He	1.48	0.003	228.00	0.0017	0.0004347
As	75	3	He	1.483	0.003	222.00	0.0017	0.0004347
Sr	88	3	He	31.526	0.2472	15559.02	0.0078	0.0007762
Sr	88	3	He	32.585	0.2555	15949.52	0.0078	0.0007762
Sr	88	3	He	31.384	0.2461	15609.16	0.0078	0.0007762
Mo	98	3	He	0.496	0.0114	720.04	0.022	0.0005162
Mo	98	3	He	0.682	0.0155	970.08	0.022	0.0005162
Mo	98	3	He	0.471	0.0109	690.04	0.022	0.0005162
Ag	107	3	He	0.07	0.0037	230.01	0.0455	0.0004641
Ag	107	3	He	0.095	0.0048	300.02	0.0455	0.0004641
Ag	107	3	He	0.063	0.0033	210.01	0.0455	0.0004641
Cd	111	3	He	0.208	0.001	66.00	0.0048	5.152E-05
Cd	111	3	He	0.169	0.0009	54.00	0.0048	5.152E-05
Cd	111	3	He	0.219	0.0011	70.00	0.0048	5.152E-05
Sn	120	3	He	6.843	0.1132	7122.00	0.0143	0.01559
Sn	120	3	He	6.774	0.1122	7002.00	0.0143	0.01559
Sn	120	3	He	5.931	0.1001	6351.71	0.0143	0.01559
Sb	121	3	He	2.336	0.0292	1840.19	0.0124	0.000258
Sb	121	3	He	2.381	0.0298	1860.18	0.0124	0.000258
Sb	121	3	He	2.331	0.0292	1850.18	0.0124	0.000258
Ba	137	3	He	89.539	0.392	24672.86	0.0044	0.000309
Ba	137	3	He	88.036	0.3854	24061.63	0.0044	0.000309
Ba	137	3	He	93.326	0.4086	25914.84	0.0044	0.000309
Tl	205	3	He	0.075	0.0031	690.04	0.0276	0.001005
Tl	205	3	He	0.091	0.0035	780.05	0.0276	0.001005
Tl	205	3	He	0.068	0.0029	650.04	0.0276	0.001005
Pb	208	3	He	32.733	1.1936	142553.76	0.0364	0.002176
Pb	208	3	He	33.403	1.218	143889.80	0.0364	0.002176
Pb	208	3	He	32.937	1.201	144627.75	0.0364	0.002176
U	238	3	He	0.586	0.0249	5561.50	0.0421	0.00024
U	238	3	He	0.585	0.0249	5501.35	0.0421	0.00024
U	238	3	He	0.618	0.0263	5901.57	0.0421	0.00024
Sc	45	1	No Gas			3217506.83		
Sc	45	1	No Gas			3322181.51		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3295332.45		
Ge	72	1	No Gas			1441137.95		
Ge	72	1	No Gas			1478335.45		
Ge	72	1	No Gas			1478154.20		
Sc	45	2	H2			196938.40		
Sc	45	2	H2			196289.53		
Sc	45	2	H2			197991.42		
Ge	72	2	H2			163862.40		
Ge	72	2	H2			162173.97		
Ge	72	2	H2			166320.27		
In	115	2	H2			435441.01		
In	115	2	H2			433503.94		
In	115	2	H2			447555.19		
Sc	45	3	He			42151.61		
Sc	45	3	He			43364.77		
Sc	45	3	He			42572.57		
Ge	72	3	He			76653.72		
Ge	72	3	He			75799.94		
Ge	72	3	He			73648.60		
In	115	3	He			62992.99		
In	115	3	He			62479.93		
In	115	3	He			63474.28		
Tb	159	3	He			285441.91		
Tb	159	3	He			287057.67		
Tb	159	3	He			286526.79		
Bi	209	3	He			223484.98		
Bi	209	3	He			221239.86		
Bi	209	3	He			224760.17		

Quantitation Report

Data File Name	226SMPL.d
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Acq Time	2023-08-10 18:25:12
Sample Name	410-136577-I-21-A MS @2
Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

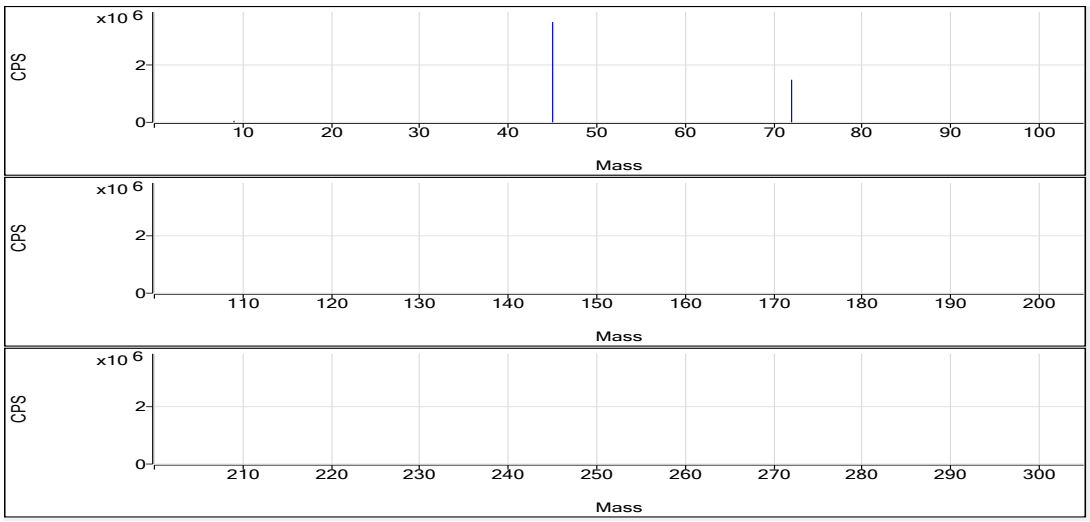
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	27.008	ppb	2.7	52767.05	0.0355	Pulse	0.5000	3
Se	78	72	H2	54.907	ppb	3.5	3449.53	0.0214	Pulse	1.5000	3
Na	23	72	He	11024.432	ppb	1.4	1440180.55	19.0445	Pulse	0.1000	3
Mg	24	72	He	17621.313	ppb	1.3	1123873.68	14.8614	Pulse	0.1000	3
Al	27	72	He	42568.484	ppb	1.8	777129.10	10.2768	Pulse	0.1000	3
K	39	72	He	11384.317	ppb	0.9	486286.83	6.4302	Pulse	0.1000	3
Ca	44	72	He	65294.264	ppb	2.2	153475.29	2.0296	Pulse	0.1000	3
Ti	47	72	He	1956.647	ppb	2.3	37124.56	0.4910	Pulse	0.1000	3
V	51	72	He	355.166	ppb	1.6	314734.15	4.1620	Pulse	0.5000	3
Cr	52	72	He	326.726	ppb	1.6	378143.98	5.0005	Pulse	0.1000	3
Mn	55	72	He	2557.679	ppb	1.8	1142636.78	15.1104	Pulse	0.1000	3
Fe	57	72	He	45219.879	ppb	1.4	991010.84	13.1048	Pulse	0.1000	3
Co	59	72	He	278.780	ppb	1.8	643436.52	8.5088	Pulse	0.1000	3
Ni	60	72	He	298.028	ppb	2.0	198855.76	2.6297	Pulse	0.1000	3
Cu	63	72	He	488.058	ppb	1.8	920722.09	12.1757	Pulse	0.1000	3
Zn	66	72	He	537.451	ppb	1.2	100219.07	1.3252	Pulse	0.1000	3
As	75	72	He	269.149	ppb	1.5	35431.37	0.4685	Pulse	0.5000	3
Sr	88	115	He	226.966	ppb	1.3	113690.98	1.7750	Pulse	0.1000	3
Mo	98	115	He	29.576	ppb	2.0	41749.00	0.6518	Pulse	0.1000	3
Ag	107	115	He	27.188	ppb	1.0	79267.23	1.2375	Pulse	0.1000	3
Cd	111	115	He	27.843	ppb	2.0	8563.31	0.1337	Pulse	0.5000	3
Sn	120	115	He	93.713	ppb	1.8	86574.92	1.3517	Pulse	0.1000	3
Sb	121	115	He	60.943	ppb	1.9	48437.96	0.7563	Pulse	0.1000	3
Ba	137	115	He	787.366	ppb	1.6	220639.67	3.4449	Pulse	0.1000	3
Tl	205	209	He	53.236	ppb	0.7	330069.85	1.4727	Pulse	0.1000	3
Pb	208	209	He	221.272	ppb	0.7	1805556.40	8.0559	Pulse	0.1000	3
U	238	209	He	30.025	ppb	1.1	283137.77	1.2633	Pulse	0.1000	3

ISTD Table:

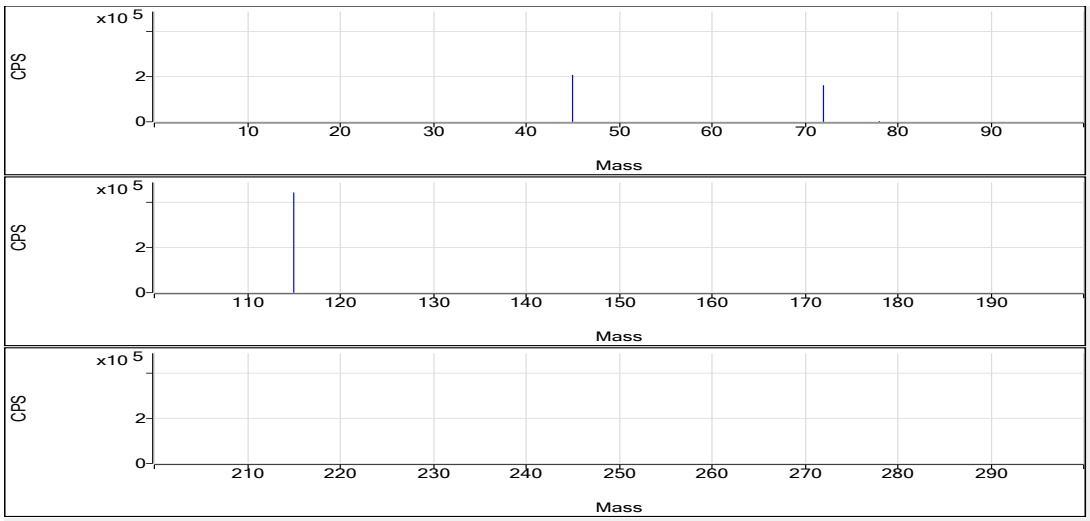
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3499727.24	0.9	108.0	Pulse	0.1000	3
No Gas	Ge	72	1485179.20	1.3	103.2	Pulse	0.1000	3
H2	Sc	45	206679.06	2.5	105.8	Pulse	0.1000	3
H2	Ge	72	161296.58	0.8	98.9	Pulse	0.1000	3
H2	In	115	441853.34	1.5	102.0	Pulse	0.1000	3
He	Sc	45	44501.61	1.3	111.3	Pulse	0.1000	3
He	Ge	72	75631.88	1.4	104.6	Pulse	0.1000	3
He	In	115	64061.77	1.9	99.2	Pulse	0.1000	3
He	Tb	159	296627.13	0.7	103.7	Pulse	0.1000	3
He	Bi	209	224134.68	0.6	100.9	Pulse	0.1000	3

No Gas

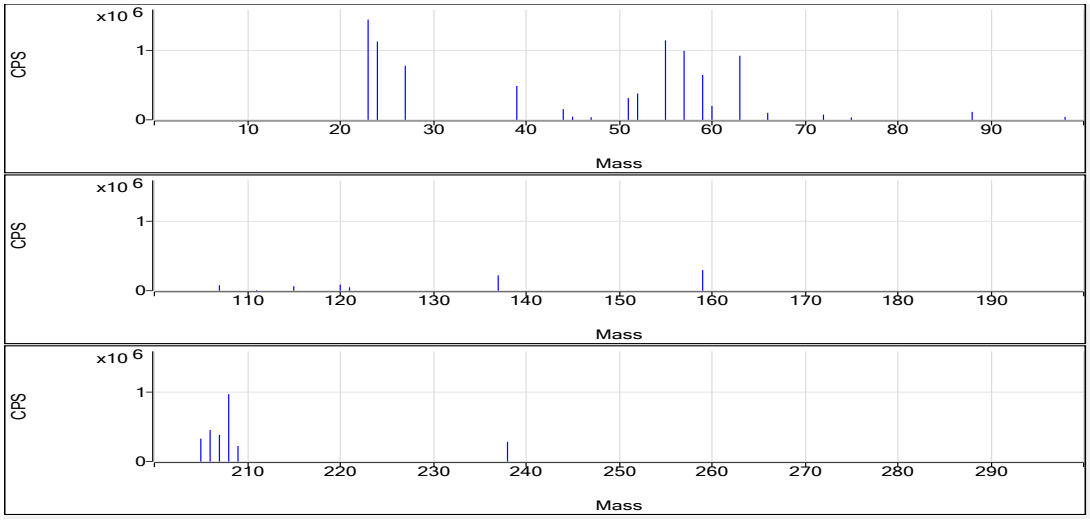


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	27.681	0.0364	53297.61	0.0013	4.694E-05
Be	9	1	No Gas	26.233	0.0345	51860.58	0.0013	4.694E-05
Be	9	1	No Gas	27.111	0.0357	53142.96	0.0013	4.694E-05
Se	78	2	H2	56.995	0.0222	3561.11	0.0004	1.089E-05
Se	78	2	H2	54.55	0.0213	3416.41	0.0004	1.089E-05
Se	78	2	H2	53.177	0.0207	3371.07	0.0004	1.089E-05
Na	23	3	He	11108.383	19.1887	1436944.67	0.0017	0.1065
Na	23	3	He	10841.559	18.7303	1439137.01	0.0017	0.1065
Na	23	3	He	11123.354	19.2144	1444459.98	0.0017	0.1065
Mg	24	3	He	17857.563	15.0606	1127812.72	0.0008	0.004846
Mg	24	3	He	17400.694	14.6754	1127578.97	0.0008	0.004846
Mg	24	3	He	17605.682	14.8482	1116229.36	0.0008	0.004846
Al	27	3	He	43145.081	10.416	780005.30	0.0002	0.001063
Al	27	3	He	41708.96	10.0694	773675.93	0.0002	0.001063
Al	27	3	He	42851.411	10.3451	777706.08	0.0002	0.001063
K	39	3	He	11478.133	6.482	485404.95	0.0006	0.1436
K	39	3	He	11266.845	6.3653	489077.45	0.0006	0.1436
K	39	3	He	11407.975	6.4433	484378.08	0.0006	0.1436
Ca	44	3	He	66519.362	2.0677	154839.31	0	0.001611
Ca	44	3	He	63742.606	1.9814	152243.81	0	0.001611
Ca	44	3	He	65620.825	2.0398	153342.76	0	0.001611
Ti	47	3	He	1974.862	0.4955	37107.65	0.0003	0.0002737
Ti	47	3	He	1904.455	0.4779	36717.09	0.0003	0.0002737
Ti	47	3	He	1990.624	0.4995	37548.95	0.0003	0.0002737
V	51	3	He	360.427	4.2235	316278.13	0.0117	0.007326
V	51	3	He	349.359	4.094	314563.81	0.0117	0.007326
V	51	3	He	355.712	4.1684	313360.53	0.0117	0.007326
Cr	52	3	He	330.03	5.0508	378232.61	0.0152	0.02538
Cr	52	3	He	320.69	4.9086	377151.32	0.0152	0.02538
Cr	52	3	He	329.459	5.0421	379048.00	0.0152	0.02538
Mn	55	3	He	2586.48	15.2803	1144269.67	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2505.253	14.8009	1137222.87	0.0059	0.01385
Mn	55	3	He	2581.304	15.2498	1146417.80	0.0059	0.01385
Fe	57	3	He	45655.771	13.2311	990808.89	0.0003	0.003918
Fe	57	3	He	44495.484	12.8949	990775.92	0.0003	0.003918
Fe	57	3	He	45508.381	13.1884	991447.72	0.0003	0.003918
Co	59	3	He	280.734	8.5684	641647.10	0.0305	0.003084
Co	59	3	He	273.2	8.3385	640689.33	0.0305	0.003084
Co	59	3	He	282.406	8.6194	647973.12	0.0305	0.003084
Ni	60	3	He	298.427	2.6332	197184.14	0.0088	0.009003
Ni	60	3	He	291.935	2.5761	197931.81	0.0088	0.009003
Ni	60	3	He	303.723	2.6797	201451.33	0.0088	0.009003
Cu	63	3	He	492.526	12.2871	920121.86	0.0249	0.004937
Cu	63	3	He	478.055	11.9263	916349.75	0.0249	0.004937
Cu	63	3	He	493.592	12.3137	925694.67	0.0249	0.004937
Zn	66	3	He	539.58	1.3305	99631.39	0.0025	0.004836
Zn	66	3	He	530.216	1.3075	100457.69	0.0025	0.004836
Zn	66	3	He	542.556	1.3378	100568.13	0.0025	0.004836
As	75	3	He	270.369	0.4707	35244.90	0.0017	0.0004347
As	75	3	He	264.643	0.4607	35397.34	0.0017	0.0004347
As	75	3	He	272.435	0.4742	35651.88	0.0017	0.0004347
Sr	88	3	He	226.308	1.7698	113106.50	0.0078	0.0007762
Sr	88	3	He	230.209	1.8003	113257.69	0.0078	0.0007762
Sr	88	3	He	224.383	1.7548	114708.74	0.0078	0.0007762
Mo	98	3	He	29.166	0.6428	41080.18	0.022	0.0005162
Mo	98	3	He	30.238	0.6664	41922.91	0.022	0.0005162
Mo	98	3	He	29.322	0.6462	42243.91	0.022	0.0005162
Ag	107	3	He	27.155	1.236	78991.80	0.0455	0.0004641
Ag	107	3	He	27.474	1.2506	78671.31	0.0455	0.0004641
Ag	107	3	He	26.933	1.2259	80138.57	0.0455	0.0004641
Cd	111	3	He	27.803	0.1335	8532.63	0.0048	5.152E-05
Cd	111	3	He	28.424	0.1365	8586.66	0.0048	5.152E-05
Cd	111	3	He	27.303	0.1311	8570.64	0.0048	5.152E-05
Sn	120	3	He	93.492	1.3486	86185.28	0.0143	0.01559
Sn	120	3	He	95.522	1.3775	86659.32	0.0143	0.01559
Sn	120	3	He	92.124	1.3291	86880.16	0.0143	0.01559
Sb	121	3	He	60.188	0.7469	47731.84	0.0124	0.000258
Sb	121	3	He	62.276	0.7728	48615.64	0.0124	0.000258
Sb	121	3	He	60.365	0.7491	48966.41	0.0124	0.000258
Ba	137	3	He	786.161	3.4396	219816.54	0.0044	0.000309
Ba	137	3	He	800.596	3.5027	220354.59	0.0044	0.000309
Ba	137	3	He	775.341	3.3923	221747.89	0.0044	0.000309
Tl	205	3	He	52.813	1.461	329753.39	0.0276	0.001005
Tl	205	3	He	53.343	1.4756	329521.48	0.0276	0.001005
Tl	205	3	He	53.552	1.4814	330934.68	0.0276	0.001005
Pb	208	3	He	219.562	7.9936	962387.25	0.0364	0.002176
Pb	208	3	He	222.068	8.0849	971080.06	0.0364	0.002176
Pb	208	3	He	222.187	8.0892	971259.36	0.0364	0.002176
U	238	3	He	29.652	1.2476	281594.84	0.0421	0.00024
U	238	3	He	30.153	1.2687	283311.27	0.0421	0.00024
U	238	3	He	30.269	1.2736	284507.20	0.0421	0.00024
Sc	45	1	No Gas			3476625.89		
Sc	45	1	No Gas			3537638.38		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3484917.45		
Ge	72	1	No Gas			1463376.85		
Ge	72	1	No Gas			1502418.42		
Ge	72	1	No Gas			1489742.32		
Sc	45	2	H2			207061.93		
Sc	45	2	H2			201327.07		
Sc	45	2	H2			211648.18		
Ge	72	2	H2			160393.06		
Ge	72	2	H2			160767.13		
Ge	72	2	H2			162729.55		
In	115	2	H2			438765.19		
In	115	2	H2			437564.95		
In	115	2	H2			449229.88		
Sc	45	3	He			45149.94		
Sc	45	3	He			44257.83		
Sc	45	3	He			44097.05		
Ge	72	3	He			74885.05		
Ge	72	3	He			76834.64		
Ge	72	3	He			75175.95		
In	115	3	He			64579.82		
In	115	3	He			63584.98		
In	115	3	He			66046.37		
Tb	159	3	He			298886.40		
Tb	159	3	He			296326.93		
Tb	159	3	He			294668.06		
Bi	209	3	He			225704.29		
Bi	209	3	He			223307.98		
Bi	209	3	He			223391.77		

Quantitation Report

Data File Name	227SMPL.d
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Acq Time	2023-08-10 18:27:12
Sample Name	410-136577-I-21-A MS @10
Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

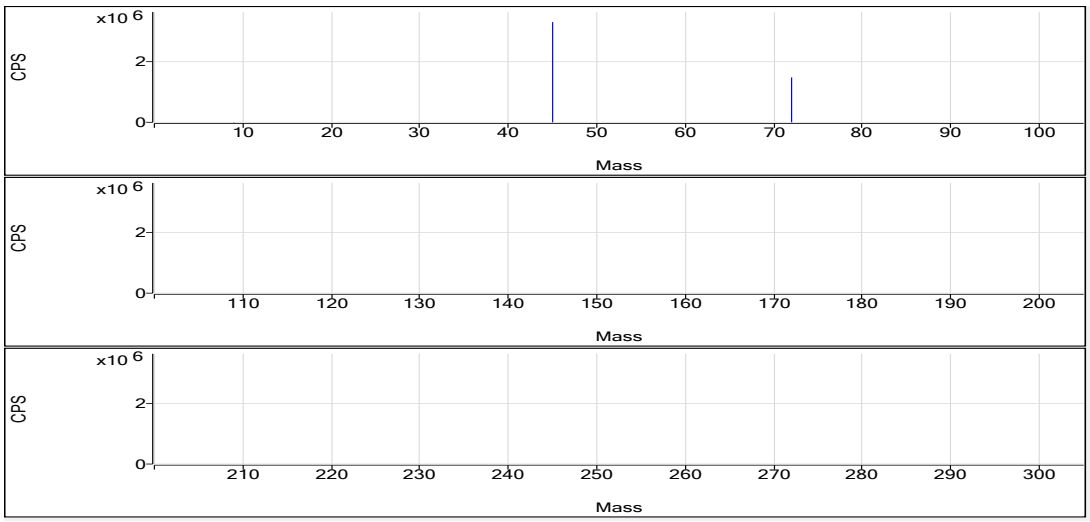
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	4.975	ppb	3.4	9793.90	0.0066	Pulse	0.5000	3
Se	78	72	H2	10.117	ppb	9.4	644.68	0.0040	Pulse	1.5000	3
Na	23	72	He	2016.010	ppb	0.5	267314.67	3.5696	Pulse	0.1000	3
Mg	24	72	He	3257.150	ppb	0.2	206011.74	2.7510	Pulse	0.1000	3
Al	27	72	He	7816.623	ppb	1.0	141377.29	1.8880	Pulse	0.1000	3
K	39	72	He	2082.654	ppb	2.1	96887.80	1.2937	Pulse	0.1000	3
Ca	44	72	He	12064.514	ppb	1.0	28181.19	0.3763	Pulse	0.1000	3
Ti	47	72	He	348.704	ppb	5.4	6568.33	0.0877	Pulse	0.1000	3
V	51	72	He	64.925	ppb	1.1	57420.51	0.7668	Pulse	0.5000	3
Cr	52	72	He	61.054	ppb	1.2	71522.71	0.9551	Pulse	0.1000	3
Mn	55	72	He	476.035	ppb	1.5	211440.02	2.8236	Pulse	0.1000	3
Fe	57	72	He	8355.656	ppb	1.4	181565.68	2.4247	Pulse	0.1000	3
Co	59	72	He	52.400	ppb	0.5	119956.21	1.6018	Pulse	0.1000	3
Ni	60	72	He	55.425	ppb	3.3	37171.76	0.4964	Pulse	0.1000	3
Cu	63	72	He	91.980	ppb	1.7	172128.04	2.2986	Pulse	0.1000	3
Zn	66	72	He	103.671	ppb	2.0	19433.63	0.2595	Pulse	0.1000	3
As	75	72	He	50.034	ppb	2.1	6548.85	0.0875	Pulse	0.5000	3
Sr	88	115	He	40.668	ppb	2.0	20799.06	0.3187	Pulse	0.1000	3
Mo	98	115	He	5.225	ppb	3.5	7542.29	0.1156	Pulse	0.1000	3
Ag	107	115	He	4.828	ppb	2.4	14364.48	0.2201	Pulse	0.1000	3
Cd	111	115	He	5.028	ppb	3.1	1578.76	0.0242	Pulse	0.5000	3
Sn	120	115	He	16.751	ppb	3.0	16603.76	0.2544	Pulse	0.1000	3
Sb	121	115	He	10.678	ppb	6.4	8662.99	0.1327	Pulse	0.1000	3
Ba	137	115	He	140.346	ppb	2.8	40089.12	0.6143	Pulse	0.1000	3
Tl	205	209	He	9.822	ppb	1.4	60974.64	0.2725	Pulse	0.1000	3
Pb	208	209	He	40.597	ppb	0.2	331055.31	1.4798	Pulse	0.1000	3
U	238	209	He	5.523	ppb	1.6	52021.82	0.2326	Pulse	0.1000	3

ISTD Table:

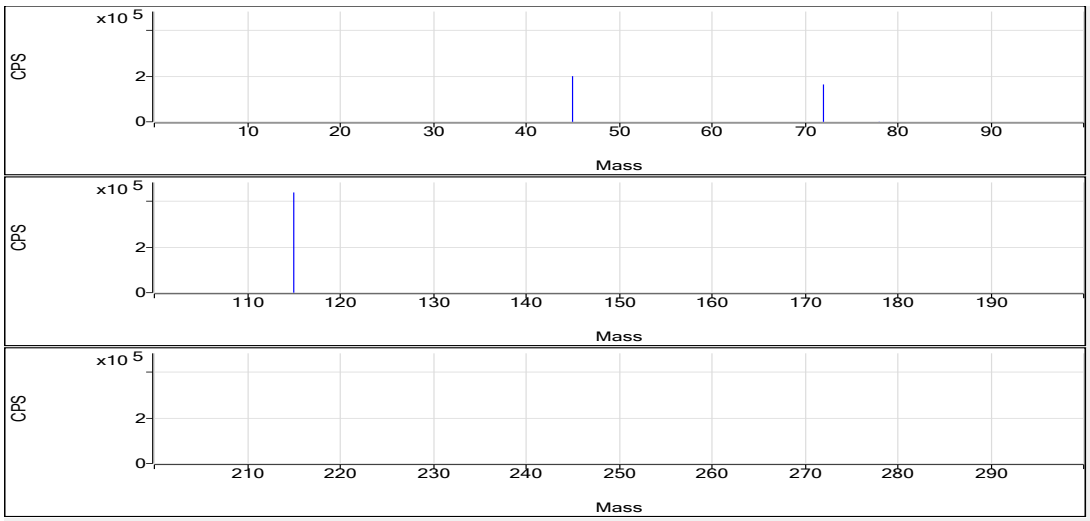
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3322083.08	0.7	102.5	Pulse	0.1000	3
No Gas	Ge	72	1487444.77	0.7	103.3	Pulse	0.1000	3
H2	Sc	45	199677.38	2.7	102.2	Pulse	0.1000	3
H2	Ge	72	163380.71	1.7	100.2	Pulse	0.1000	3
H2	In	115	438328.22	1.7	101.2	Pulse	0.1000	3
He	Sc	45	43000.91	0.6	107.5	Pulse	0.1000	3
He	Ge	72	74888.45	1.0	103.6	Pulse	0.1000	3
He	In	115	65264.27	1.0	101.0	Pulse	0.1000	3
He	Tb	159	286140.59	0.3	100.0	Pulse	0.1000	3
He	Bi	209	223713.68	1.1	100.7	Pulse	0.1000	3

No Gas

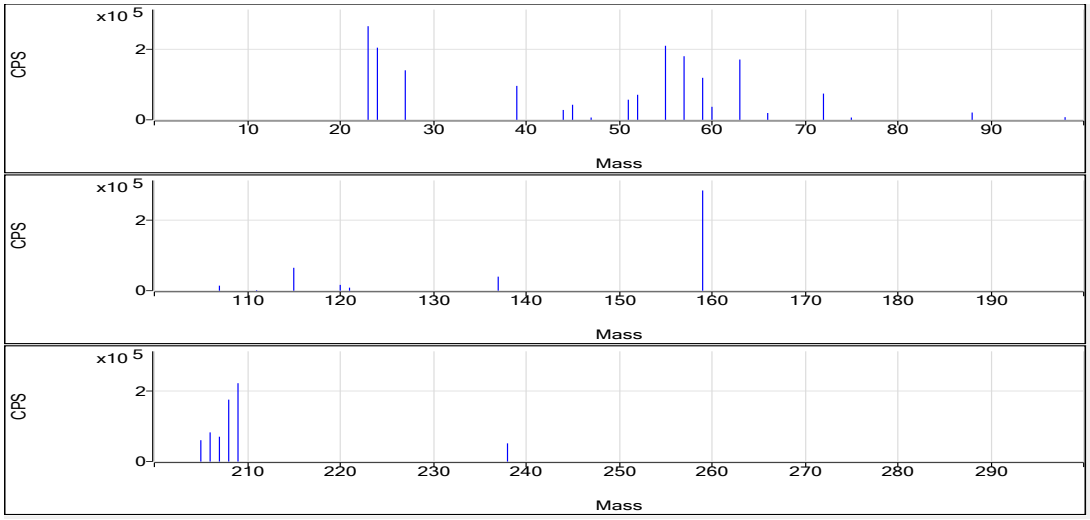


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	4.95	0.0066	9681.16	0.0013	4.694E-05
Be	9	1	No Gas	4.82	0.0064	9565.07	0.0013	4.694E-05
Be	9	1	No Gas	5.156	0.0068	10135.47	0.0013	4.694E-05
Se	78	2	H2	10.745	0.0042	676.68	0.0004	1.089E-05
Se	78	2	H2	10.58	0.0041	670.02	0.0004	1.089E-05
Se	78	2	H2	9.027	0.0035	587.35	0.0004	1.089E-05
Na	23	3	He	2019.948	3.5764	268208.63	0.0017	0.1065
Na	23	3	He	2004.938	3.5506	268278.26	0.0017	0.1065
Na	23	3	He	2023.143	3.5819	265457.12	0.0017	0.1065
Mg	24	3	He	3260.285	2.7536	206505.35	0.0008	0.004846
Mg	24	3	He	3247.964	2.7432	207274.10	0.0008	0.004846
Mg	24	3	He	3263.2	2.7561	204255.76	0.0008	0.004846
Al	27	3	He	7768.84	1.8764	140721.30	0.0002	0.001063
Al	27	3	He	7773.879	1.8776	141871.97	0.0002	0.001063
Al	27	3	He	7907.149	1.9098	141538.60	0.0002	0.001063
K	39	3	He	2132.212	1.3211	99073.56	0.0006	0.1436
K	39	3	He	2067.733	1.2855	97128.62	0.0006	0.1436
K	39	3	He	2048.018	1.2746	94461.23	0.0006	0.1436
Ca	44	3	He	12032.229	0.3753	28147.80	0	0.001611
Ca	44	3	He	11963.326	0.3732	28197.87	0	0.001611
Ca	44	3	He	12197.986	0.3805	28197.90	0	0.001611
Ti	47	3	He	328.117	0.0826	6191.47	0.0003	0.0002737
Ti	47	3	He	353.114	0.0888	6711.71	0.0003	0.0002737
Ti	47	3	He	364.88	0.0918	6801.82	0.0003	0.0002737
V	51	3	He	64.547	0.7624	57174.91	0.0117	0.007326
V	51	3	He	64.454	0.7613	57522.16	0.0117	0.007326
V	51	3	He	65.773	0.7767	57564.45	0.0117	0.007326
Cr	52	3	He	61.838	0.967	72520.48	0.0152	0.02538
Cr	52	3	He	60.447	0.9458	71466.25	0.0152	0.02538
Cr	52	3	He	60.876	0.9524	70581.40	0.0152	0.02538
Mn	55	3	He	469.838	2.787	209012.99	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	474.133	2.8124	212501.07	0.0059	0.01385
Mn	55	3	He	484.135	2.8714	212805.99	0.0059	0.01385
Fe	57	3	He	8272.19	2.4005	180024.31	0.0003	0.003918
Fe	57	3	He	8303.658	2.4096	182067.61	0.0003	0.003918
Fe	57	3	He	8491.12	2.4639	182605.13	0.0003	0.003918
Co	59	3	He	52.261	1.5976	119812.13	0.0305	0.003084
Co	59	3	He	52.251	1.5973	120688.83	0.0305	0.003084
Co	59	3	He	52.689	1.6106	119367.67	0.0305	0.003084
Ni	60	3	He	53.317	0.4778	35834.91	0.0088	0.009003
Ni	60	3	He	56.563	0.5064	38261.18	0.0088	0.009003
Ni	60	3	He	56.395	0.5049	37419.18	0.0088	0.009003
Cu	63	3	He	90.702	2.2668	169996.91	0.0249	0.004937
Cu	63	3	He	91.58	2.2887	172929.84	0.0249	0.004937
Cu	63	3	He	93.658	2.3405	173457.36	0.0249	0.004937
Zn	66	3	He	103.998	0.2603	19523.73	0.0025	0.004836
Zn	66	3	He	101.48	0.2541	19203.20	0.0025	0.004836
Zn	66	3	He	105.536	0.2641	19573.96	0.0025	0.004836
As	75	3	He	48.907	0.0855	6411.45	0.0017	0.0004347
As	75	3	He	50.276	0.0879	6639.57	0.0017	0.0004347
As	75	3	He	50.921	0.089	6595.53	0.0017	0.0004347
Sr	88	3	He	40.306	0.3159	20795.71	0.0078	0.0007762
Sr	88	3	He	41.608	0.326	21306.48	0.0078	0.0007762
Sr	88	3	He	40.088	0.3142	20295.00	0.0078	0.0007762
Mo	98	3	He	5.33	0.1179	7762.43	0.022	0.0005162
Mo	98	3	He	5.016	0.111	7252.15	0.022	0.0005162
Mo	98	3	He	5.327	0.1178	7612.30	0.022	0.0005162
Ag	107	3	He	4.696	0.2141	14097.58	0.0455	0.0004641
Ag	107	3	He	4.872	0.2222	14517.97	0.0455	0.0004641
Ag	107	3	He	4.915	0.2241	14477.88	0.0455	0.0004641
Cd	111	3	He	5.191	0.025	1644.11	0.0048	5.152E-05
Cd	111	3	He	5.013	0.0241	1576.09	0.0048	5.152E-05
Cd	111	3	He	4.878	0.0235	1516.09	0.0048	5.152E-05
Sn	120	3	He	16.239	0.2471	16269.95	0.0143	0.01559
Sn	120	3	He	17.239	0.2614	17081.09	0.0143	0.01559
Sn	120	3	He	16.777	0.2548	16460.23	0.0143	0.01559
Sb	121	3	He	11.346	0.141	9283.43	0.0124	0.000258
Sb	121	3	He	9.986	0.1241	8112.64	0.0124	0.000258
Sb	121	3	He	10.702	0.133	8592.91	0.0124	0.000258
Ba	137	3	He	136.605	0.5979	39367.11	0.0044	0.000309
Ba	137	3	He	144.433	0.6322	41313.00	0.0044	0.000309
Ba	137	3	He	140	0.6128	39587.25	0.0044	0.000309
Tl	205	3	He	9.876	0.274	61222.68	0.0276	0.001005
Tl	205	3	He	9.926	0.2754	62327.26	0.0276	0.001005
Tl	205	3	He	9.664	0.2682	59373.98	0.0276	0.001005
Pb	208	3	He	40.668	1.4824	179508.71	0.0364	0.002176
Pb	208	3	He	40.624	1.4808	177196.68	0.0364	0.002176
Pb	208	3	He	40.499	1.4762	173710.23	0.0364	0.002176
U	238	3	He	5.498	0.2315	51723.89	0.0421	0.00024
U	238	3	He	5.447	0.2294	51914.84	0.0421	0.00024
U	238	3	He	5.623	0.2368	52426.72	0.0421	0.00024
Sc	45	1	No Gas			3296857.14		
Sc	45	1	No Gas			3333131.83		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3336260.26		
Ge	72	1	No Gas			1477613.42		
Ge	72	1	No Gas			1499009.98		
Ge	72	1	No Gas			1485710.92		
Sc	45	2	H2			196258.24		
Sc	45	2	H2			196907.42		
Sc	45	2	H2			205866.48		
Ge	72	2	H2			161326.22		
Ge	72	2	H2			162224.28		
Ge	72	2	H2			166591.62		
In	115	2	H2			433889.02		
In	115	2	H2			434018.59		
In	115	2	H2			447077.06		
Sc	45	3	He			43294.43		
Sc	45	3	He			42864.13		
Sc	45	3	He			42844.16		
Ge	72	3	He			74994.74		
Ge	72	3	He			75558.98		
Ge	72	3	He			74111.64		
In	115	3	He			65966.21		
In	115	3	He			65483.99		
In	115	3	He			64731.13		
Tb	159	3	He			285113.49		
Tb	159	3	He			286760.54		
Tb	159	3	He			286547.75		
Bi	209	3	He			223415.86		
Bi	209	3	He			226315.29		
Bi	209	3	He			221409.90		

Quantitation Report

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Acq Time	2023-08-10 18:29:11
Sample Name	410-136577-J-21-A MSD @2
Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

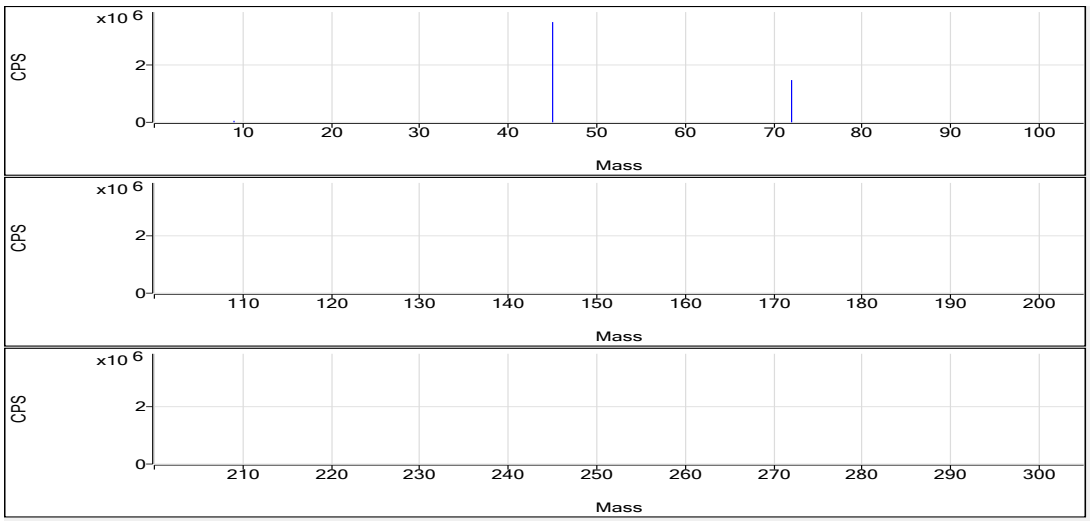
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	27.005	ppb	3.6	51902.07	0.0355	Pulse	0.5000	3
Se	78	72	H2	53.255	ppb	4.6	3363.06	0.0207	Pulse	1.5000	3
Na	23	72	He	12010.170	ppb	0.7	1556776.28	20.7378	Pulse	0.1000	3
Mg	24	72	He	20123.499	ppb	0.9	1273992.45	16.9710	Pulse	0.1000	3
Al	27	72	He	47872.147	ppb	0.8	867582.72	11.5571	Pulse	0.1000	3
K	39	72	He	14556.892	ppb	0.4	614242.02	8.1821	Pulse	0.1000	3
Ca	44	72	He	75956.035	ppb	2.3	177208.30	2.3608	Pulse	0.1000	3
Ti	47	72	He	2262.986	ppb	2.2	42629.70	0.5678	Pulse	0.1000	3
V	51	72	He	353.062	ppb	1.0	310584.06	4.1374	Pulse	0.5000	3
Cr	52	72	He	305.388	ppb	1.1	350988.81	4.6756	Pulse	0.1000	3
Mn	55	72	He	2922.182	ppb	0.6	1295846.39	17.2618	Pulse	0.1000	3
Fe	57	72	He	46746.340	ppb	0.7	1016967.61	13.5470	Pulse	0.1000	3
Co	59	72	He	270.020	ppb	1.0	618691.06	8.2415	Pulse	0.1000	3
Ni	60	72	He	291.270	ppb	0.8	192944.68	2.5702	Pulse	0.1000	3
Cu	63	72	He	643.935	ppb	0.9	1205818.06	16.0628	Pulse	0.1000	3
Zn	66	72	He	525.466	ppb	1.0	97272.64	1.2958	Pulse	0.1000	3
As	75	72	He	265.128	ppb	0.4	34648.18	0.4615	Pulse	0.5000	3
Sr	88	115	He	273.871	ppb	3.0	136603.64	2.1417	Pulse	0.1000	3
Mo	98	115	He	28.308	ppb	1.8	39810.60	0.6239	Pulse	0.1000	3
Ag	107	115	He	26.062	ppb	2.1	75673.65	1.1863	Pulse	0.1000	3
Cd	111	115	He	27.167	ppb	1.4	8324.50	0.1305	Pulse	0.5000	3
Sn	120	115	He	95.671	ppb	1.1	88020.60	1.3797	Pulse	0.1000	3
Sb	121	115	He	58.427	ppb	3.0	46247.37	0.7250	Pulse	0.1000	3
Ba	137	115	He	875.754	ppb	1.6	244434.98	3.8316	Pulse	0.1000	3
Tl	205	209	He	50.992	ppb	0.1	314206.59	1.4107	Pulse	0.1000	3
Pb	208	209	He	240.489	ppb	0.6	1950131.08	8.7553	Pulse	0.1000	3
U	238	209	He	29.582	ppb	0.2	277238.12	1.2447	Pulse	0.1000	3

ISTD Table:

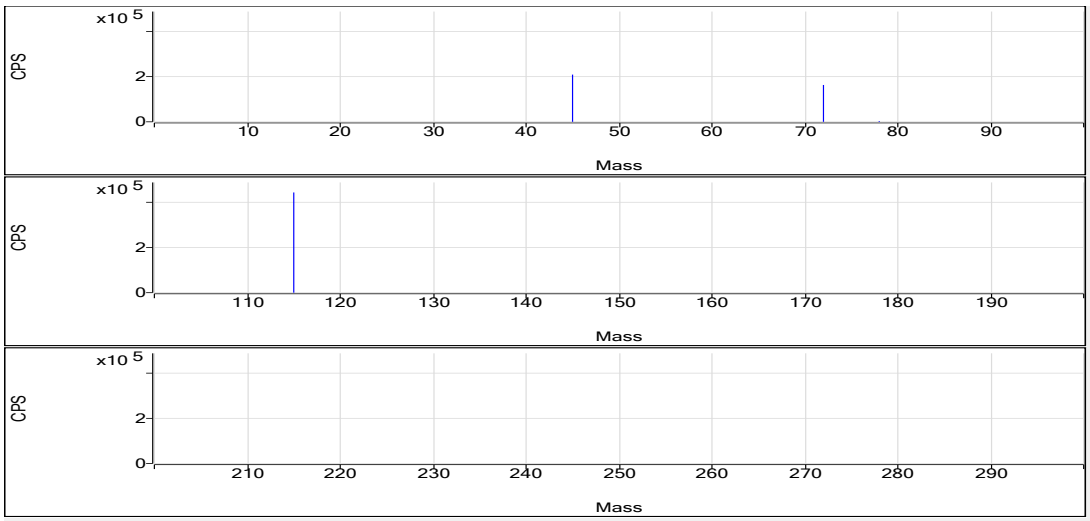
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3467127.45	1.3	107.0	Pulse	0.1000	3
No Gas	Ge	72	1460994.61	1.0	101.5	Pulse	0.1000	3
H2	Sc	45	207956.69	2.5	106.4	Pulse	0.1000	3
H2	Ge	72	162251.31	3.2	99.5	Pulse	0.1000	3
H2	In	115	441455.41	1.4	101.9	Pulse	0.1000	3
He	Sc	45	44404.80	2.3	111.1	Pulse	0.1000	3
He	Ge	72	75072.47	0.8	103.9	Pulse	0.1000	3
He	In	115	63806.37	1.8	98.8	Pulse	0.1000	3
He	Tb	159	298648.79	0.6	104.4	Pulse	0.1000	3
He	Bi	209	222738.98	0.4	100.2	Pulse	0.1000	3

No Gas

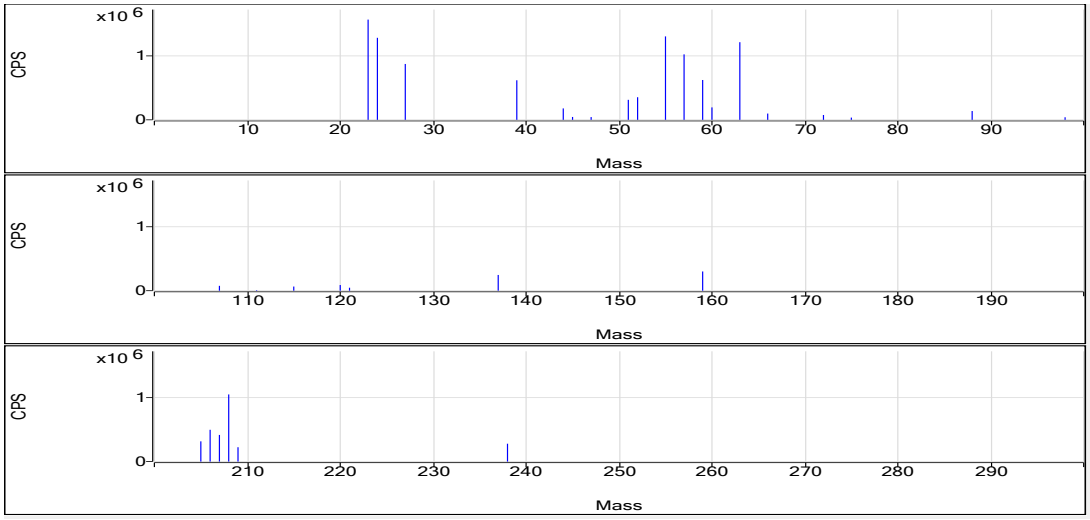


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	28.093	0.037	53427.92	0.0013	4.694E-05
Be	9	1	No Gas	26.217	0.0345	50530.06	0.0013	4.694E-05
Be	9	1	No Gas	26.704	0.0351	51748.24	0.0013	4.694E-05
Se	78	2	H2	53.21	0.0207	3411.74	0.0004	1.089E-05
Se	78	2	H2	55.749	0.0217	3395.07	0.0004	1.089E-05
Se	78	2	H2	50.807	0.0198	3282.38	0.0004	1.089E-05
Na	23	3	He	12014.865	20.7458	1553959.82	0.0017	0.1065
Na	23	3	He	12093.831	20.8815	1556783.88	0.0017	0.1065
Na	23	3	He	11921.814	20.586	1559585.13	0.0017	0.1065
Mg	24	3	He	20170.905	17.011	1274200.29	0.0008	0.004846
Mg	24	3	He	20274.149	17.098	1274712.95	0.0008	0.004846
Mg	24	3	He	19925.444	16.804	1273064.12	0.0008	0.004846
Al	27	3	He	47991.272	11.5859	867835.85	0.0002	0.001063
Al	27	3	He	48188.564	11.6335	867315.77	0.0002	0.001063
Al	27	3	He	47436.604	11.452	867596.55	0.0002	0.001063
K	39	3	He	14621.492	8.2178	615551.32	0.0006	0.1436
K	39	3	He	14558.534	8.183	610072.06	0.0006	0.1436
K	39	3	He	14490.651	8.1455	617102.69	0.0006	0.1436
Ca	44	3	He	76620.709	2.3814	178380.86	0	0.001611
Ca	44	3	He	77279.575	2.4019	179069.82	0	0.001611
Ca	44	3	He	73967.82	2.299	174174.22	0	0.001611
Ti	47	3	He	2273.293	0.5704	42723.25	0.0003	0.0002737
Ti	47	3	He	2208.376	0.5541	41309.12	0.0003	0.0002737
Ti	47	3	He	2307.289	0.5789	43856.72	0.0003	0.0002737
V	51	3	He	354.075	4.1492	310794.94	0.0117	0.007326
V	51	3	He	355.988	4.1716	311005.53	0.0117	0.007326
V	51	3	He	349.121	4.0913	309951.72	0.0117	0.007326
Cr	52	3	He	306.106	4.6865	351043.51	0.0152	0.02538
Cr	52	3	He	308.346	4.7206	351939.72	0.0152	0.02538
Cr	52	3	He	301.714	4.6197	349983.20	0.0152	0.02538
Mn	55	3	He	2933.724	17.3299	1298091.70	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2930.682	17.312	1290664.28	0.0059	0.01385
Mn	55	3	He	2902.139	17.1435	1298783.18	0.0059	0.01385
Fe	57	3	He	46797.425	13.5618	1015842.95	0.0003	0.003918
Fe	57	3	He	47057.596	13.6372	1016697.48	0.0003	0.003918
Fe	57	3	He	46383.999	13.442	1018362.41	0.0003	0.003918
Co	59	3	He	272.929	8.3303	623977.73	0.0305	0.003084
Co	59	3	He	269.63	8.2296	613545.58	0.0305	0.003084
Co	59	3	He	267.5	8.1647	618549.87	0.0305	0.003084
Ni	60	3	He	291.389	2.5713	192600.54	0.0088	0.009003
Ni	60	3	He	293.594	2.5907	193142.17	0.0088	0.009003
Ni	60	3	He	288.826	2.5487	193091.33	0.0088	0.009003
Cu	63	3	He	645.582	16.1039	1206255.84	0.0249	0.004937
Cu	63	3	He	648.562	16.1782	1206137.25	0.0249	0.004937
Cu	63	3	He	637.663	15.9064	1205061.08	0.0249	0.004937
Zn	66	3	He	524.942	1.2945	96963.71	0.0025	0.004836
Zn	66	3	He	530.89	1.3091	97598.34	0.0025	0.004836
Zn	66	3	He	520.566	1.2837	97255.87	0.0025	0.004836
As	75	3	He	266.113	0.4633	34699.63	0.0017	0.0004347
As	75	3	He	265.281	0.4618	34428.98	0.0017	0.0004347
As	75	3	He	263.99	0.4596	34815.93	0.0017	0.0004347
Sr	88	3	He	282.632	2.2101	138336.37	0.0078	0.0007762
Sr	88	3	He	266.523	2.0842	135035.78	0.0078	0.0007762
Sr	88	3	He	272.458	2.1306	136438.76	0.0078	0.0007762
Mo	98	3	He	27.977	0.6166	38594.28	0.022	0.0005162
Mo	98	3	He	28.066	0.6186	40077.54	0.022	0.0005162
Mo	98	3	He	28.88	0.6365	40759.99	0.022	0.0005162
Ag	107	3	He	26.699	1.2153	76065.45	0.0455	0.0004641
Ag	107	3	He	25.697	1.1697	75784.26	0.0455	0.0004641
Ag	107	3	He	25.789	1.1739	75171.24	0.0455	0.0004641
Cd	111	3	He	27.262	0.1309	8194.42	0.0048	5.152E-05
Cd	111	3	He	27.482	0.132	8550.63	0.0048	5.152E-05
Cd	111	3	He	26.757	0.1285	8228.44	0.0048	5.152E-05
Sn	120	3	He	96.879	1.3969	87433.46	0.0143	0.01559
Sn	120	3	He	95.234	1.3734	88983.86	0.0143	0.01559
Sn	120	3	He	94.898	1.3686	87644.47	0.0143	0.01559
Sb	121	3	He	60.46	0.7503	46959.83	0.0124	0.000258
Sb	121	3	He	57.621	0.715	46327.47	0.0124	0.000258
Sb	121	3	He	57.2	0.7098	45454.82	0.0124	0.000258
Ba	137	3	He	887.599	3.8834	243067.07	0.0044	0.000309
Ba	137	3	He	859.894	3.7622	243750.25	0.0044	0.000309
Ba	137	3	He	879.768	3.8491	246487.63	0.0044	0.000309
Tl	205	3	He	50.964	1.4099	313342.83	0.0276	0.001005
Tl	205	3	He	51.053	1.4123	313946.13	0.0276	0.001005
Tl	205	3	He	50.959	1.4097	315330.82	0.0276	0.001005
Pb	208	3	He	241.852	8.805	1044889.52	0.0364	0.002176
Pb	208	3	He	240.41	8.7525	1042325.30	0.0364	0.002176
Pb	208	3	He	239.204	8.7086	1041030.45	0.0364	0.002176
U	238	3	He	29.635	1.2469	277125.05	0.0421	0.00024
U	238	3	He	29.555	1.2436	276430.43	0.0421	0.00024
U	238	3	He	29.555	1.2436	278158.88	0.0421	0.00024
Sc	45	1	No Gas			3417358.70		
Sc	45	1	No Gas			3487101.51		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3496922.14		
Ge	72	1	No Gas			1445481.23		
Ge	72	1	No Gas			1464772.48		
Ge	72	1	No Gas			1472730.13		
Sc	45	2	H2			210603.34		
Sc	45	2	H2			202035.21		
Sc	45	2	H2			211231.52		
Ge	72	2	H2			164590.66		
Ge	72	2	H2			156329.22		
Ge	72	2	H2			165834.06		
In	115	2	H2			440780.38		
In	115	2	H2			435485.58		
In	115	2	H2			448100.27		
Sc	45	3	He			43706.02		
Sc	45	3	He			45581.93		
Sc	45	3	He			43926.46		
Ge	72	3	He			74904.63		
Ge	72	3	He			74553.28		
Ge	72	3	He			75759.50		
In	115	3	He			63273.71		
In	115	3	He			65483.94		
In	115	3	He			64721.13		
Tb	159	3	He			299904.41		
Tb	159	3	He			299384.27		
Tb	159	3	He			296657.69		
Bi	209	3	He			222247.85		
Bi	209	3	He			222289.66		
Bi	209	3	He			223679.43		

Quantitation Report

Data File Name	229SMPL.d
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Sample Name	410-136577-J-21-A MSD @10
Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

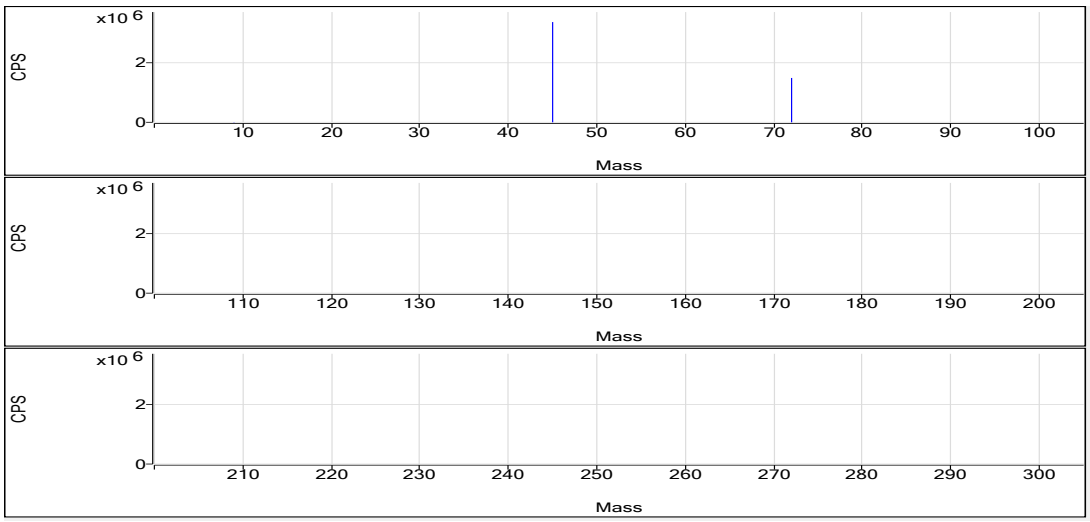
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	4.542	ppb	4.6	8887.99	0.0060	Pulse	0.5000	3
Se	78	72	H2	9.252	ppb	6.5	585.35	0.0036	Pulse	1.5000	3
Na	23	72	He	2112.493	ppb	2.3	278289.29	3.7353	Pulse	0.1000	3
Mg	24	72	He	3557.474	ppb	1.9	223816.58	3.0042	Pulse	0.1000	3
Al	27	72	He	8361.790	ppb	3.0	150442.42	2.0196	Pulse	0.1000	3
K	39	72	He	2542.398	ppb	1.6	115305.86	1.5476	Pulse	0.1000	3
Ca	44	72	He	13512.085	ppb	2.8	31384.39	0.4213	Pulse	0.1000	3
Ti	47	72	He	388.303	ppb	2.0	7275.34	0.0977	Pulse	0.1000	3
V	51	72	He	61.537	ppb	1.6	54178.32	0.7272	Pulse	0.5000	3
Cr	52	72	He	54.332	ppb	2.0	63528.87	0.8527	Pulse	0.1000	3
Mn	55	72	He	509.244	ppb	1.3	224986.52	3.0196	Pulse	0.1000	3
Fe	57	72	He	8170.791	ppb	1.4	176667.80	2.3711	Pulse	0.1000	3
Co	59	72	He	47.623	ppb	1.8	108483.78	1.4561	Pulse	0.1000	3
Ni	60	72	He	52.402	ppb	3.0	34996.34	0.4698	Pulse	0.1000	3
Cu	63	72	He	112.894	ppb	2.3	210102.35	2.8202	Pulse	0.1000	3
Zn	66	72	He	93.799	ppb	4.4	17524.50	0.2353	Pulse	0.1000	3
As	75	72	He	45.364	ppb	3.5	5909.24	0.0793	Pulse	0.5000	3
Sr	88	115	He	46.542	ppb	0.8	23466.74	0.3646	Pulse	0.1000	3
Mo	98	115	He	4.995	ppb	5.4	7112.09	0.1105	Pulse	0.1000	3
Ag	107	115	He	4.531	ppb	2.3	13300.05	0.2066	Pulse	0.1000	3
Cd	111	115	He	4.646	ppb	2.0	1438.75	0.0224	Pulse	0.5000	3
Sn	120	115	He	16.106	ppb	3.6	15779.38	0.2452	Pulse	0.1000	3
Sb	121	115	He	10.341	ppb	1.4	8272.79	0.1285	Pulse	0.1000	3
Ba	137	115	He	148.319	ppb	1.4	41780.97	0.6492	Pulse	0.1000	3
Tl	205	209	He	8.913	ppb	0.7	55721.49	0.2474	Pulse	0.1000	3
Pb	208	209	He	41.745	ppb	0.8	342716.96	1.5216	Pulse	0.1000	3
U	238	209	He	5.109	ppb	2.7	48458.67	0.2152	Pulse	0.1000	3

ISTD Table:

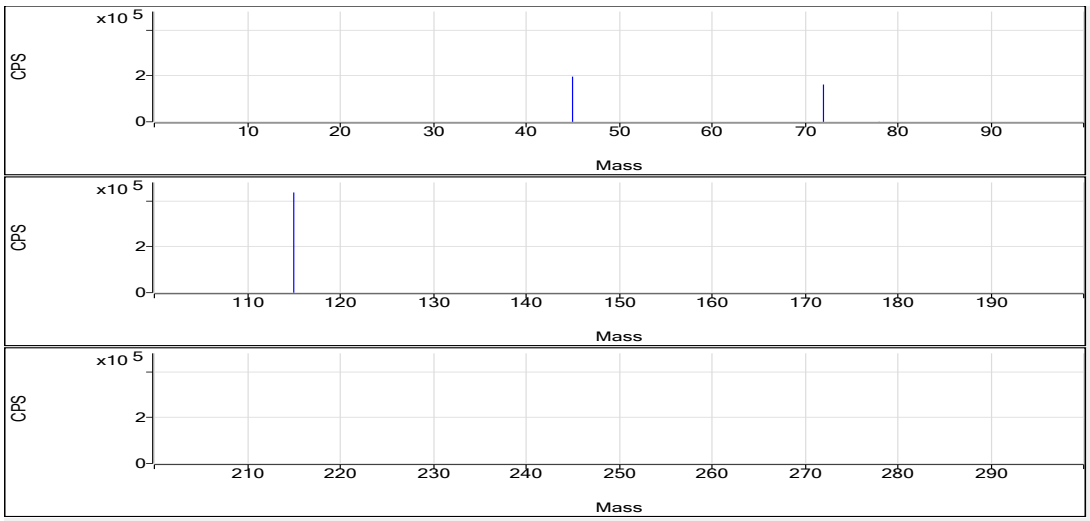
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3340621.31	1.2	103.1	Pulse	0.1000	3
No Gas	Ge	72	1477891.49	0.9	102.6	Pulse	0.1000	3
H2	Sc	45	196424.71	2.4	100.5	Pulse	0.1000	3
H2	Ge	72	162083.55	1.2	99.4	Pulse	0.1000	3
H2	In	115	435614.94	1.4	100.5	Pulse	0.1000	3
He	Sc	45	42686.07	1.5	106.8	Pulse	0.1000	3
He	Ge	72	74519.48	1.8	103.1	Pulse	0.1000	3
He	In	115	64366.38	1.5	99.7	Pulse	0.1000	3
He	Tb	159	286756.93	0.3	100.3	Pulse	0.1000	3
He	Bi	209	225243.01	0.6	101.4	Pulse	0.1000	3

No Gas

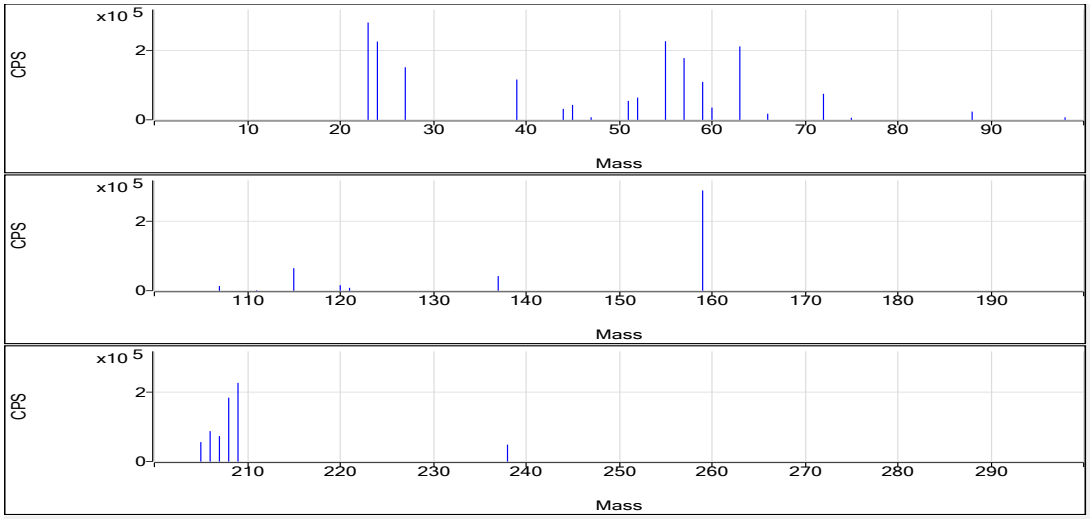


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	4.77	0.0063	9252.87	0.0013	4.694E-05
Be	9	1	No Gas	4.357	0.0058	8616.52	0.0013	4.694E-05
Be	9	1	No Gas	4.499	0.006	8794.59	0.0013	4.694E-05
Se	78	2	H2	9.177	0.0036	580.68	0.0004	1.089E-05
Se	78	2	H2	9.884	0.0039	618.02	0.0004	1.089E-05
Se	78	2	H2	8.695	0.0034	557.35	0.0004	1.089E-05
Na	23	3	He	2059.326	3.644	275885.78	0.0017	0.1065
Na	23	3	He	2126.88	3.7601	281191.87	0.0017	0.1065
Na	23	3	He	2151.272	3.802	277790.23	0.0017	0.1065
Mg	24	3	He	3489.767	2.9471	223121.19	0.0008	0.004846
Mg	24	3	He	3554.564	3.0017	224479.43	0.0008	0.004846
Mg	24	3	He	3628.091	3.0637	223849.12	0.0008	0.004846
Al	27	3	He	8098.221	1.9559	148081.99	0.0002	0.001063
Al	27	3	He	8380.937	2.0242	151375.66	0.0002	0.001063
Al	27	3	He	8606.213	2.0786	151869.60	0.0002	0.001063
K	39	3	He	2518.485	1.5344	116166.82	0.0006	0.1436
K	39	3	He	2518.418	1.5343	114744.13	0.0006	0.1436
K	39	3	He	2590.292	1.574	115006.64	0.0006	0.1436
Ca	44	3	He	13230.661	0.4126	31234.17	0	0.001611
Ca	44	3	He	13369.103	0.4169	31173.96	0	0.001611
Ca	44	3	He	13936.491	0.4345	31745.05	0	0.001611
Ti	47	3	He	384.028	0.0966	7312.01	0.0003	0.0002737
Ti	47	3	He	383.459	0.0964	7211.97	0.0003	0.0002737
Ti	47	3	He	397.421	0.0999	7302.03	0.0003	0.0002737
V	51	3	He	60.53	0.7154	54161.62	0.0117	0.007326
V	51	3	He	61.615	0.7281	54448.63	0.0117	0.007326
V	51	3	He	62.466	0.738	53924.72	0.0117	0.007326
Cr	52	3	He	53.256	0.8363	63317.59	0.0152	0.02538
Cr	52	3	He	54.324	0.8526	63760.20	0.0152	0.02538
Cr	52	3	He	55.415	0.8692	63508.82	0.0152	0.02538
Mn	55	3	He	502.762	2.9814	225717.57	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	508.991	3.0181	225708.16	0.0059	0.01385
Mn	55	3	He	515.979	3.0594	223533.84	0.0059	0.01385
Fe	57	3	He	8037.037	2.3324	176581.95	0.0003	0.003918
Fe	57	3	He	8216.882	2.3845	178320.08	0.0003	0.003918
Fe	57	3	He	8258.454	2.3965	175101.38	0.0003	0.003918
Co	59	3	He	46.78	1.4304	108292.22	0.0305	0.003084
Co	59	3	He	47.608	1.4556	108856.86	0.0305	0.003084
Co	59	3	He	48.481	1.4823	108302.25	0.0305	0.003084
Ni	60	3	He	51.207	0.4593	34772.24	0.0088	0.009003
Ni	60	3	He	51.808	0.4646	34742.26	0.0088	0.009003
Ni	60	3	He	54.191	0.4855	35474.53	0.0088	0.009003
Cu	63	3	He	111.018	2.7734	209973.59	0.0249	0.004937
Cu	63	3	He	111.792	2.7927	208849.18	0.0249	0.004937
Cu	63	3	He	115.873	2.8945	211484.29	0.0249	0.004937
Zn	66	3	He	89.324	0.2243	16980.42	0.0025	0.004836
Zn	66	3	He	94.76	0.2376	17771.62	0.0025	0.004836
Zn	66	3	He	97.313	0.2439	17821.46	0.0025	0.004836
As	75	3	He	44.31	0.0775	5867.22	0.0017	0.0004347
As	75	3	He	44.569	0.0779	5829.22	0.0017	0.0004347
As	75	3	He	47.213	0.0825	6031.29	0.0017	0.0004347
Sr	88	3	He	46.346	0.3631	23309.80	0.0078	0.0007762
Sr	88	3	He	46.33	0.3629	23730.55	0.0078	0.0007762
Sr	88	3	He	46.952	0.3678	23359.88	0.0078	0.0007762
Mo	98	3	He	4.703	0.1041	6681.90	0.022	0.0005162
Mo	98	3	He	5.048	0.1117	7302.19	0.022	0.0005162
Mo	98	3	He	5.233	0.1158	7352.19	0.022	0.0005162
Ag	107	3	He	4.411	0.2012	12916.39	0.0455	0.0004641
Ag	107	3	He	4.59	0.2093	13687.03	0.0455	0.0004641
Ag	107	3	He	4.591	0.2094	13296.72	0.0455	0.0004641
Cd	111	3	He	4.604	0.0221	1422.08	0.0048	5.152E-05
Cd	111	3	He	4.584	0.0221	1442.08	0.0048	5.152E-05
Cd	111	3	He	4.752	0.0229	1452.08	0.0048	5.152E-05
Sn	120	3	He	16.516	0.2511	16119.81	0.0143	0.01559
Sn	120	3	He	15.446	0.2358	15419.02	0.0143	0.01559
Sn	120	3	He	16.354	0.2488	15799.32	0.0143	0.01559
Sb	121	3	He	10.203	0.1268	8142.65	0.0124	0.000258
Sb	121	3	He	10.327	0.1284	8392.91	0.0124	0.000258
Sb	121	3	He	10.492	0.1304	8282.82	0.0124	0.000258
Ba	137	3	He	146.766	0.6424	41242.64	0.0044	0.000309
Ba	137	3	He	147.445	0.6454	42195.79	0.0044	0.000309
Ba	137	3	He	150.745	0.6598	41904.48	0.0044	0.000309
Tl	205	3	He	8.842	0.2454	55316.49	0.0276	0.001005
Tl	205	3	He	8.935	0.248	56200.19	0.0276	0.001005
Tl	205	3	He	8.961	0.2487	55647.79	0.0276	0.001005
Pb	208	3	He	41.573	1.5153	184495.97	0.0364	0.002176
Pb	208	3	He	41.522	1.5135	180288.65	0.0364	0.002176
Pb	208	3	He	42.141	1.536	183531.36	0.0364	0.002176
U	238	3	He	4.967	0.2092	47147.39	0.0421	0.00024
U	238	3	He	5.116	0.2155	48823.19	0.0421	0.00024
U	238	3	He	5.243	0.2208	49405.44	0.0421	0.00024
Sc	45	1	No Gas			3310390.58		
Sc	45	1	No Gas			3387466.51		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3324006.83		
Ge	72	1	No Gas			1465169.67		
Ge	72	1	No Gas			1492666.70		
Ge	72	1	No Gas			1475838.10		
Sc	45	2	H2			196490.08		
Sc	45	2	H2			191649.06		
Sc	45	2	H2			201134.98		
Ge	72	2	H2			162013.33		
Ge	72	2	H2			160130.93		
Ge	72	2	H2			164106.40		
In	115	2	H2			432186.05		
In	115	2	H2			431836.83		
In	115	2	H2			442821.95		
Sc	45	3	He			43224.25		
Sc	45	3	He			41950.48		
Sc	45	3	He			42883.49		
Ge	72	3	He			75709.39		
Ge	72	3	He			74783.98		
Ge	72	3	He			73065.07		
In	115	3	He			64328.71		
In	115	3	He			65504.49		
In	115	3	He			63635.16		
Tb	159	3	He			287162.67		
Tb	159	3	He			285822.79		
Tb	159	3	He			287285.33		
Bi	209	3	He			225378.20		
Bi	209	3	He			226608.63		
Bi	209	3	He			223742.20		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

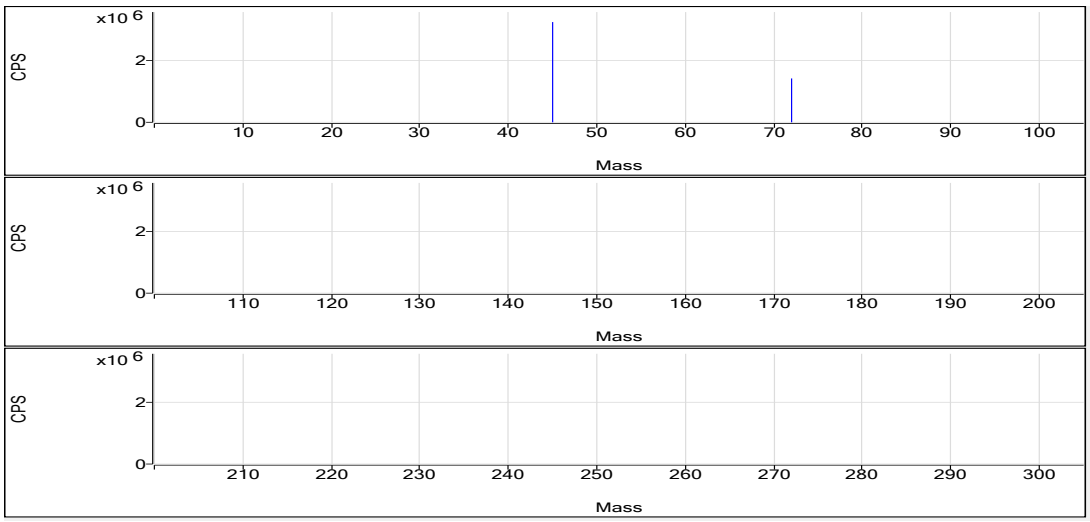
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.009	ppb	14.4	84.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.073	ppb	67.4	6.22	0.0000	Pulse	1.5000	3
Na	23	72	He	5.932	ppb	48.3	8329.35	0.1166	Pulse	0.1000	3
Mg	24	72	He	6.546	ppb	11.1	740.05	0.0104	Pulse	0.1000	3
Al	27	72	He	16.072	ppb	29.9	353.35	0.0049	Pulse	0.1000	3
K	39	72	He	32.724	ppb	69.8	11544.96	0.1617	Pulse	0.1000	3
Ca	44	72	He	5.141	ppb	299.3	126.67	0.0018	Pulse	0.1000	3
Ti	47	72	He	1.326	ppb	105.0	43.33	0.0006	Pulse	0.1000	3
V	51	72	He	0.165	ppb	19.0	661.35	0.0093	Pulse	0.5000	3
Cr	52	72	He	0.193	ppb	52.0	2023.55	0.0283	Pulse	0.1000	3
Mn	55	72	He	-0.385	ppb	N/A	826.72	0.0116	Pulse	0.1000	3
Fe	57	72	He	20.946	ppb	40.9	713.38	0.0100	Pulse	0.1000	3
Co	59	72	He	0.167	ppb	20.7	583.36	0.0082	Pulse	0.1000	3
Ni	60	72	He	1.078	ppb	7.0	1320.11	0.0185	Pulse	0.1000	3
Cu	63	72	He	0.197	ppb	5.8	703.37	0.0098	Pulse	0.1000	3
Zn	66	72	He	0.177	ppb	113.3	376.69	0.0053	Pulse	0.1000	3
As	75	72	He	0.142	ppb	34.9	48.67	0.0007	Pulse	0.5000	3
Sr	88	115	He	0.072	ppb	116.5	83.34	0.0013	Pulse	0.1000	3
Mo	98	115	He	0.023	ppb	94.5	63.33	0.0010	Pulse	0.1000	3
Ag	107	115	He	0.010	ppb	149.6	56.67	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.009	ppb	70.6	6.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.087	ppb	36.8	1053.41	0.0168	Pulse	0.1000	3
Sb	121	115	He	0.052	ppb	62.6	56.67	0.0009	Pulse	0.1000	3
Ba	137	115	He	0.285	ppb	60.3	96.67	0.0016	Pulse	0.1000	3
Tl	205	209	He	0.095	ppb	10.7	796.72	0.0036	Pulse	0.1000	3
Pb	208	209	He	0.078	ppb	3.2	1103.39	0.0050	Pulse	0.1000	3
U	238	209	He	0.012	ppb	42.1	163.34	0.0007	Pulse	0.1000	3

ISTD Table:

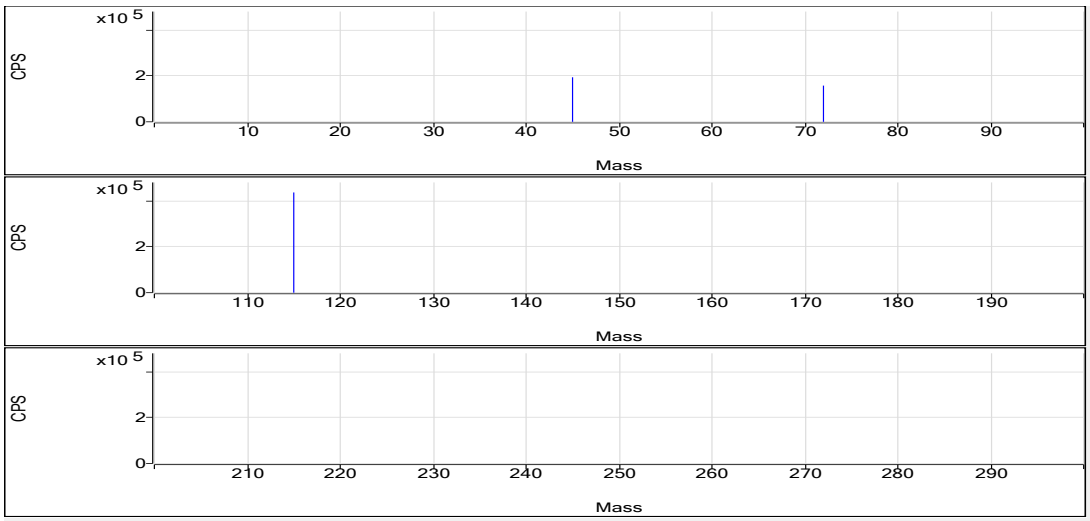
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3238685.99	0.9	99.9	Pulse	0.1000	3
No Gas	Ge	72	1417181.33	0.6	98.4	Pulse	0.1000	3
H2	Sc	45	194082.15	1.4	99.3	Pulse	0.1000	3
H2	Ge	72	157749.56	1.6	96.8	Pulse	0.1000	3
H2	In	115	436794.54	1.4	100.8	Pulse	0.1000	3
He	Sc	45	40710.68	2.7	101.8	Pulse	0.1000	3
He	Ge	72	71427.17	1.0	98.8	Pulse	0.1000	3
He	In	115	62555.67	2.0	96.8	Pulse	0.1000	3
He	Tb	159	282853.79	0.3	98.9	Pulse	0.1000	3
He	Bi	209	220056.93	0.6	99.0	Pulse	0.1000	3

No Gas

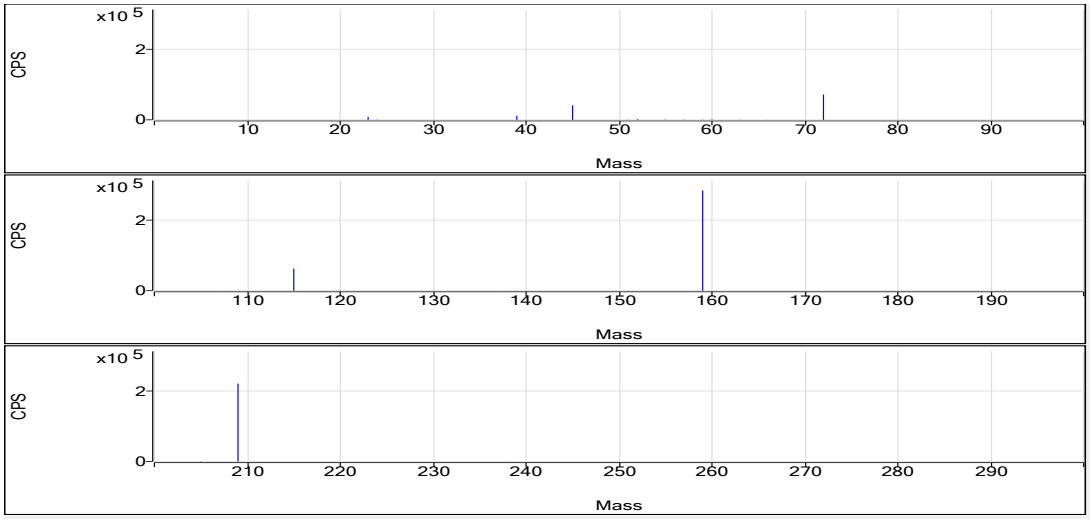


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.009	0.0001	84.00	0.0013	4.694E-05
Be	9	1	No Gas	0.008	0.0001	82.00	0.0013	4.694E-05
Be	9	1	No Gas	0.011	0.0001	86.00	0.0013	4.694E-05
Se	78	2	H2	0.125	0.0001	9.33	0.0004	1.089E-05
Se	78	2	H2	0.027	0	3.33	0.0004	1.089E-05
Se	78	2	H2	0.068	0	6.00	0.0004	1.089E-05
Na	23	3	He	9.072	0.122	8612.82	0.0017	0.1065
Na	23	3	He	3.45	0.1124	8082.54	0.0017	0.1065
Na	23	3	He	5.274	0.1155	8292.70	0.0017	0.1065
Mg	24	3	He	7.362	0.0111	780.06	0.0008	0.004846
Mg	24	3	He	6.292	0.0102	730.05	0.0008	0.004846
Mg	24	3	He	5.984	0.0099	710.04	0.0008	0.004846
Al	27	3	He	12.621	0.0041	290.01	0.0002	0.001063
Al	27	3	He	14.03	0.0044	320.01	0.0002	0.001063
Al	27	3	He	21.566	0.0063	450.02	0.0002	0.001063
K	39	3	He	57.438	0.1754	12375.73	0.0006	0.1436
K	39	3	He	28.307	0.1593	11454.79	0.0006	0.1436
K	39	3	He	12.427	0.1505	10804.36	0.0006	0.1436
Ca	44	3	He	-10.807	0.0013	90.00	0	0.001611
Ca	44	3	He	6.332	0.0018	130.00	0	0.001611
Ca	44	3	He	19.897	0.0022	160.01	0	0.001611
Ti	47	3	He	1.169	0.0006	40.00	0.0003	0.0002737
Ti	47	3	He	2.79	0.001	70.00	0.0003	0.0002737
Ti	47	3	He	0.019	0.0003	20.00	0.0003	0.0002737
V	51	3	He	0.156	0.0092	646.02	0.0117	0.007326
V	51	3	He	0.139	0.009	644.02	0.0117	0.007326
V	51	3	He	0.2	0.0097	694.02	0.0117	0.007326
Cr	52	3	He	0.101	0.0269	1900.21	0.0152	0.02538
Cr	52	3	He	0.178	0.0281	2020.21	0.0152	0.02538
Cr	52	3	He	0.3	0.03	2150.24	0.0152	0.02538
Mn	55	3	He	-0.162	0.0129	910.06	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.674	0.0099	710.04	0.0059	0.01385
Mn	55	3	He	-0.317	0.012	860.05	0.0059	0.01385
Fe	57	3	He	19.248	0.0095	670.04	0.0003	0.003918
Fe	57	3	He	13.355	0.0078	560.03	0.0003	0.003918
Fe	57	3	He	30.234	0.0127	910.06	0.0003	0.003918
Co	59	3	He	0.201	0.0092	650.03	0.0305	0.003084
Co	59	3	He	0.168	0.0082	590.03	0.0305	0.003084
Co	59	3	He	0.132	0.0071	510.03	0.0305	0.003084
Ni	60	3	He	1.055	0.0183	1290.10	0.0088	0.009003
Ni	60	3	He	1.016	0.0179	1290.10	0.0088	0.009003
Ni	60	3	He	1.162	0.0192	1380.13	0.0088	0.009003
Cu	63	3	He	0.188	0.0096	680.04	0.0249	0.004937
Cu	63	3	He	0.192	0.0097	700.04	0.0249	0.004937
Cu	63	3	He	0.21	0.0102	730.04	0.0249	0.004937
Zn	66	3	He	0.05	0.005	350.02	0.0025	0.004836
Zn	66	3	He	0.409	0.0058	420.02	0.0025	0.004836
Zn	66	3	He	0.073	0.005	360.02	0.0025	0.004836
As	75	3	He	0.157	0.0007	50.00	0.0017	0.0004347
As	75	3	He	0.182	0.0008	54.00	0.0017	0.0004347
As	75	3	He	0.086	0.0006	42.00	0.0017	0.0004347
Sr	88	3	He	0.089	0.0015	90.00	0.0078	0.0007762
Sr	88	3	He	0.146	0.0019	120.01	0.0078	0.0007762
Sr	88	3	He	-0.019	0.0006	40.00	0.0078	0.0007762
Mo	98	3	He	0.036	0.0013	80.00	0.022	0.0005162
Mo	98	3	He	0.035	0.0013	80.00	0.022	0.0005162
Mo	98	3	He	-0.002	0.0005	30.00	0.022	0.0005162
Ag	107	3	He	0.015	0.0011	70.00	0.0455	0.0004641
Ag	107	3	He	0.021	0.0014	90.00	0.0455	0.0004641
Ag	107	3	He	-0.007	0.0002	10.00	0.0455	0.0004641
Cd	111	3	He	0.003	0.0001	4.00	0.0048	5.152E-05
Cd	111	3	He	0.016	0.0001	8.00	0.0048	5.152E-05
Cd	111	3	He	0.009	0.0001	6.00	0.0048	5.152E-05
Sn	120	3	He	0.052	0.0163	1000.07	0.0143	0.01559
Sn	120	3	He	0.115	0.0172	1080.08	0.0143	0.01559
Sn	120	3	He	0.095	0.0169	1080.09	0.0143	0.01559
Sb	121	3	He	0.058	0.001	60.00	0.0124	0.000258
Sb	121	3	He	0.082	0.0013	80.00	0.0124	0.000258
Sb	121	3	He	0.017	0.0005	30.00	0.0124	0.000258
Ba	137	3	He	0.452	0.0023	140.01	0.0044	0.000309
Ba	137	3	He	0.294	0.0016	100.01	0.0044	0.000309
Ba	137	3	He	0.109	0.0008	50.00	0.0044	0.000309
Tl	205	3	He	0.106	0.0039	860.06	0.0276	0.001005
Tl	205	3	He	0.091	0.0035	780.05	0.0276	0.001005
Tl	205	3	He	0.087	0.0034	750.05	0.0276	0.001005
Pb	208	3	He	0.077	0.005	580.04	0.0364	0.002176
Pb	208	3	He	0.081	0.0051	590.03	0.0364	0.002176
Pb	208	3	He	0.076	0.0049	570.03	0.0364	0.002176
U	238	3	He	0.006	0.0005	110.00	0.0421	0.00024
U	238	3	He	0.016	0.0009	200.01	0.0421	0.00024
U	238	3	He	0.014	0.0008	180.01	0.0421	0.00024
Sc	45	1	No Gas			3249210.26		
Sc	45	1	No Gas			3259551.20		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3207296.51		
Ge	72	1	No Gas			1419922.32		
Ge	72	1	No Gas			1424522.79		
Ge	72	1	No Gas			1407098.89		
Sc	45	2	H2			192681.09		
Sc	45	2	H2			192306.58		
Sc	45	2	H2			197258.79		
Ge	72	2	H2			156481.81		
Ge	72	2	H2			156180.11		
Ge	72	2	H2			160586.75		
In	115	2	H2			431994.21		
In	115	2	H2			434838.39		
In	115	2	H2			443551.01		
Sc	45	3	He			39433.80		
Sc	45	3	He			41329.08		
Sc	45	3	He			41369.17		
Ge	72	3	He			70573.79		
Ge	72	3	He			71919.50		
Ge	72	3	He			71788.22		
In	115	3	He			61244.43		
In	115	3	He			62691.52		
In	115	3	He			63755.70		
Tb	159	3	He			283659.98		
Tb	159	3	He			283014.14		
Tb	159	3	He			281887.24		
Bi	209	3	He			218493.30		
Bi	209	3	He			220936.62		
Bi	209	3	He			220740.88		

Quantitation Report

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Acq Time	2023-08-10 18:35:13
Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

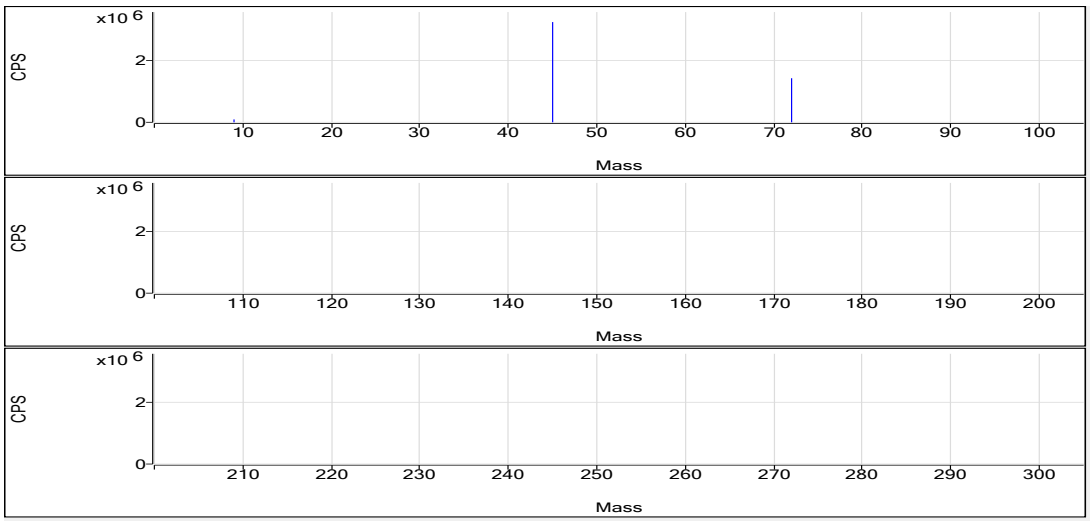
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	49.380	ppb	3.9	93343.71	0.0649	Pulse	0.5000	3
Se	78	72	H2	53.635	ppb	4.8	3351.06	0.0209	Pulse	1.5000	3
Na	23	72	He	5469.030	ppb	2.1	692103.19	9.5013	Pulse	0.1000	3
Mg	24	72	He	5479.827	ppb	2.1	336891.06	4.6249	Pulse	0.1000	3
Al	27	72	He	5409.761	ppb	2.2	95201.00	1.3069	Pulse	0.1000	3
K	39	72	He	5444.474	ppb	2.0	229473.79	3.1501	Pulse	0.1000	3
Ca	44	72	He	5273.683	ppb	5.5	12045.24	0.1654	Pulse	0.1000	3
Ti	47	72	He	5451.597	ppb	1.3	99614.80	1.3674	Pulse	0.1000	3
V	51	72	He	544.724	ppb	1.7	464709.39	6.3794	Pulse	0.5000	3
Cr	52	72	He	543.996	ppb	2.8	605216.18	8.3090	Pulse	0.1000	3
Mn	55	72	He	538.589	ppb	3.2	232555.80	3.1928	Pulse	0.1000	3
Fe	57	72	He	5397.907	ppb	3.1	114193.21	1.5678	Pulse	0.1000	3
Co	59	72	He	541.390	ppb	1.8	1203484.36	16.5212	Pulse	0.1000	3
Ni	60	72	He	542.336	ppb	1.1	348071.82	4.7779	Pulse	0.1000	3
Cu	63	72	He	539.432	ppb	1.8	980259.18	13.4568	Pulse	0.1000	3
Zn	66	72	He	532.685	ppb	2.9	95675.72	1.3135	Pulse	0.1000	3
As	75	72	He	535.911	ppb	2.4	67922.78	0.9325	Pulse	0.5000	3
Sr	88	115	He	53.307	ppb	1.3	26829.24	0.4175	Pulse	0.1000	3
Mo	98	115	He	51.393	ppb	2.0	72773.70	1.1323	Pulse	0.1000	3
Ag	107	115	He	52.593	ppb	1.5	153817.53	2.3935	Pulse	0.1000	3
Cd	111	115	He	52.981	ppb	1.1	16347.53	0.2544	Pulse	0.5000	3
Sn	120	115	He	52.809	ppb	3.0	49385.01	0.7685	Pulse	0.1000	3
Sb	121	115	He	52.398	ppb	2.6	41789.95	0.6502	Pulse	0.1000	3
Ba	137	115	He	531.798	ppb	0.6	149539.15	2.3268	Pulse	0.1000	3
Tl	205	209	He	53.677	ppb	0.7	325206.03	1.4849	Pulse	0.1000	3
Pb	208	209	He	53.257	ppb	0.8	425020.29	1.9406	Pulse	0.1000	3
U	238	209	He	53.149	ppb	0.5	489733.43	2.2361	Pulse	0.1000	3

ISTD Table:

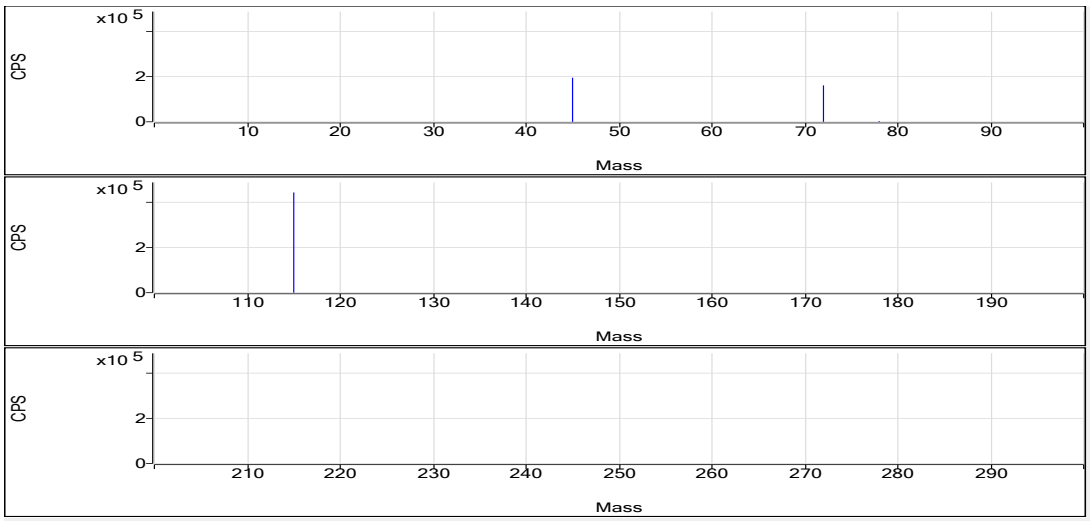
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3269097.03	0.3	100.9	Pulse	0.1000	3
No Gas	Ge	72	1437300.34	0.7	99.8	Pulse	0.1000	3
H2	Sc	45	194290.04	2.2	99.4	Pulse	0.1000	3
H2	Ge	72	160548.02	3.3	98.5	Pulse	0.1000	3
H2	In	115	441472.86	2.5	101.9	Pulse	0.1000	3
He	Sc	45	41325.68	1.8	103.4	Pulse	0.1000	3
He	Ge	72	72857.38	1.4	100.8	Pulse	0.1000	3
He	In	115	64271.17	1.3	99.5	Pulse	0.1000	3
He	Tb	159	284185.00	0.9	99.4	Pulse	0.1000	3
He	Bi	209	219020.19	0.8	98.6	Pulse	0.1000	3

No Gas

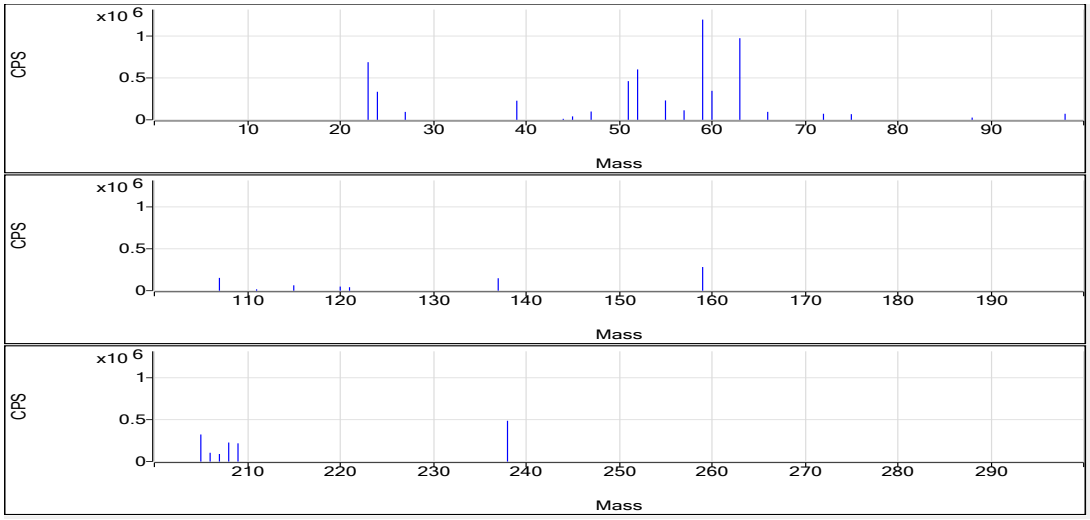


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	47.805	0.0629	90207.25	0.0013	4.694E-05
Be	9	1	No Gas	48.813	0.0642	91711.99	0.0013	4.694E-05
Be	9	1	No Gas	51.521	0.0677	98111.88	0.0013	4.694E-05
Se	78	2	H2	56.568	0.022	3403.74	0.0004	1.089E-05
Se	78	2	H2	52.716	0.0205	3363.73	0.0004	1.089E-05
Se	78	2	H2	51.62	0.0201	3285.71	0.0004	1.089E-05
Na	23	3	He	5591.296	9.7113	697159.99	0.0017	0.1065
Na	23	3	He	5449.571	9.4678	690436.01	0.0017	0.1065
Na	23	3	He	5366.222	9.3247	688713.58	0.0017	0.1065
Mg	24	3	He	5606.713	4.7319	339694.21	0.0008	0.004846
Mg	24	3	He	5453.176	4.6024	335628.82	0.0008	0.004846
Mg	24	3	He	5379.593	4.5404	335350.15	0.0008	0.004846
Al	27	3	He	5527.777	1.3354	95868.97	0.0002	0.001063
Al	27	3	He	5411.284	1.3073	95335.06	0.0002	0.001063
Al	27	3	He	5290.221	1.2781	94398.98	0.0002	0.001063
K	39	3	He	5571.973	3.2206	231198.49	0.0006	0.1436
K	39	3	He	5379.54	3.1143	227107.18	0.0006	0.1436
K	39	3	He	5381.909	3.1156	230115.70	0.0006	0.1436
Ca	44	3	He	5588.112	0.1752	12575.69	0	0.001611
Ca	44	3	He	5213.035	0.1635	11925.10	0	0.001611
Ca	44	3	He	5019.901	0.1575	11634.94	0	0.001611
Ti	47	3	He	5528.965	1.3868	99558.00	0.0003	0.0002737
Ti	47	3	He	5432.891	1.3627	99376.15	0.0003	0.0002737
Ti	47	3	He	5392.935	1.3527	99910.26	0.0003	0.0002737
V	51	3	He	554.551	6.4943	466218.19	0.0117	0.007326
V	51	3	He	543.469	6.3647	464140.72	0.0117	0.007326
V	51	3	He	536.151	6.2791	463769.25	0.0117	0.007326
Cr	52	3	He	556.819	8.5042	610505.54	0.0152	0.02538
Cr	52	3	He	547.886	8.3682	610244.83	0.0152	0.02538
Cr	52	3	He	527.284	8.0545	594898.16	0.0152	0.02538
Mn	55	3	He	552.234	3.2734	234990.41	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	544.141	3.2256	235224.84	0.0059	0.01385
Mn	55	3	He	519.393	3.0795	227452.15	0.0059	0.01385
Fe	57	3	He	5515.915	1.602	115002.27	0.0003	0.003918
Fe	57	3	He	5473.712	1.5897	115930.14	0.0003	0.003918
Fe	57	3	He	5204.092	1.5116	111647.21	0.0003	0.003918
Co	59	3	He	551.307	16.8237	1207751.62	0.0305	0.003084
Co	59	3	He	540.882	16.5057	1203663.34	0.0305	0.003084
Co	59	3	He	531.981	16.2341	1199038.11	0.0305	0.003084
Ni	60	3	He	548.876	4.8354	347128.63	0.0088	0.009003
Ni	60	3	He	540.834	4.7647	347463.74	0.0088	0.009003
Ni	60	3	He	537.299	4.7336	349623.08	0.0088	0.009003
Cu	63	3	He	550.257	13.7268	985424.28	0.0249	0.004937
Cu	63	3	He	537.247	13.4023	977354.75	0.0249	0.004937
Cu	63	3	He	530.792	13.2414	977998.50	0.0249	0.004937
Zn	66	3	He	550.552	1.3574	97446.77	0.0025	0.004836
Zn	66	3	He	524.254	1.2928	94277.00	0.0025	0.004836
Zn	66	3	He	523.249	1.2903	95303.39	0.0025	0.004836
As	75	3	He	547.411	0.9525	68376.83	0.0017	0.0004347
As	75	3	He	538.026	0.9362	68268.39	0.0017	0.0004347
As	75	3	He	522.296	0.9088	67123.13	0.0017	0.0004347
Sr	88	3	He	53.209	0.4167	26775.96	0.0078	0.0007762
Sr	88	3	He	52.669	0.4125	26855.92	0.0078	0.0007762
Sr	88	3	He	54.045	0.4232	26855.85	0.0078	0.0007762
Mo	98	3	He	52.589	1.1586	74446.03	0.022	0.0005162
Mo	98	3	He	50.89	1.1212	72997.23	0.022	0.0005162
Mo	98	3	He	50.701	1.117	70877.83	0.022	0.0005162
Ag	107	3	He	53.192	2.4207	155542.43	0.0455	0.0004641
Ag	107	3	He	51.725	2.354	153259.28	0.0455	0.0004641
Ag	107	3	He	52.863	2.4058	152650.87	0.0455	0.0004641
Cd	111	3	He	53.126	0.2551	16389.57	0.0048	5.152E-05
Cd	111	3	He	52.354	0.2514	16365.55	0.0048	5.152E-05
Cd	111	3	He	53.463	0.2567	16287.47	0.0048	5.152E-05
Sn	120	3	He	54.065	0.7864	50532.47	0.0143	0.01559
Sn	120	3	He	51.019	0.743	48374.65	0.0143	0.01559
Sn	120	3	He	53.343	0.7761	49247.90	0.0143	0.01559
Sb	121	3	He	53.91	0.669	42987.07	0.0124	0.000258
Sb	121	3	He	51.329	0.637	41472.25	0.0124	0.000258
Sb	121	3	He	51.954	0.6447	40910.54	0.0124	0.000258
Ba	137	3	He	532.562	2.3302	149724.43	0.0044	0.000309
Ba	137	3	He	528.078	2.3105	150431.23	0.0044	0.000309
Ba	137	3	He	534.755	2.3398	148461.78	0.0044	0.000309
Tl	205	3	He	53.885	1.4906	325674.19	0.0276	0.001005
Tl	205	3	He	53.908	1.4913	324547.03	0.0276	0.001005
Tl	205	3	He	53.239	1.4728	325396.87	0.0276	0.001005
Pb	208	3	He	53.683	1.9561	229935.07	0.0364	0.002176
Pb	208	3	He	53.232	1.9397	227782.48	0.0364	0.002176
Pb	208	3	He	52.857	1.926	227695.70	0.0364	0.002176
U	238	3	He	53.263	2.2409	489598.27	0.0421	0.00024
U	238	3	He	53.323	2.2434	488235.77	0.0421	0.00024
U	238	3	He	52.86	2.2239	491366.24	0.0421	0.00024
Sc	45	1	No Gas			3264310.26		
Sc	45	1	No Gas			3280770.26		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3262210.58		
Ge	72	1	No Gas			1434946.70		
Ge	72	1	No Gas			1428761.70		
Ge	72	1	No Gas			1448192.63		
Sc	45	2	H2			189693.96		
Sc	45	2	H2			194809.61		
Sc	45	2	H2			198366.56		
Ge	72	2	H2			154461.41		
Ge	72	2	H2			163792.81		
Ge	72	2	H2			163389.85		
In	115	2	H2			430970.31		
In	115	2	H2			440706.87		
In	115	2	H2			452741.40		
Sc	45	3	He			41068.16		
Sc	45	3	He			42181.29		
Sc	45	3	He			40727.59		
Ge	72	3	He			71788.51		
Ge	72	3	He			72924.31		
Ge	72	3	He			73859.33		
In	115	3	He			64649.24		
In	115	3	He			65483.78		
In	115	3	He			63836.08		
Tb	159	3	He			287103.98		
Tb	159	3	He			282484.16		
Tb	159	3	He			282966.85		
Bi	209	3	He			218484.37		
Bi	209	3	He			217632.03		
Bi	209	3	He			220944.18		

Quantitation Report

Data File Name	232_CCB.d
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Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

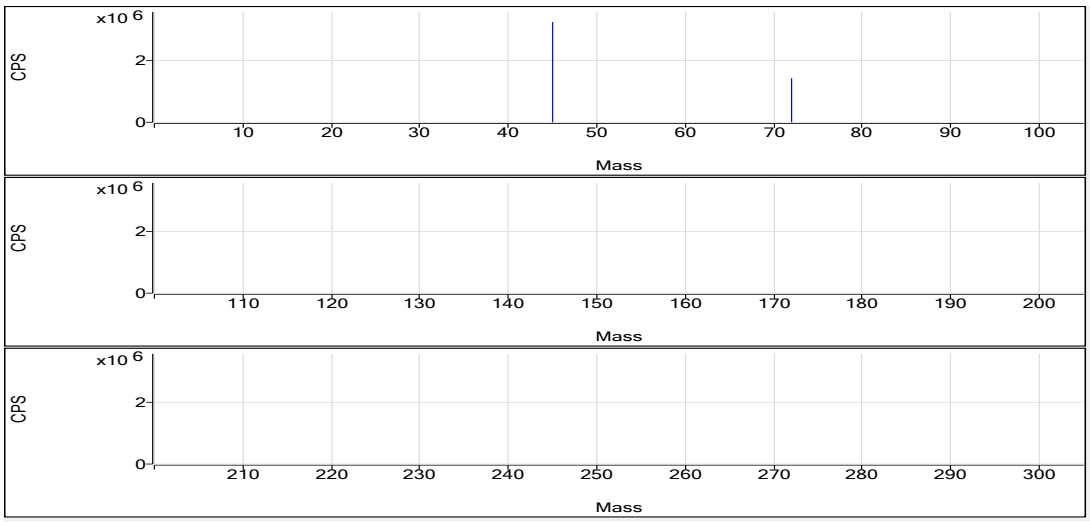
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.025	ppb	50.8	113.33	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.066	ppb	17.5	5.78	0.0000	Pulse	1.5000	3
Na	23	72	He	6.457	ppb	19.3	8446.03	0.1175	Pulse	0.1000	3
Mg	24	72	He	7.117	ppb	22.5	780.05	0.0108	Pulse	0.1000	3
Al	27	72	He	14.628	ppb	8.4	330.02	0.0046	Pulse	0.1000	3
K	39	72	He	17.016	ppb	52.7	10997.79	0.1530	Pulse	0.1000	3
Ca	44	72	He	16.955	ppb	178.8	153.34	0.0021	Pulse	0.1000	3
Ti	47	72	He	2.223	ppb	107.0	60.00	0.0008	Pulse	0.1000	3
V	51	72	He	0.200	ppb	7.3	694.69	0.0097	Pulse	0.5000	3
Cr	52	72	He	0.228	ppb	25.0	2073.56	0.0289	Pulse	0.1000	3
Mn	55	72	He	-0.516	ppb	N/A	776.71	0.0108	Pulse	0.1000	3
Fe	57	72	He	16.389	ppb	25.2	623.37	0.0087	Pulse	0.1000	3
Co	59	72	He	0.197	ppb	3.1	653.37	0.0091	Pulse	0.1000	3
Ni	60	72	He	1.232	ppb	32.0	1423.45	0.0198	Pulse	0.1000	3
Cu	63	72	He	0.274	ppb	11.3	846.72	0.0118	Pulse	0.1000	3
Zn	66	72	He	0.146	ppb	429.9	373.36	0.0052	Pulse	0.1000	3
As	75	72	He	0.235	ppb	55.0	60.67	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.188	ppb	36.8	143.34	0.0022	Pulse	0.1000	3
Mo	98	115	He	0.038	ppb	29.4	86.67	0.0014	Pulse	0.1000	3
Ag	107	115	He	0.021	ppb	32.3	90.00	0.0014	Pulse	0.1000	3
Cd	111	115	He	0.018	ppb	56.3	8.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.069	ppb	174.5	1056.75	0.0166	Pulse	0.1000	3
Sb	121	115	He	0.017	ppb	126.1	30.00	0.0005	Pulse	0.1000	3
Ba	137	115	He	0.324	ppb	30.8	110.01	0.0017	Pulse	0.1000	3
Tl	205	209	He	0.157	ppb	0.9	1170.10	0.0053	Pulse	0.1000	3
Pb	208	209	He	0.060	ppb	9.0	956.72	0.0044	Pulse	0.1000	3
U	238	209	He	0.022	ppb	27.5	256.68	0.0012	Pulse	0.1000	3

ISTD Table:

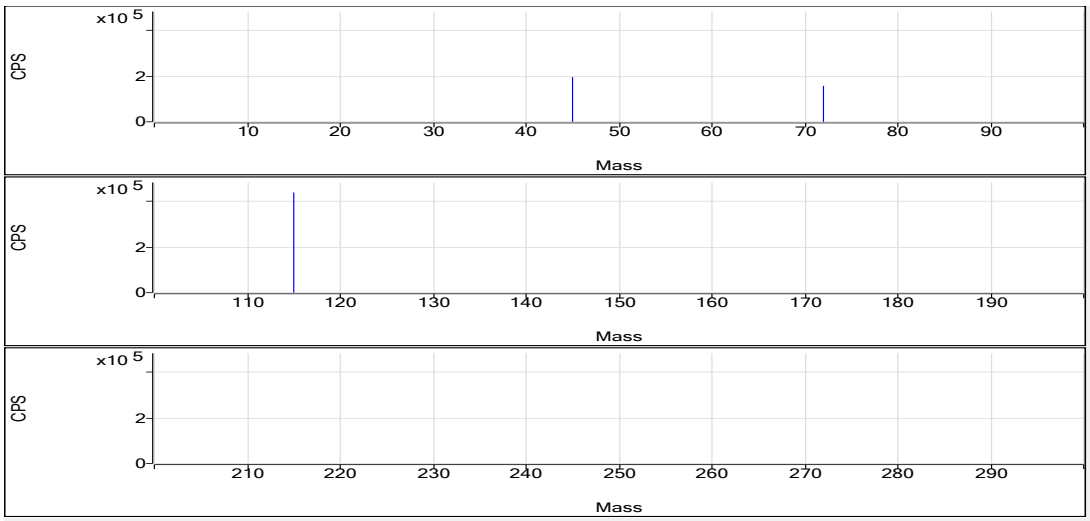
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3254879.12	1.1	100.4	Pulse	0.1000	3
No Gas	Ge	72	1428410.81	1.0	99.2	Pulse	0.1000	3
H2	Sc	45	195812.97	1.9	100.2	Pulse	0.1000	3
H2	Ge	72	157443.02	1.8	96.6	Pulse	0.1000	3
H2	In	115	438547.38	1.5	101.2	Pulse	0.1000	3
He	Sc	45	41522.77	1.9	103.8	Pulse	0.1000	3
He	Ge	72	71856.56	1.2	99.4	Pulse	0.1000	3
He	In	115	63814.67	1.2	98.8	Pulse	0.1000	3
He	Tb	159	282492.57	0.3	98.8	Pulse	0.1000	3
He	Bi	209	218970.31	0.4	98.6	Pulse	0.1000	3

No Gas

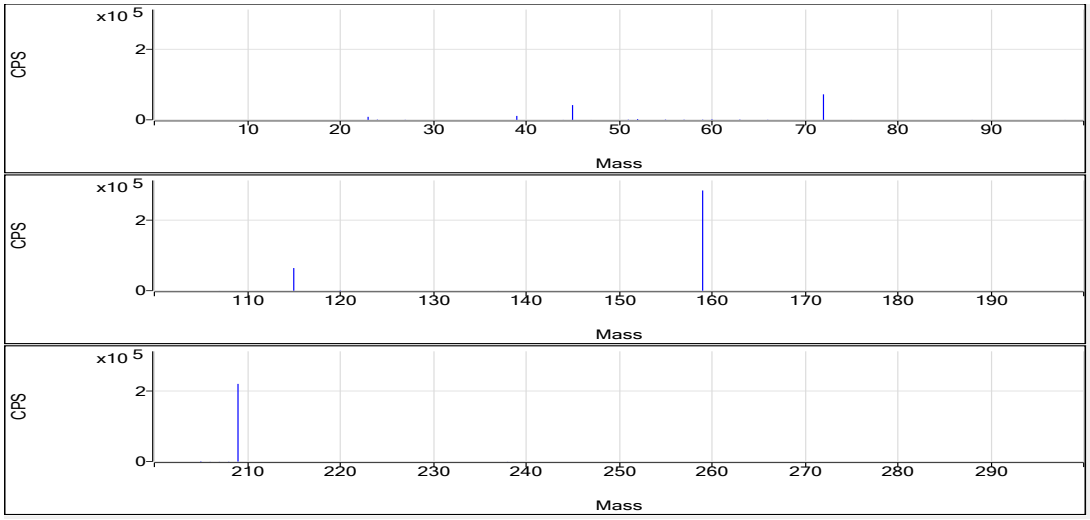


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.022	0.0001	108.00	0.0013	4.694E-05
Be	9	1	No Gas	0.014	0.0001	94.00	0.0013	4.694E-05
Be	9	1	No Gas	0.038	0.0001	138.00	0.0013	4.694E-05
Se	78	2	H2	0.061	0	5.33	0.0004	1.089E-05
Se	78	2	H2	0.058	0	5.33	0.0004	1.089E-05
Se	78	2	H2	0.079	0	6.67	0.0004	1.089E-05
Na	23	3	He	7.554	0.1194	8602.77	0.0017	0.1065
Na	23	3	He	5.098	0.1152	8362.60	0.0017	0.1065
Na	23	3	He	6.72	0.118	8372.71	0.0017	0.1065
Mg	24	3	He	8.25	0.0118	850.05	0.0008	0.004846
Mg	24	3	He	7.816	0.0114	830.05	0.0008	0.004846
Mg	24	3	He	5.285	0.0093	660.04	0.0008	0.004846
Al	27	3	He	15.728	0.0049	350.02	0.0002	0.001063
Al	27	3	He	13.291	0.0043	310.01	0.0002	0.001063
Al	27	3	He	14.865	0.0047	330.02	0.0002	0.001063
K	39	3	He	27.109	0.1586	11424.81	0.0006	0.1436
K	39	3	He	13.933	0.1513	10984.45	0.0006	0.1436
K	39	3	He	10.005	0.1492	10584.11	0.0006	0.1436
Ca	44	3	He	-16.107	0.0011	80.00	0	0.001611
Ca	44	3	He	23.546	0.0023	170.01	0	0.001611
Ca	44	3	He	43.427	0.003	210.01	0	0.001611
Ti	47	3	He	1.123	0.0006	40.00	0.0003	0.0002737
Ti	47	3	He	4.952	0.0015	110.01	0.0003	0.0002737
Ti	47	3	He	0.594	0.0004	30.00	0.0003	0.0002737
V	51	3	He	0.216	0.0099	710.02	0.0117	0.007326
V	51	3	He	0.196	0.0096	698.02	0.0117	0.007326
V	51	3	He	0.188	0.0095	676.02	0.0117	0.007326
Cr	52	3	He	0.293	0.0299	2150.23	0.0152	0.02538
Cr	52	3	He	0.188	0.0282	2050.22	0.0152	0.02538
Cr	52	3	He	0.203	0.0285	2020.23	0.0152	0.02538
Mn	55	3	He	-0.301	0.0121	870.05	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.666	0.0099	720.04	0.0059	0.01385
Mn	55	3	He	-0.58	0.0104	740.05	0.0059	0.01385
Fe	57	3	He	17.627	0.009	650.04	0.0003	0.003918
Fe	57	3	He	19.767	0.0096	700.04	0.0003	0.003918
Fe	57	3	He	11.774	0.0073	520.03	0.0003	0.003918
Co	59	3	He	0.195	0.009	650.04	0.0305	0.003084
Co	59	3	He	0.192	0.009	650.04	0.0305	0.003084
Co	59	3	He	0.204	0.0093	660.04	0.0305	0.003084
Ni	60	3	He	1.124	0.0189	1360.10	0.0088	0.009003
Ni	60	3	He	0.903	0.0169	1230.09	0.0088	0.009003
Ni	60	3	He	1.669	0.0237	1680.16	0.0088	0.009003
Cu	63	3	He	0.275	0.0118	850.06	0.0249	0.004937
Cu	63	3	He	0.305	0.0125	910.06	0.0249	0.004937
Cu	63	3	He	0.243	0.011	780.05	0.0249	0.004937
Zn	66	3	He	0.857	0.0069	500.03	0.0025	0.004836
Zn	66	3	He	-0.342	0.004	290.02	0.0025	0.004836
Zn	66	3	He	-0.075	0.0047	330.02	0.0025	0.004836
As	75	3	He	0.165	0.0007	52.00	0.0017	0.0004347
As	75	3	He	0.384	0.0011	80.00	0.0017	0.0004347
As	75	3	He	0.155	0.0007	50.00	0.0017	0.0004347
Sr	88	3	He	0.124	0.0017	110.00	0.0078	0.0007762
Sr	88	3	He	0.178	0.0022	140.01	0.0078	0.0007762
Sr	88	3	He	0.261	0.0028	180.01	0.0078	0.0007762
Mo	98	3	He	0.041	0.0014	90.00	0.022	0.0005162
Mo	98	3	He	0.026	0.0011	70.00	0.022	0.0005162
Mo	98	3	He	0.048	0.0016	100.00	0.022	0.0005162
Ag	107	3	He	0.014	0.0011	70.00	0.0455	0.0004641
Ag	107	3	He	0.02	0.0014	90.00	0.0455	0.0004641
Ag	107	3	He	0.028	0.0017	110.01	0.0455	0.0004641
Cd	111	3	He	0.009	0.0001	6.00	0.0048	5.152E-05
Cd	111	3	He	0.015	0.0001	8.00	0.0048	5.152E-05
Cd	111	3	He	0.028	0.0002	12.00	0.0048	5.152E-05
Sn	120	3	He	0.198	0.0184	1160.09	0.0143	0.01559
Sn	120	3	He	0.048	0.0163	1050.09	0.0143	0.01559
Sn	120	3	He	-0.039	0.015	960.07	0.0143	0.01559
Sb	121	3	He	0.005	0.0003	20.00	0.0124	0.000258
Sb	121	3	He	0.042	0.0008	50.00	0.0124	0.000258
Sb	121	3	He	0.004	0.0003	20.00	0.0124	0.000258
Ba	137	3	He	0.437	0.0022	140.01	0.0044	0.000309
Ba	137	3	He	0.248	0.0014	90.00	0.0044	0.000309
Ba	137	3	He	0.287	0.0016	100.01	0.0044	0.000309
Tl	205	3	He	0.156	0.0053	1170.10	0.0276	0.001005
Tl	205	3	He	0.159	0.0054	1180.10	0.0276	0.001005
Tl	205	3	He	0.156	0.0053	1160.11	0.0276	0.001005
Pb	208	3	He	0.059	0.0043	460.03	0.0364	0.002176
Pb	208	3	He	0.056	0.0042	470.02	0.0364	0.002176
Pb	208	3	He	0.066	0.0046	430.03	0.0364	0.002176
U	238	3	He	0.029	0.0015	320.02	0.0421	0.00024
U	238	3	He	0.017	0.001	210.01	0.0421	0.00024
U	238	3	He	0.02	0.0011	240.01	0.0421	0.00024
Sc	45	1	No Gas			3236047.45		
Sc	45	1	No Gas			3295979.01		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3232610.89		
Ge	72	1	No Gas			1425255.14		
Ge	72	1	No Gas			1444307.79		
Ge	72	1	No Gas			1415669.51		
Sc	45	2	H2			192094.16		
Sc	45	2	H2			199472.46		
Sc	45	2	H2			195872.30		
Ge	72	2	H2			154157.44		
Ge	72	2	H2			158756.24		
Ge	72	2	H2			159415.39		
In	115	2	H2			432873.74		
In	115	2	H2			445730.31		
In	115	2	H2			437038.08		
Sc	45	3	He			42441.84		
Sc	45	3	He			41048.14		
Sc	45	3	He			41078.33		
Ge	72	3	He			72030.54		
Ge	72	3	He			72583.80		
Ge	72	3	He			70955.33		
In	115	3	He			63012.99		
In	115	3	He			64559.06		
In	115	3	He			63896.70		
Tb	159	3	He			283140.27		
Tb	159	3	He			281698.86		
Tb	159	3	He			282638.57		
Bi	209	3	He			219818.55		
Bi	209	3	He			219043.84		
Bi	209	3	He			218048.55		

Quantitation Report

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Comment	H2 ICP
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

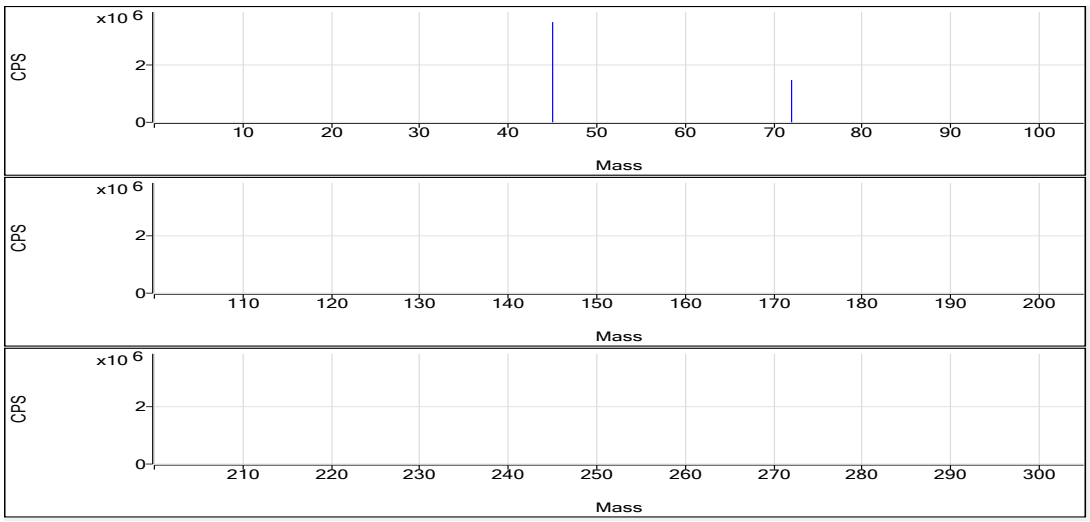
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	2.363	ppb	2.2	4624.07	0.0032	Pulse	0.5000	3
Se	78	72	H2	1.994	ppb	4.1	126.89	0.0008	Pulse	1.5000	3
Na	23	72	He	401.245	ppb	4.0	59706.91	0.7957	Pulse	0.1000	3
Mg	24	72	He	13932.204	ppb	1.5	881858.40	11.7511	Pulse	0.1000	3
Al	27	72	He	55065.462	ppb	1.4	997617.93	13.2935	Pulse	0.1000	3
K	39	72	He	5874.894	ppb	0.9	254258.57	3.3878	Pulse	0.1000	3
Ca	44	72	He	9969.059	ppb	0.9	23359.31	0.3112	Pulse	0.1000	3
Ti	47	72	He	316.003	ppb	2.2	5968.09	0.0795	Pulse	0.1000	3
V	51	72	He	82.546	ppb	1.9	73011.06	0.9729	Pulse	0.5000	3
Cr	52	72	He	77.790	ppb	1.9	90795.09	1.2099	Pulse	0.1000	3
Mn	55	72	He	2083.311	ppb	0.8	923888.32	12.3104	Pulse	0.1000	3
Fe	57	72	He	97348.847	ppb	1.6	2116791.01	28.2073	Pulse	0.1000	3
Co	59	72	He	40.935	ppb	1.6	93976.89	1.2520	Pulse	0.1000	3
Ni	60	72	He	94.274	ppb	3.0	62880.33	0.8380	Pulse	0.1000	3
Cu	63	72	He	78.487	ppb	1.5	147251.99	1.9622	Pulse	0.1000	3
Zn	66	72	He	342.517	ppb	0.6	63516.82	0.8463	Pulse	0.1000	3
As	75	72	He	27.308	ppb	2.8	3596.47	0.0479	Pulse	0.5000	3
Sr	88	115	He	100.112	ppb	1.0	49938.27	0.7834	Pulse	0.1000	3
Mo	98	115	He	2.872	ppb	7.7	4064.07	0.0638	Pulse	0.1000	3
Ag	107	115	He	0.334	ppb	6.3	996.74	0.0156	Pulse	0.1000	3
Cd	111	115	He	0.762	ppb	11.5	236.67	0.0037	Pulse	0.5000	3
Sn	120	115	He	21.074	ppb	4.1	20145.26	0.3161	Pulse	0.1000	3
Sb	121	115	He	1.062	ppb	13.3	856.73	0.0134	Pulse	0.1000	3
Ba	137	115	He	501.602	ppb	0.9	139913.54	2.1947	Pulse	0.1000	3
Tl	205	209	He	0.496	ppb	2.8	3337.21	0.0147	Pulse	0.1000	3
Pb	208	209	He	235.457	ppb	1.1	1943413.42	8.5722	Pulse	0.1000	3
U	238	209	He	3.454	ppb	2.0	32992.81	0.1455	Pulse	0.1000	3

ISTD Table:

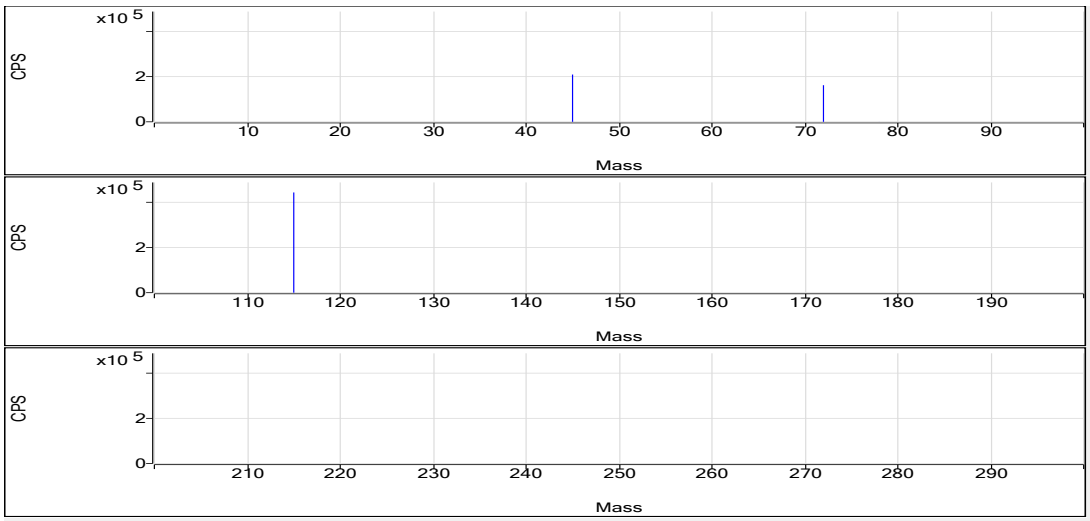
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3476269.53	0.9	107.3	Pulse	0.1000	3
No Gas	Ge	72	1467260.50	1.0	101.9	Pulse	0.1000	3
H2	Sc	45	208244.12	0.9	106.6	Pulse	0.1000	3
H2	Ge	72	161244.31	2.4	98.9	Pulse	0.1000	3
H2	In	115	441453.85	1.9	101.9	Pulse	0.1000	3
He	Sc	45	44421.51	1.3	111.1	Pulse	0.1000	3
He	Ge	72	75052.24	1.0	103.8	Pulse	0.1000	3
He	In	115	63752.81	1.0	98.7	Pulse	0.1000	3
He	Tb	159	303573.69	1.0	106.1	Pulse	0.1000	3
He	Bi	209	226727.85	1.1	102.0	Pulse	0.1000	3

No Gas

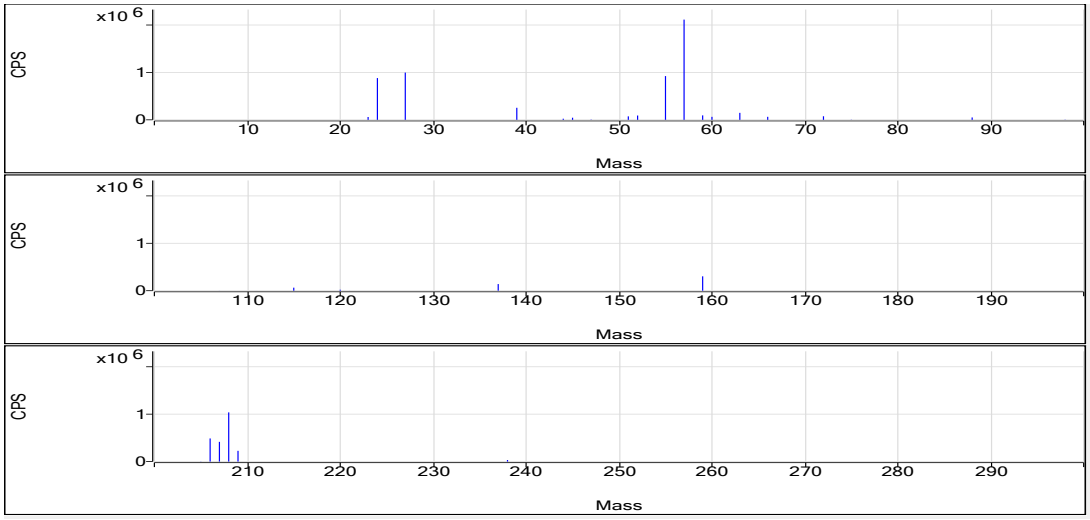


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	2.323	0.0031	4508.70	0.0013	4.694E-05
Be	9	1	No Gas	2.343	0.0031	4636.74	0.0013	4.694E-05
Be	9	1	No Gas	2.422	0.0032	4726.76	0.0013	4.694E-05
Se	78	2	H2	2.071	0.0008	128.67	0.0004	1.089E-05
Se	78	2	H2	1.908	0.0008	121.33	0.0004	1.089E-05
Se	78	2	H2	2.002	0.0008	130.67	0.0004	1.089E-05
Na	23	3	He	394.457	0.7841	59218.71	0.0017	0.1065
Na	23	3	He	389.784	0.776	58565.51	0.0017	0.1065
Na	23	3	He	419.493	0.8271	61336.51	0.0017	0.1065
Mg	24	3	He	13839.794	11.6732	881653.19	0.0008	0.004846
Mg	24	3	He	13787.244	11.6289	877604.44	0.0008	0.004846
Mg	24	3	He	14169.574	11.9512	886317.56	0.0008	0.004846
Al	27	3	He	54394.799	13.1317	991807.25	0.0002	0.001063
Al	27	3	He	54887.266	13.2505	999985.45	0.0002	0.001063
Al	27	3	He	55914.32	13.4985	1001061.08	0.0002	0.001063
K	39	3	He	5816.178	3.3554	253426.81	0.0006	0.1436
K	39	3	He	5913.854	3.4093	257294.68	0.0006	0.1436
K	39	3	He	5894.65	3.3987	252054.21	0.0006	0.1436
Ca	44	3	He	10020.969	0.3129	23629.75	0	0.001611
Ca	44	3	He	9870.875	0.3082	23259.03	0	0.001611
Ca	44	3	He	10015.332	0.3127	23189.14	0	0.001611
Ti	47	3	He	322.099	0.081	6121.50	0.0003	0.0002737
Ti	47	3	He	308.614	0.0777	5861.40	0.0003	0.0002737
Ti	47	3	He	317.295	0.0798	5921.38	0.0003	0.0002737
V	51	3	He	81.524	0.961	72580.28	0.0117	0.007326
V	51	3	He	81.806	0.9643	72771.27	0.0117	0.007326
V	51	3	He	84.307	0.9935	73681.62	0.0117	0.007326
Cr	52	3	He	77.381	1.2037	90912.26	0.0152	0.02538
Cr	52	3	He	76.543	1.1909	89875.69	0.0152	0.02538
Cr	52	3	He	79.445	1.2351	91597.32	0.0152	0.02538
Mn	55	3	He	2066.198	12.2094	922153.42	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2086.777	12.3309	930582.41	0.0059	0.01385
Mn	55	3	He	2096.957	12.391	918929.13	0.0059	0.01385
Fe	57	3	He	96285.527	27.8992	2107174.03	0.0003	0.003918
Fe	57	3	He	96633.648	28.0001	2113099.97	0.0003	0.003918
Fe	57	3	He	99127.366	28.7226	2130099.03	0.0003	0.003918
Co	59	3	He	41.033	1.255	94789.41	0.0305	0.003084
Co	59	3	He	41.538	1.2704	95875.41	0.0305	0.003084
Co	59	3	He	40.234	1.2306	91265.84	0.0305	0.003084
Ni	60	3	He	91.625	0.8147	61531.63	0.0088	0.009003
Ni	60	3	He	93.938	0.835	63017.31	0.0088	0.009003
Ni	60	3	He	97.259	0.8642	64092.04	0.0088	0.009003
Cu	63	3	He	77.544	1.9387	146423.65	0.0249	0.004937
Cu	63	3	He	78.159	1.954	147463.50	0.0249	0.004937
Cu	63	3	He	79.759	1.9939	147868.81	0.0249	0.004937
Zn	66	3	He	340.087	0.8404	63470.02	0.0025	0.004836
Zn	66	3	He	343.721	0.8493	64092.97	0.0025	0.004836
Zn	66	3	He	343.743	0.8493	62987.46	0.0025	0.004836
As	75	3	He	27.099	0.0476	3592.47	0.0017	0.0004347
As	75	3	He	26.679	0.0468	3534.46	0.0017	0.0004347
As	75	3	He	28.146	0.0494	3662.49	0.0017	0.0004347
Sr	88	3	He	99.527	0.7788	49697.38	0.0078	0.0007762
Sr	88	3	He	101.307	0.7927	49988.60	0.0078	0.0007762
Sr	88	3	He	99.502	0.7786	50128.84	0.0078	0.0007762
Mo	98	3	He	2.617	0.0581	3710.61	0.022	0.0005162
Mo	98	3	He	3.016	0.0669	4220.77	0.022	0.0005162
Mo	98	3	He	2.982	0.0662	4260.82	0.022	0.0005162
Ag	107	3	He	0.338	0.0158	1010.08	0.0455	0.0004641
Ag	107	3	He	0.352	0.0165	1040.07	0.0455	0.0004641
Ag	107	3	He	0.311	0.0146	940.06	0.0455	0.0004641
Cd	111	3	He	0.773	0.0038	240.00	0.0048	5.152E-05
Cd	111	3	He	0.67	0.0033	206.00	0.0048	5.152E-05
Cd	111	3	He	0.843	0.0041	264.00	0.0048	5.152E-05
Sn	120	3	He	20.509	0.308	19654.47	0.0143	0.01559
Sn	120	3	He	22.059	0.3301	20816.46	0.0143	0.01559
Sn	120	3	He	20.655	0.3101	19964.86	0.0143	0.01559
Sb	121	3	He	1.053	0.0133	850.06	0.0124	0.000258
Sb	121	3	He	0.925	0.0117	740.05	0.0124	0.000258
Sb	121	3	He	1.206	0.0152	980.07	0.0124	0.000258
Ba	137	3	He	497.349	2.1761	138864.86	0.0044	0.000309
Ba	137	3	He	506.423	2.2158	139730.93	0.0044	0.000309
Ba	137	3	He	501.035	2.1922	141144.84	0.0044	0.000309
Tl	205	3	He	0.511	0.0151	3470.57	0.0276	0.001005
Tl	205	3	He	0.483	0.0143	3240.51	0.0276	0.001005
Tl	205	3	He	0.495	0.0147	3300.56	0.0276	0.001005
Pb	208	3	He	232.911	8.4795	1042312.56	0.0364	0.002176
Pb	208	3	He	235.503	8.5739	1034886.39	0.0364	0.002176
Pb	208	3	He	237.957	8.6632	1039694.36	0.0364	0.002176
U	238	3	He	3.377	0.1423	32651.99	0.0421	0.00024
U	238	3	He	3.476	0.1464	33072.85	0.0421	0.00024
U	238	3	He	3.509	0.1479	33253.58	0.0421	0.00024
Sc	45	1	No Gas			3450192.45		
Sc	45	1	No Gas			3510452.76		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3468163.39		
Ge	72	1	No Gas			1454783.88		
Ge	72	1	No Gas			1483261.70		
Ge	72	1	No Gas			1463735.92		
Sc	45	2	H2			207044.14		
Sc	45	2	H2			207174.55		
Sc	45	2	H2			210513.67		
Ge	72	2	H2			157452.89		
Ge	72	2	H2			160969.99		
Ge	72	2	H2			165310.04		
In	115	2	H2			431906.20		
In	115	2	H2			446814.68		
In	115	2	H2			445640.66		
Sc	45	3	He			45040.46		
Sc	45	3	He			44257.62		
Sc	45	3	He			43966.44		
Ge	72	3	He			75527.99		
Ge	72	3	He			75467.58		
Ge	72	3	He			74161.16		
In	115	3	He			63966.74		
In	115	3	He			63223.33		
In	115	3	He			64539.75		
Tb	159	3	He			305723.80		
Tb	159	3	He			304917.34		
Tb	159	3	He			300079.94		
Bi	209	3	He			229467.42		
Bi	209	3	He			225837.05		
Bi	209	3	He			224879.08		

Quantitation Report

Data File Name	234SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 18:41:13
Sample Name	410-136557-H-21-A @10
Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

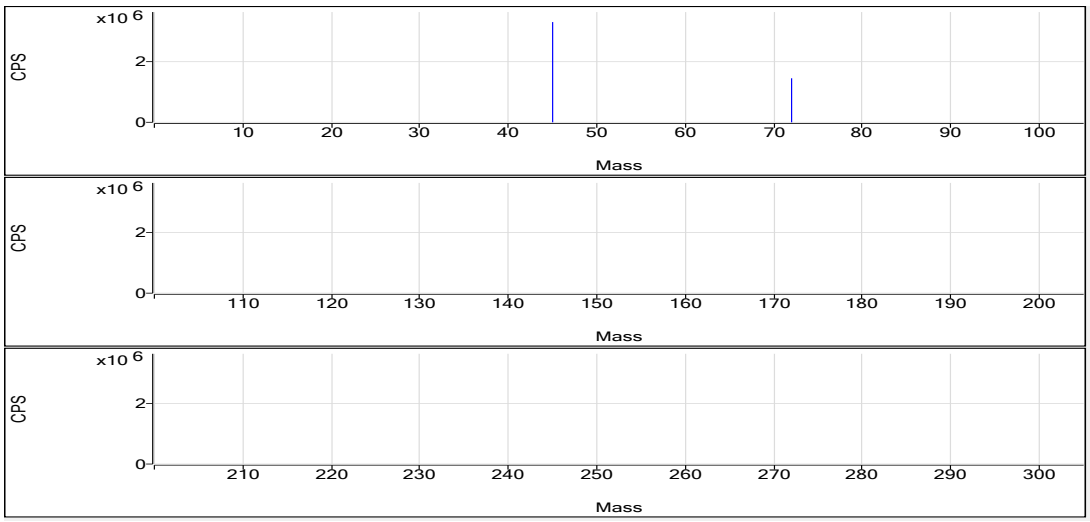
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.499	ppb	12.4	1019.37	0.0007	Pulse	0.5000	3
Se	78	72	H2	0.440	ppb	12.4	29.33	0.0002	Pulse	1.5000	3
Na	23	72	He	77.502	ppb	4.0	17474.16	0.2396	Pulse	0.1000	3
Mg	24	72	He	2952.410	ppb	0.8	181888.55	2.4940	Pulse	0.1000	3
Al	27	72	He	11660.910	ppb	0.7	205355.73	2.8159	Pulse	0.1000	3
K	39	72	He	1289.914	ppb	0.8	62422.77	0.8559	Pulse	0.1000	3
Ca	44	72	He	2241.441	ppb	4.6	5194.42	0.0712	Pulse	0.1000	3
Ti	47	72	He	74.370	ppb	7.0	1380.11	0.0189	Pulse	0.1000	3
V	51	72	He	17.538	ppb	0.8	15496.23	0.2125	Pulse	0.5000	3
Cr	52	72	He	16.582	ppb	3.9	20268.09	0.2779	Pulse	0.1000	3
Mn	55	72	He	444.117	ppb	1.4	192170.38	2.6352	Pulse	0.1000	3
Fe	57	72	He	20760.074	ppb	0.9	438896.70	6.0184	Pulse	0.1000	3
Co	59	72	He	8.639	ppb	1.0	19446.96	0.2667	Pulse	0.1000	3
Ni	60	72	He	20.824	ppb	2.7	14010.49	0.1921	Pulse	0.1000	3
Cu	63	72	He	16.554	ppb	1.1	30465.97	0.4177	Pulse	0.1000	3
Zn	66	72	He	76.570	ppb	1.7	14070.63	0.1930	Pulse	0.1000	3
As	75	72	He	5.633	ppb	9.2	746.02	0.0102	Pulse	0.5000	3
Sr	88	115	He	20.612	ppb	2.5	10374.10	0.1619	Pulse	0.1000	3
Mo	98	115	He	0.610	ppb	10.6	893.39	0.0139	Pulse	0.1000	3
Ag	107	115	He	0.099	ppb	23.3	316.68	0.0049	Pulse	0.1000	3
Cd	111	115	He	0.184	ppb	19.9	60.00	0.0009	Pulse	0.5000	3
Sn	120	115	He	4.461	ppb	3.4	5074.43	0.0792	Pulse	0.1000	3
Sb	121	115	He	0.290	ppb	9.0	246.68	0.0038	Pulse	0.1000	3
Ba	137	115	He	103.994	ppb	0.8	29171.55	0.4553	Pulse	0.1000	3
Tl	205	209	He	0.140	ppb	6.8	1090.09	0.0049	Pulse	0.1000	3
Pb	208	209	He	48.832	ppb	1.4	398502.91	1.7795	Pulse	0.1000	3
U	238	209	He	0.741	ppb	2.9	7032.21	0.0314	Pulse	0.1000	3

ISTD Table:

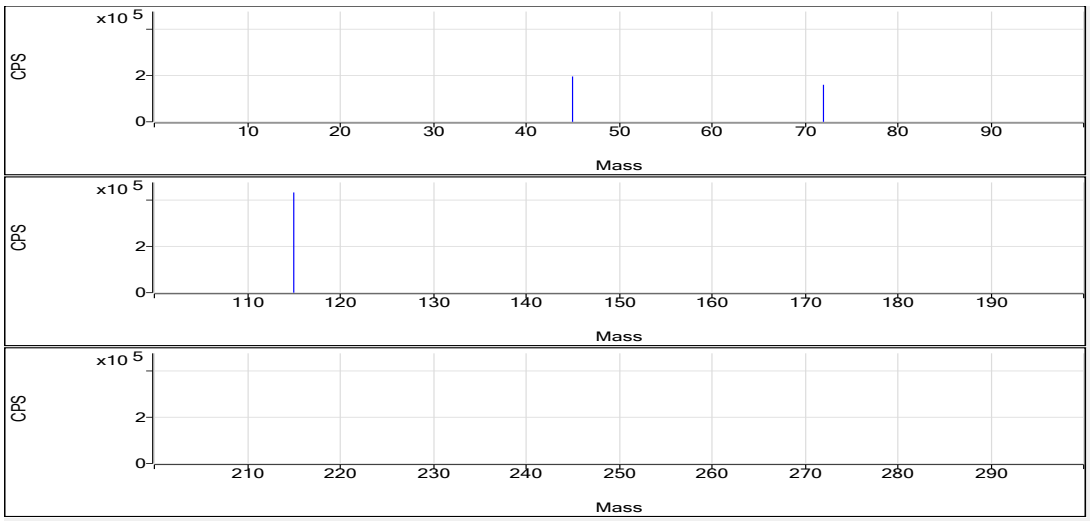
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3303301.93	0.3	101.9	Pulse	0.1000	3
No Gas	Ge	72	1450829.04	0.5	100.8	Pulse	0.1000	3
H2	Sc	45	196703.62	2.2	100.7	Pulse	0.1000	3
H2	Ge	72	160650.23	2.3	98.6	Pulse	0.1000	3
H2	In	115	434748.52	0.3	100.3	Pulse	0.1000	3
He	Sc	45	42001.04	0.5	105.0	Pulse	0.1000	3
He	Ge	72	72927.99	0.6	100.9	Pulse	0.1000	3
He	In	115	64078.27	0.6	99.2	Pulse	0.1000	3
He	Tb	159	290102.04	0.9	101.4	Pulse	0.1000	3
He	Bi	209	223951.55	0.6	100.8	Pulse	0.1000	3

No Gas

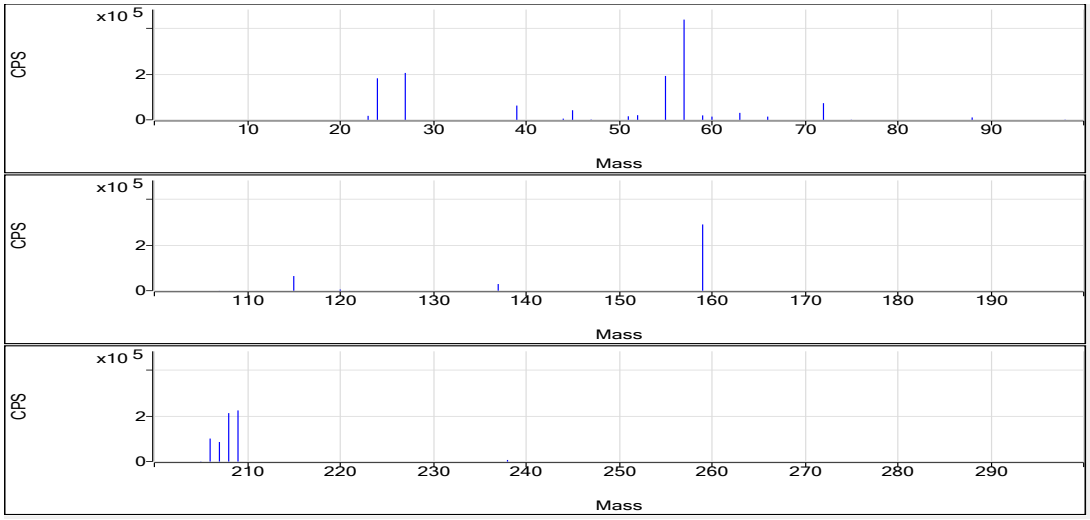


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.434	0.0006	898.03	0.0013	4.694E-05
Be	9	1	No Gas	0.507	0.0007	1028.04	0.0013	4.694E-05
Be	9	1	No Gas	0.557	0.0008	1132.05	0.0013	4.694E-05
Se	78	2	H2	0.377	0.0002	24.67	0.0004	1.089E-05
Se	78	2	H2	0.466	0.0002	31.33	0.0004	1.089E-05
Se	78	2	H2	0.477	0.0002	32.00	0.0004	1.089E-05
Na	23	3	He	80.029	0.2439	17911.19	0.0017	0.1065
Na	23	3	He	74.095	0.2337	16970.15	0.0017	0.1065
Na	23	3	He	78.382	0.2411	17541.14	0.0017	0.1065
Mg	24	3	He	2975.254	2.5133	184543.01	0.0008	0.004846
Mg	24	3	He	2956.3	2.4973	181312.48	0.0008	0.004846
Mg	24	3	He	2925.675	2.4715	179810.15	0.0008	0.004846
Al	27	3	He	11574.266	2.795	205230.04	0.0002	0.001063
Al	27	3	He	11686.646	2.8222	204897.18	0.0002	0.001063
Al	27	3	He	11721.817	2.8306	205939.98	0.0002	0.001063
K	39	3	He	1294.247	0.8583	63025.23	0.0006	0.1436
K	39	3	He	1297.849	0.8603	62462.59	0.0006	0.1436
K	39	3	He	1277.646	0.8492	61780.49	0.0006	0.1436
Ca	44	3	He	2233.073	0.071	5211.10	0	0.001611
Ca	44	3	He	2347.723	0.0745	5411.18	0	0.001611
Ca	44	3	He	2143.527	0.0682	4960.98	0	0.001611
Ti	47	3	He	73.315	0.0187	1370.11	0.0003	0.0002737
Ti	47	3	He	69.764	0.0178	1290.10	0.0003	0.0002737
Ti	47	3	He	80.032	0.0203	1480.11	0.0003	0.0002737
V	51	3	He	17.592	0.2131	15648.38	0.0117	0.007326
V	51	3	He	17.379	0.2106	15292.01	0.0117	0.007326
V	51	3	He	17.643	0.2137	15548.30	0.0117	0.007326
Cr	52	3	He	17.174	0.2869	21066.03	0.0152	0.02538
Cr	52	3	He	15.884	0.2673	19403.53	0.0152	0.02538
Cr	52	3	He	16.688	0.2795	20334.71	0.0152	0.02538
Mn	55	3	He	437.042	2.5935	190429.78	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	449.599	2.6676	193674.63	0.0059	0.01385
Mn	55	3	He	445.711	2.6446	192406.72	0.0059	0.01385
Fe	57	3	He	20586.628	5.9682	438224.21	0.0003	0.003918
Fe	57	3	He	20963.717	6.0774	441239.64	0.0003	0.003918
Fe	57	3	He	20729.877	6.0097	437226.24	0.0003	0.003918
Co	59	3	He	8.565	0.2644	19413.50	0.0305	0.003084
Co	59	3	He	8.74	0.2697	19583.78	0.0305	0.003084
Co	59	3	He	8.613	0.2659	19343.61	0.0305	0.003084
Ni	60	3	He	20.841	0.1923	14117.18	0.0088	0.009003
Ni	60	3	He	21.387	0.1971	14307.47	0.0088	0.009003
Ni	60	3	He	20.245	0.187	13606.81	0.0088	0.009003
Cu	63	3	He	16.745	0.4225	31023.64	0.0249	0.004937
Cu	63	3	He	16.389	0.4136	30031.69	0.0249	0.004937
Cu	63	3	He	16.526	0.4171	30342.58	0.0249	0.004937
Zn	66	3	He	75.125	0.1894	13907.11	0.0025	0.004836
Zn	66	3	He	77.066	0.1942	14097.35	0.0025	0.004836
Zn	66	3	He	77.518	0.1953	14207.43	0.0025	0.004836
As	75	3	He	5.388	0.0098	720.02	0.0017	0.0004347
As	75	3	He	6.229	0.0113	818.03	0.0017	0.0004347
As	75	3	He	5.282	0.0096	700.02	0.0017	0.0004347
Sr	88	3	He	20.592	0.1617	10434.12	0.0078	0.0007762
Sr	88	3	He	21.137	0.166	10574.23	0.0078	0.0007762
Sr	88	3	He	20.107	0.158	10113.96	0.0078	0.0007762
Mo	98	3	He	0.674	0.0153	990.07	0.022	0.0005162
Mo	98	3	He	0.611	0.014	890.06	0.022	0.0005162
Mo	98	3	He	0.544	0.0125	800.05	0.022	0.0005162
Ag	107	3	He	0.075	0.0039	250.01	0.0455	0.0004641
Ag	107	3	He	0.121	0.006	380.02	0.0455	0.0004641
Ag	107	3	He	0.1	0.005	320.01	0.0455	0.0004641
Cd	111	3	He	0.151	0.0008	50.00	0.0048	5.152E-05
Cd	111	3	He	0.179	0.0009	58.00	0.0048	5.152E-05
Cd	111	3	He	0.224	0.0011	72.00	0.0048	5.152E-05
Sn	120	3	He	4.562	0.0806	5201.14	0.0143	0.01559
Sn	120	3	He	4.535	0.0802	5111.10	0.0143	0.01559
Sn	120	3	He	4.286	0.0767	4911.05	0.0143	0.01559
Sb	121	3	He	0.279	0.0037	240.01	0.0124	0.000258
Sb	121	3	He	0.27	0.0036	230.01	0.0124	0.000258
Sb	121	3	He	0.319	0.0042	270.01	0.0124	0.000258
Ba	137	3	He	103.048	0.4511	29101.55	0.0044	0.000309
Ba	137	3	He	104.507	0.4575	29141.56	0.0044	0.000309
Ba	137	3	He	104.428	0.4572	29271.55	0.0044	0.000309
Tl	205	3	He	0.137	0.0048	1070.08	0.0276	0.001005
Tl	205	3	He	0.15	0.0052	1150.09	0.0276	0.001005
Tl	205	3	He	0.132	0.0047	1050.09	0.0276	0.001005
Pb	208	3	He	49.186	1.7924	213269.35	0.0364	0.002176
Pb	208	3	He	49.286	1.796	212702.95	0.0364	0.002176
Pb	208	3	He	48.023	1.7501	210528.61	0.0364	0.002176
U	238	3	He	0.72	0.0305	6832.08	0.0421	0.00024
U	238	3	He	0.763	0.0323	7202.33	0.0421	0.00024
U	238	3	He	0.739	0.0313	7062.21	0.0421	0.00024
Sc	45	1	No Gas			3312320.26		
Sc	45	1	No Gas			3292231.20		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3305354.33		
Ge	72	1	No Gas			1455955.45		
Ge	72	1	No Gas			1442301.38		
Ge	72	1	No Gas			1454230.29		
Sc	45	2	H2			192701.19		
Sc	45	2	H2			201203.28		
Sc	45	2	H2			196206.38		
Ge	72	2	H2			156329.65		
Ge	72	2	H2			162811.88		
Ge	72	2	H2			162809.16		
In	115	2	H2			433483.63		
In	115	2	H2			435919.84		
In	115	2	H2			434842.10		
Sc	45	3	He			41770.64		
Sc	45	3	He			42091.00		
Sc	45	3	He			42141.47		
Ge	72	3	He			73426.95		
Ge	72	3	He			72603.19		
Ge	72	3	He			72753.82		
In	115	3	He			64549.62		
In	115	3	He			63736.25		
In	115	3	He			64067.69		
Tb	159	3	He			289094.35		
Tb	159	3	He			293062.14		
Tb	159	3	He			288149.62		
Bi	209	3	He			223668.51		
Bi	209	3	He			222681.95		
Bi	209	3	He			225504.18		

Quantitation Report

Data File Name	235SMPL.d
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Acq Time	2023-08-10 18:43:13
Sample Name	410-136557-H-19-A @2
Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

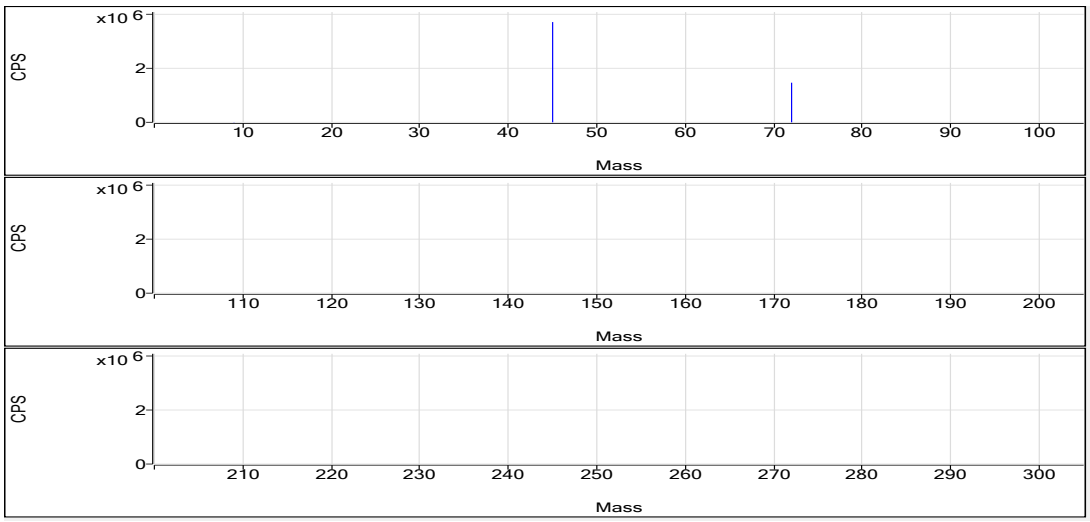
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	4.004	ppb	2.5	7750.68	0.0053	Pulse	0.5000	3
Se	78	72	H2	0.284	ppb	14.0	19.34	0.0001	Pulse	1.5000	3
Na	23	72	He	348.087	ppb	0.4	52978.26	0.7044	Pulse	0.1000	3
Mg	24	72	He	25967.893	ppb	0.4	1646950.76	21.8984	Pulse	0.1000	3
Al	27	72	He	99931.816	ppb	0.1	1814360.23	24.1240	Pulse	0.1000	3
K	39	72	He	9919.184	ppb	0.9	422751.26	5.6211	Pulse	0.1000	3
Ca	44	72	He	4037.508	ppb	2.5	9553.35	0.1270	Pulse	0.1000	3
Ti	47	72	He	395.591	ppb	1.8	7482.16	0.0995	Pulse	0.1000	3
V	51	72	He	134.385	ppb	0.9	118777.83	1.5793	Pulse	0.5000	3
Cr	52	72	He	109.367	ppb	1.5	127154.03	1.6907	Pulse	0.1000	3
Mn	55	72	He	5416.651	ppb	0.9	2405535.44	31.9852	Pulse	0.1000	3
Fe	57	72	He	173064.684	ppb	0.9	3771153.07	50.1433	Pulse	0.1000	3
Co	59	72	He	73.628	ppb	1.2	169184.99	2.2495	Pulse	0.1000	3
Ni	60	72	He	173.118	ppb	0.3	115167.53	1.5313	Pulse	0.1000	3
Cu	63	72	He	121.373	ppb	0.4	228010.29	3.0316	Pulse	0.1000	3
Zn	66	72	He	487.203	ppb	1.0	90382.54	1.2018	Pulse	0.1000	3
As	75	72	He	58.189	ppb	1.3	7644.07	0.1016	Pulse	0.5000	3
Sr	88	115	He	57.185	ppb	3.6	29087.29	0.4478	Pulse	0.1000	3
Mo	98	115	He	1.557	ppb	3.9	2260.26	0.0348	Pulse	0.1000	3
Ag	107	115	He	0.072	ppb	16.9	243.34	0.0037	Pulse	0.1000	3
Cd	111	115	He	0.581	ppb	10.8	184.67	0.0028	Pulse	0.5000	3
Sn	120	115	He	3.507	ppb	6.0	4260.81	0.0656	Pulse	0.1000	3
Sb	121	115	He	1.212	ppb	6.6	993.42	0.0153	Pulse	0.1000	3
Ba	137	115	He	604.328	ppb	1.0	171750.76	2.6441	Pulse	0.1000	3
Tl	205	209	He	0.697	ppb	1.1	4624.30	0.0203	Pulse	0.1000	3
Pb	208	209	He	93.174	ppb	0.2	774290.84	3.3935	Pulse	0.1000	3
U	238	209	He	5.349	ppb	2.0	51399.49	0.2253	Pulse	0.1000	3

ISTD Table:

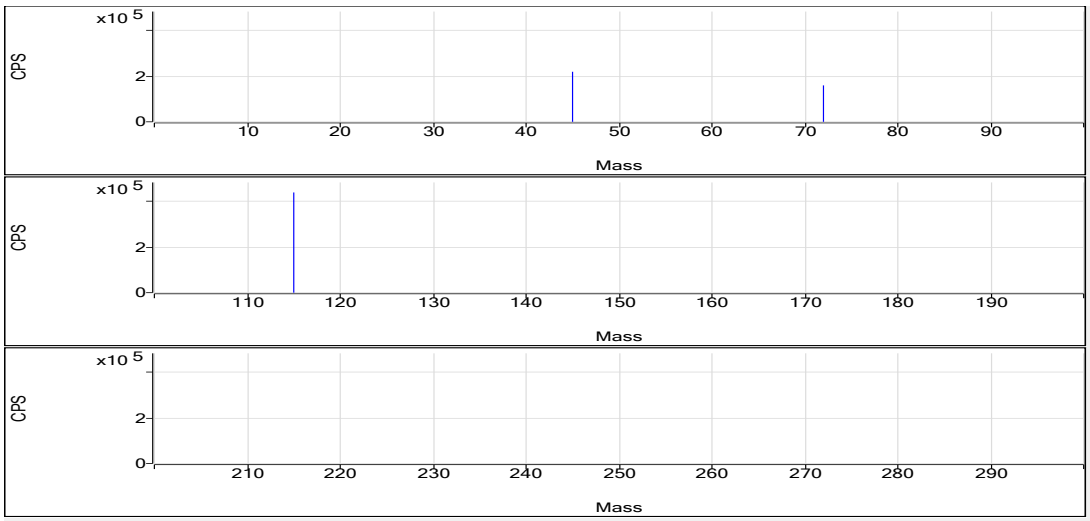
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3695503.80	1.0	114.0	Pulse	0.1000	3
No Gas	Ge	72	1460169.25	0.4	101.4	Pulse	0.1000	3
H2	Sc	45	219176.37	0.9	112.2	Pulse	0.1000	3
H2	Ge	72	159505.03	1.0	97.8	Pulse	0.1000	3
H2	In	115	438885.40	1.2	101.3	Pulse	0.1000	3
He	Sc	45	46795.27	1.8	117.0	Pulse	0.1000	3
He	Ge	72	75209.64	0.5	104.0	Pulse	0.1000	3
He	In	115	64958.24	0.8	100.6	Pulse	0.1000	3
He	Tb	159	309054.51	0.7	108.1	Pulse	0.1000	3
He	Bi	209	228171.43	0.3	102.7	Pulse	0.1000	3

No Gas

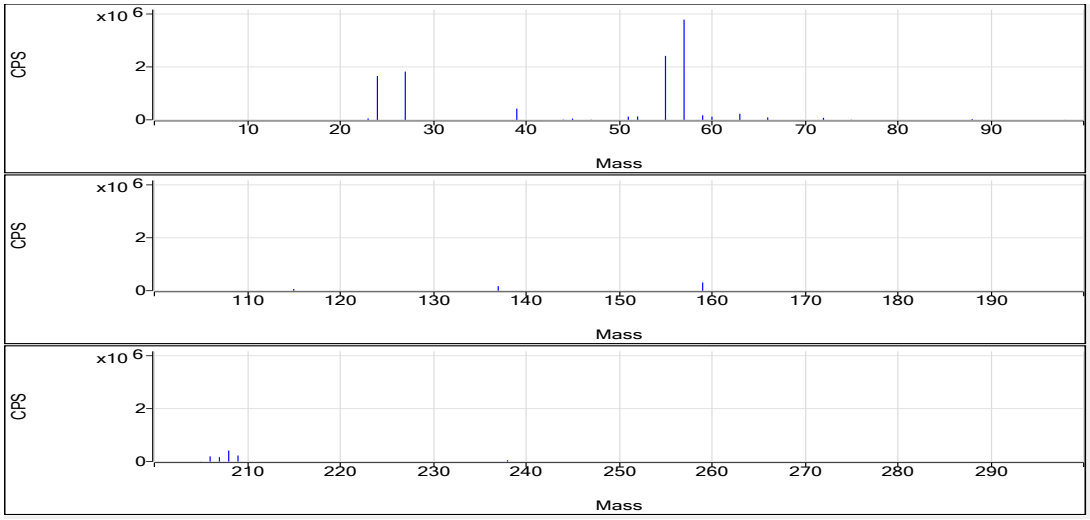


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	3.889	0.0052	7567.92	0.0013	4.694E-05
Be	9	1	No Gas	4.039	0.0054	7794.05	0.0013	4.694E-05
Be	9	1	No Gas	4.084	0.0054	7890.08	0.0013	4.694E-05
Se	78	2	H2	0.238	0.0001	16.67	0.0004	1.089E-05
Se	78	2	H2	0.309	0.0001	20.67	0.0004	1.089E-05
Se	78	2	H2	0.304	0.0001	20.67	0.0004	1.089E-05
Na	23	3	He	348.709	0.7055	52794.05	0.0017	0.1065
Na	23	3	He	349.045	0.7061	53376.15	0.0017	0.1065
Na	23	3	He	346.506	0.7017	52764.59	0.0017	0.1065
Mg	24	3	He	26038.361	21.9578	1643208.26	0.0008	0.004846
Mg	24	3	He	25842.618	21.7928	1647488.73	0.0008	0.004846
Mg	24	3	He	26022.7	21.9446	1650155.29	0.0008	0.004846
Al	27	3	He	99840.541	24.102	1803665.91	0.0002	0.001063
Al	27	3	He	99887.647	24.1134	1822918.25	0.0002	0.001063
Al	27	3	He	100067.258	24.1567	1816496.54	0.0002	0.001063
K	39	3	He	9988.351	5.6593	423514.13	0.0006	0.1436
K	39	3	He	9819.777	5.5662	420795.58	0.0006	0.1436
K	39	3	He	9949.423	5.6378	423944.06	0.0006	0.1436
Ca	44	3	He	3924.771	0.1235	9243.12	0	0.001611
Ca	44	3	He	4072.176	0.1281	9683.49	0	0.001611
Ca	44	3	He	4115.579	0.1294	9733.43	0	0.001611
Ti	47	3	He	393.865	0.099	7412.14	0.0003	0.0002737
Ti	47	3	He	403.597	0.1015	7672.24	0.0003	0.0002737
Ti	47	3	He	389.312	0.0979	7362.11	0.0003	0.0002737
V	51	3	He	135.704	1.5948	119343.38	0.0117	0.007326
V	51	3	He	133.484	1.5688	118596.95	0.0117	0.007326
V	51	3	He	133.968	1.5745	118393.16	0.0117	0.007326
Cr	52	3	He	111.058	1.7165	128453.20	0.0152	0.02538
Cr	52	3	He	107.754	1.6662	125960.05	0.0152	0.02538
Cr	52	3	He	109.289	1.6896	127048.85	0.0152	0.02538
Mn	55	3	He	5472.277	32.3135	2418174.81	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	5390.24	31.8293	2406228.25	0.0059	0.01385
Mn	55	3	He	5387.435	31.8128	2392203.25	0.0059	0.01385
Fe	57	3	He	174928.079	50.6831	3792859.63	0.0003	0.003918
Fe	57	3	He	172012.503	49.8385	3767680.57	0.0003	0.003918
Fe	57	3	He	172253.47	49.9083	3752919.01	0.0003	0.003918
Co	59	3	He	74.219	2.2676	169691.87	0.0305	0.003084
Co	59	3	He	74.052	2.2624	171035.43	0.0305	0.003084
Co	59	3	He	72.614	2.2186	166827.67	0.0305	0.003084
Ni	60	3	He	172.654	1.5272	114287.66	0.0088	0.009003
Ni	60	3	He	173.175	1.5318	115799.21	0.0088	0.009003
Ni	60	3	He	173.525	1.5349	115415.73	0.0088	0.009003
Cu	63	3	He	121.265	3.0289	226669.63	0.0249	0.004937
Cu	63	3	He	121.866	3.0439	230114.53	0.0249	0.004937
Cu	63	3	He	120.989	3.022	227246.72	0.0249	0.004937
Zn	66	3	He	491.389	1.2121	90704.52	0.0025	0.004836
Zn	66	3	He	482.019	1.189	89889.13	0.0025	0.004836
Zn	66	3	He	488.202	1.2042	90553.96	0.0025	0.004836
As	75	3	He	57.622	0.1006	7532.02	0.0017	0.0004347
As	75	3	He	57.935	0.1012	7650.06	0.0017	0.0004347
As	75	3	He	59.011	0.1031	7750.13	0.0017	0.0004347
Sr	88	3	He	56.516	0.4426	28499.55	0.0078	0.0007762
Sr	88	3	He	59.482	0.4658	30283.13	0.0078	0.0007762
Sr	88	3	He	55.557	0.4351	28479.20	0.0078	0.0007762
Mo	98	3	He	1.556	0.0348	2240.26	0.022	0.0005162
Mo	98	3	He	1.618	0.0361	2350.28	0.022	0.0005162
Mo	98	3	He	1.496	0.0335	2190.25	0.022	0.0005162
Ag	107	3	He	0.058	0.0031	200.01	0.0455	0.0004641
Ag	107	3	He	0.078	0.004	260.01	0.0455	0.0004641
Ag	107	3	He	0.08	0.0041	270.01	0.0455	0.0004641
Cd	111	3	He	0.52	0.0025	164.00	0.0048	5.152E-05
Cd	111	3	He	0.579	0.0028	184.00	0.0048	5.152E-05
Cd	111	3	He	0.645	0.0031	206.00	0.0048	5.152E-05
Sn	120	3	He	3.504	0.0655	4220.77	0.0143	0.01559
Sn	120	3	He	3.298	0.0626	4070.77	0.0143	0.01559
Sn	120	3	He	3.719	0.0686	4490.89	0.0143	0.01559
Sb	121	3	He	1.231	0.0155	1000.08	0.0124	0.000258
Sb	121	3	He	1.281	0.0162	1050.09	0.0124	0.000258
Sb	121	3	He	1.125	0.0142	930.08	0.0124	0.000258
Ba	137	3	He	606.695	2.6545	170937.36	0.0044	0.000309
Ba	137	3	He	608.918	2.6642	173225.62	0.0044	0.000309
Ba	137	3	He	597.372	2.6137	171089.31	0.0044	0.000309
Tl	205	3	He	0.689	0.0201	4590.95	0.0276	0.001005
Tl	205	3	He	0.696	0.0202	4610.96	0.0276	0.001005
Tl	205	3	He	0.705	0.0205	4671.00	0.0276	0.001005
Pb	208	3	He	92.942	3.385	416693.70	0.0364	0.002176
Pb	208	3	He	93.193	3.3941	410801.05	0.0364	0.002176
Pb	208	3	He	93.389	3.4013	414161.24	0.0364	0.002176
U	238	3	He	5.227	0.2201	50378.79	0.0421	0.00024
U	238	3	He	5.426	0.2285	52035.42	0.0421	0.00024
U	238	3	He	5.396	0.2272	51784.26	0.0421	0.00024
Sc	45	1	No Gas			3738220.57		
Sc	45	1	No Gas			3678160.88		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3670129.95		
Ge	72	1	No Gas			1467253.42		
Ge	72	1	No Gas			1455698.26		
Ge	72	1	No Gas			1457556.07		
Sc	45	2	H2			217481.74		
Sc	45	2	H2			218690.06		
Sc	45	2	H2			221357.32		
Ge	72	2	H2			160981.03		
Ge	72	2	H2			157747.00		
Ge	72	2	H2			159787.05		
In	115	2	H2			434224.49		
In	115	2	H2			444407.81		
In	115	2	H2			438023.90		
Sc	45	3	He			46283.51		
Sc	45	3	He			47778.34		
Sc	45	3	He			46323.96		
Ge	72	3	He			74834.73		
Ge	72	3	He			75597.85		
Ge	72	3	He			75196.33		
In	115	3	He			64428.89		
In	115	3	He			65051.53		
In	115	3	He			65494.01		
Tb	159	3	He			310055.89		
Tb	159	3	He			306591.19		
Tb	159	3	He			310516.46		
Bi	209	3	He			228865.56		
Bi	209	3	He			227740.78		
Bi	209	3	He			227907.95		

Quantitation Report

Data File Name	236SMPL.d
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Acq Time	2023-08-10 18:45:13
Sample Name	410-136557-H-19-A @10
Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

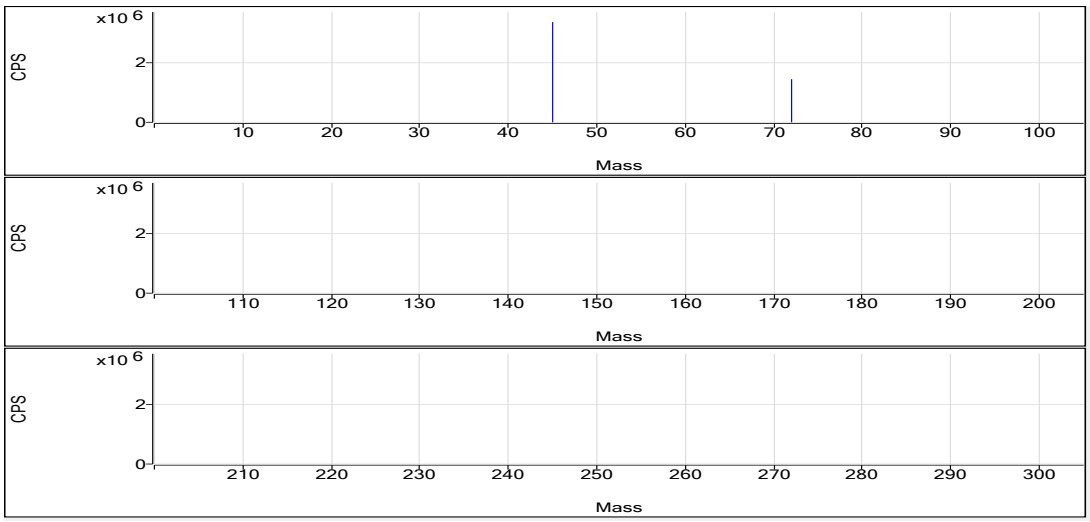
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.773	ppb	7.0	1529.42	0.0011	Pulse	0.5000	3
Se	78	72	H2	0.054	ppb	68.7	5.11	0.0000	Pulse	1.5000	3
Na	23	72	He	55.905	ppb	2.9	15034.68	0.2025	Pulse	0.1000	3
Mg	24	72	He	5083.250	ppb	2.5	318482.00	4.2905	Pulse	0.1000	3
Al	27	72	He	19572.058	ppb	2.8	350767.47	4.7256	Pulse	0.1000	3
K	39	72	He	1947.135	ppb	3.1	90473.62	1.2189	Pulse	0.1000	3
Ca	44	72	He	802.773	ppb	11.2	1973.53	0.0265	Pulse	0.1000	3
Ti	47	72	He	80.129	ppb	7.6	1513.47	0.0204	Pulse	0.1000	3
V	51	72	He	26.397	ppb	2.9	23464.13	0.3161	Pulse	0.5000	3
Cr	52	72	He	21.764	ppb	3.1	26491.28	0.3568	Pulse	0.1000	3
Mn	55	72	He	1070.939	ppb	2.6	470233.30	6.3350	Pulse	0.1000	3
Fe	57	72	He	34018.033	ppb	2.0	731912.36	9.8594	Pulse	0.1000	3
Co	59	72	He	14.591	ppb	4.0	33268.98	0.4483	Pulse	0.1000	3
Ni	60	72	He	35.426	ppb	1.9	23796.79	0.3205	Pulse	0.1000	3
Cu	63	72	He	24.234	ppb	2.7	45224.90	0.6093	Pulse	0.1000	3
Zn	66	72	He	99.806	ppb	3.3	18559.13	0.2500	Pulse	0.1000	3
As	75	72	He	11.585	ppb	2.1	1528.09	0.0206	Pulse	0.5000	3
Sr	88	115	He	11.815	ppb	4.4	5988.14	0.0931	Pulse	0.1000	3
Mo	98	115	He	0.323	ppb	11.6	490.03	0.0076	Pulse	0.1000	3
Ag	107	115	He	0.017	ppb	54.8	80.00	0.0012	Pulse	0.1000	3
Cd	111	115	He	0.106	ppb	20.2	36.00	0.0006	Pulse	0.5000	3
Sn	120	115	He	0.812	ppb	12.4	1746.83	0.0272	Pulse	0.1000	3
Sb	121	115	He	0.235	ppb	25.8	203.34	0.0032	Pulse	0.1000	3
Ba	137	115	He	118.233	ppb	0.4	33294.34	0.5176	Pulse	0.1000	3
Tl	205	209	He	0.139	ppb	11.1	1076.76	0.0048	Pulse	0.1000	3
Pb	208	209	He	18.494	ppb	0.3	150083.84	0.6753	Pulse	0.1000	3
U	238	209	He	1.058	ppb	1.5	9947.56	0.0448	Pulse	0.1000	3

ISTD Table:

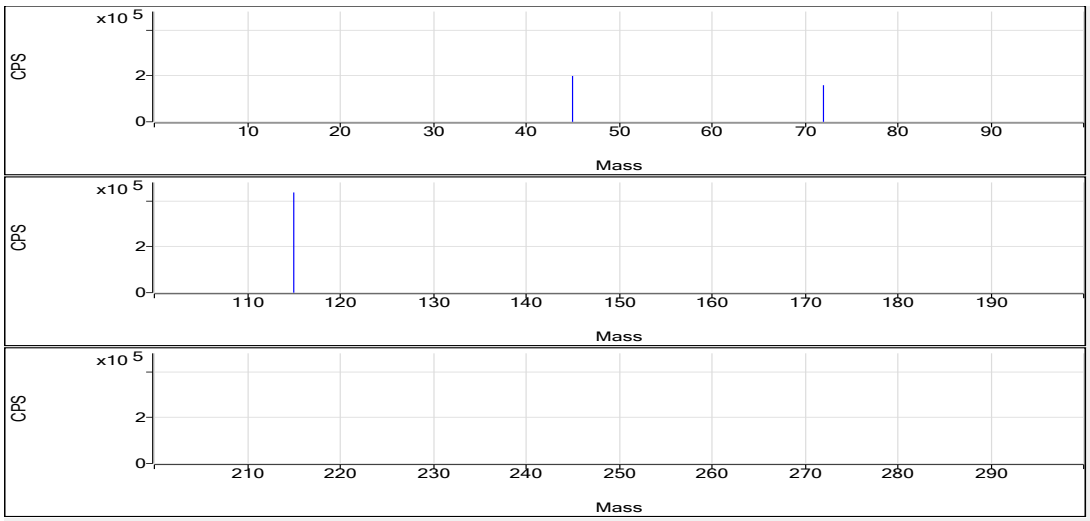
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3342310.37	1.4	103.1	Pulse	0.1000	3
No Gas	Ge	72	1438920.71	0.9	99.9	Pulse	0.1000	3
H2	Sc	45	200289.66	1.2	102.5	Pulse	0.1000	3
H2	Ge	72	159963.04	1.8	98.1	Pulse	0.1000	3
H2	In	115	437906.00	1.4	101.1	Pulse	0.1000	3
He	Sc	45	42686.19	0.9	106.8	Pulse	0.1000	3
He	Ge	72	74251.31	1.8	102.7	Pulse	0.1000	3
He	In	115	64327.93	1.9	99.6	Pulse	0.1000	3
He	Tb	159	289007.81	0.3	101.1	Pulse	0.1000	3
He	Bi	209	222242.64	0.3	100.0	Pulse	0.1000	3

No Gas

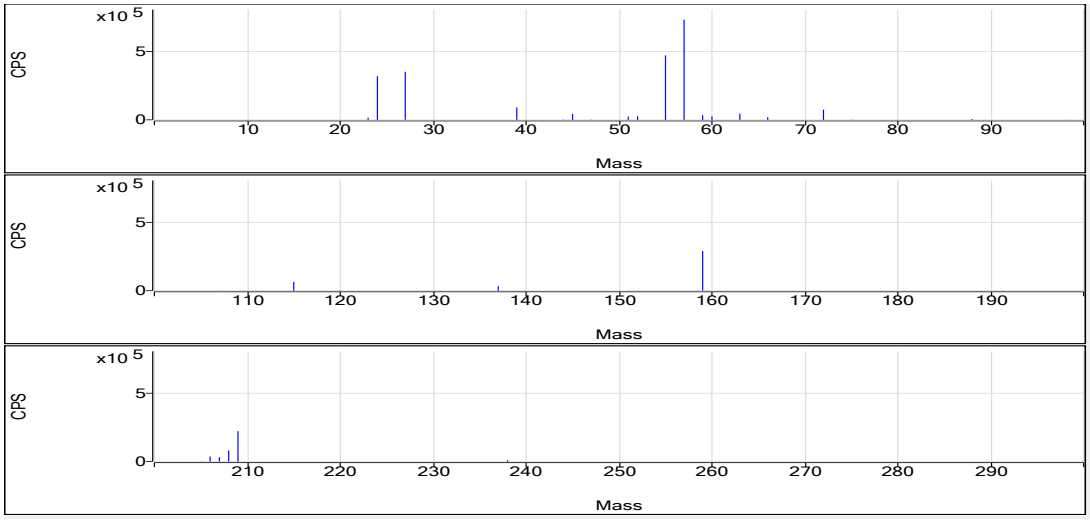


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.715	0.001	1430.08	0.0013	4.694E-05
Be	9	1	No Gas	0.782	0.0011	1550.09	0.0013	4.694E-05
Be	9	1	No Gas	0.823	0.0011	1608.10	0.0013	4.694E-05
Se	78	2	H2	0.059	0	5.33	0.0004	1.089E-05
Se	78	2	H2	0.088	0	7.33	0.0004	1.089E-05
Se	78	2	H2	0.015	0	2.67	0.0004	1.089E-05
Na	23	3	He	57.348	0.205	14967.86	0.0017	0.1065
Na	23	3	He	56.181	0.203	15368.40	0.0017	0.1065
Na	23	3	He	54.186	0.1995	14767.77	0.0017	0.1065
Mg	24	3	He	5185.863	4.3771	319633.22	0.0008	0.004846
Mg	24	3	He	4941.746	4.1712	315843.45	0.0008	0.004846
Mg	24	3	He	5122.141	4.3233	319969.33	0.0008	0.004846
Al	27	3	He	20001.747	4.8294	352663.28	0.0002	0.001063
Al	27	3	He	18963.295	4.5787	346695.46	0.0002	0.001063
Al	27	3	He	19751.131	4.7689	352943.67	0.0002	0.001063
K	39	3	He	1989.791	1.2424	90727.88	0.0006	0.1436
K	39	3	He	1878.949	1.1812	89441.07	0.0006	0.1436
K	39	3	He	1972.664	1.233	91251.92	0.0006	0.1436
Ca	44	3	He	724.173	0.0241	1760.16	0	0.001611
Ca	44	3	He	900.686	0.0296	2240.24	0	0.001611
Ca	44	3	He	783.459	0.0259	1920.19	0	0.001611
Ti	47	3	He	78.641	0.02	1460.14	0.0003	0.0002737
Ti	47	3	He	86.863	0.0221	1670.15	0.0003	0.0002737
Ti	47	3	He	74.884	0.0191	1410.12	0.0003	0.0002737
V	51	3	He	26.969	0.3228	23572.96	0.0117	0.007326
V	51	3	He	25.537	0.3061	23174.33	0.0117	0.007326
V	51	3	He	26.685	0.3195	23645.09	0.0117	0.007326
Cr	52	3	He	21.376	0.3509	25623.04	0.0152	0.02538
Cr	52	3	He	21.381	0.351	26574.78	0.0152	0.02538
Cr	52	3	He	22.536	0.3685	27276.03	0.0152	0.02538
Mn	55	3	He	1091.89	6.4587	471641.13	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1039.123	6.1472	465461.63	0.0059	0.01385
Mn	55	3	He	1081.802	6.3991	473597.14	0.0059	0.01385
Fe	57	3	He	34376.831	9.9634	727573.74	0.0003	0.003918
Fe	57	3	He	33230.974	9.6314	729284.44	0.0003	0.003918
Fe	57	3	He	34446.295	9.9835	738878.90	0.0003	0.003918
Co	59	3	He	15.02	0.4614	33689.99	0.0305	0.003084
Co	59	3	He	13.931	0.4281	32417.02	0.0305	0.003084
Co	59	3	He	14.823	0.4553	33699.92	0.0305	0.003084
Ni	60	3	He	35.136	0.318	23219.23	0.0088	0.009003
Ni	60	3	He	34.947	0.3163	23950.35	0.0088	0.009003
Ni	60	3	He	36.194	0.3273	24220.78	0.0088	0.009003
Cu	63	3	He	24.955	0.6272	45803.52	0.0249	0.004937
Cu	63	3	He	23.688	0.5956	45101.33	0.0249	0.004937
Cu	63	3	He	24.06	0.6049	44769.86	0.0249	0.004937
Zn	66	3	He	103.563	0.2593	18932.88	0.0025	0.004836
Zn	66	3	He	97.386	0.2441	18482.34	0.0025	0.004836
Zn	66	3	He	98.47	0.2468	18262.18	0.0025	0.004836
As	75	3	He	11.845	0.021	1536.09	0.0017	0.0004347
As	75	3	He	11.551	0.0205	1554.09	0.0017	0.0004347
As	75	3	He	11.358	0.0202	1494.09	0.0017	0.0004347
Sr	88	3	He	12.39	0.0976	6151.54	0.0078	0.0007762
Sr	88	3	He	11.68	0.0921	5951.50	0.0078	0.0007762
Sr	88	3	He	11.376	0.0897	5861.39	0.0078	0.0007762
Mo	98	3	He	0.366	0.0086	540.03	0.022	0.0005162
Mo	98	3	He	0.307	0.0073	470.03	0.022	0.0005162
Mo	98	3	He	0.296	0.007	460.02	0.022	0.0005162
Ag	107	3	He	0.025	0.0016	100.00	0.0455	0.0004641
Ag	107	3	He	0.02	0.0014	90.00	0.0455	0.0004641
Ag	107	3	He	0.007	0.0008	50.00	0.0455	0.0004641
Cd	111	3	He	0.088	0.0005	30.00	0.0048	5.152E-05
Cd	111	3	He	0.099	0.0005	34.00	0.0048	5.152E-05
Cd	111	3	He	0.13	0.0007	44.00	0.0048	5.152E-05
Sn	120	3	He	0.844	0.0276	1740.16	0.0143	0.01559
Sn	120	3	He	0.893	0.0283	1830.18	0.0143	0.01559
Sn	120	3	He	0.699	0.0256	1670.15	0.0143	0.01559
Sb	121	3	He	0.299	0.004	250.01	0.0124	0.000258
Sb	121	3	He	0.179	0.0025	160.01	0.0124	0.000258
Sb	121	3	He	0.226	0.0031	200.01	0.0124	0.000258
Ba	137	3	He	117.757	0.5155	32479.06	0.0044	0.000309
Ba	137	3	He	118.797	0.52	33611.86	0.0044	0.000309
Ba	137	3	He	118.146	0.5172	33792.09	0.0044	0.000309
Tl	205	3	He	0.121	0.0044	970.08	0.0276	0.001005
Tl	205	3	He	0.146	0.005	1120.09	0.0276	0.001005
Tl	205	3	He	0.15	0.0051	1140.11	0.0276	0.001005
Pb	208	3	He	18.454	0.6739	80464.34	0.0364	0.002176
Pb	208	3	He	18.482	0.6749	81541.74	0.0364	0.002176
Pb	208	3	He	18.546	0.6772	80707.45	0.0364	0.002176
U	238	3	He	1.045	0.0442	9844.08	0.0421	0.00024
U	238	3	He	1.053	0.0446	9914.25	0.0421	0.00024
U	238	3	He	1.076	0.0455	10084.34	0.0421	0.00024
Sc	45	1	No Gas			3387791.51		
Sc	45	1	No Gas			3345826.51		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3293313.08		
Ge	72	1	No Gas			1449623.10		
Ge	72	1	No Gas			1441934.98		
Ge	72	1	No Gas			1425204.04		
Sc	45	2	H2			197465.54		
Sc	45	2	H2			201175.97		
Sc	45	2	H2			202227.46		
Ge	72	2	H2			156673.13		
Ge	72	2	H2			161911.75		
Ge	72	2	H2			161304.25		
In	115	2	H2			433850.70		
In	115	2	H2			444765.66		
In	115	2	H2			435101.63		
Sc	45	3	He			42642.65		
Sc	45	3	He			42341.76		
Sc	45	3	He			43074.17		
Ge	72	3	He			73024.72		
Ge	72	3	He			75719.32		
Ge	72	3	He			74009.90		
In	115	3	He			63021.96		
In	115	3	He			64649.79		
In	115	3	He			65352.92		
Tb	159	3	He			289848.34		
Tb	159	3	He			289160.46		
Tb	159	3	He			288014.62		
Bi	209	3	He			222683.38		
Bi	209	3	He			222520.76		
Bi	209	3	He			221523.77		

Quantitation Report

Data File Name	237SMPL.d
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Acq Time	2023-08-10 18:47:13
Sample Name	410-136557-H-20-A @2
Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

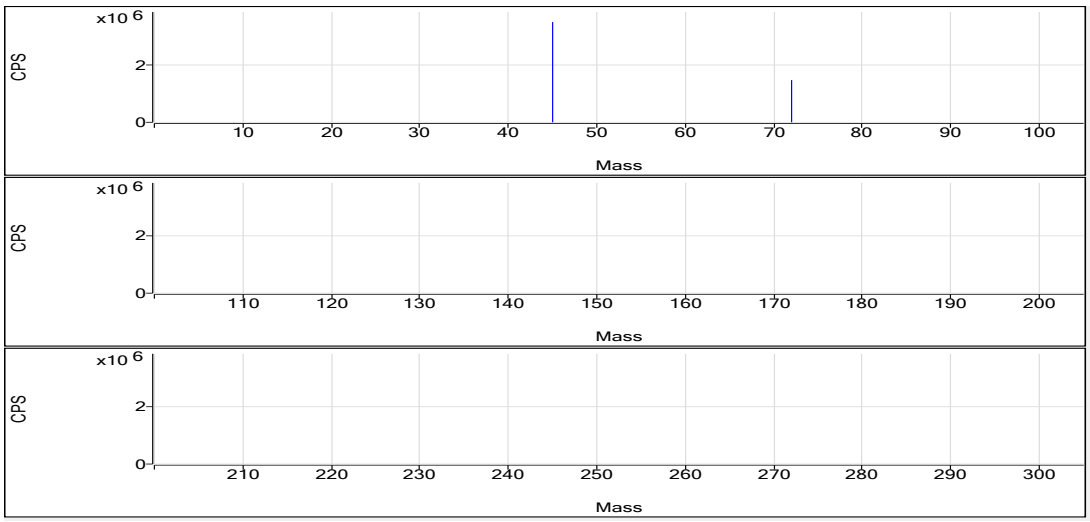
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	2.594	ppb	2.7	5095.56	0.0035	Pulse	0.5000	3
Se	78	72	H2	6.019	ppb	8.5	380.01	0.0024	Pulse	1.5000	3
Na	23	72	He	434.062	ppb	0.8	63000.34	0.8521	Pulse	0.1000	3
Mg	24	72	He	11001.597	ppb	0.4	686161.79	9.2803	Pulse	0.1000	3
Al	27	72	He	46575.876	ppb	0.1	831358.48	11.2442	Pulse	0.1000	3
K	39	72	He	6717.199	ppb	1.7	284883.31	3.8530	Pulse	0.1000	3
Ca	44	72	He	21270.648	ppb	0.4	48965.86	0.6623	Pulse	0.1000	3
Ti	47	72	He	540.173	ppb	3.0	10037.11	0.1357	Pulse	0.1000	3
V	51	72	He	81.812	ppb	0.7	71301.43	0.9643	Pulse	0.5000	3
Cr	52	72	He	137.933	ppb	0.7	157171.99	2.1257	Pulse	0.1000	3
Mn	55	72	He	2260.390	ppb	0.3	987476.86	13.3556	Pulse	0.1000	3
Fe	57	72	He	86234.144	ppb	0.5	1847493.93	24.9872	Pulse	0.1000	3
Co	59	72	He	40.051	ppb	1.0	90578.37	1.2251	Pulse	0.1000	3
Ni	60	72	He	86.853	ppb	0.3	57133.16	0.7727	Pulse	0.1000	3
Cu	63	72	He	158.695	ppb	1.0	292966.73	3.9623	Pulse	0.1000	3
Zn	66	72	He	547.011	ppb	0.4	99718.71	1.3487	Pulse	0.1000	3
As	75	72	He	44.913	ppb	3.0	5807.87	0.0785	Pulse	0.5000	3
Sr	88	115	He	149.583	ppb	0.6	75742.23	1.1701	Pulse	0.1000	3
Mo	98	115	He	3.836	ppb	2.8	5501.28	0.0850	Pulse	0.1000	3
Ag	107	115	He	2.449	ppb	3.6	7242.15	0.1119	Pulse	0.1000	3
Cd	111	115	He	2.559	ppb	3.1	798.70	0.0123	Pulse	0.5000	3
Sn	120	115	He	24.353	ppb	0.2	23487.09	0.3628	Pulse	0.1000	3
Sb	121	115	He	106.032	ppb	0.6	85159.62	1.3156	Pulse	0.1000	3
Ba	137	115	He	547.330	ppb	0.5	155031.04	2.3948	Pulse	0.1000	3
Tl	205	209	He	0.725	ppb	3.7	5091.16	0.0210	Pulse	0.1000	3
Pb	208	209	He	16907.409	ppb	0.7	148918719.45	615.3870	Analog	0.1000	3
U	238	209	He	3.035	ppb	1.6	30957.74	0.1279	Pulse	0.1000	3

ISTD Table:

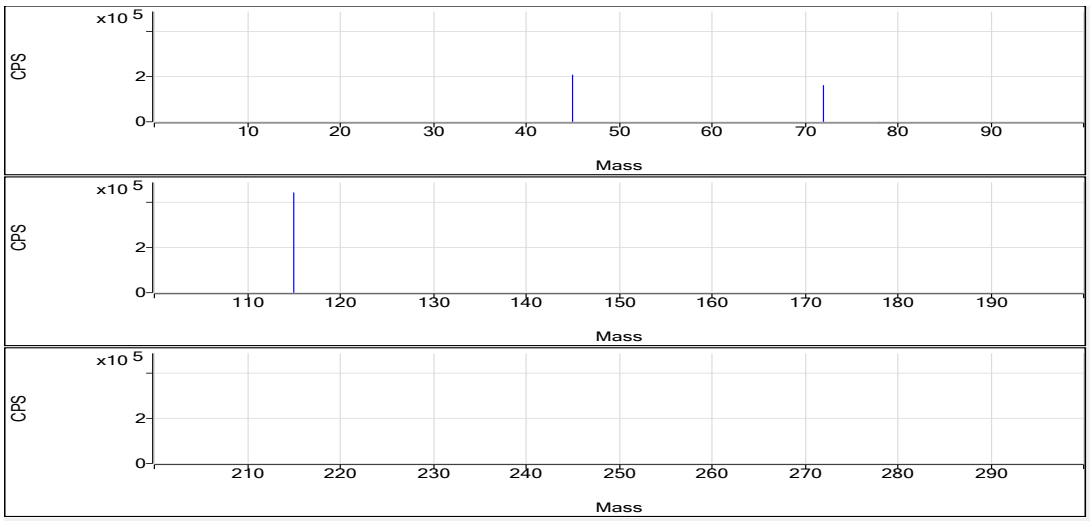
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3501696.20	1.5	108.0	Pulse	0.1000	3
No Gas	Ge	72	1474632.01	0.6	102.4	Pulse	0.1000	3
H2	Sc	45	207718.85	3.4	106.3	Pulse	0.1000	3
H2	Ge	72	161672.97	3.0	99.2	Pulse	0.1000	3
H2	In	115	442010.00	1.3	102.0	Pulse	0.1000	3
He	Sc	45	44351.12	1.5	110.9	Pulse	0.1000	3
He	Ge	72	73936.37	0.6	102.3	Pulse	0.1000	3
He	In	115	64734.85	1.2	100.2	Pulse	0.1000	3
He	Tb	159	303104.55	1.3	106.0	Pulse	0.1000	3
He	Bi	209	241990.89	0.4	108.9	Pulse	0.1000	3

No Gas

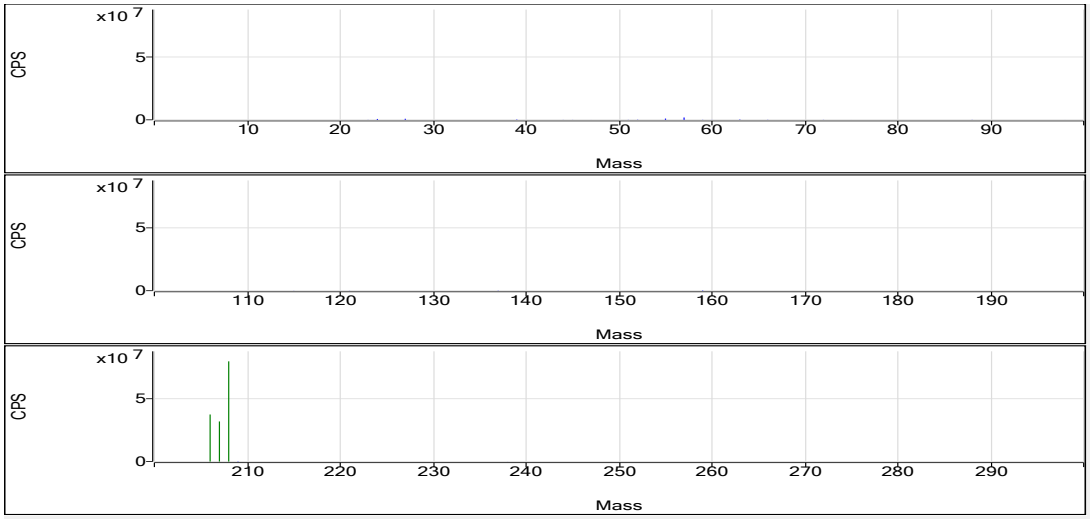


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	2.576	0.0034	5090.89	0.0013	4.694E-05
Be	9	1	No Gas	2.534	0.0034	4980.86	0.0013	4.694E-05
Be	9	1	No Gas	2.672	0.0036	5214.94	0.0013	4.694E-05
Se	78	2	H2	6.61	0.0026	403.34	0.0004	1.089E-05
Se	78	2	H2	5.698	0.0022	366.67	0.0004	1.089E-05
Se	78	2	H2	5.75	0.0022	370.01	0.0004	1.089E-05
Na	23	3	He	431.267	0.8473	62461.87	0.0017	0.1065
Na	23	3	He	438.191	0.8592	63294.87	0.0017	0.1065
Na	23	3	He	432.728	0.8498	63244.27	0.0017	0.1065
Mg	24	3	He	11008.301	9.286	684552.18	0.0008	0.004846
Mg	24	3	He	10951.106	9.2377	680526.47	0.0008	0.004846
Mg	24	3	He	11045.385	9.3172	693406.71	0.0008	0.004846
Al	27	3	He	46595.037	11.2488	829253.27	0.0002	0.001063
Al	27	3	He	46516.392	11.2298	827281.24	0.0002	0.001063
Al	27	3	He	46616.2	11.2539	837540.93	0.0002	0.001063
K	39	3	He	6786.966	3.8915	286876.42	0.0006	0.1436
K	39	3	He	6582.701	3.7787	278368.45	0.0006	0.1436
K	39	3	He	6781.931	3.8887	289405.05	0.0006	0.1436
Ca	44	3	He	21380.261	0.6657	49073.21	0	0.001611
Ca	44	3	He	21206.291	0.6603	48641.21	0	0.001611
Ca	44	3	He	21225.392	0.6609	49183.17	0	0.001611
Ti	47	3	He	529.743	0.1331	9813.64	0.0003	0.0002737
Ti	47	3	He	531.733	0.1336	9843.63	0.0003	0.0002737
Ti	47	3	He	559.043	0.1405	10454.06	0.0003	0.0002737
V	51	3	He	81.34	0.9588	70683.02	0.0117	0.007326
V	51	3	He	81.683	0.9628	70930.29	0.0117	0.007326
V	51	3	He	82.412	0.9714	72290.97	0.0117	0.007326
Cr	52	3	He	137.868	2.1247	156633.96	0.0152	0.02538
Cr	52	3	He	137.047	2.1122	155604.06	0.0152	0.02538
Cr	52	3	He	138.883	2.1402	159277.94	0.0152	0.02538
Mn	55	3	He	2261.672	13.3632	985122.09	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2252.192	13.3072	980318.34	0.0059	0.01385
Mn	55	3	He	2267.305	13.3964	996990.14	0.0059	0.01385
Fe	57	3	He	86256.07	24.9936	1842501.69	0.0003	0.003918
Fe	57	3	He	85799.677	24.8613	1831486.85	0.0003	0.003918
Fe	57	3	He	86646.684	25.1067	1868493.25	0.0003	0.003918
Co	59	3	He	40.382	1.2352	91054.93	0.0305	0.003084
Co	59	3	He	39.604	1.2114	89243.18	0.0305	0.003084
Co	59	3	He	40.168	1.2286	91437.01	0.0305	0.003084
Ni	60	3	He	86.835	0.7726	56953.05	0.0088	0.009003
Ni	60	3	He	86.6	0.7705	56761.51	0.0088	0.009003
Ni	60	3	He	87.123	0.7751	57684.92	0.0088	0.009003
Cu	63	3	He	159.676	3.9868	293901.93	0.0249	0.004937
Cu	63	3	He	156.837	3.916	288483.71	0.0249	0.004937
Cu	63	3	He	159.573	3.9842	296514.55	0.0249	0.004937
Zn	66	3	He	545.31	1.3445	99117.85	0.0025	0.004836
Zn	66	3	He	549.307	1.3544	99772.64	0.0025	0.004836
Zn	66	3	He	546.418	1.3473	100265.63	0.0025	0.004836
As	75	3	He	43.546	0.0762	5615.12	0.0017	0.0004347
As	75	3	He	44.998	0.0787	5797.19	0.0017	0.0004347
As	75	3	He	46.194	0.0808	6011.30	0.0017	0.0004347
Sr	88	3	He	150.577	1.1779	75591.63	0.0078	0.0007762
Sr	88	3	He	149.213	1.1672	75128.85	0.0078	0.0007762
Sr	88	3	He	148.958	1.1652	76506.20	0.0078	0.0007762
Mo	98	3	He	3.798	0.0842	5401.25	0.022	0.0005162
Mo	98	3	He	3.956	0.0876	5641.32	0.022	0.0005162
Mo	98	3	He	3.754	0.0832	5461.26	0.022	0.0005162
Ag	107	3	He	2.538	0.116	7442.24	0.0455	0.0004641
Ag	107	3	He	2.446	0.1117	7192.14	0.0455	0.0004641
Ag	107	3	He	2.364	0.108	7092.06	0.0455	0.0004641
Cd	111	3	He	2.528	0.0122	782.03	0.0048	5.152E-05
Cd	111	3	He	2.501	0.0121	776.03	0.0048	5.152E-05
Cd	111	3	He	2.648	0.0128	838.03	0.0048	5.152E-05
Sn	120	3	He	24.305	0.3621	23240.10	0.0143	0.01559
Sn	120	3	He	24.382	0.3632	23380.28	0.0143	0.01559
Sn	120	3	He	24.373	0.3631	23840.89	0.0143	0.01559
Sb	121	3	He	106.202	1.3177	84566.09	0.0124	0.000258
Sb	121	3	He	106.607	1.3227	85139.93	0.0124	0.000258
Sb	121	3	He	105.286	1.3063	85772.84	0.0124	0.000258
Ba	137	3	He	546.428	2.3908	153436.91	0.0044	0.000309
Ba	137	3	He	544.991	2.3845	153486.31	0.0044	0.000309
Ba	137	3	He	550.571	2.4089	158169.89	0.0044	0.000309
Tl	205	3	He	0.733	0.0213	5141.19	0.0276	0.001005
Tl	205	3	He	0.747	0.0216	5221.26	0.0276	0.001005
Tl	205	3	He	0.695	0.0202	4911.04	0.0276	0.001005
Pb	208	3	He	17027.888	619.7722	80173253.81	0.0364	0.002176
Pb	208	3	He	16788.394	611.0552	78952523.82	0.0364	0.002176
Pb	208	3	He	16905.945	615.3337	79783023.81	0.0364	0.002176
U	238	3	He	3.085	0.13	31429.33	0.0421	0.00024
U	238	3	He	3.035	0.1279	30857.25	0.0421	0.00024
U	238	3	He	2.986	0.1259	30586.65	0.0421	0.00024
Sc	45	1	No Gas			3555231.82		
Sc	45	1	No Gas			3499525.26		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3450331.51		
Ge	72	1	No Gas			1483202.17		
Ge	72	1	No Gas			1475247.32		
Ge	72	1	No Gas			1465446.54		
Sc	45	2	H2			199786.42		
Sc	45	2	H2			213324.61		
Sc	45	2	H2			210045.52		
Ge	72	2	H2			156068.24		
Ge	72	2	H2			164470.54		
Ge	72	2	H2			164480.13		
In	115	2	H2			435624.06		
In	115	2	H2			445698.51		
In	115	2	H2			444707.42		
Sc	45	3	He			44167.14		
Sc	45	3	He			45069.60		
Sc	45	3	He			43816.61		
Ge	72	3	He			73719.04		
Ge	72	3	He			73668.06		
Ge	72	3	He			74422.00		
In	115	3	He			64358.88		
In	115	3	He			64549.90		
In	115	3	He			65845.38		
Tb	159	3	He			300169.84		
Tb	159	3	He			301521.97		
Tb	159	3	He			307621.83		
Bi	209	3	He			241705.64		
Bi	209	3	He			241230.54		
Bi	209	3	He			243036.50		

Quantitation Report

Data File Name	238SMPL.d
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Acq Time	2023-08-10 18:49:12
Sample Name	410-136557-H-20-A @10
Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

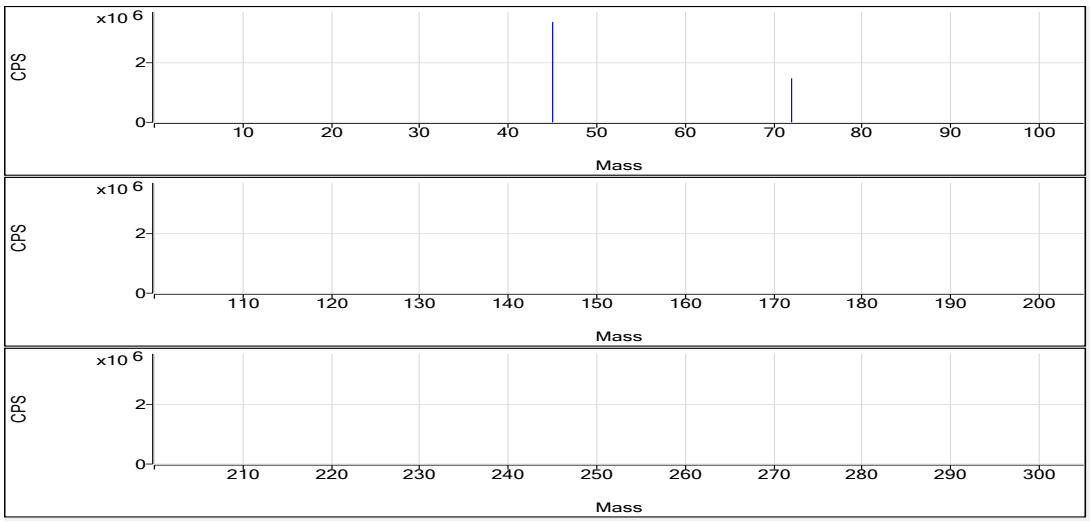
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.562	ppb	9.2	1148.72	0.0008	Pulse	0.5000	3
Se	78	72	H2	1.383	ppb	20.2	87.34	0.0005	Pulse	1.5000	3
Na	23	72	He	77.852	ppb	3.1	17564.25	0.2402	Pulse	0.1000	3
Mg	24	72	He	2289.320	ppb	2.8	141474.29	1.9350	Pulse	0.1000	3
Al	27	72	He	9675.455	ppb	1.4	170867.98	2.3367	Pulse	0.1000	3
K	39	72	He	1405.212	ppb	0.2	67257.49	0.9196	Pulse	0.1000	3
Ca	44	72	He	4463.439	ppb	3.6	10253.88	0.1402	Pulse	0.1000	3
Ti	47	72	He	116.917	ppb	6.2	2163.57	0.0296	Pulse	0.1000	3
V	51	72	He	17.053	ppb	2.9	15120.50	0.2068	Pulse	0.5000	3
Cr	52	72	He	28.917	ppb	4.5	34043.90	0.4657	Pulse	0.1000	3
Mn	55	72	He	469.469	ppb	1.9	203632.15	2.7849	Pulse	0.1000	3
Fe	57	72	He	18026.632	ppb	0.9	382209.60	5.2265	Pulse	0.1000	3
Co	59	72	He	8.391	ppb	1.6	18946.28	0.2591	Pulse	0.1000	3
Ni	60	72	He	19.554	ppb	2.0	13236.44	0.1809	Pulse	0.1000	3
Cu	63	72	He	33.416	ppb	3.7	61286.74	0.8382	Pulse	0.1000	3
Zn	66	72	He	114.760	ppb	6.5	20959.16	0.2868	Pulse	0.1000	3
As	75	72	He	9.475	ppb	4.4	1236.73	0.0169	Pulse	0.5000	3
Sr	88	115	He	30.927	ppb	3.1	15612.42	0.2425	Pulse	0.1000	3
Mo	98	115	He	0.893	ppb	20.4	1296.78	0.0202	Pulse	0.1000	3
Ag	107	115	He	0.502	ppb	5.2	1500.14	0.0233	Pulse	0.1000	3
Cd	111	115	He	0.485	ppb	1.0	153.33	0.0024	Pulse	0.5000	3
Sn	120	115	He	4.787	ppb	2.5	5397.90	0.0838	Pulse	0.1000	3
Sb	121	115	He	22.623	ppb	0.8	18085.60	0.2809	Pulse	0.1000	3
Ba	137	115	He	112.285	ppb	2.1	31647.21	0.4915	Pulse	0.1000	3
Tl	205	209	He	0.179	ppb	5.8	1350.13	0.0059	Pulse	0.1000	3
Pb	208	209	He	3695.152	ppb	0.4	30525923.09	134.4959	Analog	0.1000	3
U	238	209	He	0.698	ppb	8.7	6715.35	0.0296	Pulse	0.1000	3

ISTD Table:

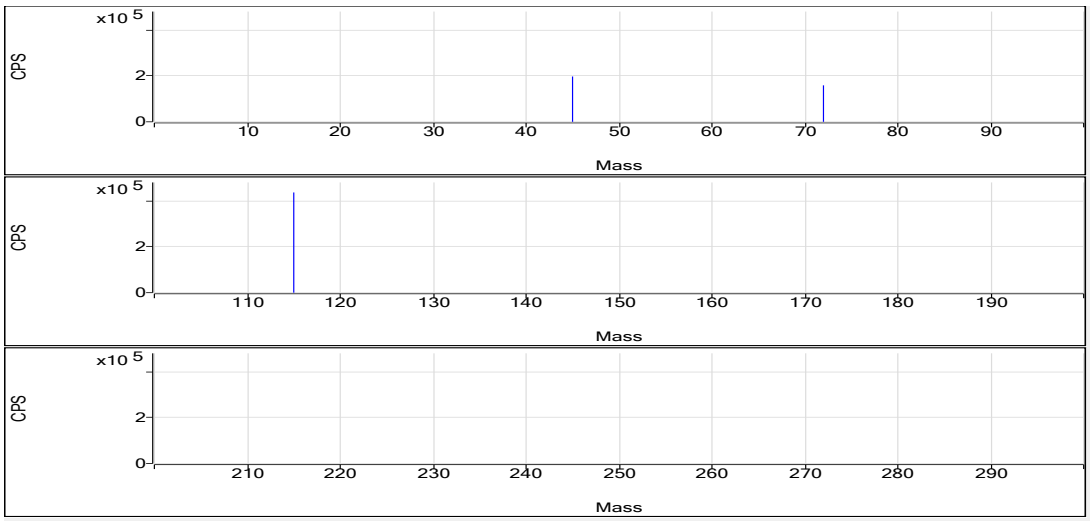
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3337448.39	1.1	103.0	Pulse	0.1000	3
No Gas	Ge	72	1463544.20	0.7	101.7	Pulse	0.1000	3
H2	Sc	45	197898.24	2.9	101.3	Pulse	0.1000	3
H2	Ge	72	159222.39	1.5	97.7	Pulse	0.1000	3
H2	In	115	437594.11	2.1	101.0	Pulse	0.1000	3
He	Sc	45	41653.28	3.6	104.2	Pulse	0.1000	3
He	Ge	72	73136.63	1.7	101.2	Pulse	0.1000	3
He	In	115	64386.45	1.5	99.7	Pulse	0.1000	3
He	Tb	159	287821.04	0.9	100.6	Pulse	0.1000	3
He	Bi	209	226968.50	0.5	102.2	Pulse	0.1000	3

No Gas

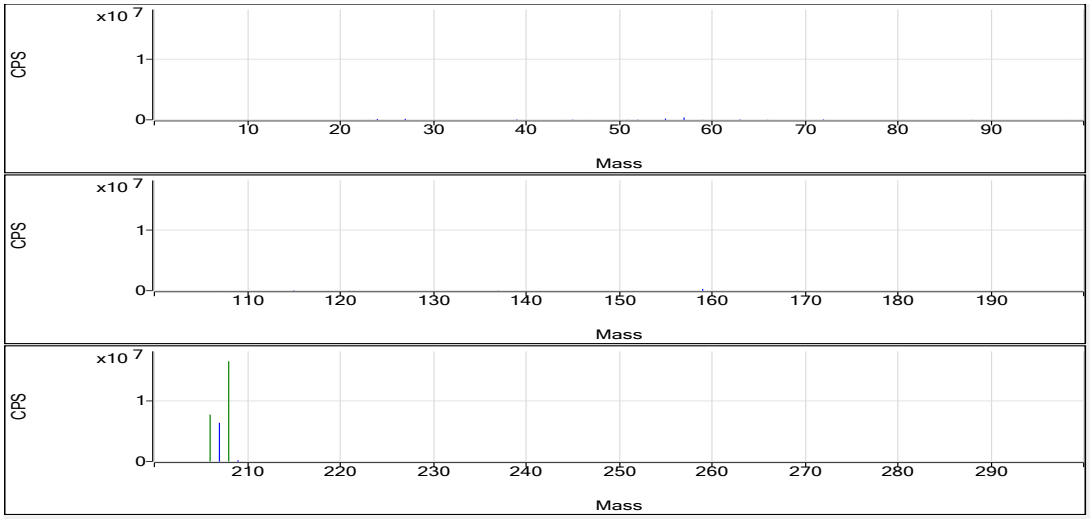


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.578	0.0008	1178.05	0.0013	4.694E-05
Be	9	1	No Gas	0.504	0.0007	1046.04	0.0013	4.694E-05
Be	9	1	No Gas	0.604	0.0008	1222.06	0.0013	4.694E-05
Se	78	2	H2	1.553	0.0006	96.67	0.0004	1.089E-05
Se	78	2	H2	1.536	0.0006	96.67	0.0004	1.089E-05
Se	78	2	H2	1.062	0.0004	68.67	0.0004	1.089E-05
Na	23	3	He	75.096	0.2355	17440.67	0.0017	0.1065
Na	23	3	He	78.828	0.2419	17801.25	0.0017	0.1065
Na	23	3	He	79.634	0.2433	17450.82	0.0017	0.1065
Mg	24	3	He	2252.928	1.9043	141054.00	0.0008	0.004846
Mg	24	3	He	2252.144	1.9036	140105.05	0.0008	0.004846
Mg	24	3	He	2362.888	1.997	143263.83	0.0008	0.004846
Al	27	3	He	9558.864	2.3085	170995.52	0.0002	0.001063
Al	27	3	He	9637.498	2.3275	171301.09	0.0002	0.001063
Al	27	3	He	9830.003	2.374	170307.34	0.0002	0.001063
K	39	3	He	1403.007	0.9184	68027.17	0.0006	0.1436
K	39	3	He	1407.767	0.921	67786.41	0.0006	0.1436
K	39	3	He	1404.862	0.9194	65958.90	0.0006	0.1436
Ca	44	3	He	4461.635	0.1402	10384.00	0	0.001611
Ca	44	3	He	4302.382	0.1352	9953.67	0	0.001611
Ca	44	3	He	4626.301	0.1453	10423.98	0	0.001611
Ti	47	3	He	118.972	0.0301	2230.25	0.0003	0.0002737
Ti	47	3	He	108.905	0.0276	2030.21	0.0003	0.0002737
Ti	47	3	He	122.874	0.0311	2230.24	0.0003	0.0002737
V	51	3	He	16.581	0.2013	14909.63	0.0117	0.007326
V	51	3	He	17.01	0.2063	15183.88	0.0117	0.007326
V	51	3	He	17.567	0.2128	15268.00	0.0117	0.007326
Cr	52	3	He	27.838	0.4493	33278.87	0.0152	0.02538
Cr	52	3	He	28.537	0.4599	33850.03	0.0152	0.02538
Cr	52	3	He	30.375	0.4879	35002.79	0.0152	0.02538
Mn	55	3	He	462.57	2.7441	203262.38	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	466.365	2.7665	203613.67	0.0059	0.01385
Mn	55	3	He	479.473	2.8439	204020.41	0.0059	0.01385
Fe	57	3	He	17871.458	5.1815	383804.99	0.0003	0.003918
Fe	57	3	He	18005.131	5.2203	384205.42	0.0003	0.003918
Fe	57	3	He	18203.308	5.2777	378618.39	0.0003	0.003918
Co	59	3	He	8.405	0.2595	19223.24	0.0305	0.003084
Co	59	3	He	8.25	0.2548	18752.81	0.0305	0.003084
Co	59	3	He	8.517	0.2629	18862.80	0.0305	0.003084
Ni	60	3	He	19.621	0.1815	13446.60	0.0088	0.009003
Ni	60	3	He	19.908	0.1841	13546.74	0.0088	0.009003
Ni	60	3	He	19.134	0.1773	12715.97	0.0088	0.009003
Cu	63	3	He	31.978	0.8024	59432.48	0.0249	0.004937
Cu	63	3	He	34.028	0.8535	62816.67	0.0249	0.004937
Cu	63	3	He	34.241	0.8588	61611.08	0.0249	0.004937
Zn	66	3	He	107.519	0.269	19924.26	0.0025	0.004836
Zn	66	3	He	114.261	0.2855	21016.00	0.0025	0.004836
Zn	66	3	He	122.5	0.3058	21937.22	0.0025	0.004836
As	75	3	He	9.671	0.0173	1278.06	0.0017	0.0004347
As	75	3	He	9	0.0161	1184.06	0.0017	0.0004347
As	75	3	He	9.753	0.0174	1248.06	0.0017	0.0004347
Sr	88	3	He	31.32	0.2456	15919.49	0.0078	0.0007762
Sr	88	3	He	29.85	0.2341	15238.68	0.0078	0.0007762
Sr	88	3	He	31.611	0.2479	15679.10	0.0078	0.0007762
Mo	98	3	He	0.789	0.0179	1160.09	0.022	0.0005162
Mo	98	3	He	0.786	0.0178	1160.09	0.022	0.0005162
Mo	98	3	He	1.104	0.0248	1570.15	0.022	0.0005162
Ag	107	3	He	0.478	0.0222	1440.14	0.0455	0.0004641
Ag	107	3	He	0.53	0.0246	1600.15	0.0455	0.0004641
Ag	107	3	He	0.497	0.0231	1460.14	0.0455	0.0004641
Cd	111	3	He	0.491	0.0024	156.00	0.0048	5.152E-05
Cd	111	3	He	0.482	0.0024	154.00	0.0048	5.152E-05
Cd	111	3	He	0.483	0.0024	150.00	0.0048	5.152E-05
Sn	120	3	He	4.859	0.0849	5501.28	0.0143	0.01559
Sn	120	3	He	4.651	0.0819	5331.19	0.0143	0.01559
Sn	120	3	He	4.851	0.0848	5361.23	0.0143	0.01559
Sb	121	3	He	22.804	0.2831	18352.64	0.0124	0.000258
Sb	121	3	He	22.424	0.2784	18122.42	0.0124	0.000258
Sb	121	3	He	22.642	0.2811	17781.75	0.0124	0.000258
Ba	137	3	He	114.717	0.5022	32549.39	0.0044	0.000309
Ba	137	3	He	109.942	0.4813	31326.62	0.0044	0.000309
Ba	137	3	He	112.195	0.4911	31065.61	0.0044	0.000309
Tl	205	3	He	0.182	0.006	1370.13	0.0276	0.001005
Tl	205	3	He	0.167	0.0056	1270.11	0.0276	0.001005
Tl	205	3	He	0.188	0.0062	1410.14	0.0276	0.001005
Pb	208	3	He	3687.275	134.2092	16382492.26	0.0364	0.002176
Pb	208	3	He	3712.159	135.1149	16532787.25	0.0364	0.002176
Pb	208	3	He	3686.022	134.1636	16463529.75	0.0364	0.002176
U	238	3	He	0.654	0.0278	6311.78	0.0421	0.00024
U	238	3	He	0.672	0.0285	6431.82	0.0421	0.00024
U	238	3	He	0.767	0.0325	7402.44	0.0421	0.00024
Sc	45	1	No Gas			3345344.33		
Sc	45	1	No Gas			3367951.82		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3299049.01		
Ge	72	1	No Gas			1460802.32		
Ge	72	1	No Gas			1474992.01		
Ge	72	1	No Gas			1454838.26		
Sc	45	2	H2			192766.31		
Sc	45	2	H2			196928.14		
Sc	45	2	H2			204000.27		
Ge	72	2	H2			157089.35		
Ge	72	2	H2			158725.71		
Ge	72	2	H2			161852.11		
In	115	2	H2			431717.88		
In	115	2	H2			432636.67		
In	115	2	H2			448427.77		
Sc	45	3	He			40115.64		
Sc	45	3	He			43083.99		
Sc	45	3	He			41760.22		
Ge	72	3	He			74071.59		
Ge	72	3	He			73598.79		
Ge	72	3	He			71739.51		
In	115	3	He			64860.17		
In	115	3	He			65131.68		
In	115	3	He			63293.82		
Tb	159	3	He			284735.62		
Tb	159	3	He			289259.84		
Tb	159	3	He			289467.67		
Bi	209	3	He			227433.79		
Bi	209	3	He			225652.05		
Bi	209	3	He			227819.66		

Quantitation Report

Data File Name	239SMPL.d
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Acq Time	2023-08-10 18:51:12
Sample Name	410-136557-H-18-A @2
Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

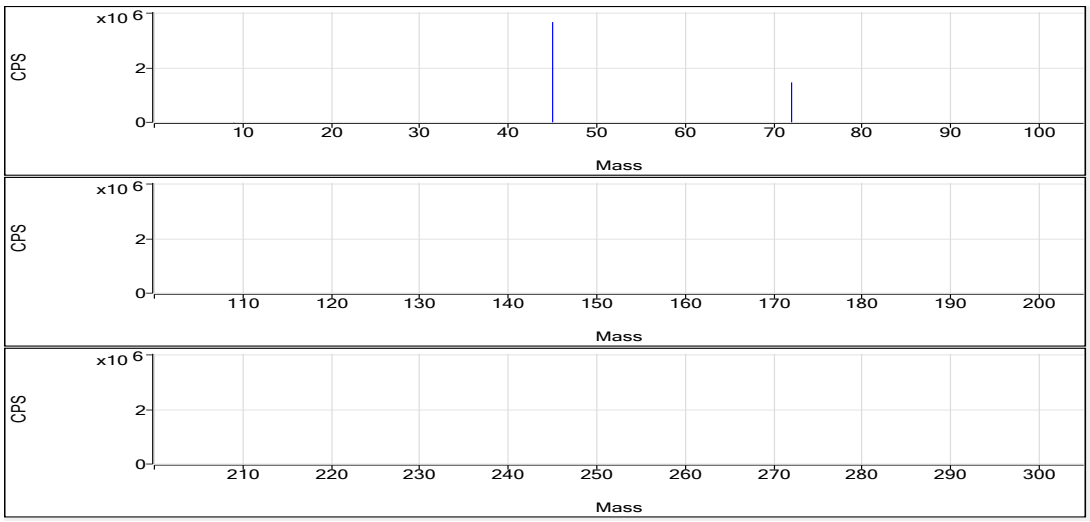
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	5.160	ppb	4.0	9991.35	0.0068	Pulse	0.5000	3
Se	78	72	H2	1.069	ppb	15.4	68.22	0.0004	Pulse	1.5000	3
Na	23	72	He	400.501	ppb	2.0	59469.19	0.7944	Pulse	0.1000	3
Mg	24	72	He	23807.357	ppb	1.4	1502905.39	20.0769	Pulse	0.1000	3
Al	27	72	He	108635.008	ppb	1.6	1963121.22	26.2249	Pulse	0.1000	3
K	39	72	He	12910.051	ppb	2.0	544404.15	7.2727	Pulse	0.1000	3
Ca	44	72	He	5156.512	ppb	3.5	12108.78	0.1618	Pulse	0.1000	3
Ti	47	72	He	518.066	ppb	1.2	9746.92	0.1302	Pulse	0.1000	3
V	51	72	He	155.868	ppb	1.6	137035.92	1.8306	Pulse	0.5000	3
Cr	52	72	He	126.994	ppb	2.1	146653.90	1.9592	Pulse	0.1000	3
Mn	55	72	He	10275.405	ppb	2.1	4541023.06	60.6636	Pulse	0.1000	3
Fe	57	72	He	205963.985	ppb	1.5	4467069.41	59.6747	Pulse	0.1000	3
Co	59	72	He	87.515	ppb	1.4	200111.89	2.6732	Pulse	0.1000	3
Ni	60	72	He	170.753	ppb	1.4	113071.47	1.5105	Pulse	0.1000	3
Cu	63	72	He	88.937	ppb	0.8	166395.85	2.2228	Pulse	0.1000	3
Zn	66	72	He	637.880	ppb	3.1	117665.80	1.5720	Pulse	0.1000	3
As	75	72	He	71.871	ppb	1.2	9389.77	0.1254	Pulse	0.5000	3
Sr	88	115	He	75.852	ppb	2.3	38265.54	0.5937	Pulse	0.1000	3
Mo	98	115	He	2.216	ppb	7.2	3177.13	0.0493	Pulse	0.1000	3
Ag	107	115	He	0.070	ppb	30.7	233.34	0.0036	Pulse	0.1000	3
Cd	111	115	He	0.923	ppb	5.6	288.67	0.0045	Pulse	0.5000	3
Sn	120	115	He	4.576	ppb	7.4	5207.82	0.0808	Pulse	0.1000	3
Sb	121	115	He	1.014	ppb	9.6	826.72	0.0128	Pulse	0.1000	3
Ba	137	115	He	818.445	ppb	2.5	230782.74	3.5808	Pulse	0.1000	3
Tl	205	209	He	0.940	ppb	5.9	6218.36	0.0270	Pulse	0.1000	3
Pb	208	209	He	89.892	ppb	0.7	754305.31	3.2740	Pulse	0.1000	3
U	238	209	He	6.799	ppb	0.6	65948.53	0.2862	Pulse	0.1000	3

ISTD Table:

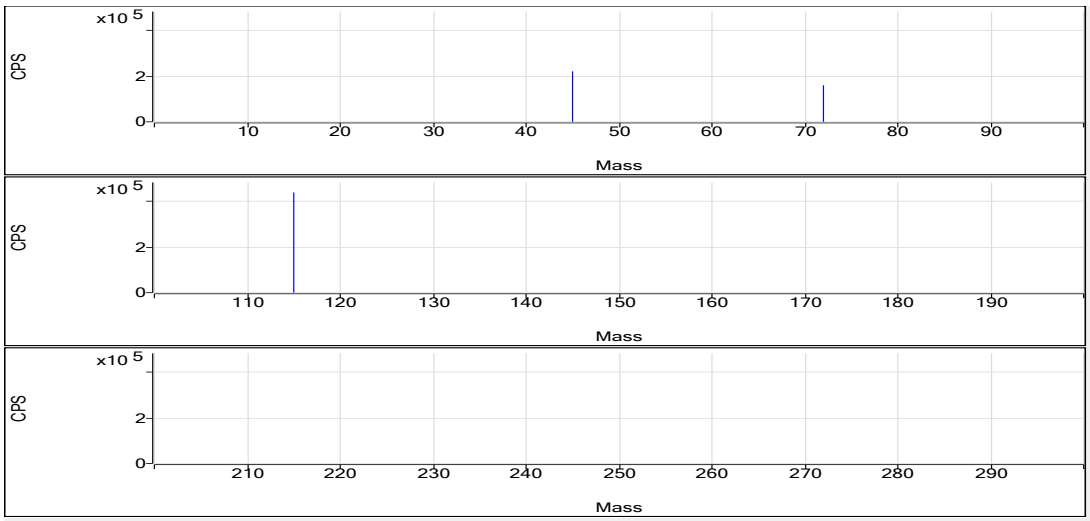
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3675705.26	0.5	113.4	Pulse	0.1000	3
No Gas	Ge	72	1463549.72	1.1	101.7	Pulse	0.1000	3
H2	Sc	45	221074.85	1.3	113.2	Pulse	0.1000	3
H2	Ge	72	159953.11	1.4	98.1	Pulse	0.1000	3
H2	In	115	439146.52	1.5	101.3	Pulse	0.1000	3
He	Sc	45	47052.67	1.1	117.7	Pulse	0.1000	3
He	Ge	72	74861.66	0.6	103.6	Pulse	0.1000	3
He	In	115	64468.02	1.8	99.8	Pulse	0.1000	3
He	Tb	159	315179.86	0.2	110.2	Pulse	0.1000	3
He	Bi	209	230389.23	0.4	103.7	Pulse	0.1000	3

No Gas

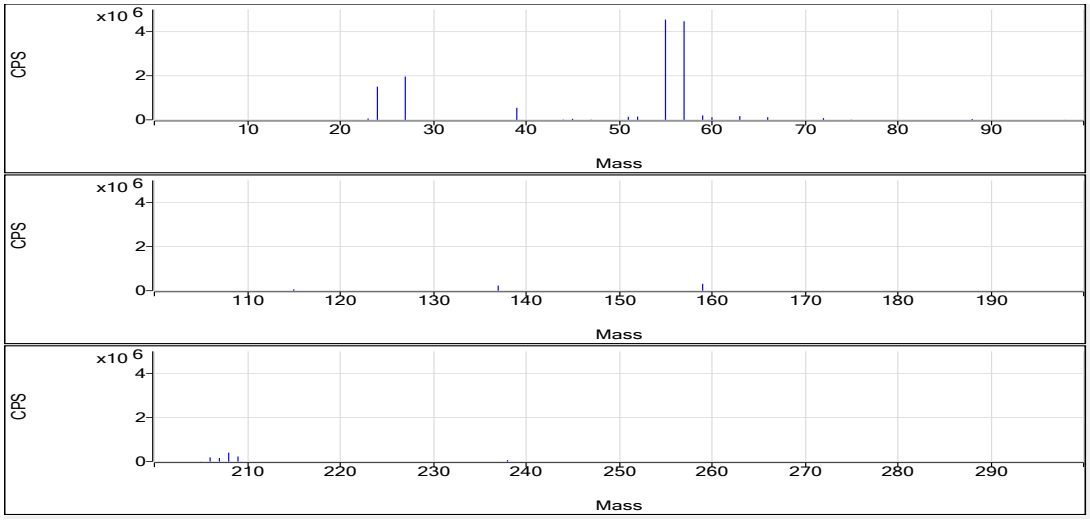


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	5.226	0.0069	9997.36	0.0013	4.694E-05
Be	9	1	No Gas	4.93	0.0065	9619.10	0.0013	4.694E-05
Be	9	1	No Gas	5.324	0.007	10357.58	0.0013	4.694E-05
Se	78	2	H2	1.201	0.0005	75.33	0.0004	1.089E-05
Se	78	2	H2	1.12	0.0004	72.00	0.0004	1.089E-05
Se	78	2	H2	0.885	0.0004	57.33	0.0004	1.089E-05
Na	23	3	He	391.269	0.7786	58696.20	0.0017	0.1065
Na	23	3	He	403.254	0.7992	59669.84	0.0017	0.1065
Na	23	3	He	406.98	0.8056	60041.52	0.0017	0.1065
Mg	24	3	He	23422.741	19.7526	1489111.07	0.0008	0.004846
Mg	24	3	He	24084.821	20.3108	1516492.63	0.0008	0.004846
Mg	24	3	He	23914.508	20.1672	1503112.48	0.0008	0.004846
Al	27	3	He	106701.236	25.7581	1941856.38	0.0002	0.001063
Al	27	3	He	109859.703	26.5206	1980140.44	0.0002	0.001063
Al	27	3	He	109344.085	26.3961	1967366.85	0.0002	0.001063
K	39	3	He	12620.114	7.1126	536206.75	0.0006	0.1436
K	39	3	He	12979.456	7.311	545874.80	0.0006	0.1436
K	39	3	He	13130.583	7.3945	551130.89	0.0006	0.1436
Ca	44	3	He	4955.543	0.1555	11725.07	0	0.001611
Ca	44	3	He	5211.282	0.1635	12205.58	0	0.001611
Ca	44	3	He	5302.711	0.1663	12395.68	0	0.001611
Ti	47	3	He	524.34	0.1318	9933.70	0.0003	0.0002737
Ti	47	3	He	511.797	0.1286	9603.46	0.0003	0.0002737
Ti	47	3	He	518.061	0.1302	9703.59	0.0003	0.0002737
V	51	3	He	153.258	1.8001	135705.75	0.0117	0.007326
V	51	3	He	156.233	1.8349	137001.30	0.0117	0.007326
V	51	3	He	158.115	1.8569	138400.70	0.0117	0.007326
Cr	52	3	He	123.989	1.9134	144247.17	0.0152	0.02538
Cr	52	3	He	128.723	1.9855	148245.32	0.0152	0.02538
Cr	52	3	He	128.27	1.9786	147469.20	0.0152	0.02538
Mn	55	3	He	10037.015	59.2565	4467239.31	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	10447.705	61.6806	4605343.37	0.0059	0.01385
Mn	55	3	He	10341.495	61.0537	4550486.49	0.0059	0.01385
Fe	57	3	He	202302.412	58.6139	4418791.18	0.0003	0.003918
Fe	57	3	He	207876.65	60.2288	4496947.12	0.0003	0.003918
Fe	57	3	He	207712.893	60.1814	4485469.93	0.0003	0.003918
Co	59	3	He	86.239	2.6343	198592.56	0.0305	0.003084
Co	59	3	He	88.69	2.7091	202270.47	0.0305	0.003084
Co	59	3	He	87.617	2.6763	199472.63	0.0305	0.003084
Ni	60	3	He	168.02	1.4865	112060.68	0.0088	0.009003
Ni	60	3	He	172.236	1.5235	113753.09	0.0088	0.009003
Ni	60	3	He	172.005	1.5215	113400.65	0.0088	0.009003
Cu	63	3	He	88.227	2.2051	166234.74	0.0249	0.004937
Cu	63	3	He	89.594	2.2391	167184.55	0.0249	0.004937
Cu	63	3	He	88.991	2.2241	165768.26	0.0249	0.004937
Zn	66	3	He	615.98	1.5182	114450.82	0.0025	0.004836
Zn	66	3	He	653.563	1.6105	120246.09	0.0025	0.004836
Zn	66	3	He	644.098	1.5872	118300.50	0.0025	0.004836
As	75	3	He	71.346	0.1245	9387.10	0.0017	0.0004347
As	75	3	He	72.887	0.1272	9497.16	0.0017	0.0004347
As	75	3	He	71.38	0.1246	9285.04	0.0017	0.0004347
Sr	88	3	He	75.631	0.592	38463.20	0.0078	0.0007762
Sr	88	3	He	77.677	0.608	38382.37	0.0078	0.0007762
Sr	88	3	He	74.247	0.5812	37951.06	0.0078	0.0007762
Mo	98	3	He	2.116	0.0471	3060.44	0.022	0.0005162
Mo	98	3	He	2.401	0.0534	3370.50	0.022	0.0005162
Mo	98	3	He	2.133	0.0475	3100.46	0.022	0.0005162
Ag	107	3	He	0.057	0.0031	200.01	0.0455	0.0004641
Ag	107	3	He	0.094	0.0048	300.01	0.0455	0.0004641
Ag	107	3	He	0.057	0.0031	200.01	0.0455	0.0004641
Cd	111	3	He	0.925	0.0045	292.00	0.0048	5.152E-05
Cd	111	3	He	0.973	0.0047	298.01	0.0048	5.152E-05
Cd	111	3	He	0.87	0.0042	276.00	0.0048	5.152E-05
Sn	120	3	He	4.23	0.0759	4931.06	0.0143	0.01559
Sn	120	3	He	4.907	0.0856	5401.22	0.0143	0.01559
Sn	120	3	He	4.59	0.081	5291.19	0.0143	0.01559
Sb	121	3	He	0.91	0.0115	750.04	0.0124	0.000258
Sb	121	3	He	1.103	0.0139	880.06	0.0124	0.000258
Sb	121	3	He	1.029	0.013	850.06	0.0124	0.000258
Ba	137	3	He	804.263	3.5188	228626.05	0.0044	0.000309
Ba	137	3	He	841.624	3.6822	232460.50	0.0044	0.000309
Ba	137	3	He	809.446	3.5415	231261.66	0.0044	0.000309
Tl	205	3	He	0.995	0.0285	6541.90	0.0276	0.001005
Tl	205	3	He	0.884	0.0254	5871.48	0.0276	0.001005
Tl	205	3	He	0.941	0.027	6241.69	0.0276	0.001005
Pb	208	3	He	89.476	3.2589	400076.28	0.0364	0.002176
Pb	208	3	He	90.652	3.3017	409286.28	0.0364	0.002176
Pb	208	3	He	89.549	3.2615	406225.03	0.0364	0.002176
U	238	3	He	6.754	0.2843	65244.64	0.0421	0.00024
U	238	3	He	6.813	0.2868	66189.80	0.0421	0.00024
U	238	3	He	6.829	0.2875	66411.14	0.0421	0.00024
Sc	45	1	No Gas			3660382.76		
Sc	45	1	No Gas			3697450.88		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3669282.13		
Ge	72	1	No Gas			1445830.29		
Ge	72	1	No Gas			1474103.88		
Ge	72	1	No Gas			1470714.98		
Sc	45	2	H2			218181.79		
Sc	45	2	H2			221280.56		
Sc	45	2	H2			223762.20		
Ge	72	2	H2			157403.34		
Ge	72	2	H2			161151.52		
Ge	72	2	H2			161304.48		
In	115	2	H2			435317.73		
In	115	2	H2			435327.73		
In	115	2	H2			446794.09		
Sc	45	3	He			47186.44		
Sc	45	3	He			46484.18		
Sc	45	3	He			47487.40		
Ge	72	3	He			75388.12		
Ge	72	3	He			74664.36		
Ge	72	3	He			74532.51		
In	115	3	He			65011.28		
In	115	3	He			63172.29		
In	115	3	He			65342.34		
Tb	159	3	He			315734.53		
Tb	159	3	He			315269.35		
Tb	159	3	He			314535.70		
Bi	209	3	He			229454.94		
Bi	209	3	He			230747.85		
Bi	209	3	He			230964.90		

Quantitation Report

Data File Name	240SMPL.d
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Acq Time	2023-08-10 18:53:13
Sample Name	410-136557-H-18-A @10
Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

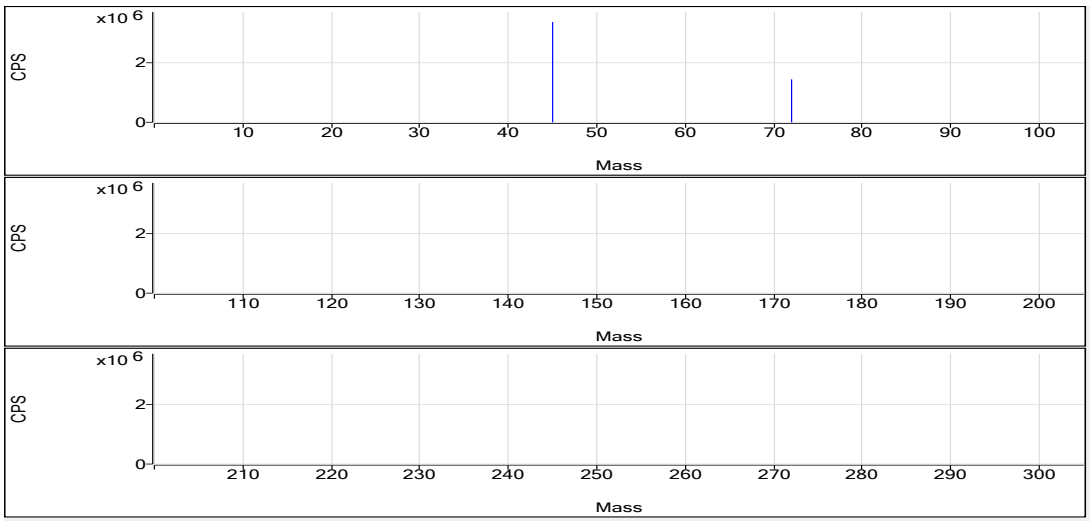
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	1.186	ppb	3.1	2330.86	0.0016	Pulse	0.5000	3
Se	78	72	H2	0.259	ppb	16.4	17.78	0.0001	Pulse	1.5000	3
Na	23	72	He	79.797	ppb	4.9	17694.34	0.2435	Pulse	0.1000	3
Mg	24	72	He	5520.414	ppb	1.5	338522.10	4.6591	Pulse	0.1000	3
Al	27	72	He	24785.672	ppb	1.0	434808.04	5.9842	Pulse	0.1000	3
K	39	72	He	2969.850	ppb	1.4	129595.60	1.7836	Pulse	0.1000	3
Ca	44	72	He	1211.129	ppb	1.4	2850.38	0.0392	Pulse	0.1000	3
Ti	47	72	He	117.811	ppb	1.8	2166.92	0.0298	Pulse	0.1000	3
V	51	72	He	36.270	ppb	1.8	31358.83	0.4316	Pulse	0.5000	3
Cr	52	72	He	28.947	ppb	2.8	33870.06	0.4662	Pulse	0.1000	3
Mn	55	72	He	2348.802	ppb	1.1	1008335.40	13.8775	Pulse	0.1000	3
Fe	57	72	He	47331.490	ppb	0.8	996659.60	13.7165	Pulse	0.1000	3
Co	59	72	He	20.189	ppb	3.2	44976.87	0.6190	Pulse	0.1000	3
Ni	60	72	He	40.304	ppb	3.6	26401.39	0.3634	Pulse	0.1000	3
Cu	63	72	He	20.542	ppb	3.9	37572.82	0.5172	Pulse	0.1000	3
Zn	66	72	He	149.068	ppb	0.0	26962.69	0.3711	Pulse	0.1000	3
As	75	72	He	16.128	ppb	6.3	2069.50	0.0285	Pulse	0.5000	3
Sr	88	115	He	16.531	ppb	5.3	8432.77	0.1300	Pulse	0.1000	3
Mo	98	115	He	0.521	ppb	8.8	776.71	0.0120	Pulse	0.1000	3
Ag	107	115	He	0.017	ppb	51.6	80.00	0.0012	Pulse	0.1000	3
Cd	111	115	He	0.184	ppb	43.0	60.67	0.0009	Pulse	0.5000	3
Sn	120	115	He	1.057	ppb	14.8	1990.21	0.0307	Pulse	0.1000	3
Sb	121	115	He	0.351	ppb	13.0	300.01	0.0046	Pulse	0.1000	3
Ba	137	115	He	180.524	ppb	2.7	51259.31	0.7901	Pulse	0.1000	3
Tl	205	209	He	0.203	ppb	5.2	1493.47	0.0066	Pulse	0.1000	3
Pb	208	209	He	21.867	ppb	2.4	179824.50	0.7981	Pulse	0.1000	3
U	238	209	He	1.541	ppb	3.7	14655.45	0.0650	Pulse	0.1000	3

ISTD Table:

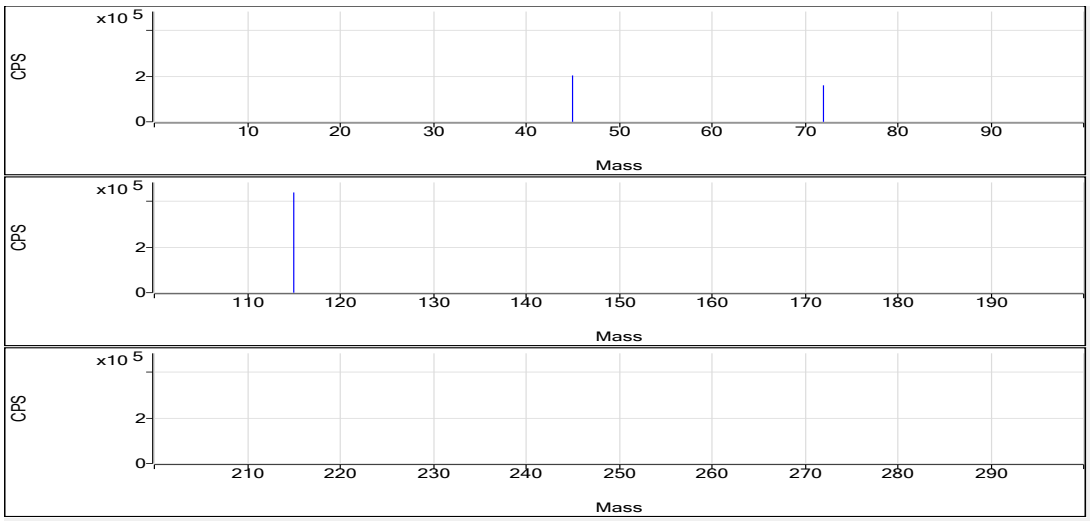
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3388499.22	1.7	104.5	Pulse	0.1000	3
No Gas	Ge	72	1451640.60	1.3	100.8	Pulse	0.1000	3
H2	Sc	45	202762.07	2.4	103.8	Pulse	0.1000	3
H2	Ge	72	159565.67	1.7	97.9	Pulse	0.1000	3
H2	In	115	438178.67	1.7	101.1	Pulse	0.1000	3
He	Sc	45	42940.19	1.4	107.4	Pulse	0.1000	3
He	Ge	72	72663.61	0.8	100.5	Pulse	0.1000	3
He	In	115	64905.56	2.3	100.5	Pulse	0.1000	3
He	Tb	159	294776.15	1.1	103.1	Pulse	0.1000	3
He	Bi	209	225350.26	1.1	101.4	Pulse	0.1000	3

No Gas

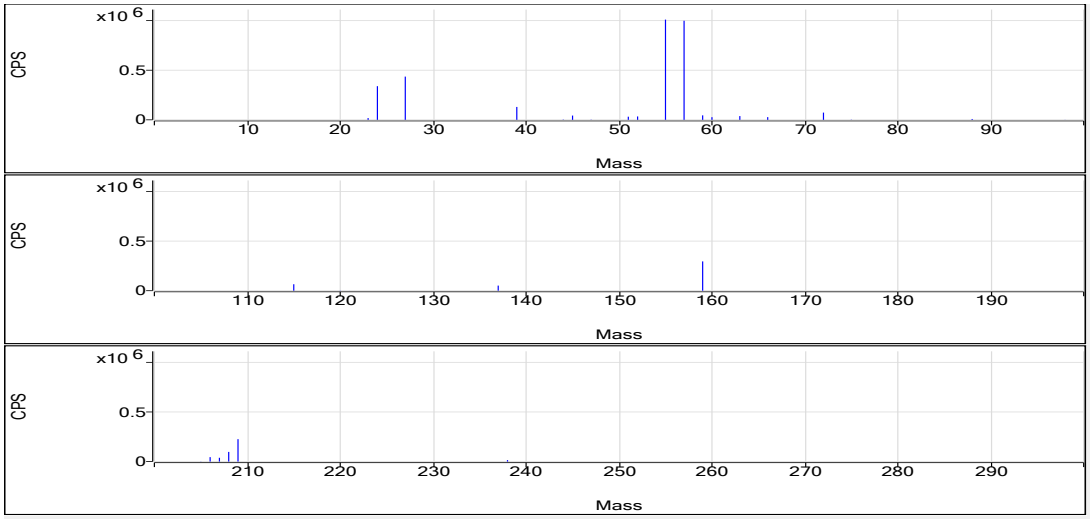


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	1.149	0.0016	2264.18	0.0013	4.694E-05
Be	9	1	No Gas	1.189	0.0016	2362.20	0.0013	4.694E-05
Be	9	1	No Gas	1.222	0.0017	2366.20	0.0013	4.694E-05
Se	78	2	H2	0.3	0.0001	20.00	0.0004	1.089E-05
Se	78	2	H2	0.26	0.0001	18.00	0.0004	1.089E-05
Se	78	2	H2	0.215	0.0001	15.33	0.0004	1.089E-05
Na	23	3	He	79.612	0.2432	17540.85	0.0017	0.1065
Na	23	3	He	83.827	0.2505	18171.48	0.0017	0.1065
Na	23	3	He	75.951	0.2369	17370.69	0.0017	0.1065
Mg	24	3	He	5607.827	4.7328	341334.29	0.0008	0.004846
Mg	24	3	He	5505.103	4.6462	337098.16	0.0008	0.004846
Mg	24	3	He	5448.312	4.5983	337133.86	0.0008	0.004846
Al	27	3	He	25000.085	6.0359	435316.63	0.0002	0.001063
Al	27	3	He	24842.36	5.9979	435165.50	0.0002	0.001063
Al	27	3	He	24514.572	5.9187	433941.99	0.0002	0.001063
K	39	3	He	3008.883	1.8052	130191.11	0.0006	0.1436
K	39	3	He	2974.015	1.7859	129575.07	0.0006	0.1436
K	39	3	He	2926.653	1.7598	129020.63	0.0006	0.1436
Ca	44	3	He	1229.519	0.0398	2870.38	0	0.001611
Ca	44	3	He	1195.249	0.0387	2810.37	0	0.001611
Ca	44	3	He	1208.619	0.0392	2870.38	0	0.001611
Ti	47	3	He	116.137	0.0294	2120.24	0.0003	0.0002737
Ti	47	3	He	117.087	0.0296	2150.25	0.0003	0.0002737
Ti	47	3	He	120.209	0.0304	2230.26	0.0003	0.0002737
V	51	3	He	37.008	0.4402	31750.34	0.0117	0.007326
V	51	3	He	36.101	0.4296	31171.11	0.0117	0.007326
V	51	3	He	35.7	0.4249	31155.04	0.0117	0.007326
Cr	52	3	He	29.129	0.4689	33820.03	0.0152	0.02538
Cr	52	3	He	29.653	0.4769	34601.87	0.0152	0.02538
Cr	52	3	He	28.061	0.4527	33188.27	0.0152	0.02538
Mn	55	3	He	2378.5	14.0528	1013496.23	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2336.743	13.8063	1001693.66	0.0059	0.01385
Mn	55	3	He	2331.163	13.7734	1009816.31	0.0059	0.01385
Fe	57	3	He	47743.012	13.8358	997846.55	0.0003	0.003918
Fe	57	3	He	47149.074	13.6637	991347.72	0.0003	0.003918
Fe	57	3	He	47102.384	13.6502	1000784.52	0.0003	0.003918
Co	59	3	He	20.928	0.6416	46274.13	0.0305	0.003084
Co	59	3	He	19.716	0.6046	43867.07	0.0305	0.003084
Co	59	3	He	19.922	0.6109	44789.41	0.0305	0.003084
Ni	60	3	He	41.212	0.3714	26785.29	0.0088	0.009003
Ni	60	3	He	41.071	0.3701	26855.62	0.0088	0.009003
Ni	60	3	He	38.628	0.3487	25563.27	0.0088	0.009003
Cu	63	3	He	21.344	0.5372	38742.74	0.0249	0.004937
Cu	63	3	He	20.534	0.517	37509.10	0.0249	0.004937
Cu	63	3	He	19.748	0.4974	36466.63	0.0249	0.004937
Zn	66	3	He	149.037	0.371	26755.68	0.0025	0.004836
Zn	66	3	He	149.092	0.3711	26925.98	0.0025	0.004836
Zn	66	3	He	149.076	0.3711	27206.41	0.0025	0.004836
As	75	3	He	17.1	0.0302	2176.18	0.0017	0.0004347
As	75	3	He	15.062	0.0266	1932.14	0.0017	0.0004347
As	75	3	He	16.221	0.0286	2100.17	0.0017	0.0004347
Sr	88	3	He	16.723	0.1315	8352.69	0.0078	0.0007762
Sr	88	3	He	17.299	0.136	8802.97	0.0078	0.0007762
Sr	88	3	He	15.571	0.1225	8142.66	0.0078	0.0007762
Mo	98	3	He	0.556	0.0128	810.05	0.022	0.0005162
Mo	98	3	He	0.538	0.0124	800.05	0.022	0.0005162
Mo	98	3	He	0.468	0.0108	720.04	0.022	0.0005162
Ag	107	3	He	0.007	0.0008	50.00	0.0455	0.0004641
Ag	107	3	He	0.024	0.0015	100.01	0.0455	0.0004641
Ag	107	3	He	0.02	0.0014	90.00	0.0455	0.0004641
Cd	111	3	He	0.12	0.0006	40.00	0.0048	5.152E-05
Cd	111	3	He	0.272	0.0014	88.00	0.0048	5.152E-05
Cd	111	3	He	0.159	0.0008	54.00	0.0048	5.152E-05
Sn	120	3	He	1.171	0.0323	2050.23	0.0143	0.01559
Sn	120	3	He	0.879	0.0281	1820.18	0.0143	0.01559
Sn	120	3	He	1.123	0.0316	2100.22	0.0143	0.01559
Sb	121	3	He	0.322	0.0043	270.01	0.0124	0.000258
Sb	121	3	He	0.328	0.0043	280.01	0.0124	0.000258
Sb	121	3	He	0.404	0.0053	350.02	0.0124	0.000258
Ba	137	3	He	183.91	0.8049	51125.39	0.0044	0.000309
Ba	137	3	He	182.715	0.7996	51757.95	0.0044	0.000309
Ba	137	3	He	174.946	0.7657	50894.58	0.0044	0.000309
Tl	205	3	He	0.205	0.0067	1490.14	0.0276	0.001005
Tl	205	3	He	0.213	0.0069	1570.15	0.0276	0.001005
Tl	205	3	He	0.192	0.0063	1420.13	0.0276	0.001005
Pb	208	3	He	22.453	0.8194	99150.50	0.0364	0.002176
Pb	208	3	He	21.656	0.7904	96239.60	0.0364	0.002176
Pb	208	3	He	21.491	0.7844	95786.66	0.0364	0.002176
U	238	3	He	1.563	0.066	14728.96	0.0421	0.00024
U	238	3	He	1.475	0.0623	14198.26	0.0421	0.00024
U	238	3	He	1.583	0.0668	15039.14	0.0421	0.00024
Sc	45	1	No Gas			3384201.82		
Sc	45	1	No Gas			3449172.76		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3332123.08		
Ge	72	1	No Gas			1454571.54		
Ge	72	1	No Gas			1468146.38		
Ge	72	1	No Gas			1432203.88		
Sc	45	2	H2			197189.53		
Sc	45	2	H2			204885.21		
Sc	45	2	H2			206211.46		
Ge	72	2	H2			156552.26		
Ge	72	2	H2			160345.67		
Ge	72	2	H2			161799.09		
In	115	2	H2			429531.79		
In	115	2	H2			441148.16		
In	115	2	H2			443856.05		
Sc	45	3	He			42231.67		
Sc	45	3	He			43214.41		
Sc	45	3	He			43374.49		
Ge	72	3	He			72120.79		
Ge	72	3	He			72553.41		
Ge	72	3	He			73316.64		
In	115	3	He			63535.47		
In	115	3	He			64740.12		
In	115	3	He			66487.67		
Tb	159	3	He			291386.91		
Tb	159	3	He			298033.55		
Tb	159	3	He			294908.00		
Bi	209	3	He			223128.45		
Bi	209	3	He			227951.91		
Bi	209	3	He			224970.43		

Quantitation Report

Data File Name	241SMPL.d
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Sample Type	Sample
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

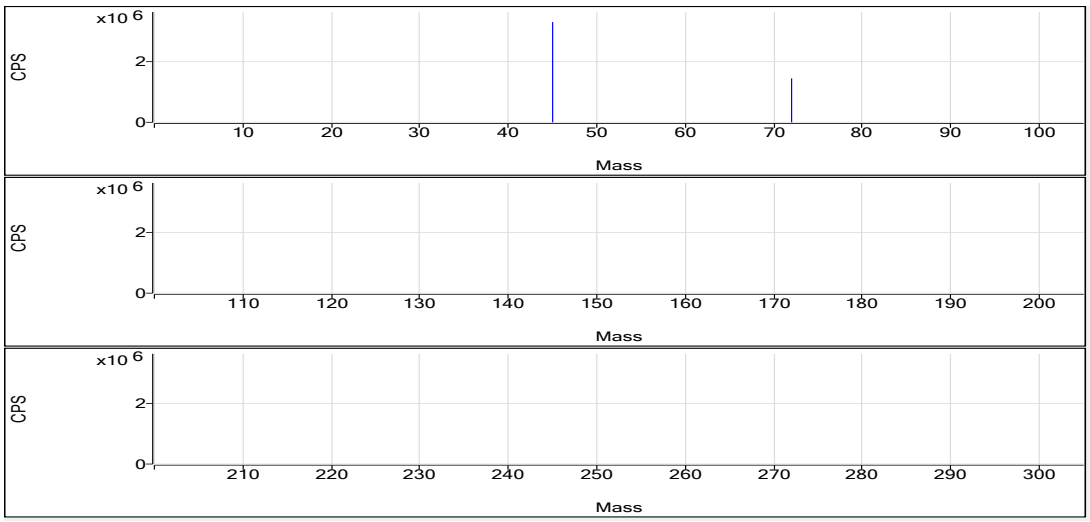
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.004	ppb	47.9	76.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.018	ppb	33.5	2.89	0.0000	Pulse	1.5000	3
Na	23	72	He	3.747	ppb	75.4	8192.55	0.1129	Pulse	0.1000	3
Mg	24	72	He	9.183	ppb	4.3	913.39	0.0126	Pulse	0.1000	3
Al	27	72	He	25.119	ppb	25.6	516.70	0.0071	Pulse	0.1000	3
K	39	72	He	9.130	ppb	56.6	10787.64	0.1487	Pulse	0.1000	3
Ca	44	72	He	33.918	ppb	6.3	193.34	0.0027	Pulse	0.1000	3
Ti	47	72	He	0.372	ppb	168.2	26.67	0.0004	Pulse	0.1000	3
V	51	72	He	0.083	ppb	48.0	602.02	0.0083	Pulse	0.5000	3
Cr	52	72	He	0.019	ppb	852.5	1863.52	0.0257	Pulse	0.1000	3
Mn	55	72	He	1.117	ppb	19.8	1483.46	0.0204	Pulse	0.1000	3
Fe	57	72	He	51.025	ppb	3.0	1356.79	0.0187	Pulse	0.1000	3
Co	59	72	He	0.077	ppb	5.9	393.35	0.0054	Pulse	0.1000	3
Ni	60	72	He	0.957	ppb	15.6	1263.43	0.0174	Pulse	0.1000	3
Cu	63	72	He	0.132	ppb	56.0	596.70	0.0082	Pulse	0.1000	3
Zn	66	72	He	0.032	ppb	588.5	356.69	0.0049	Pulse	0.1000	3
As	75	72	He	0.215	ppb	60.9	58.67	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.045	ppb	202.0	73.33	0.0011	Pulse	0.1000	3
Mo	98	115	He	0.016	ppb	151.2	56.67	0.0009	Pulse	0.1000	3
Ag	107	115	He	0.009	ppb	60.0	56.67	0.0009	Pulse	0.1000	3
Cd	111	115	He	-0.002	ppb	N/A	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.027	ppb	509.5	1040.07	0.0160	Pulse	0.1000	3
Sb	121	115	He	0.016	ppb	262.2	30.00	0.0005	Pulse	0.1000	3
Ba	137	115	He	0.339	ppb	49.4	116.67	0.0018	Pulse	0.1000	3
Tl	205	209	He	0.009	ppb	60.6	276.68	0.0013	Pulse	0.1000	3
Pb	208	209	He	1.780	ppb	3.8	14677.11	0.0670	Pulse	0.1000	3
U	238	209	He	0.010	ppb	33.7	146.68	0.0007	Pulse	0.1000	3

ISTD Table:

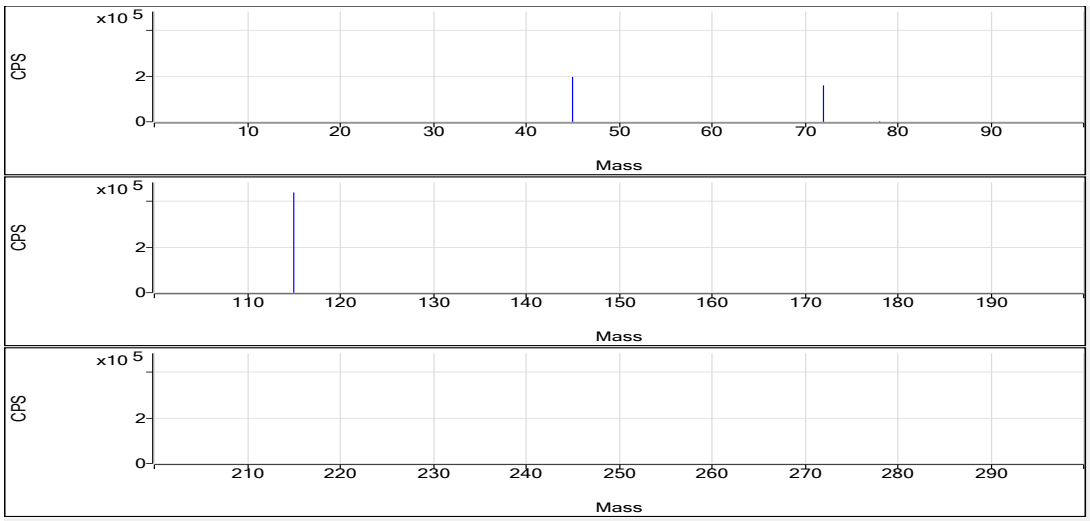
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3289399.85	1.2	101.5	Pulse	0.1000	3
No Gas	Ge	72	1441340.92	1.1	100.1	Pulse	0.1000	3
H2	Sc	45	196968.11	2.9	100.8	Pulse	0.1000	3
H2	Ge	72	160203.46	2.5	98.3	Pulse	0.1000	3
H2	In	115	440213.68	1.4	101.6	Pulse	0.1000	3
He	Sc	45	41643.26	2.6	104.1	Pulse	0.1000	3
He	Ge	72	72559.48	0.5	100.4	Pulse	0.1000	3
He	In	115	65154.07	1.3	100.9	Pulse	0.1000	3
He	Tb	159	284574.36	1.2	99.5	Pulse	0.1000	3
He	Bi	209	219136.17	1.4	98.6	Pulse	0.1000	3

No Gas

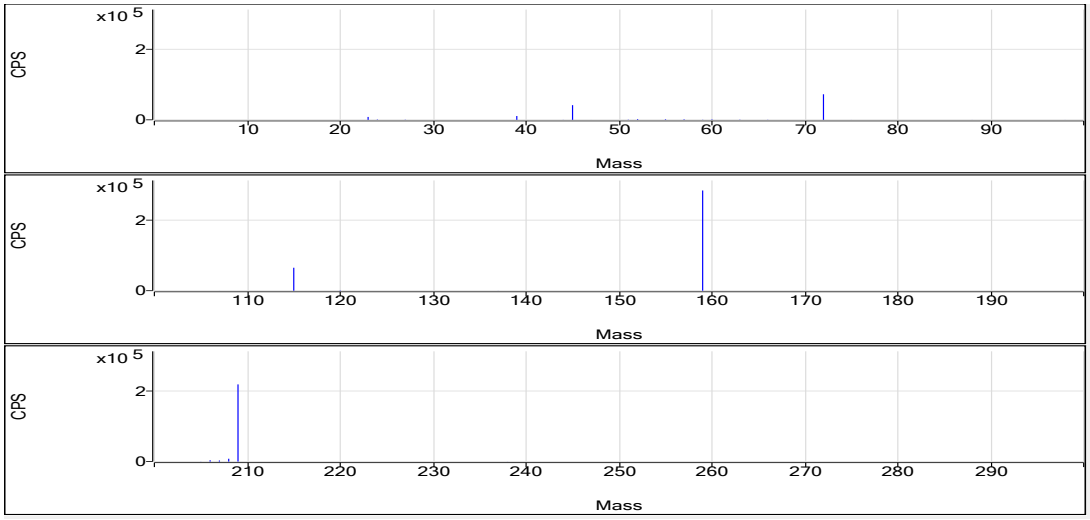


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.002	0	72.00	0.0013	4.694E-05
Be	9	1	No Gas	0.006	0.0001	80.00	0.0013	4.694E-05
Be	9	1	No Gas	0.005	0.0001	76.00	0.0013	4.694E-05
Se	78	2	H2	0.016	0	2.67	0.0004	1.089E-05
Se	78	2	H2	0.025	0	3.33	0.0004	1.089E-05
Se	78	2	H2	0.014	0	2.67	0.0004	1.089E-05
Na	23	3	He	2.557	0.1108	8002.30	0.0017	0.1065
Na	23	3	He	1.711	0.1094	7932.47	0.0017	0.1065
Na	23	3	He	6.974	0.1184	8642.89	0.0017	0.1065
Mg	24	3	He	9.04	0.0125	900.06	0.0008	0.004846
Mg	24	3	He	9.629	0.013	940.06	0.0008	0.004846
Mg	24	3	He	8.881	0.0123	900.05	0.0008	0.004846
Al	27	3	He	29.456	0.0082	590.04	0.0002	0.001063
Al	27	3	He	28.163	0.0079	570.03	0.0002	0.001063
Al	27	3	He	17.738	0.0053	390.02	0.0002	0.001063
K	39	3	He	14.923	0.1519	10964.48	0.0006	0.1436
K	39	3	He	7.456	0.1478	10714.29	0.0006	0.1436
K	39	3	He	5.012	0.1464	10684.16	0.0006	0.1436
Ca	44	3	He	32.876	0.0026	190.01	0	0.001611
Ca	44	3	He	32.5	0.0026	190.01	0	0.001611
Ca	44	3	He	36.378	0.0027	200.01	0	0.001611
Ti	47	3	He	0.013	0.0003	20.00	0.0003	0.0002737
Ti	47	3	He	0.008	0.0003	20.00	0.0003	0.0002737
Ti	47	3	He	1.094	0.0005	40.00	0.0003	0.0002737
V	51	3	He	0.044	0.0078	566.02	0.0117	0.007326
V	51	3	He	0.081	0.0083	600.02	0.0117	0.007326
V	51	3	He	0.123	0.0088	640.02	0.0117	0.007326
Cr	52	3	He	-0.166	0.0229	1650.15	0.0152	0.02538
Cr	52	3	He	0.144	0.0276	2000.21	0.0152	0.02538
Cr	52	3	He	0.079	0.0266	1940.20	0.0152	0.02538
Mn	55	3	He	1.103	0.0204	1470.14	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1.345	0.0218	1580.14	0.0059	0.01385
Mn	55	3	He	0.903	0.0192	1400.11	0.0059	0.01385
Fe	57	3	He	52.465	0.0191	1380.12	0.0003	0.003918
Fe	57	3	He	51.221	0.0188	1360.13	0.0003	0.003918
Fe	57	3	He	49.391	0.0182	1330.11	0.0003	0.003918
Co	59	3	He	0.071	0.0053	380.02	0.0305	0.003084
Co	59	3	He	0.08	0.0055	400.02	0.0305	0.003084
Co	59	3	He	0.079	0.0055	400.02	0.0305	0.003084
Ni	60	3	He	1.04	0.0181	1310.10	0.0088	0.009003
Ni	60	3	He	1.047	0.0182	1320.10	0.0088	0.009003
Ni	60	3	He	0.784	0.0159	1160.10	0.0088	0.009003
Cu	63	3	He	0.046	0.0061	440.03	0.0249	0.004937
Cu	63	3	He	0.173	0.0092	670.04	0.0249	0.004937
Cu	63	3	He	0.176	0.0093	680.04	0.0249	0.004937
Zn	66	3	He	-0.164	0.0044	320.02	0.0025	0.004836
Zn	66	3	He	0.052	0.005	360.02	0.0025	0.004836
Zn	66	3	He	0.207	0.0053	390.02	0.0025	0.004836
As	75	3	He	0.308	0.001	70.00	0.0017	0.0004347
As	75	3	He	0.273	0.0009	66.00	0.0017	0.0004347
As	75	3	He	0.065	0.0005	40.00	0.0017	0.0004347
Sr	88	3	He	-0.061	0.0003	20.00	0.0078	0.0007762
Sr	88	3	He	0.099	0.0016	100.00	0.0078	0.0007762
Sr	88	3	He	0.098	0.0015	100.00	0.0078	0.0007762
Mo	98	3	He	0.038	0.0014	90.00	0.022	0.0005162
Mo	98	3	He	-0.009	0.0003	20.00	0.022	0.0005162
Mo	98	3	He	0.019	0.0009	60.00	0.022	0.0005162
Ag	107	3	He	0.003	0.0006	40.00	0.0455	0.0004641
Ag	107	3	He	0.014	0.0011	70.00	0.0455	0.0004641
Ag	107	3	He	0.01	0.0009	60.00	0.0455	0.0004641
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Sn	120	3	He	-0.096	0.0142	940.07	0.0143	0.01559
Sn	120	3	He	0.179	0.0181	1170.08	0.0143	0.01559
Sn	120	3	He	-0.001	0.0156	1010.07	0.0143	0.01559
Sb	121	3	He	-0.009	0.0002	10.00	0.0124	0.000258
Sb	121	3	He	-0.008	0.0002	10.00	0.0124	0.000258
Sb	121	3	He	0.066	0.0011	70.00	0.0124	0.000258
Ba	137	3	He	0.275	0.0015	100.00	0.0044	0.000309
Ba	137	3	He	0.213	0.0012	80.00	0.0044	0.000309
Ba	137	3	He	0.529	0.0026	170.01	0.0044	0.000309
Tl	205	3	He	0.008	0.0012	270.01	0.0276	0.001005
Tl	205	3	He	0.004	0.0011	250.01	0.0276	0.001005
Tl	205	3	He	0.015	0.0014	310.02	0.0276	0.001005
Pb	208	3	He	1.859	0.0698	8572.99	0.0364	0.002176
Pb	208	3	He	1.742	0.0656	8092.76	0.0364	0.002176
Pb	208	3	He	1.741	0.0655	7382.32	0.0364	0.002176
U	238	3	He	0.006	0.0005	110.01	0.0421	0.00024
U	238	3	He	0.012	0.0008	170.01	0.0421	0.00024
U	238	3	He	0.012	0.0007	160.01	0.0421	0.00024
Sc	45	1	No Gas			3318639.64		
Sc	45	1	No Gas			3305972.14		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3243587.76		
Ge	72	1	No Gas			1449222.48		
Ge	72	1	No Gas			1451353.88		
Ge	72	1	No Gas			1423446.39		
Sc	45	2	H2			191274.00		
Sc	45	2	H2			197037.61		
Sc	45	2	H2			202592.73		
Ge	72	2	H2			156058.85		
Ge	72	2	H2			160325.49		
Ge	72	2	H2			164226.03		
In	115	2	H2			433216.32		
In	115	2	H2			443104.88		
In	115	2	H2			444319.84		
Sc	45	3	He			42893.67		
Sc	45	3	He			40947.76		
Sc	45	3	He			41088.36		
Ge	72	3	He			72190.99		
Ge	72	3	He			72512.44		
Ge	72	3	He			72975.01		
In	115	3	He			66116.96		
In	115	3	He			64509.08		
In	115	3	He			64860.52		
Tb	159	3	He			286483.37		
Tb	159	3	He			286605.72		
Tb	159	3	He			280634.00		
Bi	209	3	He			218759.96		
Bi	209	3	He			222386.52		
Bi	209	3	He			216262.03		

Quantitation Report

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Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

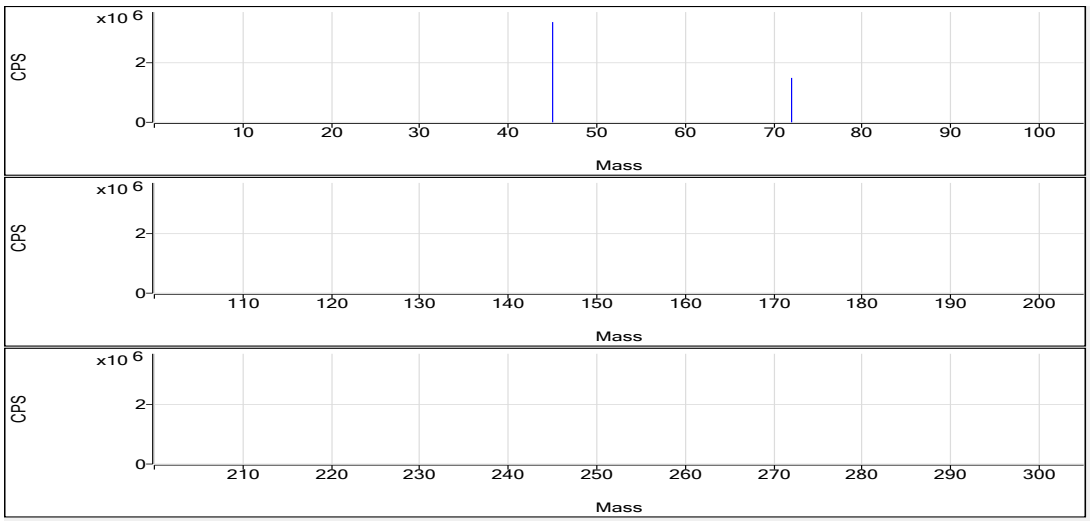
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.143	ppb	2.9	346.68	0.0002	Pulse	0.5000	3
Se	78	72	H2	0.268	ppb	8.9	18.89	0.0001	Pulse	1.5000	3
Na	23	72	He	84.592	ppb	7.4	18722.20	0.2518	Pulse	0.1000	3
Mg	24	72	He	295.013	ppb	3.8	18855.92	0.2536	Pulse	0.1000	3
Al	27	72	He	1129.188	ppb	2.7	20347.85	0.2736	Pulse	0.1000	3
K	39	72	He	180.817	ppb	10.3	18104.92	0.2435	Pulse	0.1000	3
Ca	44	72	He	573.119	ppb	2.8	1443.45	0.0194	Pulse	0.1000	3
Ti	47	72	He	19.665	ppb	21.4	386.68	0.0052	Pulse	0.1000	3
V	51	72	He	2.950	ppb	4.6	3111.02	0.0418	Pulse	0.5000	3
Cr	52	72	He	4.255	ppb	5.1	6705.12	0.0902	Pulse	0.1000	3
Mn	55	72	He	59.621	ppb	1.9	27206.02	0.3658	Pulse	0.1000	3
Fe	57	72	He	2112.266	ppb	1.6	45799.43	0.6159	Pulse	0.1000	3
Co	59	72	He	1.916	ppb	3.3	4577.56	0.0615	Pulse	0.1000	3
Ni	60	72	He	4.117	ppb	11.3	3363.84	0.0452	Pulse	0.1000	3
Cu	63	72	He	4.811	ppb	2.3	9289.95	0.1249	Pulse	0.1000	3
Zn	66	72	He	35.277	ppb	8.1	6801.84	0.0915	Pulse	0.1000	3
As	75	72	He	1.940	ppb	9.3	283.34	0.0038	Pulse	0.5000	3
Sr	88	115	He	3.964	ppb	3.3	2043.55	0.0318	Pulse	0.1000	3
Mo	98	115	He	0.280	ppb	19.4	430.02	0.0067	Pulse	0.1000	3
Ag	107	115	He	0.147	ppb	21.0	460.02	0.0071	Pulse	0.1000	3
Cd	111	115	He	0.179	ppb	20.6	58.67	0.0009	Pulse	0.5000	3
Sn	120	115	He	0.706	ppb	13.5	1650.16	0.0256	Pulse	0.1000	3
Sb	121	115	He	2.277	ppb	8.6	1833.52	0.0285	Pulse	0.1000	3
Ba	137	115	He	13.668	ppb	4.5	3867.36	0.0601	Pulse	0.1000	3
Tl	205	209	He	0.149	ppb	11.9	1166.76	0.0051	Pulse	0.1000	3
Pb	208	209	He	359.129	ppb	1.3	2976522.03	13.0735	Pulse	0.1000	3
U	238	209	He	0.182	ppb	6.8	1796.86	0.0079	Pulse	0.1000	3

ISTD Table:

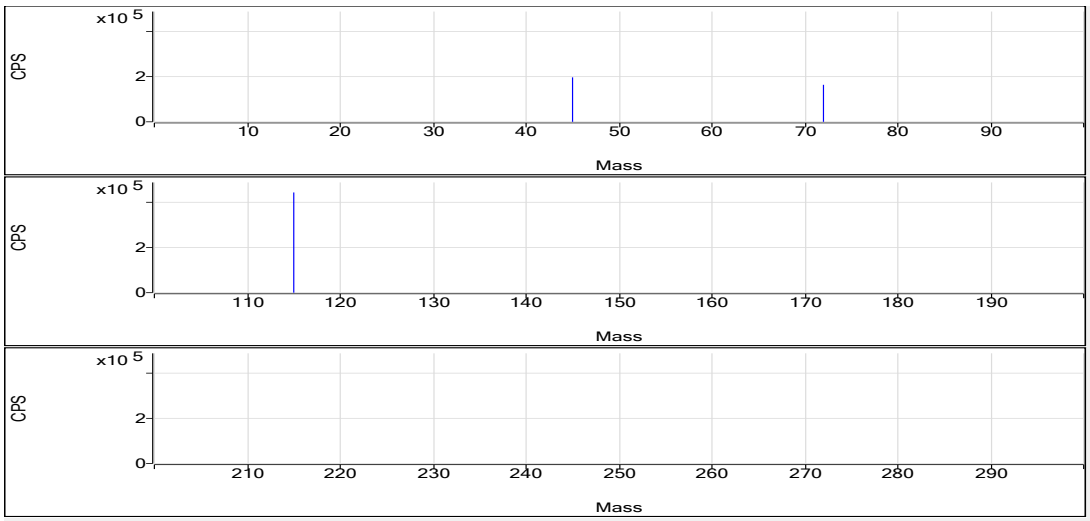
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3338958.49	1.4	103.0	Pulse	0.1000	3
No Gas	Ge	72	1479111.18	0.3	102.7	Pulse	0.1000	3
H2	Sc	45	196997.16	1.8	100.8	Pulse	0.1000	3
H2	Ge	72	163983.88	1.4	100.6	Pulse	0.1000	3
H2	In	115	444099.30	1.6	102.5	Pulse	0.1000	3
He	Sc	45	42713.10	1.7	106.8	Pulse	0.1000	3
He	Ge	72	74372.45	1.1	102.9	Pulse	0.1000	3
He	In	115	64338.92	0.4	99.6	Pulse	0.1000	3
He	Tb	159	291597.81	1.1	102.0	Pulse	0.1000	3
He	Bi	209	227691.99	0.9	102.5	Pulse	0.1000	3

No Gas

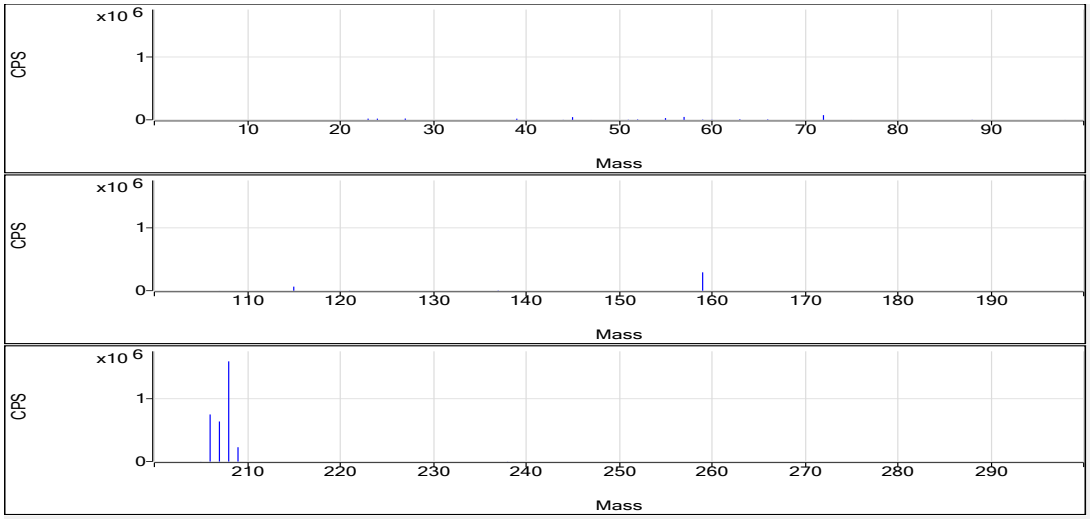


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.145	0.0002	352.01	0.0013	4.694E-05
Be	9	1	No Gas	0.145	0.0002	350.01	0.0013	4.694E-05
Be	9	1	No Gas	0.138	0.0002	338.01	0.0013	4.694E-05
Se	78	2	H2	0.29	0.0001	20.00	0.0004	1.089E-05
Se	78	2	H2	0.243	0.0001	17.33	0.0004	1.089E-05
Se	78	2	H2	0.271	0.0001	19.33	0.0004	1.089E-05
Na	23	3	He	90.938	0.2627	19543.39	0.0017	0.1065
Na	23	3	He	84.45	0.2515	18501.87	0.0017	0.1065
Na	23	3	He	78.389	0.2411	18121.34	0.0017	0.1065
Mg	24	3	He	284.1	0.2444	18181.83	0.0008	0.004846
Mg	24	3	He	306.475	0.2632	19363.13	0.0008	0.004846
Mg	24	3	He	294.463	0.2531	19022.80	0.0008	0.004846
Al	27	3	He	1114.968	0.2702	20104.25	0.0002	0.001063
Al	27	3	He	1163.898	0.282	20744.97	0.0002	0.001063
Al	27	3	He	1108.699	0.2687	20194.32	0.0002	0.001063
K	39	3	He	194.839	0.2512	18692.35	0.0006	0.1436
K	39	3	He	187.983	0.2474	18201.78	0.0006	0.1436
K	39	3	He	159.631	0.2318	17420.64	0.0006	0.1436
Ca	44	3	He	566.986	0.0192	1430.12	0	0.001611
Ca	44	3	He	591.595	0.02	1470.12	0	0.001611
Ca	44	3	He	560.775	0.019	1430.12	0	0.001611
Ti	47	3	He	22.491	0.0059	440.02	0.0003	0.0002737
Ti	47	3	He	21.678	0.0057	420.02	0.0003	0.0002737
Ti	47	3	He	14.826	0.004	300.01	0.0003	0.0002737
V	51	3	He	2.819	0.0403	2998.32	0.0117	0.007326
V	51	3	He	3.088	0.0435	3196.37	0.0117	0.007326
V	51	3	He	2.943	0.0418	3138.37	0.0117	0.007326
Cr	52	3	He	4.134	0.0883	6571.71	0.0152	0.02538
Cr	52	3	He	4.504	0.094	6911.88	0.0152	0.02538
Cr	52	3	He	4.128	0.0882	6631.78	0.0152	0.02538
Mn	55	3	He	59.923	0.3675	27346.32	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	58.353	0.3583	26354.36	0.0059	0.01385
Mn	55	3	He	60.586	0.3715	27917.37	0.0059	0.01385
Fe	57	3	He	2091.346	0.6098	45371.45	0.0003	0.003918
Fe	57	3	He	2151.286	0.6272	46134.05	0.0003	0.003918
Fe	57	3	He	2094.166	0.6106	45892.78	0.0003	0.003918
Co	59	3	He	1.93	0.062	4610.90	0.0305	0.003084
Co	59	3	He	1.846	0.0594	4370.82	0.0305	0.003084
Co	59	3	He	1.971	0.0632	4750.97	0.0305	0.003084
Ni	60	3	He	3.822	0.0426	3170.47	0.0088	0.009003
Ni	60	3	He	3.878	0.0431	3170.45	0.0088	0.009003
Ni	60	3	He	4.651	0.0499	3750.60	0.0088	0.009003
Cu	63	3	He	4.703	0.1222	9093.17	0.0249	0.004937
Cu	63	3	He	4.923	0.1277	9393.35	0.0249	0.004937
Cu	63	3	He	4.809	0.1249	9383.33	0.0249	0.004937
Zn	66	3	He	36.064	0.0934	6951.92	0.0025	0.004836
Zn	66	3	He	37.663	0.0974	7162.02	0.0025	0.004836
Zn	66	3	He	32.106	0.0837	6291.57	0.0025	0.004836
As	75	3	He	2.146	0.0042	310.01	0.0017	0.0004347
As	75	3	He	1.814	0.0036	264.00	0.0017	0.0004347
As	75	3	He	1.862	0.0037	276.00	0.0017	0.0004347
Sr	88	3	He	3.869	0.031	2000.24	0.0078	0.0007762
Sr	88	3	He	3.91	0.0313	2020.20	0.0078	0.0007762
Sr	88	3	He	4.114	0.0329	2110.21	0.0078	0.0007762
Mo	98	3	He	0.272	0.0065	420.02	0.022	0.0005162
Mo	98	3	He	0.23	0.0056	360.02	0.022	0.0005162
Mo	98	3	He	0.338	0.008	510.03	0.022	0.0005162
Ag	107	3	He	0.174	0.0084	540.03	0.0455	0.0004641
Ag	107	3	He	0.153	0.0074	480.02	0.0455	0.0004641
Ag	107	3	He	0.113	0.0056	360.02	0.0455	0.0004641
Cd	111	3	He	0.138	0.0007	46.00	0.0048	5.152E-05
Cd	111	3	He	0.209	0.0011	68.00	0.0048	5.152E-05
Cd	111	3	He	0.191	0.001	62.00	0.0048	5.152E-05
Sn	120	3	He	0.626	0.0245	1580.15	0.0143	0.01559
Sn	120	3	He	0.811	0.0271	1750.17	0.0143	0.01559
Sn	120	3	He	0.68	0.0253	1620.16	0.0143	0.01559
Sb	121	3	He	2.217	0.0278	1790.17	0.0124	0.000258
Sb	121	3	He	2.118	0.0265	1710.18	0.0124	0.000258
Sb	121	3	He	2.496	0.0312	2000.22	0.0124	0.000258
Ba	137	3	He	13.652	0.06	3870.67	0.0044	0.000309
Ba	137	3	He	14.293	0.0628	4050.76	0.0044	0.000309
Ba	137	3	He	13.06	0.0574	3680.66	0.0044	0.000309
Tl	205	3	He	0.151	0.0052	1170.10	0.0276	0.001005
Tl	205	3	He	0.166	0.0056	1270.11	0.0276	0.001005
Tl	205	3	He	0.13	0.0046	1060.08	0.0276	0.001005
Pb	208	3	He	364.449	13.2671	1599009.51	0.0364	0.002176
Pb	208	3	He	357.098	12.9996	1581965.45	0.0364	0.002176
Pb	208	3	He	355.841	12.9538	1594190.44	0.0364	0.002176
U	238	3	He	0.19	0.0082	1860.20	0.0421	0.00024
U	238	3	He	0.168	0.0073	1660.17	0.0421	0.00024
U	238	3	He	0.188	0.0081	1870.21	0.0421	0.00024
Sc	45	1	No Gas			3346130.89		
Sc	45	1	No Gas			3381881.82		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3288862.76		
Ge	72	1	No Gas			1481580.29		
Ge	72	1	No Gas			1474295.76		
Ge	72	1	No Gas			1481457.48		
Sc	45	2	H2			193986.19		
Sc	45	2	H2			196186.38		
Sc	45	2	H2			200818.92		
Ge	72	2	H2			161477.02		
Ge	72	2	H2			164498.59		
Ge	72	2	H2			165976.03		
In	115	2	H2			441907.77		
In	115	2	H2			438138.12		
In	115	2	H2			452252.02		
Sc	45	3	He			42021.01		
Sc	45	3	He			43445.14		
Sc	45	3	He			42673.14		
Ge	72	3	He			74402.42		
Ge	72	3	He			73558.28		
Ge	72	3	He			75156.66		
In	115	3	He			64488.78		
In	115	3	He			64478.94		
In	115	3	He			64087.67		
Tb	159	3	He			291068.30		
Tb	159	3	He			288763.00		
Tb	159	3	He			294962.12		
Bi	209	3	He			225654.27		
Bi	209	3	He			227505.91		
Bi	209	3	He			229915.78		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 18:59:13
Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

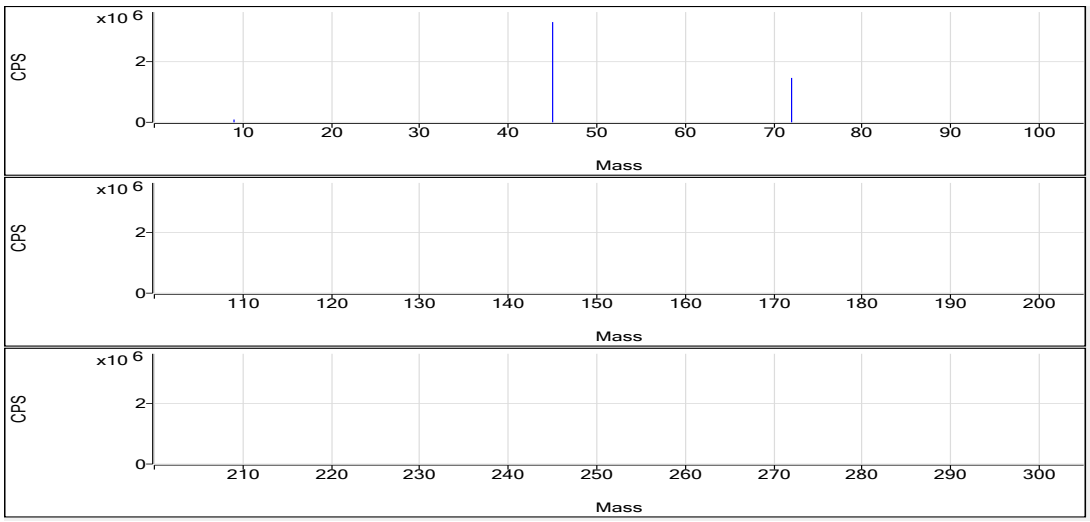
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	47.414	ppb	6.5	91186.10	0.0624	Pulse	0.5000	3
Se	78	72	H2	51.269	ppb	4.8	3268.15	0.0200	Pulse	1.5000	3
Na	23	72	He	5202.496	ppb	0.8	667358.17	9.0434	Pulse	0.1000	3
Mg	24	72	He	5221.047	ppb	0.9	325191.81	4.4067	Pulse	0.1000	3
Al	27	72	He	5223.792	ppb	1.5	93131.40	1.2621	Pulse	0.1000	3
K	39	72	He	5147.095	ppb	0.3	220350.80	2.9859	Pulse	0.1000	3
Ca	44	72	He	5361.681	ppb	2.1	12409.05	0.1681	Pulse	0.1000	3
Ti	47	72	He	5197.657	ppb	1.2	96208.41	1.3037	Pulse	0.1000	3
V	51	72	He	516.334	ppb	0.7	446258.47	6.0473	Pulse	0.5000	3
Cr	52	72	He	515.912	ppb	0.9	581599.89	7.8813	Pulse	0.1000	3
Mn	55	72	He	518.412	ppb	1.3	226825.10	3.0737	Pulse	0.1000	3
Fe	57	72	He	5256.787	ppb	0.8	112678.26	1.5269	Pulse	0.1000	3
Co	59	72	He	513.846	ppb	0.4	1157168.52	15.6808	Pulse	0.1000	3
Ni	60	72	He	515.916	ppb	1.0	335443.82	4.5456	Pulse	0.1000	3
Cu	63	72	He	514.739	ppb	0.9	947601.84	12.8410	Pulse	0.1000	3
Zn	66	72	He	520.467	ppb	0.6	94716.16	1.2835	Pulse	0.1000	3
As	75	72	He	508.919	ppb	0.8	65349.05	0.8855	Pulse	0.5000	3
Sr	88	115	He	51.676	ppb	3.5	25824.06	0.4047	Pulse	0.1000	3
Mo	98	115	He	50.858	ppb	1.4	71488.04	1.1205	Pulse	0.1000	3
Ag	107	115	He	51.582	ppb	1.0	149777.45	2.3475	Pulse	0.1000	3
Cd	111	115	He	51.838	ppb	2.6	15879.00	0.2489	Pulse	0.5000	3
Sn	120	115	He	52.064	ppb	1.7	48354.63	0.7579	Pulse	0.1000	3
Sb	121	115	He	50.908	ppb	1.8	40309.16	0.6318	Pulse	0.1000	3
Ba	137	115	He	516.271	ppb	1.4	144125.95	2.2589	Pulse	0.1000	3
Tl	205	209	He	50.843	ppb	1.0	314791.22	1.4065	Pulse	0.1000	3
Pb	208	209	He	54.051	ppb	0.9	440787.62	1.9695	Pulse	0.1000	3
U	238	209	He	50.895	ppb	0.9	479231.31	2.1412	Pulse	0.1000	3

ISTD Table:

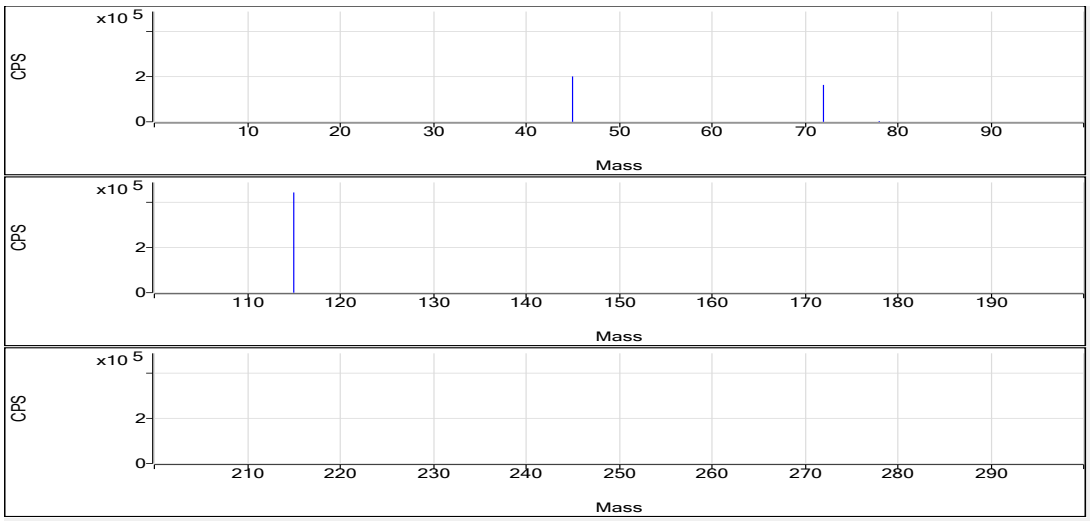
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3305493.28	2.1	102.0	Pulse	0.1000	3
No Gas	Ge	72	1463810.65	2.1	101.7	Pulse	0.1000	3
H2	Sc	45	201449.76	4.9	103.1	Pulse	0.1000	3
H2	Ge	72	163805.53	3.4	100.5	Pulse	0.1000	3
H2	In	115	444858.08	2.6	102.7	Pulse	0.1000	3
He	Sc	45	42602.59	0.8	106.5	Pulse	0.1000	3
He	Ge	72	73796.03	0.4	102.1	Pulse	0.1000	3
He	In	115	63810.49	1.7	98.8	Pulse	0.1000	3
He	Tb	159	288254.31	0.1	100.8	Pulse	0.1000	3
He	Bi	209	223822.71	1.3	100.7	Pulse	0.1000	3

No Gas

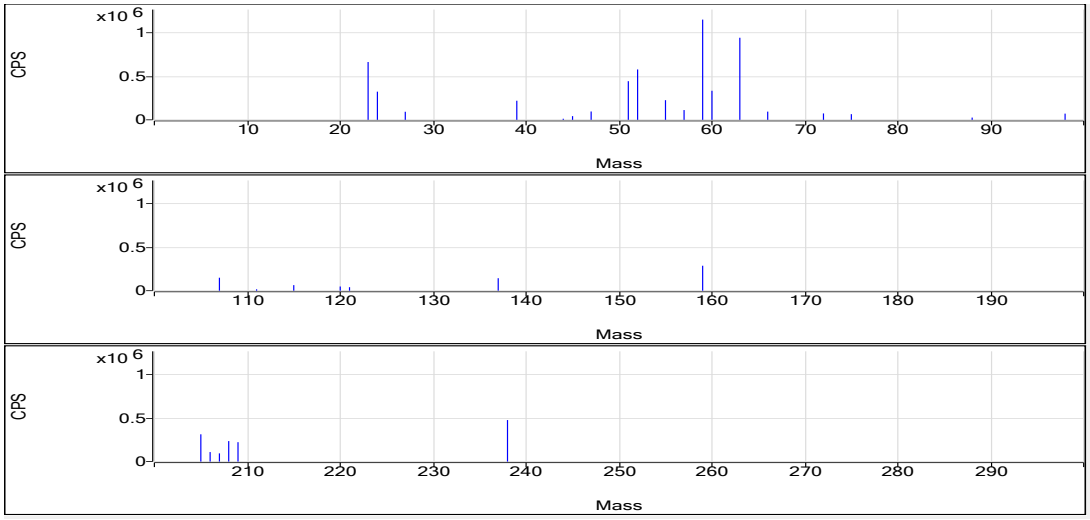


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	44.313	0.0583	87165.56	0.0013	4.694E-05
Be	9	1	No Gas	47.476	0.0624	91285.67	0.0013	4.694E-05
Be	9	1	No Gas	50.453	0.0663	95107.07	0.0013	4.694E-05
Se	78	2	H2	53.956	0.021	3310.38	0.0004	1.089E-05
Se	78	2	H2	49.08	0.0191	3213.03	0.0004	1.089E-05
Se	78	2	H2	50.77	0.0198	3281.04	0.0004	1.089E-05
Na	23	3	He	5233.588	9.0968	668228.74	0.0017	0.1065
Na	23	3	He	5217.658	9.0695	670604.68	0.0017	0.1065
Na	23	3	He	5156.242	8.964	663241.08	0.0017	0.1065
Mg	24	3	He	5264.138	4.443	326374.64	0.0008	0.004846
Mg	24	3	He	5227.313	4.412	326227.71	0.0008	0.004846
Mg	24	3	He	5171.689	4.3651	322973.08	0.0008	0.004846
Al	27	3	He	5301.079	1.2807	94077.75	0.0002	0.001063
Al	27	3	He	5222.394	1.2617	93292.68	0.0002	0.001063
Al	27	3	He	5147.902	1.2437	92023.76	0.0002	0.001063
K	39	3	He	5135.45	2.9795	218865.97	0.0006	0.1436
K	39	3	He	5139.879	2.9819	220487.73	0.0006	0.1436
K	39	3	He	5165.957	2.9963	221698.69	0.0006	0.1436
Ca	44	3	He	5231.918	0.1641	12055.35	0	0.001611
Ca	44	3	He	5419.675	0.1699	12565.92	0	0.001611
Ca	44	3	He	5433.451	0.1704	12605.87	0	0.001611
Ti	47	3	He	5247.548	1.3162	96688.25	0.0003	0.0002737
Ti	47	3	He	5220.26	1.3094	96818.81	0.0003	0.0002737
Ti	47	3	He	5125.163	1.2856	95118.16	0.0003	0.0002737
V	51	3	He	519.09	6.0795	446584.75	0.0117	0.007326
V	51	3	He	517.517	6.0611	448164.03	0.0117	0.007326
V	51	3	He	512.395	6.0012	444026.63	0.0117	0.007326
Cr	52	3	He	519.483	7.9357	582935.15	0.0152	0.02538
Cr	52	3	He	517.886	7.9114	584975.19	0.0152	0.02538
Cr	52	3	He	510.367	7.7969	576889.33	0.0152	0.02538
Mn	55	3	He	522.447	3.0976	227538.38	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	522.374	3.0971	229004.63	0.0059	0.01385
Mn	55	3	He	510.414	3.0265	223932.28	0.0059	0.01385
Fe	57	3	He	5249.719	1.5248	112010.60	0.0003	0.003918
Fe	57	3	He	5304.135	1.5406	113913.72	0.0003	0.003918
Fe	57	3	He	5216.506	1.5152	112110.46	0.0003	0.003918
Co	59	3	He	515.696	15.7372	1156014.98	0.0305	0.003084
Co	59	3	He	514.436	15.6988	1160783.89	0.0305	0.003084
Co	59	3	He	511.405	15.6063	1154706.70	0.0305	0.003084
Ni	60	3	He	518.308	4.5666	335453.35	0.0088	0.009003
Ni	60	3	He	519.344	4.5758	338335.46	0.0088	0.009003
Ni	60	3	He	510.097	4.4944	332542.65	0.0088	0.009003
Cu	63	3	He	517.99	12.9221	949223.58	0.0249	0.004937
Cu	63	3	He	516.915	12.8953	953491.63	0.0249	0.004937
Cu	63	3	He	509.311	12.7057	940090.30	0.0249	0.004937
Zn	66	3	He	522.939	1.2896	94728.86	0.0025	0.004836
Zn	66	3	He	521.838	1.2869	95152.40	0.0025	0.004836
Zn	66	3	He	516.623	1.2741	94267.22	0.0025	0.004836
As	75	3	He	507.558	0.8832	64875.02	0.0017	0.0004347
As	75	3	He	513.468	0.8934	66062.15	0.0017	0.0004347
As	75	3	He	505.73	0.88	65109.98	0.0017	0.0004347
Sr	88	3	He	51.898	0.4065	25443.34	0.0078	0.0007762
Sr	88	3	He	53.366	0.4179	26886.14	0.0078	0.0007762
Sr	88	3	He	49.763	0.3898	25142.70	0.0078	0.0007762
Mo	98	3	He	51.613	1.1371	71179.73	0.022	0.0005162
Mo	98	3	He	50.775	1.1187	71963.38	0.022	0.0005162
Mo	98	3	He	50.185	1.1057	71321.00	0.022	0.0005162
Ag	107	3	He	52.1	2.371	148418.19	0.0455	0.0004641
Ag	107	3	He	51.599	2.3483	151063.11	0.0455	0.0004641
Ag	107	3	He	51.046	2.3231	149851.05	0.0455	0.0004641
Cd	111	3	He	52.715	0.2531	15842.97	0.0048	5.152E-05
Cd	111	3	He	52.526	0.2522	16223.37	0.0048	5.152E-05
Cd	111	3	He	50.275	0.2414	15570.67	0.0048	5.152E-05
Sn	120	3	He	52.974	0.7709	48254.34	0.0143	0.01559
Sn	120	3	He	52.042	0.7576	48735.80	0.0143	0.01559
Sn	120	3	He	51.177	0.7453	48073.76	0.0143	0.01559
Sb	121	3	He	51.58	0.6401	40068.50	0.0124	0.000258
Sb	121	3	He	49.837	0.6185	39787.28	0.0124	0.000258
Sb	121	3	He	51.307	0.6367	41071.69	0.0124	0.000258
Ba	137	3	He	521.364	2.2812	142792.47	0.0044	0.000309
Ba	137	3	He	519.231	2.2718	146146.94	0.0044	0.000309
Ba	137	3	He	508.22	2.2237	143438.43	0.0044	0.000309
Tl	205	3	He	51.257	1.418	316288.20	0.0276	0.001005
Tl	205	3	He	50.3	1.3915	315954.74	0.0276	0.001005
Tl	205	3	He	50.973	1.4101	312130.72	0.0276	0.001005
Pb	208	3	He	53.853	1.9623	235340.33	0.0364	0.002176
Pb	208	3	He	53.687	1.9563	239327.36	0.0364	0.002176
Pb	208	3	He	54.613	1.99	234800.07	0.0364	0.002176
U	238	3	He	50.597	2.1287	474829.84	0.0421	0.00024
U	238	3	He	50.65	2.131	483851.48	0.0421	0.00024
U	238	3	He	51.436	2.164	479012.61	0.0421	0.00024
Sc	45	1	No Gas			3377673.07		
Sc	45	1	No Gas			3300141.83		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3238664.95		
Ge	72	1	No Gas			1495727.63		
Ge	72	1	No Gas			1462157.48		
Ge	72	1	No Gas			1433546.85		
Sc	45	2	H2			190921.54		
Sc	45	2	H2			210380.09		
Sc	45	2	H2			203047.65		
Ge	72	2	H2			157491.51		
Ge	72	2	H2			168039.10		
Ge	72	2	H2			165885.97		
In	115	2	H2			433315.03		
In	115	2	H2			456463.04		
In	115	2	H2			444796.17		
Sc	45	3	He			42532.18		
Sc	45	3	He			42953.77		
Sc	45	3	He			42321.81		
Ge	72	3	He			73457.36		
Ge	72	3	He			73940.97		
Ge	72	3	He			73989.76		
In	115	3	He			62972.59		
In	115	3	He			64709.98		
In	115	3	He			64880.39		
Tb	159	3	He			288355.09		
Tb	159	3	He			288420.09		
Tb	159	3	He			287987.75		
Bi	209	3	He			223057.36		
Bi	209	3	He			227057.93		
Bi	209	3	He			221352.83		

Quantitation Report

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Sample Type	CCB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

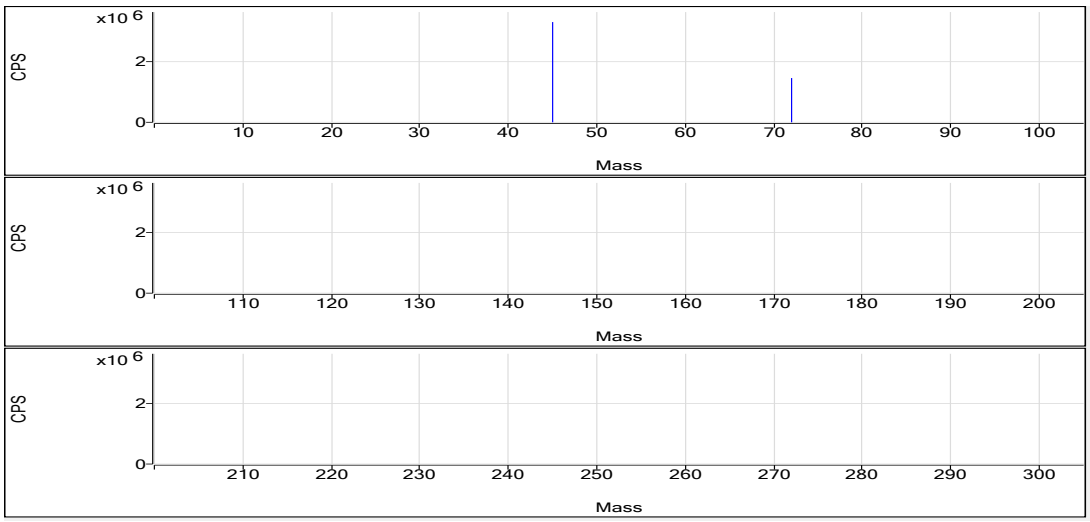
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.044	ppb	9.9	152.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.076	ppb	22.3	6.44	0.0000	Pulse	1.5000	3
Na	23	72	He	17.450	ppb	15.5	9946.97	0.1364	Pulse	0.1000	3
Mg	24	72	He	15.523	ppb	10.0	1306.77	0.0179	Pulse	0.1000	3
Al	27	72	He	45.791	ppb	12.8	883.39	0.0121	Pulse	0.1000	3
K	39	72	He	2.260	ppb	426.6	10560.77	0.1449	Pulse	0.1000	3
Ca	44	72	He	30.597	ppb	11.7	186.68	0.0026	Pulse	0.1000	3
Ti	47	72	He	2.363	ppb	56.4	63.33	0.0009	Pulse	0.1000	3
V	51	72	He	0.283	ppb	10.9	775.36	0.0106	Pulse	0.5000	3
Cr	52	72	He	0.174	ppb	61.1	2043.56	0.0280	Pulse	0.1000	3
Mn	55	72	He	1.968	ppb	14.2	1856.85	0.0255	Pulse	0.1000	3
Fe	57	72	He	75.682	ppb	6.0	1883.51	0.0258	Pulse	0.1000	3
Co	59	72	He	0.308	ppb	14.4	910.06	0.0125	Pulse	0.1000	3
Ni	60	72	He	1.226	ppb	13.5	1443.46	0.0198	Pulse	0.1000	3
Cu	63	72	He	0.389	ppb	14.4	1066.74	0.0146	Pulse	0.1000	3
Zn	66	72	He	3.605	ppb	29.1	996.74	0.0137	Pulse	0.1000	3
As	75	72	He	0.334	ppb	36.6	74.00	0.0010	Pulse	0.5000	3
Sr	88	115	He	0.211	ppb	43.3	156.68	0.0024	Pulse	0.1000	3
Mo	98	115	He	0.047	ppb	63.9	100.00	0.0015	Pulse	0.1000	3
Ag	107	115	He	0.019	ppb	24.3	86.67	0.0013	Pulse	0.1000	3
Cd	111	115	He	0.032	ppb	32.6	13.33	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.153	ppb	132.7	1150.10	0.0178	Pulse	0.1000	3
Sb	121	115	He	0.059	ppb	89.4	63.33	0.0010	Pulse	0.1000	3
Ba	137	115	He	0.696	ppb	9.7	216.68	0.0034	Pulse	0.1000	3
Tl	205	209	He	0.150	ppb	16.7	1150.10	0.0052	Pulse	0.1000	3
Pb	208	209	He	2.065	ppb	3.5	17221.73	0.0773	Pulse	0.1000	3
U	238	209	He	0.030	ppb	23.6	333.35	0.0015	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3276317.25	1.6	101.1	Pulse	0.1000	3
No Gas	Ge	72	1446239.98	1.6	100.4	Pulse	0.1000	3
H2	Sc	45	195739.27	2.8	100.2	Pulse	0.1000	3
H2	Ge	72	159295.34	1.3	97.7	Pulse	0.1000	3
H2	In	115	439968.96	2.1	101.5	Pulse	0.1000	3
He	Sc	45	41549.74	2.5	103.9	Pulse	0.1000	3
He	Ge	72	72911.47	1.3	100.9	Pulse	0.1000	3
He	In	115	64637.59	2.0	100.1	Pulse	0.1000	3
He	Tb	159	287163.18	0.9	100.4	Pulse	0.1000	3
He	Bi	209	222743.11	0.9	100.2	Pulse	0.1000	3

No Gas



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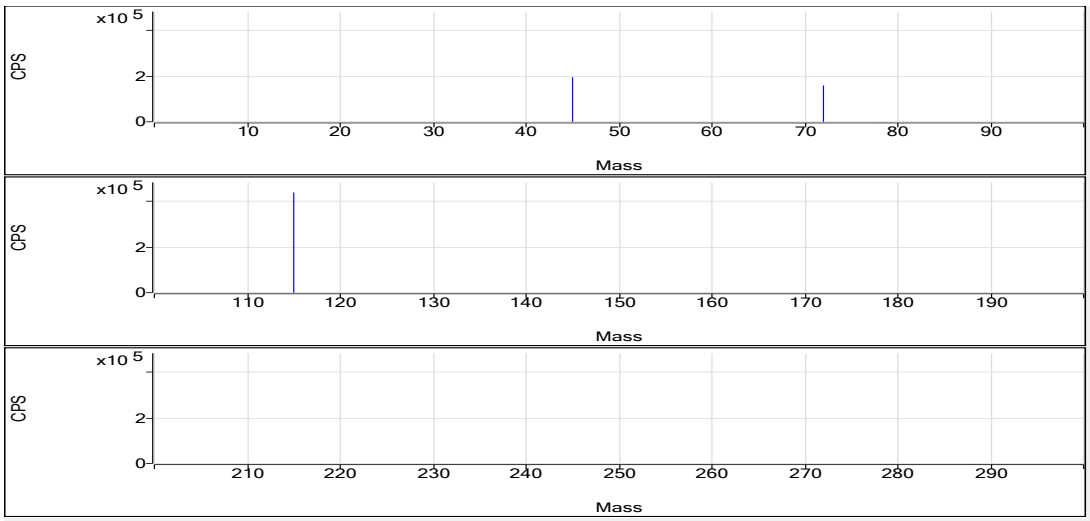
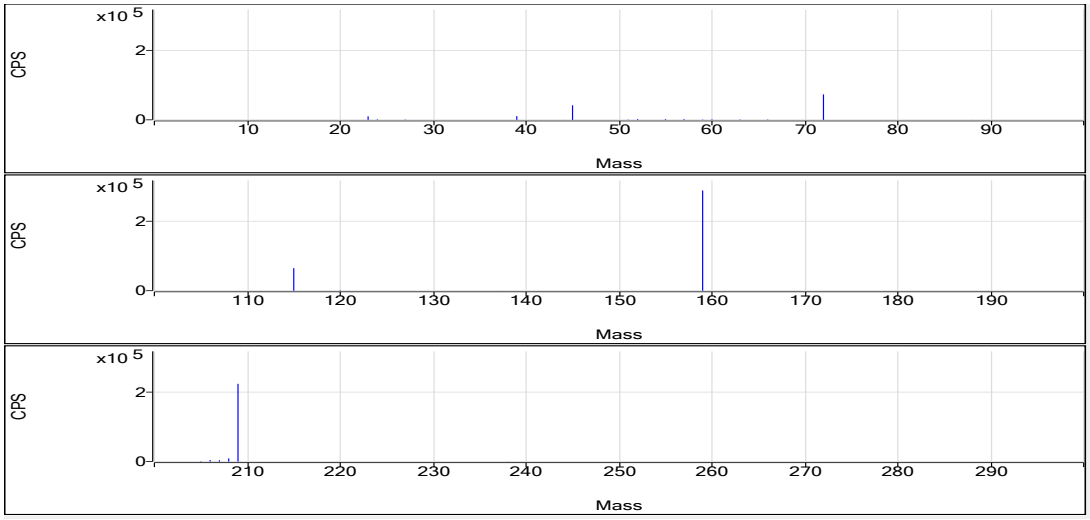


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.04	0.0001	146.00	0.0013	4.694E-05
Be	9	1	No Gas	0.044	0.0001	152.00	0.0013	4.694E-05
Be	9	1	No Gas	0.049	0.0001	158.00	0.0013	4.694E-05
Se	78	2	H2	0.081	0	6.67	0.0004	1.089E-05
Se	78	2	H2	0.057	0	5.33	0.0004	1.089E-05
Se	78	2	H2	0.09	0	7.33	0.0004	1.089E-05
Na	23	3	He	20.183	0.1411	10193.84	0.0017	0.1065
Na	23	3	He	17.386	0.1363	10083.73	0.0017	0.1065
Na	23	3	He	14.781	0.1318	9563.33	0.0017	0.1065
Mg	24	3	He	17.079	0.0192	1390.11	0.0008	0.004846
Mg	24	3	He	13.976	0.0166	1230.09	0.0008	0.004846
Mg	24	3	He	15.512	0.0179	1300.11	0.0008	0.004846
Al	27	3	He	51.232	0.0134	970.06	0.0002	0.001063
Al	27	3	He	46.564	0.0123	910.06	0.0002	0.001063
Al	27	3	He	39.577	0.0106	770.04	0.0002	0.001063
K	39	3	He	8.495	0.1483	10714.24	0.0006	0.1436
K	39	3	He	-8.844	0.1388	10263.85	0.0006	0.1436
K	39	3	He	7.128	0.1476	10704.21	0.0006	0.1436
Ca	44	3	He	32.829	0.0026	190.01	0	0.001611
Ca	44	3	He	26.486	0.0024	180.01	0	0.001611
Ca	44	3	He	32.476	0.0026	190.01	0	0.001611
Ti	47	3	He	2.221	0.0008	60.00	0.0003	0.0002737
Ti	47	3	He	3.76	0.0012	90.00	0.0003	0.0002737
Ti	47	3	He	1.108	0.0006	40.00	0.0003	0.0002737
V	51	3	He	0.28	0.0106	766.03	0.0117	0.007326
V	51	3	He	0.314	0.011	814.03	0.0117	0.007326
V	51	3	He	0.253	0.0103	746.02	0.0117	0.007326
Cr	52	3	He	0.297	0.0299	2160.27	0.0152	0.02538
Cr	52	3	He	0.109	0.027	2000.22	0.0152	0.02538
Cr	52	3	He	0.117	0.0272	1970.20	0.0152	0.02538
Mn	55	3	He	1.735	0.0241	1740.16	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1.891	0.025	1850.18	0.0059	0.01385
Mn	55	3	He	2.278	0.0273	1980.20	0.0059	0.01385
Fe	57	3	He	78.235	0.0266	1920.18	0.0003	0.003918
Fe	57	3	He	70.478	0.0243	1800.16	0.0003	0.003918
Fe	57	3	He	78.331	0.0266	1930.20	0.0003	0.003918
Co	59	3	He	0.348	0.0137	990.07	0.0305	0.003084
Co	59	3	He	0.315	0.0127	940.07	0.0305	0.003084
Co	59	3	He	0.26	0.011	800.05	0.0305	0.003084
Ni	60	3	He	1.196	0.0195	1410.11	0.0088	0.009003
Ni	60	3	He	1.406	0.0214	1580.15	0.0088	0.009003
Ni	60	3	He	1.077	0.0185	1340.11	0.0088	0.009003
Cu	63	3	He	0.452	0.0162	1170.09	0.0249	0.004937
Cu	63	3	He	0.371	0.0142	1050.07	0.0249	0.004937
Cu	63	3	He	0.344	0.0135	980.06	0.0249	0.004937
Zn	66	3	He	4.456	0.0158	1140.09	0.0025	0.004836
Zn	66	3	He	2.434	0.0108	800.04	0.0025	0.004836
Zn	66	3	He	3.924	0.0145	1050.08	0.0025	0.004836
As	75	3	He	0.467	0.0012	90.00	0.0017	0.0004347
As	75	3	He	0.31	0.001	72.00	0.0017	0.0004347
As	75	3	He	0.226	0.0008	60.00	0.0017	0.0004347
Sr	88	3	He	0.184	0.0022	140.01	0.0078	0.0007762
Sr	88	3	He	0.312	0.0032	210.01	0.0078	0.0007762
Sr	88	3	He	0.135	0.0018	120.01	0.0078	0.0007762
Mo	98	3	He	0.027	0.0011	70.00	0.022	0.0005162
Mo	98	3	He	0.081	0.0023	150.01	0.022	0.0005162
Mo	98	3	He	0.032	0.0012	80.00	0.022	0.0005162
Ag	107	3	He	0.014	0.0011	70.00	0.0455	0.0004641
Ag	107	3	He	0.02	0.0014	90.00	0.0455	0.0004641
Ag	107	3	He	0.023	0.0015	100.00	0.0455	0.0004641
Cd	111	3	He	0.042	0.0003	16.00	0.0048	5.152E-05
Cd	111	3	He	0.021	0.0002	10.00	0.0048	5.152E-05
Cd	111	3	He	0.034	0.0002	14.00	0.0048	5.152E-05
Sn	120	3	He	0.04	0.0162	1020.08	0.0143	0.01559
Sn	120	3	He	0.389	0.0211	1380.13	0.0143	0.01559
Sn	120	3	He	0.032	0.016	1050.08	0.0143	0.01559
Sb	121	3	He	0.12	0.0017	110.00	0.0124	0.000258
Sb	121	3	He	0.029	0.0006	40.00	0.0124	0.000258
Sb	121	3	He	0.028	0.0006	40.00	0.0124	0.000258
Ba	137	3	He	0.762	0.0036	230.01	0.0044	0.000309
Ba	137	3	He	0.699	0.0034	220.01	0.0044	0.000309
Ba	137	3	He	0.628	0.0031	200.01	0.0044	0.000309
Tl	205	3	He	0.125	0.0045	990.07	0.0276	0.001005
Tl	205	3	He	0.176	0.0059	1300.11	0.0276	0.001005
Tl	205	3	He	0.15	0.0052	1160.12	0.0276	0.001005
Pb	208	3	He	2.039	0.0764	8803.29	0.0364	0.002176
Pb	208	3	He	2.146	0.0803	9353.61	0.0364	0.002176
Pb	208	3	He	2.009	0.0753	9213.51	0.0364	0.002176
U	238	3	He	0.022	0.0012	260.01	0.0421	0.00024
U	238	3	He	0.036	0.0018	390.02	0.0421	0.00024
U	238	3	He	0.031	0.0016	350.02	0.0421	0.00024
Sc	45	1	No Gas			3327775.58		
Sc	45	1	No Gas			3279889.33		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3221286.83		
Ge	72	1	No Gas			1470621.07		
Ge	72	1	No Gas			1442470.29		
Ge	72	1	No Gas			1425628.57		
Sc	45	2	H2			190867.69		
Sc	45	2	H2			201824.12		
Sc	45	2	H2			194525.99		
Ge	72	2	H2			156977.33		
Ge	72	2	H2			160970.93		
Ge	72	2	H2			159937.76		
In	115	2	H2			429466.28		
In	115	2	H2			446573.31		
In	115	2	H2			443867.30		
Sc	45	3	He			41529.79		
Sc	45	3	He			40506.47		
Sc	45	3	He			42612.96		
Ge	72	3	He			72231.47		
Ge	72	3	He			73969.86		
Ge	72	3	He			72533.08		
In	115	3	He			63133.56		
In	115	3	He			65332.49		
In	115	3	He			65473.62		
Tb	159	3	He			285063.82		
Tb	159	3	He			286403.34		
Tb	159	3	He			290022.38		
Bi	209	3	He			221302.61		
Bi	209	3	He			221871.50		
Bi	209	3	He			225055.23		

Quantitation Report

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Comment	H2 ICP
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

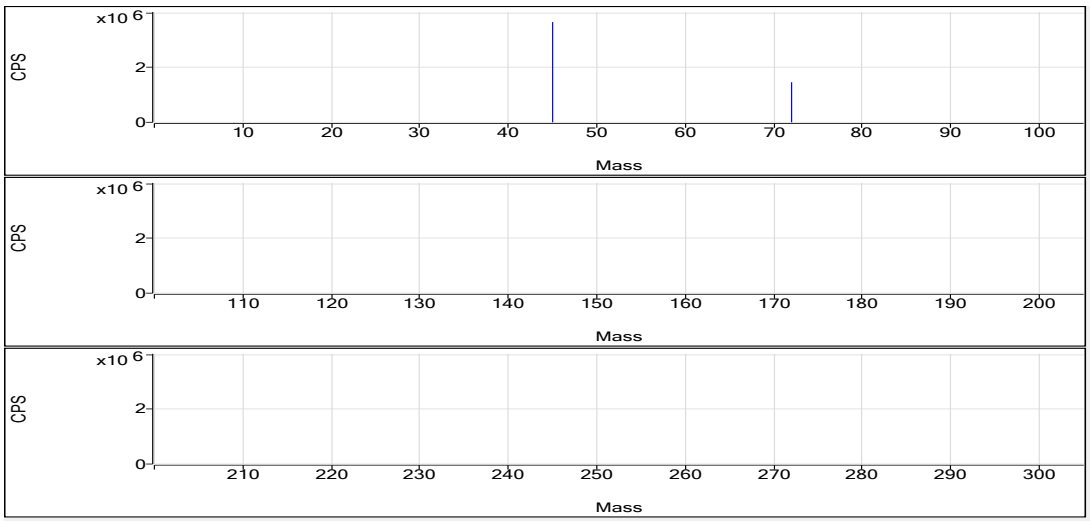
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	3.887	ppb	8.3	7556.60	0.0052	Pulse	0.5000	3
Se	78	72	H2	0.757	ppb	3.3	49.11	0.0003	Pulse	1.5000	3
Na	23	72	He	395.397	ppb	1.3	59212.16	0.7857	Pulse	0.1000	3
Mg	24	72	He	28363.475	ppb	0.8	1802632.89	23.9181	Pulse	0.1000	3
Al	27	72	He	99862.877	ppb	0.8	1816894.50	24.1074	Pulse	0.1000	3
K	39	72	He	11184.932	ppb	1.1	476311.69	6.3201	Pulse	0.1000	3
Ca	44	72	He	3697.659	ppb	2.1	8776.22	0.1165	Pulse	0.1000	3
Ti	47	72	He	628.115	ppb	5.1	11888.61	0.1578	Pulse	0.1000	3
V	51	72	He	140.801	ppb	0.9	124683.50	1.6544	Pulse	0.5000	3
Cr	52	72	He	108.262	ppb	1.6	126148.74	1.6739	Pulse	0.1000	3
Mn	55	72	He	4812.923	ppb	1.0	2142004.03	28.4218	Pulse	0.1000	3
Fe	57	72	He	144242.570	ppb	1.2	3149678.81	41.7931	Pulse	0.1000	3
Co	59	72	He	53.476	ppb	1.7	123189.44	1.6347	Pulse	0.1000	3
Ni	60	72	He	120.569	ppb	2.0	80577.20	1.0692	Pulse	0.1000	3
Cu	63	72	He	117.693	ppb	1.5	221553.53	2.9399	Pulse	0.1000	3
Zn	66	72	He	347.211	ppb	0.8	64655.24	0.8579	Pulse	0.1000	3
As	75	72	He	34.029	ppb	2.0	4492.73	0.0596	Pulse	0.5000	3
Sr	88	115	He	33.751	ppb	4.1	16873.82	0.2646	Pulse	0.1000	3
Mo	98	115	He	3.032	ppb	3.8	4294.14	0.0673	Pulse	0.1000	3
Ag	107	115	He	0.129	ppb	11.5	403.36	0.0063	Pulse	0.1000	3
Cd	111	115	He	0.420	ppb	2.5	132.00	0.0021	Pulse	0.5000	3
Sn	120	115	He	3.336	ppb	4.4	4030.73	0.0632	Pulse	0.1000	3
Sb	121	115	He	1.101	ppb	13.2	886.73	0.0139	Pulse	0.1000	3
Ba	137	115	He	400.173	ppb	1.9	111689.65	1.7510	Pulse	0.1000	3
Tl	205	209	He	0.709	ppb	1.3	4647.66	0.0206	Pulse	0.1000	3
Pb	208	209	He	66.789	ppb	0.5	549138.66	2.4331	Pulse	0.1000	3
U	238	209	He	3.943	ppb	1.9	37485.41	0.1661	Pulse	0.1000	3

ISTD Table:

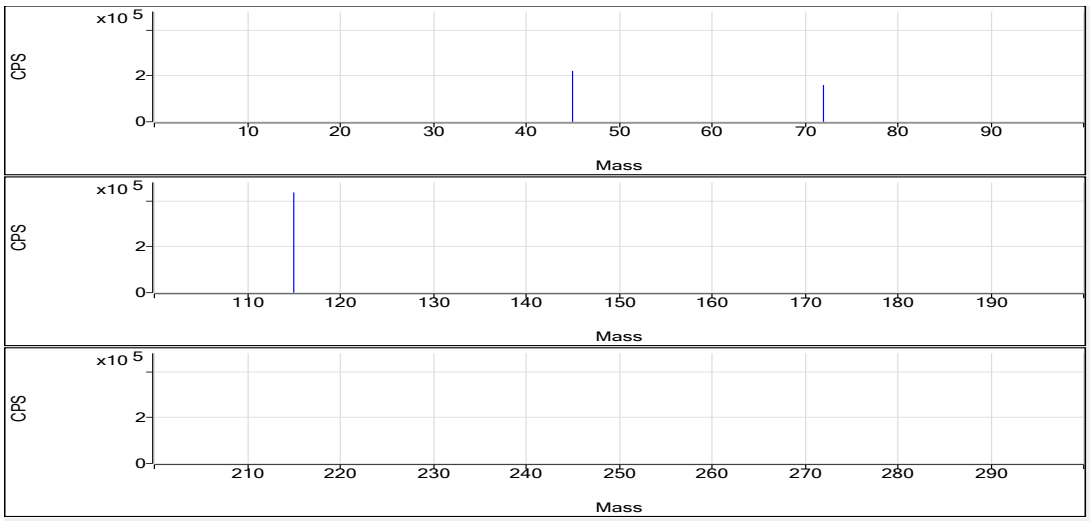
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3671311.71	1.3	113.3	Pulse	0.1000	3
No Gas	Ge	72	1467168.05	1.6	101.9	Pulse	0.1000	3
H2	Sc	45	222331.73	2.1	113.8	Pulse	0.1000	3
H2	Ge	72	160714.66	1.9	98.6	Pulse	0.1000	3
H2	In	115	437775.49	2.7	101.0	Pulse	0.1000	3
He	Sc	45	46591.45	2.1	116.5	Pulse	0.1000	3
He	Ge	72	75371.10	1.2	104.3	Pulse	0.1000	3
He	In	115	63798.41	1.7	98.8	Pulse	0.1000	3
He	Tb	159	311548.87	0.5	108.9	Pulse	0.1000	3
He	Bi	209	225690.68	0.7	101.6	Pulse	0.1000	3

No Gas

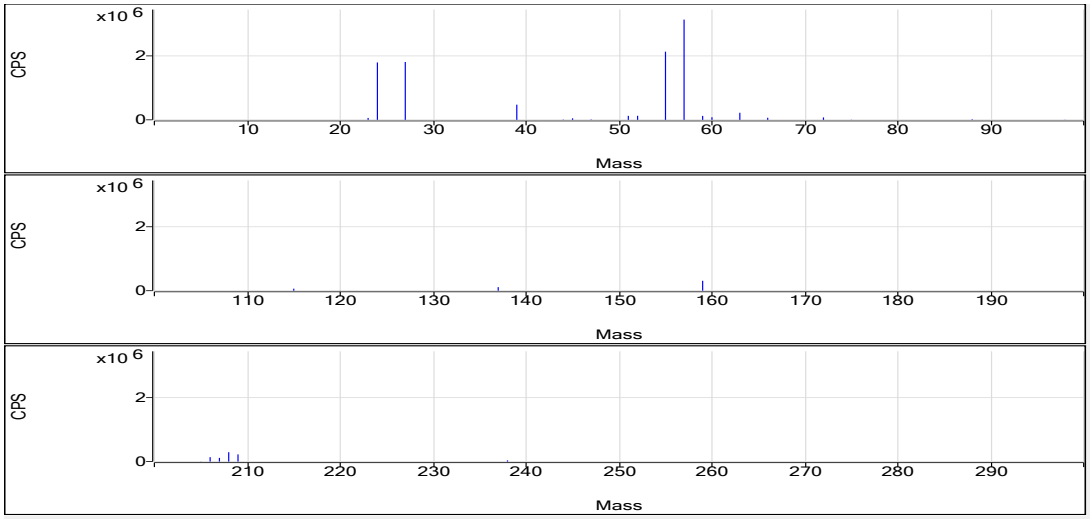


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	3.543	0.0047	7021.67	0.0013	4.694E-05
Be	9	1	No Gas	3.936	0.0052	7627.97	0.0013	4.694E-05
Be	9	1	No Gas	4.183	0.0055	8020.17	0.0013	4.694E-05
Se	78	2	H2	0.783	0.0003	50.00	0.0004	1.089E-05
Se	78	2	H2	0.733	0.0003	48.67	0.0004	1.089E-05
Se	78	2	H2	0.755	0.0003	48.67	0.0004	1.089E-05
Na	23	3	He	390.572	0.7774	59379.16	0.0017	0.1065
Na	23	3	He	400.595	0.7946	59248.75	0.0017	0.1065
Na	23	3	He	395.023	0.785	59008.57	0.0017	0.1065
Mg	24	3	He	28179.8	23.7633	1815107.32	0.0008	0.004846
Mg	24	3	He	28602.96	24.12	1798477.79	0.0008	0.004846
Mg	24	3	He	28307.664	23.8711	1794313.57	0.0008	0.004846
Al	27	3	He	98955.827	23.8884	1824666.22	0.0002	0.001063
Al	27	3	He	100205.193	24.19	1803694.82	0.0002	0.001063
Al	27	3	He	100427.611	24.2437	1822322.47	0.0002	0.001063
K	39	3	He	11062.759	6.2526	477593.47	0.0006	0.1436
K	39	3	He	11303.999	6.3858	476151.44	0.0006	0.1436
K	39	3	He	11188.037	6.3218	475190.15	0.0006	0.1436
Ca	44	3	He	3616.458	0.1139	8702.88	0	0.001611
Ca	44	3	He	3770.772	0.1187	8852.98	0	0.001611
Ca	44	3	He	3705.747	0.1167	8772.79	0	0.001611
Ti	47	3	He	603.184	0.1515	11575.05	0.0003	0.0002737
Ti	47	3	He	663.954	0.1668	12435.69	0.0003	0.0002737
Ti	47	3	He	617.206	0.1551	11655.08	0.0003	0.0002737
V	51	3	He	139.438	1.6384	125148.58	0.0117	0.007326
V	51	3	He	141.945	1.6678	124354.31	0.0117	0.007326
V	51	3	He	141.021	1.6569	124547.60	0.0117	0.007326
Cr	52	3	He	106.474	1.6467	125778.82	0.0152	0.02538
Cr	52	3	He	109.824	1.6977	126586.67	0.0152	0.02538
Cr	52	3	He	108.487	1.6773	126080.74	0.0152	0.02538
Mn	55	3	He	4758.321	28.0995	2146317.94	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	4849.912	28.6401	2135507.62	0.0059	0.01385
Mn	55	3	He	4830.534	28.5257	2144186.53	0.0059	0.01385
Fe	57	3	He	142469.869	41.2795	3153048.39	0.0003	0.003918
Fe	57	3	He	146050.57	42.3169	3155301.52	0.0003	0.003918
Fe	57	3	He	144207.271	41.7829	3140686.52	0.0003	0.003918
Co	59	3	He	52.62	1.6086	122865.96	0.0305	0.003084
Co	59	3	He	54.439	1.664	124077.23	0.0305	0.003084
Co	59	3	He	53.368	1.6314	122625.13	0.0305	0.003084
Ni	60	3	He	119.224	1.0574	80765.40	0.0088	0.009003
Ni	60	3	He	123.399	1.0941	81578.95	0.0088	0.009003
Ni	60	3	He	119.084	1.0561	79387.26	0.0088	0.009003
Cu	63	3	He	115.755	2.8915	220863.06	0.0249	0.004937
Cu	63	3	He	119.168	2.9767	221949.98	0.0249	0.004937
Cu	63	3	He	118.156	2.9514	221847.54	0.0249	0.004937
Zn	66	3	He	346.59	0.8563	65408.73	0.0025	0.004836
Zn	66	3	He	350.268	0.8654	64524.64	0.0025	0.004836
Zn	66	3	He	344.776	0.8519	64032.36	0.0025	0.004836
As	75	3	He	33.434	0.0586	4474.72	0.0017	0.0004347
As	75	3	He	34.781	0.0609	4542.75	0.0017	0.0004347
As	75	3	He	33.872	0.0593	4460.73	0.0017	0.0004347
Sr	88	3	He	34.244	0.2685	17010.73	0.0078	0.0007762
Sr	88	3	He	32.188	0.2524	16409.99	0.0078	0.0007762
Sr	88	3	He	34.82	0.273	17200.75	0.0078	0.0007762
Mo	98	3	He	3.044	0.0676	4280.79	0.022	0.0005162
Mo	98	3	He	3.141	0.0697	4530.89	0.022	0.0005162
Mo	98	3	He	2.91	0.0646	4070.75	0.022	0.0005162
Ag	107	3	He	0.146	0.0071	450.03	0.0455	0.0004641
Ag	107	3	He	0.122	0.006	390.02	0.0455	0.0004641
Ag	107	3	He	0.119	0.0059	370.02	0.0455	0.0004641
Cd	111	3	He	0.417	0.0021	130.00	0.0048	5.152E-05
Cd	111	3	He	0.412	0.002	132.00	0.0048	5.152E-05
Cd	111	3	He	0.432	0.0021	134.00	0.0048	5.152E-05
Sn	120	3	He	3.313	0.0628	3980.71	0.0143	0.01559
Sn	120	3	He	3.492	0.0654	4250.81	0.0143	0.01559
Sn	120	3	He	3.204	0.0613	3860.66	0.0143	0.01559
Sb	121	3	He	1.073	0.0136	860.06	0.0124	0.000258
Sb	121	3	He	0.971	0.0123	800.06	0.0124	0.000258
Sb	121	3	He	1.259	0.0159	1000.07	0.0124	0.000258
Ba	137	3	He	406.921	1.7805	112818.84	0.0044	0.000309
Ba	137	3	He	392.061	1.7155	111539.07	0.0044	0.000309
Ba	137	3	He	401.536	1.7569	110711.03	0.0044	0.000309
Tl	205	3	He	0.718	0.0209	4731.00	0.0276	0.001005
Tl	205	3	He	0.699	0.0203	4550.94	0.0276	0.001005
Tl	205	3	He	0.708	0.0206	4661.03	0.0276	0.001005
Pb	208	3	He	67.174	2.4471	297445.82	0.0364	0.002176
Pb	208	3	He	66.674	2.4289	293506.46	0.0364	0.002176
Pb	208	3	He	66.519	2.4233	292232.91	0.0364	0.002176
U	238	3	He	3.887	0.1638	37154.93	0.0421	0.00024
U	238	3	He	4.028	0.1697	37966.63	0.0421	0.00024
U	238	3	He	3.914	0.1649	37334.66	0.0421	0.00024
Sc	45	1	No Gas			3715679.63		
Sc	45	1	No Gas			3676663.38		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3621592.13		
Ge	72	1	No Gas			1493301.23		
Ge	72	1	No Gas			1461538.42		
Ge	72	1	No Gas			1446664.51		
Sc	45	2	H2			218178.57		
Sc	45	2	H2			227415.19		
Sc	45	2	H2			221401.44		
Ge	72	2	H2			158383.39		
Ge	72	2	H2			164165.41		
Ge	72	2	H2			159595.17		
In	115	2	H2			428007.88		
In	115	2	H2			451020.62		
In	115	2	H2			434297.96		
Sc	45	3	He			46955.92		
Sc	45	3	He			45491.38		
Sc	45	3	He			47327.05		
Ge	72	3	He			76382.86		
Ge	72	3	He			74563.61		
Ge	72	3	He			75166.83		
In	115	3	He			63394.44		
In	115	3	He			65051.72		
In	115	3	He			63043.40		
Tb	159	3	He			309739.31		
Tb	159	3	He			312671.38		
Tb	159	3	He			312235.91		
Bi	209	3	He			226894.86		
Bi	209	3	He			223761.36		
Bi	209	3	He			226415.82		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 19:05:15
Sample Name	410-136258-J-17-A @10
Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

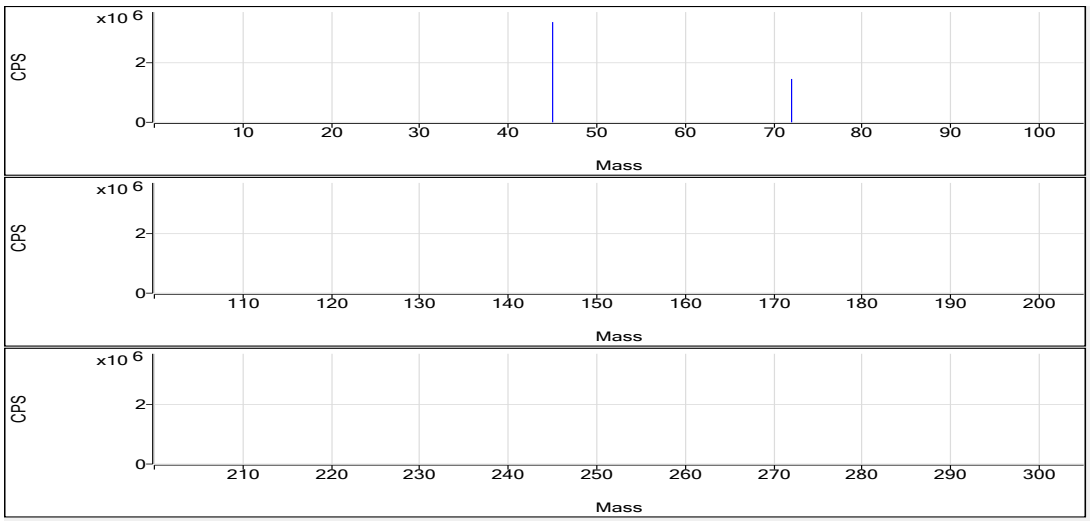
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.848	ppb	6.3	1674.77	0.0012	Pulse	0.5000	3
Se	78	72	H2	0.151	ppb	19.9	11.33	0.0001	Pulse	1.5000	3
Na	23	72	He	74.687	ppb	1.4	17650.94	0.2348	Pulse	0.1000	3
Mg	24	72	He	6103.069	ppb	0.1	387235.18	5.1504	Pulse	0.1000	3
Al	27	72	He	21399.964	ppb	0.5	388484.93	5.1669	Pulse	0.1000	3
K	39	72	He	2394.162	ppb	0.6	110200.47	1.4657	Pulse	0.1000	3
Ca	44	72	He	847.680	ppb	5.7	2100.23	0.0279	Pulse	0.1000	3
Ti	47	72	He	130.809	ppb	4.3	2486.96	0.0331	Pulse	0.1000	3
V	51	72	He	30.201	ppb	0.7	27112.39	0.3606	Pulse	0.5000	3
Cr	52	72	He	23.453	ppb	2.6	28762.52	0.3825	Pulse	0.1000	3
Mn	55	72	He	1029.999	ppb	0.4	458143.00	6.0933	Pulse	0.1000	3
Fe	57	72	He	30981.664	ppb	0.1	675157.65	8.9798	Pulse	0.1000	3
Co	59	72	He	11.682	ppb	2.9	27029.07	0.3595	Pulse	0.1000	3
Ni	60	72	He	26.332	ppb	1.9	18085.10	0.2405	Pulse	0.1000	3
Cu	63	72	He	25.884	ppb	1.0	48900.17	0.6504	Pulse	0.1000	3
Zn	66	72	He	81.687	ppb	1.7	15452.00	0.2055	Pulse	0.1000	3
As	75	72	He	7.319	ppb	8.3	989.37	0.0132	Pulse	0.5000	3
Sr	88	115	He	7.549	ppb	4.4	3833.97	0.0598	Pulse	0.1000	3
Mo	98	115	He	0.677	ppb	12.3	986.74	0.0154	Pulse	0.1000	3
Ag	107	115	He	0.039	ppb	28.5	143.34	0.0022	Pulse	0.1000	3
Cd	111	115	He	0.111	ppb	40.0	37.33	0.0006	Pulse	0.5000	3
Sn	120	115	He	0.824	ppb	21.0	1750.17	0.0273	Pulse	0.1000	3
Sb	121	115	He	0.240	ppb	28.3	206.68	0.0032	Pulse	0.1000	3
Ba	137	115	He	84.159	ppb	6.6	23594.29	0.3685	Pulse	0.1000	3
Tl	205	209	He	0.184	ppb	4.6	1366.80	0.0061	Pulse	0.1000	3
Pb	208	209	He	15.398	ppb	0.8	126255.64	0.5626	Pulse	0.1000	3
U	238	209	He	0.820	ppb	1.3	7795.98	0.0347	Pulse	0.1000	3

ISTD Table:

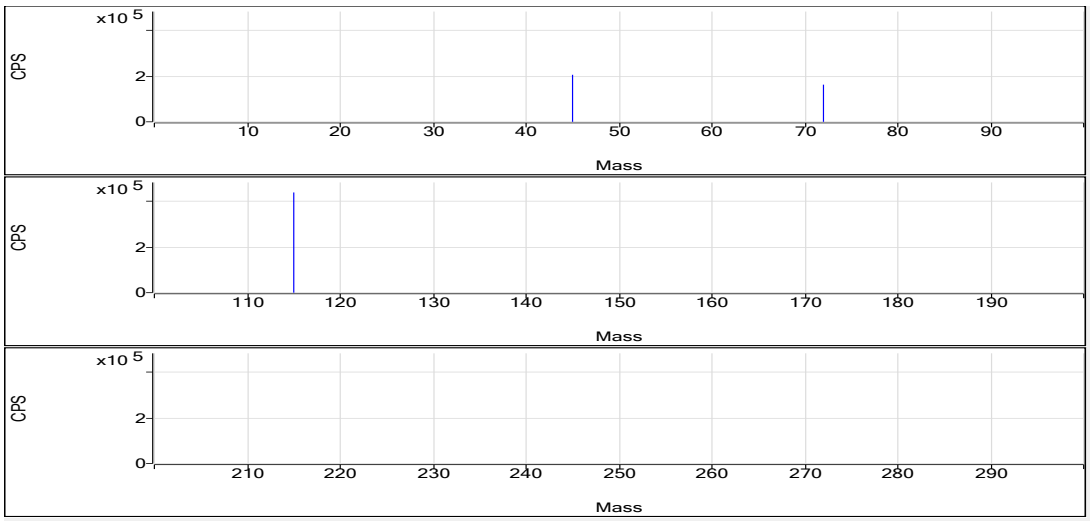
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3336549.64	2.1	102.9	Pulse	0.1000	3
No Gas	Ge	72	1442817.48	1.9	100.2	Pulse	0.1000	3
H2	Sc	45	206345.22	0.6	105.6	Pulse	0.1000	3
H2	Ge	72	163026.66	1.2	100.0	Pulse	0.1000	3
H2	In	115	439794.01	2.2	101.5	Pulse	0.1000	3
He	Sc	45	42893.46	0.8	107.3	Pulse	0.1000	3
He	Ge	72	75186.43	0.6	104.0	Pulse	0.1000	3
He	In	115	64090.33	2.1	99.2	Pulse	0.1000	3
He	Tb	159	294515.89	0.5	103.0	Pulse	0.1000	3
He	Bi	209	224403.50	0.6	101.0	Pulse	0.1000	3

No Gas

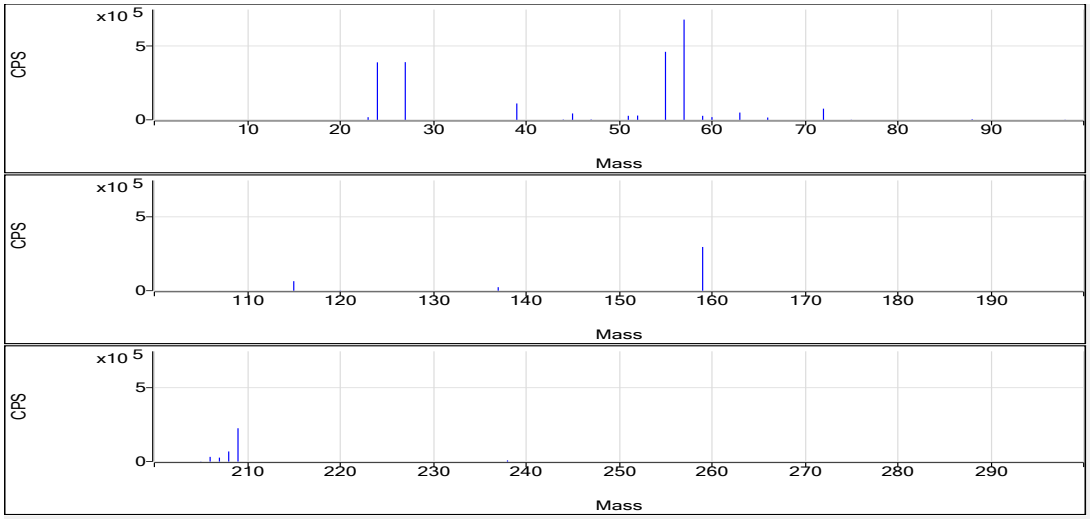


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.787	0.0011	1594.09	0.0013	4.694E-05
Be	9	1	No Gas	0.876	0.0012	1712.11	0.0013	4.694E-05
Be	9	1	No Gas	0.882	0.0012	1718.11	0.0013	4.694E-05
Se	78	2	H2	0.14	0.0001	10.67	0.0004	1.089E-05
Se	78	2	H2	0.128	0.0001	10.00	0.0004	1.089E-05
Se	78	2	H2	0.185	0.0001	13.33	0.0004	1.089E-05
Na	23	3	He	74.13	0.2338	17500.77	0.0017	0.1065
Na	23	3	He	74.029	0.2336	17520.75	0.0017	0.1065
Na	23	3	He	75.902	0.2368	17931.29	0.0017	0.1065
Mg	24	3	He	6103.792	5.151	385571.21	0.0008	0.004846
Mg	24	3	He	6109.611	5.1559	386666.40	0.0008	0.004846
Mg	24	3	He	6095.804	5.1442	389467.92	0.0008	0.004846
Al	27	3	He	21278.664	5.1376	384571.60	0.0002	0.001063
Al	27	3	He	21459.306	5.1812	388567.22	0.0002	0.001063
Al	27	3	He	21461.922	5.1818	392315.97	0.0002	0.001063
K	39	3	He	2409.091	1.474	110332.80	0.0006	0.1436
K	39	3	He	2392.839	1.465	109867.85	0.0006	0.1436
K	39	3	He	2380.556	1.4582	110400.77	0.0006	0.1436
Ca	44	3	He	890.189	0.0293	2190.24	0	0.001611
Ca	44	3	He	858.36	0.0283	2120.23	0	0.001611
Ca	44	3	He	794.489	0.0263	1990.23	0	0.001611
Ti	47	3	He	126.241	0.0319	2390.28	0.0003	0.0002737
Ti	47	3	He	137.17	0.0347	2600.32	0.0003	0.0002737
Ti	47	3	He	129.017	0.0326	2470.29	0.0003	0.0002737
V	51	3	He	30.434	0.3633	27197.19	0.0117	0.007326
V	51	3	He	30.147	0.36	26996.87	0.0117	0.007326
V	51	3	He	30.022	0.3585	27143.12	0.0117	0.007326
Cr	52	3	He	23.063	0.3766	28188.03	0.0152	0.02538
Cr	52	3	He	23.139	0.3777	28328.21	0.0152	0.02538
Cr	52	3	He	24.157	0.3932	29771.32	0.0152	0.02538
Mn	55	3	He	1028.4	6.0839	455405.62	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1027.219	6.0769	455741.75	0.0059	0.01385
Mn	55	3	He	1034.378	6.1192	463281.63	0.0059	0.01385
Fe	57	3	He	30933.191	8.9657	671121.55	0.0003	0.003918
Fe	57	3	He	31016.733	8.9899	674202.57	0.0003	0.003918
Fe	57	3	He	30995.066	8.9836	680148.82	0.0003	0.003918
Co	59	3	He	12.022	0.3699	27686.91	0.0305	0.003084
Co	59	3	He	11.338	0.349	26174.19	0.0305	0.003084
Co	59	3	He	11.685	0.3596	27226.12	0.0305	0.003084
Ni	60	3	He	26.903	0.2456	18382.12	0.0088	0.009003
Ni	60	3	He	26.122	0.2387	17901.59	0.0088	0.009003
Ni	60	3	He	25.971	0.2374	17971.59	0.0088	0.009003
Cu	63	3	He	26.038	0.6543	48973.61	0.0249	0.004937
Cu	63	3	He	26.021	0.6538	49034.30	0.0249	0.004937
Cu	63	3	He	25.593	0.6431	48692.59	0.0249	0.004937
Zn	66	3	He	83.29	0.2095	15678.92	0.0025	0.004836
Zn	66	3	He	80.576	0.2028	15208.43	0.0025	0.004836
Zn	66	3	He	81.196	0.2043	15468.65	0.0025	0.004836
As	75	3	He	7.708	0.0138	1036.05	0.0017	0.0004347
As	75	3	He	7.632	0.0137	1028.04	0.0017	0.0004347
As	75	3	He	6.616	0.0119	904.03	0.0017	0.0004347
Sr	88	3	He	7.603	0.0602	3850.66	0.0078	0.0007762
Sr	88	3	He	7.847	0.0621	4070.70	0.0078	0.0007762
Sr	88	3	He	7.196	0.057	3580.56	0.0078	0.0007762
Mo	98	3	He	0.694	0.0158	1010.08	0.022	0.0005162
Mo	98	3	He	0.586	0.0134	880.06	0.022	0.0005162
Mo	98	3	He	0.75	0.017	1070.08	0.022	0.0005162
Ag	107	3	He	0.048	0.0027	170.01	0.0455	0.0004641
Ag	107	3	He	0.027	0.0017	110.01	0.0455	0.0004641
Ag	107	3	He	0.042	0.0024	150.01	0.0455	0.0004641
Cd	111	3	He	0.094	0.0005	32.00	0.0048	5.152E-05
Cd	111	3	He	0.078	0.0004	28.00	0.0048	5.152E-05
Cd	111	3	He	0.162	0.0008	52.00	0.0048	5.152E-05
Sn	120	3	He	0.804	0.0271	1730.18	0.0143	0.01559
Sn	120	3	He	0.662	0.025	1640.14	0.0143	0.01559
Sn	120	3	He	1.007	0.0299	1880.19	0.0143	0.01559
Sb	121	3	He	0.294	0.0039	250.01	0.0124	0.000258
Sb	121	3	He	0.164	0.0023	150.01	0.0124	0.000258
Sb	121	3	He	0.262	0.0035	220.01	0.0124	0.000258
Ba	137	3	He	83.963	0.3676	23511.01	0.0044	0.000309
Ba	137	3	He	78.688	0.3446	22579.13	0.0044	0.000309
Ba	137	3	He	89.826	0.3933	24692.74	0.0044	0.000309
Tl	205	3	He	0.184	0.0061	1370.14	0.0276	0.001005
Tl	205	3	He	0.193	0.0063	1410.13	0.0276	0.001005
Tl	205	3	He	0.175	0.0059	1320.12	0.0276	0.001005
Pb	208	3	He	15.258	0.5575	68096.74	0.0364	0.002176
Pb	208	3	He	15.441	0.5642	67552.95	0.0364	0.002176
Pb	208	3	He	15.496	0.5662	68549.31	0.0364	0.002176
U	238	3	He	0.825	0.0349	7862.75	0.0421	0.00024
U	238	3	He	0.808	0.0342	7622.53	0.0421	0.00024
U	238	3	He	0.828	0.0351	7902.67	0.0421	0.00024
Sc	45	1	No Gas			3417302.76		
Sc	45	1	No Gas			3306439.95		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3285906.20		
Ge	72	1	No Gas			1474438.26		
Ge	72	1	No Gas			1428584.82		
Ge	72	1	No Gas			1425429.35		
Sc	45	2	H2			205392.26		
Sc	45	2	H2			207756.23		
Sc	45	2	H2			205887.16		
Ge	72	2	H2			163386.43		
Ge	72	2	H2			164782.58		
Ge	72	2	H2			160910.98		
In	115	2	H2			441672.06		
In	115	2	H2			448604.13		
In	115	2	H2			429105.85		
Sc	45	3	He			43174.00		
Sc	45	3	He			43013.74		
Sc	45	3	He			42492.64		
Ge	72	3	He			74854.20		
Ge	72	3	He			74995.39		
Ge	72	3	He			75709.69		
In	115	3	He			63966.35		
In	115	3	He			65544.36		
In	115	3	He			62801.24		
Tb	159	3	He			294880.50		
Tb	159	3	He			295878.26		
Tb	159	3	He			292788.92		
Bi	209	3	He			224995.95		
Bi	209	3	He			222814.43		
Bi	209	3	He			225400.11		

Quantitation Report

Data File Name	247SMPL.d
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Acq Time	2023-08-10 19:07:15
Sample Name	410-136258-F-9-A @2
Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

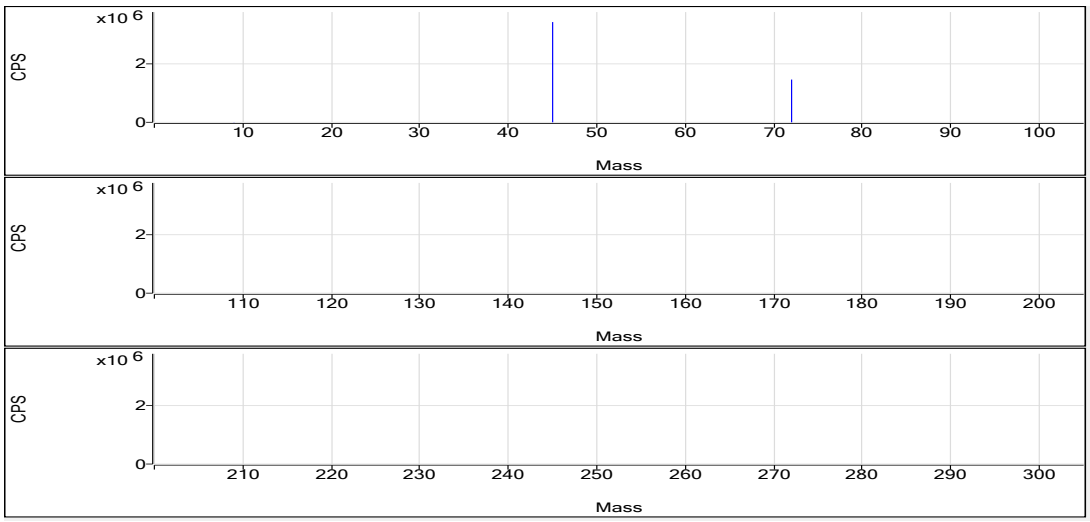
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	3.028	ppb	4.8	5874.51	0.0040	Pulse	0.5000	3
Se	78	72	H2	1.282	ppb	15.6	84.22	0.0005	Pulse	1.5000	3
Na	23	72	He	433.076	ppb	2.0	64389.31	0.8504	Pulse	0.1000	3
Mg	24	72	He	94168.270	ppb	1.2	6012157.41	79.3983	Analog	0.1000	3
Al	27	72	He	50537.881	ppb	1.6	923795.06	12.2006	Pulse	0.1000	3
K	39	72	He	9292.959	ppb	1.8	399419.46	5.2753	Pulse	0.1000	3
Ca	44	72	He	152746.506	ppb	1.4	359357.56	4.7459	Pulse	0.1000	3
Ti	47	72	He	291.300	ppb	6.1	5557.91	0.0733	Pulse	0.1000	3
V	51	72	He	166.425	ppb	1.8	147958.41	1.9541	Pulse	0.5000	3
Cr	52	72	He	69.477	ppb	2.7	82013.96	1.0833	Pulse	0.1000	3
Mn	55	72	He	4956.945	ppb	2.1	2216206.42	29.2718	Pulse	0.1000	3
Fe	57	72	He	79144.584	ppb	1.7	1736414.98	22.9333	Pulse	0.1000	3
Co	59	72	He	29.826	ppb	2.2	69131.18	0.9131	Pulse	0.1000	3
Ni	60	72	He	96.046	ppb	2.0	64638.29	0.8536	Pulse	0.1000	3
Cu	63	72	He	129.992	ppb	1.5	245823.45	3.2466	Pulse	0.1000	3
Zn	66	72	He	734.972	ppb	3.4	137058.33	1.8105	Pulse	0.1000	3
As	75	72	He	28.864	ppb	5.4	3831.87	0.0506	Pulse	0.5000	3
Sr	88	115	He	153.802	ppb	2.4	76086.75	1.2031	Pulse	0.1000	3
Mo	98	115	He	3.552	ppb	0.7	4981.06	0.0787	Pulse	0.1000	3
Ag	107	115	He	1.534	ppb	4.9	4440.83	0.0702	Pulse	0.1000	3
Cd	111	115	He	3.808	ppb	2.8	1160.06	0.0183	Pulse	0.5000	3
Sn	120	115	He	10.641	ppb	6.7	10574.33	0.1673	Pulse	0.1000	3
Sb	121	115	He	1.984	ppb	0.8	1573.48	0.0249	Pulse	0.1000	3
Ba	137	115	He	391.532	ppb	2.1	108353.98	1.7132	Pulse	0.1000	3
Tl	205	209	He	0.530	ppb	4.5	3493.94	0.0157	Pulse	0.1000	3
Pb	208	209	He	258.919	ppb	0.4	2103851.58	9.4261	Pulse	0.1000	3
U	238	209	He	2.169	ppb	1.5	20420.21	0.0915	Pulse	0.1000	3

ISTD Table:

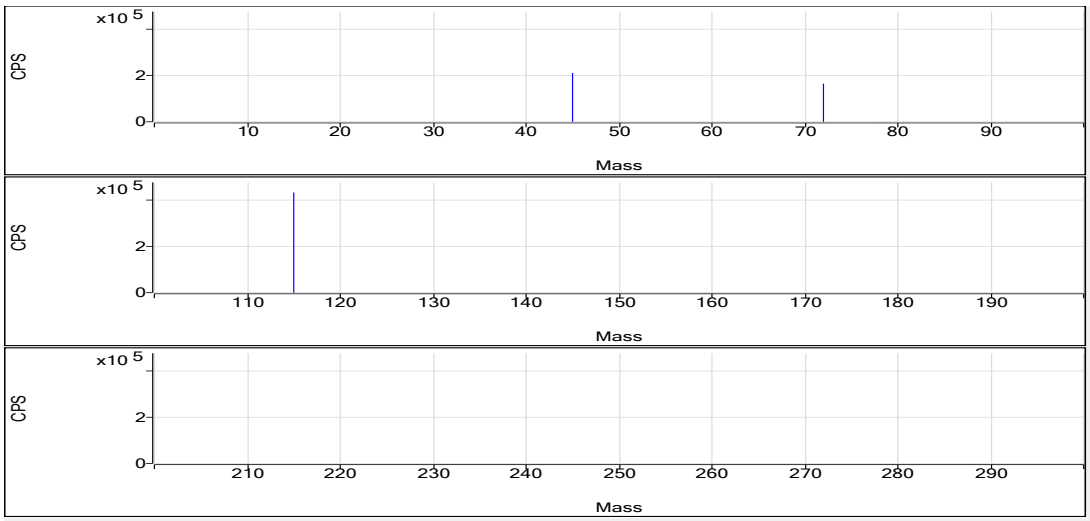
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3424888.91	1.6	105.7	Pulse	0.1000	3
No Gas	Ge	72	1460294.98	2.0	101.4	Pulse	0.1000	3
H2	Sc	45	211279.75	2.8	108.1	Pulse	0.1000	3
H2	Ge	72	165364.13	2.9	101.4	Pulse	0.1000	3
H2	In	115	434159.99	2.1	100.2	Pulse	0.1000	3
He	Sc	45	44110.66	0.7	110.3	Pulse	0.1000	3
He	Ge	72	75735.74	2.4	104.8	Pulse	0.1000	3
He	In	115	63268.49	2.5	98.0	Pulse	0.1000	3
He	Tb	159	305014.23	1.1	106.6	Pulse	0.1000	3
He	Bi	209	223196.20	0.5	100.5	Pulse	0.1000	3

No Gas

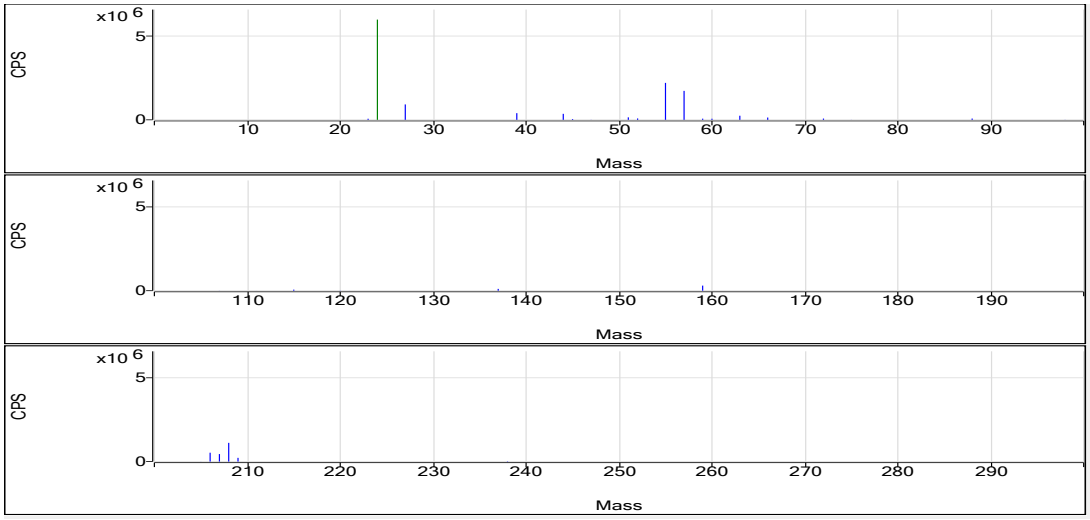


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	2.889	0.0038	5729.13	0.0013	4.694E-05
Be	9	1	No Gas	3.013	0.004	5833.16	0.0013	4.694E-05
Be	9	1	No Gas	3.181	0.0042	6061.25	0.0013	4.694E-05
Se	78	2	H2	1.5	0.0006	98.00	0.0004	1.089E-05
Se	78	2	H2	1.107	0.0004	75.33	0.0004	1.089E-05
Se	78	2	H2	1.238	0.0005	79.33	0.0004	1.089E-05
Na	23	3	He	430.641	0.8462	65112.47	0.0017	0.1065
Na	23	3	He	442.714	0.867	63867.12	0.0017	0.1065
Na	23	3	He	425.874	0.838	64188.34	0.0017	0.1065
Mg	24	3	He	93601.207	78.9202	6072517.41	0.0008	0.004846
Mg	24	3	He	95472.641	80.498	5930118.04	0.0008	0.004846
Mg	24	3	He	93430.962	78.7766	6033836.79	0.0008	0.004846
Al	27	3	He	50008.845	12.0729	928950.61	0.0002	0.001063
Al	27	3	He	51440.27	12.4184	914840.92	0.0002	0.001063
Al	27	3	He	50164.527	12.1105	927593.66	0.0002	0.001063
K	39	3	He	9196.326	5.222	401804.06	0.0006	0.1436
K	39	3	He	9487.375	5.3827	396530.85	0.0006	0.1436
K	39	3	He	9195.177	5.2213	399923.47	0.0006	0.1436
Ca	44	3	He	150840.414	4.6867	360617.92	0	0.001611
Ca	44	3	He	155040.114	4.8171	354868.32	0	0.001611
Ca	44	3	He	152358.991	4.7339	362586.44	0	0.001611
Ti	47	3	He	310.444	0.0781	6011.46	0.0003	0.0002737
Ti	47	3	He	275.025	0.0692	5101.08	0.0003	0.0002737
Ti	47	3	He	288.43	0.0726	5561.20	0.0003	0.0002737
V	51	3	He	165.577	1.9442	149596.77	0.0117	0.007326
V	51	3	He	169.707	1.9925	146784.41	0.0117	0.007326
V	51	3	He	163.991	1.9257	147494.06	0.0117	0.007326
Cr	52	3	He	67.891	1.0592	81498.52	0.0152	0.02538
Cr	52	3	He	71.504	1.1142	82080.53	0.0152	0.02538
Cr	52	3	He	69.036	1.0766	82462.84	0.0152	0.02538
Mn	55	3	He	4873.024	28.7765	2214208.87	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	5071.446	29.9477	2206181.84	0.0059	0.01385
Mn	55	3	He	4926.365	29.0913	2228228.56	0.0059	0.01385
Fe	57	3	He	78060.26	22.6191	1740429.51	0.0003	0.003918
Fe	57	3	He	80616.399	23.3597	1720858.10	0.0003	0.003918
Fe	57	3	He	78757.093	22.821	1747957.32	0.0003	0.003918
Co	59	3	He	29.634	0.9072	69807.85	0.0305	0.003084
Co	59	3	He	30.564	0.9356	68923.41	0.0305	0.003084
Co	59	3	He	29.28	0.8964	68662.28	0.0305	0.003084
Ni	60	3	He	97.267	0.8643	66503.64	0.0088	0.009003
Ni	60	3	He	97.05	0.8624	63530.61	0.0088	0.009003
Ni	60	3	He	93.823	0.834	63880.61	0.0088	0.009003
Cu	63	3	He	129.031	3.2226	247963.26	0.0249	0.004937
Cu	63	3	He	132.266	3.3033	243345.19	0.0249	0.004937
Cu	63	3	He	128.68	3.2138	246161.89	0.0249	0.004937
Zn	66	3	He	734.851	1.8102	139285.38	0.0025	0.004836
Zn	66	3	He	760.211	1.8725	137943.00	0.0025	0.004836
Zn	66	3	He	709.854	1.7488	133946.60	0.0025	0.004836
As	75	3	He	28.584	0.0501	3858.55	0.0017	0.0004347
As	75	3	He	30.538	0.0535	3944.57	0.0017	0.0004347
As	75	3	He	27.469	0.0482	3692.50	0.0017	0.0004347
Sr	88	3	He	154.918	1.2118	76817.00	0.0078	0.0007762
Sr	88	3	He	156.882	1.2271	75631.54	0.0078	0.0007762
Sr	88	3	He	149.607	1.1703	75811.72	0.0078	0.0007762
Mo	98	3	He	3.53	0.0783	4961.03	0.022	0.0005162
Mo	98	3	He	3.58	0.0794	4891.05	0.022	0.0005162
Mo	98	3	He	3.545	0.0786	5091.11	0.022	0.0005162
Ag	107	3	He	1.484	0.068	4310.80	0.0455	0.0004641
Ag	107	3	He	1.62	0.0742	4570.83	0.0455	0.0004641
Ag	107	3	He	1.496	0.0686	4440.87	0.0455	0.0004641
Cd	111	3	He	3.907	0.0188	1192.06	0.0048	5.152E-05
Cd	111	3	He	3.694	0.0178	1096.05	0.0048	5.152E-05
Cd	111	3	He	3.823	0.0184	1192.06	0.0048	5.152E-05
Sn	120	3	He	10.65	0.1674	10614.34	0.0143	0.01559
Sn	120	3	He	11.35	0.1774	10934.63	0.0143	0.01559
Sn	120	3	He	9.922	0.1571	10174.02	0.0143	0.01559
Sb	121	3	He	2.001	0.0251	1590.14	0.0124	0.000258
Sb	121	3	He	1.981	0.0248	1530.13	0.0124	0.000258
Sb	121	3	He	1.97	0.0247	1600.16	0.0124	0.000258
Ba	137	3	He	393.402	1.7214	109119.65	0.0044	0.000309
Ba	137	3	He	398.649	1.7443	107506.60	0.0044	0.000309
Ba	137	3	He	382.546	1.6739	108435.70	0.0044	0.000309
Tl	205	3	He	0.556	0.0164	3670.66	0.0276	0.001005
Tl	205	3	He	0.524	0.0155	3460.58	0.0276	0.001005
Tl	205	3	He	0.51	0.0151	3350.57	0.0276	0.001005
Pb	208	3	He	258.509	9.4112	1126152.64	0.0364	0.002176
Pb	208	3	He	258.055	9.3947	1111126.78	0.0364	0.002176
Pb	208	3	He	260.193	9.4725	1130847.01	0.0364	0.002176
U	238	3	He	2.185	0.0922	20667.28	0.0421	0.00024
U	238	3	He	2.131	0.0899	20076.36	0.0421	0.00024
U	238	3	He	2.191	0.0924	20516.98	0.0421	0.00024
Sc	45	1	No Gas			3488050.89		
Sc	45	1	No Gas			3392919.32		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3393696.51		
Ge	72	1	No Gas			1490876.23		
Ge	72	1	No Gas			1455842.79		
Ge	72	1	No Gas			1434165.92		
Sc	45	2	H2			208230.27		
Sc	45	2	H2			217986.11		
Sc	45	2	H2			207622.87		
Ge	72	2	H2			164673.24		
Ge	72	2	H2			170425.95		
Ge	72	2	H2			160993.19		
In	115	2	H2			430712.06		
In	115	2	H2			444472.92		
In	115	2	H2			427294.99		
Sc	45	3	He			44398.28		
Sc	45	3	He			44147.56		
Sc	45	3	He			43786.14		
Ge	72	3	He			76945.06		
Ge	72	3	He			73667.91		
Ge	72	3	He			76594.24		
In	115	3	He			63474.29		
In	115	3	He			61717.83		
In	115	3	He			64860.78		
Tb	159	3	He			301956.05		
Tb	159	3	He			304629.62		
Tb	159	3	He			308457.01		
Bi	209	3	He			224218.30		
Bi	209	3	He			223395.93		
Bi	209	3	He			221974.37		

Quantitation Report

Data File Name	248SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 19:09:14
Sample Name	410-136258-F-9-A @10
Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

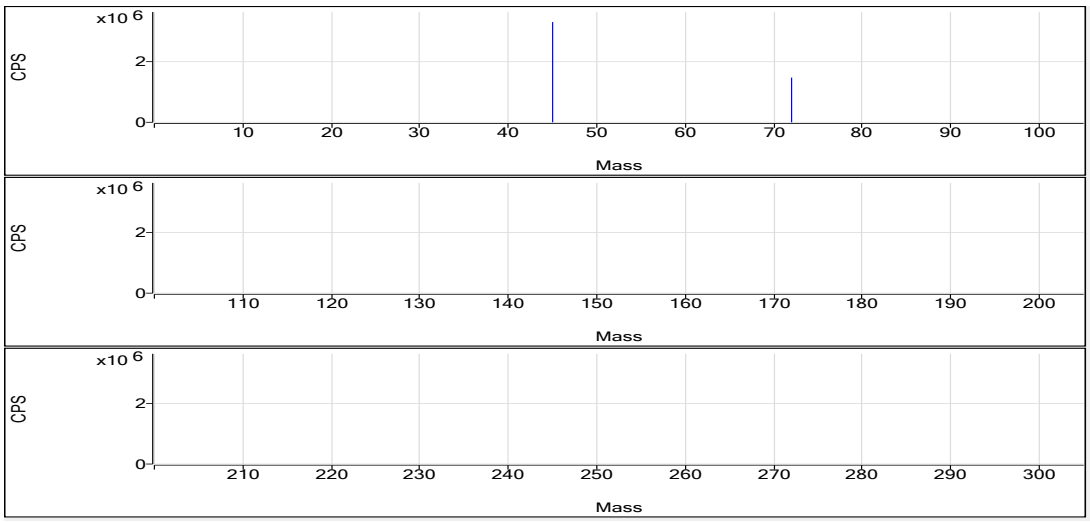
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.579	ppb	4.9	1192.06	0.0008	Pulse	0.5000	3
Se	78	72	H2	0.316	ppb	16.1	22.00	0.0001	Pulse	1.5000	3
Na	23	72	He	74.625	ppb	4.3	17751.11	0.2346	Pulse	0.1000	3
Mg	24	72	He	18012.510	ppb	1.4	1149204.59	15.1912	Pulse	0.1000	3
Al	27	72	He	10016.947	ppb	0.4	183007.12	2.4191	Pulse	0.1000	3
K	39	72	He	1865.442	ppb	1.1	88793.63	1.1738	Pulse	0.1000	3
Ca	44	72	He	30525.777	ppb	1.0	71846.48	0.9497	Pulse	0.1000	3
Ti	47	72	He	61.994	ppb	2.0	1196.76	0.0158	Pulse	0.1000	3
V	51	72	He	32.892	ppb	1.5	29660.67	0.3921	Pulse	0.5000	3
Cr	52	72	He	14.446	ppb	1.0	18562.35	0.2454	Pulse	0.1000	3
Mn	55	72	He	977.846	ppb	1.9	437652.77	5.7855	Pulse	0.1000	3
Fe	57	72	He	15905.242	ppb	2.2	348871.68	4.6119	Pulse	0.1000	3
Co	59	72	He	6.018	ppb	1.4	14123.96	0.1867	Pulse	0.1000	3
Ni	60	72	He	20.404	ppb	5.9	14250.82	0.1884	Pulse	0.1000	3
Cu	63	72	He	26.339	ppb	2.4	50057.47	0.6617	Pulse	0.1000	3
Zn	66	72	He	147.353	ppb	1.7	27754.12	0.3668	Pulse	0.1000	3
As	75	72	He	5.653	ppb	2.5	776.70	0.0103	Pulse	0.5000	3
Sr	88	115	He	30.582	ppb	2.5	15292.01	0.2398	Pulse	0.1000	3
Mo	98	115	He	0.726	ppb	3.0	1053.41	0.0165	Pulse	0.1000	3
Ag	107	115	He	0.305	ppb	4.6	916.74	0.0144	Pulse	0.1000	3
Cd	111	115	He	0.750	ppb	5.8	232.67	0.0037	Pulse	0.5000	3
Sn	120	115	He	2.134	ppb	6.2	2933.75	0.0460	Pulse	0.1000	3
Sb	121	115	He	0.429	ppb	18.8	356.68	0.0056	Pulse	0.1000	3
Ba	137	115	He	77.513	ppb	2.2	21640.95	0.3394	Pulse	0.1000	3
Tl	205	209	He	0.113	ppb	9.3	930.07	0.0041	Pulse	0.1000	3
Pb	208	209	He	51.771	ppb	1.0	423645.68	1.8865	Pulse	0.1000	3
U	238	209	He	0.415	ppb	2.7	3970.76	0.0177	Pulse	0.1000	3

ISTD Table:

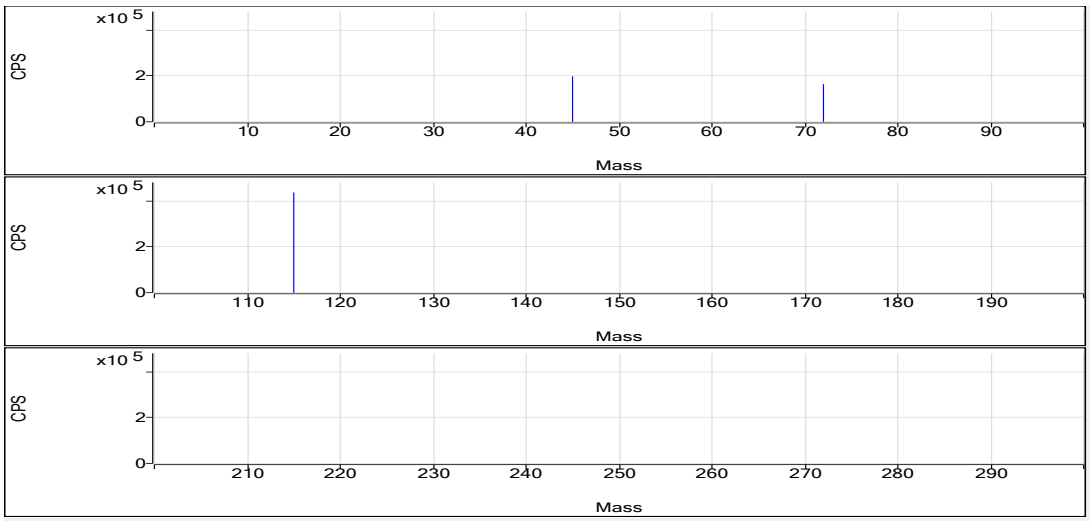
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3306863.49	2.1	102.0	Pulse	0.1000	3
No Gas	Ge	72	1475099.98	2.1	102.5	Pulse	0.1000	3
H2	Sc	45	198366.68	2.0	101.5	Pulse	0.1000	3
H2	Ge	72	164247.61	1.0	100.8	Pulse	0.1000	3
H2	In	115	437522.91	0.6	101.0	Pulse	0.1000	3
He	Sc	45	42522.29	0.8	106.3	Pulse	0.1000	3
He	Ge	72	75652.25	0.7	104.7	Pulse	0.1000	3
He	In	115	63786.51	2.8	98.8	Pulse	0.1000	3
He	Tb	159	288683.86	0.4	100.9	Pulse	0.1000	3
He	Bi	209	224572.03	0.7	101.1	Pulse	0.1000	3

No Gas

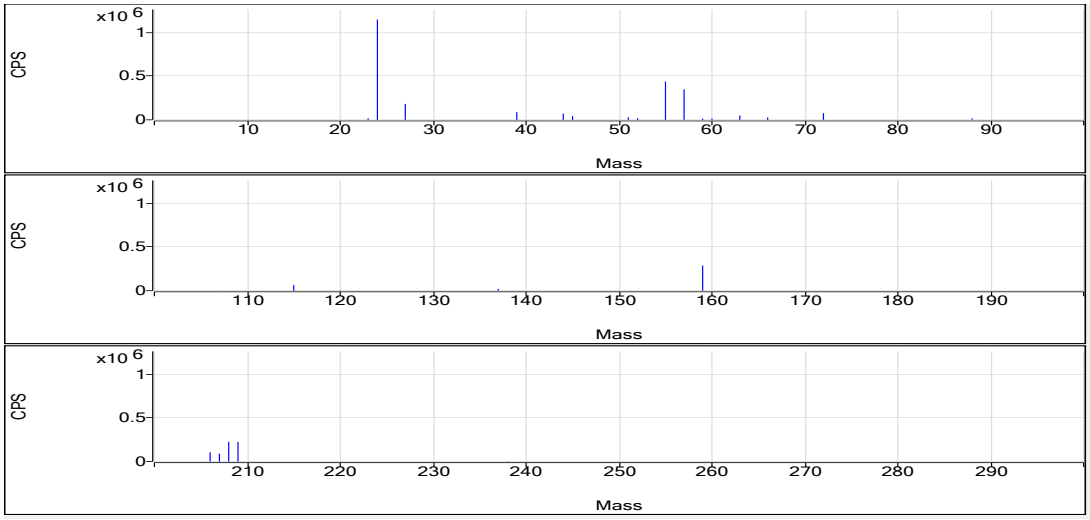


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.579	0.0008	1218.06	0.0013	4.694E-05
Be	9	1	No Gas	0.551	0.0008	1132.05	0.0013	4.694E-05
Be	9	1	No Gas	0.608	0.0008	1226.06	0.0013	4.694E-05
Se	78	2	H2	0.373	0.0002	25.33	0.0004	1.089E-05
Se	78	2	H2	0.303	0.0001	21.33	0.0004	1.089E-05
Se	78	2	H2	0.273	0.0001	19.33	0.0004	1.089E-05
Na	23	3	He	77.813	0.2401	18201.53	0.0017	0.1065
Na	23	3	He	74.68	0.2347	17621.08	0.0017	0.1065
Na	23	3	He	71.381	0.2291	17430.71	0.0017	0.1065
Mg	24	3	He	17733.772	14.9562	1133682.01	0.0008	0.004846
Mg	24	3	He	18249.603	15.3911	1155342.25	0.0008	0.004846
Mg	24	3	He	18054.156	15.2263	1158589.51	0.0008	0.004846
Al	27	3	He	9977.861	2.4097	182652.38	0.0002	0.001063
Al	27	3	He	10063.269	2.4303	182430.06	0.0002	0.001063
Al	27	3	He	10009.712	2.4173	183938.92	0.0002	0.001063
K	39	3	He	1861.758	1.1717	88816.87	0.0006	0.1436
K	39	3	He	1887.387	1.1859	89018.57	0.0006	0.1436
K	39	3	He	1847.18	1.1637	88545.44	0.0006	0.1436
Ca	44	3	He	30400.977	0.9459	71696.32	0	0.001611
Ca	44	3	He	30871.083	0.9605	72097.63	0	0.001611
Ca	44	3	He	30305.271	0.9429	71745.49	0	0.001611
Ti	47	3	He	62.041	0.0158	1200.09	0.0003	0.0002737
Ti	47	3	He	63.19	0.0161	1210.10	0.0003	0.0002737
Ti	47	3	He	60.751	0.0155	1180.08	0.0003	0.0002737
V	51	3	He	32.499	0.3875	29371.45	0.0117	0.007326
V	51	3	He	33.427	0.3984	29902.47	0.0117	0.007326
V	51	3	He	32.75	0.3904	29708.09	0.0117	0.007326
Cr	52	3	He	14.615	0.2479	18792.61	0.0152	0.02538
Cr	52	3	He	14.397	0.2446	18362.10	0.0152	0.02538
Cr	52	3	He	14.328	0.2436	18532.33	0.0152	0.02538
Mn	55	3	He	963.393	5.7002	432076.01	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	998.977	5.9102	443655.11	0.0059	0.01385
Mn	55	3	He	971.168	5.7461	437227.18	0.0059	0.01385
Fe	57	3	He	15598.765	4.5231	342851.87	0.0003	0.003918
Fe	57	3	He	16283.955	4.7216	354430.78	0.0003	0.003918
Fe	57	3	He	15833.005	4.591	349332.38	0.0003	0.003918
Co	59	3	He	6.003	0.1862	14117.34	0.0305	0.003084
Co	59	3	He	6.111	0.1895	14227.37	0.0305	0.003084
Co	59	3	He	5.941	0.1843	14027.16	0.0305	0.003084
Ni	60	3	He	19.721	0.1824	13827.01	0.0088	0.009003
Ni	60	3	He	21.804	0.2007	15068.20	0.0088	0.009003
Ni	60	3	He	19.687	0.1821	13857.24	0.0088	0.009003
Cu	63	3	He	25.971	0.6526	49465.64	0.0249	0.004937
Cu	63	3	He	27.069	0.68	51040.98	0.0249	0.004937
Cu	63	3	He	25.976	0.6527	49665.80	0.0249	0.004937
Zn	66	3	He	145.418	0.3621	27446.86	0.0025	0.004836
Zn	66	3	He	146.48	0.3647	27376.63	0.0025	0.004836
Zn	66	3	He	150.161	0.3737	28438.87	0.0025	0.004836
As	75	3	He	5.697	0.0103	784.03	0.0017	0.0004347
As	75	3	He	5.495	0.01	750.03	0.0017	0.0004347
As	75	3	He	5.765	0.0105	796.03	0.0017	0.0004347
Sr	88	3	He	31.401	0.2462	15198.62	0.0078	0.0007762
Sr	88	3	He	29.913	0.2346	15138.54	0.0078	0.0007762
Sr	88	3	He	30.431	0.2387	15538.87	0.0078	0.0007762
Mo	98	3	He	0.72	0.0164	1010.07	0.022	0.0005162
Mo	98	3	He	0.751	0.017	1100.09	0.022	0.0005162
Mo	98	3	He	0.709	0.0161	1050.08	0.022	0.0005162
Ag	107	3	He	0.292	0.0138	850.06	0.0455	0.0004641
Ag	107	3	He	0.32	0.015	970.08	0.0455	0.0004641
Ag	107	3	He	0.304	0.0143	930.07	0.0455	0.0004641
Cd	111	3	He	0.779	0.0038	234.00	0.0048	5.152E-05
Cd	111	3	He	0.771	0.0038	242.00	0.0048	5.152E-05
Cd	111	3	He	0.7	0.0034	222.00	0.0048	5.152E-05
Sn	120	3	He	2.237	0.0475	2930.40	0.0143	0.01559
Sn	120	3	He	1.983	0.0439	2830.41	0.0143	0.01559
Sn	120	3	He	2.182	0.0467	3040.44	0.0143	0.01559
Sb	121	3	He	0.358	0.0047	290.01	0.0124	0.000258
Sb	121	3	He	0.516	0.0067	430.02	0.0124	0.000258
Sb	121	3	He	0.413	0.0054	350.02	0.0124	0.000258
Ba	137	3	He	79.393	0.3476	21457.31	0.0044	0.000309
Ba	137	3	He	77.11	0.3377	21787.80	0.0044	0.000309
Ba	137	3	He	76.035	0.3329	21677.74	0.0044	0.000309
Tl	205	3	He	0.111	0.0041	910.06	0.0276	0.001005
Tl	205	3	He	0.104	0.0039	870.07	0.0276	0.001005
Tl	205	3	He	0.125	0.0045	1010.07	0.0276	0.001005
Pb	208	3	He	51.512	1.8771	227193.34	0.0364	0.002176
Pb	208	3	He	52.379	1.9086	227219.20	0.0364	0.002176
Pb	208	3	He	51.423	1.8738	225956.70	0.0364	0.002176
U	238	3	He	0.422	0.018	4020.73	0.0421	0.00024
U	238	3	He	0.421	0.0179	4010.79	0.0421	0.00024
U	238	3	He	0.402	0.0171	3880.76	0.0421	0.00024
Sc	45	1	No Gas			3383701.51		
Sc	45	1	No Gas			3290333.70		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3246555.26		
Ge	72	1	No Gas			1509154.20		
Ge	72	1	No Gas			1467475.60		
Ge	72	1	No Gas			1448670.13		
Sc	45	2	H2			195904.29		
Sc	45	2	H2			202846.81		
Sc	45	2	H2			196348.94		
Ge	72	2	H2			162357.50		
Ge	72	2	H2			165622.69		
Ge	72	2	H2			164762.63		
In	115	2	H2			434678.12		
In	115	2	H2			440305.62		
In	115	2	H2			437584.99		
Sc	45	3	He			42923.17		
Sc	45	3	He			42291.67		
Sc	45	3	He			42352.02		
Ge	72	3	He			75800.05		
Ge	72	3	He			75065.53		
Ge	72	3	He			76091.17		
In	115	3	He			61746.43		
In	115	3	He			64549.61		
In	115	3	He			65132.16		
Tb	159	3	He			289394.47		
Tb	159	3	He			289238.71		
Tb	159	3	He			287418.41		
Bi	209	3	He			223694.18		
Bi	209	3	He			223648.86		
Bi	209	3	He			226373.06		

Quantitation Report

Data File Name	249SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 19:11:13
Sample Name	410-136577-H-18-A @2
Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

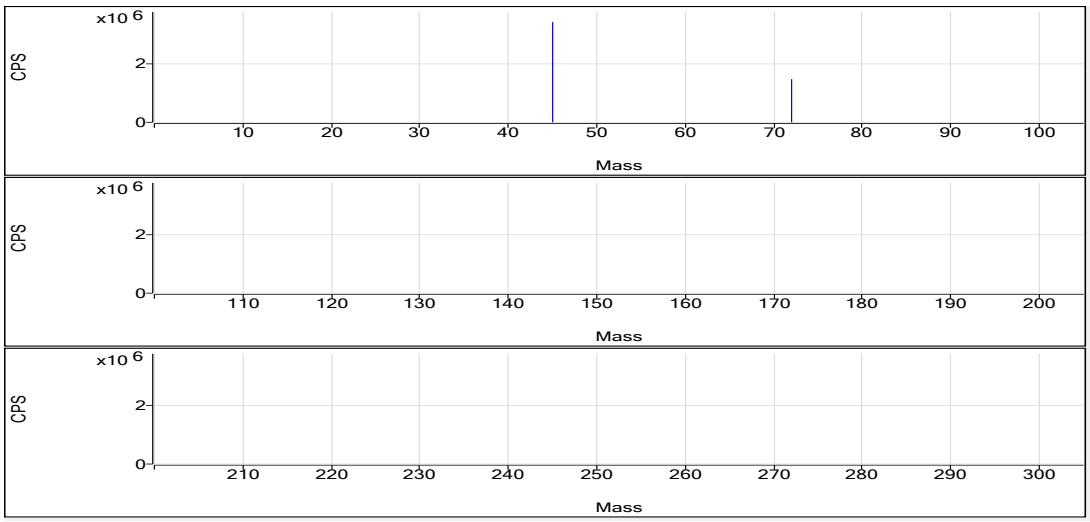
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	1.242	ppb	4.4	2488.22	0.0017	Pulse	0.5000	3
Se	78	72	H2	0.165	ppb	28.0	12.22	0.0001	Pulse	1.5000	3
Na	23	72	He	882.922	ppb	1.5	121775.91	1.6232	Pulse	0.1000	3
Mg	24	72	He	25558.616	ppb	1.3	1617029.66	21.5534	Pulse	0.1000	3
Al	27	72	He	21582.576	ppb	0.9	390958.24	5.2110	Pulse	0.1000	3
K	39	72	He	3553.364	ppb	1.4	157990.07	2.1059	Pulse	0.1000	3
Ca	44	72	He	34796.319	ppb	1.0	81211.63	1.0824	Pulse	0.1000	3
Ti	47	72	He	2042.405	ppb	1.0	38448.08	0.5125	Pulse	0.1000	3
V	51	72	He	112.407	ppb	0.9	99202.08	1.3222	Pulse	0.5000	3
Cr	52	72	He	51.380	ppb	2.4	60600.08	0.8078	Pulse	0.1000	3
Mn	55	72	He	503.372	ppb	1.9	223939.90	2.9850	Pulse	0.1000	3
Fe	57	72	He	47332.964	ppb	1.2	1029113.24	13.7170	Pulse	0.1000	3
Co	59	72	He	13.054	ppb	1.3	30112.08	0.4014	Pulse	0.1000	3
Ni	60	72	He	32.469	ppb	2.3	22097.37	0.2945	Pulse	0.1000	3
Cu	63	72	He	90.081	ppb	1.2	168904.04	2.2513	Pulse	0.1000	3
Zn	66	72	He	82.764	ppb	3.4	15618.93	0.2082	Pulse	0.1000	3
As	75	72	He	6.613	ppb	5.4	895.37	0.0119	Pulse	0.5000	3
Sr	88	115	He	33.152	ppb	1.3	16600.14	0.2599	Pulse	0.1000	3
Mo	98	115	He	0.788	ppb	16.5	1140.09	0.0179	Pulse	0.1000	3
Ag	107	115	He	0.130	ppb	15.4	406.69	0.0064	Pulse	0.1000	3
Cd	111	115	He	0.276	ppb	19.5	88.00	0.0014	Pulse	0.5000	3
Sn	120	115	He	4.573	ppb	6.9	5161.16	0.0808	Pulse	0.1000	3
Sb	121	115	He	0.749	ppb	4.0	610.04	0.0095	Pulse	0.1000	3
Ba	137	115	He	102.302	ppb	2.1	28603.68	0.4479	Pulse	0.1000	3
Tl	205	209	He	0.148	ppb	11.1	1136.76	0.0051	Pulse	0.1000	3
Pb	208	209	He	42.122	ppb	0.2	343158.84	1.5353	Pulse	0.1000	3
U	238	209	He	2.539	ppb	1.0	23922.75	0.1070	Pulse	0.1000	3

ISTD Table:

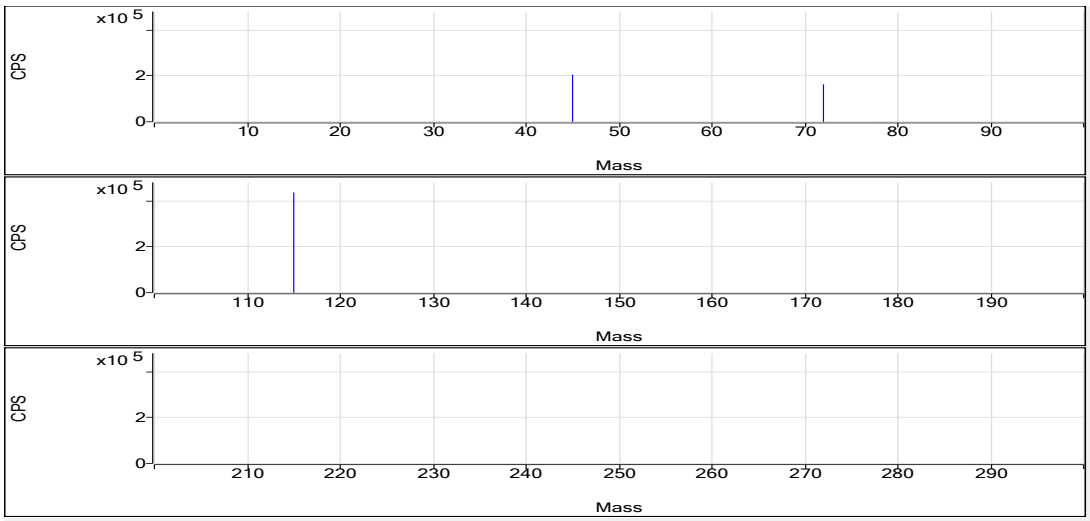
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3444957.34	2.4	106.3	Pulse	0.1000	3
No Gas	Ge	72	1483363.26	2.5	103.0	Pulse	0.1000	3
H2	Sc	45	205173.06	3.4	105.0	Pulse	0.1000	3
H2	Ge	72	162926.67	2.7	99.9	Pulse	0.1000	3
H2	In	115	436057.90	3.9	100.6	Pulse	0.1000	3
He	Sc	45	44207.31	1.0	110.6	Pulse	0.1000	3
He	Ge	72	75028.66	0.7	103.8	Pulse	0.1000	3
He	In	115	63862.90	1.1	98.9	Pulse	0.1000	3
He	Tb	159	295685.68	1.3	103.4	Pulse	0.1000	3
He	Bi	209	223514.34	0.1	100.6	Pulse	0.1000	3

No Gas

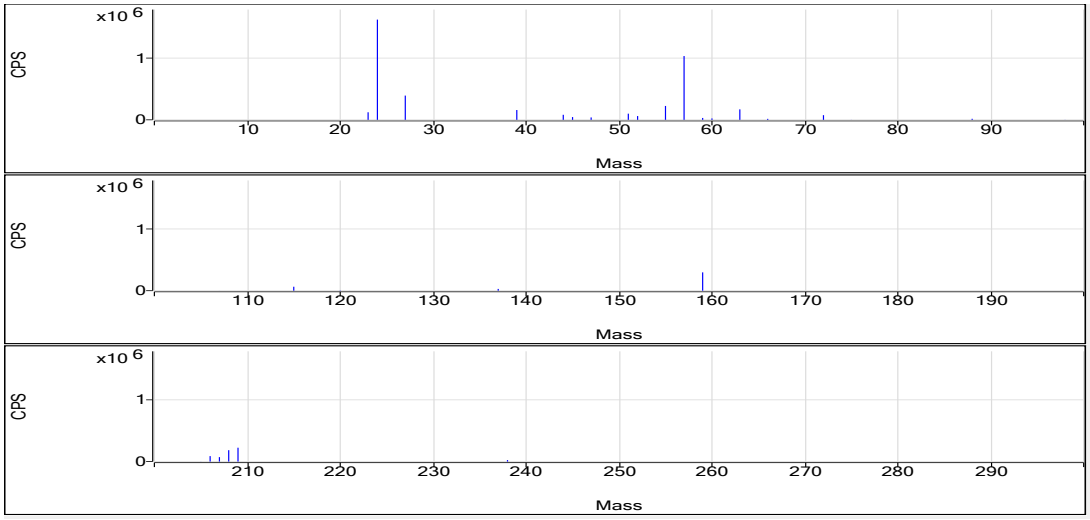


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	1.18	0.0016	2420.21	0.0013	4.694E-05
Be	9	1	No Gas	1.262	0.0017	2544.23	0.0013	4.694E-05
Be	9	1	No Gas	1.282	0.0017	2500.22	0.0013	4.694E-05
Se	78	2	H2	0.21	0.0001	14.67	0.0004	1.089E-05
Se	78	2	H2	0.168	0.0001	12.67	0.0004	1.089E-05
Se	78	2	H2	0.118	0.0001	9.33	0.0004	1.089E-05
Na	23	3	He	892.463	1.6395	122481.15	0.0017	0.1065
Na	23	3	He	867.748	1.5971	120736.92	0.0017	0.1065
Na	23	3	He	888.555	1.6328	122109.66	0.0017	0.1065
Mg	24	3	He	25782.397	21.742	1624221.07	0.0008	0.004846
Mg	24	3	He	25188.469	21.2413	1605797.32	0.0008	0.004846
Mg	24	3	He	25704.984	21.6768	1621070.60	0.0008	0.004846
Al	27	3	He	21792.844	5.2617	393073.35	0.0002	0.001063
Al	27	3	He	21390.294	5.1646	390429.76	0.0002	0.001063
Al	27	3	He	21564.59	5.2066	389371.60	0.0002	0.001063
K	39	3	He	3587.33	2.1246	158717.10	0.0006	0.1436
K	39	3	He	3496.358	2.0744	156818.18	0.0006	0.1436
K	39	3	He	3576.403	2.1186	158434.94	0.0006	0.1436
Ca	44	3	He	34945.631	1.087	81204.79	0	0.001611
Ca	44	3	He	35063.017	1.0907	82451.91	0	0.001611
Ca	44	3	He	34380.309	1.0695	79978.19	0	0.001611
Ti	47	3	He	2061.547	0.5173	38642.02	0.0003	0.0002737
Ti	47	3	He	2020.761	0.507	38331.08	0.0003	0.0002737
Ti	47	3	He	2044.908	0.5131	38371.14	0.0003	0.0002737
V	51	3	He	113.383	1.3336	99629.26	0.0117	0.007326
V	51	3	He	111.341	1.3098	99015.88	0.0117	0.007326
V	51	3	He	112.498	1.3233	98961.11	0.0117	0.007326
Cr	52	3	He	51.612	0.8113	60606.66	0.0152	0.02538
Cr	52	3	He	50.022	0.7871	59502.35	0.0152	0.02538
Cr	52	3	He	52.507	0.8249	61691.24	0.0152	0.02538
Mn	55	3	He	511.605	3.0336	226619.90	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	492.703	2.922	220896.81	0.0059	0.01385
Mn	55	3	He	505.809	2.9994	224303.00	0.0059	0.01385
Fe	57	3	He	47825.379	13.8596	1035372.95	0.0003	0.003918
Fe	57	3	He	46710.9	13.5368	1023350.45	0.0003	0.003918
Fe	57	3	He	47462.611	13.7545	1028616.31	0.0003	0.003918
Co	59	3	He	13.176	0.4051	30262.15	0.0305	0.003084
Co	59	3	He	12.854	0.3953	29881.94	0.0305	0.003084
Co	59	3	He	13.131	0.4037	30192.15	0.0305	0.003084
Ni	60	3	He	31.639	0.2872	21456.32	0.0088	0.009003
Ni	60	3	He	32.669	0.2963	22397.75	0.0088	0.009003
Ni	60	3	He	33.097	0.3	22438.04	0.0088	0.009003
Cu	63	3	He	90.833	2.2701	169582.54	0.0249	0.004937
Cu	63	3	He	88.892	2.2216	167952.15	0.0249	0.004937
Cu	63	3	He	90.519	2.2622	169177.42	0.0249	0.004937
Zn	66	3	He	85.153	0.214	15989.48	0.0025	0.004836
Zn	66	3	He	83.475	0.2099	15869.12	0.0025	0.004836
Zn	66	3	He	79.665	0.2006	14998.19	0.0025	0.004836
As	75	3	He	6.6	0.0119	890.03	0.0017	0.0004347
As	75	3	He	6.261	0.0113	856.03	0.0017	0.0004347
As	75	3	He	6.978	0.0126	940.04	0.0017	0.0004347
Sr	88	3	He	33.38	0.2617	16570.07	0.0078	0.0007762
Sr	88	3	He	32.673	0.2562	16289.78	0.0078	0.0007762
Sr	88	3	He	33.402	0.2619	16940.56	0.0078	0.0007762
Mo	98	3	He	0.895	0.0202	1280.11	0.022	0.0005162
Mo	98	3	He	0.826	0.0187	1190.10	0.022	0.0005162
Mo	98	3	He	0.644	0.0147	950.07	0.022	0.0005162
Ag	107	3	He	0.153	0.0074	470.02	0.0455	0.0004641
Ag	107	3	He	0.118	0.0058	370.02	0.0455	0.0004641
Ag	107	3	He	0.119	0.0059	380.02	0.0455	0.0004641
Cd	111	3	He	0.233	0.0012	74.00	0.0048	5.152E-05
Cd	111	3	He	0.337	0.0017	106.00	0.0048	5.152E-05
Cd	111	3	He	0.26	0.0013	84.00	0.0048	5.152E-05
Sn	120	3	He	4.369	0.0779	4931.08	0.0143	0.01559
Sn	120	3	He	4.412	0.0785	4991.11	0.0143	0.01559
Sn	120	3	He	4.937	0.086	5561.29	0.0143	0.01559
Sb	121	3	He	0.718	0.0092	580.04	0.0124	0.000258
Sb	121	3	He	0.753	0.0096	610.03	0.0124	0.000258
Sb	121	3	He	0.777	0.0099	640.04	0.0124	0.000258
Ba	137	3	He	103.255	0.452	28620.42	0.0044	0.000309
Ba	137	3	He	99.861	0.4372	27798.73	0.0044	0.000309
Ba	137	3	He	103.791	0.4544	29391.88	0.0044	0.000309
Tl	205	3	He	0.154	0.0053	1180.10	0.0276	0.001005
Tl	205	3	He	0.129	0.0046	1020.07	0.0276	0.001005
Tl	205	3	He	0.159	0.0054	1210.10	0.0276	0.001005
Pb	208	3	He	42.168	1.537	183380.37	0.0364	0.002176
Pb	208	3	He	42.154	1.5365	184174.02	0.0364	0.002176
Pb	208	3	He	42.042	1.5324	183087.75	0.0364	0.002176
U	238	3	He	2.565	0.1081	24203.41	0.0421	0.00024
U	238	3	He	2.534	0.1068	23842.47	0.0421	0.00024
U	238	3	He	2.517	0.1061	23722.36	0.0421	0.00024
Sc	45	1	No Gas			3534724.63		
Sc	45	1	No Gas			3432510.57		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3367636.82		
Ge	72	1	No Gas			1515000.13		
Ge	72	1	No Gas			1491513.10		
Ge	72	1	No Gas			1443576.54		
Sc	45	2	H2			197316.95		
Sc	45	2	H2			210702.57		
Sc	45	2	H2			207499.65		
Ge	72	2	H2			158028.55		
Ge	72	2	H2			166402.19		
Ge	72	2	H2			164349.26		
In	115	2	H2			417616.67		
In	115	2	H2			450908.94		
In	115	2	H2			439648.08		
Sc	45	3	He			43785.98		
Sc	45	3	He			44177.60		
Sc	45	3	He			44658.34		
Ge	72	3	He			74704.22		
Ge	72	3	He			75597.94		
Ge	72	3	He			74783.81		
In	115	3	He			63353.70		
In	115	3	He			63625.56		
In	115	3	He			64730.22		
Tb	159	3	He			294469.21		
Tb	159	3	He			292553.80		
Tb	159	3	He			300034.04		
Bi	209	3	He			223805.54		
Bi	209	3	He			223189.90		
Bi	209	3	He			223547.59		

Quantitation Report

Data File Name	250SMPL.d
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Acq Time	2023-08-10 19:13:12
Sample Name	410-136577-H-18-A @10
Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

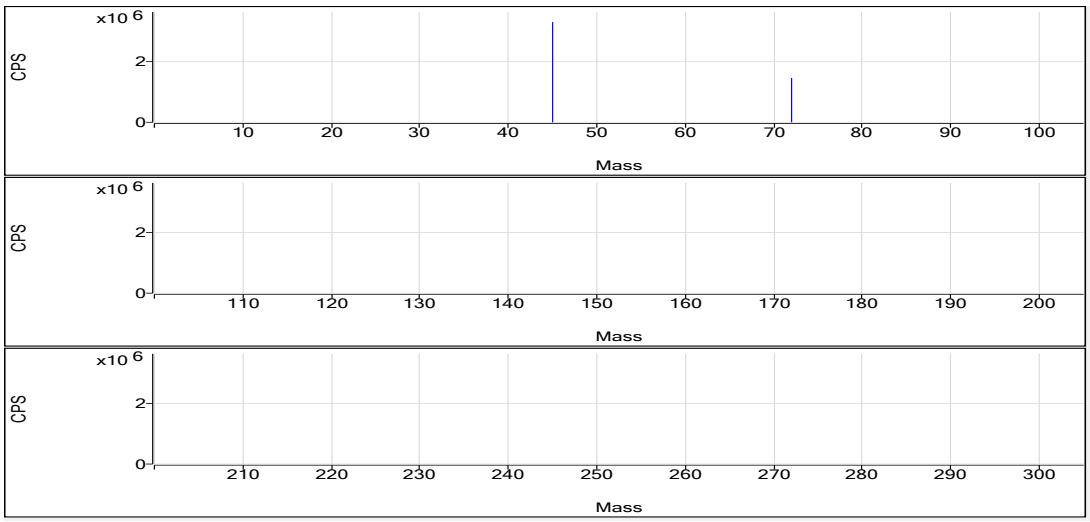
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.253	ppb	6.3	558.01	0.0004	Pulse	0.5000	3
Se	78	72	H2	0.028	ppb	87.9	3.56	0.0000	Pulse	1.5000	3
Na	23	72	He	175.480	ppb	3.8	30421.84	0.4079	Pulse	0.1000	3
Mg	24	72	He	5251.851	ppb	1.1	330645.72	4.4327	Pulse	0.1000	3
Al	27	72	He	4402.141	ppb	0.5	79348.91	1.0637	Pulse	0.1000	3
K	39	72	He	736.413	ppb	6.0	41041.30	0.5503	Pulse	0.1000	3
Ca	44	72	He	7095.460	ppb	2.9	16556.52	0.2220	Pulse	0.1000	3
Ti	47	72	He	430.507	ppb	6.0	8075.82	0.1082	Pulse	0.1000	3
V	51	72	He	22.971	ppb	1.1	20589.83	0.2760	Pulse	0.5000	3
Cr	52	72	He	10.518	ppb	3.4	13840.34	0.1855	Pulse	0.1000	3
Mn	55	72	He	103.978	ppb	2.8	46805.94	0.6276	Pulse	0.1000	3
Fe	57	72	He	9762.013	ppb	1.9	211240.86	2.8321	Pulse	0.1000	3
Co	59	72	He	2.748	ppb	0.3	6484.99	0.0869	Pulse	0.1000	3
Ni	60	72	He	7.768	ppb	2.6	5768.02	0.0773	Pulse	0.1000	3
Cu	63	72	He	18.799	ppb	0.8	35340.46	0.4737	Pulse	0.1000	3
Zn	66	72	He	19.660	ppb	1.7	3964.01	0.0531	Pulse	0.1000	3
As	75	72	He	1.280	ppb	16.3	198.67	0.0027	Pulse	0.5000	3
Sr	88	115	He	6.793	ppb	1.9	3470.53	0.0539	Pulse	0.1000	3
Mo	98	115	He	0.151	ppb	24.9	246.68	0.0038	Pulse	0.1000	3
Ag	107	115	He	0.038	ppb	17.2	140.01	0.0022	Pulse	0.1000	3
Cd	111	115	He	0.093	ppb	24.9	32.00	0.0005	Pulse	0.5000	3
Sn	120	115	He	0.972	ppb	4.0	1896.87	0.0294	Pulse	0.1000	3
Sb	121	115	He	0.184	ppb	37.7	163.34	0.0025	Pulse	0.1000	3
Ba	137	115	He	21.168	ppb	1.0	5984.86	0.0929	Pulse	0.1000	3
Tl	205	209	He	0.046	ppb	9.2	510.02	0.0023	Pulse	0.1000	3
Pb	208	209	He	9.379	ppb	0.9	77023.95	0.3435	Pulse	0.1000	3
U	238	209	He	0.510	ppb	0.9	4864.44	0.0217	Pulse	0.1000	3

ISTD Table:

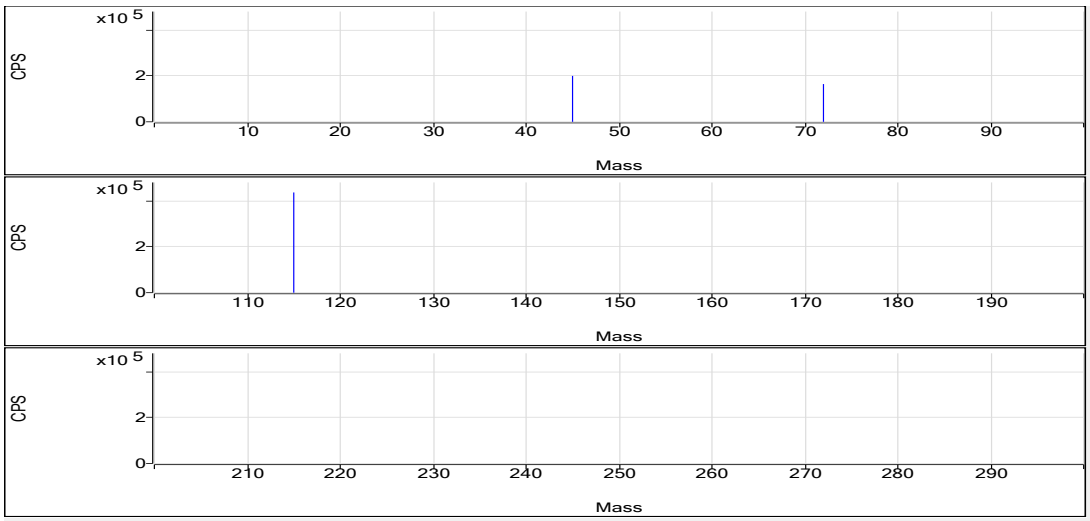
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3331770.68	1.1	102.8	Pulse	0.1000	3
No Gas	Ge	72	1472323.16	0.9	102.3	Pulse	0.1000	3
H2	Sc	45	199643.22	2.5	102.2	Pulse	0.1000	3
H2	Ge	72	164150.95	3.3	100.7	Pulse	0.1000	3
H2	In	115	435868.56	1.8	100.6	Pulse	0.1000	3
He	Sc	45	42355.15	0.8	105.9	Pulse	0.1000	3
He	Ge	72	74597.17	1.2	103.2	Pulse	0.1000	3
He	In	115	64410.38	0.8	99.7	Pulse	0.1000	3
He	Tb	159	288546.27	0.8	100.9	Pulse	0.1000	3
He	Bi	209	224200.35	0.1	100.9	Pulse	0.1000	3

No Gas

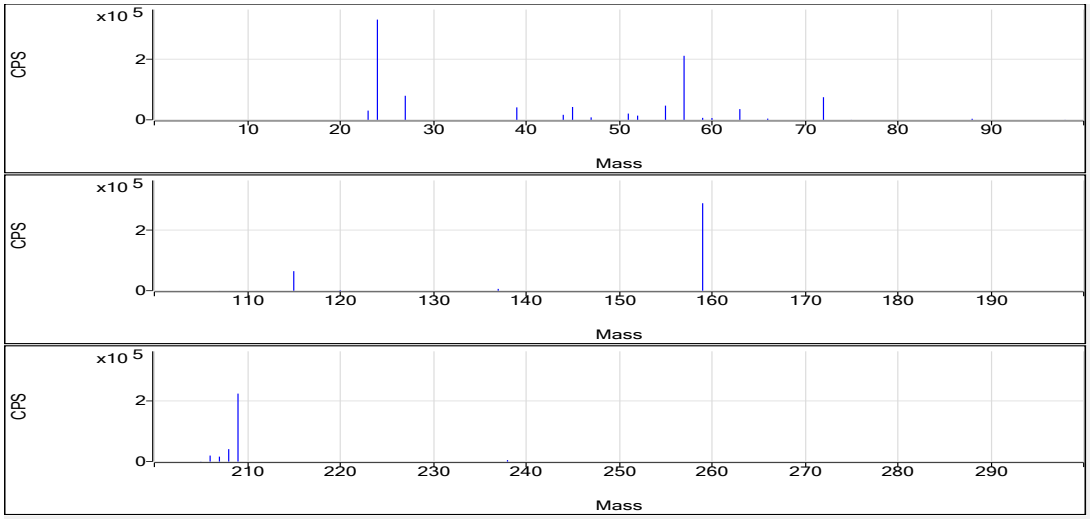


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.249	0.0004	554.01	0.0013	4.694E-05
Be	9	1	No Gas	0.239	0.0004	534.01	0.0013	4.694E-05
Be	9	1	No Gas	0.27	0.0004	586.02	0.0013	4.694E-05
Se	78	2	H2	0.015	0	2.67	0.0004	1.089E-05
Se	78	2	H2	0.012	0	2.67	0.0004	1.089E-05
Se	78	2	H2	0.056	0	5.33	0.0004	1.089E-05
Na	23	3	He	182.713	0.4203	30922.70	0.0017	0.1065
Na	23	3	He	169.766	0.3981	29890.94	0.0017	0.1065
Na	23	3	He	173.962	0.4053	30451.87	0.0017	0.1065
Mg	24	3	He	5300.054	4.4733	329096.36	0.0008	0.004846
Mg	24	3	He	5188.066	4.3789	328799.96	0.0008	0.004846
Mg	24	3	He	5267.432	4.4458	334040.85	0.0008	0.004846
Al	27	3	He	4410.666	1.0658	78407.29	0.0002	0.001063
Al	27	3	He	4416.745	1.0672	80135.95	0.0002	0.001063
Al	27	3	He	4379.01	1.0581	79503.50	0.0002	0.001063
K	39	3	He	768.049	0.5678	41769.75	0.0006	0.1436
K	39	3	He	755.005	0.5606	42091.12	0.0006	0.1436
K	39	3	He	686.185	0.5226	39263.02	0.0006	0.1436
Ca	44	3	He	7326.703	0.2292	16860.24	0	0.001611
Ca	44	3	He	6937.033	0.2171	16299.48	0	0.001611
Ca	44	3	He	7022.643	0.2197	16509.84	0	0.001611
Ti	47	3	He	416.388	0.1047	7702.27	0.0003	0.0002737
Ti	47	3	He	460.552	0.1158	8692.88	0.0003	0.0002737
Ti	47	3	He	414.58	0.1042	7832.30	0.0003	0.0002737
V	51	3	He	23.26	0.2794	20556.47	0.0117	0.007326
V	51	3	He	22.789	0.2739	20566.47	0.0117	0.007326
V	51	3	He	22.865	0.2748	20646.56	0.0117	0.007326
Cr	52	3	He	10.578	0.1865	13716.93	0.0152	0.02538
Cr	52	3	He	10.846	0.1905	14307.40	0.0152	0.02538
Cr	52	3	He	10.13	0.1796	13496.69	0.0152	0.02538
Mn	55	3	He	107.084	0.6459	47518.33	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	101.247	0.6115	45912.64	0.0059	0.01385
Mn	55	3	He	103.602	0.6254	46986.84	0.0059	0.01385
Fe	57	3	He	9939.464	2.8835	212136.81	0.0003	0.003918
Fe	57	3	He	9783.937	2.8385	213132.40	0.0003	0.003918
Fe	57	3	He	9562.637	2.7744	208453.38	0.0003	0.003918
Co	59	3	He	2.755	0.0872	6411.64	0.0305	0.003084
Co	59	3	He	2.75	0.087	6531.70	0.0305	0.003084
Co	59	3	He	2.739	0.0867	6511.62	0.0305	0.003084
Ni	60	3	He	7.557	0.0755	5551.29	0.0088	0.009003
Ni	60	3	He	7.96	0.079	5931.39	0.0088	0.009003
Ni	60	3	He	7.787	0.0775	5821.37	0.0088	0.009003
Cu	63	3	He	18.625	0.4694	34531.89	0.0249	0.004937
Cu	63	3	He	18.892	0.476	35744.80	0.0249	0.004937
Cu	63	3	He	18.879	0.4757	35744.68	0.0249	0.004937
Zn	66	3	He	19.502	0.0527	3880.66	0.0025	0.004836
Zn	66	3	He	20.044	0.0541	4060.71	0.0025	0.004836
Zn	66	3	He	19.434	0.0526	3950.65	0.0025	0.004836
As	75	3	He	1.047	0.0023	166.00	0.0017	0.0004347
As	75	3	He	1.45	0.003	222.00	0.0017	0.0004347
As	75	3	He	1.342	0.0028	208.00	0.0017	0.0004347
Sr	88	3	He	6.727	0.0534	3440.51	0.0078	0.0007762
Sr	88	3	He	6.939	0.055	3570.55	0.0078	0.0007762
Sr	88	3	He	6.713	0.0532	3400.52	0.0078	0.0007762
Mo	98	3	He	0.16	0.004	260.01	0.022	0.0005162
Mo	98	3	He	0.11	0.0029	190.01	0.022	0.0005162
Mo	98	3	He	0.183	0.0045	290.01	0.022	0.0005162
Ag	107	3	He	0.038	0.0022	140.01	0.0455	0.0004641
Ag	107	3	He	0.044	0.0025	160.01	0.0455	0.0004641
Ag	107	3	He	0.031	0.0019	120.00	0.0455	0.0004641
Cd	111	3	He	0.119	0.0006	40.00	0.0048	5.152E-05
Cd	111	3	He	0.086	0.0005	30.00	0.0048	5.152E-05
Cd	111	3	He	0.074	0.0004	26.00	0.0048	5.152E-05
Sn	120	3	He	0.963	0.0293	1890.21	0.0143	0.01559
Sn	120	3	He	1.014	0.0301	1950.19	0.0143	0.01559
Sn	120	3	He	0.939	0.029	1850.21	0.0143	0.01559
Sb	121	3	He	0.104	0.0016	100.00	0.0124	0.000258
Sb	121	3	He	0.215	0.0029	190.01	0.0124	0.000258
Sb	121	3	He	0.232	0.0031	200.01	0.0124	0.000258
Ba	137	3	He	21.207	0.0931	6001.49	0.0044	0.000309
Ba	137	3	He	21.351	0.0937	6081.60	0.0044	0.000309
Ba	137	3	He	20.945	0.0919	5871.48	0.0044	0.000309
Tl	205	3	He	0.049	0.0024	530.03	0.0276	0.001005
Tl	205	3	He	0.041	0.0021	480.02	0.0276	0.001005
Tl	205	3	He	0.048	0.0023	520.02	0.0276	0.001005
Pb	208	3	He	9.449	0.3461	41817.11	0.0364	0.002176
Pb	208	3	He	9.406	0.3445	40653.58	0.0364	0.002176
Pb	208	3	He	9.281	0.34	40443.08	0.0364	0.002176
U	238	3	He	0.512	0.0218	4891.09	0.0421	0.00024
U	238	3	He	0.505	0.0215	4811.12	0.0421	0.00024
U	238	3	He	0.513	0.0218	4891.11	0.0421	0.00024
Sc	45	1	No Gas			3352247.76		
Sc	45	1	No Gas			3353625.89		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3289438.39		
Ge	72	1	No Gas			1482261.23		
Ge	72	1	No Gas			1478021.54		
Ge	72	1	No Gas			1456686.70		
Sc	45	2	H2			193840.17		
Sc	45	2	H2			202323.43		
Sc	45	2	H2			202766.05		
Ge	72	2	H2			159375.80		
Ge	72	2	H2			169983.55		
Ge	72	2	H2			163093.50		
In	115	2	H2			426850.11		
In	115	2	H2			439163.39		
In	115	2	H2			441592.18		
Sc	45	3	He			41991.04		
Sc	45	3	He			42612.62		
Sc	45	3	He			42461.79		
Ge	72	3	He			73568.54		
Ge	72	3	He			75087.13		
Ge	72	3	He			75135.83		
In	115	3	He			64488.84		
In	115	3	He			64910.85		
In	115	3	He			63875.82		
Tb	159	3	He			291015.41		
Tb	159	3	He			286687.93		
Tb	159	3	He			287935.46		
Bi	209	3	He			224446.50		
Bi	209	3	He			224066.38		
Bi	209	3	He			224088.16		

Quantitation Report

Data File Name	251SMPL.d
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Sample Name	410-136577-H-13-A @2
Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

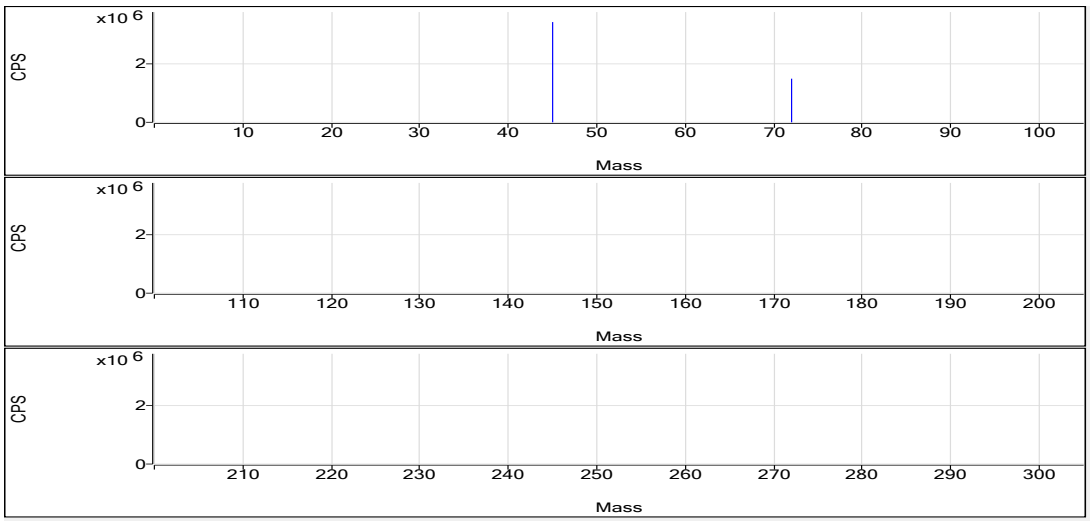
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	1.036	ppb	3.1	2090.82	0.0014	Pulse	0.5000	3
Se	78	72	H2	0.075	ppb	31.8	6.44	0.0000	Pulse	1.5000	3
Na	23	72	He	928.879	ppb	1.0	129374.65	1.7021	Pulse	0.1000	3
Mg	24	72	He	6476.501	ppb	0.0	415413.61	5.4652	Pulse	0.1000	3
Al	27	72	He	16468.071	ppb	1.0	302226.28	3.9764	Pulse	0.1000	3
K	39	72	He	2868.270	ppb	1.7	131308.20	1.7275	Pulse	0.1000	3
Ca	44	72	He	7128.069	ppb	2.1	16950.26	0.2230	Pulse	0.1000	3
Ti	47	72	He	1309.462	ppb	1.7	24982.10	0.3287	Pulse	0.1000	3
V	51	72	He	68.769	ppb	0.5	61702.39	0.8118	Pulse	0.5000	3
Cr	52	72	He	36.185	ppb	1.6	43813.06	0.5764	Pulse	0.1000	3
Mn	55	72	He	398.577	ppb	1.1	179883.81	2.3664	Pulse	0.1000	3
Fe	57	72	He	30454.431	ppb	0.7	670917.02	8.8270	Pulse	0.1000	3
Co	59	72	He	10.072	ppb	3.6	23586.46	0.3104	Pulse	0.1000	3
Ni	60	72	He	23.065	ppb	3.4	16099.38	0.2118	Pulse	0.1000	3
Cu	63	72	He	38.710	ppb	0.9	73744.35	0.9702	Pulse	0.1000	3
Zn	66	72	He	38.603	ppb	2.8	7575.59	0.0997	Pulse	0.1000	3
As	75	72	He	5.651	ppb	4.4	780.03	0.0103	Pulse	0.5000	3
Sr	88	115	He	28.721	ppb	3.4	14361.03	0.2253	Pulse	0.1000	3
Mo	98	115	He	1.868	ppb	10.6	2650.35	0.0417	Pulse	0.1000	3
Ag	107	115	He	0.050	ppb	30.6	173.34	0.0027	Pulse	0.1000	3
Cd	111	115	He	0.096	ppb	1.1	32.67	0.0005	Pulse	0.5000	3
Sn	120	115	He	2.906	ppb	10.1	3630.61	0.0570	Pulse	0.1000	3
Sb	121	115	He	0.540	ppb	19.0	443.36	0.0070	Pulse	0.1000	3
Ba	137	115	He	67.457	ppb	3.4	18823.42	0.2954	Pulse	0.1000	3
Tl	205	209	He	0.126	ppb	9.4	1003.41	0.0045	Pulse	0.1000	3
Pb	208	209	He	10.045	ppb	1.3	82444.66	0.3678	Pulse	0.1000	3
U	238	209	He	2.431	ppb	0.3	22977.70	0.1025	Pulse	0.1000	3

ISTD Table:

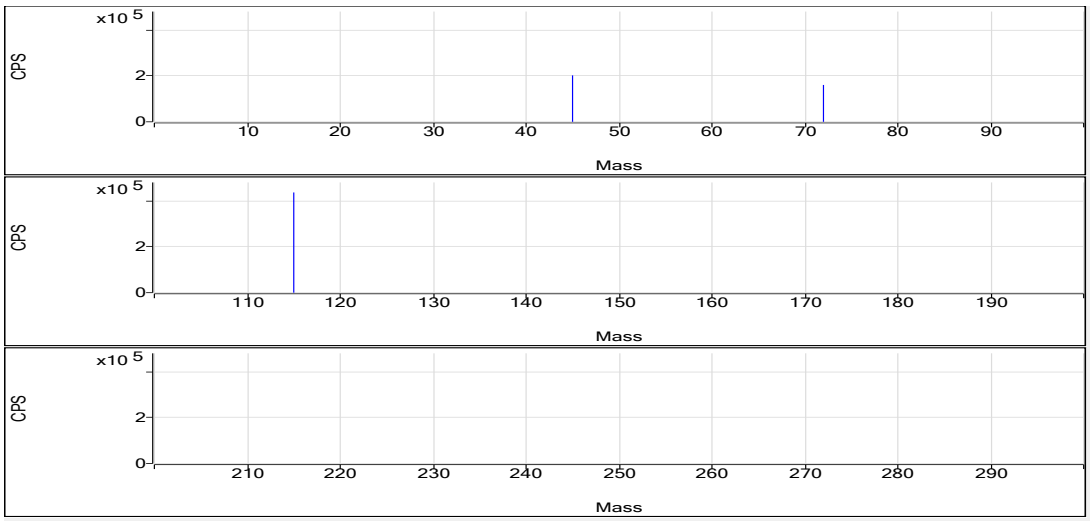
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3411629.63	0.6	105.3	Pulse	0.1000	3
No Gas	Ge	72	1484197.95	0.0	103.1	Pulse	0.1000	3
H2	Sc	45	201874.16	1.9	103.3	Pulse	0.1000	3
H2	Ge	72	160259.71	0.9	98.3	Pulse	0.1000	3
H2	In	115	435751.21	1.2	100.6	Pulse	0.1000	3
He	Sc	45	42850.03	2.1	107.2	Pulse	0.1000	3
He	Ge	72	76010.83	1.1	105.1	Pulse	0.1000	3
He	In	115	63761.07	3.2	98.7	Pulse	0.1000	3
He	Tb	159	296903.45	0.8	103.8	Pulse	0.1000	3
He	Bi	209	224173.74	0.6	100.9	Pulse	0.1000	3

No Gas

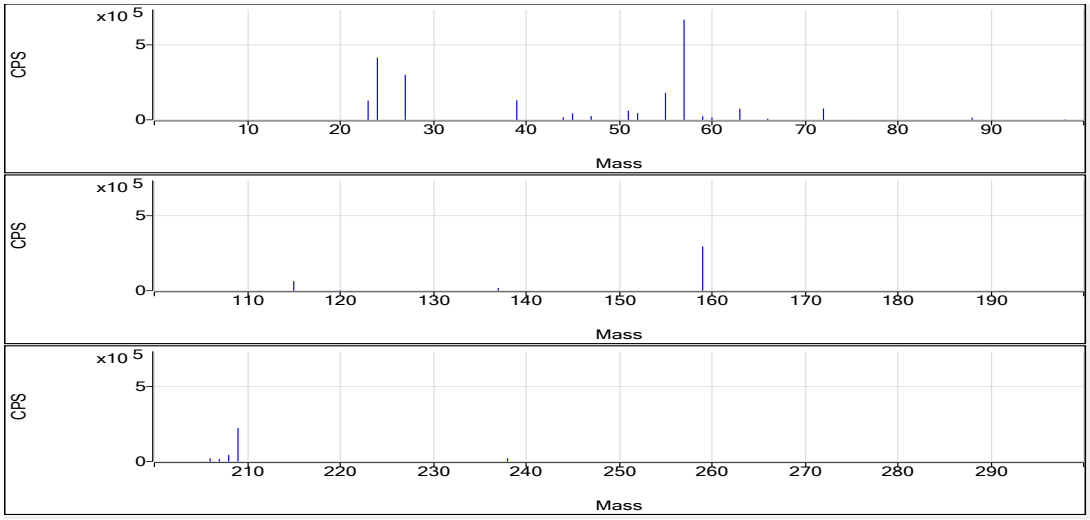


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	1.073	0.0015	2162.17	0.0013	4.694E-05
Be	9	1	No Gas	1.025	0.0014	2068.15	0.0013	4.694E-05
Be	9	1	No Gas	1.011	0.0014	2042.15	0.0013	4.694E-05
Se	78	2	H2	0.048	0	4.67	0.0004	1.089E-05
Se	78	2	H2	0.09	0	7.33	0.0004	1.089E-05
Se	78	2	H2	0.088	0	7.33	0.0004	1.089E-05
Na	23	3	He	935.143	1.7129	131022.97	0.0017	0.1065
Na	23	3	He	933.122	1.7094	128247.89	0.0017	0.1065
Na	23	3	He	918.372	1.6841	128853.09	0.0017	0.1065
Mg	24	3	He	6474.295	5.4633	417909.49	0.0008	0.004846
Mg	24	3	He	6477.39	5.4659	410084.64	0.0008	0.004846
Mg	24	3	He	6477.818	5.4663	418246.71	0.0008	0.004846
Al	27	3	He	16460.939	3.9746	304033.88	0.0002	0.001063
Al	27	3	He	16636.055	4.0169	301370.27	0.0002	0.001063
Al	27	3	He	16307.219	3.9375	301274.70	0.0002	0.001063
K	39	3	He	2814.85	1.698	129888.56	0.0006	0.1436
K	39	3	He	2880.133	1.7341	130100.36	0.0006	0.1436
K	39	3	He	2909.828	1.7505	133935.69	0.0006	0.1436
Ca	44	3	He	7250.95	0.2268	17350.59	0	0.001611
Ca	44	3	He	7174.811	0.2245	16840.17	0	0.001611
Ca	44	3	He	6958.446	0.2177	16660.02	0	0.001611
Ti	47	3	He	1288.689	0.3235	24741.84	0.0003	0.0002737
Ti	47	3	He	1306.46	0.3279	24601.34	0.0003	0.0002737
Ti	47	3	He	1333.236	0.3346	25603.12	0.0003	0.0002737
V	51	3	He	68.34	0.8068	61711.13	0.0117	0.007326
V	51	3	He	68.918	0.8135	61034.25	0.0117	0.007326
V	51	3	He	69.049	0.815	62361.79	0.0117	0.007326
Cr	52	3	He	36.837	0.5863	44849.53	0.0152	0.02538
Cr	52	3	He	35.905	0.5721	42923.82	0.0152	0.02538
Cr	52	3	He	35.811	0.5707	43665.82	0.0152	0.02538
Mn	55	3	He	397.25	2.3586	180416.76	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	395.195	2.3465	176044.33	0.0059	0.01385
Mn	55	3	He	403.286	2.3942	183190.35	0.0059	0.01385
Fe	57	3	He	30411.889	8.8147	674266.16	0.0003	0.003918
Fe	57	3	He	30674.59	8.8908	667035.54	0.0003	0.003918
Fe	57	3	He	30276.814	8.7756	671449.36	0.0003	0.003918
Co	59	3	He	9.951	0.3067	23459.52	0.0305	0.003084
Co	59	3	He	10.48	0.3228	24220.96	0.0305	0.003084
Co	59	3	He	9.785	0.3016	23078.91	0.0305	0.003084
Ni	60	3	He	23.715	0.2175	16640.01	0.0088	0.009003
Ni	60	3	He	23.273	0.2137	16029.28	0.0088	0.009003
Ni	60	3	He	22.205	0.2043	15628.85	0.0088	0.009003
Cu	63	3	He	38.658	0.969	74119.41	0.0249	0.004937
Cu	63	3	He	39.096	0.9799	73516.20	0.0249	0.004937
Cu	63	3	He	38.375	0.9619	73597.45	0.0249	0.004937
Zn	66	3	He	37.367	0.0966	7392.13	0.0025	0.004836
Zn	66	3	He	39.277	0.1013	7602.29	0.0025	0.004836
Zn	66	3	He	39.166	0.1011	7732.36	0.0025	0.004836
As	75	3	He	5.854	0.0106	812.03	0.0017	0.0004347
As	75	3	He	5.728	0.0104	780.03	0.0017	0.0004347
As	75	3	He	5.371	0.0098	748.03	0.0017	0.0004347
Sr	88	3	He	29.744	0.2333	14477.81	0.0078	0.0007762
Sr	88	3	He	27.819	0.2182	13787.11	0.0078	0.0007762
Sr	88	3	He	28.6	0.2243	14818.16	0.0078	0.0007762
Mo	98	3	He	2.004	0.0446	2770.35	0.022	0.0005162
Mo	98	3	He	1.961	0.0437	2760.37	0.022	0.0005162
Mo	98	3	He	1.641	0.0366	2420.32	0.022	0.0005162
Ag	107	3	He	0.054	0.0029	180.01	0.0455	0.0004641
Ag	107	3	He	0.063	0.0033	210.01	0.0455	0.0004641
Ag	107	3	He	0.033	0.002	130.00	0.0455	0.0004641
Cd	111	3	He	0.097	0.0005	32.00	0.0048	5.152E-05
Cd	111	3	He	0.095	0.0005	32.00	0.0048	5.152E-05
Cd	111	3	He	0.097	0.0005	34.00	0.0048	5.152E-05
Sn	120	3	He	3.032	0.0588	3650.61	0.0143	0.01559
Sn	120	3	He	3.115	0.06	3790.66	0.0143	0.01559
Sn	120	3	He	2.571	0.0522	3450.57	0.0143	0.01559
Sb	121	3	He	0.46	0.006	370.02	0.0124	0.000258
Sb	121	3	He	0.656	0.0084	530.03	0.0124	0.000258
Sb	121	3	He	0.504	0.0065	430.02	0.0124	0.000258
Ba	137	3	He	69.815	0.3057	18973.68	0.0044	0.000309
Ba	137	3	He	67.277	0.2946	18613.14	0.0044	0.000309
Ba	137	3	He	65.28	0.2859	18883.45	0.0044	0.000309
Tl	205	3	He	0.112	0.0041	920.07	0.0276	0.001005
Tl	205	3	He	0.134	0.0047	1060.08	0.0276	0.001005
Tl	205	3	He	0.131	0.0046	1030.08	0.0276	0.001005
Pb	208	3	He	10.007	0.3664	43723.56	0.0364	0.002176
Pb	208	3	He	9.936	0.3638	43873.54	0.0364	0.002176
Pb	208	3	He	10.192	0.3731	45298.59	0.0364	0.002176
U	238	3	He	2.425	0.1023	22931.01	0.0421	0.00024
U	238	3	He	2.428	0.1024	23091.06	0.0421	0.00024
U	238	3	He	2.439	0.1028	22911.03	0.0421	0.00024
Sc	45	1	No Gas			3429676.82		
Sc	45	1	No Gas			3413782.76		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3391429.32		
Ge	72	1	No Gas			1484719.51		
Ge	72	1	No Gas			1483492.63		
Ge	72	1	No Gas			1484381.70		
Sc	45	2	H2			197655.70		
Sc	45	2	H2			202848.22		
Sc	45	2	H2			205118.57		
Ge	72	2	H2			158766.74		
Ge	72	2	H2			160242.47		
Ge	72	2	H2			161769.92		
In	115	2	H2			430357.65		
In	115	2	H2			435806.52		
In	115	2	H2			441089.45		
Sc	45	3	He			41920.67		
Sc	45	3	He			42903.61		
Sc	45	3	He			43725.80		
Ge	72	3	He			76493.48		
Ge	72	3	He			75025.40		
Ge	72	3	He			76513.61		
In	115	3	He			62087.90		
In	115	3	He			63203.44		
In	115	3	He			66076.82		
Tb	159	3	He			299448.32		
Tb	159	3	He			294625.89		
Tb	159	3	He			296636.13		
Bi	209	3	He			224240.00		
Bi	209	3	He			225506.89		
Bi	209	3	He			222774.33		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 19:17:12
Sample Name	410-136577-H-13-A @10
Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

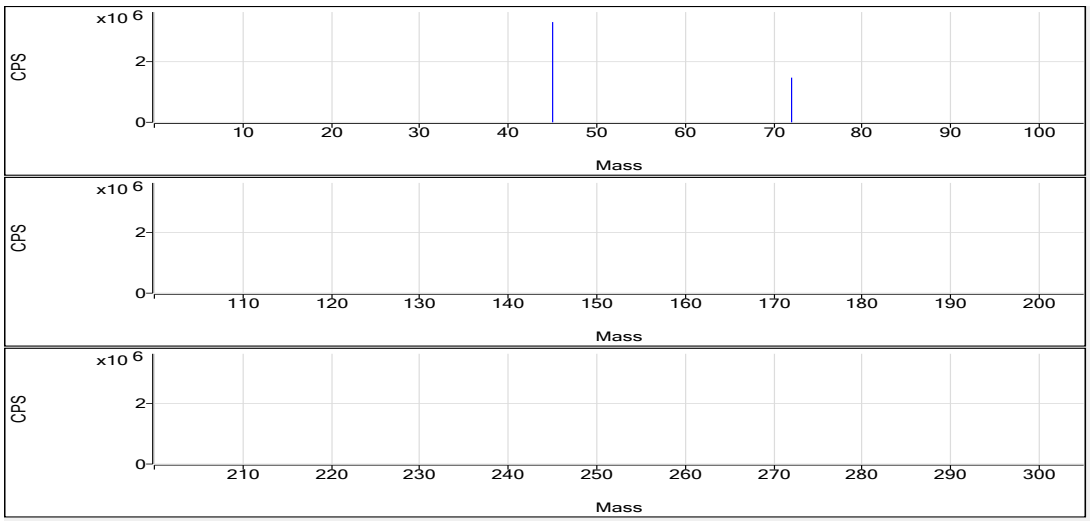
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.185	ppb	2.5	429.34	0.0003	Pulse	0.5000	3
Se	78	72	H2	0.028	ppb	121.8	3.56	0.0000	Pulse	1.5000	3
Na	23	72	He	173.127	ppb	3.5	29927.51	0.4039	Pulse	0.1000	3
Mg	24	72	He	1284.470	ppb	0.7	80611.90	1.0878	Pulse	0.1000	3
Al	27	72	He	3290.891	ppb	1.7	58948.23	0.7955	Pulse	0.1000	3
K	39	72	He	566.978	ppb	2.3	33846.35	0.4567	Pulse	0.1000	3
Ca	44	72	He	1448.625	ppb	3.5	3453.86	0.0466	Pulse	0.1000	3
Ti	47	72	He	267.431	ppb	7.8	4991.02	0.0673	Pulse	0.1000	3
V	51	72	He	13.677	ppb	1.2	12399.29	0.1673	Pulse	0.5000	3
Cr	52	72	He	7.148	ppb	1.6	9947.07	0.1342	Pulse	0.1000	3
Mn	55	72	He	77.709	ppb	2.5	35016.03	0.4725	Pulse	0.1000	3
Fe	57	72	He	5980.096	ppb	1.7	128679.09	1.7364	Pulse	0.1000	3
Co	59	72	He	1.959	ppb	8.2	4657.61	0.0629	Pulse	0.1000	3
Ni	60	72	He	5.100	ppb	6.0	3990.67	0.0539	Pulse	0.1000	3
Cu	63	72	He	7.934	ppb	2.2	15028.31	0.2028	Pulse	0.1000	3
Zn	66	72	He	10.172	ppb	7.3	2210.24	0.0298	Pulse	0.1000	3
As	75	72	He	1.245	ppb	13.4	192.67	0.0026	Pulse	0.5000	3
Sr	88	115	He	5.806	ppb	4.0	2973.75	0.0462	Pulse	0.1000	3
Mo	98	115	He	0.409	ppb	6.1	613.37	0.0095	Pulse	0.1000	3
Ag	107	115	He	0.018	ppb	16.5	83.33	0.0013	Pulse	0.1000	3
Cd	111	115	He	0.015	ppb	186.9	8.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.577	ppb	39.6	1530.13	0.0238	Pulse	0.1000	3
Sb	121	115	He	0.154	ppb	29.1	140.01	0.0022	Pulse	0.1000	3
Ba	137	115	He	13.153	ppb	6.3	3723.97	0.0578	Pulse	0.1000	3
Tl	205	209	He	0.026	ppb	37.4	386.69	0.0017	Pulse	0.1000	3
Pb	208	209	He	2.577	ppb	3.1	21577.85	0.0960	Pulse	0.1000	3
U	238	209	He	0.474	ppb	4.8	4534.29	0.0202	Pulse	0.1000	3

ISTD Table:

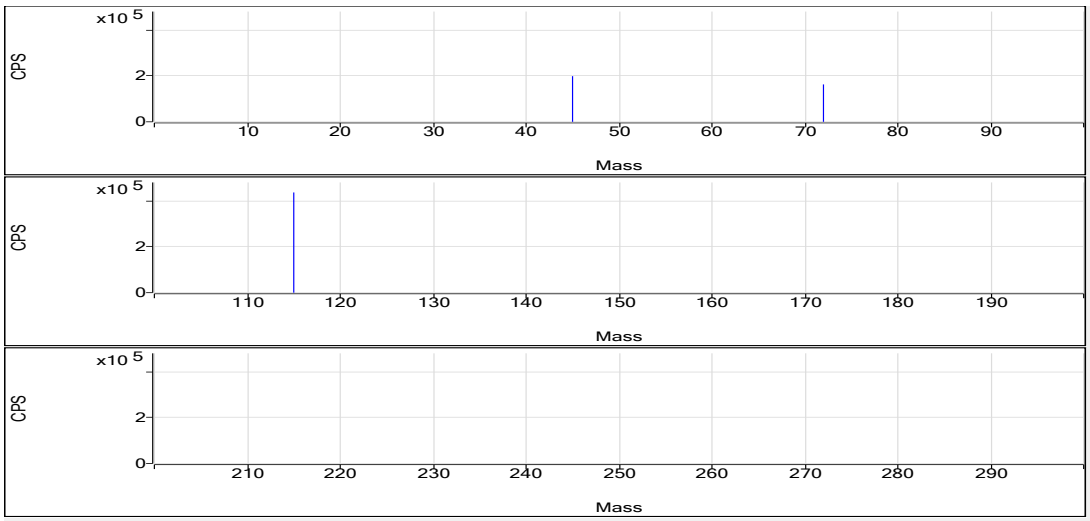
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3325795.16	0.9	102.6	Pulse	0.1000	3
No Gas	Ge	72	1481624.14	0.9	102.9	Pulse	0.1000	3
H2	Sc	45	198913.21	2.8	101.8	Pulse	0.1000	3
H2	Ge	72	162966.81	1.7	100.0	Pulse	0.1000	3
H2	In	115	436718.59	1.1	100.8	Pulse	0.1000	3
He	Sc	45	41720.32	0.5	104.3	Pulse	0.1000	3
He	Ge	72	74107.46	0.3	102.5	Pulse	0.1000	3
He	In	115	64463.89	3.6	99.8	Pulse	0.1000	3
He	Tb	159	287104.53	0.4	100.4	Pulse	0.1000	3
He	Bi	209	224872.01	0.7	101.2	Pulse	0.1000	3

No Gas

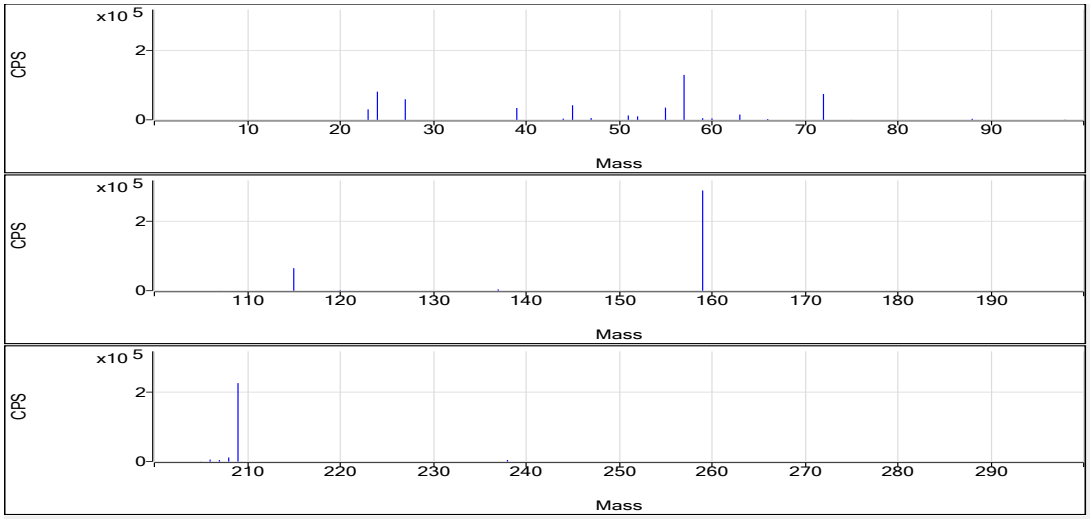


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.189	0.0003	436.01	0.0013	4.694E-05
Be	9	1	No Gas	0.185	0.0003	434.01	0.0013	4.694E-05
Be	9	1	No Gas	0.18	0.0003	418.01	0.0013	4.694E-05
Se	78	2	H2	0.068	0	6.00	0.0004	1.089E-05
Se	78	2	H2	0.004	0	2.00	0.0004	1.089E-05
Se	78	2	H2	0.013	0	2.67	0.0004	1.089E-05
Na	23	3	He	180.104	0.4158	30722.48	0.0017	0.1065
Na	23	3	He	170.438	0.3992	29660.10	0.0017	0.1065
Na	23	3	He	168.838	0.3965	29399.96	0.0017	0.1065
Mg	24	3	He	1294.667	1.0964	81000.64	0.0008	0.004846
Mg	24	3	He	1277.986	1.0823	80407.31	0.0008	0.004846
Mg	24	3	He	1280.755	1.0847	80427.76	0.0008	0.004846
Al	27	3	He	3353.886	0.8107	59892.35	0.0002	0.001063
Al	27	3	He	3266.954	0.7897	58667.18	0.0002	0.001063
Al	27	3	He	3251.834	0.786	58285.17	0.0002	0.001063
K	39	3	He	578.672	0.4632	34220.47	0.0006	0.1436
K	39	3	He	553.01	0.449	33358.45	0.0006	0.1436
K	39	3	He	569.251	0.458	33960.14	0.0006	0.1436
Ca	44	3	He	1447.463	0.0466	3440.51	0	0.001611
Ca	44	3	He	1499.842	0.0482	3580.55	0	0.001611
Ca	44	3	He	1398.569	0.0451	3340.51	0	0.001611
Ti	47	3	He	251.554	0.0634	4680.90	0.0003	0.0002737
Ti	47	3	He	290.963	0.0732	5441.22	0.0003	0.0002737
Ti	47	3	He	259.775	0.0654	4850.94	0.0003	0.0002737
V	51	3	He	13.776	0.1685	12447.32	0.0117	0.007326
V	51	3	He	13.489	0.1651	12267.17	0.0117	0.007326
V	51	3	He	13.765	0.1684	12483.38	0.0117	0.007326
Cr	52	3	He	7.021	0.1323	9773.64	0.0152	0.02538
Cr	52	3	He	7.194	0.1349	10023.79	0.0152	0.02538
Cr	52	3	He	7.228	0.1355	10043.77	0.0152	0.02538
Mn	55	3	He	79.921	0.4856	35874.65	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	76.448	0.4651	34551.54	0.0059	0.01385
Mn	55	3	He	76.758	0.4669	34621.90	0.0059	0.01385
Fe	57	3	He	6083.988	1.7665	130511.74	0.0003	0.003918
Fe	57	3	He	5886.156	1.7092	126981.16	0.0003	0.003918
Fe	57	3	He	5970.143	1.7336	128544.37	0.0003	0.003918
Co	59	3	He	2.14	0.0684	5051.11	0.0305	0.003084
Co	59	3	He	1.902	0.0611	4540.88	0.0305	0.003084
Co	59	3	He	1.835	0.0591	4380.84	0.0305	0.003084
Ni	60	3	He	5.134	0.0542	4000.68	0.0088	0.009003
Ni	60	3	He	4.779	0.051	3790.61	0.0088	0.009003
Ni	60	3	He	5.388	0.0564	4180.71	0.0088	0.009003
Cu	63	3	He	8.106	0.2071	15298.63	0.0249	0.004937
Cu	63	3	He	7.757	0.1984	14737.96	0.0249	0.004937
Cu	63	3	He	7.94	0.2029	15048.34	0.0249	0.004937
Zn	66	3	He	10.484	0.0306	2260.24	0.0025	0.004836
Zn	66	3	He	9.319	0.0277	2060.20	0.0025	0.004836
Zn	66	3	He	10.713	0.0312	2310.28	0.0025	0.004836
As	75	3	He	1.058	0.0023	168.00	0.0017	0.0004347
As	75	3	He	1.375	0.0028	210.00	0.0017	0.0004347
As	75	3	He	1.301	0.0027	200.00	0.0017	0.0004347
Sr	88	3	He	5.596	0.0445	2900.41	0.0078	0.0007762
Sr	88	3	He	6.06	0.0481	2980.40	0.0078	0.0007762
Sr	88	3	He	5.764	0.0458	3040.43	0.0078	0.0007762
Mo	98	3	He	0.381	0.0089	580.03	0.022	0.0005162
Mo	98	3	He	0.417	0.0097	600.03	0.022	0.0005162
Mo	98	3	He	0.428	0.0099	660.04	0.022	0.0005162
Ag	107	3	He	0.017	0.0012	80.00	0.0455	0.0004641
Ag	107	3	He	0.022	0.0015	90.00	0.0455	0.0004641
Ag	107	3	He	0.016	0.0012	80.00	0.0455	0.0004641
Cd	111	3	He	0.047	0.0003	18.00	0.0048	5.152E-05
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Sn	120	3	He	0.608	0.0243	1580.14	0.0143	0.01559
Sn	120	3	He	0.788	0.0268	1660.15	0.0143	0.01559
Sn	120	3	He	0.334	0.0204	1350.10	0.0143	0.01559
Sb	121	3	He	0.103	0.0015	100.00	0.0124	0.000258
Sb	121	3	He	0.175	0.0024	150.01	0.0124	0.000258
Sb	121	3	He	0.186	0.0026	170.01	0.0124	0.000258
Ba	137	3	He	13.264	0.0583	3800.65	0.0044	0.000309
Ba	137	3	He	13.926	0.0612	3790.65	0.0044	0.000309
Ba	137	3	He	12.267	0.054	3580.60	0.0044	0.000309
Tl	205	3	He	0.015	0.0014	320.02	0.0276	0.001005
Tl	205	3	He	0.028	0.0018	400.02	0.0276	0.001005
Tl	205	3	He	0.034	0.0019	440.03	0.0276	0.001005
Pb	208	3	He	2.631	0.0979	11965.89	0.0364	0.002176
Pb	208	3	He	2.614	0.0973	11925.72	0.0364	0.002176
Pb	208	3	He	2.486	0.0926	11275.20	0.0364	0.002176
U	238	3	He	0.488	0.0208	4671.04	0.0421	0.00024
U	238	3	He	0.448	0.0191	4260.84	0.0421	0.00024
U	238	3	He	0.485	0.0206	4671.00	0.0421	0.00024
Sc	45	1	No Gas			3312822.76		
Sc	45	1	No Gas			3361570.89		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3302991.83		
Ge	72	1	No Gas			1474085.76		
Ge	72	1	No Gas			1496487.63		
Ge	72	1	No Gas			1474299.04		
Sc	45	2	H2			193663.53		
Sc	45	2	H2			198406.05		
Sc	45	2	H2			204670.06		
Ge	72	2	H2			161315.40		
Ge	72	2	H2			161476.24		
Ge	72	2	H2			166108.79		
In	115	2	H2			431796.63		
In	115	2	H2			437361.48		
In	115	2	H2			440997.65		
Sc	45	3	He			41699.90		
Sc	45	3	He			41539.90		
Sc	45	3	He			41921.17		
Ge	72	3	He			73879.94		
Ge	72	3	He			74291.73		
Ge	72	3	He			74150.70		
In	115	3	He			65162.12		
In	115	3	He			61917.42		
In	115	3	He			66347.93		
Tb	159	3	He			288086.87		
Tb	159	3	He			287341.58		
Tb	159	3	He			285885.15		
Bi	209	3	He			224735.35		
Bi	209	3	He			223455.58		
Bi	209	3	He			226425.09		

Quantitation Report

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Sample Type	Sample
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

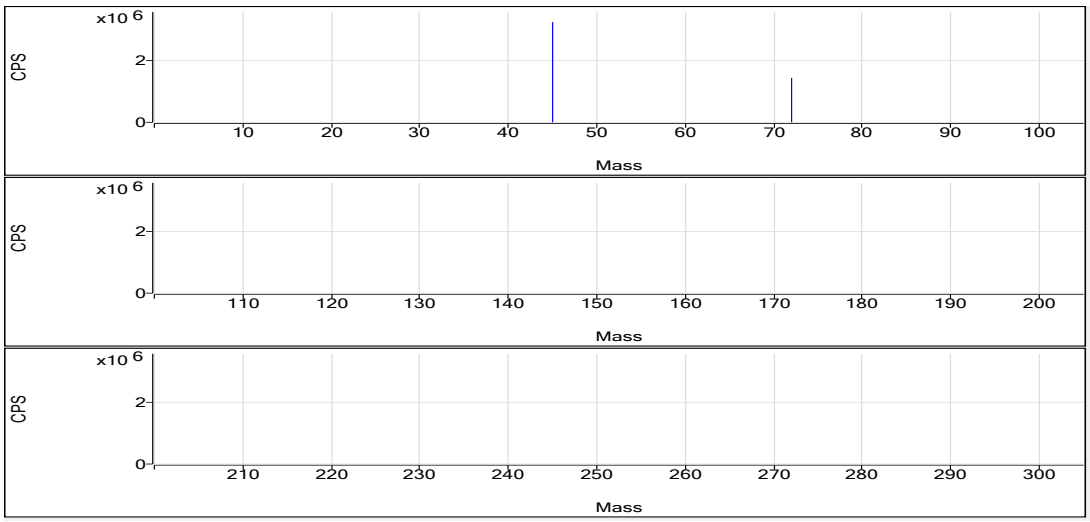
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.002	ppb	N/A	64.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.012	ppb	141.4	2.44	0.0000	Pulse	1.5000	3
Na	23	72	He	3.791	ppb	81.3	8179.17	0.1130	Pulse	0.1000	3
Mg	24	72	He	14.403	ppb	14.0	1230.09	0.0170	Pulse	0.1000	3
Al	27	72	He	20.186	ppb	22.6	430.02	0.0059	Pulse	0.1000	3
K	39	72	He	0.887	ppb	2584.7	10430.68	0.1441	Pulse	0.1000	3
Ca	44	72	He	29.795	ppb	93.3	183.34	0.0025	Pulse	0.1000	3
Ti	47	72	He	0.926	ppb	123.3	36.67	0.0005	Pulse	0.1000	3
V	51	72	He	0.120	ppb	29.4	632.02	0.0087	Pulse	0.5000	3
Cr	52	72	He	0.141	ppb	113.1	1993.55	0.0275	Pulse	0.1000	3
Mn	55	72	He	0.352	ppb	40.8	1153.43	0.0159	Pulse	0.1000	3
Fe	57	72	He	40.506	ppb	9.9	1133.42	0.0157	Pulse	0.1000	3
Co	59	72	He	0.086	ppb	37.4	413.36	0.0057	Pulse	0.1000	3
Ni	60	72	He	0.840	ppb	17.0	1186.76	0.0164	Pulse	0.1000	3
Cu	63	72	He	0.077	ppb	87.9	496.69	0.0069	Pulse	0.1000	3
Zn	66	72	He	0.806	ppb	42.8	493.36	0.0068	Pulse	0.1000	3
As	75	72	He	0.110	ppb	75.2	45.33	0.0006	Pulse	0.5000	3
Sr	88	115	He	0.088	ppb	105.7	93.34	0.0015	Pulse	0.1000	3
Mo	98	115	He	-0.007	ppb	N/A	23.33	0.0004	Pulse	0.1000	3
Ag	107	115	He	0.008	ppb	130.7	53.33	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.002	ppb	495.3	4.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.162	ppb	74.1	1146.80	0.0179	Pulse	0.1000	3
Sb	121	115	He	0.017	ppb	74.6	30.00	0.0005	Pulse	0.1000	3
Ba	137	115	He	0.276	ppb	53.5	96.67	0.0015	Pulse	0.1000	3
Tl	205	209	He	0.003	ppb	192.7	236.68	0.0011	Pulse	0.1000	3
Pb	208	209	He	0.792	ppb	1.7	6807.64	0.0310	Pulse	0.1000	3
U	238	209	He	0.008	ppb	63.2	123.34	0.0006	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3270612.66	1.2	100.9	Pulse	0.1000	3
No Gas	Ge	72	1447274.56	0.6	100.5	Pulse	0.1000	3
H2	Sc	45	196435.22	2.1	100.5	Pulse	0.1000	3
H2	Ge	72	158122.85	0.2	97.0	Pulse	0.1000	3
H2	In	115	436829.38	1.4	100.8	Pulse	0.1000	3
He	Sc	45	41432.44	1.4	103.6	Pulse	0.1000	3
He	Ge	72	72398.56	0.7	100.2	Pulse	0.1000	3
He	In	115	64028.23	1.5	99.1	Pulse	0.1000	3
He	Tb	159	284394.47	0.5	99.4	Pulse	0.1000	3
He	Bi	209	219665.48	1.1	98.9	Pulse	0.1000	3

No Gas



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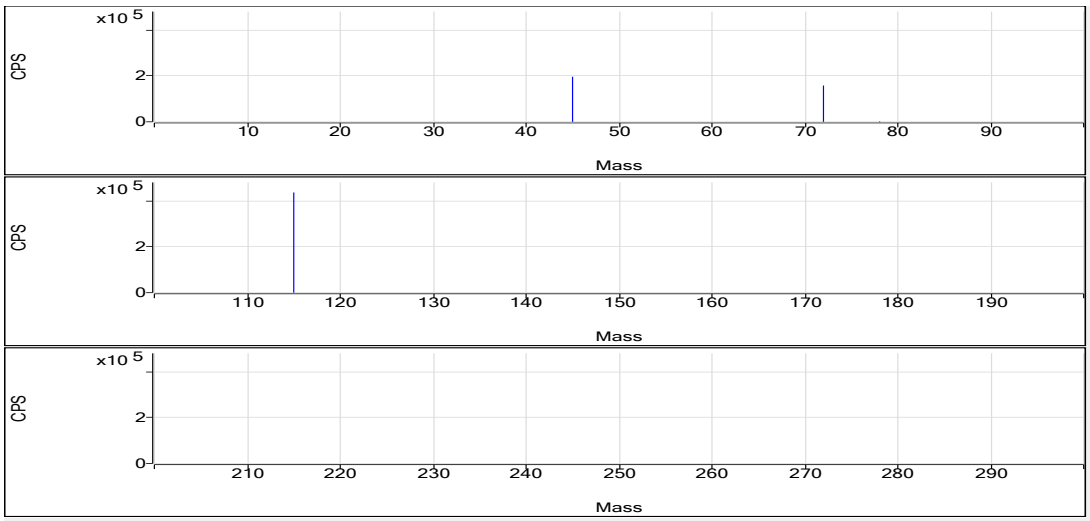
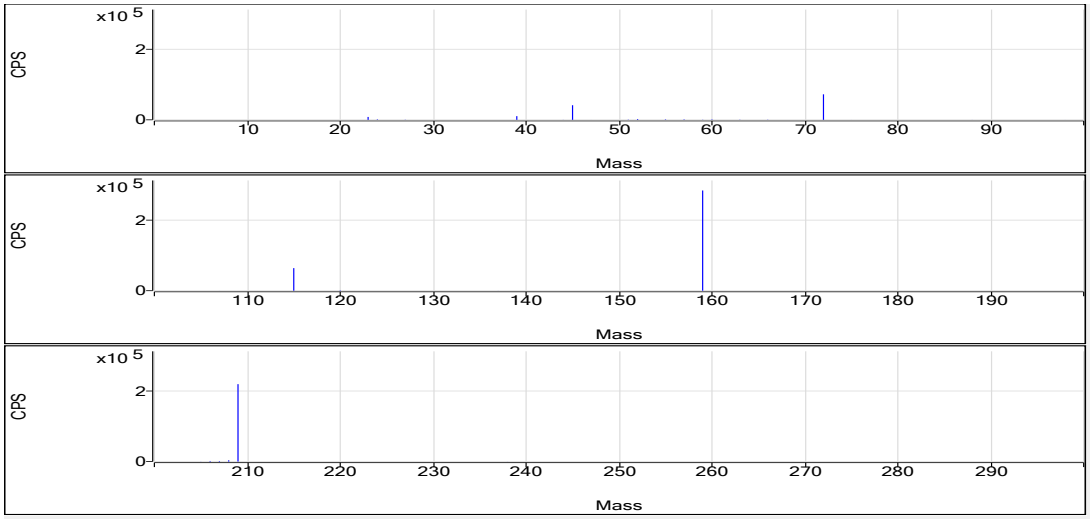


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.01	0.0001	86.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.009	0	52.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.006	0	56.00	0.0013	4.694E-05
Se	78	2	H2	0.026	0	3.33	0.0004	1.089E-05
Se	78	2	H2	-0.006	0	1.33	0.0004	1.089E-05
Se	78	2	H2	0.015	0	2.67	0.0004	1.089E-05
Na	23	3	He	3.919	0.1132	8132.47	0.0017	0.1065
Na	23	3	He	6.805	0.1181	8602.70	0.0017	0.1065
Na	23	3	He	0.648	0.1076	7802.34	0.0017	0.1065
Mg	24	3	He	14.724	0.0173	1240.11	0.0008	0.004846
Mg	24	3	He	16.244	0.0185	1350.10	0.0008	0.004846
Mg	24	3	He	12.241	0.0152	1100.07	0.0008	0.004846
Al	27	3	He	15.202	0.0047	340.02	0.0002	0.001063
Al	27	3	He	21.2	0.0062	450.02	0.0002	0.001063
Al	27	3	He	24.156	0.0069	500.03	0.0002	0.001063
K	39	3	He	26.57	0.1583	11374.65	0.0006	0.1436
K	39	3	He	-17.547	0.134	9753.52	0.0006	0.1436
K	39	3	He	-6.361	0.1401	10163.87	0.0006	0.1436
Ca	44	3	He	60.166	0.0035	250.01	0	0.001611
Ca	44	3	He	5.621	0.0018	130.01	0	0.001611
Ca	44	3	He	23.599	0.0023	170.01	0	0.001611
Ti	47	3	He	0.018	0.0003	20.00	0.0003	0.0002737
Ti	47	3	He	0.551	0.0004	30.00	0.0003	0.0002737
Ti	47	3	He	2.207	0.0008	60.00	0.0003	0.0002737
V	51	3	He	0.085	0.0083	598.02	0.0117	0.007326
V	51	3	He	0.156	0.0091	666.02	0.0117	0.007326
V	51	3	He	0.119	0.0087	632.02	0.0117	0.007326
Cr	52	3	He	0.061	0.0263	1890.19	0.0152	0.02538
Cr	52	3	He	0.038	0.026	1890.21	0.0152	0.02538
Cr	52	3	He	0.325	0.0303	2200.25	0.0152	0.02538
Mn	55	3	He	0.247	0.0153	1100.08	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.515	0.0169	1230.11	0.0059	0.01385
Mn	55	3	He	0.293	0.0156	1130.09	0.0059	0.01385
Fe	57	3	He	37.404	0.0148	1060.07	0.0003	0.003918
Fe	57	3	He	39.1	0.0152	1110.09	0.0003	0.003918
Fe	57	3	He	45.015	0.017	1230.09	0.0003	0.003918
Co	59	3	He	0.081	0.0056	400.02	0.0305	0.003084
Co	59	3	He	0.056	0.0048	350.02	0.0305	0.003084
Co	59	3	He	0.12	0.0068	490.03	0.0305	0.003084
Ni	60	3	He	0.686	0.015	1080.08	0.0088	0.009003
Ni	60	3	He	0.866	0.0166	1210.09	0.0088	0.009003
Ni	60	3	He	0.968	0.0175	1270.10	0.0088	0.009003
Cu	63	3	He	0.031	0.0057	410.02	0.0249	0.004937
Cu	63	3	He	0.155	0.0088	640.04	0.0249	0.004937
Cu	63	3	He	0.045	0.0061	440.02	0.0249	0.004937
Zn	66	3	He	0.864	0.007	500.02	0.0025	0.004836
Zn	66	3	He	0.435	0.0059	430.03	0.0025	0.004836
Zn	66	3	He	1.118	0.0076	550.03	0.0025	0.004836
As	75	3	He	0.182	0.0008	54.00	0.0017	0.0004347
As	75	3	He	0.129	0.0007	48.00	0.0017	0.0004347
As	75	3	He	0.02	0.0005	34.00	0.0017	0.0004347
Sr	88	3	He	0.08	0.0014	90.00	0.0078	0.0007762
Sr	88	3	He	-0.001	0.0008	50.00	0.0078	0.0007762
Sr	88	3	He	0.185	0.0022	140.01	0.0078	0.0007762
Mo	98	3	He	-0.002	0.0005	30.00	0.022	0.0005162
Mo	98	3	He	-0.009	0.0003	20.00	0.022	0.0005162
Mo	98	3	He	-0.009	0.0003	20.00	0.022	0.0005162
Ag	107	3	He	0.01	0.0009	60.00	0.0455	0.0004641
Ag	107	3	He	-0.003	0.0003	20.00	0.0455	0.0004641
Ag	107	3	He	0.018	0.0013	80.00	0.0455	0.0004641
Cd	111	3	He	0.015	0.0001	8.00	0.0048	5.152E-05
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Sn	120	3	He	0.142	0.0176	1130.08	0.0143	0.01559
Sn	120	3	He	0.29	0.0197	1280.24	0.0143	0.01559
Sn	120	3	He	0.053	0.0163	1030.07	0.0143	0.01559
Sb	121	3	He	0.029	0.0006	40.00	0.0124	0.000258
Sb	121	3	He	0.004	0.0003	20.00	0.0124	0.000258
Sb	121	3	He	0.018	0.0005	30.00	0.0124	0.000258
Ba	137	3	He	0.357	0.0019	120.01	0.0044	0.000309
Ba	137	3	He	0.105	0.0008	50.00	0.0044	0.000309
Ba	137	3	He	0.365	0.0019	120.01	0.0044	0.000309
Tl	205	3	He	0.006	0.0012	260.01	0.0276	0.001005
Tl	205	3	He	-0.003	0.0009	200.01	0.0276	0.001005
Tl	205	3	He	0.004	0.0011	250.01	0.0276	0.001005
Pb	208	3	He	0.796	0.0312	3640.65	0.0364	0.002176
Pb	208	3	He	0.802	0.0314	3540.64	0.0364	0.002176
Pb	208	3	He	0.777	0.0304	3490.60	0.0364	0.002176
U	238	3	He	0.013	0.0008	170.01	0.0421	0.00024
U	238	3	He	0.003	0.0004	80.00	0.0421	0.00024
U	238	3	He	0.007	0.0005	120.01	0.0421	0.00024
Sc	45	1	No Gas			3263422.45		
Sc	45	1	No Gas			3311866.83		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3236548.70		
Ge	72	1	No Gas			1440207.17		
Ge	72	1	No Gas			1456396.07		
Ge	72	1	No Gas			1445220.45		
Sc	45	2	H2			191679.74		
Sc	45	2	H2			198489.33		
Sc	45	2	H2			199136.58		
Ge	72	2	H2			158200.42		
Ge	72	2	H2			158352.55		
Ge	72	2	H2			157815.59		
In	115	2	H2			431162.26		
In	115	2	H2			435949.52		
In	115	2	H2			443376.36		
Sc	45	3	He			40827.46		
Sc	45	3	He			41499.28		
Sc	45	3	He			41970.57		
Ge	72	3	He			71849.02		
Ge	72	3	He			72814.04		
Ge	72	3	He			72532.62		
In	115	3	He			64197.62		
In	115	3	He			64901.30		
In	115	3	He			63012.61		
Tb	159	3	He			283669.29		
Tb	159	3	He			286145.72		
Tb	159	3	He			283368.41		
Bi	209	3	He			220143.65		
Bi	209	3	He			217103.49		
Bi	209	3	He			221749.29		

Quantitation Report

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Sample Type	CCV
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

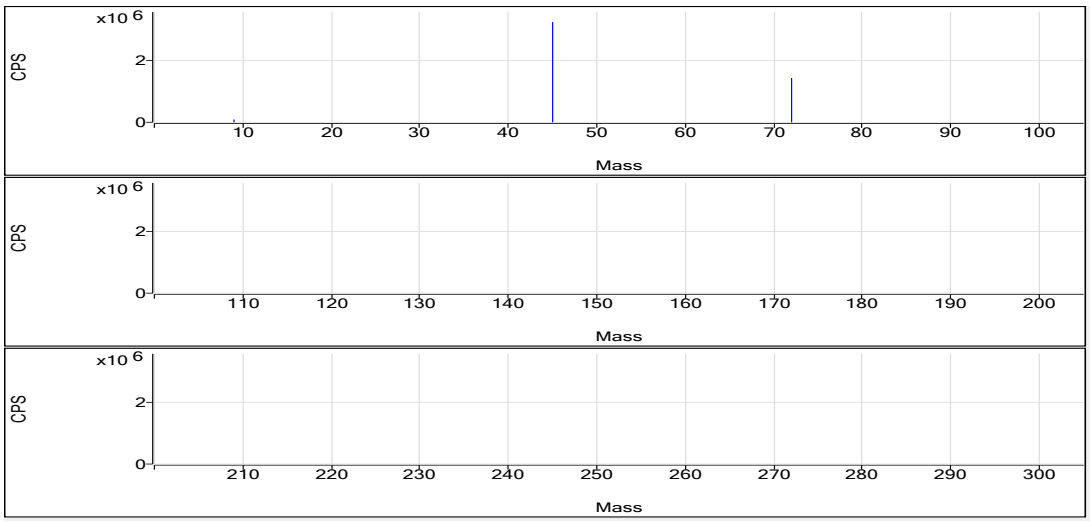
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	48.395	ppb	5.4	91611.15	0.0636	Pulse	0.5000	3
Se	78	72	H2	52.496	ppb	5.1	3235.93	0.0205	Pulse	1.5000	3
Na	23	72	He	5239.346	ppb	0.7	668302.62	9.1067	Pulse	0.1000	3
Mg	24	72	He	5205.623	ppb	0.9	322437.39	4.3937	Pulse	0.1000	3
Al	27	72	He	5215.609	ppb	1.4	92470.28	1.2601	Pulse	0.1000	3
K	39	72	He	5154.476	ppb	1.7	219417.50	2.9900	Pulse	0.1000	3
Ca	44	72	He	5146.225	ppb	0.9	11848.46	0.1615	Pulse	0.1000	3
Ti	47	72	He	5303.630	ppb	1.4	97628.34	1.3303	Pulse	0.1000	3
V	51	72	He	519.876	ppb	0.7	446823.60	6.0887	Pulse	0.5000	3
Cr	52	72	He	523.345	ppb	0.9	586677.36	7.9945	Pulse	0.1000	3
Mn	55	72	He	515.696	ppb	1.7	224386.25	3.0577	Pulse	0.1000	3
Fe	57	72	He	5150.864	ppb	1.0	109799.28	1.4962	Pulse	0.1000	3
Co	59	72	He	518.559	ppb	0.9	1161288.71	15.8246	Pulse	0.1000	3
Ni	60	72	He	518.810	ppb	1.3	335445.36	4.5711	Pulse	0.1000	3
Cu	63	72	He	518.255	ppb	0.8	948778.11	12.9287	Pulse	0.1000	3
Zn	66	72	He	520.930	ppb	1.1	94273.14	1.2846	Pulse	0.1000	3
As	75	72	He	511.802	ppb	0.8	65353.11	0.8905	Pulse	0.5000	3
Sr	88	115	He	52.999	ppb	2.8	26131.19	0.4151	Pulse	0.1000	3
Mo	98	115	He	51.819	ppb	1.2	71856.12	1.1417	Pulse	0.1000	3
Ag	107	115	He	52.377	ppb	1.4	150029.49	2.3836	Pulse	0.1000	3
Cd	111	115	He	52.162	ppb	1.9	15762.87	0.2504	Pulse	0.5000	3
Sn	120	115	He	51.925	ppb	1.2	47578.85	0.7559	Pulse	0.1000	3
Sb	121	115	He	52.711	ppb	4.1	41161.73	0.6541	Pulse	0.1000	3
Ba	137	115	He	519.212	ppb	0.5	142995.08	2.2718	Pulse	0.1000	3
Tl	205	209	He	51.576	ppb	0.9	316164.89	1.4268	Pulse	0.1000	3
Pb	208	209	He	52.166	ppb	0.9	421229.80	1.9009	Pulse	0.1000	3
U	238	209	He	50.951	ppb	0.6	475012.87	2.1436	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3262883.60	2.4	100.7	Pulse	0.1000	3
No Gas	Ge	72	1440397.11	1.7	100.0	Pulse	0.1000	3
H2	Sc	45	194888.85	2.4	99.7	Pulse	0.1000	3
H2	Ge	72	158331.75	2.0	97.1	Pulse	0.1000	3
H2	In	115	439314.73	3.4	101.4	Pulse	0.1000	3
He	Sc	45	41937.41	2.9	104.9	Pulse	0.1000	3
He	Ge	72	73387.05	0.4	101.5	Pulse	0.1000	3
He	In	115	62946.18	1.3	97.5	Pulse	0.1000	3
He	Tb	159	283881.51	1.2	99.3	Pulse	0.1000	3
He	Bi	209	221595.58	0.5	99.7	Pulse	0.1000	3

No Gas



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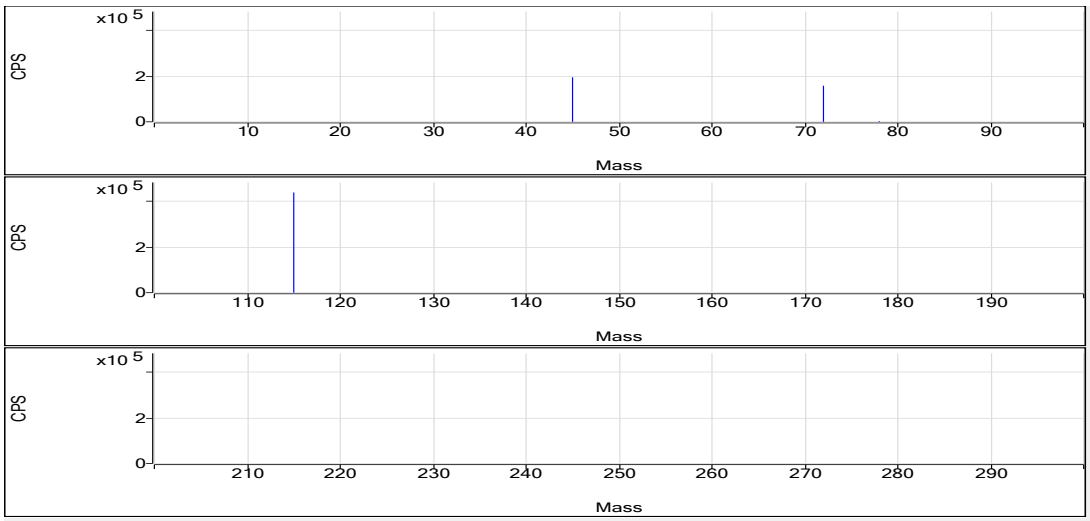
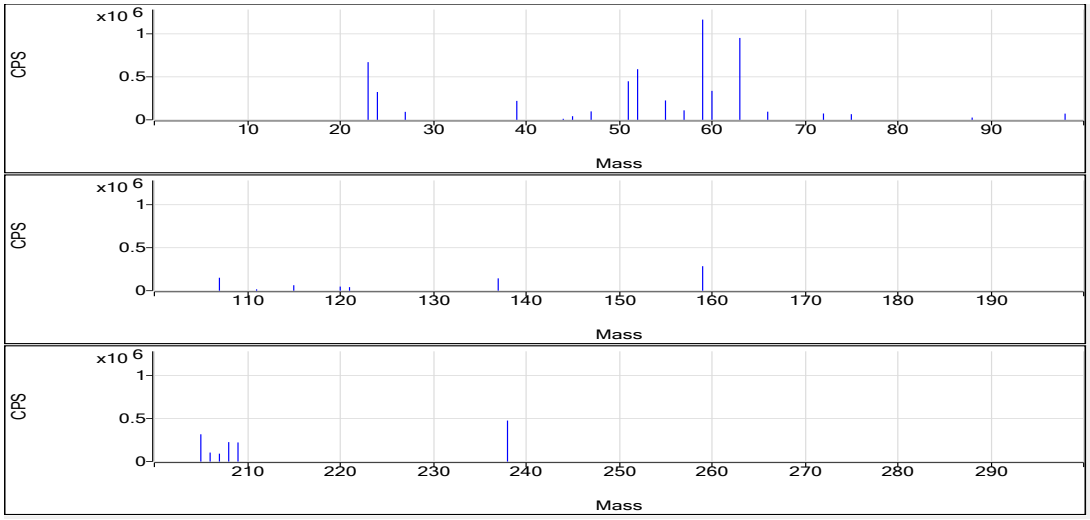


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	45.943	0.0604	88598.09	0.0013	4.694E-05
Be	9	1	No Gas	48.077	0.0632	90915.34	0.0013	4.694E-05
Be	9	1	No Gas	51.167	0.0673	95320.03	0.0013	4.694E-05
Se	78	2	H2	55.606	0.0217	3355.73	0.0004	1.089E-05
Se	78	2	H2	50.988	0.0199	3197.03	0.0004	1.089E-05
Se	78	2	H2	50.893	0.0198	3155.02	0.0004	1.089E-05
Na	23	3	He	5266.567	9.1535	668804.91	0.0017	0.1065
Na	23	3	He	5197.766	9.0353	665886.24	0.0017	0.1065
Na	23	3	He	5253.704	9.1314	670216.71	0.0017	0.1065
Mg	24	3	He	5252.124	4.4329	323894.25	0.0008	0.004846
Mg	24	3	He	5204.624	4.3929	323747.63	0.0008	0.004846
Mg	24	3	He	5160.123	4.3554	319670.29	0.0008	0.004846
Al	27	3	He	5261.596	1.2712	92879.73	0.0002	0.001063
Al	27	3	He	5129.827	1.2394	91339.81	0.0002	0.001063
Al	27	3	He	5255.403	1.2697	93191.30	0.0002	0.001063
K	39	3	He	5243.349	3.0391	222052.40	0.0006	0.1436
K	39	3	He	5071.963	2.9444	217000.37	0.0006	0.1436
K	39	3	He	5148.115	2.9865	219199.72	0.0006	0.1436
Ca	44	3	He	5123.529	0.1607	11745.09	0	0.001611
Ca	44	3	He	5114.05	0.1605	11825.10	0	0.001611
Ca	44	3	He	5201.094	0.1632	11975.19	0	0.001611
Ti	47	3	He	5336.119	1.3385	97795.61	0.0003	0.0002737
Ti	47	3	He	5358.934	1.3442	99064.14	0.0003	0.0002737
Ti	47	3	He	5215.838	1.3083	96025.26	0.0003	0.0002737
V	51	3	He	523.359	6.1295	447852.53	0.0117	0.007326
V	51	3	He	516.605	6.0504	445908.09	0.0117	0.007326
V	51	3	He	519.663	6.0862	446710.19	0.0117	0.007326
Cr	52	3	He	528.204	8.0685	589529.13	0.0152	0.02538
Cr	52	3	He	518.369	7.9187	583597.41	0.0152	0.02538
Cr	52	3	He	523.464	7.9963	586905.54	0.0152	0.02538
Mn	55	3	He	522.478	3.0977	226338.28	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	506.131	3.0013	221187.48	0.0059	0.01385
Mn	55	3	He	518.48	3.0741	225633.00	0.0059	0.01385
Fe	57	3	He	5207.884	1.5127	110527.77	0.0003	0.003918
Fe	57	3	He	5133.804	1.4913	109903.17	0.0003	0.003918
Fe	57	3	He	5110.904	1.4846	108966.90	0.0003	0.003918
Co	59	3	He	523.884	15.987	1168103.42	0.0305	0.003084
Co	59	3	He	514.683	15.7063	1157531.23	0.0305	0.003084
Co	59	3	He	517.109	15.7803	1158231.47	0.0305	0.003084
Ni	60	3	He	526.55	4.6391	338959.92	0.0088	0.009003
Ni	60	3	He	515.079	4.5382	334461.21	0.0088	0.009003
Ni	60	3	He	514.801	4.5358	332914.96	0.0088	0.009003
Cu	63	3	He	522.266	13.0287	951953.11	0.0249	0.004937
Cu	63	3	He	513.692	12.8149	944439.36	0.0249	0.004937
Cu	63	3	He	518.808	12.9425	949941.86	0.0249	0.004937
Zn	66	3	He	525.415	1.2957	94668.18	0.0025	0.004836
Zn	66	3	He	514.668	1.2693	93542.00	0.0025	0.004836
Zn	66	3	He	522.707	1.289	94609.24	0.0025	0.004836
As	75	3	He	516.366	0.8985	65648.34	0.0017	0.0004347
As	75	3	He	508.343	0.8845	65188.45	0.0017	0.0004347
As	75	3	He	510.698	0.8886	65222.55	0.0017	0.0004347
Sr	88	3	He	54.066	0.4234	27046.16	0.0078	0.0007762
Sr	88	3	He	53.623	0.42	26244.69	0.0078	0.0007762
Sr	88	3	He	51.307	0.4018	25102.73	0.0078	0.0007762
Mo	98	3	He	51.158	1.1271	71993.58	0.022	0.0005162
Mo	98	3	He	52.406	1.1546	72154.26	0.022	0.0005162
Mo	98	3	He	51.894	1.1433	71420.52	0.022	0.0005162
Ag	107	3	He	51.869	2.3605	150780.47	0.0455	0.0004641
Ag	107	3	He	52.029	2.3678	147972.44	0.0455	0.0004641
Ag	107	3	He	53.233	2.4226	151335.56	0.0455	0.0004641
Cd	111	3	He	51.436	0.247	15774.88	0.0048	5.152E-05
Cd	111	3	He	51.74	0.2484	15524.60	0.0048	5.152E-05
Cd	111	3	He	53.31	0.256	15989.14	0.0048	5.152E-05
Sn	120	3	He	51.373	0.7481	47782.55	0.0143	0.01559
Sn	120	3	He	51.768	0.7537	47100.94	0.0143	0.01559
Sn	120	3	He	52.634	0.766	47853.06	0.0143	0.01559
Sb	121	3	He	50.331	0.6246	39897.88	0.0124	0.000258
Sb	121	3	He	53.321	0.6617	41352.33	0.0124	0.000258
Sb	121	3	He	54.481	0.6761	42234.98	0.0124	0.000258
Ba	137	3	He	517.643	2.2649	144671.82	0.0044	0.000309
Ba	137	3	He	522.037	2.2841	142743.17	0.0044	0.000309
Ba	137	3	He	517.955	2.2663	141570.24	0.0044	0.000309
Tl	205	3	He	51.247	1.4177	315958.32	0.0276	0.001005
Tl	205	3	He	51.406	1.4221	314475.37	0.0276	0.001005
Tl	205	3	He	52.076	1.4406	318060.99	0.0276	0.001005
Pb	208	3	He	52.456	1.9114	226943.71	0.0364	0.002176
Pb	208	3	He	51.613	1.8807	222776.60	0.0364	0.002176
Pb	208	3	He	52.429	1.9104	226204.61	0.0364	0.002176
U	238	3	He	51.057	2.1481	478738.24	0.0421	0.00024
U	238	3	He	50.615	2.1295	470909.25	0.0421	0.00024
U	238	3	He	51.179	2.1532	475391.13	0.0421	0.00024
Sc	45	1	No Gas			3345322.45		
Sc	45	1	No Gas			3252088.70		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3191239.64		
Ge	72	1	No Gas			1466425.92		
Ge	72	1	No Gas			1438039.82		
Ge	72	1	No Gas			1416725.60		
Sc	45	2	H2			189441.72		
Sc	45	2	H2			197060.06		
Sc	45	2	H2			198164.76		
Ge	72	2	H2			154914.64		
Ge	72	2	H2			160950.29		
Ge	72	2	H2			159130.31		
In	115	2	H2			422013.16		
In	115	2	H2			447927.65		
In	115	2	H2			448003.39		
Sc	45	3	He			43154.34		
Sc	45	3	He			40737.44		
Sc	45	3	He			41920.46		
Ge	72	3	He			73065.67		
Ge	72	3	He			73698.39		
Ge	72	3	He			73397.09		
In	115	3	He			64248.54		
In	115	3	He			62861.33		
In	115	3	He			62842.00		
Tb	159	3	He			287772.83		
Tb	159	3	He			282216.77		
Tb	159	3	He			281654.92		
Bi	209	3	He			222866.91		
Bi	209	3	He			221138.38		
Bi	209	3	He			220781.46		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 19:23:13
Sample Name	CCB 4654618
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

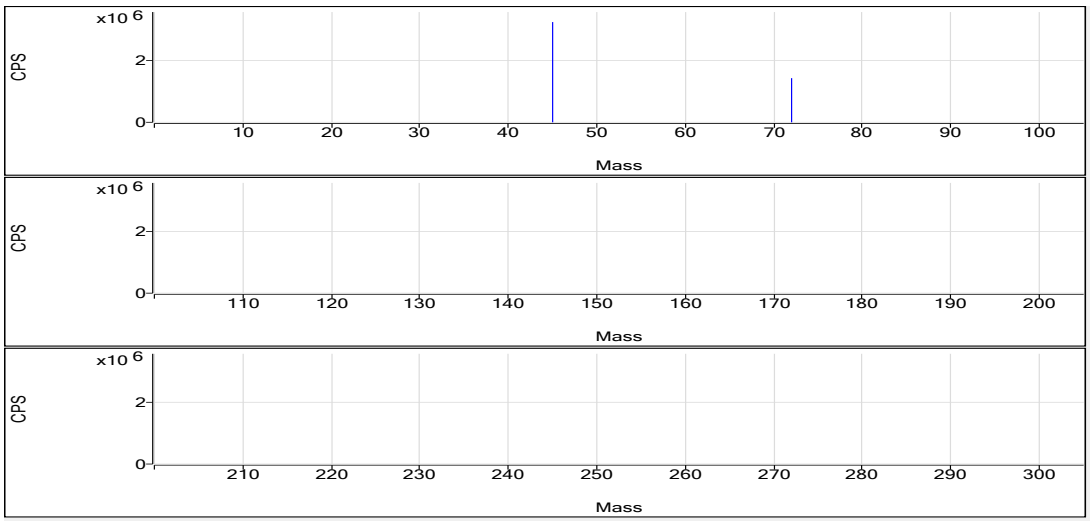
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.023	ppb	51.2	110.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.062	ppb	77.2	5.56	0.0000	Pulse	1.5000	3
Na	23	72	He	6.687	ppb	48.1	8486.07	0.1179	Pulse	0.1000	3
Mg	24	72	He	15.247	ppb	12.8	1273.44	0.0177	Pulse	0.1000	3
Al	27	72	He	21.701	ppb	16.2	453.35	0.0063	Pulse	0.1000	3
K	39	72	He	12.102	ppb	155.2	10814.33	0.1503	Pulse	0.1000	3
Ca	44	72	He	22.707	ppb	68.7	166.67	0.0023	Pulse	0.1000	3
Ti	47	72	He	0.942	ppb	90.3	36.67	0.0005	Pulse	0.1000	3
V	51	72	He	0.143	ppb	9.1	647.35	0.0090	Pulse	0.5000	3
Cr	52	72	He	0.031	ppb	464.2	1860.19	0.0259	Pulse	0.1000	3
Mn	55	72	He	0.204	ppb	51.6	1083.41	0.0151	Pulse	0.1000	3
Fe	57	72	He	37.177	ppb	3.5	1056.75	0.0147	Pulse	0.1000	3
Co	59	72	He	0.157	ppb	43.9	566.70	0.0079	Pulse	0.1000	3
Ni	60	72	He	0.947	ppb	22.5	1246.76	0.0173	Pulse	0.1000	3
Cu	63	72	He	0.138	ppb	38.6	603.36	0.0084	Pulse	0.1000	3
Zn	66	72	He	1.181	ppb	21.5	556.70	0.0077	Pulse	0.1000	3
As	75	72	He	0.171	ppb	23.8	52.67	0.0007	Pulse	0.5000	3
Sr	88	115	He	0.153	ppb	58.6	126.67	0.0020	Pulse	0.1000	3
Mo	98	115	He	0.047	ppb	51.4	100.00	0.0016	Pulse	0.1000	3
Ag	107	115	He	-0.002	ppb	N/A	23.33	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.026	ppb	58.9	11.33	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.116	ppb	30.7	1103.41	0.0172	Pulse	0.1000	3
Sb	121	115	He	0.071	ppb	34.8	73.33	0.0011	Pulse	0.1000	3
Ba	137	115	He	0.228	ppb	26.3	83.33	0.0013	Pulse	0.1000	3
Tl	205	209	He	0.129	ppb	15.8	1003.41	0.0046	Pulse	0.1000	3
Pb	208	209	He	0.693	ppb	4.0	6024.09	0.0274	Pulse	0.1000	3
U	238	209	He	0.014	ppb	25.7	186.68	0.0008	Pulse	0.1000	3

ISTD Table:

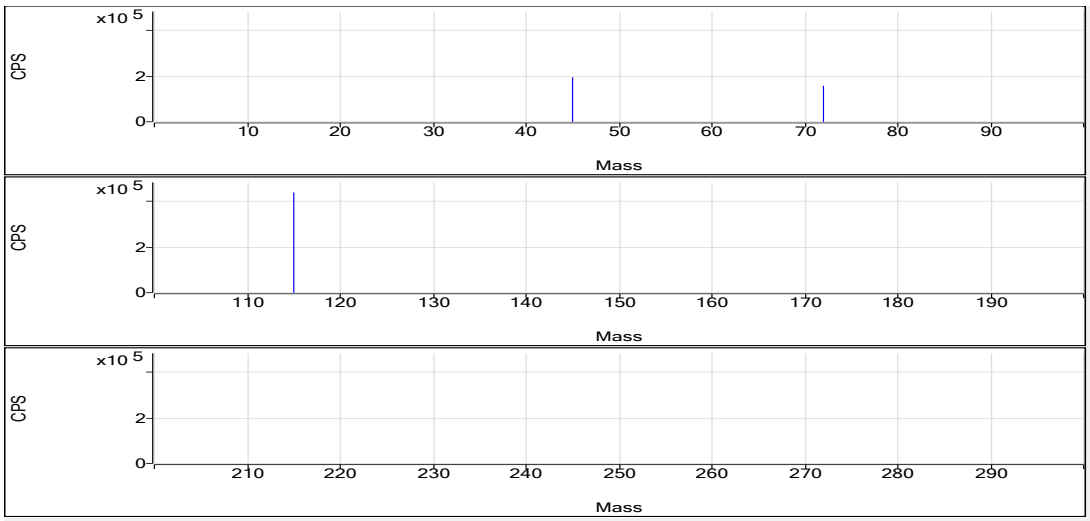
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3260060.37	1.8	100.6	Pulse	0.1000	3
No Gas	Ge	72	1435895.66	1.3	99.7	Pulse	0.1000	3
H2	Sc	45	194411.42	3.2	99.5	Pulse	0.1000	3
H2	Ge	72	157561.51	1.4	96.7	Pulse	0.1000	3
H2	In	115	438181.91	2.6	101.1	Pulse	0.1000	3
He	Sc	45	40339.60	2.3	100.9	Pulse	0.1000	3
He	Ge	72	71946.45	0.2	99.5	Pulse	0.1000	3
He	In	115	63988.19	1.9	99.1	Pulse	0.1000	3
He	Tb	159	284339.67	0.8	99.4	Pulse	0.1000	3
He	Bi	209	219974.41	0.9	99.0	Pulse	0.1000	3

No Gas

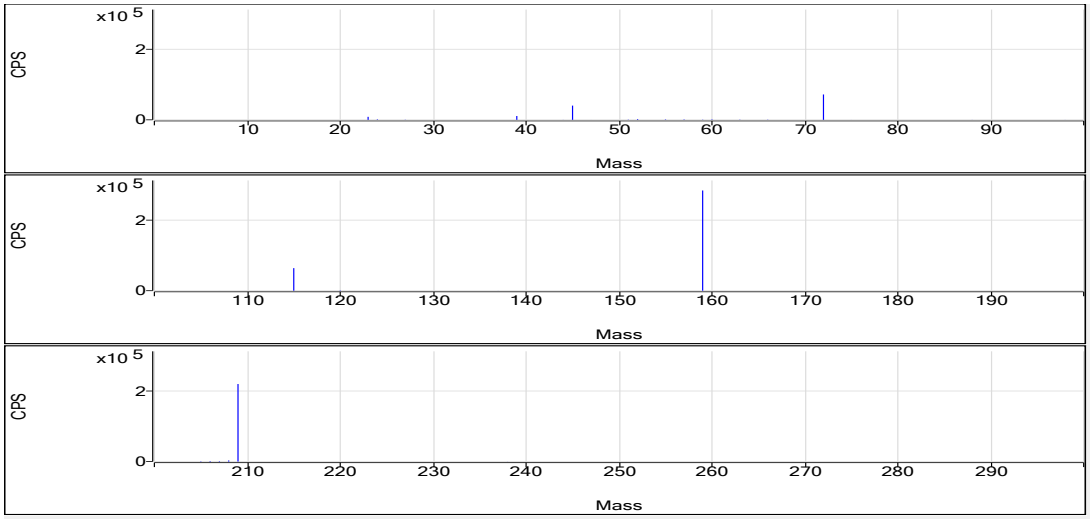


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.01	0.0001	86.00	0.0013	4.694E-05
Be	9	1	No Gas	0.032	0.0001	128.00	0.0013	4.694E-05
Be	9	1	No Gas	0.027	0.0001	116.00	0.0013	4.694E-05
Se	78	2	H2	0.06	0	5.33	0.0004	1.089E-05
Se	78	2	H2	0.112	0.0001	8.67	0.0004	1.089E-05
Se	78	2	H2	0.015	0	2.67	0.0004	1.089E-05
Na	23	3	He	3.776	0.1129	8112.53	0.0017	0.1065
Na	23	3	He	6.141	0.117	8412.65	0.0017	0.1065
Na	23	3	He	10.143	0.1239	8933.02	0.0017	0.1065
Mg	24	3	He	17.372	0.0195	1400.12	0.0008	0.004846
Mg	24	3	He	13.555	0.0163	1170.10	0.0008	0.004846
Mg	24	3	He	14.814	0.0173	1250.09	0.0008	0.004846
Al	27	3	He	18.668	0.0056	400.02	0.0002	0.001063
Al	27	3	He	25.559	0.0072	520.02	0.0002	0.001063
Al	27	3	He	20.876	0.0061	440.02	0.0002	0.001063
K	39	3	He	31.951	0.1613	11584.96	0.0006	0.1436
K	39	3	He	9.735	0.149	10714.23	0.0006	0.1436
K	39	3	He	-5.379	0.1407	10143.81	0.0006	0.1436
Ca	44	3	He	24.338	0.0024	170.01	0	0.001611
Ca	44	3	He	6.348	0.0018	130.00	0	0.001611
Ca	44	3	He	37.436	0.0028	200.01	0	0.001611
Ti	47	3	He	1.684	0.0007	50.00	0.0003	0.0002737
Ti	47	3	He	1.127	0.0006	40.00	0.0003	0.0002737
Ti	47	3	He	0.014	0.0003	20.00	0.0003	0.0002737
V	51	3	He	0.143	0.009	646.02	0.0117	0.007326
V	51	3	He	0.156	0.0092	658.02	0.0117	0.007326
V	51	3	He	0.13	0.0088	638.02	0.0117	0.007326
Cr	52	3	He	0.043	0.026	1870.18	0.0152	0.02538
Cr	52	3	He	0.169	0.028	2010.22	0.0152	0.02538
Cr	52	3	He	-0.119	0.0236	1700.16	0.0152	0.02538
Mn	55	3	He	0.083	0.0143	1030.07	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.269	0.0154	1110.08	0.0059	0.01385
Mn	55	3	He	0.261	0.0154	1110.09	0.0059	0.01385
Fe	57	3	He	38.38	0.015	1080.09	0.0003	0.003918
Fe	57	3	He	37.368	0.0147	1060.08	0.0003	0.003918
Fe	57	3	He	35.783	0.0143	1030.08	0.0003	0.003918
Co	59	3	He	0.223	0.0099	710.05	0.0305	0.003084
Co	59	3	He	0.163	0.0081	580.04	0.0305	0.003084
Co	59	3	He	0.085	0.0057	410.02	0.0305	0.003084
Ni	60	3	He	0.702	0.0152	1090.07	0.0088	0.009003
Ni	60	3	He	1.048	0.0182	1310.10	0.0088	0.009003
Ni	60	3	He	1.09	0.0186	1340.11	0.0088	0.009003
Cu	63	3	He	0.137	0.0084	600.03	0.0249	0.004937
Cu	63	3	He	0.192	0.0097	700.04	0.0249	0.004937
Cu	63	3	He	0.086	0.0071	510.02	0.0249	0.004937
Zn	66	3	He	0.922	0.0071	510.03	0.0025	0.004836
Zn	66	3	He	1.428	0.0083	600.03	0.0025	0.004836
Zn	66	3	He	1.193	0.0078	560.03	0.0025	0.004836
As	75	3	He	0.166	0.0007	52.00	0.0017	0.0004347
As	75	3	He	0.214	0.0008	58.00	0.0017	0.0004347
As	75	3	He	0.133	0.0007	48.00	0.0017	0.0004347
Sr	88	3	He	0.081	0.0014	90.00	0.0078	0.0007762
Sr	88	3	He	0.124	0.0017	110.00	0.0078	0.0007762
Sr	88	3	He	0.254	0.0028	180.01	0.0078	0.0007762
Mo	98	3	He	0.026	0.0011	70.00	0.022	0.0005162
Mo	98	3	He	0.042	0.0014	90.00	0.022	0.0005162
Mo	98	3	He	0.074	0.0021	140.01	0.022	0.0005162
Ag	107	3	He	-0.003	0.0003	20.00	0.0455	0.0004641
Ag	107	3	He	-0.003	0.0003	20.00	0.0455	0.0004641
Ag	107	3	He	0	0.0005	30.00	0.0455	0.0004641
Cd	111	3	He	0.035	0.0002	14.00	0.0048	5.152E-05
Cd	111	3	He	0.036	0.0002	14.00	0.0048	5.152E-05
Cd	111	3	He	0.008	0.0001	6.00	0.0048	5.152E-05
Sn	120	3	He	0.149	0.0177	1130.08	0.0143	0.01559
Sn	120	3	He	0.122	0.0173	1090.07	0.0143	0.01559
Sn	120	3	He	0.078	0.0167	1090.08	0.0143	0.01559
Sb	121	3	He	0.08	0.0013	80.00	0.0124	0.000258
Sb	121	3	He	0.043	0.0008	50.00	0.0124	0.000258
Sb	121	3	He	0.09	0.0014	90.00	0.0124	0.000258
Ba	137	3	He	0.216	0.0013	80.00	0.0044	0.000309
Ba	137	3	He	0.293	0.0016	100.00	0.0044	0.000309
Ba	137	3	He	0.175	0.0011	70.00	0.0044	0.000309
Tl	205	3	He	0.151	0.0052	1140.09	0.0276	0.001005
Tl	205	3	He	0.123	0.0044	980.08	0.0276	0.001005
Tl	205	3	He	0.111	0.0041	890.06	0.0276	0.001005
Pb	208	3	He	0.704	0.0278	3050.46	0.0364	0.002176
Pb	208	3	He	0.661	0.0262	2970.45	0.0364	0.002176
Pb	208	3	He	0.713	0.0281	3230.52	0.0364	0.002176
U	238	3	He	0.011	0.0007	150.01	0.0421	0.00024
U	238	3	He	0.018	0.001	220.01	0.0421	0.00024
U	238	3	He	0.015	0.0009	190.01	0.0421	0.00024
Sc	45	1	No Gas			3308284.01		
Sc	45	1	No Gas			3278970.58		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3192926.51		
Ge	72	1	No Gas			1446022.17		
Ge	72	1	No Gas			1447685.60		
Ge	72	1	No Gas			1413979.20		
Sc	45	2	H2			187405.04		
Sc	45	2	H2			199035.13		
Sc	45	2	H2			196794.10		
Ge	72	2	H2			155200.23		
Ge	72	2	H2			159343.61		
Ge	72	2	H2			158140.70		
In	115	2	H2			429023.98		
In	115	2	H2			451035.50		
In	115	2	H2			434486.24		
Sc	45	3	He			41198.85		
Sc	45	3	He			39323.58		
Sc	45	3	He			40496.37		
Ge	72	3	He			71829.26		
Ge	72	3	He			71899.61		
Ge	72	3	He			72110.47		
In	115	3	He			63805.88		
In	115	3	He			62911.45		
In	115	3	He			65273.04		
Tb	159	3	He			283114.41		
Tb	159	3	He			282941.40		
Tb	159	3	He			286963.20		
Bi	209	3	He			220040.29		
Bi	209	3	He			221864.20		
Bi	209	3	He			218018.75		

Quantitation Report

Data File Name	256SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 19:25:14
Sample Name	410-136577-H-25-A @2
Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

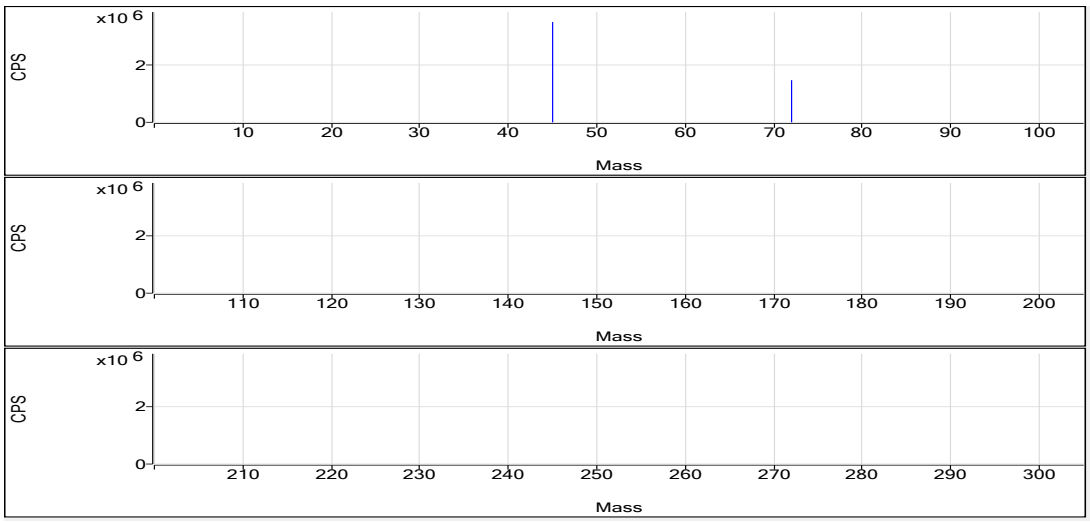
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	2.277	ppb	8.5	4478.03	0.0030	Pulse	0.5000	3
Se	78	72	H2	0.317	ppb	12.1	21.78	0.0001	Pulse	1.5000	3
Na	23	72	He	1650.490	ppb	1.0	218075.47	2.9417	Pulse	0.1000	3
Mg	24	72	He	16234.535	ppb	1.2	1015000.69	13.6922	Pulse	0.1000	3
Al	27	72	He	39789.517	ppb	1.3	712100.56	9.6060	Pulse	0.1000	3
K	39	72	He	6157.877	ppb	1.3	262726.18	3.5441	Pulse	0.1000	3
Ca	44	72	He	13231.341	ppb	0.8	30586.07	0.4126	Pulse	0.1000	3
Ti	47	72	He	2496.402	ppb	1.0	46434.65	0.6263	Pulse	0.1000	3
V	51	72	He	124.602	ppb	1.2	108592.50	1.4649	Pulse	0.5000	3
Cr	52	72	He	63.703	ppb	2.0	73793.74	0.9954	Pulse	0.1000	3
Mn	55	72	He	718.620	ppb	0.8	315470.35	4.2554	Pulse	0.1000	3
Fe	57	72	He	61629.171	ppb	0.9	1323928.31	17.8588	Pulse	0.1000	3
Co	59	72	He	19.217	ppb	1.6	43693.37	0.5894	Pulse	0.1000	3
Ni	60	72	He	42.404	ppb	0.7	28311.76	0.3819	Pulse	0.1000	3
Cu	63	72	He	62.084	ppb	0.4	115145.08	1.5531	Pulse	0.1000	3
Zn	66	72	He	112.055	ppb	1.0	20768.75	0.2801	Pulse	0.1000	3
As	75	72	He	10.687	ppb	2.9	1410.08	0.0190	Pulse	0.5000	3
Sr	88	115	He	46.012	ppb	1.3	23216.24	0.3605	Pulse	0.1000	3
Mo	98	115	He	0.792	ppb	13.2	1156.76	0.0180	Pulse	0.1000	3
Ag	107	115	He	0.113	ppb	13.7	360.02	0.0056	Pulse	0.1000	3
Cd	111	115	He	0.613	ppb	19.9	192.67	0.0030	Pulse	0.5000	3
Sn	120	115	He	3.877	ppb	7.5	4564.23	0.0709	Pulse	0.1000	3
Sb	121	115	He	1.081	ppb	5.5	880.06	0.0137	Pulse	0.1000	3
Ba	137	115	He	202.623	ppb	0.3	57112.25	0.8867	Pulse	0.1000	3
Tl	205	209	He	0.419	ppb	5.8	2823.75	0.0126	Pulse	0.1000	3
Pb	208	209	He	43.345	ppb	0.9	353920.93	1.5798	Pulse	0.1000	3
U	238	209	He	2.963	ppb	0.3	27981.18	0.1249	Pulse	0.1000	3

ISTD Table:

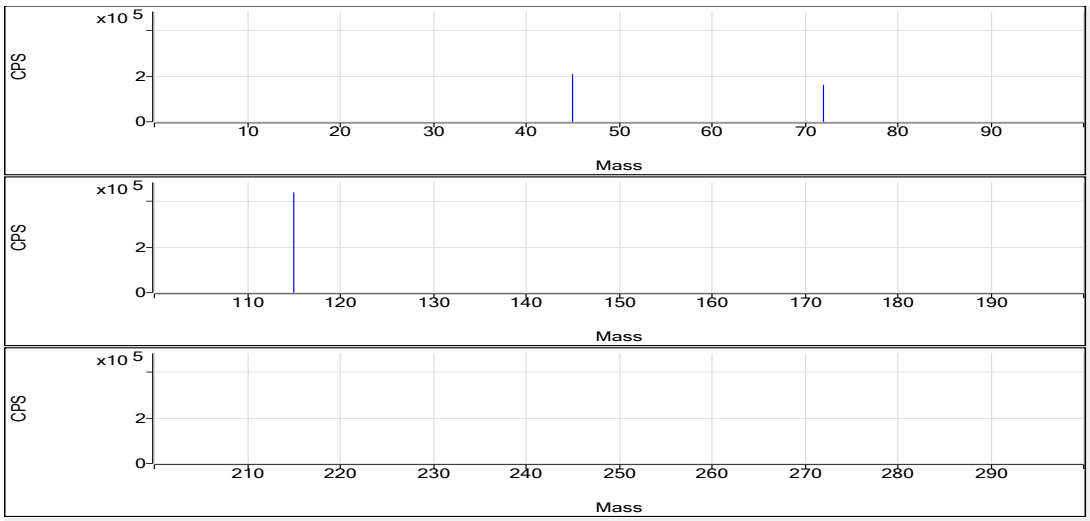
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3511198.70	1.4	108.3	Pulse	0.1000	3
No Gas	Ge	72	1474795.14	1.5	102.4	Pulse	0.1000	3
H2	Sc	45	208672.91	2.6	106.8	Pulse	0.1000	3
H2	Ge	72	161808.13	3.2	99.3	Pulse	0.1000	3
H2	In	115	439171.03	2.1	101.4	Pulse	0.1000	3
He	Sc	45	44197.46	1.2	110.5	Pulse	0.1000	3
He	Ge	72	74137.41	1.3	102.6	Pulse	0.1000	3
He	In	115	64407.01	0.2	99.7	Pulse	0.1000	3
He	Tb	159	300109.79	0.5	104.9	Pulse	0.1000	3
He	Bi	209	224049.88	1.8	100.8	Pulse	0.1000	3

No Gas

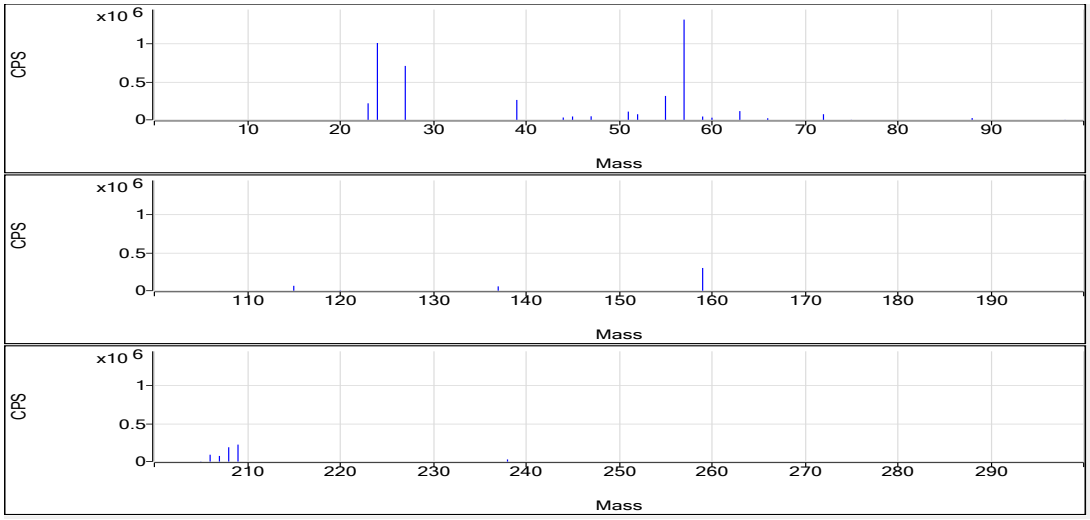


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	2.06	0.0028	4126.59	0.0013	4.694E-05
Be	9	1	No Gas	2.335	0.0031	4576.72	0.0013	4.694E-05
Be	9	1	No Gas	2.436	0.0032	4730.77	0.0013	4.694E-05
Se	78	2	H2	0.275	0.0001	18.67	0.0004	1.089E-05
Se	78	2	H2	0.349	0.0001	24.67	0.0004	1.089E-05
Se	78	2	H2	0.327	0.0001	22.00	0.0004	1.089E-05
Na	23	3	He	1638.563	2.9212	219637.26	0.0017	0.1065
Na	23	3	He	1643.745	2.9301	216502.24	0.0017	0.1065
Na	23	3	He	1669.162	2.9738	218086.91	0.0017	0.1065
Mg	24	3	He	16032.461	13.5218	1016666.16	0.0008	0.004846
Mg	24	3	He	16240.183	13.697	1012050.22	0.0008	0.004846
Mg	24	3	He	16430.96	13.8578	1016285.69	0.0008	0.004846
Al	27	3	He	39429.539	9.5191	715714.13	0.0002	0.001063
Al	27	3	He	39532.525	9.544	705191.86	0.0002	0.001063
Al	27	3	He	40406.489	9.755	715395.69	0.0002	0.001063
K	39	3	He	6095.505	3.5097	263879.98	0.0006	0.1436
K	39	3	He	6133.598	3.5307	260877.52	0.0006	0.1436
K	39	3	He	6244.528	3.5919	263421.03	0.0006	0.1436
Ca	44	3	He	13138.367	0.4097	30803.11	0	0.001611
Ca	44	3	He	13343.941	0.4161	30742.98	0	0.001611
Ca	44	3	He	13211.714	0.412	30212.13	0	0.001611
Ti	47	3	He	2511.06	0.63	47367.46	0.0003	0.0002737
Ti	47	3	He	2467.533	0.6191	45742.95	0.0003	0.0002737
Ti	47	3	He	2510.613	0.6299	46193.55	0.0003	0.0002737
V	51	3	He	122.997	1.4461	108729.30	0.0117	0.007326
V	51	3	He	125.014	1.4697	108594.60	0.0117	0.007326
V	51	3	He	125.795	1.4788	108453.59	0.0117	0.007326
Cr	52	3	He	63.757	0.9962	74903.39	0.0152	0.02538
Cr	52	3	He	62.413	0.9758	72097.47	0.0152	0.02538
Cr	52	3	He	64.939	1.0142	74380.37	0.0152	0.02538
Mn	55	3	He	714.564	4.2315	318154.45	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	715.939	4.2396	313260.37	0.0059	0.01385
Mn	55	3	He	725.356	4.2952	314996.23	0.0059	0.01385
Fe	57	3	He	61294.758	17.7619	1335464.04	0.0003	0.003918
Fe	57	3	He	61317.74	17.7686	1312894.82	0.0003	0.003918
Fe	57	3	He	62275.016	18.0459	1323426.07	0.0003	0.003918
Co	59	3	He	19.144	0.5872	44147.88	0.0305	0.003084
Co	59	3	He	18.962	0.5816	42974.57	0.0305	0.003084
Co	59	3	He	19.544	0.5994	43957.65	0.0305	0.003084
Ni	60	3	He	42.642	0.384	28869.30	0.0088	0.009003
Ni	60	3	He	42.083	0.3791	28007.79	0.0088	0.009003
Ni	60	3	He	42.486	0.3826	28058.18	0.0088	0.009003
Cu	63	3	He	61.999	1.551	116616.10	0.0249	0.004937
Cu	63	3	He	62.349	1.5597	115246.24	0.0249	0.004937
Cu	63	3	He	61.904	1.5487	113572.91	0.0249	0.004937
Zn	66	3	He	112.889	0.2822	21216.08	0.0025	0.004836
Zn	66	3	He	110.77	0.277	20465.02	0.0025	0.004836
Zn	66	3	He	112.507	0.2812	20625.16	0.0025	0.004836
As	75	3	He	10.656	0.019	1426.08	0.0017	0.0004347
As	75	3	He	10.396	0.0185	1368.08	0.0017	0.0004347
As	75	3	He	11.009	0.0196	1436.08	0.0017	0.0004347
Sr	88	3	He	46.611	0.3651	23530.05	0.0078	0.0007762
Sr	88	3	He	45.988	0.3603	23249.64	0.0078	0.0007762
Sr	88	3	He	45.438	0.356	22869.03	0.0078	0.0007762
Mo	98	3	He	0.893	0.0202	1300.11	0.022	0.0005162
Mo	98	3	He	0.8	0.0181	1170.09	0.022	0.0005162
Mo	98	3	He	0.683	0.0156	1000.07	0.022	0.0005162
Ag	107	3	He	0.099	0.005	320.02	0.0455	0.0004641
Ag	107	3	He	0.129	0.0064	410.02	0.0455	0.0004641
Ag	107	3	He	0.11	0.0054	350.02	0.0455	0.0004641
Cd	111	3	He	0.474	0.0023	150.00	0.0048	5.152E-05
Cd	111	3	He	0.661	0.0032	208.00	0.0048	5.152E-05
Cd	111	3	He	0.703	0.0034	220.00	0.0048	5.152E-05
Sn	120	3	He	4.197	0.0754	4860.99	0.0143	0.01559
Sn	120	3	He	3.809	0.0699	4510.91	0.0143	0.01559
Sn	120	3	He	3.624	0.0673	4320.78	0.0143	0.01559
Sb	121	3	He	1.093	0.0138	890.06	0.0124	0.000258
Sb	121	3	He	1.016	0.0129	830.06	0.0124	0.000258
Sb	121	3	He	1.134	0.0143	920.07	0.0124	0.000258
Ba	137	3	He	202.75	0.8873	57179.13	0.0044	0.000309
Ba	137	3	He	201.998	0.884	57048.91	0.0044	0.000309
Ba	137	3	He	203.121	0.8889	57108.71	0.0044	0.000309
Tl	205	3	He	0.443	0.0132	3020.47	0.0276	0.001005
Tl	205	3	He	0.394	0.0119	2620.38	0.0276	0.001005
Tl	205	3	He	0.421	0.0126	2830.41	0.0276	0.001005
Pb	208	3	He	42.932	1.5648	191422.93	0.0364	0.002176
Pb	208	3	He	43.739	1.5942	187433.59	0.0364	0.002176
Pb	208	3	He	43.364	1.5805	188085.23	0.0364	0.002176
U	238	3	He	2.971	0.1252	28552.41	0.0421	0.00024
U	238	3	He	2.962	0.1249	27480.21	0.0421	0.00024
U	238	3	He	2.956	0.1246	27910.92	0.0421	0.00024
Sc	45	1	No Gas			3566695.57		
Sc	45	1	No Gas			3484342.76		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3482557.76		
Ge	72	1	No Gas			1498552.48		
Ge	72	1	No Gas			1469075.45		
Ge	72	1	No Gas			1456757.48		
Sc	45	2	H2			205127.77		
Sc	45	2	H2			214832.87		
Sc	45	2	H2			206058.10		
Ge	72	2	H2			158505.61		
Ge	72	2	H2			167859.41		
Ge	72	2	H2			159059.36		
In	115	2	H2			429260.50		
In	115	2	H2			447985.07		
In	115	2	H2			440267.53		
Sc	45	3	He			44558.58		
Sc	45	3	He			43575.33		
Sc	45	3	He			44458.46		
Ge	72	3	He			75186.97		
Ge	72	3	He			73888.62		
Ge	72	3	He			73336.65		
In	115	3	He			64479.77		
In	115	3	He			64569.39		
In	115	3	He			64278.68		
Tb	159	3	He			301368.96		
Tb	159	3	He			298505.64		
Tb	159	3	He			300454.78		
Bi	209	3	He			228023.20		
Bi	209	3	He			220103.38		
Bi	209	3	He			224023.06		

Quantitation Report

Data File Name	257SMPL.d
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Acq Time	2023-08-10 19:27:14
Sample Name	410-136577-H-25-A @10
Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

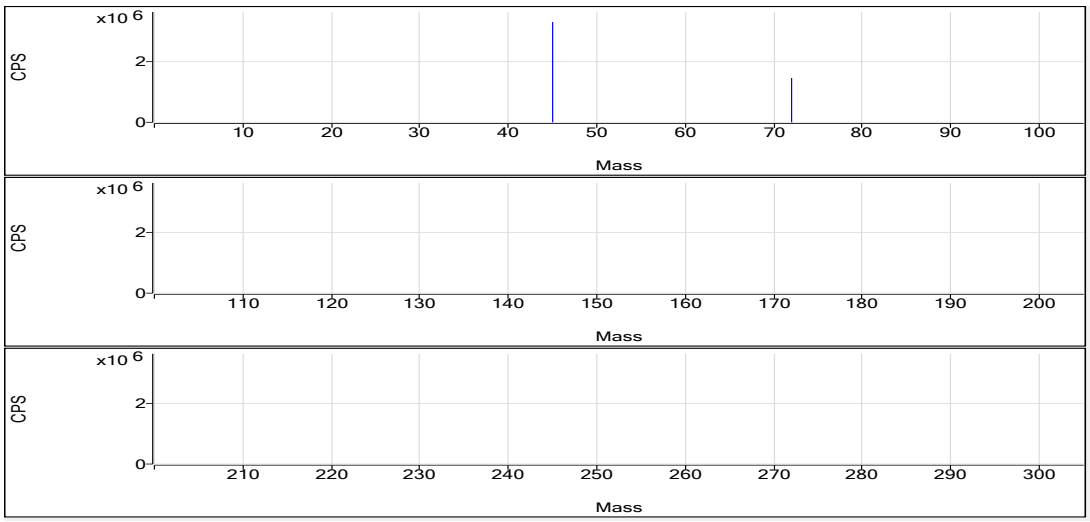
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.506	ppb	9.8	1036.04	0.0007	Pulse	0.5000	3
Se	78	72	H2	0.128	ppb	7.2	9.78	0.0001	Pulse	1.5000	3
Na	23	72	He	346.198	ppb	1.2	51847.47	0.7012	Pulse	0.1000	3
Mg	24	72	He	3517.641	ppb	0.8	219662.33	2.9706	Pulse	0.1000	3
Al	27	72	He	8540.243	ppb	1.7	152510.44	2.0626	Pulse	0.1000	3
K	39	72	He	1314.143	ppb	1.6	64284.41	0.8693	Pulse	0.1000	3
Ca	44	72	He	2920.322	ppb	4.3	6825.17	0.0923	Pulse	0.1000	3
Ti	47	72	He	526.543	ppb	5.6	9783.61	0.1323	Pulse	0.1000	3
V	51	72	He	26.690	ppb	0.4	23627.73	0.3195	Pulse	0.5000	3
Cr	52	72	He	13.761	ppb	4.7	17370.80	0.2349	Pulse	0.1000	3
Mn	55	72	He	153.894	ppb	2.2	68190.23	0.9222	Pulse	0.1000	3
Fe	57	72	He	13149.604	ppb	0.1	281988.32	3.8136	Pulse	0.1000	3
Co	59	72	He	4.134	ppb	2.5	9553.44	0.1292	Pulse	0.1000	3
Ni	60	72	He	9.987	ppb	3.0	7158.69	0.0968	Pulse	0.1000	3
Cu	63	72	He	13.290	ppb	2.0	24868.74	0.3363	Pulse	0.1000	3
Zn	66	72	He	30.716	ppb	5.0	5938.10	0.0803	Pulse	0.1000	3
As	75	72	He	2.606	ppb	9.6	367.34	0.0050	Pulse	0.5000	3
Sr	88	115	He	9.728	ppb	4.5	4994.37	0.0768	Pulse	0.1000	3
Mo	98	115	He	0.203	ppb	18.1	323.35	0.0050	Pulse	0.1000	3
Ag	107	115	He	0.021	ppb	73.4	93.34	0.0014	Pulse	0.1000	3
Cd	111	115	He	0.122	ppb	20.8	41.33	0.0006	Pulse	0.5000	3
Sn	120	115	He	0.947	ppb	16.5	1890.20	0.0291	Pulse	0.1000	3
Sb	121	115	He	0.293	ppb	18.7	253.35	0.0039	Pulse	0.1000	3
Ba	137	115	He	43.299	ppb	2.5	12332.57	0.1897	Pulse	0.1000	3
Tl	205	209	He	0.104	ppb	15.1	866.74	0.0039	Pulse	0.1000	3
Pb	208	209	He	9.791	ppb	1.1	79877.40	0.3586	Pulse	0.1000	3
U	238	209	He	0.638	ppb	4.6	6034.98	0.0271	Pulse	0.1000	3

ISTD Table:

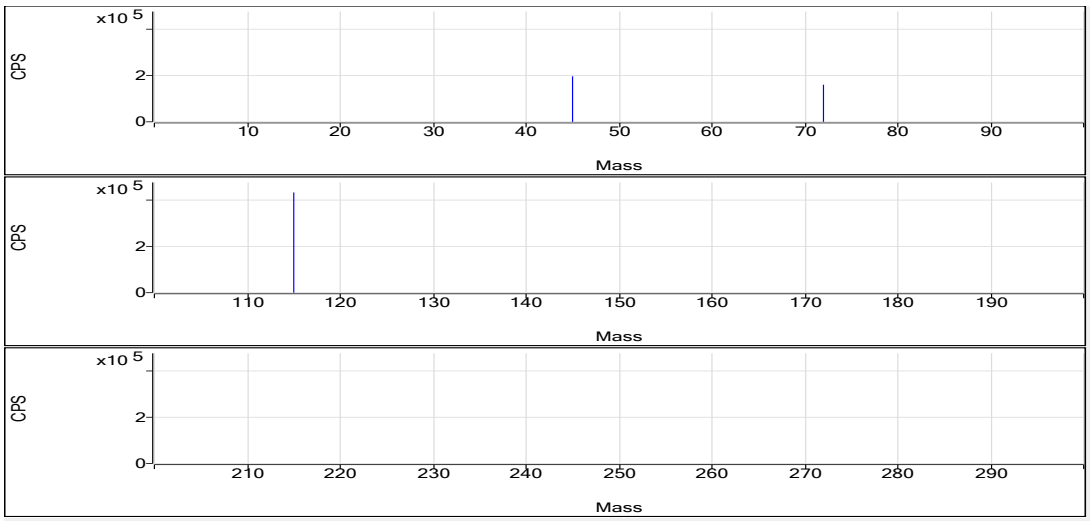
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3296249.64	2.4	101.7	Pulse	0.1000	3
No Gas	Ge	72	1457237.74	1.8	101.2	Pulse	0.1000	3
H2	Sc	45	197455.24	0.9	101.1	Pulse	0.1000	3
H2	Ge	72	161176.82	2.0	98.9	Pulse	0.1000	3
H2	In	115	435121.31	1.9	100.4	Pulse	0.1000	3
He	Sc	45	41285.58	1.2	103.3	Pulse	0.1000	3
He	Ge	72	73943.90	0.5	102.3	Pulse	0.1000	3
He	In	115	65003.18	0.4	100.6	Pulse	0.1000	3
He	Tb	159	287345.06	0.4	100.5	Pulse	0.1000	3
He	Bi	209	222768.17	0.4	100.3	Pulse	0.1000	3

No Gas

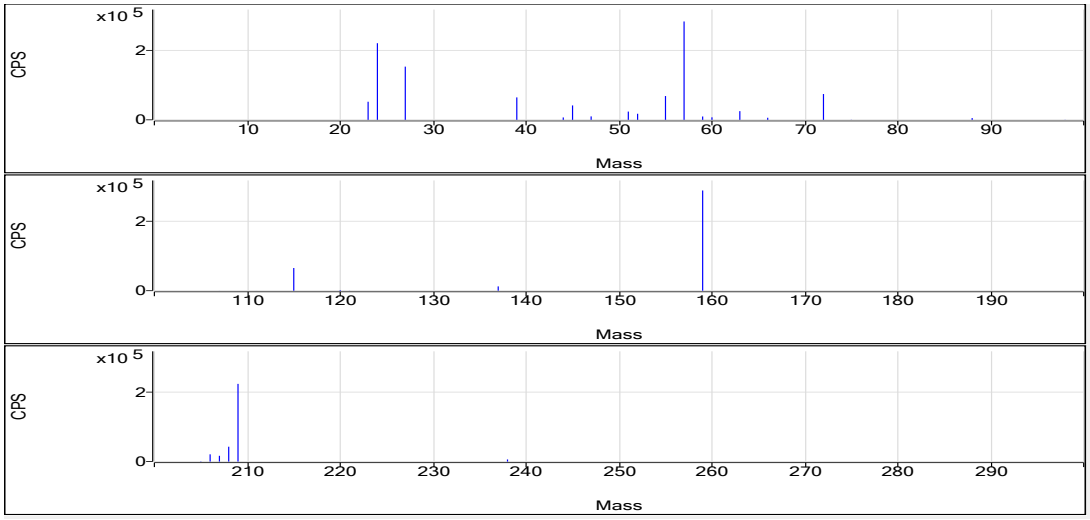


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.455	0.0006	956.04	0.0013	4.694E-05
Be	9	1	No Gas	0.509	0.0007	1044.04	0.0013	4.694E-05
Be	9	1	No Gas	0.554	0.0008	1108.05	0.0013	4.694E-05
Se	78	2	H2	0.134	0.0001	10.00	0.0004	1.089E-05
Se	78	2	H2	0.117	0.0001	9.33	0.0004	1.089E-05
Se	78	2	H2	0.133	0.0001	10.00	0.0004	1.089E-05
Na	23	3	He	349.618	0.707	52171.98	0.0017	0.1065
Na	23	3	He	347.455	0.7033	52322.26	0.0017	0.1065
Na	23	3	He	341.521	0.6931	51048.16	0.0017	0.1065
Mg	24	3	He	3503.285	2.9585	218304.18	0.0008	0.004846
Mg	24	3	He	3551.118	2.9988	223090.11	0.0008	0.004846
Mg	24	3	He	3498.522	2.9545	217592.71	0.0008	0.004846
Al	27	3	He	8517.161	2.0571	151789.19	0.0002	0.001063
Al	27	3	He	8405.925	2.0302	151033.29	0.0002	0.001063
Al	27	3	He	8697.644	2.1006	154708.85	0.0002	0.001063
K	39	3	He	1311.518	0.8679	64040.22	0.0006	0.1436
K	39	3	He	1336.891	0.8819	65606.42	0.0006	0.1436
K	39	3	He	1294.02	0.8582	63206.59	0.0006	0.1436
Ca	44	3	He	2990.105	0.0945	6971.87	0	0.001611
Ca	44	3	He	2774.931	0.0878	6531.71	0	0.001611
Ca	44	3	He	2995.931	0.0947	6971.92	0	0.001611
Ti	47	3	He	560.601	0.1409	10394.05	0.0003	0.0002737
Ti	47	3	He	509.91	0.1281	9533.38	0.0003	0.0002737
Ti	47	3	He	509.119	0.128	9423.41	0.0003	0.0002737
V	51	3	He	26.681	0.3194	23570.96	0.0117	0.007326
V	51	3	He	26.579	0.3182	23675.18	0.0117	0.007326
V	51	3	He	26.81	0.3209	23637.06	0.0117	0.007326
Cr	52	3	He	13.116	0.2251	16609.93	0.0152	0.02538
Cr	52	3	He	13.765	0.235	17480.91	0.0152	0.02538
Cr	52	3	He	14.403	0.2447	18021.57	0.0152	0.02538
Mn	55	3	He	150.436	0.9018	66542.52	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	153.955	0.9226	68632.13	0.0059	0.01385
Mn	55	3	He	157.291	0.9423	69396.04	0.0059	0.01385
Fe	57	3	He	13137.475	3.81	281140.84	0.0003	0.003918
Fe	57	3	He	13145.287	3.8123	283609.02	0.0003	0.003918
Fe	57	3	He	13166.048	3.8183	281215.11	0.0003	0.003918
Co	59	3	He	4.031	0.1261	9303.24	0.0305	0.003084
Co	59	3	He	4.134	0.1292	9613.51	0.0305	0.003084
Co	59	3	He	4.235	0.1323	9743.56	0.0305	0.003084
Ni	60	3	He	10.245	0.0991	7312.13	0.0088	0.009003
Ni	60	3	He	9.665	0.094	6991.92	0.0088	0.009003
Ni	60	3	He	10.051	0.0974	7172.03	0.0088	0.009003
Cu	63	3	He	13.455	0.3405	25122.57	0.0249	0.004937
Cu	63	3	He	12.982	0.3287	24451.29	0.0249	0.004937
Cu	63	3	He	13.432	0.3399	25032.35	0.0249	0.004937
Zn	66	3	He	31.744	0.0828	6111.51	0.0025	0.004836
Zn	66	3	He	31.47	0.0822	6111.47	0.0025	0.004836
Zn	66	3	He	28.933	0.0759	5591.31	0.0025	0.004836
As	75	3	He	2.322	0.0045	330.01	0.0017	0.0004347
As	75	3	He	2.703	0.0051	382.01	0.0017	0.0004347
As	75	3	He	2.795	0.0053	390.01	0.0017	0.0004347
Sr	88	3	He	10.229	0.0807	5271.10	0.0078	0.0007762
Sr	88	3	He	9.556	0.0755	4901.02	0.0078	0.0007762
Sr	88	3	He	9.401	0.0743	4810.98	0.0078	0.0007762
Mo	98	3	He	0.171	0.0043	280.01	0.022	0.0005162
Mo	98	3	He	0.193	0.0048	310.02	0.022	0.0005162
Mo	98	3	He	0.243	0.0059	380.02	0.022	0.0005162
Ag	107	3	He	0.003	0.0006	40.00	0.0455	0.0004641
Ag	107	3	He	0.03	0.0018	120.01	0.0455	0.0004641
Ag	107	3	He	0.031	0.0019	120.00	0.0455	0.0004641
Cd	111	3	He	0.149	0.0008	50.00	0.0048	5.152E-05
Cd	111	3	He	0.118	0.0006	40.00	0.0048	5.152E-05
Cd	111	3	He	0.099	0.0005	34.00	0.0048	5.152E-05
Sn	120	3	He	0.776	0.0267	1740.18	0.0143	0.01559
Sn	120	3	He	0.981	0.0296	1920.20	0.0143	0.01559
Sn	120	3	He	1.083	0.031	2010.22	0.0143	0.01559
Sb	121	3	He	0.35	0.0046	300.02	0.0124	0.000258
Sb	121	3	He	0.24	0.0032	210.01	0.0124	0.000258
Sb	121	3	He	0.29	0.0039	250.01	0.0124	0.000258
Ba	137	3	He	42.102	0.1845	12045.65	0.0044	0.000309
Ba	137	3	He	43.564	0.1909	12395.98	0.0044	0.000309
Ba	137	3	He	44.232	0.1938	12556.09	0.0044	0.000309
Tl	205	3	He	0.089	0.0035	770.06	0.0276	0.001005
Tl	205	3	He	0.12	0.0043	960.09	0.0276	0.001005
Tl	205	3	He	0.104	0.0039	870.06	0.0276	0.001005
Pb	208	3	He	9.802	0.359	42509.37	0.0364	0.002176
Pb	208	3	He	9.675	0.3543	41134.64	0.0364	0.002176
Pb	208	3	He	9.897	0.3624	44114.74	0.0364	0.002176
U	238	3	He	0.628	0.0267	5941.55	0.0421	0.00024
U	238	3	He	0.615	0.0261	5791.48	0.0421	0.00024
U	238	3	He	0.671	0.0285	6371.92	0.0421	0.00024
Sc	45	1	No Gas			3376019.01		
Sc	45	1	No Gas			3296573.08		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3216156.83		
Ge	72	1	No Gas			1482601.85		
Ge	72	1	No Gas			1458873.88		
Ge	72	1	No Gas			1430237.48		
Sc	45	2	H2			196570.68		
Sc	45	2	H2			199413.02		
Sc	45	2	H2			196382.01		
Ge	72	2	H2			158937.61		
Ge	72	2	H2			164906.09		
Ge	72	2	H2			159686.76		
In	115	2	H2			430687.10		
In	115	2	H2			444514.06		
In	115	2	H2			430162.77		
Sc	45	3	He			40817.31		
Sc	45	3	He			41770.35		
Sc	45	3	He			41269.07		
Ge	72	3	He			73789.53		
Ge	72	3	He			74393.15		
Ge	72	3	He			73649.01		
In	115	3	He			65302.53		
In	115	3	He			64951.64		
In	115	3	He			64799.60		
Tb	159	3	He			287094.00		
Tb	159	3	He			288544.19		
Tb	159	3	He			286396.99		
Bi	209	3	He			222807.22		
Bi	209	3	He			221787.50		
Bi	209	3	He			223709.78		

Quantitation Report

Data File Name	258SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 19:29:14
Sample Name	410-136577-H-23-A @2
Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

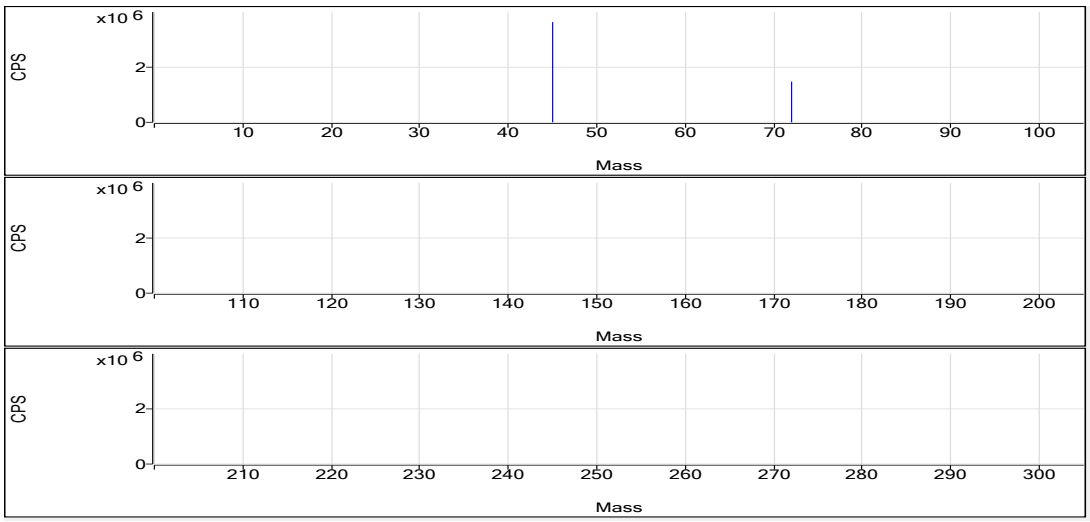
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	3.268	ppb	5.2	6349.37	0.0043	Pulse	0.5000	3
Se	78	72	H2	0.131	ppb	67.7	10.00	0.0001	Pulse	1.5000	3
Na	23	72	He	2055.453	ppb	1.6	271964.58	3.6374	Pulse	0.1000	3
Mg	24	72	He	23431.700	ppb	1.9	1477408.26	19.7601	Pulse	0.1000	3
Al	27	72	He	53512.262	ppb	2.1	965874.18	12.9186	Pulse	0.1000	3
K	39	72	He	10051.693	ppb	1.8	425753.48	5.6943	Pulse	0.1000	3
Ca	44	72	He	17026.985	ppb	3.0	39658.00	0.5305	Pulse	0.1000	3
Ti	47	72	He	4381.287	ppb	2.8	82166.80	1.0990	Pulse	0.1000	3
V	51	72	He	189.264	ppb	1.9	166080.02	2.2213	Pulse	0.5000	3
Cr	52	72	He	107.431	ppb	1.7	124212.14	1.6613	Pulse	0.1000	3
Mn	55	72	He	1359.619	ppb	2.4	601015.32	8.0389	Pulse	0.1000	3
Fe	57	72	He	90285.605	ppb	2.6	1955854.92	26.1610	Pulse	0.1000	3
Co	59	72	He	35.162	ppb	1.8	80442.57	1.0759	Pulse	0.1000	3
Ni	60	72	He	75.687	ppb	2.0	50438.55	0.6745	Pulse	0.1000	3
Cu	63	72	He	71.312	ppb	3.2	133312.69	1.7832	Pulse	0.1000	3
Zn	66	72	He	157.219	ppb	4.4	29233.55	0.3911	Pulse	0.1000	3
As	75	72	He	9.442	ppb	4.0	1260.06	0.0169	Pulse	0.5000	3
Sr	88	115	He	79.864	ppb	2.2	39886.77	0.6251	Pulse	0.1000	3
Mo	98	115	He	0.740	ppb	8.1	1073.41	0.0168	Pulse	0.1000	3
Ag	107	115	He	0.148	ppb	15.7	460.02	0.0072	Pulse	0.1000	3
Cd	111	115	He	0.320	ppb	15.0	101.33	0.0016	Pulse	0.5000	3
Sn	120	115	He	4.580	ppb	4.8	5161.16	0.0809	Pulse	0.1000	3
Sb	121	115	He	0.805	ppb	5.9	653.37	0.0102	Pulse	0.1000	3
Ba	137	115	He	239.378	ppb	0.6	66859.51	1.0475	Pulse	0.1000	3
Tl	205	209	He	0.569	ppb	3.2	3697.31	0.0167	Pulse	0.1000	3
Pb	208	209	He	26.937	ppb	1.5	216998.12	0.9826	Pulse	0.1000	3
U	238	209	He	5.804	ppb	2.2	53969.75	0.2444	Pulse	0.1000	3

ISTD Table:

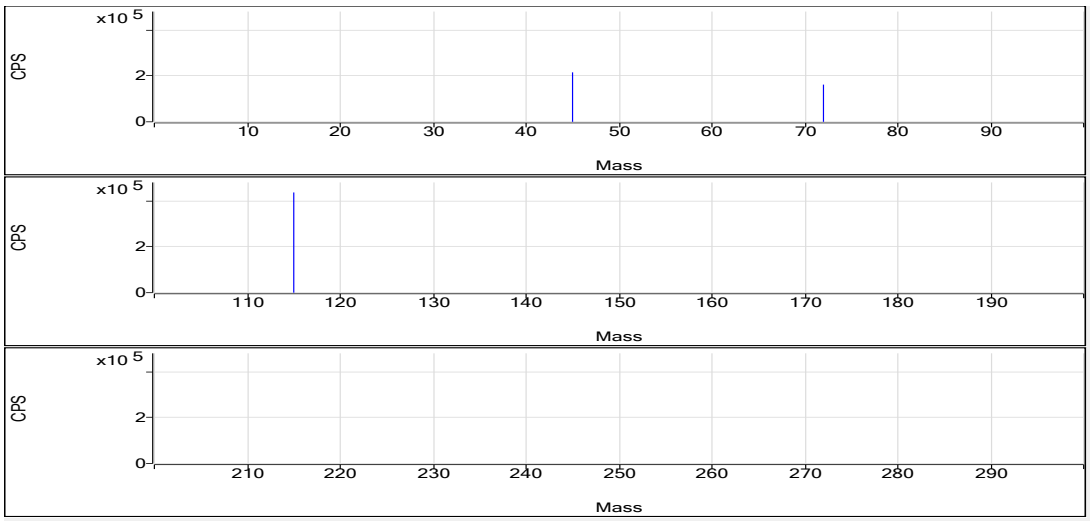
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3602812.34	0.6	111.2	Pulse	0.1000	3
No Gas	Ge	72	1463003.68	1.2	101.6	Pulse	0.1000	3
H2	Sc	45	215594.29	2.8	110.3	Pulse	0.1000	3
H2	Ge	72	162134.63	1.9	99.5	Pulse	0.1000	3
H2	In	115	436808.91	1.1	100.8	Pulse	0.1000	3
He	Sc	45	45946.17	1.7	114.9	Pulse	0.1000	3
He	Ge	72	74781.17	1.5	103.4	Pulse	0.1000	3
He	In	115	63825.50	1.6	98.8	Pulse	0.1000	3
He	Tb	159	306310.42	0.8	107.1	Pulse	0.1000	3
He	Bi	209	220850.49	1.2	99.4	Pulse	0.1000	3

No Gas

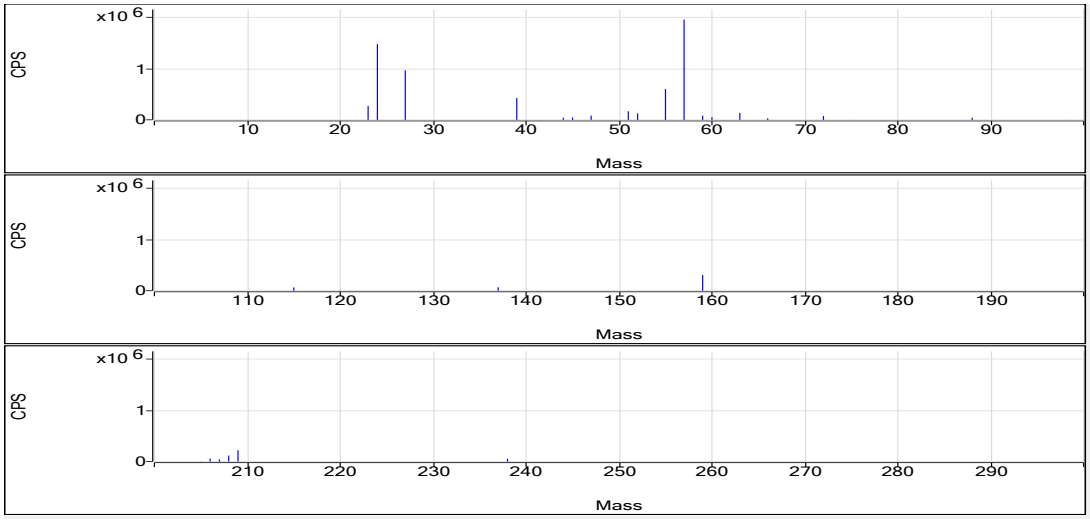


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	3.076	0.0041	6007.23	0.0013	4.694E-05
Be	9	1	No Gas	3.334	0.0044	6537.44	0.0013	4.694E-05
Be	9	1	No Gas	3.392	0.0045	6503.43	0.0013	4.694E-05
Se	78	2	H2	0.21	0.0001	14.67	0.0004	1.089E-05
Se	78	2	H2	0.15	0.0001	11.33	0.0004	1.089E-05
Se	78	2	H2	0.035	0	4.00	0.0004	1.089E-05
Na	23	3	He	2025.823	3.5865	271671.38	0.0017	0.1065
Na	23	3	He	2049.802	3.6277	272095.05	0.0017	0.1065
Na	23	3	He	2090.735	3.698	272127.32	0.0017	0.1065
Mg	24	3	He	23041.945	19.4315	1471924.67	0.0008	0.004846
Mg	24	3	He	23326.086	19.6711	1475448.42	0.0008	0.004846
Mg	24	3	He	23927.069	20.1778	1484851.70	0.0008	0.004846
Al	27	3	He	52480.907	12.6696	959716.16	0.0002	0.001063
Al	27	3	He	53377.355	12.886	966529.13	0.0002	0.001063
Al	27	3	He	54678.523	13.2001	971377.25	0.0002	0.001063
K	39	3	He	9868.081	5.5929	423658.70	0.0006	0.1436
K	39	3	He	10051.015	5.6939	427078.12	0.0006	0.1436
K	39	3	He	10235.984	5.7961	426523.63	0.0006	0.1436
Ca	44	3	He	16743.085	0.5216	39514.50	0	0.001611
Ca	44	3	He	16715.748	0.5208	39063.04	0	0.001611
Ca	44	3	He	17622.121	0.549	40396.47	0	0.001611
Ti	47	3	He	4241.382	1.0639	80591.46	0.0003	0.0002737
Ti	47	3	He	4439.004	1.1135	83517.84	0.0003	0.0002737
Ti	47	3	He	4463.476	1.1196	82391.11	0.0003	0.0002737
V	51	3	He	186.593	2.19	165893.77	0.0117	0.007326
V	51	3	He	187.809	2.2043	165332.73	0.0117	0.007326
V	51	3	He	193.391	2.2696	167013.56	0.0117	0.007326
Cr	52	3	He	106.434	1.6461	124689.93	0.0152	0.02538
Cr	52	3	He	106.322	1.6444	123337.75	0.0152	0.02538
Cr	52	3	He	109.536	1.6933	124608.75	0.0152	0.02538
Mn	55	3	He	1332.711	7.8801	596909.60	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1349.478	7.979	598474.87	0.0059	0.01385
Mn	55	3	He	1396.667	8.2576	607661.48	0.0059	0.01385
Fe	57	3	He	88421.32	25.6209	1940761.22	0.0003	0.003918
Fe	57	3	He	89520.4	25.9393	1945599.03	0.0003	0.003918
Fe	57	3	He	92915.094	26.9228	1981204.50	0.0003	0.003918
Co	59	3	He	34.814	1.0653	80694.22	0.0305	0.003084
Co	59	3	He	34.787	1.0644	79839.52	0.0305	0.003084
Co	59	3	He	35.884	1.0979	80793.98	0.0305	0.003084
Ni	60	3	He	74.067	0.6603	50017.19	0.0088	0.009003
Ni	60	3	He	77.154	0.6874	51562.43	0.0088	0.009003
Ni	60	3	He	75.838	0.6759	49736.04	0.0088	0.009003
Cu	63	3	He	69.718	1.7435	132068.65	0.0249	0.004937
Cu	63	3	He	70.335	1.7589	131926.99	0.0249	0.004937
Cu	63	3	He	73.882	1.8473	135942.44	0.0249	0.004937
Zn	66	3	He	151.977	0.3782	28649.01	0.0025	0.004836
Zn	66	3	He	154.59	0.3846	28849.43	0.0025	0.004836
Zn	66	3	He	165.089	0.4104	30202.22	0.0025	0.004836
As	75	3	He	9.087	0.0162	1230.06	0.0017	0.0004347
As	75	3	He	9.394	0.0168	1258.06	0.0017	0.0004347
As	75	3	He	9.846	0.0176	1292.07	0.0017	0.0004347
Sr	88	3	He	81.144	0.6351	40157.33	0.0078	0.0007762
Sr	88	3	He	80.574	0.6306	39877.05	0.0078	0.0007762
Sr	88	3	He	77.874	0.6095	39625.94	0.0078	0.0007762
Mo	98	3	He	0.738	0.0168	1060.08	0.022	0.0005162
Mo	98	3	He	0.68	0.0155	980.07	0.022	0.0005162
Mo	98	3	He	0.801	0.0182	1180.08	0.022	0.0005162
Ag	107	3	He	0.129	0.0063	400.02	0.0455	0.0004641
Ag	107	3	He	0.174	0.0084	530.03	0.0455	0.0004641
Ag	107	3	He	0.142	0.0069	450.02	0.0455	0.0004641
Cd	111	3	He	0.266	0.0013	84.00	0.0048	5.152E-05
Cd	111	3	He	0.358	0.0018	112.00	0.0048	5.152E-05
Cd	111	3	He	0.335	0.0017	108.00	0.0048	5.152E-05
Sn	120	3	He	4.809	0.0842	5321.25	0.0143	0.01559
Sn	120	3	He	4.565	0.0807	5101.11	0.0143	0.01559
Sn	120	3	He	4.367	0.0778	5061.12	0.0143	0.01559
Sb	121	3	He	0.782	0.01	630.04	0.0124	0.000258
Sb	121	3	He	0.859	0.0109	690.04	0.0124	0.000258
Sb	121	3	He	0.773	0.0098	640.04	0.0124	0.000258
Ba	137	3	He	237.969	1.0414	65847.79	0.0044	0.000309
Ba	137	3	He	240.797	1.0537	66632.05	0.0044	0.000309
Ba	137	3	He	239.366	1.0475	68098.68	0.0044	0.000309
Tl	205	3	He	0.551	0.0162	3550.59	0.0276	0.001005
Tl	205	3	He	0.588	0.0173	3860.69	0.0276	0.001005
Tl	205	3	He	0.568	0.0167	3680.66	0.0276	0.001005
Pb	208	3	He	26.896	0.9811	115209.41	0.0364	0.002176
Pb	208	3	He	26.545	0.9684	116592.27	0.0364	0.002176
Pb	208	3	He	27.37	0.9984	119054.09	0.0364	0.002176
U	238	3	He	5.883	0.2477	54133.87	0.0421	0.00024
U	238	3	He	5.656	0.2382	53260.14	0.0421	0.00024
U	238	3	He	5.873	0.2473	54515.24	0.0421	0.00024
Sc	45	1	No Gas			3605165.26		
Sc	45	1	No Gas			3622300.26		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3580971.51		
Ge	72	1	No Gas			1469062.95		
Ge	72	1	No Gas			1476227.79		
Ge	72	1	No Gas			1443720.29		
Sc	45	2	H2			208895.68		
Sc	45	2	H2			217300.91		
Sc	45	2	H2			220586.29		
Ge	72	2	H2			158628.55		
Ge	72	2	H2			163580.11		
Ge	72	2	H2			164195.23		
In	115	2	H2			436755.62		
In	115	2	H2			441532.02		
In	115	2	H2			432139.10		
Sc	45	3	He			46825.43		
Sc	45	3	He			45300.64		
Sc	45	3	He			45712.45		
Ge	72	3	He			75749.23		
Ge	72	3	He			75005.87		
Ge	72	3	He			73588.40		
In	115	3	He			63273.08		
In	115	3	He			63273.19		
In	115	3	He			65051.02		
Tb	159	3	He			307838.98		
Tb	159	3	He			303555.44		
Tb	159	3	He			307536.85		
Bi	209	3	He			218514.41		
Bi	209	3	He			223603.94		
Bi	209	3	He			220433.12		

Quantitation Report

Data File Name	259SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 19:31:14
Sample Name	410-136577-H-23-A @10
Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

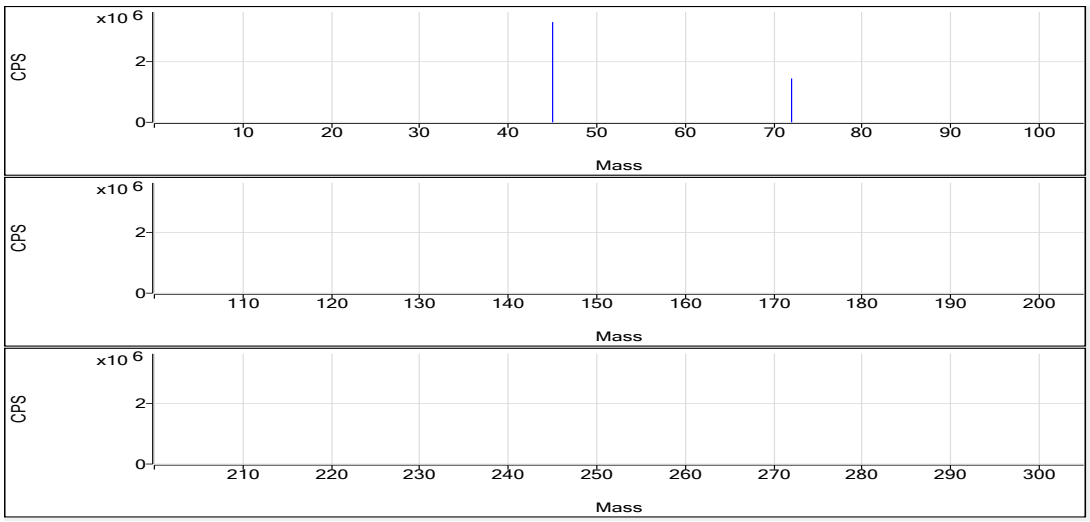
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.734	ppb	3.7	1461.42	0.0010	Pulse	0.5000	3
Se	78	72	H2	0.039	ppb	38.2	4.22	0.0000	Pulse	1.5000	3
Na	23	72	He	433.793	ppb	2.1	62558.53	0.8516	Pulse	0.1000	3
Mg	24	72	He	5170.504	ppb	1.8	320556.18	4.3641	Pulse	0.1000	3
Al	27	72	He	11844.135	ppb	0.8	210104.50	2.8602	Pulse	0.1000	3
K	39	72	He	2204.380	ppb	4.0	99954.95	1.3609	Pulse	0.1000	3
Ca	44	72	He	3771.356	ppb	1.2	8722.90	0.1187	Pulse	0.1000	3
Ti	47	72	He	953.961	ppb	0.8	17594.41	0.2395	Pulse	0.1000	3
V	51	72	He	41.799	ppb	1.5	36454.53	0.4963	Pulse	0.5000	3
Cr	52	72	He	24.194	ppb	3.1	28922.85	0.3938	Pulse	0.1000	3
Mn	55	72	He	300.860	ppb	2.7	131446.35	1.7897	Pulse	0.1000	3
Fe	57	72	He	19770.636	ppb	1.7	421018.16	5.7318	Pulse	0.1000	3
Co	59	72	He	7.742	ppb	3.0	17574.47	0.2393	Pulse	0.1000	3
Ni	60	72	He	18.048	ppb	2.5	12319.00	0.1677	Pulse	0.1000	3
Cu	63	72	He	16.036	ppb	3.7	29731.22	0.4048	Pulse	0.1000	3
Zn	66	72	He	35.797	ppb	2.7	6815.19	0.0928	Pulse	0.1000	3
As	75	72	He	2.262	ppb	9.1	320.67	0.0044	Pulse	0.5000	3
Sr	88	115	He	17.855	ppb	2.2	8873.02	0.1403	Pulse	0.1000	3
Mo	98	115	He	0.159	ppb	33.5	253.34	0.0040	Pulse	0.1000	3
Ag	107	115	He	0.025	ppb	84.7	100.00	0.0016	Pulse	0.1000	3
Cd	111	115	He	0.095	ppb	14.0	32.00	0.0005	Pulse	0.5000	3
Sn	120	115	He	1.159	ppb	2.7	2030.23	0.0321	Pulse	0.1000	3
Sb	121	115	He	0.213	ppb	28.4	183.34	0.0029	Pulse	0.1000	3
Ba	137	115	He	51.684	ppb	4.9	14314.48	0.2264	Pulse	0.1000	3
Tl	205	209	He	0.131	ppb	9.4	1030.08	0.0046	Pulse	0.1000	3
Pb	208	209	He	6.285	ppb	2.2	51468.18	0.2309	Pulse	0.1000	3
U	238	209	He	1.250	ppb	4.7	11765.78	0.0528	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3303386.51	1.0	101.9	Pulse	0.1000	3
No Gas	Ge	72	1444817.69	0.9	100.3	Pulse	0.1000	3
H2	Sc	45	199764.69	3.2	102.2	Pulse	0.1000	3
H2	Ge	72	160711.36	1.7	98.6	Pulse	0.1000	3
H2	In	115	433096.10	1.2	100.0	Pulse	0.1000	3
He	Sc	45	41653.13	1.7	104.2	Pulse	0.1000	3
He	Ge	72	73463.84	1.3	101.6	Pulse	0.1000	3
He	In	115	63221.17	0.2	97.9	Pulse	0.1000	3
He	Tb	159	288322.85	0.7	100.8	Pulse	0.1000	3
He	Bi	209	222855.44	1.2	100.3	Pulse	0.1000	3

No Gas



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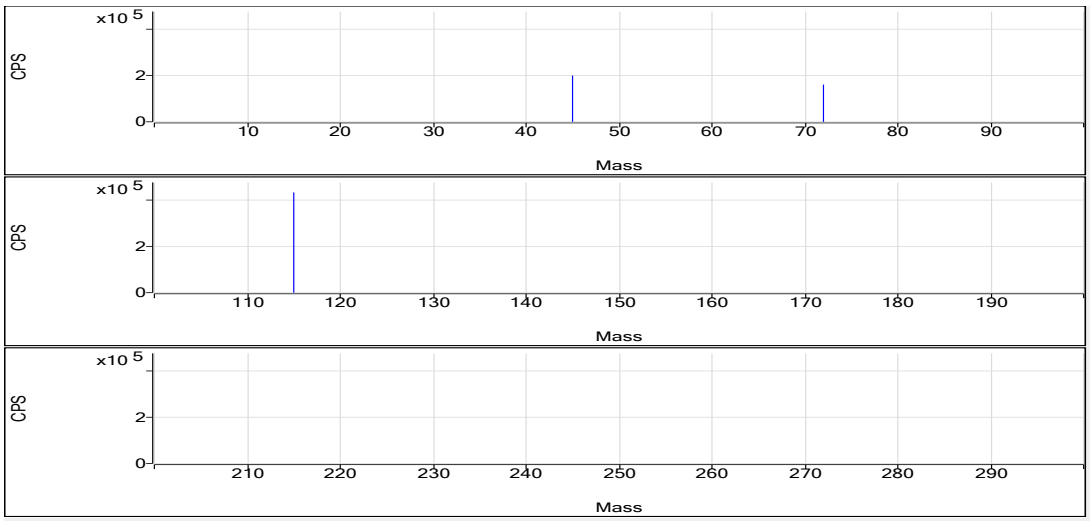
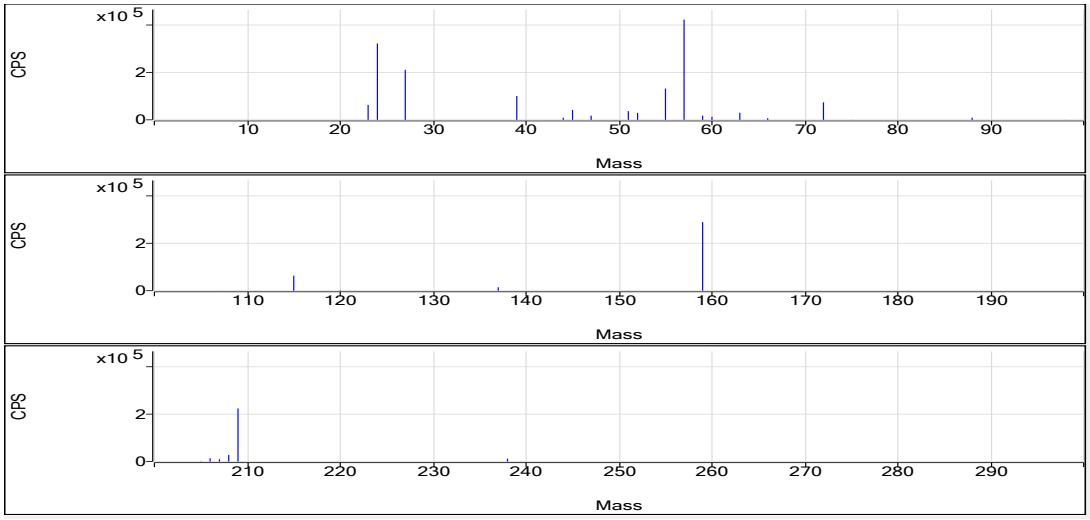


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.714	0.001	1438.08	0.0013	4.694E-05
Be	9	1	No Gas	0.724	0.001	1436.08	0.0013	4.694E-05
Be	9	1	No Gas	0.765	0.0011	1510.09	0.0013	4.694E-05
Se	78	2	H2	0.036	0	4.00	0.0004	1.089E-05
Se	78	2	H2	0.056	0	5.33	0.0004	1.089E-05
Se	78	2	H2	0.026	0	3.33	0.0004	1.089E-05
Na	23	3	He	444.42	0.8699	63305.18	0.0017	0.1065
Na	23	3	He	427.861	0.8414	61496.76	0.0017	0.1065
Na	23	3	He	429.097	0.8436	62873.66	0.0017	0.1065
Mg	24	3	He	5244.88	4.4268	322156.05	0.0008	0.004846
Mg	24	3	He	5197.675	4.387	320623.47	0.0008	0.004846
Mg	24	3	He	5068.957	4.2785	318889.02	0.0008	0.004846
Al	27	3	He	11907.881	2.8756	209265.17	0.0002	0.001063
Al	27	3	He	11890.705	2.8714	209856.05	0.0002	0.001063
Al	27	3	He	11733.819	2.8335	211192.28	0.0002	0.001063
K	39	3	He	2302.913	1.4153	102999.42	0.0006	0.1436
K	39	3	He	2174.233	1.3443	98246.09	0.0006	0.1436
K	39	3	He	2135.995	1.3232	98619.34	0.0006	0.1436
Ca	44	3	He	3816.059	0.1201	8742.84	0	0.001611
Ca	44	3	He	3773.197	0.1188	8682.89	0	0.001611
Ca	44	3	He	3724.814	0.1173	8742.96	0	0.001611
Ti	47	3	He	951.823	0.239	17390.84	0.0003	0.0002737
Ti	47	3	He	962.517	0.2417	17661.14	0.0003	0.0002737
Ti	47	3	He	947.542	0.2379	17731.24	0.0003	0.0002737
V	51	3	He	42.383	0.5031	36613.54	0.0117	0.007326
V	51	3	He	41.856	0.4969	36318.89	0.0117	0.007326
V	51	3	He	41.159	0.4888	36431.17	0.0117	0.007326
Cr	52	3	He	24.529	0.3989	29029.57	0.0152	0.02538
Cr	52	3	He	24.725	0.4019	29370.66	0.0152	0.02538
Cr	52	3	He	23.329	0.3806	28368.32	0.0152	0.02538
Mn	55	3	He	308.352	1.8339	133458.39	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	301.861	1.7956	131228.20	0.0059	0.01385
Mn	55	3	He	292.368	1.7395	129652.47	0.0059	0.01385
Fe	57	3	He	20071.535	5.8189	423466.13	0.0003	0.003918
Fe	57	3	He	19827.105	5.7481	420099.52	0.0003	0.003918
Fe	57	3	He	19413.266	5.6282	419488.82	0.0003	0.003918
Co	59	3	He	7.939	0.2453	17851.59	0.0305	0.003084
Co	59	3	He	7.801	0.2411	17621.04	0.0305	0.003084
Co	59	3	He	7.485	0.2315	17250.78	0.0305	0.003084
Ni	60	3	He	17.909	0.1665	12115.59	0.0088	0.009003
Ni	60	3	He	18.545	0.1721	12575.85	0.0088	0.009003
Ni	60	3	He	17.691	0.1646	12265.57	0.0088	0.009003
Cu	63	3	He	16.616	0.4193	30512.85	0.0249	0.004937
Cu	63	3	He	16.055	0.4053	29621.04	0.0249	0.004937
Cu	63	3	He	15.437	0.3899	29059.77	0.0249	0.004937
Zn	66	3	He	35.516	0.0921	6701.82	0.0025	0.004836
Zn	66	3	He	36.861	0.0954	6971.95	0.0025	0.004836
Zn	66	3	He	35.013	0.0909	6771.80	0.0025	0.004836
As	75	3	He	2.437	0.0047	340.01	0.0017	0.0004347
As	75	3	He	2.315	0.0045	326.01	0.0017	0.0004347
As	75	3	He	2.034	0.004	296.00	0.0017	0.0004347
Sr	88	3	He	17.468	0.1373	8682.91	0.0078	0.0007762
Sr	88	3	He	17.838	0.1402	8842.97	0.0078	0.0007762
Sr	88	3	He	18.258	0.1435	9093.19	0.0078	0.0007762
Mo	98	3	He	0.099	0.0027	170.01	0.022	0.0005162
Mo	98	3	He	0.2	0.0049	310.01	0.022	0.0005162
Mo	98	3	He	0.177	0.0044	280.01	0.022	0.0005162
Ag	107	3	He	0.025	0.0016	100.00	0.0455	0.0004641
Ag	107	3	He	0.004	0.0006	40.00	0.0455	0.0004641
Ag	107	3	He	0.045	0.0025	160.01	0.0455	0.0004641
Cd	111	3	He	0.108	0.0006	36.00	0.0048	5.152E-05
Cd	111	3	He	0.095	0.0005	32.00	0.0048	5.152E-05
Cd	111	3	He	0.081	0.0004	28.00	0.0048	5.152E-05
Sn	120	3	He	1.126	0.0316	2000.22	0.0143	0.01559
Sn	120	3	He	1.187	0.0325	2050.23	0.0143	0.01559
Sn	120	3	He	1.165	0.0322	2040.24	0.0143	0.01559
Sb	121	3	He	0.145	0.0021	130.01	0.0124	0.000258
Sb	121	3	He	0.26	0.0035	220.01	0.0124	0.000258
Sb	121	3	He	0.234	0.0032	200.01	0.0124	0.000258
Ba	137	3	He	54.551	0.239	15108.70	0.0044	0.000309
Ba	137	3	He	49.718	0.2178	13737.11	0.0044	0.000309
Ba	137	3	He	50.782	0.2225	14097.62	0.0044	0.000309
Tl	205	3	He	0.127	0.0045	1020.08	0.0276	0.001005
Tl	205	3	He	0.121	0.0043	960.06	0.0276	0.001005
Tl	205	3	He	0.145	0.005	1110.09	0.0276	0.001005
Pb	208	3	He	6.347	0.2332	28902.38	0.0364	0.002176
Pb	208	3	He	6.38	0.2344	27429.21	0.0364	0.002176
Pb	208	3	He	6.129	0.2253	26707.66	0.0364	0.002176
U	238	3	He	1.191	0.0504	11375.36	0.0421	0.00024
U	238	3	He	1.25	0.0528	11655.77	0.0421	0.00024
U	238	3	He	1.308	0.0553	12266.21	0.0421	0.00024
Sc	45	1	No Gas			3340955.58		
Sc	45	1	No Gas			3279836.20		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3289367.76		
Ge	72	1	No Gas			1460148.73		
Ge	72	1	No Gas			1439004.67		
Ge	72	1	No Gas			1435299.67		
Sc	45	2	H2			197320.33		
Sc	45	2	H2			206939.51		
Sc	45	2	H2			195034.22		
Ge	72	2	H2			160030.39		
Ge	72	2	H2			163769.72		
Ge	72	2	H2			158333.98		
In	115	2	H2			431230.54		
In	115	2	H2			438755.70		
In	115	2	H2			429302.06		
Sc	45	3	He			42492.06		
Sc	45	3	He			41248.78		
Sc	45	3	He			41218.55		
Ge	72	3	He			72773.81		
Ge	72	3	He			73084.67		
Ge	72	3	He			74533.05		
In	115	3	He			63243.22		
In	115	3	He			63083.29		
In	115	3	He			63384.51		
Tb	159	3	He			288538.61		
Tb	159	3	He			290251.36		
Tb	159	3	He			286178.59		
Bi	209	3	He			225884.47		
Bi	209	3	He			220720.52		
Bi	209	3	He			221961.32		

Quantitation Report

Data File Name	260SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 19:33:14
Sample Name	410-136577-H-31-A @2
Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

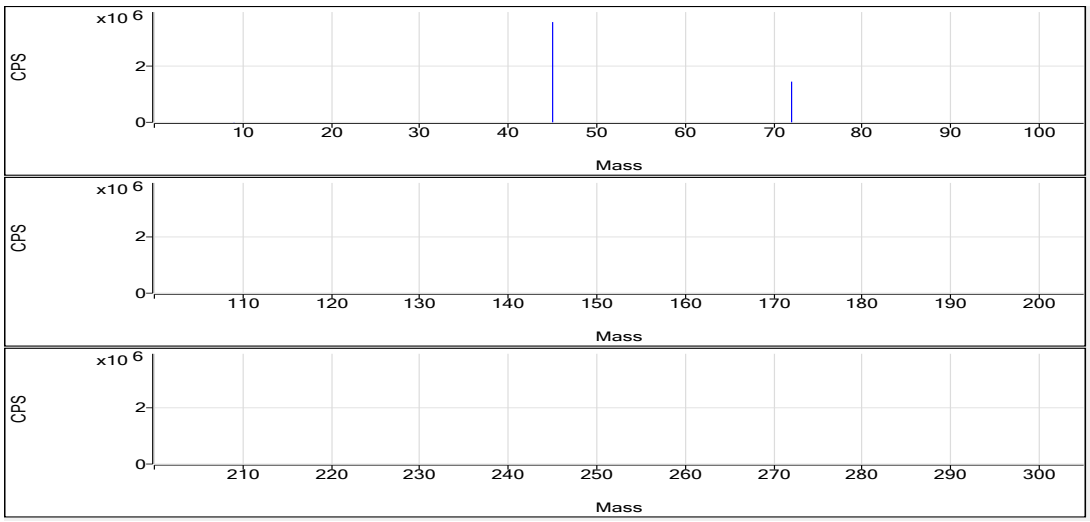
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	4.337	ppb	7.8	8243.64	0.0057	Pulse	0.5000	3
Se	78	72	H2	0.441	ppb	17.6	28.44	0.0002	Pulse	1.5000	3
Na	23	72	He	3421.421	ppb	0.9	440311.15	5.9838	Pulse	0.1000	3
Mg	24	72	He	37390.589	ppb	1.0	2319935.23	31.5289	Pulse	0.1000	3
Al	27	72	He	72217.938	ppb	1.4	1282801.88	17.4341	Pulse	0.1000	3
K	39	72	He	7975.296	ppb	1.3	334613.07	4.5477	Pulse	0.1000	3
Ca	44	72	He	24717.573	ppb	0.9	56606.74	0.7693	Pulse	0.1000	3
Ti	47	72	He	3682.883	ppb	0.8	67978.38	0.9239	Pulse	0.1000	3
V	51	72	He	299.670	ppb	0.9	258476.71	3.5128	Pulse	0.5000	3
Cr	52	72	He	162.088	ppb	0.9	183483.89	2.4935	Pulse	0.1000	3
Mn	55	72	He	6887.364	ppb	1.0	2992315.27	40.6660	Pulse	0.1000	3
Fe	57	72	He	155584.279	ppb	1.0	3317042.56	45.0790	Pulse	0.1000	3
Co	59	72	He	42.580	ppb	1.8	95821.25	1.3022	Pulse	0.1000	3
Ni	60	72	He	128.986	ppb	0.5	84117.22	1.1432	Pulse	0.1000	3
Cu	63	72	He	186.068	ppb	0.8	341776.83	4.6449	Pulse	0.1000	3
Zn	66	72	He	408.081	ppb	0.8	74126.81	1.0074	Pulse	0.1000	3
As	75	72	He	46.602	ppb	0.8	5995.95	0.0815	Pulse	0.5000	3
Sr	88	115	He	70.565	ppb	2.1	35943.01	0.5524	Pulse	0.1000	3
Mo	98	115	He	17.622	ppb	2.7	25283.21	0.3886	Pulse	0.1000	3
Ag	107	115	He	0.248	ppb	11.5	763.38	0.0117	Pulse	0.1000	3
Cd	111	115	He	0.888	ppb	7.8	280.67	0.0043	Pulse	0.5000	3
Sn	120	115	He	9.450	ppb	3.3	9780.43	0.1503	Pulse	0.1000	3
Sb	121	115	He	1.591	ppb	12.7	1300.11	0.0200	Pulse	0.1000	3
Ba	137	115	He	322.090	ppb	3.5	91704.49	1.4094	Pulse	0.1000	3
Tl	205	209	He	0.475	ppb	3.4	3167.17	0.0141	Pulse	0.1000	3
Pb	208	209	He	69.747	ppb	0.6	569152.10	2.5408	Pulse	0.1000	3
U	238	209	He	6.313	ppb	2.2	59544.15	0.2658	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3539163.39	1.3	109.2	Pulse	0.1000	3
No Gas	Ge	72	1435893.99	2.0	99.7	Pulse	0.1000	3
H2	Sc	45	213404.90	2.3	109.2	Pulse	0.1000	3
H2	Ge	72	156300.24	2.6	95.9	Pulse	0.1000	3
H2	In	115	434016.41	2.2	100.2	Pulse	0.1000	3
He	Sc	45	45705.26	1.1	114.3	Pulse	0.1000	3
He	Ge	72	73581.63	0.9	101.8	Pulse	0.1000	3
He	In	115	65075.72	1.0	100.7	Pulse	0.1000	3
He	Tb	159	307253.83	1.0	107.4	Pulse	0.1000	3
He	Bi	209	224009.22	0.6	100.8	Pulse	0.1000	3

No Gas



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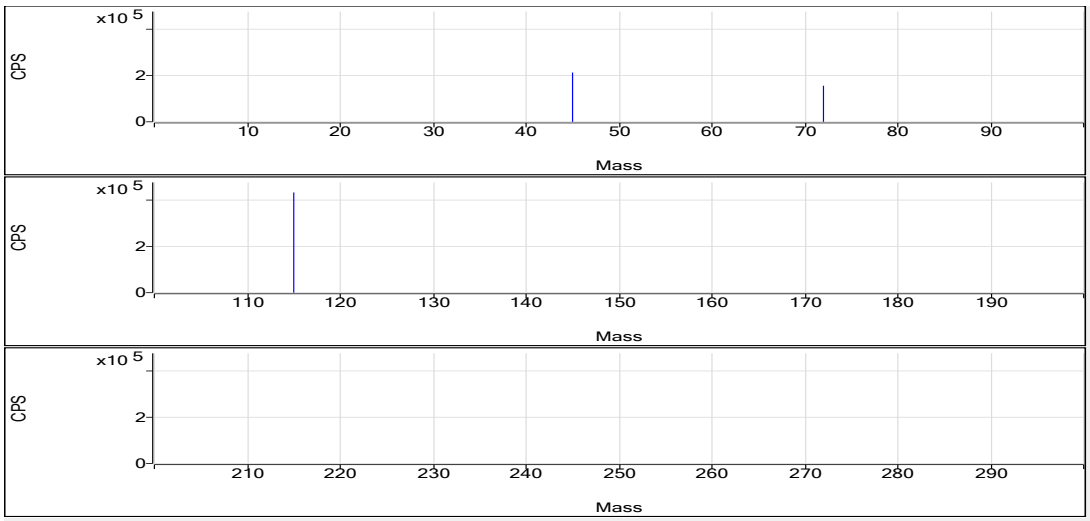
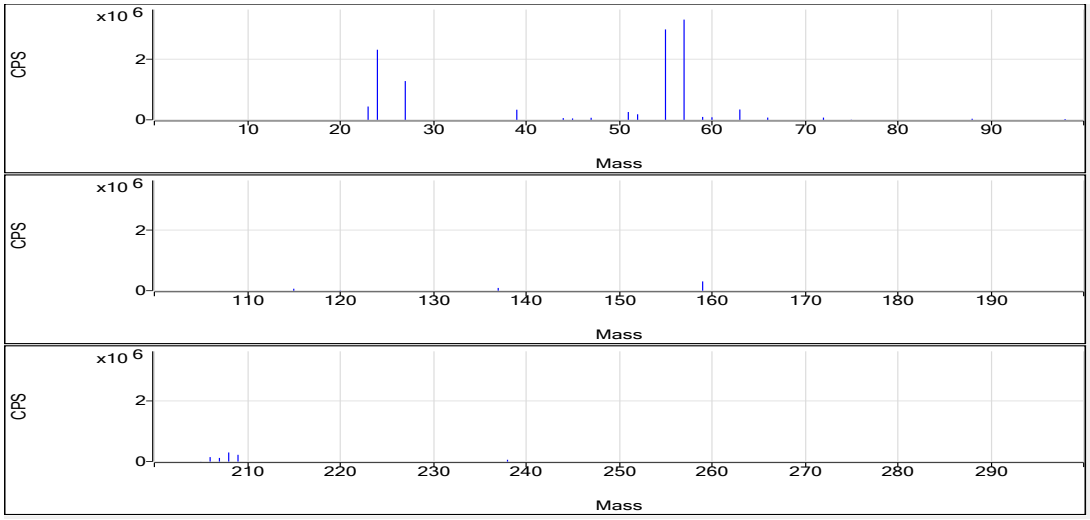


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	3.954	0.0052	7657.98	0.0013	4.694E-05
Be	9	1	No Gas	4.461	0.0059	8526.46	0.0013	4.694E-05
Be	9	1	No Gas	4.597	0.0061	8546.47	0.0013	4.694E-05
Se	78	2	H2	0.506	0.0002	32.00	0.0004	1.089E-05
Se	78	2	H2	0.355	0.0001	24.00	0.0004	1.089E-05
Se	78	2	H2	0.461	0.0002	29.33	0.0004	1.089E-05
Na	23	3	He	3386.469	5.9238	432885.66	0.0017	0.1065
Na	23	3	He	3448.722	6.0307	442520.11	0.0017	0.1065
Na	23	3	He	3429.072	5.997	445527.69	0.0017	0.1065
Mg	24	3	He	37108.933	31.2914	2286641.53	0.0008	0.004846
Mg	24	3	He	37816.974	31.8884	2339886.37	0.0008	0.004846
Mg	24	3	He	37245.859	31.4069	2333277.78	0.0008	0.004846
Al	27	3	He	71583.107	17.2808	1262805.68	0.0002	0.001063
Al	27	3	He	73390.416	17.7171	1300032.79	0.0002	0.001063
Al	27	3	He	71680.29	17.3043	1285567.17	0.0002	0.001063
K	39	3	He	7950.294	4.5339	331316.52	0.0006	0.1436
K	39	3	He	8089.264	4.6106	338315.66	0.0006	0.1436
K	39	3	He	7886.331	4.4986	334207.03	0.0006	0.1436
Ca	44	3	He	24721.445	0.7695	56228.44	0	0.001611
Ca	44	3	He	24945.586	0.7764	56971.46	0	0.001611
Ca	44	3	He	24485.688	0.7621	56620.32	0	0.001611
Ti	47	3	He	3667.783	0.9201	67235.24	0.0003	0.0002737
Ti	47	3	He	3717.073	0.9324	68419.88	0.0003	0.0002737
Ti	47	3	He	3663.795	0.9191	68280.02	0.0003	0.0002737
V	51	3	He	297.377	3.486	254739.38	0.0117	0.007326
V	51	3	He	302.824	3.5497	260466.91	0.0117	0.007326
V	51	3	He	298.809	3.5027	260223.84	0.0117	0.007326
Cr	52	3	He	160.442	2.4685	180385.43	0.0152	0.02538
Cr	52	3	He	163.279	2.5117	184300.33	0.0152	0.02538
Cr	52	3	He	162.544	2.5005	185765.92	0.0152	0.02538
Mn	55	3	He	6814.417	40.2354	2940227.46	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	6958.614	41.0865	3014820.89	0.0059	0.01385
Mn	55	3	He	6889.061	40.676	3021897.45	0.0059	0.01385
Fe	57	3	He	153952.229	44.6061	3259620.58	0.0003	0.003918
Fe	57	3	He	157086.671	45.5142	3339714.01	0.0003	0.003918
Fe	57	3	He	155713.938	45.1165	3351793.08	0.0003	0.003918
Co	59	3	He	41.866	1.2805	93569.76	0.0305	0.003084
Co	59	3	He	43.398	1.3272	97384.39	0.0305	0.003084
Co	59	3	He	42.476	1.2991	96509.61	0.0305	0.003084
Ni	60	3	He	129.626	1.1488	83952.29	0.0088	0.009003
Ni	60	3	He	128.949	1.1429	83862.56	0.0088	0.009003
Ni	60	3	He	128.382	1.1379	84536.81	0.0088	0.009003
Cu	63	3	He	185.367	4.6275	338153.78	0.0249	0.004937
Cu	63	3	He	187.738	4.6866	343889.64	0.0249	0.004937
Cu	63	3	He	185.1	4.6208	343287.07	0.0249	0.004937
Zn	66	3	He	404.842	0.9994	73034.50	0.0025	0.004836
Zn	66	3	He	410.975	1.0145	74441.70	0.0025	0.004836
Zn	66	3	He	408.425	1.0082	74904.23	0.0025	0.004836
As	75	3	He	46.372	0.0811	5925.26	0.0017	0.0004347
As	75	3	He	46.384	0.0811	5951.26	0.0017	0.0004347
As	75	3	He	47.049	0.0823	6111.33	0.0017	0.0004347
Sr	88	3	He	69.514	0.5442	35435.22	0.0078	0.0007762
Sr	88	3	He	69.938	0.5475	35986.18	0.0078	0.0007762
Sr	88	3	He	72.243	0.5655	36407.64	0.0078	0.0007762
Mo	98	3	He	17.741	0.3912	25473.57	0.022	0.0005162
Mo	98	3	He	17.091	0.3769	24772.19	0.022	0.0005162
Mo	98	3	He	18.036	0.3977	25603.87	0.022	0.0005162
Ag	107	3	He	0.226	0.0108	700.04	0.0455	0.0004641
Ag	107	3	He	0.237	0.0113	740.05	0.0455	0.0004641
Ag	107	3	He	0.28	0.0132	850.05	0.0455	0.0004641
Cd	111	3	He	0.808	0.0039	256.00	0.0048	5.152E-05
Cd	111	3	He	0.921	0.0045	294.01	0.0048	5.152E-05
Cd	111	3	He	0.934	0.0045	292.01	0.0048	5.152E-05
Sn	120	3	He	9.315	0.1484	9663.70	0.0143	0.01559
Sn	120	3	He	9.229	0.1472	9673.68	0.0143	0.01559
Sn	120	3	He	9.805	0.1554	10003.90	0.0143	0.01559
Sb	121	3	He	1.391	0.0175	1140.09	0.0124	0.000258
Sb	121	3	He	1.586	0.0199	1310.11	0.0124	0.000258
Sb	121	3	He	1.795	0.0225	1450.13	0.0124	0.000258
Ba	137	3	He	310.995	1.3608	88614.36	0.0044	0.000309
Ba	137	3	He	321.816	1.4082	92559.33	0.0044	0.000309
Ba	137	3	He	333.461	1.4591	93939.78	0.0044	0.000309
Tl	205	3	He	0.464	0.0138	3090.46	0.0276	0.001005
Tl	205	3	He	0.468	0.0139	3110.49	0.0276	0.001005
Tl	205	3	He	0.493	0.0146	3300.55	0.0276	0.001005
Pb	208	3	He	69.386	2.5277	296820.33	0.0364	0.002176
Pb	208	3	He	70.183	2.5566	301933.16	0.0364	0.002176
Pb	208	3	He	69.672	2.538	303386.66	0.0364	0.002176
U	238	3	He	6.154	0.2591	57940.22	0.0421	0.00024
U	238	3	He	6.379	0.2686	59898.83	0.0421	0.00024
U	238	3	He	6.406	0.2697	60793.39	0.0421	0.00024
Sc	45	1	No Gas			3581769.95		
Sc	45	1	No Gas			3546875.57		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3488844.64		
Ge	72	1	No Gas			1460613.73		
Ge	72	1	No Gas			1443063.26		
Ge	72	1	No Gas			1404004.98		
Sc	45	2	H2			209395.86		
Sc	45	2	H2			218751.87		
Sc	45	2	H2			212066.97		
Ge	72	2	H2			154034.45		
Ge	72	2	H2			160911.25		
Ge	72	2	H2			153955.03		
In	115	2	H2			429759.68		
In	115	2	H2			445121.75		
In	115	2	H2			427167.81		
Sc	45	3	He			46002.89		
Sc	45	3	He			45150.19		
Sc	45	3	He			45962.70		
Ge	72	3	He			73075.61		
Ge	72	3	He			73377.36		
Ge	72	3	He			74291.91		
In	115	3	He			65192.47		
In	115	3	He			65804.91		
In	115	3	He			64458.64		
Tb	159	3	He			305973.92		
Tb	159	3	He			305173.02		
Tb	159	3	He			310614.55		
Bi	209	3	He			223618.26		
Bi	209	3	He			223019.76		
Bi	209	3	He			225389.65		

Quantitation Report

Data File Name	261SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 19:35:14
Sample Name	410-136577-H-31-A @10
Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

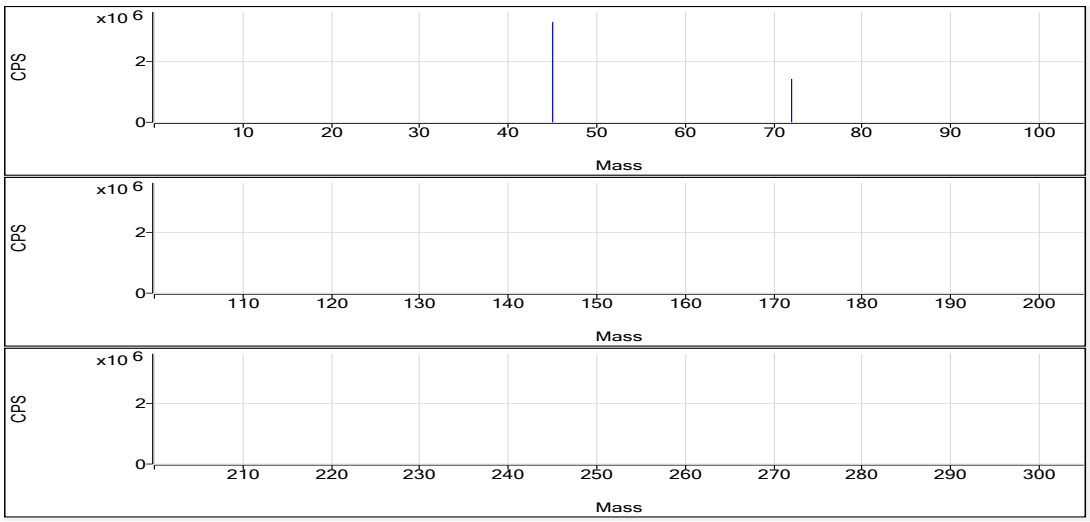
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.903	ppb	5.1	1748.78	0.0012	Pulse	0.5000	3
Se	78	72	H2	0.070	ppb	88.9	6.00	0.0000	Pulse	1.5000	3
Na	23	72	He	663.182	ppb	3.5	90460.96	1.2457	Pulse	0.1000	3
Mg	24	72	He	7393.834	ppb	1.3	453030.11	6.2386	Pulse	0.1000	3
Al	27	72	He	14230.808	ppb	1.5	249533.15	3.4363	Pulse	0.1000	3
K	39	72	He	1584.754	ppb	1.9	73980.08	1.0188	Pulse	0.1000	3
Ca	44	72	He	4888.058	ppb	3.9	11141.28	0.1534	Pulse	0.1000	3
Ti	47	72	He	709.814	ppb	0.9	12946.08	0.1783	Pulse	0.1000	3
V	51	72	He	59.334	ppb	2.4	50934.73	0.7014	Pulse	0.5000	3
Cr	52	72	He	32.536	ppb	3.3	37819.98	0.5208	Pulse	0.1000	3
Mn	55	72	He	1363.428	ppb	0.2	585391.42	8.0614	Pulse	0.1000	3
Fe	57	72	He	30715.245	ppb	1.1	646477.74	8.9026	Pulse	0.1000	3
Co	59	72	He	8.369	ppb	1.9	18765.96	0.2584	Pulse	0.1000	3
Ni	60	72	He	26.364	ppb	1.8	17487.75	0.2408	Pulse	0.1000	3
Cu	63	72	He	37.424	ppb	0.9	68127.35	0.9382	Pulse	0.1000	3
Zn	66	72	He	81.353	ppb	3.4	14864.83	0.2047	Pulse	0.1000	3
As	75	72	He	9.495	ppb	3.6	1230.73	0.0169	Pulse	0.5000	3
Sr	88	115	He	14.199	ppb	4.3	7225.40	0.1118	Pulse	0.1000	3
Mo	98	115	He	3.595	ppb	3.1	5151.13	0.0797	Pulse	0.1000	3
Ag	107	115	He	0.056	ppb	12.4	193.34	0.0030	Pulse	0.1000	3
Cd	111	115	He	0.150	ppb	8.3	50.00	0.0008	Pulse	0.5000	3
Sn	120	115	He	2.107	ppb	7.0	2950.46	0.0456	Pulse	0.1000	3
Sb	121	115	He	0.308	ppb	18.7	263.35	0.0041	Pulse	0.1000	3
Ba	137	115	He	62.873	ppb	0.8	17802.03	0.2754	Pulse	0.1000	3
Tl	205	209	He	0.109	ppb	11.9	893.39	0.0040	Pulse	0.1000	3
Pb	208	209	He	14.180	ppb	3.0	114892.93	0.5183	Pulse	0.1000	3
U	238	209	He	1.217	ppb	2.5	11398.80	0.0514	Pulse	0.1000	3

ISTD Table:

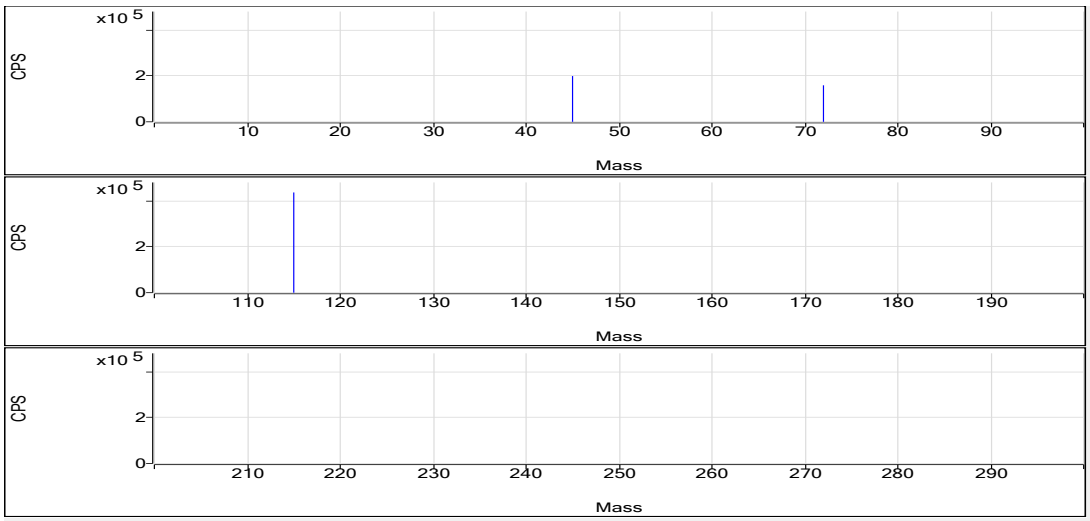
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3277422.76	1.3	101.1	Pulse	0.1000	3
No Gas	Ge	72	1418210.29	1.3	98.5	Pulse	0.1000	3
H2	Sc	45	199627.43	2.2	102.2	Pulse	0.1000	3
H2	Ge	72	159266.01	2.9	97.7	Pulse	0.1000	3
H2	In	115	437212.01	1.9	100.9	Pulse	0.1000	3
He	Sc	45	42034.34	1.3	105.1	Pulse	0.1000	3
He	Ge	72	72616.66	0.2	100.5	Pulse	0.1000	3
He	In	115	64647.11	0.4	100.1	Pulse	0.1000	3
He	Tb	159	288256.84	0.4	100.8	Pulse	0.1000	3
He	Bi	209	221756.02	1.7	99.8	Pulse	0.1000	3

No Gas

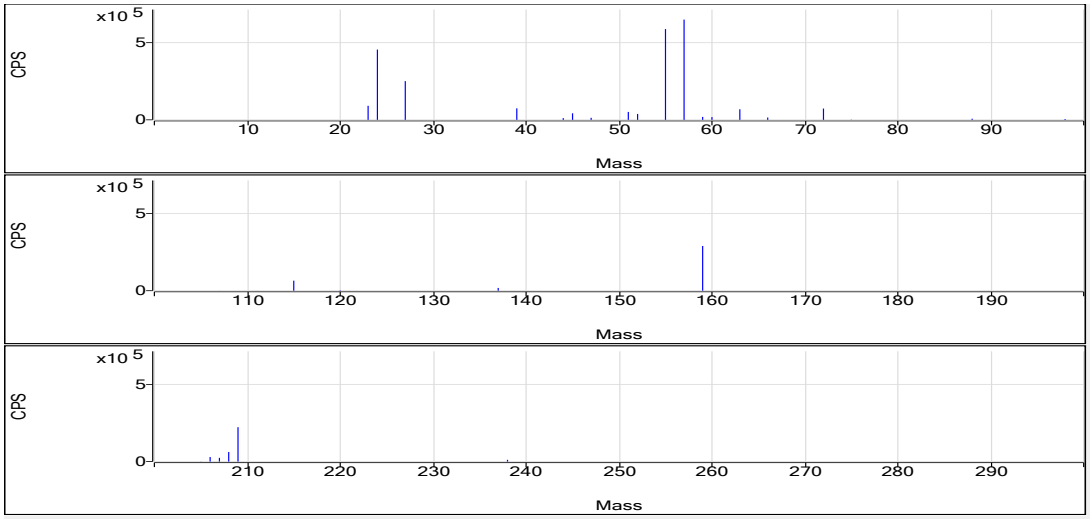


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.851	0.0012	1674.10	0.0013	4.694E-05
Be	9	1	No Gas	0.942	0.0013	1822.12	0.0013	4.694E-05
Be	9	1	No Gas	0.916	0.0013	1750.11	0.0013	4.694E-05
Se	78	2	H2	0.08	0	6.67	0.0004	1.089E-05
Se	78	2	H2	0.003	0	2.00	0.0004	1.089E-05
Se	78	2	H2	0.126	0.0001	9.33	0.0004	1.089E-05
Na	23	3	He	683.498	1.2806	93089.92	0.0017	0.1065
Na	23	3	He	667.917	1.2538	91158.19	0.0017	0.1065
Na	23	3	He	638.132	1.2027	87134.76	0.0017	0.1065
Mg	24	3	He	7508.572	6.3353	460536.71	0.0008	0.004846
Mg	24	3	He	7338.925	6.1923	450208.27	0.0008	0.004846
Mg	24	3	He	7334.005	6.1882	448345.34	0.0008	0.004846
Al	27	3	He	14464.488	3.4927	253896.52	0.0002	0.001063
Al	27	3	He	14043.106	3.391	246539.92	0.0002	0.001063
Al	27	3	He	14184.829	3.4252	248163.00	0.0002	0.001063
K	39	3	He	1618.545	1.0374	75413.57	0.0006	0.1436
K	39	3	He	1575.704	1.0138	73705.11	0.0006	0.1436
K	39	3	He	1560.013	1.0051	72821.55	0.0006	0.1436
Ca	44	3	He	4853.063	0.1523	11074.57	0	0.001611
Ca	44	3	He	4714.893	0.1481	10764.25	0	0.001611
Ca	44	3	He	5096.218	0.1599	11585.01	0	0.001611
Ti	47	3	He	702.473	0.1764	12825.97	0.0003	0.0002737
Ti	47	3	He	714.992	0.1796	13056.18	0.0003	0.0002737
Ti	47	3	He	711.977	0.1788	12956.09	0.0003	0.0002737
V	51	3	He	60.548	0.7156	52019.81	0.0117	0.007326
V	51	3	He	59.678	0.7054	51287.27	0.0117	0.007326
V	51	3	He	57.775	0.6832	49497.10	0.0117	0.007326
Cr	52	3	He	33.696	0.5385	39143.55	0.0152	0.02538
Cr	52	3	He	31.562	0.506	36787.09	0.0152	0.02538
Cr	52	3	He	32.35	0.518	37529.31	0.0152	0.02538
Mn	55	3	He	1361.723	8.0513	585277.06	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1367.147	8.0833	587694.37	0.0059	0.01385
Mn	55	3	He	1361.413	8.0495	583202.84	0.0059	0.01385
Fe	57	3	He	31089.962	9.0111	655049.64	0.0003	0.003918
Fe	57	3	He	30460.409	8.8287	641889.21	0.0003	0.003918
Fe	57	3	He	30595.363	8.8678	642494.37	0.0003	0.003918
Co	59	3	He	8.336	0.2574	18712.52	0.0305	0.003084
Co	59	3	He	8.226	0.2541	18472.26	0.0305	0.003084
Co	59	3	He	8.545	0.2638	19113.11	0.0305	0.003084
Ni	60	3	He	26.465	0.2417	17571.37	0.0088	0.009003
Ni	60	3	He	25.85	0.2363	17180.64	0.0088	0.009003
Ni	60	3	He	26.776	0.2445	17711.25	0.0088	0.009003
Cu	63	3	He	37.652	0.9439	68612.78	0.0249	0.004937
Cu	63	3	He	37.053	0.9289	67537.87	0.0249	0.004937
Cu	63	3	He	37.567	0.9417	68231.41	0.0249	0.004937
Zn	66	3	He	84.479	0.2124	15438.71	0.0025	0.004836
Zn	66	3	He	79.142	0.1993	14487.85	0.0025	0.004836
Zn	66	3	He	80.436	0.2024	14667.92	0.0025	0.004836
As	75	3	He	9.685	0.0173	1256.06	0.0017	0.0004347
As	75	3	He	9.098	0.0163	1182.06	0.0017	0.0004347
As	75	3	He	9.702	0.0173	1254.06	0.0017	0.0004347
Sr	88	3	He	13.559	0.1068	6901.93	0.0078	0.0007762
Sr	88	3	He	14.766	0.1162	7482.21	0.0078	0.0007762
Sr	88	3	He	14.272	0.1123	7292.07	0.0078	0.0007762
Mo	98	3	He	3.588	0.0795	5141.11	0.022	0.0005162
Mo	98	3	He	3.708	0.0822	5291.21	0.022	0.0005162
Mo	98	3	He	3.489	0.0774	5021.07	0.022	0.0005162
Ag	107	3	He	0.061	0.0032	210.01	0.0455	0.0004641
Ag	107	3	He	0.048	0.0026	170.01	0.0455	0.0004641
Ag	107	3	He	0.058	0.0031	200.01	0.0455	0.0004641
Cd	111	3	He	0.138	0.0007	46.00	0.0048	5.152E-05
Cd	111	3	He	0.151	0.0008	50.00	0.0048	5.152E-05
Cd	111	3	He	0.163	0.0008	54.00	0.0048	5.152E-05
Sn	120	3	He	2.238	0.0475	3070.46	0.0143	0.01559
Sn	120	3	He	1.946	0.0433	2790.39	0.0143	0.01559
Sn	120	3	He	2.138	0.0461	2990.53	0.0143	0.01559
Sb	121	3	He	0.303	0.004	260.01	0.0124	0.000258
Sb	121	3	He	0.367	0.0048	310.02	0.0124	0.000258
Sb	121	3	He	0.252	0.0034	220.01	0.0124	0.000258
Ba	137	3	He	62.947	0.2757	17822.03	0.0044	0.000309
Ba	137	3	He	62.311	0.2729	17571.81	0.0044	0.000309
Ba	137	3	He	63.361	0.2775	18012.25	0.0044	0.000309
Tl	205	3	He	0.123	0.0044	970.07	0.0276	0.001005
Tl	205	3	He	0.097	0.0037	810.05	0.0276	0.001005
Tl	205	3	He	0.108	0.004	900.06	0.0276	0.001005
Pb	208	3	He	14.239	0.5204	60298.57	0.0364	0.002176
Pb	208	3	He	14.573	0.5326	63090.85	0.0364	0.002176
Pb	208	3	He	13.727	0.5018	60810.35	0.0364	0.002176
U	238	3	He	1.225	0.0518	11385.40	0.0421	0.00024
U	238	3	He	1.242	0.0525	11505.56	0.0421	0.00024
U	238	3	He	1.183	0.05	11305.43	0.0421	0.00024
Sc	45	1	No Gas			3313517.45		
Sc	45	1	No Gas			3287299.64		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3231451.20		
Ge	72	1	No Gas			1436049.51		
Ge	72	1	No Gas			1418573.57		
Ge	72	1	No Gas			1400007.79		
Sc	45	2	H2			196725.47		
Sc	45	2	H2			204732.61		
Sc	45	2	H2			197424.20		
Ge	72	2	H2			158353.02		
Ge	72	2	H2			164227.11		
Ge	72	2	H2			155217.89		
In	115	2	H2			433890.31		
In	115	2	H2			446846.87		
In	115	2	H2			430898.86		
Sc	45	3	He			42442.23		
Sc	45	3	He			42251.46		
Sc	45	3	He			41409.33		
Ge	72	3	He			72693.35		
Ge	72	3	He			72704.47		
Ge	72	3	He			72452.16		
In	115	3	He			64669.44		
In	115	3	He			64409.10		
In	115	3	He			64931.85		
Tb	159	3	He			289427.14		
Tb	159	3	He			287257.30		
Tb	159	3	He			288086.07		
Bi	209	3	He			219886.77		
Bi	209	3	He			219248.73		
Bi	209	3	He			226132.57		

Quantitation Report

Data File Name	262SMPL.d
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Acq Time	2023-08-10 19:37:14
Sample Name	410-136577-H-20-A @2
Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

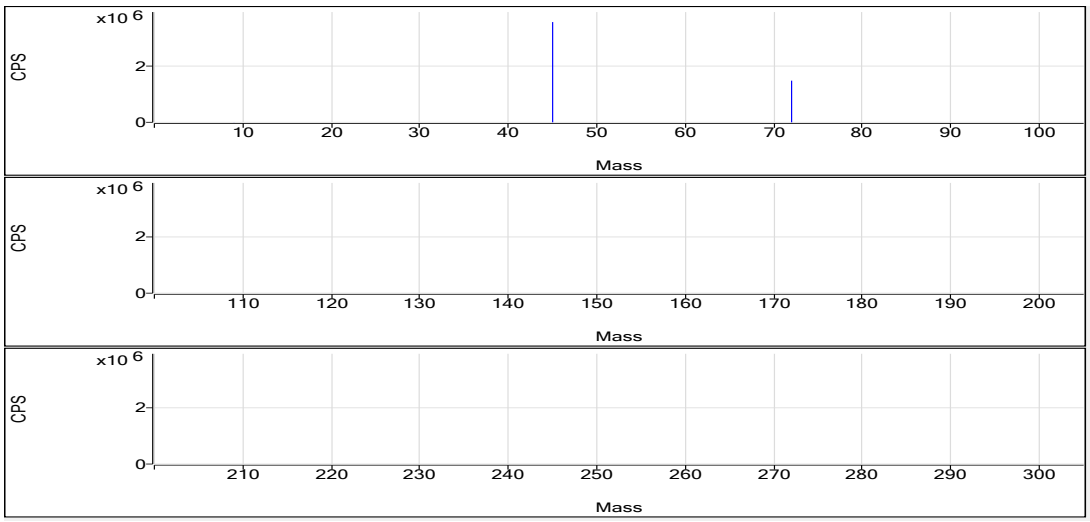
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	1.371	ppb	7.6	2739.60	0.0018	Pulse	0.5000	3
Se	78	72	H2	0.761	ppb	8.9	49.78	0.0003	Pulse	1.5000	3
Na	23	72	He	4934.243	ppb	0.2	637070.43	8.5826	Pulse	0.1000	3
Mg	24	72	He	30777.855	ppb	1.3	1926360.80	25.9537	Pulse	0.1000	3
Al	27	72	He	46131.136	ppb	1.1	826621.55	11.1369	Pulse	0.1000	3
K	39	72	He	3057.931	ppb	0.9	136006.51	1.8323	Pulse	0.1000	3
Ca	44	72	He	56140.610	ppb	1.8	129541.51	1.7453	Pulse	0.1000	3
Ti	47	72	He	5680.958	ppb	1.4	105767.27	1.4249	Pulse	0.1000	3
V	51	72	He	184.655	ppb	0.9	160871.79	2.1674	Pulse	0.5000	3
Cr	52	72	He	110.879	ppb	2.3	127194.42	1.7138	Pulse	0.1000	3
Mn	55	72	He	2240.141	ppb	0.9	982470.98	13.2361	Pulse	0.1000	3
Fe	57	72	He	74502.080	ppb	1.1	1602404.56	21.5883	Pulse	0.1000	3
Co	59	72	He	35.541	ppb	0.5	80717.49	1.0875	Pulse	0.1000	3
Ni	60	72	He	91.422	ppb	1.4	60339.46	0.8129	Pulse	0.1000	3
Cu	63	72	He	1798.048	ppb	0.5	3328531.51	44.8431	Pulse	0.1000	3
Zn	66	72	He	186.955	ppb	3.0	34448.32	0.4641	Pulse	0.1000	3
As	75	72	He	10.724	ppb	2.4	1416.75	0.0191	Pulse	0.5000	3
Sr	88	115	He	157.482	ppb	1.2	78171.48	1.2318	Pulse	0.1000	3
Mo	98	115	He	1.608	ppb	5.2	2280.26	0.0359	Pulse	0.1000	3
Ag	107	115	He	2.352	ppb	6.2	6818.57	0.1075	Pulse	0.1000	3
Cd	111	115	He	0.904	ppb	2.4	278.67	0.0044	Pulse	0.5000	3
Sn	120	115	He	16.073	ppb	3.8	15529.10	0.2448	Pulse	0.1000	3
Sb	121	115	He	3.641	ppb	4.5	2883.74	0.0454	Pulse	0.1000	3
Ba	137	115	He	313.992	ppb	2.0	87188.78	1.3740	Pulse	0.1000	3
Tl	205	209	He	0.213	ppb	7.8	1550.16	0.0069	Pulse	0.1000	3
Pb	208	209	He	133.859	ppb	0.6	1094134.49	4.8743	Pulse	0.1000	3
U	238	209	He	1.989	ppb	0.9	18830.95	0.0839	Pulse	0.1000	3

ISTD Table:

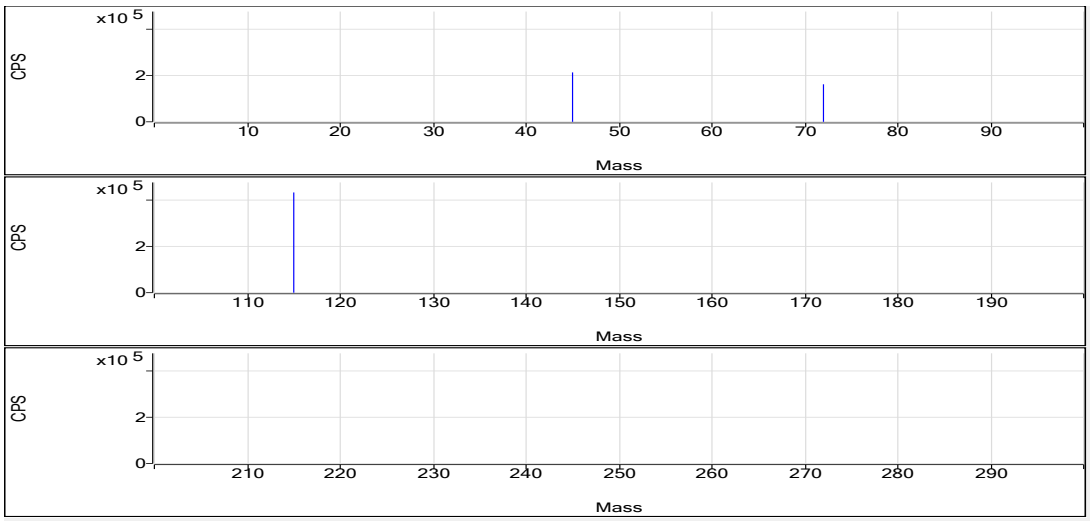
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3569115.26	0.8	110.1	Pulse	0.1000	3
No Gas	Ge	72	1482764.41	1.6	103.0	Pulse	0.1000	3
H2	Sc	45	213228.30	2.4	109.1	Pulse	0.1000	3
H2	Ge	72	161949.06	2.5	99.3	Pulse	0.1000	3
H2	In	115	432560.92	2.5	99.8	Pulse	0.1000	3
He	Sc	45	45498.07	0.2	113.8	Pulse	0.1000	3
He	Ge	72	74228.12	0.9	102.7	Pulse	0.1000	3
He	In	115	63467.22	1.5	98.3	Pulse	0.1000	3
He	Tb	159	297275.36	0.6	103.9	Pulse	0.1000	3
He	Bi	209	224468.45	0.2	101.0	Pulse	0.1000	3

No Gas

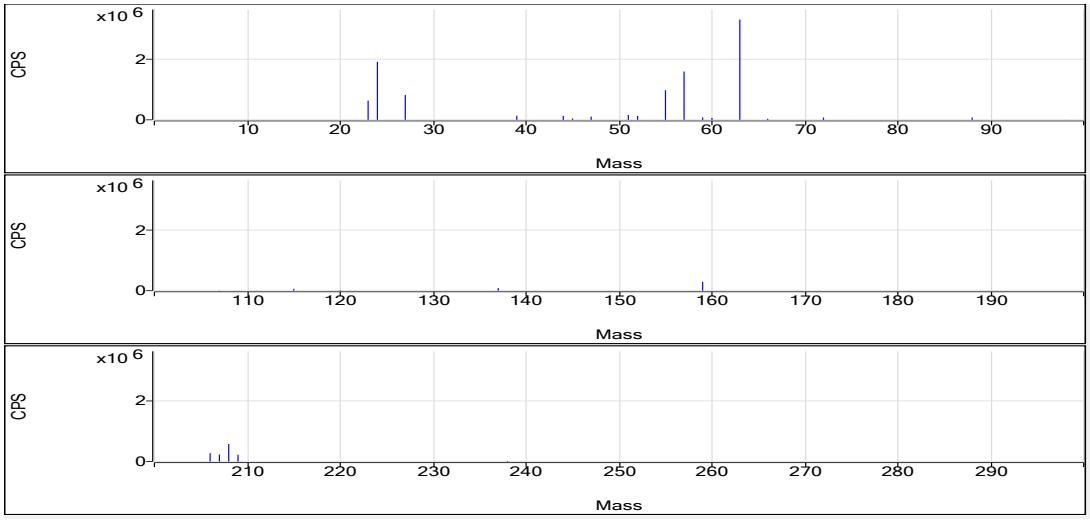


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	1.275	0.0017	2580.24	0.0013	4.694E-05
Be	9	1	No Gas	1.357	0.0018	2734.27	0.0013	4.694E-05
Be	9	1	No Gas	1.483	0.002	2904.30	0.0013	4.694E-05
Se	78	2	H2	0.689	0.0003	44.00	0.0004	1.089E-05
Se	78	2	H2	0.769	0.0003	51.33	0.0004	1.089E-05
Se	78	2	H2	0.823	0.0003	54.00	0.0004	1.089E-05
Na	23	3	He	4927.03	8.5702	640571.94	0.0017	0.1065
Na	23	3	He	4943.984	8.5993	639985.38	0.0017	0.1065
Na	23	3	He	4931.714	8.5783	630653.97	0.0017	0.1065
Mg	24	3	He	30332.959	25.5786	1911847.78	0.0008	0.004846
Mg	24	3	He	30854.296	26.0182	1936339.81	0.0008	0.004846
Mg	24	3	He	31146.31	26.2643	1930894.81	0.0008	0.004846
Al	27	3	He	45591.212	11.0065	822671.08	0.0002	0.001063
Al	27	3	He	46231.286	11.161	830633.19	0.0002	0.001063
Al	27	3	He	46570.911	11.243	826560.38	0.0002	0.001063
K	39	3	He	3039.111	1.8219	136174.14	0.0006	0.1436
K	39	3	He	3088.528	1.8492	137619.58	0.0006	0.1436
K	39	3	He	3046.152	1.8258	134225.82	0.0006	0.1436
Ca	44	3	He	54973.564	1.7091	127743.65	0	0.001611
Ca	44	3	He	56537.352	1.7577	130809.22	0	0.001611
Ca	44	3	He	56910.914	1.7693	130071.66	0	0.001611
Ti	47	3	He	5596.031	1.4036	104913.85	0.0003	0.0002737
Ti	47	3	He	5751.393	1.4426	107362.40	0.0003	0.0002737
Ti	47	3	He	5695.451	1.4286	105025.55	0.0003	0.0002737
V	51	3	He	183.236	2.1508	160757.39	0.0117	0.007326
V	51	3	He	184.18	2.1618	160888.56	0.0117	0.007326
V	51	3	He	186.549	2.1895	160969.42	0.0117	0.007326
Cr	52	3	He	108.083	1.6712	124911.39	0.0152	0.02538
Cr	52	3	He	111.343	1.7208	128069.31	0.0152	0.02538
Cr	52	3	He	113.211	1.7493	128602.56	0.0152	0.02538
Mn	55	3	He	2218.398	13.1078	979727.49	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2258.074	13.342	992944.05	0.0059	0.01385
Mn	55	3	He	2243.95	13.2586	974741.39	0.0059	0.01385
Fe	57	3	He	73605.179	21.3284	1594171.23	0.0003	0.003918
Fe	57	3	He	75127.196	21.7694	1620134.04	0.0003	0.003918
Fe	57	3	He	74773.864	21.667	1592908.41	0.0003	0.003918
Co	59	3	He	35.336	1.0812	80814.28	0.0305	0.003084
Co	59	3	He	35.592	1.089	81046.34	0.0305	0.003084
Co	59	3	He	35.695	1.0921	80291.86	0.0305	0.003084
Ni	60	3	He	90.182	0.802	59944.53	0.0088	0.009003
Ni	60	3	He	92.785	0.8249	61390.34	0.0088	0.009003
Ni	60	3	He	91.299	0.8118	59683.51	0.0088	0.009003
Cu	63	3	He	1787.683	44.5846	3332430.89	0.0249	0.004937
Cu	63	3	He	1800.89	44.9139	3342614.95	0.0249	0.004937
Cu	63	3	He	1805.569	45.0306	3310548.70	0.0249	0.004937
Zn	66	3	He	180.517	0.4483	33509.52	0.0025	0.004836
Zn	66	3	He	190.405	0.4726	35173.33	0.0025	0.004836
Zn	66	3	He	189.942	0.4715	34662.12	0.0025	0.004836
As	75	3	He	10.536	0.0188	1402.08	0.0017	0.0004347
As	75	3	He	11.015	0.0196	1458.08	0.0017	0.0004347
As	75	3	He	10.622	0.0189	1390.08	0.0017	0.0004347
Sr	88	3	He	155.469	1.2161	78415.28	0.0078	0.0007762
Sr	88	3	He	157.847	1.2347	78255.27	0.0078	0.0007762
Sr	88	3	He	159.132	1.2447	77843.90	0.0078	0.0007762
Mo	98	3	He	1.596	0.0357	2300.28	0.022	0.0005162
Mo	98	3	He	1.696	0.0379	2400.28	0.022	0.0005162
Mo	98	3	He	1.531	0.0342	2140.23	0.022	0.0005162
Ag	107	3	He	2.189	0.1001	6451.66	0.0455	0.0004641
Ag	107	3	He	2.397	0.1095	6941.98	0.0455	0.0004641
Ag	107	3	He	2.472	0.1129	7062.07	0.0455	0.0004641
Cd	111	3	He	0.926	0.0045	290.01	0.0048	5.152E-05
Cd	111	3	He	0.883	0.0043	272.00	0.0048	5.152E-05
Cd	111	3	He	0.902	0.0044	274.00	0.0048	5.152E-05
Sn	120	3	He	15.362	0.2346	15128.58	0.0143	0.01559
Sn	120	3	He	16.457	0.2502	15859.48	0.0143	0.01559
Sn	120	3	He	16.401	0.2494	15599.23	0.0143	0.01559
Sb	121	3	He	3.818	0.0476	3070.46	0.0124	0.000258
Sb	121	3	He	3.49	0.0436	2760.39	0.0124	0.000258
Sb	121	3	He	3.615	0.0451	2820.37	0.0124	0.000258
Ba	137	3	He	307.139	1.344	86661.91	0.0044	0.000309
Ba	137	3	He	319.553	1.3983	88624.74	0.0044	0.000309
Ba	137	3	He	315.284	1.3796	86279.69	0.0044	0.000309
Tl	205	3	He	0.225	0.0072	1620.18	0.0276	0.001005
Tl	205	3	He	0.221	0.0071	1600.16	0.0276	0.001005
Tl	205	3	He	0.194	0.0064	1430.13	0.0276	0.001005
Pb	208	3	He	133.59	4.8645	581568.23	0.0364	0.002176
Pb	208	3	He	134.815	4.9091	585073.19	0.0364	0.002176
Pb	208	3	He	133.172	4.8493	580057.34	0.0364	0.002176
U	238	3	He	1.971	0.0832	18634.00	0.0421	0.00024
U	238	3	He	1.989	0.0839	18884.33	0.0421	0.00024
U	238	3	He	2.005	0.0846	18974.51	0.0421	0.00024
Sc	45	1	No Gas			3582108.07		
Sc	45	1	No Gas			3588949.32		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3536288.38		
Ge	72	1	No Gas			1498154.82		
Ge	72	1	No Gas			1494546.70		
Ge	72	1	No Gas			1455591.70		
Sc	45	2	H2			209266.99		
Sc	45	2	H2			219134.68		
Sc	45	2	H2			211283.24		
Ge	72	2	H2			157563.51		
Ge	72	2	H2			165400.00		
Ge	72	2	H2			162883.66		
In	115	2	H2			421956.24		
In	115	2	H2			443240.15		
In	115	2	H2			432486.36		
Sc	45	3	He			45561.56		
Sc	45	3	He			45521.64		
Sc	45	3	He			45411.01		
Ge	72	3	He			74744.00		
Ge	72	3	He			74422.65		
Ge	72	3	He			73517.71		
In	115	3	He			64599.53		
In	115	3	He			63504.71		
In	115	3	He			62660.78		
Tb	159	3	He			296403.04		
Tb	159	3	He			299328.90		
Tb	159	3	He			296094.14		
Bi	209	3	He			224053.71		
Bi	209	3	He			225039.22		
Bi	209	3	He			224312.42		

Quantitation Report

Data File Name	263SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 19:39:13
Sample Name	410-136577-H-20-A @10
Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

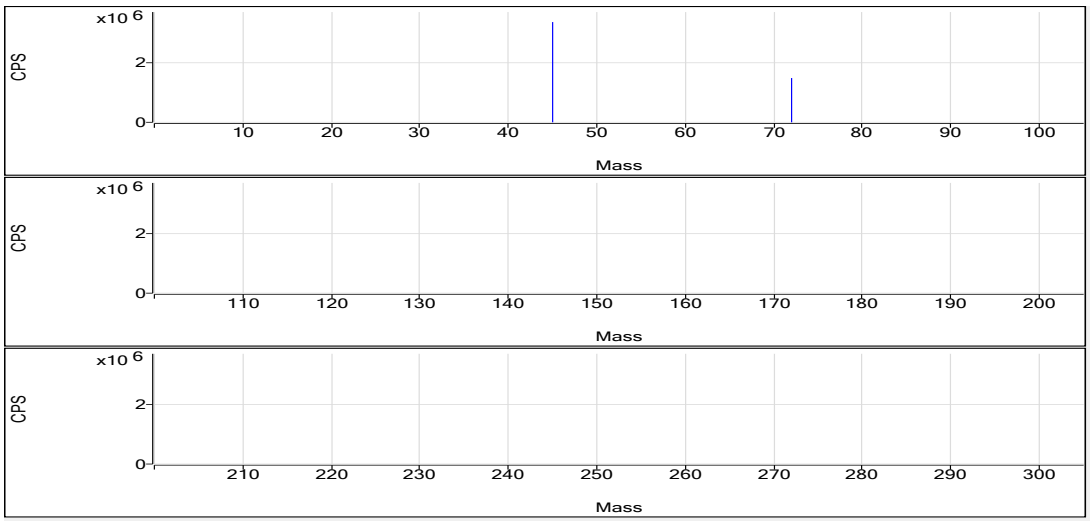
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.274	ppb	4.4	601.35	0.0004	Pulse	0.5000	3
Se	78	72	H2	0.191	ppb	26.7	14.00	0.0001	Pulse	1.5000	3
Na	23	72	He	1038.045	ppb	1.2	141032.57	1.8896	Pulse	0.1000	3
Mg	24	72	He	6692.874	ppb	0.7	421514.16	5.6476	Pulse	0.1000	3
Al	27	72	He	9963.836	ppb	1.1	179592.80	2.4063	Pulse	0.1000	3
K	39	72	He	666.569	ppb	6.0	38190.29	0.5117	Pulse	0.1000	3
Ca	44	72	He	12336.408	ppb	1.0	28718.90	0.3848	Pulse	0.1000	3
Ti	47	72	He	1218.568	ppb	1.3	22828.45	0.3059	Pulse	0.1000	3
V	51	72	He	39.967	ppb	2.2	35439.41	0.4748	Pulse	0.5000	3
Cr	52	72	He	24.223	ppb	1.6	29423.68	0.3942	Pulse	0.1000	3
Mn	55	72	He	491.231	ppb	0.5	217437.64	2.9133	Pulse	0.1000	3
Fe	57	72	He	16269.168	ppb	0.6	352091.93	4.7173	Pulse	0.1000	3
Co	59	72	He	7.590	ppb	1.7	17514.48	0.2347	Pulse	0.1000	3
Ni	60	72	He	20.395	ppb	2.6	14057.22	0.1883	Pulse	0.1000	3
Cu	63	72	He	392.854	ppb	0.6	731549.73	9.8016	Pulse	0.1000	3
Zn	66	72	He	43.024	ppb	5.2	8249.29	0.1105	Pulse	0.1000	3
As	75	72	He	2.437	ppb	13.2	348.67	0.0047	Pulse	0.5000	3
Sr	88	115	He	34.316	ppb	0.9	17387.84	0.2690	Pulse	0.1000	3
Mo	98	115	He	0.372	ppb	2.9	563.36	0.0087	Pulse	0.1000	3
Ag	107	115	He	0.539	ppb	6.4	1616.81	0.0250	Pulse	0.1000	3
Cd	111	115	He	0.219	ppb	14.8	71.33	0.0011	Pulse	0.5000	3
Sn	120	115	He	3.477	ppb	3.4	4210.77	0.0652	Pulse	0.1000	3
Sb	121	115	He	0.807	ppb	8.8	663.38	0.0103	Pulse	0.1000	3
Ba	137	115	He	67.058	ppb	0.6	18980.28	0.2937	Pulse	0.1000	3
Tl	205	209	He	0.047	ppb	26.8	516.70	0.0023	Pulse	0.1000	3
Pb	208	209	He	29.592	ppb	1.9	241624.78	1.0793	Pulse	0.1000	3
U	238	209	He	0.439	ppb	4.0	4187.50	0.0187	Pulse	0.1000	3

ISTD Table:

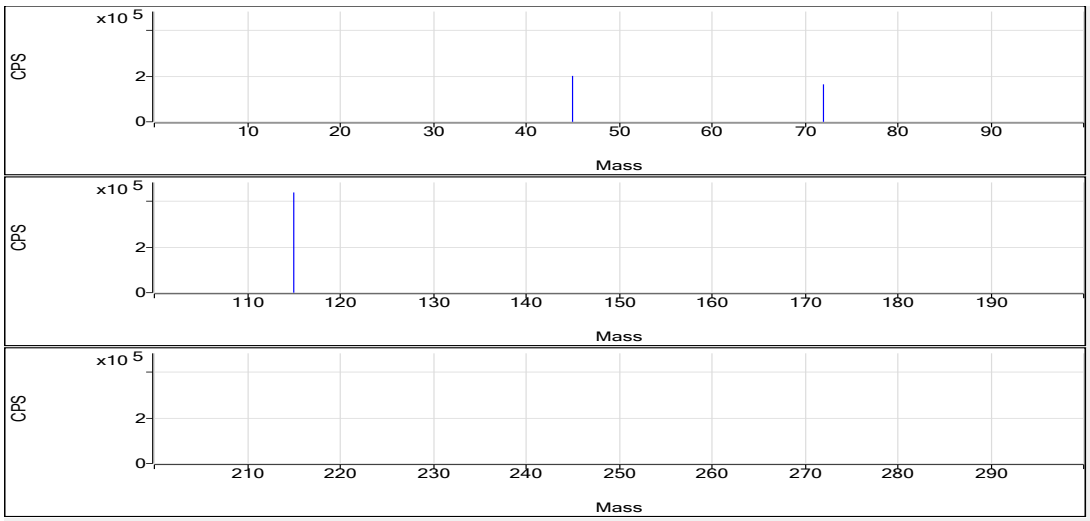
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3349939.11	1.3	103.4	Pulse	0.1000	3
No Gas	Ge	72	1479099.67	1.0	102.7	Pulse	0.1000	3
H2	Sc	45	201335.14	2.2	103.0	Pulse	0.1000	3
H2	Ge	72	164307.86	3.1	100.8	Pulse	0.1000	3
H2	In	115	439452.22	2.0	101.4	Pulse	0.1000	3
He	Sc	45	42642.85	1.8	106.6	Pulse	0.1000	3
He	Ge	72	74636.89	0.3	103.2	Pulse	0.1000	3
He	In	115	64627.25	1.2	100.1	Pulse	0.1000	3
He	Tb	159	287880.22	1.0	100.7	Pulse	0.1000	3
He	Bi	209	223929.03	1.8	100.8	Pulse	0.1000	3

No Gas

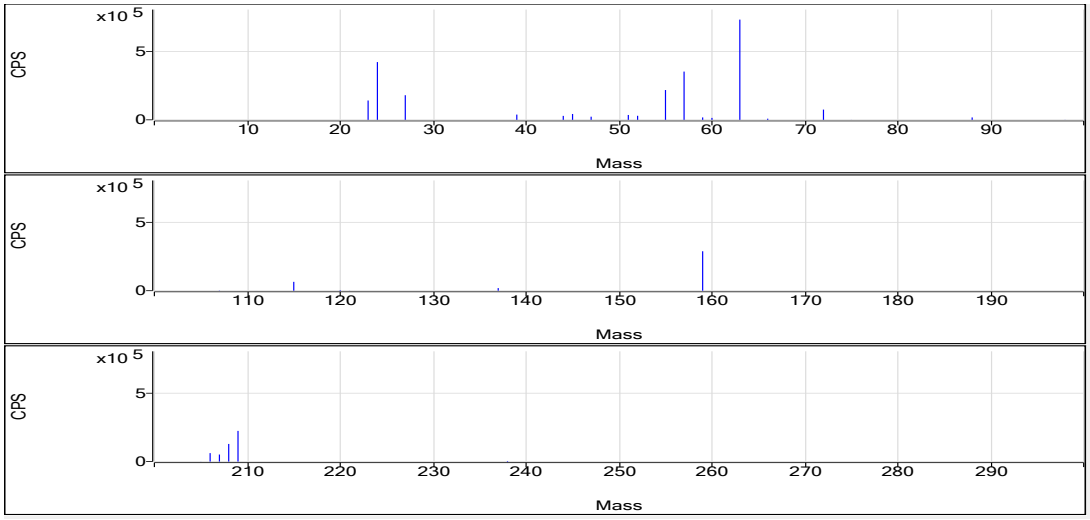


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.288	0.0004	634.02	0.0013	4.694E-05
Be	9	1	No Gas	0.266	0.0004	588.02	0.0013	4.694E-05
Be	9	1	No Gas	0.267	0.0004	582.01	0.0013	4.694E-05
Se	78	2	H2	0.186	0.0001	13.33	0.0004	1.089E-05
Se	78	2	H2	0.143	0.0001	11.33	0.0004	1.089E-05
Se	78	2	H2	0.245	0.0001	17.33	0.0004	1.089E-05
Na	23	3	He	1052.328	1.9142	142303.41	0.0017	0.1065
Na	23	3	He	1030.302	1.8763	140358.53	0.0017	0.1065
Na	23	3	He	1031.505	1.8784	140435.76	0.0017	0.1065
Mg	24	3	He	6743.848	5.6906	423051.40	0.0008	0.004846
Mg	24	3	He	6653.233	5.6142	419969.02	0.0008	0.004846
Mg	24	3	He	6681.54	5.6381	421522.06	0.0008	0.004846
Al	27	3	He	10072.666	2.4325	180840.84	0.0002	0.001063
Al	27	3	He	9851.216	2.3791	177967.34	0.0002	0.001063
Al	27	3	He	9967.625	2.4072	179970.23	0.0002	0.001063
K	39	3	He	710.695	0.5361	39854.48	0.0006	0.1436
K	39	3	He	656.635	0.5062	37869.37	0.0006	0.1436
K	39	3	He	632.377	0.4928	36847.02	0.0006	0.1436
Ca	44	3	He	12290.185	0.3833	28498.52	0	0.001611
Ca	44	3	He	12481.188	0.3893	29119.64	0	0.001611
Ca	44	3	He	12237.85	0.3817	28538.54	0	0.001611
Ti	47	3	He	1227.681	0.3082	22908.60	0.0003	0.0002737
Ti	47	3	He	1200.861	0.3014	22548.02	0.0003	0.0002737
Ti	47	3	He	1227.162	0.308	23028.74	0.0003	0.0002737
V	51	3	He	40.8	0.4846	36026.18	0.0117	0.007326
V	51	3	He	39.053	0.4642	34720.97	0.0117	0.007326
V	51	3	He	40.047	0.4758	35571.07	0.0117	0.007326
Cr	52	3	He	24.614	0.4002	29750.93	0.0152	0.02538
Cr	52	3	He	24.223	0.3942	29490.45	0.0152	0.02538
Cr	52	3	He	23.832	0.3883	29029.65	0.0152	0.02538
Mn	55	3	He	494.152	2.9305	217863.41	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	490.587	2.9095	217645.06	0.0059	0.01385
Mn	55	3	He	488.954	2.8999	216804.45	0.0059	0.01385
Fe	57	3	He	16160.208	4.6858	348350.27	0.0003	0.003918
Fe	57	3	He	16359.507	4.7435	354837.18	0.0003	0.003918
Fe	57	3	He	16287.788	4.7227	353088.35	0.0003	0.003918
Co	59	3	He	7.729	0.2389	17761.49	0.0305	0.003084
Co	59	3	He	7.558	0.2337	17481.08	0.0305	0.003084
Co	59	3	He	7.483	0.2314	17300.88	0.0305	0.003084
Ni	60	3	He	20.342	0.1879	13967.12	0.0088	0.009003
Ni	60	3	He	20.956	0.1933	14457.61	0.0088	0.009003
Ni	60	3	He	19.887	0.1839	13746.93	0.0088	0.009003
Cu	63	3	He	395.566	9.8692	733698.43	0.0249	0.004937
Cu	63	3	He	391.252	9.7616	730218.04	0.0249	0.004937
Cu	63	3	He	391.744	9.7739	730732.72	0.0249	0.004937
Zn	66	3	He	44.86	0.115	8552.79	0.0025	0.004836
Zn	66	3	He	40.541	0.1044	7812.36	0.0025	0.004836
Zn	66	3	He	43.67	0.1121	8382.71	0.0025	0.004836
As	75	3	He	2.72	0.0052	384.01	0.0017	0.0004347
As	75	3	He	2.502	0.0048	358.01	0.0017	0.0004347
As	75	3	He	2.088	0.0041	304.00	0.0017	0.0004347
Sr	88	3	He	33.985	0.2664	16980.74	0.0078	0.0007762
Sr	88	3	He	34.562	0.2709	17581.29	0.0078	0.0007762
Sr	88	3	He	34.403	0.2697	17601.48	0.0078	0.0007762
Mo	98	3	He	0.383	0.0089	570.03	0.022	0.0005162
Mo	98	3	He	0.361	0.0085	550.03	0.022	0.0005162
Mo	98	3	He	0.373	0.0087	570.03	0.022	0.0005162
Ag	107	3	He	0.5	0.0232	1480.12	0.0455	0.0004641
Ag	107	3	He	0.566	0.0262	1700.17	0.0455	0.0004641
Ag	107	3	He	0.552	0.0256	1670.15	0.0455	0.0004641
Cd	111	3	He	0.238	0.0012	76.00	0.0048	5.152E-05
Cd	111	3	He	0.182	0.0009	60.00	0.0048	5.152E-05
Cd	111	3	He	0.238	0.0012	78.00	0.0048	5.152E-05
Sn	120	3	He	3.574	0.0665	4240.78	0.0143	0.01559
Sn	120	3	He	3.512	0.0657	4260.78	0.0143	0.01559
Sn	120	3	He	3.346	0.0633	4130.75	0.0143	0.01559
Sb	121	3	He	0.814	0.0104	660.04	0.0124	0.000258
Sb	121	3	He	0.874	0.0111	720.05	0.0124	0.000258
Sb	121	3	He	0.733	0.0093	610.04	0.0124	0.000258
Ba	137	3	He	66.723	0.2922	18623.17	0.0044	0.000309
Ba	137	3	He	66.91	0.293	19013.69	0.0044	0.000309
Ba	137	3	He	67.543	0.2958	19303.97	0.0044	0.000309
Tl	205	3	He	0.042	0.0022	490.03	0.0276	0.001005
Tl	205	3	He	0.061	0.0027	610.04	0.0276	0.001005
Tl	205	3	He	0.038	0.0021	450.02	0.0276	0.001005
Pb	208	3	He	29.325	1.0695	129187.74	0.0364	0.002176
Pb	208	3	He	29.217	1.0656	127765.13	0.0364	0.002176
Pb	208	3	He	30.235	1.1026	128906.55	0.0364	0.002176
U	238	3	He	0.44	0.0188	4250.84	0.0421	0.00024
U	238	3	He	0.421	0.0179	4050.78	0.0421	0.00024
U	238	3	He	0.456	0.0194	4260.89	0.0421	0.00024
Sc	45	1	No Gas			3384145.26		
Sc	45	1	No Gas			3364721.82		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3300950.26		
Ge	72	1	No Gas			1492324.20		
Ge	72	1	No Gas			1482154.67		
Ge	72	1	No Gas			1462820.13		
Sc	45	2	H2			198212.69		
Sc	45	2	H2			206394.92		
Sc	45	2	H2			199397.81		
Ge	72	2	H2			159879.73		
Ge	72	2	H2			169992.34		
Ge	72	2	H2			163051.51		
In	115	2	H2			432771.87		
In	115	2	H2			449202.22		
In	115	2	H2			436382.57		
Sc	45	3	He			41910.39		
Sc	45	3	He			42552.67		
Sc	45	3	He			43465.49		
Ge	72	3	He			74342.21		
Ge	72	3	He			74804.82		
Ge	72	3	He			74763.63		
In	115	3	He			63765.55		
In	115	3	He			64920.93		
In	115	3	He			65293.80		
Tb	159	3	He			291123.65		
Tb	159	3	He			285450.05		
Tb	159	3	He			287066.97		
Bi	209	3	He			226618.02		
Bi	209	3	He			225758.24		
Bi	209	3	He			219410.84		

Quantitation Report

Data File Name	264SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 19:41:12
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

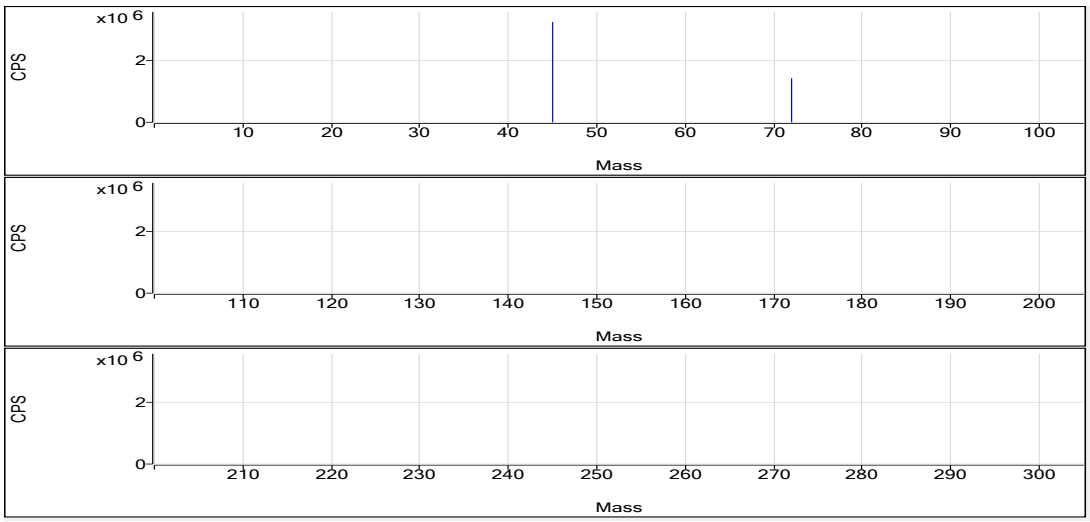
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.005	ppb	N/A	57.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.012	ppb	113.7	2.44	0.0000	Pulse	1.5000	3
Na	23	72	He	3.673	ppb	87.5	8142.50	0.1128	Pulse	0.1000	3
Mg	24	72	He	16.160	ppb	15.4	1333.44	0.0185	Pulse	0.1000	3
Al	27	72	He	25.620	ppb	2.6	523.36	0.0072	Pulse	0.1000	3
K	39	72	He	9.332	ppb	107.3	10744.27	0.1488	Pulse	0.1000	3
Ca	44	72	He	26.868	ppb	49.5	176.68	0.0024	Pulse	0.1000	3
Ti	47	72	He	1.858	ppb	149.6	53.33	0.0007	Pulse	0.1000	3
V	51	72	He	0.118	ppb	9.5	628.69	0.0087	Pulse	0.5000	3
Cr	52	72	He	0.140	ppb	55.0	1986.87	0.0275	Pulse	0.1000	3
Mn	55	72	He	0.328	ppb	15.5	1140.09	0.0158	Pulse	0.1000	3
Fe	57	72	He	48.781	ppb	11.0	1303.44	0.0181	Pulse	0.1000	3
Co	59	72	He	0.032	ppb	37.4	293.35	0.0041	Pulse	0.1000	3
Ni	60	72	He	1.039	ppb	17.7	1310.10	0.0181	Pulse	0.1000	3
Cu	63	72	He	0.257	ppb	11.2	820.06	0.0114	Pulse	0.1000	3
Zn	66	72	He	0.286	ppb	37.9	400.02	0.0055	Pulse	0.1000	3
As	75	72	He	0.000	ppb	N/A	31.33	0.0004	Pulse	0.5000	3
Sr	88	115	He	0.140	ppb	65.4	120.00	0.0019	Pulse	0.1000	3
Mo	98	115	He	0.017	ppb	65.2	56.67	0.0009	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	7966.3	30.00	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.002	ppb	576.1	4.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.070	ppb	212.8	1063.41	0.0166	Pulse	0.1000	3
Sb	121	115	He	0.013	ppb	205.5	26.67	0.0004	Pulse	0.1000	3
Ba	137	115	He	0.334	ppb	22.5	113.34	0.0018	Pulse	0.1000	3
Tl	205	209	He	-0.002	ppb	N/A	206.68	0.0009	Pulse	0.1000	3
Pb	208	209	He	0.474	ppb	5.6	4273.78	0.0194	Pulse	0.1000	3
U	238	209	He	0.009	ppb	15.1	133.34	0.0006	Pulse	0.1000	3

ISTD Table:

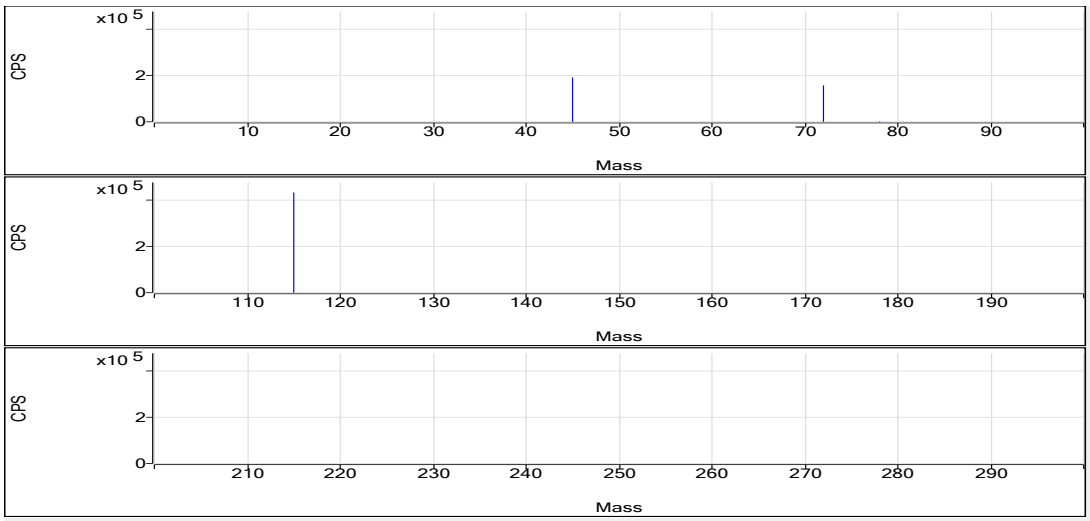
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3259392.35	1.7	100.6	Pulse	0.1000	3
No Gas	Ge	72	1432252.84	1.5	99.5	Pulse	0.1000	3
H2	Sc	45	191382.44	2.2	98.0	Pulse	0.1000	3
H2	Ge	72	157104.50	2.8	96.4	Pulse	0.1000	3
H2	In	115	433048.57	1.7	99.9	Pulse	0.1000	3
He	Sc	45	41429.32	1.7	103.6	Pulse	0.1000	3
He	Ge	72	72214.65	0.4	99.9	Pulse	0.1000	3
He	In	115	64102.85	0.2	99.2	Pulse	0.1000	3
He	Tb	159	280661.69	0.4	98.1	Pulse	0.1000	3
He	Bi	209	219728.46	0.9	98.9	Pulse	0.1000	3

No Gas

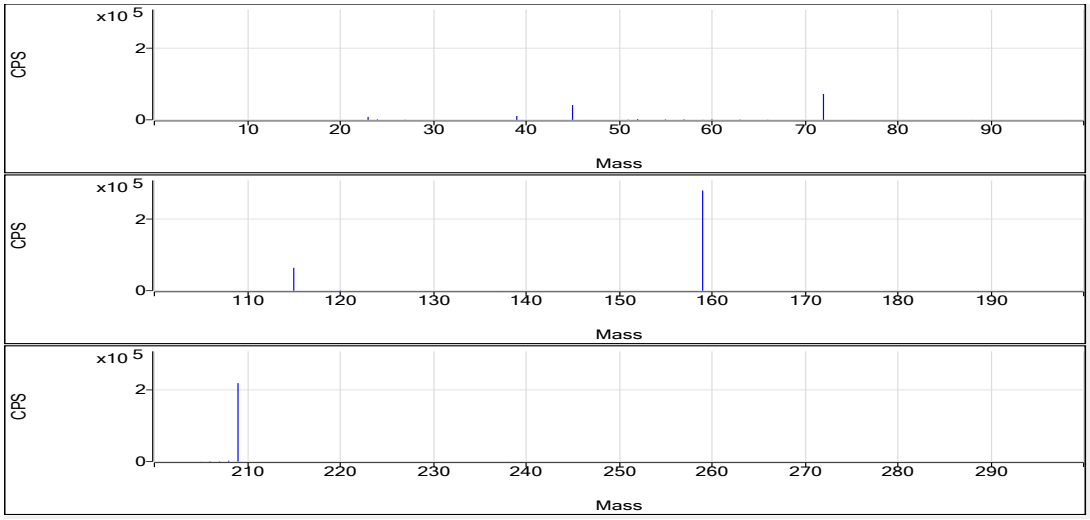


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.006	0	56.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.015	0	40.00	0.0013	4.694E-05
Be	9	1	No Gas	0.005	0.0001	76.00	0.0013	4.694E-05
Se	78	2	H2	0.028	0	3.33	0.0004	1.089E-05
Se	78	2	H2	0.004	0	2.00	0.0004	1.089E-05
Se	78	2	H2	0.004	0	2.00	0.0004	1.089E-05
Na	23	3	He	1.079	0.1083	7822.32	0.0017	0.1065
Na	23	3	He	7.266	0.1189	8552.70	0.0017	0.1065
Na	23	3	He	2.674	0.111	8052.49	0.0017	0.1065
Mg	24	3	He	15.111	0.0176	1270.10	0.0008	0.004846
Mg	24	3	He	18.996	0.0209	1500.12	0.0008	0.004846
Mg	24	3	He	14.373	0.017	1230.09	0.0008	0.004846
Al	27	3	He	24.852	0.0071	510.02	0.0002	0.001063
Al	27	3	He	26.132	0.0074	530.03	0.0002	0.001063
Al	27	3	He	25.878	0.0073	530.03	0.0002	0.001063
K	39	3	He	16.81	0.1529	11044.40	0.0006	0.1436
K	39	3	He	13.226	0.1509	10854.33	0.0006	0.1436
K	39	3	He	-2.041	0.1425	10334.08	0.0006	0.1436
Ca	44	3	He	23.924	0.0024	170.01	0	0.001611
Ca	44	3	He	15.299	0.0021	150.01	0	0.001611
Ca	44	3	He	41.38	0.0029	210.01	0	0.001611
Ti	47	3	He	4.43	0.0014	100.00	0.0003	0.0002737
Ti	47	3	He	2.236	0.0008	60.00	0.0003	0.0002737
Ti	47	3	He	-1.091	0	0.00	0.0003	0.0002737
V	51	3	He	0.108	0.0086	620.02	0.0117	0.007326
V	51	3	He	0.13	0.0088	636.02	0.0117	0.007326
V	51	3	He	0.116	0.0087	630.02	0.0117	0.007326
Cr	52	3	He	0.061	0.0263	1900.18	0.0152	0.02538
Cr	52	3	He	0.214	0.0287	2060.24	0.0152	0.02538
Cr	52	3	He	0.144	0.0276	2000.20	0.0152	0.02538
Mn	55	3	He	0.304	0.0156	1130.10	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.386	0.0161	1160.09	0.0059	0.01385
Mn	55	3	He	0.293	0.0156	1130.08	0.0059	0.01385
Fe	57	3	He	54.827	0.0198	1430.13	0.0003	0.003918
Fe	57	3	He	46.963	0.0175	1260.11	0.0003	0.003918
Fe	57	3	He	44.554	0.0168	1220.08	0.0003	0.003918
Co	59	3	He	0.031	0.004	290.02	0.0305	0.003084
Co	59	3	He	0.045	0.0045	320.01	0.0305	0.003084
Co	59	3	He	0.021	0.0037	270.01	0.0305	0.003084
Ni	60	3	He	1.134	0.019	1370.12	0.0088	0.009003
Ni	60	3	He	0.827	0.0163	1170.08	0.0088	0.009003
Ni	60	3	He	1.156	0.0192	1390.11	0.0088	0.009003
Cu	63	3	He	0.23	0.0107	770.05	0.0249	0.004937
Cu	63	3	He	0.287	0.0121	870.06	0.0249	0.004937
Cu	63	3	He	0.256	0.0113	820.06	0.0249	0.004937
Zn	66	3	He	0.399	0.0058	420.02	0.0025	0.004836
Zn	66	3	He	0.182	0.0053	380.02	0.0025	0.004836
Zn	66	3	He	0.277	0.0055	400.02	0.0025	0.004836
As	75	3	He	0.005	0.0004	32.00	0.0017	0.0004347
As	75	3	He	0.054	0.0005	38.00	0.0017	0.0004347
As	75	3	He	-0.06	0.0003	24.00	0.0017	0.0004347
Sr	88	3	He	0.24	0.0027	170.01	0.0078	0.0007762
Sr	88	3	He	0.061	0.0012	80.00	0.0078	0.0007762
Sr	88	3	He	0.12	0.0017	110.00	0.0078	0.0007762
Mo	98	3	He	0.019	0.0009	60.00	0.022	0.0005162
Mo	98	3	He	0.026	0.0011	70.00	0.022	0.0005162
Mo	98	3	He	0.005	0.0006	40.00	0.022	0.0005162
Ag	107	3	He	-0.007	0.0002	10.00	0.0455	0.0004641
Ag	107	3	He	0.007	0.0008	50.00	0.0455	0.0004641
Ag	107	3	He	0	0.0005	30.00	0.0455	0.0004641
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Cd	111	3	He	-0.011	0	0.00	0.0048	5.152E-05
Cd	111	3	He	0.015	0.0001	8.00	0.0048	5.152E-05
Sn	120	3	He	0.068	0.0166	1060.08	0.0143	0.01559
Sn	120	3	He	0.222	0.0187	1200.09	0.0143	0.01559
Sn	120	3	He	-0.078	0.0145	930.07	0.0143	0.01559
Sb	121	3	He	0.042	0.0008	50.00	0.0124	0.000258
Sb	121	3	He	0.004	0.0003	20.00	0.0124	0.000258
Sb	121	3	He	-0.008	0.0002	10.00	0.0124	0.000258
Ba	137	3	He	0.393	0.002	130.01	0.0044	0.000309
Ba	137	3	He	0.358	0.0019	120.00	0.0044	0.000309
Ba	137	3	He	0.249	0.0014	90.00	0.0044	0.000309
Tl	205	3	He	-0.01	0.0007	160.01	0.0276	0.001005
Tl	205	3	He	0.004	0.0011	240.01	0.0276	0.001005
Tl	205	3	He	0	0.001	220.01	0.0276	0.001005
Pb	208	3	He	0.504	0.0205	2390.31	0.0364	0.002176
Pb	208	3	He	0.452	0.0186	2130.26	0.0364	0.002176
Pb	208	3	He	0.468	0.0192	2270.30	0.0364	0.002176
U	238	3	He	0.009	0.0006	140.01	0.0421	0.00024
U	238	3	He	0.01	0.0006	140.01	0.0421	0.00024
U	238	3	He	0.007	0.0005	120.00	0.0421	0.00024
Sc	45	1	No Gas			3293847.76		
Sc	45	1	No Gas			3287380.89		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3196948.39		
Ge	72	1	No Gas			1450911.23		
Ge	72	1	No Gas			1437683.73		
Ge	72	1	No Gas			1408163.57		
Sc	45	2	H2			186705.19		
Sc	45	2	H2			194851.15		
Sc	45	2	H2			192590.99		
Ge	72	2	H2			152033.38		
Ge	72	2	H2			160222.76		
Ge	72	2	H2			159057.35		
In	115	2	H2			424849.80		
In	115	2	H2			438150.42		
In	115	2	H2			436145.50		
Sc	45	3	He			41228.71		
Sc	45	3	He			42231.58		
Sc	45	3	He			40827.66		
Ge	72	3	He			72221.83		
Ge	72	3	He			71909.34		
Ge	72	3	He			72512.77		
In	115	3	He			64037.86		
In	115	3	He			64027.03		
In	115	3	He			64268.55		
Tb	159	3	He			280799.14		
Tb	159	3	He			279462.67		
Tb	159	3	He			281723.26		
Bi	209	3	He			220835.17		
Bi	209	3	He			217414.63		
Bi	209	3	He			220935.58		

Quantitation Report

Data File Name	265_CCV.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 19:43:13
Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

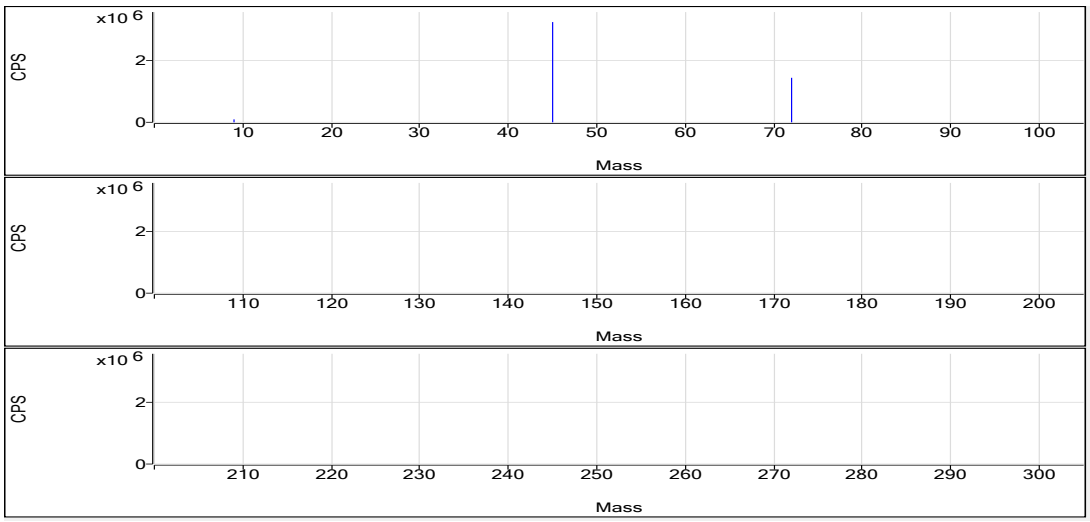
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	49.785	ppb	5.8	93878.50	0.0655	Pulse	0.5000	3
Se	78	72	H2	52.632	ppb	3.6	3243.04	0.0205	Pulse	1.5000	3
Na	23	72	He	5367.859	ppb	1.9	672682.65	9.3275	Pulse	0.1000	3
Mg	24	72	He	5373.458	ppb	1.5	327077.26	4.5352	Pulse	0.1000	3
Al	27	72	He	5306.865	ppb	1.6	92464.45	1.2821	Pulse	0.1000	3
K	39	72	He	5326.591	ppb	1.9	222488.52	3.0850	Pulse	0.1000	3
Ca	44	72	He	5363.293	ppb	5.5	12128.71	0.1682	Pulse	0.1000	3
Ti	47	72	He	5430.207	ppb	1.5	98231.56	1.3621	Pulse	0.1000	3
V	51	72	He	535.524	ppb	1.3	452316.90	6.2717	Pulse	0.5000	3
Cr	52	72	He	539.004	ppb	1.6	593752.52	8.2330	Pulse	0.1000	3
Mn	55	72	He	534.883	ppb	1.5	228687.73	3.1710	Pulse	0.1000	3
Fe	57	72	He	5306.357	ppb	2.2	111149.81	1.5412	Pulse	0.1000	3
Co	59	72	He	531.500	ppb	1.6	1169725.45	16.2194	Pulse	0.1000	3
Ni	60	72	He	531.834	ppb	0.9	337931.74	4.6856	Pulse	0.1000	3
Cu	63	72	He	531.632	ppb	1.2	956481.97	13.2623	Pulse	0.1000	3
Zn	66	72	He	527.947	ppb	1.0	93894.77	1.3019	Pulse	0.1000	3
As	75	72	He	528.875	ppb	2.0	66365.73	0.9202	Pulse	0.5000	3
Sr	88	115	He	51.868	ppb	5.4	26064.56	0.4062	Pulse	0.1000	3
Mo	98	115	He	51.819	ppb	1.0	73279.88	1.1416	Pulse	0.1000	3
Ag	107	115	He	51.710	ppb	1.2	151054.56	2.3533	Pulse	0.1000	3
Cd	111	115	He	51.765	ppb	2.7	15950.42	0.2485	Pulse	0.5000	3
Sn	120	115	He	52.424	ppb	2.6	48970.05	0.7630	Pulse	0.1000	3
Sb	121	115	He	51.999	ppb	2.7	41415.77	0.6453	Pulse	0.1000	3
Ba	137	115	He	515.217	ppb	1.7	144686.75	2.2543	Pulse	0.1000	3
Tl	205	209	He	52.203	ppb	0.8	318024.25	1.4441	Pulse	0.1000	3
Pb	208	209	He	52.456	ppb	1.4	420948.66	1.9114	Pulse	0.1000	3
U	238	209	He	51.885	ppb	0.9	480717.68	2.1829	Pulse	0.1000	3

ISTD Table:

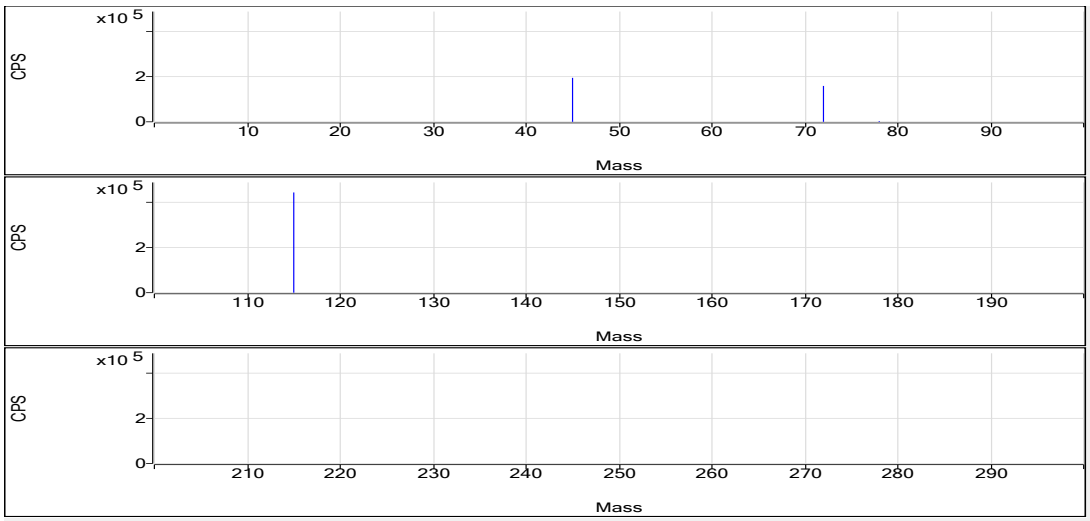
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3231154.74	2.5	99.7	Pulse	0.1000	3
No Gas	Ge	72	1434832.89	1.6	99.7	Pulse	0.1000	3
H2	Sc	45	193863.35	3.0	99.2	Pulse	0.1000	3
H2	Ge	72	158210.79	1.6	97.1	Pulse	0.1000	3
H2	In	115	441920.51	2.3	102.0	Pulse	0.1000	3
He	Sc	45	41807.11	0.5	104.6	Pulse	0.1000	3
He	Ge	72	72124.39	0.7	99.8	Pulse	0.1000	3
He	In	115	64194.23	1.5	99.4	Pulse	0.1000	3
He	Tb	159	286220.72	0.4	100.1	Pulse	0.1000	3
He	Bi	209	220223.14	0.6	99.1	Pulse	0.1000	3

No Gas

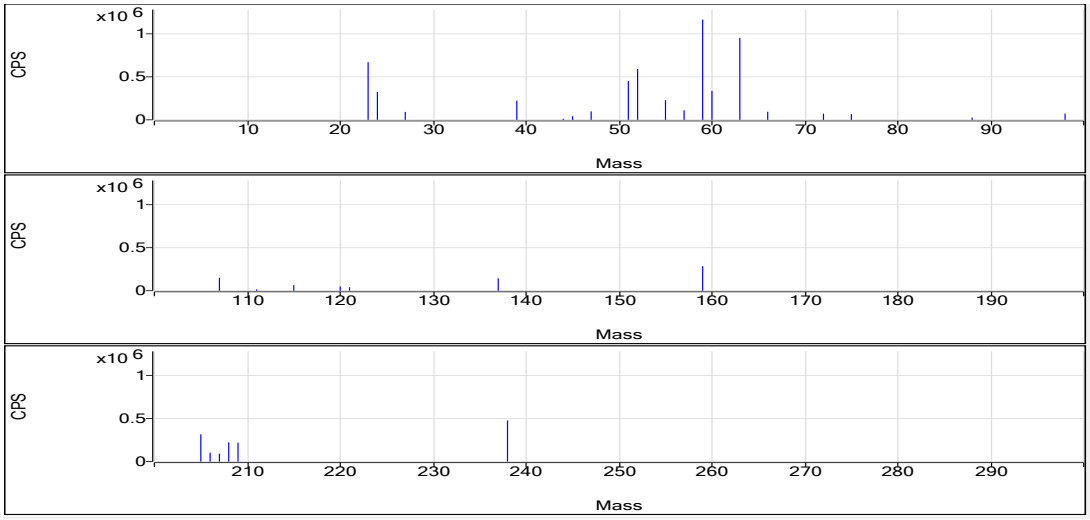


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	46.558	0.0612	89243.93	0.0013	4.694E-05
Be	9	1	No Gas	50.649	0.0666	95553.70	0.0013	4.694E-05
Be	9	1	No Gas	52.15	0.0686	96837.88	0.0013	4.694E-05
Se	78	2	H2	54.815	0.0214	3341.06	0.0004	1.089E-05
Se	78	2	H2	51.249	0.02	3215.03	0.0004	1.089E-05
Se	78	2	H2	51.833	0.0202	3173.02	0.0004	1.089E-05
Na	23	3	He	5441.29	9.4536	680095.93	0.0017	0.1065
Na	23	3	He	5253.225	9.1306	663921.71	0.0017	0.1065
Na	23	3	He	5409.062	9.3983	674030.30	0.0017	0.1065
Mg	24	3	He	5432.412	4.5849	329840.46	0.0008	0.004846
Mg	24	3	He	5279.772	4.4562	324031.50	0.0008	0.004846
Mg	24	3	He	5408.191	4.5645	327359.82	0.0008	0.004846
Al	27	3	He	5323.139	1.286	92517.90	0.0002	0.001063
Al	27	3	He	5217.176	1.2605	91653.33	0.0002	0.001063
Al	27	3	He	5380.28	1.2998	93222.13	0.0002	0.001063
K	39	3	He	5387.704	3.1188	224366.89	0.0006	0.1436
K	39	3	He	5211.294	3.0214	219697.32	0.0006	0.1436
K	39	3	He	5380.776	3.115	223401.36	0.0006	0.1436
Ca	44	3	He	5674.789	0.1779	12795.95	0	0.001611
Ca	44	3	He	5082.041	0.1595	11594.90	0	0.001611
Ca	44	3	He	5333.049	0.1673	11995.28	0	0.001611
Ti	47	3	He	5404.524	1.3556	97523.40	0.0003	0.0002737
Ti	47	3	He	5364.127	1.3455	97835.99	0.0003	0.0002737
Ti	47	3	He	5521.969	1.3851	99335.29	0.0003	0.0002737
V	51	3	He	539.322	6.3162	454387.50	0.0117	0.007326
V	51	3	He	527.22	6.1746	448982.31	0.0117	0.007326
V	51	3	He	540.029	6.3244	453580.88	0.0117	0.007326
Cr	52	3	He	540.376	8.2538	593783.12	0.0152	0.02538
Cr	52	3	He	529.987	8.0956	588668.27	0.0152	0.02538
Cr	52	3	He	546.65	8.3494	598806.16	0.0152	0.02538
Mn	55	3	He	538.684	3.1934	229733.75	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	525.933	3.1181	226732.73	0.0059	0.01385
Mn	55	3	He	540.032	3.2014	229596.70	0.0059	0.01385
Fe	57	3	He	5362.578	1.5575	112049.50	0.0003	0.003918
Fe	57	3	He	5171.934	1.5023	109238.84	0.0003	0.003918
Fe	57	3	He	5384.561	1.5639	112161.08	0.0003	0.003918
Co	59	3	He	534.824	16.3208	1174125.53	0.0305	0.003084
Co	59	3	He	521.794	15.9233	1157850.53	0.0305	0.003084
Co	59	3	He	537.882	16.4141	1177200.29	0.0305	0.003084
Ni	60	3	He	536.133	4.7234	339801.64	0.0088	0.009003
Ni	60	3	He	526.409	4.6379	337239.88	0.0088	0.009003
Ni	60	3	He	532.96	4.6955	336753.71	0.0088	0.009003
Cu	63	3	He	532.971	13.2957	956496.55	0.0249	0.004937
Cu	63	3	He	524.878	13.0939	952111.47	0.0249	0.004937
Cu	63	3	He	537.046	13.3973	960837.88	0.0249	0.004937
Zn	66	3	He	533.849	1.3164	94700.59	0.0025	0.004836
Zn	66	3	He	523.634	1.2913	93894.74	0.0025	0.004836
Zn	66	3	He	526.358	1.298	93088.98	0.0025	0.004836
As	75	3	He	536.074	0.9328	67102.98	0.0017	0.0004347
As	75	3	He	516.926	0.8995	65403.45	0.0017	0.0004347
As	75	3	He	533.625	0.9285	66590.77	0.0017	0.0004347
Sr	88	3	He	50.263	0.3937	25623.71	0.0078	0.0007762
Sr	88	3	He	50.268	0.3937	25343.20	0.0078	0.0007762
Sr	88	3	He	55.073	0.4313	27226.76	0.0078	0.0007762
Mo	98	3	He	51.468	1.1339	73802.38	0.022	0.0005162
Mo	98	3	He	51.568	1.1361	73129.09	0.022	0.0005162
Mo	98	3	He	52.421	1.1549	72908.17	0.022	0.0005162
Ag	107	3	He	51.696	2.3527	153125.40	0.0455	0.0004641
Ag	107	3	He	51.094	2.3253	149670.90	0.0455	0.0004641
Ag	107	3	He	52.339	2.3819	150367.39	0.0455	0.0004641
Cd	111	3	He	50.73	0.2436	15852.98	0.0048	5.152E-05
Cd	111	3	He	51.238	0.246	15834.98	0.0048	5.152E-05
Cd	111	3	He	53.327	0.256	16163.29	0.0048	5.152E-05
Sn	120	3	He	51.057	0.7436	48394.91	0.0143	0.01559
Sn	120	3	He	52.393	0.7626	49087.05	0.0143	0.01559
Sn	120	3	He	53.821	0.783	49428.19	0.0143	0.01559
Sb	121	3	He	51.668	0.6412	41733.26	0.0124	0.000258
Sb	121	3	He	50.776	0.6301	40559.95	0.0124	0.000258
Sb	121	3	He	53.553	0.6646	41954.10	0.0124	0.000258
Ba	137	3	He	508.303	2.224	144753.12	0.0044	0.000309
Ba	137	3	He	512.405	2.242	144310.22	0.0044	0.000309
Ba	137	3	He	524.944	2.2968	144996.91	0.0044	0.000309
Tl	205	3	He	51.826	1.4337	317424.51	0.0276	0.001005
Tl	205	3	He	52.173	1.4433	316011.40	0.0276	0.001005
Tl	205	3	He	52.61	1.4554	320636.83	0.0276	0.001005
Pb	208	3	He	52.308	1.9061	225145.11	0.0364	0.002176
Pb	208	3	He	51.807	1.8878	220231.70	0.0364	0.002176
Pb	208	3	He	53.252	1.9404	229374.84	0.0364	0.002176
U	238	3	He	51.402	2.1626	478807.30	0.0421	0.00024
U	238	3	He	51.938	2.1851	478439.33	0.0421	0.00024
U	238	3	He	52.315	2.201	484906.40	0.0421	0.00024
Sc	45	1	No Gas			3290564.95		
Sc	45	1	No Gas			3263939.33		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3138959.95		
Ge	72	1	No Gas			1457626.23		
Ge	72	1	No Gas			1434706.85		
Ge	72	1	No Gas			1412165.60		
Sc	45	2	H2			188385.51		
Sc	45	2	H2			199987.83		
Sc	45	2	H2			193216.72		
Ge	72	2	H2			156463.47		
Ge	72	2	H2			161030.51		
Ge	72	2	H2			157138.39		
In	115	2	H2			430494.68		
In	115	2	H2			449442.45		
In	115	2	H2			445824.41		
Sc	45	3	He			41700.30		
Sc	45	3	He			42060.92		
Sc	45	3	He			41660.10		
Ge	72	3	He			71940.27		
Ge	72	3	He			72714.26		
Ge	72	3	He			71718.65		
In	115	3	He			65463.49		
In	115	3	He			64750.38		
In	115	3	He			63514.72		
Tb	159	3	He			285563.73		
Tb	159	3	He			285404.88		
Tb	159	3	He			287693.55		
Bi	209	3	He			221403.63		
Bi	209	3	He			218951.17		
Bi	209	3	He			220314.63		

Quantitation Report

Data File Name	266_CCB.d
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Acq Time	2023-08-10 19:45:13
Sample Name	CCB 4654618
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

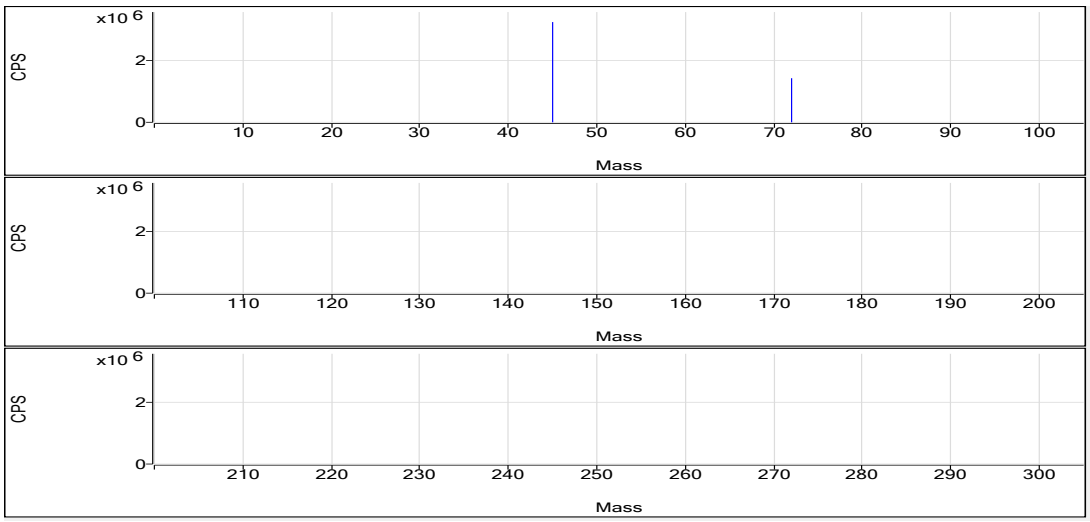
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.016	ppb	32.2	98.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.055	ppb	71.9	5.11	0.0000	Pulse	1.5000	3
Na	23	72	He	5.477	ppb	39.3	8345.94	0.1159	Pulse	0.1000	3
Mg	24	72	He	15.332	ppb	5.0	1280.10	0.0178	Pulse	0.1000	3
Al	27	72	He	24.412	ppb	34.0	500.03	0.0070	Pulse	0.1000	3
K	39	72	He	10.086	ppb	267.7	10734.27	0.1492	Pulse	0.1000	3
Ca	44	72	He	-10.043	ppb	N/A	93.34	0.0013	Pulse	0.1000	3
Ti	47	72	He	1.681	ppb	87.1	50.00	0.0007	Pulse	0.1000	3
V	51	72	He	0.155	ppb	24.0	658.02	0.0091	Pulse	0.5000	3
Cr	52	72	He	0.129	ppb	78.2	1970.21	0.0274	Pulse	0.1000	3
Mn	55	72	He	0.190	ppb	192.4	1080.08	0.0150	Pulse	0.1000	3
Fe	57	72	He	44.513	ppb	13.8	1213.43	0.0168	Pulse	0.1000	3
Co	59	72	He	0.149	ppb	23.3	550.03	0.0076	Pulse	0.1000	3
Ni	60	72	He	0.903	ppb	6.9	1220.09	0.0169	Pulse	0.1000	3
Cu	63	72	He	0.343	ppb	9.7	973.40	0.0135	Pulse	0.1000	3
Zn	66	72	He	0.199	ppb	142.0	383.36	0.0053	Pulse	0.1000	3
As	75	72	He	0.148	ppb	54.4	50.00	0.0007	Pulse	0.5000	3
Sr	88	115	He	0.128	ppb	45.1	113.33	0.0018	Pulse	0.1000	3
Mo	98	115	He	0.005	ppb	143.4	40.00	0.0006	Pulse	0.1000	3
Ag	107	115	He	0.005	ppb	114.6	43.33	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.009	ppb	222.2	6.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.160	ppb	164.3	1136.76	0.0179	Pulse	0.1000	3
Sb	121	115	He	0.030	ppb	73.7	40.00	0.0006	Pulse	0.1000	3
Ba	137	115	He	0.191	ppb	57.9	73.33	0.0011	Pulse	0.1000	3
Tl	205	209	He	0.095	ppb	9.1	790.05	0.0036	Pulse	0.1000	3
Pb	208	209	He	0.413	ppb	2.8	3743.69	0.0172	Pulse	0.1000	3
U	238	209	He	0.012	ppb	9.3	160.01	0.0007	Pulse	0.1000	3

ISTD Table:

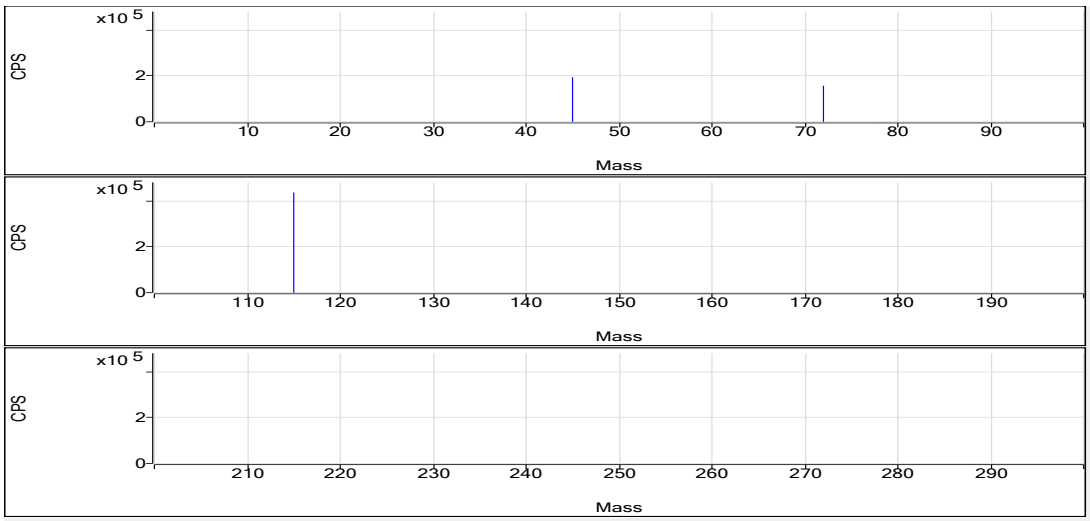
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3252175.57	1.7	100.3	Pulse	0.1000	3
No Gas	Ge	72	1430358.15	1.5	99.3	Pulse	0.1000	3
H2	Sc	45	194508.38	2.8	99.6	Pulse	0.1000	3
H2	Ge	72	157641.80	2.0	96.7	Pulse	0.1000	3
H2	In	115	438066.31	1.7	101.1	Pulse	0.1000	3
He	Sc	45	41081.68	0.1	102.7	Pulse	0.1000	3
He	Ge	72	72050.49	2.4	99.7	Pulse	0.1000	3
He	In	115	63723.15	1.5	98.7	Pulse	0.1000	3
He	Tb	159	280631.03	0.3	98.1	Pulse	0.1000	3
He	Bi	209	217708.97	0.1	98.0	Pulse	0.1000	3

No Gas

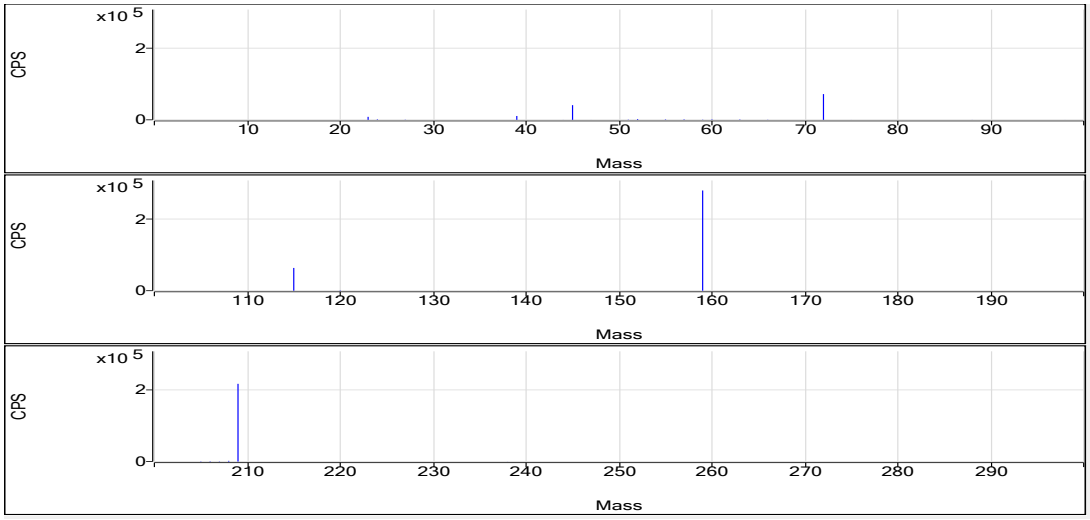


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.016	0.0001	98.00	0.0013	4.694E-05
Be	9	1	No Gas	0.012	0.0001	88.00	0.0013	4.694E-05
Be	9	1	No Gas	0.022	0.0001	108.00	0.0013	4.694E-05
Se	78	2	H2	0.039	0	4.00	0.0004	1.089E-05
Se	78	2	H2	0.1	0	8.00	0.0004	1.089E-05
Se	78	2	H2	0.026	0	3.33	0.0004	1.089E-05
Na	23	3	He	7.097	0.1186	8312.57	0.0017	0.1065
Na	23	3	He	3.038	0.1117	8122.45	0.0017	0.1065
Na	23	3	He	6.297	0.1173	8602.81	0.0017	0.1065
Mg	24	3	He	15.924	0.0183	1280.10	0.0008	0.004846
Mg	24	3	He	14.475	0.0171	1240.11	0.0008	0.004846
Mg	24	3	He	15.596	0.018	1320.09	0.0008	0.004846
Al	27	3	He	30.486	0.0084	590.04	0.0002	0.001063
Al	27	3	He	14.964	0.0047	340.02	0.0002	0.001063
Al	27	3	He	27.788	0.0078	570.03	0.0002	0.001063
K	39	3	He	40.878	0.1662	11645.08	0.0006	0.1436
K	39	3	He	-9.554	0.1384	10063.73	0.0006	0.1436
K	39	3	He	-1.065	0.1431	10493.99	0.0006	0.1436
Ca	44	3	He	-1.311	0.0016	110.01	0	0.001611
Ca	44	3	He	-16.452	0.0011	80.00	0	0.001611
Ca	44	3	He	-12.365	0.0012	90.00	0	0.001611
Ti	47	3	He	2.323	0.0009	60.00	0.0003	0.0002737
Ti	47	3	He	0.005	0.0003	20.00	0.0003	0.0002737
Ti	47	3	He	2.714	0.001	70.00	0.0003	0.0002737
V	51	3	He	0.194	0.0096	672.02	0.0117	0.007326
V	51	3	He	0.152	0.0091	662.02	0.0117	0.007326
V	51	3	He	0.12	0.0087	640.02	0.0117	0.007326
Cr	52	3	He	0.161	0.0278	1950.20	0.0152	0.02538
Cr	52	3	He	0.211	0.0286	2080.23	0.0152	0.02538
Cr	52	3	He	0.016	0.0256	1880.21	0.0152	0.02538
Mn	55	3	He	-0.05	0.0136	950.07	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.611	0.0175	1270.10	0.0059	0.01385
Mn	55	3	He	0.009	0.0139	1020.07	0.0059	0.01385
Fe	57	3	He	38.211	0.015	1050.08	0.0003	0.003918
Fe	57	3	He	44.854	0.0169	1230.10	0.0003	0.003918
Fe	57	3	He	50.475	0.0185	1360.12	0.0003	0.003918
Co	59	3	He	0.152	0.0077	540.03	0.0305	0.003084
Co	59	3	He	0.183	0.0087	630.04	0.0305	0.003084
Co	59	3	He	0.113	0.0065	480.03	0.0305	0.003084
Ni	60	3	He	0.973	0.0176	1230.09	0.0088	0.009003
Ni	60	3	He	0.884	0.0168	1220.09	0.0088	0.009003
Ni	60	3	He	0.852	0.0165	1210.10	0.0088	0.009003
Cu	63	3	He	0.306	0.0126	880.05	0.0249	0.004937
Cu	63	3	He	0.37	0.0142	1030.07	0.0249	0.004937
Cu	63	3	He	0.354	0.0138	1010.08	0.0249	0.004937
Zn	66	3	He	0.414	0.0059	410.02	0.0025	0.004836
Zn	66	3	He	-0.122	0.0045	330.02	0.0025	0.004836
Zn	66	3	He	0.307	0.0056	410.03	0.0025	0.004836
As	75	3	He	0.078	0.0006	40.00	0.0017	0.0004347
As	75	3	He	0.13	0.0007	48.00	0.0017	0.0004347
As	75	3	He	0.236	0.0008	62.00	0.0017	0.0004347
Sr	88	3	He	0.062	0.0013	80.00	0.0078	0.0007762
Sr	88	3	He	0.158	0.002	130.00	0.0078	0.0007762
Sr	88	3	He	0.166	0.0021	130.00	0.0078	0.0007762
Mo	98	3	He	0.012	0.0008	50.00	0.022	0.0005162
Mo	98	3	He	-0.002	0.0005	30.00	0.022	0.0005162
Mo	98	3	He	0.005	0.0006	40.00	0.022	0.0005162
Ag	107	3	He	0.004	0.0006	40.00	0.0455	0.0004641
Ag	107	3	He	0	0.0005	30.00	0.0455	0.0004641
Ag	107	3	He	0.011	0.001	60.00	0.0455	0.0004641
Cd	111	3	He	0.009	0.0001	6.00	0.0048	5.152E-05
Cd	111	3	He	0.028	0.0002	12.00	0.0048	5.152E-05
Cd	111	3	He	-0.011	0	0.00	0.0048	5.152E-05
Sn	120	3	He	0.384	0.0211	1340.13	0.0143	0.01559
Sn	120	3	He	-0.129	0.0137	890.06	0.0143	0.01559
Sn	120	3	He	0.225	0.0188	1180.10	0.0143	0.01559
Sb	121	3	He	0.055	0.0009	60.00	0.0124	0.000258
Sb	121	3	He	0.017	0.0005	30.00	0.0124	0.000258
Sb	121	3	He	0.018	0.0005	30.00	0.0124	0.000258
Ba	137	3	He	0.145	0.0009	60.00	0.0044	0.000309
Ba	137	3	He	0.318	0.0017	110.00	0.0044	0.000309
Ba	137	3	He	0.111	0.0008	50.00	0.0044	0.000309
Tl	205	3	He	0.09	0.0035	760.05	0.0276	0.001005
Tl	205	3	He	0.105	0.0039	850.06	0.0276	0.001005
Tl	205	3	He	0.09	0.0035	760.05	0.0276	0.001005
Pb	208	3	He	0.404	0.0169	1960.21	0.0364	0.002176
Pb	208	3	He	0.426	0.0177	2070.24	0.0364	0.002176
Pb	208	3	He	0.407	0.017	1840.21	0.0364	0.002176
U	238	3	He	0.012	0.0007	160.01	0.0421	0.00024
U	238	3	He	0.011	0.0007	150.01	0.0421	0.00024
U	238	3	He	0.013	0.0008	170.01	0.0421	0.00024
Sc	45	1	No Gas			3314510.26		
Sc	45	1	No Gas			3210979.01		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3231037.45		
Ge	72	1	No Gas			1454880.76		
Ge	72	1	No Gas			1414415.60		
Ge	72	1	No Gas			1421778.10		
Sc	45	2	H2			190280.49		
Sc	45	2	H2			200758.10		
Sc	45	2	H2			192486.54		
Ge	72	2	H2			154359.85		
Ge	72	2	H2			160720.00		
Ge	72	2	H2			157845.55		
In	115	2	H2			433081.52		
In	115	2	H2			446478.24		
In	115	2	H2			434639.17		
Sc	45	3	He			41078.28		
Sc	45	3	He			41128.57		
Sc	45	3	He			41038.18		
Ge	72	3	He			70060.80		
Ge	72	3	He			72733.29		
Ge	72	3	He			73357.39		
In	115	3	He			63634.75		
In	115	3	He			64749.87		
In	115	3	He			62811.41		
Tb	159	3	He			279654.18		
Tb	159	3	He			281492.42		
Tb	159	3	He			280746.48		
Bi	209	3	He			217835.90		
Bi	209	3	He			217712.20		
Bi	209	3	He			217578.82		

Quantitation Report

Data File Name	267SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 19:47:13
Sample Name	410-136577-H-9-A @2
Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

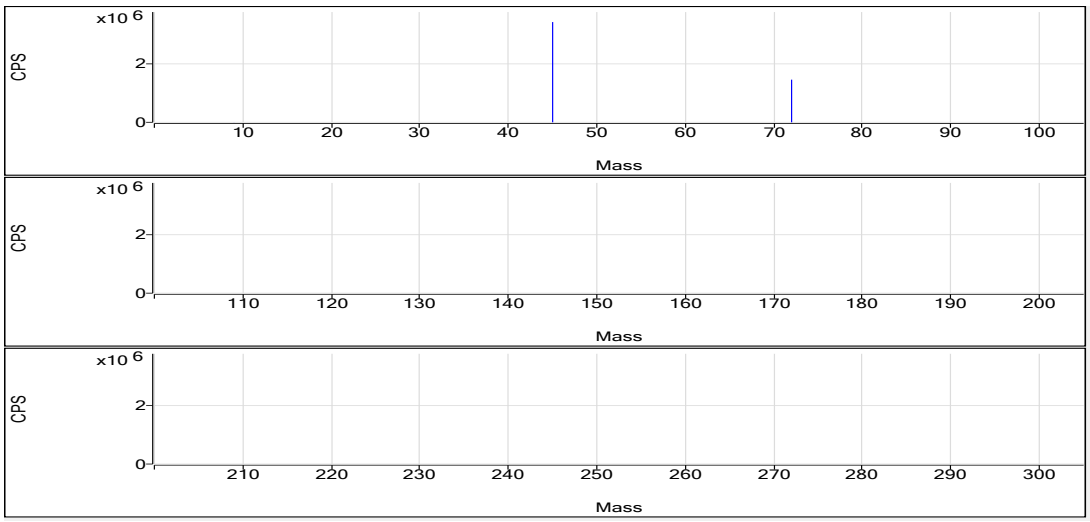
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.986	ppb	5.7	1976.81	0.0013	Pulse	0.5000	3
Se	78	72	H2	0.376	ppb	31.1	25.33	0.0002	Pulse	1.5000	3
Na	23	72	He	1478.981	ppb	1.3	195460.03	2.6471	Pulse	0.1000	3
Mg	24	72	He	22413.985	ppb	0.9	1395756.70	18.9021	Pulse	0.1000	3
Al	27	72	He	37771.938	ppb	1.4	673334.94	9.1190	Pulse	0.1000	3
K	39	72	He	2414.563	ppb	0.5	109068.71	1.4770	Pulse	0.1000	3
Ca	44	72	He	31651.080	ppb	1.6	72707.38	0.9847	Pulse	0.1000	3
Ti	47	72	He	3328.398	ppb	1.6	61653.96	0.8350	Pulse	0.1000	3
V	51	72	He	127.687	ppb	0.8	110834.75	1.5010	Pulse	0.5000	3
Cr	52	72	He	90.145	ppb	1.7	103226.90	1.3980	Pulse	0.1000	3
Mn	55	72	He	2577.784	ppb	1.3	1124495.61	15.2290	Pulse	0.1000	3
Fe	57	72	He	254497.102	ppb	2.3	5444095.12	73.7355	Mix	0.1000	3
Co	59	72	He	42.444	ppb	1.2	95848.63	1.2981	Pulse	0.1000	3
Ni	60	72	He	113.215	ppb	2.0	74170.11	1.0045	Pulse	0.1000	3
Cu	63	72	He	667.676	ppb	1.9	1229727.01	16.6549	Pulse	0.1000	3
Zn	66	72	He	135.239	ppb	3.6	24885.56	0.3371	Pulse	0.1000	3
As	75	72	He	60.256	ppb	2.3	7770.14	0.1052	Pulse	0.5000	3
Sr	88	115	He	65.569	ppb	4.5	33426.67	0.5133	Pulse	0.1000	3
Mo	98	115	He	5.127	ppb	6.6	7382.21	0.1134	Pulse	0.1000	3
Ag	107	115	He	0.565	ppb	1.3	1706.84	0.0262	Pulse	0.1000	3
Cd	111	115	He	0.412	ppb	9.3	132.00	0.0020	Pulse	0.5000	3
Sn	120	115	He	2584.032	ppb	3.3	2400479.81	36.8585	Pulse	0.1000	3
Sb	121	115	He	40.828	ppb	4.1	32996.43	0.5067	Pulse	0.1000	3
Ba	137	115	He	118.753	ppb	3.9	33852.11	0.5198	Pulse	0.1000	3
Tl	205	209	He	0.162	ppb	6.0	1216.77	0.0055	Pulse	0.1000	3
Pb	208	209	He	100.708	ppb	0.3	815170.35	3.6677	Pulse	0.1000	3
U	238	209	He	2.102	ppb	1.1	19705.66	0.0887	Pulse	0.1000	3

ISTD Table:

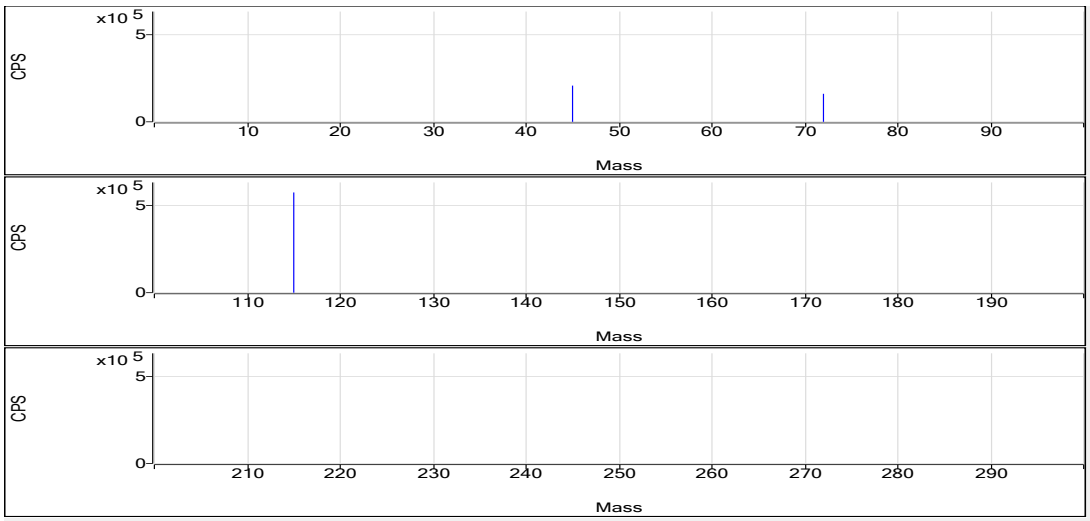
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3460362.24	1.0	106.8	Pulse	0.1000	3
No Gas	Ge	72	1472008.78	1.1	102.2	Pulse	0.1000	3
H2	Sc	45	208583.85	0.7	106.8	Pulse	0.1000	3
H2	Ge	72	161378.66	1.4	99.0	Pulse	0.1000	3
H2	In	115	577355.75	0.9	133.2	Pulse	0.1000	3
He	Sc	45	43231.13	0.6	108.1	Pulse	0.1000	3
He	Ge	72	73846.61	1.2	102.2	Pulse	0.1000	3
He	In	115	65163.99	2.6	100.9	Pulse	0.1000	3
He	Tb	159	292891.14	0.7	102.4	Pulse	0.1000	3
He	Bi	209	222256.47	0.8	100.0	Pulse	0.1000	3

No Gas

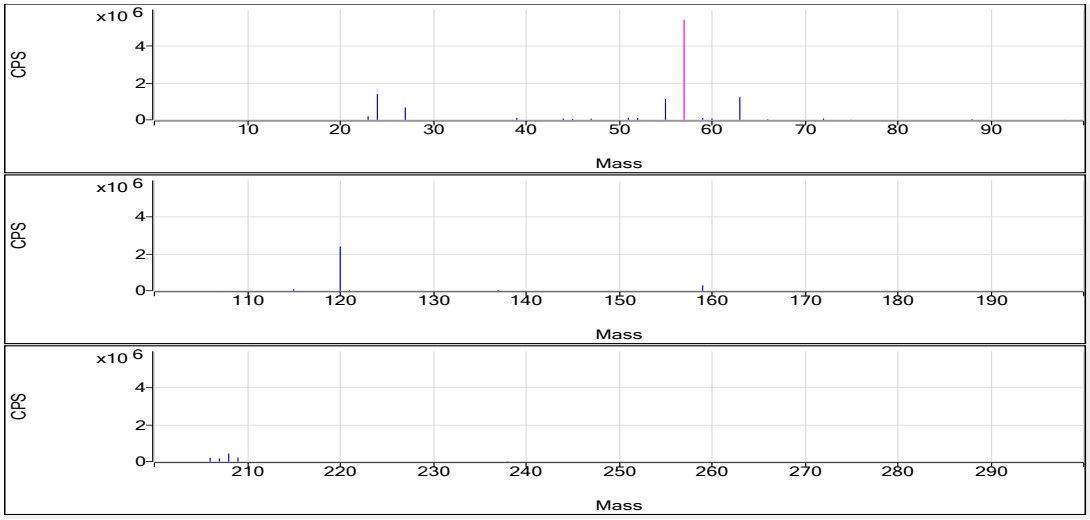


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.933	0.0013	1866.13	0.0013	4.694E-05
Be	9	1	No Gas	0.981	0.0013	1992.14	0.0013	4.694E-05
Be	9	1	No Gas	1.045	0.0014	2072.16	0.0013	4.694E-05
Se	78	2	H2	0.465	0.0002	30.67	0.0004	1.089E-05
Se	78	2	H2	0.244	0.0001	17.33	0.0004	1.089E-05
Se	78	2	H2	0.42	0.0002	28.00	0.0004	1.089E-05
Na	23	3	He	1457.049	2.6094	195354.88	0.0017	0.1065
Na	23	3	He	1495.48	2.6754	196743.86	0.0017	0.1065
Na	23	3	He	1484.413	2.6564	194281.36	0.0017	0.1065
Mg	24	3	He	22208.565	18.7289	1402152.79	0.0008	0.004846
Mg	24	3	He	22410.67	18.8993	1389807.64	0.0008	0.004846
Mg	24	3	He	22622.72	19.0781	1395309.67	0.0008	0.004846
Al	27	3	He	37275.468	8.9991	673726.71	0.0002	0.001063
Al	27	3	He	37696.959	9.1009	669256.24	0.0002	0.001063
Al	27	3	He	38343.386	9.2569	677021.86	0.0002	0.001063
K	39	3	He	2410.102	1.4745	110391.44	0.0006	0.1436
K	39	3	He	2405.966	1.4722	108265.02	0.0006	0.1436
K	39	3	He	2427.621	1.4842	108549.67	0.0006	0.1436
Ca	44	3	He	31196.065	0.9706	72661.33	0	0.001611
Ca	44	3	He	31548.745	0.9815	72177.79	0	0.001611
Ca	44	3	He	32208.43	1.002	73283.03	0	0.001611
Ti	47	3	He	3297.598	0.8272	61932.07	0.0003	0.0002737
Ti	47	3	He	3296.715	0.827	60817.06	0.0003	0.0002737
Ti	47	3	He	3390.88	0.8506	62212.75	0.0003	0.0002737
V	51	3	He	126.484	1.4869	111318.23	0.0117	0.007326
V	51	3	He	128.169	1.5066	110792.45	0.0117	0.007326
V	51	3	He	128.408	1.5094	110393.57	0.0117	0.007326
Cr	52	3	He	88.5	1.373	102790.58	0.0152	0.02538
Cr	52	3	He	90.399	1.4019	103093.00	0.0152	0.02538
Cr	52	3	He	91.535	1.4192	103797.11	0.0152	0.02538
Mn	55	3	He	2543.256	15.0252	1124872.72	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2579.72	15.2404	1120743.73	0.0059	0.01385
Mn	55	3	He	2610.376	15.4214	1127870.37	0.0059	0.01385
Fe	57	3	He	248145.204	71.8952	5382481.79	0.0003	0.003918
Fe	57	3	He	255586.893	74.0512	5445535.54	0.0003	0.003918
Fe	57	3	He	259759.209	75.26	5504268.04	0.0003	0.003918
Co	59	3	He	41.894	1.2813	95925.54	0.0305	0.003084
Co	59	3	He	42.586	1.3024	95774.79	0.0305	0.003084
Co	59	3	He	42.851	1.3105	95845.56	0.0305	0.003084
Ni	60	3	He	110.635	0.9818	73506.70	0.0088	0.009003
Ni	60	3	He	114.392	1.0149	74631.88	0.0088	0.009003
Ni	60	3	He	114.62	1.0169	74371.76	0.0088	0.009003
Cu	63	3	He	653.441	16.2999	1220299.98	0.0249	0.004937
Cu	63	3	He	675.693	16.8548	1239456.93	0.0249	0.004937
Cu	63	3	He	673.895	16.8099	1229424.12	0.0249	0.004937
Zn	66	3	He	129.611	0.3233	24201.05	0.0025	0.004836
Zn	66	3	He	137.863	0.3435	25262.64	0.0025	0.004836
Zn	66	3	He	138.242	0.3445	25193.00	0.0025	0.004836
As	75	3	He	59.15	0.1033	7734.11	0.0017	0.0004347
As	75	3	He	61.834	0.108	7940.24	0.0017	0.0004347
As	75	3	He	59.783	0.1044	7636.07	0.0017	0.0004347
Sr	88	3	He	62.245	0.4873	32708.07	0.0078	0.0007762
Sr	88	3	He	67.849	0.5312	34272.28	0.0078	0.0007762
Sr	88	3	He	66.613	0.5215	33299.65	0.0078	0.0007762
Mo	98	3	He	4.741	0.1049	7042.00	0.022	0.0005162
Mo	98	3	He	5.256	0.1163	7502.25	0.022	0.0005162
Mo	98	3	He	5.383	0.1191	7602.39	0.022	0.0005162
Ag	107	3	He	0.573	0.0265	1780.19	0.0455	0.0004641
Ag	107	3	He	0.565	0.0262	1690.17	0.0455	0.0004641
Ag	107	3	He	0.558	0.0258	1650.15	0.0455	0.0004641
Cd	111	3	He	0.368	0.0018	122.00	0.0048	5.152E-05
Cd	111	3	He	0.428	0.0021	136.00	0.0048	5.152E-05
Cd	111	3	He	0.439	0.0022	138.00	0.0048	5.152E-05
Sn	120	3	He	2491.943	35.5455	2385616.53	0.0143	0.01559
Sn	120	3	He	2602.542	37.1224	2395275.90	0.0143	0.01559
Sn	120	3	He	2657.612	37.9076	2420547.00	0.0143	0.01559
Sb	121	3	He	39.002	0.4841	32488.71	0.0124	0.000258
Sb	121	3	He	41.145	0.5107	32949.48	0.0124	0.000258
Sb	121	3	He	42.336	0.5254	33551.11	0.0124	0.000258
Ba	137	3	He	114.166	0.4998	33541.35	0.0044	0.000309
Ba	137	3	He	118.576	0.5191	33491.21	0.0044	0.000309
Ba	137	3	He	123.517	0.5407	34523.77	0.0044	0.000309
Tl	205	3	He	0.172	0.0058	1270.11	0.0276	0.001005
Tl	205	3	He	0.16	0.0054	1210.10	0.0276	0.001005
Tl	205	3	He	0.153	0.0052	1170.09	0.0276	0.001005
Pb	208	3	He	100.621	3.6645	434173.51	0.0364	0.002176
Pb	208	3	He	101.014	3.6788	438616.48	0.0364	0.002176
Pb	208	3	He	100.49	3.6597	437078.67	0.0364	0.002176
U	238	3	He	2.099	0.0885	19505.35	0.0421	0.00024
U	238	3	He	2.081	0.0878	19575.35	0.0421	0.00024
U	238	3	He	2.125	0.0897	20036.27	0.0421	0.00024
Sc	45	1	No Gas			3483989.32		
Sc	45	1	No Gas			3477885.89		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3419211.51		
Ge	72	1	No Gas			1466578.42		
Ge	72	1	No Gas			1490884.98		
Ge	72	1	No Gas			1458562.95		
Sc	45	2	H2			206942.09		
Sc	45	2	H2			209903.51		
Sc	45	2	H2			208905.95		
Ge	72	2	H2			159656.23		
Ge	72	2	H2			163943.90		
Ge	72	2	H2			160535.85		
In	115	2	H2			576720.34		
In	115	2	H2			582620.07		
In	115	2	H2			572726.83		
Sc	45	3	He			43214.37		
Sc	45	3	He			43495.20		
Sc	45	3	He			42983.83		
Ge	72	3	He			74865.64		
Ge	72	3	He			73537.45		
Ge	72	3	He			73136.73		
In	115	3	He			85722.22		
In	115	3	He			83206.85		
In	115	3	He			82734.13		
Tb	159	3	He			290947.03		
Tb	159	3	He			295162.26		
Tb	159	3	He			292564.12		
Bi	209	3	He			220314.78		
Bi	209	3	He			222966.85		
Bi	209	3	He			223487.77		

Quantitation Report

Data File Name	268SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 19:49:13
Sample Name	410-136577-H-9-A @10
Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

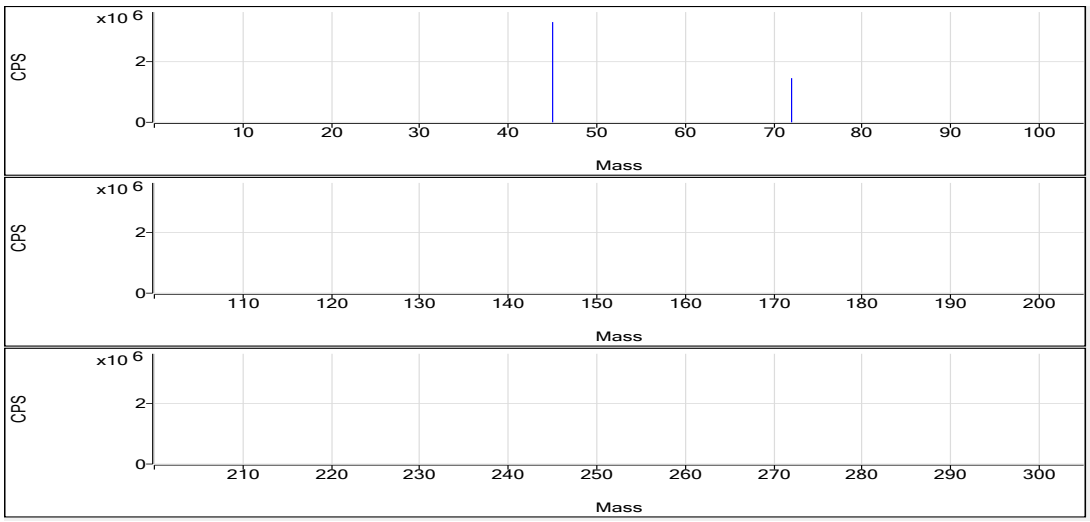
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.247	ppb	9.2	538.01	0.0004	Pulse	0.5000	3
Se	78	72	H2	0.093	ppb	20.4	7.56	0.0000	Pulse	1.5000	3
Na	23	72	He	326.431	ppb	2.1	49339.02	0.6672	Pulse	0.1000	3
Mg	24	72	He	5227.400	ppb	1.2	326270.41	4.4121	Pulse	0.1000	3
Al	27	72	He	8670.533	ppb	0.9	154854.32	2.0941	Pulse	0.1000	3
K	39	72	He	568.581	ppb	2.8	33839.72	0.4576	Pulse	0.1000	3
Ca	44	72	He	7517.987	ppb	2.0	17387.46	0.2351	Pulse	0.1000	3
Ti	47	72	He	798.288	ppb	1.1	14824.69	0.2005	Pulse	0.1000	3
V	51	72	He	29.872	ppb	1.2	26381.73	0.3568	Pulse	0.5000	3
Cr	52	72	He	21.192	ppb	1.0	25740.05	0.3481	Pulse	0.1000	3
Mn	55	72	He	605.549	ppb	0.2	265334.89	3.5881	Pulse	0.1000	3
Fe	57	72	He	59091.806	ppb	0.8	1266288.08	17.1237	Pulse	0.1000	3
Co	59	72	He	9.821	ppb	1.1	22387.91	0.3027	Pulse	0.1000	3
Ni	60	72	He	26.625	ppb	3.8	17978.34	0.2431	Pulse	0.1000	3
Cu	63	72	He	156.027	ppb	1.2	288098.79	3.8958	Pulse	0.1000	3
Zn	66	72	He	33.583	ppb	5.5	6458.33	0.0873	Pulse	0.1000	3
As	75	72	He	13.919	ppb	5.6	1822.13	0.0246	Pulse	0.5000	3
Sr	88	115	He	15.344	ppb	5.9	7729.01	0.1207	Pulse	0.1000	3
Mo	98	115	He	1.127	ppb	4.4	1623.48	0.0253	Pulse	0.1000	3
Ag	107	115	He	0.139	ppb	6.1	433.36	0.0068	Pulse	0.1000	3
Cd	111	115	He	0.076	ppb	20.1	26.67	0.0004	Pulse	0.5000	3
Sn	120	115	He	617.678	ppb	1.5	565047.13	8.8224	Pulse	0.1000	3
Sb	121	115	He	10.098	ppb	1.7	8039.26	0.1255	Pulse	0.1000	3
Ba	137	115	He	28.634	ppb	2.7	8042.56	0.1256	Pulse	0.1000	3
Tl	205	209	He	0.054	ppb	34.5	556.70	0.0025	Pulse	0.1000	3
Pb	208	209	He	23.860	ppb	0.3	194319.13	0.8706	Pulse	0.1000	3
U	238	209	He	0.479	ppb	2.9	4550.99	0.0204	Pulse	0.1000	3

ISTD Table:

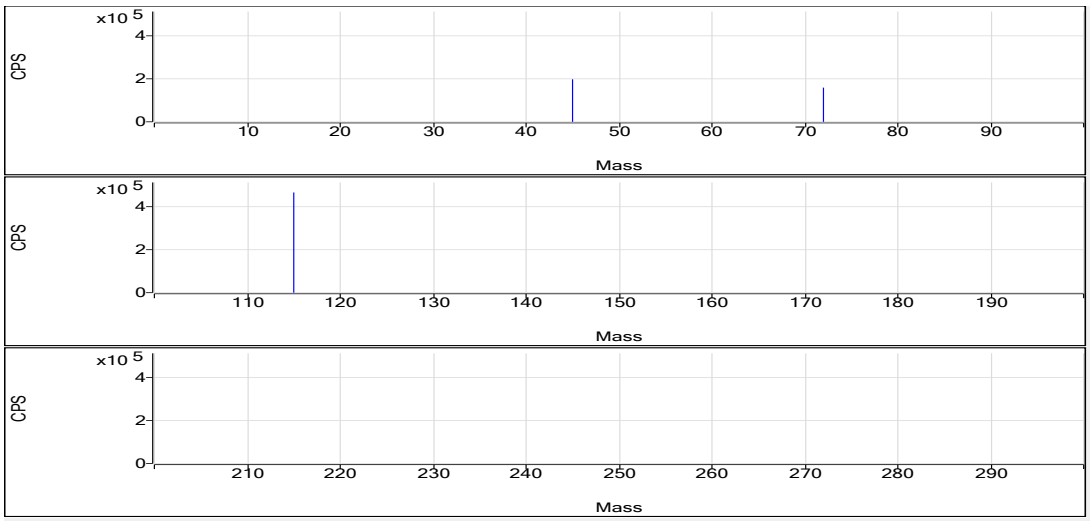
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3294193.39	1.1	101.6	Pulse	0.1000	3
No Gas	Ge	72	1450716.18	0.5	100.8	Pulse	0.1000	3
H2	Sc	45	198602.26	2.1	101.7	Pulse	0.1000	3
H2	Ge	72	159702.34	3.0	98.0	Pulse	0.1000	3
H2	In	115	468144.76	2.9	108.0	Pulse	0.1000	3
He	Sc	45	41903.83	1.4	104.8	Pulse	0.1000	3
He	Ge	72	73949.70	0.3	102.3	Pulse	0.1000	3
He	In	115	64054.02	1.2	99.2	Pulse	0.1000	3
He	Tb	159	286978.27	1.2	100.3	Pulse	0.1000	3
He	Bi	209	223194.96	0.5	100.5	Pulse	0.1000	3

No Gas

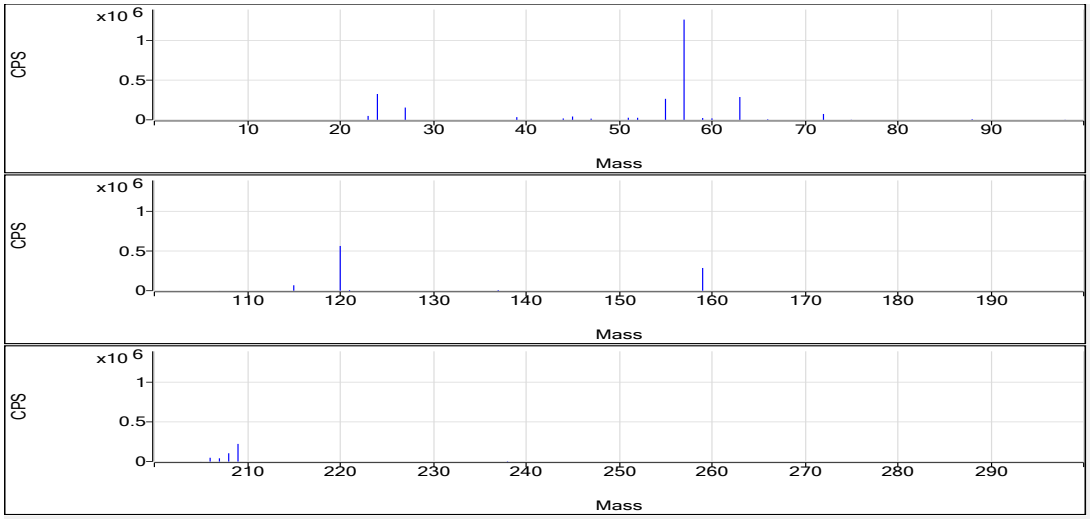


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.227	0.0003	502.01	0.0013	4.694E-05
Be	9	1	No Gas	0.242	0.0004	530.01	0.0013	4.694E-05
Be	9	1	No Gas	0.271	0.0004	582.02	0.0013	4.694E-05
Se	78	2	H2	0.072	0	6.00	0.0004	1.089E-05
Se	78	2	H2	0.099	0	8.00	0.0004	1.089E-05
Se	78	2	H2	0.109	0.0001	8.67	0.0004	1.089E-05
Na	23	3	He	323.735	0.6626	48870.82	0.0017	0.1065
Na	23	3	He	334.383	0.6809	50315.54	0.0017	0.1065
Na	23	3	He	321.175	0.6582	48830.71	0.0017	0.1065
Mg	24	3	He	5187.919	4.3788	322974.84	0.0008	0.004846
Mg	24	3	He	5301.357	4.4744	330657.14	0.0008	0.004846
Mg	24	3	He	5192.925	4.383	325179.25	0.0008	0.004846
Al	27	3	He	8683.098	2.0971	154680.77	0.0002	0.001063
Al	27	3	He	8745.777	2.1122	156093.24	0.0002	0.001063
Al	27	3	He	8582.724	2.0729	153788.96	0.0002	0.001063
K	39	3	He	571.68	0.4593	33879.63	0.0006	0.1436
K	39	3	He	582.881	0.4655	34401.22	0.0006	0.1436
K	39	3	He	551.183	0.448	33238.31	0.0006	0.1436
Ca	44	3	He	7495.496	0.2344	17290.57	0	0.001611
Ca	44	3	He	7380.925	0.2309	17060.50	0	0.001611
Ca	44	3	He	7677.541	0.2401	17811.32	0	0.001611
Ti	47	3	He	788.639	0.198	14607.82	0.0003	0.0002737
Ti	47	3	He	806.046	0.2024	14958.20	0.0003	0.0002737
Ti	47	3	He	800.178	0.2009	14908.05	0.0003	0.0002737
V	51	3	He	29.969	0.3579	26397.75	0.0117	0.007326
V	51	3	He	30.159	0.3601	26612.15	0.0117	0.007326
V	51	3	He	29.488	0.3523	26135.28	0.0117	0.007326
Cr	52	3	He	21.263	0.3492	25753.41	0.0152	0.02538
Cr	52	3	He	21.362	0.3507	25913.70	0.0152	0.02538
Cr	52	3	He	20.952	0.3444	25553.04	0.0152	0.02538
Mn	55	3	He	606.44	3.5933	265039.31	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	605.597	3.5883	265176.17	0.0059	0.01385
Mn	55	3	He	604.608	3.5825	265789.20	0.0059	0.01385
Fe	57	3	He	58782.396	17.034	1256412.72	0.0003	0.003918
Fe	57	3	He	59656.727	17.2873	1277522.79	0.0003	0.003918
Fe	57	3	He	58836.294	17.0497	1264928.73	0.0003	0.003918
Co	59	3	He	9.709	0.2993	22077.49	0.0305	0.003084
Co	59	3	He	9.824	0.3028	22377.85	0.0305	0.003084
Co	59	3	He	9.931	0.3061	22708.38	0.0305	0.003084
Ni	60	3	He	26.345	0.2407	17751.31	0.0088	0.009003
Ni	60	3	He	27.757	0.2531	18702.64	0.0088	0.009003
Ni	60	3	He	25.772	0.2356	17481.08	0.0088	0.009003
Cu	63	3	He	153.882	3.8423	283404.37	0.0249	0.004937
Cu	63	3	He	157.192	3.9248	290043.45	0.0249	0.004937
Cu	63	3	He	157.008	3.9203	290848.55	0.0249	0.004937
Zn	66	3	He	34.408	0.0894	6591.71	0.0025	0.004836
Zn	66	3	He	34.89	0.0906	6691.80	0.0025	0.004836
Zn	66	3	He	31.452	0.0821	6091.49	0.0025	0.004836
As	75	3	He	14.064	0.0249	1836.13	0.0017	0.0004347
As	75	3	He	14.612	0.0258	1910.14	0.0017	0.0004347
As	75	3	He	13.081	0.0232	1720.11	0.0017	0.0004347
Sr	88	3	He	14.293	0.1125	7302.05	0.0078	0.0007762
Sr	88	3	He	15.869	0.1248	7972.44	0.0078	0.0007762
Sr	88	3	He	15.868	0.1248	7912.54	0.0078	0.0007762
Mo	98	3	He	1.138	0.0256	1660.16	0.022	0.0005162
Mo	98	3	He	1.171	0.0263	1680.15	0.022	0.0005162
Mo	98	3	He	1.073	0.0241	1530.14	0.022	0.0005162
Ag	107	3	He	0.132	0.0065	420.02	0.0455	0.0004641
Ag	107	3	He	0.148	0.0072	460.03	0.0455	0.0004641
Ag	107	3	He	0.135	0.0066	420.02	0.0455	0.0004641
Cd	111	3	He	0.092	0.0005	32.00	0.0048	5.152E-05
Cd	111	3	He	0.074	0.0004	26.00	0.0048	5.152E-05
Cd	111	3	He	0.062	0.0003	22.00	0.0048	5.152E-05
Sn	120	3	He	607.01	8.6703	562724.25	0.0143	0.01559
Sn	120	3	He	624.053	8.9133	569266.75	0.0143	0.01559
Sn	120	3	He	621.97	8.8836	563150.38	0.0143	0.01559
Sb	121	3	He	9.993	0.1242	8062.54	0.0124	0.000258
Sb	121	3	He	10.004	0.1244	7942.59	0.0124	0.000258
Sb	121	3	He	10.296	0.128	8112.66	0.0124	0.000258
Ba	137	3	He	27.902	0.1224	7942.54	0.0044	0.000309
Ba	137	3	He	29.43	0.1291	8242.64	0.0044	0.000309
Ba	137	3	He	28.569	0.1253	7942.50	0.0044	0.000309
Tl	205	3	He	0.07	0.0029	660.04	0.0276	0.001005
Tl	205	3	He	0.058	0.0026	580.04	0.0276	0.001005
Tl	205	3	He	0.034	0.0019	430.03	0.0276	0.001005
Pb	208	3	He	23.871	0.871	104582.55	0.0364	0.002176
Pb	208	3	He	23.918	0.8727	106094.14	0.0364	0.002176
Pb	208	3	He	23.792	0.8681	104118.76	0.0364	0.002176
U	238	3	He	0.478	0.0204	4561.00	0.0421	0.00024
U	238	3	He	0.493	0.021	4691.05	0.0421	0.00024
U	238	3	He	0.465	0.0198	4400.92	0.0421	0.00024
Sc	45	1	No Gas			3322199.64		
Sc	45	1	No Gas			3305253.08		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3255127.45		
Ge	72	1	No Gas			1456682.17		
Ge	72	1	No Gas			1452419.67		
Ge	72	1	No Gas			1443046.70		
Sc	45	2	H2			193815.95		
Sc	45	2	H2			201191.25		
Sc	45	2	H2			200799.59		
Ge	72	2	H2			154099.51		
Ge	72	2	H2			162429.62		
Ge	72	2	H2			162577.88		
In	115	2	H2			453772.30		
In	115	2	H2			480712.53		
In	115	2	H2			469949.45		
Sc	45	3	He			41248.67		
Sc	45	3	He			42050.87		
Sc	45	3	He			42411.95		
Ge	72	3	He			73758.94		
Ge	72	3	He			73899.30		
Ge	72	3	He			74190.87		
In	115	3	He			69291.90		
In	115	3	He			68307.48		
In	115	3	He			67784.78		
Tb	159	3	He			282900.09		
Tb	159	3	He			289279.08		
Tb	159	3	He			288755.64		
Bi	209	3	He			224014.51		
Bi	209	3	He			223505.25		
Bi	209	3	He			222065.13		

Quantitation Report

Data File Name	269SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 19:51:13
Sample Name	410-136659-D-1-A @2
Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

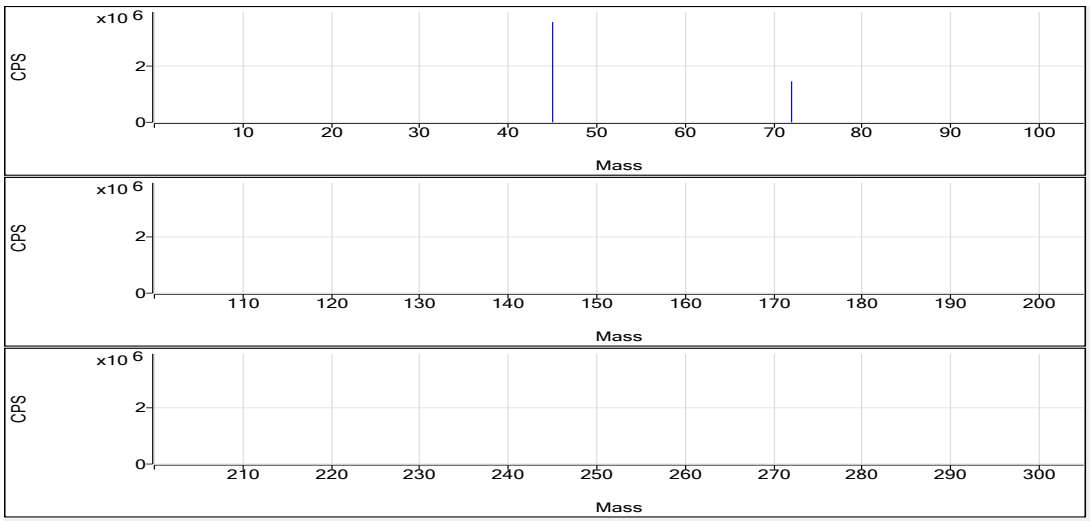
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	2.955	ppb	7.5	5697.78	0.0039	Pulse	0.5000	3
Se	78	72	H2	36.659	ppb	4.4	2244.84	0.0143	Pulse	1.5000	3
Na	23	72	He	13200.093	ppb	0.6	1678247.11	22.7819	Pulse	0.1000	3
Mg	24	72	He	58212.289	ppb	0.6	3615724.32	49.0837	Pulse	0.1000	3
Al	27	72	He	288500.259	ppb	1.7	5130188.88	69.6434	Analog	0.1000	3
K	39	72	He	6213.052	ppb	1.6	263309.68	3.5746	Pulse	0.1000	3
Ca	44	72	He	65652.391	ppb	1.5	150327.45	2.0408	Pulse	0.1000	3
Ti	47	72	He	3419.939	ppb	0.6	63200.23	0.8579	Pulse	0.1000	3
V	51	72	He	11180.277	ppb	0.6	9635010.00	130.7914	Analog	0.5000	3
Cr	52	72	He	1330.955	ppb	2.0	1494750.34	20.2922	Pulse	0.1000	3
Mn	55	72	He	3151.505	ppb	1.7	1371249.25	18.6154	Pulse	0.1000	3
Fe	57	72	He	297030.915	ppb	1.9	6339060.11	86.0581	Analog	0.1000	3
Co	59	72	He	275.371	ppb	0.3	619135.24	8.4048	Pulse	0.1000	3
Ni	60	72	He	5931.740	ppb	0.4	3843058.17	52.1686	Pulse	0.1000	3
Cu	63	72	He	1105.267	ppb	0.6	2030786.27	27.5671	Pulse	0.1000	3
Zn	66	72	He	3017.882	ppb	0.2	546530.57	7.4191	Pulse	0.1000	3
As	75	72	He	135.997	ppb	1.2	17455.94	0.2370	Pulse	0.5000	3
Sr	88	115	He	889.356	ppb	1.5	436361.00	6.9530	Pulse	0.1000	3
Mo	98	115	He	6059.467	ppb	1.9	8373243.00	133.4396	Analog	0.1000	3
Ag	107	115	He	33.010	ppb	3.2	94264.58	1.5024	Pulse	0.1000	3
Cd	111	115	He	3.063	ppb	9.5	924.70	0.0148	Pulse	0.5000	3
Sn	120	115	He	26.581	ppb	1.8	24772.78	0.3946	Pulse	0.1000	3
Sb	121	115	He	6.049	ppb	3.8	4724.29	0.0753	Pulse	0.1000	3
Ba	137	115	He	3359.352	ppb	2.1	922228.35	14.6968	Pulse	0.1000	3
Tl	205	209	He	1.731	ppb	1.1	14231.47	0.0489	Pulse	0.1000	3
Pb	208	209	He	815.238	ppb	1.1	8642024.98	29.6747	Pulse	0.1000	3
U	238	209	He	5.064	ppb	1.8	62109.25	0.2133	Pulse	0.1000	3

ISTD Table:

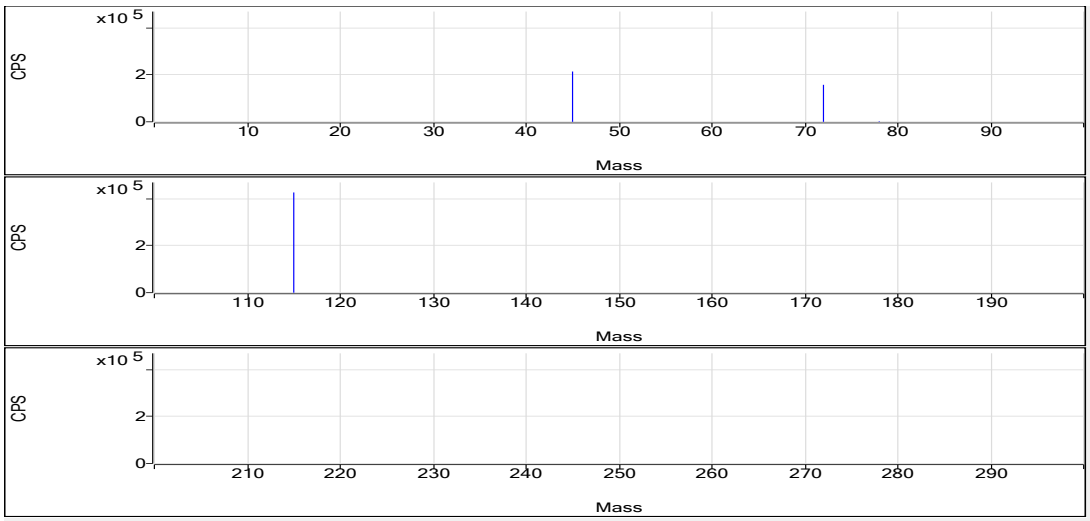
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3549253.69	1.2	109.5	Pulse	0.1000	3
No Gas	Ge	72	1451142.69	2.0	100.8	Pulse	0.1000	3
H2	Sc	45	213769.96	0.6	109.4	Pulse	0.1000	3
H2	Ge	72	157216.18	1.4	96.4	Pulse	0.1000	3
H2	In	115	425880.22	2.5	98.3	Pulse	0.1000	3
He	Sc	45	44632.01	1.2	111.6	Pulse	0.1000	3
He	Ge	72	73665.28	0.6	101.9	Pulse	0.1000	3
He	In	115	62768.96	2.4	97.2	Pulse	0.1000	3
He	Tb	159	298628.09	1.3	104.4	Pulse	0.1000	3
He	Bi	209	291237.33	0.6	131.1	Pulse	0.1000	3

No Gas

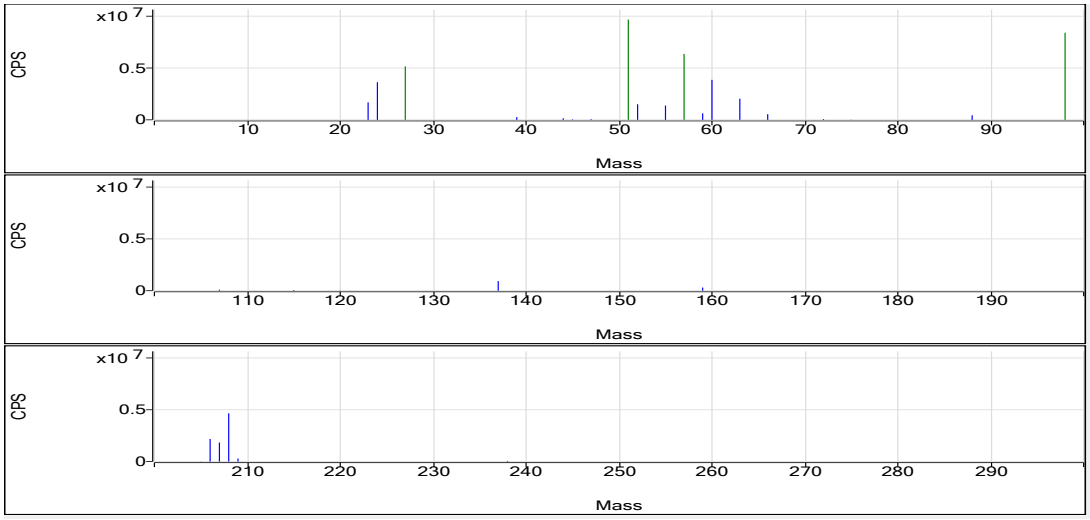


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	2.702	0.0036	5320.97	0.0013	4.694E-05
Be	9	1	No Gas	3.057	0.0041	5903.18	0.0013	4.694E-05
Be	9	1	No Gas	3.106	0.0041	5869.19	0.0013	4.694E-05
Se	78	2	H2	38.44	0.015	2321.52	0.0004	1.089E-05
Se	78	2	H2	35.325	0.0138	2193.50	0.0004	1.089E-05
Se	78	2	H2	36.211	0.0141	2219.51	0.0004	1.089E-05
Na	23	3	He	13285.032	22.9278	1688119.04	0.0017	0.1065
Na	23	3	He	13119.587	22.6436	1659037.32	0.0017	0.1065
Na	23	3	He	13195.661	22.7742	1687584.97	0.0017	0.1065
Mg	24	3	He	57869.387	48.7946	3592636.51	0.0008	0.004846
Mg	24	3	He	58583.927	49.397	3619198.70	0.0008	0.004846
Mg	24	3	He	58183.552	49.0595	3635337.76	0.0008	0.004846
Al	27	3	He	283333.823	68.3962	5035856.49	0.0002	0.001063
Al	27	3	He	293041.05	70.7395	5182904.92	0.0002	0.001063
Al	27	3	He	289125.902	69.7944	5171805.24	0.0002	0.001063
K	39	3	He	6145.956	3.5375	260458.79	0.0006	0.1436
K	39	3	He	6325.3	3.6365	266440.66	0.0006	0.1436
K	39	3	He	6167.901	3.5496	263029.59	0.0006	0.1436
Ca	44	3	He	64974.778	2.0197	148707.28	0	0.001611
Ca	44	3	He	66742.247	2.0746	152001.95	0	0.001611
Ca	44	3	He	65240.149	2.028	150273.13	0	0.001611
Ti	47	3	He	3404.148	0.854	62875.38	0.0003	0.0002737
Ti	47	3	He	3413.766	0.8564	62744.50	0.0003	0.0002737
Ti	47	3	He	3441.903	0.8634	63980.80	0.0003	0.0002737
V	51	3	He	11169.57	130.6661	9620650.00	0.0117	0.007326
V	51	3	He	11116.72	130.0479	9528287.00	0.0117	0.007326
V	51	3	He	11254.541	131.6601	9756093.00	0.0117	0.007326
Cr	52	3	He	1310.522	19.9811	1471159.51	0.0152	0.02538
Cr	52	3	He	1361.51	20.7575	1520847.32	0.0152	0.02538
Cr	52	3	He	1320.834	20.1381	1492244.20	0.0152	0.02538
Mn	55	3	He	3106.765	18.3513	1351163.42	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	3211.6	18.9701	1389889.82	0.0059	0.01385
Mn	55	3	He	3136.152	18.5247	1372694.51	0.0059	0.01385
Fe	57	3	He	296249.241	85.8317	6319589.91	0.0003	0.003918
Fe	57	3	He	302890.999	87.7559	6429654.90	0.0003	0.003918
Fe	57	3	He	291952.505	84.5868	6267935.53	0.0003	0.003918
Co	59	3	He	275.181	8.399	618399.48	0.0305	0.003084
Co	59	3	He	276.215	8.4305	617685.11	0.0305	0.003084
Co	59	3	He	274.717	8.3848	621321.12	0.0305	0.003084
Ni	60	3	He	5915.531	52.026	3830558.69	0.0088	0.009003
Ni	60	3	He	5922.253	52.0852	3816149.63	0.0088	0.009003
Ni	60	3	He	5957.436	52.3945	3882466.19	0.0088	0.009003
Cu	63	3	He	1103.685	27.5277	2026798.88	0.0249	0.004937
Cu	63	3	He	1099.146	27.4145	2008589.03	0.0249	0.004937
Cu	63	3	He	1112.969	27.7592	2056970.91	0.0249	0.004937
Zn	66	3	He	3014.514	7.4108	545639.84	0.0025	0.004836
Zn	66	3	He	3015.391	7.4129	543128.20	0.0025	0.004836
Zn	66	3	He	3023.739	7.4335	550823.66	0.0025	0.004836
As	75	3	He	134.339	0.2341	17234.32	0.0017	0.0004347
As	75	3	He	136.007	0.237	17362.50	0.0017	0.0004347
As	75	3	He	137.645	0.2398	17770.99	0.0017	0.0004347
Sr	88	3	He	889.767	6.9562	427093.86	0.0078	0.0007762
Sr	88	3	He	875.807	6.847	441003.16	0.0078	0.0007762
Sr	88	3	He	902.493	7.0556	440985.97	0.0078	0.0007762
Mo	98	3	He	6164.62	135.7553	8335083.63	0.022	0.0005162
Mo	98	3	He	5932.81	130.6504	8414916.12	0.022	0.0005162
Mo	98	3	He	6080.973	133.9132	8369729.25	0.022	0.0005162
Ag	107	3	He	33.426	1.5214	93409.46	0.0455	0.0004641
Ag	107	3	He	31.812	1.4479	93257.42	0.0455	0.0004641
Ag	107	3	He	33.792	1.538	96126.86	0.0455	0.0004641
Cd	111	3	He	3.362	0.0162	994.04	0.0048	5.152E-05
Cd	111	3	He	2.784	0.0134	864.03	0.0048	5.152E-05
Cd	111	3	He	3.042	0.0147	916.04	0.0048	5.152E-05
Sn	120	3	He	26.45	0.3927	24111.58	0.0143	0.01559
Sn	120	3	He	27.116	0.4022	25904.83	0.0143	0.01559
Sn	120	3	He	26.177	0.3888	24301.93	0.0143	0.01559
Sb	121	3	He	6.099	0.0759	4660.93	0.0124	0.000258
Sb	121	3	He	5.8	0.0722	4650.94	0.0124	0.000258
Sb	121	3	He	6.249	0.0778	4861.01	0.0124	0.000258
Ba	137	3	He	3389.959	14.8307	910572.17	0.0044	0.000309
Ba	137	3	He	3278.784	14.3443	923886.63	0.0044	0.000309
Ba	137	3	He	3409.313	14.9153	932226.24	0.0044	0.000309
Tl	205	3	He	1.712	0.0483	14148.04	0.0276	0.001005
Tl	205	3	He	1.731	0.0489	14148.02	0.0276	0.001005
Tl	205	3	He	1.75	0.0494	14398.34	0.0276	0.001005
Pb	208	3	He	805.186	29.3088	4605163.99	0.0364	0.002176
Pb	208	3	He	823.707	29.9829	4682801.18	0.0364	0.002176
Pb	208	3	He	816.821	29.7323	4638897.12	0.0364	0.002176
U	238	3	He	5.045	0.2125	62189.77	0.0421	0.00024
U	238	3	He	4.984	0.2099	60762.39	0.0421	0.00024
U	238	3	He	5.162	0.2174	63375.58	0.0421	0.00024
Sc	45	1	No Gas			3586955.88		
Sc	45	1	No Gas			3557408.38		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3503396.82		
Ge	72	1	No Gas			1479209.20		
Ge	72	1	No Gas			1452500.76		
Ge	72	1	No Gas			1421718.10		
Sc	45	2	H2			212634.43		
Sc	45	2	H2			213626.34		
Sc	45	2	H2			215049.12		
Ge	72	2	H2			154996.00		
Ge	72	2	H2			159352.43		
Ge	72	2	H2			157300.11		
In	115	2	H2			414836.91		
In	115	2	H2			436106.99		
In	115	2	H2			426696.75		
Sc	45	3	He			44628.78		
Sc	45	3	He			45150.01		
Sc	45	3	He			44117.23		
Ge	72	3	He			73627.72		
Ge	72	3	He			73267.51		
Ge	72	3	He			74100.60		
In	115	3	He			61585.94		
In	115	3	He			64609.93		
In	115	3	He			62690.70		
Tb	159	3	He			295928.39		
Tb	159	3	He			303024.43		
Tb	159	3	He			296931.46		
Bi	209	3	He			292691.69		
Bi	209	3	He			289495.78		
Bi	209	3	He			291524.51		

Quantitation Report

Data File Name	270SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 19:53:10
Sample Name	410-136659-D-1-A @10
Sample Type	Sample
Comment	H2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

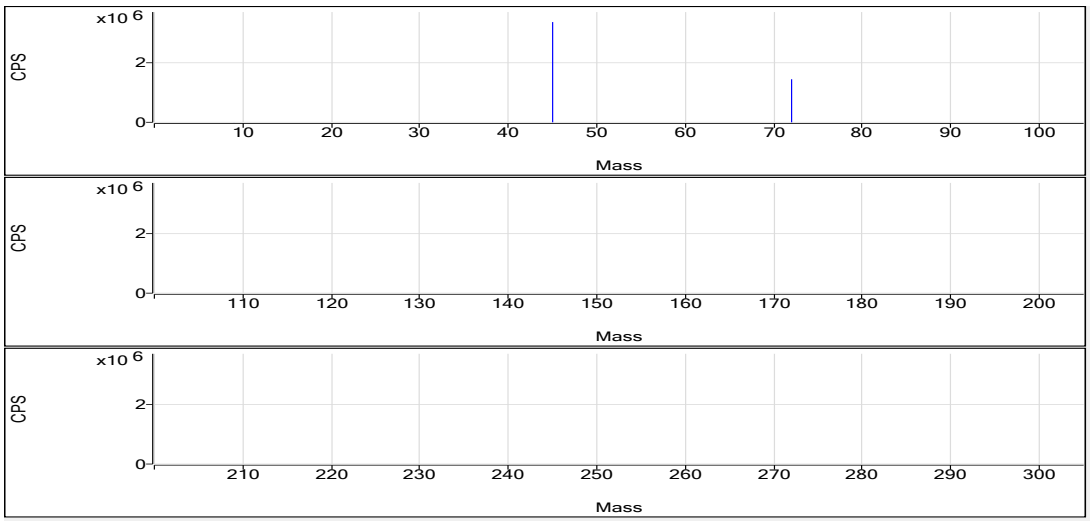
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.675	ppb	0.9	1338.74	0.0009	Pulse	0.5000	3
Se	78	72	H2	8.414	ppb	8.6	522.90	0.0033	Pulse	1.5000	3
Na	23	72	He	3058.704	ppb	0.6	387264.69	5.3608	Pulse	0.1000	3
Mg	24	72	He	13714.791	ppb	0.2	835670.69	11.5678	Pulse	0.1000	3
Al	27	72	He	65285.699	ppb	0.3	1138579.15	15.7607	Pulse	0.1000	3
K	39	72	He	1436.753	ppb	2.2	67692.55	0.9370	Pulse	0.1000	3
Ca	44	72	He	15574.691	ppb	0.9	35062.63	0.4854	Pulse	0.1000	3
Ti	47	72	He	828.841	ppb	1.2	15034.86	0.2081	Pulse	0.1000	3
V	51	72	He	2528.982	ppb	0.1	2137670.75	29.5907	Pulse	0.5000	3
Cr	52	72	He	313.699	ppb	1.3	346902.96	4.8022	Pulse	0.1000	3
Mn	55	72	He	748.724	ppb	0.9	320267.50	4.4331	Pulse	0.1000	3
Fe	57	72	He	68124.385	ppb	0.2	1426082.38	19.7406	Pulse	0.1000	3
Co	59	72	He	65.615	ppb	1.6	144856.13	2.0050	Pulse	0.1000	3
Ni	60	72	He	1404.080	ppb	0.5	892588.84	12.3555	Pulse	0.1000	3
Cu	63	72	He	264.157	ppb	0.2	476231.88	6.5922	Pulse	0.1000	3
Zn	66	72	He	711.954	ppb	0.5	126708.85	1.7539	Pulse	0.1000	3
As	75	72	He	32.253	ppb	1.6	4083.94	0.0565	Pulse	0.5000	3
Sr	88	115	He	201.938	ppb	1.2	100882.81	1.5793	Pulse	0.1000	3
Mo	98	115	He	1349.142	ppb	1.0	1897807.79	29.7108	Pulse	0.1000	3
Ag	107	115	He	7.638	ppb	0.6	22228.13	0.3480	Pulse	0.1000	3
Cd	111	115	He	0.678	ppb	7.2	211.33	0.0033	Pulse	0.5000	3
Sn	120	115	He	6.053	ppb	2.3	6508.44	0.1019	Pulse	0.1000	3
Sb	121	115	He	1.401	ppb	5.8	1126.76	0.0176	Pulse	0.1000	3
Ba	137	115	He	760.922	ppb	0.3	212653.31	3.3292	Pulse	0.1000	3
Tl	205	209	He	0.469	ppb	12.9	3333.87	0.0140	Pulse	0.1000	3
Pb	208	209	He	229.824	ppb	0.5	1995566.10	8.3672	Pulse	0.1000	3
U	238	209	He	1.376	ppb	3.8	13857.98	0.0581	Pulse	0.1000	3

ISTD Table:

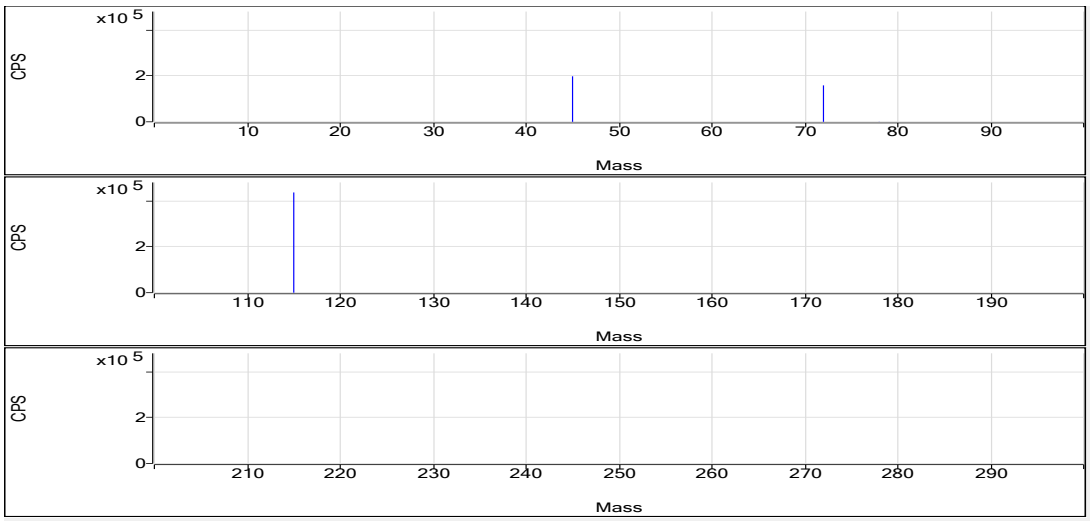
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3336395.89	2.3	102.9	Pulse	0.1000	3
No Gas	Ge	72	1433197.37	2.0	99.5	Pulse	0.1000	3
H2	Sc	45	198930.93	3.4	101.8	Pulse	0.1000	3
H2	Ge	72	159245.40	2.0	97.7	Pulse	0.1000	3
H2	In	115	437947.44	1.8	101.1	Pulse	0.1000	3
He	Sc	45	41920.65	2.5	104.8	Pulse	0.1000	3
He	Ge	72	72241.41	0.6	99.9	Pulse	0.1000	3
He	In	115	63876.04	0.5	98.9	Pulse	0.1000	3
He	Tb	159	291875.80	0.7	102.1	Pulse	0.1000	3
He	Bi	209	238497.12	0.3	107.3	Pulse	0.1000	3

No Gas

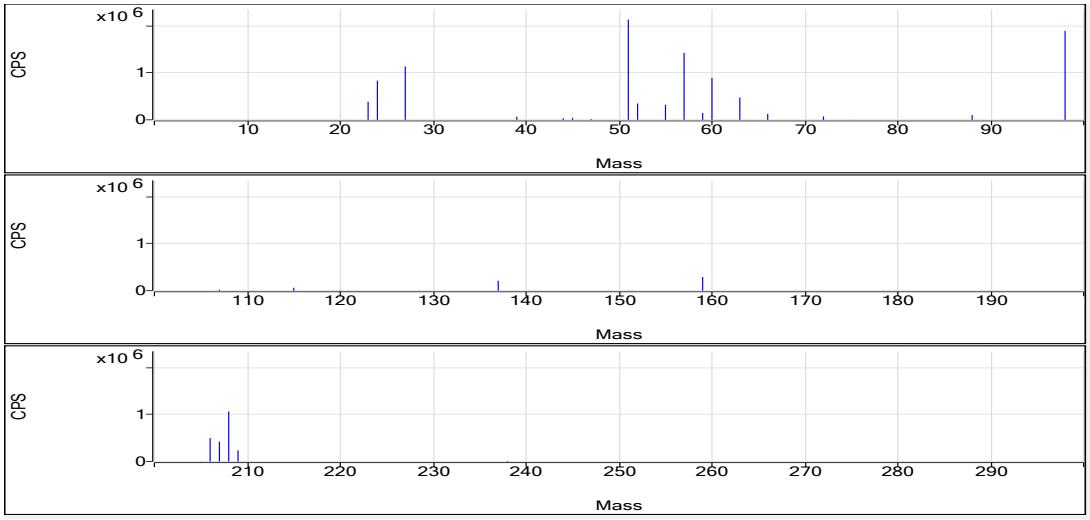


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.68	0.0009	1316.07	0.0013	4.694E-05
Be	9	1	No Gas	0.668	0.0009	1342.07	0.0013	4.694E-05
Be	9	1	No Gas	0.677	0.0009	1358.07	0.0013	4.694E-05
Se	78	2	H2	8.555	0.0033	533.34	0.0004	1.089E-05
Se	78	2	H2	9.053	0.0035	551.34	0.0004	1.089E-05
Se	78	2	H2	7.635	0.003	484.01	0.0004	1.089E-05
Na	23	3	He	3078.924	5.3955	388912.06	0.0017	0.1065
Na	23	3	He	3051.712	5.3488	384572.06	0.0017	0.1065
Na	23	3	He	3045.475	5.338	388309.96	0.0017	0.1065
Mg	24	3	He	13700.965	11.5562	832977.33	0.0008	0.004846
Mg	24	3	He	13742.786	11.5914	833415.46	0.0008	0.004846
Mg	24	3	He	13700.624	11.5559	840619.28	0.0008	0.004846
Al	27	3	He	65438.196	15.7975	1138694.75	0.0002	0.001063
Al	27	3	He	65055.498	15.7051	1129186.00	0.0002	0.001063
Al	27	3	He	65363.404	15.7794	1147856.70	0.0002	0.001063
K	39	3	He	1471.651	0.9563	68931.22	0.0006	0.1436
K	39	3	He	1409.486	0.922	66289.48	0.0006	0.1436
K	39	3	He	1429.122	0.9328	67856.95	0.0006	0.1436
Ca	44	3	He	15739.165	0.4905	35353.30	0	0.001611
Ca	44	3	He	15487.332	0.4826	34701.91	0	0.001611
Ca	44	3	He	15497.577	0.483	35132.68	0	0.001611
Ti	47	3	He	831.947	0.2089	15058.33	0.0003	0.0002737
Ti	47	3	He	836.818	0.2101	15108.25	0.0003	0.0002737
Ti	47	3	He	817.758	0.2054	14938.00	0.0003	0.0002737
V	51	3	He	2532.948	29.6371	2136268.50	0.0117	0.007326
V	51	3	He	2527.182	29.5697	2126040.75	0.0117	0.007326
V	51	3	He	2526.816	29.5654	2150703.00	0.0117	0.007326
Cr	52	3	He	318.219	4.871	351105.39	0.0152	0.02538
Cr	52	3	He	312.85	4.7892	344343.35	0.0152	0.02538
Cr	52	3	He	310.026	4.7462	345260.15	0.0152	0.02538
Mn	55	3	He	745.28	4.4128	318079.29	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	744.486	4.4081	316941.44	0.0059	0.01385
Mn	55	3	He	756.405	4.4785	325781.77	0.0059	0.01385
Fe	57	3	He	67994.488	19.7029	1420203.26	0.0003	0.003918
Fe	57	3	He	68260.588	19.78	1422170.92	0.0003	0.003918
Fe	57	3	He	68118.079	19.7387	1435872.95	0.0003	0.003918
Co	59	3	He	65.499	2.0015	144269.82	0.0305	0.003084
Co	59	3	He	64.602	1.9741	141938.47	0.0305	0.003084
Co	59	3	He	66.744	2.0395	148360.11	0.0305	0.003084
Ni	60	3	He	1409.846	12.4062	894249.60	0.0088	0.009003
Ni	60	3	He	1395.526	12.2803	882945.14	0.0088	0.009003
Ni	60	3	He	1406.869	12.38	900571.78	0.0088	0.009003
Cu	63	3	He	263.661	6.5799	474283.78	0.0249	0.004937
Cu	63	3	He	264.672	6.6051	474901.87	0.0249	0.004937
Cu	63	3	He	264.137	6.5917	479509.99	0.0249	0.004937
Zn	66	3	He	714.253	1.7596	126832.64	0.0025	0.004836
Zn	66	3	He	707.786	1.7437	125371.03	0.0025	0.004836
Zn	66	3	He	713.824	1.7585	127922.88	0.0025	0.004836
As	75	3	He	32.477	0.0569	4102.62	0.0017	0.0004347
As	75	3	He	31.647	0.0555	3988.58	0.0017	0.0004347
As	75	3	He	32.637	0.0572	4160.62	0.0017	0.0004347
Sr	88	3	He	199.213	1.558	99476.77	0.0078	0.0007762
Sr	88	3	He	203.28	1.5898	101056.81	0.0078	0.0007762
Sr	88	3	He	203.322	1.5902	102114.86	0.0078	0.0007762
Mo	98	3	He	1333.998	29.3773	1875658.57	0.022	0.0005162
Mo	98	3	He	1357.281	29.89	1899936.69	0.022	0.0005162
Mo	98	3	He	1356.145	29.865	1917828.10	0.022	0.0005162
Ag	107	3	He	7.683	0.35	22348.34	0.0455	0.0004641
Ag	107	3	He	7.641	0.3481	22127.88	0.0455	0.0004641
Ag	107	3	He	7.59	0.3458	22208.18	0.0455	0.0004641
Cd	111	3	He	0.72	0.0035	224.00	0.0048	5.152E-05
Cd	111	3	He	0.625	0.0031	194.00	0.0048	5.152E-05
Cd	111	3	He	0.69	0.0034	216.00	0.0048	5.152E-05
Sn	120	3	He	5.917	0.1	6381.74	0.0143	0.01559
Sn	120	3	He	6.191	0.1039	6601.77	0.0143	0.01559
Sn	120	3	He	6.052	0.1019	6541.81	0.0143	0.01559
Sb	121	3	He	1.469	0.0185	1180.11	0.0124	0.000258
Sb	121	3	He	1.311	0.0165	1050.08	0.0124	0.000258
Sb	121	3	He	1.423	0.0179	1150.09	0.0124	0.000258
Ba	137	3	He	762.065	3.3342	212878.59	0.0044	0.000309
Ba	137	3	He	762.284	3.3351	211996.11	0.0044	0.000309
Ba	137	3	He	758.417	3.3182	213085.23	0.0044	0.000309
Tl	205	3	He	0.444	0.0133	3160.47	0.0276	0.001005
Tl	205	3	He	0.426	0.0128	3040.47	0.0276	0.001005
Tl	205	3	He	0.538	0.0159	3800.68	0.0276	0.001005
Pb	208	3	He	229.483	8.3547	1057065.22	0.0364	0.002176
Pb	208	3	He	228.963	8.3358	1069027.48	0.0364	0.002176
Pb	208	3	He	231.027	8.411	1081499.67	0.0364	0.002176
U	238	3	He	1.319	0.0557	13267.44	0.0421	0.00024
U	238	3	He	1.421	0.06	14288.30	0.0421	0.00024
U	238	3	He	1.387	0.0586	14018.19	0.0421	0.00024
Sc	45	1	No Gas			3248983.39		
Sc	45	1	No Gas			3365185.26		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3395019.01		
Ge	72	1	No Gas			1399504.04		
Ge	72	1	No Gas			1450386.70		
Ge	72	1	No Gas			1449701.38		
Sc	45	2	H2			198691.05		
Sc	45	2	H2			192359.08		
Sc	45	2	H2			205742.65		
Ge	72	2	H2			159585.83		
Ge	72	2	H2			155926.33		
Ge	72	2	H2			162224.04		
In	115	2	H2			441593.04		
In	115	2	H2			428710.77		
In	115	2	H2			443538.51		
Sc	45	3	He			41489.56		
Sc	45	3	He			43094.03		
Sc	45	3	He			41178.37		
Ge	72	3	He			72080.86		
Ge	72	3	He			71899.40		
Ge	72	3	He			72743.96		
In	115	3	He			63897.04		
In	115	3	He			63615.76		
In	115	3	He			64267.61		
Tb	159	3	He			291989.98		
Tb	159	3	He			289918.39		
Tb	159	3	He			293719.02		
Bi	209	3	He			238064.41		
Bi	209	3	He			238078.65		
Bi	209	3	He			239348.30		

Quantitation Report

Data File Name	271SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 19:55:11
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

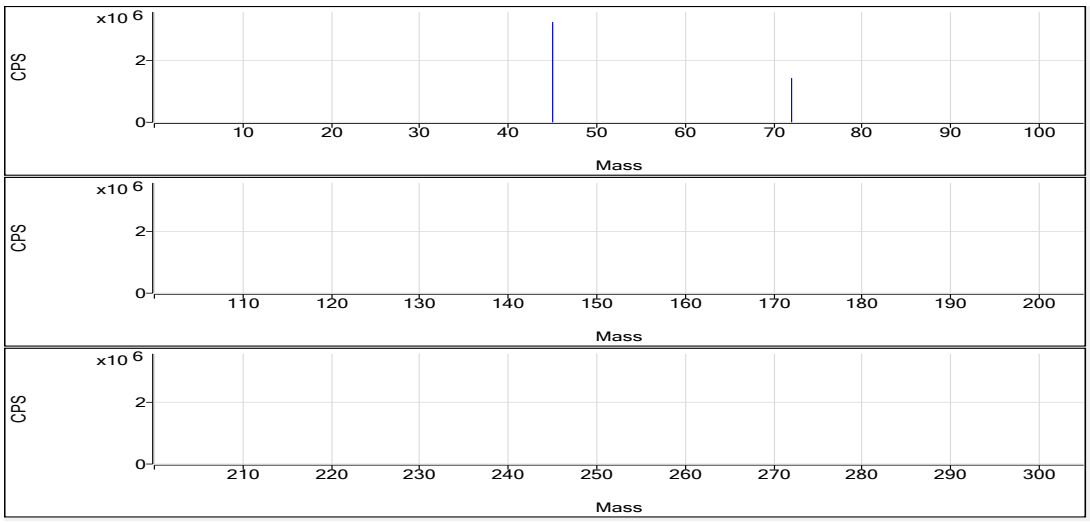
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.003	ppb	191.9	72.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.011	ppb	221.8	2.44	0.0000	Pulse	1.5000	3
Na	23	72	He	7.257	ppb	38.7	8612.75	0.1189	Pulse	0.1000	3
Mg	24	72	He	17.119	ppb	8.6	1396.78	0.0193	Pulse	0.1000	3
Al	27	72	He	45.290	ppb	9.4	870.06	0.0120	Pulse	0.1000	3
K	39	72	He	0.850	ppb	410.8	10440.68	0.1441	Pulse	0.1000	3
Ca	44	72	He	3.059	ppb	467.8	123.34	0.0017	Pulse	0.1000	3
Ti	47	72	He	1.469	ppb	76.3	46.67	0.0006	Pulse	0.1000	3
V	51	72	He	1.083	ppb	5.7	1448.08	0.0200	Pulse	0.5000	3
Cr	52	72	He	0.064	ppb	112.0	1910.19	0.0264	Pulse	0.1000	3
Mn	55	72	He	0.234	ppb	26.2	1103.42	0.0152	Pulse	0.1000	3
Fe	57	72	He	67.201	ppb	6.2	1693.49	0.0234	Pulse	0.1000	3
Co	59	72	He	0.068	ppb	31.2	373.35	0.0052	Pulse	0.1000	3
Ni	60	72	He	1.398	ppb	36.4	1540.14	0.0213	Pulse	0.1000	3
Cu	63	72	He	0.354	ppb	20.4	996.73	0.0138	Pulse	0.1000	3
Zn	66	72	He	0.320	ppb	187.7	406.69	0.0056	Pulse	0.1000	3
As	75	72	He	0.142	ppb	41.5	49.33	0.0007	Pulse	0.5000	3
Sr	88	115	He	0.073	ppb	12.4	86.67	0.0013	Pulse	0.1000	3
Mo	98	115	He	0.791	ppb	7.4	1153.42	0.0179	Pulse	0.1000	3
Ag	107	115	He	0.002	ppb	175.4	36.67	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.004	ppb	227.2	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.419	ppb	13.0	1386.78	0.0216	Pulse	0.1000	3
Sb	121	115	He	0.025	ppb	56.3	36.67	0.0006	Pulse	0.1000	3
Ba	137	115	He	0.652	ppb	13.4	203.34	0.0032	Pulse	0.1000	3
Tl	205	209	He	-0.002	ppb	N/A	210.01	0.0010	Pulse	0.1000	3
Pb	208	209	He	0.457	ppb	3.4	4160.42	0.0188	Pulse	0.1000	3
U	238	209	He	0.007	ppb	63.5	116.67	0.0005	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3242970.26	1.6	100.1	Pulse	0.1000	3
No Gas	Ge	72	1431523.62	0.7	99.4	Pulse	0.1000	3
H2	Sc	45	194988.16	2.4	99.8	Pulse	0.1000	3
H2	Ge	72	160745.34	2.0	98.6	Pulse	0.1000	3
H2	In	115	440939.79	1.9	101.8	Pulse	0.1000	3
He	Sc	45	40590.40	2.2	101.5	Pulse	0.1000	3
He	Ge	72	72458.84	1.9	100.2	Pulse	0.1000	3
He	In	115	64304.12	1.4	99.6	Pulse	0.1000	3
He	Tb	159	284913.03	0.2	99.6	Pulse	0.1000	3
He	Bi	209	221267.38	0.5	99.6	Pulse	0.1000	3

No Gas



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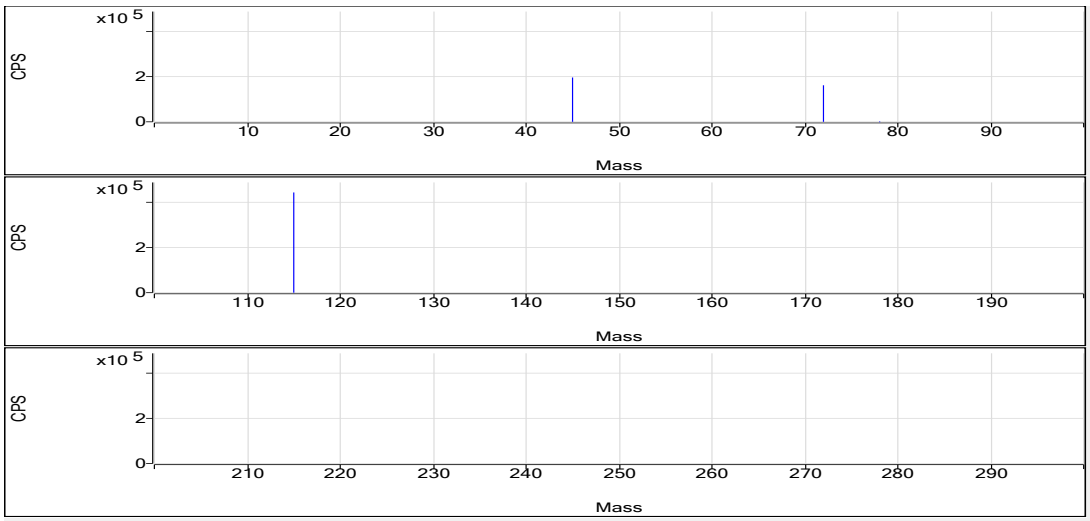
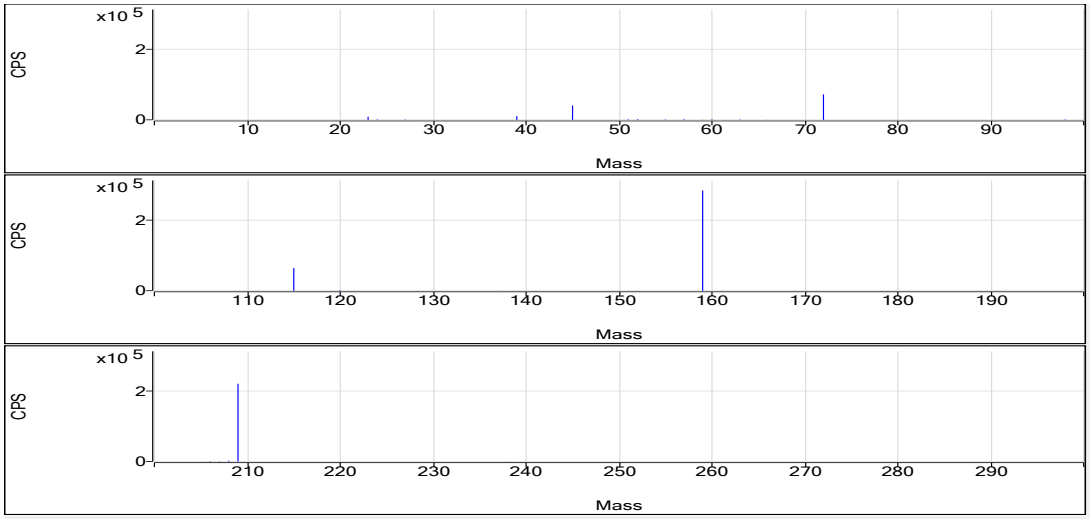


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.002	0	70.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.002	0	64.00	0.0013	4.694E-05
Be	9	1	No Gas	0.008	0.0001	82.00	0.0013	4.694E-05
Se	78	2	H2	0.026	0	3.33	0.0004	1.089E-05
Se	78	2	H2	-0.017	0	0.67	0.0004	1.089E-05
Se	78	2	H2	0.024	0	3.33	0.0004	1.089E-05
Na	23	3	He	10.475	0.1244	8822.84	0.0017	0.1065
Na	23	3	He	5.315	0.1156	8432.60	0.0017	0.1065
Na	23	3	He	5.981	0.1167	8582.80	0.0017	0.1065
Mg	24	3	He	17.008	0.0192	1360.12	0.0008	0.004846
Mg	24	3	He	18.641	0.0206	1500.13	0.0008	0.004846
Mg	24	3	He	15.709	0.0181	1330.10	0.0008	0.004846
Al	27	3	He	41.178	0.011	780.05	0.0002	0.001063
Al	27	3	He	45.002	0.0119	870.06	0.0002	0.001063
Al	27	3	He	49.689	0.0131	960.07	0.0002	0.001063
K	39	3	He	3.334	0.1455	10313.92	0.0006	0.1436
K	39	3	He	2.355	0.1449	10574.13	0.0006	0.1436
K	39	3	He	-3.14	0.1419	10434.00	0.0006	0.1436
Ca	44	3	He	16.26	0.0021	150.01	0	0.001611
Ca	44	3	He	-12.147	0.0012	90.00	0	0.001611
Ca	44	3	He	5.064	0.0018	130.01	0	0.001611
Ti	47	3	He	0.596	0.0004	30.00	0.0003	0.0002737
Ti	47	3	He	2.735	0.001	70.00	0.0003	0.0002737
Ti	47	3	He	1.078	0.0005	40.00	0.0003	0.0002737
V	51	3	He	1.154	0.0208	1476.08	0.0117	0.007326
V	51	3	He	1.059	0.0197	1438.08	0.0117	0.007326
V	51	3	He	1.036	0.0194	1430.08	0.0117	0.007326
Cr	52	3	He	-0.009	0.0253	1790.17	0.0152	0.02538
Cr	52	3	He	0.133	0.0274	2000.19	0.0152	0.02538
Cr	52	3	He	0.066	0.0264	1940.21	0.0152	0.02538
Mn	55	3	He	0.282	0.0155	1100.09	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.254	0.0154	1120.09	0.0059	0.01385
Mn	55	3	He	0.165	0.0148	1090.08	0.0059	0.01385
Fe	57	3	He	71.689	0.0247	1750.19	0.0003	0.003918
Fe	57	3	He	66.443	0.0232	1690.15	0.0003	0.003918
Fe	57	3	He	63.472	0.0223	1640.14	0.0003	0.003918
Co	59	3	He	0.056	0.0048	340.02	0.0305	0.003084
Co	59	3	He	0.092	0.0059	430.02	0.0305	0.003084
Co	59	3	He	0.055	0.0048	350.01	0.0305	0.003084
Ni	60	3	He	1.768	0.0245	1740.17	0.0088	0.009003
Ni	60	3	He	1.611	0.0232	1690.15	0.0088	0.009003
Ni	60	3	He	0.817	0.0162	1190.09	0.0088	0.009003
Cu	63	3	He	0.436	0.0158	1120.08	0.0249	0.004937
Cu	63	3	He	0.297	0.0123	900.05	0.0249	0.004937
Cu	63	3	He	0.331	0.0132	970.06	0.0249	0.004937
Zn	66	3	He	0.558	0.0062	440.02	0.0025	0.004836
Zn	66	3	He	0.765	0.0067	490.03	0.0025	0.004836
Zn	66	3	He	-0.363	0.0039	290.01	0.0025	0.004836
As	75	3	He	0.123	0.0006	46.00	0.0017	0.0004347
As	75	3	He	0.207	0.0008	58.00	0.0017	0.0004347
As	75	3	He	0.094	0.0006	44.00	0.0017	0.0004347
Sr	88	3	He	0.063	0.0013	80.01	0.0078	0.0007762
Sr	88	3	He	0.078	0.0014	90.00	0.0078	0.0007762
Sr	88	3	He	0.078	0.0014	90.00	0.0078	0.0007762
Mo	98	3	He	0.738	0.0168	1060.08	0.022	0.0005162
Mo	98	3	He	0.853	0.0193	1250.09	0.022	0.0005162
Mo	98	3	He	0.781	0.0177	1150.09	0.022	0.0005162
Ag	107	3	He	0.007	0.0008	50.00	0.0455	0.0004641
Ag	107	3	He	0	0.0005	30.00	0.0455	0.0004641
Ag	107	3	He	0	0.0005	30.00	0.0455	0.0004641
Cd	111	3	He	0.016	0.0001	8.00	0.0048	5.152E-05
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Sn	120	3	He	0.36	0.0207	1310.11	0.0143	0.01559
Sn	120	3	He	0.466	0.0222	1440.12	0.0143	0.01559
Sn	120	3	He	0.43	0.0217	1410.12	0.0143	0.01559
Sb	121	3	He	0.017	0.0005	30.00	0.0124	0.000258
Sb	121	3	He	0.041	0.0008	50.00	0.0124	0.000258
Sb	121	3	He	0.016	0.0005	30.00	0.0124	0.000258
Ba	137	3	He	0.652	0.0032	200.01	0.0044	0.000309
Ba	137	3	He	0.565	0.0028	180.01	0.0044	0.000309
Ba	137	3	He	0.739	0.0035	230.01	0.0044	0.000309
Tl	205	3	He	0.008	0.0012	270.01	0.0276	0.001005
Tl	205	3	He	-0.015	0.0006	130.00	0.0276	0.001005
Tl	205	3	He	0.001	0.001	230.01	0.0276	0.001005
Pb	208	3	He	0.472	0.0193	2290.30	0.0364	0.002176
Pb	208	3	He	0.441	0.0182	2250.28	0.0364	0.002176
Pb	208	3	He	0.458	0.0189	2290.26	0.0364	0.002176
U	238	3	He	0.003	0.0004	80.00	0.0421	0.00024
U	238	3	He	0.006	0.0005	110.00	0.0421	0.00024
U	238	3	He	0.011	0.0007	160.01	0.0421	0.00024
Sc	45	1	No Gas			3187817.76		
Sc	45	1	No Gas			3288395.58		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3252697.45		
Ge	72	1	No Gas			1421574.20		
Ge	72	1	No Gas			1440251.85		
Ge	72	1	No Gas			1432744.82		
Sc	45	2	H2			193278.81		
Sc	45	2	H2			191424.78		
Sc	45	2	H2			200260.90		
Ge	72	2	H2			157451.85		
Ge	72	2	H2			160829.36		
Ge	72	2	H2			163954.80		
In	115	2	H2			432305.58		
In	115	2	H2			441226.05		
In	115	2	H2			449287.73		
Sc	45	3	He			40005.35		
Sc	45	3	He			41609.95		
Sc	45	3	He			40155.91		
Ge	72	3	He			70894.73		
Ge	72	3	He			72954.65		
Ge	72	3	He			73527.15		
In	115	3	He			63253.57		
In	115	3	He			64770.09		
In	115	3	He			64921.16		
Tb	159	3	He			284403.82		
Tb	159	3	He			285649.18		
Tb	159	3	He			284686.09		
Bi	209	3	He			220182.07		
Bi	209	3	He			222409.70		
Bi	209	3	He			221210.37		

Quantitation Report

Data File Name	272_CCV.d
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Acq Time	2023-08-10 19:57:11
Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

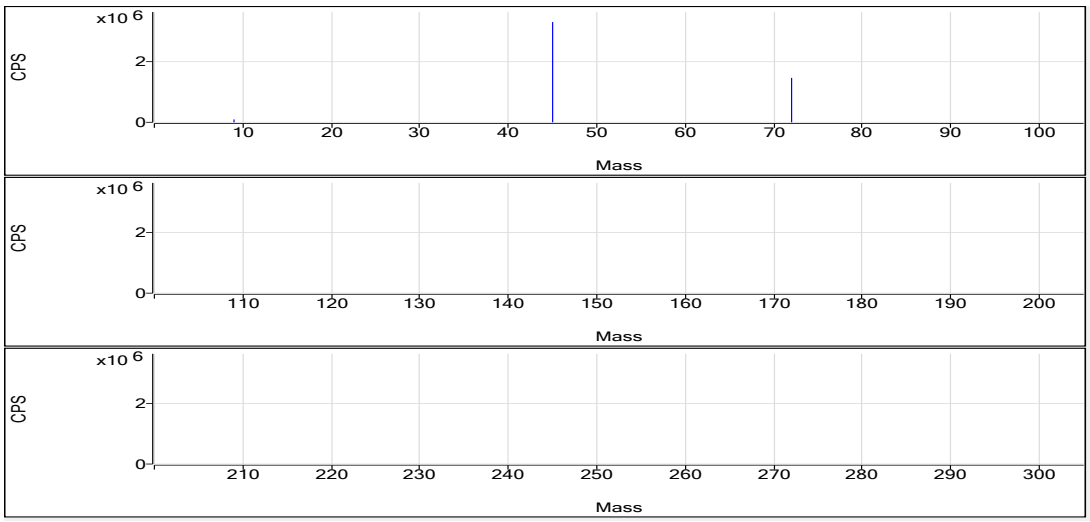
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	48.798	ppb	3.2	93425.05	0.0642	Pulse	0.5000	3
Se	78	72	H2	52.210	ppb	2.3	3296.16	0.0203	Pulse	1.5000	3
Na	23	72	He	5296.614	ppb	2.2	677404.49	9.2051	Pulse	0.1000	3
Mg	24	72	He	5286.380	ppb	1.9	328358.50	4.4618	Pulse	0.1000	3
Al	27	72	He	5315.734	ppb	2.1	94509.88	1.2843	Pulse	0.1000	3
K	39	72	He	5307.665	ppb	1.5	226284.85	3.0746	Pulse	0.1000	3
Ca	44	72	He	5292.439	ppb	1.6	12218.78	0.1660	Pulse	0.1000	3
Ti	47	72	He	5389.523	ppb	1.7	99486.49	1.3519	Pulse	0.1000	3
V	51	72	He	533.735	ppb	1.8	460016.46	6.2508	Pulse	0.5000	3
Cr	52	72	He	535.920	ppb	2.0	602409.13	8.1860	Pulse	0.1000	3
Mn	55	72	He	536.915	ppb	1.5	234247.50	3.1829	Pulse	0.1000	3
Fe	57	72	He	5381.853	ppb	1.5	115036.66	1.5631	Pulse	0.1000	3
Co	59	72	He	531.816	ppb	1.8	1194321.49	16.2291	Pulse	0.1000	3
Ni	60	72	He	534.128	ppb	1.9	346300.75	4.7058	Pulse	0.1000	3
Cu	63	72	He	531.210	ppb	1.1	975308.29	13.2518	Pulse	0.1000	3
Zn	66	72	He	525.541	ppb	2.0	95373.60	1.2960	Pulse	0.1000	3
As	75	72	He	527.709	ppb	2.3	67569.10	0.9182	Pulse	0.5000	3
Sr	88	115	He	52.813	ppb	2.8	26502.08	0.4136	Pulse	0.1000	3
Mo	98	115	He	53.211	ppb	1.7	75119.04	1.1723	Pulse	0.1000	3
Ag	107	115	He	52.273	ppb	1.0	152448.43	2.3789	Pulse	0.1000	3
Cd	111	115	He	53.517	ppb	2.7	16464.32	0.2569	Pulse	0.5000	3
Sn	120	115	He	53.871	ppb	0.5	50221.61	0.7837	Pulse	0.1000	3
Sb	121	115	He	52.868	ppb	2.2	42044.46	0.6561	Pulse	0.1000	3
Ba	137	115	He	530.479	ppb	1.2	148734.33	2.3210	Pulse	0.1000	3
Tl	205	209	He	52.837	ppb	0.6	326124.90	1.4616	Pulse	0.1000	3
Pb	208	209	He	53.544	ppb	0.8	435314.04	1.9510	Pulse	0.1000	3
U	238	209	He	52.207	ppb	1.1	490079.67	2.1964	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3286600.68	0.6	101.4	Pulse	0.1000	3
No Gas	Ge	72	1456027.90	0.4	101.1	Pulse	0.1000	3
H2	Sc	45	197970.50	1.6	101.3	Pulse	0.1000	3
H2	Ge	72	162049.68	1.0	99.4	Pulse	0.1000	3
H2	In	115	443764.51	2.2	102.4	Pulse	0.1000	3
He	Sc	45	41516.07	0.4	103.8	Pulse	0.1000	3
He	Ge	72	73607.97	1.8	101.8	Pulse	0.1000	3
He	In	115	64087.23	1.3	99.2	Pulse	0.1000	3
He	Tb	159	287274.54	0.5	100.4	Pulse	0.1000	3
He	Bi	209	223127.63	0.6	100.4	Pulse	0.1000	3

No Gas



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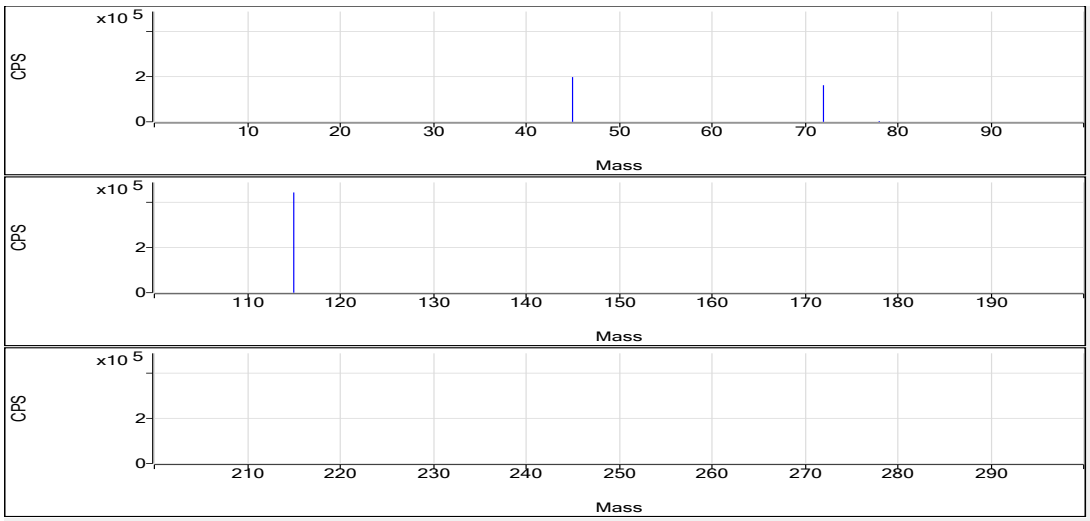
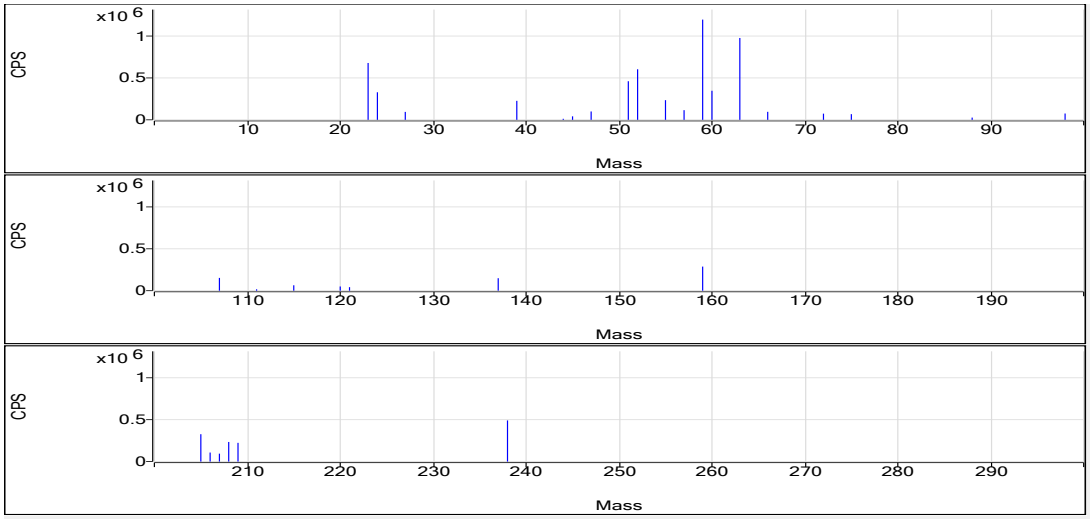


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	49.111	0.0646	94042.66	0.0013	4.694E-05
Be	9	1	No Gas	47.095	0.0619	90537.55	0.0013	4.694E-05
Be	9	1	No Gas	50.189	0.066	95694.93	0.0013	4.694E-05
Se	78	2	H2	53.048	0.0207	3329.06	0.0004	1.089E-05
Se	78	2	H2	52.734	0.0205	3365.73	0.0004	1.089E-05
Se	78	2	H2	50.848	0.0198	3193.69	0.0004	1.089E-05
Na	23	3	He	5399.779	9.3823	683738.19	0.0017	0.1065
Na	23	3	He	5317.991	9.2418	672742.80	0.0017	0.1065
Na	23	3	He	5172.072	8.9912	675732.49	0.0017	0.1065
Mg	24	3	He	5389.128	4.5484	331467.85	0.0008	0.004846
Mg	24	3	He	5286.064	4.4615	324770.19	0.0008	0.004846
Mg	24	3	He	5183.948	4.3754	328837.46	0.0008	0.004846
Al	27	3	He	5425.224	1.3107	95516.16	0.0002	0.001063
Al	27	3	He	5321.382	1.2856	93584.16	0.0002	0.001063
Al	27	3	He	5200.595	1.2565	94429.32	0.0002	0.001063
K	39	3	He	5395.249	3.123	227586.54	0.0006	0.1436
K	39	3	He	5291.903	3.0659	223176.62	0.0006	0.1436
K	39	3	He	5235.843	3.0349	228091.40	0.0006	0.1436
Ca	44	3	He	5198.934	0.1631	11885.16	0	0.001611
Ca	44	3	He	5368.643	0.1684	12255.51	0	0.001611
Ca	44	3	He	5309.739	0.1665	12515.66	0	0.001611
Ti	47	3	He	5449.172	1.3668	99606.85	0.0003	0.0002737
Ti	47	3	He	5437.151	1.3638	99275.51	0.0003	0.0002737
Ti	47	3	He	5282.247	1.325	99577.12	0.0003	0.0002737
V	51	3	He	541.615	6.343	462247.50	0.0117	0.007326
V	51	3	He	536.342	6.2813	457238.81	0.0117	0.007326
V	51	3	He	523.248	6.1282	460563.06	0.0117	0.007326
Cr	52	3	He	541.59	8.2723	602847.61	0.0152	0.02538
Cr	52	3	He	542.505	8.2863	603184.72	0.0152	0.02538
Cr	52	3	He	523.665	7.9994	601195.07	0.0152	0.02538
Mn	55	3	He	542.572	3.2163	234391.54	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	540.692	3.2052	233320.68	0.0059	0.01385
Mn	55	3	He	527.48	3.1273	235030.29	0.0059	0.01385
Fe	57	3	He	5421.105	1.5745	114741.45	0.0003	0.003918
Fe	57	3	He	5437.705	1.5793	114962.64	0.0003	0.003918
Fe	57	3	He	5286.748	1.5356	115405.90	0.0003	0.003918
Co	59	3	He	536.604	16.3751	1193341.62	0.0305	0.003084
Co	59	3	He	538.284	16.4264	1195733.19	0.0305	0.003084
Co	59	3	He	520.56	15.8856	1193889.67	0.0305	0.003084
Ni	60	3	He	540.41	4.761	346958.04	0.0088	0.009003
Ni	60	3	He	539.657	4.7544	346086.79	0.0088	0.009003
Ni	60	3	He	522.318	4.6019	345857.42	0.0088	0.009003
Cu	63	3	He	534.754	13.3402	972166.78	0.0249	0.004937
Cu	63	3	He	534.377	13.3307	970389.99	0.0249	0.004937
Cu	63	3	He	524.501	13.0845	983368.11	0.0249	0.004937
Zn	66	3	He	535.567	1.3206	96239.06	0.0025	0.004836
Zn	66	3	He	526.156	1.2975	94447.93	0.0025	0.004836
Zn	66	3	He	514.898	1.2698	95433.80	0.0025	0.004836
As	75	3	He	535.583	0.9319	67912.79	0.0017	0.0004347
As	75	3	He	533.708	0.9286	67599.20	0.0017	0.0004347
As	75	3	He	513.838	0.8941	67195.31	0.0017	0.0004347
Sr	88	3	He	51.093	0.4002	25974.40	0.0078	0.0007762
Sr	88	3	He	53.465	0.4187	26826.20	0.0078	0.0007762
Sr	88	3	He	53.882	0.422	26705.64	0.0078	0.0007762
Mo	98	3	He	52.383	1.1541	74908.16	0.022	0.0005162
Mo	98	3	He	53.084	1.1695	74928.11	0.022	0.0005162
Mo	98	3	He	54.165	1.1933	75520.84	0.022	0.0005162
Ag	107	3	He	52.003	2.3666	153612.34	0.0455	0.0004641
Ag	107	3	He	51.967	2.365	151518.53	0.0455	0.0004641
Ag	107	3	He	52.85	2.4052	152214.43	0.0455	0.0004641
Cd	111	3	He	52.951	0.2542	16501.68	0.0048	5.152E-05
Cd	111	3	He	52.467	0.2519	16139.30	0.0048	5.152E-05
Cd	111	3	He	55.132	0.2647	16751.97	0.0048	5.152E-05
Sn	120	3	He	53.619	0.7801	50633.02	0.0143	0.01559
Sn	120	3	He	53.864	0.7836	50201.75	0.0143	0.01559
Sn	120	3	He	54.13	0.7874	49830.05	0.0143	0.01559
Sb	121	3	He	53.231	0.6606	42877.02	0.0124	0.000258
Sb	121	3	He	51.544	0.6397	40981.11	0.0124	0.000258
Sb	121	3	He	53.828	0.668	42275.24	0.0124	0.000258
Ba	137	3	He	523.97	2.2926	148804.50	0.0044	0.000309
Ba	137	3	He	530.695	2.322	148764.62	0.0044	0.000309
Ba	137	3	He	536.773	2.3486	148633.86	0.0044	0.000309
Tl	205	3	He	53.101	1.4689	326859.82	0.0276	0.001005
Tl	205	3	He	52.956	1.4649	325589.66	0.0276	0.001005
Tl	205	3	He	52.454	1.4511	325925.21	0.0276	0.001005
Pb	208	3	He	53.846	1.962	233356.07	0.0364	0.002176
Pb	208	3	He	53.764	1.9591	232420.91	0.0364	0.002176
Pb	208	3	He	53.021	1.932	234637.79	0.0364	0.002176
U	238	3	He	52.868	2.2242	494926.67	0.0421	0.00024
U	238	3	He	51.763	2.1778	484019.72	0.0421	0.00024
U	238	3	He	51.989	2.1873	491292.61	0.0421	0.00024
Sc	45	1	No Gas			3277960.58		
Sc	45	1	No Gas			3309650.58		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3272190.89		
Ge	72	1	No Gas			1456197.48		
Ge	72	1	No Gas			1461900.45		
Ge	72	1	No Gas			1449985.76		
Sc	45	2	H2			195639.31		
Sc	45	2	H2			196734.41		
Sc	45	2	H2			201537.77		
Ge	72	2	H2			161091.50		
Ge	72	2	H2			163833.05		
Ge	72	2	H2			161224.50		
In	115	2	H2			435627.69		
In	115	2	H2			440887.34		
In	115	2	H2			454778.51		
Sc	45	3	He			41429.17		
Sc	45	3	He			41700.00		
Sc	45	3	He			41419.05		
Ge	72	3	He			72875.25		
Ge	72	3	He			72793.38		
Ge	72	3	He			75155.28		
In	115	3	He			65302.25		
In	115	3	He			64459.24		
In	115	3	He			63675.38		
Tb	159	3	He			285656.46		
Tb	159	3	He			287987.16		
Tb	159	3	He			288180.00		
Bi	209	3	He			222514.68		
Bi	209	3	He			222255.86		
Bi	209	3	He			224612.36		

Quantitation Report

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Sample Type	CCB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

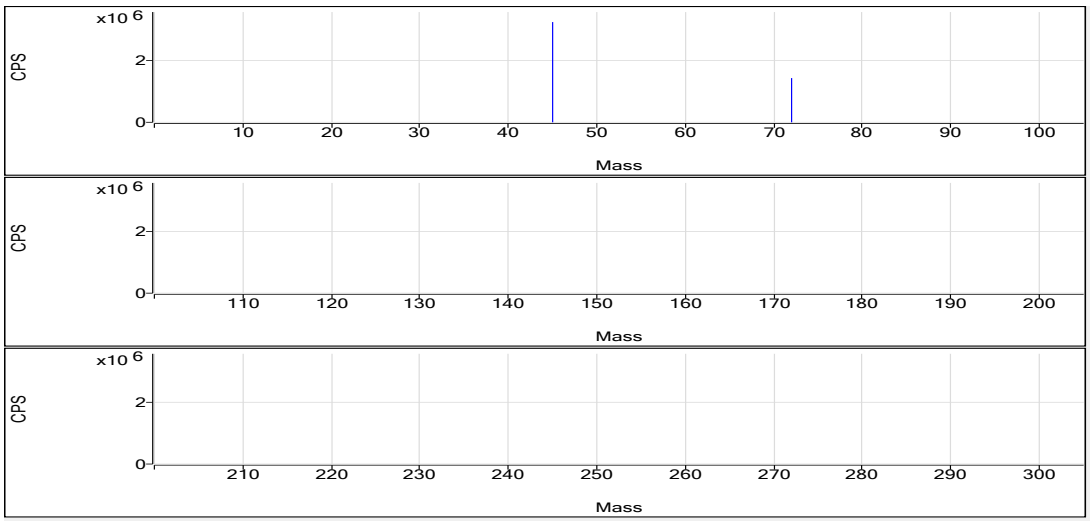
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.022	ppb	17.9	109.33	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.050	ppb	43.3	4.89	0.0000	Pulse	1.5000	3
Na	23	72	He	5.497	ppb	21.4	8429.35	0.1159	Pulse	0.1000	3
Mg	24	72	He	16.323	ppb	2.5	1353.45	0.0186	Pulse	0.1000	3
Al	27	72	He	35.338	ppb	22.2	696.71	0.0096	Pulse	0.1000	3
K	39	72	He	13.271	ppb	144.0	10974.42	0.1510	Pulse	0.1000	3
Ca	44	72	He	32.410	ppb	79.1	190.01	0.0026	Pulse	0.1000	3
Ti	47	72	He	2.031	ppb	96.7	56.67	0.0008	Pulse	0.1000	3
V	51	72	He	0.781	ppb	5.1	1196.73	0.0165	Pulse	0.5000	3
Cr	52	72	He	0.203	ppb	48.6	2070.21	0.0285	Pulse	0.1000	3
Mn	55	72	He	-0.264	ppb	N/A	893.40	0.0123	Pulse	0.1000	3
Fe	57	72	He	58.772	ppb	9.3	1523.47	0.0209	Pulse	0.1000	3
Co	59	72	He	0.186	ppb	18.1	636.70	0.0087	Pulse	0.1000	3
Ni	60	72	He	1.190	ppb	18.8	1416.79	0.0195	Pulse	0.1000	3
Cu	63	72	He	0.358	ppb	20.4	1010.07	0.0139	Pulse	0.1000	3
Zn	66	72	He	0.327	ppb	25.8	410.02	0.0056	Pulse	0.1000	3
As	75	72	He	0.082	ppb	51.0	42.00	0.0006	Pulse	0.5000	3
Sr	88	115	He	0.167	ppb	19.3	133.34	0.0021	Pulse	0.1000	3
Mo	98	115	He	0.399	ppb	4.0	596.70	0.0093	Pulse	0.1000	3
Ag	107	115	He	0.017	ppb	35.0	80.00	0.0012	Pulse	0.1000	3
Cd	111	115	He	0.013	ppb	125.5	7.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.437	ppb	6.4	1400.12	0.0218	Pulse	0.1000	3
Sb	121	115	He	0.046	ppb	14.1	53.33	0.0008	Pulse	0.1000	3
Ba	137	115	He	0.428	ppb	21.5	140.01	0.0022	Pulse	0.1000	3
Tl	205	209	He	0.117	ppb	28.0	943.40	0.0042	Pulse	0.1000	3
Pb	208	209	He	0.354	ppb	3.2	3346.96	0.0151	Pulse	0.1000	3
U	238	209	He	0.015	ppb	10.8	193.34	0.0009	Pulse	0.1000	3

ISTD Table:

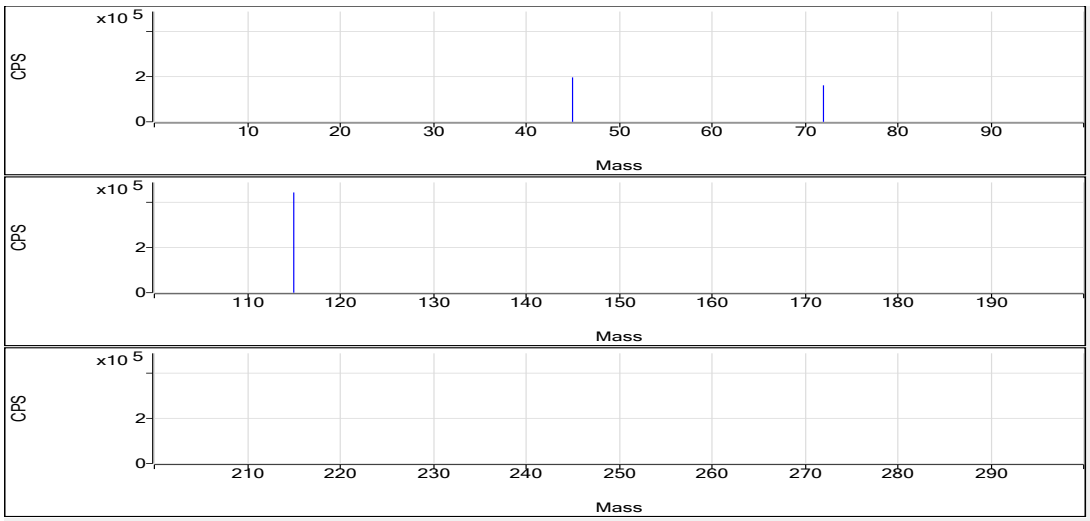
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3240959.95	0.7	100.0	Pulse	0.1000	3
No Gas	Ge	72	1429609.72	0.7	99.3	Pulse	0.1000	3
H2	Sc	45	196616.05	2.2	100.6	Pulse	0.1000	3
H2	Ge	72	161509.27	0.9	99.1	Pulse	0.1000	3
H2	In	115	443593.22	0.7	102.4	Pulse	0.1000	3
He	Sc	45	41546.22	1.3	103.9	Pulse	0.1000	3
He	Ge	72	72733.41	1.2	100.6	Pulse	0.1000	3
He	In	115	64196.83	1.1	99.4	Pulse	0.1000	3
He	Tb	159	286115.78	0.4	100.0	Pulse	0.1000	3
He	Bi	209	222359.53	0.2	100.1	Pulse	0.1000	3

No Gas

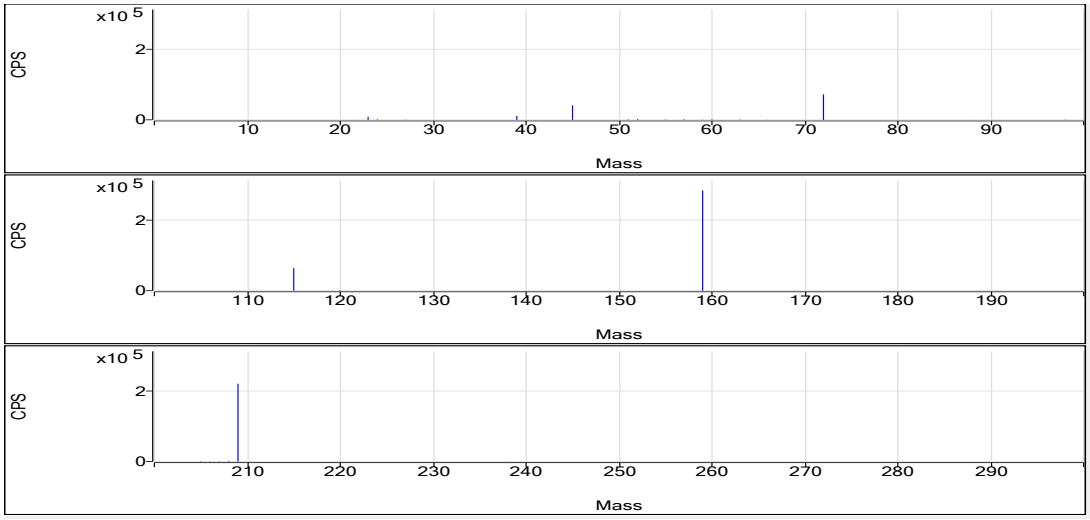


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.022	0.0001	108.00	0.0013	4.694E-05
Be	9	1	No Gas	0.027	0.0001	118.00	0.0013	4.694E-05
Be	9	1	No Gas	0.019	0.0001	102.00	0.0013	4.694E-05
Se	78	2	H2	0.026	0	3.33	0.0004	1.089E-05
Se	78	2	H2	0.056	0	5.33	0.0004	1.089E-05
Se	78	2	H2	0.067	0	6.00	0.0004	1.089E-05
Na	23	3	He	6.285	0.1173	8412.69	0.0017	0.1065
Na	23	3	He	6.06	0.1169	8592.86	0.0017	0.1065
Na	23	3	He	4.146	0.1136	8282.51	0.0017	0.1065
Mg	24	3	He	16.406	0.0187	1340.11	0.0008	0.004846
Mg	24	3	He	16.677	0.0189	1390.12	0.0008	0.004846
Mg	24	3	He	15.886	0.0182	1330.11	0.0008	0.004846
Al	27	3	He	41.791	0.0112	800.05	0.0002	0.001063
Al	27	3	He	26.586	0.0075	550.03	0.0002	0.001063
Al	27	3	He	37.637	0.0101	740.04	0.0002	0.001063
K	39	3	He	35.308	0.1631	11704.95	0.0006	0.1436
K	39	3	He	1.295	0.1444	10614.19	0.0006	0.1436
K	39	3	He	3.21	0.1454	10604.11	0.0006	0.1436
Ca	44	3	He	60.323	0.0035	250.01	0	0.001611
Ca	44	3	He	26.957	0.0024	180.01	0	0.001611
Ca	44	3	He	9.949	0.0019	140.01	0	0.001611
Ti	47	3	He	3.91	0.0013	90.00	0.0003	0.0002737
Ti	47	3	He	-0.007	0.0003	20.00	0.0003	0.0002737
Ti	47	3	He	2.189	0.0008	60.00	0.0003	0.0002737
V	51	3	He	0.825	0.017	1218.06	0.0117	0.007326
V	51	3	He	0.748	0.0161	1182.06	0.0117	0.007326
V	51	3	He	0.769	0.0163	1190.06	0.0117	0.007326
Cr	52	3	He	0.31	0.0301	2160.22	0.0152	0.02538
Cr	52	3	He	0.182	0.0282	2070.21	0.0152	0.02538
Cr	52	3	He	0.116	0.0272	1980.21	0.0152	0.02538
Mn	55	3	He	0.038	0.0141	1010.08	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.342	0.0118	870.06	0.0059	0.01385
Mn	55	3	He	-0.488	0.011	800.05	0.0059	0.01385
Fe	57	3	He	56.239	0.0202	1450.12	0.0003	0.003918
Fe	57	3	He	55.021	0.0199	1460.12	0.0003	0.003918
Fe	57	3	He	65.057	0.0228	1660.16	0.0003	0.003918
Co	59	3	He	0.164	0.0081	580.03	0.0305	0.003084
Co	59	3	He	0.224	0.0099	730.04	0.0305	0.003084
Co	59	3	He	0.169	0.0082	600.03	0.0305	0.003084
Ni	60	3	He	0.973	0.0176	1260.11	0.0088	0.009003
Ni	60	3	He	1.42	0.0215	1580.13	0.0088	0.009003
Ni	60	3	He	1.175	0.0193	1410.12	0.0088	0.009003
Cu	63	3	He	0.299	0.0124	890.05	0.0249	0.004937
Cu	63	3	He	0.44	0.0159	1170.09	0.0249	0.004937
Cu	63	3	He	0.335	0.0133	970.06	0.0249	0.004937
Zn	66	3	He	0.414	0.0059	420.02	0.0025	0.004836
Zn	66	3	He	0.246	0.0054	400.02	0.0025	0.004836
Zn	66	3	He	0.32	0.0056	410.02	0.0025	0.004836
As	75	3	He	0.071	0.0006	40.00	0.0017	0.0004347
As	75	3	He	0.047	0.0005	38.00	0.0017	0.0004347
As	75	3	He	0.129	0.0007	48.00	0.0017	0.0004347
Sr	88	3	He	0.157	0.002	130.01	0.0078	0.0007762
Sr	88	3	He	0.141	0.0019	120.01	0.0078	0.0007762
Sr	88	3	He	0.202	0.0024	150.01	0.0078	0.0007762
Mo	98	3	He	0.417	0.0097	630.03	0.022	0.0005162
Mo	98	3	He	0.388	0.0091	580.03	0.022	0.0005162
Mo	98	3	He	0.391	0.0091	580.03	0.022	0.0005162
Ag	107	3	He	0.013	0.0011	70.00	0.0455	0.0004641
Ag	107	3	He	0.024	0.0016	100.00	0.0455	0.0004641
Ag	107	3	He	0.014	0.0011	70.00	0.0455	0.0004641
Cd	111	3	He	0.015	0.0001	8.00	0.0048	5.152E-05
Cd	111	3	He	0.028	0.0002	12.00	0.0048	5.152E-05
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Sn	120	3	He	0.407	0.0214	1390.13	0.0143	0.01559
Sn	120	3	He	0.441	0.0219	1400.12	0.0143	0.01559
Sn	120	3	He	0.462	0.0222	1410.11	0.0143	0.01559
Sb	121	3	He	0.054	0.0009	60.00	0.0124	0.000258
Sb	121	3	He	0.042	0.0008	50.00	0.0124	0.000258
Sb	121	3	He	0.043	0.0008	50.00	0.0124	0.000258
Ba	137	3	He	0.492	0.0025	160.01	0.0044	0.000309
Ba	137	3	He	0.322	0.0017	110.01	0.0044	0.000309
Ba	137	3	He	0.469	0.0024	150.01	0.0044	0.000309
Tl	205	3	He	0.15	0.0051	1140.09	0.0276	0.001005
Tl	205	3	He	0.118	0.0043	950.07	0.0276	0.001005
Tl	205	3	He	0.084	0.0033	740.05	0.0276	0.001005
Pb	208	3	He	0.363	0.0154	1940.20	0.0364	0.002176
Pb	208	3	He	0.341	0.0146	1550.14	0.0364	0.002176
Pb	208	3	He	0.358	0.0152	1860.21	0.0364	0.002176
U	238	3	He	0.015	0.0009	190.01	0.0421	0.00024
U	238	3	He	0.017	0.0009	210.01	0.0421	0.00024
U	238	3	He	0.014	0.0008	180.01	0.0421	0.00024
Sc	45	1	No Gas			3252683.08		
Sc	45	1	No Gas			3256619.95		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3213576.83		
Ge	72	1	No Gas			1420383.89		
Ge	72	1	No Gas			1439882.63		
Ge	72	1	No Gas			1428562.63		
Sc	45	2	H2			191680.43		
Sc	45	2	H2			198961.95		
Sc	45	2	H2			199205.76		
Ge	72	2	H2			159755.92		
Ge	72	2	H2			162446.70		
Ge	72	2	H2			162325.20		
In	115	2	H2			440085.15		
In	115	2	H2			444989.45		
In	115	2	H2			445705.07		
Sc	45	3	He			41379.07		
Sc	45	3	He			41098.35		
Sc	45	3	He			42161.23		
Ge	72	3	He			71748.49		
Ge	72	3	He			73527.81		
Ge	72	3	He			72923.92		
In	115	3	He			65001.23		
In	115	3	He			64016.72		
In	115	3	He			63605.29		
Tb	159	3	He			287085.58		
Tb	159	3	He			286189.92		
Tb	159	3	He			285071.83		
Bi	209	3	He			221868.59		
Bi	209	3	He			222740.13		
Bi	209	3	He			222469.86		

Quantitation Report

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Auto Dilution	1.0000
Total Dilution	1.0000
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Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

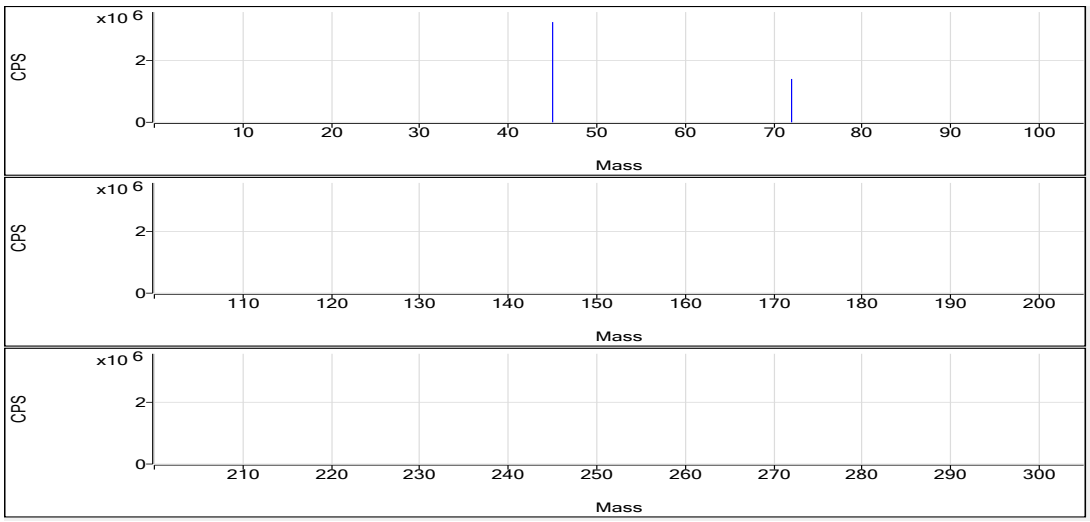
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.123	ppb	6.9	296.00	0.0002	Pulse	0.5000	3
Se	78	72	H2	1.515	ppb	4.7	95.11	0.0006	Pulse	1.5000	3
Na	23	72	He	567.022	ppb	2.6	77914.07	1.0805	Pulse	0.1000	3
Mg	24	72	He	2533.286	ppb	2.4	154360.24	2.1407	Pulse	0.1000	3
Al	27	72	He	12132.878	ppb	3.0	211250.38	2.9299	Pulse	0.1000	3
K	39	72	He	277.753	ppb	6.7	21416.09	0.2970	Pulse	0.1000	3
Ca	44	72	He	2880.765	ppb	5.7	6565.07	0.0911	Pulse	0.1000	3
Ti	47	72	He	156.766	ppb	5.3	2853.71	0.0396	Pulse	0.1000	3
V	51	72	He	466.680	ppb	2.4	394176.77	5.4664	Pulse	0.5000	3
Cr	52	72	He	58.197	ppb	3.6	65721.75	0.9116	Pulse	0.1000	3
Mn	55	72	He	137.708	ppb	4.4	59592.53	0.8267	Pulse	0.1000	3
Fe	57	72	He	12732.673	ppb	2.7	266266.33	3.6928	Pulse	0.1000	3
Co	59	72	He	12.079	ppb	2.2	26798.76	0.3716	Pulse	0.1000	3
Ni	60	72	He	262.211	ppb	1.7	166926.94	2.3147	Pulse	0.1000	3
Cu	63	72	He	49.780	ppb	3.2	89864.83	1.2463	Pulse	0.1000	3
Zn	66	72	He	134.105	ppb	2.2	24107.36	0.3343	Pulse	0.1000	3
As	75	72	He	6.097	ppb	8.2	795.36	0.0110	Pulse	0.5000	3
Sr	88	115	He	35.993	ppb	3.7	18185.49	0.2821	Pulse	0.1000	3
Mo	98	115	He	244.994	ppb	1.6	347691.84	5.3957	Pulse	0.1000	3
Ag	107	115	He	1.385	ppb	8.5	4090.75	0.0635	Pulse	0.1000	3
Cd	111	115	He	0.132	ppb	27.4	44.00	0.0007	Pulse	0.5000	3
Sn	120	115	He	1.226	ppb	13.0	2130.24	0.0331	Pulse	0.1000	3
Sb	121	115	He	0.209	ppb	26.1	183.34	0.0029	Pulse	0.1000	3
Ba	137	115	He	141.024	ppb	2.3	39778.40	0.6173	Pulse	0.1000	3
Tl	205	209	He	0.139	ppb	12.4	1100.08	0.0048	Pulse	0.1000	3
Pb	208	209	He	44.260	ppb	1.2	366589.26	1.6131	Pulse	0.1000	3
U	238	209	He	0.278	ppb	11.4	2713.73	0.0119	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3272221.51	1.3	101.0	Pulse	0.1000	3
No Gas	Ge	72	1415044.67	0.5	98.3	Pulse	0.1000	3
H2	Sc	45	200757.67	2.7	102.8	Pulse	0.1000	3
H2	Ge	72	158385.63	2.1	97.2	Pulse	0.1000	3
H2	In	115	440074.74	2.2	101.6	Pulse	0.1000	3
He	Sc	45	42358.92	3.0	105.9	Pulse	0.1000	3
He	Ge	72	72134.15	2.2	99.8	Pulse	0.1000	3
He	In	115	64452.22	1.9	99.8	Pulse	0.1000	3
He	Tb	159	288849.29	0.8	101.0	Pulse	0.1000	3
He	Bi	209	227267.61	1.0	102.3	Pulse	0.1000	3

No Gas



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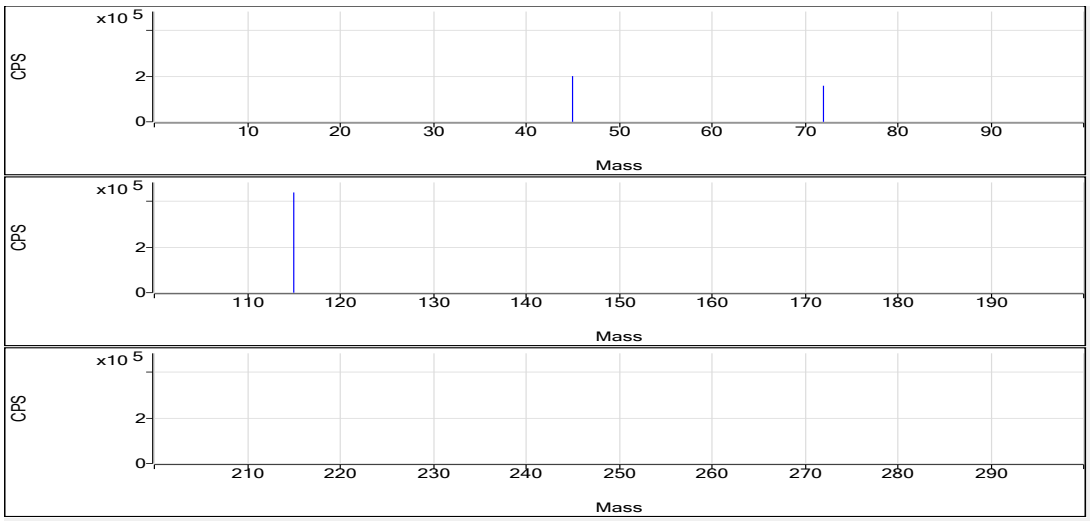
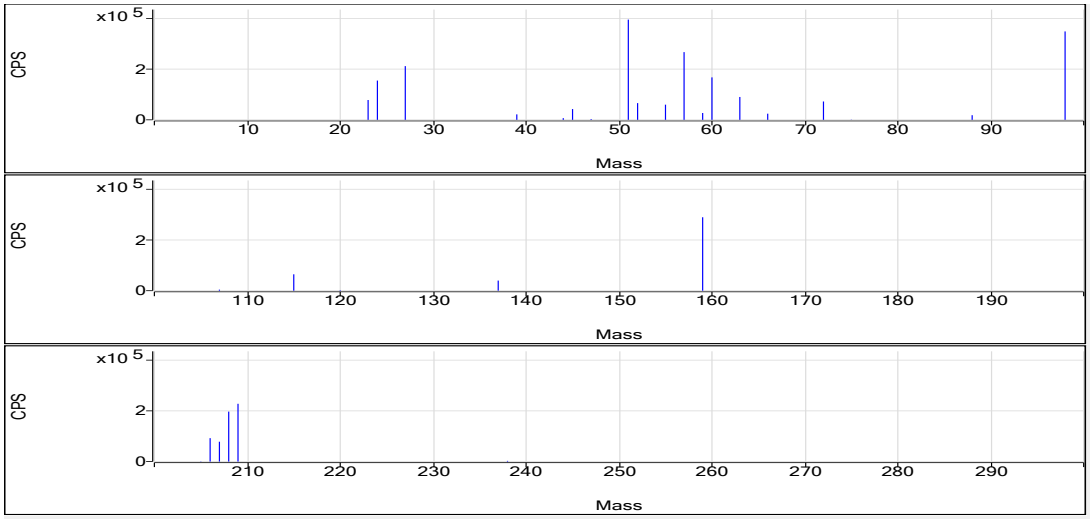


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.129	0.0002	308.00	0.0013	4.694E-05
Be	9	1	No Gas	0.114	0.0002	278.00	0.0013	4.694E-05
Be	9	1	No Gas	0.128	0.0002	302.00	0.0013	4.694E-05
Se	78	2	H2	1.506	0.0006	93.33	0.0004	1.089E-05
Se	78	2	H2	1.59	0.0006	98.67	0.0004	1.089E-05
Se	78	2	H2	1.449	0.0006	93.33	0.0004	1.089E-05
Na	23	3	He	569.072	1.084	77864.24	0.0017	0.1065
Na	23	3	He	551.634	1.0541	77874.08	0.0017	0.1065
Na	23	3	He	580.359	1.1034	78003.88	0.0017	0.1065
Mg	24	3	He	2553.058	2.1573	154959.35	0.0008	0.004846
Mg	24	3	He	2465.17	2.0832	153909.03	0.0008	0.004846
Mg	24	3	He	2581.629	2.1814	154212.33	0.0008	0.004846
Al	27	3	He	12253.56	2.959	212542.44	0.0002	0.001063
Al	27	3	He	11726.196	2.8317	209205.43	0.0002	0.001063
Al	27	3	He	12418.878	2.9989	212003.26	0.0002	0.001063
K	39	3	He	292.436	0.3051	21917.03	0.0006	0.1436
K	39	3	He	256.962	0.2855	21095.51	0.0006	0.1436
K	39	3	He	283.86	0.3004	21235.74	0.0006	0.1436
Ca	44	3	He	2893.779	0.0915	6571.74	0	0.001611
Ca	44	3	He	2711.715	0.0858	6341.58	0	0.001611
Ca	44	3	He	3036.802	0.0959	6781.88	0	0.001611
Ti	47	3	He	163.254	0.0412	2960.40	0.0003	0.0002737
Ti	47	3	He	147.356	0.0372	2750.36	0.0003	0.0002737
Ti	47	3	He	159.687	0.0403	2850.36	0.0003	0.0002737
V	51	3	He	470.208	5.5077	395612.97	0.0117	0.007326
V	51	3	He	454.183	5.3202	393058.78	0.0117	0.007326
V	51	3	He	475.65	5.5714	393858.56	0.0117	0.007326
Cr	52	3	He	58.886	0.9221	66230.82	0.0152	0.02538
Cr	52	3	He	55.866	0.8761	64724.25	0.0152	0.02538
Cr	52	3	He	59.84	0.9366	66210.18	0.0152	0.02538
Mn	55	3	He	138.426	0.8309	59682.92	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	131.365	0.7892	58307.70	0.0059	0.01385
Mn	55	3	He	143.333	0.8599	60786.98	0.0059	0.01385
Fe	57	3	He	12792.938	3.7102	266501.79	0.0003	0.003918
Fe	57	3	He	12361.003	3.5851	264865.25	0.0003	0.003918
Fe	57	3	He	13044.078	3.783	267431.95	0.0003	0.003918
Co	59	3	He	12.126	0.373	26795.31	0.0305	0.003084
Co	59	3	He	11.795	0.363	26815.48	0.0305	0.003084
Co	59	3	He	12.317	0.3789	26785.49	0.0305	0.003084
Ni	60	3	He	262.324	2.3157	166334.37	0.0088	0.009003
Ni	60	3	He	257.628	2.2744	168032.52	0.0088	0.009003
Ni	60	3	He	266.682	2.354	166413.92	0.0088	0.009003
Cu	63	3	He	50.985	1.2764	91679.50	0.0249	0.004937
Cu	63	3	He	47.942	1.2005	88690.72	0.0249	0.004937
Cu	63	3	He	50.414	1.2621	89224.26	0.0249	0.004937
Zn	66	3	He	135.853	0.3386	24321.01	0.0025	0.004836
Zn	66	3	He	130.759	0.3261	24090.77	0.0025	0.004836
Zn	66	3	He	135.702	0.3382	23910.29	0.0025	0.004836
As	75	3	He	6.202	0.0112	806.03	0.0017	0.0004347
As	75	3	He	5.556	0.0101	746.03	0.0017	0.0004347
As	75	3	He	6.534	0.0118	834.03	0.0017	0.0004347
Sr	88	3	He	37.465	0.2936	18873.04	0.0078	0.0007762
Sr	88	3	He	35.578	0.2789	18342.41	0.0078	0.0007762
Sr	88	3	He	34.937	0.2739	17341.01	0.0078	0.0007762
Mo	98	3	He	246.619	5.4315	349093.04	0.022	0.0005162
Mo	98	3	He	240.418	5.2949	348238.74	0.022	0.0005162
Mo	98	3	He	247.944	5.4606	345743.74	0.022	0.0005162
Ag	107	3	He	1.519	0.0696	4470.86	0.0455	0.0004641
Ag	107	3	He	1.297	0.0595	3910.66	0.0455	0.0004641
Ag	107	3	He	1.34	0.0614	3890.72	0.0455	0.0004641
Cd	111	3	He	0.112	0.0006	38.00	0.0048	5.152E-05
Cd	111	3	He	0.11	0.0006	38.00	0.0048	5.152E-05
Cd	111	3	He	0.174	0.0009	56.00	0.0048	5.152E-05
Sn	120	3	He	1.122	0.0316	2030.21	0.0143	0.01559
Sn	120	3	He	1.146	0.0319	2100.24	0.0143	0.01559
Sn	120	3	He	1.41	0.0357	2260.27	0.0143	0.01559
Sb	121	3	He	0.18	0.0025	160.01	0.0124	0.000258
Sb	121	3	He	0.175	0.0024	160.01	0.0124	0.000258
Sb	121	3	He	0.272	0.0036	230.01	0.0124	0.000258
Ba	137	3	He	137.833	0.6033	38775.49	0.0044	0.000309
Ba	137	3	He	140.796	0.6163	40530.72	0.0044	0.000309
Ba	137	3	He	144.442	0.6322	40029.00	0.0044	0.000309
Tl	205	3	He	0.158	0.0054	1220.10	0.0276	0.001005
Tl	205	3	He	0.132	0.0047	1070.08	0.0276	0.001005
Tl	205	3	He	0.126	0.0045	1010.07	0.0276	0.001005
Pb	208	3	He	44.668	1.628	198858.32	0.0364	0.002176
Pb	208	3	He	43.659	1.5913	195766.05	0.0364	0.002176
Pb	208	3	He	44.454	1.6202	194831.40	0.0364	0.002176
U	238	3	He	0.295	0.0127	2870.45	0.0421	0.00024
U	238	3	He	0.242	0.0104	2390.30	0.0421	0.00024
U	238	3	He	0.298	0.0128	2880.43	0.0421	0.00024
Sc	45	1	No Gas			3288393.08		
Sc	45	1	No Gas			3304507.45		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3223764.01		
Ge	72	1	No Gas			1422088.89		
Ge	72	1	No Gas			1416287.95		
Ge	72	1	No Gas			1406757.17		
Sc	45	2	H2			195251.87		
Sc	45	2	H2			201125.39		
Sc	45	2	H2			205895.74		
Ge	72	2	H2			156289.03		
Ge	72	2	H2			156612.75		
Ge	72	2	H2			162255.11		
In	115	2	H2			434640.27		
In	115	2	H2			434409.88		
In	115	2	H2			451174.06		
Sc	45	3	He			41860.87		
Sc	45	3	He			41399.39		
Sc	45	3	He			43816.49		
Ge	72	3	He			71829.12		
Ge	72	3	He			73879.84		
Ge	72	3	He			70693.49		
In	115	3	He			64288.27		
In	115	3	He			65784.97		
In	115	3	He			63333.28		
Tb	159	3	He			287769.35		
Tb	159	3	He			291344.88		
Tb	159	3	He			287433.65		
Bi	209	3	He			226811.91		
Bi	209	3	He			229733.43		
Bi	209	3	He			225257.50		

Quantitation Report

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Sample Type	Sample
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

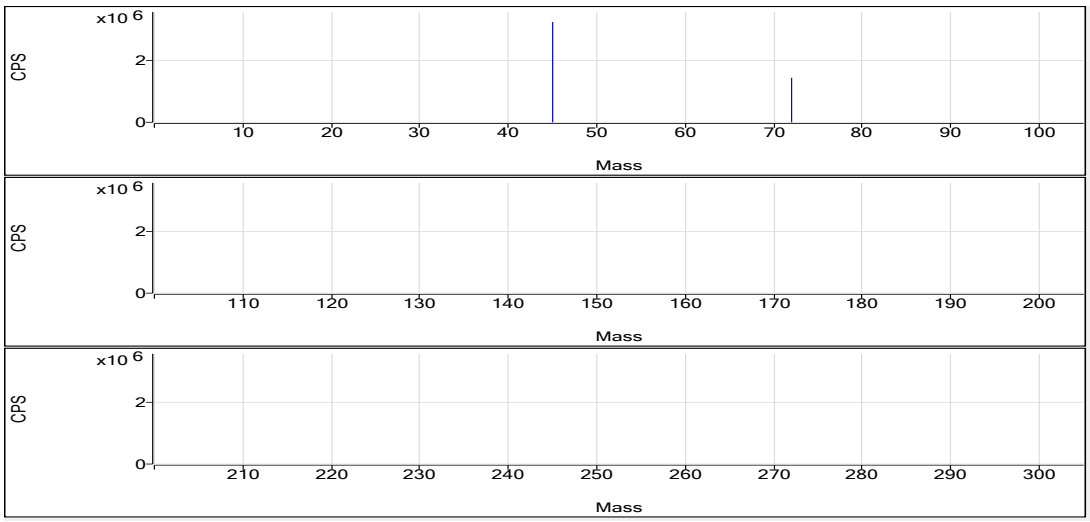
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.007	ppb	N/A	54.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.007	ppb	N/A	1.33	0.0000	Pulse	1.5000	3
Na	23	72	He	4.528	ppb	16.3	8222.51	0.1142	Pulse	0.1000	3
Mg	24	72	He	13.095	ppb	8.3	1143.42	0.0159	Pulse	0.1000	3
Al	27	72	He	31.087	ppb	8.6	616.70	0.0086	Pulse	0.1000	3
K	39	72	He	2.894	ppb	464.5	10454.02	0.1452	Pulse	0.1000	3
Ca	44	72	He	7.794	ppb	218.3	133.34	0.0019	Pulse	0.1000	3
Ti	47	72	He	1.123	ppb	147.7	40.00	0.0006	Pulse	0.1000	3
V	51	72	He	0.695	ppb	12.5	1112.72	0.0155	Pulse	0.5000	3
Cr	52	72	He	0.088	ppb	149.2	1923.53	0.0267	Pulse	0.1000	3
Mn	55	72	He	-0.276	ppb	N/A	880.06	0.0122	Pulse	0.1000	3
Fe	57	72	He	50.586	ppb	23.4	1336.77	0.0186	Pulse	0.1000	3
Co	59	72	He	0.075	ppb	66.5	386.69	0.0054	Pulse	0.1000	3
Ni	60	72	He	1.209	ppb	10.2	1413.45	0.0196	Pulse	0.1000	3
Cu	63	72	He	0.277	ppb	30.9	853.39	0.0119	Pulse	0.1000	3
Zn	66	72	He	0.011	ppb	3372.9	350.02	0.0049	Pulse	0.1000	3
As	75	72	He	0.123	ppb	33.1	46.67	0.0006	Pulse	0.5000	3
Sr	88	115	He	0.140	ppb	25.7	120.01	0.0019	Pulse	0.1000	3
Mo	98	115	He	0.389	ppb	12.6	583.37	0.0091	Pulse	0.1000	3
Ag	107	115	He	0.010	ppb	89.0	60.00	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.000	ppb	4821.4	3.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.449	ppb	34.4	1413.52	0.0220	Pulse	0.1000	3
Sb	121	115	He	0.004	ppb	294.6	20.00	0.0003	Pulse	0.1000	3
Ba	137	115	He	0.380	ppb	6.3	126.68	0.0020	Pulse	0.1000	3
Tl	205	209	He	0.021	ppb	20.8	346.69	0.0016	Pulse	0.1000	3
Pb	208	209	He	0.307	ppb	3.1	2943.58	0.0134	Pulse	0.1000	3
U	238	209	He	0.005	ppb	69.7	96.67	0.0004	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3252938.18	0.9	100.4	Pulse	0.1000	3
No Gas	Ge	72	1444569.15	1.1	100.3	Pulse	0.1000	3
H2	Sc	45	196017.99	1.0	100.3	Pulse	0.1000	3
H2	Ge	72	159436.32	2.2	97.8	Pulse	0.1000	3
H2	In	115	442407.52	1.9	102.1	Pulse	0.1000	3
He	Sc	45	41034.87	0.6	102.6	Pulse	0.1000	3
He	Ge	72	71980.20	0.2	99.6	Pulse	0.1000	3
He	In	115	64327.29	1.4	99.6	Pulse	0.1000	3
He	Tb	159	284587.28	0.9	99.5	Pulse	0.1000	3
He	Bi	209	220361.69	1.6	99.2	Pulse	0.1000	3

No Gas



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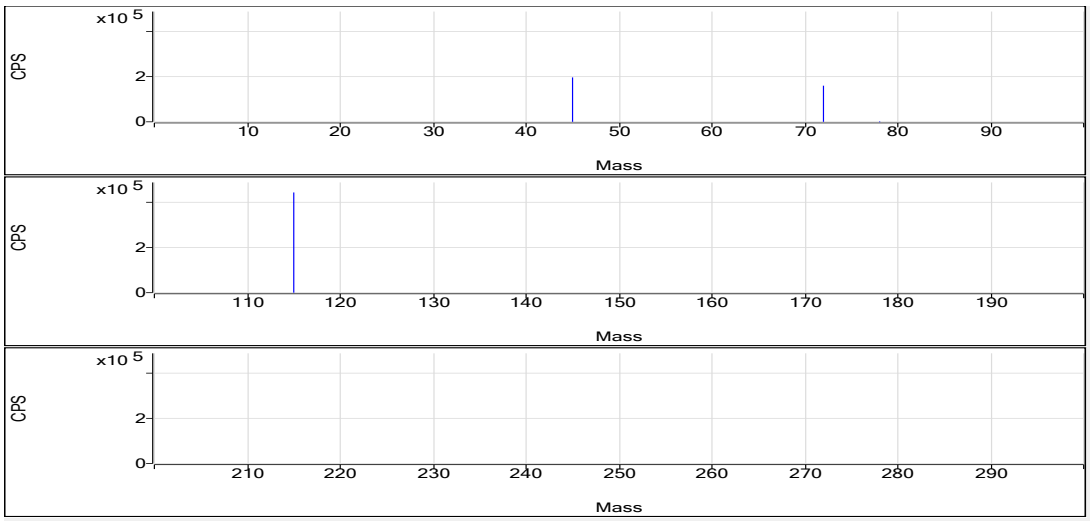
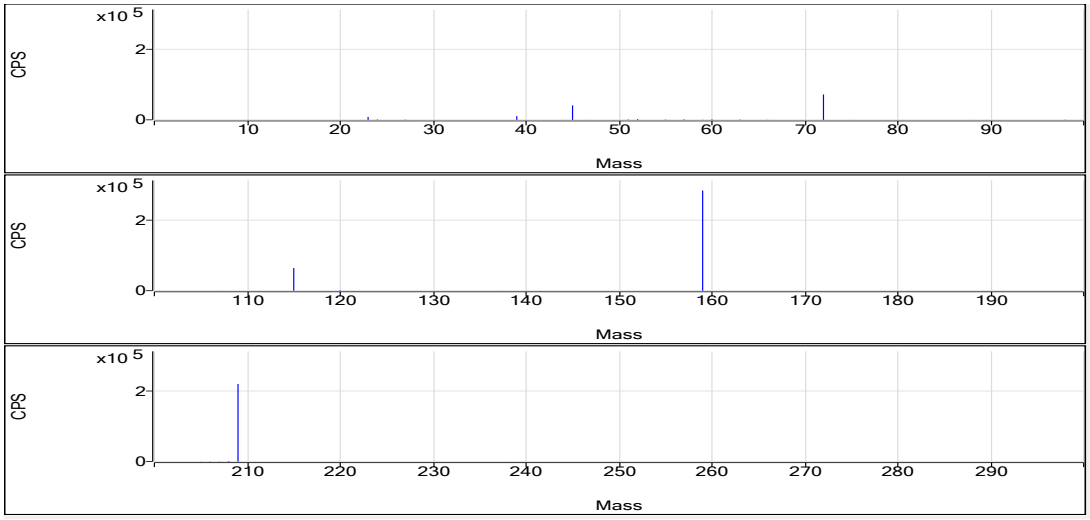


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.015	0	40.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.003	0	62.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.004	0	60.00	0.0013	4.694E-05
Se	78	2	H2	-0.006	0	1.33	0.0004	1.089E-05
Se	78	2	H2	-0.006	0	1.33	0.0004	1.089E-05
Se	78	2	H2	-0.007	0	1.33	0.0004	1.089E-05
Na	23	3	He	5.312	0.1156	8312.58	0.0017	0.1065
Na	23	3	He	4.429	0.1141	8202.46	0.0017	0.1065
Na	23	3	He	3.842	0.1131	8152.48	0.0017	0.1065
Mg	24	3	He	13.879	0.0165	1190.09	0.0008	0.004846
Mg	24	3	He	13.552	0.0163	1170.09	0.0008	0.004846
Mg	24	3	He	11.853	0.0148	1070.07	0.0008	0.004846
Al	27	3	He	29.007	0.0081	580.03	0.0002	0.001063
Al	27	3	He	30.164	0.0083	600.04	0.0002	0.001063
Al	27	3	He	34.09	0.0093	670.04	0.0002	0.001063
K	39	3	He	18.225	0.1537	11054.44	0.0006	0.1436
K	39	3	He	-2.655	0.1422	10223.86	0.0006	0.1436
K	39	3	He	-6.887	0.1398	10083.75	0.0006	0.1436
Ca	44	3	He	19.766	0.0022	160.01	0	0.001611
Ca	44	3	He	15.298	0.0021	150.01	0	0.001611
Ca	44	3	He	-11.682	0.0012	90.00	0	0.001611
Ti	47	3	He	-0.537	0.0001	10.00	0.0003	0.0002737
Ti	47	3	He	1.127	0.0006	40.00	0.0003	0.0002737
Ti	47	3	He	2.779	0.001	70.00	0.0003	0.0002737
V	51	3	He	0.631	0.0147	1058.05	0.0117	0.007326
V	51	3	He	0.66	0.015	1082.05	0.0117	0.007326
V	51	3	He	0.794	0.0166	1198.06	0.0117	0.007326
Cr	52	3	He	-0.032	0.0249	1790.18	0.0152	0.02538
Cr	52	3	He	0.068	0.0264	1900.19	0.0152	0.02538
Cr	52	3	He	0.227	0.0288	2080.22	0.0152	0.02538
Mn	55	3	He	-0.462	0.0111	800.05	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.274	0.0122	880.06	0.0059	0.01385
Mn	55	3	He	-0.091	0.0133	960.06	0.0059	0.01385
Fe	57	3	He	64.233	0.0225	1620.14	0.0003	0.003918
Fe	57	3	He	44.561	0.0168	1210.09	0.0003	0.003918
Fe	57	3	He	42.964	0.0164	1180.08	0.0003	0.003918
Co	59	3	He	0.017	0.0036	260.01	0.0305	0.003084
Co	59	3	He	0.104	0.0063	450.03	0.0305	0.003084
Co	59	3	He	0.103	0.0062	450.03	0.0305	0.003084
Ni	60	3	He	1.348	0.0209	1500.13	0.0088	0.009003
Ni	60	3	He	1.111	0.0188	1350.11	0.0088	0.009003
Ni	60	3	He	1.168	0.0193	1390.11	0.0088	0.009003
Cu	63	3	He	0.376	0.0143	1030.08	0.0249	0.004937
Cu	63	3	He	0.226	0.0106	760.05	0.0249	0.004937
Cu	63	3	He	0.23	0.0107	770.05	0.0249	0.004937
Zn	66	3	He	0.352	0.0057	410.02	0.0025	0.004836
Zn	66	3	He	0.069	0.005	360.02	0.0025	0.004836
Zn	66	3	He	-0.388	0.0039	280.01	0.0025	0.004836
As	75	3	He	0.166	0.0007	52.00	0.0017	0.0004347
As	75	3	He	0.118	0.0006	46.00	0.0017	0.0004347
As	75	3	He	0.085	0.0006	42.00	0.0017	0.0004347
Sr	88	3	He	0.163	0.0021	130.01	0.0078	0.0007762
Sr	88	3	He	0.098	0.0015	100.00	0.0078	0.0007762
Sr	88	3	He	0.157	0.002	130.01	0.0078	0.0007762
Mo	98	3	He	0.407	0.0095	600.05	0.022	0.0005162
Mo	98	3	He	0.425	0.0099	640.03	0.022	0.0005162
Mo	98	3	He	0.333	0.0079	510.02	0.022	0.0005162
Ag	107	3	He	0.018	0.0013	80.00	0.0455	0.0004641
Ag	107	3	He	0	0.0005	30.00	0.0455	0.0004641
Ag	107	3	He	0.013	0.0011	70.00	0.0455	0.0004641
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Sn	120	3	He	0.58	0.0239	1510.14	0.0143	0.01559
Sn	120	3	He	0.489	0.0226	1460.32	0.0143	0.01559
Sn	120	3	He	0.278	0.0196	1270.10	0.0143	0.01559
Sb	121	3	He	0.017	0.0005	30.00	0.0124	0.000258
Sb	121	3	He	0.004	0.0003	20.00	0.0124	0.000258
Sb	121	3	He	-0.008	0.0002	10.00	0.0124	0.000258
Ba	137	3	He	0.399	0.0021	130.01	0.0044	0.000309
Ba	137	3	He	0.353	0.0019	120.01	0.0044	0.000309
Ba	137	3	He	0.387	0.002	130.01	0.0044	0.000309
Tl	205	3	He	0.017	0.0015	330.02	0.0276	0.001005
Tl	205	3	He	0.025	0.0017	370.02	0.0276	0.001005
Tl	205	3	He	0.02	0.0015	340.02	0.0276	0.001005
Pb	208	3	He	0.314	0.0136	1680.18	0.0364	0.002176
Pb	208	3	He	0.311	0.0135	1690.17	0.0364	0.002176
Pb	208	3	He	0.297	0.013	1580.14	0.0364	0.002176
U	238	3	He	0.004	0.0004	90.00	0.0421	0.00024
U	238	3	He	0.002	0.0003	70.00	0.0421	0.00024
U	238	3	He	0.008	0.0006	130.01	0.0421	0.00024
Sc	45	1	No Gas			3284512.14		
Sc	45	1	No Gas			3247078.39		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3227224.01		
Ge	72	1	No Gas			1459383.10		
Ge	72	1	No Gas			1446148.42		
Ge	72	1	No Gas			1428175.92		
Sc	45	2	H2			195395.95		
Sc	45	2	H2			194385.39		
Sc	45	2	H2			198272.63		
Ge	72	2	H2			156551.52		
Ge	72	2	H2			158512.61		
Ge	72	2	H2			163244.82		
In	115	2	H2			432933.63		
In	115	2	H2			444628.27		
In	115	2	H2			449660.66		
Sc	45	3	He			41248.87		
Sc	45	3	He			41068.42		
Sc	45	3	He			40787.31		
Ge	72	3	He			71919.96		
Ge	72	3	He			71910.43		
Ge	72	3	He			72110.21		
In	115	3	He			63303.53		
In	115	3	He			64760.26		
In	115	3	He			64951.15		
Tb	159	3	He			283411.32		
Tb	159	3	He			282802.93		
Tb	159	3	He			287547.59		
Bi	209	3	He			224126.91		
Bi	209	3	He			217163.67		
Bi	209	3	He			219794.49		

Quantitation Report

Data File Name	276SMPL.d
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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

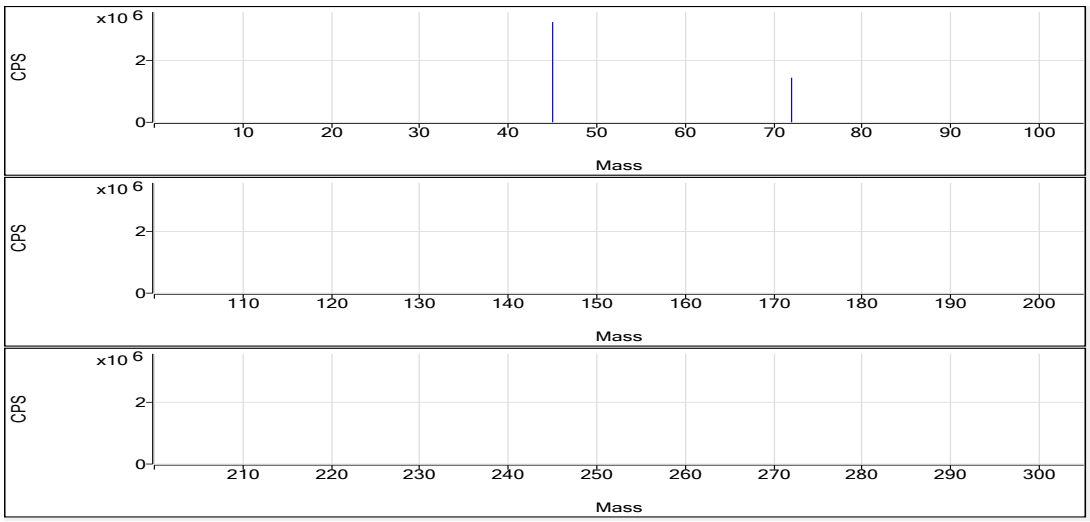
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.003	ppb	N/A	62.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.004	ppb	277.1	2.00	0.0000	Pulse	1.5000	3
Na	23	72	He	2.233	ppb	99.9	8002.39	0.1103	Pulse	0.1000	3
Mg	24	72	He	13.221	ppb	11.0	1160.09	0.0160	Pulse	0.1000	3
Al	27	72	He	30.584	ppb	17.9	613.37	0.0084	Pulse	0.1000	3
K	39	72	He	11.517	ppb	174.1	10881.00	0.1500	Pulse	0.1000	3
Ca	44	72	He	10.142	ppb	186.3	140.01	0.0019	Pulse	0.1000	3
Ti	47	72	He	0.566	ppb	260.8	30.00	0.0004	Pulse	0.1000	3
V	51	72	He	0.599	ppb	5.6	1040.05	0.0143	Pulse	0.5000	3
Cr	52	72	He	0.233	ppb	25.6	2100.22	0.0289	Pulse	0.1000	3
Mn	55	72	He	-0.323	ppb	N/A	866.73	0.0119	Pulse	0.1000	3
Fe	57	72	He	50.833	ppb	20.3	1353.44	0.0186	Pulse	0.1000	3
Co	59	72	He	0.086	ppb	18.6	413.35	0.0057	Pulse	0.1000	3
Ni	60	72	He	0.956	ppb	20.7	1263.44	0.0174	Pulse	0.1000	3
Cu	63	72	He	0.237	ppb	17.9	786.71	0.0108	Pulse	0.1000	3
Zn	66	72	He	0.052	ppb	464.0	360.02	0.0050	Pulse	0.1000	3
As	75	72	He	0.119	ppb	70.7	46.67	0.0006	Pulse	0.5000	3
Sr	88	115	He	0.098	ppb	73.8	100.00	0.0015	Pulse	0.1000	3
Mo	98	115	He	0.357	ppb	14.4	543.37	0.0084	Pulse	0.1000	3
Ag	107	115	He	-0.001	ppb	N/A	26.67	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.004	ppb	227.1	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.275	ppb	27.7	1263.44	0.0195	Pulse	0.1000	3
Sb	121	115	He	0.017	ppb	4.6	30.00	0.0005	Pulse	0.1000	3
Ba	137	115	He	0.271	ppb	22.0	96.67	0.0015	Pulse	0.1000	3
Tl	205	209	He	0.008	ppb	149.7	273.35	0.0012	Pulse	0.1000	3
Pb	208	209	He	0.328	ppb	5.3	3136.94	0.0141	Pulse	0.1000	3
U	238	209	He	0.008	ppb	69.0	126.67	0.0006	Pulse	0.1000	3

ISTD Table:

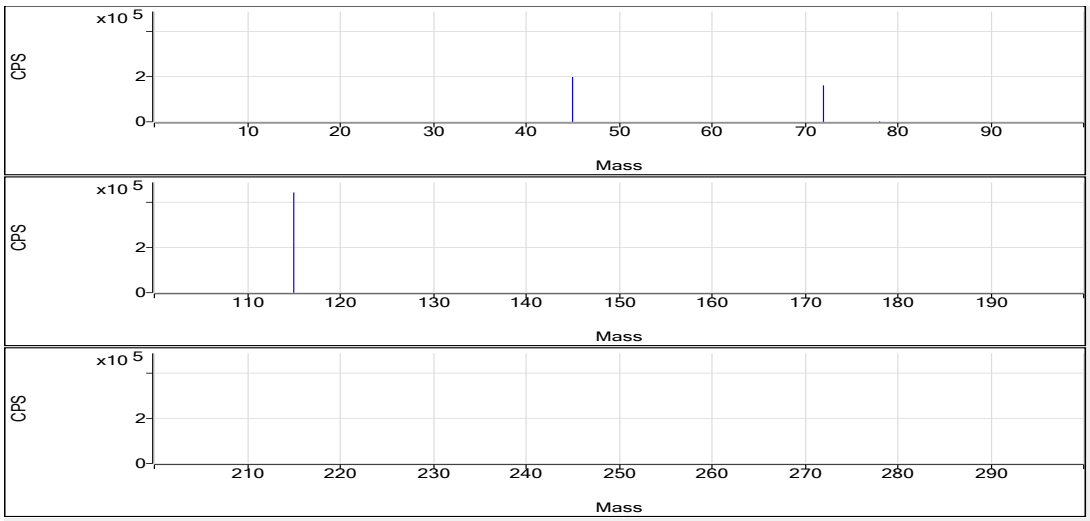
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3236731.51	1.5	99.9	Pulse	0.1000	3
No Gas	Ge	72	1439880.71	1.8	100.0	Pulse	0.1000	3
H2	Sc	45	197565.86	1.0	101.1	Pulse	0.1000	3
H2	Ge	72	160924.02	1.9	98.7	Pulse	0.1000	3
H2	In	115	441995.89	1.7	102.0	Pulse	0.1000	3
He	Sc	45	41425.97	1.1	103.6	Pulse	0.1000	3
He	Ge	72	72569.90	0.9	100.4	Pulse	0.1000	3
He	In	115	64753.83	2.1	100.3	Pulse	0.1000	3
He	Tb	159	283715.93	1.5	99.2	Pulse	0.1000	3
He	Bi	209	221981.29	0.8	99.9	Pulse	0.1000	3

No Gas

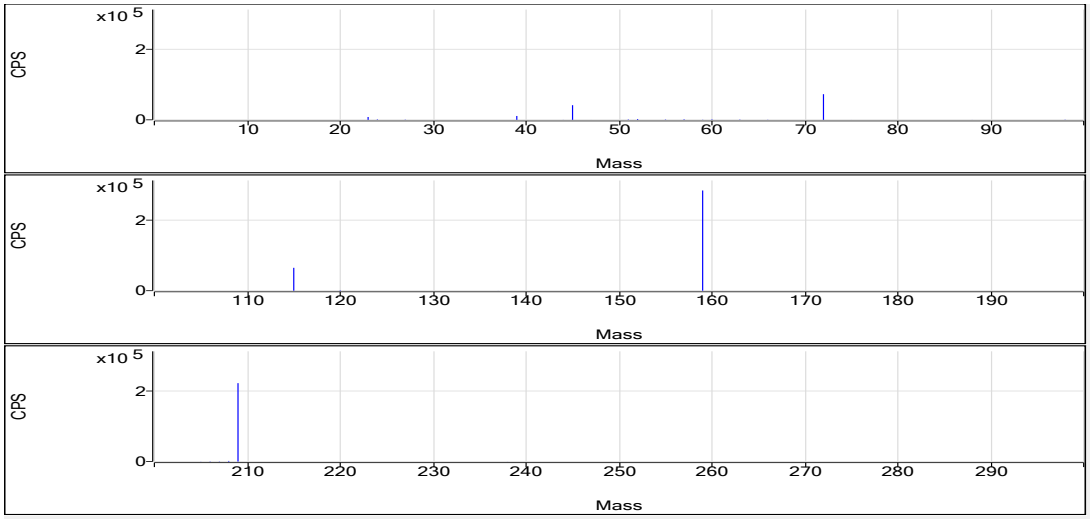


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.011	0	48.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.001	0	66.00	0.0013	4.694E-05
Be	9	1	No Gas	0.003	0.0001	72.00	0.0013	4.694E-05
Se	78	2	H2	0.016	0	2.67	0.0004	1.089E-05
Se	78	2	H2	-0.007	0	1.33	0.0004	1.089E-05
Se	78	2	H2	0.004	0	2.00	0.0004	1.089E-05
Na	23	3	He	4.666	0.1145	8222.55	0.0017	0.1065
Na	23	3	He	1.75	0.1095	7992.38	0.0017	0.1065
Na	23	3	He	0.282	0.1069	7792.24	0.0017	0.1065
Mg	24	3	He	14.894	0.0174	1250.10	0.0008	0.004846
Mg	24	3	He	12.285	0.0152	1110.08	0.0008	0.004846
Mg	24	3	He	12.485	0.0154	1120.09	0.0008	0.004846
Al	27	3	He	25.011	0.0071	510.02	0.0002	0.001063
Al	27	3	He	30.776	0.0085	620.04	0.0002	0.001063
Al	27	3	He	35.966	0.0097	710.04	0.0002	0.001063
K	39	3	He	34.218	0.1625	11675.00	0.0006	0.1436
K	39	3	He	4.123	0.1459	10654.16	0.0006	0.1436
K	39	3	He	-3.79	0.1415	10313.85	0.0006	0.1436
Ca	44	3	He	-11.52	0.0013	90.01	0	0.001611
Ca	44	3	He	18.691	0.0022	160.01	0	0.001611
Ca	44	3	He	23.256	0.0023	170.01	0	0.001611
Ti	47	3	He	2.239	0.0008	60.00	0.0003	0.0002737
Ti	47	3	He	-0.545	0.0001	10.00	0.0003	0.0002737
Ti	47	3	He	0.003	0.0003	20.00	0.0003	0.0002737
V	51	3	He	0.623	0.0146	1050.05	0.0117	0.007326
V	51	3	He	0.561	0.0139	1014.04	0.0117	0.007326
V	51	3	He	0.613	0.0145	1056.05	0.0117	0.007326
Cr	52	3	He	0.18	0.0281	2020.21	0.0152	0.02538
Cr	52	3	He	0.222	0.0288	2100.22	0.0152	0.02538
Cr	52	3	He	0.298	0.0299	2180.24	0.0152	0.02538
Mn	55	3	He	-0.248	0.0124	890.07	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.56	0.0105	770.05	0.0059	0.01385
Mn	55	3	He	-0.161	0.0129	940.06	0.0059	0.01385
Fe	57	3	He	48.471	0.018	1290.10	0.0003	0.003918
Fe	57	3	He	62.121	0.0219	1600.14	0.0003	0.003918
Fe	57	3	He	41.906	0.0161	1170.09	0.0003	0.003918
Co	59	3	He	0.086	0.0057	410.02	0.0305	0.003084
Co	59	3	He	0.069	0.0052	380.02	0.0305	0.003084
Co	59	3	He	0.101	0.0062	450.02	0.0305	0.003084
Ni	60	3	He	0.94	0.0173	1240.10	0.0088	0.009003
Ni	60	3	He	0.767	0.0158	1150.09	0.0088	0.009003
Ni	60	3	He	1.161	0.0192	1400.12	0.0088	0.009003
Cu	63	3	He	0.282	0.012	860.05	0.0249	0.004937
Cu	63	3	He	0.23	0.0107	780.05	0.0249	0.004937
Cu	63	3	He	0.198	0.0099	720.04	0.0249	0.004937
Zn	66	3	He	0.298	0.0056	400.02	0.0025	0.004836
Zn	66	3	He	-0.185	0.0044	320.01	0.0025	0.004836
Zn	66	3	He	0.043	0.0049	360.02	0.0025	0.004836
As	75	3	He	0.038	0.0005	36.00	0.0017	0.0004347
As	75	3	He	0.207	0.0008	58.00	0.0017	0.0004347
As	75	3	He	0.113	0.0006	46.00	0.0017	0.0004347
Sr	88	3	He	0.041	0.0011	70.00	0.0078	0.0007762
Sr	88	3	He	0.074	0.0014	90.00	0.0078	0.0007762
Sr	88	3	He	0.18	0.0022	140.01	0.0078	0.0007762
Mo	98	3	He	0.339	0.008	510.03	0.022	0.0005162
Mo	98	3	He	0.415	0.0097	640.04	0.022	0.0005162
Mo	98	3	He	0.317	0.0075	480.03	0.022	0.0005162
Ag	107	3	He	-0.01	0	0.00	0.0455	0.0004641
Ag	107	3	He	0.01	0.0009	60.00	0.0455	0.0004641
Ag	107	3	He	-0.003	0.0003	20.00	0.0455	0.0004641
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Cd	111	3	He	0.014	0.0001	8.00	0.0048	5.152E-05
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Sn	120	3	He	0.191	0.0183	1170.10	0.0143	0.01559
Sn	120	3	He	0.293	0.0198	1310.11	0.0143	0.01559
Sn	120	3	He	0.34	0.0204	1310.11	0.0143	0.01559
Sb	121	3	He	0.017	0.0005	30.00	0.0124	0.000258
Sb	121	3	He	0.016	0.0005	30.00	0.0124	0.000258
Sb	121	3	He	0.017	0.0005	30.00	0.0124	0.000258
Ba	137	3	He	0.287	0.0016	100.00	0.0044	0.000309
Ba	137	3	He	0.205	0.0012	80.00	0.0044	0.000309
Ba	137	3	He	0.322	0.0017	110.00	0.0044	0.000309
Tl	205	3	He	-0.005	0.0009	190.01	0.0276	0.001005
Tl	205	3	He	0.019	0.0015	340.02	0.0276	0.001005
Tl	205	3	He	0.011	0.0013	290.01	0.0276	0.001005
Pb	208	3	He	0.314	0.0136	1650.17	0.0364	0.002176
Pb	208	3	He	0.347	0.0148	1970.21	0.0364	0.002176
Pb	208	3	He	0.324	0.014	1650.17	0.0364	0.002176
U	238	3	He	0.003	0.0004	80.00	0.0421	0.00024
U	238	3	He	0.007	0.0005	120.01	0.0421	0.00024
U	238	3	He	0.014	0.0008	180.01	0.0421	0.00024
Sc	45	1	No Gas			3270504.01		
Sc	45	1	No Gas			3258926.51		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3180764.02		
Ge	72	1	No Gas			1451874.04		
Ge	72	1	No Gas			1458007.95		
Ge	72	1	No Gas			1409760.14		
Sc	45	2	H2			195701.05		
Sc	45	2	H2			199541.75		
Sc	45	2	H2			197454.78		
Ge	72	2	H2			157532.97		
Ge	72	2	H2			163651.49		
Ge	72	2	H2			161587.60		
In	115	2	H2			433477.53		
In	115	2	H2			447079.95		
In	115	2	H2			445430.19		
Sc	45	3	He			41599.69		
Sc	45	3	He			41750.13		
Sc	45	3	He			40928.08		
Ge	72	3	He			71830.11		
Ge	72	3	He			73014.99		
Ge	72	3	He			72864.60		
In	115	3	He			63886.92		
In	115	3	He			66297.31		
In	115	3	He			64106.83		
Tb	159	3	He			280105.80		
Tb	159	3	He			282719.35		
Tb	159	3	He			288322.63		
Bi	209	3	He			220822.93		
Bi	209	3	He			224056.23		
Bi	209	3	He			221064.70		

Quantitation Report

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Sample Type	CCV
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

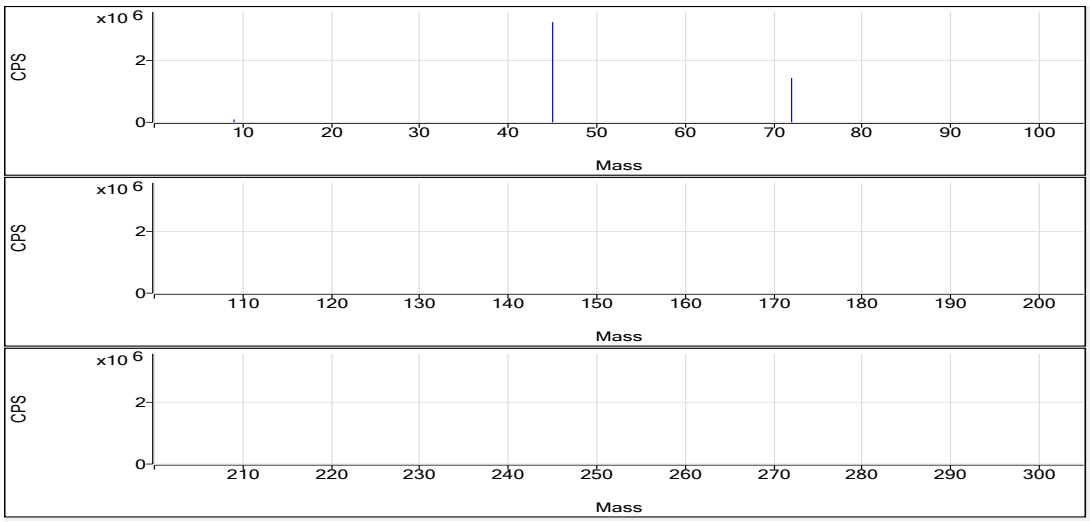
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	48.536	ppb	7.0	92120.98	0.0638	Pulse	0.5000	3
Se	78	72	H2	51.404	ppb	3.8	3271.27	0.0200	Pulse	1.5000	3
Na	23	72	He	5152.331	ppb	2.2	668774.39	8.9572	Pulse	0.1000	3
Mg	24	72	He	5139.198	ppb	2.7	323844.77	4.3377	Pulse	0.1000	3
Al	27	72	He	5043.003	ppb	2.5	90967.77	1.2184	Pulse	0.1000	3
K	39	72	He	5152.562	ppb	2.3	223171.74	2.9889	Pulse	0.1000	3
Ca	44	72	He	5158.597	ppb	5.0	12078.71	0.1618	Pulse	0.1000	3
Ti	47	72	He	5218.846	ppb	1.4	97758.79	1.3091	Pulse	0.1000	3
V	51	72	He	514.354	ppb	2.6	449749.27	6.0241	Pulse	0.5000	3
Cr	52	72	He	515.362	ppb	2.3	587812.92	7.8729	Pulse	0.1000	3
Mn	55	72	He	512.684	ppb	2.6	226964.04	3.0399	Pulse	0.1000	3
Fe	57	72	He	5139.780	ppb	2.8	111461.69	1.4930	Pulse	0.1000	3
Co	59	72	He	514.364	ppb	2.6	1171888.97	15.6966	Pulse	0.1000	3
Ni	60	72	He	518.290	ppb	1.6	340979.50	4.5665	Pulse	0.1000	3
Cu	63	72	He	512.632	ppb	2.7	954767.15	12.7885	Pulse	0.1000	3
Zn	66	72	He	516.221	ppb	3.0	95051.90	1.2731	Pulse	0.1000	3
As	75	72	He	509.178	ppb	2.7	66146.57	0.8860	Pulse	0.5000	3
Sr	88	115	He	51.555	ppb	1.9	26191.51	0.4038	Pulse	0.1000	3
Mo	98	115	He	51.940	ppb	2.2	74191.24	1.1443	Pulse	0.1000	3
Ag	107	115	He	51.034	ppb	2.3	150578.43	2.3225	Pulse	0.1000	3
Cd	111	115	He	51.428	ppb	3.0	16007.82	0.2469	Pulse	0.5000	3
Sn	120	115	He	51.403	ppb	2.2	48528.62	0.7485	Pulse	0.1000	3
Sb	121	115	He	51.762	ppb	0.5	41656.43	0.6424	Pulse	0.1000	3
Ba	137	115	He	515.767	ppb	1.4	146326.23	2.2567	Pulse	0.1000	3
Tl	205	209	He	52.308	ppb	1.5	319582.07	1.4470	Pulse	0.1000	3
Pb	208	209	He	52.353	ppb	1.7	421312.68	1.9077	Pulse	0.1000	3
U	238	209	He	51.931	ppb	1.1	482552.78	2.1849	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3267784.85	2.6	100.8	Pulse	0.1000	3
No Gas	Ge	72	1444973.94	2.4	100.4	Pulse	0.1000	3
H2	Sc	45	198402.71	2.2	101.5	Pulse	0.1000	3
H2	Ge	72	163443.54	3.1	100.3	Pulse	0.1000	3
H2	In	115	440126.52	3.5	101.6	Pulse	0.1000	3
He	Sc	45	41108.41	1.3	102.8	Pulse	0.1000	3
He	Ge	72	74687.08	2.2	103.3	Pulse	0.1000	3
He	In	115	64850.66	1.7	100.4	Pulse	0.1000	3
He	Tb	159	286315.58	0.7	100.1	Pulse	0.1000	3
He	Bi	209	220881.52	1.3	99.4	Pulse	0.1000	3

No Gas



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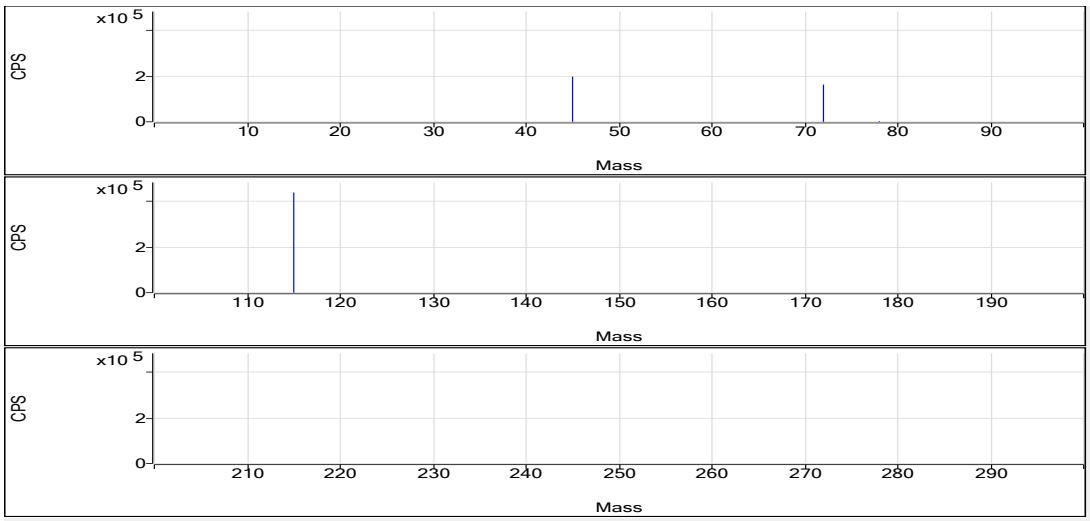
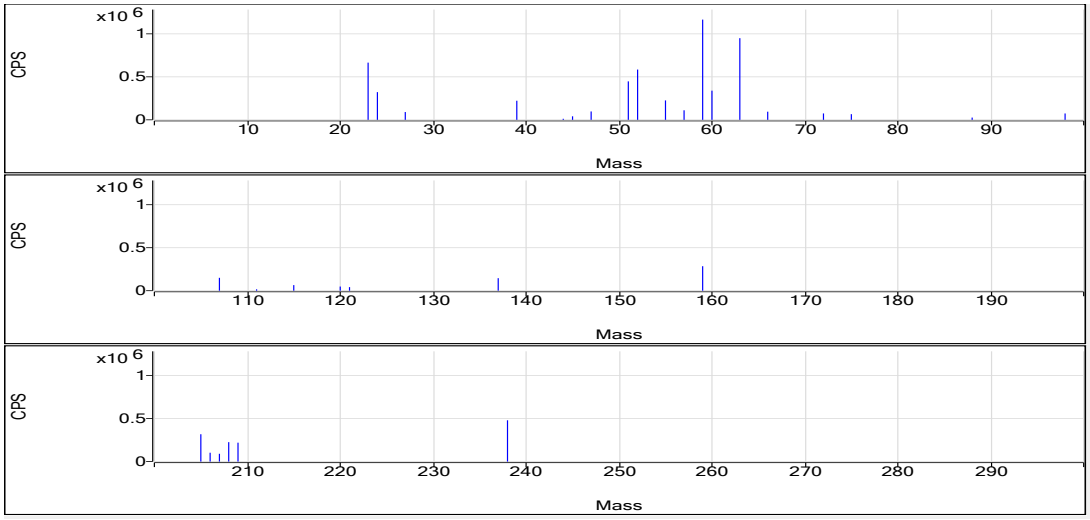


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	45.167	0.0594	87740.73	0.0013	4.694E-05
Be	9	1	No Gas	48.455	0.0637	92400.26	0.0013	4.694E-05
Be	9	1	No Gas	51.985	0.0684	96221.95	0.0013	4.694E-05
Se	78	2	H2	53.417	0.0208	3358.40	0.0004	1.089E-05
Se	78	2	H2	49.572	0.0193	3266.38	0.0004	1.089E-05
Se	78	2	H2	51.224	0.02	3189.03	0.0004	1.089E-05
Na	23	3	He	5204.726	9.0472	670226.79	0.0017	0.1065
Na	23	3	He	5232.062	9.0942	667853.51	0.0017	0.1065
Na	23	3	He	5020.205	8.7303	668242.88	0.0017	0.1065
Mg	24	3	He	5183.526	4.3751	324109.64	0.0008	0.004846
Mg	24	3	He	5248.759	4.4301	325333.28	0.0008	0.004846
Mg	24	3	He	4985.31	4.208	322091.38	0.0008	0.004846
Al	27	3	He	5054.968	1.2213	90475.03	0.0002	0.001063
Al	27	3	He	5161.719	1.2471	91581.56	0.0002	0.001063
Al	27	3	He	4912.321	1.1869	90846.71	0.0002	0.001063
K	39	3	He	5134.654	2.9791	220690.80	0.0006	0.1436
K	39	3	He	5278.552	3.0585	224609.35	0.0006	0.1436
K	39	3	He	5044.479	2.9293	224215.06	0.0006	0.1436
Ca	44	3	He	5165.689	0.1621	12005.27	0	0.001611
Ca	44	3	He	5413.266	0.1697	12465.70	0	0.001611
Ca	44	3	He	4896.837	0.1537	11765.15	0	0.001611
Ti	47	3	He	5299.331	1.3292	98470.83	0.0003	0.0002737
Ti	47	3	He	5195.429	1.3032	95701.97	0.0003	0.0002737
Ti	47	3	He	5161.777	1.2947	99103.58	0.0003	0.0002737
V	51	3	He	519.544	6.0848	450768.38	0.0117	0.007326
V	51	3	He	524.599	6.144	451195.44	0.0117	0.007326
V	51	3	He	498.919	5.8435	447284.00	0.0117	0.007326
Cr	52	3	He	520.446	7.9504	588968.82	0.0152	0.02538
Cr	52	3	He	523.617	7.9986	587398.47	0.0152	0.02538
Cr	52	3	He	502.022	7.6698	587071.48	0.0152	0.02538
Mn	55	3	He	511.819	3.0348	224822.32	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	526.35	3.1206	229168.08	0.0059	0.01385
Mn	55	3	He	499.881	2.9644	226901.72	0.0059	0.01385
Fe	57	3	He	5207.242	1.5125	112049.52	0.0003	0.003918
Fe	57	3	He	5236.898	1.5211	111707.21	0.0003	0.003918
Fe	57	3	He	4975.2	1.4453	110628.35	0.0003	0.003918
Co	59	3	He	521.639	15.9186	1179258.89	0.0305	0.003084
Co	59	3	He	522.662	15.9498	1171306.39	0.0305	0.003084
Co	59	3	He	498.792	15.2215	1165101.62	0.0305	0.003084
Ni	60	3	He	520.66	4.5873	339832.18	0.0088	0.009003
Ni	60	3	He	524.978	4.6253	339669.06	0.0088	0.009003
Ni	60	3	He	509.233	4.4868	343437.26	0.0088	0.009003
Cu	63	3	He	519.094	12.9496	959319.83	0.0249	0.004937
Cu	63	3	He	521.793	13.017	955929.60	0.0249	0.004937
Cu	63	3	He	497.009	12.3989	949052.02	0.0249	0.004937
Zn	66	3	He	532.351	1.3127	97245.67	0.0025	0.004836
Zn	66	3	He	515.223	1.2706	93310.79	0.0025	0.004836
Zn	66	3	He	501.088	1.2359	94599.24	0.0025	0.004836
As	75	3	He	517.894	0.9011	66757.23	0.0017	0.0004347
As	75	3	He	516.08	0.898	65945.72	0.0017	0.0004347
As	75	3	He	493.559	0.8588	65736.75	0.0017	0.0004347
Sr	88	3	He	51.986	0.4072	26505.27	0.0078	0.0007762
Sr	88	3	He	50.421	0.3949	25142.98	0.0078	0.0007762
Sr	88	3	He	52.259	0.4093	26926.29	0.0078	0.0007762
Mo	98	3	He	51.823	1.1417	74325.10	0.022	0.0005162
Mo	98	3	He	53.14	1.1707	74536.48	0.022	0.0005162
Mo	98	3	He	50.856	1.1205	73712.14	0.022	0.0005162
Ag	107	3	He	51.012	2.3215	151125.79	0.0455	0.0004641
Ag	107	3	He	52.232	2.377	151336.17	0.0455	0.0004641
Ag	107	3	He	49.858	2.269	149273.33	0.0455	0.0004641
Cd	111	3	He	50.618	0.243	15820.93	0.0048	5.152E-05
Cd	111	3	He	53.218	0.2555	16267.46	0.0048	5.152E-05
Cd	111	3	He	50.448	0.2422	15935.07	0.0048	5.152E-05
Sn	120	3	He	50.798	0.7399	48163.50	0.0143	0.01559
Sn	120	3	He	52.729	0.7674	48856.68	0.0143	0.01559
Sn	120	3	He	50.683	0.7382	48565.67	0.0143	0.01559
Sb	121	3	He	51.982	0.6451	41994.05	0.0124	0.000258
Sb	121	3	He	51.805	0.6429	40930.96	0.0124	0.000258
Sb	121	3	He	51.498	0.6391	42044.28	0.0124	0.000258
Ba	137	3	He	511.433	2.2377	145671.39	0.0044	0.000309
Ba	137	3	He	524.034	2.2928	145976.88	0.0044	0.000309
Ba	137	3	He	511.835	2.2395	147330.43	0.0044	0.000309
Tl	205	3	He	53.187	1.4713	320381.83	0.0276	0.001005
Tl	205	3	He	51.686	1.4298	317248.69	0.0276	0.001005
Tl	205	3	He	52.05	1.4399	321115.70	0.0276	0.001005
Pb	208	3	He	53.31	1.9425	227821.64	0.0364	0.002176
Pb	208	3	He	52.195	1.9019	227244.59	0.0364	0.002176
Pb	208	3	He	51.554	1.8786	225654.49	0.0364	0.002176
U	238	3	He	52.512	2.2093	481078.08	0.0421	0.00024
U	238	3	He	51.897	2.1834	484447.53	0.0421	0.00024
U	238	3	He	51.385	2.1619	482132.73	0.0421	0.00024
Sc	45	1	No Gas			3347453.39		
Sc	45	1	No Gas			3279264.33		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3176636.83		
Ge	72	1	No Gas			1477149.67		
Ge	72	1	No Gas			1450130.45		
Ge	72	1	No Gas			1407641.70		
Sc	45	2	H2			194341.42		
Sc	45	2	H2			203098.75		
Sc	45	2	H2			197767.97		
Ge	72	2	H2			161388.15		
Ge	72	2	H2			169134.67		
Ge	72	2	H2			159807.81		
In	115	2	H2			425170.38		
In	115	2	H2			456112.61		
In	115	2	H2			439096.56		
Sc	45	3	He			41649.82		
Sc	45	3	He			40626.97		
Sc	45	3	He			41048.45		
Ge	72	3	He			74080.76		
Ge	72	3	He			73437.28		
Ge	72	3	He			76543.20		
In	115	3	He			65473.76		
In	115	3	He			64047.25		
In	115	3	He			66166.55		
Tb	159	3	He			286823.37		
Tb	159	3	He			284074.04		
Tb	159	3	He			288049.33		
Bi	209	3	He			217752.50		
Bi	209	3	He			221877.69		
Bi	209	3	He			223014.37		

Quantitation Report

Data File Name	278_CCB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 20:09:13
Sample Name	CCB 4654618
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

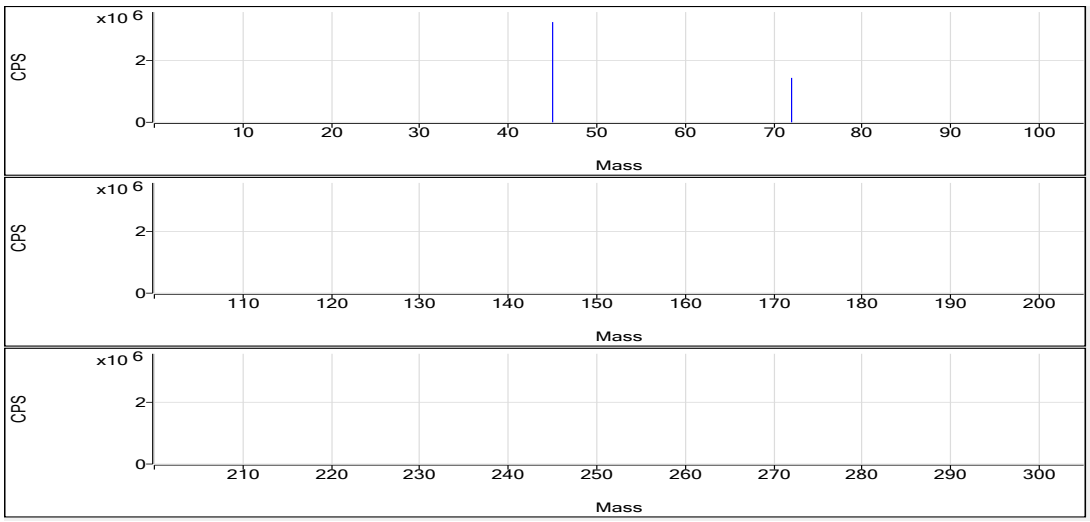
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.025	ppb	20.7	113.33	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.061	ppb	68.8	5.56	0.0000	Pulse	1.5000	3
Na	23	72	He	3.212	ppb	25.4	8145.86	0.1120	Pulse	0.1000	3
Mg	24	72	He	12.461	ppb	5.3	1116.75	0.0154	Pulse	0.1000	3
Al	27	72	He	27.297	ppb	4.9	556.70	0.0077	Pulse	0.1000	3
K	39	72	He	1.645	ppb	933.2	10514.12	0.1445	Pulse	0.1000	3
Ca	44	72	He	8.743	ppb	300.5	136.67	0.0019	Pulse	0.1000	3
Ti	47	72	He	1.464	ppb	56.7	46.67	0.0006	Pulse	0.1000	3
V	51	72	He	0.679	ppb	14.4	1110.72	0.0153	Pulse	0.5000	3
Cr	52	72	He	0.140	ppb	199.4	2000.21	0.0275	Pulse	0.1000	3
Mn	55	72	He	-0.445	ppb	N/A	816.72	0.0112	Pulse	0.1000	3
Fe	57	72	He	43.241	ppb	12.3	1196.76	0.0164	Pulse	0.1000	3
Co	59	72	He	0.153	ppb	15.5	563.37	0.0077	Pulse	0.1000	3
Ni	60	72	He	1.193	ppb	33.4	1416.79	0.0195	Pulse	0.1000	3
Cu	63	72	He	0.217	ppb	3.1	753.38	0.0104	Pulse	0.1000	3
Zn	66	72	He	-0.047	ppb	N/A	343.35	0.0047	Pulse	0.1000	3
As	75	72	He	0.093	ppb	86.7	43.33	0.0006	Pulse	0.5000	3
Sr	88	115	He	0.146	ppb	24.4	123.34	0.0019	Pulse	0.1000	3
Mo	98	115	He	0.275	ppb	8.5	423.35	0.0066	Pulse	0.1000	3
Ag	107	115	He	0.012	ppb	38.1	66.67	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.013	ppb	77.9	7.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.253	ppb	25.4	1236.77	0.0192	Pulse	0.1000	3
Sb	121	115	He	0.042	ppb	53.7	50.00	0.0008	Pulse	0.1000	3
Ba	137	115	He	0.379	ppb	18.9	126.67	0.0020	Pulse	0.1000	3
Tl	205	209	He	0.111	ppb	47.5	913.40	0.0041	Pulse	0.1000	3
Pb	208	209	He	0.270	ppb	10.0	2676.89	0.0120	Pulse	0.1000	3
U	238	209	He	0.015	ppb	36.8	190.01	0.0009	Pulse	0.1000	3

ISTD Table:

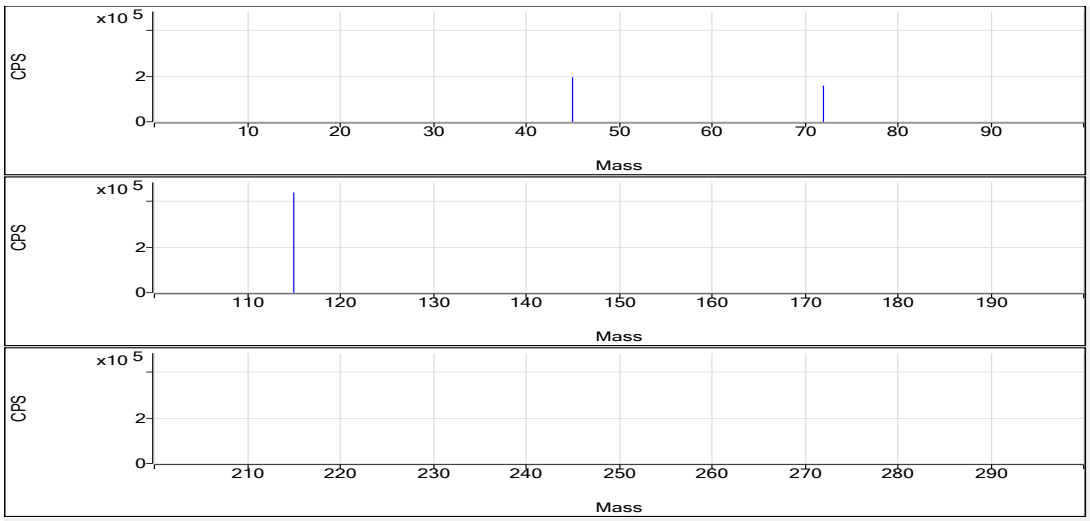
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3221276.93	2.2	99.4	Pulse	0.1000	3
No Gas	Ge	72	1427681.44	1.7	99.2	Pulse	0.1000	3
H2	Sc	45	195425.86	2.0	100.0	Pulse	0.1000	3
H2	Ge	72	158858.54	2.1	97.5	Pulse	0.1000	3
H2	In	115	439474.84	2.1	101.4	Pulse	0.1000	3
He	Sc	45	41466.13	1.1	103.7	Pulse	0.1000	3
He	Ge	72	72743.70	0.7	100.6	Pulse	0.1000	3
He	In	115	64372.09	2.1	99.7	Pulse	0.1000	3
He	Tb	159	281792.03	0.3	98.5	Pulse	0.1000	3
He	Bi	209	222890.15	1.4	100.3	Pulse	0.1000	3

No Gas

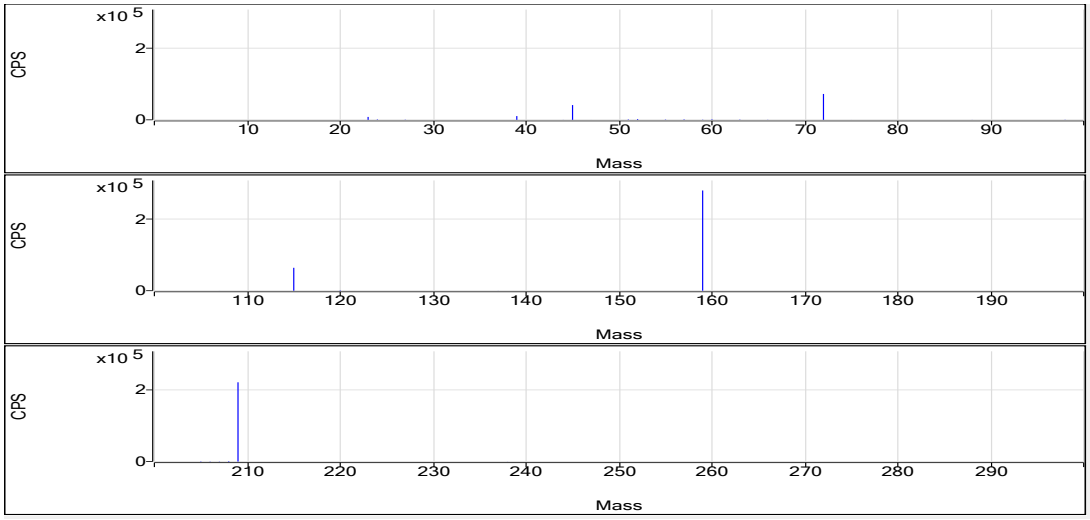


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.021	0.0001	108.00	0.0013	4.694E-05
Be	9	1	No Gas	0.022	0.0001	110.00	0.0013	4.694E-05
Be	9	1	No Gas	0.031	0.0001	122.00	0.0013	4.694E-05
Se	78	2	H2	0.016	0	2.67	0.0004	1.089E-05
Se	78	2	H2	0.1	0	8.00	0.0004	1.089E-05
Se	78	2	H2	0.068	0	6.00	0.0004	1.089E-05
Na	23	3	He	2.736	0.1112	8082.51	0.0017	0.1065
Na	23	3	He	2.746	0.1112	8032.47	0.0017	0.1065
Na	23	3	He	4.155	0.1136	8322.60	0.0017	0.1065
Mg	24	3	He	11.707	0.0147	1070.08	0.0008	0.004846
Mg	24	3	He	12.968	0.0158	1140.09	0.0008	0.004846
Mg	24	3	He	12.709	0.0156	1140.08	0.0008	0.004846
Al	27	3	He	28.643	0.008	580.03	0.0002	0.001063
Al	27	3	He	25.987	0.0073	530.03	0.0002	0.001063
Al	27	3	He	27.263	0.0076	560.03	0.0002	0.001063
K	39	3	He	18.679	0.154	11194.66	0.0006	0.1436
K	39	3	He	-2.618	0.1422	10273.81	0.0006	0.1436
K	39	3	He	-11.126	0.1375	10073.88	0.0006	0.1436
Ca	44	3	He	18.984	0.0022	160.01	0	0.001611
Ca	44	3	He	28.349	0.0025	180.01	0	0.001611
Ca	44	3	He	-21.104	0.001	70.00	0	0.001611
Ti	47	3	He	2.199	0.0008	60.00	0.0003	0.0002737
Ti	47	3	He	0.564	0.0004	30.00	0.0003	0.0002737
Ti	47	3	He	1.63	0.0007	50.00	0.0003	0.0002737
V	51	3	He	0.77	0.0163	1188.06	0.0117	0.007326
V	51	3	He	0.692	0.0154	1114.05	0.0117	0.007326
V	51	3	He	0.576	0.0141	1030.04	0.0117	0.007326
Cr	52	3	He	0.338	0.0305	2220.25	0.0152	0.02538
Cr	52	3	He	0.26	0.0293	2120.23	0.0152	0.02538
Cr	52	3	He	-0.179	0.0227	1660.15	0.0152	0.02538
Mn	55	3	He	-0.576	0.0105	760.04	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.494	0.0109	790.06	0.0059	0.01385
Mn	55	3	He	-0.266	0.0123	900.06	0.0059	0.01385
Fe	57	3	He	45.818	0.0172	1250.09	0.0003	0.003918
Fe	57	3	He	37.12	0.0147	1060.08	0.0003	0.003918
Fe	57	3	He	46.785	0.0175	1280.10	0.0003	0.003918
Co	59	3	He	0.178	0.0085	620.04	0.0305	0.003084
Co	59	3	He	0.148	0.0076	550.03	0.0305	0.003084
Co	59	3	He	0.132	0.0071	520.03	0.0305	0.003084
Ni	60	3	He	1.197	0.0195	1420.12	0.0088	0.009003
Ni	60	3	He	1.589	0.023	1660.16	0.0088	0.009003
Ni	60	3	He	0.792	0.016	1170.08	0.0088	0.009003
Cu	63	3	He	0.21	0.0102	740.05	0.0249	0.004937
Cu	63	3	He	0.218	0.0104	750.05	0.0249	0.004937
Cu	63	3	He	0.223	0.0105	770.05	0.0249	0.004937
Zn	66	3	He	-0.289	0.0041	300.01	0.0025	0.004836
Zn	66	3	He	0.229	0.0054	390.02	0.0025	0.004836
Zn	66	3	He	-0.08	0.0046	340.02	0.0025	0.004836
As	75	3	He	0.177	0.0007	54.00	0.0017	0.0004347
As	75	3	He	0.084	0.0006	42.00	0.0017	0.0004347
As	75	3	He	0.017	0.0005	34.00	0.0017	0.0004347
Sr	88	3	He	0.139	0.0019	120.00	0.0078	0.0007762
Sr	88	3	He	0.185	0.0022	140.01	0.0078	0.0007762
Sr	88	3	He	0.115	0.0017	110.00	0.0078	0.0007762
Mo	98	3	He	0.265	0.0064	410.02	0.022	0.0005162
Mo	98	3	He	0.258	0.0062	390.02	0.022	0.0005162
Mo	98	3	He	0.302	0.0072	470.02	0.022	0.0005162
Ag	107	3	He	0.014	0.0011	70.00	0.0455	0.0004641
Ag	107	3	He	0.007	0.0008	50.00	0.0455	0.0004641
Ag	107	3	He	0.017	0.0012	80.00	0.0455	0.0004641
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Cd	111	3	He	0.022	0.0002	10.00	0.0048	5.152E-05
Cd	111	3	He	0.015	0.0001	8.00	0.0048	5.152E-05
Sn	120	3	He	0.223	0.0188	1210.10	0.0143	0.01559
Sn	120	3	He	0.21	0.0186	1170.09	0.0143	0.01559
Sn	120	3	He	0.327	0.0203	1330.11	0.0143	0.01559
Sb	121	3	He	0.054	0.0009	60.00	0.0124	0.000258
Sb	121	3	He	0.056	0.001	60.00	0.0124	0.000258
Sb	121	3	He	0.016	0.0005	30.00	0.0124	0.000258
Ba	137	3	He	0.461	0.0023	150.01	0.0044	0.000309
Ba	137	3	He	0.329	0.0017	110.00	0.0044	0.000309
Ba	137	3	He	0.347	0.0018	120.01	0.0044	0.000309
Tl	205	3	He	0.172	0.0058	1300.11	0.0276	0.001005
Tl	205	3	He	0.086	0.0034	760.05	0.0276	0.001005
Tl	205	3	He	0.076	0.0031	680.04	0.0276	0.001005
Pb	208	3	He	0.291	0.0128	1630.18	0.0364	0.002176
Pb	208	3	He	0.24	0.0109	1240.10	0.0364	0.002176
Pb	208	3	He	0.279	0.0123	1480.16	0.0364	0.002176
U	238	3	He	0.009	0.0006	140.01	0.0421	0.00024
U	238	3	He	0.02	0.0011	240.01	0.0421	0.00024
U	238	3	He	0.015	0.0009	190.01	0.0421	0.00024
Sc	45	1	No Gas			3285890.89		
Sc	45	1	No Gas			3232769.95		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3145169.95		
Ge	72	1	No Gas			1442724.20		
Ge	72	1	No Gas			1440872.95		
Ge	72	1	No Gas			1399447.17		
Sc	45	2	H2			192304.78		
Sc	45	2	H2			199803.40		
Sc	45	2	H2			194169.41		
Ge	72	2	H2			154926.07		
Ge	72	2	H2			160720.08		
Ge	72	2	H2			160929.48		
In	115	2	H2			429536.83		
In	115	2	H2			447126.17		
In	115	2	H2			441761.52		
Sc	45	3	He			40988.25		
Sc	45	3	He			41850.51		
Sc	45	3	He			41559.64		
Ge	72	3	He			72713.62		
Ge	72	3	He			72251.41		
Ge	72	3	He			73266.08		
In	115	3	He			64508.41		
In	115	3	He			62961.93		
In	115	3	He			65674.86		
Tb	159	3	He			282394.08		
Tb	159	3	He			282090.78		
Tb	159	3	He			280891.23		
Bi	209	3	He			225366.36		
Bi	209	3	He			223812.81		
Bi	209	3	He			219491.29		

Quantitation Report

Data File Name	279SMPL.d
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Acq Time	2023-08-10 20:11:13
Sample Name	RINSE
Sample Type	Sample
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

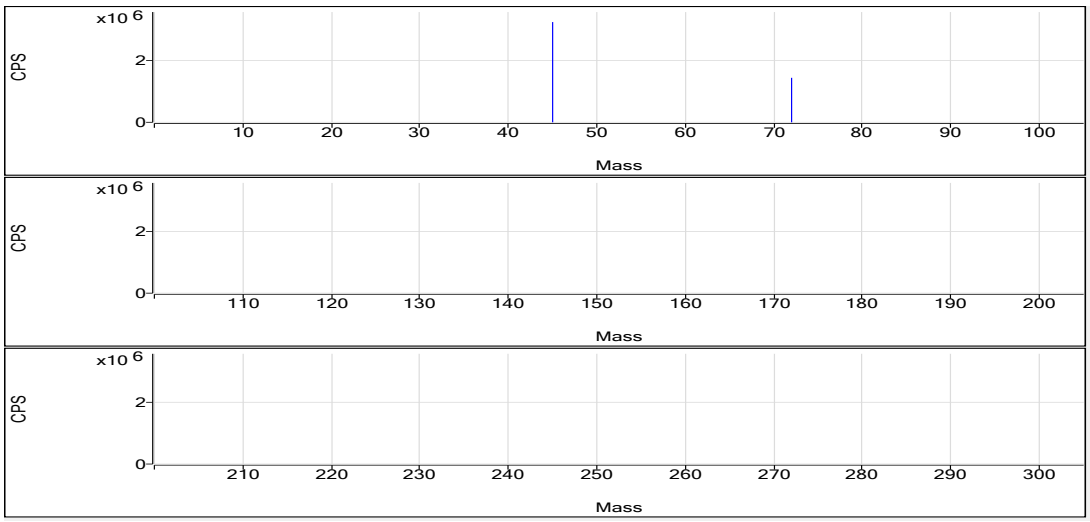
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.001	ppb	781.5	68.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.011	ppb	216.5	2.44	0.0000	Pulse	1.5000	3
Na	23	72	He	4.079	ppb	47.0	8165.88	0.1135	Pulse	0.1000	3
Mg	24	72	He	10.906	ppb	17.8	1010.07	0.0140	Pulse	0.1000	3
Al	27	72	He	30.310	ppb	21.5	603.36	0.0084	Pulse	0.1000	3
K	39	72	He	11.537	ppb	78.0	10790.96	0.1500	Pulse	0.1000	3
Ca	44	72	He	10.743	ppb	78.6	140.01	0.0019	Pulse	0.1000	3
Ti	47	72	He	1.303	ppb	62.4	43.33	0.0006	Pulse	0.1000	3
V	51	72	He	0.586	ppb	6.3	1020.71	0.0142	Pulse	0.5000	3
Cr	52	72	He	0.214	ppb	47.7	2060.22	0.0286	Pulse	0.1000	3
Mn	55	72	He	-0.394	ppb	N/A	830.05	0.0115	Pulse	0.1000	3
Fe	57	72	He	41.671	ppb	19.8	1150.09	0.0160	Pulse	0.1000	3
Co	59	72	He	0.111	ppb	32.7	466.69	0.0065	Pulse	0.1000	3
Ni	60	72	He	1.210	ppb	15.3	1413.46	0.0196	Pulse	0.1000	3
Cu	63	72	He	0.200	ppb	24.2	713.38	0.0099	Pulse	0.1000	3
Zn	66	72	He	0.071	ppb	448.3	360.02	0.0050	Pulse	0.1000	3
As	75	72	He	-0.015	ppb	N/A	29.33	0.0004	Pulse	0.5000	3
Sr	88	115	He	0.120	ppb	50.8	110.00	0.0017	Pulse	0.1000	3
Mo	98	115	He	0.286	ppb	16.8	436.69	0.0068	Pulse	0.1000	3
Ag	107	115	He	0.007	ppb	99.9	50.00	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.004	ppb	86.3	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.281	ppb	62.2	1256.80	0.0196	Pulse	0.1000	3
Sb	121	115	He	0.004	ppb	288.6	20.00	0.0003	Pulse	0.1000	3
Ba	137	115	He	0.334	ppb	41.0	113.34	0.0018	Pulse	0.1000	3
Tl	205	209	He	0.040	ppb	5.7	466.70	0.0021	Pulse	0.1000	3
Pb	208	209	He	0.268	ppb	6.5	2626.86	0.0119	Pulse	0.1000	3
U	238	209	He	0.005	ppb	41.1	103.34	0.0005	Pulse	0.1000	3

ISTD Table:

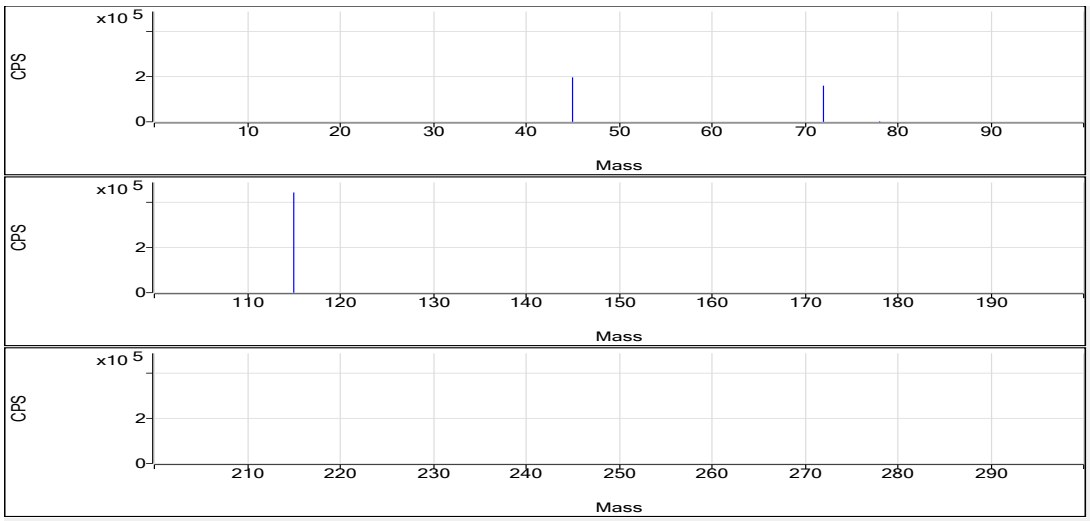
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3231833.91	1.5	99.7	Pulse	0.1000	3
No Gas	Ge	72	1434600.71	1.8	99.6	Pulse	0.1000	3
H2	Sc	45	195792.56	2.9	100.2	Pulse	0.1000	3
H2	Ge	72	159141.86	2.4	97.6	Pulse	0.1000	3
H2	In	115	441249.03	2.4	101.8	Pulse	0.1000	3
He	Sc	45	41800.35	1.0	104.5	Pulse	0.1000	3
He	Ge	72	71953.48	1.3	99.5	Pulse	0.1000	3
He	In	115	64127.55	0.7	99.3	Pulse	0.1000	3
He	Tb	159	284831.26	0.8	99.6	Pulse	0.1000	3
He	Bi	209	220012.86	0.3	99.0	Pulse	0.1000	3

No Gas

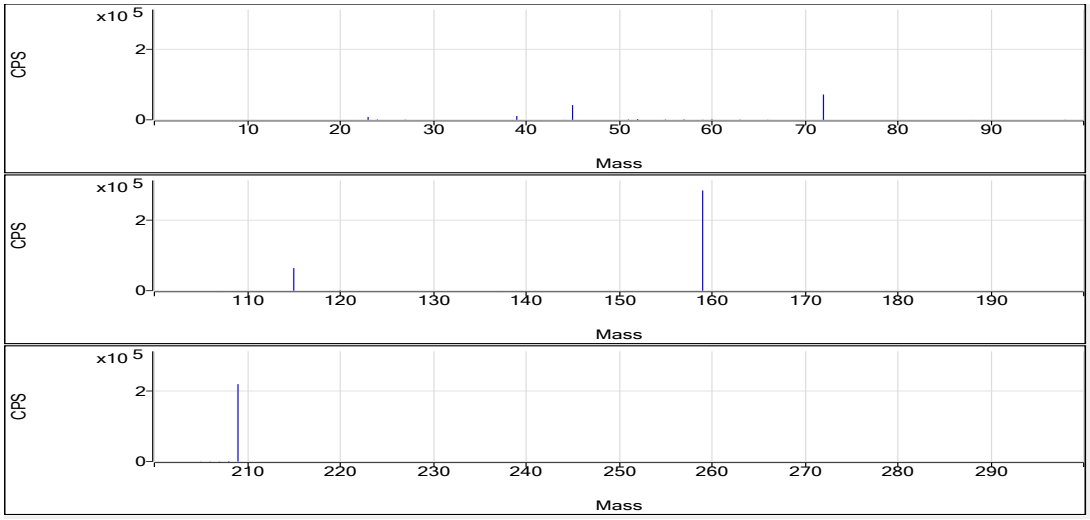


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.005	0	60.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.001	0	66.00	0.0013	4.694E-05
Be	9	1	No Gas	0.007	0.0001	80.00	0.0013	4.694E-05
Se	78	2	H2	0.027	0	3.33	0.0004	1.089E-05
Se	78	2	H2	0.024	0	3.33	0.0004	1.089E-05
Se	78	2	H2	-0.017	0	0.67	0.0004	1.089E-05
Na	23	3	He	3.143	0.1119	7952.51	0.0017	0.1065
Na	23	3	He	2.81	0.1113	7992.39	0.0017	0.1065
Na	23	3	He	6.284	0.1173	8552.74	0.0017	0.1065
Mg	24	3	He	12.605	0.0155	1100.08	0.0008	0.004846
Mg	24	3	He	8.786	0.0123	880.06	0.0008	0.004846
Mg	24	3	He	11.327	0.0144	1050.08	0.0008	0.004846
Al	27	3	He	23.567	0.0068	480.02	0.0002	0.001063
Al	27	3	He	36.553	0.0099	710.04	0.0002	0.001063
Al	27	3	He	30.81	0.0085	620.03	0.0002	0.001063
K	39	3	He	21.45	0.1555	11054.45	0.0006	0.1436
K	39	3	He	9.277	0.1488	10684.19	0.0006	0.1436
K	39	3	He	3.884	0.1458	10634.23	0.0006	0.1436
Ca	44	3	He	11.538	0.002	140.01	0	0.001611
Ca	44	3	He	1.93	0.0017	120.00	0	0.001611
Ca	44	3	He	18.76	0.0022	160.01	0	0.001611
Ti	47	3	He	0.591	0.0004	30.00	0.0003	0.0002737
Ti	47	3	He	1.129	0.0006	40.00	0.0003	0.0002737
Ti	47	3	He	2.188	0.0008	60.00	0.0003	0.0002737
V	51	3	He	0.557	0.0138	984.04	0.0117	0.007326
V	51	3	He	0.574	0.014	1008.04	0.0117	0.007326
V	51	3	He	0.628	0.0147	1070.05	0.0117	0.007326
Cr	52	3	He	0.31	0.0301	2140.24	0.0152	0.02538
Cr	52	3	He	0.226	0.0288	2070.21	0.0152	0.02538
Cr	52	3	He	0.107	0.027	1970.21	0.0152	0.02538
Mn	55	3	He	-0.584	0.0104	740.05	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.342	0.0118	850.05	0.0059	0.01385
Mn	55	3	He	-0.257	0.0123	900.06	0.0059	0.01385
Fe	57	3	He	49.597	0.0183	1300.12	0.0003	0.003918
Fe	57	3	He	33.098	0.0135	970.06	0.0003	0.003918
Fe	57	3	He	42.318	0.0162	1180.08	0.0003	0.003918
Co	59	3	He	0.069	0.0052	370.01	0.0305	0.003084
Co	59	3	He	0.136	0.0072	520.03	0.0305	0.003084
Co	59	3	He	0.128	0.007	510.03	0.0305	0.003084
Ni	60	3	He	1.264	0.0201	1430.12	0.0088	0.009003
Ni	60	3	He	1.003	0.0178	1280.10	0.0088	0.009003
Ni	60	3	He	1.362	0.021	1530.15	0.0088	0.009003
Cu	63	3	He	0.163	0.009	640.04	0.0249	0.004937
Cu	63	3	He	0.254	0.0113	810.05	0.0249	0.004937
Cu	63	3	He	0.181	0.0095	690.04	0.0249	0.004937
Zn	66	3	He	0.264	0.0055	390.02	0.0025	0.004836
Zn	66	3	He	0.242	0.0054	390.02	0.0025	0.004836
Zn	66	3	He	-0.294	0.0041	300.01	0.0025	0.004836
As	75	3	He	-0.023	0.0004	28.00	0.0017	0.0004347
As	75	3	He	0.038	0.0005	36.00	0.0017	0.0004347
As	75	3	He	-0.061	0.0003	24.00	0.0017	0.0004347
Sr	88	3	He	0.121	0.0017	110.01	0.0078	0.0007762
Sr	88	3	He	0.181	0.0022	140.00	0.0078	0.0007762
Sr	88	3	He	0.059	0.0012	80.00	0.0078	0.0007762
Mo	98	3	He	0.239	0.0058	370.02	0.022	0.0005162
Mo	98	3	He	0.283	0.0067	430.02	0.022	0.0005162
Mo	98	3	He	0.335	0.0079	510.03	0.022	0.0005162
Ag	107	3	He	0.007	0.0008	50.00	0.0455	0.0004641
Ag	107	3	He	0.014	0.0011	70.00	0.0455	0.0004641
Ag	107	3	He	0	0.0005	30.00	0.0455	0.0004641
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Cd	111	3	He	0.009	0.0001	6.00	0.0048	5.152E-05
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Sn	120	3	He	0.244	0.0191	1220.11	0.0143	0.01559
Sn	120	3	He	0.127	0.0174	1110.15	0.0143	0.01559
Sn	120	3	He	0.47	0.0223	1440.14	0.0143	0.01559
Sb	121	3	He	0.017	0.0005	30.00	0.0124	0.000258
Sb	121	3	He	0.004	0.0003	20.00	0.0124	0.000258
Sb	121	3	He	-0.008	0.0002	10.00	0.0124	0.000258
Ba	137	3	He	0.429	0.0022	140.01	0.0044	0.000309
Ba	137	3	He	0.395	0.002	130.01	0.0044	0.000309
Ba	137	3	He	0.177	0.0011	70.00	0.0044	0.000309
Tl	205	3	He	0.041	0.0021	470.03	0.0276	0.001005
Tl	205	3	He	0.042	0.0022	480.03	0.0276	0.001005
Tl	205	3	He	0.038	0.0021	450.03	0.0276	0.001005
Pb	208	3	He	0.277	0.0123	1540.15	0.0364	0.002176
Pb	208	3	He	0.279	0.0123	1260.10	0.0364	0.002176
Pb	208	3	He	0.248	0.0112	1230.10	0.0364	0.002176
U	238	3	He	0.003	0.0004	80.00	0.0421	0.00024
U	238	3	He	0.007	0.0005	120.01	0.0421	0.00024
U	238	3	He	0.006	0.0005	110.01	0.0421	0.00024
Sc	45	1	No Gas			3285720.89		
Sc	45	1	No Gas			3215251.83		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3194529.01		
Ge	72	1	No Gas			1463219.51		
Ge	72	1	No Gas			1426355.29		
Ge	72	1	No Gas			1414227.32		
Sc	45	2	H2			190928.83		
Sc	45	2	H2			201974.88		
Sc	45	2	H2			194473.96		
Ge	72	2	H2			155461.49		
Ge	72	2	H2			163135.71		
Ge	72	2	H2			158828.38		
In	115	2	H2			435460.46		
In	115	2	H2			453695.23		
In	115	2	H2			434591.40		
Sc	45	3	He			41639.68		
Sc	45	3	He			41479.36		
Sc	45	3	He			42282.01		
Ge	72	3	He			71096.32		
Ge	72	3	He			71819.74		
Ge	72	3	He			72944.38		
In	115	3	He			64006.76		
In	115	3	He			63795.51		
In	115	3	He			64609.79		
Tb	159	3	He			285358.08		
Tb	159	3	He			282376.85		
Tb	159	3	He			286758.84		
Bi	209	3	He			220089.98		
Bi	209	3	He			220528.20		
Bi	209	3	He			219420.41		

Quantitation Report

Data File Name	280SMPL.d
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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

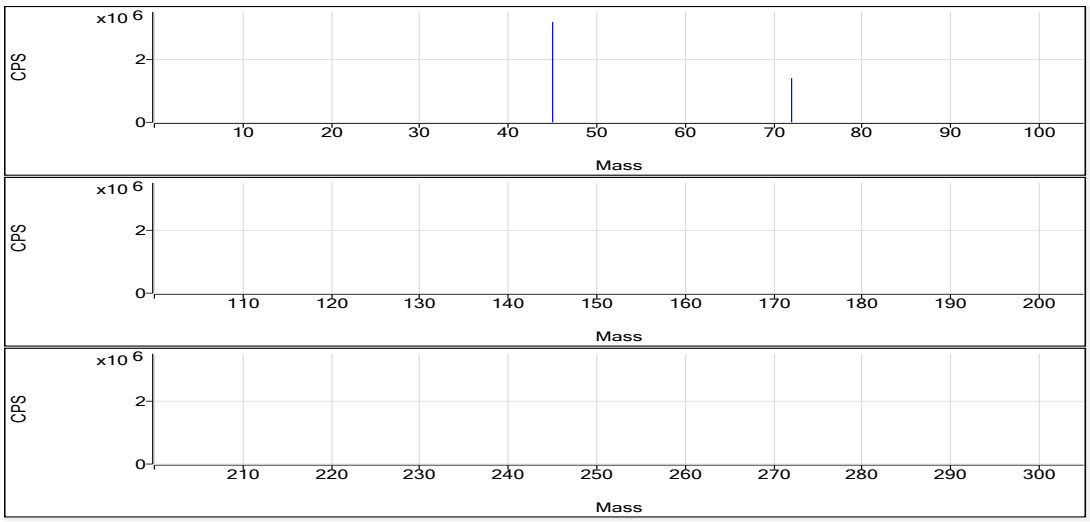
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.007	ppb	N/A	54.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.037	ppb	60.2	4.00	0.0000	Pulse	1.5000	3
Na	23	72	He	2.032	ppb	133.4	8059.11	0.1099	Pulse	0.1000	3
Mg	24	72	He	11.192	ppb	14.3	1046.74	0.0143	Pulse	0.1000	3
Al	27	72	He	26.662	ppb	15.8	550.03	0.0075	Pulse	0.1000	3
K	39	72	He	12.538	ppb	81.9	11037.79	0.1506	Pulse	0.1000	3
Ca	44	72	He	16.925	ppb	52.3	156.68	0.0021	Pulse	0.1000	3
Ti	47	72	He	1.263	ppb	98.5	43.33	0.0006	Pulse	0.1000	3
V	51	72	He	0.475	ppb	2.9	944.04	0.0129	Pulse	0.5000	3
Cr	52	72	He	0.142	ppb	93.3	2020.22	0.0276	Pulse	0.1000	3
Mn	55	72	He	-0.389	ppb	N/A	846.73	0.0116	Pulse	0.1000	3
Fe	57	72	He	45.969	ppb	4.2	1263.43	0.0172	Pulse	0.1000	3
Co	59	72	He	0.078	ppb	41.6	400.02	0.0055	Pulse	0.1000	3
Ni	60	72	He	0.901	ppb	35.7	1240.10	0.0169	Pulse	0.1000	3
Cu	63	72	He	0.223	ppb	19.8	770.05	0.0105	Pulse	0.1000	3
Zn	66	72	He	0.143	ppb	287.3	380.02	0.0052	Pulse	0.1000	3
As	75	72	He	0.095	ppb	123.0	44.00	0.0006	Pulse	0.5000	3
Sr	88	115	He	0.079	ppb	114.8	90.00	0.0014	Pulse	0.1000	3
Mo	98	115	He	0.275	ppb	10.2	423.35	0.0066	Pulse	0.1000	3
Ag	107	115	He	0.006	ppb	127.2	46.67	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.004	ppb	171.6	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.073	ppb	43.6	1070.07	0.0166	Pulse	0.1000	3
Sb	121	115	He	0.017	ppb	151.3	30.00	0.0005	Pulse	0.1000	3
Ba	137	115	He	0.189	ppb	70.3	73.33	0.0011	Pulse	0.1000	3
Tl	205	209	He	0.026	ppb	42.3	376.68	0.0017	Pulse	0.1000	3
Pb	208	209	He	0.277	ppb	12.5	2693.56	0.0123	Pulse	0.1000	3
U	238	209	He	0.009	ppb	48.0	136.67	0.0006	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3206386.10	1.3	98.9	Pulse	0.1000	3
No Gas	Ge	72	1412461.64	0.9	98.1	Pulse	0.1000	3
H2	Sc	45	195575.36	2.9	100.1	Pulse	0.1000	3
H2	Ge	72	159357.71	1.7	97.8	Pulse	0.1000	3
H2	In	115	442022.72	2.8	102.0	Pulse	0.1000	3
He	Sc	45	41435.89	1.1	103.6	Pulse	0.1000	3
He	Ge	72	73303.48	0.7	101.4	Pulse	0.1000	3
He	In	115	64343.64	1.9	99.6	Pulse	0.1000	3
He	Tb	159	283399.97	0.7	99.1	Pulse	0.1000	3
He	Bi	209	219531.94	0.3	98.8	Pulse	0.1000	3

No Gas



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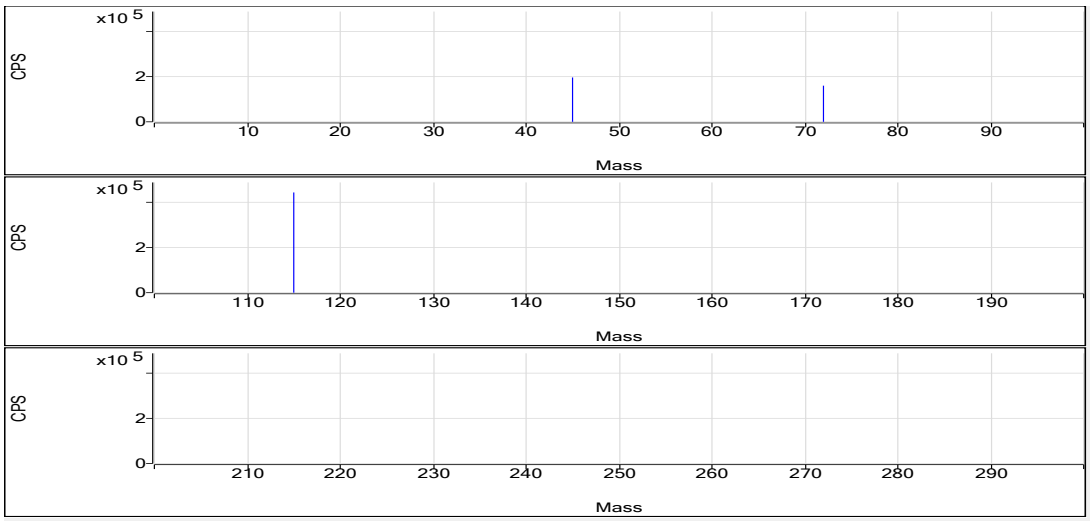
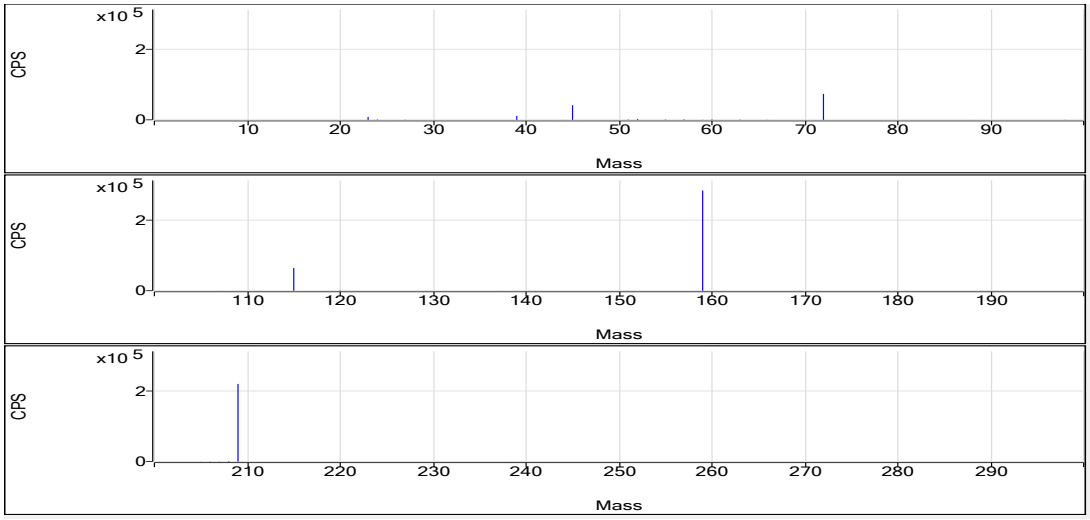


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.002	0	64.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.011	0	46.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.008	0	52.00	0.0013	4.694E-05
Se	78	2	H2	0.015	0	2.67	0.0004	1.089E-05
Se	78	2	H2	0.035	0	4.00	0.0004	1.089E-05
Se	78	2	H2	0.059	0	5.33	0.0004	1.089E-05
Na	23	3	He	4.535	0.1142	8402.65	0.0017	0.1065
Na	23	3	He	2.406	0.1106	8042.47	0.0017	0.1065
Na	23	3	He	-0.847	0.105	7732.21	0.0017	0.1065
Mg	24	3	He	12.477	0.0154	1130.08	0.0008	0.004846
Mg	24	3	He	11.705	0.0147	1070.07	0.0008	0.004846
Mg	24	3	He	9.394	0.0128	940.08	0.0008	0.004846
Al	27	3	He	28.831	0.008	590.04	0.0002	0.001063
Al	27	3	He	21.802	0.0063	460.02	0.0002	0.001063
Al	27	3	He	29.353	0.0081	600.04	0.0002	0.001063
K	39	3	He	24.381	0.1571	11554.76	0.0006	0.1436
K	39	3	He	6.18	0.1471	10694.21	0.0006	0.1436
K	39	3	He	7.054	0.1475	10864.39	0.0006	0.1436
Ca	44	3	He	26.935	0.0024	180.01	0	0.001611
Ca	44	3	He	10.12	0.0019	140.01	0	0.001611
Ca	44	3	He	13.722	0.002	150.01	0	0.001611
Ti	47	3	He	0.535	0.0004	30.00	0.0003	0.0002737
Ti	47	3	He	0.553	0.0004	30.00	0.0003	0.0002737
Ti	47	3	He	2.699	0.001	70.00	0.0003	0.0002737
V	51	3	He	0.487	0.013	958.04	0.0117	0.007326
V	51	3	He	0.46	0.0127	924.04	0.0117	0.007326
V	51	3	He	0.477	0.0129	950.04	0.0117	0.007326
Cr	52	3	He	0.155	0.0277	2040.22	0.0152	0.02538
Cr	52	3	He	0.004	0.0254	1850.18	0.0152	0.02538
Cr	52	3	He	0.268	0.0295	2170.25	0.0152	0.02538
Mn	55	3	He	-0.159	0.0129	950.07	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.227	0.0125	910.07	0.0059	0.01385
Mn	55	3	He	-0.783	0.0092	680.04	0.0059	0.01385
Fe	57	3	He	47.961	0.0178	1310.10	0.0003	0.003918
Fe	57	3	He	45.81	0.0172	1250.09	0.0003	0.003918
Fe	57	3	He	44.135	0.0167	1230.09	0.0003	0.003918
Co	59	3	He	0.046	0.0045	330.01	0.0305	0.003084
Co	59	3	He	0.111	0.0065	470.02	0.0305	0.003084
Co	59	3	He	0.077	0.0054	400.02	0.0305	0.003084
Ni	60	3	He	0.584	0.0141	1040.07	0.0088	0.009003
Ni	60	3	He	1.228	0.0198	1440.12	0.0088	0.009003
Ni	60	3	He	0.891	0.0168	1240.10	0.0088	0.009003
Cu	63	3	He	0.227	0.0106	780.05	0.0249	0.004937
Cu	63	3	He	0.177	0.0094	680.04	0.0249	0.004937
Cu	63	3	He	0.265	0.0115	850.05	0.0249	0.004937
Zn	66	3	He	-0.308	0.0041	300.01	0.0025	0.004836
Zn	66	3	He	0.494	0.0061	440.02	0.0025	0.004836
Zn	66	3	He	0.243	0.0054	400.02	0.0025	0.004836
As	75	3	He	0.11	0.0006	46.00	0.0017	0.0004347
As	75	3	He	-0.029	0.0004	28.00	0.0017	0.0004347
As	75	3	He	0.203	0.0008	58.00	0.0017	0.0004347
Sr	88	3	He	0.002	0.0008	50.00	0.0078	0.0007762
Sr	88	3	He	0.18	0.0022	140.01	0.0078	0.0007762
Sr	88	3	He	0.057	0.0012	80.00	0.0078	0.0007762
Mo	98	3	He	0.278	0.0066	420.02	0.022	0.0005162
Mo	98	3	He	0.246	0.0059	380.02	0.022	0.0005162
Mo	98	3	He	0.302	0.0072	470.02	0.022	0.0005162
Ag	107	3	He	0.014	0.0011	70.00	0.0455	0.0004641
Ag	107	3	He	0	0.0005	30.00	0.0455	0.0004641
Ag	107	3	He	0.003	0.0006	40.00	0.0455	0.0004641
Cd	111	3	He	0.009	0.0001	6.00	0.0048	5.152E-05
Cd	111	3	He	0.009	0.0001	6.00	0.0048	5.152E-05
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Sn	120	3	He	0.06	0.0164	1040.07	0.0143	0.01559
Sn	120	3	He	0.11	0.0172	1100.07	0.0143	0.01559
Sn	120	3	He	0.05	0.0163	1070.08	0.0143	0.01559
Sb	121	3	He	0.043	0.0008	50.00	0.0124	0.000258
Sb	121	3	He	-0.008	0.0002	10.00	0.0124	0.000258
Sb	121	3	He	0.016	0.0005	30.00	0.0124	0.000258
Ba	137	3	He	0.255	0.0014	90.00	0.0044	0.000309
Ba	137	3	He	0.036	0.0005	30.00	0.0044	0.000309
Ba	137	3	He	0.278	0.0015	100.00	0.0044	0.000309
Tl	205	3	He	0.026	0.0017	380.02	0.0276	0.001005
Tl	205	3	He	0.036	0.002	440.02	0.0276	0.001005
Tl	205	3	He	0.015	0.0014	310.01	0.0276	0.001005
Pb	208	3	He	0.306	0.0133	1580.15	0.0364	0.002176
Pb	208	3	He	0.287	0.0126	1620.16	0.0364	0.002176
Pb	208	3	He	0.239	0.0109	1310.12	0.0364	0.002176
U	238	3	He	0.005	0.0005	100.00	0.0421	0.00024
U	238	3	He	0.008	0.0006	130.01	0.0421	0.00024
U	238	3	He	0.014	0.0008	180.01	0.0421	0.00024
Sc	45	1	No Gas			3250603.39		
Sc	45	1	No Gas			3166526.83		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3202028.08		
Ge	72	1	No Gas			1427427.63		
Ge	72	1	No Gas			1404411.23		
Ge	72	1	No Gas			1405546.07		
Sc	45	2	H2			191355.39		
Sc	45	2	H2			202053.30		
Sc	45	2	H2			193317.38		
Ge	72	2	H2			158828.13		
Ge	72	2	H2			162275.11		
Ge	72	2	H2			156969.88		
In	115	2	H2			429603.16		
In	115	2	H2			454524.80		
In	115	2	H2			441940.19		
Sc	45	3	He			41208.48		
Sc	45	3	He			41950.78		
Sc	45	3	He			41148.42		
Ge	72	3	He			73548.37		
Ge	72	3	He			72723.32		
Ge	72	3	He			73638.76		
In	115	3	He			63253.38		
In	115	3	He			64148.10		
In	115	3	He			65654.48		
Tb	159	3	He			285742.91		
Tb	159	3	He			282187.46		
Tb	159	3	He			282269.53		
Bi	209	3	He			219971.19		
Bi	209	3	He			218769.08		
Bi	209	3	He			219855.54		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 20:15:14
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Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

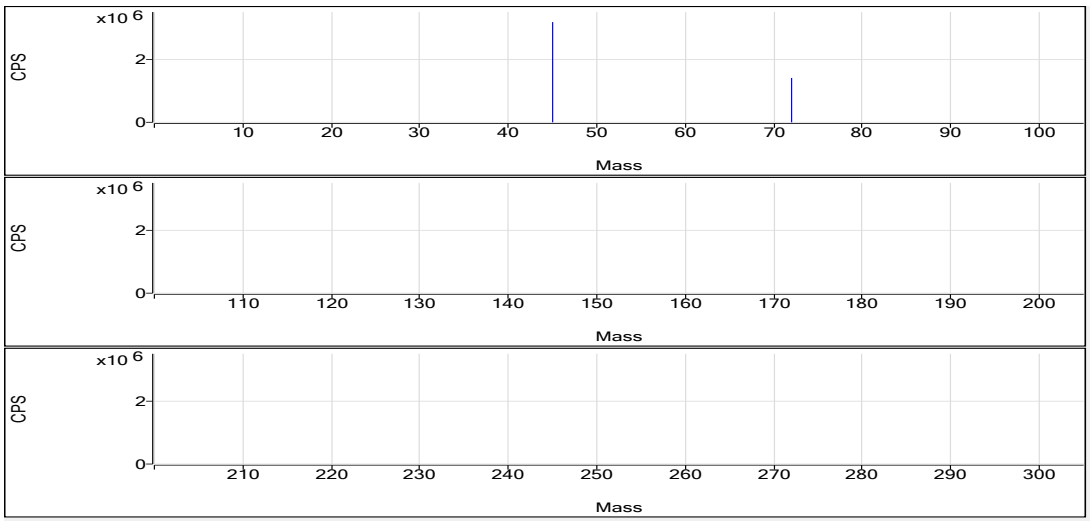
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.005	ppb	N/A	56.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.022	ppb	155.7	3.11	0.0000	Pulse	1.5000	3
Na	23	72	He	4.211	ppb	33.7	8179.21	0.1137	Pulse	0.1000	3
Mg	24	72	He	9.259	ppb	18.3	910.06	0.0127	Pulse	0.1000	3
Al	27	72	He	22.851	ppb	12.7	473.36	0.0066	Pulse	0.1000	3
K	39	72	He	12.887	ppb	166.8	10844.37	0.1508	Pulse	0.1000	3
Ca	44	72	He	15.277	ppb	163.2	150.00	0.0021	Pulse	0.1000	3
Ti	47	72	He	1.677	ppb	119.0	50.00	0.0007	Pulse	0.1000	3
V	51	72	He	0.557	ppb	7.1	996.04	0.0138	Pulse	0.5000	3
Cr	52	72	He	0.256	ppb	16.9	2106.89	0.0293	Pulse	0.1000	3
Mn	55	72	He	-0.322	ppb	N/A	860.05	0.0120	Pulse	0.1000	3
Fe	57	72	He	36.220	ppb	8.3	1036.73	0.0144	Pulse	0.1000	3
Co	59	72	He	0.083	ppb	28.9	403.36	0.0056	Pulse	0.1000	3
Ni	60	72	He	1.068	ppb	5.1	1323.45	0.0184	Pulse	0.1000	3
Cu	63	72	He	0.196	ppb	33.1	706.71	0.0098	Pulse	0.1000	3
Zn	66	72	He	0.181	ppb	133.4	380.02	0.0053	Pulse	0.1000	3
As	75	72	He	0.086	ppb	201.5	42.00	0.0006	Pulse	0.5000	3
Sr	88	115	He	0.088	ppb	9.8	93.33	0.0015	Pulse	0.1000	3
Mo	98	115	He	0.226	ppb	10.0	350.02	0.0055	Pulse	0.1000	3
Ag	107	115	He	0.013	ppb	15.1	66.67	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.002	ppb	277.8	4.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.143	ppb	224.4	1126.78	0.0176	Pulse	0.1000	3
Sb	121	115	He	0.008	ppb	220.5	23.33	0.0004	Pulse	0.1000	3
Ba	137	115	He	0.346	ppb	27.7	116.67	0.0018	Pulse	0.1000	3
Tl	205	209	He	0.015	ppb	46.5	310.02	0.0014	Pulse	0.1000	3
Pb	208	209	He	0.254	ppb	5.9	2503.52	0.0114	Pulse	0.1000	3
U	238	209	He	0.008	ppb	22.5	123.34	0.0006	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3204860.68	1.8	98.9	Pulse	0.1000	3
No Gas	Ge	72	1418050.55	1.8	98.5	Pulse	0.1000	3
H2	Sc	45	197325.63	1.7	101.0	Pulse	0.1000	3
H2	Ge	72	159963.83	2.3	98.1	Pulse	0.1000	3
H2	In	115	442043.47	2.8	102.0	Pulse	0.1000	3
He	Sc	45	41696.58	0.9	104.3	Pulse	0.1000	3
He	Ge	72	71943.68	0.3	99.5	Pulse	0.1000	3
He	In	115	63787.17	1.6	98.8	Pulse	0.1000	3
He	Tb	159	283478.35	0.6	99.1	Pulse	0.1000	3
He	Bi	209	219190.91	1.1	98.6	Pulse	0.1000	3

No Gas



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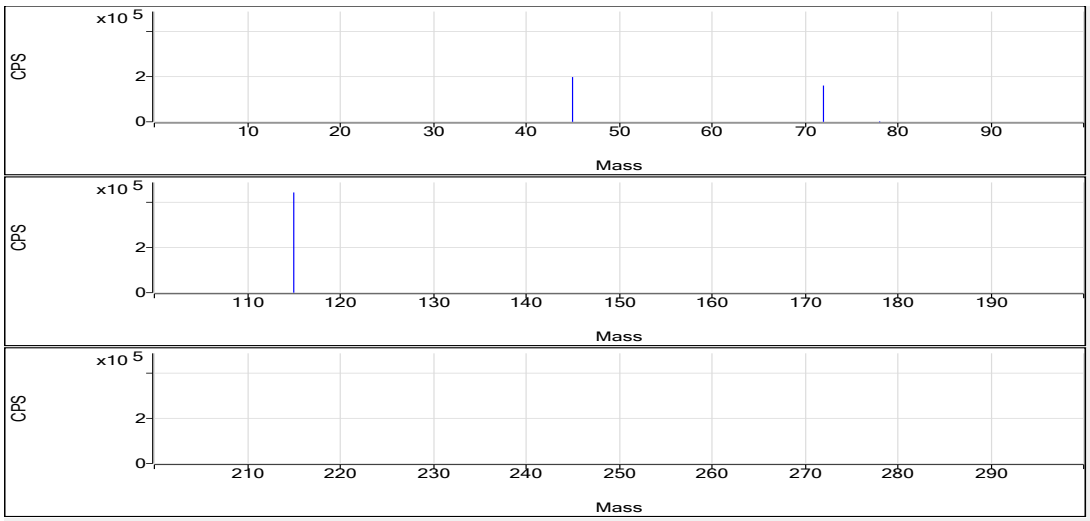
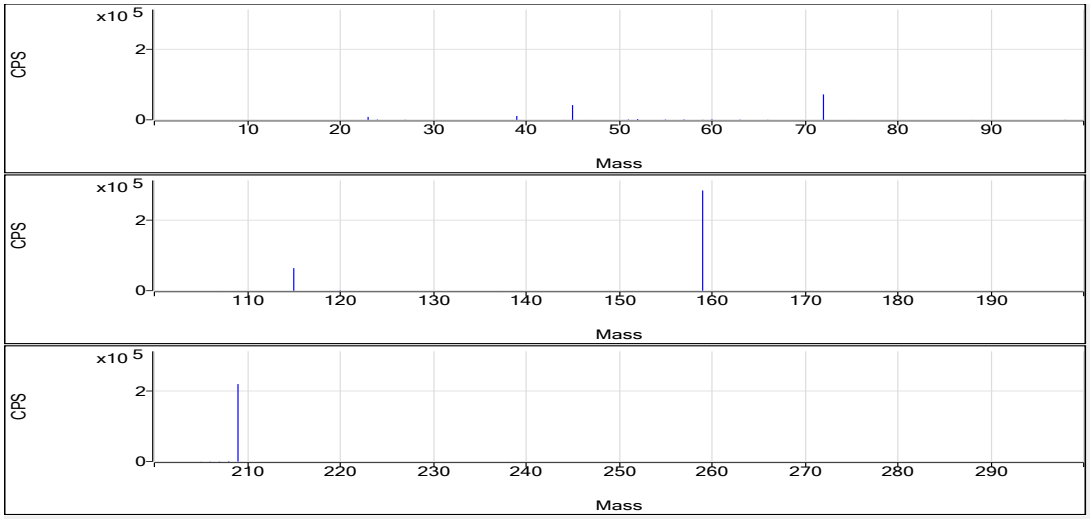


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.008	0	52.00	0.0013	4.694E-05
Be	9	1	No Gas	0.002	0	70.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.01	0	48.00	0.0013	4.694E-05
Se	78	2	H2	0.037	0	4.00	0.0004	1.089E-05
Se	78	2	H2	0.045	0	4.67	0.0004	1.089E-05
Se	78	2	H2	-0.017	0	0.67	0.0004	1.089E-05
Na	23	3	He	5.258	0.1155	8282.65	0.0017	0.1065
Na	23	3	He	2.594	0.1109	7982.40	0.0017	0.1065
Na	23	3	He	4.782	0.1147	8272.58	0.0017	0.1065
Mg	24	3	He	10.957	0.0141	1010.07	0.0008	0.004846
Mg	24	3	He	9.25	0.0126	910.05	0.0008	0.004846
Mg	24	3	He	7.57	0.0112	810.05	0.0008	0.004846
Al	27	3	He	22.169	0.0064	460.02	0.0002	0.001063
Al	27	3	He	20.349	0.006	430.02	0.0002	0.001063
Al	27	3	He	26.033	0.0073	530.03	0.0002	0.001063
K	39	3	He	33.667	0.1622	11635.09	0.0006	0.1436
K	39	3	He	14.251	0.1515	10904.33	0.0006	0.1436
K	39	3	He	-9.257	0.1385	9993.68	0.0006	0.1436
Ca	44	3	He	10.984	0.002	140.00	0	0.001611
Ca	44	3	He	42.082	0.0029	210.01	0	0.001611
Ca	44	3	He	-7.236	0.0014	100.00	0	0.001611
Ti	47	3	He	-0.535	0.0001	10.00	0.0003	0.0002737
Ti	47	3	He	3.341	0.0011	80.00	0.0003	0.0002737
Ti	47	3	He	2.225	0.0008	60.00	0.0003	0.0002737
V	51	3	He	0.544	0.0137	982.04	0.0117	0.007326
V	51	3	He	0.526	0.0135	970.04	0.0117	0.007326
V	51	3	He	0.601	0.0144	1036.05	0.0117	0.007326
Cr	52	3	He	0.293	0.0298	2140.21	0.0152	0.02538
Cr	52	3	He	0.268	0.0295	2120.22	0.0152	0.02538
Cr	52	3	He	0.208	0.0286	2060.23	0.0152	0.02538
Mn	55	3	He	-0.528	0.0107	770.04	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.087	0.0133	960.06	0.0059	0.01385
Mn	55	3	He	-0.351	0.0118	850.06	0.0059	0.01385
Fe	57	3	He	38.94	0.0152	1090.07	0.0003	0.003918
Fe	57	3	He	33.001	0.0135	970.06	0.0003	0.003918
Fe	57	3	He	36.719	0.0146	1050.07	0.0003	0.003918
Co	59	3	He	0.109	0.0064	460.03	0.0305	0.003084
Co	59	3	He	0.077	0.0054	390.02	0.0305	0.003084
Co	59	3	He	0.062	0.005	360.02	0.0305	0.003084
Ni	60	3	He	1.006	0.0178	1280.10	0.0088	0.009003
Ni	60	3	He	1.11	0.0188	1350.12	0.0088	0.009003
Ni	60	3	He	1.089	0.0186	1340.12	0.0088	0.009003
Cu	63	3	He	0.188	0.0096	690.04	0.0249	0.004937
Cu	63	3	He	0.265	0.0115	830.05	0.0249	0.004937
Cu	63	3	He	0.136	0.0083	600.03	0.0249	0.004937
Zn	66	3	He	-0.096	0.0046	330.01	0.0025	0.004836
Zn	66	3	He	0.35	0.0057	410.02	0.0025	0.004836
Zn	66	3	He	0.288	0.0055	400.02	0.0025	0.004836
As	75	3	He	0.039	0.0005	36.00	0.0017	0.0004347
As	75	3	He	0.277	0.0009	66.00	0.0017	0.0004347
As	75	3	He	-0.059	0.0003	24.00	0.0017	0.0004347
Sr	88	3	He	0.083	0.0014	90.00	0.0078	0.0007762
Sr	88	3	He	0.082	0.0014	90.00	0.0078	0.0007762
Sr	88	3	He	0.098	0.0015	100.00	0.0078	0.0007762
Mo	98	3	He	0.2	0.0049	310.01	0.022	0.0005162
Mo	98	3	He	0.234	0.0057	360.02	0.022	0.0005162
Mo	98	3	He	0.242	0.0059	380.02	0.022	0.0005162
Ag	107	3	He	0.014	0.0011	70.00	0.0455	0.0004641
Ag	107	3	He	0.011	0.0009	60.00	0.0455	0.0004641
Ag	107	3	He	0.013	0.0011	70.00	0.0455	0.0004641
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Cd	111	3	He	0.009	0.0001	6.00	0.0048	5.152E-05
Sn	120	3	He	0.02	0.0159	1000.08	0.0143	0.01559
Sn	120	3	He	-0.098	0.0142	900.06	0.0143	0.01559
Sn	120	3	He	0.506	0.0228	1480.20	0.0143	0.01559
Sb	121	3	He	-0.008	0.0002	10.00	0.0124	0.000258
Sb	121	3	He	0.005	0.0003	20.00	0.0124	0.000258
Sb	121	3	He	0.029	0.0006	40.00	0.0124	0.000258
Ba	137	3	He	0.292	0.0016	100.00	0.0044	0.000309
Ba	137	3	He	0.29	0.0016	100.01	0.0044	0.000309
Ba	137	3	He	0.457	0.0023	150.01	0.0044	0.000309
Tl	205	3	He	0.007	0.0012	260.01	0.0276	0.001005
Tl	205	3	He	0.02	0.0016	340.02	0.0276	0.001005
Tl	205	3	He	0.017	0.0015	330.02	0.0276	0.001005
Pb	208	3	He	0.267	0.0119	1220.11	0.0364	0.002176
Pb	208	3	He	0.258	0.0116	1270.11	0.0364	0.002176
Pb	208	3	He	0.237	0.0108	1200.09	0.0364	0.002176
U	238	3	He	0.007	0.0006	120.01	0.0421	0.00024
U	238	3	He	0.01	0.0006	140.01	0.0421	0.00024
U	238	3	He	0.006	0.0005	110.00	0.0421	0.00024
Sc	45	1	No Gas			3266202.14		
Sc	45	1	No Gas			3192864.33		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3155515.58		
Ge	72	1	No Gas			1447527.79		
Ge	72	1	No Gas			1408884.82		
Ge	72	1	No Gas			1397739.04		
Sc	45	2	H2			195428.32		
Sc	45	2	H2			201253.65		
Sc	45	2	H2			195294.92		
Ge	72	2	H2			157382.29		
Ge	72	2	H2			164228.24		
Ge	72	2	H2			158280.96		
In	115	2	H2			438618.47		
In	115	2	H2			455722.42		
In	115	2	H2			431789.52		
Sc	45	3	He			41288.31		
Sc	45	3	He			41850.78		
Sc	45	3	He			41950.66		
Ge	72	3	He			71718.74		
Ge	72	3	He			71970.78		
Ge	72	3	He			72141.52		
In	115	3	He			63002.25		
In	115	3	He			63444.29		
In	115	3	He			64941.33		
Tb	159	3	He			281844.51		
Tb	159	3	He			283156.34		
Tb	159	3	He			285434.19		
Bi	209	3	He			217073.41		
Bi	209	3	He			218648.75		
Bi	209	3	He			221850.58		

Quantitation Report

Data File Name	282_CCV.d
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Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

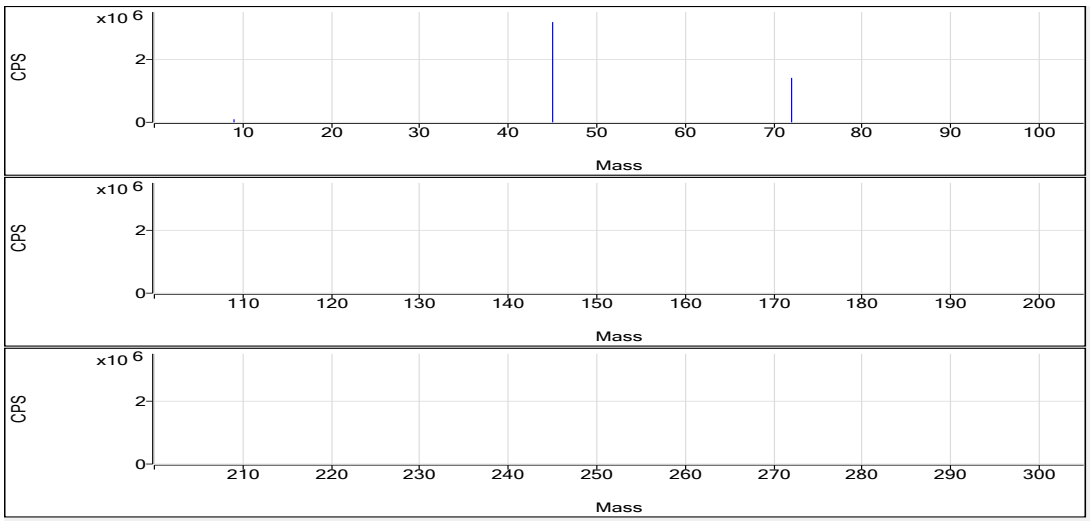
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	51.557	ppb	2.5	95696.76	0.0678	Pulse	0.5000	3
Se	78	72	H2	52.835	ppb	4.0	3291.94	0.0206	Pulse	1.5000	3
Na	23	72	He	5259.477	ppb	1.2	673825.80	9.1413	Pulse	0.1000	3
Mg	24	72	He	5276.767	ppb	0.9	328303.42	4.4537	Pulse	0.1000	3
Al	27	72	He	5145.227	ppb	2.9	91619.16	1.2431	Pulse	0.1000	3
K	39	72	He	5248.921	ppb	1.3	224243.93	3.0422	Pulse	0.1000	3
Ca	44	72	He	5234.441	ppb	2.0	12105.37	0.1642	Pulse	0.1000	3
Ti	47	72	He	5287.178	ppb	0.8	97761.81	1.3262	Pulse	0.1000	3
V	51	72	He	527.901	ppb	0.5	455754.72	6.1826	Pulse	0.5000	3
Cr	52	72	He	525.651	ppb	1.2	591884.52	8.0296	Pulse	0.1000	3
Mn	55	72	He	524.806	ppb	1.8	229347.21	3.1115	Pulse	0.1000	3
Fe	57	72	He	5246.588	ppb	1.9	112331.35	1.5239	Pulse	0.1000	3
Co	59	72	He	524.177	ppb	1.4	1179090.71	15.9960	Pulse	0.1000	3
Ni	60	72	He	523.727	ppb	0.7	340143.41	4.6143	Pulse	0.1000	3
Cu	63	72	He	522.859	ppb	0.9	961504.15	13.0435	Pulse	0.1000	3
Zn	66	72	He	518.607	ppb	1.6	94270.06	1.2789	Pulse	0.1000	3
As	75	72	He	521.009	ppb	1.8	66821.70	0.9066	Pulse	0.5000	3
Sr	88	115	He	52.136	ppb	2.1	26251.49	0.4083	Pulse	0.1000	3
Mo	98	115	He	51.849	ppb	1.3	73440.61	1.1423	Pulse	0.1000	3
Ag	107	115	He	51.282	ppb	0.4	150043.05	2.3338	Pulse	0.1000	3
Cd	111	115	He	52.476	ppb	1.2	16198.03	0.2520	Pulse	0.5000	3
Sn	120	115	He	51.950	ppb	0.7	48622.45	0.7563	Pulse	0.1000	3
Sb	121	115	He	52.095	ppb	2.4	41562.79	0.6465	Pulse	0.1000	3
Ba	137	115	He	519.379	ppb	0.9	146098.27	2.2725	Pulse	0.1000	3
Tl	205	209	He	53.022	ppb	0.9	321738.70	1.4668	Pulse	0.1000	3
Pb	208	209	He	53.260	ppb	0.4	425700.08	1.9407	Pulse	0.1000	3
U	238	209	He	52.424	ppb	0.6	483806.40	2.2056	Pulse	0.1000	3

ISTD Table:

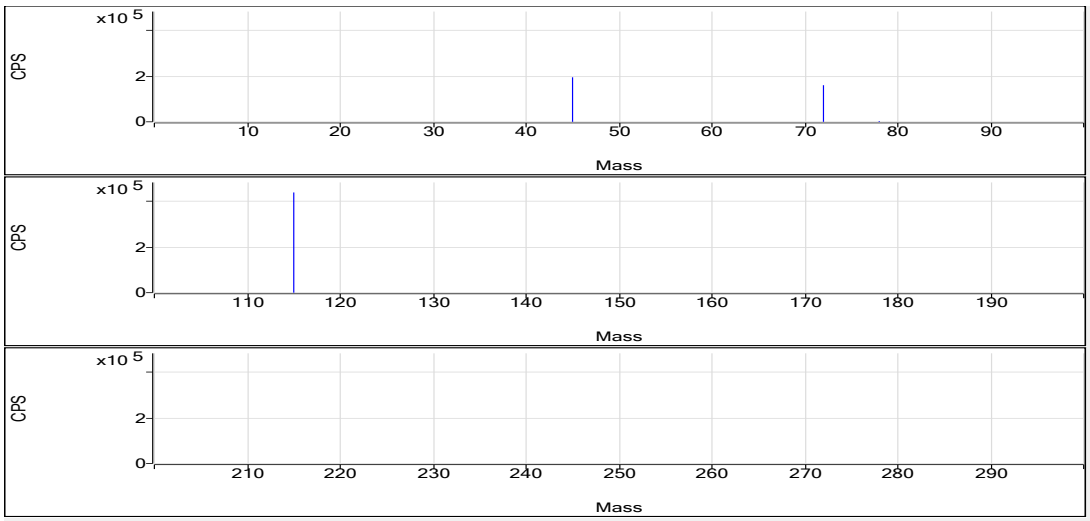
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3184893.50	1.5	98.3	Pulse	0.1000	3
No Gas	Ge	72	1411848.05	1.4	98.1	Pulse	0.1000	3
H2	Sc	45	194647.43	2.4	99.6	Pulse	0.1000	3
H2	Ge	72	160044.22	2.6	98.2	Pulse	0.1000	3
H2	In	115	438214.67	1.6	101.1	Pulse	0.1000	3
He	Sc	45	41332.30	2.1	103.4	Pulse	0.1000	3
He	Ge	72	73718.83	1.1	102.0	Pulse	0.1000	3
He	In	115	64290.56	0.2	99.5	Pulse	0.1000	3
He	Tb	159	285955.38	0.6	100.0	Pulse	0.1000	3
He	Bi	209	219355.66	0.2	98.7	Pulse	0.1000	3

No Gas

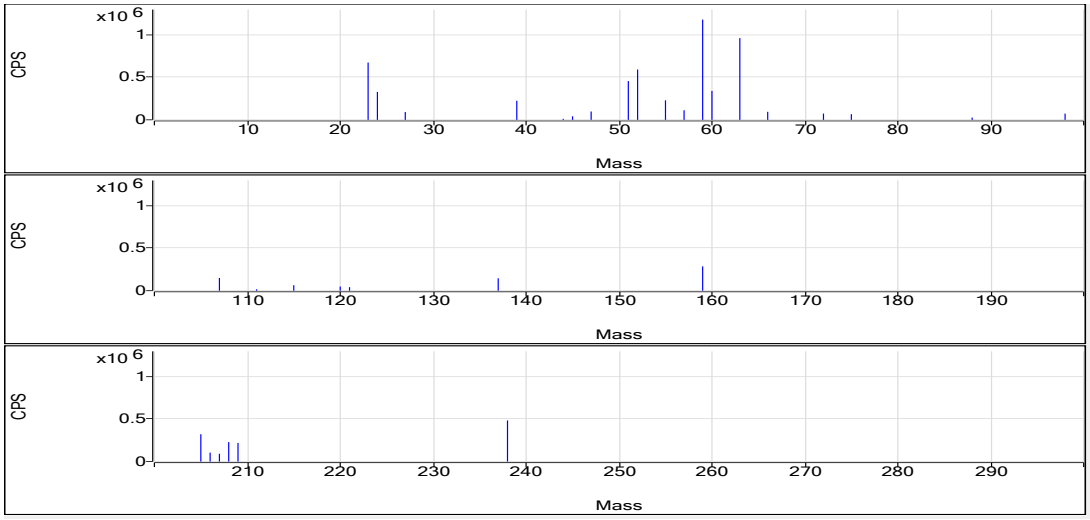


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.083	0.0659	94384.65	0.0013	4.694E-05
Be	9	1	No Gas	52.426	0.0689	96958.55	0.0013	4.694E-05
Be	9	1	No Gas	52.163	0.0686	95747.09	0.0013	4.694E-05
Se	78	2	H2	52.068	0.0203	3290.38	0.0004	1.089E-05
Se	78	2	H2	51.213	0.02	3245.04	0.0004	1.089E-05
Se	78	2	H2	55.225	0.0215	3340.39	0.0004	1.089E-05
Na	23	3	He	5294.277	9.2011	675424.91	0.0017	0.1065
Na	23	3	He	5185.389	9.014	672929.52	0.0017	0.1065
Na	23	3	He	5298.764	9.2088	673122.96	0.0017	0.1065
Mg	24	3	He	5324.337	4.4938	329877.34	0.0008	0.004846
Mg	24	3	He	5226.437	4.4113	329316.67	0.0008	0.004846
Mg	24	3	He	5279.525	4.456	325716.25	0.0008	0.004846
Al	27	3	He	5192.794	1.2546	92094.65	0.0002	0.001063
Al	27	3	He	4975.961	1.2022	89750.85	0.0002	0.001063
Al	27	3	He	5266.925	1.2725	93011.99	0.0002	0.001063
K	39	3	He	5273.342	3.0556	224306.01	0.0006	0.1436
K	39	3	He	5173.272	3.0004	223989.33	0.0006	0.1436
K	39	3	He	5300.148	3.0704	224436.46	0.0006	0.1436
Ca	44	3	He	5283.834	0.1657	12165.48	0	0.001611
Ca	44	3	He	5306.926	0.1664	12425.59	0	0.001611
Ca	44	3	He	5112.565	0.1604	11725.03	0	0.001611
Ti	47	3	He	5332.098	1.3375	98178.65	0.0003	0.0002737
Ti	47	3	He	5253.236	1.3177	98369.28	0.0003	0.0002737
Ti	47	3	He	5276.201	1.3234	96737.51	0.0003	0.0002737
V	51	3	He	528.033	6.1841	453959.28	0.0117	0.007326
V	51	3	He	524.999	6.1486	459017.31	0.0117	0.007326
V	51	3	He	530.67	6.215	454287.56	0.0117	0.007326
Cr	52	3	He	530.744	8.1072	595123.94	0.0152	0.02538
Cr	52	3	He	518.344	7.9183	591132.80	0.0152	0.02538
Cr	52	3	He	527.867	8.0634	589396.83	0.0152	0.02538
Mn	55	3	He	532.194	3.1551	231605.93	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	514.388	3.05	227692.50	0.0059	0.01385
Mn	55	3	He	527.836	3.1294	228743.20	0.0059	0.01385
Fe	57	3	He	5348.031	1.5533	114024.87	0.0003	0.003918
Fe	57	3	He	5152.736	1.4967	111737.09	0.0003	0.003918
Fe	57	3	He	5238.995	1.5217	111232.09	0.0003	0.003918
Co	59	3	He	523.759	15.9832	1173282.87	0.0305	0.003084
Co	59	3	He	517.014	15.7774	1177842.25	0.0305	0.003084
Co	59	3	He	531.759	16.2273	1186147.01	0.0305	0.003084
Ni	60	3	He	524.627	4.6222	339303.24	0.0088	0.009003
Ni	60	3	He	519.898	4.5806	341960.07	0.0088	0.009003
Ni	60	3	He	526.655	4.64	339166.91	0.0088	0.009003
Cu	63	3	He	520.974	12.9965	954037.56	0.0249	0.004937
Cu	63	3	He	519.437	12.9582	967375.84	0.0249	0.004937
Cu	63	3	He	528.165	13.1759	963099.05	0.0249	0.004937
Zn	66	3	He	520.9	1.2846	94296.42	0.0025	0.004836
Zn	66	3	He	509.21	1.2558	93753.48	0.0025	0.004836
Zn	66	3	He	525.711	1.2964	94760.27	0.0025	0.004836
As	75	3	He	523.217	0.9104	66829.82	0.0017	0.0004347
As	75	3	He	510.87	0.8889	66361.46	0.0017	0.0004347
As	75	3	He	528.94	0.9204	67273.83	0.0017	0.0004347
Sr	88	3	He	52.778	0.4133	26635.64	0.0078	0.0007762
Sr	88	3	He	50.849	0.3983	25613.70	0.0078	0.0007762
Sr	88	3	He	52.78	0.4134	26505.12	0.0078	0.0007762
Mo	98	3	He	51.844	1.1422	73602.30	0.022	0.0005162
Mo	98	3	He	52.534	1.1574	74435.43	0.022	0.0005162
Mo	98	3	He	51.168	1.1273	72284.11	0.022	0.0005162
Ag	107	3	He	51.374	2.338	150658.48	0.0455	0.0004641
Ag	107	3	He	51.075	2.3244	149487.69	0.0455	0.0004641
Ag	107	3	He	51.398	2.3391	149982.99	0.0455	0.0004641
Cd	111	3	He	52.288	0.2511	16177.33	0.0048	5.152E-05
Cd	111	3	He	51.956	0.2495	16043.20	0.0048	5.152E-05
Cd	111	3	He	53.185	0.2554	16373.57	0.0048	5.152E-05
Sn	120	3	He	52.269	0.7608	49026.68	0.0143	0.01559
Sn	120	3	He	51.52	0.7502	48244.40	0.0143	0.01559
Sn	120	3	He	52.062	0.7579	48596.28	0.0143	0.01559
Sb	121	3	He	52.376	0.65	41883.59	0.0124	0.000258
Sb	121	3	He	50.731	0.6296	40489.44	0.0124	0.000258
Sb	121	3	He	53.178	0.6599	42315.34	0.0124	0.000258
Ba	137	3	He	520.336	2.2767	146705.32	0.0044	0.000309
Ba	137	3	He	514.058	2.2492	144652.42	0.0044	0.000309
Ba	137	3	He	523.743	2.2916	146937.07	0.0044	0.000309
Tl	205	3	He	53.516	1.4804	324214.64	0.0276	0.001005
Tl	205	3	He	52.596	1.455	319758.63	0.0276	0.001005
Tl	205	3	He	52.953	1.4649	321242.83	0.0276	0.001005
Pb	208	3	He	53.16	1.9371	227698.96	0.0364	0.002176
Pb	208	3	He	53.134	1.9361	229072.05	0.0364	0.002176
Pb	208	3	He	53.485	1.9489	230048.98	0.0364	0.002176
U	238	3	He	52.126	2.1931	480286.40	0.0421	0.00024
U	238	3	He	52.379	2.2037	484298.63	0.0421	0.00024
U	238	3	He	52.766	2.22	486834.17	0.0421	0.00024
Sc	45	1	No Gas			3238463.08		
Sc	45	1	No Gas			3163664.02		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3152553.39		
Ge	72	1	No Gas			1433157.01		
Ge	72	1	No Gas			1406485.76		
Ge	72	1	No Gas			1395901.39		
Sc	45	2	H2			193553.14		
Sc	45	2	H2			199835.31		
Sc	45	2	H2			190553.84		
Ge	72	2	H2			162214.41		
Ge	72	2	H2			162649.09		
Ge	72	2	H2			155269.17		
In	115	2	H2			439929.92		
In	115	2	H2			444186.05		
In	115	2	H2			430528.04		
Sc	45	3	He			41689.77		
Sc	45	3	He			40346.30		
Sc	45	3	He			41960.82		
Ge	72	3	He			73407.16		
Ge	72	3	He			74653.59		
Ge	72	3	He			73095.74		
In	115	3	He			64820.89		
In	115	3	He			64688.95		
In	115	3	He			64499.60		
Tb	159	3	He			287993.98		
Tb	159	3	He			284954.53		
Tb	159	3	He			284917.63		
Bi	209	3	He			219002.93		
Bi	209	3	He			219765.66		
Bi	209	3	He			219298.40		

Quantitation Report

Data File Name	283_CCB.d
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Sample Name	CCB 4654618
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

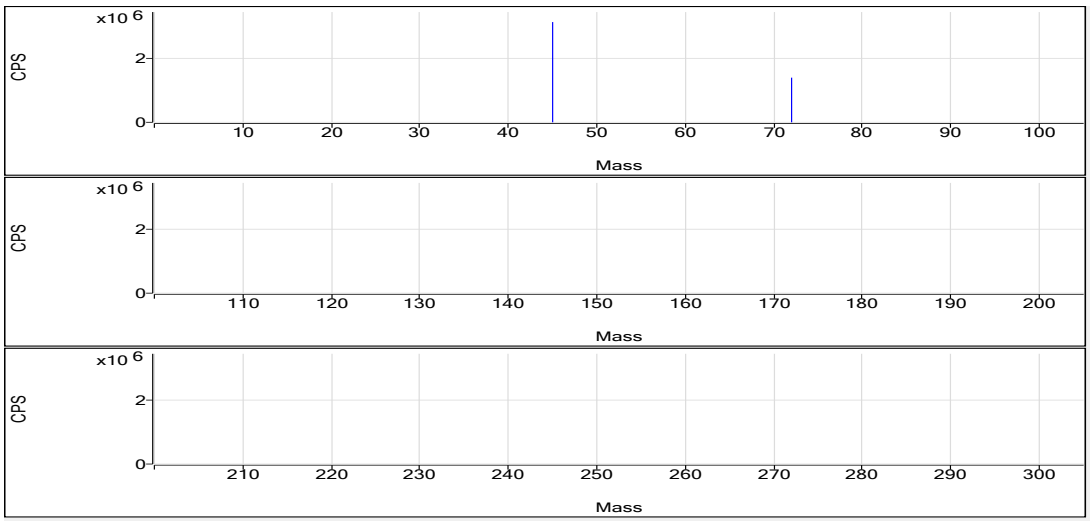
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.007	ppb	41.5	78.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.044	ppb	80.6	4.44	0.0000	Pulse	1.5000	3
Na	23	72	He	4.124	ppb	54.6	8172.47	0.1135	Pulse	0.1000	3
Mg	24	72	He	11.055	ppb	9.3	1020.08	0.0142	Pulse	0.1000	3
Al	27	72	He	25.863	ppb	15.8	526.69	0.0073	Pulse	0.1000	3
K	39	72	He	11.856	ppb	136.3	10807.69	0.1502	Pulse	0.1000	3
Ca	44	72	He	25.500	ppb	62.6	173.34	0.0024	Pulse	0.1000	3
Ti	47	72	He	1.684	ppb	58.2	50.00	0.0007	Pulse	0.1000	3
V	51	72	He	0.529	ppb	11.2	972.71	0.0135	Pulse	0.5000	3
Cr	52	72	He	0.161	ppb	63.5	2003.55	0.0278	Pulse	0.1000	3
Mn	55	72	He	-0.431	ppb	N/A	813.38	0.0113	Pulse	0.1000	3
Fe	57	72	He	33.166	ppb	11.0	973.40	0.0135	Pulse	0.1000	3
Co	59	72	He	0.151	ppb	25.2	553.36	0.0077	Pulse	0.1000	3
Ni	60	72	He	0.866	ppb	16.7	1196.76	0.0166	Pulse	0.1000	3
Cu	63	72	He	0.223	ppb	16.6	756.71	0.0105	Pulse	0.1000	3
Zn	66	72	He	0.407	ppb	51.4	420.02	0.0058	Pulse	0.1000	3
As	75	72	He	0.107	ppb	42.2	44.67	0.0006	Pulse	0.5000	3
Sr	88	115	He	0.141	ppb	17.9	120.00	0.0019	Pulse	0.1000	3
Mo	98	115	He	0.204	ppb	13.2	320.02	0.0050	Pulse	0.1000	3
Ag	107	115	He	0.015	ppb	32.7	73.33	0.0011	Pulse	0.1000	3
Cd	111	115	He	0.007	ppb	149.2	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.288	ppb	40.7	1260.11	0.0197	Pulse	0.1000	3
Sb	121	115	He	0.042	ppb	102.9	50.00	0.0008	Pulse	0.1000	3
Ba	137	115	He	0.311	ppb	11.0	106.67	0.0017	Pulse	0.1000	3
Tl	205	209	He	0.123	ppb	9.5	966.74	0.0044	Pulse	0.1000	3
Pb	208	209	He	0.229	ppb	4.2	2310.16	0.0105	Pulse	0.1000	3
U	238	209	He	0.017	ppb	47.0	213.34	0.0010	Pulse	0.1000	3

ISTD Table:

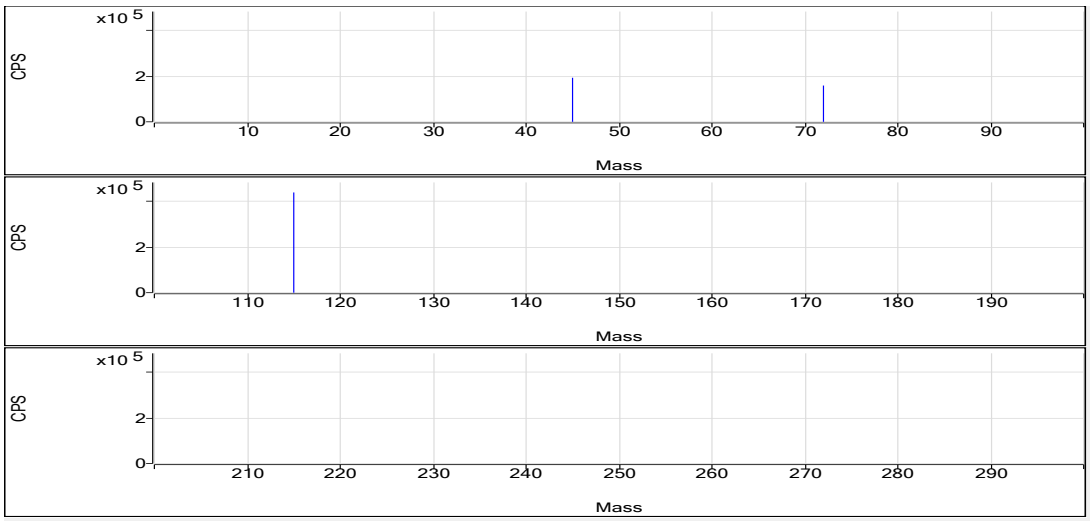
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3137396.83	1.6	96.8	Pulse	0.1000	3
No Gas	Ge	72	1397365.45	1.9	97.1	Pulse	0.1000	3
H2	Sc	45	192891.22	2.8	98.7	Pulse	0.1000	3
H2	Ge	72	158806.80	2.2	97.4	Pulse	0.1000	3
H2	In	115	438841.66	2.3	101.3	Pulse	0.1000	3
He	Sc	45	40918.07	1.5	102.3	Pulse	0.1000	3
He	Ge	72	72000.60	1.4	99.6	Pulse	0.1000	3
He	In	115	63900.35	2.7	98.9	Pulse	0.1000	3
He	Tb	159	282019.02	0.1	98.6	Pulse	0.1000	3
He	Bi	209	219724.64	0.9	98.9	Pulse	0.1000	3

No Gas

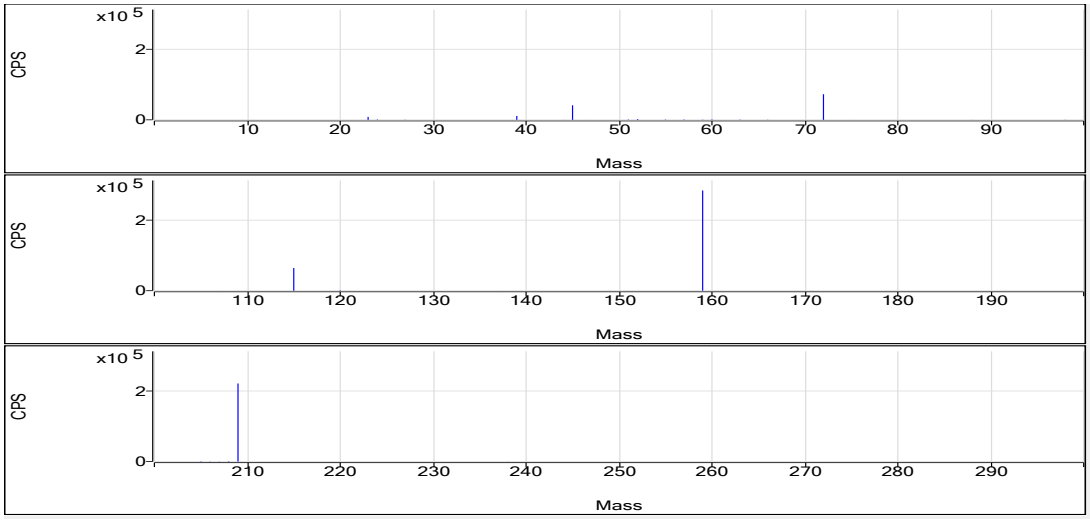


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.007	0.0001	80.00	0.0013	4.694E-05
Be	9	1	No Gas	0.004	0.0001	74.00	0.0013	4.694E-05
Be	9	1	No Gas	0.01	0.0001	82.00	0.0013	4.694E-05
Se	78	2	H2	0.057	0	5.33	0.0004	1.089E-05
Se	78	2	H2	0.004	0	2.00	0.0004	1.089E-05
Se	78	2	H2	0.072	0	6.00	0.0004	1.089E-05
Na	23	3	He	6.724	0.118	8362.54	0.0017	0.1065
Na	23	3	He	2.868	0.1114	8102.42	0.0017	0.1065
Na	23	3	He	2.78	0.1112	8052.45	0.0017	0.1065
Mg	24	3	He	11.158	0.0143	1010.08	0.0008	0.004846
Mg	24	3	He	12.026	0.015	1090.08	0.0008	0.004846
Mg	24	3	He	9.982	0.0133	960.07	0.0008	0.004846
Al	27	3	He	21.32	0.0062	440.02	0.0002	0.001063
Al	27	3	He	29.198	0.0081	590.03	0.0002	0.001063
Al	27	3	He	27.072	0.0076	550.03	0.0002	0.001063
K	39	3	He	30.046	0.1602	11354.83	0.0006	0.1436
K	39	3	He	-0.871	0.1432	10413.99	0.0006	0.1436
K	39	3	He	6.394	0.1472	10654.25	0.0006	0.1436
Ca	44	3	He	7.202	0.0018	130.01	0	0.001611
Ca	44	3	He	36.658	0.0027	200.01	0	0.001611
Ca	44	3	He	32.639	0.0026	190.01	0	0.001611
Ti	47	3	He	2.285	0.0008	60.00	0.0003	0.0002737
Ti	47	3	He	0.553	0.0004	30.00	0.0003	0.0002737
Ti	47	3	He	2.213	0.0008	60.00	0.0003	0.0002737
V	51	3	He	0.563	0.0139	986.04	0.0117	0.007326
V	51	3	He	0.563	0.0139	1012.04	0.0117	0.007326
V	51	3	He	0.46	0.0127	920.04	0.0117	0.007326
Cr	52	3	He	0.27	0.0295	2090.23	0.0152	0.02538
Cr	52	3	He	0.066	0.0264	1920.18	0.0152	0.02538
Cr	52	3	He	0.147	0.0276	2000.23	0.0152	0.02538
Mn	55	3	He	-0.076	0.0134	950.06	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.391	0.0115	840.06	0.0059	0.01385
Mn	55	3	He	-0.826	0.009	650.03	0.0059	0.01385
Fe	57	3	He	36.65	0.0145	1030.07	0.0003	0.003918
Fe	57	3	He	33.456	0.0136	990.07	0.0003	0.003918
Fe	57	3	He	29.392	0.0124	900.06	0.0003	0.003918
Co	59	3	He	0.176	0.0085	600.04	0.0305	0.003084
Co	59	3	He	0.169	0.0082	600.03	0.0305	0.003084
Co	59	3	He	0.107	0.0064	460.02	0.0305	0.003084
Ni	60	3	He	0.87	0.0167	1180.08	0.0088	0.009003
Ni	60	3	He	1.009	0.0179	1300.11	0.0088	0.009003
Ni	60	3	He	0.72	0.0153	1110.08	0.0088	0.009003
Cu	63	3	He	0.181	0.0095	670.04	0.0249	0.004937
Cu	63	3	He	0.238	0.0109	790.05	0.0249	0.004937
Cu	63	3	He	0.251	0.0112	810.05	0.0249	0.004937
Zn	66	3	He	0.559	0.0062	440.03	0.0025	0.004836
Zn	66	3	He	0.494	0.006	440.02	0.0025	0.004836
Zn	66	3	He	0.168	0.0052	380.02	0.0025	0.004836
As	75	3	He	0.156	0.0007	50.00	0.0017	0.0004347
As	75	3	He	0.066	0.0005	40.00	0.0017	0.0004347
As	75	3	He	0.1	0.0006	44.00	0.0017	0.0004347
Sr	88	3	He	0.169	0.0021	130.00	0.0078	0.0007762
Sr	88	3	He	0.119	0.0017	110.00	0.0078	0.0007762
Sr	88	3	He	0.136	0.0018	120.00	0.0078	0.0007762
Mo	98	3	He	0.226	0.0055	340.02	0.022	0.0005162
Mo	98	3	He	0.174	0.0043	280.02	0.022	0.0005162
Mo	98	3	He	0.213	0.0052	340.02	0.022	0.0005162
Ag	107	3	He	0.015	0.0011	70.00	0.0455	0.0004641
Ag	107	3	He	0.01	0.0009	60.00	0.0455	0.0004641
Ag	107	3	He	0.02	0.0014	90.00	0.0455	0.0004641
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Cd	111	3	He	0.015	0.0001	8.00	0.0048	5.152E-05
Cd	111	3	He	0.008	0.0001	6.00	0.0048	5.152E-05
Sn	120	3	He	0.197	0.0184	1140.10	0.0143	0.01559
Sn	120	3	He	0.247	0.0191	1230.12	0.0143	0.01559
Sn	120	3	He	0.42	0.0216	1410.12	0.0143	0.01559
Sb	121	3	He	-0.008	0.0002	10.00	0.0124	0.000258
Sb	121	3	He	0.067	0.0011	70.00	0.0124	0.000258
Sb	121	3	He	0.066	0.0011	70.00	0.0124	0.000258
Ba	137	3	He	0.298	0.0016	100.00	0.0044	0.000309
Ba	137	3	He	0.284	0.0016	100.00	0.0044	0.000309
Ba	137	3	He	0.349	0.0018	120.01	0.0044	0.000309
Tl	205	3	He	0.133	0.0047	1040.08	0.0276	0.001005
Tl	205	3	He	0.11	0.0041	890.06	0.0276	0.001005
Tl	205	3	He	0.125	0.0045	970.08	0.0276	0.001005
Pb	208	3	He	0.228	0.0105	1170.09	0.0364	0.002176
Pb	208	3	He	0.22	0.0102	1060.08	0.0364	0.002176
Pb	208	3	He	0.239	0.0109	1250.10	0.0364	0.002176
U	238	3	He	0.009	0.0006	140.01	0.0421	0.00024
U	238	3	He	0.026	0.0013	290.01	0.0421	0.00024
U	238	3	He	0.017	0.001	210.01	0.0421	0.00024
Sc	45	1	No Gas			3173345.27		
Sc	45	1	No Gas			3160405.89		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3078439.33		
Ge	72	1	No Gas			1409399.98		
Ge	72	1	No Gas			1416314.35		
Ge	72	1	No Gas			1366382.01		
Sc	45	2	H2			196073.90		
Sc	45	2	H2			195904.63		
Sc	45	2	H2			186695.13		
Ge	72	2	H2			160321.38		
Ge	72	2	H2			161223.07		
Ge	72	2	H2			154875.95		
In	115	2	H2			444625.81		
In	115	2	H2			444486.56		
In	115	2	H2			427412.61		
Sc	45	3	He			41579.76		
Sc	45	3	He			40366.71		
Sc	45	3	He			40807.74		
Ge	72	3	He			70864.78		
Ge	72	3	He			72743.81		
Ge	72	3	He			72393.22		
In	115	3	He			61988.66		
In	115	3	He			64388.91		
In	115	3	He			65352.95		
Tb	159	3	He			281948.86		
Tb	159	3	He			282394.57		
Tb	159	3	He			281713.63		
Bi	209	3	He			221760.29		
Bi	209	3	He			219700.62		
Bi	209	3	He			217713.00		

Quantitation Report

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Acq Time	2023-08-10 20:27:40
Sample Name	MB 410-404498/1-A @2
Sample Type	Sample
Comment	G20 ICP rr
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

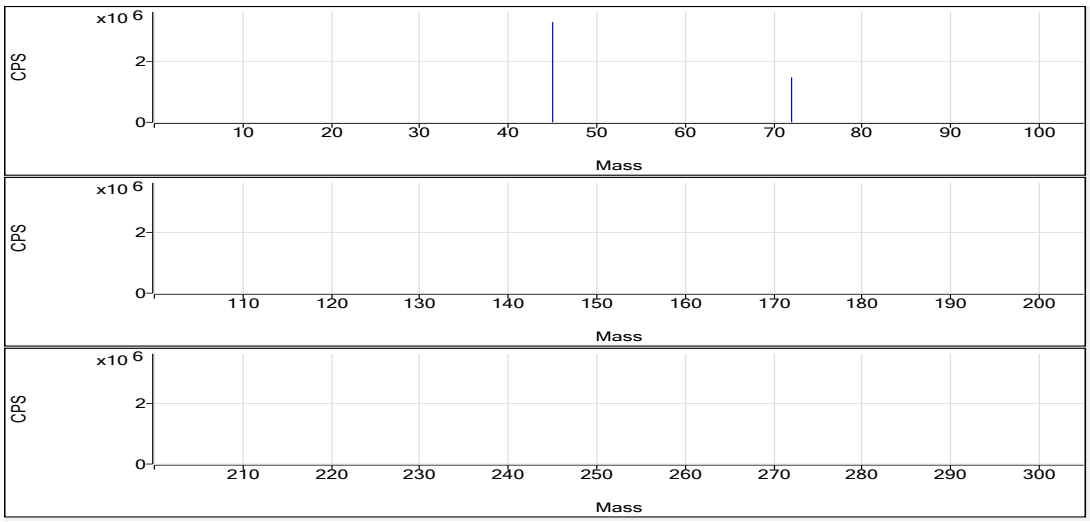
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.010	ppb	N/A	51.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.023	ppb	51.2	3.11	0.0000	Pulse	1.5000	3
Na	23	72	He	94.249	ppb	3.4	19443.16	0.2684	Pulse	0.1000	3
Mg	24	72	He	11.054	ppb	15.7	1026.74	0.0142	Pulse	0.1000	3
Al	27	72	He	21.822	ppb	30.4	460.02	0.0063	Pulse	0.1000	3
K	39	72	He	10.415	ppb	115.2	10830.97	0.1494	Pulse	0.1000	3
Ca	44	72	He	19.124	ppb	56.5	160.01	0.0022	Pulse	0.1000	3
Ti	47	72	He	0.552	ppb	170.4	30.00	0.0004	Pulse	0.1000	3
V	51	72	He	0.329	ppb	26.5	809.36	0.0112	Pulse	0.5000	3
Cr	52	72	He	0.302	ppb	46.3	2173.59	0.0300	Pulse	0.1000	3
Mn	55	72	He	-0.647	ppb	N/A	726.71	0.0100	Pulse	0.1000	3
Fe	57	72	He	38.328	ppb	19.1	1086.75	0.0150	Pulse	0.1000	3
Co	59	72	He	0.083	ppb	32.8	406.69	0.0056	Pulse	0.1000	3
Ni	60	72	He	1.048	ppb	9.1	1320.11	0.0182	Pulse	0.1000	3
Cu	63	72	He	0.409	ppb	14.1	1096.75	0.0151	Pulse	0.1000	3
Zn	66	72	He	1.232	ppb	33.6	570.03	0.0079	Pulse	0.1000	3
As	75	72	He	-0.017	ppb	N/A	29.33	0.0004	Pulse	0.5000	3
Sr	88	115	He	0.121	ppb	67.9	106.67	0.0017	Pulse	0.1000	3
Mo	98	115	He	0.216	ppb	11.4	326.69	0.0053	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	1318.9	30.00	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.007	ppb	53.7	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.326	ppb	4.9	1253.43	0.0202	Pulse	0.1000	3
Sb	121	115	He	0.027	ppb	146.8	36.67	0.0006	Pulse	0.1000	3
Ba	137	115	He	0.176	ppb	32.5	66.67	0.0011	Pulse	0.1000	3
Tl	205	209	He	0.001	ppb	969.5	223.34	0.0010	Pulse	0.1000	3
Pb	208	209	He	0.217	ppb	5.1	2196.83	0.0101	Pulse	0.1000	3
U	238	209	He	0.002	ppb	74.9	73.33	0.0003	Pulse	0.1000	3

ISTD Table:

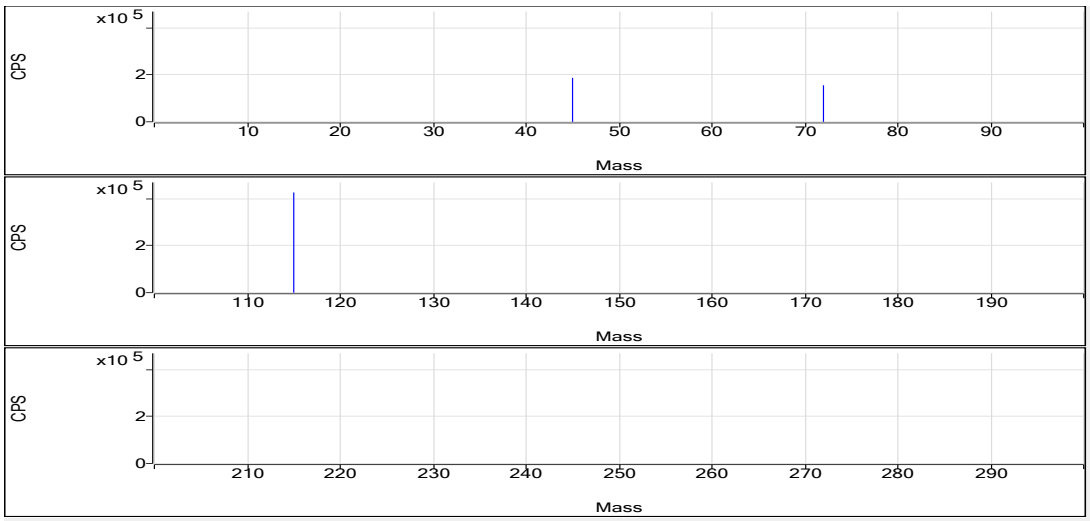
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3321532.55	2.2	102.5	Pulse	0.1000	3
No Gas	Ge	72	1492071.33	1.6	103.6	Pulse	0.1000	3
H2	Sc	45	187283.92	2.3	95.9	Pulse	0.1000	3
H2	Ge	72	155747.40	2.1	95.5	Pulse	0.1000	3
H2	In	115	426988.32	2.0	98.5	Pulse	0.1000	3
He	Sc	45	40921.50	0.8	102.3	Pulse	0.1000	3
He	Ge	72	72469.28	1.8	100.3	Pulse	0.1000	3
He	In	115	61927.93	0.8	95.9	Pulse	0.1000	3
He	Tb	159	278691.24	1.1	97.4	Pulse	0.1000	3
He	Bi	209	217895.96	1.4	98.1	Pulse	0.1000	3

No Gas

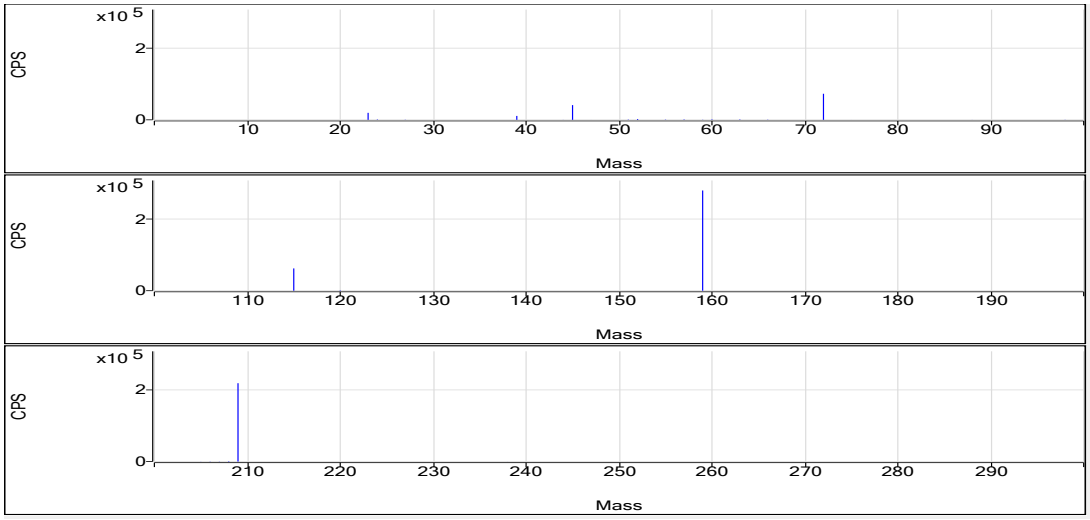


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.017	0	36.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.004	0	62.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.008	0	56.00	0.0013	4.694E-05
Se	78	2	H2	0.016	0	2.67	0.0004	1.089E-05
Se	78	2	H2	0.017	0	2.67	0.0004	1.089E-05
Se	78	2	H2	0.037	0	4.00	0.0004	1.089E-05
Na	23	3	He	90.627	0.2621	19393.08	0.0017	0.1065
Na	23	3	He	96.466	0.2722	19593.33	0.0017	0.1065
Na	23	3	He	95.652	0.2708	19343.06	0.0017	0.1065
Mg	24	3	He	11.729	0.0147	1090.07	0.0008	0.004846
Mg	24	3	He	9.081	0.0125	900.06	0.0008	0.004846
Mg	24	3	He	12.351	0.0153	1090.09	0.0008	0.004846
Al	27	3	He	29.197	0.0081	600.03	0.0002	0.001063
Al	27	3	He	16.314	0.005	360.02	0.0002	0.001063
Al	27	3	He	19.954	0.0059	420.02	0.0002	0.001063
K	39	3	He	19.293	0.1543	11414.78	0.0006	0.1436
K	39	3	He	15.185	0.152	10944.37	0.0006	0.1436
K	39	3	He	-3.233	0.1419	10133.77	0.0006	0.1436
Ca	44	3	He	26.474	0.0024	180.01	0	0.001611
Ca	44	3	He	24.168	0.0024	170.01	0	0.001611
Ca	44	3	He	6.729	0.0018	130.01	0	0.001611
Ti	47	3	He	1.065	0.0005	40.00	0.0003	0.0002737
Ti	47	3	He	1.124	0.0006	40.00	0.0003	0.0002737
Ti	47	3	He	-0.533	0.0001	10.00	0.0003	0.0002737
V	51	3	He	0.233	0.0101	744.02	0.0117	0.007326
V	51	3	He	0.404	0.0121	868.03	0.0117	0.007326
V	51	3	He	0.35	0.0114	816.03	0.0117	0.007326
Cr	52	3	He	0.322	0.0303	2240.26	0.0152	0.02538
Cr	52	3	He	0.431	0.032	2300.28	0.0152	0.02538
Cr	52	3	He	0.153	0.0277	1980.22	0.0152	0.02538
Mn	55	3	He	-0.79	0.0092	680.04	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.605	0.0103	740.04	0.0059	0.01385
Mn	55	3	He	-0.545	0.0106	760.05	0.0059	0.01385
Fe	57	3	He	29.871	0.0126	930.06	0.0003	0.003918
Fe	57	3	He	42.099	0.0161	1160.09	0.0003	0.003918
Fe	57	3	He	43.013	0.0164	1170.09	0.0003	0.003918
Co	59	3	He	0.067	0.0051	380.02	0.0305	0.003084
Co	59	3	He	0.067	0.0051	370.02	0.0305	0.003084
Co	59	3	He	0.115	0.0066	470.02	0.0305	0.003084
Ni	60	3	He	1.005	0.0178	1320.11	0.0088	0.009003
Ni	60	3	He	0.983	0.0176	1270.11	0.0088	0.009003
Ni	60	3	He	1.157	0.0192	1370.11	0.0088	0.009003
Cu	63	3	He	0.371	0.0142	1050.08	0.0249	0.004937
Cu	63	3	He	0.381	0.0144	1040.07	0.0249	0.004937
Cu	63	3	He	0.476	0.0168	1200.10	0.0249	0.004937
Zn	66	3	He	1.223	0.0078	580.03	0.0025	0.004836
Zn	66	3	He	1.65	0.0089	640.04	0.0025	0.004836
Zn	66	3	He	0.823	0.0069	490.02	0.0025	0.004836
As	75	3	He	-0.001	0.0004	32.00	0.0017	0.0004347
As	75	3	He	-0.042	0.0004	26.00	0.0017	0.0004347
As	75	3	He	-0.008	0.0004	30.00	0.0017	0.0004347
Sr	88	3	He	0.045	0.0011	70.00	0.0078	0.0007762
Sr	88	3	He	0.109	0.0016	100.00	0.0078	0.0007762
Sr	88	3	He	0.208	0.0024	150.01	0.0078	0.0007762
Mo	98	3	He	0.189	0.0047	290.02	0.022	0.0005162
Mo	98	3	He	0.22	0.0054	330.02	0.022	0.0005162
Mo	98	3	He	0.238	0.0058	360.02	0.022	0.0005162
Ag	107	3	He	-0.003	0.0003	20.00	0.0455	0.0004641
Ag	107	3	He	0.008	0.0008	50.00	0.0455	0.0004641
Ag	107	3	He	-0.003	0.0003	20.00	0.0455	0.0004641
Cd	111	3	He	0.003	0.0001	4.00	0.0048	5.152E-05
Cd	111	3	He	0.01	0.0001	6.00	0.0048	5.152E-05
Cd	111	3	He	0.009	0.0001	6.00	0.0048	5.152E-05
Sn	120	3	He	0.313	0.02	1240.10	0.0143	0.01559
Sn	120	3	He	0.344	0.0205	1260.10	0.0143	0.01559
Sn	120	3	He	0.322	0.0202	1260.10	0.0143	0.01559
Sb	121	3	He	-0.008	0.0002	10.00	0.0124	0.000258
Sb	121	3	He	0.019	0.0005	30.00	0.0124	0.000258
Sb	121	3	He	0.07	0.0011	70.00	0.0124	0.000258
Ba	137	3	He	0.114	0.0008	50.00	0.0044	0.000309
Ba	137	3	He	0.227	0.0013	80.00	0.0044	0.000309
Ba	137	3	He	0.186	0.0011	70.00	0.0044	0.000309
Tl	205	3	He	-0.005	0.0009	190.01	0.0276	0.001005
Tl	205	3	He	0.009	0.0013	270.01	0.0276	0.001005
Tl	205	3	He	-0.002	0.0009	210.01	0.0276	0.001005
Pb	208	3	He	0.212	0.0099	1250.10	0.0364	0.002176
Pb	208	3	He	0.23	0.0105	1180.09	0.0364	0.002176
Pb	208	3	He	0.21	0.0098	1200.10	0.0364	0.002176
U	238	3	He	0.004	0.0004	90.00	0.0421	0.00024
U	238	3	He	0.002	0.0003	70.00	0.0421	0.00024
U	238	3	He	0.001	0.0003	60.00	0.0421	0.00024
Sc	45	1	No Gas			3239956.20		
Sc	45	1	No Gas			3347027.45		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3377614.01		
Ge	72	1	No Gas			1471350.13		
Ge	72	1	No Gas			1487337.48		
Ge	72	1	No Gas			1517526.38		
Sc	45	2	H2			187088.71		
Sc	45	2	H2			183012.20		
Sc	45	2	H2			191750.84		
Ge	72	2	H2			157118.67		
Ge	72	2	H2			152003.83		
Ge	72	2	H2			158119.71		
In	115	2	H2			433514.49		
In	115	2	H2			417265.97		
In	115	2	H2			430184.49		
Sc	45	3	He			41269.16		
Sc	45	3	He			40597.12		
Sc	45	3	He			40898.21		
Ge	72	3	He			73980.47		
Ge	72	3	He			71990.07		
Ge	72	3	He			71437.29		
In	115	3	He			61867.55		
In	115	3	He			61495.69		
In	115	3	He			62449.87		
Tb	159	3	He			278401.85		
Tb	159	3	He			275806.97		
Tb	159	3	He			281864.90		
Bi	209	3	He			217022.18		
Bi	209	3	He			215294.18		
Bi	209	3	He			221371.52		

Quantitation Report

Data File Name	285SMPL.d
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Sample Type	Sample
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

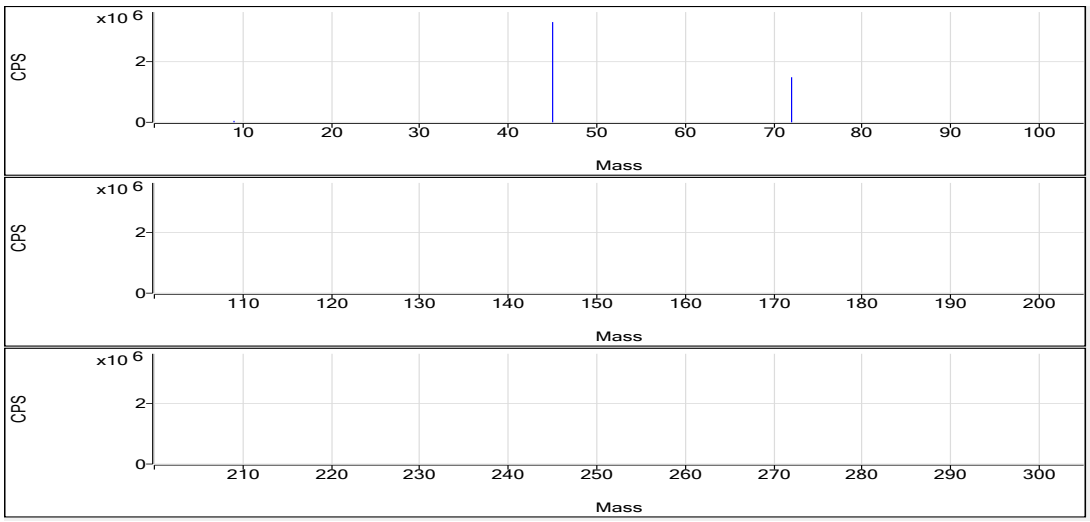
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	24.539	ppb	4.3	47613.41	0.0323	Pulse	0.5000	3
Se	78	72	H2	53.647	ppb	5.2	3351.06	0.0209	Pulse	1.5000	3
Na	23	72	He	2775.240	ppb	1.0	355734.82	4.8738	Pulse	0.1000	3
Mg	24	72	He	2728.160	ppb	1.9	168224.72	2.3050	Pulse	0.1000	3
Al	27	72	He	2707.477	ppb	2.2	47777.42	0.6546	Pulse	0.1000	3
K	39	72	He	2677.286	ppb	2.4	118386.40	1.6221	Pulse	0.1000	3
Ca	44	72	He	2721.883	ppb	1.0	6288.24	0.0862	Pulse	0.1000	3
Ti	47	72	He	273.477	ppb	5.8	5024.37	0.0689	Pulse	0.1000	3
V	51	72	He	269.082	ppb	1.4	230271.61	3.1550	Pulse	0.5000	3
Cr	52	72	He	272.218	ppb	1.4	304394.13	4.1705	Pulse	0.1000	3
Mn	55	72	He	267.562	ppb	2.9	116262.12	1.5931	Pulse	0.1000	3
Fe	57	72	He	2704.130	ppb	1.8	57464.02	0.7873	Pulse	0.1000	3
Co	59	72	He	270.075	ppb	1.7	601639.89	8.2432	Pulse	0.1000	3
Ni	60	72	He	269.654	ppb	1.6	173716.25	2.3802	Pulse	0.1000	3
Cu	63	72	He	268.312	ppb	1.4	488709.86	6.6959	Pulse	0.1000	3
Zn	66	72	He	267.174	ppb	1.6	48264.98	0.6612	Pulse	0.1000	3
As	75	72	He	264.619	ppb	1.8	33620.38	0.4607	Pulse	0.5000	3
Sr	88	115	He	26.977	ppb	0.5	13283.26	0.2117	Pulse	0.1000	3
Mo	98	115	He	26.351	ppb	1.1	36451.03	0.5808	Pulse	0.1000	3
Ag	107	115	He	26.383	ppb	1.3	75365.33	1.2009	Pulse	0.1000	3
Cd	111	115	He	26.883	ppb	2.1	8101.71	0.1291	Pulse	0.5000	3
Sn	120	115	He	53.757	ppb	1.1	49080.24	0.7821	Pulse	0.1000	3
Sb	121	115	He	52.777	ppb	3.7	41101.21	0.6550	Pulse	0.1000	3
Ba	137	115	He	267.265	ppb	1.4	73398.64	1.1695	Pulse	0.1000	3
Tl	205	209	He	53.292	ppb	0.5	321931.60	1.4742	Pulse	0.1000	3
Pb	208	209	He	27.176	ppb	1.2	216469.12	0.9913	Pulse	0.1000	3
U	238	209	He	26.584	ppb	2.1	244248.60	1.1186	Pulse	0.1000	3

ISTD Table:

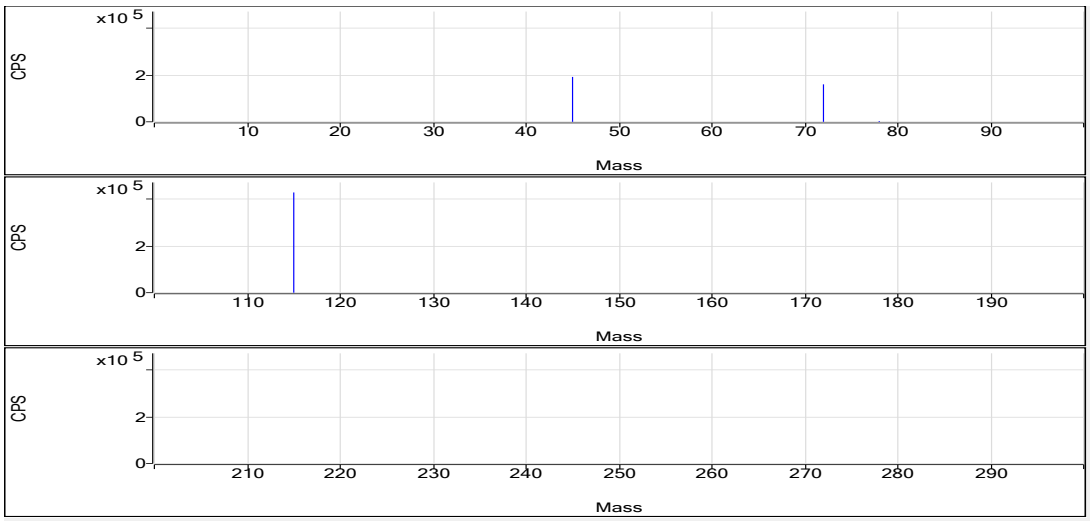
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3281680.89	2.8	101.2	Pulse	0.1000	3
No Gas	Ge	72	1475469.35	2.6	102.5	Pulse	0.1000	3
H2	Sc	45	192236.19	1.9	98.4	Pulse	0.1000	3
H2	Ge	72	160476.20	2.5	98.4	Pulse	0.1000	3
H2	In	115	429216.36	1.8	99.1	Pulse	0.1000	3
He	Sc	45	41095.02	2.6	102.8	Pulse	0.1000	3
He	Ge	72	72995.00	1.2	101.0	Pulse	0.1000	3
He	In	115	62759.76	0.4	97.2	Pulse	0.1000	3
He	Tb	159	279653.16	0.6	97.8	Pulse	0.1000	3
He	Bi	209	218376.59	0.6	98.3	Pulse	0.1000	3

No Gas

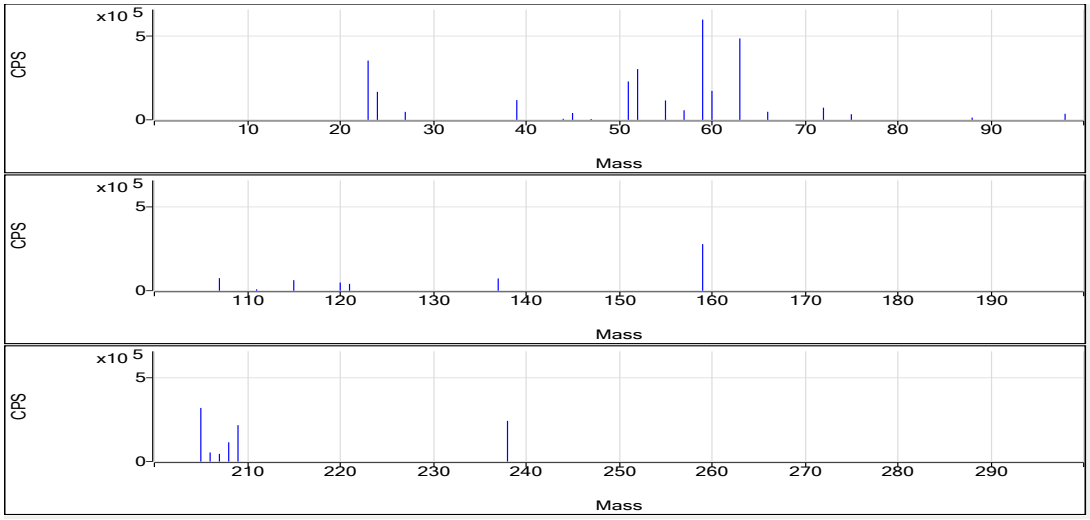


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	25.741	0.0339	48507.49	0.0013	4.694E-05
Be	9	1	No Gas	23.749	0.0313	46533.49	0.0013	4.694E-05
Be	9	1	No Gas	24.127	0.0318	47799.25	0.0013	4.694E-05
Se	78	2	H2	54.823	0.0214	3359.06	0.0004	1.089E-05
Se	78	2	H2	55.65	0.0217	3449.75	0.0004	1.089E-05
Se	78	2	H2	50.468	0.0197	3244.37	0.0004	1.089E-05
Na	23	3	He	2768.253	4.8618	355911.24	0.0017	0.1065
Na	23	3	He	2806.738	4.9279	354812.57	0.0017	0.1065
Na	23	3	He	2750.729	4.8317	356480.66	0.0017	0.1065
Mg	24	3	He	2713.609	2.2927	167837.50	0.0008	0.004846
Mg	24	3	He	2784.776	2.3527	169394.82	0.0008	0.004846
Mg	24	3	He	2686.094	2.2695	167441.85	0.0008	0.004846
Al	27	3	He	2660.659	0.6433	47095.24	0.0002	0.001063
Al	27	3	He	2774.517	0.6708	48298.90	0.0002	0.001063
Al	27	3	He	2687.254	0.6498	47938.12	0.0002	0.001063
K	39	3	He	2711.465	1.6409	120125.86	0.0006	0.1436
K	39	3	He	2716.873	1.6439	118363.50	0.0006	0.1436
K	39	3	He	2603.52	1.5813	116669.83	0.0006	0.1436
Ca	44	3	He	2701.984	0.0855	6261.56	0	0.001611
Ca	44	3	He	2752.55	0.0871	6271.57	0	0.001611
Ca	44	3	He	2711.116	0.0858	6331.58	0	0.001611
Ti	47	3	He	282.762	0.0712	5211.09	0.0003	0.0002737
Ti	47	3	He	282.528	0.0711	5121.08	0.0003	0.0002737
Ti	47	3	He	255.143	0.0643	4740.93	0.0003	0.0002737
V	51	3	He	267.601	3.1377	229692.89	0.0117	0.007326
V	51	3	He	273.315	3.2045	230725.20	0.0117	0.007326
V	51	3	He	266.33	3.1228	230396.73	0.0117	0.007326
Cr	52	3	He	269.51	4.1293	302286.23	0.0152	0.02538
Cr	52	3	He	276.746	4.2395	305242.81	0.0152	0.02538
Cr	52	3	He	270.398	4.1428	305653.35	0.0152	0.02538
Mn	55	3	He	267	1.5898	116381.98	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	275.638	1.6408	118137.01	0.0059	0.01385
Mn	55	3	He	260.049	1.5488	114267.36	0.0059	0.01385
Fe	57	3	He	2679.362	0.7802	57112.49	0.0003	0.003918
Fe	57	3	He	2759.588	0.8034	57845.85	0.0003	0.003918
Fe	57	3	He	2673.441	0.7785	57433.71	0.0003	0.003918
Co	59	3	He	266.541	8.1354	595553.35	0.0305	0.003084
Co	59	3	He	275.27	8.4017	604926.83	0.0305	0.003084
Co	59	3	He	268.414	8.1925	604439.48	0.0305	0.003084
Ni	60	3	He	269.334	2.3773	174033.59	0.0088	0.009003
Ni	60	3	He	274.208	2.4202	174254.96	0.0088	0.009003
Ni	60	3	He	265.422	2.3429	172860.21	0.0088	0.009003
Cu	63	3	He	267.122	6.6662	488000.11	0.0249	0.004937
Cu	63	3	He	272.411	6.7981	489464.21	0.0249	0.004937
Cu	63	3	He	265.404	6.6233	488665.27	0.0249	0.004937
Zn	66	3	He	271.787	0.6726	49234.48	0.0025	0.004836
Zn	66	3	He	266.275	0.659	47449.06	0.0025	0.004836
Zn	66	3	He	263.461	0.6521	48111.41	0.0025	0.004836
As	75	3	He	263.178	0.4581	33538.81	0.0017	0.0004347
As	75	3	He	269.925	0.4699	33831.53	0.0017	0.0004347
As	75	3	He	260.755	0.4539	33490.79	0.0017	0.0004347
Sr	88	3	He	26.841	0.2106	13276.57	0.0078	0.0007762
Sr	88	3	He	26.998	0.2118	13266.56	0.0078	0.0007762
Sr	88	3	He	27.091	0.2125	13306.65	0.0078	0.0007762
Mo	98	3	He	26.099	0.5753	36267.11	0.022	0.0005162
Mo	98	3	He	26.279	0.5792	36277.29	0.022	0.0005162
Mo	98	3	He	26.675	0.5879	36808.69	0.022	0.0005162
Ag	107	3	He	25.975	1.1823	74538.27	0.0455	0.0004641
Ag	107	3	He	26.559	1.2089	75713.68	0.0455	0.0004641
Ag	107	3	He	26.615	1.2115	75844.03	0.0455	0.0004641
Cd	111	3	He	26.273	0.1262	7954.29	0.0048	5.152E-05
Cd	111	3	He	26.979	0.1296	8114.39	0.0048	5.152E-05
Cd	111	3	He	27.396	0.1316	8236.45	0.0048	5.152E-05
Sn	120	3	He	53.203	0.7742	48805.79	0.0143	0.01559
Sn	120	3	He	53.686	0.781	48916.33	0.0143	0.01559
Sn	120	3	He	54.382	0.791	49518.59	0.0143	0.01559
Sb	121	3	He	50.637	0.6284	39616.96	0.0124	0.000258
Sb	121	3	He	54.495	0.6763	42354.72	0.0124	0.000258
Sb	121	3	He	53.2	0.6602	41331.94	0.0124	0.000258
Ba	137	3	He	265.277	1.1608	73183.92	0.0044	0.000309
Ba	137	3	He	265.013	1.1597	72631.29	0.0044	0.000309
Ba	137	3	He	271.505	1.1881	74380.72	0.0044	0.000309
Tl	205	3	He	52.985	1.4657	322148.63	0.0276	0.001005
Tl	205	3	He	53.552	1.4814	322641.99	0.0276	0.001005
Tl	205	3	He	53.339	1.4755	321004.17	0.0276	0.001005
Pb	208	3	He	26.816	0.9782	114897.28	0.0364	0.002176
Pb	208	3	He	27.434	1.0007	117319.04	0.0364	0.002176
Pb	208	3	He	27.277	0.995	114332.73	0.0364	0.002176
U	238	3	He	25.979	1.0931	240248.30	0.0421	0.00024
U	238	3	He	26.734	1.1249	244989.72	0.0421	0.00024
U	238	3	He	27.039	1.1377	247507.79	0.0421	0.00024
Sc	45	1	No Gas			3179438.39		
Sc	45	1	No Gas			3307712.14		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3357892.14		
Ge	72	1	No Gas			1432119.35		
Ge	72	1	No Gas			1488850.76		
Ge	72	1	No Gas			1505437.95		
Sc	45	2	H2			189653.53		
Sc	45	2	H2			190553.86		
Sc	45	2	H2			196501.17		
Ge	72	2	H2			157282.11		
Ge	72	2	H2			159130.97		
Ge	72	2	H2			165015.51		
In	115	2	H2			430008.59		
In	115	2	H2			421022.22		
In	115	2	H2			436618.27		
Sc	45	3	He			41118.78		
Sc	45	3	He			42151.08		
Sc	45	3	He			40015.19		
Ge	72	3	He			73205.36		
Ge	72	3	He			72000.33		
Ge	72	3	He			73779.31		
In	115	3	He			63424.53		
In	115	3	He			63011.58		
In	115	3	He			62991.65		
Tb	159	3	He			277781.44		
Tb	159	3	He			280594.92		
Tb	159	3	He			280583.12		
Bi	209	3	He			219785.49		
Bi	209	3	He			217792.16		
Bi	209	3	He			217552.11		

Quantitation Report

Data File Name	286SMPL.d
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Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

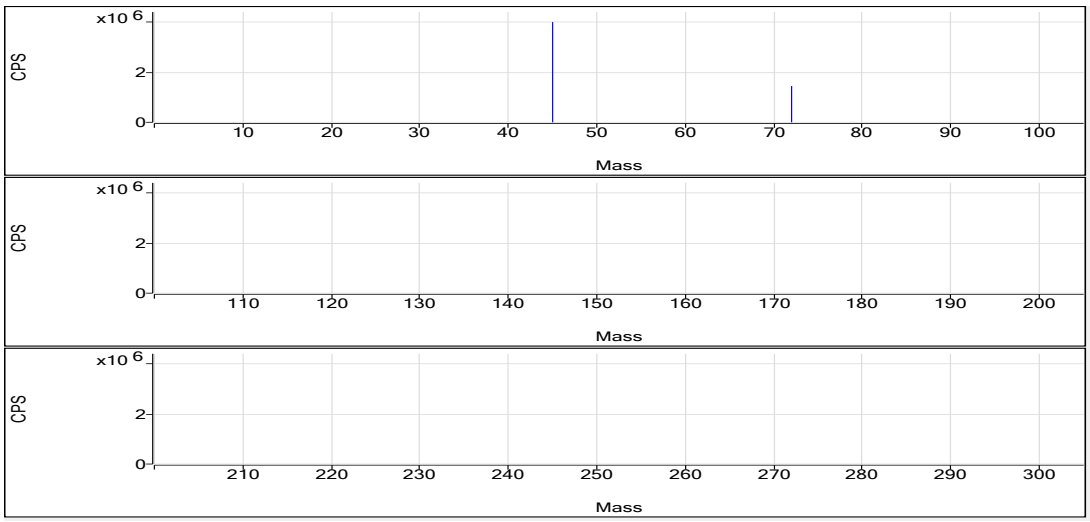
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	1.823	ppb	6.8	3523.76	0.0024	Pulse	0.5000	3
Se	78	72	H2	0.528	ppb	8.1	33.78	0.0002	Pulse	1.5000	3
Na	23	72	He	5475.313	ppb	0.9	700597.83	9.5121	Pulse	0.1000	3
Mg	24	72	He	137146.854	ppb	0.9	8516885.71	115.6336	Analog	0.1000	3
Al	27	72	He	115933.598	ppb	0.6	2061345.49	27.9868	Pulse	0.1000	3
K	39	72	He	2449.755	ppb	0.1	110219.76	1.4964	Pulse	0.1000	3
Ca	44	72	He	176568.551	ppb	0.8	404050.58	5.4858	Pulse	0.1000	3
Ti	47	72	He	16854.902	ppb	0.9	311343.26	4.2271	Pulse	0.1000	3
V	51	72	He	512.493	ppb	0.5	442098.86	6.0023	Pulse	0.5000	3
Cr	52	72	He	246.402	ppb	0.6	278222.96	3.7774	Pulse	0.1000	3
Mn	55	72	He	4243.693	ppb	0.6	1845923.67	25.0619	Pulse	0.1000	3
Fe	57	72	He	217806.644	ppb	0.3	4648043.89	63.1057	Pulse	0.1000	3
Co	59	72	He	138.909	ppb	0.6	312388.08	4.2413	Pulse	0.1000	3
Ni	60	72	He	242.952	ppb	0.8	158013.16	2.1454	Pulse	0.1000	3
Cu	63	72	He	405.087	ppb	0.7	744393.97	10.1066	Pulse	0.1000	3
Zn	66	72	He	313.149	ppb	1.2	57019.73	0.7742	Pulse	0.1000	3
As	75	72	He	6.557	ppb	6.6	872.03	0.0118	Pulse	0.5000	3
Sr	88	115	He	312.074	ppb	1.1	148990.32	2.4403	Pulse	0.1000	3
Mo	98	115	He	1.879	ppb	11.9	2556.99	0.0419	Pulse	0.1000	3
Ag	107	115	He	0.254	ppb	3.6	733.38	0.0120	Pulse	0.1000	3
Cd	111	115	He	0.524	ppb	10.5	156.67	0.0026	Pulse	0.5000	3
Sn	120	115	He	2.539	ppb	15.2	3160.48	0.0518	Pulse	0.1000	3
Sb	121	115	He	0.102	ppb	31.1	93.34	0.0015	Pulse	0.1000	3
Ba	137	115	He	308.916	ppb	0.5	82537.78	1.3518	Pulse	0.1000	3
Tl	205	209	He	0.231	ppb	11.5	1560.16	0.0074	Pulse	0.1000	3
Pb	208	209	He	32.637	ppb	1.0	251205.06	1.1901	Pulse	0.1000	3
U	238	209	He	2.065	ppb	3.4	18383.63	0.0871	Pulse	0.1000	3

ISTD Table:

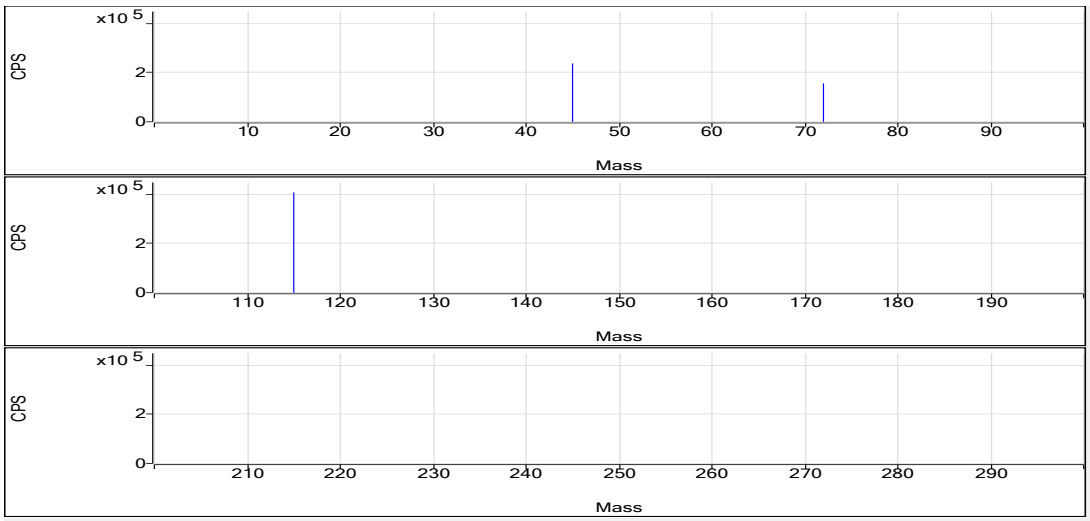
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3999116.71	1.3	123.4	Pulse	0.1000	3
No Gas	Ge	72	1444619.10	2.5	100.3	Pulse	0.1000	3
H2	Sc	45	237278.26	2.2	121.4	Pulse	0.1000	3
H2	Ge	72	156128.74	1.9	95.8	Pulse	0.1000	3
H2	In	115	407609.59	2.4	94.1	Pulse	0.1000	3
He	Sc	45	50327.32	0.5	125.9	Pulse	0.1000	3
He	Ge	72	73655.54	0.5	101.9	Pulse	0.1000	3
He	In	115	61059.46	1.2	94.5	Pulse	0.1000	3
He	Tb	159	294498.02	0.9	103.0	Pulse	0.1000	3
He	Bi	209	211085.56	0.1	95.0	Pulse	0.1000	3

No Gas

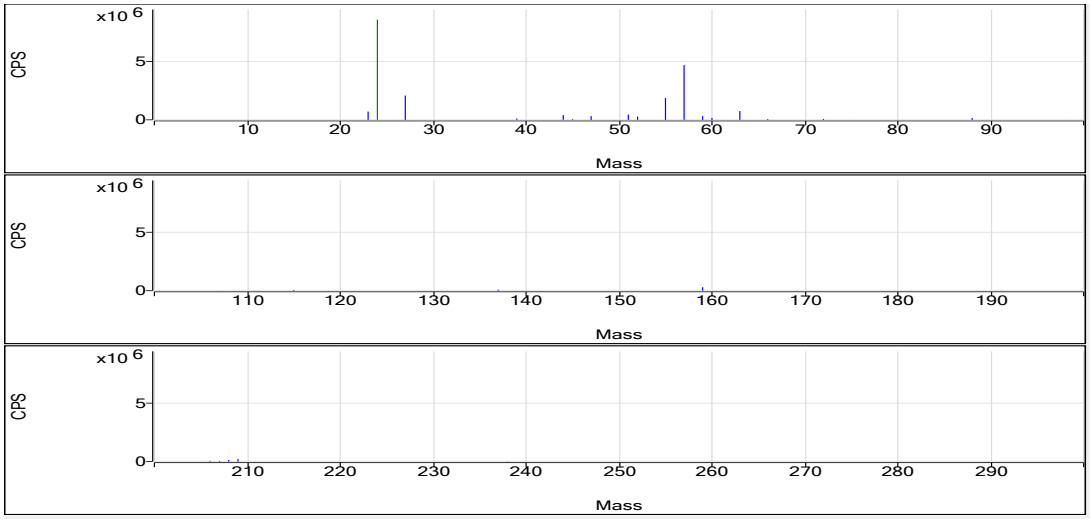


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	1.965	0.0026	3692.47	0.0013	4.694E-05
Be	9	1	No Gas	1.741	0.0023	3404.40	0.0013	4.694E-05
Be	9	1	No Gas	1.761	0.0024	3474.42	0.0013	4.694E-05
Se	78	2	H2	0.478	0.0002	30.67	0.0004	1.089E-05
Se	78	2	H2	0.552	0.0002	34.67	0.0004	1.089E-05
Se	78	2	H2	0.552	0.0002	36.00	0.0004	1.089E-05
Na	23	3	He	5496.782	9.5489	703075.07	0.0017	0.1065
Na	23	3	He	5508.898	9.5698	701625.38	0.0017	0.1065
Na	23	3	He	5420.258	9.4175	697093.04	0.0017	0.1065
Mg	24	3	He	138168.96	116.4953	8577382.37	0.0008	0.004846
Mg	24	3	He	137422.995	115.8664	8494969.25	0.0008	0.004846
Mg	24	3	He	135848.606	114.539	8478305.50	0.0008	0.004846
Al	27	3	He	116328.169	28.082	2067637.78	0.0002	0.001063
Al	27	3	He	116320.187	28.0801	2058745.59	0.0002	0.001063
Al	27	3	He	115152.438	27.7982	2057653.09	0.0002	0.001063
K	39	3	He	2452.483	1.4979	110290.50	0.0006	0.1436
K	39	3	He	2449.566	1.4963	109705.62	0.0006	0.1436
K	39	3	He	2447.215	1.495	110663.16	0.0006	0.1436
Ca	44	3	He	177230.725	5.5064	405426.32	0	0.001611
Ca	44	3	He	177489.97	5.5144	404300.78	0	0.001611
Ca	44	3	He	174984.96	5.4366	402424.64	0	0.001611
Ti	47	3	He	16880.928	4.2337	311718.34	0.0003	0.0002737
Ti	47	3	He	16985.605	4.2599	312323.67	0.0003	0.0002737
Ti	47	3	He	16698.172	4.1878	309987.77	0.0003	0.0002737
V	51	3	He	512.647	6.0041	442076.47	0.0117	0.007326
V	51	3	He	514.959	6.0312	442188.19	0.0117	0.007326
V	51	3	He	509.874	5.9717	442031.91	0.0117	0.007326
Cr	52	3	He	245.295	3.7606	276884.98	0.0152	0.02538
Cr	52	3	He	248.236	3.8053	278995.70	0.0152	0.02538
Cr	52	3	He	245.674	3.7663	278788.20	0.0152	0.02538
Mn	55	3	He	4227.497	24.9663	1838234.19	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	4270.872	25.2223	1849224.82	0.0059	0.01385
Mn	55	3	He	4232.709	24.9971	1850312.00	0.0059	0.01385
Fe	57	3	He	218070.413	63.1821	4652008.06	0.0003	0.003918
Fe	57	3	He	218247.932	63.2335	4636089.93	0.0003	0.003918
Fe	57	3	He	217101.585	62.9014	4656033.68	0.0003	0.003918
Co	59	3	He	138.478	4.2281	311310.03	0.0305	0.003084
Co	59	3	He	139.847	4.2699	313054.80	0.0305	0.003084
Co	59	3	He	138.402	4.2258	312799.41	0.0305	0.003084
Ni	60	3	He	242.174	2.1385	157455.34	0.0088	0.009003
Ni	60	3	He	245.201	2.1651	158740.66	0.0088	0.009003
Ni	60	3	He	241.48	2.1324	157843.48	0.0088	0.009003
Cu	63	3	He	403.701	10.0721	741591.63	0.0249	0.004937
Cu	63	3	He	408.549	10.193	747316.71	0.0249	0.004937
Cu	63	3	He	403.012	10.0549	744273.58	0.0249	0.004937
Zn	66	3	He	312.493	0.7726	56882.39	0.0025	0.004836
Zn	66	3	He	317.175	0.7841	57485.05	0.0025	0.004836
Zn	66	3	He	309.777	0.7659	56691.74	0.0025	0.004836
As	75	3	He	6.06	0.011	808.03	0.0017	0.0004347
As	75	3	He	6.761	0.0122	894.03	0.0017	0.0004347
As	75	3	He	6.85	0.0123	914.03	0.0017	0.0004347
Sr	88	3	He	316.099	2.4718	148882.54	0.0078	0.0007762
Sr	88	3	He	310.616	2.4289	149842.95	0.0078	0.0007762
Sr	88	3	He	309.507	2.4202	148245.47	0.0078	0.0007762
Mo	98	3	He	2.035	0.0453	2730.36	0.022	0.0005162
Mo	98	3	He	1.979	0.0441	2720.36	0.022	0.0005162
Mo	98	3	He	1.623	0.0362	2220.24	0.022	0.0005162
Ag	107	3	He	0.249	0.0118	710.05	0.0455	0.0004641
Ag	107	3	He	0.264	0.0125	770.05	0.0455	0.0004641
Ag	107	3	He	0.248	0.0118	720.04	0.0455	0.0004641
Cd	111	3	He	0.543	0.0027	160.00	0.0048	5.152E-05
Cd	111	3	He	0.462	0.0023	140.00	0.0048	5.152E-05
Cd	111	3	He	0.567	0.0028	170.00	0.0048	5.152E-05
Sn	120	3	He	2.948	0.0576	3470.55	0.0143	0.01559
Sn	120	3	He	2.488	0.0511	3150.51	0.0143	0.01559
Sn	120	3	He	2.182	0.0467	2860.39	0.0143	0.01559
Sb	121	3	He	0.073	0.0012	70.00	0.0124	0.000258
Sb	121	3	He	0.136	0.0019	120.01	0.0124	0.000258
Sb	121	3	He	0.098	0.0015	90.00	0.0124	0.000258
Ba	137	3	He	308.149	1.3484	81218.88	0.0044	0.000309
Ba	137	3	He	307.838	1.347	83101.34	0.0044	0.000309
Ba	137	3	He	310.761	1.3598	83293.13	0.0044	0.000309
Tl	205	3	He	0.238	0.0076	1600.18	0.0276	0.001005
Tl	205	3	He	0.202	0.0066	1390.12	0.0276	0.001005
Tl	205	3	He	0.254	0.008	1690.17	0.0276	0.001005
Pb	208	3	He	32.327	1.1788	134035.69	0.0364	0.002176
Pb	208	3	He	32.629	1.1898	135065.73	0.0364	0.002176
Pb	208	3	He	32.955	1.2016	136209.62	0.0364	0.002176
U	238	3	He	2.028	0.0856	18063.23	0.0421	0.00024
U	238	3	He	2.02	0.0852	18002.92	0.0421	0.00024
U	238	3	He	2.146	0.0905	19084.74	0.0421	0.00024
Sc	45	1	No Gas			3940352.13		
Sc	45	1	No Gas			4023053.69		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			4033944.31		
Ge	72	1	No Gas			1404425.92		
Ge	72	1	No Gas			1458155.45		
Ge	72	1	No Gas			1471275.92		
Sc	45	2	H2			236439.94		
Sc	45	2	H2			232468.16		
Sc	45	2	H2			242926.68		
Ge	72	2	H2			155641.78		
Ge	72	2	H2			153400.63		
Ge	72	2	H2			159343.81		
In	115	2	H2			408103.55		
In	115	2	H2			397438.28		
In	115	2	H2			417286.95		
Sc	45	3	He			50588.59		
Sc	45	3	He			50076.33		
Sc	45	3	He			50317.03		
Ge	72	3	He			73628.56		
Ge	72	3	He			73316.94		
Ge	72	3	He			74021.11		
In	115	3	He			60260.64		
In	115	3	He			61716.50		
In	115	3	He			61275.18		
Tb	159	3	He			293213.55		
Tb	159	3	He			297666.77		
Tb	159	3	He			292613.75		
Bi	209	3	He			211114.76		
Bi	209	3	He			211271.36		
Bi	209	3	He			210870.56		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 20:33:38
Sample Name	410-137227-B-1-A @10
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

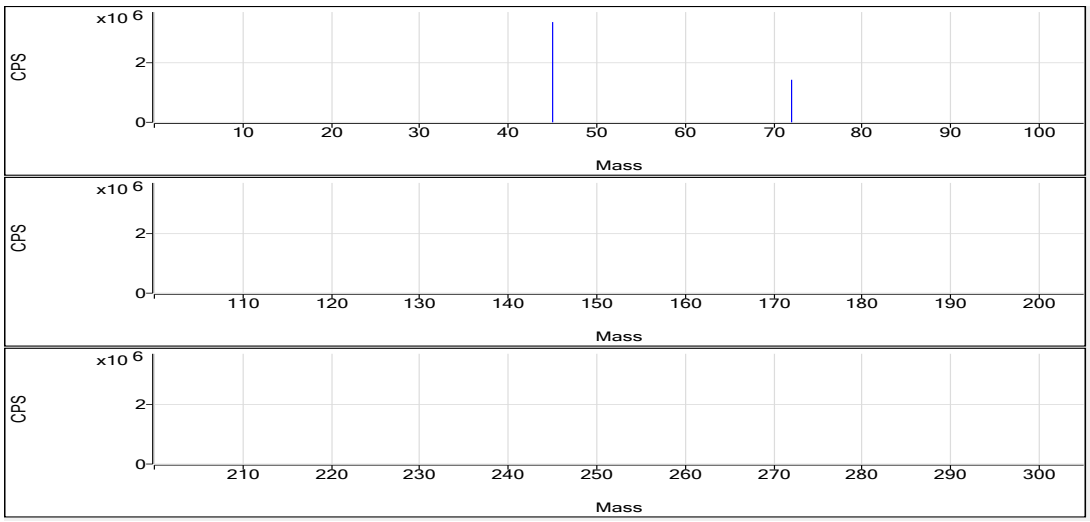
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.431	ppb	6.9	879.37	0.0006	Pulse	0.5000	3
Se	78	72	H2	0.114	ppb	26.9	8.67	0.0001	Pulse	1.5000	3
Na	23	72	He	1290.428	ppb	2.7	171548.30	2.3232	Pulse	0.1000	3
Mg	24	72	He	28945.746	ppb	2.1	1802519.29	24.4091	Pulse	0.1000	3
Al	27	72	He	25134.465	ppb	1.7	448158.86	6.0684	Pulse	0.1000	3
K	39	72	He	532.382	ppb	6.7	32306.25	0.4376	Pulse	0.1000	3
Ca	44	72	He	38365.409	ppb	1.5	88124.69	1.1932	Pulse	0.1000	3
Ti	47	72	He	3688.362	ppb	2.9	68320.23	0.9252	Pulse	0.1000	3
V	51	72	He	111.493	ppb	2.2	96853.17	1.3115	Pulse	0.5000	3
Cr	52	72	He	53.607	ppb	2.8	62156.08	0.8417	Pulse	0.1000	3
Mn	55	72	He	930.161	ppb	2.1	406468.18	5.5041	Pulse	0.1000	3
Fe	57	72	He	47712.316	ppb	2.5	1021051.29	13.8269	Pulse	0.1000	3
Co	59	72	He	30.796	ppb	2.9	69607.10	0.9427	Pulse	0.1000	3
Ni	60	72	He	53.717	ppb	2.1	35547.53	0.4814	Pulse	0.1000	3
Cu	63	72	He	91.013	ppb	1.5	167985.58	2.2745	Pulse	0.1000	3
Zn	66	72	He	70.283	ppb	3.3	13106.35	0.1775	Pulse	0.1000	3
As	75	72	He	1.364	ppb	3.1	207.33	0.0028	Pulse	0.5000	3
Sr	88	115	He	67.238	ppb	2.3	32852.02	0.5264	Pulse	0.1000	3
Mo	98	115	He	0.537	ppb	12.1	770.05	0.0123	Pulse	0.1000	3
Ag	107	115	He	0.046	ppb	33.3	160.01	0.0026	Pulse	0.1000	3
Cd	111	115	He	0.112	ppb	27.9	36.67	0.0006	Pulse	0.5000	3
Sn	120	115	He	0.832	ppb	7.2	1713.50	0.0275	Pulse	0.1000	3
Sb	121	115	He	0.052	ppb	71.6	56.67	0.0009	Pulse	0.1000	3
Ba	137	115	He	65.496	ppb	2.4	17902.12	0.2868	Pulse	0.1000	3
Tl	205	209	He	0.060	ppb	8.6	580.04	0.0027	Pulse	0.1000	3
Pb	208	209	He	7.095	ppb	2.5	56806.92	0.2604	Pulse	0.1000	3
U	238	209	He	0.419	ppb	6.6	3894.08	0.0179	Pulse	0.1000	3

ISTD Table:

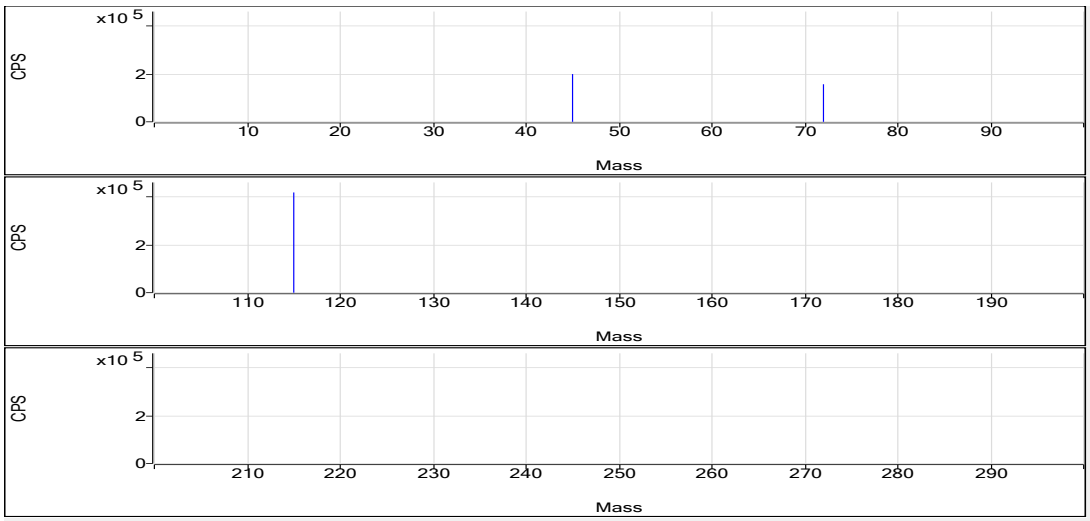
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3382383.91	1.7	104.4	Pulse	0.1000	3
No Gas	Ge	72	1435311.59	1.7	99.7	Pulse	0.1000	3
H2	Sc	45	199863.28	1.4	102.3	Pulse	0.1000	3
H2	Ge	72	157258.61	2.3	96.5	Pulse	0.1000	3
H2	In	115	419600.72	2.6	96.8	Pulse	0.1000	3
He	Sc	45	42275.20	1.3	105.7	Pulse	0.1000	3
He	Ge	72	73869.62	2.2	102.2	Pulse	0.1000	3
He	In	115	62412.90	0.3	96.6	Pulse	0.1000	3
He	Tb	159	287015.10	0.3	100.4	Pulse	0.1000	3
He	Bi	209	218172.91	1.4	98.2	Pulse	0.1000	3

No Gas

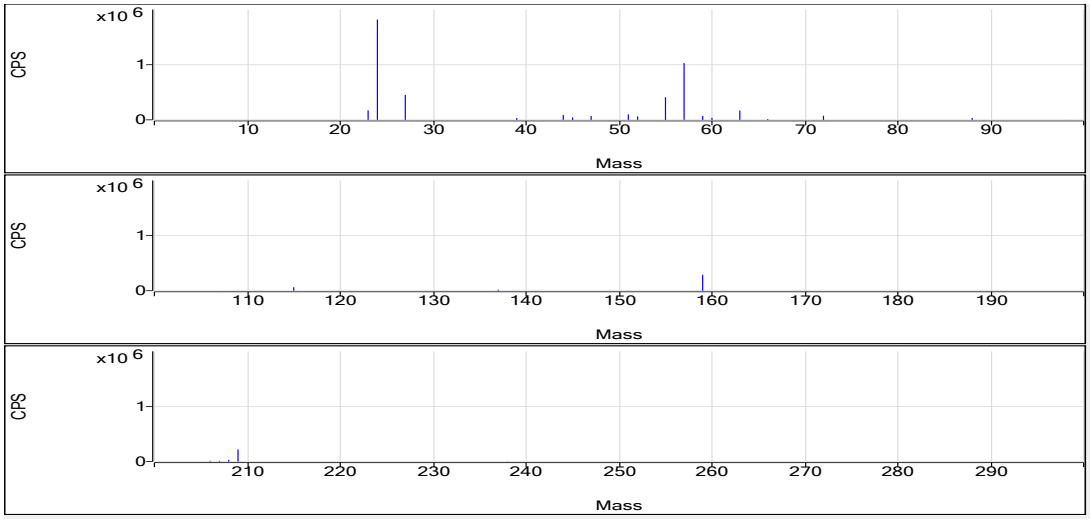


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.417	0.0006	842.03	0.0013	4.694E-05
Be	9	1	No Gas	0.464	0.0007	940.04	0.0013	4.694E-05
Be	9	1	No Gas	0.41	0.0006	856.03	0.0013	4.694E-05
Se	78	2	H2	0.079	0	6.67	0.0004	1.089E-05
Se	78	2	H2	0.128	0.0001	9.33	0.0004	1.089E-05
Se	78	2	H2	0.135	0.0001	10.00	0.0004	1.089E-05
Na	23	3	He	1325.474	2.3834	172034.20	0.0017	0.1065
Na	23	3	He	1288.701	2.3202	171649.35	0.0017	0.1065
Na	23	3	He	1257.108	2.2659	170961.35	0.0017	0.1065
Mg	24	3	He	29590.142	24.9523	1801076.22	0.0008	0.004846
Mg	24	3	He	28887.959	24.3603	1802176.22	0.0008	0.004846
Mg	24	3	He	28359.138	23.9145	1804305.44	0.0008	0.004846
Al	27	3	He	25501.295	6.1569	444411.01	0.0002	0.001063
Al	27	3	He	25247.528	6.0957	450957.38	0.0002	0.001063
Al	27	3	He	24654.574	5.9525	449108.20	0.0002	0.001063
K	39	3	He	571.01	0.459	33127.98	0.0006	0.1436
K	39	3	He	524.793	0.4334	32065.70	0.0006	0.1436
K	39	3	He	501.342	0.4205	31725.07	0.0006	0.1436
Ca	44	3	He	38986.234	1.2125	87520.34	0	0.001611
Ca	44	3	He	38243.032	1.1894	87994.30	0	0.001611
Ca	44	3	He	37866.959	1.1778	88859.43	0	0.001611
Ti	47	3	He	3767.635	0.9451	68219.27	0.0003	0.0002737
Ti	47	3	He	3730.114	0.9357	69223.71	0.0003	0.0002737
Ti	47	3	He	3567.336	0.8949	67517.70	0.0003	0.0002737
V	51	3	He	114.331	1.3447	97064.36	0.0117	0.007326
V	51	3	He	110.426	1.2991	96104.46	0.0117	0.007326
V	51	3	He	109.722	1.2908	97390.70	0.0117	0.007326
Cr	52	3	He	54.214	0.8509	61419.67	0.0152	0.02538
Cr	52	3	He	54.7	0.8583	63498.07	0.0152	0.02538
Cr	52	3	He	51.908	0.8158	61550.51	0.0152	0.02538
Mn	55	3	He	943.928	5.5853	403151.44	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	939.086	5.5567	411087.14	0.0059	0.01385
Mn	55	3	He	907.469	5.3701	405165.97	0.0059	0.01385
Fe	57	3	He	48518.95	14.0606	1014901.00	0.0003	0.003918
Fe	57	3	He	48277.514	13.9906	1035025.61	0.0003	0.003918
Fe	57	3	He	46340.483	13.4294	1013227.25	0.0003	0.003918
Co	59	3	He	31.611	0.9675	69837.81	0.0305	0.003084
Co	59	3	He	30.915	0.9463	70008.92	0.0305	0.003084
Co	59	3	He	29.862	0.9142	68974.58	0.0305	0.003084
Ni	60	3	He	54.519	0.4884	35253.47	0.0088	0.009003
Ni	60	3	He	54.185	0.4855	35914.76	0.0088	0.009003
Ni	60	3	He	52.447	0.4702	35474.35	0.0088	0.009003
Cu	63	3	He	92.027	2.2998	166002.87	0.0249	0.004937
Cu	63	3	He	91.582	2.2887	169319.55	0.0249	0.004937
Cu	63	3	He	89.431	2.2351	168634.33	0.0249	0.004937
Zn	66	3	He	72.9	0.1839	13276.46	0.0025	0.004836
Zn	66	3	He	69.427	0.1754	12976.21	0.0025	0.004836
Zn	66	3	He	68.524	0.1732	13066.37	0.0025	0.004836
As	75	3	He	1.343	0.0028	200.00	0.0017	0.0004347
As	75	3	He	1.413	0.0029	214.00	0.0017	0.0004347
As	75	3	He	1.335	0.0028	208.00	0.0017	0.0004347
Sr	88	3	He	65.87	0.5157	32177.22	0.0078	0.0007762
Sr	88	3	He	68.897	0.5393	33550.31	0.0078	0.0007762
Sr	88	3	He	66.947	0.5241	32828.52	0.0078	0.0007762
Mo	98	3	He	0.522	0.012	750.05	0.022	0.0005162
Mo	98	3	He	0.48	0.0111	690.04	0.022	0.0005162
Mo	98	3	He	0.607	0.0139	870.06	0.022	0.0005162
Ag	107	3	He	0.029	0.0018	110.00	0.0455	0.0004641
Ag	107	3	He	0.057	0.0031	190.01	0.0455	0.0004641
Ag	107	3	He	0.053	0.0029	180.01	0.0455	0.0004641
Cd	111	3	He	0.129	0.0007	42.00	0.0048	5.152E-05
Cd	111	3	He	0.13	0.0007	42.00	0.0048	5.152E-05
Cd	111	3	He	0.076	0.0004	26.00	0.0048	5.152E-05
Sn	120	3	He	0.896	0.0284	1770.18	0.0143	0.01559
Sn	120	3	He	0.779	0.0267	1660.16	0.0143	0.01559
Sn	120	3	He	0.822	0.0273	1710.17	0.0143	0.01559
Sb	121	3	He	0.031	0.0006	40.00	0.0124	0.000258
Sb	121	3	He	0.096	0.0014	90.00	0.0124	0.000258
Sb	121	3	He	0.031	0.0006	40.00	0.0124	0.000258
Ba	137	3	He	63.897	0.2798	17461.51	0.0044	0.000309
Ba	137	3	He	67.075	0.2937	18272.67	0.0044	0.000309
Ba	137	3	He	65.516	0.2869	17972.17	0.0044	0.000309
Tl	205	3	He	0.059	0.0026	570.03	0.0276	0.001005
Tl	205	3	He	0.065	0.0028	620.04	0.0276	0.001005
Tl	205	3	He	0.055	0.0025	550.04	0.0276	0.001005
Pb	208	3	He	7.292	0.2676	30315.66	0.0364	0.002176
Pb	208	3	He	6.947	0.255	30416.03	0.0364	0.002176
Pb	208	3	He	7.048	0.2587	30846.80	0.0364	0.002176
U	238	3	He	0.446	0.019	4090.85	0.0421	0.00024
U	238	3	He	0.391	0.0167	3690.64	0.0421	0.00024
U	238	3	He	0.419	0.0179	3900.75	0.0421	0.00024
Sc	45	1	No Gas			3339943.39		
Sc	45	1	No Gas			3358203.39		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3449004.95		
Ge	72	1	No Gas			1414089.04		
Ge	72	1	No Gas			1430329.04		
Ge	72	1	No Gas			1461516.70		
Sc	45	2	H2			202926.83		
Sc	45	2	H2			197666.99		
Sc	45	2	H2			198996.01		
Ge	72	2	H2			160537.23		
Ge	72	2	H2			153439.27		
Ge	72	2	H2			157799.33		
In	115	2	H2			432147.57		
In	115	2	H2			412024.29		
In	115	2	H2			414630.31		
Sc	45	3	He			41720.45		
Sc	45	3	He			42793.25		
Sc	45	3	He			42311.89		
Ge	72	3	He			72180.65		
Ge	72	3	He			73979.96		
Ge	72	3	He			75448.24		
In	115	3	He			62410.42		
In	115	3	He			62218.19		
In	115	3	He			62650.19		
Tb	159	3	He			288004.41		
Tb	159	3	He			286811.44		
Tb	159	3	He			286229.45		
Bi	209	3	He			215161.75		
Bi	209	3	He			221139.53		
Bi	209	3	He			218217.46		

Quantitation Report

Data File Name	288SMPL.d
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Acq Time	2023-08-10 20:35:37
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

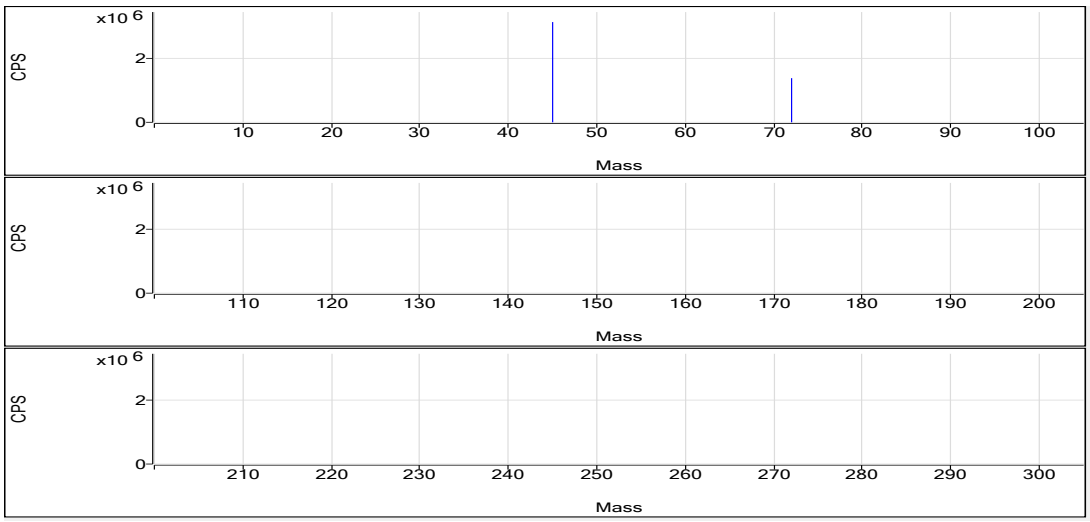
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.004	ppb	181.2	72.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.045	ppb	47.2	4.44	0.0000	Pulse	1.5000	3
Na	23	72	He	1.973	ppb	48.3	7875.67	0.1098	Pulse	0.1000	3
Mg	24	72	He	19.549	ppb	9.8	1530.13	0.0213	Pulse	0.1000	3
Al	27	72	He	26.557	ppb	19.7	536.70	0.0075	Pulse	0.1000	3
K	39	72	He	4.865	ppb	543.0	10484.10	0.1463	Pulse	0.1000	3
Ca	44	72	He	15.596	ppb	177.8	150.01	0.0021	Pulse	0.1000	3
Ti	47	72	He	2.068	ppb	43.0	56.67	0.0008	Pulse	0.1000	3
V	51	72	He	0.426	ppb	17.8	882.70	0.0123	Pulse	0.5000	3
Cr	52	72	He	0.110	ppb	121.2	1940.20	0.0271	Pulse	0.1000	3
Mn	55	72	He	-0.379	ppb	N/A	833.39	0.0116	Pulse	0.1000	3
Fe	57	72	He	41.371	ppb	12.7	1140.09	0.0159	Pulse	0.1000	3
Co	59	72	He	0.079	ppb	35.5	393.35	0.0055	Pulse	0.1000	3
Ni	60	72	He	0.920	ppb	41.9	1223.43	0.0171	Pulse	0.1000	3
Cu	63	72	He	0.195	ppb	7.3	703.37	0.0098	Pulse	0.1000	3
Zn	66	72	He	-0.135	ppb	N/A	323.35	0.0045	Pulse	0.1000	3
As	75	72	He	0.086	ppb	128.7	42.00	0.0006	Pulse	0.5000	3
Sr	88	115	He	0.215	ppb	46.6	153.34	0.0025	Pulse	0.1000	3
Mo	98	115	He	0.158	ppb	21.5	250.01	0.0040	Pulse	0.1000	3
Ag	107	115	He	0.003	ppb	426.1	36.67	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.007	ppb	195.7	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.177	ppb	49.2	1133.41	0.0181	Pulse	0.1000	3
Sb	121	115	He	0.009	ppb	75.3	23.33	0.0004	Pulse	0.1000	3
Ba	137	115	He	0.259	ppb	29.7	90.00	0.0014	Pulse	0.1000	3
Tl	205	209	He	0.032	ppb	33.4	413.36	0.0019	Pulse	0.1000	3
Pb	208	209	He	0.165	ppb	8.1	1783.45	0.0082	Pulse	0.1000	3
U	238	209	He	0.006	ppb	18.3	110.00	0.0005	Pulse	0.1000	3

ISTD Table:

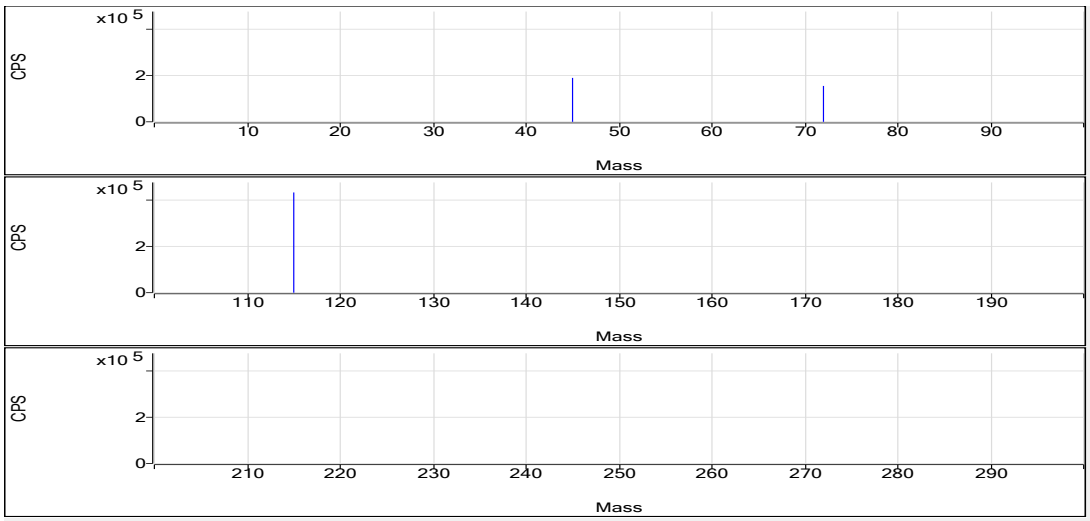
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3156800.16	2.6	97.4	Pulse	0.1000	3
No Gas	Ge	72	1390155.19	1.6	96.6	Pulse	0.1000	3
H2	Sc	45	190073.17	1.5	97.3	Pulse	0.1000	3
H2	Ge	72	155292.59	2.3	95.3	Pulse	0.1000	3
H2	In	115	433814.15	2.1	100.1	Pulse	0.1000	3
He	Sc	45	41098.41	1.9	102.8	Pulse	0.1000	3
He	Ge	72	71705.51	1.4	99.2	Pulse	0.1000	3
He	In	115	62528.36	1.5	96.8	Pulse	0.1000	3
He	Tb	159	279544.08	1.2	97.7	Pulse	0.1000	3
He	Bi	209	217766.03	0.8	98.0	Pulse	0.1000	3

No Gas

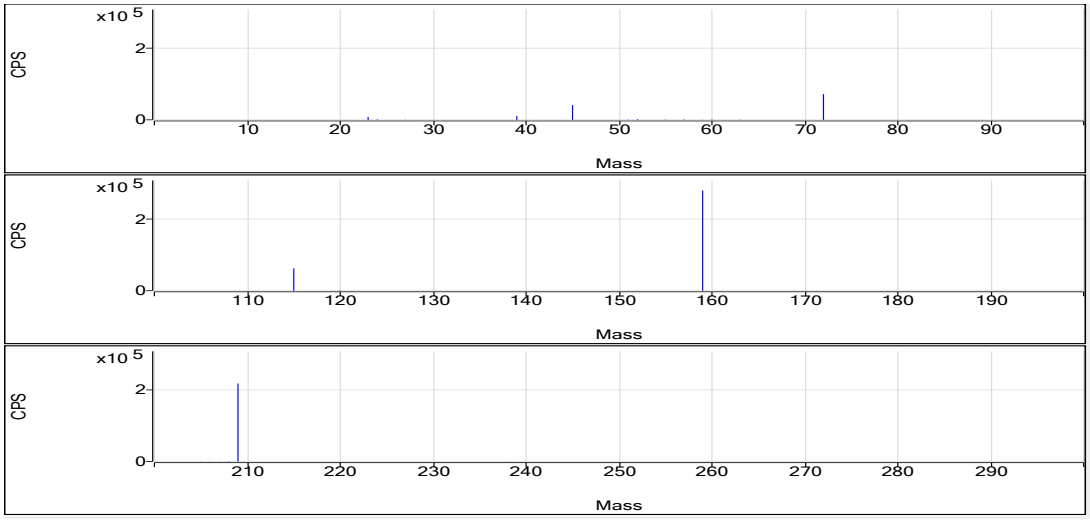


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.005	0.0001	74.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.003	0	58.00	0.0013	4.694E-05
Be	9	1	No Gas	0.009	0.0001	84.00	0.0013	4.694E-05
Se	78	2	H2	0.069	0	6.00	0.0004	1.089E-05
Se	78	2	H2	0.04	0	4.00	0.0004	1.089E-05
Se	78	2	H2	0.027	0	3.33	0.0004	1.089E-05
Na	23	3	He	3.053	0.1117	7922.44	0.0017	0.1065
Na	23	3	He	1.251	0.1086	7912.30	0.0017	0.1065
Na	23	3	He	1.615	0.1092	7792.27	0.0017	0.1065
Mg	24	3	He	17.332	0.0195	1380.11	0.0008	0.004846
Mg	24	3	He	20.792	0.0224	1630.14	0.0008	0.004846
Mg	24	3	He	20.525	0.0222	1580.15	0.0008	0.004846
Al	27	3	He	24.219	0.0069	490.02	0.0002	0.001063
Al	27	3	He	32.56	0.0089	650.04	0.0002	0.001063
Al	27	3	He	22.892	0.0066	470.03	0.0002	0.001063
K	39	3	He	34.142	0.1625	11524.93	0.0006	0.1436
K	39	3	He	-17.182	0.1342	9773.55	0.0006	0.1436
K	39	3	He	-2.365	0.1423	10153.82	0.0006	0.1436
Ca	44	3	He	2.613	0.0017	120.01	0	0.001611
Ca	44	3	He	-3.253	0.0015	110.00	0	0.001611
Ca	44	3	He	47.429	0.0031	220.01	0	0.001611
Ti	47	3	He	2.844	0.001	70.00	0.0003	0.0002737
Ti	47	3	He	1.098	0.0005	40.00	0.0003	0.0002737
Ti	47	3	He	2.262	0.0008	60.00	0.0003	0.0002737
V	51	3	He	0.456	0.0127	898.03	0.0117	0.007326
V	51	3	He	0.481	0.013	944.04	0.0117	0.007326
V	51	3	He	0.34	0.0113	806.03	0.0117	0.007326
Cr	52	3	He	0.259	0.0293	2080.23	0.0152	0.02538
Cr	52	3	He	0.073	0.0265	1930.18	0.0152	0.02538
Cr	52	3	He	-0.001	0.0254	1810.18	0.0152	0.02538
Mn	55	3	He	-0.484	0.011	780.05	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.301	0.0121	880.06	0.0059	0.01385
Mn	55	3	He	-0.352	0.0118	840.05	0.0059	0.01385
Fe	57	3	He	38.068	0.0149	1060.08	0.0003	0.003918
Fe	57	3	He	38.597	0.0151	1100.08	0.0003	0.003918
Fe	57	3	He	47.447	0.0177	1260.10	0.0003	0.003918
Co	59	3	He	0.088	0.0058	410.02	0.0305	0.003084
Co	59	3	He	0.047	0.0045	330.02	0.0305	0.003084
Co	59	3	He	0.101	0.0062	440.02	0.0305	0.003084
Ni	60	3	He	1.269	0.0202	1430.12	0.0088	0.009003
Ni	60	3	He	0.506	0.0135	980.08	0.0088	0.009003
Ni	60	3	He	0.985	0.0177	1260.10	0.0088	0.009003
Cu	63	3	He	0.181	0.0094	670.04	0.0249	0.004937
Cu	63	3	He	0.209	0.0102	740.04	0.0249	0.004937
Cu	63	3	He	0.196	0.0098	700.04	0.0249	0.004937
Zn	66	3	He	-0.304	0.0041	290.01	0.0025	0.004836
Zn	66	3	He	0.099	0.0051	370.02	0.0025	0.004836
Zn	66	3	He	-0.2	0.0043	310.01	0.0025	0.004836
As	75	3	He	0.058	0.0005	38.00	0.0017	0.0004347
As	75	3	He	0.208	0.0008	58.00	0.0017	0.0004347
As	75	3	He	-0.008	0.0004	30.00	0.0017	0.0004347
Sr	88	3	He	0.102	0.0016	100.00	0.0078	0.0007762
Sr	88	3	He	0.252	0.0027	170.01	0.0078	0.0007762
Sr	88	3	He	0.293	0.0031	190.01	0.0078	0.0007762
Mo	98	3	He	0.119	0.0031	200.01	0.022	0.0005162
Mo	98	3	He	0.174	0.0044	270.01	0.022	0.0005162
Mo	98	3	He	0.182	0.0045	280.01	0.022	0.0005162
Ag	107	3	He	0.007	0.0008	50.00	0.0455	0.0004641
Ag	107	3	He	0.011	0.001	60.00	0.0455	0.0004641
Ag	107	3	He	-0.01	0	0.00	0.0455	0.0004641
Cd	111	3	He	0.022	0.0002	10.00	0.0048	5.152E-05
Cd	111	3	He	0.003	0.0001	4.00	0.0048	5.152E-05
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Sn	120	3	He	0.275	0.0195	1240.09	0.0143	0.01559
Sn	120	3	He	0.107	0.0171	1060.07	0.0143	0.01559
Sn	120	3	He	0.151	0.0177	1100.08	0.0143	0.01559
Sb	121	3	He	0.017	0.0005	30.00	0.0124	0.000258
Sb	121	3	He	0.005	0.0003	20.00	0.0124	0.000258
Sb	121	3	He	0.005	0.0003	20.00	0.0124	0.000258
Ba	137	3	He	0.181	0.0011	70.00	0.0044	0.000309
Ba	137	3	He	0.261	0.0015	90.00	0.0044	0.000309
Ba	137	3	He	0.335	0.0018	110.00	0.0044	0.000309
Tl	205	3	He	0.02	0.0016	340.02	0.0276	0.001005
Tl	205	3	He	0.041	0.0021	470.03	0.0276	0.001005
Tl	205	3	He	0.036	0.002	430.02	0.0276	0.001005
Pb	208	3	He	0.16	0.008	940.07	0.0364	0.002176
Pb	208	3	He	0.18	0.0087	940.07	0.0364	0.002176
Pb	208	3	He	0.155	0.0078	970.08	0.0364	0.002176
U	238	3	He	0.007	0.0006	120.00	0.0421	0.00024
U	238	3	He	0.005	0.0005	100.00	0.0421	0.00024
U	238	3	He	0.006	0.0005	110.00	0.0421	0.00024
Sc	45	1	No Gas			3146365.89		
Sc	45	1	No Gas			3079514.64		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3244519.95		
Ge	72	1	No Gas			1387179.20		
Ge	72	1	No Gas			1369211.07		
Ge	72	1	No Gas			1414075.29		
Sc	45	2	H2			193382.28		
Sc	45	2	H2			188003.22		
Sc	45	2	H2			188834.02		
Ge	72	2	H2			159120.34		
Ge	72	2	H2			152064.62		
Ge	72	2	H2			154692.82		
In	115	2	H2			444474.37		
In	115	2	H2			427587.81		
In	115	2	H2			429380.27		
Sc	45	3	He			41850.24		
Sc	45	3	He			41168.81		
Sc	45	3	He			40276.18		
Ge	72	3	He			70925.11		
Ge	72	3	He			72853.79		
Ge	72	3	He			71337.62		
In	115	3	He			63595.00		
In	115	3	He			61977.91		
In	115	3	He			62038.70		
Tb	159	3	He			276865.68		
Tb	159	3	He			283388.16		
Tb	159	3	He			278378.41		
Bi	209	3	He			217255.37		
Bi	209	3	He			219663.69		
Bi	209	3	He			216379.02		

Quantitation Report

Data File Name	289SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	2023-08-10 20:37:37
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

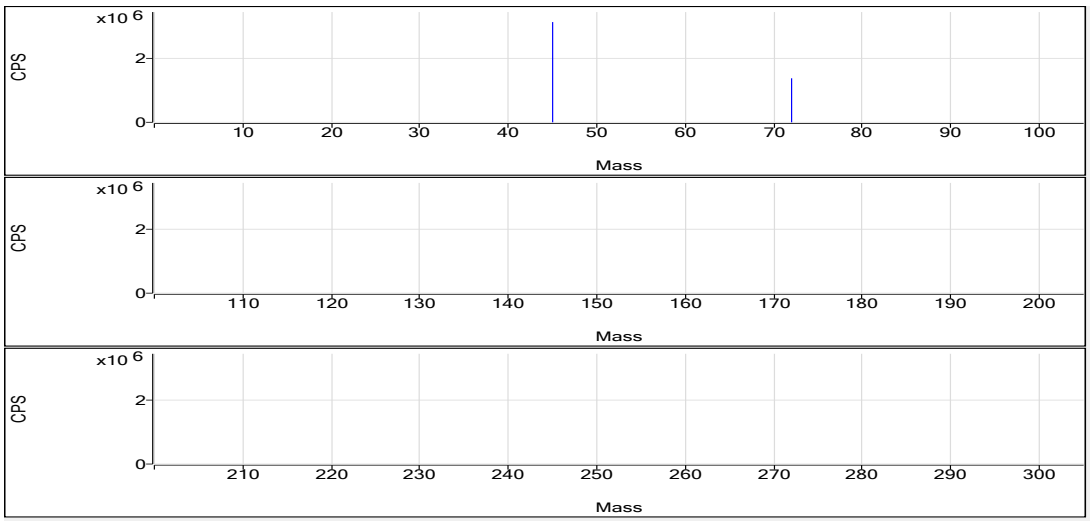
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	-0.007	ppb	N/A	52.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.001	ppb	2243.7	1.78	0.0000	Pulse	1.5000	3
Na	23	72	He	2.753	ppb	76.7	8015.75	0.1112	Pulse	0.1000	3
Mg	24	72	He	17.343	ppb	20.4	1403.45	0.0195	Pulse	0.1000	3
Al	27	72	He	21.643	ppb	1.7	453.36	0.0063	Pulse	0.1000	3
K	39	72	He	3.713	ppb	692.4	10507.46	0.1457	Pulse	0.1000	3
Ca	44	72	He	6.009	ppb	454.3	130.00	0.0018	Pulse	0.1000	3
Ti	47	72	He	1.483	ppb	149.0	46.67	0.0006	Pulse	0.1000	3
V	51	72	He	0.322	ppb	42.4	798.69	0.0111	Pulse	0.5000	3
Cr	52	72	He	0.063	ppb	92.3	1900.20	0.0263	Pulse	0.1000	3
Mn	55	72	He	-0.570	ppb	N/A	756.71	0.0105	Pulse	0.1000	3
Fe	57	72	He	35.429	ppb	14.5	1023.41	0.0142	Pulse	0.1000	3
Co	59	72	He	0.081	ppb	12.4	400.02	0.0055	Pulse	0.1000	3
Ni	60	72	He	0.915	ppb	20.3	1230.10	0.0170	Pulse	0.1000	3
Cu	63	72	He	0.153	ppb	18.6	630.04	0.0087	Pulse	0.1000	3
Zn	66	72	He	-0.178	ppb	N/A	316.68	0.0044	Pulse	0.1000	3
As	75	72	He	0.048	ppb	167.9	37.33	0.0005	Pulse	0.5000	3
Sr	88	115	He	0.128	ppb	44.7	113.34	0.0018	Pulse	0.1000	3
Mo	98	115	He	0.153	ppb	27.9	246.68	0.0039	Pulse	0.1000	3
Ag	107	115	He	0.007	ppb	98.2	50.00	0.0008	Pulse	0.1000	3
Cd	111	115	He	-0.006	ppb	N/A	1.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.229	ppb	57.9	1200.16	0.0189	Pulse	0.1000	3
Sb	121	115	He	0.034	ppb	118.9	43.33	0.0007	Pulse	0.1000	3
Ba	137	115	He	0.169	ppb	12.9	66.67	0.0010	Pulse	0.1000	3
Tl	205	209	He	0.014	ppb	87.0	303.35	0.0014	Pulse	0.1000	3
Pb	208	209	He	0.144	ppb	16.6	1626.77	0.0074	Pulse	0.1000	3
U	238	209	He	0.003	ppb	66.9	83.33	0.0004	Pulse	0.1000	3

ISTD Table:

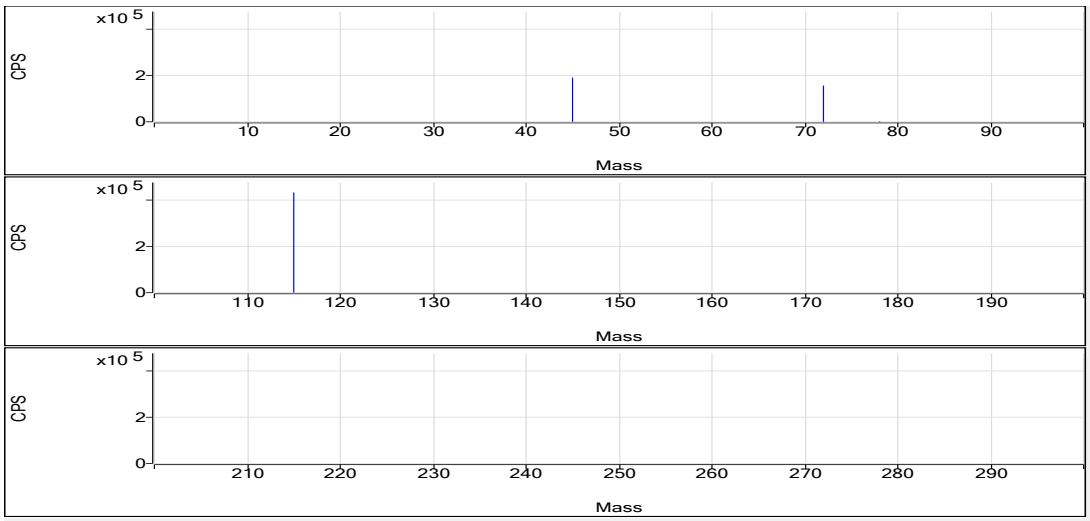
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3148584.54	1.6	97.1	Pulse	0.1000	3
No Gas	Ge	72	1382566.18	1.5	96.0	Pulse	0.1000	3
H2	Sc	45	190954.91	3.1	97.7	Pulse	0.1000	3
H2	Ge	72	156142.59	1.8	95.8	Pulse	0.1000	3
H2	In	115	432238.48	2.4	99.8	Pulse	0.1000	3
He	Sc	45	40129.09	2.6	100.4	Pulse	0.1000	3
He	Ge	72	72110.60	1.1	99.8	Pulse	0.1000	3
He	In	115	63646.08	0.5	98.5	Pulse	0.1000	3
He	Tb	159	281303.46	0.9	98.4	Pulse	0.1000	3
He	Bi	209	219563.43	0.7	98.8	Pulse	0.1000	3

No Gas

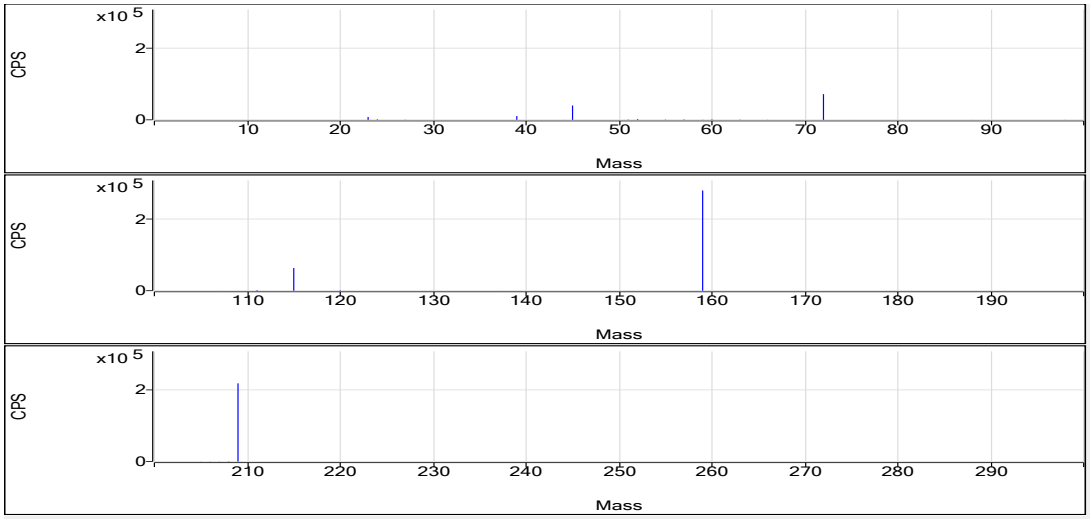


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.004	0	58.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.009	0	48.00	0.0013	4.694E-05
Be	9	1	No Gas	-0.008	0	52.00	0.0013	4.694E-05
Se	78	2	H2	0.026	0	3.33	0.0004	1.089E-05
Se	78	2	H2	-0.017	0	0.67	0.0004	1.089E-05
Se	78	2	H2	-0.006	0	1.33	0.0004	1.089E-05
Na	23	3	He	0.627	0.1075	7822.35	0.0017	0.1065
Na	23	3	He	4.85	0.1148	8172.46	0.0017	0.1065
Na	23	3	He	2.781	0.1112	8052.45	0.0017	0.1065
Mg	24	3	He	19.527	0.0213	1550.14	0.0008	0.004846
Mg	24	3	He	19.244	0.0211	1500.13	0.0008	0.004846
Mg	24	3	He	13.259	0.016	1160.08	0.0008	0.004846
Al	27	3	He	21.225	0.0062	450.02	0.0002	0.001063
Al	27	3	He	21.783	0.0063	450.03	0.0002	0.001063
Al	27	3	He	21.922	0.0064	460.02	0.0002	0.001063
K	39	3	He	29.275	0.1598	11624.90	0.0006	0.1436
K	39	3	He	4.003	0.1459	10384.08	0.0006	0.1436
K	39	3	He	-22.139	0.1314	9513.41	0.0006	0.1436
Ca	44	3	He	36.658	0.0027	200.01	0	0.001611
Ca	44	3	He	-15.688	0.0011	80.00	0	0.001611
Ca	44	3	He	-2.943	0.0015	110.00	0	0.001611
Ti	47	3	He	3.842	0.0012	90.00	0.0003	0.0002737
Ti	47	3	He	1.149	0.0006	40.00	0.0003	0.0002737
Ti	47	3	He	-0.541	0.0001	10.00	0.0003	0.0002737
V	51	3	He	0.232	0.01	730.02	0.0117	0.007326
V	51	3	He	0.478	0.0129	920.04	0.0117	0.007326
V	51	3	He	0.255	0.0103	746.02	0.0117	0.007326
Cr	52	3	He	0.13	0.0274	1990.21	0.0152	0.02538
Cr	52	3	He	0.021	0.0257	1830.19	0.0152	0.02538
Cr	52	3	He	0.039	0.026	1880.19	0.0152	0.02538
Mn	55	3	He	-0.6	0.0103	750.05	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.634	0.0101	720.04	0.0059	0.01385
Mn	55	3	He	-0.475	0.0111	800.05	0.0059	0.01385
Fe	57	3	He	37.252	0.0147	1070.08	0.0003	0.003918
Fe	57	3	He	29.628	0.0125	890.05	0.0003	0.003918
Fe	57	3	He	39.407	0.0153	1110.09	0.0003	0.003918
Co	59	3	He	0.088	0.0058	420.02	0.0305	0.003084
Co	59	3	He	0.069	0.0052	370.02	0.0305	0.003084
Co	59	3	He	0.085	0.0057	410.02	0.0305	0.003084
Ni	60	3	He	1.009	0.0179	1300.11	0.0088	0.009003
Ni	60	3	He	0.701	0.0152	1080.07	0.0088	0.009003
Ni	60	3	He	1.034	0.0181	1310.11	0.0088	0.009003
Cu	63	3	He	0.133	0.0082	600.04	0.0249	0.004937
Cu	63	3	He	0.185	0.0096	680.04	0.0249	0.004937
Cu	63	3	He	0.14	0.0084	610.04	0.0249	0.004937
Zn	66	3	He	-0.849	0.0027	200.01	0.0025	0.004836
Zn	66	3	He	0.147	0.0052	370.02	0.0025	0.004836
Zn	66	3	He	0.168	0.0052	380.02	0.0025	0.004836
As	75	3	He	-0.044	0.0004	26.00	0.0017	0.0004347
As	75	3	He	0.105	0.0006	44.00	0.0017	0.0004347
As	75	3	He	0.084	0.0006	42.00	0.0017	0.0004347
Sr	88	3	He	0.062	0.0013	80.00	0.0078	0.0007762
Sr	88	3	He	0.162	0.002	130.01	0.0078	0.0007762
Sr	88	3	He	0.161	0.002	130.01	0.0078	0.0007762
Mo	98	3	He	0.184	0.0046	290.01	0.022	0.0005162
Mo	98	3	He	0.169	0.0042	270.01	0.022	0.0005162
Mo	98	3	He	0.104	0.0028	180.01	0.022	0.0005162
Ag	107	3	He	0.014	0.0011	70.00	0.0455	0.0004641
Ag	107	3	He	0	0.0005	30.00	0.0455	0.0004641
Ag	107	3	He	0.007	0.0008	50.00	0.0455	0.0004641
Cd	111	3	He	-0.011	0	0.00	0.0048	5.152E-05
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Sn	120	3	He	0.08	0.0167	1060.08	0.0143	0.01559
Sn	120	3	He	0.275	0.0195	1240.28	0.0143	0.01559
Sn	120	3	He	0.332	0.0203	1300.12	0.0143	0.01559
Sb	121	3	He	0.005	0.0003	20.00	0.0124	0.000258
Sb	121	3	He	0.017	0.0005	30.00	0.0124	0.000258
Sb	121	3	He	0.08	0.0013	80.00	0.0124	0.000258
Ba	137	3	He	0.182	0.0011	70.00	0.0044	0.000309
Ba	137	3	He	0.181	0.0011	70.00	0.0044	0.000309
Ba	137	3	He	0.144	0.0009	60.00	0.0044	0.000309
Tl	205	3	He	0.019	0.0015	340.02	0.0276	0.001005
Tl	205	3	He	0.022	0.0016	350.02	0.0276	0.001005
Tl	205	3	He	0	0.001	220.01	0.0276	0.001005
Pb	208	3	He	0.13	0.0069	810.05	0.0364	0.002176
Pb	208	3	He	0.171	0.0084	860.06	0.0364	0.002176
Pb	208	3	He	0.13	0.0069	800.06	0.0364	0.002176
U	238	3	He	0.005	0.0005	100.00	0.0421	0.00024
U	238	3	He	0.004	0.0004	90.00	0.0421	0.00024
U	238	3	He	0.001	0.0003	60.00	0.0421	0.00024
Sc	45	1	No Gas			3133988.39		
Sc	45	1	No Gas			3107809.64		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3203955.58		
Ge	72	1	No Gas			1373323.26		
Ge	72	1	No Gas			1367945.92		
Ge	72	1	No Gas			1406429.35		
Sc	45	2	H2			197888.10		
Sc	45	2	H2			187522.56		
Sc	45	2	H2			187454.08		
Ge	72	2	H2			159314.62		
Ge	72	2	H2			153985.12		
Ge	72	2	H2			155128.04		
In	115	2	H2			443441.32		
In	115	2	H2			422754.29		
In	115	2	H2			430519.84		
Sc	45	3	He			41278.89		
Sc	45	3	He			39273.33		
Sc	45	3	He			39835.04		
Ge	72	3	He			72743.50		
Ge	72	3	He			71196.37		
Ge	72	3	He			72391.94		
In	115	3	He			63404.54		
In	115	3	He			63574.56		
In	115	3	He			63987.22		
Tb	159	3	He			278593.02		
Tb	159	3	He			281667.32		
Tb	159	3	He			283650.03		
Bi	209	3	He			221273.49		
Bi	209	3	He			218606.25		
Bi	209	3	He			218810.56		

Quantitation Report

Data File Name	290_CCV.d
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Acq Time	2023-08-10 20:39:39
Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

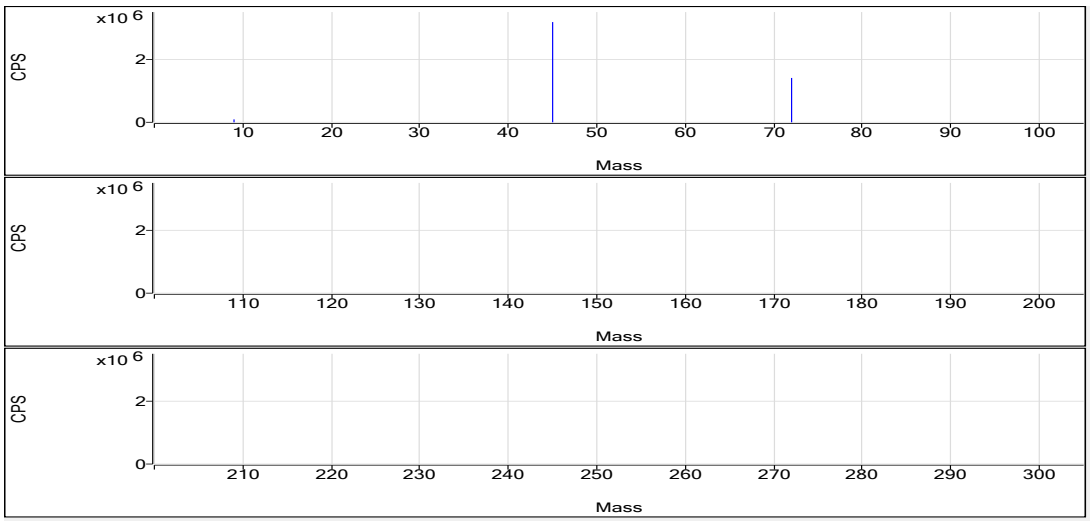
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	49.844	ppb	6.8	92785.85	0.0655	Pulse	0.5000	3
Se	78	72	H2	52.745	ppb	2.6	3212.36	0.0205	Pulse	1.5000	3
Na	23	72	He	5346.640	ppb	1.6	668120.41	9.2910	Pulse	0.1000	3
Mg	24	72	He	5357.391	ppb	1.3	325162.25	4.5217	Pulse	0.1000	3
Al	27	72	He	5299.145	ppb	0.7	92068.52	1.2802	Pulse	0.1000	3
K	39	72	He	5389.225	ppb	1.0	224341.58	3.1196	Pulse	0.1000	3
Ca	44	72	He	5459.514	ppb	2.7	12308.95	0.1712	Pulse	0.1000	3
Ti	47	72	He	5403.829	ppb	1.6	97470.39	1.3554	Pulse	0.1000	3
V	51	72	He	534.580	ppb	1.3	450216.04	6.2607	Pulse	0.5000	3
Cr	52	72	He	534.500	ppb	1.1	587119.35	8.1644	Pulse	0.1000	3
Mn	55	72	He	534.022	ppb	1.6	227659.40	3.1659	Pulse	0.1000	3
Fe	57	72	He	5300.333	ppb	1.0	110709.37	1.5395	Pulse	0.1000	3
Co	59	72	He	532.332	ppb	0.7	1168227.53	16.2448	Pulse	0.1000	3
Ni	60	72	He	532.913	ppb	1.6	337621.21	4.6951	Pulse	0.1000	3
Cu	63	72	He	531.252	ppb	1.2	953034.49	13.2528	Pulse	0.1000	3
Zn	66	72	He	531.914	ppb	2.8	94313.56	1.3116	Pulse	0.1000	3
As	75	72	He	525.382	ppb	1.3	65738.80	0.9142	Pulse	0.5000	3
Sr	88	115	He	51.812	ppb	1.1	25857.49	0.4058	Pulse	0.1000	3
Mo	98	115	He	51.473	ppb	0.8	72258.25	1.1340	Pulse	0.1000	3
Ag	107	115	He	51.602	ppb	0.7	149633.20	2.3484	Pulse	0.1000	3
Cd	111	115	He	52.272	ppb	1.7	15990.48	0.2510	Pulse	0.5000	3
Sn	120	115	He	52.637	ppb	2.0	48819.74	0.7661	Pulse	0.1000	3
Sb	121	115	He	51.620	ppb	1.4	40817.22	0.6406	Pulse	0.1000	3
Ba	137	115	He	518.654	ppb	1.6	144601.84	2.2693	Pulse	0.1000	3
Tl	205	209	He	52.740	ppb	0.2	319005.63	1.4590	Pulse	0.1000	3
Pb	208	209	He	52.819	ppb	1.3	420822.94	1.9246	Pulse	0.1000	3
U	238	209	He	51.829	ppb	0.0	476783.69	2.1805	Pulse	0.1000	3

ISTD Table:

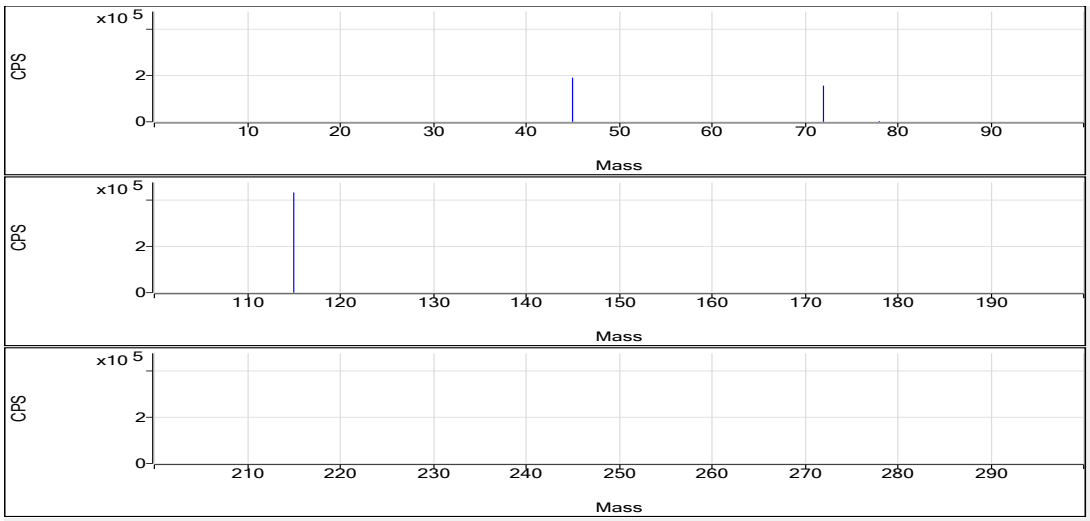
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3202825.99	2.8	98.8	Pulse	0.1000	3
No Gas	Ge	72	1417438.47	2.8	98.4	Pulse	0.1000	3
H2	Sc	45	190728.63	2.1	97.6	Pulse	0.1000	3
H2	Ge	72	156374.27	1.4	95.9	Pulse	0.1000	3
H2	In	115	432832.83	1.0	99.9	Pulse	0.1000	3
He	Sc	45	41298.99	1.8	103.3	Pulse	0.1000	3
He	Ge	72	71916.51	0.9	99.5	Pulse	0.1000	3
He	In	115	63720.25	0.8	98.7	Pulse	0.1000	3
He	Tb	159	283643.69	1.0	99.2	Pulse	0.1000	3
He	Bi	209	218654.64	0.5	98.4	Pulse	0.1000	3

No Gas

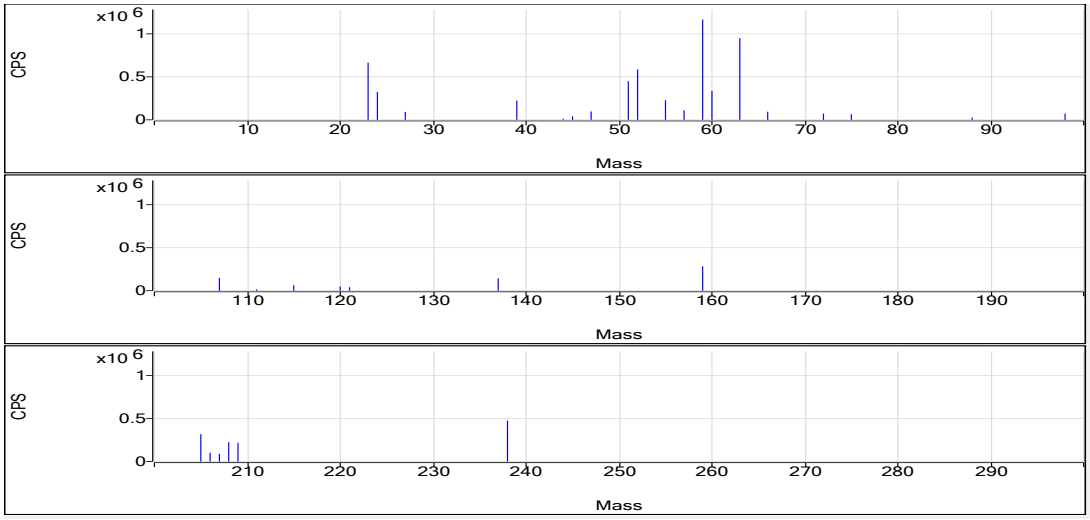


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	52.674	0.0693	95733.24	0.0013	4.694E-05
Be	9	1	No Gas	50.765	0.0668	94074.76	0.0013	4.694E-05
Be	9	1	No Gas	46.092	0.0606	88549.55	0.0013	4.694E-05
Se	78	2	H2	52.568	0.0205	3222.37	0.0004	1.089E-05
Se	78	2	H2	54.189	0.0211	3246.37	0.0004	1.089E-05
Se	78	2	H2	51.478	0.0201	3168.35	0.0004	1.089E-05
Na	23	3	He	5419.492	9.4162	674659.52	0.0017	0.1065
Na	23	3	He	5371.748	9.3342	667085.30	0.0017	0.1065
Na	23	3	He	5248.68	9.1227	662616.40	0.0017	0.1065
Mg	24	3	He	5422.412	4.5765	327901.01	0.0008	0.004846
Mg	24	3	He	5365.226	4.5283	323622.87	0.0008	0.004846
Mg	24	3	He	5284.535	4.4602	323962.87	0.0008	0.004846
Al	27	3	He	5337.159	1.2894	92385.80	0.0002	0.001063
Al	27	3	He	5291.361	1.2784	91361.16	0.0002	0.001063
Al	27	3	He	5268.917	1.2729	92458.61	0.0002	0.001063
K	39	3	He	5427.809	3.1409	225045.29	0.0006	0.1436
K	39	3	He	5410.911	3.1316	223807.09	0.0006	0.1436
K	39	3	He	5328.956	3.0864	224172.36	0.0006	0.1436
Ca	44	3	He	5518.227	0.173	12395.73	0	0.001611
Ca	44	3	He	5568.467	0.1746	12475.78	0	0.001611
Ca	44	3	He	5291.848	0.166	12055.33	0	0.001611
Ti	47	3	He	5402.418	1.3551	97090.73	0.0003	0.0002737
Ti	47	3	He	5489.763	1.377	98409.68	0.0003	0.0002737
Ti	47	3	He	5319.305	1.3342	96910.77	0.0003	0.0002737
V	51	3	He	539.5	6.3183	452697.56	0.0117	0.007326
V	51	3	He	537.55	6.2954	449917.53	0.0117	0.007326
V	51	3	He	526.69	6.1684	448033.03	0.0117	0.007326
Cr	52	3	He	533.738	8.1528	584136.75	0.0152	0.02538
Cr	52	3	He	540.616	8.2575	590139.05	0.0152	0.02538
Cr	52	3	He	529.145	8.0828	587082.26	0.0152	0.02538
Mn	55	3	He	540.781	3.2058	229690.11	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	536.781	3.1822	227419.74	0.0059	0.01385
Mn	55	3	He	524.505	3.1097	225868.34	0.0059	0.01385
Fe	57	3	He	5326.668	1.5471	110850.45	0.0003	0.003918
Fe	57	3	He	5333.455	1.5491	110709.54	0.0003	0.003918
Fe	57	3	He	5240.876	1.5223	110568.13	0.0003	0.003918
Co	59	3	He	535.06	16.328	1169888.26	0.0305	0.003084
Co	59	3	He	533.627	16.2843	1163791.86	0.0305	0.003084
Co	59	3	He	528.31	16.1221	1171002.48	0.0305	0.003084
Ni	60	3	He	535.423	4.7171	337978.43	0.0088	0.009003
Ni	60	3	He	540.055	4.7579	340031.05	0.0088	0.009003
Ni	60	3	He	523.261	4.6102	334854.14	0.0088	0.009003
Cu	63	3	He	534.636	13.3372	955597.72	0.0249	0.004937
Cu	63	3	He	534.943	13.3449	953719.83	0.0249	0.004937
Cu	63	3	He	524.178	13.0764	949785.92	0.0249	0.004937
Zn	66	3	He	544.425	1.3424	96178.88	0.0025	0.004836
Zn	66	3	He	535.957	1.3216	94447.82	0.0025	0.004836
Zn	66	3	He	515.361	1.271	92313.97	0.0025	0.004836
As	75	3	He	531.047	0.924	66204.89	0.0017	0.0004347
As	75	3	He	527.485	0.9178	65594.11	0.0017	0.0004347
As	75	3	He	517.612	0.9007	65417.39	0.0017	0.0004347
Sr	88	3	He	51.269	0.4016	25723.87	0.0078	0.0007762
Sr	88	3	He	52.369	0.4102	26235.07	0.0078	0.0007762
Sr	88	3	He	51.799	0.4057	25613.54	0.0078	0.0007762
Mo	98	3	He	51.074	1.1252	72084.16	0.022	0.0005162
Mo	98	3	He	51.479	1.1342	72545.97	0.022	0.0005162
Mo	98	3	He	51.866	1.1427	72144.62	0.022	0.0005162
Ag	107	3	He	51.522	2.3447	150204.97	0.0455	0.0004641
Ag	107	3	He	51.271	2.3333	149247.19	0.0455	0.0004641
Ag	107	3	He	52.013	2.3671	149447.43	0.0455	0.0004641
Cd	111	3	He	51.561	0.2476	15858.99	0.0048	5.152E-05
Cd	111	3	He	51.991	0.2496	15967.14	0.0048	5.152E-05
Cd	111	3	He	53.262	0.2557	16145.31	0.0048	5.152E-05
Sn	120	3	He	53.441	0.7775	49809.93	0.0143	0.01559
Sn	120	3	He	53.017	0.7715	49348.10	0.0143	0.01559
Sn	120	3	He	51.453	0.7492	47301.20	0.0143	0.01559
Sb	121	3	He	50.829	0.6308	40409.19	0.0124	0.000258
Sb	121	3	He	51.804	0.6429	41121.62	0.0124	0.000258
Sb	121	3	He	52.228	0.6481	40920.85	0.0124	0.000258
Ba	137	3	He	511.287	2.2371	143309.21	0.0044	0.000309
Ba	137	3	He	527.442	2.3078	147614.06	0.0044	0.000309
Ba	137	3	He	517.233	2.2631	142882.24	0.0044	0.000309
Tl	205	3	He	52.744	1.4591	318130.78	0.0276	0.001005
Tl	205	3	He	52.823	1.4613	318730.19	0.0276	0.001005
Tl	205	3	He	52.652	1.4565	320155.93	0.0276	0.001005
Pb	208	3	He	53.608	1.9534	227522.26	0.0364	0.002176
Pb	208	3	He	52.428	1.9104	225623.22	0.0364	0.002176
Pb	208	3	He	52.42	1.9101	223913.77	0.0364	0.002176
U	238	3	He	51.82	2.1802	475355.85	0.0421	0.00024
U	238	3	He	51.852	2.1815	475831.16	0.0421	0.00024
U	238	3	He	51.814	2.1799	479164.06	0.0421	0.00024
Sc	45	1	No Gas			3109372.77		
Sc	45	1	No Gas			3207649.95		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3291455.26		
Ge	72	1	No Gas			1382171.54		
Ge	72	1	No Gas			1409262.32		
Ge	72	1	No Gas			1460881.54		
Sc	45	2	H2			192997.46		
Sc	45	2	H2			186098.75		
Sc	45	2	H2			193089.68		
Ge	72	2	H2			157351.68		
Ge	72	2	H2			153784.28		
Ge	72	2	H2			157986.84		
In	115	2	H2			435462.42		
In	115	2	H2			427992.49		
In	115	2	H2			435043.59		
Sc	45	3	He			41379.12		
Sc	45	3	He			41981.03		
Sc	45	3	He			40536.81		
Ge	72	3	He			71649.01		
Ge	72	3	He			71467.11		
Ge	72	3	He			72633.41		
In	115	3	He			64449.29		
In	115	3	He			64349.14		
In	115	3	He			63504.71		
Tb	159	3	He			281021.75		
Tb	159	3	He			283399.90		
Tb	159	3	He			286509.41		
Bi	209	3	He			218036.91		
Bi	209	3	He			218119.08		
Bi	209	3	He			219807.93		

Quantitation Report

Data File Name	291_CCB.d
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Sample Type	CCB
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-08-10 16:44:41
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

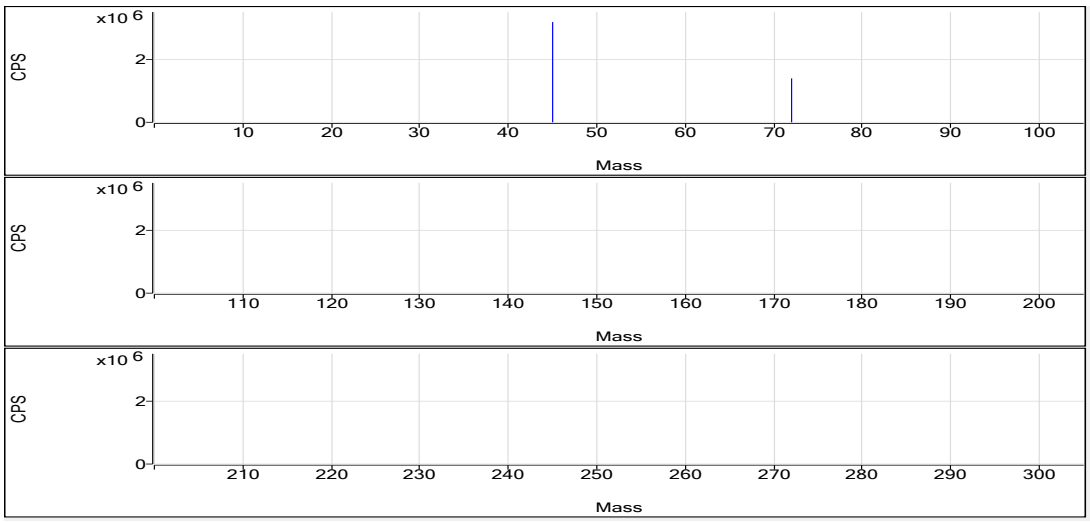
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	72	No Gas	0.028	ppb	20.9	118.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.039	ppb	90.0	4.00	0.0000	Pulse	1.5000	3
Na	23	72	He	3.034	ppb	27.9	8045.74	0.1117	Pulse	0.1000	3
Mg	24	72	He	14.316	ppb	26.8	1220.10	0.0169	Pulse	0.1000	3
Al	27	72	He	17.829	ppb	8.2	386.69	0.0054	Pulse	0.1000	3
K	39	72	He	5.037	ppb	237.0	10554.16	0.1464	Pulse	0.1000	3
Ca	44	72	He	1.649	ppb	898.9	120.00	0.0017	Pulse	0.1000	3
Ti	47	72	He	2.408	ppb	46.9	63.33	0.0009	Pulse	0.1000	3
V	51	72	He	0.378	ppb	11.9	846.70	0.0117	Pulse	0.5000	3
Cr	52	72	He	0.176	ppb	72.1	2023.54	0.0281	Pulse	0.1000	3
Mn	55	72	He	-0.802	ppb	N/A	656.71	0.0091	Pulse	0.1000	3
Fe	57	72	He	30.207	ppb	18.9	913.39	0.0127	Pulse	0.1000	3
Co	59	72	He	0.129	ppb	16.3	506.70	0.0070	Pulse	0.1000	3
Ni	60	72	He	1.028	ppb	6.0	1300.10	0.0180	Pulse	0.1000	3
Cu	63	72	He	0.277	ppb	6.9	853.39	0.0118	Pulse	0.1000	3
Zn	66	72	He	-0.331	ppb	N/A	290.01	0.0040	Pulse	0.1000	3
As	75	72	He	0.176	ppb	34.0	53.33	0.0007	Pulse	0.5000	3
Sr	88	115	He	0.109	ppb	29.6	103.33	0.0016	Pulse	0.1000	3
Mo	98	115	He	0.132	ppb	39.3	216.68	0.0034	Pulse	0.1000	3
Ag	107	115	He	0.013	ppb	14.5	66.67	0.0011	Pulse	0.1000	3
Cd	111	115	He	0.005	ppb	217.7	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.194	ppb	15.0	1163.43	0.0183	Pulse	0.1000	3
Sb	121	115	He	0.022	ppb	35.3	33.33	0.0005	Pulse	0.1000	3
Ba	137	115	He	0.157	ppb	51.9	63.33	0.0010	Pulse	0.1000	3
Tl	205	209	He	0.146	ppb	14.8	1096.76	0.0050	Pulse	0.1000	3
Pb	208	209	He	0.128	ppb	6.4	1490.10	0.0068	Pulse	0.1000	3
U	238	209	He	0.014	ppb	16.5	183.34	0.0008	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3204074.64	2.1	98.9	Pulse	0.1000	3
No Gas	Ge	72	1405122.79	2.0	97.6	Pulse	0.1000	3
H2	Sc	45	191882.28	2.4	98.2	Pulse	0.1000	3
H2	Ge	72	155821.56	2.5	95.6	Pulse	0.1000	3
H2	In	115	432533.34	2.3	99.8	Pulse	0.1000	3
He	Sc	45	39801.57	2.2	99.5	Pulse	0.1000	3
He	Ge	72	72057.50	1.1	99.7	Pulse	0.1000	3
He	In	115	63405.15	0.7	98.2	Pulse	0.1000	3
He	Tb	159	280253.99	0.1	98.0	Pulse	0.1000	3
He	Bi	209	217942.42	0.9	98.1	Pulse	0.1000	3

No Gas



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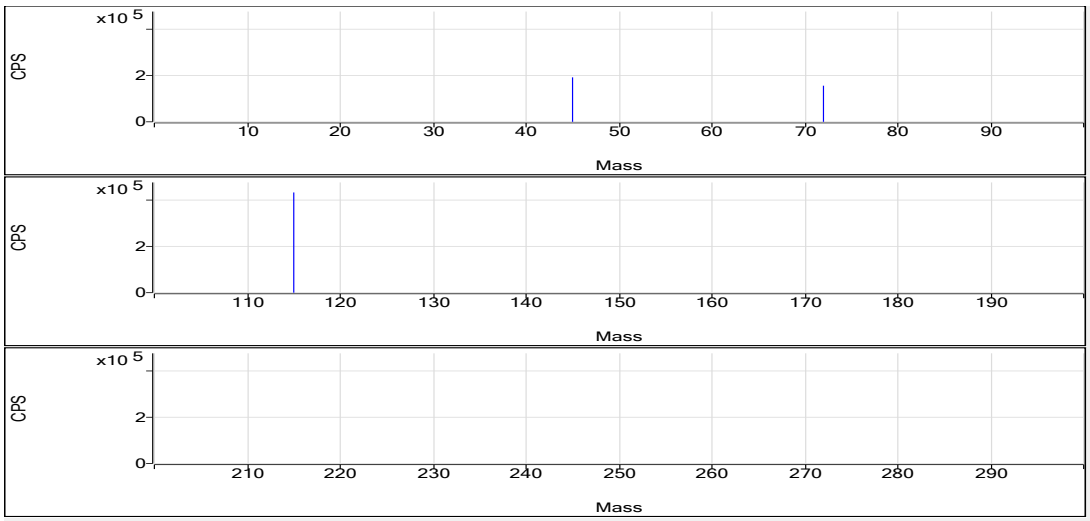
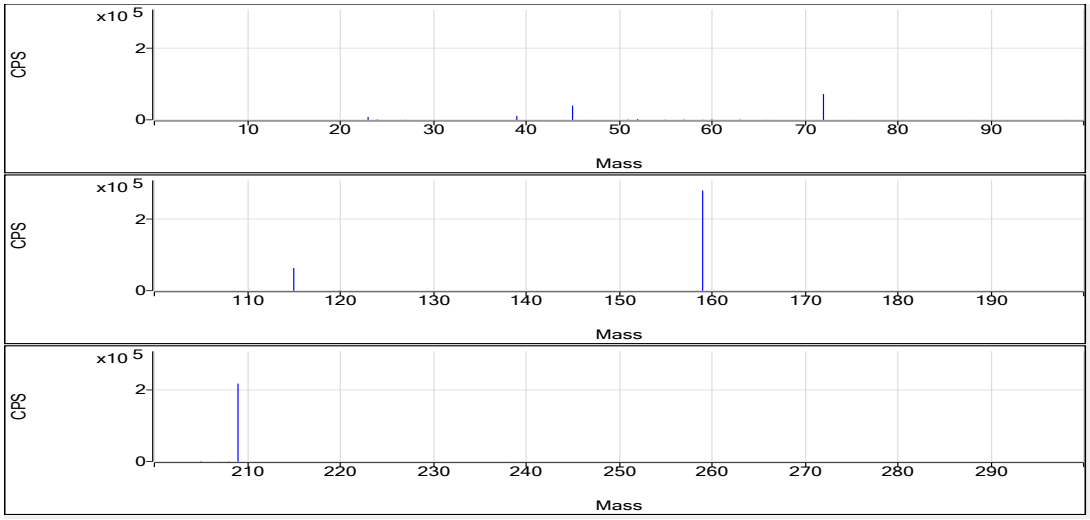


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.033	0.0001	124.00	0.0013	4.694E-05
Be	9	1	No Gas	0.022	0.0001	106.00	0.0013	4.694E-05
Be	9	1	No Gas	0.03	0.0001	124.00	0.0013	4.694E-05
Se	78	2	H2	0.004	0	2.00	0.0004	1.089E-05
Se	78	2	H2	0.074	0	6.00	0.0004	1.089E-05
Se	78	2	H2	0.038	0	4.00	0.0004	1.089E-05
Na	23	3	He	2.06	0.11	8022.40	0.0017	0.1065
Na	23	3	He	3.443	0.1124	8052.40	0.0017	0.1065
Na	23	3	He	3.598	0.1126	8062.41	0.0017	0.1065
Mg	24	3	He	17.672	0.0197	1440.12	0.0008	0.004846
Mg	24	3	He	10.143	0.0134	960.07	0.0008	0.004846
Mg	24	3	He	15.133	0.0176	1260.10	0.0008	0.004846
Al	27	3	He	17.75	0.0053	390.02	0.0002	0.001063
Al	27	3	He	16.41	0.005	360.02	0.0002	0.001063
Al	27	3	He	19.327	0.0057	410.02	0.0002	0.001063
K	39	3	He	18.577	0.1539	11224.60	0.0006	0.1436
K	39	3	He	0.527	0.1439	10314.03	0.0006	0.1436
K	39	3	He	-3.991	0.1414	10123.85	0.0006	0.1436
Ca	44	3	He	18.769	0.0022	160.01	0	0.001611
Ca	44	3	He	-6.936	0.0014	100.00	0	0.001611
Ca	44	3	He	-6.885	0.0014	100.00	0	0.001611
Ti	47	3	He	3.282	0.0011	80.00	0.0003	0.0002737
Ti	47	3	He	1.134	0.0006	40.00	0.0003	0.0002737
Ti	47	3	He	2.808	0.001	70.00	0.0003	0.0002737
V	51	3	He	0.424	0.0123	896.04	0.0117	0.007326
V	51	3	He	0.376	0.0117	840.03	0.0117	0.007326
V	51	3	He	0.334	0.0112	804.03	0.0117	0.007326
Cr	52	3	He	0.323	0.0303	2210.24	0.0152	0.02538
Cr	52	3	He	0.102	0.0269	1930.19	0.0152	0.02538
Cr	52	3	He	0.104	0.027	1930.20	0.0152	0.02538
Mn	55	3	He	-0.907	0.0085	620.04	0.0059	0.01385

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.834	0.0089	640.04	0.0059	0.01385
Mn	55	3	He	-0.666	0.0099	710.05	0.0059	0.01385
Fe	57	3	He	33.806	0.0137	1000.08	0.0003	0.003918
Fe	57	3	He	33.203	0.0135	970.06	0.0003	0.003918
Fe	57	3	He	23.61	0.0108	770.04	0.0003	0.003918
Co	59	3	He	0.142	0.0074	540.03	0.0305	0.003084
Co	59	3	He	0.141	0.0074	530.03	0.0305	0.003084
Co	59	3	He	0.105	0.0063	450.03	0.0305	0.003084
Ni	60	3	He	1.097	0.0186	1360.10	0.0088	0.009003
Ni	60	3	He	1.008	0.0179	1280.10	0.0088	0.009003
Ni	60	3	He	0.978	0.0176	1260.09	0.0088	0.009003
Cu	63	3	He	0.291	0.0122	890.05	0.0249	0.004937
Cu	63	3	He	0.255	0.0113	810.06	0.0249	0.004937
Cu	63	3	He	0.284	0.012	860.06	0.0249	0.004937
Zn	66	3	He	-0.238	0.0043	310.01	0.0025	0.004836
Zn	66	3	He	-0.492	0.0036	260.01	0.0025	0.004836
Zn	66	3	He	-0.263	0.0042	300.01	0.0025	0.004836
As	75	3	He	0.113	0.0006	46.00	0.0017	0.0004347
As	75	3	He	0.232	0.0008	60.00	0.0017	0.0004347
As	75	3	He	0.184	0.0008	54.00	0.0017	0.0004347
Sr	88	3	He	0.081	0.0014	90.00	0.0078	0.0007762
Sr	88	3	He	0.102	0.0016	100.00	0.0078	0.0007762
Sr	88	3	He	0.145	0.0019	120.00	0.0078	0.0007762
Mo	98	3	He	0.076	0.0022	140.01	0.022	0.0005162
Mo	98	3	He	0.141	0.0036	230.01	0.022	0.0005162
Mo	98	3	He	0.179	0.0044	280.01	0.022	0.0005162
Ag	107	3	He	0.014	0.0011	70.00	0.0455	0.0004641
Ag	107	3	He	0.014	0.0011	70.00	0.0455	0.0004641
Ag	107	3	He	0.011	0.001	60.00	0.0455	0.0004641
Cd	111	3	He	0.015	0.0001	8.00	0.0048	5.152E-05
Cd	111	3	He	0.002	0.0001	4.00	0.0048	5.152E-05
Cd	111	3	He	-0.004	0	2.00	0.0048	5.152E-05
Sn	120	3	He	0.225	0.0188	1200.09	0.0143	0.01559
Sn	120	3	He	0.168	0.018	1140.10	0.0143	0.01559
Sn	120	3	He	0.188	0.0183	1150.09	0.0143	0.01559
Sb	121	3	He	0.017	0.0005	30.00	0.0124	0.000258
Sb	121	3	He	0.017	0.0005	30.00	0.0124	0.000258
Sb	121	3	He	0.03	0.0006	40.00	0.0124	0.000258
Ba	137	3	He	0.252	0.0014	90.00	0.0044	0.000309
Ba	137	3	He	0.11	0.0008	50.00	0.0044	0.000309
Ba	137	3	He	0.111	0.0008	50.00	0.0044	0.000309
Tl	205	3	He	0.164	0.0055	1210.11	0.0276	0.001005
Tl	205	3	He	0.151	0.0052	1120.09	0.0276	0.001005
Tl	205	3	He	0.122	0.0044	960.07	0.0276	0.001005
Pb	208	3	He	0.138	0.0072	890.07	0.0364	0.002176
Pb	208	3	He	0.124	0.0067	850.07	0.0364	0.002176
Pb	208	3	He	0.123	0.0067	760.05	0.0364	0.002176
U	238	3	He	0.016	0.0009	200.01	0.0421	0.00024
U	238	3	He	0.015	0.0009	190.01	0.0421	0.00024
U	238	3	He	0.012	0.0007	160.01	0.0421	0.00024
Sc	45	1	No Gas			3137003.08		
Sc	45	1	No Gas			3200919.95		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3274300.89		
Ge	72	1	No Gas			1376079.20		
Ge	72	1	No Gas			1408299.98		
Ge	72	1	No Gas			1430989.20		
Sc	45	2	H2			194576.13		
Sc	45	2	H2			186596.89		
Sc	45	2	H2			194473.83		
Ge	72	2	H2			159686.10		
Ge	72	2	H2			151822.49		
Ge	72	2	H2			155956.08		
In	115	2	H2			436519.95		
In	115	2	H2			421225.81		
In	115	2	H2			439854.25		
Sc	45	3	He			40366.30		
Sc	45	3	He			40266.23		
Sc	45	3	He			38772.19		
Ge	72	3	He			72934.76		
Ge	72	3	He			71659.16		
Ge	72	3	He			71578.57		
In	115	3	He			63856.23		
In	115	3	He			63423.94		
In	115	3	He			62962.49		
Tb	159	3	He			280447.09		
Tb	159	3	He			280423.55		
Tb	159	3	He			279891.32		
Bi	209	3	He			218586.03		
Bi	209	3	He			215679.51		
Bi	209	3	He			219561.72		

Quantitation Report

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Sample Type	CalBlk
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

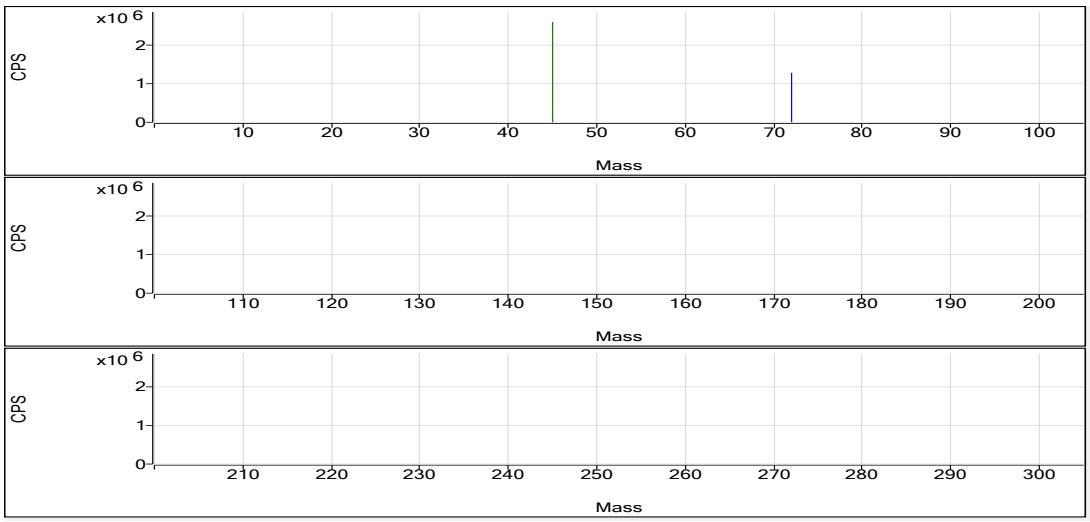
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.000	ppb	N/A	88.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.000	ppb	N/A	5.78	0.0000	Pulse	1.5000	3
Na	23	45	He	0.000	ppb	N/A	21352.73	0.4171	Pulse	0.1000	3
Mg	24	45	He	0.000	ppb	N/A	233.35	0.0046	Pulse	0.1000	3
Al	27	45	He	0.000	ppb	N/A	106.67	0.0021	Pulse	0.1000	3
K	39	45	He	0.000	ppb	N/A	21049.08	0.4112	Pulse	0.1000	3
Ca	44	45	He	0.000	ppb	N/A	170.01	0.0033	Pulse	0.1000	3
Ti	47	45	He	0.000	ppb	N/A	0.00	0.0000	Pulse	0.1000	3
V	51	45	He	0.000	ppb	N/A	1627.43	0.0318	Pulse	0.5000	3
Cr	52	45	He	0.000	ppb	N/A	2200.25	0.0430	Pulse	0.1000	3
Mn	55	45	He	0.000	ppb	N/A	143.34	0.0028	Pulse	0.1000	3
Fe	57	45	He	0.000	ppb	N/A	140.01	0.0027	Pulse	0.1000	3
Co	59	45	He	0.000	ppb	N/A	186.68	0.0036	Pulse	0.1000	3
Ni	60	72	He	0.000	ppb	N/A	1156.76	0.0141	Pulse	0.1000	3
Cu	63	72	He	0.000	ppb	N/A	763.38	0.0093	Pulse	0.1000	3
Zn	66	72	He	0.000	ppb	N/A	483.36	0.0059	Pulse	0.1000	3
As	75	72	He	0.000	ppb	N/A	71.33	0.0009	Pulse	0.5000	3
Sr	88	115	He	0.000	ppb	N/A	60.00	0.0007	Pulse	0.1000	3
Mo	98	115	He	0.000	ppb	N/A	160.01	0.0018	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	N/A	93.33	0.0011	Pulse	0.1000	3
Cd	111	115	He	0.000	ppb	N/A	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.000	ppb	N/A	1300.12	0.0148	Pulse	0.1000	3
Sb	121	115	He	0.000	ppb	N/A	23.33	0.0003	Pulse	0.1000	3
Ba	137	115	He	0.000	ppb	N/A	23.33	0.0003	Pulse	0.1000	3
Tl	205	159	He	0.000	ppb	N/A	1106.76	0.0028	Pulse	0.1000	3
Pb	208	159	He	0.000	ppb	N/A	866.71	0.0022	Pulse	0.1000	3
U	238	209	He	0.000	ppb	N/A	123.34	0.0004	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2607929.34	2.1	100.0	Analog	0.1000	3
No Gas	Ge	72	1288896.39	0.9	100.0	Pulse	0.1000	3
H2	Sc	45	206070.71	0.3	100.0	Pulse	0.1000	3
H2	Ge	72	162752.49	1.4	100.0	Pulse	0.1000	3
H2	In	115	403697.54	1.2	100.0	Pulse	0.1000	3
He	Sc	45	51197.73	1.2	100.0	Pulse	0.1000	3
He	Ge	72	81861.26	1.2	100.0	Pulse	0.1000	3
He	In	115	87644.82	0.2	100.0	Pulse	0.1000	3
He	Tb	159	401611.48	0.2	100.0	Pulse	0.1000	3
He	Bi	209	306117.99	1.4	100.0	Pulse	0.1000	3

No Gas



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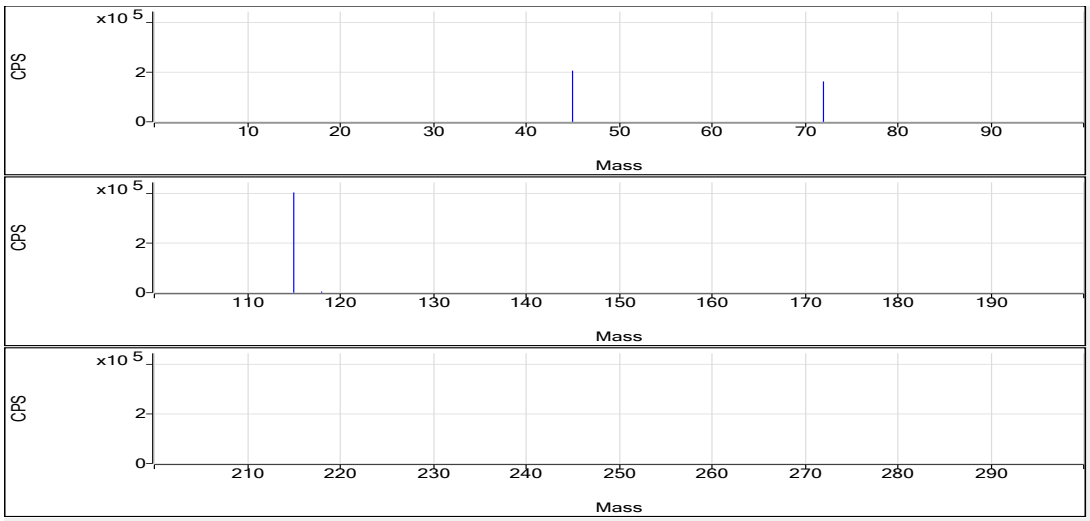
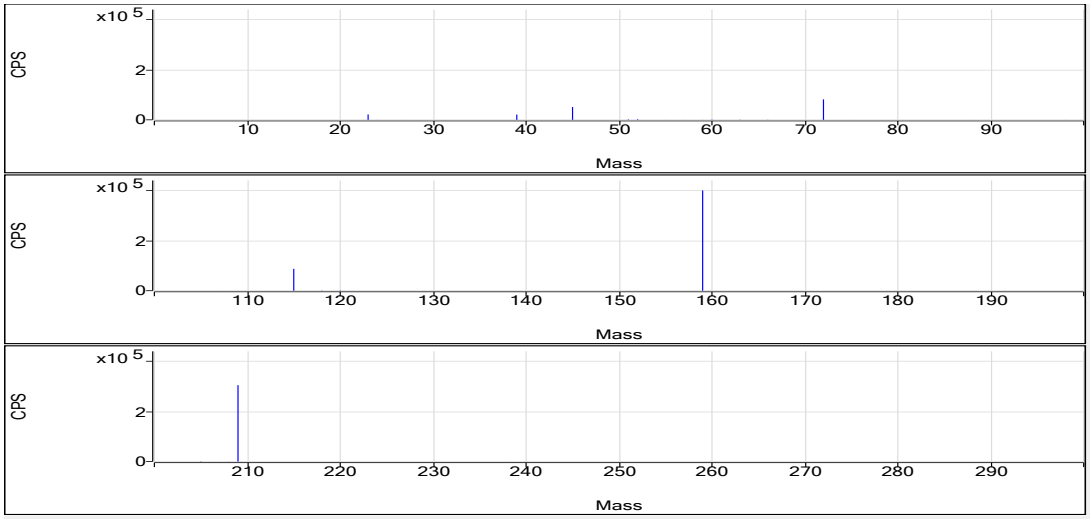


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.007	0	100.00	0.0007	3.404E-05
Be	9	1	No Gas	0	0	90.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.007	0	76.00	0.0007	3.404E-05
Se	78	2	H2	-0.014	0	4.67	0.0004	3.546E-05
Se	78	2	H2	0.012	0	6.67	0.0004	3.546E-05
Se	78	2	H2	0.003	0	6.00	0.0004	3.546E-05
Na	23	3	He	1.608	0.4228	21596.40	0.0036	0.4171
Na	23	3	He	-1.287	0.4125	20895.30	0.0036	0.4171
Na	23	3	He	-0.321	0.4159	21566.48	0.0036	0.4171
Mg	24	3	He	-0.353	0.0039	200.01	0.0018	0.004553
Mg	24	3	He	-0.116	0.0043	220.01	0.0018	0.004553
Mg	24	3	He	0.469	0.0054	280.02	0.0018	0.004553
Al	27	3	He	-0.89	0.0016	80.00	0.0006	0.002085
Al	27	3	He	0.827	0.0026	130.00	0.0006	0.002085
Al	27	3	He	0.063	0.0021	110.01	0.0006	0.002085
K	39	3	He	2.043	0.4136	21125.86	0.0012	0.4112
K	39	3	He	4.476	0.4164	21095.88	0.0012	0.4112
K	39	3	He	-6.519	0.4036	20925.51	0.0012	0.4112
Ca	44	3	He	11.687	0.0041	210.01	0.0001	0.003322
Ca	44	3	He	-5.339	0.003	150.01	0.0001	0.003322
Ca	44	3	He	-6.348	0.0029	150.01	0.0001	0.003322
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	0.057	0.033	1686.11	0.0213	0.0318
V	51	3	He	0.025	0.0323	1638.10	0.0213	0.0318
V	51	3	He	-0.082	0.03	1558.09	0.0213	0.0318
Cr	52	3	He	-0.003	0.0429	2190.25	0.0294	0.04297
Cr	52	3	He	-0.025	0.0422	2140.23	0.0294	0.04297
Cr	52	3	He	0.028	0.0438	2270.27	0.0294	0.04297
Mn	55	3	He	0.042	0.0033	170.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.019	0.0026	130.01	0.0124	0.002801
Mn	55	3	He	-0.024	0.0025	130.01	0.0124	0.002801
Fe	57	3	He	0.016	0.0027	140.01	0.0006	0.002732
Fe	57	3	He	-0.635	0.0024	120.00	0.0006	0.002732
Fe	57	3	He	0.619	0.0031	160.01	0.0006	0.002732
Co	59	3	He	-0.006	0.0033	170.01	0.0549	0.003644
Co	59	3	He	-0.002	0.0036	180.01	0.0549	0.003644
Co	59	3	He	0.007	0.0041	210.01	0.0549	0.003644
Ni	60	3	He	0.129	0.0153	1260.11	0.0093	0.01413
Ni	60	3	He	-0.048	0.0137	1130.08	0.0093	0.01413
Ni	60	3	He	-0.081	0.0134	1080.08	0.0093	0.01413
Cu	63	3	He	0.01	0.0096	790.05	0.0274	0.009321
Cu	63	3	He	0.013	0.0097	800.05	0.0274	0.009321
Cu	63	3	He	-0.024	0.0087	700.04	0.0274	0.009321
Zn	66	3	He	-0.104	0.0056	460.02	0.0031	0.005913
Zn	66	3	He	-0.27	0.0051	420.02	0.0031	0.005913
Zn	66	3	He	0.373	0.0071	570.03	0.0031	0.005913
As	75	3	He	-0.02	0.0008	68.00	0.0021	0.0008698
As	75	3	He	0.114	0.0011	92.00	0.0021	0.0008698
As	75	3	He	-0.094	0.0007	54.00	0.0021	0.0008698
Sr	88	3	He	0	0.0007	60.00	0.0088	0.0006843
Sr	88	3	He	0.026	0.0009	80.00	0.0088	0.0006843
Sr	88	3	He	-0.026	0.0005	40.00	0.0088	0.0006843
Mo	98	3	He	-0.031	0.0011	100.00	0.0219	0.001827
Mo	98	3	He	-0.005	0.0017	150.01	0.0219	0.001827
Mo	98	3	He	0.037	0.0026	230.01	0.0219	0.001827
Ag	107	3	He	-0.001	0.001	90.00	0.047	0.001064
Ag	107	3	He	0.009	0.0015	130.00	0.047	0.001064
Ag	107	3	He	-0.008	0.0007	60.00	0.047	0.001064
Cd	111	3	He	0.001	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Cd	111	3	He	0.001	0.0001	6.00	0.0053	6.086E-05
Sn	120	3	He	0.087	0.0162	1420.15	0.0154	0.01483
Sn	120	3	He	0.021	0.0152	1330.12	0.0154	0.01483
Sn	120	3	He	-0.109	0.0132	1150.09	0.0154	0.01483
Sb	121	3	He	-0.011	0.0001	10.00	0.0143	0.0002661
Sb	121	3	He	0.021	0.0006	50.00	0.0143	0.0002661
Sb	121	3	He	-0.011	0.0001	10.00	0.0143	0.0002661
Ba	137	3	He	-0.032	0.0001	10.00	0.0048	0.0002665
Ba	137	3	He	-0.008	0.0002	20.00	0.0048	0.0002665
Ba	137	3	He	0.04	0.0005	40.00	0.0048	0.0002665
Tl	205	3	He	0.011	0.003	1220.13	0.0246	0.002755
Tl	205	3	He	0.007	0.0029	1170.09	0.0246	0.002755
Tl	205	3	He	-0.018	0.0023	930.06	0.0246	0.002755
Pb	208	3	He	-0.006	0.002	420.02	0.0324	0.002158
Pb	208	3	He	0.003	0.0023	500.03	0.0324	0.002158
Pb	208	3	He	0.003	0.0022	490.03	0.0324	0.002158
U	238	3	He	0.003	0.0005	170.01	0.0492	0.0004023
U	238	3	He	-0.004	0.0002	60.00	0.0492	0.0004023
U	238	3	He	0.001	0.0005	140.01	0.0492	0.0004023
Sc	45	1	No Gas			2552261.37		
Sc	45	1	No Gas			2659728.40		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2611798.24		
Ge	72	1	No Gas			1279564.28		
Ge	72	1	No Gas			1302001.78		
Ge	72	1	No Gas			1285123.11		
Sc	45	2	H2			205786.75		
Sc	45	2	H2			205586.13		
Sc	45	2	H2			206839.25		
Ge	72	2	H2			160110.92		
Ge	72	2	H2			164498.61		
Ge	72	2	H2			163647.95		
In	115	2	H2			399186.13		
In	115	2	H2			408985.74		
In	115	2	H2			402920.74		
Sc	45	3	He			51080.68		
Sc	45	3	He			50659.18		
Sc	45	3	He			51853.32		
Ge	72	3	He			82226.70		
Ge	72	3	He			82598.56		
Ge	72	3	He			80758.53		
In	115	3	He			87776.55		
In	115	3	He			87736.62		
In	115	3	He			87443.90		
Tb	159	3	He			402606.99		
Tb	159	3	He			401228.28		
Tb	159	3	He			400999.17		
Bi	209	3	He			310666.89		
Bi	209	3	He			305360.21		
Bi	209	3	He			302326.87		

Quantitation Report

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Sample Type	CalStd
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

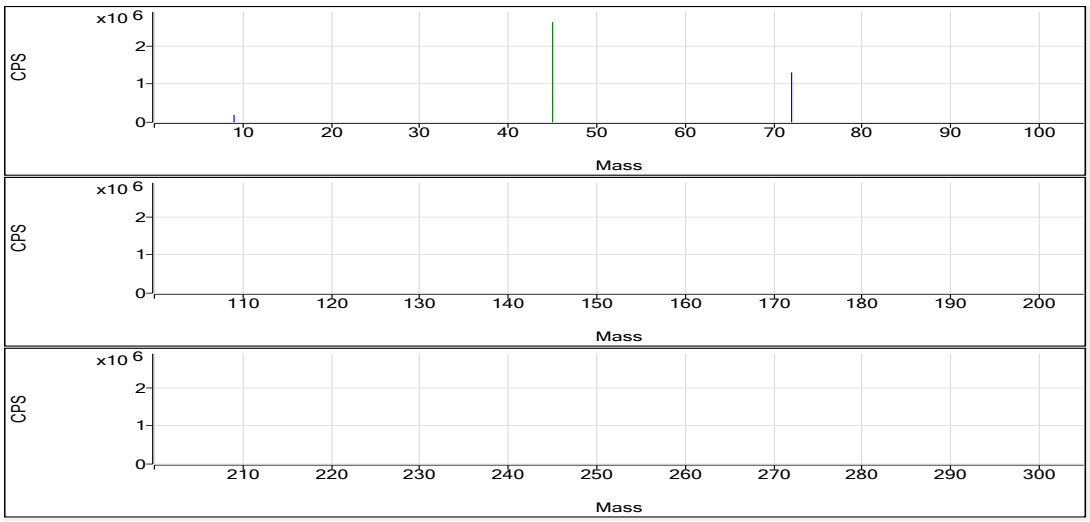
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	100.000	ppb	1.5	191551.05	0.0729	Pulse	0.5000	3
Se	78	72	H2	100.000	ppb	0.7	7161.80	0.0439	Pulse	1.5000	3
Na	23	45	He	10000.000	ppb	2.4	1842318.46	36.0612	Analog	0.1000	3
Mg	24	45	He	10000.000	ppb	1.4	923404.28	18.0725	Pulse	0.1000	3
Al	27	45	He	10000.000	ppb	1.3	297783.87	5.8280	Pulse	0.1000	3
K	39	45	He	10000.000	ppb	1.8	619340.24	12.1219	Pulse	0.1000	3
Ca	44	45	He	10000.000	ppb	0.4	34692.10	0.6789	Pulse	0.1000	3
Ti	47	45	He	10000.000	ppb	2.0	271745.06	5.3186	Pulse	0.1000	3
V	51	45	He	1000.000	ppb	1.5	1087423.09	21.2827	Pulse	0.5000	3
Cr	52	45	He	1000.000	ppb	1.2	1504952.58	29.4531	Analog	0.1000	3
Mn	55	45	He	1000.000	ppb	2.0	635310.04	12.4349	Pulse	0.1000	3
Fe	57	45	He	10000.000	ppb	1.9	292464.02	5.7242	Pulse	0.1000	3
Co	59	45	He	1000.000	ppb	1.8	2804530.90	54.8911	Analog	0.1000	3
Ni	60	72	He	1000.000	ppb	0.4	769953.32	9.2970	Pulse	0.1000	3
Cu	63	72	He	1000.000	ppb	0.8	2272054.50	27.4353	Analog	0.1000	3
Zn	66	72	He	1000.000	ppb	1.3	254757.11	3.0763	Pulse	0.1000	3
As	75	72	He	1000.000	ppb	0.8	177770.46	2.1466	Pulse	0.5000	3
Sr	88	115	He	100.000	ppb	0.8	77039.91	0.8806	Pulse	0.1000	3
Mo	98	115	He	100.000	ppb	0.1	192155.67	2.1963	Pulse	0.1000	3
Ag	107	115	He	100.000	ppb	1.1	411638.02	4.7050	Pulse	0.1000	3
Cd	111	115	He	100.000	ppb	0.4	46597.28	0.5326	Pulse	0.5000	3
Sn	120	115	He	100.000	ppb	0.3	136211.08	1.5569	Pulse	0.1000	3
Sb	121	115	He	100.000	ppb	0.6	124698.36	1.4253	Pulse	0.1000	3
Ba	137	115	He	1000.000	ppb	0.7	418121.45	4.7791	Pulse	0.1000	3
Tl	205	159	He	100.000	ppb	0.7	983138.65	2.4588	Pulse	0.1000	3
Pb	208	159	He	100.000	ppb	0.7	1296541.12	3.2426	Pulse	0.1000	3
U	238	209	He	100.000	ppb	0.5	1506356.33	4.9252	Pulse	0.1000	3

ISTD Table:

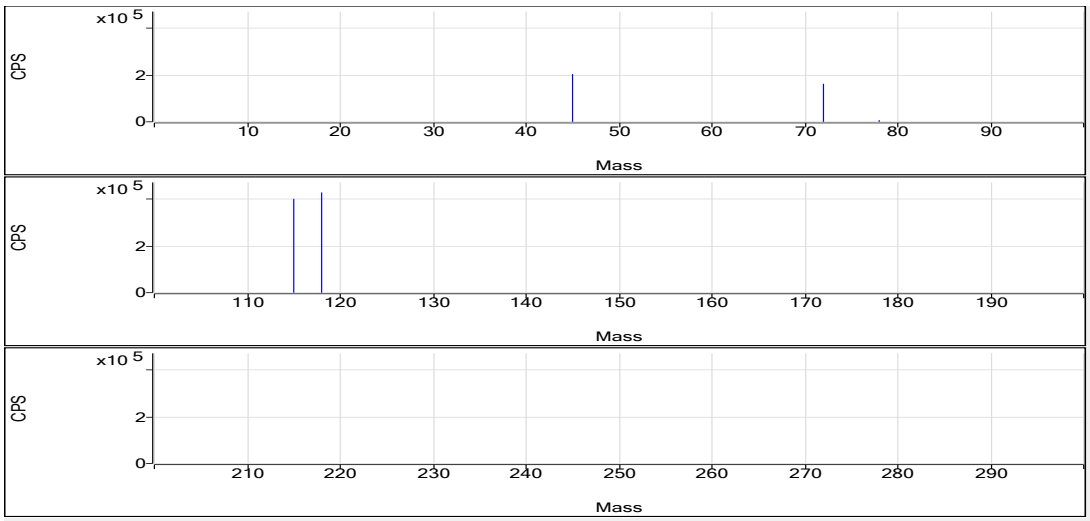
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2628311.00	1.0	100.8	Analog	0.1000	3
No Gas	Ge	72	1309465.50	0.6	101.6	Pulse	0.1000	3
H2	Sc	45	204438.96	0.7	99.2	Pulse	0.1000	3
H2	Ge	72	163256.88	0.5	100.3	Pulse	0.1000	3
H2	In	115	402414.75	0.4	99.7	Pulse	0.1000	3
He	Sc	45	51103.72	1.9	99.8	Pulse	0.1000	3
He	Ge	72	82819.73	1.1	101.2	Pulse	0.1000	3
He	In	115	87489.29	0.3	99.8	Pulse	0.1000	3
He	Tb	159	399850.42	0.2	99.6	Pulse	0.1000	3
He	Bi	209	305851.02	0.5	99.9	Pulse	0.1000	3

No Gas

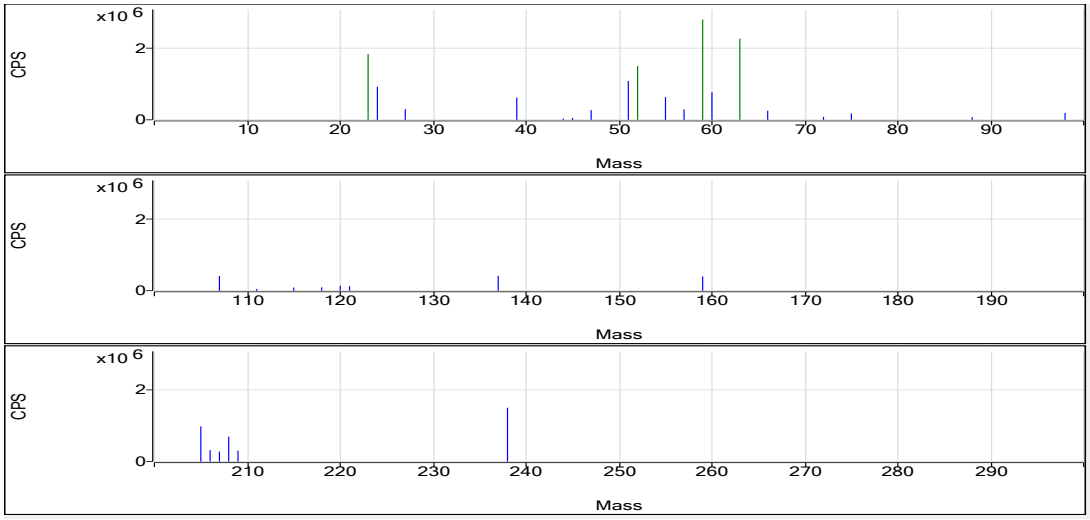


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	98.217	0.0716	190223.23	0.0007	3.404E-05
Be	9	1	No Gas	100.834	0.0735	192155.42	0.0007	3.404E-05
Be	9	1	No Gas	100.949	0.0736	192274.50	0.0007	3.404E-05
Se	78	2	H2	99.653	0.0437	7096.44	0.0004	3.546E-05
Se	78	2	H2	99.532	0.0437	7131.12	0.0004	3.546E-05
Se	78	2	H2	100.815	0.0442	7257.84	0.0004	3.546E-05
Na	23	3	He	9751.578	35.1757	1829265.60	0.0036	0.4171
Na	23	3	He	10021.17	36.1366	1851667.00	0.0036	0.4171
Na	23	3	He	10227.253	36.8712	1846022.78	0.0036	0.4171
Mg	24	3	He	9852.823	17.8065	926005.06	0.0018	0.004553
Mg	24	3	He	10009.087	18.0889	926886.55	0.0018	0.004553
Mg	24	3	He	10138.09	18.322	917321.24	0.0018	0.004553
Al	27	3	He	9865.532	5.7497	299004.57	0.0006	0.002085
Al	27	3	He	10003.52	5.8301	298737.09	0.0006	0.002085
Al	27	3	He	10130.948	5.9043	295609.96	0.0006	0.002085
K	39	3	He	9825.908	11.9181	619783.23	0.0012	0.4112
K	39	3	He	9990.229	12.1105	620550.54	0.0012	0.4112
K	39	3	He	10183.863	12.3373	617686.94	0.0012	0.4112
Ca	44	3	He	9962.564	0.6764	35173.45	0.0001	0.003322
Ca	44	3	He	9989.926	0.6782	34752.13	0.0001	0.003322
Ca	44	3	He	10047.51	0.6821	34150.73	0.0001	0.003322
Ti	47	3	He	9767.738	5.1951	270163.28	0.0005	0
Ti	47	3	He	10114.997	5.3798	275663.47	0.0005	0
Ti	47	3	He	10117.265	5.381	269408.43	0.0005	0
V	51	3	He	985.54	20.9754	1090798.00	0.0213	0.0318
V	51	3	He	999.645	21.2751	1090153.38	0.0213	0.0318
V	51	3	He	1014.815	21.5975	1081317.88	0.0213	0.0318
Cr	52	3	He	985.749	29.034	1509872.17	0.0294	0.04297
Cr	52	3	He	1005.343	29.6102	1517247.79	0.0294	0.04297
Cr	52	3	He	1008.908	29.7151	1487737.79	0.0294	0.04297
Mn	55	3	He	981.926	12.2102	634977.06	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	996.621	12.3929	635022.14	0.0124	0.002801
Mn	55	3	He	1021.454	12.7017	635930.93	0.0124	0.002801
Fe	57	3	He	9793.439	5.6061	291535.43	0.0006	0.002732
Fe	57	3	He	10046.435	5.7508	294675.43	0.0006	0.002732
Fe	57	3	He	10160.126	5.8159	291181.19	0.0006	0.002732
Co	59	3	He	988.745	54.2733	2822411.52	0.0549	0.003644
Co	59	3	He	990.257	54.3563	2785257.77	0.0549	0.003644
Co	59	3	He	1020.998	56.0436	2805923.40	0.0549	0.003644
Ni	60	3	He	1004.19	9.3359	763338.11	0.0093	0.01413
Ni	60	3	He	996.021	9.2601	771759.05	0.0093	0.01413
Ni	60	3	He	999.789	9.295	774762.80	0.0093	0.01413
Cu	63	3	He	1009.145	27.6861	2263726.53	0.0274	0.009321
Cu	63	3	He	996.69	27.3446	2278973.09	0.0274	0.009321
Cu	63	3	He	994.166	27.2753	2273463.87	0.0274	0.009321
Zn	66	3	He	1014.596	3.1211	255197.11	0.0031	0.005913
Zn	66	3	He	991.508	3.0503	254216.85	0.0031	0.005913
Zn	66	3	He	993.896	3.0576	254857.36	0.0031	0.005913
As	75	3	He	1009.507	2.167	177182.73	0.0021	0.0008698
As	75	3	He	996.282	2.1386	178239.31	0.0021	0.0008698
As	75	3	He	994.211	2.1342	177889.34	0.0021	0.0008698
Sr	88	3	He	100.071	0.8812	76949.06	0.0088	0.0006843
Sr	88	3	He	99.15	0.8731	76607.66	0.0088	0.0006843
Sr	88	3	He	100.779	0.8874	77563.01	0.0088	0.0006843
Mo	98	3	He	100.002	2.1964	191794.82	0.0219	0.001827
Mo	98	3	He	99.906	2.1943	192532.32	0.0219	0.001827
Mo	98	3	He	100.091	2.1983	192139.88	0.0219	0.001827
Ag	107	3	He	99.023	4.6591	406841.87	0.047	0.001064
Ag	107	3	He	99.772	4.6943	411891.56	0.047	0.001064
Ag	107	3	He	101.205	4.7617	416180.62	0.047	0.001064
Cd	111	3	He	100.44	0.535	46713.67	0.0053	6.086E-05
Cd	111	3	He	99.766	0.5314	46623.36	0.0053	6.086E-05
Cd	111	3	He	99.793	0.5315	46454.82	0.0053	6.086E-05
Sn	120	3	He	99.812	1.554	135698.79	0.0154	0.01483
Sn	120	3	He	99.898	1.5553	136467.14	0.0154	0.01483
Sn	120	3	He	100.291	1.5614	136467.32	0.0154	0.01483
Sb	121	3	He	100.014	1.4255	124477.35	0.0143	0.0002661
Sb	121	3	He	100.584	1.4336	125788.28	0.0143	0.0002661
Sb	121	3	He	99.403	1.4168	123829.44	0.0143	0.0002661
Ba	137	3	He	992.292	4.7422	414105.58	0.0048	0.0002665
Ba	137	3	He	1005.674	4.8062	421708.08	0.0048	0.0002665
Ba	137	3	He	1002.034	4.7888	418550.70	0.0048	0.0002665
Tl	205	3	He	99.487	2.4462	979515.92	0.0246	0.002755
Tl	205	3	He	100.767	2.4776	988716.70	0.0246	0.002755
Tl	205	3	He	99.746	2.4525	981183.34	0.0246	0.002755
Pb	208	3	He	99.763	3.2349	696171.40	0.0324	0.002158
Pb	208	3	He	100.746	3.2668	699198.19	0.0324	0.002158
Pb	208	3	He	99.491	3.2261	691314.83	0.0324	0.002158
U	238	3	He	100.344	4.9421	1516761.85	0.0492	0.0004023
U	238	3	He	99.408	4.896	1501393.42	0.0492	0.0004023
U	238	3	He	100.248	4.9374	1500913.73	0.0492	0.0004023
Sc	45	1	No Gas			2657186.84		
Sc	45	1	No Gas			2614560.43		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2613185.74		
Ge	72	1	No Gas			1310058.57		
Ge	72	1	No Gas			1301776.70		
Ge	72	1	No Gas			1316561.23		
Sc	45	2	H2			204234.90		
Sc	45	2	H2			205929.90		
Sc	45	2	H2			203152.09		
Ge	72	2	H2			162333.22		
Ge	72	2	H2			163324.12		
Ge	72	2	H2			164113.30		
In	115	2	H2			400612.53		
In	115	2	H2			402914.80		
In	115	2	H2			403716.91		
Sc	45	3	He			52003.67		
Sc	45	3	He			51240.71		
Sc	45	3	He			50066.79		
Ge	72	3	He			81763.91		
Ge	72	3	He			83342.85		
Ge	72	3	He			83352.42		
In	115	3	He			88047.93		
In	115	3	He			88481.05		
In	115	3	He			88129.47		
Tb	159	3	He			400426.01		
Tb	159	3	He			399056.52		
Tb	159	3	He			400068.74		
Bi	209	3	He			306905.13		
Bi	209	3	He			306656.44		
Bi	209	3	He			303991.48		

Quantitation Report

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Sample Type	ICV
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

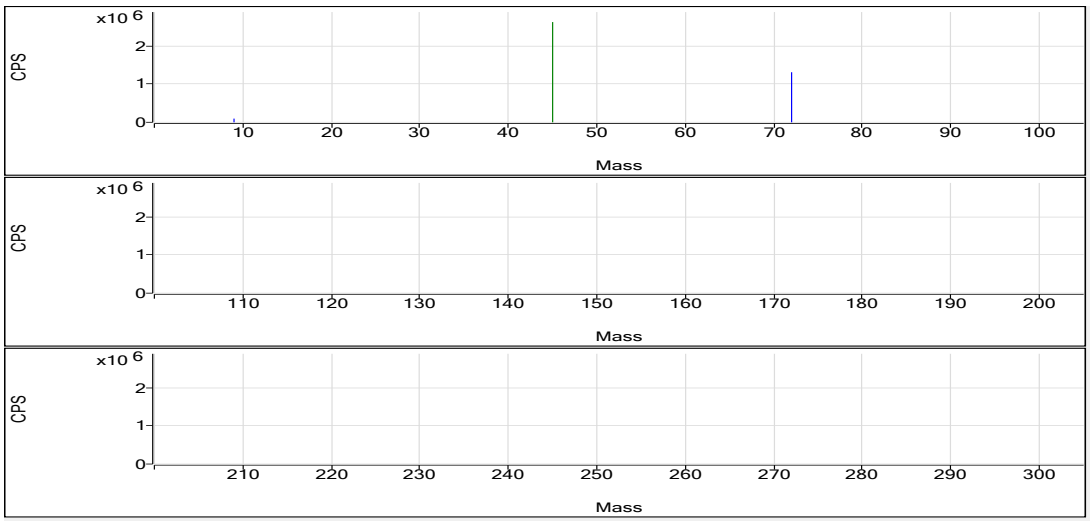
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.412	ppb	0.1	96673.52	0.0368	Pulse	0.5000	3
Se	78	72	H2	50.452	ppb	3.2	3629.80	0.0221	Pulse	1.5000	3
Na	23	45	He	4876.618	ppb	1.2	900104.47	17.7993	Pulse	0.1000	3
Mg	24	45	He	5016.454	ppb	1.6	458556.92	9.0682	Pulse	0.1000	3
Al	27	45	He	5079.807	ppb	0.6	149771.58	2.9615	Pulse	0.1000	3
K	39	45	He	5027.512	ppb	0.3	318557.27	6.2988	Pulse	0.1000	3
Ca	44	45	He	5129.207	ppb	3.5	17687.89	0.3498	Pulse	0.1000	3
Ti	47	45	He	5040.459	ppb	1.7	135561.52	2.6808	Pulse	0.1000	3
V	51	45	He	507.870	ppb	0.8	547405.44	10.8245	Pulse	0.5000	3
Cr	52	45	He	489.922	ppb	1.4	730819.68	14.4516	Pulse	0.1000	3
Mn	55	45	He	511.404	ppb	1.0	321658.80	6.3606	Pulse	0.1000	3
Fe	57	45	He	5148.853	ppb	0.9	149119.43	2.9487	Pulse	0.1000	3
Co	59	45	He	491.577	ppb	1.2	1364618.42	26.9850	Pulse	0.1000	3
Ni	60	72	He	512.453	ppb	1.8	391399.72	4.7712	Pulse	0.1000	3
Cu	63	72	He	488.429	ppb	0.9	1099745.56	13.4050	Pulse	0.1000	3
Zn	66	72	He	523.094	ppb	2.2	132244.79	1.6120	Pulse	0.1000	3
As	75	72	He	497.389	ppb	1.7	87624.69	1.0681	Pulse	0.5000	3
Sr	88	115	He	50.563	ppb	2.6	38947.83	0.4456	Pulse	0.1000	3
Mo	98	115	He	49.094	ppb	1.9	94342.49	1.0792	Pulse	0.1000	3
Ag	107	115	He	49.469	ppb	1.8	203508.75	2.3281	Pulse	0.1000	3
Cd	111	115	He	54.357	ppb	1.8	25310.25	0.2895	Pulse	0.5000	3
Sn	120	115	He	51.032	ppb	1.7	70088.10	0.8018	Pulse	0.1000	3
Sb	121	115	He	54.400	ppb	3.4	67779.61	0.7755	Pulse	0.1000	3
Ba	137	115	He	500.079	ppb	2.2	208919.27	2.3900	Pulse	0.1000	3
Tl	205	159	He	49.467	ppb	0.4	492397.27	1.2177	Pulse	0.1000	3
Pb	208	159	He	49.711	ppb	1.1	652239.40	1.6130	Pulse	0.1000	3
U	238	209	He	51.029	ppb	0.5	773156.55	2.5135	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2629797.93	0.8	100.8	Analog	0.1000	3
No Gas	Ge	72	1313516.46	0.5	101.9	Pulse	0.1000	3
H2	Sc	45	202665.44	1.0	98.3	Pulse	0.1000	3
H2	Ge	72	163918.52	1.3	100.7	Pulse	0.1000	3
H2	In	115	401712.06	0.7	99.5	Pulse	0.1000	3
He	Sc	45	50575.19	1.5	98.8	Pulse	0.1000	3
He	Ge	72	82045.43	1.1	100.2	Pulse	0.1000	3
He	In	115	87433.51	1.7	99.8	Pulse	0.1000	3
He	Tb	159	404380.46	0.6	100.7	Pulse	0.1000	3
He	Bi	209	307610.67	0.7	100.5	Pulse	0.1000	3

No Gas



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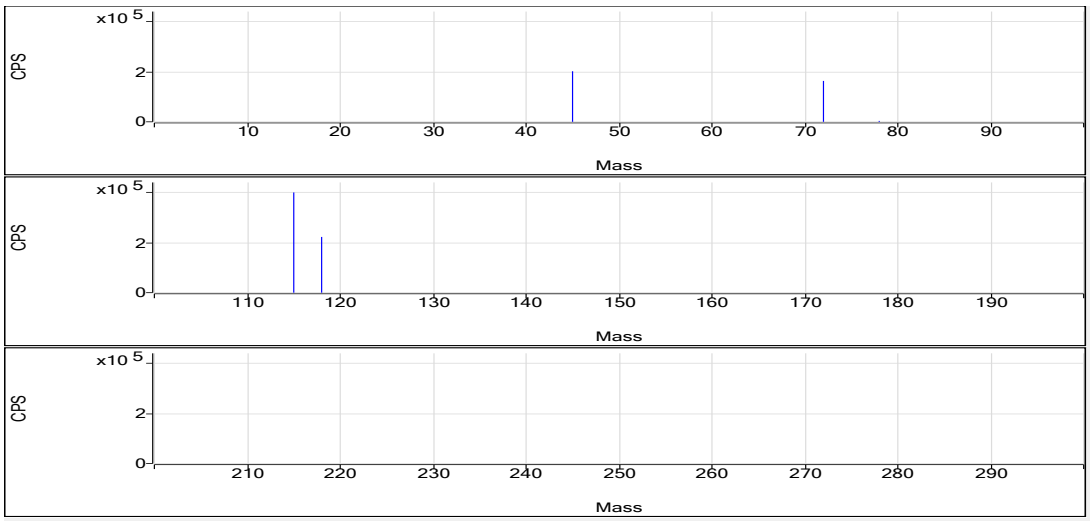
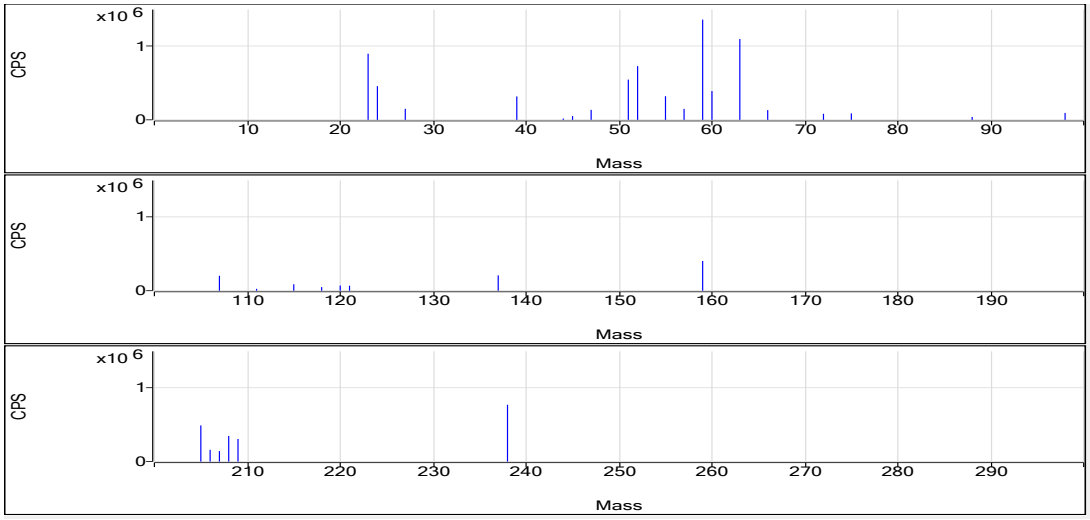


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.457	0.0368	97235.16	0.0007	3.404E-05
Be	9	1	No Gas	50.421	0.0368	97075.88	0.0007	3.404E-05
Be	9	1	No Gas	50.358	0.0367	95709.51	0.0007	3.404E-05
Se	78	2	H2	52.285	0.023	3714.49	0.0004	3.546E-05
Se	78	2	H2	49.267	0.0216	3594.46	0.0004	3.546E-05
Se	78	2	H2	49.804	0.0219	3580.45	0.0004	3.546E-05
Na	23	3	He	4811.194	17.5661	903804.21	0.0036	0.4171
Na	23	3	He	4921.271	17.9585	901646.00	0.0036	0.4171
Na	23	3	He	4897.388	17.8734	894863.19	0.0036	0.4171
Mg	24	3	He	4929.806	8.9117	458519.17	0.0018	0.004553
Mg	24	3	He	5035.91	9.1034	457055.46	0.0018	0.004553
Mg	24	3	He	5083.648	9.1896	460096.13	0.0018	0.004553
Al	27	3	He	5044.232	2.9408	151309.77	0.0006	0.002085
Al	27	3	He	5089.22	2.967	148966.44	0.0006	0.002085
Al	27	3	He	5105.969	2.9768	149038.53	0.0006	0.002085
K	39	3	He	5017.058	6.2865	323451.97	0.0012	0.4112
K	39	3	He	5041.723	6.3154	317079.86	0.0012	0.4112
K	39	3	He	5023.756	6.2944	315139.98	0.0012	0.4112
Ca	44	3	He	4945.424	0.3374	17360.81	0.0001	0.003322
Ca	44	3	He	5308.32	0.3619	18171.85	0.0001	0.003322
Ca	44	3	He	5133.878	0.3502	17531.02	0.0001	0.003322
Ti	47	3	He	4951.889	2.6337	135508.76	0.0005	0
Ti	47	3	He	5042.081	2.6817	134640.03	0.0005	0
Ti	47	3	He	5127.407	2.7271	136535.76	0.0005	0
V	51	3	He	503.023	10.7215	551636.50	0.0213	0.0318
V	51	3	He	510.27	10.8755	546028.13	0.0213	0.0318
V	51	3	He	510.317	10.8765	544551.69	0.0213	0.0318
Cr	52	3	He	483.778	14.2709	734260.54	0.0294	0.04297
Cr	52	3	He	497.033	14.6608	736076.00	0.0294	0.04297
Cr	52	3	He	488.954	14.4232	722122.49	0.0294	0.04297
Mn	55	3	He	505.653	6.2891	323586.26	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	513.36	6.385	320571.42	0.0124	0.002801
Mn	55	3	He	515.198	6.4078	320818.73	0.0124	0.002801
Fe	57	3	He	5116.102	2.9299	150748.45	0.0006	0.002732
Fe	57	3	He	5128.756	2.9372	147466.27	0.0006	0.002732
Fe	57	3	He	5201.7	2.9789	149143.56	0.0006	0.002732
Co	59	3	He	485.345	26.643	1370822.32	0.0549	0.003644
Co	59	3	He	492.55	27.0384	1357524.20	0.0549	0.003644
Co	59	3	He	496.836	27.2737	1365508.73	0.0549	0.003644
Ni	60	3	He	515.177	4.7964	391356.99	0.0093	0.01413
Ni	60	3	He	520.222	4.8433	394541.21	0.0093	0.01413
Ni	60	3	He	501.959	4.6737	388300.97	0.0093	0.01413
Cu	63	3	He	491.478	13.4886	1100579.05	0.0274	0.009321
Cu	63	3	He	490.511	13.4621	1096642.41	0.0274	0.009321
Cu	63	3	He	483.299	13.2643	1102015.22	0.0274	0.009321
Zn	66	3	He	535.732	1.6508	134696.84	0.0031	0.005913
Zn	66	3	He	520.383	1.6037	130640.46	0.0031	0.005913
Zn	66	3	He	513.166	1.5815	131397.06	0.0031	0.005913
As	75	3	He	503.507	1.0813	88223.65	0.0021	0.0008698
As	75	3	He	501.235	1.0764	87684.21	0.0021	0.0008698
As	75	3	He	487.427	1.0468	86966.22	0.0021	0.0008698
Sr	88	3	He	49.134	0.433	38603.44	0.0088	0.0006843
Sr	88	3	He	51.775	0.4562	39496.07	0.0088	0.0006843
Sr	88	3	He	50.779	0.4475	38743.98	0.0088	0.0006843
Mo	98	3	He	48.279	1.0613	94616.93	0.0219	0.001827
Mo	98	3	He	50.088	1.101	95312.46	0.0219	0.001827
Mo	98	3	He	48.914	1.0753	93098.07	0.0219	0.001827
Ag	107	3	He	48.454	2.2803	203292.28	0.047	0.001064
Ag	107	3	He	49.864	2.3466	203141.42	0.047	0.001064
Ag	107	3	He	50.089	2.3572	204092.56	0.047	0.001064
Cd	111	3	He	53.279	0.2838	25300.89	0.0053	6.086E-05
Cd	111	3	He	55.187	0.294	25447.17	0.0053	6.086E-05
Cd	111	3	He	54.604	0.2909	25182.68	0.0053	6.086E-05
Sn	120	3	He	50.014	0.7861	70078.77	0.0154	0.01483
Sn	120	3	He	51.557	0.8099	70108.09	0.0154	0.01483
Sn	120	3	He	51.525	0.8094	70077.43	0.0154	0.01483
Sb	121	3	He	52.508	0.7485	66731.31	0.0143	0.0002661
Sb	121	3	He	56.153	0.8005	69293.54	0.0143	0.0002661
Sb	121	3	He	54.539	0.7775	67313.98	0.0143	0.0002661
Ba	137	3	He	487.734	2.3311	207815.50	0.0048	0.0002665
Ba	137	3	He	508.819	2.4318	210515.58	0.0048	0.0002665
Ba	137	3	He	503.683	2.4073	208426.74	0.0048	0.0002665
Tl	205	3	He	49.315	1.2139	494052.34	0.0246	0.002755
Tl	205	3	He	49.388	1.2157	491280.38	0.0246	0.002755
Tl	205	3	He	49.698	1.2233	491859.09	0.0246	0.002755
Pb	208	3	He	49.213	1.5969	347409.99	0.0324	0.002158
Pb	208	3	He	49.647	1.6109	348984.17	0.0324	0.002158
Pb	208	3	He	50.272	1.6312	351731.79	0.0324	0.002158
U	238	3	He	51.135	2.5187	771077.18	0.0492	0.0004023
U	238	3	He	51.19	2.5214	772962.72	0.0492	0.0004023
U	238	3	He	50.764	2.5004	775429.75	0.0492	0.0004023
Sc	45	1	No Gas			2642727.15		
Sc	45	1	No Gas			2640302.15		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2606364.49		
Ge	72	1	No Gas			1309584.90		
Ge	72	1	No Gas			1310410.29		
Ge	72	1	No Gas			1320554.20		
Sc	45	2	H2			201662.73		
Sc	45	2	H2			205068.49		
Sc	45	2	H2			201265.09		
Ge	72	2	H2			161829.46		
Ge	72	2	H2			166176.79		
Ge	72	2	H2			163749.30		
In	115	2	H2			399672.61		
In	115	2	H2			400391.48		
In	115	2	H2			405072.10		
Sc	45	3	He			51451.51		
Sc	45	3	He			50207.21		
Sc	45	3	He			50066.85		
Ge	72	3	He			81593.24		
Ge	72	3	He			81461.61		
Ge	72	3	He			83081.43		
In	115	3	He			89528.93		
In	115	3	He			86953.01		
In	115	3	He			86961.45		
Tb	159	3	He			406980.27		
Tb	159	3	He			404099.88		
Tb	159	3	He			402061.24		
Bi	209	3	He			306146.21		
Bi	209	3	He			306562.75		
Bi	209	3	He			310123.04		

Quantitation Report

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Sample Type	ICB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

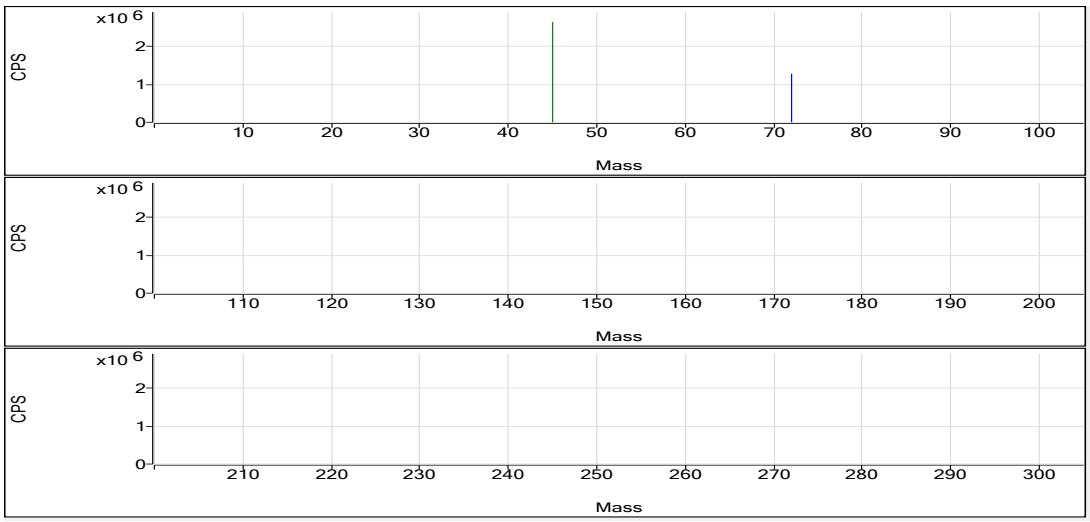
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.012	ppb	70.7	112.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.041	ppb	114.2	8.45	0.0001	Pulse	1.5000	3
Na	23	45	He	-1.888	ppb	N/A	20668.35	0.4103	Pulse	0.1000	3
Mg	24	45	He	0.956	ppb	83.6	316.68	0.0063	Pulse	0.1000	3
Al	27	45	He	0.509	ppb	61.5	120.00	0.0024	Pulse	0.1000	3
K	39	45	He	2.901	ppb	516.9	20882.24	0.4146	Pulse	0.1000	3
Ca	44	45	He	-7.981	ppb	N/A	140.01	0.0028	Pulse	0.1000	3
Ti	47	45	He	2.363	ppb	24.1	63.33	0.0013	Pulse	0.1000	3
V	51	45	He	0.004	ppb	2452.6	1605.43	0.0319	Pulse	0.5000	3
Cr	52	45	He	0.233	ppb	59.8	2510.29	0.0498	Pulse	0.1000	3
Mn	55	45	He	0.185	ppb	19.0	256.68	0.0051	Pulse	0.1000	3
Fe	57	45	He	1.708	ppb	55.0	186.68	0.0037	Pulse	0.1000	3
Co	59	45	He	0.186	ppb	17.6	696.71	0.0138	Pulse	0.1000	3
Ni	60	72	He	-0.165	ppb	N/A	1006.73	0.0126	Pulse	0.1000	3
Cu	63	72	He	0.229	ppb	36.4	1246.77	0.0156	Pulse	0.1000	3
Zn	66	72	He	0.601	ppb	109.2	620.04	0.0078	Pulse	0.1000	3
As	75	72	He	0.299	ppb	56.9	120.67	0.0015	Pulse	0.5000	3
Sr	88	115	He	-0.025	ppb	N/A	40.00	0.0005	Pulse	0.1000	3
Mo	98	115	He	0.069	ppb	35.6	290.01	0.0034	Pulse	0.1000	3
Ag	107	115	He	0.013	ppb	23.4	146.68	0.0017	Pulse	0.1000	3
Cd	111	115	He	0.012	ppb	58.4	10.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.024	ppb	36.0	1313.44	0.0152	Pulse	0.1000	3
Sb	121	115	He	0.071	ppb	65.2	110.00	0.0013	Pulse	0.1000	3
Ba	137	115	He	0.058	ppb	89.5	46.67	0.0005	Pulse	0.1000	3
Tl	205	159	He	0.100	ppb	11.8	2093.58	0.0052	Pulse	0.1000	3
Pb	208	159	He	0.000	ppb	N/A	863.38	0.0022	Pulse	0.1000	3
U	238	209	He	0.060	ppb	5.1	1036.76	0.0033	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2649107.67	0.7	101.6	Analog	0.1000	3
No Gas	Ge	72	1284096.75	0.9	99.6	Pulse	0.1000	3
H2	Sc	45	202692.55	0.8	98.4	Pulse	0.1000	3
H2	Ge	72	157655.52	0.6	96.9	Pulse	0.1000	3
H2	In	115	398392.68	0.5	98.7	Pulse	0.1000	3
He	Sc	45	50378.20	1.1	98.4	Pulse	0.1000	3
He	Ge	72	79913.14	0.6	97.6	Pulse	0.1000	3
He	In	115	86414.30	1.6	98.6	Pulse	0.1000	3
He	Tb	159	401465.21	0.7	100.0	Pulse	0.1000	3
He	Bi	209	309972.13	2.1	101.3	Pulse	0.1000	3

No Gas



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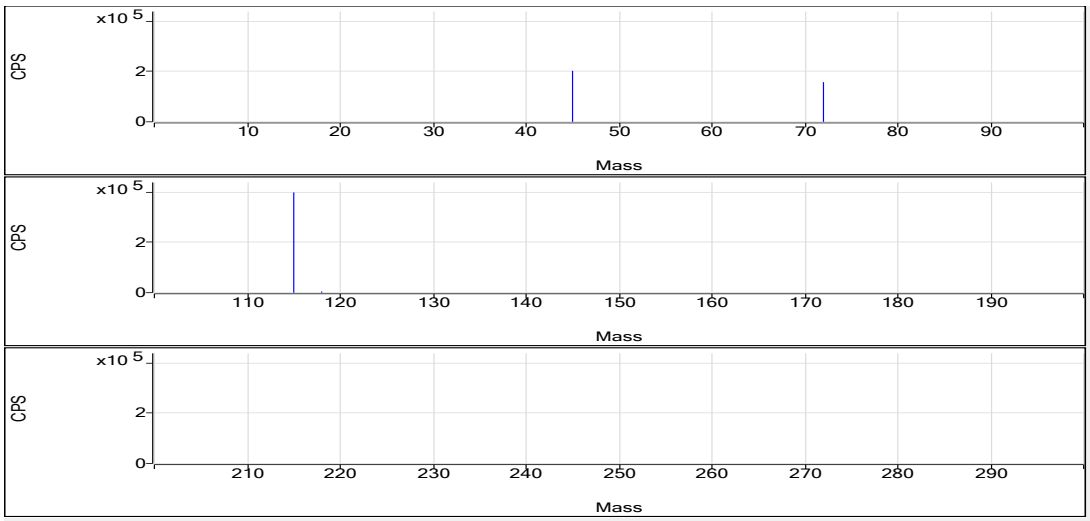
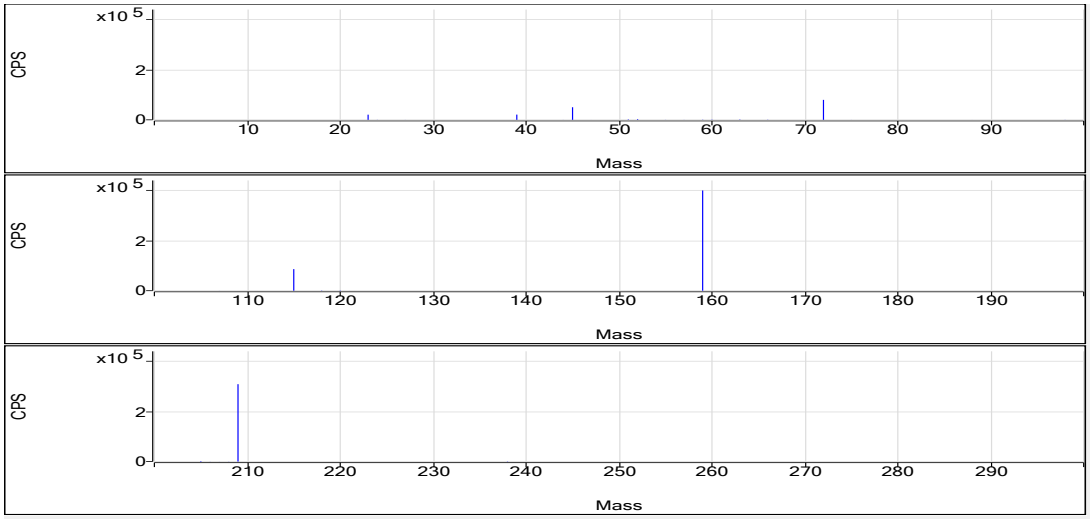


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.015	0	120.00	0.0007	3.404E-05
Be	9	1	No Gas	0.018	0	124.00	0.0007	3.404E-05
Be	9	1	No Gas	0.002	0	94.00	0.0007	3.404E-05
Se	78	2	H2	0.063	0.0001	10.00	0.0004	3.546E-05
Se	78	2	H2	0.073	0.0001	10.67	0.0004	3.546E-05
Se	78	2	H2	-0.013	0	4.67	0.0004	3.546E-05
Na	23	3	He	1.977	0.4241	21165.69	0.0036	0.4171
Na	23	3	He	-3.908	0.4031	20264.31	0.0036	0.4171
Na	23	3	He	-3.734	0.4037	20575.04	0.0036	0.4171
Mg	24	3	He	1.029	0.0064	320.01	0.0018	0.004553
Mg	24	3	He	0.123	0.0048	240.01	0.0018	0.004553
Mg	24	3	He	1.716	0.0077	390.02	0.0018	0.004553
Al	27	3	He	0.549	0.0024	120.00	0.0006	0.002085
Al	27	3	He	0.178	0.0022	110.00	0.0006	0.002085
Al	27	3	He	0.801	0.0026	130.01	0.0006	0.002085
K	39	3	He	19.772	0.4343	21676.56	0.0012	0.4112
K	39	3	He	-8.914	0.4007	20144.59	0.0012	0.4112
K	39	3	He	-2.153	0.4087	20825.56	0.0012	0.4112
Ca	44	3	He	1.254	0.0034	170.01	0.0001	0.003322
Ca	44	3	He	-10.887	0.0026	130.01	0.0001	0.003322
Ca	44	3	He	-14.311	0.0024	120.01	0.0001	0.003322
Ti	47	3	He	1.884	0.001	50.00	0.0005	0
Ti	47	3	He	2.992	0.0016	80.00	0.0005	0
Ti	47	3	He	2.214	0.0012	60.00	0.0005	0
V	51	3	He	0.033	0.0325	1622.10	0.0213	0.0318
V	51	3	He	0.08	0.0335	1684.11	0.0213	0.0318
V	51	3	He	-0.102	0.0296	1510.09	0.0213	0.0318
Cr	52	3	He	0.133	0.0469	2340.26	0.0294	0.04297
Cr	52	3	He	0.393	0.0545	2740.34	0.0294	0.04297
Cr	52	3	He	0.174	0.0481	2450.28	0.0294	0.04297
Mn	55	3	He	0.178	0.005	250.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.223	0.0056	280.01	0.0124	0.002801
Mn	55	3	He	0.154	0.0047	240.01	0.0124	0.002801
Fe	57	3	He	2.58	0.0042	210.01	0.0006	0.002732
Fe	57	3	He	1.832	0.0038	190.01	0.0006	0.002732
Fe	57	3	He	0.713	0.0031	160.01	0.0006	0.002732
Co	59	3	He	0.204	0.0148	740.05	0.0549	0.003644
Co	59	3	He	0.205	0.0149	750.05	0.0549	0.003644
Co	59	3	He	0.148	0.0118	600.04	0.0549	0.003644
Ni	60	3	He	-0.239	0.0119	950.06	0.0093	0.01413
Ni	60	3	He	-0.156	0.0127	1020.07	0.0093	0.01413
Ni	60	3	He	-0.099	0.0132	1050.07	0.0093	0.01413
Cu	63	3	He	0.277	0.0169	1350.11	0.0274	0.009321
Cu	63	3	He	0.277	0.0169	1360.13	0.0274	0.009321
Cu	63	3	He	0.133	0.013	1030.08	0.0274	0.009321
Zn	66	3	He	1.339	0.01	800.06	0.0031	0.005913
Zn	66	3	He	0.382	0.0071	570.03	0.0031	0.005913
Zn	66	3	He	0.082	0.0062	490.02	0.0031	0.005913
As	75	3	He	0.494	0.0019	154.00	0.0021	0.0008698
As	75	3	He	0.186	0.0013	102.00	0.0021	0.0008698
As	75	3	He	0.216	0.0013	106.00	0.0021	0.0008698
Sr	88	3	He	-0.025	0.0005	40.00	0.0088	0.0006843
Sr	88	3	He	-0.013	0.0006	50.00	0.0088	0.0006843
Sr	88	3	He	-0.038	0.0004	30.00	0.0088	0.0006843
Mo	98	3	He	0.055	0.003	260.01	0.0219	0.001827
Mo	98	3	He	0.098	0.004	350.02	0.0219	0.001827
Mo	98	3	He	0.055	0.003	260.01	0.0219	0.001827
Ag	107	3	He	0.012	0.0016	140.01	0.047	0.001064
Ag	107	3	He	0.011	0.0016	140.01	0.047	0.001064
Ag	107	3	He	0.017	0.0019	160.01	0.047	0.001064
Cd	111	3	He	0.011	0.0001	10.00	0.0053	6.086E-05
Cd	111	3	He	0.006	0.0001	8.00	0.0053	6.086E-05
Cd	111	3	He	0.019	0.0002	14.00	0.0053	6.086E-05
Sn	120	3	He	0.031	0.0153	1310.12	0.0154	0.01483
Sn	120	3	He	0.025	0.0152	1340.11	0.0154	0.01483
Sn	120	3	He	0.015	0.0151	1290.10	0.0154	0.01483
Sb	121	3	He	0.121	0.002	170.01	0.0143	0.0002661
Sb	121	3	He	0.029	0.0007	60.00	0.0143	0.0002661
Sb	121	3	He	0.063	0.0012	100.00	0.0143	0.0002661
Ba	137	3	He	0.042	0.0005	40.00	0.0048	0.0002665
Ba	137	3	He	0.016	0.0003	30.00	0.0048	0.0002665
Ba	137	3	He	0.115	0.0008	70.00	0.0048	0.0002665
Tl	205	3	He	0.109	0.0054	2190.26	0.0246	0.002755
Tl	205	3	He	0.105	0.0053	2120.26	0.0246	0.002755
Tl	205	3	He	0.087	0.0049	1970.23	0.0246	0.002755
Pb	208	3	He	-0.004	0.002	400.02	0.0324	0.002158
Pb	208	3	He	0.004	0.0023	430.02	0.0324	0.002158
Pb	208	3	He	-0.001	0.0021	460.03	0.0324	0.002158
U	238	3	He	0.058	0.0032	990.09	0.0492	0.0004023
U	238	3	He	0.058	0.0033	1040.09	0.0492	0.0004023
U	238	3	He	0.063	0.0035	1080.09	0.0492	0.0004023
Sc	45	1	No Gas			2670180.90		
Sc	45	1	No Gas			2643388.71		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2633753.40		
Ge	72	1	No Gas			1286530.14		
Ge	72	1	No Gas			1271098.65		
Ge	72	1	No Gas			1294661.47		
Sc	45	2	H2			204258.04		
Sc	45	2	H2			202644.24		
Sc	45	2	H2			201175.37		
Ge	72	2	H2			158005.28		
Ge	72	2	H2			158349.69		
Ge	72	2	H2			156611.60		
In	115	2	H2			400341.87		
In	115	2	H2			396420.89		
In	115	2	H2			398415.27		
Sc	45	3	He			49906.87		
Sc	45	3	He			50267.63		
Sc	45	3	He			50960.09		
Ge	72	3	He			79811.92		
Ge	72	3	He			80436.41		
Ge	72	3	He			79491.08		
In	115	3	He			85542.68		
In	115	3	He			88028.61		
In	115	3	He			85693.91		
Tb	159	3	He			402966.32		
Tb	159	3	He			398215.50		
Tb	159	3	He			403213.82		
Bi	209	3	He			305621.05		
Bi	209	3	He			317349.31		
Bi	209	3	He			306946.03		

Quantitation Report

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Sample Type	CRI
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

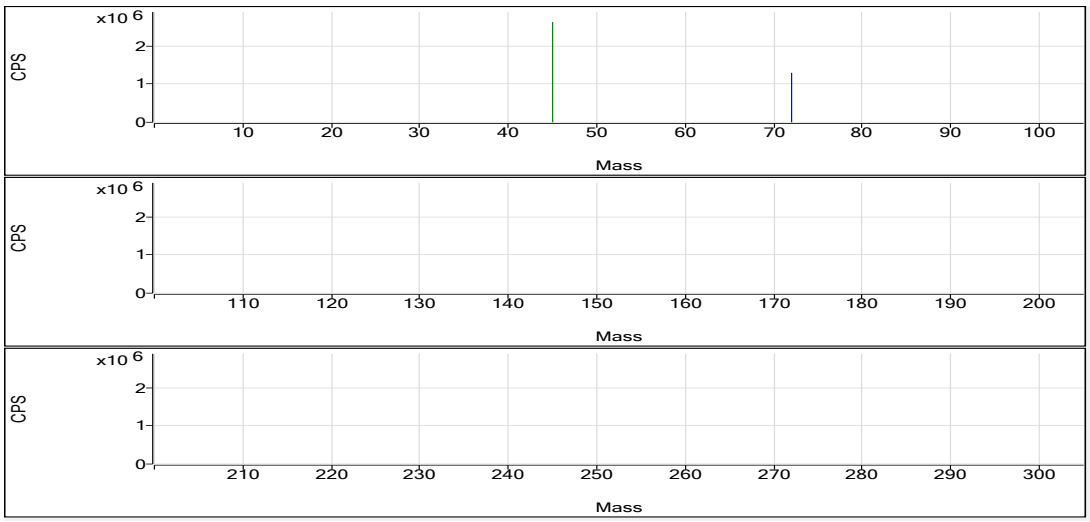
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.476	ppb	6.0	997.37	0.0004	Pulse	0.5000	3
Se	78	72	H2	1.045	ppb	12.3	79.78	0.0005	Pulse	1.5000	3
Na	23	45	He	189.993	ppb	4.2	55688.85	1.0943	Pulse	0.1000	3
Mg	24	45	He	49.958	ppb	7.7	4824.29	0.0948	Pulse	0.1000	3
Al	27	45	He	26.431	ppb	8.4	890.06	0.0175	Pulse	0.1000	3
K	39	45	He	207.429	ppb	6.7	33288.65	0.6541	Pulse	0.1000	3
Ca	44	45	He	97.330	ppb	39.8	503.36	0.0099	Pulse	0.1000	3
Ti	47	45	He	11.214	ppb	22.3	303.35	0.0060	Pulse	0.1000	3
V	51	45	He	1.875	ppb	5.2	3646.49	0.0716	Pulse	0.5000	3
Cr	52	45	He	2.302	ppb	12.1	5631.28	0.1107	Pulse	0.1000	3
Mn	55	45	He	1.941	ppb	14.3	1370.12	0.0269	Pulse	0.1000	3
Fe	57	45	He	53.044	ppb	4.1	1683.49	0.0331	Pulse	0.1000	3
Co	59	45	He	0.498	ppb	5.4	1576.81	0.0310	Pulse	0.1000	3
Ni	60	72	He	0.922	ppb	15.2	1856.85	0.0227	Pulse	0.1000	3
Cu	63	72	He	1.038	ppb	9.5	3093.76	0.0378	Pulse	0.1000	3
Zn	66	72	He	11.736	ppb	7.6	3433.85	0.0419	Pulse	0.1000	3
As	75	72	He	2.245	ppb	13.8	465.34	0.0057	Pulse	0.5000	3
Sr	88	115	He	1.013	ppb	18.5	840.06	0.0096	Pulse	0.1000	3
Mo	98	115	He	0.513	ppb	3.5	1146.75	0.0131	Pulse	0.1000	3
Ag	107	115	He	0.511	ppb	11.1	2196.91	0.0251	Pulse	0.1000	3
Cd	111	115	He	0.529	ppb	8.2	252.00	0.0029	Pulse	0.5000	3
Sn	120	115	He	2.182	ppb	4.7	4244.14	0.0485	Pulse	0.1000	3
Sb	121	115	He	1.084	ppb	7.0	1376.79	0.0157	Pulse	0.1000	3
Ba	137	115	He	2.007	ppb	3.8	863.39	0.0099	Pulse	0.1000	3
Tl	205	159	He	0.459	ppb	3.0	5604.69	0.0140	Pulse	0.1000	3
Pb	208	159	He	0.510	ppb	3.2	7474.45	0.0187	Pulse	0.1000	3
U	238	209	He	0.992	ppb	3.6	15122.74	0.0492	Pulse	0.1000	3

ISTD Table:

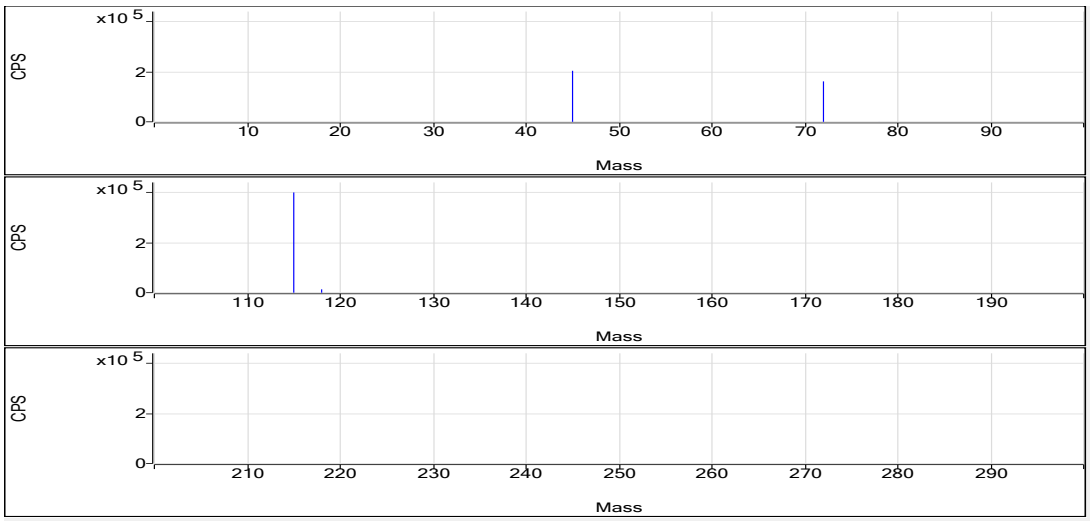
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2617046.00	0.6	100.3	Analog	0.1000	3
No Gas	Ge	72	1290980.03	0.5	100.2	Pulse	0.1000	3
H2	Sc	45	203731.87	1.0	98.9	Pulse	0.1000	3
H2	Ge	72	161437.07	1.6	99.2	Pulse	0.1000	3
H2	In	115	400098.83	0.5	99.1	Pulse	0.1000	3
He	Sc	45	50903.23	1.3	99.4	Pulse	0.1000	3
He	Ge	72	81843.89	0.6	100.0	Pulse	0.1000	3
He	In	115	87566.77	0.5	99.9	Pulse	0.1000	3
He	Tb	159	399765.59	0.4	99.5	Pulse	0.1000	3
He	Bi	209	307107.28	0.4	100.3	Pulse	0.1000	3

No Gas

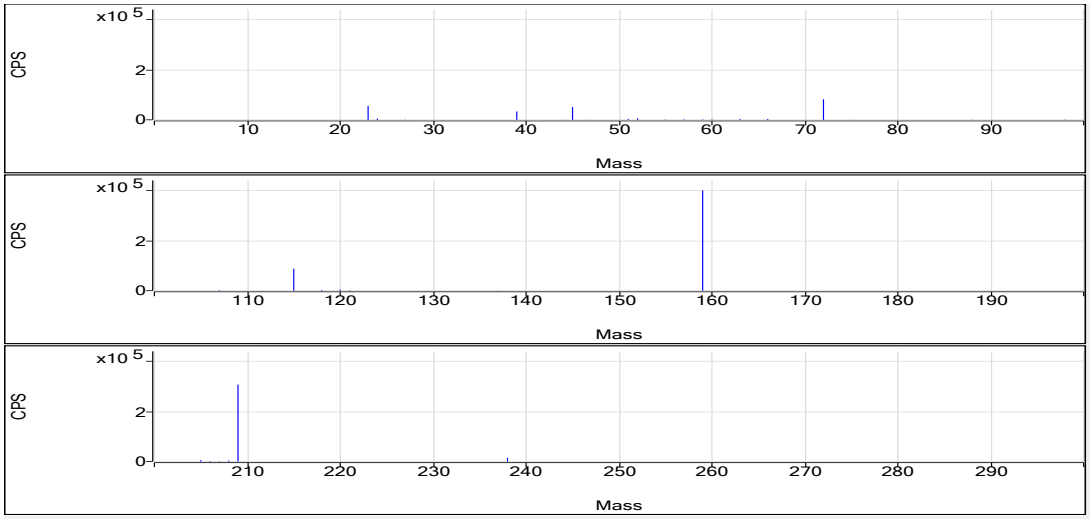


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.454	0.0004	950.04	0.0007	3.404E-05
Be	9	1	No Gas	0.466	0.0004	976.04	0.0007	3.404E-05
Be	9	1	No Gas	0.508	0.0004	1066.04	0.0007	3.404E-05
Se	78	2	H2	0.945	0.0004	71.33	0.0004	3.546E-05
Se	78	2	H2	1	0.0005	76.67	0.0004	3.546E-05
Se	78	2	H2	1.19	0.0006	91.33	0.0004	3.546E-05
Na	23	3	He	183.753	1.072	55093.35	0.0036	0.4171
Na	23	3	He	187.132	1.0841	55494.64	0.0036	0.4171
Na	23	3	He	199.092	1.1267	56478.55	0.0036	0.4171
Mg	24	3	He	45.521	0.0868	4460.79	0.0018	0.004553
Mg	24	3	He	51.875	0.0983	5031.06	0.0018	0.004553
Mg	24	3	He	52.477	0.0994	4981.02	0.0018	0.004553
Al	27	3	He	24.813	0.0165	850.05	0.0006	0.002085
Al	27	3	He	28.949	0.019	970.07	0.0006	0.002085
Al	27	3	He	25.53	0.017	850.06	0.0006	0.002085
K	39	3	He	200.334	0.6458	33188.30	0.0012	0.4112
K	39	3	He	198.488	0.6436	32947.96	0.0012	0.4112
K	39	3	He	223.466	0.6729	33729.69	0.0012	0.4112
Ca	44	3	He	54.526	0.007	360.02	0.0001	0.003322
Ca	44	3	He	130.119	0.0121	620.04	0.0001	0.003322
Ca	44	3	He	107.344	0.0106	530.03	0.0001	0.003322
Ti	47	3	He	8.415	0.0045	230.01	0.0005	0
Ti	47	3	He	13.223	0.007	360.02	0.0005	0
Ti	47	3	He	12.003	0.0064	320.01	0.0005	0
V	51	3	He	1.912	0.0724	3722.51	0.0213	0.0318
V	51	3	He	1.764	0.0693	3546.46	0.0213	0.0318
V	51	3	He	1.949	0.0732	3670.49	0.0213	0.0318
Cr	52	3	He	2.338	0.1117	5741.32	0.0294	0.04297
Cr	52	3	He	2.007	0.102	5221.16	0.0294	0.04297
Cr	52	3	He	2.562	0.1183	5931.37	0.0294	0.04297
Mn	55	3	He	1.637	0.0232	1190.10	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2.179	0.0299	1530.13	0.0124	0.002801
Mn	55	3	He	2.005	0.0277	1390.12	0.0124	0.002801
Fe	57	3	He	53.046	0.0331	1700.15	0.0006	0.002732
Fe	57	3	He	50.883	0.0318	1630.16	0.0006	0.002732
Fe	57	3	He	55.202	0.0343	1720.16	0.0006	0.002732
Co	59	3	He	0.469	0.0294	1510.13	0.0549	0.003644
Co	59	3	He	0.503	0.0313	1600.16	0.0549	0.003644
Co	59	3	He	0.522	0.0323	1620.15	0.0549	0.003644
Ni	60	3	He	0.811	0.0217	1780.16	0.0093	0.01413
Ni	60	3	He	0.876	0.0223	1810.17	0.0093	0.01413
Ni	60	3	He	1.079	0.0241	1980.21	0.0093	0.01413
Cu	63	3	He	1.151	0.0409	3360.48	0.0274	0.009321
Cu	63	3	He	0.997	0.0367	2980.42	0.0274	0.009321
Cu	63	3	He	0.967	0.0359	2940.38	0.0274	0.009321
Zn	66	3	He	12.736	0.045	3700.58	0.0031	0.005913
Zn	66	3	He	11.014	0.0397	3230.45	0.0031	0.005913
Zn	66	3	He	11.459	0.0411	3370.52	0.0031	0.005913
As	75	3	He	1.908	0.005	408.01	0.0021	0.0008698
As	75	3	He	2.518	0.0063	510.01	0.0021	0.0008698
As	75	3	He	2.311	0.0058	478.01	0.0021	0.0008698
Sr	88	3	He	1.227	0.0115	1000.08	0.0088	0.0006843
Sr	88	3	He	0.93	0.0089	780.05	0.0088	0.0006843
Sr	88	3	He	0.881	0.0084	740.05	0.0088	0.0006843
Mo	98	3	He	0.508	0.013	1130.08	0.0219	0.001827
Mo	98	3	He	0.533	0.0135	1190.08	0.0219	0.001827
Mo	98	3	He	0.499	0.0128	1120.09	0.0219	0.001827
Ag	107	3	He	0.576	0.0281	2450.30	0.047	0.001064
Ag	107	3	He	0.468	0.0231	2030.21	0.047	0.001064
Ag	107	3	He	0.489	0.0241	2110.22	0.047	0.001064
Cd	111	3	He	0.566	0.0031	268.00	0.0053	6.086E-05
Cd	111	3	He	0.539	0.0029	258.00	0.0053	6.086E-05
Cd	111	3	He	0.481	0.0026	230.00	0.0053	6.086E-05
Sn	120	3	He	2.301	0.0503	4380.85	0.0154	0.01483
Sn	120	3	He	2.121	0.0475	4180.78	0.0154	0.01483
Sn	120	3	He	2.123	0.0476	4170.78	0.0154	0.01483
Sb	121	3	He	0.997	0.0145	1260.11	0.0143	0.0002661
Sb	121	3	He	1.131	0.0164	1440.15	0.0143	0.0002661
Sb	121	3	He	1.126	0.0163	1430.12	0.0143	0.0002661
Ba	137	3	He	1.987	0.0098	850.06	0.0048	0.0002665
Ba	137	3	He	1.943	0.0096	840.05	0.0048	0.0002665
Ba	137	3	He	2.092	0.0103	900.06	0.0048	0.0002665
Tl	205	3	He	0.449	0.0138	5531.31	0.0246	0.002755
Tl	205	3	He	0.453	0.0139	5531.32	0.0246	0.002755
Tl	205	3	He	0.474	0.0144	5751.45	0.0246	0.002755
Pb	208	3	He	0.529	0.0193	3920.74	0.0324	0.002158
Pb	208	3	He	0.504	0.0185	4240.81	0.0324	0.002158
Pb	208	3	He	0.498	0.0183	3970.73	0.0324	0.002158
U	238	3	He	0.951	0.0473	14498.51	0.0492	0.0004023
U	238	3	He	1.005	0.0499	15379.79	0.0492	0.0004023
U	238	3	He	1.019	0.0506	15489.91	0.0492	0.0004023
Sc	45	1	No Gas			2604458.24		
Sc	45	1	No Gas			2610449.49		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2636230.27		
Ge	72	1	No Gas			1285857.40		
Ge	72	1	No Gas			1288320.53		
Ge	72	1	No Gas			1298762.17		
Sc	45	2	H2			201456.81		
Sc	45	2	H2			204357.05		
Sc	45	2	H2			205381.74		
Ge	72	2	H2			158613.28		
Ge	72	2	H2			161807.38		
Ge	72	2	H2			163890.54		
In	115	2	H2			402042.18		
In	115	2	H2			400355.58		
In	115	2	H2			397898.74		
Sc	45	3	He			51391.60		
Sc	45	3	He			51190.81		
Sc	45	3	He			50127.27		
Ge	72	3	He			82205.78		
Ge	72	3	He			81310.80		
Ge	72	3	He			82015.09		
In	115	3	He			87102.84		
In	115	3	He			87956.89		
In	115	3	He			87706.10		
Tb	159	3	He			401599.80		
Tb	159	3	He			398352.03		
Tb	159	3	He			399344.95		
Bi	209	3	He			306787.61		
Bi	209	3	He			308348.90		
Bi	209	3	He			306185.33		

Quantitation Report

Data File Name	019ICSA.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H09B00.b
Acq Time	8/9/2023 1:44:59 PM
Sample Name	ICSA 4677791
Sample Type	ICSA
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

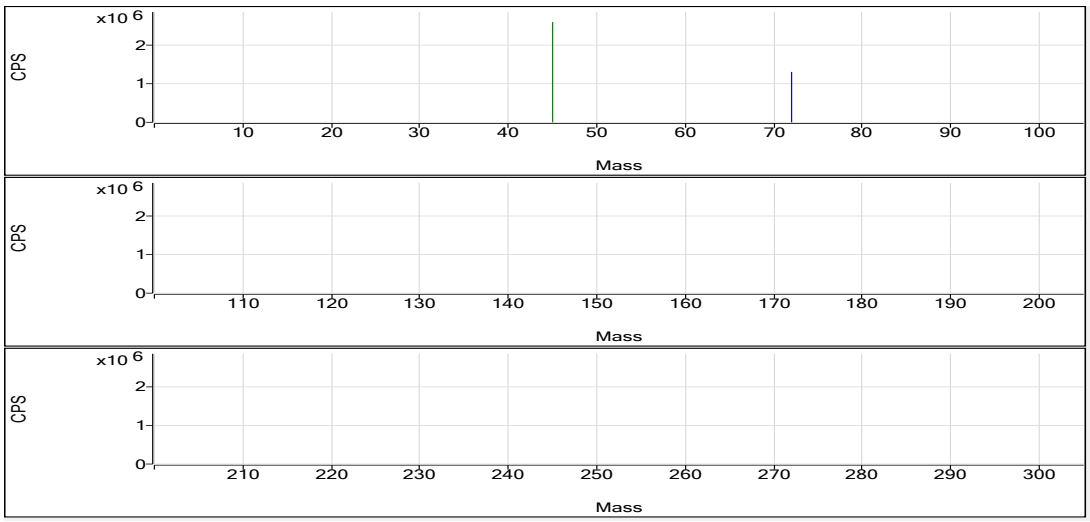
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.023	ppb	N/A	45.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.022	ppb	166.9	7.56	0.0000	Pulse	1.5000	3
Na	23	45	He	243212.871	ppb	2.1	43126624.36	867.3280	Analog	0.1000	3
Mg	24	45	He	99225.013	ppb	1.4	8915325.70	179.2833	Analog	0.1000	3
Al	27	45	He	103379.466	ppb	2.2	2994773.29	60.2303	Analog	0.1000	3
K	39	45	He	99904.003	ppb	1.9	5837789.70	117.4063	Analog	0.1000	3
Ca	44	45	He	290406.102	ppb	1.7	975705.04	19.6223	Pulse	0.1000	3
Ti	47	45	He	2015.574	ppb	2.5	53301.69	1.0720	Pulse	0.1000	3
V	51	45	He	-0.477	ppb	N/A	1076.72	0.0217	Pulse	0.5000	3
Cr	52	45	He	3.202	ppb	3.7	6818.49	0.1371	Pulse	0.1000	3
Mn	55	45	He	0.860	ppb	17.9	670.04	0.0135	Pulse	0.1000	3
Fe	57	45	He	247902.654	ppb	2.5	7052427.81	141.8404	Analog	0.1000	3
Co	59	45	He	0.173	ppb	15.7	653.37	0.0131	Pulse	0.1000	3
Ni	60	72	He	-0.651	ppb	N/A	686.71	0.0081	Pulse	0.1000	3
Cu	63	72	He	-0.036	ppb	N/A	706.70	0.0083	Pulse	0.1000	3
Zn	66	72	He	1.208	ppb	17.9	816.72	0.0096	Pulse	0.1000	3
As	75	72	He	0.162	ppb	12.7	103.33	0.0012	Pulse	0.5000	3
Sr	88	115	He	2.074	ppb	6.9	1576.81	0.0189	Pulse	0.1000	3
Mo	98	115	He	2125.349	ppb	0.9	3883647.75	46.6428	Analog	0.1000	3
Ag	107	115	He	0.010	ppb	40.6	126.67	0.0015	Pulse	0.1000	3
Cd	111	115	He	0.298	ppb	1.0	137.33	0.0016	Pulse	0.5000	3
Sn	120	115	He	0.295	ppb	56.2	1613.48	0.0194	Pulse	0.1000	3
Sb	121	115	He	0.164	ppb	23.2	216.68	0.0026	Pulse	0.1000	3
Ba	137	115	He	0.346	ppb	33.1	160.01	0.0019	Pulse	0.1000	3
Tl	205	159	He	-0.053	ppb	N/A	573.37	0.0015	Pulse	0.1000	3
Pb	208	159	He	0.056	ppb	18.9	1556.76	0.0040	Pulse	0.1000	3
U	238	209	He	0.052	ppb	15.2	856.73	0.0030	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2581206.32	1.6	99.0	Analog	0.1000	3
No Gas	Ge	72	1296866.33	1.2	100.6	Pulse	0.1000	3
H2	Sc	45	199287.73	1.1	96.7	Pulse	0.1000	3
H2	Ge	72	167107.34	1.2	102.7	Pulse	0.1000	3
H2	In	115	379037.74	0.7	93.9	Pulse	0.1000	3
He	Sc	45	49732.28	1.5	97.1	Pulse	0.1000	3
He	Ge	72	84895.42	0.8	103.7	Pulse	0.1000	3
He	In	115	83264.20	0.1	95.0	Pulse	0.1000	3
He	Tb	159	392084.11	0.5	97.6	Pulse	0.1000	3
He	Bi	209	289178.58	0.8	94.5	Pulse	0.1000	3

No Gas



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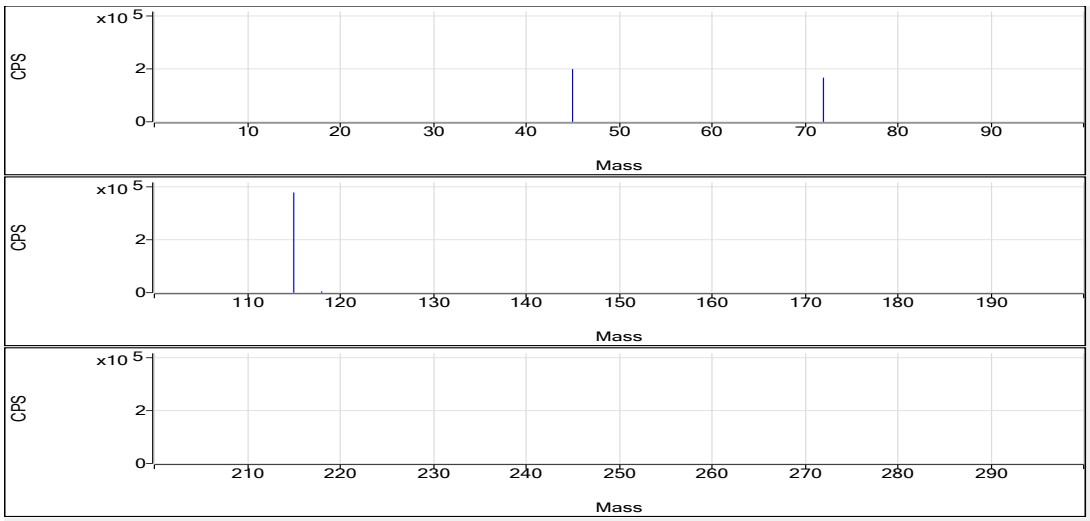
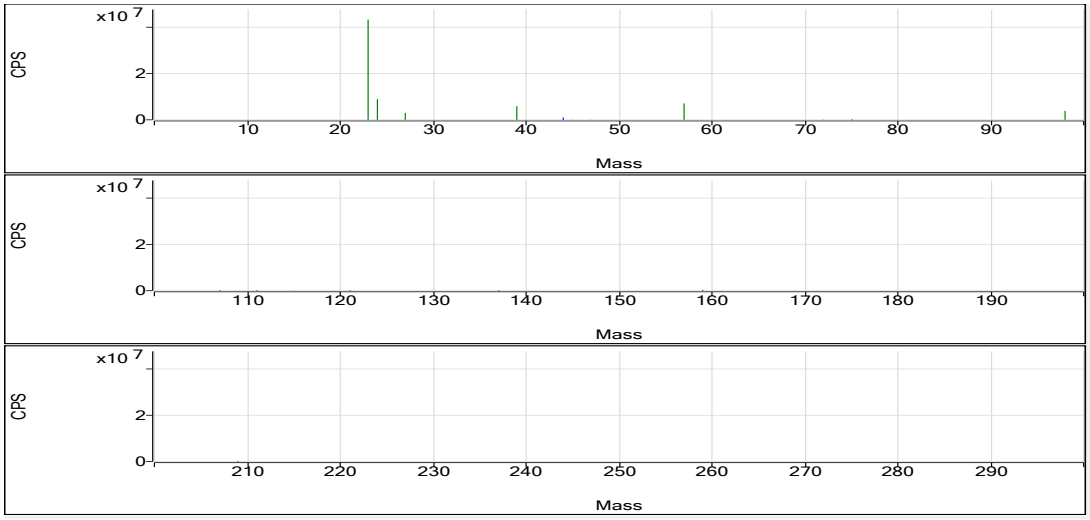


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.018	0	54.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.03	0	32.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.02	0	50.00	0.0007	3.404E-05
Se	78	2	H2	-0.017	0	4.67	0.0004	3.546E-05
Se	78	2	H2	0.057	0.0001	10.00	0.0004	3.546E-05
Se	78	2	H2	0.027	0	8.00	0.0004	3.546E-05
Na	23	3	He	237627.229	847.4185	42665699.36	0.0036	0.4171
Na	23	3	He	244790.664	872.9519	43583059.35	0.0036	0.4171
Na	23	3	He	247220.72	881.6137	43131114.36	0.0036	0.4171
Mg	24	3	He	97593.444	176.3354	8878107.99	0.0018	0.004553
Mg	24	3	He	100149.926	180.9544	9034342.99	0.0018	0.004553
Mg	24	3	He	99931.669	180.5601	8833526.12	0.0018	0.004553
Al	27	3	He	100911.619	58.7926	2960079.33	0.0006	0.002085
Al	27	3	He	103713.477	60.4249	3016778.39	0.0006	0.002085
Al	27	3	He	105513.304	61.4735	3007462.14	0.0006	0.002085
K	39	3	He	98083.296	115.2741	5803804.91	0.0012	0.4112
K	39	3	He	99695.584	117.1622	5849450.54	0.0012	0.4112
K	39	3	He	101933.13	119.7826	5860113.66	0.0012	0.4112
Ca	44	3	He	285551.514	19.2944	971430.69	0.0001	0.003322
Ca	44	3	He	290266.655	19.6129	979196.24	0.0001	0.003322
Ca	44	3	He	295400.139	19.9597	976488.19	0.0001	0.003322
Ti	47	3	He	1997.125	1.0622	53479.16	0.0005	0
Ti	47	3	He	1976.569	1.0513	52485.31	0.0005	0
Ti	47	3	He	2073.028	1.1026	53940.60	0.0005	0
V	51	3	He	-0.519	0.0208	1046.05	0.0213	0.0318
V	51	3	He	-0.501	0.0212	1056.05	0.0213	0.0318
V	51	3	He	-0.411	0.0231	1128.05	0.0213	0.0318
Cr	52	3	He	3.18	0.1365	6871.82	0.0294	0.04297
Cr	52	3	He	3.096	0.134	6691.74	0.0294	0.04297
Cr	52	3	He	3.329	0.1409	6891.90	0.0294	0.04297
Mn	55	3	He	0.685	0.0113	570.04	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.919	0.0142	710.04	0.0124	0.002801
Mn	55	3	He	0.975	0.0149	730.04	0.0124	0.002801
Fe	57	3	He	241118.245	137.9587	6945924.27	0.0006	0.002732
Fe	57	3	He	249076.085	142.5118	7115053.64	0.0006	0.002732
Fe	57	3	He	253513.63	145.0507	7096305.52	0.0006	0.002732
Co	59	3	He	0.172	0.0131	660.03	0.0549	0.003644
Co	59	3	He	0.2	0.0146	730.05	0.0549	0.003644
Co	59	3	He	0.146	0.0117	570.04	0.0549	0.003644
Ni	60	3	He	-0.624	0.0083	710.04	0.0093	0.01413
Ni	60	3	He	-0.651	0.0081	690.04	0.0093	0.01413
Ni	60	3	He	-0.677	0.0078	660.05	0.0093	0.01413
Cu	63	3	He	-0.01	0.009	770.04	0.0274	0.009321
Cu	63	3	He	-0.075	0.0073	620.03	0.0274	0.009321
Cu	63	3	He	-0.024	0.0087	730.04	0.0274	0.009321
Zn	66	3	He	1.402	0.0102	870.06	0.0031	0.005913
Zn	66	3	He	0.974	0.0089	760.05	0.0031	0.005913
Zn	66	3	He	1.248	0.0097	820.05	0.0031	0.005913
As	75	3	He	0.164	0.0012	104.00	0.0021	0.0008698
As	75	3	He	0.141	0.0012	100.00	0.0021	0.0008698
As	75	3	He	0.182	0.0013	106.00	0.0021	0.0008698
Sr	88	3	He	2.049	0.0187	1560.14	0.0088	0.0006843
Sr	88	3	He	2.229	0.0203	1690.15	0.0088	0.0006843
Sr	88	3	He	1.946	0.0178	1480.14	0.0088	0.0006843
Mo	98	3	He	2115.17	46.4194	3870519.32	0.0219	0.001827
Mo	98	3	He	2113.962	46.3929	3863196.19	0.0219	0.001827
Mo	98	3	He	2146.914	47.1161	3917227.75	0.0219	0.001827
Ag	107	3	He	0.005	0.0013	110.00	0.047	0.001064
Ag	107	3	He	0.011	0.0016	130.01	0.047	0.001064
Ag	107	3	He	0.013	0.0017	140.01	0.047	0.001064
Cd	111	3	He	0.295	0.0016	136.00	0.0053	6.086E-05
Cd	111	3	He	0.3	0.0017	138.00	0.0053	6.086E-05
Cd	111	3	He	0.3	0.0017	138.00	0.0053	6.086E-05
Sn	120	3	He	0.112	0.0166	1380.11	0.0154	0.01483
Sn	120	3	He	0.339	0.0201	1670.16	0.0154	0.01483
Sn	120	3	He	0.434	0.0215	1790.18	0.0154	0.01483
Sb	121	3	He	0.124	0.002	170.01	0.0143	0.0002661
Sb	121	3	He	0.2	0.0031	260.01	0.0143	0.0002661
Sb	121	3	He	0.167	0.0026	220.01	0.0143	0.0002661
Ba	137	3	He	0.446	0.0024	200.01	0.0048	0.0002665
Ba	137	3	He	0.371	0.002	170.01	0.0048	0.0002665
Ba	137	3	He	0.221	0.0013	110.01	0.0048	0.0002665
Tl	205	3	He	-0.046	0.0016	640.04	0.0246	0.002755
Tl	205	3	He	-0.052	0.0015	580.03	0.0246	0.002755
Tl	205	3	He	-0.06	0.0013	500.03	0.0246	0.002755
Pb	208	3	He	0.053	0.0039	760.05	0.0324	0.002158
Pb	208	3	He	0.068	0.0044	820.06	0.0324	0.002158
Pb	208	3	He	0.047	0.0037	740.04	0.0324	0.002158
U	238	3	He	0.046	0.0027	770.07	0.0492	0.0004023
U	238	3	He	0.049	0.0028	810.05	0.0492	0.0004023
U	238	3	He	0.061	0.0034	990.08	0.0492	0.0004023
Sc	45	1	No Gas			2610812.62		
Sc	45	1	No Gas			2597429.49		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2535376.84		
Ge	72	1	No Gas			1309148.50		
Ge	72	1	No Gas			1302700.21		
Ge	72	1	No Gas			1278750.29		
Sc	45	2	H2			199481.72		
Sc	45	2	H2			201436.40		
Sc	45	2	H2			196945.08		
Ge	72	2	H2			166833.88		
Ge	72	2	H2			165227.24		
Ge	72	2	H2			169260.90		
In	115	2	H2			375910.66		
In	115	2	H2			381062.30		
In	115	2	H2			380140.27		
Sc	45	3	He			50347.85		
Sc	45	3	He			49926.07		
Sc	45	3	He			48922.92		
Ge	72	3	He			85164.13		
Ge	72	3	He			85355.57		
Ge	72	3	He			84166.57		
In	115	3	He			83390.17		
In	115	3	He			83279.49		
In	115	3	He			83149.08		
Tb	159	3	He			393398.47		
Tb	159	3	He			392828.12		
Tb	159	3	He			390025.74		
Bi	209	3	He			289652.01		
Bi	209	3	He			286684.41		
Bi	209	3	He			291199.31		

Quantitation Report

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Sample Type	ICSAB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

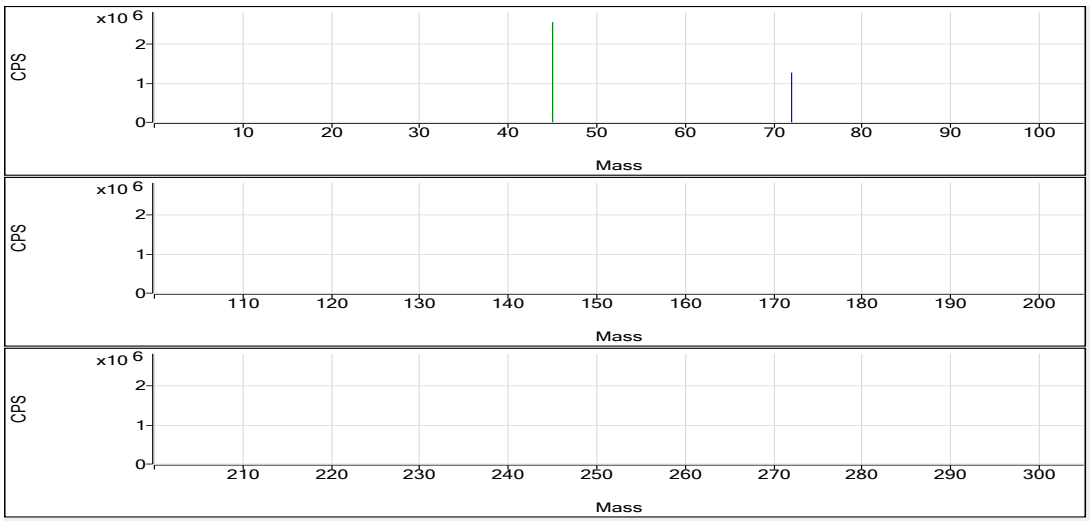
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.029	ppb	N/A	34.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	97.289	ppb	1.1	7279.64	0.0427	Pulse	1.5000	3
Na	23	45	He	236418.463	ppb	2.3	42454473.54	843.1100	Analog	0.1000	3
Mg	24	45	He	97200.700	ppb	2.9	8842471.12	175.6258	Analog	0.1000	3
Al	27	45	He	101118.839	ppb	1.0	2967092.14	58.9133	Analog	0.1000	3
K	39	45	He	98690.420	ppb	2.6	5839855.12	115.9851	Analog	0.1000	3
Ca	44	45	He	288447.068	ppb	2.6	981322.95	19.4900	Pulse	0.1000	3
Ti	47	45	He	2002.134	ppb	3.3	53609.80	1.0649	Pulse	0.1000	3
V	51	45	He	203.682	ppb	2.5	219540.38	4.3602	Pulse	0.5000	3
Cr	52	45	He	195.251	ppb	2.8	291284.41	5.7853	Pulse	0.1000	3
Mn	55	45	He	201.969	ppb	2.6	126564.71	2.5137	Pulse	0.1000	3
Fe	57	45	He	243407.036	ppb	1.7	7013153.23	139.2682	Analog	0.1000	3
Co	59	45	He	190.416	ppb	3.0	526374.54	10.4551	Pulse	0.1000	3
Ni	60	72	He	184.588	ppb	0.2	148109.33	1.7276	Pulse	0.1000	3
Cu	63	72	He	178.179	ppb	1.4	419719.00	4.8961	Pulse	0.1000	3
Zn	66	72	He	96.279	ppb	1.2	25850.67	0.3015	Pulse	0.1000	3
As	75	72	He	95.103	ppb	1.5	17568.82	0.2049	Pulse	0.5000	3
Sr	88	115	He	2.194	ppb	6.2	1683.50	0.0200	Pulse	0.1000	3
Mo	98	115	He	2093.845	ppb	0.6	3871647.34	45.9515	Analog	0.1000	3
Ag	107	115	He	49.286	ppb	1.0	195418.57	2.3194	Pulse	0.1000	3
Cd	111	115	He	101.611	ppb	0.6	45600.70	0.5412	Pulse	0.5000	3
Sn	120	115	He	0.349	ppb	32.2	1703.50	0.0202	Pulse	0.1000	3
Sb	121	115	He	0.153	ppb	27.2	206.68	0.0025	Pulse	0.1000	3
Ba	137	115	He	0.449	ppb	13.1	203.34	0.0024	Pulse	0.1000	3
Tl	205	159	He	-0.056	ppb	N/A	550.03	0.0014	Pulse	0.1000	3
Pb	208	159	He	0.053	ppb	15.4	1533.43	0.0039	Pulse	0.1000	3
U	238	209	He	0.043	ppb	14.2	743.38	0.0025	Pulse	0.1000	3

ISTD Table:

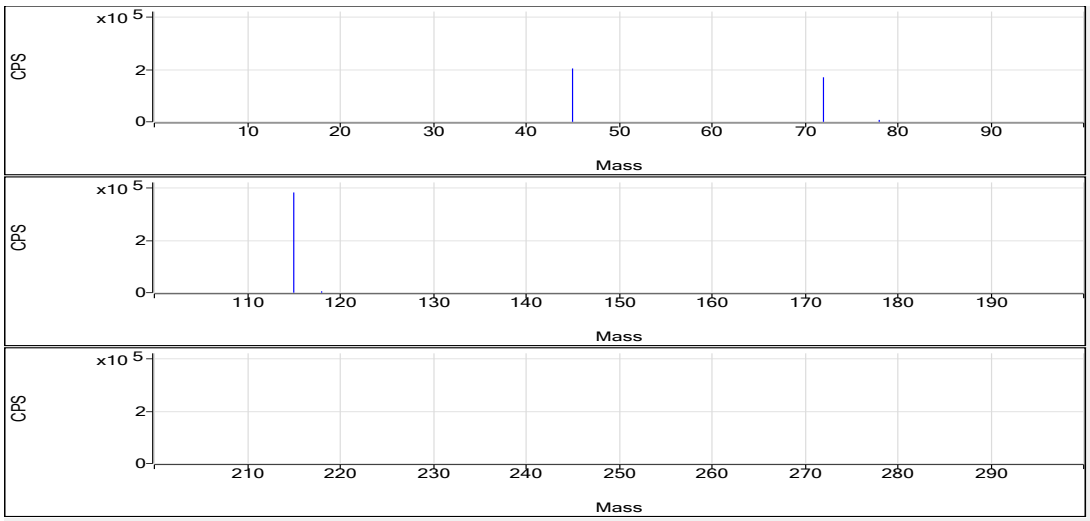
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2571817.36	1.4	98.6	Analog	0.1000	3
No Gas	Ge	72	1275815.55	1.2	99.0	Pulse	0.1000	3
H2	Sc	45	204413.72	2.5	99.2	Pulse	0.1000	3
H2	Ge	72	170588.24	1.8	104.8	Pulse	0.1000	3
H2	In	115	383985.70	0.3	95.1	Pulse	0.1000	3
He	Sc	45	50371.72	2.5	98.4	Pulse	0.1000	3
He	Ge	72	85729.60	0.6	104.7	Pulse	0.1000	3
He	In	115	84259.38	1.2	96.1	Pulse	0.1000	3
He	Tb	159	395620.06	0.7	98.5	Pulse	0.1000	3
He	Bi	209	292173.41	0.5	95.4	Pulse	0.1000	3

No Gas

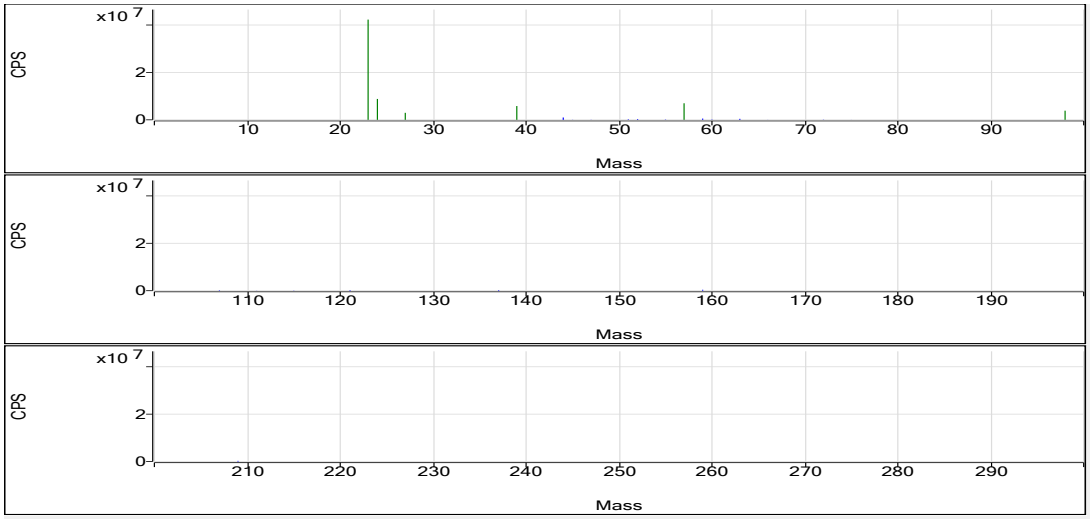


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.023	0	44.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.028	0	36.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.035	0	22.00	0.0007	3.404E-05
Se	78	2	H2	98.088	0.043	7214.49	0.0004	3.546E-05
Se	78	2	H2	97.65	0.0428	7293.20	0.0004	3.546E-05
Se	78	2	H2	96.129	0.0422	7331.22	0.0004	3.546E-05
Na	23	3	He	239111.723	852.7098	41931281.88	0.0036	0.4171
Na	23	3	He	230088.229	820.5464	42425079.37	0.0036	0.4171
Na	23	3	He	240055.439	856.0736	43007059.36	0.0036	0.4171
Mg	24	3	He	100248.537	181.1326	8907041.12	0.0018	0.004553
Mg	24	3	He	94764.795	171.2246	8852903.62	0.0018	0.004553
Mg	24	3	He	96588.769	174.5202	8767468.62	0.0018	0.004553
Al	27	3	He	102197.847	59.5419	2927923.08	0.0006	0.002085
Al	27	3	He	100243.915	58.4036	3019665.89	0.0006	0.002085
Al	27	3	He	100914.754	58.7944	2953687.46	0.0006	0.002085
K	39	3	He	101460.323	119.2289	5862979.29	0.0012	0.4112
K	39	3	He	96303.88	113.1903	5852329.29	0.0012	0.4112
K	39	3	He	98307.058	115.5362	5804256.79	0.0012	0.4112
Ca	44	3	He	294800.659	19.9192	979511.16	0.0001	0.003322
Ca	44	3	He	280276.991	18.9381	979162.56	0.0001	0.003322
Ca	44	3	He	290263.553	19.6127	985295.14	0.0001	0.003322
Ti	47	3	He	2070.882	1.1014	54161.49	0.0005	0
Ti	47	3	He	1940.765	1.0322	53369.20	0.0005	0
Ti	47	3	He	1994.756	1.0609	53298.71	0.0005	0
V	51	3	He	208.979	4.4728	219945.09	0.0213	0.0318
V	51	3	He	198.728	4.255	219995.72	0.0213	0.0318
V	51	3	He	203.339	4.3529	218680.34	0.0213	0.0318
Cr	52	3	He	200.891	5.9512	292645.21	0.0294	0.04297
Cr	52	3	He	190.117	5.6343	291314.72	0.0294	0.04297
Cr	52	3	He	194.745	5.7704	289893.30	0.0294	0.04297
Mn	55	3	He	207.259	2.5795	126843.40	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	196.749	2.4488	126612.02	0.0124	0.002801
Mn	55	3	He	201.899	2.5128	126238.71	0.0124	0.002801
Fe	57	3	He	247268.706	141.4777	6957045.52	0.0006	0.002732
Fe	57	3	He	238954.274	136.7206	7068926.14	0.0006	0.002732
Fe	57	3	He	243998.129	139.6064	7013488.02	0.0006	0.002732
Co	59	3	He	196.299	10.778	529998.55	0.0549	0.003644
Co	59	3	He	184.759	10.1446	524509.52	0.0549	0.003644
Co	59	3	He	190.19	10.4427	524615.54	0.0549	0.003644
Ni	60	3	He	184.389	1.7258	148812.68	0.0093	0.01413
Ni	60	3	He	185.047	1.7319	148521.36	0.0093	0.01413
Ni	60	3	He	184.328	1.7252	146993.95	0.0093	0.01413
Cu	63	3	He	177.132	4.8673	419705.46	0.0274	0.009321
Cu	63	3	He	176.472	4.8493	415855.23	0.0274	0.009321
Cu	63	3	He	180.933	4.9716	423596.32	0.0274	0.009321
Zn	66	3	He	96.255	0.3015	25994.21	0.0031	0.005913
Zn	66	3	He	97.443	0.3051	26164.49	0.0031	0.005913
Zn	66	3	He	95.14	0.298	25393.31	0.0031	0.005913
As	75	3	He	93.953	0.2025	17458.69	0.0021	0.0008698
As	75	3	He	96.682	0.2083	17865.18	0.0021	0.0008698
As	75	3	He	94.673	0.204	17382.59	0.0021	0.0008698
Sr	88	3	He	2.349	0.0214	1780.18	0.0088	0.0006843
Sr	88	3	He	2.132	0.0194	1660.16	0.0088	0.0006843
Sr	88	3	He	2.1	0.0192	1610.17	0.0088	0.0006843
Mo	98	3	He	2102.912	46.1504	3847576.82	0.0219	0.001827
Mo	98	3	He	2078.76	45.6204	3895258.69	0.0219	0.001827
Mo	98	3	He	2099.861	46.0835	3872106.50	0.0219	0.001827
Ag	107	3	He	49.806	2.3439	195412.61	0.047	0.001064
Ag	107	3	He	48.772	2.2953	195979.27	0.047	0.001064
Ag	107	3	He	49.28	2.3192	194863.83	0.047	0.001064
Cd	111	3	He	101.013	0.538	44853.64	0.0053	6.086E-05
Cd	111	3	He	101.521	0.5407	46167.84	0.0053	6.086E-05
Cd	111	3	He	102.299	0.5449	45780.62	0.0053	6.086E-05
Sn	120	3	He	0.415	0.0212	1770.17	0.0154	0.01483
Sn	120	3	He	0.413	0.0212	1810.18	0.0154	0.01483
Sn	120	3	He	0.219	0.0182	1530.14	0.0154	0.01483
Sb	121	3	He	0.116	0.0019	160.01	0.0143	0.0002661
Sb	121	3	He	0.146	0.0023	200.01	0.0143	0.0002661
Sb	121	3	He	0.198	0.0031	260.01	0.0143	0.0002661
Ba	137	3	He	0.421	0.0023	190.01	0.0048	0.0002665
Ba	137	3	He	0.41	0.0022	190.01	0.0048	0.0002665
Ba	137	3	He	0.517	0.0027	230.01	0.0048	0.0002665
Tl	205	3	He	-0.051	0.0015	590.04	0.0246	0.002755
Tl	205	3	He	-0.059	0.0013	510.03	0.0246	0.002755
Tl	205	3	He	-0.056	0.0014	550.03	0.0246	0.002755
Pb	208	3	He	0.062	0.0042	970.07	0.0324	0.002158
Pb	208	3	He	0.052	0.0038	700.04	0.0324	0.002158
Pb	208	3	He	0.046	0.0036	820.05	0.0324	0.002158
U	238	3	He	0.038	0.0023	660.04	0.0492	0.0004023
U	238	3	He	0.043	0.0025	730.05	0.0492	0.0004023
U	238	3	He	0.05	0.0029	840.06	0.0492	0.0004023
Sc	45	1	No Gas			2579040.59		
Sc	45	1	No Gas			2602629.65		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2533781.84		
Ge	72	1	No Gas			1286177.09		
Ge	72	1	No Gas			1283774.67		
Ge	72	1	No Gas			1257494.90		
Sc	45	2	H2			198487.63		
Sc	45	2	H2			206691.38		
Sc	45	2	H2			208062.15		
Ge	72	2	H2			167664.53		
Ge	72	2	H2			170254.06		
Ge	72	2	H2			173846.13		
In	115	2	H2			385227.65		
In	115	2	H2			383271.52		
In	115	2	H2			383457.92		
Sc	45	3	He			49174.15		
Sc	45	3	He			51703.45		
Sc	45	3	He			50237.57		
Ge	72	3	He			86229.01		
Ge	72	3	He			85756.50		
Ge	72	3	He			85203.29		
In	115	3	He			83379.36		
In	115	3	He			85392.13		
In	115	3	He			84033.56		
Tb	159	3	He			394105.07		
Tb	159	3	He			393983.74		
Tb	159	3	He			398771.36		
Bi	209	3	He			292342.85		
Bi	209	3	He			290627.32		
Bi	209	3	He			293550.07		

Quantitation Report

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Acq Time	8/9/2023 1:51:01 PM
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Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

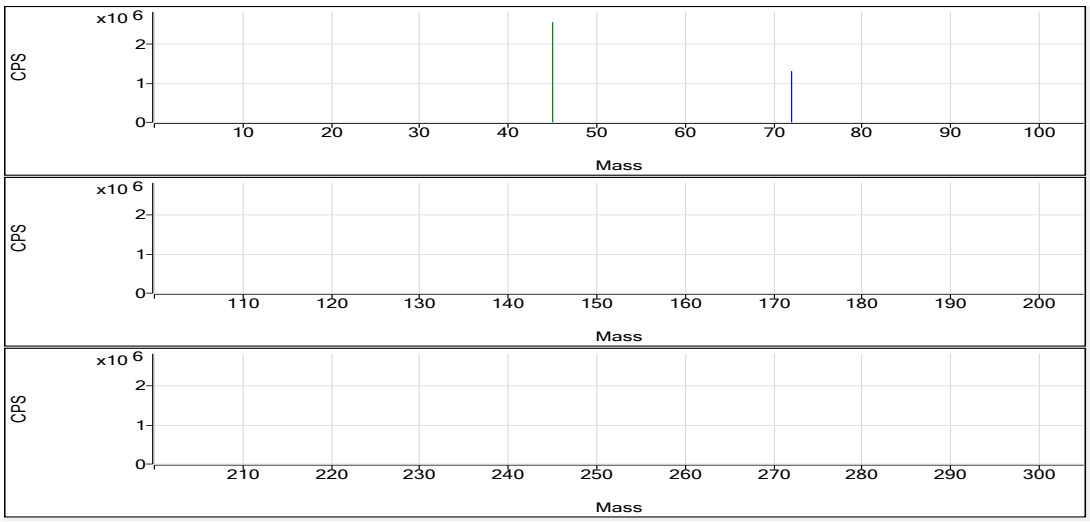
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.954	ppb	11.6	1868.79	0.0007	Pulse	0.5000	3
Se	78	72	H2	1.201	ppb	4.7	95.33	0.0006	Pulse	1.5000	3
Na	23	45	He	67.696	ppb	11.5	33024.47	0.6584	Pulse	0.1000	3
Mg	24	45	He	41.662	ppb	10.3	4007.35	0.0798	Pulse	0.1000	3
Al	27	45	He	36.107	ppb	18.0	1160.08	0.0231	Pulse	0.1000	3
K	39	45	He	53.300	ppb	18.3	23753.25	0.4736	Pulse	0.1000	3
Ca	44	45	He	48.292	ppb	15.2	330.02	0.0066	Pulse	0.1000	3
Ti	47	45	He	1.121	ppb	31.7	30.00	0.0006	Pulse	0.1000	3
V	51	45	He	0.586	ppb	6.0	2219.52	0.0443	Pulse	0.5000	3
Cr	52	45	He	0.129	ppb	89.9	2343.62	0.0468	Pulse	0.1000	3
Mn	55	45	He	1.104	ppb	24.9	826.72	0.0165	Pulse	0.1000	3
Fe	57	45	He	42.340	ppb	12.6	1350.12	0.0270	Pulse	0.1000	3
Co	59	45	He	0.357	ppb	15.2	1166.76	0.0232	Pulse	0.1000	3
Ni	60	72	He	-0.564	ppb	N/A	750.05	0.0089	Pulse	0.1000	3
Cu	63	72	He	0.391	ppb	26.0	1690.16	0.0200	Pulse	0.1000	3
Zn	66	72	He	-0.459	ppb	N/A	380.02	0.0045	Pulse	0.1000	3
As	75	72	He	0.545	ppb	34.0	172.00	0.0020	Pulse	0.5000	3
Sr	88	115	He	0.373	ppb	4.4	346.68	0.0040	Pulse	0.1000	3
Mo	98	115	He	2.338	ppb	8.1	4644.25	0.0531	Pulse	0.1000	3
Ag	107	115	He	0.389	ppb	19.0	1696.83	0.0194	Pulse	0.1000	3
Cd	111	115	He	0.352	ppb	29.0	169.33	0.0019	Pulse	0.5000	3
Sn	120	115	He	1.199	ppb	12.9	2913.74	0.0333	Pulse	0.1000	3
Sb	121	115	He	0.436	ppb	18.8	566.70	0.0065	Pulse	0.1000	3
Ba	137	115	He	0.262	ppb	54.2	133.34	0.0015	Pulse	0.1000	3
Tl	205	159	He	1.254	ppb	5.6	13444.13	0.0336	Pulse	0.1000	3
Pb	208	159	He	0.419	ppb	16.3	6304.18	0.0157	Pulse	0.1000	3
U	238	209	He	0.167	ppb	6.5	2683.71	0.0086	Pulse	0.1000	3

ISTD Table:

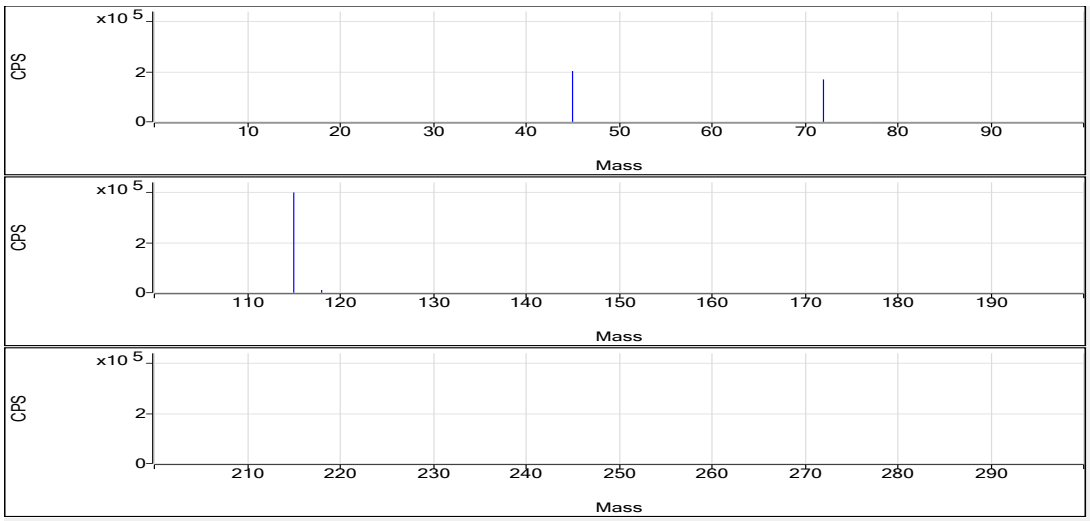
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2567330.43	2.2	98.4	Analog	0.1000	3
No Gas	Ge	72	1311026.70	1.7	101.7	Pulse	0.1000	3
H2	Sc	45	203296.44	0.9	98.7	Pulse	0.1000	3
H2	Ge	72	169627.11	0.2	104.2	Pulse	0.1000	3
H2	In	115	401121.54	0.7	99.4	Pulse	0.1000	3
He	Sc	45	50163.82	2.5	98.0	Pulse	0.1000	3
He	Ge	72	84345.07	0.6	103.0	Pulse	0.1000	3
He	In	115	87445.69	1.1	99.8	Pulse	0.1000	3
He	Tb	159	400575.08	1.1	99.7	Pulse	0.1000	3
He	Bi	209	310401.62	1.0	101.4	Pulse	0.1000	3

No Gas

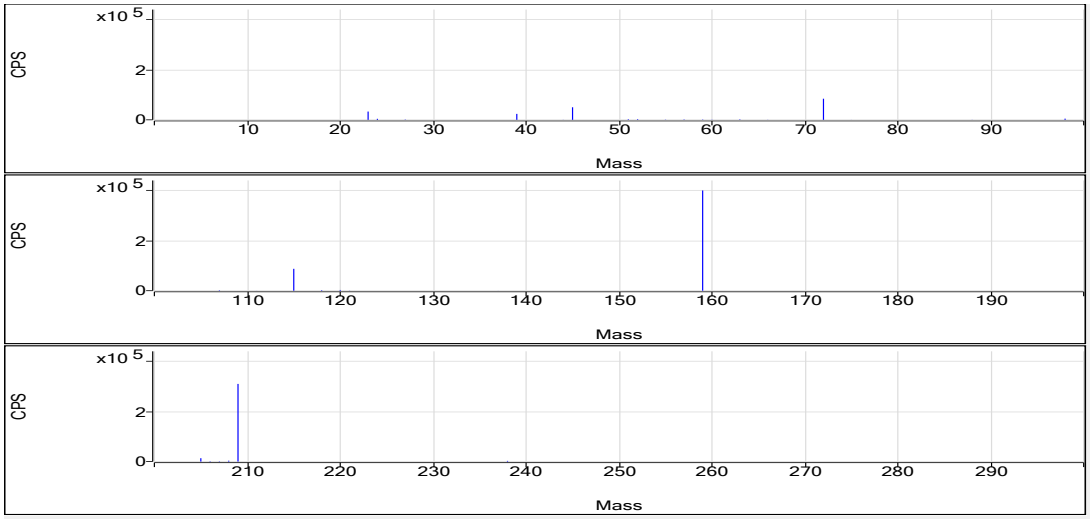


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	1.082	0.0008	2074.15	0.0007	3.404E-05
Be	9	1	No Gas	0.888	0.0007	1792.12	0.0007	3.404E-05
Be	9	1	No Gas	0.891	0.0007	1740.11	0.0007	3.404E-05
Se	78	2	H2	1.193	0.0006	94.67	0.0004	3.546E-05
Se	78	2	H2	1.149	0.0005	91.33	0.0004	3.546E-05
Se	78	2	H2	1.262	0.0006	100.00	0.0004	3.546E-05
Na	23	3	He	76.65	0.6903	34511.11	0.0036	0.4171
Na	23	3	He	63.728	0.6442	33177.96	0.0036	0.4171
Na	23	3	He	62.712	0.6406	31384.33	0.0036	0.4171
Mg	24	3	He	45.865	0.0874	4370.82	0.0018	0.004553
Mg	24	3	He	41.871	0.0802	4130.69	0.0018	0.004553
Mg	24	3	He	37.251	0.0719	3520.53	0.0018	0.004553
Al	27	3	He	43.459	0.0274	1370.10	0.0006	0.002085
Al	27	3	He	33.752	0.0217	1120.08	0.0006	0.002085
Al	27	3	He	31.109	0.0202	990.07	0.0006	0.002085
K	39	3	He	63.754	0.4858	24290.75	0.0012	0.4112
K	39	3	He	44.49	0.4633	23860.07	0.0012	0.4112
K	39	3	He	51.655	0.4717	23108.94	0.0012	0.4112
Ca	44	3	He	42.616	0.0062	310.02	0.0001	0.003322
Ca	44	3	He	45.679	0.0064	330.01	0.0001	0.003322
Ca	44	3	He	56.581	0.0071	350.02	0.0001	0.003322
Ti	47	3	He	0.752	0.0004	20.00	0.0005	0
Ti	47	3	He	1.46	0.0008	40.00	0.0005	0
Ti	47	3	He	1.151	0.0006	30.00	0.0005	0
V	51	3	He	0.597	0.0445	2224.19	0.0213	0.0318
V	51	3	He	0.547	0.0434	2236.19	0.0213	0.0318
V	51	3	He	0.615	0.0449	2198.18	0.0213	0.0318
Cr	52	3	He	0.042	0.0442	2210.26	0.0294	0.04297
Cr	52	3	He	0.084	0.0454	2340.28	0.0294	0.04297
Cr	52	3	He	0.26	0.0506	2480.31	0.0294	0.04297
Mn	55	3	He	1.303	0.019	950.06	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.79	0.0126	650.04	0.0124	0.002801
Mn	55	3	He	1.22	0.018	880.06	0.0124	0.002801
Fe	57	3	He	46.269	0.0292	1460.13	0.0006	0.002732
Fe	57	3	He	36.292	0.0235	1210.10	0.0006	0.002732
Fe	57	3	He	44.46	0.0282	1380.12	0.0006	0.002732
Co	59	3	He	0.382	0.0246	1230.10	0.0549	0.003644
Co	59	3	He	0.394	0.0252	1300.12	0.0549	0.003644
Co	59	3	He	0.294	0.0198	970.06	0.0549	0.003644
Ni	60	3	He	-0.6	0.0086	720.04	0.0093	0.01413
Ni	60	3	He	-0.558	0.0089	760.05	0.0093	0.01413
Ni	60	3	He	-0.534	0.0092	770.05	0.0093	0.01413
Cu	63	3	He	0.488	0.0227	1910.19	0.0274	0.009321
Cu	63	3	He	0.399	0.0203	1720.17	0.0274	0.009321
Cu	63	3	He	0.285	0.0171	1440.12	0.0274	0.009321
Zn	66	3	He	-0.609	0.004	340.02	0.0031	0.005913
Zn	66	3	He	-0.239	0.0052	440.02	0.0031	0.005913
Zn	66	3	He	-0.529	0.0043	360.02	0.0031	0.005913
As	75	3	He	0.747	0.0025	208.00	0.0021	0.0008698
As	75	3	He	0.505	0.002	166.00	0.0021	0.0008698
As	75	3	He	0.383	0.0017	142.00	0.0021	0.0008698
Sr	88	3	He	0.384	0.0041	360.03	0.0088	0.0006843
Sr	88	3	He	0.354	0.0038	330.01	0.0088	0.0006843
Sr	88	3	He	0.38	0.004	350.01	0.0088	0.0006843
Mo	98	3	He	2.129	0.0486	4300.82	0.0219	0.001827
Mo	98	3	He	2.389	0.0542	4710.93	0.0219	0.001827
Mo	98	3	He	2.497	0.0566	4921.00	0.0219	0.001827
Ag	107	3	He	0.46	0.0227	2010.20	0.047	0.001064
Ag	107	3	He	0.396	0.0197	1710.17	0.047	0.001064
Ag	107	3	He	0.312	0.0158	1370.13	0.047	0.001064
Cd	111	3	He	0.446	0.0024	216.00	0.0053	6.086E-05
Cd	111	3	He	0.365	0.002	174.00	0.0053	6.086E-05
Cd	111	3	He	0.244	0.0014	118.00	0.0053	6.086E-05
Sn	120	3	He	1.257	0.0342	3030.44	0.0154	0.01483
Sn	120	3	He	1.316	0.0351	3050.43	0.0154	0.01483
Sn	120	3	He	1.023	0.0306	2660.35	0.0154	0.01483
Sb	121	3	He	0.504	0.0075	660.04	0.0143	0.0002661
Sb	121	3	He	0.345	0.0052	450.02	0.0143	0.0002661
Sb	121	3	He	0.458	0.0068	590.04	0.0143	0.0002661
Ba	137	3	He	0.417	0.0023	200.01	0.0048	0.0002665
Ba	137	3	He	0.233	0.0014	120.01	0.0048	0.0002665
Ba	137	3	He	0.137	0.0009	80.00	0.0048	0.0002665
Tl	205	3	He	1.314	0.035	14058.03	0.0246	0.002755
Tl	205	3	He	1.271	0.034	13747.76	0.0246	0.002755
Tl	205	3	He	1.177	0.0317	12526.59	0.0246	0.002755
Pb	208	3	He	0.489	0.018	3790.70	0.0324	0.002158
Pb	208	3	He	0.415	0.0156	3470.59	0.0324	0.002158
Pb	208	3	He	0.352	0.0136	2920.42	0.0324	0.002158
U	238	3	He	0.159	0.0082	2570.35	0.0492	0.0004023
U	238	3	He	0.163	0.0085	2640.39	0.0492	0.0004023
U	238	3	He	0.18	0.0093	2840.40	0.0492	0.0004023
Sc	45	1	No Gas			2522849.65		
Sc	45	1	No Gas			2631678.40		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2547463.24		
Ge	72	1	No Gas			1296462.64		
Ge	72	1	No Gas			1336015.14		
Ge	72	1	No Gas			1300602.32		
Sc	45	2	H2			201761.34		
Sc	45	2	H2			205320.09		
Sc	45	2	H2			202807.89		
Ge	72	2	H2			169527.95		
Ge	72	2	H2			169414.06		
Ge	72	2	H2			169939.31		
In	115	2	H2			398123.67		
In	115	2	H2			402977.06		
In	115	2	H2			402263.90		
Sc	45	3	He			49996.68		
Sc	45	3	He			51501.72		
Sc	45	3	He			48993.07		
Ge	72	3	He			84117.06		
Ge	72	3	He			84941.80		
Ge	72	3	He			83976.34		
In	115	3	He			88592.52		
In	115	3	He			86862.10		
In	115	3	He			86931.06		
Tb	159	3	He			401379.29		
Tb	159	3	He			404656.28		
Tb	159	3	He			395689.68		
Bi	209	3	He			311949.10		
Bi	209	3	He			312425.33		
Bi	209	3	He			306830.44		

Quantitation Report

Data File Name	023_LRC.d
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Sample Name	LRC 4661368
Sample Type	LRC
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

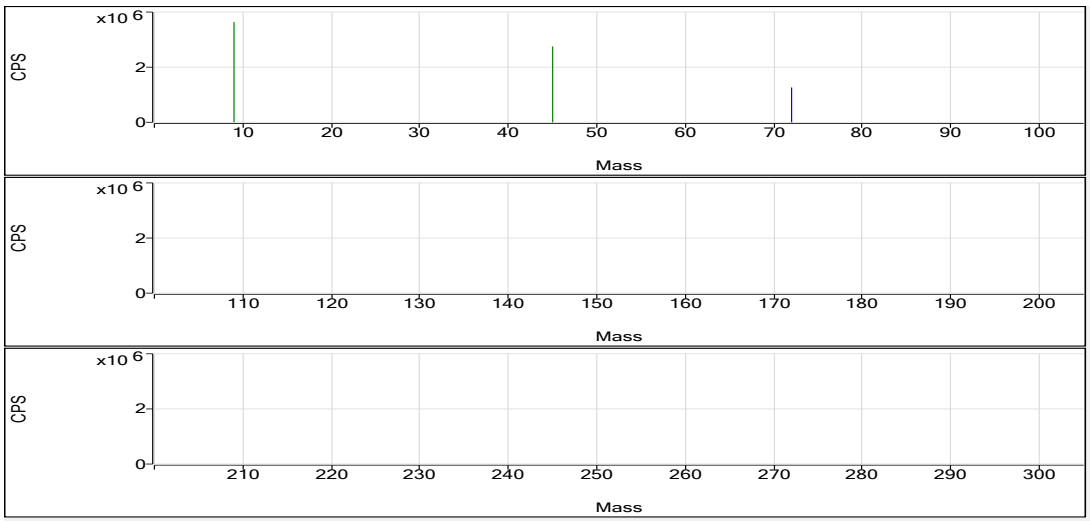
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	1813.146	ppb	1.2	3654593.25	1.3210	Analog	0.5000	3
Se	78	72	H2	1962.887	ppb	0.9	143352.51	0.8604	Pulse	1.5000	3
Na	23	45	He	177531.422	ppb	2.3	34173707.82	633.2123	Analog	0.1000	3
Mg	24	45	He	186264.401	ppb	1.7	18164648.06	336.5452	Analog	0.1000	3
Al	27	45	He	192265.753	ppb	2.1	6045571.16	112.0149	Analog	0.1000	3
K	39	45	He	188641.871	ppb	2.6	11944088.57	221.3251	Analog	0.1000	3
Ca	44	45	He	190693.026	ppb	1.8	695488.66	12.8860	Pulse	0.1000	3
Ti	47	45	He	1979.234	ppb	1.7	56821.97	1.0527	Pulse	0.1000	3
V	51	45	He	1913.782	ppb	1.9	2196727.00	40.7014	Analog	0.5000	3
Cr	52	45	He	1845.719	ppb	2.7	2931676.62	54.3257	Analog	0.1000	3
Mn	55	45	He	5740.028	ppb	3.1	3850935.98	71.3636	Analog	0.1000	3
Fe	57	45	He	148699.701	ppb	2.9	4591393.58	85.0814	Analog	0.1000	3
Co	59	45	He	1794.112	ppb	2.2	5314831.17	98.4779	Analog	0.1000	3
Ni	60	72	He	1911.280	ppb	1.6	1489404.46	17.7563	Mix	0.1000	3
Cu	63	72	He	1839.349	ppb	0.7	4232028.58	50.4553	Analog	0.1000	3
Zn	66	72	He	1923.554	ppb	0.9	495880.10	5.9120	Pulse	0.1000	3
As	75	72	He	1955.969	ppb	0.7	352102.36	4.1979	Pulse	0.5000	3
Sr	88	115	He	2064.685	ppb	2.0	1680847.52	18.1676	Analog	0.1000	3
Mo	98	115	He	1969.097	ppb	1.6	3998300.05	43.2139	Analog	0.1000	3
Ag	107	115	He	1844.447	ppb	2.2	8027065.71	86.7628	Analog	0.1000	3
Cd	111	115	He	1862.650	ppb	1.8	917782.54	9.9195	Pulse	0.5000	3
Sn	120	115	He	2041.993	ppb	2.3	2914583.71	31.5035	Analog	0.1000	3
Sb	121	115	He	2045.770	ppb	1.9	2697307.46	29.1529	Analog	0.1000	3
Ba	137	115	He	1918.853	ppb	1.8	848424.89	9.1701	Pulse	0.1000	3
Tl	205	159	He	2016.626	ppb	0.7	19633630.96	49.5317	Analog	0.1000	3
Pb	208	159	He	2019.142	ppb	0.7	25936178.99	65.4310	Analog	0.1000	3
U	238	209	He	218.487	ppb	1.0	3141278.08	10.7603	Analog	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2766581.63	0.2	106.1	Analog	0.1000	3
No Gas	Ge	72	1270542.04	0.6	98.6	Pulse	0.1000	3
H2	Sc	45	205120.22	1.3	99.5	Pulse	0.1000	3
H2	Ge	72	166612.64	0.3	102.4	Pulse	0.1000	3
H2	In	115	491300.29	0.6	121.7	Pulse	0.1000	3
He	Sc	45	53987.57	2.3	105.4	Pulse	0.1000	3
He	Ge	72	83879.37	0.7	102.5	Pulse	0.1000	3
He	In	115	92540.85	1.8	105.6	Pulse	0.1000	3
He	Tb	159	396397.05	0.6	98.7	Pulse	0.1000	3
He	Bi	209	291927.39	0.2	95.4	Pulse	0.1000	3

No Gas



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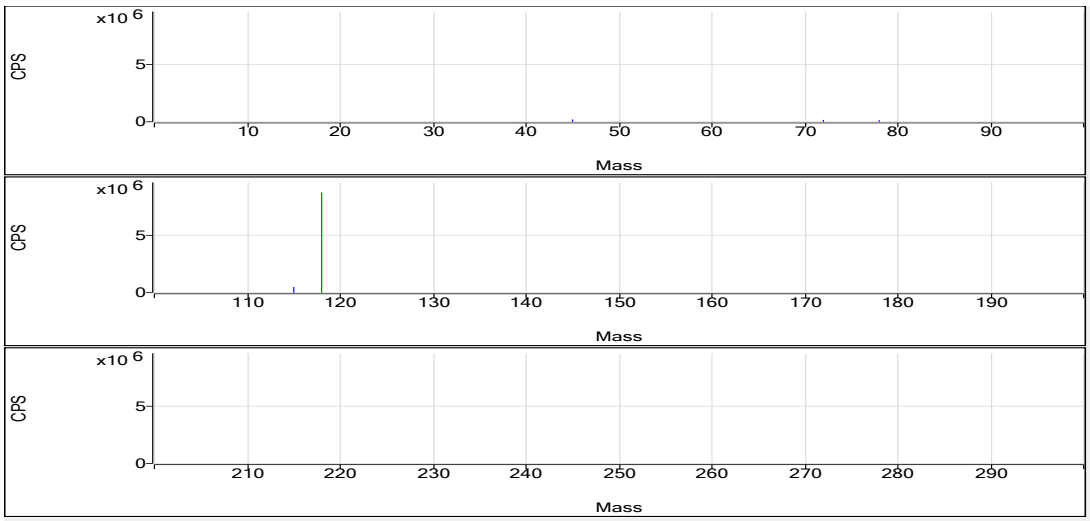
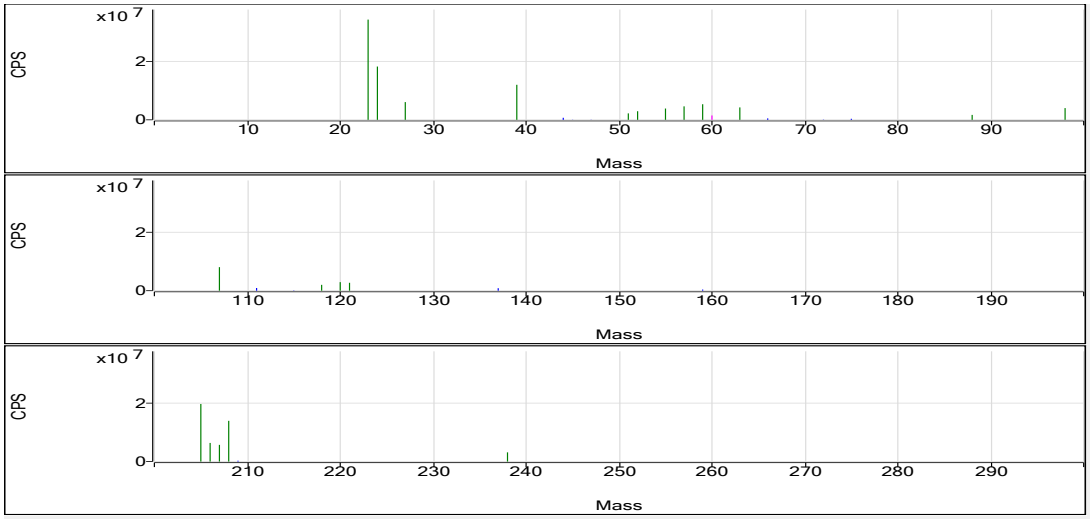


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	1814.173	1.3217	3650497.50	0.0007	3.404E-05
Be	9	1	No Gas	1790.471	1.3044	3607357.00	0.0007	3.404E-05
Be	9	1	No Gas	1834.793	1.3367	3705925.25	0.0007	3.404E-05
Se	78	2	H2	1944.865	0.8525	142322.18	0.0004	3.546E-05
Se	78	2	H2	1965.111	0.8614	143752.41	0.0004	3.546E-05
Se	78	2	H2	1978.685	0.8673	143982.93	0.0004	3.546E-05
Na	23	3	He	174373.425	621.9559	34241549.49	0.0036	0.4171
Na	23	3	He	182028.203	649.2406	34154154.49	0.0036	0.4171
Na	23	3	He	176192.638	628.4403	34125419.49	0.0036	0.4171
Mg	24	3	He	184350.33	333.0869	18337973.48	0.0018	0.004553
Mg	24	3	He	189927.37	343.1634	18052559.73	0.0018	0.004553
Mg	24	3	He	184515.502	333.3853	18103410.98	0.0018	0.004553
Al	27	3	He	190231.194	110.8296	6101682.41	0.0006	0.002085
Al	27	3	He	196956.978	114.748	6036468.66	0.0006	0.002085
Al	27	3	He	189609.089	110.4672	5998562.41	0.0006	0.002085
K	39	3	He	184726.191	216.7395	11932513.57	0.0012	0.4112
K	39	3	He	194025.8	227.6301	11974777.32	0.0012	0.4112
K	39	3	He	187173.622	219.6056	11924974.82	0.0012	0.4112
Ca	44	3	He	187933.437	12.6996	699170.61	0.0001	0.003322
Ca	44	3	He	194591.939	13.1494	691741.86	0.0001	0.003322
Ca	44	3	He	189553.703	12.809	695553.51	0.0001	0.003322
Ti	47	3	He	1941.567	1.0326	56851.84	0.0005	0
Ti	47	3	He	1994.251	1.0607	55797.66	0.0005	0
Ti	47	3	He	2001.883	1.0647	57816.40	0.0005	0
V	51	3	He	1882.583	40.0384	2204297.25	0.0213	0.0318
V	51	3	He	1953.309	41.5413	2185336.50	0.0213	0.0318
V	51	3	He	1905.455	40.5244	2200547.25	0.0213	0.0318
Cr	52	3	He	1806.095	53.1604	2926726.83	0.0294	0.04297
Cr	52	3	He	1902.63	55.9995	2945927.46	0.0294	0.04297
Cr	52	3	He	1828.431	53.8173	2922375.58	0.0294	0.04297
Mn	55	3	He	5578.007	69.3493	3818002.13	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	5925.927	73.6747	3875755.88	0.0124	0.002801
Mn	55	3	He	5716.149	71.0667	3859049.94	0.0124	0.002801
Fe	57	3	He	146215.983	83.6603	4605887.43	0.0006	0.002732
Fe	57	3	He	153605.496	87.8882	4623475.24	0.0006	0.002732
Fe	57	3	He	146277.625	83.6956	4544818.06	0.0006	0.002732
Co	59	3	He	1756.449	96.4107	5307853.05	0.0549	0.003644
Co	59	3	He	1833.801	100.6563	5295156.80	0.0549	0.003644
Co	59	3	He	1792.086	98.3667	5341483.67	0.0549	0.003644
Ni	60	3	He	1911.749	17.7606	1501651.85	0.0093	0.01413
Ni	60	3	He	1941.066	18.0328	1508353.26	0.0093	0.01413
Ni	60	3	He	1881.023	17.4754	1458208.26	0.0093	0.01413
Cu	63	3	He	1824.201	50.0399	4230847.12	0.0274	0.009321
Cu	63	3	He	1850.675	50.766	4246325.87	0.0274	0.009321
Cu	63	3	He	1843.169	50.5601	4218912.75	0.0274	0.009321
Zn	66	3	He	1909.424	5.8686	496190.62	0.0031	0.005913
Zn	66	3	He	1919.773	5.9004	493541.01	0.0031	0.005913
Zn	66	3	He	1941.464	5.967	497908.66	0.0031	0.005913
As	75	3	He	1940.841	4.1654	352182.53	0.0021	0.0008698
As	75	3	He	1958.806	4.2039	351639.72	0.0021	0.0008698
As	75	3	He	1968.26	4.2242	352484.84	0.0021	0.0008698
Sr	88	3	He	2061.8	18.1422	1684057.94	0.0088	0.0006843
Sr	88	3	He	2024.242	17.8118	1674536.69	0.0088	0.0006843
Sr	88	3	He	2108.013	18.5489	1683947.94	0.0088	0.0006843
Mo	98	3	He	1957.304	42.9551	3987313.07	0.0219	0.001827
Mo	98	3	He	1944.945	42.6838	4012831.19	0.0219	0.001827
Mo	98	3	He	2005.042	44.0027	3994755.88	0.0219	0.001827
Ag	107	3	He	1845.324	86.8041	8057610.50	0.047	0.001064
Ag	107	3	He	1803.558	84.8395	7976005.51	0.047	0.001064
Ag	107	3	He	1884.458	88.645	8047581.13	0.047	0.001064
Cd	111	3	He	1868.781	9.9522	923815.25	0.0053	6.086E-05
Cd	111	3	He	1827.207	9.7308	914820.81	0.0053	6.086E-05
Cd	111	3	He	1891.961	10.0756	914711.56	0.0053	6.086E-05
Sn	120	3	He	2023.776	31.2226	2898247.14	0.0154	0.01483
Sn	120	3	He	2006.468	30.9557	2910238.71	0.0154	0.01483
Sn	120	3	He	2095.734	32.3323	2935265.27	0.0154	0.01483
Sb	121	3	He	2020.918	28.7988	2673253.71	0.0143	0.0002661
Sb	121	3	He	2026.952	28.8848	2715541.52	0.0143	0.0002661
Sb	121	3	He	2089.44	29.7752	2703127.15	0.0143	0.0002661
Ba	137	3	He	1917.018	9.1613	850401.32	0.0048	0.0002665
Ba	137	3	He	1884.464	9.0057	846656.71	0.0048	0.0002665
Ba	137	3	He	1955.077	9.3432	848216.63	0.0048	0.0002665
Tl	205	3	He	2002.673	49.189	19608860.96	0.0246	0.002755
Tl	205	3	He	2032.106	49.9119	19654608.46	0.0246	0.002755
Tl	205	3	He	2015.1	49.4942	19637423.46	0.0246	0.002755
Pb	208	3	He	2018.88	65.4225	13993579.79	0.0324	0.002158
Pb	208	3	He	2034.138	65.917	13883282.29	0.0324	0.002158
Pb	208	3	He	2004.407	64.9536	13799467.29	0.0324	0.002158
U	238	3	He	219.049	10.788	3146553.70	0.0492	0.0004023
U	238	3	He	220.399	10.8545	3176772.14	0.0492	0.0004023
U	238	3	He	216.011	10.6384	3100508.39	0.0492	0.0004023
Sc	45	1	No Gas			2761943.40		
Sc	45	1	No Gas			2765431.83		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2772369.65		
Ge	72	1	No Gas			1277991.93		
Ge	72	1	No Gas			1263036.78		
Ge	72	1	No Gas			1270597.40		
Sc	45	2	H2			205768.41		
Sc	45	2	H2			202150.56		
Sc	45	2	H2			207441.68		
Ge	72	2	H2			166945.33		
Ge	72	2	H2			166885.84		
Ge	72	2	H2			166006.76		
In	115	2	H2			487995.89		
In	115	2	H2			492171.56		
In	115	2	H2			493733.43		
Sc	45	3	He			55054.63		
Sc	45	3	He			52606.31		
Sc	45	3	He			54301.77		
Ge	72	3	He			84549.49		
Ge	72	3	He			83645.12		
Ge	72	3	He			83443.50		
In	115	3	He			108258.53		
In	115	3	He			109720.43		
In	115	3	He			106355.28		
Tb	159	3	He			398643.16		
Tb	159	3	He			393786.09		
Tb	159	3	He			396761.91		
Bi	209	3	He			291670.35		
Bi	209	3	He			292667.89		
Bi	209	3	He			291443.92		

Quantitation Report

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Sample Type	Sample
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

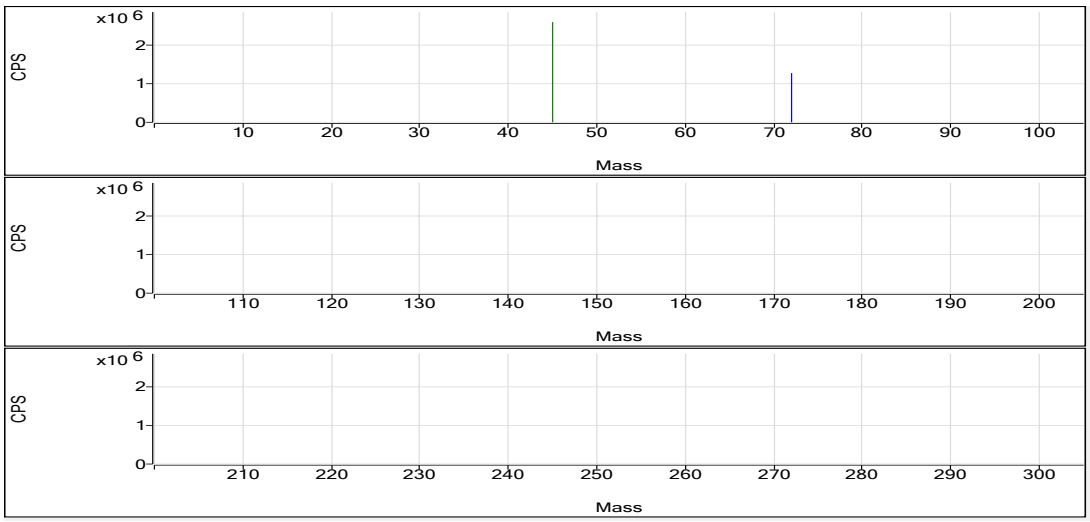
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.021	ppb	63.8	129.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.076	ppb	29.3	10.89	0.0001	Pulse	1.5000	3
Na	23	45	He	7.744	ppb	24.7	21886.82	0.4447	Pulse	0.1000	3
Mg	24	45	He	1.032	ppb	97.1	316.68	0.0064	Pulse	0.1000	3
Al	27	45	He	2.240	ppb	35.6	166.68	0.0034	Pulse	0.1000	3
K	39	45	He	0.848	ppb	493.9	20291.37	0.4122	Pulse	0.1000	3
Ca	44	45	He	6.947	ppb	43.1	186.68	0.0038	Pulse	0.1000	3
Ti	47	45	He	0.000	ppb	N/A	0.00	0.0000	Pulse	0.1000	3
V	51	45	He	0.438	ppb	17.4	2022.82	0.0411	Pulse	0.5000	3
Cr	52	45	He	-0.167	ppb	N/A	1873.51	0.0380	Pulse	0.1000	3
Mn	55	45	He	0.107	ppb	38.9	203.34	0.0041	Pulse	0.1000	3
Fe	57	45	He	0.431	ppb	84.5	146.67	0.0030	Pulse	0.1000	3
Co	59	45	He	-0.011	ppb	N/A	150.01	0.0031	Pulse	0.1000	3
Ni	60	72	He	-0.875	ppb	N/A	470.03	0.0060	Pulse	0.1000	3
Cu	63	72	He	0.003	ppb	760.8	736.71	0.0094	Pulse	0.1000	3
Zn	66	72	He	-0.594	ppb	N/A	320.02	0.0041	Pulse	0.1000	3
As	75	72	He	0.134	ppb	33.6	90.67	0.0012	Pulse	0.5000	3
Sr	88	115	He	0.019	ppb	273.4	73.33	0.0009	Pulse	0.1000	3
Mo	98	115	He	0.243	ppb	10.4	613.37	0.0072	Pulse	0.1000	3
Ag	107	115	He	0.013	ppb	6.3	143.34	0.0017	Pulse	0.1000	3
Cd	111	115	He	0.016	ppb	12.5	12.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.536	ppb	15.0	1976.89	0.0231	Pulse	0.1000	3
Sb	121	115	He	0.055	ppb	60.8	90.00	0.0011	Pulse	0.1000	3
Ba	137	115	He	-0.023	ppb	N/A	13.33	0.0002	Pulse	0.1000	3
Tl	205	159	He	0.144	ppb	17.6	2463.66	0.0063	Pulse	0.1000	3
Pb	208	159	He	0.017	ppb	17.9	1063.39	0.0027	Pulse	0.1000	3
U	238	209	He	0.001	ppb	151.1	140.01	0.0005	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2610760.74	0.6	100.1	Analog	0.1000	3
No Gas	Ge	72	1280637.45	0.4	99.4	Pulse	0.1000	3
H2	Sc	45	199724.75	0.8	96.9	Pulse	0.1000	3
H2	Ge	72	158278.44	1.3	97.3	Pulse	0.1000	3
H2	In	115	391761.88	0.7	97.0	Pulse	0.1000	3
He	Sc	45	49227.44	1.3	96.2	Pulse	0.1000	3
He	Ge	72	78284.49	1.2	95.6	Pulse	0.1000	3
He	In	115	85622.44	1.7	97.7	Pulse	0.1000	3
He	Tb	159	391014.27	0.9	97.4	Pulse	0.1000	3
He	Bi	209	303843.60	0.4	99.3	Pulse	0.1000	3

No Gas



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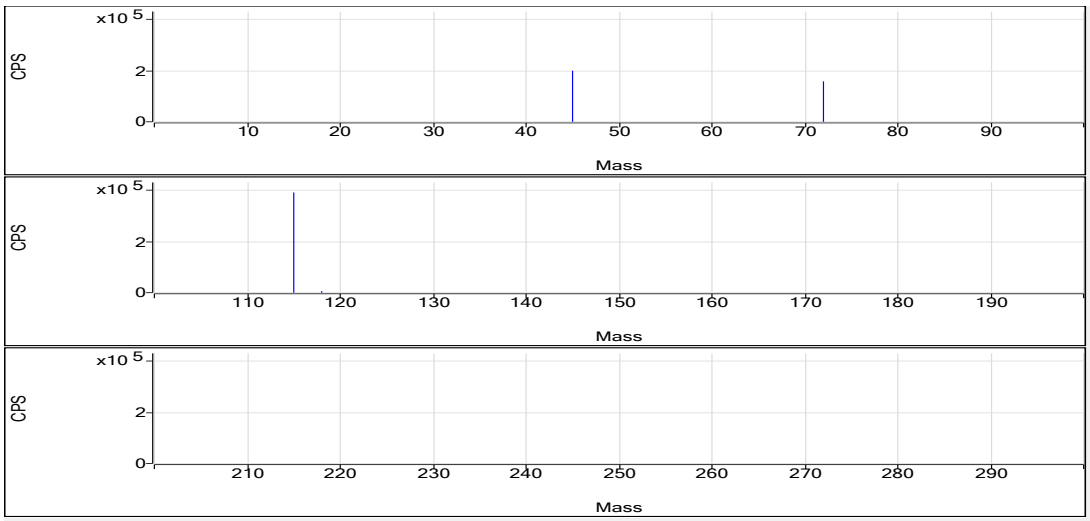
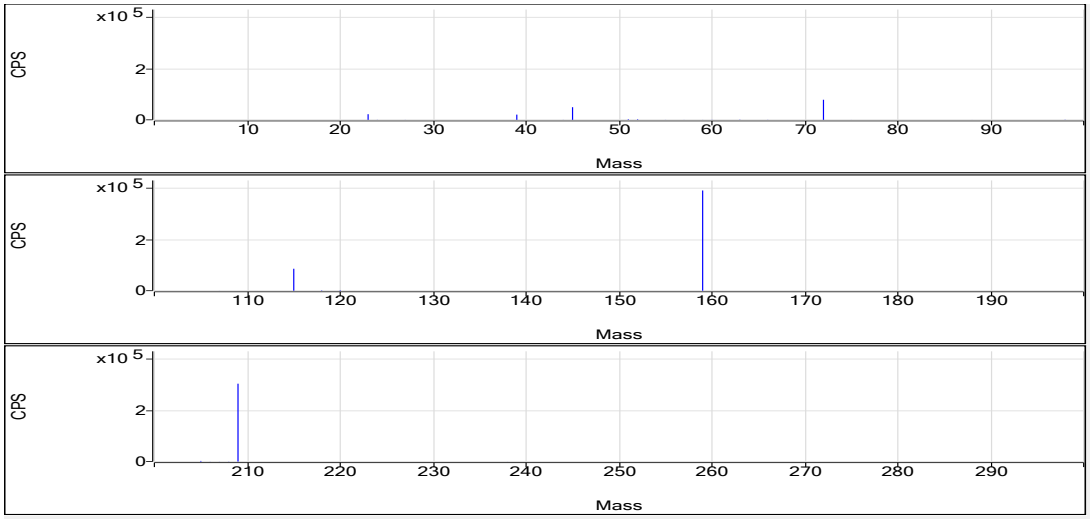


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.036	0.0001	156.00	0.0007	3.404E-05
Be	9	1	No Gas	0.019	0	126.00	0.0007	3.404E-05
Be	9	1	No Gas	0.009	0	106.00	0.0007	3.404E-05
Se	78	2	H2	0.065	0.0001	10.00	0.0004	3.546E-05
Se	78	2	H2	0.061	0.0001	10.00	0.0004	3.546E-05
Se	78	2	H2	0.102	0.0001	12.67	0.0004	3.546E-05
Na	23	3	He	7.994	0.4456	22016.83	0.0036	0.4171
Na	23	3	He	5.72	0.4374	21756.71	0.0036	0.4171
Na	23	3	He	9.517	0.451	21886.92	0.0036	0.4171
Mg	24	3	He	1.625	0.0075	370.02	0.0018	0.004553
Mg	24	3	He	1.598	0.0074	370.02	0.0018	0.004553
Mg	24	3	He	-0.125	0.0043	210.01	0.0018	0.004553
Al	27	3	He	1.633	0.003	150.01	0.0006	0.002085
Al	27	3	He	1.944	0.0032	160.01	0.0006	0.002085
Al	27	3	He	3.142	0.0039	190.01	0.0006	0.002085
K	39	3	He	-2.836	0.4079	20154.48	0.0012	0.4112
K	39	3	He	5.402	0.4175	20765.29	0.0012	0.4112
K	39	3	He	-0.022	0.4112	19954.35	0.0012	0.4112
Ca	44	3	He	4.752	0.0036	180.01	0.0001	0.003322
Ca	44	3	He	10.356	0.004	200.01	0.0001	0.003322
Ca	44	3	He	5.733	0.0037	180.01	0.0001	0.003322
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	0.456	0.0415	2050.16	0.0213	0.0318
V	51	3	He	0.354	0.0393	1956.14	0.0213	0.0318
V	51	3	He	0.503	0.0425	2062.16	0.0213	0.0318
Cr	52	3	He	-0.057	0.0413	2040.20	0.0294	0.04297
Cr	52	3	He	-0.189	0.0374	1860.19	0.0294	0.04297
Cr	52	3	He	-0.256	0.0354	1720.14	0.0294	0.04297
Mn	55	3	He	0.149	0.0047	230.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.066	0.0036	180.01	0.0124	0.002801
Mn	55	3	He	0.106	0.0041	200.01	0.0124	0.002801
Fe	57	3	He	0.177	0.0028	140.01	0.0006	0.002732
Fe	57	3	He	0.848	0.0032	160.01	0.0006	0.002732
Fe	57	3	He	0.267	0.0029	140.00	0.0006	0.002732
Co	59	3	He	-0.015	0.0028	140.01	0.0549	0.003644
Co	59	3	He	-0.03	0.002	100.00	0.0549	0.003644
Co	59	3	He	0.012	0.0043	210.01	0.0549	0.003644
Ni	60	3	He	-0.848	0.0063	490.03	0.0093	0.01413
Ni	60	3	He	-0.882	0.0059	470.03	0.0093	0.01413
Ni	60	3	He	-0.895	0.0058	450.02	0.0093	0.01413
Cu	63	3	He	-0.023	0.0087	680.04	0.0274	0.009321
Cu	63	3	He	0.006	0.0095	750.04	0.0274	0.009321
Cu	63	3	He	0.028	0.0101	780.05	0.0274	0.009321
Zn	66	3	He	-0.595	0.0041	320.02	0.0031	0.005913
Zn	66	3	He	-0.651	0.0039	310.01	0.0031	0.005913
Zn	66	3	He	-0.536	0.0043	330.02	0.0031	0.005913
As	75	3	He	0.094	0.0011	84.00	0.0021	0.0008698
As	75	3	He	0.183	0.0013	100.00	0.0021	0.0008698
As	75	3	He	0.125	0.0011	88.00	0.0021	0.0008698
Sr	88	3	He	-0.038	0.0004	30.00	0.0088	0.0006843
Sr	88	3	He	0.065	0.0013	110.00	0.0088	0.0006843
Sr	88	3	He	0.03	0.0009	80.00	0.0088	0.0006843
Mo	98	3	He	0.223	0.0067	570.03	0.0219	0.001827
Mo	98	3	He	0.235	0.007	610.03	0.0219	0.001827
Mo	98	3	He	0.272	0.0078	660.04	0.0219	0.001827
Ag	107	3	He	0.012	0.0017	140.01	0.047	0.001064
Ag	107	3	He	0.014	0.0017	150.01	0.047	0.001064
Ag	107	3	He	0.012	0.0017	140.01	0.047	0.001064
Cd	111	3	He	0.015	0.0001	12.00	0.0053	6.086E-05
Cd	111	3	He	0.019	0.0002	14.00	0.0053	6.086E-05
Cd	111	3	He	0.015	0.0001	12.00	0.0053	6.086E-05
Sn	120	3	He	0.629	0.0245	2080.23	0.0154	0.01483
Sn	120	3	He	0.494	0.0225	1960.21	0.0154	0.01483
Sn	120	3	He	0.485	0.0223	1890.23	0.0154	0.01483
Sb	121	3	He	0.089	0.0015	130.01	0.0143	0.0002661
Sb	121	3	He	0.022	0.0006	50.00	0.0143	0.0002661
Sb	121	3	He	0.056	0.0011	90.00	0.0143	0.0002661
Ba	137	3	He	-0.056	0	0.00	0.0048	0.0002665
Ba	137	3	He	-0.008	0.0002	20.00	0.0048	0.0002665
Ba	137	3	He	-0.006	0.0002	20.00	0.0048	0.0002665
Tl	205	3	He	0.16	0.0067	2630.37	0.0246	0.002755
Tl	205	3	He	0.158	0.0066	2600.35	0.0246	0.002755
Tl	205	3	He	0.115	0.0056	2160.26	0.0246	0.002755
Pb	208	3	He	0.018	0.0027	500.04	0.0324	0.002158
Pb	208	3	He	0.02	0.0028	550.03	0.0324	0.002158
Pb	208	3	He	0.014	0.0026	560.03	0.0324	0.002158
U	238	3	He	0	0.0004	120.00	0.0492	0.0004023
U	238	3	He	0.001	0.0004	130.01	0.0492	0.0004023
U	238	3	He	0.003	0.0006	170.01	0.0492	0.0004023
Sc	45	1	No Gas			2593033.24		
Sc	45	1	No Gas			2624519.96		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2614729.02		
Ge	72	1	No Gas			1285443.65		
Ge	72	1	No Gas			1282218.42		
Ge	72	1	No Gas			1274250.29		
Sc	45	2	H2			198183.59		
Sc	45	2	H2			201224.35		
Sc	45	2	H2			199766.31		
Ge	72	2	H2			156185.50		
Ge	72	2	H2			160381.95		
Ge	72	2	H2			158267.88		
In	115	2	H2			394849.29		
In	115	2	H2			389846.48		
In	115	2	H2			390589.88		
Sc	45	3	He			49414.65		
Sc	45	3	He			49735.82		
Sc	45	3	He			48531.85		
Ge	72	3	He			78324.06		
Ge	72	3	He			79179.53		
Ge	72	3	He			77349.89		
In	115	3	He			84828.24		
In	115	3	He			87323.48		
In	115	3	He			84747.27		
Tb	159	3	He			393620.15		
Tb	159	3	He			392231.21		
Tb	159	3	He			387191.44		
Bi	209	3	He			305394.59		
Bi	209	3	He			303277.63		
Bi	209	3	He			302858.59		

Quantitation Report

Data File Name	025SMPL.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H09B00.b
Acq Time	8/9/2023 2:12:55 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

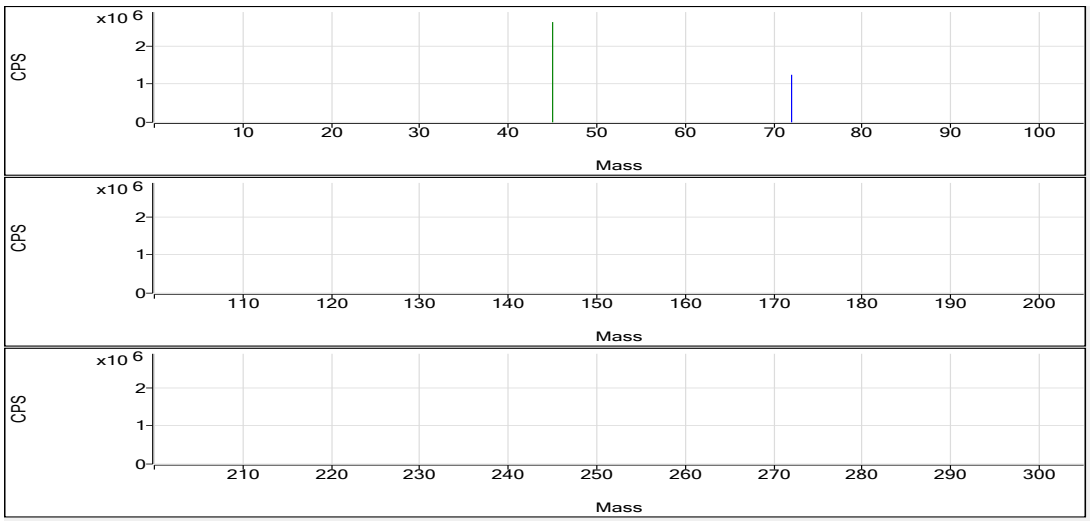
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.009	ppb	49.8	106.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.011	ppb	96.6	6.67	0.0000	Pulse	1.5000	3
Na	23	45	He	-3.051	ppb	N/A	20548.24	0.4062	Pulse	0.1000	3
Mg	24	45	He	-0.221	ppb	N/A	210.01	0.0042	Pulse	0.1000	3
Al	27	45	He	-1.204	ppb	N/A	70.00	0.0014	Pulse	0.1000	3
K	39	45	He	-10.457	ppb	N/A	20181.14	0.3989	Pulse	0.1000	3
Ca	44	45	He	-11.086	ppb	N/A	130.01	0.0026	Pulse	0.1000	3
Ti	47	45	He	0.000	ppb	N/A	0.00	0.0000	Pulse	0.1000	3
V	51	45	He	-0.043	ppb	N/A	1562.76	0.0309	Pulse	0.5000	3
Cr	52	45	He	0.139	ppb	49.6	2380.29	0.0471	Pulse	0.1000	3
Mn	55	45	He	-0.024	ppb	N/A	126.67	0.0025	Pulse	0.1000	3
Fe	57	45	He	0.174	ppb	741.4	143.34	0.0028	Pulse	0.1000	3
Co	59	45	He	-0.023	ppb	N/A	120.00	0.0024	Pulse	0.1000	3
Ni	60	72	He	-1.188	ppb	N/A	256.68	0.0031	Pulse	0.1000	3
Cu	63	72	He	-0.086	ppb	N/A	576.70	0.0070	Pulse	0.1000	3
Zn	66	72	He	-0.956	ppb	N/A	246.68	0.0030	Pulse	0.1000	3
As	75	72	He	-0.015	ppb	N/A	69.33	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.007	ppb	292.6	66.67	0.0007	Pulse	0.1000	3
Mo	98	115	He	0.019	ppb	222.9	200.01	0.0022	Pulse	0.1000	3
Ag	107	115	He	0.001	ppb	1058.5	100.00	0.0011	Pulse	0.1000	3
Cd	111	115	He	0.007	ppb	189.9	8.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.115	ppb	N/A	1173.43	0.0131	Pulse	0.1000	3
Sb	121	115	He	0.034	ppb	55.4	66.67	0.0007	Pulse	0.1000	3
Ba	137	115	He	-0.025	ppb	N/A	13.33	0.0001	Pulse	0.1000	3
Tl	205	159	He	0.015	ppb	70.2	1266.77	0.0031	Pulse	0.1000	3
Pb	208	159	He	0.010	ppb	96.2	1006.72	0.0025	Pulse	0.1000	3
U	238	209	He	-0.006	ppb	N/A	40.00	0.0001	Pulse	0.1000	3

ISTD Table:

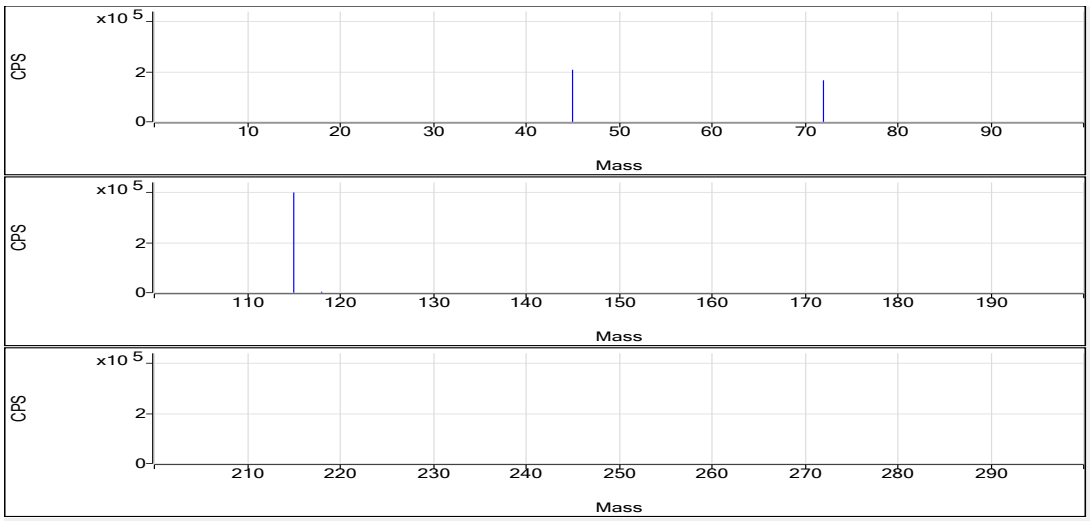
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2632681.31	0.3	100.9	Analog	0.1000	3
No Gas	Ge	72	1248141.28	0.6	96.8	Pulse	0.1000	3
H2	Sc	45	208663.12	2.7	101.3	Pulse	0.1000	3
H2	Ge	72	166406.12	1.3	102.2	Pulse	0.1000	3
H2	In	115	401652.83	0.7	99.5	Pulse	0.1000	3
He	Sc	45	50588.78	0.4	98.8	Pulse	0.1000	3
He	Ge	72	82880.04	1.5	101.2	Pulse	0.1000	3
He	In	115	89792.15	1.4	102.5	Pulse	0.1000	3
He	Tb	159	404734.47	1.0	100.8	Pulse	0.1000	3
He	Bi	209	310018.22	0.6	101.3	Pulse	0.1000	3

No Gas

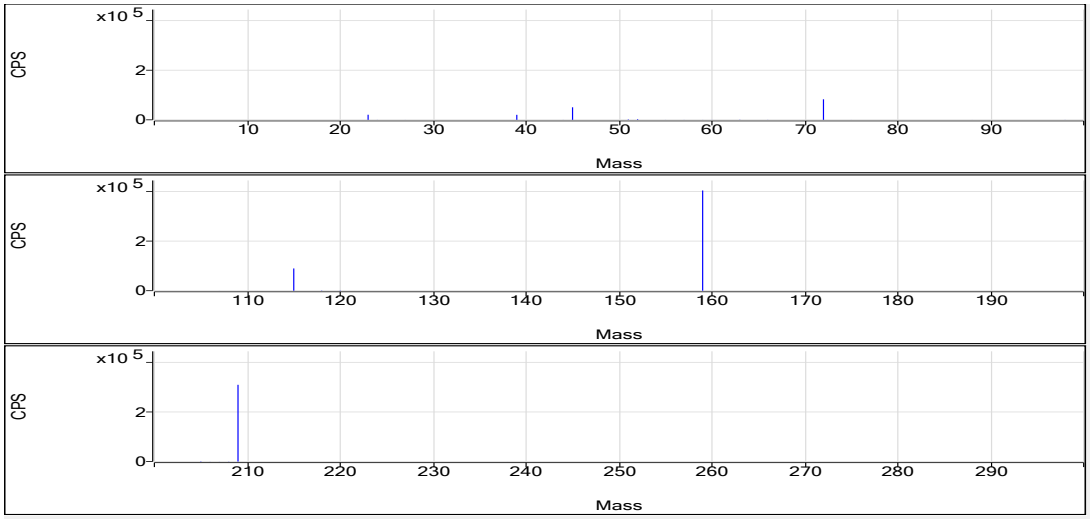


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.013	0	114.00	0.0007	3.404E-05
Be	9	1	No Gas	0.004	0	98.00	0.0007	3.404E-05
Be	9	1	No Gas	0.009	0	106.00	0.0007	3.404E-05
Se	78	2	H2	0.021	0	7.33	0.0004	3.546E-05
Se	78	2	H2	0.01	0	6.67	0.0004	3.546E-05
Se	78	2	H2	0.001	0	6.00	0.0004	3.546E-05
Na	23	3	He	-1.845	0.4105	20675.15	0.0036	0.4171
Na	23	3	He	-1.373	0.4122	20925.39	0.0036	0.4171
Na	23	3	He	-5.935	0.3959	20044.17	0.0036	0.4171
Mg	24	3	He	0.557	0.0056	280.01	0.0018	0.004553
Mg	24	3	He	-0.667	0.0033	170.01	0.0018	0.004553
Mg	24	3	He	-0.552	0.0036	180.01	0.0018	0.004553
Al	27	3	He	-1.533	0.0012	60.00	0.0006	0.002085
Al	27	3	He	-1.212	0.0014	70.00	0.0006	0.002085
Al	27	3	He	-0.866	0.0016	80.00	0.0006	0.002085
K	39	3	He	-5.524	0.4047	20384.79	0.0012	0.4112
K	39	3	He	-14.826	0.3938	19994.22	0.0012	0.4112
K	39	3	He	-11.021	0.3983	20164.42	0.0012	0.4112
Ca	44	3	He	6.67	0.0038	190.01	0.0001	0.003322
Ca	44	3	He	-25.846	0.0016	80.00	0.0001	0.003322
Ca	44	3	He	-14.083	0.0024	120.01	0.0001	0.003322
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	-0.033	0.0311	1566.09	0.0213	0.0318
V	51	3	He	-0.013	0.0315	1600.10	0.0213	0.0318
V	51	3	He	-0.082	0.0301	1522.09	0.0213	0.0318
Cr	52	3	He	0.18	0.0483	2430.30	0.0294	0.04297
Cr	52	3	He	0.059	0.0447	2270.26	0.0294	0.04297
Cr	52	3	He	0.178	0.0482	2440.30	0.0294	0.04297
Mn	55	3	He	-0.129	0.0012	60.00	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.035	0.0024	120.00	0.0124	0.002801
Mn	55	3	He	0.092	0.004	200.01	0.0124	0.002801
Fe	57	3	He	-1.305	0.002	100.00	0.0006	0.002732
Fe	57	3	He	1.078	0.0033	170.01	0.0006	0.002732
Fe	57	3	He	0.749	0.0032	160.01	0.0006	0.002732
Co	59	3	He	-0.034	0.0018	90.00	0.0549	0.003644
Co	59	3	He	-0.005	0.0033	170.01	0.0549	0.003644
Co	59	3	He	-0.03	0.002	100.00	0.0549	0.003644
Ni	60	3	He	-1.178	0.0032	260.01	0.0093	0.01413
Ni	60	3	He	-1.186	0.0031	260.01	0.0093	0.01413
Ni	60	3	He	-1.2	0.003	250.01	0.0093	0.01413
Cu	63	3	He	-0.085	0.007	570.03	0.0274	0.009321
Cu	63	3	He	-0.074	0.0073	610.03	0.0274	0.009321
Cu	63	3	He	-0.1	0.0066	550.03	0.0274	0.009321
Zn	66	3	He	-0.926	0.0031	250.01	0.0031	0.005913
Zn	66	3	He	-0.717	0.0037	310.02	0.0031	0.005913
Zn	66	3	He	-1.225	0.0022	180.01	0.0031	0.005913
As	75	3	He	0.029	0.0009	76.00	0.0021	0.0008698
As	75	3	He	-0.026	0.0008	68.00	0.0021	0.0008698
As	75	3	He	-0.049	0.0008	64.00	0.0021	0.0008698
Sr	88	3	He	0.024	0.0009	80.00	0.0088	0.0006843
Sr	88	3	He	0.009	0.0008	70.00	0.0088	0.0006843
Sr	88	3	He	-0.014	0.0006	50.00	0.0088	0.0006843
Mo	98	3	He	0.004	0.0019	170.01	0.0219	0.001827
Mo	98	3	He	-0.013	0.0015	140.00	0.0219	0.001827
Mo	98	3	He	0.065	0.0033	290.02	0.0219	0.001827
Ag	107	3	He	0.011	0.0016	140.01	0.047	0.001064
Ag	107	3	He	0.003	0.0012	110.00	0.047	0.001064
Ag	107	3	He	-0.011	0.0006	50.00	0.047	0.001064
Cd	111	3	He	0.018	0.0002	14.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	0.01	0.0001	10.00	0.0053	6.086E-05
Sn	120	3	He	-0.176	0.0121	1080.08	0.0154	0.01483
Sn	120	3	He	-0.052	0.014	1280.11	0.0154	0.01483
Sn	120	3	He	-0.117	0.013	1160.09	0.0154	0.01483
Sb	121	3	He	0.044	0.0009	80.00	0.0143	0.0002661
Sb	121	3	He	0.012	0.0004	40.00	0.0143	0.0002661
Sb	121	3	He	0.044	0.0009	80.00	0.0143	0.0002661
Ba	137	3	He	-0.032	0.0001	10.00	0.0048	0.0002665
Ba	137	3	He	-0.033	0.0001	10.00	0.0048	0.0002665
Ba	137	3	He	-0.009	0.0002	20.00	0.0048	0.0002665
Tl	205	3	He	0.023	0.0033	1340.12	0.0246	0.002755
Tl	205	3	He	0.019	0.0032	1300.11	0.0246	0.002755
Tl	205	3	He	0.003	0.0028	1160.09	0.0246	0.002755
Pb	208	3	He	0.017	0.0027	660.04	0.0324	0.002158
Pb	208	3	He	0.015	0.0026	600.03	0.0324	0.002158
Pb	208	3	He	-0.001	0.0021	490.03	0.0324	0.002158
U	238	3	He	-0.005	0.0002	50.00	0.0492	0.0004023
U	238	3	He	-0.006	0.0001	40.00	0.0492	0.0004023
U	238	3	He	-0.006	0.0001	30.00	0.0492	0.0004023
Sc	45	1	No Gas			2631834.02		
Sc	45	1	No Gas			2640470.90		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2625739.02		
Ge	72	1	No Gas			1246297.95		
Ge	72	1	No Gas			1242247.01		
Ge	72	1	No Gas			1255878.89		
Sc	45	2	H2			205314.16		
Sc	45	2	H2			215120.37		
Sc	45	2	H2			205554.82		
Ge	72	2	H2			163941.79		
Ge	72	2	H2			167511.52		
Ge	72	2	H2			167765.06		
In	115	2	H2			402307.49		
In	115	2	H2			398703.35		
In	115	2	H2			403947.65		
Sc	45	3	He			50367.96		
Sc	45	3	He			50769.51		
Sc	45	3	He			50628.86		
Ge	72	3	He			81481.88		
Ge	72	3	He			83513.58		
Ge	72	3	He			83644.67		
In	115	3	He			89165.09		
In	115	3	He			91198.83		
In	115	3	He			89034.77		
Tb	159	3	He			402207.14		
Tb	159	3	He			402420.89		
Tb	159	3	He			409575.38		
Bi	209	3	He			312123.51		
Bi	209	3	He			308306.32		
Bi	209	3	He			309624.82		

Quantitation Report

Data File Name	026SMPL.d
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Acq Time	8/9/2023 2:14:57 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

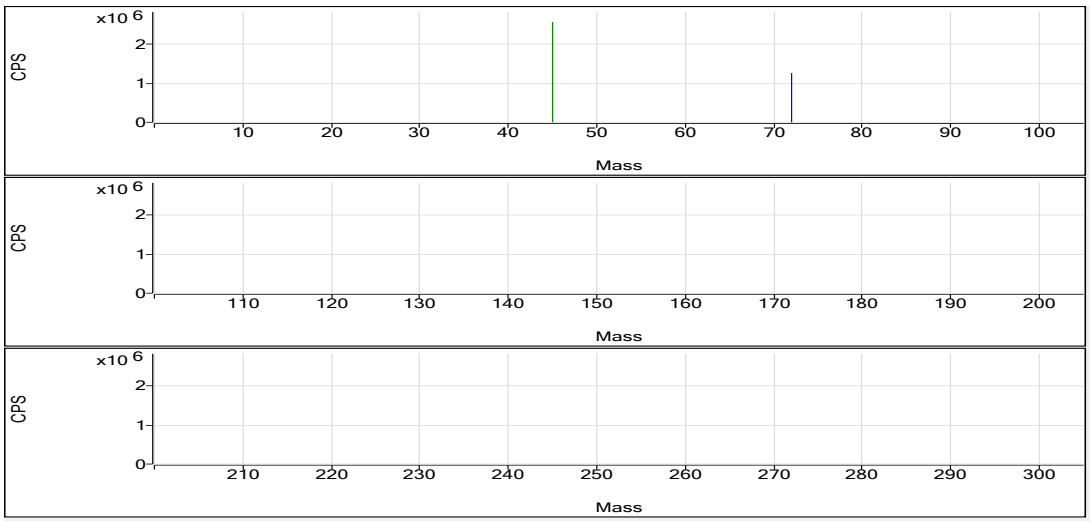
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.005	ppb	N/A	77.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.023	ppb	101.4	7.33	0.0000	Pulse	1.5000	3
Na	23	45	He	-6.575	ppb	N/A	19937.46	0.3936	Pulse	0.1000	3
Mg	24	45	He	-0.157	ppb	N/A	216.68	0.0043	Pulse	0.1000	3
Al	27	45	He	-0.410	ppb	N/A	93.34	0.0018	Pulse	0.1000	3
K	39	45	He	-6.898	ppb	N/A	20418.09	0.4031	Pulse	0.1000	3
Ca	44	45	He	-3.333	ppb	N/A	156.67	0.0031	Pulse	0.1000	3
Ti	47	45	He	0.247	ppb	86.6	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	0.133	ppb	7.1	1753.45	0.0346	Pulse	0.5000	3
Cr	52	45	He	-0.020	ppb	N/A	2146.91	0.0424	Pulse	0.1000	3
Mn	55	45	He	0.013	ppb	646.0	150.00	0.0030	Pulse	0.1000	3
Fe	57	45	He	1.896	ppb	52.0	193.34	0.0038	Pulse	0.1000	3
Co	59	45	He	-0.015	ppb	N/A	143.34	0.0028	Pulse	0.1000	3
Ni	60	72	He	-0.981	ppb	N/A	406.69	0.0050	Pulse	0.1000	3
Cu	63	72	He	-0.039	ppb	N/A	666.70	0.0082	Pulse	0.1000	3
Zn	66	72	He	0.527	ppb	82.1	610.04	0.0075	Pulse	0.1000	3
As	75	72	He	0.078	ppb	64.3	84.00	0.0010	Pulse	0.5000	3
Sr	88	115	He	0.027	ppb	104.3	80.00	0.0009	Pulse	0.1000	3
Mo	98	115	He	-0.016	ppb	N/A	130.00	0.0015	Pulse	0.1000	3
Ag	107	115	He	-0.004	ppb	N/A	76.67	0.0009	Pulse	0.1000	3
Cd	111	115	He	-0.001	ppb	N/A	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.176	ppb	8.3	1533.48	0.0176	Pulse	0.1000	3
Sb	121	115	He	0.019	ppb	197.4	46.67	0.0005	Pulse	0.1000	3
Ba	137	115	He	-0.008	ppb	N/A	20.00	0.0002	Pulse	0.1000	3
Tl	205	159	He	-0.032	ppb	N/A	793.39	0.0020	Pulse	0.1000	3
Pb	208	159	He	0.000	ppb	8319.4	870.05	0.0022	Pulse	0.1000	3
U	238	209	He	-0.006	ppb	N/A	26.67	0.0001	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2565899.54	1.1	98.4	Analog	0.1000	3
No Gas	Ge	72	1259442.95	1.2	97.7	Pulse	0.1000	3
H2	Sc	45	201504.15	1.6	97.8	Pulse	0.1000	3
H2	Ge	72	160715.07	1.6	98.7	Pulse	0.1000	3
H2	In	115	393409.73	0.5	97.5	Pulse	0.1000	3
He	Sc	45	50652.32	0.7	98.9	Pulse	0.1000	3
He	Ge	72	80929.19	1.2	98.9	Pulse	0.1000	3
He	In	115	87374.31	1.8	99.7	Pulse	0.1000	3
He	Tb	159	402464.79	0.2	100.2	Pulse	0.1000	3
He	Bi	209	307088.90	0.6	100.3	Pulse	0.1000	3

No Gas



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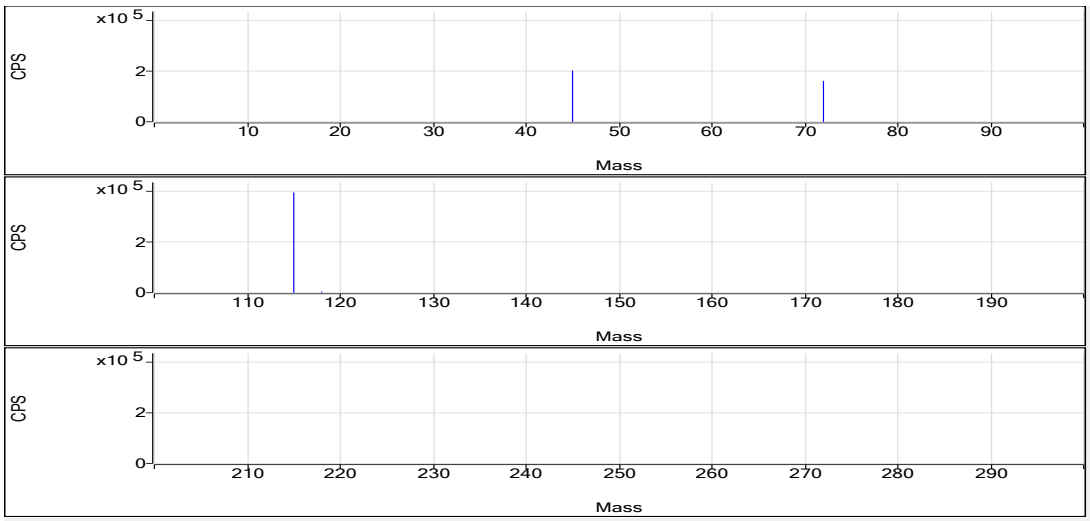
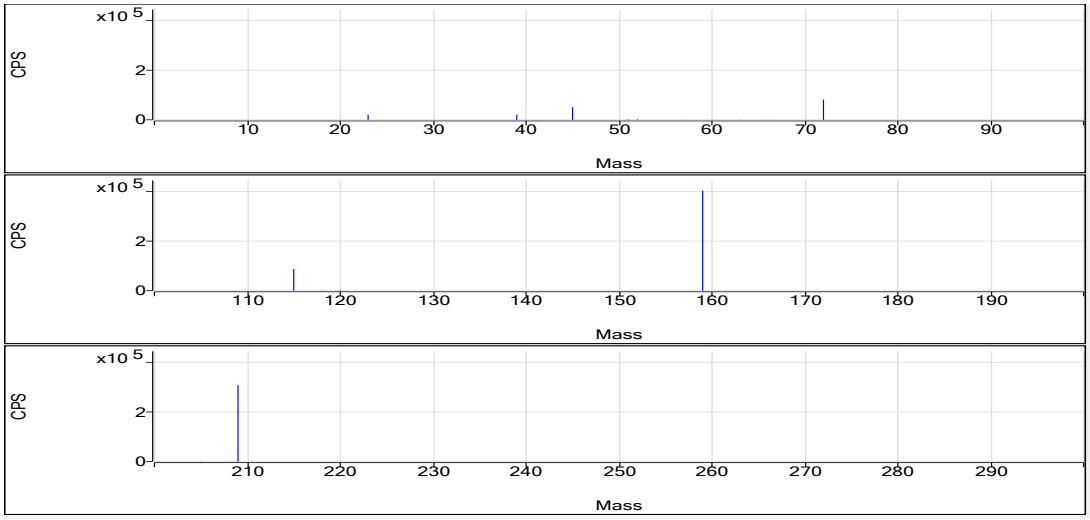


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.006	0	100.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.019	0	52.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.003	0	80.00	0.0007	3.404E-05
Se	78	2	H2	0.049	0.0001	9.33	0.0004	3.546E-05
Se	78	2	H2	0.006	0	6.00	0.0004	3.546E-05
Se	78	2	H2	0.014	0	6.67	0.0004	3.546E-05
Na	23	3	He	-7.278	0.3911	19974.31	0.0036	0.4171
Na	23	3	He	-5.792	0.3964	20034.24	0.0036	0.4171
Na	23	3	He	-6.654	0.3933	19803.82	0.0036	0.4171
Mg	24	3	He	0.948	0.0063	320.01	0.0018	0.004553
Mg	24	3	He	-0.877	0.003	150.01	0.0018	0.004553
Mg	24	3	He	-0.541	0.0036	180.01	0.0018	0.004553
Al	27	3	He	-2.234	0.0008	40.00	0.0006	0.002085
Al	27	3	He	2.536	0.0036	180.01	0.0006	0.002085
Al	27	3	He	-1.533	0.0012	60.00	0.0006	0.002085
K	39	3	He	-9.104	0.4005	20454.85	0.0012	0.4112
K	39	3	He	-1.956	0.4089	20665.05	0.0012	0.4112
K	39	3	He	-9.634	0.3999	20134.36	0.0012	0.4112
Ca	44	3	He	-11.488	0.0025	130.01	0.0001	0.003322
Ca	44	3	He	-14.024	0.0024	120.00	0.0001	0.003322
Ca	44	3	He	15.512	0.0044	220.01	0.0001	0.003322
Ti	47	3	He	0.368	0.0002	10.00	0.0005	0
Ti	47	3	He	0.372	0.0002	10.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	0.124	0.0344	1758.12	0.0213	0.0318
V	51	3	He	0.143	0.0348	1760.12	0.0213	0.0318
V	51	3	He	0.132	0.0346	1742.12	0.0213	0.0318
Cr	52	3	He	0.104	0.046	2350.29	0.0294	0.04297
Cr	52	3	He	-0.156	0.0384	1940.20	0.0294	0.04297
Cr	52	3	He	-0.009	0.0427	2150.24	0.0294	0.04297
Mn	55	3	He	-0.052	0.0022	110.00	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.109	0.0042	210.01	0.0124	0.002801
Mn	55	3	He	-0.018	0.0026	130.00	0.0124	0.002801
Fe	57	3	He	2.413	0.0041	210.01	0.0006	0.002732
Fe	57	3	He	0.759	0.0032	160.01	0.0006	0.002732
Fe	57	3	He	2.516	0.0042	210.01	0.0006	0.002732
Co	59	3	He	-0.016	0.0027	140.01	0.0549	0.003644
Co	59	3	He	0.002	0.0038	190.01	0.0549	0.003644
Co	59	3	He	-0.03	0.002	100.00	0.0549	0.003644
Ni	60	3	He	-1.047	0.0044	360.02	0.0093	0.01413
Ni	60	3	He	-1.05	0.0044	350.02	0.0093	0.01413
Ni	60	3	He	-0.845	0.0063	510.02	0.0093	0.01413
Cu	63	3	He	-0.023	0.0087	710.04	0.0274	0.009321
Cu	63	3	He	-0.007	0.0091	730.04	0.0274	0.009321
Cu	63	3	He	-0.088	0.0069	560.03	0.0274	0.009321
Zn	66	3	He	1.025	0.0091	740.05	0.0031	0.005913
Zn	66	3	He	0.317	0.0069	550.03	0.0031	0.005913
Zn	66	3	He	0.24	0.0066	540.03	0.0031	0.005913
As	75	3	He	0.131	0.0012	94.00	0.0021	0.0008698
As	75	3	He	0.073	0.001	82.00	0.0021	0.0008698
As	75	3	He	0.031	0.0009	76.00	0.0021	0.0008698
Sr	88	3	He	-0.001	0.0007	60.00	0.0088	0.0006843
Sr	88	3	He	0.054	0.0012	100.00	0.0088	0.0006843
Sr	88	3	He	0.027	0.0009	80.00	0.0088	0.0006843
Mo	98	3	He	-0.001	0.0018	160.01	0.0219	0.001827
Mo	98	3	He	-0.025	0.0013	110.00	0.0219	0.001827
Mo	98	3	He	-0.02	0.0014	120.00	0.0219	0.001827
Ag	107	3	He	-0.001	0.001	90.00	0.047	0.001064
Ag	107	3	He	-0.003	0.0009	80.00	0.047	0.001064
Ag	107	3	He	-0.008	0.0007	60.00	0.047	0.001064
Cd	111	3	He	0.001	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	0.002	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Sn	120	3	He	0.167	0.0174	1550.15	0.0154	0.01483
Sn	120	3	He	0.169	0.0174	1500.13	0.0154	0.01483
Sn	120	3	He	0.193	0.0178	1550.16	0.0154	0.01483
Sb	121	3	He	-0.003	0.0002	20.00	0.0143	0.0002661
Sb	121	3	He	-0.002	0.0002	20.00	0.0143	0.0002661
Sb	121	3	He	0.062	0.0011	100.00	0.0143	0.0002661
Ba	137	3	He	0.015	0.0003	30.00	0.0048	0.0002665
Ba	137	3	He	-0.007	0.0002	20.00	0.0048	0.0002665
Ba	137	3	He	-0.032	0.0001	10.00	0.0048	0.0002665
Tl	205	3	He	-0.033	0.0019	780.05	0.0246	0.002755
Tl	205	3	He	-0.035	0.0019	760.05	0.0246	0.002755
Tl	205	3	He	-0.027	0.0021	840.06	0.0246	0.002755
Pb	208	3	He	0.009	0.0025	590.04	0.0324	0.002158
Pb	208	3	He	-0.003	0.0021	440.03	0.0324	0.002158
Pb	208	3	He	-0.006	0.002	370.02	0.0324	0.002158
U	238	3	He	-0.006	0.0001	30.00	0.0492	0.0004023
U	238	3	He	-0.007	0.0001	20.00	0.0492	0.0004023
U	238	3	He	-0.006	0.0001	30.00	0.0492	0.0004023
Sc	45	1	No Gas			2592397.77		
Sc	45	1	No Gas			2568886.52		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2536414.34		
Ge	72	1	No Gas			1275621.07		
Ge	72	1	No Gas			1256788.26		
Ge	72	1	No Gas			1245919.51		
Sc	45	2	H2			204436.70		
Sc	45	2	H2			198050.58		
Sc	45	2	H2			202025.17		
Ge	72	2	H2			163285.15		
Ge	72	2	H2			158033.69		
Ge	72	2	H2			160826.37		
In	115	2	H2			391019.02		
In	115	2	H2			394235.93		
In	115	2	H2			394974.25		
Sc	45	3	He			51070.17		
Sc	45	3	He			50538.72		
Sc	45	3	He			50348.07		
Ge	72	3	He			81692.97		
Ge	72	3	He			79883.58		
Ge	72	3	He			81211.01		
In	115	3	He			89055.58		
In	115	3	He			86056.57		
In	115	3	He			87032.47		
Tb	159	3	He			403540.74		
Tb	159	3	He			401733.35		
Tb	159	3	He			402120.27		
Bi	209	3	He			307946.17		
Bi	209	3	He			304919.41		
Bi	209	3	He			308401.13		

Quantitation Report

Data File Name	027_CCV.d
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Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

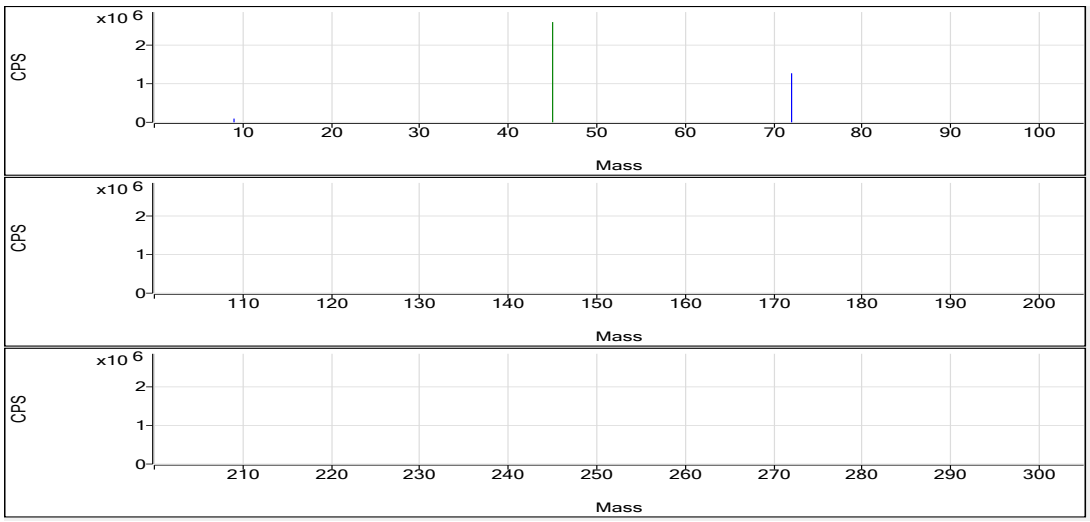
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.738	ppb	0.1	96203.76	0.0370	Pulse	0.5000	3
Se	78	72	H2	52.536	ppb	1.0	3741.39	0.0231	Pulse	1.5000	3
Na	23	45	He	4858.135	ppb	0.6	905273.74	17.7335	Pulse	0.1000	3
Mg	24	45	He	5034.141	ppb	0.8	464549.16	9.1002	Pulse	0.1000	3
Al	27	45	He	5046.801	ppb	1.2	150199.70	2.9423	Pulse	0.1000	3
K	39	45	He	5004.766	ppb	0.8	320183.05	6.2721	Pulse	0.1000	3
Ca	44	45	He	5103.222	ppb	2.4	17771.42	0.3481	Pulse	0.1000	3
Ti	47	45	He	5056.202	ppb	0.6	137283.57	2.6892	Pulse	0.1000	3
V	51	45	He	507.341	ppb	1.2	551992.68	10.8132	Pulse	0.5000	3
Cr	52	45	He	489.201	ppb	1.3	736629.84	14.4304	Pulse	0.1000	3
Mn	55	45	He	509.878	ppb	0.7	323732.70	6.3417	Pulse	0.1000	3
Fe	57	45	He	5079.504	ppb	0.9	148499.53	2.9090	Pulse	0.1000	3
Co	59	45	He	490.533	ppb	1.1	1374597.22	26.9278	Pulse	0.1000	3
Ni	60	72	He	518.914	ppb	1.3	391023.96	4.8311	Pulse	0.1000	3
Cu	63	72	He	494.168	ppb	0.6	1097738.92	13.5624	Pulse	0.1000	3
Zn	66	72	He	516.477	ppb	1.2	128831.78	1.5917	Pulse	0.1000	3
As	75	72	He	521.645	ppb	0.8	90666.62	1.1202	Pulse	0.5000	3
Sr	88	115	He	51.864	ppb	2.5	39546.09	0.4570	Pulse	0.1000	3
Mo	98	115	He	51.171	ppb	2.9	97319.47	1.1248	Pulse	0.1000	3
Ag	107	115	He	50.739	ppb	1.2	206626.38	2.3878	Pulse	0.1000	3
Cd	111	115	He	51.529	ppb	0.6	23752.86	0.2745	Pulse	0.5000	3
Sn	120	115	He	52.272	ppb	1.3	71035.61	0.8209	Pulse	0.1000	3
Sb	121	115	He	51.469	ppb	1.9	63496.53	0.7337	Pulse	0.1000	3
Ba	137	115	He	517.078	ppb	0.9	213856.23	2.4713	Pulse	0.1000	3
Tl	205	159	He	51.055	ppb	0.6	503327.02	1.2567	Pulse	0.1000	3
Pb	208	159	He	51.006	ppb	0.5	662849.14	1.6550	Pulse	0.1000	3
U	238	209	He	50.917	ppb	1.1	771609.49	2.5079	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2600208.92	0.9	99.7	Analog	0.1000	3
No Gas	Ge	72	1272009.80	0.7	98.7	Pulse	0.1000	3
H2	Sc	45	203314.31	1.4	98.7	Pulse	0.1000	3
H2	Ge	72	162232.27	2.1	99.7	Pulse	0.1000	3
H2	In	115	396319.92	0.8	98.2	Pulse	0.1000	3
He	Sc	45	51050.37	0.8	99.7	Pulse	0.1000	3
He	Ge	72	80942.56	0.8	98.9	Pulse	0.1000	3
He	In	115	86542.71	1.3	98.7	Pulse	0.1000	3
He	Tb	159	400529.95	0.8	99.7	Pulse	0.1000	3
He	Bi	209	307672.49	0.3	100.5	Pulse	0.1000	3

No Gas



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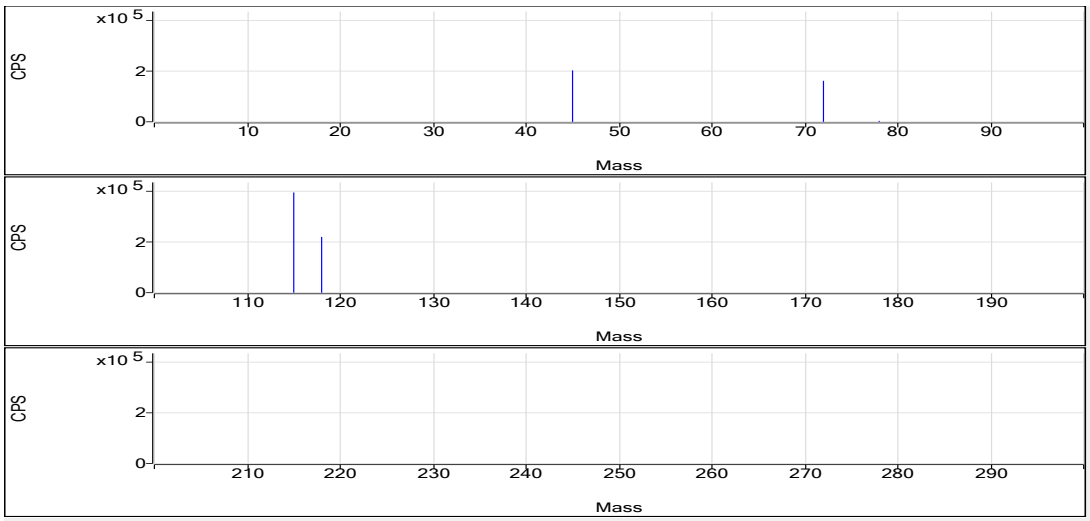
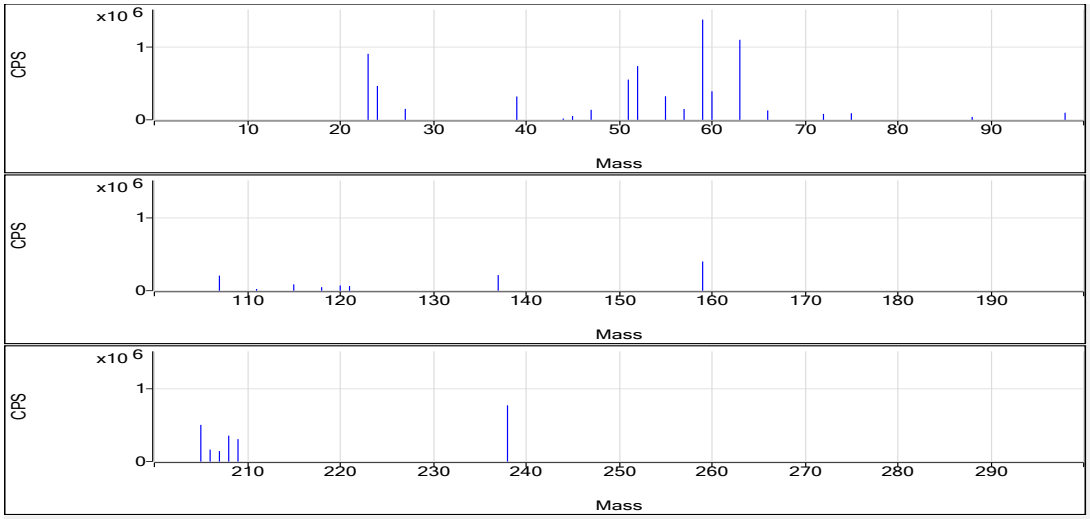


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.682	0.037	95226.12	0.0007	3.404E-05
Be	9	1	No Gas	50.745	0.037	96286.88	0.0007	3.404E-05
Be	9	1	No Gas	50.787	0.037	97098.27	0.0007	3.404E-05
Se	78	2	H2	53.125	0.0233	3791.18	0.0004	3.546E-05
Se	78	2	H2	52.056	0.0229	3781.84	0.0004	3.546E-05
Se	78	2	H2	52.426	0.023	3651.14	0.0004	3.546E-05
Na	23	3	He	4888.778	17.8427	905511.78	0.0036	0.4171
Na	23	3	He	4855.53	17.7242	902154.60	0.0036	0.4171
Na	23	3	He	4830.096	17.6335	908154.83	0.0036	0.4171
Mg	24	3	He	5065.336	9.1566	464692.81	0.0018	0.004553
Mg	24	3	He	5046.982	9.1234	464377.61	0.0018	0.004553
Mg	24	3	He	4990.106	9.0206	464577.06	0.0018	0.004553
Al	27	3	He	5045.748	2.9417	149290.91	0.0006	0.002085
Al	27	3	He	5106.177	2.9769	151523.88	0.0006	0.002085
Al	27	3	He	4988.477	2.9083	149784.30	0.0006	0.002085
K	39	3	He	5038.218	6.3113	320298.06	0.0012	0.4112
K	39	3	He	5015.235	6.2844	319874.27	0.0012	0.4112
K	39	3	He	4960.846	6.2207	320376.81	0.0012	0.4112
Ca	44	3	He	4961.962	0.3385	17180.73	0.0001	0.003322
Ca	44	3	He	5150.978	0.3513	17881.44	0.0001	0.003322
Ca	44	3	He	5196.725	0.3544	18252.08	0.0001	0.003322
Ti	47	3	He	5089.128	2.7067	137364.91	0.0005	0
Ti	47	3	He	5024.138	2.6721	136011.31	0.0005	0
Ti	47	3	He	5055.34	2.6887	138474.49	0.0005	0
V	51	3	He	508.241	10.8324	549740.31	0.0213	0.0318
V	51	3	He	512.697	10.9271	556184.63	0.0213	0.0318
V	51	3	He	501.085	10.6803	550053.13	0.0213	0.0318
Cr	52	3	He	492.344	14.5229	737031.79	0.0294	0.04297
Cr	52	3	He	493.515	14.5573	740962.18	0.0294	0.04297
Cr	52	3	He	481.744	14.2111	731895.54	0.0294	0.04297
Mn	55	3	He	512.668	6.3764	323598.47	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	511.351	6.36	323721.05	0.0124	0.002801
Mn	55	3	He	505.617	6.2887	323878.57	0.0124	0.002801
Fe	57	3	He	5132.305	2.9392	149162.91	0.0006	0.002732
Fe	57	3	He	5054.044	2.8944	147324.41	0.0006	0.002732
Fe	57	3	He	5052.163	2.8933	149011.27	0.0006	0.002732
Co	59	3	He	493.569	27.0944	1375034.82	0.0549	0.003644
Co	59	3	He	493.505	27.0909	1378917.79	0.0549	0.003644
Co	59	3	He	484.525	26.598	1369839.04	0.0549	0.003644
Ni	60	3	He	519.091	4.8328	388829.53	0.0093	0.01413
Ni	60	3	He	512.276	4.7695	389589.88	0.0093	0.01413
Ni	60	3	He	525.377	4.8911	394652.46	0.0093	0.01413
Cu	63	3	He	496.975	13.6394	1097381.08	0.0274	0.009321
Cu	63	3	He	491.012	13.4758	1100750.22	0.0274	0.009321
Cu	63	3	He	494.517	13.5719	1095085.45	0.0274	0.009321
Zn	66	3	He	515.514	1.5888	127826.16	0.0031	0.005913
Zn	66	3	He	510.758	1.5742	128582.11	0.0031	0.005913
Zn	66	3	He	523.161	1.6122	130087.06	0.0031	0.005913
As	75	3	He	525.159	1.1277	90732.93	0.0021	0.0008698
As	75	3	He	517.176	1.1106	90716.97	0.0021	0.0008698
As	75	3	He	522.6	1.1222	90549.97	0.0021	0.0008698
Sr	88	3	He	50.797	0.4476	38763.86	0.0088	0.0006843
Sr	88	3	He	51.484	0.4537	39756.58	0.0088	0.0006843
Sr	88	3	He	53.31	0.4698	40117.84	0.0088	0.0006843
Mo	98	3	He	50.4	1.1079	95936.65	0.0219	0.001827
Mo	98	3	He	50.234	1.1042	96762.57	0.0219	0.001827
Mo	98	3	He	52.879	1.1623	99259.18	0.0219	0.001827
Ag	107	3	He	50.467	2.375	205664.06	0.047	0.001064
Ag	107	3	He	50.328	2.3685	207551.62	0.047	0.001064
Ag	107	3	He	51.421	2.4199	206663.45	0.047	0.001064
Cd	111	3	He	51.776	0.2758	23882.42	0.0053	6.086E-05
Cd	111	3	He	51.169	0.2726	23884.41	0.0053	6.086E-05
Cd	111	3	He	51.641	0.2751	23491.75	0.0053	6.086E-05
Sn	120	3	He	52.517	0.8247	71413.58	0.0154	0.01483
Sn	120	3	He	51.492	0.8089	70882.05	0.0154	0.01483
Sn	120	3	He	52.807	0.8292	70811.19	0.0154	0.01483
Sb	121	3	He	50.362	0.7179	62170.61	0.0143	0.0002661
Sb	121	3	He	52.019	0.7416	64982.84	0.0143	0.0002661
Sb	121	3	He	52.024	0.7416	63336.14	0.0143	0.0002661
Ba	137	3	He	519.578	2.4832	215036.36	0.0048	0.0002665
Ba	137	3	He	511.447	2.4444	214201.46	0.0048	0.0002665
Ba	137	3	He	520.211	2.4863	212330.86	0.0048	0.0002665
Tl	205	3	He	50.952	1.2541	506723.08	0.0246	0.002755
Tl	205	3	He	50.804	1.2505	499599.48	0.0246	0.002755
Tl	205	3	He	51.408	1.2654	503658.51	0.0246	0.002755
Pb	208	3	He	50.762	1.6471	357976.17	0.0324	0.002158
Pb	208	3	He	50.962	1.6535	353768.16	0.0324	0.002158
Pb	208	3	He	51.294	1.6643	354463.51	0.0324	0.002158
U	238	3	He	50.356	2.4803	765778.74	0.0492	0.0004023
U	238	3	He	51.465	2.5349	778634.44	0.0492	0.0004023
U	238	3	He	50.93	2.5086	770415.30	0.0492	0.0004023
Sc	45	1	No Gas			2576628.56		
Sc	45	1	No Gas			2602123.87		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2621874.34		
Ge	72	1	No Gas			1263215.61		
Ge	72	1	No Gas			1280171.78		
Ge	72	1	No Gas			1272642.01		
Sc	45	2	H2			202482.36		
Sc	45	2	H2			206497.91		
Sc	45	2	H2			200962.65		
Ge	72	2	H2			162564.68		
Ge	72	2	H2			165489.78		
Ge	72	2	H2			158642.35		
In	115	2	H2			399534.49		
In	115	2	H2			393348.71		
In	115	2	H2			396076.56		
Sc	45	3	He			50749.77		
Sc	45	3	He			50899.69		
Sc	45	3	He			51501.64		
Ge	72	3	He			80456.84		
Ge	72	3	He			81683.42		
Ge	72	3	He			80687.43		
In	115	3	He			86971.48		
In	115	3	He			88007.51		
In	115	3	He			85784.24		
Tb	159	3	He			404038.59		
Tb	159	3	He			399516.67		
Tb	159	3	He			398034.60		
Bi	209	3	He			308740.33		
Bi	209	3	He			307162.34		
Bi	209	3	He			307114.80		

Quantitation Report

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Sample Type	CCB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

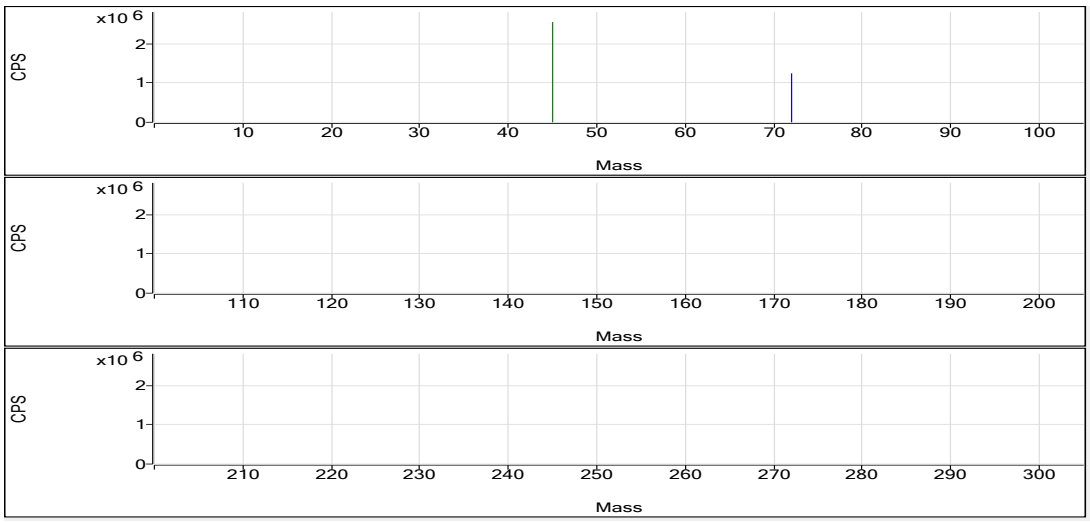
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.007	ppb	134.7	99.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.053	ppb	37.8	9.33	0.0001	Pulse	1.5000	3
Na	23	45	He	-5.952	ppb	N/A	19927.32	0.3958	Pulse	0.1000	3
Mg	24	45	He	0.302	ppb	90.5	256.68	0.0051	Pulse	0.1000	3
Al	27	45	He	-0.167	ppb	N/A	100.00	0.0020	Pulse	0.1000	3
K	39	45	He	-2.955	ppb	N/A	20525.02	0.4077	Pulse	0.1000	3
Ca	44	45	He	-0.141	ppb	N/A	166.68	0.0033	Pulse	0.1000	3
Ti	47	45	He	1.245	ppb	34.6	33.33	0.0007	Pulse	0.1000	3
V	51	45	He	0.102	ppb	59.8	1709.44	0.0340	Pulse	0.5000	3
Cr	52	45	He	0.041	ppb	58.3	2223.59	0.0442	Pulse	0.1000	3
Mn	55	45	He	0.201	ppb	43.9	266.68	0.0053	Pulse	0.1000	3
Fe	57	45	He	1.473	ppb	83.6	180.01	0.0036	Pulse	0.1000	3
Co	59	45	He	0.066	ppb	54.0	366.68	0.0073	Pulse	0.1000	3
Ni	60	72	He	-0.994	ppb	N/A	390.02	0.0049	Pulse	0.1000	3
Cu	63	72	He	0.060	ppb	91.7	873.39	0.0110	Pulse	0.1000	3
Zn	66	72	He	0.299	ppb	67.7	543.37	0.0068	Pulse	0.1000	3
As	75	72	He	0.254	ppb	42.7	112.67	0.0014	Pulse	0.5000	3
Sr	88	115	He	0.042	ppb	88.5	90.00	0.0011	Pulse	0.1000	3
Mo	98	115	He	0.025	ppb	67.8	203.34	0.0024	Pulse	0.1000	3
Ag	107	115	He	0.006	ppb	55.5	116.67	0.0014	Pulse	0.1000	3
Cd	111	115	He	0.012	ppb	148.0	10.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.089	ppb	103.9	1383.45	0.0162	Pulse	0.1000	3
Sb	121	115	He	0.044	ppb	45.9	76.67	0.0009	Pulse	0.1000	3
Ba	137	115	He	0.042	ppb	116.5	40.00	0.0005	Pulse	0.1000	3
Tl	205	159	He	0.029	ppb	65.4	1380.12	0.0035	Pulse	0.1000	3
Pb	208	159	He	0.010	ppb	27.5	983.38	0.0025	Pulse	0.1000	3
U	238	209	He	0.052	ppb	10.3	910.07	0.0030	Pulse	0.1000	3

ISTD Table:

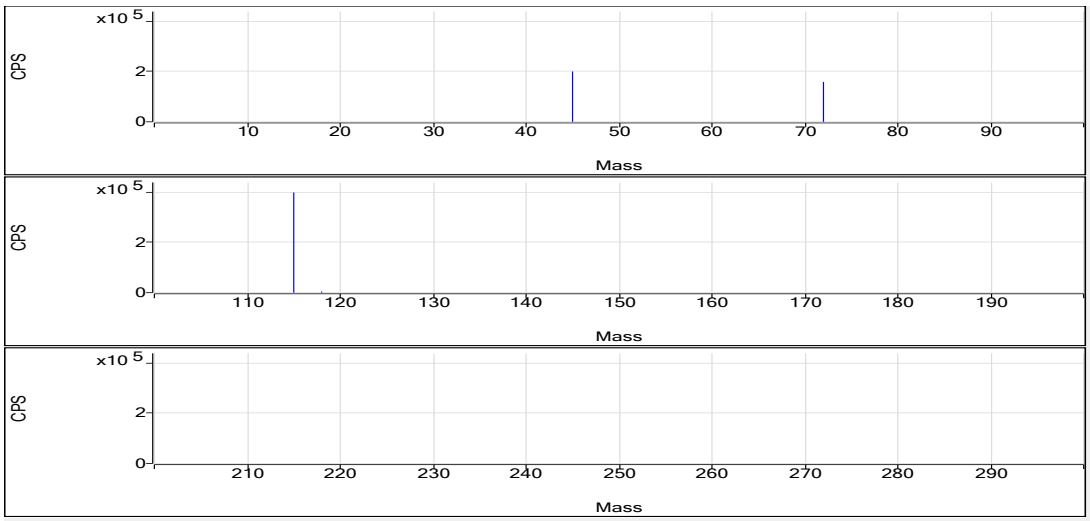
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2559445.79	0.6	98.1	Analog	0.1000	3
No Gas	Ge	72	1249728.00	0.1	97.0	Pulse	0.1000	3
H2	Sc	45	200450.20	0.8	97.3	Pulse	0.1000	3
H2	Ge	72	158949.85	0.8	97.7	Pulse	0.1000	3
H2	In	115	399090.55	0.6	98.9	Pulse	0.1000	3
He	Sc	45	50338.46	0.3	98.3	Pulse	0.1000	3
He	Ge	72	79567.99	0.7	97.2	Pulse	0.1000	3
He	In	115	85479.12	1.8	97.5	Pulse	0.1000	3
He	Tb	159	398293.22	0.4	99.2	Pulse	0.1000	3
He	Bi	209	308389.29	0.5	100.7	Pulse	0.1000	3

No Gas

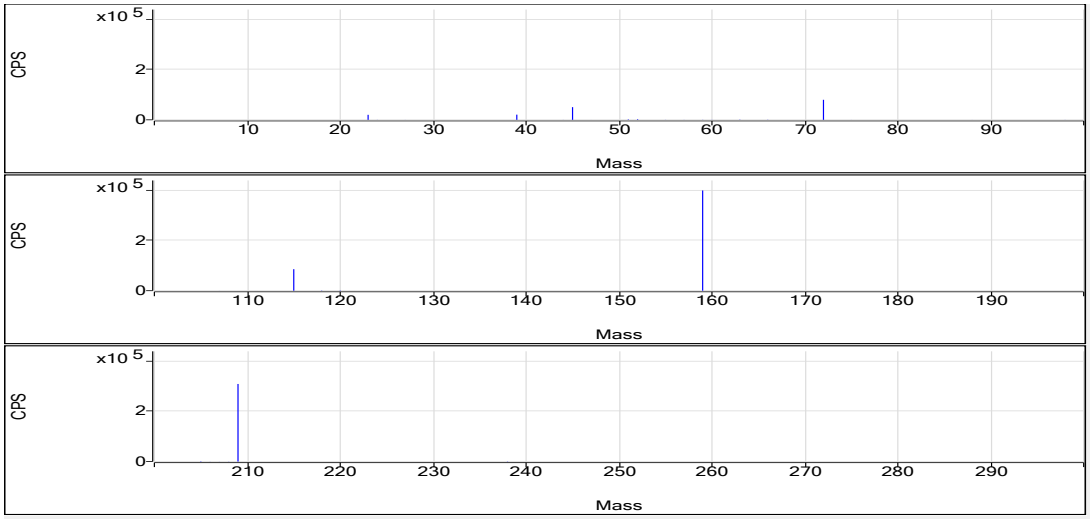


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.012	0	110.00	0.0007	3.404E-05
Be	9	1	No Gas	0.011	0	108.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.004	0	80.00	0.0007	3.404E-05
Se	78	2	H2	0.033	0	8.00	0.0004	3.546E-05
Se	78	2	H2	0.054	0.0001	9.33	0.0004	3.546E-05
Se	78	2	H2	0.073	0.0001	10.67	0.0004	3.546E-05
Na	23	3	He	-1.378	0.4121	20825.35	0.0036	0.4171
Na	23	3	He	-5.518	0.3974	19943.98	0.0036	0.4171
Na	23	3	He	-10.958	0.378	19012.63	0.0036	0.4171
Mg	24	3	He	0.328	0.0051	260.01	0.0018	0.004553
Mg	24	3	He	0.017	0.0046	230.01	0.0018	0.004553
Mg	24	3	He	0.561	0.0056	280.01	0.0018	0.004553
Al	27	3	He	-0.521	0.0018	90.00	0.0006	0.002085
Al	27	3	He	0.526	0.0024	120.00	0.0006	0.002085
Al	27	3	He	-0.507	0.0018	90.00	0.0006	0.002085
K	39	3	He	2.683	0.4143	20935.69	0.0012	0.4112
K	39	3	He	-8.711	0.401	20124.53	0.0012	0.4112
K	39	3	He	-2.838	0.4079	20514.85	0.0012	0.4112
Ca	44	3	He	-5.226	0.003	150.01	0.0001	0.003322
Ca	44	3	He	12.769	0.0042	210.01	0.0001	0.003322
Ca	44	3	He	-7.967	0.0028	140.01	0.0001	0.003322
Ti	47	3	He	1.488	0.0008	40.00	0.0005	0
Ti	47	3	He	1.499	0.0008	40.00	0.0005	0
Ti	47	3	He	0.748	0.0004	20.00	0.0005	0
V	51	3	He	0.163	0.0353	1782.12	0.0213	0.0318
V	51	3	He	0.1	0.0339	1702.11	0.0213	0.0318
V	51	3	He	0.042	0.0327	1644.10	0.0213	0.0318
Cr	52	3	He	0.067	0.0449	2270.25	0.0294	0.04297
Cr	52	3	He	0.036	0.044	2210.25	0.0294	0.04297
Cr	52	3	He	0.02	0.0435	2190.27	0.0294	0.04297
Mn	55	3	He	0.157	0.0047	240.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.143	0.0046	230.01	0.0124	0.002801
Mn	55	3	He	0.302	0.0066	330.02	0.0124	0.002801
Fe	57	3	He	2.835	0.0044	220.01	0.0006	0.002732
Fe	57	3	He	1.146	0.0034	170.01	0.0006	0.002732
Fe	57	3	He	0.438	0.003	150.01	0.0006	0.002732
Co	59	3	He	0.107	0.0095	480.02	0.0549	0.003644
Co	59	3	He	0.039	0.0058	290.01	0.0549	0.003644
Co	59	3	He	0.053	0.0066	330.02	0.0549	0.003644
Ni	60	3	He	-1.088	0.004	320.02	0.0093	0.01413
Ni	60	3	He	-0.998	0.0049	390.03	0.0093	0.01413
Ni	60	3	He	-0.895	0.0058	460.02	0.0093	0.01413
Cu	63	3	He	0.096	0.012	950.06	0.0274	0.009321
Cu	63	3	He	0.088	0.0117	940.06	0.0274	0.009321
Cu	63	3	He	-0.003	0.0092	730.04	0.0274	0.009321
Zn	66	3	He	0.411	0.0072	570.03	0.0031	0.005913
Zn	66	3	He	0.065	0.0061	490.03	0.0031	0.005913
Zn	66	3	He	0.421	0.0072	570.04	0.0031	0.005913
As	75	3	He	0.275	0.0015	116.00	0.0021	0.0008698
As	75	3	He	0.35	0.0016	130.00	0.0021	0.0008698
As	75	3	He	0.137	0.0012	92.00	0.0021	0.0008698
Sr	88	3	He	0.014	0.0008	70.00	0.0088	0.0006843
Sr	88	3	He	0.085	0.0014	120.00	0.0088	0.0006843
Sr	88	3	He	0.029	0.0009	80.00	0.0088	0.0006843
Mo	98	3	He	0.027	0.0024	210.01	0.0219	0.001827
Mo	98	3	He	0.042	0.0027	230.01	0.0219	0.001827
Mo	98	3	He	0.007	0.002	170.01	0.0219	0.001827
Ag	107	3	He	0.007	0.0014	120.00	0.047	0.001064
Ag	107	3	He	0.003	0.0012	100.00	0.047	0.001064
Ag	107	3	He	0.01	0.0015	130.01	0.047	0.001064
Cd	111	3	He	0.002	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	0.002	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	0.033	0.0002	20.00	0.0053	6.086E-05
Sn	120	3	He	-0.016	0.0146	1270.11	0.0154	0.01483
Sn	120	3	He	0.158	0.0173	1450.12	0.0154	0.01483
Sn	120	3	He	0.124	0.0167	1430.12	0.0154	0.01483
Sb	121	3	He	0.046	0.0009	80.00	0.0143	0.0002661
Sb	121	3	He	0.023	0.0006	50.00	0.0143	0.0002661
Sb	121	3	He	0.064	0.0012	100.01	0.0143	0.0002661
Ba	137	3	He	-0.008	0.0002	20.00	0.0048	0.0002665
Ba	137	3	He	0.044	0.0005	40.00	0.0048	0.0002665
Ba	137	3	He	0.091	0.0007	60.00	0.0048	0.0002665
Tl	205	3	He	0.008	0.0029	1170.10	0.0246	0.002755
Tl	205	3	He	0.035	0.0036	1450.12	0.0246	0.002755
Tl	205	3	He	0.044	0.0038	1520.15	0.0246	0.002755
Pb	208	3	He	0.01	0.0025	530.03	0.0324	0.002158
Pb	208	3	He	0.007	0.0024	470.03	0.0324	0.002158
Pb	208	3	He	0.012	0.0025	510.03	0.0324	0.002158
U	238	3	He	0.046	0.0027	820.06	0.0492	0.0004023
U	238	3	He	0.052	0.003	920.07	0.0492	0.0004023
U	238	3	He	0.057	0.0032	990.08	0.0492	0.0004023
Sc	45	1	No Gas			2557954.49		
Sc	45	1	No Gas			2574424.02		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2545958.87		
Ge	72	1	No Gas			1250635.68		
Ge	72	1	No Gas			1249162.48		
Ge	72	1	No Gas			1249385.84		
Sc	45	2	H2			202167.89		
Sc	45	2	H2			199095.31		
Sc	45	2	H2			200087.40		
Ge	72	2	H2			160443.53		
Ge	72	2	H2			158309.12		
Ge	72	2	H2			158096.90		
In	115	2	H2			400273.86		
In	115	2	H2			400727.26		
In	115	2	H2			396270.54		
Sc	45	3	He			50529.22		
Sc	45	3	He			50187.75		
Sc	45	3	He			50298.42		
Ge	72	3	He			79440.89		
Ge	72	3	He			80154.58		
Ge	72	3	He			79108.49		
In	115	3	He			87082.68		
In	115	3	He			83964.46		
In	115	3	He			85412.36		
Tb	159	3	He			397779.76		
Tb	159	3	He			399932.61		
Tb	159	3	He			397167.30		
Bi	209	3	He			306850.27		
Bi	209	3	He			308302.55		
Bi	209	3	He			310015.05		

Quantitation Report

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Auto Dilution	1.0000
Total Dilution	1.0000
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Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

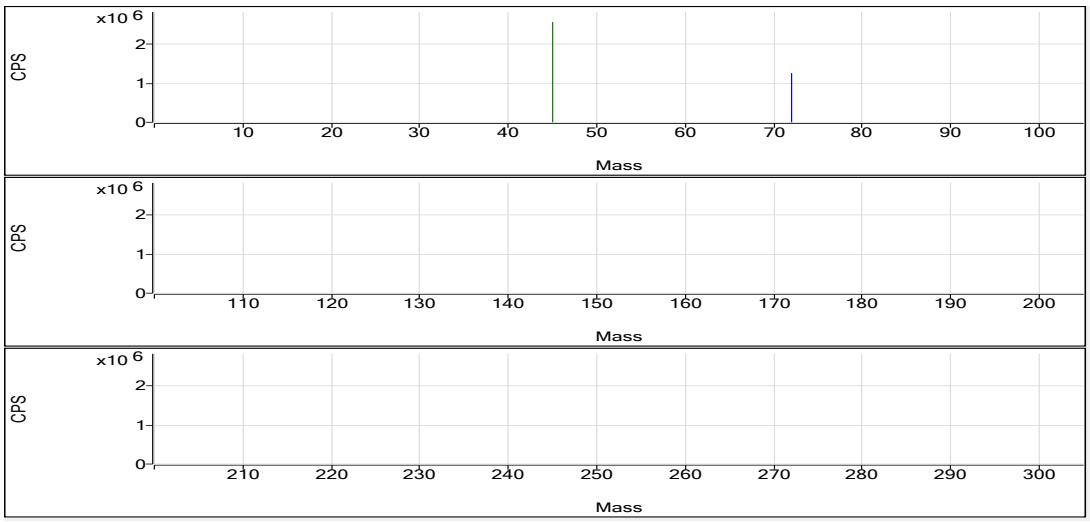
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.028	ppb	N/A	36.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.016	ppb	N/A	4.67	0.0000	Pulse	1.5000	3
Na	23	45	He	-12.262	ppb	N/A	18642.27	0.3733	Pulse	0.1000	3
Mg	24	45	He	-0.491	ppb	N/A	183.34	0.0037	Pulse	0.1000	3
Al	27	45	He	-1.166	ppb	N/A	70.00	0.0014	Pulse	0.1000	3
K	39	45	He	-5.254	ppb	N/A	20217.85	0.4050	Pulse	0.1000	3
Ca	44	45	He	-5.489	ppb	N/A	146.67	0.0030	Pulse	0.1000	3
Ti	47	45	He	0.125	ppb	173.2	3.33	0.0001	Pulse	0.1000	3
V	51	45	He	0.017	ppb	448.9	1605.43	0.0322	Pulse	0.5000	3
Cr	52	45	He	0.073	ppb	360.1	2246.92	0.0451	Pulse	0.1000	3
Mn	55	45	He	0.011	ppb	180.0	146.67	0.0029	Pulse	0.1000	3
Fe	57	45	He	0.961	ppb	131.7	163.34	0.0033	Pulse	0.1000	3
Co	59	45	He	-0.034	ppb	N/A	90.00	0.0018	Pulse	0.1000	3
Ni	60	72	He	-1.101	ppb	N/A	316.68	0.0039	Pulse	0.1000	3
Cu	63	72	He	0.001	ppb	10143.3	756.71	0.0093	Pulse	0.1000	3
Zn	66	72	He	-0.845	ppb	N/A	270.01	0.0033	Pulse	0.1000	3
As	75	72	He	-0.027	ppb	N/A	66.00	0.0008	Pulse	0.5000	3
Sr	88	115	He	-0.043	ppb	N/A	26.67	0.0003	Pulse	0.1000	3
Mo	98	115	He	-0.016	ppb	N/A	126.67	0.0015	Pulse	0.1000	3
Ag	107	115	He	-0.009	ppb	N/A	56.67	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.006	ppb	126.8	8.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.078	ppb	70.3	1383.45	0.0160	Pulse	0.1000	3
Sb	121	115	He	0.011	ppb	111.7	36.67	0.0004	Pulse	0.1000	3
Ba	137	115	He	-0.015	ppb	N/A	16.67	0.0002	Pulse	0.1000	3
Tl	205	159	He	-0.060	ppb	N/A	510.03	0.0013	Pulse	0.1000	3
Pb	208	159	He	0.056	ppb	13.6	1590.10	0.0040	Pulse	0.1000	3
U	238	209	He	-0.004	ppb	N/A	56.67	0.0002	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2577086.79	1.8	98.8	Analog	0.1000	3
No Gas	Ge	72	1265540.74	1.3	98.2	Pulse	0.1000	3
H2	Sc	45	201998.72	1.1	98.0	Pulse	0.1000	3
H2	Ge	72	162754.58	1.2	100.0	Pulse	0.1000	3
H2	In	115	396240.81	0.4	98.2	Pulse	0.1000	3
He	Sc	45	49936.59	2.4	97.5	Pulse	0.1000	3
He	Ge	72	81240.57	2.2	99.2	Pulse	0.1000	3
He	In	115	86319.57	0.6	98.5	Pulse	0.1000	3
He	Tb	159	399509.90	0.6	99.5	Pulse	0.1000	3
He	Bi	209	307668.64	1.1	100.5	Pulse	0.1000	3

No Gas



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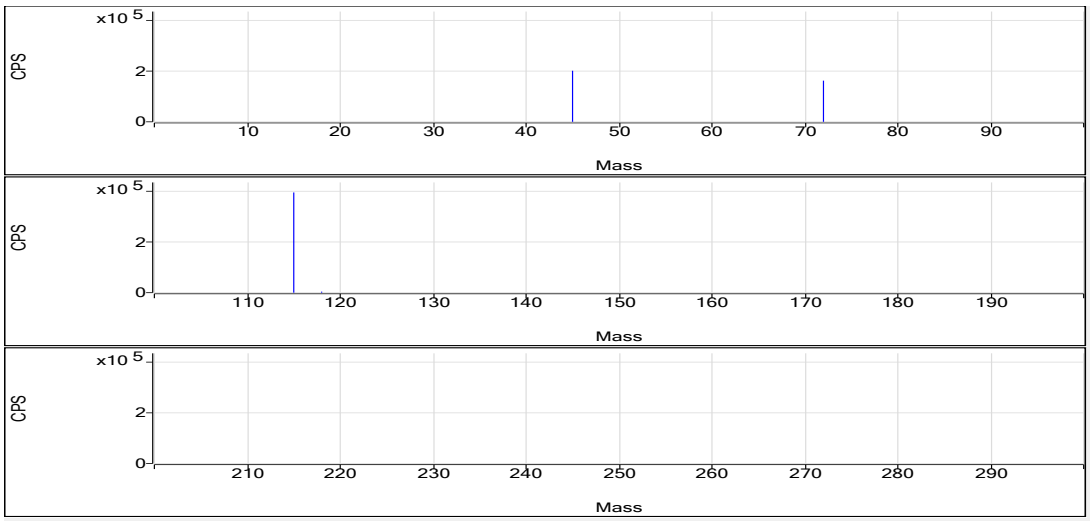
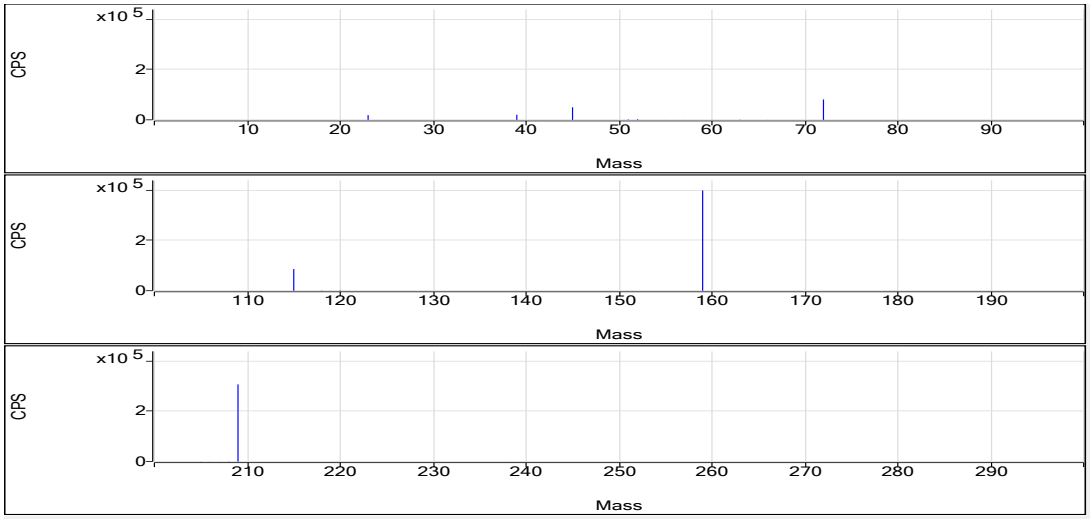


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.024	0	44.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.034	0	24.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.025	0	40.00	0.0007	3.404E-05
Se	78	2	H2	-0.007	0	5.33	0.0004	3.546E-05
Se	78	2	H2	-0.015	0	4.67	0.0004	3.546E-05
Se	78	2	H2	-0.024	0	4.00	0.0004	3.546E-05
Na	23	3	He	-11.304	0.3768	19252.93	0.0036	0.4171
Na	23	3	He	-15.108	0.3632	18151.82	0.0036	0.4171
Na	23	3	He	-10.375	0.3801	18522.05	0.0036	0.4171
Mg	24	3	He	-0.137	0.0043	220.01	0.0018	0.004553
Mg	24	3	He	-0.748	0.0032	160.01	0.0018	0.004553
Mg	24	3	He	-0.589	0.0035	170.01	0.0018	0.004553
Al	27	3	He	-1.563	0.0012	60.00	0.0006	0.002085
Al	27	3	He	-1.174	0.0014	70.00	0.0006	0.002085
Al	27	3	He	-0.76	0.0016	80.00	0.0006	0.002085
K	39	3	He	-9.477	0.4001	20444.75	0.0012	0.4112
K	39	3	He	-13.939	0.3949	19733.90	0.0012	0.4112
K	39	3	He	7.654	0.4201	20474.90	0.0012	0.4112
Ca	44	3	He	-17.307	0.0022	110.00	0.0001	0.003322
Ca	44	3	He	-7.705	0.0028	140.00	0.0001	0.003322
Ca	44	3	He	8.544	0.0039	190.01	0.0001	0.003322
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.376	0.0002	10.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	0.008	0.032	1634.10	0.0213	0.0318
V	51	3	He	-0.056	0.0306	1530.09	0.0213	0.0318
V	51	3	He	0.099	0.0339	1652.10	0.0213	0.0318
Cr	52	3	He	-0.084	0.0405	2070.23	0.0294	0.04297
Cr	52	3	He	-0.073	0.0408	2040.20	0.0294	0.04297
Cr	52	3	He	0.374	0.054	2630.33	0.0294	0.04297
Mn	55	3	He	0.027	0.0031	160.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.016	0.003	150.01	0.0124	0.002801
Mn	55	3	He	-0.011	0.0027	130.00	0.0124	0.002801
Fe	57	3	He	0.014	0.0027	140.00	0.0006	0.002732
Fe	57	3	He	0.471	0.003	150.01	0.0006	0.002732
Fe	57	3	He	2.399	0.0041	200.01	0.0006	0.002732
Co	59	3	He	-0.031	0.002	100.00	0.0549	0.003644
Co	59	3	He	-0.03	0.002	100.00	0.0549	0.003644
Co	59	3	He	-0.04	0.0014	70.00	0.0549	0.003644
Ni	60	3	He	-1.1	0.0039	320.02	0.0093	0.01413
Ni	60	3	He	-1.019	0.0047	370.01	0.0093	0.01413
Ni	60	3	He	-1.183	0.0031	260.01	0.0093	0.01413
Cu	63	3	He	-0.036	0.0083	680.04	0.0274	0.009321
Cu	63	3	He	0.069	0.0112	890.06	0.0274	0.009321
Cu	63	3	He	-0.031	0.0085	700.04	0.0274	0.009321
Zn	66	3	He	-0.73	0.0037	300.02	0.0031	0.005913
Zn	66	3	He	-1.022	0.0028	220.01	0.0031	0.005913
Zn	66	3	He	-0.784	0.0035	290.01	0.0031	0.005913
As	75	3	He	-0.074	0.0007	58.00	0.0021	0.0008698
As	75	3	He	-0.017	0.0008	66.00	0.0021	0.0008698
As	75	3	He	0.011	0.0009	74.00	0.0021	0.0008698
Sr	88	3	He	-0.038	0.0003	30.00	0.0088	0.0006843
Sr	88	3	He	-0.038	0.0003	30.00	0.0088	0.0006843
Sr	88	3	He	-0.052	0.0002	20.00	0.0088	0.0006843
Mo	98	3	He	-0.02	0.0014	120.01	0.0219	0.001827
Mo	98	3	He	-0.02	0.0014	120.00	0.0219	0.001827
Mo	98	3	He	-0.01	0.0016	140.01	0.0219	0.001827
Ag	107	3	He	-0.008	0.0007	60.00	0.047	0.001064
Ag	107	3	He	-0.013	0.0005	40.00	0.047	0.001064
Ag	107	3	He	-0.006	0.0008	70.00	0.047	0.001064
Cd	111	3	He	0.01	0.0001	10.00	0.0053	6.086E-05
Cd	111	3	He	0.01	0.0001	10.00	0.0053	6.086E-05
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Sn	120	3	He	0.101	0.0164	1410.12	0.0154	0.01483
Sn	120	3	He	0.117	0.0166	1430.12	0.0154	0.01483
Sn	120	3	He	0.015	0.0151	1310.12	0.0154	0.01483
Sb	121	3	He	0.022	0.0006	50.00	0.0143	0.0002661
Sb	121	3	He	-0.002	0.0002	20.00	0.0143	0.0002661
Sb	121	3	He	0.014	0.0005	40.00	0.0143	0.0002661
Ba	137	3	He	0.017	0.0003	30.00	0.0048	0.0002665
Ba	137	3	He	-0.031	0.0001	10.00	0.0048	0.0002665
Ba	137	3	He	-0.032	0.0001	10.00	0.0048	0.0002665
Tl	205	3	He	-0.059	0.0013	520.03	0.0246	0.002755
Tl	205	3	He	-0.052	0.0015	590.03	0.0246	0.002755
Tl	205	3	He	-0.07	0.001	420.02	0.0246	0.002755
Pb	208	3	He	0.058	0.0041	890.06	0.0324	0.002158
Pb	208	3	He	0.048	0.0037	800.06	0.0324	0.002158
Pb	208	3	He	0.062	0.0042	880.06	0.0324	0.002158
U	238	3	He	-0.006	0.0001	30.00	0.0492	0.0004023
U	238	3	He	-0.004	0.0002	60.00	0.0492	0.0004023
U	238	3	He	-0.003	0.0003	80.00	0.0492	0.0004023
Sc	45	1	No Gas			2627593.40		
Sc	45	1	No Gas			2564529.34		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2539137.62		
Ge	72	1	No Gas			1283341.39		
Ge	72	1	No Gas			1261716.70		
Ge	72	1	No Gas			1251564.12		
Sc	45	2	H2			203526.60		
Sc	45	2	H2			203077.73		
Sc	45	2	H2			199391.83		
Ge	72	2	H2			164812.20		
Ge	72	2	H2			162453.14		
Ge	72	2	H2			160998.40		
In	115	2	H2			396888.12		
In	115	2	H2			397566.36		
In	115	2	H2			394267.96		
Sc	45	3	He			51100.67		
Sc	45	3	He			49976.62		
Sc	45	3	He			48732.47		
Ge	72	3	He			81692.54		
Ge	72	3	He			79280.12		
Ge	72	3	He			82749.04		
In	115	3	He			86015.61		
In	115	3	He			86005.81		
In	115	3	He			86961.39		
Tb	159	3	He			399859.56		
Tb	159	3	He			396945.89		
Tb	159	3	He			401724.25		
Bi	209	3	He			306970.46		
Bi	209	3	He			304730.52		
Bi	209	3	He			311304.94		

Quantitation Report

Data File Name	030SMPL.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H09B00.b
Acq Time	8/9/2023 2:36:46 PM
Sample Name	LCS 410-404119/2-A
Sample Type	Sample
Comment	T31
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

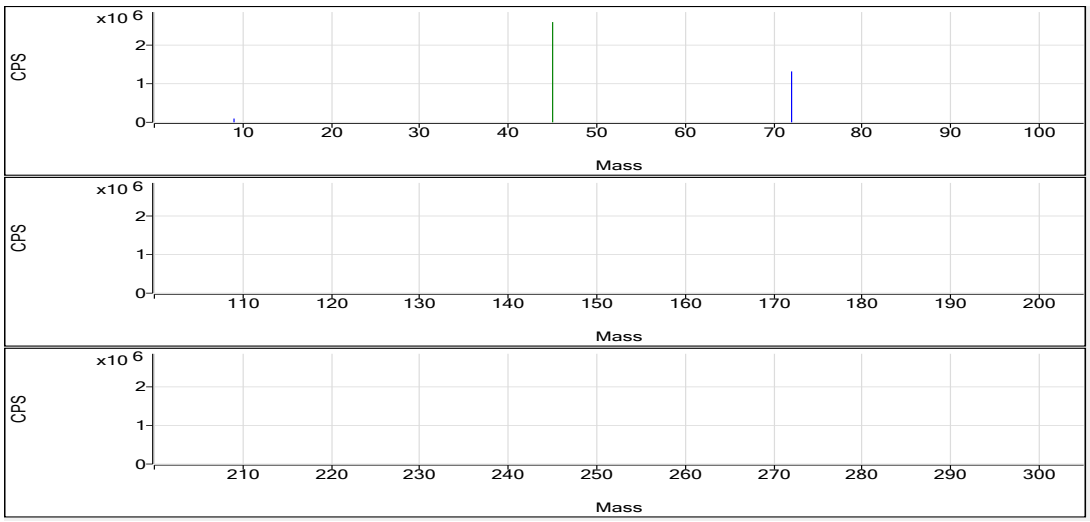
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.358	ppb	0.8	96783.60	0.0374	Pulse	0.5000	3
Se	78	72	H2	96.752	ppb	1.8	7174.47	0.0424	Pulse	1.5000	3
Na	23	45	He	4783.648	ppb	1.2	894056.39	17.4680	Pulse	0.1000	3
Mg	24	45	He	5013.604	ppb	1.3	463866.40	9.0631	Pulse	0.1000	3
Al	27	45	He	4995.234	ppb	0.5	149072.10	2.9123	Pulse	0.1000	3
K	39	45	He	4931.145	ppb	1.6	316599.99	6.1859	Pulse	0.1000	3
Ca	44	45	He	4852.670	ppb	2.4	16946.96	0.3312	Pulse	0.1000	3
Ti	47	45	He	520.364	ppb	2.5	14164.02	0.2768	Pulse	0.1000	3
V	51	45	He	497.936	ppb	1.4	543205.75	10.6134	Pulse	0.5000	3
Cr	52	45	He	480.079	ppb	0.7	724905.17	14.1621	Pulse	0.1000	3
Mn	55	45	He	502.275	ppb	1.8	319724.98	6.2472	Pulse	0.1000	3
Fe	57	45	He	5003.431	ppb	1.4	146658.72	2.8654	Pulse	0.1000	3
Co	59	45	He	487.822	ppb	3.3	1370226.85	26.7789	Mix	0.1000	3
Ni	60	72	He	492.910	ppb	1.3	382633.85	4.5897	Pulse	0.1000	3
Cu	63	72	He	476.181	ppb	1.2	1089514.64	13.0691	Pulse	0.1000	3
Zn	66	72	He	501.317	ppb	2.1	128805.08	1.5452	Pulse	0.1000	3
As	75	72	He	498.100	ppb	1.0	89174.81	1.0697	Pulse	0.5000	3
Sr	88	115	He	51.672	ppb	1.0	39472.61	0.4553	Pulse	0.1000	3
Mo	98	115	He	50.243	ppb	0.0	95748.02	1.1044	Pulse	0.1000	3
Ag	107	115	He	49.584	ppb	1.7	202266.81	2.3335	Pulse	0.1000	3
Cd	111	115	He	50.641	ppb	1.4	23382.90	0.2697	Pulse	0.5000	3
Sn	120	115	He	102.585	ppb	2.3	138399.66	1.5967	Pulse	0.1000	3
Sb	121	115	He	101.135	ppb	1.3	124953.44	1.4415	Pulse	0.1000	3
Ba	137	115	He	509.596	ppb	2.4	211106.05	2.4355	Pulse	0.1000	3
Tl	205	159	He	100.590	ppb	0.5	993955.40	2.4733	Pulse	0.1000	3
Pb	208	159	He	50.987	ppb	0.6	664844.57	1.6544	Pulse	0.1000	3
U	238	209	He	50.314	ppb	0.6	766306.66	2.4783	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2584335.95	0.3	99.1	Analog	0.1000	3
No Gas	Ge	72	1312126.52	0.3	101.8	Pulse	0.1000	3
H2	Sc	45	202236.94	0.9	98.1	Pulse	0.1000	3
H2	Ge	72	169060.04	1.4	103.9	Pulse	0.1000	3
H2	In	115	398661.05	0.8	98.8	Pulse	0.1000	3
He	Sc	45	51190.68	2.0	100.0	Pulse	0.1000	3
He	Ge	72	83372.96	1.1	101.8	Pulse	0.1000	3
He	In	115	86695.60	1.5	98.9	Pulse	0.1000	3
He	Tb	159	401882.60	0.4	100.1	Pulse	0.1000	3
He	Bi	209	309210.11	0.6	101.0	Pulse	0.1000	3

No Gas



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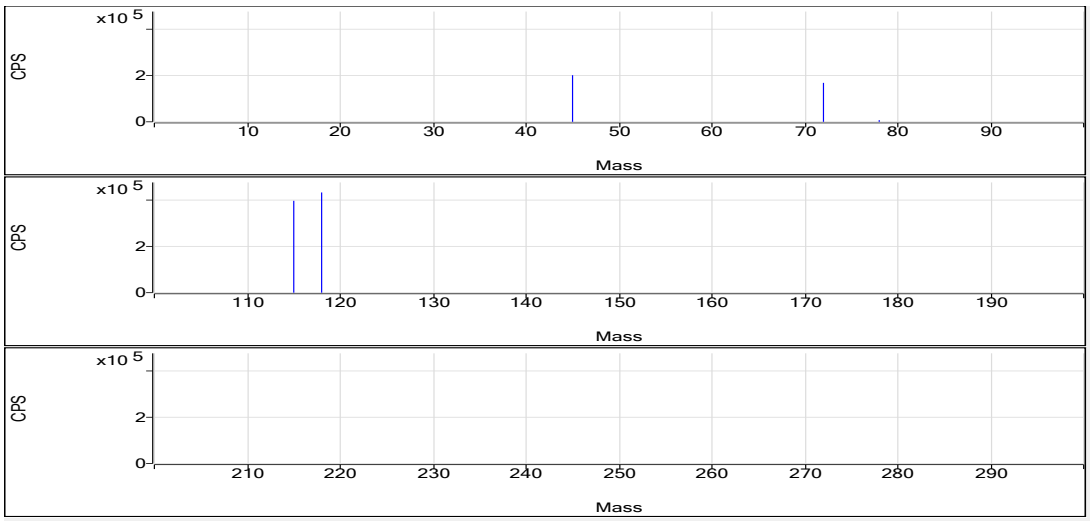
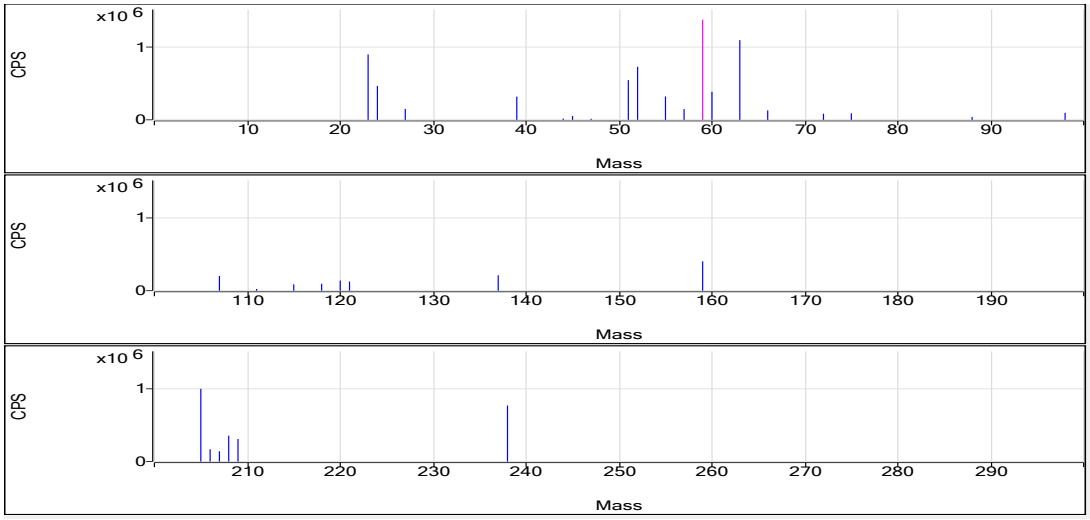


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	51.822	0.0378	97718.09	0.0007	3.404E-05
Be	9	1	No Gas	51.003	0.0372	95810.15	0.0007	3.404E-05
Be	9	1	No Gas	51.248	0.0374	96822.57	0.0007	3.404E-05
Se	78	2	H2	96.82	0.0425	7119.11	0.0004	3.546E-05
Se	78	2	H2	98.434	0.0432	7242.50	0.0004	3.546E-05
Se	78	2	H2	95.001	0.0417	7161.80	0.0004	3.546E-05
Na	23	3	He	4767.223	17.4094	901156.94	0.0036	0.4171
Na	23	3	He	4734.137	17.2915	895743.03	0.0036	0.4171
Na	23	3	He	4849.584	17.703	885269.21	0.0036	0.4171
Mg	24	3	He	5000.172	9.0388	467872.88	0.0018	0.004553
Mg	24	3	He	4953.753	8.9549	463889.17	0.0018	0.004553
Mg	24	3	He	5086.888	9.1955	459837.14	0.0018	0.004553
Al	27	3	He	4968.008	2.8964	149926.12	0.0006	0.002085
Al	27	3	He	4995.059	2.9122	150858.19	0.0006	0.002085
Al	27	3	He	5022.635	2.9282	146431.98	0.0006	0.002085
K	39	3	He	4879.965	6.126	317097.65	0.0012	0.4112
K	39	3	He	4892.848	6.1411	318123.82	0.0012	0.4112
K	39	3	He	5020.622	6.2907	314578.51	0.0012	0.4112
Ca	44	3	He	4757.91	0.3248	16810.07	0.0001	0.003322
Ca	44	3	He	4820.037	0.329	17040.46	0.0001	0.003322
Ca	44	3	He	4980.063	0.3398	16990.36	0.0001	0.003322
Ti	47	3	He	506.611	0.2694	13947.28	0.0005	0
Ti	47	3	He	522.565	0.2779	14397.61	0.0005	0
Ti	47	3	He	531.915	0.2829	14147.18	0.0005	0
V	51	3	He	492.996	10.5084	543942.25	0.0213	0.0318
V	51	3	He	494.912	10.5491	546471.06	0.0213	0.0318
V	51	3	He	505.899	10.7826	539203.94	0.0213	0.0318
Cr	52	3	He	478.581	14.1181	730790.07	0.0294	0.04297
Cr	52	3	He	477.881	14.0975	730287.25	0.0294	0.04297
Cr	52	3	He	483.774	14.2708	713638.19	0.0294	0.04297
Mn	55	3	He	494.003	6.1443	318045.62	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	500.812	6.229	322676.17	0.0124	0.002801
Mn	55	3	He	512.011	6.3682	318453.14	0.0124	0.002801
Fe	57	3	He	4936.666	2.8272	146345.89	0.0006	0.002732
Fe	57	3	He	4994.165	2.8601	148162.99	0.0006	0.002732
Fe	57	3	He	5079.462	2.9089	145467.29	0.0006	0.002732
Co	59	3	He	478.349	26.259	1359234.04	0.0549	0.003644
Co	59	3	He	478.664	26.2763	1361178.57	0.0549	0.003644
Co	59	3	He	506.453	27.8016	1390267.95	0.0549	0.003644
Ni	60	3	He	497.172	4.6293	380976.63	0.0093	0.01413
Ni	60	3	He	496.014	4.6186	386781.13	0.0093	0.01413
Ni	60	3	He	485.544	4.5214	380143.78	0.0093	0.01413
Cu	63	3	He	481.927	13.2267	1088511.23	0.0274	0.009321
Cu	63	3	He	475.846	13.0599	1093699.20	0.0274	0.009321
Cu	63	3	He	470.77	12.9207	1086333.50	0.0274	0.009321
Zn	66	3	He	513.411	1.5823	130217.86	0.0031	0.005913
Zn	66	3	He	495.039	1.5259	127785.51	0.0031	0.005913
Zn	66	3	He	495.502	1.5273	128411.88	0.0031	0.005913
As	75	3	He	502.526	1.0792	88811.16	0.0021	0.0008698
As	75	3	He	499.273	1.0722	89789.48	0.0021	0.0008698
As	75	3	He	492.5	1.0576	88923.78	0.0021	0.0008698
Sr	88	3	He	52.108	0.4592	39134.87	0.0088	0.0006843
Sr	88	3	He	51.776	0.4563	39736.85	0.0088	0.0006843
Sr	88	3	He	51.133	0.4506	39546.10	0.0088	0.0006843
Mo	98	3	He	50.257	1.1047	94153.47	0.0219	0.001827
Mo	98	3	He	50.222	1.104	96147.54	0.0219	0.001827
Mo	98	3	He	50.251	1.1046	96943.06	0.0219	0.001827
Ag	107	3	He	50.556	2.3792	202773.57	0.047	0.001064
Ag	107	3	He	49.126	2.3119	201353.81	0.047	0.001064
Ag	107	3	He	49.07	2.3093	202673.04	0.047	0.001064
Cd	111	3	He	51.446	0.274	23355.53	0.0053	6.086E-05
Cd	111	3	He	50.076	0.2667	23231.32	0.0053	6.086E-05
Cd	111	3	He	50.401	0.2685	23561.85	0.0053	6.086E-05
Sn	120	3	He	105.095	1.6355	139388.13	0.0154	0.01483
Sn	120	3	He	102.115	1.5895	138436.61	0.0154	0.01483
Sn	120	3	He	100.543	1.5653	137374.23	0.0154	0.01483
Sb	121	3	He	102.587	1.4622	124617.63	0.0143	0.0002661
Sb	121	3	He	100.226	1.4285	124414.20	0.0143	0.0002661
Sb	121	3	He	100.591	1.4337	125828.48	0.0143	0.0002661
Ba	137	3	He	519.361	2.4822	211553.08	0.0048	0.0002665
Ba	137	3	He	513.234	2.4529	213633.98	0.0048	0.0002665
Ba	137	3	He	496.193	2.3715	208131.09	0.0048	0.0002665
Tl	205	3	He	101.201	2.4883	996386.31	0.0246	0.002755
Tl	205	3	He	100.147	2.4624	989366.94	0.0246	0.002755
Tl	205	3	He	100.421	2.4691	996112.95	0.0246	0.002755
Pb	208	3	He	51.289	1.6641	356089.25	0.0324	0.002158
Pb	208	3	He	51.006	1.655	352780.82	0.0324	0.002158
Pb	208	3	He	50.665	1.6439	354177.46	0.0324	0.002158
U	238	3	He	50.673	2.4959	773012.02	0.0492	0.0004023
U	238	3	He	50.172	2.4713	759337.57	0.0492	0.0004023
U	238	3	He	50.098	2.4676	766570.38	0.0492	0.0004023
Sc	45	1	No Gas			2585939.65		
Sc	45	1	No Gas			2576148.71		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2590919.49		
Ge	72	1	No Gas			1313204.82		
Ge	72	1	No Gas			1308278.81		
Ge	72	1	No Gas			1314895.92		
Sc	45	2	H2			202401.23		
Sc	45	2	H2			200344.02		
Sc	45	2	H2			203965.58		
Ge	72	2	H2			167612.81		
Ge	72	2	H2			167723.77		
Ge	72	2	H2			171843.53		
In	115	2	H2			402262.69		
In	115	2	H2			398158.16		
In	115	2	H2			395562.30		
Sc	45	3	He			51762.65		
Sc	45	3	He			51802.58		
Sc	45	3	He			50006.81		
Ge	72	3	He			82296.69		
Ge	72	3	He			83744.98		
Ge	72	3	He			84077.22		
In	115	3	He			85965.33		
In	115	3	He			87827.43		
In	115	3	He			88511.57		
Tb	159	3	He			400431.71		
Tb	159	3	He			401788.47		
Tb	159	3	He			403427.61		
Bi	209	3	He			309712.38		
Bi	209	3	He			307267.05		
Bi	209	3	He			310650.89		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

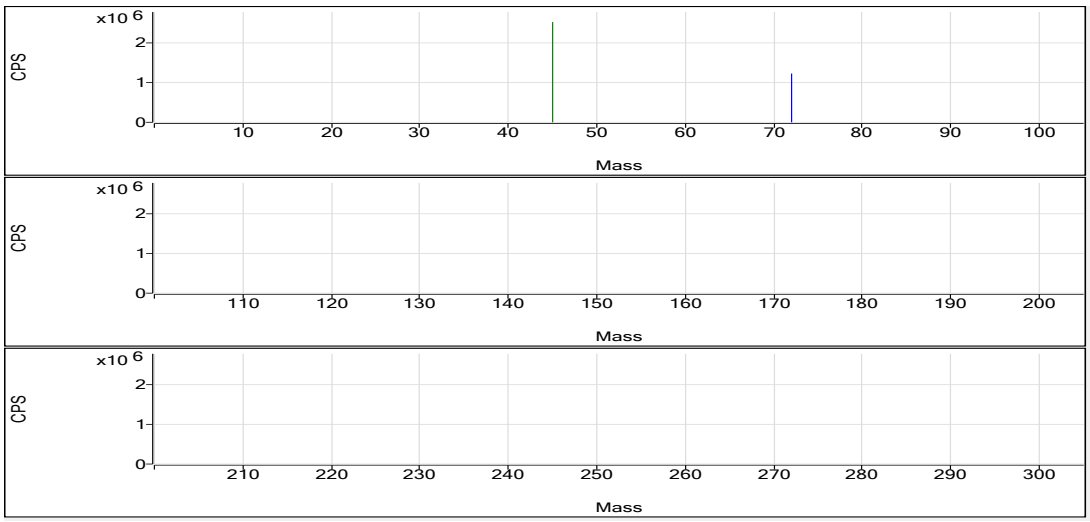
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.002	ppb	N/A	82.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.070	ppb	57.5	10.44	0.0001	Pulse	1.5000	3
Na	23	45	He	-6.800	ppb	N/A	19373.17	0.3928	Pulse	0.1000	3
Mg	24	45	He	0.659	ppb	36.1	283.34	0.0057	Pulse	0.1000	3
Al	27	45	He	0.839	ppb	177.4	126.67	0.0026	Pulse	0.1000	3
K	39	45	He	4.524	ppb	290.4	20538.35	0.4165	Pulse	0.1000	3
Ca	44	45	He	-11.135	ppb	N/A	126.67	0.0026	Pulse	0.1000	3
Ti	47	45	He	0.381	ppb	1.2	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	0.150	ppb	48.3	1725.45	0.0350	Pulse	0.5000	3
Cr	52	45	He	0.103	ppb	198.1	2266.91	0.0460	Pulse	0.1000	3
Mn	55	45	He	0.063	ppb	60.5	176.68	0.0036	Pulse	0.1000	3
Fe	57	45	He	1.116	ppb	218.7	166.67	0.0034	Pulse	0.1000	3
Co	59	45	He	0.073	ppb	21.1	376.69	0.0076	Pulse	0.1000	3
Ni	60	72	He	-0.883	ppb	N/A	466.69	0.0059	Pulse	0.1000	3
Cu	63	72	He	0.080	ppb	133.2	910.06	0.0115	Pulse	0.1000	3
Zn	66	72	He	0.317	ppb	29.5	543.37	0.0069	Pulse	0.1000	3
As	75	72	He	0.200	ppb	40.5	102.67	0.0013	Pulse	0.5000	3
Sr	88	115	He	-0.003	ppb	N/A	56.67	0.0007	Pulse	0.1000	3
Mo	98	115	He	0.017	ppb	120.1	186.68	0.0022	Pulse	0.1000	3
Ag	107	115	He	0.005	ppb	109.0	110.00	0.0013	Pulse	0.1000	3
Cd	111	115	He	0.000	ppb	821.7	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.109	ppb	68.1	1410.13	0.0165	Pulse	0.1000	3
Sb	121	115	He	0.017	ppb	56.4	43.33	0.0005	Pulse	0.1000	3
Ba	137	115	He	0.026	ppb	53.9	33.33	0.0004	Pulse	0.1000	3
Tl	205	159	He	0.117	ppb	10.7	2230.27	0.0056	Pulse	0.1000	3
Pb	208	159	He	0.002	ppb	194.5	883.38	0.0022	Pulse	0.1000	3
U	238	209	He	0.071	ppb	3.1	1203.44	0.0039	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2530647.83	0.8	97.0	Analog	0.1000	3
No Gas	Ge	72	1230787.69	0.4	95.5	Pulse	0.1000	3
H2	Sc	45	198572.53	1.1	96.4	Pulse	0.1000	3
H2	Ge	72	157722.58	2.4	96.9	Pulse	0.1000	3
H2	In	115	389442.52	0.2	96.5	Pulse	0.1000	3
He	Sc	45	49324.40	1.2	96.3	Pulse	0.1000	3
He	Ge	72	78884.18	1.7	96.4	Pulse	0.1000	3
He	In	115	85361.15	1.2	97.4	Pulse	0.1000	3
He	Tb	159	396041.49	0.2	98.6	Pulse	0.1000	3
He	Bi	209	307946.79	0.5	100.6	Pulse	0.1000	3

No Gas



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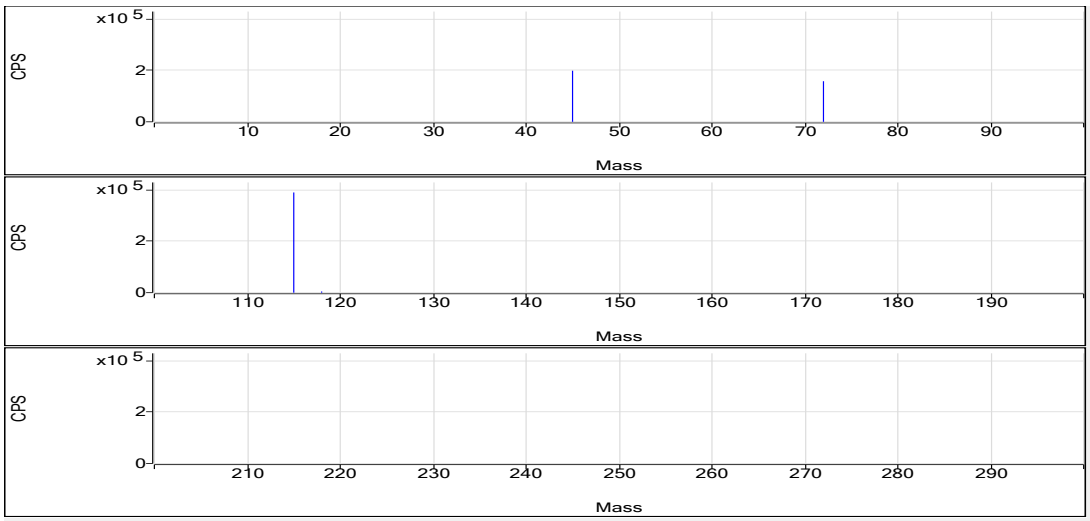
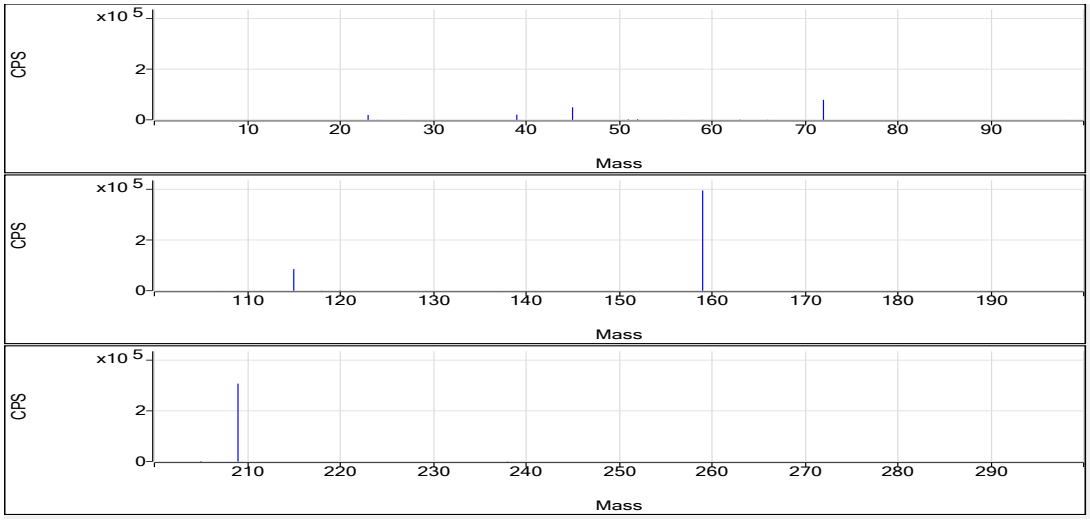


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.011	0	106.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.005	0	78.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.013	0	62.00	0.0007	3.404E-05
Se	78	2	H2	0.107	0.0001	13.33	0.0004	3.546E-05
Se	78	2	H2	0.028	0	7.33	0.0004	3.546E-05
Se	78	2	H2	0.074	0.0001	10.67	0.0004	3.546E-05
Na	23	3	He	-5.705	0.3967	19683.58	0.0036	0.4171
Na	23	3	He	-9.623	0.3828	19032.82	0.0036	0.4171
Na	23	3	He	-5.072	0.399	19403.10	0.0036	0.4171
Mg	24	3	He	0.492	0.0054	270.01	0.0018	0.004553
Mg	24	3	He	0.931	0.0062	310.01	0.0018	0.004553
Mg	24	3	He	0.553	0.0056	270.01	0.0018	0.004553
Al	27	3	He	1.266	0.0028	140.01	0.0006	0.002085
Al	27	3	He	-0.817	0.0016	80.00	0.0006	0.002085
Al	27	3	He	2.069	0.0033	160.01	0.0006	0.002085
K	39	3	He	9.371	0.4222	20945.64	0.0012	0.4112
K	39	3	He	-10.347	0.3991	19844.04	0.0012	0.4112
K	39	3	He	14.549	0.4282	20825.37	0.0012	0.4112
Ca	44	3	He	1.55	0.0034	170.01	0.0001	0.003322
Ca	44	3	He	-25.356	0.0016	80.00	0.0001	0.003322
Ca	44	3	He	-9.599	0.0027	130.01	0.0001	0.003322
Ti	47	3	He	0.379	0.0002	10.00	0.0005	0
Ti	47	3	He	0.378	0.0002	10.00	0.0005	0
Ti	47	3	He	0.387	0.0002	10.00	0.0005	0
V	51	3	He	0.173	0.0355	1760.12	0.0213	0.0318
V	51	3	He	0.069	0.0333	1654.10	0.0213	0.0318
V	51	3	He	0.209	0.0362	1762.12	0.0213	0.0318
Cr	52	3	He	0.115	0.0464	2300.26	0.0294	0.04297
Cr	52	3	He	-0.107	0.0398	1980.19	0.0294	0.04297
Cr	52	3	He	0.301	0.0518	2520.29	0.0294	0.04297
Mn	55	3	He	0.067	0.0036	180.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.098	0.004	200.01	0.0124	0.002801
Mn	55	3	He	0.023	0.0031	150.01	0.0124	0.002801
Fe	57	3	He	3.68	0.0048	240.01	0.0006	0.002732
Fe	57	3	He	0.849	0.0032	160.01	0.0006	0.002732
Fe	57	3	He	-1.181	0.0021	100.00	0.0006	0.002732
Co	59	3	He	0.088	0.0085	420.02	0.0549	0.003644
Co	59	3	He	0.073	0.0076	380.02	0.0549	0.003644
Co	59	3	He	0.057	0.0068	330.02	0.0549	0.003644
Ni	60	3	He	-0.988	0.005	390.02	0.0093	0.01413
Ni	60	3	He	-0.945	0.0054	430.02	0.0093	0.01413
Ni	60	3	He	-0.717	0.0075	580.04	0.0093	0.01413
Cu	63	3	He	0.165	0.0139	1090.09	0.0274	0.009321
Cu	63	3	He	0.114	0.0125	1000.07	0.0274	0.009321
Cu	63	3	He	-0.039	0.0082	640.03	0.0274	0.009321
Zn	66	3	He	0.393	0.0071	560.03	0.0031	0.005913
Zn	66	3	He	0.346	0.007	560.04	0.0031	0.005913
Zn	66	3	He	0.213	0.0066	510.03	0.0031	0.005913
As	75	3	He	0.175	0.0012	98.00	0.0021	0.0008698
As	75	3	He	0.291	0.0015	120.00	0.0021	0.0008698
As	75	3	He	0.135	0.0012	90.00	0.0021	0.0008698
Sr	88	3	He	0.054	0.0012	100.00	0.0088	0.0006843
Sr	88	3	He	-0.051	0.0002	20.00	0.0088	0.0006843
Sr	88	3	He	-0.01	0.0006	50.00	0.0088	0.0006843
Mo	98	3	He	-0.004	0.0017	150.01	0.0219	0.001827
Mo	98	3	He	0.018	0.0022	190.01	0.0219	0.001827
Mo	98	3	He	0.036	0.0026	220.01	0.0219	0.001827
Ag	107	3	He	0.004	0.0013	110.00	0.047	0.001064
Ag	107	3	He	0	0.0011	90.00	0.047	0.001064
Ag	107	3	He	0.01	0.0015	130.01	0.047	0.001064
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Cd	111	3	He	0.002	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	0.002	0.0001	6.00	0.0053	6.086E-05
Sn	120	3	He	0.158	0.0173	1490.13	0.0154	0.01483
Sn	120	3	He	0.024	0.0152	1300.11	0.0154	0.01483
Sn	120	3	He	0.146	0.0171	1440.15	0.0154	0.01483
Sb	121	3	He	0.022	0.0006	50.00	0.0143	0.0002661
Sb	121	3	He	0.006	0.0004	30.00	0.0143	0.0002661
Sb	121	3	He	0.023	0.0006	50.00	0.0143	0.0002661
Ba	137	3	He	0.017	0.0003	30.00	0.0048	0.0002665
Ba	137	3	He	0.042	0.0005	40.00	0.0048	0.0002665
Ba	137	3	He	0.019	0.0004	30.00	0.0048	0.0002665
Tl	205	3	He	0.121	0.0057	2270.27	0.0246	0.002755
Tl	205	3	He	0.103	0.0053	2090.26	0.0246	0.002755
Tl	205	3	He	0.127	0.0059	2330.28	0.0246	0.002755
Pb	208	3	He	0.004	0.0023	420.03	0.0324	0.002158
Pb	208	3	He	0.005	0.0023	490.02	0.0324	0.002158
Pb	208	3	He	-0.003	0.0021	400.02	0.0324	0.002158
U	238	3	He	0.071	0.0039	1210.11	0.0492	0.0004023
U	238	3	He	0.073	0.004	1230.11	0.0492	0.0004023
U	238	3	He	0.069	0.0038	1170.09	0.0492	0.0004023
Sc	45	1	No Gas			2530215.59		
Sc	45	1	No Gas			2549875.27		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2511852.62		
Ge	72	1	No Gas			1232038.34		
Ge	72	1	No Gas			1235189.67		
Ge	72	1	No Gas			1225135.06		
Sc	45	2	H2			200091.38		
Sc	45	2	H2			196065.21		
Sc	45	2	H2			199560.99		
Ge	72	2	H2			161645.84		
Ge	72	2	H2			154164.48		
Ge	72	2	H2			157357.43		
In	115	2	H2			390175.66		
In	115	2	H2			389123.86		
In	115	2	H2			389028.04		
Sc	45	3	He			49615.43		
Sc	45	3	He			49725.84		
Sc	45	3	He			48631.93		
Ge	72	3	He			78666.16		
Ge	72	3	He			80305.37		
Ge	72	3	He			77681.01		
In	115	3	He			86266.95		
In	115	3	He			85562.66		
In	115	3	He			84274.67		
Tb	159	3	He			396619.99		
Tb	159	3	He			395248.35		
Tb	159	3	He			396256.13		
Bi	209	3	He			309271.21		
Bi	209	3	He			306482.63		
Bi	209	3	He			308086.54		

Quantitation Report

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Auto Dilution	1.0000
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Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

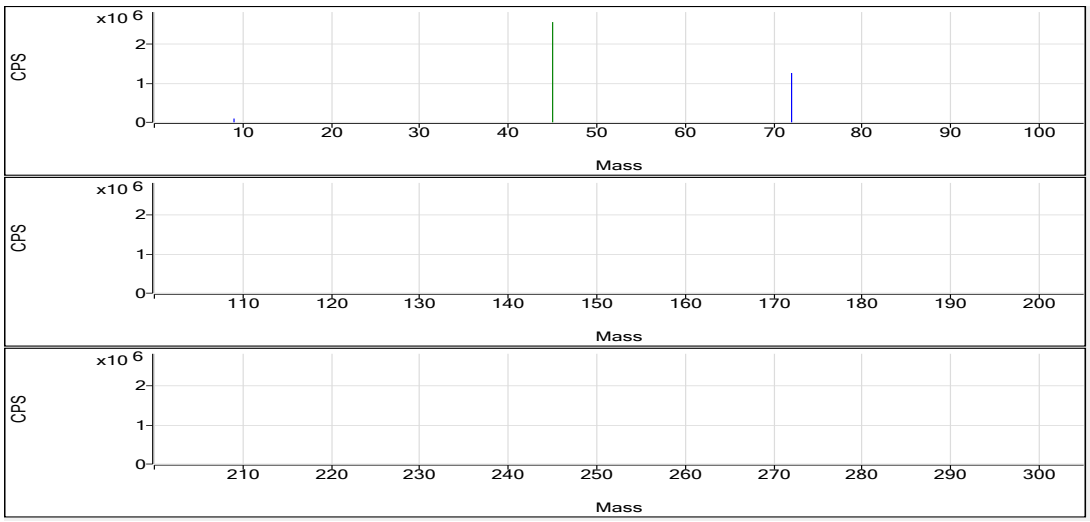
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.525	ppb	0.7	96270.82	0.0376	Pulse	0.5000	3
Se	78	72	H2	51.298	ppb	2.6	3594.90	0.0225	Pulse	1.5000	3
Na	23	45	He	4922.071	ppb	1.7	898731.97	17.9613	Pulse	0.1000	3
Mg	24	45	He	5130.759	ppb	2.2	464058.31	9.2748	Pulse	0.1000	3
Al	27	45	He	5132.987	ppb	1.1	149755.15	2.9925	Pulse	0.1000	3
K	39	45	He	5072.541	ppb	1.5	317831.01	6.3515	Pulse	0.1000	3
Ca	44	45	He	5147.793	ppb	2.0	17567.92	0.3511	Pulse	0.1000	3
Ti	47	45	He	5099.595	ppb	2.5	135702.28	2.7123	Pulse	0.1000	3
V	51	45	He	511.365	ppb	1.5	545353.04	10.8988	Pulse	0.5000	3
Cr	52	45	He	494.677	ppb	2.0	730097.83	14.5915	Pulse	0.1000	3
Mn	55	45	He	521.236	ppb	2.9	324335.12	6.4829	Pulse	0.1000	3
Fe	57	45	He	5195.562	ppb	3.3	148850.97	2.9754	Pulse	0.1000	3
Co	59	45	He	497.547	ppb	2.3	1366553.16	27.3127	Pulse	0.1000	3
Ni	60	72	He	510.588	ppb	1.4	388442.51	4.7538	Pulse	0.1000	3
Cu	63	72	He	488.469	ppb	1.4	1095407.27	13.4061	Pulse	0.1000	3
Zn	66	72	He	505.033	ppb	0.6	127193.29	1.5566	Pulse	0.1000	3
As	75	72	He	508.853	ppb	1.7	89284.82	1.0927	Pulse	0.5000	3
Sr	88	115	He	51.579	ppb	1.3	38977.84	0.4545	Pulse	0.1000	3
Mo	98	115	He	51.780	ppb	0.6	97611.23	1.1381	Pulse	0.1000	3
Ag	107	115	He	51.285	ppb	0.9	206968.58	2.4135	Pulse	0.1000	3
Cd	111	115	He	51.685	ppb	0.9	23609.95	0.2753	Pulse	0.5000	3
Sn	120	115	He	51.665	ppb	2.8	69578.83	0.8115	Pulse	0.1000	3
Sb	121	115	He	52.349	ppb	2.3	63985.22	0.7462	Pulse	0.1000	3
Ba	137	115	He	518.005	ppb	1.2	212294.12	2.4757	Pulse	0.1000	3
Tl	205	159	He	50.933	ppb	0.7	504632.46	1.2537	Pulse	0.1000	3
Pb	208	159	He	50.802	ppb	0.7	663485.93	1.6484	Pulse	0.1000	3
U	238	209	He	50.892	ppb	0.8	770930.98	2.5067	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2562385.22	0.3	98.3	Analog	0.1000	3
No Gas	Ge	72	1260528.36	0.4	97.8	Pulse	0.1000	3
H2	Sc	45	199907.74	1.7	97.0	Pulse	0.1000	3
H2	Ge	72	159643.29	0.6	98.1	Pulse	0.1000	3
H2	In	115	394738.15	0.4	97.8	Pulse	0.1000	3
He	Sc	45	50046.73	1.8	97.8	Pulse	0.1000	3
He	Ge	72	81717.01	1.0	99.8	Pulse	0.1000	3
He	In	115	85760.54	1.4	97.9	Pulse	0.1000	3
He	Tb	159	402527.39	1.0	100.2	Pulse	0.1000	3
He	Bi	209	307561.00	1.3	100.5	Pulse	0.1000	3

No Gas



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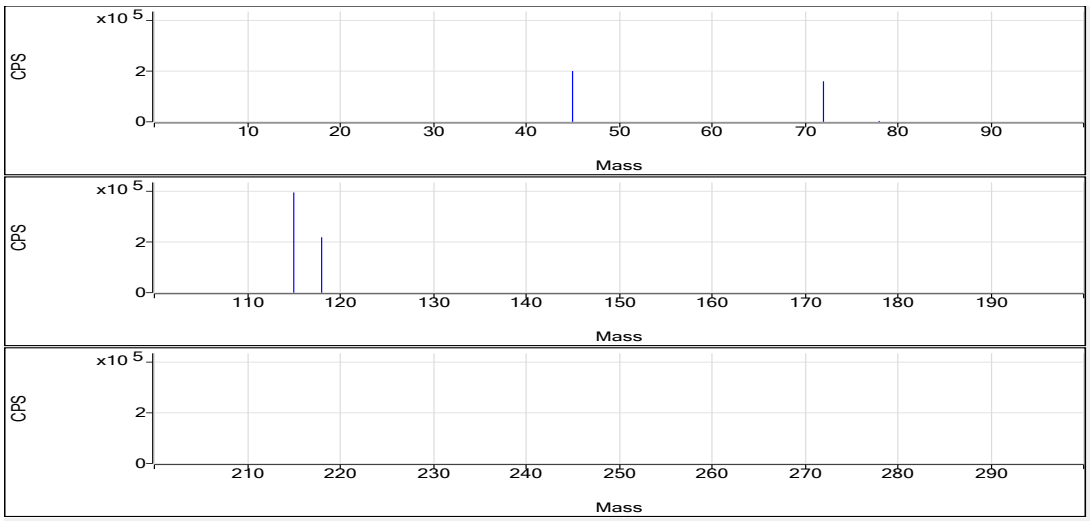
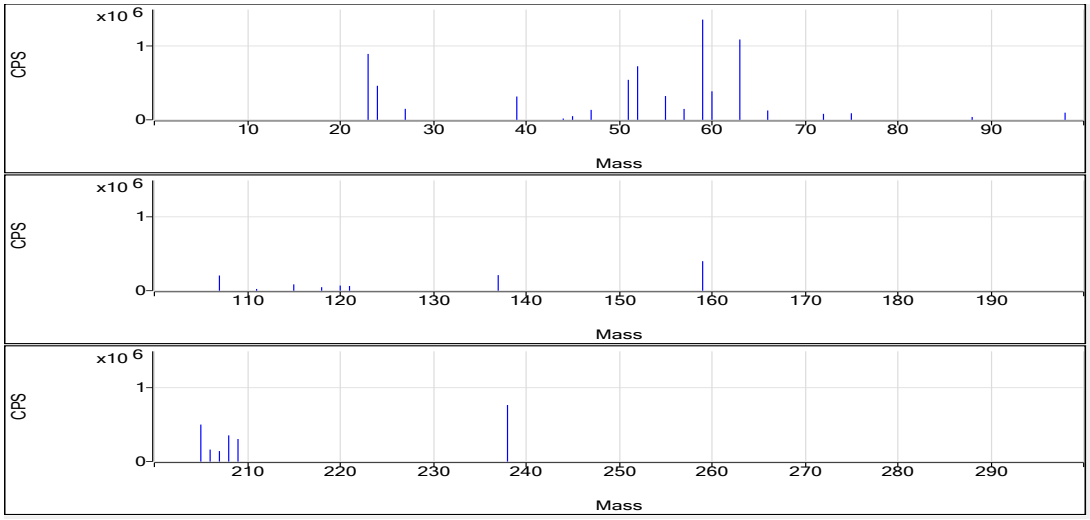


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	51.646	0.0377	96441.95	0.0007	3.404E-05
Be	9	1	No Gas	51.1	0.0373	95807.79	0.0007	3.404E-05
Be	9	1	No Gas	51.828	0.0378	96562.73	0.0007	3.404E-05
Se	78	2	H2	52.519	0.0231	3657.14	0.0004	3.546E-05
Se	78	2	H2	51.475	0.0226	3613.13	0.0004	3.546E-05
Se	78	2	H2	49.9	0.0219	3514.44	0.0004	3.546E-05
Na	23	3	He	5006.999	18.2641	898294.21	0.0036	0.4171
Na	23	3	He	4918.952	17.9502	897633.66	0.0036	0.4171
Na	23	3	He	4840.261	17.6697	900268.03	0.0036	0.4171
Mg	24	3	He	5211.343	9.4204	463327.81	0.0018	0.004553
Mg	24	3	He	5178.589	9.3612	468122.41	0.0018	0.004553
Mg	24	3	He	5002.345	9.0427	460724.72	0.0018	0.004553
Al	27	3	He	5136.727	2.9947	147290.89	0.0006	0.002085
Al	27	3	He	5187.288	3.0242	151228.87	0.0006	0.002085
Al	27	3	He	5074.945	2.9587	150745.68	0.0006	0.002085
K	39	3	He	5104.697	6.3892	314243.04	0.0012	0.4112
K	39	3	He	5125.114	6.4131	320697.67	0.0012	0.4112
K	39	3	He	4987.813	6.2523	318552.32	0.0012	0.4112
Ca	44	3	He	5263.2	0.3589	17651.48	0.0001	0.003322
Ca	44	3	He	5077.879	0.3464	17320.81	0.0001	0.003322
Ca	44	3	He	5102.301	0.348	17731.46	0.0001	0.003322
Ti	47	3	He	5197.496	2.7643	135960.77	0.0005	0
Ti	47	3	He	5145.355	2.7366	136849.34	0.0005	0
Ti	47	3	He	4955.934	2.6359	134296.72	0.0005	0
V	51	3	He	518.516	11.0507	543514.94	0.0213	0.0318
V	51	3	He	512.041	10.9131	545730.69	0.0213	0.0318
V	51	3	He	503.538	10.7324	546813.50	0.0213	0.0318
Cr	52	3	He	506.312	14.9337	734492.49	0.0294	0.04297
Cr	52	3	He	489.885	14.4505	722625.22	0.0294	0.04297
Cr	52	3	He	487.833	14.3902	733175.77	0.0294	0.04297
Mn	55	3	He	536.586	6.6737	328237.61	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	521.026	6.4803	324057.09	0.0124	0.002801
Mn	55	3	He	506.096	6.2947	320710.66	0.0124	0.002801
Fe	57	3	He	5347.963	3.0626	150628.62	0.0006	0.002732
Fe	57	3	He	5226.346	2.993	149669.82	0.0006	0.002732
Fe	57	3	He	5012.376	2.8706	146254.47	0.0006	0.002732
Co	59	3	He	507.362	27.8515	1369838.26	0.0549	0.003644
Co	59	3	He	500.023	27.4486	1372618.42	0.0549	0.003644
Co	59	3	He	485.256	26.6381	1357202.79	0.0549	0.003644
Ni	60	3	He	518.887	4.8309	391350.97	0.0093	0.01413
Ni	60	3	He	506.388	4.7149	389629.76	0.0093	0.01413
Ni	60	3	He	506.489	4.7158	384346.79	0.0093	0.01413
Cu	63	3	He	496.117	13.6158	1103021.62	0.0274	0.009321
Cu	63	3	He	482.473	13.2416	1094270.22	0.0274	0.009321
Cu	63	3	He	486.817	13.3608	1088929.98	0.0274	0.009321
Zn	66	3	He	507.069	1.5628	126604.85	0.0031	0.005913
Zn	66	3	He	501.371	1.5453	127704.18	0.0031	0.005913
Zn	66	3	He	506.659	1.5616	127270.83	0.0031	0.005913
As	75	3	He	517.033	1.1103	89944.45	0.0021	0.0008698
As	75	3	He	499.901	1.0735	88714.63	0.0021	0.0008698
As	75	3	He	509.627	1.0944	89195.38	0.0021	0.0008698
Sr	88	3	He	51.05	0.4499	39184.98	0.0088	0.0006843
Sr	88	3	He	52.327	0.4611	39436.29	0.0088	0.0006843
Sr	88	3	He	51.359	0.4526	38312.24	0.0088	0.0006843
Mo	98	3	He	52.065	1.1444	99681.83	0.0219	0.001827
Mo	98	3	He	51.44	1.1307	96702.56	0.0219	0.001827
Mo	98	3	He	51.836	1.1394	96449.31	0.0219	0.001827
Ag	107	3	He	50.78	2.3897	208152.73	0.047	0.001064
Ag	107	3	He	51.714	2.4337	208141.72	0.047	0.001064
Ag	107	3	He	51.362	2.4171	204611.29	0.047	0.001064
Cd	111	3	He	51.685	0.2753	23980.54	0.0053	6.086E-05
Cd	111	3	He	51.227	0.2729	23337.48	0.0053	6.086E-05
Cd	111	3	He	52.143	0.2777	23511.84	0.0053	6.086E-05
Sn	120	3	He	50.149	0.7882	68650.98	0.0154	0.01483
Sn	120	3	He	51.815	0.8138	69605.05	0.0154	0.01483
Sn	120	3	He	53.03	0.8326	70480.45	0.0154	0.01483
Sb	121	3	He	51.315	0.7315	63717.74	0.0143	0.0002661
Sb	121	3	He	52.063	0.7422	63475.70	0.0143	0.0002661
Sb	121	3	He	53.668	0.765	64762.22	0.0143	0.0002661
Ba	137	3	He	511.416	2.4442	212901.34	0.0048	0.0002665
Ba	137	3	He	519.017	2.4805	212151.07	0.0048	0.0002665
Ba	137	3	He	523.583	2.5024	211829.94	0.0048	0.0002665
Tl	205	3	He	50.79	1.2502	499005.66	0.0246	0.002755
Tl	205	3	He	50.65	1.2467	507607.73	0.0246	0.002755
Tl	205	3	He	51.359	1.2641	507283.98	0.0246	0.002755
Pb	208	3	He	50.97	1.6538	353238.74	0.0324	0.002158
Pb	208	3	He	50.385	1.6348	360020.66	0.0324	0.002158
Pb	208	3	He	51.053	1.6565	357916.71	0.0324	0.002158
U	238	3	He	51.244	2.5241	765094.21	0.0492	0.0004023
U	238	3	He	50.993	2.5117	779421.47	0.0492	0.0004023
U	238	3	He	50.438	2.4844	768277.25	0.0492	0.0004023
Sc	45	1	No Gas			2560872.31		
Sc	45	1	No Gas			2571181.99		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2555101.37		
Ge	72	1	No Gas			1255880.68		
Ge	72	1	No Gas			1260513.65		
Ge	72	1	No Gas			1265190.76		
Sc	45	2	H2			196004.68		
Sc	45	2	H2			202118.18		
Sc	45	2	H2			201600.37		
Ge	72	2	H2			158622.86		
Ge	72	2	H2			159886.93		
Ge	72	2	H2			160420.09		
In	115	2	H2			396107.26		
In	115	2	H2			394817.65		
In	115	2	H2			393289.53		
Sc	45	3	He			49183.69		
Sc	45	3	He			50006.80		
Sc	45	3	He			50949.69		
Ge	72	3	He			81010.26		
Ge	72	3	He			82638.70		
Ge	72	3	He			81502.08		
In	115	3	He			87474.28		
In	115	3	He			85904.83		
In	115	3	He			85019.53		
Tb	159	3	He			399146.48		
Tb	159	3	He			407148.24		
Tb	159	3	He			401287.45		
Bi	209	3	He			303119.96		
Bi	209	3	He			310318.41		
Bi	209	3	He			309244.64		

Quantitation Report

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Acq Time	8/9/2023 2:42:57 PM
Sample Name	CCB 4654618
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

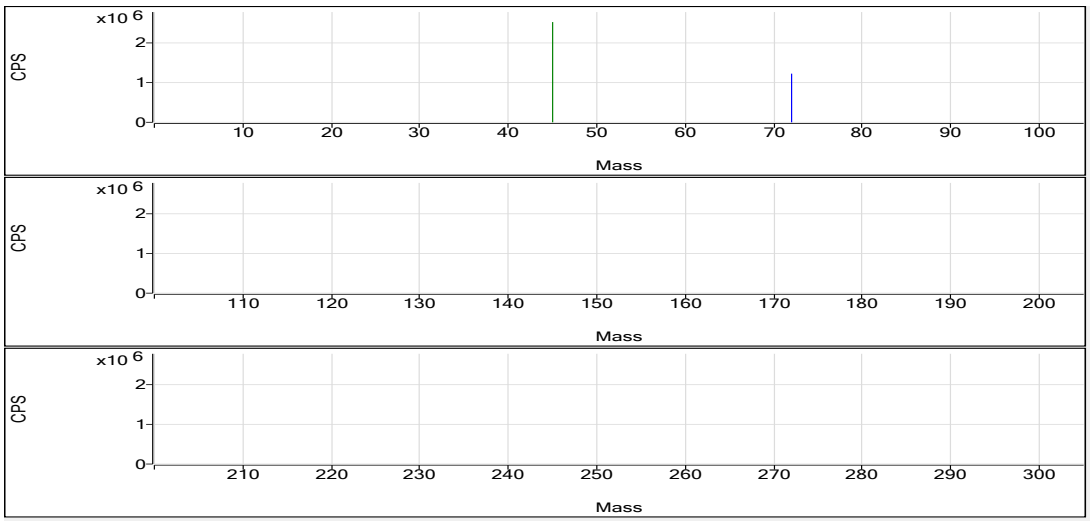
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.006	ppb	N/A	74.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.036	ppb	102.3	8.00	0.0001	Pulse	1.5000	3
Na	23	45	He	-10.058	ppb	N/A	18849.20	0.3812	Pulse	0.1000	3
Mg	24	45	He	0.460	ppb	165.1	266.68	0.0054	Pulse	0.1000	3
Al	27	45	He	-0.221	ppb	N/A	96.67	0.0020	Pulse	0.1000	3
K	39	45	He	1.025	ppb	370.3	20391.46	0.4124	Pulse	0.1000	3
Ca	44	45	He	0.718	ppb	152.1	166.68	0.0034	Pulse	0.1000	3
Ti	47	45	He	1.767	ppb	48.8	46.67	0.0009	Pulse	0.1000	3
V	51	45	He	0.116	ppb	56.2	1693.44	0.0343	Pulse	0.5000	3
Cr	52	45	He	0.094	ppb	124.0	2260.26	0.0457	Pulse	0.1000	3
Mn	55	45	He	0.149	ppb	65.1	230.01	0.0046	Pulse	0.1000	3
Fe	57	45	He	0.764	ppb	140.3	156.68	0.0032	Pulse	0.1000	3
Co	59	45	He	0.088	ppb	29.7	420.02	0.0085	Pulse	0.1000	3
Ni	60	72	He	-0.950	ppb	N/A	416.69	0.0053	Pulse	0.1000	3
Cu	63	72	He	0.082	ppb	33.8	906.73	0.0116	Pulse	0.1000	3
Zn	66	72	He	0.275	ppb	75.2	530.03	0.0068	Pulse	0.1000	3
As	75	72	He	0.252	ppb	30.7	110.67	0.0014	Pulse	0.5000	3
Sr	88	115	He	0.011	ppb	343.4	66.67	0.0008	Pulse	0.1000	3
Mo	98	115	He	0.018	ppb	55.8	190.01	0.0022	Pulse	0.1000	3
Ag	107	115	He	0.001	ppb	563.2	93.33	0.0011	Pulse	0.1000	3
Cd	111	115	He	0.000	ppb	2582.9	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.128	ppb	27.7	1430.12	0.0168	Pulse	0.1000	3
Sb	121	115	He	0.009	ppb	54.8	33.33	0.0004	Pulse	0.1000	3
Ba	137	115	He	0.043	ppb	115.8	40.00	0.0005	Pulse	0.1000	3
Tl	205	159	He	0.024	ppb	90.6	1333.45	0.0034	Pulse	0.1000	3
Pb	208	159	He	-0.010	ppb	N/A	730.03	0.0018	Pulse	0.1000	3
U	238	209	He	0.049	ppb	10.0	866.73	0.0028	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2539033.87	0.8	97.4	Analog	0.1000	3
No Gas	Ge	72	1231977.14	0.6	95.6	Pulse	0.1000	3
H2	Sc	45	198485.97	0.9	96.3	Pulse	0.1000	3
H2	Ge	72	157058.49	1.8	96.5	Pulse	0.1000	3
H2	In	115	390439.21	0.8	96.7	Pulse	0.1000	3
He	Sc	45	49444.99	1.3	96.6	Pulse	0.1000	3
He	Ge	72	78478.99	0.7	95.9	Pulse	0.1000	3
He	In	115	85119.50	0.4	97.1	Pulse	0.1000	3
He	Tb	159	397752.96	0.3	99.0	Pulse	0.1000	3
He	Bi	209	307637.23	0.8	100.5	Pulse	0.1000	3

No Gas



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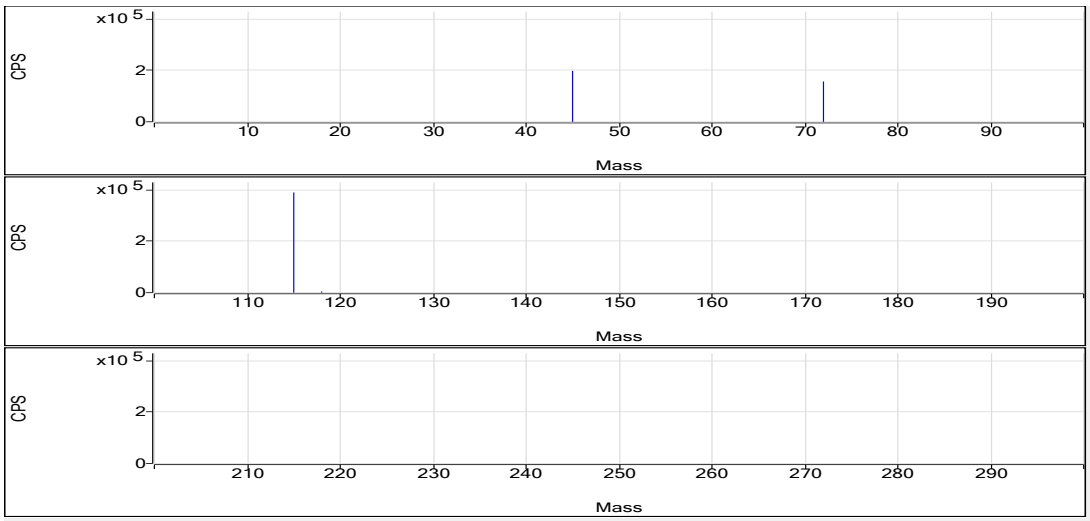
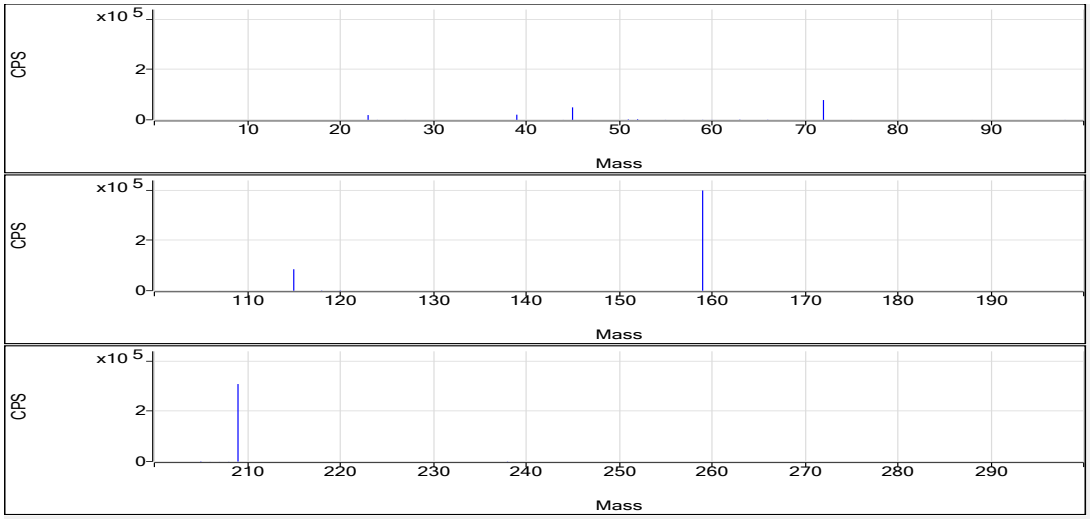


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.009	0	70.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.013	0	62.00	0.0007	3.404E-05
Be	9	1	No Gas	0.003	0	92.00	0.0007	3.404E-05
Se	78	2	H2	-0.005	0	5.33	0.0004	3.546E-05
Se	78	2	H2	0.047	0.0001	8.67	0.0004	3.546E-05
Se	78	2	H2	0.066	0.0001	10.00	0.0004	3.546E-05
Na	23	3	He	-6.185	0.395	19713.70	0.0036	0.4171
Na	23	3	He	-14.2	0.3664	18221.70	0.0036	0.4171
Na	23	3	He	-9.79	0.3822	18612.19	0.0036	0.4171
Mg	24	3	He	0.364	0.0052	260.01	0.0018	0.004553
Mg	24	3	He	1.265	0.0068	340.02	0.0018	0.004553
Mg	24	3	He	-0.247	0.0041	200.01	0.0018	0.004553
Al	27	3	He	-0.139	0.002	100.00	0.0006	0.002085
Al	27	3	He	-0.472	0.0018	90.00	0.0006	0.002085
Al	27	3	He	-0.054	0.0021	100.00	0.0006	0.002085
K	39	3	He	5.382	0.4175	20835.48	0.0012	0.4112
K	39	3	He	-1.578	0.4093	20354.72	0.0012	0.4112
K	39	3	He	-0.728	0.4103	19984.19	0.0012	0.4112
Ca	44	3	He	1.254	0.0034	170.01	0.0001	0.003322
Ca	44	3	He	1.438	0.0034	170.01	0.0001	0.003322
Ca	44	3	He	-0.538	0.0033	160.01	0.0001	0.003322
Ti	47	3	He	2.26	0.0012	60.00	0.0005	0
Ti	47	3	He	2.269	0.0012	60.00	0.0005	0
Ti	47	3	He	0.772	0.0004	20.00	0.0005	0
V	51	3	He	0.107	0.0341	1700.11	0.0213	0.0318
V	51	3	He	0.056	0.033	1640.10	0.0213	0.0318
V	51	3	He	0.185	0.0357	1740.12	0.0213	0.0318
Cr	52	3	He	-0.037	0.0419	2090.24	0.0294	0.04297
Cr	52	3	He	0.132	0.0469	2330.26	0.0294	0.04297
Cr	52	3	He	0.187	0.0485	2360.28	0.0294	0.04297
Mn	55	3	He	0.097	0.004	200.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.26	0.006	300.02	0.0124	0.002801
Mn	55	3	He	0.089	0.0039	190.01	0.0124	0.002801
Fe	57	3	He	-0.222	0.0026	130.01	0.0006	0.002732
Fe	57	3	He	1.904	0.0038	190.01	0.0006	0.002732
Fe	57	3	He	0.609	0.0031	150.01	0.0006	0.002732
Co	59	3	He	0.105	0.0094	470.03	0.0549	0.003644
Co	59	3	He	0.058	0.0068	340.02	0.0549	0.003644
Co	59	3	He	0.102	0.0092	450.02	0.0549	0.003644
Ni	60	3	He	-0.922	0.0056	440.02	0.0093	0.01413
Ni	60	3	He	-0.885	0.0059	460.03	0.0093	0.01413
Ni	60	3	He	-1.042	0.0045	350.02	0.0093	0.01413
Cu	63	3	He	0.08	0.0115	910.06	0.0274	0.009321
Cu	63	3	He	0.11	0.0123	960.07	0.0274	0.009321
Cu	63	3	He	0.055	0.0108	850.06	0.0274	0.009321
Zn	66	3	He	0.095	0.0062	490.03	0.0031	0.005913
Zn	66	3	He	0.501	0.0074	580.04	0.0031	0.005913
Zn	66	3	He	0.23	0.0066	520.03	0.0031	0.005913
As	75	3	He	0.185	0.0013	100.00	0.0021	0.0008698
As	75	3	He	0.337	0.0016	124.00	0.0021	0.0008698
As	75	3	He	0.235	0.0014	108.00	0.0021	0.0008698
Sr	88	3	He	-0.011	0.0006	50.00	0.0088	0.0006843
Sr	88	3	He	-0.011	0.0006	50.00	0.0088	0.0006843
Sr	88	3	He	0.056	0.0012	100.00	0.0088	0.0006843
Mo	98	3	He	0.008	0.002	170.01	0.0219	0.001827
Mo	98	3	He	0.029	0.0025	210.01	0.0219	0.001827
Mo	98	3	He	0.019	0.0022	190.01	0.0219	0.001827
Ag	107	3	He	0.005	0.0013	110.00	0.047	0.001064
Ag	107	3	He	0	0.0011	90.00	0.047	0.001064
Ag	107	3	He	-0.003	0.0009	80.00	0.047	0.001064
Cd	111	3	He	0.011	0.0001	10.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Sn	120	3	He	0.108	0.0165	1400.11	0.0154	0.01483
Sn	120	3	He	0.107	0.0165	1410.11	0.0154	0.01483
Sn	120	3	He	0.169	0.0174	1480.13	0.0154	0.01483
Sb	121	3	He	0.014	0.0005	40.00	0.0143	0.0002661
Sb	121	3	He	0.006	0.0004	30.00	0.0143	0.0002661
Sb	121	3	He	0.006	0.0004	30.00	0.0143	0.0002661
Ba	137	3	He	-0.006	0.0002	20.00	0.0048	0.0002665
Ba	137	3	He	0.042	0.0005	40.00	0.0048	0.0002665
Ba	137	3	He	0.092	0.0007	60.00	0.0048	0.0002665
Tl	205	3	He	0.045	0.0039	1540.14	0.0246	0.002755
Tl	205	3	He	0.001	0.0028	1110.09	0.0246	0.002755
Tl	205	3	He	0.026	0.0034	1350.11	0.0246	0.002755
Pb	208	3	He	-0.008	0.0019	380.02	0.0324	0.002158
Pb	208	3	He	-0.018	0.0016	370.02	0.0324	0.002158
Pb	208	3	He	-0.004	0.002	390.02	0.0324	0.002158
U	238	3	He	0.047	0.0027	830.06	0.0492	0.0004023
U	238	3	He	0.045	0.0026	810.05	0.0492	0.0004023
U	238	3	He	0.055	0.0031	960.07	0.0492	0.0004023
Sc	45	1	No Gas			2559121.52		
Sc	45	1	No Gas			2516469.34		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2541510.74		
Ge	72	1	No Gas			1237513.89		
Ge	72	1	No Gas			1223600.68		
Ge	72	1	No Gas			1234816.86		
Sc	45	2	H2			196381.52		
Sc	45	2	H2			199491.42		
Sc	45	2	H2			199584.96		
Ge	72	2	H2			160341.08		
Ge	72	2	H2			155043.62		
Ge	72	2	H2			155790.76		
In	115	2	H2			394023.08		
In	115	2	H2			389237.34		
In	115	2	H2			388057.22		
Sc	45	3	He			49906.71		
Sc	45	3	He			49725.90		
Sc	45	3	He			48702.35		
Ge	72	3	He			78998.13		
Ge	72	3	He			77862.57		
Ge	72	3	He			78576.26		
In	115	3	He			84898.51		
In	115	3	He			85563.40		
In	115	3	He			84919.69		
Tb	159	3	He			398430.23		
Tb	159	3	He			398268.12		
Tb	159	3	He			396560.54		
Bi	209	3	He			305783.16		
Bi	209	3	He			306580.54		
Bi	209	3	He			310547.98		

Quantitation Report

Data File Name	034SMPL.d
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Sample Name	410-136848-U-6-A
Sample Type	Sample
Comment	T31
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

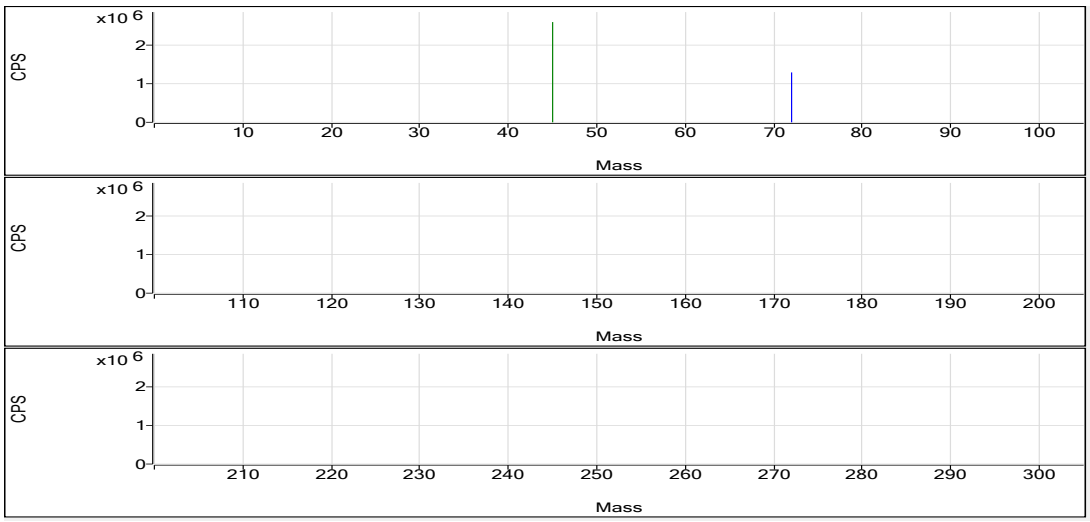
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.025	ppb	N/A	41.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.067	ppb	69.5	10.89	0.0001	Pulse	1.5000	3
Na	23	45	He	10281.597	ppb	2.1	1849786.74	37.0649	Analog	0.1000	3
Mg	24	45	He	15911.567	ppb	1.5	1435104.98	28.7534	Analog	0.1000	3
Al	27	45	He	35.794	ppb	22.9	1143.70	0.0229	Pulse	0.1000	3
K	39	45	He	2681.428	ppb	0.6	177256.83	3.5513	Pulse	0.1000	3
Ca	44	45	He	141008.426	ppb	0.5	475632.15	9.5295	Pulse	0.1000	3
Ti	47	45	He	0.627	ppb	34.5	16.67	0.0003	Pulse	0.1000	3
V	51	45	He	-0.084	ppb	N/A	1498.09	0.0300	Pulse	0.5000	3
Cr	52	45	He	0.413	ppb	5.5	2750.35	0.0551	Pulse	0.1000	3
Mn	55	45	He	1007.250	ppb	2.0	625087.57	12.5251	Pulse	0.1000	3
Fe	57	45	He	816.055	ppb	3.5	23436.17	0.4696	Pulse	0.1000	3
Co	59	45	He	0.265	ppb	10.7	906.73	0.0182	Pulse	0.1000	3
Ni	60	72	He	-0.365	ppb	N/A	903.39	0.0107	Pulse	0.1000	3
Cu	63	72	He	0.388	ppb	19.3	1676.82	0.0200	Pulse	0.1000	3
Zn	66	72	He	2.639	ppb	18.7	1176.76	0.0140	Pulse	0.1000	3
As	75	72	He	0.660	ppb	8.4	192.00	0.0023	Pulse	0.5000	3
Sr	88	115	He	500.234	ppb	0.9	386001.74	4.4022	Pulse	0.1000	3
Mo	98	115	He	0.257	ppb	36.6	653.37	0.0075	Pulse	0.1000	3
Ag	107	115	He	-0.004	ppb	N/A	76.67	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.021	ppb	29.2	15.33	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.197	ppb	37.0	1566.82	0.0179	Pulse	0.1000	3
Sb	121	115	He	0.104	ppb	23.6	153.34	0.0017	Pulse	0.1000	3
Ba	137	115	He	52.180	ppb	4.0	21891.45	0.2496	Pulse	0.1000	3
Tl	205	159	He	-0.061	ppb	N/A	506.70	0.0013	Pulse	0.1000	3
Pb	208	159	He	0.126	ppb	7.6	2513.52	0.0062	Pulse	0.1000	3
U	238	209	He	0.558	ppb	2.0	8609.88	0.0279	Pulse	0.1000	3

ISTD Table:

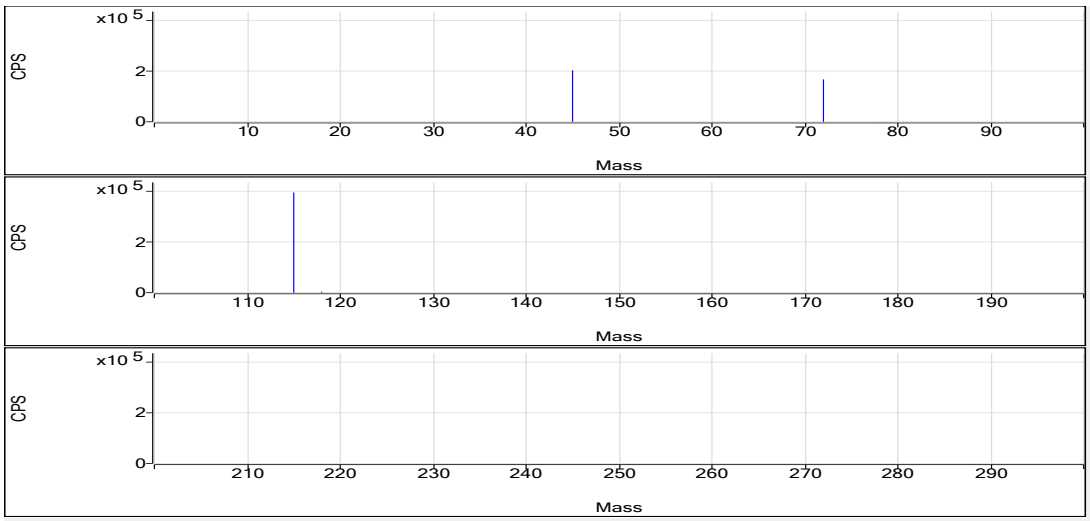
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2590564.96	1.4	99.3	Analog	0.1000	3
No Gas	Ge	72	1289059.15	0.1	100.0	Pulse	0.1000	3
H2	Sc	45	203004.97	1.2	98.5	Pulse	0.1000	3
H2	Ge	72	167525.46	0.7	102.9	Pulse	0.1000	3
H2	In	115	395521.75	1.1	98.0	Pulse	0.1000	3
He	Sc	45	49913.05	0.9	97.5	Pulse	0.1000	3
He	Ge	72	84046.68	1.8	102.7	Pulse	0.1000	3
He	In	115	87689.43	1.0	100.1	Pulse	0.1000	3
He	Tb	159	402748.47	0.8	100.3	Pulse	0.1000	3
He	Bi	209	308539.51	0.3	100.8	Pulse	0.1000	3

No Gas

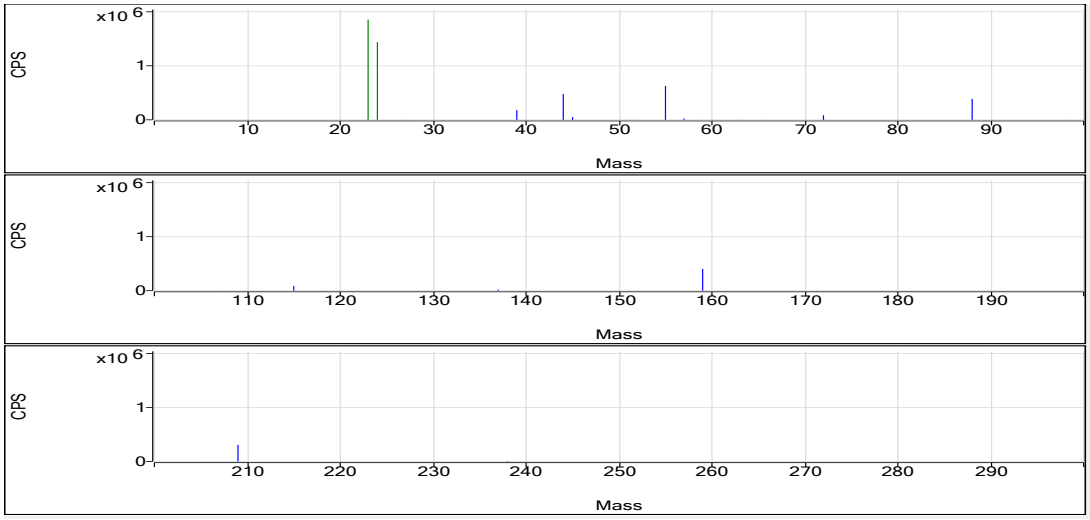


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.02	0	50.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.025	0	40.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.029	0	34.00	0.0007	3.404E-05
Se	78	2	H2	0.056	0.0001	10.00	0.0004	3.546E-05
Se	78	2	H2	0.119	0.0001	14.67	0.0004	3.546E-05
Se	78	2	H2	0.027	0	8.00	0.0004	3.546E-05
Na	23	3	He	10393.874	37.4651	1863732.63	0.0036	0.4171
Na	23	3	He	10028.052	36.1612	1823539.82	0.0036	0.4171
Na	23	3	He	10422.866	37.5685	1862087.78	0.0036	0.4171
Mg	24	3	He	16179.221	29.237	1454418.73	0.0018	0.004553
Mg	24	3	He	15729.875	28.4251	1433425.92	0.0018	0.004553
Mg	24	3	He	15825.605	28.5981	1417470.29	0.0018	0.004553
Al	27	3	He	33.345	0.0215	1070.08	0.0006	0.002085
Al	27	3	He	29.1	0.019	960.06	0.0006	0.002085
Al	27	3	He	44.938	0.0283	1400.97	0.0006	0.002085
K	39	3	He	2666.159	3.5335	175774.84	0.0012	0.4112
K	39	3	He	2680.383	3.5501	179025.70	0.0012	0.4112
K	39	3	He	2697.744	3.5704	176969.94	0.0012	0.4112
Ca	44	3	He	140764.648	9.513	473231.36	0.0001	0.003322
Ca	44	3	He	140439.479	9.491	478614.29	0.0001	0.003322
Ca	44	3	He	141821.151	9.5844	475050.81	0.0001	0.003322
Ti	47	3	He	0.378	0.0002	10.00	0.0005	0
Ti	47	3	He	0.746	0.0004	20.00	0.0005	0
Ti	47	3	He	0.759	0.0004	20.00	0.0005	0
V	51	3	He	-0.085	0.03	1492.09	0.0213	0.0318
V	51	3	He	-0.042	0.0309	1558.09	0.0213	0.0318
V	51	3	He	-0.125	0.0291	1444.08	0.0213	0.0318
Cr	52	3	He	0.426	0.0555	2760.35	0.0294	0.04297
Cr	52	3	He	0.387	0.0543	2740.34	0.0294	0.04297
Cr	52	3	He	0.426	0.0555	2750.35	0.0294	0.04297
Mn	55	3	He	1013.844	12.6071	627148.12	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	984.428	12.2413	617308.12	0.0124	0.002801
Mn	55	3	He	1023.477	12.7268	630806.47	0.0124	0.002801
Fe	57	3	He	833.195	0.4794	23850.39	0.0006	0.002732
Fe	57	3	He	782.62	0.4505	22718.30	0.0006	0.002732
Fe	57	3	He	832.35	0.479	23739.83	0.0006	0.002732
Co	59	3	He	0.238	0.0167	830.06	0.0549	0.003644
Co	59	3	He	0.262	0.018	910.06	0.0549	0.003644
Co	59	3	He	0.294	0.0198	980.07	0.0549	0.003644
Ni	60	3	He	-0.345	0.0109	930.06	0.0093	0.01413
Ni	60	3	He	-0.237	0.0119	1010.07	0.0093	0.01413
Ni	60	3	He	-0.514	0.0094	770.05	0.0093	0.01413
Cu	63	3	He	0.453	0.0217	1850.19	0.0274	0.009321
Cu	63	3	He	0.306	0.0177	1500.12	0.0274	0.009321
Cu	63	3	He	0.404	0.0204	1680.16	0.0274	0.009321
Zn	66	3	He	2.628	0.014	1190.08	0.0031	0.005913
Zn	66	3	He	2.15	0.0125	1060.08	0.0031	0.005913
Zn	66	3	He	3.139	0.0156	1280.11	0.0031	0.005913
As	75	3	He	0.69	0.0023	200.00	0.0021	0.0008698
As	75	3	He	0.596	0.0021	182.00	0.0021	0.0008698
As	75	3	He	0.693	0.0024	194.00	0.0021	0.0008698
Sr	88	3	He	496.197	4.3667	386737.57	0.0088	0.0006843
Sr	88	3	He	499.15	4.3927	385190.93	0.0088	0.0006843
Sr	88	3	He	505.354	4.4472	386076.71	0.0088	0.0006843
Mo	98	3	He	0.174	0.0056	500.03	0.0219	0.001827
Mo	98	3	He	0.358	0.0097	850.05	0.0219	0.001827
Mo	98	3	He	0.237	0.007	610.03	0.0219	0.001827
Ag	107	3	He	-0.011	0.0006	50.00	0.047	0.001064
Ag	107	3	He	-0.015	0.0003	30.00	0.047	0.001064
Ag	107	3	He	0.014	0.0017	150.01	0.047	0.001064
Cd	111	3	He	0.027	0.0002	18.00	0.0053	6.086E-05
Cd	111	3	He	0.023	0.0002	16.00	0.0053	6.086E-05
Cd	111	3	He	0.015	0.0001	12.00	0.0053	6.086E-05
Sn	120	3	He	0.224	0.0183	1620.16	0.0154	0.01483
Sn	120	3	He	0.251	0.0187	1640.17	0.0154	0.01483
Sn	120	3	He	0.114	0.0166	1440.12	0.0154	0.01483
Sb	121	3	He	0.132	0.0021	190.01	0.0143	0.0002661
Sb	121	3	He	0.093	0.0016	140.01	0.0143	0.0002661
Sb	121	3	He	0.086	0.0015	130.01	0.0143	0.0002661
Ba	137	3	He	54.074	0.2587	22909.80	0.0048	0.0002665
Ba	137	3	He	49.954	0.239	20956.64	0.0048	0.0002665
Ba	137	3	He	52.511	0.2512	21807.92	0.0048	0.0002665
Tl	205	3	He	-0.054	0.0014	580.04	0.0246	0.002755
Tl	205	3	He	-0.058	0.0013	530.03	0.0246	0.002755
Tl	205	3	He	-0.071	0.001	410.02	0.0246	0.002755
Pb	208	3	He	0.137	0.0066	1450.14	0.0324	0.002158
Pb	208	3	He	0.118	0.006	1250.10	0.0324	0.002158
Pb	208	3	He	0.123	0.0061	1330.11	0.0324	0.002158
U	238	3	He	0.546	0.0273	8393.03	0.0492	0.0004023
U	238	3	He	0.563	0.0281	8693.27	0.0492	0.0004023
U	238	3	He	0.567	0.0283	8743.33	0.0492	0.0004023
Sc	45	1	No Gas			2570987.46		
Sc	45	1	No Gas			2568601.21		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2632106.21		
Ge	72	1	No Gas			1289787.32		
Ge	72	1	No Gas			1287682.56		
Ge	72	1	No Gas			1289707.56		
Sc	45	2	H2			200150.60		
Sc	45	2	H2			204761.62		
Sc	45	2	H2			204102.69		
Ge	72	2	H2			166470.17		
Ge	72	2	H2			167420.15		
Ge	72	2	H2			168686.05		
In	115	2	H2			390814.17		
In	115	2	H2			396170.54		
In	115	2	H2			399580.54		
Sc	45	3	He			49745.82		
Sc	45	3	He			50428.12		
Sc	45	3	He			49565.20		
Ge	72	3	He			85112.72		
Ge	72	3	He			84711.21		
Ge	72	3	He			82316.10		
In	115	3	He			88572.73		
In	115	3	He			87697.11		
In	115	3	He			86820.83		
Tb	159	3	He			405486.83		
Tb	159	3	He			399383.35		
Tb	159	3	He			403375.23		
Bi	209	3	He			307710.07		
Bi	209	3	He			309268.37		
Bi	209	3	He			308640.09		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

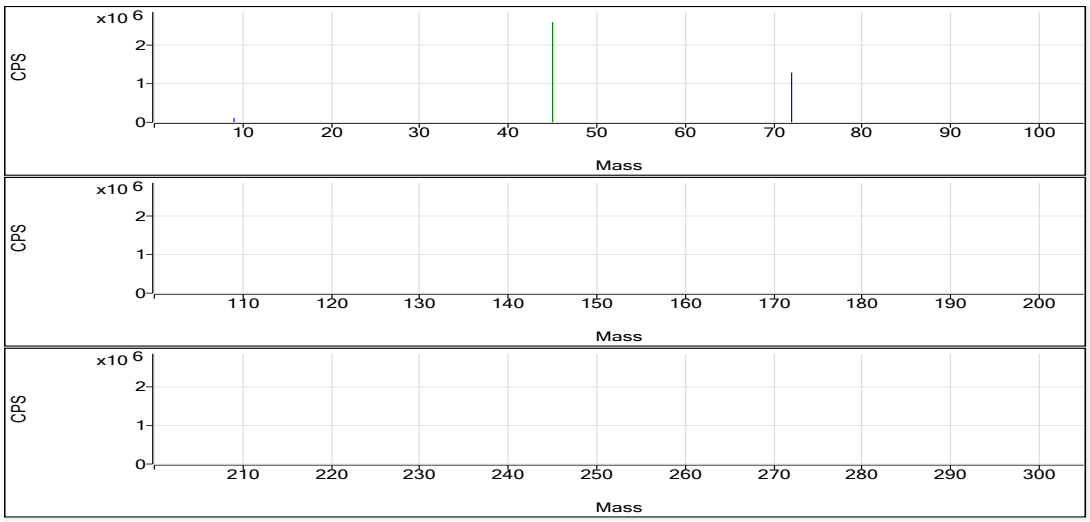
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	60.036	ppb	0.2	113884.90	0.0438	Pulse	0.5000	3
Se	78	72	H2	115.975	ppb	0.8	8464.95	0.0509	Pulse	1.5000	3
Na	23	45	He	15319.359	ppb	2.6	2804838.60	55.0216	Analog	0.1000	3
Mg	24	45	He	20861.562	ppb	1.6	1921813.25	37.6970	Analog	0.1000	3
Al	27	45	He	5964.291	ppb	1.0	177259.76	3.4768	Pulse	0.1000	3
K	39	45	He	8354.321	ppb	1.1	519751.41	10.1947	Pulse	0.1000	3
Ca	44	45	He	137757.929	ppb	1.2	474633.63	9.3099	Pulse	0.1000	3
Ti	47	45	He	600.983	ppb	4.6	16293.02	0.3196	Pulse	0.1000	3
V	51	45	He	594.181	ppb	1.5	645349.52	12.6587	Pulse	0.5000	3
Cr	52	45	He	568.931	ppb	1.4	855228.17	16.7753	Pulse	0.1000	3
Mn	55	45	He	1529.740	ppb	1.9	969671.21	19.0207	Pulse	0.1000	3
Fe	57	45	He	6689.054	ppb	2.1	195243.63	3.8299	Pulse	0.1000	3
Co	59	45	He	591.368	ppb	2.1	1654902.16	32.4623	Analog	0.1000	3
Ni	60	72	He	572.873	ppb	1.2	447999.42	5.3320	Pulse	0.1000	3
Cu	63	72	He	547.304	ppb	1.6	1261908.55	15.0197	Pulse	0.1000	3
Zn	66	72	He	584.522	ppb	1.2	151294.24	1.8006	Pulse	0.1000	3
As	75	72	He	586.180	ppb	1.0	105756.39	1.2587	Pulse	0.5000	3
Sr	88	115	He	556.054	ppb	2.1	415730.51	4.8933	Pulse	0.1000	3
Mo	98	115	He	60.995	ppb	2.3	113872.74	1.3404	Pulse	0.1000	3
Ag	107	115	He	54.259	ppb	1.6	216939.68	2.5534	Pulse	0.1000	3
Cd	111	115	He	61.276	ppb	2.2	27728.81	0.3264	Pulse	0.5000	3
Sn	120	115	He	124.245	ppb	1.9	164036.20	1.9308	Pulse	0.1000	3
Sb	121	115	He	121.048	ppb	0.8	146589.54	1.7252	Pulse	0.1000	3
Ba	137	115	He	656.109	ppb	1.1	266445.55	3.1357	Pulse	0.1000	3
Tl	205	159	He	120.449	ppb	0.5	1185895.32	2.9610	Pulse	0.1000	3
Pb	208	159	He	60.028	ppb	0.4	779912.80	1.9473	Pulse	0.1000	3
U	238	209	He	61.437	ppb	0.1	921995.59	3.0260	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2601730.59	0.5	99.8	Analog	0.1000	3
No Gas	Ge	72	1291257.38	0.9	100.2	Pulse	0.1000	3
H2	Sc	45	200995.21	1.3	97.5	Pulse	0.1000	3
H2	Ge	72	166409.92	0.6	102.2	Pulse	0.1000	3
H2	In	115	393336.56	0.8	97.4	Pulse	0.1000	3
He	Sc	45	50986.85	1.2	99.6	Pulse	0.1000	3
He	Ge	72	84030.61	1.6	102.7	Pulse	0.1000	3
He	In	115	84975.35	1.5	97.0	Pulse	0.1000	3
He	Tb	159	400507.65	0.4	99.7	Pulse	0.1000	3
He	Bi	209	304690.62	0.7	99.5	Pulse	0.1000	3

No Gas



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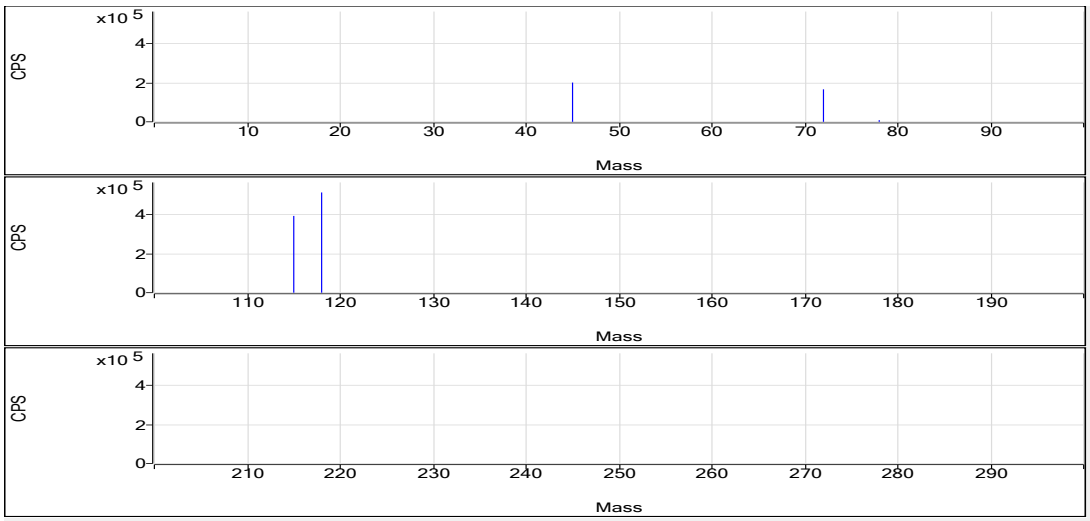
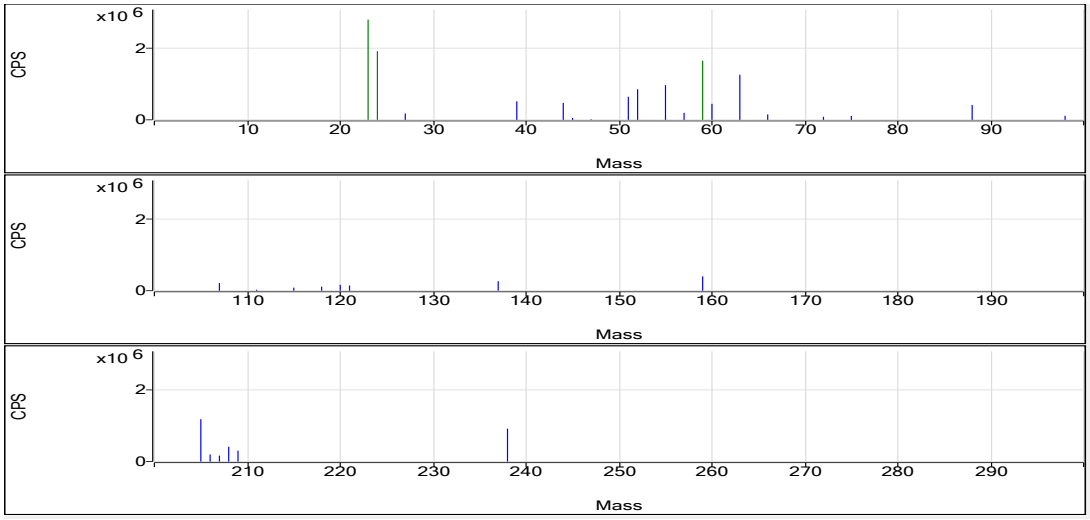


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	60.095	0.0438	114392.66	0.0007	3.404E-05
Be	9	1	No Gas	59.875	0.0437	112935.81	0.0007	3.404E-05
Be	9	1	No Gas	60.139	0.0438	114326.22	0.0007	3.404E-05
Se	78	2	H2	115.363	0.0506	8473.85	0.0004	3.546E-05
Se	78	2	H2	117.019	0.0513	8495.19	0.0004	3.546E-05
Se	78	2	H2	115.541	0.0507	8425.82	0.0004	3.546E-05
Na	23	3	He	15772.374	56.6363	2851500.27	0.0036	0.4171
Na	23	3	He	15126.032	54.3325	2772626.83	0.0036	0.4171
Na	23	3	He	15059.67	54.0959	2790388.71	0.0036	0.4171
Mg	24	3	He	21135.556	38.1921	1922877.47	0.0018	0.004553
Mg	24	3	He	20966.562	37.8867	1933387.94	0.0018	0.004553
Mg	24	3	He	20482.568	37.0122	1909174.35	0.0018	0.004553
Al	27	3	He	6034.006	3.5175	177095.51	0.0006	0.002085
Al	27	3	He	5934.768	3.4596	176548.22	0.0006	0.002085
Al	27	3	He	5924.1	3.4534	178135.54	0.0006	0.002085
K	39	3	He	8453.606	10.311	519133.66	0.0012	0.4112
K	39	3	He	8343.845	10.1825	519618.51	0.0012	0.4112
K	39	3	He	8265.511	10.0907	520502.06	0.0012	0.4112
Ca	44	3	He	139528.227	9.4295	474750.31	0.0001	0.003322
Ca	44	3	He	137571.613	9.2973	474446.91	0.0001	0.003322
Ca	44	3	He	136173.949	9.2029	474703.66	0.0001	0.003322
Ti	47	3	He	612.062	0.3255	16389.74	0.0005	0
Ti	47	3	He	621.205	0.3304	16860.31	0.0005	0
Ti	47	3	He	569.682	0.303	15629.00	0.0005	0
V	51	3	He	604.426	12.8764	648294.50	0.0213	0.0318
V	51	3	He	590.895	12.5888	642418.13	0.0213	0.0318
V	51	3	He	587.224	12.5108	645335.94	0.0213	0.0318
Cr	52	3	He	578.4	17.0538	858615.46	0.0294	0.04297
Cr	52	3	He	564.606	16.6481	849564.99	0.0294	0.04297
Cr	52	3	He	563.788	16.624	857504.05	0.0294	0.04297
Mn	55	3	He	1563.771	19.4438	978948.81	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1513.251	18.8157	960181.78	0.0124	0.002801
Mn	55	3	He	1512.199	18.8027	969883.03	0.0124	0.002801
Fe	57	3	He	6849.67	3.9218	197451.87	0.0006	0.002732
Fe	57	3	He	6612.929	3.7863	193218.94	0.0006	0.002732
Fe	57	3	He	6604.562	3.7815	195060.09	0.0006	0.002732
Co	59	3	He	605.569	33.2418	1673643.41	0.0549	0.003644
Co	59	3	He	584.347	32.077	1636912.16	0.0549	0.003644
Co	59	3	He	584.188	32.0682	1654150.91	0.0549	0.003644
Ni	60	3	He	578.583	5.385	446424.06	0.0093	0.01413
Ni	60	3	He	574.421	5.3464	447521.75	0.0093	0.01413
Ni	60	3	He	565.616	5.2647	450052.45	0.0093	0.01413
Cu	63	3	He	555.589	15.2469	1263981.86	0.0274	0.009321
Cu	63	3	He	547.876	15.0354	1258541.47	0.0274	0.009321
Cu	63	3	He	538.447	14.7768	1263202.32	0.0274	0.009321
Zn	66	3	He	585.694	1.8042	149572.78	0.0031	0.005913
Zn	66	3	He	590.818	1.82	152341.31	0.0031	0.005913
Zn	66	3	He	577.054	1.7777	151968.63	0.0031	0.005913
As	75	3	He	592.528	1.2723	105472.99	0.0021	0.0008698
As	75	3	He	584.239	1.2545	105007.63	0.0021	0.0008698
As	75	3	He	581.772	1.2492	106788.55	0.0021	0.0008698
Sr	88	3	He	555.493	4.8884	417641.40	0.0088	0.0006843
Sr	88	3	He	544.937	4.7955	412289.17	0.0088	0.0006843
Sr	88	3	He	567.732	4.9961	417260.97	0.0088	0.0006843
Mo	98	3	He	61.092	1.3425	114695.53	0.0219	0.001827
Mo	98	3	He	59.523	1.3081	112458.60	0.0219	0.001827
Mo	98	3	He	62.37	1.3705	114464.10	0.0219	0.001827
Ag	107	3	He	53.98	2.5402	217026.07	0.047	0.001064
Ag	107	3	He	53.553	2.5202	216669.16	0.047	0.001064
Ag	107	3	He	55.245	2.5997	217123.81	0.047	0.001064
Cd	111	3	He	61.415	0.3271	27947.90	0.0053	6.086E-05
Cd	111	3	He	59.853	0.3188	27408.84	0.0053	6.086E-05
Cd	111	3	He	62.56	0.3332	27829.68	0.0053	6.086E-05
Sn	120	3	He	123.76	1.9233	164315.94	0.0154	0.01483
Sn	120	3	He	122.146	1.8984	163211.37	0.0154	0.01483
Sn	120	3	He	126.83	1.9706	164581.29	0.0154	0.01483
Sb	121	3	He	121.1	1.726	147458.32	0.0143	0.0002661
Sb	121	3	He	119.995	1.7102	147033.53	0.0143	0.0002661
Sb	121	3	He	122.048	1.7395	145276.76	0.0143	0.0002661
Ba	137	3	He	662.628	3.1668	270558.51	0.0048	0.0002665
Ba	137	3	He	648.42	3.0989	266427.16	0.0048	0.0002665
Ba	137	3	He	657.28	3.1413	262350.97	0.0048	0.0002665
Tl	205	3	He	120.835	2.9705	1190513.65	0.0246	0.002755
Tl	205	3	He	120.748	2.9684	1183244.36	0.0246	0.002755
Tl	205	3	He	119.764	2.9442	1183927.95	0.0246	0.002755
Pb	208	3	He	60.291	1.9558	417049.68	0.0324	0.002158
Pb	208	3	He	59.98	1.9458	410725.93	0.0324	0.002158
Pb	208	3	He	59.813	1.9403	415947.85	0.0324	0.002158
U	238	3	He	61.337	3.0211	927831.00	0.0492	0.0004023
U	238	3	He	61.515	3.0299	918594.60	0.0492	0.0004023
U	238	3	He	61.458	3.0271	919561.16	0.0492	0.0004023
Sc	45	1	No Gas			2610812.62		
Sc	45	1	No Gas			2587016.06		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2607363.09		
Ge	72	1	No Gas			1302460.53		
Ge	72	1	No Gas			1278229.43		
Ge	72	1	No Gas			1293082.17		
Sc	45	2	H2			198172.32		
Sc	45	2	H2			203221.87		
Sc	45	2	H2			201591.44		
Ge	72	2	H2			167462.61		
Ge	72	2	H2			165510.17		
Ge	72	2	H2			166256.99		
In	115	2	H2			395554.17		
In	115	2	H2			389715.74		
In	115	2	H2			394739.76		
Sc	45	3	He			50347.57		
Sc	45	3	He			51030.75		
Sc	45	3	He			51582.23		
Ge	72	3	He			82900.87		
Ge	72	3	He			83705.34		
Ge	72	3	He			85485.61		
In	115	3	He			86308.48		
In	115	3	He			86841.00		
In	115	3	He			84395.70		
Tb	159	3	He			400780.35		
Tb	159	3	He			398619.10		
Tb	159	3	He			402123.51		
Bi	209	3	He			307116.17		
Bi	209	3	He			303177.40		
Bi	209	3	He			303778.28		

Quantitation Report

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Acq Time	8/9/2023 2:49:03 PM
Sample Name	410-136848-U-6-A SD@5
Sample Type	Sample
Comment	T31
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

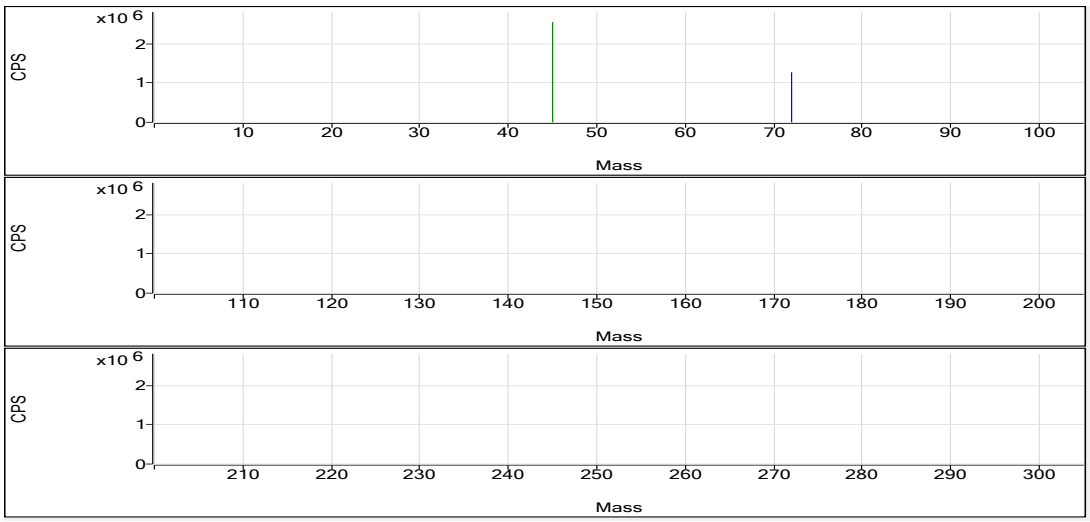
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.001	ppb	N/A	84.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.102	ppb	20.5	13.11	0.0001	Pulse	1.5000	3
Na	23	45	He	1944.471	ppb	0.5	361860.33	7.3480	Pulse	0.1000	3
Mg	24	45	He	3007.398	ppb	1.2	267823.64	5.4383	Pulse	0.1000	3
Al	27	45	He	8.488	ppb	40.0	346.68	0.0070	Pulse	0.1000	3
K	39	45	He	526.692	ppb	3.6	50621.61	1.0280	Pulse	0.1000	3
Ca	44	45	He	27795.756	ppb	2.1	92630.92	1.8811	Pulse	0.1000	3
Ti	47	45	He	0.380	ppb	99.7	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	0.059	ppb	105.1	1627.44	0.0330	Pulse	0.5000	3
Cr	52	45	He	-0.015	ppb	N/A	2093.57	0.0425	Pulse	0.1000	3
Mn	55	45	He	198.936	ppb	0.5	121937.81	2.4760	Pulse	0.1000	3
Fe	57	45	He	157.458	ppb	3.0	4570.88	0.0928	Pulse	0.1000	3
Co	59	45	He	0.168	ppb	9.7	633.37	0.0129	Pulse	0.1000	3
Ni	60	72	He	-0.800	ppb	N/A	553.36	0.0067	Pulse	0.1000	3
Cu	63	72	He	0.202	ppb	24.4	1226.76	0.0149	Pulse	0.1000	3
Zn	66	72	He	0.888	ppb	38.1	713.37	0.0086	Pulse	0.1000	3
As	75	72	He	0.393	ppb	39.3	141.33	0.0017	Pulse	0.5000	3
Sr	88	115	He	97.747	ppb	2.1	74268.97	0.8608	Pulse	0.1000	3
Mo	98	115	He	0.093	ppb	17.5	333.35	0.0039	Pulse	0.1000	3
Ag	107	115	He	-0.004	ppb	N/A	76.67	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.009	ppb	55.7	9.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.055	ppb	93.1	1353.45	0.0157	Pulse	0.1000	3
Sb	121	115	He	0.345	ppb	9.7	446.69	0.0052	Pulse	0.1000	3
Ba	137	115	He	10.738	ppb	3.5	4450.90	0.0516	Pulse	0.1000	3
Tl	205	159	He	0.130	ppb	7.5	2363.63	0.0059	Pulse	0.1000	3
Pb	208	159	He	0.041	ppb	17.4	1393.41	0.0035	Pulse	0.1000	3
U	238	209	He	0.200	ppb	11.1	3170.50	0.0102	Pulse	0.1000	3

ISTD Table:

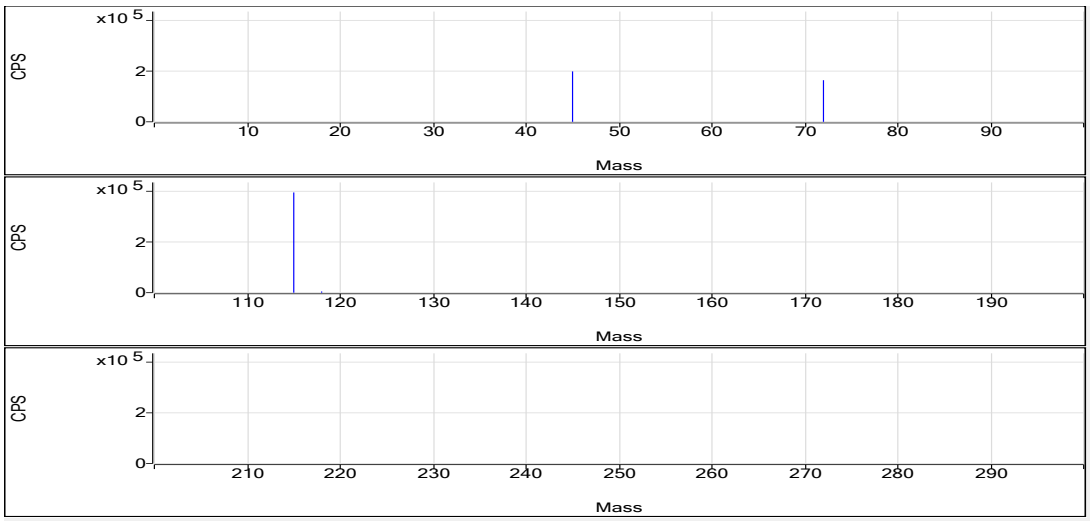
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2543741.32	0.3	97.5	Analog	0.1000	3
No Gas	Ge	72	1269782.98	0.6	98.5	Pulse	0.1000	3
H2	Sc	45	197852.93	1.5	96.0	Pulse	0.1000	3
H2	Ge	72	163294.62	0.5	100.3	Pulse	0.1000	3
H2	In	115	393264.89	0.8	97.4	Pulse	0.1000	3
He	Sc	45	49247.48	0.7	96.2	Pulse	0.1000	3
He	Ge	72	82558.46	0.1	100.9	Pulse	0.1000	3
He	In	115	86285.93	0.4	98.4	Pulse	0.1000	3
He	Tb	159	397901.74	0.6	99.1	Pulse	0.1000	3
He	Bi	209	309488.69	1.0	101.1	Pulse	0.1000	3

No Gas

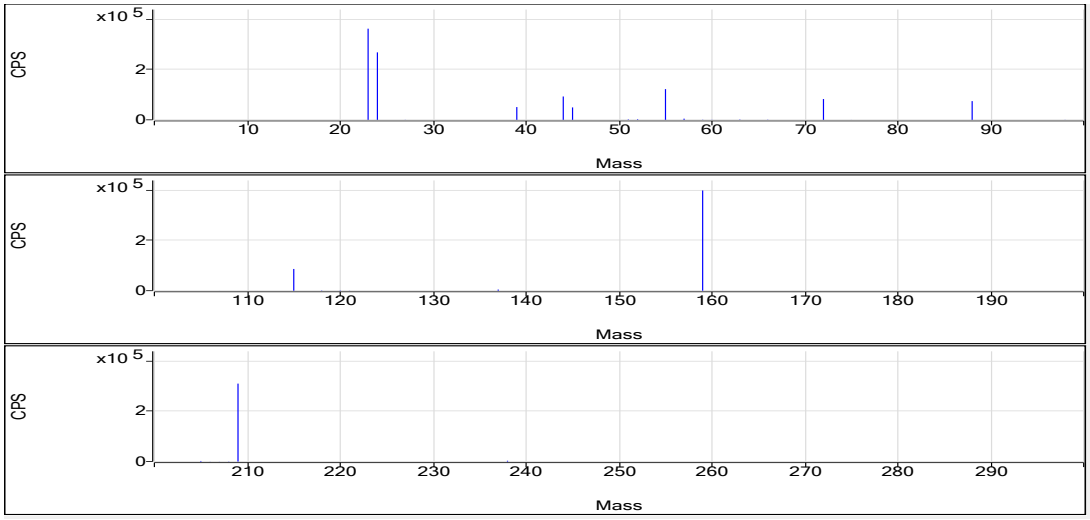


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.005	0	78.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.006	0	76.00	0.0007	3.404E-05
Be	9	1	No Gas	0.006	0	98.00	0.0007	3.404E-05
Se	78	2	H2	0.078	0.0001	11.33	0.0004	3.546E-05
Se	78	2	H2	0.115	0.0001	14.00	0.0004	3.546E-05
Se	78	2	H2	0.114	0.0001	14.00	0.0004	3.546E-05
Na	23	3	He	1952.998	7.3783	362600.19	0.0036	0.4171
Na	23	3	He	1947.645	7.3593	360185.19	0.0036	0.4171
Na	23	3	He	1932.769	7.3062	362795.62	0.0036	0.4171
Mg	24	3	He	3047.465	5.5107	270815.89	0.0018	0.004553
Mg	24	3	He	2974.917	5.3796	263294.29	0.0018	0.004553
Mg	24	3	He	2999.812	5.4246	269360.74	0.0018	0.004553
Al	27	3	He	8.297	0.0069	340.01	0.0006	0.002085
Al	27	3	He	5.19	0.0051	250.01	0.0006	0.002085
Al	27	3	He	11.978	0.0091	450.02	0.0006	0.002085
K	39	3	He	544.983	1.0494	51571.63	0.0012	0.4112
K	39	3	He	527.646	1.0291	50367.26	0.0012	0.4112
K	39	3	He	507.447	1.0054	49925.94	0.0012	0.4112
Ca	44	3	He	28040.299	1.8976	93257.55	0.0001	0.003322
Ca	44	3	He	28228.807	1.9104	93499.91	0.0001	0.003322
Ca	44	3	He	27118.163	1.8353	91135.30	0.0001	0.003322
Ti	47	3	He	0.383	0.0002	10.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.757	0.0004	20.00	0.0005	0
V	51	3	He	-0.001	0.0318	1562.10	0.0213	0.0318
V	51	3	He	0.123	0.0344	1684.11	0.0213	0.0318
V	51	3	He	0.054	0.0329	1636.10	0.0213	0.0318
Cr	52	3	He	0.006	0.0431	2120.24	0.0294	0.04297
Cr	52	3	He	0.095	0.0458	2240.26	0.0294	0.04297
Cr	52	3	He	-0.146	0.0387	1920.20	0.0294	0.04297
Mn	55	3	He	197.829	2.4622	121003.97	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	199.303	2.4806	121406.11	0.0124	0.002801
Mn	55	3	He	199.675	2.4852	123403.34	0.0124	0.002801
Fe	57	3	He	153.519	0.0906	4450.85	0.0006	0.002732
Fe	57	3	He	162.74	0.0958	4690.89	0.0006	0.002732
Fe	57	3	He	156.114	0.0921	4570.91	0.0006	0.002732
Co	59	3	He	0.182	0.0136	670.04	0.0549	0.003644
Co	59	3	He	0.172	0.0131	640.04	0.0549	0.003644
Co	59	3	He	0.15	0.0119	590.03	0.0549	0.003644
Ni	60	3	He	-0.843	0.0063	520.03	0.0093	0.01413
Ni	60	3	He	-0.727	0.0074	610.03	0.0093	0.01413
Ni	60	3	He	-0.829	0.0064	530.03	0.0093	0.01413
Cu	63	3	He	0.199	0.0148	1220.09	0.0274	0.009321
Cu	63	3	He	0.154	0.0135	1120.08	0.0274	0.009321
Cu	63	3	He	0.253	0.0162	1340.10	0.0274	0.009321
Zn	66	3	He	1.192	0.0096	790.05	0.0031	0.005913
Zn	66	3	He	0.95	0.0088	730.04	0.0031	0.005913
Zn	66	3	He	0.523	0.0075	620.03	0.0031	0.005913
As	75	3	He	0.566	0.0021	172.00	0.0021	0.0008698
As	75	3	He	0.271	0.0015	120.00	0.0021	0.0008698
As	75	3	He	0.341	0.0016	132.00	0.0021	0.0008698
Sr	88	3	He	96.183	0.847	73401.09	0.0088	0.0006843
Sr	88	3	He	96.981	0.854	73461.48	0.0088	0.0006843
Sr	88	3	He	100.077	0.8813	75944.33	0.0088	0.0006843
Mo	98	3	He	0.111	0.0043	370.02	0.0219	0.001827
Mo	98	3	He	0.081	0.0036	310.02	0.0219	0.001827
Mo	98	3	He	0.086	0.0037	320.02	0.0219	0.001827
Ag	107	3	He	-0.008	0.0007	60.00	0.047	0.001064
Ag	107	3	He	-0.003	0.0009	80.00	0.047	0.001064
Ag	107	3	He	0	0.001	90.00	0.047	0.001064
Cd	111	3	He	0.015	0.0001	12.00	0.0053	6.086E-05
Cd	111	3	He	0.006	0.0001	8.00	0.0053	6.086E-05
Cd	111	3	He	0.006	0.0001	8.00	0.0053	6.086E-05
Sn	120	3	He	0.004	0.0149	1290.11	0.0154	0.01483
Sn	120	3	He	0.056	0.0157	1350.11	0.0154	0.01483
Sn	120	3	He	0.107	0.0165	1420.13	0.0154	0.01483
Sb	121	3	He	0.354	0.0053	460.02	0.0143	0.0002661
Sb	121	3	He	0.308	0.0047	400.02	0.0143	0.0002661
Sb	121	3	He	0.372	0.0056	480.02	0.0143	0.0002661
Ba	137	3	He	11.151	0.0536	4640.98	0.0048	0.0002665
Ba	137	3	He	10.65	0.0512	4400.89	0.0048	0.0002665
Ba	137	3	He	10.412	0.05	4310.84	0.0048	0.0002665
Tl	205	3	He	0.14	0.0062	2480.32	0.0246	0.002755
Tl	205	3	He	0.12	0.0057	2260.28	0.0246	0.002755
Tl	205	3	He	0.129	0.0059	2350.29	0.0246	0.002755
Pb	208	3	He	0.044	0.0036	770.05	0.0324	0.002158
Pb	208	3	He	0.033	0.0032	710.04	0.0324	0.002158
Pb	208	3	He	0.047	0.0037	780.06	0.0324	0.002158
U	238	3	He	0.201	0.0103	3220.53	0.0492	0.0004023
U	238	3	He	0.222	0.0113	3480.59	0.0492	0.0004023
U	238	3	He	0.177	0.0091	2810.39	0.0492	0.0004023
Sc	45	1	No Gas			2542833.56		
Sc	45	1	No Gas			2552559.65		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2535830.74		
Ge	72	1	No Gas			1262543.57		
Ge	72	1	No Gas			1270022.64		
Ge	72	1	No Gas			1276782.72		
Sc	45	2	H2			195832.89		
Sc	45	2	H2			201234.82		
Sc	45	2	H2			196491.09		
Ge	72	2	H2			162606.05		
Ge	72	2	H2			163172.86		
Ge	72	2	H2			164104.96		
In	115	2	H2			390230.07		
In	115	2	H2			393311.87		
In	115	2	H2			396252.73		
Sc	45	3	He			49143.81		
Sc	45	3	He			48943.07		
Sc	45	3	He			49655.57		
Ge	72	3	He			82528.29		
Ge	72	3	He			82678.92		
Ge	72	3	He			82468.17		
In	115	3	He			86669.75		
In	115	3	He			86026.55		
In	115	3	He			86186.46		
Tb	159	3	He			400727.85		
Tb	159	3	He			395671.79		
Tb	159	3	He			397305.58		
Bi	209	3	He			313052.96		
Bi	209	3	He			307596.15		
Bi	209	3	He			307816.95		

Quantitation Report

Data File Name	037SMPL.d
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Acq Time	8/9/2023 2:51:07 PM
Sample Name	410-136848-X-6-A DU
Sample Type	Sample
Comment	T31
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

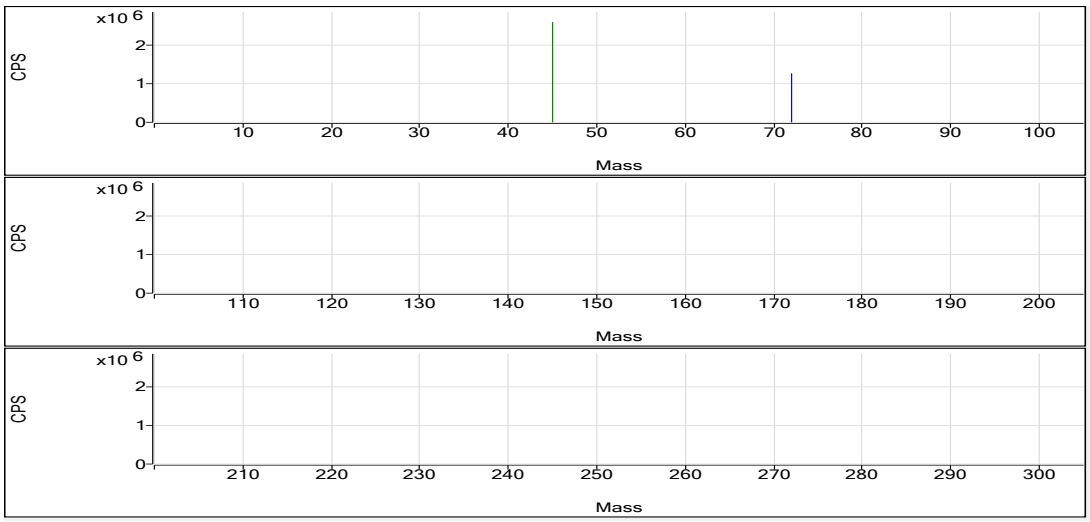
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.026	ppb	N/A	39.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.060	ppb	31.9	10.22	0.0001	Pulse	1.5000	3
Na	23	45	He	10223.058	ppb	2.3	1816526.33	36.8563	Analog	0.1000	3
Mg	24	45	He	15839.267	ppb	1.1	1410847.43	28.6228	Analog	0.1000	3
Al	27	45	He	34.037	ppb	4.3	1080.08	0.0219	Pulse	0.1000	3
K	39	45	He	2693.451	ppb	1.5	175742.59	3.5654	Pulse	0.1000	3
Ca	44	45	He	139868.550	ppb	1.4	465908.47	9.4524	Pulse	0.1000	3
Ti	47	45	He	0.504	ppb	173.2	13.33	0.0003	Pulse	0.1000	3
V	51	45	He	-0.025	ppb	N/A	1540.76	0.0313	Pulse	0.5000	3
Cr	52	45	He	0.341	ppb	55.0	2613.68	0.0530	Pulse	0.1000	3
Mn	55	45	He	1004.549	ppb	0.6	615735.88	12.4915	Pulse	0.1000	3
Fe	57	45	He	807.007	ppb	0.6	22895.56	0.4645	Pulse	0.1000	3
Co	59	45	He	0.275	ppb	2.2	923.39	0.0187	Pulse	0.1000	3
Ni	60	72	He	-0.400	ppb	N/A	876.73	0.0104	Pulse	0.1000	3
Cu	63	72	He	0.394	ppb	13.4	1693.49	0.0201	Pulse	0.1000	3
Zn	66	72	He	3.194	ppb	8.1	1323.44	0.0157	Pulse	0.1000	3
As	75	72	He	0.688	ppb	23.3	197.33	0.0023	Pulse	0.5000	3
Sr	88	115	He	496.997	ppb	0.9	378242.48	4.3737	Pulse	0.1000	3
Mo	98	115	He	0.242	ppb	13.6	616.71	0.0071	Pulse	0.1000	3
Ag	107	115	He	-0.010	ppb	N/A	50.00	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.010	ppb	110.7	10.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.133	ppb	84.7	1460.13	0.0169	Pulse	0.1000	3
Sb	121	115	He	0.146	ppb	27.0	203.34	0.0024	Pulse	0.1000	3
Ba	137	115	He	51.286	ppb	2.3	21216.93	0.2454	Pulse	0.1000	3
Tl	205	159	He	-0.040	ppb	N/A	710.05	0.0018	Pulse	0.1000	3
Pb	208	159	He	0.124	ppb	10.1	2460.19	0.0062	Pulse	0.1000	3
U	238	209	He	0.567	ppb	4.5	8756.62	0.0283	Pulse	0.1000	3

ISTD Table:

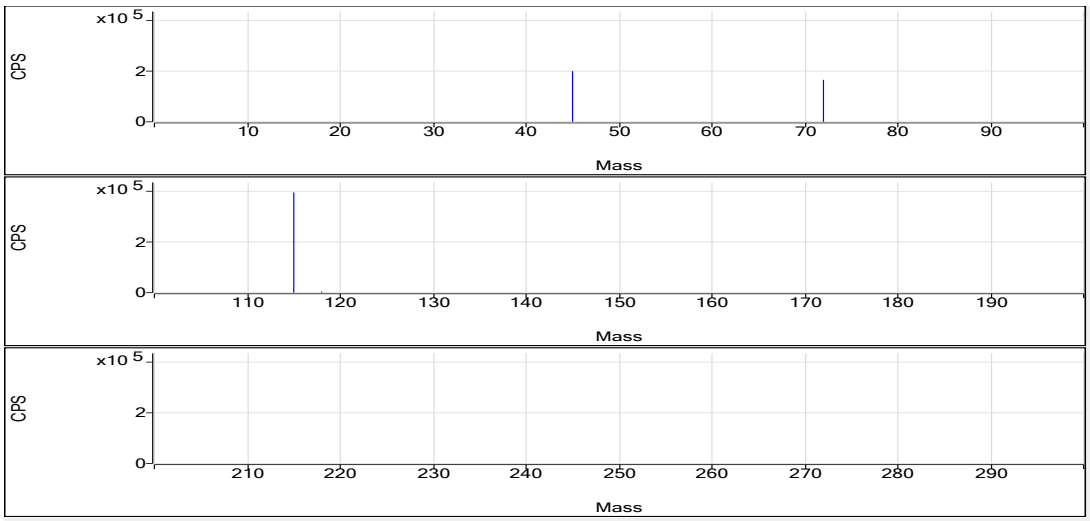
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2598756.58	1.3	99.6	Analog	0.1000	3
No Gas	Ge	72	1269132.84	1.1	98.5	Pulse	0.1000	3
H2	Sc	45	199215.09	0.3	96.7	Pulse	0.1000	3
H2	Ge	72	165057.48	0.2	101.4	Pulse	0.1000	3
H2	In	115	393901.18	0.8	97.6	Pulse	0.1000	3
He	Sc	45	49294.25	1.0	96.3	Pulse	0.1000	3
He	Ge	72	84171.02	0.6	102.8	Pulse	0.1000	3
He	In	115	86484.90	0.8	98.7	Pulse	0.1000	3
He	Tb	159	399360.68	1.0	99.4	Pulse	0.1000	3
He	Bi	209	309171.18	0.3	101.0	Pulse	0.1000	3

No Gas

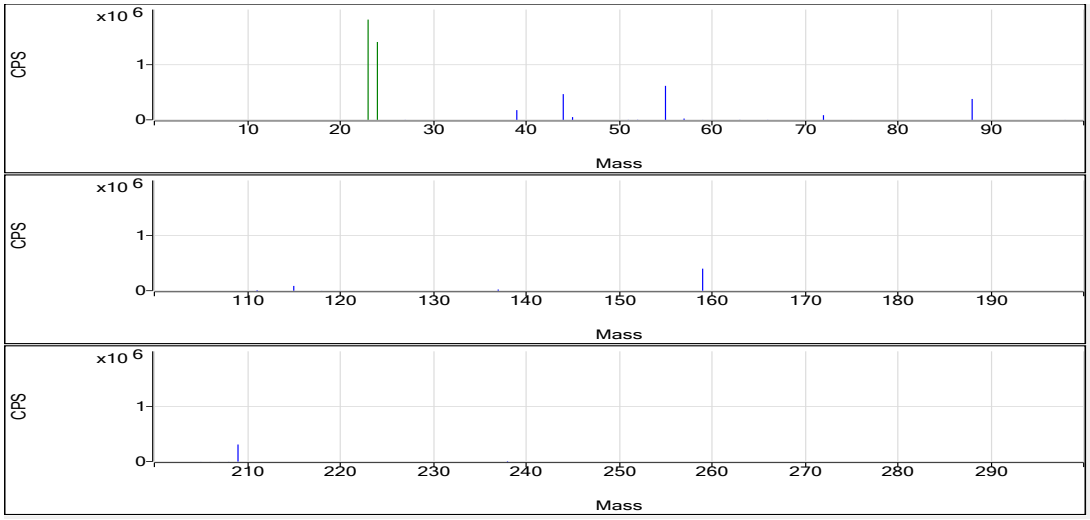


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.024	0	44.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.029	0	34.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.025	0	40.00	0.0007	3.404E-05
Se	78	2	H2	0.076	0.0001	11.33	0.0004	3.546E-05
Se	78	2	H2	0.067	0.0001	10.67	0.0004	3.546E-05
Se	78	2	H2	0.039	0.0001	8.67	0.0004	3.546E-05
Na	23	3	He	10475.141	37.7548	1841014.50	0.0036	0.4171
Na	23	3	He	10183.529	36.7154	1813174.19	0.0036	0.4171
Na	23	3	He	10010.504	36.0986	1795390.29	0.0036	0.4171
Mg	24	3	He	16034.114	28.9748	1412882.64	0.0018	0.004553
Mg	24	3	He	15729.433	28.4243	1403725.14	0.0018	0.004553
Mg	24	3	He	15754.254	28.4692	1415934.51	0.0018	0.004553
Al	27	3	He	35.497	0.0228	1110.08	0.0006	0.002085
Al	27	3	He	32.572	0.0211	1040.07	0.0006	0.002085
Al	27	3	He	34.043	0.0219	1090.09	0.0006	0.002085
K	39	3	He	2716.735	3.5927	175188.14	0.0012	0.4112
K	39	3	He	2717.472	3.5936	177466.17	0.0012	0.4112
K	39	3	He	2646.146	3.51	174573.47	0.0012	0.4112
Ca	44	3	He	141728.682	9.5781	467052.06	0.0001	0.003322
Ca	44	3	He	140143.723	9.471	467723.78	0.0001	0.003322
Ca	44	3	He	137733.245	9.3082	462949.56	0.0001	0.003322
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	1.512	0.0008	40.00	0.0005	0
V	51	3	He	0.059	0.0331	1612.10	0.0213	0.0318
V	51	3	He	-0.038	0.031	1530.09	0.0213	0.0318
V	51	3	He	-0.096	0.0298	1480.09	0.0213	0.0318
Cr	52	3	He	0.213	0.0492	2400.30	0.0294	0.04297
Cr	52	3	He	0.254	0.0504	2490.30	0.0294	0.04297
Cr	52	3	He	0.556	0.0593	2950.44	0.0294	0.04297
Mn	55	3	He	1010.417	12.5644	612672.57	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1003.952	12.4841	616520.85	0.0124	0.002801
Mn	55	3	He	999.279	12.426	618014.21	0.0124	0.002801
Fe	57	3	He	803.429	0.4624	22548.43	0.0006	0.002732
Fe	57	3	He	812.734	0.4677	23099.08	0.0006	0.002732
Fe	57	3	He	804.859	0.4632	23039.18	0.0006	0.002732
Co	59	3	He	0.27	0.0185	900.06	0.0549	0.003644
Co	59	3	He	0.273	0.0186	920.06	0.0549	0.003644
Co	59	3	He	0.282	0.0191	950.06	0.0549	0.003644
Ni	60	3	He	-0.282	0.0115	970.07	0.0093	0.01413
Ni	60	3	He	-0.35	0.0109	920.07	0.0093	0.01413
Ni	60	3	He	-0.568	0.0089	740.05	0.0093	0.01413
Cu	63	3	He	0.404	0.0204	1720.16	0.0274	0.009321
Cu	63	3	He	0.44	0.0214	1810.18	0.0274	0.009321
Cu	63	3	He	0.336	0.0185	1550.14	0.0274	0.009321
Zn	66	3	He	3.406	0.0164	1380.12	0.0031	0.005913
Zn	66	3	He	3.271	0.016	1350.11	0.0031	0.005913
Zn	66	3	He	2.905	0.0148	1240.09	0.0031	0.005913
As	75	3	He	0.523	0.002	168.00	0.0021	0.0008698
As	75	3	He	0.696	0.0024	200.00	0.0021	0.0008698
As	75	3	He	0.843	0.0027	224.00	0.0021	0.0008698
Sr	88	3	He	501.333	4.4119	378079.37	0.0088	0.0006843
Sr	88	3	He	497.383	4.3771	379642.88	0.0088	0.0006843
Sr	88	3	He	492.274	4.3322	377005.19	0.0088	0.0006843
Mo	98	3	He	0.204	0.0063	540.03	0.0219	0.001827
Mo	98	3	He	0.264	0.0076	660.05	0.0219	0.001827
Mo	98	3	He	0.257	0.0075	650.04	0.0219	0.001827
Ag	107	3	He	-0.018	0.0002	20.00	0.047	0.001064
Ag	107	3	He	-0.008	0.0007	60.00	0.047	0.001064
Ag	107	3	He	-0.006	0.0008	70.00	0.047	0.001064
Cd	111	3	He	0.006	0.0001	8.00	0.0053	6.086E-05
Cd	111	3	He	0.002	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	0.023	0.0002	16.00	0.0053	6.086E-05
Sn	120	3	He	0.105	0.0165	1410.12	0.0154	0.01483
Sn	120	3	He	0.257	0.0188	1630.16	0.0154	0.01483
Sn	120	3	He	0.037	0.0154	1340.11	0.0154	0.01483
Sb	121	3	He	0.121	0.002	170.01	0.0143	0.0002661
Sb	121	3	He	0.192	0.003	260.01	0.0143	0.0002661
Sb	121	3	He	0.126	0.0021	180.01	0.0143	0.0002661
Ba	137	3	He	52.218	0.2498	21407.20	0.0048	0.0002665
Ba	137	3	He	51.664	0.2472	21437.18	0.0048	0.0002665
Ba	137	3	He	49.975	0.2391	20806.41	0.0048	0.0002665
Tl	205	3	He	-0.049	0.0015	620.04	0.0246	0.002755
Tl	205	3	He	-0.055	0.0014	570.04	0.0246	0.002755
Tl	205	3	He	-0.015	0.0024	940.07	0.0246	0.002755
Pb	208	3	He	0.136	0.0066	1340.13	0.0324	0.002158
Pb	208	3	He	0.111	0.0058	1210.10	0.0324	0.002158
Pb	208	3	He	0.123	0.0062	1340.12	0.0324	0.002158
U	238	3	He	0.553	0.0276	8553.13	0.0492	0.0004023
U	238	3	He	0.596	0.0298	9223.59	0.0492	0.0004023
U	238	3	He	0.551	0.0276	8493.14	0.0492	0.0004023
Sc	45	1	No Gas			2605223.40		
Sc	45	1	No Gas			2629655.27		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2561391.06		
Ge	72	1	No Gas			1278410.37		
Ge	72	1	No Gas			1275514.90		
Ge	72	1	No Gas			1253473.26		
Sc	45	2	H2			199757.79		
Sc	45	2	H2			199309.27		
Sc	45	2	H2			198578.22		
Ge	72	2	H2			165154.82		
Ge	72	2	H2			164690.99		
Ge	72	2	H2			165326.62		
In	115	2	H2			390500.15		
In	115	2	H2			394875.50		
In	115	2	H2			396327.88		
Sc	45	3	He			48762.42		
Sc	45	3	He			49384.63		
Sc	45	3	He			49735.70		
Ge	72	3	He			84298.12		
Ge	72	3	He			84609.79		
Ge	72	3	He			83605.15		
In	115	3	He			85703.95		
In	115	3	He			86740.96		
In	115	3	He			87033.04		
Tb	159	3	He			400547.30		
Tb	159	3	He			402805.62		
Tb	159	3	He			394729.13		
Bi	209	3	He			309450.76		
Bi	209	3	He			309885.23		
Bi	209	3	He			308177.55		

Quantitation Report

Data File Name	038SMPL.d
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Sample Name	410-136848-V-6-A MS
Sample Type	Sample
Comment	T31
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

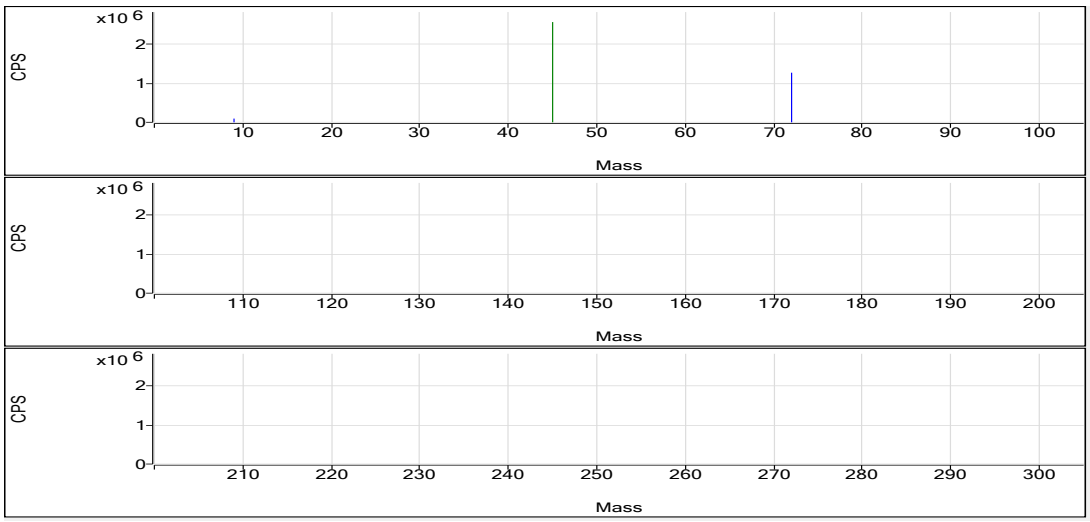
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.672	ppb	0.5	94690.92	0.0370	Pulse	0.5000	3
Se	78	72	H2	99.899	ppb	1.5	7203.60	0.0438	Pulse	1.5000	3
Na	23	45	He	14831.027	ppb	2.1	2669121.73	53.2810	Analog	0.1000	3
Mg	24	45	He	20442.783	ppb	1.8	1850616.79	36.9404	Analog	0.1000	3
Al	27	45	He	5141.274	ppb	2.2	150148.43	2.9974	Pulse	0.1000	3
K	39	45	He	7541.721	ppb	2.4	463011.02	9.2431	Pulse	0.1000	3
Ca	44	45	He	139316.761	ppb	2.5	471608.72	9.4152	Pulse	0.1000	3
Ti	47	45	He	529.826	ppb	2.4	14117.25	0.2818	Pulse	0.1000	3
V	51	45	He	509.064	ppb	2.4	543487.39	10.8499	Pulse	0.5000	3
Cr	52	45	He	485.530	ppb	3.1	717340.77	14.3225	Pulse	0.1000	3
Mn	55	45	He	1469.334	ppb	3.3	915022.10	18.2698	Pulse	0.1000	3
Fe	57	45	He	5839.288	ppb	2.6	167481.66	3.3437	Pulse	0.1000	3
Co	59	45	He	481.060	ppb	2.2	1322846.91	26.4078	Pulse	0.1000	3
Ni	60	72	He	469.876	ppb	1.4	372673.32	4.3759	Pulse	0.1000	3
Cu	63	72	He	451.460	ppb	1.0	1055322.59	12.3911	Pulse	0.1000	3
Zn	66	72	He	487.739	ppb	1.9	128037.08	1.5035	Pulse	0.1000	3
As	75	72	He	492.112	ppb	1.7	90003.90	1.0568	Pulse	0.5000	3
Sr	88	115	He	550.098	ppb	1.4	408255.21	4.8409	Pulse	0.1000	3
Mo	98	115	He	51.351	ppb	0.8	95191.48	1.1287	Pulse	0.1000	3
Ag	107	115	He	50.805	ppb	1.2	201632.34	2.3909	Pulse	0.1000	3
Cd	111	115	He	51.545	ppb	1.3	23156.54	0.2746	Pulse	0.5000	3
Sn	120	115	He	105.761	ppb	0.7	138797.12	1.6457	Pulse	0.1000	3
Sb	121	115	He	104.934	ppb	1.5	126130.65	1.4956	Pulse	0.1000	3
Ba	137	115	He	570.956	ppb	0.4	230132.79	2.7288	Pulse	0.1000	3
Tl	205	159	He	101.018	ppb	0.4	993734.20	2.4838	Pulse	0.1000	3
Pb	208	159	He	50.413	ppb	0.2	654440.61	1.6357	Pulse	0.1000	3
U	238	209	He	51.332	ppb	1.0	777595.33	2.5284	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2562761.32	1.1	98.3	Analog	0.1000	3
No Gas	Ge	72	1268293.78	0.9	98.4	Pulse	0.1000	3
H2	Sc	45	198178.85	1.9	96.2	Pulse	0.1000	3
H2	Ge	72	164394.25	0.9	101.0	Pulse	0.1000	3
H2	In	115	393887.78	0.4	97.6	Pulse	0.1000	3
He	Sc	45	50113.94	2.8	97.9	Pulse	0.1000	3
He	Ge	72	85176.89	1.6	104.1	Pulse	0.1000	3
He	In	115	84337.50	0.6	96.2	Pulse	0.1000	3
He	Tb	159	400089.91	0.4	99.6	Pulse	0.1000	3
He	Bi	209	307561.27	0.6	100.5	Pulse	0.1000	3

No Gas



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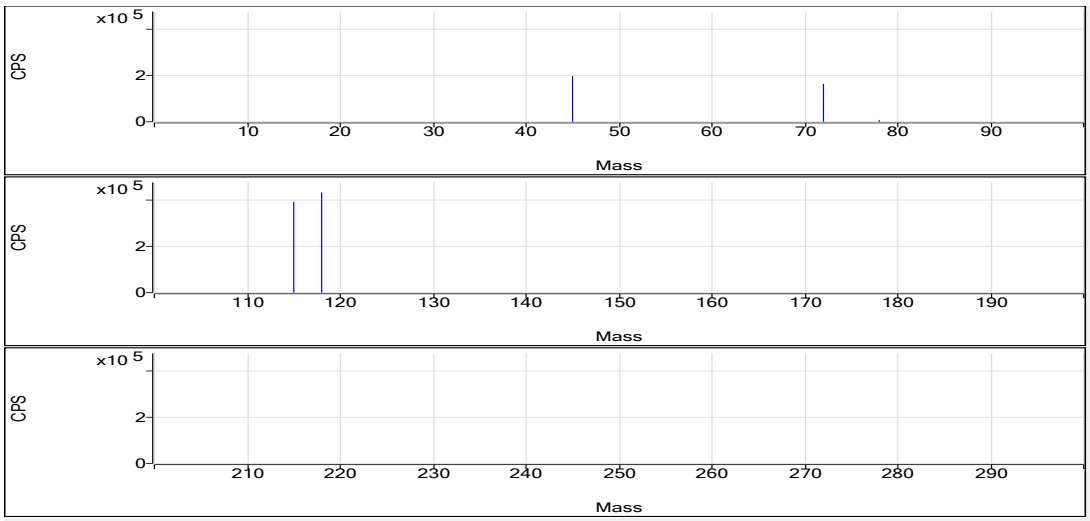
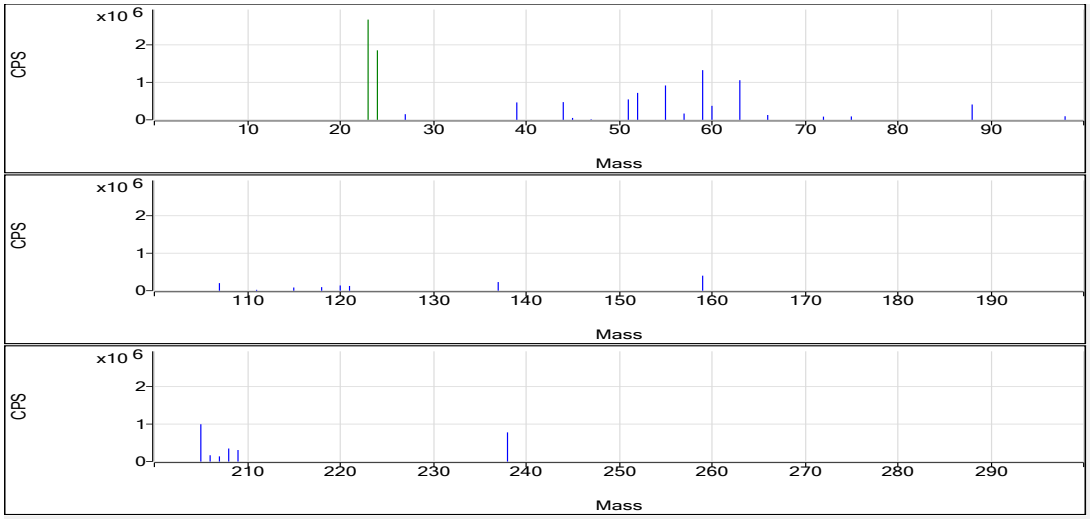


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.889	0.0371	94870.10	0.0007	3.404E-05
Be	9	1	No Gas	50.359	0.0367	95260.55	0.0007	3.404E-05
Be	9	1	No Gas	50.768	0.037	93942.11	0.0007	3.404E-05
Se	78	2	H2	100.807	0.0442	7234.50	0.0004	3.546E-05
Se	78	2	H2	100.766	0.0442	7223.16	0.0004	3.546E-05
Se	78	2	H2	98.125	0.043	7153.13	0.0004	3.546E-05
Na	23	3	He	14465.411	51.9777	2685827.46	0.0036	0.4171
Na	23	3	He	14996.053	53.8692	2633292.77	0.0036	0.4171
Na	23	3	He	15031.616	53.9959	2688244.96	0.0036	0.4171
Mg	24	3	He	20097.235	36.316	1876545.28	0.0018	0.004553
Mg	24	3	He	20843.189	37.6638	1841124.35	0.0018	0.004553
Mg	24	3	He	20387.927	36.8413	1834180.75	0.0018	0.004553
Al	27	3	He	5028.355	2.9316	151482.13	0.0006	0.002085
Al	27	3	He	5253.376	3.0627	149712.77	0.0006	0.002085
Al	27	3	He	5142.091	2.9978	149250.40	0.0006	0.002085
K	39	3	He	7361.355	9.0319	466701.56	0.0012	0.4112
K	39	3	He	7725.676	9.4585	462362.65	0.0012	0.4112
K	39	3	He	7538.133	9.2389	459968.86	0.0012	0.4112
Ca	44	3	He	135716.013	9.1719	473937.10	0.0001	0.003322
Ca	44	3	He	142742.243	9.6466	471555.23	0.0001	0.003322
Ca	44	3	He	139492.027	9.427	469333.82	0.0001	0.003322
Ti	47	3	He	516.59	0.2748	14197.28	0.0005	0
Ti	47	3	He	530.674	0.2822	13797.01	0.0005	0
Ti	47	3	He	542.215	0.2884	14357.45	0.0005	0
V	51	3	He	496.686	10.5868	547049.13	0.0213	0.0318
V	51	3	He	521.017	11.1039	542791.63	0.0213	0.0318
V	51	3	He	509.489	10.8589	540621.44	0.0213	0.0318
Cr	52	3	He	470.412	13.8778	717104.75	0.0294	0.04297
Cr	52	3	He	500.742	14.7698	721995.46	0.0294	0.04297
Cr	52	3	He	485.437	14.3197	712922.10	0.0294	0.04297
Mn	55	3	He	1422.929	17.6928	914236.24	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1518.784	18.8845	923134.36	0.0124	0.002801
Mn	55	3	He	1466.291	18.2319	907695.69	0.0124	0.002801
Fe	57	3	He	5668.467	3.2459	167726.77	0.0006	0.002732
Fe	57	3	He	5967.484	3.417	167035.15	0.0006	0.002732
Fe	57	3	He	5881.913	3.3681	167683.06	0.0006	0.002732
Co	59	3	He	469.641	25.781	1332173.89	0.0549	0.003644
Co	59	3	He	490.581	26.9304	1316441.39	0.0549	0.003644
Co	59	3	He	482.958	26.5119	1319925.45	0.0549	0.003644
Ni	60	3	He	469.577	4.3731	371903.63	0.0093	0.01413
Ni	60	3	He	463.496	4.3167	373749.29	0.0093	0.01413
Ni	60	3	He	476.555	4.4379	372367.03	0.0093	0.01413
Cu	63	3	He	450.805	12.3731	1052241.47	0.0274	0.009321
Cu	63	3	He	447.276	12.2763	1062912.56	0.0274	0.009321
Cu	63	3	He	456.297	12.5237	1050813.73	0.0274	0.009321
Zn	66	3	He	490.964	1.5134	128701.62	0.0031	0.005913
Zn	66	3	He	477.538	1.4722	127462.48	0.0031	0.005913
Zn	66	3	He	494.714	1.5249	127947.15	0.0031	0.005913
As	75	3	He	499.124	1.0719	91153.67	0.0021	0.0008698
As	75	3	He	482.82	1.0369	89775.00	0.0021	0.0008698
As	75	3	He	494.392	1.0617	89083.02	0.0021	0.0008698
Sr	88	3	He	551.13	4.85	410335.19	0.0088	0.0006843
Sr	88	3	He	557.101	4.9026	410699.56	0.0088	0.0006843
Sr	88	3	He	542.064	4.7703	403730.89	0.0088	0.0006843
Mo	98	3	He	51.133	1.1239	95090.79	0.0219	0.001827
Mo	98	3	He	51.806	1.1387	95392.98	0.0219	0.001827
Mo	98	3	He	51.114	1.1235	95090.66	0.0219	0.001827
Ag	107	3	He	50.768	2.3892	202134.72	0.047	0.001064
Ag	107	3	He	51.443	2.4209	202806.77	0.047	0.001064
Ag	107	3	He	50.202	2.3626	199955.52	0.047	0.001064
Cd	111	3	He	52.314	0.2787	23575.92	0.0053	6.086E-05
Cd	111	3	He	51.137	0.2724	22818.65	0.0053	6.086E-05
Cd	111	3	He	51.184	0.2726	23075.04	0.0053	6.086E-05
Sn	120	3	He	106.518	1.6574	140224.31	0.0154	0.01483
Sn	120	3	He	105.625	1.6436	137690.43	0.0154	0.01483
Sn	120	3	He	105.141	1.6362	138476.62	0.0154	0.01483
Sb	121	3	He	105.552	1.5044	127280.23	0.0143	0.0002661
Sb	121	3	He	106.111	1.5124	126695.54	0.0143	0.0002661
Sb	121	3	He	103.14	1.47	124416.17	0.0143	0.0002661
Ba	137	3	He	569.63	2.7224	230329.82	0.0048	0.0002665
Ba	137	3	He	573.537	2.7411	229627.50	0.0048	0.0002665
Ba	137	3	He	569.702	2.7228	230441.05	0.0048	0.0002665
Tl	205	3	He	100.622	2.4741	993957.49	0.0246	0.002755
Tl	205	3	He	101.372	2.4925	995659.59	0.0246	0.002755
Tl	205	3	He	101.061	2.4848	991585.53	0.0246	0.002755
Pb	208	3	He	50.322	1.6328	349035.15	0.0324	0.002158
Pb	208	3	He	50.443	1.6367	346055.23	0.0324	0.002158
Pb	208	3	He	50.472	1.6377	347771.36	0.0324	0.002158
U	238	3	He	51.449	2.5342	778980.07	0.0492	0.0004023
U	238	3	He	50.784	2.5014	774232.25	0.0492	0.0004023
U	238	3	He	51.761	2.5495	779573.66	0.0492	0.0004023
Sc	45	1	No Gas			2556579.81		
Sc	45	1	No Gas			2594109.65		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2537594.49		
Ge	72	1	No Gas			1277060.22		
Ge	72	1	No Gas			1271861.93		
Ge	72	1	No Gas			1255959.20		
Sc	45	2	H2			193978.84		
Sc	45	2	H2			200758.63		
Sc	45	2	H2			199799.08		
Ge	72	2	H2			163598.59		
Ge	72	2	H2			163407.65		
Ge	72	2	H2			166176.52		
In	115	2	H2			395621.63		
In	115	2	H2			392261.67		
In	115	2	H2			393780.03		
Sc	45	3	He			51672.64		
Sc	45	3	He			48883.11		
Sc	45	3	He			49786.06		
Ge	72	3	He			85042.62		
Ge	72	3	He			86582.31		
Ge	72	3	He			83905.75		
In	115	3	He			85342.24		
In	115	3	He			84506.74		
In	115	3	He			85382.22		
Tb	159	3	He			401750.74		
Tb	159	3	He			399465.70		
Tb	159	3	He			399053.28		
Bi	209	3	He			307392.48		
Bi	209	3	He			309518.39		
Bi	209	3	He			305772.94		

Quantitation Report

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Acq Time	8/9/2023 2:55:14 PM
Sample Name	410-136848-W-6-A MSD
Sample Type	Sample
Comment	T31
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

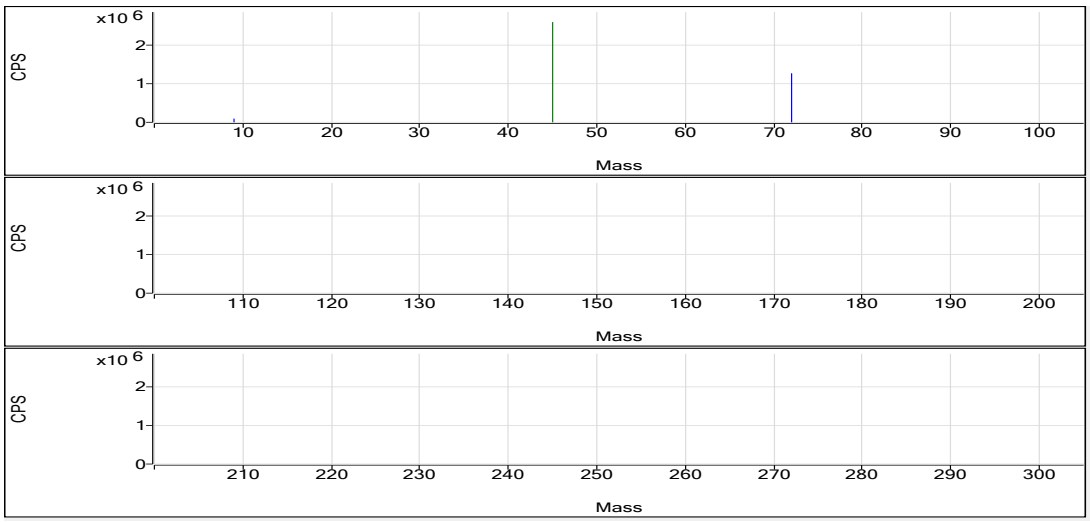
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.289	ppb	0.9	95008.93	0.0367	Pulse	0.5000	3
Se	78	72	H2	96.203	ppb	1.4	6973.49	0.0422	Pulse	1.5000	3
Na	23	45	He	14842.676	ppb	0.4	2685279.13	53.3225	Analog	0.1000	3
Mg	24	45	He	20401.035	ppb	0.4	1856427.84	36.8649	Analog	0.1000	3
Al	27	45	He	5025.315	ppb	2.2	147516.99	2.9298	Pulse	0.1000	3
K	39	45	He	7538.547	ppb	1.7	465226.27	9.2394	Pulse	0.1000	3
Ca	44	45	He	140080.856	ppb	1.2	476690.28	9.4668	Pulse	0.1000	3
Ti	47	45	He	512.919	ppb	1.1	13736.93	0.2728	Pulse	0.1000	3
V	51	45	He	505.884	ppb	1.1	542935.17	10.7823	Pulse	0.5000	3
Cr	52	45	He	481.748	ppb	1.1	715602.15	14.2112	Pulse	0.1000	3
Mn	55	45	He	1472.141	ppb	1.5	921692.28	18.3047	Pulse	0.1000	3
Fe	57	45	He	5797.784	ppb	1.8	167164.98	3.3199	Pulse	0.1000	3
Co	59	45	He	478.290	ppb	0.7	1322125.24	26.2558	Pulse	0.1000	3
Ni	60	72	He	483.153	ppb	0.2	373901.35	4.4992	Pulse	0.1000	3
Cu	63	72	He	463.602	ppb	0.3	1057426.47	12.7241	Pulse	0.1000	3
Zn	66	72	He	490.032	ppb	1.3	125528.86	1.5105	Pulse	0.1000	3
As	75	72	He	499.897	ppb	0.8	89213.59	1.0735	Pulse	0.5000	3
Sr	88	115	He	559.593	ppb	1.8	414573.24	4.9245	Pulse	0.1000	3
Mo	98	115	He	51.683	ppb	0.9	95644.78	1.1360	Pulse	0.1000	3
Ag	107	115	He	50.639	ppb	1.3	200639.84	2.3831	Pulse	0.1000	3
Cd	111	115	He	51.941	ppb	2.6	23290.08	0.2767	Pulse	0.5000	3
Sn	120	115	He	106.076	ppb	2.8	138939.32	1.6506	Pulse	0.1000	3
Sb	121	115	He	105.204	ppb	1.0	126242.04	1.4994	Pulse	0.1000	3
Ba	137	115	He	573.974	ppb	1.8	230935.89	2.7432	Pulse	0.1000	3
Tl	205	159	He	101.875	ppb	1.0	999608.19	2.5048	Pulse	0.1000	3
Pb	208	159	He	50.952	ppb	0.4	659759.23	1.6532	Pulse	0.1000	3
U	238	209	He	51.400	ppb	0.5	773929.83	2.5317	Pulse	0.1000	3

ISTD Table:

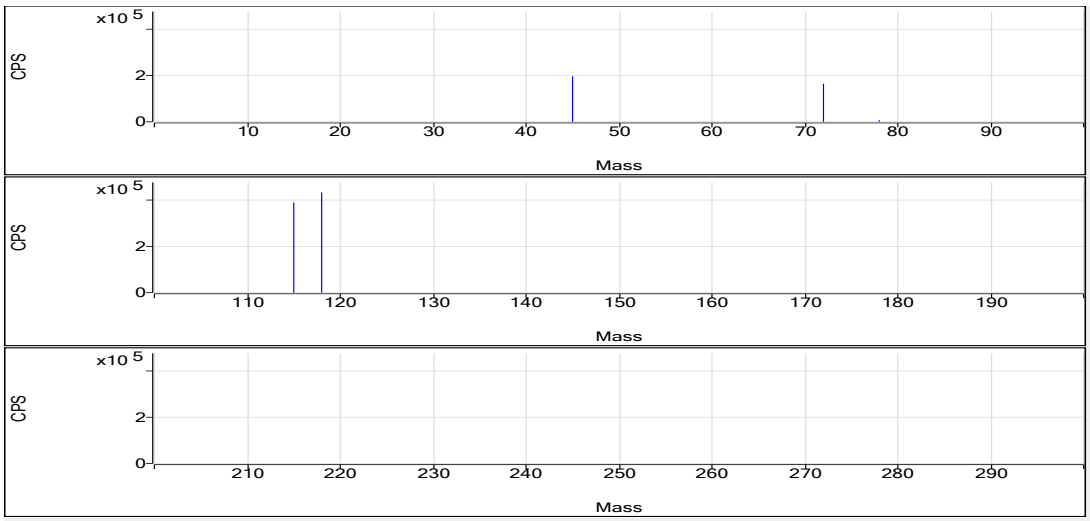
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2590936.73	0.7	99.3	Analog	0.1000	3
No Gas	Ge	72	1267263.42	0.6	98.3	Pulse	0.1000	3
H2	Sc	45	196927.98	0.5	95.6	Pulse	0.1000	3
H2	Ge	72	165242.48	1.1	101.5	Pulse	0.1000	3
H2	In	115	391417.19	0.8	97.0	Pulse	0.1000	3
He	Sc	45	50357.80	1.0	98.4	Pulse	0.1000	3
He	Ge	72	83104.56	0.2	101.5	Pulse	0.1000	3
He	In	115	84202.37	1.7	96.1	Pulse	0.1000	3
He	Tb	159	399077.62	0.3	99.4	Pulse	0.1000	3
He	Bi	209	305697.74	0.4	99.9	Pulse	0.1000	3

No Gas

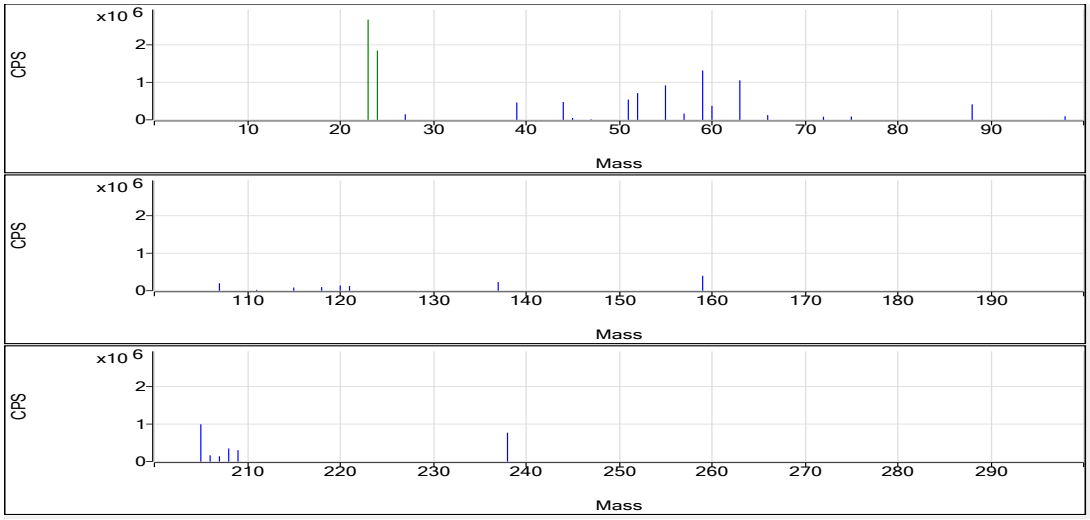


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	49.798	0.0363	94640.55	0.0007	3.404E-05
Be	9	1	No Gas	50.319	0.0367	95236.52	0.0007	3.404E-05
Be	9	1	No Gas	50.75	0.037	95149.73	0.0007	3.404E-05
Se	78	2	H2	94.673	0.0415	6906.34	0.0004	3.546E-05
Se	78	2	H2	97.196	0.0426	7089.77	0.0004	3.546E-05
Se	78	2	H2	96.739	0.0424	6924.35	0.0004	3.546E-05
Na	23	3	He	14916.426	53.5854	2729089.02	0.0036	0.4171
Na	23	3	He	14815.082	53.2241	2669026.21	0.0036	0.4171
Na	23	3	He	14796.519	53.158	2657722.15	0.0036	0.4171
Mg	24	3	He	20397.408	36.8584	1877188.57	0.0018	0.004553
Mg	24	3	He	20323.743	36.7253	1841660.29	0.0018	0.004553
Mg	24	3	He	20481.952	37.0111	1850434.66	0.0018	0.004553
Al	27	3	He	4898.922	2.8562	145463.86	0.0006	0.002085
Al	27	3	He	5077.401	2.9601	148442.29	0.0006	0.002085
Al	27	3	He	5099.621	2.9731	148644.81	0.0006	0.002085
K	39	3	He	7388.089	9.0632	461586.40	0.0012	0.4112
K	39	3	He	7633.318	9.3504	468892.73	0.0012	0.4112
K	39	3	He	7594.234	9.3046	465199.68	0.0012	0.4112
Ca	44	3	He	138122.418	9.3345	475403.12	0.0001	0.003322
Ca	44	3	He	141448.282	9.5592	479363.12	0.0001	0.003322
Ca	44	3	He	140671.868	9.5067	475304.60	0.0001	0.003322
Ti	47	3	He	507.499	0.2699	13746.92	0.0005	0
Ti	47	3	He	518.426	0.2757	13827.06	0.0005	0
Ti	47	3	He	512.83	0.2728	13636.82	0.0005	0
V	51	3	He	499.683	10.6505	542427.19	0.0213	0.0318
V	51	3	He	509.974	10.8692	545056.88	0.0213	0.0318
V	51	3	He	507.995	10.8271	541321.44	0.0213	0.0318
Cr	52	3	He	476.104	14.0452	715320.54	0.0294	0.04297
Cr	52	3	He	486.447	14.3494	719579.13	0.0294	0.04297
Cr	52	3	He	482.695	14.2391	711906.79	0.0294	0.04297
Mn	55	3	He	1446.283	17.9832	915879.52	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1488.403	18.5068	928060.61	0.0124	0.002801
Mn	55	3	He	1481.736	18.424	921136.71	0.0124	0.002801
Fe	57	3	He	5678.588	3.2517	165610.35	0.0006	0.002732
Fe	57	3	He	5846.976	3.3481	167896.11	0.0006	0.002732
Fe	57	3	He	5867.788	3.36	167988.47	0.0006	0.002732
Co	59	3	He	474.931	26.0714	1327809.04	0.0549	0.003644
Co	59	3	He	478.437	26.2639	1317051.54	0.0549	0.003644
Co	59	3	He	481.502	26.432	1321515.14	0.0549	0.003644
Ni	60	3	He	482.175	4.4901	372590.23	0.0093	0.01413
Ni	60	3	He	483.106	4.4987	374756.71	0.0093	0.01413
Ni	60	3	He	484.177	4.5087	374357.10	0.0093	0.01413
Cu	63	3	He	465.009	12.7627	1059051.70	0.0274	0.009321
Cu	63	3	He	463.176	12.7124	1058978.50	0.0274	0.009321
Cu	63	3	He	462.62	12.6972	1054249.20	0.0274	0.009321
Zn	66	3	He	496.525	1.5304	126997.56	0.0031	0.005913
Zn	66	3	He	484.269	1.4928	124356.03	0.0031	0.005913
Zn	66	3	He	489.304	1.5083	125233.00	0.0031	0.005913
As	75	3	He	504.631	1.0837	89923.88	0.0021	0.0008698
As	75	3	He	498.501	1.0705	89177.38	0.0021	0.0008698
As	75	3	He	496.558	1.0664	88539.52	0.0021	0.0008698
Sr	88	3	He	566.589	4.986	412511.36	0.0088	0.0006843
Sr	88	3	He	564.388	4.9667	418339.80	0.0088	0.0006843
Sr	88	3	He	547.8	4.8207	412868.55	0.0088	0.0006843
Mo	98	3	He	52.208	1.1475	94940.11	0.0219	0.001827
Mo	98	3	He	51.53	1.1327	95403.57	0.0219	0.001827
Mo	98	3	He	51.309	1.1278	96590.65	0.0219	0.001827
Ag	107	3	He	51.357	2.4169	199955.80	0.047	0.001064
Ag	107	3	He	50.144	2.3598	198766.31	0.047	0.001064
Ag	107	3	He	50.415	2.3726	203197.40	0.047	0.001064
Cd	111	3	He	52.784	0.2812	23261.39	0.0053	6.086E-05
Cd	111	3	He	52.655	0.2805	23623.95	0.0053	6.086E-05
Cd	111	3	He	50.383	0.2684	22984.90	0.0053	6.086E-05
Sn	120	3	He	108.808	1.6927	140043.69	0.0154	0.01483
Sn	120	3	He	106.454	1.6564	139518.63	0.0154	0.01483
Sn	120	3	He	102.965	1.6026	137255.63	0.0154	0.01483
Sb	121	3	He	106.333	1.5155	125384.84	0.0143	0.0002661
Sb	121	3	He	105.091	1.4978	126161.43	0.0143	0.0002661
Sb	121	3	He	104.188	1.485	127179.84	0.0143	0.0002661
Ba	137	3	He	582.596	2.7844	230360.64	0.0048	0.0002665
Ba	137	3	He	576.611	2.7558	232117.36	0.0048	0.0002665
Ba	137	3	He	562.714	2.6894	230329.66	0.0048	0.0002665
Tl	205	3	He	100.821	2.479	992531.78	0.0246	0.002755
Tl	205	3	He	102.958	2.5314	1009730.77	0.0246	0.002755
Tl	205	3	He	101.845	2.5041	996562.02	0.0246	0.002755
Pb	208	3	He	50.722	1.6458	350771.99	0.0324	0.002158
Pb	208	3	He	51.172	1.6603	352043.16	0.0324	0.002158
Pb	208	3	He	50.962	1.6535	351073.24	0.0324	0.002158
U	238	3	He	51.69	2.546	774669.60	0.0492	0.0004023
U	238	3	He	51.256	2.5246	774758.19	0.0492	0.0004023
U	238	3	He	51.253	2.5245	772361.71	0.0492	0.0004023
Sc	45	1	No Gas			2606208.87		
Sc	45	1	No Gas			2595484.18		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2571117.15		
Ge	72	1	No Gas			1276378.89		
Ge	72	1	No Gas			1263569.98		
Ge	72	1	No Gas			1261841.39		
Sc	45	2	H2			195914.27		
Sc	45	2	H2			197941.58		
Sc	45	2	H2			196928.08		
Ge	72	2	H2			166287.26		
Ge	72	2	H2			166277.15		
Ge	72	2	H2			163163.04		
In	115	2	H2			391163.39		
In	115	2	H2			394523.82		
In	115	2	H2			388564.37		
Sc	45	3	He			50929.76		
Sc	45	3	He			50146.93		
Sc	45	3	He			49996.70		
Ge	72	3	He			82980.54		
Ge	72	3	He			83302.77		
Ge	72	3	He			83030.36		
In	115	3	He			83461.61		
In	115	3	He			84970.34		
In	115	3	He			86387.91		
Tb	159	3	He			400382.06		
Tb	159	3	He			398876.67		
Tb	159	3	He			397974.13		
Bi	209	3	He			304266.28		
Bi	209	3	He			306881.75		
Bi	209	3	He			305945.19		

Quantitation Report

Data File Name	040SMPL.d
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Sample Type	Sample
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

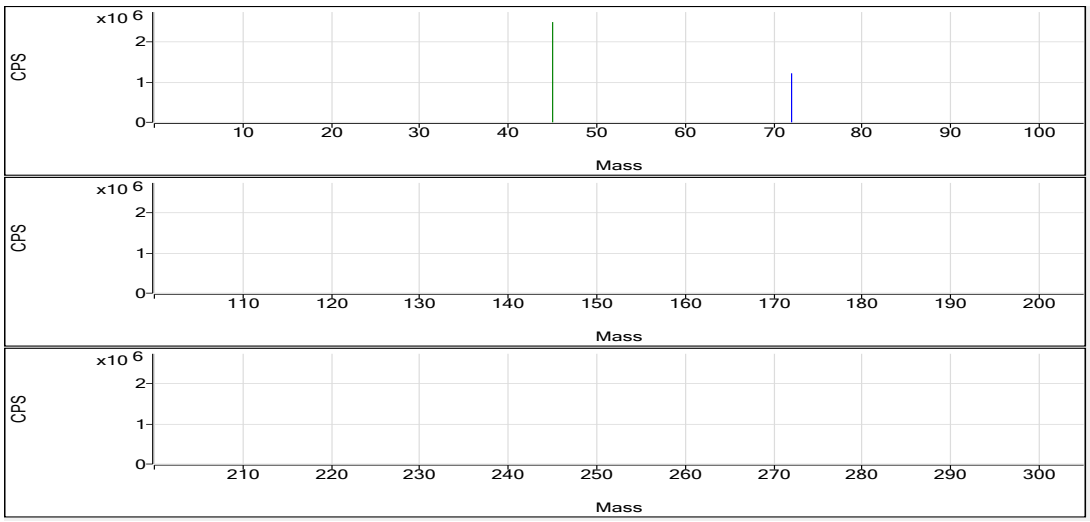
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.000	ppb	2019.8	85.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.107	ppb	42.8	12.66	0.0001	Pulse	1.5000	3
Na	23	45	He	-6.651	ppb	N/A	19566.87	0.3934	Pulse	0.1000	3
Mg	24	45	He	3.341	ppb	25.4	526.69	0.0106	Pulse	0.1000	3
Al	27	45	He	-0.012	ppb	N/A	103.33	0.0021	Pulse	0.1000	3
K	39	45	He	-4.691	ppb	N/A	20181.18	0.4057	Pulse	0.1000	3
Ca	44	45	He	39.123	ppb	52.0	296.68	0.0060	Pulse	0.1000	3
Ti	47	45	He	0.503	ppb	114.6	13.33	0.0003	Pulse	0.1000	3
V	51	45	He	0.036	ppb	74.7	1620.10	0.0326	Pulse	0.5000	3
Cr	52	45	He	0.059	ppb	251.9	2223.59	0.0447	Pulse	0.1000	3
Mn	55	45	He	0.265	ppb	30.9	303.35	0.0061	Pulse	0.1000	3
Fe	57	45	He	0.613	ppb	120.2	153.34	0.0031	Pulse	0.1000	3
Co	59	45	He	0.130	ppb	17.2	536.70	0.0108	Pulse	0.1000	3
Ni	60	72	He	-0.754	ppb	N/A	553.37	0.0071	Pulse	0.1000	3
Cu	63	72	He	0.105	ppb	50.2	946.73	0.0122	Pulse	0.1000	3
Zn	66	72	He	0.845	ppb	52.9	660.05	0.0085	Pulse	0.1000	3
As	75	72	He	0.315	ppb	5.9	120.00	0.0015	Pulse	0.5000	3
Sr	88	115	He	0.184	ppb	13.8	196.68	0.0023	Pulse	0.1000	3
Mo	98	115	He	0.032	ppb	87.7	216.68	0.0025	Pulse	0.1000	3
Ag	107	115	He	-0.003	ppb	N/A	80.00	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.000	ppb	860.8	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.193	ppb	38.8	1520.14	0.0178	Pulse	0.1000	3
Sb	121	115	He	0.042	ppb	29.8	73.33	0.0009	Pulse	0.1000	3
Ba	137	115	He	0.067	ppb	36.6	50.00	0.0006	Pulse	0.1000	3
Tl	205	159	He	0.127	ppb	8.5	2350.30	0.0059	Pulse	0.1000	3
Pb	208	159	He	-0.005	ppb	N/A	803.38	0.0020	Pulse	0.1000	3
U	238	209	He	0.087	ppb	11.9	1436.81	0.0047	Pulse	0.1000	3

ISTD Table:

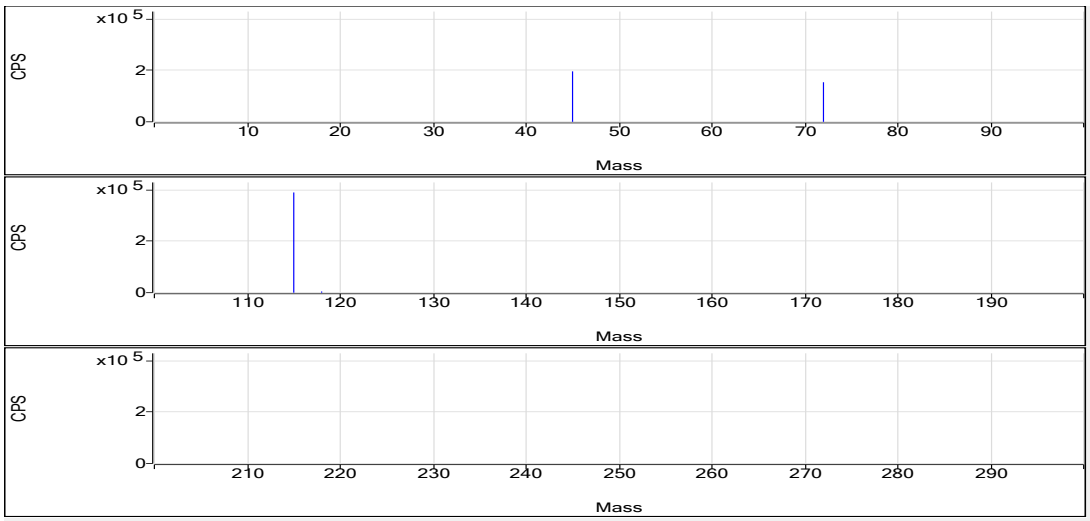
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2496991.16	0.9	95.7	Analog	0.1000	3
No Gas	Ge	72	1220817.85	0.7	94.7	Pulse	0.1000	3
H2	Sc	45	196265.21	2.1	95.2	Pulse	0.1000	3
H2	Ge	72	153857.89	1.7	94.5	Pulse	0.1000	3
H2	In	115	389752.95	0.3	96.5	Pulse	0.1000	3
He	Sc	45	49745.81	0.2	97.2	Pulse	0.1000	3
He	Ge	72	77590.96	0.3	94.8	Pulse	0.1000	3
He	In	115	85387.57	1.4	97.4	Pulse	0.1000	3
He	Tb	159	399318.52	0.1	99.4	Pulse	0.1000	3
He	Bi	209	307068.85	1.0	100.3	Pulse	0.1000	3

No Gas

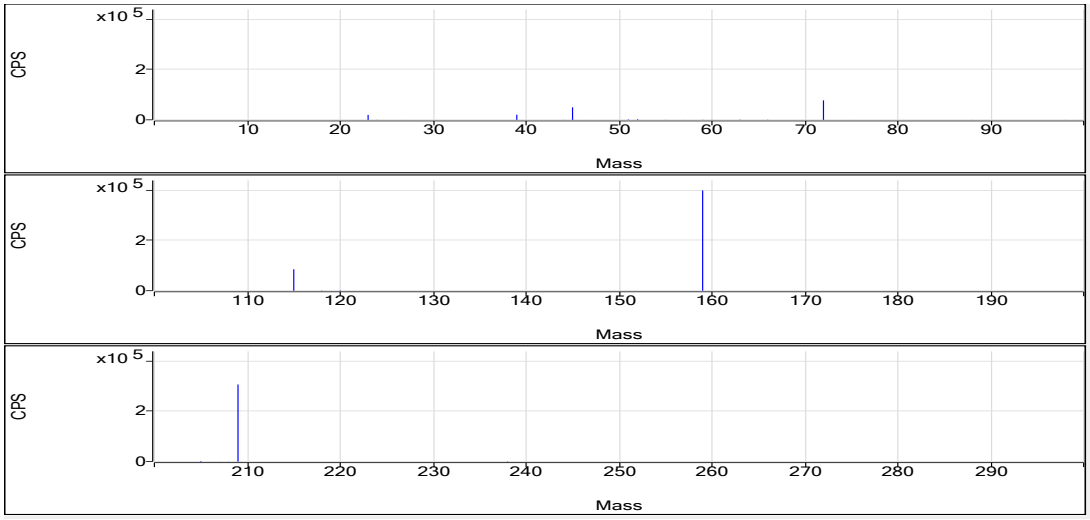


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.004	0	78.00	0.0007	3.404E-05
Be	9	1	No Gas	0.001	0	86.00	0.0007	3.404E-05
Be	9	1	No Gas	0.004	0	92.00	0.0007	3.404E-05
Se	78	2	H2	0.121	0.0001	13.33	0.0004	3.546E-05
Se	78	2	H2	0.144	0.0001	15.33	0.0004	3.546E-05
Se	78	2	H2	0.056	0.0001	9.33	0.0004	3.546E-05
Na	23	3	He	-2.432	0.4084	20274.46	0.0036	0.4171
Na	23	3	He	-7.372	0.3908	19463.41	0.0036	0.4171
Na	23	3	He	-10.148	0.3809	18962.73	0.0036	0.4171
Mg	24	3	He	3.947	0.0117	580.03	0.0018	0.004553
Mg	24	3	He	3.703	0.0112	560.03	0.0018	0.004553
Mg	24	3	He	2.372	0.0088	440.02	0.0018	0.004553
Al	27	3	He	0.225	0.0022	110.00	0.0006	0.002085
Al	27	3	He	-1.166	0.0014	70.00	0.0006	0.002085
Al	27	3	He	0.904	0.0026	130.00	0.0006	0.002085
K	39	3	He	0.2	0.4114	20425.01	0.0012	0.4112
K	39	3	He	-7.98	0.4018	20014.23	0.0012	0.4112
K	39	3	He	-6.295	0.4038	20104.31	0.0012	0.4112
Ca	44	3	He	55.192	0.0071	350.02	0.0001	0.003322
Ca	44	3	He	45.935	0.0064	320.01	0.0001	0.003322
Ca	44	3	He	16.242	0.0044	220.01	0.0001	0.003322
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.378	0.0002	10.00	0.0005	0
Ti	47	3	He	1.133	0.0006	30.00	0.0005	0
V	51	3	He	0.005	0.0319	1584.10	0.0213	0.0318
V	51	3	He	0.055	0.033	1642.10	0.0213	0.0318
V	51	3	He	0.048	0.0328	1634.11	0.0213	0.0318
Cr	52	3	He	0.114	0.0463	2300.26	0.0294	0.04297
Cr	52	3	He	-0.109	0.0398	1980.22	0.0294	0.04297
Cr	52	3	He	0.171	0.048	2390.30	0.0294	0.04297
Mn	55	3	He	0.342	0.0071	350.02	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.275	0.0062	310.01	0.0124	0.002801
Mn	55	3	He	0.179	0.005	250.01	0.0124	0.002801
Fe	57	3	He	1.211	0.0034	170.01	0.0006	0.002732
Fe	57	3	He	0.84	0.0032	160.01	0.0006	0.002732
Fe	57	3	He	-0.211	0.0026	130.00	0.0006	0.002732
Co	59	3	He	0.154	0.0121	600.04	0.0549	0.003644
Co	59	3	He	0.127	0.0106	530.03	0.0549	0.003644
Co	59	3	He	0.109	0.0096	480.02	0.0549	0.003644
Ni	60	3	He	-0.65	0.0081	630.04	0.0093	0.01413
Ni	60	3	He	-0.867	0.0061	470.03	0.0093	0.01413
Ni	60	3	He	-0.744	0.0072	560.04	0.0093	0.01413
Cu	63	3	He	0.1	0.0121	940.07	0.0274	0.009321
Cu	63	3	He	0.16	0.0137	1060.08	0.0274	0.009321
Cu	63	3	He	0.055	0.0108	840.05	0.0274	0.009321
Zn	66	3	He	1.003	0.009	700.05	0.0031	0.005913
Zn	66	3	He	1.192	0.0096	740.05	0.0031	0.005913
Zn	66	3	He	0.341	0.007	540.04	0.0031	0.005913
As	75	3	He	0.325	0.0016	122.00	0.0021	0.0008698
As	75	3	He	0.294	0.0015	116.00	0.0021	0.0008698
As	75	3	He	0.327	0.0016	122.00	0.0021	0.0008698
Sr	88	3	He	0.213	0.0026	220.02	0.0088	0.0006843
Sr	88	3	He	0.173	0.0022	190.01	0.0088	0.0006843
Sr	88	3	He	0.166	0.0021	180.01	0.0088	0.0006843
Mo	98	3	He	0.017	0.0022	190.01	0.0219	0.001827
Mo	98	3	He	0.065	0.0032	280.01	0.0219	0.001827
Mo	98	3	He	0.014	0.0021	180.01	0.0219	0.001827
Ag	107	3	He	0	0.001	90.00	0.047	0.001064
Ag	107	3	He	-0.005	0.0008	70.00	0.047	0.001064
Ag	107	3	He	-0.002	0.001	80.00	0.047	0.001064
Cd	111	3	He	0.002	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	0.002	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	-0.002	0	4.00	0.0053	6.086E-05
Sn	120	3	He	0.229	0.0184	1580.14	0.0154	0.01483
Sn	120	3	He	0.107	0.0165	1420.13	0.0154	0.01483
Sn	120	3	He	0.243	0.0186	1560.15	0.0154	0.01483
Sb	121	3	He	0.055	0.001	90.00	0.0143	0.0002661
Sb	121	3	He	0.03	0.0007	60.00	0.0143	0.0002661
Sb	121	3	He	0.04	0.0008	70.00	0.0143	0.0002661
Ba	137	3	He	0.09	0.0007	60.00	0.0048	0.0002665
Ba	137	3	He	0.041	0.0005	40.00	0.0048	0.0002665
Ba	137	3	He	0.069	0.0006	50.00	0.0048	0.0002665
Tl	205	3	He	0.128	0.0059	2360.29	0.0246	0.002755
Tl	205	3	He	0.116	0.0056	2240.30	0.0246	0.002755
Tl	205	3	He	0.138	0.0061	2450.32	0.0246	0.002755
Pb	208	3	He	-0.002	0.0021	430.03	0.0324	0.002158
Pb	208	3	He	-0.007	0.0019	400.02	0.0324	0.002158
Pb	208	3	He	-0.005	0.002	450.02	0.0324	0.002158
U	238	3	He	0.078	0.0043	1300.12	0.0492	0.0004023
U	238	3	He	0.084	0.0045	1410.15	0.0492	0.0004023
U	238	3	He	0.098	0.0052	1600.16	0.0492	0.0004023
Sc	45	1	No Gas			2523420.27		
Sc	45	1	No Gas			2489910.59		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2477642.62		
Ge	72	1	No Gas			1221717.95		
Ge	72	1	No Gas			1228371.08		
Ge	72	1	No Gas			1212364.51		
Sc	45	2	H2			191526.52		
Sc	45	2	H2			198497.67		
Sc	45	2	H2			198771.44		
Ge	72	2	H2			150830.65		
Ge	72	2	H2			155215.70		
Ge	72	2	H2			155527.31		
In	115	2	H2			388597.77		
In	115	2	H2			389406.17		
In	115	2	H2			391254.92		
Sc	45	3	He			49645.11		
Sc	45	3	He			49806.32		
Sc	45	3	He			49786.01		
Ge	72	3	He			77842.63		
Ge	72	3	He			77319.26		
Ge	72	3	He			77610.99		
In	115	3	He			86024.76		
In	115	3	He			86176.40		
In	115	3	He			83983.32		
Tb	159	3	He			399710.54		
Tb	159	3	He			399266.20		
Tb	159	3	He			398978.82		
Bi	209	3	He			305398.02		
Bi	209	3	He			310554.29		
Bi	209	3	He			305254.25		

Quantitation Report

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Sample Type	CCV
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

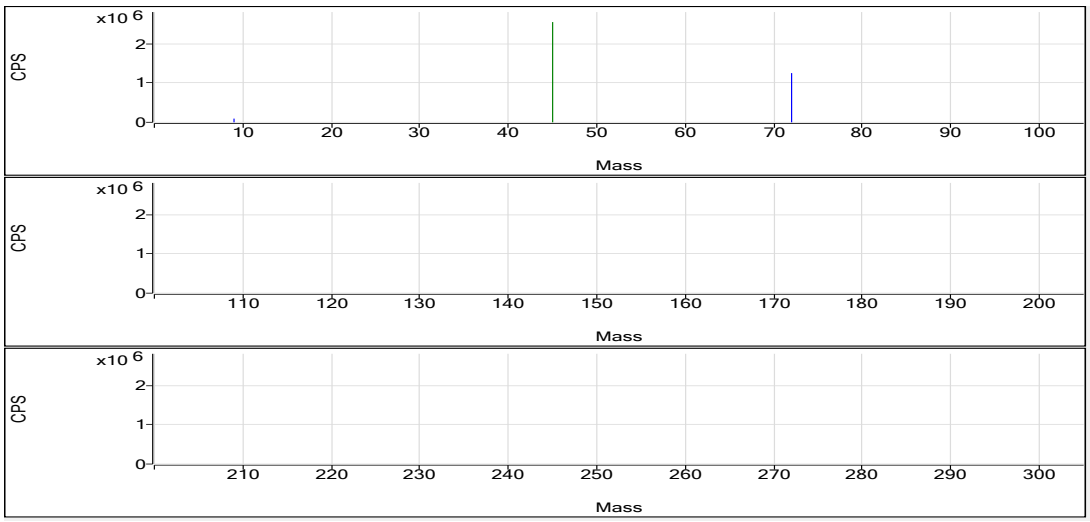
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.378	ppb	0.7	93790.77	0.0367	Pulse	0.5000	3
Se	78	72	H2	51.810	ppb	3.2	3556.67	0.0227	Pulse	1.5000	3
Na	23	45	He	4920.137	ppb	0.2	891767.54	17.9545	Pulse	0.1000	3
Mg	24	45	He	5099.446	ppb	0.8	457842.55	9.2182	Pulse	0.1000	3
Al	27	45	He	5040.596	ppb	0.8	145961.27	2.9387	Pulse	0.1000	3
K	39	45	He	5106.233	ppb	1.2	317420.26	6.3910	Pulse	0.1000	3
Ca	44	45	He	5104.601	ppb	1.6	17294.12	0.3482	Pulse	0.1000	3
Ti	47	45	He	5087.302	ppb	1.1	134386.75	2.7057	Pulse	0.1000	3
V	51	45	He	512.230	ppb	1.0	542222.02	10.9171	Pulse	0.5000	3
Cr	52	45	He	494.371	ppb	0.8	724280.67	14.5825	Pulse	0.1000	3
Mn	55	45	He	516.389	ppb	1.1	318992.74	6.4226	Pulse	0.1000	3
Fe	57	45	He	5140.778	ppb	1.7	146218.30	2.9440	Pulse	0.1000	3
Co	59	45	He	496.855	ppb	0.8	1354665.50	27.2747	Pulse	0.1000	3
Ni	60	72	He	520.043	ppb	0.4	387710.25	4.8416	Pulse	0.1000	3
Cu	63	72	He	496.768	ppb	0.5	1091763.68	13.6337	Pulse	0.1000	3
Zn	66	72	He	517.546	ppb	1.0	127720.74	1.5950	Pulse	0.1000	3
As	75	72	He	516.679	ppb	0.9	88848.15	1.1095	Pulse	0.5000	3
Sr	88	115	He	51.334	ppb	1.1	39001.18	0.4524	Pulse	0.1000	3
Mo	98	115	He	50.866	ppb	1.9	96393.10	1.1181	Pulse	0.1000	3
Ag	107	115	He	50.512	ppb	1.3	204945.23	2.3771	Pulse	0.1000	3
Cd	111	115	He	51.028	ppb	1.3	23435.65	0.2718	Pulse	0.5000	3
Sn	120	115	He	50.874	ppb	1.2	68918.82	0.7993	Pulse	0.1000	3
Sb	121	115	He	52.117	ppb	2.0	64051.99	0.7430	Pulse	0.1000	3
Ba	137	115	He	516.851	ppb	0.8	212974.90	2.4702	Pulse	0.1000	3
Tl	205	159	He	51.262	ppb	0.9	504360.74	1.2618	Pulse	0.1000	3
Pb	208	159	He	51.384	ppb	0.9	666436.67	1.6672	Pulse	0.1000	3
U	238	209	He	50.372	ppb	0.4	768299.23	2.4811	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2553225.38	1.2	97.9	Analog	0.1000	3
No Gas	Ge	72	1253241.02	1.2	97.2	Pulse	0.1000	3
H2	Sc	45	195415.16	1.0	94.8	Pulse	0.1000	3
H2	Ge	72	156381.45	0.3	96.1	Pulse	0.1000	3
H2	In	115	392999.30	1.0	97.3	Pulse	0.1000	3
He	Sc	45	49668.60	0.5	97.0	Pulse	0.1000	3
He	Ge	72	80080.85	1.0	97.8	Pulse	0.1000	3
He	In	115	86219.52	0.6	98.4	Pulse	0.1000	3
He	Tb	159	399750.25	0.9	99.5	Pulse	0.1000	3
He	Bi	209	309661.45	0.3	101.2	Pulse	0.1000	3

No Gas



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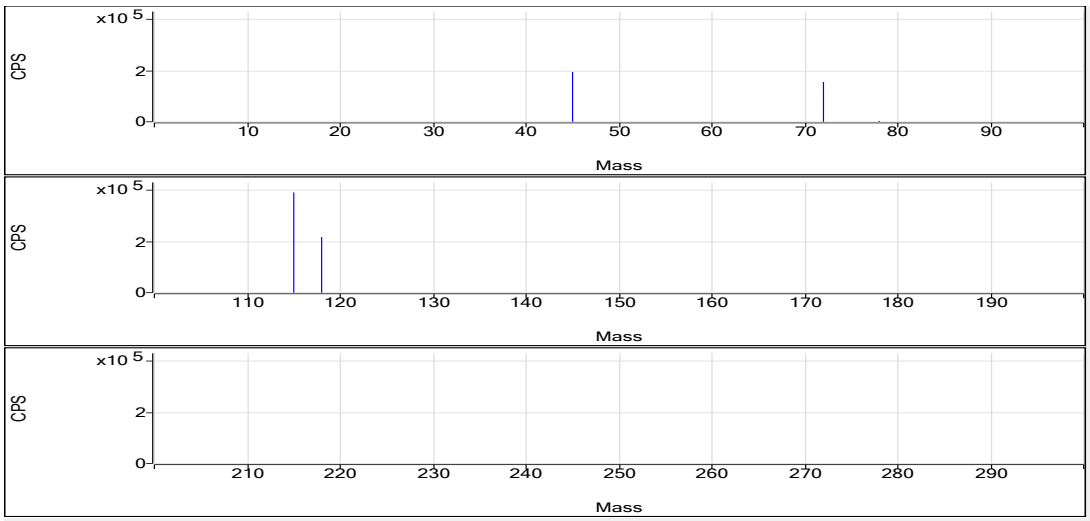
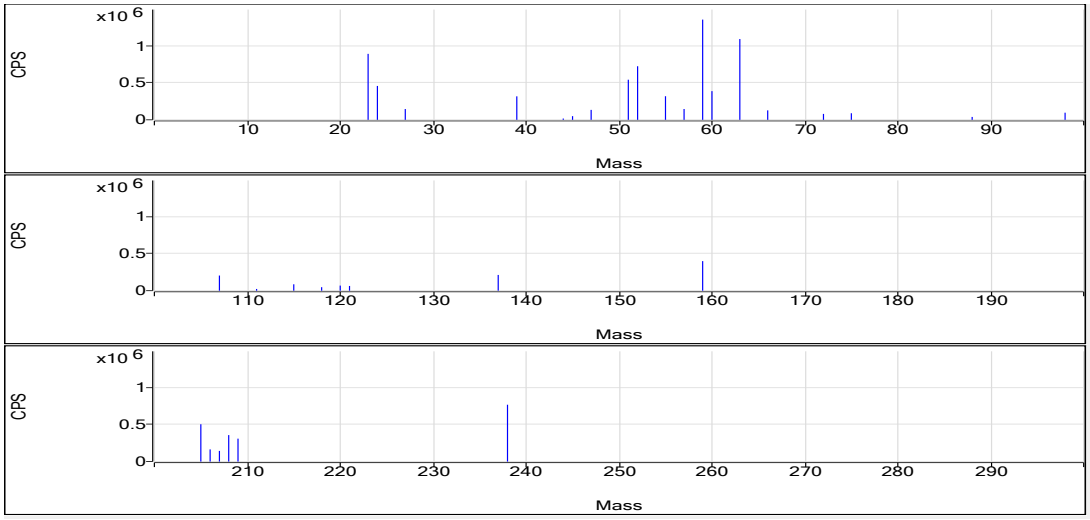


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.008	0.0365	93932.46	0.0007	3.404E-05
Be	9	1	No Gas	50.421	0.0368	94292.57	0.0007	3.404E-05
Be	9	1	No Gas	50.705	0.037	93147.27	0.0007	3.404E-05
Se	78	2	H2	53.742	0.0236	3677.81	0.0004	3.546E-05
Se	78	2	H2	50.737	0.0223	3493.77	0.0004	3.546E-05
Se	78	2	H2	50.952	0.0224	3498.43	0.0004	3.546E-05
Na	23	3	He	4929.473	17.9877	888851.00	0.0036	0.4171
Na	23	3	He	4909.753	17.9174	893295.69	0.0036	0.4171
Na	23	3	He	4921.186	17.9582	893155.92	0.0036	0.4171
Mg	24	3	He	5146.777	9.3037	459735.62	0.0018	0.004553
Mg	24	3	He	5066.599	9.1588	456624.64	0.0018	0.004553
Mg	24	3	He	5084.963	9.192	457167.38	0.0018	0.004553
Al	27	3	He	5028.877	2.9319	144876.62	0.0006	0.002085
Al	27	3	He	5006.957	2.9191	145535.59	0.0006	0.002085
Al	27	3	He	5085.954	2.9651	147471.59	0.0006	0.002085
K	39	3	He	5163.676	6.4582	319129.37	0.0012	0.4112
K	39	3	He	5041.602	6.3153	314856.09	0.0012	0.4112
K	39	3	He	5113.419	6.3994	318275.33	0.0012	0.4112
Ca	44	3	He	5010.385	0.3418	16890.27	0.0001	0.003322
Ca	44	3	He	5143.903	0.3508	17491.03	0.0001	0.003322
Ca	44	3	He	5159.514	0.3519	17501.06	0.0001	0.003322
Ti	47	3	He	5124.101	2.7253	134669.29	0.0005	0
Ti	47	3	He	5022.309	2.6712	133174.49	0.0005	0
Ti	47	3	He	5115.496	2.7207	135316.48	0.0005	0
V	51	3	He	517.954	11.0388	545472.94	0.0213	0.0318
V	51	3	He	507.312	10.8126	539076.25	0.0213	0.0318
V	51	3	He	511.426	10.9	542116.88	0.0213	0.0318
Cr	52	3	He	496.077	14.6326	723061.40	0.0294	0.04297
Cr	52	3	He	490.025	14.4547	720654.52	0.0294	0.04297
Cr	52	3	He	497.012	14.6601	729126.08	0.0294	0.04297
Mn	55	3	He	521.142	6.4817	320288.90	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	509.808	6.3408	316128.14	0.0124	0.002801
Mn	55	3	He	518.217	6.4453	320561.17	0.0124	0.002801
Fe	57	3	He	5241.498	3.0017	148324.84	0.0006	0.002732
Fe	57	3	He	5077.515	2.9078	144973.66	0.0006	0.002732
Fe	57	3	He	5103.322	2.9226	145356.41	0.0006	0.002732
Co	59	3	He	501.492	27.5292	1360337.64	0.0549	0.003644
Co	59	3	He	494.529	27.1471	1353449.20	0.0549	0.003644
Co	59	3	He	494.544	27.1479	1350209.67	0.0549	0.003644
Ni	60	3	He	517.549	4.8185	390247.53	0.0093	0.01413
Ni	60	3	He	521.628	4.8563	387447.10	0.0093	0.01413
Ni	60	3	He	520.952	4.8501	385436.13	0.0093	0.01413
Cu	63	3	He	494.069	13.5597	1098199.20	0.0274	0.009321
Cu	63	3	He	498.28	13.6752	1091029.67	0.0274	0.009321
Cu	63	3	He	497.955	13.6662	1086062.17	0.0274	0.009321
Zn	66	3	He	511.694	1.577	127723.60	0.0031	0.005913
Zn	66	3	He	521.412	1.6069	128198.69	0.0031	0.005913
Zn	66	3	He	519.533	1.6011	127239.92	0.0031	0.005913
As	75	3	He	513.951	1.1037	89386.67	0.0021	0.0008698
As	75	3	He	513.901	1.1036	88044.59	0.0021	0.0008698
As	75	3	He	522.183	1.1213	89113.18	0.0021	0.0008698
Sr	88	3	He	50.727	0.447	38733.85	0.0088	0.0006843
Sr	88	3	He	51.765	0.4562	39044.62	0.0088	0.0006843
Sr	88	3	He	51.508	0.4539	39225.06	0.0088	0.0006843
Mo	98	3	He	50.476	1.1095	96138.41	0.0219	0.001827
Mo	98	3	He	51.962	1.1421	97759.70	0.0219	0.001827
Mo	98	3	He	50.159	1.1026	95281.19	0.0219	0.001827
Ag	107	3	He	50.238	2.3642	204853.69	0.047	0.001064
Ag	107	3	He	51.285	2.4135	206577.83	0.047	0.001064
Ag	107	3	He	50.015	2.3537	203404.18	0.047	0.001064
Cd	111	3	He	51.771	0.2758	23894.41	0.0053	6.086E-05
Cd	111	3	He	50.835	0.2708	23177.21	0.0053	6.086E-05
Cd	111	3	He	50.477	0.2689	23235.33	0.0053	6.086E-05
Sn	120	3	He	50.342	0.7911	68550.00	0.0154	0.01483
Sn	120	3	He	50.768	0.7977	68278.88	0.0154	0.01483
Sn	120	3	He	51.512	0.8092	69927.57	0.0154	0.01483
Sb	121	3	He	51.056	0.7278	63064.43	0.0143	0.0002661
Sb	121	3	He	53.085	0.7567	64771.67	0.0143	0.0002661
Sb	121	3	He	52.211	0.7443	64319.87	0.0143	0.0002661
Ba	137	3	He	517.676	2.4741	214377.48	0.0048	0.0002665
Ba	137	3	He	520.348	2.4869	212863.28	0.0048	0.0002665
Ba	137	3	He	512.529	2.4495	211683.94	0.0048	0.0002665
Tl	205	3	He	50.973	1.2547	505031.40	0.0246	0.002755
Tl	205	3	He	50.999	1.2553	503481.40	0.0246	0.002755
Tl	205	3	He	51.812	1.2753	504569.41	0.0246	0.002755
Pb	208	3	He	50.874	1.6507	357753.51	0.0324	0.002158
Pb	208	3	He	51.434	1.6688	360579.99	0.0324	0.002158
Pb	208	3	He	51.844	1.6821	355053.04	0.0324	0.002158
U	238	3	He	50.485	2.4867	767588.11	0.0492	0.0004023
U	238	3	He	50.484	2.4866	770695.93	0.0492	0.0004023
U	238	3	He	50.147	2.47	766613.66	0.0492	0.0004023
Sc	45	1	No Gas			2575889.34		
Sc	45	1	No Gas			2564555.27		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2519231.52		
Ge	72	1	No Gas			1264650.06		
Ge	72	1	No Gas			1258487.09		
Ge	72	1	No Gas			1236585.92		
Sc	45	2	H2			196646.66		
Sc	45	2	H2			193199.22		
Sc	45	2	H2			196399.59		
Ge	72	2	H2			155893.75		
Ge	72	2	H2			156851.89		
Ge	72	2	H2			156398.70		
In	115	2	H2			397482.53		
In	115	2	H2			391638.55		
In	115	2	H2			389876.83		
Sc	45	3	He			49414.29		
Sc	45	3	He			49856.21		
Sc	45	3	He			49735.29		
Ge	72	3	He			80990.14		
Ge	72	3	He			79781.91		
Ge	72	3	He			79470.49		
In	115	3	He			87012.21		
In	115	3	He			85965.54		
In	115	3	He			86790.49		
Tb	159	3	He			402518.86		
Tb	159	3	He			401079.21		
Tb	159	3	He			395652.69		
Bi	209	3	He			308681.25		
Bi	209	3	He			309935.84		
Bi	209	3	He			310367.26		

Quantitation Report

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Sample Name	CCB 4654618
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

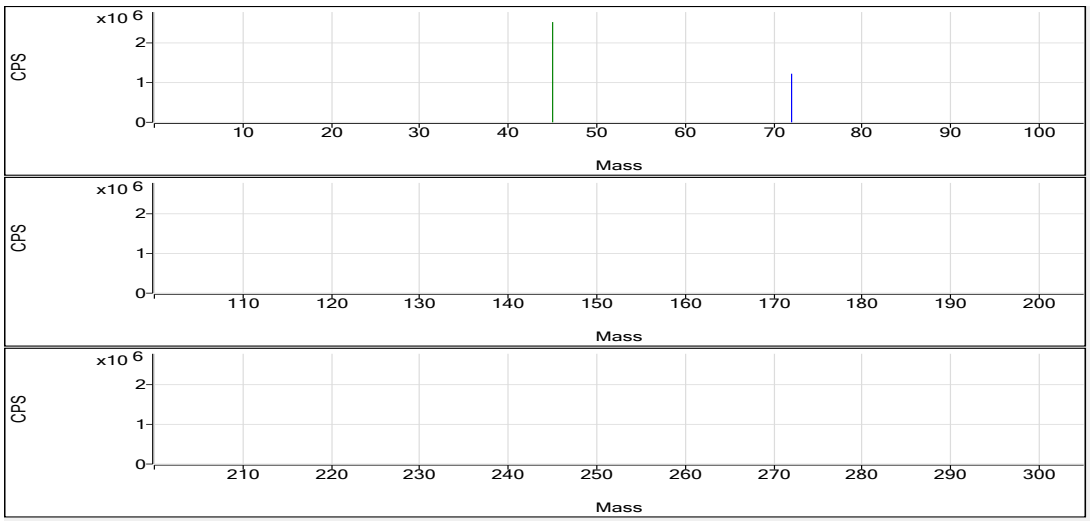
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.009	ppb	N/A	70.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.065	ppb	52.1	10.00	0.0001	Pulse	1.5000	3
Na	23	45	He	-8.081	ppb	N/A	19116.26	0.3883	Pulse	0.1000	3
Mg	24	45	He	0.779	ppb	97.3	293.35	0.0060	Pulse	0.1000	3
Al	27	45	He	-0.444	ppb	N/A	90.01	0.0018	Pulse	0.1000	3
K	39	45	He	-2.899	ppb	N/A	20077.59	0.4078	Pulse	0.1000	3
Ca	44	45	He	7.175	ppb	254.2	186.68	0.0038	Pulse	0.1000	3
Ti	47	45	He	1.524	ppb	49.9	40.00	0.0008	Pulse	0.1000	3
V	51	45	He	0.091	ppb	30.0	1660.77	0.0337	Pulse	0.5000	3
Cr	52	45	He	0.128	ppb	42.8	2300.26	0.0467	Pulse	0.1000	3
Mn	55	45	He	0.167	ppb	37.2	240.01	0.0049	Pulse	0.1000	3
Fe	57	45	He	-0.257	ppb	N/A	126.67	0.0026	Pulse	0.1000	3
Co	59	45	He	0.088	ppb	44.7	420.02	0.0085	Pulse	0.1000	3
Ni	60	72	He	-0.805	ppb	N/A	526.69	0.0067	Pulse	0.1000	3
Cu	63	72	He	0.098	ppb	56.6	950.06	0.0120	Pulse	0.1000	3
Zn	66	72	He	0.352	ppb	53.8	553.37	0.0070	Pulse	0.1000	3
As	75	72	He	0.215	ppb	53.3	105.33	0.0013	Pulse	0.5000	3
Sr	88	115	He	0.024	ppb	172.6	76.67	0.0009	Pulse	0.1000	3
Mo	98	115	He	0.021	ppb	26.7	196.68	0.0023	Pulse	0.1000	3
Ag	107	115	He	0.014	ppb	29.7	146.67	0.0017	Pulse	0.1000	3
Cd	111	115	He	0.003	ppb	209.3	6.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.176	ppb	77.7	1503.46	0.0175	Pulse	0.1000	3
Sb	121	115	He	0.058	ppb	17.0	93.33	0.0011	Pulse	0.1000	3
Ba	137	115	He	0.107	ppb	11.7	66.67	0.0008	Pulse	0.1000	3
Tl	205	159	He	0.029	ppb	44.1	1383.46	0.0035	Pulse	0.1000	3
Pb	208	159	He	-0.007	ppb	N/A	770.03	0.0019	Pulse	0.1000	3
U	238	209	He	0.053	ppb	7.3	923.39	0.0030	Pulse	0.1000	3

ISTD Table:

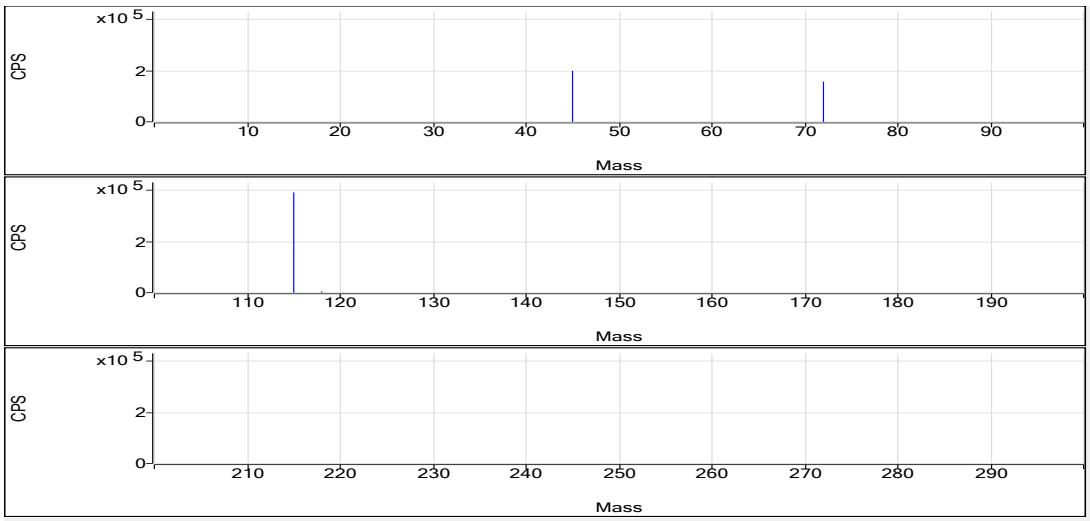
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2529528.19	1.7	97.0	Analog	0.1000	3
No Gas	Ge	72	1225719.38	0.7	95.1	Pulse	0.1000	3
H2	Sc	45	198995.27	1.4	96.6	Pulse	0.1000	3
H2	Ge	72	156367.66	0.5	96.1	Pulse	0.1000	3
H2	In	115	391206.74	1.0	96.9	Pulse	0.1000	3
He	Sc	45	49244.28	2.1	96.2	Pulse	0.1000	3
He	Ge	72	79132.56	0.2	96.7	Pulse	0.1000	3
He	In	115	85696.74	1.0	97.8	Pulse	0.1000	3
He	Tb	159	398855.44	0.5	99.3	Pulse	0.1000	3
He	Bi	209	306985.50	0.1	100.3	Pulse	0.1000	3

No Gas

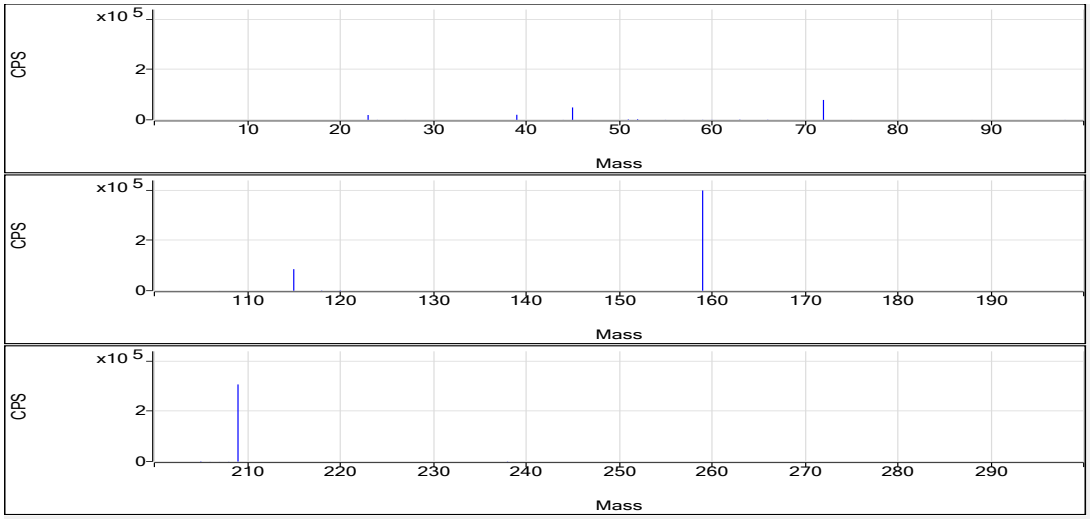


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.001	0	84.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.013	0	62.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.013	0	64.00	0.0007	3.404E-05
Se	78	2	H2	0.085	0.0001	11.33	0.0004	3.546E-05
Se	78	2	H2	0.084	0.0001	11.33	0.0004	3.546E-05
Se	78	2	H2	0.026	0	7.33	0.0004	3.546E-05
Na	23	3	He	-7.526	0.3902	19643.51	0.0036	0.4171
Na	23	3	He	-12.948	0.3709	18201.76	0.0036	0.4171
Na	23	3	He	-3.769	0.4036	19503.52	0.0036	0.4171
Mg	24	3	He	0.339	0.0052	260.01	0.0018	0.004553
Mg	24	3	He	1.653	0.0075	370.02	0.0018	0.004553
Mg	24	3	He	0.344	0.0052	250.01	0.0018	0.004553
Al	27	3	He	-0.85	0.0016	80.01	0.0006	0.002085
Al	27	3	He	1.319	0.0029	140.01	0.0006	0.002085
Al	27	3	He	-1.802	0.001	50.00	0.0006	0.002085
K	39	3	He	-10.075	0.3994	20104.40	0.0012	0.4112
K	39	3	He	3.413	0.4152	20374.59	0.0012	0.4112
K	39	3	He	-2.034	0.4088	19753.79	0.0012	0.4112
Ca	44	3	He	-8	0.0028	140.01	0.0001	0.003322
Ca	44	3	He	2.11	0.0035	170.01	0.0001	0.003322
Ca	44	3	He	27.416	0.0052	250.01	0.0001	0.003322
Ti	47	3	He	1.494	0.0008	40.00	0.0005	0
Ti	47	3	He	2.299	0.0012	60.00	0.0005	0
Ti	47	3	He	0.778	0.0004	20.00	0.0005	0
V	51	3	He	0.067	0.0332	1672.11	0.0213	0.0318
V	51	3	He	0.121	0.0344	1686.11	0.0213	0.0318
V	51	3	He	0.085	0.0336	1624.10	0.0213	0.0318
Cr	52	3	He	0.12	0.0465	2340.29	0.0294	0.04297
Cr	52	3	He	0.077	0.0452	2220.23	0.0294	0.04297
Cr	52	3	He	0.186	0.0484	2340.25	0.0294	0.04297
Mn	55	3	He	0.11	0.0042	210.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.234	0.0057	280.01	0.0124	0.002801
Mn	55	3	He	0.158	0.0048	230.01	0.0124	0.002801
Fe	57	3	He	-1.65	0.0018	90.00	0.0006	0.002732
Fe	57	3	He	-0.857	0.0022	110.00	0.0006	0.002732
Fe	57	3	He	1.736	0.0037	180.01	0.0006	0.002732
Co	59	3	He	0.125	0.0105	530.03	0.0549	0.003644
Co	59	3	He	0.093	0.0088	430.02	0.0549	0.003644
Co	59	3	He	0.047	0.0062	300.02	0.0549	0.003644
Ni	60	3	He	-0.785	0.0068	540.03	0.0093	0.01413
Ni	60	3	He	-0.788	0.0068	540.03	0.0093	0.01413
Ni	60	3	He	-0.842	0.0063	500.02	0.0093	0.01413
Cu	63	3	He	0.09	0.0118	930.06	0.0274	0.009321
Cu	63	3	He	0.157	0.0136	1080.08	0.0274	0.009321
Cu	63	3	He	0.047	0.0106	840.05	0.0274	0.009321
Zn	66	3	He	0.138	0.0063	500.03	0.0031	0.005913
Zn	66	3	He	0.498	0.0074	590.04	0.0031	0.005913
Zn	66	3	He	0.418	0.0072	570.03	0.0031	0.005913
As	75	3	He	0.15	0.0012	94.00	0.0021	0.0008698
As	75	3	He	0.347	0.0016	128.00	0.0021	0.0008698
As	75	3	He	0.148	0.0012	94.00	0.0021	0.0008698
Sr	88	3	He	-0.012	0.0006	50.00	0.0088	0.0006843
Sr	88	3	He	0.07	0.0013	110.00	0.0088	0.0006843
Sr	88	3	He	0.015	0.0008	70.00	0.0088	0.0006843
Mo	98	3	He	0.017	0.0022	190.01	0.0219	0.001827
Mo	98	3	He	0.019	0.0022	190.01	0.0219	0.001827
Mo	98	3	He	0.028	0.0024	210.01	0.0219	0.001827
Ag	107	3	He	0.009	0.0015	130.00	0.047	0.001064
Ag	107	3	He	0.018	0.0019	160.01	0.047	0.001064
Ag	107	3	He	0.014	0.0017	150.01	0.047	0.001064
Cd	111	3	He	0.01	0.0001	10.00	0.0053	6.086E-05
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Cd	111	3	He	0.002	0.0001	6.00	0.0053	6.086E-05
Sn	120	3	He	0.023	0.0152	1310.10	0.0154	0.01483
Sn	120	3	He	0.218	0.0182	1540.13	0.0154	0.01483
Sn	120	3	He	0.287	0.0193	1660.15	0.0154	0.01483
Sb	121	3	He	0.063	0.0012	100.00	0.0143	0.0002661
Sb	121	3	He	0.064	0.0012	100.00	0.0143	0.0002661
Sb	121	3	He	0.046	0.0009	80.00	0.0143	0.0002661
Ba	137	3	He	0.114	0.0008	70.00	0.0048	0.0002665
Ba	137	3	He	0.093	0.0007	60.00	0.0048	0.0002665
Ba	137	3	He	0.114	0.0008	70.00	0.0048	0.0002665
Tl	205	3	He	0.043	0.0038	1530.15	0.0246	0.002755
Tl	205	3	He	0.024	0.0034	1340.12	0.0246	0.002755
Tl	205	3	He	0.019	0.0032	1280.11	0.0246	0.002755
Pb	208	3	He	-0.019	0.0015	410.02	0.0324	0.002158
Pb	208	3	He	-0.006	0.002	360.02	0.0324	0.002158
Pb	208	3	He	0.004	0.0023	450.02	0.0324	0.002158
U	238	3	He	0.057	0.0032	990.07	0.0492	0.0004023
U	238	3	He	0.051	0.0029	890.06	0.0492	0.0004023
U	238	3	He	0.051	0.0029	890.05	0.0492	0.0004023
Sc	45	1	No Gas			2527764.49		
Sc	45	1	No Gas			2488328.40		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2572491.68		
Ge	72	1	No Gas			1229509.20		
Ge	72	1	No Gas			1215350.92		
Ge	72	1	No Gas			1232298.03		
Sc	45	2	H2			201277.15		
Sc	45	2	H2			199937.46		
Sc	45	2	H2			195771.19		
Ge	72	2	H2			155529.18		
Ge	72	2	H2			156943.41		
Ge	72	2	H2			156630.39		
In	115	2	H2			392822.61		
In	115	2	H2			386757.85		
In	115	2	H2			394039.76		
Sc	45	3	He			50338.08		
Sc	45	3	He			49073.76		
Sc	45	3	He			48321.00		
Ge	72	3	He			78918.90		
Ge	72	3	He			79279.40		
Ge	72	3	He			79199.39		
In	115	3	He			86247.64		
In	115	3	He			84677.90		
In	115	3	He			86187.06		
Tb	159	3	He			400189.72		
Tb	159	3	He			399969.02		
Tb	159	3	He			396407.57		
Bi	209	3	He			306866.58		
Bi	209	3	He			307412.20		
Bi	209	3	He			306677.71		

Quantitation Report

Data File Name	043SMPL.d
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Sample Type	Sample
Comment	T31
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

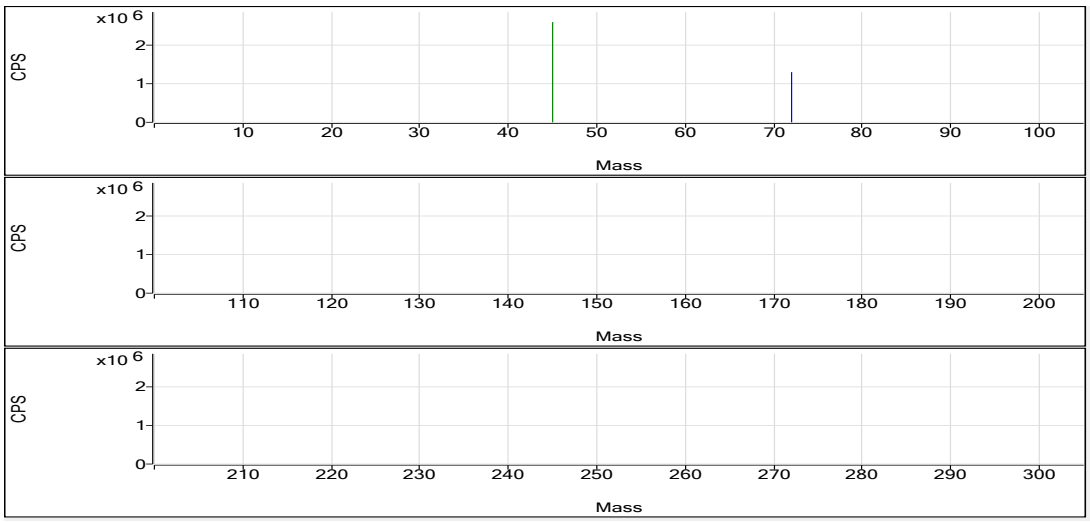
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.026	ppb	N/A	39.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.016	ppb	121.1	7.11	0.0000	Pulse	1.5000	3
Na	23	45	He	504.257	ppb	3.2	109943.29	2.2144	Pulse	0.1000	3
Mg	24	45	He	19707.442	ppb	1.2	1768283.31	35.6118	Analog	0.1000	3
Al	27	45	He	42.937	ppb	12.4	1346.79	0.0271	Pulse	0.1000	3
K	39	45	He	1086.826	ppb	1.6	83615.26	1.6839	Pulse	0.1000	3
Ca	44	45	He	20495.942	ppb	2.6	68910.86	1.3880	Pulse	0.1000	3
Ti	47	45	He	0.889	ppb	108.8	23.33	0.0005	Pulse	0.1000	3
V	51	45	He	0.189	ppb	44.3	1778.12	0.0358	Pulse	0.5000	3
Cr	52	45	He	1.703	ppb	3.0	4620.90	0.0930	Pulse	0.1000	3
Mn	55	45	He	0.897	ppb	15.2	693.38	0.0140	Pulse	0.1000	3
Fe	57	45	He	70.998	ppb	4.5	2153.57	0.0434	Pulse	0.1000	3
Co	59	45	He	0.083	ppb	55.2	406.69	0.0082	Pulse	0.1000	3
Ni	60	72	He	-1.028	ppb	N/A	390.02	0.0046	Pulse	0.1000	3
Cu	63	72	He	0.124	ppb	32.0	1083.41	0.0127	Pulse	0.1000	3
Zn	66	72	He	0.002	ppb	6392.8	503.36	0.0059	Pulse	0.1000	3
As	75	72	He	0.084	ppb	70.6	89.33	0.0010	Pulse	0.5000	3
Sr	88	115	He	28.083	ppb	2.0	21173.11	0.2478	Pulse	0.1000	3
Mo	98	115	He	0.201	ppb	22.7	533.37	0.0062	Pulse	0.1000	3
Ag	107	115	He	-0.008	ppb	N/A	60.00	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.012	ppb	21.3	10.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.012	ppb	626.8	1283.44	0.0150	Pulse	0.1000	3
Sb	121	115	He	0.055	ppb	44.6	90.00	0.0011	Pulse	0.1000	3
Ba	137	115	He	803.714	ppb	0.6	328210.23	3.8411	Pulse	0.1000	3
Tl	205	159	He	-0.044	ppb	N/A	676.71	0.0017	Pulse	0.1000	3
Pb	208	159	He	0.045	ppb	12.0	1460.10	0.0036	Pulse	0.1000	3
U	238	209	He	0.115	ppb	9.0	1890.21	0.0061	Pulse	0.1000	3

ISTD Table:

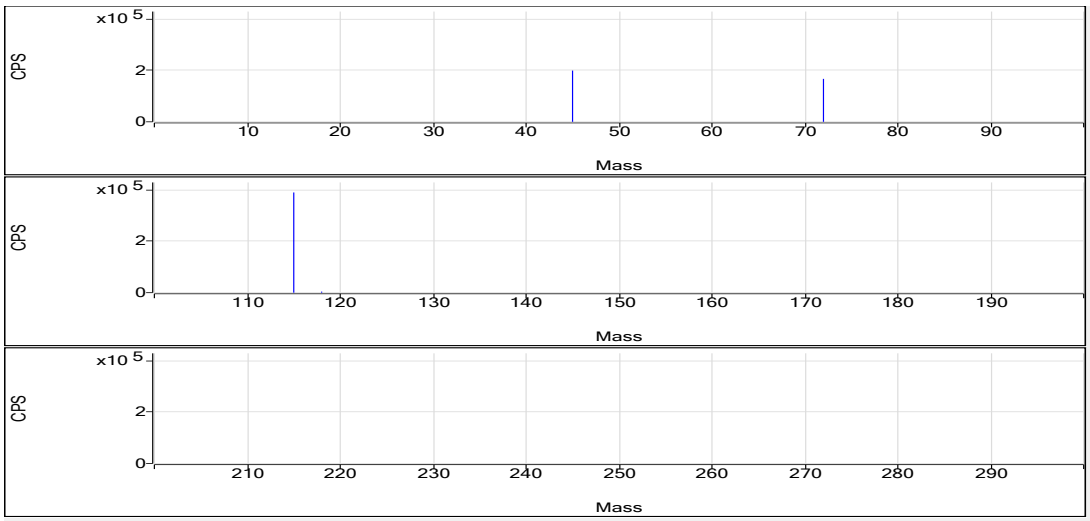
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2593828.61	0.2	99.5	Analog	0.1000	3
No Gas	Ge	72	1297798.58	0.9	100.7	Pulse	0.1000	3
H2	Sc	45	199781.52	0.6	96.9	Pulse	0.1000	3
H2	Ge	72	167466.71	0.7	102.9	Pulse	0.1000	3
H2	In	115	390826.56	0.3	96.8	Pulse	0.1000	3
He	Sc	45	49659.01	1.2	97.0	Pulse	0.1000	3
He	Ge	72	85076.02	1.6	103.9	Pulse	0.1000	3
He	In	115	85448.05	0.2	97.5	Pulse	0.1000	3
He	Tb	159	403174.03	0.3	100.4	Pulse	0.1000	3
He	Bi	209	310728.66	0.4	101.5	Pulse	0.1000	3

No Gas

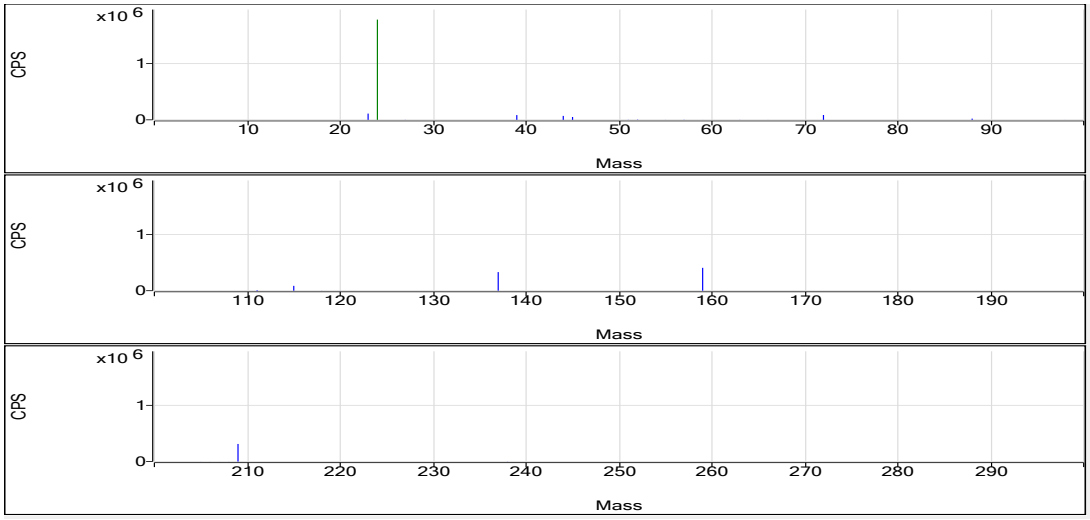


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.024	0	42.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.027	0	38.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.027	0	38.00	0.0007	3.404E-05
Se	78	2	H2	0.038	0.0001	8.67	0.0004	3.546E-05
Se	78	2	H2	0.001	0	6.00	0.0004	3.546E-05
Se	78	2	H2	0.009	0	6.67	0.0004	3.546E-05
Na	23	3	He	521.866	2.2772	111568.47	0.0036	0.4171
Na	23	3	He	490.65	2.1659	108768.38	0.0036	0.4171
Na	23	3	He	500.255	2.2002	109493.02	0.0036	0.4171
Mg	24	3	He	19969.679	36.0856	1767962.47	0.0018	0.004553
Mg	24	3	He	19562.541	35.35	1775195.13	0.0018	0.004553
Mg	24	3	He	19590.107	35.3998	1761692.32	0.0018	0.004553
Al	27	3	He	39.518	0.0251	1230.10	0.0006	0.002085
Al	27	3	He	49.065	0.0307	1540.16	0.0006	0.002085
Al	27	3	He	40.229	0.0255	1270.11	0.0006	0.002085
K	39	3	He	1107.162	1.7078	83669.18	0.0012	0.4112
K	39	3	He	1078.618	1.6743	84081.03	0.0012	0.4112
K	39	3	He	1074.697	1.6697	83095.58	0.0012	0.4112
Ca	44	3	He	21105.492	1.4291	70019.22	0.0001	0.003322
Ca	44	3	He	20124.909	1.3629	68441.99	0.0001	0.003322
Ca	44	3	He	20257.426	1.3719	68271.36	0.0001	0.003322
Ti	47	3	He	1.919	0.001	50.00	0.0005	0
Ti	47	3	He	0.749	0.0004	20.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	0.227	0.0366	1794.12	0.0213	0.0318
V	51	3	He	0.093	0.0338	1696.11	0.0213	0.0318
V	51	3	He	0.247	0.0371	1844.13	0.0213	0.0318
Cr	52	3	He	1.697	0.0929	4550.86	0.0294	0.04297
Cr	52	3	He	1.756	0.0946	4750.93	0.0294	0.04297
Cr	52	3	He	1.655	0.0916	4560.91	0.0294	0.04297
Mn	55	3	He	0.743	0.012	590.03	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.944	0.0145	730.05	0.0124	0.002801
Mn	55	3	He	1.003	0.0153	760.05	0.0124	0.002801
Fe	57	3	He	67.295	0.0412	2020.23	0.0006	0.002732
Fe	57	3	He	72.499	0.0442	2220.24	0.0006	0.002732
Fe	57	3	He	73.201	0.0446	2220.23	0.0006	0.002732
Co	59	3	He	0.064	0.0071	350.01	0.0549	0.003644
Co	59	3	He	0.05	0.0064	320.02	0.0549	0.003644
Co	59	3	He	0.135	0.0111	550.03	0.0549	0.003644
Ni	60	3	He	-1.033	0.0045	380.02	0.0093	0.01413
Ni	60	3	He	-1.061	0.0043	370.02	0.0093	0.01413
Ni	60	3	He	-0.99	0.0049	420.02	0.0093	0.01413
Cu	63	3	He	0.083	0.0116	970.07	0.0274	0.009321
Cu	63	3	He	0.128	0.0128	1110.09	0.0274	0.009321
Cu	63	3	He	0.162	0.0138	1170.08	0.0274	0.009321
Zn	66	3	He	0.176	0.0065	540.03	0.0031	0.005913
Zn	66	3	He	-0.043	0.0058	500.02	0.0031	0.005913
Zn	66	3	He	-0.126	0.0055	470.03	0.0031	0.005913
As	75	3	He	0.018	0.0009	76.00	0.0021	0.0008698
As	75	3	He	0.101	0.0011	94.00	0.0021	0.0008698
As	75	3	He	0.132	0.0012	98.00	0.0021	0.0008698
Sr	88	3	He	28.099	0.2479	21166.38	0.0088	0.0006843
Sr	88	3	He	28.637	0.2527	21627.11	0.0088	0.0006843
Sr	88	3	He	27.513	0.2428	20725.85	0.0088	0.0006843
Mo	98	3	He	0.184	0.0059	500.03	0.0219	0.001827
Mo	98	3	He	0.167	0.0055	470.03	0.0219	0.001827
Mo	98	3	He	0.253	0.0074	630.04	0.0219	0.001827
Ag	107	3	He	-0.013	0.0005	40.00	0.047	0.001064
Ag	107	3	He	-0.005	0.0008	70.00	0.047	0.001064
Ag	107	3	He	-0.005	0.0008	70.00	0.047	0.001064
Cd	111	3	He	0.011	0.0001	10.00	0.0053	6.086E-05
Cd	111	3	He	0.011	0.0001	10.00	0.0053	6.086E-05
Cd	111	3	He	0.015	0.0001	12.00	0.0053	6.086E-05
Sn	120	3	He	-0.043	0.0142	1210.09	0.0154	0.01483
Sn	120	3	He	0.099	0.0164	1400.12	0.0154	0.01483
Sn	120	3	He	-0.02	0.0145	1240.10	0.0154	0.01483
Sb	121	3	He	0.031	0.0007	60.00	0.0143	0.0002661
Sb	121	3	He	0.055	0.0011	90.00	0.0143	0.0002661
Sb	121	3	He	0.08	0.0014	120.00	0.0143	0.0002661
Ba	137	3	He	808.815	3.8654	330004.92	0.0048	0.0002665
Ba	137	3	He	801.774	3.8318	327988.75	0.0048	0.0002665
Ba	137	3	He	800.554	3.826	326637.01	0.0048	0.0002665
Tl	205	3	He	-0.051	0.0015	610.04	0.0246	0.002755
Tl	205	3	He	-0.027	0.0021	850.06	0.0246	0.002755
Tl	205	3	He	-0.054	0.0014	570.04	0.0246	0.002755
Pb	208	3	He	0.051	0.0038	770.06	0.0324	0.002158
Pb	208	3	He	0.042	0.0035	740.04	0.0324	0.002158
Pb	208	3	He	0.042	0.0035	850.07	0.0324	0.002158
U	238	3	He	0.125	0.0066	2040.24	0.0492	0.0004023
U	238	3	He	0.104	0.0055	1730.19	0.0492	0.0004023
U	238	3	He	0.117	0.0061	1900.20	0.0492	0.0004023
Sc	45	1	No Gas			2592799.81		
Sc	45	1	No Gas			2588987.15		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2599698.87		
Ge	72	1	No Gas			1294626.86		
Ge	72	1	No Gas			1310091.78		
Ge	72	1	No Gas			1288677.09		
Sc	45	2	H2			199300.04		
Sc	45	2	H2			198973.65		
Sc	45	2	H2			201070.86		
Ge	72	2	H2			166346.83		
Ge	72	2	H2			167329.45		
Ge	72	2	H2			168723.85		
In	115	2	H2			391375.07		
In	115	2	H2			389455.70		
In	115	2	H2			391648.90		
Sc	45	3	He			48993.62		
Sc	45	3	He			50217.75		
Sc	45	3	He			49765.66		
Ge	72	3	He			83704.36		
Ge	72	3	He			86480.53		
Ge	72	3	He			85043.18		
In	115	3	He			85381.77		
In	115	3	He			85604.13		
In	115	3	He			85381.95		
Tb	159	3	He			402696.05		
Tb	159	3	He			404760.89		
Tb	159	3	He			402065.15		
Bi	209	3	He			310649.00		
Bi	209	3	He			312039.51		
Bi	209	3	He			309497.46		

Quantitation Report

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Sample Type	Sample
Comment	T31
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

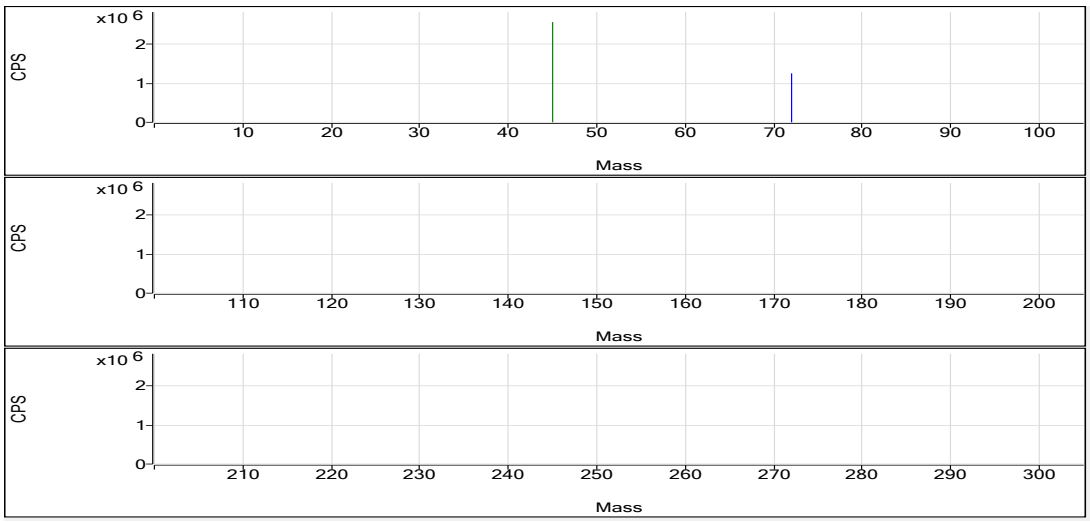
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.036	ppb	N/A	20.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.017	ppb	N/A	4.44	0.0000	Pulse	1.5000	3
Na	23	45	He	-6.577	ppb	N/A	19493.38	0.3936	Pulse	0.1000	3
Mg	24	45	He	3.180	ppb	16.7	510.03	0.0103	Pulse	0.1000	3
Al	27	45	He	-0.459	ppb	N/A	90.00	0.0018	Pulse	0.1000	3
K	39	45	He	7.430	ppb	79.0	20795.45	0.4199	Pulse	0.1000	3
Ca	44	45	He	-6.296	ppb	N/A	143.34	0.0029	Pulse	0.1000	3
Ti	47	45	He	0.502	ppb	114.1	13.33	0.0003	Pulse	0.1000	3
V	51	45	He	-0.005	ppb	N/A	1570.09	0.0317	Pulse	0.5000	3
Cr	52	45	He	0.080	ppb	126.5	2243.57	0.0453	Pulse	0.1000	3
Mn	55	45	He	0.420	ppb	29.3	396.69	0.0080	Pulse	0.1000	3
Fe	57	45	He	2.165	ppb	37.5	196.68	0.0040	Pulse	0.1000	3
Co	59	45	He	0.011	ppb	267.6	210.01	0.0042	Pulse	0.1000	3
Ni	60	72	He	-1.021	ppb	N/A	376.69	0.0047	Pulse	0.1000	3
Cu	63	72	He	0.026	ppb	65.3	813.39	0.0100	Pulse	0.1000	3
Zn	66	72	He	-0.291	ppb	N/A	406.69	0.0050	Pulse	0.1000	3
As	75	72	He	0.009	ppb	270.3	72.00	0.0009	Pulse	0.5000	3
Sr	88	115	He	0.001	ppb	3329.7	60.00	0.0007	Pulse	0.1000	3
Mo	98	115	He	-0.045	ppb	N/A	73.33	0.0008	Pulse	0.1000	3
Ag	107	115	He	-0.015	ppb	N/A	30.00	0.0003	Pulse	0.1000	3
Cd	111	115	He	-0.009	ppb	N/A	1.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.132	ppb	61.7	1456.79	0.0169	Pulse	0.1000	3
Sb	121	115	He	-0.002	ppb	N/A	20.00	0.0002	Pulse	0.1000	3
Ba	137	115	He	0.138	ppb	47.2	80.00	0.0009	Pulse	0.1000	3
Tl	205	159	He	-0.069	ppb	N/A	430.02	0.0011	Pulse	0.1000	3
Pb	208	159	He	-0.012	ppb	N/A	716.70	0.0018	Pulse	0.1000	3
U	238	209	He	0.001	ppb	273.3	143.34	0.0005	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2572418.19	0.6	98.6	Analog	0.1000	3
No Gas	Ge	72	1256227.87	1.3	97.5	Pulse	0.1000	3
H2	Sc	45	199024.74	1.4	96.6	Pulse	0.1000	3
H2	Ge	72	159009.58	0.7	97.7	Pulse	0.1000	3
H2	In	115	392118.03	1.0	97.1	Pulse	0.1000	3
He	Sc	45	49531.68	1.0	96.7	Pulse	0.1000	3
He	Ge	72	80999.11	0.5	98.9	Pulse	0.1000	3
He	In	115	86395.92	0.5	98.6	Pulse	0.1000	3
He	Tb	159	402259.93	0.2	100.2	Pulse	0.1000	3
He	Bi	209	311294.40	0.2	101.7	Pulse	0.1000	3

No Gas



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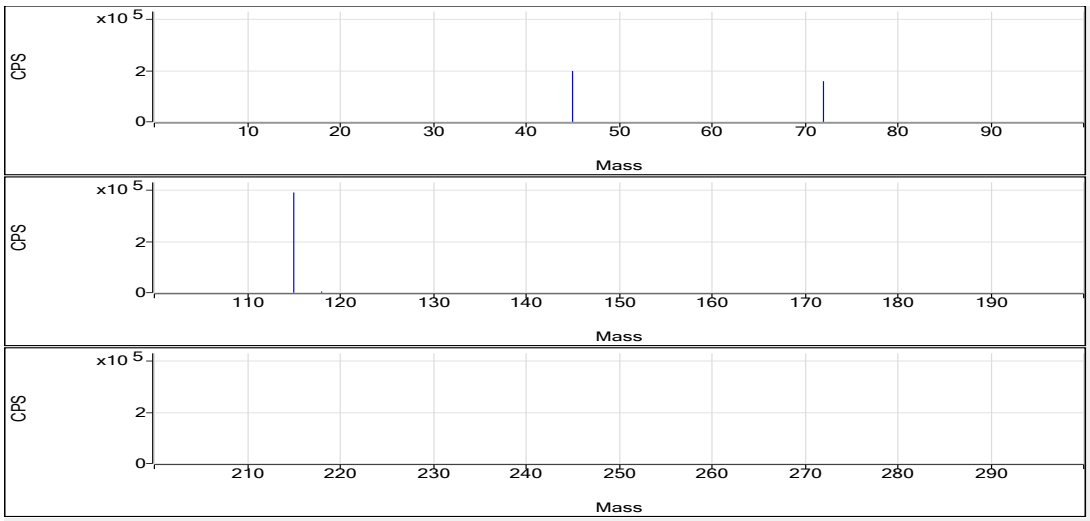
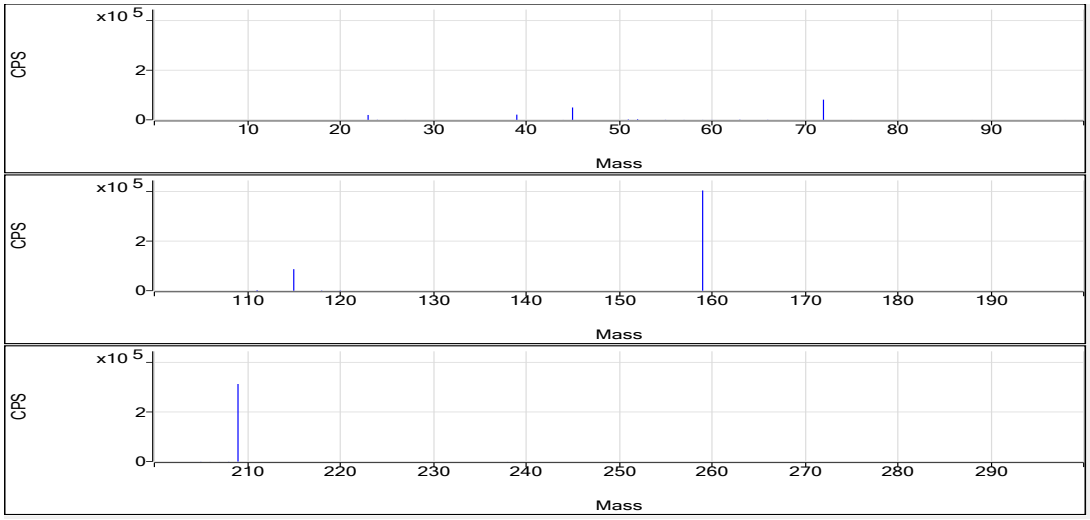


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.036	0	20.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.034	0	24.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.038	0	16.00	0.0007	3.404E-05
Se	78	2	H2	0.005	0	6.00	0.0004	3.546E-05
Se	78	2	H2	-0.052	0	2.00	0.0004	3.546E-05
Se	78	2	H2	-0.004	0	5.33	0.0004	3.546E-05
Na	23	3	He	-1.072	0.4132	20444.76	0.0036	0.4171
Na	23	3	He	-7.28	0.3911	19192.96	0.0036	0.4171
Na	23	3	He	-11.38	0.3765	18842.43	0.0036	0.4171
Mg	24	3	He	2.626	0.0093	460.02	0.0018	0.004553
Mg	24	3	He	3.684	0.0112	550.03	0.0018	0.004553
Mg	24	3	He	3.231	0.0104	520.03	0.0018	0.004553
Al	27	3	He	0.238	0.0022	110.00	0.0006	0.002085
Al	27	3	He	-0.78	0.0016	80.00	0.0006	0.002085
Al	27	3	He	-0.834	0.0016	80.00	0.0006	0.002085
K	39	3	He	7.976	0.4205	20805.51	0.0012	0.4112
K	39	3	He	13.006	0.4264	20925.63	0.0012	0.4112
K	39	3	He	1.307	0.4127	20655.22	0.0012	0.4112
Ca	44	3	He	4.686	0.0036	180.01	0.0001	0.003322
Ca	44	3	He	-6.938	0.0029	140.01	0.0001	0.003322
Ca	44	3	He	-16.636	0.0022	110.00	0.0001	0.003322
Ti	47	3	He	0.38	0.0002	10.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	1.127	0.0006	30.00	0.0005	0
V	51	3	He	-0.012	0.0315	1560.09	0.0213	0.0318
V	51	3	He	-0.037	0.031	1522.09	0.0213	0.0318
V	51	3	He	0.035	0.0325	1628.10	0.0213	0.0318
Cr	52	3	He	0.079	0.0453	2240.25	0.0294	0.04297
Cr	52	3	He	0.181	0.0483	2370.25	0.0294	0.04297
Cr	52	3	He	-0.021	0.0424	2120.22	0.0294	0.04297
Mn	55	3	He	0.344	0.0071	350.02	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.562	0.0098	480.02	0.0124	0.002801
Mn	55	3	He	0.353	0.0072	360.02	0.0124	0.002801
Fe	57	3	He	1.231	0.0034	170.01	0.0006	0.002732
Fe	57	3	He	2.705	0.0043	210.01	0.0006	0.002732
Fe	57	3	He	2.559	0.0042	210.01	0.0006	0.002732
Co	59	3	He	-0.007	0.0032	160.01	0.0549	0.003644
Co	59	3	He	0.045	0.0061	300.01	0.0549	0.003644
Co	59	3	He	-0.004	0.0034	170.01	0.0549	0.003644
Ni	60	3	He	-1.072	0.0042	340.02	0.0093	0.01413
Ni	60	3	He	-0.987	0.005	400.02	0.0093	0.01413
Ni	60	3	He	-1.003	0.0048	390.02	0.0093	0.01413
Cu	63	3	He	0.046	0.0106	860.05	0.0274	0.009321
Cu	63	3	He	0.013	0.0097	780.06	0.0274	0.009321
Cu	63	3	He	0.02	0.0099	800.05	0.0274	0.009321
Zn	66	3	He	-0.004	0.0059	480.02	0.0031	0.005913
Zn	66	3	He	-0.552	0.0042	340.02	0.0031	0.005913
Zn	66	3	He	-0.318	0.0049	400.02	0.0031	0.005913
As	75	3	He	0.007	0.0009	72.00	0.0021	0.0008698
As	75	3	He	0.034	0.0009	76.00	0.0021	0.0008698
As	75	3	He	-0.014	0.0008	68.00	0.0021	0.0008698
Sr	88	3	He	0.014	0.0008	70.00	0.0088	0.0006843
Sr	88	3	He	-0.038	0.0003	30.00	0.0088	0.0006843
Sr	88	3	He	0.027	0.0009	80.00	0.0088	0.0006843
Mo	98	3	He	-0.046	0.0008	70.00	0.0219	0.001827
Mo	98	3	He	-0.046	0.0008	70.00	0.0219	0.001827
Mo	98	3	He	-0.041	0.0009	80.00	0.0219	0.001827
Ag	107	3	He	-0.018	0.0002	20.00	0.047	0.001064
Ag	107	3	He	-0.015	0.0003	30.00	0.047	0.001064
Ag	107	3	He	-0.013	0.0005	40.00	0.047	0.001064
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Sn	120	3	He	0.198	0.0179	1550.13	0.0154	0.01483
Sn	120	3	He	0.156	0.0172	1480.14	0.0154	0.01483
Sn	120	3	He	0.041	0.0155	1340.11	0.0154	0.01483
Sb	121	3	He	-0.011	0.0001	10.00	0.0143	0.0002661
Sb	121	3	He	-0.002	0.0002	20.00	0.0143	0.0002661
Sb	121	3	He	0.006	0.0003	30.00	0.0143	0.0002661
Ba	137	3	He	0.089	0.0007	60.00	0.0048	0.0002665
Ba	137	3	He	0.212	0.0013	110.00	0.0048	0.0002665
Ba	137	3	He	0.113	0.0008	70.00	0.0048	0.0002665
Tl	205	3	He	-0.069	0.0011	430.02	0.0246	0.002755
Tl	205	3	He	-0.068	0.0011	440.02	0.0246	0.002755
Tl	205	3	He	-0.07	0.001	420.02	0.0246	0.002755
Pb	208	3	He	-0.011	0.0018	470.02	0.0324	0.002158
Pb	208	3	He	-0.012	0.0018	420.02	0.0324	0.002158
Pb	208	3	He	-0.012	0.0018	430.02	0.0324	0.002158
U	238	3	He	-0.001	0.0004	110.00	0.0492	0.0004023
U	238	3	He	0	0.0004	120.01	0.0492	0.0004023
U	238	3	He	0.005	0.0006	200.01	0.0492	0.0004023
Sc	45	1	No Gas			2575059.34		
Sc	45	1	No Gas			2555659.02		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2586536.21		
Ge	72	1	No Gas			1272693.50		
Ge	72	1	No Gas			1241101.78		
Ge	72	1	No Gas			1254888.34		
Sc	45	2	H2			198801.13		
Sc	45	2	H2			196379.65		
Sc	45	2	H2			201893.43		
Ge	72	2	H2			160159.50		
Ge	72	2	H2			157864.19		
Ge	72	2	H2			159005.06		
In	115	2	H2			390630.89		
In	115	2	H2			396733.74		
In	115	2	H2			388989.45		
Sc	45	3	He			49474.86		
Sc	45	3	He			49073.15		
Sc	45	3	He			50047.03		
Ge	72	3	He			81361.20		
Ge	72	3	He			80616.77		
Ge	72	3	He			81019.37		
In	115	3	He			86669.59		
In	115	3	He			85884.63		
In	115	3	He			86659.29		
Tb	159	3	He			403078.12		
Tb	159	3	He			401710.38		
Tb	159	3	He			401991.28		
Bi	209	3	He			311762.59		
Bi	209	3	He			311615.23		
Bi	209	3	He			310505.37		

Quantitation Report

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Sample Type	Sample
Comment	T31
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

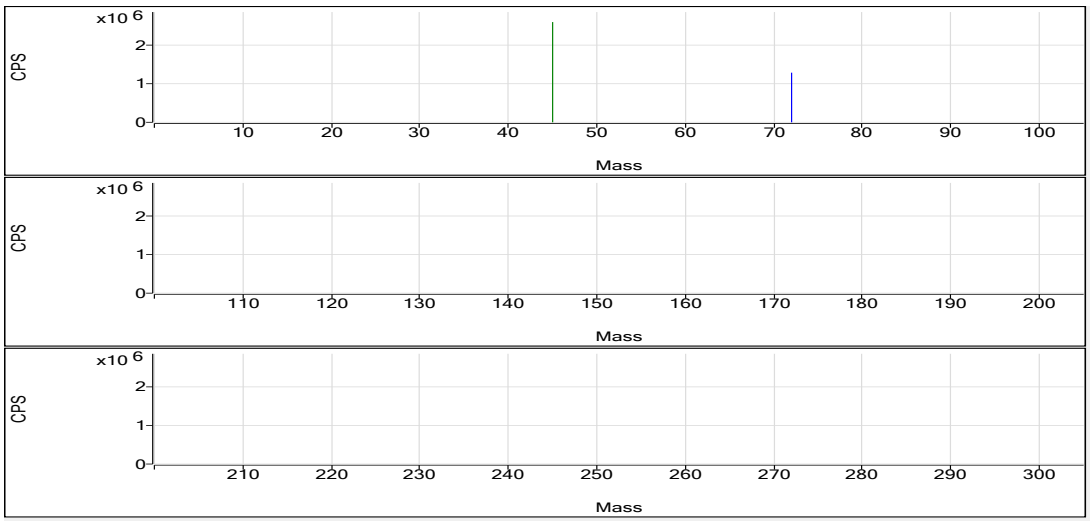
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.029	ppb	N/A	34.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.242	ppb	31.0	23.33	0.0001	Pulse	1.5000	3
Na	23	45	He	133912.207	ppb	1.2	23845622.14	477.7354	Analog	0.1000	3
Mg	24	45	He	25108.708	ppb	0.5	2264785.85	45.3707	Analog	0.1000	3
Al	27	45	He	41.570	ppb	13.5	1313.45	0.0263	Pulse	0.1000	3
K	39	45	He	11874.356	ppb	0.9	714620.20	14.3170	Pulse	0.1000	3
Ca	44	45	He	98663.118	ppb	0.9	332866.14	6.6687	Pulse	0.1000	3
Ti	47	45	He	2.512	ppb	23.1	66.67	0.0013	Pulse	0.1000	3
V	51	45	He	0.615	ppb	7.1	2240.19	0.0449	Pulse	0.5000	3
Cr	52	45	He	0.326	ppb	42.2	2623.68	0.0526	Pulse	0.1000	3
Mn	55	45	He	351.891	ppb	1.2	218497.47	4.3776	Pulse	0.1000	3
Fe	57	45	He	11740.286	ppb	1.5	335421.67	6.7199	Pulse	0.1000	3
Co	59	45	He	0.136	ppb	7.4	553.37	0.0111	Pulse	0.1000	3
Ni	60	72	He	-0.720	ppb	N/A	626.70	0.0074	Pulse	0.1000	3
Cu	63	72	He	1.730	ppb	4.4	4770.96	0.0568	Pulse	0.1000	3
Zn	66	72	He	7.449	ppb	9.1	2416.97	0.0288	Pulse	0.1000	3
As	75	72	He	96.995	ppb	2.7	17555.48	0.2090	Pulse	0.5000	3
Sr	88	115	He	794.698	ppb	1.1	594655.17	6.9931	Pulse	0.1000	3
Mo	98	115	He	0.010	ppb	178.2	173.34	0.0020	Pulse	0.1000	3
Ag	107	115	He	-0.001	ppb	N/A	86.67	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.021	ppb	122.5	14.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	1.185	ppb	9.1	2813.72	0.0331	Pulse	0.1000	3
Sb	121	115	He	2.709	ppb	4.8	3303.84	0.0389	Pulse	0.1000	3
Ba	137	115	He	256.688	ppb	0.9	104332.09	1.2269	Pulse	0.1000	3
Tl	205	159	He	-0.077	ppb	N/A	343.35	0.0009	Pulse	0.1000	3
Pb	208	159	He	15.982	ppb	0.6	206440.04	0.5200	Pulse	0.1000	3
U	238	209	He	0.012	ppb	32.0	290.02	0.0010	Pulse	0.1000	3

ISTD Table:

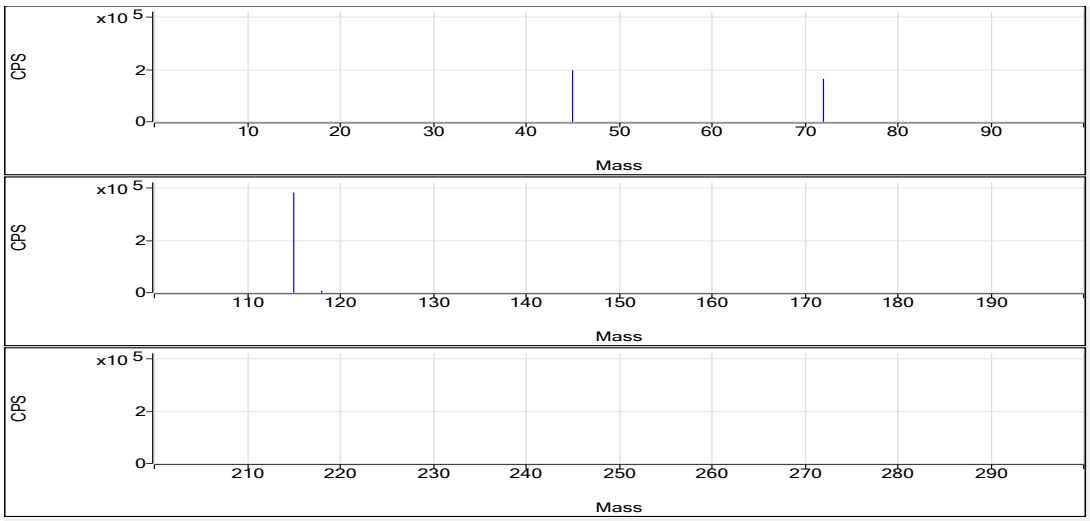
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2598817.04	0.9	99.7	Analog	0.1000	3
No Gas	Ge	72	1286707.82	0.6	99.8	Pulse	0.1000	3
H2	Sc	45	197383.30	0.3	95.8	Pulse	0.1000	3
H2	Ge	72	164841.32	0.9	101.3	Pulse	0.1000	3
H2	In	115	383725.54	0.7	95.1	Pulse	0.1000	3
He	Sc	45	49916.16	0.8	97.5	Pulse	0.1000	3
He	Ge	72	84027.04	2.1	102.6	Pulse	0.1000	3
He	In	115	85042.66	1.4	97.0	Pulse	0.1000	3
He	Tb	159	396982.04	0.4	98.8	Pulse	0.1000	3
He	Bi	209	299591.50	0.5	97.9	Pulse	0.1000	3

No Gas

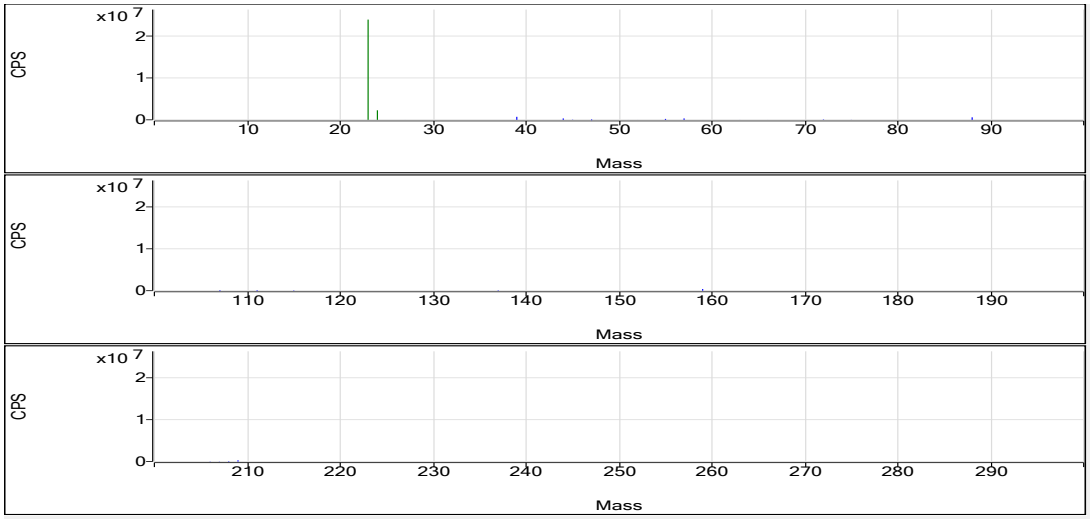


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.031	0	30.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.032	0	28.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.023	0	44.00	0.0007	3.404E-05
Se	78	2	H2	0.329	0.0002	29.33	0.0004	3.546E-05
Se	78	2	H2	0.204	0.0001	20.67	0.0004	3.546E-05
Se	78	2	H2	0.194	0.0001	20.00	0.0004	3.546E-05
Na	23	3	He	132053.164	471.109	23648314.65	0.0036	0.4171
Na	23	3	He	134621.133	480.2623	24054782.14	0.0036	0.4171
Na	23	3	He	135062.324	481.8349	23833769.64	0.0036	0.4171
Mg	24	3	He	25197.274	45.5307	2285511.53	0.0018	0.004553
Mg	24	3	He	25149.018	45.4435	2276119.81	0.0018	0.004553
Mg	24	3	He	24979.833	45.1379	2232726.22	0.0018	0.004553
Al	27	3	He	39.853	0.0253	1270.11	0.0006	0.002085
Al	27	3	He	47.832	0.03	1500.16	0.0006	0.002085
Al	27	3	He	37.025	0.0237	1170.09	0.0006	0.002085
K	39	3	He	11764.836	14.1887	712231.79	0.0012	0.4112
K	39	3	He	11891.341	14.3368	718086.08	0.0012	0.4112
K	39	3	He	11966.892	14.4253	713542.72	0.0012	0.4112
Ca	44	3	He	98824.412	6.6796	335297.81	0.0001	0.003322
Ca	44	3	He	97684.709	6.6026	330704.21	0.0001	0.003322
Ca	44	3	He	99480.232	6.7239	332596.40	0.0001	0.003322
Ti	47	3	He	1.873	0.001	50.00	0.0005	0
Ti	47	3	He	3.003	0.0016	80.00	0.0005	0
Ti	47	3	He	2.661	0.0014	70.00	0.0005	0
V	51	3	He	0.664	0.0459	2304.20	0.0213	0.0318
V	51	3	He	0.578	0.0441	2208.18	0.0213	0.0318
V	51	3	He	0.604	0.0446	2208.18	0.0213	0.0318
Cr	52	3	He	0.456	0.0564	2830.38	0.0294	0.04297
Cr	52	3	He	0.182	0.0483	2420.30	0.0294	0.04297
Cr	52	3	He	0.34	0.053	2620.35	0.0294	0.04297
Mn	55	3	He	348.066	4.33	217353.59	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	351.263	4.3698	218866.68	0.0124	0.002801
Mn	55	3	He	356.343	4.4329	219272.15	0.0124	0.002801
Fe	57	3	He	11539.02	6.6048	331541.44	0.0006	0.002732
Fe	57	3	He	11874.758	6.7969	340433.86	0.0006	0.002732
Fe	57	3	He	11807.08	6.7582	334289.72	0.0006	0.002732
Co	59	3	He	0.13	0.0108	540.03	0.0549	0.003644
Co	59	3	He	0.13	0.0108	540.03	0.0549	0.003644
Co	59	3	He	0.147	0.0117	580.04	0.0549	0.003644
Ni	60	3	He	-0.865	0.0061	500.03	0.0093	0.01413
Ni	60	3	He	-0.712	0.0075	640.03	0.0093	0.01413
Ni	60	3	He	-0.583	0.0087	740.05	0.0093	0.01413
Cu	63	3	He	1.741	0.0571	4680.91	0.0274	0.009321
Cu	63	3	He	1.801	0.0587	5001.07	0.0274	0.009321
Cu	63	3	He	1.649	0.0546	4630.90	0.0274	0.009321
Zn	66	3	He	8.043	0.0306	2510.32	0.0031	0.005913
Zn	66	3	He	7.597	0.0292	2490.33	0.0031	0.005913
Zn	66	3	He	6.707	0.0265	2250.25	0.0031	0.005913
As	75	3	He	99.518	0.2144	17584.85	0.0021	0.0008698
As	75	3	He	94.345	0.2033	17316.53	0.0021	0.0008698
As	75	3	He	97.121	0.2093	17765.06	0.0021	0.0008698
Sr	88	3	He	804.502	7.0794	592167.76	0.0088	0.0006843
Sr	88	3	He	786.847	6.9241	593811.36	0.0088	0.0006843
Sr	88	3	He	792.744	6.976	597986.40	0.0088	0.0006843
Mo	98	3	He	0.026	0.0024	200.01	0.0219	0.001827
Mo	98	3	He	0.012	0.0021	180.01	0.0219	0.001827
Mo	98	3	He	-0.009	0.0016	140.00	0.0219	0.001827
Ag	107	3	He	-0.005	0.0008	70.00	0.047	0.001064
Ag	107	3	He	0.01	0.0015	130.01	0.047	0.001064
Ag	107	3	He	-0.008	0.0007	60.00	0.047	0.001064
Cd	111	3	He	0.011	0.0001	10.00	0.0053	6.086E-05
Cd	111	3	He	0.002	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	0.05	0.0003	28.00	0.0053	6.086E-05
Sn	120	3	He	1.287	0.0347	2900.41	0.0154	0.01483
Sn	120	3	He	1.073	0.0314	2690.37	0.0154	0.01483
Sn	120	3	He	1.195	0.0333	2850.39	0.0154	0.01483
Sb	121	3	He	2.851	0.0409	3420.53	0.0143	0.0002661
Sb	121	3	He	2.592	0.0372	3190.48	0.0143	0.0002661
Sb	121	3	He	2.683	0.0385	3300.51	0.0143	0.0002661
Ba	137	3	He	259.395	1.2399	103710.26	0.0048	0.0002665
Ba	137	3	He	255.092	1.2193	104567.75	0.0048	0.0002665
Ba	137	3	He	255.576	1.2216	104718.26	0.0048	0.0002665
Tl	205	3	He	-0.078	0.0008	330.02	0.0246	0.002755
Tl	205	3	He	-0.075	0.0009	360.02	0.0246	0.002755
Tl	205	3	He	-0.077	0.0009	340.02	0.0246	0.002755
Pb	208	3	He	16.082	0.5233	110282.55	0.0324	0.002158
Pb	208	3	He	15.895	0.5172	110010.21	0.0324	0.002158
Pb	208	3	He	15.968	0.5196	109363.77	0.0324	0.002158
U	238	3	He	0.013	0.001	310.02	0.0492	0.0004023
U	238	3	He	0.007	0.0008	230.01	0.0492	0.0004023
U	238	3	He	0.014	0.0011	330.02	0.0492	0.0004023
Sc	45	1	No Gas			2624338.40		
Sc	45	1	No Gas			2593448.24		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2578664.49		
Ge	72	1	No Gas			1283008.26		
Ge	72	1	No Gas			1295268.89		
Ge	72	1	No Gas			1281846.31		
Sc	45	2	H2			197239.33		
Sc	45	2	H2			196825.09		
Sc	45	2	H2			198085.47		
Ge	72	2	H2			163222.96		
Ge	72	2	H2			165609.61		
Ge	72	2	H2			165691.40		
In	115	2	H2			383807.38		
In	115	2	H2			386228.04		
In	115	2	H2			381141.21		
Sc	45	3	He			50197.12		
Sc	45	3	He			50086.76		
Sc	45	3	He			49464.60		
Ge	72	3	He			82015.33		
Ge	72	3	He			85173.39		
Ge	72	3	He			84892.39		
In	115	3	He			83661.33		
In	115	3	He			85773.71		
In	115	3	He			85734.43		
Tb	159	3	He			395006.09		
Tb	159	3	He			398471.48		
Tb	159	3	He			397468.55		
Bi	209	3	He			299615.09		
Bi	209	3	He			301161.71		
Bi	209	3	He			297997.69		

Quantitation Report

Data File Name	046SMPL.d
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Sample Type	Sample
Comment	T31
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

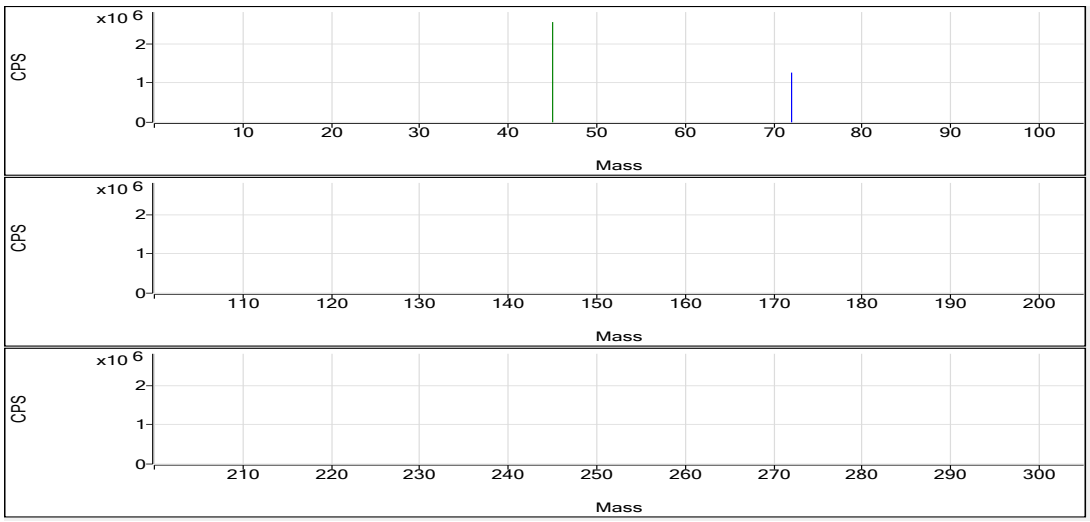
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.562	ppb	1.7	1133.38	0.0004	Pulse	0.5000	3
Se	78	72	H2	0.078	ppb	16.7	11.56	0.0001	Pulse	1.5000	3
Na	23	45	He	77270.182	ppb	1.7	13469767.72	275.8399	Analog	0.1000	3
Mg	24	45	He	23961.297	ppb	1.6	2114322.47	43.2976	Analog	0.1000	3
Al	27	45	He	2201.894	ppb	0.4	62751.02	1.2849	Pulse	0.1000	3
K	39	45	He	2194.745	ppb	0.3	145605.70	2.9814	Pulse	0.1000	3
Ca	44	45	He	53398.818	ppb	1.0	176337.34	3.6108	Pulse	0.1000	3
Ti	47	45	He	67.239	ppb	4.2	1746.83	0.0358	Pulse	0.1000	3
V	51	45	He	2.235	ppb	2.6	3873.21	0.0793	Pulse	0.5000	3
Cr	52	45	He	8.925	ppb	4.8	14914.87	0.3055	Pulse	0.1000	3
Mn	55	45	He	9364.586	ppb	0.8	5685711.58	116.4246	Analog	0.1000	3
Fe	57	45	He	8033.136	ppb	0.9	224588.56	4.5989	Pulse	0.1000	3
Co	59	45	He	5.002	ppb	1.4	13586.86	0.2782	Pulse	0.1000	3
Ni	60	72	He	10.564	ppb	1.4	9243.29	0.1122	Pulse	0.1000	3
Cu	63	72	He	41.265	ppb	0.7	94006.04	1.1411	Pulse	0.1000	3
Zn	66	72	He	473.289	ppb	1.5	120197.24	1.4591	Pulse	0.1000	3
As	75	72	He	1.642	ppb	5.5	362.01	0.0044	Pulse	0.5000	3
Sr	88	115	He	239.735	ppb	2.8	177391.81	2.1101	Pulse	0.1000	3
Mo	98	115	He	1.677	ppb	8.6	3247.17	0.0386	Pulse	0.1000	3
Ag	107	115	He	0.040	ppb	19.8	246.68	0.0029	Pulse	0.1000	3
Cd	111	115	He	0.109	ppb	11.6	54.00	0.0006	Pulse	0.5000	3
Sn	120	115	He	14.448	ppb	1.1	19981.72	0.2376	Pulse	0.1000	3
Sb	121	115	He	12.058	ppb	4.8	14464.61	0.1721	Pulse	0.1000	3
Ba	137	115	He	537.463	ppb	2.2	215959.14	2.5687	Pulse	0.1000	3
Tl	205	159	He	-0.071	ppb	N/A	406.69	0.0010	Pulse	0.1000	3
Pb	208	159	He	5.541	ppb	0.9	72637.95	0.1817	Pulse	0.1000	3
U	238	209	He	0.111	ppb	2.6	1823.53	0.0059	Pulse	0.1000	3

ISTD Table:

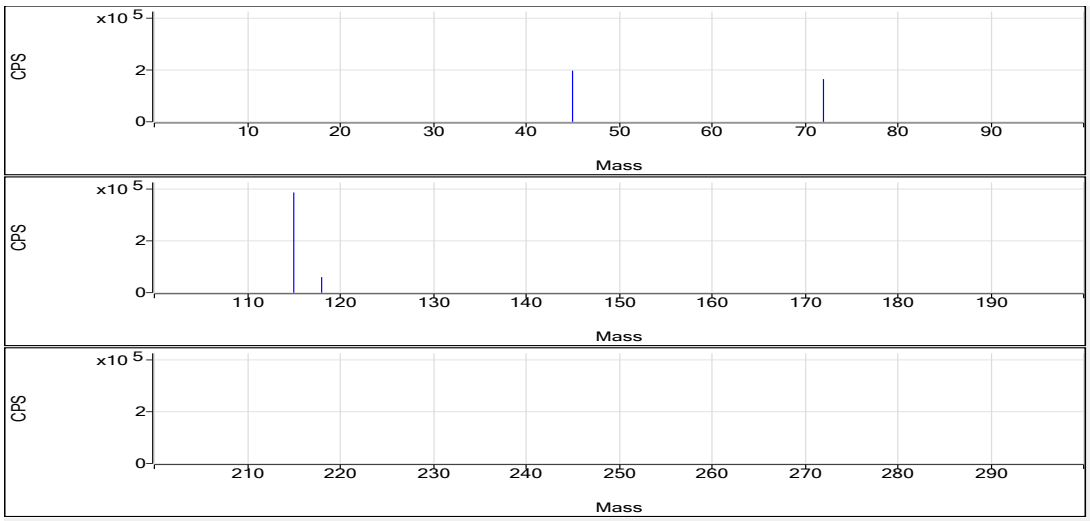
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2556705.12	1.4	98.0	Analog	0.1000	3
No Gas	Ge	72	1267705.92	1.0	98.4	Pulse	0.1000	3
H2	Sc	45	198540.48	0.8	96.3	Pulse	0.1000	3
H2	Ge	72	165713.47	1.1	101.8	Pulse	0.1000	3
H2	In	115	388760.73	1.0	96.3	Pulse	0.1000	3
He	Sc	45	48839.18	1.4	95.4	Pulse	0.1000	3
He	Ge	72	82387.53	1.3	100.6	Pulse	0.1000	3
He	In	115	84105.53	2.7	96.0	Pulse	0.1000	3
He	Tb	159	399778.61	0.8	99.5	Pulse	0.1000	3
He	Bi	209	310986.23	1.1	101.6	Pulse	0.1000	3

No Gas

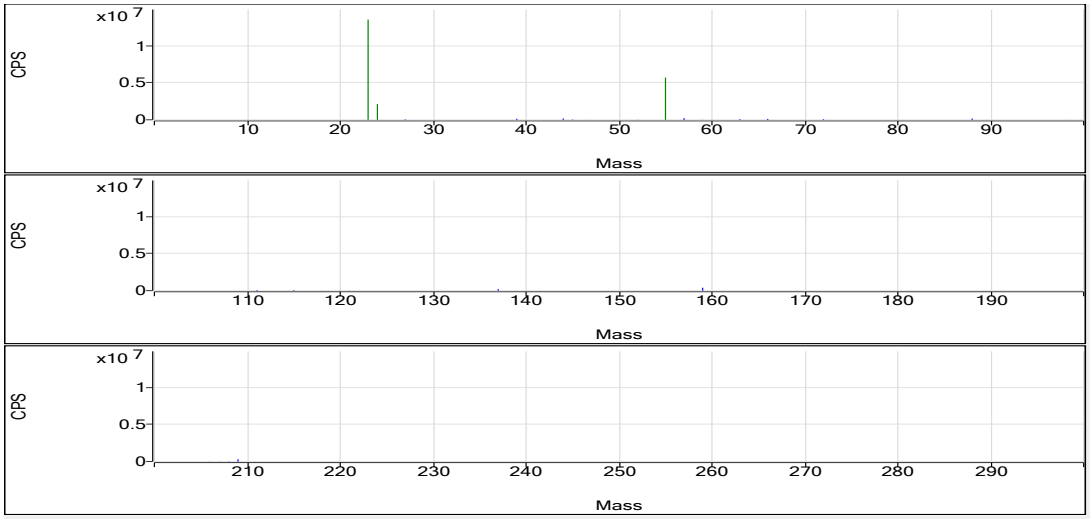


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.572	0.0005	1164.05	0.0007	3.404E-05
Be	9	1	No Gas	0.554	0.0004	1100.05	0.0007	3.404E-05
Be	9	1	No Gas	0.56	0.0004	1136.05	0.0007	3.404E-05
Se	78	2	H2	0.074	0.0001	11.33	0.0004	3.546E-05
Se	78	2	H2	0.093	0.0001	12.67	0.0004	3.546E-05
Se	78	2	H2	0.068	0.0001	10.67	0.0004	3.546E-05
Na	23	3	He	77460.04	276.5166	13527957.30	0.0036	0.4171
Na	23	3	He	75860.283	270.8144	13393017.30	0.0036	0.4171
Na	23	3	He	78490.222	280.1886	13488328.55	0.0036	0.4171
Mg	24	3	He	23903.076	43.1924	2113091.22	0.0018	0.004553
Mg	24	3	He	23622.002	42.6845	2110947.16	0.0018	0.004553
Mg	24	3	He	24358.814	44.0158	2118929.03	0.0018	0.004553
Al	27	3	He	2203.806	1.286	62915.08	0.0006	0.002085
Al	27	3	He	2192.252	1.2793	63266.13	0.0006	0.002085
Al	27	3	He	2209.624	1.2894	62071.84	0.0006	0.002085
K	39	3	He	2191.618	2.9777	145679.12	0.0012	0.4112
K	39	3	He	2190.099	2.976	147174.77	0.0012	0.4112
K	39	3	He	2202.517	2.9905	143963.22	0.0012	0.4112
Ca	44	3	He	52925.046	3.5788	175084.31	0.0001	0.003322
Ca	44	3	He	53308.864	3.6047	178269.96	0.0001	0.003322
Ca	44	3	He	53962.544	3.6489	175657.75	0.0001	0.003322
Ti	47	3	He	70.337	0.0374	1830.18	0.0005	0
Ti	47	3	He	66.538	0.0354	1750.16	0.0005	0
Ti	47	3	He	64.84	0.0345	1660.16	0.0005	0
V	51	3	He	2.194	0.0784	3836.53	0.0213	0.0318
V	51	3	He	2.301	0.0807	3990.57	0.0213	0.0318
V	51	3	He	2.211	0.0788	3792.52	0.0213	0.0318
Cr	52	3	He	8.525	0.2937	14367.69	0.0294	0.04297
Cr	52	3	He	8.878	0.3041	15038.21	0.0294	0.04297
Cr	52	3	He	9.373	0.3186	15338.71	0.0294	0.04297
Mn	55	3	He	9327.96	115.9693	5673538.04	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	9318.243	115.8485	5729239.29	0.0124	0.002801
Mn	55	3	He	9447.555	117.4561	5654357.42	0.0124	0.002801
Fe	57	3	He	8033.136	4.5989	224990.76	0.0006	0.002732
Fe	57	3	He	7962.197	4.5583	225429.31	0.0006	0.002732
Fe	57	3	He	8104.075	4.6395	223345.60	0.0006	0.002732
Co	59	3	He	4.923	0.2738	13396.71	0.0549	0.003644
Co	59	3	He	5.057	0.2812	13907.18	0.0549	0.003644
Co	59	3	He	5.026	0.2795	13456.70	0.0549	0.003644
Ni	60	3	He	10.407	0.1107	9083.24	0.0093	0.01413
Ni	60	3	He	10.691	0.1134	9243.31	0.0093	0.01413
Ni	60	3	He	10.594	0.1125	9403.33	0.0093	0.01413
Cu	63	3	He	41.596	1.1501	94338.63	0.0274	0.009321
Cu	63	3	He	41.2	1.1393	92888.04	0.0274	0.009321
Cu	63	3	He	41.001	1.1338	94791.46	0.0274	0.009321
Zn	66	3	He	474.023	1.4614	119867.70	0.0031	0.005913
Zn	66	3	He	479.796	1.4791	120594.23	0.0031	0.005913
Zn	66	3	He	466.048	1.4369	120129.80	0.0031	0.005913
As	75	3	He	1.686	0.0045	368.01	0.0021	0.0008698
As	75	3	He	1.538	0.0042	340.01	0.0021	0.0008698
As	75	3	He	1.702	0.0045	378.01	0.0021	0.0008698
Sr	88	3	He	232.392	2.0455	176015.60	0.0088	0.0006843
Sr	88	3	He	241.627	2.1267	179921.89	0.0088	0.0006843
Sr	88	3	He	245.186	2.158	176237.95	0.0088	0.0006843
Mo	98	3	He	1.527	0.0353	3040.45	0.0219	0.001827
Mo	98	3	He	1.813	0.0416	3520.58	0.0219	0.001827
Mo	98	3	He	1.691	0.0389	3180.47	0.0219	0.001827
Ag	107	3	He	0.039	0.0029	250.01	0.047	0.001064
Ag	107	3	He	0.048	0.0033	280.01	0.047	0.001064
Ag	107	3	He	0.032	0.0026	210.01	0.047	0.001064
Cd	111	3	He	0.115	0.0007	58.00	0.0053	6.086E-05
Cd	111	3	He	0.117	0.0007	58.00	0.0053	6.086E-05
Cd	111	3	He	0.094	0.0006	46.00	0.0053	6.086E-05
Sn	120	3	He	14.341	0.236	20305.64	0.0154	0.01483
Sn	120	3	He	14.365	0.2363	19995.02	0.0154	0.01483
Sn	120	3	He	14.637	0.2405	19644.51	0.0154	0.01483
Sb	121	3	He	11.388	0.1625	13987.49	0.0143	0.0002661
Sb	121	3	He	12.348	0.1762	14908.38	0.0143	0.0002661
Sb	121	3	He	12.439	0.1775	14497.96	0.0143	0.0002661
Ba	137	3	He	528.988	2.5282	217554.35	0.0048	0.0002665
Ba	137	3	He	532.505	2.545	215306.93	0.0048	0.0002665
Ba	137	3	He	550.896	2.6329	215016.15	0.0048	0.0002665
Tl	205	3	He	-0.072	0.001	390.02	0.0246	0.002755
Tl	205	3	He	-0.071	0.001	400.02	0.0246	0.002755
Tl	205	3	He	-0.069	0.0011	430.02	0.0246	0.002755
Pb	208	3	He	5.497	0.1803	38507.58	0.0324	0.002158
Pb	208	3	He	5.596	0.1835	39139.32	0.0324	0.002158
Pb	208	3	He	5.529	0.1813	38798.16	0.0324	0.002158
U	238	3	He	0.114	0.006	1850.21	0.0492	0.0004023
U	238	3	He	0.108	0.0057	1790.19	0.0492	0.0004023
U	238	3	He	0.11	0.0058	1830.19	0.0492	0.0004023
Sc	45	1	No Gas			2582529.02		
Sc	45	1	No Gas			2515366.99		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2572219.34		
Ge	72	1	No Gas			1279109.51		
Ge	72	1	No Gas			1254401.70		
Ge	72	1	No Gas			1269606.54		
Sc	45	2	H2			199838.63		
Sc	45	2	H2			198997.13		
Sc	45	2	H2			196785.68		
Ge	72	2	H2			167059.35		
Ge	72	2	H2			166381.09		
Ge	72	2	H2			163699.96		
In	115	2	H2			391189.56		
In	115	2	H2			391016.32		
In	115	2	H2			384076.32		
Sc	45	3	He			48922.77		
Sc	45	3	He			49454.60		
Sc	45	3	He			48140.18		
Ge	72	3	He			82024.77		
Ge	72	3	He			81532.91		
Ge	72	3	He			83604.90		
In	115	3	He			86156.91		
In	115	3	He			84706.92		
In	115	3	He			81770.86		
Tb	159	3	He			398458.35		
Tb	159	3	He			397591.75		
Tb	159	3	He			403285.74		
Bi	209	3	He			307284.00		
Bi	209	3	He			312008.04		
Bi	209	3	He			313666.66		

Quantitation Report

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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

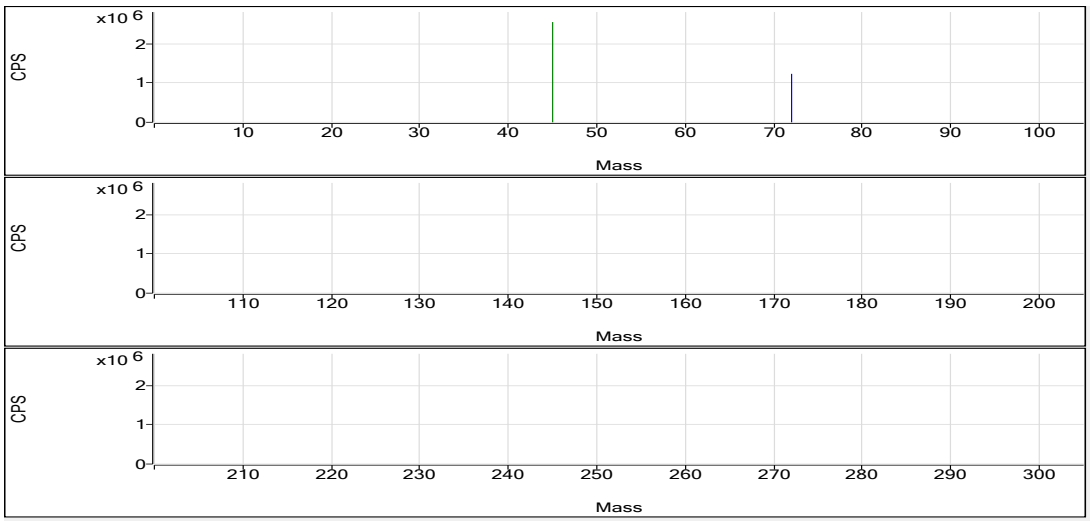
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.018	ppb	11.1	120.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.659	ppb	20.3	52.66	0.0003	Pulse	1.5000	3
Na	23	45	He	55512.290	ppb	3.3	9719944.85	198.2858	Analog	0.1000	3
Mg	24	45	He	98860.532	ppb	3.6	8755555.91	178.6248	Analog	0.1000	3
Al	27	45	He	883.500	ppb	8.2	25339.45	0.5168	Pulse	0.1000	3
K	39	45	He	3574.334	ppb	4.0	225327.60	4.5970	Pulse	0.1000	3
Ca	44	45	He	331167.117	ppb	3.5	1096806.03	22.3760	Pulse	0.1000	3
Ti	47	45	He	15.228	ppb	14.0	396.69	0.0081	Pulse	0.1000	3
V	51	45	He	1.605	ppb	5.3	3233.09	0.0659	Pulse	0.5000	3
Cr	52	45	He	1.113	ppb	20.7	3707.26	0.0757	Pulse	0.1000	3
Mn	55	45	He	114.793	ppb	3.9	70087.29	1.4299	Pulse	0.1000	3
Fe	57	45	He	632.182	ppb	5.6	17858.45	0.3644	Pulse	0.1000	3
Co	59	45	He	0.358	ppb	21.2	1140.09	0.0233	Pulse	0.1000	3
Ni	60	72	He	5.387	ppb	4.7	5267.82	0.0641	Pulse	0.1000	3
Cu	63	72	He	1.659	ppb	3.2	4500.85	0.0548	Pulse	0.1000	3
Zn	66	72	He	8.680	ppb	7.4	2673.80	0.0326	Pulse	0.1000	3
As	75	72	He	0.752	ppb	12.8	204.00	0.0025	Pulse	0.5000	3
Sr	88	115	He	1002.718	ppb	0.9	740601.99	8.8235	Pulse	0.1000	3
Mo	98	115	He	0.150	ppb	8.9	430.02	0.0051	Pulse	0.1000	3
Ag	107	115	He	-0.003	ppb	N/A	76.67	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.499	ppb	2.7	228.00	0.0027	Pulse	0.5000	3
Sn	120	115	He	0.172	ppb	39.9	1466.80	0.0175	Pulse	0.1000	3
Sb	121	115	He	0.137	ppb	40.6	186.67	0.0022	Pulse	0.1000	3
Ba	137	115	He	957.079	ppb	0.5	383928.33	4.5740	Pulse	0.1000	3
Tl	205	159	He	-0.065	ppb	N/A	463.36	0.0012	Pulse	0.1000	3
Pb	208	159	He	0.724	ppb	2.9	10158.58	0.0256	Pulse	0.1000	3
U	238	209	He	0.160	ppb	4.9	2453.67	0.0083	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2560427.05	1.1	98.2	Analog	0.1000	3
No Gas	Ge	72	1237653.76	0.8	96.0	Pulse	0.1000	3
H2	Sc	45	199228.46	1.1	96.7	Pulse	0.1000	3
H2	Ge	72	162303.69	0.8	99.7	Pulse	0.1000	3
H2	In	115	383033.26	0.5	94.9	Pulse	0.1000	3
He	Sc	45	49050.21	2.9	95.8	Pulse	0.1000	3
He	Ge	72	82122.77	1.1	100.3	Pulse	0.1000	3
He	In	115	83939.31	1.0	95.8	Pulse	0.1000	3
He	Tb	159	396621.71	1.1	98.8	Pulse	0.1000	3
He	Bi	209	297034.35	0.5	97.0	Pulse	0.1000	3

No Gas



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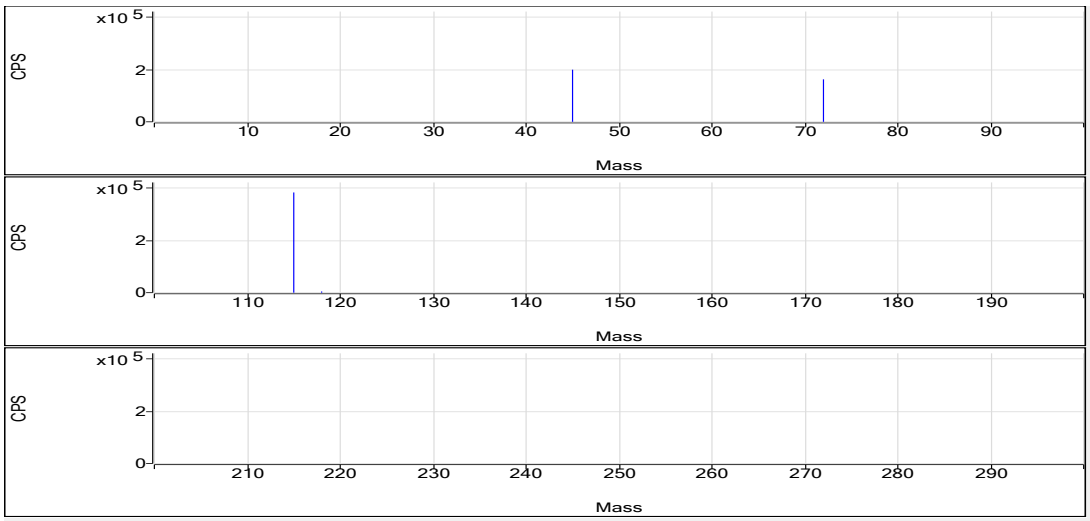
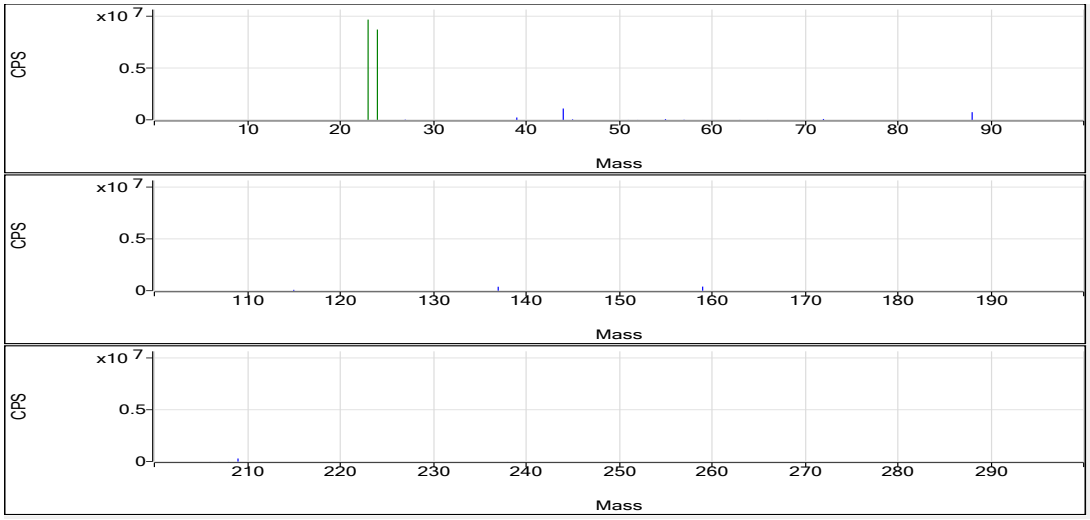


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.017	0	118.00	0.0007	3.404E-05
Be	9	1	No Gas	0.02	0	124.00	0.0007	3.404E-05
Be	9	1	No Gas	0.017	0	120.00	0.0007	3.404E-05
Se	78	2	H2	0.722	0.0004	57.33	0.0004	3.546E-05
Se	78	2	H2	0.749	0.0004	59.33	0.0004	3.546E-05
Se	78	2	H2	0.505	0.0003	41.33	0.0004	3.546E-05
Na	23	3	He	57617.748	205.7905	9762220.48	0.0036	0.4171
Na	23	3	He	54374.389	194.2298	9646597.98	0.0036	0.4171
Na	23	3	He	54544.733	194.837	9751016.10	0.0036	0.4171
Mg	24	3	He	102888.307	185.9021	8818762.37	0.0018	0.004553
Mg	24	3	He	97533.832	176.2277	8752506.74	0.0018	0.004553
Mg	24	3	He	96159.456	173.7445	8695398.62	0.0018	0.004553
Al	27	3	He	893.507	0.5226	24792.65	0.0006	0.002085
Al	27	3	He	950.125	0.5556	27595.43	0.0006	0.002085
Al	27	3	He	806.868	0.4722	23630.27	0.0006	0.002085
K	39	3	He	3736.682	4.7871	227089.98	0.0012	0.4112
K	39	3	He	3512.984	4.5252	224745.91	0.0012	0.4112
K	39	3	He	3473.335	4.4787	224146.91	0.0012	0.4112
Ca	44	3	He	344474.448	23.2751	1104114.20	0.0001	0.003322
Ca	44	3	He	326701.071	22.0743	1096341.55	0.0001	0.003322
Ca	44	3	He	322325.833	21.7788	1089962.33	0.0001	0.003322
Ti	47	3	He	16.251	0.0086	410.02	0.0005	0
Ti	47	3	He	16.658	0.0089	440.02	0.0005	0
Ti	47	3	He	12.774	0.0068	340.02	0.0005	0
V	51	3	He	1.587	0.0655	3108.35	0.0213	0.0318
V	51	3	He	1.53	0.0643	3194.38	0.0213	0.0318
V	51	3	He	1.697	0.0679	3396.55	0.0213	0.0318
Cr	52	3	He	1.364	0.0831	3940.67	0.0294	0.04297
Cr	52	3	He	1.066	0.0743	3690.60	0.0294	0.04297
Cr	52	3	He	0.91	0.0697	3490.51	0.0294	0.04297
Mn	55	3	He	119.918	1.4936	70854.40	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	111.908	1.3941	69236.96	0.0124	0.002801
Mn	55	3	He	112.554	1.4021	70170.51	0.0124	0.002801
Fe	57	3	He	671.031	0.3867	18342.37	0.0006	0.002732
Fe	57	3	He	602.304	0.3473	17250.99	0.0006	0.002732
Fe	57	3	He	623.21	0.3593	17981.99	0.0006	0.002732
Co	59	3	He	0.444	0.028	1330.12	0.0549	0.003644
Co	59	3	He	0.3	0.0201	1000.07	0.0549	0.003644
Co	59	3	He	0.33	0.0218	1090.07	0.0549	0.003644
Ni	60	3	He	5.575	0.0659	5481.22	0.0093	0.01413
Ni	60	3	He	5.487	0.0651	5311.19	0.0093	0.01413
Ni	60	3	He	5.099	0.0615	5011.04	0.0093	0.01413
Cu	63	3	He	1.606	0.0534	4440.81	0.0274	0.009321
Cu	63	3	He	1.657	0.0548	4470.87	0.0274	0.009321
Cu	63	3	He	1.713	0.0563	4590.88	0.0274	0.009321
Zn	66	3	He	8.527	0.0321	2670.34	0.0031	0.005913
Zn	66	3	He	8.13	0.0309	2520.31	0.0031	0.005913
Zn	66	3	He	9.382	0.0347	2830.75	0.0031	0.005913
As	75	3	He	0.849	0.0027	224.00	0.0021	0.0008698
As	75	3	He	0.656	0.0023	186.00	0.0021	0.0008698
As	75	3	He	0.749	0.0025	202.00	0.0021	0.0008698
Sr	88	3	He	1005.006	8.8436	745328.82	0.0088	0.0006843
Sr	88	3	He	992.997	8.738	738872.80	0.0088	0.0006843
Sr	88	3	He	1010.152	8.8889	737604.36	0.0088	0.0006843
Mo	98	3	He	0.138	0.0049	410.02	0.0219	0.001827
Mo	98	3	He	0.165	0.0054	460.02	0.0219	0.001827
Mo	98	3	He	0.147	0.0051	420.02	0.0219	0.001827
Ag	107	3	He	-0.013	0.0005	40.00	0.047	0.001064
Ag	107	3	He	0	0.0011	90.00	0.047	0.001064
Ag	107	3	He	0.003	0.0012	100.00	0.047	0.001064
Cd	111	3	He	0.483	0.0026	222.00	0.0053	6.086E-05
Cd	111	3	He	0.504	0.0027	232.00	0.0053	6.086E-05
Cd	111	3	He	0.509	0.0028	230.00	0.0053	6.086E-05
Sn	120	3	He	0.092	0.0163	1370.11	0.0154	0.01483
Sn	120	3	He	0.212	0.0181	1530.15	0.0154	0.01483
Sn	120	3	He	0.211	0.0181	1500.14	0.0154	0.01483
Sb	121	3	He	0.156	0.0025	210.01	0.0143	0.0002661
Sb	121	3	He	0.181	0.0028	240.01	0.0143	0.0002661
Sb	121	3	He	0.074	0.0013	110.00	0.0143	0.0002661
Ba	137	3	He	960.513	4.5904	386869.88	0.0048	0.0002665
Ba	137	3	He	951.574	4.5477	384544.56	0.0048	0.0002665
Ba	137	3	He	959.152	4.5839	380370.54	0.0048	0.0002665
Tl	205	3	He	-0.06	0.0013	510.03	0.0246	0.002755
Tl	205	3	He	-0.07	0.001	410.02	0.0246	0.002755
Tl	205	3	He	-0.064	0.0012	470.03	0.0246	0.002755
Pb	208	3	He	0.715	0.0253	5431.32	0.0324	0.002158
Pb	208	3	He	0.748	0.0264	5431.38	0.0324	0.002158
Pb	208	3	He	0.709	0.0251	5211.18	0.0324	0.002158
U	238	3	He	0.151	0.0079	2340.31	0.0492	0.0004023
U	238	3	He	0.167	0.0086	2550.37	0.0492	0.0004023
U	238	3	He	0.16	0.0083	2470.32	0.0492	0.0004023
Sc	45	1	No Gas			2546373.87		
Sc	45	1	No Gas			2540680.90		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2594226.37		
Ge	72	1	No Gas			1242770.92		
Ge	72	1	No Gas			1226523.18		
Ge	72	1	No Gas			1243667.17		
Sc	45	2	H2			200201.68		
Sc	45	2	H2			200799.76		
Sc	45	2	H2			196683.94		
Ge	72	2	H2			162930.05		
Ge	72	2	H2			163142.28		
Ge	72	2	H2			160838.74		
In	115	2	H2			385157.57		
In	115	2	H2			382380.11		
In	115	2	H2			381562.10		
Sc	45	3	He			47437.67		
Sc	45	3	He			49665.90		
Sc	45	3	He			50047.05		
Ge	72	3	He			83202.19		
Ge	72	3	He			81633.06		
Ge	72	3	He			81533.07		
In	115	3	He			84285.73		
In	115	3	He			84566.99		
In	115	3	He			82987.29		
Tb	159	3	He			401295.46		
Tb	159	3	He			393297.18		
Tb	159	3	He			395272.49		
Bi	209	3	He			297643.84		
Bi	209	3	He			295465.84		
Bi	209	3	He			297993.37		

Quantitation Report

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Sample Type	Sample
Comment	T31
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

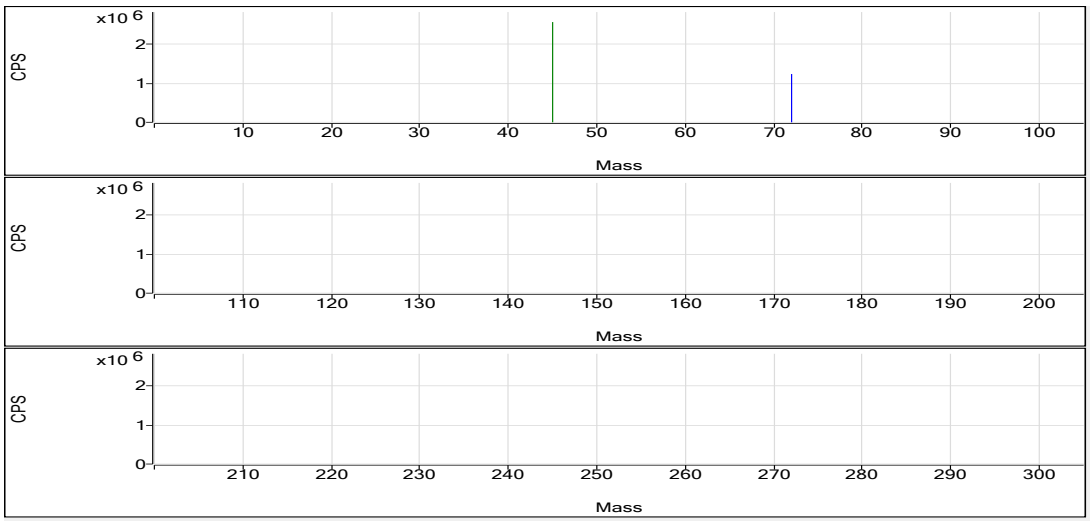
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.088	ppb	5.8	250.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.280	ppb	23.1	25.11	0.0002	Pulse	1.5000	3
Na	23	45	He	147534.085	ppb	1.0	25691589.62	526.2894	Analog	0.1000	3
Mg	24	45	He	77157.846	ppb	0.4	6805885.73	139.4126	Analog	0.1000	3
Al	27	45	He	983.503	ppb	2.5	28074.40	0.5751	Pulse	0.1000	3
K	39	45	He	3104.980	ppb	1.8	197570.77	4.0474	Pulse	0.1000	3
Ca	44	45	He	181882.088	ppb	1.2	599986.70	12.2908	Pulse	0.1000	3
Ti	47	45	He	53.530	ppb	13.2	1390.12	0.0285	Pulse	0.1000	3
V	51	45	He	5.511	ppb	2.0	7269.86	0.1489	Pulse	0.5000	3
Cr	52	45	He	1.985	ppb	10.5	4947.69	0.1014	Pulse	0.1000	3
Mn	55	45	He	13598.808	ppb	1.2	8253068.00	169.0650	Analog	0.1000	3
Fe	57	45	He	1628.670	ppb	3.8	45616.27	0.9346	Pulse	0.1000	3
Co	59	45	He	31.737	ppb	1.7	85211.93	1.7456	Pulse	0.1000	3
Ni	60	72	He	24.994	ppb	2.2	20171.42	0.2461	Pulse	0.1000	3
Cu	63	72	He	8.238	ppb	1.9	19280.18	0.2353	Pulse	0.1000	3
Zn	66	72	He	17.388	ppb	7.4	4860.99	0.0593	Pulse	0.1000	3
As	75	72	He	0.417	ppb	13.5	144.67	0.0018	Pulse	0.5000	3
Sr	88	115	He	993.666	ppb	2.1	728466.37	8.7438	Pulse	0.1000	3
Mo	98	115	He	2.111	ppb	10.1	4007.37	0.0482	Pulse	0.1000	3
Ag	107	115	He	-0.002	ppb	N/A	80.00	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.814	ppb	7.5	366.68	0.0044	Pulse	0.5000	3
Sn	120	115	He	0.128	ppb	10.8	1400.11	0.0168	Pulse	0.1000	3
Sb	121	115	He	0.209	ppb	19.8	270.01	0.0032	Pulse	0.1000	3
Ba	137	115	He	925.777	ppb	2.1	368607.41	4.4244	Pulse	0.1000	3
Tl	205	159	He	-0.079	ppb	N/A	323.35	0.0008	Pulse	0.1000	3
Pb	208	159	He	2.098	ppb	0.2	27689.08	0.0701	Pulse	0.1000	3
U	238	209	He	0.103	ppb	11.2	1610.16	0.0055	Pulse	0.1000	3

ISTD Table:

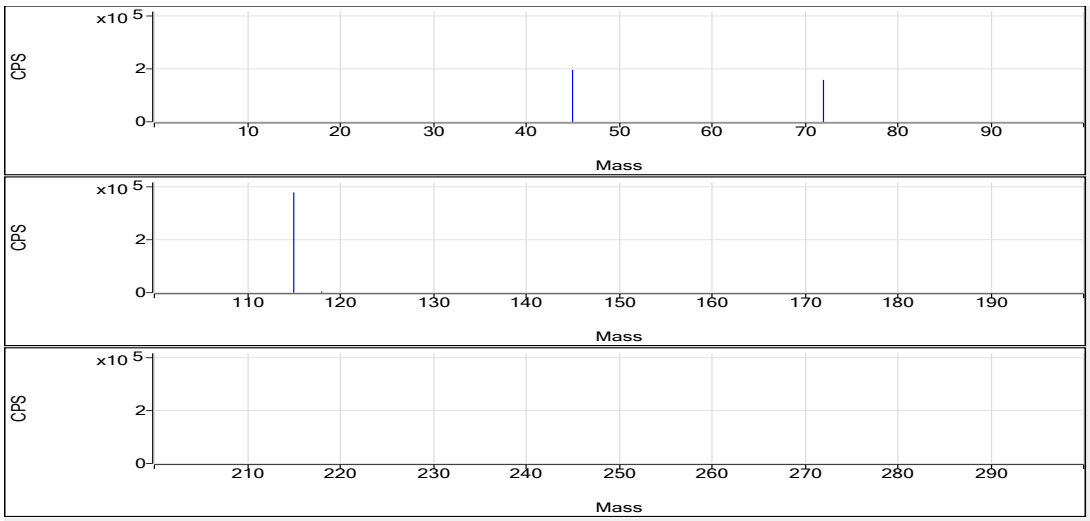
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2562588.35	0.2	98.3	Analog	0.1000	3
No Gas	Ge	72	1234121.89	0.4	95.8	Pulse	0.1000	3
H2	Sc	45	197060.22	0.5	95.6	Pulse	0.1000	3
H2	Ge	72	158955.95	0.3	97.7	Pulse	0.1000	3
H2	In	115	380179.61	0.9	94.2	Pulse	0.1000	3
He	Sc	45	48819.14	0.8	95.4	Pulse	0.1000	3
He	Ge	72	81951.04	0.6	100.1	Pulse	0.1000	3
He	In	115	83334.91	2.1	95.1	Pulse	0.1000	3
He	Tb	159	394822.26	0.6	98.3	Pulse	0.1000	3
He	Bi	209	295201.66	0.3	96.4	Pulse	0.1000	3

No Gas

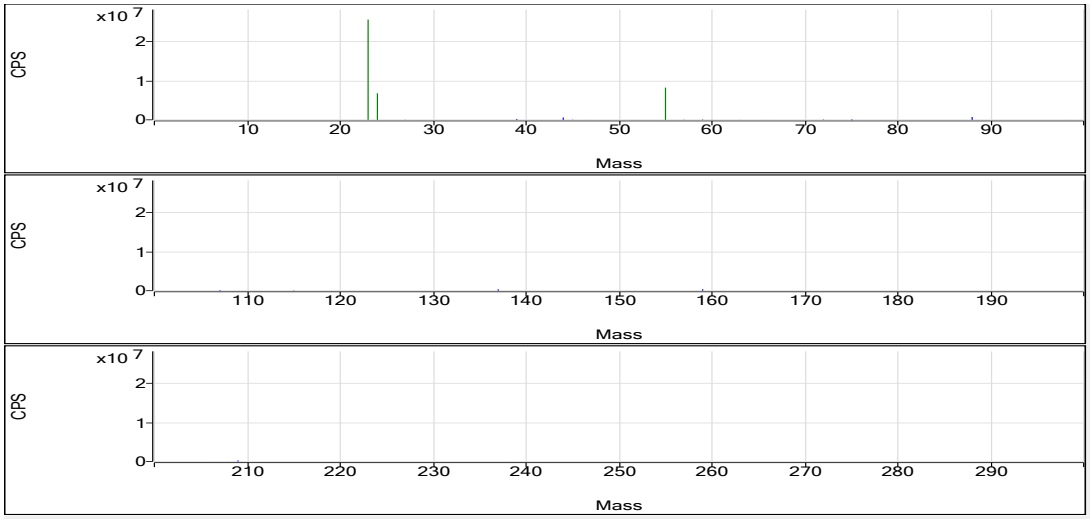


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.084	0.0001	244.00	0.0007	3.404E-05
Be	9	1	No Gas	0.085	0.0001	246.00	0.0007	3.404E-05
Be	9	1	No Gas	0.093	0.0001	262.00	0.0007	3.404E-05
Se	78	2	H2	0.312	0.0002	27.33	0.0004	3.546E-05
Se	78	2	H2	0.322	0.0002	28.00	0.0004	3.546E-05
Se	78	2	H2	0.205	0.0001	20.00	0.0004	3.546E-05
Na	23	3	He	148850.879	530.983	25694754.62	0.0036	0.4171
Na	23	3	He	145831.074	520.2191	25591572.12	0.0036	0.4171
Na	23	3	He	147920.304	527.666	25788442.12	0.0036	0.4171
Mg	24	3	He	77479.712	139.9941	6774443.65	0.0018	0.004553
Mg	24	3	He	77044.685	139.2081	6848179.90	0.0018	0.004553
Mg	24	3	He	76949.141	139.0355	6795033.65	0.0018	0.004553
Al	27	3	He	971.39	0.568	27486.56	0.0006	0.002085
Al	27	3	He	967.021	0.5655	27817.40	0.0006	0.002085
Al	27	3	He	1012.097	0.5917	28919.24	0.0006	0.002085
K	39	3	He	3170.107	4.1236	199545.82	0.0012	0.4112
K	39	3	He	3063.383	3.9986	196708.38	0.0012	0.4112
K	39	3	He	3081.449	4.0198	196458.10	0.0012	0.4112
Ca	44	3	He	184425.301	12.4626	603075.66	0.0001	0.003322
Ca	44	3	He	180454.576	12.1943	599885.69	0.0001	0.003322
Ca	44	3	He	180766.386	12.2154	596998.74	0.0001	0.003322
Ti	47	3	He	55.178	0.0293	1420.12	0.0005	0
Ti	47	3	He	59.629	0.0317	1560.16	0.0005	0
Ti	47	3	He	45.784	0.0244	1190.09	0.0005	0
V	51	3	He	5.585	0.1505	7281.86	0.0213	0.0318
V	51	3	He	5.567	0.1501	7383.91	0.0213	0.0318
V	51	3	He	5.382	0.1462	7143.80	0.0213	0.0318
Cr	52	3	He	1.976	0.1011	4890.99	0.0294	0.04297
Cr	52	3	He	1.781	0.0954	4690.94	0.0294	0.04297
Cr	52	3	He	2.199	0.1077	5261.15	0.0294	0.04297
Mn	55	3	He	13775.197	171.2579	8287328.63	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	13457.125	167.3036	8230305.50	0.0124	0.002801
Mn	55	3	He	13564.101	168.6335	8241569.88	0.0124	0.002801
Fe	57	3	He	1700.656	0.9758	47218.09	0.0006	0.002732
Fe	57	3	He	1590.482	0.9127	44900.54	0.0006	0.002732
Fe	57	3	He	1594.872	0.9152	44730.17	0.0006	0.002732
Co	59	3	He	32.357	1.7796	86117.04	0.0549	0.003644
Co	59	3	He	31.336	1.7236	84789.51	0.0549	0.003644
Co	59	3	He	31.52	1.7337	84729.25	0.0549	0.003644
Ni	60	3	He	24.527	0.2418	19914.38	0.0093	0.01413
Ni	60	3	He	25.602	0.2518	20665.49	0.0093	0.01413
Ni	60	3	He	24.853	0.2448	19934.39	0.0093	0.01413
Cu	63	3	He	8.246	0.2355	19393.62	0.0274	0.009321
Cu	63	3	He	8.387	0.2393	19644.00	0.0274	0.009321
Cu	63	3	He	8.08	0.2309	18802.92	0.0274	0.009321
Zn	66	3	He	17.93	0.061	5021.04	0.0031	0.005913
Zn	66	3	He	18.316	0.0622	5101.09	0.0031	0.005913
Zn	66	3	He	15.918	0.0548	4460.85	0.0031	0.005913
As	75	3	He	0.398	0.0017	142.00	0.0021	0.0008698
As	75	3	He	0.48	0.0019	156.00	0.0021	0.0008698
As	75	3	He	0.373	0.0017	136.00	0.0021	0.0008698
Sr	88	3	He	972.238	8.5553	729541.47	0.0088	0.0006843
Sr	88	3	He	1014.044	8.9232	732001.47	0.0088	0.0006843
Sr	88	3	He	994.717	8.7531	723856.16	0.0088	0.0006843
Mo	98	3	He	1.873	0.0429	3660.60	0.0219	0.001827
Mo	98	3	He	2.284	0.0519	4260.78	0.0219	0.001827
Mo	98	3	He	2.176	0.0496	4100.74	0.0219	0.001827
Ag	107	3	He	0	0.0011	90.00	0.047	0.001064
Ag	107	3	He	-0.012	0.0005	40.00	0.047	0.001064
Ag	107	3	He	0.006	0.0013	110.00	0.047	0.001064
Cd	111	3	He	0.847	0.0046	390.01	0.0053	6.086E-05
Cd	111	3	He	0.744	0.004	330.01	0.0053	6.086E-05
Cd	111	3	He	0.851	0.0046	380.01	0.0053	6.086E-05
Sn	120	3	He	0.141	0.017	1450.12	0.0154	0.01483
Sn	120	3	He	0.113	0.0166	1360.11	0.0154	0.01483
Sn	120	3	He	0.128	0.0168	1390.11	0.0154	0.01483
Sb	121	3	He	0.171	0.0027	230.01	0.0143	0.0002661
Sb	121	3	He	0.204	0.0032	260.01	0.0143	0.0002661
Sb	121	3	He	0.253	0.0039	320.01	0.0143	0.0002661
Ba	137	3	He	907.487	4.337	369828.86	0.0048	0.0002665
Ba	137	3	He	946.653	4.5241	371132.57	0.0048	0.0002665
Ba	137	3	He	923.19	4.412	364860.81	0.0048	0.0002665
Tl	205	3	He	-0.073	0.001	380.02	0.0246	0.002755
Tl	205	3	He	-0.084	0.0007	280.01	0.0246	0.002755
Tl	205	3	He	-0.08	0.0008	310.01	0.0246	0.002755
Pb	208	3	He	2.103	0.0703	14538.59	0.0324	0.002158
Pb	208	3	He	2.096	0.0701	14768.75	0.0324	0.002158
Pb	208	3	He	2.094	0.07	14688.76	0.0324	0.002158
U	238	3	He	0.1	0.0053	1580.15	0.0492	0.0004023
U	238	3	He	0.115	0.0061	1790.19	0.0492	0.0004023
U	238	3	He	0.093	0.005	1460.13	0.0492	0.0004023
Sc	45	1	No Gas			2561598.40		
Sc	45	1	No Gas			2558278.56		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2567888.09		
Ge	72	1	No Gas			1229034.83		
Ge	72	1	No Gas			1234276.86		
Ge	72	1	No Gas			1239053.97		
Sc	45	2	H2			197810.74		
Sc	45	2	H2			196065.60		
Sc	45	2	H2			197304.33		
Ge	72	2	H2			158692.34		
Ge	72	2	H2			158745.03		
Ge	72	2	H2			159430.48		
In	115	2	H2			382476.52		
In	115	2	H2			376381.64		
In	115	2	H2			381680.66		
Sc	45	3	He			48390.92		
Sc	45	3	He			49193.83		
Sc	45	3	He			48872.66		
Ge	72	3	He			82357.23		
Ge	72	3	He			82075.30		
Ge	72	3	He			81420.60		
In	115	3	He			85282.26		
In	115	3	He			82042.00		
In	115	3	He			82705.28		
Tb	159	3	He			392935.78		
Tb	159	3	He			397552.22		
Tb	159	3	He			393978.78		
Bi	209	3	He			296333.06		
Bi	209	3	He			294912.30		
Bi	209	3	He			294359.62		

Quantitation Report

Data File Name	049SMPL.d
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Sample Type	Sample
Comment	T31
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

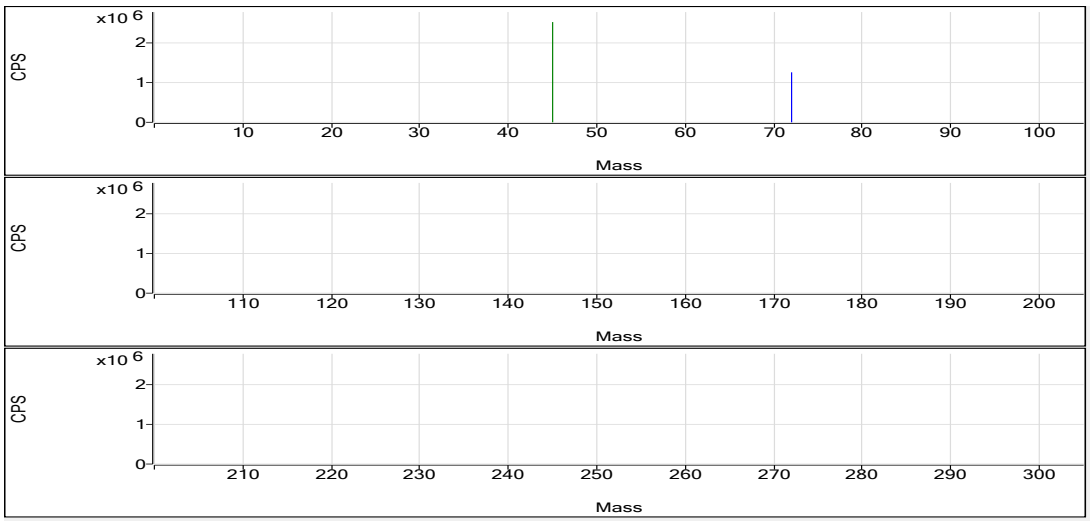
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.032	ppb	N/A	28.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.044	ppb	N/A	2.67	0.0000	Pulse	1.5000	3
Na	23	45	He	536.580	ppb	1.3	114989.14	2.3297	Pulse	0.1000	3
Mg	24	45	He	31.650	ppb	8.4	3047.08	0.0617	Pulse	0.1000	3
Al	27	45	He	12.654	ppb	6.5	466.69	0.0095	Pulse	0.1000	3
K	39	45	He	15.501	ppb	114.3	21196.03	0.4293	Pulse	0.1000	3
Ca	44	45	He	161.866	ppb	13.1	703.38	0.0143	Pulse	0.1000	3
Ti	47	45	He	0.634	ppb	34.2	16.67	0.0003	Pulse	0.1000	3
V	51	45	He	0.045	ppb	184.7	1616.77	0.0328	Pulse	0.5000	3
Cr	52	45	He	0.598	ppb	21.6	2990.42	0.0606	Pulse	0.1000	3
Mn	55	45	He	2.604	ppb	14.3	1736.83	0.0352	Pulse	0.1000	3
Fe	57	45	He	6.434	ppb	14.7	316.68	0.0064	Pulse	0.1000	3
Co	59	45	He	-0.022	ppb	N/A	120.00	0.0024	Pulse	0.1000	3
Ni	60	72	He	-1.056	ppb	N/A	360.02	0.0043	Pulse	0.1000	3
Cu	63	72	He	0.034	ppb	109.5	853.39	0.0103	Pulse	0.1000	3
Zn	66	72	He	1.284	ppb	61.8	820.05	0.0099	Pulse	0.1000	3
As	75	72	He	0.095	ppb	85.6	89.33	0.0011	Pulse	0.5000	3
Sr	88	115	He	0.789	ppb	19.4	656.71	0.0076	Pulse	0.1000	3
Mo	98	115	He	-0.039	ppb	N/A	83.34	0.0010	Pulse	0.1000	3
Ag	107	115	He	-0.009	ppb	N/A	53.33	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.005	ppb	146.1	7.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.366	ppb	31.6	1763.50	0.0205	Pulse	0.1000	3
Sb	121	115	He	0.152	ppb	5.2	210.01	0.0024	Pulse	0.1000	3
Ba	137	115	He	1.183	ppb	18.5	510.03	0.0059	Pulse	0.1000	3
Tl	205	159	He	-0.076	ppb	N/A	353.35	0.0009	Pulse	0.1000	3
Pb	208	159	He	0.078	ppb	8.3	1870.12	0.0047	Pulse	0.1000	3
U	238	209	He	-0.003	ppb	N/A	73.33	0.0002	Pulse	0.1000	3

ISTD Table:

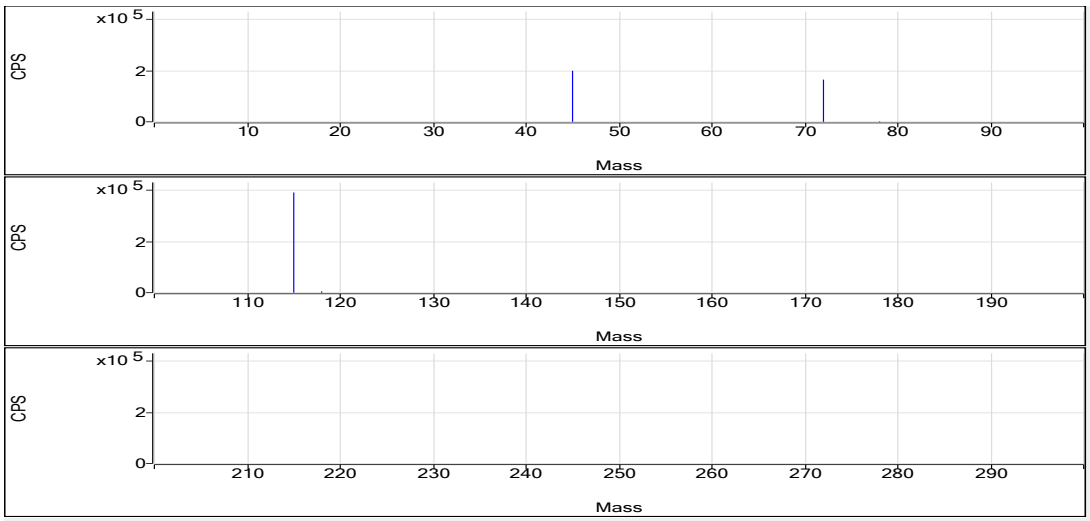
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2532467.67	1.1	97.1	Analog	0.1000	3
No Gas	Ge	72	1262660.66	0.4	98.0	Pulse	0.1000	3
H2	Sc	45	199817.92	1.5	97.0	Pulse	0.1000	3
H2	Ge	72	165121.68	2.1	101.5	Pulse	0.1000	3
H2	In	115	392221.78	0.7	97.2	Pulse	0.1000	3
He	Sc	45	49360.84	0.8	96.4	Pulse	0.1000	3
He	Ge	72	83188.43	0.7	101.6	Pulse	0.1000	3
He	In	115	86151.16	0.4	98.3	Pulse	0.1000	3
He	Tb	159	398262.57	1.3	99.2	Pulse	0.1000	3
He	Bi	209	313570.77	0.8	102.4	Pulse	0.1000	3

No Gas

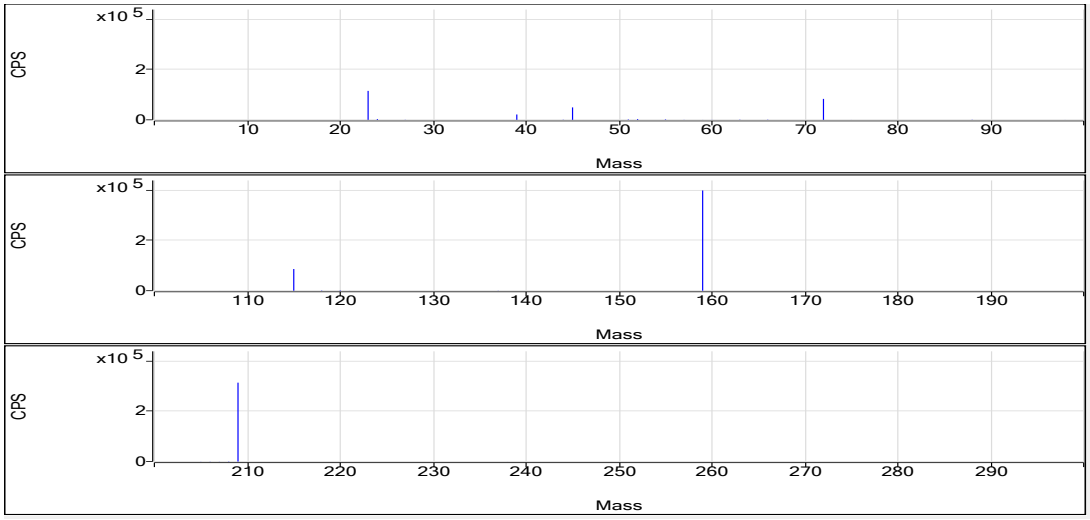


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.03	0	32.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.027	0	36.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.038	0	16.00	0.0007	3.404E-05
Se	78	2	H2	-0.043	0	2.67	0.0004	3.546E-05
Se	78	2	H2	-0.036	0	3.33	0.0004	3.546E-05
Se	78	2	H2	-0.053	0	2.00	0.0004	3.546E-05
Na	23	3	He	528.707	2.3016	114471.22	0.0036	0.4171
Na	23	3	He	538.601	2.3369	114442.01	0.0036	0.4171
Na	23	3	He	542.433	2.3505	116054.19	0.0036	0.4171
Mg	24	3	He	32.539	0.0633	3150.43	0.0018	0.004553
Mg	24	3	He	33.763	0.0656	3210.45	0.0018	0.004553
Mg	24	3	He	28.647	0.0563	2780.35	0.0018	0.004553
Al	27	3	He	12.298	0.0092	460.02	0.0006	0.002085
Al	27	3	He	13.597	0.01	490.03	0.0006	0.002085
Al	27	3	He	12.067	0.0091	450.02	0.0006	0.002085
K	39	3	He	18.988	0.4334	21556.62	0.0012	0.4112
K	39	3	He	-3.708	0.4068	19924.21	0.0012	0.4112
K	39	3	He	31.223	0.4478	22107.26	0.0012	0.4112
Ca	44	3	He	141.317	0.0129	640.04	0.0001	0.003322
Ca	44	3	He	183.581	0.0157	770.05	0.0001	0.003322
Ca	44	3	He	160.701	0.0142	700.04	0.0001	0.003322
Ti	47	3	He	0.756	0.0004	20.00	0.0005	0
Ti	47	3	He	0.384	0.0002	10.00	0.0005	0
Ti	47	3	He	0.762	0.0004	20.00	0.0005	0
V	51	3	He	-0.037	0.031	1542.10	0.0213	0.0318
V	51	3	He	0.043	0.0327	1602.10	0.0213	0.0318
V	51	3	He	0.13	0.0346	1706.11	0.0213	0.0318
Cr	52	3	He	0.747	0.065	3230.47	0.0294	0.04297
Cr	52	3	He	0.518	0.0582	2850.38	0.0294	0.04297
Cr	52	3	He	0.529	0.0585	2890.41	0.0294	0.04297
Mn	55	3	He	3.026	0.0404	2010.20	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2.469	0.0335	1640.15	0.0124	0.002801
Mn	55	3	He	2.316	0.0316	1560.14	0.0124	0.002801
Fe	57	3	He	7.526	0.007	350.02	0.0006	0.002732
Fe	57	3	He	5.932	0.0061	300.01	0.0006	0.002732
Fe	57	3	He	5.845	0.0061	300.01	0.0006	0.002732
Co	59	3	He	-0.015	0.0028	140.00	0.0549	0.003644
Co	59	3	He	-0.029	0.002	100.00	0.0549	0.003644
Co	59	3	He	-0.022	0.0024	120.00	0.0549	0.003644
Ni	60	3	He	-1.007	0.0048	400.02	0.0093	0.01413
Ni	60	3	He	-1.118	0.0038	310.02	0.0093	0.01413
Ni	60	3	He	-1.043	0.0044	370.02	0.0093	0.01413
Cu	63	3	He	-0.005	0.0092	770.05	0.0274	0.009321
Cu	63	3	He	0.07	0.0113	930.06	0.0274	0.009321
Cu	63	3	He	0.037	0.0103	860.05	0.0274	0.009321
Zn	66	3	He	1.885	0.0117	980.07	0.0031	0.005913
Zn	66	3	He	1.582	0.0108	890.06	0.0031	0.005913
Zn	66	3	He	0.385	0.0071	590.03	0.0031	0.005913
As	75	3	He	0.04	0.001	80.00	0.0021	0.0008698
As	75	3	He	0.057	0.001	82.00	0.0021	0.0008698
As	75	3	He	0.189	0.0013	106.00	0.0021	0.0008698
Sr	88	3	He	0.953	0.0091	780.05	0.0088	0.0006843
Sr	88	3	He	0.65	0.0064	550.03	0.0088	0.0006843
Sr	88	3	He	0.762	0.0074	640.04	0.0088	0.0006843
Mo	98	3	He	-0.036	0.001	90.01	0.0219	0.001827
Mo	98	3	He	-0.046	0.0008	70.00	0.0219	0.001827
Mo	98	3	He	-0.036	0.001	90.00	0.0219	0.001827
Ag	107	3	He	-0.01	0.0006	50.00	0.047	0.001064
Ag	107	3	He	-0.013	0.0005	40.00	0.047	0.001064
Ag	107	3	He	-0.005	0.0008	70.00	0.047	0.001064
Cd	111	3	He	0.01	0.0001	10.00	0.0053	6.086E-05
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Cd	111	3	He	0.006	0.0001	8.00	0.0053	6.086E-05
Sn	120	3	He	0.35	0.0202	1740.18	0.0154	0.01483
Sn	120	3	He	0.489	0.0224	1920.19	0.0154	0.01483
Sn	120	3	He	0.259	0.0188	1630.14	0.0154	0.01483
Sb	121	3	He	0.161	0.0026	220.01	0.0143	0.0002661
Sb	121	3	He	0.145	0.0023	200.01	0.0143	0.0002661
Sb	121	3	He	0.152	0.0024	210.01	0.0143	0.0002661
Ba	137	3	He	1.428	0.0071	610.04	0.0048	0.0002665
Ba	137	3	He	1.114	0.0056	480.02	0.0048	0.0002665
Ba	137	3	He	1.008	0.0051	440.02	0.0048	0.0002665
Tl	205	3	He	-0.082	0.0007	300.02	0.0246	0.002755
Tl	205	3	He	-0.074	0.0009	370.02	0.0246	0.002755
Tl	205	3	He	-0.072	0.001	390.02	0.0246	0.002755
Pb	208	3	He	0.075	0.0046	940.08	0.0324	0.002158
Pb	208	3	He	0.086	0.0049	1150.08	0.0324	0.002158
Pb	208	3	He	0.074	0.0046	870.06	0.0324	0.002158
U	238	3	He	-0.002	0.0003	90.00	0.0492	0.0004023
U	238	3	He	-0.005	0.0002	50.00	0.0492	0.0004023
U	238	3	He	-0.003	0.0003	80.00	0.0492	0.0004023
Sc	45	1	No Gas			2555256.99		
Sc	45	1	No Gas			2541212.62		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2500933.40		
Ge	72	1	No Gas			1269181.23		
Ge	72	1	No Gas			1259248.26		
Ge	72	1	No Gas			1259552.48		
Sc	45	2	H2			196491.60		
Sc	45	2	H2			200443.98		
Sc	45	2	H2			202518.18		
Ge	72	2	H2			161362.18		
Ge	72	2	H2			168070.35		
Ge	72	2	H2			165932.50		
In	115	2	H2			394765.54		
In	115	2	H2			392721.01		
In	115	2	H2			389178.78		
Sc	45	3	He			49735.77		
Sc	45	3	He			48972.71		
Sc	45	3	He			49374.03		
Ge	72	3	He			83754.81		
Ge	72	3	He			82648.73		
Ge	72	3	He			83161.75		
In	115	3	He			86046.12		
In	115	3	He			85845.61		
In	115	3	He			86589.12		
Tb	159	3	He			403297.96		
Tb	159	3	He			392814.53		
Tb	159	3	He			398675.23		
Bi	209	3	He			313143.63		
Bi	209	3	He			311261.44		
Bi	209	3	He			316307.24		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

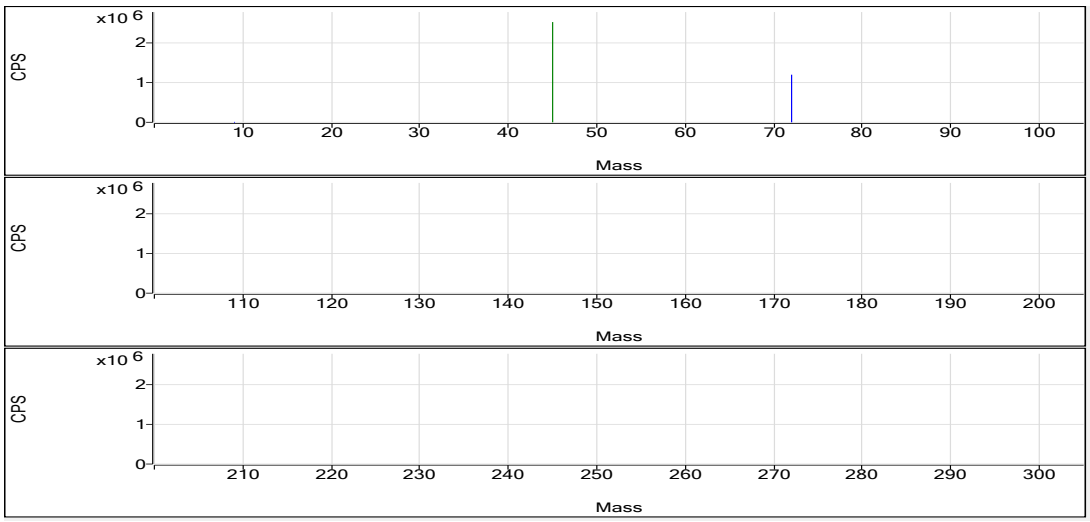
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.037	ppb	N/A	18.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.045	ppb	N/A	2.45	0.0000	Pulse	1.5000	3
Na	23	45	He	-0.128	ppb	N/A	20812.00	0.4166	Pulse	0.1000	3
Mg	24	45	He	3.047	ppb	47.3	503.36	0.0101	Pulse	0.1000	3
Al	27	45	He	-1.060	ppb	N/A	73.33	0.0015	Pulse	0.1000	3
K	39	45	He	0.150	ppb	2977.6	20551.71	0.4114	Pulse	0.1000	3
Ca	44	45	He	-8.697	ppb	N/A	136.68	0.0027	Pulse	0.1000	3
Ti	47	45	He	0.000	ppb	N/A	0.00	0.0000	Pulse	0.1000	3
V	51	45	He	0.054	ppb	108.5	1646.10	0.0330	Pulse	0.5000	3
Cr	52	45	He	-0.048	ppb	N/A	2076.89	0.0416	Pulse	0.1000	3
Mn	55	45	He	0.563	ppb	22.5	490.03	0.0098	Pulse	0.1000	3
Fe	57	45	He	-0.699	ppb	N/A	116.67	0.0023	Pulse	0.1000	3
Co	59	45	He	-0.004	ppb	N/A	170.01	0.0034	Pulse	0.1000	3
Ni	60	72	He	-0.889	ppb	N/A	466.69	0.0059	Pulse	0.1000	3
Cu	63	72	He	-0.051	ppb	N/A	630.04	0.0079	Pulse	0.1000	3
Zn	66	72	He	0.357	ppb	56.7	556.70	0.0070	Pulse	0.1000	3
As	75	72	He	0.103	ppb	31.5	86.67	0.0011	Pulse	0.5000	3
Sr	88	115	He	0.065	ppb	85.1	106.67	0.0013	Pulse	0.1000	3
Mo	98	115	He	-0.039	ppb	N/A	83.33	0.0010	Pulse	0.1000	3
Ag	107	115	He	-0.012	ppb	N/A	43.33	0.0005	Pulse	0.1000	3
Cd	111	115	He	-0.006	ppb	N/A	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.142	ppb	41.6	1446.79	0.0170	Pulse	0.1000	3
Sb	121	115	He	0.001	ppb	2054.3	23.33	0.0003	Pulse	0.1000	3
Ba	137	115	He	0.076	ppb	116.2	53.33	0.0006	Pulse	0.1000	3
Tl	205	159	He	-0.082	ppb	N/A	290.01	0.0007	Pulse	0.1000	3
Pb	208	159	He	-0.008	ppb	N/A	756.71	0.0019	Pulse	0.1000	3
U	238	209	He	-0.006	ppb	N/A	36.67	0.0001	Pulse	0.1000	3

ISTD Table:

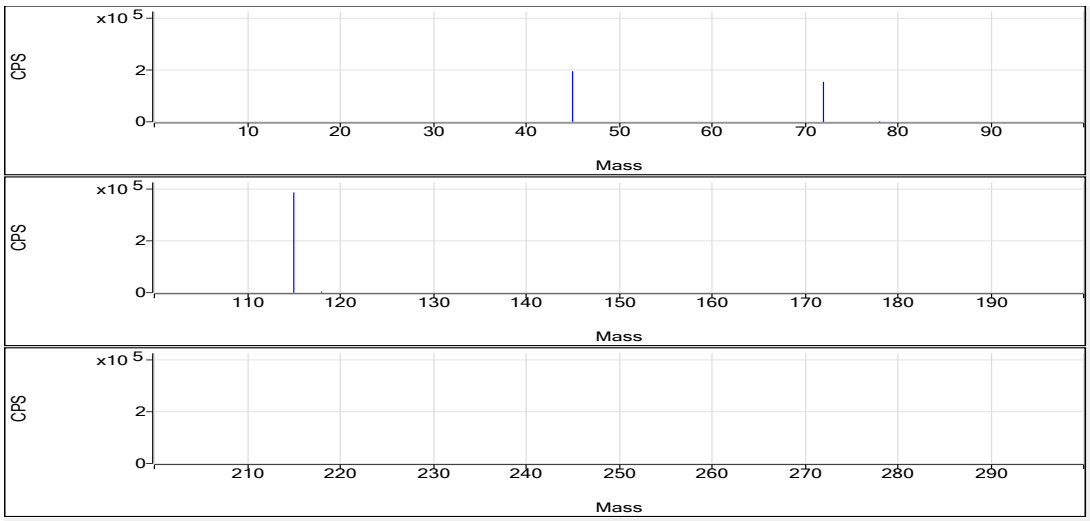
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2512829.60	1.3	96.4	Analog	0.1000	3
No Gas	Ge	72	1193310.87	1.2	92.6	Pulse	0.1000	3
H2	Sc	45	195640.94	0.9	94.9	Pulse	0.1000	3
H2	Ge	72	154759.52	1.2	95.1	Pulse	0.1000	3
H2	In	115	387619.45	0.7	96.0	Pulse	0.1000	3
He	Sc	45	49963.41	1.2	97.6	Pulse	0.1000	3
He	Ge	72	79430.68	1.4	97.0	Pulse	0.1000	3
He	In	115	85066.48	1.7	97.1	Pulse	0.1000	3
He	Tb	159	395254.67	0.7	98.4	Pulse	0.1000	3
He	Bi	209	306850.85	0.8	100.2	Pulse	0.1000	3

No Gas

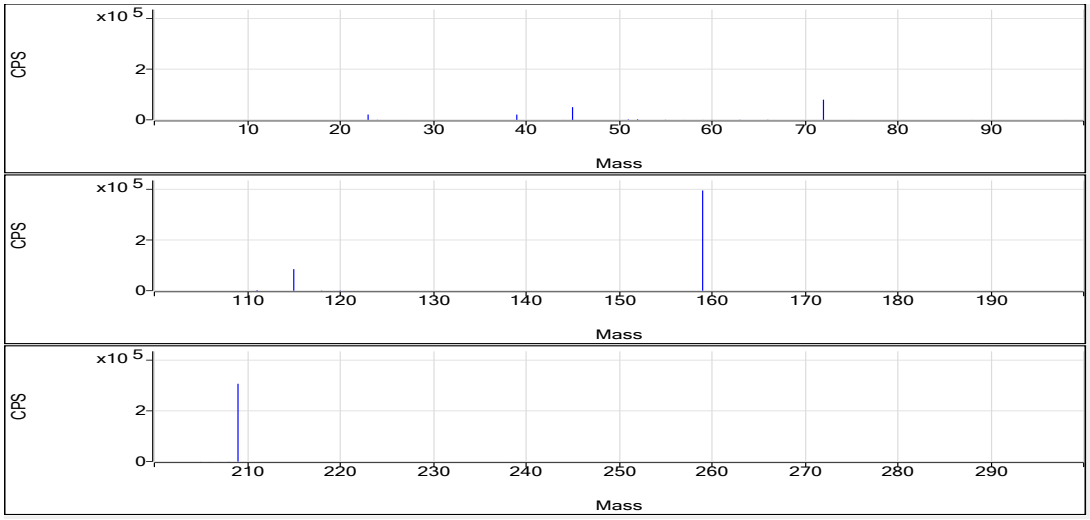


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.042	0	8.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.033	0	26.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.036	0	20.00	0.0007	3.404E-05
Se	78	2	H2	-0.011	0	4.67	0.0004	3.546E-05
Se	78	2	H2	-0.071	0	0.67	0.0004	3.546E-05
Se	78	2	H2	-0.051	0	2.00	0.0004	3.546E-05
Na	23	3	He	-2.511	0.4081	20625.17	0.0036	0.4171
Na	23	3	He	0.429	0.4186	20915.47	0.0036	0.4171
Na	23	3	He	1.7	0.4231	20895.37	0.0036	0.4171
Mg	24	3	He	4.708	0.0131	660.04	0.0018	0.004553
Mg	24	3	He	2.133	0.0084	420.02	0.0018	0.004553
Mg	24	3	He	2.299	0.0087	430.02	0.0018	0.004553
Al	27	3	He	-0.521	0.0018	90.00	0.0006	0.002085
Al	27	3	He	-1.861	0.001	50.00	0.0006	0.002085
Al	27	3	He	-0.798	0.0016	80.00	0.0006	0.002085
K	39	3	He	-0.772	0.4103	20735.17	0.0012	0.4112
K	39	3	He	-3.777	0.4068	20324.63	0.0012	0.4112
K	39	3	He	4.998	0.417	20595.32	0.0012	0.4112
Ca	44	3	He	-5.234	0.003	150.01	0.0001	0.003322
Ca	44	3	He	-10.656	0.0026	130.01	0.0001	0.003322
Ca	44	3	He	-10.202	0.0026	130.01	0.0001	0.003322
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	0.005	0.0319	1612.10	0.0213	0.0318
V	51	3	He	0.039	0.0326	1630.10	0.0213	0.0318
V	51	3	He	0.12	0.0343	1696.11	0.0213	0.0318
Cr	52	3	He	0.08	0.0453	2290.27	0.0294	0.04297
Cr	52	3	He	-0.148	0.0386	1930.20	0.0294	0.04297
Cr	52	3	He	-0.077	0.0407	2010.20	0.0294	0.04297
Mn	55	3	He	0.586	0.0101	510.03	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.676	0.0112	560.03	0.0124	0.002801
Mn	55	3	He	0.426	0.0081	400.02	0.0124	0.002801
Fe	57	3	He	-0.971	0.0022	110.00	0.0006	0.002732
Fe	57	3	He	1.172	0.0034	170.01	0.0006	0.002732
Fe	57	3	He	-2.297	0.0014	70.00	0.0006	0.002732
Co	59	3	He	0.009	0.0042	210.01	0.0549	0.003644
Co	59	3	He	-0.012	0.003	150.01	0.0549	0.003644
Co	59	3	He	-0.011	0.003	150.01	0.0549	0.003644
Ni	60	3	He	-0.939	0.0054	430.02	0.0093	0.01413
Ni	60	3	He	-0.875	0.006	470.03	0.0093	0.01413
Ni	60	3	He	-0.853	0.0062	500.03	0.0093	0.01413
Cu	63	3	He	0.018	0.0098	780.05	0.0274	0.009321
Cu	63	3	He	-0.07	0.0074	580.03	0.0274	0.009321
Cu	63	3	He	-0.1	0.0066	530.03	0.0274	0.009321
Zn	66	3	He	0.124	0.0063	500.03	0.0031	0.005913
Zn	66	3	He	0.486	0.0074	580.03	0.0031	0.005913
Zn	66	3	He	0.462	0.0073	590.03	0.0031	0.005913
As	75	3	He	0.134	0.0012	92.00	0.0021	0.0008698
As	75	3	He	0.106	0.0011	86.00	0.0021	0.0008698
As	75	3	He	0.069	0.001	82.00	0.0021	0.0008698
Sr	88	3	He	0.099	0.0016	130.01	0.0088	0.0006843
Sr	88	3	He	0.001	0.0007	60.00	0.0088	0.0006843
Sr	88	3	He	0.096	0.0015	130.00	0.0088	0.0006843
Mo	98	3	He	-0.04	0.001	80.00	0.0219	0.001827
Mo	98	3	He	-0.036	0.001	90.00	0.0219	0.001827
Mo	98	3	He	-0.04	0.0009	80.00	0.0219	0.001827
Ag	107	3	He	-0.007	0.0007	60.00	0.047	0.001064
Ag	107	3	He	-0.008	0.0007	60.00	0.047	0.001064
Ag	107	3	He	-0.02	0.0001	10.00	0.047	0.001064
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Sn	120	3	He	0.21	0.0181	1510.14	0.0154	0.01483
Sn	120	3	He	0.112	0.0166	1430.13	0.0154	0.01483
Sn	120	3	He	0.104	0.0164	1400.11	0.0154	0.01483
Sb	121	3	He	-0.002	0.0002	20.00	0.0143	0.0002661
Sb	121	3	He	-0.011	0.0001	10.00	0.0143	0.0002661
Sb	121	3	He	0.014	0.0005	40.00	0.0143	0.0002661
Ba	137	3	He	0.17	0.0011	90.00	0.0048	0.0002665
Ba	137	3	He	-0.007	0.0002	20.00	0.0048	0.0002665
Ba	137	3	He	0.067	0.0006	50.00	0.0048	0.0002665
Tl	205	3	He	-0.079	0.0008	320.01	0.0246	0.002755
Tl	205	3	He	-0.088	0.0006	240.01	0.0246	0.002755
Tl	205	3	He	-0.08	0.0008	310.01	0.0246	0.002755
Pb	208	3	He	-0.011	0.0018	440.03	0.0324	0.002158
Pb	208	3	He	-0.008	0.0019	370.02	0.0324	0.002158
Pb	208	3	He	-0.003	0.002	510.03	0.0324	0.002158
U	238	3	He	-0.005	0.0002	50.00	0.0492	0.0004023
U	238	3	He	-0.005	0.0001	40.00	0.0492	0.0004023
U	238	3	He	-0.007	0.0001	20.00	0.0492	0.0004023
Sc	45	1	No Gas			2530799.18		
Sc	45	1	No Gas			2532575.74		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2475113.87		
Ge	72	1	No Gas			1209595.29		
Ge	72	1	No Gas			1189540.53		
Ge	72	1	No Gas			1180796.78		
Sc	45	2	H2			193653.59		
Sc	45	2	H2			196776.17		
Sc	45	2	H2			196493.06		
Ge	72	2	H2			153061.10		
Ge	72	2	H2			156710.51		
Ge	72	2	H2			154506.94		
In	115	2	H2			384573.00		
In	115	2	H2			389262.65		
In	115	2	H2			389022.69		
Sc	45	3	He			50538.81		
Sc	45	3	He			49966.80		
Sc	45	3	He			49384.61		
Ge	72	3	He			79471.05		
Ge	72	3	He			78324.53		
Ge	72	3	He			80496.46		
In	115	3	He			83601.26		
In	115	3	He			86408.08		
In	115	3	He			85210.94		
Tb	159	3	He			392262.22		
Tb	159	3	He			397854.10		
Tb	159	3	He			395647.69		
Bi	209	3	He			308998.75		
Bi	209	3	He			303987.71		
Bi	209	3	He			307566.09		

Quantitation Report

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Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

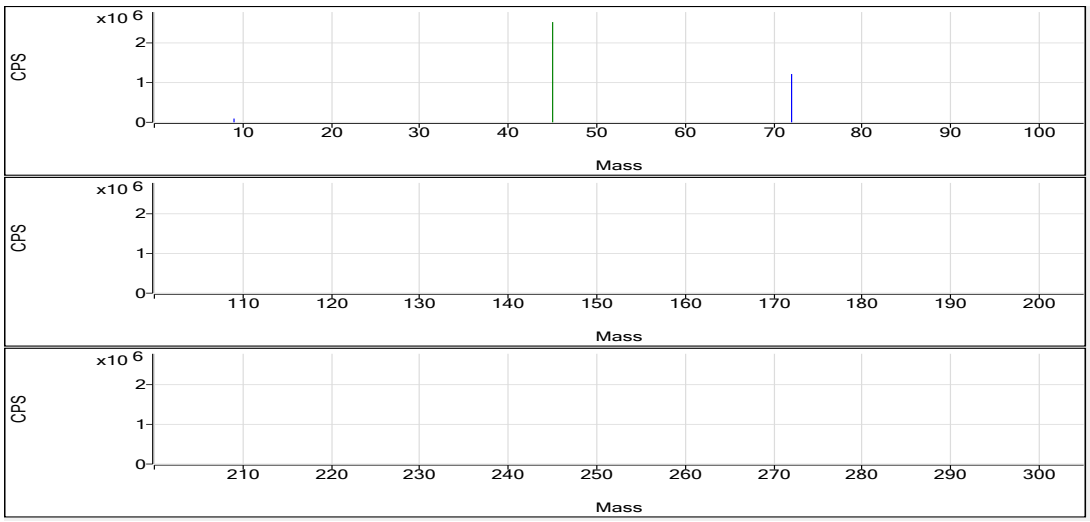
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.233	ppb	0.4	94505.70	0.0374	Pulse	0.5000	3
Se	78	72	H2	50.763	ppb	1.6	3443.09	0.0223	Pulse	1.5000	3
Na	23	45	He	4979.993	ppb	1.5	887631.63	18.1678	Pulse	0.1000	3
Mg	24	45	He	5147.230	ppb	2.4	454542.62	9.3045	Pulse	0.1000	3
Al	27	45	He	5091.675	ppb	2.0	145022.34	2.9685	Pulse	0.1000	3
K	39	45	He	5145.871	ppb	1.6	314511.08	6.4374	Pulse	0.1000	3
Ca	44	45	He	5058.296	ppb	2.7	16856.86	0.3450	Pulse	0.1000	3
Ti	47	45	He	5119.400	ppb	1.7	133025.26	2.7228	Pulse	0.1000	3
V	51	45	He	515.042	ppb	1.1	536325.79	10.9769	Pulse	0.5000	3
Cr	52	45	He	491.966	ppb	1.1	709041.39	14.5117	Pulse	0.1000	3
Mn	55	45	He	514.616	ppb	0.8	312743.19	6.4006	Pulse	0.1000	3
Fe	57	45	He	5156.392	ppb	1.8	144271.66	2.9530	Pulse	0.1000	3
Co	59	45	He	496.707	ppb	1.6	1332153.32	27.2666	Pulse	0.1000	3
Ni	60	72	He	509.861	ppb	1.1	378847.30	4.7471	Pulse	0.1000	3
Cu	63	72	He	487.279	ppb	0.8	1067316.29	13.3734	Pulse	0.1000	3
Zn	66	72	He	514.850	ppb	1.8	126638.42	1.5867	Pulse	0.1000	3
As	75	72	He	511.156	ppb	1.3	87597.76	1.0977	Pulse	0.5000	3
Sr	88	115	He	52.094	ppb	1.0	38663.78	0.4591	Pulse	0.1000	3
Mo	98	115	He	51.396	ppb	1.3	95154.75	1.1297	Pulse	0.1000	3
Ag	107	115	He	50.942	ppb	1.7	201905.30	2.3973	Pulse	0.1000	3
Cd	111	115	He	51.208	ppb	1.5	22972.89	0.2728	Pulse	0.5000	3
Sn	120	115	He	52.098	ppb	2.4	68908.24	0.8182	Pulse	0.1000	3
Sb	121	115	He	52.180	ppb	1.1	62648.98	0.7438	Pulse	0.1000	3
Ba	137	115	He	518.808	ppb	1.8	208827.62	2.4795	Pulse	0.1000	3
Tl	205	159	He	51.052	ppb	0.6	499363.04	1.2566	Pulse	0.1000	3
Pb	208	159	He	51.278	ppb	0.8	661160.74	1.6638	Pulse	0.1000	3
U	238	209	He	50.694	ppb	0.3	766838.14	2.4970	Pulse	0.1000	3

ISTD Table:

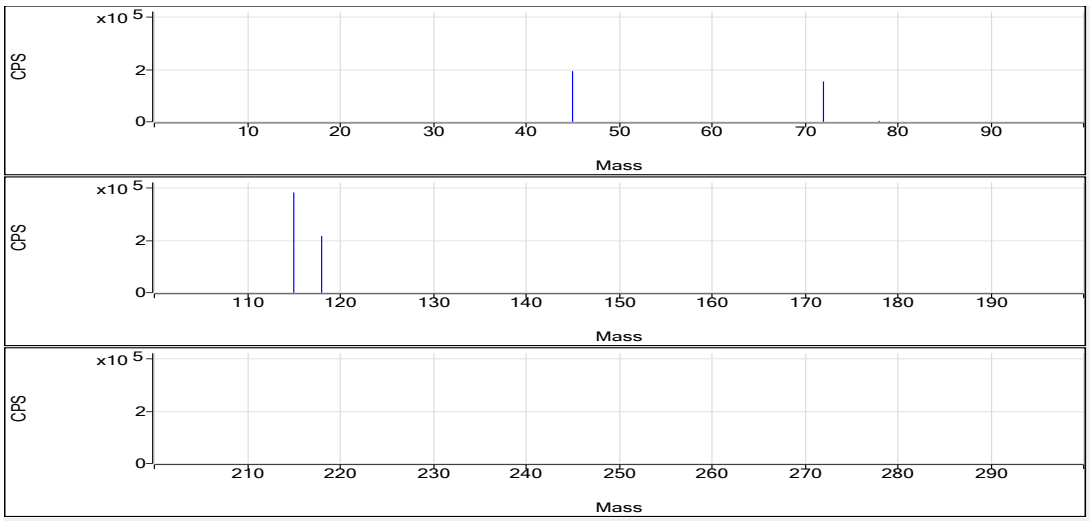
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2529696.84	0.8	97.0	Analog	0.1000	3
No Gas	Ge	72	1218162.64	0.4	94.5	Pulse	0.1000	3
H2	Sc	45	193863.57	0.4	94.1	Pulse	0.1000	3
H2	Ge	72	154507.97	0.7	94.9	Pulse	0.1000	3
H2	In	115	383385.43	0.2	95.0	Pulse	0.1000	3
He	Sc	45	48865.91	1.8	95.4	Pulse	0.1000	3
He	Ge	72	79812.73	1.4	97.5	Pulse	0.1000	3
He	In	115	84230.23	1.0	96.1	Pulse	0.1000	3
He	Tb	159	397397.98	0.7	99.0	Pulse	0.1000	3
He	Bi	209	307108.29	0.9	100.3	Pulse	0.1000	3

No Gas

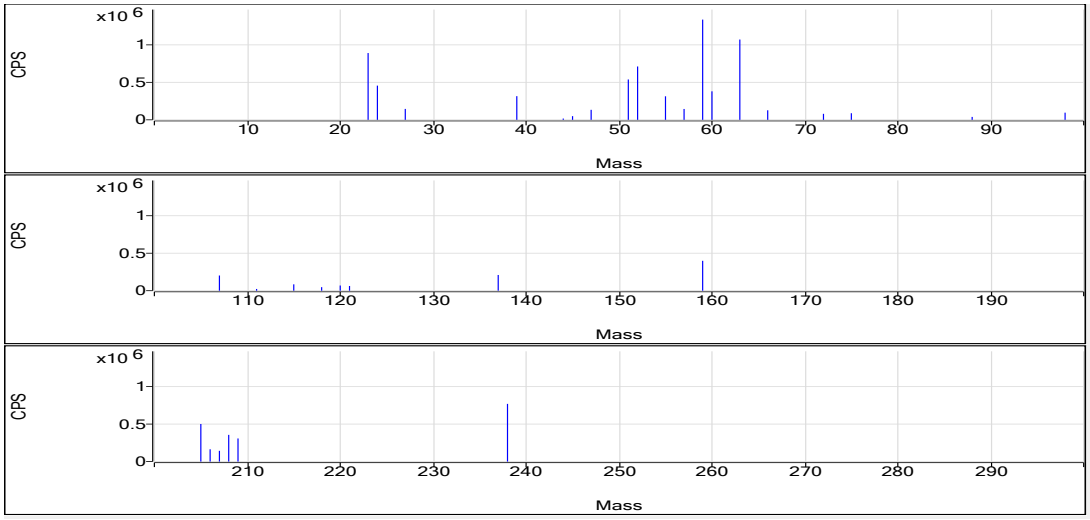


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	51.046	0.0372	94692.92	0.0007	3.404E-05
Be	9	1	No Gas	51.214	0.0373	93601.96	0.0007	3.404E-05
Be	9	1	No Gas	51.438	0.0375	95222.22	0.0007	3.404E-05
Se	78	2	H2	51.534	0.0226	3485.77	0.0004	3.546E-05
Se	78	2	H2	49.905	0.0219	3413.75	0.0004	3.546E-05
Se	78	2	H2	50.849	0.0223	3429.75	0.0004	3.546E-05
Na	23	3	He	4903.633	17.8956	889511.55	0.0036	0.4171
Na	23	3	He	4983.876	18.1816	889865.38	0.0036	0.4171
Na	23	3	He	5052.469	18.4261	883517.96	0.0036	0.4171
Mg	24	3	He	5036.59	9.1046	452549.49	0.0018	0.004553
Mg	24	3	He	5123.8	9.2622	453319.60	0.0018	0.004553
Mg	24	3	He	5281.3	9.5468	457758.78	0.0018	0.004553
Al	27	3	He	4986.498	2.9072	144503.27	0.0006	0.002085
Al	27	3	He	5099.739	2.9732	145515.59	0.0006	0.002085
Al	27	3	He	5188.789	3.025	145048.16	0.0006	0.002085
K	39	3	He	5059.393	6.3361	314940.01	0.0012	0.4112
K	39	3	He	5149.669	6.4418	315283.22	0.0012	0.4112
K	39	3	He	5228.55	6.5342	313310.01	0.0012	0.4112
Ca	44	3	He	4900.237	0.3344	16619.94	0.0001	0.003322
Ca	44	3	He	5152.955	0.3514	17200.60	0.0001	0.003322
Ca	44	3	He	5121.698	0.3493	16750.05	0.0001	0.003322
Ti	47	3	He	5034.577	2.6777	133096.28	0.0005	0
Ti	47	3	He	5114.118	2.72	133125.17	0.0005	0
Ti	47	3	He	5209.504	2.7707	132854.33	0.0005	0
V	51	3	He	510.444	10.8792	540756.06	0.0213	0.0318
V	51	3	He	513.251	10.9388	535379.81	0.0213	0.0318
V	51	3	He	521.429	11.1126	532841.50	0.0213	0.0318
Cr	52	3	He	487.785	14.3888	715201.86	0.0294	0.04297
Cr	52	3	He	490.311	14.4631	707866.94	0.0294	0.04297
Cr	52	3	He	497.802	14.6834	704055.38	0.0294	0.04297
Mn	55	3	He	512.39	6.3729	316768.57	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	511.961	6.3676	311648.53	0.0124	0.002801
Mn	55	3	He	519.498	6.4613	309812.46	0.0124	0.002801
Fe	57	3	He	5102.161	2.9219	145236.39	0.0006	0.002732
Fe	57	3	He	5106.216	2.9243	143122.08	0.0006	0.002732
Fe	57	3	He	5260.798	3.0127	144456.50	0.0006	0.002732
Co	59	3	He	490.562	26.9293	1338536.86	0.0549	0.003644
Co	59	3	He	493.566	27.0942	1326074.67	0.0549	0.003644
Co	59	3	He	505.992	27.7763	1331848.42	0.0549	0.003644
Ni	60	3	He	507.514	4.7253	382509.49	0.0093	0.01413
Ni	60	3	He	516.055	4.8046	377862.88	0.0093	0.01413
Ni	60	3	He	506.012	4.7114	376169.53	0.0093	0.01413
Cu	63	3	He	486.603	13.3549	1081068.03	0.0274	0.009321
Cu	63	3	He	491.568	13.4911	1061020.30	0.0274	0.009321
Cu	63	3	He	483.665	13.2743	1059860.53	0.0274	0.009321
Zn	66	3	He	508.424	1.567	126846.10	0.0031	0.005913
Zn	66	3	He	510.379	1.573	123709.53	0.0031	0.005913
Zn	66	3	He	525.747	1.6202	129359.64	0.0031	0.005913
As	75	3	He	505.431	1.0854	87861.44	0.0021	0.0008698
As	75	3	He	518.454	1.1133	87559.48	0.0021	0.0008698
As	75	3	He	509.584	1.0943	87372.36	0.0021	0.0008698
Sr	88	3	He	52.686	0.4643	38664.04	0.0088	0.0006843
Sr	88	3	He	51.642	0.4551	38623.42	0.0088	0.0006843
Sr	88	3	He	51.955	0.4578	38703.87	0.0088	0.0006843
Mo	98	3	He	51.479	1.1315	94234.64	0.0219	0.001827
Mo	98	3	He	50.691	1.1142	94568.10	0.0219	0.001827
Mo	98	3	He	52.02	1.1434	96661.50	0.0219	0.001827
Ag	107	3	He	51.912	2.443	203454.96	0.047	0.001064
Ag	107	3	He	50.207	2.3628	200533.47	0.047	0.001064
Ag	107	3	He	50.706	2.3862	201727.48	0.047	0.001064
Cd	111	3	He	52.089	0.2775	23107.12	0.0053	6.086E-05
Cd	111	3	He	50.837	0.2708	22982.92	0.0053	6.086E-05
Cd	111	3	He	50.696	0.27	22828.63	0.0053	6.086E-05
Sn	120	3	He	53.527	0.8403	69976.87	0.0154	0.01483
Sn	120	3	He	51.668	0.8116	68881.22	0.0154	0.01483
Sn	120	3	He	51.098	0.8028	67866.62	0.0154	0.01483
Sb	121	3	He	52.807	0.7528	62692.03	0.0143	0.0002661
Sb	121	3	He	51.618	0.7358	62452.21	0.0143	0.0002661
Sb	121	3	He	52.114	0.7429	62802.69	0.0143	0.0002661
Ba	137	3	He	529.184	2.5291	210628.43	0.0048	0.0002665
Ba	137	3	He	510.296	2.4389	206992.56	0.0048	0.0002665
Ba	137	3	He	516.944	2.4706	208861.87	0.0048	0.0002665
Tl	205	3	He	50.781	1.2499	500436.09	0.0246	0.002755
Tl	205	3	He	51.405	1.2653	501572.61	0.0246	0.002755
Tl	205	3	He	50.969	1.2546	496080.42	0.0246	0.002755
Pb	208	3	He	50.822	1.649	354740.58	0.0324	0.002158
Pb	208	3	He	51.425	1.6685	355402.26	0.0324	0.002158
Pb	208	3	He	51.587	1.6738	354699.88	0.0324	0.002158
U	238	3	He	50.581	2.4914	762017.10	0.0492	0.0004023
U	238	3	He	50.662	2.4954	773908.58	0.0492	0.0004023
U	238	3	He	50.839	2.5041	764588.74	0.0492	0.0004023
Sc	45	1	No Gas			2543961.84		
Sc	45	1	No Gas			2506406.06		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2538722.62		
Ge	72	1	No Gas			1216239.83		
Ge	72	1	No Gas			1215013.03		
Ge	72	1	No Gas			1223235.06		
Sc	45	2	H2			193046.15		
Sc	45	2	H2			194384.04		
Sc	45	2	H2			194160.52		
Ge	72	2	H2			154074.88		
Ge	72	2	H2			155810.53		
Ge	72	2	H2			153638.49		
In	115	2	H2			382357.81		
In	115	2	H2			383995.78		
In	115	2	H2			383802.69		
Sc	45	3	He			49705.52		
Sc	45	3	He			48943.06		
Sc	45	3	He			47949.16		
Ge	72	3	He			80949.08		
Ge	72	3	He			78646.12		
Ge	72	3	He			79842.98		
In	115	3	He			83641.41		
In	115	3	He			85250.89		
In	115	3	He			84899.36		
Tb	159	3	He			400366.56		
Tb	159	3	He			396411.79		
Tb	159	3	He			395415.58		
Bi	209	3	He			305858.00		
Bi	209	3	He			310133.53		
Bi	209	3	He			305333.35		

Quantitation Report

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Sample Type	CCB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

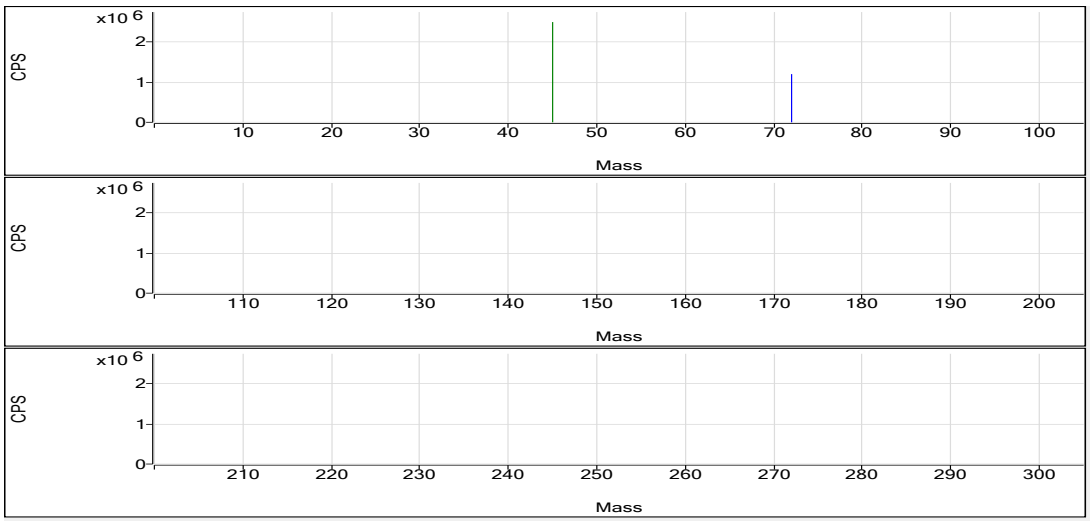
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.013	ppb	N/A	61.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.023	ppb	196.3	6.89	0.0000	Pulse	1.5000	3
Na	23	45	He	-6.001	ppb	N/A	19583.52	0.3957	Pulse	0.1000	3
Mg	24	45	He	0.690	ppb	80.2	286.68	0.0058	Pulse	0.1000	3
Al	27	45	He	-0.902	ppb	N/A	76.67	0.0016	Pulse	0.1000	3
K	39	45	He	-4.981	ppb	N/A	20054.22	0.4054	Pulse	0.1000	3
Ca	44	45	He	-8.334	ppb	N/A	136.68	0.0028	Pulse	0.1000	3
Ti	47	45	He	1.764	ppb	68.9	46.67	0.0009	Pulse	0.1000	3
V	51	45	He	0.048	ppb	159.5	1624.10	0.0328	Pulse	0.5000	3
Cr	52	45	He	0.039	ppb	127.3	2183.57	0.0441	Pulse	0.1000	3
Mn	55	45	He	0.323	ppb	30.3	336.68	0.0068	Pulse	0.1000	3
Fe	57	45	He	0.524	ppb	69.7	150.01	0.0030	Pulse	0.1000	3
Co	59	45	He	0.076	ppb	25.3	386.69	0.0078	Pulse	0.1000	3
Ni	60	72	He	-0.891	ppb	N/A	450.02	0.0059	Pulse	0.1000	3
Cu	63	72	He	0.060	ppb	28.6	843.38	0.0110	Pulse	0.1000	3
Zn	66	72	He	0.277	ppb	220.4	520.03	0.0068	Pulse	0.1000	3
As	75	72	He	0.210	ppb	42.6	101.33	0.0013	Pulse	0.5000	3
Sr	88	115	He	0.003	ppb	1326.8	60.00	0.0007	Pulse	0.1000	3
Mo	98	115	He	-0.011	ppb	N/A	133.34	0.0016	Pulse	0.1000	3
Ag	107	115	He	-0.001	ppb	N/A	86.67	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.008	ppb	144.9	8.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.125	ppb	47.9	1416.79	0.0168	Pulse	0.1000	3
Sb	121	115	He	0.036	ppb	123.6	66.67	0.0008	Pulse	0.1000	3
Ba	137	115	He	0.101	ppb	16.1	63.33	0.0007	Pulse	0.1000	3
Tl	205	159	He	-0.007	ppb	N/A	1020.09	0.0026	Pulse	0.1000	3
Pb	208	159	He	-0.012	ppb	N/A	700.04	0.0018	Pulse	0.1000	3
U	238	209	He	0.049	ppb	10.9	856.73	0.0028	Pulse	0.1000	3

ISTD Table:

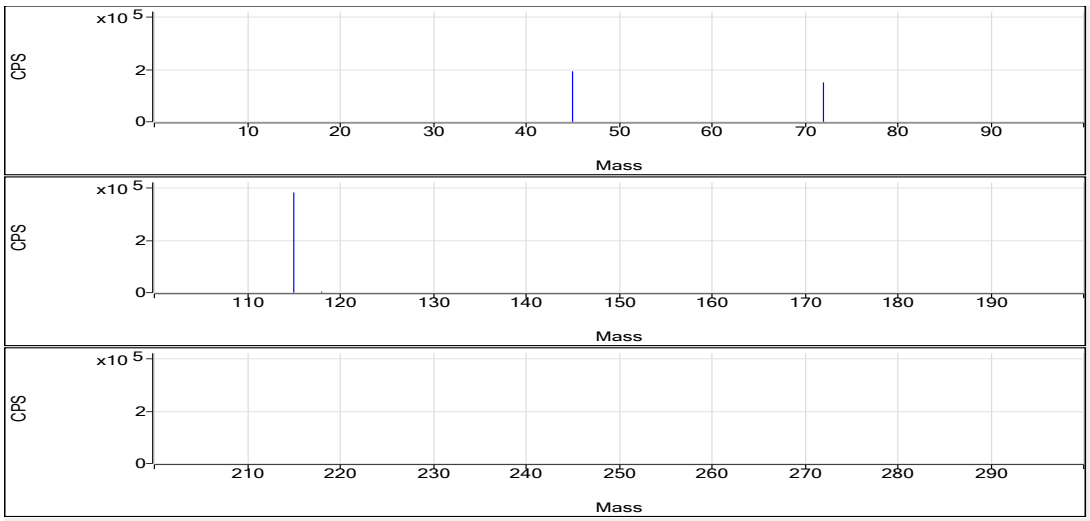
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2504819.60	1.3	96.0	Analog	0.1000	3
No Gas	Ge	72	1204201.91	0.9	93.4	Pulse	0.1000	3
H2	Sc	45	193918.95	0.6	94.1	Pulse	0.1000	3
H2	Ge	72	151014.43	0.6	92.8	Pulse	0.1000	3
H2	In	115	384560.39	0.5	95.3	Pulse	0.1000	3
He	Sc	45	49495.25	2.4	96.7	Pulse	0.1000	3
He	Ge	72	76819.90	0.6	93.8	Pulse	0.1000	3
He	In	115	84543.21	1.3	96.5	Pulse	0.1000	3
He	Tb	159	393425.67	0.8	98.0	Pulse	0.1000	3
He	Bi	209	305280.34	0.8	99.7	Pulse	0.1000	3

No Gas

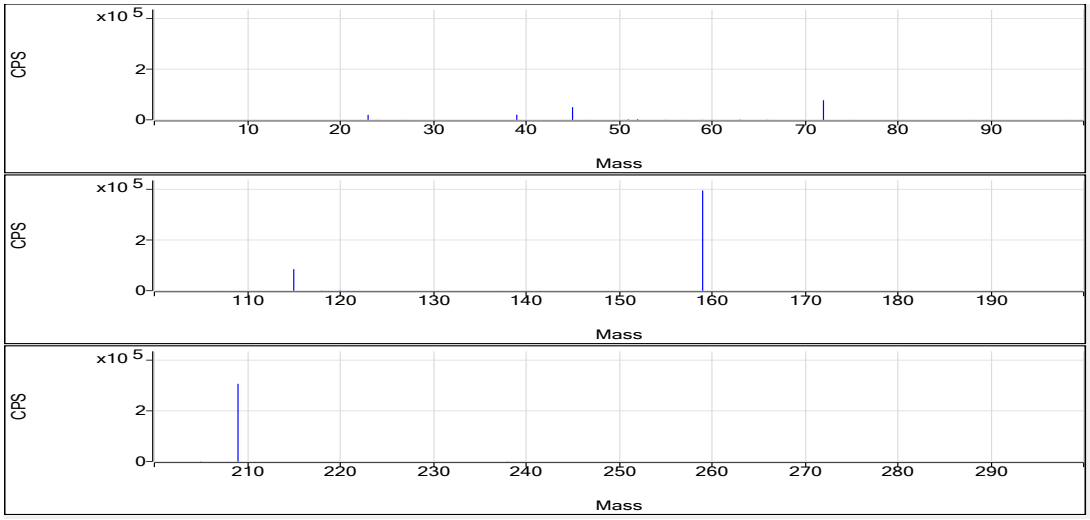


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.009	0	68.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.01	0	68.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.02	0	48.00	0.0007	3.404E-05
Se	78	2	H2	0.019	0	6.67	0.0004	3.546E-05
Se	78	2	H2	0.071	0.0001	10.00	0.0004	3.546E-05
Se	78	2	H2	-0.02	0	4.00	0.0004	3.546E-05
Na	23	3	He	-6.405	0.3942	20054.14	0.0036	0.4171
Na	23	3	He	-2.971	0.4065	19893.91	0.0036	0.4171
Na	23	3	He	-8.627	0.3863	18802.51	0.0036	0.4171
Mg	24	3	He	0.309	0.0051	260.01	0.0018	0.004553
Mg	24	3	He	1.325	0.0069	340.01	0.0018	0.004553
Mg	24	3	He	0.437	0.0053	260.01	0.0018	0.004553
Al	27	3	He	-2.228	0.0008	40.00	0.0006	0.002085
Al	27	3	He	0.28	0.0022	110.00	0.0006	0.002085
Al	27	3	He	-0.757	0.0016	80.00	0.0006	0.002085
K	39	3	He	-15.994	0.3925	19964.12	0.0012	0.4112
K	39	3	He	0.687	0.412	20164.30	0.0012	0.4112
K	39	3	He	0.365	0.4116	20034.25	0.0012	0.4112
Ca	44	3	He	-5.52	0.0029	150.01	0.0001	0.003322
Ca	44	3	He	-9.851	0.0027	130.01	0.0001	0.003322
Ca	44	3	He	-9.632	0.0027	130.01	0.0001	0.003322
Ti	47	3	He	2.218	0.0012	60.00	0.0005	0
Ti	47	3	He	2.689	0.0014	70.00	0.0005	0
Ti	47	3	He	0.386	0.0002	10.00	0.0005	0
V	51	3	He	0.038	0.0326	1658.10	0.0213	0.0318
V	51	3	He	0.129	0.0345	1690.11	0.0213	0.0318
V	51	3	He	-0.023	0.0313	1524.09	0.0213	0.0318
Cr	52	3	He	0.016	0.0434	2210.23	0.0294	0.04297
Cr	52	3	He	0.005	0.0431	2110.23	0.0294	0.04297
Cr	52	3	He	0.097	0.0458	2230.24	0.0294	0.04297
Mn	55	3	He	0.265	0.0061	310.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.268	0.0061	300.01	0.0124	0.002801
Mn	55	3	He	0.436	0.0082	400.02	0.0124	0.002801
Fe	57	3	He	0.379	0.0029	150.01	0.0006	0.002732
Fe	57	3	He	0.939	0.0033	160.01	0.0006	0.002732
Fe	57	3	He	0.253	0.0029	140.01	0.0006	0.002732
Co	59	3	He	0.095	0.0088	450.02	0.0549	0.003644
Co	59	3	He	0.056	0.0067	330.02	0.0549	0.003644
Co	59	3	He	0.076	0.0078	380.02	0.0549	0.003644
Ni	60	3	He	-0.937	0.0054	420.02	0.0093	0.01413
Ni	60	3	He	-0.805	0.0067	510.03	0.0093	0.01413
Ni	60	3	He	-0.931	0.0055	420.02	0.0093	0.01413
Cu	63	3	He	0.075	0.0114	880.05	0.0274	0.009321
Cu	63	3	He	0.065	0.0111	850.05	0.0274	0.009321
Cu	63	3	He	0.041	0.0105	800.05	0.0274	0.009321
Zn	66	3	He	0.98	0.0089	690.04	0.0031	0.005913
Zn	66	3	He	-0.055	0.0057	440.02	0.0031	0.005913
Zn	66	3	He	-0.096	0.0056	430.02	0.0031	0.005913
As	75	3	He	0.161	0.0012	94.00	0.0021	0.0008698
As	75	3	He	0.313	0.0015	118.00	0.0021	0.0008698
As	75	3	He	0.155	0.0012	92.00	0.0021	0.0008698
Sr	88	3	He	0.03	0.0009	80.00	0.0088	0.0006843
Sr	88	3	He	-0.037	0.0004	30.00	0.0088	0.0006843
Sr	88	3	He	0.015	0.0008	70.00	0.0088	0.0006843
Mo	98	3	He	-0.013	0.0015	130.01	0.0219	0.001827
Mo	98	3	He	0.01	0.002	170.01	0.0219	0.001827
Mo	98	3	He	-0.03	0.0012	100.00	0.0219	0.001827
Ag	107	3	He	0.002	0.0012	100.00	0.047	0.001064
Ag	107	3	He	-0.01	0.0006	50.00	0.047	0.001064
Ag	107	3	He	0.005	0.0013	110.00	0.047	0.001064
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Cd	111	3	He	0.02	0.0002	14.00	0.0053	6.086E-05
Cd	111	3	He	0.006	0.0001	8.00	0.0053	6.086E-05
Sn	120	3	He	0.117	0.0166	1410.12	0.0154	0.01483
Sn	120	3	He	0.189	0.0177	1480.13	0.0154	0.01483
Sn	120	3	He	0.07	0.0159	1360.13	0.0154	0.01483
Sb	121	3	He	0.014	0.0005	40.00	0.0143	0.0002661
Sb	121	3	He	0.007	0.0004	30.00	0.0143	0.0002661
Sb	121	3	He	0.088	0.0015	130.01	0.0143	0.0002661
Ba	137	3	He	0.092	0.0007	60.00	0.0048	0.0002665
Ba	137	3	He	0.12	0.0008	70.00	0.0048	0.0002665
Ba	137	3	He	0.091	0.0007	60.00	0.0048	0.0002665
Tl	205	3	He	-0.005	0.0026	1030.09	0.0246	0.002755
Tl	205	3	He	-0.003	0.0027	1050.10	0.0246	0.002755
Tl	205	3	He	-0.012	0.0025	980.08	0.0246	0.002755
Pb	208	3	He	-0.01	0.0018	400.02	0.0324	0.002158
Pb	208	3	He	-0.013	0.0017	330.02	0.0324	0.002158
Pb	208	3	He	-0.012	0.0018	430.02	0.0324	0.002158
U	238	3	He	0.047	0.0027	830.06	0.0492	0.0004023
U	238	3	He	0.055	0.0031	940.07	0.0492	0.0004023
U	238	3	He	0.045	0.0026	800.06	0.0492	0.0004023
Sc	45	1	No Gas			2500726.06		
Sc	45	1	No Gas			2538865.27		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2474867.46		
Ge	72	1	No Gas			1202626.54		
Ge	72	1	No Gas			1216080.76		
Ge	72	1	No Gas			1193898.42		
Sc	45	2	H2			194950.66		
Sc	45	2	H2			194183.88		
Sc	45	2	H2			192622.32		
Ge	72	2	H2			152080.22		
Ge	72	2	H2			150677.99		
Ge	72	2	H2			150285.09		
In	115	2	H2			386073.12		
In	115	2	H2			385458.51		
In	115	2	H2			382149.53		
Sc	45	3	He			50869.69		
Sc	45	3	He			48943.64		
Sc	45	3	He			48672.43		
Ge	72	3	He			77339.07		
Ge	72	3	He			76595.46		
Ge	72	3	He			76525.17		
In	115	3	He			84758.13		
In	115	3	He			83399.50		
In	115	3	He			85492.90		
Tb	159	3	He			391632.26		
Tb	159	3	He			391387.38		
Tb	159	3	He			397257.38		
Bi	209	3	He			305142.44		
Bi	209	3	He			302948.69		
Bi	209	3	He			307749.88		

Quantitation Report

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Auto Dilution	1.0000
Total Dilution	1.0000
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Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

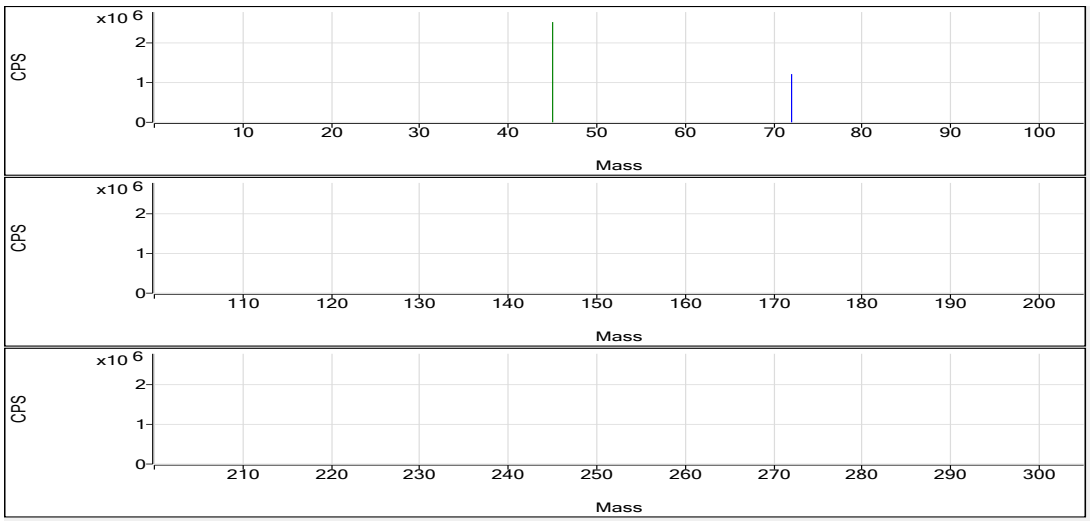
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.007	ppb	55.8	98.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.039	ppb	123.9	8.22	0.0001	Pulse	1.5000	3
Na	23	45	He	61284.628	ppb	1.4	10538234.84	218.8607	Analog	0.1000	3
Mg	24	45	He	59727.874	ppb	2.1	5195843.77	107.9203	Analog	0.1000	3
Al	27	45	He	139.988	ppb	4.9	4027.41	0.0836	Pulse	0.1000	3
K	39	45	He	2125.064	ppb	1.9	139622.52	2.8998	Pulse	0.1000	3
Ca	44	45	He	105193.237	ppb	1.9	342318.76	7.1099	Pulse	0.1000	3
Ti	47	45	He	4.571	ppb	28.9	116.67	0.0024	Pulse	0.1000	3
V	51	45	He	0.539	ppb	15.5	2083.50	0.0432	Pulse	0.5000	3
Cr	52	45	He	0.542	ppb	8.1	2837.05	0.0589	Pulse	0.1000	3
Mn	55	45	He	21951.698	ppb	1.3	13140794.39	272.9093	Analog	0.1000	3
Fe	57	45	He	698.112	ppb	1.0	19366.83	0.4022	Pulse	0.1000	3
Co	59	45	He	3.640	ppb	4.2	9793.65	0.2034	Pulse	0.1000	3
Ni	60	72	He	2.281	ppb	16.4	2810.38	0.0353	Pulse	0.1000	3
Cu	63	72	He	4.795	ppb	1.6	11221.43	0.1408	Pulse	0.1000	3
Zn	66	72	He	4.010	ppb	12.4	1453.46	0.0182	Pulse	0.1000	3
As	75	72	He	0.652	ppb	15.5	180.67	0.0023	Pulse	0.5000	3
Sr	88	115	He	608.887	ppb	1.0	441825.98	5.3582	Pulse	0.1000	3
Mo	98	115	He	0.208	ppb	27.0	526.69	0.0064	Pulse	0.1000	3
Ag	107	115	He	-0.002	ppb	N/A	80.00	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.339	ppb	23.4	154.00	0.0019	Pulse	0.5000	3
Sn	120	115	He	0.108	ppb	30.6	1360.11	0.0165	Pulse	0.1000	3
Sb	121	115	He	0.152	ppb	15.3	200.01	0.0024	Pulse	0.1000	3
Ba	137	115	He	549.014	ppb	1.9	216353.31	2.6239	Pulse	0.1000	3
Tl	205	159	He	-0.072	ppb	N/A	390.02	0.0010	Pulse	0.1000	3
Pb	208	159	He	1.082	ppb	1.2	14603.74	0.0372	Pulse	0.1000	3
U	238	209	He	0.040	ppb	7.8	706.71	0.0024	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2510642.25	0.3	96.3	Analog	0.1000	3
No Gas	Ge	72	1207429.23	0.6	93.7	Pulse	0.1000	3
H2	Sc	45	196444.39	0.5	95.3	Pulse	0.1000	3
H2	Ge	72	156869.27	0.2	96.4	Pulse	0.1000	3
H2	In	115	375678.12	0.5	93.1	Pulse	0.1000	3
He	Sc	45	48160.61	2.3	94.1	Pulse	0.1000	3
He	Ge	72	79689.20	1.5	97.3	Pulse	0.1000	3
He	In	115	82460.39	0.5	94.1	Pulse	0.1000	3
He	Tb	159	392503.00	1.3	97.7	Pulse	0.1000	3
He	Bi	209	298342.21	0.5	97.5	Pulse	0.1000	3

No Gas



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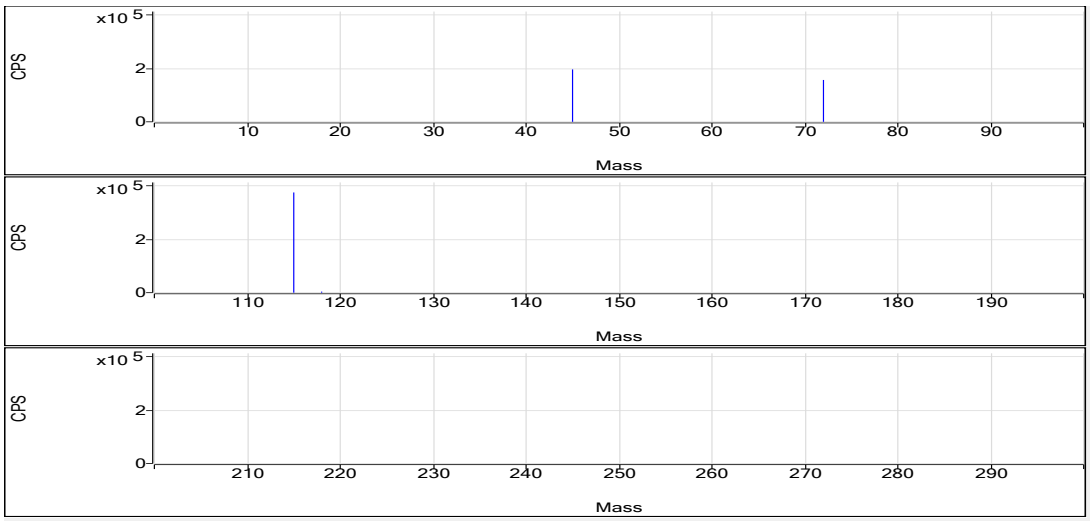
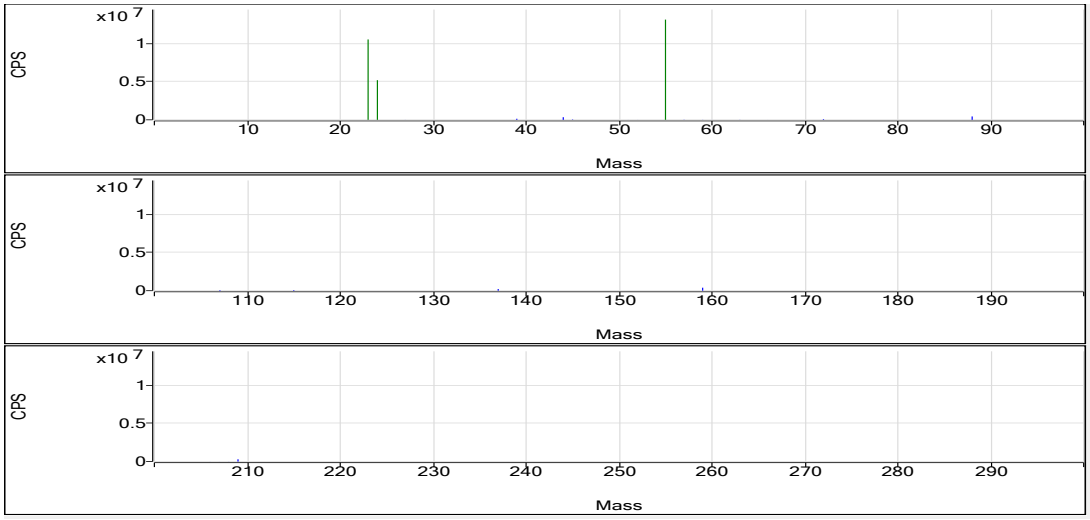


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.011	0	106.00	0.0007	3.404E-05
Be	9	1	No Gas	0.005	0	94.00	0.0007	3.404E-05
Be	9	1	No Gas	0.005	0	94.00	0.0007	3.404E-05
Se	78	2	H2	0.016	0	6.67	0.0004	3.546E-05
Se	78	2	H2	0.094	0.0001	12.00	0.0004	3.546E-05
Se	78	2	H2	0.006	0	6.00	0.0004	3.546E-05
Na	23	3	He	61104.299	218.218	10507252.34	0.0036	0.4171
Na	23	3	He	60526.772	216.1594	10651288.59	0.0036	0.4171
Na	23	3	He	62222.814	222.2048	10456163.59	0.0036	0.4171
Mg	24	3	He	59836.972	108.1174	5205880.23	0.0018	0.004553
Mg	24	3	He	58430.209	105.5757	5202256.48	0.0018	0.004553
Mg	24	3	He	60916.44	110.0678	5179394.61	0.0018	0.004553
Al	27	3	He	147.595	0.0881	4240.73	0.0006	0.002085
Al	27	3	He	134.393	0.0804	3960.78	0.0006	0.002085
Al	27	3	He	137.977	0.0825	3880.71	0.0006	0.002085
K	39	3	He	2138.083	2.915	140360.07	0.0012	0.4112
K	39	3	He	2080.014	2.847	140288.31	0.0012	0.4112
K	39	3	He	2157.095	2.9373	138219.17	0.0012	0.4112
Ca	44	3	He	105442.68	7.1267	343154.10	0.0001	0.003322
Ca	44	3	He	103118.509	6.9697	343433.98	0.0001	0.003322
Ca	44	3	He	107018.523	7.2332	340368.20	0.0001	0.003322
Ti	47	3	He	5.467	0.0029	140.01	0.0005	0
Ti	47	3	He	3.053	0.0016	80.00	0.0005	0
Ti	47	3	He	5.194	0.0028	130.00	0.0005	0
V	51	3	He	0.621	0.045	2166.18	0.0213	0.0318
V	51	3	He	0.542	0.0433	2134.17	0.0213	0.0318
V	51	3	He	0.454	0.0414	1950.14	0.0213	0.0318
Cr	52	3	He	0.587	0.0602	2900.40	0.0294	0.04297
Cr	52	3	He	0.499	0.0576	2840.37	0.0294	0.04297
Cr	52	3	He	0.541	0.0589	2770.37	0.0294	0.04297
Mn	55	3	He	22000.772	273.5194	13170029.80	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	21635.606	268.9796	13254009.80	0.0124	0.002801
Mn	55	3	He	22218.717	276.2289	12998343.56	0.0124	0.002801
Fe	57	3	He	705.001	0.4061	19553.75	0.0006	0.002732
Fe	57	3	He	691.637	0.3985	19633.81	0.0006	0.002732
Fe	57	3	He	697.698	0.4019	18912.93	0.0006	0.002732
Co	59	3	He	3.776	0.2109	10153.93	0.0549	0.003644
Co	59	3	He	3.477	0.1945	9583.46	0.0549	0.003644
Co	59	3	He	3.667	0.2049	9643.55	0.0549	0.003644
Ni	60	3	He	2.051	0.0332	2670.35	0.0093	0.01413
Ni	60	3	He	2.078	0.0334	2680.37	0.0093	0.01413
Ni	60	3	He	2.714	0.0393	3080.43	0.0093	0.01413
Cu	63	3	He	4.725	0.1389	11184.72	0.0274	0.009321
Cu	63	3	He	4.786	0.1406	11274.81	0.0274	0.009321
Cu	63	3	He	4.875	0.143	11204.76	0.0274	0.009321
Zn	66	3	He	4.304	0.0191	1540.13	0.0031	0.005913
Zn	66	3	He	4.288	0.0191	1530.16	0.0031	0.005913
Zn	66	3	He	3.437	0.0165	1290.10	0.0031	0.005913
As	75	3	He	0.66	0.0023	184.00	0.0021	0.0008698
As	75	3	He	0.548	0.002	164.00	0.0021	0.0008698
As	75	3	He	0.749	0.0025	194.00	0.0021	0.0008698
Sr	88	3	He	605.187	5.3257	440745.03	0.0088	0.0006843
Sr	88	3	He	615.706	5.4182	444152.22	0.0088	0.0006843
Sr	88	3	He	605.768	5.3308	440580.70	0.0088	0.0006843
Mo	98	3	He	0.17	0.0056	460.03	0.0219	0.001827
Mo	98	3	He	0.273	0.0078	640.03	0.0219	0.001827
Mo	98	3	He	0.181	0.0058	480.02	0.0219	0.001827
Ag	107	3	He	-0.01	0.0006	50.00	0.047	0.001064
Ag	107	3	He	0.008	0.0015	120.00	0.047	0.001064
Ag	107	3	He	-0.005	0.0008	70.00	0.047	0.001064
Cd	111	3	He	0.352	0.0019	160.00	0.0053	6.086E-05
Cd	111	3	He	0.254	0.0014	116.00	0.0053	6.086E-05
Cd	111	3	He	0.411	0.0023	186.00	0.0053	6.086E-05
Sn	120	3	He	0.073	0.016	1320.11	0.0154	0.01483
Sn	120	3	He	0.138	0.017	1390.12	0.0154	0.01483
Sn	120	3	He	0.113	0.0166	1370.11	0.0154	0.01483
Sb	121	3	He	0.125	0.0021	170.01	0.0143	0.0002661
Sb	121	3	He	0.17	0.0027	220.01	0.0143	0.0002661
Sb	121	3	He	0.16	0.0025	210.01	0.0143	0.0002661
Ba	137	3	He	542.327	2.5919	214505.91	0.0048	0.0002665
Ba	137	3	He	560.993	2.6811	219783.36	0.0048	0.0002665
Ba	137	3	He	543.721	2.5986	214770.66	0.0048	0.0002665
Tl	205	3	He	-0.065	0.0012	450.03	0.0246	0.002755
Tl	205	3	He	-0.073	0.001	380.02	0.0246	0.002755
Tl	205	3	He	-0.077	0.0009	340.02	0.0246	0.002755
Pb	208	3	He	1.096	0.0377	7882.66	0.0324	0.002158
Pb	208	3	He	1.071	0.0369	7922.65	0.0324	0.002158
Pb	208	3	He	1.078	0.0371	7792.58	0.0324	0.002158
U	238	3	He	0.037	0.0022	660.04	0.0492	0.0004023
U	238	3	He	0.043	0.0025	750.05	0.0492	0.0004023
U	238	3	He	0.04	0.0024	710.05	0.0492	0.0004023
Sc	45	1	No Gas			2508869.96		
Sc	45	1	No Gas			2518764.65		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2504292.15		
Ge	72	1	No Gas			1212627.87		
Ge	72	1	No Gas			1210838.03		
Ge	72	1	No Gas			1198821.78		
Sc	45	2	H2			197568.08		
Sc	45	2	H2			195962.11		
Sc	45	2	H2			195802.99		
Ge	72	2	H2			157186.02		
Ge	72	2	H2			156620.93		
Ge	72	2	H2			156800.87		
In	115	2	H2			377428.31		
In	115	2	H2			376147.61		
In	115	2	H2			373458.43		
Sc	45	3	He			48150.26		
Sc	45	3	He			49275.15		
Sc	45	3	He			47056.42		
Ge	72	3	He			80516.92		
Ge	72	3	He			80205.55		
Ge	72	3	He			78345.13		
In	115	3	He			82765.33		
In	115	3	He			81981.48		
In	115	3	He			82655.58		
Tb	159	3	He			390172.96		
Tb	159	3	He			398408.86		
Tb	159	3	He			388927.18		
Bi	209	3	He			299432.96		
Bi	209	3	He			298870.48		
Bi	209	3	He			296723.18		

Quantitation Report

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Sample Name	410-137015-E-4-A
Sample Type	Sample
Comment	T31
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

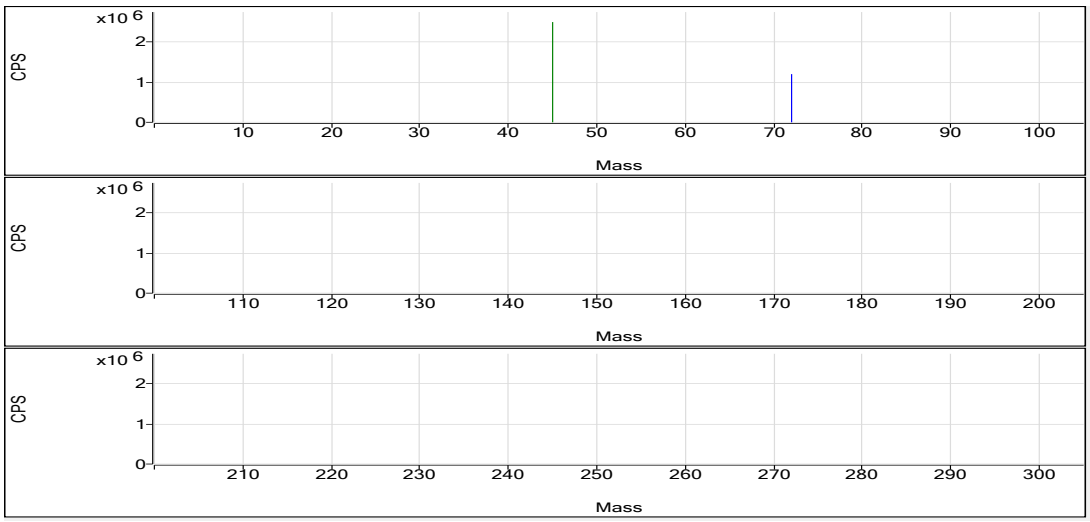
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.027	ppb	N/A	36.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.336	ppb	7.9	28.89	0.0002	Pulse	1.5000	3
Na	23	45	He	47299.278	ppb	1.5	8260580.92	169.0112	Analog	0.1000	3
Mg	24	45	He	62576.806	ppb	1.0	5526561.79	113.0677	Analog	0.1000	3
Al	27	45	He	72.279	ppb	0.8	2160.25	0.0442	Pulse	0.1000	3
K	39	45	He	2110.971	ppb	2.2	140921.11	2.8833	Pulse	0.1000	3
Ca	44	45	He	227682.600	ppb	1.6	751950.33	15.3849	Pulse	0.1000	3
Ti	47	45	He	1.918	ppb	51.8	50.00	0.0010	Pulse	0.1000	3
V	51	45	He	0.613	ppb	8.1	2190.85	0.0448	Pulse	0.5000	3
Cr	52	45	He	2.145	ppb	13.0	5181.13	0.1061	Pulse	0.1000	3
Mn	55	45	He	258.968	ppb	0.4	157514.37	3.2223	Pulse	0.1000	3
Fe	57	45	He	284.314	ppb	1.2	8085.87	0.1654	Pulse	0.1000	3
Co	59	45	He	0.120	ppb	3.3	500.03	0.0102	Pulse	0.1000	3
Ni	60	72	He	3.074	ppb	16.9	3403.86	0.0427	Pulse	0.1000	3
Cu	63	72	He	1.621	ppb	3.1	4297.45	0.0538	Pulse	0.1000	3
Zn	66	72	He	22.465	ppb	2.7	5981.45	0.0749	Pulse	0.1000	3
As	75	72	He	0.407	ppb	13.1	139.33	0.0017	Pulse	0.5000	3
Sr	88	115	He	579.750	ppb	0.7	414586.91	5.1018	Pulse	0.1000	3
Mo	98	115	He	0.317	ppb	24.8	713.38	0.0088	Pulse	0.1000	3
Ag	107	115	He	0.016	ppb	79.1	146.67	0.0018	Pulse	0.1000	3
Cd	111	115	He	0.078	ppb	22.4	38.67	0.0005	Pulse	0.5000	3
Sn	120	115	He	0.251	ppb	32.9	1520.15	0.0187	Pulse	0.1000	3
Sb	121	115	He	1.657	ppb	2.1	1940.20	0.0239	Pulse	0.1000	3
Ba	137	115	He	1040.193	ppb	0.5	403968.12	4.9711	Pulse	0.1000	3
Tl	205	159	He	-0.076	ppb	N/A	343.35	0.0009	Pulse	0.1000	3
Pb	208	159	He	0.377	ppb	9.5	5587.34	0.0144	Pulse	0.1000	3
U	238	209	He	0.921	ppb	1.6	13540.94	0.0458	Pulse	0.1000	3

ISTD Table:

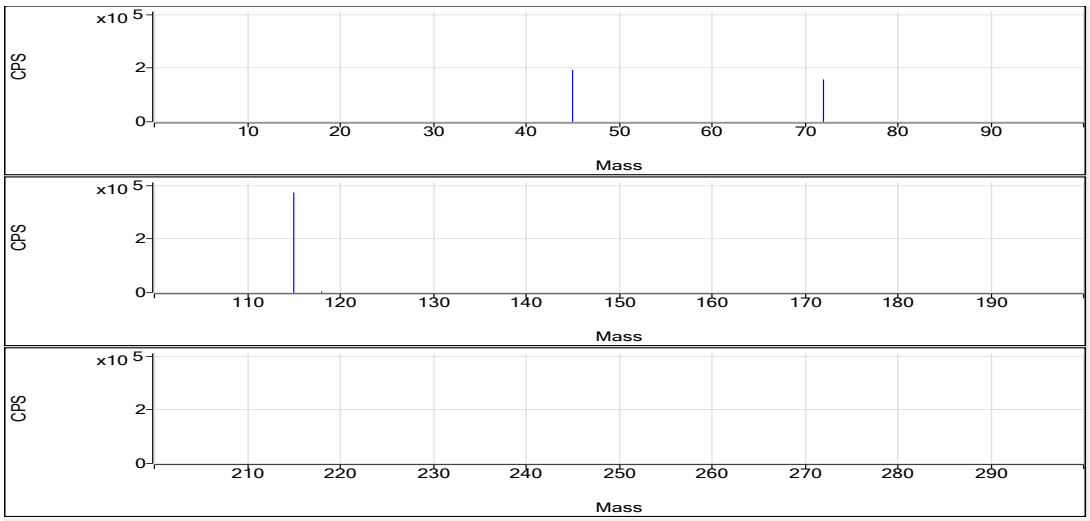
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2496848.45	1.2	95.7	Analog	0.1000	3
No Gas	Ge	72	1200127.46	0.0	93.1	Pulse	0.1000	3
H2	Sc	45	193224.73	1.7	93.8	Pulse	0.1000	3
H2	Ge	72	157874.92	2.0	97.0	Pulse	0.1000	3
H2	In	115	373729.01	0.6	92.6	Pulse	0.1000	3
He	Sc	45	48883.06	1.5	95.5	Pulse	0.1000	3
He	Ge	72	79873.52	1.9	97.6	Pulse	0.1000	3
He	In	115	81263.17	0.4	92.7	Pulse	0.1000	3
He	Tb	159	388748.94	0.4	96.8	Pulse	0.1000	3
He	Bi	209	295807.82	0.5	96.6	Pulse	0.1000	3

No Gas

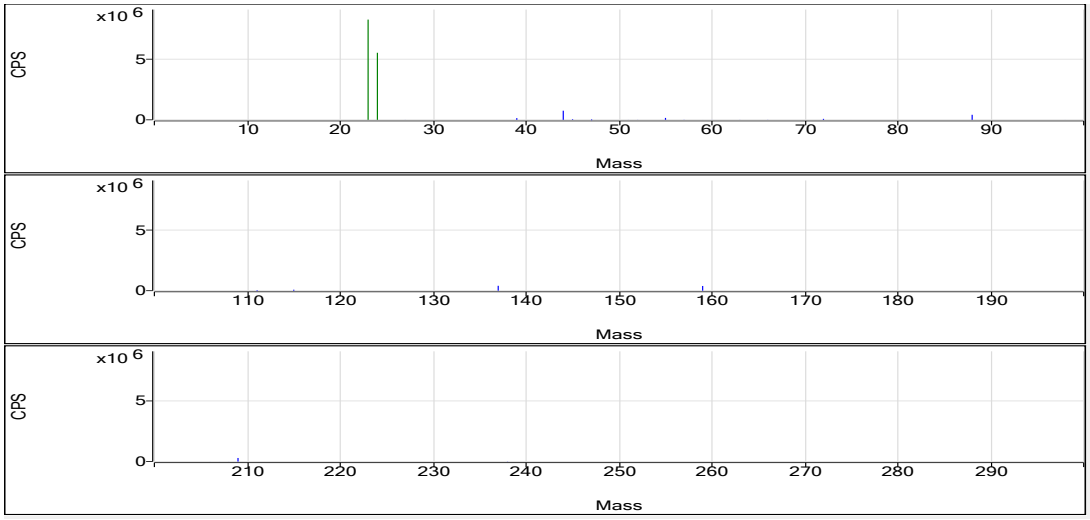


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.025	0	40.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.026	0	38.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.03	0	30.00	0.0007	3.404E-05
Se	78	2	H2	0.324	0.0002	27.33	0.0004	3.546E-05
Se	78	2	H2	0.367	0.0002	31.33	0.0004	3.546E-05
Se	78	2	H2	0.319	0.0002	28.00	0.0004	3.546E-05
Na	23	3	He	47145.74	168.4639	8267112.38	0.0036	0.4171
Na	23	3	He	46681.43	166.8089	8254583.00	0.0036	0.4171
Na	23	3	He	48070.665	171.7607	8260047.38	0.0036	0.4171
Mg	24	3	He	62644.329	113.1897	5554613.04	0.0018	0.004553
Mg	24	3	He	61894.967	111.8358	5534221.17	0.0018	0.004553
Mg	24	3	He	63191.121	114.1776	5490851.17	0.0018	0.004553
Al	27	3	He	71.632	0.0438	2150.24	0.0006	0.002085
Al	27	3	He	72.393	0.0443	2190.24	0.0006	0.002085
Al	27	3	He	72.814	0.0445	2140.28	0.0006	0.002085
K	39	3	He	2074.203	2.8402	139380.20	0.0012	0.4112
K	39	3	He	2094.592	2.8641	141731.27	0.0012	0.4112
K	39	3	He	2164.118	2.9455	141651.87	0.0012	0.4112
Ca	44	3	He	227762.659	15.3903	755257.18	0.0001	0.003322
Ca	44	3	He	224070.544	15.1409	749251.40	0.0001	0.003322
Ca	44	3	He	231214.597	15.6235	751342.41	0.0001	0.003322
Ti	47	3	He	1.149	0.0006	30.00	0.0005	0
Ti	47	3	He	3.04	0.0016	80.00	0.0005	0
Ti	47	3	He	1.564	0.0008	40.00	0.0005	0
V	51	3	He	0.636	0.0453	2224.19	0.0213	0.0318
V	51	3	He	0.556	0.0436	2158.17	0.0213	0.0318
V	51	3	He	0.647	0.0455	2190.18	0.0213	0.0318
Cr	52	3	He	1.921	0.0995	4880.98	0.0294	0.04297
Cr	52	3	He	2.058	0.1035	5121.14	0.0294	0.04297
Cr	52	3	He	2.457	0.1152	5541.26	0.0294	0.04297
Mn	55	3	He	259.973	3.2348	158743.87	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	257.742	3.2071	158703.61	0.0124	0.002801
Mn	55	3	He	259.19	3.2251	155095.62	0.0124	0.002801
Fe	57	3	He	281.667	0.1639	8042.55	0.0006	0.002732
Fe	57	3	He	288.118	0.1676	8292.67	0.0006	0.002732
Fe	57	3	He	283.156	0.1647	7922.40	0.0006	0.002732
Co	59	3	He	0.123	0.0104	510.03	0.0549	0.003644
Co	59	3	He	0.121	0.0103	510.03	0.0549	0.003644
Co	59	3	He	0.115	0.01	480.02	0.0549	0.003644
Ni	60	3	He	3.54	0.047	3670.58	0.0093	0.01413
Ni	60	3	He	3.17	0.0436	3510.54	0.0093	0.01413
Ni	60	3	He	2.514	0.0375	3030.46	0.0093	0.01413
Cu	63	3	He	1.574	0.0525	4100.72	0.0274	0.009321
Cu	63	3	He	1.673	0.0552	4450.83	0.0274	0.009321
Cu	63	3	He	1.617	0.0537	4340.79	0.0274	0.009321
Zn	66	3	He	22.513	0.075	5861.44	0.0031	0.005913
Zn	66	3	He	23.05	0.0767	6181.53	0.0031	0.005913
Zn	66	3	He	21.832	0.0729	5901.37	0.0031	0.005913
As	75	3	He	0.346	0.0016	126.00	0.0021	0.0008698
As	75	3	He	0.427	0.0018	144.00	0.0021	0.0008698
As	75	3	He	0.447	0.0018	148.00	0.0021	0.0008698
Sr	88	3	He	577.502	5.0821	414961.17	0.0088	0.0006843
Sr	88	3	He	584.304	5.1419	416593.28	0.0088	0.0006843
Sr	88	3	He	577.443	5.0815	412206.28	0.0088	0.0006843
Mo	98	3	He	0.402	0.0107	870.06	0.0219	0.001827
Mo	98	3	He	0.299	0.0084	680.04	0.0219	0.001827
Mo	98	3	He	0.248	0.0073	590.03	0.0219	0.001827
Ag	107	3	He	0.011	0.0016	130.00	0.047	0.001064
Ag	107	3	He	0.03	0.0025	200.01	0.047	0.001064
Ag	107	3	He	0.006	0.0014	110.01	0.047	0.001064
Cd	111	3	He	0.085	0.0005	42.00	0.0053	6.086E-05
Cd	111	3	He	0.091	0.0005	44.00	0.0053	6.086E-05
Cd	111	3	He	0.058	0.0004	30.00	0.0053	6.086E-05
Sn	120	3	He	0.182	0.0176	1440.13	0.0154	0.01483
Sn	120	3	He	0.343	0.0201	1630.18	0.0154	0.01483
Sn	120	3	He	0.229	0.0184	1490.14	0.0154	0.01483
Sb	121	3	He	1.649	0.0238	1940.20	0.0143	0.0002661
Sb	121	3	He	1.627	0.0235	1900.20	0.0143	0.0002661
Sb	121	3	He	1.694	0.0244	1980.21	0.0143	0.0002661
Ba	137	3	He	1038.125	4.9613	405097.45	0.0048	0.0002665
Ba	137	3	He	1046.138	4.9996	405059.45	0.0048	0.0002665
Ba	137	3	He	1036.315	4.9526	401747.45	0.0048	0.0002665
Tl	205	3	He	-0.071	0.001	390.02	0.0246	0.002755
Tl	205	3	He	-0.076	0.0009	340.02	0.0246	0.002755
Tl	205	3	He	-0.081	0.0008	300.02	0.0246	0.002755
Pb	208	3	He	0.345	0.0133	2730.39	0.0324	0.002158
Pb	208	3	He	0.416	0.0156	3120.47	0.0324	0.002158
Pb	208	3	He	0.37	0.0142	2830.40	0.0324	0.002158
U	238	3	He	0.935	0.0465	13657.69	0.0492	0.0004023
U	238	3	He	0.923	0.0458	13597.76	0.0492	0.0004023
U	238	3	He	0.906	0.045	13367.36	0.0492	0.0004023
Sc	45	1	No Gas			2518777.62		
Sc	45	1	No Gas			2507988.09		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2463779.65		
Ge	72	1	No Gas			1199541.08		
Ge	72	1	No Gas			1200730.14		
Ge	72	1	No Gas			1200111.15		
Sc	45	2	H2			189528.79		
Sc	45	2	H2			195235.62		
Sc	45	2	H2			194909.78		
Ge	72	2	H2			154176.54		
Ge	72	2	H2			159613.19		
Ge	72	2	H2			159835.04		
In	115	2	H2			371577.34		
In	115	2	H2			373274.96		
In	115	2	H2			376334.72		
Sc	45	3	He			49073.49		
Sc	45	3	He			49485.26		
Sc	45	3	He			48090.43		
Ge	72	3	He			78114.16		
Ge	72	3	He			80607.35		
Ge	72	3	He			80899.06		
In	115	3	He			81660.08		
In	115	3	He			81026.29		
In	115	3	He			81126.63		
Tb	159	3	He			389846.44		
Tb	159	3	He			387223.43		
Tb	159	3	He			389176.95		
Bi	209	3	He			294000.91		
Bi	209	3	He			296651.52		
Bi	209	3	He			296771.03		

Quantitation Report

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Sample Type	Sample
Comment	T31
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

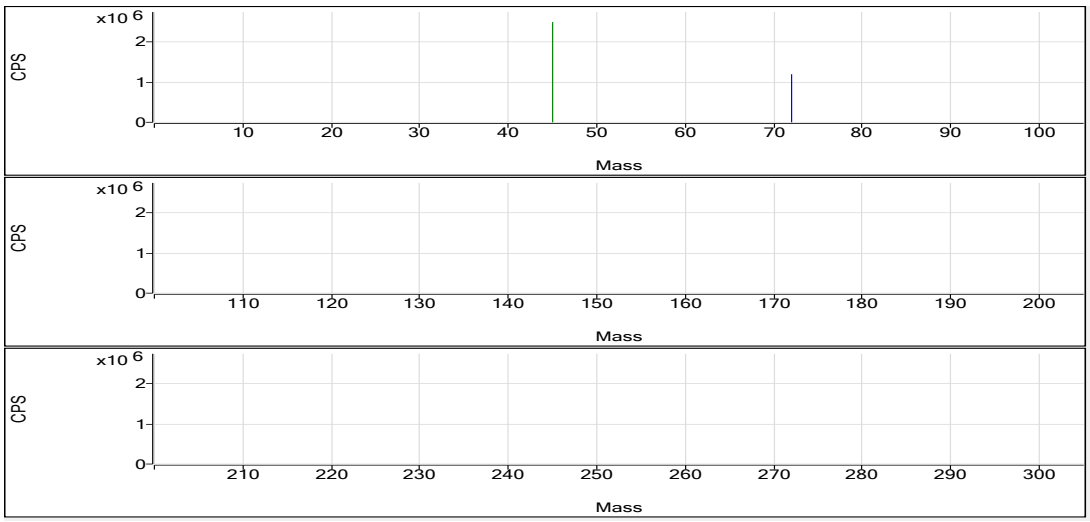
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.169	ppb	11.4	392.68	0.0002	Pulse	0.5000	3
Se	78	72	H2	0.199	ppb	22.9	19.33	0.0001	Pulse	1.5000	3
Na	23	45	He	107478.651	ppb	1.8	18430305.56	383.5153	Analog	0.1000	3
Mg	24	45	He	129834.406	ppb	0.8	11273987.33	234.5880	Analog	0.1000	3
Al	27	45	He	134.094	ppb	7.7	3853.99	0.0802	Pulse	0.1000	3
K	39	45	He	3230.830	ppb	1.9	201593.84	4.1947	Pulse	0.1000	3
Ca	44	45	He	195625.394	ppb	0.8	635307.50	13.2192	Pulse	0.1000	3
Ti	47	45	He	6.525	ppb	27.3	166.67	0.0035	Pulse	0.1000	3
V	51	45	He	1.739	ppb	1.8	3304.40	0.0688	Pulse	0.5000	3
Cr	52	45	He	1.399	ppb	10.5	4044.05	0.0841	Pulse	0.1000	3
Mn	55	45	He	15802.656	ppb	0.0	9442111.32	196.4636	Analog	0.1000	3
Fe	57	45	He	823.887	ppb	3.4	22781.87	0.4741	Pulse	0.1000	3
Co	59	45	He	11.817	ppb	1.4	31348.17	0.6522	Pulse	0.1000	3
Ni	60	72	He	31.562	ppb	1.2	24097.31	0.3071	Pulse	0.1000	3
Cu	63	72	He	2.499	ppb	5.1	6108.16	0.0779	Pulse	0.1000	3
Zn	66	72	He	19.999	ppb	6.2	5281.15	0.0673	Pulse	0.1000	3
As	75	72	He	0.479	ppb	35.8	148.67	0.0019	Pulse	0.5000	3
Sr	88	115	He	1456.942	ppb	2.6	1049896.23	12.8202	Pulse	0.1000	3
Mo	98	115	He	0.113	ppb	10.8	353.35	0.0043	Pulse	0.1000	3
Ag	107	115	He	0.012	ppb	59.2	133.34	0.0016	Pulse	0.1000	3
Cd	111	115	He	1.424	ppb	6.1	626.02	0.0076	Pulse	0.5000	3
Sn	120	115	He	0.175	ppb	77.7	1433.47	0.0175	Pulse	0.1000	3
Sb	121	115	He	0.153	ppb	31.8	200.01	0.0024	Pulse	0.1000	3
Ba	137	115	He	1149.091	ppb	2.5	449743.27	5.4915	Pulse	0.1000	3
Tl	205	159	He	-0.064	ppb	N/A	460.03	0.0012	Pulse	0.1000	3
Pb	208	159	He	0.951	ppb	1.3	12916.30	0.0330	Pulse	0.1000	3
U	238	209	He	0.082	ppb	25.8	1296.78	0.0044	Pulse	0.1000	3

ISTD Table:

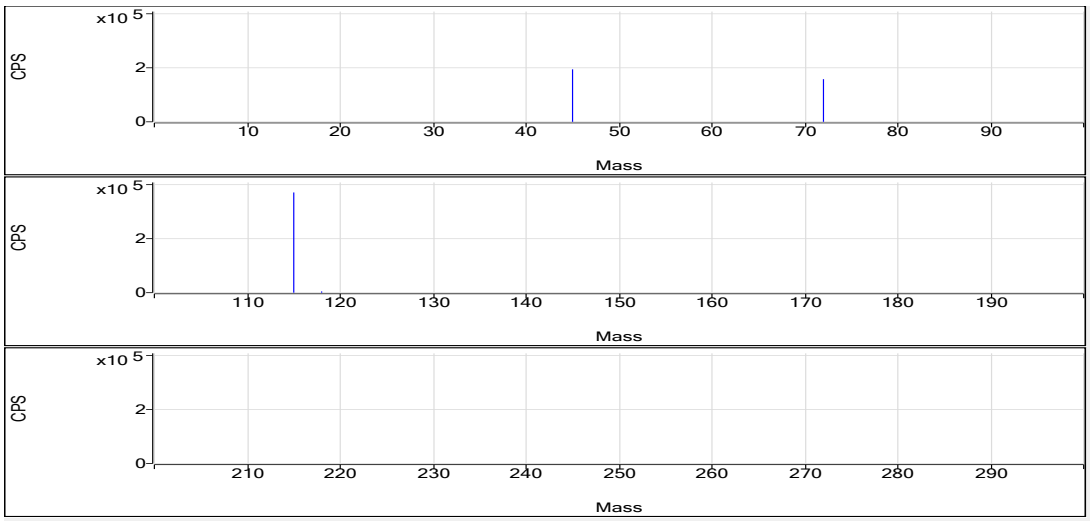
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2495482.52	0.7	95.7	Analog	0.1000	3
No Gas	Ge	72	1196146.39	0.4	92.8	Pulse	0.1000	3
H2	Sc	45	194083.56	0.8	94.2	Pulse	0.1000	3
H2	Ge	72	157719.55	0.6	96.9	Pulse	0.1000	3
H2	In	115	370631.58	0.3	91.8	Pulse	0.1000	3
He	Sc	45	48060.35	0.9	93.9	Pulse	0.1000	3
He	Ge	72	78465.39	1.1	95.9	Pulse	0.1000	3
He	In	115	81920.47	1.9	93.5	Pulse	0.1000	3
He	Tb	159	391830.92	0.9	97.6	Pulse	0.1000	3
He	Bi	209	292705.01	1.1	95.6	Pulse	0.1000	3

No Gas

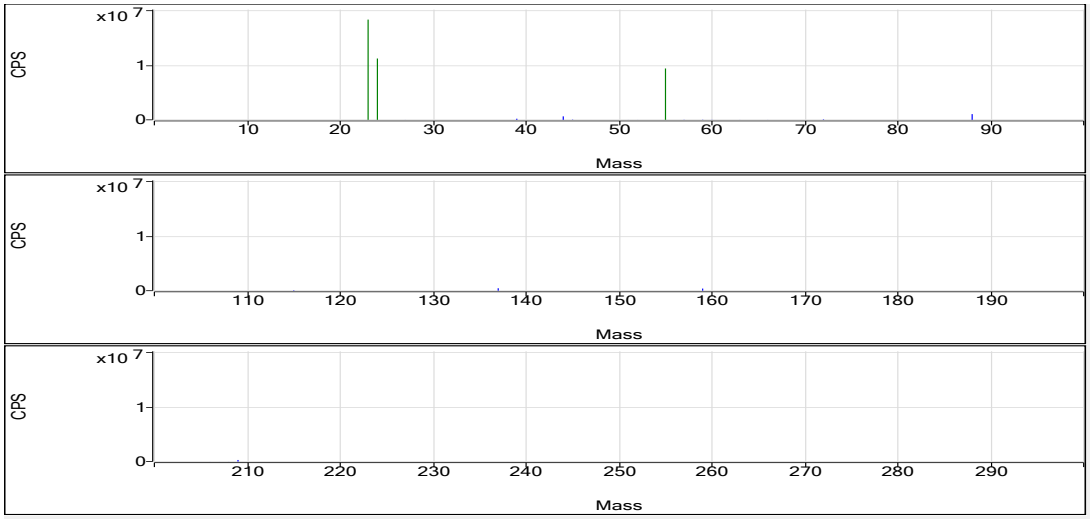


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.188	0.0002	426.01	0.0007	3.404E-05
Be	9	1	No Gas	0.171	0.0002	398.01	0.0007	3.404E-05
Be	9	1	No Gas	0.149	0.0001	354.01	0.0007	3.404E-05
Se	78	2	H2	0.24	0.0001	22.00	0.0004	3.546E-05
Se	78	2	H2	0.207	0.0001	20.00	0.0004	3.546E-05
Se	78	2	H2	0.15	0.0001	16.00	0.0004	3.546E-05
Na	23	3	He	108386.764	386.7522	18622434.72	0.0036	0.4171
Na	23	3	He	108763.908	388.0965	18472868.47	0.0036	0.4171
Na	23	3	He	105285.28	375.6972	18195613.48	0.0036	0.4171
Mg	24	3	He	130354.758	235.5282	11340876.08	0.0018	0.004553
Mg	24	3	He	130449.587	235.6995	11218979.83	0.0018	0.004553
Mg	24	3	He	128698.874	232.5364	11262106.08	0.0018	0.004553
Al	27	3	He	122.633	0.0735	3540.52	0.0006	0.002085
Al	27	3	He	142.859	0.0853	4060.79	0.0006	0.002085
Al	27	3	He	136.792	0.0818	3960.67	0.0006	0.002085
K	39	3	He	3293.419	4.268	205509.08	0.0012	0.4112
K	39	3	He	3229.609	4.1933	199595.54	0.0012	0.4112
K	39	3	He	3169.462	4.1229	199676.91	0.0012	0.4112
Ca	44	3	He	197014.437	13.3131	641035.03	0.0001	0.003322
Ca	44	3	He	195858.809	13.235	629967.88	0.0001	0.003322
Ca	44	3	He	194002.936	13.1096	634919.60	0.0001	0.003322
Ti	47	3	He	8.2	0.0044	210.01	0.0005	0
Ti	47	3	He	6.716	0.0036	170.01	0.0005	0
Ti	47	3	He	4.659	0.0025	120.00	0.0005	0
V	51	3	He	1.706	0.068	3276.40	0.0213	0.0318
V	51	3	He	1.767	0.0693	3300.40	0.0213	0.0318
V	51	3	He	1.745	0.0689	3336.40	0.0213	0.0318
Cr	52	3	He	1.541	0.0883	4250.80	0.0294	0.04297
Cr	52	3	He	1.247	0.0796	3790.64	0.0294	0.04297
Cr	52	3	He	1.411	0.0845	4090.71	0.0294	0.04297
Mn	55	3	He	15801.888	196.454	9459422.36	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	15802.148	196.4572	9351099.86	0.0124	0.002801
Mn	55	3	He	15803.933	196.4794	9515811.73	0.0124	0.002801
Fe	57	3	He	819.141	0.4714	22698.50	0.0006	0.002732
Fe	57	3	He	853.707	0.4912	23379.56	0.0006	0.002732
Fe	57	3	He	798.813	0.4598	22267.56	0.0006	0.002732
Co	59	3	He	11.657	0.6435	30984.15	0.0549	0.003644
Co	59	3	He	11.809	0.6518	31024.29	0.0549	0.003644
Co	59	3	He	11.985	0.6615	32036.06	0.0549	0.003644
Ni	60	3	He	31.984	0.311	24261.02	0.0093	0.01413
Ni	60	3	He	31.397	0.3056	24290.90	0.0093	0.01413
Ni	60	3	He	31.306	0.3047	23740.02	0.0093	0.01413
Cu	63	3	He	2.512	0.0782	6101.48	0.0274	0.009321
Cu	63	3	He	2.367	0.0742	5901.41	0.0274	0.009321
Cu	63	3	He	2.619	0.0811	6321.60	0.0274	0.009321
Zn	66	3	He	19.123	0.0646	5041.06	0.0031	0.005913
Zn	66	3	He	19.466	0.0657	5221.13	0.0031	0.005913
Zn	66	3	He	21.408	0.0716	5581.25	0.0031	0.005913
As	75	3	He	0.419	0.0018	138.00	0.0021	0.0008698
As	75	3	He	0.345	0.0016	128.00	0.0021	0.0008698
As	75	3	He	0.671	0.0023	180.00	0.0021	0.0008698
Sr	88	3	He	1452.366	12.7799	1052752.48	0.0088	0.0006843
Sr	88	3	He	1421.883	12.5117	1040861.86	0.0088	0.0006843
Sr	88	3	He	1496.576	13.1689	1056074.36	0.0088	0.0006843
Mo	98	3	He	0.099	0.004	330.02	0.0219	0.001827
Mo	98	3	He	0.119	0.0044	370.02	0.0219	0.001827
Mo	98	3	He	0.121	0.0045	360.02	0.0219	0.001827
Ag	107	3	He	0.006	0.0013	110.00	0.047	0.001064
Ag	107	3	He	0.011	0.0016	130.00	0.047	0.001064
Ag	107	3	He	0.02	0.002	160.01	0.047	0.001064
Cd	111	3	He	1.329	0.0071	588.02	0.0053	6.086E-05
Cd	111	3	He	1.442	0.0077	644.02	0.0053	6.086E-05
Cd	111	3	He	1.501	0.0081	646.02	0.0053	6.086E-05
Sn	120	3	He	0.14	0.017	1400.12	0.0154	0.01483
Sn	120	3	He	0.059	0.0157	1310.11	0.0154	0.01483
Sn	120	3	He	0.324	0.0198	1590.17	0.0154	0.01483
Sb	121	3	He	0.194	0.003	250.01	0.0143	0.0002661
Sb	121	3	He	0.099	0.0017	140.01	0.0143	0.0002661
Sb	121	3	He	0.165	0.0026	210.01	0.0143	0.0002661
Ba	137	3	He	1155.991	5.5245	455085.93	0.0048	0.0002665
Ba	137	3	He	1117.549	5.3408	444308.78	0.0048	0.0002665
Ba	137	3	He	1173.731	5.6093	449835.11	0.0048	0.0002665
Tl	205	3	He	-0.074	0.0009	370.02	0.0246	0.002755
Tl	205	3	He	-0.061	0.0013	490.03	0.0246	0.002755
Tl	205	3	He	-0.058	0.0013	520.03	0.0246	0.002755
Pb	208	3	He	0.937	0.0325	6952.13	0.0324	0.002158
Pb	208	3	He	0.956	0.0331	6781.93	0.0324	0.002158
Pb	208	3	He	0.959	0.0332	6802.00	0.0324	0.002158
U	238	3	He	0.063	0.0035	1020.07	0.0492	0.0004023
U	238	3	He	0.105	0.0056	1610.16	0.0492	0.0004023
U	238	3	He	0.078	0.0043	1260.12	0.0492	0.0004023
Sc	45	1	No Gas			2494306.68		
Sc	45	1	No Gas			2513447.78		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2478693.09		
Ge	72	1	No Gas			1191694.98		
Ge	72	1	No Gas			1200448.50		
Ge	72	1	No Gas			1196295.69		
Sc	45	2	H2			195620.25		
Sc	45	2	H2			192355.23		
Sc	45	2	H2			194275.19		
Ge	72	2	H2			156591.81		
Ge	72	2	H2			158278.74		
Ge	72	2	H2			158288.10		
In	115	2	H2			369740.70		
In	115	2	H2			370280.23		
In	115	2	H2			371873.82		
Sc	45	3	He			48150.82		
Sc	45	3	He			47598.65		
Sc	45	3	He			48431.59		
Ge	72	3	He			78002.54		
Ge	72	3	He			79491.09		
Ge	72	3	He			77902.54		
In	115	3	He			82384.29		
In	115	3	He			83199.10		
In	115	3	He			80201.50		
Tb	159	3	He			395640.07		
Tb	159	3	He			389270.66		
Tb	159	3	He			390582.03		
Bi	209	3	He			291945.70		
Bi	209	3	He			289927.59		
Bi	209	3	He			296241.73		

Quantitation Report

Data File Name	056SMPL.d
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Sample Type	Sample
Comment	T31
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

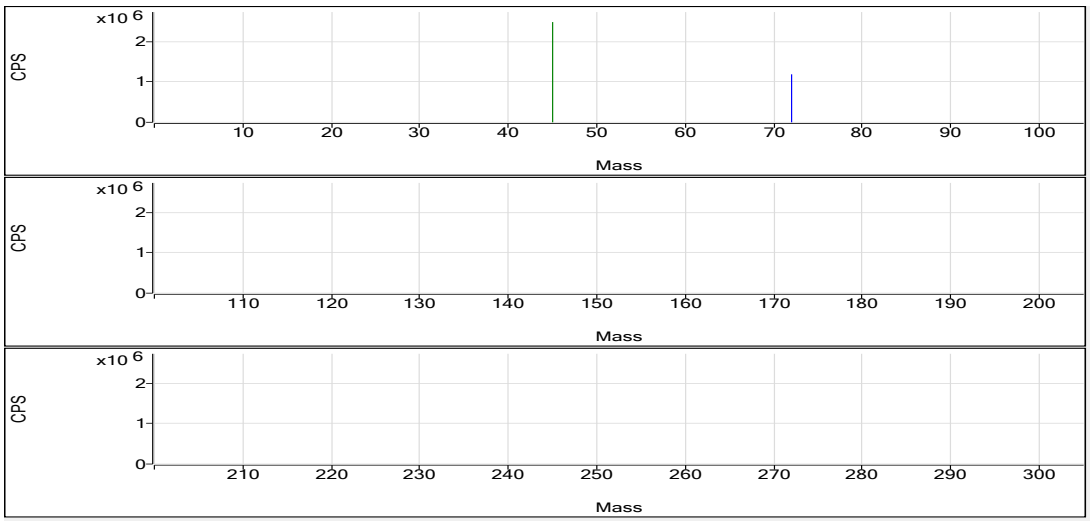
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.014	ppb	41.8	109.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.000	ppb	61261.1	5.56	0.0000	Pulse	1.5000	3
Na	23	45	He	102121.490	ppb	2.5	17798165.15	364.4202	Analog	0.1000	3
Mg	24	45	He	89098.674	ppb	2.8	7862256.34	160.9871	Analog	0.1000	3
Al	27	45	He	253.825	ppb	5.3	7328.77	0.1500	Pulse	0.1000	3
K	39	45	He	2166.004	ppb	3.5	143957.09	2.9477	Pulse	0.1000	3
Ca	44	45	He	132633.439	ppb	1.9	437822.07	8.9637	Pulse	0.1000	3
Ti	47	45	He	12.170	ppb	27.1	316.68	0.0065	Pulse	0.1000	3
V	51	45	He	0.727	ppb	8.4	2308.87	0.0473	Pulse	0.5000	3
Cr	52	45	He	0.529	ppb	31.7	2857.05	0.0585	Pulse	0.1000	3
Mn	55	45	He	25674.007	ppb	2.4	15589207.27	319.1855	Analog	0.1000	3
Fe	57	45	He	1017.885	ppb	2.4	28582.38	0.5851	Pulse	0.1000	3
Co	59	45	He	5.316	ppb	3.8	14431.01	0.2954	Pulse	0.1000	3
Ni	60	72	He	3.873	ppb	8.8	4007.35	0.0501	Pulse	0.1000	3
Cu	63	72	He	2.676	ppb	4.2	6615.10	0.0827	Pulse	0.1000	3
Zn	66	72	He	6.136	ppb	2.4	1980.21	0.0248	Pulse	0.1000	3
As	75	72	He	0.743	ppb	29.7	196.67	0.0025	Pulse	0.5000	3
Sr	88	115	He	1065.401	ppb	1.4	769269.88	9.3750	Pulse	0.1000	3
Mo	98	115	He	0.489	ppb	4.3	1030.07	0.0126	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	N/A	86.67	0.0011	Pulse	0.1000	3
Cd	111	115	He	0.025	ppb	83.2	16.00	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.015	ppb	1123.6	1236.77	0.0151	Pulse	0.1000	3
Sb	121	115	He	0.115	ppb	21.4	156.67	0.0019	Pulse	0.1000	3
Ba	137	115	He	931.127	ppb	0.3	365175.29	4.4499	Pulse	0.1000	3
Tl	205	159	He	-0.084	ppb	N/A	273.35	0.0007	Pulse	0.1000	3
Pb	208	159	He	0.748	ppb	1.8	10295.34	0.0264	Pulse	0.1000	3
U	238	209	He	0.085	ppb	2.4	1340.12	0.0046	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2486396.16	0.8	95.3	Analog	0.1000	3
No Gas	Ge	72	1190438.45	0.6	92.4	Pulse	0.1000	3
H2	Sc	45	194433.62	1.0	94.4	Pulse	0.1000	3
H2	Ge	72	156504.34	0.9	96.2	Pulse	0.1000	3
H2	In	115	373515.14	0.3	92.5	Pulse	0.1000	3
He	Sc	45	48855.97	2.0	95.4	Pulse	0.1000	3
He	Ge	72	80010.68	2.2	97.7	Pulse	0.1000	3
He	In	115	82064.79	1.3	93.6	Pulse	0.1000	3
He	Tb	159	390040.97	0.7	97.1	Pulse	0.1000	3
He	Bi	209	293319.71	0.4	95.8	Pulse	0.1000	3

No Gas



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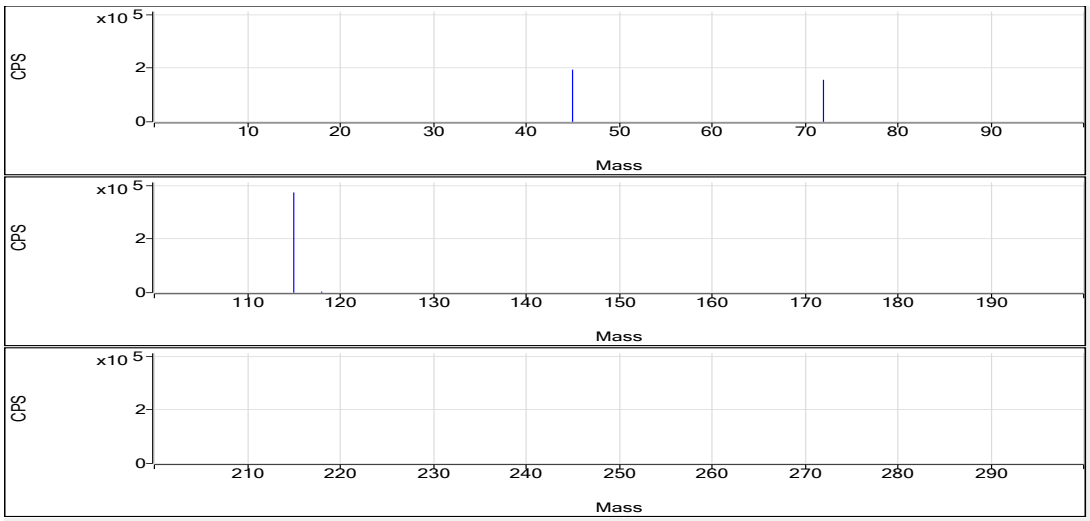
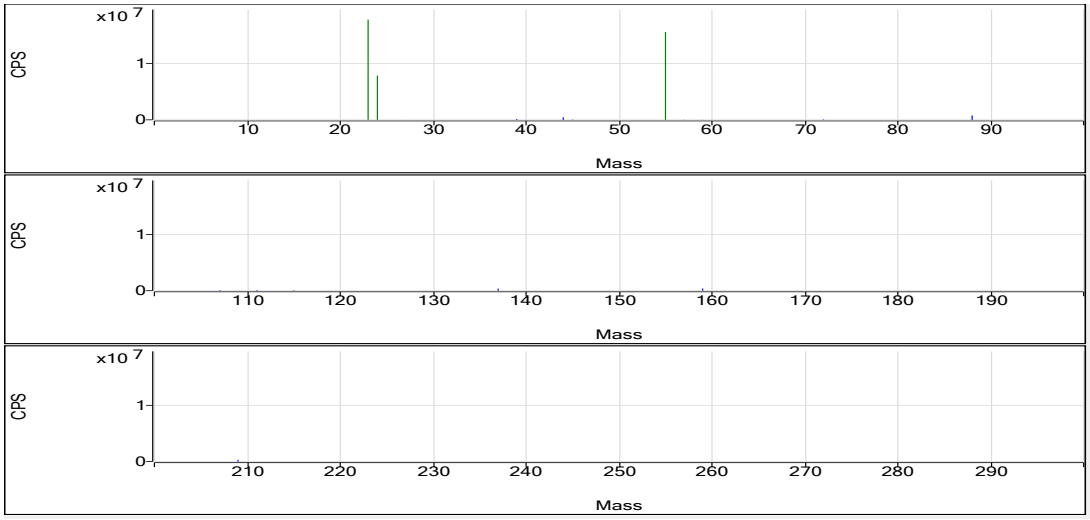


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.013	0	108.00	0.0007	3.404E-05
Be	9	1	No Gas	0.019	0	120.00	0.0007	3.404E-05
Be	9	1	No Gas	0.008	0	100.00	0.0007	3.404E-05
Se	78	2	H2	0.016	0	6.67	0.0004	3.546E-05
Se	78	2	H2	-0.022	0	4.00	0.0004	3.546E-05
Se	78	2	H2	0.006	0	6.00	0.0004	3.546E-05
Na	23	3	He	103083.831	367.8503	17848679.73	0.0036	0.4171
Na	23	3	He	99274.409	354.272	17705327.24	0.0036	0.4171
Na	23	3	He	104006.23	371.1382	17840488.48	0.0036	0.4171
Mg	24	3	He	90384.543	163.3104	7924079.88	0.0018	0.004553
Mg	24	3	He	86246.719	155.8342	7788073.63	0.0018	0.004553
Mg	24	3	He	90664.759	163.8167	7874615.51	0.0018	0.004553
Al	27	3	He	265.353	0.1567	7602.24	0.0006	0.002085
Al	27	3	He	257.178	0.1519	7592.21	0.0006	0.002085
Al	27	3	He	238.944	0.1413	6791.85	0.0006	0.002085
K	39	3	He	2168.582	2.9508	143175.53	0.0012	0.4112
K	39	3	He	2087.988	2.8564	142752.20	0.0012	0.4112
K	39	3	He	2241.442	3.0361	145943.53	0.0012	0.4112
Ca	44	3	He	132487.587	8.9538	434453.12	0.0001	0.003322
Ca	44	3	He	130188.35	8.7985	439718.67	0.0001	0.003322
Ca	44	3	He	135224.38	9.1387	439294.41	0.0001	0.003322
Ti	47	3	He	15.113	0.008	390.02	0.0005	0
Ti	47	3	He	12.792	0.0068	340.02	0.0005	0
Ti	47	3	He	8.605	0.0046	220.01	0.0005	0
V	51	3	He	0.779	0.0484	2346.21	0.0213	0.0318
V	51	3	He	0.743	0.0476	2378.21	0.0213	0.0318
V	51	3	He	0.659	0.0458	2202.18	0.0213	0.0318
Cr	52	3	He	0.515	0.0581	2820.37	0.0294	0.04297
Cr	52	3	He	0.369	0.0538	2690.34	0.0294	0.04297
Cr	52	3	He	0.704	0.0637	3060.43	0.0294	0.04297
Mn	55	3	He	26019.348	323.4789	15695706.02	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	24970.727	310.4423	15514864.77	0.0124	0.002801
Mn	55	3	He	26031.946	323.6355	15557051.02	0.0124	0.002801
Fe	57	3	He	1045.601	0.601	29160.17	0.0006	0.002732
Fe	57	3	He	1000.303	0.5751	28739.37	0.0006	0.002732
Fe	57	3	He	1007.751	0.5793	27847.59	0.0006	0.002732
Co	59	3	He	5.55	0.3083	14958.15	0.0549	0.003644
Co	59	3	He	5.182	0.2881	14397.69	0.0549	0.003644
Co	59	3	He	5.216	0.2899	13937.19	0.0549	0.003644
Ni	60	3	He	3.982	0.0511	4190.73	0.0093	0.01413
Ni	60	3	He	4.147	0.0526	4150.76	0.0093	0.01413
Ni	60	3	He	3.489	0.0465	3680.57	0.0093	0.01413
Cu	63	3	He	2.546	0.0791	6491.72	0.0274	0.009321
Cu	63	3	He	2.753	0.0848	6691.84	0.0274	0.009321
Cu	63	3	He	2.73	0.0842	6661.75	0.0274	0.009321
Zn	66	3	He	6.056	0.0245	2010.23	0.0031	0.005913
Zn	66	3	He	6.044	0.0245	1930.20	0.0031	0.005913
Zn	66	3	He	6.307	0.0253	2000.21	0.0031	0.005913
As	75	3	He	0.504	0.002	160.00	0.0021	0.0008698
As	75	3	He	0.788	0.0026	202.00	0.0021	0.0008698
As	75	3	He	0.937	0.0029	228.00	0.0021	0.0008698
Sr	88	3	He	1054.802	9.2818	769080.61	0.0088	0.0006843
Sr	88	3	He	1059.175	9.3203	768527.57	0.0088	0.0006843
Sr	88	3	He	1082.226	9.5231	770201.47	0.0088	0.0006843
Mo	98	3	He	0.511	0.013	1080.08	0.0219	0.001827
Mo	98	3	He	0.469	0.0121	1000.07	0.0219	0.001827
Mo	98	3	He	0.486	0.0125	1010.07	0.0219	0.001827
Ag	107	3	He	-0.01	0.0006	50.00	0.047	0.001064
Ag	107	3	He	0.013	0.0017	140.01	0.047	0.001064
Ag	107	3	He	-0.004	0.0009	70.00	0.047	0.001064
Cd	111	3	He	0.002	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	0.043	0.0003	24.00	0.0053	6.086E-05
Cd	111	3	He	0.03	0.0002	18.00	0.0053	6.086E-05
Sn	120	3	He	-0.085	0.0135	1120.09	0.0154	0.01483
Sn	120	3	He	0.21	0.0181	1490.13	0.0154	0.01483
Sn	120	3	He	-0.08	0.0136	1100.08	0.0154	0.01483
Sb	121	3	He	0.142	0.0023	190.01	0.0143	0.0002661
Sb	121	3	He	0.109	0.0018	150.01	0.0143	0.0002661
Sb	121	3	He	0.094	0.0016	130.00	0.0143	0.0002661
Ba	137	3	He	927.464	4.4324	367268.00	0.0048	0.0002665
Ba	137	3	He	932.484	4.4564	367466.83	0.0048	0.0002665
Ba	137	3	He	933.434	4.461	360791.05	0.0048	0.0002665
Tl	205	3	He	-0.085	0.0007	260.01	0.0246	0.002755
Tl	205	3	He	-0.087	0.0006	240.01	0.0246	0.002755
Tl	205	3	He	-0.079	0.0008	320.02	0.0246	0.002755
Pb	208	3	He	0.737	0.0261	5511.36	0.0324	0.002158
Pb	208	3	He	0.744	0.0263	5471.35	0.0324	0.002158
Pb	208	3	He	0.763	0.0269	5771.42	0.0324	0.002158
U	238	3	He	0.085	0.0046	1340.10	0.0492	0.0004023
U	238	3	He	0.086	0.0047	1370.14	0.0492	0.0004023
U	238	3	He	0.082	0.0045	1310.12	0.0492	0.0004023
Sc	45	1	No Gas			2466801.37		
Sc	45	1	No Gas			2488211.68		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2504175.43		
Ge	72	1	No Gas			1187706.31		
Ge	72	1	No Gas			1185481.47		
Ge	72	1	No Gas			1198127.56		
Sc	45	2	H2			192965.72		
Sc	45	2	H2			196560.19		
Sc	45	2	H2			193774.96		
Ge	72	2	H2			156255.25		
Ge	72	2	H2			155213.30		
Ge	72	2	H2			158044.48		
In	115	2	H2			372373.28		
In	115	2	H2			373600.42		
In	115	2	H2			374571.71		
Sc	45	3	He			48521.58		
Sc	45	3	He			49976.65		
Sc	45	3	He			48069.67		
Ge	72	3	He			82024.57		
Ge	72	3	He			78878.87		
Ge	72	3	He			79128.60		
In	115	3	He			82866.20		
In	115	3	He			82464.37		
In	115	3	He			80884.38		
Tb	159	3	He			386986.36		
Tb	159	3	He			391296.01		
Tb	159	3	He			391840.54		
Bi	209	3	He			291944.51		
Bi	209	3	He			294156.11		
Bi	209	3	He			293858.51		

Quantitation Report

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Sample Name	410-137015-E-3-A
Sample Type	Sample
Comment	T31
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

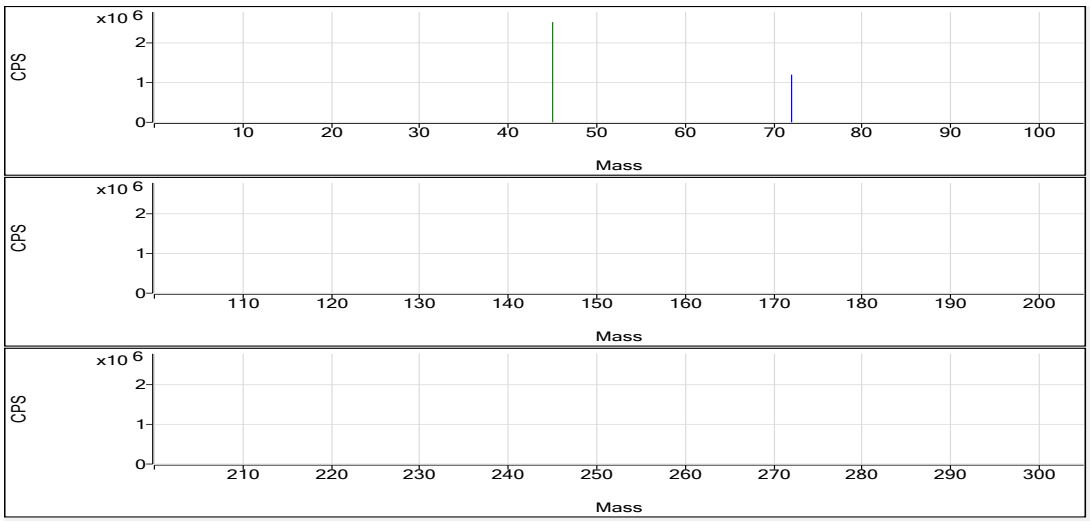
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.007	ppb	111.2	98.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.032	ppb	27.5	8.00	0.0000	Pulse	1.5000	3
Na	23	45	He	85231.301	ppb	2.0	14869248.95	304.2166	Analog	0.1000	3
Mg	24	45	He	55910.531	ppb	1.9	4937828.78	101.0231	Analog	0.1000	3
Al	27	45	He	204.801	ppb	0.7	5934.85	0.1214	Pulse	0.1000	3
K	39	45	He	1802.930	ppb	3.3	123280.43	2.5226	Pulse	0.1000	3
Ca	44	45	He	118455.300	ppb	2.1	391293.01	8.0058	Pulse	0.1000	3
Ti	47	45	He	10.517	ppb	6.3	273.35	0.0056	Pulse	0.1000	3
V	51	45	He	0.625	ppb	7.5	2204.18	0.0451	Pulse	0.5000	3
Cr	52	45	He	4.397	ppb	5.1	8422.74	0.1723	Pulse	0.1000	3
Mn	55	45	He	18736.515	ppb	1.9	11385340.25	232.9377	Analog	0.1000	3
Fe	57	45	He	855.885	ppb	1.2	24070.71	0.4924	Pulse	0.1000	3
Co	59	45	He	3.178	ppb	6.6	8699.62	0.1781	Pulse	0.1000	3
Ni	60	72	He	3.283	ppb	6.7	3617.24	0.0446	Pulse	0.1000	3
Cu	63	72	He	2.176	ppb	4.3	5594.61	0.0690	Pulse	0.1000	3
Zn	66	72	He	10.073	ppb	6.5	2987.07	0.0368	Pulse	0.1000	3
As	75	72	He	0.878	ppb	11.1	223.33	0.0028	Pulse	0.5000	3
Sr	88	115	He	687.613	ppb	0.2	511485.76	6.0509	Pulse	0.1000	3
Mo	98	115	He	0.557	ppb	3.0	1186.76	0.0140	Pulse	0.1000	3
Ag	107	115	He	-0.011	ppb	N/A	46.67	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.017	ppb	30.5	12.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.493	ppb	9.6	1896.86	0.0224	Pulse	0.1000	3
Sb	121	115	He	0.665	ppb	19.7	823.39	0.0097	Pulse	0.1000	3
Ba	137	115	He	448.934	ppb	0.3	181370.88	2.1456	Pulse	0.1000	3
Tl	205	159	He	-0.087	ppb	N/A	246.68	0.0006	Pulse	0.1000	3
Pb	208	159	He	1.381	ppb	0.5	18515.72	0.0469	Pulse	0.1000	3
U	238	209	He	0.027	ppb	22.3	523.37	0.0018	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2524172.36	1.6	96.8	Analog	0.1000	3
No Gas	Ge	72	1200335.50	1.1	93.1	Pulse	0.1000	3
H2	Sc	45	200808.66	0.5	97.4	Pulse	0.1000	3
H2	Ge	72	161888.42	0.7	99.5	Pulse	0.1000	3
H2	In	115	382299.50	0.7	94.7	Pulse	0.1000	3
He	Sc	45	48889.34	2.0	95.5	Pulse	0.1000	3
He	Ge	72	81083.32	0.6	99.0	Pulse	0.1000	3
He	In	115	84530.39	0.2	96.4	Pulse	0.1000	3
He	Tb	159	394646.02	0.2	98.3	Pulse	0.1000	3
He	Bi	209	298006.16	0.5	97.4	Pulse	0.1000	3

No Gas



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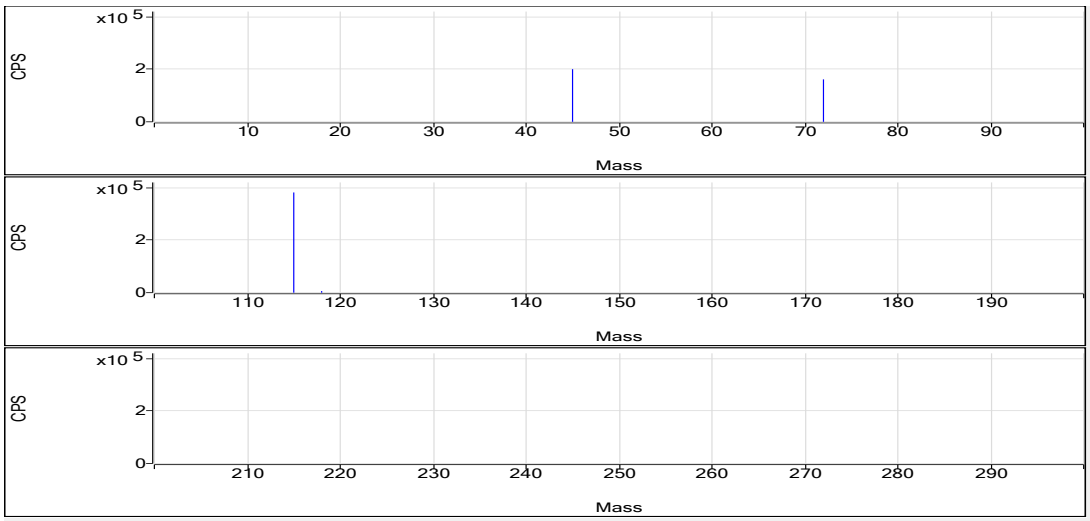
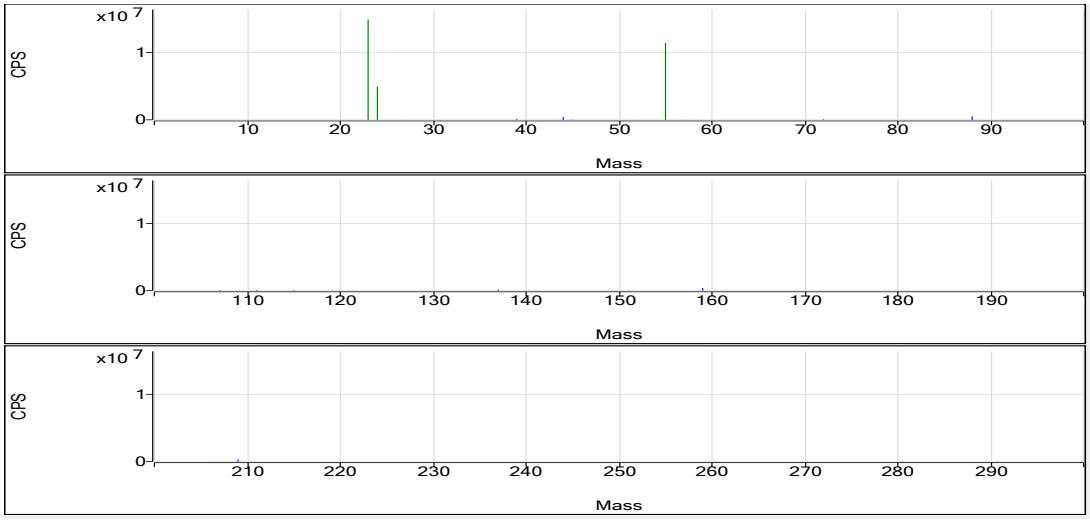


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.001	0	82.00	0.0007	3.404E-05
Be	9	1	No Gas	0.013	0	110.00	0.0007	3.404E-05
Be	9	1	No Gas	0.008	0	102.00	0.0007	3.404E-05
Se	78	2	H2	0.04	0.0001	8.67	0.0004	3.546E-05
Se	78	2	H2	0.023	0	7.33	0.0004	3.546E-05
Se	78	2	H2	0.032	0	8.00	0.0004	3.546E-05
Na	23	3	He	83373.098	297.5932	14881568.53	0.0036	0.4171
Na	23	3	He	86628.007	309.195	14943762.28	0.0036	0.4171
Na	23	3	He	85692.797	305.8615	14782416.03	0.0036	0.4171
Mg	24	3	He	54795.168	99.0079	4951030.86	0.0018	0.004553
Mg	24	3	He	56059.905	101.293	4895612.11	0.0018	0.004553
Mg	24	3	He	56876.52	102.7685	4966843.36	0.0018	0.004553
Al	27	3	He	203.794	0.1208	6041.47	0.0006	0.002085
Al	27	3	He	204.241	0.1211	5851.67	0.0006	0.002085
Al	27	3	He	206.366	0.1223	5911.41	0.0006	0.002085
K	39	3	He	1733.316	2.441	122067.16	0.0012	0.4112
K	39	3	He	1840.834	2.5669	124063.33	0.0012	0.4112
K	39	3	He	1834.64	2.5597	123710.80	0.0012	0.4112
Ca	44	3	He	115625.368	7.8146	390782.57	0.0001	0.003322
Ca	44	3	He	120448.867	8.1405	393440.54	0.0001	0.003322
Ca	44	3	He	119291.665	8.0623	389655.93	0.0001	0.003322
Ti	47	3	He	10.152	0.0054	270.01	0.0005	0
Ti	47	3	He	11.282	0.006	290.02	0.0005	0
Ti	47	3	He	10.115	0.0054	260.01	0.0005	0
V	51	3	He	0.636	0.0453	2266.19	0.0213	0.0318
V	51	3	He	0.665	0.0459	2220.18	0.0213	0.0318
V	51	3	He	0.574	0.044	2126.17	0.0213	0.0318
Cr	52	3	He	4.402	0.1724	8622.87	0.0294	0.04297
Cr	52	3	He	4.619	0.1788	8642.89	0.0294	0.04297
Cr	52	3	He	4.169	0.1656	8002.46	0.0294	0.04297
Mn	55	3	He	18328.766	227.8685	11394888.58	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	18948.933	235.5785	11385789.83	0.0124	0.002801
Mn	55	3	He	18931.847	235.3661	11375342.33	0.0124	0.002801
Fe	57	3	He	844.231	0.4858	24291.09	0.0006	0.002732
Fe	57	3	He	860.621	0.4951	23930.55	0.0006	0.002732
Fe	57	3	He	862.802	0.4964	23990.49	0.0006	0.002732
Co	59	3	He	2.944	0.1652	8262.73	0.0549	0.003644
Co	59	3	He	3.241	0.1815	8772.96	0.0549	0.003644
Co	59	3	He	3.35	0.1875	9063.17	0.0549	0.003644
Ni	60	3	He	3.155	0.0434	3520.55	0.0093	0.01413
Ni	60	3	He	3.537	0.047	3830.63	0.0093	0.01413
Ni	60	3	He	3.158	0.0434	3500.55	0.0093	0.01413
Cu	63	3	He	2.282	0.0719	5831.36	0.0274	0.009321
Cu	63	3	He	2.141	0.0681	5551.23	0.0274	0.009321
Cu	63	3	He	2.104	0.067	5401.24	0.0274	0.009321
Zn	66	3	He	9.32	0.0345	2800.36	0.0031	0.005913
Zn	66	3	He	10.373	0.0378	3080.45	0.0031	0.005913
Zn	66	3	He	10.525	0.0382	3080.41	0.0031	0.005913
As	75	3	He	0.767	0.0025	204.00	0.0021	0.0008698
As	75	3	He	0.92	0.0028	232.00	0.0021	0.0008698
As	75	3	He	0.948	0.0029	234.00	0.0021	0.0008698
Sr	88	3	He	689.311	6.0659	512120.85	0.0088	0.0006843
Sr	88	3	He	686.923	6.0448	512179.13	0.0088	0.0006843
Sr	88	3	He	686.605	6.042	510157.30	0.0088	0.0006843
Mo	98	3	He	0.565	0.0142	1200.10	0.0219	0.001827
Mo	98	3	He	0.568	0.0143	1210.10	0.0219	0.001827
Mo	98	3	He	0.537	0.0136	1150.07	0.0219	0.001827
Ag	107	3	He	-0.013	0.0005	40.00	0.047	0.001064
Ag	107	3	He	-0.013	0.0005	40.00	0.047	0.001064
Ag	107	3	He	-0.008	0.0007	60.00	0.047	0.001064
Cd	111	3	He	0.011	0.0001	10.00	0.0053	6.086E-05
Cd	111	3	He	0.02	0.0002	14.00	0.0053	6.086E-05
Cd	111	3	He	0.02	0.0002	14.00	0.0053	6.086E-05
Sn	120	3	He	0.498	0.0225	1900.19	0.0154	0.01483
Sn	120	3	He	0.538	0.0231	1960.22	0.0154	0.01483
Sn	120	3	He	0.444	0.0217	1830.17	0.0154	0.01483
Sb	121	3	He	0.779	0.0114	960.07	0.0143	0.0002661
Sb	121	3	He	0.694	0.0102	860.05	0.0143	0.0002661
Sb	121	3	He	0.522	0.0077	650.04	0.0143	0.0002661
Ba	137	3	He	450.381	2.1525	181732.69	0.0048	0.0002665
Ba	137	3	He	448.094	2.1416	181459.26	0.0048	0.0002665
Ba	137	3	He	448.327	2.1427	180920.70	0.0048	0.0002665
Tl	205	3	He	-0.084	0.0007	270.01	0.0246	0.002755
Tl	205	3	He	-0.093	0.0005	190.01	0.0246	0.002755
Tl	205	3	He	-0.083	0.0007	280.01	0.0246	0.002755
Pb	208	3	He	1.374	0.0467	9673.91	0.0324	0.002158
Pb	208	3	He	1.388	0.0471	10014.13	0.0324	0.002158
Pb	208	3	He	1.382	0.0469	9573.83	0.0324	0.002158
U	238	3	He	0.02	0.0014	420.02	0.0492	0.0004023
U	238	3	He	0.032	0.002	590.04	0.0492	0.0004023
U	238	3	He	0.03	0.0019	560.04	0.0492	0.0004023
Sc	45	1	No Gas			2481169.96		
Sc	45	1	No Gas			2532575.74		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2558771.37		
Ge	72	1	No Gas			1185852.40		
Ge	72	1	No Gas			1202951.54		
Ge	72	1	No Gas			1212202.56		
Sc	45	2	H2			201618.02		
Sc	45	2	H2			199767.97		
Sc	45	2	H2			201040.00		
Ge	72	2	H2			163211.76		
Ge	72	2	H2			161214.33		
Ge	72	2	H2			161239.17		
In	115	2	H2			383573.47		
In	115	2	H2			384096.75		
In	115	2	H2			379228.28		
Sc	45	3	He			50006.42		
Sc	45	3	He			48331.19		
Sc	45	3	He			48330.42		
Ge	72	3	He			81100.46		
Ge	72	3	He			81572.04		
Ge	72	3	He			80577.45		
In	115	3	He			84436.63		
In	115	3	He			84738.53		
In	115	3	He			84445.66		
Tb	159	3	He			394864.68		
Tb	159	3	He			393661.60		
Tb	159	3	He			395411.79		
Bi	209	3	He			297667.12		
Bi	209	3	He			299505.68		
Bi	209	3	He			296845.68		

Quantitation Report

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Sample Type	Sample
Comment	T31
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

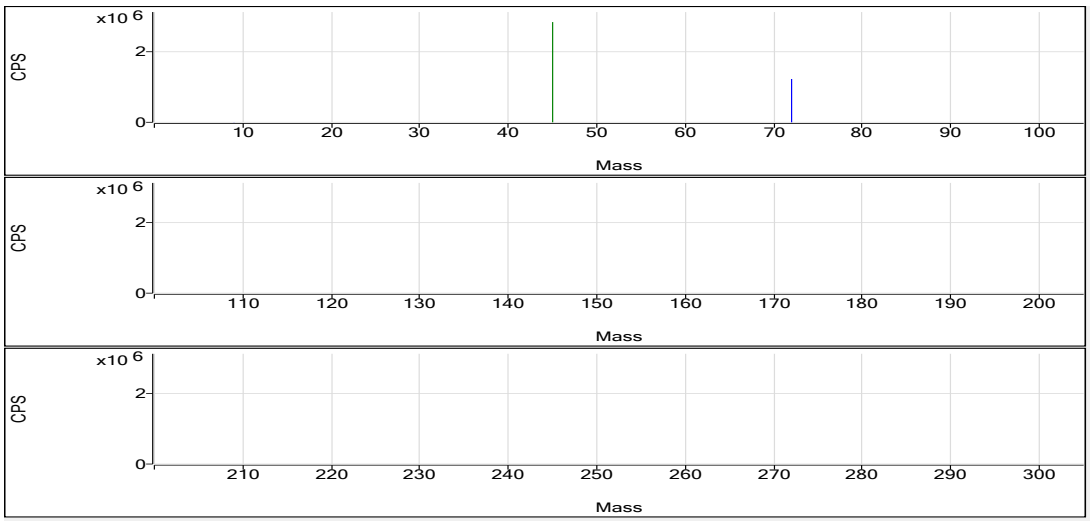
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	1.974	ppb	2.2	4207.95	0.0015	Pulse	0.5000	3
Se	78	72	H2	2.101	ppb	11.1	154.45	0.0010	Pulse	1.5000	3
Na	23	45	He	60891.871	ppb	2.0	10867192.76	217.4608	Analog	0.1000	3
Mg	24	45	He	28058.192	ppb	3.0	2533322.93	50.6998	Analog	0.1000	3
Al	27	45	He	44846.816	ppb	2.7	1305669.41	26.1296	Analog	0.1000	3
K	39	45	He	17887.998	ppb	1.7	1067448.65	21.3594	Pulse	0.1000	3
Ca	44	45	He	136269.212	ppb	3.0	460167.01	9.2093	Pulse	0.1000	3
Ti	47	45	He	574.875	ppb	2.9	15278.54	0.3058	Pulse	0.1000	3
V	51	45	He	59.073	ppb	2.1	64323.87	1.2871	Pulse	0.5000	3
Cr	52	45	He	47.794	ppb	1.8	72394.41	1.4486	Pulse	0.1000	3
Mn	55	45	He	539.415	ppb	1.4	335292.63	6.7089	Pulse	0.1000	3
Fe	57	45	He	23086.736	ppb	1.8	660252.52	13.2118	Pulse	0.1000	3
Co	59	45	He	7.637	ppb	2.2	21132.81	0.4228	Pulse	0.1000	3
Ni	60	72	He	17.299	ppb	1.0	14561.22	0.1747	Pulse	0.1000	3
Cu	63	72	He	31.262	ppb	0.8	72238.56	0.8667	Pulse	0.1000	3
Zn	66	72	He	158.178	ppb	2.2	40969.24	0.4916	Pulse	0.1000	3
As	75	72	He	22.410	ppb	2.1	4080.61	0.0490	Pulse	0.5000	3
Sr	88	115	He	806.242	ppb	0.4	592756.88	7.0947	Pulse	0.1000	3
Mo	98	115	He	23.699	ppb	0.3	43604.93	0.5219	Pulse	0.1000	3
Ag	107	115	He	0.208	ppb	7.4	906.74	0.0109	Pulse	0.1000	3
Cd	111	115	He	1.539	ppb	4.4	690.02	0.0083	Pulse	0.5000	3
Sn	120	115	He	21.940	ppb	1.4	29505.50	0.3532	Pulse	0.1000	3
Sb	121	115	He	0.805	ppb	15.8	980.08	0.0117	Pulse	0.1000	3
Ba	137	115	He	930.882	ppb	0.5	371686.44	4.4488	Pulse	0.1000	3
Tl	205	159	He	0.185	ppb	15.6	2957.09	0.0073	Pulse	0.1000	3
Pb	208	159	He	31.945	ppb	0.5	420242.05	1.0373	Pulse	0.1000	3
U	238	209	He	4.541	ppb	1.6	69498.41	0.2240	Pulse	0.1000	3

ISTD Table:

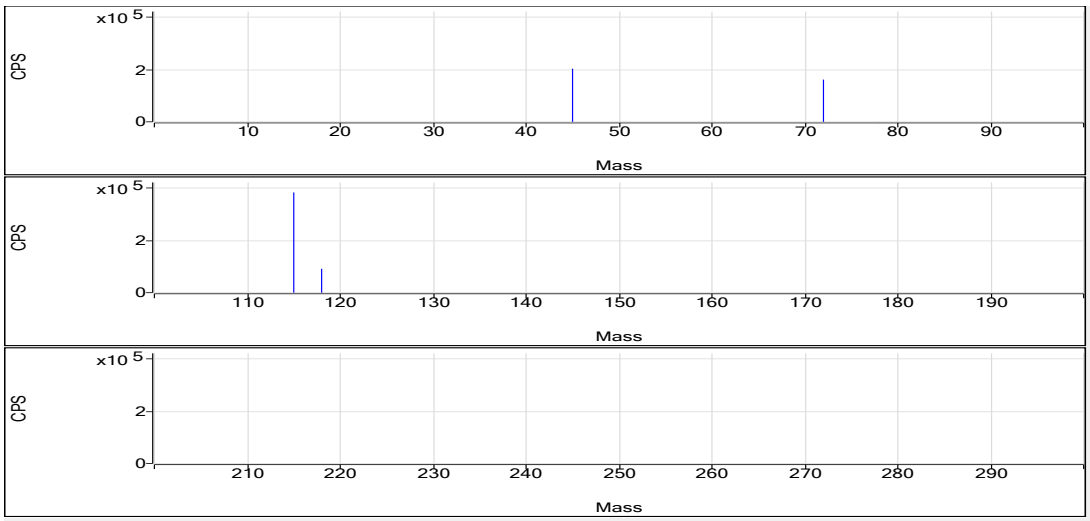
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2859018.71	1.2	109.6	Analog	0.1000	3
No Gas	Ge	72	1235126.49	1.0	95.8	Pulse	0.1000	3
H2	Sc	45	203204.94	1.3	98.6	Pulse	0.1000	3
H2	Ge	72	161540.93	1.7	99.3	Pulse	0.1000	3
H2	In	115	383535.76	0.7	95.0	Pulse	0.1000	3
He	Sc	45	49986.42	2.0	97.6	Pulse	0.1000	3
He	Ge	72	83346.05	0.6	101.8	Pulse	0.1000	3
He	In	115	83548.96	0.3	95.3	Pulse	0.1000	3
He	Tb	159	405129.36	0.5	100.9	Pulse	0.1000	3
He	Bi	209	310257.72	0.8	101.4	Pulse	0.1000	3

No Gas

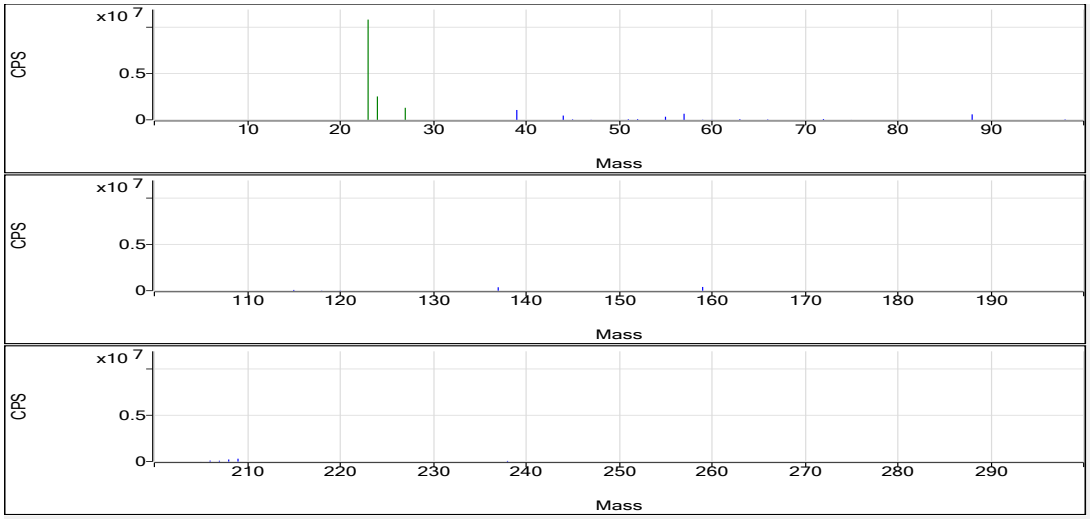


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	1.995	0.0015	4214.63	0.0007	3.404E-05
Be	9	1	No Gas	2.002	0.0015	4244.63	0.0007	3.404E-05
Be	9	1	No Gas	1.925	0.0014	4164.61	0.0007	3.404E-05
Se	78	2	H2	2.315	0.0011	170.67	0.0004	3.546E-05
Se	78	2	H2	2.137	0.001	154.00	0.0004	3.546E-05
Se	78	2	H2	1.852	0.0008	138.67	0.0004	3.546E-05
Na	23	3	He	61055.072	218.0425	10855377.34	0.0036	0.4171
Na	23	3	He	59571.282	212.7537	10861062.34	0.0036	0.4171
Na	23	3	He	62049.258	221.5862	10885138.59	0.0036	0.4171
Mg	24	3	He	28034.843	50.6576	2522020.12	0.0018	0.004553
Mg	24	3	He	27222.329	49.1896	2511125.12	0.0018	0.004553
Mg	24	3	He	28917.403	52.2522	2566823.56	0.0018	0.004553
Al	27	3	He	45129.527	26.2943	1309075.84	0.0006	0.002085
Al	27	3	He	43536.516	25.3662	1294942.40	0.0006	0.002085
Al	27	3	He	45874.405	26.7282	1312989.98	0.0006	0.002085
K	39	3	He	18001.856	21.4927	1070027.95	0.0012	0.4112
K	39	3	He	17542.428	20.9547	1069735.92	0.0012	0.4112
K	39	3	He	18119.708	21.6307	1062582.09	0.0012	0.4112
Ca	44	3	He	135948.922	9.1877	457412.69	0.0001	0.003322
Ca	44	3	He	132406.085	8.9483	456810.50	0.0001	0.003322
Ca	44	3	He	140452.628	9.4919	466277.84	0.0001	0.003322
Ti	47	3	He	568.692	0.3025	15058.42	0.0005	0
Ti	47	3	He	562.344	0.2991	15268.48	0.0005	0
Ti	47	3	He	593.59	0.3157	15508.72	0.0005	0
V	51	3	He	58.802	1.2814	63794.95	0.0213	0.0318
V	51	3	He	58.012	1.2646	64558.18	0.0213	0.0318
V	51	3	He	60.403	1.3154	64618.47	0.0213	0.0318
Cr	52	3	He	48.303	1.4636	72863.82	0.0294	0.04297
Cr	52	3	He	46.822	1.42	72490.77	0.0294	0.04297
Cr	52	3	He	48.257	1.4622	71828.64	0.0294	0.04297
Mn	55	3	He	542.475	6.7469	335899.92	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	530.789	6.6016	337013.51	0.0124	0.002801
Mn	55	3	He	544.981	6.7781	332964.45	0.0124	0.002801
Fe	57	3	He	23179.095	13.2647	660389.44	0.0006	0.002732
Fe	57	3	He	22621.461	12.9456	660872.96	0.0006	0.002732
Fe	57	3	He	23459.65	13.4252	659495.15	0.0006	0.002732
Co	59	3	He	7.83	0.4334	21576.86	0.0549	0.003644
Co	59	3	He	7.534	0.4172	21296.33	0.0549	0.003644
Co	59	3	He	7.546	0.4178	20525.25	0.0549	0.003644
Ni	60	3	He	17.262	0.1744	14578.05	0.0093	0.01413
Ni	60	3	He	17.145	0.1733	14497.76	0.0093	0.01413
Ni	60	3	He	17.49	0.1765	14607.84	0.0093	0.01413
Cu	63	3	He	31.074	0.8616	72030.65	0.0274	0.009321
Cu	63	3	He	31.542	0.8744	73156.66	0.0274	0.009321
Cu	63	3	He	31.17	0.8642	71528.37	0.0274	0.009321
Zn	66	3	He	154.353	0.4798	40116.56	0.0031	0.005913
Zn	66	3	He	158.965	0.494	41330.46	0.0031	0.005913
Zn	66	3	He	161.217	0.5009	41460.69	0.0031	0.005913
As	75	3	He	22.91	0.05	4182.64	0.0021	0.0008698
As	75	3	He	22.347	0.0488	4084.61	0.0021	0.0008698
As	75	3	He	21.974	0.048	3974.59	0.0021	0.0008698
Sr	88	3	He	802.662	7.0632	591006.79	0.0088	0.0006843
Sr	88	3	He	806.676	7.0985	591034.83	0.0088	0.0006843
Sr	88	3	He	809.39	7.1224	596229.01	0.0088	0.0006843
Mo	98	3	He	23.649	0.5208	43577.81	0.0219	0.001827
Mo	98	3	He	23.794	0.524	43628.33	0.0219	0.001827
Mo	98	3	He	23.655	0.5209	43608.65	0.0219	0.001827
Ag	107	3	He	0.191	0.01	840.06	0.047	0.001064
Ag	107	3	He	0.22	0.0114	950.08	0.047	0.001064
Ag	107	3	He	0.214	0.0111	930.08	0.047	0.001064
Cd	111	3	He	1.479	0.0079	664.02	0.0053	6.086E-05
Cd	111	3	He	1.527	0.0082	682.02	0.0053	6.086E-05
Cd	111	3	He	1.613	0.0086	724.02	0.0053	6.086E-05
Sn	120	3	He	21.584	0.3477	29091.29	0.0154	0.01483
Sn	120	3	He	22.149	0.3564	29672.72	0.0154	0.01483
Sn	120	3	He	22.086	0.3554	29752.48	0.0154	0.01483
Sb	121	3	He	0.669	0.0098	820.06	0.0143	0.0002661
Sb	121	3	He	0.824	0.012	1000.08	0.0143	0.0002661
Sb	121	3	He	0.92	0.0134	1120.10	0.0143	0.0002661
Ba	137	3	He	926.304	4.4269	370415.11	0.0048	0.0002665
Ba	137	3	He	936.124	4.4738	372496.67	0.0048	0.0002665
Ba	137	3	He	930.217	4.4456	372147.53	0.0048	0.0002665
Tl	205	3	He	0.153	0.0065	2640.34	0.0246	0.002755
Tl	205	3	He	0.192	0.0075	3040.46	0.0246	0.002755
Tl	205	3	He	0.21	0.0079	3190.47	0.0246	0.002755
Pb	208	3	He	32.138	1.0436	225696.70	0.0324	0.002158
Pb	208	3	He	31.856	1.0344	225807.81	0.0324	0.002158
Pb	208	3	He	31.84	1.0339	222025.15	0.0324	0.002158
U	238	3	He	4.458	0.2199	68864.91	0.0492	0.0004023
U	238	3	He	4.581	0.226	69970.23	0.0492	0.0004023
U	238	3	He	4.583	0.2261	69660.08	0.0492	0.0004023
Sc	45	1	No Gas			2833696.21		
Sc	45	1	No Gas			2844161.52		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2899198.39		
Ge	72	1	No Gas			1230990.76		
Ge	72	1	No Gas			1224960.92		
Ge	72	1	No Gas			1249427.79		
Sc	45	2	H2			204894.25		
Sc	45	2	H2			200262.13		
Sc	45	2	H2			204458.45		
Ge	72	2	H2			162535.14		
Ge	72	2	H2			158398.43		
Ge	72	2	H2			163689.23		
In	115	2	H2			384075.97		
In	115	2	H2			380494.33		
In	115	2	H2			386036.99		
Sc	45	3	He			49785.60		
Sc	45	3	He			51049.94		
Sc	45	3	He			49123.72		
Ge	72	3	He			83604.01		
Ge	72	3	He			83664.58		
Ge	72	3	He			82769.57		
In	115	3	He			83832.63		
In	115	3	He			83410.14		
In	115	3	He			83863.17		
Tb	159	3	He			404708.63		
Tb	159	3	He			407224.41		
Tb	159	3	He			403455.03		
Bi	209	3	He			313115.80		
Bi	209	3	He			309590.23		
Bi	209	3	He			308067.12		

Quantitation Report

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Sample Type	Sample
Comment	T31
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

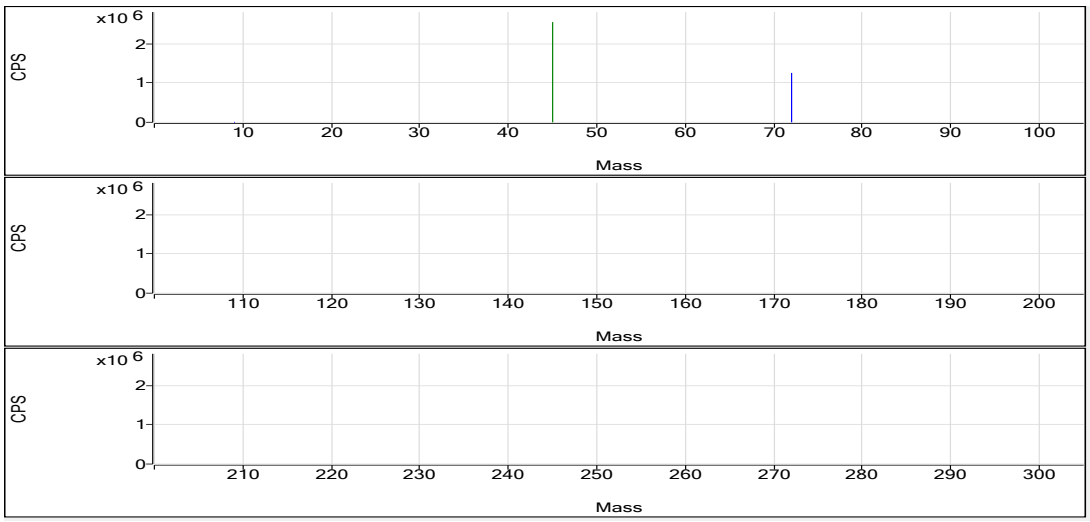
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.039	ppb	N/A	14.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.023	ppb	N/A	4.22	0.0000	Pulse	1.5000	3
Na	23	45	He	52.928	ppb	10.2	30425.34	0.6057	Pulse	0.1000	3
Mg	24	45	He	14.009	ppb	3.5	1500.12	0.0299	Pulse	0.1000	3
Al	27	45	He	40.868	ppb	11.2	1300.10	0.0259	Pulse	0.1000	3
K	39	45	He	4.687	ppb	139.6	20932.27	0.4167	Pulse	0.1000	3
Ca	44	45	He	55.000	ppb	19.0	353.35	0.0070	Pulse	0.1000	3
Ti	47	45	He	0.996	ppb	42.6	26.67	0.0005	Pulse	0.1000	3
V	51	45	He	-0.079	ppb	N/A	1513.42	0.0301	Pulse	0.5000	3
Cr	52	45	He	0.381	ppb	60.0	2720.36	0.0542	Pulse	0.1000	3
Mn	55	45	He	2.455	ppb	11.0	1673.49	0.0333	Pulse	0.1000	3
Fe	57	45	He	39.516	ppb	3.9	1273.44	0.0253	Pulse	0.1000	3
Co	59	45	He	-0.012	ppb	N/A	150.01	0.0030	Pulse	0.1000	3
Ni	60	72	He	-1.069	ppb	N/A	353.35	0.0042	Pulse	0.1000	3
Cu	63	72	He	0.052	ppb	95.3	903.40	0.0107	Pulse	0.1000	3
Zn	66	72	He	-0.610	ppb	N/A	340.02	0.0040	Pulse	0.1000	3
As	75	72	He	-0.048	ppb	N/A	64.67	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.130	ppb	17.8	160.01	0.0018	Pulse	0.1000	3
Mo	98	115	He	0.002	ppb	219.2	163.34	0.0019	Pulse	0.1000	3
Ag	107	115	He	-0.009	ppb	N/A	56.67	0.0006	Pulse	0.1000	3
Cd	111	115	He	-0.007	ppb	N/A	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.135	ppb	75.5	1480.13	0.0169	Pulse	0.1000	3
Sb	121	115	He	0.005	ppb	299.9	30.00	0.0003	Pulse	0.1000	3
Ba	137	115	He	0.645	ppb	24.7	293.35	0.0034	Pulse	0.1000	3
Tl	205	159	He	-0.092	ppb	N/A	203.34	0.0005	Pulse	0.1000	3
Pb	208	159	He	0.095	ppb	16.9	2096.82	0.0052	Pulse	0.1000	3
U	238	209	He	0.001	ppb	137.7	136.68	0.0004	Pulse	0.1000	3

ISTD Table:

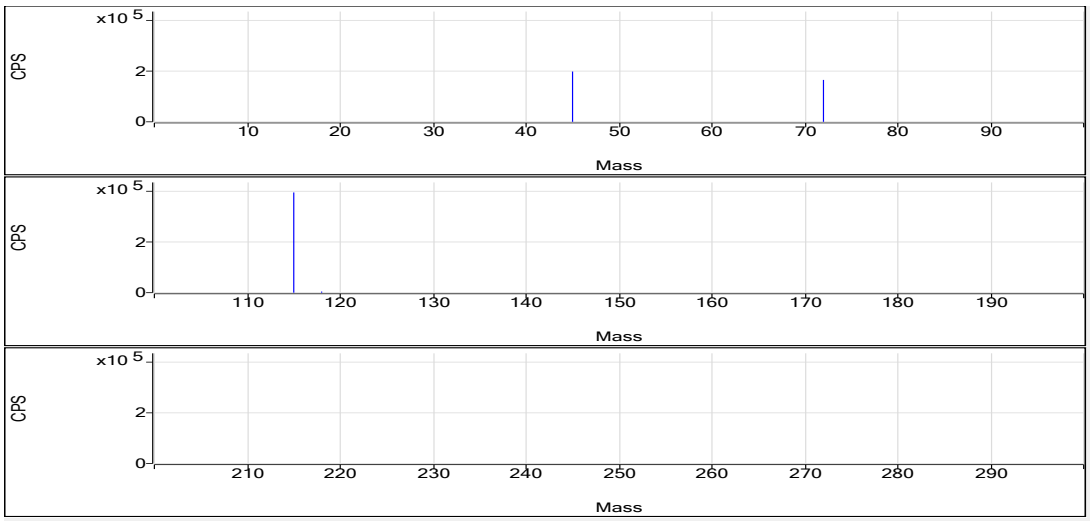
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2558529.34	0.3	98.1	Analog	0.1000	3
No Gas	Ge	72	1260631.39	0.6	97.8	Pulse	0.1000	3
H2	Sc	45	198464.41	0.6	96.3	Pulse	0.1000	3
H2	Ge	72	165324.84	1.0	101.6	Pulse	0.1000	3
H2	In	115	395504.54	0.7	98.0	Pulse	0.1000	3
He	Sc	45	50240.74	1.0	98.1	Pulse	0.1000	3
He	Ge	72	84144.26	1.0	102.8	Pulse	0.1000	3
He	In	115	87500.35	1.3	99.8	Pulse	0.1000	3
He	Tb	159	400782.72	0.7	99.8	Pulse	0.1000	3
He	Bi	209	314279.16	1.1	102.7	Pulse	0.1000	3

No Gas

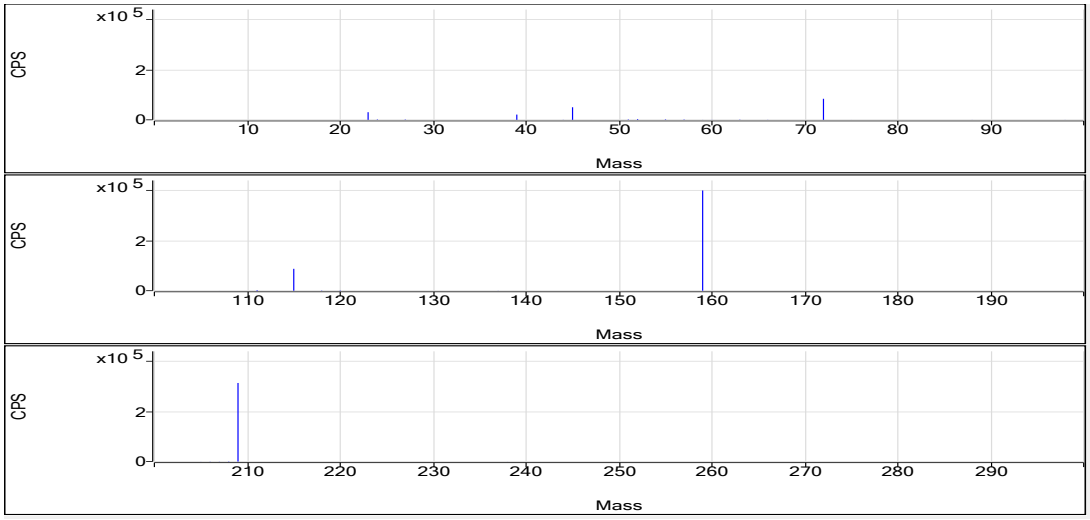


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.04	0	12.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.036	0	20.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.041	0	10.00	0.0007	3.404E-05
Se	78	2	H2	-0.026	0	4.00	0.0004	3.546E-05
Se	78	2	H2	-0.044	0	2.67	0.0004	3.546E-05
Se	78	2	H2	0.002	0	6.00	0.0004	3.546E-05
Na	23	3	He	58.924	0.6271	31163.49	0.0036	0.4171
Na	23	3	He	51.363	0.6001	30251.61	0.0036	0.4171
Na	23	3	He	48.497	0.5899	29860.93	0.0036	0.4171
Mg	24	3	He	14.521	0.0308	1530.13	0.0018	0.004553
Mg	24	3	He	13.951	0.0298	1500.12	0.0018	0.004553
Mg	24	3	He	13.554	0.029	1470.11	0.0018	0.004553
Al	27	3	He	46.163	0.029	1440.12	0.0006	0.002085
Al	27	3	He	37.968	0.0242	1220.09	0.0006	0.002085
Al	27	3	He	38.473	0.0245	1240.10	0.0006	0.002085
K	39	3	He	11.195	0.4243	21085.67	0.0012	0.4112
K	39	3	He	-1.894	0.409	20615.24	0.0012	0.4112
K	39	3	He	4.761	0.4168	21095.90	0.0012	0.4112
Ca	44	3	He	67	0.0078	390.02	0.0001	0.003322
Ca	44	3	He	47.74	0.0065	330.02	0.0001	0.003322
Ca	44	3	He	50.261	0.0067	340.02	0.0001	0.003322
Ti	47	3	He	0.757	0.0004	20.00	0.0005	0
Ti	47	3	He	0.746	0.0004	20.00	0.0005	0
Ti	47	3	He	1.486	0.0008	40.00	0.0005	0
V	51	3	He	-0.027	0.0312	1552.09	0.0213	0.0318
V	51	3	He	-0.111	0.0294	1484.08	0.0213	0.0318
V	51	3	He	-0.098	0.0297	1504.08	0.0213	0.0318
Cr	52	3	He	0.455	0.0564	2800.37	0.0294	0.04297
Cr	52	3	He	0.563	0.0595	3000.43	0.0294	0.04297
Cr	52	3	He	0.124	0.0466	2360.28	0.0294	0.04297
Mn	55	3	He	2.608	0.0352	1750.17	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2.615	0.0353	1780.17	0.0124	0.002801
Mn	55	3	He	2.143	0.0294	1490.14	0.0124	0.002801
Fe	57	3	He	37.785	0.0244	1210.11	0.0006	0.002732
Fe	57	3	He	39.957	0.0256	1290.11	0.0006	0.002732
Fe	57	3	He	40.807	0.0261	1320.11	0.0006	0.002732
Co	59	3	He	-0.026	0.0022	110.00	0.0549	0.003644
Co	59	3	He	-0.001	0.0036	180.01	0.0549	0.003644
Co	59	3	He	-0.009	0.0032	160.01	0.0549	0.003644
Ni	60	3	He	-1.001	0.0048	410.02	0.0093	0.01413
Ni	60	3	He	-1.056	0.0043	360.02	0.0093	0.01413
Ni	60	3	He	-1.152	0.0034	290.01	0.0093	0.01413
Cu	63	3	He	0.008	0.0095	810.06	0.0274	0.009321
Cu	63	3	He	0.041	0.0105	870.05	0.0274	0.009321
Cu	63	3	He	0.105	0.0122	1030.08	0.0274	0.009321
Zn	66	3	He	-0.39	0.0047	400.02	0.0031	0.005913
Zn	66	3	He	-0.556	0.0042	350.02	0.0031	0.005913
Zn	66	3	He	-0.884	0.0032	270.01	0.0031	0.005913
As	75	3	He	0.056	0.001	84.00	0.0021	0.0008698
As	75	3	He	-0.08	0.0007	58.00	0.0021	0.0008698
As	75	3	He	-0.118	0.0006	52.00	0.0021	0.0008698
Sr	88	3	He	0.104	0.0016	140.01	0.0088	0.0006843
Sr	88	3	He	0.141	0.0019	170.01	0.0088	0.0006843
Sr	88	3	He	0.146	0.002	170.01	0.0088	0.0006843
Mo	98	3	He	0	0.0018	160.01	0.0219	0.001827
Mo	98	3	He	-0.001	0.0018	160.01	0.0219	0.001827
Mo	98	3	He	0.007	0.002	170.01	0.0219	0.001827
Ag	107	3	He	-0.008	0.0007	60.00	0.047	0.001064
Ag	107	3	He	-0.008	0.0007	60.00	0.047	0.001064
Ag	107	3	He	-0.01	0.0006	50.00	0.047	0.001064
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Sn	120	3	He	0.051	0.0156	1370.12	0.0154	0.01483
Sn	120	3	He	0.248	0.0187	1650.14	0.0154	0.01483
Sn	120	3	He	0.106	0.0165	1420.14	0.0154	0.01483
Sb	121	3	He	0.005	0.0003	30.00	0.0143	0.0002661
Sb	121	3	He	0.021	0.0006	50.00	0.0143	0.0002661
Sb	121	3	He	-0.011	0.0001	10.00	0.0143	0.0002661
Ba	137	3	He	0.827	0.0042	370.02	0.0048	0.0002665
Ba	137	3	He	0.583	0.0031	270.01	0.0048	0.0002665
Ba	137	3	He	0.526	0.0028	240.01	0.0048	0.0002665
Tl	205	3	He	-0.087	0.0006	250.01	0.0246	0.002755
Tl	205	3	He	-0.091	0.0005	210.01	0.0246	0.002755
Tl	205	3	He	-0.097	0.0004	150.01	0.0246	0.002755
Pb	208	3	He	0.11	0.0057	1200.11	0.0324	0.002158
Pb	208	3	He	0.078	0.0047	910.07	0.0324	0.002158
Pb	208	3	He	0.096	0.0053	1170.10	0.0324	0.002158
U	238	3	He	0	0.0004	120.01	0.0492	0.0004023
U	238	3	He	0.001	0.0005	150.01	0.0492	0.0004023
U	238	3	He	0.001	0.0004	140.01	0.0492	0.0004023
Sc	45	1	No Gas			2567395.27		
Sc	45	1	No Gas			2556657.62		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2551535.12		
Ge	72	1	No Gas			1267320.37		
Ge	72	1	No Gas			1252789.75		
Ge	72	1	No Gas			1261784.04		
Sc	45	2	H2			198497.50		
Sc	45	2	H2			199622.73		
Sc	45	2	H2			197272.99		
Ge	72	2	H2			167271.91		
Ge	72	2	H2			163973.04		
Ge	72	2	H2			164729.57		
In	115	2	H2			395216.48		
In	115	2	H2			398569.92		
In	115	2	H2			392727.22		
Sc	45	3	He			49695.64		
Sc	45	3	He			50407.92		
Sc	45	3	He			50618.65		
Ge	72	3	He			84831.83		
Ge	72	3	He			83202.35		
Ge	72	3	He			84398.61		
In	115	3	He			87766.55		
In	115	3	He			88480.71		
In	115	3	He			86277.59		
Tb	159	3	He			397662.81		
Tb	159	3	He			402320.58		
Tb	159	3	He			402364.76		
Bi	209	3	He			310198.63		
Bi	209	3	He			315816.52		
Bi	209	3	He			316822.32		

Quantitation Report

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Sample Name	410-136892-Q-4-A
Sample Type	Sample
Comment	T31
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

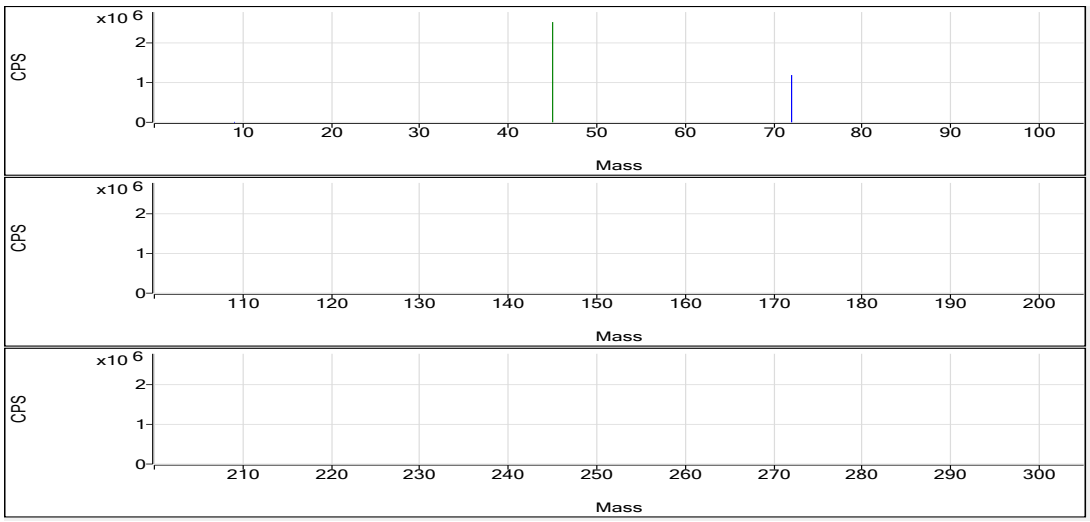
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.037	ppb	N/A	18.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.055	ppb	72.5	9.78	0.0001	Pulse	1.5000	3
Na	23	45	He	678884.177	ppb	1.2	121897191.52	2 420.2402	Analog	0.1000	3
Mg	24	45	He	36463.524	ppb	2.6	3317847.34	65.8865	Analog	0.1000	3
Al	27	45	He	16.631	ppb	7.6	593.37	0.0118	Pulse	0.1000	3
K	39	45	He	2707.467	ppb	3.6	180357.89	3.5818	Pulse	0.1000	3
Ca	44	45	He	178196.690	ppb	1.9	606431.35	12.0418	Pulse	0.1000	3
Ti	47	45	He	1.113	ppb	65.3	30.00	0.0006	Pulse	0.1000	3
V	51	45	He	-0.116	ppb	N/A	1477.42	0.0293	Pulse	0.5000	3
Cr	52	45	He	0.335	ppb	11.4	2660.33	0.0528	Pulse	0.1000	3
Mn	55	45	He	34.104	ppb	2.7	21493.33	0.4268	Pulse	0.1000	3
Fe	57	45	He	33.090	ppb	11.0	1090.08	0.0217	Pulse	0.1000	3
Co	59	45	He	0.037	ppb	19.0	286.68	0.0057	Pulse	0.1000	3
Ni	60	72	He	-0.029	ppb	N/A	1146.76	0.0139	Pulse	0.1000	3
Cu	63	72	He	1.630	ppb	3.5	4470.86	0.0540	Pulse	0.1000	3
Zn	66	72	He	1.263	ppb	12.6	810.05	0.0098	Pulse	0.1000	3
As	75	72	He	0.286	ppb	19.3	122.67	0.0015	Pulse	0.5000	3
Sr	88	115	He	6175.549	ppb	1.3	4750802.11	54.3387	Analog	0.1000	3
Mo	98	115	He	1.683	ppb	7.3	3387.21	0.0387	Pulse	0.1000	3
Ag	107	115	He	0.003	ppb	184.1	106.67	0.0012	Pulse	0.1000	3
Cd	111	115	He	-0.003	ppb	N/A	4.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.225	ppb	38.5	1600.15	0.0183	Pulse	0.1000	3
Sb	121	115	He	0.078	ppb	21.3	120.01	0.0014	Pulse	0.1000	3
Ba	137	115	He	505.798	ppb	0.5	211352.89	2.4174	Pulse	0.1000	3
Tl	205	159	He	-0.080	ppb	N/A	316.68	0.0008	Pulse	0.1000	3
Pb	208	159	He	0.025	ppb	14.1	1190.07	0.0030	Pulse	0.1000	3
U	238	209	He	1.040	ppb	1.0	15196.13	0.0516	Pulse	0.1000	3

ISTD Table:

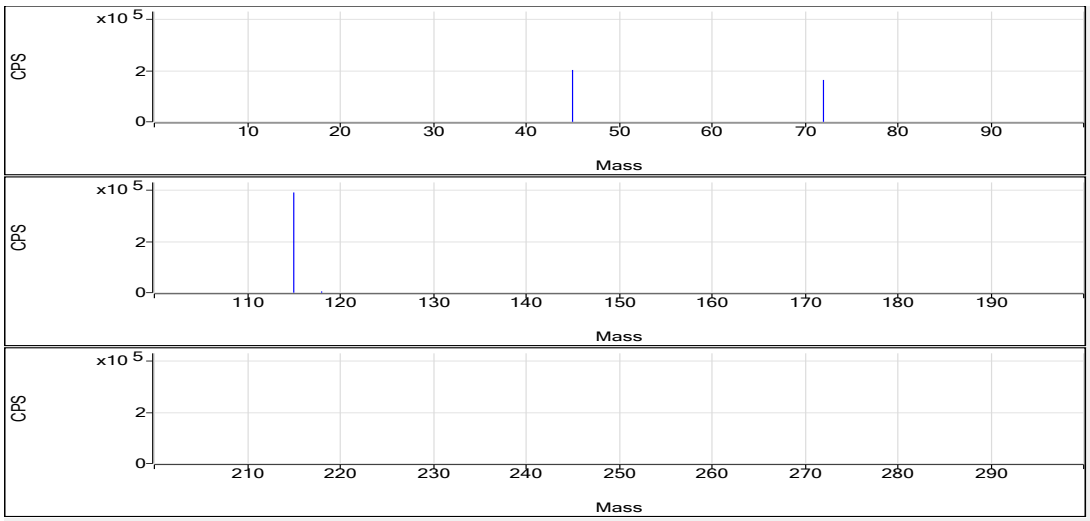
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2534075.74	1.8	97.2	Analog	0.1000	3
No Gas	Ge	72	1194584.44	1.3	92.7	Pulse	0.1000	3
H2	Sc	45	202319.35	1.3	98.2	Pulse	0.1000	3
H2	Ge	72	163417.98	1.4	100.4	Pulse	0.1000	3
H2	In	115	391058.16	1.5	96.9	Pulse	0.1000	3
He	Sc	45	50371.32	1.7	98.4	Pulse	0.1000	3
He	Ge	72	82756.18	0.7	101.1	Pulse	0.1000	3
He	In	115	87431.95	0.5	99.8	Pulse	0.1000	3
He	Tb	159	398986.87	0.6	99.3	Pulse	0.1000	3
He	Bi	209	294382.06	0.6	96.2	Pulse	0.1000	3

No Gas

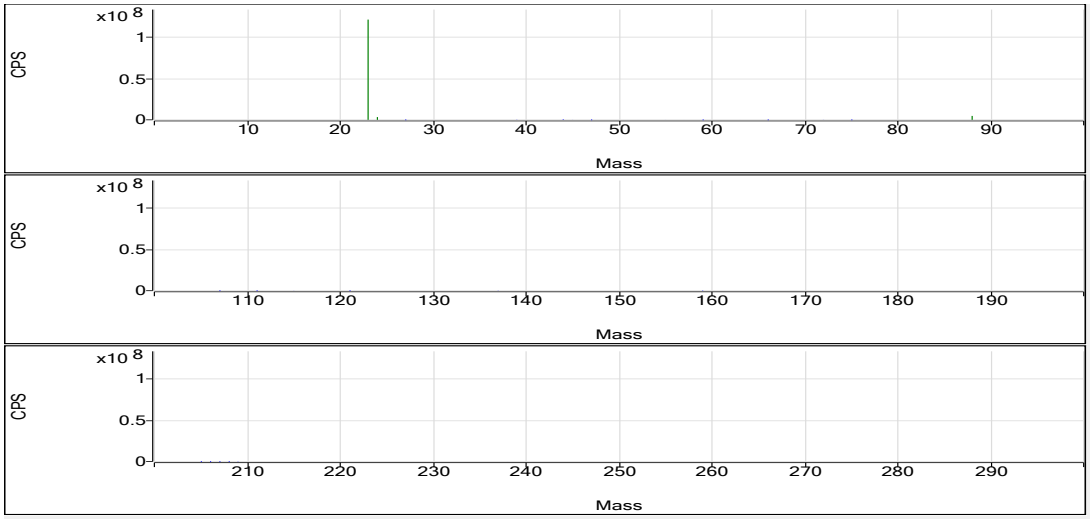


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.038	0	16.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.039	0	14.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.033	0	24.00	0.0007	3.404E-05
Se	78	2	H2	0.059	0.0001	10.00	0.0004	3.546E-05
Se	78	2	H2	0.014	0	6.67	0.0004	3.546E-05
Se	78	2	H2	0.094	0.0001	12.67	0.0004	3.546E-05
Na	23	3	He	687889.1	2452.3375	122042488.18	0.0036	0.4171
Na	23	3	He	676704.911	2412.4724	120592018.20	0.0036	0.4171
Na	23	3	He	672058.519	2395.9108	123057068.17	0.0036	0.4171
Mg	24	3	He	37319.19	67.4325	3355830.26	0.0018	0.004553
Mg	24	3	He	36607.832	66.1472	3306494.01	0.0018	0.004553
Mg	24	3	He	35463.55	64.0797	3291217.76	0.0018	0.004553
Al	27	3	He	16.773	0.0119	590.04	0.0006	0.002085
Al	27	3	He	15.309	0.011	550.03	0.0006	0.002085
Al	27	3	He	17.812	0.0125	640.05	0.0006	0.002085
K	39	3	He	2790.9	3.6795	183115.21	0.0012	0.4112
K	39	3	He	2729.595	3.6077	180340.13	0.0012	0.4112
K	39	3	He	2601.905	3.4582	177618.32	0.0012	0.4112
Ca	44	3	He	180535.115	12.1998	607131.01	0.0001	0.003322
Ca	44	3	He	179670.1	12.1413	606907.49	0.0001	0.003322
Ca	44	3	He	174384.855	11.7843	605255.54	0.0001	0.003322
Ti	47	3	He	1.133	0.0006	30.00	0.0005	0
Ti	47	3	He	0.376	0.0002	10.00	0.0005	0
Ti	47	3	He	1.831	0.001	50.01	0.0005	0
V	51	3	He	-0.067	0.0304	1512.09	0.0213	0.0318
V	51	3	He	-0.201	0.0275	1376.07	0.0213	0.0318
V	51	3	He	-0.082	0.0301	1544.09	0.0213	0.0318
Cr	52	3	He	0.37	0.0539	2680.32	0.0294	0.04297
Cr	52	3	He	0.294	0.0516	2580.32	0.0294	0.04297
Cr	52	3	He	0.34	0.053	2720.35	0.0294	0.04297
Mn	55	3	He	35.184	0.4402	21907.29	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	33.593	0.4204	21015.96	0.0124	0.002801
Mn	55	3	He	33.535	0.4197	21556.74	0.0124	0.002801
Fe	57	3	He	34.914	0.0227	1130.09	0.0006	0.002732
Fe	57	3	He	35.438	0.023	1150.08	0.0006	0.002732
Fe	57	3	He	28.917	0.0193	990.07	0.0006	0.002732
Co	59	3	He	0.04	0.0058	290.01	0.0549	0.003644
Co	59	3	He	0.043	0.006	300.01	0.0549	0.003644
Co	59	3	He	0.029	0.0053	270.01	0.0549	0.003644
Ni	60	3	He	-0.068	0.0135	1120.08	0.0093	0.01413
Ni	60	3	He	-0.033	0.0138	1150.10	0.0093	0.01413
Ni	60	3	He	0.014	0.0143	1170.10	0.0093	0.01413
Cu	63	3	He	1.694	0.0558	4630.92	0.0274	0.009321
Cu	63	3	He	1.607	0.0534	4440.87	0.0274	0.009321
Cu	63	3	He	1.589	0.0529	4340.78	0.0274	0.009321
Zn	66	3	He	1.174	0.0095	790.05	0.0031	0.005913
Zn	66	3	He	1.167	0.0095	790.05	0.0031	0.005913
Zn	66	3	He	1.447	0.0104	850.06	0.0031	0.005913
As	75	3	He	0.235	0.0014	114.00	0.0021	0.0008698
As	75	3	He	0.278	0.0015	122.00	0.0021	0.0008698
As	75	3	He	0.344	0.0016	132.00	0.0021	0.0008698
Sr	88	3	He	6148.229	54.0983	4755711.49	0.0088	0.0006843
Sr	88	3	He	6115.363	53.8091	4701535.55	0.0088	0.0006843
Sr	88	3	He	6263.056	55.1087	4795159.30	0.0088	0.0006843
Mo	98	3	He	1.581	0.0365	3210.50	0.0219	0.001827
Mo	98	3	He	1.649	0.038	3320.52	0.0219	0.001827
Mo	98	3	He	1.818	0.0417	3630.61	0.0219	0.001827
Ag	107	3	He	0.004	0.0013	110.01	0.047	0.001064
Ag	107	3	He	0.009	0.0015	130.01	0.047	0.001064
Ag	107	3	He	-0.003	0.0009	80.00	0.047	0.001064
Cd	111	3	He	0.001	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Sn	120	3	He	0.322	0.0198	1740.18	0.0154	0.01483
Sn	120	3	He	0.196	0.0179	1560.13	0.0154	0.01483
Sn	120	3	He	0.156	0.0172	1500.14	0.0154	0.01483
Sb	121	3	He	0.061	0.0011	100.00	0.0143	0.0002661
Sb	121	3	He	0.078	0.0014	120.01	0.0143	0.0002661
Sb	121	3	He	0.094	0.0016	140.01	0.0143	0.0002661
Ba	137	3	He	503.935	2.4085	211725.74	0.0048	0.0002665
Ba	137	3	He	505.072	2.4139	210913.61	0.0048	0.0002665
Ba	137	3	He	508.387	2.4297	211419.31	0.0048	0.0002665
Tl	205	3	He	-0.076	0.0009	360.02	0.0246	0.002755
Tl	205	3	He	-0.083	0.0007	290.02	0.0246	0.002755
Tl	205	3	He	-0.081	0.0008	300.01	0.0246	0.002755
Pb	208	3	He	0.028	0.0031	690.05	0.0324	0.002158
Pb	208	3	He	0.027	0.003	550.03	0.0324	0.002158
Pb	208	3	He	0.021	0.0029	580.03	0.0324	0.002158
U	238	3	He	1.047	0.052	15399.76	0.0492	0.0004023
U	238	3	He	1.045	0.0519	15229.53	0.0492	0.0004023
U	238	3	He	1.028	0.051	14959.09	0.0492	0.0004023
Sc	45	1	No Gas			2579896.52		
Sc	45	1	No Gas			2532848.09		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2489482.62		
Ge	72	1	No Gas			1206398.50		
Ge	72	1	No Gas			1200340.69		
Ge	72	1	No Gas			1177014.12		
Sc	45	2	H2			202027.01		
Sc	45	2	H2			199794.78		
Sc	45	2	H2			205136.27		
Ge	72	2	H2			163495.23		
Ge	72	2	H2			161048.10		
Ge	72	2	H2			165710.60		
In	115	2	H2			387748.16		
In	115	2	H2			387579.56		
In	115	2	H2			397846.75		
Sc	45	3	He			49765.78		
Sc	45	3	He			49986.90		
Sc	45	3	He			51361.29		
Ge	72	3	He			83000.89		
Ge	72	3	He			83192.11		
Ge	72	3	He			82075.55		
In	115	3	He			87917.67		
In	115	3	He			87383.21		
In	115	3	He			87021.56		
Tb	159	3	He			400007.73		
Tb	159	3	He			400696.91		
Tb	159	3	He			396255.97		
Bi	209	3	He			296243.41		
Bi	209	3	He			293613.06		
Bi	209	3	He			293289.72		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

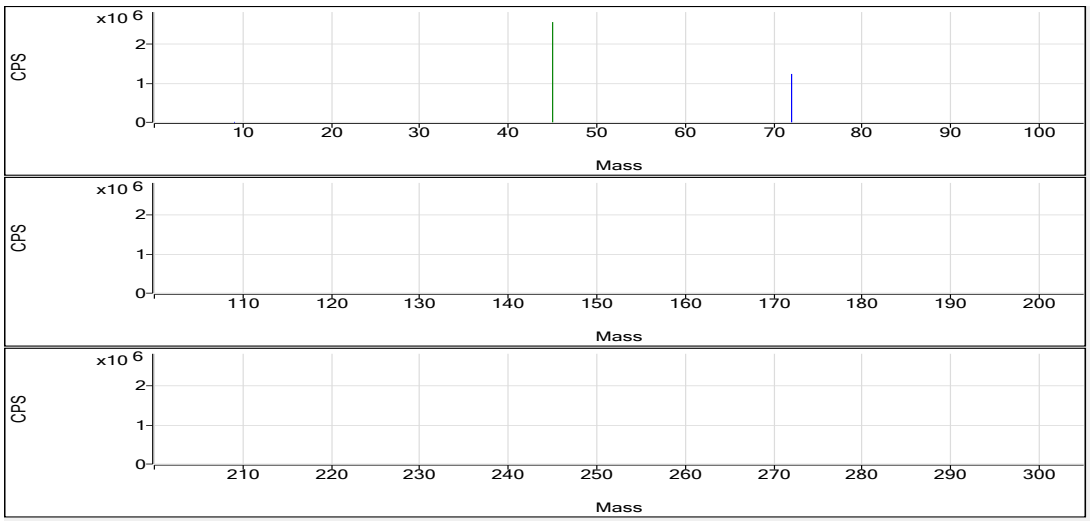
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.039	ppb	N/A	14.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.025	ppb	N/A	4.00	0.0000	Pulse	1.5000	3
Na	23	45	He	152.938	ppb	15.8	49534.16	0.9622	Pulse	0.1000	3
Mg	24	45	He	6.947	ppb	35.0	880.06	0.0171	Pulse	0.1000	3
Al	27	45	He	-1.579	ppb	N/A	60.00	0.0012	Pulse	0.1000	3
K	39	45	He	-3.687	ppb	N/A	20952.14	0.4069	Pulse	0.1000	3
Ca	44	45	He	33.386	ppb	87.5	286.68	0.0056	Pulse	0.1000	3
Ti	47	45	He	0.123	ppb	173.2	3.33	0.0001	Pulse	0.1000	3
V	51	45	He	-0.081	ppb	N/A	1548.76	0.0301	Pulse	0.5000	3
Cr	52	45	He	-0.092	ppb	N/A	2073.55	0.0403	Pulse	0.1000	3
Mn	55	45	He	0.633	ppb	23.9	550.03	0.0107	Pulse	0.1000	3
Fe	57	45	He	-1.382	ppb	N/A	100.00	0.0019	Pulse	0.1000	3
Co	59	45	He	-0.020	ppb	N/A	130.01	0.0025	Pulse	0.1000	3
Ni	60	72	He	-1.126	ppb	N/A	306.68	0.0037	Pulse	0.1000	3
Cu	63	72	He	-0.068	ppb	N/A	623.37	0.0075	Pulse	0.1000	3
Zn	66	72	He	0.207	ppb	141.7	546.70	0.0065	Pulse	0.1000	3
As	75	72	He	0.023	ppb	199.2	76.67	0.0009	Pulse	0.5000	3
Sr	88	115	He	1.082	ppb	26.7	906.73	0.0102	Pulse	0.1000	3
Mo	98	115	He	-0.051	ppb	N/A	63.33	0.0007	Pulse	0.1000	3
Ag	107	115	He	-0.008	ppb	N/A	60.00	0.0007	Pulse	0.1000	3
Cd	111	115	He	-0.007	ppb	N/A	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.110	ppb	66.4	1470.13	0.0165	Pulse	0.1000	3
Sb	121	115	He	0.023	ppb	140.8	53.33	0.0006	Pulse	0.1000	3
Ba	137	115	He	0.164	ppb	36.1	93.34	0.0010	Pulse	0.1000	3
Tl	205	159	He	-0.091	ppb	N/A	210.01	0.0005	Pulse	0.1000	3
Pb	208	159	He	-0.006	ppb	N/A	803.38	0.0020	Pulse	0.1000	3
U	238	209	He	-0.005	ppb	N/A	53.33	0.0002	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2562272.83	2.2	98.2	Analog	0.1000	3
No Gas	Ge	72	1236043.65	0.8	95.9	Pulse	0.1000	3
H2	Sc	45	203944.95	0.3	99.0	Pulse	0.1000	3
H2	Ge	72	163722.28	0.7	100.6	Pulse	0.1000	3
H2	In	115	402848.31	0.6	99.8	Pulse	0.1000	3
He	Sc	45	51505.35	0.9	100.6	Pulse	0.1000	3
He	Ge	72	83614.74	2.1	102.1	Pulse	0.1000	3
He	In	115	88930.49	0.5	101.5	Pulse	0.1000	3
He	Tb	159	406845.23	1.1	101.3	Pulse	0.1000	3
He	Bi	209	314017.00	0.9	102.6	Pulse	0.1000	3

No Gas



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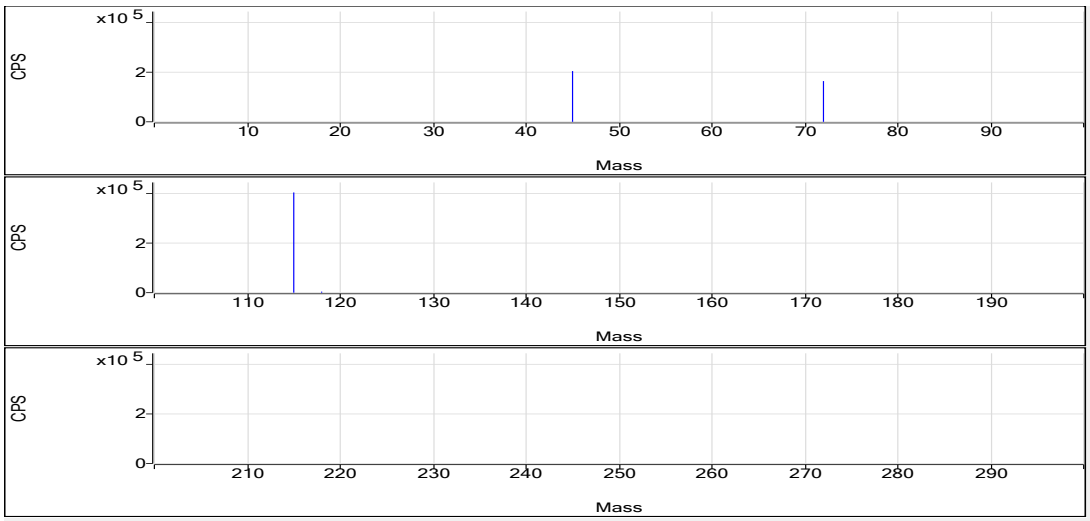
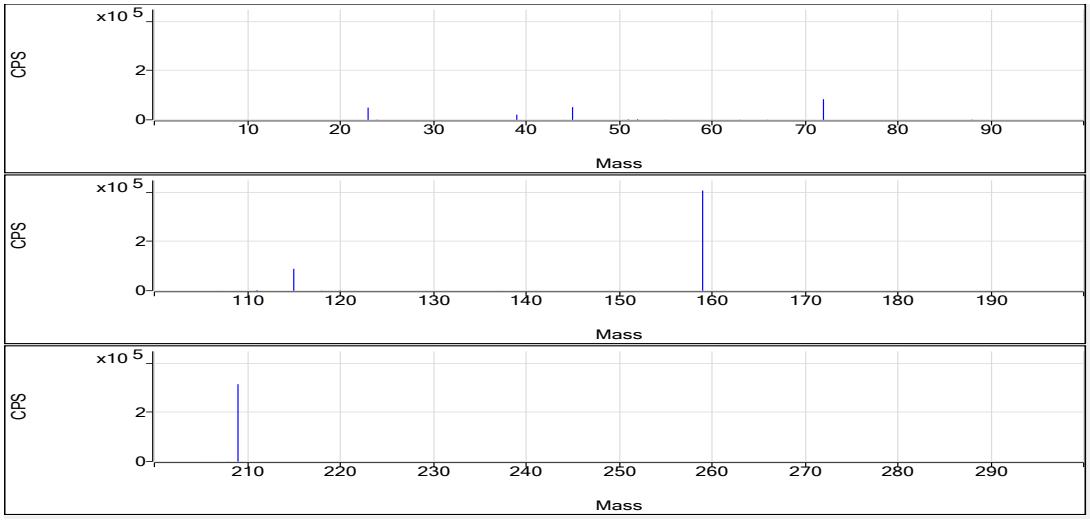


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.04	0	12.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.034	0	24.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.044	0	6.00	0.0007	3.404E-05
Se	78	2	H2	-0.053	0	2.00	0.0004	3.546E-05
Se	78	2	H2	0.003	0	6.00	0.0004	3.546E-05
Se	78	2	H2	-0.026	0	4.00	0.0004	3.546E-05
Na	23	3	He	180.272	1.0596	54019.57	0.0036	0.4171
Na	23	3	He	143.8	0.9296	48269.37	0.0036	0.4171
Na	23	3	He	134.743	0.8973	46313.55	0.0036	0.4171
Mg	24	3	He	9.423	0.0216	1100.10	0.0018	0.004553
Mg	24	3	He	6.861	0.0169	880.05	0.0018	0.004553
Mg	24	3	He	4.558	0.0128	660.04	0.0018	0.004553
Al	27	3	He	-1.895	0.001	50.00	0.0006	0.002085
Al	27	3	He	-1.925	0.001	50.00	0.0006	0.002085
Al	27	3	He	-0.918	0.0016	80.00	0.0006	0.002085
K	39	3	He	8.441	0.4211	21466.26	0.0012	0.4112
K	39	3	He	-10.116	0.3993	20735.20	0.0012	0.4112
K	39	3	He	-9.385	0.4002	20654.96	0.0012	0.4112
Ca	44	3	He	66.98	0.0078	400.03	0.0001	0.003322
Ca	44	3	He	19.251	0.0046	240.01	0.0001	0.003322
Ca	44	3	He	13.928	0.0043	220.01	0.0001	0.003322
Ti	47	3	He	0.369	0.0002	10.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	-0.054	0.0306	1562.10	0.0213	0.0318
V	51	3	He	-0.146	0.0287	1490.09	0.0213	0.0318
V	51	3	He	-0.043	0.0309	1594.10	0.0213	0.0318
Cr	52	3	He	-0.034	0.042	2140.23	0.0294	0.04297
Cr	52	3	He	-0.217	0.0366	1900.18	0.0294	0.04297
Cr	52	3	He	-0.025	0.0422	2180.25	0.0294	0.04297
Mn	55	3	He	0.469	0.0086	440.02	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.766	0.0123	640.04	0.0124	0.002801
Mn	55	3	He	0.663	0.011	570.03	0.0124	0.002801
Fe	57	3	He	-1.689	0.0018	90.00	0.0006	0.002732
Fe	57	3	He	-1.745	0.0017	90.00	0.0006	0.002732
Fe	57	3	He	-0.711	0.0023	120.00	0.0006	0.002732
Co	59	3	He	-0.002	0.0035	180.01	0.0549	0.003644
Co	59	3	He	-0.031	0.0019	100.00	0.0549	0.003644
Co	59	3	He	-0.028	0.0021	110.01	0.0549	0.003644
Ni	60	3	He	-1.118	0.0038	320.02	0.0093	0.01413
Ni	60	3	He	-1.2	0.003	250.01	0.0093	0.01413
Ni	60	3	He	-1.061	0.0043	350.02	0.0093	0.01413
Cu	63	3	He	-0.101	0.0066	560.03	0.0274	0.009321
Cu	63	3	He	-0.052	0.0079	660.03	0.0274	0.009321
Cu	63	3	He	-0.05	0.0079	650.04	0.0274	0.009321
Zn	66	3	He	-0.132	0.0055	470.02	0.0031	0.005913
Zn	66	3	He	0.37	0.007	590.04	0.0031	0.005913
Zn	66	3	He	0.384	0.0071	580.03	0.0031	0.005913
As	75	3	He	-0.012	0.0008	72.00	0.0021	0.0008698
As	75	3	He	0.007	0.0009	74.00	0.0021	0.0008698
As	75	3	He	0.073	0.001	84.00	0.0021	0.0008698
Sr	88	3	He	1.411	0.0131	1160.10	0.0088	0.0006843
Sr	88	3	He	0.869	0.0083	740.04	0.0088	0.0006843
Sr	88	3	He	0.965	0.0092	820.05	0.0088	0.0006843
Mo	98	3	He	-0.058	0.0006	50.00	0.0219	0.001827
Mo	98	3	He	-0.052	0.0007	60.00	0.0219	0.001827
Mo	98	3	He	-0.042	0.0009	80.00	0.0219	0.001827
Ag	107	3	He	-0.008	0.0007	60.00	0.047	0.001064
Ag	107	3	He	-0.006	0.0008	70.00	0.047	0.001064
Ag	107	3	He	-0.011	0.0006	50.00	0.047	0.001064
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Sn	120	3	He	0.027	0.0152	1350.12	0.0154	0.01483
Sn	120	3	He	0.14	0.017	1510.13	0.0154	0.01483
Sn	120	3	He	0.163	0.0173	1550.13	0.0154	0.01483
Sb	121	3	He	0.061	0.0011	100.00	0.0143	0.0002661
Sb	121	3	He	-0.003	0.0002	20.00	0.0143	0.0002661
Sb	121	3	He	0.013	0.0004	40.00	0.0143	0.0002661
Ba	137	3	He	0.11	0.0008	70.00	0.0048	0.0002665
Ba	137	3	He	0.227	0.0014	120.01	0.0048	0.0002665
Ba	137	3	He	0.155	0.001	90.00	0.0048	0.0002665
Tl	205	3	He	-0.092	0.0005	200.01	0.0246	0.002755
Tl	205	3	He	-0.091	0.0005	210.01	0.0246	0.002755
Tl	205	3	He	-0.09	0.0005	220.01	0.0246	0.002755
Pb	208	3	He	-0.016	0.0016	420.03	0.0324	0.002158
Pb	208	3	He	-0.001	0.0021	510.03	0.0324	0.002158
Pb	208	3	He	0.001	0.0022	510.02	0.0324	0.002158
U	238	3	He	-0.004	0.0002	70.00	0.0492	0.0004023
U	238	3	He	-0.006	0.0001	40.00	0.0492	0.0004023
U	238	3	He	-0.005	0.0002	50.00	0.0492	0.0004023
Sc	45	1	No Gas			2555905.43		
Sc	45	1	No Gas			2509103.40		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2621809.65		
Ge	72	1	No Gas			1235139.90		
Ge	72	1	No Gas			1226315.14		
Ge	72	1	No Gas			1246675.92		
Sc	45	2	H2			204195.23		
Sc	45	2	H2			203211.31		
Sc	45	2	H2			204428.32		
Ge	72	2	H2			163324.82		
Ge	72	2	H2			162788.66		
Ge	72	2	H2			165053.36		
In	115	2	H2			405466.01		
In	115	2	H2			402356.24		
In	115	2	H2			400722.69		
Sc	45	3	He			50980.14		
Sc	45	3	He			51923.74		
Sc	45	3	He			51612.16		
Ge	72	3	He			85335.24		
Ge	72	3	He			83725.30		
Ge	72	3	He			81783.68		
In	115	3	He			88582.91		
In	115	3	He			88853.95		
In	115	3	He			89377.46		
Tb	159	3	He			411861.20		
Tb	159	3	He			404637.26		
Tb	159	3	He			404037.22		
Bi	209	3	He			312866.64		
Bi	209	3	He			317127.96		
Bi	209	3	He			312056.40		

Quantitation Report

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Sample Type	CCV
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Auto Dilution	1.0000
Total Dilution	1.0000
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Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

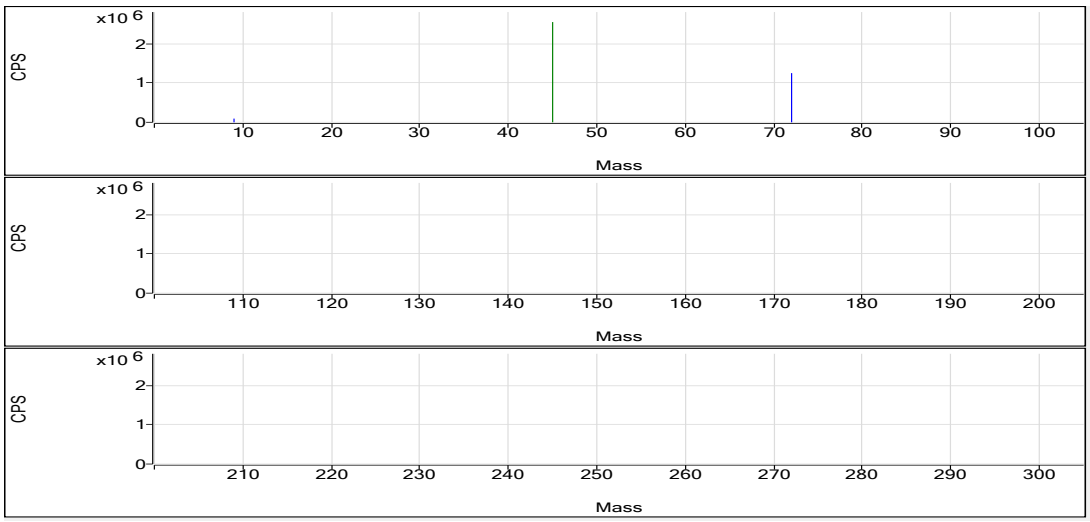
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.470	ppb	1.5	93981.09	0.0368	Pulse	0.5000	3
Se	78	72	H2	50.972	ppb	1.2	3697.82	0.0224	Pulse	1.5000	3
Na	23	45	He	4894.754	ppb	2.7	912383.68	17.8640	Pulse	0.1000	3
Mg	24	45	He	5087.838	ppb	2.9	469703.34	9.1972	Pulse	0.1000	3
Al	27	45	He	5093.704	ppb	2.8	151667.96	2.9696	Pulse	0.1000	3
K	39	45	He	5120.138	ppb	3.0	327229.98	6.4073	Pulse	0.1000	3
Ca	44	45	He	5070.088	ppb	4.3	17664.51	0.3458	Pulse	0.1000	3
Ti	47	45	He	5051.924	ppb	2.9	137222.93	2.6869	Pulse	0.1000	3
V	51	45	He	514.368	ppb	2.6	559901.62	10.9626	Pulse	0.5000	3
Cr	52	45	He	491.557	ppb	2.9	740513.69	14.4997	Pulse	0.1000	3
Mn	55	45	He	518.080	ppb	3.4	329049.16	6.4436	Pulse	0.1000	3
Fe	57	45	He	5136.087	ppb	2.8	150221.56	2.9413	Pulse	0.1000	3
Co	59	45	He	495.203	ppb	2.8	1388346.49	27.1841	Pulse	0.1000	3
Ni	60	72	He	507.812	ppb	0.5	394045.36	4.7281	Pulse	0.1000	3
Cu	63	72	He	483.192	ppb	0.1	1105234.33	13.2613	Pulse	0.1000	3
Zn	66	72	He	507.414	ppb	1.2	130333.82	1.5639	Pulse	0.1000	3
As	75	72	He	519.986	ppb	0.5	93061.13	1.1166	Pulse	0.5000	3
Sr	88	115	He	52.247	ppb	1.1	40512.42	0.4604	Pulse	0.1000	3
Mo	98	115	He	51.245	ppb	1.3	99118.79	1.1264	Pulse	0.1000	3
Ag	107	115	He	50.375	ppb	0.5	208610.33	2.3707	Pulse	0.1000	3
Cd	111	115	He	51.784	ppb	2.2	24270.42	0.2758	Pulse	0.5000	3
Sn	120	115	He	52.772	ppb	1.2	72912.17	0.8286	Pulse	0.1000	3
Sb	121	115	He	53.120	ppb	1.4	66630.82	0.7572	Pulse	0.1000	3
Ba	137	115	He	524.140	ppb	0.4	220432.58	2.5050	Pulse	0.1000	3
Tl	205	159	He	50.956	ppb	0.6	510292.26	1.2542	Pulse	0.1000	3
Pb	208	159	He	51.464	ppb	0.2	679359.19	1.6698	Pulse	0.1000	3
U	238	209	He	49.951	ppb	1.6	780501.24	2.4604	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2553826.26	0.9	97.9	Analog	0.1000	3
No Gas	Ge	72	1252852.93	0.6	97.2	Pulse	0.1000	3
H2	Sc	45	204187.59	0.9	99.1	Pulse	0.1000	3
H2	Ge	72	165248.61	0.0	101.5	Pulse	0.1000	3
H2	In	115	403006.30	0.3	99.8	Pulse	0.1000	3
He	Sc	45	51100.50	3.0	99.8	Pulse	0.1000	3
He	Ge	72	83342.91	0.5	101.8	Pulse	0.1000	3
He	In	115	87997.50	0.7	100.4	Pulse	0.1000	3
He	Tb	159	406852.08	0.3	101.3	Pulse	0.1000	3
He	Bi	209	317256.14	0.9	103.6	Pulse	0.1000	3

No Gas



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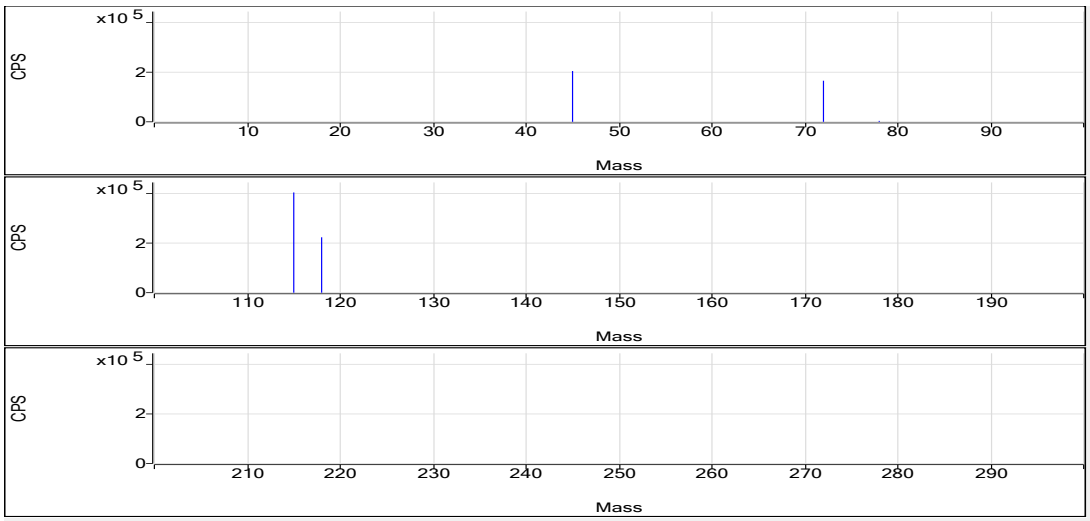
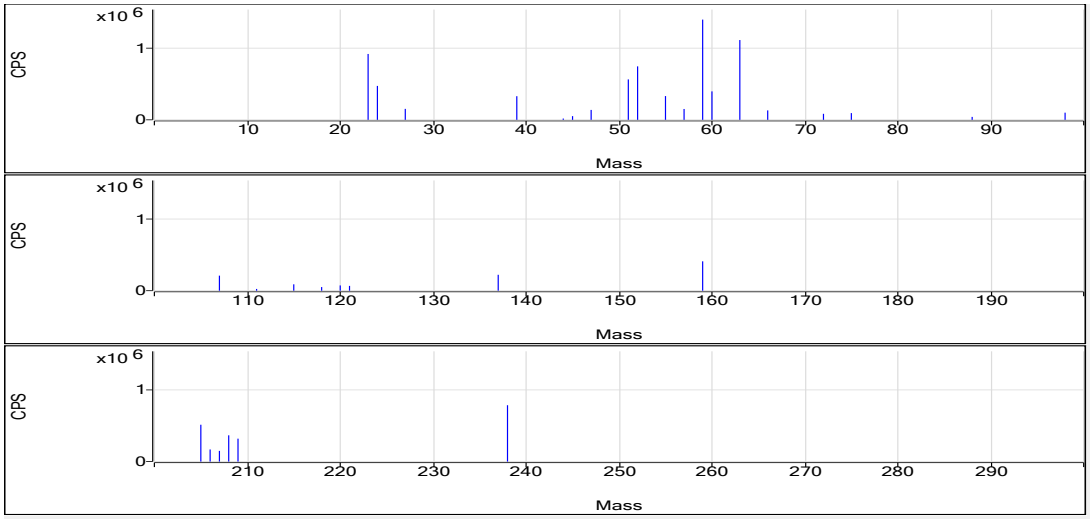


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	49.568	0.0361	93177.23	0.0007	3.404E-05
Be	9	1	No Gas	50.879	0.0371	94022.96	0.0007	3.404E-05
Be	9	1	No Gas	50.963	0.0372	94743.07	0.0007	3.404E-05
Se	78	2	H2	50.312	0.0221	3649.14	0.0004	3.546E-05
Se	78	2	H2	51.154	0.0225	3712.49	0.0004	3.546E-05
Se	78	2	H2	51.449	0.0226	3731.83	0.0004	3.546E-05
Na	23	3	He	4751.421	17.3531	914964.36	0.0036	0.4171
Na	23	3	He	4927.487	17.9807	915747.41	0.0036	0.4171
Na	23	3	He	5005.356	18.2582	906439.28	0.0036	0.4171
Mg	24	3	He	4934.384	8.9199	470316.16	0.0018	0.004553
Mg	24	3	He	5095.8	9.2116	469142.69	0.0018	0.004553
Mg	24	3	He	5233.331	9.4601	469651.16	0.0018	0.004553
Al	27	3	He	4969.192	2.8971	152753.74	0.0006	0.002085
Al	27	3	He	5061.999	2.9512	150302.09	0.0006	0.002085
Al	27	3	He	5249.923	3.0607	151948.06	0.0006	0.002085
K	39	3	He	4958.321	6.2178	327839.41	0.0012	0.4112
K	39	3	He	5141.39	6.4321	327586.44	0.0012	0.4112
K	39	3	He	5260.703	6.5719	326264.08	0.0012	0.4112
Ca	44	3	He	4858.371	0.3315	17480.88	0.0001	0.003322
Ca	44	3	He	5293.43	0.3609	18382.08	0.0001	0.003322
Ca	44	3	He	5058.462	0.3451	17130.57	0.0001	0.003322
Ti	47	3	He	4912.367	2.6127	137757.97	0.0005	0
Ti	47	3	He	5034.626	2.6777	136375.33	0.0005	0
Ti	47	3	He	5208.779	2.7703	137535.48	0.0005	0
V	51	3	He	500.048	10.6583	561971.06	0.0213	0.0318
V	51	3	He	516.667	11.0114	560807.75	0.0213	0.0318
V	51	3	He	526.39	11.218	556926.06	0.0213	0.0318
Cr	52	3	He	477.659	14.091	742964.91	0.0294	0.04297
Cr	52	3	He	490.872	14.4796	737438.82	0.0294	0.04297
Cr	52	3	He	506.139	14.9286	741137.33	0.0294	0.04297
Mn	55	3	He	499.946	6.2182	327862.46	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	519.441	6.4606	329034.10	0.0124	0.002801
Mn	55	3	He	534.854	6.6522	330250.93	0.0124	0.002801
Fe	57	3	He	5001.71	2.8645	151032.69	0.0006	0.002732
Fe	57	3	He	5120.463	2.9324	149346.39	0.0006	0.002732
Fe	57	3	He	5286.087	3.0272	150285.59	0.0006	0.002732
Co	59	3	He	481.584	26.4365	1393902.17	0.0549	0.003644
Co	59	3	He	494.987	27.1722	1383868.73	0.0549	0.003644
Co	59	3	He	509.038	27.9435	1387268.57	0.0549	0.003644
Ni	60	3	He	506.594	4.7168	394439.80	0.0093	0.01413
Ni	60	3	He	506.367	4.7147	393929.60	0.0093	0.01413
Ni	60	3	He	510.476	4.7528	393766.67	0.0093	0.01413
Cu	63	3	He	482.47	13.2416	1107326.00	0.0274	0.009321
Cu	63	3	He	483.27	13.2635	1108220.22	0.0274	0.009321
Cu	63	3	He	483.835	13.279	1100156.78	0.0274	0.009321
Zn	66	3	He	501.52	1.5458	129266.55	0.0031	0.005913
Zn	66	3	He	506.949	1.5625	130549.94	0.0031	0.005913
Zn	66	3	He	513.775	1.5834	131184.97	0.0031	0.005913
As	75	3	He	519.606	1.1158	93309.38	0.0021	0.0008698
As	75	3	He	517.655	1.1116	92880.63	0.0021	0.0008698
As	75	3	He	522.697	1.1224	92993.40	0.0021	0.0008698
Sr	88	3	He	52.469	0.4624	40820.13	0.0088	0.0006843
Sr	88	3	He	51.575	0.4545	40177.82	0.0088	0.0006843
Sr	88	3	He	52.697	0.4644	40539.31	0.0088	0.0006843
Mo	98	3	He	50.482	1.1097	97970.19	0.0219	0.001827
Mo	98	3	He	51.601	1.1342	100267.02	0.0219	0.001827
Mo	98	3	He	51.653	1.1354	99119.15	0.0219	0.001827
Ag	107	3	He	50.186	2.3618	208516.17	0.047	0.001064
Ag	107	3	He	50.294	2.3668	209235.80	0.047	0.001064
Ag	107	3	He	50.647	2.3834	208079.02	0.047	0.001064
Cd	111	3	He	51.763	0.2757	24343.22	0.0053	6.086E-05
Cd	111	3	He	50.666	0.2699	23858.39	0.0053	6.086E-05
Cd	111	3	He	52.921	0.2819	24609.66	0.0053	6.086E-05
Sn	120	3	He	52.165	0.8193	72329.99	0.0154	0.01483
Sn	120	3	He	52.685	0.8273	73132.78	0.0154	0.01483
Sn	120	3	He	53.467	0.8393	73273.75	0.0154	0.01483
Sb	121	3	He	52.878	0.7538	66550.55	0.0143	0.0002661
Sb	121	3	He	52.522	0.7487	66188.77	0.0143	0.0002661
Sb	121	3	He	53.96	0.7692	67153.13	0.0143	0.0002661
Ba	137	3	He	523.845	2.5036	221039.29	0.0048	0.0002665
Ba	137	3	He	522.299	2.4962	220673.88	0.0048	0.0002665
Ba	137	3	He	526.277	2.5152	219584.57	0.0048	0.0002665
Tl	205	3	He	51.306	1.2629	513972.02	0.0246	0.002755
Tl	205	3	He	50.855	1.2518	507816.01	0.0246	0.002755
Tl	205	3	He	50.706	1.2481	509088.74	0.0246	0.002755
Pb	208	3	He	51.365	1.6666	364027.46	0.0324	0.002158
Pb	208	3	He	51.576	1.6734	360505.07	0.0324	0.002158
Pb	208	3	He	51.45	1.6694	366367.18	0.0324	0.002158
U	238	3	He	50.898	2.507	787369.21	0.0492	0.0004023
U	238	3	He	49.423	2.4344	774491.94	0.0492	0.0004023
U	238	3	He	49.533	2.4398	779642.57	0.0492	0.0004023
Sc	45	1	No Gas			2577795.74		
Sc	45	1	No Gas			2534235.74		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2549447.31		
Ge	72	1	No Gas			1245195.92		
Ge	72	1	No Gas			1253696.47		
Ge	72	1	No Gas			1259666.39		
Sc	45	2	H2			205806.38		
Sc	45	2	H2			202268.90		
Sc	45	2	H2			204487.50		
Ge	72	2	H2			165206.91		
Ge	72	2	H2			165314.69		
Ge	72	2	H2			165224.22		
In	115	2	H2			402902.85		
In	115	2	H2			401764.29		
In	115	2	H2			404351.75		
Sc	45	3	He			52726.34		
Sc	45	3	He			50929.60		
Sc	45	3	He			49645.57		
Ge	72	3	He			83625.09		
Ge	72	3	He			83554.23		
Ge	72	3	He			82849.42		
In	115	3	He			88682.54		
In	115	3	He			88792.95		
In	115	3	He			87695.80		
Tb	159	3	He			406992.03		
Tb	159	3	He			405679.37		
Tb	159	3	He			407884.84		
Bi	209	3	He			314066.83		
Bi	209	3	He			318149.14		
Bi	209	3	He			319552.44		

Quantitation Report

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Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

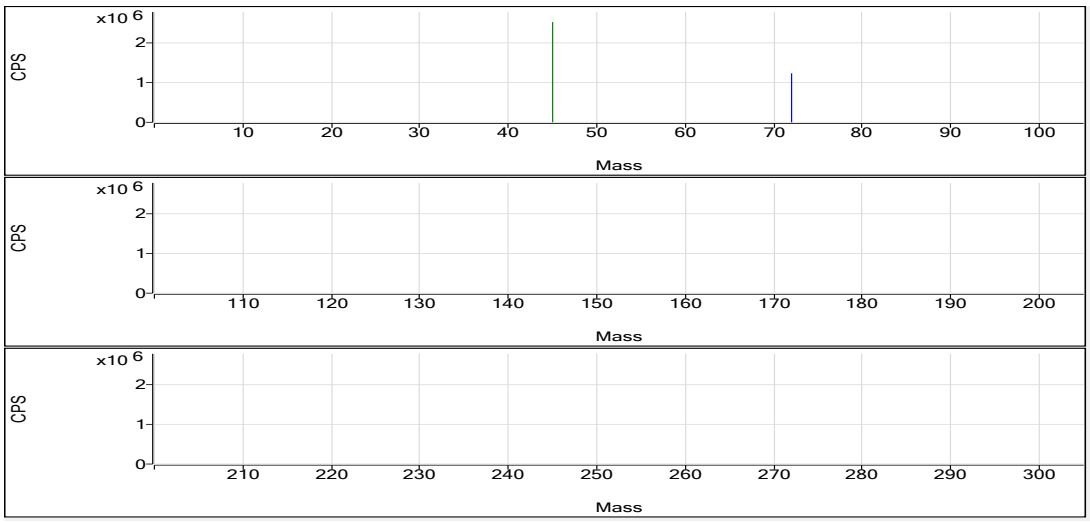
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.014	ppb	N/A	61.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.013	ppb	N/A	4.89	0.0000	Pulse	1.5000	3
Na	23	45	He	11.922	ppb	30.0	23389.13	0.4596	Pulse	0.1000	3
Mg	24	45	He	1.791	ppb	20.6	396.68	0.0078	Pulse	0.1000	3
Al	27	45	He	-1.328	ppb	N/A	66.67	0.0013	Pulse	0.1000	3
K	39	45	He	2.554	ppb	110.7	21085.91	0.4142	Pulse	0.1000	3
Ca	44	45	He	16.816	ppb	65.0	226.68	0.0045	Pulse	0.1000	3
Ti	47	45	He	1.833	ppb	91.8	50.00	0.0010	Pulse	0.1000	3
V	51	45	He	0.004	ppb	1098.9	1622.77	0.0319	Pulse	0.5000	3
Cr	52	45	He	0.061	ppb	316.4	2276.93	0.0448	Pulse	0.1000	3
Mn	55	45	He	0.438	ppb	21.3	420.02	0.0082	Pulse	0.1000	3
Fe	57	45	He	0.150	ppb	494.1	143.34	0.0028	Pulse	0.1000	3
Co	59	45	He	0.061	ppb	39.6	356.68	0.0070	Pulse	0.1000	3
Ni	60	72	He	-1.030	ppb	N/A	380.02	0.0046	Pulse	0.1000	3
Cu	63	72	He	0.008	ppb	468.6	796.72	0.0096	Pulse	0.1000	3
Zn	66	72	He	0.233	ppb	115.2	553.37	0.0066	Pulse	0.1000	3
As	75	72	He	0.180	ppb	27.2	104.67	0.0013	Pulse	0.5000	3
Sr	88	115	He	0.128	ppb	16.7	160.01	0.0018	Pulse	0.1000	3
Mo	98	115	He	-0.011	ppb	N/A	140.01	0.0016	Pulse	0.1000	3
Ag	107	115	He	-0.002	ppb	N/A	86.67	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.006	ppb	275.1	8.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.073	ppb	169.4	1413.46	0.0160	Pulse	0.1000	3
Sb	121	115	He	0.050	ppb	47.2	86.67	0.0010	Pulse	0.1000	3
Ba	137	115	He	0.117	ppb	69.9	73.33	0.0008	Pulse	0.1000	3
Tl	205	159	He	-0.026	ppb	N/A	873.40	0.0021	Pulse	0.1000	3
Pb	208	159	He	-0.007	ppb	N/A	790.04	0.0019	Pulse	0.1000	3
U	238	209	He	0.035	ppb	23.5	680.04	0.0021	Pulse	0.1000	3

ISTD Table:

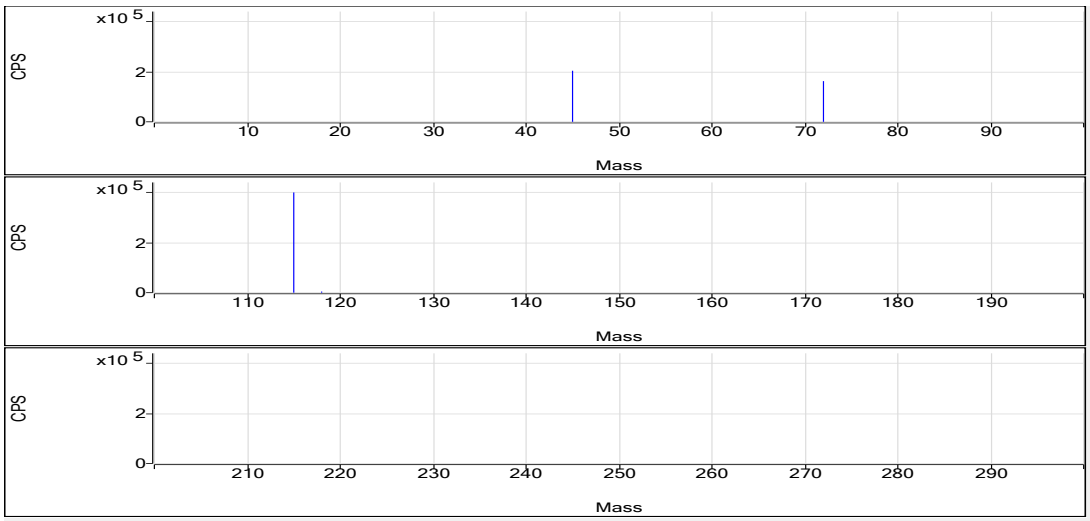
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2539794.70	0.2	97.4	Analog	0.1000	3
No Gas	Ge	72	1240503.60	1.1	96.2	Pulse	0.1000	3
H2	Sc	45	204632.41	0.7	99.3	Pulse	0.1000	3
H2	Ge	72	163024.51	0.4	100.2	Pulse	0.1000	3
H2	In	115	401510.88	0.7	99.5	Pulse	0.1000	3
He	Sc	45	50906.80	1.4	99.4	Pulse	0.1000	3
He	Ge	72	83389.93	1.5	101.9	Pulse	0.1000	3
He	In	115	88496.93	1.0	101.0	Pulse	0.1000	3
He	Tb	159	411717.81	1.3	102.5	Pulse	0.1000	3
He	Bi	209	317115.83	0.8	103.6	Pulse	0.1000	3

No Gas

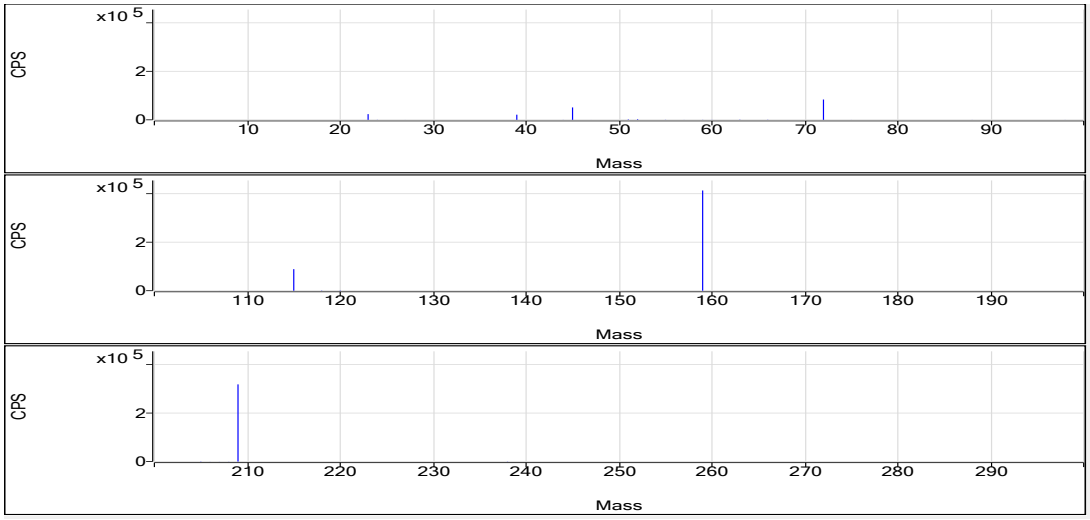


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.012	0	64.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.017	0	56.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.012	0	64.00	0.0007	3.404E-05
Se	78	2	H2	-0.034	0	3.33	0.0004	3.546E-05
Se	78	2	H2	0.031	0	8.00	0.0004	3.546E-05
Se	78	2	H2	-0.034	0	3.33	0.0004	3.546E-05
Na	23	3	He	8.817	0.4485	22958.41	0.0036	0.4171
Na	23	3	He	15.831	0.4735	23729.72	0.0036	0.4171
Na	23	3	He	11.118	0.4567	23479.27	0.0036	0.4171
Mg	24	3	He	1.589	0.0074	380.02	0.0018	0.004553
Mg	24	3	He	1.566	0.0074	370.01	0.0018	0.004553
Mg	24	3	He	2.217	0.0086	440.02	0.0018	0.004553
Al	27	3	He	-0.56	0.0018	90.00	0.0006	0.002085
Al	27	3	He	-1.181	0.0014	70.00	0.0006	0.002085
Al	27	3	He	-2.243	0.0008	40.00	0.0006	0.002085
K	39	3	He	2.786	0.4144	21216.08	0.0012	0.4112
K	39	3	He	-0.381	0.4107	20585.16	0.0012	0.4112
K	39	3	He	5.258	0.4173	21456.48	0.0012	0.4112
Ca	44	3	He	5.772	0.0037	190.01	0.0001	0.003322
Ca	44	3	He	27.624	0.0052	260.01	0.0001	0.003322
Ca	44	3	He	17.053	0.0045	230.01	0.0001	0.003322
Ti	47	3	He	3.306	0.0018	90.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	2.194	0.0012	60.00	0.0005	0
V	51	3	He	0.048	0.0328	1680.11	0.0213	0.0318
V	51	3	He	-0.003	0.0317	1590.10	0.0213	0.0318
V	51	3	He	-0.034	0.0311	1598.10	0.0213	0.0318
Cr	52	3	He	-0.152	0.0385	1970.20	0.0294	0.04297
Cr	52	3	He	0.222	0.0495	2480.30	0.0294	0.04297
Cr	52	3	He	0.113	0.0463	2380.28	0.0294	0.04297
Mn	55	3	He	0.545	0.0096	490.03	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.401	0.0078	390.02	0.0124	0.002801
Mn	55	3	He	0.369	0.0074	380.02	0.0124	0.002801
Fe	57	3	He	0.688	0.0031	160.01	0.0006	0.002732
Fe	57	3	He	0.457	0.003	150.01	0.0006	0.002732
Fe	57	3	He	-0.695	0.0023	120.00	0.0006	0.002732
Co	59	3	He	0.033	0.0055	280.01	0.0549	0.003644
Co	59	3	He	0.075	0.0078	390.02	0.0549	0.003644
Co	59	3	He	0.075	0.0078	400.02	0.0549	0.003644
Ni	60	3	He	-1.038	0.0045	380.02	0.0093	0.01413
Ni	60	3	He	-0.945	0.0054	440.02	0.0093	0.01413
Ni	60	3	He	-1.108	0.0038	320.02	0.0093	0.01413
Cu	63	3	He	0.044	0.0105	890.06	0.0274	0.009321
Cu	63	3	He	0.015	0.0097	800.05	0.0274	0.009321
Cu	63	3	He	-0.034	0.0084	700.05	0.0274	0.009321
Zn	66	3	He	0.461	0.0073	620.04	0.0031	0.005913
Zn	66	3	He	-0.063	0.0057	470.03	0.0031	0.005913
Zn	66	3	He	0.3	0.0068	570.03	0.0031	0.005913
As	75	3	He	0.134	0.0012	98.00	0.0021	0.0008698
As	75	3	He	0.173	0.0012	102.00	0.0021	0.0008698
As	75	3	He	0.232	0.0014	114.00	0.0021	0.0008698
Sr	88	3	He	0.117	0.0017	150.01	0.0088	0.0006843
Sr	88	3	He	0.114	0.0017	150.01	0.0088	0.0006843
Sr	88	3	He	0.152	0.002	180.01	0.0088	0.0006843
Mo	98	3	He	0.011	0.0021	180.01	0.0219	0.001827
Mo	98	3	He	-0.027	0.0012	110.00	0.0219	0.001827
Mo	98	3	He	-0.017	0.0015	130.01	0.0219	0.001827
Ag	107	3	He	0.007	0.0014	120.01	0.047	0.001064
Ag	107	3	He	-0.008	0.0007	60.00	0.047	0.001064
Ag	107	3	He	-0.004	0.0009	80.00	0.047	0.001064
Cd	111	3	He	0.023	0.0002	16.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	0.001	0.0001	6.00	0.0053	6.086E-05
Sn	120	3	He	-0.028	0.0144	1260.10	0.0154	0.01483
Sn	120	3	He	0.036	0.0154	1370.11	0.0154	0.01483
Sn	120	3	He	0.212	0.0181	1610.16	0.0154	0.01483
Sb	121	3	He	0.078	0.0014	120.01	0.0143	0.0002661
Sb	121	3	He	0.036	0.0008	70.00	0.0143	0.0002661
Sb	121	3	He	0.037	0.0008	70.00	0.0143	0.0002661
Ba	137	3	He	0.04	0.0005	40.00	0.0048	0.0002665
Ba	137	3	He	0.109	0.0008	70.00	0.0048	0.0002665
Ba	137	3	He	0.203	0.0012	110.00	0.0048	0.0002665
Tl	205	3	He	-0.02	0.0023	930.08	0.0246	0.002755
Tl	205	3	He	-0.018	0.0023	940.08	0.0246	0.002755
Tl	205	3	He	-0.039	0.0018	750.05	0.0246	0.002755
Pb	208	3	He	-0.003	0.0021	420.02	0.0324	0.002158
Pb	208	3	He	-0.017	0.0016	260.01	0.0324	0.002158
Pb	208	3	He	-0.002	0.0021	480.03	0.0324	0.002158
U	238	3	He	0.027	0.0017	550.03	0.0492	0.0004023
U	238	3	He	0.036	0.0022	690.04	0.0492	0.0004023
U	238	3	He	0.043	0.0025	800.06	0.0492	0.0004023
Sc	45	1	No Gas			2535545.43		
Sc	45	1	No Gas			2546711.06		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2537127.62		
Ge	72	1	No Gas			1253860.29		
Ge	72	1	No Gas			1227749.43		
Ge	72	1	No Gas			1239901.08		
Sc	45	2	H2			204367.07		
Sc	45	2	H2			206174.24		
Sc	45	2	H2			203355.93		
Ge	72	2	H2			162778.40		
Ge	72	2	H2			163789.97		
Ge	72	2	H2			162505.17		
In	115	2	H2			404529.95		
In	115	2	H2			399826.05		
In	115	2	H2			400176.63		
Sc	45	3	He			51191.07		
Sc	45	3	He			50117.26		
Sc	45	3	He			51412.06		
Ge	72	3	He			84600.33		
Ge	72	3	He			82166.08		
Ge	72	3	He			83403.38		
In	115	3	He			87485.16		
In	115	3	He			89084.72		
In	115	3	He			88943.60		
Tb	159	3	He			409609.53		
Tb	159	3	He			407644.13		
Tb	159	3	He			417899.76		
Bi	209	3	He			320191.56		
Bi	209	3	He			315618.84		
Bi	209	3	He			315537.10		

Quantitation Report

Data File Name	064SMPL.d
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Acq Time	8/9/2023 3:48:51 PM
Sample Name	410-136848-U-6-A @5
Sample Type	Sample
Comment	T31
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

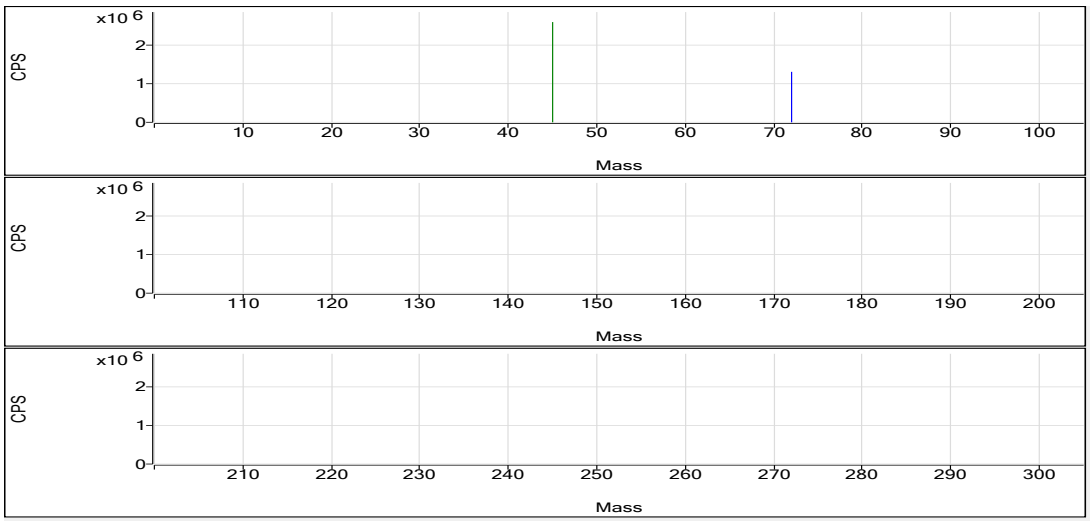
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.034	ppb	N/A	24.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.037	ppb	N/A	3.33	0.0000	Pulse	1.5000	3
Na	23	45	He	1717.551	ppb	1.4	340678.76	6.5391	Pulse	0.1000	3
Mg	24	45	He	2665.369	ppb	0.6	251140.98	4.8203	Pulse	0.1000	3
Al	27	45	He	6.203	ppb	33.2	296.68	0.0057	Pulse	0.1000	3
K	39	45	He	478.121	ppb	1.8	50594.87	0.9711	Pulse	0.1000	3
Ca	44	45	He	25773.098	ppb	1.0	90890.30	1.7445	Pulse	0.1000	3
Ti	47	45	He	0.722	ppb	132.1	20.00	0.0004	Pulse	0.1000	3
V	51	45	He	-0.082	ppb	N/A	1565.43	0.0300	Pulse	0.5000	3
Cr	52	45	He	0.214	ppb	51.2	2566.97	0.0493	Pulse	0.1000	3
Mn	55	45	He	181.463	ppb	1.1	117679.25	2.2588	Pulse	0.1000	3
Fe	57	45	He	146.534	ppb	2.8	4510.85	0.0866	Pulse	0.1000	3
Co	59	45	He	0.047	ppb	53.2	323.35	0.0062	Pulse	0.1000	3
Ni	60	72	He	-0.933	ppb	N/A	476.69	0.0055	Pulse	0.1000	3
Cu	63	72	He	0.053	ppb	36.5	940.07	0.0108	Pulse	0.1000	3
Zn	66	72	He	1.724	ppb	7.8	976.73	0.0112	Pulse	0.1000	3
As	75	72	He	0.086	ppb	59.8	92.00	0.0011	Pulse	0.5000	3
Sr	88	115	He	91.285	ppb	2.6	72649.95	0.8039	Pulse	0.1000	3
Mo	98	115	He	-0.006	ppb	N/A	153.34	0.0017	Pulse	0.1000	3
Ag	107	115	He	-0.002	ppb	N/A	86.67	0.0010	Pulse	0.1000	3
Cd	111	115	He	-0.003	ppb	N/A	4.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.076	ppb	116.3	1446.80	0.0160	Pulse	0.1000	3
Sb	121	115	He	0.010	ppb	163.4	36.67	0.0004	Pulse	0.1000	3
Ba	137	115	He	9.022	ppb	6.7	3920.71	0.0434	Pulse	0.1000	3
Tl	205	159	He	-0.088	ppb	N/A	246.68	0.0006	Pulse	0.1000	3
Pb	208	159	He	0.021	ppb	40.1	1180.07	0.0028	Pulse	0.1000	3
U	238	209	He	0.091	ppb	4.7	1570.15	0.0049	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2601233.50	1.9	99.7	Analog	0.1000	3
No Gas	Ge	72	1309719.77	0.6	101.6	Pulse	0.1000	3
H2	Sc	45	205208.92	0.1	99.6	Pulse	0.1000	3
H2	Ge	72	174743.23	0.8	107.4	Pulse	0.1000	3
H2	In	115	413457.60	0.4	102.4	Pulse	0.1000	3
He	Sc	45	52100.88	0.5	101.8	Pulse	0.1000	3
He	Ge	72	87178.52	0.4	106.5	Pulse	0.1000	3
He	In	115	90385.83	0.8	103.1	Pulse	0.1000	3
He	Tb	159	414682.70	0.1	103.3	Pulse	0.1000	3
He	Bi	209	319967.64	0.8	104.5	Pulse	0.1000	3

No Gas



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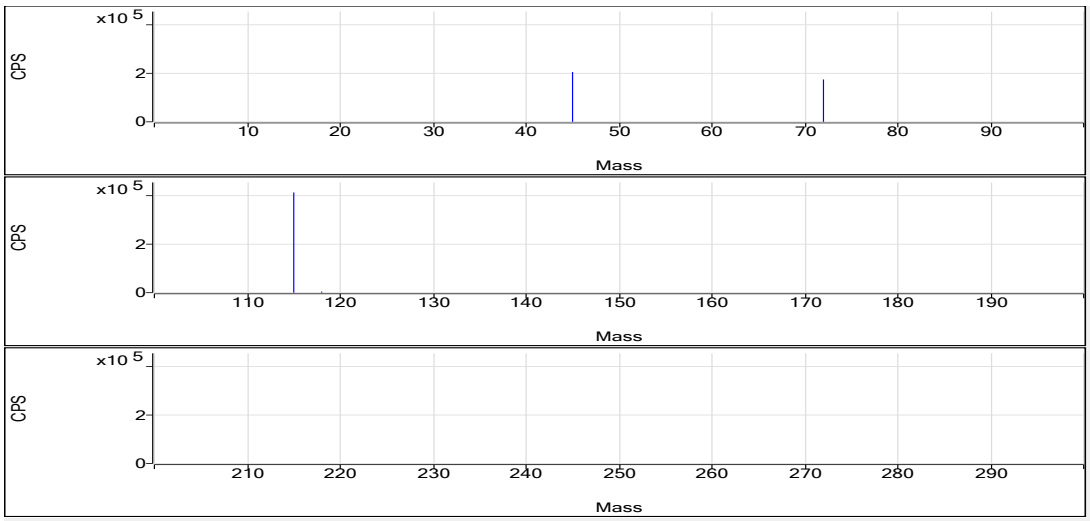
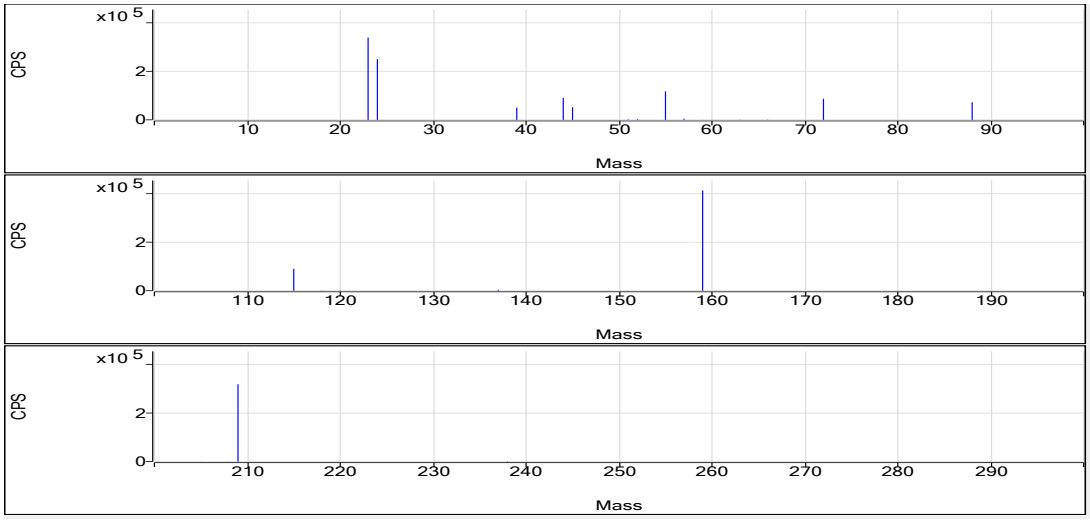


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.033	0	26.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.036	0	20.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.033	0	26.00	0.0007	3.404E-05
Se	78	2	H2	-0.038	0	3.33	0.0004	3.546E-05
Se	78	2	H2	-0.028	0	4.00	0.0004	3.546E-05
Se	78	2	H2	-0.046	0	2.67	0.0004	3.546E-05
Na	23	3	He	1691.123	6.4449	337294.33	0.0036	0.4171
Na	23	3	He	1739.441	6.6171	342722.38	0.0036	0.4171
Na	23	3	He	1722.088	6.5553	342019.57	0.0036	0.4171
Mg	24	3	He	2673.035	4.8342	252995.66	0.0018	0.004553
Mg	24	3	He	2675.687	4.839	250624.66	0.0018	0.004553
Mg	24	3	He	2647.385	4.7878	249802.63	0.0018	0.004553
Al	27	3	He	3.966	0.0044	230.01	0.0006	0.002085
Al	27	3	He	8.022	0.0068	350.02	0.0006	0.002085
Al	27	3	He	6.621	0.0059	310.01	0.0006	0.002085
K	39	3	He	483.301	0.9772	51139.99	0.0012	0.4112
K	39	3	He	482.933	0.9767	50588.23	0.0012	0.4112
K	39	3	He	468.13	0.9594	50056.38	0.0012	0.4112
Ca	44	3	He	26043.095	1.7627	92251.85	0.0001	0.003322
Ca	44	3	He	25729.599	1.7415	90199.85	0.0001	0.003322
Ca	44	3	He	25546.599	1.7292	90219.20	0.0001	0.003322
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.363	0.0002	10.00	0.0005	0
Ti	47	3	He	1.802	0.001	50.00	0.0005	0
V	51	3	He	-0.106	0.0295	1546.09	0.0213	0.0318
V	51	3	He	-0.053	0.0307	1588.10	0.0213	0.0318
V	51	3	He	-0.087	0.0299	1562.10	0.0213	0.0318
Cr	52	3	He	0.339	0.0529	2770.36	0.0294	0.04297
Cr	52	3	He	0.134	0.0469	2430.27	0.0294	0.04297
Cr	52	3	He	0.168	0.0479	2500.29	0.0294	0.04297
Mn	55	3	He	180.111	2.242	117332.78	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	183.798	2.2878	118492.44	0.0124	0.002801
Mn	55	3	He	180.479	2.2465	117212.54	0.0124	0.002801
Fe	57	3	He	150.882	0.0891	4660.90	0.0006	0.002732
Fe	57	3	He	142.72	0.0844	4370.79	0.0006	0.002732
Fe	57	3	He	145.999	0.0863	4500.85	0.0006	0.002732
Co	59	3	He	0.062	0.0071	370.02	0.0549	0.003644
Co	59	3	He	0.018	0.0046	240.01	0.0549	0.003644
Co	59	3	He	0.059	0.0069	360.02	0.0549	0.003644
Ni	60	3	He	-0.965	0.0052	450.02	0.0093	0.01413
Ni	60	3	He	-0.914	0.0056	490.03	0.0093	0.01413
Ni	60	3	He	-0.919	0.0056	490.02	0.0093	0.01413
Cu	63	3	He	0.054	0.0108	940.06	0.0274	0.009321
Cu	63	3	He	0.034	0.0102	890.07	0.0274	0.009321
Cu	63	3	He	0.072	0.0113	990.07	0.0274	0.009321
Zn	66	3	He	1.777	0.0114	990.06	0.0031	0.005913
Zn	66	3	He	1.822	0.0115	1000.07	0.0031	0.005913
Zn	66	3	He	1.571	0.0107	940.07	0.0031	0.005913
As	75	3	He	0.087	0.0011	92.00	0.0021	0.0008698
As	75	3	He	0.034	0.0009	82.00	0.0021	0.0008698
As	75	3	He	0.138	0.0012	102.00	0.0021	0.0008698
Sr	88	3	He	88.52	0.7796	71128.75	0.0088	0.0006843
Sr	88	3	He	92.439	0.814	73250.11	0.0088	0.0006843
Sr	88	3	He	92.895	0.8181	73570.98	0.0088	0.0006843
Mo	98	3	He	-0.003	0.0018	160.01	0.0219	0.001827
Mo	98	3	He	0.003	0.0019	170.01	0.0219	0.001827
Mo	98	3	He	-0.017	0.0014	130.00	0.0219	0.001827
Ag	107	3	He	-0.006	0.0008	70.00	0.047	0.001064
Ag	107	3	He	-0.018	0.0002	20.00	0.047	0.001064
Ag	107	3	He	0.018	0.0019	170.01	0.047	0.001064
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Cd	111	3	He	0.001	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Sn	120	3	He	0.14	0.017	1550.14	0.0154	0.01483
Sn	120	3	He	-0.025	0.0144	1300.12	0.0154	0.01483
Sn	120	3	He	0.113	0.0166	1490.15	0.0154	0.01483
Sb	121	3	He	0.027	0.0007	60.00	0.0143	0.0002661
Sb	121	3	He	0.005	0.0003	30.00	0.0143	0.0002661
Sb	121	3	He	-0.003	0.0002	20.00	0.0143	0.0002661
Ba	137	3	He	8.913	0.0429	3910.70	0.0048	0.0002665
Ba	137	3	He	8.481	0.0408	3670.70	0.0048	0.0002665
Ba	137	3	He	9.672	0.0465	4180.73	0.0048	0.0002665
Tl	205	3	He	-0.08	0.0008	330.02	0.0246	0.002755
Tl	205	3	He	-0.092	0.0005	210.01	0.0246	0.002755
Tl	205	3	He	-0.093	0.0005	200.01	0.0246	0.002755
Pb	208	3	He	0.024	0.0029	600.04	0.0324	0.002158
Pb	208	3	He	0.028	0.0031	670.04	0.0324	0.002158
Pb	208	3	He	0.012	0.0025	640.04	0.0324	0.002158
U	238	3	He	0.087	0.0047	1500.14	0.0492	0.0004023
U	238	3	He	0.095	0.0051	1630.16	0.0492	0.0004023
U	238	3	He	0.093	0.005	1580.16	0.0492	0.0004023
Sc	45	1	No Gas			2545115.90		
Sc	45	1	No Gas			2634777.77		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2623806.84		
Ge	72	1	No Gas			1301081.07		
Ge	72	1	No Gas			1313301.07		
Ge	72	1	No Gas			1314777.17		
Sc	45	2	H2			205339.41		
Sc	45	2	H2			205005.76		
Sc	45	2	H2			205281.58		
Ge	72	2	H2			175891.33		
Ge	72	2	H2			173238.16		
Ge	72	2	H2			175100.21		
In	115	2	H2			414940.03		
In	115	2	H2			411667.42		
In	115	2	H2			413765.35		
Sc	45	3	He			52334.93		
Sc	45	3	He			51793.11		
Sc	45	3	He			52174.60		
Ge	72	3	He			87084.63		
Ge	72	3	He			86903.35		
Ge	72	3	He			87547.58		
In	115	3	He			91249.18		
In	115	3	He			89990.35		
In	115	3	He			89940.34		
Tb	159	3	He			414585.97		
Tb	159	3	He			415146.13		
Tb	159	3	He			414316.01		
Bi	209	3	He			321243.41		
Bi	209	3	He			321584.35		
Bi	209	3	He			317075.17		

Quantitation Report

Data File Name	065SMPL.d
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Acq Time	8/9/2023 3:50:54 PM
Sample Name	410-136848-U-6-A PDS @5
Sample Type	Sample
Comment	T31
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

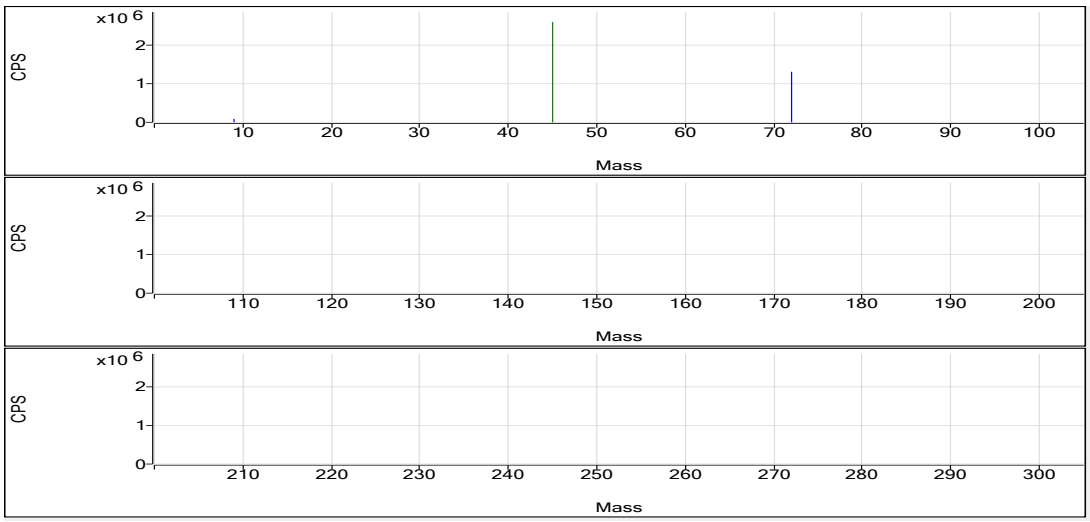
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	47.145	ppb	1.4	88809.30	0.0344	Pulse	0.5000	3
Se	78	72	H2	92.788	ppb	1.1	7013.50	0.0407	Pulse	1.5000	3
Na	23	45	He	6293.259	ppb	0.7	1178777.69	22.8488	Analog	0.1000	3
Mg	24	45	He	7023.037	ppb	1.1	654844.81	12.6937	Pulse	0.1000	3
Al	27	45	He	4754.298	ppb	2.4	142991.24	2.7719	Pulse	0.1000	3
K	39	45	He	5159.948	ppb	1.1	332950.36	6.4539	Pulse	0.1000	3
Ca	44	45	He	26263.400	ppb	1.4	91701.60	1.7776	Pulse	0.1000	3
Ti	47	45	He	488.736	ppb	4.0	13409.89	0.2599	Pulse	0.1000	3
V	51	45	He	482.837	ppb	0.7	530988.83	10.2925	Pulse	0.5000	3
Cr	52	45	He	459.323	ppb	1.1	699161.71	13.5517	Pulse	0.1000	3
Mn	55	45	He	636.379	ppb	0.6	408301.83	7.9143	Pulse	0.1000	3
Fe	57	45	He	4934.463	ppb	1.4	145786.79	2.8260	Pulse	0.1000	3
Co	59	45	He	460.315	ppb	0.9	1303613.23	25.2692	Pulse	0.1000	3
Ni	60	72	He	451.111	ppb	0.7	369331.02	4.2017	Pulse	0.1000	3
Cu	63	72	He	428.408	ppb	1.2	1033567.20	11.7588	Pulse	0.1000	3
Zn	66	72	He	458.007	ppb	1.0	124130.41	1.4122	Pulse	0.1000	3
As	75	72	He	463.228	ppb	1.2	87443.50	0.9948	Pulse	0.5000	3
Sr	88	115	He	127.650	ppb	0.4	100771.54	1.1239	Pulse	0.1000	3
Mo	98	115	He	46.993	ppb	0.7	92631.27	1.0331	Pulse	0.1000	3
Ag	107	115	He	48.113	ppb	1.0	203028.24	2.2643	Pulse	0.1000	3
Cd	111	115	He	47.965	ppb	2.0	22907.44	0.2555	Pulse	0.5000	3
Sn	120	115	He	97.373	ppb	0.8	135966.24	1.5164	Pulse	0.1000	3
Sb	121	115	He	95.989	ppb	0.2	122673.52	1.3681	Pulse	0.1000	3
Ba	137	115	He	493.586	ppb	0.2	211525.53	2.3590	Pulse	0.1000	3
Tl	205	159	He	97.398	ppb	0.6	979778.68	2.3949	Pulse	0.1000	3
Pb	208	159	He	48.387	ppb	0.5	642353.08	1.5701	Pulse	0.1000	3
U	238	209	He	47.606	ppb	1.1	738182.96	2.3449	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2583406.52	1.1	99.1	Analog	0.1000	3
No Gas	Ge	72	1303248.37	0.3	101.1	Pulse	0.1000	3
H2	Sc	45	203648.10	0.9	98.8	Pulse	0.1000	3
H2	Ge	72	172300.97	0.7	105.9	Pulse	0.1000	3
H2	In	115	407087.09	1.3	100.8	Pulse	0.1000	3
He	Sc	45	51592.17	1.1	100.8	Pulse	0.1000	3
He	Ge	72	87903.44	1.0	107.4	Pulse	0.1000	3
He	In	115	89665.89	0.7	102.3	Pulse	0.1000	3
He	Tb	159	409114.12	0.3	101.9	Pulse	0.1000	3
He	Bi	209	314811.41	0.7	102.8	Pulse	0.1000	3

No Gas



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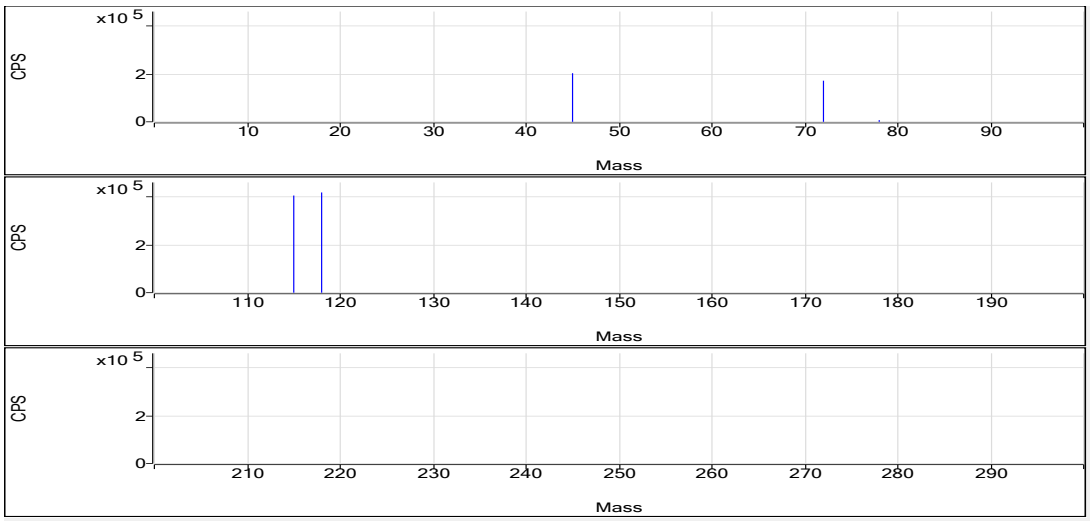
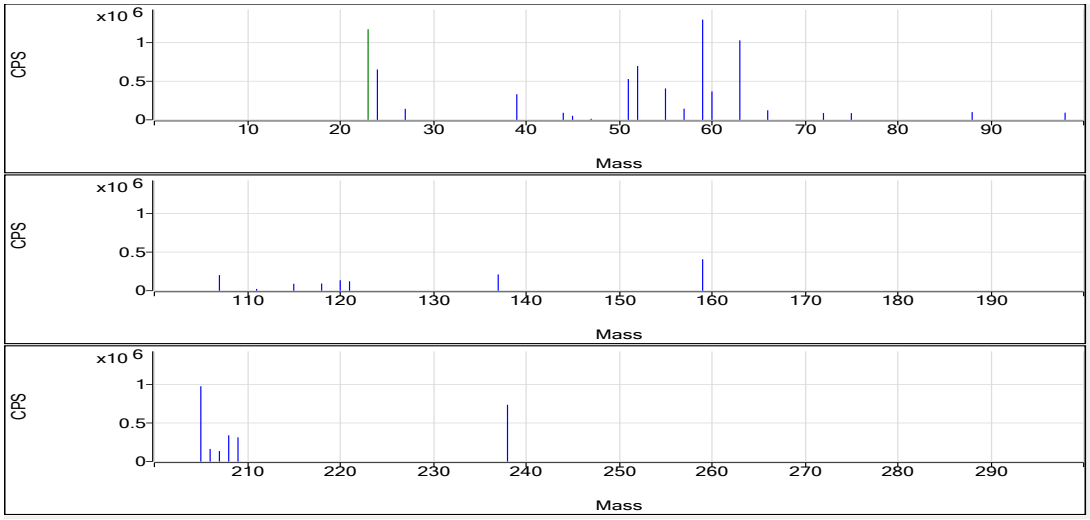


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	46.493	0.0339	88694.52	0.0007	3.404E-05
Be	9	1	No Gas	47.133	0.0344	88517.63	0.0007	3.404E-05
Be	9	1	No Gas	47.808	0.0349	89215.75	0.0007	3.404E-05
Se	78	2	H2	93.577	0.0411	7089.76	0.0004	3.546E-05
Se	78	2	H2	93.168	0.0409	6987.71	0.0004	3.546E-05
Se	78	2	H2	91.618	0.0402	6963.03	0.0004	3.546E-05
Na	23	3	He	6241.743	22.6652	1175948.03	0.0036	0.4171
Na	23	3	He	6305.27	22.8916	1189070.06	0.0036	0.4171
Na	23	3	He	6332.764	22.9896	1171314.98	0.0036	0.4171
Mg	24	3	He	7008.529	12.6675	657232.65	0.0018	0.004553
Mg	24	3	He	6951.434	12.5643	652634.44	0.0018	0.004553
Mg	24	3	He	7109.148	12.8493	654667.33	0.0018	0.004553
Al	27	3	He	4791.376	2.7935	144936.84	0.0006	0.002085
Al	27	3	He	4628.336	2.6985	140170.60	0.0006	0.002085
Al	27	3	He	4843.183	2.8237	143866.27	0.0006	0.002085
K	39	3	He	5174.827	6.4713	335753.08	0.0012	0.4112
K	39	3	He	5096.785	6.3799	331394.17	0.0012	0.4112
K	39	3	He	5208.232	6.5104	331703.82	0.0012	0.4112
Ca	44	3	He	26207.023	1.7738	92030.53	0.0001	0.003322
Ca	44	3	He	25921.491	1.7545	91135.00	0.0001	0.003322
Ca	44	3	He	26661.686	1.8045	91939.26	0.0001	0.003322
Ti	47	3	He	505.426	0.2688	13947.11	0.0005	0
Ti	47	3	He	467.52	0.2487	12916.02	0.0005	0
Ti	47	3	He	493.264	0.2623	13366.55	0.0005	0
V	51	3	He	482.693	10.2895	533852.00	0.0213	0.0318
V	51	3	He	479.488	10.2213	530931.38	0.0213	0.0318
V	51	3	He	486.331	10.3668	528183.13	0.0213	0.0318
Cr	52	3	He	464.509	13.7042	711021.40	0.0294	0.04297
Cr	52	3	He	454.49	13.4096	696538.27	0.0294	0.04297
Cr	52	3	He	458.969	13.5413	689925.46	0.0294	0.04297
Mn	55	3	He	635.45	7.9028	410024.02	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	633.246	7.8754	409075.42	0.0124	0.002801
Mn	55	3	He	640.44	7.9648	405806.05	0.0124	0.002801
Fe	57	3	He	4947.652	2.8335	147013.42	0.0006	0.002732
Fe	57	3	He	4858.283	2.7824	144527.46	0.0006	0.002732
Fe	57	3	He	4997.455	2.862	145819.50	0.0006	0.002732
Co	59	3	He	459.993	25.2515	1310133.81	0.0549	0.003644
Co	59	3	He	456.348	25.0514	1301255.21	0.0549	0.003644
Co	59	3	He	464.604	25.5046	1299450.68	0.0549	0.003644
Ni	60	3	He	452.507	4.2147	370812.57	0.0093	0.01413
Ni	60	3	He	453.269	4.2218	367186.83	0.0093	0.01413
Ni	60	3	He	447.557	4.1687	369993.67	0.0093	0.01413
Cu	63	3	He	430.854	11.8259	1040457.33	0.0274	0.009321
Cu	63	3	He	431.967	11.8565	1031213.81	0.0274	0.009321
Cu	63	3	He	422.402	11.5941	1029030.45	0.0274	0.009321
Zn	66	3	He	461.366	1.4225	125152.89	0.0031	0.005913
Zn	66	3	He	459.625	1.4172	123256.67	0.0031	0.005913
Zn	66	3	He	453.031	1.3969	123981.67	0.0031	0.005913
As	75	3	He	466.025	1.0008	88054.63	0.0021	0.0008698
As	75	3	He	466.59	1.002	87153.06	0.0021	0.0008698
As	75	3	He	457.068	0.9816	87122.82	0.0021	0.0008698
Sr	88	3	He	127.925	1.1263	101443.31	0.0088	0.0006843
Sr	88	3	He	127.973	1.1267	100244.39	0.0088	0.0006843
Sr	88	3	He	127.052	1.1186	100626.93	0.0088	0.0006843
Mo	98	3	He	46.61	1.0247	92292.27	0.0219	0.001827
Mo	98	3	He	47.181	1.0372	92282.52	0.0219	0.001827
Mo	98	3	He	47.188	1.0374	93319.02	0.0219	0.001827
Ag	107	3	He	48.513	2.2831	205635.52	0.047	0.001064
Ag	107	3	He	48.278	2.272	202145.64	0.047	0.001064
Ag	107	3	He	47.549	2.2378	201303.57	0.047	0.001064
Cd	111	3	He	47.795	0.2546	22930.85	0.0053	6.086E-05
Cd	111	3	He	49.011	0.2611	23227.28	0.0053	6.086E-05
Cd	111	3	He	47.089	0.2508	22564.20	0.0053	6.086E-05
Sn	120	3	He	96.479	1.5026	135336.90	0.0154	0.01483
Sn	120	3	He	97.57	1.5194	135184.35	0.0154	0.01483
Sn	120	3	He	98.07	1.5271	137377.47	0.0154	0.01483
Sb	121	3	He	95.964	1.3678	123194.19	0.0143	0.0002661
Sb	121	3	He	96.147	1.3704	121924.60	0.0143	0.0002661
Sb	121	3	He	95.855	1.3662	122901.76	0.0143	0.0002661
Ba	137	3	He	494.016	2.3611	212658.94	0.0048	0.0002665
Ba	137	3	He	492.28	2.3528	209328.96	0.0048	0.0002665
Ba	137	3	He	494.462	2.3632	212588.69	0.0048	0.0002665
Tl	205	3	He	97.899	2.4072	987248.11	0.0246	0.002755
Tl	205	3	He	96.786	2.3799	974338.42	0.0246	0.002755
Tl	205	3	He	97.508	2.3976	977749.52	0.0246	0.002755
Pb	208	3	He	48.289	1.5669	341656.48	0.0324	0.002158
Pb	208	3	He	48.225	1.5649	340875.27	0.0324	0.002158
Pb	208	3	He	48.647	1.5785	341619.37	0.0324	0.002158
U	238	3	He	48.193	2.3738	744915.46	0.0492	0.0004023
U	238	3	He	47.247	2.3272	738435.85	0.0492	0.0004023
U	238	3	He	47.379	2.3337	731197.57	0.0492	0.0004023
Sc	45	1	No Gas			2615909.02		
Sc	45	1	No Gas			2575318.71		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2558991.84		
Ge	72	1	No Gas			1307488.42		
Ge	72	1	No Gas			1302865.61		
Ge	72	1	No Gas			1299391.07		
Sc	45	2	H2			201651.25		
Sc	45	2	H2			205249.78		
Sc	45	2	H2			204043.26		
Ge	72	2	H2			172702.34		
Ge	72	2	H2			170961.77		
Ge	72	2	H2			173238.79		
In	115	2	H2			412756.67		
In	115	2	H2			402217.73		
In	115	2	H2			406286.87		
Sc	45	3	He			51883.41		
Sc	45	3	He			51943.42		
Sc	45	3	He			50949.69		
Ge	72	3	He			87981.01		
Ge	72	3	He			86974.88		
Ge	72	3	He			88754.43		
In	115	3	He			90805.84		
In	115	3	He			89689.46		
In	115	3	He			90684.72		
Tb	159	3	He			410124.92		
Tb	159	3	He			409410.97		
Tb	159	3	He			407806.48		
Bi	209	3	He			313809.37		
Bi	209	3	He			317302.83		
Bi	209	3	He			313322.03		

Quantitation Report

Data File Name	066SMPL.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H09B00.b
Acq Time	8/9/2023 3:52:55 PM
Sample Name	410-136848-U-6-A SD@25
Sample Type	Sample
Comment	T31
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

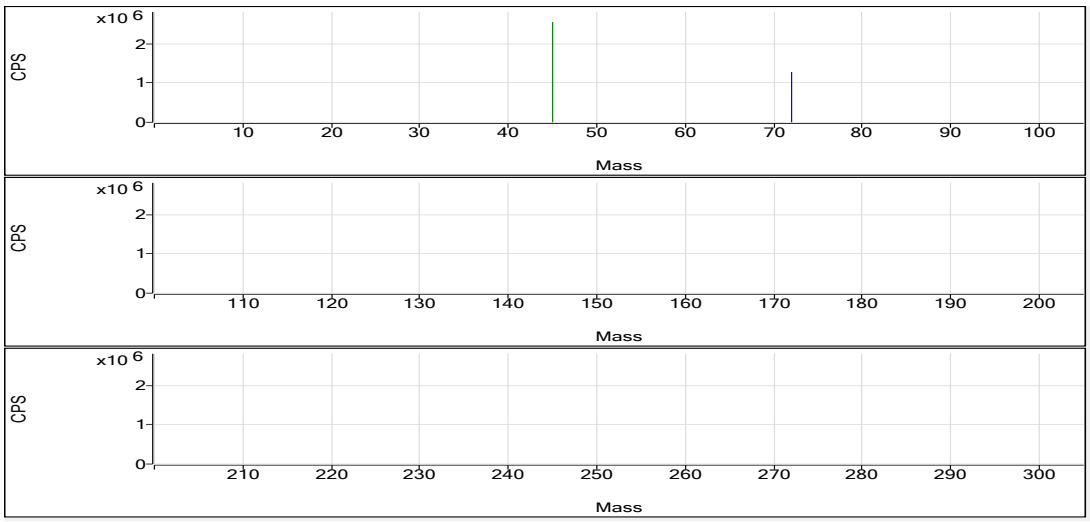
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.019	ppb	N/A	52.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.014	ppb	138.5	7.11	0.0000	Pulse	1.5000	3
Na	23	45	He	357.569	ppb	1.8	87800.15	1.6916	Pulse	0.1000	3
Mg	24	45	He	560.845	ppb	0.4	52835.14	1.0179	Pulse	0.1000	3
Al	27	45	He	0.388	ppb	291.9	120.00	0.0023	Pulse	0.1000	3
K	39	45	He	83.870	ppb	2.9	26441.23	0.5094	Pulse	0.1000	3
Ca	44	45	He	5330.113	ppb	1.0	18862.69	0.3634	Pulse	0.1000	3
Ti	47	45	He	0.723	ppb	49.7	20.00	0.0004	Pulse	0.1000	3
V	51	45	He	-0.089	ppb	N/A	1552.09	0.0299	Pulse	0.5000	3
Cr	52	45	He	0.210	ppb	26.7	2550.30	0.0491	Pulse	0.1000	3
Mn	55	45	He	39.236	ppb	1.5	25466.36	0.4906	Pulse	0.1000	3
Fe	57	45	He	29.475	ppb	13.0	1016.74	0.0196	Pulse	0.1000	3
Co	59	45	He	0.090	ppb	20.1	446.69	0.0086	Pulse	0.1000	3
Ni	60	72	He	-0.940	ppb	N/A	470.02	0.0054	Pulse	0.1000	3
Cu	63	72	He	0.026	ppb	164.5	873.39	0.0100	Pulse	0.1000	3
Zn	66	72	He	1.643	ppb	22.7	953.40	0.0110	Pulse	0.1000	3
As	75	72	He	0.319	ppb	22.7	135.33	0.0016	Pulse	0.5000	3
Sr	88	115	He	19.658	ppb	1.9	15712.52	0.1737	Pulse	0.1000	3
Mo	98	115	He	-0.009	ppb	N/A	146.67	0.0016	Pulse	0.1000	3
Ag	107	115	He	0.006	ppb	154.2	123.34	0.0014	Pulse	0.1000	3
Cd	111	115	He	0.002	ppb	263.3	6.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.192	ppb	9.7	1610.14	0.0178	Pulse	0.1000	3
Sb	121	115	He	0.126	ppb	21.6	186.68	0.0021	Pulse	0.1000	3
Ba	137	115	He	2.149	ppb	11.0	953.40	0.0105	Pulse	0.1000	3
Tl	205	159	He	0.062	ppb	15.8	1763.53	0.0043	Pulse	0.1000	3
Pb	208	159	He	0.019	ppb	58.3	1143.39	0.0028	Pulse	0.1000	3
U	238	209	He	0.067	ppb	2.4	1183.43	0.0037	Pulse	0.1000	3

ISTD Table:

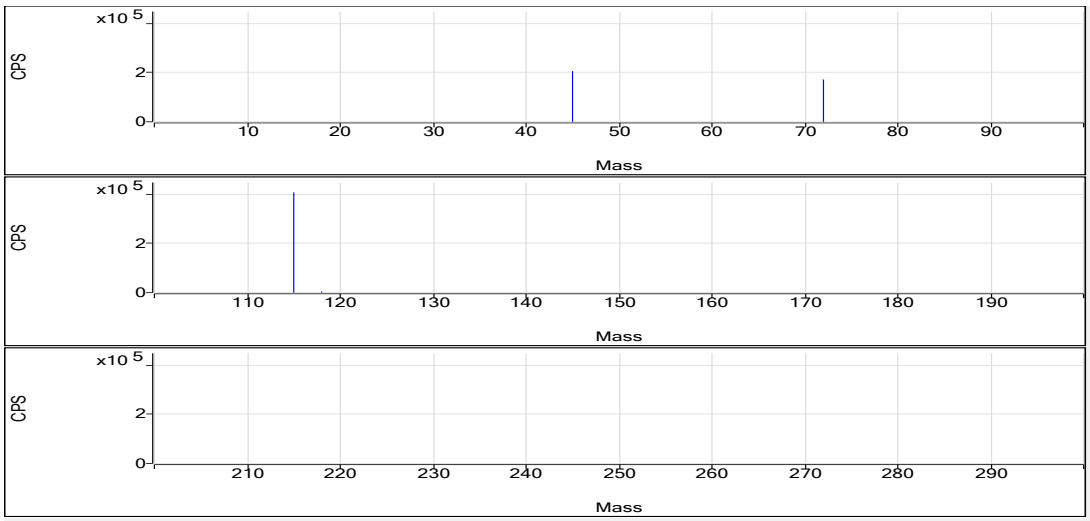
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2559324.75	1.9	98.1	Analog	0.1000	3
No Gas	Ge	72	1285759.85	0.6	99.8	Pulse	0.1000	3
H2	Sc	45	205814.79	0.0	99.9	Pulse	0.1000	3
H2	Ge	72	171667.13	0.9	105.5	Pulse	0.1000	3
H2	In	115	406737.26	0.7	100.8	Pulse	0.1000	3
He	Sc	45	51906.88	0.6	101.4	Pulse	0.1000	3
He	Ge	72	87031.34	1.3	106.3	Pulse	0.1000	3
He	In	115	90482.44	0.0	103.2	Pulse	0.1000	3
He	Tb	159	411917.03	1.2	102.6	Pulse	0.1000	3
He	Bi	209	318419.88	0.6	104.0	Pulse	0.1000	3

No Gas

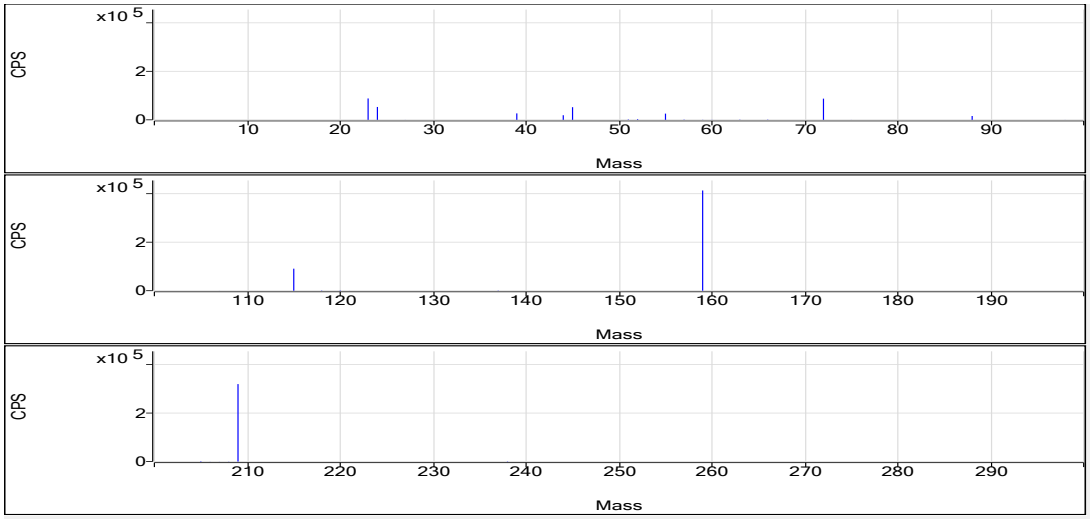


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.022	0	46.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.014	0	62.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.021	0	48.00	0.0007	3.404E-05
Se	78	2	H2	-0.001	0	6.00	0.0004	3.546E-05
Se	78	2	H2	0.007	0	6.67	0.0004	3.546E-05
Se	78	2	H2	0.035	0.0001	8.67	0.0004	3.546E-05
Na	23	3	He	364.827	1.7175	88555.37	0.0036	0.4171
Na	23	3	He	352.169	1.6723	87085.36	0.0036	0.4171
Na	23	3	He	355.709	1.685	87759.73	0.0036	0.4171
Mg	24	3	He	560.846	1.0179	52484.23	0.0018	0.004553
Mg	24	3	He	558.395	1.0135	52774.87	0.0018	0.004553
Mg	24	3	He	563.295	1.0223	53246.31	0.0018	0.004553
Al	27	3	He	-0.249	0.0019	100.00	0.0006	0.002085
Al	27	3	He	1.696	0.0031	160.01	0.0006	0.002085
Al	27	3	He	-0.283	0.0019	100.00	0.0006	0.002085
K	39	3	He	85.504	0.5113	26364.58	0.0012	0.4112
K	39	3	He	81.042	0.5061	26354.35	0.0012	0.4112
K	39	3	He	85.063	0.5108	26604.77	0.0012	0.4112
Ca	44	3	He	5394.623	0.3678	18962.85	0.0001	0.003322
Ca	44	3	He	5298.376	0.3613	18812.59	0.0001	0.003322
Ca	44	3	He	5297.339	0.3612	18812.64	0.0001	0.003322
Ti	47	3	He	0.365	0.0002	10.00	0.0005	0
Ti	47	3	He	1.083	0.0006	30.00	0.0005	0
Ti	47	3	He	0.722	0.0004	20.00	0.0005	0
V	51	3	He	-0.003	0.0317	1636.10	0.0213	0.0318
V	51	3	He	-0.119	0.0293	1524.09	0.0213	0.0318
V	51	3	He	-0.145	0.0287	1496.09	0.0213	0.0318
Cr	52	3	He	0.241	0.05	2580.32	0.0294	0.04297
Cr	52	3	He	0.243	0.0501	2610.31	0.0294	0.04297
Cr	52	3	He	0.145	0.0472	2460.28	0.0294	0.04297
Mn	55	3	He	38.575	0.4824	24871.97	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	39.539	0.4944	25743.41	0.0124	0.002801
Mn	55	3	He	39.594	0.495	25783.71	0.0124	0.002801
Fe	57	3	He	33.871	0.0221	1140.09	0.0006	0.002732
Fe	57	3	He	26.777	0.0181	940.06	0.0006	0.002732
Fe	57	3	He	27.778	0.0186	970.07	0.0006	0.002732
Co	59	3	He	0.096	0.0089	460.03	0.0549	0.003644
Co	59	3	He	0.105	0.0094	490.03	0.0549	0.003644
Co	59	3	He	0.07	0.0075	390.02	0.0549	0.003644
Ni	60	3	He	-0.898	0.0058	510.03	0.0093	0.01413
Ni	60	3	He	-0.945	0.0054	460.02	0.0093	0.01413
Ni	60	3	He	-0.978	0.005	440.02	0.0093	0.01413
Cu	63	3	He	0.004	0.0094	830.05	0.0274	0.009321
Cu	63	3	He	0.076	0.0114	980.07	0.0274	0.009321
Cu	63	3	He	-0.001	0.0093	810.04	0.0274	0.009321
Zn	66	3	He	1.848	0.0116	1020.06	0.0031	0.005913
Zn	66	3	He	1.868	0.0116	1000.09	0.0031	0.005913
Zn	66	3	He	1.211	0.0096	840.05	0.0031	0.005913
As	75	3	He	0.368	0.0017	146.00	0.0021	0.0008698
As	75	3	He	0.355	0.0016	140.00	0.0021	0.0008698
As	75	3	He	0.236	0.0014	120.00	0.0021	0.0008698
Sr	88	3	He	19.234	0.1699	15378.86	0.0088	0.0006843
Sr	88	3	He	19.863	0.1755	15869.45	0.0088	0.0006843
Sr	88	3	He	19.877	0.1756	15889.25	0.0088	0.0006843
Mo	98	3	He	-0.043	0.0009	80.00	0.0219	0.001827
Mo	98	3	He	0.012	0.0021	190.01	0.0219	0.001827
Mo	98	3	He	0.002	0.0019	170.01	0.0219	0.001827
Ag	107	3	He	-0.001	0.001	90.00	0.047	0.001064
Ag	107	3	He	0.017	0.0019	170.01	0.047	0.001064
Ag	107	3	He	0.003	0.0012	110.00	0.047	0.001064
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Cd	111	3	He	0.001	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	0.009	0.0001	10.00	0.0053	6.086E-05
Sn	120	3	He	0.213	0.0181	1640.14	0.0154	0.01483
Sn	120	3	He	0.178	0.0176	1590.14	0.0154	0.01483
Sn	120	3	He	0.185	0.0177	1600.13	0.0154	0.01483
Sb	121	3	He	0.152	0.0024	220.01	0.0143	0.0002661
Sb	121	3	He	0.098	0.0017	150.01	0.0143	0.0002661
Sb	121	3	He	0.129	0.0021	190.01	0.0143	0.0002661
Ba	137	3	He	2.418	0.0118	1070.08	0.0048	0.0002665
Ba	137	3	He	2.05	0.0101	910.07	0.0048	0.0002665
Ba	137	3	He	1.979	0.0097	880.06	0.0048	0.0002665
Tl	205	3	He	0.073	0.0046	1900.23	0.0246	0.002755
Tl	205	3	He	0.055	0.0041	1670.19	0.0246	0.002755
Tl	205	3	He	0.058	0.0042	1720.18	0.0246	0.002755
Pb	208	3	He	0.029	0.0031	660.04	0.0324	0.002158
Pb	208	3	He	0.021	0.0028	660.04	0.0324	0.002158
Pb	208	3	He	0.007	0.0024	530.03	0.0324	0.002158
U	238	3	He	0.068	0.0037	1180.10	0.0492	0.0004023
U	238	3	He	0.066	0.0036	1160.10	0.0492	0.0004023
U	238	3	He	0.069	0.0038	1210.10	0.0492	0.0004023
Sc	45	1	No Gas			2530760.27		
Sc	45	1	No Gas			2615001.37		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2532212.62		
Ge	72	1	No Gas			1279050.06		
Ge	72	1	No Gas			1283554.28		
Ge	72	1	No Gas			1294675.22		
Sc	45	2	H2			205927.87		
Sc	45	2	H2			205769.35		
Sc	45	2	H2			205747.15		
Ge	72	2	H2			171164.45		
Ge	72	2	H2			173340.23		
Ge	72	2	H2			170496.70		
In	115	2	H2			409215.31		
In	115	2	H2			403779.02		
In	115	2	H2			407217.45		
Sc	45	3	He			51562.07		
Sc	45	3	He			52074.17		
Sc	45	3	He			52084.41		
Ge	72	3	He			88031.49		
Ge	72	3	He			85847.13		
Ge	72	3	He			87215.41		
In	115	3	He			90515.06		
In	115	3	He			90453.93		
In	115	3	He			90504.54		
Tb	159	3	He			417382.77		
Tb	159	3	He			407251.83		
Tb	159	3	He			411116.48		
Bi	209	3	He			316341.32		
Bi	209	3	He			319362.87		
Bi	209	3	He			319555.46		

Quantitation Report

Data File Name	067SMPL.d
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Acq Time	8/9/2023 3:54:57 PM
Sample Name	410-136848-X-6-A DU @5
Sample Type	Sample
Comment	T31
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

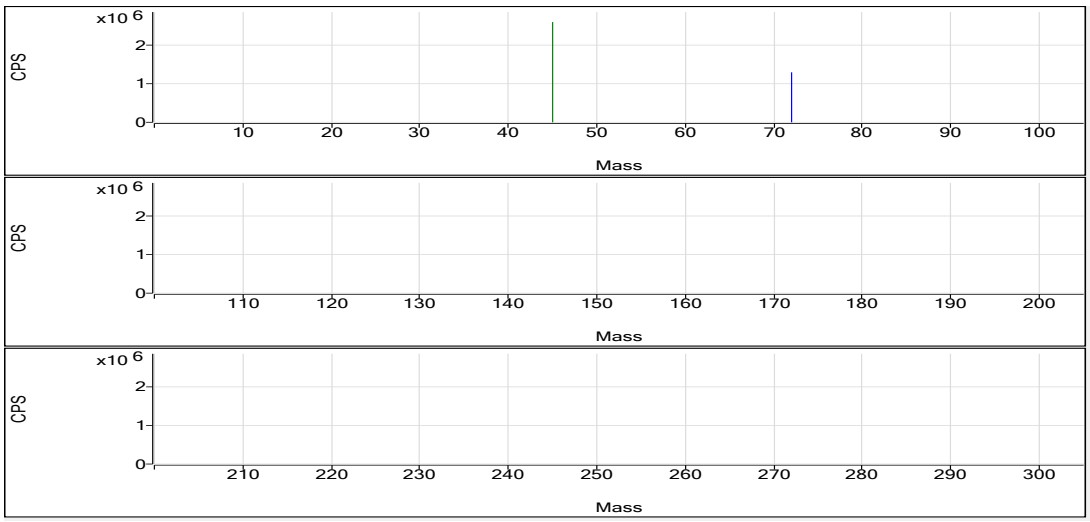
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.029	ppb	N/A	32.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.005	ppb	N/A	5.78	0.0000	Pulse	1.5000	3
Na	23	45	He	1697.671	ppb	0.9	335652.15	6.4683	Pulse	0.1000	3
Mg	24	45	He	2660.622	ppb	1.4	249674.90	4.8117	Pulse	0.1000	3
Al	27	45	He	3.034	ppb	17.0	200.01	0.0039	Pulse	0.1000	3
K	39	45	He	472.436	ppb	2.8	50043.25	0.9644	Pulse	0.1000	3
Ca	44	45	He	25054.250	ppb	1.3	87999.30	1.6959	Pulse	0.1000	3
Ti	47	45	He	0.240	ppb	86.6	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	-0.131	ppb	N/A	1505.42	0.0290	Pulse	0.5000	3
Cr	52	45	He	0.035	ppb	264.5	2283.58	0.0440	Pulse	0.1000	3
Mn	55	45	He	179.382	ppb	1.3	115861.67	2.2329	Pulse	0.1000	3
Fe	57	45	He	140.997	ppb	3.4	4327.48	0.0834	Pulse	0.1000	3
Co	59	45	He	0.061	ppb	7.0	363.35	0.0070	Pulse	0.1000	3
Ni	60	72	He	-0.939	ppb	N/A	480.02	0.0054	Pulse	0.1000	3
Cu	63	72	He	0.050	ppb	83.6	946.73	0.0107	Pulse	0.1000	3
Zn	66	72	He	1.688	ppb	9.1	983.41	0.0111	Pulse	0.1000	3
As	75	72	He	0.103	ppb	48.9	96.67	0.0011	Pulse	0.5000	3
Sr	88	115	He	89.226	ppb	0.4	71581.37	0.7858	Pulse	0.1000	3
Mo	98	115	He	-0.010	ppb	N/A	146.67	0.0016	Pulse	0.1000	3
Ag	107	115	He	-0.004	ppb	N/A	80.00	0.0009	Pulse	0.1000	3
Cd	111	115	He	-0.002	ppb	N/A	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.083	ppb	147.0	1466.80	0.0161	Pulse	0.1000	3
Sb	121	115	He	0.051	ppb	16.2	90.00	0.0010	Pulse	0.1000	3
Ba	137	115	He	9.182	ppb	4.5	4020.74	0.0441	Pulse	0.1000	3
Tl	205	159	He	-0.052	ppb	N/A	616.71	0.0015	Pulse	0.1000	3
Pb	208	159	He	0.019	ppb	12.1	1146.73	0.0028	Pulse	0.1000	3
U	238	209	He	0.108	ppb	9.2	1816.87	0.0057	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2594139.86	3.5	99.5	Analog	0.1000	3
No Gas	Ge	72	1293385.71	1.7	100.3	Pulse	0.1000	3
H2	Sc	45	206990.77	0.6	100.4	Pulse	0.1000	3
H2	Ge	72	172789.19	0.9	106.2	Pulse	0.1000	3
H2	In	115	410273.95	0.4	101.6	Pulse	0.1000	3
He	Sc	45	51893.20	1.1	101.4	Pulse	0.1000	3
He	Ge	72	88651.06	1.9	108.3	Pulse	0.1000	3
He	In	115	91099.78	1.2	103.9	Pulse	0.1000	3
He	Tb	159	413637.22	0.7	103.0	Pulse	0.1000	3
He	Bi	209	318905.83	0.5	104.2	Pulse	0.1000	3

No Gas



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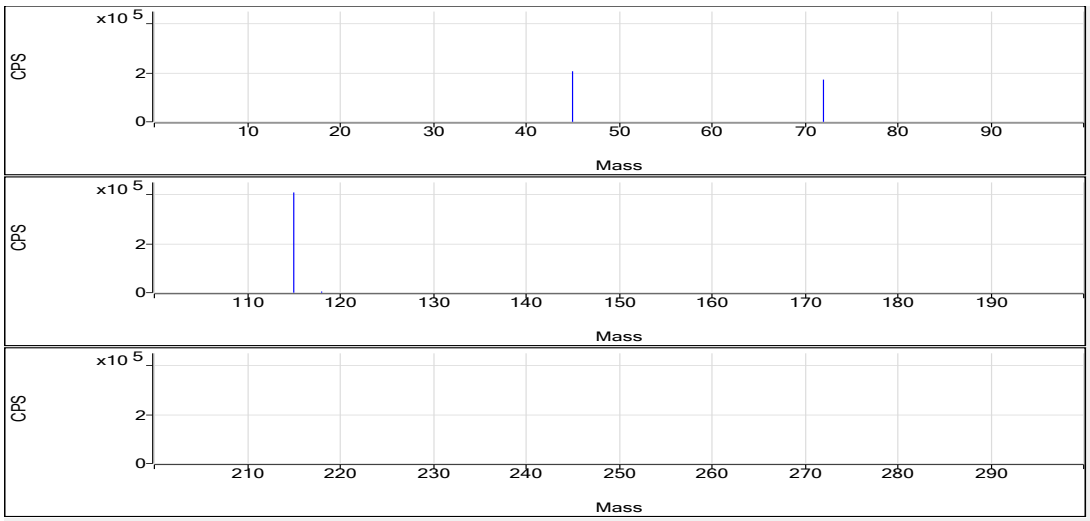
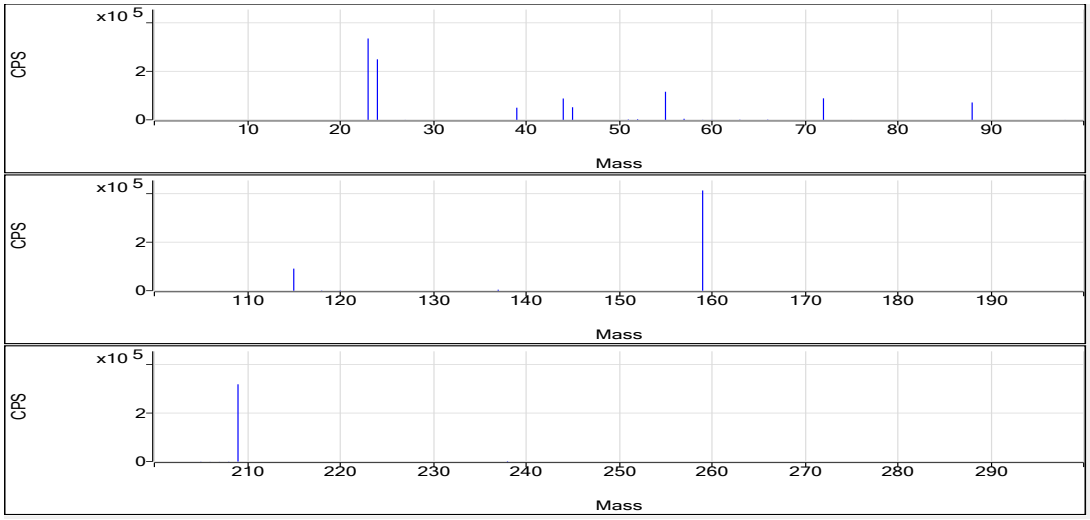


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.026	0	38.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.033	0	26.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.029	0	34.00	0.0007	3.404E-05
Se	78	2	H2	-0.011	0	5.33	0.0004	3.546E-05
Se	78	2	H2	-0.001	0	6.00	0.0004	3.546E-05
Se	78	2	H2	-0.001	0	6.00	0.0004	3.546E-05
Na	23	3	He	1701.561	6.4821	339954.10	0.0036	0.4171
Na	23	3	He	1711.326	6.5169	334589.88	0.0036	0.4171
Na	23	3	He	1680.125	6.4057	332412.46	0.0036	0.4171
Mg	24	3	He	2616.702	4.7324	248189.25	0.0018	0.004553
Mg	24	3	He	2681.731	4.8499	249000.68	0.0018	0.004553
Mg	24	3	He	2683.434	4.853	251834.78	0.0018	0.004553
Al	27	3	He	3.295	0.004	210.01	0.0006	0.002085
Al	27	3	He	2.44	0.0035	180.01	0.0006	0.002085
Al	27	3	He	3.368	0.004	210.01	0.0006	0.002085
K	39	3	He	457.051	0.9464	49635.25	0.0012	0.4112
K	39	3	He	479.425	0.9726	49936.38	0.0012	0.4112
K	39	3	He	480.831	0.9743	50558.13	0.0012	0.4112
Ca	44	3	He	24664.841	1.6696	87562.45	0.0001	0.003322
Ca	44	3	He	25248.652	1.7091	87745.45	0.0001	0.003322
Ca	44	3	He	25249.257	1.7091	88690.01	0.0001	0.003322
Ti	47	3	He	0.359	0.0002	10.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.362	0.0002	10.00	0.0005	0
V	51	3	He	-0.114	0.0294	1540.09	0.0213	0.0318
V	51	3	He	-0.158	0.0284	1460.09	0.0213	0.0318
V	51	3	He	-0.121	0.0292	1516.09	0.0213	0.0318
Cr	52	3	He	0.141	0.0471	2470.27	0.0294	0.04297
Cr	52	3	He	-0.017	0.0425	2180.23	0.0294	0.04297
Cr	52	3	He	-0.019	0.0424	2200.24	0.0294	0.04297
Mn	55	3	He	177.337	2.2075	115770.90	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	182.053	2.2661	116345.74	0.0124	0.002801
Mn	55	3	He	178.756	2.2251	115468.37	0.0124	0.002801
Fe	57	3	He	140.555	0.0832	4360.81	0.0006	0.002732
Fe	57	3	He	146.062	0.0863	4430.85	0.0006	0.002732
Fe	57	3	He	136.373	0.0808	4190.77	0.0006	0.002732
Co	59	3	He	0.062	0.0071	370.01	0.0549	0.003644
Co	59	3	He	0.065	0.0072	370.01	0.0549	0.003644
Co	59	3	He	0.056	0.0067	350.02	0.0549	0.003644
Ni	60	3	He	-0.904	0.0057	520.03	0.0093	0.01413
Ni	60	3	He	-0.968	0.0051	450.02	0.0093	0.01413
Ni	60	3	He	-0.945	0.0054	470.02	0.0093	0.01413
Cu	63	3	He	0.002	0.0094	850.05	0.0274	0.009321
Cu	63	3	He	0.068	0.0112	980.08	0.0274	0.009321
Cu	63	3	He	0.08	0.0115	1010.07	0.0274	0.009321
Zn	66	3	He	1.56	0.0107	970.07	0.0031	0.005913
Zn	66	3	He	1.647	0.011	960.07	0.0031	0.005913
Zn	66	3	He	1.858	0.0116	1020.09	0.0031	0.005913
As	75	3	He	0.088	0.0011	96.00	0.0021	0.0008698
As	75	3	He	0.159	0.0012	106.00	0.0021	0.0008698
As	75	3	He	0.062	0.001	88.00	0.0021	0.0008698
Sr	88	3	He	88.93	0.7832	72134.23	0.0088	0.0006843
Sr	88	3	He	89.094	0.7846	71540.76	0.0088	0.0006843
Sr	88	3	He	89.654	0.7895	71069.11	0.0088	0.0006843
Mo	98	3	He	-0.014	0.0015	140.01	0.0219	0.001827
Mo	98	3	He	-0.018	0.0014	130.00	0.0219	0.001827
Mo	98	3	He	0.003	0.0019	170.01	0.0219	0.001827
Ag	107	3	He	-0.002	0.001	90.00	0.047	0.001064
Ag	107	3	He	-0.009	0.0007	60.00	0.047	0.001064
Ag	107	3	He	-0.001	0.001	90.00	0.047	0.001064
Cd	111	3	He	0.005	0.0001	8.00	0.0053	6.086E-05
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Sn	120	3	He	-0.039	0.0142	1310.12	0.0154	0.01483
Sn	120	3	He	0.084	0.0161	1470.14	0.0154	0.01483
Sn	120	3	He	0.205	0.018	1620.15	0.0154	0.01483
Sb	121	3	He	0.05	0.001	90.00	0.0143	0.0002661
Sb	121	3	He	0.043	0.0009	80.00	0.0143	0.0002661
Sb	121	3	He	0.059	0.0011	100.00	0.0143	0.0002661
Ba	137	3	He	9.193	0.0442	4070.76	0.0048	0.0002665
Ba	137	3	He	8.759	0.0421	3840.64	0.0048	0.0002665
Ba	137	3	He	9.594	0.0461	4150.82	0.0048	0.0002665
Tl	205	3	He	-0.043	0.0017	710.05	0.0246	0.002755
Tl	205	3	He	-0.051	0.0015	620.04	0.0246	0.002755
Tl	205	3	He	-0.061	0.0013	520.03	0.0246	0.002755
Pb	208	3	He	0.019	0.0028	660.04	0.0324	0.002158
Pb	208	3	He	0.017	0.0027	600.03	0.0324	0.002158
Pb	208	3	He	0.021	0.0029	630.04	0.0324	0.002158
U	238	3	He	0.107	0.0056	1810.21	0.0492	0.0004023
U	238	3	He	0.098	0.0052	1670.18	0.0492	0.0004023
U	238	3	He	0.118	0.0062	1970.22	0.0492	0.0004023
Sc	45	1	No Gas			2517675.27		
Sc	45	1	No Gas			2692654.65		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2572089.65		
Ge	72	1	No Gas			1275243.18		
Ge	72	1	No Gas			1318485.61		
Ge	72	1	No Gas			1286428.34		
Sc	45	2	H2			208179.63		
Sc	45	2	H2			205807.67		
Sc	45	2	H2			206985.02		
Ge	72	2	H2			174534.14		
Ge	72	2	H2			171872.01		
Ge	72	2	H2			171961.42		
In	115	2	H2			411016.75		
In	115	2	H2			411527.61		
In	115	2	H2			408277.49		
Sc	45	3	He			52444.87		
Sc	45	3	He			51341.65		
Sc	45	3	He			51893.09		
Ge	72	3	He			90626.37		
Ge	72	3	He			87516.69		
Ge	72	3	He			87810.13		
In	115	3	He			92114.84		
In	115	3	He			91188.15		
In	115	3	He			90021.38		
Tb	159	3	He			416371.79		
Tb	159	3	He			414225.19		
Tb	159	3	He			410314.68		
Bi	209	3	He			320491.87		
Bi	209	3	He			318939.17		
Bi	209	3	He			317286.46		

Quantitation Report

Data File Name	068SMPL.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H09B00.b
Acq Time	8/9/2023 3:57:01 PM
Sample Name	410-136848-V-6-A MS @5
Sample Type	Sample
Comment	T31
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

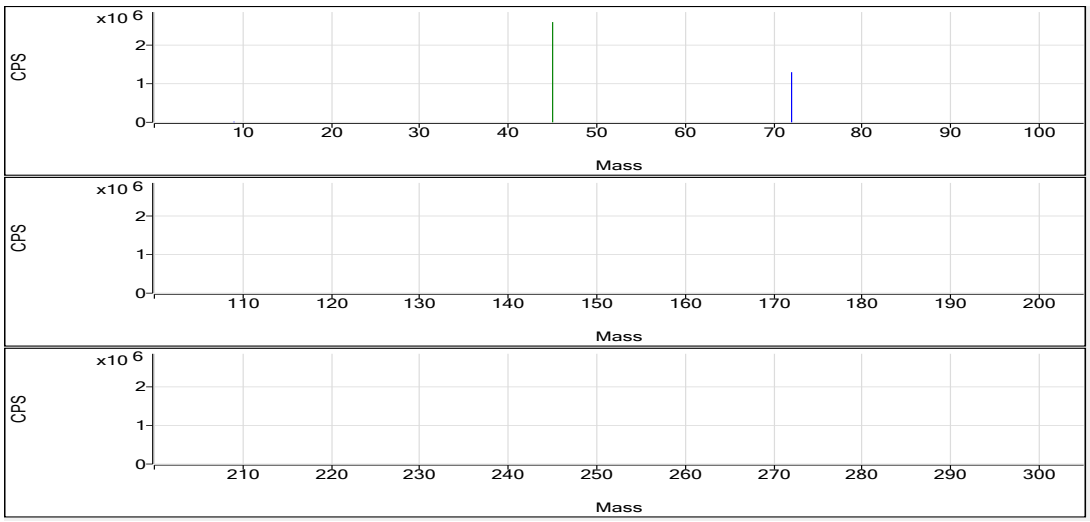
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	9.000	ppb	1.1	17199.27	0.0066	Pulse	0.5000	3
Se	78	72	H2	17.584	ppb	2.8	1343.84	0.0077	Pulse	1.5000	3
Na	23	45	He	2565.753	ppb	1.8	493342.13	9.5625	Pulse	0.1000	3
Mg	24	45	He	3570.919	ppb	0.2	333122.86	6.4565	Pulse	0.1000	3
Al	27	45	He	916.914	ppb	3.6	27666.68	0.5363	Pulse	0.1000	3
K	39	45	He	1383.309	ppb	0.4	104797.09	2.0311	Pulse	0.1000	3
Ca	44	45	He	25646.359	ppb	0.9	89561.79	1.7359	Pulse	0.1000	3
Ti	47	45	He	95.628	ppb	5.0	2623.66	0.0509	Pulse	0.1000	3
V	51	45	He	93.432	ppb	1.0	104079.65	2.0173	Pulse	0.5000	3
Cr	52	45	He	89.287	ppb	1.4	137696.36	2.6689	Pulse	0.1000	3
Mn	55	45	He	271.174	ppb	1.1	174094.76	3.3741	Pulse	0.1000	3
Fe	57	45	He	1090.656	ppb	0.6	32336.96	0.6268	Pulse	0.1000	3
Co	59	45	He	88.787	ppb	0.3	251626.97	4.8769	Pulse	0.1000	3
Ni	60	72	He	85.835	ppb	0.7	71293.27	0.8109	Pulse	0.1000	3
Cu	63	72	He	83.011	ppb	0.8	200968.22	2.2860	Pulse	0.1000	3
Zn	66	72	He	89.001	ppb	3.6	24541.70	0.2792	Pulse	0.1000	3
As	75	72	He	90.581	ppb	0.3	17164.36	0.1952	Pulse	0.5000	3
Sr	88	115	He	100.120	ppb	0.9	78759.21	0.8816	Pulse	0.1000	3
Mo	98	115	He	9.308	ppb	0.6	18412.67	0.2061	Pulse	0.1000	3
Ag	107	115	He	9.076	ppb	2.2	38233.16	0.4280	Pulse	0.1000	3
Cd	111	115	He	9.394	ppb	2.4	4474.07	0.0501	Pulse	0.5000	3
Sn	120	115	He	19.305	ppb	1.5	27922.36	0.3125	Pulse	0.1000	3
Sb	121	115	He	19.192	ppb	0.6	24455.68	0.2738	Pulse	0.1000	3
Ba	137	115	He	104.071	ppb	1.2	44449.67	0.4976	Pulse	0.1000	3
Tl	205	159	He	18.347	ppb	0.3	187030.22	0.4534	Pulse	0.1000	3
Pb	208	159	He	9.302	ppb	1.0	125235.22	0.3036	Pulse	0.1000	3
U	238	209	He	9.283	ppb	1.3	144400.15	0.4576	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2609636.78	1.7	100.1	Analog	0.1000	3
No Gas	Ge	72	1304639.41	0.8	101.2	Pulse	0.1000	3
H2	Sc	45	207420.30	1.4	100.7	Pulse	0.1000	3
H2	Ge	72	173560.46	0.3	106.6	Pulse	0.1000	3
H2	In	115	405979.73	1.0	100.6	Pulse	0.1000	3
He	Sc	45	51595.52	0.7	100.8	Pulse	0.1000	3
He	Ge	72	87916.59	0.7	107.4	Pulse	0.1000	3
He	In	115	89337.14	1.4	101.9	Pulse	0.1000	3
He	Tb	159	412539.95	0.1	102.7	Pulse	0.1000	3
He	Bi	209	315597.15	0.6	103.1	Pulse	0.1000	3

No Gas



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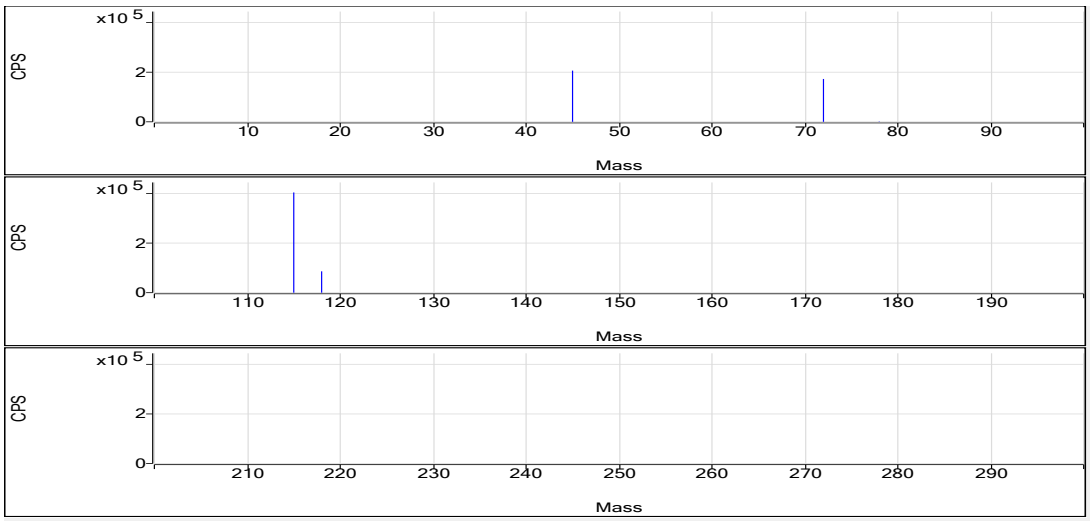
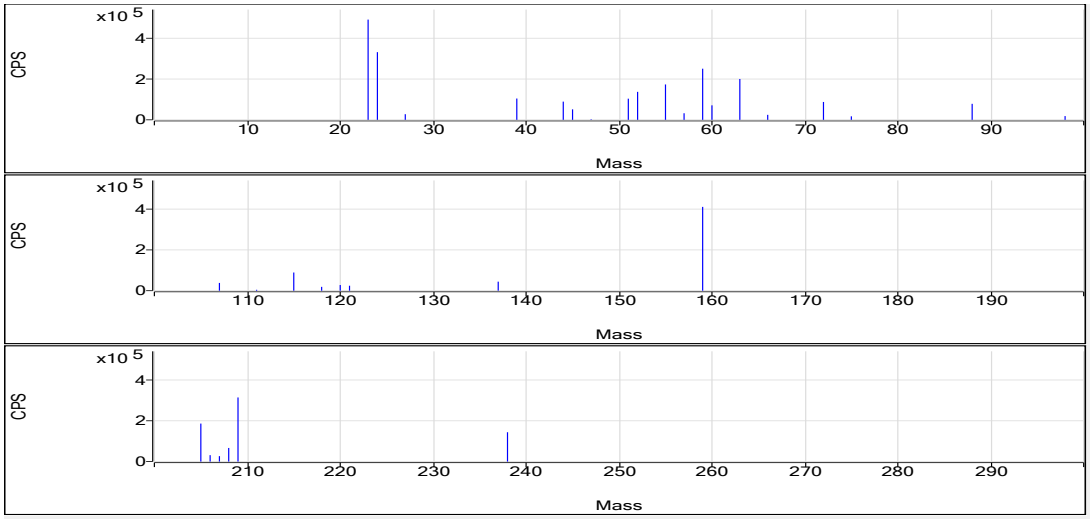


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	8.988	0.0066	17476.24	0.0007	3.404E-05
Be	9	1	No Gas	8.905	0.0065	17009.73	0.0007	3.404E-05
Be	9	1	No Gas	9.108	0.0067	17111.85	0.0007	3.404E-05
Se	78	2	H2	17.179	0.0076	1316.73	0.0004	3.546E-05
Se	78	2	H2	18.125	0.008	1384.07	0.0004	3.546E-05
Se	78	2	H2	17.449	0.0077	1330.73	0.0004	3.546E-05
Na	23	3	He	2608.767	9.7158	497648.23	0.0036	0.4171
Na	23	3	He	2518.545	9.3942	487872.77	0.0036	0.4171
Na	23	3	He	2569.947	9.5774	494505.38	0.0036	0.4171
Mg	24	3	He	3577.361	6.4681	331299.80	0.0018	0.004553
Mg	24	3	He	3573.222	6.4606	335521.99	0.0018	0.004553
Mg	24	3	He	3562.172	6.4406	332546.79	0.0018	0.004553
Al	27	3	He	923.565	0.5401	27666.71	0.0006	0.002085
Al	27	3	He	881.367	0.5156	26774.98	0.0006	0.002085
Al	27	3	He	945.81	0.5531	28558.34	0.0006	0.002085
K	39	3	He	1388.72	2.0375	104361.10	0.0012	0.4112
K	39	3	He	1383.037	2.0308	105467.84	0.0012	0.4112
K	39	3	He	1378.17	2.0251	104562.34	0.0012	0.4112
Ca	44	3	He	25892.514	1.7525	89766.59	0.0001	0.003322
Ca	44	3	He	25421.768	1.7207	89364.24	0.0001	0.003322
Ca	44	3	He	25624.794	1.7345	89554.55	0.0001	0.003322
Ti	47	3	He	98.756	0.0525	2690.33	0.0005	0
Ti	47	3	He	90.159	0.048	2490.31	0.0005	0
Ti	47	3	He	97.969	0.0521	2690.35	0.0005	0
V	51	3	He	94.496	2.0399	104485.63	0.0213	0.0318
V	51	3	He	92.625	2.0002	103875.54	0.0213	0.0318
V	51	3	He	93.176	2.0119	103877.80	0.0213	0.0318
Cr	52	3	He	90.746	2.7118	138901.46	0.0294	0.04297
Cr	52	3	He	88.661	2.6505	137649.38	0.0294	0.04297
Cr	52	3	He	88.454	2.6444	136538.25	0.0294	0.04297
Mn	55	3	He	269.048	3.3476	171468.12	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	274.657	3.4174	177476.31	0.0124	0.002801
Mn	55	3	He	269.816	3.3572	173339.84	0.0124	0.002801
Fe	57	3	He	1097.626	0.6307	32306.88	0.0006	0.002732
Fe	57	3	He	1089.578	0.6261	32517.34	0.0006	0.002732
Fe	57	3	He	1084.763	0.6234	32186.66	0.0006	0.002732
Co	59	3	He	88.715	4.873	249596.60	0.0549	0.003644
Co	59	3	He	88.536	4.8631	252559.37	0.0549	0.003644
Co	59	3	He	89.11	4.8947	252724.94	0.0549	0.003644
Ni	60	3	He	86.425	0.8164	71999.73	0.0093	0.01413
Ni	60	3	He	85.782	0.8104	70673.15	0.0093	0.01413
Ni	60	3	He	85.298	0.8059	71206.93	0.0093	0.01413
Cu	63	3	He	82.479	2.2714	200317.30	0.0274	0.009321
Cu	63	3	He	83.791	2.3074	201213.75	0.0274	0.009321
Cu	63	3	He	82.764	2.2792	201373.61	0.0274	0.009321
Zn	66	3	He	85.709	0.2691	23730.23	0.0031	0.005913
Zn	66	3	He	92.126	0.2888	25182.80	0.0031	0.005913
Zn	66	3	He	89.169	0.2797	24712.07	0.0031	0.005913
As	75	3	He	90.764	0.1956	17252.49	0.0021	0.0008698
As	75	3	He	90.319	0.1947	16976.14	0.0021	0.0008698
As	75	3	He	90.661	0.1954	17264.46	0.0021	0.0008698
Sr	88	3	He	100.708	0.8868	79956.35	0.0088	0.0006843
Sr	88	3	He	100.611	0.8859	77844.05	0.0088	0.0006843
Sr	88	3	He	99.04	0.8721	78477.23	0.0088	0.0006843
Mo	98	3	He	9.369	0.2074	18702.98	0.0219	0.001827
Mo	98	3	He	9.284	0.2056	18062.25	0.0219	0.001827
Mo	98	3	He	9.271	0.2053	18472.78	0.0219	0.001827
Ag	107	3	He	8.853	0.4175	37641.42	0.047	0.001064
Ag	107	3	He	9.126	0.4303	37812.26	0.047	0.001064
Ag	107	3	He	9.249	0.4361	39245.81	0.047	0.001064
Cd	111	3	He	9.15	0.0488	4398.71	0.0053	6.086E-05
Cd	111	3	He	9.603	0.0512	4498.74	0.0053	6.086E-05
Cd	111	3	He	9.431	0.0503	4524.76	0.0053	6.086E-05
Sn	120	3	He	19.631	0.3175	28630.63	0.0154	0.01483
Sn	120	3	He	19.074	0.309	27147.43	0.0154	0.01483
Sn	120	3	He	19.209	0.311	27989.03	0.0154	0.01483
Sb	121	3	He	19.255	0.2746	24762.89	0.0143	0.0002661
Sb	121	3	He	19.262	0.2748	24141.79	0.0143	0.0002661
Sb	121	3	He	19.058	0.2719	24462.36	0.0143	0.0002661
Ba	137	3	He	102.976	0.4924	44392.85	0.0048	0.0002665
Ba	137	3	He	105.358	0.5038	44262.23	0.0048	0.0002665
Ba	137	3	He	103.88	0.4967	44693.94	0.0048	0.0002665
Tl	205	3	He	18.3	0.4522	186712.91	0.0246	0.002755
Tl	205	3	He	18.329	0.4529	186956.64	0.0246	0.002755
Tl	205	3	He	18.412	0.455	187421.11	0.0246	0.002755
Pb	208	3	He	9.226	0.3011	66549.94	0.0324	0.002158
Pb	208	3	He	9.271	0.3026	66539.74	0.0324	0.002158
Pb	208	3	He	9.408	0.307	67815.72	0.0324	0.002158
U	238	3	He	9.166	0.4518	142865.69	0.0492	0.0004023
U	238	3	He	9.275	0.4571	144898.81	0.0492	0.0004023
U	238	3	He	9.408	0.4637	145435.95	0.0492	0.0004023
Sc	45	1	No Gas			2655098.71		
Sc	45	1	No Gas			2608076.37		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2565735.27		
Ge	72	1	No Gas			1316941.23		
Ge	72	1	No Gas			1300614.28		
Ge	72	1	No Gas			1296362.72		
Sc	45	2	H2			205877.48		
Sc	45	2	H2			205645.52		
Sc	45	2	H2			210737.91		
Ge	72	2	H2			174049.98		
Ge	72	2	H2			173441.52		
Ge	72	2	H2			173189.88		
In	115	2	H2			402129.72		
In	115	2	H2			405732.49		
In	115	2	H2			410076.99		
Sc	45	3	He			51220.63		
Sc	45	3	He			51933.45		
Sc	45	3	He			51632.49		
Ge	72	3	He			88191.88		
Ge	72	3	He			87204.97		
Ge	72	3	He			88352.92		
In	115	3	He			90303.45		
In	115	3	He			88018.83		
In	115	3	He			90131.56		
Tb	159	3	He			412888.04		
Tb	159	3	He			412772.26		
Tb	159	3	He			411959.56		
Bi	209	3	He			316220.07		
Bi	209	3	He			316961.28		
Bi	209	3	He			313610.09		

Quantitation Report

Data File Name	069SMPL.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H09B00.b
Acq Time	8/9/2023 3:59:03 PM
Sample Name	410-136848-W-6-A MSD @5
Sample Type	Sample
Comment	T31
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

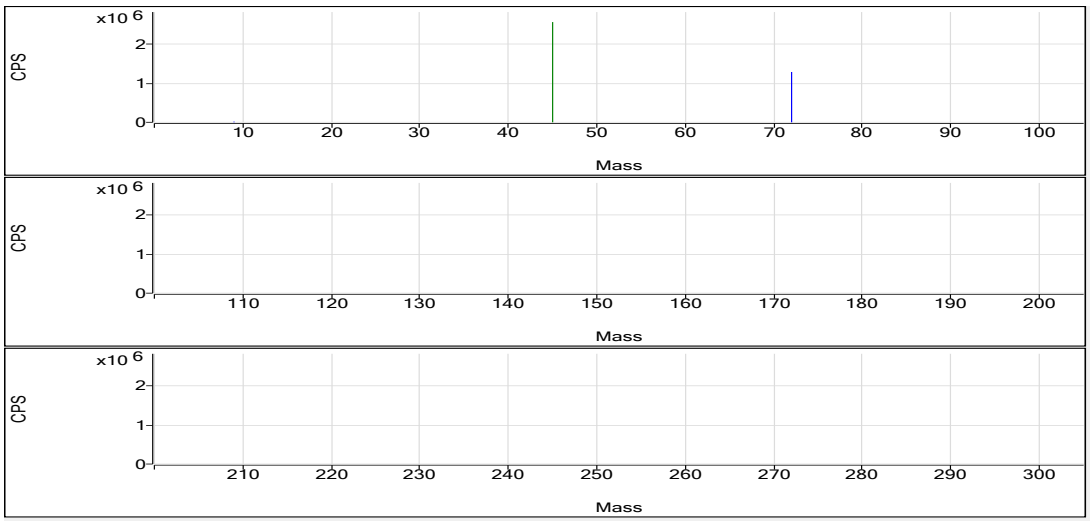
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	9.329	ppb	2.1	17591.04	0.0068	Pulse	0.5000	3
Se	78	72	H2	18.292	ppb	1.5	1394.74	0.0081	Pulse	1.5000	3
Na	23	45	He	2673.020	ppb	1.9	506160.94	9.9448	Pulse	0.1000	3
Mg	24	45	He	3722.547	ppb	1.4	342553.53	6.7304	Pulse	0.1000	3
Al	27	45	He	954.903	ppb	1.5	28424.73	0.5584	Pulse	0.1000	3
K	39	45	He	1453.749	ppb	2.4	107567.41	2.1136	Pulse	0.1000	3
Ca	44	45	He	27013.663	ppb	2.0	93043.82	1.8283	Pulse	0.1000	3
Ti	47	45	He	95.258	ppb	13.4	2577.00	0.0507	Pulse	0.1000	3
V	51	45	He	96.169	ppb	1.5	105630.02	2.0755	Pulse	0.5000	3
Cr	52	45	He	91.204	ppb	0.7	138716.38	2.7253	Pulse	0.1000	3
Mn	55	45	He	281.775	ppb	1.6	178426.35	3.5059	Pulse	0.1000	3
Fe	57	45	He	1118.550	ppb	0.8	32714.61	0.6427	Pulse	0.1000	3
Co	59	45	He	90.830	ppb	1.8	253907.25	4.9890	Pulse	0.1000	3
Ni	60	72	He	90.234	ppb	2.8	73842.77	0.8518	Pulse	0.1000	3
Cu	63	72	He	85.110	ppb	1.4	203204.53	2.3435	Pulse	0.1000	3
Zn	66	72	He	93.206	ppb	2.7	25322.95	0.2921	Pulse	0.1000	3
As	75	72	He	93.798	ppb	0.7	17529.44	0.2021	Pulse	0.5000	3
Sr	88	115	He	103.285	ppb	1.5	80609.51	0.9095	Pulse	0.1000	3
Mo	98	115	He	9.510	ppb	2.1	18656.34	0.2105	Pulse	0.1000	3
Ag	107	115	He	9.299	ppb	1.6	38861.62	0.4385	Pulse	0.1000	3
Cd	111	115	He	9.361	ppb	1.6	4423.39	0.0499	Pulse	0.5000	3
Sn	120	115	He	19.805	ppb	3.0	28379.84	0.3202	Pulse	0.1000	3
Sb	121	115	He	19.638	ppb	2.3	24822.88	0.2801	Pulse	0.1000	3
Ba	137	115	He	106.948	ppb	1.6	45318.97	0.5114	Pulse	0.1000	3
Tl	205	159	He	18.948	ppb	0.7	191222.01	0.4681	Pulse	0.1000	3
Pb	208	159	He	9.668	ppb	1.9	128851.92	0.3155	Pulse	0.1000	3
U	238	209	He	9.458	ppb	1.0	147875.64	0.4662	Pulse	0.1000	3

ISTD Table:

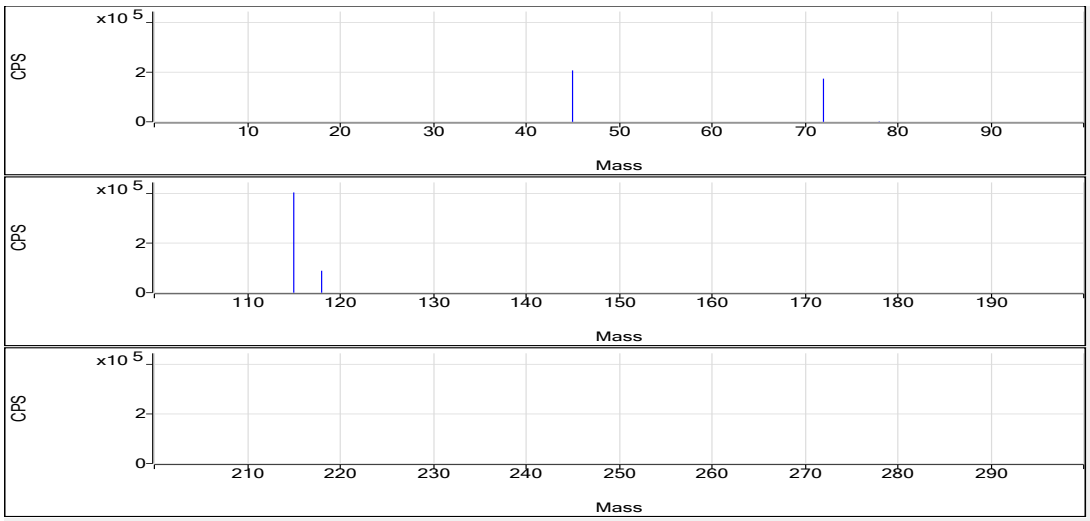
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2575694.86	1.2	98.8	Analog	0.1000	3
No Gas	Ge	72	1292955.66	1.0	100.3	Pulse	0.1000	3
H2	Sc	45	206280.88	1.0	100.1	Pulse	0.1000	3
H2	Ge	72	173195.76	1.3	106.4	Pulse	0.1000	3
H2	In	115	402161.83	0.5	99.6	Pulse	0.1000	3
He	Sc	45	50903.20	1.7	99.4	Pulse	0.1000	3
He	Ge	72	86722.98	1.9	105.9	Pulse	0.1000	3
He	In	115	88627.26	0.6	101.1	Pulse	0.1000	3
He	Tb	159	408485.88	0.4	101.7	Pulse	0.1000	3
He	Bi	209	317197.69	0.5	103.6	Pulse	0.1000	3

No Gas

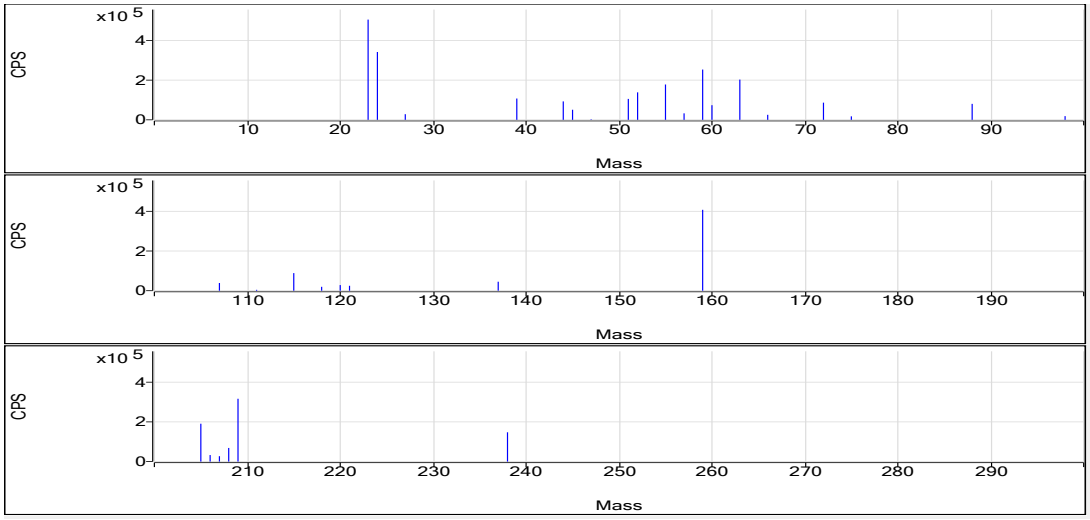


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	9.479	0.0069	17702.51	0.0007	3.404E-05
Be	9	1	No Gas	9.397	0.0069	17662.46	0.0007	3.404E-05
Be	9	1	No Gas	9.113	0.0067	17408.15	0.0007	3.404E-05
Se	78	2	H2	18.241	0.008	1411.40	0.0004	3.546E-05
Se	78	2	H2	18.041	0.0079	1368.07	0.0004	3.546E-05
Se	78	2	H2	18.594	0.0082	1404.74	0.0004	3.546E-05
Na	23	3	He	2715.234	10.0953	515570.97	0.0036	0.4171
Na	23	3	He	2687.581	9.9967	499298.31	0.0036	0.4171
Na	23	3	He	2616.247	9.7424	503613.55	0.0036	0.4171
Mg	24	3	He	3748.518	6.7773	346122.34	0.0018	0.004553
Mg	24	3	He	3757.064	6.7928	339274.10	0.0018	0.004553
Mg	24	3	He	3662.059	6.6211	342264.14	0.0018	0.004553
Al	27	3	He	970.743	0.5676	28989.36	0.0006	0.002085
Al	27	3	He	948.935	0.5549	27716.62	0.0006	0.002085
Al	27	3	He	945.031	0.5527	28568.20	0.0006	0.002085
K	39	3	He	1456.83	2.1172	108128.84	0.0012	0.4112
K	39	3	He	1487.008	2.1526	107513.62	0.0012	0.4112
K	39	3	He	1417.409	2.0711	107059.78	0.0012	0.4112
Ca	44	3	He	26864.323	1.8182	92856.49	0.0001	0.003322
Ca	44	3	He	27625.018	1.8696	93379.12	0.0001	0.003322
Ca	44	3	He	26551.648	1.7971	92895.86	0.0001	0.003322
Ti	47	3	He	81.371	0.0433	2210.24	0.0005	0
Ti	47	3	He	106.549	0.0567	2830.41	0.0005	0
Ti	47	3	He	97.854	0.052	2690.34	0.0005	0
V	51	3	He	95.596	2.0633	105373.98	0.0213	0.0318
V	51	3	He	97.85	2.1112	105446.80	0.0213	0.0318
V	51	3	He	95.06	2.0519	106069.27	0.0213	0.0318
Cr	52	3	He	91.468	2.7331	139578.65	0.0294	0.04297
Cr	52	3	He	91.69	2.7396	136831.26	0.0294	0.04297
Cr	52	3	He	90.455	2.7033	139739.23	0.0294	0.04297
Mn	55	3	He	281.36	3.5007	178782.93	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	286.525	3.5649	178054.53	0.0124	0.002801
Mn	55	3	He	277.439	3.452	178441.60	0.0124	0.002801
Fe	57	3	He	1127.285	0.6477	33078.83	0.0006	0.002732
Fe	57	3	He	1119.788	0.6434	32136.40	0.0006	0.002732
Fe	57	3	He	1108.579	0.637	32928.60	0.0006	0.002732
Co	59	3	He	90.827	4.9889	254787.30	0.0549	0.003644
Co	59	3	He	92.436	5.0772	253589.57	0.0549	0.003644
Co	59	3	He	89.225	4.901	253344.88	0.0549	0.003644
Ni	60	3	He	90.055	0.8501	74312.22	0.0093	0.01413
Ni	60	3	He	92.811	0.8757	74311.66	0.0093	0.01413
Ni	60	3	He	87.835	0.8295	72904.44	0.0093	0.01413
Cu	63	3	He	84.752	2.3337	204007.75	0.0274	0.009321
Cu	63	3	He	86.404	2.379	201888.81	0.0274	0.009321
Cu	63	3	He	84.173	2.3178	203717.03	0.0274	0.009321
Zn	66	3	He	92.719	0.2906	25403.10	0.0031	0.005913
Zn	66	3	He	95.953	0.3005	25503.23	0.0031	0.005913
Zn	66	3	He	90.946	0.2852	25062.53	0.0031	0.005913
As	75	3	He	93.077	0.2006	17534.78	0.0021	0.0008698
As	75	3	He	94.099	0.2028	17208.39	0.0021	0.0008698
As	75	3	He	94.219	0.203	17845.16	0.0021	0.0008698
Sr	88	3	He	104.218	0.9177	81695.26	0.0088	0.0006843
Sr	88	3	He	101.551	0.8942	78688.93	0.0088	0.0006843
Sr	88	3	He	104.086	0.9165	81444.33	0.0088	0.0006843
Mo	98	3	He	9.347	0.2069	18422.52	0.0219	0.001827
Mo	98	3	He	9.726	0.2153	18943.58	0.0219	0.001827
Mo	98	3	He	9.456	0.2093	18602.91	0.0219	0.001827
Ag	107	3	He	9.206	0.4341	38644.17	0.047	0.001064
Ag	107	3	He	9.216	0.4346	38243.20	0.047	0.001064
Ag	107	3	He	9.474	0.4467	39697.50	0.047	0.001064
Cd	111	3	He	9.491	0.0506	4504.75	0.0053	6.086E-05
Cd	111	3	He	9.396	0.0501	4408.72	0.0053	6.086E-05
Cd	111	3	He	9.195	0.049	4356.70	0.0053	6.086E-05
Sn	120	3	He	20.149	0.3255	28981.13	0.0154	0.01483
Sn	120	3	He	20.144	0.3255	28640.38	0.0154	0.01483
Sn	120	3	He	19.12	0.3097	27518.00	0.0154	0.01483
Sb	121	3	He	19.351	0.276	24572.45	0.0143	0.0002661
Sb	121	3	He	20.16	0.2876	25303.81	0.0143	0.0002661
Sb	121	3	He	19.402	0.2767	24592.37	0.0143	0.0002661
Ba	137	3	He	108.14	0.517	46028.61	0.0048	0.0002665
Ba	137	3	He	107.657	0.5147	45295.29	0.0048	0.0002665
Ba	137	3	He	105.049	0.5023	44633.02	0.0048	0.0002665
Tl	205	3	He	18.916	0.4673	189939.08	0.0246	0.002755
Tl	205	3	He	18.84	0.4655	190528.04	0.0246	0.002755
Tl	205	3	He	19.087	0.4715	193198.90	0.0246	0.002755
Pb	208	3	He	9.874	0.3221	70760.95	0.0324	0.002158
Pb	208	3	He	9.544	0.3114	67886.28	0.0324	0.002158
Pb	208	3	He	9.587	0.3128	67605.73	0.0324	0.002158
U	238	3	He	9.564	0.4714	148661.81	0.0492	0.0004023
U	238	3	He	9.412	0.4639	147335.80	0.0492	0.0004023
U	238	3	He	9.4	0.4633	147629.30	0.0492	0.0004023
Sc	45	1	No Gas			2550951.68		
Sc	45	1	No Gas			2567330.43		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2608802.46		
Ge	72	1	No Gas			1289400.29		
Ge	72	1	No Gas			1282546.86		
Ge	72	1	No Gas			1306919.82		
Sc	45	2	H2			208616.27		
Sc	45	2	H2			204713.53		
Sc	45	2	H2			205512.83		
Ge	72	2	H2			175749.84		
Ge	72	2	H2			172227.63		
Ge	72	2	H2			171609.80		
In	115	2	H2			404409.45		
In	115	2	H2			400673.00		
In	115	2	H2			401403.04		
Sc	45	3	He			51070.55		
Sc	45	3	He			49946.29		
Sc	45	3	He			51692.76		
Ge	72	3	He			87416.77		
Ge	72	3	He			84861.61		
Ge	72	3	He			87890.57		
In	115	3	He			89176.75		
In	115	3	He			88149.41		
In	115	3	He			89015.05		
Tb	159	3	He			406421.99		
Tb	159	3	He			409323.00		
Tb	159	3	He			409712.65		
Bi	209	3	He			315359.00		
Bi	209	3	He			317594.45		
Bi	209	3	He			318639.62		

Quantitation Report

Data File Name	070SMPL.d
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Acq Time	8/9/2023 4:01:07 PM
Sample Name	410-136892-Q-4-A @5
Sample Type	Sample
Comment	T31
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

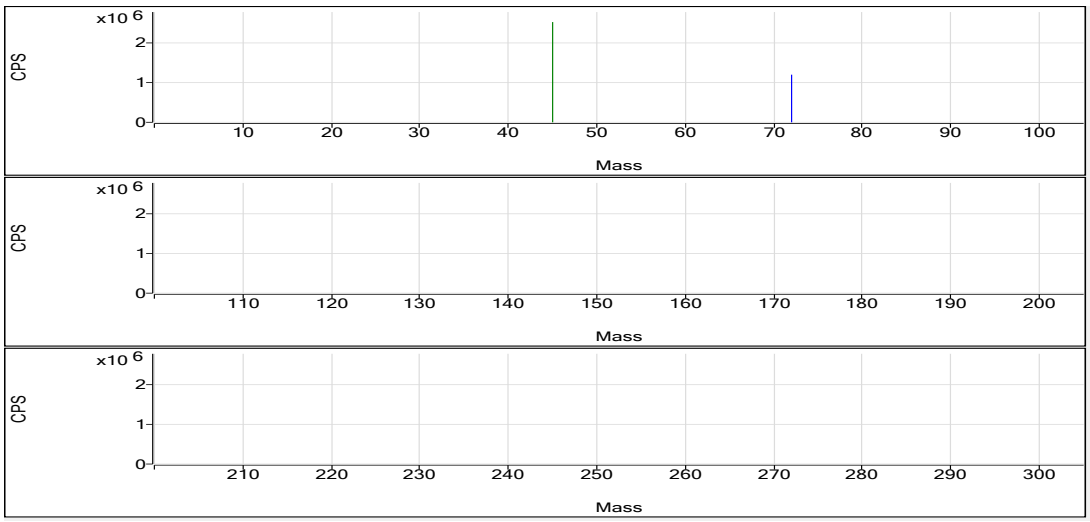
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.034	ppb	N/A	24.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.020	ppb	192.9	7.11	0.0000	Pulse	1.5000	3
Na	23	45	He	127964.536	ppb	0.8	22929258.82	456.5354	Analog	0.1000	3
Mg	24	45	He	6642.991	ppb	1.4	602998.65	12.0070	Pulse	0.1000	3
Al	27	45	He	1.982	ppb	117.1	163.34	0.0032	Pulse	0.1000	3
K	39	45	He	506.935	ppb	1.3	50474.41	1.0048	Pulse	0.1000	3
Ca	44	45	He	33061.602	ppb	2.3	112337.86	2.2369	Pulse	0.1000	3
Ti	47	45	He	0.126	ppb	173.2	3.33	0.0001	Pulse	0.1000	3
V	51	45	He	-0.139	ppb	N/A	1449.42	0.0288	Pulse	0.5000	3
Cr	52	45	He	0.150	ppb	36.3	2380.28	0.0474	Pulse	0.1000	3
Mn	55	45	He	6.345	ppb	6.2	4100.74	0.0817	Pulse	0.1000	3
Fe	57	45	He	5.411	ppb	50.3	293.35	0.0058	Pulse	0.1000	3
Co	59	45	He	0.027	ppb	108.8	256.68	0.0051	Pulse	0.1000	3
Ni	60	72	He	-0.807	ppb	N/A	536.70	0.0066	Pulse	0.1000	3
Cu	63	72	He	0.343	ppb	5.4	1513.46	0.0187	Pulse	0.1000	3
Zn	66	72	He	1.310	ppb	17.7	803.38	0.0099	Pulse	0.1000	3
As	75	72	He	0.059	ppb	129.6	80.67	0.0010	Pulse	0.5000	3
Sr	88	115	He	1062.684	ppb	1.0	845120.09	9.3511	Pulse	0.1000	3
Mo	98	115	He	0.295	ppb	12.1	750.05	0.0083	Pulse	0.1000	3
Ag	107	115	He	-0.008	ppb	N/A	63.33	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.002	ppb	96.7	6.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.182	ppb	41.4	1593.48	0.0176	Pulse	0.1000	3
Sb	121	115	He	0.033	ppb	82.3	66.67	0.0007	Pulse	0.1000	3
Ba	137	115	He	92.661	ppb	1.4	40042.57	0.4431	Pulse	0.1000	3
Tl	205	159	He	-0.048	ppb	N/A	636.70	0.0016	Pulse	0.1000	3
Pb	208	159	He	0.015	ppb	74.5	1076.73	0.0026	Pulse	0.1000	3
U	238	209	He	0.189	ppb	9.6	3003.83	0.0097	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2520848.24	0.1	96.7	Analog	0.1000	3
No Gas	Ge	72	1197631.44	0.9	92.9	Pulse	0.1000	3
H2	Sc	45	203206.25	0.4	98.6	Pulse	0.1000	3
H2	Ge	72	160395.92	1.4	98.6	Pulse	0.1000	3
H2	In	115	403197.99	0.3	99.9	Pulse	0.1000	3
He	Sc	45	50227.22	1.5	98.1	Pulse	0.1000	3
He	Ge	72	80875.04	0.4	98.8	Pulse	0.1000	3
He	In	115	90379.34	0.7	103.1	Pulse	0.1000	3
He	Tb	159	407059.76	0.9	101.4	Pulse	0.1000	3
He	Bi	209	309203.41	0.5	101.0	Pulse	0.1000	3

No Gas



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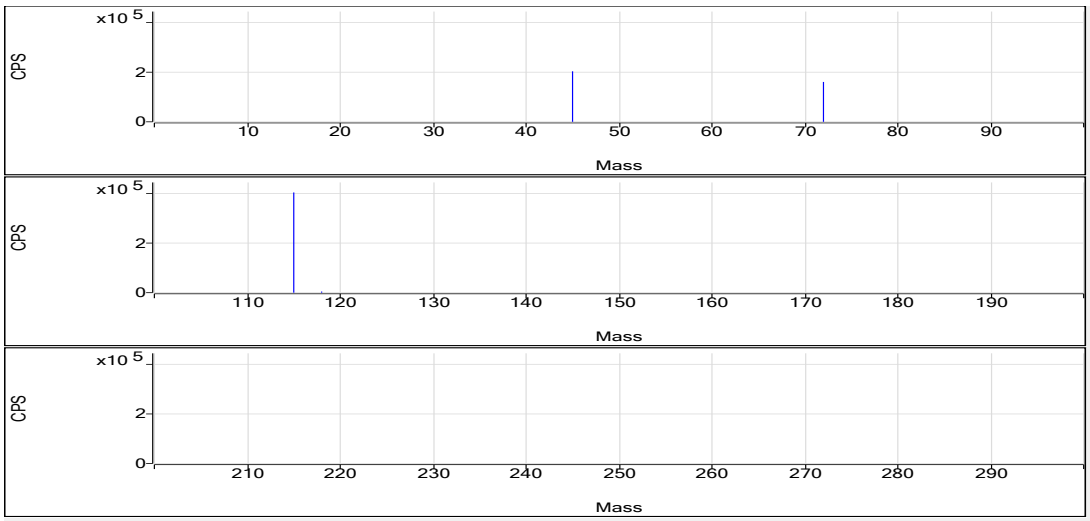
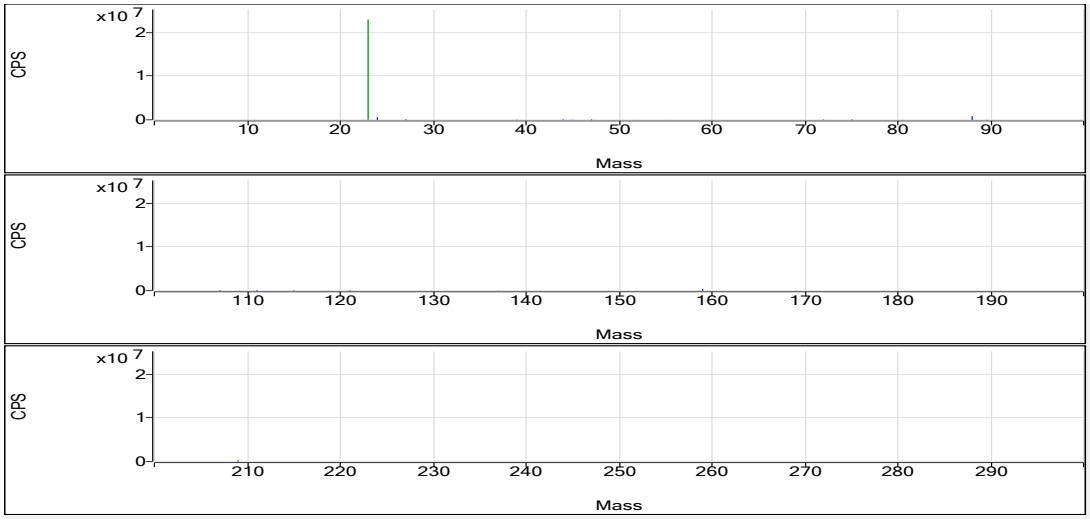


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.034	0	24.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.038	0	16.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.029	0	32.00	0.0007	3.404E-05
Se	78	2	H2	-0.024	0	4.00	0.0004	3.546E-05
Se	78	2	H2	0.05	0.0001	9.33	0.0004	3.546E-05
Se	78	2	H2	0.034	0.0001	8.00	0.0004	3.546E-05
Na	23	3	He	127449.193	454.6985	23207727.15	0.0036	0.4171
Na	23	3	He	129078.108	460.5047	22829422.16	0.0036	0.4171
Na	23	3	He	127366.306	454.4031	22750627.16	0.0036	0.4171
Mg	24	3	He	6532.573	11.8075	602654.52	0.0018	0.004553
Mg	24	3	He	6700.187	12.1104	600369.68	0.0018	0.004553
Mg	24	3	He	6696.213	12.1032	605971.75	0.0018	0.004553
Al	27	3	He	4.157	0.0045	230.01	0.0006	0.002085
Al	27	3	He	-0.462	0.0018	90.01	0.0006	0.002085
Al	27	3	He	2.25	0.0034	170.01	0.0006	0.002085
K	39	3	He	514.22	1.0134	51722.51	0.0012	0.4112
K	39	3	He	501.236	0.9982	49484.13	0.0012	0.4112
K	39	3	He	505.348	1.003	50216.60	0.0012	0.4112
Ca	44	3	He	32364.731	2.1898	111766.59	0.0001	0.003322
Ca	44	3	He	32943.492	2.2289	110496.85	0.0001	0.003322
Ca	44	3	He	33876.582	2.2919	114750.14	0.0001	0.003322
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.379	0.0002	10.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	-0.073	0.0303	1544.10	0.0213	0.0318
V	51	3	He	-0.154	0.0285	1414.08	0.0213	0.0318
V	51	3	He	-0.19	0.0278	1390.08	0.0213	0.0318
Cr	52	3	He	0.211	0.0492	2510.30	0.0294	0.04297
Cr	52	3	He	0.13	0.0468	2320.28	0.0294	0.04297
Cr	52	3	He	0.108	0.0461	2310.25	0.0294	0.04297
Mn	55	3	He	5.906	0.0762	3890.65	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	6.461	0.0831	4120.75	0.0124	0.002801
Mn	55	3	He	6.668	0.0857	4290.81	0.0124	0.002801
Fe	57	3	He	7.211	0.0069	350.02	0.0006	0.002732
Fe	57	3	He	2.277	0.004	200.01	0.0006	0.002732
Fe	57	3	He	6.746	0.0066	330.01	0.0006	0.002732
Co	59	3	He	-0.006	0.0033	170.01	0.0549	0.003644
Co	59	3	He	0.051	0.0065	320.02	0.0549	0.003644
Co	59	3	He	0.036	0.0056	280.01	0.0549	0.003644
Ni	60	3	He	-0.773	0.007	560.03	0.0093	0.01413
Ni	60	3	He	-0.792	0.0068	550.03	0.0093	0.01413
Ni	60	3	He	-0.856	0.0062	500.03	0.0093	0.01413
Cu	63	3	He	0.362	0.0192	1550.13	0.0274	0.009321
Cu	63	3	He	0.325	0.0182	1480.14	0.0274	0.009321
Cu	63	3	He	0.34	0.0187	1510.12	0.0274	0.009321
Zn	66	3	He	1.471	0.0104	840.05	0.0031	0.005913
Zn	66	3	He	1.045	0.0091	740.05	0.0031	0.005913
Zn	66	3	He	1.414	0.0103	830.05	0.0031	0.005913
As	75	3	He	0	0.0009	70.00	0.0021	0.0008698
As	75	3	He	0.146	0.0012	96.00	0.0021	0.0008698
As	75	3	He	0.032	0.0009	76.00	0.0021	0.0008698
Sr	88	3	He	1062.337	9.3481	848893.19	0.0088	0.0006843
Sr	88	3	He	1073.043	9.4423	846900.07	0.0088	0.0006843
Sr	88	3	He	1052.672	9.263	839567.02	0.0088	0.0006843
Mo	98	3	He	0.328	0.009	820.05	0.0219	0.001827
Mo	98	3	He	0.257	0.0075	670.04	0.0219	0.001827
Mo	98	3	He	0.299	0.0084	760.05	0.0219	0.001827
Ag	107	3	He	-0.013	0.0004	40.00	0.047	0.001064
Ag	107	3	He	-0.011	0.0006	50.00	0.047	0.001064
Ag	107	3	He	0.001	0.0011	100.00	0.047	0.001064
Cd	111	3	He	0.005	0.0001	8.00	0.0053	6.086E-05
Cd	111	3	He	0.001	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	0.001	0.0001	6.00	0.0053	6.086E-05
Sn	120	3	He	0.095	0.0163	1480.14	0.0154	0.01483
Sn	120	3	He	0.231	0.0184	1650.16	0.0154	0.01483
Sn	120	3	He	0.219	0.0182	1650.15	0.0154	0.01483
Sb	121	3	He	0.005	0.0003	30.00	0.0143	0.0002661
Sb	121	3	He	0.036	0.0008	70.00	0.0143	0.0002661
Sb	121	3	He	0.059	0.0011	100.01	0.0143	0.0002661
Ba	137	3	He	92.256	0.4411	40059.43	0.0048	0.0002665
Ba	137	3	He	94.107	0.45	40360.18	0.0048	0.0002665
Ba	137	3	He	91.621	0.4381	39708.10	0.0048	0.0002665
Tl	205	3	He	-0.049	0.0016	630.03	0.0246	0.002755
Tl	205	3	He	-0.051	0.0015	620.03	0.0246	0.002755
Tl	205	3	He	-0.046	0.0016	660.04	0.0246	0.002755
Pb	208	3	He	0.022	0.0029	660.04	0.0324	0.002158
Pb	208	3	He	0.021	0.0028	570.03	0.0324	0.002158
Pb	208	3	He	0.002	0.0022	480.03	0.0324	0.002158
U	238	3	He	0.179	0.0092	2850.44	0.0492	0.0004023
U	238	3	He	0.21	0.0107	3340.59	0.0492	0.0004023
U	238	3	He	0.178	0.0092	2820.45	0.0492	0.0004023
Sc	45	1	No Gas			2520671.06		
Sc	45	1	No Gas			2518972.15		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2522901.52		
Ge	72	1	No Gas			1194824.98		
Ge	72	1	No Gas			1188521.39		
Ge	72	1	No Gas			1209547.95		
Sc	45	2	H2			203547.54		
Sc	45	2	H2			203830.80		
Sc	45	2	H2			202240.41		
Ge	72	2	H2			159340.17		
Ge	72	2	H2			162891.26		
Ge	72	2	H2			158956.33		
In	115	2	H2			402469.64		
In	115	2	H2			402434.02		
In	115	2	H2			404690.31		
Sc	45	3	He			51039.81		
Sc	45	3	He			49574.79		
Sc	45	3	He			50067.06		
Ge	72	3	He			80536.47		
Ge	72	3	He			81139.81		
Ge	72	3	He			80948.85		
In	115	3	He			90816.08		
In	115	3	He			89699.08		
In	115	3	He			90645.32		
Tb	159	3	He			406235.93		
Tb	159	3	He			410896.20		
Tb	159	3	He			404047.14		
Bi	209	3	He			308753.65		
Bi	209	3	He			310995.01		
Bi	209	3	He			307861.56		

Quantitation Report

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Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

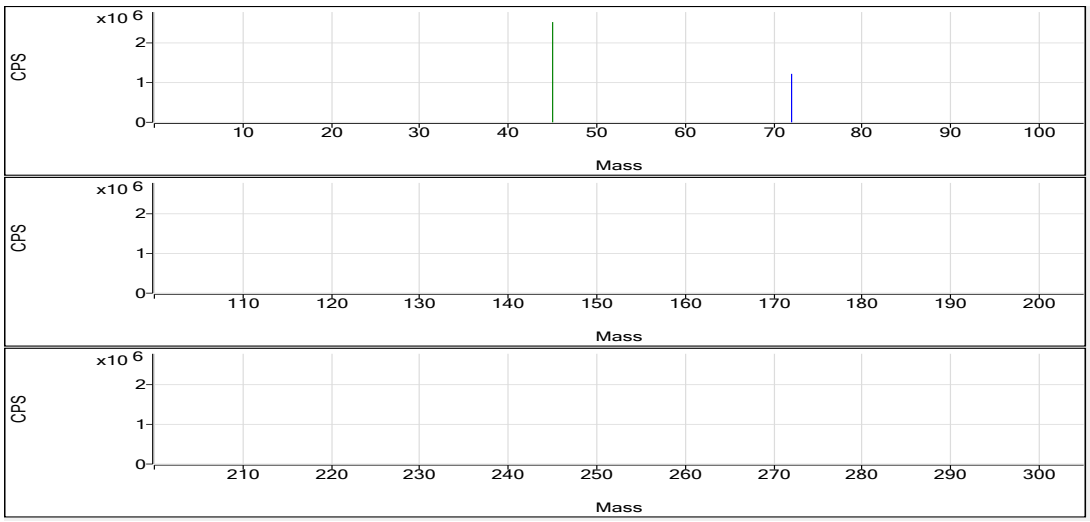
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.034	ppb	N/A	22.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.012	ppb	N/A	4.89	0.0000	Pulse	1.5000	3
Na	23	45	He	23.087	ppb	25.6	25011.80	0.4993	Pulse	0.1000	3
Mg	24	45	He	1.973	ppb	14.0	406.69	0.0081	Pulse	0.1000	3
Al	27	45	He	-2.093	ppb	N/A	43.33	0.0009	Pulse	0.1000	3
K	39	45	He	2.293	ppb	135.6	20731.89	0.4139	Pulse	0.1000	3
Ca	44	45	He	11.950	ppb	201.2	206.67	0.0041	Pulse	0.1000	3
Ti	47	45	He	0.501	ppb	43.5	13.33	0.0003	Pulse	0.1000	3
V	51	45	He	-0.090	ppb	N/A	1497.42	0.0299	Pulse	0.5000	3
Cr	52	45	He	0.037	ppb	172.3	2206.91	0.0441	Pulse	0.1000	3
Mn	55	45	He	0.257	ppb	35.0	300.01	0.0060	Pulse	0.1000	3
Fe	57	45	He	-1.518	ppb	N/A	93.34	0.0019	Pulse	0.1000	3
Co	59	45	He	-0.015	ppb	N/A	140.01	0.0028	Pulse	0.1000	3
Ni	60	72	He	-1.107	ppb	N/A	316.68	0.0039	Pulse	0.1000	3
Cu	63	72	He	-0.068	ppb	N/A	613.38	0.0075	Pulse	0.1000	3
Zn	66	72	He	-0.050	ppb	N/A	473.36	0.0058	Pulse	0.1000	3
As	75	72	He	0.067	ppb	127.3	83.33	0.0010	Pulse	0.5000	3
Sr	88	115	He	0.187	ppb	40.0	206.68	0.0023	Pulse	0.1000	3
Mo	98	115	He	-0.051	ppb	N/A	63.33	0.0007	Pulse	0.1000	3
Ag	107	115	He	-0.011	ppb	N/A	50.00	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.001	ppb	578.1	6.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.092	ppb	41.5	1443.47	0.0163	Pulse	0.1000	3
Sb	121	115	He	0.021	ppb	98.8	50.00	0.0006	Pulse	0.1000	3
Ba	137	115	He	0.023	ppb	117.1	33.33	0.0004	Pulse	0.1000	3
Tl	205	159	He	-0.083	ppb	N/A	293.35	0.0007	Pulse	0.1000	3
Pb	208	159	He	-0.021	ppb	N/A	593.36	0.0015	Pulse	0.1000	3
U	238	209	He	-0.001	ppb	N/A	116.67	0.0004	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2538614.60	1.4	97.3	Analog	0.1000	3
No Gas	Ge	72	1226883.81	0.8	95.2	Pulse	0.1000	3
H2	Sc	45	204891.78	0.5	99.4	Pulse	0.1000	3
H2	Ge	72	162848.90	0.6	100.1	Pulse	0.1000	3
H2	In	115	399460.12	0.8	99.0	Pulse	0.1000	3
He	Sc	45	50093.48	0.3	97.8	Pulse	0.1000	3
He	Ge	72	82179.71	0.1	100.4	Pulse	0.1000	3
He	In	115	88840.46	2.0	101.4	Pulse	0.1000	3
He	Tb	159	405628.29	0.4	101.0	Pulse	0.1000	3
He	Bi	209	314067.22	0.5	102.6	Pulse	0.1000	3

No Gas



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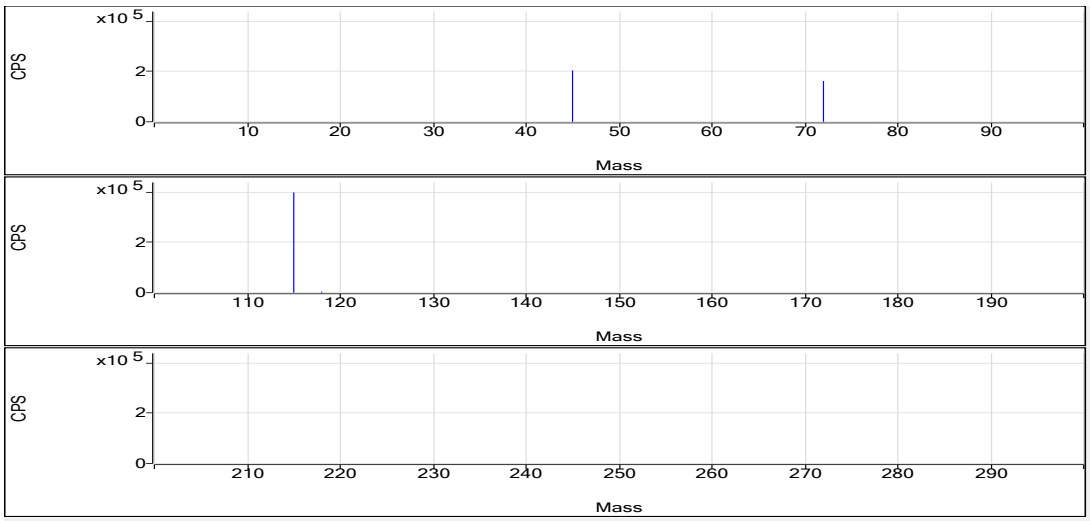
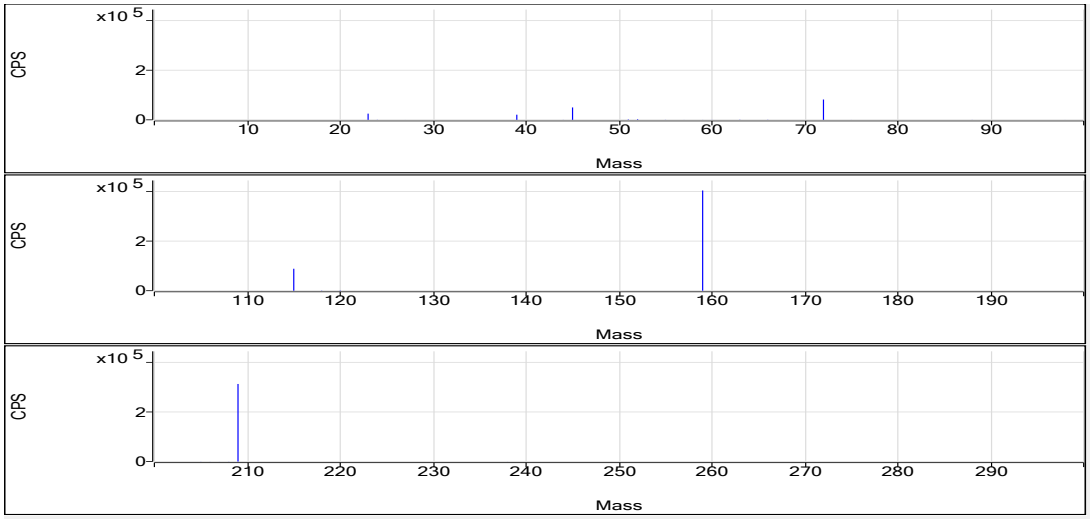


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.035	0	22.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.037	0	18.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.031	0	28.00	0.0007	3.404E-05
Se	78	2	H2	-0.025	0	4.00	0.0004	3.546E-05
Se	78	2	H2	-0.015	0	4.67	0.0004	3.546E-05
Se	78	2	H2	0.003	0	6.00	0.0004	3.546E-05
Na	23	3	He	27.282	0.5143	25713.13	0.0036	0.4171
Na	23	3	He	25.65	0.5085	25422.42	0.0036	0.4171
Na	23	3	He	16.329	0.4753	23899.85	0.0036	0.4171
Mg	24	3	He	1.687	0.0076	380.02	0.0018	0.004553
Mg	24	3	He	2.24	0.0086	430.02	0.0018	0.004553
Mg	24	3	He	1.993	0.0082	410.02	0.0018	0.004553
Al	27	3	He	-2.205	0.0008	40.00	0.0006	0.002085
Al	27	3	He	-1.862	0.001	50.00	0.0006	0.002085
Al	27	3	He	-2.213	0.0008	40.00	0.0006	0.002085
K	39	3	He	2.86	0.4145	20725.19	0.0012	0.4112
K	39	3	He	5.082	0.4171	20855.38	0.0012	0.4112
K	39	3	He	-1.062	0.4099	20615.11	0.0012	0.4112
Ca	44	3	He	15.967	0.0044	220.01	0.0001	0.003322
Ca	44	3	He	33.731	0.0056	280.01	0.0001	0.003322
Ca	44	3	He	-13.848	0.0024	120.00	0.0001	0.003322
Ti	47	3	He	0.376	0.0002	10.00	0.0005	0
Ti	47	3	He	0.752	0.0004	20.00	0.0005	0
Ti	47	3	He	0.374	0.0002	10.00	0.0005	0
V	51	3	He	-0.122	0.0292	1460.08	0.0213	0.0318
V	51	3	He	-0.066	0.0304	1520.09	0.0213	0.0318
V	51	3	He	-0.081	0.0301	1512.09	0.0213	0.0318
Cr	52	3	He	0.008	0.0432	2160.23	0.0294	0.04297
Cr	52	3	He	0.11	0.0462	2310.25	0.0294	0.04297
Cr	52	3	He	-0.007	0.0428	2150.24	0.0294	0.04297
Mn	55	3	He	0.177	0.005	250.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.354	0.0072	360.02	0.0124	0.002801
Mn	55	3	He	0.239	0.0058	290.01	0.0124	0.002801
Fe	57	3	He	-1.628	0.0018	90.00	0.0006	0.002732
Fe	57	3	He	-1.279	0.002	100.01	0.0006	0.002732
Fe	57	3	He	-1.647	0.0018	90.00	0.0006	0.002732
Co	59	3	He	-0.026	0.0022	110.00	0.0549	0.003644
Co	59	3	He	-0.001	0.0036	180.01	0.0549	0.003644
Co	59	3	He	-0.019	0.0026	130.01	0.0549	0.003644
Ni	60	3	He	-1.181	0.0032	260.01	0.0093	0.01413
Ni	60	3	He	-0.971	0.0051	420.02	0.0093	0.01413
Ni	60	3	He	-1.168	0.0033	270.01	0.0093	0.01413
Cu	63	3	He	-0.083	0.0071	580.05	0.0274	0.009321
Cu	63	3	He	-0.025	0.0086	710.05	0.0274	0.009321
Cu	63	3	He	-0.096	0.0067	550.03	0.0274	0.009321
Zn	66	3	He	0.213	0.0066	540.03	0.0031	0.005913
Zn	66	3	He	-0.103	0.0056	460.02	0.0031	0.005913
Zn	66	3	He	-0.259	0.0051	420.02	0.0031	0.005913
As	75	3	He	0.105	0.0011	90.00	0.0021	0.0008698
As	75	3	He	0.127	0.0011	94.00	0.0021	0.0008698
As	75	3	He	-0.031	0.0008	66.00	0.0021	0.0008698
Sr	88	3	He	0.135	0.0019	170.01	0.0088	0.0006843
Sr	88	3	He	0.154	0.002	180.01	0.0088	0.0006843
Sr	88	3	He	0.273	0.0031	270.01	0.0088	0.0006843
Mo	98	3	He	-0.053	0.0007	60.00	0.0219	0.001827
Mo	98	3	He	-0.042	0.0009	80.00	0.0219	0.001827
Mo	98	3	He	-0.057	0.0006	50.00	0.0219	0.001827
Ag	107	3	He	-0.011	0.0006	50.00	0.047	0.001064
Ag	107	3	He	-0.011	0.0006	50.00	0.047	0.001064
Ag	107	3	He	-0.01	0.0006	50.00	0.047	0.001064
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Cd	111	3	He	0.01	0.0001	10.00	0.0053	6.086E-05
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Sn	120	3	He	0.067	0.0159	1440.13	0.0154	0.01483
Sn	120	3	He	0.074	0.016	1410.13	0.0154	0.01483
Sn	120	3	He	0.136	0.0169	1480.14	0.0154	0.01483
Sb	121	3	He	0.035	0.0008	70.00	0.0143	0.0002661
Sb	121	3	He	0.029	0.0007	60.00	0.0143	0.0002661
Sb	121	3	He	-0.003	0.0002	20.00	0.0143	0.0002661
Ba	137	3	He	0.036	0.0004	40.00	0.0048	0.0002665
Ba	137	3	He	0.039	0.0005	40.00	0.0048	0.0002665
Ba	137	3	He	-0.008	0.0002	20.00	0.0048	0.0002665
Tl	205	3	He	-0.086	0.0006	260.01	0.0246	0.002755
Tl	205	3	He	-0.088	0.0006	240.01	0.0246	0.002755
Tl	205	3	He	-0.074	0.0009	380.02	0.0246	0.002755
Pb	208	3	He	-0.024	0.0014	270.01	0.0324	0.002158
Pb	208	3	He	-0.02	0.0015	380.02	0.0324	0.002158
Pb	208	3	He	-0.021	0.0015	370.02	0.0324	0.002158
U	238	3	He	-0.004	0.0002	70.00	0.0492	0.0004023
U	238	3	He	0.002	0.0005	150.01	0.0492	0.0004023
U	238	3	He	0	0.0004	130.00	0.0492	0.0004023
Sc	45	1	No Gas			2578586.68		
Sc	45	1	No Gas			2513408.87		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2523848.24		
Ge	72	1	No Gas			1238404.20		
Ge	72	1	No Gas			1218839.04		
Ge	72	1	No Gas			1223408.18		
Sc	45	2	H2			205837.95		
Sc	45	2	H2			205027.50		
Sc	45	2	H2			203809.90		
Ge	72	2	H2			162645.52		
Ge	72	2	H2			162061.09		
Ge	72	2	H2			163840.08		
In	115	2	H2			401557.96		
In	115	2	H2			401209.99		
In	115	2	H2			395612.42		
Sc	45	3	He			49996.27		
Sc	45	3	He			49996.39		
Sc	45	3	He			50287.79		
Ge	72	3	He			82226.63		
Ge	72	3	He			82216.77		
Ge	72	3	He			82095.74		
In	115	3	He			90815.98		
In	115	3	He			88299.57		
In	115	3	He			87424.94		
Tb	159	3	He			404884.21		
Tb	159	3	He			407448.08		
Tb	159	3	He			404552.57		
Bi	209	3	He			315169.04		
Bi	209	3	He			312220.48		
Bi	209	3	He			314812.14		

Quantitation Report

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Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H09B00.b
Acq Time	8/9/2023 4:05:14 PM
Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

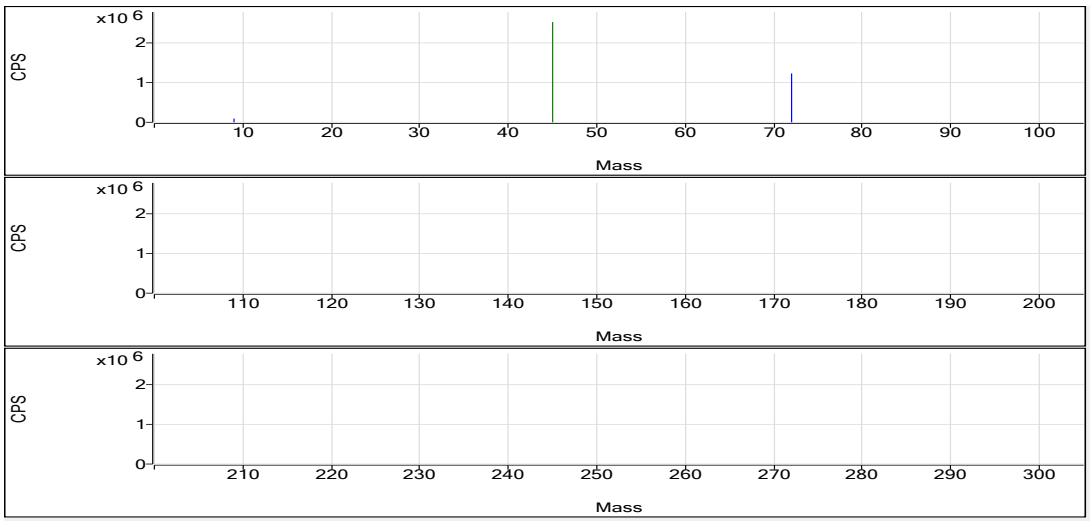
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.153	ppb	1.6	94505.80	0.0373	Pulse	0.5000	3
Se	78	72	H2	50.767	ppb	2.1	3660.70	0.0223	Pulse	1.5000	3
Na	23	45	He	5000.193	ppb	0.6	904939.99	18.2398	Pulse	0.1000	3
Mg	24	45	He	5143.517	ppb	1.2	461276.61	9.2978	Pulse	0.1000	3
Al	27	45	He	5198.697	ppb	0.1	150375.43	3.0308	Pulse	0.1000	3
K	39	45	He	5163.480	ppb	1.6	320381.08	6.4580	Pulse	0.1000	3
Ca	44	45	He	5164.166	ppb	0.5	17474.43	0.3522	Pulse	0.1000	3
Ti	47	45	He	5182.291	ppb	1.1	136742.98	2.7563	Pulse	0.1000	3
V	51	45	He	519.996	ppb	1.1	549801.09	11.0822	Pulse	0.5000	3
Cr	52	45	He	498.848	ppb	1.4	729986.71	14.7142	Pulse	0.1000	3
Mn	55	45	He	526.216	ppb	1.1	324695.84	6.5448	Pulse	0.1000	3
Fe	57	45	He	5178.576	ppb	0.8	147137.01	2.9657	Pulse	0.1000	3
Co	59	45	He	509.112	ppb	2.7	1386453.05	27.9475	Mix	0.1000	3
Ni	60	72	He	507.553	ppb	0.4	386594.72	4.7257	Pulse	0.1000	3
Cu	63	72	He	485.347	ppb	0.8	1089712.98	13.3205	Pulse	0.1000	3
Zn	66	72	He	512.984	ppb	1.9	129335.93	1.5810	Pulse	0.1000	3
As	75	72	He	517.041	ppb	0.2	90831.23	1.1103	Pulse	0.5000	3
Sr	88	115	He	52.146	ppb	2.2	40361.75	0.4595	Pulse	0.1000	3
Mo	98	115	He	50.604	ppb	1.4	97692.37	1.1123	Pulse	0.1000	3
Ag	107	115	He	49.780	ppb	1.1	205754.14	2.3427	Pulse	0.1000	3
Cd	111	115	He	51.099	ppb	1.0	23906.44	0.2722	Pulse	0.5000	3
Sn	120	115	He	51.689	ppb	1.0	71310.41	0.8119	Pulse	0.1000	3
Sb	121	115	He	52.750	ppb	2.2	66041.17	0.7520	Pulse	0.1000	3
Ba	137	115	He	518.149	ppb	0.8	217497.92	2.4764	Pulse	0.1000	3
Tl	205	159	He	51.119	ppb	0.5	510633.89	1.2583	Pulse	0.1000	3
Pb	208	159	He	51.501	ppb	0.1	678140.69	1.6710	Pulse	0.1000	3
U	238	209	He	50.319	ppb	0.7	776008.66	2.4785	Pulse	0.1000	3

ISTD Table:

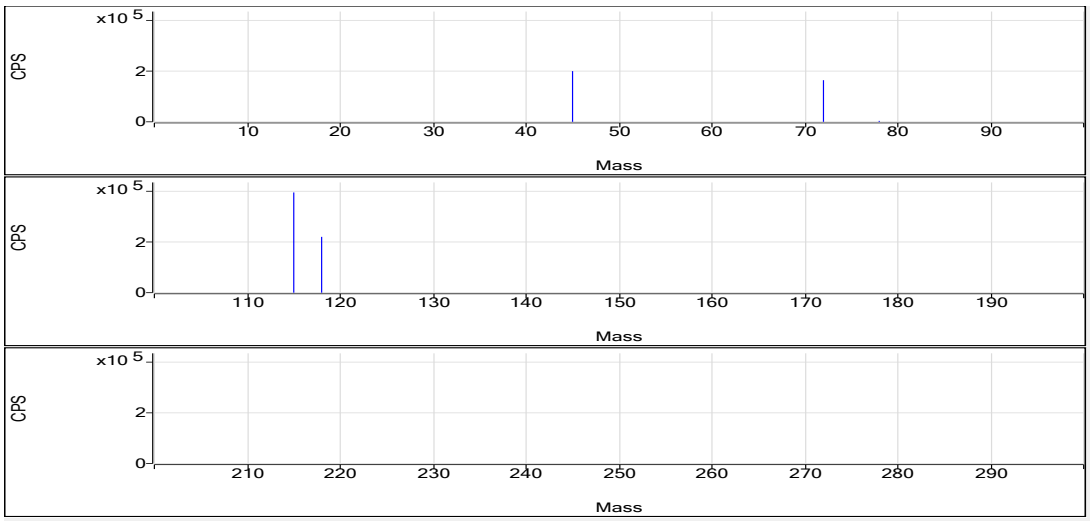
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2533997.93	1.7	97.2	Analog	0.1000	3
No Gas	Ge	72	1234642.25	1.3	95.8	Pulse	0.1000	3
H2	Sc	45	200021.34	1.7	97.1	Pulse	0.1000	3
H2	Ge	72	164258.28	1.4	100.9	Pulse	0.1000	3
H2	In	115	395455.03	1.2	98.0	Pulse	0.1000	3
He	Sc	45	49615.42	1.2	96.9	Pulse	0.1000	3
He	Ge	72	81807.68	0.1	99.9	Pulse	0.1000	3
He	In	115	87830.14	0.5	100.2	Pulse	0.1000	3
He	Tb	159	405823.04	0.2	101.0	Pulse	0.1000	3
He	Bi	209	313093.39	0.2	102.3	Pulse	0.1000	3

No Gas

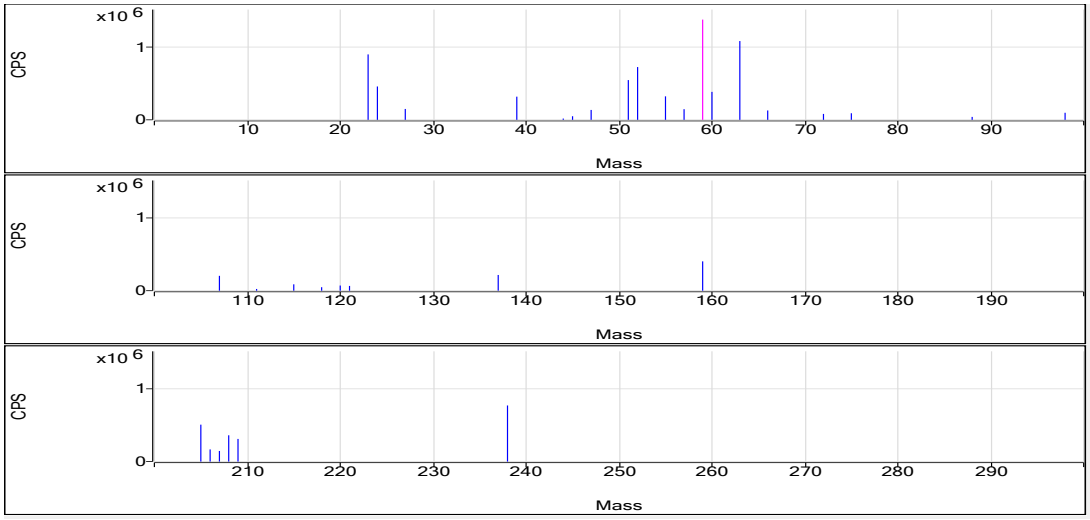


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.359	0.0367	93638.56	0.0007	3.404E-05
Be	9	1	No Gas	51.08	0.0372	95578.48	0.0007	3.404E-05
Be	9	1	No Gas	52.02	0.0379	94300.36	0.0007	3.404E-05
Se	78	2	H2	49.577	0.0218	3581.12	0.0004	3.546E-05
Se	78	2	H2	51.094	0.0224	3733.16	0.0004	3.546E-05
Se	78	2	H2	51.631	0.0227	3667.81	0.0004	3.546E-05
Na	23	3	He	5010.372	18.2761	897791.71	0.0036	0.4171
Na	23	3	He	5024.42	18.3262	906686.31	0.0036	0.4171
Na	23	3	He	4965.788	18.1172	910341.94	0.0036	0.4171
Mg	24	3	He	5167.412	9.341	458864.84	0.0018	0.004553
Mg	24	3	He	5190.494	9.3827	464208.04	0.0018	0.004553
Mg	24	3	He	5072.645	9.1698	460756.95	0.0018	0.004553
Al	27	3	He	5199.796	3.0315	148916.63	0.0006	0.002085
Al	27	3	He	5194.777	3.0285	149836.41	0.0006	0.002085
Al	27	3	He	5201.518	3.0325	152373.26	0.0006	0.002085
K	39	3	He	5228.81	6.5345	321000.60	0.0012	0.4112
K	39	3	He	5187.455	6.4861	320898.98	0.0012	0.4112
K	39	3	He	5074.175	6.3534	319243.65	0.0012	0.4112
Ca	44	3	He	5185.142	0.3536	17370.95	0.0001	0.003322
Ca	44	3	He	5136.017	0.3503	17330.92	0.0001	0.003322
Ca	44	3	He	5171.34	0.3527	17721.43	0.0001	0.003322
Ti	47	3	He	5247.518	2.791	137102.24	0.0005	0
Ti	47	3	He	5160.447	2.7446	135791.06	0.0005	0
Ti	47	3	He	5138.907	2.7332	137335.63	0.0005	0
V	51	3	He	525.502	11.1992	550146.38	0.0213	0.0318
V	51	3	He	520.247	11.0875	548553.88	0.0213	0.0318
V	51	3	He	514.238	10.9598	550703.00	0.0213	0.0318
Cr	52	3	He	506.568	14.9412	733968.27	0.0294	0.04297
Cr	52	3	He	495.837	14.6256	723600.46	0.0294	0.04297
Cr	52	3	He	494.14	14.5757	732391.40	0.0294	0.04297
Mn	55	3	He	531.495	6.6104	324729.25	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	526.795	6.552	324159.12	0.0124	0.002801
Mn	55	3	He	520.357	6.472	325199.14	0.0124	0.002801
Fe	57	3	He	5173.337	2.9627	145537.25	0.0006	0.002732
Fe	57	3	He	5222.608	2.9909	147972.26	0.0006	0.002732
Fe	57	3	He	5139.783	2.9435	147901.52	0.0006	0.002732
Co	59	3	He	507.492	27.8586	1368519.82	0.0549	0.003644
Co	59	3	He	523.707	28.7486	1422335.45	0.0549	0.003644
Co	59	3	He	496.136	27.2353	1368503.89	0.0549	0.003644
Ni	60	3	He	506.802	4.7187	385869.45	0.0093	0.01413
Ni	60	3	He	505.964	4.7109	385941.83	0.0093	0.01413
Ni	60	3	He	509.892	4.7474	387972.88	0.0093	0.01413
Cu	63	3	He	489.726	13.4406	1099096.31	0.0274	0.009321
Cu	63	3	He	482.957	13.2549	1085907.95	0.0274	0.009321
Cu	63	3	He	483.357	13.2659	1084134.67	0.0274	0.009321
Zn	66	3	He	524.171	1.6153	132093.39	0.0031	0.005913
Zn	66	3	He	505.398	1.5577	127614.25	0.0031	0.005913
Zn	66	3	He	509.383	1.5699	128300.16	0.0031	0.005913
As	75	3	He	518.298	1.113	91015.07	0.0021	0.0008698
As	75	3	He	515.743	1.1075	90733.38	0.0021	0.0008698
As	75	3	He	517.083	1.1104	90745.23	0.0021	0.0008698
Sr	88	3	He	50.874	0.4483	39195.24	0.0088	0.0006843
Sr	88	3	He	52.555	0.4631	40679.29	0.0088	0.0006843
Sr	88	3	He	53.01	0.4671	41210.71	0.0088	0.0006843
Mo	98	3	He	51.096	1.1231	98191.74	0.0219	0.001827
Mo	98	3	He	50.94	1.1197	98354.03	0.0219	0.001827
Mo	98	3	He	49.776	1.0942	96531.33	0.0219	0.001827
Ag	107	3	He	50.434	2.3734	207503.30	0.047	0.001064
Ag	107	3	He	49.45	2.3272	204417.61	0.047	0.001064
Ag	107	3	He	49.457	2.3275	205341.52	0.047	0.001064
Cd	111	3	He	50.586	0.2695	23557.85	0.0053	6.086E-05
Cd	111	3	He	51.625	0.275	24154.86	0.0053	6.086E-05
Cd	111	3	He	51.084	0.2721	24006.60	0.0053	6.086E-05
Sn	120	3	He	51.189	0.8042	70308.98	0.0154	0.01483
Sn	120	3	He	52.257	0.8207	72087.48	0.0154	0.01483
Sn	120	3	He	51.619	0.8108	71534.76	0.0154	0.01483
Sb	121	3	He	54.077	0.7709	67394.64	0.0143	0.0002661
Sb	121	3	He	52.337	0.7461	65535.36	0.0143	0.0002661
Sb	121	3	He	51.837	0.739	65193.50	0.0143	0.0002661
Ba	137	3	He	523.145	2.5003	218591.21	0.0048	0.0002665
Ba	137	3	He	515.289	2.4627	216324.94	0.0048	0.0002665
Ba	137	3	He	516.014	2.4662	217577.61	0.0048	0.0002665
Tl	205	3	He	50.85	1.2517	506996.52	0.0246	0.002755
Tl	205	3	He	51.118	1.2582	511872.18	0.0246	0.002755
Tl	205	3	He	51.39	1.2649	513032.96	0.0246	0.002755
Pb	208	3	He	51.476	1.6702	363052.73	0.0324	0.002158
Pb	208	3	He	51.461	1.6697	363978.51	0.0324	0.002158
Pb	208	3	He	51.568	1.6732	363508.51	0.0324	0.002158
U	238	3	He	49.926	2.4591	769863.27	0.0492	0.0004023
U	238	3	He	50.616	2.4931	782187.33	0.0492	0.0004023
U	238	3	He	50.417	2.4833	775975.38	0.0492	0.0004023
Sc	45	1	No Gas			2549927.15		
Sc	45	1	No Gas			2566046.52		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2486020.12		
Ge	72	1	No Gas			1233771.47		
Ge	72	1	No Gas			1250551.00		
Ge	72	1	No Gas			1219604.28		
Sc	45	2	H2			197616.17		
Sc	45	2	H2			203951.77		
Sc	45	2	H2			198496.09		
Ge	72	2	H2			164528.32		
Ge	72	2	H2			166429.80		
Ge	72	2	H2			161816.72		
In	115	2	H2			392885.97		
In	115	2	H2			392432.77		
In	115	2	H2			401046.36		
Sc	45	3	He			49123.84		
Sc	45	3	He			49474.97		
Sc	45	3	He			50247.46		
Ge	72	3	He			81774.56		
Ge	72	3	He			81925.00		
Ge	72	3	He			81723.49		
In	115	3	He			87807.12		
In	115	3	He			88219.94		
In	115	3	He			88593.31		
Tb	159	3	He			405060.31		
Tb	159	3	He			406822.14		
Tb	159	3	He			405586.67		
Bi	209	3	He			313063.47		
Bi	209	3	He			313739.88		
Bi	209	3	He			312476.83		

Quantitation Report

Data File Name	073_CCB.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H09B00.b
Acq Time	8/9/2023 4:07:16 PM
Sample Name	CCB 4654618
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

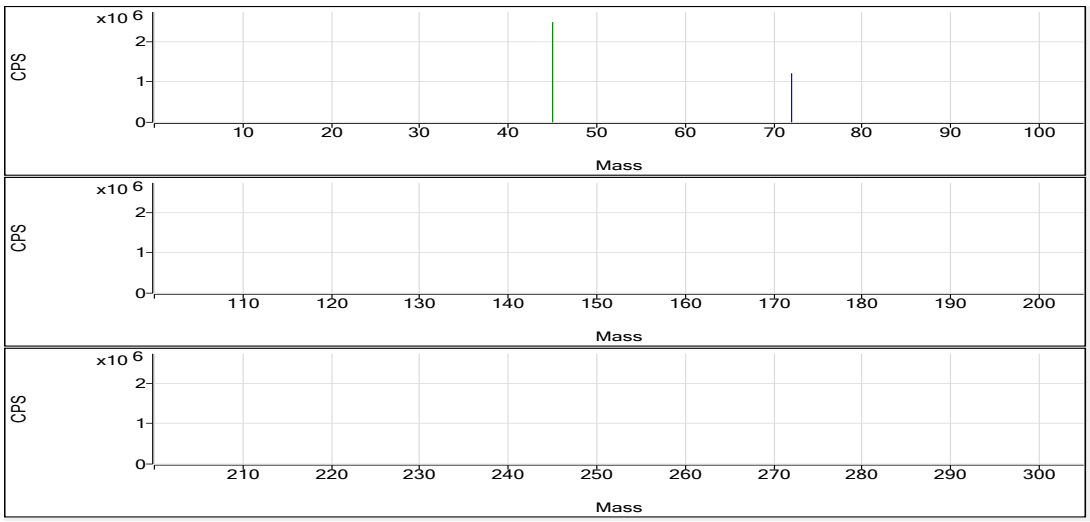
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.008	ppb	N/A	69.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.017	ppb	118.2	6.89	0.0000	Pulse	1.5000	3
Na	23	45	He	-5.885	ppb	N/A	19667.02	0.3961	Pulse	0.1000	3
Mg	24	45	He	1.118	ppb	37.1	326.68	0.0066	Pulse	0.1000	3
Al	27	45	He	-0.008	ppb	N/A	103.33	0.0021	Pulse	0.1000	3
K	39	45	He	-0.599	ppb	N/A	20384.86	0.4105	Pulse	0.1000	3
Ca	44	45	He	-4.371	ppb	N/A	150.01	0.0030	Pulse	0.1000	3
Ti	47	45	He	1.637	ppb	47.5	43.33	0.0009	Pulse	0.1000	3
V	51	45	He	-0.070	ppb	N/A	1504.76	0.0303	Pulse	0.5000	3
Cr	52	45	He	0.128	ppb	100.3	2320.26	0.0467	Pulse	0.1000	3
Mn	55	45	He	0.353	ppb	18.5	356.68	0.0072	Pulse	0.1000	3
Fe	57	45	He	-0.899	ppb	N/A	110.00	0.0022	Pulse	0.1000	3
Co	59	45	He	0.069	ppb	32.0	370.02	0.0075	Pulse	0.1000	3
Ni	60	72	He	-0.995	ppb	N/A	393.35	0.0049	Pulse	0.1000	3
Cu	63	72	He	0.094	ppb	66.6	956.73	0.0119	Pulse	0.1000	3
Zn	66	72	He	0.234	ppb	124.4	533.36	0.0066	Pulse	0.1000	3
As	75	72	He	0.224	ppb	49.0	108.67	0.0014	Pulse	0.5000	3
Sr	88	115	He	0.079	ppb	44.3	120.00	0.0014	Pulse	0.1000	3
Mo	98	115	He	0.004	ppb	688.6	166.68	0.0019	Pulse	0.1000	3
Ag	107	115	He	0.005	ppb	119.5	113.34	0.0013	Pulse	0.1000	3
Cd	111	115	He	0.007	ppb	124.3	8.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.175	ppb	8.1	1526.80	0.0175	Pulse	0.1000	3
Sb	121	115	He	0.048	ppb	57.9	83.34	0.0010	Pulse	0.1000	3
Ba	137	115	He	0.104	ppb	34.9	66.67	0.0008	Pulse	0.1000	3
Tl	205	159	He	-0.003	ppb	N/A	1083.42	0.0027	Pulse	0.1000	3
Pb	208	159	He	-0.011	ppb	N/A	720.04	0.0018	Pulse	0.1000	3
U	238	209	He	0.044	ppb	8.2	796.72	0.0026	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2486551.84	0.5	95.3	Analog	0.1000	3
No Gas	Ge	72	1216145.48	1.3	94.4	Pulse	0.1000	3
H2	Sc	45	199964.61	2.0	97.0	Pulse	0.1000	3
H2	Ge	72	160806.52	0.6	98.8	Pulse	0.1000	3
H2	In	115	394454.34	0.4	97.7	Pulse	0.1000	3
He	Sc	45	49665.64	1.0	97.0	Pulse	0.1000	3
He	Ge	72	80446.44	0.4	98.3	Pulse	0.1000	3
He	In	115	87128.97	0.6	99.4	Pulse	0.1000	3
He	Tb	159	402263.36	0.5	100.2	Pulse	0.1000	3
He	Bi	209	310638.36	1.3	101.5	Pulse	0.1000	3

No Gas



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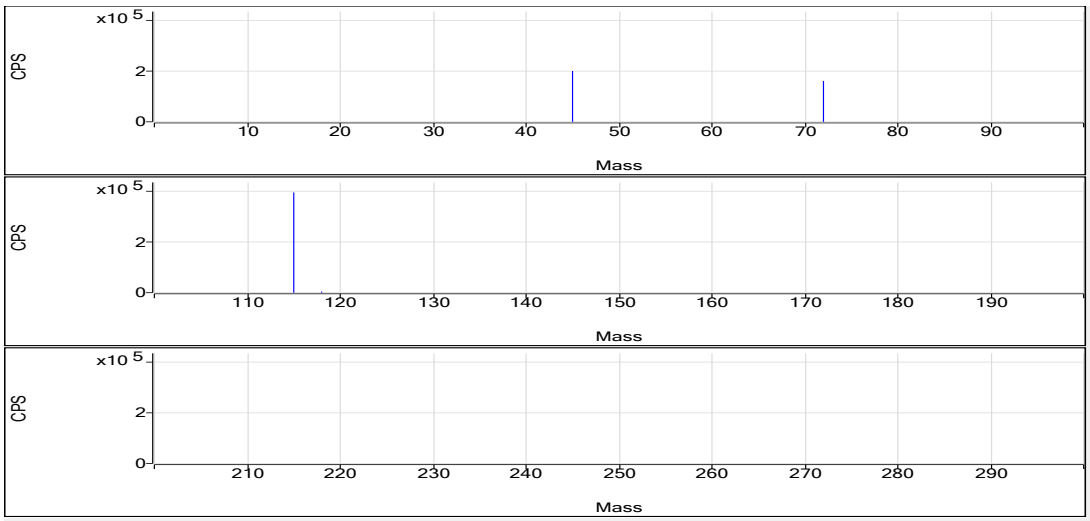
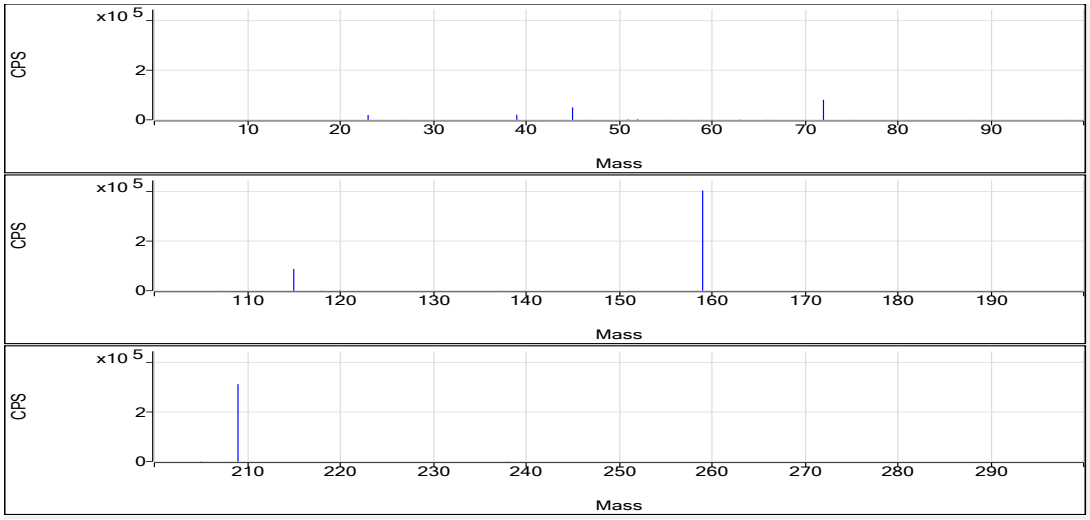


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.004	0	92.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.018	0	52.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.012	0	64.00	0.0007	3.404E-05
Se	78	2	H2	0.023	0	7.33	0.0004	3.546E-05
Se	78	2	H2	0.033	0.0001	8.00	0.0004	3.546E-05
Se	78	2	H2	-0.005	0	5.33	0.0004	3.546E-05
Na	23	3	He	-10.201	0.3807	19132.94	0.0036	0.4171
Na	23	3	He	-3.033	0.4062	20054.35	0.0036	0.4171
Na	23	3	He	-4.422	0.4013	19813.77	0.0036	0.4171
Mg	24	3	He	1.555	0.0074	370.02	0.0018	0.004553
Mg	24	3	He	1.068	0.0065	320.01	0.0018	0.004553
Mg	24	3	He	0.731	0.0059	290.01	0.0018	0.004553
Al	27	3	He	0.179	0.0022	110.00	0.0006	0.002085
Al	27	3	He	-1.144	0.0014	70.00	0.0006	0.002085
Al	27	3	He	0.941	0.0026	130.00	0.0006	0.002085
K	39	3	He	-6.635	0.4034	20274.75	0.0012	0.4112
K	39	3	He	2.191	0.4138	20424.80	0.0012	0.4112
K	39	3	He	2.646	0.4143	20455.02	0.0012	0.4112
Ca	44	3	He	-19.718	0.002	100.00	0.0001	0.003322
Ca	44	3	He	10.803	0.0041	200.01	0.0001	0.003322
Ca	44	3	He	-4.198	0.003	150.01	0.0001	0.003322
Ti	47	3	He	2.245	0.0012	60.00	0.0005	0
Ti	47	3	He	1.904	0.001	50.00	0.0005	0
Ti	47	3	He	0.762	0.0004	20.00	0.0005	0
V	51	3	He	-0.189	0.0278	1396.08	0.0213	0.0318
V	51	3	He	0.023	0.0323	1594.10	0.0213	0.0318
V	51	3	He	-0.044	0.0309	1524.09	0.0213	0.0318
Cr	52	3	He	-0.02	0.0424	2130.23	0.0294	0.04297
Cr	52	3	He	0.213	0.0492	2430.28	0.0294	0.04297
Cr	52	3	He	0.192	0.0486	2400.28	0.0294	0.04297
Mn	55	3	He	0.303	0.0066	330.02	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.427	0.0081	400.02	0.0124	0.002801
Mn	55	3	He	0.329	0.0069	340.01	0.0124	0.002801
Fe	57	3	He	-1.645	0.0018	90.00	0.0006	0.002732
Fe	57	3	He	-0.172	0.0026	130.00	0.0006	0.002732
Fe	57	3	He	-0.881	0.0022	110.00	0.0006	0.002732
Co	59	3	He	0.068	0.0074	370.02	0.0549	0.003644
Co	59	3	He	0.048	0.0063	310.02	0.0549	0.003644
Co	59	3	He	0.092	0.0087	430.02	0.0549	0.003644
Ni	60	3	He	-1.026	0.0046	370.02	0.0093	0.01413
Ni	60	3	He	-0.958	0.0052	420.02	0.0093	0.01413
Ni	60	3	He	-1.002	0.0048	390.02	0.0093	0.01413
Cu	63	3	He	0.028	0.0101	810.06	0.0274	0.009321
Cu	63	3	He	0.101	0.0121	970.06	0.0274	0.009321
Cu	63	3	He	0.152	0.0135	1090.08	0.0274	0.009321
Zn	66	3	He	-0.02	0.0059	470.02	0.0031	0.005913
Zn	66	3	He	0.551	0.0076	610.03	0.0031	0.005913
Zn	66	3	He	0.17	0.0064	520.03	0.0031	0.005913
As	75	3	He	0.256	0.0014	114.00	0.0021	0.0008698
As	75	3	He	0.315	0.0015	124.00	0.0021	0.0008698
As	75	3	He	0.102	0.0011	88.00	0.0021	0.0008698
Sr	88	3	He	0.091	0.0015	130.01	0.0088	0.0006843
Sr	88	3	He	0.106	0.0016	140.00	0.0088	0.0006843
Sr	88	3	He	0.039	0.001	90.00	0.0088	0.0006843
Mo	98	3	He	0.01	0.0021	180.01	0.0219	0.001827
Mo	98	3	He	-0.025	0.0013	110.01	0.0219	0.001827
Mo	98	3	He	0.026	0.0024	210.01	0.0219	0.001827
Ag	107	3	He	0.011	0.0016	140.00	0.047	0.001064
Ag	107	3	He	-0.001	0.001	90.00	0.047	0.001064
Ag	107	3	He	0.004	0.0013	110.01	0.047	0.001064
Cd	111	3	He	0.01	0.0001	10.00	0.0053	6.086E-05
Cd	111	3	He	0.015	0.0001	12.00	0.0053	6.086E-05
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Sn	120	3	He	0.164	0.0174	1520.14	0.0154	0.01483
Sn	120	3	He	0.17	0.0174	1510.12	0.0154	0.01483
Sn	120	3	He	0.19	0.0178	1550.15	0.0154	0.01483
Sb	121	3	He	0.077	0.0014	120.01	0.0143	0.0002661
Sb	121	3	He	0.046	0.0009	80.00	0.0143	0.0002661
Sb	121	3	He	0.022	0.0006	50.00	0.0143	0.0002661
Ba	137	3	He	0.135	0.0009	80.00	0.0048	0.0002665
Ba	137	3	He	0.113	0.0008	70.00	0.0048	0.0002665
Ba	137	3	He	0.064	0.0006	50.00	0.0048	0.0002665
Tl	205	3	He	0.012	0.0031	1230.11	0.0246	0.002755
Tl	205	3	He	-0.012	0.0024	980.07	0.0246	0.002755
Tl	205	3	He	-0.007	0.0026	1040.08	0.0246	0.002755
Pb	208	3	He	-0.001	0.0021	510.03	0.0324	0.002158
Pb	208	3	He	-0.016	0.0016	400.02	0.0324	0.002158
Pb	208	3	He	-0.017	0.0016	390.02	0.0324	0.002158
U	238	3	He	0.044	0.0026	800.05	0.0492	0.0004023
U	238	3	He	0.04	0.0024	750.05	0.0492	0.0004023
U	238	3	He	0.047	0.0027	840.07	0.0492	0.0004023
Sc	45	1	No Gas			2473441.06		
Sc	45	1	No Gas			2486914.96		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2499299.49		
Ge	72	1	No Gas			1201025.76		
Ge	72	1	No Gas			1214707.95		
Ge	72	1	No Gas			1232702.72		
Sc	45	2	H2			204087.13		
Sc	45	2	H2			196296.58		
Sc	45	2	H2			199510.11		
Ge	72	2	H2			161717.50		
Ge	72	2	H2			159895.70		
Ge	72	2	H2			160806.36		
In	115	2	H2			393436.44		
In	115	2	H2			396292.18		
In	115	2	H2			393634.41		
Sc	45	3	He			50257.72		
Sc	45	3	He			49364.86		
Sc	45	3	He			49374.33		
Ge	72	3	He			80315.58		
Ge	72	3	He			80204.60		
Ge	72	3	He			80819.13		
In	115	3	He			87605.24		
In	115	3	He			86549.43		
In	115	3	He			87252.90		
Tb	159	3	He			402288.00		
Tb	159	3	He			400224.21		
Tb	159	3	He			404277.88		
Bi	209	3	He			309407.32		
Bi	209	3	He			315188.75		
Bi	209	3	He			307319.00		

Quantitation Report

Data File Name	074SMPL.d
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Sample Name	MB 410-401756/1-A
Sample Type	Sample
Comment	D2 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

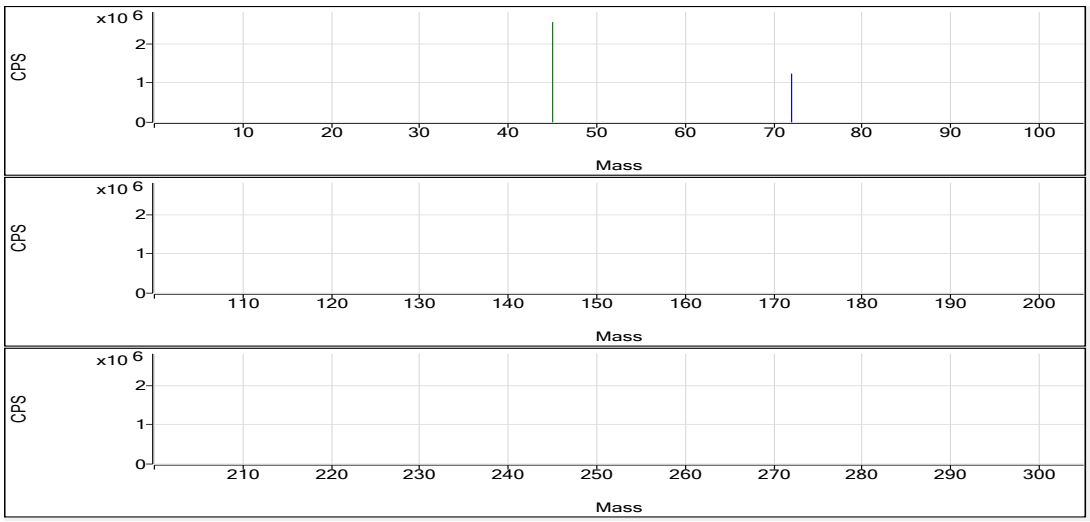
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.036	ppb	N/A	19.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.035	ppb	N/A	3.33	0.0000	Pulse	1.5000	3
Na	23	45	He	-14.777	ppb	N/A	18358.67	0.3644	Pulse	0.1000	3
Mg	24	45	He	0.335	ppb	179.8	260.01	0.0052	Pulse	0.1000	3
Al	27	45	He	-0.854	ppb	N/A	80.00	0.0016	Pulse	0.1000	3
K	39	45	He	4.849	ppb	116.0	21002.36	0.4169	Pulse	0.1000	3
Ca	44	45	He	-7.088	ppb	N/A	143.34	0.0028	Pulse	0.1000	3
Ti	47	45	He	0.372	ppb	99.8	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	-0.161	ppb	N/A	1429.42	0.0284	Pulse	0.5000	3
Cr	52	45	He	-0.185	ppb	N/A	1890.20	0.0375	Pulse	0.1000	3
Mn	55	45	He	0.158	ppb	10.7	240.01	0.0048	Pulse	0.1000	3
Fe	57	45	He	-0.954	ppb	N/A	110.00	0.0022	Pulse	0.1000	3
Co	59	45	He	-0.023	ppb	N/A	120.00	0.0024	Pulse	0.1000	3
Ni	60	72	He	-1.212	ppb	N/A	236.68	0.0029	Pulse	0.1000	3
Cu	63	72	He	-0.119	ppb	N/A	500.03	0.0061	Pulse	0.1000	3
Zn	66	72	He	-0.778	ppb	N/A	290.01	0.0035	Pulse	0.1000	3
As	75	72	He	-0.024	ppb	N/A	67.33	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.009	ppb	162.7	66.67	0.0008	Pulse	0.1000	3
Mo	98	115	He	-0.062	ppb	N/A	40.00	0.0005	Pulse	0.1000	3
Ag	107	115	He	-0.010	ppb	N/A	50.00	0.0006	Pulse	0.1000	3
Cd	111	115	He	-0.006	ppb	N/A	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.058	ppb	60.4	1366.79	0.0157	Pulse	0.1000	3
Sb	121	115	He	0.000	ppb	10471.2	23.33	0.0003	Pulse	0.1000	3
Ba	137	115	He	-0.024	ppb	N/A	13.33	0.0002	Pulse	0.1000	3
Tl	205	159	He	-0.092	ppb	N/A	200.01	0.0005	Pulse	0.1000	3
Pb	208	159	He	-0.016	ppb	N/A	656.70	0.0016	Pulse	0.1000	3
U	238	209	He	-0.003	ppb	N/A	80.00	0.0003	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2550562.56	1.5	97.8	Analog	0.1000	3
No Gas	Ge	72	1237565.61	1.4	96.0	Pulse	0.1000	3
H2	Sc	45	201414.75	1.0	97.7	Pulse	0.1000	3
H2	Ge	72	164380.18	0.5	101.0	Pulse	0.1000	3
H2	In	115	399273.26	0.6	98.9	Pulse	0.1000	3
He	Sc	45	50384.52	0.6	98.4	Pulse	0.1000	3
He	Ge	72	82357.05	0.9	100.6	Pulse	0.1000	3
He	In	115	86878.14	0.8	99.1	Pulse	0.1000	3
He	Tb	159	402811.92	1.0	100.3	Pulse	0.1000	3
He	Bi	209	314039.10	0.5	102.6	Pulse	0.1000	3

No Gas



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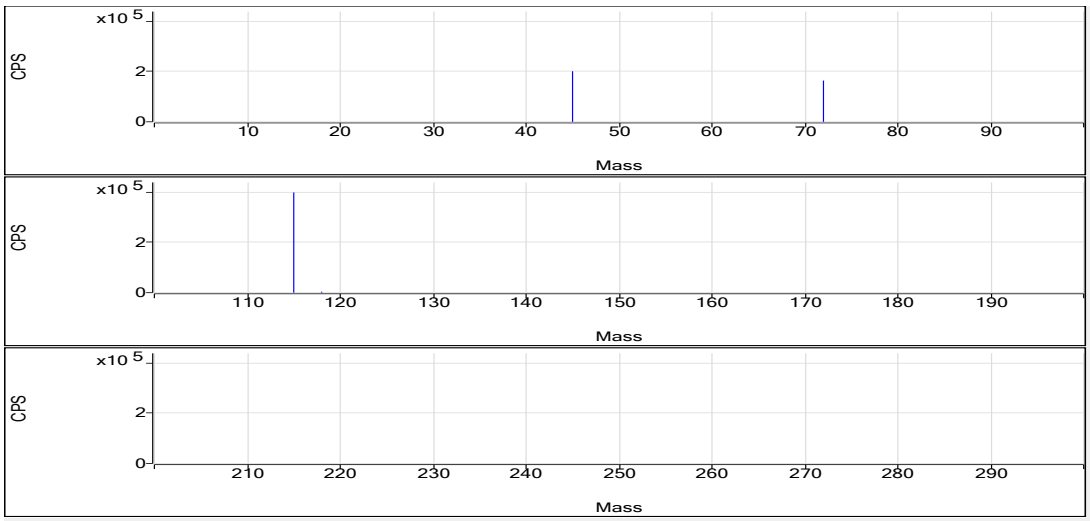
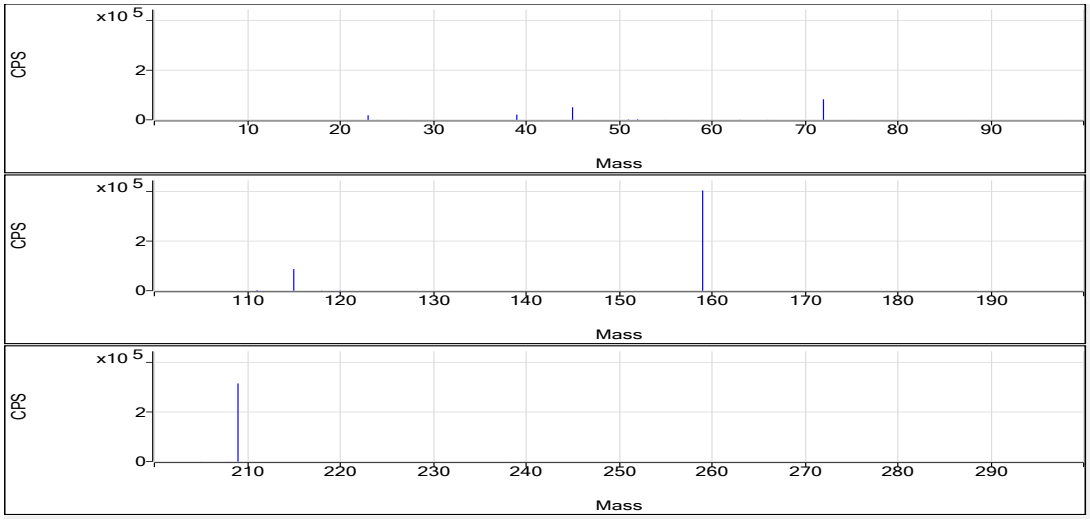


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.04	0	12.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.034	0	24.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.035	0	22.00	0.0007	3.404E-05
Se	78	2	H2	-0.044	0	2.67	0.0004	3.546E-05
Se	78	2	H2	-0.081	0	0.00	0.0004	3.546E-05
Se	78	2	H2	0.021	0	7.33	0.0004	3.546E-05
Na	23	3	He	-14.313	0.366	18422.15	0.0036	0.4171
Na	23	3	He	-13.921	0.3674	18422.10	0.0036	0.4171
Na	23	3	He	-16.097	0.3597	18231.76	0.0036	0.4171
Mg	24	3	He	-0.32	0.004	200.01	0.0018	0.004553
Mg	24	3	He	0.461	0.0054	270.01	0.0018	0.004553
Mg	24	3	He	0.865	0.0061	310.01	0.0018	0.004553
Al	27	3	He	-1.191	0.0014	70.00	0.0006	0.002085
Al	27	3	He	-0.839	0.0016	80.00	0.0006	0.002085
Al	27	3	He	-0.531	0.0018	90.00	0.0006	0.002085
K	39	3	He	7.839	0.4204	21156.20	0.0012	0.4112
K	39	3	He	8.346	0.421	21105.62	0.0012	0.4112
K	39	3	He	-1.637	0.4093	20745.26	0.0012	0.4112
Ca	44	3	He	-13.874	0.0024	120.01	0.0001	0.003322
Ca	44	3	He	-10.787	0.0026	130.01	0.0001	0.003322
Ca	44	3	He	3.397	0.0036	180.01	0.0001	0.003322
Ti	47	3	He	0.374	0.0002	10.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.742	0.0004	20.00	0.0005	0
V	51	3	He	-0.084	0.03	1510.09	0.0213	0.0318
V	51	3	He	-0.27	0.0261	1306.07	0.0213	0.0318
V	51	3	He	-0.13	0.029	1472.09	0.0213	0.0318
Cr	52	3	He	-0.312	0.0338	1700.15	0.0294	0.04297
Cr	52	3	He	-0.037	0.0419	2100.24	0.0294	0.04297
Cr	52	3	He	-0.207	0.0369	1870.21	0.0294	0.04297
Mn	55	3	He	0.142	0.0046	230.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.176	0.005	250.01	0.0124	0.002801
Mn	55	3	He	0.156	0.0047	240.01	0.0124	0.002801
Fe	57	3	He	-3.038	0.001	50.00	0.0006	0.002732
Fe	57	3	He	1.849	0.0038	190.01	0.0006	0.002732
Fe	57	3	He	-1.671	0.0018	90.00	0.0006	0.002732
Co	59	3	He	-0.023	0.0024	120.00	0.0549	0.003644
Co	59	3	He	-0.016	0.0028	140.01	0.0549	0.003644
Co	59	3	He	-0.03	0.002	100.00	0.0549	0.003644
Ni	60	3	He	-1.181	0.0032	260.01	0.0093	0.01413
Ni	60	3	He	-1.219	0.0028	230.01	0.0093	0.01413
Ni	60	3	He	-1.237	0.0026	220.01	0.0093	0.01413
Cu	63	3	He	-0.122	0.006	490.02	0.0274	0.009321
Cu	63	3	He	-0.126	0.0059	480.03	0.0274	0.009321
Cu	63	3	He	-0.108	0.0064	530.03	0.0274	0.009321
Zn	66	3	He	-0.855	0.0033	270.01	0.0031	0.005913
Zn	66	3	He	-0.611	0.004	330.01	0.0031	0.005913
Zn	66	3	He	-0.869	0.0032	270.01	0.0031	0.005913
As	75	3	He	0.105	0.0011	90.00	0.0021	0.0008698
As	75	3	He	-0.109	0.0006	52.00	0.0021	0.0008698
As	75	3	He	-0.069	0.0007	60.00	0.0021	0.0008698
Sr	88	3	He	0.027	0.0009	80.00	0.0088	0.0006843
Sr	88	3	He	0	0.0007	60.00	0.0088	0.0006843
Sr	88	3	He	0.001	0.0007	60.00	0.0088	0.0006843
Mo	98	3	He	-0.062	0.0005	40.00	0.0219	0.001827
Mo	98	3	He	-0.068	0.0003	30.00	0.0219	0.001827
Mo	98	3	He	-0.057	0.0006	50.00	0.0219	0.001827
Ag	107	3	He	-0.013	0.0005	40.00	0.047	0.001064
Ag	107	3	He	-0.008	0.0007	60.00	0.047	0.001064
Ag	107	3	He	-0.01	0.0006	50.00	0.047	0.001064
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Sn	120	3	He	0.02	0.0151	1310.12	0.0154	0.01483
Sn	120	3	He	0.088	0.0162	1420.13	0.0154	0.01483
Sn	120	3	He	0.067	0.0159	1370.13	0.0154	0.01483
Sb	121	3	He	-0.011	0.0001	10.00	0.0143	0.0002661
Sb	121	3	He	0.013	0.0005	40.00	0.0143	0.0002661
Sb	121	3	He	-0.002	0.0002	20.00	0.0143	0.0002661
Ba	137	3	He	0.017	0.0003	30.00	0.0048	0.0002665
Ba	137	3	He	-0.032	0.0001	10.00	0.0048	0.0002665
Ba	137	3	He	-0.056	0	0.00	0.0048	0.0002665
Tl	205	3	He	-0.09	0.0005	220.01	0.0246	0.002755
Tl	205	3	He	-0.088	0.0006	240.01	0.0246	0.002755
Tl	205	3	He	-0.098	0.0003	140.01	0.0246	0.002755
Pb	208	3	He	-0.012	0.0018	450.02	0.0324	0.002158
Pb	208	3	He	-0.011	0.0018	360.02	0.0324	0.002158
Pb	208	3	He	-0.026	0.0013	270.01	0.0324	0.002158
U	238	3	He	-0.004	0.0002	70.00	0.0492	0.0004023
U	238	3	He	-0.004	0.0002	70.00	0.0492	0.0004023
U	238	3	He	-0.002	0.0003	100.00	0.0492	0.0004023
Sc	45	1	No Gas			2509401.68		
Sc	45	1	No Gas			2582438.24		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2559847.77		
Ge	72	1	No Gas			1217174.83		
Ge	72	1	No Gas			1249258.03		
Ge	72	1	No Gas			1246263.97		
Sc	45	2	H2			199542.18		
Sc	45	2	H2			201061.95		
Sc	45	2	H2			203640.13		
Ge	72	2	H2			163466.94		
Ge	72	2	H2			165125.19		
Ge	72	2	H2			164548.40		
In	115	2	H2			401115.78		
In	115	2	H2			400387.77		
In	115	2	H2			396316.24		
Sc	45	3	He			50328.06		
Sc	45	3	He			50136.88		
Sc	45	3	He			50688.62		
Ge	72	3	He			82136.53		
Ge	72	3	He			81722.92		
Ge	72	3	He			83211.70		
In	115	3	He			86580.36		
In	115	3	He			87706.50		
In	115	3	He			86368.47		
Tb	159	3	He			400704.92		
Tb	159	3	He			407458.00		
Tb	159	3	He			400272.85		
Bi	209	3	He			312633.43		
Bi	209	3	He			313890.89		
Bi	209	3	He			315592.98		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

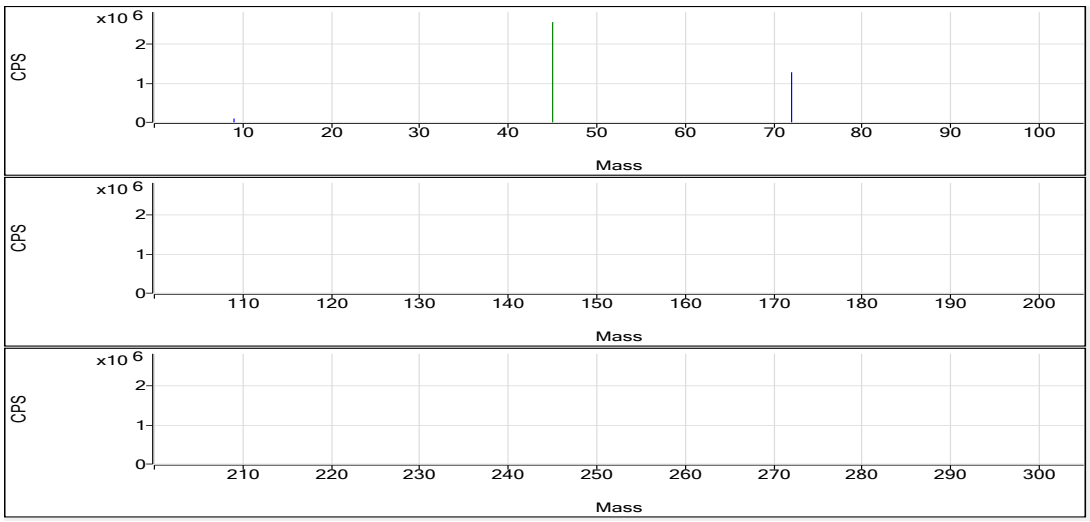
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.693	ppb	1.4	96878.18	0.0377	Pulse	0.5000	3
Se	78	72	H2	97.889	ppb	0.6	7305.20	0.0429	Pulse	1.5000	3
Na	23	45	He	4821.660	ppb	1.8	897666.78	17.6034	Pulse	0.1000	3
Mg	24	45	He	5028.767	ppb	1.4	463568.95	9.0905	Pulse	0.1000	3
Al	27	45	He	5071.422	ppb	2.6	150767.93	2.9567	Pulse	0.1000	3
K	39	45	He	4974.848	ppb	3.0	318034.13	6.2371	Pulse	0.1000	3
Ca	44	45	He	5017.301	ppb	3.3	17454.39	0.3423	Pulse	0.1000	3
Ti	47	45	He	518.961	ppb	0.6	14077.25	0.2760	Pulse	0.1000	3
V	51	45	He	506.246	ppb	1.3	550239.17	10.7900	Pulse	0.5000	3
Cr	52	45	He	484.676	ppb	1.3	729103.14	14.2973	Pulse	0.1000	3
Mn	55	45	He	512.865	ppb	0.7	325303.18	6.3788	Pulse	0.1000	3
Fe	57	45	He	5061.277	ppb	1.8	147814.32	2.8985	Pulse	0.1000	3
Co	59	45	He	506.110	ppb	3.3	1416684.56	27.7827	Mix	0.1000	3
Ni	60	72	He	493.364	ppb	0.7	387842.39	4.5940	Pulse	0.1000	3
Cu	63	72	He	470.162	ppb	0.7	1089396.55	12.9040	Pulse	0.1000	3
Zn	66	72	He	493.661	ppb	1.1	128461.63	1.5217	Pulse	0.1000	3
As	75	72	He	497.204	ppb	1.1	90139.95	1.0677	Pulse	0.5000	3
Sr	88	115	He	52.331	ppb	1.9	39930.46	0.4611	Pulse	0.1000	3
Mo	98	115	He	51.823	ppb	1.7	98641.66	1.1391	Pulse	0.1000	3
Ag	107	115	He	50.859	ppb	2.1	207252.45	2.3935	Pulse	0.1000	3
Cd	111	115	He	52.455	ppb	1.0	24198.31	0.2794	Pulse	0.5000	3
Sn	120	115	He	106.529	ppb	1.5	143538.34	1.6576	Pulse	0.1000	3
Sb	121	115	He	107.250	ppb	2.5	132358.70	1.5286	Pulse	0.1000	3
Ba	137	115	He	525.759	ppb	0.7	217612.01	2.5128	Pulse	0.1000	3
Tl	205	159	He	103.532	ppb	0.5	1031850.45	2.5455	Pulse	0.1000	3
Pb	208	159	He	51.988	ppb	1.1	683748.13	1.6868	Pulse	0.1000	3
U	238	209	He	51.665	ppb	1.2	794028.71	2.5448	Pulse	0.1000	3

ISTD Table:

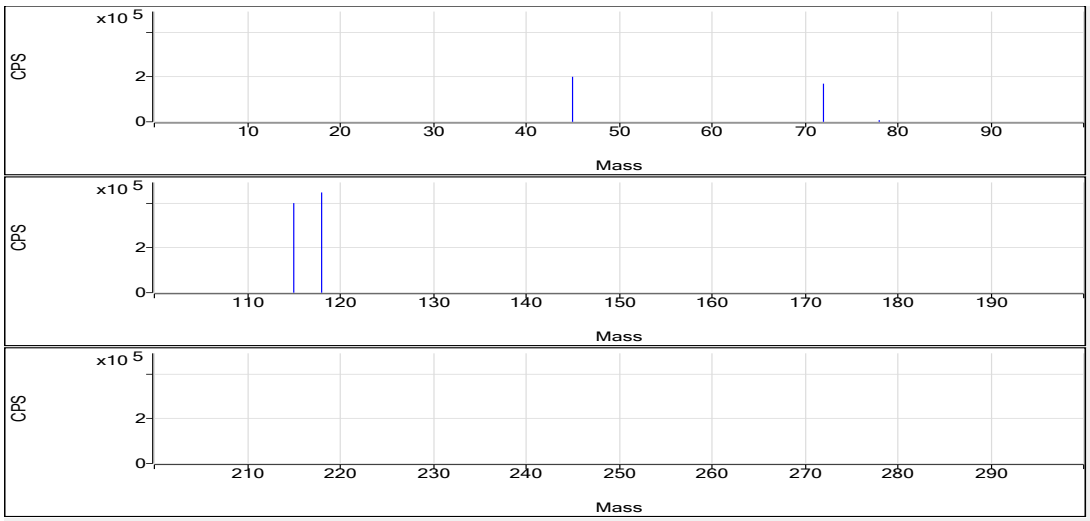
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2570282.77	1.1	98.6	Analog	0.1000	3
No Gas	Ge	72	1282801.85	0.8	99.5	Pulse	0.1000	3
H2	Sc	45	200814.90	1.6	97.4	Pulse	0.1000	3
H2	Ge	72	170123.13	1.1	104.5	Pulse	0.1000	3
H2	In	115	399381.13	0.7	98.9	Pulse	0.1000	3
He	Sc	45	51000.06	1.0	99.6	Pulse	0.1000	3
He	Ge	72	84425.81	0.7	103.1	Pulse	0.1000	3
He	In	115	86609.07	1.6	98.8	Pulse	0.1000	3
He	Tb	159	405358.89	0.3	100.9	Pulse	0.1000	3
He	Bi	209	312043.20	1.0	101.9	Pulse	0.1000	3

No Gas

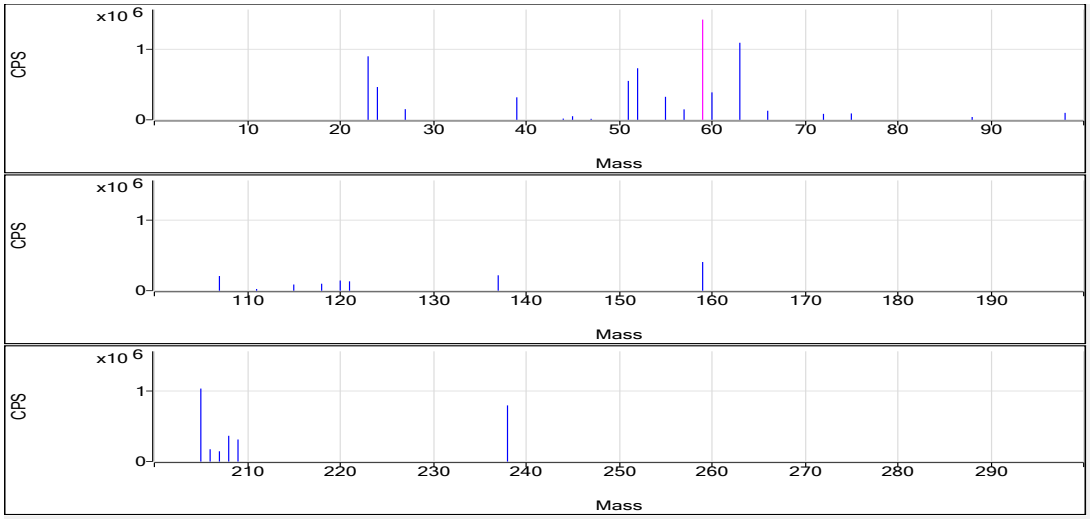


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	51.823	0.0378	96041.64	0.0007	3.404E-05
Be	9	1	No Gas	50.899	0.0371	96377.49	0.0007	3.404E-05
Be	9	1	No Gas	52.357	0.0382	98215.41	0.0007	3.404E-05
Se	78	2	H2	97.886	0.0429	7267.85	0.0004	3.546E-05
Se	78	2	H2	97.335	0.0427	7351.89	0.0004	3.546E-05
Se	78	2	H2	98.447	0.0432	7295.87	0.0004	3.546E-05
Na	23	3	He	4789.119	17.4875	896427.25	0.0036	0.4171
Na	23	3	He	4920.613	17.9562	904773.81	0.0036	0.4171
Na	23	3	He	4755.247	17.3667	891799.28	0.0036	0.4171
Mg	24	3	He	4993.881	9.0274	462757.45	0.0018	0.004553
Mg	24	3	He	5111.227	9.2395	465557.88	0.0018	0.004553
Mg	24	3	He	4981.192	9.0045	462391.52	0.0018	0.004553
Al	27	3	He	5096.45	2.9712	152309.48	0.0006	0.002085
Al	27	3	He	5187.262	3.0242	152380.82	0.0006	0.002085
Al	27	3	He	4930.555	2.8746	147613.48	0.0006	0.002085
K	39	3	He	4863.962	6.1073	313064.92	0.0012	0.4112
K	39	3	He	5141.63	6.4324	324116.67	0.0012	0.4112
K	39	3	He	4918.953	6.1717	316920.80	0.0012	0.4112
Ca	44	3	He	5137.469	0.3504	17961.65	0.0001	0.003322
Ca	44	3	He	5086.189	0.3469	17481.12	0.0001	0.003322
Ca	44	3	He	4828.244	0.3295	16920.40	0.0001	0.003322
Ti	47	3	He	522.21	0.2777	14237.44	0.0005	0
Ti	47	3	He	515.944	0.2744	13826.98	0.0005	0
Ti	47	3	He	518.729	0.2759	14167.33	0.0005	0
V	51	3	He	503.782	10.7376	550422.88	0.0213	0.0318
V	51	3	He	513.762	10.9497	551732.50	0.0213	0.0318
V	51	3	He	501.193	10.6826	548562.13	0.0213	0.0318
Cr	52	3	He	480.06	14.1616	725939.52	0.0294	0.04297
Cr	52	3	He	491.672	14.5031	730781.16	0.0294	0.04297
Cr	52	3	He	482.296	14.2273	730588.74	0.0294	0.04297
Mn	55	3	He	511.466	6.3614	326093.43	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	517.17	6.4323	324112.12	0.0124	0.002801
Mn	55	3	He	509.96	6.3427	325703.98	0.0124	0.002801
Fe	57	3	He	4960.224	2.8407	145619.03	0.0006	0.002732
Fe	57	3	He	5134.196	2.9403	148154.00	0.0006	0.002732
Fe	57	3	He	5089.412	2.9146	149669.94	0.0006	0.002732
Co	59	3	He	488.152	26.7971	1373649.82	0.0549	0.003644
Co	59	3	He	521.186	28.6102	1441611.07	0.0549	0.003644
Co	59	3	He	508.991	27.9409	1434792.79	0.0549	0.003644
Ni	60	3	He	494.264	4.6023	385279.60	0.0093	0.01413
Ni	60	3	He	496.498	4.6231	391392.61	0.0093	0.01413
Ni	60	3	He	489.329	4.5565	386854.96	0.0093	0.01413
Cu	63	3	He	473.754	13.0025	1088497.02	0.0274	0.009321
Cu	63	3	He	467.696	12.8363	1086739.20	0.0274	0.009321
Cu	63	3	He	469.037	12.8731	1092953.42	0.0274	0.009321
Zn	66	3	He	499.378	1.5392	128854.25	0.0031	0.005913
Zn	66	3	He	488.466	1.5057	127474.71	0.0031	0.005913
Zn	66	3	He	493.141	1.5201	129055.93	0.0031	0.005913
As	75	3	He	502.657	1.0794	90364.63	0.0021	0.0008698
As	75	3	He	497.232	1.0678	90400.89	0.0021	0.0008698
As	75	3	He	491.722	1.056	89654.32	0.0021	0.0008698
Sr	88	3	He	51.306	0.4521	39837.19	0.0088	0.0006843
Sr	88	3	He	53.333	0.47	40147.60	0.0088	0.0006843
Sr	88	3	He	52.353	0.4613	39806.58	0.0088	0.0006843
Mo	98	3	He	51.25	1.1265	99259.31	0.0219	0.001827
Mo	98	3	He	52.83	1.1612	99197.98	0.0219	0.001827
Mo	98	3	He	51.39	1.1296	97467.68	0.0219	0.001827
Ag	107	3	He	49.921	2.3493	207004.02	0.047	0.001064
Ag	107	3	He	51.999	2.447	209047.50	0.047	0.001064
Ag	107	3	He	50.658	2.384	205705.84	0.047	0.001064
Cd	111	3	He	52.375	0.279	24581.64	0.0053	6.086E-05
Cd	111	3	He	52.99	0.2823	24112.80	0.0053	6.086E-05
Cd	111	3	He	52.001	0.277	23900.48	0.0053	6.086E-05
Sn	120	3	He	104.665	1.6288	143519.11	0.0154	0.01483
Sn	120	3	He	107.637	1.6747	143062.84	0.0154	0.01483
Sn	120	3	He	107.286	1.6692	144033.06	0.0154	0.01483
Sb	121	3	He	104.807	1.4938	131621.35	0.0143	0.0002661
Sb	121	3	He	110.075	1.5689	134024.85	0.0143	0.0002661
Sb	121	3	He	106.869	1.5232	131429.90	0.0143	0.0002661
Ba	137	3	He	521.824	2.494	219748.22	0.0048	0.0002665
Ba	137	3	He	529.138	2.5289	216041.05	0.0048	0.0002665
Ba	137	3	He	526.313	2.5154	217046.75	0.0048	0.0002665
Tl	205	3	He	103.923	2.5551	1032482.33	0.0246	0.002755
Tl	205	3	He	103.741	2.5507	1036383.73	0.0246	0.002755
Tl	205	3	He	102.933	2.5308	1026685.30	0.0246	0.002755
Pb	208	3	He	52.565	1.7055	368678.59	0.0324	0.002158
Pb	208	3	He	51.991	1.6869	365267.22	0.0324	0.002158
Pb	208	3	He	51.408	1.668	359250.97	0.0324	0.002158
U	238	3	He	51.777	2.5503	789873.82	0.0492	0.0004023
U	238	3	He	52.216	2.5719	799066.24	0.0492	0.0004023
U	238	3	He	51.002	2.5121	793146.08	0.0492	0.0004023
Sc	45	1	No Gas			2541536.68		
Sc	45	1	No Gas			2596703.24		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2572608.40		
Ge	72	1	No Gas			1284547.87		
Ge	72	1	No Gas			1292030.76		
Ge	72	1	No Gas			1271826.93		
Sc	45	2	H2			197782.18		
Sc	45	2	H2			204187.32		
Sc	45	2	H2			200475.21		
Ge	72	2	H2			169253.12		
Ge	72	2	H2			172177.83		
Ge	72	2	H2			168938.45		
In	115	2	H2			398564.21		
In	115	2	H2			402511.36		
In	115	2	H2			397067.81		
Sc	45	3	He			51261.17		
Sc	45	3	He			50387.96		
Sc	45	3	He			51351.05		
Ge	72	3	He			83714.45		
Ge	72	3	He			84661.09		
Ge	72	3	He			84901.88		
In	115	3	He			88883.77		
In	115	3	He			86197.01		
In	115	3	He			87051.99		
Tb	159	3	He			404081.67		
Tb	159	3	He			406320.54		
Tb	159	3	He			405674.45		
Bi	209	3	He			309716.42		
Bi	209	3	He			310689.04		
Bi	209	3	He			315724.14		

Quantitation Report

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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

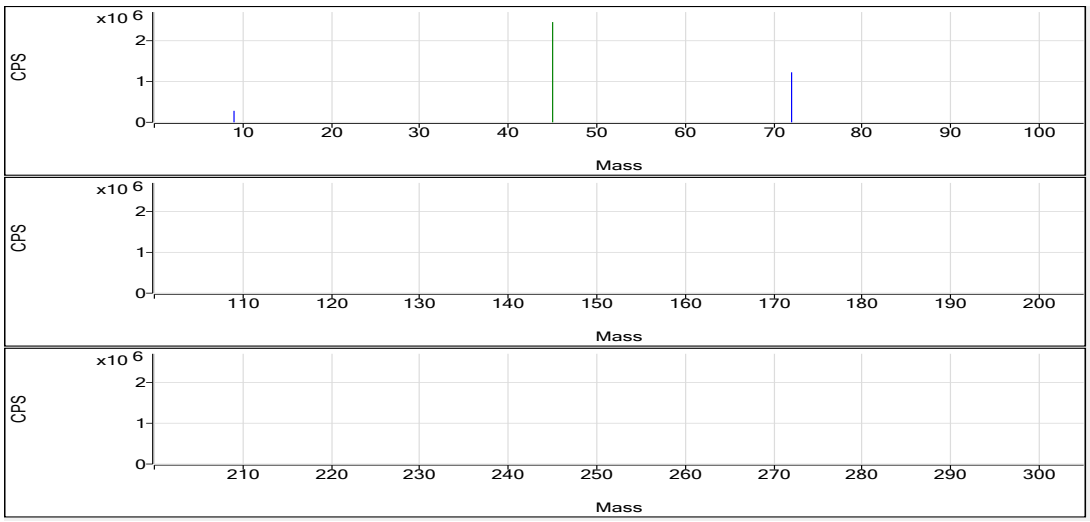
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	157.134	ppb	1.3	282279.96	0.1145	Pulse	0.5000	3
Se	78	72	H2	207.776	ppb	0.1	15033.21	0.0911	Pulse	1.5000	3
Na	23	45	He	5.480	ppb	56.8	21462.85	0.4366	Pulse	0.1000	3
Mg	24	45	He	1.082	ppb	47.8	320.02	0.0065	Pulse	0.1000	3
Al	27	45	He	1724.366	ppb	2.5	49494.00	1.0067	Pulse	0.1000	3
K	39	45	He	-1.087	ppb	N/A	20167.87	0.4099	Pulse	0.1000	3
Ca	44	45	He	1264.774	ppb	2.1	4364.18	0.0888	Pulse	0.1000	3
Ti	47	45	He	0.775	ppb	132.2	20.00	0.0004	Pulse	0.1000	3
V	51	45	He	1673.060	ppb	2.7	1749355.13	35.5858	Analog	0.5000	3
Cr	52	45	He	923.871	ppb	4.7	1337393.23	27.2141	Mix	0.1000	3
Mn	55	45	He	948.707	ppb	1.6	580054.14	11.7972	Pulse	0.1000	3
Fe	57	45	He	1590.326	ppb	3.1	44860.83	0.9126	Pulse	0.1000	3
Co	59	45	He	817.849	ppb	1.7	2207315.07	44.8933	Analog	0.1000	3
Ni	60	72	He	1480.753	ppb	1.9	1144725.58	13.7597	Pulse	0.1000	3
Cu	63	72	He	588.252	ppb	1.8	1342981.18	16.1427	Pulse	0.1000	3
Zn	66	72	He	684.022	ppb	1.7	175225.94	2.1061	Pulse	0.1000	3
As	75	72	He	479.904	ppb	0.8	85751.38	1.0306	Pulse	0.5000	3
Sr	88	115	He	389.943	ppb	0.7	296931.23	3.4317	Pulse	0.1000	3
Mo	98	115	He	309.322	ppb	0.3	587496.55	6.7899	Pulse	0.1000	3
Ag	107	115	He	859.658	ppb	1.1	3498972.24	40.4389	Analog	0.1000	3
Cd	111	115	He	886.742	ppb	0.4	408602.74	4.7224	Pulse	0.5000	3
Sn	120	115	He	0.068	ppb	141.9	1373.45	0.0159	Pulse	0.1000	3
Sb	121	115	He	356.853	ppb	0.6	440022.00	5.0855	Pulse	0.1000	3
Ba	137	115	He	2051.991	ppb	0.7	848489.41	9.8063	Pulse	0.1000	3
Tl	205	159	He	253.454	ppb	0.8	2496037.31	6.2277	Analog	0.1000	3
Pb	208	159	He	1357.857	ppb	1.3	17635657.66	44.0026	Analog	0.1000	3
U	238	209	He	0.050	ppb	21.0	893.41	0.0028	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2465344.55	1.3	94.5	Analog	0.1000	3
No Gas	Ge	72	1229669.93	0.7	95.4	Pulse	0.1000	3
H2	Sc	45	199523.28	1.7	96.8	Pulse	0.1000	3
H2	Ge	72	165006.93	1.3	101.4	Pulse	0.1000	3
H2	In	115	395958.57	0.8	98.1	Pulse	0.1000	3
He	Sc	45	49180.81	2.5	96.1	Pulse	0.1000	3
He	Ge	72	83208.97	1.4	101.6	Pulse	0.1000	3
He	In	115	86524.93	0.1	98.7	Pulse	0.1000	3
He	Tb	159	400814.64	0.9	99.8	Pulse	0.1000	3
He	Bi	209	314424.06	0.6	102.7	Pulse	0.1000	3

No Gas



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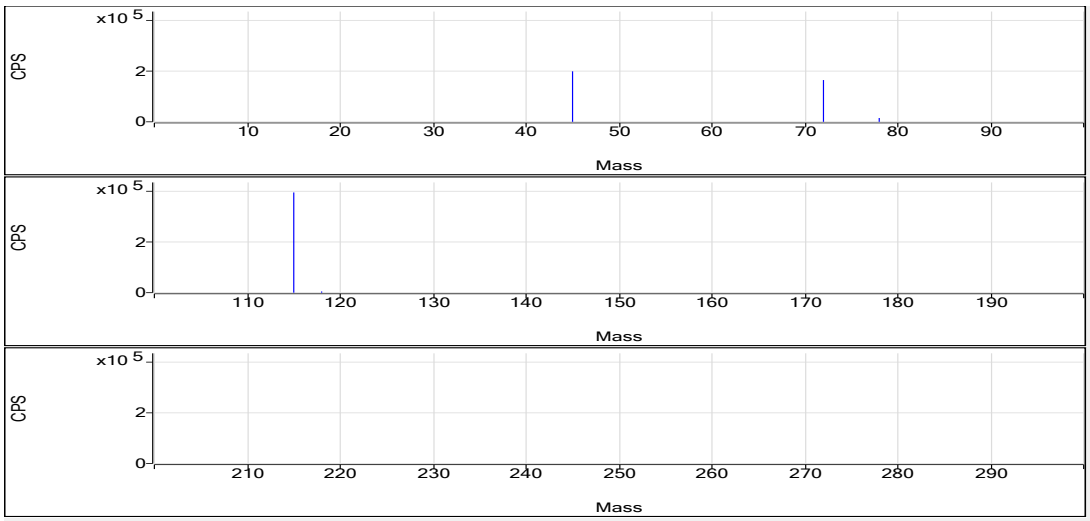
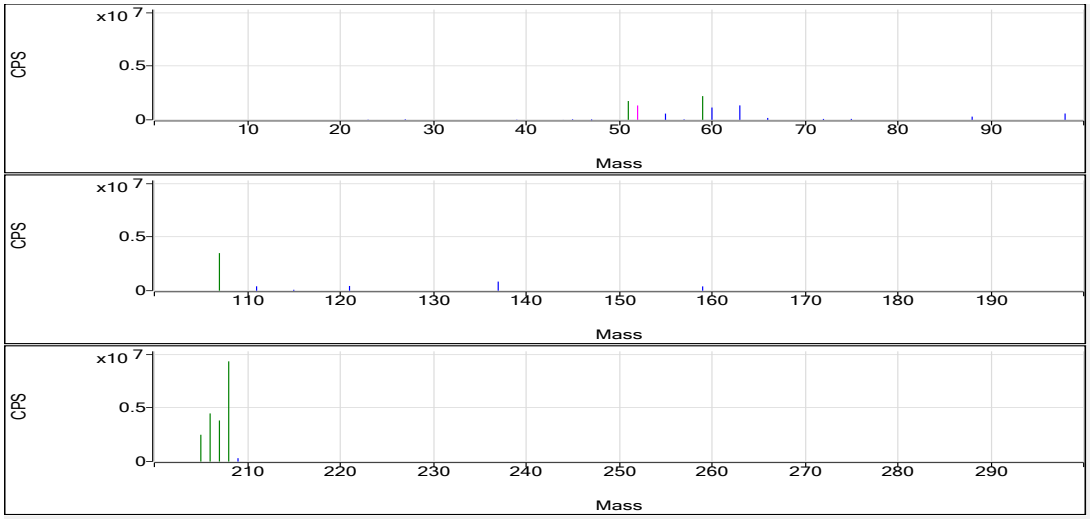


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	155.238	0.1131	280752.56	0.0007	3.404E-05
Be	9	1	No Gas	159.346	0.1161	281948.09	0.0007	3.404E-05
Be	9	1	No Gas	156.819	0.1143	284139.22	0.0007	3.404E-05
Se	78	2	H2	207.778	0.0911	15001.84	0.0004	3.546E-05
Se	78	2	H2	207.498	0.091	15215.40	0.0004	3.546E-05
Se	78	2	H2	208.051	0.0912	14882.39	0.0004	3.546E-05
Na	23	3	He	7.773	0.4448	21576.20	0.0036	0.4171
Na	23	3	He	6.731	0.441	21356.26	0.0036	0.4171
Na	23	3	He	1.936	0.424	21456.10	0.0036	0.4171
Mg	24	3	He	0.561	0.0056	270.02	0.0018	0.004553
Mg	24	3	He	1.595	0.0074	360.02	0.0018	0.004553
Mg	24	3	He	1.089	0.0065	330.02	0.0018	0.004553
Al	27	3	He	1712.488	0.9998	48500.57	0.0006	0.002085
Al	27	3	He	1772.961	1.035	50116.39	0.0006	0.002085
Al	27	3	He	1687.649	0.9853	49865.03	0.0006	0.002085
K	39	3	He	-10.455	0.3989	19353.38	0.0012	0.4112
K	39	3	He	-1.523	0.4094	19823.91	0.0012	0.4112
K	39	3	He	8.716	0.4214	21326.31	0.0012	0.4112
Ca	44	3	He	1284.487	0.0901	4370.82	0.0001	0.003322
Ca	44	3	He	1274.754	0.0894	4330.86	0.0001	0.003322
Ca	44	3	He	1235.08	0.0868	4390.86	0.0001	0.003322
Ti	47	3	He	1.938	0.001	50.00	0.0005	0
Ti	47	3	He	0.388	0.0002	10.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	1690.642	35.9594	1744455.00	0.0213	0.0318
V	51	3	He	1706.782	36.3024	1757821.88	0.0213	0.0318
V	51	3	He	1621.757	34.4956	1745788.50	0.0213	0.0318
Cr	52	3	He	957.584	28.2056	1368303.73	0.0294	0.04297
Cr	52	3	He	939.067	27.661	1339391.54	0.0294	0.04297
Cr	52	3	He	874.962	25.7757	1304484.43	0.0294	0.04297
Mn	55	3	He	949.363	11.8054	572701.20	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	963.974	11.9871	580432.80	0.0124	0.002801
Mn	55	3	He	932.782	11.5993	587028.43	0.0124	0.002801
Fe	57	3	He	1615.458	0.927	44971.22	0.0006	0.002732
Fe	57	3	He	1622.455	0.931	45081.51	0.0006	0.002732
Fe	57	3	He	1533.067	0.8799	44529.76	0.0006	0.002732
Co	59	3	He	818.471	44.9274	2179508.09	0.0549	0.003644
Co	59	3	He	831.6	45.648	2210350.44	0.0549	0.003644
Co	59	3	He	803.478	44.1045	2232086.69	0.0549	0.003644
Ni	60	3	He	1512.426	14.0538	1149940.69	0.0093	0.01413
Ni	60	3	He	1456.803	13.5374	1137236.55	0.0093	0.01413
Ni	60	3	He	1473.03	13.6881	1146999.51	0.0093	0.01413
Cu	63	3	He	600.701	16.4842	1348805.92	0.0274	0.009321
Cu	63	3	He	580.753	15.937	1338821.39	0.0274	0.009321
Cu	63	3	He	583.303	16.007	1341316.23	0.0274	0.009321
Zn	66	3	He	694.698	2.1389	175016.33	0.0031	0.005913
Zn	66	3	He	672.125	2.0696	173861.97	0.0031	0.005913
Zn	66	3	He	685.241	2.1099	176799.51	0.0031	0.005913
As	75	3	He	483.082	1.0374	84887.55	0.0021	0.0008698
As	75	3	He	475.901	1.022	85857.37	0.0021	0.0008698
As	75	3	He	480.727	1.0324	86509.23	0.0021	0.0008698
Sr	88	3	He	391.824	3.4483	298423.75	0.0088	0.0006843
Sr	88	3	He	386.724	3.4034	294640.80	0.0088	0.0006843
Sr	88	3	He	391.28	3.4435	297729.14	0.0088	0.0006843
Mo	98	3	He	309.49	6.7936	587935.85	0.0219	0.001827
Mo	98	3	He	308.37	6.769	586007.14	0.0219	0.001827
Mo	98	3	He	310.104	6.8071	588546.67	0.0219	0.001827
Ag	107	3	He	869.357	40.8951	3539158.38	0.047	0.001064
Ag	107	3	He	850.948	40.0292	3465400.57	0.047	0.001064
Ag	107	3	He	858.67	40.3924	3492357.76	0.047	0.001064
Cd	111	3	He	885.018	4.7132	407891.13	0.0053	6.086E-05
Cd	111	3	He	884.223	4.709	407663.38	0.0053	6.086E-05
Cd	111	3	He	890.984	4.745	410253.72	0.0053	6.086E-05
Sn	120	3	He	0.027	0.0153	1320.10	0.0154	0.01483
Sn	120	3	He	0.177	0.0176	1520.15	0.0154	0.01483
Sn	120	3	He	-0.002	0.0148	1280.11	0.0154	0.01483
Sb	121	3	He	354.715	5.055	437473.78	0.0143	0.0002661
Sb	121	3	He	356.864	5.0857	440274.80	0.0143	0.0002661
Sb	121	3	He	358.981	5.1158	442317.42	0.0143	0.0002661
Ba	137	3	He	2038.369	9.7412	843028.42	0.0048	0.0002665
Ba	137	3	He	2049.088	9.7925	847749.99	0.0048	0.0002665
Ba	137	3	He	2068.516	9.8853	854689.83	0.0048	0.0002665
Tl	205	3	He	254.849	6.2619	2487613.09	0.0246	0.002755
Tl	205	3	He	254.342	6.2495	2506671.68	0.0246	0.002755
Tl	205	3	He	251.17	6.1716	2493827.15	0.0246	0.002755
Pb	208	3	He	1377.186	44.6289	9422685.48	0.0324	0.002158
Pb	208	3	He	1351.38	43.7927	9240319.86	0.0324	0.002158
Pb	208	3	He	1345.005	43.5861	9326393.61	0.0324	0.002158
U	238	3	He	0.041	0.0024	750.07	0.0492	0.0004023
U	238	3	He	0.047	0.0027	860.06	0.0492	0.0004023
U	238	3	He	0.061	0.0034	1070.09	0.0492	0.0004023
Sc	45	1	No Gas			2481688.71		
Sc	45	1	No Gas			2428026.53		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2486318.40		
Ge	72	1	No Gas			1233317.87		
Ge	72	1	No Gas			1220440.29		
Ge	72	1	No Gas			1235251.62		
Sc	45	2	H2			196077.20		
Sc	45	2	H2			202667.61		
Sc	45	2	H2			199825.04		
Ge	72	2	H2			164658.79		
Ge	72	2	H2			167228.08		
Ge	72	2	H2			163133.93		
In	115	2	H2			399838.67		
In	115	2	H2			394045.81		
In	115	2	H2			393991.24		
Sc	45	3	He			48511.74		
Sc	45	3	He			48421.61		
Sc	45	3	He			50609.07		
Ge	72	3	He			81824.39		
Ge	72	3	He			84006.86		
Ge	72	3	He			83795.65		
In	115	3	He			86550.02		
In	115	3	He			86579.57		
In	115	3	He			86469.46		
Tb	159	3	He			397260.23		
Tb	159	3	He			401100.66		
Tb	159	3	He			404083.04		
Bi	209	3	He			312582.36		
Bi	209	3	He			316277.07		
Bi	209	3	He			314412.75		

Quantitation Report

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Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

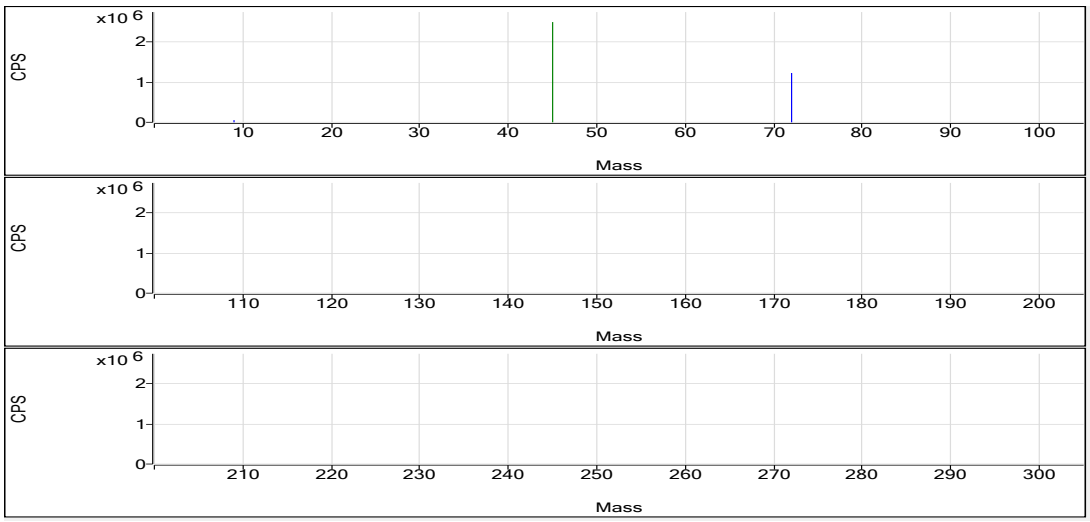
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	29.535	ppb	0.9	53703.13	0.0216	Pulse	0.5000	3
Se	78	72	H2	40.613	ppb	2.3	2902.30	0.0178	Pulse	1.5000	3
Na	23	45	He	-8.925	ppb	N/A	19112.93	0.3852	Pulse	0.1000	3
Mg	24	45	He	0.828	ppb	37.4	300.01	0.0060	Pulse	0.1000	3
Al	27	45	He	326.025	ppb	1.2	9526.74	0.1920	Pulse	0.1000	3
K	39	45	He	-0.049	ppb	N/A	20398.20	0.4111	Pulse	0.1000	3
Ca	44	45	He	250.388	ppb	19.5	1003.40	0.0202	Pulse	0.1000	3
Ti	47	45	He	0.251	ppb	173.2	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	307.188	ppb	0.9	325438.00	6.5598	Pulse	0.5000	3
Cr	52	45	He	170.114	ppb	0.9	250334.59	5.0460	Pulse	0.1000	3
Mn	55	45	He	182.544	ppb	0.6	112727.64	2.2722	Pulse	0.1000	3
Fe	57	45	He	299.829	ppb	1.4	8646.20	0.1743	Pulse	0.1000	3
Co	59	45	He	148.589	ppb	0.5	404798.99	8.1593	Pulse	0.1000	3
Ni	60	72	He	283.179	ppb	0.5	220428.61	2.6428	Pulse	0.1000	3
Cu	63	72	He	112.437	ppb	1.1	257962.29	3.0930	Pulse	0.1000	3
Zn	66	72	He	131.377	ppb	0.3	34138.12	0.4093	Pulse	0.1000	3
As	75	72	He	93.144	ppb	0.3	16742.49	0.2007	Pulse	0.5000	3
Sr	88	115	He	73.528	ppb	1.8	56633.93	0.6477	Pulse	0.1000	3
Mo	98	115	He	58.507	ppb	1.5	112433.88	1.2858	Pulse	0.1000	3
Ag	107	115	He	173.796	ppb	1.6	714979.81	8.1763	Pulse	0.1000	3
Cd	111	115	He	167.679	ppb	1.8	78088.50	0.8930	Pulse	0.5000	3
Sn	120	115	He	0.064	ppb	45.6	1383.46	0.0158	Pulse	0.1000	3
Sb	121	115	He	68.166	ppb	1.4	84966.77	0.9716	Pulse	0.1000	3
Ba	137	115	He	387.793	ppb	1.6	162092.67	1.8535	Pulse	0.1000	3
Tl	205	159	He	46.023	ppb	0.9	455338.26	1.1331	Pulse	0.1000	3
Pb	208	159	He	254.774	ppb	0.6	3318543.78	8.2579	Analog	0.1000	3
U	238	209	He	0.004	ppb	24.7	193.34	0.0006	Pulse	0.1000	3

ISTD Table:

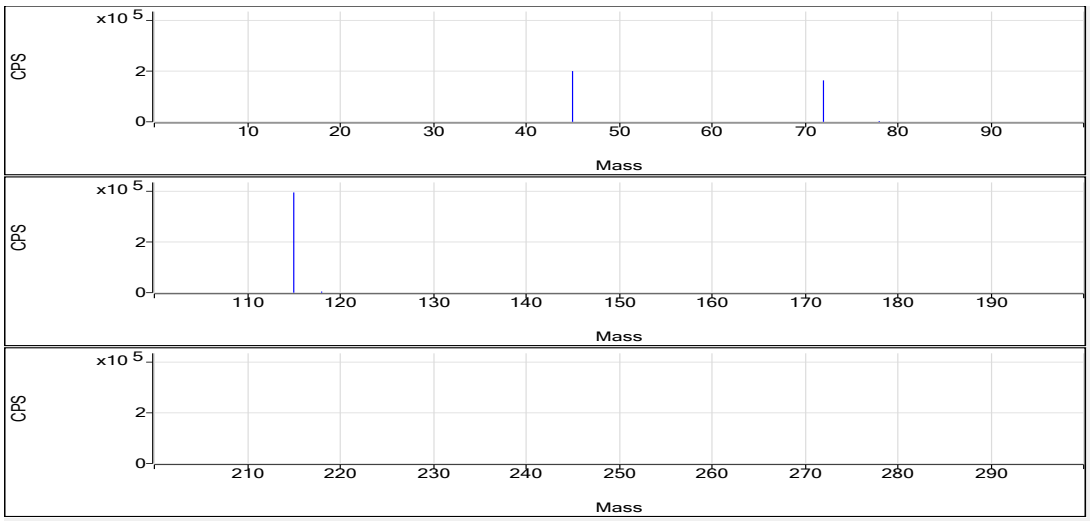
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2491981.11	0.8	95.6	Analog	0.1000	3
No Gas	Ge	72	1225458.39	0.6	95.1	Pulse	0.1000	3
H2	Sc	45	199172.52	0.9	96.7	Pulse	0.1000	3
H2	Ge	72	162700.88	0.5	100.0	Pulse	0.1000	3
H2	In	115	393401.90	1.6	97.4	Pulse	0.1000	3
He	Sc	45	49611.98	0.6	96.9	Pulse	0.1000	3
He	Ge	72	83406.47	0.8	101.9	Pulse	0.1000	3
He	In	115	87457.13	1.4	99.8	Pulse	0.1000	3
He	Tb	159	401872.74	0.7	100.1	Pulse	0.1000	3
He	Bi	209	313200.84	0.7	102.3	Pulse	0.1000	3

No Gas

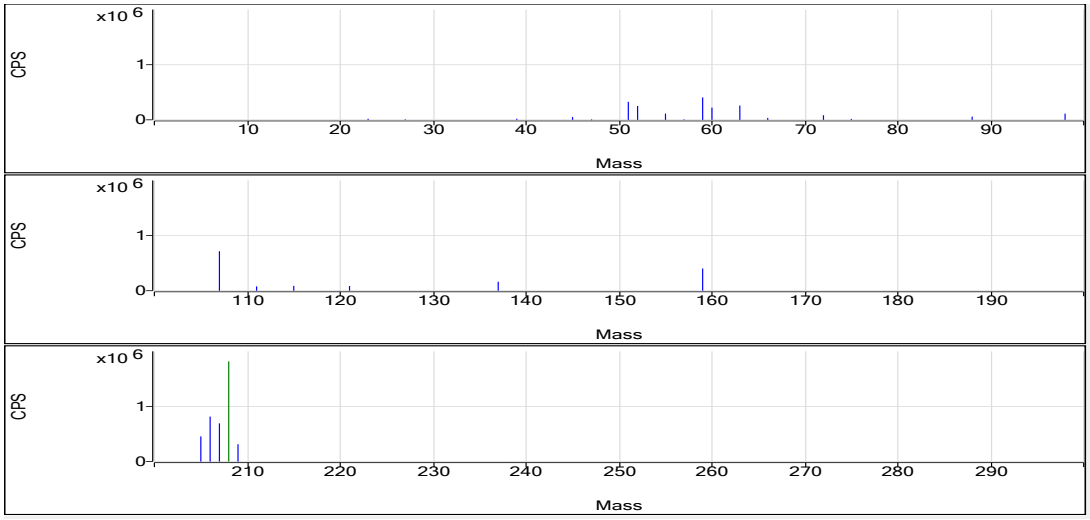


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	29.231	0.0213	53599.43	0.0007	3.404E-05
Be	9	1	No Gas	29.634	0.0216	53436.79	0.0007	3.404E-05
Be	9	1	No Gas	29.74	0.0217	54073.18	0.0007	3.404E-05
Se	78	2	H2	40.17	0.0176	2858.29	0.0004	3.546E-05
Se	78	2	H2	39.973	0.0176	2852.29	0.0004	3.546E-05
Se	78	2	H2	41.696	0.0183	2996.32	0.0004	3.546E-05
Na	23	3	He	-8.501	0.3868	19313.26	0.0036	0.4171
Na	23	3	He	-7.469	0.3904	19293.12	0.0036	0.4171
Na	23	3	He	-10.804	0.3785	18732.40	0.0036	0.4171
Mg	24	3	He	0.584	0.0056	280.01	0.0018	0.004553
Mg	24	3	He	1.176	0.0067	330.02	0.0018	0.004553
Mg	24	3	He	0.724	0.0059	290.01	0.0018	0.004553
Al	27	3	He	326.522	0.1923	9603.49	0.0006	0.002085
Al	27	3	He	329.657	0.1941	9593.40	0.0006	0.002085
Al	27	3	He	321.898	0.1896	9383.32	0.0006	0.002085
K	39	3	He	6.368	0.4186	20905.57	0.0012	0.4112
K	39	3	He	-7.165	0.4028	19903.96	0.0012	0.4112
K	39	3	He	0.649	0.4119	20385.08	0.0012	0.4112
Ca	44	3	He	196.874	0.0166	830.05	0.0001	0.003322
Ca	44	3	He	292.346	0.0231	1140.09	0.0001	0.003322
Ca	44	3	He	261.943	0.021	1040.07	0.0001	0.003322
Ti	47	3	He	0.753	0.0004	20.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	305.456	6.523	325736.00	0.0213	0.0318
V	51	3	He	310.342	6.6268	327462.69	0.0213	0.0318
V	51	3	He	305.766	6.5296	323115.31	0.0213	0.0318
Cr	52	3	He	168.343	4.9939	249380.29	0.0294	0.04297
Cr	52	3	He	171.492	5.0866	251350.68	0.0294	0.04297
Cr	52	3	He	170.506	5.0576	250272.79	0.0294	0.04297
Mn	55	3	He	181.973	2.2651	113111.68	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	183.747	2.2872	113019.77	0.0124	0.002801
Mn	55	3	He	181.912	2.2644	112051.46	0.0124	0.002801
Fe	57	3	He	298.78	0.1737	8672.91	0.0006	0.002732
Fe	57	3	He	304.463	0.1769	8742.97	0.0006	0.002732
Fe	57	3	He	296.245	0.1722	8522.71	0.0006	0.002732
Co	59	3	He	148.48	8.1533	407147.53	0.0549	0.003644
Co	59	3	He	147.895	8.1212	401307.96	0.0549	0.003644
Co	59	3	He	149.391	8.2034	405941.48	0.0549	0.003644
Ni	60	3	He	283.364	2.6446	222506.60	0.0093	0.01413
Ni	60	3	He	281.725	2.6293	219003.40	0.0093	0.01413
Ni	60	3	He	284.45	2.6546	219775.82	0.0093	0.01413
Cu	63	3	He	111.262	3.0608	257528.26	0.0274	0.009321
Cu	63	3	He	112.259	3.0881	257217.65	0.0274	0.009321
Cu	63	3	He	113.79	3.1301	259140.95	0.0274	0.009321
Zn	66	3	He	131.745	0.4104	34532.32	0.0031	0.005913
Zn	66	3	He	130.987	0.4081	33991.29	0.0031	0.005913
Zn	66	3	He	131.398	0.4094	33890.74	0.0031	0.005913
As	75	3	He	93.127	0.2007	16886.00	0.0021	0.0008698
As	75	3	He	93.438	0.2014	16771.87	0.0021	0.0008698
As	75	3	He	92.869	0.2001	16569.61	0.0021	0.0008698
Sr	88	3	He	72.415	0.6379	56684.02	0.0088	0.0006843
Sr	88	3	He	75.044	0.661	57216.52	0.0088	0.0006843
Sr	88	3	He	73.126	0.6441	56001.26	0.0088	0.0006843
Mo	98	3	He	57.479	1.2632	112256.00	0.0219	0.001827
Mo	98	3	He	59.186	1.3007	112588.57	0.0219	0.001827
Mo	98	3	He	58.857	1.2935	112457.07	0.0219	0.001827
Ag	107	3	He	170.739	8.0325	713822.10	0.047	0.001064
Ag	107	3	He	174.801	8.2236	711853.11	0.047	0.001064
Ag	107	3	He	175.848	8.2728	719264.21	0.047	0.001064
Cd	111	3	He	164.111	0.874	77672.14	0.0053	6.086E-05
Cd	111	3	He	169.519	0.9028	78150.91	0.0053	6.086E-05
Cd	111	3	He	169.406	0.9022	78442.45	0.0053	6.086E-05
Sn	120	3	He	0.082	0.0161	1430.14	0.0154	0.01483
Sn	120	3	He	0.08	0.0161	1390.12	0.0154	0.01483
Sn	120	3	He	0.03	0.0153	1330.11	0.0154	0.01483
Sb	121	3	He	67.174	0.9575	85090.15	0.0143	0.0002661
Sb	121	3	He	69.061	0.9844	85211.28	0.0143	0.0002661
Sb	121	3	He	68.264	0.973	84598.89	0.0143	0.0002661
Ba	137	3	He	387.461	1.8519	164568.92	0.0048	0.0002665
Ba	137	3	He	394.179	1.884	163080.29	0.0048	0.0002665
Ba	137	3	He	381.738	1.8245	158628.79	0.0048	0.0002665
Tl	205	3	He	45.826	1.1283	454508.63	0.0246	0.002755
Tl	205	3	He	45.759	1.1266	455198.00	0.0246	0.002755
Tl	205	3	He	46.483	1.1444	456308.16	0.0246	0.002755
Pb	208	3	He	254.121	8.2368	1810192.16	0.0324	0.002158
Pb	208	3	He	253.675	8.2223	1811029.97	0.0324	0.002158
Pb	208	3	He	256.526	8.3147	1818706.69	0.0324	0.002158
U	238	3	He	0.003	0.0006	180.01	0.0492	0.0004023
U	238	3	He	0.006	0.0007	210.01	0.0492	0.0004023
U	238	3	He	0.004	0.0006	190.01	0.0492	0.0004023
Sc	45	1	No Gas			2512916.06		
Sc	45	1	No Gas			2471262.31		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2491764.96		
Ge	72	1	No Gas			1232905.76		
Ge	72	1	No Gas			1217702.87		
Ge	72	1	No Gas			1225766.54		
Sc	45	2	H2			198338.10		
Sc	45	2	H2			197862.15		
Sc	45	2	H2			201317.32		
Ge	72	2	H2			162009.90		
Ge	72	2	H2			162464.55		
Ge	72	2	H2			163628.20		
In	115	2	H2			388610.07		
In	115	2	H2			391111.17		
In	115	2	H2			400484.45		
Sc	45	3	He			49936.50		
Sc	45	3	He			49414.63		
Sc	45	3	He			49484.81		
Ge	72	3	He			84137.75		
Ge	72	3	He			83292.15		
Ge	72	3	He			82789.50		
In	115	3	He			88873.83		
In	115	3	He			86568.99		
In	115	3	He			86951.26		
Tb	159	3	He			402840.07		
Tb	159	3	He			404041.71		
Tb	159	3	He			398736.44		
Bi	209	3	He			315621.85		
Bi	209	3	He			311030.00		
Bi	209	3	He			312950.68		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

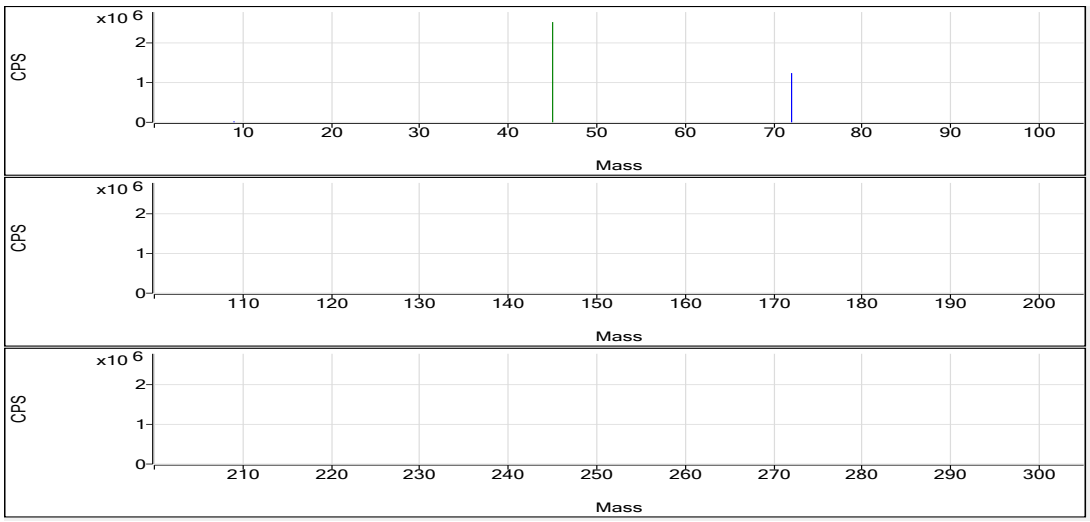
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	13.856	ppb	0.6	25484.33	0.0101	Pulse	0.5000	3
Se	78	72	H2	18.877	ppb	5.1	1366.96	0.0083	Pulse	1.5000	3
Na	23	45	He	-13.300	ppb	N/A	18368.62	0.3696	Pulse	0.1000	3
Mg	24	45	He	0.114	ppb	352.5	236.68	0.0048	Pulse	0.1000	3
Al	27	45	He	155.832	ppb	3.1	4617.52	0.0929	Pulse	0.1000	3
K	39	45	He	0.711	ppb	577.7	20481.52	0.4120	Pulse	0.1000	3
Ca	44	45	He	109.776	ppb	14.7	533.37	0.0107	Pulse	0.1000	3
Ti	47	45	He	0.624	ppb	91.9	16.67	0.0003	Pulse	0.1000	3
V	51	45	He	146.087	ppb	2.1	155847.34	3.1363	Pulse	0.5000	3
Cr	52	45	He	81.496	ppb	3.0	121224.00	2.4398	Pulse	0.1000	3
Mn	55	45	He	85.923	ppb	2.9	53225.54	1.0710	Pulse	0.1000	3
Fe	57	45	He	138.355	ppb	7.7	4067.38	0.0819	Pulse	0.1000	3
Co	59	45	He	71.071	ppb	2.6	194013.43	3.9045	Pulse	0.1000	3
Ni	60	72	He	132.518	ppb	1.7	105050.90	1.2443	Pulse	0.1000	3
Cu	63	72	He	53.109	ppb	1.7	123773.15	1.4659	Pulse	0.1000	3
Zn	66	72	He	59.295	ppb	4.9	15865.98	0.1880	Pulse	0.1000	3
As	75	72	He	43.840	ppb	2.6	8014.95	0.0949	Pulse	0.5000	3
Sr	88	115	He	35.595	ppb	2.3	27116.79	0.3139	Pulse	0.1000	3
Mo	98	115	He	28.445	ppb	2.2	54085.22	0.6261	Pulse	0.1000	3
Ag	107	115	He	87.693	ppb	0.6	356492.03	4.1261	Pulse	0.1000	3
Cd	111	115	He	81.213	ppb	0.8	37371.13	0.4326	Pulse	0.5000	3
Sn	120	115	He	0.037	ppb	161.5	1330.12	0.0154	Pulse	0.1000	3
Sb	121	115	He	32.563	ppb	1.7	40112.60	0.4643	Pulse	0.1000	3
Ba	137	115	He	187.518	ppb	1.5	77442.34	0.8964	Pulse	0.1000	3
Tl	205	159	He	21.660	ppb	1.5	217064.39	0.5347	Pulse	0.1000	3
Pb	208	159	He	116.218	ppb	1.1	1529549.39	3.7681	Pulse	0.1000	3
U	238	209	He	0.000	ppb	N/A	120.01	0.0004	Pulse	0.1000	3

ISTD Table:

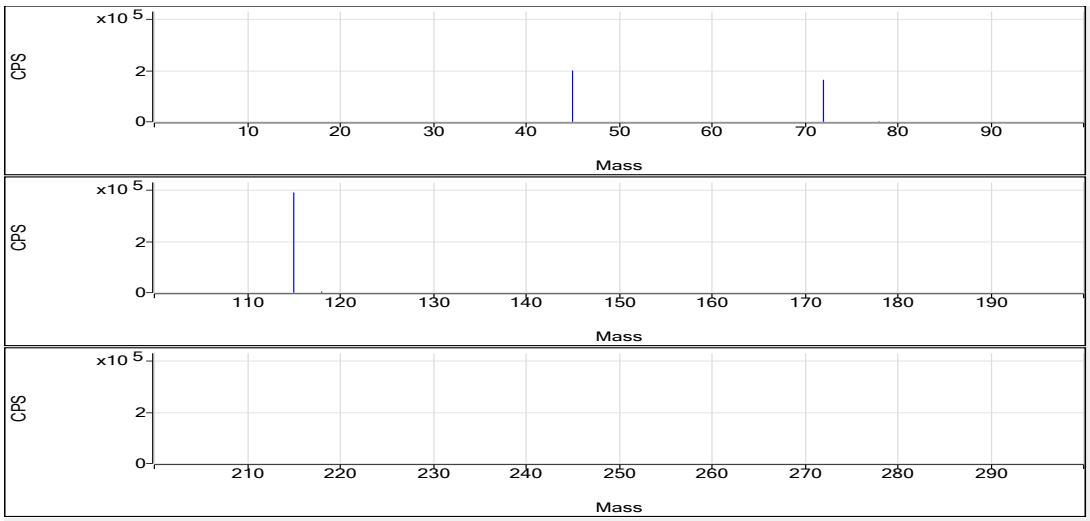
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2516335.33	1.7	96.5	Analog	0.1000	3
No Gas	Ge	72	1235573.21	0.7	95.9	Pulse	0.1000	3
H2	Sc	45	200679.79	0.4	97.4	Pulse	0.1000	3
H2	Ge	72	164567.12	1.6	101.1	Pulse	0.1000	3
H2	In	115	392511.49	1.0	97.2	Pulse	0.1000	3
He	Sc	45	49705.73	2.0	97.1	Pulse	0.1000	3
He	Ge	72	84442.38	1.6	103.2	Pulse	0.1000	3
He	In	115	86397.63	0.5	98.6	Pulse	0.1000	3
He	Tb	159	405941.86	0.8	101.1	Pulse	0.1000	3
He	Bi	209	315686.87	1.5	103.1	Pulse	0.1000	3

No Gas

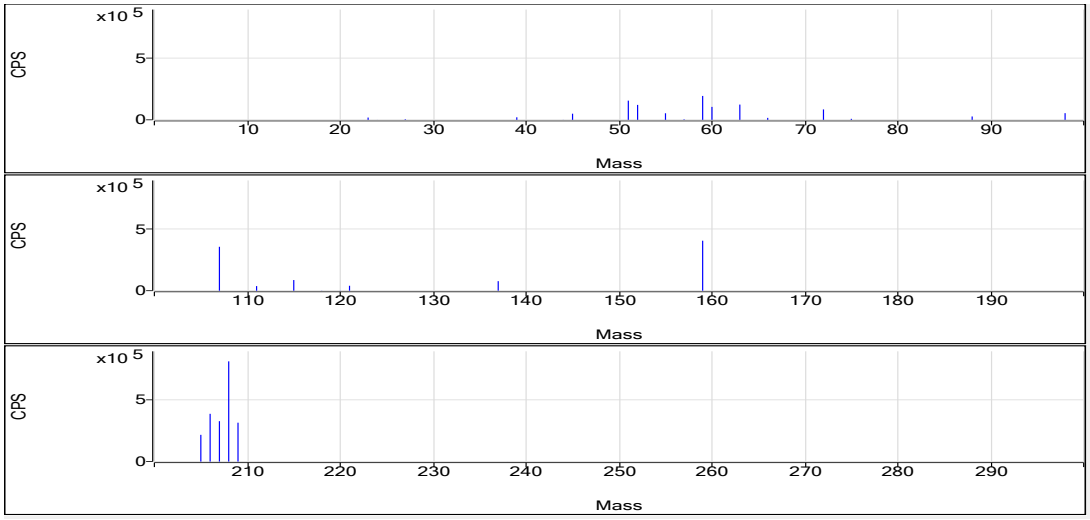


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	13.824	0.0101	25744.12	0.0007	3.404E-05
Be	9	1	No Gas	13.789	0.0101	25551.78	0.0007	3.404E-05
Be	9	1	No Gas	13.954	0.0102	25157.09	0.0007	3.404E-05
Se	78	2	H2	18.394	0.0081	1355.40	0.0004	3.546E-05
Se	78	2	H2	18.257	0.008	1318.73	0.0004	3.546E-05
Se	78	2	H2	19.98	0.0088	1426.74	0.0004	3.546E-05
Na	23	3	He	-13.96	0.3673	18382.03	0.0036	0.4171
Na	23	3	He	-14.994	0.3636	18361.86	0.0036	0.4171
Na	23	3	He	-10.947	0.378	18361.98	0.0036	0.4171
Mg	24	3	He	0.577	0.0056	280.01	0.0018	0.004553
Mg	24	3	He	-0.109	0.0044	220.01	0.0018	0.004553
Mg	24	3	He	-0.127	0.0043	210.01	0.0018	0.004553
Al	27	3	He	160.737	0.0957	4790.92	0.0006	0.002085
Al	27	3	He	155.527	0.0927	4680.89	0.0006	0.002085
Al	27	3	He	151.231	0.0902	4380.75	0.0006	0.002085
K	39	3	He	5.237	0.4173	20885.42	0.0012	0.4112
K	39	3	He	-0.323	0.4108	20745.21	0.0012	0.4112
K	39	3	He	-2.781	0.4079	19813.92	0.0012	0.4112
Ca	44	3	He	122.385	0.0116	580.03	0.0001	0.003322
Ca	44	3	He	91.537	0.0095	480.03	0.0001	0.003322
Ca	44	3	He	115.406	0.0111	540.04	0.0001	0.003322
Ti	47	3	He	1.127	0.0006	30.00	0.0005	0
Ti	47	3	He	0.745	0.0004	20.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	144.974	3.1126	155776.42	0.0213	0.0318
V	51	3	He	143.735	3.0863	155853.72	0.0213	0.0318
V	51	3	He	149.552	3.2099	155911.89	0.0213	0.0318
Cr	52	3	He	80.132	2.3997	120094.67	0.0294	0.04297
Cr	52	3	He	80.074	2.398	121093.10	0.0294	0.04297
Cr	52	3	He	84.282	2.5217	122484.24	0.0294	0.04297
Mn	55	3	He	83.068	1.0355	51823.77	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	86.926	1.0835	54714.20	0.0124	0.002801
Mn	55	3	He	87.774	1.094	53138.66	0.0124	0.002801
Fe	57	3	He	127.955	0.0759	3800.61	0.0006	0.002732
Fe	57	3	He	137.847	0.0816	4120.75	0.0006	0.002732
Fe	57	3	He	149.263	0.0881	4280.79	0.0006	0.002732
Co	59	3	He	69.875	3.8389	192124.55	0.0549	0.003644
Co	59	3	He	70.156	3.8543	194638.63	0.0549	0.003644
Co	59	3	He	73.181	4.0204	195277.11	0.0549	0.003644
Ni	60	3	He	131.327	1.2332	104628.00	0.0093	0.01413
Ni	60	3	He	131.089	1.231	105282.44	0.0093	0.01413
Ni	60	3	He	135.138	1.2686	105242.26	0.0093	0.01413
Cu	63	3	He	53.826	1.4856	126037.67	0.0274	0.009321
Cu	63	3	He	52.117	1.4387	123044.47	0.0274	0.009321
Cu	63	3	He	53.385	1.4734	122237.31	0.0274	0.009321
Zn	66	3	He	60.031	0.1902	16139.71	0.0031	0.005913
Zn	66	3	He	56.104	0.1782	15238.58	0.0031	0.005913
Zn	66	3	He	61.75	0.1955	16219.65	0.0031	0.005913
As	75	3	He	43.046	0.0932	7910.24	0.0021	0.0008698
As	75	3	He	43.353	0.0939	8030.29	0.0021	0.0008698
As	75	3	He	45.122	0.0977	8104.33	0.0021	0.0008698
Sr	88	3	He	34.892	0.3077	26665.98	0.0088	0.0006843
Sr	88	3	He	35.383	0.312	27036.47	0.0088	0.0006843
Sr	88	3	He	36.511	0.3219	27647.91	0.0088	0.0006843
Mo	98	3	He	28.044	0.6172	53492.68	0.0219	0.001827
Mo	98	3	He	28.132	0.6192	53653.36	0.0219	0.001827
Mo	98	3	He	29.159	0.6417	55109.61	0.0219	0.001827
Ag	107	3	He	88.28	4.1537	359975.15	0.047	0.001064
Ag	107	3	He	87.614	4.1224	357205.74	0.047	0.001064
Ag	107	3	He	87.186	4.1022	352295.19	0.047	0.001064
Cd	111	3	He	80.616	0.4294	37211.36	0.0053	6.086E-05
Cd	111	3	He	81.132	0.4321	37444.00	0.0053	6.086E-05
Cd	111	3	He	81.892	0.4362	37458.02	0.0053	6.086E-05
Sn	120	3	He	-0.011	0.0147	1270.10	0.0154	0.01483
Sn	120	3	He	0.019	0.0151	1310.11	0.0154	0.01483
Sn	120	3	He	0.103	0.0164	1410.14	0.0154	0.01483
Sb	121	3	He	31.931	0.4553	39457.33	0.0143	0.0002661
Sb	121	3	He	32.854	0.4684	40590.53	0.0143	0.0002661
Sb	121	3	He	32.904	0.4691	40289.94	0.0143	0.0002661
Ba	137	3	He	184.257	0.8808	76332.59	0.0048	0.0002665
Ba	137	3	He	188.678	0.9019	78152.11	0.0048	0.0002665
Ba	137	3	He	189.62	0.9064	77842.32	0.0048	0.0002665
Tl	205	3	He	21.939	0.5416	218069.33	0.0246	0.002755
Tl	205	3	He	21.725	0.5363	219457.44	0.0246	0.002755
Tl	205	3	He	21.316	0.5263	213666.40	0.0246	0.002755
Pb	208	3	He	117.439	3.8077	818784.13	0.0324	0.002158
Pb	208	3	He	114.922	3.7261	812016.71	0.0324	0.002158
Pb	208	3	He	116.293	3.7706	810674.13	0.0324	0.002158
U	238	3	He	0.001	0.0004	140.01	0.0492	0.0004023
U	238	3	He	-0.001	0.0004	120.01	0.0492	0.0004023
U	238	3	He	-0.002	0.0003	100.00	0.0492	0.0004023
Sc	45	1	No Gas			2547605.90		
Sc	45	1	No Gas			2534961.84		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2466438.24		
Ge	72	1	No Gas			1239077.95		
Ge	72	1	No Gas			1241720.45		
Ge	72	1	No Gas			1225921.23		
Sc	45	2	H2			199865.78		
Sc	45	2	H2			200728.06		
Sc	45	2	H2			201445.54		
Ge	72	2	H2			167379.31		
Ge	72	2	H2			164061.68		
Ge	72	2	H2			162260.36		
In	115	2	H2			397041.71		
In	115	2	H2			391276.75		
In	115	2	H2			389216.01		
Sc	45	3	He			50046.67		
Sc	45	3	He			50498.54		
Sc	45	3	He			48571.97		
Ge	72	3	He			84841.84		
Ge	72	3	He			85525.25		
Ge	72	3	He			82960.06		
In	115	3	He			86669.86		
In	115	3	He			86659.45		
In	115	3	He			85885.26		
Tb	159	3	He			402658.98		
Tb	159	3	He			409177.49		
Tb	159	3	He			405989.10		
Bi	209	3	He			318726.21		
Bi	209	3	He			317996.64		
Bi	209	3	He			310337.75		

Quantitation Report

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Total Dilution	1.0000
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Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

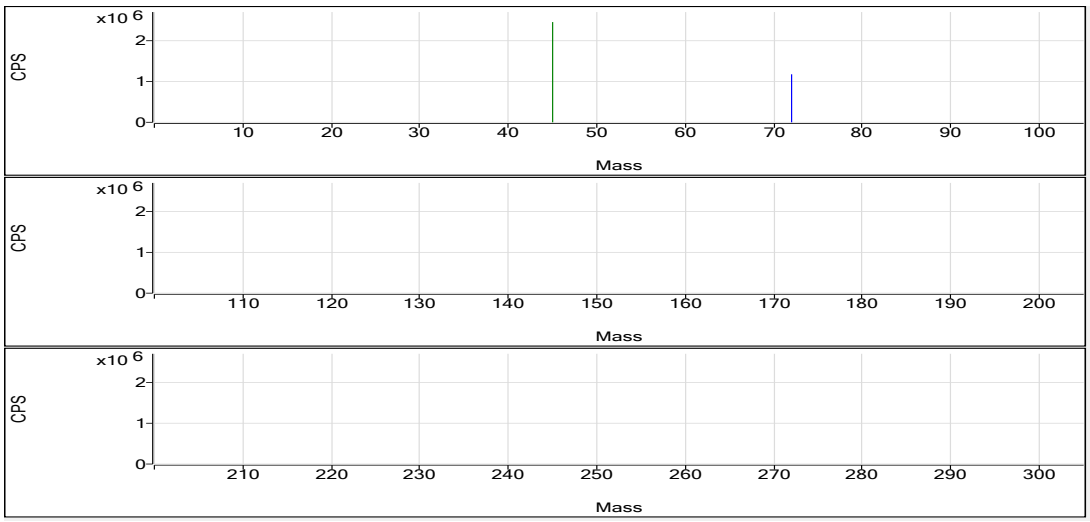
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.023	ppb	N/A	42.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.069	ppb	80.8	10.67	0.0001	Pulse	1.5000	3
Na	23	45	He	-17.030	ppb	N/A	17854.57	0.3564	Pulse	0.1000	3
Mg	24	45	He	0.052	ppb	778.8	233.35	0.0046	Pulse	0.1000	3
Al	27	45	He	-0.490	ppb	N/A	90.00	0.0018	Pulse	0.1000	3
K	39	45	He	1.259	ppb	425.0	20681.82	0.4127	Pulse	0.1000	3
Ca	44	45	He	8.870	ppb	39.6	196.68	0.0039	Pulse	0.1000	3
Ti	47	45	He	0.252	ppb	86.6	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	-0.055	ppb	N/A	1534.09	0.0306	Pulse	0.5000	3
Cr	52	45	He	-0.030	ppb	N/A	2106.89	0.0421	Pulse	0.1000	3
Mn	55	45	He	0.084	ppb	106.6	193.34	0.0038	Pulse	0.1000	3
Fe	57	45	He	-1.170	ppb	N/A	103.34	0.0021	Pulse	0.1000	3
Co	59	45	He	0.008	ppb	128.8	203.34	0.0041	Pulse	0.1000	3
Ni	60	72	He	-1.058	ppb	N/A	353.35	0.0043	Pulse	0.1000	3
Cu	63	72	He	-0.029	ppb	N/A	700.04	0.0085	Pulse	0.1000	3
Zn	66	72	He	0.076	ppb	538.2	503.36	0.0061	Pulse	0.1000	3
As	75	72	He	0.140	ppb	10.8	96.00	0.0012	Pulse	0.5000	3
Sr	88	115	He	0.018	ppb	231.1	73.33	0.0008	Pulse	0.1000	3
Mo	98	115	He	0.037	ppb	87.6	230.01	0.0026	Pulse	0.1000	3
Ag	107	115	He	0.018	ppb	33.0	166.67	0.0019	Pulse	0.1000	3
Cd	111	115	He	0.025	ppb	37.6	16.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.030	ppb	507.8	1330.11	0.0153	Pulse	0.1000	3
Sb	121	115	He	0.145	ppb	23.0	203.34	0.0023	Pulse	0.1000	3
Ba	137	115	He	0.096	ppb	75.3	63.33	0.0007	Pulse	0.1000	3
Tl	205	159	He	0.027	ppb	32.6	1363.45	0.0034	Pulse	0.1000	3
Pb	208	159	He	0.023	ppb	81.5	1163.40	0.0029	Pulse	0.1000	3
U	238	209	He	-0.002	ppb	N/A	93.34	0.0003	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2471552.00	1.1	94.8	Analog	0.1000	3
No Gas	Ge	72	1183986.83	0.3	91.9	Pulse	0.1000	3
H2	Sc	45	197971.37	0.8	96.1	Pulse	0.1000	3
H2	Ge	72	161437.21	1.3	99.2	Pulse	0.1000	3
H2	In	115	394263.87	0.4	97.7	Pulse	0.1000	3
He	Sc	45	50123.69	1.8	97.9	Pulse	0.1000	3
He	Ge	72	82011.91	1.1	100.2	Pulse	0.1000	3
He	In	115	87021.88	0.8	99.3	Pulse	0.1000	3
He	Tb	159	400136.56	0.2	99.6	Pulse	0.1000	3
He	Bi	209	314023.30	0.4	102.6	Pulse	0.1000	3

No Gas



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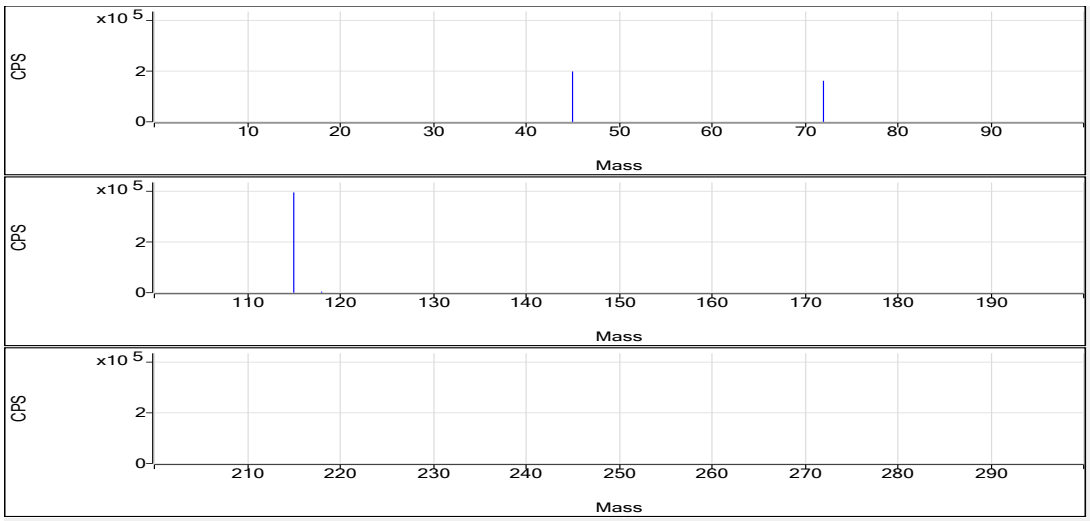
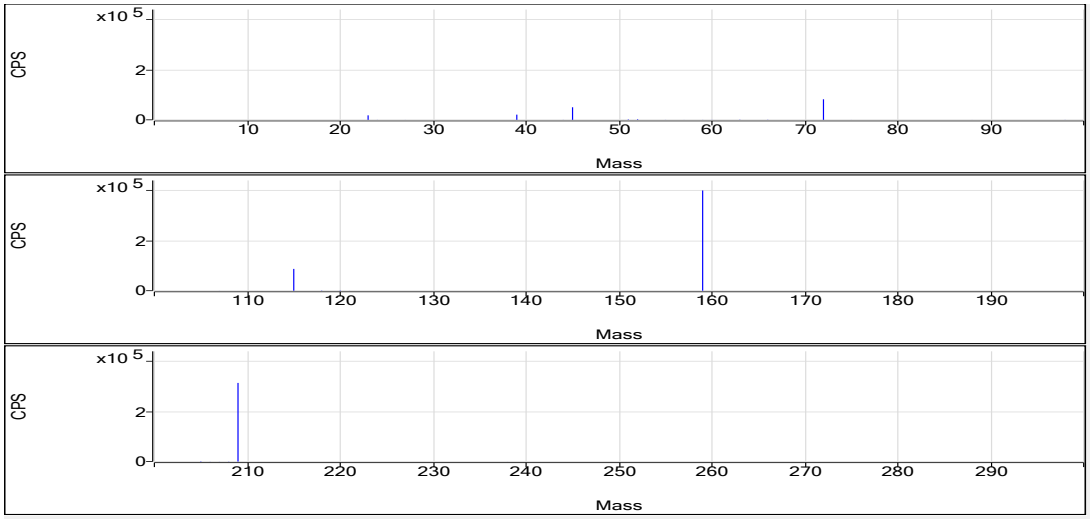


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.019	0	50.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.025	0	38.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.026	0	38.00	0.0007	3.404E-05
Se	78	2	H2	0.099	0.0001	12.67	0.0004	3.546E-05
Se	78	2	H2	0.005	0	6.00	0.0004	3.546E-05
Se	78	2	H2	0.105	0.0001	13.33	0.0004	3.546E-05
Na	23	3	He	-12.89	0.3711	18211.68	0.0036	0.4171
Na	23	3	He	-17.138	0.356	18061.50	0.0036	0.4171
Na	23	3	He	-21.06	0.342	17290.53	0.0036	0.4171
Mg	24	3	He	-0.377	0.0039	190.01	0.0018	0.004553
Mg	24	3	He	0.098	0.0047	240.01	0.0018	0.004553
Mg	24	3	He	0.436	0.0053	270.02	0.0018	0.004553
Al	27	3	He	-0.08	0.002	100.00	0.0006	0.002085
Al	27	3	He	-1.887	0.001	50.00	0.0006	0.002085
Al	27	3	He	0.496	0.0024	120.00	0.0006	0.002085
K	39	3	He	5.336	0.4174	20484.94	0.0012	0.4112
K	39	3	He	3.24	0.415	21055.67	0.0012	0.4112
K	39	3	He	-4.8	0.4056	20504.86	0.0012	0.4112
Ca	44	3	He	5.127	0.0037	180.01	0.0001	0.003322
Ca	44	3	He	12.097	0.0041	210.01	0.0001	0.003322
Ca	44	3	He	9.387	0.004	200.01	0.0001	0.003322
Ti	47	3	He	0.383	0.0002	10.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.372	0.0002	10.00	0.0005	0
V	51	3	He	0	0.0318	1560.10	0.0213	0.0318
V	51	3	He	-0.098	0.0297	1508.09	0.0213	0.0318
V	51	3	He	-0.068	0.0303	1534.09	0.0213	0.0318
Cr	52	3	He	0.112	0.0463	2270.25	0.0294	0.04297
Cr	52	3	He	-0.067	0.041	2080.23	0.0294	0.04297
Cr	52	3	He	-0.136	0.039	1970.20	0.0294	0.04297
Mn	55	3	He	0.021	0.0031	150.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.187	0.0051	260.01	0.0124	0.002801
Mn	55	3	He	0.045	0.0034	170.01	0.0124	0.002801
Fe	57	3	He	-1.213	0.002	100.00	0.0006	0.002732
Fe	57	3	He	-2.363	0.0014	70.00	0.0006	0.002732
Fe	57	3	He	0.065	0.0028	140.01	0.0006	0.002732
Co	59	3	He	0.019	0.0047	230.01	0.0549	0.003644
Co	59	3	He	0.002	0.0037	190.01	0.0549	0.003644
Co	59	3	He	0.002	0.0038	190.01	0.0549	0.003644
Ni	60	3	He	-1.044	0.0044	360.02	0.0093	0.01413
Ni	60	3	He	-1.048	0.0044	360.02	0.0093	0.01413
Ni	60	3	He	-1.08	0.0041	340.02	0.0093	0.01413
Cu	63	3	He	-0.075	0.0073	590.03	0.0274	0.009321
Cu	63	3	He	0.03	0.0101	830.05	0.0274	0.009321
Cu	63	3	He	-0.041	0.0082	680.04	0.0274	0.009321
Zn	66	3	He	0.282	0.0068	550.03	0.0031	0.005913
Zn	66	3	He	0.34	0.007	570.03	0.0031	0.005913
Zn	66	3	He	-0.395	0.0047	390.02	0.0031	0.005913
As	75	3	He	0.123	0.0011	92.00	0.0021	0.0008698
As	75	3	He	0.152	0.0012	98.00	0.0021	0.0008698
As	75	3	He	0.145	0.0012	98.00	0.0021	0.0008698
Sr	88	3	He	0.065	0.0013	110.00	0.0088	0.0006843
Sr	88	3	He	0.001	0.0007	60.00	0.0088	0.0006843
Sr	88	3	He	-0.012	0.0006	50.00	0.0088	0.0006843
Mo	98	3	He	0.015	0.0022	190.01	0.0219	0.001827
Mo	98	3	He	0.022	0.0023	200.01	0.0219	0.001827
Mo	98	3	He	0.075	0.0035	300.01	0.0219	0.001827
Ag	107	3	He	0.023	0.0022	190.01	0.047	0.001064
Ag	107	3	He	0.012	0.0016	140.00	0.047	0.001064
Ag	107	3	He	0.019	0.002	170.01	0.047	0.001064
Cd	111	3	He	0.014	0.0001	12.00	0.0053	6.086E-05
Cd	111	3	He	0.027	0.0002	18.00	0.0053	6.086E-05
Cd	111	3	He	0.032	0.0002	20.00	0.0053	6.086E-05
Sn	120	3	He	-0.141	0.0127	1110.09	0.0154	0.01483
Sn	120	3	He	0.15	0.0172	1490.13	0.0154	0.01483
Sn	120	3	He	0.081	0.0161	1390.11	0.0154	0.01483
Sb	121	3	He	0.109	0.0018	160.01	0.0143	0.0002661
Sb	121	3	He	0.175	0.0028	240.01	0.0143	0.0002661
Sb	121	3	He	0.152	0.0024	210.01	0.0143	0.0002661
Ba	137	3	He	0.159	0.001	90.00	0.0048	0.0002665
Ba	137	3	He	0.113	0.0008	70.00	0.0048	0.0002665
Ba	137	3	He	0.017	0.0003	30.00	0.0048	0.0002665
Tl	205	3	He	0.03	0.0035	1390.11	0.0246	0.002755
Tl	205	3	He	0.033	0.0036	1430.14	0.0246	0.002755
Tl	205	3	He	0.017	0.0032	1270.11	0.0246	0.002755
Pb	208	3	He	0.045	0.0036	890.06	0.0324	0.002158
Pb	208	3	He	0.01	0.0025	450.02	0.0324	0.002158
Pb	208	3	He	0.015	0.0026	590.04	0.0324	0.002158
U	238	3	He	-0.006	0.0001	40.00	0.0492	0.0004023
U	238	3	He	0.001	0.0004	140.01	0.0492	0.0004023
U	238	3	He	-0.002	0.0003	100.00	0.0492	0.0004023
Sc	45	1	No Gas			2502100.59		
Sc	45	1	No Gas			2449527.78		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2463027.62		
Ge	72	1	No Gas			1187414.67		
Ge	72	1	No Gas			1182195.29		
Ge	72	1	No Gas			1182350.53		
Sc	45	2	H2			198536.42		
Sc	45	2	H2			196170.43		
Sc	45	2	H2			199207.26		
Ge	72	2	H2			160767.24		
Ge	72	2	H2			159765.11		
Ge	72	2	H2			163779.28		
In	115	2	H2			395755.42		
In	115	2	H2			394333.98		
In	115	2	H2			392702.22		
Sc	45	3	He			49073.45		
Sc	45	3	He			50738.90		
Sc	45	3	He			50558.73		
Ge	72	3	He			81129.81		
Ge	72	3	He			81935.30		
Ge	72	3	He			82970.61		
In	115	3	He			87757.60		
In	115	3	He			86891.29		
In	115	3	He			86438.06		
Tb	159	3	He			399226.40		
Tb	159	3	He			400241.48		
Tb	159	3	He			400941.79		
Bi	209	3	He			313196.81		
Bi	209	3	He			315512.75		
Bi	209	3	He			313360.35		

Quantitation Report

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Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H09B00.b
Acq Time	8/9/2023 4:26:45 PM
Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

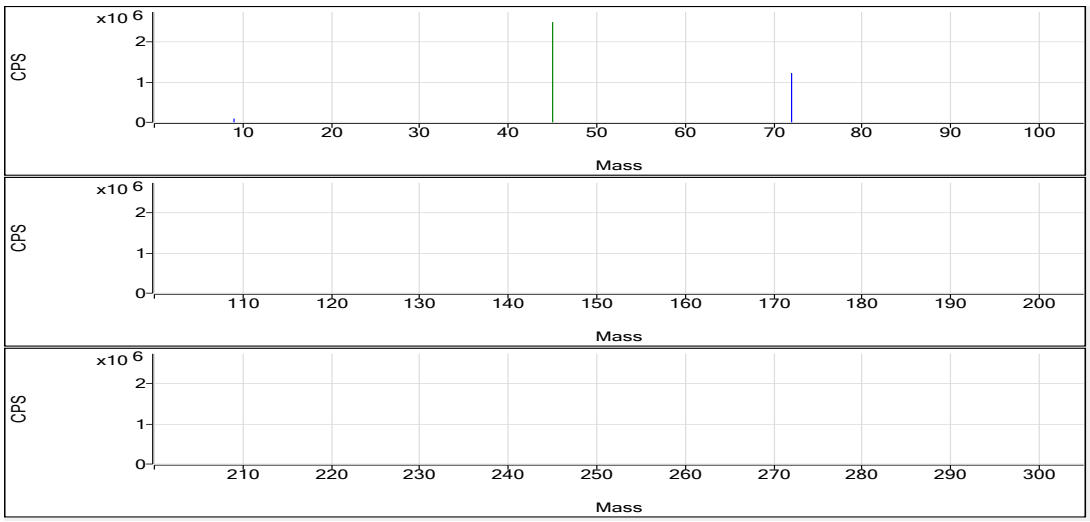
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.796	ppb	0.5	94224.14	0.0378	Pulse	0.5000	3
Se	78	72	H2	50.928	ppb	2.6	3649.58	0.0224	Pulse	1.5000	3
Na	23	45	He	4943.262	ppb	0.6	887767.04	18.0369	Pulse	0.1000	3
Mg	24	45	He	5144.928	ppb	0.4	457769.80	9.3004	Pulse	0.1000	3
Al	27	45	He	5173.402	ppb	0.3	148452.13	3.0161	Pulse	0.1000	3
K	39	45	He	5131.733	ppb	1.3	316022.03	6.4208	Pulse	0.1000	3
Ca	44	45	He	5311.970	ppb	3.0	17824.85	0.3622	Pulse	0.1000	3
Ti	47	45	He	5192.868	ppb	2.6	135934.64	2.7619	Pulse	0.1000	3
V	51	45	He	519.736	ppb	0.9	545178.69	11.0766	Pulse	0.5000	3
Cr	52	45	He	495.523	ppb	1.4	719387.39	14.6164	Pulse	0.1000	3
Mn	55	45	He	523.717	ppb	0.9	320597.72	6.5137	Pulse	0.1000	3
Fe	57	45	He	5222.439	ppb	0.5	147204.71	2.9908	Pulse	0.1000	3
Co	59	45	He	500.516	ppb	1.0	1352312.37	27.4757	Pulse	0.1000	3
Ni	60	72	He	503.685	ppb	0.9	384261.20	4.6898	Pulse	0.1000	3
Cu	63	72	He	477.726	ppb	0.5	1074307.79	13.1114	Pulse	0.1000	3
Zn	66	72	He	506.718	ppb	1.4	127960.25	1.5617	Pulse	0.1000	3
As	75	72	He	511.172	ppb	0.5	89942.79	1.0977	Pulse	0.5000	3
Sr	88	115	He	50.483	ppb	2.8	39352.34	0.4449	Pulse	0.1000	3
Mo	98	115	He	49.984	ppb	2.6	97191.49	1.0987	Pulse	0.1000	3
Ag	107	115	He	49.712	ppb	1.1	206971.80	2.3395	Pulse	0.1000	3
Cd	111	115	He	50.119	ppb	1.6	23616.64	0.2670	Pulse	0.5000	3
Sn	120	115	He	50.899	ppb	0.8	70747.64	0.7997	Pulse	0.1000	3
Sb	121	115	He	51.652	ppb	1.4	65136.72	0.7363	Pulse	0.1000	3
Ba	137	115	He	507.786	ppb	0.9	214693.60	2.4269	Pulse	0.1000	3
Tl	205	159	He	51.188	ppb	0.6	509045.89	1.2600	Pulse	0.1000	3
Pb	208	159	He	51.391	ppb	1.0	673661.21	1.6674	Pulse	0.1000	3
U	238	209	He	50.782	ppb	0.9	779783.79	2.5013	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2494881.68	1.8	95.7	Analog	0.1000	3
No Gas	Ge	72	1225885.63	0.9	95.1	Pulse	0.1000	3
H2	Sc	45	200162.65	0.7	97.1	Pulse	0.1000	3
H2	Ge	72	163266.96	1.4	100.3	Pulse	0.1000	3
H2	In	115	398191.37	1.0	98.6	Pulse	0.1000	3
He	Sc	45	49220.81	0.7	96.1	Pulse	0.1000	3
He	Ge	72	81938.24	0.6	100.1	Pulse	0.1000	3
He	In	115	88468.26	0.8	100.9	Pulse	0.1000	3
He	Tb	159	404034.62	1.0	100.6	Pulse	0.1000	3
He	Bi	209	311766.02	0.8	101.8	Pulse	0.1000	3

No Gas



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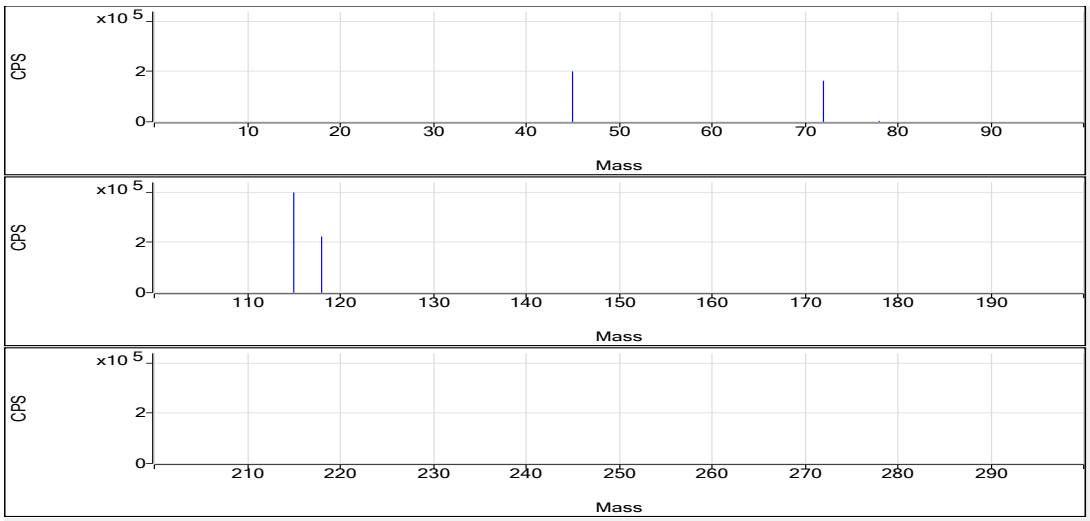
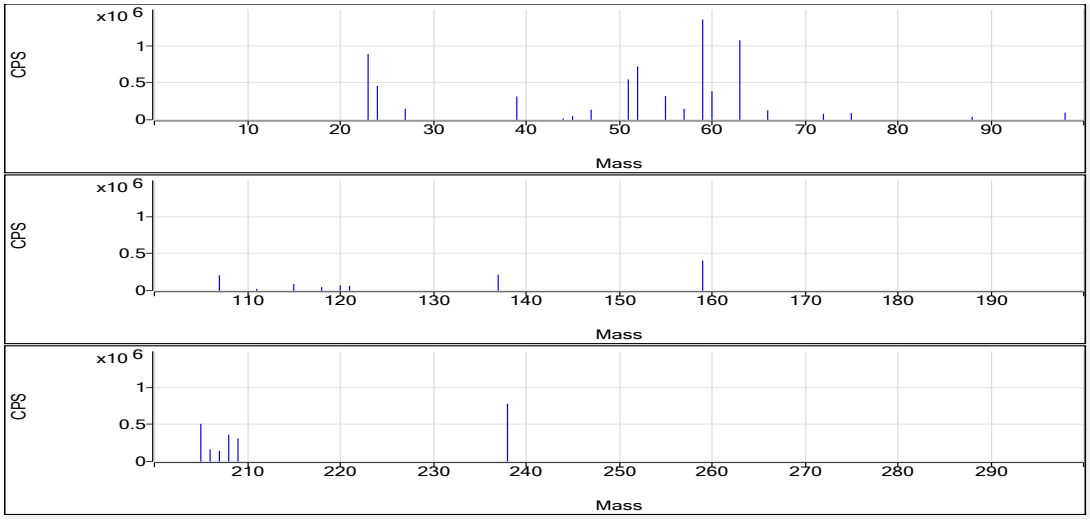


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	51.835	0.0378	93411.21	0.0007	3.404E-05
Be	9	1	No Gas	52.032	0.0379	93555.95	0.0007	3.404E-05
Be	9	1	No Gas	51.522	0.0376	95705.25	0.0007	3.404E-05
Se	78	2	H2	52.293	0.023	3708.49	0.0004	3.546E-05
Se	78	2	H2	50.823	0.0223	3623.80	0.0004	3.546E-05
Se	78	2	H2	49.67	0.0218	3616.46	0.0004	3.546E-05
Na	23	3	He	4964.71	18.1133	885613.66	0.0036	0.4171
Na	23	3	He	4956.968	18.0857	889893.50	0.0036	0.4171
Na	23	3	He	4908.109	17.9116	887793.97	0.0036	0.4171
Mg	24	3	He	5136.55	9.2852	453981.44	0.0018	0.004553
Mg	24	3	He	5166.485	9.3393	459532.69	0.0018	0.004553
Mg	24	3	He	5131.749	9.2765	459795.27	0.0018	0.004553
Al	27	3	He	5192.468	3.0272	148007.87	0.0006	0.002085
Al	27	3	He	5160.636	3.0086	148037.57	0.0006	0.002085
Al	27	3	He	5167.1	3.0124	149310.95	0.0006	0.002085
K	39	3	He	5206.07	6.5079	318189.62	0.0012	0.4112
K	39	3	He	5110.832	6.3964	314727.36	0.0012	0.4112
K	39	3	He	5078.295	6.3583	315149.12	0.0012	0.4112
Ca	44	3	He	5403.886	0.3684	18011.82	0.0001	0.003322
Ca	44	3	He	5402.514	0.3683	18121.92	0.0001	0.003322
Ca	44	3	He	5129.511	0.3499	17340.80	0.0001	0.003322
Ti	47	3	He	5182.235	2.7562	134760.12	0.0005	0
Ti	47	3	He	5331.122	2.8354	139514.30	0.0005	0
Ti	47	3	He	5065.247	2.694	133529.50	0.0005	0
V	51	3	He	524.699	11.1821	546726.69	0.0213	0.0318
V	51	3	He	519.459	11.0708	544727.06	0.0213	0.0318
V	51	3	He	515.05	10.9771	544082.31	0.0213	0.0318
Cr	52	3	He	503.069	14.8383	725486.79	0.0294	0.04297
Cr	52	3	He	493.284	14.5505	715945.93	0.0294	0.04297
Cr	52	3	He	490.217	14.4603	716729.44	0.0294	0.04297
Mn	55	3	He	528.537	6.5736	321404.49	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	523.596	6.5122	320428.45	0.0124	0.002801
Mn	55	3	He	519.019	6.4553	319960.21	0.0124	0.002801
Fe	57	3	He	5232.077	2.9963	146496.30	0.0006	0.002732
Fe	57	3	He	5242.791	3.0024	147730.48	0.0006	0.002732
Fe	57	3	He	5192.45	2.9736	147387.35	0.0006	0.002732
Co	59	3	He	505.213	27.7335	1355972.48	0.0549	0.003644
Co	59	3	He	501.246	27.5158	1353890.29	0.0549	0.003644
Co	59	3	He	495.088	27.1777	1347074.35	0.0549	0.003644
Ni	60	3	He	508.765	4.7369	386355.54	0.0093	0.01413
Ni	60	3	He	500.636	4.6615	384700.97	0.0093	0.01413
Ni	60	3	He	501.655	4.6709	381727.10	0.0093	0.01413
Cu	63	3	He	480.302	13.1821	1075164.12	0.0274	0.009321
Cu	63	3	He	475.519	13.0509	1077064.59	0.0274	0.009321
Cu	63	3	He	477.357	13.1013	1070694.67	0.0274	0.009321
Zn	66	3	He	514.62	1.586	129358.99	0.0031	0.005913
Zn	66	3	He	500.293	1.542	127259.87	0.0031	0.005913
Zn	66	3	He	505.24	1.5572	127261.89	0.0031	0.005913
As	75	3	He	514.355	1.1045	90088.98	0.0021	0.0008698
As	75	3	He	509.027	1.0931	90211.88	0.0021	0.0008698
As	75	3	He	510.134	1.0955	89527.50	0.0021	0.0008698
Sr	88	3	He	51.438	0.4533	39746.57	0.0088	0.0006843
Sr	88	3	He	51.167	0.4509	39937.47	0.0088	0.0006843
Sr	88	3	He	48.844	0.4305	38372.99	0.0088	0.0006843
Mo	98	3	He	50.687	1.1142	97697.68	0.0219	0.001827
Mo	98	3	He	50.755	1.1157	98816.26	0.0219	0.001827
Mo	98	3	He	48.509	1.0664	95060.52	0.0219	0.001827
Ag	107	3	He	49.372	2.3235	203738.14	0.047	0.001064
Ag	107	3	He	50.358	2.3699	209906.36	0.047	0.001064
Ag	107	3	He	49.406	2.3251	207270.90	0.047	0.001064
Cd	111	3	He	50.66	0.2698	23662.06	0.0053	6.086E-05
Cd	111	3	He	50.48	0.2689	23816.28	0.0053	6.086E-05
Cd	111	3	He	49.219	0.2622	23371.59	0.0053	6.086E-05
Sn	120	3	He	51.384	0.8072	70781.46	0.0154	0.01483
Sn	120	3	He	50.736	0.7972	70610.43	0.0154	0.01483
Sn	120	3	He	50.578	0.7948	70851.03	0.0154	0.01483
Sb	121	3	He	52.227	0.7445	65284.01	0.0143	0.0002661
Sb	121	3	He	51.856	0.7392	65475.38	0.0143	0.0002661
Sb	121	3	He	50.874	0.7252	64650.77	0.0143	0.0002661
Ba	137	3	He	509.956	2.4372	213714.65	0.0048	0.0002665
Ba	137	3	He	510.88	2.4417	216264.25	0.0048	0.0002665
Ba	137	3	He	502.521	2.4017	214101.91	0.0048	0.0002665
Tl	205	3	He	51.414	1.2655	506131.75	0.0246	0.002755
Tl	205	3	He	50.835	1.2513	511016.09	0.0246	0.002755
Tl	205	3	He	51.316	1.2631	509989.84	0.0246	0.002755
Pb	208	3	He	51.995	1.687	362834.84	0.0324	0.002158
Pb	208	3	He	51.027	1.6556	364247.30	0.0324	0.002158
Pb	208	3	He	51.15	1.6596	359714.84	0.0324	0.002158
U	238	3	He	51.259	2.5248	779852.64	0.0492	0.0004023
U	238	3	He	50.405	2.4827	777230.77	0.0492	0.0004023
U	238	3	He	50.681	2.4963	782267.96	0.0492	0.0004023
Sc	45	1	No Gas			2471379.03		
Sc	45	1	No Gas			2465854.65		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2547411.37		
Ge	72	1	No Gas			1219059.04		
Ge	72	1	No Gas			1220545.92		
Ge	72	1	No Gas			1238051.93		
Sc	45	2	H2			201415.84		
Sc	45	2	H2			200424.12		
Sc	45	2	H2			198647.99		
Ge	72	2	H2			161545.33		
Ge	72	2	H2			162413.06		
Ge	72	2	H2			165842.48		
In	115	2	H2			394360.50		
In	115	2	H2			398071.40		
In	115	2	H2			402142.22		
Sc	45	3	He			48892.92		
Sc	45	3	He			49204.16		
Sc	45	3	He			49565.36		
Ge	72	3	He			81562.54		
Ge	72	3	He			82527.94		
Ge	72	3	He			81724.23		
In	115	3	He			88057.94		
In	115	3	He			88954.40		
In	115	3	He			89528.01		
Tb	159	3	He			399944.95		
Tb	159	3	He			408396.56		
Tb	159	3	He			403762.34		
Bi	209	3	He			308877.16		
Bi	209	3	He			313052.77		
Bi	209	3	He			313368.14		

Quantitation Report

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Sample Type	CCB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

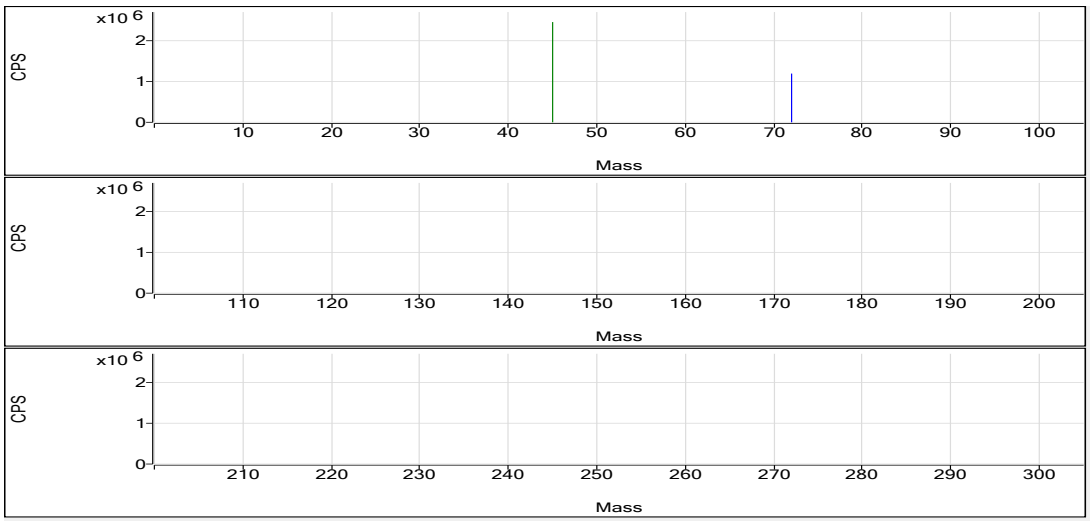
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.013	ppb	N/A	60.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.074	ppb	40.5	10.89	0.0001	Pulse	1.5000	3
Na	23	45	He	-14.612	ppb	N/A	17837.94	0.3650	Pulse	0.1000	3
Mg	24	45	He	0.348	ppb	150.8	253.34	0.0052	Pulse	0.1000	3
Al	27	45	He	0.058	ppb	3097.9	103.34	0.0021	Pulse	0.1000	3
K	39	45	He	9.252	ppb	115.4	20625.08	0.4220	Pulse	0.1000	3
Ca	44	45	He	-16.856	ppb	N/A	106.67	0.0022	Pulse	0.1000	3
Ti	47	45	He	1.151	ppb	66.3	30.00	0.0006	Pulse	0.1000	3
V	51	45	He	-0.120	ppb	N/A	1429.41	0.0292	Pulse	0.5000	3
Cr	52	45	He	0.037	ppb	449.7	2153.57	0.0440	Pulse	0.1000	3
Mn	55	45	He	0.280	ppb	14.4	306.68	0.0063	Pulse	0.1000	3
Fe	57	45	He	1.061	ppb	194.7	163.34	0.0033	Pulse	0.1000	3
Co	59	45	He	0.090	ppb	22.7	420.02	0.0086	Pulse	0.1000	3
Ni	60	72	He	-1.041	ppb	N/A	363.35	0.0045	Pulse	0.1000	3
Cu	63	72	He	0.019	ppb	93.1	800.05	0.0098	Pulse	0.1000	3
Zn	66	72	He	0.158	ppb	51.3	520.03	0.0064	Pulse	0.1000	3
As	75	72	He	0.160	ppb	22.5	98.67	0.0012	Pulse	0.5000	3
Sr	88	115	He	0.017	ppb	195.2	73.33	0.0008	Pulse	0.1000	3
Mo	98	115	He	-0.002	ppb	N/A	156.68	0.0018	Pulse	0.1000	3
Ag	107	115	He	-0.001	ppb	N/A	90.00	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.003	ppb	231.6	6.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.006	ppb	417.4	1313.44	0.0149	Pulse	0.1000	3
Sb	121	115	He	0.077	ppb	16.9	120.00	0.0014	Pulse	0.1000	3
Ba	137	115	He	0.047	ppb	114.6	43.33	0.0005	Pulse	0.1000	3
Tl	205	159	He	0.013	ppb	54.1	1240.10	0.0031	Pulse	0.1000	3
Pb	208	159	He	0.000	ppb	2133.7	876.72	0.0022	Pulse	0.1000	3
U	238	209	He	0.047	ppb	16.1	850.06	0.0027	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2471625.43	2.0	94.8	Analog	0.1000	3
No Gas	Ge	72	1201324.93	1.0	93.2	Pulse	0.1000	3
H2	Sc	45	198587.52	0.7	96.4	Pulse	0.1000	3
H2	Ge	72	160432.83	0.6	98.6	Pulse	0.1000	3
H2	In	115	397555.16	0.2	98.5	Pulse	0.1000	3
He	Sc	45	48873.22	0.6	95.5	Pulse	0.1000	3
He	Ge	72	81300.76	0.7	99.3	Pulse	0.1000	3
He	In	115	88041.10	1.0	100.5	Pulse	0.1000	3
He	Tb	159	404136.27	0.6	100.6	Pulse	0.1000	3
He	Bi	209	310703.05	1.0	101.5	Pulse	0.1000	3

No Gas



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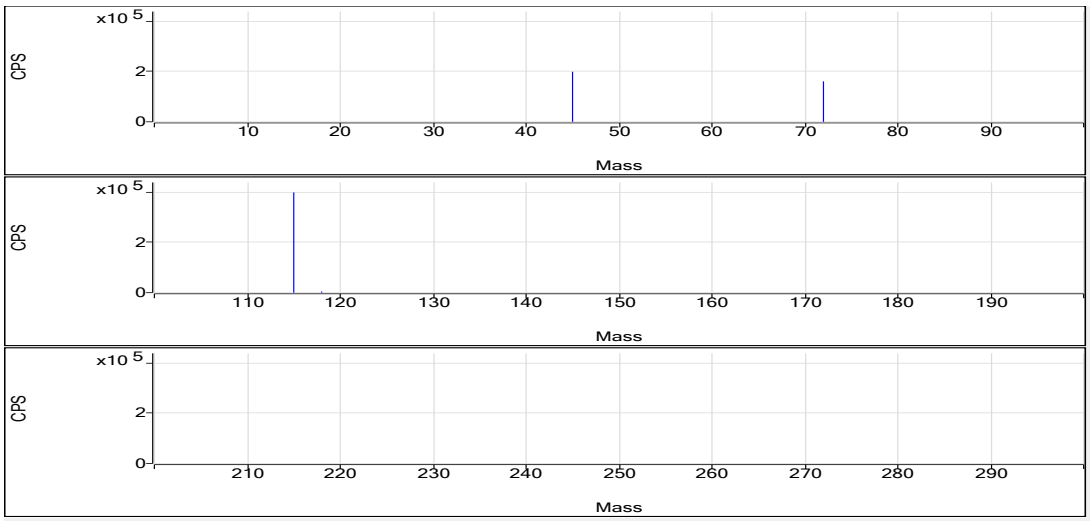
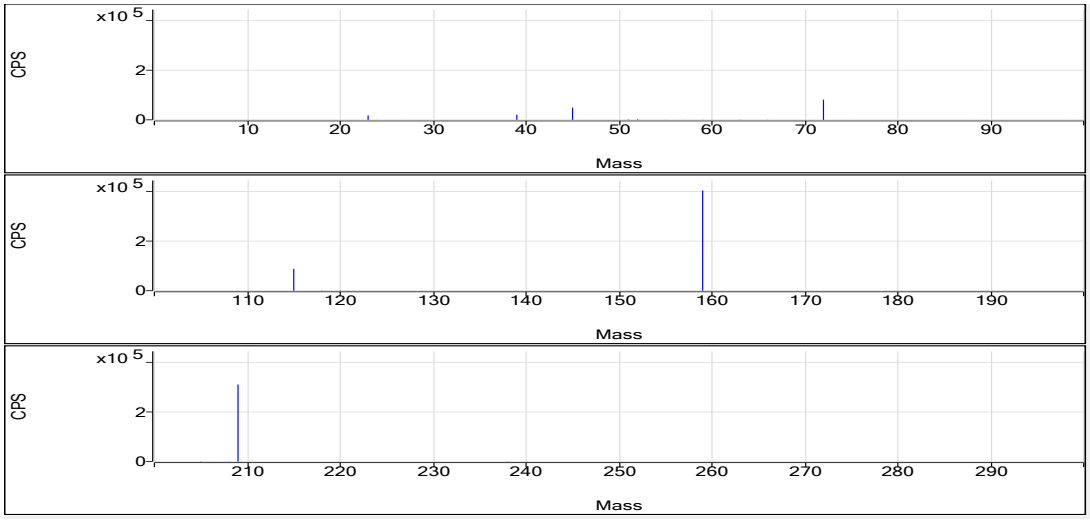


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.009	0	68.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.014	0	60.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.016	0	54.00	0.0007	3.404E-05
Se	78	2	H2	0.053	0.0001	9.33	0.0004	3.546E-05
Se	78	2	H2	0.061	0.0001	10.00	0.0004	3.546E-05
Se	78	2	H2	0.108	0.0001	13.33	0.0004	3.546E-05
Na	23	3	He	-12.355	0.373	18241.73	0.0036	0.4171
Na	23	3	He	-15.192	0.3629	17831.26	0.0036	0.4171
Na	23	3	He	-16.289	0.359	17440.83	0.0036	0.4171
Mg	24	3	He	0.762	0.0059	290.01	0.0018	0.004553
Mg	24	3	He	0.522	0.0055	270.01	0.0018	0.004553
Mg	24	3	He	-0.241	0.0041	200.01	0.0018	0.004553
Al	27	3	He	0.283	0.0022	110.00	0.0006	0.002085
Al	27	3	He	-1.831	0.001	50.00	0.0006	0.002085
Al	27	3	He	1.722	0.0031	150.01	0.0006	0.002085
K	39	3	He	21.091	0.4359	21316.06	0.0012	0.4112
K	39	3	He	0.366	0.4116	20224.44	0.0012	0.4112
K	39	3	He	6.299	0.4186	20334.75	0.0012	0.4112
Ca	44	3	He	-0.738	0.0033	160.01	0.0001	0.003322
Ca	44	3	He	-28.082	0.0014	70.00	0.0001	0.003322
Ca	44	3	He	-21.749	0.0019	90.00	0.0001	0.003322
Ti	47	3	He	1.153	0.0006	30.00	0.0005	0
Ti	47	3	He	1.913	0.001	50.00	0.0005	0
Ti	47	3	He	0.387	0.0002	10.00	0.0005	0
V	51	3	He	-0.134	0.029	1416.08	0.0213	0.0318
V	51	3	He	-0.136	0.0289	1420.08	0.0213	0.0318
V	51	3	He	-0.09	0.0299	1452.08	0.0213	0.0318
Cr	52	3	He	0.111	0.0462	2260.26	0.0294	0.04297
Cr	52	3	He	0.152	0.0474	2330.27	0.0294	0.04297
Cr	52	3	He	-0.152	0.0385	1870.18	0.0294	0.04297
Mn	55	3	He	0.301	0.0065	320.02	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.233	0.0057	280.01	0.0124	0.002801
Mn	55	3	He	0.305	0.0066	320.01	0.0124	0.002801
Fe	57	3	He	-0.486	0.0025	120.00	0.0006	0.002732
Fe	57	3	He	3.407	0.0047	230.01	0.0006	0.002732
Fe	57	3	He	0.262	0.0029	140.01	0.0006	0.002732
Co	59	3	He	0.068	0.0074	360.02	0.0549	0.003644
Co	59	3	He	0.108	0.0096	470.02	0.0549	0.003644
Co	59	3	He	0.095	0.0089	430.02	0.0549	0.003644
Ni	60	3	He	-1.081	0.0041	330.02	0.0093	0.01413
Ni	60	3	He	-1.072	0.0042	340.01	0.0093	0.01413
Ni	60	3	He	-0.969	0.0051	420.02	0.0093	0.01413
Cu	63	3	He	0.026	0.01	810.05	0.0274	0.009321
Cu	63	3	He	0.032	0.0102	830.05	0.0274	0.009321
Cu	63	3	He	-0.001	0.0093	760.05	0.0274	0.009321
Zn	66	3	He	0.213	0.0066	530.03	0.0031	0.005913
Zn	66	3	He	0.196	0.0065	530.03	0.0031	0.005913
Zn	66	3	He	0.065	0.0061	500.02	0.0031	0.005913
As	75	3	He	0.137	0.0012	94.00	0.0021	0.0008698
As	75	3	He	0.202	0.0013	106.00	0.0021	0.0008698
As	75	3	He	0.141	0.0012	96.00	0.0021	0.0008698
Sr	88	3	He	-0.013	0.0006	50.00	0.0088	0.0006843
Sr	88	3	He	0.012	0.0008	70.00	0.0088	0.0006843
Sr	88	3	He	0.053	0.0011	100.00	0.0088	0.0006843
Mo	98	3	He	-0.011	0.0016	140.01	0.0219	0.001827
Mo	98	3	He	0.004	0.0019	170.01	0.0219	0.001827
Mo	98	3	He	0	0.0018	160.01	0.0219	0.001827
Ag	107	3	He	-0.003	0.0009	80.00	0.047	0.001064
Ag	107	3	He	0.004	0.0012	110.00	0.047	0.001064
Ag	107	3	He	-0.003	0.0009	80.00	0.047	0.001064
Cd	111	3	He	0.001	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	0.01	0.0001	10.00	0.0053	6.086E-05
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Sn	120	3	He	0.033	0.0153	1350.11	0.0154	0.01483
Sn	120	3	He	-0.006	0.0147	1310.11	0.0154	0.01483
Sn	120	3	He	-0.01	0.0147	1280.10	0.0154	0.01483
Sb	121	3	He	0.069	0.0012	110.00	0.0143	0.0002661
Sb	121	3	He	0.092	0.0016	140.01	0.0143	0.0002661
Sb	121	3	He	0.07	0.0013	110.00	0.0143	0.0002661
Ba	137	3	He	0.016	0.0003	30.00	0.0048	0.0002665
Ba	137	3	He	0.109	0.0008	70.00	0.0048	0.0002665
Ba	137	3	He	0.016	0.0003	30.00	0.0048	0.0002665
Tl	205	3	He	0.02	0.0033	1320.11	0.0246	0.002755
Tl	205	3	He	0.011	0.003	1210.11	0.0246	0.002755
Tl	205	3	He	0.007	0.0029	1190.09	0.0246	0.002755
Pb	208	3	He	-0.003	0.002	420.02	0.0324	0.002158
Pb	208	3	He	0.01	0.0025	590.04	0.0324	0.002158
Pb	208	3	He	-0.005	0.002	420.03	0.0324	0.002158
U	238	3	He	0.04	0.0024	740.05	0.0492	0.0004023
U	238	3	He	0.047	0.0027	830.05	0.0492	0.0004023
U	238	3	He	0.055	0.0031	980.08	0.0492	0.0004023
Sc	45	1	No Gas			2467099.49		
Sc	45	1	No Gas			2522330.90		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2425445.90		
Ge	72	1	No Gas			1202218.19		
Ge	72	1	No Gas			1212588.42		
Ge	72	1	No Gas			1189168.19		
Sc	45	2	H2			197050.17		
Sc	45	2	H2			198936.15		
Sc	45	2	H2			199776.23		
Ge	72	2	H2			159361.33		
Ge	72	2	H2			160968.16		
Ge	72	2	H2			160969.00		
In	115	2	H2			398509.80		
In	115	2	H2			396902.77		
In	115	2	H2			397252.92		
Sc	45	3	He			48902.91		
Sc	45	3	He			49134.36		
Sc	45	3	He			48582.39		
Ge	72	3	He			80717.34		
Ge	72	3	He			81371.42		
Ge	72	3	He			81813.52		
In	115	3	He			88058.89		
In	115	3	He			88883.63		
In	115	3	He			87203.33		
Tb	159	3	He			405235.74		
Tb	159	3	He			401171.20		
Tb	159	3	He			406001.87		
Bi	209	3	He			311200.60		
Bi	209	3	He			307339.41		
Bi	209	3	He			313569.14		

Quantitation Report

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Auto Dilution	1.0000
Total Dilution	1.0000
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Acq Mode	Spectrum
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Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

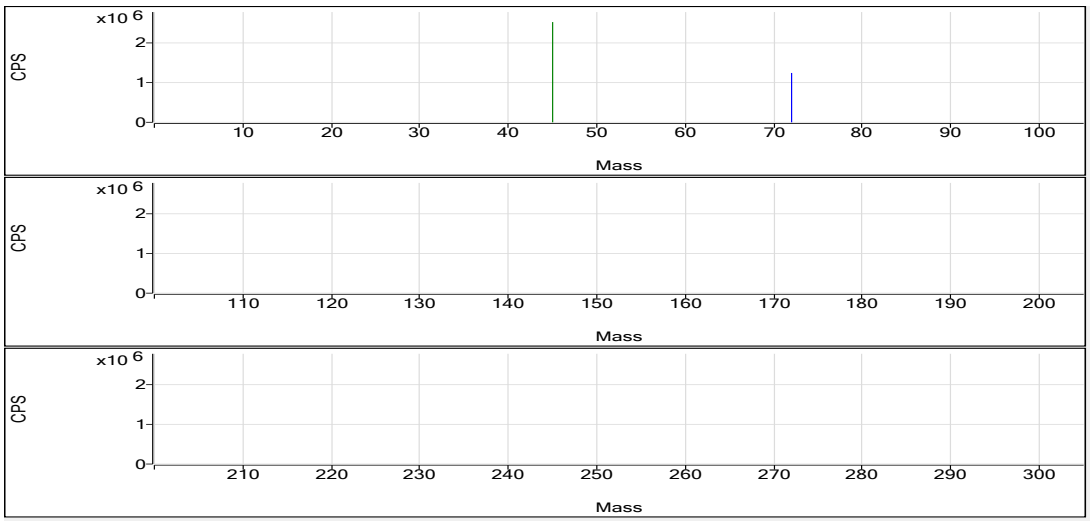
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.032	ppb	N/A	26.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.017	ppb	N/A	4.67	0.0000	Pulse	1.5000	3
Na	23	45	He	-19.198	ppb	N/A	17581.07	0.3486	Pulse	0.1000	3
Mg	24	45	He	-0.290	ppb	N/A	203.34	0.0040	Pulse	0.1000	3
Al	27	45	He	-1.085	ppb	N/A	73.33	0.0015	Pulse	0.1000	3
K	39	45	He	-9.531	ppb	N/A	20174.46	0.4000	Pulse	0.1000	3
Ca	44	45	He	-11.074	ppb	N/A	130.00	0.0026	Pulse	0.1000	3
Ti	47	45	He	0.126	ppb	173.2	3.33	0.0001	Pulse	0.1000	3
V	51	45	He	-0.263	ppb	N/A	1322.07	0.0262	Pulse	0.5000	3
Cr	52	45	He	-0.176	ppb	N/A	1906.86	0.0378	Pulse	0.1000	3
Mn	55	45	He	0.189	ppb	33.3	260.01	0.0052	Pulse	0.1000	3
Fe	57	45	He	-1.432	ppb	N/A	96.67	0.0019	Pulse	0.1000	3
Co	59	45	He	0.008	ppb	119.9	206.68	0.0041	Pulse	0.1000	3
Ni	60	72	He	-1.094	ppb	N/A	326.68	0.0040	Pulse	0.1000	3
Cu	63	72	He	0.147	ppb	20.8	1096.74	0.0134	Pulse	0.1000	3
Zn	66	72	He	-0.589	ppb	N/A	336.68	0.0041	Pulse	0.1000	3
As	75	72	He	0.057	ppb	63.3	81.33	0.0010	Pulse	0.5000	3
Sr	88	115	He	0.029	ppb	184.2	83.34	0.0009	Pulse	0.1000	3
Mo	98	115	He	-0.039	ppb	N/A	86.67	0.0010	Pulse	0.1000	3
Ag	107	115	He	-0.003	ppb	N/A	80.00	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.003	ppb	94.6	6.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.070	ppb	230.3	1410.12	0.0159	Pulse	0.1000	3
Sb	121	115	He	0.029	ppb	54.8	60.00	0.0007	Pulse	0.1000	3
Ba	137	115	He	-0.024	ppb	N/A	13.33	0.0002	Pulse	0.1000	3
Tl	205	159	He	-0.069	ppb	N/A	433.36	0.0011	Pulse	0.1000	3
Pb	208	159	He	-0.001	ppb	N/A	860.05	0.0021	Pulse	0.1000	3
U	238	209	He	0.004	ppb	81.6	183.34	0.0006	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2519503.92	0.2	96.6	Analog	0.1000	3
No Gas	Ge	72	1240192.09	0.3	96.2	Pulse	0.1000	3
H2	Sc	45	203491.96	0.2	98.7	Pulse	0.1000	3
H2	Ge	72	166037.99	0.1	102.0	Pulse	0.1000	3
H2	In	115	404227.51	0.8	100.1	Pulse	0.1000	3
He	Sc	45	50438.06	1.3	98.5	Pulse	0.1000	3
He	Ge	72	82035.60	2.3	100.2	Pulse	0.1000	3
He	In	115	88631.65	1.0	101.1	Pulse	0.1000	3
He	Tb	159	405016.77	0.7	100.8	Pulse	0.1000	3
He	Bi	209	315911.97	0.6	103.2	Pulse	0.1000	3

No Gas



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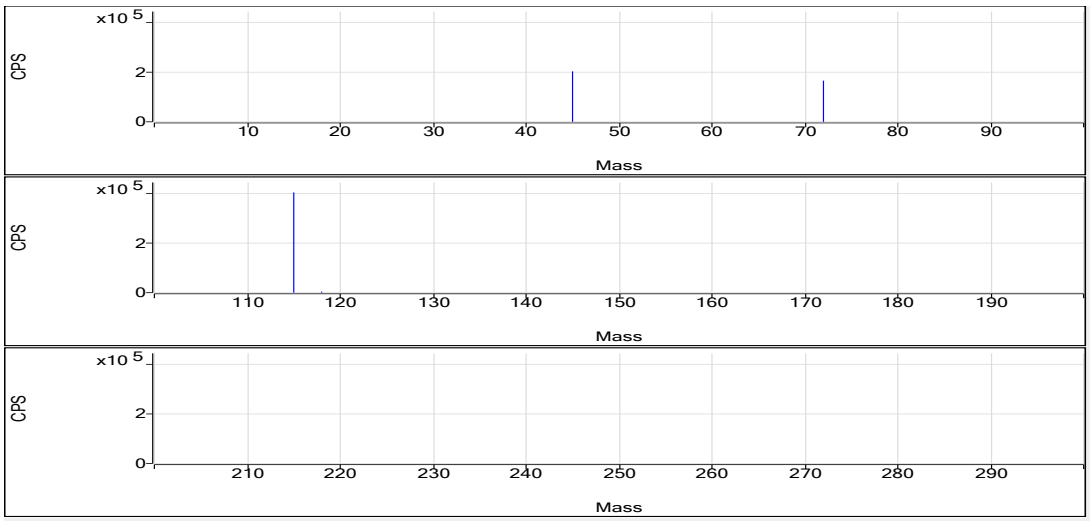
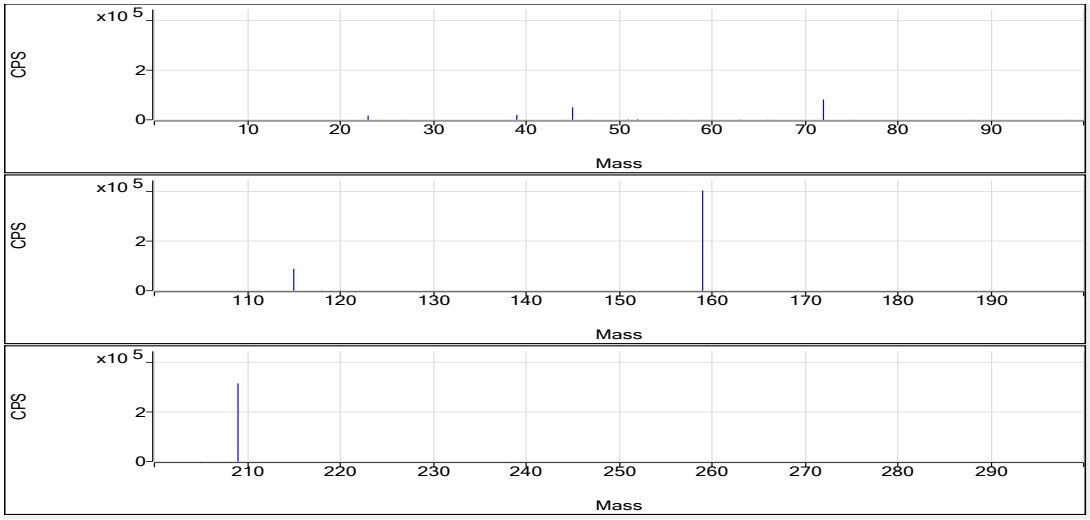


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.029	0	32.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.038	0	16.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.029	0	32.00	0.0007	3.404E-05
Se	78	2	H2	-0.008	0	5.33	0.0004	3.546E-05
Se	78	2	H2	0.002	0	6.00	0.0004	3.546E-05
Se	78	2	H2	-0.044	0	2.67	0.0004	3.546E-05
Na	23	3	He	-18.747	0.3502	17781.32	0.0036	0.4171
Na	23	3	He	-17.148	0.3559	17681.13	0.0036	0.4171
Na	23	3	He	-21.7	0.3397	17280.77	0.0036	0.4171
Mg	24	3	He	-0.557	0.0035	180.01	0.0018	0.004553
Mg	24	3	He	-0.403	0.0038	190.01	0.0018	0.004553
Mg	24	3	He	0.091	0.0047	240.01	0.0018	0.004553
Al	27	3	He	0.141	0.0022	110.00	0.0006	0.002085
Al	27	3	He	-1.505	0.0012	60.00	0.0006	0.002085
Al	27	3	He	-1.891	0.001	50.00	0.0006	0.002085
K	39	3	He	-0.676	0.4104	20835.50	0.0012	0.4112
K	39	3	He	-6.044	0.4041	20074.23	0.0012	0.4112
K	39	3	He	-21.874	0.3856	19613.65	0.0012	0.4112
Ca	44	3	He	3.313	0.0035	180.01	0.0001	0.003322
Ca	44	3	He	-19.373	0.002	100.00	0.0001	0.003322
Ca	44	3	He	-17.162	0.0022	110.00	0.0001	0.003322
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.378	0.0002	10.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	-0.278	0.0259	1314.07	0.0213	0.0318
V	51	3	He	-0.234	0.0268	1332.07	0.0213	0.0318
V	51	3	He	-0.275	0.026	1320.07	0.0213	0.0318
Cr	52	3	He	-0.128	0.0392	1990.21	0.0294	0.04297
Cr	52	3	He	-0.181	0.0376	1870.20	0.0294	0.04297
Cr	52	3	He	-0.218	0.0366	1860.18	0.0294	0.04297
Mn	55	3	He	0.123	0.0043	220.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.196	0.0052	260.01	0.0124	0.002801
Mn	55	3	He	0.249	0.0059	300.01	0.0124	0.002801
Fe	57	3	He	-2.021	0.0016	80.00	0.0006	0.002732
Fe	57	3	He	-2.312	0.0014	70.00	0.0006	0.002732
Fe	57	3	He	0.036	0.0028	140.01	0.0006	0.002732
Co	59	3	He	0.002	0.0037	190.01	0.0549	0.003644
Co	59	3	He	0.003	0.0038	190.01	0.0549	0.003644
Co	59	3	He	0.02	0.0047	240.01	0.0549	0.003644
Ni	60	3	He	-1.048	0.0044	370.02	0.0093	0.01413
Ni	60	3	He	-1.174	0.0032	260.01	0.0093	0.01413
Ni	60	3	He	-1.059	0.0043	350.02	0.0093	0.01413
Cu	63	3	He	0.158	0.0137	1150.08	0.0274	0.009321
Cu	63	3	He	0.113	0.0124	1000.07	0.0274	0.009321
Cu	63	3	He	0.171	0.014	1140.08	0.0274	0.009321
Zn	66	3	He	-0.649	0.0039	330.01	0.0031	0.005913
Zn	66	3	He	-0.794	0.0035	280.01	0.0031	0.005913
Zn	66	3	He	-0.325	0.0049	400.02	0.0031	0.005913
As	75	3	He	0.015	0.0009	76.00	0.0021	0.0008698
As	75	3	He	0.081	0.001	84.00	0.0021	0.0008698
As	75	3	He	0.076	0.001	84.00	0.0021	0.0008698
Sr	88	3	He	0.089	0.0015	130.01	0.0088	0.0006843
Sr	88	3	He	0.011	0.0008	70.00	0.0088	0.0006843
Sr	88	3	He	-0.013	0.0006	50.00	0.0088	0.0006843
Mo	98	3	He	-0.037	0.001	90.01	0.0219	0.001827
Mo	98	3	He	-0.048	0.0008	70.00	0.0219	0.001827
Mo	98	3	He	-0.031	0.0011	100.00	0.0219	0.001827
Ag	107	3	He	-0.006	0.0008	70.00	0.047	0.001064
Ag	107	3	He	-0.006	0.0008	70.00	0.047	0.001064
Ag	107	3	He	0.002	0.0011	100.00	0.047	0.001064
Cd	111	3	He	0.001	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	0.001	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	0.006	0.0001	8.00	0.0053	6.086E-05
Sn	120	3	He	-0.096	0.0133	1180.09	0.0154	0.01483
Sn	120	3	He	0.08	0.0161	1440.12	0.0154	0.01483
Sn	120	3	He	0.226	0.0183	1610.16	0.0154	0.01483
Sb	121	3	He	0.045	0.0009	80.00	0.0143	0.0002661
Sb	121	3	He	0.028	0.0007	60.00	0.0143	0.0002661
Sb	121	3	He	0.013	0.0005	40.00	0.0143	0.0002661
Ba	137	3	He	-0.056	0	0.00	0.0048	0.0002665
Ba	137	3	He	-0.032	0.0001	10.00	0.0048	0.0002665
Ba	137	3	He	0.016	0.0003	30.00	0.0048	0.0002665
Tl	205	3	He	-0.068	0.0011	440.03	0.0246	0.002755
Tl	205	3	He	-0.072	0.001	400.02	0.0246	0.002755
Tl	205	3	He	-0.066	0.0011	460.04	0.0246	0.002755
Pb	208	3	He	-0.001	0.0021	510.03	0.0324	0.002158
Pb	208	3	He	-0.007	0.0019	420.02	0.0324	0.002158
Pb	208	3	He	0.004	0.0023	450.03	0.0324	0.002158
U	238	3	He	0.001	0.0004	140.01	0.0492	0.0004023
U	238	3	He	0.007	0.0007	230.01	0.0492	0.0004023
U	238	3	He	0.003	0.0006	180.01	0.0492	0.0004023
Sc	45	1	No Gas			2523653.71		
Sc	45	1	No Gas			2513992.46		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2520865.59		
Ge	72	1	No Gas			1236905.06		
Ge	72	1	No Gas			1243513.50		
Ge	72	1	No Gas			1240157.72		
Sc	45	2	H2			203333.92		
Sc	45	2	H2			203179.45		
Sc	45	2	H2			203962.50		
Ge	72	2	H2			165912.75		
Ge	72	2	H2			165995.84		
Ge	72	2	H2			166205.39		
In	115	2	H2			405734.88		
In	115	2	H2			400501.17		
In	115	2	H2			406446.48		
Sc	45	3	He			50769.47		
Sc	45	3	He			49675.39		
Sc	45	3	He			50869.33		
Ge	72	3	He			84157.98		
Ge	72	3	He			80566.42		
Ge	72	3	He			81382.40		
In	115	3	He			88422.06		
In	115	3	He			89618.63		
In	115	3	He			87877.19		
Tb	159	3	He			407821.36		
Tb	159	3	He			402527.42		
Tb	159	3	He			404701.52		
Bi	209	3	He			316495.05		
Bi	209	3	He			313837.79		
Bi	209	3	He			317403.06		

Quantitation Report

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Acq Time	8/9/2023 4:32:51 PM
Sample Name	LCS 410-405036/2-A
Sample Type	Sample
Comment	E7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

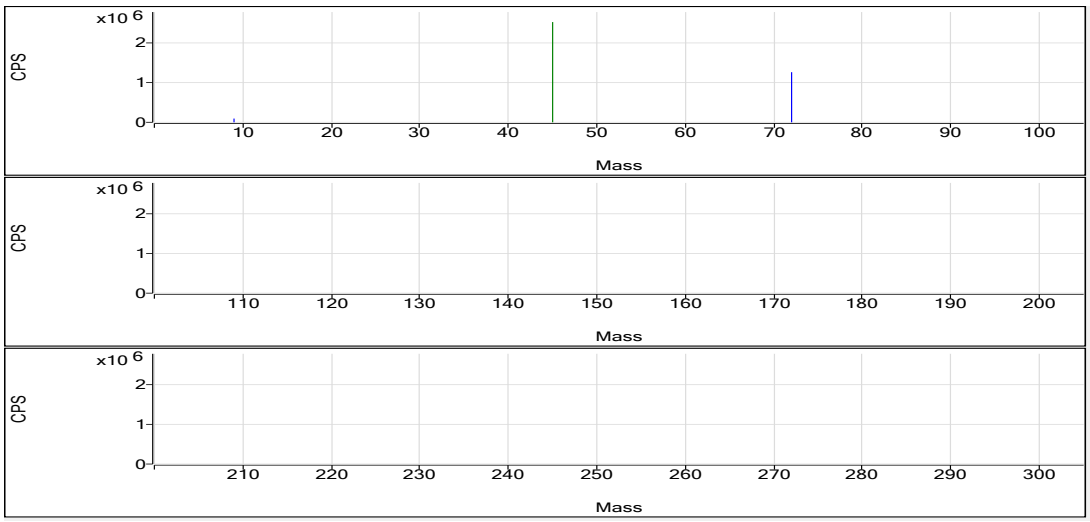
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.941	ppb	0.9	94265.62	0.0371	Pulse	0.5000	3
Se	78	72	H2	96.864	ppb	2.0	7270.52	0.0425	Pulse	1.5000	3
Na	23	45	He	4698.708	ppb	1.3	882340.53	17.1652	Pulse	0.1000	3
Mg	24	45	He	4939.729	ppb	0.9	459012.35	8.9296	Pulse	0.1000	3
Al	27	45	He	4971.751	ppb	1.3	148997.52	2.8986	Pulse	0.1000	3
K	39	45	He	4894.240	ppb	0.2	315763.60	6.1427	Pulse	0.1000	3
Ca	44	45	He	4949.134	ppb	1.4	17357.60	0.3377	Pulse	0.1000	3
Ti	47	45	He	499.905	ppb	3.0	13666.83	0.2659	Pulse	0.1000	3
V	51	45	He	497.639	ppb	0.6	545249.19	10.6071	Pulse	0.5000	3
Cr	52	45	He	476.962	ppb	0.9	723272.93	14.0705	Pulse	0.1000	3
Mn	55	45	He	497.398	ppb	1.7	318000.14	6.1865	Pulse	0.1000	3
Fe	57	45	He	5006.774	ppb	0.3	147396.38	2.8674	Pulse	0.1000	3
Co	59	45	He	482.122	ppb	0.5	1360481.33	26.4661	Pulse	0.1000	3
Ni	60	72	He	481.422	ppb	1.5	382736.69	4.4831	Pulse	0.1000	3
Cu	63	72	He	460.853	ppb	0.9	1079915.53	12.6487	Pulse	0.1000	3
Zn	66	72	He	492.770	ppb	2.2	129664.64	1.5189	Pulse	0.1000	3
As	75	72	He	489.803	ppb	1.8	89797.28	1.0519	Pulse	0.5000	3
Sr	88	115	He	52.176	ppb	1.3	39950.69	0.4598	Pulse	0.1000	3
Mo	98	115	He	49.608	ppb	1.2	94744.89	1.0905	Pulse	0.1000	3
Ag	107	115	He	49.870	ppb	2.6	203883.20	2.3469	Pulse	0.1000	3
Cd	111	115	He	51.525	ppb	1.9	23844.36	0.2745	Pulse	0.5000	3
Sn	120	115	He	105.182	ppb	2.2	142203.44	1.6368	Pulse	0.1000	3
Sb	121	115	He	105.704	ppb	1.9	130887.73	1.5066	Pulse	0.1000	3
Ba	137	115	He	520.660	ppb	1.4	216197.52	2.4884	Pulse	0.1000	3
Tl	205	159	He	102.261	ppb	1.4	1021481.39	2.5143	Pulse	0.1000	3
Pb	208	159	He	51.127	ppb	0.5	673968.56	1.6589	Pulse	0.1000	3
U	238	209	He	50.050	ppb	0.4	785347.96	2.4653	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2537793.24	0.6	97.3	Analog	0.1000	3
No Gas	Ge	72	1268624.64	0.5	98.4	Pulse	0.1000	3
H2	Sc	45	202099.44	1.4	98.1	Pulse	0.1000	3
H2	Ge	72	171154.44	2.4	105.2	Pulse	0.1000	3
H2	In	115	403337.81	0.7	99.9	Pulse	0.1000	3
He	Sc	45	51404.91	0.5	100.4	Pulse	0.1000	3
He	Ge	72	85384.81	1.5	104.3	Pulse	0.1000	3
He	In	115	86894.25	1.5	99.1	Pulse	0.1000	3
He	Tb	159	406282.14	0.5	101.2	Pulse	0.1000	3
He	Bi	209	318566.25	0.3	104.1	Pulse	0.1000	3

No Gas



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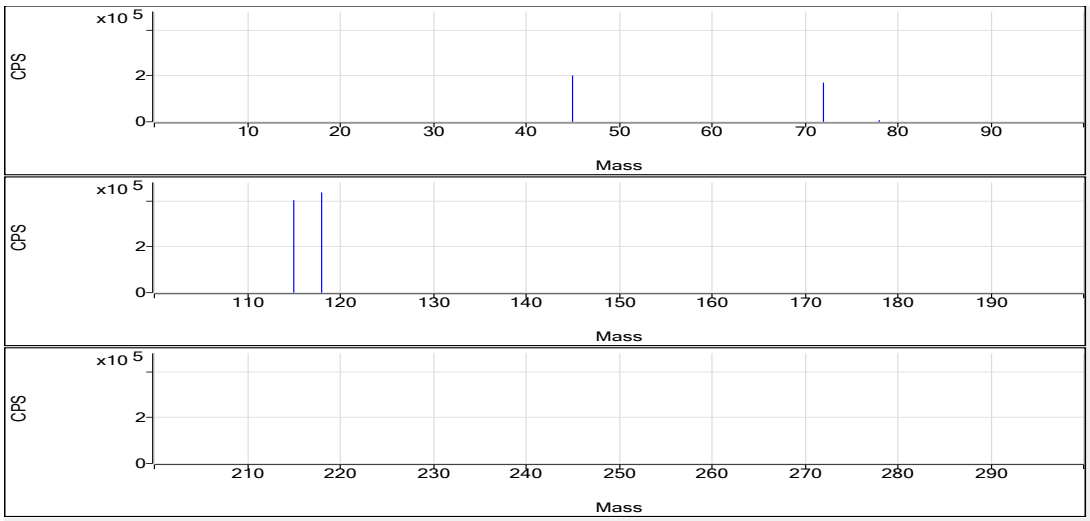
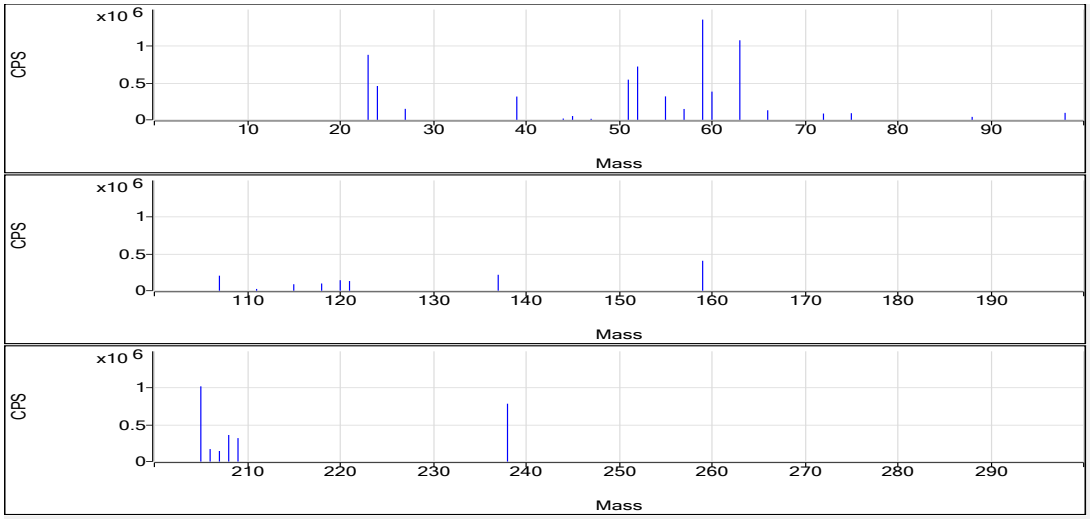


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.532	0.0368	94155.51	0.0007	3.404E-05
Be	9	1	No Gas	51.397	0.0375	94632.58	0.0007	3.404E-05
Be	9	1	No Gas	50.894	0.0371	94008.78	0.0007	3.404E-05
Se	78	2	H2	96.548	0.0424	7301.87	0.0004	3.546E-05
Se	78	2	H2	95.126	0.0417	7281.86	0.0004	3.546E-05
Se	78	2	H2	98.917	0.0434	7227.84	0.0004	3.546E-05
Na	23	3	He	4766.395	17.4065	889820.61	0.0036	0.4171
Na	23	3	He	4679.26	17.0959	881156.86	0.0036	0.4171
Na	23	3	He	4650.468	16.9932	876044.13	0.0036	0.4171
Mg	24	3	He	4991.022	9.0223	461220.34	0.0018	0.004553
Mg	24	3	He	4913.598	8.8824	457816.99	0.0018	0.004553
Mg	24	3	He	4914.567	8.8841	457999.72	0.0018	0.004553
Al	27	3	He	5025.421	2.9299	149775.06	0.0006	0.002085
Al	27	3	He	4987.951	2.908	149886.14	0.0006	0.002085
Al	27	3	He	4901.881	2.8579	147331.37	0.0006	0.002085
K	39	3	He	4905.632	6.1561	314698.30	0.0012	0.4112
K	39	3	He	4895.765	6.1445	316700.17	0.0012	0.4112
K	39	3	He	4881.324	6.1276	315892.32	0.0012	0.4112
Ca	44	3	He	4989.433	0.3404	17400.99	0.0001	0.003322
Ca	44	3	He	4867.667	0.3322	17120.62	0.0001	0.003322
Ca	44	3	He	4990.303	0.3405	17551.19	0.0001	0.003322
Ti	47	3	He	508.922	0.2707	13836.98	0.0005	0
Ti	47	3	He	508.408	0.2704	13937.11	0.0005	0
Ti	47	3	He	482.385	0.2566	13226.41	0.0005	0
V	51	3	He	499.713	10.6511	544487.88	0.0213	0.0318
V	51	3	He	499.23	10.6409	548453.31	0.0213	0.0318
V	51	3	He	493.975	10.5292	542806.38	0.0213	0.0318
Cr	52	3	He	481.437	14.2021	726011.79	0.0294	0.04297
Cr	52	3	He	476.132	14.0461	723963.43	0.0294	0.04297
Cr	52	3	He	473.318	13.9633	719843.58	0.0294	0.04297
Mn	55	3	He	507.057	6.3066	322394.60	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	494.584	6.1515	317062.81	0.0124	0.002801
Mn	55	3	He	490.552	6.1014	314543.02	0.0124	0.002801
Fe	57	3	He	5007.387	2.8677	146597.86	0.0006	0.002732
Fe	57	3	He	5023.616	2.877	148286.45	0.0006	0.002732
Fe	57	3	He	4989.32	2.8574	147304.82	0.0006	0.002732
Co	59	3	He	482.859	26.5065	1355018.73	0.0549	0.003644
Co	59	3	He	483.872	26.5621	1369067.01	0.0549	0.003644
Co	59	3	He	479.636	26.3296	1357358.26	0.0549	0.003644
Ni	60	3	He	488.131	4.5454	384907.46	0.0093	0.01413
Ni	60	3	He	473.714	4.4115	383156.60	0.0093	0.01413
Ni	60	3	He	482.421	4.4924	380146.01	0.0093	0.01413
Cu	63	3	He	464.09	12.7375	1078622.95	0.0274	0.009321
Cu	63	3	He	456.393	12.5263	1087951.78	0.0274	0.009321
Cu	63	3	He	462.075	12.6822	1073171.86	0.0274	0.009321
Zn	66	3	He	498.117	1.5353	130014.22	0.0031	0.005913
Zn	66	3	He	480.28	1.4806	128592.36	0.0031	0.005913
Zn	66	3	He	499.912	1.5409	130387.35	0.0031	0.005913
As	75	3	He	496.872	1.067	90356.84	0.0021	0.0008698
As	75	3	He	479.975	1.0308	89525.52	0.0021	0.0008698
As	75	3	He	492.562	1.0578	89509.48	0.0021	0.0008698
Sr	88	3	He	51.747	0.456	40258.15	0.0088	0.0006843
Sr	88	3	He	51.823	0.4567	39134.97	0.0088	0.0006843
Sr	88	3	He	52.957	0.4666	40458.95	0.0088	0.0006843
Mo	98	3	He	48.982	1.0767	95059.96	0.0219	0.001827
Mo	98	3	He	50.202	1.1035	94567.10	0.0219	0.001827
Mo	98	3	He	49.641	1.0912	94607.62	0.0219	0.001827
Ag	107	3	He	48.434	2.2794	201233.88	0.047	0.001064
Ag	107	3	He	50.933	2.3969	205410.49	0.047	0.001064
Ag	107	3	He	50.244	2.3645	205005.23	0.047	0.001064
Cd	111	3	He	50.721	0.2702	23852.37	0.0053	6.086E-05
Cd	111	3	He	52.587	0.2801	24004.62	0.0053	6.086E-05
Cd	111	3	He	51.266	0.2731	23676.08	0.0053	6.086E-05
Sn	120	3	He	102.624	1.5973	141021.44	0.0154	0.01483
Sn	120	3	He	105.889	1.6477	141203.35	0.0154	0.01483
Sn	120	3	He	107.032	1.6653	144385.54	0.0154	0.01483
Sb	121	3	He	103.663	1.4775	130438.98	0.0143	0.0002661
Sb	121	3	He	107.655	1.5344	131491.07	0.0143	0.0002661
Sb	121	3	He	105.794	1.5079	130733.13	0.0143	0.0002661
Ba	137	3	He	512.332	2.4486	216173.63	0.0048	0.0002665
Ba	137	3	He	526.261	2.5152	215542.20	0.0048	0.0002665
Ba	137	3	He	523.387	2.5014	216876.74	0.0048	0.0002665
Tl	205	3	He	101.055	2.4847	1015545.53	0.0246	0.002755
Tl	205	3	He	103.888	2.5543	1034556.78	0.0246	0.002755
Tl	205	3	He	101.839	2.504	1014341.86	0.0246	0.002755
Pb	208	3	He	50.937	1.6527	362104.37	0.0324	0.002158
Pb	208	3	He	51.386	1.6673	358668.39	0.0324	0.002158
Pb	208	3	He	51.057	1.6566	361641.44	0.0324	0.002158
U	238	3	He	49.972	2.4614	782426.63	0.0492	0.0004023
U	238	3	He	50.251	2.4752	787399.36	0.0492	0.0004023
U	238	3	He	49.928	2.4592	786217.88	0.0492	0.0004023
Sc	45	1	No Gas			2555231.06		
Sc	45	1	No Gas			2525015.27		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2533133.40		
Ge	72	1	No Gas			1276143.34		
Ge	72	1	No Gas			1266982.40		
Ge	72	1	No Gas			1262748.18		
Sc	45	2	H2			199748.45		
Sc	45	2	H2			205221.07		
Sc	45	2	H2			201328.81		
Ge	72	2	H2			172398.77		
Ge	72	2	H2			174495.68		
Ge	72	2	H2			166568.88		
In	115	2	H2			400312.69		
In	115	2	H2			405132.92		
In	115	2	H2			404567.81		
Sc	45	3	He			51120.15		
Sc	45	3	He			51542.09		
Sc	45	3	He			51552.50		
Ge	72	3	He			84681.09		
Ge	72	3	He			86853.06		
Ge	72	3	He			84620.29		
In	115	3	He			89055.61		
In	115	3	He			86458.24		
In	115	3	He			87454.77		
Tb	159	3	He			408722.10		
Tb	159	3	He			405027.77		
Tb	159	3	He			405096.56		
Bi	209	3	He			317877.12		
Bi	209	3	He			318121.54		
Bi	209	3	He			319700.09		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

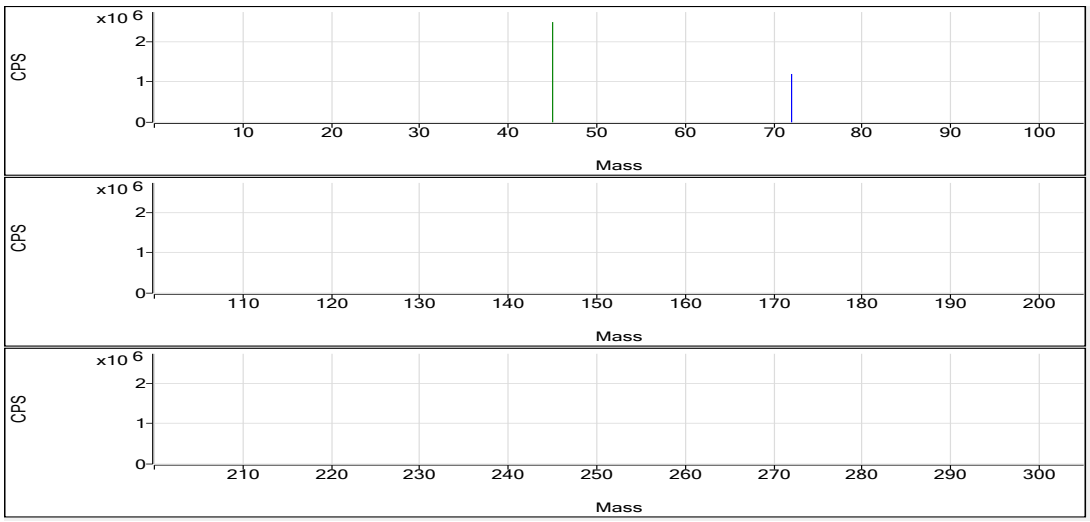
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.010	ppb	N/A	66.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.025	ppb	105.4	7.33	0.0000	Pulse	1.5000	3
Na	23	45	He	-10.866	ppb	N/A	18455.42	0.3783	Pulse	0.1000	3
Mg	24	45	He	0.015	ppb	1990.9	223.34	0.0046	Pulse	0.1000	3
Al	27	45	He	-2.289	ppb	N/A	36.67	0.0008	Pulse	0.1000	3
K	39	45	He	-0.584	ppb	N/A	20020.95	0.4105	Pulse	0.1000	3
Ca	44	45	He	-11.752	ppb	N/A	123.34	0.0025	Pulse	0.1000	3
Ti	47	45	He	0.383	ppb	99.5	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	-0.066	ppb	N/A	1482.08	0.0304	Pulse	0.5000	3
Cr	52	45	He	0.031	ppb	258.5	2140.23	0.0439	Pulse	0.1000	3
Mn	55	45	He	0.225	ppb	14.9	273.34	0.0056	Pulse	0.1000	3
Fe	57	45	He	0.730	ppb	252.5	153.34	0.0031	Pulse	0.1000	3
Co	59	45	He	0.088	ppb	27.3	413.36	0.0085	Pulse	0.1000	3
Ni	60	72	He	-0.994	ppb	N/A	393.35	0.0049	Pulse	0.1000	3
Cu	63	72	He	0.041	ppb	53.9	836.72	0.0104	Pulse	0.1000	3
Zn	66	72	He	0.214	ppb	12.3	526.70	0.0066	Pulse	0.1000	3
As	75	72	He	0.148	ppb	17.2	95.33	0.0012	Pulse	0.5000	3
Sr	88	115	He	0.041	ppb	120.6	90.00	0.0010	Pulse	0.1000	3
Mo	98	115	He	0.026	ppb	40.2	206.68	0.0024	Pulse	0.1000	3
Ag	107	115	He	-0.003	ppb	N/A	80.00	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.007	ppb	84.5	8.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.154	ppb	65.7	1486.80	0.0172	Pulse	0.1000	3
Sb	121	115	He	0.060	ppb	18.5	96.67	0.0011	Pulse	0.1000	3
Ba	137	115	He	0.056	ppb	118.4	46.67	0.0005	Pulse	0.1000	3
Tl	205	159	He	0.069	ppb	28.0	1783.53	0.0045	Pulse	0.1000	3
Pb	208	159	He	-0.003	ppb	N/A	820.05	0.0020	Pulse	0.1000	3
U	238	209	He	0.064	ppb	22.2	1096.76	0.0035	Pulse	0.1000	3

ISTD Table:

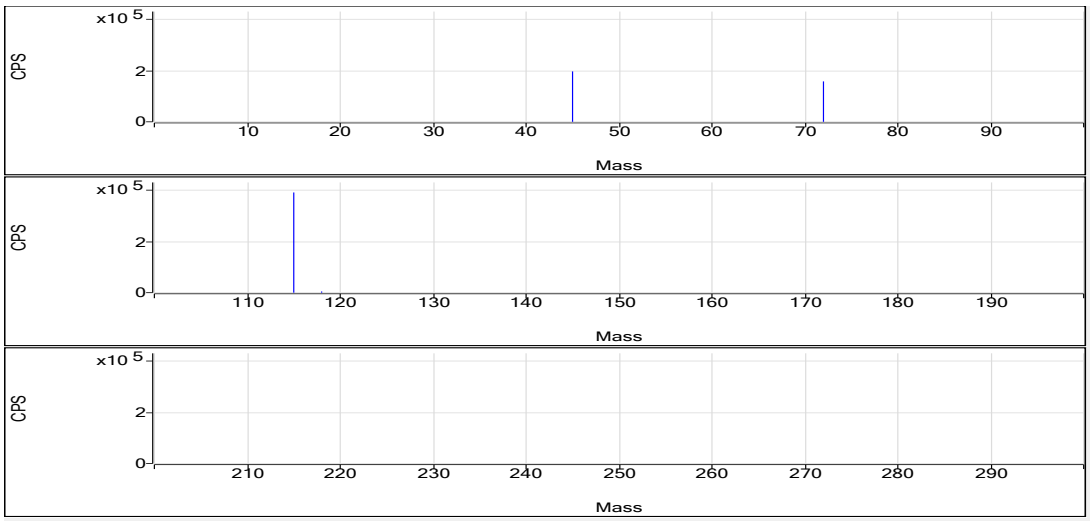
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2478809.81	0.9	95.0	Analog	0.1000	3
No Gas	Ge	72	1194772.25	0.5	92.7	Pulse	0.1000	3
H2	Sc	45	196809.00	0.6	95.5	Pulse	0.1000	3
H2	Ge	72	157795.85	1.4	97.0	Pulse	0.1000	3
H2	In	115	391259.16	0.3	96.9	Pulse	0.1000	3
He	Sc	45	48779.19	0.9	95.3	Pulse	0.1000	3
He	Ge	72	80175.27	2.3	97.9	Pulse	0.1000	3
He	In	115	86538.29	2.3	98.7	Pulse	0.1000	3
He	Tb	159	400285.07	0.3	99.7	Pulse	0.1000	3
He	Bi	209	310606.91	0.4	101.5	Pulse	0.1000	3

No Gas

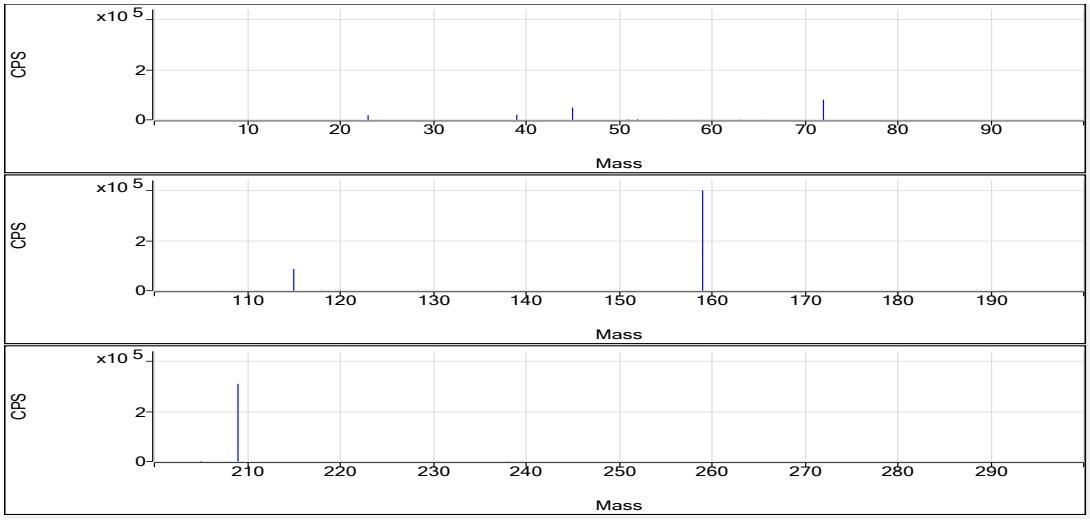


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.011	0	66.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.013	0	60.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.005	0	74.00	0.0007	3.404E-05
Se	78	2	H2	0.016	0	6.67	0.0004	3.546E-05
Se	78	2	H2	0.004	0	6.00	0.0004	3.546E-05
Se	78	2	H2	0.055	0.0001	9.33	0.0004	3.546E-05
Na	23	3	He	-9.78	0.3822	18832.49	0.0036	0.4171
Na	23	3	He	-9.622	0.3828	18572.23	0.0036	0.4171
Na	23	3	He	-13.196	0.37	17961.54	0.0036	0.4171
Mg	24	3	He	-0.049	0.0045	220.01	0.0018	0.004553
Mg	24	3	He	0.332	0.0052	250.01	0.0018	0.004553
Mg	24	3	He	-0.239	0.0041	200.01	0.0018	0.004553
Al	27	3	He	-2.185	0.0008	40.00	0.0006	0.002085
Al	27	3	He	-2.871	0.0004	20.00	0.0006	0.002085
Al	27	3	He	-1.81	0.001	50.00	0.0006	0.002085
K	39	3	He	-10.693	0.3987	19643.81	0.0012	0.4112
K	39	3	He	16.085	0.43	20865.38	0.0012	0.4112
K	39	3	He	-7.143	0.4028	19553.66	0.0012	0.4112
Ca	44	3	He	-10.115	0.0026	130.01	0.0001	0.003322
Ca	44	3	He	-18.664	0.0021	100.00	0.0001	0.003322
Ca	44	3	He	-6.476	0.0029	140.01	0.0001	0.003322
Ti	47	3	He	0.763	0.0004	20.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.387	0.0002	10.00	0.0005	0
V	51	3	He	-0.113	0.0294	1448.08	0.0213	0.0318
V	51	3	He	-0.026	0.0312	1516.09	0.0213	0.0318
V	51	3	He	-0.06	0.0305	1482.08	0.0213	0.0318
Cr	52	3	He	-0.005	0.0428	2110.23	0.0294	0.04297
Cr	52	3	He	0.123	0.0466	2260.25	0.0294	0.04297
Cr	52	3	He	-0.025	0.0422	2050.21	0.0294	0.04297
Mn	55	3	He	0.232	0.0057	280.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.189	0.0052	250.01	0.0124	0.002801
Mn	55	3	He	0.255	0.006	290.01	0.0124	0.002801
Fe	57	3	He	-1.228	0.002	100.00	0.0006	0.002732
Fe	57	3	He	2.43	0.0041	200.01	0.0006	0.002732
Fe	57	3	He	0.987	0.0033	160.01	0.0006	0.002732
Co	59	3	He	0.115	0.0099	490.03	0.0549	0.003644
Co	59	3	He	0.069	0.0074	360.02	0.0549	0.003644
Co	59	3	He	0.08	0.008	390.02	0.0549	0.003644
Ni	60	3	He	-0.911	0.0057	460.02	0.0093	0.01413
Ni	60	3	He	-1.019	0.0047	380.02	0.0093	0.01413
Ni	60	3	He	-1.053	0.0044	340.01	0.0093	0.01413
Cu	63	3	He	0.029	0.0101	820.06	0.0274	0.009321
Cu	63	3	He	0.028	0.0101	820.05	0.0274	0.009321
Cu	63	3	He	0.067	0.0111	870.05	0.0274	0.009321
Zn	66	3	He	0.244	0.0067	540.03	0.0031	0.005913
Zn	66	3	He	0.195	0.0065	530.03	0.0031	0.005913
Zn	66	3	He	0.202	0.0065	510.03	0.0031	0.005913
As	75	3	He	0.169	0.0012	100.00	0.0021	0.0008698
As	75	3	He	0.156	0.0012	98.00	0.0021	0.0008698
As	75	3	He	0.12	0.0011	88.00	0.0021	0.0008698
Sr	88	3	He	0.029	0.0009	80.00	0.0088	0.0006843
Sr	88	3	He	-0.001	0.0007	60.00	0.0088	0.0006843
Sr	88	3	He	0.096	0.0015	130.01	0.0088	0.0006843
Mo	98	3	He	0.029	0.0025	210.01	0.0219	0.001827
Mo	98	3	He	0.014	0.0021	190.01	0.0219	0.001827
Mo	98	3	He	0.034	0.0026	220.01	0.0219	0.001827
Ag	107	3	He	-0.003	0.0009	80.00	0.047	0.001064
Ag	107	3	He	-0.003	0.0009	80.00	0.047	0.001064
Ag	107	3	He	-0.003	0.0009	80.00	0.047	0.001064
Cd	111	3	He	0.006	0.0001	8.00	0.0053	6.086E-05
Cd	111	3	He	0.014	0.0001	12.00	0.0053	6.086E-05
Cd	111	3	He	0.002	0.0001	6.00	0.0053	6.086E-05
Sn	120	3	He	0.153	0.0172	1470.12	0.0154	0.01483
Sn	120	3	He	0.053	0.0157	1390.11	0.0154	0.01483
Sn	120	3	He	0.255	0.0188	1600.17	0.0154	0.01483
Sb	121	3	He	0.063	0.0012	100.00	0.0143	0.0002661
Sb	121	3	He	0.068	0.0012	110.00	0.0143	0.0002661
Sb	121	3	He	0.047	0.0009	80.00	0.0143	0.0002661
Ba	137	3	He	0.018	0.0004	30.00	0.0048	0.0002665
Ba	137	3	He	0.133	0.0009	80.00	0.0048	0.0002665
Ba	137	3	He	0.018	0.0004	30.00	0.0048	0.0002665
Tl	205	3	He	0.082	0.0048	1920.22	0.0246	0.002755
Tl	205	3	He	0.078	0.0047	1870.22	0.0246	0.002755
Tl	205	3	He	0.047	0.0039	1560.14	0.0246	0.002755
Pb	208	3	He	0.004	0.0023	480.03	0.0324	0.002158
Pb	208	3	He	-0.006	0.0019	480.03	0.0324	0.002158
Pb	208	3	He	-0.008	0.0019	370.02	0.0324	0.002158
U	238	3	He	0.05	0.0029	890.07	0.0492	0.0004023
U	238	3	He	0.062	0.0035	1080.08	0.0492	0.0004023
U	238	3	He	0.078	0.0043	1320.12	0.0492	0.0004023
Sc	45	1	No Gas			2505303.71		
Sc	45	1	No Gas			2469719.18		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2461406.53		
Ge	72	1	No Gas			1201326.86		
Ge	72	1	No Gas			1192605.69		
Ge	72	1	No Gas			1190384.20		
Sc	45	2	H2			195691.17		
Sc	45	2	H2			196723.79		
Sc	45	2	H2			198012.05		
Ge	72	2	H2			156913.80		
Ge	72	2	H2			160299.04		
Ge	72	2	H2			156174.71		
In	115	2	H2			392751.32		
In	115	2	H2			390345.42		
In	115	2	H2			390680.74		
Sc	45	3	He			49274.18		
Sc	45	3	He			48521.63		
Sc	45	3	He			48541.75		
Ge	72	3	He			81070.75		
Ge	72	3	He			81391.26		
Ge	72	3	He			78063.81		
In	115	3	He			85533.47		
In	115	3	He			88823.32		
In	115	3	He			85281.32		
Tb	159	3	He			401588.82		
Tb	159	3	He			400094.06		
Tb	159	3	He			399172.34		
Bi	209	3	He			309716.23		
Bi	209	3	He			311906.52		
Bi	209	3	He			310197.98		

Quantitation Report

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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

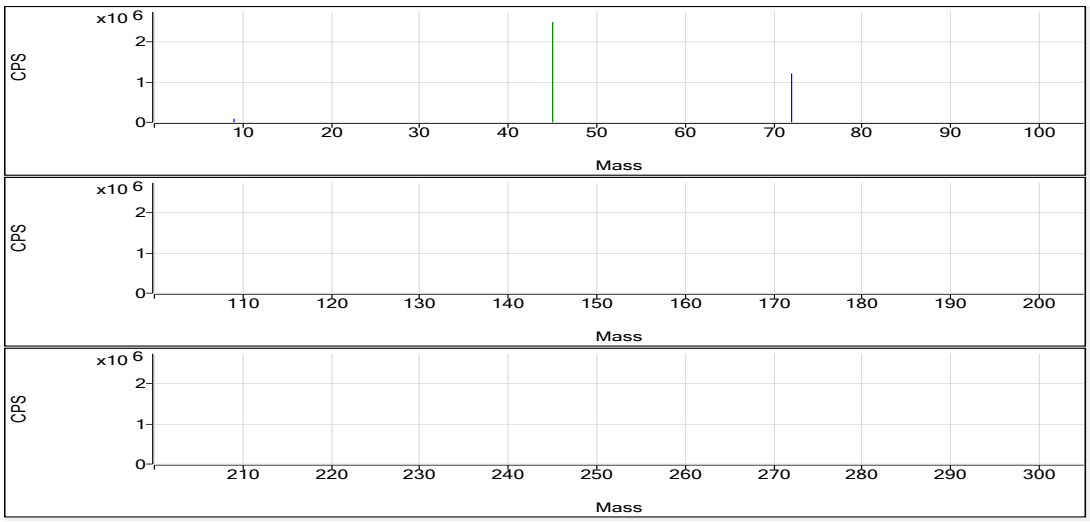
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.199	ppb	1.3	93358.67	0.0373	Pulse	0.5000	3
Se	78	72	H2	51.321	ppb	1.2	3624.91	0.0225	Pulse	1.5000	3
Na	23	45	He	4970.842	ppb	0.9	881228.42	18.1352	Pulse	0.1000	3
Mg	24	45	He	5206.216	ppb	1.5	457282.74	9.4111	Pulse	0.1000	3
Al	27	45	He	5192.281	ppb	1.3	147091.56	3.0271	Pulse	0.1000	3
K	39	45	He	5154.670	ppb	1.0	313306.21	6.4477	Pulse	0.1000	3
Ca	44	45	He	5124.617	ppb	4.1	16980.41	0.3495	Pulse	0.1000	3
Ti	47	45	He	5146.584	ppb	1.8	133000.97	2.7373	Pulse	0.1000	3
V	51	45	He	520.552	ppb	1.2	539066.19	11.0940	Pulse	0.5000	3
Cr	52	45	He	500.724	ppb	1.0	717664.78	14.7693	Pulse	0.1000	3
Mn	55	45	He	525.705	ppb	1.4	317720.06	6.5384	Pulse	0.1000	3
Fe	57	45	He	5189.250	ppb	1.4	144399.58	2.9718	Pulse	0.1000	3
Co	59	45	He	502.420	ppb	1.0	1340166.12	27.5802	Pulse	0.1000	3
Ni	60	72	He	499.710	ppb	1.0	378615.86	4.6529	Pulse	0.1000	3
Cu	63	72	He	476.914	ppb	0.8	1065100.58	13.0892	Pulse	0.1000	3
Zn	66	72	He	505.184	ppb	1.2	126699.69	1.5570	Pulse	0.1000	3
As	75	72	He	507.343	ppb	0.2	88656.18	1.0895	Pulse	0.5000	3
Sr	88	115	He	50.751	ppb	0.6	38403.05	0.4472	Pulse	0.1000	3
Mo	98	115	He	50.815	ppb	1.3	95905.97	1.1170	Pulse	0.1000	3
Ag	107	115	He	50.172	ppb	0.5	202735.57	2.3611	Pulse	0.1000	3
Cd	111	115	He	51.540	ppb	0.6	23572.57	0.2745	Pulse	0.5000	3
Sn	120	115	He	52.144	ppb	1.8	70322.31	0.8189	Pulse	0.1000	3
Sb	121	115	He	53.050	ppb	1.4	64932.75	0.7562	Pulse	0.1000	3
Ba	137	115	He	521.360	ppb	0.7	213958.62	2.4917	Pulse	0.1000	3
Tl	205	159	He	50.854	ppb	1.1	504428.94	1.2517	Pulse	0.1000	3
Pb	208	159	He	51.074	ppb	0.9	667821.05	1.6572	Pulse	0.1000	3
U	238	209	He	50.432	ppb	0.4	774700.04	2.4841	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2500847.00	1.1	95.9	Analog	0.1000	3
No Gas	Ge	72	1218874.88	1.1	94.6	Pulse	0.1000	3
H2	Sc	45	199600.24	1.0	96.9	Pulse	0.1000	3
H2	Ge	72	160906.07	1.3	98.9	Pulse	0.1000	3
H2	In	115	395646.44	0.6	98.0	Pulse	0.1000	3
He	Sc	45	48595.17	1.1	94.9	Pulse	0.1000	3
He	Ge	72	81374.38	0.7	99.4	Pulse	0.1000	3
He	In	115	85865.14	0.7	98.0	Pulse	0.1000	3
He	Tb	159	403003.94	0.7	100.3	Pulse	0.1000	3
He	Bi	209	311873.32	0.9	101.9	Pulse	0.1000	3

No Gas



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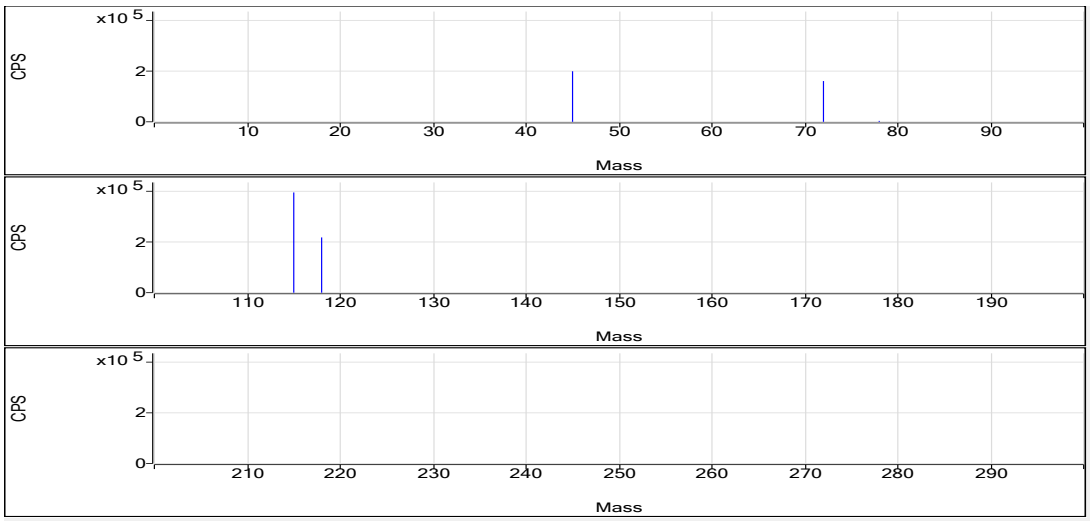
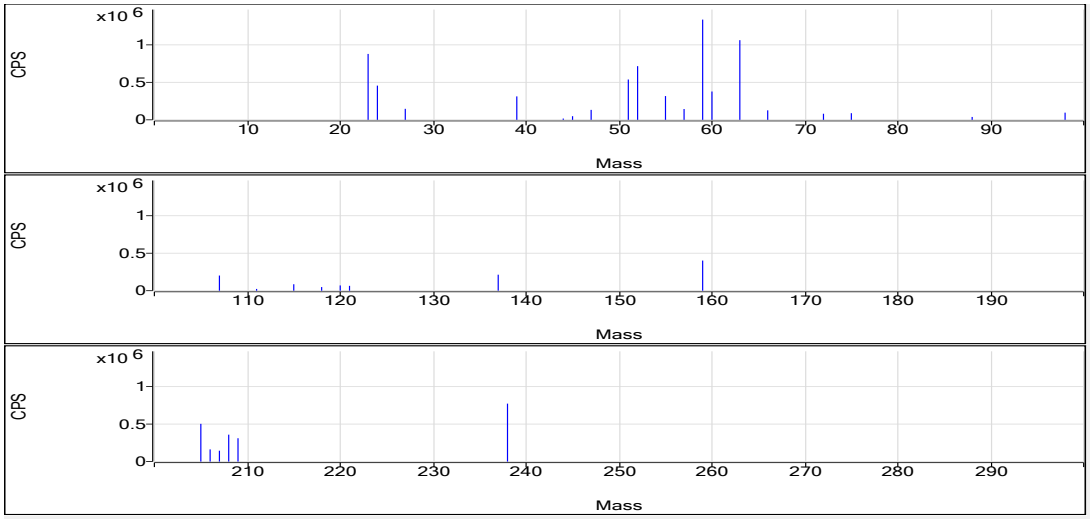


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	51.969	0.0379	93664.41	0.0007	3.404E-05
Be	9	1	No Gas	50.79	0.037	92807.40	0.0007	3.404E-05
Be	9	1	No Gas	50.838	0.0371	93604.20	0.0007	3.404E-05
Se	78	2	H2	50.596	0.0222	3627.13	0.0004	3.546E-05
Se	78	2	H2	51.575	0.0226	3602.46	0.0004	3.546E-05
Se	78	2	H2	51.791	0.0227	3645.14	0.0004	3.546E-05
Na	23	3	He	4964.105	18.1112	880417.41	0.0036	0.4171
Na	23	3	He	4931.163	17.9938	883741.78	0.0036	0.4171
Na	23	3	He	5017.256	18.3006	879526.08	0.0036	0.4171
Mg	24	3	He	5202.968	9.4052	457205.07	0.0018	0.004553
Mg	24	3	He	5127.808	9.2694	455256.63	0.0018	0.004553
Mg	24	3	He	5287.872	9.5586	459386.52	0.0018	0.004553
Al	27	3	He	5246.025	3.0584	148673.76	0.0006	0.002085
Al	27	3	He	5116.859	2.9831	146513.09	0.0006	0.002085
Al	27	3	He	5213.958	3.0397	146087.84	0.0006	0.002085
K	39	3	He	5156.644	6.45	313546.60	0.0012	0.4112
K	39	3	He	5103.517	6.3878	313728.63	0.0012	0.4112
K	39	3	He	5203.85	6.5053	312643.41	0.0012	0.4112
Ca	44	3	He	5154.9	0.3516	17090.58	0.0001	0.003322
Ca	44	3	He	4902.531	0.3345	16429.70	0.0001	0.003322
Ca	44	3	He	5316.419	0.3625	17420.95	0.0001	0.003322
Ti	47	3	He	5153.659	2.741	133246.56	0.0005	0
Ti	47	3	He	5051.535	2.6867	131954.82	0.0005	0
Ti	47	3	He	5234.557	2.7841	133801.52	0.0005	0
V	51	3	He	521.025	11.104	539787.50	0.0213	0.0318
V	51	3	He	513.92	10.9531	537946.44	0.0213	0.0318
V	51	3	He	526.709	11.2248	539464.63	0.0213	0.0318
Cr	52	3	He	500.61	14.766	717801.00	0.0294	0.04297
Cr	52	3	He	495.699	14.6215	718119.44	0.0294	0.04297
Cr	52	3	He	505.862	14.9204	717073.90	0.0294	0.04297
Mn	55	3	He	533.07	6.63	322296.25	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	518.151	6.4445	316515.23	0.0124	0.002801
Mn	55	3	He	525.893	6.5408	314348.71	0.0124	0.002801
Fe	57	3	He	5208.259	2.9826	144991.62	0.0006	0.002732
Fe	57	3	He	5110.412	2.9267	143739.28	0.0006	0.002732
Fe	57	3	He	5249.079	3.006	144467.84	0.0006	0.002732
Co	59	3	He	501.359	27.5219	1337892.32	0.0549	0.003644
Co	59	3	He	497.917	27.333	1342428.26	0.0549	0.003644
Co	59	3	He	507.984	27.8856	1340177.79	0.0549	0.003644
Ni	60	3	He	495.835	4.6169	378467.85	0.0093	0.01413
Ni	60	3	He	505.304	4.7048	381980.74	0.0093	0.01413
Ni	60	3	He	497.991	4.6369	375398.98	0.0093	0.01413
Cu	63	3	He	473.556	12.9971	1065429.98	0.0274	0.009321
Cu	63	3	He	480.813	13.1961	1071387.64	0.0274	0.009321
Cu	63	3	He	476.373	13.0743	1058484.12	0.0274	0.009321
Zn	66	3	He	503.008	1.5504	127089.78	0.0031	0.005913
Zn	66	3	He	500.444	1.5425	125233.73	0.0031	0.005913
Zn	66	3	He	512.101	1.5783	127775.56	0.0031	0.005913
As	75	3	He	506.414	1.0875	89147.25	0.0021	0.0008698
As	75	3	He	507.524	1.0899	88487.13	0.0021	0.0008698
As	75	3	He	508.091	1.0911	88334.16	0.0021	0.0008698
Sr	88	3	He	50.551	0.4455	38111.82	0.0088	0.0006843
Sr	88	3	He	51.09	0.4502	38984.95	0.0088	0.0006843
Sr	88	3	He	50.613	0.446	38112.37	0.0088	0.0006843
Mo	98	3	He	51.594	1.1341	97023.35	0.0219	0.001827
Mo	98	3	He	50.397	1.1078	95925.95	0.0219	0.001827
Mo	98	3	He	50.454	1.1091	94768.61	0.0219	0.001827
Ag	107	3	He	49.975	2.3519	201209.57	0.047	0.001064
Ag	107	3	He	50.116	2.3585	204224.59	0.047	0.001064
Ag	107	3	He	50.424	2.373	202772.56	0.047	0.001064
Cd	111	3	He	51.752	0.2757	23583.89	0.0053	6.086E-05
Cd	111	3	He	51.218	0.2728	23624.03	0.0053	6.086E-05
Cd	111	3	He	51.651	0.2751	23509.79	0.0053	6.086E-05
Sn	120	3	He	51.798	0.8136	69605.66	0.0154	0.01483
Sn	120	3	He	53.19	0.8351	72308.83	0.0154	0.01483
Sn	120	3	He	51.442	0.8081	69052.44	0.0154	0.01483
Sb	121	3	He	52.467	0.7479	63988.27	0.0143	0.0002661
Sb	121	3	He	52.815	0.7529	65194.07	0.0143	0.0002661
Sb	121	3	He	53.867	0.7679	65615.90	0.0143	0.0002661
Ba	137	3	He	523.143	2.5003	213906.40	0.0048	0.0002665
Ba	137	3	He	523.724	2.503	216742.73	0.0048	0.0002665
Ba	137	3	He	517.214	2.4719	211226.74	0.0048	0.0002665
Tl	205	3	He	51.305	1.2628	506146.79	0.0246	0.002755
Tl	205	3	He	50.219	1.2361	502424.52	0.0246	0.002755
Tl	205	3	He	51.038	1.2563	504715.50	0.0246	0.002755
Pb	208	3	He	51.404	1.6679	363197.34	0.0324	0.002158
Pb	208	3	He	50.524	1.6393	356574.88	0.0324	0.002158
Pb	208	3	He	51.295	1.6643	359571.83	0.0324	0.002158
U	238	3	He	50.266	2.4759	776019.44	0.0492	0.0004023
U	238	3	He	50.629	2.4937	769308.74	0.0492	0.0004023
U	238	3	He	50.402	2.4826	778771.94	0.0492	0.0004023
Sc	45	1	No Gas			2471690.28		
Sc	45	1	No Gas			2505874.34		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2524976.37		
Ge	72	1	No Gas			1224619.28		
Ge	72	1	No Gas			1203023.03		
Ge	72	1	No Gas			1228982.33		
Sc	45	2	H2			201498.14		
Sc	45	2	H2			197586.17		
Sc	45	2	H2			199716.40		
Ge	72	2	H2			163291.69		
Ge	72	2	H2			159105.74		
Ge	72	2	H2			160320.78		
In	115	2	H2			393070.03		
In	115	2	H2			397466.13		
In	115	2	H2			396403.16		
Sc	45	3	He			48611.83		
Sc	45	3	He			49113.80		
Sc	45	3	He			48059.89		
Ge	72	3	He			81974.54		
Ge	72	3	He			81189.68		
Ge	72	3	He			80958.93		
In	115	3	He			85935.77		
In	115	3	He			86972.31		
In	115	3	He			85824.34		
Tb	159	3	He			400806.71		
Tb	159	3	He			406445.03		
Tb	159	3	He			401760.07		
Bi	209	3	He			313428.92		
Bi	209	3	He			308495.91		
Bi	209	3	He			313695.13		

Quantitation Report

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Acq Time	8/9/2023 4:39:00 PM
Sample Name	CCB 4654618
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

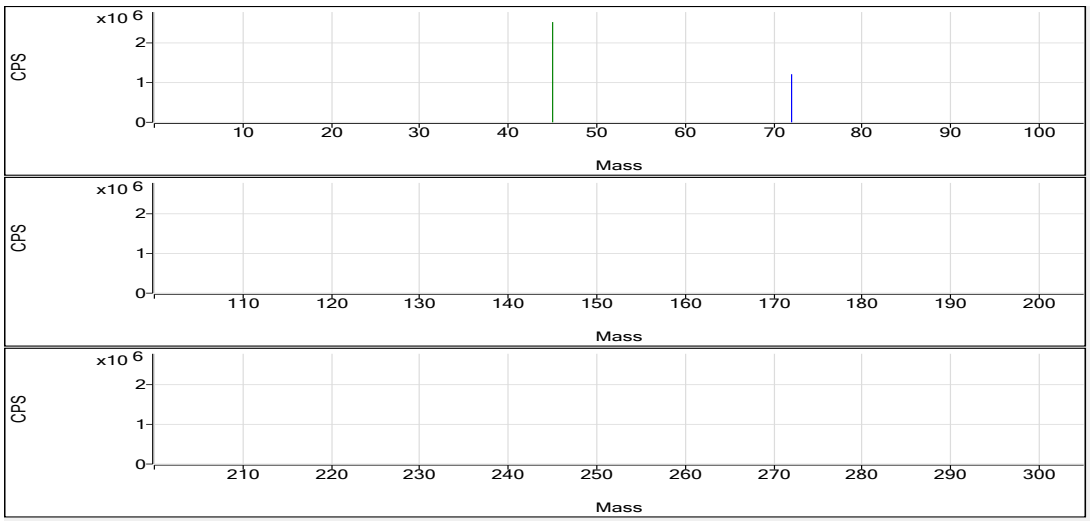
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.014	ppb	N/A	60.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.016	ppb	176.1	6.67	0.0000	Pulse	1.5000	3
Na	23	45	He	-13.885	ppb	N/A	18108.38	0.3676	Pulse	0.1000	3
Mg	24	45	He	0.586	ppb	101.1	276.68	0.0056	Pulse	0.1000	3
Al	27	45	He	0.255	ppb	490.8	110.00	0.0022	Pulse	0.1000	3
K	39	45	He	-2.796	ppb	N/A	20091.01	0.4079	Pulse	0.1000	3
Ca	44	45	He	-11.004	ppb	N/A	126.67	0.0026	Pulse	0.1000	3
Ti	47	45	He	1.272	ppb	17.1	33.33	0.0007	Pulse	0.1000	3
V	51	45	He	-0.109	ppb	N/A	1452.08	0.0295	Pulse	0.5000	3
Cr	52	45	He	0.057	ppb	72.5	2200.24	0.0447	Pulse	0.1000	3
Mn	55	45	He	0.150	ppb	45.0	230.01	0.0047	Pulse	0.1000	3
Fe	57	45	He	-0.510	ppb	N/A	120.01	0.0024	Pulse	0.1000	3
Co	59	45	He	0.110	ppb	21.5	476.69	0.0097	Pulse	0.1000	3
Ni	60	72	He	-0.938	ppb	N/A	430.03	0.0054	Pulse	0.1000	3
Cu	63	72	He	0.023	ppb	87.7	790.05	0.0100	Pulse	0.1000	3
Zn	66	72	He	0.524	ppb	25.4	596.70	0.0075	Pulse	0.1000	3
As	75	72	He	0.162	ppb	84.5	96.67	0.0012	Pulse	0.5000	3
Sr	88	115	He	0.024	ppb	33.3	76.67	0.0009	Pulse	0.1000	3
Mo	98	115	He	0.020	ppb	104.5	193.34	0.0023	Pulse	0.1000	3
Ag	107	115	He	-0.007	ppb	N/A	63.34	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.005	ppb	350.9	7.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.155	ppb	52.0	1470.14	0.0172	Pulse	0.1000	3
Sb	121	115	He	0.052	ppb	31.4	86.67	0.0010	Pulse	0.1000	3
Ba	137	115	He	0.058	ppb	127.4	46.67	0.0005	Pulse	0.1000	3
Tl	205	159	He	0.000	ppb	N/A	1100.08	0.0028	Pulse	0.1000	3
Pb	208	159	He	-0.011	ppb	N/A	716.71	0.0018	Pulse	0.1000	3
U	238	209	He	0.045	ppb	8.1	806.72	0.0026	Pulse	0.1000	3

ISTD Table:

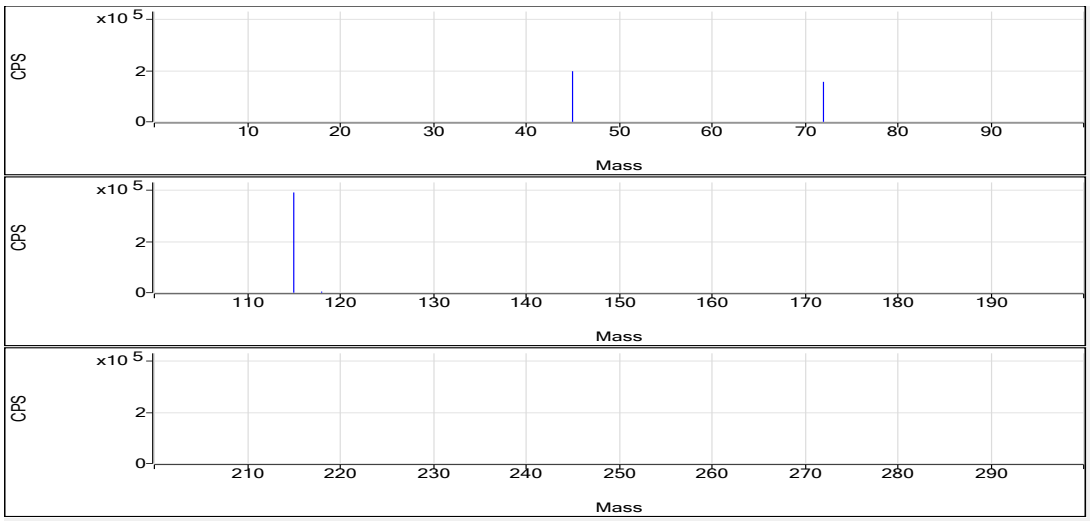
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2510771.99	0.7	96.3	Analog	0.1000	3
No Gas	Ge	72	1204531.28	1.3	93.5	Pulse	0.1000	3
H2	Sc	45	198065.00	0.3	96.1	Pulse	0.1000	3
H2	Ge	72	156428.41	0.5	96.1	Pulse	0.1000	3
H2	In	115	392192.62	0.6	97.2	Pulse	0.1000	3
He	Sc	45	49264.18	1.2	96.2	Pulse	0.1000	3
He	Ge	72	79340.19	0.3	96.9	Pulse	0.1000	3
He	In	115	85364.22	1.1	97.4	Pulse	0.1000	3
He	Tb	159	399514.81	0.4	99.5	Pulse	0.1000	3
He	Bi	209	308194.77	0.1	100.7	Pulse	0.1000	3

No Gas

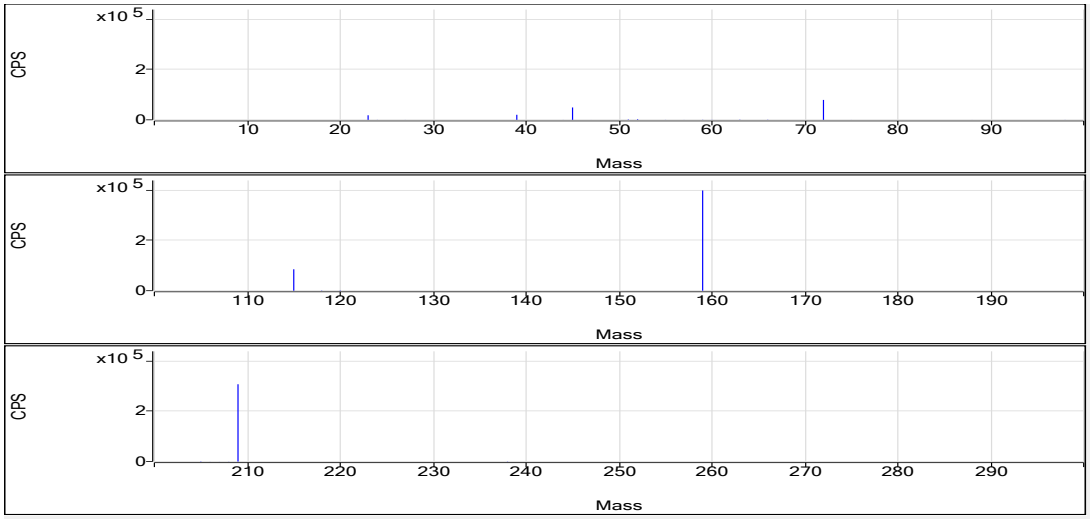


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.016	0	56.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.009	0	68.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.016	0	56.00	0.0007	3.404E-05
Se	78	2	H2	0.016	0	6.67	0.0004	3.546E-05
Se	78	2	H2	0.045	0.0001	8.67	0.0004	3.546E-05
Se	78	2	H2	-0.012	0	4.67	0.0004	3.546E-05
Na	23	3	He	-13.494	0.369	18232.00	0.0036	0.4171
Na	23	3	He	-13.731	0.3681	18311.91	0.0036	0.4171
Na	23	3	He	-14.43	0.3656	17781.23	0.0036	0.4171
Mg	24	3	He	0.168	0.0049	240.01	0.0018	0.004553
Mg	24	3	He	1.263	0.0068	340.02	0.0018	0.004553
Mg	24	3	He	0.325	0.0051	250.01	0.0018	0.004553
Al	27	3	He	1.633	0.003	150.01	0.0006	0.002085
Al	27	3	He	-0.818	0.0016	80.00	0.0006	0.002085
Al	27	3	He	-0.049	0.0021	100.00	0.0006	0.002085
K	39	3	He	1.316	0.4127	20394.79	0.0012	0.4112
K	39	3	He	-15.809	0.3927	19533.62	0.0012	0.4112
K	39	3	He	6.104	0.4183	20344.63	0.0012	0.4112
Ca	44	3	He	10.743	0.004	200.01	0.0001	0.003322
Ca	44	3	He	-40.244	0.0006	30.00	0.0001	0.003322
Ca	44	3	He	-3.512	0.0031	150.01	0.0001	0.003322
Ti	47	3	He	1.522	0.0008	40.00	0.0005	0
Ti	47	3	He	1.134	0.0006	30.00	0.0005	0
Ti	47	3	He	1.16	0.0006	30.00	0.0005	0
V	51	3	He	-0.113	0.0294	1452.08	0.0213	0.0318
V	51	3	He	-0.115	0.0294	1460.08	0.0213	0.0318
V	51	3	He	-0.099	0.0297	1444.08	0.0213	0.0318
Cr	52	3	He	0.025	0.0437	2160.24	0.0294	0.04297
Cr	52	3	He	0.104	0.046	2290.23	0.0294	0.04297
Cr	52	3	He	0.042	0.0442	2150.25	0.0294	0.04297
Mn	55	3	He	0.117	0.0042	210.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.227	0.0056	280.01	0.0124	0.002801
Mn	55	3	He	0.106	0.0041	200.01	0.0124	0.002801
Fe	57	3	He	-2.299	0.0014	70.00	0.0006	0.002732
Fe	57	3	He	-0.207	0.0026	130.01	0.0006	0.002732
Fe	57	3	He	0.976	0.0033	160.01	0.0006	0.002732
Co	59	3	He	0.136	0.0111	550.03	0.0549	0.003644
Co	59	3	He	0.091	0.0086	430.02	0.0549	0.003644
Co	59	3	He	0.102	0.0093	450.02	0.0549	0.003644
Ni	60	3	He	-0.953	0.0053	420.02	0.0093	0.01413
Ni	60	3	He	-0.979	0.005	400.03	0.0093	0.01413
Ni	60	3	He	-0.882	0.0059	470.03	0.0093	0.01413
Cu	63	3	He	0.031	0.0102	810.05	0.0274	0.009321
Cu	63	3	He	0	0.0093	740.04	0.0274	0.009321
Cu	63	3	He	0.038	0.0104	820.06	0.0274	0.009321
Zn	66	3	He	0.408	0.0072	570.03	0.0031	0.005913
Zn	66	3	He	0.495	0.0074	590.03	0.0031	0.005913
Zn	66	3	He	0.669	0.008	630.03	0.0031	0.005913
As	75	3	He	0.04	0.001	76.00	0.0021	0.0008698
As	75	3	He	0.311	0.0015	122.00	0.0021	0.0008698
As	75	3	He	0.137	0.0012	92.00	0.0021	0.0008698
Sr	88	3	He	0.015	0.0008	70.00	0.0088	0.0006843
Sr	88	3	He	0.028	0.0009	80.00	0.0088	0.0006843
Sr	88	3	He	0.03	0.0009	80.00	0.0088	0.0006843
Mo	98	3	He	0.028	0.0025	210.01	0.0219	0.001827
Mo	98	3	He	-0.004	0.0017	150.01	0.0219	0.001827
Mo	98	3	He	0.036	0.0026	220.01	0.0219	0.001827
Ag	107	3	He	-0.013	0.0005	40.00	0.047	0.001064
Ag	107	3	He	0.005	0.0013	110.01	0.047	0.001064
Ag	107	3	He	-0.013	0.0005	40.00	0.047	0.001064
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	0.024	0.0002	16.00	0.0053	6.086E-05
Sn	120	3	He	0.188	0.0177	1520.13	0.0154	0.01483
Sn	120	3	He	0.063	0.0158	1360.13	0.0154	0.01483
Sn	120	3	He	0.215	0.0181	1530.15	0.0154	0.01483
Sb	121	3	He	0.047	0.0009	80.00	0.0143	0.0002661
Sb	121	3	He	0.071	0.0013	110.00	0.0143	0.0002661
Sb	121	3	He	0.04	0.0008	70.00	0.0143	0.0002661
Ba	137	3	He	0.14	0.0009	80.00	0.0048	0.0002665
Ba	137	3	He	0.042	0.0005	40.00	0.0048	0.0002665
Ba	137	3	He	-0.006	0.0002	20.00	0.0048	0.0002665
Tl	205	3	He	0.011	0.003	1200.10	0.0246	0.002755
Tl	205	3	He	-0.001	0.0027	1090.08	0.0246	0.002755
Tl	205	3	He	-0.01	0.0025	1010.07	0.0246	0.002755
Pb	208	3	He	-0.004	0.002	490.03	0.0324	0.002158
Pb	208	3	He	-0.014	0.0017	380.02	0.0324	0.002158
Pb	208	3	He	-0.016	0.0016	290.01	0.0324	0.002158
U	238	3	He	0.043	0.0025	780.06	0.0492	0.0004023
U	238	3	He	0.049	0.0028	870.06	0.0492	0.0004023
U	238	3	He	0.043	0.0025	770.05	0.0492	0.0004023
Sc	45	1	No Gas			2528685.27		
Sc	45	1	No Gas			2496251.99		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2507378.71		
Ge	72	1	No Gas			1218806.15		
Ge	72	1	No Gas			1207063.19		
Ge	72	1	No Gas			1187724.51		
Sc	45	2	H2			198436.64		
Sc	45	2	H2			198438.16		
Sc	45	2	H2			197320.19		
Ge	72	2	H2			156620.59		
Ge	72	2	H2			157165.37		
Ge	72	2	H2			155499.28		
In	115	2	H2			389315.81		
In	115	2	H2			394121.52		
In	115	2	H2			393140.54		
Sc	45	3	He			49414.76		
Sc	45	3	He			49745.27		
Sc	45	3	He			48632.52		
Ge	72	3	He			79551.48		
Ge	72	3	He			79390.36		
Ge	72	3	He			79078.72		
In	115	3	He			85713.40		
In	115	3	He			86045.99		
In	115	3	He			84355.82		
Tb	159	3	He			398163.08		
Tb	159	3	He			398914.25		
Tb	159	3	He			401467.10		
Bi	209	3	He			308530.46		
Bi	209	3	He			307942.26		
Bi	209	3	He			308111.60		

Quantitation Report

Data File Name	087SMPL.d
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Sample Type	Sample
Comment	E7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

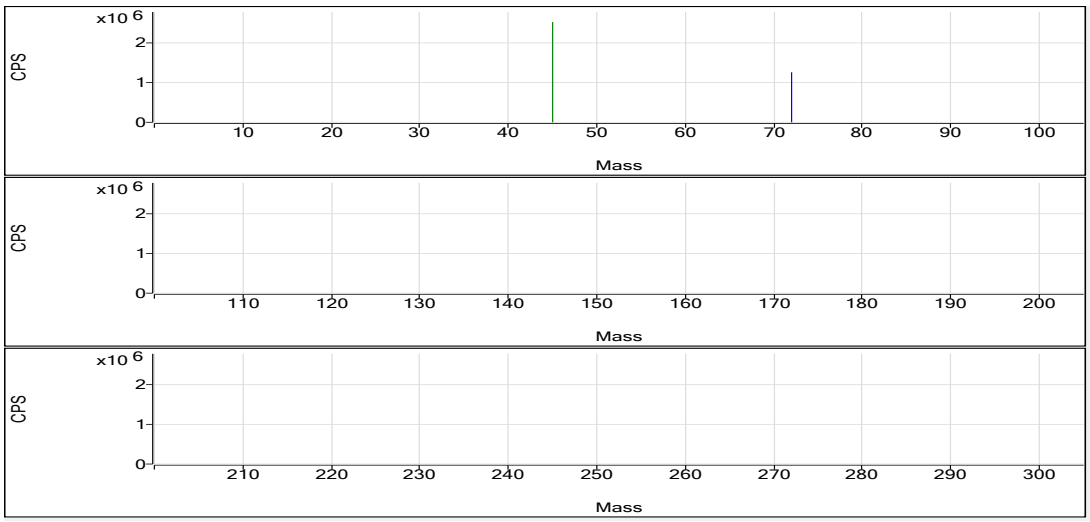
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.026	ppb	N/A	38.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	16.461	ppb	2.3	1233.61	0.0073	Pulse	1.5000	3
Na	23	45	He	9096.929	ppb	2.7	1636710.60	32.8423	Analog	0.1000	3
Mg	24	45	He	17161.646	ppb	3.0	1545369.20	31.0120	Analog	0.1000	3
Al	27	45	He	18.306	ppb	28.2	636.73	0.0127	Pulse	0.1000	3
K	39	45	He	16237.274	ppb	2.6	968135.38	19.4263	Pulse	0.1000	3
Ca	44	45	He	52838.694	ppb	2.5	178061.81	3.5730	Pulse	0.1000	3
Ti	47	45	He	0.251	ppb	86.7	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	9.417	ppb	2.8	11558.64	0.2319	Pulse	0.5000	3
Cr	52	45	He	1685.892	ppb	2.7	2473086.94	49.6252	Analog	0.1000	3
Mn	55	45	He	0.303	ppb	21.1	326.68	0.0066	Pulse	0.1000	3
Fe	57	45	He	7.061	ppb	25.1	336.68	0.0068	Pulse	0.1000	3
Co	59	45	He	0.098	ppb	12.2	450.03	0.0090	Pulse	0.1000	3
Ni	60	72	He	-1.061	ppb	N/A	370.02	0.0043	Pulse	0.1000	3
Cu	63	72	He	0.377	ppb	11.4	1703.50	0.0197	Pulse	0.1000	3
Zn	66	72	He	-0.284	ppb	N/A	436.69	0.0050	Pulse	0.1000	3
As	75	72	He	0.703	ppb	16.4	206.00	0.0024	Pulse	0.5000	3
Sr	88	115	He	280.808	ppb	1.1	214844.65	2.4715	Pulse	0.1000	3
Mo	98	115	He	7.057	ppb	1.0	13620.44	0.1567	Pulse	0.1000	3
Ag	107	115	He	-0.010	ppb	N/A	53.33	0.0006	Pulse	0.1000	3
Cd	111	115	He	-0.003	ppb	N/A	4.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.058	ppb	135.9	1366.79	0.0157	Pulse	0.1000	3
Sb	121	115	He	1.265	ppb	3.7	1590.15	0.0183	Pulse	0.1000	3
Ba	137	115	He	12.939	ppb	7.5	5397.92	0.0621	Pulse	0.1000	3
Tl	205	159	He	-0.066	ppb	N/A	453.36	0.0011	Pulse	0.1000	3
Pb	208	159	He	-0.007	ppb	N/A	783.37	0.0019	Pulse	0.1000	3
U	238	209	He	1.525	ppb	2.0	23829.43	0.0755	Pulse	0.1000	3

ISTD Table:

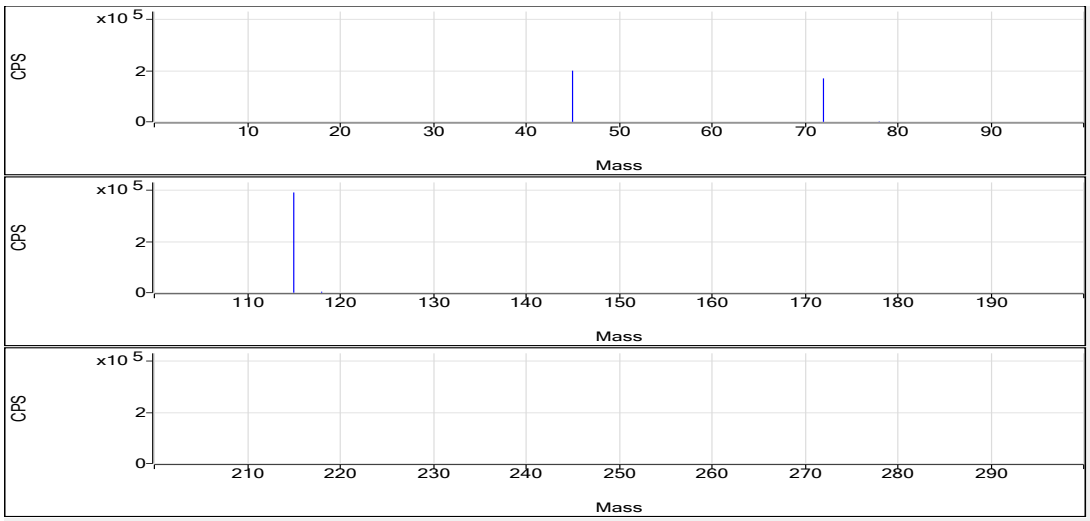
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2518890.07	1.8	96.6	Analog	0.1000	3
No Gas	Ge	72	1256614.35	1.3	97.5	Pulse	0.1000	3
H2	Sc	45	200433.57	1.2	97.3	Pulse	0.1000	3
H2	Ge	72	170146.18	0.3	104.5	Pulse	0.1000	3
H2	In	115	392730.75	0.4	97.3	Pulse	0.1000	3
He	Sc	45	49859.61	2.8	97.4	Pulse	0.1000	3
He	Ge	72	86628.87	1.2	105.8	Pulse	0.1000	3
He	In	115	86928.35	0.2	99.2	Pulse	0.1000	3
He	Tb	159	403219.76	0.4	100.4	Pulse	0.1000	3
He	Bi	209	315610.91	0.1	103.1	Pulse	0.1000	3

No Gas

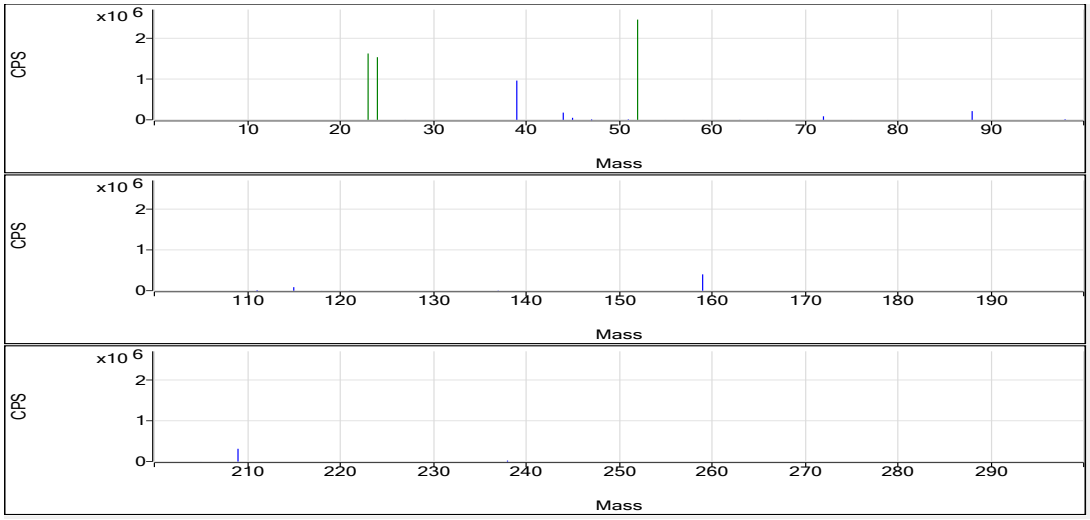


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.025	0	40.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.026	0	38.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.026	0	38.00	0.0007	3.404E-05
Se	78	2	H2	16.187	0.0071	1215.39	0.0004	3.546E-05
Se	78	2	H2	16.311	0.0072	1224.06	0.0004	3.546E-05
Se	78	2	H2	16.885	0.0074	1261.39	0.0004	3.546E-05
Na	23	3	He	8887.391	32.0954	1647501.23	0.0036	0.4171
Na	23	3	He	9365.424	33.7993	1639310.29	0.0036	0.4171
Na	23	3	He	9037.971	32.6321	1623320.29	0.0036	0.4171
Mg	24	3	He	16638.745	30.0673	1543395.29	0.0018	0.004553
Mg	24	3	He	17668.176	31.9272	1548512.95	0.0018	0.004553
Mg	24	3	He	17178.015	31.0416	1544199.35	0.0018	0.004553
Al	27	3	He	17.824	0.0125	640.03	0.0006	0.002085
Al	27	3	He	13.41	0.0099	480.03	0.0006	0.002085
Al	27	3	He	23.684	0.0159	790.12	0.0006	0.002085
K	39	3	He	15754.116	18.8604	968133.27	0.0012	0.4112
K	39	3	He	16548.894	19.7912	959898.89	0.0012	0.4112
K	39	3	He	16408.813	19.6271	976373.97	0.0012	0.4112
Ca	44	3	He	51361.543	3.4732	178282.40	0.0001	0.003322
Ca	44	3	He	53968.056	3.6493	176993.57	0.0001	0.003322
Ca	44	3	He	53186.484	3.5965	178909.45	0.0001	0.003322
Ti	47	3	He	0.366	0.0002	10.00	0.0005	0
Ti	47	3	He	0.388	0.0002	10.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	9.116	0.2255	11576.67	0.0213	0.0318
V	51	3	He	9.52	0.2341	11354.48	0.0213	0.0318
V	51	3	He	9.614	0.2361	11744.76	0.0213	0.0318
Cr	52	3	He	1647.156	48.486	2488854.65	0.0294	0.04297
Cr	52	3	He	1735.492	51.084	2477640.12	0.0294	0.04297
Cr	52	3	He	1675.027	49.3057	2452766.06	0.0294	0.04297
Mn	55	3	He	0.229	0.0056	290.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.339	0.007	340.02	0.0124	0.002801
Mn	55	3	He	0.341	0.007	350.02	0.0124	0.002801
Fe	57	3	He	5.1	0.0056	290.01	0.0006	0.002732
Fe	57	3	He	8.559	0.0076	370.02	0.0006	0.002732
Fe	57	3	He	7.523	0.007	350.02	0.0006	0.002732
Co	59	3	He	0.086	0.0084	430.02	0.0549	0.003644
Co	59	3	He	0.11	0.0097	470.03	0.0549	0.003644
Co	59	3	He	0.098	0.009	450.03	0.0549	0.003644
Ni	60	3	He	-0.943	0.0054	460.02	0.0093	0.01413
Ni	60	3	He	-1.124	0.0037	320.02	0.0093	0.01413
Ni	60	3	He	-1.116	0.0038	330.01	0.0093	0.01413
Cu	63	3	He	0.427	0.021	1800.18	0.0274	0.009321
Cu	63	3	He	0.354	0.019	1650.16	0.0274	0.009321
Cu	63	3	He	0.351	0.0189	1660.15	0.0274	0.009321
Zn	66	3	He	-0.251	0.0051	440.02	0.0031	0.005913
Zn	66	3	He	-0.273	0.0051	440.02	0.0031	0.005913
Zn	66	3	He	-0.327	0.0049	430.02	0.0031	0.005913
As	75	3	He	0.793	0.0026	220.00	0.0021	0.0008698
As	75	3	He	0.573	0.0021	182.00	0.0021	0.0008698
As	75	3	He	0.744	0.0025	216.00	0.0021	0.0008698
Sr	88	3	He	282.332	2.4849	216322.18	0.0088	0.0006843
Sr	88	3	He	277.248	2.4402	211745.11	0.0088	0.0006843
Sr	88	3	He	282.845	2.4894	216466.66	0.0088	0.0006843
Mo	98	3	He	6.982	0.155	13496.93	0.0219	0.001827
Mo	98	3	He	7.12	0.1581	13717.19	0.0219	0.001827
Mo	98	3	He	7.068	0.1569	13647.19	0.0219	0.001827
Ag	107	3	He	-0.015	0.0003	30.00	0.047	0.001064
Ag	107	3	He	-0.01	0.0006	50.00	0.047	0.001064
Ag	107	3	He	-0.003	0.0009	80.00	0.047	0.001064
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	0.006	0.0001	8.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Sn	120	3	He	0.148	0.0171	1490.13	0.0154	0.01483
Sn	120	3	He	0.017	0.0151	1310.12	0.0154	0.01483
Sn	120	3	He	0.008	0.015	1300.11	0.0154	0.01483
Sb	121	3	He	1.312	0.019	1650.16	0.0143	0.0002661
Sb	121	3	He	1.219	0.0176	1530.15	0.0143	0.0002661
Sb	121	3	He	1.265	0.0183	1590.15	0.0143	0.0002661
Ba	137	3	He	12.927	0.062	5401.25	0.0048	0.0002665
Ba	137	3	He	13.91	0.0667	5791.43	0.0048	0.0002665
Ba	137	3	He	11.979	0.0575	5001.07	0.0048	0.0002665
Tl	205	3	He	-0.063	0.0012	490.03	0.0246	0.002755
Tl	205	3	He	-0.066	0.0011	460.03	0.0246	0.002755
Tl	205	3	He	-0.071	0.001	410.02	0.0246	0.002755
Pb	208	3	He	-0.009	0.0019	430.02	0.0324	0.002158
Pb	208	3	He	-0.003	0.0021	390.02	0.0324	0.002158
Pb	208	3	He	-0.008	0.0019	370.02	0.0324	0.002158
U	238	3	He	1.493	0.0739	23352.04	0.0492	0.0004023
U	238	3	He	1.554	0.077	24293.65	0.0492	0.0004023
U	238	3	He	1.528	0.0756	23842.59	0.0492	0.0004023
Sc	45	1	No Gas			2534119.02		
Sc	45	1	No Gas			2469057.78		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2553493.40		
Ge	72	1	No Gas			1241484.98		
Ge	72	1	No Gas			1254230.76		
Ge	72	1	No Gas			1274127.32		
Sc	45	2	H2			202593.10		
Sc	45	2	H2			200837.56		
Sc	45	2	H2			197870.06		
Ge	72	2	H2			170448.32		
Ge	72	2	H2			170363.77		
Ge	72	2	H2			169626.44		
In	115	2	H2			394166.21		
In	115	2	H2			391223.12		
In	115	2	H2			392802.92		
Sc	45	3	He			51331.41		
Sc	45	3	He			48501.32		
Sc	45	3	He			49746.10		
Ge	72	3	He			85586.35		
Ge	72	3	He			86692.12		
Ge	72	3	He			87608.15		
In	115	3	He			87061.75		
In	115	3	He			86780.55		
In	115	3	He			86961.54		
Tb	159	3	He			404224.10		
Tb	159	3	He			404067.22		
Tb	159	3	He			401367.96		
Bi	209	3	He			315956.69		
Bi	209	3	He			315693.55		
Bi	209	3	He			315182.50		

Quantitation Report

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Sample Name	410-137447-B-3-B DU
Sample Type	Sample
Comment	E7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

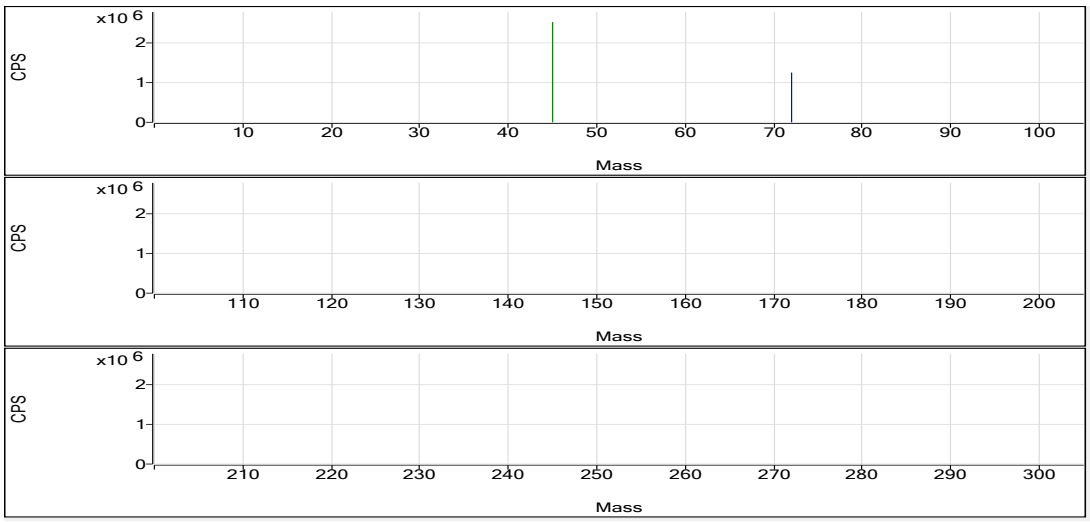
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.035	ppb	N/A	21.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	16.886	ppb	1.9	1253.39	0.0074	Pulse	1.5000	3
Na	23	45	He	9466.128	ppb	0.3	1676036.23	34.1582	Analog	0.1000	3
Mg	24	45	He	17644.511	ppb	1.1	1564443.78	31.8845	Analog	0.1000	3
Al	27	45	He	22.074	ppb	33.4	733.57	0.0149	Pulse	0.1000	3
K	39	45	He	16455.185	ppb	0.7	965694.70	19.6815	Pulse	0.1000	3
Ca	44	45	He	53850.563	ppb	1.2	178664.93	3.6413	Pulse	0.1000	3
Ti	47	45	He	0.766	ppb	50.0	20.00	0.0004	Pulse	0.1000	3
V	51	45	He	9.733	ppb	1.8	11708.75	0.2386	Pulse	0.5000	3
Cr	52	45	He	1734.771	ppb	1.2	2505449.50	51.0628	Analog	0.1000	3
Mn	55	45	He	0.201	ppb	50.0	260.01	0.0053	Pulse	0.1000	3
Fe	57	45	He	8.286	ppb	8.7	366.69	0.0075	Pulse	0.1000	3
Co	59	45	He	0.078	ppb	16.8	390.02	0.0079	Pulse	0.1000	3
Ni	60	72	He	-1.068	ppb	N/A	363.35	0.0042	Pulse	0.1000	3
Cu	63	72	He	0.327	ppb	3.4	1576.81	0.0183	Pulse	0.1000	3
Zn	66	72	He	-0.556	ppb	N/A	363.35	0.0042	Pulse	0.1000	3
As	75	72	He	0.495	ppb	36.7	166.67	0.0019	Pulse	0.5000	3
Sr	88	115	He	286.200	ppb	2.1	217104.81	2.5189	Pulse	0.1000	3
Mo	98	115	He	7.170	ppb	3.0	13717.14	0.1592	Pulse	0.1000	3
Ag	107	115	He	-0.005	ppb	N/A	73.34	0.0009	Pulse	0.1000	3
Cd	111	115	He	-0.001	ppb	N/A	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.011	ppb	394.8	1293.44	0.0150	Pulse	0.1000	3
Sb	121	115	He	1.252	ppb	11.0	1560.14	0.0181	Pulse	0.1000	3
Ba	137	115	He	12.972	ppb	5.2	5367.92	0.0623	Pulse	0.1000	3
Tl	205	159	He	-0.079	ppb	N/A	333.35	0.0008	Pulse	0.1000	3
Pb	208	159	He	-0.004	ppb	N/A	816.71	0.0020	Pulse	0.1000	3
U	238	209	He	1.490	ppb	0.8	23295.04	0.0738	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2538696.73	0.3	97.3	Analog	0.1000	3
No Gas	Ge	72	1258023.99	1.0	97.6	Pulse	0.1000	3
H2	Sc	45	199452.41	0.9	96.8	Pulse	0.1000	3
H2	Ge	72	168546.85	1.1	103.6	Pulse	0.1000	3
H2	In	115	395536.30	0.2	98.0	Pulse	0.1000	3
He	Sc	45	49066.72	0.2	95.8	Pulse	0.1000	3
He	Ge	72	86276.56	1.5	105.4	Pulse	0.1000	3
He	In	115	86196.99	0.8	98.3	Pulse	0.1000	3
He	Tb	159	402683.74	1.0	100.3	Pulse	0.1000	3
He	Bi	209	315781.30	0.4	103.2	Pulse	0.1000	3

No Gas



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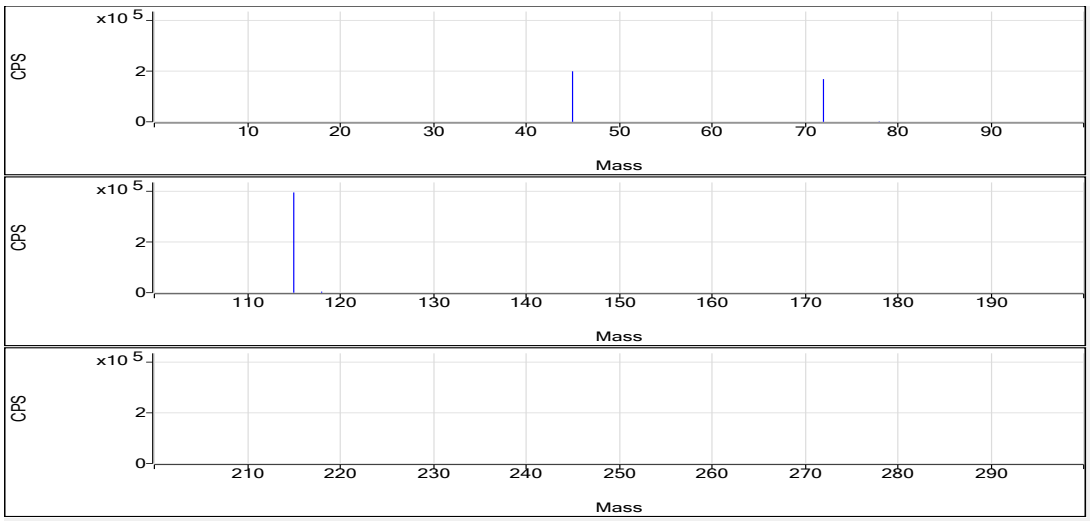
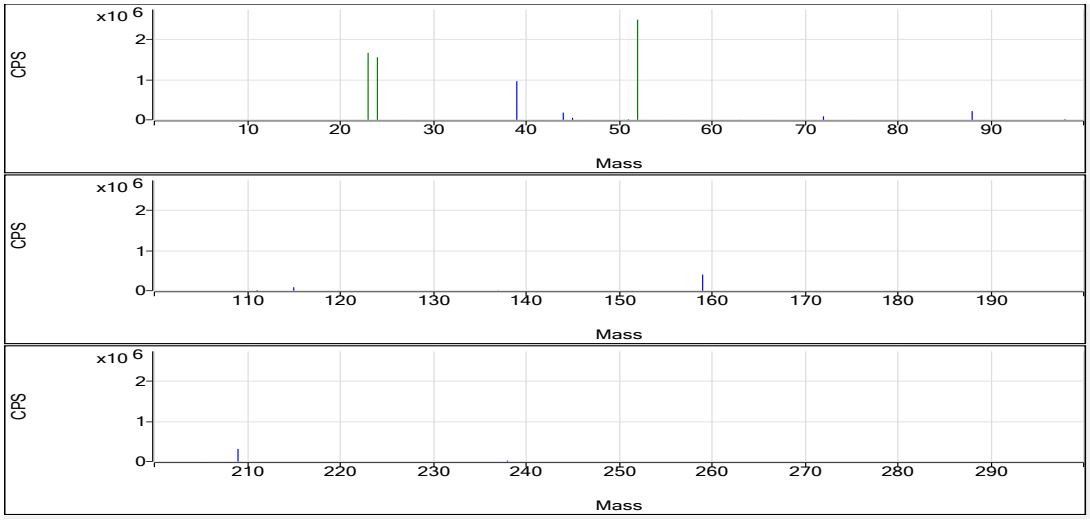


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.038	0	16.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.035	0	22.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.033	0	26.00	0.0007	3.404E-05
Se	78	2	H2	17.04	0.0075	1274.73	0.0004	3.546E-05
Se	78	2	H2	16.517	0.0073	1232.72	0.0004	3.546E-05
Se	78	2	H2	17.102	0.0075	1252.72	0.0004	3.546E-05
Na	23	3	He	9492.881	34.2536	1684029.19	0.0036	0.4171
Na	23	3	He	9463.68	34.1495	1672060.76	0.0036	0.4171
Na	23	3	He	9441.824	34.0716	1672018.73	0.0036	0.4171
Mg	24	3	He	17459.347	31.5499	1551106.85	0.0018	0.004553
Mg	24	3	He	17838.772	32.2355	1578343.10	0.0018	0.004553
Mg	24	3	He	17635.415	31.868	1563881.38	0.0018	0.004553
Al	27	3	He	30.31	0.0197	970.65	0.0006	0.002085
Al	27	3	He	16.054	0.0114	560.03	0.0006	0.002085
Al	27	3	He	19.858	0.0137	670.04	0.0006	0.002085
K	39	3	He	16338.206	19.5445	960875.38	0.0012	0.4112
K	39	3	He	16581.65	19.8296	970913.11	0.0012	0.4112
K	39	3	He	16445.698	19.6703	965295.61	0.0012	0.4112
Ca	44	3	He	53109.997	3.5913	176560.37	0.0001	0.003322
Ca	44	3	He	54239.588	3.6676	179576.31	0.0001	0.003322
Ca	44	3	He	54202.105	3.6651	179858.12	0.0001	0.003322
Ti	47	3	He	0.765	0.0004	20.00	0.0005	0
Ti	47	3	He	0.384	0.0002	10.00	0.0005	0
Ti	47	3	He	1.149	0.0006	30.00	0.0005	0
V	51	3	He	9.711	0.2382	11708.75	0.0213	0.0318
V	51	3	He	9.572	0.2352	11516.61	0.0213	0.0318
V	51	3	He	9.916	0.2425	11900.90	0.0213	0.0318
Cr	52	3	He	1726.753	50.8269	2498834.03	0.0294	0.04297
Cr	52	3	He	1758.221	51.7524	2533951.37	0.0294	0.04297
Cr	52	3	He	1719.338	50.6089	2483563.09	0.0294	0.04297
Mn	55	3	He	0.135	0.0045	220.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.317	0.0067	330.02	0.0124	0.002801
Mn	55	3	He	0.152	0.0047	230.01	0.0124	0.002801
Fe	57	3	He	9.091	0.0079	390.02	0.0006	0.002732
Fe	57	3	He	8.077	0.0074	360.02	0.0006	0.002732
Fe	57	3	He	7.691	0.0071	350.02	0.0006	0.002732
Co	59	3	He	0.082	0.0081	400.02	0.0549	0.003644
Co	59	3	He	0.064	0.0071	350.01	0.0549	0.003644
Co	59	3	He	0.09	0.0086	420.02	0.0549	0.003644
Ni	60	3	He	-1.077	0.0041	350.02	0.0093	0.01413
Ni	60	3	He	-1.101	0.0039	340.02	0.0093	0.01413
Ni	60	3	He	-1.027	0.0046	400.02	0.0093	0.01413
Cu	63	3	He	0.335	0.0185	1570.14	0.0274	0.009321
Cu	63	3	He	0.314	0.0179	1560.13	0.0274	0.009321
Cu	63	3	He	0.33	0.0184	1600.15	0.0274	0.009321
Zn	66	3	He	-0.773	0.0035	300.01	0.0031	0.005913
Zn	66	3	He	-0.391	0.0047	410.02	0.0031	0.005913
Zn	66	3	He	-0.504	0.0044	380.02	0.0031	0.005913
As	75	3	He	0.496	0.0019	164.00	0.0021	0.0008698
As	75	3	He	0.312	0.0015	134.00	0.0021	0.0008698
As	75	3	He	0.676	0.0023	202.00	0.0021	0.0008698
Sr	88	3	He	285.841	2.5158	215622.57	0.0088	0.0006843
Sr	88	3	He	292.436	2.5738	221031.42	0.0088	0.0006843
Sr	88	3	He	280.324	2.4672	214660.43	0.0088	0.0006843
Mo	98	3	He	7.359	0.1633	13997.29	0.0219	0.001827
Mo	98	3	He	7.217	0.1602	13757.39	0.0219	0.001827
Mo	98	3	He	6.933	0.154	13396.75	0.0219	0.001827
Ag	107	3	He	0.007	0.0014	120.01	0.047	0.001064
Ag	107	3	He	-0.015	0.0003	30.00	0.047	0.001064
Ag	107	3	He	-0.006	0.0008	70.00	0.047	0.001064
Cd	111	3	He	0.002	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	0.006	0.0001	8.00	0.0053	6.086E-05
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Sn	120	3	He	-0.001	0.0148	1270.10	0.0154	0.01483
Sn	120	3	He	-0.025	0.0144	1240.10	0.0154	0.01483
Sn	120	3	He	0.059	0.0157	1370.13	0.0154	0.01483
Sb	121	3	He	1.259	0.0182	1560.15	0.0143	0.0002661
Sb	121	3	He	1.387	0.02	1720.17	0.0143	0.0002661
Sb	121	3	He	1.111	0.0161	1400.11	0.0143	0.0002661
Ba	137	3	He	12.325	0.0592	5071.09	0.0048	0.0002665
Ba	137	3	He	12.91	0.062	5321.24	0.0048	0.0002665
Ba	137	3	He	13.681	0.0656	5711.43	0.0048	0.0002665
Tl	205	3	He	-0.084	0.0007	280.01	0.0246	0.002755
Tl	205	3	He	-0.071	0.001	410.03	0.0246	0.002755
Tl	205	3	He	-0.081	0.0008	310.01	0.0246	0.002755
Pb	208	3	He	-0.007	0.0019	420.02	0.0324	0.002158
Pb	208	3	He	-0.011	0.0018	380.02	0.0324	0.002158
Pb	208	3	He	0.006	0.0024	560.03	0.0324	0.002158
U	238	3	He	1.493	0.0739	23301.72	0.0492	0.0004023
U	238	3	He	1.5	0.0743	23382.01	0.0492	0.0004023
U	238	3	He	1.476	0.0731	23201.39	0.0492	0.0004023
Sc	45	1	No Gas			2543170.74		
Sc	45	1	No Gas			2529774.65		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2543144.81		
Ge	72	1	No Gas			1252852.17		
Ge	72	1	No Gas			1248272.72		
Ge	72	1	No Gas			1272947.09		
Sc	45	2	H2			201478.69		
Sc	45	2	H2			199149.35		
Sc	45	2	H2			197729.20		
Ge	72	2	H2			169868.59		
Ge	72	2	H2			169444.39		
Ge	72	2	H2			166327.58		
In	115	2	H2			395657.81		
In	115	2	H2			396111.24		
In	115	2	H2			394839.84		
Sc	45	3	He			49163.57		
Sc	45	3	He			48962.94		
Sc	45	3	He			49073.66		
Ge	72	3	He			84771.39		
Ge	72	3	He			87003.54		
Ge	72	3	He			87054.75		
In	115	3	He			85714.69		
In	115	3	He			85885.58		
In	115	3	He			87011.52		
Tb	159	3	He			398834.02		
Tb	159	3	He			406650.58		
Tb	159	3	He			402566.63		
Bi	209	3	He			315184.76		
Bi	209	3	He			314825.41		
Bi	209	3	He			317333.73		

Quantitation Report

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Sample Type	Sample
Comment	E7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

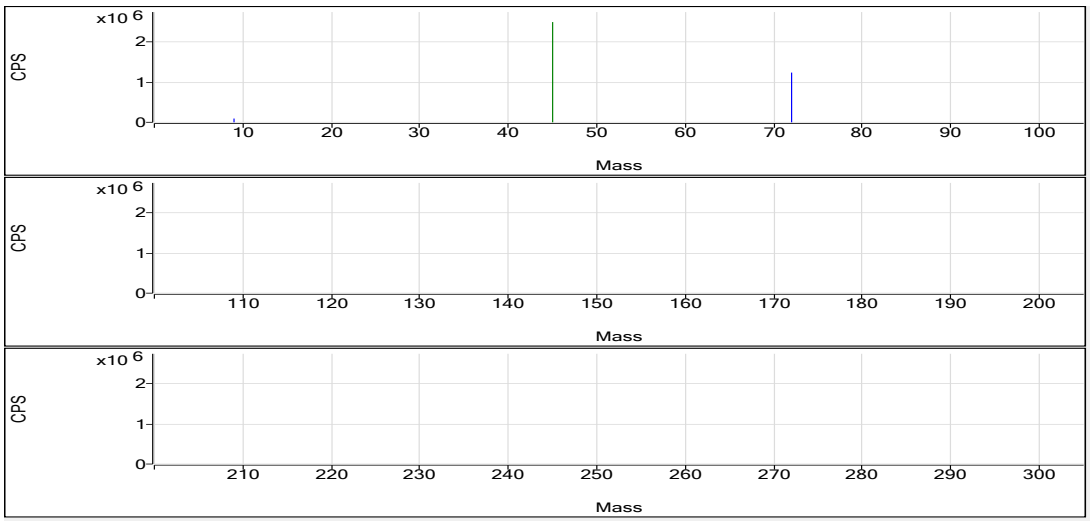
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.303	ppb	0.4	93296.29	0.0374	Pulse	0.5000	3
Se	78	72	H2	113.175	ppb	0.7	8317.53	0.0496	Pulse	1.5000	3
Na	23	45	He	14104.016	ppb	0.8	2517361.52	50.6896	Analog	0.1000	3
Mg	24	45	He	22731.422	ppb	0.6	2039883.88	41.0755	Analog	0.1000	3
Al	27	45	He	5043.407	ppb	0.4	146025.32	2.9403	Pulse	0.1000	3
K	39	45	He	21899.135	ppb	0.6	1294017.58	26.0567	Analog	0.1000	3
Ca	44	45	He	58458.582	ppb	0.5	196299.41	3.9526	Pulse	0.1000	3
Ti	47	45	He	518.871	ppb	2.2	13703.59	0.2760	Pulse	0.1000	3
V	51	45	He	516.396	ppb	0.7	546546.85	11.0057	Pulse	0.5000	3
Cr	52	45	He	2178.048	ppb	1.3	3183201.31	64.0996	Analog	0.1000	3
Mn	55	45	He	503.304	ppb	0.5	310891.13	6.2599	Pulse	0.1000	3
Fe	57	45	He	4951.636	ppb	1.2	140824.64	2.8358	Pulse	0.1000	3
Co	59	45	He	481.388	ppb	0.5	1312329.98	26.4258	Pulse	0.1000	3
Ni	60	72	He	471.333	ppb	2.0	370724.97	4.3894	Pulse	0.1000	3
Cu	63	72	He	450.498	ppb	1.8	1044320.12	12.3647	Pulse	0.1000	3
Zn	66	72	He	478.536	ppb	0.5	124617.96	1.4752	Pulse	0.1000	3
As	75	72	He	492.599	ppb	1.1	89352.47	1.0579	Pulse	0.5000	3
Sr	88	115	He	338.881	ppb	2.4	255471.43	2.9825	Pulse	0.1000	3
Mo	98	115	He	57.210	ppb	0.7	107720.67	1.2573	Pulse	0.1000	3
Ag	107	115	He	49.181	ppb	3.0	198240.99	2.3145	Pulse	0.1000	3
Cd	111	115	He	51.273	ppb	1.8	23395.59	0.2731	Pulse	0.5000	3
Sn	120	115	He	107.277	ppb	1.6	142986.03	1.6691	Pulse	0.1000	3
Sb	121	115	He	106.682	ppb	2.0	130249.52	1.5205	Pulse	0.1000	3
Ba	137	115	He	530.778	ppb	1.0	217322.76	2.5367	Pulse	0.1000	3
Tl	205	159	He	102.445	ppb	0.3	1003974.62	2.5188	Pulse	0.1000	3
Pb	208	159	He	51.298	ppb	0.4	663407.68	1.6644	Pulse	0.1000	3
U	238	209	He	52.321	ppb	0.6	795708.32	2.5771	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2493969.54	1.3	95.6	Analog	0.1000	3
No Gas	Ge	72	1237003.65	0.6	96.0	Pulse	0.1000	3
H2	Sc	45	198775.04	0.3	96.5	Pulse	0.1000	3
H2	Ge	72	167551.98	0.7	102.9	Pulse	0.1000	3
H2	In	115	391764.14	0.5	97.0	Pulse	0.1000	3
He	Sc	45	49662.23	0.8	97.0	Pulse	0.1000	3
He	Ge	72	84472.79	1.3	103.2	Pulse	0.1000	3
He	In	115	85680.33	1.8	97.8	Pulse	0.1000	3
He	Tb	159	398584.77	0.6	99.2	Pulse	0.1000	3
He	Bi	209	308775.45	0.9	100.9	Pulse	0.1000	3

No Gas



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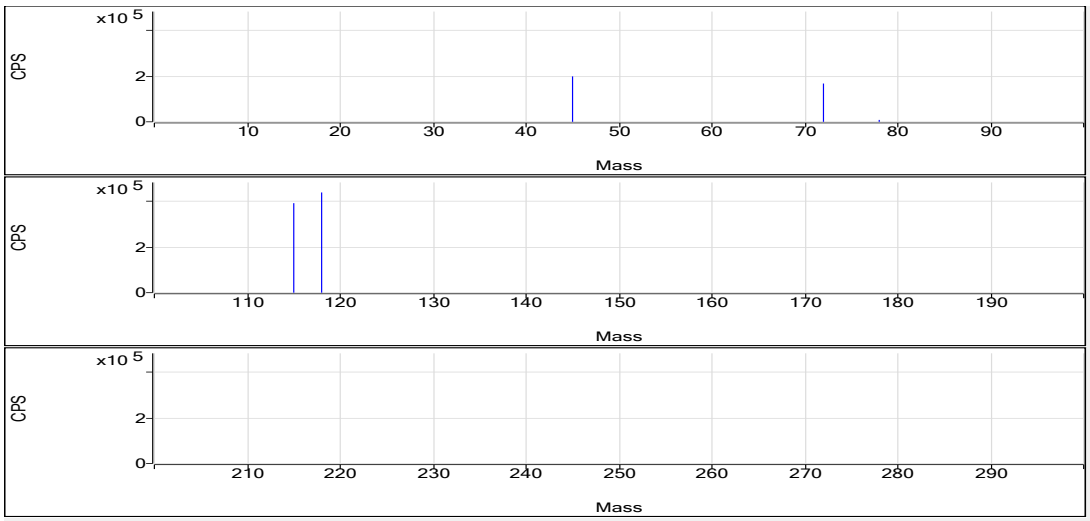
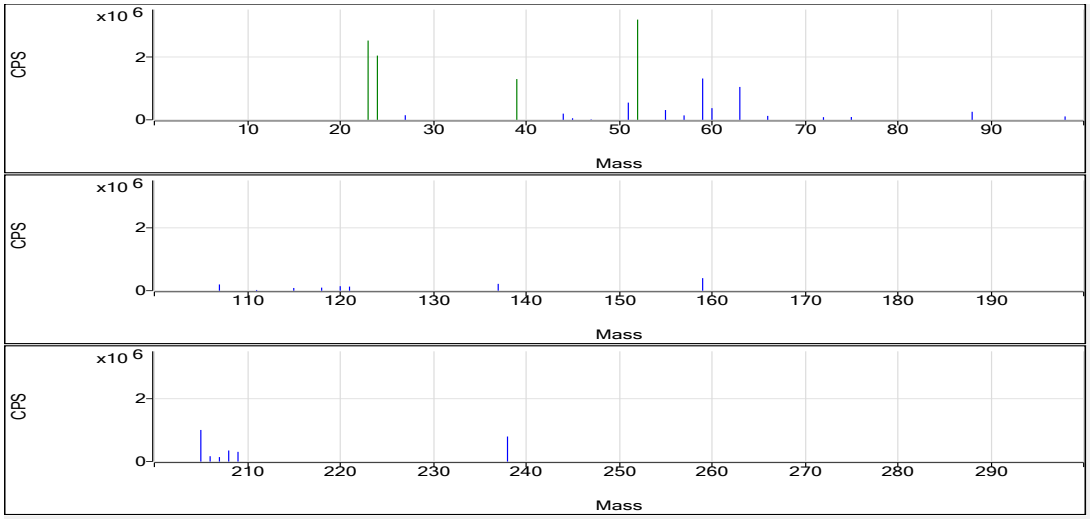


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	51.49	0.0375	92277.93	0.0007	3.404E-05
Be	9	1	No Gas	51.33	0.0374	94373.20	0.0007	3.404E-05
Be	9	1	No Gas	51.088	0.0373	93237.75	0.0007	3.404E-05
Se	78	2	H2	114.074	0.05	8379.12	0.0004	3.546E-05
Se	78	2	H2	113.026	0.0496	8247.05	0.0004	3.546E-05
Se	78	2	H2	112.424	0.0493	8326.43	0.0004	3.546E-05
Na	23	3	He	14096.606	50.6632	2538567.46	0.0036	0.4171
Na	23	3	He	14224.886	51.1204	2529162.15	0.0036	0.4171
Na	23	3	He	13990.557	50.2852	2484354.96	0.0036	0.4171
Mg	24	3	He	22709.082	41.0351	2056135.44	0.0018	0.004553
Mg	24	3	He	22605.466	40.8479	2020932.47	0.0018	0.004553
Mg	24	3	He	22879.719	41.3434	2042583.72	0.0018	0.004553
Al	27	3	He	5052.017	2.9454	147582.35	0.0006	0.002085
Al	27	3	He	5058.203	2.949	145898.74	0.0006	0.002085
Al	27	3	He	5020.001	2.9267	144594.86	0.0006	0.002085
K	39	3	He	21819.978	25.964	1300973.34	0.0012	0.4112
K	39	3	He	22052.201	26.236	1298014.59	0.0012	0.4112
K	39	3	He	21825.227	25.9702	1283064.82	0.0012	0.4112
Ca	44	3	He	58713.436	3.9698	198915.68	0.0001	0.003322
Ca	44	3	He	58120.324	3.9298	194423.71	0.0001	0.003322
Ca	44	3	He	58541.986	3.9583	195558.83	0.0001	0.003322
Ti	47	3	He	505.701	0.269	13476.84	0.0005	0
Ti	47	3	He	524.706	0.2791	13806.92	0.0005	0
Ti	47	3	He	526.207	0.2799	13827.01	0.0005	0
V	51	3	He	512.22	10.9169	547011.75	0.0213	0.0318
V	51	3	He	519.624	11.0743	547895.25	0.0213	0.0318
V	51	3	He	517.344	11.0258	544733.56	0.0213	0.0318
Cr	52	3	He	2161.197	63.604	3186990.89	0.0294	0.04297
Cr	52	3	He	2162.449	63.6408	3148603.39	0.0294	0.04297
Cr	52	3	He	2210.497	65.0539	3214009.64	0.0294	0.04297
Mn	55	3	He	506.255	6.2966	315503.73	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	502.489	6.2498	309206.69	0.0124	0.002801
Mn	55	3	He	501.169	6.2334	307962.96	0.0124	0.002801
Fe	57	3	He	4889.946	2.8005	140324.89	0.0006	0.002732
Fe	57	3	He	4955.768	2.8382	140417.71	0.0006	0.002732
Fe	57	3	He	5009.195	2.8687	141731.33	0.0006	0.002732
Co	59	3	He	478.695	26.278	1316705.61	0.0549	0.003644
Co	59	3	He	482.4	26.4813	1310153.50	0.0549	0.003644
Co	59	3	He	483.068	26.518	1310130.84	0.0549	0.003644
Ni	60	3	He	465.57	4.3359	369308.43	0.0093	0.01413
Ni	60	3	He	465.955	4.3395	368868.24	0.0093	0.01413
Ni	60	3	He	482.474	4.4929	373998.24	0.0093	0.01413
Cu	63	3	He	446.034	12.2423	1042717.88	0.0274	0.009321
Cu	63	3	He	445.432	12.2258	1039214.91	0.0274	0.009321
Cu	63	3	He	460.028	12.6261	1051027.56	0.0274	0.009321
Zn	66	3	He	481.263	1.4836	126362.69	0.0031	0.005913
Zn	66	3	He	476.75	1.4697	124930.54	0.0031	0.005913
Zn	66	3	He	477.595	1.4723	122560.65	0.0031	0.005913
As	75	3	He	491.11	1.0547	89829.45	0.0021	0.0008698
As	75	3	He	488.13	1.0483	89104.97	0.0021	0.0008698
As	75	3	He	498.557	1.0706	89122.98	0.0021	0.0008698
Sr	88	3	He	336.371	2.9604	256941.30	0.0088	0.0006843
Sr	88	3	He	347.842	3.0613	256876.91	0.0088	0.0006843
Sr	88	3	He	332.431	2.9257	252596.09	0.0088	0.0006843
Mo	98	3	He	56.721	1.2466	108193.98	0.0219	0.001827
Mo	98	3	He	57.446	1.2625	105936.69	0.0219	0.001827
Mo	98	3	He	57.463	1.2629	109031.33	0.0219	0.001827
Ag	107	3	He	48.501	2.2825	198110.43	0.047	0.001064
Ag	107	3	He	50.867	2.3938	200867.46	0.047	0.001064
Ag	107	3	He	48.176	2.2672	195745.09	0.047	0.001064
Cd	111	3	He	50.488	0.2689	23341.52	0.0053	6.086E-05
Cd	111	3	He	52.276	0.2785	23365.53	0.0053	6.086E-05
Cd	111	3	He	51.055	0.272	23479.72	0.0053	6.086E-05
Sn	120	3	He	106.978	1.6645	144468.03	0.0154	0.01483
Sn	120	3	He	109.11	1.6974	142427.48	0.0154	0.01483
Sn	120	3	He	105.743	1.6454	142062.57	0.0154	0.01483
Sb	121	3	He	104.434	1.4885	129189.86	0.0143	0.0002661
Sb	121	3	He	108.714	1.5495	130017.02	0.0143	0.0002661
Sb	121	3	He	106.898	1.5236	131541.69	0.0143	0.0002661
Ba	137	3	He	527.101	2.5192	218648.30	0.0048	0.0002665
Ba	137	3	He	537.008	2.5665	215358.75	0.0048	0.0002665
Ba	137	3	He	528.225	2.5245	217961.23	0.0048	0.0002665
Tl	205	3	He	102.714	2.5255	1003975.61	0.0246	0.002755
Tl	205	3	He	102.067	2.5096	995487.33	0.0246	0.002755
Tl	205	3	He	102.553	2.5215	1012460.92	0.0246	0.002755
Pb	208	3	He	51.422	1.6685	350668.04	0.0324	0.002158
Pb	208	3	He	51.407	1.668	351849.41	0.0324	0.002158
Pb	208	3	He	51.065	1.6569	351643.35	0.0324	0.002158
U	238	3	He	52.016	2.5621	796085.85	0.0492	0.0004023
U	238	3	He	52.682	2.5949	792897.33	0.0492	0.0004023
U	238	3	He	52.265	2.5743	798141.78	0.0492	0.0004023
Sc	45	1	No Gas			2457749.49		
Sc	45	1	No Gas			2521358.24		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2502800.90		
Ge	72	1	No Gas			1233784.83		
Ge	72	1	No Gas			1245879.04		
Ge	72	1	No Gas			1231347.09		
Sc	45	2	H2			198213.53		
Sc	45	2	H2			198711.27		
Sc	45	2	H2			199400.31		
Ge	72	2	H2			167460.33		
Ge	72	2	H2			166347.99		
Ge	72	2	H2			168847.61		
In	115	2	H2			389694.29		
In	115	2	H2			391949.88		
In	115	2	H2			393648.24		
Sc	45	3	He			50106.76		
Sc	45	3	He			49474.60		
Sc	45	3	He			49405.32		
Ge	72	3	He			85173.63		
Ge	72	3	He			85002.09		
Ge	72	3	He			83242.66		
In	115	3	He			87546.06		
In	115	3	He			84677.71		
In	115	3	He			87092.71		
Tb	159	3	He			397542.61		
Tb	159	3	He			396677.65		
Tb	159	3	He			401534.06		
Bi	209	3	He			310720.91		
Bi	209	3	He			305565.70		
Bi	209	3	He			310039.74		

Quantitation Report

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Sample Type	Sample
Comment	E7
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

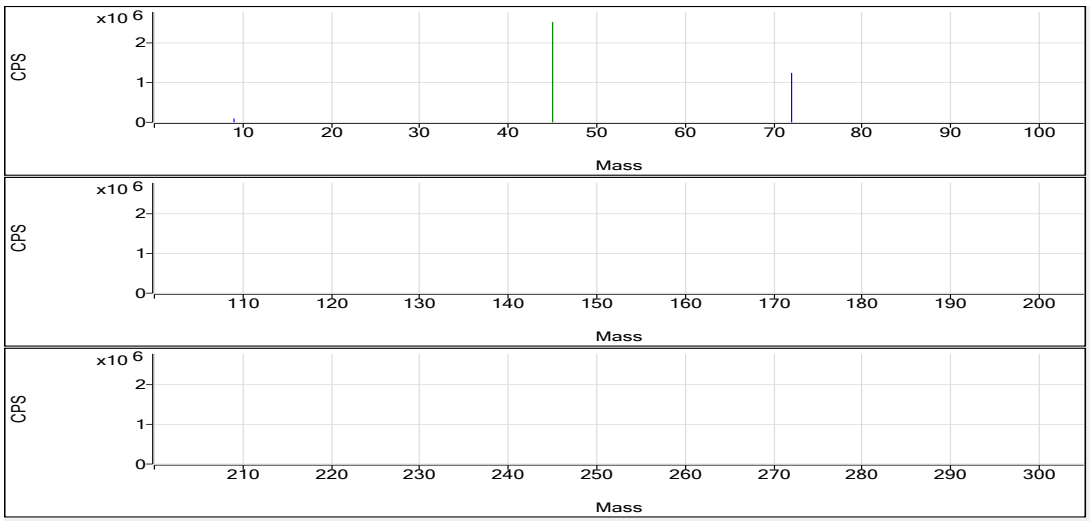
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.199	ppb	1.6	93871.07	0.0373	Pulse	0.5000	3
Se	78	72	H2	111.527	ppb	1.9	8225.48	0.0489	Pulse	1.5000	3
Na	23	45	He	14352.814	ppb	0.9	2528198.19	51.5764	Analog	0.1000	3
Mg	24	45	He	23025.860	ppb	0.7	2039560.70	41.6074	Analog	0.1000	3
Al	27	45	He	5115.091	ppb	1.4	146176.65	2.9821	Pulse	0.1000	3
K	39	45	He	21977.813	ppb	2.0	1281728.76	26.1489	Analog	0.1000	3
Ca	44	45	He	58603.561	ppb	1.1	194230.17	3.9624	Pulse	0.1000	3
Ti	47	45	He	510.492	ppb	1.6	13309.90	0.2715	Pulse	0.1000	3
V	51	45	He	519.987	ppb	0.5	543229.40	11.0820	Pulse	0.5000	3
Cr	52	45	He	2198.987	ppb	1.6	3172173.91	64.7154	Analog	0.1000	3
Mn	55	45	He	506.370	ppb	1.1	308722.87	6.2981	Pulse	0.1000	3
Fe	57	45	He	5062.636	ppb	0.9	142121.06	2.8993	Pulse	0.1000	3
Co	59	45	He	486.228	ppb	0.4	1308418.91	26.6915	Pulse	0.1000	3
Ni	60	72	He	470.812	ppb	0.7	367519.95	4.3846	Pulse	0.1000	3
Cu	63	72	He	451.577	ppb	0.8	1038889.62	12.3943	Pulse	0.1000	3
Zn	66	72	He	482.024	ppb	1.4	124550.48	1.4859	Pulse	0.1000	3
As	75	72	He	493.915	ppb	0.3	88907.88	1.0607	Pulse	0.5000	3
Sr	88	115	He	341.727	ppb	1.0	253566.34	3.0075	Pulse	0.1000	3
Mo	98	115	He	57.572	ppb	1.9	106683.94	1.2652	Pulse	0.1000	3
Ag	107	115	He	49.635	ppb	1.4	196938.83	2.3359	Pulse	0.1000	3
Cd	111	115	He	52.216	ppb	0.9	23450.33	0.2781	Pulse	0.5000	3
Sn	120	115	He	107.444	ppb	1.6	140941.09	1.6717	Pulse	0.1000	3
Sb	121	115	He	108.638	ppb	1.1	130547.98	1.5484	Pulse	0.1000	3
Ba	137	115	He	539.206	ppb	0.5	217279.01	2.5770	Pulse	0.1000	3
Tl	205	159	He	102.804	ppb	1.3	1001290.71	2.5277	Pulse	0.1000	3
Pb	208	159	He	51.471	ppb	1.0	661564.16	1.6700	Pulse	0.1000	3
U	238	209	He	52.326	ppb	0.4	795066.99	2.5773	Pulse	0.1000	3

ISTD Table:

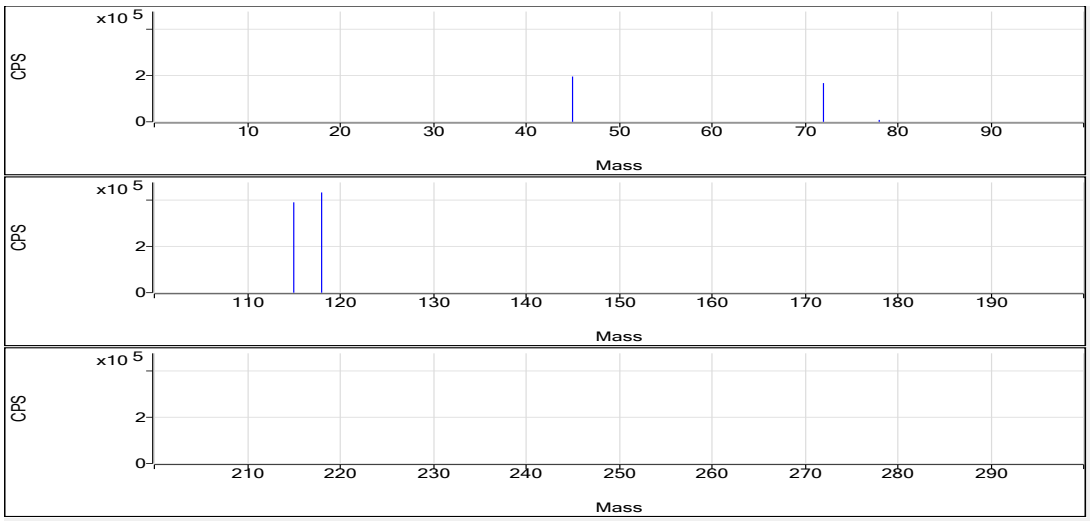
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2514649.44	1.1	96.4	Analog	0.1000	3
No Gas	Ge	72	1240566.52	0.4	96.3	Pulse	0.1000	3
H2	Sc	45	196737.22	0.2	95.5	Pulse	0.1000	3
H2	Ge	72	168140.29	0.4	103.3	Pulse	0.1000	3
H2	In	115	392537.76	0.7	97.2	Pulse	0.1000	3
He	Sc	45	49020.07	0.6	95.7	Pulse	0.1000	3
He	Ge	72	83822.53	0.6	102.4	Pulse	0.1000	3
He	In	115	84314.02	0.5	96.2	Pulse	0.1000	3
He	Tb	159	396150.78	0.5	98.6	Pulse	0.1000	3
He	Bi	209	308489.33	0.4	100.8	Pulse	0.1000	3

No Gas

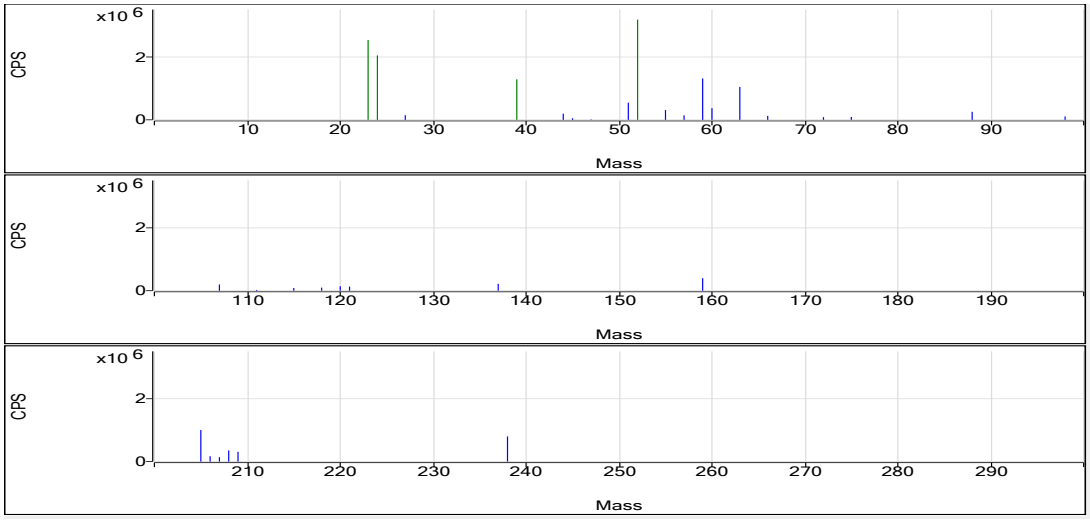


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	51.102	0.0373	94250.27	0.0007	3.404E-05
Be	9	1	No Gas	50.445	0.0368	93183.38	0.0007	3.404E-05
Be	9	1	No Gas	52.049	0.038	94179.56	0.0007	3.404E-05
Se	78	2	H2	112.751	0.0495	8351.11	0.0004	3.546E-05
Se	78	2	H2	112.765	0.0495	8289.07	0.0004	3.546E-05
Se	78	2	H2	109.065	0.0478	8036.26	0.0004	3.546E-05
Na	23	3	He	14477.513	52.0209	2537739.49	0.0036	0.4171
Na	23	3	He	14358.304	51.596	2526292.15	0.0036	0.4171
Na	23	3	He	14222.625	51.1124	2520562.93	0.0036	0.4171
Mg	24	3	He	23045.978	41.6438	2031512.78	0.0018	0.004553
Mg	24	3	He	23180.873	41.8875	2050937.31	0.0018	0.004553
Mg	24	3	He	22850.731	41.291	2036232.00	0.0018	0.004553
Al	27	3	He	5197.382	3.03	147815.06	0.0006	0.002085
Al	27	3	He	5083.826	2.9639	145120.86	0.0006	0.002085
Al	27	3	He	5064.066	2.9524	145594.04	0.0006	0.002085
K	39	3	He	22425.992	26.6737	1301226.31	0.0012	0.4112
K	39	3	He	21960.514	26.1286	1279334.20	0.0012	0.4112
K	39	3	He	21546.933	25.6443	1264625.76	0.0012	0.4112
Ca	44	3	He	59298.148	4.0093	195587.93	0.0001	0.003322
Ca	44	3	He	58522.874	3.957	193744.68	0.0001	0.003322
Ca	44	3	He	57989.661	3.9209	193357.91	0.0001	0.003322
Ti	47	3	He	501.286	0.2666	13006.29	0.0005	0
Ti	47	3	He	517.51	0.2752	13476.73	0.0005	0
Ti	47	3	He	512.679	0.2727	13446.69	0.0005	0
V	51	3	He	521.912	11.1229	542609.19	0.0213	0.0318
V	51	3	He	521.324	11.1104	543997.81	0.0213	0.0318
V	51	3	He	516.726	11.0127	543081.19	0.0213	0.0318
Cr	52	3	He	2227.607	65.5571	3198079.01	0.0294	0.04297
Cr	52	3	He	2208.151	64.9849	3181854.02	0.0294	0.04297
Cr	52	3	He	2161.205	63.6042	3136588.70	0.0294	0.04297
Mn	55	3	He	512.807	6.3781	311142.85	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	502.666	6.252	306117.20	0.0124	0.002801
Mn	55	3	He	503.638	6.2641	308908.55	0.0124	0.002801
Fe	57	3	He	5077.822	2.908	141861.79	0.0006	0.002732
Fe	57	3	He	5098.465	2.9198	142963.16	0.0006	0.002732
Fe	57	3	He	5011.619	2.8701	141538.22	0.0006	0.002732
Co	59	3	He	484.845	26.6155	1298388.34	0.0549	0.003644
Co	59	3	He	488.2	26.7997	1312193.11	0.0549	0.003644
Co	59	3	He	485.64	26.6592	1314675.29	0.0549	0.003644
Ni	60	3	He	469.582	4.3732	368346.01	0.0093	0.01413
Ni	60	3	He	474.427	4.4182	367911.36	0.0093	0.01413
Ni	60	3	He	468.427	4.3625	366302.49	0.0093	0.01413
Cu	63	3	He	449.633	12.341	1039457.48	0.0274	0.009321
Cu	63	3	He	455.683	12.5069	1041478.50	0.0274	0.009321
Cu	63	3	He	449.416	12.335	1035732.88	0.0274	0.009321
Zn	66	3	He	474.36	1.4624	123174.98	0.0031	0.005913
Zn	66	3	He	484.287	1.4929	124315.50	0.0031	0.005913
Zn	66	3	He	487.425	1.5025	126160.95	0.0031	0.005913
As	75	3	He	493.409	1.0596	89247.91	0.0021	0.0008698
As	75	3	He	495.723	1.0646	88648.54	0.0021	0.0008698
As	75	3	He	492.612	1.0579	88827.20	0.0021	0.0008698
Sr	88	3	He	337.934	2.9741	251972.75	0.0088	0.0006843
Sr	88	3	He	342.454	3.0139	254220.04	0.0088	0.0006843
Sr	88	3	He	344.793	3.0345	254506.23	0.0088	0.0006843
Mo	98	3	He	58.187	1.2787	108336.77	0.0219	0.001827
Mo	98	3	He	58.247	1.2801	107972.62	0.0219	0.001827
Mo	98	3	He	56.281	1.2369	103742.44	0.0219	0.001827
Ag	107	3	He	48.925	2.3025	195067.50	0.047	0.001064
Ag	107	3	He	49.621	2.3352	196972.36	0.047	0.001064
Ag	107	3	He	50.361	2.37	198776.64	0.047	0.001064
Cd	111	3	He	51.665	0.2752	23315.41	0.0053	6.086E-05
Cd	111	3	He	52.464	0.2795	23571.89	0.0053	6.086E-05
Cd	111	3	He	52.521	0.2798	23463.70	0.0053	6.086E-05
Sn	120	3	He	105.565	1.6427	139173.06	0.0154	0.01483
Sn	120	3	He	108.839	1.6932	142819.89	0.0154	0.01483
Sn	120	3	He	107.927	1.6791	140830.31	0.0154	0.01483
Sb	121	3	He	107.448	1.5314	129745.01	0.0143	0.0002661
Sb	121	3	He	109.744	1.5641	131933.95	0.0143	0.0002661
Sb	121	3	He	108.722	1.5496	129964.97	0.0143	0.0002661
Ba	137	3	He	540.825	2.5848	218984.70	0.0048	0.0002665
Ba	137	3	He	535.983	2.5616	216071.11	0.0048	0.0002665
Ba	137	3	He	540.809	2.5847	216781.23	0.0048	0.0002665
Tl	205	3	He	101.276	2.4901	992366.70	0.0246	0.002755
Tl	205	3	He	103.86	2.5536	1010066.47	0.0246	0.002755
Tl	205	3	He	103.276	2.5393	1001438.97	0.0246	0.002755
Pb	208	3	He	50.89	1.6512	348555.07	0.0324	0.002158
Pb	208	3	He	51.792	1.6804	353990.85	0.0324	0.002158
Pb	208	3	He	51.731	1.6785	351565.46	0.0324	0.002158
U	238	3	He	52.285	2.5753	792940.69	0.0492	0.0004023
U	238	3	He	52.158	2.569	795856.47	0.0492	0.0004023
U	238	3	He	52.534	2.5876	796403.82	0.0492	0.0004023
Sc	45	1	No Gas			2529281.84		
Sc	45	1	No Gas			2533198.24		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2481468.24		
Ge	72	1	No Gas			1245888.26		
Ge	72	1	No Gas			1235146.47		
Ge	72	1	No Gas			1240664.83		
Sc	45	2	H2			196368.67		
Sc	45	2	H2			197016.48		
Sc	45	2	H2			196826.52		
Ge	72	2	H2			168858.69		
Ge	72	2	H2			167582.60		
Ge	72	2	H2			167979.57		
In	115	2	H2			390978.28		
In	115	2	H2			395768.63		
In	115	2	H2			390866.36		
Sc	45	3	He			48783.09		
Sc	45	3	He			48962.97		
Sc	45	3	He			49314.16		
Ge	72	3	He			84228.28		
Ge	72	3	He			83272.47		
Ge	72	3	He			83966.84		
In	115	3	He			85482.22		
In	115	3	He			85100.05		
In	115	3	He			84627.76		
Tb	159	3	He			398521.52		
Tb	159	3	He			395547.42		
Tb	159	3	He			394383.39		
Bi	209	3	He			307901.48		
Bi	209	3	He			309786.64		
Bi	209	3	He			307779.86		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

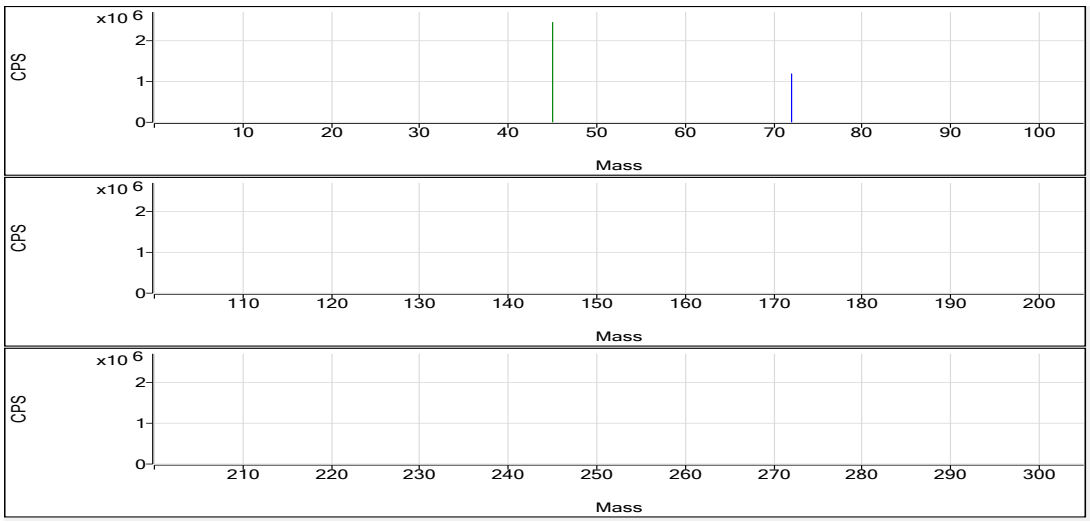
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.006	ppb	N/A	72.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.114	ppb	33.0	13.33	0.0001	Pulse	1.5000	3
Na	23	45	He	-13.475	ppb	N/A	17961.49	0.3690	Pulse	0.1000	3
Mg	24	45	He	3.601	ppb	31.4	540.03	0.0111	Pulse	0.1000	3
Al	27	45	He	-0.881	ppb	N/A	76.67	0.0016	Pulse	0.1000	3
K	39	45	He	-6.387	ppb	N/A	19657.02	0.4037	Pulse	0.1000	3
Ca	44	45	He	-15.615	ppb	N/A	110.00	0.0023	Pulse	0.1000	3
Ti	47	45	He	0.783	ppb	88.8	20.00	0.0004	Pulse	0.1000	3
V	51	45	He	0.089	ppb	104.1	1640.77	0.0337	Pulse	0.5000	3
Cr	52	45	He	0.765	ppb	7.6	3187.14	0.0655	Pulse	0.1000	3
Mn	55	45	He	0.231	ppb	20.1	276.68	0.0057	Pulse	0.1000	3
Fe	57	45	He	0.639	ppb	280.3	150.00	0.0031	Pulse	0.1000	3
Co	59	45	He	0.119	ppb	9.4	496.69	0.0102	Pulse	0.1000	3
Ni	60	72	He	-0.933	ppb	N/A	430.02	0.0055	Pulse	0.1000	3
Cu	63	72	He	0.070	ppb	96.4	883.39	0.0112	Pulse	0.1000	3
Zn	66	72	He	0.159	ppb	106.4	503.36	0.0064	Pulse	0.1000	3
As	75	72	He	0.152	ppb	53.3	94.00	0.0012	Pulse	0.5000	3
Sr	88	115	He	0.074	ppb	37.1	113.33	0.0013	Pulse	0.1000	3
Mo	98	115	He	0.026	ppb	29.9	203.34	0.0024	Pulse	0.1000	3
Ag	107	115	He	-0.003	ppb	N/A	76.67	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.002	ppb	240.4	6.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.060	ppb	64.3	1336.79	0.0158	Pulse	0.1000	3
Sb	121	115	He	0.045	ppb	27.8	76.67	0.0009	Pulse	0.1000	3
Ba	137	115	He	0.125	ppb	11.8	73.33	0.0009	Pulse	0.1000	3
Tl	205	159	He	0.096	ppb	7.7	2016.89	0.0051	Pulse	0.1000	3
Pb	208	159	He	-0.005	ppb	N/A	786.71	0.0020	Pulse	0.1000	3
U	238	209	He	0.071	ppb	11.6	1213.44	0.0039	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2450902.36	0.6	94.0	Analog	0.1000	3
No Gas	Ge	72	1191902.09	1.2	92.5	Pulse	0.1000	3
H2	Sc	45	195569.89	0.7	94.9	Pulse	0.1000	3
H2	Ge	72	156212.86	1.0	96.0	Pulse	0.1000	3
H2	In	115	385691.95	0.4	95.5	Pulse	0.1000	3
He	Sc	45	48699.00	2.6	95.1	Pulse	0.1000	3
He	Ge	72	78683.09	0.6	96.1	Pulse	0.1000	3
He	In	115	84858.56	0.4	96.8	Pulse	0.1000	3
He	Tb	159	394956.89	0.6	98.3	Pulse	0.1000	3
He	Bi	209	309814.26	0.4	101.2	Pulse	0.1000	3

No Gas



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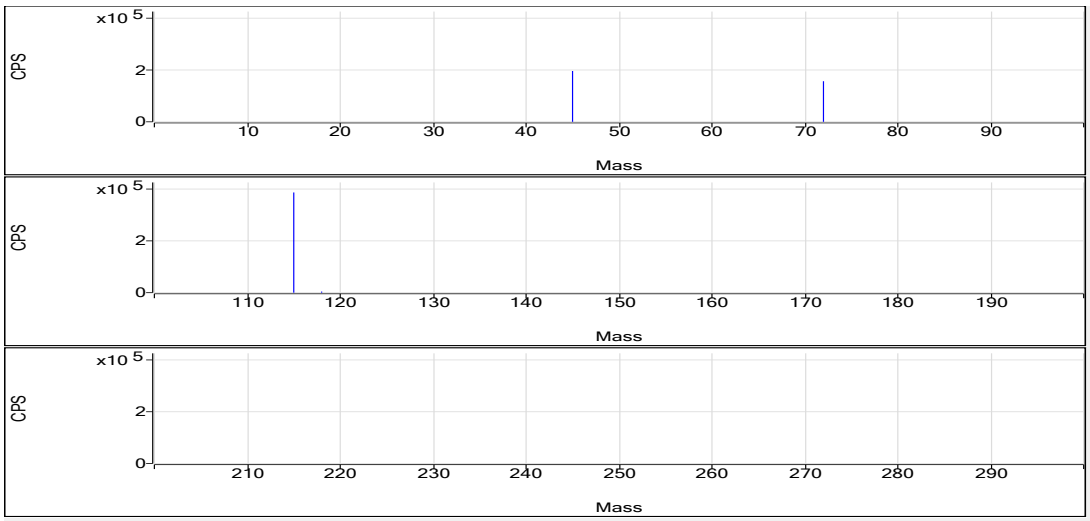
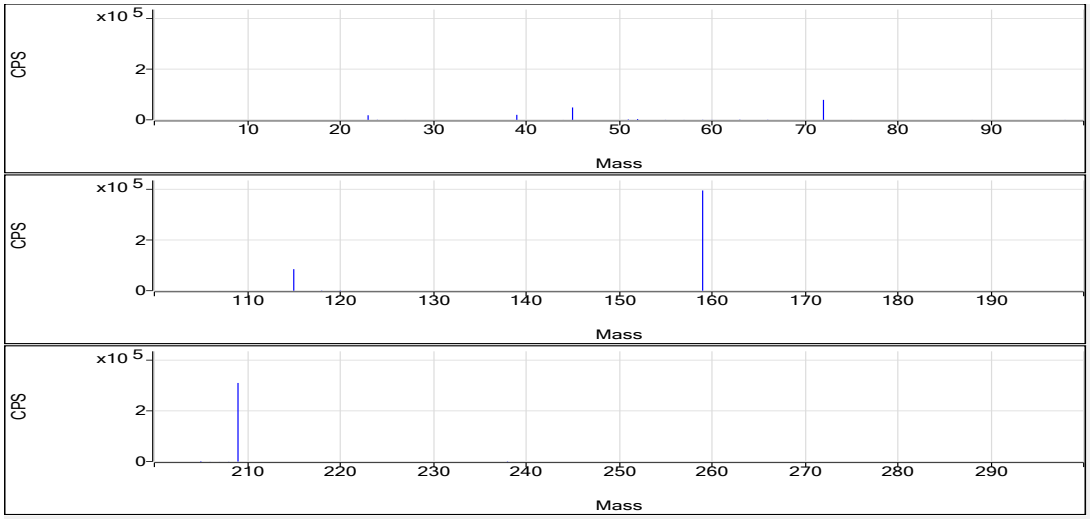


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.013	0	60.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.01	0	66.00	0.0007	3.404E-05
Be	9	1	No Gas	0.004	0	90.00	0.0007	3.404E-05
Se	78	2	H2	0.112	0.0001	13.33	0.0004	3.546E-05
Se	78	2	H2	0.077	0.0001	10.67	0.0004	3.546E-05
Se	78	2	H2	0.152	0.0001	16.00	0.0004	3.546E-05
Na	23	3	He	-17.902	0.3532	17661.08	0.0036	0.4171
Na	23	3	He	-11.631	0.3756	17821.31	0.0036	0.4171
Na	23	3	He	-10.892	0.3782	18402.09	0.0036	0.4171
Mg	24	3	He	4.898	0.0134	670.04	0.0018	0.004553
Mg	24	3	He	3.079	0.0101	480.02	0.0018	0.004553
Mg	24	3	He	2.827	0.0097	470.02	0.0018	0.004553
Al	27	3	He	-0.832	0.0016	80.00	0.0006	0.002085
Al	27	3	He	-1.408	0.0013	60.00	0.0006	0.002085
Al	27	3	He	-0.403	0.0018	90.00	0.0006	0.002085
K	39	3	He	-12.706	0.3963	19813.92	0.0012	0.4112
K	39	3	He	-6.963	0.403	19122.96	0.0012	0.4112
K	39	3	He	0.507	0.4118	20034.19	0.0012	0.4112
Ca	44	3	He	-19.564	0.002	100.00	0.0001	0.003322
Ca	44	3	He	-5.492	0.003	140.01	0.0001	0.003322
Ca	44	3	He	-21.789	0.0018	90.00	0.0001	0.003322
Ti	47	3	He	0.376	0.0002	10.00	0.0005	0
Ti	47	3	He	1.585	0.0008	40.00	0.0005	0
Ti	47	3	He	0.386	0.0002	10.00	0.0005	0
V	51	3	He	0.036	0.0326	1628.10	0.0213	0.0318
V	51	3	He	0.035	0.0325	1544.09	0.0213	0.0318
V	51	3	He	0.196	0.036	1750.12	0.0213	0.0318
Cr	52	3	He	0.702	0.0636	3180.47	0.0294	0.04297
Cr	52	3	He	0.775	0.0658	3120.45	0.0294	0.04297
Cr	52	3	He	0.818	0.067	3260.49	0.0294	0.04297
Mn	55	3	He	0.273	0.0062	310.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.182	0.0051	240.01	0.0124	0.002801
Mn	55	3	He	0.238	0.0058	280.01	0.0124	0.002801
Fe	57	3	He	-0.929	0.0022	110.00	0.0006	0.002732
Fe	57	3	He	2.593	0.0042	200.01	0.0006	0.002732
Fe	57	3	He	0.255	0.0029	140.00	0.0006	0.002732
Co	59	3	He	0.127	0.0106	530.03	0.0549	0.003644
Co	59	3	He	0.106	0.0095	450.02	0.0549	0.003644
Co	59	3	He	0.125	0.0105	510.03	0.0549	0.003644
Ni	60	3	He	-0.93	0.0055	430.02	0.0093	0.01413
Ni	60	3	He	-0.891	0.0059	460.02	0.0093	0.01413
Ni	60	3	He	-0.978	0.0051	400.02	0.0093	0.01413
Cu	63	3	He	0.135	0.013	1020.07	0.0274	0.009321
Cu	63	3	He	0.073	0.0113	890.06	0.0274	0.009321
Cu	63	3	He	0.001	0.0093	740.04	0.0274	0.009321
Zn	66	3	He	0.279	0.0068	530.03	0.0031	0.005913
Zn	66	3	He	0.231	0.0066	520.03	0.0031	0.005913
Zn	66	3	He	-0.034	0.0058	460.02	0.0031	0.005913
As	75	3	He	0.237	0.0014	108.00	0.0021	0.0008698
As	75	3	He	0.14	0.0012	92.00	0.0021	0.0008698
As	75	3	He	0.077	0.001	82.00	0.0021	0.0008698
Sr	88	3	He	0.096	0.0015	130.00	0.0088	0.0006843
Sr	88	3	He	0.043	0.0011	90.00	0.0088	0.0006843
Sr	88	3	He	0.083	0.0014	120.00	0.0088	0.0006843
Mo	98	3	He	0.034	0.0026	220.01	0.0219	0.001827
Mo	98	3	He	0.019	0.0022	190.01	0.0219	0.001827
Mo	98	3	He	0.024	0.0024	200.01	0.0219	0.001827
Ag	107	3	He	-0.005	0.0008	70.00	0.047	0.001064
Ag	107	3	He	-0.005	0.0008	70.00	0.047	0.001064
Ag	107	3	He	0	0.0011	90.00	0.047	0.001064
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Cd	111	3	He	0.006	0.0001	8.00	0.0053	6.086E-05
Cd	111	3	He	0.002	0.0001	6.00	0.0053	6.086E-05
Sn	120	3	He	0.019	0.0151	1290.12	0.0154	0.01483
Sn	120	3	He	0.096	0.0163	1380.12	0.0154	0.01483
Sn	120	3	He	0.064	0.0158	1340.12	0.0154	0.01483
Sb	121	3	He	0.055	0.0011	90.00	0.0143	0.0002661
Sb	121	3	He	0.031	0.0007	60.00	0.0143	0.0002661
Sb	121	3	He	0.048	0.0009	80.00	0.0143	0.0002661
Ba	137	3	He	0.116	0.0008	70.00	0.0048	0.0002665
Ba	137	3	He	0.142	0.0009	80.00	0.0048	0.0002665
Ba	137	3	He	0.117	0.0008	70.00	0.0048	0.0002665
Tl	205	3	He	0.102	0.0053	2070.23	0.0246	0.002755
Tl	205	3	He	0.088	0.0049	1950.22	0.0246	0.002755
Tl	205	3	He	0.098	0.0052	2030.23	0.0246	0.002755
Pb	208	3	He	0.001	0.0022	430.03	0.0324	0.002158
Pb	208	3	He	-0.015	0.0017	410.02	0.0324	0.002158
Pb	208	3	He	-0.001	0.0021	390.02	0.0324	0.002158
U	238	3	He	0.066	0.0037	1130.10	0.0492	0.0004023
U	238	3	He	0.081	0.0044	1360.12	0.0492	0.0004023
U	238	3	He	0.067	0.0037	1150.09	0.0492	0.0004023
Sc	45	1	No Gas			2434380.90		
Sc	45	1	No Gas			2462703.40		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2455622.78		
Ge	72	1	No Gas			1192121.23		
Ge	72	1	No Gas			1206542.33		
Ge	72	1	No Gas			1177042.72		
Sc	45	2	H2			197161.17		
Sc	45	2	H2			194737.46		
Sc	45	2	H2			194811.05		
Ge	72	2	H2			157349.82		
Ge	72	2	H2			154376.01		
Ge	72	2	H2			156912.75		
In	115	2	H2			385896.21		
In	115	2	H2			387013.59		
In	115	2	H2			384166.05		
Sc	45	3	He			49996.44		
Sc	45	3	He			47447.80		
Sc	45	3	He			48652.75		
Ge	72	3	He			78294.15		
Ge	72	3	He			78545.66		
Ge	72	3	He			79209.47		
In	115	3	He			85271.68		
In	115	3	He			84617.58		
In	115	3	He			84707.64		
Tb	159	3	He			394200.66		
Tb	159	3	He			397610.38		
Tb	159	3	He			393059.64		
Bi	209	3	He			308424.08		
Bi	209	3	He			310134.60		
Bi	209	3	He			310884.10		

Quantitation Report

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Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

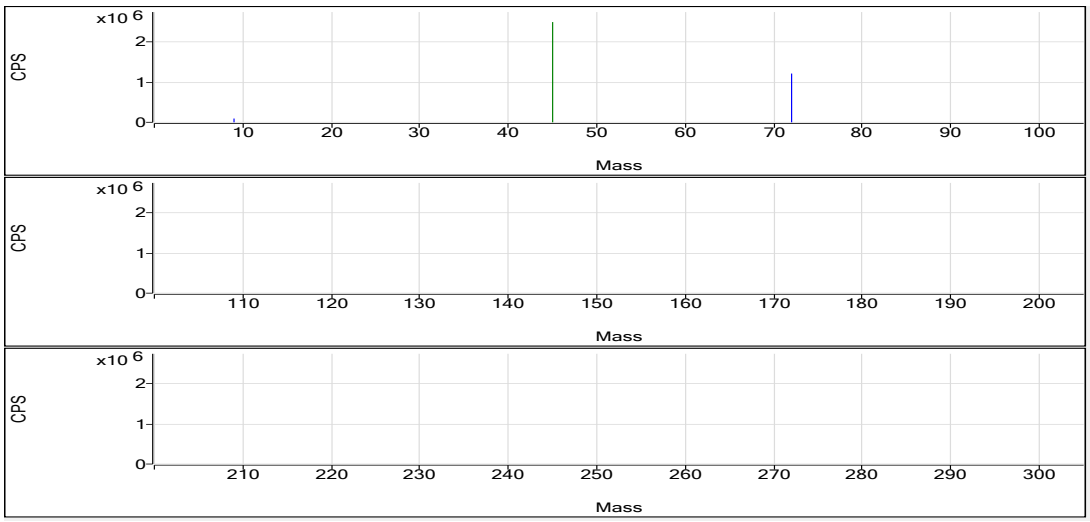
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.430	ppb	0.9	93410.22	0.0375	Pulse	0.5000	3
Se	78	72	H2	50.408	ppb	0.5	3512.22	0.0221	Pulse	1.5000	3
Na	23	45	He	4981.622	ppb	1.4	878985.66	18.1736	Pulse	0.1000	3
Mg	24	45	He	5188.451	ppb	1.4	453625.97	9.3790	Pulse	0.1000	3
Al	27	45	He	5141.562	ppb	1.5	144977.24	2.9975	Pulse	0.1000	3
K	39	45	He	5112.531	ppb	1.5	309467.78	6.3983	Pulse	0.1000	3
Ca	44	45	He	5178.441	ppb	7.0	17083.95	0.3532	Pulse	0.1000	3
Ti	47	45	He	5086.629	ppb	2.2	130838.69	2.7054	Pulse	0.1000	3
V	51	45	He	516.371	ppb	1.0	532263.94	11.0051	Pulse	0.5000	3
Cr	52	45	He	490.705	ppb	0.8	700080.17	14.4747	Pulse	0.1000	3
Mn	55	45	He	516.843	ppb	1.9	310889.04	6.4283	Pulse	0.1000	3
Fe	57	45	He	5102.547	ppb	0.9	141332.61	2.9222	Pulse	0.1000	3
Co	59	45	He	498.997	ppb	1.2	1324811.54	27.3923	Pulse	0.1000	3
Ni	60	72	He	493.445	ppb	2.0	375443.54	4.5947	Pulse	0.1000	3
Cu	63	72	He	469.638	ppb	1.3	1053298.66	12.8896	Pulse	0.1000	3
Zn	66	72	He	499.697	ppb	1.0	125864.63	1.5402	Pulse	0.1000	3
As	75	72	He	500.818	ppb	1.4	87886.90	1.0755	Pulse	0.5000	3
Sr	88	115	He	51.238	ppb	1.1	38128.86	0.4515	Pulse	0.1000	3
Mo	98	115	He	51.305	ppb	1.5	95228.53	1.1277	Pulse	0.1000	3
Ag	107	115	He	50.883	ppb	2.3	202176.30	2.3946	Pulse	0.1000	3
Cd	111	115	He	51.655	ppb	1.2	23233.98	0.2751	Pulse	0.5000	3
Sn	120	115	He	52.578	ppb	2.1	69712.81	0.8256	Pulse	0.1000	3
Sb	121	115	He	53.054	ppb	2.4	63854.69	0.7563	Pulse	0.1000	3
Ba	137	115	He	518.734	ppb	1.6	209332.26	2.4792	Pulse	0.1000	3
Tl	205	159	He	51.670	ppb	0.7	505588.68	1.2718	Pulse	0.1000	3
Pb	208	159	He	51.618	ppb	0.2	665817.81	1.6748	Pulse	0.1000	3
U	238	209	He	50.612	ppb	0.2	772242.49	2.4929	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2490826.94	0.4	95.5	Analog	0.1000	3
No Gas	Ge	72	1211221.81	0.2	94.0	Pulse	0.1000	3
H2	Sc	45	193569.22	0.9	93.9	Pulse	0.1000	3
H2	Ge	72	158705.62	0.3	97.5	Pulse	0.1000	3
H2	In	115	389575.33	1.2	96.5	Pulse	0.1000	3
He	Sc	45	48367.73	0.9	94.5	Pulse	0.1000	3
He	Ge	72	81726.74	1.5	99.8	Pulse	0.1000	3
He	In	115	84447.13	1.3	96.4	Pulse	0.1000	3
He	Tb	159	397553.78	0.5	99.0	Pulse	0.1000	3
He	Bi	209	309775.29	0.3	101.2	Pulse	0.1000	3

No Gas



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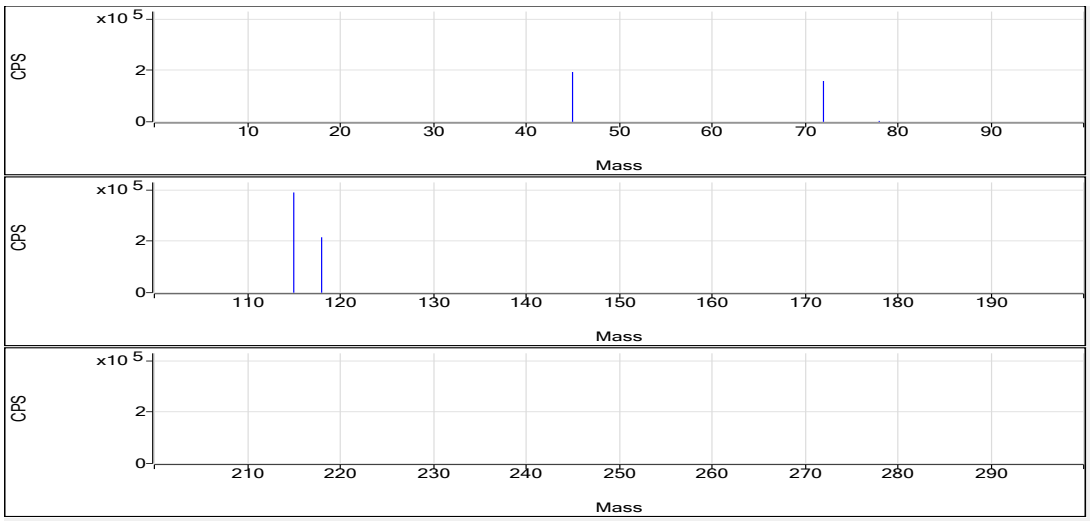
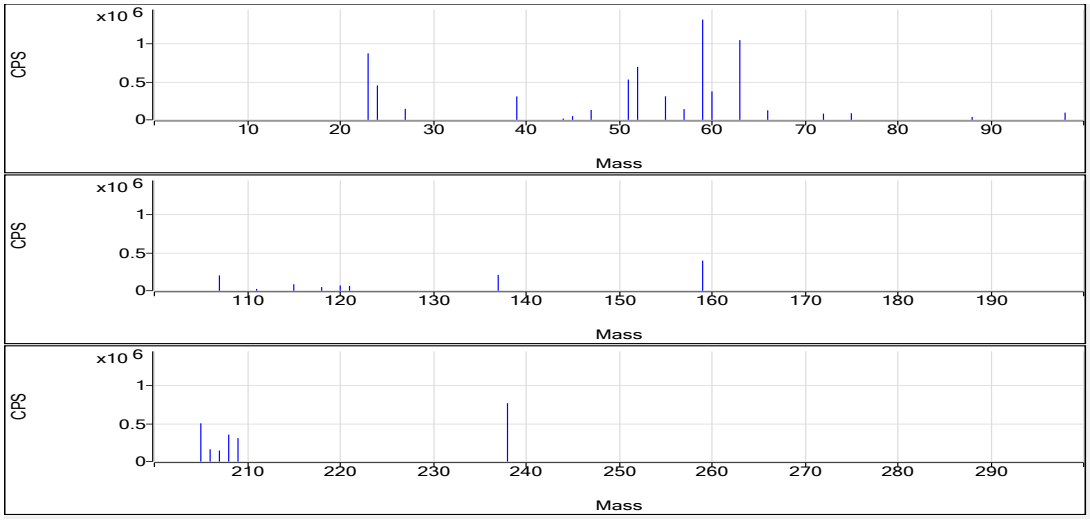


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	51.009	0.0372	92837.25	0.0007	3.404E-05
Be	9	1	No Gas	51.907	0.0378	93801.27	0.0007	3.404E-05
Be	9	1	No Gas	51.375	0.0375	93592.13	0.0007	3.404E-05
Se	78	2	H2	50.711	0.0223	3543.78	0.0004	3.546E-05
Se	78	2	H2	50.26	0.0221	3501.10	0.0004	3.546E-05
Se	78	2	H2	50.253	0.0221	3491.77	0.0004	3.546E-05
Na	23	3	He	4976.281	18.1546	886175.30	0.0036	0.4171
Na	23	3	He	5051.414	18.4224	883902.17	0.0036	0.4171
Na	23	3	He	4917.17	17.9439	866879.52	0.0036	0.4171
Mg	24	3	He	5187.191	9.3767	457703.59	0.0018	0.004553
Mg	24	3	He	5259.689	9.5077	456177.81	0.0018	0.004553
Mg	24	3	He	5118.472	9.2526	446996.52	0.0018	0.004553
Al	27	3	He	5132.081	2.992	146047.98	0.0006	0.002085
Al	27	3	He	5225.551	3.0465	146168.45	0.0006	0.002085
Al	27	3	He	5067.055	2.9541	142715.29	0.0006	0.002085
K	39	3	He	5128.776	6.4174	313249.70	0.0012	0.4112
K	39	3	He	5181.191	6.4788	310849.25	0.0012	0.4112
K	39	3	He	5027.626	6.2989	304304.39	0.0012	0.4112
Ca	44	3	He	5461.403	0.3723	18171.97	0.0001	0.003322
Ca	44	3	He	5303.779	0.3616	17350.95	0.0001	0.003322
Ca	44	3	He	4770.139	0.3256	15728.92	0.0001	0.003322
Ti	47	3	He	5009.255	2.6642	130048.39	0.0005	0
Ti	47	3	He	5215.264	2.7738	133086.22	0.0005	0
Ti	47	3	He	5035.369	2.6781	129381.46	0.0005	0
V	51	3	He	511.149	10.8942	531774.63	0.0213	0.0318
V	51	3	He	521.154	11.1068	532901.38	0.0213	0.0318
V	51	3	He	516.81	11.0145	532115.81	0.0213	0.0318
Cr	52	3	He	486.37	14.3472	700325.07	0.0294	0.04297
Cr	52	3	He	492.333	14.5225	696788.97	0.0294	0.04297
Cr	52	3	He	493.413	14.5543	703126.47	0.0294	0.04297
Mn	55	3	He	508.752	6.3277	308871.36	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	527.422	6.5598	314736.99	0.0124	0.002801
Mn	55	3	He	514.355	6.3973	309058.76	0.0124	0.002801
Fe	57	3	He	5079.016	2.9087	141981.47	0.0006	0.002732
Fe	57	3	He	5154.118	2.9517	141620.26	0.0006	0.002732
Fe	57	3	He	5074.506	2.9061	140396.10	0.0006	0.002732
Co	59	3	He	492.572	27.0397	1319882.01	0.0549	0.003644
Co	59	3	He	504.596	27.6997	1329023.89	0.0549	0.003644
Co	59	3	He	499.823	27.4376	1325528.73	0.0549	0.003644
Ni	60	3	He	496.974	4.6275	373521.52	0.0093	0.01413
Ni	60	3	He	482.468	4.4928	373401.01	0.0093	0.01413
Ni	60	3	He	500.892	4.6638	379408.08	0.0093	0.01413
Cu	63	3	He	472.866	12.9781	1047574.13	0.0274	0.009321
Cu	63	3	He	462.841	12.7032	1055773.66	0.0274	0.009321
Cu	63	3	He	473.207	12.9875	1056548.19	0.0274	0.009321
Zn	66	3	He	500.487	1.5426	124517.58	0.0031	0.005913
Zn	66	3	He	494.396	1.5239	126653.58	0.0031	0.005913
Zn	66	3	He	504.207	1.554	126422.74	0.0031	0.005913
As	75	3	He	508.968	1.093	88223.52	0.0021	0.0008698
As	75	3	He	496.09	1.0653	88541.81	0.0021	0.0008698
As	75	3	He	497.397	1.0682	86895.36	0.0021	0.0008698
Sr	88	3	He	51.718	0.4557	38743.89	0.0088	0.0006843
Sr	88	3	He	50.654	0.4464	38001.95	0.0088	0.0006843
Sr	88	3	He	51.342	0.4524	37640.75	0.0088	0.0006843
Mo	98	3	He	50.396	1.1078	94174.44	0.0219	0.001827
Mo	98	3	He	51.806	1.1387	96942.98	0.0219	0.001827
Mo	98	3	He	51.714	1.1367	94568.18	0.0219	0.001827
Ag	107	3	He	49.947	2.3505	199824.00	0.047	0.001064
Ag	107	3	He	50.478	2.3755	202237.26	0.047	0.001064
Ag	107	3	He	52.224	2.4577	204467.63	0.047	0.001064
Cd	111	3	He	50.966	0.2715	23079.03	0.0053	6.086E-05
Cd	111	3	He	51.835	0.2761	23505.73	0.0053	6.086E-05
Cd	111	3	He	52.165	0.2779	23117.19	0.0053	6.086E-05
Sn	120	3	He	51.307	0.806	68520.48	0.0154	0.01483
Sn	120	3	He	53.016	0.8324	70861.95	0.0154	0.01483
Sn	120	3	He	53.411	0.8385	69756.01	0.0154	0.01483
Sb	121	3	He	52.205	0.7442	63265.07	0.0143	0.0002661
Sb	121	3	He	52.437	0.7475	63637.43	0.0143	0.0002661
Sb	121	3	He	54.522	0.7772	64661.57	0.0143	0.0002661
Ba	137	3	He	513.039	2.452	208447.22	0.0048	0.0002665
Ba	137	3	He	514.87	2.4607	209490.88	0.0048	0.0002665
Ba	137	3	He	528.291	2.5249	210058.69	0.0048	0.0002665
Tl	205	3	He	51.233	1.2611	503791.55	0.0246	0.002755
Tl	205	3	He	51.865	1.2766	504581.87	0.0246	0.002755
Tl	205	3	He	51.91	1.2777	508392.61	0.0246	0.002755
Pb	208	3	He	51.617	1.6748	359982.92	0.0324	0.002158
Pb	208	3	He	51.747	1.679	355218.28	0.0324	0.002158
Pb	208	3	He	51.489	1.6706	355185.27	0.0324	0.002158
U	238	3	He	50.684	2.4965	771031.08	0.0492	0.0004023
U	238	3	He	50.634	2.494	773887.96	0.0492	0.0004023
U	238	3	He	50.517	2.4882	771808.43	0.0492	0.0004023
Sc	45	1	No Gas			2495914.81		
Sc	45	1	No Gas			2478265.12		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2498300.90		
Ge	72	1	No Gas			1208562.56		
Ge	72	1	No Gas			1213389.28		
Ge	72	1	No Gas			1211713.58		
Sc	45	2	H2			195609.33		
Sc	45	2	H2			192164.18		
Sc	45	2	H2			192934.16		
Ge	72	2	H2			159178.30		
Ge	72	2	H2			158670.50		
Ge	72	2	H2			158268.06		
In	115	2	H2			384679.06		
In	115	2	H2			394366.36		
In	115	2	H2			389680.58		
Sc	45	3	He			48812.78		
Sc	45	3	He			47979.80		
Sc	45	3	He			48310.60		
Ge	72	3	He			80718.36		
Ge	72	3	He			83110.76		
Ge	72	3	He			81351.09		
In	115	3	He			85382.38		
In	115	3	He			85502.63		
In	115	3	He			83561.35		
Tb	159	3	He			399497.22		
Tb	159	3	He			395261.91		
Tb	159	3	He			397902.22		
Bi	209	3	He			308845.89		
Bi	209	3	He			310298.55		
Bi	209	3	He			310181.42		

Quantitation Report

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Sample Type	CCB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

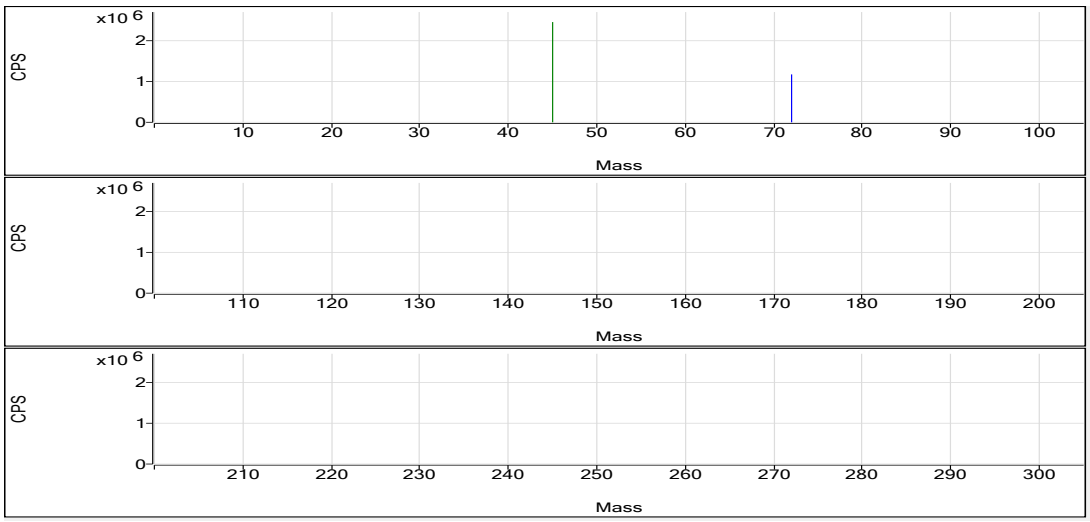
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.006	ppb	N/A	73.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.026	ppb	175.8	7.11	0.0000	Pulse	1.5000	3
Na	23	45	He	-14.283	ppb	N/A	17574.32	0.3661	Pulse	0.1000	3
Mg	24	45	He	0.520	ppb	96.8	263.35	0.0055	Pulse	0.1000	3
Al	27	45	He	0.707	ppb	92.7	120.01	0.0025	Pulse	0.1000	3
K	39	45	He	0.402	ppb	1847.3	19757.22	0.4117	Pulse	0.1000	3
Ca	44	45	He	2.412	ppb	881.7	166.67	0.0035	Pulse	0.1000	3
Ti	47	45	He	1.315	ppb	86.6	33.33	0.0007	Pulse	0.1000	3
V	51	45	He	-0.002	ppb	N/A	1524.76	0.0318	Pulse	0.5000	3
Cr	52	45	He	0.138	ppb	65.7	2256.93	0.0470	Pulse	0.1000	3
Mn	55	45	He	0.160	ppb	18.8	230.01	0.0048	Pulse	0.1000	3
Fe	57	45	He	-0.045	ppb	N/A	130.01	0.0027	Pulse	0.1000	3
Co	59	45	He	0.060	ppb	12.4	333.35	0.0069	Pulse	0.1000	3
Ni	60	72	He	-0.972	ppb	N/A	400.02	0.0051	Pulse	0.1000	3
Cu	63	72	He	-0.003	ppb	N/A	723.38	0.0092	Pulse	0.1000	3
Zn	66	72	He	0.415	ppb	93.7	563.36	0.0072	Pulse	0.1000	3
As	75	72	He	0.253	ppb	24.3	110.67	0.0014	Pulse	0.5000	3
Sr	88	115	He	0.029	ppb	212.1	80.00	0.0009	Pulse	0.1000	3
Mo	98	115	He	0.015	ppb	239.9	183.34	0.0021	Pulse	0.1000	3
Ag	107	115	He	-0.009	ppb	N/A	53.33	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.000	ppb	1994.1	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.164	ppb	15.2	1480.14	0.0174	Pulse	0.1000	3
Sb	121	115	He	0.042	ppb	21.9	73.33	0.0009	Pulse	0.1000	3
Ba	137	115	He	0.059	ppb	128.5	46.67	0.0005	Pulse	0.1000	3
Tl	205	159	He	0.017	ppb	56.0	1246.78	0.0032	Pulse	0.1000	3
Pb	208	159	He	-0.013	ppb	N/A	686.71	0.0018	Pulse	0.1000	3
U	238	209	He	0.054	ppb	10.5	933.40	0.0031	Pulse	0.1000	3

ISTD Table:

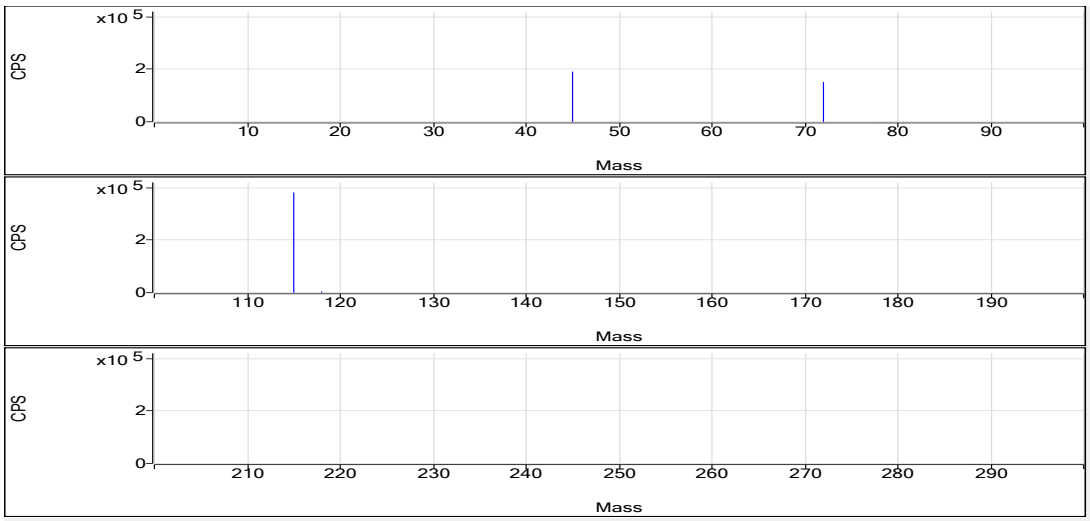
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2464730.69	0.8	94.5	Analog	0.1000	3
No Gas	Ge	72	1177976.10	0.5	91.4	Pulse	0.1000	3
H2	Sc	45	191681.18	1.4	93.0	Pulse	0.1000	3
H2	Ge	72	151843.01	1.2	93.3	Pulse	0.1000	3
H2	In	115	382510.76	0.9	94.8	Pulse	0.1000	3
He	Sc	45	48003.26	1.4	93.8	Pulse	0.1000	3
He	Ge	72	78378.14	0.3	95.7	Pulse	0.1000	3
He	In	115	85244.03	0.7	97.3	Pulse	0.1000	3
He	Tb	159	392394.58	0.7	97.7	Pulse	0.1000	3
He	Bi	209	305907.98	1.0	99.9	Pulse	0.1000	3

No Gas

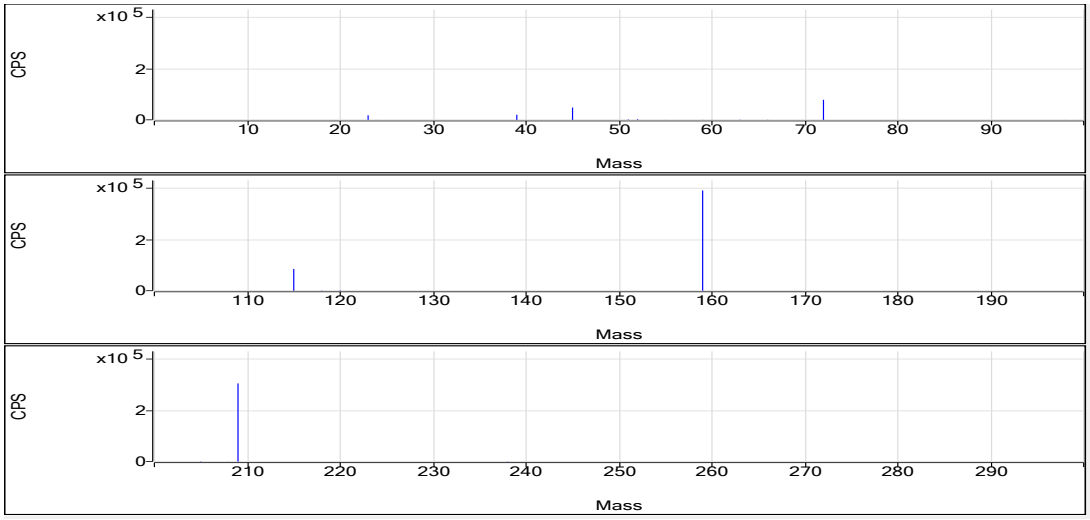


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.009	0	100.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.015	0	56.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.011	0	64.00	0.0007	3.404E-05
Se	78	2	H2	0.071	0.0001	10.00	0.0004	3.546E-05
Se	78	2	H2	0.028	0	7.33	0.0004	3.546E-05
Se	78	2	H2	-0.021	0	4.00	0.0004	3.546E-05
Na	23	3	He	-12.506	0.3725	17651.05	0.0036	0.4171
Na	23	3	He	-15.08	0.3633	17701.04	0.0036	0.4171
Na	23	3	He	-15.264	0.3627	17370.86	0.0036	0.4171
Mg	24	3	He	1.101	0.0065	310.02	0.0018	0.004553
Mg	24	3	He	0.207	0.0049	240.01	0.0018	0.004553
Mg	24	3	He	0.253	0.005	240.01	0.0018	0.004553
Al	27	3	He	0.044	0.0021	100.00	0.0006	0.002085
Al	27	3	He	1.354	0.0029	140.01	0.0006	0.002085
Al	27	3	He	0.722	0.0025	120.01	0.0006	0.002085
K	39	3	He	8.632	0.4213	19964.19	0.0012	0.4112
K	39	3	He	-5.785	0.4044	19703.83	0.0012	0.4112
K	39	3	He	-1.641	0.4093	19603.65	0.0012	0.4112
Ca	44	3	He	25.8	0.0051	240.01	0.0001	0.003322
Ca	44	3	He	-15.752	0.0023	110.00	0.0001	0.003322
Ca	44	3	He	-2.814	0.0031	150.01	0.0001	0.003322
Ti	47	3	He	1.984	0.0011	50.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	1.963	0.001	50.00	0.0005	0
V	51	3	He	-0.015	0.0315	1492.09	0.0213	0.0318
V	51	3	He	0.053	0.0329	1604.10	0.0213	0.0318
V	51	3	He	-0.044	0.0309	1478.09	0.0213	0.0318
Cr	52	3	He	0.24	0.05	2370.29	0.0294	0.04297
Cr	52	3	He	0.109	0.0462	2250.24	0.0294	0.04297
Cr	52	3	He	0.065	0.0449	2150.25	0.0294	0.04297
Mn	55	3	He	0.148	0.0046	220.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.138	0.0045	220.01	0.0124	0.002801
Mn	55	3	He	0.195	0.0052	250.01	0.0124	0.002801
Fe	57	3	He	-0.717	0.0023	110.01	0.0006	0.002732
Fe	57	3	He	0.247	0.0029	140.00	0.0006	0.002732
Fe	57	3	He	0.334	0.0029	140.01	0.0006	0.002732
Co	59	3	He	0.064	0.0072	340.02	0.0549	0.003644
Co	59	3	He	0.064	0.0072	350.02	0.0549	0.003644
Co	59	3	He	0.052	0.0065	310.02	0.0549	0.003644
Ni	60	3	He	-0.959	0.0052	410.02	0.0093	0.01413
Ni	60	3	He	-0.946	0.0053	420.02	0.0093	0.01413
Ni	60	3	He	-1.011	0.0047	370.01	0.0093	0.01413
Cu	63	3	He	-0.038	0.0083	650.04	0.0274	0.009321
Cu	63	3	He	0.018	0.0098	770.05	0.0274	0.009321
Cu	63	3	He	0.01	0.0096	750.05	0.0274	0.009321
Zn	66	3	He	0.855	0.0085	670.04	0.0031	0.005913
Zn	66	3	He	0.272	0.0067	530.03	0.0031	0.005913
Zn	66	3	He	0.118	0.0063	490.02	0.0031	0.005913
As	75	3	He	0.188	0.0013	100.00	0.0021	0.0008698
As	75	3	He	0.259	0.0014	112.00	0.0021	0.0008698
As	75	3	He	0.311	0.0015	120.00	0.0021	0.0008698
Sr	88	3	He	0.083	0.0014	120.01	0.0088	0.0006843
Sr	88	3	He	0.042	0.0011	90.00	0.0088	0.0006843
Sr	88	3	He	-0.038	0.0004	30.00	0.0088	0.0006843
Mo	98	3	He	-0.002	0.0018	150.01	0.0219	0.001827
Mo	98	3	He	-0.009	0.0016	140.01	0.0219	0.001827
Mo	98	3	He	0.055	0.003	260.01	0.0219	0.001827
Ag	107	3	He	-0.013	0.0005	40.00	0.047	0.001064
Ag	107	3	He	-0.015	0.0004	30.00	0.047	0.001064
Ag	107	3	He	0	0.0011	90.00	0.047	0.001064
Cd	111	3	He	0.006	0.0001	8.00	0.0053	6.086E-05
Cd	111	3	He	0.002	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Sn	120	3	He	0.142	0.017	1440.13	0.0154	0.01483
Sn	120	3	He	0.159	0.0173	1480.13	0.0154	0.01483
Sn	120	3	He	0.191	0.0178	1520.15	0.0154	0.01483
Sb	121	3	He	0.031	0.0007	60.00	0.0143	0.0002661
Sb	121	3	He	0.047	0.0009	80.00	0.0143	0.0002661
Sb	121	3	He	0.047	0.0009	80.00	0.0143	0.0002661
Ba	137	3	He	0.142	0.0009	80.00	0.0048	0.0002665
Ba	137	3	He	0.042	0.0005	40.00	0.0048	0.0002665
Ba	137	3	He	-0.007	0.0002	20.00	0.0048	0.0002665
Tl	205	3	He	0.02	0.0032	1280.11	0.0246	0.002755
Tl	205	3	He	0.025	0.0034	1320.15	0.0246	0.002755
Tl	205	3	He	0.007	0.0029	1140.09	0.0246	0.002755
Pb	208	3	He	-0.02	0.0015	340.02	0.0324	0.002158
Pb	208	3	He	-0.002	0.0021	400.02	0.0324	0.002158
Pb	208	3	He	-0.016	0.0016	340.02	0.0324	0.002158
U	238	3	He	0.048	0.0027	850.06	0.0492	0.0004023
U	238	3	He	0.055	0.0031	950.07	0.0492	0.0004023
U	238	3	He	0.059	0.0033	1000.08	0.0492	0.0004023
Sc	45	1	No Gas			2474465.43		
Sc	45	1	No Gas			2442187.78		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2477538.87		
Ge	72	1	No Gas			1182204.75		
Ge	72	1	No Gas			1171698.65		
Ge	72	1	No Gas			1180024.90		
Sc	45	2	H2			188960.92		
Sc	45	2	H2			194485.11		
Sc	45	2	H2			191597.50		
Ge	72	2	H2			150353.32		
Ge	72	2	H2			153780.62		
Ge	72	2	H2			151395.10		
In	115	2	H2			381772.10		
In	115	2	H2			379620.66		
In	115	2	H2			386139.53		
Sc	45	3	He			47387.77		
Sc	45	3	He			48722.25		
Sc	45	3	He			47899.77		
Ge	72	3	He			78485.06		
Ge	72	3	He			78545.32		
Ge	72	3	He			78104.05		
In	115	3	He			84596.67		
In	115	3	He			85663.86		
In	115	3	He			85493.55		
Tb	159	3	He			395468.82		
Tb	159	3	He			390829.96		
Tb	159	3	He			390884.96		
Bi	209	3	He			309553.39		
Bi	209	3	He			304185.37		
Bi	209	3	He			303985.19		

Quantitation Report

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Auto Dilution	1.0000
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Acq Mode	Spectrum
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Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

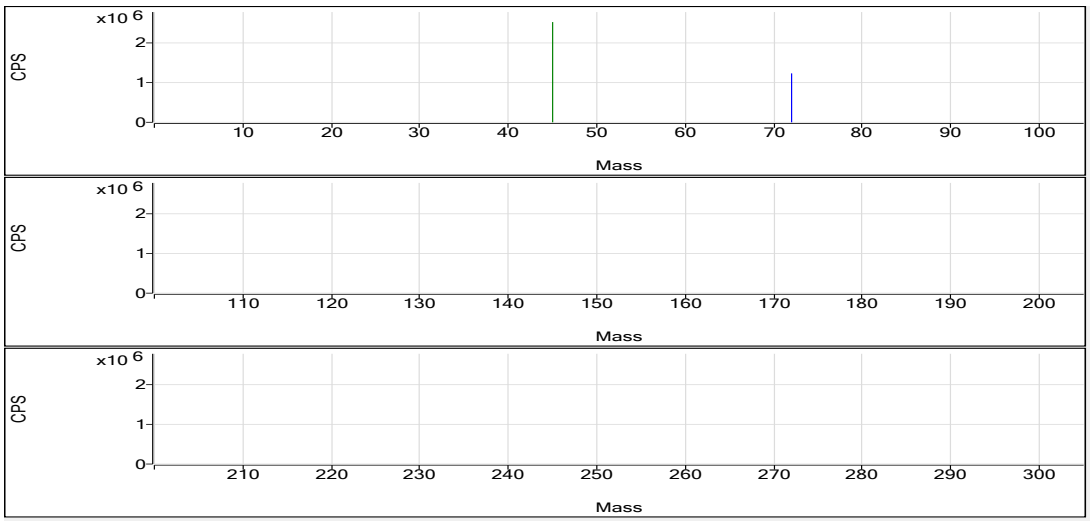
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.010	ppb	105.0	104.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.743	ppb	10.4	58.89	0.0004	Pulse	1.5000	3
Na	23	45	He	247173.799	ppb	0.8	43136194.36	881.4464	Analog	0.1000	3
Mg	24	45	He	42700.317	ppb	0.5	3775895.05	77.1551	Analog	0.1000	3
Al	27	45	He	859.255	ppb	2.6	24597.91	0.5027	Pulse	0.1000	3
K	39	45	He	19452.936	ppb	0.4	1135002.25	23.1920	Pulse	0.1000	3
Ca	44	45	He	100457.930	ppb	0.6	332296.58	6.7900	Pulse	0.1000	3
Ti	47	45	He	22.925	ppb	5.9	596.70	0.0122	Pulse	0.1000	3
V	51	45	He	7.092	ppb	3.6	8930.78	0.1825	Pulse	0.5000	3
Cr	52	45	He	3.326	ppb	5.8	6888.52	0.1408	Pulse	0.1000	3
Mn	55	45	He	968.091	ppb	0.9	589132.86	12.0382	Pulse	0.1000	3
Fe	57	45	He	10457.898	ppb	0.7	292959.77	5.9862	Pulse	0.1000	3
Co	59	45	He	2.026	ppb	1.6	5621.29	0.1149	Pulse	0.1000	3
Ni	60	72	He	1.890	ppb	5.8	2650.33	0.0317	Pulse	0.1000	3
Cu	63	72	He	12.284	ppb	0.8	28979.95	0.3462	Pulse	0.1000	3
Zn	66	72	He	27.194	ppb	4.7	7482.21	0.0894	Pulse	0.1000	3
As	75	72	He	21.906	ppb	2.6	4006.59	0.0479	Pulse	0.5000	3
Sr	88	115	He	1042.503	ppb	1.6	766120.77	9.1736	Pulse	0.1000	3
Mo	98	115	He	0.550	ppb	21.8	1160.09	0.0139	Pulse	0.1000	3
Ag	107	115	He	-0.004	ppb	N/A	73.33	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.013	ppb	52.3	10.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.216	ppb	38.0	1516.80	0.0182	Pulse	0.1000	3
Sb	121	115	He	0.091	ppb	11.5	130.00	0.0016	Pulse	0.1000	3
Ba	137	115	He	200.889	ppb	1.8	80197.82	0.9603	Pulse	0.1000	3
Tl	205	159	He	-0.068	ppb	N/A	430.03	0.0011	Pulse	0.1000	3
Pb	208	159	He	3.774	ppb	0.8	49215.07	0.1245	Pulse	0.1000	3
U	238	209	He	0.113	ppb	6.1	1776.86	0.0060	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2536349.49	1.7	97.3	Analog	0.1000	3
No Gas	Ge	72	1237993.42	1.3	96.1	Pulse	0.1000	3
H2	Sc	45	193721.43	0.5	94.0	Pulse	0.1000	3
H2	Ge	72	163199.88	0.9	100.3	Pulse	0.1000	3
H2	In	115	374376.43	0.5	92.7	Pulse	0.1000	3
He	Sc	45	48939.95	0.8	95.6	Pulse	0.1000	3
He	Ge	72	83704.78	1.1	102.3	Pulse	0.1000	3
He	In	115	83529.85	1.8	95.3	Pulse	0.1000	3
He	Tb	159	395438.81	0.1	98.5	Pulse	0.1000	3
He	Bi	209	298475.60	0.8	97.5	Pulse	0.1000	3

No Gas



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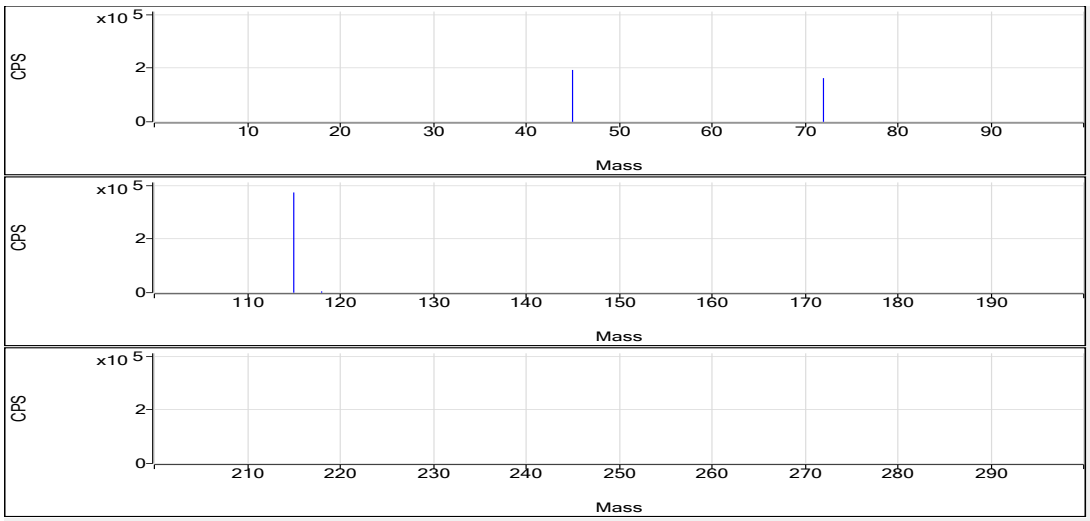
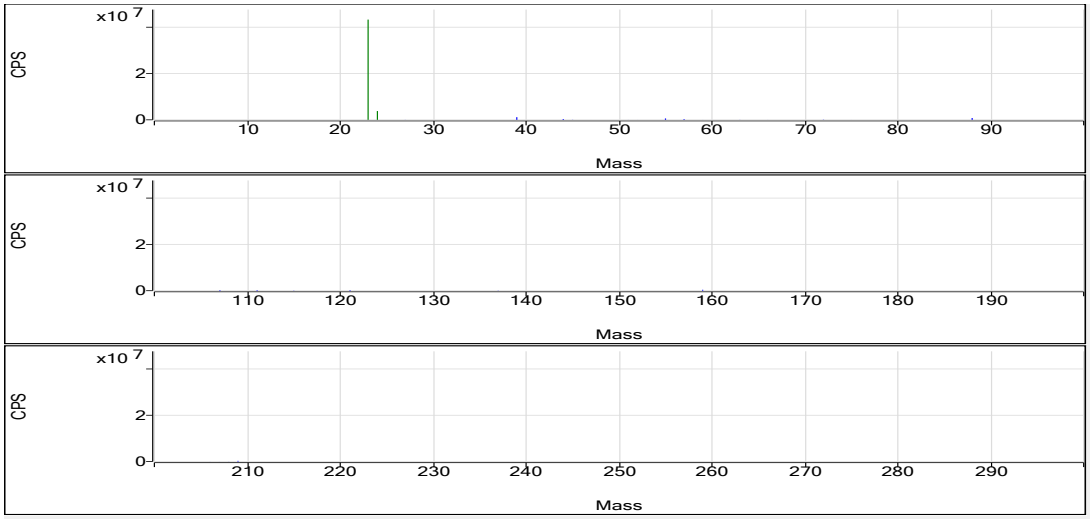


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.017	0	116.00	0.0007	3.404E-05
Be	9	1	No Gas	0.015	0	114.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.002	0	84.00	0.0007	3.404E-05
Se	78	2	H2	0.741	0.0004	58.67	0.0004	3.546E-05
Se	78	2	H2	0.821	0.0004	64.00	0.0004	3.546E-05
Se	78	2	H2	0.666	0.0003	54.00	0.0004	3.546E-05
Na	23	3	He	248844.231	887.4005	43227604.36	0.0036	0.4171
Na	23	3	He	245056.834	873.9007	43174774.36	0.0036	0.4171
Na	23	3	He	247620.333	883.038	43006204.36	0.0036	0.4171
Mg	24	3	He	42623.744	77.0167	3751685.26	0.0018	0.004553
Mg	24	3	He	42538.096	76.862	3797339.32	0.0018	0.004553
Mg	24	3	He	42939.112	77.5865	3778660.57	0.0018	0.004553
Al	27	3	He	862.93	0.5048	24591.23	0.0006	0.002085
Al	27	3	He	835.129	0.4886	24140.38	0.0006	0.002085
Al	27	3	He	879.705	0.5146	25062.11	0.0006	0.002085
K	39	3	He	19412.625	23.1448	1127445.61	0.0012	0.4112
K	39	3	He	19398.376	23.1281	1142638.58	0.0012	0.4112
K	39	3	He	19547.807	23.3031	1134922.56	0.0012	0.4112
Ca	44	3	He	100104.531	6.7661	329594.64	0.0001	0.003322
Ca	44	3	He	100172.42	6.7707	334503.71	0.0001	0.003322
Ca	44	3	He	101096.838	6.8331	332791.40	0.0001	0.003322
Ti	47	3	He	21.616	0.0115	560.04	0.0005	0
Ti	47	3	He	22.835	0.0121	600.03	0.0005	0
Ti	47	3	He	24.323	0.0129	630.04	0.0005	0
V	51	3	He	7.115	0.183	8914.77	0.0213	0.0318
V	51	3	He	6.825	0.1768	8736.65	0.0213	0.0318
V	51	3	He	7.336	0.1877	9140.92	0.0213	0.0318
Cr	52	3	He	3.51	0.1462	7121.96	0.0294	0.04297
Cr	52	3	He	3.124	0.1348	6661.73	0.0294	0.04297
Cr	52	3	He	3.344	0.1413	6881.86	0.0294	0.04297
Mn	55	3	He	978.353	12.1658	592628.82	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	961.821	11.9603	590894.09	0.0124	0.002801
Mn	55	3	He	964.099	11.9886	583875.66	0.0124	0.002801
Fe	57	3	He	10544.759	6.0359	294025.62	0.0006	0.002732
Fe	57	3	He	10413.435	5.9608	294490.68	0.0006	0.002732
Fe	57	3	He	10415.499	5.962	290363.00	0.0006	0.002732
Co	59	3	He	2.062	0.1168	5691.28	0.0549	0.003644
Co	59	3	He	2.014	0.1142	5641.30	0.0549	0.003644
Co	59	3	He	2.003	0.1136	5531.29	0.0549	0.003644
Ni	60	3	He	2.013	0.0328	2710.37	0.0093	0.01413
Ni	60	3	He	1.851	0.0313	2640.32	0.0093	0.01413
Ni	60	3	He	1.806	0.0309	2600.30	0.0093	0.01413
Cu	63	3	He	12.332	0.3475	28709.34	0.0274	0.009321
Cu	63	3	He	12.173	0.3432	28939.87	0.0274	0.009321
Cu	63	3	He	12.348	0.348	29290.64	0.0274	0.009321
Zn	66	3	He	28.244	0.0926	7652.36	0.0031	0.005913
Zn	66	3	He	25.774	0.085	7171.97	0.0031	0.005913
Zn	66	3	He	27.566	0.0906	7622.29	0.0031	0.005913
As	75	3	He	22.48	0.0491	4056.60	0.0021	0.0008698
As	75	3	He	21.35	0.0467	3936.56	0.0021	0.0008698
As	75	3	He	21.888	0.0478	4026.60	0.0021	0.0008698
Sr	88	3	He	1061.94	9.3446	765912.96	0.0088	0.0006843
Sr	88	3	He	1029.95	9.0631	770295.38	0.0088	0.0006843
Sr	88	3	He	1035.619	9.113	762153.97	0.0088	0.0006843
Mo	98	3	He	0.662	0.0164	1340.10	0.0219	0.001827
Mo	98	3	He	0.566	0.0142	1210.10	0.0219	0.001827
Mo	98	3	He	0.424	0.0111	930.06	0.0219	0.001827
Ag	107	3	He	-0.01	0.0006	50.00	0.047	0.001064
Ag	107	3	He	-0.003	0.0009	80.00	0.047	0.001064
Ag	107	3	He	0	0.0011	90.00	0.047	0.001064
Cd	111	3	He	0.011	0.0001	10.00	0.0053	6.086E-05
Cd	111	3	He	0.02	0.0002	14.00	0.0053	6.086E-05
Cd	111	3	He	0.007	0.0001	8.00	0.0053	6.086E-05
Sn	120	3	He	0.162	0.0173	1420.13	0.0154	0.01483
Sn	120	3	He	0.175	0.0175	1490.14	0.0154	0.01483
Sn	120	3	He	0.31	0.0196	1640.14	0.0154	0.01483
Sb	121	3	He	0.101	0.0017	140.01	0.0143	0.0002661
Sb	121	3	He	0.08	0.0014	120.00	0.0143	0.0002661
Sb	121	3	He	0.09	0.0016	130.00	0.0143	0.0002661
Ba	137	3	He	204.942	0.9796	80294.71	0.0048	0.0002665
Ba	137	3	He	199.419	0.9533	81019.15	0.0048	0.0002665
Ba	137	3	He	198.307	0.9479	79279.61	0.0048	0.0002665
Tl	205	3	He	-0.066	0.0011	450.03	0.0246	0.002755
Tl	205	3	He	-0.068	0.0011	430.02	0.0246	0.002755
Tl	205	3	He	-0.07	0.001	410.03	0.0246	0.002755
Pb	208	3	He	3.761	0.124	26227.33	0.0324	0.002158
Pb	208	3	He	3.754	0.1238	26718.24	0.0324	0.002158
Pb	208	3	He	3.807	0.1255	26728.00	0.0324	0.002158
U	238	3	He	0.12	0.0063	1860.22	0.0492	0.0004023
U	238	3	He	0.106	0.0056	1680.17	0.0492	0.0004023
U	238	3	He	0.113	0.006	1790.20	0.0492	0.0004023
Sc	45	1	No Gas			2505277.78		
Sc	45	1	No Gas			2519789.18		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2583981.52		
Ge	72	1	No Gas			1236677.95		
Ge	72	1	No Gas			1222260.84		
Ge	72	1	No Gas			1255041.47		
Sc	45	2	H2			194929.86		
Sc	45	2	H2			193006.75		
Sc	45	2	H2			193227.67		
Ge	72	2	H2			162807.69		
Ge	72	2	H2			161927.67		
Ge	72	2	H2			164864.27		
In	115	2	H2			376562.81		
In	115	2	H2			373307.22		
In	115	2	H2			373259.25		
Sc	45	3	He			48712.62		
Sc	45	3	He			49404.67		
Sc	45	3	He			48702.55		
Ge	72	3	He			82608.63		
Ge	72	3	He			84328.41		
Ge	72	3	He			84177.31		
In	115	3	He			81971.17		
In	115	3	He			84999.54		
In	115	3	He			83641.71		
Tb	159	3	He			395061.52		
Tb	159	3	He			395891.91		
Tb	159	3	He			395363.00		
Bi	209	3	He			295792.03		
Bi	209	3	He			299441.15		
Bi	209	3	He			300193.61		

Quantitation Report

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Sample Type	Sample
Comment	E7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

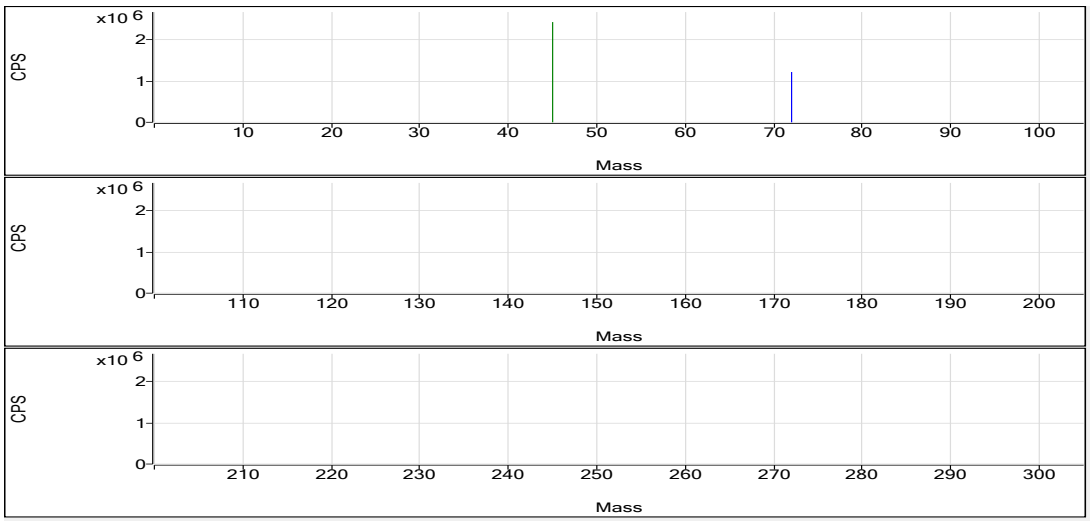
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.006	ppb	N/A	72.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	1.545	ppb	2.5	116.67	0.0007	Pulse	1.5000	3
Na	23	45	He	141333.889	ppb	2.0	23963376.31	504.1893	Analog	0.1000	3
Mg	24	45	He	510.928	ppb	1.6	44093.33	0.9277	Pulse	0.1000	3
Al	27	45	He	435.652	ppb	2.1	12162.06	0.2559	Pulse	0.1000	3
K	39	45	He	9633.752	ppb	2.5	555715.51	11.6930	Pulse	0.1000	3
Ca	44	45	He	12331.069	ppb	0.7	39761.77	0.8364	Pulse	0.1000	3
Ti	47	45	He	3.419	ppb	22.2	86.67	0.0018	Pulse	0.1000	3
V	51	45	He	12.146	ppb	2.0	13778.58	0.2899	Pulse	0.5000	3
Cr	52	45	He	3.535	ppb	8.0	6988.60	0.1469	Pulse	0.1000	3
Mn	55	45	He	25.376	ppb	4.2	15124.96	0.3183	Pulse	0.1000	3
Fe	57	45	He	279.779	ppb	1.3	7738.98	0.1628	Pulse	0.1000	3
Co	59	45	He	0.384	ppb	15.3	1173.42	0.0247	Pulse	0.1000	3
Ni	60	72	He	2.904	ppb	14.0	3397.17	0.0411	Pulse	0.1000	3
Cu	63	72	He	5.408	ppb	5.6	13036.32	0.1576	Pulse	0.1000	3
Zn	66	72	He	6.569	ppb	2.9	2156.89	0.0261	Pulse	0.1000	3
As	75	72	He	4511.133	ppb	0.4	800538.71	9.6806	Pulse	0.5000	3
Sr	88	115	He	104.217	ppb	0.4	78364.24	0.9177	Pulse	0.1000	3
Mo	98	115	He	10.957	ppb	0.6	20689.28	0.2423	Pulse	0.1000	3
Ag	107	115	He	-0.004	ppb	N/A	76.67	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.016	ppb	109.0	12.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.297	ppb	36.6	1656.82	0.0194	Pulse	0.1000	3
Sb	121	115	He	10.516	ppb	4.9	12816.41	0.1501	Pulse	0.1000	3
Ba	137	115	He	15.234	ppb	4.1	6238.29	0.0731	Pulse	0.1000	3
Tl	205	159	He	-0.069	ppb	N/A	416.69	0.0011	Pulse	0.1000	3
Pb	208	159	He	2.759	ppb	1.5	35947.48	0.0916	Pulse	0.1000	3
U	238	209	He	2.514	ppb	1.9	38438.39	0.1242	Pulse	0.1000	3

ISTD Table:

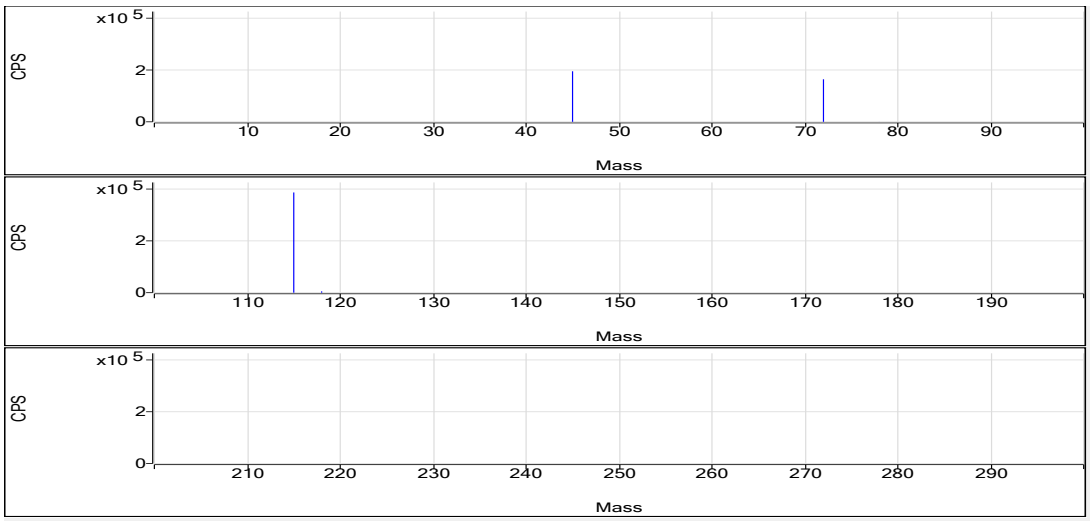
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2434886.68	1.5	93.4	Analog	0.1000	3
No Gas	Ge	72	1221087.14	1.4	94.7	Pulse	0.1000	3
H2	Sc	45	194583.09	1.5	94.4	Pulse	0.1000	3
H2	Ge	72	163708.81	1.3	100.6	Pulse	0.1000	3
H2	In	115	385792.74	0.7	95.6	Pulse	0.1000	3
He	Sc	45	47538.47	1.7	92.9	Pulse	0.1000	3
He	Ge	72	82695.63	0.1	101.0	Pulse	0.1000	3
He	In	115	85396.33	0.9	97.4	Pulse	0.1000	3
He	Tb	159	392632.50	0.4	97.8	Pulse	0.1000	3
He	Bi	209	309474.51	0.6	101.1	Pulse	0.1000	3

No Gas

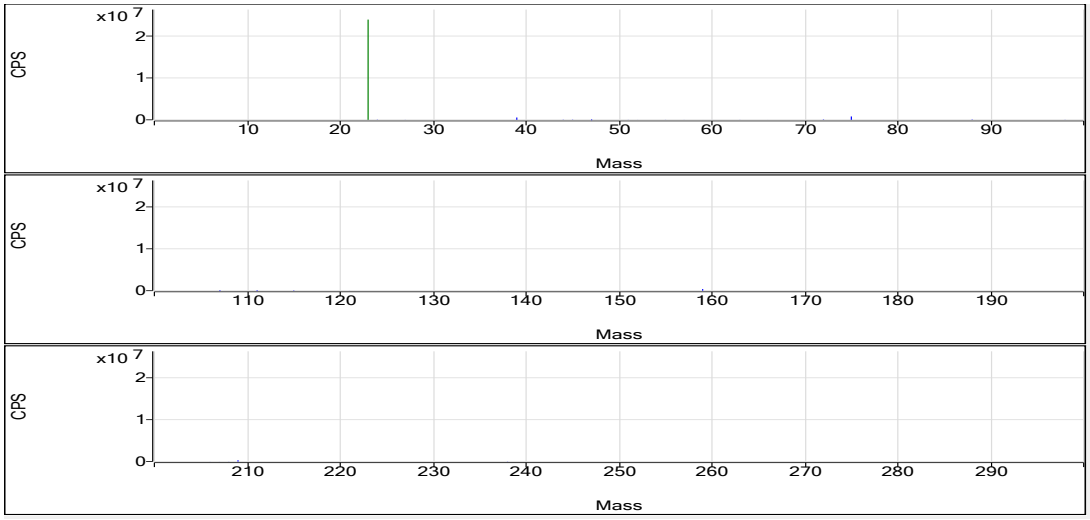


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.003	0	78.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.007	0	70.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.008	0	68.00	0.0007	3.404E-05
Se	78	2	H2	1.56	0.0007	116.00	0.0004	3.546E-05
Se	78	2	H2	1.575	0.0007	119.33	0.0004	3.546E-05
Se	78	2	H2	1.501	0.0007	114.67	0.0004	3.546E-05
Na	23	3	He	144020.148	513.7643	24201954.64	0.0036	0.4171
Na	23	3	He	141697.375	505.4849	23771389.65	0.0036	0.4171
Na	23	3	He	138284.143	493.3188	23916784.64	0.0036	0.4171
Mg	24	3	He	513.455	0.9323	43916.01	0.0018	0.004553
Mg	24	3	He	517.407	0.9394	44177.00	0.0018	0.004553
Mg	24	3	He	501.922	0.9114	44186.97	0.0018	0.004553
Al	27	3	He	437.146	0.2568	12095.38	0.0006	0.002085
Al	27	3	He	443.741	0.2606	12255.47	0.0006	0.002085
Al	27	3	He	426.068	0.2503	12135.34	0.0006	0.002085
K	39	3	He	9802.819	11.891	560152.06	0.0012	0.4112
K	39	3	He	9744.617	11.8229	555992.88	0.0012	0.4112
K	39	3	He	9353.82	11.3652	551001.59	0.0012	0.4112
Ca	44	3	He	12228.655	0.8295	39073.26	0.0001	0.003322
Ca	44	3	He	12372.67	0.8392	39464.26	0.0001	0.003322
Ca	44	3	He	12391.883	0.8405	40747.78	0.0001	0.003322
Ti	47	3	He	2.794	0.0015	70.00	0.0005	0
Ti	47	3	He	3.198	0.0017	80.00	0.0005	0
Ti	47	3	He	4.266	0.0023	110.00	0.0005	0
V	51	3	He	12.26	0.2923	13770.57	0.0213	0.0318
V	51	3	He	12.315	0.2935	13802.63	0.0213	0.0318
V	51	3	He	11.862	0.2839	13762.55	0.0213	0.0318
Cr	52	3	He	3.564	0.1478	6961.90	0.0294	0.04297
Cr	52	3	He	3.24	0.1383	6501.70	0.0294	0.04297
Cr	52	3	He	3.801	0.1547	7502.20	0.0294	0.04297
Mn	55	3	He	25.06	0.3143	14807.85	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	26.575	0.3332	15668.85	0.0124	0.002801
Mn	55	3	He	24.493	0.3073	14898.18	0.0124	0.002801
Fe	57	3	He	277.659	0.1616	7612.27	0.0006	0.002732
Fe	57	3	He	284.089	0.1653	7772.31	0.0006	0.002732
Fe	57	3	He	277.588	0.1616	7832.36	0.0006	0.002732
Co	59	3	He	0.394	0.0253	1190.08	0.0549	0.003644
Co	59	3	He	0.437	0.0276	1300.11	0.0549	0.003644
Co	59	3	He	0.321	0.0212	1030.08	0.0549	0.003644
Ni	60	3	He	2.872	0.0408	3370.49	0.0093	0.01413
Ni	60	3	He	2.513	0.0375	3100.43	0.0093	0.01413
Ni	60	3	He	3.325	0.045	3720.59	0.0093	0.01413
Cu	63	3	He	5.24	0.153	12645.95	0.0274	0.009321
Cu	63	3	He	5.227	0.1527	12635.88	0.0274	0.009321
Cu	63	3	He	5.757	0.1672	13827.12	0.0274	0.009321
Zn	66	3	He	6.352	0.0254	2100.22	0.0031	0.005913
Zn	66	3	He	6.693	0.0265	2190.23	0.0031	0.005913
Zn	66	3	He	6.662	0.0264	2180.23	0.0031	0.005913
As	75	3	He	4530.27	9.7216	803289.81	0.0021	0.0008698
As	75	3	He	4493.089	9.6418	798050.38	0.0021	0.0008698
As	75	3	He	4510.041	9.6782	800275.94	0.0021	0.0008698
Sr	88	3	He	104.737	0.9223	77965.15	0.0088	0.0006843
Sr	88	3	He	103.972	0.9155	78427.56	0.0088	0.0006843
Sr	88	3	He	103.941	0.9153	78700.00	0.0088	0.0006843
Mo	98	3	He	10.997	0.2432	20555.84	0.0219	0.001827
Mo	98	3	He	10.99	0.243	20815.92	0.0219	0.001827
Mo	98	3	He	10.885	0.2407	20696.07	0.0219	0.001827
Ag	107	3	He	-0.003	0.0009	80.00	0.047	0.001064
Ag	107	3	He	-0.003	0.0009	80.00	0.047	0.001064
Ag	107	3	He	-0.005	0.0008	70.00	0.047	0.001064
Cd	111	3	He	0.033	0.0002	20.00	0.0053	6.086E-05
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Cd	111	3	He	0.019	0.0002	14.00	0.0053	6.086E-05
Sn	120	3	He	0.419	0.0213	1800.18	0.0154	0.01483
Sn	120	3	He	0.212	0.0181	1550.14	0.0154	0.01483
Sn	120	3	He	0.26	0.0188	1620.15	0.0154	0.01483
Sb	121	3	He	11.094	0.1584	13386.99	0.0143	0.0002661
Sb	121	3	He	10.119	0.1445	12375.93	0.0143	0.0002661
Sb	121	3	He	10.335	0.1475	12686.31	0.0143	0.0002661
Ba	137	3	He	15.89	0.0762	6441.73	0.0048	0.0002665
Ba	137	3	He	15.167	0.0727	6231.62	0.0048	0.0002665
Ba	137	3	He	14.647	0.0703	6041.53	0.0048	0.0002665
Tl	205	3	He	-0.066	0.0011	450.03	0.0246	0.002755
Tl	205	3	He	-0.069	0.001	410.02	0.0246	0.002755
Tl	205	3	He	-0.072	0.001	390.02	0.0246	0.002755
Pb	208	3	He	2.718	0.0902	19144.41	0.0324	0.002158
Pb	208	3	He	2.803	0.093	19835.70	0.0324	0.002158
Pb	208	3	He	2.756	0.0915	18984.47	0.0324	0.002158
U	238	3	He	2.466	0.1219	37856.43	0.0492	0.0004023
U	238	3	He	2.56	0.1265	38869.95	0.0492	0.0004023
U	238	3	He	2.516	0.1243	38588.79	0.0492	0.0004023
Sc	45	1	No Gas			2462444.03		
Sc	45	1	No Gas			2448516.21		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2393699.81		
Ge	72	1	No Gas			1227577.79		
Ge	72	1	No Gas			1233825.84		
Ge	72	1	No Gas			1201857.79		
Sc	45	2	H2			191628.42		
Sc	45	2	H2			194859.63		
Sc	45	2	H2			197261.23		
Ge	72	2	H2			161302.29		
Ge	72	2	H2			164416.46		
Ge	72	2	H2			165407.67		
In	115	2	H2			388823.39		
In	115	2	H2			384666.48		
In	115	2	H2			383888.35		
Sc	45	3	He			47107.12		
Sc	45	3	He			47026.90		
Sc	45	3	He			48481.40		
Ge	72	3	He			82629.14		
Ge	72	3	He			82769.44		
Ge	72	3	He			82688.31		
In	115	3	He			84546.28		
In	115	3	He			85673.18		
In	115	3	He			85995.74		
Tb	159	3	He			393765.97		
Tb	159	3	He			390637.81		
Tb	159	3	He			393493.71		
Bi	209	3	He			310645.43		
Bi	209	3	He			307319.37		
Bi	209	3	He			310458.73		

Quantitation Report

Data File Name	096SMPL.d
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Sample Type	Sample
Comment	E7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

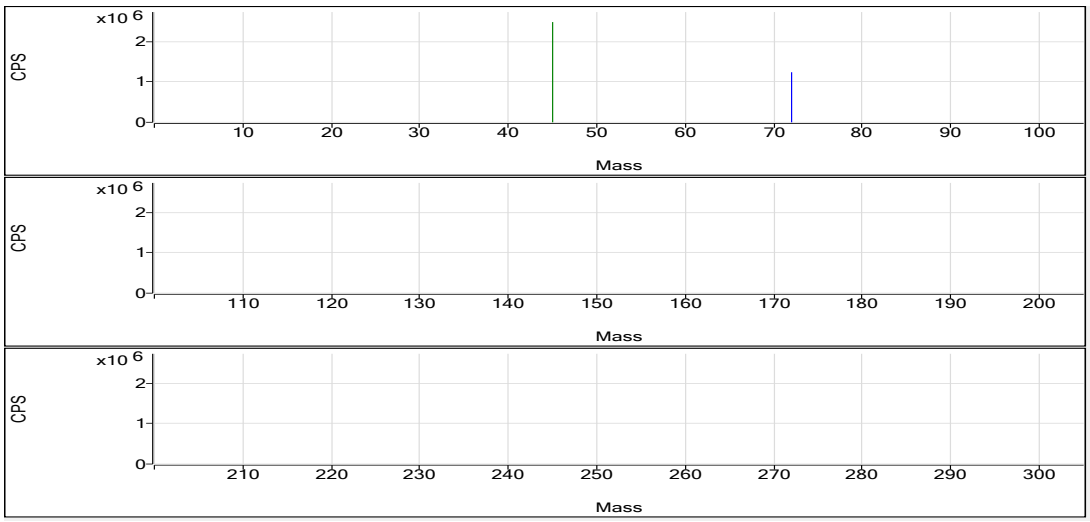
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.028	ppb	N/A	33.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.145	ppb	53.4	16.22	0.0001	Pulse	1.5000	3
Na	23	45	He	34805.363	ppb	2.0	6011849.29	124.4777	Analog	0.1000	3
Mg	24	45	He	3157.515	ppb	1.2	275781.40	5.7095	Pulse	0.1000	3
Al	27	45	He	6.605	ppb	2.5	286.68	0.0059	Pulse	0.1000	3
K	39	45	He	7599.516	ppb	2.2	449669.11	9.3108	Pulse	0.1000	3
Ca	44	45	He	56414.194	ppb	1.8	184232.22	3.8145	Pulse	0.1000	3
Ti	47	45	He	0.647	ppb	33.8	16.67	0.0003	Pulse	0.1000	3
V	51	45	He	0.534	ppb	20.2	2083.50	0.0431	Pulse	0.5000	3
Cr	52	45	He	0.184	ppb	42.0	2336.94	0.0484	Pulse	0.1000	3
Mn	55	45	He	280.559	ppb	3.0	168559.91	3.4907	Pulse	0.1000	3
Fe	57	45	He	1158.865	ppb	1.8	32156.51	0.6658	Pulse	0.1000	3
Co	59	45	He	0.176	ppb	10.1	643.37	0.0133	Pulse	0.1000	3
Ni	60	72	He	-0.287	ppb	N/A	946.73	0.0115	Pulse	0.1000	3
Cu	63	72	He	2.698	ppb	1.4	6878.55	0.0833	Pulse	0.1000	3
Zn	66	72	He	1.873	ppb	16.9	963.40	0.0117	Pulse	0.1000	3
As	75	72	He	13422.922	ppb	0.3	2378183.25	28.8029	Analog	0.5000	3
Sr	88	115	He	353.344	ppb	1.3	263819.75	3.1097	Pulse	0.1000	3
Mo	98	115	He	5.817	ppb	1.6	10984.69	0.1295	Pulse	0.1000	3
Ag	107	115	He	-0.014	ppb	N/A	33.33	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.012	ppb	76.7	10.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.112	ppb	134.3	1403.45	0.0166	Pulse	0.1000	3
Sb	121	115	He	2.554	ppb	5.4	3110.47	0.0367	Pulse	0.1000	3
Ba	137	115	He	75.479	ppb	1.2	30624.93	0.3610	Pulse	0.1000	3
Tl	205	159	He	-0.056	ppb	N/A	543.36	0.0014	Pulse	0.1000	3
Pb	208	159	He	0.901	ppb	4.2	12346.06	0.0314	Pulse	0.1000	3
U	238	209	He	1.411	ppb	0.5	21865.92	0.0699	Pulse	0.1000	3

ISTD Table:

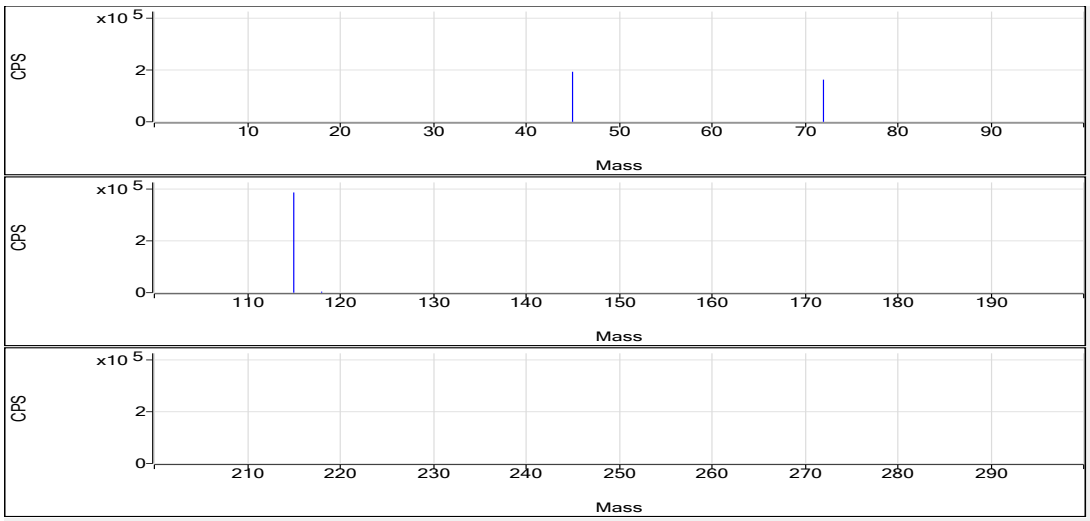
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2485120.96	0.3	95.3	Analog	0.1000	3
No Gas	Ge	72	1241221.68	1.1	96.3	Pulse	0.1000	3
H2	Sc	45	194110.95	0.6	94.2	Pulse	0.1000	3
H2	Ge	72	163511.45	0.7	100.5	Pulse	0.1000	3
H2	In	115	388629.25	0.6	96.3	Pulse	0.1000	3
He	Sc	45	48311.01	2.4	94.4	Pulse	0.1000	3
He	Ge	72	82568.18	0.7	100.9	Pulse	0.1000	3
He	In	115	84845.11	1.1	96.8	Pulse	0.1000	3
He	Tb	159	393727.05	0.5	98.0	Pulse	0.1000	3
He	Bi	209	312834.34	0.7	102.2	Pulse	0.1000	3

No Gas

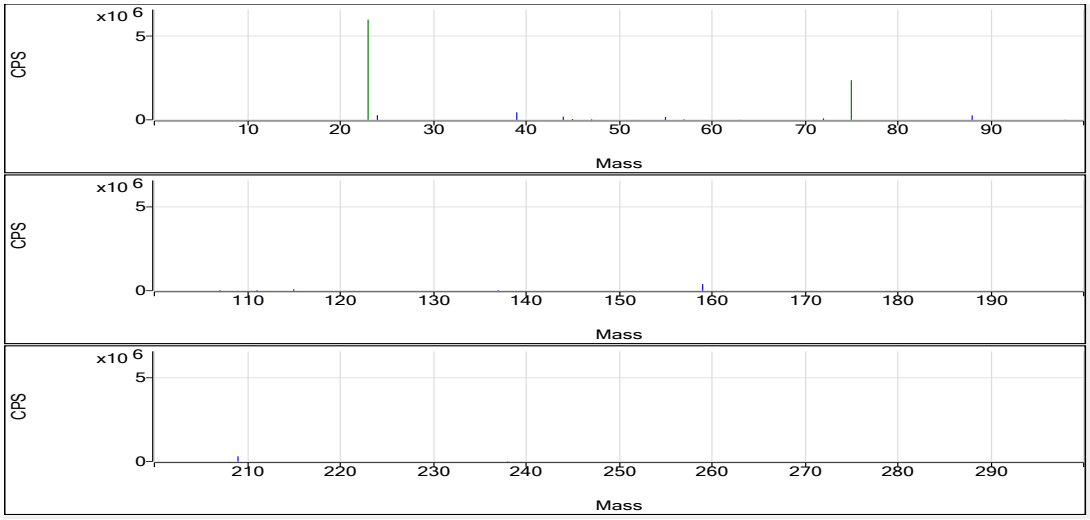


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.029	0	32.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.026	0	38.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.03	0	30.00	0.0007	3.404E-05
Se	78	2	H2	0.068	0.0001	10.67	0.0004	3.546E-05
Se	78	2	H2	0.223	0.0001	22.00	0.0004	3.546E-05
Se	78	2	H2	0.144	0.0001	16.00	0.0004	3.546E-05
Na	23	3	He	34058.533	121.8157	6047615.53	0.0036	0.4171
Na	23	3	He	35404.98	126.615	6027944.29	0.0036	0.4171
Na	23	3	He	34952.575	125.0024	5959988.04	0.0036	0.4171
Mg	24	3	He	3114.758	5.6323	279617.28	0.0018	0.004553
Mg	24	3	He	3171.31	5.7344	273007.98	0.0018	0.004553
Mg	24	3	He	3186.477	5.7618	274718.94	0.0018	0.004553
Al	27	3	He	6.794	0.006	300.01	0.0006	0.002085
Al	27	3	He	6.517	0.0059	280.01	0.0006	0.002085
Al	27	3	He	6.502	0.0059	280.01	0.0006	0.002085
K	39	3	He	7416.461	9.0964	451597.45	0.0012	0.4112
K	39	3	He	7751.781	9.4891	451761.67	0.0012	0.4112
K	39	3	He	7630.306	9.3469	445648.20	0.0012	0.4112
Ca	44	3	He	55303.66	3.7395	185648.88	0.0001	0.003322
Ca	44	3	He	57215.835	3.8687	184181.07	0.0001	0.003322
Ca	44	3	He	56723.087	3.8354	182866.72	0.0001	0.003322
Ti	47	3	He	0.757	0.0004	20.00	0.0005	0
Ti	47	3	He	0.395	0.0002	10.00	0.0005	0
Ti	47	3	He	0.789	0.0004	20.00	0.0005	0
V	51	3	He	0.464	0.0417	2068.16	0.0213	0.0318
V	51	3	He	0.659	0.0458	2180.18	0.0213	0.0318
V	51	3	He	0.48	0.042	2002.15	0.0213	0.0318
Cr	52	3	He	0.169	0.0479	2380.28	0.0294	0.04297
Cr	52	3	He	0.268	0.0508	2420.29	0.0294	0.04297
Cr	52	3	He	0.115	0.0464	2210.25	0.0294	0.04297
Mn	55	3	He	270.737	3.3686	167238.20	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	285.409	3.551	169059.67	0.0124	0.002801
Mn	55	3	He	285.53	3.5525	169381.87	0.0124	0.002801
Fe	57	3	He	1137.891	0.6538	32457.17	0.0006	0.002732
Fe	57	3	He	1158.829	0.6658	31695.65	0.0006	0.002732
Fe	57	3	He	1179.874	0.6778	32316.70	0.0006	0.002732
Co	59	3	He	0.187	0.0139	690.04	0.0549	0.003644
Co	59	3	He	0.156	0.0122	580.03	0.0549	0.003644
Co	59	3	He	0.186	0.0138	660.04	0.0549	0.003644
Ni	60	3	He	-0.227	0.012	1000.07	0.0093	0.01413
Ni	60	3	He	-0.393	0.0105	860.06	0.0093	0.01413
Ni	60	3	He	-0.241	0.0119	980.06	0.0093	0.01413
Cu	63	3	He	2.733	0.0843	7011.96	0.0274	0.009321
Cu	63	3	He	2.704	0.0835	6851.91	0.0274	0.009321
Cu	63	3	He	2.656	0.0822	6771.78	0.0274	0.009321
Zn	66	3	He	2.184	0.0126	1050.08	0.0031	0.005913
Zn	66	3	He	1.884	0.0117	960.07	0.0031	0.005913
Zn	66	3	He	1.552	0.0107	880.06	0.0031	0.005913
As	75	3	He	13409.15	28.7734	2394272.50	0.0021	0.0008698
As	75	3	He	13473.33	28.9111	2372881.00	0.0021	0.0008698
As	75	3	He	13386.287	28.7243	2367396.25	0.0021	0.0008698
Sr	88	3	He	352.612	3.1033	264475.68	0.0088	0.0006843
Sr	88	3	He	358.226	3.1527	264049.98	0.0088	0.0006843
Sr	88	3	He	349.195	3.0732	262933.59	0.0088	0.0006843
Mo	98	3	He	5.71	0.1271	10834.42	0.0219	0.001827
Mo	98	3	He	5.861	0.1304	10924.79	0.0219	0.001827
Mo	98	3	He	5.879	0.1308	11194.85	0.0219	0.001827
Ag	107	3	He	-0.005	0.0008	70.00	0.047	0.001064
Ag	107	3	He	-0.018	0.0002	20.00	0.047	0.001064
Ag	107	3	He	-0.02	0.0001	10.00	0.047	0.001064
Cd	111	3	He	0.002	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	0.02	0.0002	14.00	0.0053	6.086E-05
Cd	111	3	He	0.015	0.0001	12.00	0.0053	6.086E-05
Sn	120	3	He	0.012	0.015	1280.11	0.0154	0.01483
Sn	120	3	He	0.285	0.0192	1610.14	0.0154	0.01483
Sn	120	3	He	0.039	0.0154	1320.10	0.0154	0.01483
Sb	121	3	He	2.699	0.0387	3300.51	0.0143	0.0002661
Sb	121	3	He	2.537	0.0364	3050.48	0.0143	0.0002661
Sb	121	3	He	2.426	0.0348	2980.42	0.0143	0.0002661
Ba	137	3	He	74.45	0.3561	30344.17	0.0048	0.0002665
Ba	137	3	He	76.059	0.3637	30464.55	0.0048	0.0002665
Ba	137	3	He	75.927	0.3631	31066.08	0.0048	0.0002665
Tl	205	3	He	-0.044	0.0017	660.04	0.0246	0.002755
Tl	205	3	He	-0.06	0.0013	500.03	0.0246	0.002755
Tl	205	3	He	-0.064	0.0012	470.02	0.0246	0.002755
Pb	208	3	He	0.921	0.032	6791.99	0.0324	0.002158
Pb	208	3	He	0.925	0.0321	6611.95	0.0324	0.002158
Pb	208	3	He	0.857	0.0299	6341.75	0.0324	0.002158
U	238	3	He	1.404	0.0696	21889.17	0.0492	0.0004023
U	238	3	He	1.41	0.0699	21879.37	0.0492	0.0004023
U	238	3	He	1.419	0.0703	21829.21	0.0492	0.0004023
Sc	45	1	No Gas			2484295.28		
Sc	45	1	No Gas			2477474.03		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2493593.56		
Ge	72	1	No Gas			1248655.22		
Ge	72	1	No Gas			1226009.59		
Ge	72	1	No Gas			1249000.22		
Sc	45	2	H2			193087.61		
Sc	45	2	H2			195489.45		
Sc	45	2	H2			193755.78		
Ge	72	2	H2			163084.37		
Ge	72	2	H2			164891.48		
Ge	72	2	H2			162558.51		
In	115	2	H2			391331.79		
In	115	2	H2			387325.19		
In	115	2	H2			387230.78		
Sc	45	3	He			49645.61		
Sc	45	3	He			47608.45		
Sc	45	3	He			47678.97		
Ge	72	3	He			83211.45		
Ge	72	3	He			82075.18		
Ge	72	3	He			82417.90		
In	115	3	He			85232.24		
In	115	3	He			83762.05		
In	115	3	He			85563.42		
Tb	159	3	He			394891.56		
Tb	159	3	He			391642.10		
Tb	159	3	He			394647.49		
Bi	209	3	He			314680.87		
Bi	209	3	He			313185.46		
Bi	209	3	He			310636.69		

Quantitation Report

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Sample Type	Sample
Comment	E7
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

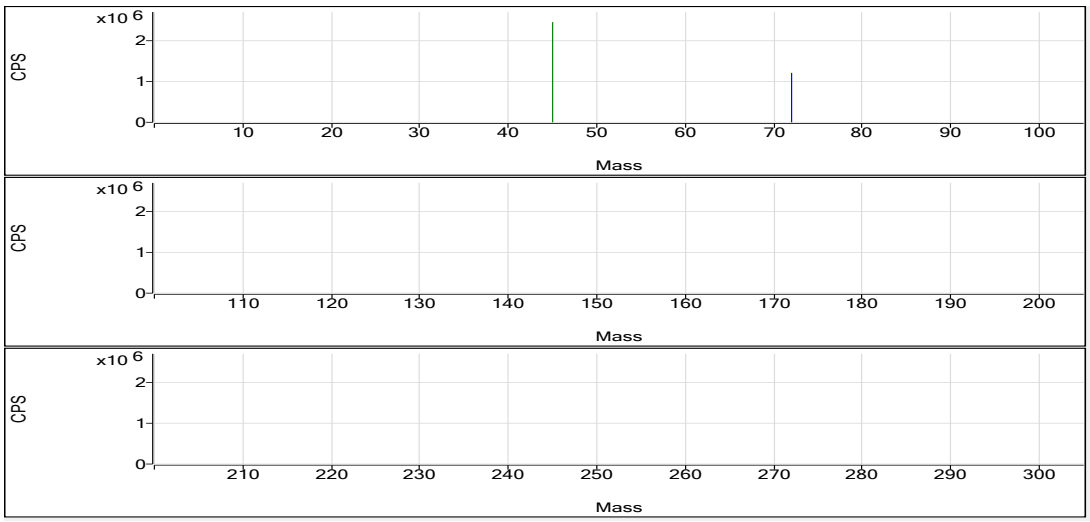
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.035	ppb	N/A	20.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.239	ppb	36.1	22.66	0.0001	Pulse	1.5000	3
Na	23	45	He	201336.162	ppb	2.2	34265953.66	718.0622	Analog	0.1000	3
Mg	24	45	He	3419.035	ppb	2.5	295003.60	6.1820	Pulse	0.1000	3
Al	27	45	He	3.403	ppb	58.9	193.34	0.0041	Pulse	0.1000	3
K	39	45	He	18284.041	ppb	2.2	1041405.72	21.8232	Pulse	0.1000	3
Ca	44	45	He	37900.398	ppb	2.4	122340.89	2.5638	Pulse	0.1000	3
Ti	47	45	He	1.450	ppb	33.6	36.67	0.0008	Pulse	0.1000	3
V	51	45	He	1.185	ppb	13.5	2717.61	0.0570	Pulse	0.5000	3
Cr	52	45	He	0.429	ppb	35.7	2650.34	0.0556	Pulse	0.1000	3
Mn	55	45	He	768.333	ppb	2.6	455932.00	9.5548	Pulse	0.1000	3
Fe	57	45	He	2271.016	ppb	1.0	62147.66	1.3021	Pulse	0.1000	3
Co	59	45	He	0.204	ppb	12.8	706.71	0.0148	Pulse	0.1000	3
Ni	60	72	He	-0.155	ppb	N/A	1050.08	0.0127	Pulse	0.1000	3
Cu	63	72	He	0.209	ppb	20.9	1246.76	0.0151	Pulse	0.1000	3
Zn	66	72	He	0.044	ppb	768.2	500.03	0.0060	Pulse	0.1000	3
As	75	72	He	3013.249	ppb	1.4	535296.41	6.4665	Pulse	0.5000	3
Sr	88	115	He	464.061	ppb	1.5	337010.08	4.0839	Pulse	0.1000	3
Mo	98	115	He	11.032	ppb	2.4	20131.66	0.2439	Pulse	0.1000	3
Ag	107	115	He	-0.008	ppb	N/A	56.67	0.0007	Pulse	0.1000	3
Cd	111	115	He	-0.005	ppb	N/A	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.364	ppb	19.2	1686.84	0.0204	Pulse	0.1000	3
Sb	121	115	He	2.150	ppb	3.8	2550.32	0.0309	Pulse	0.1000	3
Ba	137	115	He	162.586	ppb	0.3	64144.25	0.7772	Pulse	0.1000	3
Tl	205	159	He	-0.088	ppb	N/A	236.68	0.0006	Pulse	0.1000	3
Pb	208	159	He	0.036	ppb	51.2	1296.74	0.0033	Pulse	0.1000	3
U	238	209	He	0.301	ppb	2.2	4671.02	0.0152	Pulse	0.1000	3

ISTD Table:

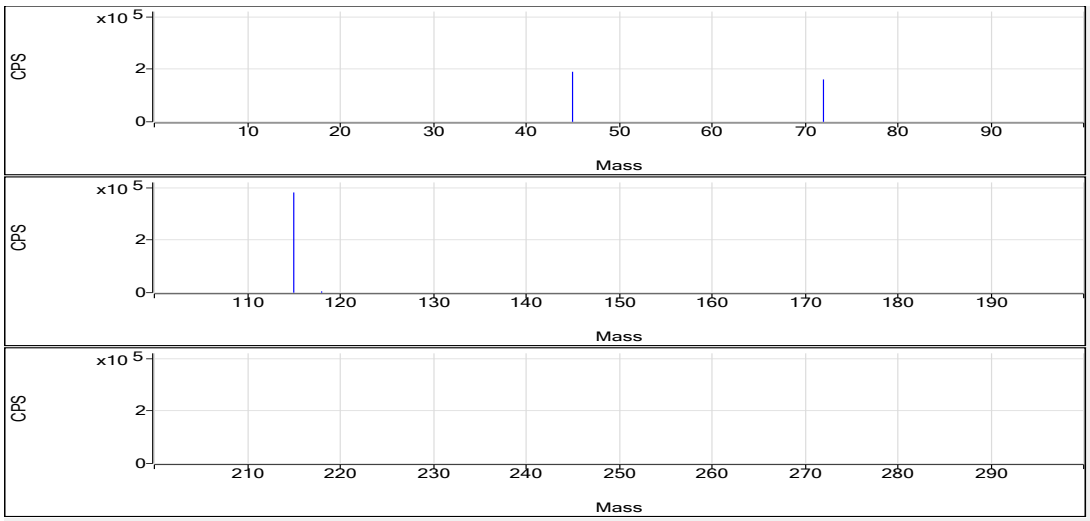
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2468443.97	1.4	94.7	Analog	0.1000	3
No Gas	Ge	72	1216470.40	0.5	94.4	Pulse	0.1000	3
H2	Sc	45	191128.28	0.8	92.7	Pulse	0.1000	3
H2	Ge	72	161831.13	1.6	99.4	Pulse	0.1000	3
H2	In	115	382732.18	0.6	94.8	Pulse	0.1000	3
He	Sc	45	47735.79	2.2	93.2	Pulse	0.1000	3
He	Ge	72	82789.04	1.3	101.1	Pulse	0.1000	3
He	In	115	82529.64	1.1	94.2	Pulse	0.1000	3
He	Tb	159	390645.59	0.4	97.3	Pulse	0.1000	3
He	Bi	209	306940.16	0.3	100.3	Pulse	0.1000	3

No Gas

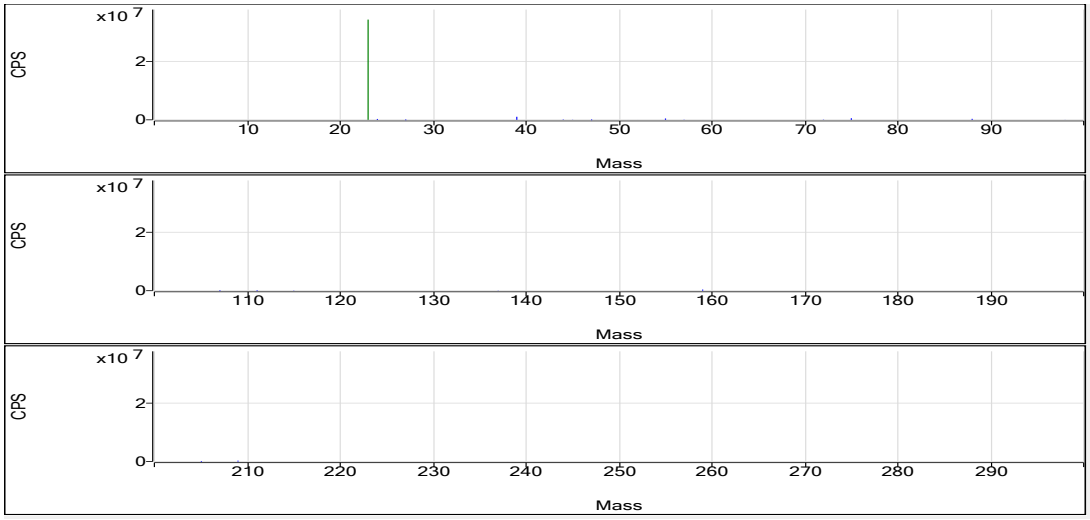


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.036	0	20.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.032	0	26.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.038	0	16.00	0.0007	3.404E-05
Se	78	2	H2	0.215	0.0001	21.33	0.0004	3.546E-05
Se	78	2	H2	0.167	0.0001	17.33	0.0004	3.546E-05
Se	78	2	H2	0.334	0.0002	29.33	0.0004	3.546E-05
Na	23	3	He	196489.467	700.7866	34221404.49	0.0036	0.4171
Na	23	3	He	205361.274	732.4093	34207726.99	0.0036	0.4171
Na	23	3	He	202157.746	720.9906	34368729.49	0.0036	0.4171
Mg	24	3	He	3355.435	6.0671	296274.74	0.0018	0.004553
Mg	24	3	He	3515.405	6.3562	296868.77	0.0018	0.004553
Mg	24	3	He	3386.264	6.1228	291867.28	0.0018	0.004553
Al	27	3	He	1.695	0.0031	150.01	0.0006	0.002085
Al	27	3	He	5.61	0.0054	250.01	0.0006	0.002085
Al	27	3	He	2.904	0.0038	180.01	0.0006	0.002085
K	39	3	He	17877.308	21.3469	1042428.19	0.0012	0.4112
K	39	3	He	18699.251	22.3094	1041978.27	0.0012	0.4112
K	39	3	He	18275.564	21.8133	1039810.69	0.0012	0.4112
Ca	44	3	He	37123.55	2.5113	122633.20	0.0001	0.003322
Ca	44	3	He	38922.123	2.6328	122966.50	0.0001	0.003322
Ca	44	3	He	37655.521	2.5472	121422.98	0.0001	0.003322
Ti	47	3	He	1.155	0.0006	30.00	0.0005	0
Ti	47	3	He	2.013	0.0011	50.00	0.0005	0
Ti	47	3	He	1.183	0.0006	30.00	0.0005	0
V	51	3	He	1.004	0.0531	2594.24	0.0213	0.0318
V	51	3	He	1.305	0.0595	2780.29	0.0213	0.0318
V	51	3	He	1.246	0.0583	2778.29	0.0213	0.0318
Cr	52	3	He	0.259	0.0506	2470.30	0.0294	0.04297
Cr	52	3	He	0.556	0.0593	2770.37	0.0294	0.04297
Cr	52	3	He	0.472	0.0569	2710.35	0.0294	0.04297
Mn	55	3	He	749.698	9.3232	455276.09	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	789.647	9.8198	458641.01	0.0124	0.002801
Mn	55	3	He	765.654	9.5215	453878.90	0.0124	0.002801
Fe	57	3	He	2248.206	1.289	62947.72	0.0006	0.002732
Fe	57	3	He	2291.822	1.314	61371.34	0.0006	0.002732
Fe	57	3	He	2273.02	1.3032	62123.93	0.0006	0.002732
Co	59	3	He	0.202	0.0147	720.04	0.0549	0.003644
Co	59	3	He	0.23	0.0163	760.05	0.0549	0.003644
Co	59	3	He	0.178	0.0134	640.04	0.0549	0.003644
Ni	60	3	He	-0.056	0.0136	1140.09	0.0093	0.01413
Ni	60	3	He	-0.084	0.0133	1090.08	0.0093	0.01413
Ni	60	3	He	-0.327	0.0111	920.06	0.0093	0.01413
Cu	63	3	He	0.257	0.0164	1370.11	0.0274	0.009321
Cu	63	3	He	0.2	0.0148	1210.09	0.0274	0.009321
Cu	63	3	He	0.17	0.014	1160.09	0.0274	0.009321
Zn	66	3	He	-0.293	0.005	420.02	0.0031	0.005913
Zn	66	3	He	0.387	0.0071	580.03	0.0031	0.005913
Zn	66	3	He	0.038	0.006	500.03	0.0031	0.005913
As	75	3	He	2985.636	6.4073	536704.13	0.0021	0.0008698
As	75	3	He	3061.223	6.5694	536607.00	0.0021	0.0008698
As	75	3	He	2992.886	6.4228	532578.13	0.0021	0.0008698
Sr	88	3	He	456.717	4.0193	335784.21	0.0088	0.0006843
Sr	88	3	He	465.097	4.093	335971.32	0.0088	0.0006843
Sr	88	3	He	470.37	4.1394	339274.72	0.0088	0.0006843
Mo	98	3	He	11.063	0.2446	20435.51	0.0219	0.001827
Mo	98	3	He	10.755	0.2379	19524.13	0.0219	0.001827
Mo	98	3	He	11.278	0.2493	20435.35	0.0219	0.001827
Ag	107	3	He	-0.007	0.0007	60.00	0.047	0.001064
Ag	107	3	He	-0.017	0.0002	20.00	0.047	0.001064
Ag	107	3	He	0.001	0.0011	90.00	0.047	0.001064
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	-0.002	0	4.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Sn	120	3	He	0.319	0.0198	1650.16	0.0154	0.01483
Sn	120	3	He	0.445	0.0217	1780.18	0.0154	0.01483
Sn	120	3	He	0.328	0.0199	1630.17	0.0154	0.01483
Sb	121	3	He	2.166	0.0311	2600.34	0.0143	0.0002661
Sb	121	3	He	2.221	0.0319	2620.34	0.0143	0.0002661
Sb	121	3	He	2.062	0.0297	2430.27	0.0143	0.0002661
Ba	137	3	He	162.339	0.7761	64833.67	0.0048	0.0002665
Ba	137	3	He	162.308	0.7759	63689.19	0.0048	0.0002665
Ba	137	3	He	163.113	0.7798	63909.88	0.0048	0.0002665
Tl	205	3	He	-0.091	0.0005	200.01	0.0246	0.002755
Tl	205	3	He	-0.084	0.0007	270.01	0.0246	0.002755
Tl	205	3	He	-0.087	0.0006	240.01	0.0246	0.002755
Pb	208	3	He	0.033	0.0032	750.05	0.0324	0.002158
Pb	208	3	He	0.056	0.004	720.05	0.0324	0.002158
Pb	208	3	He	0.019	0.0028	510.03	0.0324	0.002158
U	238	3	He	0.296	0.015	4591.01	0.0492	0.0004023
U	238	3	He	0.308	0.0156	4781.05	0.0492	0.0004023
U	238	3	He	0.298	0.0151	4641.01	0.0492	0.0004023
Sc	45	1	No Gas			2449722.31		
Sc	45	1	No Gas			2445909.65		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2509699.96		
Ge	72	1	No Gas			1216092.48		
Ge	72	1	No Gas			1210753.19		
Ge	72	1	No Gas			1222565.53		
Sc	45	2	H2			191515.17		
Sc	45	2	H2			192418.38		
Sc	45	2	H2			189451.29		
Ge	72	2	H2			164559.63		
Ge	72	2	H2			159622.59		
Ge	72	2	H2			161311.16		
In	115	2	H2			383022.26		
In	115	2	H2			380225.07		
In	115	2	H2			384949.21		
Sc	45	3	He			48832.85		
Sc	45	3	He			46705.75		
Sc	45	3	He			47668.76		
Ge	72	3	He			83765.07		
Ge	72	3	He			81682.25		
Ge	72	3	He			82919.79		
In	115	3	He			83550.90		
In	115	3	He			82092.23		
In	115	3	He			81970.43		
Tb	159	3	He			390236.40		
Tb	159	3	He			389185.35		
Tb	159	3	He			392515.03		
Bi	209	3	He			306113.92		
Bi	209	3	He			306688.10		
Bi	209	3	He			308018.47		

Quantitation Report

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Sample Type	Sample
Comment	E7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

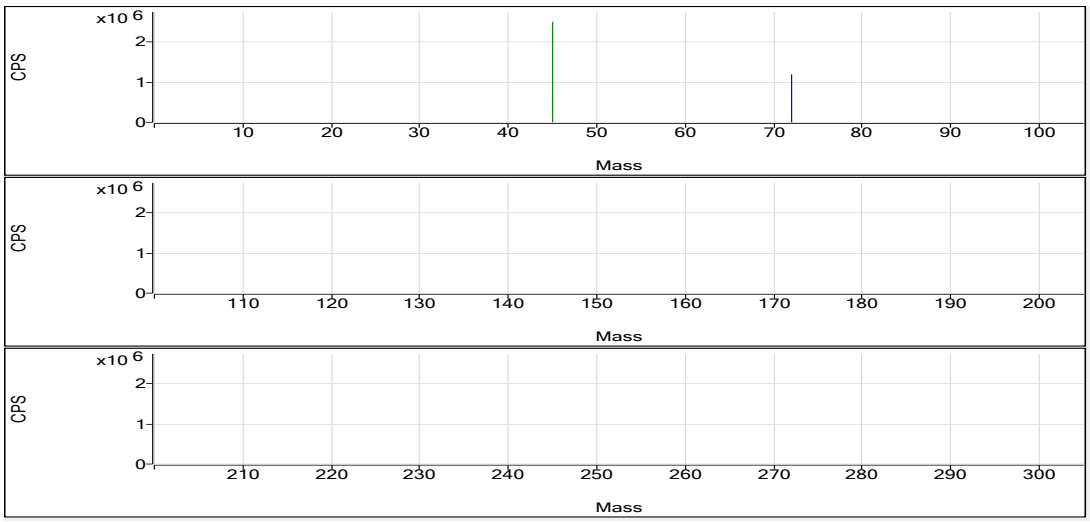
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.028	ppb	N/A	34.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.130	ppb	20.2	14.67	0.0001	Pulse	1.5000	3
Na	23	45	He	17408.045	ppb	1.1	3013740.27	62.4665	Analog	0.1000	3
Mg	24	45	He	109612.219	ppb	1.6	9555038.19	198.0508	Analog	0.1000	3
Al	27	45	He	10.759	ppb	43.6	403.35	0.0084	Pulse	0.1000	3
K	39	45	He	36284.166	ppb	0.6	2069955.44	42.9027	Analog	0.1000	3
Ca	44	45	He	468032.844	ppb	0.7	1525729.72	31.6223	Analog	0.1000	3
Ti	47	45	He	0.259	ppb	86.6	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	-0.384	ppb	N/A	1140.05	0.0236	Pulse	0.5000	3
Cr	52	45	He	-0.103	ppb	N/A	1926.86	0.0399	Pulse	0.1000	3
Mn	55	45	He	3618.022	ppb	1.4	2170213.67	44.9825	Analog	0.1000	3
Fe	57	45	He	60310.872	ppb	0.8	1664978.20	34.5096	Analog	0.1000	3
Co	59	45	He	10.525	ppb	1.7	28047.89	0.5813	Pulse	0.1000	3
Ni	60	72	He	4.011	ppb	11.4	4164.08	0.0514	Pulse	0.1000	3
Cu	63	72	He	0.730	ppb	7.1	2380.27	0.0293	Pulse	0.1000	3
Zn	66	72	He	31.586	ppb	4.5	8346.05	0.1029	Pulse	0.1000	3
As	75	72	He	1.874	ppb	8.1	396.68	0.0049	Pulse	0.5000	3
Sr	88	115	He	1140.838	ppb	1.6	848236.73	10.0388	Pulse	0.1000	3
Mo	98	115	He	0.014	ppb	258.6	180.01	0.0021	Pulse	0.1000	3
Ag	107	115	He	-0.013	ppb	N/A	36.67	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.097	ppb	30.9	48.67	0.0006	Pulse	0.5000	3
Sn	120	115	He	-0.087	ppb	N/A	1140.09	0.0135	Pulse	0.1000	3
Sb	121	115	He	0.004	ppb	716.8	26.67	0.0003	Pulse	0.1000	3
Ba	137	115	He	20.391	ppb	2.2	8259.49	0.0977	Pulse	0.1000	3
Tl	205	159	He	-0.078	ppb	N/A	333.35	0.0008	Pulse	0.1000	3
Pb	208	159	He	0.001	ppb	531.5	860.04	0.0022	Pulse	0.1000	3
U	238	209	He	0.425	ppb	4.3	6581.91	0.0213	Pulse	0.1000	3

ISTD Table:

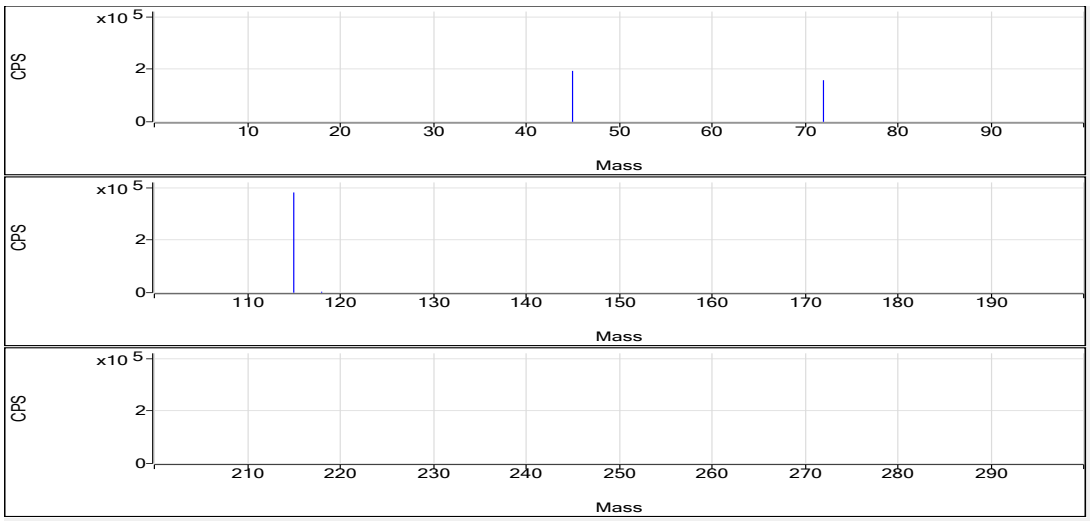
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2495966.63	1.3	95.7	Analog	0.1000	3
No Gas	Ge	72	1194768.55	1.0	92.7	Pulse	0.1000	3
H2	Sc	45	194068.44	1.3	94.2	Pulse	0.1000	3
H2	Ge	72	158540.87	0.8	97.4	Pulse	0.1000	3
H2	In	115	381847.46	1.4	94.6	Pulse	0.1000	3
He	Sc	45	48247.56	0.5	94.2	Pulse	0.1000	3
He	Ge	72	81157.19	2.0	99.1	Pulse	0.1000	3
He	In	115	84510.34	1.7	96.4	Pulse	0.1000	3
He	Tb	159	392502.57	1.3	97.7	Pulse	0.1000	3
He	Bi	209	308801.99	1.0	100.9	Pulse	0.1000	3

No Gas

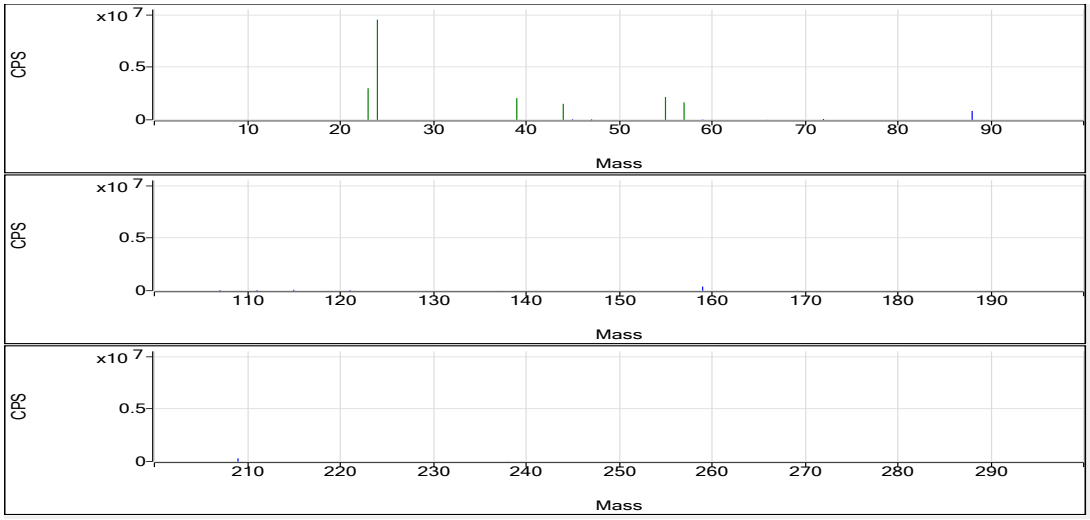


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.035	0	22.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.025	0	40.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.024	0	40.00	0.0007	3.404E-05
Se	78	2	H2	0.112	0.0001	13.33	0.0004	3.546E-05
Se	78	2	H2	0.119	0.0001	14.00	0.0004	3.546E-05
Se	78	2	H2	0.16	0.0001	16.67	0.0004	3.546E-05
Na	23	3	He	17188.322	61.6833	2993605.27	0.0036	0.4171
Na	23	3	He	17551.835	62.979	3025529.95	0.0036	0.4171
Na	23	3	He	17483.978	62.7372	3022085.58	0.0036	0.4171
Mg	24	3	He	108337.531	195.7477	9499996.11	0.0018	0.004553
Mg	24	3	He	111558.079	201.5666	9683311.73	0.0018	0.004553
Mg	24	3	He	108941.046	196.8381	9481806.73	0.0018	0.004553
Al	27	3	He	13.753	0.0101	490.02	0.0006	0.002085
Al	27	3	He	5.355	0.0052	250.01	0.0006	0.002085
Al	27	3	He	13.17	0.0098	470.02	0.0006	0.002085
K	39	3	He	36375.084	43.0092	2087313.56	0.0012	0.4112
K	39	3	He	36429.875	43.0733	2069254.03	0.0012	0.4112
K	39	3	He	36047.538	42.6256	2053298.72	0.0012	0.4112
Ca	44	3	He	470372.384	31.7804	1542359.51	0.0001	0.003322
Ca	44	3	He	464197.836	31.3632	1506697.95	0.0001	0.003322
Ca	44	3	He	469528.312	31.7233	1528131.70	0.0001	0.003322
Ti	47	3	He	0.387	0.0002	10.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.39	0.0002	10.00	0.0005	0
V	51	3	He	-0.391	0.0235	1140.05	0.0213	0.0318
V	51	3	He	-0.429	0.0227	1090.05	0.0213	0.0318
V	51	3	He	-0.334	0.0247	1190.06	0.0213	0.0318
Cr	52	3	He	-0.221	0.0365	1770.17	0.0294	0.04297
Cr	52	3	He	-0.017	0.0425	2040.22	0.0294	0.04297
Cr	52	3	He	-0.07	0.0409	1970.19	0.0294	0.04297
Mn	55	3	He	3564.42	44.3162	2150744.81	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	3625.588	45.0766	2165492.00	0.0124	0.002801
Mn	55	3	He	3664.058	45.5549	2194404.19	0.0124	0.002801
Fe	57	3	He	59871.456	34.2582	1662614.82	0.0006	0.002732
Fe	57	3	He	60212.842	34.4536	1655157.94	0.0006	0.002732
Fe	57	3	He	60848.319	34.8171	1677161.85	0.0006	0.002732
Co	59	3	He	10.564	0.5835	28318.34	0.0549	0.003644
Co	59	3	He	10.331	0.5707	27416.70	0.0549	0.003644
Co	59	3	He	10.678	0.5898	28408.63	0.0549	0.003644
Ni	60	3	He	4.393	0.0549	4390.83	0.0093	0.01413
Ni	60	3	He	3.504	0.0467	3870.63	0.0093	0.01413
Ni	60	3	He	4.137	0.0525	4230.79	0.0093	0.01413
Cu	63	3	He	0.755	0.03	2400.29	0.0274	0.009321
Cu	63	3	He	0.671	0.0277	2300.24	0.0274	0.009321
Cu	63	3	He	0.765	0.0303	2440.28	0.0274	0.009321
Zn	66	3	He	32.625	0.1061	8482.85	0.0031	0.005913
Zn	66	3	He	29.958	0.0979	8122.53	0.0031	0.005913
Zn	66	3	He	32.176	0.1047	8432.77	0.0031	0.005913
As	75	3	He	2.019	0.0052	416.01	0.0021	0.0008698
As	75	3	He	1.718	0.0046	378.01	0.0021	0.0008698
As	75	3	He	1.886	0.0049	396.01	0.0021	0.0008698
Sr	88	3	He	1152.804	10.1441	852586.16	0.0088	0.0006843
Sr	88	3	He	1119.84	9.854	848628.74	0.0088	0.0006843
Sr	88	3	He	1149.871	10.1183	843495.30	0.0088	0.0006843
Mo	98	3	He	0.02	0.0023	190.01	0.0219	0.001827
Mo	98	3	He	-0.025	0.0013	110.00	0.0219	0.001827
Mo	98	3	He	0.048	0.0029	240.01	0.0219	0.001827
Ag	107	3	He	-0.01	0.0006	50.00	0.047	0.001064
Ag	107	3	He	-0.013	0.0005	40.00	0.047	0.001064
Ag	107	3	He	-0.018	0.0002	20.00	0.047	0.001064
Cd	111	3	He	0.065	0.0004	34.00	0.0053	6.086E-05
Cd	111	3	He	0.102	0.0006	52.00	0.0053	6.086E-05
Cd	111	3	He	0.124	0.0007	60.00	0.0053	6.086E-05
Sn	120	3	He	-0.206	0.0117	980.07	0.0154	0.01483
Sn	120	3	He	-0.066	0.0138	1190.09	0.0154	0.01483
Sn	120	3	He	0.011	0.015	1250.10	0.0154	0.01483
Sb	121	3	He	-0.019	0	0.00	0.0143	0.0002661
Sb	121	3	He	-0.002	0.0002	20.00	0.0143	0.0002661
Sb	121	3	He	0.032	0.0007	60.00	0.0143	0.0002661
Ba	137	3	He	20.268	0.0971	8162.79	0.0048	0.0002665
Ba	137	3	He	20.897	0.1001	8622.98	0.0048	0.0002665
Ba	137	3	He	20.007	0.0959	7992.70	0.0048	0.0002665
Tl	205	3	He	-0.082	0.0007	290.01	0.0246	0.002755
Tl	205	3	He	-0.074	0.0009	360.02	0.0246	0.002755
Tl	205	3	He	-0.076	0.0009	350.02	0.0246	0.002755
Pb	208	3	He	-0.005	0.002	420.02	0.0324	0.002158
Pb	208	3	He	0.003	0.0023	400.02	0.0324	0.002158
Pb	208	3	He	0.005	0.0023	460.02	0.0324	0.002158
U	238	3	He	0.408	0.0205	6391.80	0.0492	0.0004023
U	238	3	He	0.444	0.0223	6882.06	0.0492	0.0004023
U	238	3	He	0.422	0.0212	6471.88	0.0492	0.0004023
Sc	45	1	No Gas			2517830.90		
Sc	45	1	No Gas			2512047.15		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2458021.84		
Ge	72	1	No Gas			1207584.44		
Ge	72	1	No Gas			1190876.31		
Ge	72	1	No Gas			1185844.90		
Sc	45	2	H2			191495.58		
Sc	45	2	H2			194270.70		
Sc	45	2	H2			196439.04		
Ge	72	2	H2			157902.56		
Ge	72	2	H2			160068.34		
Ge	72	2	H2			157651.70		
In	115	2	H2			388017.73		
In	115	2	H2			379085.19		
In	115	2	H2			378439.45		
Sc	45	3	He			48531.84		
Sc	45	3	He			48040.27		
Sc	45	3	He			48170.58		
Ge	72	3	He			79963.70		
Ge	72	3	He			82971.22		
Ge	72	3	He			80536.66		
In	115	3	He			84054.42		
In	115	3	He			86126.77		
In	115	3	He			83369.50		
Tb	159	3	He			391203.04		
Tb	159	3	He			388280.27		
Tb	159	3	He			398024.41		
Bi	209	3	He			311669.96		
Bi	209	3	He			309049.37		
Bi	209	3	He			305686.64		

Quantitation Report

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Sample Type	Sample
Comment	E7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

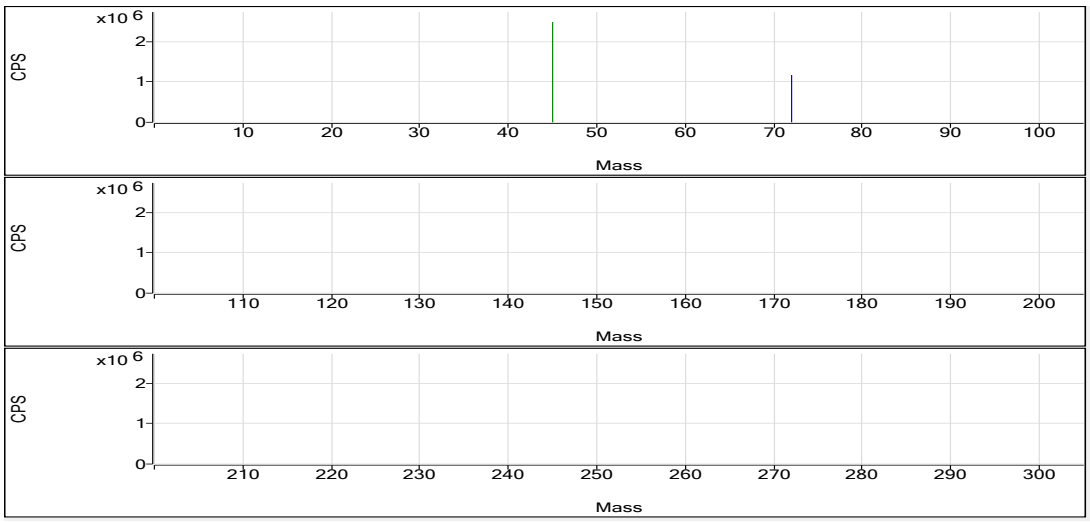
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.034	ppb	N/A	23.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.064	ppb	32.5	10.22	0.0001	Pulse	1.5000	3
Na	23	45	He	15301.637	ppb	3.8	2694507.67	54.9584	Analog	0.1000	3
Mg	24	45	He	91400.882	ppb	3.6	8097207.59	165.1467	Analog	0.1000	3
Al	27	45	He	5.068	ppb	19.7	246.68	0.0050	Pulse	0.1000	3
K	39	45	He	31668.687	ppb	2.8	1838890.91	37.4976	Analog	0.1000	3
Ca	44	45	He	438202.909	ppb	2.0	1452128.31	29.6071	Analog	0.1000	3
Ti	47	45	He	0.517	ppb	86.7	13.33	0.0003	Pulse	0.1000	3
V	51	45	He	-0.147	ppb	N/A	1406.75	0.0287	Pulse	0.5000	3
Cr	52	45	He	0.696	ppb	30.2	3107.10	0.0634	Pulse	0.1000	3
Mn	55	45	He	6309.807	ppb	3.3	3846501.72	78.4472	Analog	0.1000	3
Fe	57	45	He	959.274	ppb	2.8	27049.48	0.5516	Pulse	0.1000	3
Co	59	45	He	0.149	ppb	16.9	580.03	0.0118	Pulse	0.1000	3
Ni	60	72	He	-0.487	ppb	N/A	783.38	0.0096	Pulse	0.1000	3
Cu	63	72	He	-0.068	ppb	N/A	610.03	0.0075	Pulse	0.1000	3
Zn	66	72	He	0.109	ppb	117.8	510.02	0.0062	Pulse	0.1000	3
As	75	72	He	0.882	ppb	15.7	225.33	0.0028	Pulse	0.5000	3
Sr	88	115	He	1040.987	ppb	0.7	791193.61	9.1602	Pulse	0.1000	3
Mo	98	115	He	-0.004	ppb	N/A	150.01	0.0017	Pulse	0.1000	3
Ag	107	115	He	-0.008	ppb	N/A	60.00	0.0007	Pulse	0.1000	3
Cd	111	115	He	-0.007	ppb	N/A	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.017	ppb	117.2	1303.45	0.0151	Pulse	0.1000	3
Sb	121	115	He	0.014	ppb	177.1	40.00	0.0005	Pulse	0.1000	3
Ba	137	115	He	26.613	ppb	1.7	11008.16	0.1274	Pulse	0.1000	3
Tl	205	159	He	-0.089	ppb	N/A	223.35	0.0006	Pulse	0.1000	3
Pb	208	159	He	0.013	ppb	59.4	1010.05	0.0026	Pulse	0.1000	3
U	238	209	He	0.002	ppb	143.4	150.01	0.0005	Pulse	0.1000	3

ISTD Table:

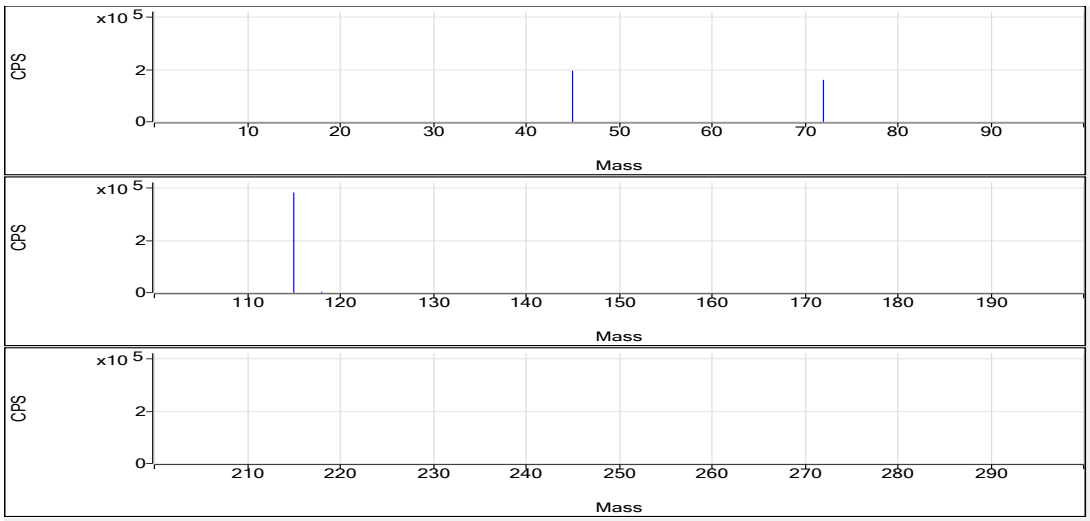
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2490178.56	0.6	95.5	Analog	0.1000	3
No Gas	Ge	72	1174180.19	0.7	91.1	Pulse	0.1000	3
H2	Sc	45	195568.47	1.8	94.9	Pulse	0.1000	3
H2	Ge	72	160581.77	0.8	98.7	Pulse	0.1000	3
H2	In	115	383388.67	0.7	95.0	Pulse	0.1000	3
He	Sc	45	49066.91	3.2	95.8	Pulse	0.1000	3
He	Ge	72	81620.08	1.1	99.7	Pulse	0.1000	3
He	In	115	86375.01	0.8	98.6	Pulse	0.1000	3
He	Tb	159	392366.70	1.0	97.7	Pulse	0.1000	3
He	Bi	209	309472.90	1.0	101.1	Pulse	0.1000	3

No Gas

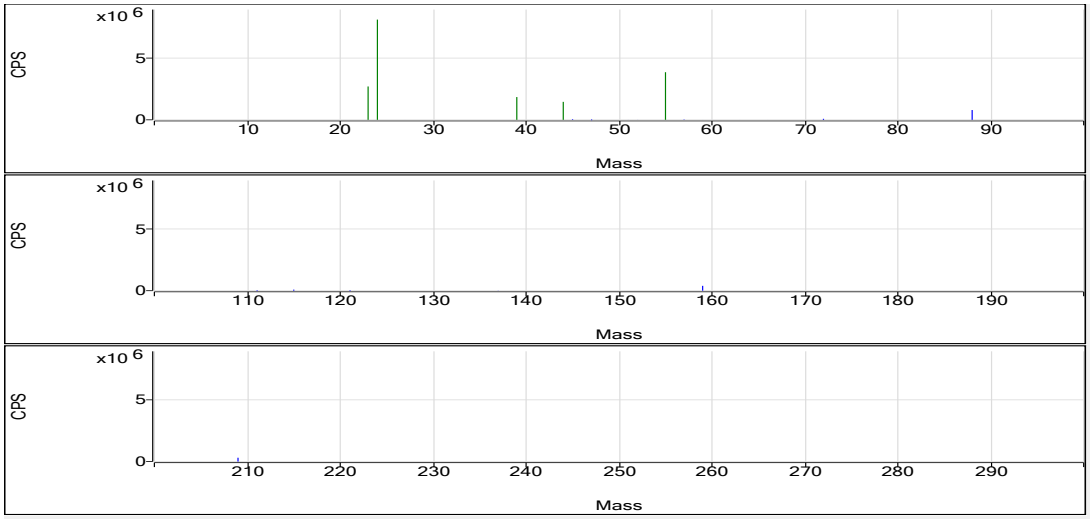


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.035	0	22.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.032	0	26.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.035	0	22.00	0.0007	3.404E-05
Se	78	2	H2	0.052	0.0001	9.33	0.0004	3.546E-05
Se	78	2	H2	0.088	0.0001	12.00	0.0004	3.546E-05
Se	78	2	H2	0.053	0.0001	9.33	0.0004	3.546E-05
Na	23	3	He	14967.138	53.7661	2673574.02	0.0036	0.4171
Na	23	3	He	14964.352	53.7562	2697881.83	0.0036	0.4171
Na	23	3	He	15973.423	57.3529	2712067.15	0.0036	0.4171
Mg	24	3	He	90855.04	164.1605	8163047.38	0.0018	0.004553
Mg	24	3	He	88406.053	159.7357	8016716.76	0.0018	0.004553
Mg	24	3	He	94941.552	171.544	8111858.63	0.0018	0.004553
Al	27	3	He	5.397	0.0052	260.01	0.0006	0.002085
Al	27	3	He	3.946	0.0044	220.01	0.0006	0.002085
Al	27	3	He	5.86	0.0055	260.01	0.0006	0.002085
K	39	3	He	31006.614	36.7223	1826052.16	0.0012	0.4112
K	39	3	He	31341.218	37.1141	1862660.44	0.0012	0.4112
K	39	3	He	32658.228	38.6564	1827960.13	0.0012	0.4112
Ca	44	3	He	435608.571	29.4318	1463526.85	0.0001	0.003322
Ca	44	3	He	431200.078	29.134	1462158.73	0.0001	0.003322
Ca	44	3	He	447800.077	30.2554	1430699.35	0.0001	0.003322
Ti	47	3	He	0.756	0.0004	20.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.795	0.0004	20.00	0.0005	0
V	51	3	He	-0.171	0.0282	1400.08	0.0213	0.0318
V	51	3	He	-0.157	0.0285	1428.08	0.0213	0.0318
V	51	3	He	-0.111	0.0294	1392.08	0.0213	0.0318
Cr	52	3	He	0.515	0.0581	2890.38	0.0294	0.04297
Cr	52	3	He	0.646	0.062	3110.42	0.0294	0.04297
Cr	52	3	He	0.927	0.0702	3320.51	0.0294	0.04297
Mn	55	3	He	6201.95	77.1063	3834187.76	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	6179.259	76.8242	3855604.63	0.0124	0.002801
Mn	55	3	He	6548.212	81.4111	3849712.76	0.0124	0.002801
Fe	57	3	He	937.407	0.5391	26805.79	0.0006	0.002732
Fe	57	3	He	950.718	0.5467	27436.74	0.0006	0.002732
Fe	57	3	He	989.696	0.569	26905.90	0.0006	0.002732
Co	59	3	He	0.153	0.0121	600.04	0.0549	0.003644
Co	59	3	He	0.122	0.0104	520.03	0.0549	0.003644
Co	59	3	He	0.172	0.0131	620.03	0.0549	0.003644
Ni	60	3	He	-0.42	0.0102	830.05	0.0093	0.01413
Ni	60	3	He	-0.557	0.009	740.05	0.0093	0.01413
Ni	60	3	He	-0.485	0.0096	780.05	0.0093	0.01413
Cu	63	3	He	-0.025	0.0086	700.04	0.0274	0.009321
Cu	63	3	He	-0.04	0.0082	680.04	0.0274	0.009321
Cu	63	3	He	-0.137	0.0056	450.02	0.0274	0.009321
Zn	66	3	He	0.161	0.0064	520.02	0.0031	0.005913
Zn	66	3	He	0.203	0.0065	540.03	0.0031	0.005913
Zn	66	3	He	-0.037	0.0058	470.02	0.0031	0.005913
As	75	3	He	0.95	0.0029	236.00	0.0021	0.0008698
As	75	3	He	0.723	0.0024	200.00	0.0021	0.0008698
As	75	3	He	0.974	0.003	240.00	0.0021	0.0008698
Sr	88	3	He	1035.091	9.1083	794042.49	0.0088	0.0006843
Sr	88	3	He	1039.459	9.1468	786326.47	0.0088	0.0006843
Sr	88	3	He	1048.412	9.2256	793211.86	0.0088	0.0006843
Mo	98	3	He	-0.021	0.0014	120.00	0.0219	0.001827
Mo	98	3	He	-0.014	0.0015	130.01	0.0219	0.001827
Mo	98	3	He	0.023	0.0023	200.01	0.0219	0.001827
Ag	107	3	He	-0.015	0.0003	30.00	0.047	0.001064
Ag	107	3	He	-0.005	0.0008	70.00	0.047	0.001064
Ag	107	3	He	-0.003	0.0009	80.00	0.047	0.001064
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Cd	111	3	He	0.002	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Sn	120	3	He	0.035	0.0154	1340.12	0.0154	0.01483
Sn	120	3	He	0.019	0.0151	1300.12	0.0154	0.01483
Sn	120	3	He	-0.004	0.0148	1270.10	0.0154	0.01483
Sb	121	3	He	0.014	0.0005	40.00	0.0143	0.0002661
Sb	121	3	He	-0.011	0.0001	10.00	0.0143	0.0002661
Sb	121	3	He	0.038	0.0008	70.00	0.0143	0.0002661
Ba	137	3	He	26.6	0.1274	11104.92	0.0048	0.0002665
Ba	137	3	He	26.171	0.1253	10774.57	0.0048	0.0002665
Ba	137	3	He	27.069	0.1296	11145.00	0.0048	0.0002665
Tl	205	3	He	-0.084	0.0007	270.02	0.0246	0.002755
Tl	205	3	He	-0.084	0.0007	270.01	0.0246	0.002755
Tl	205	3	He	-0.099	0.0003	130.01	0.0246	0.002755
Pb	208	3	He	0.004	0.0023	560.03	0.0324	0.002158
Pb	208	3	He	0.017	0.0027	580.03	0.0324	0.002158
Pb	208	3	He	0.018	0.0027	490.03	0.0324	0.002158
U	238	3	He	0.004	0.0006	190.01	0.0492	0.0004023
U	238	3	He	0	0.0004	120.01	0.0492	0.0004023
U	238	3	He	0.001	0.0005	140.01	0.0492	0.0004023
Sc	45	1	No Gas			2504694.18		
Sc	45	1	No Gas			2473000.12		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2492841.37		
Ge	72	1	No Gas			1183136.47		
Ge	72	1	No Gas			1172340.37		
Ge	72	1	No Gas			1167063.73		
Sc	45	2	H2			199582.26		
Sc	45	2	H2			193489.94		
Sc	45	2	H2			193633.22		
Ge	72	2	H2			160556.68		
Ge	72	2	H2			161828.26		
Ge	72	2	H2			159360.37		
In	115	2	H2			386559.88		
In	115	2	H2			381234.33		
In	115	2	H2			382371.79		
Sc	45	3	He			49726.01		
Sc	45	3	He			50187.38		
Sc	45	3	He			47287.34		
Ge	72	3	He			81161.27		
Ge	72	3	He			82638.87		
Ge	72	3	He			81060.09		
In	115	3	He			87184.37		
In	115	3	He			85975.92		
In	115	3	He			85986.82		
Tb	159	3	He			393100.38		
Tb	159	3	He			395724.10		
Tb	159	3	He			388275.62		
Bi	209	3	He			308558.34		
Bi	209	3	He			312950.66		
Bi	209	3	He			306909.70		

Quantitation Report

Data File Name	100SMPL.d
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Sample Name	410-137128-K-7-A
Sample Type	Sample
Comment	E7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

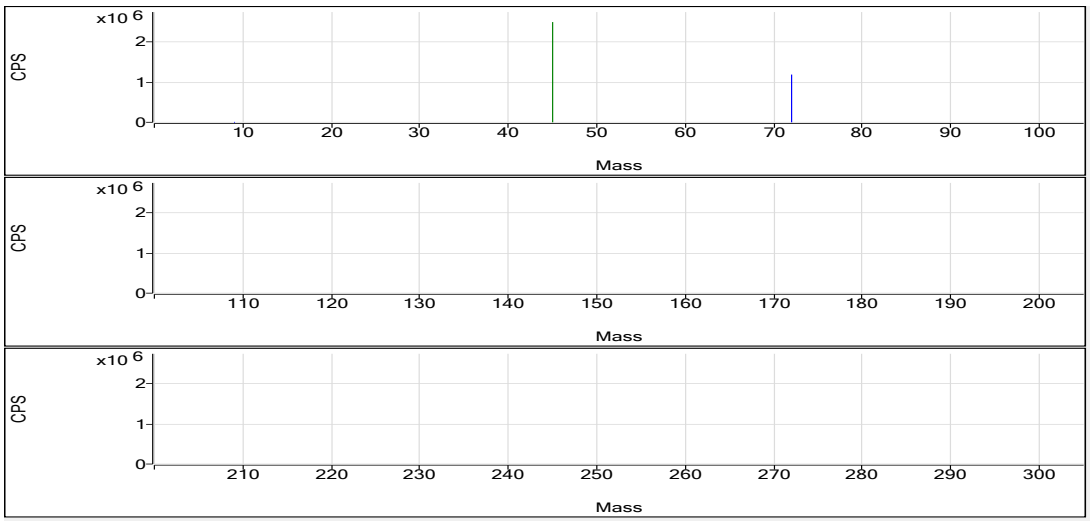
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.039	ppb	N/A	14.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.068	ppb	80.4	10.44	0.0001	Pulse	1.5000	3
Na	23	45	He	15462.784	ppb	2.2	2711110.37	55.5328	Analog	0.1000	3
Mg	24	45	He	90982.336	ppb	2.2	8025541.34	164.3905	Analog	0.1000	3
Al	27	45	He	4.305	ppb	49.5	223.34	0.0046	Pulse	0.1000	3
K	39	45	He	32094.855	ppb	2.2	1854985.70	37.9967	Analog	0.1000	3
Ca	44	45	He	443485.353	ppb	1.9	1462917.95	29.9640	Analog	0.1000	3
Ti	47	45	He	0.523	ppb	115.8	13.33	0.0003	Pulse	0.1000	3
V	51	45	He	0.035	ppb	333.1	1587.43	0.0325	Pulse	0.5000	3
Cr	52	45	He	0.165	ppb	126.3	2330.26	0.0478	Pulse	0.1000	3
Mn	55	45	He	6371.625	ppb	2.7	3866943.59	79.2157	Analog	0.1000	3
Fe	57	45	He	1101.325	ppb	5.5	30883.92	0.6329	Pulse	0.1000	3
Co	59	45	He	0.131	ppb	21.5	530.03	0.0108	Pulse	0.1000	3
Ni	60	72	He	-0.860	ppb	N/A	503.36	0.0061	Pulse	0.1000	3
Cu	63	72	He	-0.051	ppb	N/A	650.04	0.0079	Pulse	0.1000	3
Zn	66	72	He	0.896	ppb	42.3	710.04	0.0087	Pulse	0.1000	3
As	75	72	He	0.610	ppb	27.5	178.67	0.0022	Pulse	0.5000	3
Sr	88	115	He	1049.941	ppb	1.5	790245.30	9.2390	Pulse	0.1000	3
Mo	98	115	He	-0.025	ppb	N/A	110.00	0.0013	Pulse	0.1000	3
Ag	107	115	He	-0.004	ppb	N/A	73.33	0.0009	Pulse	0.1000	3
Cd	111	115	He	-0.004	ppb	N/A	3.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.049	ppb	N/A	1203.43	0.0141	Pulse	0.1000	3
Sb	121	115	He	0.017	ppb	140.3	43.33	0.0005	Pulse	0.1000	3
Ba	137	115	He	27.035	ppb	4.5	11071.52	0.1295	Pulse	0.1000	3
Tl	205	159	He	-0.088	ppb	N/A	236.68	0.0006	Pulse	0.1000	3
Pb	208	159	He	0.007	ppb	133.7	936.72	0.0024	Pulse	0.1000	3
U	238	209	He	0.002	ppb	112.5	160.01	0.0005	Pulse	0.1000	3

ISTD Table:

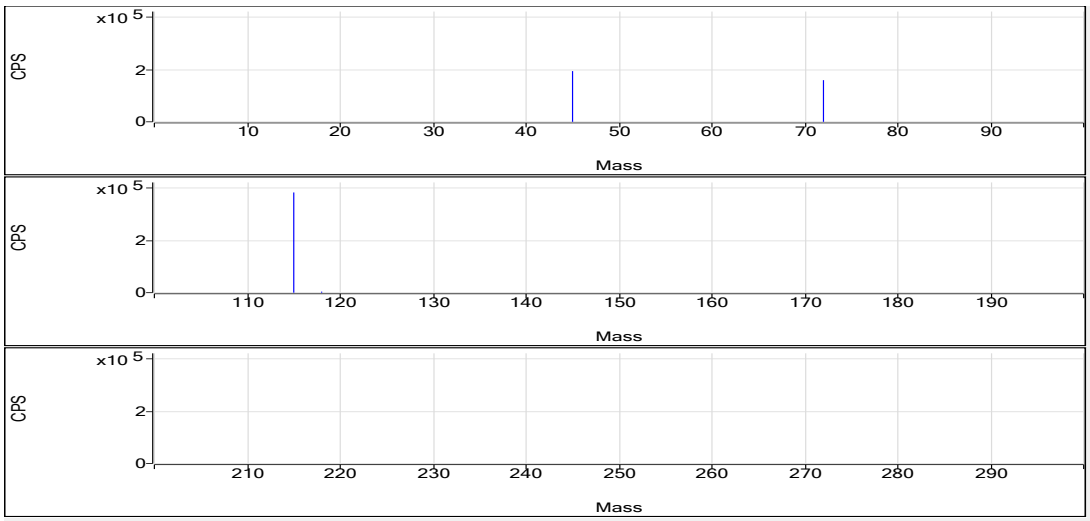
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2501871.47	1.2	95.9	Analog	0.1000	3
No Gas	Ge	72	1191454.98	0.8	92.4	Pulse	0.1000	3
H2	Sc	45	194380.25	0.6	94.3	Pulse	0.1000	3
H2	Ge	72	159680.16	0.5	98.1	Pulse	0.1000	3
H2	In	115	384172.13	0.1	95.2	Pulse	0.1000	3
He	Sc	45	48836.15	2.4	95.4	Pulse	0.1000	3
He	Ge	72	81998.94	1.7	100.2	Pulse	0.1000	3
He	In	115	85542.69	1.0	97.6	Pulse	0.1000	3
He	Tb	159	394478.67	0.0	98.2	Pulse	0.1000	3
He	Bi	209	308668.85	0.2	100.8	Pulse	0.1000	3

No Gas

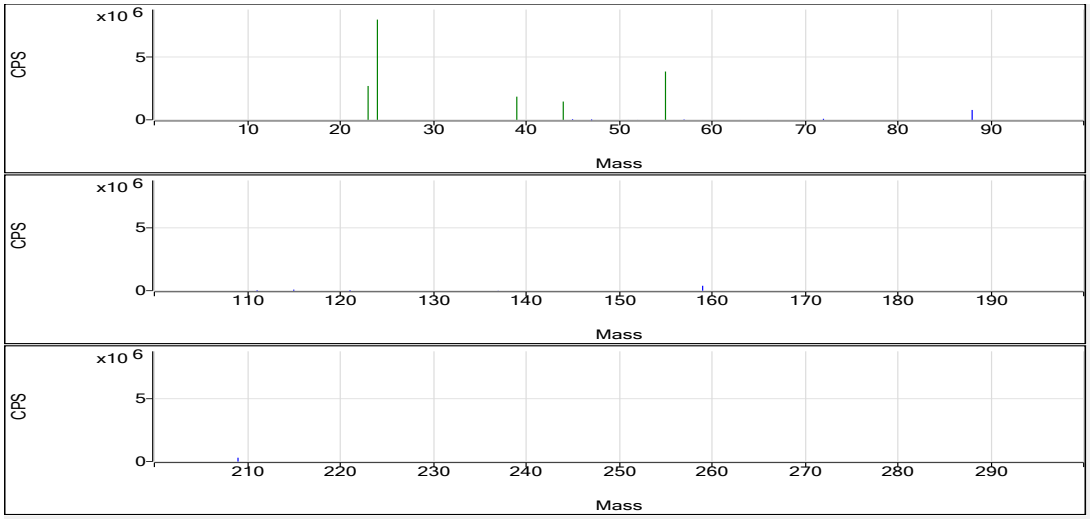


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.037	0	18.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.037	0	18.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.043	0	6.00	0.0007	3.404E-05
Se	78	2	H2	0.052	0.0001	9.33	0.0004	3.546E-05
Se	78	2	H2	0.023	0	7.33	0.0004	3.546E-05
Se	78	2	H2	0.13	0.0001	14.67	0.0004	3.546E-05
Na	23	3	He	15117.982	54.3038	2701944.33	0.0036	0.4171
Na	23	3	He	15468.403	55.5528	2733990.58	0.0036	0.4171
Na	23	3	He	15801.968	56.7418	2697396.21	0.0036	0.4171
Mg	24	3	He	90035.484	162.6797	8094309.88	0.0018	0.004553
Mg	24	3	He	89602.488	161.8974	7967659.88	0.0018	0.004553
Mg	24	3	He	93309.035	168.5944	8014654.26	0.0018	0.004553
Al	27	3	He	2.287	0.0034	170.01	0.0006	0.002085
Al	27	3	He	4.095	0.0045	220.01	0.0006	0.002085
Al	27	3	He	6.532	0.0059	280.01	0.0006	0.002085
K	39	3	He	31598.134	37.415	1861623.88	0.0012	0.4112
K	39	3	He	31795.347	37.6459	1852716.69	0.0012	0.4112
K	39	3	He	32891.085	38.9291	1850616.53	0.0012	0.4112
Ca	44	3	He	435018.327	29.3919	1462428.42	0.0001	0.003322
Ca	44	3	He	443934.551	29.9943	1476146.85	0.0001	0.003322
Ca	44	3	He	451503.181	30.5056	1450178.57	0.0001	0.003322
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.382	0.0002	10.00	0.0005	0
Ti	47	3	He	1.187	0.0006	30.00	0.0005	0
V	51	3	He	-0.098	0.0297	1478.08	0.0213	0.0318
V	51	3	He	0.097	0.0339	1666.11	0.0213	0.0318
V	51	3	He	0.105	0.034	1618.10	0.0213	0.0318
Cr	52	3	He	0.002	0.043	2140.23	0.0294	0.04297
Cr	52	3	He	0.094	0.0457	2250.24	0.0294	0.04297
Cr	52	3	He	0.399	0.0547	2600.32	0.0294	0.04297
Mn	55	3	He	6234.754	77.5141	3856799.94	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	6315.744	78.521	3864351.50	0.0124	0.002801
Mn	55	3	He	6564.376	81.612	3879679.32	0.0124	0.002801
Fe	57	3	He	1033.281	0.5939	29551.35	0.0006	0.002732
Fe	57	3	He	1121.572	0.6444	31715.64	0.0006	0.002732
Fe	57	3	He	1149.122	0.6602	31384.77	0.0006	0.002732
Co	59	3	He	0.146	0.0117	580.03	0.0549	0.003644
Co	59	3	He	0.148	0.0118	580.03	0.0549	0.003644
Co	59	3	He	0.098	0.009	430.02	0.0549	0.003644
Ni	60	3	He	-0.815	0.0066	530.03	0.0093	0.01413
Ni	60	3	He	-0.903	0.0057	480.02	0.0093	0.01413
Ni	60	3	He	-0.862	0.0061	500.02	0.0093	0.01413
Cu	63	3	He	-0.033	0.0084	680.04	0.0274	0.009321
Cu	63	3	He	-0.034	0.0084	700.04	0.0274	0.009321
Cu	63	3	He	-0.085	0.007	570.03	0.0274	0.009321
Zn	66	3	He	1.299	0.0099	800.05	0.0031	0.005913
Zn	66	3	He	0.844	0.0085	710.04	0.0031	0.005913
Zn	66	3	He	0.547	0.0076	620.04	0.0031	0.005913
As	75	3	He	0.517	0.002	160.00	0.0021	0.0008698
As	75	3	He	0.51	0.002	164.00	0.0021	0.0008698
As	75	3	He	0.804	0.0026	212.00	0.0021	0.0008698
Sr	88	3	He	1053.61	9.2713	792196.71	0.0088	0.0006843
Sr	88	3	He	1032.304	9.0838	785578.66	0.0088	0.0006843
Sr	88	3	He	1063.909	9.3619	792960.54	0.0088	0.0006843
Mo	98	3	He	-0.014	0.0015	130.01	0.0219	0.001827
Mo	98	3	He	-0.031	0.0012	100.00	0.0219	0.001827
Mo	98	3	He	-0.029	0.0012	100.00	0.0219	0.001827
Ag	107	3	He	0	0.0011	90.00	0.047	0.001064
Ag	107	3	He	-0.008	0.0007	60.00	0.047	0.001064
Ag	107	3	He	-0.005	0.0008	70.00	0.047	0.001064
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Sn	120	3	He	0.01	0.015	1280.11	0.0154	0.01483
Sn	120	3	He	-0.182	0.012	1040.07	0.0154	0.01483
Sn	120	3	He	0.026	0.0152	1290.10	0.0154	0.01483
Sb	121	3	He	-0.01	0.0001	10.00	0.0143	0.0002661
Sb	121	3	He	0.03	0.0007	60.00	0.0143	0.0002661
Sb	121	3	He	0.031	0.0007	60.00	0.0143	0.0002661
Ba	137	3	He	26.503	0.1269	10844.63	0.0048	0.0002665
Ba	137	3	He	26.185	0.1254	10844.71	0.0048	0.0002665
Ba	137	3	He	28.418	0.1361	11525.22	0.0048	0.0002665
Tl	205	3	He	-0.089	0.0006	220.01	0.0246	0.002755
Tl	205	3	He	-0.086	0.0006	250.01	0.0246	0.002755
Tl	205	3	He	-0.087	0.0006	240.01	0.0246	0.002755
Pb	208	3	He	0.014	0.0026	580.04	0.0324	0.002158
Pb	208	3	He	-0.003	0.0021	520.03	0.0324	0.002158
Pb	208	3	He	0.009	0.0025	480.03	0.0324	0.002158
U	238	3	He	0.005	0.0006	200.01	0.0492	0.0004023
U	238	3	He	0	0.0004	120.01	0.0492	0.0004023
U	238	3	He	0.002	0.0005	160.01	0.0492	0.0004023
Sc	45	1	No Gas			2496978.24		
Sc	45	1	No Gas			2534715.43		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2473920.74		
Ge	72	1	No Gas			1193425.53		
Ge	72	1	No Gas			1199417.01		
Ge	72	1	No Gas			1181522.40		
Sc	45	2	H2			195202.65		
Sc	45	2	H2			192977.17		
Sc	45	2	H2			194960.92		
Ge	72	2	H2			159957.35		
Ge	72	2	H2			160320.28		
Ge	72	2	H2			158762.84		
In	115	2	H2			384065.97		
In	115	2	H2			384531.75		
In	115	2	H2			383918.67		
Sc	45	3	He			49756.10		
Sc	45	3	He			49214.25		
Sc	45	3	He			47538.09		
Ge	72	3	He			80809.22		
Ge	72	3	He			83503.99		
Ge	72	3	He			81683.62		
In	115	3	He			85452.50		
In	115	3	He			86488.11		
In	115	3	He			84707.83		
Tb	159	3	He			394277.73		
Tb	159	3	He			394596.13		
Tb	159	3	He			394562.14		
Bi	209	3	He			307910.62		
Bi	209	3	He			309355.11		
Bi	209	3	He			308740.82		

Quantitation Report

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Sample Name	RINSE
Sample Type	Sample
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

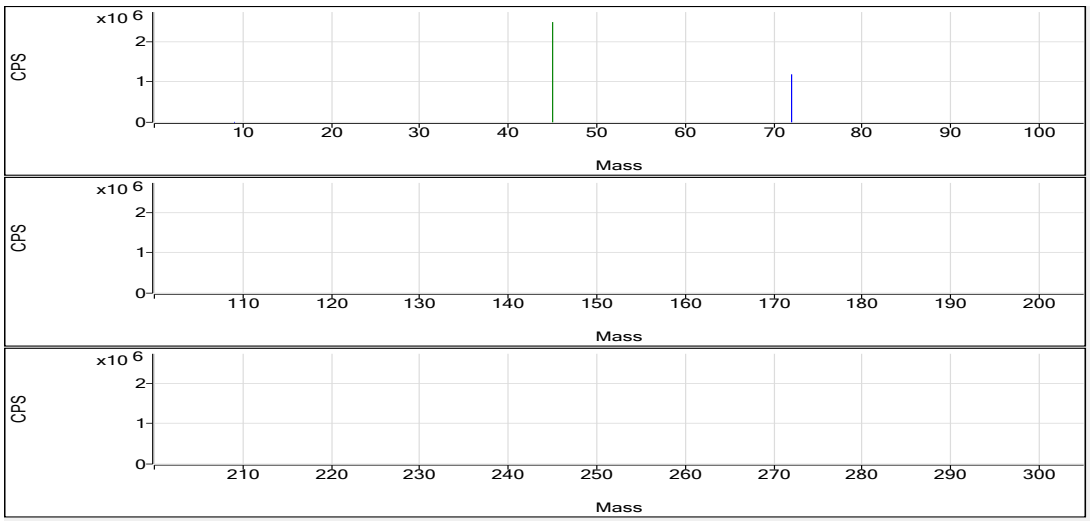
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.040	ppb	N/A	12.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.032	ppb	N/A	3.33	0.0000	Pulse	1.5000	3
Na	23	45	He	-3.480	ppb	N/A	19733.63	0.4047	Pulse	0.1000	3
Mg	24	45	He	16.837	ppb	14.5	1706.82	0.0350	Pulse	0.1000	3
Al	27	45	He	-1.340	ppb	N/A	63.33	0.0013	Pulse	0.1000	3
K	39	45	He	15.772	ppb	37.5	20948.98	0.4297	Pulse	0.1000	3
Ca	44	45	He	105.455	ppb	20.4	510.03	0.0104	Pulse	0.1000	3
Ti	47	45	He	0.126	ppb	173.2	3.33	0.0001	Pulse	0.1000	3
V	51	45	He	0.093	ppb	108.2	1647.44	0.0338	Pulse	0.5000	3
Cr	52	45	He	-0.023	ppb	N/A	2063.56	0.0423	Pulse	0.1000	3
Mn	55	45	He	1.329	ppb	15.0	943.41	0.0193	Pulse	0.1000	3
Fe	57	45	He	-0.484	ppb	N/A	120.01	0.0025	Pulse	0.1000	3
Co	59	45	He	-0.020	ppb	N/A	123.34	0.0025	Pulse	0.1000	3
Ni	60	72	He	-1.082	ppb	N/A	330.02	0.0041	Pulse	0.1000	3
Cu	63	72	He	-0.120	ppb	N/A	486.69	0.0060	Pulse	0.1000	3
Zn	66	72	He	-0.041	ppb	N/A	466.69	0.0058	Pulse	0.1000	3
As	75	72	He	0.385	ppb	18.6	136.67	0.0017	Pulse	0.5000	3
Sr	88	115	He	0.229	ppb	11.8	226.68	0.0027	Pulse	0.1000	3
Mo	98	115	He	-0.051	ppb	N/A	60.00	0.0007	Pulse	0.1000	3
Ag	107	115	He	-0.009	ppb	N/A	53.33	0.0006	Pulse	0.1000	3
Cd	111	115	He	-0.002	ppb	N/A	4.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.392	ppb	110.2	1747.80	0.0209	Pulse	0.1000	3
Sb	121	115	He	0.004	ppb	675.6	26.67	0.0003	Pulse	0.1000	3
Ba	137	115	He	-0.006	ppb	N/A	20.00	0.0002	Pulse	0.1000	3
Tl	205	159	He	-0.083	ppb	N/A	283.35	0.0007	Pulse	0.1000	3
Pb	208	159	He	-0.003	ppb	N/A	806.71	0.0021	Pulse	0.1000	3
U	238	209	He	-0.004	ppb	N/A	60.00	0.0002	Pulse	0.1000	3

ISTD Table:

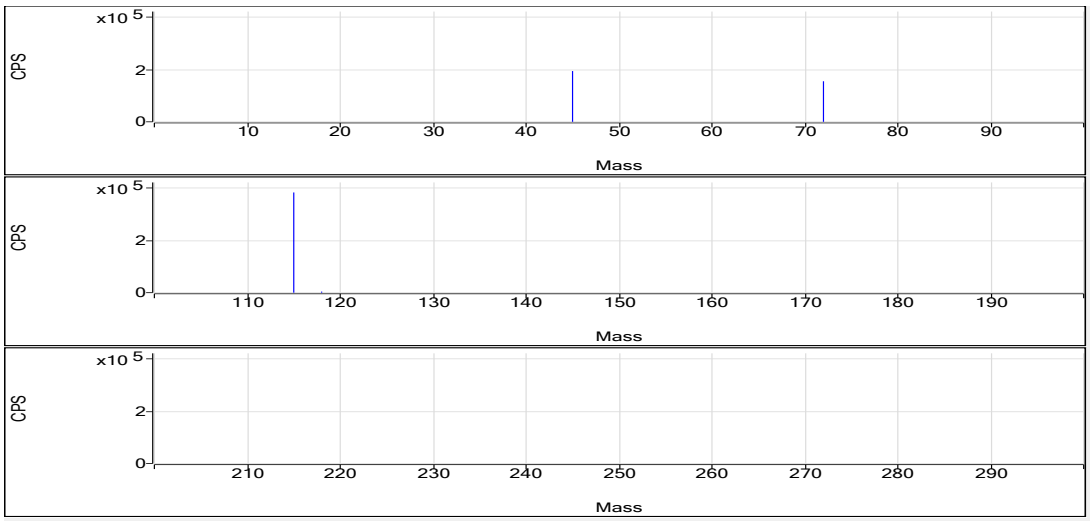
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2474266.58	1.1	94.9	Analog	0.1000	3
No Gas	Ge	72	1184725.66	0.1	91.9	Pulse	0.1000	3
H2	Sc	45	194562.21	0.8	94.4	Pulse	0.1000	3
H2	Ge	72	155479.10	1.8	95.5	Pulse	0.1000	3
H2	In	115	384228.54	0.7	95.2	Pulse	0.1000	3
He	Sc	45	48759.06	2.1	95.2	Pulse	0.1000	3
He	Ge	72	80684.21	1.7	98.6	Pulse	0.1000	3
He	In	115	83935.86	1.5	95.8	Pulse	0.1000	3
He	Tb	159	392897.55	0.0	97.8	Pulse	0.1000	3
He	Bi	209	307018.94	0.2	100.3	Pulse	0.1000	3

No Gas

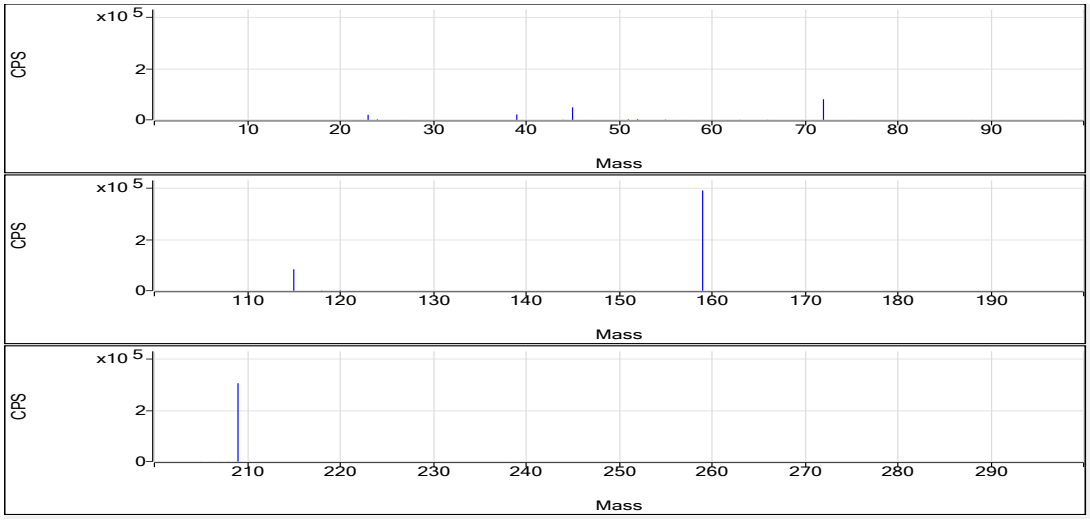


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.041	0	10.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.038	0	16.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.04	0	12.00	0.0007	3.404E-05
Se	78	2	H2	-0.033	0	3.33	0.0004	3.546E-05
Se	78	2	H2	-0.022	0	4.00	0.0004	3.546E-05
Se	78	2	H2	-0.041	0	2.67	0.0004	3.546E-05
Na	23	3	He	-5.071	0.399	19343.05	0.0036	0.4171
Na	23	3	He	-1.715	0.4109	20504.70	0.0036	0.4171
Na	23	3	He	-3.653	0.404	19353.15	0.0036	0.4171
Mg	24	3	He	18.83	0.0386	1870.19	0.0018	0.004553
Mg	24	3	He	17.559	0.0363	1810.16	0.0018	0.004553
Mg	24	3	He	14.12	0.0301	1440.12	0.0018	0.004553
Al	27	3	He	-1.808	0.001	50.00	0.0006	0.002085
Al	27	3	He	-1.858	0.001	50.00	0.0006	0.002085
Al	27	3	He	-0.353	0.0019	90.00	0.0006	0.002085
K	39	3	He	22.565	0.4376	21215.93	0.0012	0.4112
K	39	3	He	12.996	0.4264	21276.11	0.0012	0.4112
K	39	3	He	11.754	0.425	20354.91	0.0012	0.4112
Ca	44	3	He	118.765	0.0113	550.03	0.0001	0.003322
Ca	44	3	He	116.971	0.0112	560.04	0.0001	0.003322
Ca	44	3	He	80.63	0.0088	420.03	0.0001	0.003322
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.377	0.0002	10.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	0.199	0.036	1746.12	0.0213	0.0318
V	51	3	He	0.084	0.0336	1676.11	0.0213	0.0318
V	51	3	He	-0.003	0.0317	1520.09	0.0213	0.0318
Cr	52	3	He	0.075	0.0452	2190.24	0.0294	0.04297
Cr	52	3	He	0.025	0.0437	2180.25	0.0294	0.04297
Cr	52	3	He	-0.169	0.038	1820.18	0.0294	0.04297
Mn	55	3	He	1.467	0.021	1020.07	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1.419	0.0204	1020.13	0.0124	0.002801
Mn	55	3	He	1.101	0.0165	790.04	0.0124	0.002801
Fe	57	3	He	-2.251	0.0014	70.00	0.0006	0.002732
Fe	57	3	He	0.83	0.0032	160.01	0.0006	0.002732
Fe	57	3	He	-0.031	0.0027	130.01	0.0006	0.002732
Co	59	3	He	-0.018	0.0027	130.01	0.0549	0.003644
Co	59	3	He	-0.023	0.0024	120.01	0.0549	0.003644
Co	59	3	He	-0.021	0.0025	120.00	0.0549	0.003644
Ni	60	3	He	-1.141	0.0035	280.01	0.0093	0.01413
Ni	60	3	He	-1.099	0.0039	320.02	0.0093	0.01413
Ni	60	3	He	-1.006	0.0048	390.02	0.0093	0.01413
Cu	63	3	He	-0.086	0.007	550.03	0.0274	0.009321
Cu	63	3	He	-0.165	0.0048	390.02	0.0274	0.009321
Cu	63	3	He	-0.107	0.0064	520.03	0.0274	0.009321
Zn	66	3	He	0.091	0.0062	490.03	0.0031	0.005913
Zn	66	3	He	-0.088	0.0056	460.02	0.0031	0.005913
Zn	66	3	He	-0.125	0.0055	450.03	0.0031	0.005913
As	75	3	He	0.443	0.0018	144.00	0.0021	0.0008698
As	75	3	He	0.406	0.0017	142.00	0.0021	0.0008698
As	75	3	He	0.305	0.0015	124.00	0.0021	0.0008698
Sr	88	3	He	0.244	0.0028	240.01	0.0088	0.0006843
Sr	88	3	He	0.245	0.0028	240.01	0.0088	0.0006843
Sr	88	3	He	0.198	0.0024	200.01	0.0088	0.0006843
Mo	98	3	He	-0.051	0.0007	60.00	0.0219	0.001827
Mo	98	3	He	-0.051	0.0007	60.00	0.0219	0.001827
Mo	98	3	He	-0.05	0.0007	60.00	0.0219	0.001827
Ag	107	3	He	-0.01	0.0006	50.00	0.047	0.001064
Ag	107	3	He	-0.008	0.0007	60.00	0.047	0.001064
Ag	107	3	He	-0.01	0.0006	50.00	0.047	0.001064
Cd	111	3	He	0.002	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	-0.002	0	4.00	0.0053	6.086E-05
Sn	120	3	He	0.246	0.0186	1580.18	0.0154	0.01483
Sn	120	3	He	0.052	0.0156	1320.12	0.0154	0.01483
Sn	120	3	He	0.879	0.0284	2343.09	0.0154	0.01483
Sb	121	3	He	-0.01	0.0001	10.00	0.0143	0.0002661
Sb	121	3	He	0.031	0.0007	60.00	0.0143	0.0002661
Sb	121	3	He	-0.01	0.0001	10.00	0.0143	0.0002661
Ba	137	3	He	-0.031	0.0001	10.00	0.0048	0.0002665
Ba	137	3	He	0.019	0.0004	30.00	0.0048	0.0002665
Ba	137	3	He	-0.005	0.0002	20.00	0.0048	0.0002665
Tl	205	3	He	-0.083	0.0007	280.01	0.0246	0.002755
Tl	205	3	He	-0.081	0.0008	300.02	0.0246	0.002755
Tl	205	3	He	-0.084	0.0007	270.02	0.0246	0.002755
Pb	208	3	He	-0.003	0.0021	390.02	0.0324	0.002158
Pb	208	3	He	-0.006	0.002	410.03	0.0324	0.002158
Pb	208	3	He	-0.001	0.0021	460.03	0.0324	0.002158
U	238	3	He	-0.004	0.0002	60.00	0.0492	0.0004023
U	238	3	He	-0.006	0.0001	40.00	0.0492	0.0004023
U	238	3	He	-0.003	0.0003	80.00	0.0492	0.0004023
Sc	45	1	No Gas			2487329.81		
Sc	45	1	No Gas			2491336.99		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2444132.93		
Ge	72	1	No Gas			1186509.75		
Ge	72	1	No Gas			1183601.31		
Ge	72	1	No Gas			1184065.92		
Sc	45	2	H2			195650.95		
Sc	45	2	H2			195355.58		
Sc	45	2	H2			192680.11		
Ge	72	2	H2			158158.14		
Ge	72	2	H2			155600.72		
Ge	72	2	H2			152678.45		
In	115	2	H2			382097.88		
In	115	2	H2			387239.88		
In	115	2	H2			383347.85		
Sc	45	3	He			48481.20		
Sc	45	3	He			49896.45		
Sc	45	3	He			47899.52		
Ge	72	3	He			79139.23		
Ge	72	3	He			81532.50		
Ge	72	3	He			81380.91		
In	115	3	He			84858.90		
In	115	3	He			84415.78		
In	115	3	He			82554.83		
Tb	159	3	He			392913.63		
Tb	159	3	He			392961.01		
Tb	159	3	He			392818.00		
Bi	209	3	He			307645.43		
Bi	209	3	He			306777.36		
Bi	209	3	He			306634.04		

Quantitation Report

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Sample Type	CCV
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

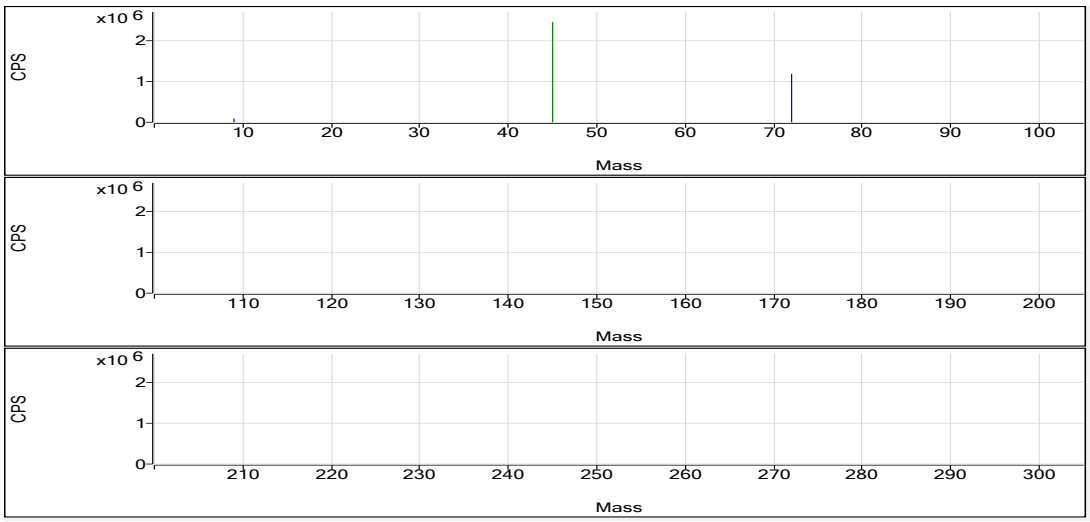
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.141	ppb	0.3	92211.01	0.0373	Pulse	0.5000	3
Se	78	72	H2	50.549	ppb	1.9	3532.22	0.0222	Pulse	1.5000	3
Na	23	45	He	4919.481	ppb	2.4	878780.06	17.9521	Pulse	0.1000	3
Mg	24	45	He	5111.837	ppb	2.4	452335.28	9.2406	Pulse	0.1000	3
Al	27	45	He	5087.502	ppb	1.7	145203.40	2.9660	Pulse	0.1000	3
K	39	45	He	5047.428	ppb	3.0	309460.86	6.3221	Pulse	0.1000	3
Ca	44	45	He	5066.393	ppb	3.4	16927.06	0.3456	Pulse	0.1000	3
Ti	47	45	He	5021.684	ppb	2.0	130747.28	2.6708	Pulse	0.1000	3
V	51	45	He	515.912	ppb	2.4	538234.00	10.9954	Pulse	0.5000	3
Cr	52	45	He	492.234	ppb	3.0	710691.42	14.5196	Pulse	0.1000	3
Mn	55	45	He	509.471	ppb	1.9	310202.35	6.3366	Pulse	0.1000	3
Fe	57	45	He	5139.869	ppb	2.9	144080.24	2.9435	Pulse	0.1000	3
Co	59	45	He	499.285	ppb	2.3	1341671.75	27.4081	Pulse	0.1000	3
Ni	60	72	He	500.920	ppb	0.4	375703.67	4.6641	Pulse	0.1000	3
Cu	63	72	He	478.632	ppb	0.5	1058154.91	13.1363	Pulse	0.1000	3
Zn	66	72	He	506.915	ppb	1.8	125854.29	1.5624	Pulse	0.1000	3
As	75	72	He	514.040	ppb	0.5	88918.45	1.1039	Pulse	0.5000	3
Sr	88	115	He	50.945	ppb	1.9	38713.89	0.4489	Pulse	0.1000	3
Mo	98	115	He	50.210	ppb	2.7	95161.49	1.1037	Pulse	0.1000	3
Ag	107	115	He	49.308	ppb	2.9	200069.22	2.3205	Pulse	0.1000	3
Cd	111	115	He	50.737	ppb	1.2	23305.46	0.2703	Pulse	0.5000	3
Sn	120	115	He	51.706	ppb	0.7	70041.10	0.8122	Pulse	0.1000	3
Sb	121	115	He	52.047	ppb	1.2	63981.59	0.7419	Pulse	0.1000	3
Ba	137	115	He	513.590	ppb	1.5	211664.41	2.4546	Pulse	0.1000	3
Tl	205	159	He	51.269	ppb	1.3	502225.51	1.2619	Pulse	0.1000	3
Pb	208	159	He	51.457	ppb	1.0	664488.90	1.6696	Pulse	0.1000	3
U	238	209	He	50.539	ppb	0.2	765189.23	2.4893	Pulse	0.1000	3

ISTD Table:

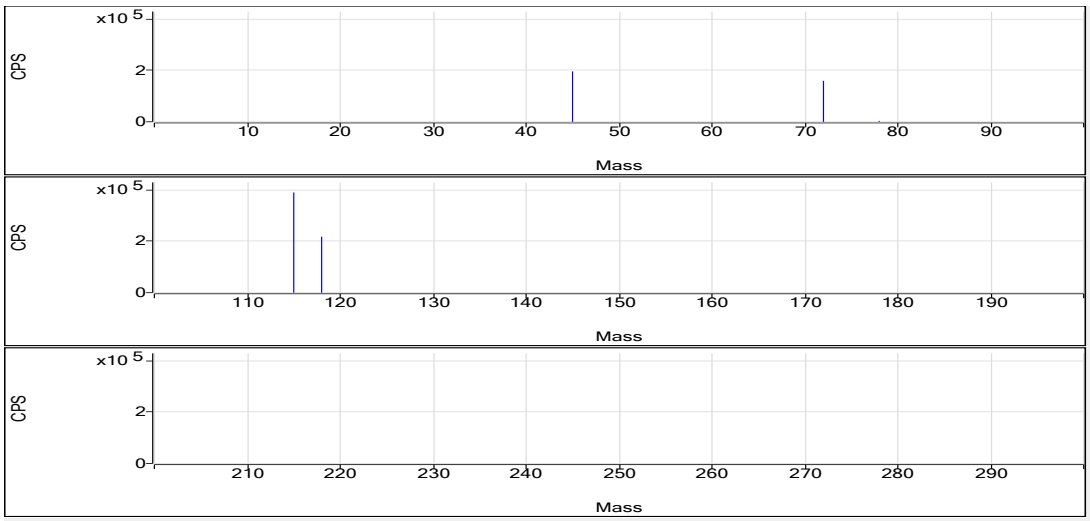
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2472693.19	0.9	94.8	Analog	0.1000	3
No Gas	Ge	72	1196799.88	1.0	92.9	Pulse	0.1000	3
H2	Sc	45	195819.24	0.6	95.0	Pulse	0.1000	3
H2	Ge	72	159181.39	1.2	97.8	Pulse	0.1000	3
H2	In	115	389325.25	0.4	96.4	Pulse	0.1000	3
He	Sc	45	48966.44	2.0	95.6	Pulse	0.1000	3
He	Ge	72	80553.39	0.6	98.4	Pulse	0.1000	3
He	In	115	86244.46	1.5	98.4	Pulse	0.1000	3
He	Tb	159	398005.80	0.7	99.1	Pulse	0.1000	3
He	Bi	209	307387.74	0.9	100.4	Pulse	0.1000	3

No Gas

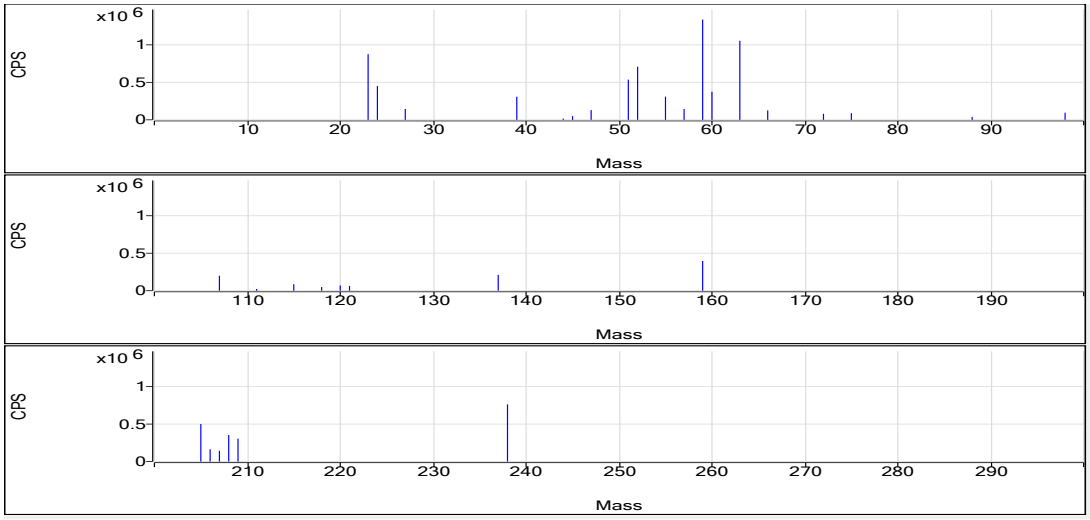


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	51.286	0.0374	92634.29	0.0007	3.404E-05
Be	9	1	No Gas	51.092	0.0373	91255.79	0.0007	3.404E-05
Be	9	1	No Gas	51.045	0.0372	92742.94	0.0007	3.404E-05
Se	78	2	H2	49.467	0.0217	3483.76	0.0004	3.546E-05
Se	78	2	H2	51.211	0.0225	3528.44	0.0004	3.546E-05
Se	78	2	H2	50.969	0.0224	3584.45	0.0004	3.546E-05
Na	23	3	He	4797.789	17.5184	873921.39	0.0036	0.4171
Na	23	3	He	5032.7	18.3557	879787.72	0.0036	0.4171
Na	23	3	He	4927.954	17.9823	882631.08	0.0036	0.4171
Mg	24	3	He	4999.711	9.038	450869.06	0.0018	0.004553
Mg	24	3	He	5238.893	9.4701	453903.47	0.0018	0.004553
Mg	24	3	He	5096.907	9.2136	452233.31	0.0018	0.004553
Al	27	3	He	5003.879	2.9173	145533.22	0.0006	0.002085
Al	27	3	He	5174.976	3.017	144604.54	0.0006	0.002085
Al	27	3	He	5083.651	2.9638	145472.45	0.0006	0.002085
K	39	3	He	4950.547	6.2087	309725.00	0.0012	0.4112
K	39	3	He	5224.664	6.5297	312966.79	0.0012	0.4112
K	39	3	He	4967.072	6.228	305690.78	0.0012	0.4112
Ca	44	3	He	5069.507	0.3458	17250.77	0.0001	0.003322
Ca	44	3	He	4891.881	0.3338	15999.21	0.0001	0.003322
Ca	44	3	He	5237.791	0.3572	17531.19	0.0001	0.003322
Ti	47	3	He	4937.586	2.6261	131006.26	0.0005	0
Ti	47	3	He	5130.431	2.7287	130785.54	0.0005	0
Ti	47	3	He	4997.035	2.6577	130450.05	0.0005	0
V	51	3	He	502.782	10.7164	534596.31	0.0213	0.0318
V	51	3	He	527.74	11.2467	539056.44	0.0213	0.0318
V	51	3	He	517.216	11.0231	541049.25	0.0213	0.0318
Cr	52	3	He	477.604	14.0894	702862.49	0.0294	0.04297
Cr	52	3	He	507.115	14.9573	716902.41	0.0294	0.04297
Cr	52	3	He	491.984	14.5123	712309.36	0.0294	0.04297
Mn	55	3	He	500.315	6.2228	310429.92	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	519.673	6.4635	309793.24	0.0124	0.002801
Mn	55	3	He	508.426	6.3236	310383.88	0.0124	0.002801
Fe	57	3	He	4981.756	2.853	142327.22	0.0006	0.002732
Fe	57	3	He	5271.022	3.0186	144679.16	0.0006	0.002732
Fe	57	3	He	5166.83	2.9589	145234.34	0.0006	0.002732
Co	59	3	He	489.75	26.8848	1341175.61	0.0549	0.003644
Co	59	3	He	511.898	28.1004	1346853.89	0.0549	0.003644
Co	59	3	He	496.206	27.2391	1336985.76	0.0549	0.003644
Ni	60	3	He	498.516	4.6418	376074.53	0.0093	0.01413
Ni	60	3	He	502.053	4.6746	374597.61	0.0093	0.01413
Ni	60	3	He	502.19	4.6759	376438.86	0.0093	0.01413
Cu	63	3	He	476.443	13.0762	1059429.52	0.0274	0.009321
Cu	63	3	He	480.916	13.1989	1057687.56	0.0274	0.009321
Cu	63	3	He	478.538	13.1337	1057347.64	0.0274	0.009321
Zn	66	3	He	513.05	1.5812	128107.09	0.0031	0.005913
Zn	66	3	He	511.36	1.576	126291.93	0.0031	0.005913
Zn	66	3	He	496.334	1.5299	123163.85	0.0031	0.005913
As	75	3	He	510.93	1.0972	88893.74	0.0021	0.0008698
As	75	3	He	515.617	1.1072	88728.58	0.0021	0.0008698
As	75	3	He	515.574	1.1072	89133.04	0.0021	0.0008698
Sr	88	3	He	51.72	0.4558	39426.03	0.0088	0.0006843
Sr	88	3	He	49.83	0.4391	38393.03	0.0088	0.0006843
Sr	88	3	He	51.283	0.4519	38322.62	0.0088	0.0006843
Mo	98	3	He	50.162	1.1026	95383.17	0.0219	0.001827
Mo	98	3	He	48.902	1.075	93983.62	0.0219	0.001827
Mo	98	3	He	51.567	1.1335	96117.69	0.0219	0.001827
Ag	107	3	He	48.818	2.2974	198738.69	0.047	0.001064
Ag	107	3	He	48.183	2.2676	198249.98	0.047	0.001064
Ag	107	3	He	50.923	2.3964	203219.00	0.047	0.001064
Cd	111	3	He	50.73	0.2702	23375.61	0.0053	6.086E-05
Cd	111	3	He	50.116	0.267	23339.49	0.0053	6.086E-05
Cd	111	3	He	51.364	0.2736	23201.28	0.0053	6.086E-05
Sn	120	3	He	51.851	0.8144	70450.07	0.0154	0.01483
Sn	120	3	He	51.278	0.8056	70430.11	0.0154	0.01483
Sn	120	3	He	51.99	0.8165	69243.13	0.0154	0.01483
Sb	121	3	He	51.572	0.7352	63596.82	0.0143	0.0002661
Sb	121	3	He	51.809	0.7386	64570.96	0.0143	0.0002661
Sb	121	3	He	52.759	0.7521	63776.99	0.0143	0.0002661
Ba	137	3	He	512.705	2.4504	211969.76	0.0048	0.0002665
Ba	137	3	He	506.478	2.4206	211632.15	0.0048	0.0002665
Ba	137	3	He	521.585	2.4928	211391.32	0.0048	0.0002665
Tl	205	3	He	51.426	1.2658	502104.84	0.0246	0.002755
Tl	205	3	He	50.517	1.2435	498898.74	0.0246	0.002755
Tl	205	3	He	51.863	1.2765	505672.96	0.0246	0.002755
Pb	208	3	He	51.136	1.6592	351590.03	0.0324	0.002158
Pb	208	3	He	51.196	1.6611	356301.67	0.0324	0.002158
Pb	208	3	He	52.04	1.6885	358832.57	0.0324	0.002158
U	238	3	He	50.428	2.4838	761687.33	0.0492	0.0004023
U	238	3	He	50.669	2.4957	760951.00	0.0492	0.0004023
U	238	3	He	50.522	2.4885	772929.36	0.0492	0.0004023
Sc	45	1	No Gas			2477007.31		
Sc	45	1	No Gas			2449424.03		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2491648.24		
Ge	72	1	No Gas			1207241.62		
Ge	72	1	No Gas			1184491.70		
Ge	72	1	No Gas			1198666.31		
Sc	45	2	H2			197252.63		
Sc	45	2	H2			195092.54		
Sc	45	2	H2			195112.54		
Ge	72	2	H2			160409.94		
Ge	72	2	H2			156944.74		
Ge	72	2	H2			160189.48		
In	115	2	H2			387528.82		
In	115	2	H2			389477.61		
In	115	2	H2			390969.33		
Sc	45	3	He			49886.04		
Sc	45	3	He			47930.01		
Sc	45	3	He			49083.28		
Ge	72	3	He			81019.42		
Ge	72	3	He			80134.40		
Ge	72	3	He			80506.36		
In	115	3	He			86871.07		
In	115	3	He			87807.21		
In	115	3	He			85180.91		
Tb	159	3	He			396668.94		
Tb	159	3	He			401217.57		
Tb	159	3	He			396130.89		
Bi	209	3	He			306657.20		
Bi	209	3	He			304903.94		
Bi	209	3	He			310602.07		

Quantitation Report

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Sample Type	CCB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

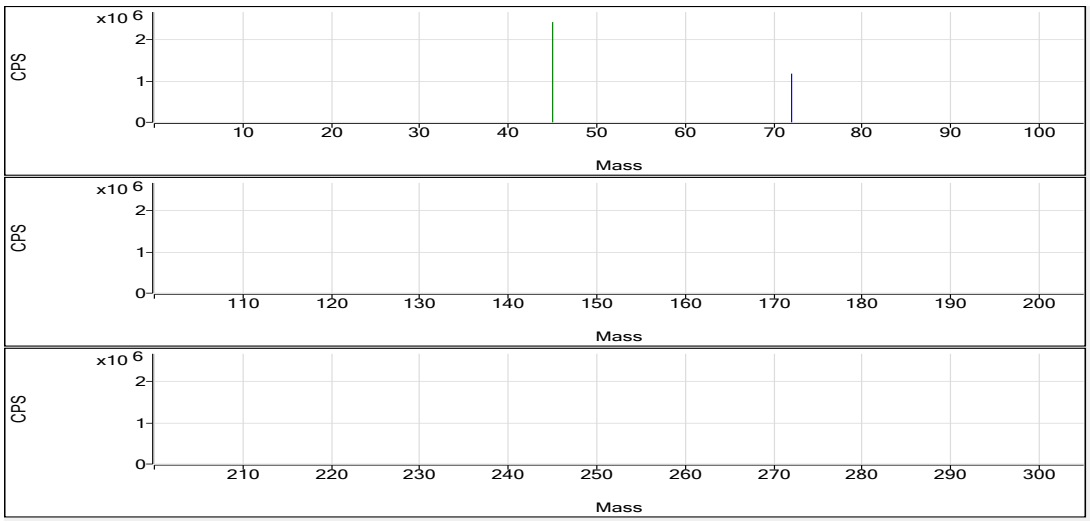
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.016	ppb	N/A	54.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.031	ppb	47.5	7.56	0.0000	Pulse	1.5000	3
Na	23	45	He	-5.802	ppb	N/A	19179.62	0.3964	Pulse	0.1000	3
Mg	24	45	He	2.623	ppb	11.9	450.03	0.0093	Pulse	0.1000	3
Al	27	45	He	-0.272	ppb	N/A	93.33	0.0019	Pulse	0.1000	3
K	39	45	He	16.215	ppb	49.6	20815.40	0.4302	Pulse	0.1000	3
Ca	44	45	He	-1.293	ppb	N/A	156.68	0.0032	Pulse	0.1000	3
Ti	47	45	He	1.817	ppb	26.1	46.67	0.0010	Pulse	0.1000	3
V	51	45	He	0.058	ppb	45.0	1598.10	0.0330	Pulse	0.5000	3
Cr	52	45	He	0.092	ppb	37.9	2210.25	0.0457	Pulse	0.1000	3
Mn	55	45	He	0.346	ppb	20.5	343.35	0.0071	Pulse	0.1000	3
Fe	57	45	He	-0.189	ppb	N/A	126.67	0.0026	Pulse	0.1000	3
Co	59	45	He	0.082	ppb	27.9	393.35	0.0081	Pulse	0.1000	3
Ni	60	72	He	-0.975	ppb	N/A	400.02	0.0051	Pulse	0.1000	3
Cu	63	72	He	0.006	ppb	849.6	746.71	0.0095	Pulse	0.1000	3
Zn	66	72	He	0.267	ppb	68.7	530.03	0.0067	Pulse	0.1000	3
As	75	72	He	0.375	ppb	34.7	132.00	0.0017	Pulse	0.5000	3
Sr	88	115	He	-0.012	ppb	N/A	50.00	0.0006	Pulse	0.1000	3
Mo	98	115	He	-0.014	ppb	N/A	130.00	0.0015	Pulse	0.1000	3
Ag	107	115	He	-0.005	ppb	N/A	70.00	0.0008	Pulse	0.1000	3
Cd	111	115	He	-0.006	ppb	N/A	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.077	ppb	70.3	1376.78	0.0160	Pulse	0.1000	3
Sb	121	115	He	0.019	ppb	63.8	46.67	0.0005	Pulse	0.1000	3
Ba	137	115	He	0.082	ppb	95.4	56.67	0.0007	Pulse	0.1000	3
Tl	205	159	He	-0.025	ppb	N/A	843.39	0.0021	Pulse	0.1000	3
Pb	208	159	He	0.006	ppb	110.9	933.38	0.0024	Pulse	0.1000	3
U	238	209	He	0.044	ppb	10.5	793.39	0.0026	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2437882.31	1.0	93.5	Analog	0.1000	3
No Gas	Ge	72	1183161.57	0.4	91.8	Pulse	0.1000	3
H2	Sc	45	193900.68	0.7	94.1	Pulse	0.1000	3
H2	Ge	72	154231.86	1.0	94.8	Pulse	0.1000	3
H2	In	115	386878.55	0.8	95.8	Pulse	0.1000	3
He	Sc	45	48398.09	1.7	94.5	Pulse	0.1000	3
He	Ge	72	78770.54	0.9	96.2	Pulse	0.1000	3
He	In	115	85956.30	0.3	98.1	Pulse	0.1000	3
He	Tb	159	395565.72	0.4	98.5	Pulse	0.1000	3
He	Bi	209	308410.27	0.6	100.7	Pulse	0.1000	3

No Gas



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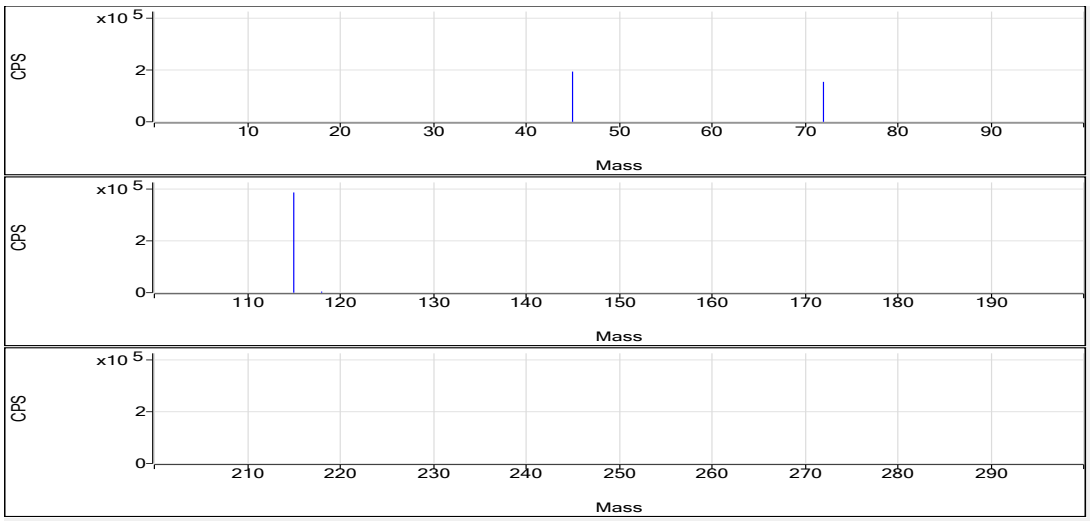
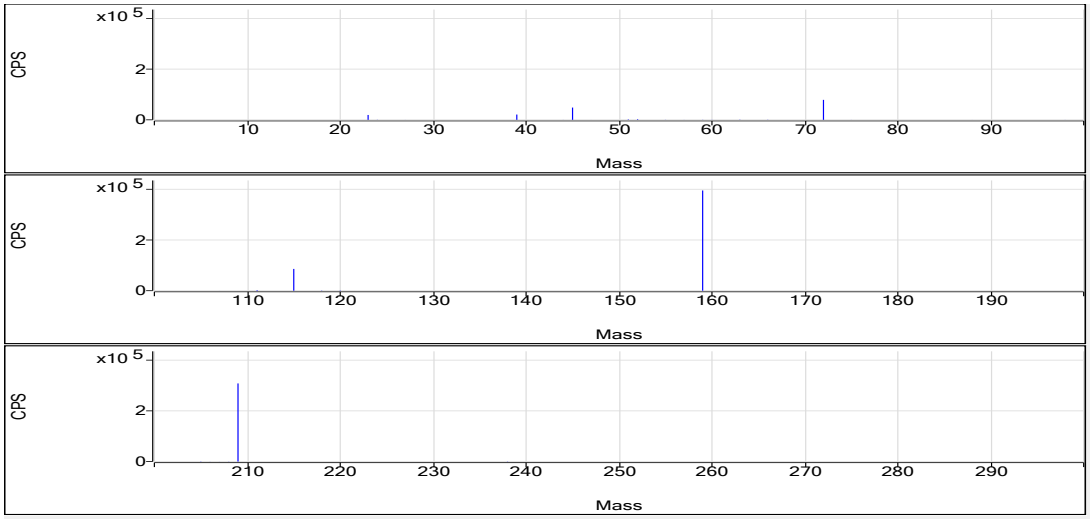


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.017	0	54.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.01	0	66.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.023	0	42.00	0.0007	3.404E-05
Se	78	2	H2	0.046	0.0001	8.67	0.0004	3.546E-05
Se	78	2	H2	0.017	0	6.67	0.0004	3.546E-05
Se	78	2	H2	0.029	0	7.33	0.0004	3.546E-05
Na	23	3	He	-5.622	0.397	19132.79	0.0036	0.4171
Na	23	3	He	-3.636	0.4041	19283.16	0.0036	0.4171
Na	23	3	He	-8.148	0.388	19122.90	0.0036	0.4171
Mg	24	3	He	2.419	0.0089	430.02	0.0018	0.004553
Mg	24	3	He	2.468	0.009	430.03	0.0018	0.004553
Mg	24	3	He	2.983	0.0099	490.03	0.0018	0.004553
Al	27	3	He	-0.729	0.0017	80.00	0.0006	0.002085
Al	27	3	He	-0.341	0.0019	90.00	0.0006	0.002085
Al	27	3	He	0.253	0.0022	110.00	0.0006	0.002085
K	39	3	He	22.865	0.438	21105.89	0.0012	0.4112
K	39	3	He	18.497	0.4328	20655.10	0.0012	0.4112
K	39	3	He	7.283	0.4197	20685.22	0.0012	0.4112
Ca	44	3	He	-9.237	0.0027	130.01	0.0001	0.003322
Ca	44	3	He	0.464	0.0034	160.01	0.0001	0.003322
Ca	44	3	He	4.895	0.0037	180.01	0.0001	0.003322
Ti	47	3	He	1.561	0.0008	40.00	0.0005	0
Ti	47	3	He	2.364	0.0013	60.00	0.0005	0
Ti	47	3	He	1.526	0.0008	40.00	0.0005	0
V	51	3	He	0.029	0.0324	1562.10	0.0213	0.0318
V	51	3	He	0.08	0.0335	1598.10	0.0213	0.0318
V	51	3	He	0.064	0.0332	1634.10	0.0213	0.0318
Cr	52	3	He	0.127	0.0467	2250.26	0.0294	0.04297
Cr	52	3	He	0.092	0.0457	2180.23	0.0294	0.04297
Cr	52	3	He	0.057	0.0446	2200.25	0.0294	0.04297
Mn	55	3	He	0.392	0.0077	370.02	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.382	0.0075	360.02	0.0124	0.002801
Mn	55	3	He	0.264	0.0061	300.02	0.0124	0.002801
Fe	57	3	He	-1.511	0.0019	90.00	0.0006	0.002732
Fe	57	3	He	1.818	0.0038	180.01	0.0006	0.002732
Fe	57	3	He	-0.874	0.0022	110.00	0.0006	0.002732
Co	59	3	He	0.096	0.0089	430.02	0.0549	0.003644
Co	59	3	He	0.094	0.0088	420.02	0.0549	0.003644
Co	59	3	He	0.056	0.0067	330.01	0.0549	0.003644
Ni	60	3	He	-1.01	0.0047	370.02	0.0093	0.01413
Ni	60	3	He	-0.936	0.0054	430.02	0.0093	0.01413
Ni	60	3	He	-0.978	0.005	400.02	0.0093	0.01413
Cu	63	3	He	0.058	0.0109	850.05	0.0274	0.009321
Cu	63	3	He	-0.045	0.0081	640.04	0.0274	0.009321
Cu	63	3	He	0.005	0.0095	750.04	0.0274	0.009321
Zn	66	3	He	0.457	0.0073	570.03	0.0031	0.005913
Zn	66	3	He	0.091	0.0062	490.03	0.0031	0.005913
Zn	66	3	He	0.253	0.0067	530.03	0.0031	0.005913
As	75	3	He	0.288	0.0015	116.00	0.0021	0.0008698
As	75	3	He	0.525	0.002	158.00	0.0021	0.0008698
As	75	3	He	0.312	0.0015	122.00	0.0021	0.0008698
Sr	88	3	He	0.002	0.0007	60.00	0.0088	0.0006843
Sr	88	3	He	-0.025	0.0005	40.00	0.0088	0.0006843
Sr	88	3	He	-0.012	0.0006	50.00	0.0088	0.0006843
Mo	98	3	He	0.002	0.0019	160.01	0.0219	0.001827
Mo	98	3	He	-0.025	0.0013	110.00	0.0219	0.001827
Mo	98	3	He	-0.02	0.0014	120.00	0.0219	0.001827
Ag	107	3	He	-0.01	0.0006	50.00	0.047	0.001064
Ag	107	3	He	0	0.001	90.00	0.047	0.001064
Ag	107	3	He	-0.005	0.0008	70.00	0.047	0.001064
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Sn	120	3	He	0.037	0.0154	1320.11	0.0154	0.01483
Sn	120	3	He	0.055	0.0157	1350.11	0.0154	0.01483
Sn	120	3	He	0.138	0.017	1460.13	0.0154	0.01483
Sb	121	3	He	0.006	0.0004	30.00	0.0143	0.0002661
Sb	121	3	He	0.03	0.0007	60.00	0.0143	0.0002661
Sb	121	3	He	0.022	0.0006	50.00	0.0143	0.0002661
Ba	137	3	He	0.14	0.0009	80.00	0.0048	0.0002665
Ba	137	3	He	0.114	0.0008	70.00	0.0048	0.0002665
Ba	137	3	He	-0.007	0.0002	20.00	0.0048	0.0002665
Tl	205	3	He	-0.019	0.0023	900.06	0.0246	0.002755
Tl	205	3	He	-0.026	0.0021	840.06	0.0246	0.002755
Tl	205	3	He	-0.031	0.002	790.06	0.0246	0.002755
Pb	208	3	He	0.007	0.0024	460.03	0.0324	0.002158
Pb	208	3	He	0.013	0.0026	610.04	0.0324	0.002158
Pb	208	3	He	-0.001	0.0021	480.02	0.0324	0.002158
U	238	3	He	0.04	0.0024	730.05	0.0492	0.0004023
U	238	3	He	0.049	0.0028	860.06	0.0492	0.0004023
U	238	3	He	0.044	0.0026	790.05	0.0492	0.0004023
Sc	45	1	No Gas			2454001.68		
Sc	45	1	No Gas			2449761.21		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2409884.03		
Ge	72	1	No Gas			1187405.14		
Ge	72	1	No Gas			1184416.15		
Ge	72	1	No Gas			1177663.42		
Sc	45	2	H2			195354.63		
Sc	45	2	H2			193886.36		
Sc	45	2	H2			192461.05		
Ge	72	2	H2			155337.46		
Ge	72	2	H2			154913.65		
Ge	72	2	H2			152444.47		
In	115	2	H2			389587.69		
In	115	2	H2			387771.21		
In	115	2	H2			383276.75		
Sc	45	3	He			48191.09		
Sc	45	3	He			47719.16		
Sc	45	3	He			49284.01		
Ge	72	3	He			77922.24		
Ge	72	3	He			79139.02		
Ge	72	3	He			79250.37		
In	115	3	He			85695.94		
In	115	3	He			86117.25		
In	115	3	He			86077.08		
Tb	159	3	He			393901.09		
Tb	159	3	He			397328.43		
Tb	159	3	He			395467.65		
Bi	209	3	He			310051.09		
Bi	209	3	He			306207.22		
Bi	209	3	He			308972.51		

Quantitation Report

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Acq Time	8/9/2023 5:15:47 PM
Sample Name	410-137168-C-2-A
Sample Type	Sample
Comment	E7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

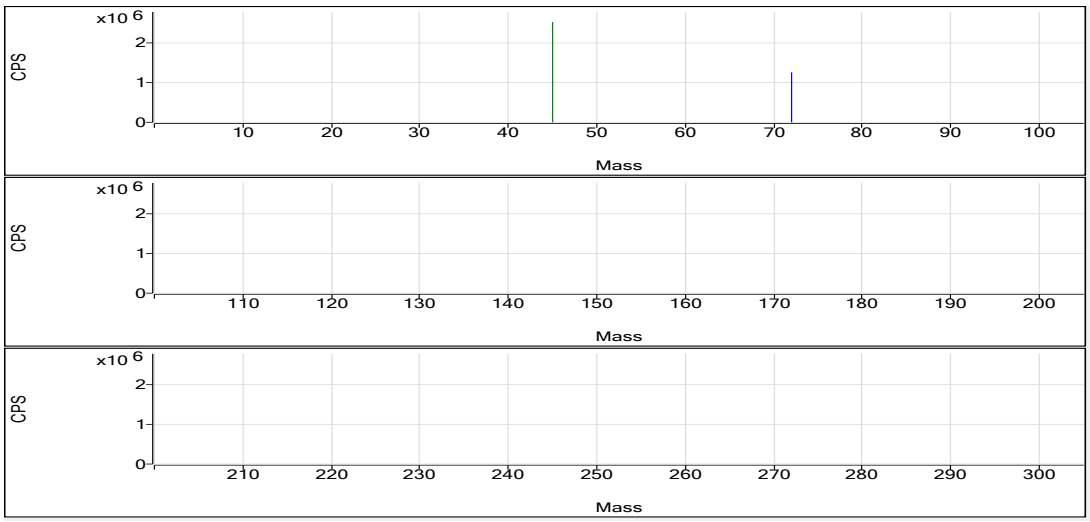
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.030	ppb	N/A	30.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.373	ppb	20.2	33.56	0.0002	Pulse	1.5000	3
Na	23	45	He	118957.954	ppb	1.2	21008619.69	424.4323	Analog	0.1000	3
Mg	24	45	He	3545.194	ppb	1.5	317272.78	6.4100	Pulse	0.1000	3
Al	27	45	He	198.531	ppb	2.1	5828.04	0.1177	Pulse	0.1000	3
K	39	45	He	10321.534	ppb	1.6	618632.05	12.4985	Pulse	0.1000	3
Ca	44	45	He	16443.989	ppb	1.6	55151.88	1.1142	Pulse	0.1000	3
Ti	47	45	He	3.816	ppb	80.3	100.04	0.0020	Pulse	0.1000	3
V	51	45	He	0.073	ppb	68.8	1650.77	0.0333	Pulse	0.5000	3
Cr	52	45	He	0.686	ppb	30.7	3127.11	0.0631	Pulse	0.1000	3
Mn	55	45	He	22.361	ppb	0.5	13900.44	0.2808	Pulse	0.1000	3
Fe	57	45	He	317.532	ppb	3.7	9126.51	0.1844	Pulse	0.1000	3
Co	59	45	He	0.213	ppb	18.2	760.05	0.0153	Pulse	0.1000	3
Ni	60	72	He	0.719	ppb	30.6	1793.52	0.0208	Pulse	0.1000	3
Cu	63	72	He	33.860	ppb	0.8	80874.01	0.9380	Pulse	0.1000	3
Zn	66	72	He	113.006	ppb	1.1	30426.31	0.3529	Pulse	0.1000	3
As	75	72	He	0.502	ppb	26.3	168.00	0.0019	Pulse	0.5000	3
Sr	88	115	He	64.101	ppb	3.6	48955.79	0.5647	Pulse	0.1000	3
Mo	98	115	He	0.397	ppb	20.8	913.40	0.0105	Pulse	0.1000	3
Ag	107	115	He	0.117	ppb	19.5	570.04	0.0066	Pulse	0.1000	3
Cd	111	115	He	0.066	ppb	27.0	36.00	0.0004	Pulse	0.5000	3
Sn	120	115	He	3.437	ppb	5.9	5881.46	0.0678	Pulse	0.1000	3
Sb	121	115	He	1.522	ppb	11.6	1903.53	0.0220	Pulse	0.1000	3
Ba	137	115	He	22.416	ppb	5.8	9310.12	0.1074	Pulse	0.1000	3
Tl	205	159	He	-0.070	ppb	N/A	416.69	0.0010	Pulse	0.1000	3
Pb	208	159	He	0.977	ppb	0.9	13563.24	0.0338	Pulse	0.1000	3
U	238	209	He	0.043	ppb	12.3	843.40	0.0025	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2528188.19	0.7	96.9	Analog	0.1000	3
No Gas	Ge	72	1258373.99	0.1	97.6	Pulse	0.1000	3
H2	Sc	45	198632.49	0.7	96.4	Pulse	0.1000	3
H2	Ge	72	168769.53	0.6	103.7	Pulse	0.1000	3
H2	In	115	393551.01	0.6	97.5	Pulse	0.1000	3
He	Sc	45	49501.61	1.0	96.7	Pulse	0.1000	3
He	Ge	72	86226.39	1.1	105.3	Pulse	0.1000	3
He	In	115	86719.73	1.6	98.9	Pulse	0.1000	3
He	Tb	159	400912.12	0.2	99.8	Pulse	0.1000	3
He	Bi	209	336872.24	0.4	110.0	Pulse	0.1000	3

No Gas



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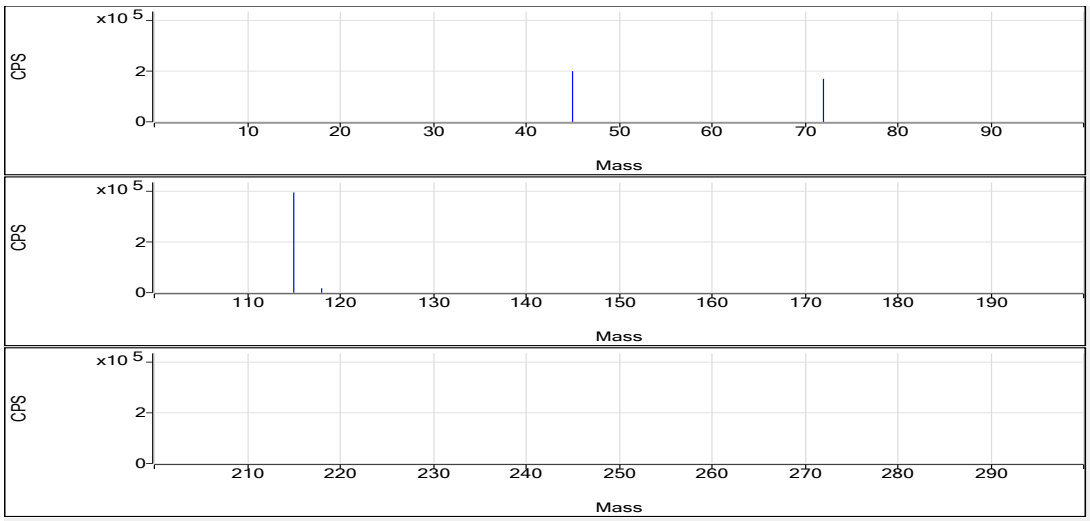
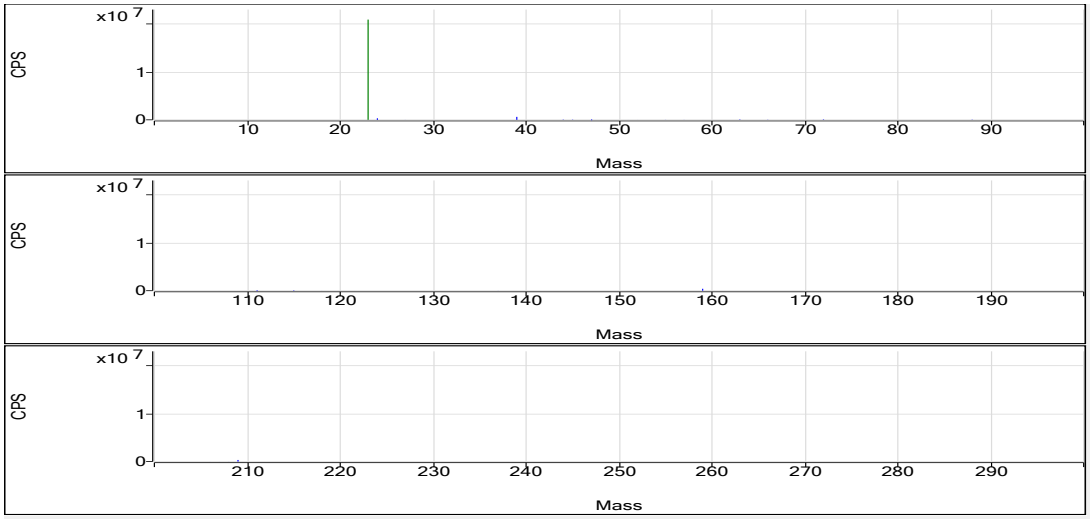


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.03	0	30.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.029	0	32.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.031	0	28.00	0.0007	3.404E-05
Se	78	2	H2	0.417	0.0002	36.67	0.0004	3.546E-05
Se	78	2	H2	0.416	0.0002	36.67	0.0004	3.546E-05
Se	78	2	H2	0.286	0.0002	27.33	0.0004	3.546E-05
Na	23	3	He	118171.053	421.6274	21084082.19	0.0036	0.4171
Na	23	3	He	120590.315	430.2507	21079279.69	0.0036	0.4171
Na	23	3	He	118112.496	421.4187	20862497.19	0.0036	0.4171
Mg	24	3	He	3488.715	6.3079	315436.95	0.0018	0.004553
Mg	24	3	He	3591.214	6.4931	318117.63	0.0018	0.004553
Mg	24	3	He	3555.653	6.4289	318263.75	0.0018	0.004553
Al	27	3	He	193.833	0.115	5751.28	0.0006	0.002085
Al	27	3	He	200.374	0.1188	5821.42	0.0006	0.002085
Al	27	3	He	201.384	0.1194	5911.43	0.0006	0.002085
K	39	3	He	10151.66	12.2995	615056.40	0.0012	0.4112
K	39	3	He	10470.174	12.6726	620866.51	0.0012	0.4112
K	39	3	He	10342.767	12.5233	619973.23	0.0012	0.4112
Ca	44	3	He	16351.416	1.108	55406.01	0.0001	0.003322
Ca	44	3	He	16733.313	1.1338	55547.19	0.0001	0.003322
Ca	44	3	He	16247.238	1.1009	54502.45	0.0001	0.003322
Ti	47	3	He	2.632	0.0014	70.00	0.0005	0
Ti	47	3	He	7.296	0.0039	190.11	0.0005	0
Ti	47	3	He	1.519	0.0008	40.00	0.0005	0
V	51	3	He	0.119	0.0343	1716.11	0.0213	0.0318
V	51	3	He	0.019	0.0322	1578.10	0.0213	0.0318
V	51	3	He	0.08	0.0335	1658.11	0.0213	0.0318
Cr	52	3	He	0.912	0.0698	3490.52	0.0294	0.04297
Cr	52	3	He	0.649	0.0621	3040.44	0.0294	0.04297
Cr	52	3	He	0.497	0.0576	2850.37	0.0294	0.04297
Mn	55	3	He	22.499	0.2825	14127.33	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	22.295	0.28	13716.89	0.0124	0.002801
Mn	55	3	He	22.29	0.2799	13857.10	0.0124	0.002801
Fe	57	3	He	310.594	0.1804	9023.07	0.0006	0.002732
Fe	57	3	He	331.042	0.1921	9413.41	0.0006	0.002732
Fe	57	3	He	310.96	0.1806	8943.04	0.0006	0.002732
Co	59	3	He	0.258	0.0178	890.05	0.0549	0.003644
Co	59	3	He	0.194	0.0143	700.05	0.0549	0.003644
Co	59	3	He	0.188	0.0139	690.04	0.0549	0.003644
Ni	60	3	He	0.779	0.0214	1820.18	0.0093	0.01413
Ni	60	3	He	0.902	0.0225	1960.23	0.0093	0.01413
Ni	60	3	He	0.475	0.0185	1600.14	0.0093	0.01413
Cu	63	3	He	34.163	0.9463	80646.07	0.0274	0.009321
Cu	63	3	He	33.726	0.9343	81410.86	0.0274	0.009321
Cu	63	3	He	33.691	0.9333	80565.09	0.0274	0.009321
Zn	66	3	He	113.725	0.3551	30262.53	0.0031	0.005913
Zn	66	3	He	111.601	0.3486	30373.10	0.0031	0.005913
Zn	66	3	He	113.693	0.355	30643.30	0.0031	0.005913
As	75	3	He	0.382	0.0017	144.00	0.0021	0.0008698
As	75	3	He	0.643	0.0022	196.00	0.0021	0.0008698
As	75	3	He	0.48	0.0019	164.00	0.0021	0.0008698
Sr	88	3	He	66.612	0.5868	49988.64	0.0088	0.0006843
Sr	88	3	He	62.08	0.5469	47601.20	0.0088	0.0006843
Sr	88	3	He	63.61	0.5604	49277.53	0.0088	0.0006843
Mo	98	3	He	0.473	0.0122	1040.08	0.0219	0.001827
Mo	98	3	He	0.309	0.0086	750.05	0.0219	0.001827
Mo	98	3	He	0.409	0.0108	950.07	0.0219	0.001827
Ag	107	3	He	0.137	0.0075	640.04	0.047	0.001064
Ag	107	3	He	0.092	0.0054	470.03	0.047	0.001064
Ag	107	3	He	0.122	0.0068	600.04	0.047	0.001064
Cd	111	3	He	0.046	0.0003	26.00	0.0053	6.086E-05
Cd	111	3	He	0.079	0.0005	42.00	0.0053	6.086E-05
Cd	111	3	He	0.074	0.0005	40.00	0.0053	6.086E-05
Sn	120	3	He	3.447	0.068	5791.44	0.0154	0.01483
Sn	120	3	He	3.637	0.0709	6171.60	0.0154	0.01483
Sn	120	3	He	3.228	0.0646	5681.35	0.0154	0.01483
Sb	121	3	He	1.522	0.022	1870.20	0.0143	0.0002661
Sb	121	3	He	1.699	0.0245	2130.23	0.0143	0.0002661
Sb	121	3	He	1.346	0.0194	1710.17	0.0143	0.0002661
Ba	137	3	He	23.51	0.1126	9593.63	0.0048	0.0002665
Ba	137	3	He	20.989	0.1006	8753.10	0.0048	0.0002665
Ba	137	3	He	22.75	0.109	9583.63	0.0048	0.0002665
Tl	205	3	He	-0.068	0.0011	440.02	0.0246	0.002755
Tl	205	3	He	-0.07	0.001	420.02	0.0246	0.002755
Tl	205	3	He	-0.073	0.001	390.02	0.0246	0.002755
Pb	208	3	He	0.987	0.0341	7092.22	0.0324	0.002158
Pb	208	3	He	0.975	0.0338	7012.08	0.0324	0.002158
Pb	208	3	He	0.97	0.0336	7282.29	0.0324	0.002158
U	238	3	He	0.048	0.0027	930.07	0.0492	0.0004023
U	238	3	He	0.037	0.0022	750.06	0.0492	0.0004023
U	238	3	He	0.043	0.0025	850.06	0.0492	0.0004023
Sc	45	1	No Gas			2511943.40		
Sc	45	1	No Gas			2548928.56		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2523692.62		
Ge	72	1	No Gas			1257537.95		
Ge	72	1	No Gas			1257807.95		
Ge	72	1	No Gas			1259776.07		
Sc	45	2	H2			200241.31		
Sc	45	2	H2			197656.99		
Sc	45	2	H2			197999.18		
Ge	72	2	H2			168006.25		
Ge	72	2	H2			168382.38		
Ge	72	2	H2			169919.96		
In	115	2	H2			396125.19		
In	115	2	H2			393278.16		
In	115	2	H2			391249.68		
Sc	45	3	He			50006.43		
Sc	45	3	He			48993.02		
Sc	45	3	He			49505.39		
Ge	72	3	He			85223.90		
Ge	72	3	He			87135.37		
Ge	72	3	He			86319.89		
In	115	3	He			85220.65		
In	115	3	He			87062.41		
In	115	3	He			87967.24		
Tb	159	3	He			401661.56		
Tb	159	3	He			400868.82		
Tb	159	3	He			400205.97		
Bi	209	3	He			338294.37		
Bi	209	3	He			335759.45		
Bi	209	3	He			336562.89		

Quantitation Report

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Sample Type	Sample
Comment	E7
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

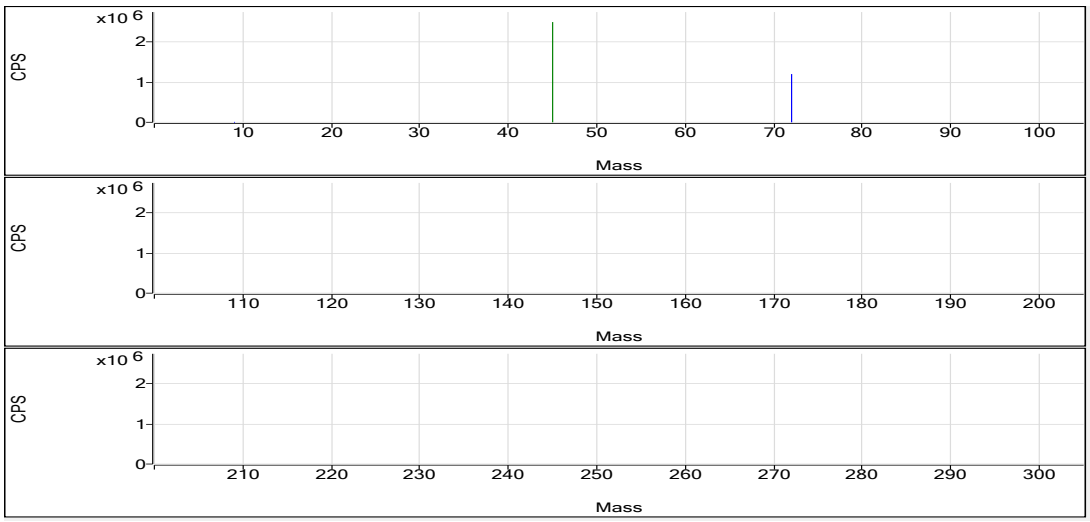
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.039	ppb	N/A	14.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.109	ppb	19.8	13.56	0.0001	Pulse	1.5000	3
Na	23	45	He	15102.059	ppb	0.6	2683844.13	54.2470	Analog	0.1000	3
Mg	24	45	He	105450.709	ppb	0.8	9426547.15	190.5318	Analog	0.1000	3
Al	27	45	He	-0.339	ppb	N/A	93.33	0.0019	Pulse	0.1000	3
K	39	45	He	33531.302	ppb	0.6	1963100.13	39.6789	Analog	0.1000	3
Ca	44	45	He	484374.105	ppb	0.5	1619133.88	32.7263	Analog	0.1000	3
Ti	47	45	He	0.253	ppb	86.6	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	-0.421	ppb	N/A	1130.72	0.0229	Pulse	0.5000	3
Cr	52	45	He	-0.125	ppb	N/A	1943.52	0.0393	Pulse	0.1000	3
Mn	55	45	He	2635.519	ppb	1.2	1621193.78	32.7679	Analog	0.1000	3
Fe	57	45	He	66150.683	ppb	0.8	1872694.87	37.8509	Analog	0.1000	3
Co	59	45	He	4.361	ppb	2.2	12022.01	0.2430	Pulse	0.1000	3
Ni	60	72	He	3.885	ppb	5.8	4090.72	0.0502	Pulse	0.1000	3
Cu	63	72	He	0.163	ppb	24.6	1123.41	0.0138	Pulse	0.1000	3
Zn	66	72	He	2.059	ppb	25.6	996.74	0.0122	Pulse	0.1000	3
As	75	72	He	0.350	ppb	37.4	132.00	0.0016	Pulse	0.5000	3
Sr	88	115	He	1352.014	ppb	2.1	1007132.90	11.8969	Pulse	0.1000	3
Mo	98	115	He	0.006	ppb	330.0	166.67	0.0020	Pulse	0.1000	3
Ag	107	115	He	-0.003	ppb	N/A	76.67	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.046	ppb	74.4	26.00	0.0003	Pulse	0.5000	3
Sn	120	115	He	0.050	ppb	186.2	1320.11	0.0156	Pulse	0.1000	3
Sb	121	115	He	0.025	ppb	65.7	53.33	0.0006	Pulse	0.1000	3
Ba	137	115	He	25.787	ppb	0.9	10457.67	0.1235	Pulse	0.1000	3
Tl	205	159	He	-0.073	ppb	N/A	376.69	0.0010	Pulse	0.1000	3
Pb	208	159	He	0.008	ppb	70.2	960.06	0.0024	Pulse	0.1000	3
U	238	209	He	2.028	ppb	2.7	30934.79	0.1003	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2502718.77	1.6	96.0	Analog	0.1000	3
No Gas	Ge	72	1204284.96	1.1	93.4	Pulse	0.1000	3
H2	Sc	45	196231.90	1.8	95.2	Pulse	0.1000	3
H2	Ge	72	162599.40	0.3	99.9	Pulse	0.1000	3
H2	In	115	384965.40	0.6	95.4	Pulse	0.1000	3
He	Sc	45	49474.95	0.2	96.6	Pulse	0.1000	3
He	Ge	72	81484.97	1.0	99.5	Pulse	0.1000	3
He	In	115	84673.65	1.6	96.6	Pulse	0.1000	3
He	Tb	159	396170.50	1.3	98.6	Pulse	0.1000	3
He	Bi	209	308542.01	0.6	100.8	Pulse	0.1000	3

No Gas



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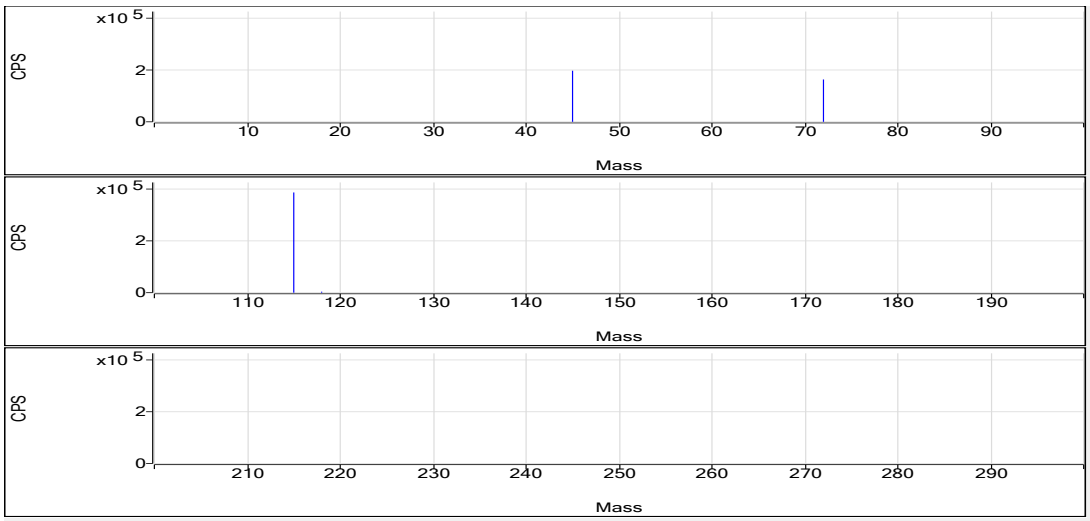
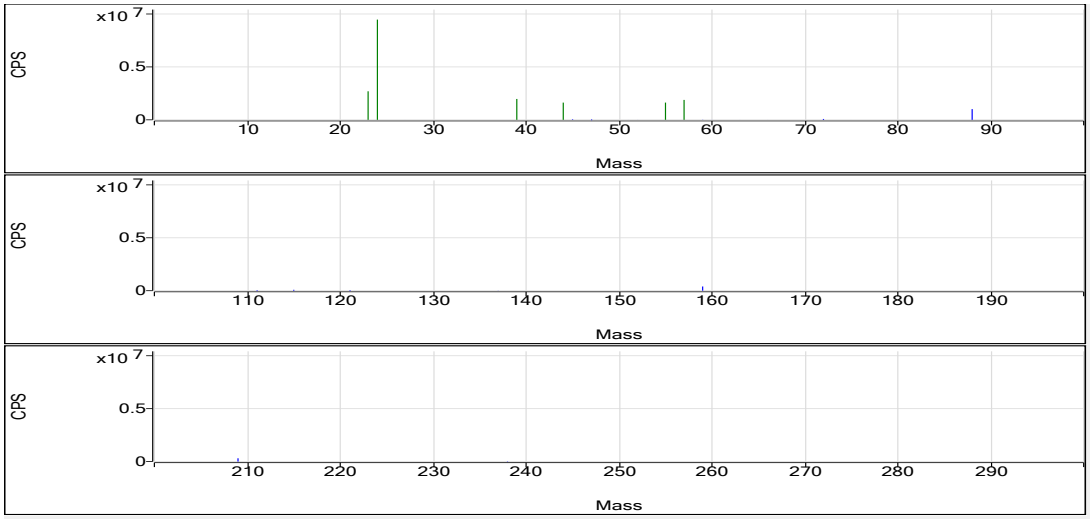


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.04	0	12.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.039	0	14.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.037	0	18.00	0.0007	3.404E-05
Se	78	2	H2	0.097	0.0001	12.67	0.0004	3.546E-05
Se	78	2	H2	0.096	0.0001	12.67	0.0004	3.546E-05
Se	78	2	H2	0.134	0.0001	15.33	0.0004	3.546E-05
Na	23	3	He	15006.365	53.9059	2674026.84	0.0036	0.4171
Na	23	3	He	15107.399	54.2661	2682626.21	0.0036	0.4171
Na	23	3	He	15192.413	54.5691	2694879.33	0.0036	0.4171
Mg	24	3	He	105615.61	190.8298	9466192.36	0.0018	0.004553
Mg	24	3	He	104531.497	188.871	9336781.11	0.0018	0.004553
Mg	24	3	He	106205.019	191.8947	9476667.98	0.0018	0.004553
Al	27	3	He	-1.156	0.0014	70.00	0.0006	0.002085
Al	27	3	He	-0.453	0.0018	90.00	0.0006	0.002085
Al	27	3	He	0.593	0.0024	120.00	0.0006	0.002085
K	39	3	He	33439.188	39.571	1962936.53	0.0012	0.4112
K	39	3	He	33410.951	39.5379	1954545.91	0.0012	0.4112
K	39	3	He	33743.766	39.9277	1971817.94	0.0012	0.4112
Ca	44	3	He	485490.732	32.8017	1627143.26	0.0001	0.003322
Ca	44	3	He	481826.938	32.5542	1609307.16	0.0001	0.003322
Ca	44	3	He	485804.646	32.8229	1620951.23	0.0001	0.003322
Ti	47	3	He	0.379	0.0002	10.00	0.0005	0
Ti	47	3	He	0.38	0.0002	10.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	-0.365	0.024	1192.06	0.0213	0.0318
V	51	3	He	-0.512	0.0209	1034.04	0.0213	0.0318
V	51	3	He	-0.385	0.0236	1166.05	0.0213	0.0318
Cr	52	3	He	-0.145	0.0387	1920.19	0.0294	0.04297
Cr	52	3	He	-0.106	0.0399	1970.19	0.0294	0.04297
Cr	52	3	He	-0.125	0.0393	1940.19	0.0294	0.04297
Mn	55	3	He	2629.713	32.6957	1621886.54	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2670.386	33.2014	1641301.07	0.0124	0.002801
Mn	55	3	He	2606.459	32.4067	1600393.73	0.0124	0.002801
Fe	57	3	He	66786.931	38.2149	1895667.63	0.0006	0.002732
Fe	57	3	He	65831.825	37.6685	1862128.88	0.0006	0.002732
Fe	57	3	He	65833.294	37.6693	1860288.10	0.0006	0.002732
Co	59	3	He	4.413	0.2458	12195.47	0.0549	0.003644
Co	59	3	He	4.421	0.2463	12175.43	0.0549	0.003644
Co	59	3	He	4.248	0.2368	11695.12	0.0549	0.003644
Ni	60	3	He	3.986	0.0511	4180.74	0.0093	0.01413
Ni	60	3	He	3.626	0.0478	3850.65	0.0093	0.01413
Ni	60	3	He	4.042	0.0517	4240.77	0.0093	0.01413
Cu	63	3	He	0.209	0.015	1230.09	0.0274	0.009321
Cu	63	3	He	0.135	0.013	1050.07	0.0274	0.009321
Cu	63	3	He	0.144	0.0133	1090.07	0.0274	0.009321
Zn	66	3	He	2.615	0.0139	1140.08	0.0031	0.005913
Zn	66	3	He	1.995	0.012	970.07	0.0031	0.005913
Zn	66	3	He	1.565	0.0107	880.06	0.0031	0.005913
As	75	3	He	0.495	0.0019	158.00	0.0021	0.0008698
As	75	3	He	0.312	0.0015	124.00	0.0021	0.0008698
As	75	3	He	0.242	0.0014	114.00	0.0021	0.0008698
Sr	88	3	He	1382.079	12.1615	1013559.91	0.0088	0.0006843
Sr	88	3	He	1348.355	11.8647	1004355.38	0.0088	0.0006843
Sr	88	3	He	1325.607	11.6646	1003483.42	0.0088	0.0006843
Mo	98	3	He	-0.018	0.0014	120.00	0.0219	0.001827
Mo	98	3	He	0.019	0.0022	190.01	0.0219	0.001827
Mo	98	3	He	0.017	0.0022	190.01	0.0219	0.001827
Ag	107	3	He	-0.007	0.0007	60.00	0.047	0.001064
Ag	107	3	He	-0.005	0.0008	70.00	0.047	0.001064
Ag	107	3	He	0.002	0.0012	100.00	0.047	0.001064
Cd	111	3	He	0.034	0.0002	20.00	0.0053	6.086E-05
Cd	111	3	He	0.02	0.0002	14.00	0.0053	6.086E-05
Cd	111	3	He	0.085	0.0005	44.00	0.0053	6.086E-05
Sn	120	3	He	0.112	0.0166	1380.13	0.0154	0.01483
Sn	120	3	He	0.095	0.0163	1380.12	0.0154	0.01483
Sn	120	3	He	-0.057	0.0139	1200.09	0.0154	0.01483
Sb	121	3	He	0.007	0.0004	30.00	0.0143	0.0002661
Sb	121	3	He	0.031	0.0007	60.00	0.0143	0.0002661
Sb	121	3	He	0.038	0.0008	70.00	0.0143	0.0002661
Ba	137	3	He	25.54	0.1223	10194.14	0.0048	0.0002665
Ba	137	3	He	25.961	0.1243	10524.38	0.0048	0.0002665
Ba	137	3	He	25.86	0.1238	10654.48	0.0048	0.0002665
Tl	205	3	He	-0.071	0.001	400.02	0.0246	0.002755
Tl	205	3	He	-0.077	0.0009	350.02	0.0246	0.002755
Tl	205	3	He	-0.073	0.001	380.02	0.0246	0.002755
Pb	208	3	He	0.002	0.0022	480.03	0.0324	0.002158
Pb	208	3	He	0.01	0.0025	590.04	0.0324	0.002158
Pb	208	3	He	0.013	0.0026	610.04	0.0324	0.002158
U	238	3	He	1.981	0.098	30326.58	0.0492	0.0004023
U	238	3	He	2.016	0.0997	30847.88	0.0492	0.0004023
U	238	3	He	2.087	0.1032	31629.90	0.0492	0.0004023
Sc	45	1	No Gas			2537464.81		
Sc	45	1	No Gas			2512980.90		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2457710.59		
Ge	72	1	No Gas			1217797.48		
Ge	72	1	No Gas			1204098.03		
Ge	72	1	No Gas			1190959.36		
Sc	45	2	H2			195010.45		
Sc	45	2	H2			193484.76		
Sc	45	2	H2			200200.49		
Ge	72	2	H2			162201.81		
Ge	72	2	H2			163071.43		
Ge	72	2	H2			162524.97		
In	115	2	H2			382684.68		
In	115	2	H2			384840.38		
In	115	2	H2			387371.13		
Sc	45	3	He			49605.43		
Sc	45	3	He			49434.70		
Sc	45	3	He			49384.73		
Ge	72	3	He			81772.69		
Ge	72	3	He			80576.41		
Ge	72	3	He			82105.80		
In	115	3	He			83349.41		
In	115	3	He			84657.46		
In	115	3	He			86035.93		
Tb	159	3	He			393097.42		
Tb	159	3	He			401939.06		
Tb	159	3	He			393475.03		
Bi	209	3	He			309602.30		
Bi	209	3	He			309475.99		
Bi	209	3	He			306547.73		

Quantitation Report

Data File Name	106SMPL.d
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Sample Name	410-137128-I-15-A
Sample Type	Sample
Comment	E7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

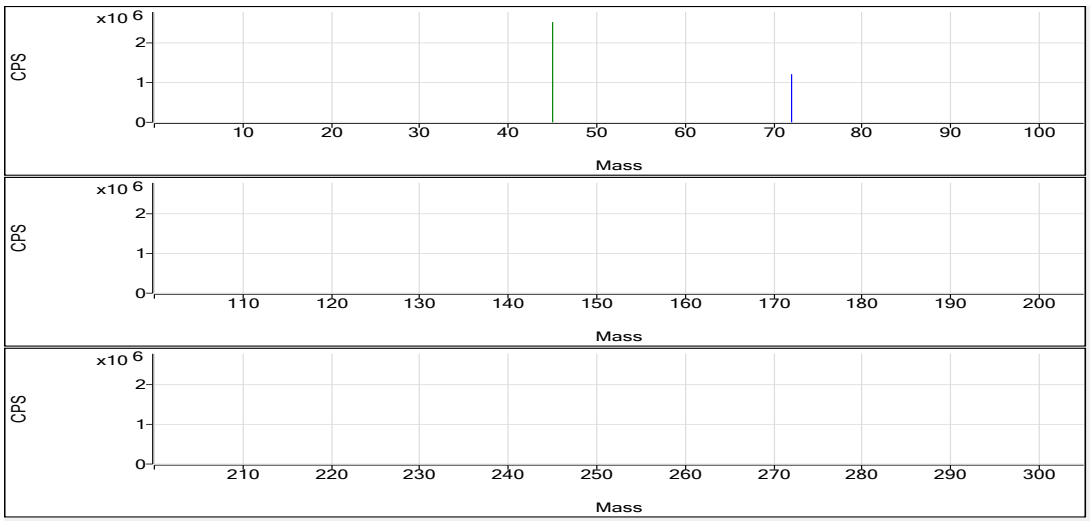
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.031	ppb	N/A	29.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.162	ppb	28.3	17.55	0.0001	Pulse	1.5000	3
Na	23	45	He	19498.991	ppb	0.8	3445158.18	69.9195	Analog	0.1000	3
Mg	24	45	He	92734.463	ppb	0.6	8256072.38	167.5562	Analog	0.1000	3
Al	27	45	He	1.649	ppb	118.4	150.01	0.0030	Pulse	0.1000	3
K	39	45	He	38022.219	ppb	0.6	2214324.03	44.9381	Analog	0.1000	3
Ca	44	45	He	460258.033	ppb	2.0	1532180.18	31.0971	Analog	0.1000	3
Ti	47	45	He	0.380	ppb	99.7	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	-0.598	ppb	N/A	940.70	0.0191	Pulse	0.5000	3
Cr	52	45	He	-0.002	ppb	N/A	2113.56	0.0429	Pulse	0.1000	3
Mn	55	45	He	3053.434	ppb	0.7	1870630.65	37.9635	Analog	0.1000	3
Fe	57	45	He	132733.748	ppb	1.3	3742076.82	75.9464	Analog	0.1000	3
Co	59	45	He	0.592	ppb	12.3	1780.17	0.0361	Pulse	0.1000	3
Ni	60	72	He	-1.114	ppb	N/A	320.01	0.0038	Pulse	0.1000	3
Cu	63	72	He	-0.100	ppb	N/A	556.70	0.0066	Pulse	0.1000	3
Zn	66	72	He	1.297	ppb	8.9	836.72	0.0099	Pulse	0.1000	3
As	75	72	He	0.116	ppb	48.9	94.67	0.0011	Pulse	0.5000	3
Sr	88	115	He	866.979	ppb	1.1	657687.57	7.6291	Pulse	0.1000	3
Mo	98	115	He	0.042	ppb	16.1	236.68	0.0027	Pulse	0.1000	3
Ag	107	115	He	-0.004	ppb	N/A	76.67	0.0009	Pulse	0.1000	3
Cd	111	115	He	-0.009	ppb	N/A	1.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.042	ppb	N/A	1223.43	0.0142	Pulse	0.1000	3
Sb	121	115	He	0.022	ppb	184.8	50.00	0.0006	Pulse	0.1000	3
Ba	137	115	He	18.934	ppb	7.9	7819.17	0.0907	Pulse	0.1000	3
Tl	205	159	He	-0.089	ppb	N/A	226.68	0.0006	Pulse	0.1000	3
Pb	208	159	He	0.004	ppb	261.7	913.39	0.0023	Pulse	0.1000	3
U	238	209	He	0.302	ppb	6.2	4721.06	0.0153	Pulse	0.1000	3

ISTD Table:

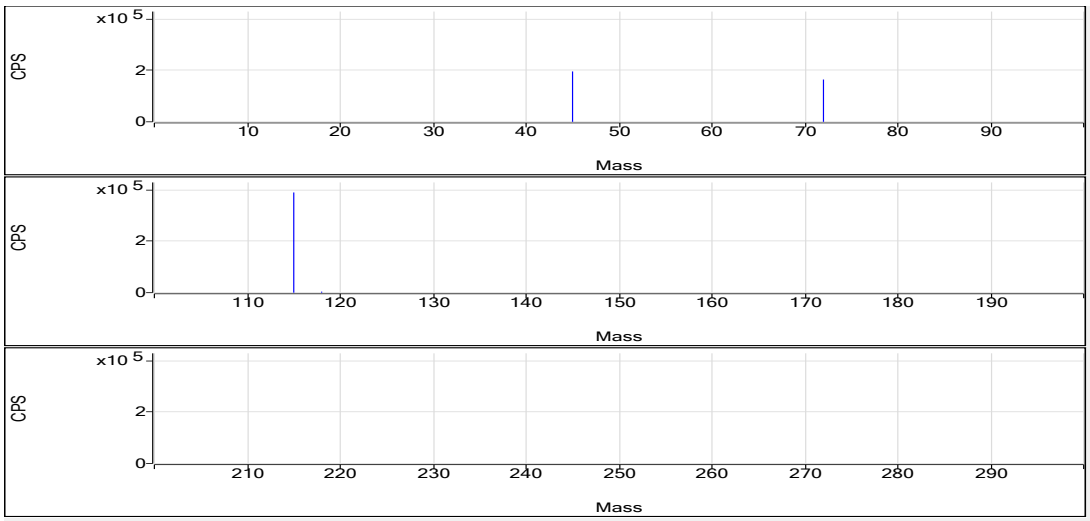
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2523683.92	0.5	96.8	Analog	0.1000	3
No Gas	Ge	72	1210808.37	0.3	93.9	Pulse	0.1000	3
H2	Sc	45	196211.53	1.1	95.2	Pulse	0.1000	3
H2	Ge	72	164665.65	0.7	101.2	Pulse	0.1000	3
H2	In	115	390268.00	1.0	96.7	Pulse	0.1000	3
He	Sc	45	49274.41	0.5	96.2	Pulse	0.1000	3
He	Ge	72	84573.29	0.6	103.3	Pulse	0.1000	3
He	In	115	86214.28	1.1	98.4	Pulse	0.1000	3
He	Tb	159	398678.81	0.9	99.3	Pulse	0.1000	3
He	Bi	209	309474.17	0.4	101.1	Pulse	0.1000	3

No Gas

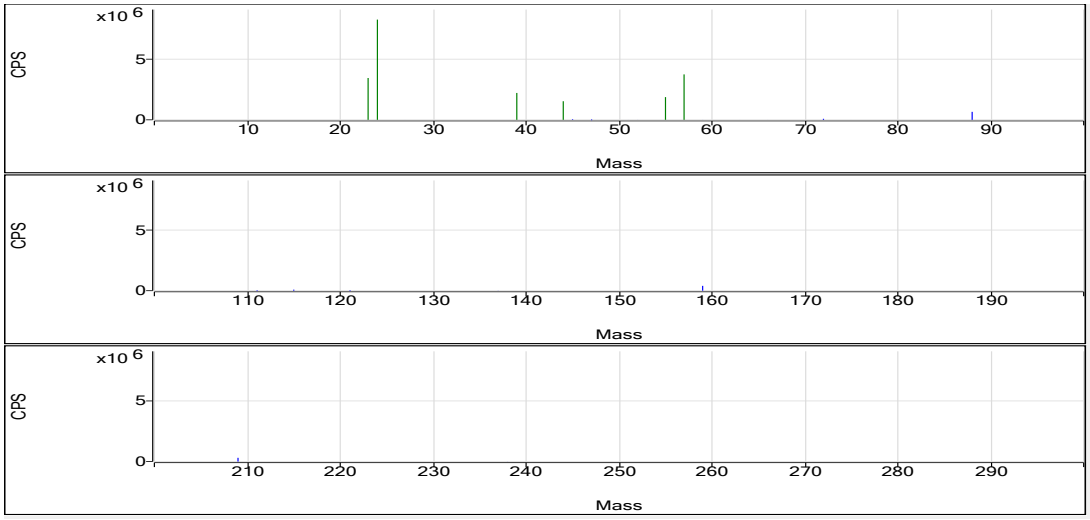


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.02	0	48.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.034	0	24.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.038	0	16.00	0.0007	3.404E-05
Se	78	2	H2	0.139	0.0001	16.00	0.0004	3.546E-05
Se	78	2	H2	0.133	0.0001	15.33	0.0004	3.546E-05
Se	78	2	H2	0.215	0.0001	21.33	0.0004	3.546E-05
Na	23	3	He	19339.183	69.3499	3438740.89	0.0036	0.4171
Na	23	3	He	19505.737	69.9435	3433806.51	0.0036	0.4171
Na	23	3	He	19652.052	70.4651	3462927.14	0.0036	0.4171
Mg	24	3	He	92176.623	166.5483	8258364.25	0.0018	0.004553
Mg	24	3	He	93218.852	168.4314	8268967.38	0.0018	0.004553
Mg	24	3	He	92807.914	167.6889	8240885.50	0.0018	0.004553
Al	27	3	He	1.268	0.0028	140.01	0.0006	0.002085
Al	27	3	He	3.764	0.0043	210.01	0.0006	0.002085
Al	27	3	He	-0.085	0.002	100.00	0.0006	0.002085
K	39	3	He	38187.503	45.1316	2237869.81	0.0012	0.4112
K	39	3	He	38115.673	45.0475	2211561.53	0.0012	0.4112
K	39	3	He	37763.481	44.6351	2193540.75	0.0012	0.4112
Ca	44	3	He	449708.208	30.3843	1506619.82	0.0001	0.003322
Ca	44	3	He	464366.839	31.3746	1540305.91	0.0001	0.003322
Ca	44	3	He	466699.053	31.5322	1549614.82	0.0001	0.003322
Ti	47	3	He	0.758	0.0004	20.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.383	0.0002	10.00	0.0005	0
V	51	3	He	-0.578	0.0195	968.04	0.0213	0.0318
V	51	3	He	-0.628	0.0185	906.03	0.0213	0.0318
V	51	3	He	-0.589	0.0193	948.04	0.0213	0.0318
Cr	52	3	He	-0.096	0.0401	1990.21	0.0294	0.04297
Cr	52	3	He	0.139	0.0471	2310.27	0.0294	0.04297
Cr	52	3	He	-0.049	0.0415	2040.21	0.0294	0.04297
Mn	55	3	He	3056.198	37.9979	1884138.88	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	3072.848	38.2049	1875628.41	0.0124	0.002801
Mn	55	3	He	3031.257	37.6878	1852124.66	0.0124	0.002801
Fe	57	3	He	131297.195	75.1245	3725078.38	0.0006	0.002732
Fe	57	3	He	134676.32	77.0579	3783077.44	0.0006	0.002732
Fe	57	3	He	132227.729	75.6569	3718074.63	0.0006	0.002732
Co	59	3	He	0.672	0.0405	2010.20	0.0549	0.003644
Co	59	3	He	0.572	0.035	1720.17	0.0549	0.003644
Co	59	3	He	0.531	0.0328	1610.14	0.0549	0.003644
Ni	60	3	He	-1.155	0.0034	290.01	0.0093	0.01413
Ni	60	3	He	-1.114	0.0038	320.01	0.0093	0.01413
Ni	60	3	He	-1.074	0.0042	350.02	0.0093	0.01413
Cu	63	3	He	-0.079	0.0072	610.04	0.0274	0.009321
Cu	63	3	He	-0.107	0.0064	540.03	0.0274	0.009321
Cu	63	3	He	-0.115	0.0062	520.03	0.0274	0.009321
Zn	66	3	He	1.174	0.0095	810.05	0.0031	0.005913
Zn	66	3	He	1.314	0.0099	840.05	0.0031	0.005913
Zn	66	3	He	1.403	0.0102	860.06	0.0031	0.005913
As	75	3	He	0.076	0.001	88.00	0.0021	0.0008698
As	75	3	He	0.091	0.0011	90.00	0.0021	0.0008698
As	75	3	He	0.182	0.0013	106.00	0.0021	0.0008698
Sr	88	3	He	857.713	7.5476	655845.69	0.0088	0.0006843
Sr	88	3	He	866.109	7.6215	660513.58	0.0088	0.0006843
Sr	88	3	He	877.114	7.7183	656703.43	0.0088	0.0006843
Mo	98	3	He	0.048	0.0029	250.01	0.0219	0.001827
Mo	98	3	He	0.043	0.0028	240.01	0.0219	0.001827
Mo	98	3	He	0.035	0.0026	220.01	0.0219	0.001827
Ag	107	3	He	-0.008	0.0007	60.00	0.047	0.001064
Ag	107	3	He	-0.01	0.0006	50.00	0.047	0.001064
Ag	107	3	He	0.007	0.0014	120.00	0.047	0.001064
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Sn	120	3	He	0.038	0.0154	1340.12	0.0154	0.01483
Sn	120	3	He	-0.049	0.0141	1220.09	0.0154	0.01483
Sn	120	3	He	-0.116	0.013	1110.08	0.0154	0.01483
Sb	121	3	He	-0.019	0	0.00	0.0143	0.0002661
Sb	121	3	He	0.022	0.0006	50.00	0.0143	0.0002661
Sb	121	3	He	0.064	0.0012	100.01	0.0143	0.0002661
Ba	137	3	He	17.867	0.0856	7442.26	0.0048	0.0002665
Ba	137	3	He	18.301	0.0877	7602.34	0.0048	0.0002665
Ba	137	3	He	20.635	0.0989	8412.90	0.0048	0.0002665
Tl	205	3	He	-0.088	0.0006	230.01	0.0246	0.002755
Tl	205	3	He	-0.092	0.0005	200.01	0.0246	0.002755
Tl	205	3	He	-0.087	0.0006	250.01	0.0246	0.002755
Pb	208	3	He	0.013	0.0026	590.04	0.0324	0.002158
Pb	208	3	He	0.007	0.0024	510.04	0.0324	0.002158
Pb	208	3	He	-0.008	0.0019	370.02	0.0324	0.002158
U	238	3	He	0.323	0.0163	5071.19	0.0492	0.0004023
U	238	3	He	0.293	0.0148	4581.01	0.0492	0.0004023
U	238	3	He	0.289	0.0146	4510.99	0.0492	0.0004023
Sc	45	1	No Gas			2511865.59		
Sc	45	1	No Gas			2536427.31		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2522758.87		
Ge	72	1	No Gas			1211418.73		
Ge	72	1	No Gas			1214603.34		
Ge	72	1	No Gas			1206403.03		
Sc	45	2	H2			193807.40		
Sc	45	2	H2			196856.27		
Sc	45	2	H2			197970.93		
Ge	72	2	H2			165933.86		
Ge	72	2	H2			163706.79		
Ge	72	2	H2			164356.29		
In	115	2	H2			394829.96		
In	115	2	H2			388270.54		
In	115	2	H2			387703.51		
Sc	45	3	He			49585.39		
Sc	45	3	He			49093.97		
Sc	45	3	He			49143.88		
Ge	72	3	He			85113.17		
Ge	72	3	He			84458.49		
Ge	72	3	He			84148.21		
In	115	3	He			86901.22		
In	115	3	He			86670.63		
In	115	3	He			85089.86		
Tb	159	3	He			395042.30		
Tb	159	3	He			401864.92		
Tb	159	3	He			399129.21		
Bi	209	3	He			310864.21		
Bi	209	3	He			309213.39		
Bi	209	3	He			308344.92		

Quantitation Report

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Sample Type	Sample
Comment	E7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

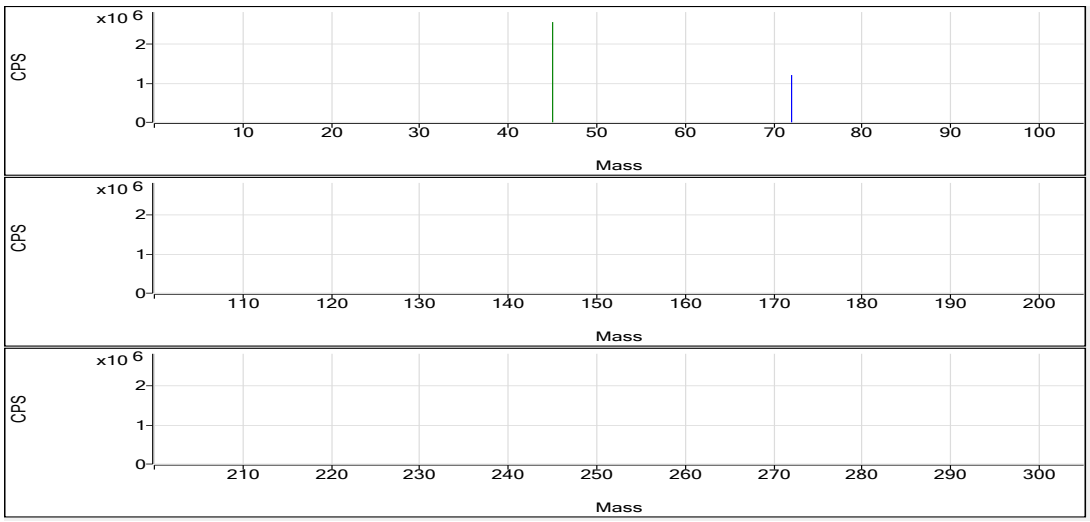
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.036	ppb	N/A	19.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.131	ppb	6.7	15.56	0.0001	Pulse	1.5000	3
Na	23	45	He	19374.205	ppb	3.3	3497589.63	69.4747	Analog	0.1000	3
Mg	24	45	He	92271.014	ppb	2.1	8394533.83	166.7189	Analog	0.1000	3
Al	27	45	He	3.561	ppb	47.0	210.01	0.0042	Pulse	0.1000	3
K	39	45	He	38334.306	ppb	1.8	2281105.95	45.3036	Analog	0.1000	3
Ca	44	45	He	440422.858	ppb	2.2	1498246.85	29.7571	Analog	0.1000	3
Ti	47	45	He	0.122	ppb	173.2	3.33	0.0001	Pulse	0.1000	3
V	51	45	He	-0.647	ppb	N/A	908.70	0.0180	Pulse	0.5000	3
Cr	52	45	He	0.100	ppb	137.5	2313.60	0.0459	Pulse	0.1000	3
Mn	55	45	He	3056.442	ppb	3.0	1913165.33	38.0009	Analog	0.1000	3
Fe	57	45	He	133473.643	ppb	1.8	3845326.09	76.3698	Analog	0.1000	3
Co	59	45	He	0.602	ppb	12.8	1846.85	0.0367	Pulse	0.1000	3
Ni	60	72	He	-1.084	ppb	N/A	356.69	0.0041	Pulse	0.1000	3
Cu	63	72	He	-0.102	ppb	N/A	573.37	0.0065	Pulse	0.1000	3
Zn	66	72	He	1.155	ppb	20.9	830.06	0.0095	Pulse	0.1000	3
As	75	72	He	0.250	ppb	17.8	123.33	0.0014	Pulse	0.5000	3
Sr	88	115	He	840.274	ppb	1.5	658252.58	7.3942	Pulse	0.1000	3
Mo	98	115	He	0.045	ppb	78.6	250.02	0.0028	Pulse	0.1000	3
Ag	107	115	He	-0.011	ppb	N/A	46.67	0.0005	Pulse	0.1000	3
Cd	111	115	He	-0.007	ppb	N/A	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.005	ppb	1840.4	1326.78	0.0149	Pulse	0.1000	3
Sb	121	115	He	0.002	ppb	990.3	26.67	0.0003	Pulse	0.1000	3
Ba	137	115	He	17.227	ppb	4.3	7352.20	0.0826	Pulse	0.1000	3
Tl	205	159	He	-0.095	ppb	N/A	170.01	0.0004	Pulse	0.1000	3
Pb	208	159	He	0.017	ppb	74.1	1086.73	0.0027	Pulse	0.1000	3
U	238	209	He	0.272	ppb	3.6	4250.86	0.0138	Pulse	0.1000	3

ISTD Table:

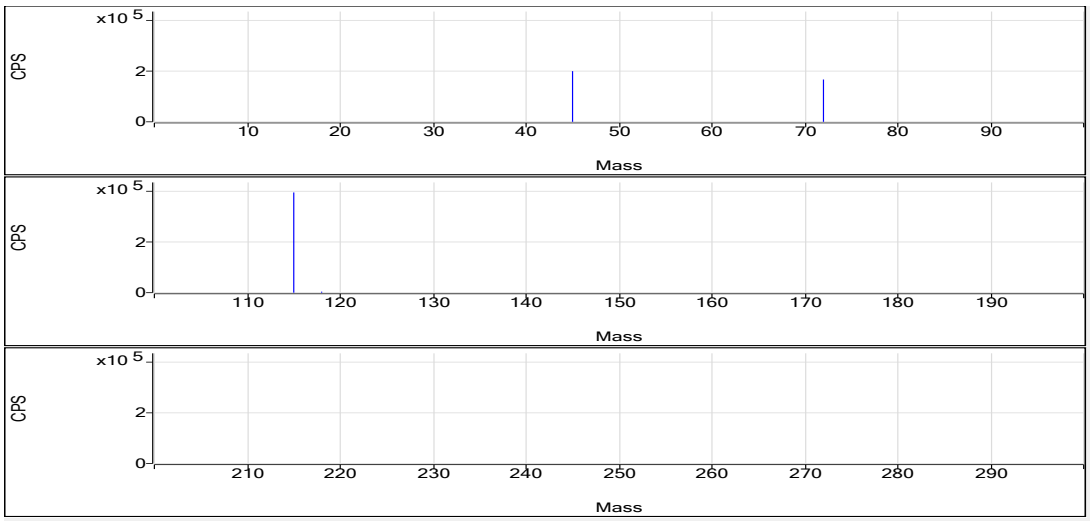
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2566850.54	0.3	98.4	Analog	0.1000	3
No Gas	Ge	72	1210316.31	0.7	93.9	Pulse	0.1000	3
H2	Sc	45	200825.78	1.0	97.5	Pulse	0.1000	3
H2	Ge	72	167657.32	1.5	103.0	Pulse	0.1000	3
H2	In	115	397225.64	0.5	98.4	Pulse	0.1000	3
He	Sc	45	50361.19	1.6	98.4	Pulse	0.1000	3
He	Ge	72	87788.65	1.2	107.2	Pulse	0.1000	3
He	In	115	89028.88	0.6	101.6	Pulse	0.1000	3
He	Tb	159	400617.09	0.3	99.8	Pulse	0.1000	3
He	Bi	209	308004.04	0.9	100.6	Pulse	0.1000	3

No Gas

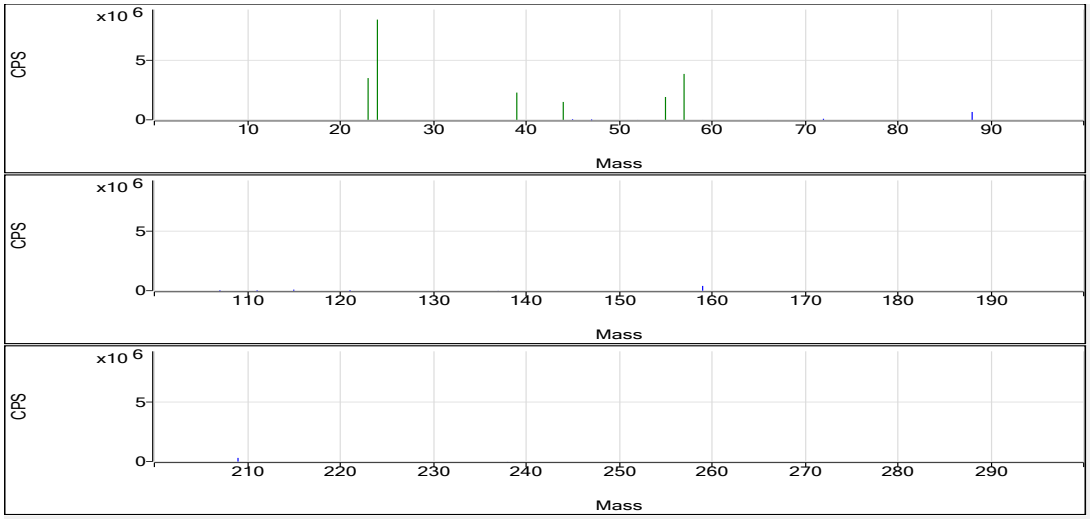


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.033	0	26.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.04	0	12.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.036	0	20.00	0.0007	3.404E-05
Se	78	2	H2	0.121	0.0001	14.67	0.0004	3.546E-05
Se	78	2	H2	0.133	0.0001	16.00	0.0004	3.546E-05
Se	78	2	H2	0.138	0.0001	16.00	0.0004	3.546E-05
Na	23	3	He	19776.883	70.91	3533157.13	0.0036	0.4171
Na	23	3	He	19700.545	70.6379	3528123.38	0.0036	0.4171
Na	23	3	He	18645.187	66.8762	3431488.39	0.0036	0.4171
Mg	24	3	He	94400.459	170.5663	8498624.87	0.0018	0.004553
Mg	24	3	He	91933.657	166.1093	8296595.50	0.0018	0.004553
Mg	24	3	He	90478.926	163.481	8388381.13	0.0018	0.004553
Al	27	3	He	2.279	0.0034	170.01	0.0006	0.002085
Al	27	3	He	2.952	0.0038	190.01	0.0006	0.002085
Al	27	3	He	5.454	0.0053	270.01	0.0006	0.002085
K	39	3	He	38688.386	45.7182	2277951.84	0.0012	0.4112
K	39	3	He	38765.552	45.8086	2287982.15	0.0012	0.4112
K	39	3	He	37548.98	44.3839	2277383.87	0.0012	0.4112
Ca	44	3	He	448726.619	30.318	1510624.04	0.0001	0.003322
Ca	44	3	He	442904.437	29.9247	1494637.01	0.0001	0.003322
Ca	44	3	He	429637.519	29.0284	1489479.51	0.0001	0.003322
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.366	0.0002	10.00	0.0005	0
V	51	3	He	-0.582	0.0194	968.04	0.0213	0.0318
V	51	3	He	-0.707	0.0168	838.03	0.0213	0.0318
V	51	3	He	-0.653	0.0179	920.04	0.0213	0.0318
Cr	52	3	He	0.191	0.0486	2420.29	0.0294	0.04297
Cr	52	3	He	-0.059	0.0412	2060.21	0.0294	0.04297
Cr	52	3	He	0.169	0.0479	2460.31	0.0294	0.04297
Mn	55	3	He	3091.325	38.4346	1915037.94	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	3125.576	38.8604	1940943.56	0.0124	0.002801
Mn	55	3	He	2952.427	36.7078	1883514.50	0.0124	0.002801
Fe	57	3	He	134475.224	76.9428	3833747.13	0.0006	0.002732
Fe	57	3	He	135251.997	77.3873	3865229.63	0.0006	0.002732
Fe	57	3	He	130693.707	74.7792	3837001.51	0.0006	0.002732
Co	59	3	He	0.683	0.0411	2050.23	0.0549	0.003644
Co	59	3	He	0.594	0.0362	1810.16	0.0549	0.003644
Co	59	3	He	0.53	0.0327	1680.15	0.0549	0.003644
Ni	60	3	He	-1.114	0.0038	330.02	0.0093	0.01413
Ni	60	3	He	-1.053	0.0044	380.02	0.0093	0.01413
Ni	60	3	He	-1.086	0.004	360.02	0.0093	0.01413
Cu	63	3	He	-0.101	0.0065	570.03	0.0274	0.009321
Cu	63	3	He	-0.081	0.0071	620.04	0.0274	0.009321
Cu	63	3	He	-0.123	0.006	530.03	0.0274	0.009321
Zn	66	3	He	1.028	0.0091	790.06	0.0031	0.005913
Zn	66	3	He	1.433	0.0103	900.06	0.0031	0.005913
Zn	66	3	He	1.003	0.009	800.05	0.0031	0.005913
As	75	3	He	0.301	0.0015	132.00	0.0021	0.0008698
As	75	3	He	0.225	0.0014	118.00	0.0021	0.0008698
As	75	3	He	0.223	0.0013	120.00	0.0021	0.0008698
Sr	88	3	He	854.137	7.5161	664610.69	0.0088	0.0006843
Sr	88	3	He	837.121	7.3664	656494.21	0.0088	0.0006843
Sr	88	3	He	829.563	7.2999	653652.84	0.0088	0.0006843
Mo	98	3	He	0.01	0.002	180.01	0.0219	0.001827
Mo	98	3	He	0.045	0.0028	250.02	0.0219	0.001827
Mo	98	3	He	0.08	0.0036	320.02	0.0219	0.001827
Ag	107	3	He	-0.003	0.0009	80.00	0.047	0.001064
Ag	107	3	He	-0.015	0.0003	30.00	0.047	0.001064
Ag	107	3	He	-0.016	0.0003	30.00	0.047	0.001064
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Cd	111	3	He	0.001	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Sn	120	3	He	0.109	0.0165	1460.13	0.0154	0.01483
Sn	120	3	He	-0.03	0.0144	1280.10	0.0154	0.01483
Sn	120	3	He	-0.064	0.0138	1240.11	0.0154	0.01483
Sb	121	3	He	0.029	0.0007	60.00	0.0143	0.0002661
Sb	121	3	He	-0.003	0.0002	20.00	0.0143	0.0002661
Sb	121	3	He	-0.019	0	0.00	0.0143	0.0002661
Ba	137	3	He	17.296	0.0829	7332.20	0.0048	0.0002665
Ba	137	3	He	17.936	0.086	7662.36	0.0048	0.0002665
Ba	137	3	He	16.448	0.0789	7062.03	0.0048	0.0002665
Tl	205	3	He	-0.089	0.0006	230.01	0.0246	0.002755
Tl	205	3	He	-0.099	0.0003	130.01	0.0246	0.002755
Tl	205	3	He	-0.097	0.0004	150.01	0.0246	0.002755
Pb	208	3	He	0.003	0.0022	570.04	0.0324	0.002158
Pb	208	3	He	0.026	0.003	610.04	0.0324	0.002158
Pb	208	3	He	0.023	0.0029	530.03	0.0324	0.002158
U	238	3	He	0.261	0.0133	4040.80	0.0492	0.0004023
U	238	3	He	0.279	0.0142	4380.87	0.0492	0.0004023
U	238	3	He	0.276	0.014	4330.90	0.0492	0.0004023
Sc	45	1	No Gas			2558486.06		
Sc	45	1	No Gas			2572932.62		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2569132.93		
Ge	72	1	No Gas			1219784.20		
Ge	72	1	No Gas			1205585.14		
Ge	72	1	No Gas			1205579.59		
Sc	45	2	H2			201042.01		
Sc	45	2	H2			202743.96		
Sc	45	2	H2			198691.38		
Ge	72	2	H2			165813.38		
Ge	72	2	H2			170414.78		
Ge	72	2	H2			166743.79		
In	115	2	H2			397433.90		
In	115	2	H2			398920.46		
In	115	2	H2			395322.57		
Sc	45	3	He			49825.92		
Sc	45	3	He			49946.59		
Sc	45	3	He			51311.06		
Ge	72	3	He			87104.82		
Ge	72	3	He			87275.51		
Ge	72	3	He			88985.61		
In	115	3	He			88431.10		
In	115	3	He			89125.97		
In	115	3	He			89549.16		
Tb	159	3	He			401281.13		
Tb	159	3	He			399165.78		
Tb	159	3	He			401404.37		
Bi	209	3	He			304922.18		
Bi	209	3	He			309498.06		
Bi	209	3	He			309591.87		

Quantitation Report

Data File Name	108SMPL.d
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Sample Type	Sample
Comment	E7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

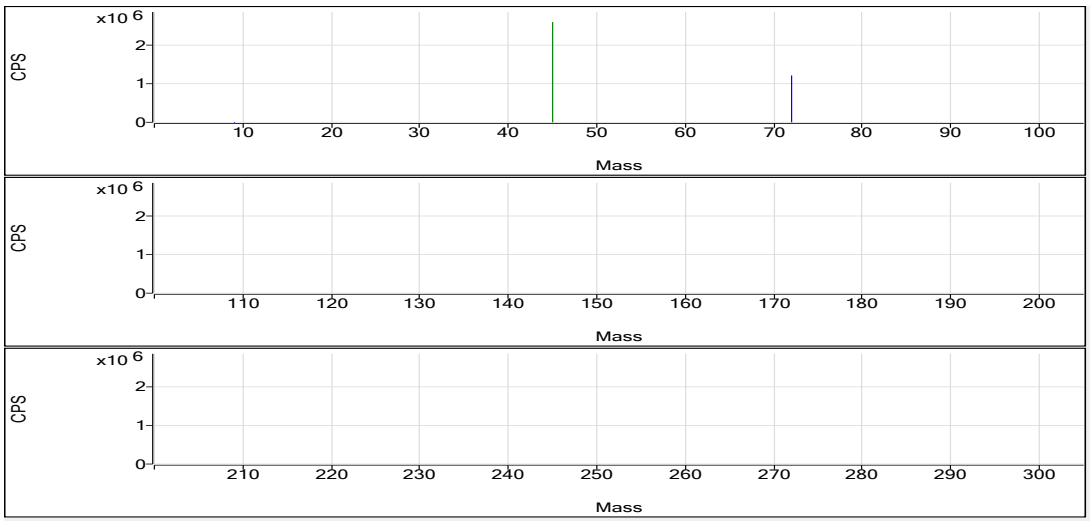
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.040	ppb	N/A	12.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.085	ppb	14.9	12.44	0.0001	Pulse	1.5000	3
Na	23	45	He	14767.608	ppb	1.2	2719639.85	53.0549	Analog	0.1000	3
Mg	24	45	He	88055.720	ppb	1.3	8155928.00	159.1027	Analog	0.1000	3
Al	27	45	He	2.899	ppb	30.7	193.34	0.0038	Pulse	0.1000	3
K	39	45	He	31829.117	ppb	1.7	1931734.14	37.6855	Analog	0.1000	3
Ca	44	45	He	441824.575	ppb	1.2	1530249.56	29.8518	Analog	0.1000	3
Ti	47	45	He	0.245	ppb	86.6	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	-0.377	ppb	N/A	1219.39	0.0238	Pulse	0.5000	3
Cr	52	45	He	-0.007	ppb	N/A	2193.58	0.0428	Pulse	0.1000	3
Mn	55	45	He	6305.738	ppb	0.3	4018882.13	78.3966	Analog	0.1000	3
Fe	57	45	He	348.913	ppb	4.0	10374.10	0.2024	Pulse	0.1000	3
Co	59	45	He	0.103	ppb	23.5	476.69	0.0093	Pulse	0.1000	3
Ni	60	72	He	-1.060	ppb	N/A	376.68	0.0043	Pulse	0.1000	3
Cu	63	72	He	-0.107	ppb	N/A	560.03	0.0064	Pulse	0.1000	3
Zn	66	72	He	0.064	ppb	354.0	536.70	0.0061	Pulse	0.1000	3
As	75	72	He	0.317	ppb	16.2	136.00	0.0015	Pulse	0.5000	3
Sr	88	115	He	1054.573	ppb	1.4	838720.82	9.2798	Pulse	0.1000	3
Mo	98	115	He	-0.048	ppb	N/A	70.00	0.0008	Pulse	0.1000	3
Ag	107	115	He	-0.007	ppb	N/A	66.67	0.0007	Pulse	0.1000	3
Cd	111	115	He	-0.010	ppb	N/A	0.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.038	ppb	263.6	1393.46	0.0154	Pulse	0.1000	3
Sb	121	115	He	0.010	ppb	120.7	36.67	0.0004	Pulse	0.1000	3
Ba	137	115	He	27.200	ppb	1.9	11772.19	0.1303	Pulse	0.1000	3
Tl	205	159	He	-0.097	ppb	N/A	150.01	0.0004	Pulse	0.1000	3
Pb	208	159	He	0.016	ppb	62.5	1090.06	0.0027	Pulse	0.1000	3
U	238	209	He	0.002	ppb	79.8	163.34	0.0005	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2606974.08	1.5	100.0	Analog	0.1000	3
No Gas	Ge	72	1218303.21	1.0	94.5	Pulse	0.1000	3
H2	Sc	45	206339.72	1.0	100.1	Pulse	0.1000	3
H2	Ge	72	171514.85	1.4	105.4	Pulse	0.1000	3
H2	In	115	404617.09	0.3	100.2	Pulse	0.1000	3
He	Sc	45	51264.55	0.9	100.1	Pulse	0.1000	3
He	Ge	72	87788.75	0.7	107.2	Pulse	0.1000	3
He	In	115	90390.45	1.0	103.1	Pulse	0.1000	3
He	Tb	159	406593.85	0.5	101.2	Pulse	0.1000	3
He	Bi	209	311089.06	1.3	101.6	Pulse	0.1000	3

No Gas



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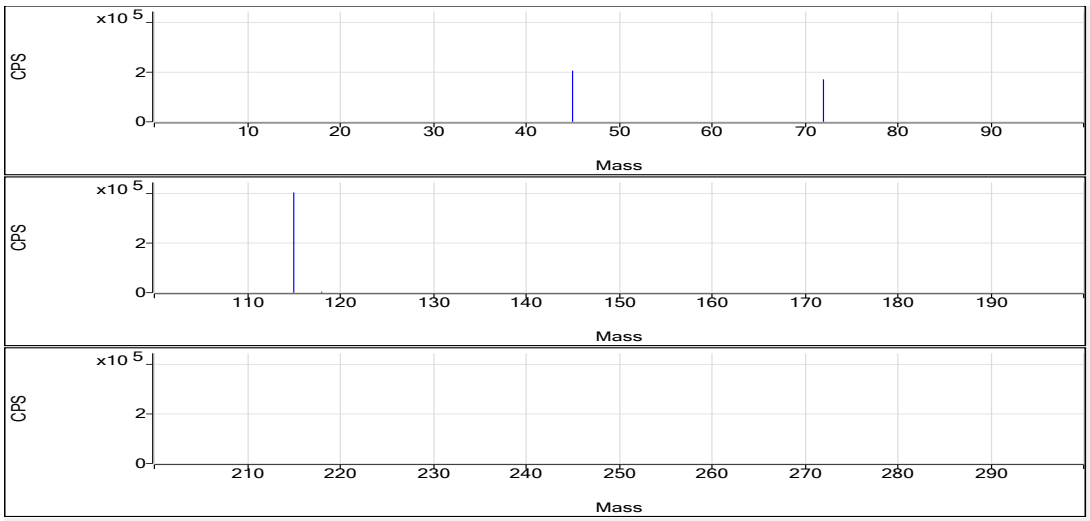
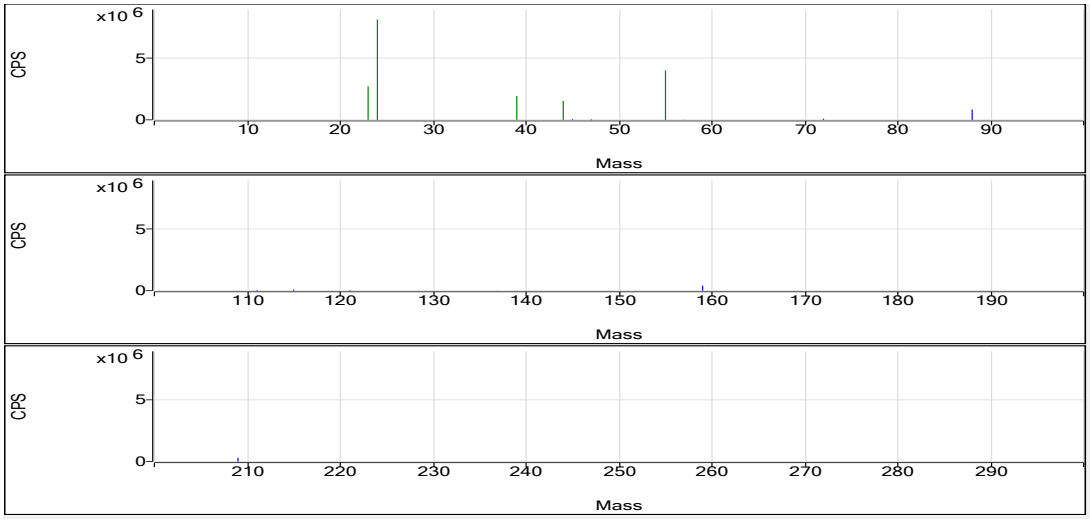


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.037	0	18.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.042	0	10.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.041	0	10.00	0.0007	3.404E-05
Se	78	2	H2	0.07	0.0001	11.33	0.0004	3.546E-05
Se	78	2	H2	0.094	0.0001	13.33	0.0004	3.546E-05
Se	78	2	H2	0.09	0.0001	12.67	0.0004	3.546E-05
Na	23	3	He	14694.695	52.795	2710024.96	0.0036	0.4171
Na	23	3	He	14636.947	52.5892	2719032.77	0.0036	0.4171
Na	23	3	He	14971.182	53.7805	2729861.83	0.0036	0.4171
Mg	24	3	He	89007.075	160.8216	8255148.00	0.0018	0.004553
Mg	24	3	He	86771.577	156.7826	8106172.38	0.0018	0.004553
Mg	24	3	He	88388.507	159.704	8106463.63	0.0018	0.004553
Al	27	3	He	2.107	0.0033	170.01	0.0006	0.002085
Al	27	3	He	2.73	0.0037	190.01	0.0006	0.002085
Al	27	3	He	3.862	0.0043	220.01	0.0006	0.002085
K	39	3	He	31885.784	37.7518	1937843.10	0.0012	0.4112
K	39	3	He	31264.179	37.0239	1914257.16	0.0012	0.4112
K	39	3	He	32337.39	38.2807	1943102.16	0.0012	0.4112
Ca	44	3	He	445473.038	30.0982	1544974.82	0.0001	0.003322
Ca	44	3	He	435510.616	29.4252	1521379.35	0.0001	0.003322
Ca	44	3	He	444490.073	30.0318	1524394.51	0.0001	0.003322
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.364	0.0002	10.00	0.0005	0
Ti	47	3	He	0.37	0.0002	10.00	0.0005	0
V	51	3	He	-0.422	0.0228	1172.06	0.0213	0.0318
V	51	3	He	-0.384	0.0236	1222.06	0.0213	0.0318
V	51	3	He	-0.324	0.0249	1264.06	0.0213	0.0318
Cr	52	3	He	0.102	0.046	2360.25	0.0294	0.04297
Cr	52	3	He	0.085	0.0455	2350.29	0.0294	0.04297
Cr	52	3	He	-0.208	0.0368	1870.19	0.0294	0.04297
Mn	55	3	He	6306.931	78.4114	4024943.07	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	6283.536	78.1206	4039089.63	0.0124	0.002801
Mn	55	3	He	6326.747	78.6578	3992613.69	0.0124	0.002801
Fe	57	3	He	365.156	0.2117	10864.55	0.0006	0.002732
Fe	57	3	He	339.486	0.197	10183.94	0.0006	0.002732
Fe	57	3	He	342.096	0.1985	10073.82	0.0006	0.002732
Co	59	3	He	0.079	0.008	410.02	0.0549	0.003644
Co	59	3	He	0.127	0.0106	550.03	0.0549	0.003644
Co	59	3	He	0.102	0.0093	470.03	0.0549	0.003644
Ni	60	3	He	-1.114	0.0038	330.01	0.0093	0.01413
Ni	60	3	He	-0.97	0.0051	450.02	0.0093	0.01413
Ni	60	3	He	-1.095	0.004	350.02	0.0093	0.01413
Cu	63	3	He	-0.105	0.0064	560.03	0.0274	0.009321
Cu	63	3	He	-0.108	0.0064	560.03	0.0274	0.009321
Cu	63	3	He	-0.109	0.0063	560.03	0.0274	0.009321
Zn	66	3	He	-0.168	0.0054	470.02	0.0031	0.005913
Zn	66	3	He	0.075	0.0061	540.03	0.0031	0.005913
Zn	66	3	He	0.287	0.0068	600.04	0.0031	0.005913
As	75	3	He	0.376	0.0017	146.00	0.0021	0.0008698
As	75	3	He	0.294	0.0015	132.00	0.0021	0.0008698
As	75	3	He	0.281	0.0015	130.00	0.0021	0.0008698
Sr	88	3	He	1066.605	9.3856	840306.63	0.0088	0.0006843
Sr	88	3	He	1059.315	9.3215	841317.57	0.0088	0.0006843
Sr	88	3	He	1037.799	9.1322	834538.27	0.0088	0.0006843
Mo	98	3	He	-0.043	0.0009	80.00	0.0219	0.001827
Mo	98	3	He	-0.063	0.0004	40.00	0.0219	0.001827
Mo	98	3	He	-0.038	0.001	90.00	0.0219	0.001827
Ag	107	3	He	0.003	0.0012	110.01	0.047	0.001064
Ag	107	3	He	-0.011	0.0006	50.00	0.047	0.001064
Ag	107	3	He	-0.013	0.0004	40.00	0.047	0.001064
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Sn	120	3	He	0.154	0.0172	1540.14	0.0154	0.01483
Sn	120	3	He	-0.035	0.0143	1290.11	0.0154	0.01483
Sn	120	3	He	-0.004	0.0148	1350.12	0.0154	0.01483
Sb	121	3	He	-0.003	0.0002	20.00	0.0143	0.0002661
Sb	121	3	He	0.02	0.0006	50.00	0.0143	0.0002661
Sb	121	3	He	0.012	0.0004	40.00	0.0143	0.0002661
Ba	137	3	He	27.794	0.1331	11915.69	0.0048	0.0002665
Ba	137	3	He	26.921	0.1289	11635.38	0.0048	0.0002665
Ba	137	3	He	26.886	0.1287	11765.49	0.0048	0.0002665
Tl	205	3	He	-0.098	0.0003	140.01	0.0246	0.002755
Tl	205	3	He	-0.097	0.0004	150.01	0.0246	0.002755
Tl	205	3	He	-0.096	0.0004	160.01	0.0246	0.002755
Pb	208	3	He	0.016	0.0027	540.03	0.0324	0.002158
Pb	208	3	He	0.026	0.003	770.05	0.0324	0.002158
Pb	208	3	He	0.006	0.0024	440.03	0.0324	0.002158
U	238	3	He	0.004	0.0006	190.01	0.0492	0.0004023
U	238	3	He	0	0.0004	130.00	0.0492	0.0004023
U	238	3	He	0.003	0.0006	170.01	0.0492	0.0004023
Sc	45	1	No Gas			2589363.24		
Sc	45	1	No Gas			2650754.65		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2580804.34		
Ge	72	1	No Gas			1214784.83		
Ge	72	1	No Gas			1232130.14		
Ge	72	1	No Gas			1207994.67		
Sc	45	2	H2			206092.56		
Sc	45	2	H2			208606.34		
Sc	45	2	H2			204320.27		
Ge	72	2	H2			171103.49		
Ge	72	2	H2			174099.29		
Ge	72	2	H2			169341.76		
In	115	2	H2			403388.00		
In	115	2	H2			405707.22		
In	115	2	H2			404756.05		
Sc	45	3	He			51331.08		
Sc	45	3	He			51703.28		
Sc	45	3	He			50759.30		
Ge	72	3	He			87115.30		
Ge	72	3	He			87919.03		
Ge	72	3	He			88331.91		
In	115	3	He			89537.72		
In	115	3	He			90262.92		
In	115	3	He			91390.69		
Tb	159	3	He			408623.20		
Tb	159	3	He			404659.41		
Tb	159	3	He			406498.94		
Bi	209	3	He			314054.78		
Bi	209	3	He			312656.75		
Bi	209	3	He			306555.64		

Quantitation Report

Data File Name	109SMPL.d
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Sample Type	Sample
Comment	E7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

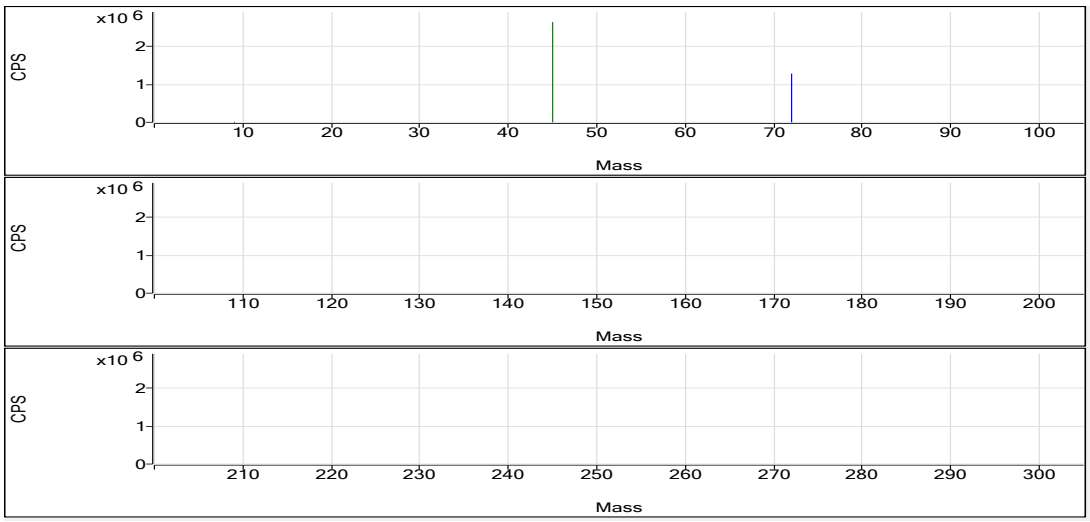
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.040	ppb	N/A	12.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.124	ppb	63.5	15.78	0.0001	Pulse	1.5000	3
Na	23	45	He	13972.076	ppb	1.8	2572081.78	50.2193	Analog	0.1000	3
Mg	24	45	He	7452.783	ppb	2.0	689874.86	13.4702	Pulse	0.1000	3
Al	27	45	He	13.283	ppb	21.8	503.36	0.0098	Pulse	0.1000	3
K	39	45	He	4637.936	ppb	1.8	299240.28	5.8426	Pulse	0.1000	3
Ca	44	45	He	74359.954	ppb	1.3	257476.91	5.0269	Pulse	0.1000	3
Ti	47	45	He	0.610	ppb	33.5	16.67	0.0003	Pulse	0.1000	3
V	51	45	He	-0.325	ppb	N/A	1275.40	0.0249	Pulse	0.5000	3
Cr	52	45	He	0.099	ppb	91.1	2350.27	0.0459	Pulse	0.1000	3
Mn	55	45	He	170.995	ppb	1.6	109039.87	2.1286	Pulse	0.1000	3
Fe	57	45	He	35.238	ppb	5.2	1173.42	0.0229	Pulse	0.1000	3
Co	59	45	He	0.044	ppb	39.3	310.02	0.0061	Pulse	0.1000	3
Ni	60	72	He	-0.411	ppb	N/A	920.07	0.0103	Pulse	0.1000	3
Cu	63	72	He	12.230	ppb	0.6	30773.65	0.3447	Pulse	0.1000	3
Zn	66	72	He	2.016	ppb	16.1	1080.09	0.0121	Pulse	0.1000	3
As	75	72	He	0.124	ppb	79.6	101.33	0.0011	Pulse	0.5000	3
Sr	88	115	He	285.523	ppb	2.8	228895.02	2.5130	Pulse	0.1000	3
Mo	98	115	He	0.099	ppb	21.3	363.35	0.0040	Pulse	0.1000	3
Ag	107	115	He	-0.008	ppb	N/A	63.33	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.059	ppb	42.1	34.00	0.0004	Pulse	0.5000	3
Sn	120	115	He	-0.039	ppb	N/A	1296.77	0.0142	Pulse	0.1000	3
Sb	121	115	He	0.015	ppb	109.7	43.33	0.0005	Pulse	0.1000	3
Ba	137	115	He	21.573	ppb	4.2	9413.58	0.1034	Pulse	0.1000	3
Tl	205	159	He	-0.083	ppb	N/A	293.35	0.0007	Pulse	0.1000	3
Pb	208	159	He	0.024	ppb	43.7	1193.40	0.0029	Pulse	0.1000	3
U	238	209	He	0.346	ppb	2.5	5491.39	0.0174	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2637833.92	1.2	101.1	Analog	0.1000	3
No Gas	Ge	72	1281186.47	1.0	99.4	Pulse	0.1000	3
H2	Sc	45	207571.15	1.1	100.7	Pulse	0.1000	3
H2	Ge	72	175634.44	1.6	107.9	Pulse	0.1000	3
H2	In	115	411354.51	1.1	101.9	Pulse	0.1000	3
He	Sc	45	51227.59	1.9	100.1	Pulse	0.1000	3
He	Ge	72	89268.34	0.7	109.0	Pulse	0.1000	3
He	In	115	91097.16	0.9	103.9	Pulse	0.1000	3
He	Tb	159	408071.84	0.5	101.6	Pulse	0.1000	3
He	Bi	209	314783.94	0.5	102.8	Pulse	0.1000	3

No Gas



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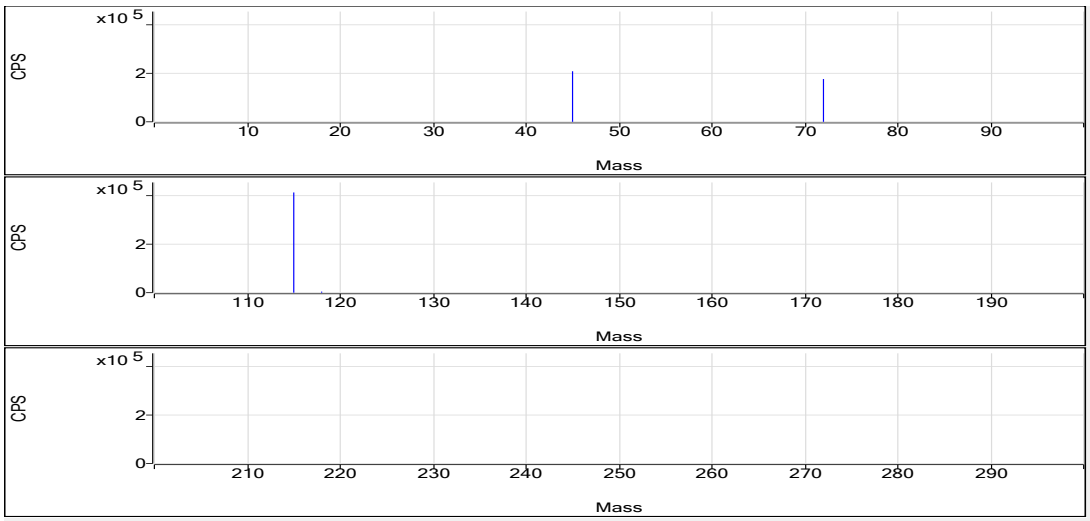
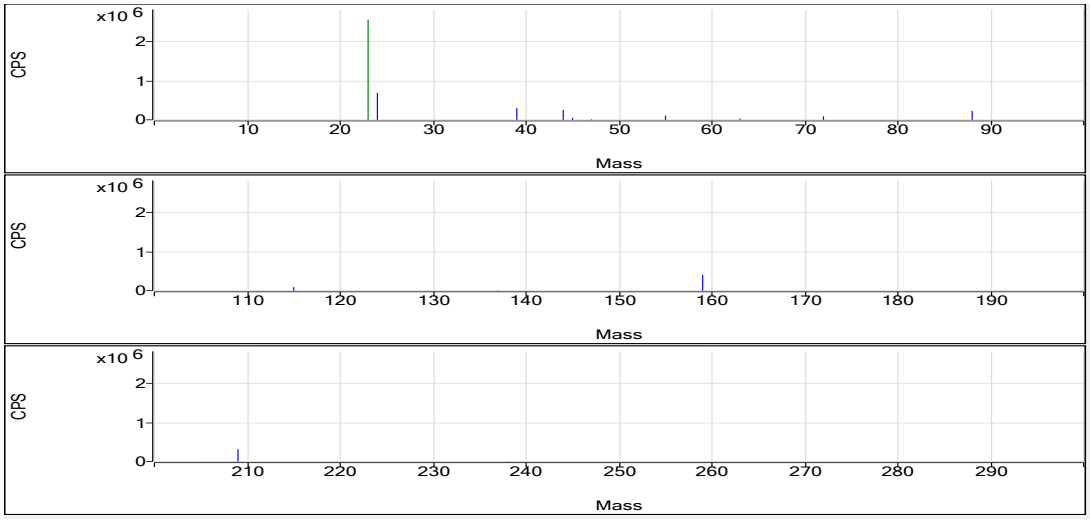


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.04	0	12.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.04	0	14.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.041	0	10.00	0.0007	3.404E-05
Se	78	2	H2	0.05	0.0001	10.00	0.0004	3.546E-05
Se	78	2	H2	0.207	0.0001	22.00	0.0004	3.546E-05
Se	78	2	H2	0.115	0.0001	15.33	0.0004	3.546E-05
Na	23	3	He	13766.073	49.485	2583816.21	0.0036	0.4171
Na	23	3	He	13903.88	49.9762	2556329.18	0.0036	0.4171
Na	23	3	He	14246.275	51.1967	2576099.96	0.0036	0.4171
Mg	24	3	He	7312.093	13.216	690059.99	0.0018	0.004553
Mg	24	3	He	7435.789	13.4395	687440.69	0.0018	0.004553
Mg	24	3	He	7610.467	13.7551	692123.90	0.0018	0.004553
Al	27	3	He	12.202	0.0092	480.02	0.0006	0.002085
Al	27	3	He	16.557	0.0117	600.04	0.0006	0.002085
Al	27	3	He	11.091	0.0085	430.02	0.0006	0.002085
K	39	3	He	4541.83	5.73	299187.50	0.0012	0.4112
K	39	3	He	4672.371	5.8829	300914.94	0.0012	0.4112
K	39	3	He	4699.607	5.9148	297618.41	0.0012	0.4112
Ca	44	3	He	73634.378	4.9779	259914.23	0.0001	0.003322
Ca	44	3	He	74006.252	5.003	255906.83	0.0001	0.003322
Ca	44	3	He	75439.231	5.0998	256609.66	0.0001	0.003322
Ti	47	3	He	0.72	0.0004	20.00	0.0005	0
Ti	47	3	He	0.735	0.0004	20.00	0.0005	0
Ti	47	3	He	0.374	0.0002	10.00	0.0005	0
V	51	3	He	-0.31	0.0252	1316.07	0.0213	0.0318
V	51	3	He	-0.328	0.0248	1270.07	0.0213	0.0318
V	51	3	He	-0.337	0.0246	1240.06	0.0213	0.0318
Cr	52	3	He	0.154	0.0475	2480.30	0.0294	0.04297
Cr	52	3	He	-0.005	0.0428	2190.24	0.0294	0.04297
Cr	52	3	He	0.147	0.0473	2380.28	0.0294	0.04297
Mn	55	3	He	171.695	2.1373	111599.06	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	168.015	2.0916	106986.50	0.0124	0.002801
Mn	55	3	He	173.275	2.157	108534.04	0.0124	0.002801
Fe	57	3	He	37.07	0.0239	1250.09	0.0006	0.002732
Fe	57	3	He	35.206	0.0229	1170.09	0.0006	0.002732
Fe	57	3	He	33.437	0.0219	1100.08	0.0006	0.002732
Co	59	3	He	0.024	0.005	260.01	0.0549	0.003644
Co	59	3	He	0.051	0.0065	330.02	0.0549	0.003644
Co	59	3	He	0.057	0.0068	340.02	0.0549	0.003644
Ni	60	3	He	-0.475	0.0097	870.06	0.0093	0.01413
Ni	60	3	He	-0.306	0.0113	1000.08	0.0093	0.01413
Ni	60	3	He	-0.453	0.0099	890.06	0.0093	0.01413
Cu	63	3	He	12.156	0.3427	30683.51	0.0274	0.009321
Cu	63	3	He	12.292	0.3464	30693.48	0.0274	0.009321
Cu	63	3	He	12.241	0.345	30943.95	0.0274	0.009321
Zn	66	3	He	1.931	0.0118	1060.09	0.0031	0.005913
Zn	66	3	He	2.376	0.0132	1170.10	0.0031	0.005913
Zn	66	3	He	1.743	0.0113	1010.07	0.0031	0.005913
As	75	3	He	0.188	0.0013	114.00	0.0021	0.0008698
As	75	3	He	0.173	0.0012	110.00	0.0021	0.0008698
As	75	3	He	0.01	0.0009	80.00	0.0021	0.0008698
Sr	88	3	He	290.369	2.5556	233175.29	0.0088	0.0006843
Sr	88	3	He	289.922	2.5517	230200.00	0.0088	0.0006843
Sr	88	3	He	276.277	2.4316	223309.76	0.0088	0.0006843
Mo	98	3	He	0.117	0.0044	400.02	0.0219	0.001827
Mo	98	3	He	0.104	0.0041	370.02	0.0219	0.001827
Mo	98	3	He	0.076	0.0035	320.01	0.0219	0.001827
Ag	107	3	He	-0.002	0.001	90.00	0.047	0.001064
Ag	107	3	He	-0.016	0.0003	30.00	0.047	0.001064
Ag	107	3	He	-0.006	0.0008	70.00	0.047	0.001064
Cd	111	3	He	0.075	0.0005	42.00	0.0053	6.086E-05
Cd	111	3	He	0.03	0.0002	20.00	0.0053	6.086E-05
Cd	111	3	He	0.07	0.0004	40.00	0.0053	6.086E-05
Sn	120	3	He	-0.159	0.0124	1130.08	0.0154	0.01483
Sn	120	3	He	0.001	0.0149	1340.11	0.0154	0.01483
Sn	120	3	He	0.041	0.0155	1420.12	0.0154	0.01483
Sb	121	3	He	-0.003	0.0002	20.00	0.0143	0.0002661
Sb	121	3	He	0.028	0.0007	60.00	0.0143	0.0002661
Sb	121	3	He	0.02	0.0005	50.00	0.0143	0.0002661
Ba	137	3	He	21.488	0.103	9393.58	0.0048	0.0002665
Ba	137	3	He	22.522	0.1079	9733.79	0.0048	0.0002665
Ba	137	3	He	20.71	0.0992	9113.38	0.0048	0.0002665
Tl	205	3	He	-0.086	0.0006	260.01	0.0246	0.002755
Tl	205	3	He	-0.079	0.0008	330.02	0.0246	0.002755
Tl	205	3	He	-0.083	0.0007	290.02	0.0246	0.002755
Pb	208	3	He	0.035	0.0033	670.04	0.0324	0.002158
Pb	208	3	He	0.016	0.0027	530.03	0.0324	0.002158
Pb	208	3	He	0.02	0.0028	630.04	0.0324	0.002158
U	238	3	He	0.342	0.0173	5461.34	0.0492	0.0004023
U	238	3	He	0.356	0.0179	5641.46	0.0492	0.0004023
U	238	3	He	0.34	0.0171	5371.36	0.0492	0.0004023
Sc	45	1	No Gas			2613587.77		
Sc	45	1	No Gas			2673020.90		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2626893.09		
Ge	72	1	No Gas			1268667.25		
Ge	72	1	No Gas			1279545.61		
Ge	72	1	No Gas			1295346.54		
Sc	45	2	H2			208392.22		
Sc	45	2	H2			204956.52		
Sc	45	2	H2			209364.72		
Ge	72	2	H2			173857.09		
Ge	72	2	H2			174241.38		
Ge	72	2	H2			178804.84		
In	115	2	H2			406547.73		
In	115	2	H2			415238.16		
In	115	2	H2			412277.65		
Sc	45	3	He			52214.11		
Sc	45	3	He			51150.91		
Sc	45	3	He			50317.74		
Ge	72	3	He			89530.34		
Ge	72	3	He			88594.79		
Ge	72	3	He			89679.89		
In	115	3	He			91248.29		
In	115	3	He			90221.98		
In	115	3	He			91842.80		
Tb	159	3	He			408970.03		
Tb	159	3	He			409447.53		
Tb	159	3	He			405797.96		
Bi	209	3	He			316325.91		
Bi	209	3	He			314671.44		
Bi	209	3	He			313354.47		

Quantitation Report

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Sample Type	Sample
Comment	E7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

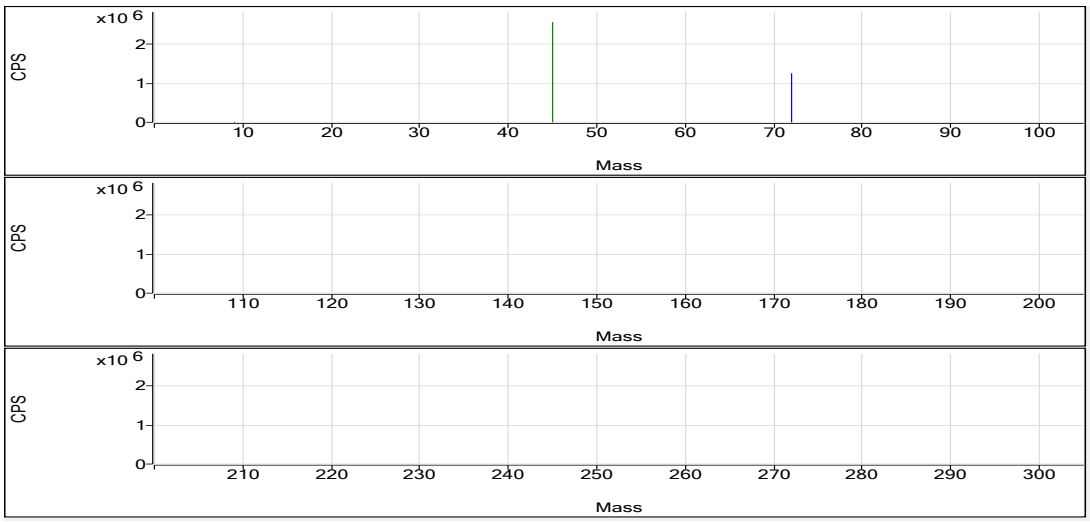
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.037	ppb	N/A	17.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.013	ppb	N/A	5.11	0.0000	Pulse	1.5000	3
Na	23	45	He	514.916	ppb	1.5	116856.41	2.2524	Pulse	0.1000	3
Mg	24	45	He	19.068	ppb	6.5	2023.53	0.0390	Pulse	0.1000	3
Al	27	45	He	12.739	ppb	25.5	493.36	0.0095	Pulse	0.1000	3
K	39	45	He	5.378	ppb	156.6	21660.10	0.4175	Pulse	0.1000	3
Ca	44	45	He	157.189	ppb	1.3	723.38	0.0139	Pulse	0.1000	3
Ti	47	45	He	0.361	ppb	99.0	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	-0.429	ppb	N/A	1176.72	0.0227	Pulse	0.5000	3
Cr	52	45	He	0.289	ppb	13.6	2670.33	0.0515	Pulse	0.1000	3
Mn	55	45	He	0.431	ppb	11.3	423.36	0.0082	Pulse	0.1000	3
Fe	57	45	He	3.390	ppb	89.1	243.34	0.0047	Pulse	0.1000	3
Co	59	45	He	-0.033	ppb	N/A	93.33	0.0018	Pulse	0.1000	3
Ni	60	72	He	-1.228	ppb	N/A	243.34	0.0027	Pulse	0.1000	3
Cu	63	72	He	0.091	ppb	30.6	1053.41	0.0118	Pulse	0.1000	3
Zn	66	72	He	-0.390	ppb	N/A	420.02	0.0047	Pulse	0.1000	3
As	75	72	He	0.075	ppb	20.0	92.00	0.0010	Pulse	0.5000	3
Sr	88	115	He	0.779	ppb	6.0	676.71	0.0075	Pulse	0.1000	3
Mo	98	115	He	-0.054	ppb	N/A	56.67	0.0006	Pulse	0.1000	3
Ag	107	115	He	-0.008	ppb	N/A	60.00	0.0007	Pulse	0.1000	3
Cd	111	115	He	-0.007	ppb	N/A	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.361	ppb	89.1	1830.21	0.0204	Pulse	0.1000	3
Sb	121	115	He	0.114	ppb	46.8	170.01	0.0019	Pulse	0.1000	3
Ba	137	115	He	1.421	ppb	10.9	633.37	0.0071	Pulse	0.1000	3
Tl	205	159	He	-0.098	ppb	N/A	143.34	0.0003	Pulse	0.1000	3
Pb	208	159	He	0.007	ppb	125.5	973.38	0.0024	Pulse	0.1000	3
U	238	209	He	-0.005	ppb	N/A	46.67	0.0001	Pulse	0.1000	3

ISTD Table:

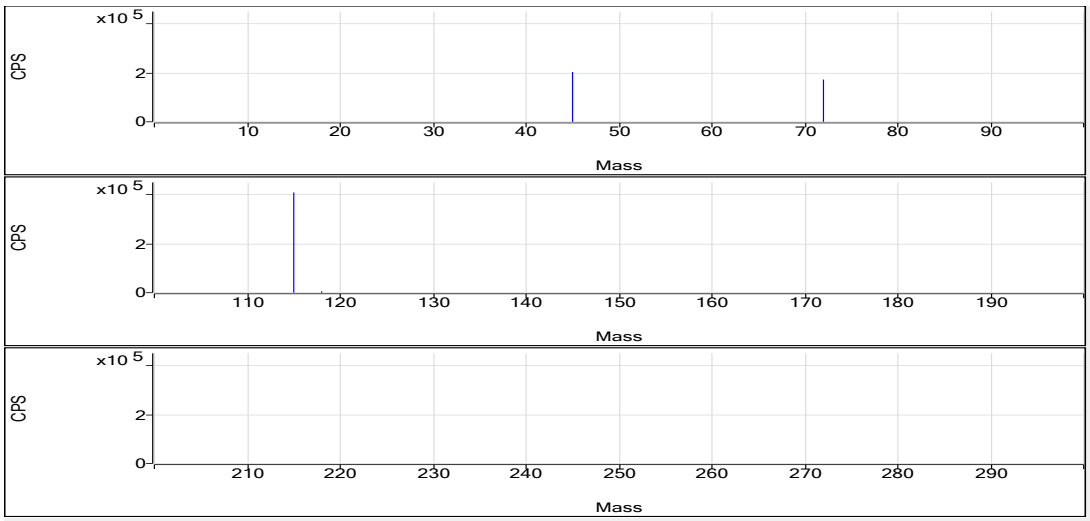
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2567918.29	0.6	98.5	Analog	0.1000	3
No Gas	Ge	72	1257453.66	0.8	97.6	Pulse	0.1000	3
H2	Sc	45	203614.03	1.0	98.8	Pulse	0.1000	3
H2	Ge	72	172733.25	0.4	106.1	Pulse	0.1000	3
H2	In	115	409628.69	1.1	101.5	Pulse	0.1000	3
He	Sc	45	51886.48	1.6	101.3	Pulse	0.1000	3
He	Ge	72	89214.27	1.0	109.0	Pulse	0.1000	3
He	In	115	89759.75	0.7	102.4	Pulse	0.1000	3
He	Tb	159	409692.40	1.2	102.0	Pulse	0.1000	3
He	Bi	209	318999.74	0.3	104.2	Pulse	0.1000	3

No Gas

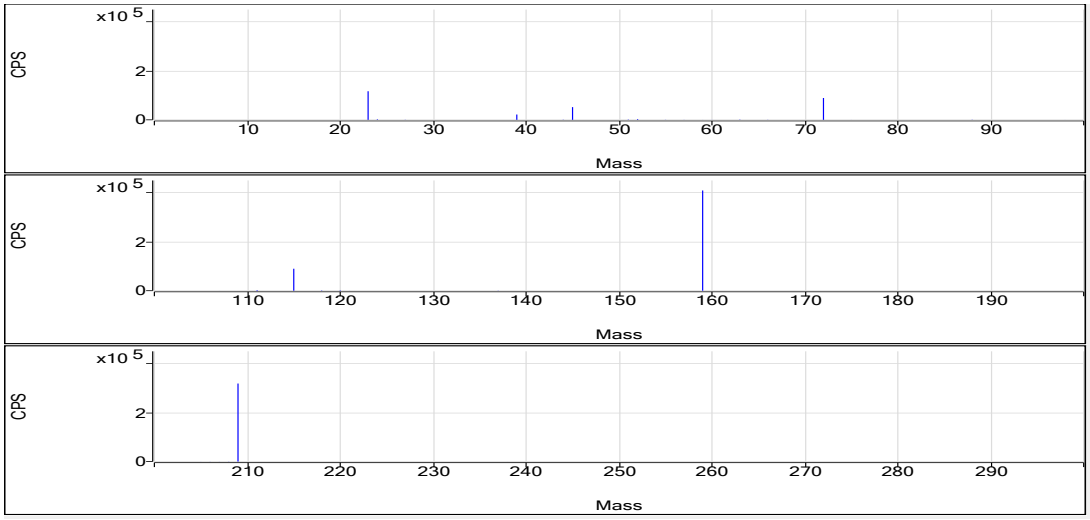


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.038	0	16.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.035	0	22.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.039	0	14.00	0.0007	3.404E-05
Se	78	2	H2	-0.019	0	4.67	0.0004	3.546E-05
Se	78	2	H2	-0.002	0	6.00	0.0004	3.546E-05
Se	78	2	H2	-0.019	0	4.67	0.0004	3.546E-05
Na	23	3	He	507.085	2.2245	116910.10	0.0036	0.4171
Na	23	3	He	522.289	2.2787	116124.09	0.0036	0.4171
Na	23	3	He	515.372	2.2541	117535.04	0.0036	0.4171
Mg	24	3	He	17.807	0.0367	1930.17	0.0018	0.004553
Mg	24	3	He	19.095	0.0391	1990.20	0.0018	0.004553
Mg	24	3	He	20.303	0.0412	2150.23	0.0018	0.004553
Al	27	3	He	15.692	0.0112	590.03	0.0006	0.002085
Al	27	3	He	13.264	0.0098	500.02	0.0006	0.002085
Al	27	3	He	9.26	0.0075	390.02	0.0006	0.002085
K	39	3	He	9.87	0.4227	22217.47	0.0012	0.4112
K	39	3	He	10.6	0.4236	21586.79	0.0012	0.4112
K	39	3	He	-4.336	0.4061	21176.03	0.0012	0.4112
Ca	44	3	He	159.263	0.0141	740.04	0.0001	0.003322
Ca	44	3	He	157.072	0.0139	710.04	0.0001	0.003322
Ca	44	3	He	155.233	0.0138	720.05	0.0001	0.003322
Ti	47	3	He	0.716	0.0004	20.00	0.0005	0
Ti	47	3	He	0.369	0.0002	10.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	-0.488	0.0214	1126.05	0.0213	0.0318
V	51	3	He	-0.392	0.0235	1196.06	0.0213	0.0318
V	51	3	He	-0.406	0.0232	1208.06	0.0213	0.0318
Cr	52	3	He	0.26	0.0506	2660.33	0.0294	0.04297
Cr	52	3	He	0.334	0.0528	2690.33	0.0294	0.04297
Cr	52	3	He	0.274	0.051	2660.34	0.0294	0.04297
Mn	55	3	He	0.463	0.0086	450.02	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.375	0.0075	380.02	0.0124	0.002801
Mn	55	3	He	0.454	0.0084	440.03	0.0124	0.002801
Fe	57	3	He	5.868	0.0061	320.01	0.0006	0.002732
Fe	57	3	He	0.027	0.0027	140.01	0.0006	0.002732
Fe	57	3	He	4.276	0.0052	270.01	0.0006	0.002732
Co	59	3	He	-0.039	0.0015	80.00	0.0549	0.003644
Co	59	3	He	-0.016	0.0027	140.00	0.0549	0.003644
Co	59	3	He	-0.045	0.0012	60.00	0.0549	0.003644
Ni	60	3	He	-1.244	0.0026	230.01	0.0093	0.01413
Ni	60	3	He	-1.242	0.0026	230.01	0.0093	0.01413
Ni	60	3	He	-1.199	0.003	270.01	0.0093	0.01413
Cu	63	3	He	0.114	0.0125	1110.08	0.0274	0.009321
Cu	63	3	He	0.06	0.011	970.07	0.0274	0.009321
Cu	63	3	He	0.097	0.012	1080.08	0.0274	0.009321
Zn	66	3	He	-0.171	0.0054	480.03	0.0031	0.005913
Zn	66	3	He	-0.121	0.0055	490.03	0.0031	0.005913
Zn	66	3	He	-0.878	0.0032	290.01	0.0031	0.005913
As	75	3	He	0.076	0.001	92.00	0.0021	0.0008698
As	75	3	He	0.09	0.0011	94.00	0.0021	0.0008698
As	75	3	He	0.06	0.001	90.00	0.0021	0.0008698
Sr	88	3	He	0.727	0.0071	630.04	0.0088	0.0006843
Sr	88	3	He	0.816	0.0079	710.04	0.0088	0.0006843
Sr	88	3	He	0.794	0.0077	690.04	0.0088	0.0006843
Mo	98	3	He	-0.053	0.0007	60.00	0.0219	0.001827
Mo	98	3	He	-0.058	0.0006	50.00	0.0219	0.001827
Mo	98	3	He	-0.053	0.0007	60.00	0.0219	0.001827
Ag	107	3	He	-0.015	0.0003	30.00	0.047	0.001064
Ag	107	3	He	-0.001	0.001	90.00	0.047	0.001064
Ag	107	3	He	-0.008	0.0007	60.00	0.047	0.001064
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Sn	120	3	He	0.313	0.0197	1750.20	0.0154	0.01483
Sn	120	3	He	0.066	0.0158	1430.13	0.0154	0.01483
Sn	120	3	He	0.703	0.0257	2310.30	0.0154	0.01483
Sb	121	3	He	0.084	0.0015	130.01	0.0143	0.0002661
Sb	121	3	He	0.176	0.0028	250.01	0.0143	0.0002661
Sb	121	3	He	0.083	0.0014	130.01	0.0143	0.0002661
Ba	137	3	He	1.543	0.0076	680.04	0.0048	0.0002665
Ba	137	3	He	1.474	0.0073	660.05	0.0048	0.0002665
Ba	137	3	He	1.246	0.0062	560.03	0.0048	0.0002665
Tl	205	3	He	-0.096	0.0004	160.01	0.0246	0.002755
Tl	205	3	He	-0.098	0.0003	140.01	0.0246	0.002755
Tl	205	3	He	-0.099	0.0003	130.01	0.0246	0.002755
Pb	208	3	He	0	0.0022	460.02	0.0324	0.002158
Pb	208	3	He	0.016	0.0027	510.03	0.0324	0.002158
Pb	208	3	He	0.004	0.0023	560.03	0.0324	0.002158
U	238	3	He	-0.006	0.0001	40.00	0.0492	0.0004023
U	238	3	He	-0.004	0.0002	60.00	0.0492	0.0004023
U	238	3	He	-0.006	0.0001	40.00	0.0492	0.0004023
Sc	45	1	No Gas			2584707.77		
Sc	45	1	No Gas			2558667.62		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2560379.49		
Ge	72	1	No Gas			1268928.97		
Ge	72	1	No Gas			1253312.72		
Ge	72	1	No Gas			1250119.28		
Sc	45	2	H2			202624.90		
Sc	45	2	H2			202288.55		
Sc	45	2	H2			205928.63		
Ge	72	2	H2			172156.07		
Ge	72	2	H2			172573.10		
Ge	72	2	H2			173470.58		
In	115	2	H2			405546.48		
In	115	2	H2			414291.91		
In	115	2	H2			409047.69		
Sc	45	3	He			52555.27		
Sc	45	3	He			50960.41		
Sc	45	3	He			52143.77		
Ge	72	3	He			89106.74		
Ge	72	3	He			88413.10		
Ge	72	3	He			90122.97		
In	115	3	He			89035.31		
In	115	3	He			90273.20		
In	115	3	He			90001.25		
Tb	159	3	He			414778.00		
Tb	159	3	He			405200.97		
Tb	159	3	He			409098.24		
Bi	209	3	He			320064.21		
Bi	209	3	He			317842.57		
Bi	209	3	He			319092.44		

Quantitation Report

Data File Name	111SMPL.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H09B00.b
Acq Time	8/9/2023 5:30:04 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

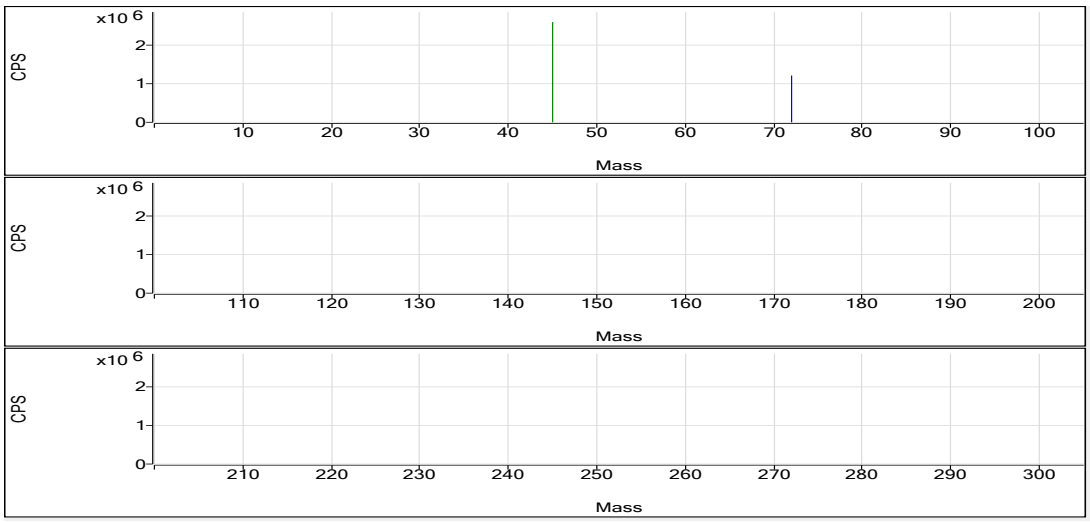
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.037	ppb	N/A	19.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.038	ppb	N/A	3.11	0.0000	Pulse	1.5000	3
Na	23	45	He	-11.431	ppb	N/A	18972.65	0.3763	Pulse	0.1000	3
Mg	24	45	He	1.765	ppb	44.8	390.02	0.0077	Pulse	0.1000	3
Al	27	45	He	-1.649	ppb	N/A	56.67	0.0011	Pulse	0.1000	3
K	39	45	He	-0.370	ppb	N/A	20708.56	0.4108	Pulse	0.1000	3
Ca	44	45	He	7.586	ppb	117.2	193.34	0.0038	Pulse	0.1000	3
Ti	47	45	He	0.250	ppb	173.2	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	-0.361	ppb	N/A	1216.72	0.0241	Pulse	0.5000	3
Cr	52	45	He	-0.072	ppb	N/A	2060.22	0.0409	Pulse	0.1000	3
Mn	55	45	He	0.184	ppb	19.6	256.68	0.0051	Pulse	0.1000	3
Fe	57	45	He	0.533	ppb	260.9	153.34	0.0030	Pulse	0.1000	3
Co	59	45	He	-0.027	ppb	N/A	110.00	0.0022	Pulse	0.1000	3
Ni	60	72	He	-1.240	ppb	N/A	220.01	0.0026	Pulse	0.1000	3
Cu	63	72	He	-0.086	ppb	N/A	586.70	0.0070	Pulse	0.1000	3
Zn	66	72	He	0.216	ppb	181.5	553.37	0.0066	Pulse	0.1000	3
As	75	72	He	0.049	ppb	45.3	82.00	0.0010	Pulse	0.5000	3
Sr	88	115	He	0.103	ppb	24.8	143.34	0.0016	Pulse	0.1000	3
Mo	98	115	He	-0.055	ppb	N/A	56.67	0.0006	Pulse	0.1000	3
Ag	107	115	He	-0.010	ppb	N/A	53.33	0.0006	Pulse	0.1000	3
Cd	111	115	He	-0.010	ppb	N/A	0.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.109	ppb	48.5	1486.81	0.0165	Pulse	0.1000	3
Sb	121	115	He	-0.003	ppb	N/A	20.00	0.0002	Pulse	0.1000	3
Ba	137	115	He	0.037	ppb	127.1	40.00	0.0004	Pulse	0.1000	3
Tl	205	159	He	-0.093	ppb	N/A	190.01	0.0005	Pulse	0.1000	3
Pb	208	159	He	0.007	ppb	88.0	960.05	0.0024	Pulse	0.1000	3
U	238	209	He	-0.003	ppb	N/A	80.00	0.0003	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2603857.36	1.6	99.8	Analog	0.1000	3
No Gas	Ge	72	1215563.94	1.2	94.3	Pulse	0.1000	3
H2	Sc	45	202269.96	0.8	98.2	Pulse	0.1000	3
H2	Ge	72	164756.25	1.1	101.2	Pulse	0.1000	3
H2	In	115	402438.30	0.3	99.7	Pulse	0.1000	3
He	Sc	45	50414.78	0.9	98.5	Pulse	0.1000	3
He	Ge	72	84124.30	1.2	102.8	Pulse	0.1000	3
He	In	115	90047.60	1.6	102.7	Pulse	0.1000	3
He	Tb	159	404671.62	0.9	100.8	Pulse	0.1000	3
He	Bi	209	313479.68	0.3	102.4	Pulse	0.1000	3

No Gas



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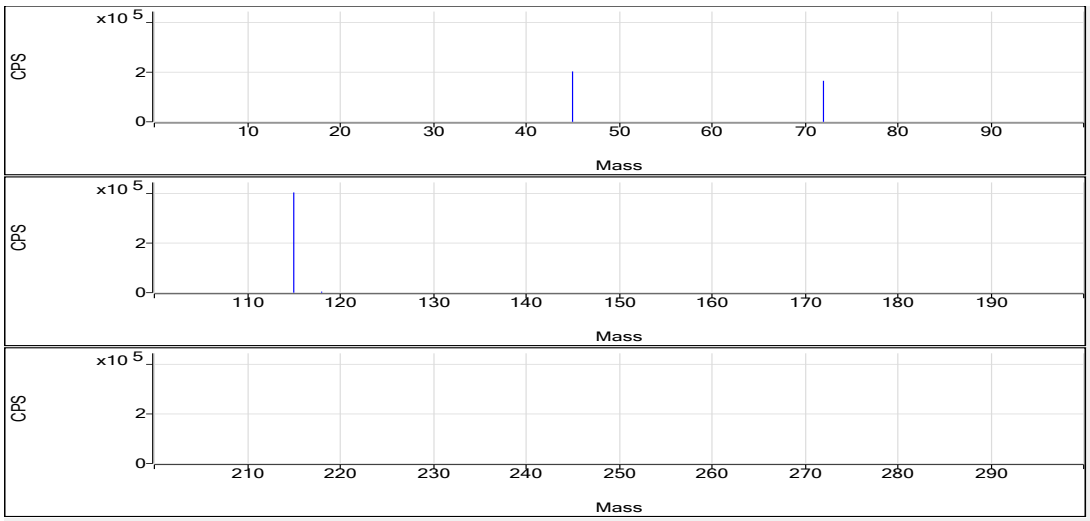
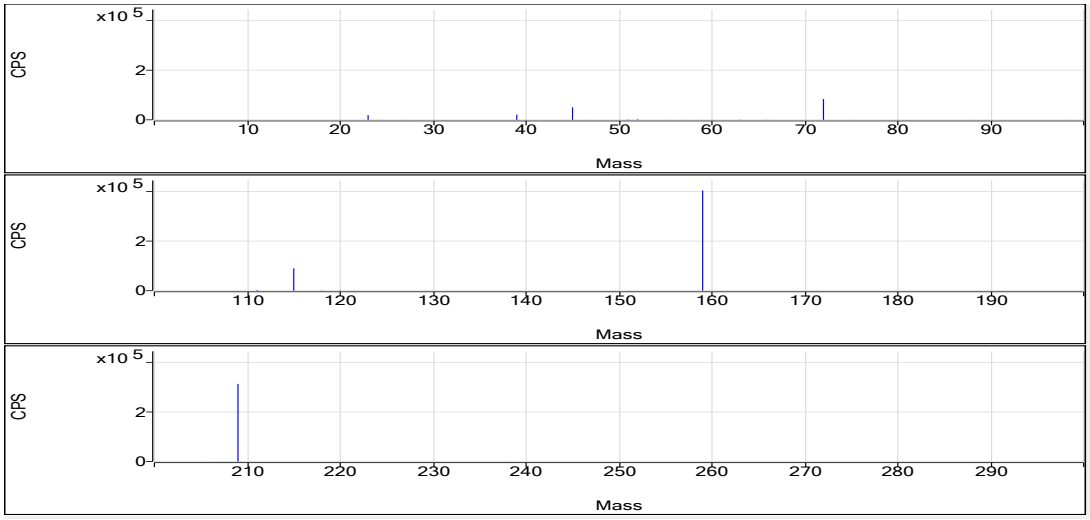


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.036	0	20.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.038	0	16.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.035	0	22.00	0.0007	3.404E-05
Se	78	2	H2	-0.072	0	0.67	0.0004	3.546E-05
Se	78	2	H2	0.003	0	6.00	0.0004	3.546E-05
Se	78	2	H2	-0.044	0	2.67	0.0004	3.546E-05
Na	23	3	He	-12.514	0.3725	18692.25	0.0036	0.4171
Na	23	3	He	-11.473	0.3762	18852.41	0.0036	0.4171
Na	23	3	He	-10.308	0.3803	19373.30	0.0036	0.4171
Mg	24	3	He	2.664	0.0094	470.02	0.0018	0.004553
Mg	24	3	He	1.456	0.0072	360.01	0.0018	0.004553
Mg	24	3	He	1.174	0.0067	340.02	0.0018	0.004553
Al	27	3	He	-2.552	0.0006	30.00	0.0006	0.002085
Al	27	3	He	-0.838	0.0016	80.00	0.0006	0.002085
Al	27	3	He	-1.556	0.0012	60.00	0.0006	0.002085
K	39	3	He	-12.285	0.3968	19914.10	0.0012	0.4112
K	39	3	He	8.828	0.4215	21125.75	0.0012	0.4112
K	39	3	He	2.347	0.4139	21085.84	0.0012	0.4112
Ca	44	3	He	15.72	0.0044	220.01	0.0001	0.003322
Ca	44	3	He	-1.911	0.0032	160.01	0.0001	0.003322
Ca	44	3	He	8.949	0.0039	200.01	0.0001	0.003322
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.75	0.0004	20.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	-0.416	0.023	1152.05	0.0213	0.0318
V	51	3	He	-0.313	0.0251	1260.06	0.0213	0.0318
V	51	3	He	-0.353	0.0243	1238.06	0.0213	0.0318
Cr	52	3	He	-0.099	0.0401	2010.20	0.0294	0.04297
Cr	52	3	He	-0.05	0.0415	2080.23	0.0294	0.04297
Cr	52	3	He	-0.066	0.041	2090.22	0.0294	0.04297
Mn	55	3	He	0.175	0.005	250.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.224	0.0056	280.02	0.0124	0.002801
Mn	55	3	He	0.154	0.0047	240.01	0.0124	0.002801
Fe	57	3	He	-0.596	0.0024	120.00	0.0006	0.002732
Fe	57	3	He	0.108	0.0028	140.01	0.0006	0.002732
Fe	57	3	He	2.088	0.0039	200.01	0.0006	0.002732
Co	59	3	He	-0.03	0.002	100.00	0.0549	0.003644
Co	59	3	He	-0.026	0.0022	110.00	0.0549	0.003644
Co	59	3	He	-0.023	0.0024	120.00	0.0549	0.003644
Ni	60	3	He	-1.275	0.0023	190.01	0.0093	0.01413
Ni	60	3	He	-1.178	0.0032	270.01	0.0093	0.01413
Ni	60	3	He	-1.268	0.0024	200.01	0.0093	0.01413
Cu	63	3	He	-0.085	0.007	580.03	0.0274	0.009321
Cu	63	3	He	-0.073	0.0073	620.03	0.0274	0.009321
Cu	63	3	He	-0.099	0.0066	560.03	0.0274	0.009321
Zn	66	3	He	0.116	0.0063	520.03	0.0031	0.005913
Zn	66	3	He	-0.116	0.0056	470.03	0.0031	0.005913
Zn	66	3	He	0.647	0.0079	670.04	0.0031	0.005913
As	75	3	He	0.055	0.001	82.00	0.0021	0.0008698
As	75	3	He	0.024	0.0009	78.00	0.0021	0.0008698
As	75	3	He	0.067	0.001	86.00	0.0021	0.0008698
Sr	88	3	He	0.115	0.0017	150.01	0.0088	0.0006843
Sr	88	3	He	0.074	0.0013	120.00	0.0088	0.0006843
Sr	88	3	He	0.121	0.0017	160.01	0.0088	0.0006843
Mo	98	3	He	-0.063	0.0005	40.00	0.0219	0.001827
Mo	98	3	He	-0.058	0.0006	50.00	0.0219	0.001827
Mo	98	3	He	-0.043	0.0009	80.00	0.0219	0.001827
Ag	107	3	He	-0.011	0.0006	50.00	0.047	0.001064
Ag	107	3	He	-0.016	0.0003	30.00	0.047	0.001064
Ag	107	3	He	-0.004	0.0009	80.00	0.047	0.001064
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Sn	120	3	He	0.121	0.0167	1480.15	0.0154	0.01483
Sn	120	3	He	0.155	0.0172	1550.15	0.0154	0.01483
Sn	120	3	He	0.051	0.0156	1430.12	0.0154	0.01483
Sb	121	3	He	-0.003	0.0002	20.00	0.0143	0.0002661
Sb	121	3	He	-0.003	0.0002	20.00	0.0143	0.0002661
Sb	121	3	He	-0.003	0.0002	20.00	0.0143	0.0002661
Ba	137	3	He	0.086	0.0007	60.00	0.0048	0.0002665
Ba	137	3	He	-0.009	0.0002	20.00	0.0048	0.0002665
Ba	137	3	He	0.036	0.0004	40.00	0.0048	0.0002665
Tl	205	3	He	-0.096	0.0004	160.01	0.0246	0.002755
Tl	205	3	He	-0.091	0.0005	210.01	0.0246	0.002755
Tl	205	3	He	-0.092	0.0005	200.01	0.0246	0.002755
Pb	208	3	He	0.009	0.0024	440.02	0.0324	0.002158
Pb	208	3	He	0	0.0022	430.03	0.0324	0.002158
Pb	208	3	He	0.011	0.0025	490.02	0.0324	0.002158
U	238	3	He	-0.002	0.0003	100.00	0.0492	0.0004023
U	238	3	He	-0.004	0.0002	70.00	0.0492	0.0004023
U	238	3	He	-0.004	0.0002	70.00	0.0492	0.0004023
Sc	45	1	No Gas			2634388.71		
Sc	45	1	No Gas			2621290.90		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2555892.46		
Ge	72	1	No Gas			1222795.84		
Ge	72	1	No Gas			1224756.39		
Ge	72	1	No Gas			1199139.59		
Sc	45	2	H2			203445.62		
Sc	45	2	H2			202808.22		
Sc	45	2	H2			200556.03		
Ge	72	2	H2			166924.94		
Ge	72	2	H2			163747.21		
Ge	72	2	H2			163596.60		
In	115	2	H2			402874.21		
In	115	2	H2			400955.81		
In	115	2	H2			403484.88		
Sc	45	3	He			50186.80		
Sc	45	3	He			50117.49		
Sc	45	3	He			50940.04		
Ge	72	3	He			82940.88		
Ge	72	3	He			84610.57		
Ge	72	3	He			84821.45		
In	115	3	He			88621.11		
In	115	3	He			90001.11		
In	115	3	He			91541.72		
Tb	159	3	He			408706.56		
Tb	159	3	He			403161.83		
Tb	159	3	He			402146.48		
Bi	209	3	He			314481.09		
Bi	209	3	He			313029.57		
Bi	209	3	He			312928.37		

Quantitation Report

Data File Name	112_CCV.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H09B00.b
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Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

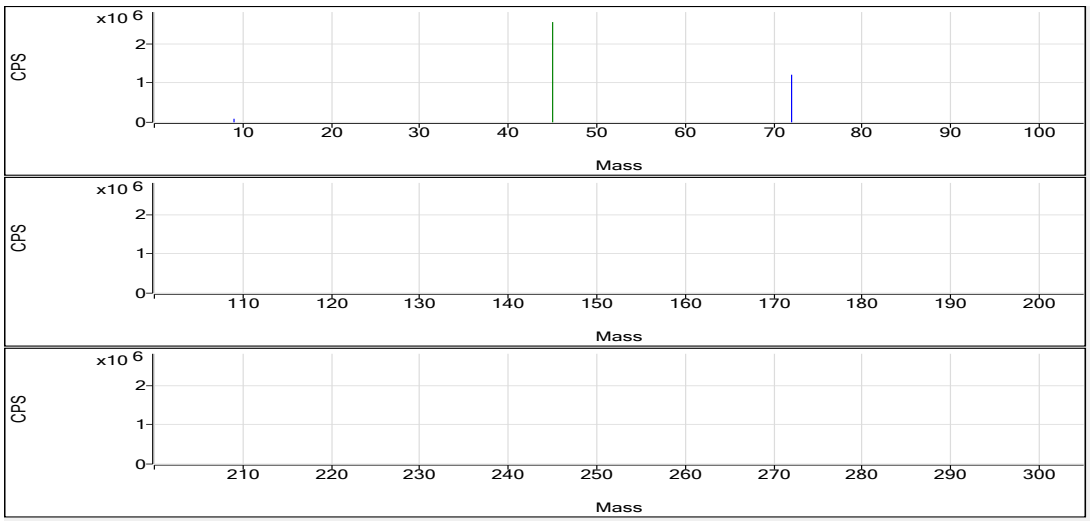
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	48.529	ppb	0.8	90337.63	0.0354	Pulse	0.5000	3
Se	78	72	H2	50.261	ppb	1.4	3690.70	0.0221	Pulse	1.5000	3
Na	23	45	He	4781.730	ppb	0.6	891392.28	17.4611	Pulse	0.1000	3
Mg	24	45	He	5014.759	ppb	0.2	462778.24	9.0652	Pulse	0.1000	3
Al	27	45	He	5022.608	ppb	0.3	149486.44	2.9282	Pulse	0.1000	3
K	39	45	He	5103.293	ppb	0.6	326084.53	6.3875	Pulse	0.1000	3
Ca	44	45	He	5096.956	ppb	2.3	17748.04	0.3477	Pulse	0.1000	3
Ti	47	45	He	5066.630	ppb	2.1	137566.66	2.6947	Pulse	0.1000	3
V	51	45	He	514.832	ppb	0.2	560144.90	10.9724	Pulse	0.5000	3
Cr	52	45	He	488.284	ppb	0.2	735299.23	14.4035	Pulse	0.1000	3
Mn	55	45	He	514.156	ppb	0.7	326458.71	6.3949	Pulse	0.1000	3
Fe	57	45	He	5103.634	ppb	0.3	149208.27	2.9228	Pulse	0.1000	3
Co	59	45	He	517.353	ppb	1.7	1449814.82	28.3998	Analog	0.1000	3
Ni	60	72	He	496.409	ppb	0.5	392041.88	4.6222	Pulse	0.1000	3
Cu	63	72	He	471.750	ppb	0.2	1098179.33	12.9475	Pulse	0.1000	3
Zn	66	72	He	500.956	ppb	1.5	130956.55	1.5441	Pulse	0.1000	3
As	75	72	He	508.798	ppb	0.1	92672.68	1.0926	Pulse	0.5000	3
Sr	88	115	He	52.260	ppb	0.8	41197.64	0.4605	Pulse	0.1000	3
Mo	98	115	He	50.337	ppb	1.0	98984.21	1.1065	Pulse	0.1000	3
Ag	107	115	He	49.582	ppb	1.4	208734.42	2.3334	Pulse	0.1000	3
Cd	111	115	He	50.820	ppb	0.8	24218.32	0.2707	Pulse	0.5000	3
Sn	120	115	He	52.089	ppb	1.1	73183.48	0.8181	Pulse	0.1000	3
Sb	121	115	He	51.854	ppb	2.2	66124.85	0.7392	Pulse	0.1000	3
Ba	137	115	He	522.184	ppb	1.3	223260.28	2.4957	Pulse	0.1000	3
Tl	205	159	He	50.669	ppb	0.4	511368.48	1.2472	Pulse	0.1000	3
Pb	208	159	He	50.722	ppb	0.6	674780.78	1.6458	Pulse	0.1000	3
U	238	209	He	50.045	ppb	0.3	772919.94	2.4650	Pulse	0.1000	3

ISTD Table:

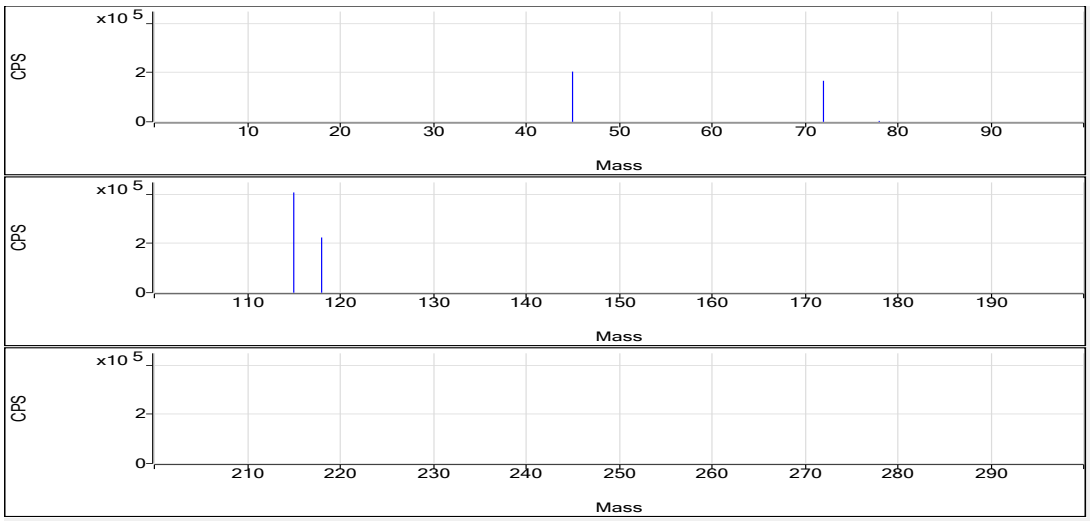
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2552957.36	1.7	97.9	Analog	0.1000	3
No Gas	Ge	72	1211911.83	0.7	94.0	Pulse	0.1000	3
H2	Sc	45	204624.12	0.9	99.3	Pulse	0.1000	3
H2	Ge	72	167265.31	0.6	102.8	Pulse	0.1000	3
H2	In	115	408481.42	0.6	101.2	Pulse	0.1000	3
He	Sc	45	51050.16	0.0	99.7	Pulse	0.1000	3
He	Ge	72	84818.00	0.8	103.6	Pulse	0.1000	3
He	In	115	89462.64	0.8	102.1	Pulse	0.1000	3
He	Tb	159	410014.76	0.3	102.1	Pulse	0.1000	3
He	Bi	209	313565.95	1.0	102.4	Pulse	0.1000	3

No Gas

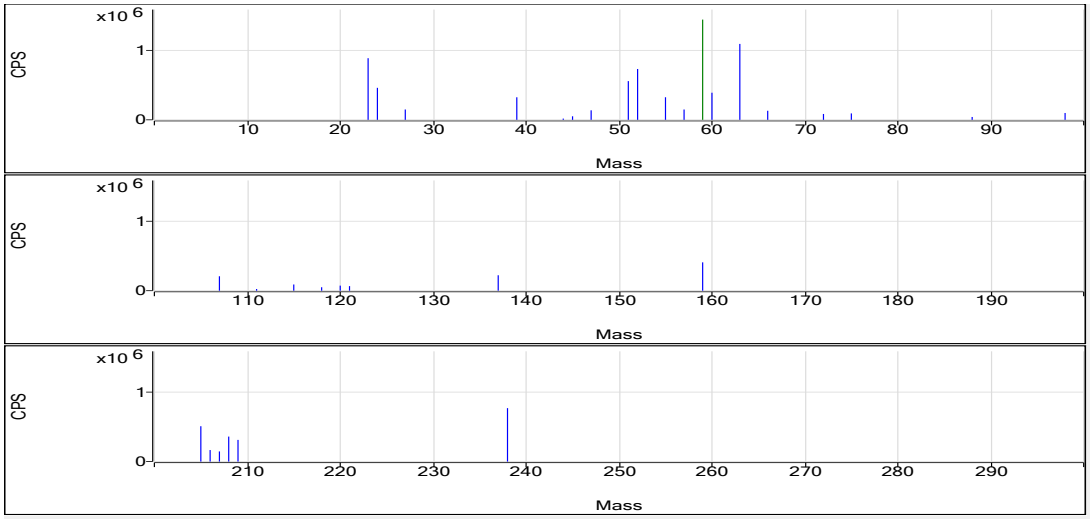


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	48.298	0.0352	90726.55	0.0007	3.404E-05
Be	9	1	No Gas	48.986	0.0357	89414.74	0.0007	3.404E-05
Be	9	1	No Gas	48.303	0.0352	90871.61	0.0007	3.404E-05
Se	78	2	H2	49.488	0.0217	3655.14	0.0004	3.546E-05
Se	78	2	H2	50.375	0.0221	3679.14	0.0004	3.546E-05
Se	78	2	H2	50.92	0.0224	3737.83	0.0004	3.546E-05
Na	23	3	He	4815.016	17.5798	897270.22	0.0036	0.4171
Na	23	3	He	4773.956	17.4334	890335.46	0.0036	0.4171
Na	23	3	He	4756.217	17.3702	886571.16	0.0036	0.4171
Mg	24	3	He	5027.765	9.0887	463885.23	0.0018	0.004553
Mg	24	3	He	5010.903	9.0582	462608.35	0.0018	0.004553
Mg	24	3	He	5005.61	9.0486	461841.13	0.0018	0.004553
Al	27	3	He	5021.786	2.9277	149432.04	0.0006	0.002085
Al	27	3	He	5040.517	2.9387	150079.23	0.0006	0.002085
Al	27	3	He	5005.52	2.9183	148948.05	0.0006	0.002085
K	39	3	He	5114.705	6.4009	326701.26	0.0012	0.4112
K	39	3	He	5124.496	6.4124	327483.37	0.0012	0.4112
K	39	3	He	5070.677	6.3493	324068.96	0.0012	0.4112
Ca	44	3	He	4962.498	0.3386	17280.82	0.0001	0.003322
Ca	44	3	He	5171.349	0.3527	18011.79	0.0001	0.003322
Ca	44	3	He	5157.019	0.3517	17951.51	0.0001	0.003322
Ti	47	3	He	5184.331	2.7573	140734.76	0.0005	0
Ti	47	3	He	4987.699	2.6528	135478.38	0.0005	0
Ti	47	3	He	5027.859	2.6741	136486.85	0.0005	0
V	51	3	He	513.471	10.9435	558556.19	0.0213	0.0318
V	51	3	He	515.102	10.9782	560662.69	0.0213	0.0318
V	51	3	He	515.924	10.9956	561215.81	0.0213	0.0318
Cr	52	3	He	487.72	14.3869	734305.69	0.0294	0.04297
Cr	52	3	He	489.585	14.4417	737548.58	0.0294	0.04297
Cr	52	3	He	487.547	14.3818	734043.43	0.0294	0.04297
Mn	55	3	He	511.152	6.3575	324486.91	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	518.044	6.4432	329058.04	0.0124	0.002801
Mn	55	3	He	513.271	6.3839	325831.17	0.0124	0.002801
Fe	57	3	He	5119.809	2.932	149650.91	0.0006	0.002732
Fe	57	3	He	5086.583	2.913	148770.06	0.0006	0.002732
Fe	57	3	He	5104.51	2.9233	149203.83	0.0006	0.002732
Co	59	3	He	527.035	28.9313	1476650.45	0.0549	0.003644
Co	59	3	He	514.671	28.2526	1442879.20	0.0549	0.003644
Co	59	3	He	510.354	28.0157	1429914.82	0.0549	0.003644
Ni	60	3	He	495.659	4.6153	395091.63	0.0093	0.01413
Ni	60	3	He	494.608	4.6055	389768.71	0.0093	0.01413
Ni	60	3	He	498.96	4.6459	391265.31	0.0093	0.01413
Cu	63	3	He	471.016	12.9274	1106656.78	0.0274	0.009321
Cu	63	3	He	472.735	12.9746	1098050.53	0.0274	0.009321
Cu	63	3	He	471.5	12.9407	1089830.69	0.0274	0.009321
Zn	66	3	He	497.247	1.5327	131204.85	0.0031	0.005913
Zn	66	3	He	496.202	1.5295	129439.75	0.0031	0.005913
Zn	66	3	He	509.42	1.57	132225.06	0.0031	0.005913
As	75	3	He	507.926	1.0907	93373.73	0.0021	0.0008698
As	75	3	He	509.157	1.0934	92534.52	0.0021	0.0008698
As	75	3	He	509.31	1.0937	92109.80	0.0021	0.0008698
Sr	88	3	He	51.93	0.4576	41301.50	0.0088	0.0006843
Sr	88	3	He	52.086	0.459	40819.88	0.0088	0.0006843
Sr	88	3	He	52.763	0.4649	41471.54	0.0088	0.0006843
Mo	98	3	He	49.802	1.0947	98806.41	0.0219	0.001827
Mo	98	3	He	50.733	1.1152	99179.06	0.0219	0.001827
Mo	98	3	He	50.476	1.1095	98967.17	0.0219	0.001827
Ag	107	3	He	48.908	2.3017	207736.17	0.047	0.001064
Ag	107	3	He	50.279	2.3662	210436.58	0.047	0.001064
Ag	107	3	He	49.558	2.3323	208030.50	0.047	0.001064
Cd	111	3	He	51.194	0.2727	24611.68	0.0053	6.086E-05
Cd	111	3	He	50.849	0.2709	24088.76	0.0053	6.086E-05
Cd	111	3	He	50.417	0.2686	23954.51	0.0053	6.086E-05
Sn	120	3	He	51.592	0.8104	73143.40	0.0154	0.01483
Sn	120	3	He	52.701	0.8275	73595.44	0.0154	0.01483
Sn	120	3	He	51.974	0.8163	72811.59	0.0154	0.01483
Sb	121	3	He	50.655	0.7221	65173.59	0.0143	0.0002661
Sb	121	3	He	52.017	0.7415	65947.24	0.0143	0.0002661
Sb	121	3	He	52.892	0.754	67253.73	0.0143	0.0002661
Ba	137	3	He	518.225	2.4768	223540.09	0.0048	0.0002665
Ba	137	3	He	529.925	2.5327	225245.33	0.0048	0.0002665
Ba	137	3	He	518.402	2.4776	220995.41	0.0048	0.0002665
Tl	205	3	He	50.852	1.2517	514869.91	0.0246	0.002755
Tl	205	3	He	50.479	1.2425	509620.58	0.0246	0.002755
Tl	205	3	He	50.675	1.2473	509614.95	0.0246	0.002755
Pb	208	3	He	50.381	1.6347	359545.11	0.0324	0.002158
Pb	208	3	He	50.849	1.6499	363291.44	0.0324	0.002158
Pb	208	3	He	50.936	1.6527	361401.13	0.0324	0.002158
U	238	3	He	49.943	2.46	768861.79	0.0492	0.0004023
U	238	3	He	49.957	2.4606	780602.49	0.0492	0.0004023
U	238	3	He	50.234	2.4743	769295.54	0.0492	0.0004023
Sc	45	1	No Gas			2575967.15		
Sc	45	1	No Gas			2503086.21		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2579818.71		
Ge	72	1	No Gas			1218845.68		
Ge	72	1	No Gas			1202941.00		
Ge	72	1	No Gas			1213948.81		
Sc	45	2	H2			203008.98		
Sc	45	2	H2			204276.19		
Sc	45	2	H2			206587.18		
Ge	72	2	H2			168230.39		
Ge	72	2	H2			166358.85		
Ge	72	2	H2			167206.68		
In	115	2	H2			407667.06		
In	115	2	H2			406639.21		
In	115	2	H2			411138.00		
Sc	45	3	He			51039.96		
Sc	45	3	He			51070.66		
Sc	45	3	He			51039.85		
Ge	72	3	He			85605.51		
Ge	72	3	He			84631.10		
Ge	72	3	He			84217.38		
In	115	3	He			90653.88		
In	115	3	He			89317.06		
In	115	3	He			89588.03		
Tb	159	3	He			411336.79		
Tb	159	3	He			410149.21		
Tb	159	3	He			408558.28		
Bi	209	3	He			312550.76		
Bi	209	3	He			317234.94		
Bi	209	3	He			310912.14		

Quantitation Report

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Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H09B00.b
Acq Time	8/9/2023 5:34:13 PM
Sample Name	CCB 4654618
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

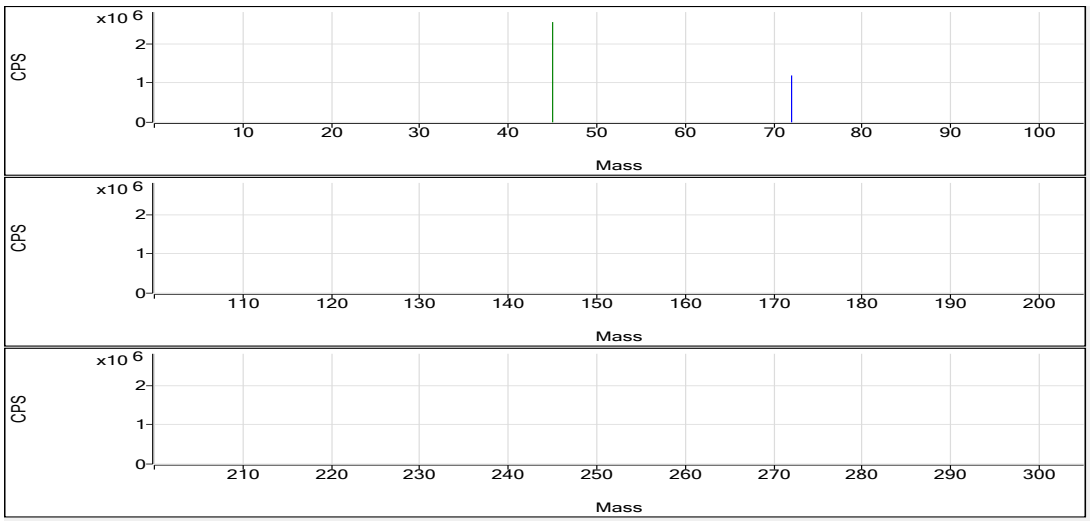
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.022	ppb	N/A	45.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.035	ppb	61.4	8.22	0.0001	Pulse	1.5000	3
Na	23	45	He	-15.263	ppb	N/A	18411.95	0.3627	Pulse	0.1000	3
Mg	24	45	He	0.864	ppb	114.2	310.02	0.0061	Pulse	0.1000	3
Al	27	45	He	-1.320	ppb	N/A	66.67	0.0013	Pulse	0.1000	3
K	39	45	He	-0.330	ppb	N/A	20858.81	0.4108	Pulse	0.1000	3
Ca	44	45	He	12.176	ppb	241.3	210.01	0.0041	Pulse	0.1000	3
Ti	47	45	He	0.621	ppb	124.7	16.67	0.0003	Pulse	0.1000	3
V	51	45	He	-0.317	ppb	N/A	1272.73	0.0251	Pulse	0.5000	3
Cr	52	45	He	0.024	ppb	495.2	2216.92	0.0437	Pulse	0.1000	3
Mn	55	45	He	0.208	ppb	39.7	273.35	0.0054	Pulse	0.1000	3
Fe	57	45	He	-0.542	ppb	N/A	123.34	0.0024	Pulse	0.1000	3
Co	59	45	He	0.023	ppb	63.5	250.01	0.0049	Pulse	0.1000	3
Ni	60	72	He	-1.089	ppb	N/A	340.02	0.0040	Pulse	0.1000	3
Cu	63	72	He	-0.029	ppb	N/A	720.04	0.0085	Pulse	0.1000	3
Zn	66	72	He	-0.011	ppb	N/A	496.69	0.0059	Pulse	0.1000	3
As	75	72	He	0.130	ppb	156.0	97.33	0.0011	Pulse	0.5000	3
Sr	88	115	He	0.095	ppb	65.9	136.67	0.0015	Pulse	0.1000	3
Mo	98	115	He	-0.012	ppb	N/A	140.01	0.0016	Pulse	0.1000	3
Ag	107	115	He	-0.004	ppb	N/A	76.67	0.0009	Pulse	0.1000	3
Cd	111	115	He	-0.006	ppb	N/A	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.127	ppb	86.5	1506.80	0.0168	Pulse	0.1000	3
Sb	121	115	He	0.023	ppb	87.3	53.33	0.0006	Pulse	0.1000	3
Ba	137	115	He	0.037	ppb	106.5	40.00	0.0004	Pulse	0.1000	3
Tl	205	159	He	-0.031	ppb	N/A	800.05	0.0020	Pulse	0.1000	3
Pb	208	159	He	0.011	ppb	114.7	1020.06	0.0025	Pulse	0.1000	3
U	238	209	He	0.034	ppb	7.4	643.37	0.0021	Pulse	0.1000	3

ISTD Table:

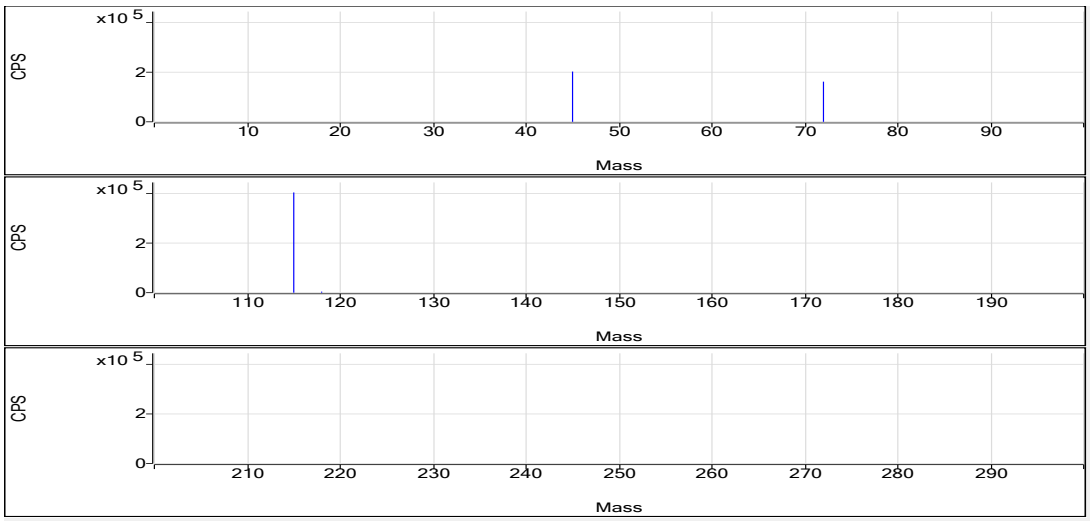
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2551595.69	0.9	97.8	Analog	0.1000	3
No Gas	Ge	72	1192626.78	0.2	92.5	Pulse	0.1000	3
H2	Sc	45	202353.44	0.6	98.2	Pulse	0.1000	3
H2	Ge	72	161700.19	1.9	99.4	Pulse	0.1000	3
H2	In	115	403561.04	1.0	100.0	Pulse	0.1000	3
He	Sc	45	50789.56	1.5	99.2	Pulse	0.1000	3
He	Ge	72	84502.76	1.0	103.2	Pulse	0.1000	3
He	In	115	89822.87	1.2	102.5	Pulse	0.1000	3
He	Tb	159	403629.16	0.5	100.5	Pulse	0.1000	3
He	Bi	209	313310.82	0.5	102.3	Pulse	0.1000	3

No Gas

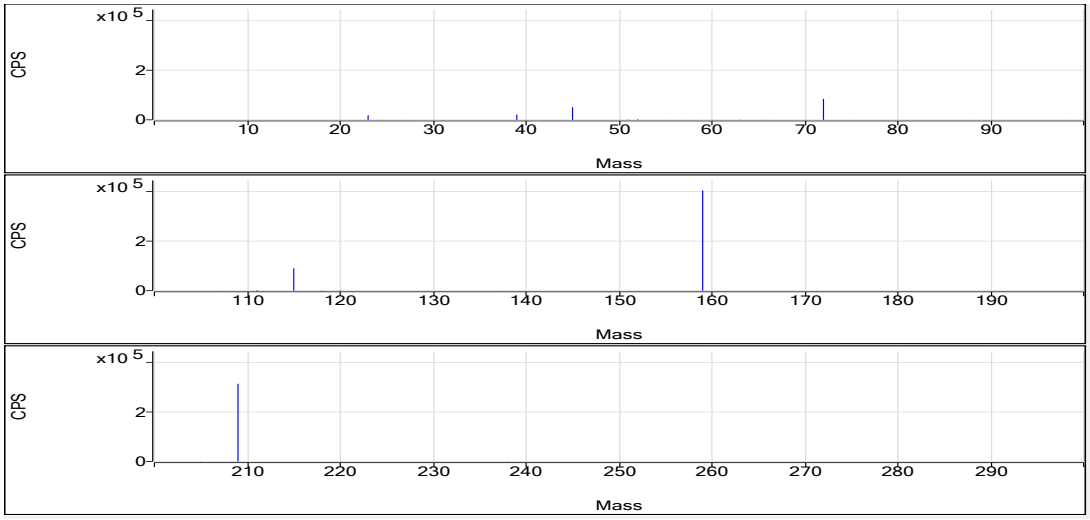


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.019	0	52.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.026	0	38.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.022	0	46.00	0.0007	3.404E-05
Se	78	2	H2	0.015	0	6.67	0.0004	3.546E-05
Se	78	2	H2	0.032	0	8.00	0.0004	3.546E-05
Se	78	2	H2	0.058	0.0001	10.00	0.0004	3.546E-05
Na	23	3	He	-13.933	0.3674	18442.11	0.0036	0.4171
Na	23	3	He	-11.936	0.3745	18912.46	0.0036	0.4171
Na	23	3	He	-19.922	0.346	17881.27	0.0036	0.4171
Mg	24	3	He	2.001	0.0082	410.03	0.0018	0.004553
Mg	24	3	He	0.22	0.005	250.01	0.0018	0.004553
Mg	24	3	He	0.372	0.0052	270.01	0.0018	0.004553
Al	27	3	He	-0.843	0.0016	80.00	0.0006	0.002085
Al	27	3	He	-1.199	0.0014	70.00	0.0006	0.002085
Al	27	3	He	-1.917	0.001	50.00	0.0006	0.002085
K	39	3	He	7.918	0.4205	21105.76	0.0012	0.4112
K	39	3	He	1.371	0.4128	20845.50	0.0012	0.4112
K	39	3	He	-10.278	0.3991	20625.18	0.0012	0.4112
Ca	44	3	He	45.195	0.0064	320.01	0.0001	0.003322
Ca	44	3	He	-11.062	0.0026	130.01	0.0001	0.003322
Ca	44	3	He	2.395	0.0035	180.01	0.0001	0.003322
Ti	47	3	He	0.375	0.0002	10.00	0.0005	0
Ti	47	3	He	1.489	0.0008	40.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	-0.287	0.0257	1290.07	0.0213	0.0318
V	51	3	He	-0.352	0.0243	1228.06	0.0213	0.0318
V	51	3	He	-0.312	0.0252	1300.07	0.0213	0.0318
Cr	52	3	He	-0.011	0.0426	2140.23	0.0294	0.04297
Cr	52	3	He	0.155	0.0475	2400.31	0.0294	0.04297
Cr	52	3	He	-0.072	0.0408	2110.23	0.0294	0.04297
Mn	55	3	He	0.304	0.0066	330.02	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.157	0.0048	240.01	0.0124	0.002801
Mn	55	3	He	0.164	0.0048	250.01	0.0124	0.002801
Fe	57	3	He	-0.596	0.0024	120.00	0.0006	0.002732
Fe	57	3	He	-2.006	0.0016	80.00	0.0006	0.002732
Fe	57	3	He	0.976	0.0033	170.01	0.0006	0.002732
Co	59	3	He	0.006	0.004	200.01	0.0549	0.003644
Co	59	3	He	0.031	0.0053	270.01	0.0549	0.003644
Co	59	3	He	0.032	0.0054	280.01	0.0549	0.003644
Ni	60	3	He	-1.039	0.0045	380.02	0.0093	0.01413
Ni	60	3	He	-1.054	0.0043	370.02	0.0093	0.01413
Ni	60	3	He	-1.174	0.0032	270.01	0.0093	0.01413
Cu	63	3	He	-0.021	0.0087	740.04	0.0274	0.009321
Cu	63	3	He	-0.036	0.0083	710.05	0.0274	0.009321
Cu	63	3	He	-0.03	0.0085	710.04	0.0274	0.009321
Zn	66	3	He	0.38	0.0071	600.03	0.0031	0.005913
Zn	66	3	He	-0.32	0.0049	420.02	0.0031	0.005913
Zn	66	3	He	-0.094	0.0056	470.02	0.0031	0.005913
As	75	3	He	0.255	0.0014	120.00	0.0021	0.0008698
As	75	3	He	0.24	0.0014	118.00	0.0021	0.0008698
As	75	3	He	-0.104	0.0006	54.00	0.0021	0.0008698
Sr	88	3	He	0.036	0.001	90.00	0.0088	0.0006843
Sr	88	3	He	0.089	0.0015	130.01	0.0088	0.0006843
Sr	88	3	He	0.16	0.0021	190.01	0.0088	0.0006843
Mo	98	3	He	-0.023	0.0013	120.00	0.0219	0.001827
Mo	98	3	He	-0.016	0.0015	130.01	0.0219	0.001827
Mo	98	3	He	0.002	0.0019	170.01	0.0219	0.001827
Ag	107	3	He	-0.006	0.0008	70.00	0.047	0.001064
Ag	107	3	He	0.004	0.0012	110.00	0.047	0.001064
Ag	107	3	He	-0.011	0.0006	50.00	0.047	0.001064
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Sn	120	3	He	0.052	0.0156	1410.13	0.0154	0.01483
Sn	120	3	He	0.253	0.0187	1660.16	0.0154	0.01483
Sn	120	3	He	0.075	0.016	1450.12	0.0154	0.01483
Sb	121	3	He	0.02	0.0006	50.00	0.0143	0.0002661
Sb	121	3	He	0.045	0.0009	80.00	0.0143	0.0002661
Sb	121	3	He	0.005	0.0003	30.00	0.0143	0.0002661
Ba	137	3	He	0.06	0.0006	50.00	0.0048	0.0002665
Ba	137	3	He	-0.009	0.0002	20.00	0.0048	0.0002665
Ba	137	3	He	0.06	0.0006	50.00	0.0048	0.0002665
Tl	205	3	He	-0.038	0.0018	740.05	0.0246	0.002755
Tl	205	3	He	-0.03	0.002	810.05	0.0246	0.002755
Tl	205	3	He	-0.026	0.0021	850.06	0.0246	0.002755
Pb	208	3	He	-0.003	0.0021	470.02	0.0324	0.002158
Pb	208	3	He	0.014	0.0026	600.04	0.0324	0.002158
Pb	208	3	He	0.023	0.0029	570.04	0.0324	0.002158
U	238	3	He	0.036	0.0022	680.05	0.0492	0.0004023
U	238	3	He	0.031	0.0019	600.03	0.0492	0.0004023
U	238	3	He	0.034	0.0021	650.04	0.0492	0.0004023
Sc	45	1	No Gas			2577795.74		
Sc	45	1	No Gas			2534767.31		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2542224.02		
Ge	72	1	No Gas			1193408.34		
Ge	72	1	No Gas			1190125.76		
Ge	72	1	No Gas			1194346.23		
Sc	45	2	H2			201477.89		
Sc	45	2	H2			201832.11		
Sc	45	2	H2			203750.33		
Ge	72	2	H2			158642.64		
Ge	72	2	H2			161645.83		
Ge	72	2	H2			164812.11		
In	115	2	H2			398946.87		
In	115	2	H2			406959.10		
In	115	2	H2			404777.14		
Sc	45	3	He			50196.96		
Sc	45	3	He			50498.86		
Sc	45	3	He			51672.85		
Ge	72	3	He			84750.63		
Ge	72	3	He			85204.26		
Ge	72	3	He			83553.39		
In	115	3	He			90171.33		
In	115	3	He			88643.06		
In	115	3	He			90675.20		
Tb	159	3	He			406130.27		
Tb	159	3	He			401964.41		
Tb	159	3	He			402792.81		
Bi	209	3	He			315027.24		
Bi	209	3	He			312497.61		
Bi	209	3	He			312407.61		

Quantitation Report

Data File Name	114SMPL.d
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Acq Time	8/9/2023 5:36:17 PM
Sample Name	410-137168-C-1-A
Sample Type	Sample
Comment	E7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

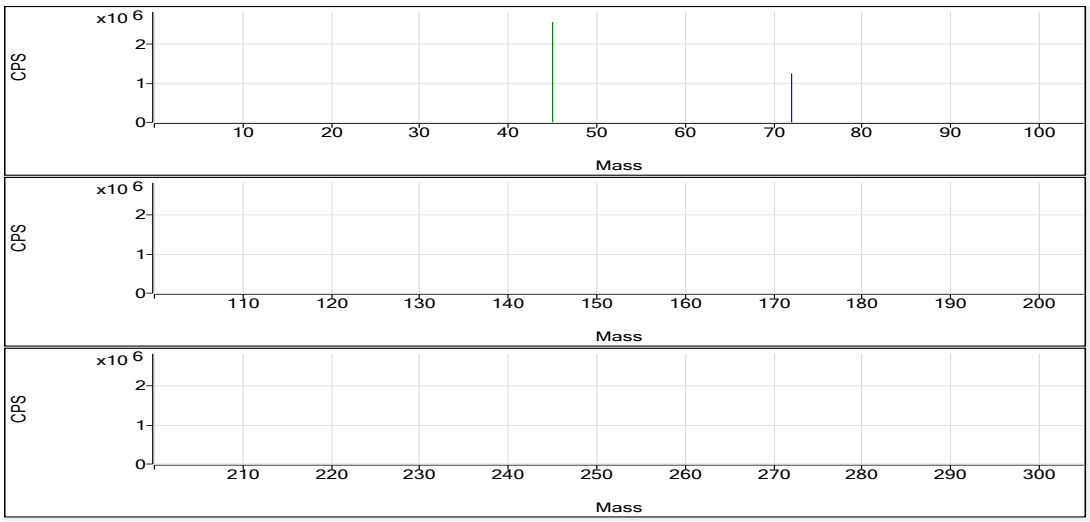
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.026	ppb	N/A	38.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	7.550	ppb	3.0	589.34	0.0033	Pulse	1.5000	3
Na	23	45	He	723621.179	ppb	0.7	132794818.02	2 579.7014	Analog	0.1000	3
Mg	24	45	He	2913.425	ppb	0.8	271203.02	5.2685	Pulse	0.1000	3
Al	27	45	He	150.476	ppb	2.9	4620.88	0.0898	Pulse	0.1000	3
K	39	45	He	3353.550	ppb	1.1	223344.63	4.3384	Pulse	0.1000	3
Ca	44	45	He	17271.439	ppb	2.6	60235.35	1.1701	Pulse	0.1000	3
Ti	47	45	He	0.731	ppb	0.7	20.00	0.0004	Pulse	0.1000	3
V	51	45	He	3.005	ppb	3.1	4924.20	0.0957	Pulse	0.5000	3
Cr	52	45	He	2.648	ppb	5.0	6221.52	0.1209	Pulse	0.1000	3
Mn	55	45	He	244.180	ppb	1.0	156408.72	3.0385	Pulse	0.1000	3
Fe	57	45	He	3692.904	ppb	0.8	108905.10	2.1156	Pulse	0.1000	3
Co	59	45	He	0.716	ppb	1.4	2210.24	0.0429	Pulse	0.1000	3
Ni	60	72	He	5.792	ppb	1.6	6088.14	0.0679	Pulse	0.1000	3
Cu	63	72	He	17.245	ppb	1.3	43239.11	0.4823	Pulse	0.1000	3
Zn	66	72	He	92.993	ppb	1.9	26127.82	0.2914	Pulse	0.1000	3
As	75	72	He	5.189	ppb	4.6	1076.05	0.0120	Pulse	0.5000	3
Sr	88	115	He	91.344	ppb	0.7	71642.12	0.8044	Pulse	0.1000	3
Mo	98	115	He	5.177	ppb	6.3	10277.44	0.1154	Pulse	0.1000	3
Ag	107	115	He	0.099	ppb	22.5	510.03	0.0057	Pulse	0.1000	3
Cd	111	115	He	4.735	ppb	4.0	2250.86	0.0253	Pulse	0.5000	3
Sn	120	115	He	2.419	ppb	3.2	4644.29	0.0521	Pulse	0.1000	3
Sb	121	115	He	0.404	ppb	22.0	536.70	0.0060	Pulse	0.1000	3
Ba	137	115	He	24.699	ppb	5.0	10534.38	0.1183	Pulse	0.1000	3
Tl	205	159	He	7.044	ppb	0.4	71274.00	0.1758	Pulse	0.1000	3
Pb	208	159	He	69.852	ppb	0.7	918755.39	2.2657	Pulse	0.1000	3
U	238	209	He	0.032	ppb	12.8	680.05	0.0020	Pulse	0.1000	3

ISTD Table:

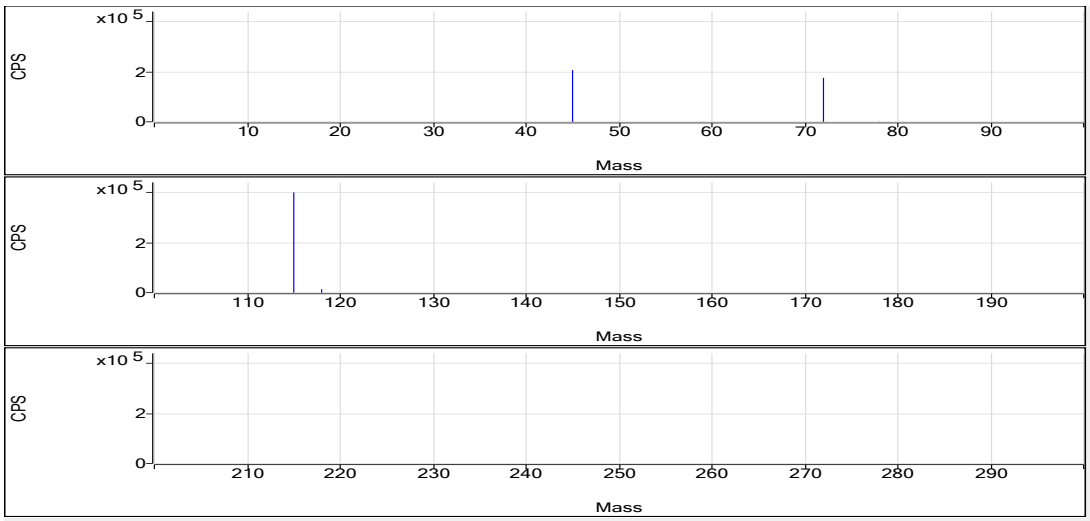
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2560876.58	2.0	98.2	Analog	0.1000	3
No Gas	Ge	72	1247487.79	0.7	96.8	Pulse	0.1000	3
H2	Sc	45	207490.54	0.6	100.7	Pulse	0.1000	3
H2	Ge	72	176231.60	1.5	108.3	Pulse	0.1000	3
H2	In	115	401670.71	0.5	99.5	Pulse	0.1000	3
He	Sc	45	51478.48	0.7	100.5	Pulse	0.1000	3
He	Ge	72	89663.84	1.2	109.5	Pulse	0.1000	3
He	In	115	89064.68	1.0	101.6	Pulse	0.1000	3
He	Tb	159	405516.23	0.2	101.0	Pulse	0.1000	3
He	Bi	209	342070.00	0.4	111.7	Pulse	0.1000	3

No Gas

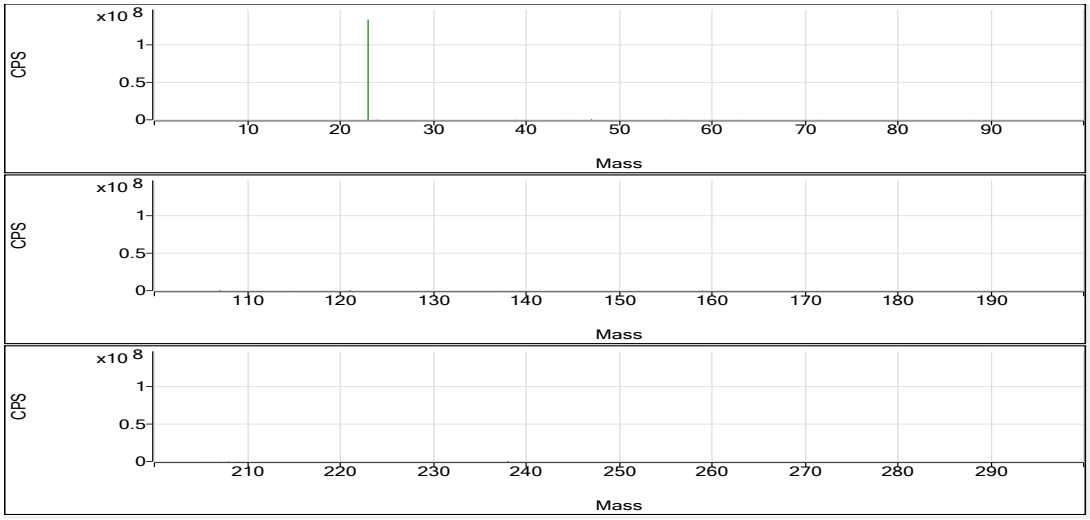


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.017	0	54.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.04	0	12.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.021	0	48.00	0.0007	3.404E-05
Se	78	2	H2	7.795	0.0035	600.01	0.0004	3.546E-05
Se	78	2	H2	7.511	0.0033	596.01	0.0004	3.546E-05
Se	78	2	H2	7.343	0.0033	572.01	0.0004	3.546E-05
Na	23	3	He	724128.889	2581.511	132486348.03	0.0036	0.4171
Na	23	3	He	728273.768	2596.2851	132932108.02	0.0036	0.4171
Na	23	3	He	718460.88	2561.3079	132965998.02	0.0036	0.4171
Mg	24	3	He	2921.152	5.2825	271102.46	0.0018	0.004553
Mg	24	3	He	2933.397	5.3046	271599.45	0.0018	0.004553
Mg	24	3	He	2885.725	5.2185	270907.14	0.0018	0.004553
Al	27	3	He	149.631	0.0893	4580.87	0.0006	0.002085
Al	27	3	He	146.637	0.0875	4480.82	0.0006	0.002085
Al	27	3	He	155.16	0.0925	4800.94	0.0006	0.002085
K	39	3	He	3368.597	4.3561	223558.81	0.0012	0.4112
K	39	3	He	3312.299	4.2901	219658.88	0.0012	0.4112
K	39	3	He	3379.754	4.3691	226816.19	0.0012	0.4112
Ca	44	3	He	17784.467	1.2048	61831.35	0.0001	0.003322
Ca	44	3	He	16923.683	1.1466	58708.91	0.0001	0.003322
Ca	44	3	He	17106.166	1.159	60165.80	0.0001	0.003322
Ti	47	3	He	0.733	0.0004	20.00	0.0005	0
Ti	47	3	He	0.734	0.0004	20.00	0.0005	0
Ti	47	3	He	0.724	0.0004	20.00	0.0005	0
V	51	3	He	3.106	0.0978	5018.90	0.0213	0.0318
V	51	3	He	2.991	0.0954	4882.85	0.0213	0.0318
V	51	3	He	2.919	0.0938	4870.85	0.0213	0.0318
Cr	52	3	He	2.502	0.1165	5981.42	0.0294	0.04297
Cr	52	3	He	2.764	0.1242	6361.57	0.0294	0.04297
Cr	52	3	He	2.679	0.1218	6321.58	0.0294	0.04297
Mn	55	3	He	244.377	3.0409	156064.42	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	246.573	3.0682	157096.01	0.0124	0.002801
Mn	55	3	He	241.59	3.0063	156065.73	0.0124	0.002801
Fe	57	3	He	3712.136	2.1266	109141.46	0.0006	0.002732
Fe	57	3	He	3708.429	2.1245	108776.91	0.0006	0.002732
Fe	57	3	He	3658.145	2.0957	108796.94	0.0006	0.002732
Co	59	3	He	0.725	0.0435	2230.24	0.0549	0.003644
Co	59	3	He	0.706	0.0424	2170.23	0.0549	0.003644
Co	59	3	He	0.716	0.043	2230.25	0.0549	0.003644
Ni	60	3	He	5.791	0.0679	6021.46	0.0093	0.01413
Ni	60	3	He	5.698	0.067	5991.41	0.0093	0.01413
Ni	60	3	He	5.888	0.0688	6251.54	0.0093	0.01413
Cu	63	3	He	17.432	0.4874	43235.66	0.0274	0.009321
Cu	63	3	He	17.298	0.4837	43245.64	0.0274	0.009321
Cu	63	3	He	17.005	0.4757	43236.02	0.0274	0.009321
Zn	66	3	He	94.141	0.295	26164.68	0.0031	0.005913
Zn	66	3	He	93.833	0.294	26284.81	0.0031	0.005913
Zn	66	3	He	91.006	0.2853	25933.96	0.0031	0.005913
As	75	3	He	5.437	0.0125	1112.05	0.0021	0.0008698
As	75	3	He	5.173	0.012	1070.05	0.0021	0.0008698
As	75	3	He	4.958	0.0115	1046.04	0.0021	0.0008698
Sr	88	3	He	91.225	0.8034	71079.33	0.0088	0.0006843
Sr	88	3	He	92.064	0.8107	71863.42	0.0088	0.0006843
Sr	88	3	He	90.743	0.7991	71983.62	0.0088	0.0006843
Mo	98	3	He	5.213	0.1162	10284.16	0.0219	0.001827
Mo	98	3	He	5.482	0.1221	10824.50	0.0219	0.001827
Mo	98	3	He	4.836	0.1079	9723.67	0.0219	0.001827
Ag	107	3	He	0.073	0.0045	400.02	0.047	0.001064
Ag	107	3	He	0.114	0.0064	570.03	0.047	0.001064
Ag	107	3	He	0.11	0.0062	560.03	0.047	0.001064
Cd	111	3	He	4.688	0.025	2214.19	0.0053	6.086E-05
Cd	111	3	He	4.942	0.0264	2338.21	0.0053	6.086E-05
Cd	111	3	He	4.575	0.0244	2200.19	0.0053	6.086E-05
Sn	120	3	He	2.41	0.052	4600.92	0.0154	0.01483
Sn	120	3	He	2.346	0.051	4520.92	0.0154	0.01483
Sn	120	3	He	2.502	0.0534	4811.02	0.0154	0.01483
Sb	121	3	He	0.426	0.0063	560.03	0.0143	0.0002661
Sb	121	3	He	0.306	0.0046	410.02	0.0143	0.0002661
Sb	121	3	He	0.48	0.0071	640.04	0.0143	0.0002661
Ba	137	3	He	24.054	0.1152	10194.14	0.0048	0.0002665
Ba	137	3	He	26.113	0.1251	11084.78	0.0048	0.0002665
Ba	137	3	He	23.928	0.1146	10324.23	0.0048	0.0002665
Tl	205	3	He	7.078	0.1766	71766.83	0.0246	0.002755
Tl	205	3	He	7.038	0.1756	71113.08	0.0246	0.002755
Tl	205	3	He	7.017	0.1751	70942.09	0.0246	0.002755
Pb	208	3	He	69.348	2.2493	486449.72	0.0324	0.002158
Pb	208	3	He	70.287	2.2798	485593.20	0.0324	0.002158
Pb	208	3	He	69.921	2.2679	487061.59	0.0324	0.002158
U	238	3	He	0.029	0.0018	630.04	0.0492	0.0004023
U	238	3	He	0.037	0.0022	760.05	0.0492	0.0004023
U	238	3	He	0.03	0.0019	650.05	0.0492	0.0004023
Sc	45	1	No Gas			2504746.06		
Sc	45	1	No Gas			2604549.02		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2573334.65		
Ge	72	1	No Gas			1238580.45		
Ge	72	1	No Gas			1249225.45		
Ge	72	1	No Gas			1254657.48		
Sc	45	2	H2			207053.84		
Sc	45	2	H2			208942.15		
Sc	45	2	H2			206475.64		
Ge	72	2	H2			173807.50		
Ge	72	2	H2			179107.71		
Ge	72	2	H2			175779.59		
In	115	2	H2			399403.43		
In	115	2	H2			403286.05		
In	115	2	H2			402322.65		
Sc	45	3	He			51321.24		
Sc	45	3	He			51200.89		
Sc	45	3	He			51913.32		
Ge	72	3	He			88704.57		
Ge	72	3	He			89398.75		
Ge	72	3	He			90888.19		
In	115	3	He			88500.93		
In	115	3	He			88662.30		
In	115	3	He			90101.79		
Tb	159	3	He			406407.81		
Tb	159	3	He			404973.70		
Tb	159	3	He			405167.18		
Bi	209	3	He			340580.70		
Bi	209	3	He			342208.12		
Bi	209	3	He			343421.17		

Quantitation Report

Data File Name	115SMPL.d
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Acq Time	8/9/2023 5:38:24 PM
Sample Name	410-137168-C-1-A @10
Sample Type	Sample
Comment	E7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

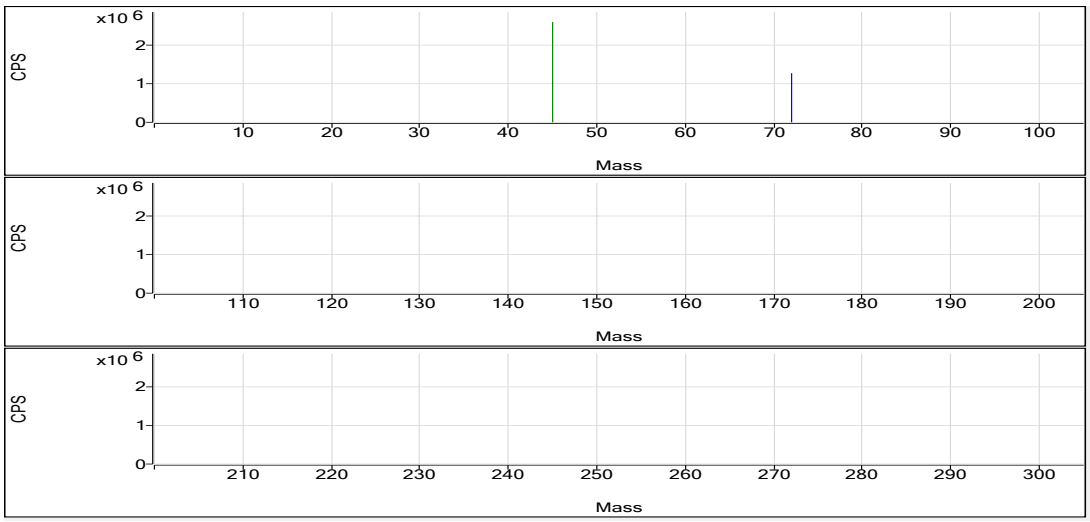
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.037	ppb	N/A	19.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.766	ppb	13.3	65.78	0.0004	Pulse	1.5000	3
Na	23	45	He	70640.001	ppb	1.5	12899114.81	252.2072	Analog	0.1000	3
Mg	24	45	He	273.553	ppb	1.6	25512.71	0.4988	Pulse	0.1000	3
Al	27	45	He	11.535	ppb	26.0	450.03	0.0088	Pulse	0.1000	3
K	39	45	He	320.584	ppb	3.1	40232.82	0.7866	Pulse	0.1000	3
Ca	44	45	He	1654.150	ppb	3.9	5884.71	0.1151	Pulse	0.1000	3
Ti	47	45	He	0.612	ppb	34.3	16.67	0.0003	Pulse	0.1000	3
V	51	45	He	-0.066	ppb	N/A	1554.76	0.0304	Pulse	0.5000	3
Cr	52	45	He	0.212	ppb	7.6	2516.97	0.0492	Pulse	0.1000	3
Mn	55	45	He	24.753	ppb	4.3	15882.64	0.3105	Pulse	0.1000	3
Fe	57	45	He	353.122	ppb	2.5	10474.13	0.2048	Pulse	0.1000	3
Co	59	45	He	0.050	ppb	45.8	326.68	0.0064	Pulse	0.1000	3
Ni	60	72	He	-0.523	ppb	N/A	833.39	0.0093	Pulse	0.1000	3
Cu	63	72	He	1.563	ppb	9.5	4687.61	0.0522	Pulse	0.1000	3
Zn	66	72	He	9.450	ppb	6.6	3140.45	0.0349	Pulse	0.1000	3
As	75	72	He	0.534	ppb	18.0	181.33	0.0020	Pulse	0.5000	3
Sr	88	115	He	8.447	ppb	5.6	6801.90	0.0750	Pulse	0.1000	3
Mo	98	115	He	0.431	ppb	12.5	1023.41	0.0113	Pulse	0.1000	3
Ag	107	115	He	-0.002	ppb	N/A	86.67	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.478	ppb	8.6	236.67	0.0026	Pulse	0.5000	3
Sn	120	115	He	0.285	ppb	38.4	1743.50	0.0192	Pulse	0.1000	3
Sb	121	115	He	0.035	ppb	37.1	70.00	0.0008	Pulse	0.1000	3
Ba	137	115	He	2.199	ppb	9.5	976.73	0.0108	Pulse	0.1000	3
Tl	205	159	He	0.614	ppb	5.0	7225.56	0.0178	Pulse	0.1000	3
Pb	208	159	He	6.872	ppb	0.8	91032.34	0.2248	Pulse	0.1000	3
U	238	209	He	0.001	ppb	89.5	150.01	0.0005	Pulse	0.1000	3

ISTD Table:

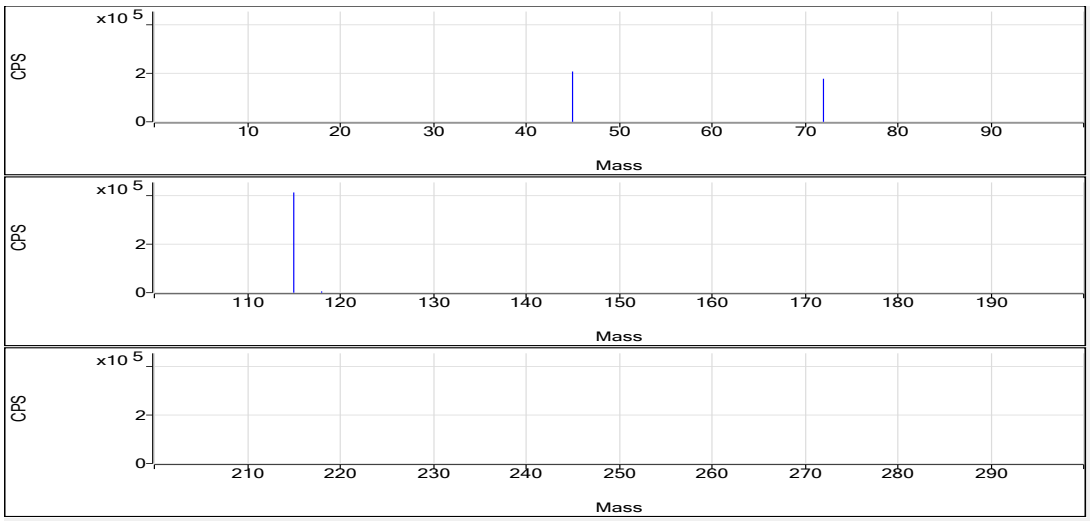
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2603801.16	0.9	99.8	Analog	0.1000	3
No Gas	Ge	72	1274267.82	0.3	98.9	Pulse	0.1000	3
H2	Sc	45	207014.15	0.8	100.5	Pulse	0.1000	3
H2	Ge	72	177248.31	0.7	108.9	Pulse	0.1000	3
H2	In	115	412396.14	0.4	102.2	Pulse	0.1000	3
He	Sc	45	51147.37	0.6	99.9	Pulse	0.1000	3
He	Ge	72	89878.20	1.2	109.8	Pulse	0.1000	3
He	In	115	90683.00	0.6	103.5	Pulse	0.1000	3
He	Tb	159	404886.35	0.4	100.8	Pulse	0.1000	3
He	Bi	209	322400.78	0.6	105.3	Pulse	0.1000	3

No Gas

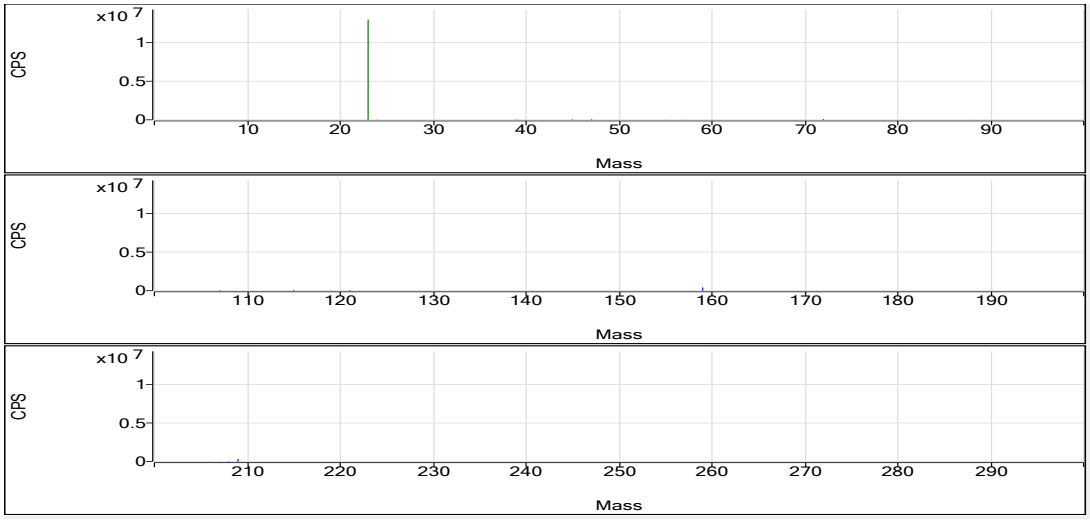


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.032	0	28.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.038	0	16.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.039	0	14.00	0.0007	3.404E-05
Se	78	2	H2	0.661	0.0003	57.33	0.0004	3.546E-05
Se	78	2	H2	0.77	0.0004	66.67	0.0004	3.546E-05
Se	78	2	H2	0.865	0.0004	73.33	0.0004	3.546E-05
Na	23	3	He	69951.961	249.7547	12765119.81	0.0036	0.4171
Na	23	3	He	70100.167	250.283	12884992.31	0.0036	0.4171
Na	23	3	He	71867.874	256.5838	13047232.31	0.0036	0.4171
Mg	24	3	He	278.523	0.5078	25953.26	0.0018	0.004553
Mg	24	3	He	271.87	0.4958	25522.84	0.0018	0.004553
Mg	24	3	He	270.264	0.4929	25062.02	0.0018	0.004553
Al	27	3	He	13.55	0.01	510.03	0.0006	0.002085
Al	27	3	He	8.092	0.0068	350.02	0.0006	0.002085
Al	27	3	He	12.963	0.0096	490.03	0.0006	0.002085
K	39	3	He	332.005	0.8	40887.92	0.0012	0.4112
K	39	3	He	314.11	0.779	40105.91	0.0012	0.4112
K	39	3	He	315.638	0.7808	39704.63	0.0012	0.4112
Ca	44	3	He	1642.557	0.1143	5841.35	0.0001	0.003322
Ca	44	3	He	1595.854	0.1111	5721.33	0.0001	0.003322
Ca	44	3	He	1724.038	0.1198	6091.45	0.0001	0.003322
Ti	47	3	He	0.736	0.0004	20.00	0.0005	0
Ti	47	3	He	0.73	0.0004	20.00	0.0005	0
Ti	47	3	He	0.37	0.0002	10.00	0.0005	0
V	51	3	He	-0.056	0.0306	1564.09	0.0213	0.0318
V	51	3	He	-0.129	0.0291	1496.09	0.0213	0.0318
V	51	3	He	-0.012	0.0315	1604.10	0.0213	0.0318
Cr	52	3	He	0.229	0.0497	2540.32	0.0294	0.04297
Cr	52	3	He	0.197	0.0488	2510.29	0.0294	0.04297
Cr	52	3	He	0.211	0.0492	2500.31	0.0294	0.04297
Mn	55	3	He	23.568	0.2958	15118.58	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	25.023	0.3139	16159.59	0.0124	0.002801
Mn	55	3	He	25.669	0.3219	16369.75	0.0124	0.002801
Fe	57	3	He	344.502	0.1998	10213.90	0.0006	0.002732
Fe	57	3	He	362.031	0.2099	10804.36	0.0006	0.002732
Fe	57	3	He	352.833	0.2046	10404.14	0.0006	0.002732
Co	59	3	He	0.076	0.0078	400.02	0.0549	0.003644
Co	59	3	He	0.04	0.0058	300.02	0.0549	0.003644
Co	59	3	He	0.034	0.0055	280.01	0.0549	0.003644
Ni	60	3	He	-0.638	0.0082	740.05	0.0093	0.01413
Ni	60	3	He	-0.465	0.0098	870.06	0.0093	0.01413
Ni	60	3	He	-0.465	0.0098	890.06	0.0093	0.01413
Cu	63	3	He	1.499	0.0504	4550.88	0.0274	0.009321
Cu	63	3	He	1.732	0.0568	5041.07	0.0274	0.009321
Cu	63	3	He	1.457	0.0493	4470.87	0.0274	0.009321
Zn	66	3	He	9.304	0.0345	3110.45	0.0031	0.005913
Zn	66	3	He	8.908	0.0333	2950.40	0.0031	0.005913
Zn	66	3	He	10.138	0.037	3360.50	0.0031	0.005913
As	75	3	He	0.628	0.0022	200.00	0.0021	0.0008698
As	75	3	He	0.435	0.0018	160.00	0.0021	0.0008698
As	75	3	He	0.54	0.002	184.00	0.0021	0.0008698
Sr	88	3	He	7.902	0.0702	6381.67	0.0088	0.0006843
Sr	88	3	He	8.736	0.0776	7061.99	0.0088	0.0006843
Sr	88	3	He	8.704	0.0773	6962.04	0.0088	0.0006843
Mo	98	3	He	0.443	0.0116	1050.08	0.0219	0.001827
Mo	98	3	He	0.477	0.0123	1120.08	0.0219	0.001827
Mo	98	3	He	0.372	0.01	900.06	0.0219	0.001827
Ag	107	3	He	0.001	0.0011	100.00	0.047	0.001064
Ag	107	3	He	-0.006	0.0008	70.00	0.047	0.001064
Ag	107	3	He	-0.001	0.001	90.00	0.047	0.001064
Cd	111	3	He	0.484	0.0026	240.00	0.0053	6.086E-05
Cd	111	3	He	0.516	0.0028	256.00	0.0053	6.086E-05
Cd	111	3	He	0.435	0.0024	214.00	0.0053	6.086E-05
Sn	120	3	He	0.173	0.0175	1590.14	0.0154	0.01483
Sn	120	3	He	0.391	0.0209	1900.19	0.0154	0.01483
Sn	120	3	He	0.291	0.0193	1740.17	0.0154	0.01483
Sb	121	3	He	0.043	0.0009	80.00	0.0143	0.0002661
Sb	121	3	He	0.043	0.0009	80.00	0.0143	0.0002661
Sb	121	3	He	0.02	0.0006	50.00	0.0143	0.0002661
Ba	137	3	He	2.201	0.0108	980.07	0.0048	0.0002665
Ba	137	3	He	1.99	0.0098	890.06	0.0048	0.0002665
Ba	137	3	He	2.406	0.0118	1060.07	0.0048	0.0002665
Tl	205	3	He	0.626	0.0181	7362.29	0.0246	0.002755
Tl	205	3	He	0.58	0.017	6882.01	0.0246	0.002755
Tl	205	3	He	0.638	0.0184	7432.38	0.0246	0.002755
Pb	208	3	He	6.886	0.2253	47607.22	0.0324	0.002158
Pb	208	3	He	6.919	0.2264	48590.38	0.0324	0.002158
Pb	208	3	He	6.81	0.2228	48118.92	0.0324	0.002158
U	238	3	He	0.001	0.0004	140.01	0.0492	0.0004023
U	238	3	He	0.003	0.0005	170.01	0.0492	0.0004023
U	238	3	He	0.001	0.0004	140.01	0.0492	0.0004023
Sc	45	1	No Gas			2618399.02		
Sc	45	1	No Gas			2576498.87		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2616505.59		
Ge	72	1	No Gas			1273786.15		
Ge	72	1	No Gas			1278049.51		
Ge	72	1	No Gas			1270967.79		
Sc	45	2	H2			206082.07		
Sc	45	2	H2			208807.81		
Sc	45	2	H2			206152.56		
Ge	72	2	H2			176215.52		
Ge	72	2	H2			178707.01		
Ge	72	2	H2			176822.40		
In	115	2	H2			412968.86		
In	115	2	H2			413479.37		
In	115	2	H2			410740.19		
Sc	45	3	He			51110.63		
Sc	45	3	He			51481.70		
Sc	45	3	He			50849.79		
Ge	72	3	He			90213.42		
Ge	72	3	He			88694.39		
Ge	72	3	He			90726.80		
In	115	3	He			90897.15		
In	115	3	He			91067.41		
In	115	3	He			90111.81		
Tb	159	3	He			406335.46		
Tb	159	3	He			404885.81		
Tb	159	3	He			403437.77		
Bi	209	3	He			323068.49		
Bi	209	3	He			320256.83		
Bi	209	3	He			323877.01		

Quantitation Report

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Sample Type	Sample
Comment	E7
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

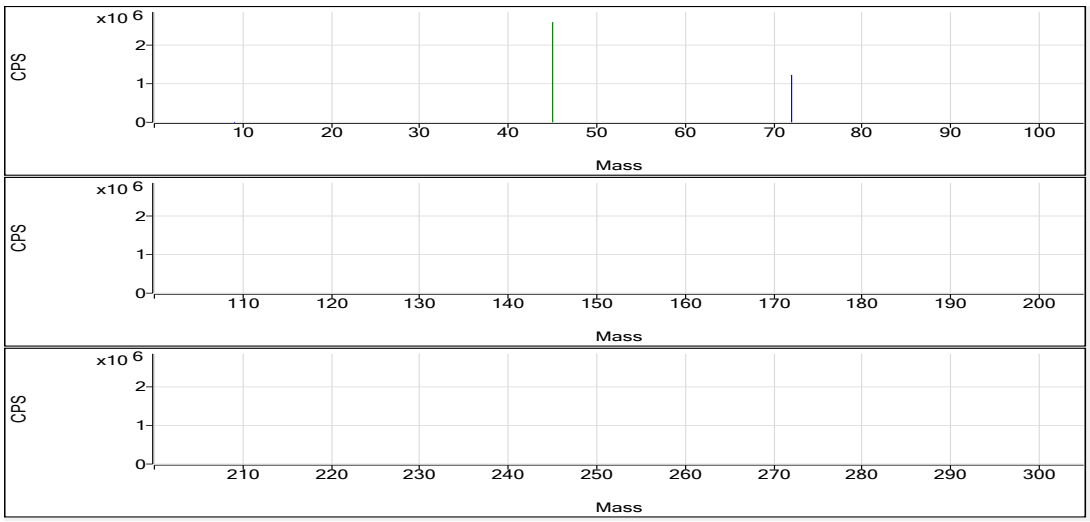
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.038	ppb	N/A	16.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.072	ppb	90.9	11.33	0.0001	Pulse	1.5000	3
Na	23	45	He	7346.714	ppb	1.8	1368187.06	26.6038	Analog	0.1000	3
Mg	24	45	He	27.253	ppb	6.4	2767.02	0.0538	Pulse	0.1000	3
Al	27	45	He	2.212	ppb	26.8	173.34	0.0034	Pulse	0.1000	3
K	39	45	He	35.113	ppb	13.6	23265.70	0.4523	Pulse	0.1000	3
Ca	44	45	He	162.575	ppb	14.2	736.71	0.0143	Pulse	0.1000	3
Ti	47	45	He	0.247	ppb	173.2	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	-0.273	ppb	N/A	1337.40	0.0260	Pulse	0.5000	3
Cr	52	45	He	-0.067	ppb	N/A	2110.22	0.0410	Pulse	0.1000	3
Mn	55	45	He	2.493	ppb	11.9	1736.83	0.0338	Pulse	0.1000	3
Fe	57	45	He	37.552	ppb	8.5	1246.76	0.0242	Pulse	0.1000	3
Co	59	45	He	-0.015	ppb	N/A	143.34	0.0028	Pulse	0.1000	3
Ni	60	72	He	-1.096	ppb	N/A	340.02	0.0040	Pulse	0.1000	3
Cu	63	72	He	0.066	ppb	119.9	956.73	0.0111	Pulse	0.1000	3
Zn	66	72	He	1.029	ppb	24.4	780.05	0.0091	Pulse	0.1000	3
As	75	72	He	0.021	ppb	259.3	78.67	0.0009	Pulse	0.5000	3
Sr	88	115	He	0.989	ppb	8.0	856.73	0.0094	Pulse	0.1000	3
Mo	98	115	He	0.010	ppb	138.5	186.68	0.0020	Pulse	0.1000	3
Ag	107	115	He	-0.012	ppb	N/A	46.67	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.045	ppb	46.2	27.33	0.0003	Pulse	0.5000	3
Sn	120	115	He	0.097	ppb	72.7	1490.13	0.0163	Pulse	0.1000	3
Sb	121	115	He	-0.003	ppb	N/A	20.00	0.0002	Pulse	0.1000	3
Ba	137	115	He	0.327	ppb	23.2	166.68	0.0018	Pulse	0.1000	3
Tl	205	159	He	-0.010	ppb	N/A	1030.08	0.0025	Pulse	0.1000	3
Pb	208	159	He	0.679	ppb	1.3	9925.23	0.0242	Pulse	0.1000	3
U	238	209	He	-0.004	ppb	N/A	63.33	0.0002	Pulse	0.1000	3

ISTD Table:

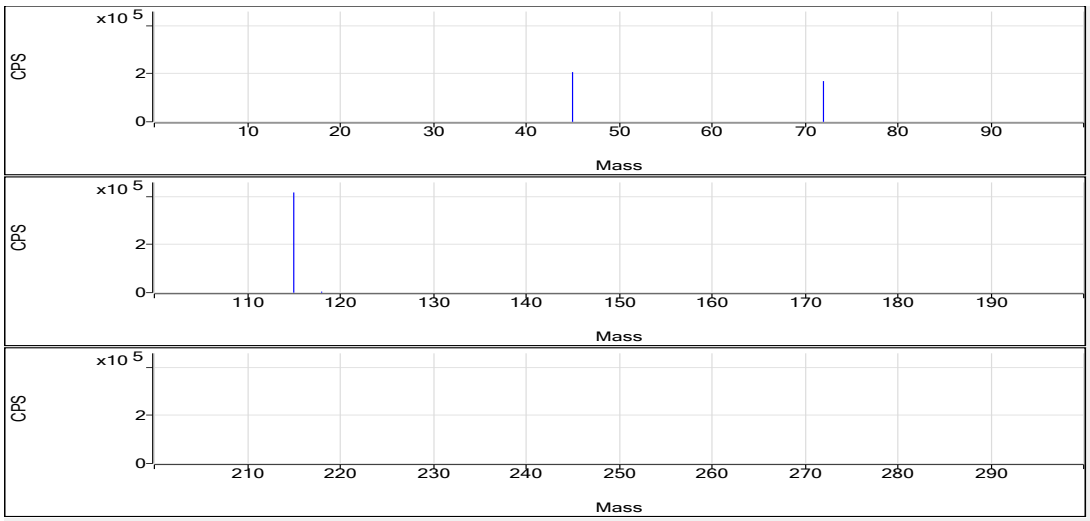
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2583458.51	1.0	99.1	Analog	0.1000	3
No Gas	Ge	72	1221184.10	1.2	94.7	Pulse	0.1000	3
H2	Sc	45	206869.40	0.3	100.4	Pulse	0.1000	3
H2	Ge	72	169545.83	0.3	104.2	Pulse	0.1000	3
H2	In	115	417258.61	0.6	103.4	Pulse	0.1000	3
He	Sc	45	51438.40	1.7	100.5	Pulse	0.1000	3
He	Ge	72	85975.25	0.3	105.0	Pulse	0.1000	3
He	In	115	91255.39	1.1	104.1	Pulse	0.1000	3
He	Tb	159	410611.86	0.2	102.2	Pulse	0.1000	3
He	Bi	209	322836.31	0.7	105.5	Pulse	0.1000	3

No Gas

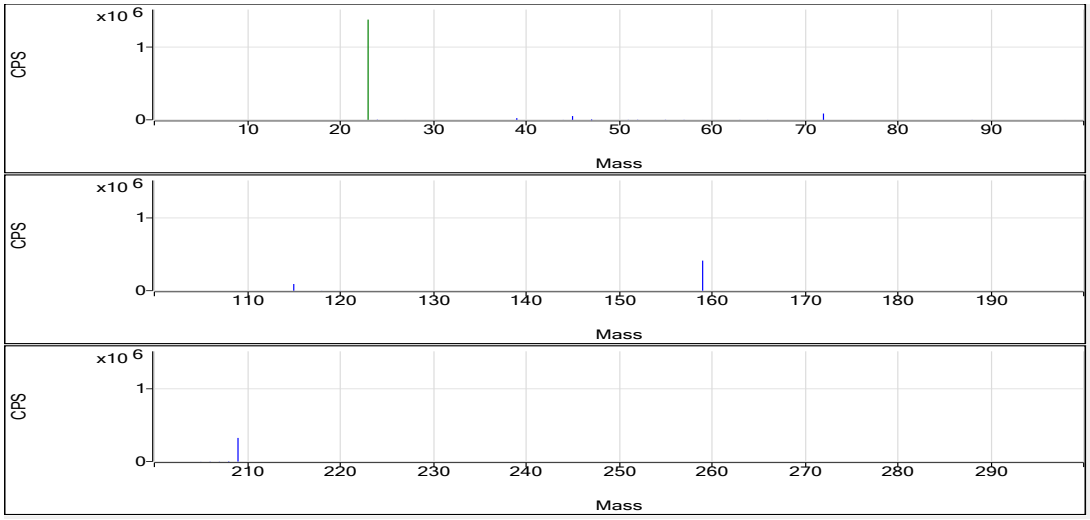


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.035	0	22.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.035	0	22.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.044	0	6.00	0.0007	3.404E-05
Se	78	2	H2	0.144	0.0001	16.67	0.0004	3.546E-05
Se	78	2	H2	0.018	0	7.33	0.0004	3.546E-05
Se	78	2	H2	0.054	0.0001	10.00	0.0004	3.546E-05
Na	23	3	He	7431.83	26.9072	1374428.89	0.0036	0.4171
Na	23	3	He	7192.413	26.0538	1365870.29	0.0036	0.4171
Na	23	3	He	7415.901	26.8504	1364262.01	0.0036	0.4171
Mg	24	3	He	29.123	0.0572	2920.39	0.0018	0.004553
Mg	24	3	He	26.939	0.0532	2790.36	0.0018	0.004553
Mg	24	3	He	25.696	0.051	2590.31	0.0018	0.004553
Al	27	3	He	2.135	0.0033	170.01	0.0006	0.002085
Al	27	3	He	1.661	0.0031	160.01	0.0006	0.002085
Al	27	3	He	2.841	0.0037	190.01	0.0006	0.002085
K	39	3	He	40.383	0.4585	23419.22	0.0012	0.4112
K	39	3	He	33.931	0.4509	23639.59	0.0012	0.4112
K	39	3	He	31.025	0.4475	22738.30	0.0012	0.4112
Ca	44	3	He	156.59	0.0139	710.05	0.0001	0.003322
Ca	44	3	He	188.019	0.016	840.05	0.0001	0.003322
Ca	44	3	He	143.117	0.013	660.04	0.0001	0.003322
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.74	0.0004	20.00	0.0005	0
V	51	3	He	-0.265	0.0262	1336.07	0.0213	0.0318
V	51	3	He	-0.288	0.0257	1346.07	0.0213	0.0318
V	51	3	He	-0.264	0.0262	1330.07	0.0213	0.0318
Cr	52	3	He	-0.083	0.0405	2070.21	0.0294	0.04297
Cr	52	3	He	-0.008	0.0427	2240.25	0.0294	0.04297
Cr	52	3	He	-0.109	0.0398	2020.21	0.0294	0.04297
Mn	55	3	He	2.814	0.0378	1930.19	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2.23	0.0305	1600.15	0.0124	0.002801
Mn	55	3	He	2.435	0.0331	1680.16	0.0124	0.002801
Fe	57	3	He	35.946	0.0233	1190.09	0.0006	0.002732
Fe	57	3	He	41.237	0.0263	1380.11	0.0006	0.002732
Fe	57	3	He	35.475	0.023	1170.09	0.0006	0.002732
Co	59	3	He	-0.009	0.0031	160.01	0.0549	0.003644
Co	59	3	He	-0.032	0.0019	100.00	0.0549	0.003644
Co	59	3	He	-0.005	0.0033	170.01	0.0549	0.003644
Ni	60	3	He	-1.07	0.0042	360.02	0.0093	0.01413
Ni	60	3	He	-1.172	0.0032	280.01	0.0093	0.01413
Ni	60	3	He	-1.045	0.0044	380.02	0.0093	0.01413
Cu	63	3	He	0.004	0.0094	810.06	0.0274	0.009321
Cu	63	3	He	0.155	0.0136	1170.09	0.0274	0.009321
Cu	63	3	He	0.038	0.0104	890.05	0.0274	0.009321
Zn	66	3	He	0.806	0.0084	720.04	0.0031	0.005913
Zn	66	3	He	0.981	0.0089	770.05	0.0031	0.005913
Zn	66	3	He	1.302	0.0099	850.06	0.0031	0.005913
As	75	3	He	-0.025	0.0008	70.00	0.0021	0.0008698
As	75	3	He	0.081	0.001	90.00	0.0021	0.0008698
As	75	3	He	0.008	0.0009	76.00	0.0021	0.0008698
Sr	88	3	He	1.063	0.01	920.08	0.0088	0.0006843
Sr	88	3	He	0.997	0.0095	870.06	0.0088	0.0006843
Sr	88	3	He	0.906	0.0087	780.05	0.0088	0.0006843
Mo	98	3	He	0.001	0.0019	170.01	0.0219	0.001827
Mo	98	3	He	0.026	0.0024	220.01	0.0219	0.001827
Mo	98	3	He	0.003	0.0019	170.01	0.0219	0.001827
Ag	107	3	He	-0.018	0.0002	20.00	0.047	0.001064
Ag	107	3	He	-0.016	0.0003	30.00	0.047	0.001064
Ag	107	3	He	-0.001	0.001	90.00	0.047	0.001064
Cd	111	3	He	0.05	0.0003	30.00	0.0053	6.086E-05
Cd	111	3	He	0.062	0.0004	36.00	0.0053	6.086E-05
Cd	111	3	He	0.022	0.0002	16.00	0.0053	6.086E-05
Sn	120	3	He	0.178	0.0176	1610.14	0.0154	0.01483
Sn	120	3	He	0.047	0.0156	1430.13	0.0154	0.01483
Sn	120	3	He	0.067	0.0159	1430.12	0.0154	0.01483
Sb	121	3	He	-0.011	0.0001	10.00	0.0143	0.0002661
Sb	121	3	He	-0.011	0.0001	10.00	0.0143	0.0002661
Sb	121	3	He	0.012	0.0004	40.00	0.0143	0.0002661
Ba	137	3	He	0.241	0.0014	130.01	0.0048	0.0002665
Ba	137	3	He	0.354	0.002	180.01	0.0048	0.0002665
Ba	137	3	He	0.385	0.0021	190.01	0.0048	0.0002665
Tl	205	3	He	-0.016	0.0024	970.07	0.0246	0.002755
Tl	205	3	He	-0.006	0.0026	1070.10	0.0246	0.002755
Tl	205	3	He	-0.008	0.0026	1050.08	0.0246	0.002755
Pb	208	3	He	0.672	0.0239	5411.36	0.0324	0.002158
Pb	208	3	He	0.676	0.0241	5231.24	0.0324	0.002158
Pb	208	3	He	0.69	0.0245	5381.33	0.0324	0.002158
U	238	3	He	-0.005	0.0002	50.00	0.0492	0.0004023
U	238	3	He	-0.005	0.0002	50.00	0.0492	0.0004023
U	238	3	He	-0.002	0.0003	90.00	0.0492	0.0004023
Sc	45	1	No Gas			2557928.56		
Sc	45	1	No Gas			2581634.34		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2610812.62		
Ge	72	1	No Gas			1205619.59		
Ge	72	1	No Gas			1224712.09		
Ge	72	1	No Gas			1233220.61		
Sc	45	2	H2			206355.19		
Sc	45	2	H2			207633.34		
Sc	45	2	H2			206619.66		
Ge	72	2	H2			169052.01		
Ge	72	2	H2			169837.56		
Ge	72	2	H2			169747.91		
In	115	2	H2			416125.62		
In	115	2	H2			419992.14		
In	115	2	H2			415658.08		
Sc	45	3	He			51080.41		
Sc	45	3	He			52425.03		
Sc	45	3	He			50809.77		
Ge	72	3	He			85857.52		
Ge	72	3	He			86290.57		
Ge	72	3	He			85777.65		
In	115	3	He			91650.88		
In	115	3	He			91973.76		
In	115	3	He			90162.50		
Tb	159	3	He			411193.86		
Tb	159	3	He			410852.22		
Tb	159	3	He			409789.49		
Bi	209	3	He			325312.18		
Bi	209	3	He			321294.74		
Bi	209	3	He			321902.01		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

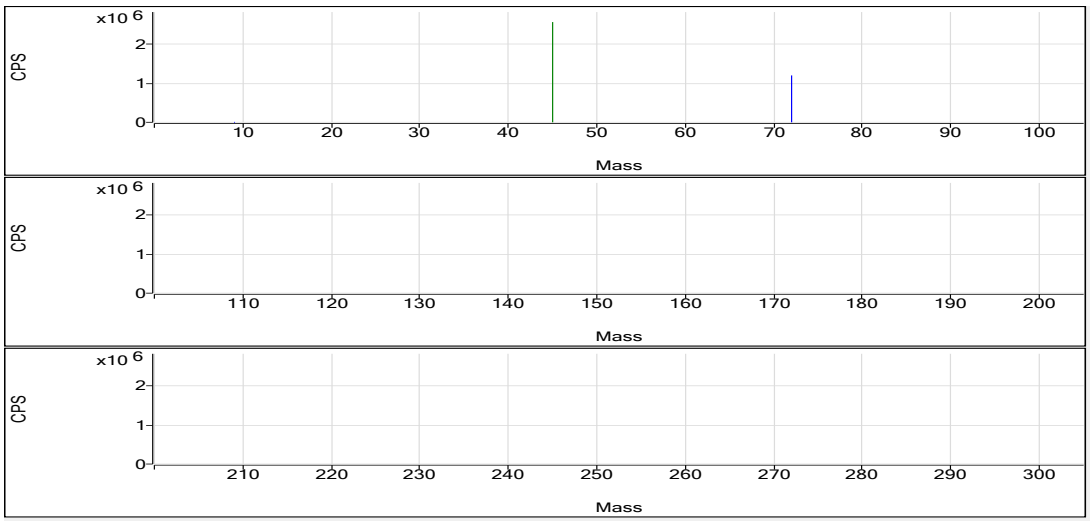
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.037	ppb	N/A	18.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.021	ppb	N/A	4.44	0.0000	Pulse	1.5000	3
Na	23	45	He	12.227	ppb	32.0	23308.86	0.4606	Pulse	0.1000	3
Mg	24	45	He	-0.044	ppb	N/A	226.68	0.0045	Pulse	0.1000	3
Al	27	45	He	-1.307	ppb	N/A	66.67	0.0013	Pulse	0.1000	3
K	39	45	He	3.291	ppb	444.9	20995.65	0.4150	Pulse	0.1000	3
Ca	44	45	He	0.500	ppb	823.6	170.01	0.0034	Pulse	0.1000	3
Ti	47	45	He	0.374	ppb	101.4	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	-0.284	ppb	N/A	1303.40	0.0258	Pulse	0.5000	3
Cr	52	45	He	-0.110	ppb	N/A	2010.20	0.0397	Pulse	0.1000	3
Mn	55	45	He	0.093	ppb	108.9	200.01	0.0040	Pulse	0.1000	3
Fe	57	45	He	0.984	ppb	103.2	166.68	0.0033	Pulse	0.1000	3
Co	59	45	He	-0.027	ppb	N/A	110.00	0.0022	Pulse	0.1000	3
Ni	60	72	He	-1.206	ppb	N/A	250.01	0.0029	Pulse	0.1000	3
Cu	63	72	He	-0.105	ppb	N/A	550.03	0.0065	Pulse	0.1000	3
Zn	66	72	He	0.071	ppb	246.1	523.36	0.0061	Pulse	0.1000	3
As	75	72	He	-0.045	ppb	N/A	66.00	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.025	ppb	97.6	83.33	0.0009	Pulse	0.1000	3
Mo	98	115	He	-0.068	ppb	N/A	30.00	0.0003	Pulse	0.1000	3
Ag	107	115	He	-0.010	ppb	N/A	53.33	0.0006	Pulse	0.1000	3
Cd	111	115	He	-0.009	ppb	N/A	1.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.028	ppb	N/A	1320.13	0.0144	Pulse	0.1000	3
Sb	121	115	He	-0.003	ppb	N/A	20.00	0.0002	Pulse	0.1000	3
Ba	137	115	He	-0.018	ppb	N/A	16.67	0.0002	Pulse	0.1000	3
Tl	205	159	He	-0.094	ppb	N/A	180.01	0.0004	Pulse	0.1000	3
Pb	208	159	He	0.004	ppb	87.0	940.06	0.0023	Pulse	0.1000	3
U	238	209	He	-0.004	ppb	N/A	66.67	0.0002	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2572115.69	0.8	98.6	Analog	0.1000	3
No Gas	Ge	72	1203040.63	0.2	93.3	Pulse	0.1000	3
H2	Sc	45	206203.79	1.3	100.1	Pulse	0.1000	3
H2	Ge	72	169103.01	0.7	103.9	Pulse	0.1000	3
H2	In	115	407973.55	1.1	101.1	Pulse	0.1000	3
He	Sc	45	50615.44	2.0	98.9	Pulse	0.1000	3
He	Ge	72	85284.39	1.9	104.2	Pulse	0.1000	3
He	In	115	91564.23	1.2	104.5	Pulse	0.1000	3
He	Tb	159	410841.71	0.5	102.3	Pulse	0.1000	3
He	Bi	209	315179.36	0.3	103.0	Pulse	0.1000	3

No Gas



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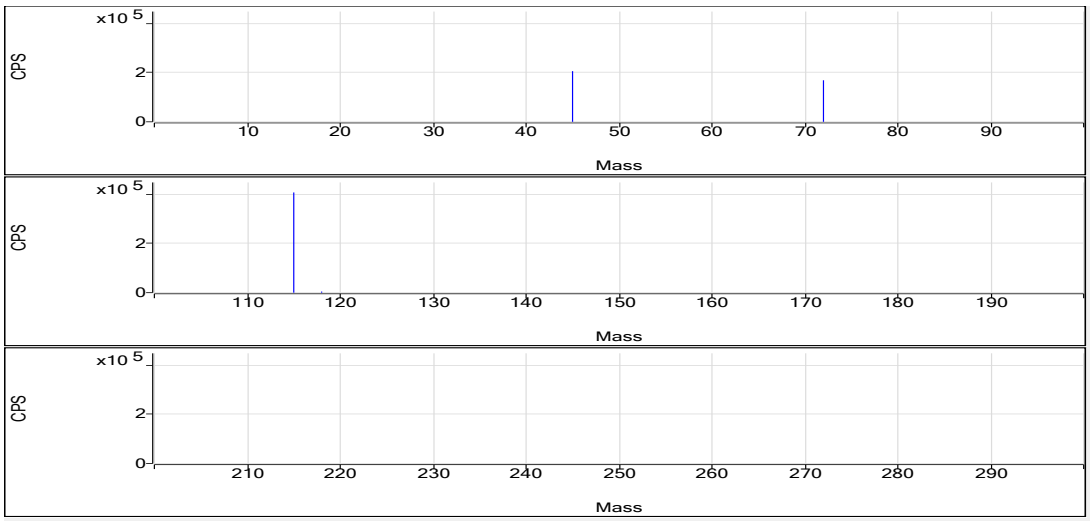
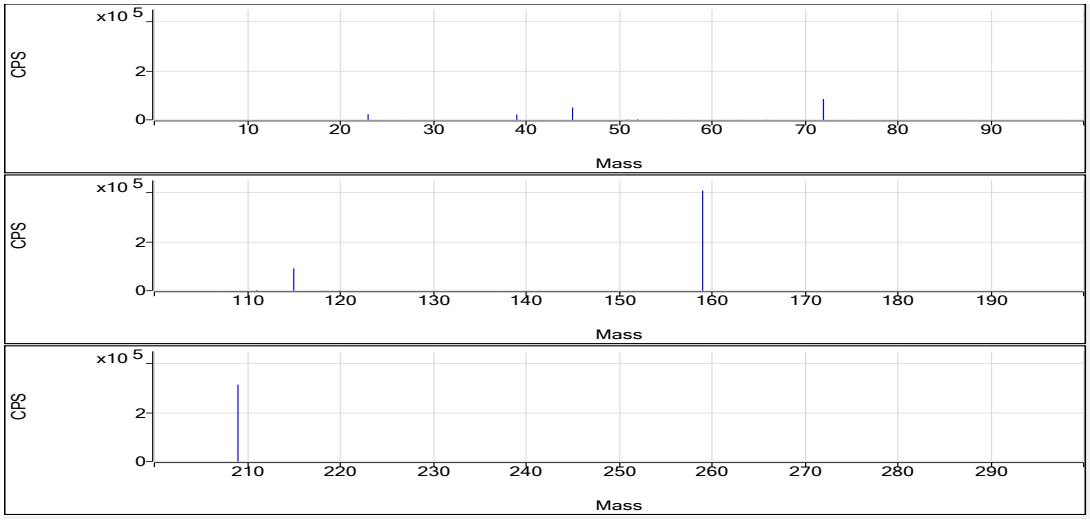


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.037	0	18.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.038	0	16.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.036	0	20.00	0.0007	3.404E-05
Se	78	2	H2	-0.045	0	2.67	0.0004	3.546E-05
Se	78	2	H2	0.019	0	7.33	0.0004	3.546E-05
Se	78	2	H2	-0.036	0	3.33	0.0004	3.546E-05
Na	23	3	He	10.724	0.4553	23539.27	0.0036	0.4171
Na	23	3	He	9.287	0.4502	22727.91	0.0036	0.4171
Na	23	3	He	16.669	0.4765	23659.40	0.0036	0.4171
Mg	24	3	He	0.263	0.005	260.01	0.0018	0.004553
Mg	24	3	He	-0.327	0.004	200.01	0.0018	0.004553
Mg	24	3	He	-0.068	0.0044	220.01	0.0018	0.004553
Al	27	3	He	-2.25	0.0008	40.00	0.0006	0.002085
Al	27	3	He	-0.858	0.0016	80.00	0.0006	0.002085
Al	27	3	He	-0.813	0.0016	80.00	0.0006	0.002085
K	39	3	He	-12.129	0.397	20524.92	0.0012	0.4112
K	39	3	He	4.999	0.417	21055.70	0.0012	0.4112
K	39	3	He	17.003	0.4311	21406.33	0.0012	0.4112
Ca	44	3	He	5.229	0.0037	190.01	0.0001	0.003322
Ca	44	3	He	-2.259	0.0032	160.01	0.0001	0.003322
Ca	44	3	He	-1.472	0.0032	160.01	0.0001	0.003322
Ti	47	3	He	0.364	0.0002	10.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.757	0.0004	20.00	0.0005	0
V	51	3	He	-0.335	0.0247	1276.07	0.0213	0.0318
V	51	3	He	-0.285	0.0257	1300.07	0.0213	0.0318
V	51	3	He	-0.232	0.0269	1334.07	0.0213	0.0318
Cr	52	3	He	-0.159	0.0383	1980.20	0.0294	0.04297
Cr	52	3	He	-0.188	0.0374	1890.18	0.0294	0.04297
Cr	52	3	He	0.018	0.0435	2160.23	0.0294	0.04297
Mn	55	3	He	0.117	0.0043	220.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.018	0.0026	130.01	0.0124	0.002801
Mn	55	3	He	0.18	0.005	250.01	0.0124	0.002801
Fe	57	3	He	0.296	0.0029	150.01	0.0006	0.002732
Fe	57	3	He	2.149	0.004	200.01	0.0006	0.002732
Fe	57	3	He	0.505	0.003	150.01	0.0006	0.002732
Co	59	3	He	-0.038	0.0015	80.00	0.0549	0.003644
Co	59	3	He	-0.012	0.003	150.01	0.0549	0.003644
Co	59	3	He	-0.03	0.002	100.00	0.0549	0.003644
Ni	60	3	He	-1.207	0.0029	250.01	0.0093	0.01413
Ni	60	3	He	-1.212	0.0029	240.01	0.0093	0.01413
Ni	60	3	He	-1.199	0.003	260.01	0.0093	0.01413
Cu	63	3	He	-0.067	0.0075	640.04	0.0274	0.009321
Cu	63	3	He	-0.113	0.0062	520.03	0.0274	0.009321
Cu	63	3	He	-0.134	0.0057	490.02	0.0274	0.009321
Zn	66	3	He	0.051	0.0061	520.03	0.0031	0.005913
Zn	66	3	He	-0.093	0.0056	470.02	0.0031	0.005913
Zn	66	3	He	0.254	0.0067	580.03	0.0031	0.005913
As	75	3	He	-0.014	0.0008	72.00	0.0021	0.0008698
As	75	3	He	-0.115	0.0006	52.00	0.0021	0.0008698
As	75	3	He	-0.007	0.0009	74.00	0.0021	0.0008698
Sr	88	3	He	0.033	0.001	90.00	0.0088	0.0006843
Sr	88	3	He	-0.002	0.0007	60.00	0.0088	0.0006843
Sr	88	3	He	0.046	0.0011	100.00	0.0088	0.0006843
Mo	98	3	He	-0.068	0.0003	30.00	0.0219	0.001827
Mo	98	3	He	-0.073	0.0002	20.00	0.0219	0.001827
Mo	98	3	He	-0.063	0.0004	40.00	0.0219	0.001827
Ag	107	3	He	-0.016	0.0003	30.00	0.047	0.001064
Ag	107	3	He	-0.013	0.0004	40.00	0.047	0.001064
Ag	107	3	He	-0.002	0.001	90.00	0.047	0.001064
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Sn	120	3	He	-0.035	0.0143	1320.12	0.0154	0.01483
Sn	120	3	He	-0.15	0.0125	1130.09	0.0154	0.01483
Sn	120	3	He	0.103	0.0164	1510.18	0.0154	0.01483
Sb	121	3	He	-0.011	0.0001	10.00	0.0143	0.0002661
Sb	121	3	He	-0.003	0.0002	20.00	0.0143	0.0002661
Sb	121	3	He	0.004	0.0003	30.00	0.0143	0.0002661
Ba	137	3	He	-0.01	0.0002	20.00	0.0048	0.0002665
Ba	137	3	He	-0.009	0.0002	20.00	0.0048	0.0002665
Ba	137	3	He	-0.033	0.0001	10.00	0.0048	0.0002665
Tl	205	3	He	-0.094	0.0004	180.01	0.0246	0.002755
Tl	205	3	He	-0.098	0.0003	140.01	0.0246	0.002755
Tl	205	3	He	-0.09	0.0005	220.01	0.0246	0.002755
Pb	208	3	He	0.008	0.0024	590.04	0.0324	0.002158
Pb	208	3	He	0.002	0.0022	470.03	0.0324	0.002158
Pb	208	3	He	0.002	0.0022	570.04	0.0324	0.002158
U	238	3	He	-0.006	0.0001	40.00	0.0492	0.0004023
U	238	3	He	-0.004	0.0002	60.00	0.0492	0.0004023
U	238	3	He	-0.002	0.0003	100.00	0.0492	0.0004023
Sc	45	1	No Gas			2574527.77		
Sc	45	1	No Gas			2591697.62		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2550121.68		
Ge	72	1	No Gas			1204472.48		
Ge	72	1	No Gas			1203912.48		
Ge	72	1	No Gas			1200736.94		
Sc	45	2	H2			204043.30		
Sc	45	2	H2			205341.44		
Sc	45	2	H2			209226.62		
Ge	72	2	H2			169757.60		
Ge	72	2	H2			167824.26		
Ge	72	2	H2			169727.18		
In	115	2	H2			403578.59		
In	115	2	H2			407690.15		
In	115	2	H2			412651.91		
Sc	45	3	He			51702.47		
Sc	45	3	He			50488.47		
Sc	45	3	He			49655.37		
Ge	72	3	He			85666.25		
Ge	72	3	He			83524.44		
Ge	72	3	He			86662.47		
In	115	3	He			92375.87		
In	115	3	He			90332.42		
In	115	3	He			92003.98		
Tb	159	3	He			409290.89		
Tb	159	3	He			413267.77		
Tb	159	3	He			409966.48		
Bi	209	3	He			314135.35		
Bi	209	3	He			315298.82		
Bi	209	3	He			316103.92		

Quantitation Report

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Acq Time	8/9/2023 5:44:33 PM
Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

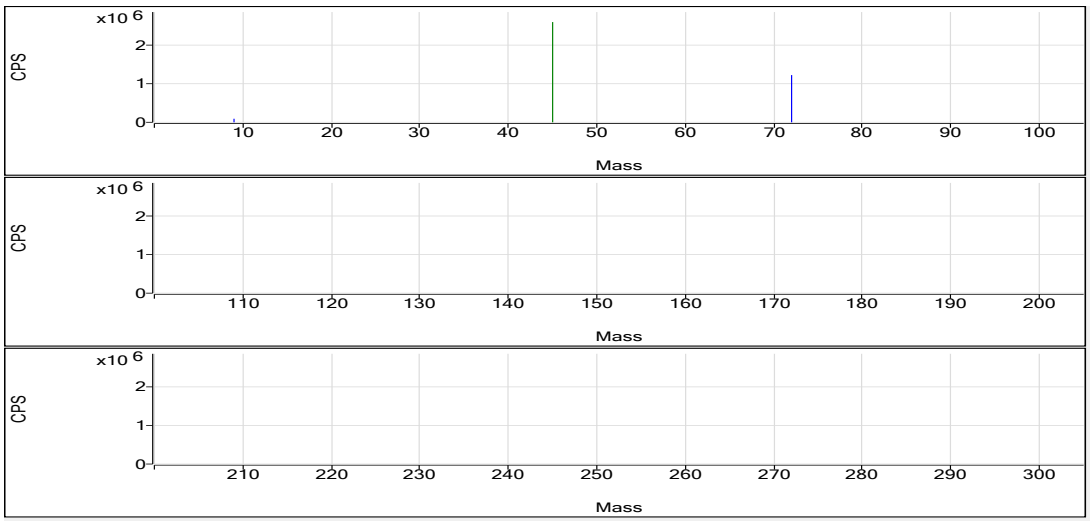
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	48.518	ppb	0.5	91874.97	0.0354	Pulse	0.5000	3
Se	78	72	H2	49.371	ppb	2.1	3738.05	0.0217	Pulse	1.5000	3
Na	23	45	He	4762.873	ppb	2.3	892808.42	17.3939	Pulse	0.1000	3
Mg	24	45	He	4965.119	ppb	1.9	460753.44	8.9755	Pulse	0.1000	3
Al	27	45	He	4983.372	ppb	2.6	149118.41	2.9054	Pulse	0.1000	3
K	39	45	He	5103.239	ppb	2.1	327875.21	6.3875	Pulse	0.1000	3
Ca	44	45	He	5066.712	ppb	2.9	17737.91	0.3456	Pulse	0.1000	3
Ti	47	45	He	5093.629	ppb	2.8	139039.92	2.7091	Pulse	0.1000	3
V	51	45	He	514.386	ppb	2.4	562696.77	10.9630	Pulse	0.5000	3
Cr	52	45	He	487.229	ppb	2.4	737693.06	14.3724	Pulse	0.1000	3
Mn	55	45	He	513.866	ppb	2.0	328073.15	6.3912	Pulse	0.1000	3
Fe	57	45	He	5088.283	ppb	1.0	149602.84	2.9140	Pulse	0.1000	3
Co	59	45	He	500.400	ppb	3.9	1409586.59	27.4693	Mix	0.1000	3
Ni	60	72	He	497.431	ppb	1.2	393469.30	4.6317	Pulse	0.1000	3
Cu	63	72	He	474.928	ppb	0.8	1107312.48	13.0347	Pulse	0.1000	3
Zn	66	72	He	499.571	ppb	2.0	130805.30	1.5398	Pulse	0.1000	3
As	75	72	He	511.207	ppb	1.1	93257.22	1.0978	Pulse	0.5000	3
Sr	88	115	He	52.967	ppb	0.8	41561.84	0.4667	Pulse	0.1000	3
Mo	98	115	He	50.552	ppb	1.4	98950.82	1.1112	Pulse	0.1000	3
Ag	107	115	He	50.025	ppb	1.1	209636.46	2.3542	Pulse	0.1000	3
Cd	111	115	He	51.282	ppb	1.9	24324.49	0.2732	Pulse	0.5000	3
Sn	120	115	He	52.254	ppb	2.5	73073.28	0.8206	Pulse	0.1000	3
Sb	121	115	He	53.358	ppb	1.6	67732.96	0.7606	Pulse	0.1000	3
Ba	137	115	He	528.181	ppb	1.4	224788.90	2.5243	Pulse	0.1000	3
Tl	205	159	He	50.089	ppb	0.3	507973.11	1.2330	Pulse	0.1000	3
Pb	208	159	He	50.892	ppb	0.6	680321.34	1.6513	Pulse	0.1000	3
U	238	209	He	49.670	ppb	0.3	773618.84	2.4465	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2596889.18	2.0	99.6	Analog	0.1000	3
No Gas	Ge	72	1223132.58	1.2	94.9	Pulse	0.1000	3
H2	Sc	45	207622.51	0.7	100.8	Pulse	0.1000	3
H2	Ge	72	172463.66	0.5	106.0	Pulse	0.1000	3
H2	In	115	410187.01	0.9	101.6	Pulse	0.1000	3
He	Sc	45	51348.19	2.6	100.3	Pulse	0.1000	3
He	Ge	72	84952.39	0.7	103.8	Pulse	0.1000	3
He	In	115	89047.89	0.1	101.6	Pulse	0.1000	3
He	Tb	159	411993.63	0.1	102.6	Pulse	0.1000	3
He	Bi	209	316216.02	0.6	103.3	Pulse	0.1000	3

No Gas



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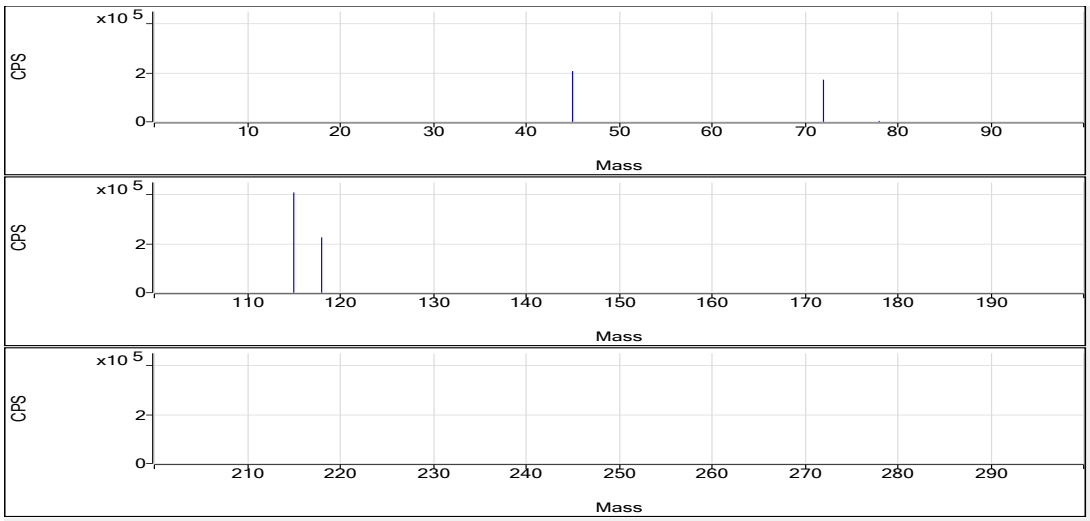
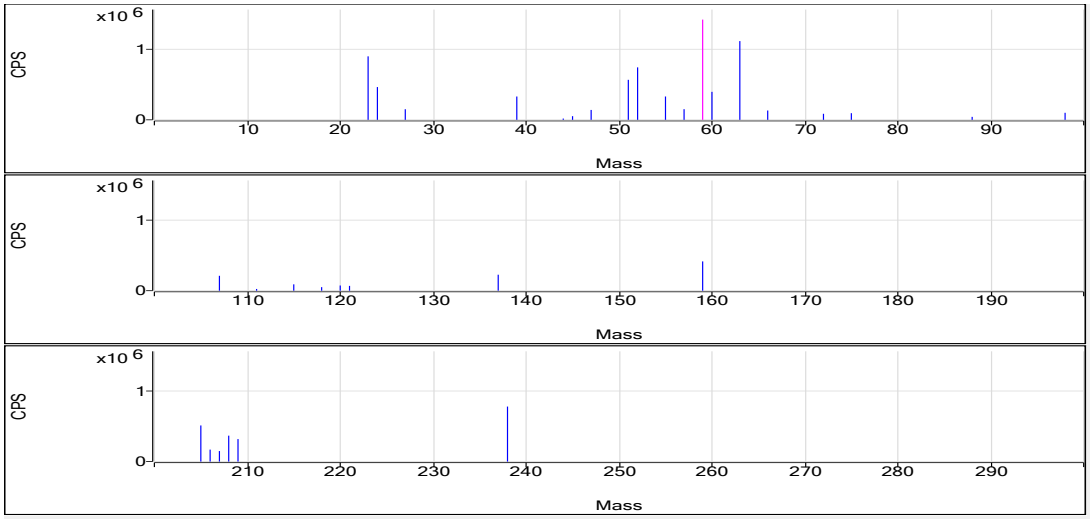


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	48.373	0.0353	92483.09	0.0007	3.404E-05
Be	9	1	No Gas	48.389	0.0353	92819.73	0.0007	3.404E-05
Be	9	1	No Gas	48.793	0.0356	90322.10	0.0007	3.404E-05
Se	78	2	H2	48.67	0.0214	3705.15	0.0004	3.546E-05
Se	78	2	H2	50.559	0.0222	3811.85	0.0004	3.546E-05
Se	78	2	H2	48.883	0.0215	3697.15	0.0004	3.546E-05
Na	23	3	He	4884.706	17.8282	891703.97	0.0036	0.4171
Na	23	3	He	4671.703	17.0689	899134.75	0.0036	0.4171
Na	23	3	He	4732.209	17.2846	887586.55	0.0036	0.4171
Mg	24	3	He	5072.967	9.1703	458669.02	0.0018	0.004553
Mg	24	3	He	4921.913	8.8974	468686.28	0.0018	0.004553
Mg	24	3	He	4900.478	8.8587	454905.03	0.0018	0.004553
Al	27	3	He	5111.422	2.98	149047.81	0.0006	0.002085
Al	27	3	He	4852.448	2.8291	149027.12	0.0006	0.002085
Al	27	3	He	4986.247	2.907	149280.30	0.0006	0.002085
K	39	3	He	5212.855	6.5158	325899.72	0.0012	0.4112
K	39	3	He	5001.979	6.2689	330223.86	0.0012	0.4112
K	39	3	He	5094.883	6.3777	327502.05	0.0012	0.4112
Ca	44	3	He	5198.338	0.3545	17731.23	0.0001	0.003322
Ca	44	3	He	4905.202	0.3347	17631.07	0.0001	0.003322
Ca	44	3	He	5096.595	0.3476	17851.43	0.0001	0.003322
Ti	47	3	He	5245.677	2.79	139544.89	0.0005	0
Ti	47	3	He	4958.805	2.6374	138929.28	0.0005	0
Ti	47	3	He	5076.406	2.6999	138645.58	0.0005	0
V	51	3	He	527.129	11.2338	561874.00	0.0213	0.0318
V	51	3	He	502.567	10.7118	564261.88	0.0213	0.0318
V	51	3	He	513.463	10.9433	561954.44	0.0213	0.0318
Cr	52	3	He	499.629	14.7371	737099.83	0.0294	0.04297
Cr	52	3	He	476.259	14.0498	740095.93	0.0294	0.04297
Cr	52	3	He	485.799	14.3304	735883.43	0.0294	0.04297
Mn	55	3	He	525.925	6.5412	327166.97	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	506.738	6.3026	332002.14	0.0124	0.002801
Mn	55	3	He	508.934	6.3299	325050.33	0.0124	0.002801
Fe	57	3	He	5144.198	2.946	147348.30	0.0006	0.002732
Fe	57	3	He	5043.335	2.8883	152144.97	0.0006	0.002732
Fe	57	3	He	5077.315	2.9077	149315.25	0.0006	0.002732
Co	59	3	He	521.852	28.6467	1432812.48	0.0549	0.003644
Co	59	3	He	484.339	26.5878	1400554.82	0.0549	0.003644
Co	59	3	He	495.01	27.1735	1395392.48	0.0549	0.003644
Ni	60	3	He	494.427	4.6038	394252.69	0.0093	0.01413
Ni	60	3	He	504.058	4.6932	397757.61	0.0093	0.01413
Ni	60	3	He	493.807	4.5981	388397.61	0.0093	0.01413
Cu	63	3	He	472.354	12.9641	1110194.67	0.0274	0.009321
Cu	63	3	He	479.214	13.1523	1114673.42	0.0274	0.009321
Cu	63	3	He	473.215	12.9877	1097069.36	0.0274	0.009321
Zn	66	3	He	492.923	1.5194	130114.61	0.0031	0.005913
Zn	66	3	He	510.815	1.5743	133426.58	0.0031	0.005913
Zn	66	3	He	494.975	1.5257	128874.70	0.0031	0.005913
As	75	3	He	507.132	1.089	93261.16	0.0021	0.0008698
As	75	3	He	517.411	1.1111	94167.07	0.0021	0.0008698
As	75	3	He	509.077	1.0932	92343.43	0.0021	0.0008698
Sr	88	3	He	52.462	0.4623	41110.69	0.0088	0.0006843
Sr	88	3	He	53.175	0.4686	41772.36	0.0088	0.0006843
Sr	88	3	He	53.263	0.4693	41802.47	0.0088	0.0006843
Mo	98	3	He	50.64	1.1131	98987.47	0.0219	0.001827
Mo	98	3	He	51.219	1.1258	100367.07	0.0219	0.001827
Mo	98	3	He	49.799	1.0947	97497.91	0.0219	0.001827
Ag	107	3	He	50.21	2.3629	210129.02	0.047	0.001064
Ag	107	3	He	50.436	2.3736	211602.28	0.047	0.001064
Ag	107	3	He	49.428	2.3261	207178.08	0.047	0.001064
Cd	111	3	He	50.904	0.2712	24112.76	0.0053	6.086E-05
Cd	111	3	He	52.398	0.2791	24882.15	0.0053	6.086E-05
Cd	111	3	He	50.542	0.2692	23978.57	0.0053	6.086E-05
Sn	120	3	He	53.689	0.8427	74943.48	0.0154	0.01483
Sn	120	3	He	52.016	0.817	72831.42	0.0154	0.01483
Sn	120	3	He	51.057	0.8022	71444.93	0.0154	0.01483
Sb	121	3	He	52.704	0.7513	66811.89	0.0143	0.0002661
Sb	121	3	He	53.071	0.7565	67444.96	0.0143	0.0002661
Sb	121	3	He	54.3	0.7741	68942.03	0.0143	0.0002661
Ba	137	3	He	524.622	2.5073	222970.68	0.0048	0.0002665
Ba	137	3	He	536.74	2.5652	228690.90	0.0048	0.0002665
Ba	137	3	He	523.18	2.5004	222705.13	0.0048	0.0002665
Tl	205	3	He	50.251	1.2369	509674.45	0.0246	0.002755
Tl	205	3	He	50.04	1.2317	508100.97	0.0246	0.002755
Tl	205	3	He	49.977	1.2302	506143.90	0.0246	0.002755
Pb	208	3	He	50.549	1.6402	360665.70	0.0324	0.002158
Pb	208	3	He	51.006	1.655	365727.03	0.0324	0.002158
Pb	208	3	He	51.122	1.6587	366836.24	0.0324	0.002158
U	238	3	He	49.728	2.4494	772507.57	0.0492	0.0004023
U	238	3	He	49.502	2.4383	776217.02	0.0492	0.0004023
U	238	3	He	49.779	2.4519	772131.94	0.0492	0.0004023
Sc	45	1	No Gas			2621757.77		
Sc	45	1	No Gas			2630420.59		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2538489.18		
Ge	72	1	No Gas			1218555.06		
Ge	72	1	No Gas			1239682.79		
Ge	72	1	No Gas			1211159.90		
Sc	45	2	H2			208991.77		
Sc	45	2	H2			205968.90		
Sc	45	2	H2			207906.87		
Ge	72	2	H2			173391.81		
Ge	72	2	H2			171732.22		
Ge	72	2	H2			172266.95		
In	115	2	H2			406256.17		
In	115	2	H2			413742.06		
In	115	2	H2			410562.81		
Sc	45	3	He			50016.59		
Sc	45	3	He			52676.68		
Sc	45	3	He			51351.29		
Ge	72	3	He			85635.98		
Ge	72	3	He			84751.50		
Ge	72	3	He			84469.69		
In	115	3	He			89316.76		
In	115	3	He			89537.52		
In	115	3	He			89457.68		
Tb	159	3	He			412047.38		
Tb	159	3	He			412503.35		
Tb	159	3	He			411430.15		
Bi	209	3	He			315386.19		
Bi	209	3	He			318349.27		
Bi	209	3	He			314912.61		

Quantitation Report

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Sample Type	CCB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

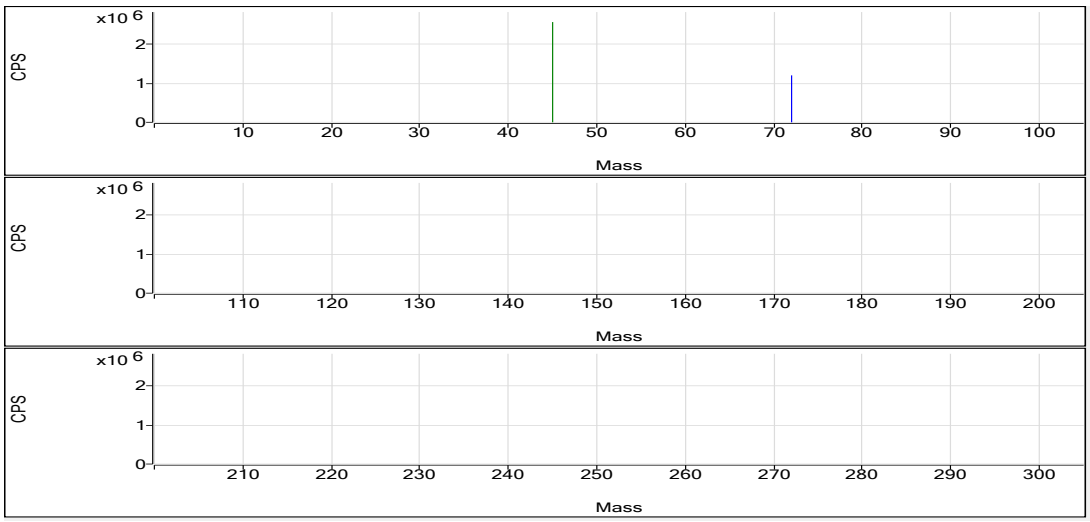
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.020	ppb	N/A	49.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.001	ppb	774.6	6.00	0.0000	Pulse	1.5000	3
Na	23	45	He	-5.064	ppb	N/A	20518.18	0.3990	Pulse	0.1000	3
Mg	24	45	He	0.030	ppb	3077.8	236.68	0.0046	Pulse	0.1000	3
Al	27	45	He	-1.131	ppb	N/A	73.33	0.0014	Pulse	0.1000	3
K	39	45	He	-6.526	ppb	N/A	20752.04	0.4035	Pulse	0.1000	3
Ca	44	45	He	-9.883	ppb	N/A	136.67	0.0027	Pulse	0.1000	3
Ti	47	45	He	1.584	ppb	12.7	43.33	0.0008	Pulse	0.1000	3
V	51	45	He	-0.349	ppb	N/A	1254.06	0.0244	Pulse	0.5000	3
Cr	52	45	He	0.016	ppb	376.5	2233.59	0.0434	Pulse	0.1000	3
Mn	55	45	He	0.087	ppb	79.8	200.01	0.0039	Pulse	0.1000	3
Fe	57	45	He	-0.020	ppb	N/A	140.00	0.0027	Pulse	0.1000	3
Co	59	45	He	0.036	ppb	21.5	290.01	0.0056	Pulse	0.1000	3
Ni	60	72	He	-1.129	ppb	N/A	306.68	0.0037	Pulse	0.1000	3
Cu	63	72	He	-0.061	ppb	N/A	643.37	0.0077	Pulse	0.1000	3
Zn	66	72	He	0.373	ppb	95.0	593.37	0.0071	Pulse	0.1000	3
As	75	72	He	0.175	ppb	13.7	104.67	0.0012	Pulse	0.5000	3
Sr	88	115	He	0.031	ppb	22.4	86.67	0.0010	Pulse	0.1000	3
Mo	98	115	He	-0.018	ppb	N/A	130.01	0.0014	Pulse	0.1000	3
Ag	107	115	He	-0.001	ppb	N/A	90.00	0.0010	Pulse	0.1000	3
Cd	111	115	He	-0.002	ppb	N/A	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.107	ppb	85.8	1490.13	0.0165	Pulse	0.1000	3
Sb	121	115	He	0.082	ppb	28.2	130.01	0.0014	Pulse	0.1000	3
Ba	137	115	He	0.014	ppb	337.5	30.00	0.0003	Pulse	0.1000	3
Tl	205	159	He	-0.045	ppb	N/A	673.38	0.0017	Pulse	0.1000	3
Pb	208	159	He	0.004	ppb	62.8	923.38	0.0023	Pulse	0.1000	3
U	238	209	He	0.028	ppb	23.6	560.03	0.0018	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2564170.48	1.0	98.3	Analog	0.1000	3
No Gas	Ge	72	1200710.27	0.4	93.2	Pulse	0.1000	3
H2	Sc	45	204313.97	1.2	99.1	Pulse	0.1000	3
H2	Ge	72	166766.85	0.4	102.5	Pulse	0.1000	3
H2	In	115	408454.75	1.1	101.2	Pulse	0.1000	3
He	Sc	45	51425.02	0.7	100.4	Pulse	0.1000	3
He	Ge	72	84050.45	0.9	102.7	Pulse	0.1000	3
He	In	115	90385.84	0.3	103.1	Pulse	0.1000	3
He	Tb	159	405948.12	0.2	101.1	Pulse	0.1000	3
He	Bi	209	314439.29	1.1	102.7	Pulse	0.1000	3

No Gas



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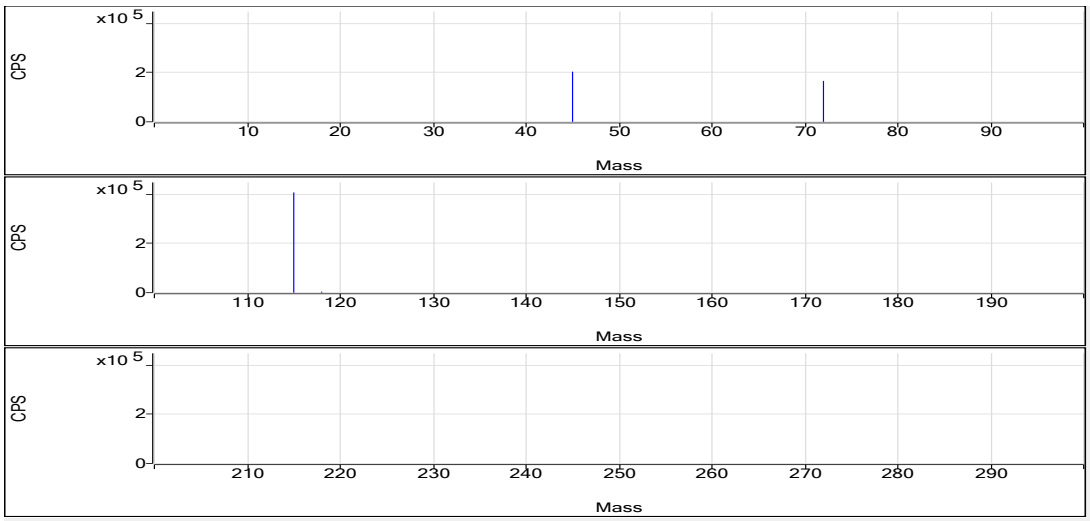
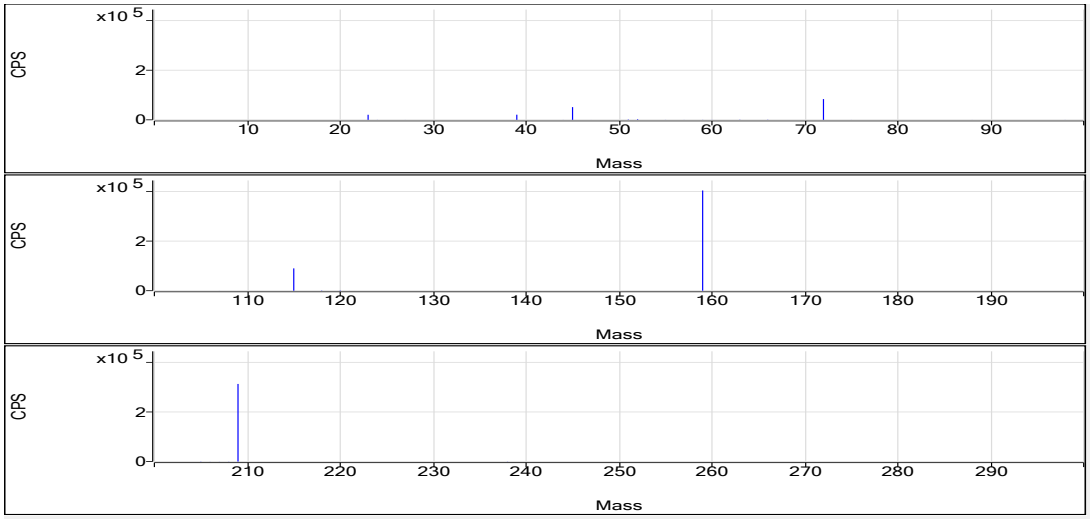


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.022	0	46.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.032	0	28.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.007	0	74.00	0.0007	3.404E-05
Se	78	2	H2	0.01	0	6.67	0.0004	3.546E-05
Se	78	2	H2	0.002	0	6.00	0.0004	3.546E-05
Se	78	2	H2	-0.008	0	5.33	0.0004	3.546E-05
Na	23	3	He	-5.574	0.3972	20284.40	0.0036	0.4171
Na	23	3	He	-7.095	0.3918	20294.74	0.0036	0.4171
Na	23	3	He	-2.522	0.4081	20975.39	0.0036	0.4171
Mg	24	3	He	0.081	0.0047	240.01	0.0018	0.004553
Mg	24	3	He	-0.917	0.0029	150.01	0.0018	0.004553
Mg	24	3	He	0.926	0.0062	320.02	0.0018	0.004553
Al	27	3	He	-0.553	0.0018	90.00	0.0006	0.002085
Al	27	3	He	-0.596	0.0017	90.00	0.0006	0.002085
Al	27	3	He	-2.242	0.0008	40.00	0.0006	0.002085
K	39	3	He	-1.567	0.4094	20905.59	0.0012	0.4112
K	39	3	He	-3.707	0.4068	21075.80	0.0012	0.4112
K	39	3	He	-14.304	0.3944	20274.74	0.0012	0.4112
Ca	44	3	He	-23.085	0.0018	90.00	0.0001	0.003322
Ca	44	3	He	-0.592	0.0033	170.01	0.0001	0.003322
Ca	44	3	He	-5.972	0.0029	150.01	0.0001	0.003322
Ti	47	3	He	1.473	0.0008	40.00	0.0005	0
Ti	47	3	He	1.815	0.001	50.00	0.0005	0
Ti	47	3	He	1.463	0.0008	40.00	0.0005	0
V	51	3	He	-0.322	0.0249	1274.07	0.0213	0.0318
V	51	3	He	-0.381	0.0237	1228.06	0.0213	0.0318
V	51	3	He	-0.343	0.0245	1260.06	0.0213	0.0318
Cr	52	3	He	-0.029	0.0421	2150.24	0.0294	0.04297
Cr	52	3	He	0.082	0.0454	2350.28	0.0294	0.04297
Cr	52	3	He	-0.006	0.0428	2200.26	0.0294	0.04297
Mn	55	3	He	0.011	0.0029	150.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.147	0.0046	240.01	0.0124	0.002801
Mn	55	3	He	0.103	0.0041	210.01	0.0124	0.002801
Fe	57	3	He	-2.379	0.0014	70.00	0.0006	0.002732
Fe	57	3	He	-0.726	0.0023	120.00	0.0006	0.002732
Fe	57	3	He	3.046	0.0045	230.01	0.0006	0.002732
Co	59	3	He	0.044	0.0061	310.01	0.0549	0.003644
Co	59	3	He	0.029	0.0052	270.01	0.0549	0.003644
Co	59	3	He	0.036	0.0056	290.01	0.0549	0.003644
Ni	60	3	He	-1.094	0.004	330.01	0.0093	0.01413
Ni	60	3	He	-1.177	0.0032	270.01	0.0093	0.01413
Ni	60	3	He	-1.115	0.0038	320.02	0.0093	0.01413
Cu	63	3	He	-0.033	0.0084	700.04	0.0274	0.009321
Cu	63	3	He	-0.085	0.007	590.04	0.0274	0.009321
Cu	63	3	He	-0.064	0.0076	640.03	0.0274	0.009321
Zn	66	3	He	0.267	0.0067	560.04	0.0031	0.005913
Zn	66	3	He	0.083	0.0062	520.03	0.0031	0.005913
Zn	66	3	He	0.767	0.0083	700.04	0.0031	0.005913
As	75	3	He	0.189	0.0013	106.00	0.0021	0.0008698
As	75	3	He	0.147	0.0012	100.00	0.0021	0.0008698
As	75	3	He	0.189	0.0013	108.00	0.0021	0.0008698
Sr	88	3	He	0.035	0.001	90.00	0.0088	0.0006843
Sr	88	3	He	0.023	0.0009	80.00	0.0088	0.0006843
Sr	88	3	He	0.035	0.001	90.00	0.0088	0.0006843
Mo	98	3	He	-0.023	0.0013	120.01	0.0219	0.001827
Mo	98	3	He	0.013	0.0021	190.01	0.0219	0.001827
Mo	98	3	He	-0.043	0.0009	80.00	0.0219	0.001827
Ag	107	3	He	0.001	0.0011	100.00	0.047	0.001064
Ag	107	3	He	0.008	0.0014	130.01	0.047	0.001064
Ag	107	3	He	-0.013	0.0004	40.00	0.047	0.001064
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	0.001	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	0.001	0.0001	6.00	0.0053	6.086E-05
Sn	120	3	He	0.097	0.0163	1480.13	0.0154	0.01483
Sn	120	3	He	0.204	0.018	1620.14	0.0154	0.01483
Sn	120	3	He	0.021	0.0152	1370.13	0.0154	0.01483
Sb	121	3	He	0.105	0.0018	160.01	0.0143	0.0002661
Sb	121	3	He	0.083	0.0014	130.01	0.0143	0.0002661
Sb	121	3	He	0.059	0.0011	100.00	0.0143	0.0002661
Ba	137	3	He	-0.033	0.0001	10.00	0.0048	0.0002665
Ba	137	3	He	0.06	0.0006	50.00	0.0048	0.0002665
Ba	137	3	He	0.014	0.0003	30.00	0.0048	0.0002665
Tl	205	3	He	-0.056	0.0014	560.03	0.0246	0.002755
Tl	205	3	He	-0.033	0.0019	790.06	0.0246	0.002755
Tl	205	3	He	-0.045	0.0016	670.04	0.0246	0.002755
Pb	208	3	He	0.005	0.0023	420.03	0.0324	0.002158
Pb	208	3	He	0.005	0.0023	520.03	0.0324	0.002158
Pb	208	3	He	0.001	0.0022	450.02	0.0324	0.002158
U	238	3	He	0.025	0.0016	510.03	0.0492	0.0004023
U	238	3	He	0.024	0.0016	500.03	0.0492	0.0004023
U	238	3	He	0.036	0.0022	670.04	0.0492	0.0004023
Sc	45	1	No Gas			2574436.99		
Sc	45	1	No Gas			2535350.90		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2582723.56		
Ge	72	1	No Gas			1205527.95		
Ge	72	1	No Gas			1200267.01		
Ge	72	1	No Gas			1196335.84		
Sc	45	2	H2			202673.90		
Sc	45	2	H2			203050.93		
Sc	45	2	H2			207217.07		
Ge	72	2	H2			167057.26		
Ge	72	2	H2			165934.86		
Ge	72	2	H2			167308.42		
In	115	2	H2			413539.72		
In	115	2	H2			405059.21		
In	115	2	H2			406765.31		
Sc	45	3	He			51070.10		
Sc	45	3	He			51803.02		
Sc	45	3	He			51401.95		
Ge	72	3	He			83172.34		
Ge	72	3	He			84308.77		
Ge	72	3	He			84670.25		
In	115	3	He			90625.83		
In	115	3	He			90111.58		
In	115	3	He			90443.59		
Tb	159	3	He			404809.17		
Tb	159	3	He			406729.41		
Tb	159	3	He			406305.78		
Bi	209	3	He			315973.26		
Bi	209	3	He			317003.47		
Bi	209	3	He			310341.13		

Quantitation Report

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Auto Dilution	1.0000
Total Dilution	1.0000
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Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

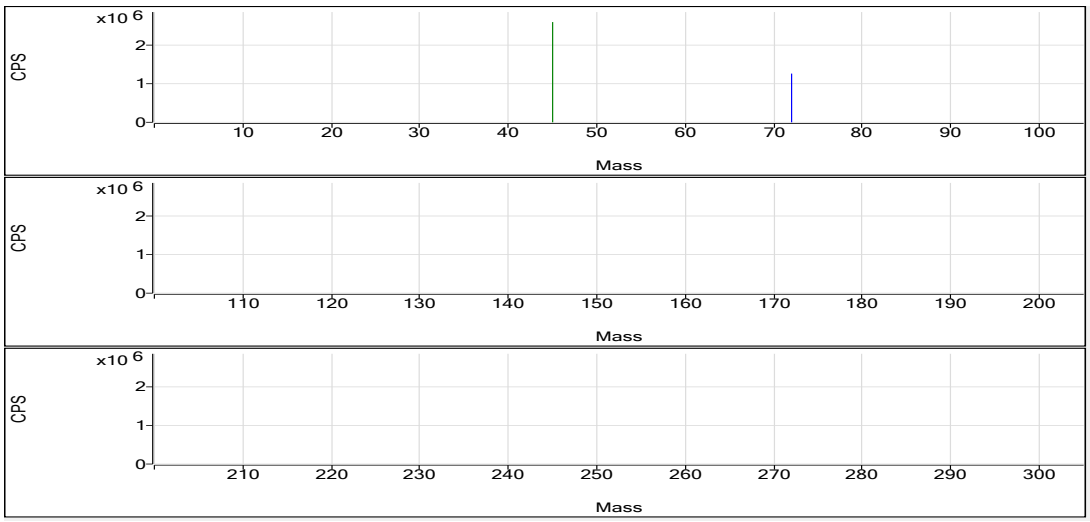
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.029	ppb	N/A	33.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.170	ppb	45.7	19.56	0.0001	Pulse	1.5000	3
Na	23	45	He	46020.334	ppb	1.8	8352064.67	164.4525	Analog	0.1000	3
Mg	24	45	He	7714.711	ppb	1.7	708154.13	13.9434	Pulse	0.1000	3
Al	27	45	He	169.445	ppb	4.4	5117.73	0.1008	Pulse	0.1000	3
K	39	45	He	3757.809	ppb	2.0	244380.44	4.8119	Pulse	0.1000	3
Ca	44	45	He	19402.338	ppb	3.6	66723.56	1.3141	Pulse	0.1000	3
Ti	47	45	He	6.315	ppb	28.7	170.01	0.0034	Pulse	0.1000	3
V	51	45	He	1.067	ppb	10.7	2765.61	0.0545	Pulse	0.5000	3
Cr	52	45	He	0.673	ppb	19.8	3187.17	0.0628	Pulse	0.1000	3
Mn	55	45	He	186.822	ppb	2.5	118093.15	2.3254	Pulse	0.1000	3
Fe	57	45	He	1996.954	ppb	2.9	58157.69	1.1453	Pulse	0.1000	3
Co	59	45	He	0.362	ppb	7.4	1193.42	0.0235	Pulse	0.1000	3
Ni	60	72	He	-0.609	ppb	N/A	753.38	0.0085	Pulse	0.1000	3
Cu	63	72	He	2.282	ppb	6.4	6398.30	0.0719	Pulse	0.1000	3
Zn	66	72	He	5.951	ppb	13.0	2150.24	0.0242	Pulse	0.1000	3
As	75	72	He	4.183	ppb	2.3	876.03	0.0098	Pulse	0.5000	3
Sr	88	115	He	191.435	ppb	0.8	154816.26	1.6851	Pulse	0.1000	3
Mo	98	115	He	0.057	ppb	64.6	283.35	0.0031	Pulse	0.1000	3
Ag	107	115	He	-0.008	ppb	N/A	63.33	0.0007	Pulse	0.1000	3
Cd	111	115	He	-0.003	ppb	N/A	4.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.222	ppb	36.3	1676.83	0.0183	Pulse	0.1000	3
Sb	121	115	He	0.014	ppb	30.1	43.33	0.0005	Pulse	0.1000	3
Ba	137	115	He	37.033	ppb	3.4	16283.53	0.1772	Pulse	0.1000	3
Tl	205	159	He	-0.086	ppb	N/A	260.02	0.0006	Pulse	0.1000	3
Pb	208	159	He	0.746	ppb	2.0	10808.86	0.0263	Pulse	0.1000	3
U	238	209	He	0.022	ppb	12.6	470.03	0.0015	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2594524.60	1.5	99.5	Analog	0.1000	3
No Gas	Ge	72	1260538.71	1.3	97.8	Pulse	0.1000	3
H2	Sc	45	208262.10	1.1	101.1	Pulse	0.1000	3
H2	Ge	72	177972.55	0.7	109.4	Pulse	0.1000	3
H2	In	115	409530.81	1.0	101.4	Pulse	0.1000	3
He	Sc	45	50799.49	2.1	99.2	Pulse	0.1000	3
He	Ge	72	88969.59	1.0	108.7	Pulse	0.1000	3
He	In	115	91874.25	0.3	104.8	Pulse	0.1000	3
He	Tb	159	410698.72	0.5	102.3	Pulse	0.1000	3
He	Bi	209	314204.33	0.0	102.6	Pulse	0.1000	3

No Gas



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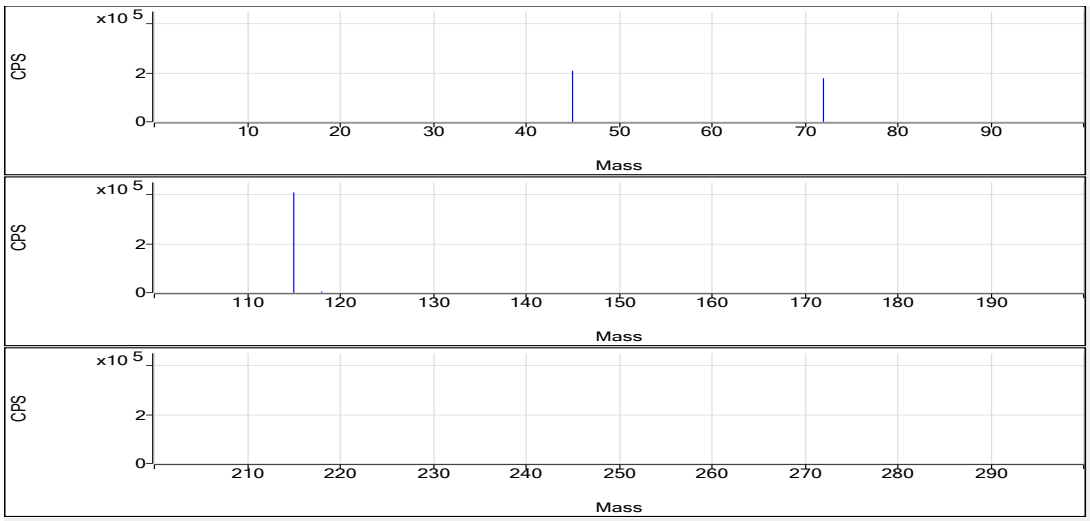
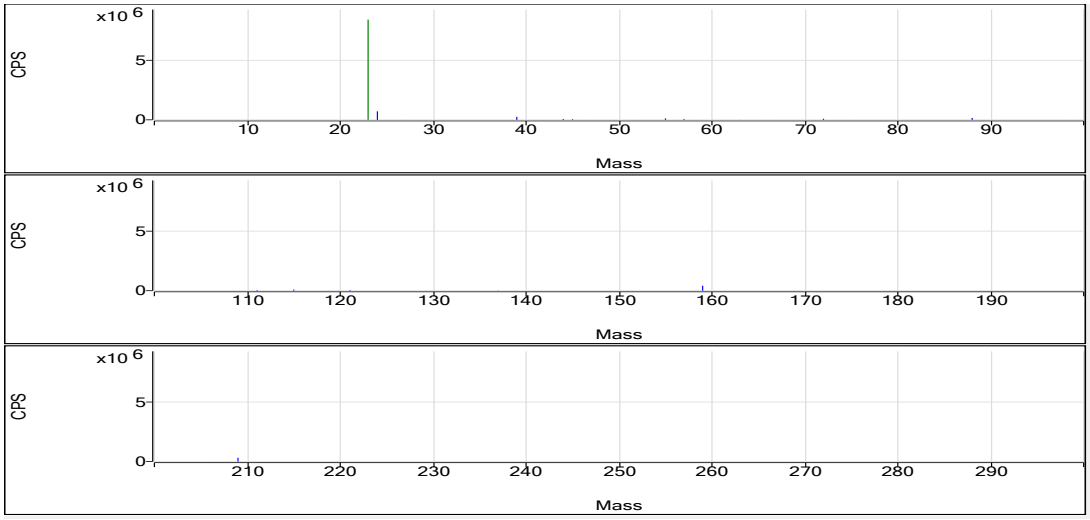


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.026	0	38.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.03	0	32.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.031	0	30.00	0.0007	3.404E-05
Se	78	2	H2	0.212	0.0001	22.67	0.0004	3.546E-05
Se	78	2	H2	0.08	0.0001	12.67	0.0004	3.546E-05
Se	78	2	H2	0.218	0.0001	23.33	0.0004	3.546E-05
Na	23	3	He	45966.208	164.2596	8403587.37	0.0036	0.4171
Na	23	3	He	46895.767	167.5729	8315849.25	0.0036	0.4171
Na	23	3	He	45199.027	161.525	8336757.38	0.0036	0.4171
Mg	24	3	He	7647.593	13.8221	707146.63	0.0018	0.004553
Mg	24	3	He	7867.108	14.2188	705609.83	0.0018	0.004553
Mg	24	3	He	7629.432	13.7893	711705.93	0.0018	0.004553
Al	27	3	He	165.551	0.0985	5041.02	0.0006	0.002085
Al	27	3	He	178.05	0.1058	5251.12	0.0006	0.002085
Al	27	3	He	164.735	0.0981	5061.05	0.0006	0.002085
K	39	3	He	3734.809	4.7849	244798.96	0.0012	0.4112
K	39	3	He	3840.075	4.9082	243570.91	0.0012	0.4112
K	39	3	He	3698.541	4.7425	244771.46	0.0012	0.4112
Ca	44	3	He	19395.291	1.3136	67205.00	0.0001	0.003322
Ca	44	3	He	20107.969	1.3618	67577.69	0.0001	0.003322
Ca	44	3	He	18703.754	1.2669	65387.99	0.0001	0.003322
Ti	47	3	He	6.616	0.0035	180.01	0.0005	0
Ti	47	3	He	7.957	0.0042	210.01	0.0005	0
Ti	47	3	He	4.372	0.0023	120.01	0.0005	0
V	51	3	He	1.044	0.054	2762.28	0.0213	0.0318
V	51	3	He	1.191	0.0571	2834.30	0.0213	0.0318
V	51	3	He	0.966	0.0523	2700.26	0.0213	0.0318
Cr	52	3	He	0.792	0.0663	3390.66	0.0294	0.04297
Cr	52	3	He	0.698	0.0635	3150.42	0.0294	0.04297
Cr	52	3	He	0.529	0.0585	3020.42	0.0294	0.04297
Mn	55	3	He	188.008	2.3401	119722.33	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	190.875	2.3758	117898.94	0.0124	0.002801
Mn	55	3	He	181.582	2.2603	116658.17	0.0124	0.002801
Fe	57	3	He	1989.265	1.1409	58368.46	0.0006	0.002732
Fe	57	3	He	2058.027	1.1802	58569.39	0.0006	0.002732
Fe	57	3	He	1943.571	1.1147	57535.22	0.0006	0.002732
Co	59	3	He	0.368	0.0238	1220.09	0.0549	0.003644
Co	59	3	He	0.385	0.0248	1230.09	0.0549	0.003644
Co	59	3	He	0.333	0.0219	1130.09	0.0549	0.003644
Ni	60	3	He	-0.512	0.0094	840.06	0.0093	0.01413
Ni	60	3	He	-0.493	0.0096	840.06	0.0093	0.01413
Ni	60	3	He	-0.823	0.0065	580.03	0.0093	0.01413
Cu	63	3	He	2.172	0.0689	6171.53	0.0274	0.009321
Cu	63	3	He	2.228	0.0704	6191.55	0.0274	0.009321
Cu	63	3	He	2.447	0.0764	6831.83	0.0274	0.009321
Zn	66	3	He	5.2	0.0219	1960.20	0.0031	0.005913
Zn	66	3	He	6.744	0.0266	2340.28	0.0031	0.005913
Zn	66	3	He	5.908	0.0241	2150.25	0.0031	0.005913
As	75	3	He	4.162	0.0098	878.03	0.0021	0.0008698
As	75	3	He	4.1	0.0097	850.03	0.0021	0.0008698
As	75	3	He	4.287	0.0101	900.03	0.0021	0.0008698
Sr	88	3	He	191.603	1.6866	154426.52	0.0088	0.0006843
Sr	88	3	He	192.797	1.6971	156072.43	0.0088	0.0006843
Sr	88	3	He	189.903	1.6716	153949.82	0.0088	0.0006843
Mo	98	3	He	0.021	0.0023	210.01	0.0219	0.001827
Mo	98	3	He	0.095	0.0039	360.02	0.0219	0.001827
Mo	98	3	He	0.055	0.003	280.01	0.0219	0.001827
Ag	107	3	He	0.001	0.0011	100.00	0.047	0.001064
Ag	107	3	He	-0.013	0.0004	40.00	0.047	0.001064
Ag	107	3	He	-0.011	0.0005	50.00	0.047	0.001064
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Sn	120	3	He	0.299	0.0194	1780.18	0.0154	0.01483
Sn	120	3	He	0.138	0.017	1560.15	0.0154	0.01483
Sn	120	3	He	0.228	0.0184	1690.16	0.0154	0.01483
Sb	121	3	He	0.012	0.0004	40.00	0.0143	0.0002661
Sb	121	3	He	0.012	0.0004	40.00	0.0143	0.0002661
Sb	121	3	He	0.019	0.0005	50.00	0.0143	0.0002661
Ba	137	3	He	36.739	0.1758	16099.95	0.0048	0.0002665
Ba	137	3	He	38.424	0.1839	16910.98	0.0048	0.0002665
Ba	137	3	He	35.935	0.172	15839.67	0.0048	0.0002665
Tl	205	3	He	-0.084	0.0007	280.02	0.0246	0.002755
Tl	205	3	He	-0.082	0.0008	310.02	0.0246	0.002755
Tl	205	3	He	-0.093	0.0005	190.01	0.0246	0.002755
Pb	208	3	He	0.757	0.0267	5811.47	0.0324	0.002158
Pb	208	3	He	0.729	0.0258	5811.49	0.0324	0.002158
Pb	208	3	He	0.751	0.0265	5861.56	0.0324	0.002158
U	238	3	He	0.02	0.0014	440.03	0.0492	0.0004023
U	238	3	He	0.025	0.0017	520.03	0.0492	0.0004023
U	238	3	He	0.021	0.0014	450.02	0.0492	0.0004023
Sc	45	1	No Gas			2558356.37		
Sc	45	1	No Gas			2588572.15		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2636645.27		
Ge	72	1	No Gas			1247947.64		
Ge	72	1	No Gas			1254512.56		
Ge	72	1	No Gas			1279155.92		
Sc	45	2	H2			208801.81		
Sc	45	2	H2			210260.58		
Sc	45	2	H2			205723.90		
Ge	72	2	H2			176567.61		
Ge	72	2	H2			179194.35		
Ge	72	2	H2			178155.70		
In	115	2	H2			409945.85		
In	115	2	H2			405324.99		
In	115	2	H2			413321.60		
Sc	45	3	He			51160.41		
Sc	45	3	He			49625.26		
Sc	45	3	He			51612.79		
Ge	72	3	He			89589.75		
Ge	72	3	He			87920.17		
Ge	72	3	He			89398.86		
In	115	3	He			91571.13		
In	115	3	He			91973.63		
In	115	3	He			92104.28		
Tb	159	3	He			411566.71		
Tb	159	3	He			412192.69		
Tb	159	3	He			408336.75		
Bi	209	3	He			314122.42		
Bi	209	3	He			314307.07		
Bi	209	3	He			314183.49		

Quantitation Report

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Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H09B00.b
Acq Time	8/9/2023 5:51:13 PM
Sample Name	410-137230-B-6-A @10
Sample Type	Sample
Comment	E7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

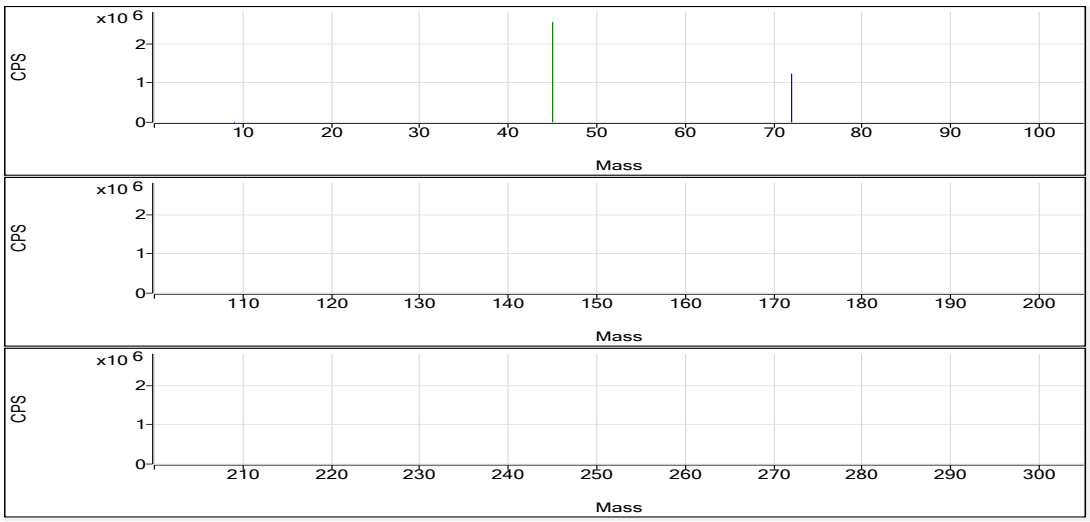
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.038	ppb	N/A	16.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.121	ppb	14.6	15.56	0.0001	Pulse	1.5000	3
Na	23	45	He	12338.338	ppb	0.8	2288932.00	44.3960	Analog	0.1000	3
Mg	24	45	He	43.043	ppb	2.8	4244.13	0.0823	Pulse	0.1000	3
Al	27	45	He	33.375	ppb	4.6	1110.09	0.0215	Pulse	0.1000	3
K	39	45	He	868.460	ppb	1.1	73635.59	1.4282	Pulse	0.1000	3
Ca	44	45	He	1138.911	ppb	9.4	4137.39	0.0803	Pulse	0.1000	3
Ti	47	45	He	0.487	ppb	44.0	13.33	0.0003	Pulse	0.1000	3
V	51	45	He	0.734	ppb	10.4	2443.55	0.0474	Pulse	0.5000	3
Cr	52	45	He	0.388	ppb	25.9	2803.70	0.0544	Pulse	0.1000	3
Mn	55	45	He	2.546	ppb	5.5	1776.85	0.0345	Pulse	0.1000	3
Fe	57	45	He	25.737	ppb	5.8	900.06	0.0175	Pulse	0.1000	3
Co	59	45	He	0.027	ppb	87.9	263.35	0.0051	Pulse	0.1000	3
Ni	60	72	He	-0.892	ppb	N/A	516.70	0.0058	Pulse	0.1000	3
Cu	63	72	He	0.366	ppb	9.9	1713.50	0.0194	Pulse	0.1000	3
Zn	66	72	He	3.827	ppb	1.8	1563.47	0.0177	Pulse	0.1000	3
As	75	72	He	409.120	ppb	1.3	77765.75	0.8787	Pulse	0.5000	3
Sr	88	115	He	9.792	ppb	3.3	7825.75	0.0868	Pulse	0.1000	3
Mo	98	115	He	0.936	ppb	3.4	2016.87	0.0224	Pulse	0.1000	3
Ag	107	115	He	-0.008	ppb	N/A	60.00	0.0007	Pulse	0.1000	3
Cd	111	115	He	-0.002	ppb	N/A	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.125	ppb	28.2	1510.14	0.0168	Pulse	0.1000	3
Sb	121	115	He	0.908	ppb	2.2	1190.09	0.0132	Pulse	0.1000	3
Ba	137	115	He	1.378	ppb	16.8	616.70	0.0068	Pulse	0.1000	3
Tl	205	159	He	-0.092	ppb	N/A	206.68	0.0005	Pulse	0.1000	3
Pb	208	159	He	0.271	ppb	4.5	4487.15	0.0109	Pulse	0.1000	3
U	238	209	He	0.210	ppb	1.7	3423.91	0.0107	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2554790.22	0.9	98.0	Analog	0.1000	3
No Gas	Ge	72	1241271.65	0.6	96.3	Pulse	0.1000	3
H2	Sc	45	206777.15	0.9	100.3	Pulse	0.1000	3
H2	Ge	72	175580.67	0.8	107.9	Pulse	0.1000	3
H2	In	115	413534.45	0.1	102.4	Pulse	0.1000	3
He	Sc	45	51559.01	0.7	100.7	Pulse	0.1000	3
He	Ge	72	88504.15	0.9	108.1	Pulse	0.1000	3
He	In	115	90127.13	1.2	102.8	Pulse	0.1000	3
He	Tb	159	410050.62	0.3	102.1	Pulse	0.1000	3
He	Bi	209	318540.12	0.5	104.1	Pulse	0.1000	3

No Gas



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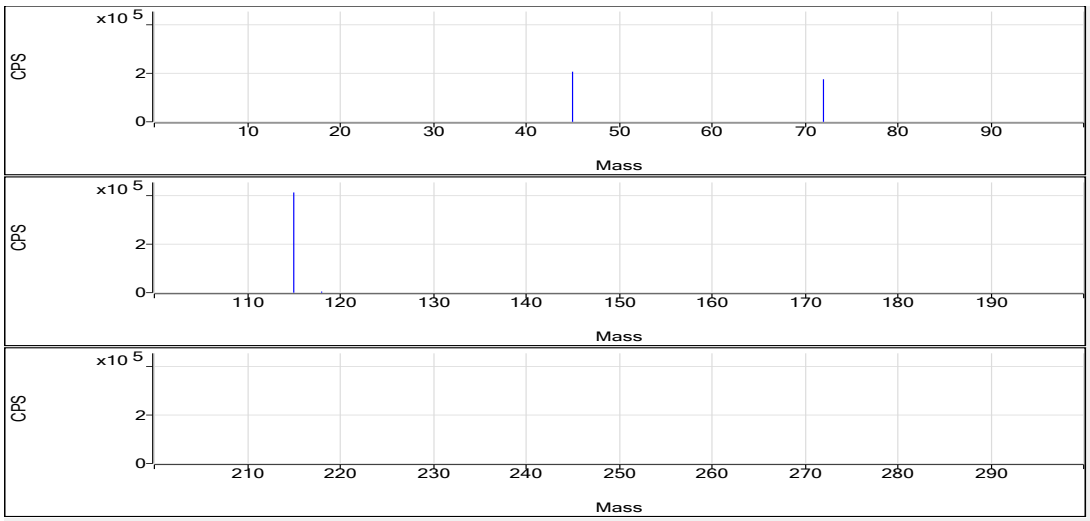
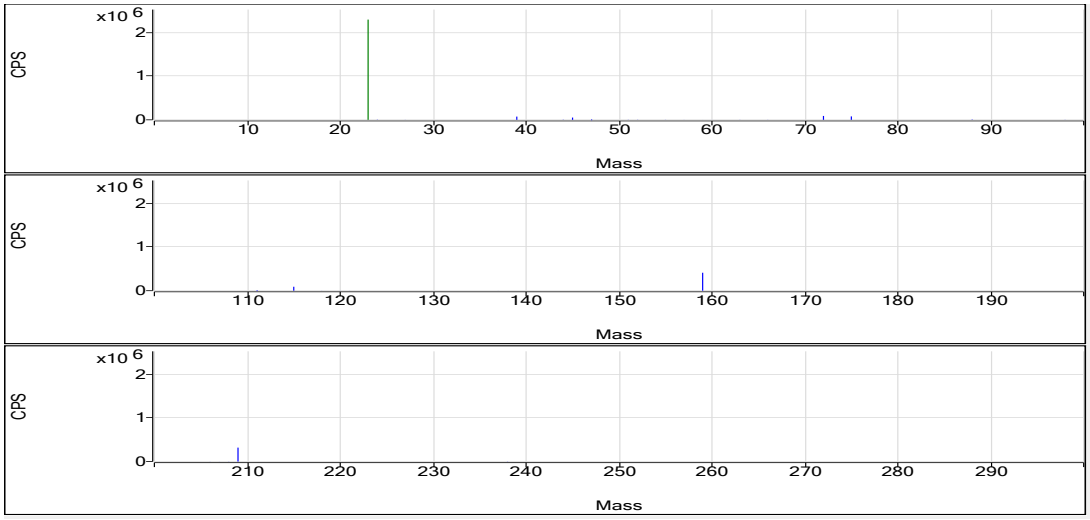


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.037	0	18.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.038	0	16.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.038	0	16.00	0.0007	3.404E-05
Se	78	2	H2	0.102	0.0001	14.00	0.0004	3.546E-05
Se	78	2	H2	0.137	0.0001	16.67	0.0004	3.546E-05
Se	78	2	H2	0.125	0.0001	16.00	0.0004	3.546E-05
Na	23	3	He	12340.194	44.4026	2291283.25	0.0036	0.4171
Na	23	3	He	12438.931	44.7545	2291482.00	0.0036	0.4171
Na	23	3	He	12235.89	44.0308	2284030.75	0.0036	0.4171
Mg	24	3	He	41.892	0.0802	4140.75	0.0018	0.004553
Mg	24	3	He	44.295	0.0846	4330.81	0.0018	0.004553
Mg	24	3	He	42.941	0.0821	4260.82	0.0018	0.004553
Al	27	3	He	35.01	0.0225	1160.09	0.0006	0.002085
Al	27	3	He	31.96	0.0207	1060.08	0.0006	0.002085
Al	27	3	He	33.154	0.0214	1110.09	0.0006	0.002085
K	39	3	He	875.051	1.4359	74097.89	0.0012	0.4112
K	39	3	He	873.263	1.4338	73414.34	0.0012	0.4112
K	39	3	He	857.067	1.4149	73394.53	0.0012	0.4112
Ca	44	3	He	1029.568	0.0729	3760.61	0.0001	0.003322
Ca	44	3	He	1243.349	0.0873	4470.83	0.0001	0.003322
Ca	44	3	He	1143.815	0.0806	4180.73	0.0001	0.003322
Ti	47	3	He	0.364	0.0002	10.00	0.0005	0
Ti	47	3	He	0.734	0.0004	20.00	0.0005	0
Ti	47	3	He	0.362	0.0002	10.00	0.0005	0
V	51	3	He	0.815	0.0491	2534.23	0.0213	0.0318
V	51	3	He	0.664	0.0459	2350.20	0.0213	0.0318
V	51	3	He	0.723	0.0472	2446.22	0.0213	0.0318
Cr	52	3	He	0.483	0.0572	2950.39	0.0294	0.04297
Cr	52	3	He	0.399	0.0547	2800.37	0.0294	0.04297
Cr	52	3	He	0.283	0.0513	2660.34	0.0294	0.04297
Mn	55	3	He	2.487	0.0337	1740.17	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2.446	0.0332	1700.18	0.0124	0.002801
Mn	55	3	He	2.706	0.0364	1890.20	0.0124	0.002801
Fe	57	3	He	27.404	0.0184	950.06	0.0006	0.002732
Fe	57	3	He	25.267	0.0172	880.06	0.0006	0.002732
Fe	57	3	He	24.54	0.0168	870.05	0.0006	0.002732
Co	59	3	He	0.054	0.0066	340.02	0.0549	0.003644
Co	59	3	He	0.012	0.0043	220.01	0.0549	0.003644
Co	59	3	He	0.014	0.0044	230.01	0.0549	0.003644
Ni	60	3	He	-0.754	0.0071	630.04	0.0093	0.01413
Ni	60	3	He	-0.859	0.0062	540.03	0.0093	0.01413
Ni	60	3	He	-1.064	0.0043	380.02	0.0093	0.01413
Cu	63	3	He	0.349	0.0189	1670.16	0.0274	0.009321
Cu	63	3	He	0.408	0.0205	1800.20	0.0274	0.009321
Cu	63	3	He	0.342	0.0187	1670.15	0.0274	0.009321
Zn	66	3	He	3.787	0.0175	1550.14	0.0031	0.005913
Zn	66	3	He	3.789	0.0175	1540.13	0.0031	0.005913
Zn	66	3	He	3.906	0.0179	1600.14	0.0031	0.005913
As	75	3	He	410.98	0.8827	78009.05	0.0021	0.0008698
As	75	3	He	413.075	0.8872	77880.42	0.0021	0.0008698
As	75	3	He	403.305	0.8663	77407.79	0.0021	0.0008698
Sr	88	3	He	9.421	0.0836	7612.28	0.0088	0.0006843
Sr	88	3	He	9.979	0.0885	7992.45	0.0088	0.0006843
Sr	88	3	He	9.978	0.0885	7872.51	0.0088	0.0006843
Mo	98	3	He	0.963	0.0229	2090.23	0.0219	0.001827
Mo	98	3	He	0.901	0.0216	1950.20	0.0219	0.001827
Mo	98	3	He	0.946	0.0226	2010.19	0.0219	0.001827
Ag	107	3	He	-0.011	0.0005	50.00	0.047	0.001064
Ag	107	3	He	-0.009	0.0007	60.00	0.047	0.001064
Ag	107	3	He	-0.006	0.0008	70.00	0.047	0.001064
Cd	111	3	He	0.001	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Sn	120	3	He	0.085	0.0161	1470.13	0.0154	0.01483
Sn	120	3	He	0.151	0.0172	1550.14	0.0154	0.01483
Sn	120	3	He	0.139	0.017	1510.14	0.0154	0.01483
Sb	121	3	He	0.929	0.0135	1230.10	0.0143	0.0002661
Sb	121	3	He	0.89	0.013	1170.09	0.0143	0.0002661
Sb	121	3	He	0.904	0.0132	1170.09	0.0143	0.0002661
Ba	137	3	He	1.3	0.0065	590.03	0.0048	0.0002665
Ba	137	3	He	1.195	0.006	540.03	0.0048	0.0002665
Ba	137	3	He	1.638	0.0081	720.04	0.0048	0.0002665
Tl	205	3	He	-0.09	0.0005	220.01	0.0246	0.002755
Tl	205	3	He	-0.094	0.0004	180.01	0.0246	0.002755
Tl	205	3	He	-0.09	0.0005	220.01	0.0246	0.002755
Pb	208	3	He	0.273	0.011	2120.25	0.0324	0.002158
Pb	208	3	He	0.258	0.0105	2400.34	0.0324	0.002158
Pb	208	3	He	0.282	0.0113	2610.36	0.0324	0.002158
U	238	3	He	0.211	0.0108	3450.57	0.0492	0.0004023
U	238	3	He	0.213	0.0109	3450.59	0.0492	0.0004023
U	238	3	He	0.206	0.0105	3370.57	0.0492	0.0004023
Sc	45	1	No Gas			2579157.31		
Sc	45	1	No Gas			2547787.46		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2537425.90		
Ge	72	1	No Gas			1249228.50		
Ge	72	1	No Gas			1236861.15		
Ge	72	1	No Gas			1237725.29		
Sc	45	2	H2			208939.47		
Sc	45	2	H2			206050.47		
Sc	45	2	H2			205341.52		
Ge	72	2	H2			174706.15		
Ge	72	2	H2			174776.95		
Ge	72	2	H2			177258.90		
In	115	2	H2			413580.54		
In	115	2	H2			413885.66		
In	115	2	H2			413137.14		
Sc	45	3	He			51602.46		
Sc	45	3	He			51201.11		
Sc	45	3	He			51873.46		
Ge	72	3	He			88373.08		
Ge	72	3	He			87780.27		
Ge	72	3	He			89359.09		
In	115	3	He			91088.84		
In	115	3	He			90333.72		
In	115	3	He			88984.01		
Tb	159	3	He			409086.36		
Tb	159	3	He			411554.56		
Tb	159	3	He			409510.93		
Bi	209	3	He			319214.68		
Bi	209	3	He			316799.45		
Bi	209	3	He			319606.23		

Quantitation Report

Data File Name	122SMPL.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H09B00.b
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Sample Name	410-137230-B-8-A @50
Sample Type	Sample
Comment	E7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

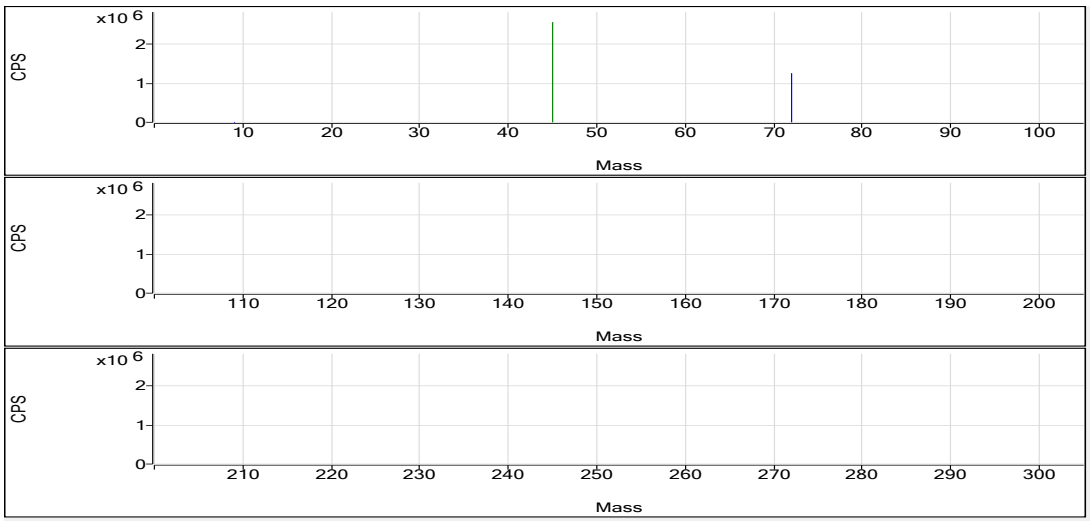
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.037	ppb	N/A	17.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.031	ppb	N/A	3.78	0.0000	Pulse	1.5000	3
Na	23	45	He	648.635	ppb	1.5	137750.85	2.7291	Pulse	0.1000	3
Mg	24	45	He	60.561	ppb	7.3	5754.66	0.1140	Pulse	0.1000	3
Al	27	45	He	-0.407	ppb	N/A	93.33	0.0018	Pulse	0.1000	3
K	39	45	He	158.176	ppb	6.5	30108.39	0.5964	Pulse	0.1000	3
Ca	44	45	He	1105.249	ppb	5.2	3937.33	0.0780	Pulse	0.1000	3
Ti	47	45	He	0.372	ppb	99.6	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	-0.320	ppb	N/A	1261.40	0.0250	Pulse	0.5000	3
Cr	52	45	He	0.093	ppb	47.9	2306.93	0.0457	Pulse	0.1000	3
Mn	55	45	He	5.905	ppb	5.6	3847.32	0.0762	Pulse	0.1000	3
Fe	57	45	He	25.119	ppb	19.3	863.39	0.0171	Pulse	0.1000	3
Co	59	45	He	-0.029	ppb	N/A	103.33	0.0020	Pulse	0.1000	3
Ni	60	72	He	-1.144	ppb	N/A	310.01	0.0035	Pulse	0.1000	3
Cu	63	72	He	-0.017	ppb	N/A	783.39	0.0089	Pulse	0.1000	3
Zn	66	72	He	2.552	ppb	22.9	1216.76	0.0137	Pulse	0.1000	3
As	75	72	He	251.687	ppb	1.2	47869.03	0.5409	Pulse	0.5000	3
Sr	88	115	He	6.929	ppb	2.7	5591.31	0.0617	Pulse	0.1000	3
Mo	98	115	He	0.049	ppb	46.5	263.35	0.0029	Pulse	0.1000	3
Ag	107	115	He	-0.011	ppb	N/A	50.00	0.0006	Pulse	0.1000	3
Cd	111	115	He	-0.010	ppb	N/A	0.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.025	ppb	431.0	1380.12	0.0152	Pulse	0.1000	3
Sb	121	115	He	0.074	ppb	45.6	120.00	0.0013	Pulse	0.1000	3
Ba	137	115	He	1.413	ppb	15.7	636.71	0.0070	Pulse	0.1000	3
Tl	205	159	He	-0.091	ppb	N/A	206.68	0.0005	Pulse	0.1000	3
Pb	208	159	He	0.022	ppb	18.2	1163.40	0.0029	Pulse	0.1000	3
U	238	209	He	0.021	ppb	27.8	460.02	0.0015	Pulse	0.1000	3

ISTD Table:

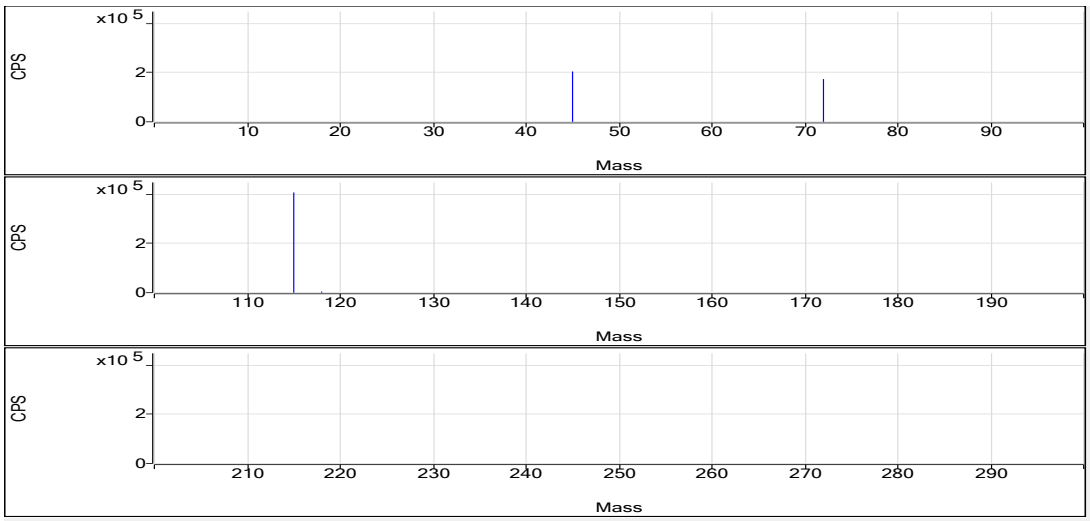
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2566971.63	1.1	98.4	Analog	0.1000	3
No Gas	Ge	72	1258807.84	0.7	97.7	Pulse	0.1000	3
H2	Sc	45	204191.17	0.7	99.1	Pulse	0.1000	3
H2	Ge	72	173566.05	1.5	106.6	Pulse	0.1000	3
H2	In	115	406818.55	0.4	100.8	Pulse	0.1000	3
He	Sc	45	50478.09	0.6	98.6	Pulse	0.1000	3
He	Ge	72	88499.87	0.7	108.1	Pulse	0.1000	3
He	In	115	90697.29	0.4	103.5	Pulse	0.1000	3
He	Tb	159	406875.32	0.6	101.3	Pulse	0.1000	3
He	Bi	209	315232.58	1.2	103.0	Pulse	0.1000	3

No Gas

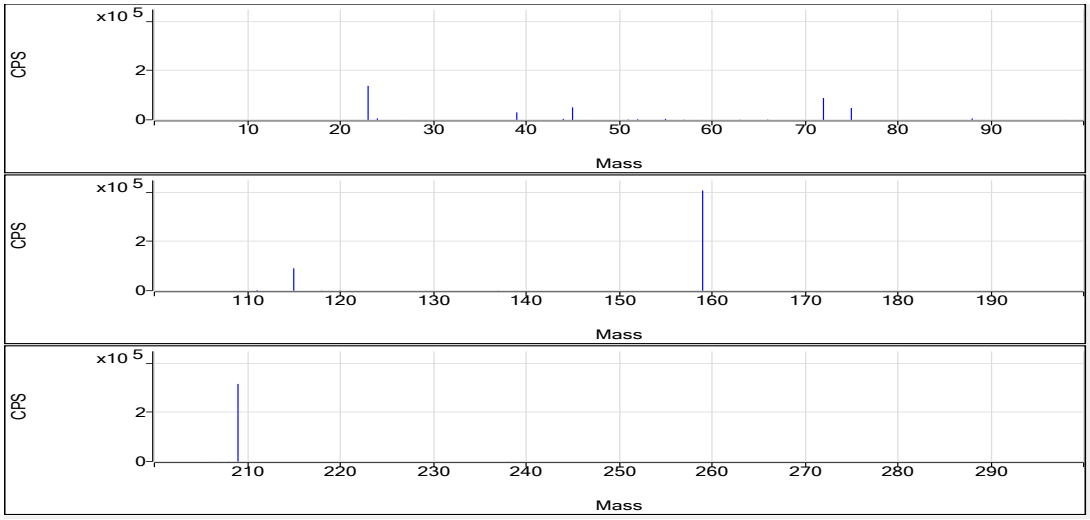


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.036	0	20.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.04	0	12.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.036	0	20.00	0.0007	3.404E-05
Se	78	2	H2	-0.01	0	5.33	0.0004	3.546E-05
Se	78	2	H2	-0.046	0	2.67	0.0004	3.546E-05
Se	78	2	H2	-0.037	0	3.33	0.0004	3.546E-05
Na	23	3	He	640.77	2.701	136830.05	0.0036	0.4171
Na	23	3	He	645.92	2.7194	137787.96	0.0036	0.4171
Na	23	3	He	659.217	2.7668	138634.55	0.0036	0.4171
Mg	24	3	He	60.534	0.1139	5771.30	0.0018	0.004553
Mg	24	3	He	65.002	0.122	6181.50	0.0018	0.004553
Mg	24	3	He	56.146	0.106	5311.17	0.0018	0.004553
Al	27	3	He	-0.529	0.0018	90.00	0.0006	0.002085
Al	27	3	He	0.487	0.0024	120.00	0.0006	0.002085
Al	27	3	He	-1.18	0.0014	70.00	0.0006	0.002085
K	39	3	He	157.13	0.5952	30151.79	0.0012	0.4112
K	39	3	He	169.018	0.6091	30863.33	0.0012	0.4112
K	39	3	He	148.381	0.585	29310.06	0.0012	0.4112
Ca	44	3	He	1169.507	0.0823	4170.74	0.0001	0.003322
Ca	44	3	He	1087.428	0.0768	3890.63	0.0001	0.003322
Ca	44	3	He	1058.812	0.0749	3750.61	0.0001	0.003322
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.742	0.0004	20.00	0.0005	0
Ti	47	3	He	0.375	0.0002	10.00	0.0005	0
V	51	3	He	-0.317	0.0251	1270.06	0.0213	0.0318
V	51	3	He	-0.356	0.0242	1228.06	0.0213	0.0318
V	51	3	He	-0.289	0.0257	1286.07	0.0213	0.0318
Cr	52	3	He	0.043	0.0442	2240.24	0.0294	0.04297
Cr	52	3	He	0.109	0.0462	2340.28	0.0294	0.04297
Cr	52	3	He	0.127	0.0467	2340.28	0.0294	0.04297
Mn	55	3	He	6.286	0.0809	4100.71	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	5.745	0.0742	3760.60	0.0124	0.002801
Mn	55	3	He	5.683	0.0735	3680.66	0.0124	0.002801
Fe	57	3	He	30.074	0.0199	1010.07	0.0006	0.002732
Fe	57	3	He	20.408	0.0144	730.04	0.0006	0.002732
Fe	57	3	He	24.876	0.017	850.05	0.0006	0.002732
Co	59	3	He	-0.03	0.002	100.00	0.0549	0.003644
Co	59	3	He	-0.023	0.0024	120.00	0.0549	0.003644
Co	59	3	He	-0.034	0.0018	90.00	0.0549	0.003644
Ni	60	3	He	-1.193	0.0031	270.01	0.0093	0.01413
Ni	60	3	He	-1.019	0.0047	410.02	0.0093	0.01413
Ni	60	3	He	-1.22	0.0028	250.01	0.0093	0.01413
Cu	63	3	He	-0.006	0.0092	810.06	0.0274	0.009321
Cu	63	3	He	0.004	0.0094	830.06	0.0274	0.009321
Cu	63	3	He	-0.049	0.008	710.04	0.0274	0.009321
Zn	66	3	He	3.227	0.0158	1400.12	0.0031	0.005913
Zn	66	3	He	2.224	0.0127	1120.08	0.0031	0.005913
Zn	66	3	He	2.205	0.0127	1130.09	0.0031	0.005913
As	75	3	He	251.731	0.541	47881.65	0.0021	0.0008698
As	75	3	He	254.656	0.5473	48106.61	0.0021	0.0008698
As	75	3	He	248.673	0.5345	47618.82	0.0021	0.0008698
Sr	88	3	He	6.898	0.0614	5551.29	0.0088	0.0006843
Sr	88	3	He	6.761	0.0602	5481.29	0.0088	0.0006843
Sr	88	3	He	7.127	0.0634	5741.34	0.0088	0.0006843
Mo	98	3	He	0.073	0.0034	310.02	0.0219	0.001827
Mo	98	3	He	0.047	0.0029	260.01	0.0219	0.001827
Mo	98	3	He	0.027	0.0024	220.01	0.0219	0.001827
Ag	107	3	He	-0.009	0.0007	60.00	0.047	0.001064
Ag	107	3	He	-0.013	0.0004	40.00	0.047	0.001064
Ag	107	3	He	-0.011	0.0006	50.00	0.047	0.001064
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Sn	120	3	He	-0.001	0.0148	1340.12	0.0154	0.01483
Sn	120	3	He	0.142	0.017	1550.14	0.0154	0.01483
Sn	120	3	He	-0.067	0.0138	1250.11	0.0154	0.01483
Sb	121	3	He	0.051	0.001	90.00	0.0143	0.0002661
Sb	121	3	He	0.058	0.0011	100.00	0.0143	0.0002661
Sb	121	3	He	0.113	0.0019	170.01	0.0143	0.0002661
Ba	137	3	He	1.263	0.0063	570.03	0.0048	0.0002665
Ba	137	3	He	1.667	0.0082	750.05	0.0048	0.0002665
Ba	137	3	He	1.308	0.0065	590.04	0.0048	0.0002665
Tl	205	3	He	-0.096	0.0004	160.01	0.0246	0.002755
Tl	205	3	He	-0.091	0.0005	210.01	0.0246	0.002755
Tl	205	3	He	-0.087	0.0006	250.01	0.0246	0.002755
Pb	208	3	He	0.026	0.003	660.04	0.0324	0.002158
Pb	208	3	He	0.018	0.0027	520.03	0.0324	0.002158
Pb	208	3	He	0.021	0.0028	690.04	0.0324	0.002158
U	238	3	He	0.015	0.0011	360.02	0.0492	0.0004023
U	238	3	He	0.026	0.0017	540.03	0.0492	0.0004023
U	238	3	He	0.023	0.0015	480.02	0.0492	0.0004023
Sc	45	1	No Gas			2577419.65		
Sc	45	1	No Gas			2535597.31		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2587897.93		
Ge	72	1	No Gas			1268024.82		
Ge	72	1	No Gas			1250071.93		
Ge	72	1	No Gas			1258326.78		
Sc	45	2	H2			203089.43		
Sc	45	2	H2			203596.54		
Sc	45	2	H2			205887.54		
Ge	72	2	H2			170516.13		
Ge	72	2	H2			175323.42		
Ge	72	2	H2			174858.61		
In	115	2	H2			405576.32		
In	115	2	H2			406302.49		
In	115	2	H2			408576.83		
Sc	45	3	He			50658.55		
Sc	45	3	He			50668.85		
Sc	45	3	He			50106.88		
Ge	72	3	He			88502.76		
Ge	72	3	He			87899.09		
Ge	72	3	He			89097.76		
In	115	3	He			90444.31		
In	115	3	He			91097.11		
In	115	3	He			90574.48		
Tb	159	3	He			407623.67		
Tb	159	3	He			408994.80		
Tb	159	3	He			404007.49		
Bi	209	3	He			317720.33		
Bi	209	3	He			317054.04		
Bi	209	3	He			310923.37		

Quantitation Report

Data File Name	123SMPL.d
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Sample Type	Sample
Comment	E7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

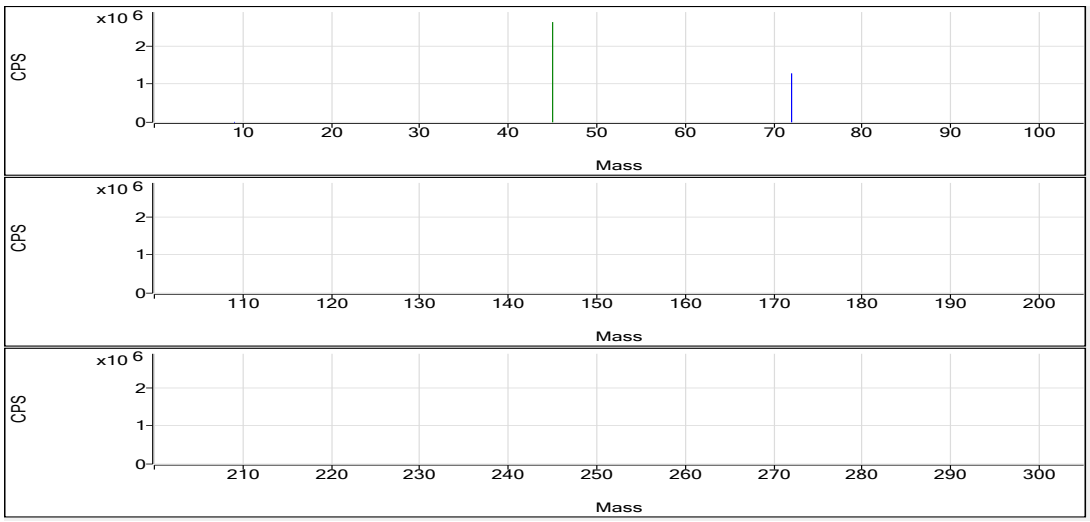
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.039	ppb	N/A	14.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.028	ppb	N/A	4.00	0.0000	Pulse	1.5000	3
Na	23	45	He	16620.887	ppb	0.5	3012952.77	59.6608	Analog	0.1000	3
Mg	24	45	He	275.874	ppb	1.2	25402.58	0.5030	Pulse	0.1000	3
Al	27	45	He	-0.519	ppb	N/A	90.00	0.0018	Pulse	0.1000	3
K	39	45	He	1528.694	ppb	0.7	111174.50	2.2014	Pulse	0.1000	3
Ca	44	45	He	3283.758	ppb	1.1	11371.51	0.2252	Pulse	0.1000	3
Ti	47	45	He	0.373	ppb	100.1	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	-0.247	ppb	N/A	1340.74	0.0266	Pulse	0.5000	3
Cr	52	45	He	0.222	ppb	56.9	2500.31	0.0495	Pulse	0.1000	3
Mn	55	45	He	64.889	ppb	1.5	40881.93	0.8095	Pulse	0.1000	3
Fe	57	45	He	178.363	ppb	4.4	5291.18	0.1048	Pulse	0.1000	3
Co	59	45	He	0.008	ppb	132.2	206.68	0.0041	Pulse	0.1000	3
Ni	60	72	He	-1.148	ppb	N/A	306.68	0.0035	Pulse	0.1000	3
Cu	63	72	He	-0.097	ppb	N/A	590.03	0.0067	Pulse	0.1000	3
Zn	66	72	He	1.134	ppb	44.0	830.05	0.0094	Pulse	0.1000	3
As	75	72	He	249.285	ppb	1.3	47402.78	0.5358	Pulse	0.5000	3
Sr	88	115	He	37.623	ppb	3.0	30233.04	0.3317	Pulse	0.1000	3
Mo	98	115	He	0.863	ppb	2.5	1893.53	0.0208	Pulse	0.1000	3
Ag	107	115	He	-0.006	ppb	N/A	73.33	0.0008	Pulse	0.1000	3
Cd	111	115	He	-0.010	ppb	N/A	0.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.091	ppb	32.8	1480.14	0.0162	Pulse	0.1000	3
Sb	121	115	He	0.158	ppb	8.1	230.01	0.0025	Pulse	0.1000	3
Ba	137	115	He	12.591	ppb	2.2	5507.98	0.0604	Pulse	0.1000	3
Tl	205	159	He	-0.096	ppb	N/A	166.68	0.0004	Pulse	0.1000	3
Pb	208	159	He	0.013	ppb	11.9	1060.06	0.0026	Pulse	0.1000	3
U	238	209	He	0.021	ppb	8.0	460.03	0.0014	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2623832.56	1.0	100.6	Analog	0.1000	3
No Gas	Ge	72	1281991.31	0.5	99.5	Pulse	0.1000	3
H2	Sc	45	204281.52	1.3	99.1	Pulse	0.1000	3
H2	Ge	72	174490.99	0.6	107.2	Pulse	0.1000	3
H2	In	115	410842.18	1.0	101.8	Pulse	0.1000	3
He	Sc	45	50502.03	0.4	98.6	Pulse	0.1000	3
He	Ge	72	88486.93	1.4	108.1	Pulse	0.1000	3
He	In	115	91150.78	1.0	104.0	Pulse	0.1000	3
He	Tb	159	409209.15	0.6	101.9	Pulse	0.1000	3
He	Bi	209	319697.35	0.7	104.4	Pulse	0.1000	3

No Gas



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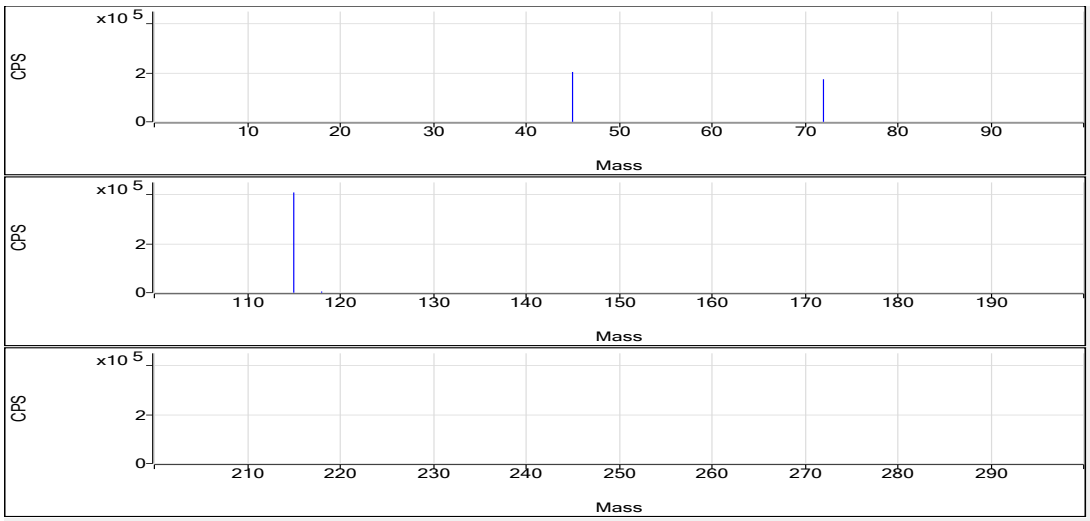
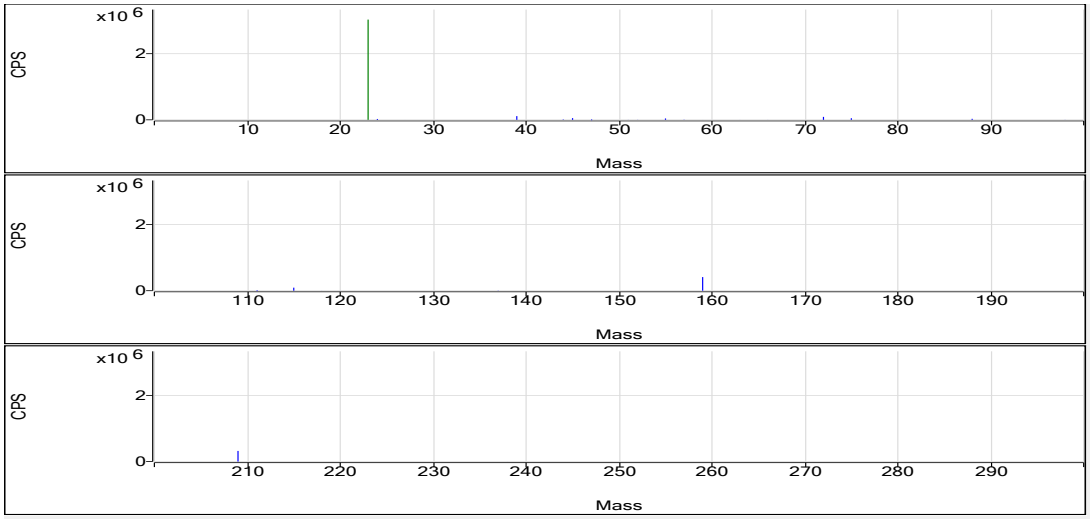


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.037	0	18.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.038	0	16.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.041	0	10.00	0.0007	3.404E-05
Se	78	2	H2	-0.064	0	1.33	0.0004	3.546E-05
Se	78	2	H2	-0.02	0	4.67	0.0004	3.546E-05
Se	78	2	H2	-0.002	0	6.00	0.0004	3.546E-05
Na	23	3	He	16527.278	59.3271	3008452.46	0.0036	0.4171
Na	23	3	He	16650.939	59.7679	3014601.21	0.0036	0.4171
Na	23	3	He	16684.445	59.8873	3015804.64	0.0036	0.4171
Mg	24	3	He	277.033	0.5051	25613.12	0.0018	0.004553
Mg	24	3	He	272.047	0.4961	25021.73	0.0018	0.004553
Mg	24	3	He	278.543	0.5078	25572.88	0.0018	0.004553
Al	27	3	He	-0.87	0.0016	80.00	0.0006	0.002085
Al	27	3	He	1.186	0.0028	140.01	0.0006	0.002085
Al	27	3	He	-1.874	0.001	50.00	0.0006	0.002085
K	39	3	He	1525.164	2.1973	111422.59	0.0012	0.4112
K	39	3	He	1519.566	2.1907	110496.23	0.0012	0.4112
K	39	3	He	1541.352	2.2162	111604.69	0.0012	0.4112
Ca	44	3	He	3326.691	0.2281	11565.02	0.0001	0.003322
Ca	44	3	He	3265.511	0.2239	11294.72	0.0001	0.003322
Ca	44	3	He	3259.072	0.2235	11254.79	0.0001	0.003322
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.373	0.0002	10.00	0.0005	0
Ti	47	3	He	0.747	0.0004	20.00	0.0005	0
V	51	3	He	-0.329	0.0248	1258.06	0.0213	0.0318
V	51	3	He	-0.188	0.0278	1402.08	0.0213	0.0318
V	51	3	He	-0.224	0.027	1362.07	0.0213	0.0318
Cr	52	3	He	0.296	0.0517	2620.32	0.0294	0.04297
Cr	52	3	He	0.076	0.0452	2280.28	0.0294	0.04297
Cr	52	3	He	0.295	0.0516	2600.32	0.0294	0.04297
Mn	55	3	He	64.49	0.8045	40798.40	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	66.021	0.8236	41540.48	0.0124	0.002801
Mn	55	3	He	64.157	0.8004	40306.92	0.0124	0.002801
Fe	57	3	He	169.319	0.0996	5051.06	0.0006	0.002732
Fe	57	3	He	183.428	0.1077	5431.23	0.0006	0.002732
Fe	57	3	He	182.341	0.1071	5391.25	0.0006	0.002732
Co	59	3	He	0.02	0.0047	240.01	0.0549	0.003644
Co	59	3	He	-0.001	0.0036	180.01	0.0549	0.003644
Co	59	3	He	0.006	0.004	200.01	0.0549	0.003644
Ni	60	3	He	-1.205	0.0029	260.01	0.0093	0.01413
Ni	60	3	He	-1.186	0.0031	280.01	0.0093	0.01413
Ni	60	3	He	-1.053	0.0044	380.02	0.0093	0.01413
Cu	63	3	He	-0.101	0.0066	580.03	0.0274	0.009321
Cu	63	3	He	-0.112	0.0062	560.03	0.0274	0.009321
Cu	63	3	He	-0.077	0.0072	630.04	0.0274	0.009321
Zn	66	3	He	1.278	0.0098	870.05	0.0031	0.005913
Zn	66	3	He	0.579	0.0077	690.05	0.0031	0.005913
Zn	66	3	He	1.545	0.0107	930.06	0.0031	0.005913
As	75	3	He	250.198	0.5377	47558.62	0.0021	0.0008698
As	75	3	He	245.57	0.5278	47359.91	0.0021	0.0008698
As	75	3	He	252.085	0.5418	47289.82	0.0021	0.0008698
Sr	88	3	He	38.608	0.3404	30664.06	0.0088	0.0006843
Sr	88	3	He	36.382	0.3208	29351.37	0.0088	0.0006843
Sr	88	3	He	37.878	0.334	30683.69	0.0088	0.0006843
Mo	98	3	He	0.873	0.021	1890.22	0.0219	0.001827
Mo	98	3	He	0.838	0.0202	1850.18	0.0219	0.001827
Mo	98	3	He	0.879	0.0211	1940.20	0.0219	0.001827
Ag	107	3	He	-0.006	0.0008	70.00	0.047	0.001064
Ag	107	3	He	-0.009	0.0007	60.00	0.047	0.001064
Ag	107	3	He	-0.002	0.001	90.00	0.047	0.001064
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Sn	120	3	He	0.118	0.0167	1500.15	0.0154	0.01483
Sn	120	3	He	0.059	0.0157	1440.13	0.0154	0.01483
Sn	120	3	He	0.097	0.0163	1500.13	0.0154	0.01483
Sb	121	3	He	0.153	0.0024	220.01	0.0143	0.0002661
Sb	121	3	He	0.173	0.0027	250.01	0.0143	0.0002661
Sb	121	3	He	0.149	0.0024	220.01	0.0143	0.0002661
Ba	137	3	He	12.886	0.0618	5571.34	0.0048	0.0002665
Ba	137	3	He	12.55	0.0602	5511.31	0.0048	0.0002665
Ba	137	3	He	12.337	0.0592	5441.30	0.0048	0.0002665
Tl	205	3	He	-0.096	0.0004	160.01	0.0246	0.002755
Tl	205	3	He	-0.097	0.0004	150.01	0.0246	0.002755
Tl	205	3	He	-0.093	0.0005	190.01	0.0246	0.002755
Pb	208	3	He	0.014	0.0026	550.03	0.0324	0.002158
Pb	208	3	He	0.015	0.0026	600.04	0.0324	0.002158
Pb	208	3	He	0.012	0.0025	590.04	0.0324	0.002158
U	238	3	He	0.021	0.0015	470.02	0.0492	0.0004023
U	238	3	He	0.022	0.0015	480.03	0.0492	0.0004023
U	238	3	He	0.019	0.0013	430.03	0.0492	0.0004023
Sc	45	1	No Gas			2616103.55		
Sc	45	1	No Gas			2653425.90		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2601968.24		
Ge	72	1	No Gas			1275879.51		
Ge	72	1	No Gas			1289317.95		
Ge	72	1	No Gas			1280776.47		
Sc	45	2	H2			207067.44		
Sc	45	2	H2			203923.22		
Sc	45	2	H2			201853.90		
Ge	72	2	H2			175536.81		
Ge	72	2	H2			174342.77		
Ge	72	2	H2			173593.38		
In	115	2	H2			414350.97		
In	115	2	H2			411633.47		
In	115	2	H2			406542.10		
Sc	45	3	He			50709.59		
Sc	45	3	He			50438.49		
Sc	45	3	He			50358.00		
Ge	72	3	He			88443.41		
Ge	72	3	He			89731.07		
Ge	72	3	He			87286.32		
In	115	3	He			90091.26		
In	115	3	He			91500.29		
In	115	3	He			91883.24		
Tb	159	3	He			411320.11		
Tb	159	3	He			409827.73		
Tb	159	3	He			406479.60		
Bi	209	3	He			322066.87		
Bi	209	3	He			317978.47		
Bi	209	3	He			319046.71		

Quantitation Report

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Acq Time	8/9/2023 5:57:21 PM
Sample Name	410-137128-J-13-A @10
Sample Type	Sample
Comment	E7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

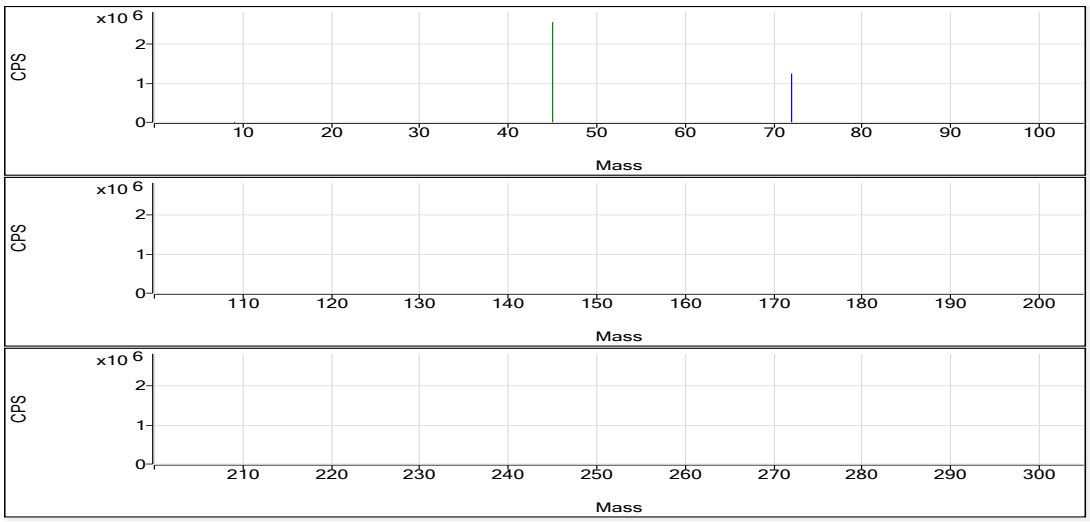
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.037	ppb	N/A	17.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.043	ppb	N/A	2.89	0.0000	Pulse	1.5000	3
Na	23	45	He	1530.576	ppb	1.2	301482.47	5.8727	Pulse	0.1000	3
Mg	24	45	He	10087.118	ppb	0.7	935871.68	18.2299	Pulse	0.1000	3
Al	27	45	He	-0.789	ppb	N/A	83.34	0.0016	Pulse	0.1000	3
K	39	45	He	3341.016	ppb	1.1	221967.06	4.3238	Pulse	0.1000	3
Ca	44	45	He	43158.251	ppb	0.7	149851.85	2.9190	Pulse	0.1000	3
Ti	47	45	He	0.122	ppb	173.2	3.33	0.0001	Pulse	0.1000	3
V	51	45	He	-0.353	ppb	N/A	1247.40	0.0243	Pulse	0.5000	3
Cr	52	45	He	0.040	ppb	189.6	2266.91	0.0442	Pulse	0.1000	3
Mn	55	45	He	333.973	ppb	0.9	213298.93	4.1548	Pulse	0.1000	3
Fe	57	45	He	5579.303	ppb	0.4	164019.97	3.1949	Pulse	0.1000	3
Co	59	45	He	0.990	ppb	6.3	2977.07	0.0580	Pulse	0.1000	3
Ni	60	72	He	-0.760	ppb	N/A	616.70	0.0071	Pulse	0.1000	3
Cu	63	72	He	0.045	ppb	34.7	920.06	0.0106	Pulse	0.1000	3
Zn	66	72	He	4.025	ppb	4.8	1593.48	0.0183	Pulse	0.1000	3
As	75	72	He	0.080	ppb	98.4	90.67	0.0010	Pulse	0.5000	3
Sr	88	115	He	108.297	ppb	1.0	86463.59	0.9536	Pulse	0.1000	3
Mo	98	115	He	-0.050	ppb	N/A	66.67	0.0007	Pulse	0.1000	3
Ag	107	115	He	-0.011	ppb	N/A	50.00	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.014	ppb	94.7	12.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.076	ppb	166.1	1450.14	0.0160	Pulse	0.1000	3
Sb	121	115	He	0.007	ppb	275.2	33.33	0.0004	Pulse	0.1000	3
Ba	137	115	He	2.052	ppb	6.1	913.40	0.0101	Pulse	0.1000	3
Tl	205	159	He	-0.092	ppb	N/A	200.01	0.0005	Pulse	0.1000	3
Pb	208	159	He	0.026	ppb	21.5	1223.40	0.0030	Pulse	0.1000	3
U	238	209	He	0.037	ppb	24.3	723.38	0.0022	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2570010.49	0.7	98.5	Analog	0.1000	3
No Gas	Ge	72	1247817.85	0.5	96.8	Pulse	0.1000	3
H2	Sc	45	205358.49	0.8	99.7	Pulse	0.1000	3
H2	Ge	72	172250.57	1.2	105.8	Pulse	0.1000	3
H2	In	115	409470.12	0.7	101.4	Pulse	0.1000	3
He	Sc	45	51338.10	0.5	100.3	Pulse	0.1000	3
He	Ge	72	87199.05	0.8	106.5	Pulse	0.1000	3
He	In	115	90680.89	1.6	103.5	Pulse	0.1000	3
He	Tb	159	408910.72	0.2	101.8	Pulse	0.1000	3
He	Bi	209	322058.49	0.4	105.2	Pulse	0.1000	3

No Gas



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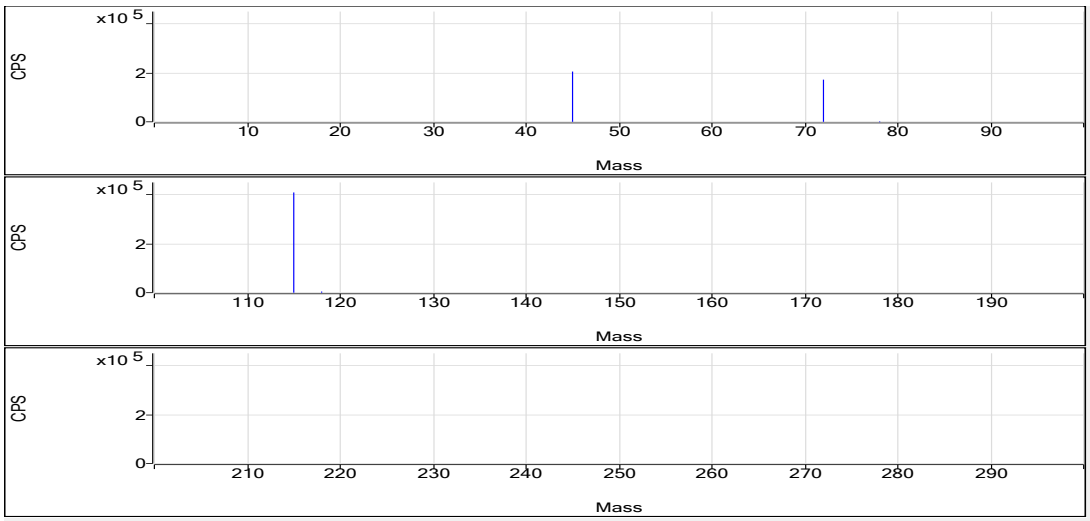
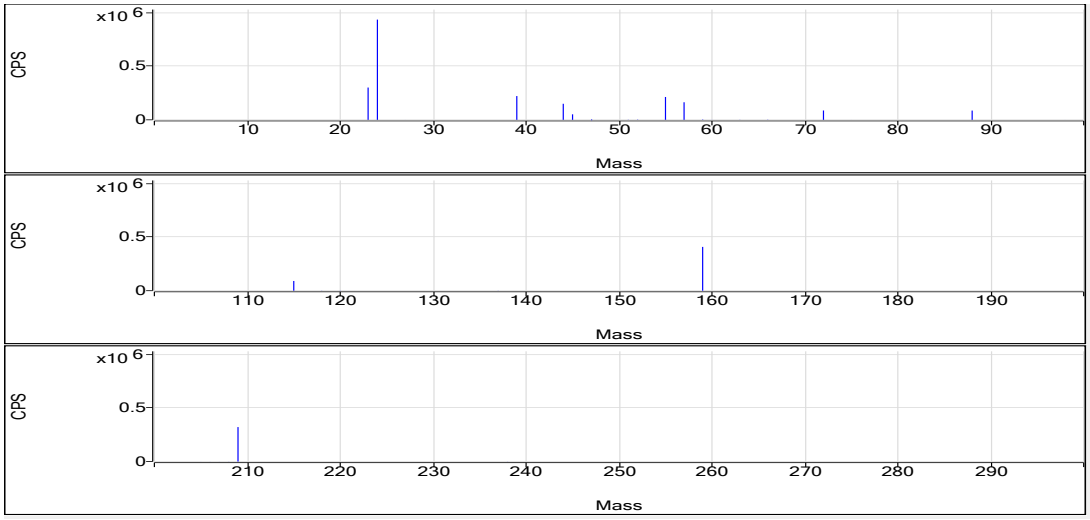


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.037	0	18.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.041	0	10.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.034	0	24.00	0.0007	3.404E-05
Se	78	2	H2	-0.045	0	2.67	0.0004	3.546E-05
Se	78	2	H2	-0.037	0	3.33	0.0004	3.546E-05
Se	78	2	H2	-0.046	0	2.67	0.0004	3.546E-05
Na	23	3	He	1510.736	5.8019	299045.54	0.0036	0.4171
Na	23	3	He	1544.857	5.9236	302579.19	0.0036	0.4171
Na	23	3	He	1536.135	5.8925	302822.69	0.0036	0.4171
Mg	24	3	He	10077.212	18.212	938686.16	0.0018	0.004553
Mg	24	3	He	10159.29	18.3603	937852.64	0.0018	0.004553
Mg	24	3	He	10024.851	18.1174	931076.24	0.0018	0.004553
Al	27	3	He	-1.58	0.0012	60.00	0.0006	0.002085
Al	27	3	He	0.455	0.0023	120.01	0.0006	0.002085
Al	27	3	He	-1.24	0.0014	70.00	0.0006	0.002085
K	39	3	He	3308.704	4.2859	220906.62	0.0012	0.4112
K	39	3	He	3383.062	4.373	223375.78	0.0012	0.4112
K	39	3	He	3331.283	4.3124	221618.79	0.0012	0.4112
Ca	44	3	He	43076.606	2.9135	150166.26	0.0001	0.003322
Ca	44	3	He	43497.171	2.9419	150272.40	0.0001	0.003322
Ca	44	3	He	42900.977	2.9016	149116.89	0.0001	0.003322
Ti	47	3	He	0.365	0.0002	10.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	-0.346	0.0244	1260.06	0.0213	0.0318
V	51	3	He	-0.31	0.0252	1288.07	0.0213	0.0318
V	51	3	He	-0.403	0.0232	1194.06	0.0213	0.0318
Cr	52	3	He	0.063	0.0448	2310.26	0.0294	0.04297
Cr	52	3	He	0.103	0.046	2350.25	0.0294	0.04297
Cr	52	3	He	-0.045	0.0416	2140.23	0.0294	0.04297
Mn	55	3	He	336.064	4.1808	215487.93	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	335.187	4.1699	213000.43	0.0124	0.002801
Mn	55	3	He	330.667	4.1137	211408.43	0.0124	0.002801
Fe	57	3	He	5562.733	3.1855	164185.60	0.0006	0.002732
Fe	57	3	He	5602.631	3.2083	163880.88	0.0006	0.002732
Fe	57	3	He	5572.545	3.1911	163993.44	0.0006	0.002732
Co	59	3	He	1.054	0.0615	3170.45	0.0549	0.003644
Co	59	3	He	0.986	0.0578	2950.39	0.0549	0.003644
Co	59	3	He	0.93	0.0547	2810.36	0.0549	0.003644
Ni	60	3	He	-0.857	0.0062	540.03	0.0093	0.01413
Ni	60	3	He	-0.712	0.0075	660.04	0.0093	0.01413
Ni	60	3	He	-0.711	0.0075	650.04	0.0093	0.01413
Cu	63	3	He	0.027	0.0101	880.05	0.0274	0.009321
Cu	63	3	He	0.055	0.0108	950.06	0.0274	0.009321
Cu	63	3	He	0.053	0.0108	930.06	0.0274	0.009321
Zn	66	3	He	4.18	0.0187	1640.15	0.0031	0.005913
Zn	66	3	He	4.088	0.0185	1620.16	0.0031	0.005913
Zn	66	3	He	3.807	0.0176	1520.12	0.0031	0.005913
As	75	3	He	-0.001	0.0009	76.00	0.0021	0.0008698
As	75	3	He	0.083	0.001	92.00	0.0021	0.0008698
As	75	3	He	0.156	0.0012	104.00	0.0021	0.0008698
Sr	88	3	He	107.808	0.9493	87358.96	0.0088	0.0006843
Sr	88	3	He	109.533	0.9645	85939.84	0.0088	0.0006843
Sr	88	3	He	107.551	0.947	86091.96	0.0088	0.0006843
Mo	98	3	He	-0.058	0.0005	50.00	0.0219	0.001827
Mo	98	3	He	-0.058	0.0006	50.00	0.0219	0.001827
Mo	98	3	He	-0.033	0.0011	100.00	0.0219	0.001827
Ag	107	3	He	-0.009	0.0007	60.00	0.047	0.001064
Ag	107	3	He	-0.011	0.0006	50.00	0.047	0.001064
Ag	107	3	He	-0.013	0.0004	40.00	0.047	0.001064
Cd	111	3	He	0.001	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	0.027	0.0002	18.00	0.0053	6.086E-05
Cd	111	3	He	0.013	0.0001	12.00	0.0053	6.086E-05
Sn	120	3	He	0.06	0.0158	1450.14	0.0154	0.01483
Sn	120	3	He	0.21	0.0181	1610.16	0.0154	0.01483
Sn	120	3	He	-0.042	0.0142	1290.11	0.0154	0.01483
Sb	121	3	He	0.027	0.0007	60.00	0.0143	0.0002661
Sb	121	3	He	-0.011	0.0001	10.00	0.0143	0.0002661
Sb	121	3	He	0.004	0.0003	30.00	0.0143	0.0002661
Ba	137	3	He	2.173	0.0106	980.07	0.0048	0.0002665
Ba	137	3	He	2.058	0.0101	900.06	0.0048	0.0002665
Ba	137	3	He	1.924	0.0095	860.06	0.0048	0.0002665
Tl	205	3	He	-0.092	0.0005	200.01	0.0246	0.002755
Tl	205	3	He	-0.091	0.0005	210.01	0.0246	0.002755
Tl	205	3	He	-0.093	0.0005	190.01	0.0246	0.002755
Pb	208	3	He	0.023	0.0029	630.04	0.0324	0.002158
Pb	208	3	He	0.032	0.0032	740.04	0.0324	0.002158
Pb	208	3	He	0.022	0.0029	590.04	0.0324	0.002158
U	238	3	He	0.027	0.0017	560.03	0.0492	0.0004023
U	238	3	He	0.044	0.0025	820.07	0.0492	0.0004023
U	238	3	He	0.042	0.0025	790.05	0.0492	0.0004023
Sc	45	1	No Gas			2584072.31		
Sc	45	1	No Gas			2548811.84		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2577147.31		
Ge	72	1	No Gas			1242800.61		
Ge	72	1	No Gas			1253949.43		
Ge	72	1	No Gas			1246703.50		
Sc	45	2	H2			203386.87		
Sc	45	2	H2			206283.26		
Sc	45	2	H2			206405.33		
Ge	72	2	H2			169908.81		
Ge	72	2	H2			172822.65		
Ge	72	2	H2			174020.25		
In	115	2	H2			409697.92		
In	115	2	H2			412129.21		
In	115	2	H2			406583.24		
Sc	45	3	He			51542.30		
Sc	45	3	He			51080.59		
Sc	45	3	He			51391.41		
Ge	72	3	He			87487.16		
Ge	72	3	He			87748.85		
Ge	72	3	He			86361.14		
In	115	3	He			92034.68		
In	115	3	He			89114.99		
In	115	3	He			90915.93		
Tb	159	3	He			408622.14		
Tb	159	3	He			409754.41		
Tb	159	3	He			408355.62		
Bi	209	3	He			323427.46		
Bi	209	3	He			321962.69		
Bi	209	3	He			320785.33		

Quantitation Report

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Sample Type	Sample
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

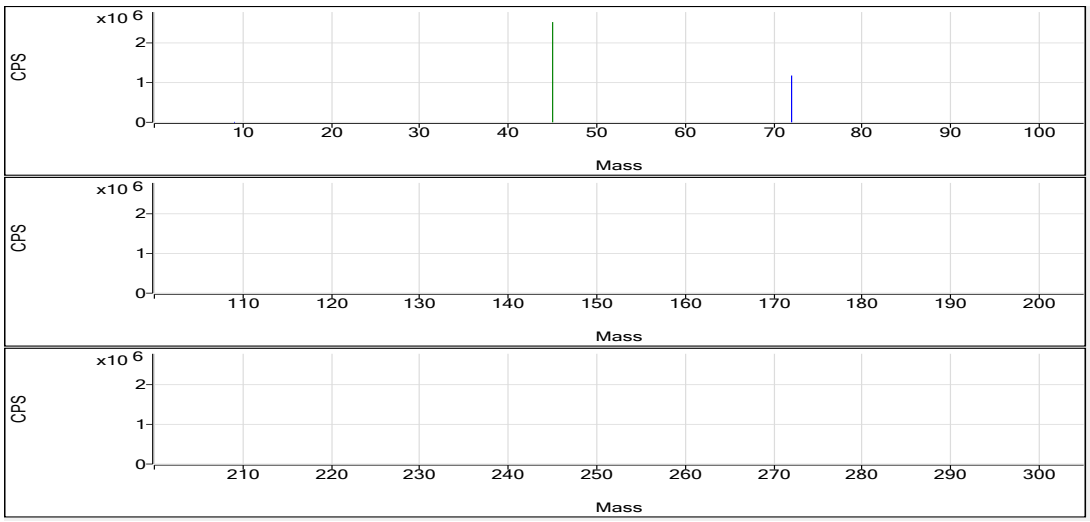
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.038	ppb	N/A	16.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.003	ppb	1307.1	6.00	0.0000	Pulse	1.5000	3
Na	23	45	He	-12.145	ppb	N/A	18842.68	0.3738	Pulse	0.1000	3
Mg	24	45	He	1.249	ppb	59.5	343.35	0.0068	Pulse	0.1000	3
Al	27	45	He	-2.099	ppb	N/A	43.33	0.0009	Pulse	0.1000	3
K	39	45	He	3.096	ppb	237.7	20908.85	0.4148	Pulse	0.1000	3
Ca	44	45	He	2.666	ppb	340.7	176.68	0.0035	Pulse	0.1000	3
Ti	47	45	He	0.867	ppb	89.4	23.33	0.0005	Pulse	0.1000	3
V	51	45	He	-0.235	ppb	N/A	1351.41	0.0268	Pulse	0.5000	3
Cr	52	45	He	-0.166	ppb	N/A	1920.20	0.0381	Pulse	0.1000	3
Mn	55	45	He	0.104	ppb	82.7	206.68	0.0041	Pulse	0.1000	3
Fe	57	45	He	1.581	ppb	65.7	183.34	0.0036	Pulse	0.1000	3
Co	59	45	He	-0.029	ppb	N/A	103.34	0.0021	Pulse	0.1000	3
Ni	60	72	He	-1.261	ppb	N/A	203.34	0.0024	Pulse	0.1000	3
Cu	63	72	He	-0.126	ppb	N/A	490.02	0.0059	Pulse	0.1000	3
Zn	66	72	He	-0.005	ppb	N/A	493.36	0.0059	Pulse	0.1000	3
As	75	72	He	0.125	ppb	48.9	95.33	0.0011	Pulse	0.5000	3
Sr	88	115	He	0.062	ppb	73.2	110.01	0.0012	Pulse	0.1000	3
Mo	98	115	He	-0.054	ppb	N/A	56.67	0.0006	Pulse	0.1000	3
Ag	107	115	He	-0.014	ppb	N/A	36.67	0.0004	Pulse	0.1000	3
Cd	111	115	He	-0.007	ppb	N/A	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.078	ppb	93.9	1436.79	0.0160	Pulse	0.1000	3
Sb	121	115	He	0.002	ppb	1025.8	26.67	0.0003	Pulse	0.1000	3
Ba	137	115	He	-0.033	ppb	N/A	10.00	0.0001	Pulse	0.1000	3
Tl	205	159	He	-0.095	ppb	N/A	170.01	0.0004	Pulse	0.1000	3
Pb	208	159	He	-0.019	ppb	N/A	623.36	0.0015	Pulse	0.1000	3
U	238	209	He	-0.006	ppb	N/A	36.67	0.0001	Pulse	0.1000	3

ISTD Table:

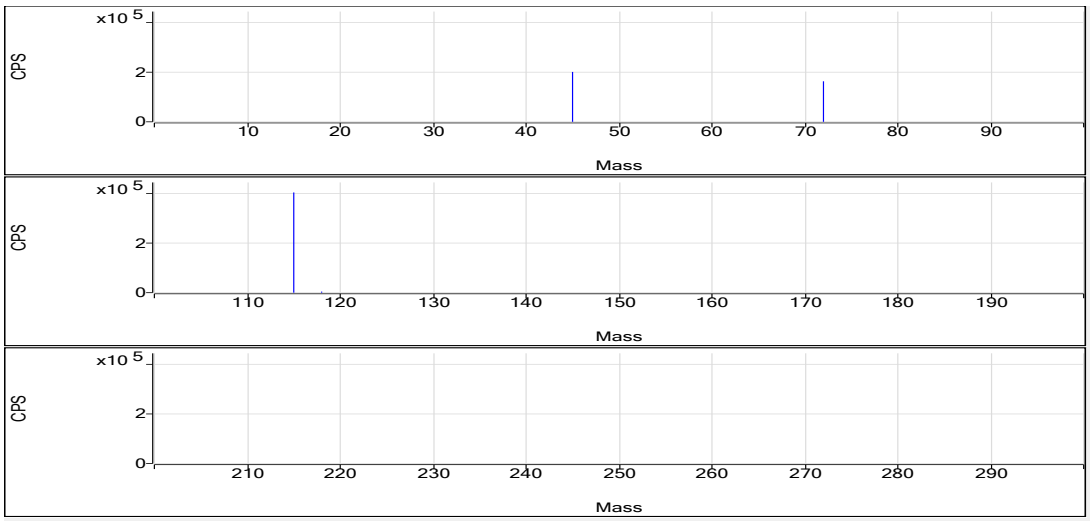
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2519564.39	1.5	96.6	Analog	0.1000	3
No Gas	Ge	72	1175548.94	0.6	91.2	Pulse	0.1000	3
H2	Sc	45	201495.93	1.1	97.8	Pulse	0.1000	3
H2	Ge	72	163655.38	0.9	100.6	Pulse	0.1000	3
H2	In	115	404791.26	0.6	100.3	Pulse	0.1000	3
He	Sc	45	50407.95	0.8	98.5	Pulse	0.1000	3
He	Ge	72	83983.24	3.6	102.6	Pulse	0.1000	3
He	In	115	89600.98	1.5	102.2	Pulse	0.1000	3
He	Tb	159	402369.67	0.3	100.2	Pulse	0.1000	3
He	Bi	209	312826.01	0.8	102.2	Pulse	0.1000	3

No Gas

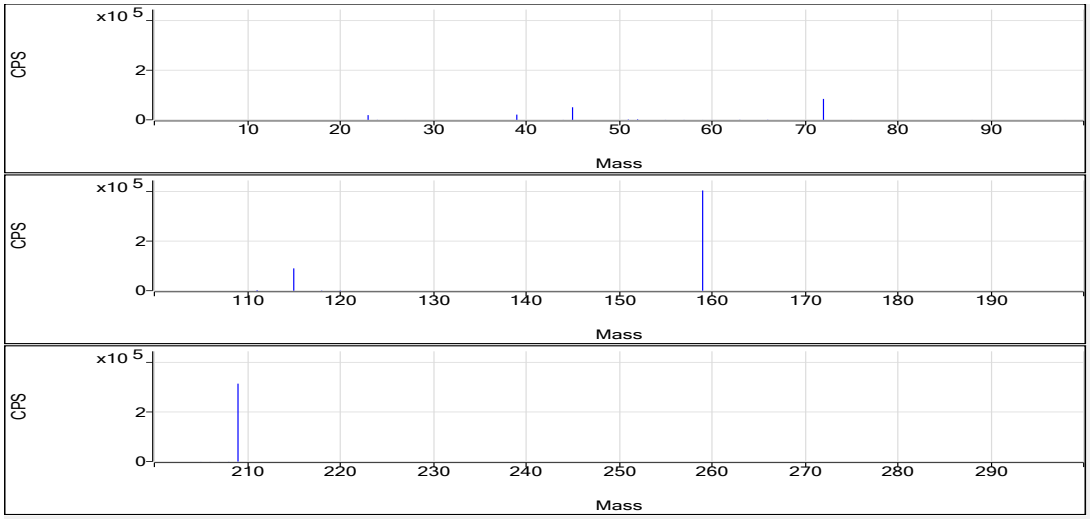


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.041	0	10.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.038	0	16.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.034	0	24.00	0.0007	3.404E-05
Se	78	2	H2	0.003	0	6.00	0.0004	3.546E-05
Se	78	2	H2	0.04	0.0001	8.67	0.0004	3.546E-05
Se	78	2	H2	-0.035	0	3.33	0.0004	3.546E-05
Na	23	3	He	-10.643	0.3791	19103.12	0.0036	0.4171
Na	23	3	He	-14.832	0.3642	18211.84	0.0036	0.4171
Na	23	3	He	-10.96	0.378	19213.07	0.0036	0.4171
Mg	24	3	He	2.094	0.0083	420.02	0.0018	0.004553
Mg	24	3	He	0.69	0.0058	290.02	0.0018	0.004553
Mg	24	3	He	0.965	0.0063	320.02	0.0018	0.004553
Al	27	3	He	-3.238	0.0002	10.00	0.0006	0.002085
Al	27	3	He	-0.832	0.0016	80.00	0.0006	0.002085
Al	27	3	He	-2.227	0.0008	40.00	0.0006	0.002085
K	39	3	He	10.968	0.424	21366.05	0.0012	0.4112
K	39	3	He	1.933	0.4134	20675.20	0.0012	0.4112
K	39	3	He	-3.611	0.407	20685.30	0.0012	0.4112
Ca	44	3	He	6.648	0.0038	190.01	0.0001	0.003322
Ca	44	3	He	-7.727	0.0028	140.01	0.0001	0.003322
Ca	44	3	He	9.076	0.0039	200.01	0.0001	0.003322
Ti	47	3	He	1.493	0.0008	40.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	1.11	0.0006	30.00	0.0005	0
V	51	3	He	-0.284	0.0258	1298.07	0.0213	0.0318
V	51	3	He	-0.198	0.0276	1380.08	0.0213	0.0318
V	51	3	He	-0.222	0.0271	1376.07	0.0213	0.0318
Cr	52	3	He	-0.213	0.0367	1850.19	0.0294	0.04297
Cr	52	3	He	-0.128	0.0392	1960.21	0.0294	0.04297
Cr	52	3	He	-0.156	0.0384	1950.21	0.0294	0.04297
Mn	55	3	He	0.014	0.003	150.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.113	0.0042	210.01	0.0124	0.002801
Mn	55	3	He	0.186	0.0051	260.01	0.0124	0.002801
Fe	57	3	He	0.429	0.003	150.01	0.0006	0.002732
Fe	57	3	He	1.866	0.0038	190.01	0.0006	0.002732
Fe	57	3	He	2.447	0.0041	210.01	0.0006	0.002732
Co	59	3	He	-0.019	0.0026	130.01	0.0549	0.003644
Co	59	3	He	-0.034	0.0018	90.00	0.0549	0.003644
Co	59	3	He	-0.034	0.0018	90.00	0.0549	0.003644
Ni	60	3	He	-1.295	0.0021	180.01	0.0093	0.01413
Ni	60	3	He	-1.268	0.0024	190.01	0.0093	0.01413
Ni	60	3	He	-1.221	0.0028	240.01	0.0093	0.01413
Cu	63	3	He	-0.144	0.0054	460.02	0.0274	0.009321
Cu	63	3	He	-0.091	0.0068	550.03	0.0274	0.009321
Cu	63	3	He	-0.144	0.0054	460.02	0.0274	0.009321
Zn	66	3	He	-0.252	0.0051	440.02	0.0031	0.005913
Zn	66	3	He	0.34	0.007	560.03	0.0031	0.005913
Zn	66	3	He	-0.104	0.0056	480.03	0.0031	0.005913
As	75	3	He	0.063	0.001	86.00	0.0021	0.0008698
As	75	3	He	0.185	0.0013	102.00	0.0021	0.0008698
As	75	3	He	0.127	0.0011	98.00	0.0021	0.0008698
Sr	88	3	He	0.087	0.0015	130.01	0.0088	0.0006843
Sr	88	3	He	0.09	0.0015	130.01	0.0088	0.0006843
Sr	88	3	He	0.01	0.0008	70.00	0.0088	0.0006843
Mo	98	3	He	-0.053	0.0007	60.00	0.0219	0.001827
Mo	98	3	He	-0.052	0.0007	60.00	0.0219	0.001827
Mo	98	3	He	-0.058	0.0005	50.00	0.0219	0.001827
Ag	107	3	He	-0.013	0.0004	40.00	0.047	0.001064
Ag	107	3	He	-0.018	0.0002	20.00	0.047	0.001064
Ag	107	3	He	-0.011	0.0005	50.00	0.047	0.001064
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Sn	120	3	He	0.146	0.0171	1530.14	0.0154	0.01483
Sn	120	3	He	0.001	0.0148	1310.11	0.0154	0.01483
Sn	120	3	He	0.086	0.0162	1470.13	0.0154	0.01483
Sb	121	3	He	-0.019	0	0.00	0.0143	0.0002661
Sb	121	3	He	0.029	0.0007	60.00	0.0143	0.0002661
Sb	121	3	He	-0.003	0.0002	20.00	0.0143	0.0002661
Ba	137	3	He	-0.009	0.0002	20.00	0.0048	0.0002665
Ba	137	3	He	-0.056	0	0.00	0.0048	0.0002665
Ba	137	3	He	-0.033	0.0001	10.00	0.0048	0.0002665
Tl	205	3	He	-0.09	0.0005	220.01	0.0246	0.002755
Tl	205	3	He	-0.097	0.0004	150.01	0.0246	0.002755
Tl	205	3	He	-0.098	0.0003	140.01	0.0246	0.002755
Pb	208	3	He	-0.015	0.0017	310.02	0.0324	0.002158
Pb	208	3	He	-0.024	0.0014	300.01	0.0324	0.002158
Pb	208	3	He	-0.017	0.0016	380.02	0.0324	0.002158
U	238	3	He	-0.008	0	10.00	0.0492	0.0004023
U	238	3	He	-0.004	0.0002	60.00	0.0492	0.0004023
U	238	3	He	-0.006	0.0001	40.00	0.0492	0.0004023
Sc	45	1	No Gas			2547061.21		
Sc	45	1	No Gas			2475827.15		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2535804.81		
Ge	72	1	No Gas			1179401.23		
Ge	72	1	No Gas			1167891.39		
Ge	72	1	No Gas			1179354.20		
Sc	45	2	H2			202857.13		
Sc	45	2	H2			199034.31		
Sc	45	2	H2			202596.36		
Ge	72	2	H2			162213.95		
Ge	72	2	H2			163597.08		
Ge	72	2	H2			165155.10		
In	115	2	H2			406457.88		
In	115	2	H2			406118.04		
In	115	2	H2			401797.85		
Sc	45	3	He			50388.03		
Sc	45	3	He			50006.62		
Sc	45	3	He			50829.21		
Ge	72	3	He			85605.99		
Ge	72	3	He			80517.31		
Ge	72	3	He			85826.43		
In	115	3	He			89579.27		
In	115	3	He			88259.96		
In	115	3	He			90986.97		
Tb	159	3	He			403691.56		
Tb	159	3	He			401702.34		
Tb	159	3	He			401715.11		
Bi	209	3	He			313059.35		
Bi	209	3	He			310126.11		
Bi	209	3	He			315292.57		

Quantitation Report

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Sample Type	CCV
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

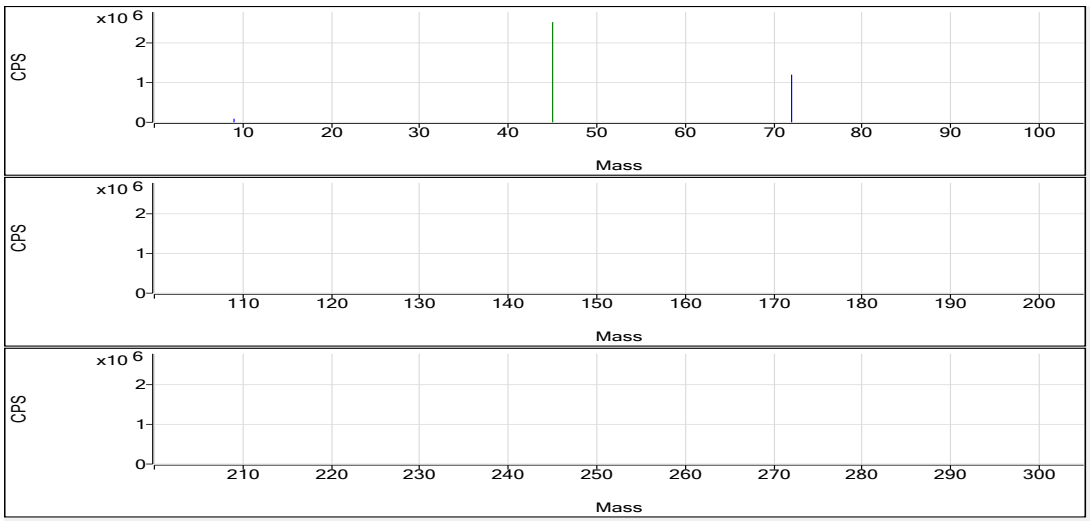
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	49.340	ppb	0.9	91416.85	0.0360	Pulse	0.5000	3
Se	78	72	H2	50.196	ppb	0.9	3689.37	0.0220	Pulse	1.5000	3
Na	23	45	He	4799.029	ppb	1.3	889926.42	17.5228	Pulse	0.1000	3
Mg	24	45	He	5027.329	ppb	0.6	461596.02	9.0879	Pulse	0.1000	3
Al	27	45	He	5000.759	ppb	0.5	148082.22	2.9155	Pulse	0.1000	3
K	39	45	He	5068.482	ppb	0.8	322347.21	6.3468	Pulse	0.1000	3
Ca	44	45	He	5083.121	ppb	3.2	17607.87	0.3467	Pulse	0.1000	3
Ti	47	45	He	5052.840	ppb	1.1	136486.42	2.6874	Pulse	0.1000	3
V	51	45	He	509.747	ppb	1.3	551765.90	10.8644	Pulse	0.5000	3
Cr	52	45	He	482.922	ppb	1.7	723471.79	14.2458	Pulse	0.1000	3
Mn	55	45	He	507.695	ppb	1.1	320699.84	6.3145	Pulse	0.1000	3
Fe	57	45	He	5010.952	ppb	1.9	145740.18	2.8698	Pulse	0.1000	3
Co	59	45	He	491.346	ppb	1.1	1369855.66	26.9724	Pulse	0.1000	3
Ni	60	72	He	488.667	ppb	0.1	382092.43	4.5504	Pulse	0.1000	3
Cu	63	72	He	468.130	ppb	0.2	1078864.57	12.8483	Pulse	0.1000	3
Zn	66	72	He	494.739	ppb	0.6	128050.82	1.5250	Pulse	0.1000	3
As	75	72	He	508.432	ppb	0.5	91680.47	1.0918	Pulse	0.5000	3
Sr	88	115	He	51.516	ppb	1.9	39552.65	0.4540	Pulse	0.1000	3
Mo	98	115	He	50.499	ppb	1.5	96704.99	1.1100	Pulse	0.1000	3
Ag	107	115	He	50.610	ppb	0.9	207499.64	2.3817	Pulse	0.1000	3
Cd	111	115	He	51.753	ppb	1.9	24016.64	0.2757	Pulse	0.5000	3
Sn	120	115	He	53.228	ppb	0.5	72802.05	0.8356	Pulse	0.1000	3
Sb	121	115	He	52.637	ppb	1.6	65374.80	0.7504	Pulse	0.1000	3
Ba	137	115	He	523.364	ppb	0.7	217918.90	2.5013	Pulse	0.1000	3
Tl	205	159	He	50.472	ppb	0.7	505958.77	1.2424	Pulse	0.1000	3
Pb	208	159	He	50.945	ppb	0.4	673186.90	1.6530	Pulse	0.1000	3
U	238	209	He	50.413	ppb	0.6	775052.36	2.4831	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2541039.60	1.6	97.4	Analog	0.1000	3
No Gas	Ge	72	1208062.61	1.0	93.7	Pulse	0.1000	3
H2	Sc	45	204098.15	0.7	99.0	Pulse	0.1000	3
H2	Ge	72	167428.40	1.3	102.9	Pulse	0.1000	3
H2	In	115	403864.50	1.1	100.0	Pulse	0.1000	3
He	Sc	45	50792.76	1.4	99.2	Pulse	0.1000	3
He	Ge	72	83969.87	0.1	102.6	Pulse	0.1000	3
He	In	115	87122.52	0.3	99.4	Pulse	0.1000	3
He	Tb	159	407254.21	0.6	101.4	Pulse	0.1000	3
He	Bi	209	312129.84	1.1	102.0	Pulse	0.1000	3

No Gas



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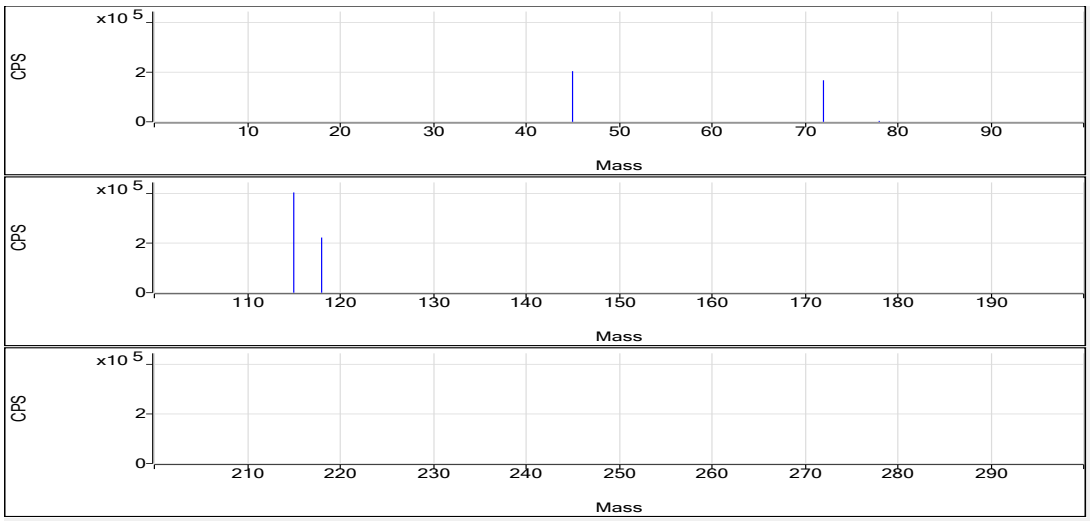
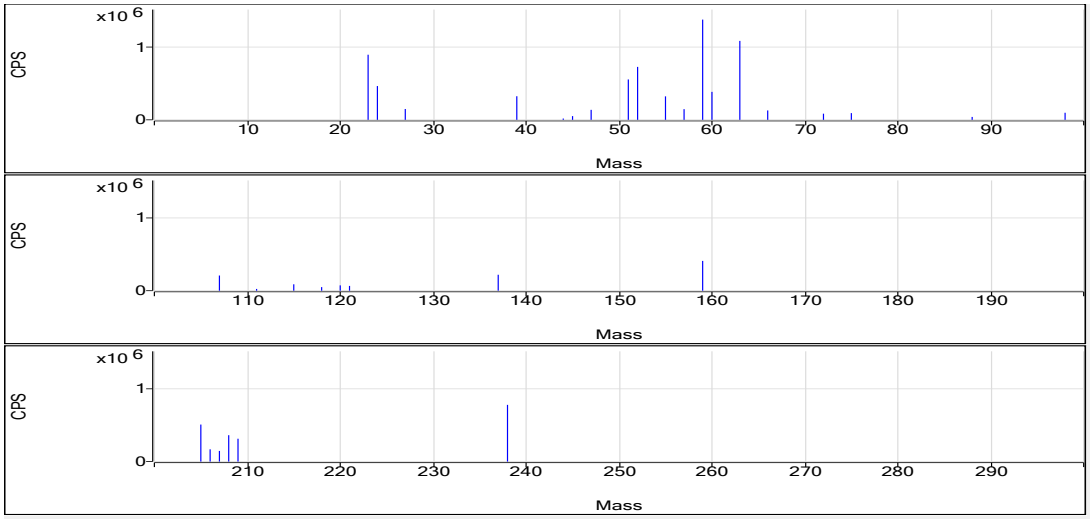


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	49.689	0.0362	91117.01	0.0007	3.404E-05
Be	9	1	No Gas	48.862	0.0356	92171.19	0.0007	3.404E-05
Be	9	1	No Gas	49.468	0.0361	90962.34	0.0007	3.404E-05
Se	78	2	H2	50.49	0.0222	3691.82	0.0004	3.546E-05
Se	78	2	H2	50.394	0.0221	3667.14	0.0004	3.546E-05
Se	78	2	H2	49.702	0.0218	3709.15	0.0004	3.546E-05
Na	23	3	He	4796.936	17.5153	890819.83	0.0036	0.4171
Na	23	3	He	4738.924	17.3085	890898.35	0.0036	0.4171
Na	23	3	He	4861.227	17.7445	888061.08	0.0036	0.4171
Mg	24	3	He	5059.967	9.1468	465204.02	0.0018	0.004553
Mg	24	3	He	5005.808	9.049	465766.44	0.0018	0.004553
Mg	24	3	He	5016.212	9.0678	453817.61	0.0018	0.004553
Al	27	3	He	5023.288	2.9286	148948.15	0.0006	0.002085
Al	27	3	He	4973.919	2.8999	149260.45	0.0006	0.002085
Al	27	3	He	5005.069	2.918	146038.05	0.0006	0.002085
K	39	3	He	5070.643	6.3493	322921.71	0.0012	0.4112
K	39	3	He	5027.072	6.2983	324181.99	0.0012	0.4112
K	39	3	He	5107.731	6.3927	319937.94	0.0012	0.4112
Ca	44	3	He	4927.86	0.3362	17100.70	0.0001	0.003322
Ca	44	3	He	5073.068	0.346	17811.45	0.0001	0.003322
Ca	44	3	He	5248.435	0.3579	17911.46	0.0001	0.003322
Ti	47	3	He	5056.139	2.6892	136769.50	0.0005	0
Ti	47	3	He	4993.401	2.6558	136698.13	0.0005	0
Ti	47	3	He	5108.979	2.7173	135991.62	0.0005	0
V	51	3	He	508.924	10.8469	551666.94	0.0213	0.0318
V	51	3	He	503.734	10.7366	552630.25	0.0213	0.0318
V	51	3	He	516.582	11.0096	551000.50	0.0213	0.0318
Cr	52	3	He	479.411	14.1425	719280.30	0.0294	0.04297
Cr	52	3	He	477.03	14.0725	724333.27	0.0294	0.04297
Cr	52	3	He	492.326	14.5223	726801.79	0.0294	0.04297
Mn	55	3	He	506.258	6.2967	320245.11	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	502.921	6.2552	321964.45	0.0124	0.002801
Mn	55	3	He	513.907	6.3918	319889.96	0.0124	0.002801
Fe	57	3	He	4944.905	2.832	144032.15	0.0006	0.002732
Fe	57	3	He	4966.041	2.8441	146388.15	0.0006	0.002732
Fe	57	3	He	5121.91	2.9332	146800.24	0.0006	0.002732
Co	59	3	He	491.502	26.9809	1372235.92	0.0549	0.003644
Co	59	3	He	485.705	26.6628	1372375.29	0.0549	0.003644
Co	59	3	He	496.83	27.2734	1364955.76	0.0549	0.003644
Ni	60	3	He	488.606	4.5498	381482.38	0.0093	0.01413
Ni	60	3	He	487.998	4.5441	381920.31	0.0093	0.01413
Ni	60	3	He	489.396	4.5571	382874.60	0.0093	0.01413
Cu	63	3	He	469.281	12.8798	1079926.00	0.0274	0.009321
Cu	63	3	He	467.242	12.8239	1077805.30	0.0274	0.009321
Cu	63	3	He	467.867	12.841	1078862.41	0.0274	0.009321
Zn	66	3	He	498.12	1.5353	128733.17	0.0031	0.005913
Zn	66	3	He	494.149	1.5232	128016.04	0.0031	0.005913
Zn	66	3	He	491.95	1.5164	127403.24	0.0031	0.005913
As	75	3	He	511.276	1.0979	92057.54	0.0021	0.0008698
As	75	3	He	507.857	1.0906	91661.05	0.0021	0.0008698
As	75	3	He	506.162	1.087	91322.82	0.0021	0.0008698
Sr	88	3	He	50.482	0.4449	38603.62	0.0088	0.0006843
Sr	88	3	He	51.703	0.4556	39756.38	0.0088	0.0006843
Sr	88	3	He	52.364	0.4614	40297.95	0.0088	0.0006843
Mo	98	3	He	51.243	1.1264	97739.80	0.0219	0.001827
Mo	98	3	He	50.489	1.1098	96842.08	0.0219	0.001827
Mo	98	3	He	49.763	1.0939	95533.08	0.0219	0.001827
Ag	107	3	He	51.069	2.4033	208549.74	0.047	0.001064
Ag	107	3	He	50.612	2.3818	207836.77	0.047	0.001064
Ag	107	3	He	50.149	2.3601	206112.42	0.047	0.001064
Cd	111	3	He	52.163	0.2779	24110.83	0.0053	6.086E-05
Cd	111	3	He	52.477	0.2795	24391.29	0.0053	6.086E-05
Cd	111	3	He	50.619	0.2696	23547.81	0.0053	6.086E-05
Sn	120	3	He	53.504	0.8399	72881.73	0.0154	0.01483
Sn	120	3	He	53.068	0.8332	72701.76	0.0154	0.01483
Sn	120	3	He	53.112	0.8338	72822.65	0.0154	0.01483
Sb	121	3	He	51.98	0.741	64299.95	0.0143	0.0002661
Sb	121	3	He	52.354	0.7463	65123.38	0.0143	0.0002661
Sb	121	3	He	53.577	0.7638	66701.07	0.0143	0.0002661
Ba	137	3	He	526.797	2.5177	218475.97	0.0048	0.0002665
Ba	137	3	He	519.298	2.4819	216567.36	0.0048	0.0002665
Ba	137	3	He	523.998	2.5043	218713.38	0.0048	0.0002665
Tl	205	3	He	50.471	1.2423	509470.58	0.0246	0.002755
Tl	205	3	He	50.808	1.2506	508534.21	0.0246	0.002755
Tl	205	3	He	50.136	1.2341	499871.52	0.0246	0.002755
Pb	208	3	He	50.936	1.6527	364383.12	0.0324	0.002158
Pb	208	3	He	50.746	1.6466	356912.65	0.0324	0.002158
Pb	208	3	He	51.153	1.6597	359809.60	0.0324	0.002158
U	238	3	He	50.279	2.4765	781542.96	0.0492	0.0004023
U	238	3	He	50.765	2.5005	779742.33	0.0492	0.0004023
U	238	3	He	50.194	2.4723	763871.79	0.0492	0.0004023
Sc	45	1	No Gas			2514692.62		
Sc	45	1	No Gas			2586795.59		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2521630.59		
Ge	72	1	No Gas			1204439.20		
Ge	72	1	No Gas			1221494.67		
Ge	72	1	No Gas			1198253.97		
Sc	45	2	H2			202473.00		
Sc	45	2	H2			204528.49		
Sc	45	2	H2			205292.95		
Ge	72	2	H2			166551.44		
Ge	72	2	H2			165751.58		
Ge	72	2	H2			169982.17		
In	115	2	H2			405440.50		
In	115	2	H2			407394.64		
In	115	2	H2			398758.35		
Sc	45	3	He			50859.48		
Sc	45	3	He			51471.62		
Sc	45	3	He			50047.19		
Ge	72	3	He			83846.24		
Ge	72	3	He			84046.64		
Ge	72	3	He			84016.74		
In	115	3	He			87163.10		
In	115	3	He			87646.40		
In	115	3	He			87706.80		
Tb	159	3	He			410092.85		
Tb	159	3	He			406627.34		
Tb	159	3	He			405042.45		
Bi	209	3	He			315581.91		
Bi	209	3	He			311838.76		
Bi	209	3	He			308968.86		

Quantitation Report

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Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

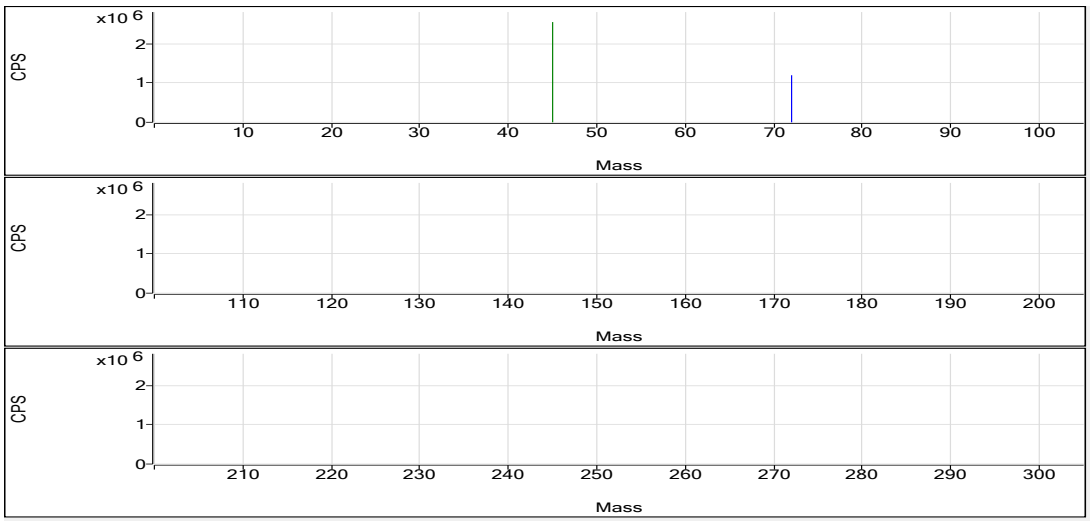
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.024	ppb	N/A	42.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.041	ppb	39.2	8.66	0.0001	Pulse	1.5000	3
Na	23	45	He	-9.280	ppb	N/A	19343.22	0.3840	Pulse	0.1000	3
Mg	24	45	He	0.558	ppb	75.7	280.01	0.0056	Pulse	0.1000	3
Al	27	45	He	-1.303	ppb	N/A	66.67	0.0013	Pulse	0.1000	3
K	39	45	He	-10.317	ppb	N/A	20107.75	0.3991	Pulse	0.1000	3
Ca	44	45	He	1.606	ppb	1250.2	173.34	0.0034	Pulse	0.1000	3
Ti	47	45	He	1.994	ppb	48.0	53.33	0.0011	Pulse	0.1000	3
V	51	45	He	-0.260	ppb	N/A	1322.74	0.0263	Pulse	0.5000	3
Cr	52	45	He	-0.008	ppb	N/A	2153.57	0.0427	Pulse	0.1000	3
Mn	55	45	He	0.143	ppb	70.5	230.01	0.0046	Pulse	0.1000	3
Fe	57	45	He	1.016	ppb	135.1	166.68	0.0033	Pulse	0.1000	3
Co	59	45	He	0.059	ppb	52.6	346.68	0.0069	Pulse	0.1000	3
Ni	60	72	He	-1.040	ppb	N/A	370.02	0.0045	Pulse	0.1000	3
Cu	63	72	He	0.032	ppb	138.9	843.39	0.0102	Pulse	0.1000	3
Zn	66	72	He	0.160	ppb	240.9	530.03	0.0064	Pulse	0.1000	3
As	75	72	He	0.242	ppb	50.9	114.67	0.0014	Pulse	0.5000	3
Sr	88	115	He	0.038	ppb	68.8	90.00	0.0010	Pulse	0.1000	3
Mo	98	115	He	-0.016	ppb	N/A	130.01	0.0015	Pulse	0.1000	3
Ag	107	115	He	-0.003	ppb	N/A	80.00	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.008	ppb	126.7	9.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.113	ppb	58.0	1463.47	0.0166	Pulse	0.1000	3
Sb	121	115	He	0.037	ppb	37.7	70.00	0.0008	Pulse	0.1000	3
Ba	137	115	He	0.102	ppb	13.9	66.67	0.0008	Pulse	0.1000	3
Tl	205	159	He	-0.031	ppb	N/A	806.72	0.0020	Pulse	0.1000	3
Pb	208	159	He	-0.010	ppb	N/A	740.04	0.0018	Pulse	0.1000	3
U	238	209	He	0.042	ppb	11.2	773.39	0.0025	Pulse	0.1000	3

ISTD Table:

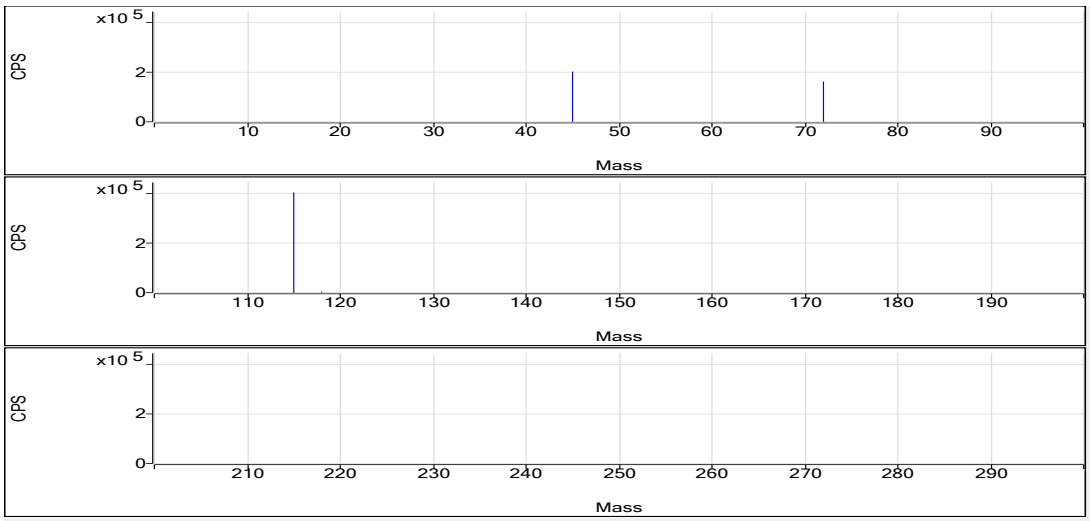
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2543330.69	1.3	97.5	Analog	0.1000	3
No Gas	Ge	72	1194071.08	0.7	92.6	Pulse	0.1000	3
H2	Sc	45	201982.68	0.2	98.0	Pulse	0.1000	3
H2	Ge	72	162252.16	0.2	99.7	Pulse	0.1000	3
H2	In	115	402999.47	0.7	99.8	Pulse	0.1000	3
He	Sc	45	50381.36	1.1	98.4	Pulse	0.1000	3
He	Ge	72	82648.69	1.4	101.0	Pulse	0.1000	3
He	In	115	88293.03	0.4	100.7	Pulse	0.1000	3
He	Tb	159	403119.07	1.2	100.4	Pulse	0.1000	3
He	Bi	209	310581.76	0.4	101.5	Pulse	0.1000	3

No Gas

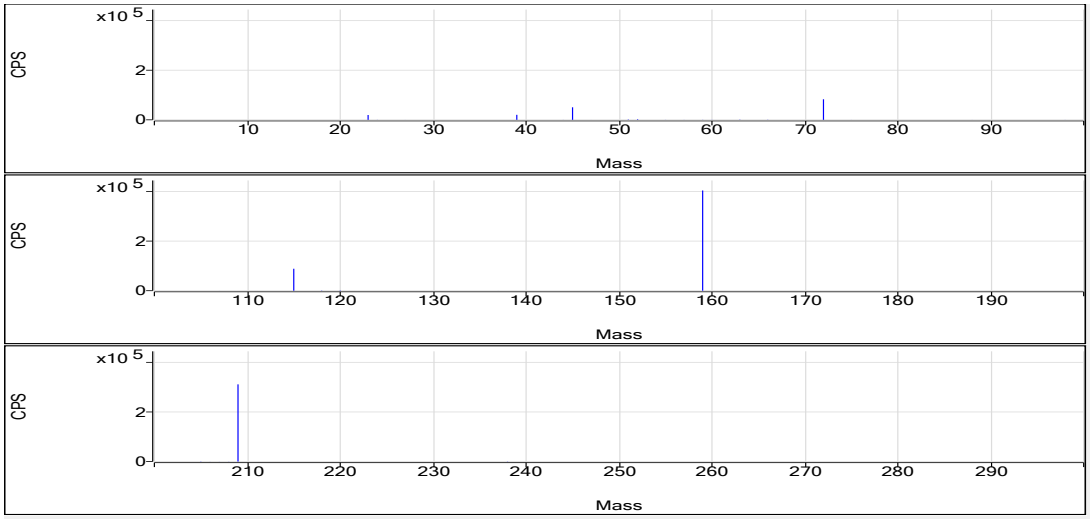


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.015	0	58.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.031	0	30.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.026	0	38.00	0.0007	3.404E-05
Se	78	2	H2	0.05	0.0001	9.33	0.0004	3.546E-05
Se	78	2	H2	0.05	0.0001	9.33	0.0004	3.546E-05
Se	78	2	H2	0.022	0	7.33	0.0004	3.546E-05
Na	23	3	He	-12.827	0.3713	18692.29	0.0036	0.4171
Na	23	3	He	-5.781	0.3965	19753.86	0.0036	0.4171
Na	23	3	He	-9.234	0.3841	19583.52	0.0036	0.4171
Mg	24	3	He	0.229	0.005	250.01	0.0018	0.004553
Mg	24	3	He	1.035	0.0064	320.01	0.0018	0.004553
Mg	24	3	He	0.412	0.0053	270.01	0.0018	0.004553
Al	27	3	He	-2.555	0.0006	30.00	0.0006	0.002085
Al	27	3	He	-0.133	0.002	100.00	0.0006	0.002085
Al	27	3	He	-1.221	0.0014	70.00	0.0006	0.002085
K	39	3	He	-6.166	0.404	20334.68	0.0012	0.4112
K	39	3	He	-13.439	0.3954	19703.83	0.0012	0.4112
K	39	3	He	-11.347	0.3979	20284.74	0.0012	0.4112
Ca	44	3	He	3.763	0.0036	180.01	0.0001	0.003322
Ca	44	3	He	-19.463	0.002	100.00	0.0001	0.003322
Ca	44	3	He	20.518	0.0047	240.01	0.0001	0.003322
Ti	47	3	He	1.121	0.0006	30.00	0.0005	0
Ti	47	3	He	3.019	0.0016	80.00	0.0005	0
Ti	47	3	He	1.844	0.001	50.00	0.0005	0
V	51	3	He	-0.294	0.0255	1286.07	0.0213	0.0318
V	51	3	He	-0.138	0.0289	1438.08	0.0213	0.0318
V	51	3	He	-0.348	0.0244	1244.06	0.0213	0.0318
Cr	52	3	He	-0.056	0.0413	2080.22	0.0294	0.04297
Cr	52	3	He	-0.014	0.0426	2120.23	0.0294	0.04297
Cr	52	3	He	0.046	0.0443	2260.25	0.0294	0.04297
Mn	55	3	He	0.19	0.0052	260.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.211	0.0054	270.01	0.0124	0.002801
Mn	55	3	He	0.027	0.0031	160.01	0.0124	0.002801
Fe	57	3	He	0.087	0.0028	140.01	0.0006	0.002732
Fe	57	3	He	2.592	0.0042	210.01	0.0006	0.002732
Fe	57	3	He	0.368	0.0029	150.01	0.0006	0.002732
Co	59	3	He	0.024	0.005	250.01	0.0549	0.003644
Co	59	3	He	0.084	0.0082	410.02	0.0549	0.003644
Co	59	3	He	0.069	0.0075	380.02	0.0549	0.003644
Ni	60	3	He	-1.072	0.0042	340.02	0.0093	0.01413
Ni	60	3	He	-1.059	0.0043	360.02	0.0093	0.01413
Ni	60	3	He	-0.988	0.005	410.02	0.0093	0.01413
Cu	63	3	He	0.001	0.0093	760.04	0.0274	0.009321
Cu	63	3	He	0.013	0.0097	810.06	0.0274	0.009321
Cu	63	3	He	0.083	0.0116	960.07	0.0274	0.009321
Zn	66	3	He	-0.006	0.0059	480.02	0.0031	0.005913
Zn	66	3	He	0.601	0.0078	650.04	0.0031	0.005913
Zn	66	3	He	-0.115	0.0056	460.02	0.0031	0.005913
As	75	3	He	0.385	0.0017	138.00	0.0021	0.0008698
As	75	3	He	0.173	0.0012	104.00	0.0021	0.0008698
As	75	3	He	0.169	0.0012	102.00	0.0021	0.0008698
Sr	88	3	He	0.012	0.0008	70.00	0.0088	0.0006843
Sr	88	3	He	0.038	0.001	90.00	0.0088	0.0006843
Sr	88	3	He	0.064	0.0013	110.01	0.0088	0.0006843
Mo	98	3	He	-0.011	0.0016	140.01	0.0219	0.001827
Mo	98	3	He	-0.032	0.0011	100.00	0.0219	0.001827
Mo	98	3	He	-0.005	0.0017	150.01	0.0219	0.001827
Ag	107	3	He	-0.008	0.0007	60.00	0.047	0.001064
Ag	107	3	He	-0.001	0.001	90.00	0.047	0.001064
Ag	107	3	He	-0.001	0.001	90.00	0.047	0.001064
Cd	111	3	He	0.018	0.0002	14.00	0.0053	6.086E-05
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Cd	111	3	He	0.01	0.0001	10.00	0.0053	6.086E-05
Sn	120	3	He	0.106	0.0165	1460.13	0.0154	0.01483
Sn	120	3	He	0.051	0.0156	1380.13	0.0154	0.01483
Sn	120	3	He	0.182	0.0176	1550.16	0.0154	0.01483
Sb	121	3	He	0.021	0.0006	50.00	0.0143	0.0002661
Sb	121	3	He	0.045	0.0009	80.00	0.0143	0.0002661
Sb	121	3	He	0.045	0.0009	80.00	0.0143	0.0002661
Ba	137	3	He	0.086	0.0007	60.00	0.0048	0.0002665
Ba	137	3	He	0.11	0.0008	70.00	0.0048	0.0002665
Ba	137	3	He	0.111	0.0008	70.00	0.0048	0.0002665
Tl	205	3	He	-0.017	0.0023	950.08	0.0246	0.002755
Tl	205	3	He	-0.035	0.0019	770.05	0.0246	0.002755
Tl	205	3	He	-0.041	0.0018	700.04	0.0246	0.002755
Pb	208	3	He	-0.004	0.002	450.02	0.0324	0.002158
Pb	208	3	He	-0.01	0.0018	360.02	0.0324	0.002158
Pb	208	3	He	-0.016	0.0016	310.01	0.0324	0.002158
U	238	3	He	0.047	0.0027	840.07	0.0492	0.0004023
U	238	3	He	0.043	0.0025	780.06	0.0492	0.0004023
U	238	3	He	0.038	0.0023	700.05	0.0492	0.0004023
Sc	45	1	No Gas			2516456.37		
Sc	45	1	No Gas			2579416.68		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2534119.02		
Ge	72	1	No Gas			1189819.44		
Ge	72	1	No Gas			1204305.76		
Ge	72	1	No Gas			1188088.03		
Sc	45	2	H2			202116.87		
Sc	45	2	H2			201623.08		
Sc	45	2	H2			202208.10		
Ge	72	2	H2			162211.44		
Ge	72	2	H2			162666.08		
Ge	72	2	H2			161878.96		
In	115	2	H2			399945.27		
In	115	2	H2			403292.96		
In	115	2	H2			405760.19		
Sc	45	3	He			50337.71		
Sc	45	3	He			49826.57		
Sc	45	3	He			50979.80		
Ge	72	3	He			81422.16		
Ge	72	3	He			83774.93		
Ge	72	3	He			82748.98		
In	115	3	He			88652.77		
In	115	3	He			88350.38		
In	115	3	He			87897.62		
Tb	159	3	He			405909.53		
Tb	159	3	He			405833.55		
Tb	159	3	He			397614.13		
Bi	209	3	He			309082.94		
Bi	209	3	He			311848.75		
Bi	209	3	He			310813.59		

Quantitation Report

Data File Name	128SMPL.d
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Sample Type	Sample
Comment	E7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

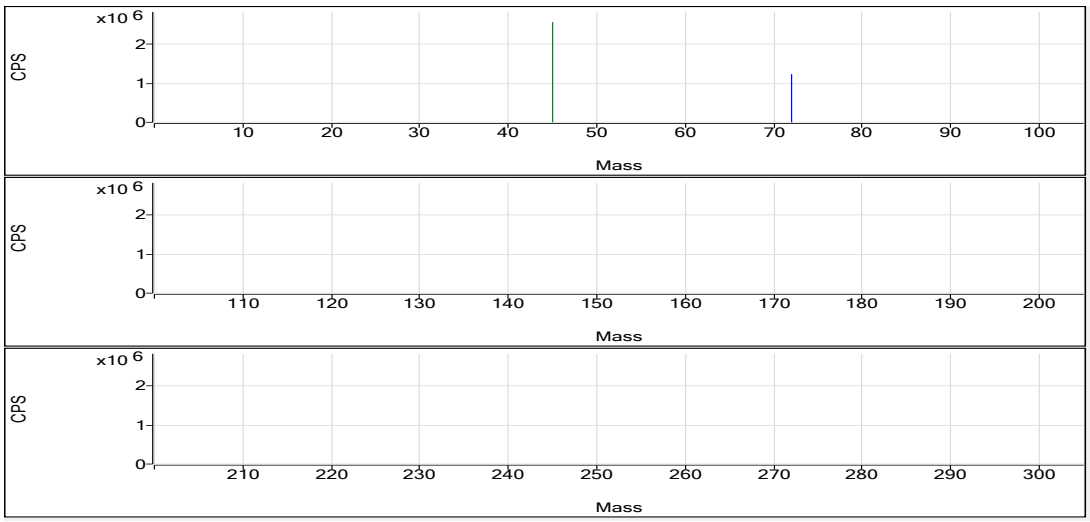
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.034	ppb	N/A	24.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.003	ppb	1835.3	6.22	0.0000	Pulse	1.5000	3
Na	23	45	He	2542.164	ppb	2.5	487290.43	9.4784	Pulse	0.1000	3
Mg	24	45	He	16188.861	ppb	1.8	1504250.65	29.2544	Analog	0.1000	3
Al	27	45	He	-0.232	ppb	N/A	100.00	0.0019	Pulse	0.1000	3
K	39	45	He	5379.969	ppb	1.4	345098.64	6.7115	Pulse	0.1000	3
Ca	44	45	He	73640.780	ppb	0.7	256001.10	4.9783	Pulse	0.1000	3
Ti	47	45	He	0.366	ppb	101.2	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	-0.349	ppb	N/A	1253.40	0.0244	Pulse	0.5000	3
Cr	52	45	He	0.083	ppb	200.5	2333.62	0.0454	Pulse	0.1000	3
Mn	55	45	He	1088.459	ppb	2.2	695865.43	13.5347	Pulse	0.1000	3
Fe	57	45	He	167.380	ppb	1.8	5064.42	0.0985	Pulse	0.1000	3
Co	59	45	He	0.028	ppb	70.1	266.68	0.0052	Pulse	0.1000	3
Ni	60	72	He	-1.108	ppb	N/A	330.02	0.0038	Pulse	0.1000	3
Cu	63	72	He	-0.059	ppb	N/A	660.04	0.0077	Pulse	0.1000	3
Zn	66	72	He	1.041	ppb	20.0	780.05	0.0091	Pulse	0.1000	3
As	75	72	He	0.060	ppb	169.1	85.33	0.0010	Pulse	0.5000	3
Sr	88	115	He	182.670	ppb	1.1	144538.89	1.6080	Pulse	0.1000	3
Mo	98	115	He	-0.044	ppb	N/A	76.67	0.0009	Pulse	0.1000	3
Ag	107	115	He	-0.014	ppb	N/A	36.67	0.0004	Pulse	0.1000	3
Cd	111	115	He	-0.003	ppb	N/A	4.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.125	ppb	83.2	1506.80	0.0168	Pulse	0.1000	3
Sb	121	115	He	-0.006	ppb	N/A	16.67	0.0002	Pulse	0.1000	3
Ba	137	115	He	4.399	ppb	2.1	1913.53	0.0213	Pulse	0.1000	3
Tl	205	159	He	-0.089	ppb	N/A	236.68	0.0006	Pulse	0.1000	3
Pb	208	159	He	0.008	ppb	79.5	986.72	0.0024	Pulse	0.1000	3
U	238	209	He	0.004	ppb	64.9	193.34	0.0006	Pulse	0.1000	3

ISTD Table:

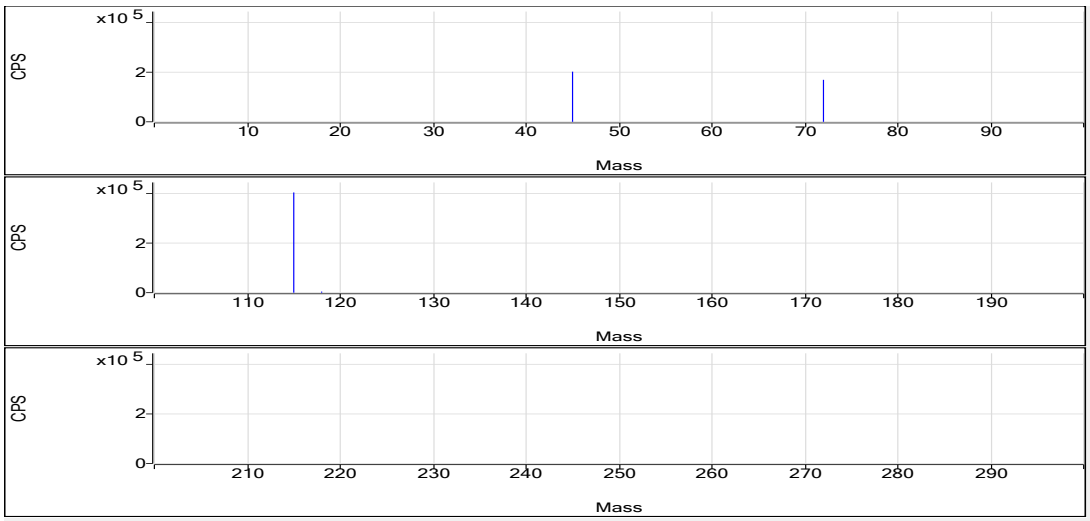
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2571272.72	1.9	98.6	Analog	0.1000	3
No Gas	Ge	72	1235221.18	0.8	95.8	Pulse	0.1000	3
H2	Sc	45	202173.48	1.3	98.1	Pulse	0.1000	3
H2	Ge	72	169262.26	1.1	104.0	Pulse	0.1000	3
H2	In	115	404027.15	1.3	100.1	Pulse	0.1000	3
He	Sc	45	51428.35	2.1	100.5	Pulse	0.1000	3
He	Ge	72	85720.28	2.1	104.7	Pulse	0.1000	3
He	In	115	89889.14	0.4	102.6	Pulse	0.1000	3
He	Tb	159	408956.50	0.3	101.8	Pulse	0.1000	3
He	Bi	209	322722.49	0.2	105.4	Pulse	0.1000	3

No Gas

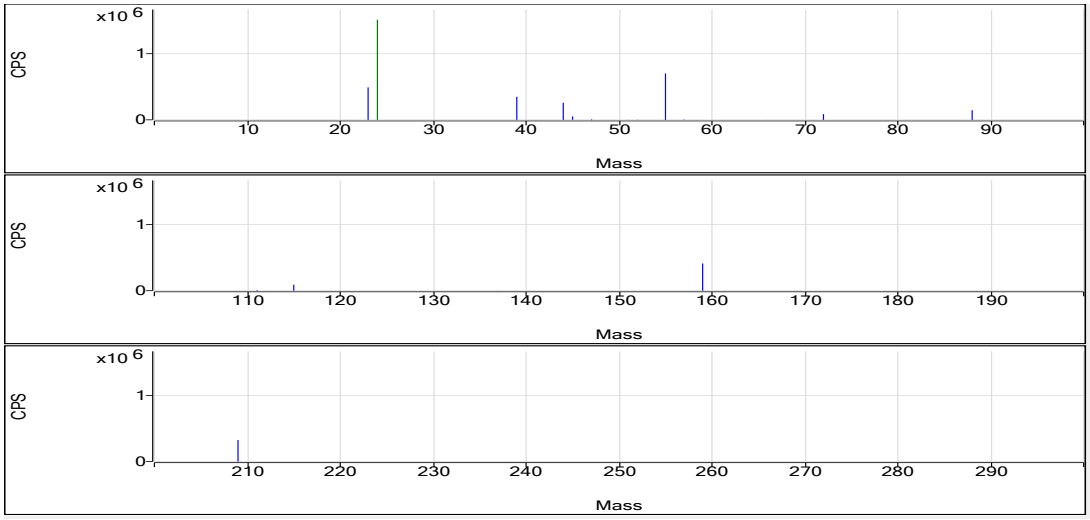


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.03	0	30.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.035	0	22.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.035	0	22.00	0.0007	3.404E-05
Se	78	2	H2	0.053	0.0001	10.00	0.0004	3.546E-05
Se	78	2	H2	-0.044	0	2.67	0.0004	3.546E-05
Se	78	2	H2	0	0	6.00	0.0004	3.546E-05
Na	23	3	He	2467.66	9.2128	485387.10	0.0036	0.4171
Na	23	3	He	2578.719	9.6087	487825.11	0.0036	0.4171
Na	23	3	He	2580.114	9.6136	488659.09	0.0036	0.4171
Mg	24	3	He	15970.994	28.8608	1520561.23	0.0018	0.004553
Mg	24	3	He	16528.064	29.8673	1516339.66	0.0018	0.004553
Mg	24	3	He	16067.525	29.0352	1475851.07	0.0018	0.004553
Al	27	3	He	-0.972	0.0015	80.00	0.0006	0.002085
Al	27	3	He	0.141	0.0022	110.00	0.0006	0.002085
Al	27	3	He	0.136	0.0022	110.00	0.0006	0.002085
K	39	3	He	5292.407	6.609	348201.91	0.0012	0.4112
K	39	3	He	5427.479	6.7672	343564.29	0.0012	0.4112
K	39	3	He	5420.022	6.7584	343529.72	0.0012	0.4112
Ca	44	3	He	73075	4.9401	260272.57	0.0001	0.003322
Ca	44	3	He	73868.655	4.9937	253525.41	0.0001	0.003322
Ca	44	3	He	73978.685	5.0011	254205.31	0.0001	0.003322
Ti	47	3	He	0.357	0.0002	10.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.74	0.0004	20.00	0.0005	0
V	51	3	He	-0.387	0.0236	1242.06	0.0213	0.0318
V	51	3	He	-0.345	0.0245	1242.06	0.0213	0.0318
V	51	3	He	-0.315	0.0251	1276.07	0.0213	0.0318
Cr	52	3	He	-0.048	0.0416	2190.26	0.0294	0.04297
Cr	52	3	He	0.026	0.0437	2220.25	0.0294	0.04297
Cr	52	3	He	0.272	0.051	2590.34	0.0294	0.04297
Mn	55	3	He	1063.14	13.2199	696504.83	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1109.586	13.7973	700479.83	0.0124	0.002801
Mn	55	3	He	1092.649	13.5868	690611.63	0.0124	0.002801
Fe	57	3	He	164.115	0.0966	5091.08	0.0006	0.002732
Fe	57	3	He	169.803	0.0999	5071.08	0.0006	0.002732
Fe	57	3	He	168.22	0.099	5031.09	0.0006	0.002732
Co	59	3	He	0.006	0.004	210.01	0.0549	0.003644
Co	59	3	He	0.034	0.0055	280.01	0.0549	0.003644
Co	59	3	He	0.045	0.0061	310.01	0.0549	0.003644
Ni	60	3	He	-1.043	0.0044	390.02	0.0093	0.01413
Ni	60	3	He	-1.216	0.0028	240.01	0.0093	0.01413
Ni	60	3	He	-1.064	0.0042	360.02	0.0093	0.01413
Cu	63	3	He	-0.037	0.0083	730.04	0.0274	0.009321
Cu	63	3	He	-0.06	0.0077	650.04	0.0274	0.009321
Cu	63	3	He	-0.082	0.0071	600.03	0.0274	0.009321
Zn	66	3	He	0.819	0.0084	740.04	0.0031	0.005913
Zn	66	3	He	1.231	0.0097	820.05	0.0031	0.005913
Zn	66	3	He	1.073	0.0092	780.05	0.0031	0.005913
As	75	3	He	-0.034	0.0008	70.00	0.0021	0.0008698
As	75	3	He	0.046	0.001	82.00	0.0021	0.0008698
As	75	3	He	0.167	0.0012	104.00	0.0021	0.0008698
Sr	88	3	He	184.125	1.6208	146088.01	0.0088	0.0006843
Sr	88	3	He	183.448	1.6148	144542.09	0.0088	0.0006843
Sr	88	3	He	180.437	1.5883	142986.57	0.0088	0.0006843
Mo	98	3	He	-0.038	0.001	90.00	0.0219	0.001827
Mo	98	3	He	-0.048	0.0008	70.00	0.0219	0.001827
Mo	98	3	He	-0.048	0.0008	70.00	0.0219	0.001827
Ag	107	3	He	-0.011	0.0006	50.00	0.047	0.001064
Ag	107	3	He	-0.016	0.0003	30.00	0.047	0.001064
Ag	107	3	He	-0.016	0.0003	30.00	0.047	0.001064
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	0.001	0.0001	6.00	0.0053	6.086E-05
Sn	120	3	He	0.132	0.0169	1520.12	0.0154	0.01483
Sn	120	3	He	0.226	0.0183	1640.16	0.0154	0.01483
Sn	120	3	He	0.018	0.0151	1360.12	0.0154	0.01483
Sb	121	3	He	-0.019	0	0.00	0.0143	0.0002661
Sb	121	3	He	0.021	0.0006	50.00	0.0143	0.0002661
Sb	121	3	He	-0.019	0	0.00	0.0143	0.0002661
Ba	137	3	He	4.449	0.0215	1940.21	0.0048	0.0002665
Ba	137	3	He	4.457	0.0216	1930.20	0.0048	0.0002665
Ba	137	3	He	4.291	0.0208	1870.19	0.0048	0.0002665
Tl	205	3	He	-0.087	0.0006	250.01	0.0246	0.002755
Tl	205	3	He	-0.09	0.0005	220.01	0.0246	0.002755
Tl	205	3	He	-0.088	0.0006	240.01	0.0246	0.002755
Pb	208	3	He	0.013	0.0026	460.03	0.0324	0.002158
Pb	208	3	He	0.01	0.0025	580.03	0.0324	0.002158
Pb	208	3	He	0.001	0.0022	530.03	0.0324	0.002158
U	238	3	He	0.007	0.0007	240.01	0.0492	0.0004023
U	238	3	He	0.003	0.0006	180.01	0.0492	0.0004023
U	238	3	He	0.002	0.0005	160.01	0.0492	0.0004023
Sc	45	1	No Gas			2515833.87		
Sc	45	1	No Gas			2604899.18		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2593085.12		
Ge	72	1	No Gas			1224195.92		
Ge	72	1	No Gas			1241068.73		
Ge	72	1	No Gas			1240398.89		
Sc	45	2	H2			204765.95		
Sc	45	2	H2			199503.51		
Sc	45	2	H2			202250.99		
Ge	72	2	H2			170597.58		
Ge	72	2	H2			167076.15		
Ge	72	2	H2			170113.06		
In	115	2	H2			405047.30		
In	115	2	H2			398498.78		
In	115	2	H2			408535.38		
Sc	45	3	He			52686.07		
Sc	45	3	He			50769.24		
Sc	45	3	He			50829.73		
Ge	72	3	He			87829.25		
Ge	72	3	He			84600.50		
Ge	72	3	He			84731.10		
In	115	3	He			90141.81		
In	115	3	He			89517.87		
In	115	3	He			90030.37		
Tb	159	3	He			409020.58		
Tb	159	3	He			410310.42		
Tb	159	3	He			407538.51		
Bi	209	3	He			323549.35		
Bi	209	3	He			322201.69		
Bi	209	3	He			322416.42		

Quantitation Report

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Sample Type	Sample
Comment	E7
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

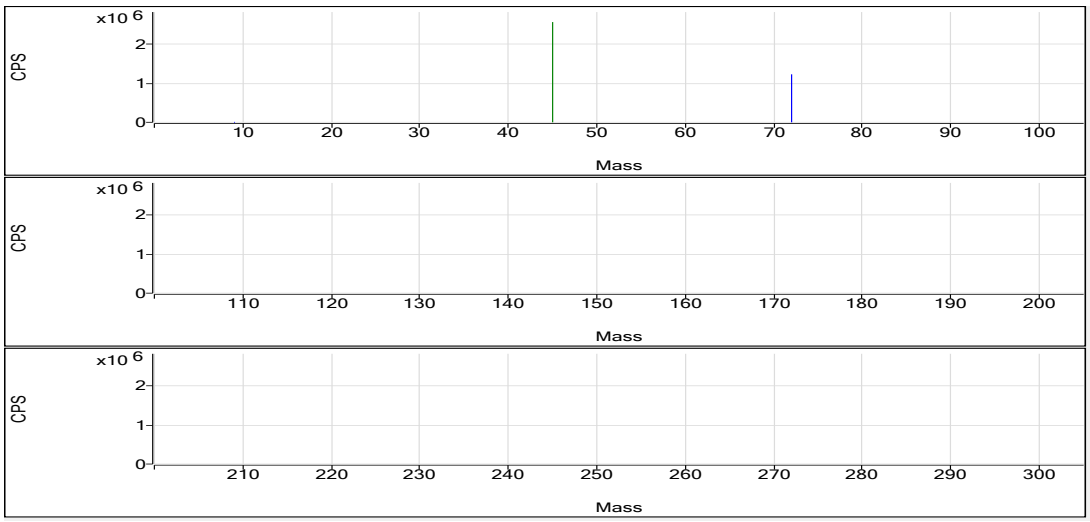
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.037	ppb	N/A	17.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.002	ppb	N/A	5.78	0.0000	Pulse	1.5000	3
Na	23	45	He	2651.843	ppb	0.9	508125.64	9.8693	Pulse	0.1000	3
Mg	24	45	He	16788.030	ppb	0.5	1561903.52	30.3370	Analog	0.1000	3
Al	27	45	He	0.978	ppb	51.8	136.68	0.0027	Pulse	0.1000	3
K	39	45	He	5602.166	ppb	1.2	358941.70	6.9717	Pulse	0.1000	3
Ca	44	45	He	77345.409	ppb	0.2	269194.19	5.2286	Pulse	0.1000	3
Ti	47	45	He	0.486	ppb	114.4	13.33	0.0003	Pulse	0.1000	3
V	51	45	He	-0.374	ppb	N/A	1228.06	0.0239	Pulse	0.5000	3
Cr	52	45	He	0.058	ppb	148.0	2300.27	0.0447	Pulse	0.1000	3
Mn	55	45	He	1130.558	ppb	0.1	723785.17	14.0581	Pulse	0.1000	3
Fe	57	45	He	210.270	ppb	3.1	6334.92	0.1230	Pulse	0.1000	3
Co	59	45	He	0.003	ppb	544.1	196.68	0.0038	Pulse	0.1000	3
Ni	60	72	He	-1.126	ppb	N/A	316.68	0.0037	Pulse	0.1000	3
Cu	63	72	He	-0.024	ppb	N/A	746.71	0.0087	Pulse	0.1000	3
Zn	66	72	He	1.389	ppb	14.8	876.72	0.0102	Pulse	0.1000	3
As	75	72	He	0.093	ppb	159.3	92.00	0.0011	Pulse	0.5000	3
Sr	88	115	He	192.538	ppb	2.1	152845.90	1.6948	Pulse	0.1000	3
Mo	98	115	He	-0.046	ppb	N/A	73.33	0.0008	Pulse	0.1000	3
Ag	107	115	He	-0.014	ppb	N/A	36.67	0.0004	Pulse	0.1000	3
Cd	111	115	He	-0.011	ppb	0.0	0.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.022	ppb	N/A	1306.78	0.0145	Pulse	0.1000	3
Sb	121	115	He	-0.003	ppb	N/A	20.00	0.0002	Pulse	0.1000	3
Ba	137	115	He	4.678	ppb	1.7	2040.22	0.0226	Pulse	0.1000	3
Tl	205	159	He	-0.092	ppb	N/A	203.34	0.0005	Pulse	0.1000	3
Pb	208	159	He	0.002	ppb	104.5	916.72	0.0022	Pulse	0.1000	3
U	238	209	He	-0.003	ppb	N/A	86.67	0.0003	Pulse	0.1000	3

ISTD Table:

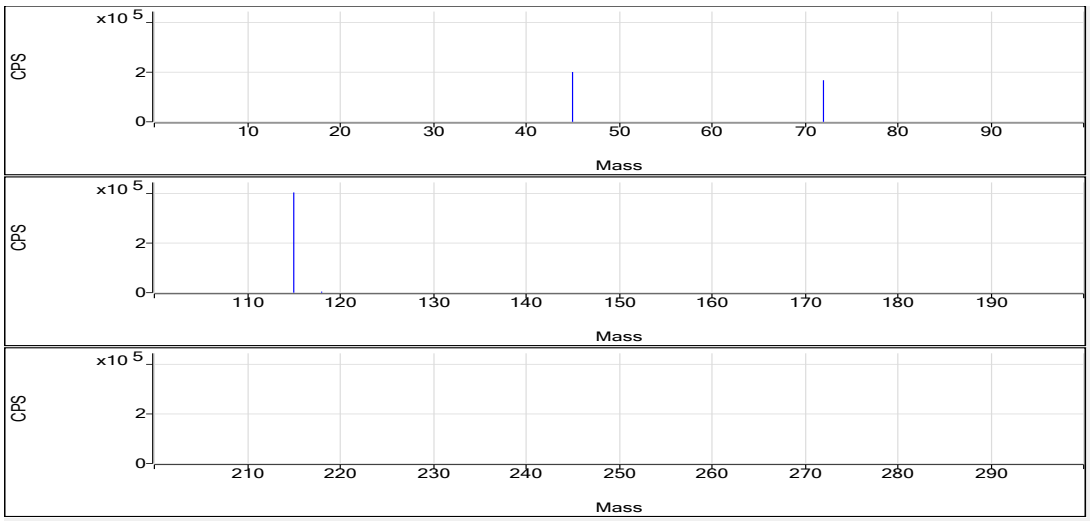
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2572098.29	1.6	98.6	Analog	0.1000	3
No Gas	Ge	72	1231373.78	1.2	95.5	Pulse	0.1000	3
H2	Sc	45	201693.69	0.5	97.9	Pulse	0.1000	3
H2	Ge	72	168448.89	1.2	103.5	Pulse	0.1000	3
H2	In	115	405916.28	0.6	100.5	Pulse	0.1000	3
He	Sc	45	51485.43	0.2	100.6	Pulse	0.1000	3
He	Ge	72	86082.12	1.4	105.2	Pulse	0.1000	3
He	In	115	90191.12	0.5	102.9	Pulse	0.1000	3
He	Tb	159	410218.73	0.3	102.1	Pulse	0.1000	3
He	Bi	209	320735.48	0.7	104.8	Pulse	0.1000	3

No Gas

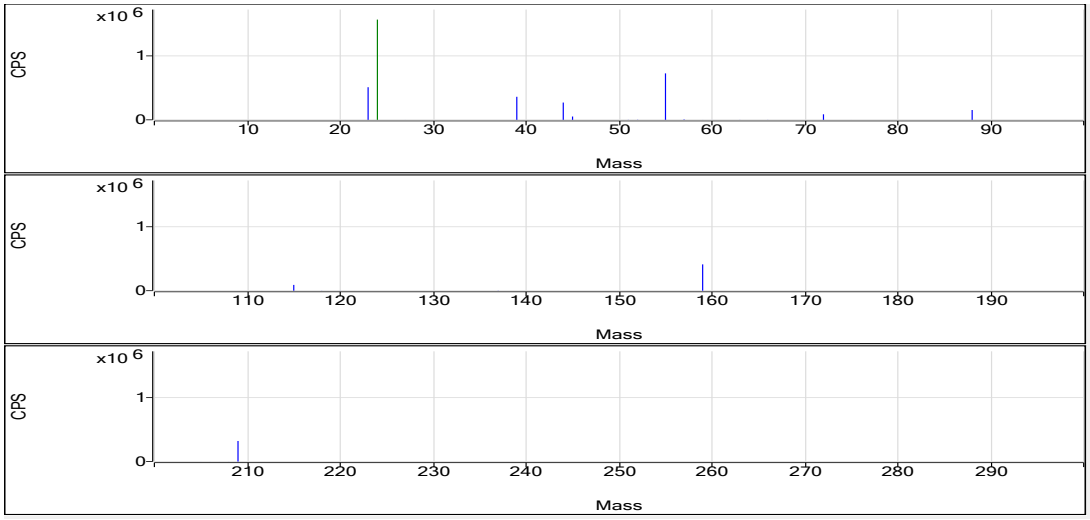


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.039	0	14.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.034	0	24.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.039	0	14.00	0.0007	3.404E-05
Se	78	2	H2	0.029	0	8.00	0.0004	3.546E-05
Se	78	2	H2	0.019	0	7.33	0.0004	3.546E-05
Se	78	2	H2	-0.054	0	2.00	0.0004	3.546E-05
Na	23	3	He	2679.786	9.9689	513318.94	0.0036	0.4171
Na	23	3	He	2634.445	9.8073	505889.48	0.0036	0.4171
Na	23	3	He	2641.298	9.8317	505168.51	0.0036	0.4171
Mg	24	3	He	16805.396	30.3684	1563726.38	0.0018	0.004553
Mg	24	3	He	16697.471	30.1734	1556430.76	0.0018	0.004553
Mg	24	3	He	16861.223	30.4692	1565553.41	0.0018	0.004553
Al	27	3	He	0.422	0.0023	120.01	0.0006	0.002085
Al	27	3	He	1.414	0.0029	150.01	0.0006	0.002085
Al	27	3	He	1.099	0.0027	140.01	0.0006	0.002085
K	39	3	He	5676.912	7.0593	363495.97	0.0012	0.4112
K	39	3	He	5540.583	6.8996	355902.92	0.0012	0.4112
K	39	3	He	5589.002	6.9563	357426.21	0.0012	0.4112
Ca	44	3	He	77469.337	5.2369	269659.86	0.0001	0.003322
Ca	44	3	He	77157.656	5.2159	269050.17	0.0001	0.003322
Ca	44	3	He	77409.234	5.2329	268872.55	0.0001	0.003322
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	1.093	0.0006	30.00	0.0005	0
Ti	47	3	He	0.366	0.0002	10.00	0.0005	0
V	51	3	He	-0.378	0.0238	1224.06	0.0213	0.0318
V	51	3	He	-0.396	0.0234	1206.06	0.0213	0.0318
V	51	3	He	-0.348	0.0244	1254.06	0.0213	0.0318
Cr	52	3	He	0.157	0.0476	2450.30	0.0294	0.04297
Cr	52	3	He	0.016	0.0434	2240.27	0.0294	0.04297
Cr	52	3	He	0.002	0.043	2210.23	0.0294	0.04297
Mn	55	3	He	1129.616	14.0463	723273.27	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1131.294	14.0672	725627.41	0.0124	0.002801
Mn	55	3	He	1130.765	14.0606	722454.83	0.0124	0.002801
Fe	57	3	He	209.12	0.1224	6301.59	0.0006	0.002732
Fe	57	3	He	217.216	0.127	6551.67	0.0006	0.002732
Fe	57	3	He	204.474	0.1197	6151.49	0.0006	0.002732
Co	59	3	He	-0.017	0.0027	140.01	0.0549	0.003644
Co	59	3	He	0.011	0.0043	220.01	0.0549	0.003644
Co	59	3	He	0.015	0.0045	230.01	0.0549	0.003644
Ni	60	3	He	-1.115	0.0038	330.02	0.0093	0.01413
Ni	60	3	He	-1.121	0.0037	320.02	0.0093	0.01413
Ni	60	3	He	-1.141	0.0035	300.01	0.0093	0.01413
Cu	63	3	He	0.007	0.0095	830.05	0.0274	0.009321
Cu	63	3	He	-0.035	0.0084	720.04	0.0274	0.009321
Cu	63	3	He	-0.043	0.0081	690.04	0.0274	0.009321
Zn	66	3	He	1.619	0.0109	950.07	0.0031	0.005913
Zn	66	3	He	1.329	0.01	860.05	0.0031	0.005913
Zn	66	3	He	1.221	0.0097	820.05	0.0031	0.005913
As	75	3	He	-0.053	0.0008	66.00	0.0021	0.0008698
As	75	3	He	0.244	0.0014	120.00	0.0021	0.0008698
As	75	3	He	0.089	0.0011	90.00	0.0021	0.0008698
Sr	88	3	He	197.262	1.7364	155720.42	0.0088	0.0006843
Sr	88	3	He	190.168	1.674	151504.33	0.0088	0.0006843
Sr	88	3	He	190.184	1.6741	151312.96	0.0088	0.0006843
Mo	98	3	He	-0.038	0.001	90.00	0.0219	0.001827
Mo	98	3	He	-0.038	0.001	90.00	0.0219	0.001827
Mo	98	3	He	-0.063	0.0004	40.00	0.0219	0.001827
Ag	107	3	He	-0.016	0.0003	30.00	0.047	0.001064
Ag	107	3	He	-0.016	0.0003	30.00	0.047	0.001064
Ag	107	3	He	-0.011	0.0006	50.00	0.047	0.001064
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Sn	120	3	He	0.043	0.0155	1390.13	0.0154	0.01483
Sn	120	3	He	-0.016	0.0146	1320.10	0.0154	0.01483
Sn	120	3	He	-0.094	0.0134	1210.10	0.0154	0.01483
Sb	121	3	He	-0.011	0.0001	10.00	0.0143	0.0002661
Sb	121	3	He	0.005	0.0003	30.00	0.0143	0.0002661
Sb	121	3	He	-0.003	0.0002	20.00	0.0143	0.0002661
Ba	137	3	He	4.588	0.0222	1990.21	0.0048	0.0002665
Ba	137	3	He	4.731	0.0229	2070.23	0.0048	0.0002665
Ba	137	3	He	4.714	0.0228	2060.23	0.0048	0.0002665
Tl	205	3	He	-0.093	0.0005	190.01	0.0246	0.002755
Tl	205	3	He	-0.093	0.0005	190.01	0.0246	0.002755
Tl	205	3	He	-0.089	0.0006	230.01	0.0246	0.002755
Pb	208	3	He	0.003	0.0023	500.03	0.0324	0.002158
Pb	208	3	He	0	0.0021	370.02	0.0324	0.002158
Pb	208	3	He	0.004	0.0023	460.03	0.0324	0.002158
U	238	3	He	-0.004	0.0002	70.00	0.0492	0.0004023
U	238	3	He	-0.003	0.0002	80.00	0.0492	0.0004023
U	238	3	He	-0.001	0.0003	110.00	0.0492	0.0004023
Sc	45	1	No Gas			2619423.40		
Sc	45	1	No Gas			2538579.96		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2558291.52		
Ge	72	1	No Gas			1247532.79		
Ge	72	1	No Gas			1225870.68		
Ge	72	1	No Gas			1220717.87		
Sc	45	2	H2			200827.16		
Sc	45	2	H2			202938.94		
Sc	45	2	H2			201314.96		
Ge	72	2	H2			166814.67		
Ge	72	2	H2			167803.34		
Ge	72	2	H2			170728.65		
In	115	2	H2			408314.84		
In	115	2	H2			403144.06		
In	115	2	H2			406289.95		
Sc	45	3	He			51491.94		
Sc	45	3	He			51582.92		
Sc	45	3	He			51381.44		
Ge	72	3	He			87297.09		
Ge	72	3	He			86067.80		
Ge	72	3	He			84881.46		
In	115	3	He			89689.67		
In	115	3	He			90514.40		
In	115	3	He			90392.92		
Tb	159	3	He			411557.14		
Tb	159	3	He			410203.00		
Tb	159	3	He			408896.05		
Bi	209	3	He			321573.35		
Bi	209	3	He			322459.98		
Bi	209	3	He			318173.10		

Quantitation Report

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Sample Type	Sample
Comment	E7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

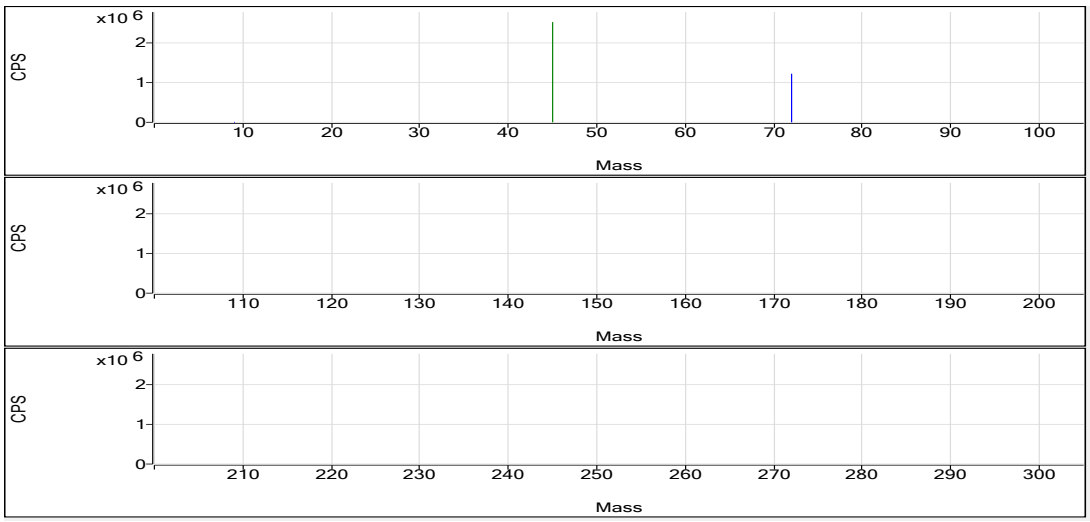
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.038	ppb	N/A	15.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.015	ppb	N/A	4.89	0.0000	Pulse	1.5000	3
Na	23	45	He	1560.569	ppb	1.2	300434.04	5.9796	Pulse	0.1000	3
Mg	24	45	He	11107.235	ppb	1.6	1008488.32	20.0730	Pulse	0.1000	3
Al	27	45	He	0.415	ppb	261.4	116.67	0.0023	Pulse	0.1000	3
K	39	45	He	3521.994	ppb	1.1	227889.38	4.5357	Pulse	0.1000	3
Ca	44	45	He	51226.403	ppb	0.9	174047.34	3.4640	Pulse	0.1000	3
Ti	47	45	He	0.371	ppb	99.3	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	-0.375	ppb	N/A	1198.06	0.0238	Pulse	0.5000	3
Cr	52	45	He	0.001	ppb	4877.1	2160.23	0.0430	Pulse	0.1000	3
Mn	55	45	He	273.497	ppb	1.6	170968.29	3.4030	Pulse	0.1000	3
Fe	57	45	He	7031.900	ppb	2.0	202264.50	4.0260	Pulse	0.1000	3
Co	59	45	He	0.466	ppb	10.6	1466.80	0.0292	Pulse	0.1000	3
Ni	60	72	He	-0.721	ppb	N/A	640.04	0.0074	Pulse	0.1000	3
Cu	63	72	He	-0.077	ppb	N/A	620.04	0.0072	Pulse	0.1000	3
Zn	66	72	He	2.063	ppb	10.5	1053.41	0.0122	Pulse	0.1000	3
As	75	72	He	-0.001	ppb	N/A	74.67	0.0009	Pulse	0.5000	3
Sr	88	115	He	138.926	ppb	1.7	109750.91	1.2231	Pulse	0.1000	3
Mo	98	115	He	-0.046	ppb	N/A	73.33	0.0008	Pulse	0.1000	3
Ag	107	115	He	-0.012	ppb	N/A	46.67	0.0005	Pulse	0.1000	3
Cd	111	115	He	-0.004	ppb	N/A	3.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.019	ppb	95.8	1356.78	0.0151	Pulse	0.1000	3
Sb	121	115	He	-0.003	ppb	N/A	20.00	0.0002	Pulse	0.1000	3
Ba	137	115	He	2.704	ppb	13.2	1183.43	0.0132	Pulse	0.1000	3
Tl	205	159	He	-0.091	ppb	N/A	210.01	0.0005	Pulse	0.1000	3
Pb	208	159	He	0.003	ppb	302.8	916.72	0.0023	Pulse	0.1000	3
U	238	209	He	0.221	ppb	2.7	3597.30	0.0113	Pulse	0.1000	3

ISTD Table:

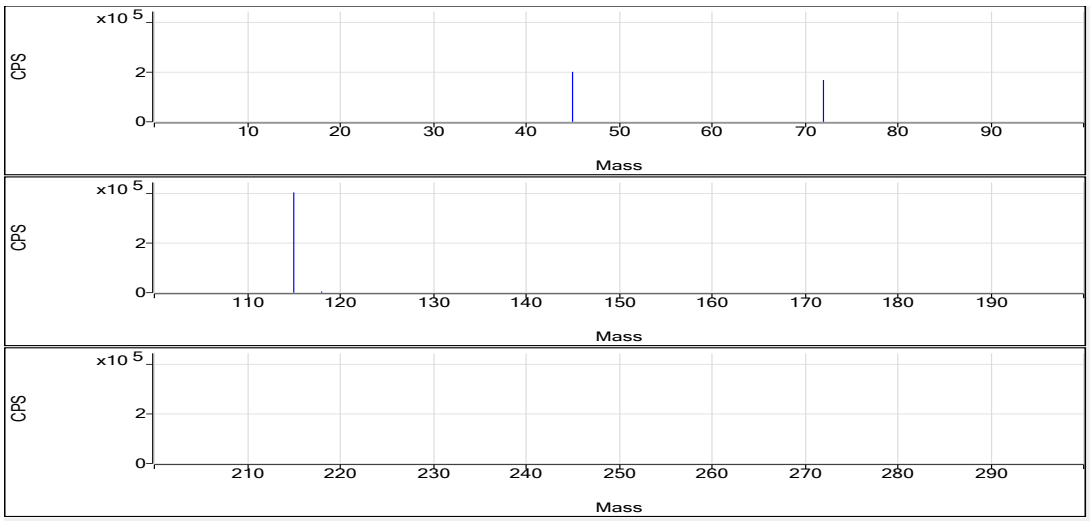
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2537750.02	1.0	97.3	Analog	0.1000	3
No Gas	Ge	72	1229075.84	0.4	95.4	Pulse	0.1000	3
H2	Sc	45	202259.17	0.7	98.2	Pulse	0.1000	3
H2	Ge	72	168992.23	0.8	103.8	Pulse	0.1000	3
H2	In	115	405488.42	0.4	100.4	Pulse	0.1000	3
He	Sc	45	50247.61	1.3	98.1	Pulse	0.1000	3
He	Ge	72	86049.22	1.0	105.1	Pulse	0.1000	3
He	In	115	89743.55	1.1	102.4	Pulse	0.1000	3
He	Tb	159	407275.03	0.2	101.4	Pulse	0.1000	3
He	Bi	209	318292.96	0.4	104.0	Pulse	0.1000	3

No Gas

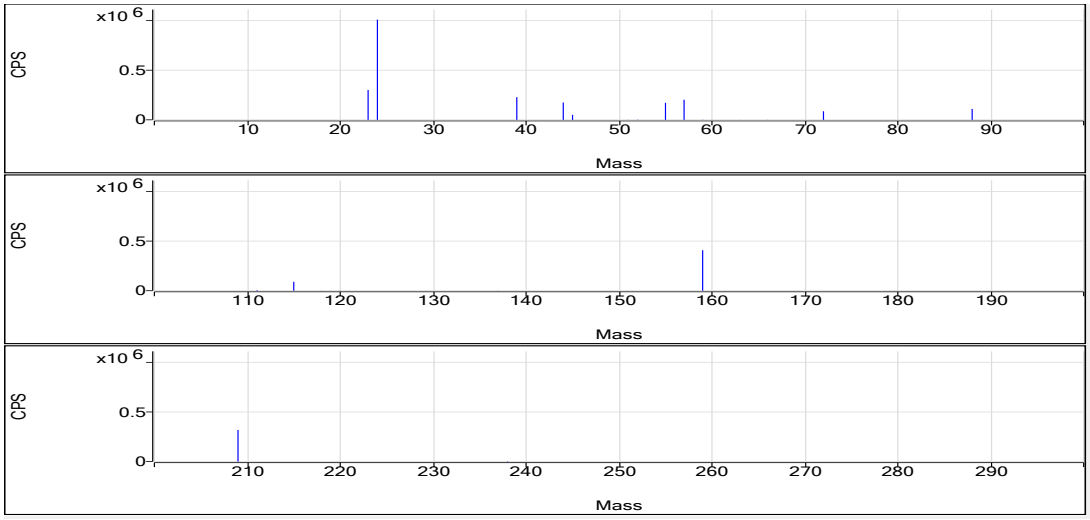


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.036	0	20.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.037	0	18.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.042	0	8.00	0.0007	3.404E-05
Se	78	2	H2	-0.018	0	4.67	0.0004	3.546E-05
Se	78	2	H2	-0.027	0	4.00	0.0004	3.546E-05
Se	78	2	H2	0	0	6.00	0.0004	3.546E-05
Na	23	3	He	1560.216	5.9783	298655.95	0.0036	0.4171
Na	23	3	He	1542.424	5.9149	301483.88	0.0036	0.4171
Na	23	3	He	1579.067	6.0455	301162.30	0.0036	0.4171
Mg	24	3	He	11212.471	20.2631	1012276.55	0.0018	0.004553
Mg	24	3	He	10905.306	19.7081	1004530.69	0.0018	0.004553
Mg	24	3	He	11203.927	20.2477	1008657.72	0.0018	0.004553
Al	27	3	He	0.202	0.0022	110.01	0.0006	0.002085
Al	27	3	He	-0.547	0.0018	90.00	0.0006	0.002085
Al	27	3	He	1.591	0.003	150.01	0.0006	0.002085
K	39	3	He	3531.609	4.547	227150.88	0.0012	0.4112
K	39	3	He	3478.548	4.4848	228593.14	0.0012	0.4112
K	39	3	He	3555.825	4.5753	227924.12	0.0012	0.4112
Ca	44	3	He	51321.775	3.4705	173373.14	0.0001	0.003322
Ca	44	3	He	50749.66	3.4318	174921.31	0.0001	0.003322
Ca	44	3	He	51607.774	3.4898	173847.56	0.0001	0.003322
Ti	47	3	He	0.376	0.0002	10.00	0.0005	0
Ti	47	3	He	0.738	0.0004	20.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	-0.405	0.0232	1158.05	0.0213	0.0318
V	51	3	He	-0.342	0.0245	1250.06	0.0213	0.0318
V	51	3	He	-0.376	0.0238	1186.06	0.0213	0.0318
Cr	52	3	He	-0.004	0.0428	2140.23	0.0294	0.04297
Cr	52	3	He	-0.053	0.0414	2110.21	0.0294	0.04297
Cr	52	3	He	0.061	0.0448	2230.25	0.0294	0.04297
Mn	55	3	He	276.023	3.4344	171568.42	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	268.582	3.3418	170335.02	0.0124	0.002801
Mn	55	3	He	275.887	3.4327	171001.44	0.0124	0.002801
Fe	57	3	He	7116.936	4.0747	203557.63	0.0006	0.002732
Fe	57	3	He	6865.801	3.931	200364.57	0.0006	0.002732
Fe	57	3	He	7112.962	4.0724	202871.29	0.0006	0.002732
Co	59	3	He	0.437	0.0276	1380.12	0.0549	0.003644
Co	59	3	He	0.438	0.0277	1410.11	0.0549	0.003644
Co	59	3	He	0.522	0.0323	1610.16	0.0549	0.003644
Ni	60	3	He	-0.831	0.0064	550.03	0.0093	0.01413
Ni	60	3	He	-0.655	0.008	700.04	0.0093	0.01413
Ni	60	3	He	-0.676	0.0078	670.04	0.0093	0.01413
Cu	63	3	He	-0.034	0.0084	720.05	0.0274	0.009321
Cu	63	3	He	-0.105	0.0064	560.03	0.0274	0.009321
Cu	63	3	He	-0.092	0.0068	580.03	0.0274	0.009321
Zn	66	3	He	2.135	0.0125	1070.08	0.0031	0.005913
Zn	66	3	He	1.82	0.0115	1000.07	0.0031	0.005913
Zn	66	3	He	2.233	0.0128	1090.07	0.0031	0.005913
As	75	3	He	0.007	0.0009	76.00	0.0021	0.0008698
As	75	3	He	0.055	0.001	86.00	0.0021	0.0008698
As	75	3	He	-0.067	0.0007	62.00	0.0021	0.0008698
Sr	88	3	He	141.661	1.2471	110601.15	0.0088	0.0006843
Sr	88	3	He	137.563	1.2111	109048.57	0.0088	0.0006843
Sr	88	3	He	137.555	1.211	109603.02	0.0088	0.0006843
Mo	98	3	He	-0.058	0.0006	50.00	0.0219	0.001827
Mo	98	3	He	-0.038	0.001	90.00	0.0219	0.001827
Mo	98	3	He	-0.043	0.0009	80.00	0.0219	0.001827
Ag	107	3	He	-0.013	0.0005	40.00	0.047	0.001064
Ag	107	3	He	-0.011	0.0006	50.00	0.047	0.001064
Ag	107	3	He	-0.011	0.0006	50.00	0.047	0.001064
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Cd	111	3	He	0.001	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Sn	120	3	He	0.025	0.0152	1350.12	0.0154	0.01483
Sn	120	3	He	0.032	0.0153	1380.12	0.0154	0.01483
Sn	120	3	He	-0.002	0.0148	1340.11	0.0154	0.01483
Sb	121	3	He	-0.011	0.0001	10.00	0.0143	0.0002661
Sb	121	3	He	-0.003	0.0002	20.00	0.0143	0.0002661
Sb	121	3	He	0.005	0.0003	30.00	0.0143	0.0002661
Ba	137	3	He	2.658	0.013	1150.10	0.0048	0.0002665
Ba	137	3	He	3.082	0.015	1350.11	0.0048	0.0002665
Ba	137	3	He	2.372	0.0116	1050.08	0.0048	0.0002665
Tl	205	3	He	-0.09	0.0005	220.01	0.0246	0.002755
Tl	205	3	He	-0.094	0.0004	180.01	0.0246	0.002755
Tl	205	3	He	-0.089	0.0006	230.01	0.0246	0.002755
Pb	208	3	He	-0.006	0.002	420.02	0.0324	0.002158
Pb	208	3	He	0.011	0.0025	490.03	0.0324	0.002158
Pb	208	3	He	0.003	0.0023	520.03	0.0324	0.002158
U	238	3	He	0.228	0.0116	3700.63	0.0492	0.0004023
U	238	3	He	0.221	0.0113	3600.64	0.0492	0.0004023
U	238	3	He	0.216	0.011	3490.62	0.0492	0.0004023
Sc	45	1	No Gas			2529268.87		
Sc	45	1	No Gas			2566331.84		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2517649.34		
Ge	72	1	No Gas			1224537.25		
Ge	72	1	No Gas			1228390.37		
Ge	72	1	No Gas			1234299.90		
Sc	45	2	H2			203991.19		
Sc	45	2	H2			201529.61		
Sc	45	2	H2			201256.72		
Ge	72	2	H2			170536.21		
Ge	72	2	H2			167896.89		
Ge	72	2	H2			168543.59		
In	115	2	H2			406988.24		
In	115	2	H2			403698.94		
In	115	2	H2			405778.08		
Sc	45	3	He			49956.57		
Sc	45	3	He			50970.32		
Sc	45	3	He			49815.93		
Ge	72	3	He			85817.31		
Ge	72	3	He			86964.67		
Ge	72	3	He			85365.69		
In	115	3	He			88691.38		
In	115	3	He			90050.82		
In	115	3	He			90513.26		
Tb	159	3	He			407057.73		
Tb	159	3	He			408107.61		
Tb	159	3	He			406659.76		
Bi	209	3	He			318659.17		
Bi	209	3	He			319483.14		
Bi	209	3	He			316736.56		

Quantitation Report

Data File Name	131SMPL.d
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Acq Time	8/9/2023 6:11:39 PM
Sample Name	410-137128-I-15-A @10
Sample Type	Sample
Comment	E7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

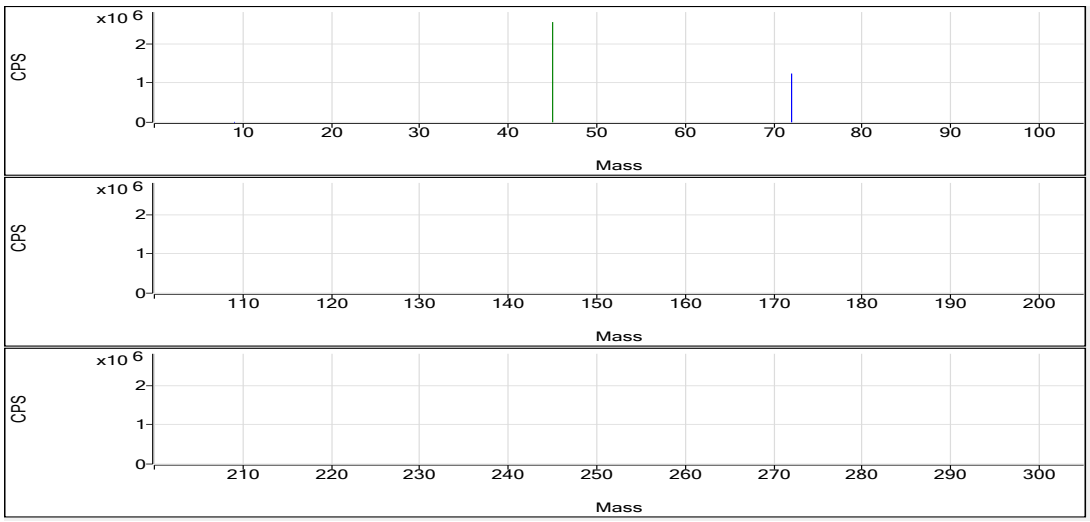
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.038	ppb	N/A	15.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.007	ppb	316.3	6.44	0.0000	Pulse	1.5000	3
Na	23	45	He	1834.562	ppb	0.8	348933.78	6.9562	Pulse	0.1000	3
Mg	24	45	He	9035.881	ppb	0.7	819148.14	16.3305	Pulse	0.1000	3
Al	27	45	He	-0.038	ppb	N/A	103.34	0.0021	Pulse	0.1000	3
K	39	45	He	3602.738	ppb	0.6	232262.65	4.6303	Pulse	0.1000	3
Ca	44	45	He	43040.134	ppb	1.1	146013.20	2.9110	Pulse	0.1000	3
Ti	47	45	He	0.123	ppb	173.2	3.33	0.0001	Pulse	0.1000	3
V	51	45	He	-0.378	ppb	N/A	1192.06	0.0238	Pulse	0.5000	3
Cr	52	45	He	-0.115	ppb	N/A	1986.87	0.0396	Pulse	0.1000	3
Mn	55	45	He	286.951	ppb	1.0	179084.74	3.5702	Pulse	0.1000	3
Fe	57	45	He	13003.265	ppb	1.2	373308.73	7.4426	Pulse	0.1000	3
Co	59	45	He	0.041	ppb	29.7	296.68	0.0059	Pulse	0.1000	3
Ni	60	72	He	-1.200	ppb	N/A	256.68	0.0030	Pulse	0.1000	3
Cu	63	72	He	-0.069	ppb	N/A	640.04	0.0074	Pulse	0.1000	3
Zn	66	72	He	1.097	ppb	35.2	800.05	0.0093	Pulse	0.1000	3
As	75	72	He	-0.017	ppb	N/A	72.00	0.0008	Pulse	0.5000	3
Sr	88	115	He	85.095	ppb	1.0	66162.03	0.7494	Pulse	0.1000	3
Mo	98	115	He	-0.052	ppb	N/A	60.00	0.0007	Pulse	0.1000	3
Ag	107	115	He	-0.012	ppb	N/A	43.33	0.0005	Pulse	0.1000	3
Cd	111	115	He	-0.007	ppb	N/A	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.069	ppb	129.3	1403.45	0.0159	Pulse	0.1000	3
Sb	121	115	He	0.010	ppb	86.9	36.67	0.0004	Pulse	0.1000	3
Ba	137	115	He	1.832	ppb	10.7	796.72	0.0090	Pulse	0.1000	3
Tl	205	159	He	-0.097	ppb	N/A	153.34	0.0004	Pulse	0.1000	3
Pb	208	159	He	0.022	ppb	33.7	1163.40	0.0029	Pulse	0.1000	3
U	238	209	He	0.023	ppb	26.8	490.03	0.0015	Pulse	0.1000	3

ISTD Table:

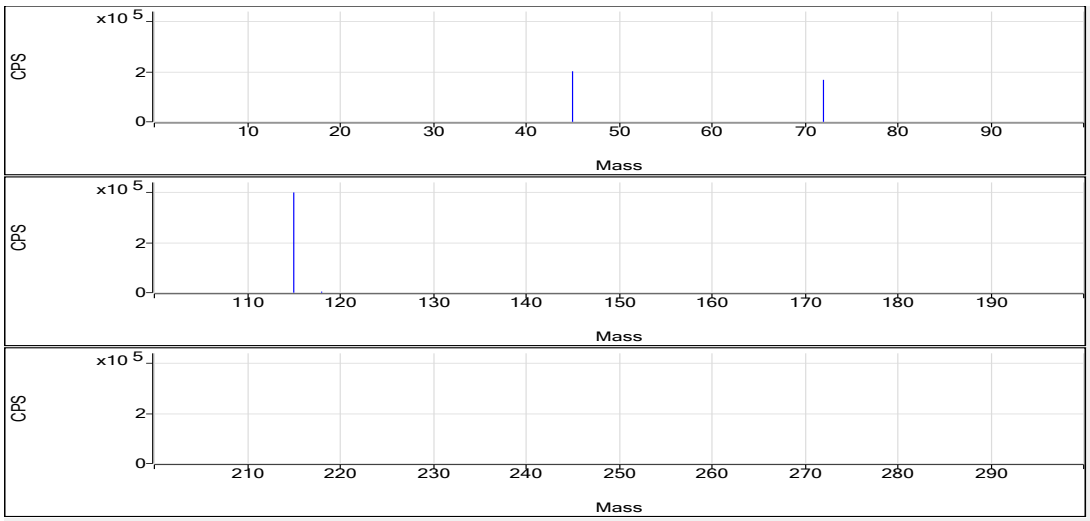
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2549412.72	1.4	97.8	Analog	0.1000	3
No Gas	Ge	72	1240116.91	1.2	96.2	Pulse	0.1000	3
H2	Sc	45	202285.94	0.8	98.2	Pulse	0.1000	3
H2	Ge	72	168009.31	0.6	103.2	Pulse	0.1000	3
H2	In	115	401061.75	0.5	99.3	Pulse	0.1000	3
He	Sc	45	50164.00	1.4	98.0	Pulse	0.1000	3
He	Ge	72	86240.30	1.0	105.3	Pulse	0.1000	3
He	In	115	88282.13	0.5	100.7	Pulse	0.1000	3
He	Tb	159	404205.74	0.7	100.6	Pulse	0.1000	3
He	Bi	209	318541.70	0.6	104.1	Pulse	0.1000	3

No Gas

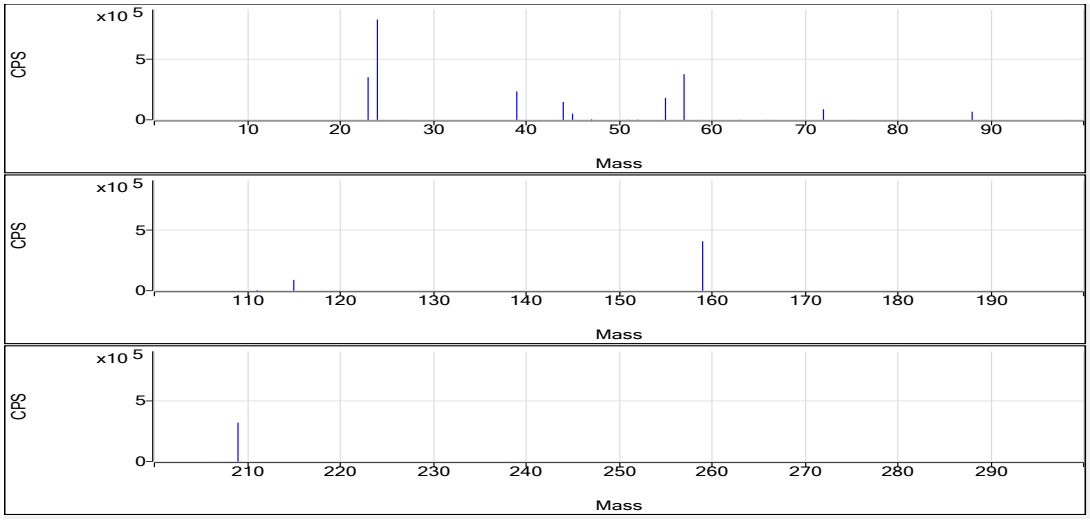


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.039	0	14.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.036	0	20.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.04	0	12.00	0.0007	3.404E-05
Se	78	2	H2	0.019	0	7.33	0.0004	3.546E-05
Se	78	2	H2	0.018	0	7.33	0.0004	3.546E-05
Se	78	2	H2	-0.018	0	4.67	0.0004	3.546E-05
Na	23	3	He	1820.742	6.9069	351837.77	0.0036	0.4171
Na	23	3	He	1833.72	6.9532	345196.79	0.0036	0.4171
Na	23	3	He	1849.224	7.0085	349766.79	0.0036	0.4171
Mg	24	3	He	8959.75	16.1929	824864.83	0.0018	0.004553
Mg	24	3	He	9082.041	16.4139	814880.93	0.0018	0.004553
Mg	24	3	He	9065.852	16.3846	817698.66	0.0018	0.004553
Al	27	3	He	-0.883	0.0016	80.00	0.0006	0.002085
Al	27	3	He	-0.812	0.0016	80.00	0.0006	0.002085
Al	27	3	He	1.581	0.003	150.01	0.0006	0.002085
K	39	3	He	3583.197	4.6074	234698.98	0.0012	0.4112
K	39	3	He	3623.123	4.6541	231058.36	0.0012	0.4112
K	39	3	He	3601.895	4.6293	231030.60	0.0012	0.4112
Ca	44	3	He	42486.723	2.8736	146380.88	0.0001	0.003322
Ca	44	3	He	43206.758	2.9222	145077.44	0.0001	0.003322
Ca	44	3	He	43426.922	2.9371	146581.27	0.0001	0.003322
Ti	47	3	He	0.369	0.0002	10.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	-0.358	0.0242	1232.06	0.0213	0.0318
V	51	3	He	-0.397	0.0234	1160.06	0.0213	0.0318
V	51	3	He	-0.38	0.0237	1184.06	0.0213	0.0318
Cr	52	3	He	-0.086	0.0404	2060.21	0.0294	0.04297
Cr	52	3	He	-0.187	0.0375	1860.18	0.0294	0.04297
Cr	52	3	He	-0.071	0.0409	2040.22	0.0294	0.04297
Mn	55	3	He	284.198	3.536	180122.69	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	286.947	3.5702	177243.94	0.0124	0.002801
Mn	55	3	He	289.709	3.6045	179887.59	0.0124	0.002801
Fe	57	3	He	12841.811	7.3502	374416.79	0.0006	0.002732
Fe	57	3	He	13164.733	7.5349	374078.35	0.0006	0.002732
Fe	57	3	He	13003.252	7.4426	371431.05	0.0006	0.002732
Co	59	3	He	0.055	0.0067	340.02	0.0549	0.003644
Co	59	3	He	0.036	0.0056	280.01	0.0549	0.003644
Co	59	3	He	0.032	0.0054	270.01	0.0549	0.003644
Ni	60	3	He	-1.337	0.0017	150.01	0.0093	0.01413
Ni	60	3	He	-1.146	0.0035	300.01	0.0093	0.01413
Ni	60	3	He	-1.119	0.0037	320.01	0.0093	0.01413
Cu	63	3	He	-0.11	0.0063	550.03	0.0274	0.009321
Cu	63	3	He	-0.09	0.0069	590.03	0.0274	0.009321
Cu	63	3	He	-0.007	0.0091	780.05	0.0274	0.009321
Zn	66	3	He	0.763	0.0083	720.04	0.0031	0.005913
Zn	66	3	He	1.52	0.0106	910.06	0.0031	0.005913
Zn	66	3	He	1.008	0.009	770.05	0.0031	0.005913
As	75	3	He	0.001	0.0009	76.00	0.0021	0.0008698
As	75	3	He	0.05	0.001	84.00	0.0021	0.0008698
As	75	3	He	-0.1	0.0007	56.00	0.0021	0.0008698
Sr	88	3	He	86.061	0.7579	67109.76	0.0088	0.0006843
Sr	88	3	He	84.445	0.7437	65874.03	0.0088	0.0006843
Sr	88	3	He	84.78	0.7467	65502.30	0.0088	0.0006843
Mo	98	3	He	-0.052	0.0007	60.00	0.0219	0.001827
Mo	98	3	He	-0.047	0.0008	70.00	0.0219	0.001827
Mo	98	3	He	-0.057	0.0006	50.00	0.0219	0.001827
Ag	107	3	He	-0.011	0.0006	50.00	0.047	0.001064
Ag	107	3	He	-0.015	0.0003	30.00	0.047	0.001064
Ag	107	3	He	-0.011	0.0006	50.00	0.047	0.001064
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Cd	111	3	He	0.001	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Sn	120	3	He	0.064	0.0158	1400.12	0.0154	0.01483
Sn	120	3	He	-0.017	0.0146	1290.10	0.0154	0.01483
Sn	120	3	He	0.162	0.0173	1520.13	0.0154	0.01483
Sb	121	3	He	0.021	0.0006	50.00	0.0143	0.0002661
Sb	121	3	He	0.005	0.0003	30.00	0.0143	0.0002661
Sb	121	3	He	0.005	0.0003	30.00	0.0143	0.0002661
Ba	137	3	He	2.048	0.0101	890.07	0.0048	0.0002665
Ba	137	3	He	1.787	0.0088	780.06	0.0048	0.0002665
Ba	137	3	He	1.662	0.0082	720.04	0.0048	0.0002665
Tl	205	3	He	-0.096	0.0004	160.01	0.0246	0.002755
Tl	205	3	He	-0.096	0.0004	160.01	0.0246	0.002755
Tl	205	3	He	-0.098	0.0003	140.01	0.0246	0.002755
Pb	208	3	He	0.021	0.0028	640.04	0.0324	0.002158
Pb	208	3	He	0.03	0.0031	670.04	0.0324	0.002158
Pb	208	3	He	0.015	0.0027	560.03	0.0324	0.002158
U	238	3	He	0.025	0.0017	530.03	0.0492	0.0004023
U	238	3	He	0.028	0.0018	560.04	0.0492	0.0004023
U	238	3	He	0.016	0.0012	380.02	0.0492	0.0004023
Sc	45	1	No Gas			2509168.24		
Sc	45	1	No Gas			2572258.24		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2566811.68		
Ge	72	1	No Gas			1223145.06		
Ge	72	1	No Gas			1246973.65		
Ge	72	1	No Gas			1250232.01		
Sc	45	2	H2			200708.67		
Sc	45	2	H2			202368.90		
Sc	45	2	H2			203780.25		
Ge	72	2	H2			167028.55		
Ge	72	2	H2			168942.07		
Ge	72	2	H2			168057.30		
In	115	2	H2			402054.02		
In	115	2	H2			398754.60		
In	115	2	H2			402376.63		
Sc	45	3	He			50939.79		
Sc	45	3	He			49645.81		
Sc	45	3	He			49906.41		
Ge	72	3	He			87226.01		
Ge	72	3	He			86008.49		
Ge	72	3	He			85486.39		
In	115	3	He			88551.68		
In	115	3	He			88582.14		
In	115	3	He			87736.44		
Tb	159	3	He			403750.78		
Tb	159	3	He			401760.38		
Tb	159	3	He			407106.05		
Bi	209	3	He			320603.96		
Bi	209	3	He			316613.16		
Bi	209	3	He			318407.98		

Quantitation Report

Data File Name	132SMPL.d
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Sample Name	410-137128-I-19-A @5
Sample Type	Sample
Comment	E7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

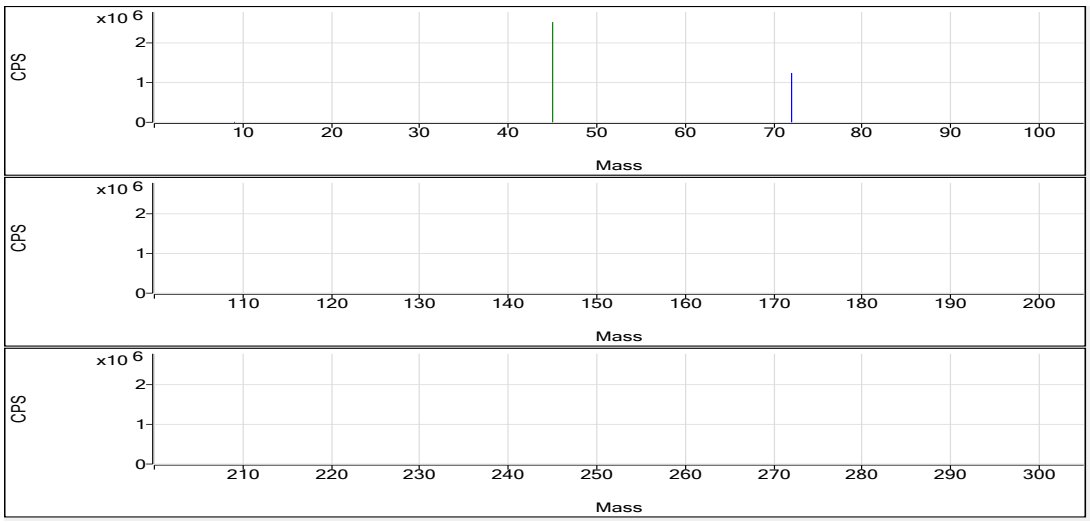
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.039	ppb	N/A	14.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.003	ppb	N/A	5.78	0.0000	Pulse	1.5000	3
Na	23	45	He	3524.098	ppb	3.1	651041.85	12.9784	Pulse	0.1000	3
Mg	24	45	He	17941.372	ppb	2.1	1626648.51	32.4208	Analog	0.1000	3
Al	27	45	He	0.191	ppb	338.0	110.00	0.0022	Pulse	0.1000	3
K	39	45	He	6960.288	ppb	2.2	429572.38	8.5622	Pulse	0.1000	3
Ca	44	45	He	78690.082	ppb	2.3	266868.36	5.3194	Pulse	0.1000	3
Ti	47	45	He	0.246	ppb	173.2	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	-0.481	ppb	N/A	1081.38	0.0216	Pulse	0.5000	3
Cr	52	45	He	0.048	ppb	96.5	2226.91	0.0444	Pulse	0.1000	3
Mn	55	45	He	552.511	ppb	2.7	344726.98	6.8717	Pulse	0.1000	3
Fe	57	45	He	25081.629	ppb	2.6	720050.25	14.3532	Pulse	0.1000	3
Co	59	45	He	0.091	ppb	48.3	433.35	0.0087	Pulse	0.1000	3
Ni	60	72	He	-1.162	ppb	N/A	286.68	0.0033	Pulse	0.1000	3
Cu	63	72	He	-0.010	ppb	N/A	776.72	0.0091	Pulse	0.1000	3
Zn	66	72	He	1.074	ppb	19.4	790.05	0.0092	Pulse	0.1000	3
As	75	72	He	0.021	ppb	329.0	78.67	0.0009	Pulse	0.5000	3
Sr	88	115	He	159.130	ppb	0.8	123039.10	1.4008	Pulse	0.1000	3
Mo	98	115	He	-0.047	ppb	N/A	70.00	0.0008	Pulse	0.1000	3
Ag	107	115	He	-0.004	ppb	N/A	76.67	0.0009	Pulse	0.1000	3
Cd	111	115	He	-0.009	ppb	N/A	1.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.153	ppb	12.1	1510.13	0.0172	Pulse	0.1000	3
Sb	121	115	He	0.000	ppb	N/A	23.33	0.0003	Pulse	0.1000	3
Ba	137	115	He	3.343	ppb	6.0	1426.79	0.0162	Pulse	0.1000	3
Tl	205	159	He	-0.098	ppb	N/A	140.01	0.0003	Pulse	0.1000	3
Pb	208	159	He	0.022	ppb	36.4	1160.07	0.0029	Pulse	0.1000	3
U	238	209	He	0.058	ppb	8.0	1023.41	0.0032	Pulse	0.1000	3

ISTD Table:

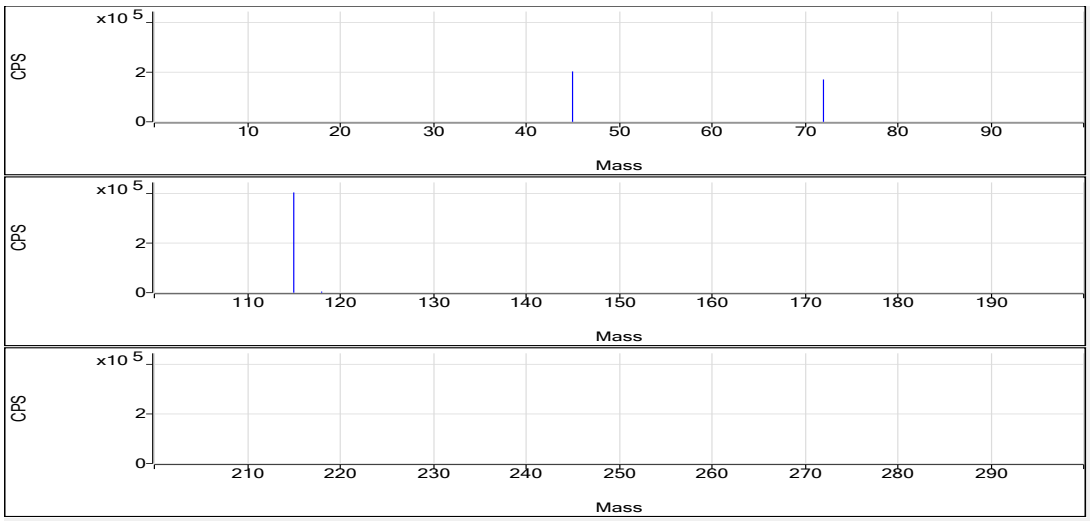
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2510179.76	0.9	96.3	Analog	0.1000	3
No Gas	Ge	72	1235446.02	0.7	95.9	Pulse	0.1000	3
H2	Sc	45	202127.37	1.7	98.1	Pulse	0.1000	3
H2	Ge	72	169875.21	0.5	104.4	Pulse	0.1000	3
H2	In	115	402141.18	0.7	99.6	Pulse	0.1000	3
He	Sc	45	50187.52	2.4	98.0	Pulse	0.1000	3
He	Ge	72	85851.12	2.2	104.9	Pulse	0.1000	3
He	In	115	87833.84	0.5	100.2	Pulse	0.1000	3
He	Tb	159	404551.01	0.3	100.7	Pulse	0.1000	3
He	Bi	209	316045.00	1.0	103.2	Pulse	0.1000	3

No Gas

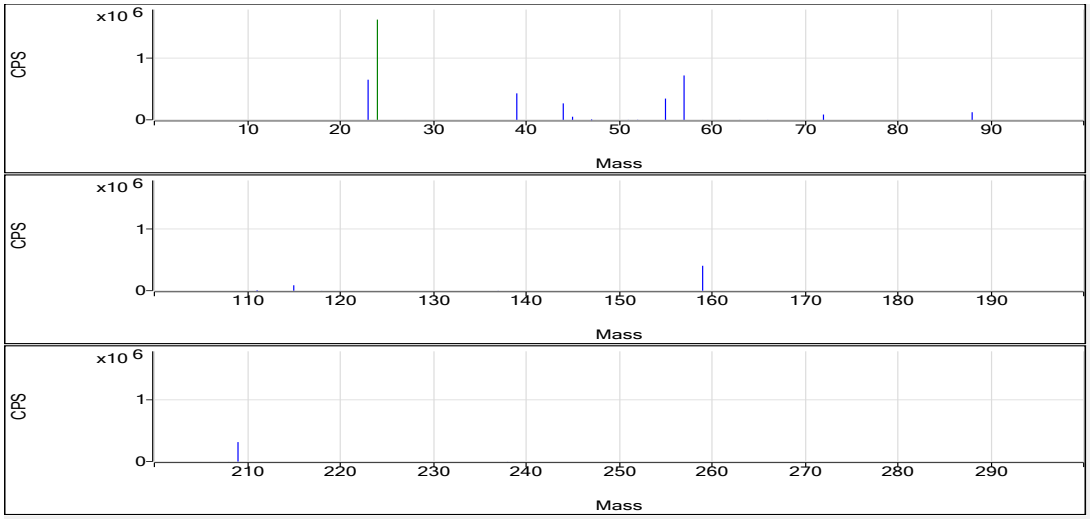


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.036	0	20.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.04	0	12.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.04	0	12.00	0.0007	3.404E-05
Se	78	2	H2	0.008	0	6.67	0.0004	3.546E-05
Se	78	2	H2	-0.036	0	3.33	0.0004	3.546E-05
Se	78	2	H2	0.018	0	7.33	0.0004	3.546E-05
Na	23	3	He	3473.407	12.7977	652437.45	0.0036	0.4171
Na	23	3	He	3450.275	12.7153	646055.15	0.0036	0.4171
Na	23	3	He	3648.613	13.4222	654632.96	0.0036	0.4171
Mg	24	3	He	17928.864	32.3982	1651687.94	0.0018	0.004553
Mg	24	3	He	17569.291	31.7486	1613126.69	0.0018	0.004553
Mg	24	3	He	18325.962	33.1157	1615130.91	0.0018	0.004553
Al	27	3	He	-0.548	0.0018	90.00	0.0006	0.002085
Al	27	3	He	0.476	0.0024	120.00	0.0006	0.002085
Al	27	3	He	0.645	0.0025	120.01	0.0006	0.002085
K	39	3	He	6885.633	8.4748	432051.09	0.0012	0.4112
K	39	3	He	6860.602	8.4455	429109.49	0.0012	0.4112
K	39	3	He	7134.627	8.7664	427556.56	0.0012	0.4112
Ca	44	3	He	77587.048	5.2449	267388.41	0.0001	0.003322
Ca	44	3	He	77721.086	5.2539	266949.74	0.0001	0.003322
Ca	44	3	He	80762.111	5.4594	266266.93	0.0001	0.003322
Ti	47	3	He	0.738	0.0004	20.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	-0.51	0.021	1068.05	0.0213	0.0318
V	51	3	He	-0.529	0.0205	1044.04	0.0213	0.0318
V	51	3	He	-0.404	0.0232	1132.05	0.0213	0.0318
Cr	52	3	He	0	0.043	2190.23	0.0294	0.04297
Cr	52	3	He	0.092	0.0457	2320.27	0.0294	0.04297
Cr	52	3	He	0.052	0.0445	2170.24	0.0294	0.04297
Mn	55	3	He	546.999	6.8032	346830.74	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	541.177	6.7308	341987.38	0.0124	0.002801
Mn	55	3	He	569.357	7.0811	345362.81	0.0124	0.002801
Fe	57	3	He	24692.33	14.1305	720382.33	0.0006	0.002732
Fe	57	3	He	24727.753	14.1507	718990.69	0.0006	0.002732
Fe	57	3	He	25824.804	14.7784	720777.72	0.0006	0.002732
Co	59	3	He	0.109	0.0096	490.03	0.0549	0.003644
Co	59	3	He	0.041	0.0059	300.01	0.0549	0.003644
Co	59	3	He	0.124	0.0105	510.02	0.0549	0.003644
Ni	60	3	He	-1.173	0.0032	280.01	0.0093	0.01413
Ni	60	3	He	-1.177	0.0032	280.01	0.0093	0.01413
Ni	60	3	He	-1.136	0.0036	300.02	0.0093	0.01413
Cu	63	3	He	-0.028	0.0086	740.05	0.0274	0.009321
Cu	63	3	He	-0.019	0.0088	770.05	0.0274	0.009321
Cu	63	3	He	0.017	0.0098	820.06	0.0274	0.009321
Zn	66	3	He	0.9	0.0087	750.04	0.0031	0.005913
Zn	66	3	He	1.018	0.009	790.05	0.0031	0.005913
Zn	66	3	He	1.304	0.0099	830.05	0.0031	0.005913
As	75	3	He	0.004	0.0009	76.00	0.0021	0.0008698
As	75	3	He	0.096	0.0011	94.00	0.0021	0.0008698
As	75	3	He	-0.038	0.0008	66.00	0.0021	0.0008698
Sr	88	3	He	157.82	1.3893	122627.87	0.0088	0.0006843
Sr	88	3	He	159.274	1.4021	123063.46	0.0088	0.0006843
Sr	88	3	He	160.295	1.4111	123425.96	0.0088	0.0006843
Mo	98	3	He	-0.026	0.0012	110.00	0.0219	0.001827
Mo	98	3	He	-0.047	0.0008	70.00	0.0219	0.001827
Mo	98	3	He	-0.068	0.0003	30.00	0.0219	0.001827
Ag	107	3	He	-0.008	0.0007	60.00	0.047	0.001064
Ag	107	3	He	-0.008	0.0007	60.00	0.047	0.001064
Ag	107	3	He	0.004	0.0013	110.01	0.047	0.001064
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Sn	120	3	He	0.162	0.0173	1530.14	0.0154	0.01483
Sn	120	3	He	0.132	0.0169	1480.13	0.0154	0.01483
Sn	120	3	He	0.165	0.0174	1520.13	0.0154	0.01483
Sb	121	3	He	0.005	0.0003	30.00	0.0143	0.0002661
Sb	121	3	He	0.013	0.0005	40.00	0.0143	0.0002661
Sb	121	3	He	-0.019	0	0.00	0.0143	0.0002661
Ba	137	3	He	3.548	0.0172	1520.14	0.0048	0.0002665
Ba	137	3	He	3.33	0.0162	1420.12	0.0048	0.0002665
Ba	137	3	He	3.15	0.0153	1340.12	0.0048	0.0002665
Tl	205	3	He	-0.099	0.0003	130.01	0.0246	0.002755
Tl	205	3	He	-0.101	0.0003	110.00	0.0246	0.002755
Tl	205	3	He	-0.094	0.0004	180.01	0.0246	0.002755
Pb	208	3	He	0.031	0.0032	740.05	0.0324	0.002158
Pb	208	3	He	0.02	0.0028	650.04	0.0324	0.002158
Pb	208	3	He	0.015	0.0027	560.03	0.0324	0.002158
U	238	3	He	0.061	0.0034	1080.08	0.0492	0.0004023
U	238	3	He	0.06	0.0033	1060.09	0.0492	0.0004023
U	238	3	He	0.052	0.003	930.06	0.0492	0.0004023
Sc	45	1	No Gas			2521215.59		
Sc	45	1	No Gas			2482985.59		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2526338.09		
Ge	72	1	No Gas			1244667.64		
Ge	72	1	No Gas			1229143.34		
Ge	72	1	No Gas			1232527.09		
Sc	45	2	H2			205645.33		
Sc	45	2	H2			198791.01		
Sc	45	2	H2			201945.76		
Ge	72	2	H2			170799.31		
Ge	72	2	H2			169302.15		
Ge	72	2	H2			169524.16		
In	115	2	H2			404045.62		
In	115	2	H2			398994.02		
In	115	2	H2			403383.90		
Sc	45	3	He			50980.79		
Sc	45	3	He			50809.43		
Sc	45	3	He			48772.34		
Ge	72	3	He			86441.13		
Ge	72	3	He			87417.37		
Ge	72	3	He			83694.85		
In	115	3	He			88270.24		
In	115	3	He			87777.20		
In	115	3	He			87474.51		
Tb	159	3	He			405793.47		
Tb	159	3	He			404810.35		
Tb	159	3	He			403049.21		
Bi	209	3	He			318598.34		
Bi	209	3	He			317057.07		
Bi	209	3	He			312479.60		

Quantitation Report

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Sample Name	410-137128-L-5-A @5
Sample Type	Sample
Comment	E7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

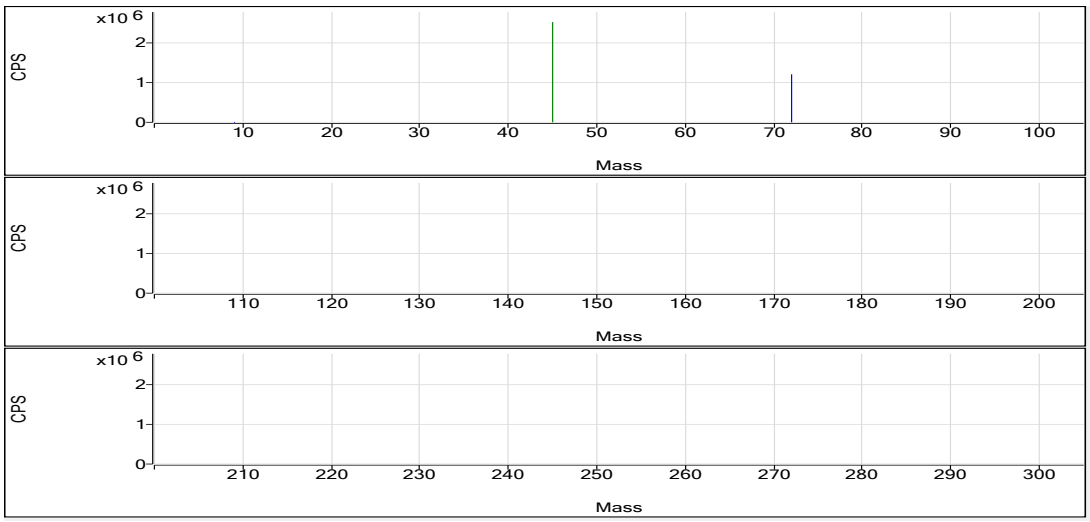
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.038	ppb	N/A	16.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.051	ppb	N/A	2.22	0.0000	Pulse	1.5000	3
Na	23	45	He	2735.049	ppb	0.8	506922.75	10.1659	Pulse	0.1000	3
Mg	24	45	He	17477.574	ppb	0.3	1574935.97	31.5829	Analog	0.1000	3
Al	27	45	He	-0.134	ppb	N/A	100.00	0.0020	Pulse	0.1000	3
K	39	45	He	5839.033	ppb	0.9	361479.85	7.2491	Pulse	0.1000	3
Ca	44	45	He	79444.767	ppb	0.7	267797.13	5.3704	Pulse	0.1000	3
Ti	47	45	He	0.125	ppb	173.2	3.33	0.0001	Pulse	0.1000	3
V	51	45	He	-0.410	ppb	N/A	1150.72	0.0231	Pulse	0.5000	3
Cr	52	45	He	-0.001	ppb	N/A	2140.25	0.0429	Pulse	0.1000	3
Mn	55	45	He	1164.808	ppb	0.5	722245.33	14.4838	Pulse	0.1000	3
Fe	57	45	He	66.623	ppb	3.3	2036.88	0.0409	Pulse	0.1000	3
Co	59	45	He	0.004	ppb	587.0	193.34	0.0039	Pulse	0.1000	3
Ni	60	72	He	-1.077	ppb	N/A	353.35	0.0041	Pulse	0.1000	3
Cu	63	72	He	-0.088	ppb	N/A	590.03	0.0069	Pulse	0.1000	3
Zn	66	72	He	1.010	ppb	68.4	770.05	0.0090	Pulse	0.1000	3
As	75	72	He	0.005	ppb	2140.9	75.33	0.0009	Pulse	0.5000	3
Sr	88	115	He	196.819	ppb	0.7	153044.67	1.7325	Pulse	0.1000	3
Mo	98	115	He	-0.056	ppb	N/A	53.33	0.0006	Pulse	0.1000	3
Ag	107	115	He	-0.007	ppb	N/A	66.67	0.0008	Pulse	0.1000	3
Cd	111	115	He	-0.009	ppb	N/A	1.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.027	ppb	139.6	1346.78	0.0152	Pulse	0.1000	3
Sb	121	115	He	0.005	ppb	152.6	30.00	0.0003	Pulse	0.1000	3
Ba	137	115	He	5.252	ppb	7.7	2240.26	0.0254	Pulse	0.1000	3
Tl	205	159	He	-0.097	ppb	N/A	146.68	0.0004	Pulse	0.1000	3
Pb	208	159	He	-0.001	ppb	N/A	856.71	0.0021	Pulse	0.1000	3
U	238	209	He	-0.006	ppb	N/A	40.00	0.0001	Pulse	0.1000	3

ISTD Table:

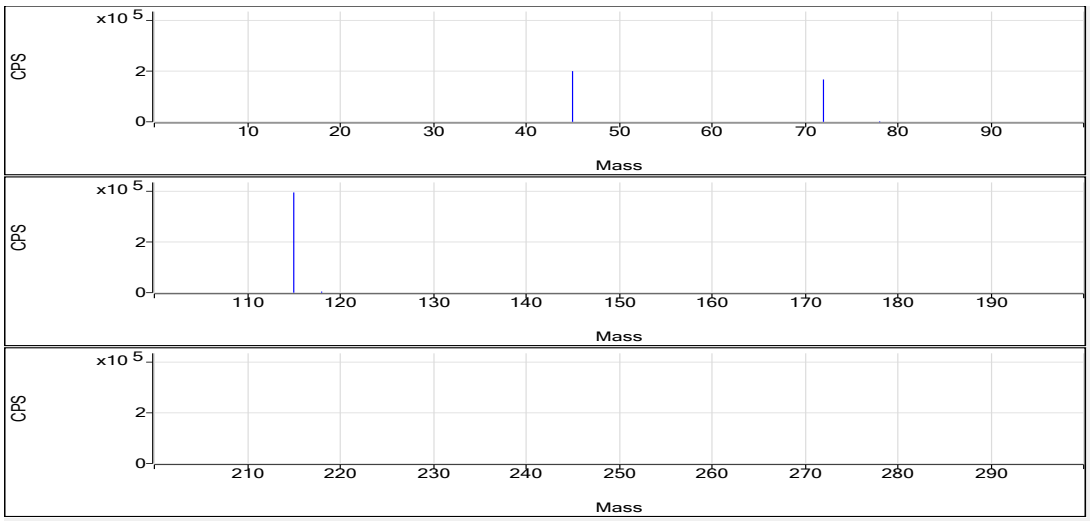
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2518211.37	1.4	96.6	Analog	0.1000	3
No Gas	Ge	72	1205948.19	1.8	93.6	Pulse	0.1000	3
H2	Sc	45	200898.70	1.5	97.5	Pulse	0.1000	3
H2	Ge	72	167758.07	0.8	103.1	Pulse	0.1000	3
H2	In	115	397137.23	0.5	98.4	Pulse	0.1000	3
He	Sc	45	49866.36	0.5	97.4	Pulse	0.1000	3
He	Ge	72	85545.70	1.0	104.5	Pulse	0.1000	3
He	In	115	88339.67	0.5	100.8	Pulse	0.1000	3
He	Tb	159	402746.24	0.8	100.3	Pulse	0.1000	3
He	Bi	209	318151.10	0.4	103.9	Pulse	0.1000	3

No Gas

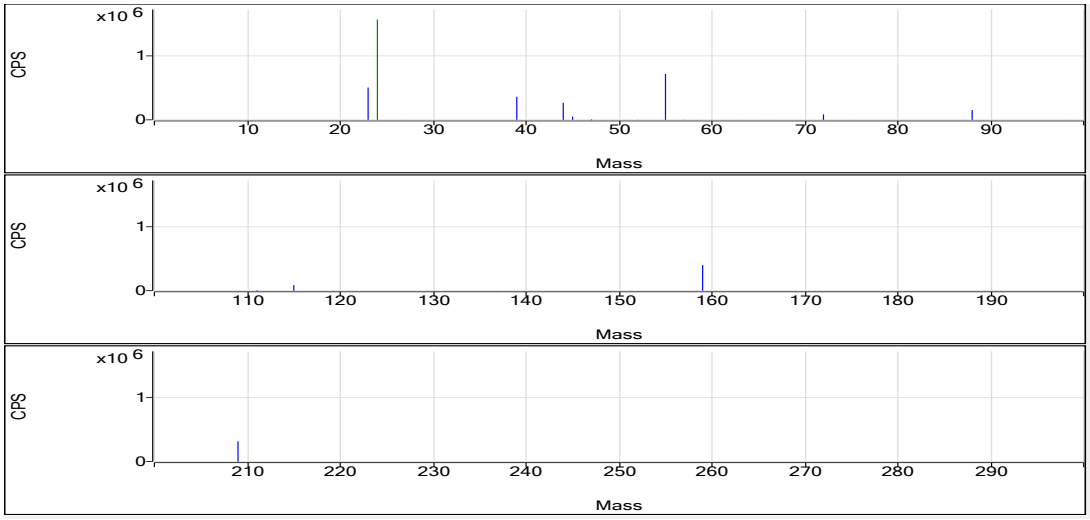


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.039	0	14.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.039	0	14.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.036	0	20.00	0.0007	3.404E-05
Se	78	2	H2	-0.036	0	3.33	0.0004	3.546E-05
Se	78	2	H2	-0.072	0	0.67	0.0004	3.546E-05
Se	78	2	H2	-0.044	0	2.67	0.0004	3.546E-05
Na	23	3	He	2725.477	10.1318	506457.65	0.0036	0.4171
Na	23	3	He	2718.913	10.1084	505794.41	0.0036	0.4171
Na	23	3	He	2760.755	10.2575	508516.20	0.0036	0.4171
Mg	24	3	He	17518.657	31.6571	1582443.57	0.0018	0.004553
Mg	24	3	He	17491.326	31.6077	1581558.10	0.0018	0.004553
Mg	24	3	He	17422.739	31.4838	1560806.23	0.0018	0.004553
Al	27	3	He	-0.144	0.002	100.00	0.0006	0.002085
Al	27	3	He	-0.834	0.0016	80.00	0.0006	0.002085
Al	27	3	He	0.577	0.0024	120.01	0.0006	0.002085
K	39	3	He	5780.461	7.1805	358934.02	0.0012	0.4112
K	39	3	He	5846.335	7.2577	363153.63	0.0012	0.4112
K	39	3	He	5890.304	7.3092	362351.91	0.0012	0.4112
Ca	44	3	He	78844.634	5.3298	266423.10	0.0001	0.003322
Ca	44	3	He	79542.913	5.377	269050.46	0.0001	0.003322
Ca	44	3	He	79946.754	5.4043	267917.83	0.0001	0.003322
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.376	0.0002	10.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	-0.44	0.0224	1122.05	0.0213	0.0318
V	51	3	He	-0.411	0.0231	1154.05	0.0213	0.0318
V	51	3	He	-0.38	0.0237	1176.05	0.0213	0.0318
Cr	52	3	He	-0.087	0.0404	2020.24	0.0294	0.04297
Cr	52	3	He	-0.041	0.0418	2090.22	0.0294	0.04297
Cr	52	3	He	0.124	0.0466	2310.28	0.0294	0.04297
Mn	55	3	He	1164.785	14.4836	723990.22	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1158.91	14.4105	721061.40	0.0124	0.002801
Mn	55	3	He	1170.728	14.5574	721684.36	0.0124	0.002801
Fe	57	3	He	64.462	0.0396	1980.18	0.0006	0.002732
Fe	57	3	He	66.491	0.0408	2040.24	0.0006	0.002732
Fe	57	3	He	68.917	0.0422	2090.23	0.0006	0.002732
Co	59	3	He	-0.004	0.0034	170.01	0.0549	0.003644
Co	59	3	He	0.032	0.0054	270.01	0.0549	0.003644
Co	59	3	He	-0.015	0.0028	140.01	0.0549	0.003644
Ni	60	3	He	-1.085	0.0041	350.02	0.0093	0.01413
Ni	60	3	He	-1.019	0.0047	400.02	0.0093	0.01413
Ni	60	3	He	-1.127	0.0037	310.01	0.0093	0.01413
Cu	63	3	He	-0.057	0.0078	670.03	0.0274	0.009321
Cu	63	3	He	-0.11	0.0063	540.03	0.0274	0.009321
Cu	63	3	He	-0.099	0.0066	560.03	0.0274	0.009321
Zn	66	3	He	0.639	0.0079	680.04	0.0031	0.005913
Zn	66	3	He	0.584	0.0077	660.04	0.0031	0.005913
Zn	66	3	He	1.808	0.0115	970.07	0.0031	0.005913
As	75	3	He	0.048	0.001	84.00	0.0021	0.0008698
As	75	3	He	-0.122	0.0006	52.00	0.0021	0.0008698
As	75	3	He	0.09	0.0011	90.00	0.0021	0.0008698
Sr	88	3	He	197.787	1.741	154172.97	0.0088	0.0006843
Sr	88	3	He	195.34	1.7195	152456.68	0.0088	0.0006843
Sr	88	3	He	197.33	1.737	152504.36	0.0088	0.0006843
Mo	98	3	He	-0.042	0.0009	80.00	0.0219	0.001827
Mo	98	3	He	-0.068	0.0003	30.00	0.0219	0.001827
Mo	98	3	He	-0.057	0.0006	50.00	0.0219	0.001827
Ag	107	3	He	-0.006	0.0008	70.00	0.047	0.001064
Ag	107	3	He	0.004	0.0012	110.01	0.047	0.001064
Ag	107	3	He	-0.018	0.0002	20.00	0.047	0.001064
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Sn	120	3	He	0.049	0.0156	1380.12	0.0154	0.01483
Sn	120	3	He	0.048	0.0156	1380.11	0.0154	0.01483
Sn	120	3	He	-0.016	0.0146	1280.11	0.0154	0.01483
Sb	121	3	He	0.005	0.0003	30.00	0.0143	0.0002661
Sb	121	3	He	0.013	0.0005	40.00	0.0143	0.0002661
Sb	121	3	He	-0.003	0.0002	20.00	0.0143	0.0002661
Ba	137	3	He	5.474	0.0264	2340.28	0.0048	0.0002665
Ba	137	3	He	4.783	0.0231	2050.21	0.0048	0.0002665
Ba	137	3	He	5.498	0.0265	2330.28	0.0048	0.0002665
Tl	205	3	He	-0.096	0.0004	160.01	0.0246	0.002755
Tl	205	3	He	-0.097	0.0004	150.01	0.0246	0.002755
Tl	205	3	He	-0.099	0.0003	130.01	0.0246	0.002755
Pb	208	3	He	0.001	0.0022	430.02	0.0324	0.002158
Pb	208	3	He	0.003	0.0022	480.03	0.0324	0.002158
Pb	208	3	He	-0.007	0.0019	400.02	0.0324	0.002158
U	238	3	He	-0.007	0.0001	20.00	0.0492	0.0004023
U	238	3	He	-0.004	0.0002	60.00	0.0492	0.0004023
U	238	3	He	-0.006	0.0001	40.00	0.0492	0.0004023
Sc	45	1	No Gas			2504616.37		
Sc	45	1	No Gas			2492011.37		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2558006.37		
Ge	72	1	No Gas			1183166.47		
Ge	72	1	No Gas			1207690.37		
Ge	72	1	No Gas			1226987.72		
Sc	45	2	H2			201965.45		
Sc	45	2	H2			203203.92		
Sc	45	2	H2			197526.74		
Ge	72	2	H2			168108.30		
Ge	72	2	H2			168908.20		
Ge	72	2	H2			166257.71		
In	115	2	H2			398646.40		
In	115	2	H2			395073.12		
In	115	2	H2			397692.18		
Sc	45	3	He			49987.03		
Sc	45	3	He			50037.11		
Sc	45	3	He			49574.93		
Ge	72	3	He			86360.11		
Ge	72	3	He			85656.97		
Ge	72	3	He			84620.01		
In	115	3	He			88561.59		
In	115	3	He			88672.97		
In	115	3	He			87806.90		
Tb	159	3	He			400365.42		
Tb	159	3	He			401569.33		
Tb	159	3	He			406303.98		
Bi	209	3	He			319369.53		
Bi	209	3	He			316901.64		
Bi	209	3	He			318182.14		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

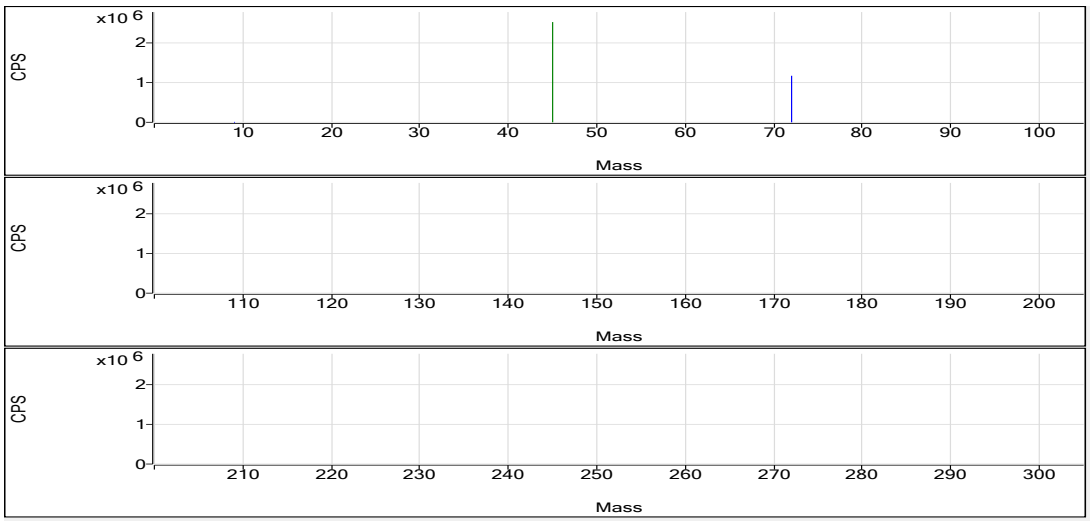
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.039	ppb	N/A	14.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.049	ppb	N/A	2.22	0.0000	Pulse	1.5000	3
Na	23	45	He	-15.004	ppb	N/A	18051.56	0.3636	Pulse	0.1000	3
Mg	24	45	He	2.078	ppb	41.9	413.36	0.0083	Pulse	0.1000	3
Al	27	45	He	-1.616	ppb	N/A	56.67	0.0011	Pulse	0.1000	3
K	39	45	He	12.923	ppb	59.2	21169.22	0.4263	Pulse	0.1000	3
Ca	44	45	He	11.412	ppb	133.9	203.34	0.0041	Pulse	0.1000	3
Ti	47	45	He	0.000	ppb	N/A	0.00	0.0000	Pulse	0.1000	3
V	51	45	He	-0.311	ppb	N/A	1250.73	0.0252	Pulse	0.5000	3
Cr	52	45	He	0.016	ppb	892.1	2156.90	0.0434	Pulse	0.1000	3
Mn	55	45	He	0.233	ppb	18.1	283.35	0.0057	Pulse	0.1000	3
Fe	57	45	He	-0.551	ppb	N/A	120.00	0.0024	Pulse	0.1000	3
Co	59	45	He	-0.023	ppb	N/A	120.00	0.0024	Pulse	0.1000	3
Ni	60	72	He	-1.249	ppb	N/A	206.68	0.0025	Pulse	0.1000	3
Cu	63	72	He	-0.101	ppb	N/A	533.36	0.0065	Pulse	0.1000	3
Zn	66	72	He	0.111	ppb	200.4	510.03	0.0063	Pulse	0.1000	3
As	75	72	He	0.086	ppb	51.6	86.00	0.0011	Pulse	0.5000	3
Sr	88	115	He	0.056	ppb	53.8	103.34	0.0012	Pulse	0.1000	3
Mo	98	115	He	-0.057	ppb	N/A	50.00	0.0006	Pulse	0.1000	3
Ag	107	115	He	-0.004	ppb	N/A	76.67	0.0009	Pulse	0.1000	3
Cd	111	115	He	-0.004	ppb	N/A	3.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.120	ppb	91.9	1460.15	0.0167	Pulse	0.1000	3
Sb	121	115	He	0.000	ppb	N/A	23.33	0.0003	Pulse	0.1000	3
Ba	137	115	He	0.001	ppb	7309.7	23.33	0.0003	Pulse	0.1000	3
Tl	205	159	He	-0.098	ppb	N/A	136.67	0.0003	Pulse	0.1000	3
Pb	208	159	He	-0.014	ppb	N/A	683.37	0.0017	Pulse	0.1000	3
U	238	209	He	-0.006	ppb	N/A	26.67	0.0001	Pulse	0.1000	3

ISTD Table:

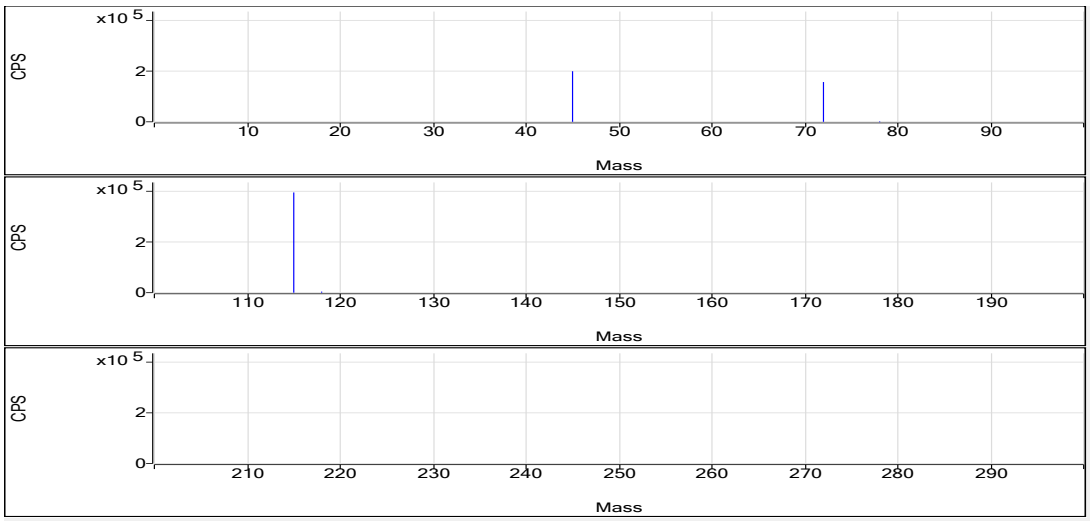
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2532117.56	0.5	97.1	Analog	0.1000	3
No Gas	Ge	72	1175379.15	0.9	91.2	Pulse	0.1000	3
H2	Sc	45	199598.01	1.3	96.9	Pulse	0.1000	3
H2	Ge	72	156907.48	1.3	96.4	Pulse	0.1000	3
H2	In	115	395422.84	0.8	98.0	Pulse	0.1000	3
He	Sc	45	49672.38	2.4	97.0	Pulse	0.1000	3
He	Ge	72	81562.20	1.1	99.6	Pulse	0.1000	3
He	In	115	87393.34	1.8	99.7	Pulse	0.1000	3
He	Tb	159	397878.07	0.3	99.1	Pulse	0.1000	3
He	Bi	209	308898.52	0.0	100.9	Pulse	0.1000	3

No Gas

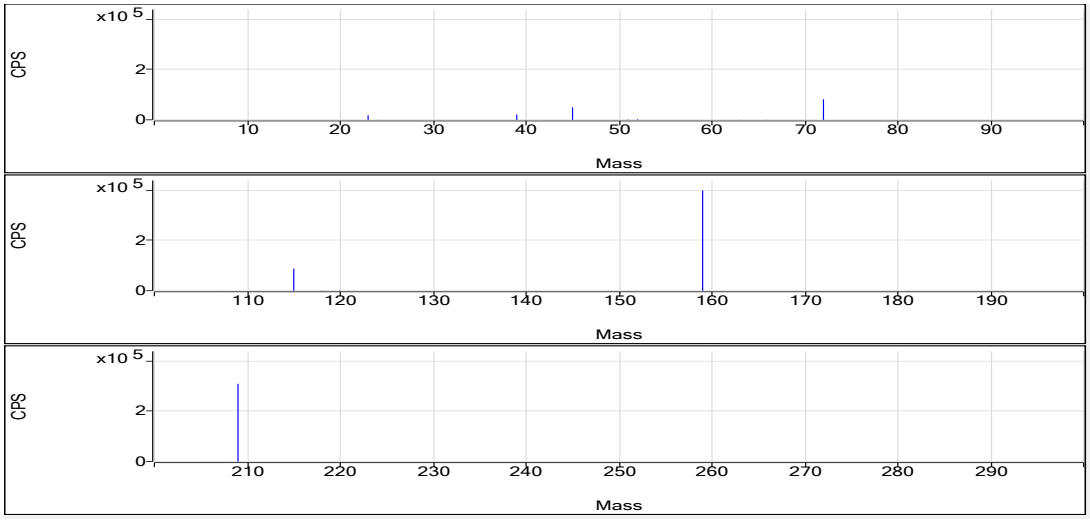


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.038	0	16.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.039	0	14.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.039	0	14.00	0.0007	3.404E-05
Se	78	2	H2	-0.061	0	1.33	0.0004	3.546E-05
Se	78	2	H2	-0.033	0	3.33	0.0004	3.546E-05
Se	78	2	H2	-0.052	0	2.00	0.0004	3.546E-05
Na	23	3	He	-17.185	0.3558	18131.72	0.0036	0.4171
Na	23	3	He	-17.101	0.3561	17610.98	0.0036	0.4171
Na	23	3	He	-10.725	0.3788	18411.99	0.0036	0.4171
Mg	24	3	He	2.911	0.0098	500.03	0.0018	0.004553
Mg	24	3	He	1.173	0.0067	330.02	0.0018	0.004553
Mg	24	3	He	2.149	0.0084	410.02	0.0018	0.004553
Al	27	3	He	-2.568	0.0006	30.00	0.0006	0.002085
Al	27	3	He	0.24	0.0022	110.00	0.0006	0.002085
Al	27	3	He	-2.519	0.0006	30.00	0.0006	0.002085
K	39	3	He	4.387	0.4163	21215.91	0.0012	0.4112
K	39	3	He	15.21	0.429	21215.97	0.0012	0.4112
K	39	3	He	19.172	0.4336	21075.79	0.0012	0.4112
Ca	44	3	He	6.021	0.0037	190.01	0.0001	0.003322
Ca	44	3	He	28.653	0.0053	260.01	0.0001	0.003322
Ca	44	3	He	-0.438	0.0033	160.01	0.0001	0.003322
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	-0.325	0.0249	1268.07	0.0213	0.0318
V	51	3	He	-0.372	0.0239	1182.06	0.0213	0.0318
V	51	3	He	-0.236	0.0268	1302.07	0.0213	0.0318
Cr	52	3	He	-0.053	0.0414	2110.23	0.0294	0.04297
Cr	52	3	He	0.175	0.0481	2380.27	0.0294	0.04297
Cr	52	3	He	-0.076	0.0407	1980.20	0.0294	0.04297
Mn	55	3	He	0.28	0.0063	320.02	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.198	0.0053	260.02	0.0124	0.002801
Mn	55	3	He	0.222	0.0056	270.01	0.0124	0.002801
Fe	57	3	He	-0.659	0.0024	120.00	0.0006	0.002732
Fe	57	3	He	-0.534	0.0024	120.00	0.0006	0.002732
Fe	57	3	He	-0.459	0.0025	120.00	0.0006	0.002732
Co	59	3	He	-0.02	0.0026	130.00	0.0549	0.003644
Co	59	3	He	0	0.0036	180.01	0.0549	0.003644
Co	59	3	He	-0.048	0.001	50.00	0.0549	0.003644
Ni	60	3	He	-1.235	0.0027	220.01	0.0093	0.01413
Ni	60	3	He	-1.204	0.003	240.01	0.0093	0.01413
Ni	60	3	He	-1.309	0.002	160.01	0.0093	0.01413
Cu	63	3	He	-0.101	0.0065	540.03	0.0274	0.009321
Cu	63	3	He	-0.111	0.0063	510.03	0.0274	0.009321
Cu	63	3	He	-0.092	0.0068	550.03	0.0274	0.009321
Zn	66	3	He	0.047	0.0061	500.03	0.0031	0.005913
Zn	66	3	He	0.358	0.007	570.03	0.0031	0.005913
Zn	66	3	He	-0.072	0.0057	460.02	0.0031	0.005913
As	75	3	He	0.035	0.0009	78.00	0.0021	0.0008698
As	75	3	He	0.111	0.0011	90.00	0.0021	0.0008698
As	75	3	He	0.113	0.0011	90.00	0.0021	0.0008698
Sr	88	3	He	0.088	0.0015	130.01	0.0088	0.0006843
Sr	88	3	He	0.053	0.0011	100.00	0.0088	0.0006843
Sr	88	3	He	0.028	0.0009	80.00	0.0088	0.0006843
Mo	98	3	He	-0.053	0.0007	60.00	0.0219	0.001827
Mo	98	3	He	-0.062	0.0005	40.00	0.0219	0.001827
Mo	98	3	He	-0.057	0.0006	50.00	0.0219	0.001827
Ag	107	3	He	-0.008	0.0007	60.00	0.047	0.001064
Ag	107	3	He	-0.006	0.0008	70.00	0.047	0.001064
Ag	107	3	He	0.002	0.0012	100.00	0.047	0.001064
Cd	111	3	He	0.001	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Sn	120	3	He	0.247	0.0186	1660.20	0.0154	0.01483
Sn	120	3	He	0.075	0.016	1390.13	0.0154	0.01483
Sn	120	3	He	0.04	0.0154	1330.11	0.0154	0.01483
Sb	121	3	He	0.005	0.0003	30.00	0.0143	0.0002661
Sb	121	3	He	0.006	0.0003	30.00	0.0143	0.0002661
Sb	121	3	He	-0.011	0.0001	10.00	0.0143	0.0002661
Ba	137	3	He	-0.032	0.0001	10.00	0.0048	0.0002665
Ba	137	3	He	-0.008	0.0002	20.00	0.0048	0.0002665
Ba	137	3	He	0.041	0.0005	40.00	0.0048	0.0002665
Tl	205	3	He	-0.094	0.0005	180.01	0.0246	0.002755
Tl	205	3	He	-0.1	0.0003	120.01	0.0246	0.002755
Tl	205	3	He	-0.101	0.0003	110.00	0.0246	0.002755
Pb	208	3	He	-0.007	0.0019	440.02	0.0324	0.002158
Pb	208	3	He	-0.011	0.0018	390.02	0.0324	0.002158
Pb	208	3	He	-0.022	0.0014	330.02	0.0324	0.002158
U	238	3	He	-0.006	0.0001	40.00	0.0492	0.0004023
U	238	3	He	-0.006	0.0001	30.00	0.0492	0.0004023
U	238	3	He	-0.008	0	10.00	0.0492	0.0004023
Sc	45	1	No Gas			2531084.49		
Sc	45	1	No Gas			2544856.52		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2520411.68		
Ge	72	1	No Gas			1186947.56		
Ge	72	1	No Gas			1167129.98		
Ge	72	1	No Gas			1172059.90		
Sc	45	2	H2			197455.56		
Sc	45	2	H2			198946.13		
Sc	45	2	H2			202392.34		
Ge	72	2	H2			154750.62		
Ge	72	2	H2			157279.66		
Ge	72	2	H2			158692.17		
In	115	2	H2			391839.21		
In	115	2	H2			396996.01		
In	115	2	H2			397433.31		
Sc	45	3	He			50960.17		
Sc	45	3	He			49454.71		
Sc	45	3	He			48602.27		
Ge	72	3	He			82558.48		
Ge	72	3	He			81290.31		
Ge	72	3	He			80837.81		
In	115	3	He			89105.55		
In	115	3	He			86991.70		
In	115	3	He			86105.45		
Tb	159	3	He			399059.99		
Tb	159	3	He			396599.06		
Tb	159	3	He			397975.15		
Bi	209	3	He			308916.46		
Bi	209	3	He			308844.66		
Bi	209	3	He			308934.45		

Quantitation Report

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Sample Type	CCV
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Auto Dilution	1.0000
Total Dilution	1.0000
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Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

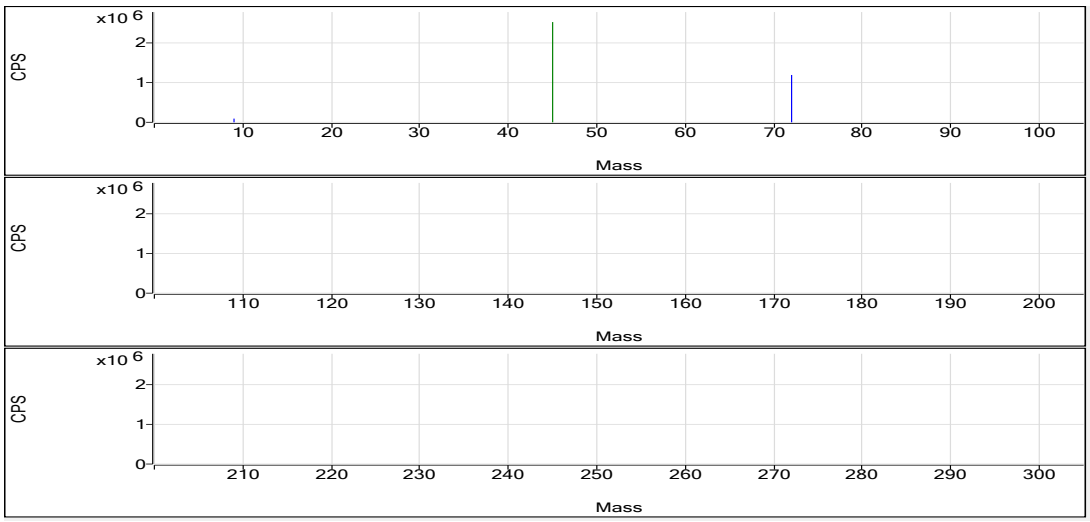
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.344	ppb	0.0	92806.67	0.0367	Pulse	0.5000	3
Se	78	72	H2	50.143	ppb	1.5	3560.00	0.0220	Pulse	1.5000	3
Na	23	45	He	4848.751	ppb	0.9	882602.41	17.7000	Pulse	0.1000	3
Mg	24	45	He	5064.292	ppb	0.5	456514.53	9.1547	Pulse	0.1000	3
Al	27	45	He	5079.170	ppb	1.1	147657.96	2.9612	Pulse	0.1000	3
K	39	45	He	5067.751	ppb	0.7	316440.41	6.3459	Pulse	0.1000	3
Ca	44	45	He	5187.471	ppb	1.1	17641.31	0.3538	Pulse	0.1000	3
Ti	47	45	He	5073.564	ppb	1.2	134554.71	2.6984	Pulse	0.1000	3
V	51	45	He	512.733	ppb	0.6	544916.27	10.9278	Pulse	0.5000	3
Cr	52	45	He	487.468	ppb	1.1	717029.44	14.3795	Pulse	0.1000	3
Mn	55	45	He	514.450	ppb	0.8	319076.96	6.3985	Pulse	0.1000	3
Fe	57	45	He	5097.898	ppb	0.1	145584.19	2.9195	Pulse	0.1000	3
Co	59	45	He	498.516	ppb	1.8	1364727.95	27.3659	Mix	0.1000	3
Ni	60	72	He	494.853	ppb	0.9	381507.36	4.6078	Pulse	0.1000	3
Cu	63	72	He	472.503	ppb	0.6	1073747.72	12.9682	Pulse	0.1000	3
Zn	66	72	He	499.414	ppb	1.5	127445.32	1.5393	Pulse	0.1000	3
As	75	72	He	505.552	ppb	0.6	89887.78	1.0857	Pulse	0.5000	3
Sr	88	115	He	51.808	ppb	1.9	39222.00	0.4565	Pulse	0.1000	3
Mo	98	115	He	51.319	ppb	1.8	96910.02	1.1280	Pulse	0.1000	3
Ag	107	115	He	50.472	ppb	1.8	204038.40	2.3752	Pulse	0.1000	3
Cd	111	115	He	51.101	ppb	0.4	23386.23	0.2722	Pulse	0.5000	3
Sn	120	115	He	52.681	ppb	1.5	71072.32	0.8272	Pulse	0.1000	3
Sb	121	115	He	52.765	ppb	1.3	64618.35	0.7522	Pulse	0.1000	3
Ba	137	115	He	522.613	ppb	1.1	214583.02	2.4977	Pulse	0.1000	3
Tl	205	159	He	50.814	ppb	0.6	502832.58	1.2508	Pulse	0.1000	3
Pb	208	159	He	51.072	ppb	0.3	666185.98	1.6571	Pulse	0.1000	3
U	238	209	He	50.326	ppb	0.4	765843.89	2.4788	Pulse	0.1000	3

ISTD Table:

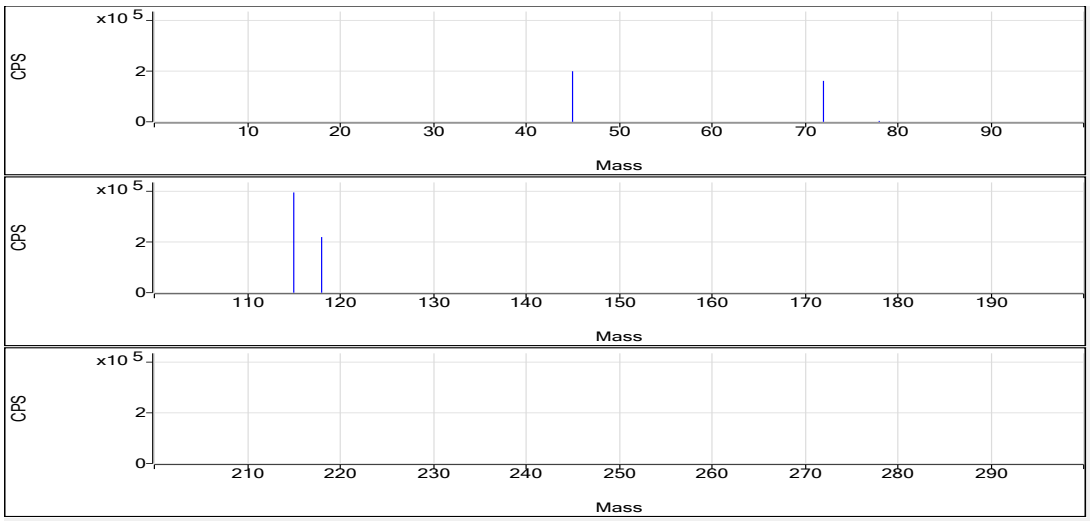
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2528015.27	0.7	96.9	Analog	0.1000	3
No Gas	Ge	72	1193481.91	0.5	92.6	Pulse	0.1000	3
H2	Sc	45	199795.08	0.6	97.0	Pulse	0.1000	3
H2	Ge	72	161743.25	1.8	99.4	Pulse	0.1000	3
H2	In	115	395802.83	1.0	98.0	Pulse	0.1000	3
He	Sc	45	49866.06	0.6	97.4	Pulse	0.1000	3
He	Ge	72	82799.57	1.0	101.1	Pulse	0.1000	3
He	In	115	85913.16	1.0	98.0	Pulse	0.1000	3
He	Tb	159	402023.01	0.5	100.1	Pulse	0.1000	3
He	Bi	209	308954.90	0.4	100.9	Pulse	0.1000	3

No Gas

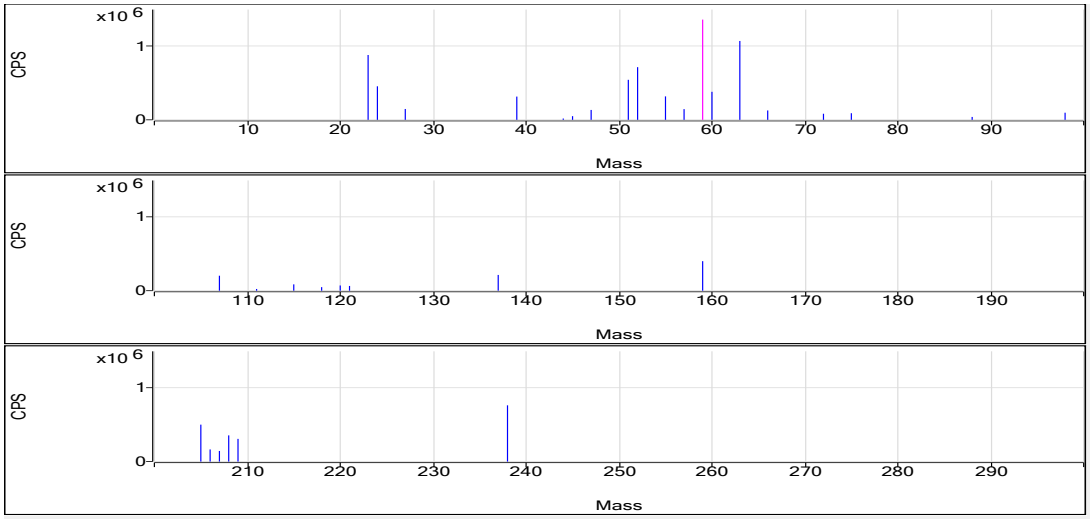


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.337	0.0367	92654.45	0.0007	3.404E-05
Be	9	1	No Gas	50.354	0.0367	93578.13	0.0007	3.404E-05
Be	9	1	No Gas	50.341	0.0367	92187.42	0.0007	3.404E-05
Se	78	2	H2	49.35	0.0217	3572.45	0.0004	3.546E-05
Se	78	2	H2	50.243	0.0221	3560.45	0.0004	3.546E-05
Se	78	2	H2	50.836	0.0223	3547.11	0.0004	3.546E-05
Na	23	3	He	4892.606	17.8563	887204.28	0.0036	0.4171
Na	23	3	He	4805.096	17.5444	880853.35	0.0036	0.4171
Na	23	3	He	4848.55	17.6993	879749.60	0.0036	0.4171
Mg	24	3	He	5060.301	9.1475	454497.77	0.0018	0.004553
Mg	24	3	He	5089.095	9.1995	461878.98	0.0018	0.004553
Mg	24	3	He	5043.48	9.1171	453166.83	0.0018	0.004553
Al	27	3	He	5145.51	2.9998	149048.56	0.0006	0.002085
Al	27	3	He	5037.842	2.9371	147463.24	0.0006	0.002085
Al	27	3	He	5054.158	2.9466	146462.09	0.0006	0.002085
K	39	3	He	5106.011	6.3907	317527.03	0.0012	0.4112
K	39	3	He	5044.592	6.3188	317247.77	0.0012	0.4112
K	39	3	He	5052.649	6.3282	314546.44	0.0012	0.4112
Ca	44	3	He	5128.94	0.3498	17380.99	0.0001	0.003322
Ca	44	3	He	5190.338	0.354	17771.63	0.0001	0.003322
Ca	44	3	He	5243.134	0.3575	17771.32	0.0001	0.003322
Ti	47	3	He	5073.184	2.6982	134063.50	0.0005	0
Ti	47	3	He	5012.163	2.6658	133840.82	0.0005	0
Ti	47	3	He	5135.346	2.7313	135759.81	0.0005	0
V	51	3	He	515.64	10.9896	546026.50	0.0213	0.0318
V	51	3	He	509.695	10.8633	545413.56	0.0213	0.0318
V	51	3	He	512.863	10.9306	543308.75	0.0213	0.0318
Cr	52	3	He	493.497	14.5568	723263.50	0.0294	0.04297
Cr	52	3	He	484.079	14.2798	716946.00	0.0294	0.04297
Cr	52	3	He	484.829	14.3019	710878.82	0.0294	0.04297
Mn	55	3	He	514.694	6.4015	318065.39	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	518.354	6.447	323687.42	0.0124	0.002801
Mn	55	3	He	510.303	6.347	315478.08	0.0124	0.002801
Fe	57	3	He	5093.787	2.9171	144940.47	0.0006	0.002732
Fe	57	3	He	5101.349	2.9215	146678.63	0.0006	0.002732
Fe	57	3	He	5098.558	2.9199	145133.46	0.0006	0.002732
Co	59	3	He	492.4	27.0302	1343015.29	0.0549	0.003644
Co	59	3	He	508.905	27.9362	1402592.95	0.0549	0.003644
Co	59	3	He	494.243	27.1314	1348575.60	0.0549	0.003644
Ni	60	3	He	500.015	4.6557	381884.25	0.0093	0.01413
Ni	60	3	He	493.589	4.596	384524.29	0.0093	0.01413
Ni	60	3	He	490.954	4.5716	378113.55	0.0093	0.01413
Cu	63	3	He	475.063	13.0384	1069475.92	0.0274	0.009321
Cu	63	3	He	472.821	12.9769	1085702.56	0.0274	0.009321
Cu	63	3	He	469.625	12.8893	1066064.67	0.0274	0.009321
Zn	66	3	He	501.569	1.5459	126805.72	0.0031	0.005913
Zn	66	3	He	490.922	1.5132	126604.51	0.0031	0.005913
Zn	66	3	He	505.751	1.5588	128925.74	0.0031	0.005913
As	75	3	He	509.073	1.0932	89670.34	0.0021	0.0008698
As	75	3	He	502.826	1.0798	90340.68	0.0021	0.0008698
As	75	3	He	504.756	1.0839	89652.33	0.0021	0.0008698
Sr	88	3	He	52.119	0.4593	38984.58	0.0088	0.0006843
Sr	88	3	He	52.618	0.4637	40128.30	0.0088	0.0006843
Sr	88	3	He	50.687	0.4467	38553.13	0.0088	0.0006843
Mo	98	3	He	51.614	1.1345	96299.09	0.0219	0.001827
Mo	98	3	He	52.083	1.1448	99077.68	0.0219	0.001827
Mo	98	3	He	50.259	1.1048	95353.30	0.0219	0.001827
Ag	107	3	He	51.539	2.4254	205876.85	0.047	0.001064
Ag	107	3	He	49.833	2.3452	202966.07	0.047	0.001064
Ag	107	3	He	50.044	2.3551	203272.28	0.047	0.001064
Cd	111	3	He	50.862	0.2709	22996.90	0.0053	6.086E-05
Cd	111	3	He	51.232	0.2729	23617.94	0.0053	6.086E-05
Cd	111	3	He	51.21	0.2728	23543.85	0.0053	6.086E-05
Sn	120	3	He	52.169	0.8193	69544.98	0.0154	0.01483
Sn	120	3	He	53.588	0.8412	72801.14	0.0154	0.01483
Sn	120	3	He	52.286	0.8211	70870.85	0.0154	0.01483
Sb	121	3	He	53.313	0.76	64510.21	0.0143	0.0002661
Sb	121	3	He	53.006	0.7556	65395.40	0.0143	0.0002661
Sb	121	3	He	51.975	0.7409	63949.43	0.0143	0.0002661
Ba	137	3	He	525.434	2.5112	213157.73	0.0048	0.0002665
Ba	137	3	He	526.286	2.5153	217687.07	0.0048	0.0002665
Ba	137	3	He	516.12	2.4667	212904.25	0.0048	0.0002665
Tl	205	3	He	50.549	1.2443	498071.09	0.0246	0.002755
Tl	205	3	He	51.158	1.2592	505781.28	0.0246	0.002755
Tl	205	3	He	50.733	1.2488	504645.38	0.0246	0.002755
Pb	208	3	He	51.104	1.6581	354994.21	0.0324	0.002158
Pb	208	3	He	51.182	1.6607	357582.65	0.0324	0.002158
Pb	208	3	He	50.929	1.6525	357248.43	0.0324	0.002158
U	238	3	He	50.254	2.4753	761617.64	0.0492	0.0004023
U	238	3	He	50.574	2.4911	770981.63	0.0492	0.0004023
U	238	3	He	50.149	2.4701	764932.41	0.0492	0.0004023
Sc	45	1	No Gas			2524237.31		
Sc	45	1	No Gas			2548526.52		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2511281.99		
Ge	72	1	No Gas			1199429.51		
Ge	72	1	No Gas			1187617.09		
Ge	72	1	No Gas			1193399.12		
Sc	45	2	H2			200200.06		
Sc	45	2	H2			198528.20		
Sc	45	2	H2			200656.99		
Ge	72	2	H2			164881.76		
Ge	72	2	H2			161412.50		
Ge	72	2	H2			158935.50		
In	115	2	H2			400382.69		
In	115	2	H2			393894.41		
In	115	2	H2			393131.40		
Sc	45	3	He			49685.72		
Sc	45	3	He			50207.09		
Sc	45	3	He			49705.36		
Ge	72	3	He			82025.12		
Ge	72	3	He			83664.12		
Ge	72	3	He			82709.48		
In	115	3	He			85261.37		
In	115	3	He			86920.78		
In	115	3	He			86690.55		
Tb	159	3	He			400293.16		
Tb	159	3	He			401666.20		
Tb	159	3	He			404109.68		
Bi	209	3	He			307690.31		
Bi	209	3	He			309499.02		
Bi	209	3	He			309675.37		

Quantitation Report

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Acq Time	8/9/2023 6:21:57 PM
Sample Name	CCB 4654618
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

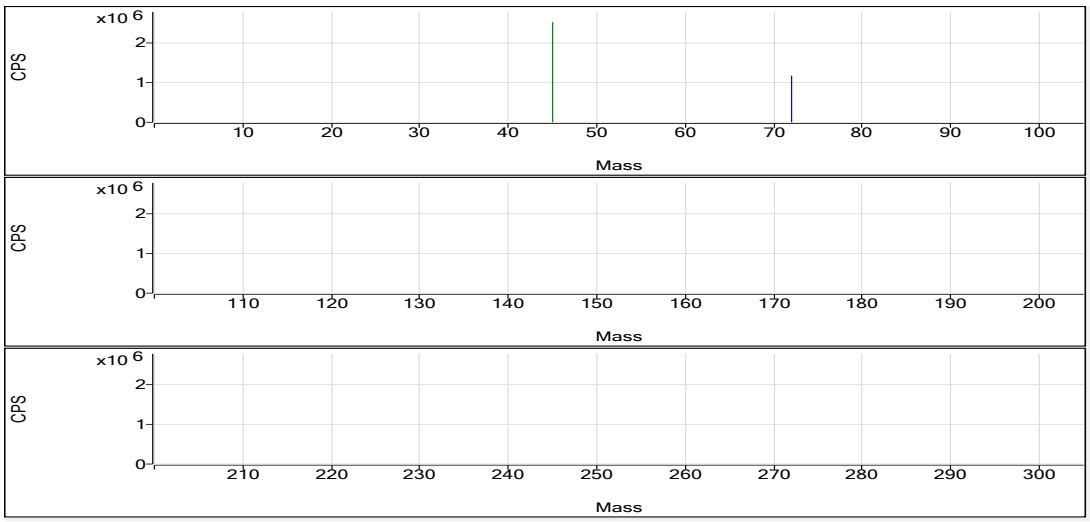
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.024	ppb	N/A	41.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.017	ppb	N/A	4.44	0.0000	Pulse	1.5000	3
Na	23	45	He	-13.149	ppb	N/A	18365.22	0.3702	Pulse	0.1000	3
Mg	24	45	He	0.040	ppb	1164.2	230.01	0.0046	Pulse	0.1000	3
Al	27	45	He	-0.560	ppb	N/A	86.67	0.0018	Pulse	0.1000	3
K	39	45	He	12.596	ppb	195.2	21115.80	0.4259	Pulse	0.1000	3
Ca	44	45	He	0.599	ppb	1603.1	166.68	0.0034	Pulse	0.1000	3
Ti	47	45	He	2.135	ppb	42.5	56.67	0.0011	Pulse	0.1000	3
V	51	45	He	-0.312	ppb	N/A	1248.06	0.0252	Pulse	0.5000	3
Cr	52	45	He	-0.002	ppb	N/A	2130.24	0.0429	Pulse	0.1000	3
Mn	55	45	He	0.114	ppb	97.3	210.01	0.0042	Pulse	0.1000	3
Fe	57	45	He	1.464	ppb	70.3	176.68	0.0036	Pulse	0.1000	3
Co	59	45	He	0.013	ppb	102.2	216.68	0.0044	Pulse	0.1000	3
Ni	60	72	He	-1.205	ppb	N/A	243.34	0.0029	Pulse	0.1000	3
Cu	63	72	He	-0.069	ppb	N/A	613.38	0.0074	Pulse	0.1000	3
Zn	66	72	He	-0.115	ppb	N/A	460.03	0.0056	Pulse	0.1000	3
As	75	72	He	0.140	ppb	35.2	96.67	0.0012	Pulse	0.5000	3
Sr	88	115	He	0.046	ppb	92.8	93.34	0.0011	Pulse	0.1000	3
Mo	98	115	He	-0.014	ppb	N/A	130.00	0.0015	Pulse	0.1000	3
Ag	107	115	He	-0.012	ppb	N/A	43.33	0.0005	Pulse	0.1000	3
Cd	111	115	He	-0.001	ppb	N/A	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.106	ppb	158.7	1410.12	0.0165	Pulse	0.1000	3
Sb	121	115	He	0.031	ppb	54.4	60.00	0.0007	Pulse	0.1000	3
Ba	137	115	He	0.034	ppb	41.3	36.67	0.0004	Pulse	0.1000	3
Tl	205	159	He	-0.040	ppb	N/A	706.72	0.0018	Pulse	0.1000	3
Pb	208	159	He	-0.017	ppb	N/A	646.70	0.0016	Pulse	0.1000	3
U	238	209	He	0.039	ppb	18.0	716.72	0.0023	Pulse	0.1000	3

ISTD Table:

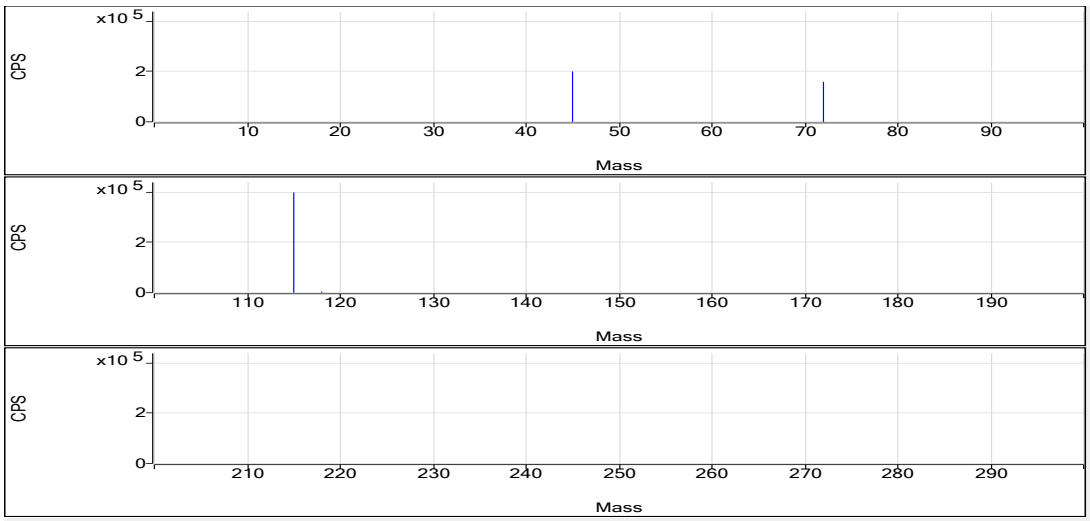
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2535238.56	0.7	97.2	Analog	0.1000	3
No Gas	Ge	72	1179033.50	0.3	91.5	Pulse	0.1000	3
H2	Sc	45	199694.05	0.5	96.9	Pulse	0.1000	3
H2	Ge	72	158682.07	1.1	97.5	Pulse	0.1000	3
H2	In	115	397683.50	0.2	98.5	Pulse	0.1000	3
He	Sc	45	49628.91	2.6	96.9	Pulse	0.1000	3
He	Ge	72	82635.05	1.3	100.9	Pulse	0.1000	3
He	In	115	85585.58	0.9	97.7	Pulse	0.1000	3
He	Tb	159	398765.97	0.7	99.3	Pulse	0.1000	3
He	Bi	209	309306.46	0.9	101.0	Pulse	0.1000	3

No Gas

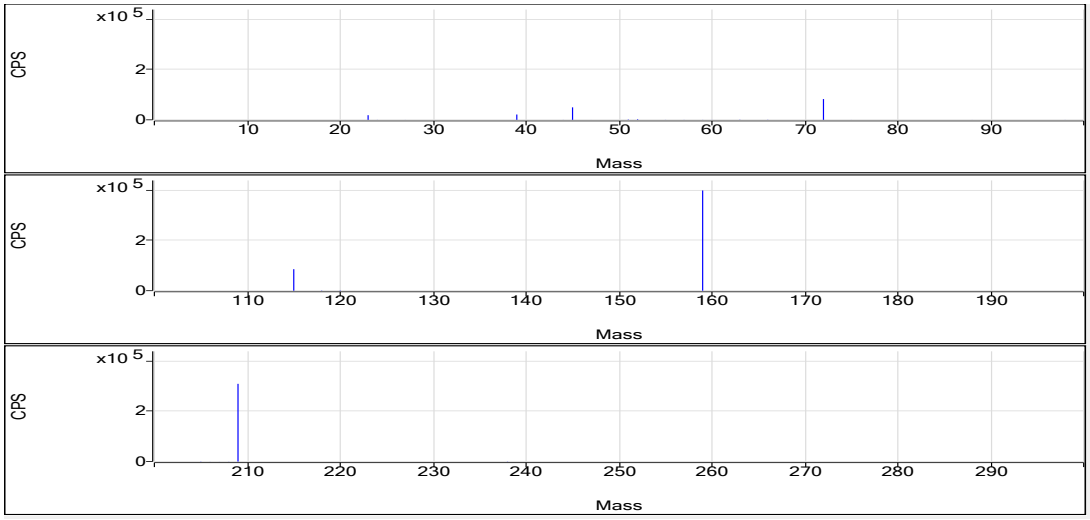


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.024	0	42.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.02	0	50.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.03	0	32.00	0.0007	3.404E-05
Se	78	2	H2	-0.043	0	2.67	0.0004	3.546E-05
Se	78	2	H2	-0.003	0	5.33	0.0004	3.546E-05
Se	78	2	H2	-0.005	0	5.33	0.0004	3.546E-05
Na	23	3	He	-15.672	0.3612	18471.94	0.0036	0.4171
Na	23	3	He	-10.156	0.3809	18602.17	0.0036	0.4171
Na	23	3	He	-13.618	0.3685	18021.55	0.0036	0.4171
Mg	24	3	He	0.402	0.0053	270.01	0.0018	0.004553
Mg	24	3	He	0.2	0.0049	240.01	0.0018	0.004553
Mg	24	3	He	-0.483	0.0037	180.01	0.0018	0.004553
Al	27	3	He	-1.9	0.001	50.00	0.0006	0.002085
Al	27	3	He	-0.415	0.0018	90.00	0.0006	0.002085
Al	27	3	He	0.634	0.0025	120.01	0.0006	0.002085
K	39	3	He	-13.091	0.3959	20244.41	0.0012	0.4112
K	39	3	He	35.908	0.4532	22137.39	0.0012	0.4112
K	39	3	He	14.972	0.4287	20965.61	0.0012	0.4112
Ca	44	3	He	-2.857	0.0031	160.01	0.0001	0.003322
Ca	44	3	He	11.444	0.0041	200.01	0.0001	0.003322
Ca	44	3	He	-6.791	0.0029	140.01	0.0001	0.003322
Ti	47	3	He	2.941	0.0016	80.00	0.0005	0
Ti	47	3	He	2.31	0.0012	60.00	0.0005	0
Ti	47	3	He	1.153	0.0006	30.00	0.0005	0
V	51	3	He	-0.379	0.0237	1214.06	0.0213	0.0318
V	51	3	He	-0.203	0.0275	1342.07	0.0213	0.0318
V	51	3	He	-0.353	0.0243	1188.06	0.0213	0.0318
Cr	52	3	He	0.015	0.0434	2220.26	0.0294	0.04297
Cr	52	3	He	-0.027	0.0422	2060.23	0.0294	0.04297
Cr	52	3	He	0.006	0.0432	2110.24	0.0294	0.04297
Mn	55	3	He	0.199	0.0053	270.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.011	0.0027	130.01	0.0124	0.002801
Mn	55	3	He	0.153	0.0047	230.01	0.0124	0.002801
Fe	57	3	He	0.352	0.0029	150.01	0.0006	0.002732
Fe	57	3	He	2.382	0.0041	200.01	0.0006	0.002732
Fe	57	3	He	1.659	0.0037	180.01	0.0006	0.002732
Co	59	3	He	-0.002	0.0035	180.01	0.0549	0.003644
Co	59	3	He	0.023	0.0049	240.01	0.0549	0.003644
Co	59	3	He	0.019	0.0047	230.01	0.0549	0.003644
Ni	60	3	He	-1.149	0.0035	290.01	0.0093	0.01413
Ni	60	3	He	-1.26	0.0024	200.01	0.0093	0.01413
Ni	60	3	He	-1.206	0.0029	240.01	0.0093	0.01413
Cu	63	3	He	-0.066	0.0075	630.05	0.0274	0.009321
Cu	63	3	He	-0.056	0.0078	640.04	0.0274	0.009321
Cu	63	3	He	-0.086	0.007	570.04	0.0274	0.009321
Zn	66	3	He	0.173	0.0064	540.03	0.0031	0.005913
Zn	66	3	He	0.092	0.0062	510.03	0.0031	0.005913
Zn	66	3	He	-0.611	0.004	330.02	0.0031	0.005913
As	75	3	He	0.084	0.0011	88.00	0.0021	0.0008698
As	75	3	He	0.161	0.0012	100.00	0.0021	0.0008698
As	75	3	He	0.176	0.0012	102.00	0.0021	0.0008698
Sr	88	3	He	0.095	0.0015	130.01	0.0088	0.0006843
Sr	88	3	He	0.016	0.0008	70.00	0.0088	0.0006843
Sr	88	3	He	0.027	0.0009	80.00	0.0088	0.0006843
Mo	98	3	He	-0.03	0.0012	100.00	0.0219	0.001827
Mo	98	3	He	0.013	0.0021	180.01	0.0219	0.001827
Mo	98	3	He	-0.025	0.0013	110.00	0.0219	0.001827
Ag	107	3	He	-0.015	0.0004	30.00	0.047	0.001064
Ag	107	3	He	-0.01	0.0006	50.00	0.047	0.001064
Ag	107	3	He	-0.01	0.0006	50.00	0.047	0.001064
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	0.002	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	0.002	0.0001	6.00	0.0053	6.086E-05
Sn	120	3	He	0.284	0.0192	1640.16	0.0154	0.01483
Sn	120	3	He	-0.053	0.014	1190.09	0.0154	0.01483
Sn	120	3	He	0.088	0.0162	1400.12	0.0154	0.01483
Sb	121	3	He	0.014	0.0005	40.00	0.0143	0.0002661
Sb	121	3	He	0.047	0.0009	80.00	0.0143	0.0002661
Sb	121	3	He	0.03	0.0007	60.00	0.0143	0.0002661
Ba	137	3	He	0.018	0.0004	30.00	0.0048	0.0002665
Ba	137	3	He	0.043	0.0005	40.00	0.0048	0.0002665
Ba	137	3	He	0.041	0.0005	40.00	0.0048	0.0002665
Tl	205	3	He	-0.038	0.0018	720.05	0.0246	0.002755
Tl	205	3	He	-0.034	0.0019	770.05	0.0246	0.002755
Tl	205	3	He	-0.048	0.0016	630.05	0.0246	0.002755
Pb	208	3	He	-0.018	0.0016	350.02	0.0324	0.002158
Pb	208	3	He	-0.011	0.0018	400.02	0.0324	0.002158
Pb	208	3	He	-0.021	0.0015	310.02	0.0324	0.002158
U	238	3	He	0.031	0.0019	600.03	0.0492	0.0004023
U	238	3	He	0.044	0.0025	780.07	0.0492	0.0004023
U	238	3	He	0.042	0.0025	770.06	0.0492	0.0004023
Sc	45	1	No Gas			2529580.12		
Sc	45	1	No Gas			2522266.06		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2553869.49		
Ge	72	1	No Gas			1181343.11		
Ge	72	1	No Gas			1180503.73		
Ge	72	1	No Gas			1175253.65		
Sc	45	2	H2			200716.64		
Sc	45	2	H2			199572.32		
Sc	45	2	H2			198793.18		
Ge	72	2	H2			158822.29		
Ge	72	2	H2			156852.87		
Ge	72	2	H2			160371.04		
In	115	2	H2			396799.64		
In	115	2	H2			398750.97		
In	115	2	H2			397499.88		
Sc	45	3	He			51140.92		
Sc	45	3	He			48842.89		
Sc	45	3	He			48902.92		
Ge	72	3	He			83805.15		
Ge	72	3	He			82346.63		
Ge	72	3	He			81753.37		
In	115	3	He			85412.05		
In	115	3	He			84898.89		
In	115	3	He			86468.04		
Tb	159	3	He			395969.06		
Tb	159	3	He			401147.30		
Tb	159	3	He			399181.56		
Bi	209	3	He			312254.14		
Bi	209	3	He			306503.69		
Bi	209	3	He			309161.56		

Quantitation Report

Data File Name	137SMPL.d
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Sample Name	MB 410-403544/1-A
Sample Type	Sample
Comment	I7 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

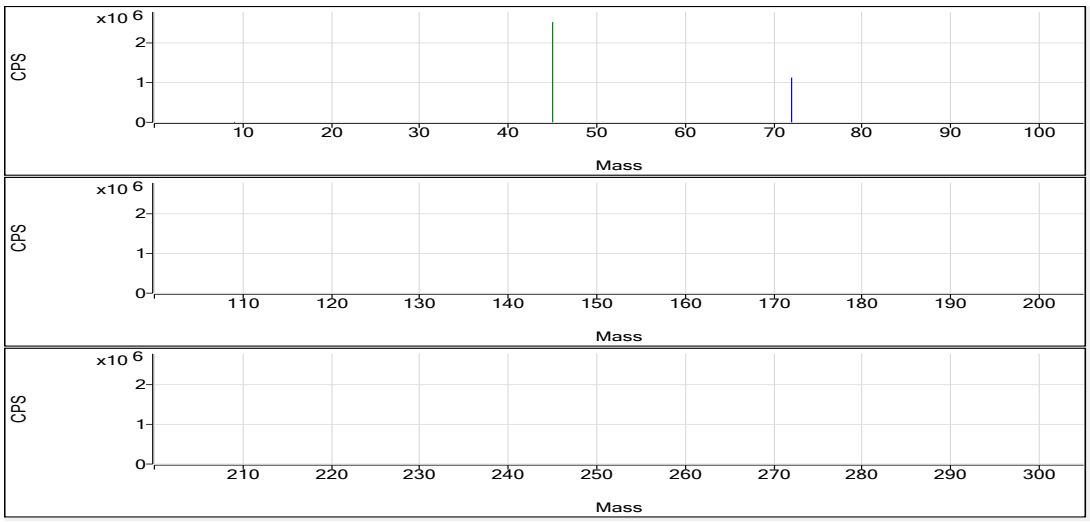
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.037	ppb	N/A	17.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.026	ppb	N/A	3.78	0.0000	Pulse	1.5000	3
Na	23	45	He	118835.379	ppb	1.3	21384946.35	423.9954	Analog	0.1000	3
Mg	24	45	He	0.551	ppb	47.6	280.01	0.0055	Pulse	0.1000	3
Al	27	45	He	-0.625	ppb	N/A	86.67	0.0017	Pulse	0.1000	3
K	39	45	He	7.557	ppb	42.2	21185.95	0.4200	Pulse	0.1000	3
Ca	44	45	He	-14.997	ppb	N/A	116.67	0.0023	Pulse	0.1000	3
Ti	47	45	He	0.248	ppb	173.2	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	-0.425	ppb	N/A	1148.05	0.0228	Pulse	0.5000	3
Cr	52	45	He	-0.166	ppb	N/A	1920.19	0.0381	Pulse	0.1000	3
Mn	55	45	He	0.120	ppb	53.6	216.68	0.0043	Pulse	0.1000	3
Fe	57	45	He	-0.260	ppb	N/A	130.00	0.0026	Pulse	0.1000	3
Co	59	45	He	-0.033	ppb	N/A	93.33	0.0018	Pulse	0.1000	3
Ni	60	72	He	-1.080	ppb	N/A	323.35	0.0041	Pulse	0.1000	3
Cu	63	72	He	-0.090	ppb	N/A	540.03	0.0069	Pulse	0.1000	3
Zn	66	72	He	-0.977	ppb	N/A	230.01	0.0029	Pulse	0.1000	3
As	75	72	He	0.029	ppb	116.8	73.33	0.0009	Pulse	0.5000	3
Sr	88	115	He	0.012	ppb	650.5	70.00	0.0008	Pulse	0.1000	3
Mo	98	115	He	-0.045	ppb	N/A	73.33	0.0008	Pulse	0.1000	3
Ag	107	115	He	-0.009	ppb	N/A	56.67	0.0006	Pulse	0.1000	3
Cd	111	115	He	-0.006	ppb	N/A	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.037	ppb	N/A	1260.10	0.0143	Pulse	0.1000	3
Sb	121	115	He	-0.011	ppb	N/A	10.00	0.0001	Pulse	0.1000	3
Ba	137	115	He	0.118	ppb	57.6	73.33	0.0008	Pulse	0.1000	3
Tl	205	159	He	-0.101	ppb	N/A	113.34	0.0003	Pulse	0.1000	3
Pb	208	159	He	-0.017	ppb	N/A	643.36	0.0016	Pulse	0.1000	3
U	238	209	He	-0.002	ppb	N/A	93.34	0.0003	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2540741.32	0.6	97.4	Analog	0.1000	3
No Gas	Ge	72	1133609.60	0.6	88.0	Pulse	0.1000	3
H2	Sc	45	202458.47	1.9	98.2	Pulse	0.1000	3
H2	Ge	72	155627.25	1.4	95.6	Pulse	0.1000	3
H2	In	115	399548.01	0.6	99.0	Pulse	0.1000	3
He	Sc	45	50441.44	1.1	98.5	Pulse	0.1000	3
He	Ge	72	78736.89	1.6	96.2	Pulse	0.1000	3
He	In	115	88410.61	0.6	100.9	Pulse	0.1000	3
He	Tb	159	402851.36	0.8	100.3	Pulse	0.1000	3
He	Bi	209	309800.10	0.8	101.2	Pulse	0.1000	3

No Gas



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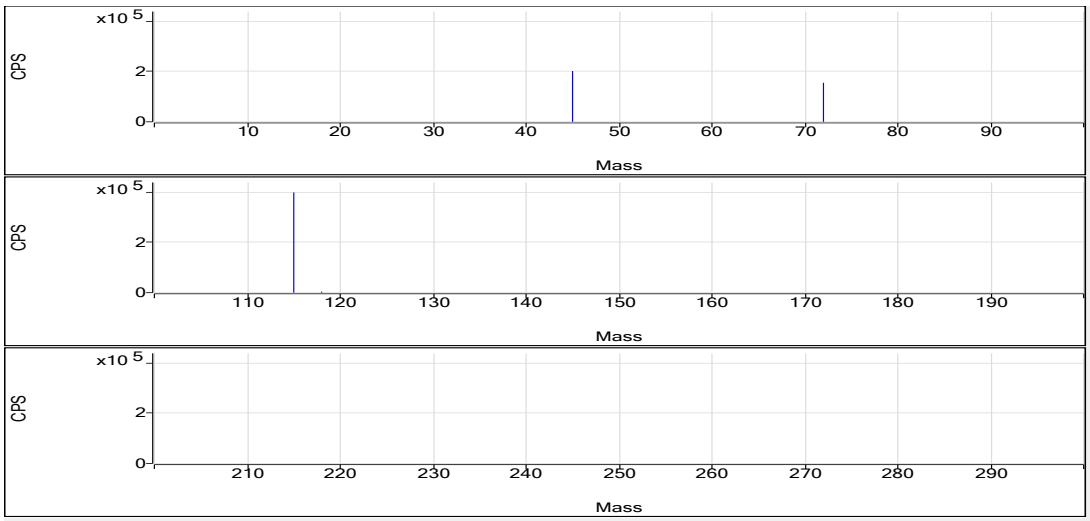
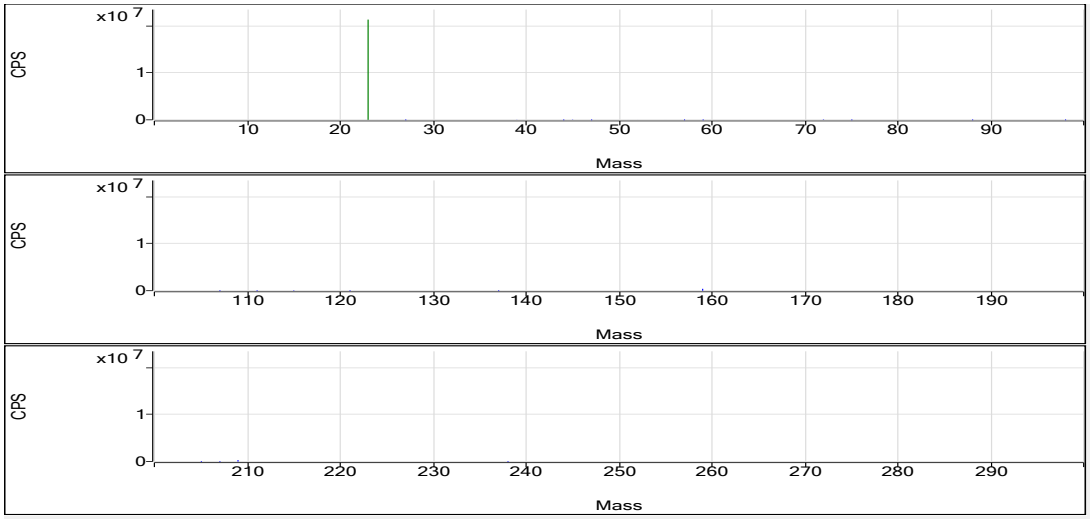


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.032	0	28.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.037	0	18.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.044	0	6.00	0.0007	3.404E-05
Se	78	2	H2	-0.004	0	5.33	0.0004	3.546E-05
Se	78	2	H2	-0.022	0	4.00	0.0004	3.546E-05
Se	78	2	H2	-0.051	0	2.00	0.0004	3.546E-05
Na	23	3	He	120517.927	429.9927	21429062.18	0.0036	0.4171
Na	23	3	He	118573.567	423.0621	21414932.18	0.0036	0.4171
Na	23	3	He	117414.641	418.9313	21310844.68	0.0036	0.4171
Mg	24	3	He	0.257	0.005	250.01	0.0018	0.004553
Mg	24	3	He	0.76	0.0059	300.01	0.0018	0.004553
Mg	24	3	He	0.635	0.0057	290.01	0.0018	0.004553
Al	27	3	He	-0.134	0.002	100.00	0.0006	0.002085
Al	27	3	He	-0.187	0.002	100.00	0.0006	0.002085
Al	27	3	He	-1.554	0.0012	60.00	0.0006	0.002085
K	39	3	He	10.523	0.4235	21105.97	0.0012	0.4112
K	39	3	He	7.965	0.4205	21285.95	0.0012	0.4112
K	39	3	He	4.181	0.4161	21165.93	0.0012	0.4112
Ca	44	3	He	-25.409	0.0016	80.00	0.0001	0.003322
Ca	44	3	He	-11.152	0.0026	130.01	0.0001	0.003322
Ca	44	3	He	-8.43	0.0028	140.01	0.0001	0.003322
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.743	0.0004	20.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	-0.45	0.0222	1108.05	0.0213	0.0318
V	51	3	He	-0.427	0.0227	1150.05	0.0213	0.0318
V	51	3	He	-0.399	0.0233	1186.06	0.0213	0.0318
Cr	52	3	He	-0.042	0.0417	2080.22	0.0294	0.04297
Cr	52	3	He	-0.332	0.0332	1680.16	0.0294	0.04297
Cr	52	3	He	-0.124	0.0393	2000.20	0.0294	0.04297
Mn	55	3	He	0.114	0.0042	210.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.188	0.0051	260.01	0.0124	0.002801
Mn	55	3	He	0.059	0.0035	180.01	0.0124	0.002801
Fe	57	3	He	1.538	0.0036	180.01	0.0006	0.002732
Fe	57	3	He	-1.322	0.002	100.00	0.0006	0.002732
Fe	57	3	He	-0.995	0.0022	110.00	0.0006	0.002732
Co	59	3	He	-0.037	0.0016	80.00	0.0549	0.003644
Co	59	3	He	-0.023	0.0024	120.00	0.0549	0.003644
Co	59	3	He	-0.038	0.0016	80.00	0.0549	0.003644
Ni	60	3	He	-1.126	0.0037	290.01	0.0093	0.01413
Ni	60	3	He	-1.023	0.0046	370.02	0.0093	0.01413
Ni	60	3	He	-1.09	0.004	310.01	0.0093	0.01413
Cu	63	3	He	-0.095	0.0067	530.03	0.0274	0.009321
Cu	63	3	He	-0.07	0.0074	590.03	0.0274	0.009321
Cu	63	3	He	-0.104	0.0065	500.03	0.0274	0.009321
Zn	66	3	He	-1.06	0.0027	210.01	0.0031	0.005913
Zn	66	3	He	-0.702	0.0038	300.01	0.0031	0.005913
Zn	66	3	He	-1.168	0.0023	180.01	0.0031	0.005913
As	75	3	He	0.067	0.001	80.00	0.0021	0.0008698
As	75	3	He	0.003	0.0009	70.00	0.0021	0.0008698
As	75	3	He	0.016	0.0009	70.00	0.0021	0.0008698
Sr	88	3	He	0.103	0.0016	140.01	0.0088	0.0006843
Sr	88	3	He	-0.052	0.0002	20.00	0.0088	0.0006843
Sr	88	3	He	-0.013	0.0006	50.00	0.0088	0.0006843
Mo	98	3	He	-0.052	0.0007	60.00	0.0219	0.001827
Mo	98	3	He	-0.047	0.0008	70.00	0.0219	0.001827
Mo	98	3	He	-0.037	0.001	90.00	0.0219	0.001827
Ag	107	3	He	-0.011	0.0006	50.00	0.047	0.001064
Ag	107	3	He	-0.006	0.0008	70.00	0.047	0.001064
Ag	107	3	He	-0.011	0.0006	50.00	0.047	0.001064
Cd	111	3	He	0.001	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Sn	120	3	He	-0.036	0.0143	1260.10	0.0154	0.01483
Sn	120	3	He	-0.088	0.0135	1200.10	0.0154	0.01483
Sn	120	3	He	0.012	0.015	1320.11	0.0154	0.01483
Sb	121	3	He	-0.003	0.0002	20.00	0.0143	0.0002661
Sb	121	3	He	-0.011	0.0001	10.00	0.0143	0.0002661
Sb	121	3	He	-0.019	0	0.00	0.0143	0.0002661
Ba	137	3	He	0.158	0.001	90.00	0.0048	0.0002665
Ba	137	3	He	0.156	0.001	90.00	0.0048	0.0002665
Ba	137	3	He	0.039	0.0005	40.00	0.0048	0.0002665
Tl	205	3	He	-0.101	0.0003	110.00	0.0246	0.002755
Tl	205	3	He	-0.107	0.0001	50.00	0.0246	0.002755
Tl	205	3	He	-0.094	0.0004	180.01	0.0246	0.002755
Pb	208	3	He	-0.021	0.0015	310.02	0.0324	0.002158
Pb	208	3	He	-0.018	0.0016	310.01	0.0324	0.002158
Pb	208	3	He	-0.013	0.0017	370.02	0.0324	0.002158
U	238	3	He	-0.002	0.0003	90.00	0.0492	0.0004023
U	238	3	He	-0.004	0.0002	70.00	0.0492	0.0004023
U	238	3	He	0	0.0004	120.01	0.0492	0.0004023
Sc	45	1	No Gas			2535558.40		
Sc	45	1	No Gas			2528412.93		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2558252.62		
Ge	72	1	No Gas			1126839.91		
Ge	72	1	No Gas			1134144.83		
Ge	72	1	No Gas			1139844.05		
Sc	45	2	H2			206526.87		
Sc	45	2	H2			199056.15		
Sc	45	2	H2			201792.40		
Ge	72	2	H2			158126.97		
Ge	72	2	H2			154337.01		
Ge	72	2	H2			154417.78		
In	115	2	H2			400663.43		
In	115	2	H2			396998.35		
In	115	2	H2			400982.26		
Sc	45	3	He			49835.88		
Sc	45	3	He			50618.88		
Sc	45	3	He			50869.55		
Ge	72	3	He			78988.34		
Ge	72	3	He			79842.99		
Ge	72	3	He			77379.33		
In	115	3	He			88270.50		
In	115	3	He			89044.85		
In	115	3	He			87938.65		
Tb	159	3	He			402043.24		
Tb	159	3	He			406305.27		
Tb	159	3	He			400205.58		
Bi	209	3	He			312117.53		
Bi	209	3	He			307169.45		
Bi	209	3	He			310113.32		

Quantitation Report

Data File Name	138SMPL.d
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Sample Type	Sample
Comment	I7 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

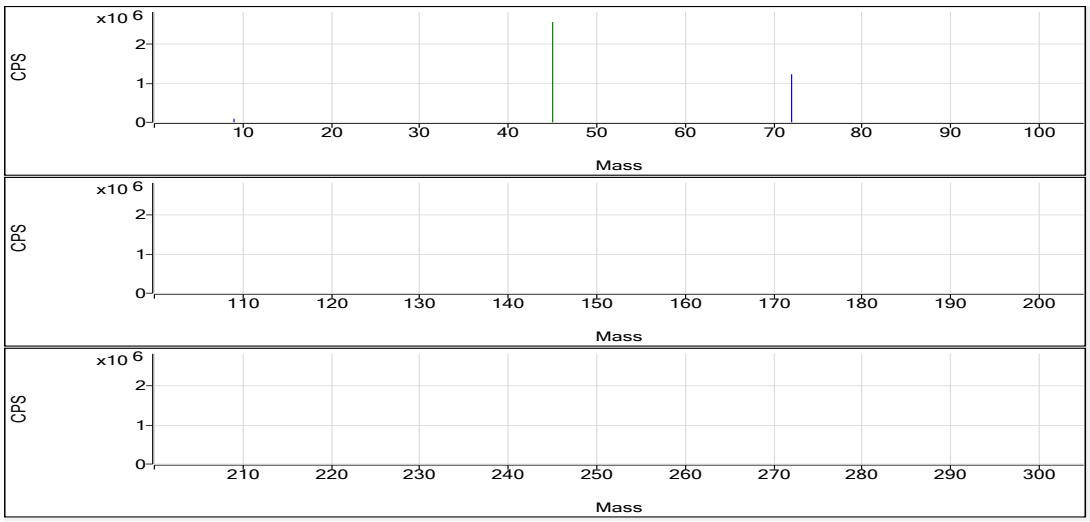
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	48.930	ppb	0.8	91845.53	0.0357	Pulse	0.5000	3
Se	78	72	H2	96.448	ppb	0.5	7044.63	0.0423	Pulse	1.5000	3
Na	23	45	He	120028.185	ppb	1.4	21803236.34	428.2470	Analog	0.1000	3
Mg	24	45	He	4874.426	ppb	1.4	448620.28	8.8116	Pulse	0.1000	3
Al	27	45	He	4917.017	ppb	0.8	145961.35	2.8667	Pulse	0.1000	3
K	39	45	He	4921.475	ppb	1.0	314370.61	6.1746	Pulse	0.1000	3
Ca	44	45	He	5055.126	ppb	1.5	17557.74	0.3448	Pulse	0.1000	3
Ti	47	45	He	500.275	ppb	1.2	13546.79	0.2661	Pulse	0.1000	3
V	51	45	He	500.016	ppb	1.3	542611.06	10.6576	Pulse	0.5000	3
Cr	52	45	He	472.637	ppb	1.4	709908.82	13.9433	Pulse	0.1000	3
Mn	55	45	He	493.341	ppb	1.8	312405.18	6.1361	Pulse	0.1000	3
Fe	57	45	He	4870.145	ppb	1.1	142009.25	2.7892	Pulse	0.1000	3
Co	59	45	He	475.965	ppb	1.3	1330263.52	26.1282	Pulse	0.1000	3
Ni	60	72	He	472.227	ppb	0.5	374724.35	4.3977	Pulse	0.1000	3
Cu	63	72	He	458.967	ppb	0.9	1073348.47	12.5969	Pulse	0.1000	3
Zn	66	72	He	485.511	ppb	0.4	127526.48	1.4966	Pulse	0.1000	3
As	75	72	He	488.766	ppb	0.4	89440.56	1.0496	Pulse	0.5000	3
Sr	88	115	He	50.705	ppb	2.0	39168.51	0.4468	Pulse	0.1000	3
Mo	98	115	He	49.634	ppb	1.9	95638.11	1.0910	Pulse	0.1000	3
Ag	107	115	He	48.199	ppb	2.9	198817.83	2.2683	Pulse	0.1000	3
Cd	111	115	He	50.018	ppb	2.2	23354.18	0.2664	Pulse	0.5000	3
Sn	120	115	He	102.566	ppb	1.1	139952.06	1.5965	Pulse	0.1000	3
Sb	121	115	He	105.030	ppb	1.7	131221.93	1.4970	Pulse	0.1000	3
Ba	137	115	He	506.044	ppb	0.8	212027.37	2.4186	Pulse	0.1000	3
Tl	205	159	He	100.460	ppb	0.5	987784.44	2.4701	Pulse	0.1000	3
Pb	208	159	He	50.320	ppb	0.3	652941.66	1.6328	Pulse	0.1000	3
U	238	209	He	50.414	ppb	0.4	756799.91	2.4832	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2574112.72	0.5	98.7	Analog	0.1000	3
No Gas	Ge	72	1233972.67	0.4	95.7	Pulse	0.1000	3
H2	Sc	45	199226.07	1.0	96.7	Pulse	0.1000	3
H2	Ge	72	166494.54	0.9	102.3	Pulse	0.1000	3
H2	In	115	398055.87	1.3	98.6	Pulse	0.1000	3
He	Sc	45	50916.26	0.8	99.5	Pulse	0.1000	3
He	Ge	72	85210.40	0.7	104.1	Pulse	0.1000	3
He	In	115	87672.89	1.4	100.0	Pulse	0.1000	3
He	Tb	159	399900.04	0.2	99.6	Pulse	0.1000	3
He	Bi	209	304767.15	0.7	99.6	Pulse	0.1000	3

No Gas



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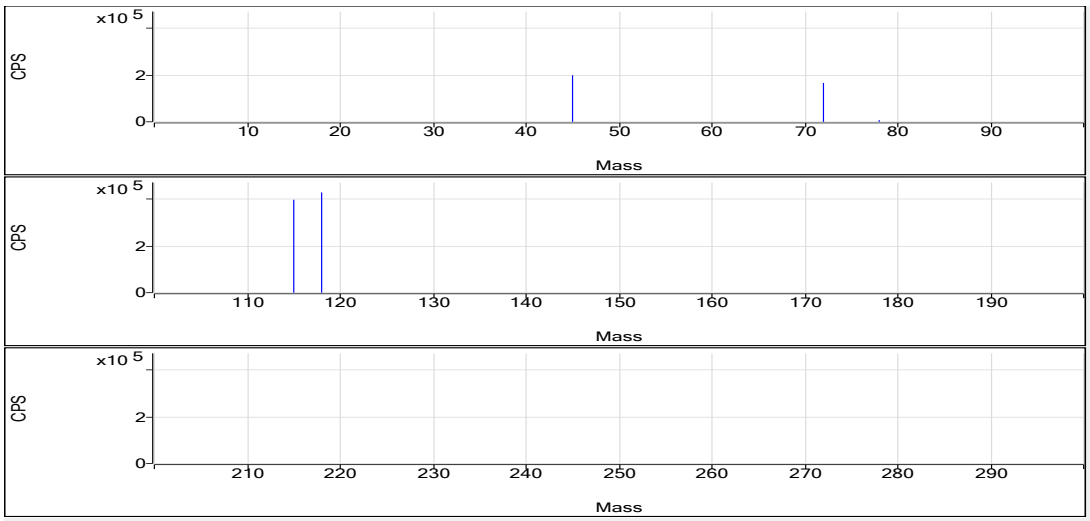
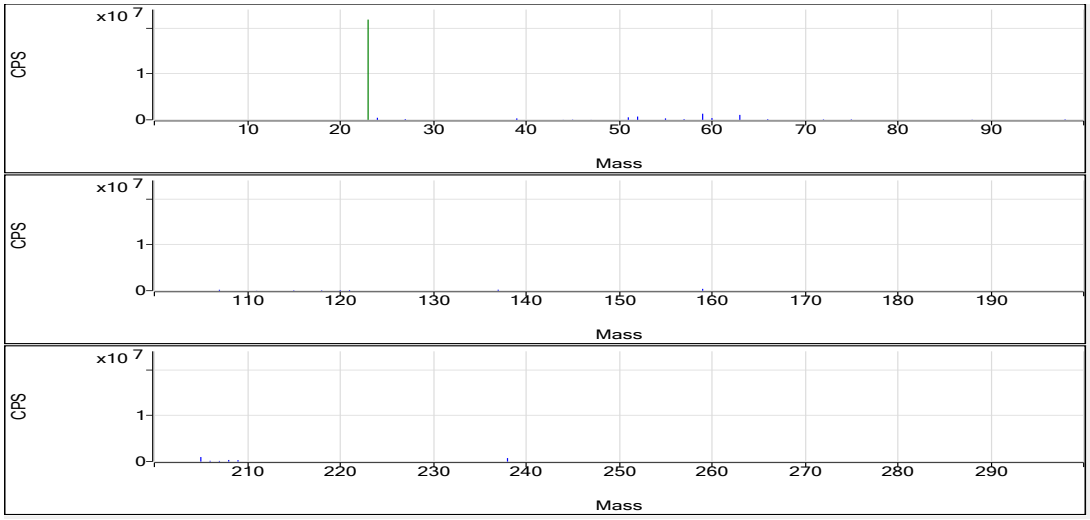


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	48.468	0.0353	91296.09	0.0007	3.404E-05
Be	9	1	No Gas	49.052	0.0358	91567.75	0.0007	3.404E-05
Be	9	1	No Gas	49.269	0.0359	92672.75	0.0007	3.404E-05
Se	78	2	H2	96.536	0.0423	7100.43	0.0004	3.546E-05
Se	78	2	H2	95.969	0.0421	6935.69	0.0004	3.546E-05
Se	78	2	H2	96.839	0.0425	7097.77	0.0004	3.546E-05
Na	23	3	He	121060.608	431.927	21967422.17	0.0036	0.4171
Na	23	3	He	120889.617	431.3175	21789474.68	0.0036	0.4171
Na	23	3	He	118134.331	421.4965	21652812.18	0.0036	0.4171
Mg	24	3	He	4900.938	8.8595	450587.22	0.0018	0.004553
Mg	24	3	He	4925.293	8.9035	449791.79	0.0018	0.004553
Mg	24	3	He	4797.047	8.6718	445481.83	0.0018	0.004553
Al	27	3	He	4964.633	2.8944	147209.11	0.0006	0.002085
Al	27	3	He	4892.821	2.8526	144109.40	0.0006	0.002085
Al	27	3	He	4893.598	2.8531	146565.53	0.0006	0.002085
K	39	3	He	4928.699	6.1831	314465.15	0.0012	0.4112
K	39	3	He	4968.738	6.23	314727.32	0.0012	0.4112
K	39	3	He	4866.987	6.1108	313919.35	0.0012	0.4112
Ca	44	3	He	4965.724	0.3388	17230.67	0.0001	0.003322
Ca	44	3	He	5099.328	0.3478	17571.22	0.0001	0.003322
Ca	44	3	He	5100.325	0.3479	17871.32	0.0001	0.003322
Ti	47	3	He	503.765	0.2679	13626.84	0.0005	0
Ti	47	3	He	503.811	0.268	13536.78	0.0005	0
Ti	47	3	He	493.249	0.2623	13476.75	0.0005	0
V	51	3	He	504.549	10.7539	546934.25	0.0213	0.0318
V	51	3	He	502.738	10.7154	541326.31	0.0213	0.0318
V	51	3	He	492.76	10.5034	539572.63	0.0213	0.0318
Cr	52	3	He	479.396	14.1421	719252.57	0.0294	0.04297
Cr	52	3	He	472.183	13.9299	703718.11	0.0294	0.04297
Cr	52	3	He	466.331	13.7578	706755.77	0.0294	0.04297
Mn	55	3	He	501.523	6.2378	317249.31	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	494.502	6.1505	310714.16	0.0124	0.002801
Mn	55	3	He	483.999	6.0199	309252.07	0.0124	0.002801
Fe	57	3	He	4920.013	2.8177	143306.78	0.0006	0.002732
Fe	57	3	He	4875.934	2.7925	141072.72	0.0006	0.002732
Fe	57	3	He	4814.487	2.7573	141648.26	0.0006	0.002732
Co	59	3	He	480.142	26.3574	1340515.14	0.0549	0.003644
Co	59	3	He	478.89	26.2887	1328062.32	0.0549	0.003644
Co	59	3	He	468.864	25.7384	1322213.11	0.0549	0.003644
Ni	60	3	He	470.232	4.3792	375021.21	0.0093	0.01413
Ni	60	3	He	471.531	4.3913	375434.88	0.0093	0.01413
Ni	60	3	He	474.919	4.4227	373716.95	0.0093	0.01413
Cu	63	3	He	458.332	12.5795	1077268.03	0.0274	0.009321
Cu	63	3	He	455.03	12.489	1067753.50	0.0274	0.009321
Cu	63	3	He	463.537	12.7223	1075023.89	0.0274	0.009321
Zn	66	3	He	484.979	1.495	128026.72	0.0031	0.005913
Zn	66	3	He	483.866	1.4916	127523.65	0.0031	0.005913
Zn	66	3	He	487.688	1.5033	127029.08	0.0031	0.005913
As	75	3	He	487.907	1.0478	89729.03	0.0021	0.0008698
As	75	3	He	490.994	1.0544	90147.69	0.0021	0.0008698
As	75	3	He	487.398	1.0467	88444.97	0.0021	0.0008698
Sr	88	3	He	51.649	0.4551	39566.28	0.0088	0.0006843
Sr	88	3	He	49.631	0.4374	38974.55	0.0088	0.0006843
Sr	88	3	He	50.837	0.448	38964.70	0.0088	0.0006843
Mo	98	3	He	50.384	1.1075	96278.86	0.0219	0.001827
Mo	98	3	He	48.575	1.0678	95152.05	0.0219	0.001827
Mo	98	3	He	49.942	1.0978	95483.43	0.0219	0.001827
Ag	107	3	He	49.405	2.3251	202125.70	0.047	0.001064
Ag	107	3	He	46.698	2.1977	195835.95	0.047	0.001064
Ag	107	3	He	48.493	2.2821	198491.85	0.047	0.001064
Cd	111	3	He	50.272	0.2678	23279.37	0.0053	6.086E-05
Cd	111	3	He	48.825	0.2601	23175.25	0.0053	6.086E-05
Cd	111	3	He	50.957	0.2714	23607.93	0.0053	6.086E-05
Sn	120	3	He	103.519	1.6112	140063.00	0.0154	0.01483
Sn	120	3	He	101.343	1.5776	140577.95	0.0154	0.01483
Sn	120	3	He	102.835	1.6006	139215.23	0.0154	0.01483
Sb	121	3	He	105.96	1.5102	131288.37	0.0143	0.0002661
Sb	121	3	He	102.928	1.467	130723.56	0.0143	0.0002661
Sb	121	3	He	106.202	1.5137	131653.87	0.0143	0.0002661
Ba	137	3	He	510.52	2.4399	212111.95	0.0048	0.0002665
Ba	137	3	He	501.965	2.3991	213777.18	0.0048	0.0002665
Ba	137	3	He	505.648	2.4167	210192.99	0.0048	0.0002665
Tl	205	3	He	99.972	2.4581	985010.84	0.0246	0.002755
Tl	205	3	He	100.93	2.4816	992707.02	0.0246	0.002755
Tl	205	3	He	100.479	2.4705	985635.45	0.0246	0.002755
Pb	208	3	He	50.406	1.6355	347967.03	0.0324	0.002158
Pb	208	3	He	50.427	1.6362	348084.41	0.0324	0.002158
Pb	208	3	He	50.128	1.6265	344074.45	0.0324	0.002158
U	238	3	He	50.649	2.4947	766101.16	0.0492	0.0004023
U	238	3	He	50.199	2.4726	752888.66	0.0492	0.0004023
U	238	3	He	50.394	2.4822	751409.91	0.0492	0.0004023
Sc	45	1	No Gas			2583060.74		
Sc	45	1	No Gas			2559899.65		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2579377.77		
Ge	72	1	No Gas			1230111.47		
Ge	72	1	No Gas			1239575.45		
Ge	72	1	No Gas			1232231.08		
Sc	45	2	H2			201032.03		
Sc	45	2	H2			197051.33		
Sc	45	2	H2			199594.86		
Ge	72	2	H2			167664.33		
Ge	72	2	H2			164741.66		
Ge	72	2	H2			167077.63		
In	115	2	H2			400361.44		
In	115	2	H2			392301.36		
In	115	2	H2			401504.80		
Sc	45	3	He			50859.11		
Sc	45	3	He			50518.41		
Sc	45	3	He			51371.27		
Ge	72	3	He			85636.50		
Ge	72	3	He			85495.57		
Ge	72	3	He			84499.14		
In	115	3	He			87666.02		
In	115	3	He			89850.95		
In	115	3	He			87705.63		
Tb	159	3	He			400722.03		
Tb	159	3	He			400024.02		
Tb	159	3	He			398954.06		
Bi	209	3	He			307085.95		
Bi	209	3	He			304494.12		
Bi	209	3	He			302721.38		

Quantitation Report

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Acq Time	8/9/2023 6:30:52 PM
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Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

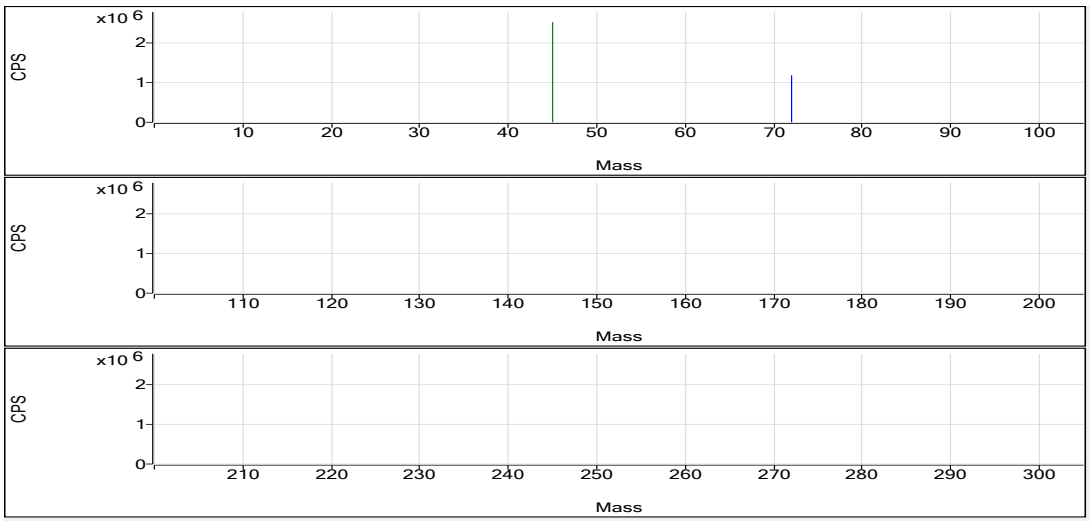
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.023	ppb	N/A	44.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.046	ppb	26.9	8.89	0.0001	Pulse	1.5000	3
Na	23	45	He	8.055	ppb	136.0	22120.55	0.4458	Pulse	0.1000	3
Mg	24	45	He	0.309	ppb	312.1	253.35	0.0051	Pulse	0.1000	3
Al	27	45	He	-0.715	ppb	N/A	83.33	0.0017	Pulse	0.1000	3
K	39	45	He	14.211	ppb	51.7	21259.43	0.4278	Pulse	0.1000	3
Ca	44	45	He	-3.831	ppb	N/A	153.34	0.0031	Pulse	0.1000	3
Ti	47	45	He	0.123	ppb	173.2	3.33	0.0001	Pulse	0.1000	3
V	51	45	He	-0.255	ppb	N/A	1310.07	0.0264	Pulse	0.5000	3
Cr	52	45	He	-0.028	ppb	N/A	2093.56	0.0422	Pulse	0.1000	3
Mn	55	45	He	0.098	ppb	38.0	200.01	0.0040	Pulse	0.1000	3
Fe	57	45	He	-0.198	ppb	N/A	130.00	0.0026	Pulse	0.1000	3
Co	59	45	He	0.034	ppb	101.5	273.35	0.0055	Pulse	0.1000	3
Ni	60	72	He	-1.216	ppb	N/A	236.68	0.0028	Pulse	0.1000	3
Cu	63	72	He	-0.066	ppb	N/A	626.70	0.0075	Pulse	0.1000	3
Zn	66	72	He	0.003	ppb	6144.5	493.36	0.0059	Pulse	0.1000	3
As	75	72	He	0.113	ppb	96.8	92.67	0.0011	Pulse	0.5000	3
Sr	88	115	He	0.014	ppb	375.2	70.00	0.0008	Pulse	0.1000	3
Mo	98	115	He	0.003	ppb	467.0	163.34	0.0019	Pulse	0.1000	3
Ag	107	115	He	-0.005	ppb	N/A	73.34	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.002	ppb	556.2	6.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.079	ppb	198.0	1393.45	0.0160	Pulse	0.1000	3
Sb	121	115	He	0.019	ppb	64.0	46.67	0.0005	Pulse	0.1000	3
Ba	137	115	He	0.041	ppb	102.8	40.00	0.0005	Pulse	0.1000	3
Tl	205	159	He	0.027	ppb	32.7	1376.79	0.0034	Pulse	0.1000	3
Pb	208	159	He	-0.011	ppb	N/A	720.03	0.0018	Pulse	0.1000	3
U	238	209	He	0.052	ppb	20.1	913.40	0.0029	Pulse	0.1000	3

ISTD Table:

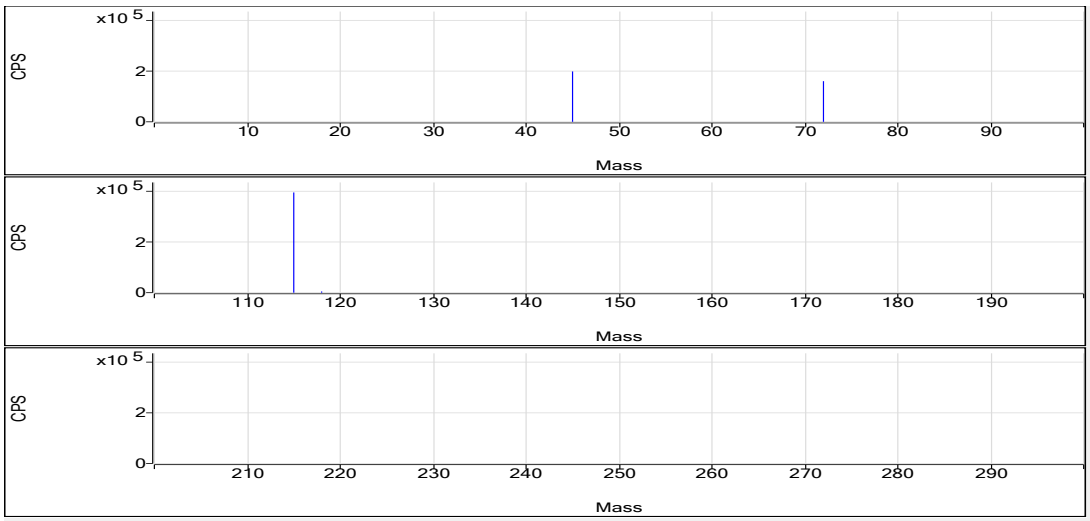
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2536025.27	0.6	97.2	Analog	0.1000	3
No Gas	Ge	72	1188164.62	0.6	92.2	Pulse	0.1000	3
H2	Sc	45	198149.07	0.6	96.2	Pulse	0.1000	3
H2	Ge	72	159828.89	1.2	98.2	Pulse	0.1000	3
H2	In	115	394191.23	0.7	97.6	Pulse	0.1000	3
He	Sc	45	49698.72	2.6	97.1	Pulse	0.1000	3
He	Ge	72	83336.51	0.3	101.8	Pulse	0.1000	3
He	In	115	86863.07	1.2	99.1	Pulse	0.1000	3
He	Tb	159	401243.48	1.0	99.9	Pulse	0.1000	3
He	Bi	209	310062.95	1.3	101.3	Pulse	0.1000	3

No Gas

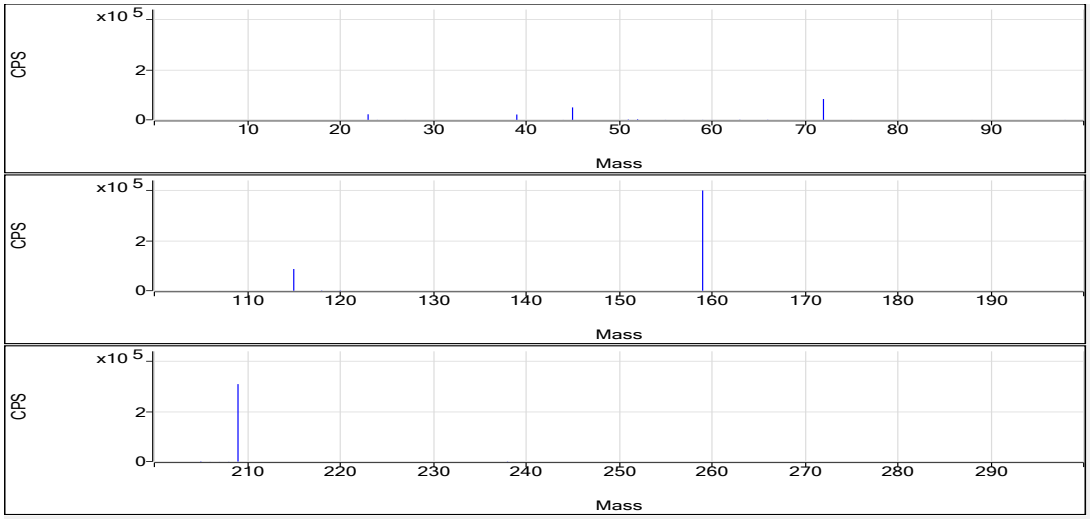


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.021	0	48.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.023	0	44.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.024	0	42.00	0.0007	3.404E-05
Se	78	2	H2	0.032	0	8.00	0.0004	3.546E-05
Se	78	2	H2	0.053	0.0001	9.33	0.0004	3.546E-05
Se	78	2	H2	0.053	0.0001	9.33	0.0004	3.546E-05
Na	23	3	He	19.227	0.4856	23459.03	0.0036	0.4171
Na	23	3	He	7.61	0.4442	22167.39	0.0036	0.4171
Na	23	3	He	-2.671	0.4075	20735.23	0.0036	0.4171
Mg	24	3	He	1.146	0.0066	320.02	0.0018	0.004553
Mg	24	3	He	-0.745	0.0032	160.01	0.0018	0.004553
Mg	24	3	He	0.526	0.0055	280.01	0.0018	0.004553
Al	27	3	He	-1.802	0.001	50.00	0.0006	0.002085
Al	27	3	He	-0.139	0.002	100.00	0.0006	0.002085
Al	27	3	He	-0.205	0.002	100.00	0.0006	0.002085
K	39	3	He	20.344	0.435	21015.57	0.0012	0.4112
K	39	3	He	6.075	0.4183	20875.69	0.0012	0.4112
K	39	3	He	16.213	0.4302	21887.03	0.0012	0.4112
Ca	44	3	He	-21.595	0.0019	90.00	0.0001	0.003322
Ca	44	3	He	-7.643	0.0028	140.01	0.0001	0.003322
Ca	44	3	He	17.746	0.0045	230.01	0.0001	0.003322
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.37	0.0002	10.00	0.0005	0
V	51	3	He	-0.212	0.0273	1318.07	0.0213	0.0318
V	51	3	He	-0.293	0.0256	1276.06	0.0213	0.0318
V	51	3	He	-0.261	0.0263	1336.07	0.0213	0.0318
Cr	52	3	He	0.024	0.0437	2110.22	0.0294	0.04297
Cr	52	3	He	-0.03	0.0421	2100.23	0.0294	0.04297
Cr	52	3	He	-0.078	0.0407	2070.22	0.0294	0.04297
Mn	55	3	He	0.091	0.0039	190.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.065	0.0036	180.01	0.0124	0.002801
Mn	55	3	He	0.138	0.0045	230.01	0.0124	0.002801
Fe	57	3	He	-0.433	0.0025	120.00	0.0006	0.002732
Fe	57	3	He	1.179	0.0034	170.01	0.0006	0.002732
Fe	57	3	He	-1.34	0.002	100.00	0.0006	0.002732
Co	59	3	He	0.073	0.0077	370.02	0.0549	0.003644
Co	59	3	He	0.025	0.005	250.01	0.0549	0.003644
Co	59	3	He	0.005	0.0039	200.01	0.0549	0.003644
Ni	60	3	He	-1.224	0.0028	230.01	0.0093	0.01413
Ni	60	3	He	-1.174	0.0032	270.01	0.0093	0.01413
Ni	60	3	He	-1.25	0.0025	210.01	0.0093	0.01413
Cu	63	3	He	-0.077	0.0072	600.04	0.0274	0.009321
Cu	63	3	He	-0.03	0.0085	710.05	0.0274	0.009321
Cu	63	3	He	-0.09	0.0069	570.02	0.0274	0.009321
Zn	66	3	He	0.146	0.0064	530.03	0.0031	0.005913
Zn	66	3	He	-0.172	0.0054	450.02	0.0031	0.005913
Zn	66	3	He	0.034	0.006	500.03	0.0031	0.005913
As	75	3	He	0.165	0.0012	102.00	0.0021	0.0008698
As	75	3	He	0.186	0.0013	106.00	0.0021	0.0008698
As	75	3	He	-0.013	0.0008	70.00	0.0021	0.0008698
Sr	88	3	He	-0.039	0.0003	30.00	0.0088	0.0006843
Sr	88	3	He	0.068	0.0013	110.00	0.0088	0.0006843
Sr	88	3	He	0.014	0.0008	70.00	0.0088	0.0006843
Mo	98	3	He	-0.011	0.0016	140.00	0.0219	0.001827
Mo	98	3	He	0.012	0.0021	180.01	0.0219	0.001827
Mo	98	3	He	0.006	0.002	170.01	0.0219	0.001827
Ag	107	3	He	-0.008	0.0007	60.00	0.047	0.001064
Ag	107	3	He	-0.008	0.0007	60.00	0.047	0.001064
Ag	107	3	He	0.002	0.0012	100.01	0.047	0.001064
Cd	111	3	He	0.001	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	0.01	0.0001	10.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Sn	120	3	He	-0.04	0.0142	1250.10	0.0154	0.01483
Sn	120	3	He	0.021	0.0151	1300.11	0.0154	0.01483
Sn	120	3	He	0.255	0.0188	1630.15	0.0154	0.01483
Sb	121	3	He	0.021	0.0006	50.00	0.0143	0.0002661
Sb	121	3	He	0.006	0.0003	30.00	0.0143	0.0002661
Sb	121	3	He	0.03	0.0007	60.00	0.0143	0.0002661
Ba	137	3	He	0.016	0.0003	30.00	0.0048	0.0002665
Ba	137	3	He	0.017	0.0003	30.00	0.0048	0.0002665
Ba	137	3	He	0.089	0.0007	60.00	0.0048	0.0002665
Tl	205	3	He	0.033	0.0036	1430.13	0.0246	0.002755
Tl	205	3	He	0.017	0.0032	1260.11	0.0246	0.002755
Tl	205	3	He	0.033	0.0036	1440.13	0.0246	0.002755
Pb	208	3	He	-0.018	0.0016	310.01	0.0324	0.002158
Pb	208	3	He	-0.006	0.002	440.02	0.0324	0.002158
Pb	208	3	He	-0.009	0.0019	400.02	0.0324	0.002158
U	238	3	He	0.044	0.0026	810.06	0.0492	0.0004023
U	238	3	He	0.047	0.0027	830.06	0.0492	0.0004023
U	238	3	He	0.064	0.0035	1100.08	0.0492	0.0004023
Sc	45	1	No Gas			2519516.84		
Sc	45	1	No Gas			2544752.77		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2543806.21		
Ge	72	1	No Gas			1196104.98		
Ge	72	1	No Gas			1182755.29		
Ge	72	1	No Gas			1185633.58		
Sc	45	2	H2			198608.83		
Sc	45	2	H2			196824.41		
Sc	45	2	H2			199013.96		
Ge	72	2	H2			162029.41		
Ge	72	2	H2			158672.40		
Ge	72	2	H2			158784.87		
In	115	2	H2			397319.33		
In	115	2	H2			393609.33		
In	115	2	H2			391645.03		
Sc	45	3	He			48310.53		
Sc	45	3	He			49906.06		
Sc	45	3	He			50879.58		
Ge	72	3	He			83333.70		
Ge	72	3	He			83594.99		
Ge	72	3	He			83080.83		
In	115	3	He			87927.64		
In	115	3	He			85824.80		
In	115	3	He			86861.42		
Tb	159	3	He			402004.80		
Tb	159	3	He			396896.95		
Tb	159	3	He			404828.70		
Bi	209	3	He			313211.48		
Bi	209	3	He			305407.51		
Bi	209	3	He			311569.86		

Quantitation Report

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Sample Type	CCV
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

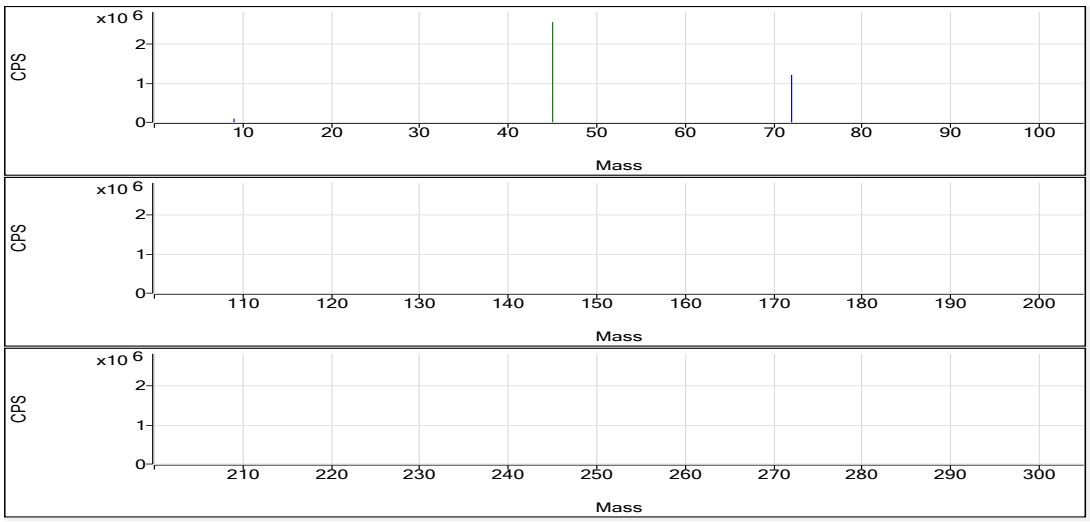
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	49.215	ppb	1.6	92175.58	0.0359	Pulse	0.5000	3
Se	78	72	H2	51.442	ppb	1.2	3679.81	0.0226	Pulse	1.5000	3
Na	23	45	He	4913.193	ppb	0.7	893882.25	17.9297	Pulse	0.1000	3
Mg	24	45	He	5057.650	ppb	1.0	455804.67	9.1427	Pulse	0.1000	3
Al	27	45	He	5073.402	ppb	1.7	147455.87	2.9578	Pulse	0.1000	3
K	39	45	He	5122.242	ppb	2.4	319536.93	6.4097	Pulse	0.1000	3
Ca	44	45	He	5033.477	ppb	3.8	17117.20	0.3434	Pulse	0.1000	3
Ti	47	45	He	5081.724	ppb	2.0	134740.09	2.7028	Pulse	0.1000	3
V	51	45	He	517.237	ppb	1.0	549571.83	11.0235	Pulse	0.5000	3
Cr	52	45	He	491.131	ppb	0.4	722266.19	14.4872	Pulse	0.1000	3
Mn	55	45	He	515.587	ppb	1.0	319698.84	6.4126	Pulse	0.1000	3
Fe	57	45	He	5112.270	ppb	2.0	145954.79	2.9277	Pulse	0.1000	3
Co	59	45	He	503.675	ppb	1.2	1378523.42	27.6491	Mix	0.1000	3
Ni	60	72	He	492.973	ppb	2.6	383839.37	4.5903	Pulse	0.1000	3
Cu	63	72	He	472.102	ppb	1.5	1083623.84	12.9572	Pulse	0.1000	3
Zn	66	72	He	497.072	ppb	1.6	128138.51	1.5321	Pulse	0.1000	3
As	75	72	He	504.966	ppb	2.6	90676.09	1.0844	Pulse	0.5000	3
Sr	88	115	He	52.011	ppb	2.0	40141.07	0.4583	Pulse	0.1000	3
Mo	98	115	He	50.688	ppb	1.7	97594.36	1.1142	Pulse	0.1000	3
Ag	107	115	He	50.575	ppb	1.9	208456.32	2.3801	Pulse	0.1000	3
Cd	111	115	He	50.518	ppb	1.4	23569.23	0.2691	Pulse	0.5000	3
Sn	120	115	He	51.536	ppb	2.1	70901.84	0.8095	Pulse	0.1000	3
Sb	121	115	He	52.158	ppb	0.8	65130.04	0.7435	Pulse	0.1000	3
Ba	137	115	He	515.193	ppb	1.6	215662.64	2.4623	Pulse	0.1000	3
Tl	205	159	He	50.932	ppb	1.2	503008.85	1.2537	Pulse	0.1000	3
Pb	208	159	He	51.597	ppb	0.7	671737.88	1.6741	Pulse	0.1000	3
U	238	209	He	50.172	ppb	0.4	764855.35	2.4713	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2568281.42	0.5	98.5	Analog	0.1000	3
No Gas	Ge	72	1214936.73	0.4	94.3	Pulse	0.1000	3
H2	Sc	45	199785.52	1.3	96.9	Pulse	0.1000	3
H2	Ge	72	162947.19	0.4	100.1	Pulse	0.1000	3
H2	In	115	396547.35	0.7	98.2	Pulse	0.1000	3
He	Sc	45	49856.16	0.6	97.4	Pulse	0.1000	3
He	Ge	72	83644.66	1.8	102.2	Pulse	0.1000	3
He	In	115	87600.26	1.6	99.9	Pulse	0.1000	3
He	Tb	159	401266.86	1.1	99.9	Pulse	0.1000	3
He	Bi	209	309501.73	0.4	101.1	Pulse	0.1000	3

No Gas



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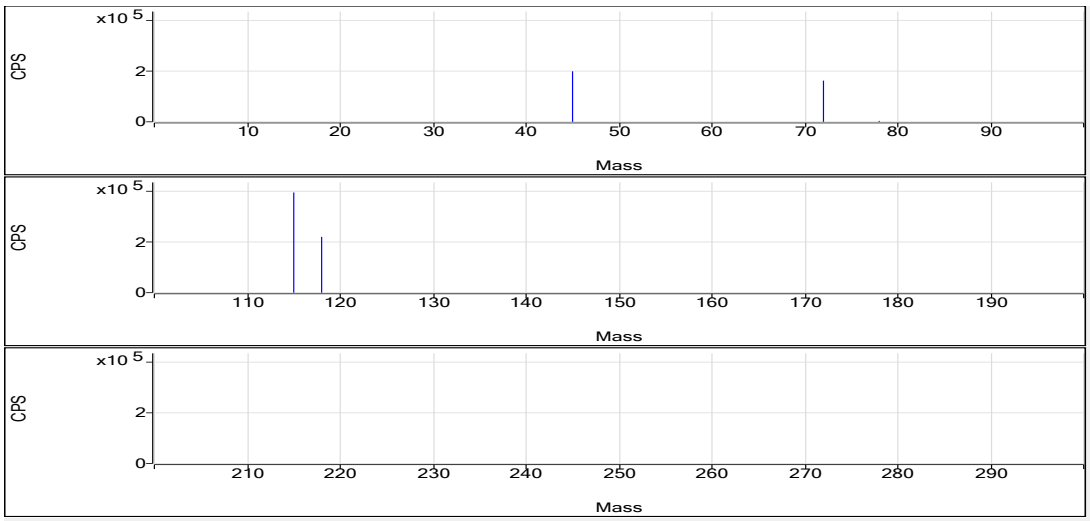
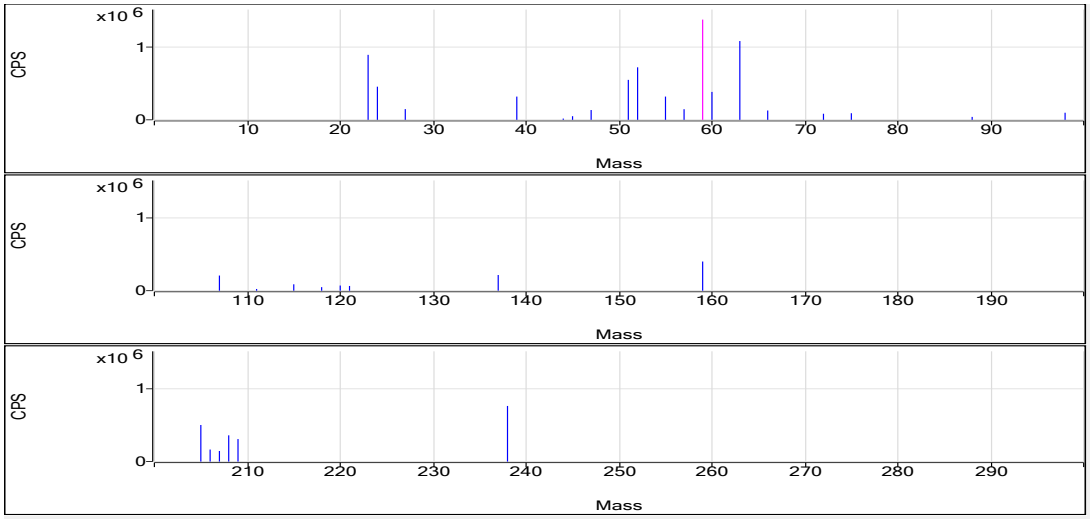


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	48.486	0.0354	90273.89	0.0007	3.404E-05
Be	9	1	No Gas	49.093	0.0358	92294.19	0.0007	3.404E-05
Be	9	1	No Gas	50.066	0.0365	93958.65	0.0007	3.404E-05
Se	78	2	H2	50.945	0.0224	3657.14	0.0004	3.546E-05
Se	78	2	H2	52.125	0.0229	3711.16	0.0004	3.546E-05
Se	78	2	H2	51.257	0.0225	3671.14	0.0004	3.546E-05
Na	23	3	He	4951.739	18.0671	896041.55	0.0036	0.4171
Na	23	3	He	4908.701	17.9137	892392.41	0.0036	0.4171
Na	23	3	He	4879.14	17.8083	893212.80	0.0036	0.4171
Mg	24	3	He	5113.641	9.2438	458449.56	0.0018	0.004553
Mg	24	3	He	5030.628	9.0938	453020.74	0.0018	0.004553
Mg	24	3	He	5028.681	9.0903	455943.70	0.0018	0.004553
Al	27	3	He	5152.767	3.0041	148986.71	0.0006	0.002085
Al	27	3	He	5086.408	2.9654	147724.73	0.0006	0.002085
Al	27	3	He	4981.031	2.904	145656.16	0.0006	0.002085
K	39	3	He	5230.224	6.5362	324162.92	0.0012	0.4112
K	39	3	He	5147.33	6.4391	320771.52	0.0012	0.4112
K	39	3	He	4989.173	6.2539	313676.34	0.0012	0.4112
Ca	44	3	He	5081.568	0.3466	17190.61	0.0001	0.003322
Ca	44	3	He	5198.627	0.3545	17661.17	0.0001	0.003322
Ca	44	3	He	4820.235	0.329	16499.83	0.0001	0.003322
Ti	47	3	He	5153.243	2.7408	135931.06	0.0005	0
Ti	47	3	He	5124.671	2.7256	135779.76	0.0005	0
Ti	47	3	He	4967.257	2.6419	132509.44	0.0005	0
V	51	3	He	522.041	11.1256	551778.13	0.0213	0.0318
V	51	3	He	517.467	11.0284	549394.94	0.0213	0.0318
V	51	3	He	512.203	10.9166	547542.44	0.0213	0.0318
Cr	52	3	He	491.847	14.5082	719538.74	0.0294	0.04297
Cr	52	3	He	492.755	14.5349	724076.00	0.0294	0.04297
Cr	52	3	He	488.792	14.4184	723183.82	0.0294	0.04297
Mn	55	3	He	521.002	6.48	321375.35	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	514.394	6.3978	318714.84	0.0124	0.002801
Mn	55	3	He	511.364	6.3602	319006.34	0.0124	0.002801
Fe	57	3	He	5168.222	2.9597	146788.62	0.0006	0.002732
Fe	57	3	He	5175.503	2.9639	147650.26	0.0006	0.002732
Fe	57	3	He	4993.085	2.8595	143425.50	0.0006	0.002732
Co	59	3	He	502.349	27.5763	1367652.48	0.0549	0.003644
Co	59	3	He	498.565	27.3686	1363400.92	0.0549	0.003644
Co	59	3	He	510.112	28.0024	1404516.85	0.0549	0.003644
Ni	60	3	He	492.288	4.584	384762.30	0.0093	0.01413
Ni	60	3	He	506.23	4.7134	386713.16	0.0093	0.01413
Ni	60	3	He	480.402	4.4736	380042.65	0.0093	0.01413
Cu	63	3	He	474.205	13.0149	1092422.48	0.0274	0.009321
Cu	63	3	He	477.995	13.1188	1076342.87	0.0274	0.009321
Cu	63	3	He	464.106	12.7379	1082106.16	0.0274	0.009321
Zn	66	3	He	502.398	1.5485	129974.43	0.0031	0.005913
Zn	66	3	He	500.645	1.5431	126604.88	0.0031	0.005913
Zn	66	3	He	488.174	1.5048	127836.23	0.0031	0.005913
As	75	3	He	501.987	1.078	90483.62	0.0021	0.0008698
As	75	3	He	519.269	1.1151	91487.74	0.0021	0.0008698
As	75	3	He	493.642	1.0601	90056.92	0.0021	0.0008698
Sr	88	3	He	51.908	0.4574	40398.38	0.0088	0.0006843
Sr	88	3	He	51.016	0.4496	39786.65	0.0088	0.0006843
Sr	88	3	He	53.108	0.468	40238.18	0.0088	0.0006843
Mo	98	3	He	49.701	1.0925	96489.22	0.0219	0.001827
Mo	98	3	He	51.119	1.1236	99441.09	0.0219	0.001827
Mo	98	3	He	51.246	1.1264	96852.77	0.0219	0.001827
Ag	107	3	He	50.443	2.3739	209655.84	0.047	0.001064
Ag	107	3	He	49.691	2.3385	206954.70	0.047	0.001064
Ag	107	3	He	51.592	2.4279	208758.43	0.047	0.001064
Cd	111	3	He	50.208	0.2674	23619.95	0.0053	6.086E-05
Cd	111	3	He	50.029	0.2665	23583.93	0.0053	6.086E-05
Cd	111	3	He	51.318	0.2734	23503.81	0.0053	6.086E-05
Sn	120	3	He	51.482	0.8087	71424.29	0.0154	0.01483
Sn	120	3	He	50.469	0.7931	70188.65	0.0154	0.01483
Sn	120	3	He	52.656	0.8268	71092.58	0.0154	0.01483
Sb	121	3	He	52.388	0.7468	65957.16	0.0143	0.0002661
Sb	121	3	He	51.699	0.737	65223.56	0.0143	0.0002661
Sb	121	3	He	52.385	0.7468	64209.41	0.0143	0.0002661
Ba	137	3	He	515.101	2.4618	217424.98	0.0048	0.0002665
Ba	137	3	He	506.981	2.423	214436.87	0.0048	0.0002665
Ba	137	3	He	523.498	2.502	215126.07	0.0048	0.0002665
Tl	205	3	He	50.238	1.2366	502511.83	0.0246	0.002755
Tl	205	3	He	51.109	1.258	502090.81	0.0246	0.002755
Tl	205	3	He	51.449	1.2664	504423.90	0.0246	0.002755
Pb	208	3	He	51.188	1.6609	363798.78	0.0324	0.002158
Pb	208	3	He	51.875	1.6831	360570.54	0.0324	0.002158
Pb	208	3	He	51.729	1.6784	358176.36	0.0324	0.002158
U	238	3	He	49.943	2.46	765071.32	0.0492	0.0004023
U	238	3	He	50.378	2.4814	765583.58	0.0492	0.0004023
U	238	3	He	50.196	2.4724	763911.16	0.0492	0.0004023
Sc	45	1	No Gas			2553182.15		
Sc	45	1	No Gas			2578042.15		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2573619.96		
Ge	72	1	No Gas			1211499.44		
Ge	72	1	No Gas			1220723.97		
Ge	72	1	No Gas			1212586.78		
Sc	45	2	H2			200857.83		
Sc	45	2	H2			196898.55		
Sc	45	2	H2			201600.19		
Ge	72	2	H2			163516.68		
Ge	72	2	H2			162181.55		
Ge	72	2	H2			163143.34		
In	115	2	H2			395297.96		
In	115	2	H2			394582.18		
In	115	2	H2			399761.91		
Sc	45	3	He			49595.21		
Sc	45	3	He			49816.22		
Sc	45	3	He			50157.04		
Ge	72	3	He			83936.54		
Ge	72	3	He			82045.65		
Ge	72	3	He			84951.78		
In	115	3	He			88702.23		
In	115	3	He			88873.41		
In	115	3	He			86368.09		
Tb	159	3	He			406358.82		
Tb	159	3	He			399118.67		
Tb	159	3	He			398323.08		
Bi	209	3	He			311006.15		
Bi	209	3	He			308528.16		
Bi	209	3	He			308970.89		

Quantitation Report

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Sample Type	CCB
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Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

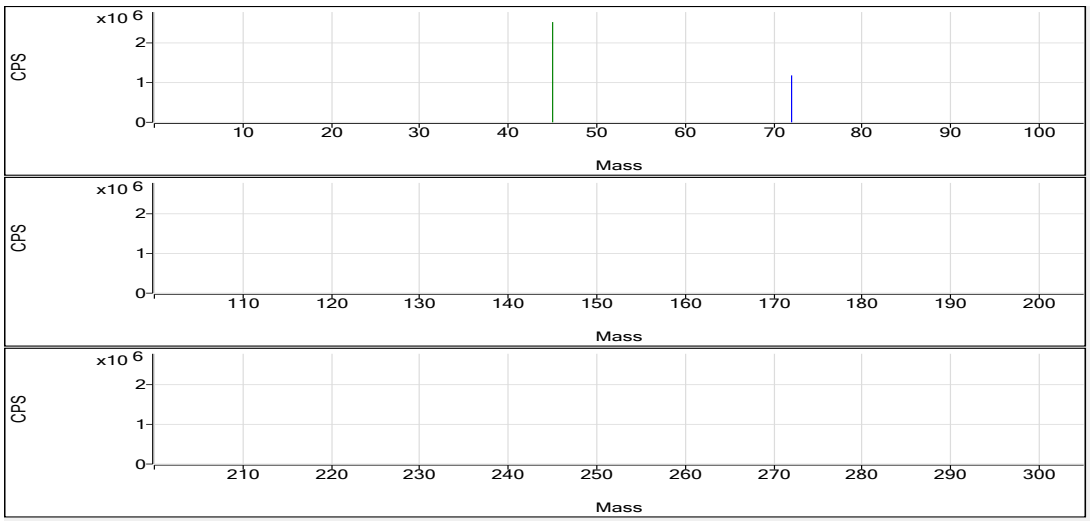
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.015	ppb	N/A	58.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.056	ppb	112.4	9.56	0.0001	Pulse	1.5000	3
Na	23	45	He	-8.335	ppb	N/A	19149.60	0.3873	Pulse	0.1000	3
Mg	24	45	He	0.421	ppb	114.2	263.35	0.0053	Pulse	0.1000	3
Al	27	45	He	0.135	ppb	1012.0	106.67	0.0022	Pulse	0.1000	3
K	39	45	He	13.112	ppb	72.4	21085.79	0.4265	Pulse	0.1000	3
Ca	44	45	He	-2.269	ppb	N/A	156.68	0.0032	Pulse	0.1000	3
Ti	47	45	He	1.637	ppb	69.3	43.33	0.0009	Pulse	0.1000	3
V	51	45	He	-0.251	ppb	N/A	1308.73	0.0265	Pulse	0.5000	3
Cr	52	45	He	0.025	ppb	697.9	2156.90	0.0437	Pulse	0.1000	3
Mn	55	45	He	0.112	ppb	50.2	206.68	0.0042	Pulse	0.1000	3
Fe	57	45	He	0.752	ppb	186.5	156.67	0.0032	Pulse	0.1000	3
Co	59	45	He	0.042	ppb	77.6	293.34	0.0059	Pulse	0.1000	3
Ni	60	72	He	-1.088	ppb	N/A	330.01	0.0040	Pulse	0.1000	3
Cu	63	72	He	-0.028	ppb	N/A	696.71	0.0085	Pulse	0.1000	3
Zn	66	72	He	0.329	ppb	163.6	566.70	0.0069	Pulse	0.1000	3
As	75	72	He	0.159	ppb	24.5	98.67	0.0012	Pulse	0.5000	3
Sr	88	115	He	0.030	ppb	130.5	83.33	0.0009	Pulse	0.1000	3
Mo	98	115	He	0.000	ppb	N/A	160.01	0.0018	Pulse	0.1000	3
Ag	107	115	He	-0.006	ppb	N/A	70.00	0.0008	Pulse	0.1000	3
Cd	111	115	He	-0.002	ppb	N/A	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.192	ppb	77.8	1563.48	0.0178	Pulse	0.1000	3
Sb	121	115	He	0.038	ppb	59.7	70.00	0.0008	Pulse	0.1000	3
Ba	137	115	He	0.039	ppb	118.8	40.00	0.0005	Pulse	0.1000	3
Tl	205	159	He	-0.018	ppb	N/A	923.40	0.0023	Pulse	0.1000	3
Pb	208	159	He	-0.011	ppb	N/A	726.70	0.0018	Pulse	0.1000	3
U	238	209	He	0.043	ppb	32.6	773.39	0.0025	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2522123.45	1.9	96.7	Analog	0.1000	3
No Gas	Ge	72	1180517.93	1.0	91.6	Pulse	0.1000	3
H2	Sc	45	198850.10	0.6	96.5	Pulse	0.1000	3
H2	Ge	72	159505.54	0.6	98.0	Pulse	0.1000	3
H2	In	115	394891.00	0.7	97.8	Pulse	0.1000	3
He	Sc	45	49448.16	2.2	96.6	Pulse	0.1000	3
He	Ge	72	81565.96	2.2	99.6	Pulse	0.1000	3
He	In	115	87826.26	1.9	100.2	Pulse	0.1000	3
He	Tb	159	399921.99	1.0	99.6	Pulse	0.1000	3
He	Bi	209	307682.85	0.6	100.5	Pulse	0.1000	3

No Gas



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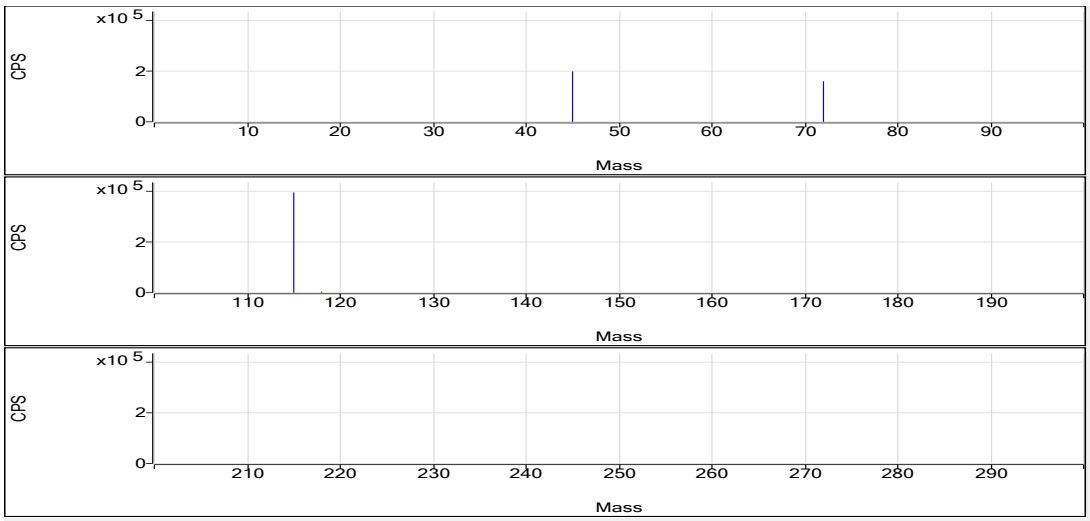
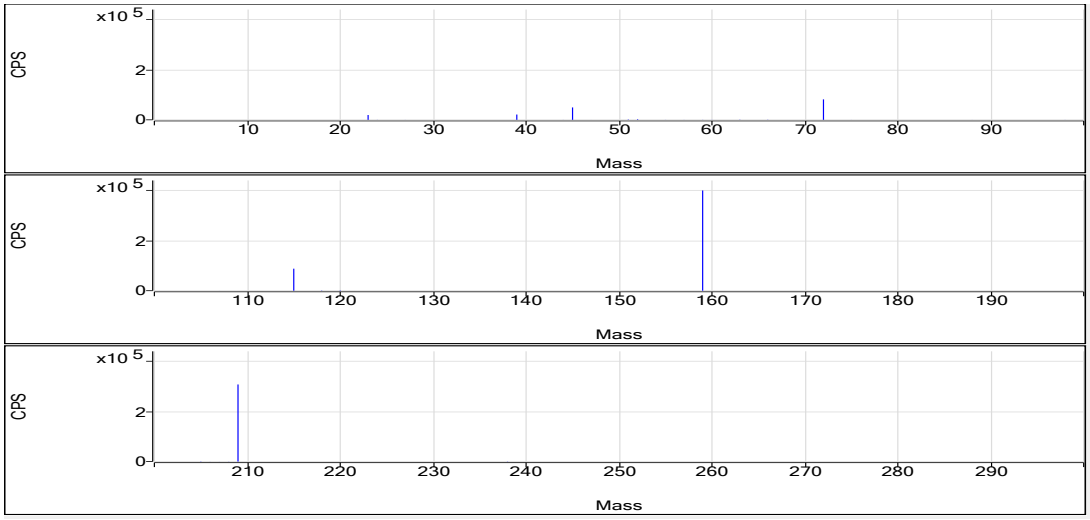


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.016	0	56.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.015	0	58.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.014	0	62.00	0.0007	3.404E-05
Se	78	2	H2	0.127	0.0001	14.67	0.0004	3.546E-05
Se	78	2	H2	0.024	0	7.33	0.0004	3.546E-05
Se	78	2	H2	0.015	0	6.67	0.0004	3.546E-05
Na	23	3	He	-4.667	0.4004	19493.42	0.0036	0.4171
Na	23	3	He	-9.678	0.3826	19403.21	0.0036	0.4171
Na	23	3	He	-10.661	0.3791	18552.18	0.0036	0.4171
Mg	24	3	He	0.095	0.0047	230.01	0.0018	0.004553
Mg	24	3	He	0.972	0.0063	320.02	0.0018	0.004553
Mg	24	3	He	0.194	0.0049	240.01	0.0018	0.004553
Al	27	3	He	1.711	0.0031	150.01	0.0006	0.002085
Al	27	3	He	-0.532	0.0018	90.00	0.0006	0.002085
Al	27	3	He	-0.773	0.0016	80.00	0.0006	0.002085
K	39	3	He	11.714	0.4249	20685.22	0.0012	0.4112
K	39	3	He	4.389	0.4163	21115.80	0.0012	0.4112
K	39	3	He	23.233	0.4384	21456.34	0.0012	0.4112
Ca	44	3	He	-3.558	0.0031	150.01	0.0001	0.003322
Ca	44	3	He	-2.472	0.0032	160.01	0.0001	0.003322
Ca	44	3	He	-0.777	0.0033	160.01	0.0001	0.003322
Ti	47	3	He	1.931	0.001	50.00	0.0005	0
Ti	47	3	He	2.595	0.0014	70.00	0.0005	0
Ti	47	3	He	0.384	0.0002	10.00	0.0005	0
V	51	3	He	-0.263	0.0262	1276.07	0.0213	0.0318
V	51	3	He	-0.229	0.0269	1366.07	0.0213	0.0318
V	51	3	He	-0.262	0.0262	1284.06	0.0213	0.0318
Cr	52	3	He	0.118	0.0464	2260.24	0.0294	0.04297
Cr	52	3	He	-0.174	0.0379	1920.18	0.0294	0.04297
Cr	52	3	He	0.13	0.0468	2290.27	0.0294	0.04297
Mn	55	3	He	0.171	0.0049	240.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.06	0.0035	180.01	0.0124	0.002801
Mn	55	3	He	0.103	0.0041	200.01	0.0124	0.002801
Fe	57	3	He	1.329	0.0035	170.01	0.0006	0.002732
Fe	57	3	He	1.773	0.0037	190.01	0.0006	0.002732
Fe	57	3	He	-0.847	0.0022	110.00	0.0006	0.002732
Co	59	3	He	0.061	0.007	340.01	0.0549	0.003644
Co	59	3	He	0.059	0.0069	350.01	0.0549	0.003644
Co	59	3	He	0.004	0.0039	190.01	0.0549	0.003644
Ni	60	3	He	-0.965	0.0052	430.02	0.0093	0.01413
Ni	60	3	He	-1.211	0.0029	230.01	0.0093	0.01413
Ni	60	3	He	-1.088	0.004	330.01	0.0093	0.01413
Cu	63	3	He	0.002	0.0094	780.04	0.0274	0.009321
Cu	63	3	He	-0.001	0.0093	740.05	0.0274	0.009321
Cu	63	3	He	-0.086	0.007	570.04	0.0274	0.009321
Zn	66	3	He	0.699	0.0081	670.04	0.0031	0.005913
Zn	66	3	He	-0.289	0.005	400.02	0.0031	0.005913
Zn	66	3	He	0.578	0.0077	630.04	0.0031	0.005913
As	75	3	He	0.133	0.0012	96.00	0.0021	0.0008698
As	75	3	He	0.204	0.0013	104.00	0.0021	0.0008698
As	75	3	He	0.141	0.0012	96.00	0.0021	0.0008698
Sr	88	3	He	-0.014	0.0006	50.00	0.0088	0.0006843
Sr	88	3	He	0.063	0.0012	110.00	0.0088	0.0006843
Sr	88	3	He	0.041	0.001	90.00	0.0088	0.0006843
Mo	98	3	He	-0.011	0.0016	140.01	0.0219	0.001827
Mo	98	3	He	0.004	0.0019	170.01	0.0219	0.001827
Mo	98	3	He	0.007	0.002	170.01	0.0219	0.001827
Ag	107	3	He	-0.015	0.0003	30.00	0.047	0.001064
Ag	107	3	He	-0.006	0.0008	70.00	0.047	0.001064
Ag	107	3	He	0.005	0.0013	110.00	0.047	0.001064
Cd	111	3	He	0.001	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	0.001	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Sn	120	3	He	0.064	0.0158	1400.12	0.0154	0.01483
Sn	120	3	He	0.356	0.0203	1810.19	0.0154	0.01483
Sn	120	3	He	0.155	0.0172	1480.12	0.0154	0.01483
Sb	121	3	He	0.029	0.0007	60.00	0.0143	0.0002661
Sb	121	3	He	0.021	0.0006	50.00	0.0143	0.0002661
Sb	121	3	He	0.063	0.0012	100.00	0.0143	0.0002661
Ba	137	3	He	-0.008	0.0002	20.00	0.0048	0.0002665
Ba	137	3	He	0.085	0.0007	60.00	0.0048	0.0002665
Ba	137	3	He	0.042	0.0005	40.00	0.0048	0.0002665
Tl	205	3	He	-0.017	0.0023	940.06	0.0246	0.002755
Tl	205	3	He	-0.019	0.0023	900.06	0.0246	0.002755
Tl	205	3	He	-0.018	0.0023	930.07	0.0246	0.002755
Pb	208	3	He	-0.01	0.0018	460.02	0.0324	0.002158
Pb	208	3	He	-0.019	0.0015	340.02	0.0324	0.002158
Pb	208	3	He	-0.003	0.0021	440.02	0.0324	0.002158
U	238	3	He	0.029	0.0018	560.04	0.0492	0.0004023
U	238	3	He	0.057	0.0032	980.07	0.0492	0.0004023
U	238	3	He	0.044	0.0026	780.05	0.0492	0.0004023
Sc	45	1	No Gas			2520748.87		
Sc	45	1	No Gas			2475074.96		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2570546.52		
Ge	72	1	No Gas			1185938.42		
Ge	72	1	No Gas			1166473.19		
Ge	72	1	No Gas			1189142.17		
Sc	45	2	H2			199494.04		
Sc	45	2	H2			197566.34		
Sc	45	2	H2			199489.92		
Ge	72	2	H2			160673.28		
Ge	72	2	H2			158886.35		
Ge	72	2	H2			158956.98		
In	115	2	H2			393153.08		
In	115	2	H2			398210.78		
In	115	2	H2			393309.13		
Sc	45	3	He			48682.05		
Sc	45	3	He			50719.38		
Sc	45	3	He			48943.06		
Ge	72	3	He			83151.87		
Ge	72	3	He			79591.27		
Ge	72	3	He			81954.75		
In	115	3	He			88491.21		
In	115	3	He			89085.00		
In	115	3	He			85925.60		
Tb	159	3	He			402051.13		
Tb	159	3	He			395294.96		
Tb	159	3	He			402419.88		
Bi	209	3	He			309563.32		
Bi	209	3	He			307587.09		
Bi	209	3	He			305898.14		

Quantitation Report

Data File Name	142SMPL.d
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Acq Time	8/9/2023 6:37:04 PM
Sample Name	410-136332-D-1-E
Sample Type	Sample
Comment	I7 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

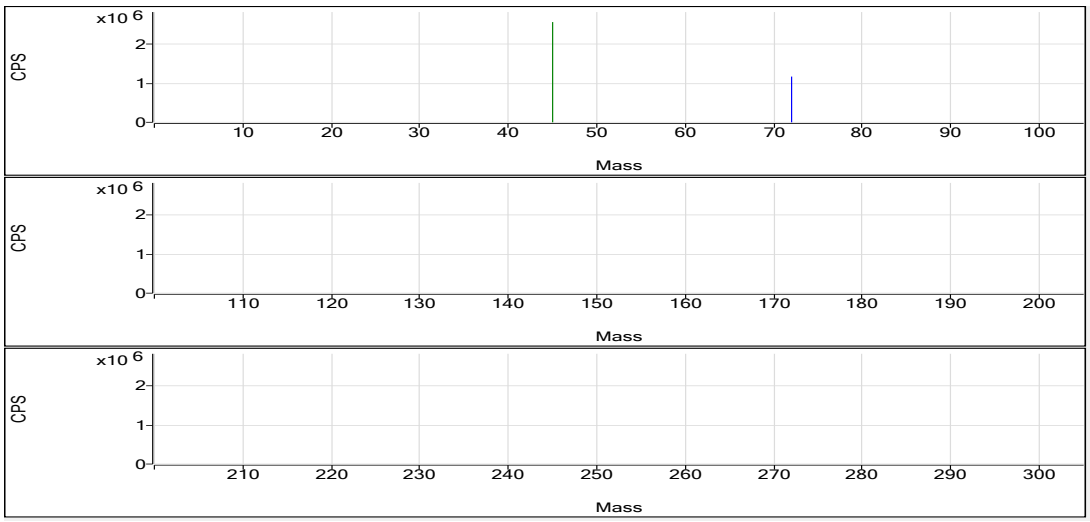
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.020	ppb	N/A	49.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.033	ppb	N/A	3.33	0.0000	Pulse	1.5000	3
Na	23	45	He	133586.137	ppb	2.2	24407499.64	476.5731	Analog	0.1000	3
Mg	24	45	He	2231.605	ppb	2.1	206740.95	4.0366	Pulse	0.1000	3
Al	27	45	He	0.658	ppb	156.4	126.67	0.0025	Pulse	0.1000	3
K	39	45	He	117.497	ppb	10.0	28104.24	0.5488	Pulse	0.1000	3
Ca	44	45	He	8266.281	ppb	1.6	28772.45	0.5618	Pulse	0.1000	3
Ti	47	45	He	0.610	ppb	92.4	16.67	0.0003	Pulse	0.1000	3
V	51	45	He	-0.395	ppb	N/A	1198.73	0.0234	Pulse	0.5000	3
Cr	52	45	He	0.732	ppb	29.8	3300.49	0.0645	Pulse	0.1000	3
Mn	55	45	He	619.490	ppb	2.2	394570.60	7.7044	Pulse	0.1000	3
Fe	57	45	He	-0.111	ppb	N/A	136.67	0.0027	Pulse	0.1000	3
Co	59	45	He	1.205	ppb	5.7	3573.89	0.0698	Pulse	0.1000	3
Ni	60	72	He	-0.560	ppb	N/A	716.71	0.0089	Pulse	0.1000	3
Cu	63	72	He	1.124	ppb	2.7	3223.80	0.0402	Pulse	0.1000	3
Zn	66	72	He	1.333	ppb	20.3	803.38	0.0100	Pulse	0.1000	3
As	75	72	He	0.105	ppb	90.0	88.00	0.0011	Pulse	0.5000	3
Sr	88	115	He	25.321	ppb	1.1	19921.29	0.2235	Pulse	0.1000	3
Mo	98	115	He	-0.010	ppb	N/A	143.34	0.0016	Pulse	0.1000	3
Ag	107	115	He	-0.004	ppb	N/A	76.67	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.055	ppb	11.2	31.33	0.0004	Pulse	0.5000	3
Sn	120	115	He	0.006	ppb	1395.6	1330.11	0.0149	Pulse	0.1000	3
Sb	121	115	He	0.036	ppb	93.9	70.00	0.0008	Pulse	0.1000	3
Ba	137	115	He	18.769	ppb	1.3	8019.29	0.0900	Pulse	0.1000	3
Tl	205	159	He	-0.054	ppb	N/A	570.03	0.0014	Pulse	0.1000	3
Pb	208	159	He	0.351	ppb	3.2	5437.31	0.0135	Pulse	0.1000	3
U	238	209	He	0.008	ppb	30.1	243.34	0.0008	Pulse	0.1000	3

ISTD Table:

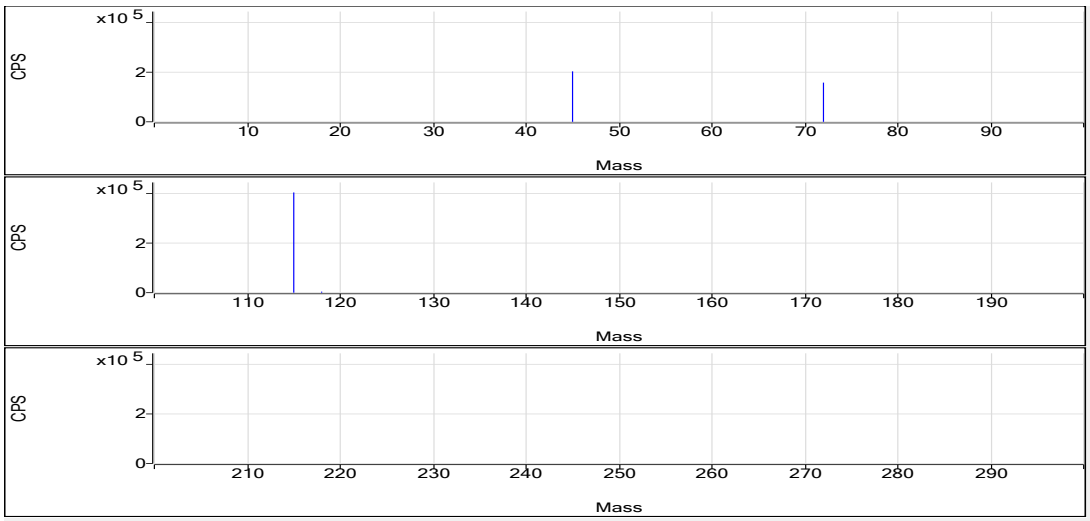
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2563336.21	1.0	98.3	Analog	0.1000	3
No Gas	Ge	72	1169082.77	0.3	90.7	Pulse	0.1000	3
H2	Sc	45	203467.85	0.5	98.7	Pulse	0.1000	3
H2	Ge	72	158029.24	0.4	97.1	Pulse	0.1000	3
H2	In	115	404140.77	1.5	100.1	Pulse	0.1000	3
He	Sc	45	51227.61	1.8	100.1	Pulse	0.1000	3
He	Ge	72	80282.06	0.7	98.1	Pulse	0.1000	3
He	In	115	89145.43	1.1	101.7	Pulse	0.1000	3
He	Tb	159	401965.05	0.8	100.1	Pulse	0.1000	3
He	Bi	209	311846.19	0.1	101.9	Pulse	0.1000	3

No Gas

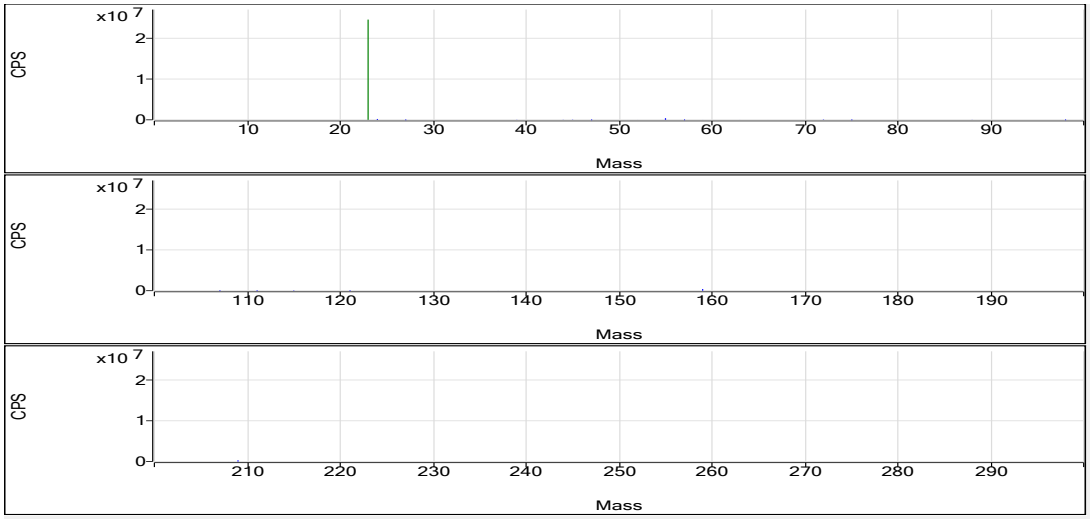


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.019	0	52.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.019	0	52.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.023	0	44.00	0.0007	3.404E-05
Se	78	2	H2	-0.023	0	4.00	0.0004	3.546E-05
Se	78	2	H2	-0.023	0	4.00	0.0004	3.546E-05
Se	78	2	H2	-0.052	0	2.00	0.0004	3.546E-05
Na	23	3	He	136095.411	485.5172	24649374.63	0.0036	0.4171
Na	23	3	He	130295.269	464.8431	24318217.14	0.0036	0.4171
Na	23	3	He	134367.731	479.3591	24254907.14	0.0036	0.4171
Mg	24	3	He	2278.356	4.1211	209223.55	0.0018	0.004553
Mg	24	3	He	2184.29	3.9511	206701.66	0.0018	0.004553
Mg	24	3	He	2232.169	4.0376	204297.65	0.0018	0.004553
Al	27	3	He	1.155	0.0028	140.01	0.0006	0.002085
Al	27	3	He	1.344	0.0029	150.01	0.0006	0.002085
Al	27	3	He	-0.525	0.0018	90.00	0.0006	0.002085
K	39	3	He	122.655	0.5548	28168.07	0.0012	0.4112
K	39	3	He	104.073	0.5331	27887.17	0.0012	0.4112
K	39	3	He	125.762	0.5585	28257.47	0.0012	0.4112
Ca	44	3	He	8312.462	0.5649	28679.00	0.0001	0.003322
Ca	44	3	He	8116.421	0.5516	28859.22	0.0001	0.003322
Ca	44	3	He	8369.959	0.5688	28779.12	0.0001	0.003322
Ti	47	3	He	1.111	0.0006	30.00	0.0005	0
Ti	47	3	He	0.719	0.0004	20.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	-0.386	0.0236	1198.06	0.0213	0.0318
V	51	3	He	-0.419	0.0229	1198.06	0.0213	0.0318
V	51	3	He	-0.38	0.0237	1200.06	0.0213	0.0318
Cr	52	3	He	0.796	0.0664	3370.51	0.0294	0.04297
Cr	52	3	He	0.489	0.0574	3000.40	0.0294	0.04297
Cr	52	3	He	0.911	0.0698	3530.56	0.0294	0.04297
Mn	55	3	He	628.88	7.8211	397073.00	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	603.546	7.5062	392684.25	0.0124	0.002801
Mn	55	3	He	626.045	7.7859	393954.56	0.0124	0.002801
Fe	57	3	He	-0.988	0.0022	110.00	0.0006	0.002732
Fe	57	3	He	-0.097	0.0027	140.01	0.0006	0.002732
Fe	57	3	He	0.752	0.0032	160.01	0.0006	0.002732
Co	59	3	He	1.283	0.0741	3760.61	0.0549	0.003644
Co	59	3	He	1.153	0.0669	3500.54	0.0549	0.003644
Co	59	3	He	1.18	0.0684	3460.52	0.0549	0.003644
Ni	60	3	He	-0.514	0.0094	750.05	0.0093	0.01413
Ni	60	3	He	-0.656	0.008	650.04	0.0093	0.01413
Ni	60	3	He	-0.509	0.0094	750.04	0.0093	0.01413
Cu	63	3	He	1.116	0.0399	3200.46	0.0274	0.009321
Cu	63	3	He	1.157	0.0411	3320.51	0.0274	0.009321
Cu	63	3	He	1.1	0.0395	3150.44	0.0274	0.009321
Zn	66	3	He	1.081	0.0092	740.05	0.0031	0.005913
Zn	66	3	He	1.619	0.0109	880.05	0.0031	0.005913
Zn	66	3	He	1.299	0.0099	790.05	0.0031	0.005913
As	75	3	He	0.211	0.0013	106.00	0.0021	0.0008698
As	75	3	He	0.079	0.001	84.00	0.0021	0.0008698
As	75	3	He	0.027	0.0009	74.00	0.0021	0.0008698
Sr	88	3	He	25.615	0.2261	19944.64	0.0088	0.0006843
Sr	88	3	He	25.046	0.2211	19674.26	0.0088	0.0006843
Sr	88	3	He	25.3	0.2233	20144.98	0.0088	0.0006843
Mo	98	3	He	-0.021	0.0014	120.00	0.0219	0.001827
Mo	98	3	He	0.019	0.0022	200.01	0.0219	0.001827
Mo	98	3	He	-0.028	0.0012	110.00	0.0219	0.001827
Ag	107	3	He	-0.006	0.0008	70.00	0.047	0.001064
Ag	107	3	He	0.001	0.0011	100.00	0.047	0.001064
Ag	107	3	He	-0.008	0.0007	60.00	0.047	0.001064
Cd	111	3	He	0.048	0.0003	28.00	0.0053	6.086E-05
Cd	111	3	He	0.06	0.0004	34.00	0.0053	6.086E-05
Cd	111	3	He	0.055	0.0004	32.00	0.0053	6.086E-05
Sn	120	3	He	-0.058	0.0139	1230.09	0.0154	0.01483
Sn	120	3	He	0.095	0.0163	1450.13	0.0154	0.01483
Sn	120	3	He	-0.02	0.0145	1310.11	0.0154	0.01483
Sb	121	3	He	0.053	0.001	90.00	0.0143	0.0002661
Sb	121	3	He	-0.003	0.0002	20.00	0.0143	0.0002661
Sb	121	3	He	0.059	0.0011	100.00	0.0143	0.0002661
Ba	137	3	He	18.973	0.0909	8022.58	0.0048	0.0002665
Ba	137	3	He	18.502	0.0887	7892.56	0.0048	0.0002665
Ba	137	3	He	18.832	0.0903	8142.72	0.0048	0.0002665
Tl	205	3	He	-0.058	0.0013	530.03	0.0246	0.002755
Tl	205	3	He	-0.048	0.0016	640.04	0.0246	0.002755
Tl	205	3	He	-0.057	0.0013	540.03	0.0246	0.002755
Pb	208	3	He	0.338	0.0131	2630.36	0.0324	0.002158
Pb	208	3	He	0.359	0.0138	2850.41	0.0324	0.002158
Pb	208	3	He	0.356	0.0137	2930.43	0.0324	0.002158
U	238	3	He	0.01	0.0009	280.01	0.0492	0.0004023
U	238	3	He	0.007	0.0008	240.01	0.0492	0.0004023
U	238	3	He	0.005	0.0007	210.01	0.0492	0.0004023
Sc	45	1	No Gas			2580648.71		
Sc	45	1	No Gas			2532420.12		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2576939.81		
Ge	72	1	No Gas			1166472.95		
Ge	72	1	No Gas			1167201.47		
Ge	72	1	No Gas			1173573.89		
Sc	45	2	H2			202672.95		
Sc	45	2	H2			203250.91		
Sc	45	2	H2			204479.68		
Ge	72	2	H2			157440.12		
Ge	72	2	H2			158036.43		
Ge	72	2	H2			158611.16		
In	115	2	H2			397374.02		
In	115	2	H2			406909.95		
In	115	2	H2			408138.35		
Sc	45	3	He			50769.31		
Sc	45	3	He			52314.89		
Sc	45	3	He			50598.62		
Ge	72	3	He			80175.00		
Ge	72	3	He			80868.14		
Ge	72	3	He			79803.05		
In	115	3	He			88229.62		
In	115	3	He			89004.42		
In	115	3	He			90222.38		
Tb	159	3	He			399958.28		
Tb	159	3	He			405636.40		
Tb	159	3	He			400300.46		
Bi	209	3	He			311420.66		
Bi	209	3	He			311896.48		
Bi	209	3	He			312221.42		

Quantitation Report

Data File Name	143SMPL.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H09B00.b
Acq Time	8/9/2023 6:39:09 PM
Sample Name	410-136332-D-1-F DU
Sample Type	Sample
Comment	I7 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

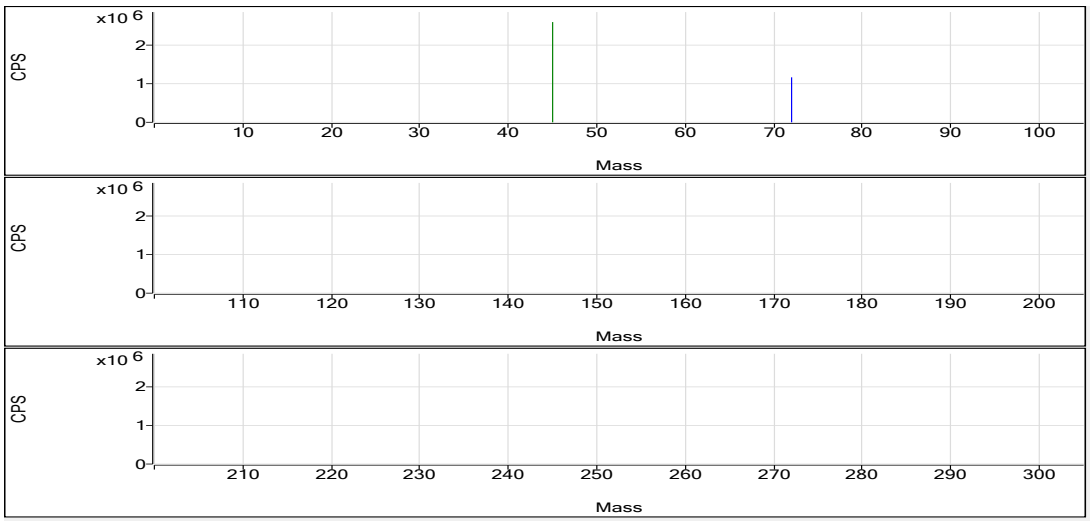
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.022	ppb	N/A	46.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.029	ppb	N/A	3.55	0.0000	Pulse	1.5000	3
Na	23	45	He	124318.565	ppb	3.3	22633818.83	443.5397	Analog	0.1000	3
Mg	24	45	He	2072.794	ppb	4.2	191313.45	3.7497	Pulse	0.1000	3
Al	27	45	He	0.806	ppb	99.1	130.01	0.0026	Pulse	0.1000	3
K	39	45	He	109.141	ppb	18.0	27499.85	0.5390	Pulse	0.1000	3
Ca	44	45	He	7836.588	ppb	1.4	27196.08	0.5327	Pulse	0.1000	3
Ti	47	45	He	0.375	ppb	101.8	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	-0.409	ppb	N/A	1178.06	0.0231	Pulse	0.5000	3
Cr	52	45	He	0.667	ppb	28.8	3190.47	0.0626	Pulse	0.1000	3
Mn	55	45	He	581.919	ppb	3.1	369334.24	7.2373	Pulse	0.1000	3
Fe	57	45	He	-0.895	ppb	N/A	113.34	0.0022	Pulse	0.1000	3
Co	59	45	He	1.126	ppb	1.4	3340.50	0.0654	Pulse	0.1000	3
Ni	60	72	He	-0.429	ppb	N/A	836.72	0.0101	Pulse	0.1000	3
Cu	63	72	He	0.952	ppb	10.6	2920.40	0.0354	Pulse	0.1000	3
Zn	66	72	He	1.234	ppb	16.9	800.05	0.0097	Pulse	0.1000	3
As	75	72	He	-0.016	ppb	N/A	68.67	0.0008	Pulse	0.5000	3
Sr	88	115	He	23.542	ppb	2.0	18375.81	0.2078	Pulse	0.1000	3
Mo	98	115	He	-0.033	ppb	N/A	96.67	0.0011	Pulse	0.1000	3
Ag	107	115	He	-0.006	ppb	N/A	70.00	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.024	ppb	38.1	16.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.028	ppb	N/A	1273.45	0.0144	Pulse	0.1000	3
Sb	121	115	He	0.039	ppb	60.8	73.33	0.0008	Pulse	0.1000	3
Ba	137	115	He	17.435	ppb	3.5	7388.97	0.0836	Pulse	0.1000	3
Tl	205	159	He	-0.062	ppb	N/A	496.70	0.0012	Pulse	0.1000	3
Pb	208	159	He	0.328	ppb	5.6	5140.60	0.0128	Pulse	0.1000	3
U	238	209	He	0.000	ppb	N/A	120.01	0.0004	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2595419.44	0.8	99.5	Analog	0.1000	3
No Gas	Ge	72	1164623.39	0.4	90.4	Pulse	0.1000	3
H2	Sc	45	204418.03	0.2	99.2	Pulse	0.1000	3
H2	Ge	72	157520.53	0.8	96.8	Pulse	0.1000	3
H2	In	115	402775.64	1.0	99.8	Pulse	0.1000	3
He	Sc	45	51063.95	3.0	99.7	Pulse	0.1000	3
He	Ge	72	82464.42	1.5	100.7	Pulse	0.1000	3
He	In	115	88417.91	1.0	100.9	Pulse	0.1000	3
He	Tb	159	401894.22	0.7	100.1	Pulse	0.1000	3
He	Bi	209	309906.81	0.1	101.2	Pulse	0.1000	3

No Gas



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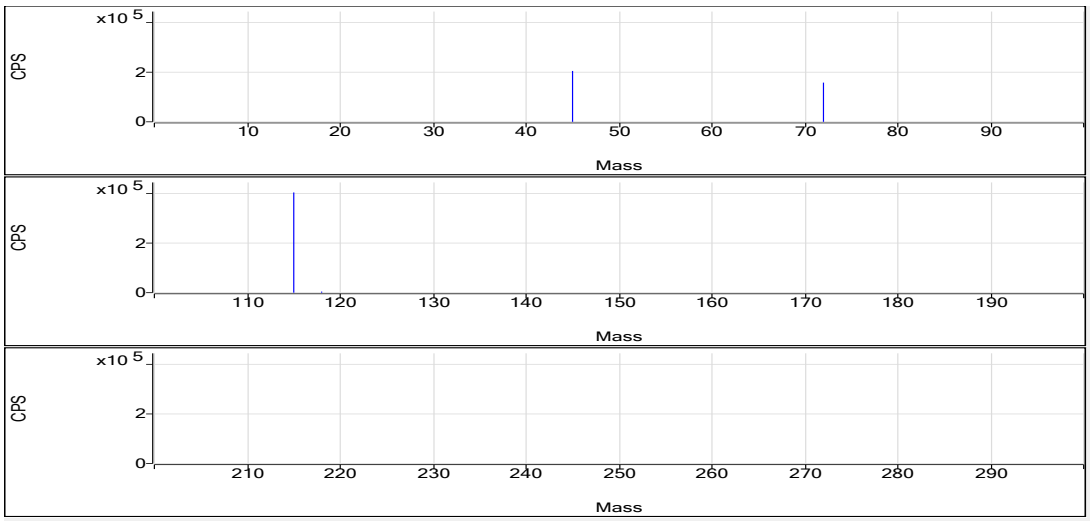
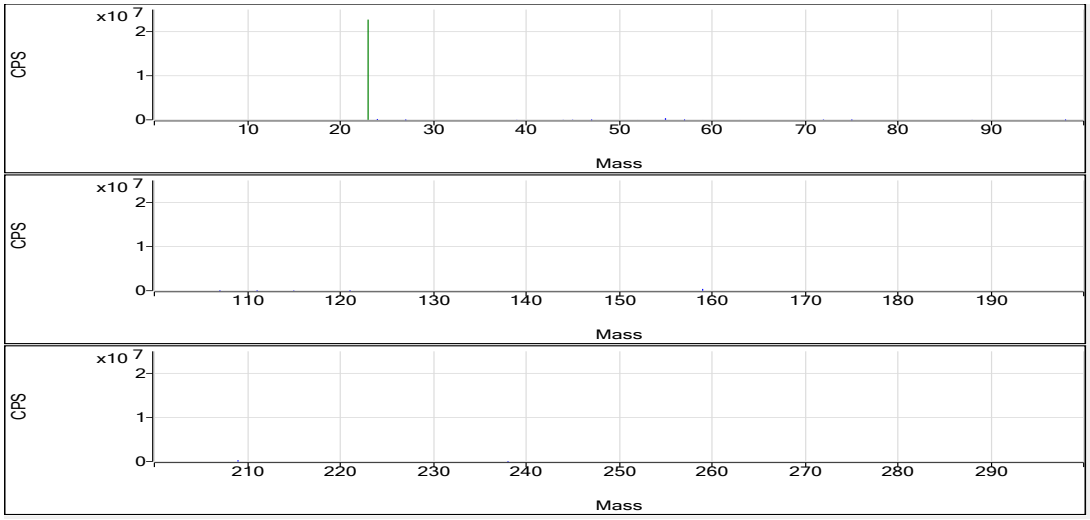


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.027	0	36.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.021	0	48.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.017	0	56.00	0.0007	3.404E-05
Se	78	2	H2	-0.004	0	5.33	0.0004	3.546E-05
Se	78	2	H2	-0.032	0	3.33	0.0004	3.546E-05
Se	78	2	H2	-0.052	0	2.00	0.0004	3.546E-05
Na	23	3	He	122335.786	436.4723	22667579.66	0.0036	0.4171
Na	23	3	He	129035.393	460.3524	22683464.66	0.0036	0.4171
Na	23	3	He	121584.516	433.7944	22550412.16	0.0036	0.4171
Mg	24	3	He	2040.037	3.6905	191659.45	0.0018	0.004553
Mg	24	3	He	2170.666	3.9265	193474.35	0.0018	0.004553
Mg	24	3	He	2007.678	3.632	188806.56	0.0018	0.004553
Al	27	3	He	0.057	0.0021	110.00	0.0006	0.002085
Al	27	3	He	1.647	0.003	150.01	0.0006	0.002085
Al	27	3	He	0.715	0.0025	130.01	0.0006	0.002085
K	39	3	He	95.227	0.5227	27145.88	0.0012	0.4112
K	39	3	He	131.646	0.5654	27857.32	0.0012	0.4112
K	39	3	He	100.55	0.5289	27496.34	0.0012	0.4112
Ca	44	3	He	7776.631	0.5287	27456.74	0.0001	0.003322
Ca	44	3	He	7964.162	0.5414	26674.96	0.0001	0.003322
Ca	44	3	He	7768.97	0.5282	27456.53	0.0001	0.003322
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.763	0.0004	20.00	0.0005	0
Ti	47	3	He	0.362	0.0002	10.00	0.0005	0
V	51	3	He	-0.471	0.0218	1132.05	0.0213	0.0318
V	51	3	He	-0.285	0.0257	1268.07	0.0213	0.0318
V	51	3	He	-0.47	0.0218	1134.05	0.0213	0.0318
Cr	52	3	He	0.654	0.0622	3230.49	0.0294	0.04297
Cr	52	3	He	0.865	0.0684	3370.48	0.0294	0.04297
Cr	52	3	He	0.482	0.0571	2970.43	0.0294	0.04297
Mn	55	3	He	572.699	7.1227	369906.40	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	602.623	7.4947	369294.56	0.0124	0.002801
Mn	55	3	He	570.434	7.0945	368801.75	0.0124	0.002801
Fe	57	3	He	-1.409	0.0019	100.00	0.0006	0.002732
Fe	57	3	He	-0.873	0.0022	110.00	0.0006	0.002732
Fe	57	3	He	-0.404	0.0025	130.01	0.0006	0.002732
Co	59	3	He	1.109	0.0645	3350.52	0.0549	0.003644
Co	59	3	He	1.128	0.0656	3230.48	0.0549	0.003644
Co	59	3	He	1.139	0.0662	3440.50	0.0549	0.003644
Ni	60	3	He	-0.528	0.0092	770.05	0.0093	0.01413
Ni	60	3	He	-0.286	0.0115	950.06	0.0093	0.01413
Ni	60	3	He	-0.473	0.0097	790.05	0.0093	0.01413
Cu	63	3	He	0.84	0.0324	2700.36	0.0274	0.009321
Cu	63	3	He	1.038	0.0378	3130.43	0.0274	0.009321
Cu	63	3	He	0.977	0.0361	2930.41	0.0274	0.009321
Zn	66	3	He	1.041	0.0091	760.05	0.0031	0.005913
Zn	66	3	He	1.456	0.0104	860.05	0.0031	0.005913
Zn	66	3	He	1.206	0.0096	780.05	0.0031	0.005913
As	75	3	He	-0.026	0.0008	68.00	0.0021	0.0008698
As	75	3	He	-0.135	0.0006	48.00	0.0021	0.0008698
As	75	3	He	0.112	0.0011	90.00	0.0021	0.0008698
Sr	88	3	He	23.335	0.206	18392.57	0.0088	0.0006843
Sr	88	3	He	24.087	0.2126	18802.98	0.0088	0.0006843
Sr	88	3	He	23.203	0.2048	17931.89	0.0088	0.0006843
Mo	98	3	He	-0.007	0.0017	150.01	0.0219	0.001827
Mo	98	3	He	-0.063	0.0005	40.00	0.0219	0.001827
Mo	98	3	He	-0.031	0.0011	100.00	0.0219	0.001827
Ag	107	3	He	-0.001	0.001	90.00	0.047	0.001064
Ag	107	3	He	-0.013	0.0005	40.00	0.047	0.001064
Ag	107	3	He	-0.003	0.0009	80.00	0.047	0.001064
Cd	111	3	He	0.014	0.0001	12.00	0.0053	6.086E-05
Cd	111	3	He	0.027	0.0002	18.00	0.0053	6.086E-05
Cd	111	3	He	0.031	0.0002	20.00	0.0053	6.086E-05
Sn	120	3	He	-0.061	0.0139	1240.10	0.0154	0.01483
Sn	120	3	He	-0.001	0.0148	1310.13	0.0154	0.01483
Sn	120	3	He	-0.021	0.0145	1270.11	0.0154	0.01483
Sb	121	3	He	0.06	0.0011	100.00	0.0143	0.0002661
Sb	121	3	He	0.013	0.0005	40.00	0.0143	0.0002661
Sb	121	3	He	0.045	0.0009	80.00	0.0143	0.0002661
Ba	137	3	He	17.13	0.0821	7332.25	0.0048	0.0002665
Ba	137	3	He	17.034	0.0817	7222.17	0.0048	0.0002665
Ba	137	3	He	18.141	0.087	7612.49	0.0048	0.0002665
Tl	205	3	He	-0.056	0.0014	560.03	0.0246	0.002755
Tl	205	3	He	-0.056	0.0014	550.04	0.0246	0.002755
Tl	205	3	He	-0.074	0.0009	380.02	0.0246	0.002755
Pb	208	3	He	0.349	0.0135	3110.46	0.0324	0.002158
Pb	208	3	He	0.322	0.0126	2480.34	0.0324	0.002158
Pb	208	3	He	0.314	0.0123	2610.38	0.0324	0.002158
U	238	3	He	0	0.0004	130.01	0.0492	0.0004023
U	238	3	He	-0.001	0.0004	110.00	0.0492	0.0004023
U	238	3	He	0	0.0004	120.01	0.0492	0.0004023
Sc	45	1	No Gas			2570533.56		
Sc	45	1	No Gas			2611020.12		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2604704.65		
Ge	72	1	No Gas			1159825.84		
Ge	72	1	No Gas			1165752.64		
Ge	72	1	No Gas			1168291.70		
Sc	45	2	H2			204296.52		
Sc	45	2	H2			204785.43		
Sc	45	2	H2			204172.15		
Ge	72	2	H2			157965.78		
Ge	72	2	H2			156074.46		
Ge	72	2	H2			158521.34		
In	115	2	H2			407538.78		
In	115	2	H2			399495.50		
In	115	2	H2			401292.65		
Sc	45	3	He			51933.61		
Sc	45	3	He			49274.13		
Sc	45	3	He			51984.10		
Ge	72	3	He			83433.75		
Ge	72	3	He			82839.78		
Ge	72	3	He			81119.74		
In	115	3	He			89286.93		
In	115	3	He			88441.33		
In	115	3	He			87545.52		
Tb	159	3	He			404398.31		
Tb	159	3	He			398666.32		
Tb	159	3	He			402618.04		
Bi	209	3	He			310017.26		
Bi	209	3	He			309445.80		
Bi	209	3	He			310257.36		

Quantitation Report

Data File Name	144SMPL.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H09B00.b
Acq Time	8/9/2023 6:41:13 PM
Sample Name	410-136332-D-1-G MS @100
Sample Type	Sample
Comment	I7 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

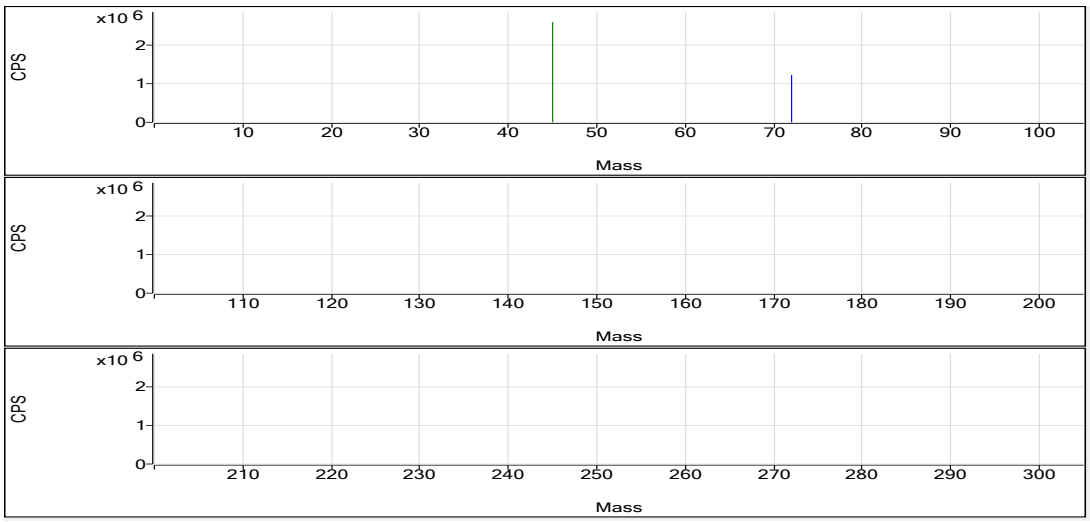
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	3.409	ppb	0.4	6506.78	0.0025	Pulse	0.5000	3
Se	78	72	H2	0.602	ppb	2.7	50.00	0.0003	Pulse	1.5000	3
Na	23	45	He	1065.272	ppb	1.7	213664.32	4.2141	Pulse	0.1000	3
Mg	24	45	He	54.843	ppb	1.6	5254.46	0.1036	Pulse	0.1000	3
Al	27	45	He	8.397	ppb	23.6	353.35	0.0070	Pulse	0.1000	3
K	39	45	He	41.790	ppb	34.7	23325.78	0.4601	Pulse	0.1000	3
Ca	44	45	He	98.701	ppb	31.0	506.69	0.0100	Pulse	0.1000	3
Ti	47	45	He	4.711	ppb	46.1	126.67	0.0025	Pulse	0.1000	3
V	51	45	He	3.218	ppb	2.2	5078.92	0.1002	Pulse	0.5000	3
Cr	52	45	He	3.564	ppb	4.7	7492.21	0.1478	Pulse	0.1000	3
Mn	55	45	He	8.606	ppb	5.7	5564.61	0.1098	Pulse	0.1000	3
Fe	57	45	He	2.938	ppb	74.4	223.35	0.0044	Pulse	0.1000	3
Co	59	45	He	3.494	ppb	2.7	9910.42	0.1954	Pulse	0.1000	3
Ni	60	72	He	2.497	ppb	8.7	3217.12	0.0373	Pulse	0.1000	3
Cu	63	72	He	3.243	ppb	2.4	8476.12	0.0983	Pulse	0.1000	3
Zn	66	72	He	3.714	ppb	6.6	1493.46	0.0173	Pulse	0.1000	3
As	75	72	He	3.456	ppb	3.0	714.69	0.0083	Pulse	0.5000	3
Sr	88	115	He	3.970	ppb	8.2	3187.15	0.0356	Pulse	0.1000	3
Mo	98	115	He	7.109	ppb	2.2	14127.58	0.1578	Pulse	0.1000	3
Ag	107	115	He	3.467	ppb	3.5	14691.59	0.1641	Pulse	0.1000	3
Cd	111	115	He	0.674	ppb	7.1	326.68	0.0037	Pulse	0.5000	3
Sn	120	115	He	36.318	ppb	0.7	51459.72	0.5749	Pulse	0.1000	3
Sb	121	115	He	3.568	ppb	6.7	4574.24	0.0511	Pulse	0.1000	3
Ba	137	115	He	71.319	ppb	1.9	30531.40	0.3411	Pulse	0.1000	3
Tl	205	159	He	3.503	ppb	1.1	35682.59	0.0888	Pulse	0.1000	3
Pb	208	159	He	3.618	ppb	1.9	47975.96	0.1194	Pulse	0.1000	3
U	238	209	He	-0.001	ppb	N/A	113.34	0.0004	Pulse	0.1000	3

ISTD Table:

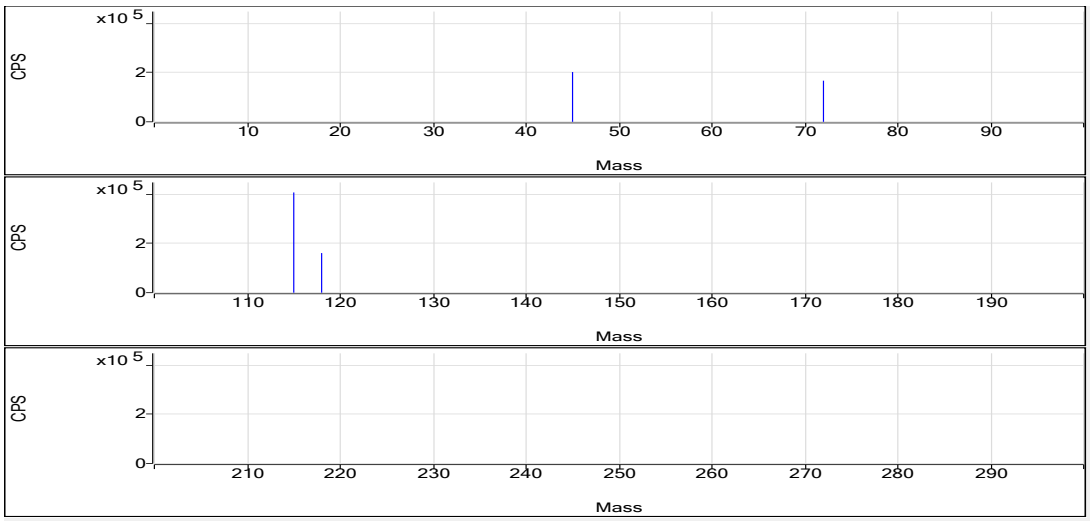
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2584253.82	1.4	99.1	Analog	0.1000	3
No Gas	Ge	72	1220823.42	1.5	94.7	Pulse	0.1000	3
H2	Sc	45	202079.29	0.4	98.1	Pulse	0.1000	3
H2	Ge	72	167046.92	1.0	102.6	Pulse	0.1000	3
H2	In	115	407025.97	1.0	100.8	Pulse	0.1000	3
He	Sc	45	50702.45	1.0	99.0	Pulse	0.1000	3
He	Ge	72	86256.38	0.6	105.4	Pulse	0.1000	3
He	In	115	89511.44	0.5	102.1	Pulse	0.1000	3
He	Tb	159	401876.87	1.3	100.1	Pulse	0.1000	3
He	Bi	209	309179.54	1.5	101.0	Pulse	0.1000	3

No Gas

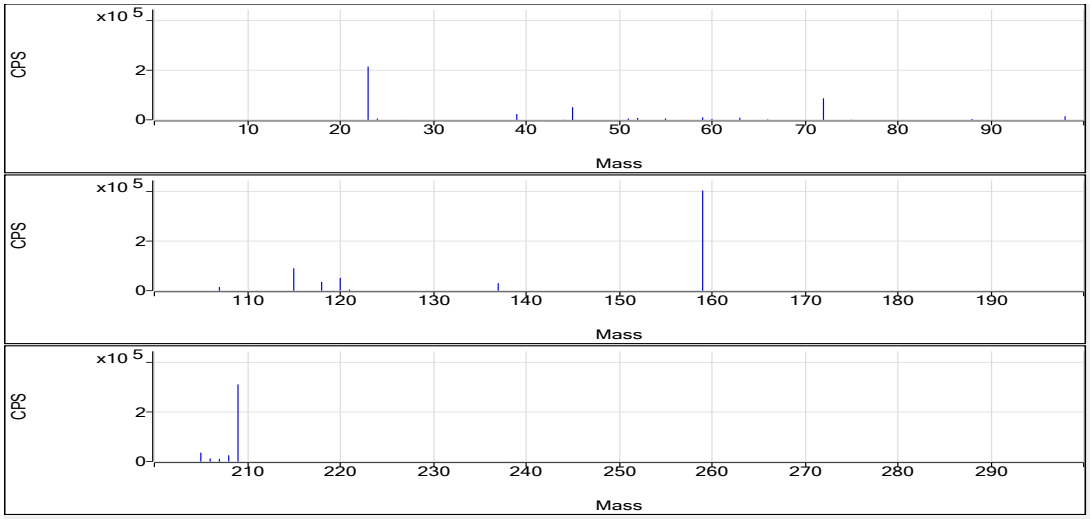


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	3.427	0.0025	6585.48	0.0007	3.404E-05
Be	9	1	No Gas	3.398	0.0025	6541.46	0.0007	3.404E-05
Be	9	1	No Gas	3.403	0.0025	6393.40	0.0007	3.404E-05
Se	78	2	H2	0.617	0.0003	50.67	0.0004	3.546E-05
Se	78	2	H2	0.604	0.0003	50.67	0.0004	3.546E-05
Se	78	2	H2	0.585	0.0003	48.67	0.0004	3.546E-05
Na	23	3	He	1054.19	4.1746	213869.72	0.0036	0.4171
Na	23	3	He	1054.932	4.1773	209772.97	0.0036	0.4171
Na	23	3	He	1086.692	4.2905	217350.27	0.0036	0.4171
Mg	24	3	He	54.102	0.1023	5241.10	0.0018	0.004553
Mg	24	3	He	55.795	0.1054	5291.12	0.0018	0.004553
Mg	24	3	He	54.633	0.1033	5231.16	0.0018	0.004553
Al	27	3	He	6.473	0.0059	300.01	0.0006	0.002085
Al	27	3	He	10.436	0.0082	410.02	0.0006	0.002085
Al	27	3	He	8.281	0.0069	350.02	0.0006	0.002085
K	39	3	He	26.547	0.4423	22658.13	0.0012	0.4112
K	39	3	He	43.36	0.462	23198.77	0.0012	0.4112
K	39	3	He	55.461	0.4761	24120.43	0.0012	0.4112
Ca	44	3	He	92.412	0.0096	490.02	0.0001	0.003322
Ca	44	3	He	71.688	0.0082	410.02	0.0001	0.003322
Ca	44	3	He	132.002	0.0122	620.04	0.0001	0.003322
Ti	47	3	He	2.202	0.0012	60.00	0.0005	0
Ti	47	3	He	5.991	0.0032	160.01	0.0005	0
Ti	47	3	He	5.939	0.0032	160.01	0.0005	0
V	51	3	He	3.224	0.1003	5138.94	0.0213	0.0318
V	51	3	He	3.285	0.1016	5102.92	0.0213	0.0318
V	51	3	He	3.143	0.0986	4994.89	0.0213	0.0318
Cr	52	3	He	3.372	0.1421	7282.15	0.0294	0.04297
Cr	52	3	He	3.666	0.1508	7572.23	0.0294	0.04297
Cr	52	3	He	3.655	0.1505	7622.25	0.0294	0.04297
Mn	55	3	He	8.161	0.1043	5341.18	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	9.131	0.1163	5841.42	0.0124	0.002801
Mn	55	3	He	8.526	0.1088	5511.24	0.0124	0.002801
Fe	57	3	He	1.025	0.0033	170.01	0.0006	0.002732
Fe	57	3	He	5.319	0.0058	290.02	0.0006	0.002732
Fe	57	3	He	2.471	0.0041	210.01	0.0006	0.002732
Co	59	3	He	3.594	0.2009	10294.09	0.0549	0.003644
Co	59	3	He	3.411	0.1908	9583.54	0.0549	0.003644
Co	59	3	He	3.477	0.1945	9853.64	0.0549	0.003644
Ni	60	3	He	2.256	0.0351	3040.42	0.0093	0.01413
Ni	60	3	He	2.68	0.039	3340.47	0.0093	0.01413
Ni	60	3	He	2.554	0.0378	3270.46	0.0093	0.01413
Cu	63	3	He	3.333	0.1007	8733.00	0.0274	0.009321
Cu	63	3	He	3.187	0.0967	8282.66	0.0274	0.009321
Cu	63	3	He	3.209	0.0973	8412.70	0.0274	0.009321
Zn	66	3	He	3.485	0.0166	1440.13	0.0031	0.005913
Zn	66	3	He	3.97	0.0181	1550.14	0.0031	0.005913
Zn	66	3	He	3.689	0.0172	1490.12	0.0031	0.005913
As	75	3	He	3.53	0.0084	732.02	0.0021	0.0008698
As	75	3	He	3.339	0.008	688.02	0.0021	0.0008698
As	75	3	He	3.498	0.0084	724.02	0.0021	0.0008698
Sr	88	3	He	4.344	0.0389	3470.54	0.0088	0.0006843
Sr	88	3	He	3.816	0.0343	3060.48	0.0088	0.0006843
Sr	88	3	He	3.749	0.0337	3030.42	0.0088	0.0006843
Mo	98	3	He	7.185	0.1595	14227.61	0.0219	0.001827
Mo	98	3	He	7.211	0.1601	14297.81	0.0219	0.001827
Mo	98	3	He	6.932	0.154	13857.31	0.0219	0.001827
Ag	107	3	He	3.514	0.1663	14838.47	0.047	0.001064
Ag	107	3	He	3.559	0.1685	15048.70	0.047	0.001064
Ag	107	3	He	3.328	0.1576	14187.61	0.047	0.001064
Cd	111	3	He	0.704	0.0038	340.01	0.0053	6.086E-05
Cd	111	3	He	0.699	0.0038	338.01	0.0053	6.086E-05
Cd	111	3	He	0.619	0.0034	302.01	0.0053	6.086E-05
Sn	120	3	He	36.132	0.572	51024.66	0.0154	0.01483
Sn	120	3	He	36.206	0.5731	51195.59	0.0154	0.01483
Sn	120	3	He	36.617	0.5795	52158.92	0.0154	0.01483
Sb	121	3	He	3.609	0.0517	4610.92	0.0143	0.0002661
Sb	121	3	He	3.784	0.0542	4841.00	0.0143	0.0002661
Sb	121	3	He	3.311	0.0474	4270.81	0.0143	0.0002661
Ba	137	3	He	72.469	0.3466	30915.74	0.0048	0.0002665
Ba	137	3	He	69.833	0.334	29833.02	0.0048	0.0002665
Ba	137	3	He	71.656	0.3427	30845.44	0.0048	0.0002665
Tl	205	3	He	3.467	0.0879	35558.92	0.0246	0.002755
Tl	205	3	He	3.545	0.0898	35578.53	0.0246	0.002755
Tl	205	3	He	3.498	0.0887	35910.32	0.0246	0.002755
Pb	208	3	He	3.542	0.1169	25084.93	0.0324	0.002158
Pb	208	3	He	3.678	0.1214	24924.49	0.0324	0.002158
Pb	208	3	He	3.633	0.1199	25736.26	0.0324	0.002158
U	238	3	He	-0.002	0.0003	90.00	0.0492	0.0004023
U	238	3	He	0.002	0.0005	150.01	0.0492	0.0004023
U	238	3	He	-0.002	0.0003	100.00	0.0492	0.0004023
Sc	45	1	No Gas			2602409.18		
Sc	45	1	No Gas			2606507.15		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2543845.12		
Ge	72	1	No Gas			1230203.97		
Ge	72	1	No Gas			1232978.50		
Ge	72	1	No Gas			1199287.79		
Sc	45	2	H2			201102.59		
Sc	45	2	H2			202593.53		
Sc	45	2	H2			202541.74		
Ge	72	2	H2			165579.45		
Ge	72	2	H2			168848.51		
Ge	72	2	H2			166712.81		
In	115	2	H2			411857.10		
In	115	2	H2			405075.03		
In	115	2	H2			404145.78		
Sc	45	3	He			51230.87		
Sc	45	3	He			50217.70		
Sc	45	3	He			50658.79		
Ge	72	3	He			86692.45		
Ge	72	3	He			85636.11		
Ge	72	3	He			86440.59		
In	115	3	He			89477.69		
In	115	3	He			89598.47		
In	115	3	He			90283.28		
Tb	159	3	He			404523.35		
Tb	159	3	He			396069.64		
Tb	159	3	He			405037.61		
Bi	209	3	He			312608.20		
Bi	209	3	He			304023.37		
Bi	209	3	He			310907.05		

Quantitation Report

Data File Name	145SMPL.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H09B00.b
Acq Time	8/9/2023 6:43:14 PM
Sample Name	410-136332-D-1-H MSD @100
Sample Type	Sample
Comment	I7 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

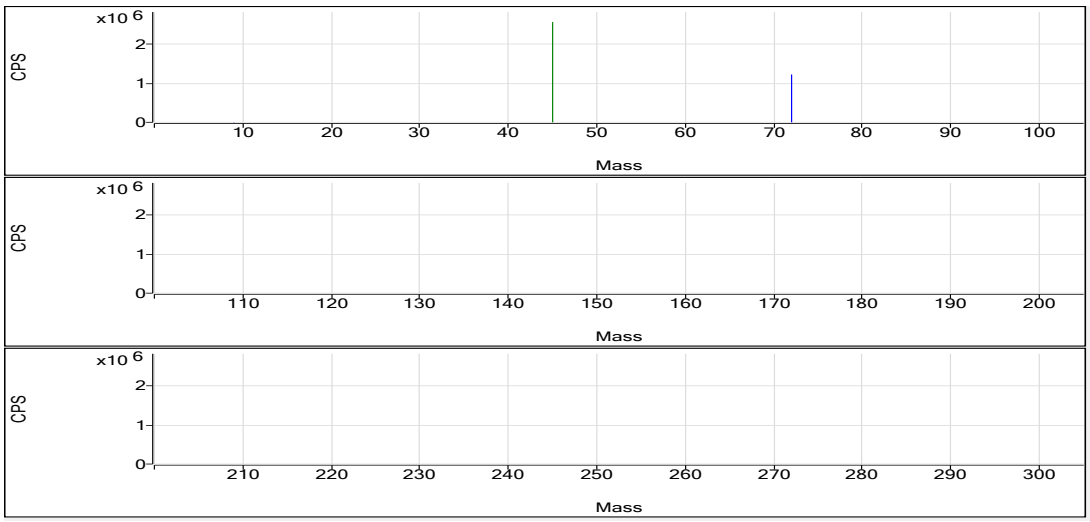
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	3.230	ppb	1.2	6145.29	0.0024	Pulse	0.5000	3
Se	78	72	H2	0.563	ppb	9.0	47.33	0.0003	Pulse	1.5000	3
Na	23	45	He	945.882	ppb	3.6	194225.73	3.7886	Pulse	0.1000	3
Mg	24	45	He	48.641	ppb	12.4	4734.25	0.0924	Pulse	0.1000	3
Al	27	45	He	3.995	ppb	32.0	226.68	0.0044	Pulse	0.1000	3
K	39	45	He	31.967	ppb	21.1	23002.05	0.4486	Pulse	0.1000	3
Ca	44	45	He	91.637	ppb	32.9	486.69	0.0095	Pulse	0.1000	3
Ti	47	45	He	8.291	ppb	22.9	226.68	0.0044	Pulse	0.1000	3
V	51	45	He	3.075	ppb	2.7	4981.55	0.0971	Pulse	0.5000	3
Cr	52	45	He	3.176	ppb	1.9	6991.91	0.1364	Pulse	0.1000	3
Mn	55	45	He	7.910	ppb	5.0	5184.46	0.1011	Pulse	0.1000	3
Fe	57	45	He	4.646	ppb	25.2	276.68	0.0054	Pulse	0.1000	3
Co	59	45	He	3.206	ppb	1.7	9209.91	0.1796	Pulse	0.1000	3
Ni	60	72	He	2.033	ppb	2.5	2810.35	0.0330	Pulse	0.1000	3
Cu	63	72	He	3.095	ppb	5.0	8019.17	0.0942	Pulse	0.1000	3
Zn	66	72	He	3.494	ppb	5.6	1416.80	0.0166	Pulse	0.1000	3
As	75	72	He	3.273	ppb	2.0	672.02	0.0079	Pulse	0.5000	3
Sr	88	115	He	3.545	ppb	7.8	2877.06	0.0319	Pulse	0.1000	3
Mo	98	115	He	6.377	ppb	1.9	12799.57	0.1418	Pulse	0.1000	3
Ag	107	115	He	3.181	ppb	3.3	13610.39	0.1507	Pulse	0.1000	3
Cd	111	115	He	0.654	ppb	8.1	320.01	0.0035	Pulse	0.5000	3
Sn	120	115	He	33.553	ppb	1.3	48060.78	0.5322	Pulse	0.1000	3
Sb	121	115	He	3.387	ppb	6.5	4380.87	0.0485	Pulse	0.1000	3
Ba	137	115	He	67.661	ppb	1.3	29218.54	0.3236	Pulse	0.1000	3
Tl	205	159	He	3.178	ppb	1.6	32464.25	0.0808	Pulse	0.1000	3
Pb	208	159	He	3.381	ppb	1.0	44885.21	0.1117	Pulse	0.1000	3
U	238	209	He	-0.004	ppb	N/A	60.00	0.0002	Pulse	0.1000	3

ISTD Table:

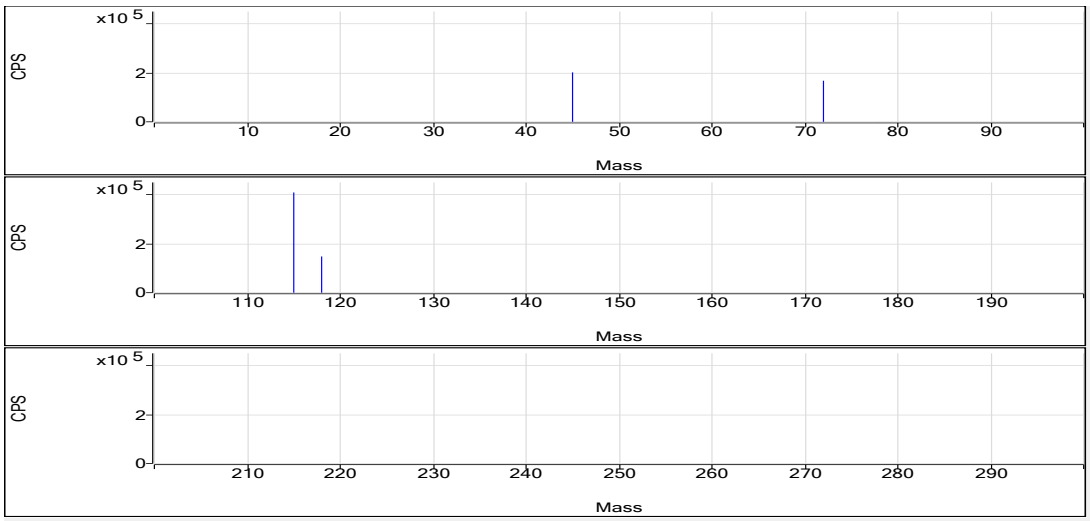
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2574367.72	0.9	98.7	Analog	0.1000	3
No Gas	Ge	72	1228281.52	0.6	95.3	Pulse	0.1000	3
H2	Sc	45	201619.62	1.1	97.8	Pulse	0.1000	3
H2	Ge	72	167737.70	0.6	103.1	Pulse	0.1000	3
H2	In	115	408973.89	1.3	101.3	Pulse	0.1000	3
He	Sc	45	51281.12	1.6	100.2	Pulse	0.1000	3
He	Ge	72	85157.13	1.4	104.0	Pulse	0.1000	3
He	In	115	90295.94	0.9	103.0	Pulse	0.1000	3
He	Tb	159	401816.44	0.9	100.1	Pulse	0.1000	3
He	Bi	209	310308.02	0.1	101.4	Pulse	0.1000	3

No Gas

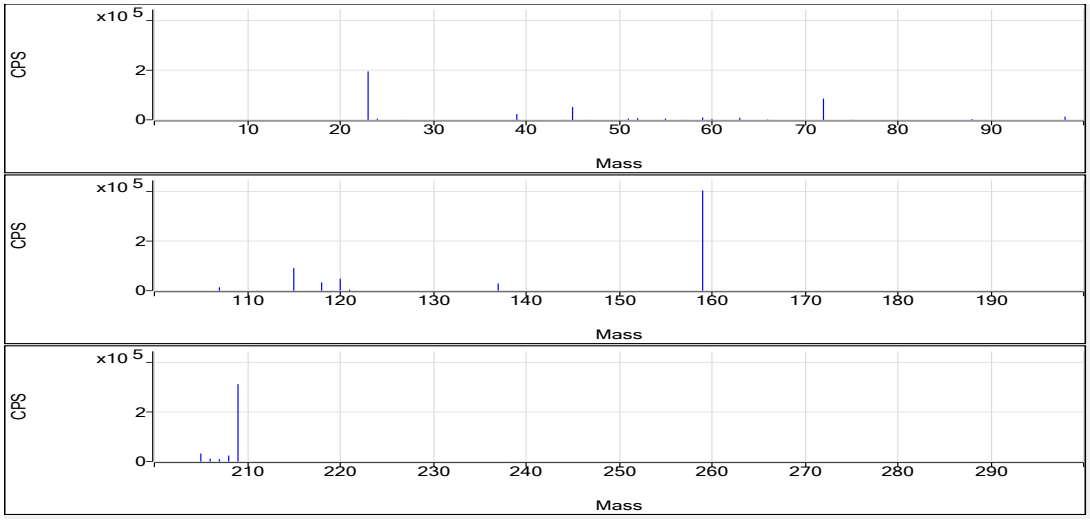


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	3.204	0.0024	6059.25	0.0007	3.404E-05
Be	9	1	No Gas	3.275	0.0024	6207.32	0.0007	3.404E-05
Be	9	1	No Gas	3.211	0.0024	6169.31	0.0007	3.404E-05
Se	78	2	H2	0.591	0.0003	49.33	0.0004	3.546E-05
Se	78	2	H2	0.505	0.0003	43.33	0.0004	3.546E-05
Se	78	2	H2	0.594	0.0003	49.33	0.0004	3.546E-05
Na	23	3	He	955.937	3.8244	197272.01	0.0036	0.4171
Na	23	3	He	973.65	3.8875	195690.66	0.0036	0.4171
Na	23	3	He	908.058	3.6538	189714.51	0.0036	0.4171
Mg	24	3	He	47.276	0.09	4640.89	0.0018	0.004553
Mg	24	3	He	55.216	0.1043	5251.06	0.0018	0.004553
Mg	24	3	He	43.43	0.083	4310.79	0.0018	0.004553
Al	27	3	He	4.408	0.0047	240.01	0.0006	0.002085
Al	27	3	He	2.56	0.0036	180.01	0.0006	0.002085
Al	27	3	He	5.017	0.005	260.01	0.0006	0.002085
K	39	3	He	26.135	0.4418	22788.66	0.0012	0.4112
K	39	3	He	39.36	0.4573	23018.45	0.0012	0.4112
K	39	3	He	30.407	0.4468	23199.05	0.0012	0.4112
Ca	44	3	He	85.711	0.0091	470.03	0.0001	0.003322
Ca	44	3	He	124.333	0.0117	590.03	0.0001	0.003322
Ca	44	3	He	64.867	0.0077	400.02	0.0001	0.003322
Ti	47	3	He	8.384	0.0045	230.01	0.0005	0
Ti	47	3	He	6.35	0.0034	170.01	0.0005	0
Ti	47	3	He	10.139	0.0054	280.01	0.0005	0
V	51	3	He	3.164	0.099	5108.92	0.0213	0.0318
V	51	3	He	3.063	0.0969	4876.84	0.0213	0.0318
V	51	3	He	2.998	0.0955	4958.89	0.0213	0.0318
Cr	52	3	He	3.161	0.1359	7011.90	0.0294	0.04297
Cr	52	3	He	3.242	0.1383	6961.92	0.0294	0.04297
Cr	52	3	He	3.124	0.1349	7001.90	0.0294	0.04297
Mn	55	3	He	8.088	0.1034	5331.24	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	8.182	0.1045	5261.15	0.0124	0.002801
Mn	55	3	He	7.46	0.0955	4960.98	0.0124	0.002801
Fe	57	3	He	4.035	0.005	260.01	0.0006	0.002732
Fe	57	3	He	3.906	0.005	250.01	0.0006	0.002732
Fe	57	3	He	5.997	0.0062	320.01	0.0006	0.002732
Co	59	3	He	3.22	0.1804	9303.27	0.0549	0.003644
Co	59	3	He	3.254	0.1822	9173.18	0.0549	0.003644
Co	59	3	He	3.145	0.1763	9153.29	0.0549	0.003644
Ni	60	3	He	2.038	0.033	2810.36	0.0093	0.01413
Ni	60	3	He	1.979	0.0325	2730.34	0.0093	0.01413
Ni	60	3	He	2.081	0.0334	2890.36	0.0093	0.01413
Cu	63	3	He	3.198	0.097	8252.62	0.0274	0.009321
Cu	63	3	He	3.168	0.0962	8082.59	0.0274	0.009321
Cu	63	3	He	2.918	0.0894	7722.29	0.0274	0.009321
Zn	66	3	He	3.704	0.0173	1470.13	0.0031	0.005913
Zn	66	3	He	3.464	0.0165	1390.12	0.0031	0.005913
Zn	66	3	He	3.313	0.0161	1390.15	0.0031	0.005913
As	75	3	He	3.31	0.008	678.02	0.0021	0.0008698
As	75	3	He	3.312	0.008	670.02	0.0021	0.0008698
As	75	3	He	3.197	0.0077	668.02	0.0021	0.0008698
Sr	88	3	He	3.85	0.0346	3090.47	0.0088	0.0006843
Sr	88	3	He	3.309	0.0298	2710.35	0.0088	0.0006843
Sr	88	3	He	3.477	0.0313	2830.37	0.0088	0.0006843
Mo	98	3	He	6.508	0.1446	12936.41	0.0219	0.001827
Mo	98	3	He	6.267	0.1394	12676.14	0.0219	0.001827
Mo	98	3	He	6.355	0.1413	12786.15	0.0219	0.001827
Ag	107	3	He	3.067	0.1453	12996.50	0.047	0.001064
Ag	107	3	He	3.202	0.1517	13797.15	0.047	0.001064
Ag	107	3	He	3.275	0.1551	14037.53	0.047	0.001064
Cd	111	3	He	0.715	0.0039	346.01	0.0053	6.086E-05
Cd	111	3	He	0.62	0.0034	306.00	0.0053	6.086E-05
Cd	111	3	He	0.628	0.0034	308.01	0.0053	6.086E-05
Sn	120	3	He	33.213	0.527	47131.04	0.0154	0.01483
Sn	120	3	He	33.412	0.5301	48214.65	0.0154	0.01483
Sn	120	3	He	34.035	0.5397	48836.64	0.0154	0.01483
Sb	121	3	He	3.631	0.052	4650.97	0.0143	0.0002661
Sb	121	3	He	3.199	0.0459	4170.80	0.0143	0.0002661
Sb	121	3	He	3.332	0.0477	4320.83	0.0143	0.0002661
Ba	137	3	He	68.247	0.3264	29191.65	0.0048	0.0002665
Ba	137	3	He	66.64	0.3187	28991.64	0.0048	0.0002665
Ba	137	3	He	68.096	0.3257	29472.33	0.0048	0.0002665
Tl	205	3	He	3.235	0.0822	32842.00	0.0246	0.002755
Tl	205	3	He	3.163	0.0804	32160.32	0.0246	0.002755
Tl	205	3	He	3.135	0.0798	32390.44	0.0246	0.002755
Pb	208	3	He	3.409	0.1126	23852.10	0.0324	0.002158
Pb	208	3	He	3.391	0.1121	24633.96	0.0324	0.002158
Pb	208	3	He	3.343	0.1105	24172.88	0.0324	0.002158
U	238	3	He	-0.004	0.0002	70.00	0.0492	0.0004023
U	238	3	He	-0.005	0.0002	50.00	0.0492	0.0004023
U	238	3	He	-0.004	0.0002	60.00	0.0492	0.0004023
Sc	45	1	No Gas			2558343.40		
Sc	45	1	No Gas			2565021.99		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2599737.77		
Ge	72	1	No Gas			1222974.90		
Ge	72	1	No Gas			1225499.04		
Ge	72	1	No Gas			1236370.61		
Sc	45	2	H2			201507.61		
Sc	45	2	H2			203820.25		
Sc	45	2	H2			199531.01		
Ge	72	2	H2			167571.76		
Ge	72	2	H2			168766.56		
Ge	72	2	H2			166874.78		
In	115	2	H2			403510.11		
In	115	2	H2			413940.23		
In	115	2	H2			409471.32		
Sc	45	3	He			51582.32		
Sc	45	3	He			50337.82		
Sc	45	3	He			51923.21		
Ge	72	3	He			85042.95		
Ge	72	3	He			84006.82		
Ge	72	3	He			86421.61		
In	115	3	He			89698.69		
In	115	3	He			91219.13		
In	115	3	He			90756.12		
Tb	159	3	He			399516.28		
Tb	159	3	He			399835.42		
Tb	159	3	He			406097.61		
Bi	209	3	He			310624.82		
Bi	209	3	He			309830.17		
Bi	209	3	He			310469.08		

Quantitation Report

Data File Name	146SMPL.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H09B00.b
Acq Time	8/9/2023 6:45:19 PM
Sample Name	LB 410-402536/1-B
Sample Type	Sample
Comment	I7 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

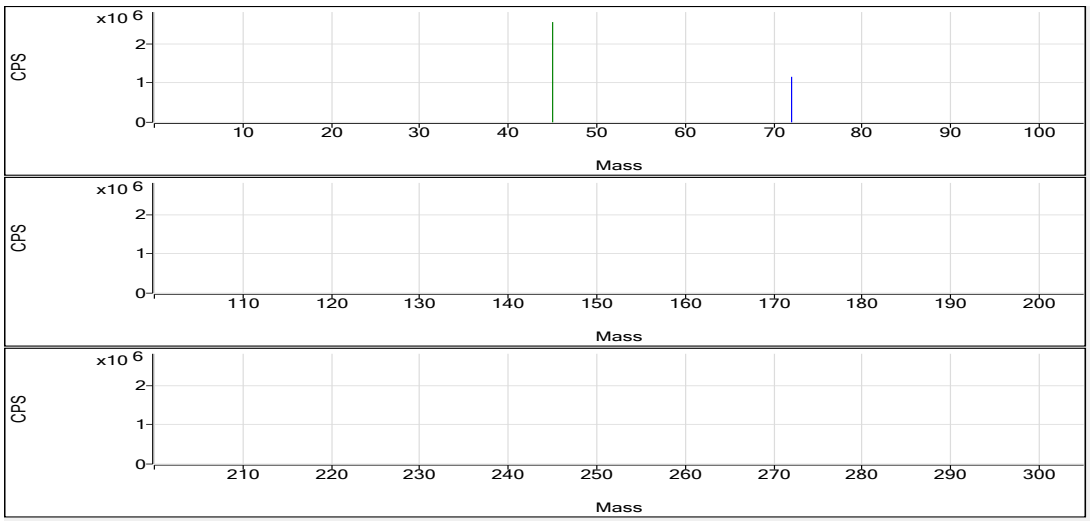
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.034	ppb	N/A	23.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.040	ppb	N/A	2.89	0.0000	Pulse	1.5000	3
Na	23	45	He	135207.507	ppb	1.6	24628146.30	482.3524	Analog	0.1000	3
Mg	24	45	He	4.525	ppb	14.2	650.04	0.0127	Pulse	0.1000	3
Al	27	45	He	-1.233	ppb	N/A	70.00	0.0014	Pulse	0.1000	3
K	39	45	He	18.062	ppb	79.2	22067.29	0.4323	Pulse	0.1000	3
Ca	44	45	He	28.289	ppb	38.7	266.68	0.0052	Pulse	0.1000	3
Ti	47	45	He	0.248	ppb	173.2	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	-0.358	ppb	N/A	1235.39	0.0242	Pulse	0.5000	3
Cr	52	45	He	-0.159	ppb	N/A	1953.54	0.0383	Pulse	0.1000	3
Mn	55	45	He	0.095	ppb	29.1	203.34	0.0040	Pulse	0.1000	3
Fe	57	45	He	-0.538	ppb	N/A	123.34	0.0024	Pulse	0.1000	3
Co	59	45	He	0.257	ppb	7.6	906.73	0.0178	Pulse	0.1000	3
Ni	60	72	He	-0.963	ppb	N/A	416.69	0.0052	Pulse	0.1000	3
Cu	63	72	He	0.918	ppb	4.5	2770.36	0.0345	Pulse	0.1000	3
Zn	66	72	He	0.061	ppb	228.7	490.03	0.0061	Pulse	0.1000	3
As	75	72	He	0.024	ppb	416.1	74.00	0.0009	Pulse	0.5000	3
Sr	88	115	He	0.145	ppb	14.8	176.68	0.0020	Pulse	0.1000	3
Mo	98	115	He	-0.033	ppb	N/A	100.00	0.0011	Pulse	0.1000	3
Ag	107	115	He	0.016	ppb	38.8	163.34	0.0018	Pulse	0.1000	3
Cd	111	115	He	-0.007	ppb	N/A	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.019	ppb	523.4	1363.45	0.0151	Pulse	0.1000	3
Sb	121	115	He	0.015	ppb	107.0	43.33	0.0005	Pulse	0.1000	3
Ba	137	115	He	0.741	ppb	18.7	343.35	0.0038	Pulse	0.1000	3
Tl	205	159	He	-0.089	ppb	N/A	230.01	0.0006	Pulse	0.1000	3
Pb	208	159	He	0.081	ppb	18.5	1943.46	0.0048	Pulse	0.1000	3
U	238	209	He	-0.005	ppb	N/A	43.33	0.0001	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2554254.18	1.2	97.9	Analog	0.1000	3
No Gas	Ge	72	1159204.44	1.2	89.9	Pulse	0.1000	3
H2	Sc	45	204340.76	1.3	99.2	Pulse	0.1000	3
H2	Ge	72	159339.79	0.6	97.9	Pulse	0.1000	3
H2	In	115	402551.26	0.1	99.7	Pulse	0.1000	3
He	Sc	45	51070.54	2.3	99.8	Pulse	0.1000	3
He	Ge	72	80329.02	0.5	98.1	Pulse	0.1000	3
He	In	115	90224.39	1.0	102.9	Pulse	0.1000	3
He	Tb	159	407479.54	0.5	101.5	Pulse	0.1000	3
He	Bi	209	309531.33	1.2	101.1	Pulse	0.1000	3

No Gas



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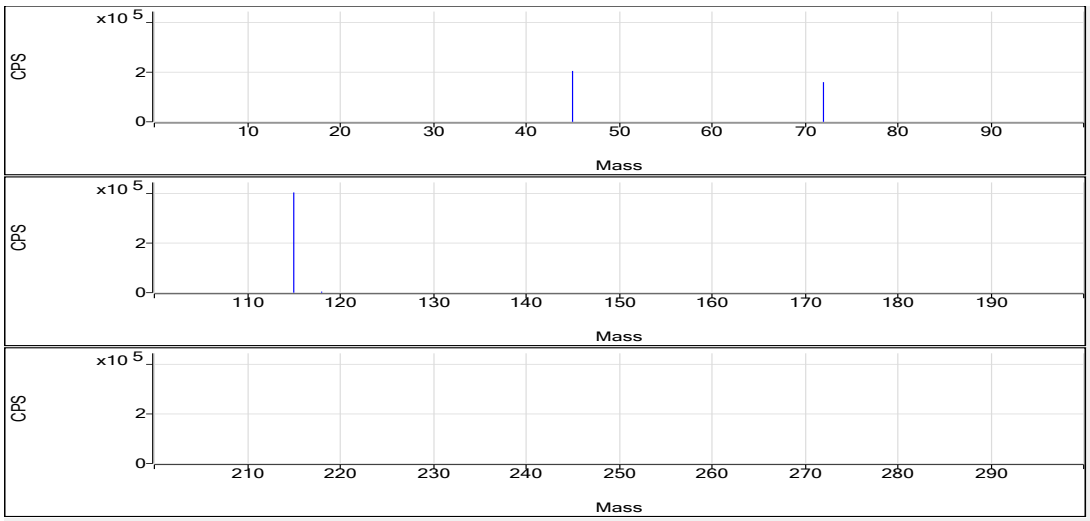
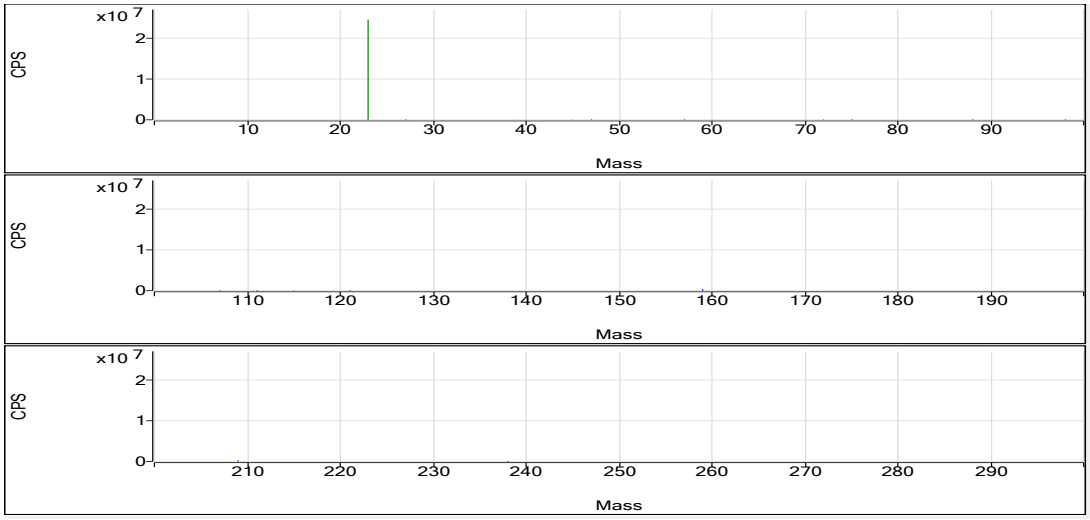


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.036	0	20.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.034	0	24.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.033	0	26.00	0.0007	3.404E-05
Se	78	2	H2	-0.034	0	3.33	0.0004	3.546E-05
Se	78	2	H2	-0.043	0	2.67	0.0004	3.546E-05
Se	78	2	H2	-0.042	0	2.67	0.0004	3.546E-05
Na	23	3	He	132815.277	473.8255	24826152.13	0.0036	0.4171
Na	23	3	He	135960.74	485.0372	24542407.13	0.0036	0.4171
Na	23	3	He	136846.505	488.1944	24515879.63	0.0036	0.4171
Mg	24	3	He	4.664	0.013	680.04	0.0018	0.004553
Mg	24	3	He	3.825	0.0115	580.03	0.0018	0.004553
Mg	24	3	He	5.085	0.0137	690.04	0.0018	0.004553
Al	27	3	He	-0.63	0.0017	90.00	0.0006	0.002085
Al	27	3	He	-1.543	0.0012	60.00	0.0006	0.002085
Al	27	3	He	-1.527	0.0012	60.00	0.0006	0.002085
K	39	3	He	1.669	0.4131	21646.58	0.0012	0.4112
K	39	3	He	28.055	0.444	22468.03	0.0012	0.4112
K	39	3	He	24.461	0.4398	22087.25	0.0012	0.4112
Ca	44	3	He	15.81	0.0044	230.01	0.0001	0.003322
Ca	44	3	He	32.744	0.0055	280.01	0.0001	0.003322
Ca	44	3	He	36.314	0.0058	290.01	0.0001	0.003322
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.743	0.0004	20.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	-0.374	0.0239	1250.06	0.0213	0.0318
V	51	3	He	-0.421	0.0228	1156.05	0.0213	0.0318
V	51	3	He	-0.278	0.0259	1300.07	0.0213	0.0318
Cr	52	3	He	-0.241	0.0359	1880.20	0.0294	0.04297
Cr	52	3	He	-0.305	0.034	1720.15	0.0294	0.04297
Cr	52	3	He	0.069	0.045	2260.26	0.0294	0.04297
Mn	55	3	He	0.082	0.0038	200.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.077	0.0038	190.01	0.0124	0.002801
Mn	55	3	He	0.127	0.0044	220.01	0.0124	0.002801
Fe	57	3	He	-1.772	0.0017	90.00	0.0006	0.002732
Fe	57	3	He	0.061	0.0028	140.00	0.0006	0.002732
Fe	57	3	He	0.098	0.0028	140.01	0.0006	0.002732
Co	59	3	He	0.236	0.0166	870.05	0.0549	0.003644
Co	59	3	He	0.261	0.018	910.07	0.0549	0.003644
Co	59	3	He	0.275	0.0187	940.08	0.0549	0.003644
Ni	60	3	He	-0.975	0.0051	410.02	0.0093	0.01413
Ni	60	3	He	-0.97	0.0051	410.02	0.0093	0.01413
Ni	60	3	He	-0.943	0.0054	430.02	0.0093	0.01413
Cu	63	3	He	0.928	0.0348	2810.35	0.0274	0.009321
Cu	63	3	He	0.953	0.0355	2840.39	0.0274	0.009321
Cu	63	3	He	0.872	0.0332	2660.33	0.0274	0.009321
Zn	66	3	He	0.169	0.0064	520.03	0.0031	0.005913
Zn	66	3	He	-0.096	0.0056	450.02	0.0031	0.005913
Zn	66	3	He	0.109	0.0062	500.03	0.0031	0.005913
As	75	3	He	-0.083	0.0007	56.00	0.0021	0.0008698
As	75	3	He	0.118	0.0011	90.00	0.0021	0.0008698
As	75	3	He	0.037	0.0009	76.00	0.0021	0.0008698
Sr	88	3	He	0.164	0.0021	190.01	0.0088	0.0006843
Sr	88	3	He	0.149	0.002	180.01	0.0088	0.0006843
Sr	88	3	He	0.122	0.0018	160.01	0.0088	0.0006843
Mo	98	3	He	-0.042	0.0009	80.00	0.0219	0.001827
Mo	98	3	He	-0.012	0.0016	140.00	0.0219	0.001827
Mo	98	3	He	-0.043	0.0009	80.00	0.0219	0.001827
Ag	107	3	He	0.023	0.0021	190.01	0.047	0.001064
Ag	107	3	He	0.01	0.0016	140.01	0.047	0.001064
Ag	107	3	He	0.015	0.0018	160.01	0.047	0.001064
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Sn	120	3	He	0.068	0.0159	1420.11	0.0154	0.01483
Sn	120	3	He	0.082	0.0161	1450.13	0.0154	0.01483
Sn	120	3	He	-0.094	0.0134	1220.11	0.0154	0.01483
Sb	121	3	He	0.021	0.0006	50.00	0.0143	0.0002661
Sb	121	3	He	-0.003	0.0002	20.00	0.0143	0.0002661
Sb	121	3	He	0.027	0.0007	60.00	0.0143	0.0002661
Ba	137	3	He	0.693	0.0036	320.01	0.0048	0.0002665
Ba	137	3	He	0.897	0.0046	410.02	0.0048	0.0002665
Ba	137	3	He	0.633	0.0033	300.01	0.0048	0.0002665
Tl	205	3	He	-0.09	0.0005	220.01	0.0246	0.002755
Tl	205	3	He	-0.092	0.0005	200.01	0.0246	0.002755
Tl	205	3	He	-0.085	0.0007	270.01	0.0246	0.002755
Pb	208	3	He	0.091	0.0051	1130.08	0.0324	0.002158
Pb	208	3	He	0.087	0.005	1070.09	0.0324	0.002158
Pb	208	3	He	0.064	0.0042	940.07	0.0324	0.002158
U	238	3	He	-0.007	0.0001	20.00	0.0492	0.0004023
U	238	3	He	-0.004	0.0002	60.00	0.0492	0.0004023
U	238	3	He	-0.005	0.0002	50.00	0.0492	0.0004023
Sc	45	1	No Gas			2518557.15		
Sc	45	1	No Gas			2576641.52		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2567563.87		
Ge	72	1	No Gas			1146825.22		
Ge	72	1	No Gas			1157108.50		
Ge	72	1	No Gas			1173679.59		
Sc	45	2	H2			202643.57		
Sc	45	2	H2			207471.13		
Sc	45	2	H2			202907.59		
Ge	72	2	H2			160299.20		
Ge	72	2	H2			159177.84		
Ge	72	2	H2			158542.33		
In	115	2	H2			402702.45		
In	115	2	H2			402795.97		
In	115	2	H2			402155.35		
Sc	45	3	He			52395.14		
Sc	45	3	He			50599.02		
Sc	45	3	He			50217.45		
Ge	72	3	He			80838.56		
Ge	72	3	He			80094.06		
Ge	72	3	He			80054.43		
In	115	3	He			89396.89		
In	115	3	He			90091.50		
In	115	3	He			91209.20		
Tb	159	3	He			409365.62		
Tb	159	3	He			407503.39		
Tb	159	3	He			405569.60		
Bi	209	3	He			313569.18		
Bi	209	3	He			306469.88		
Bi	209	3	He			308554.94		

Quantitation Report

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Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

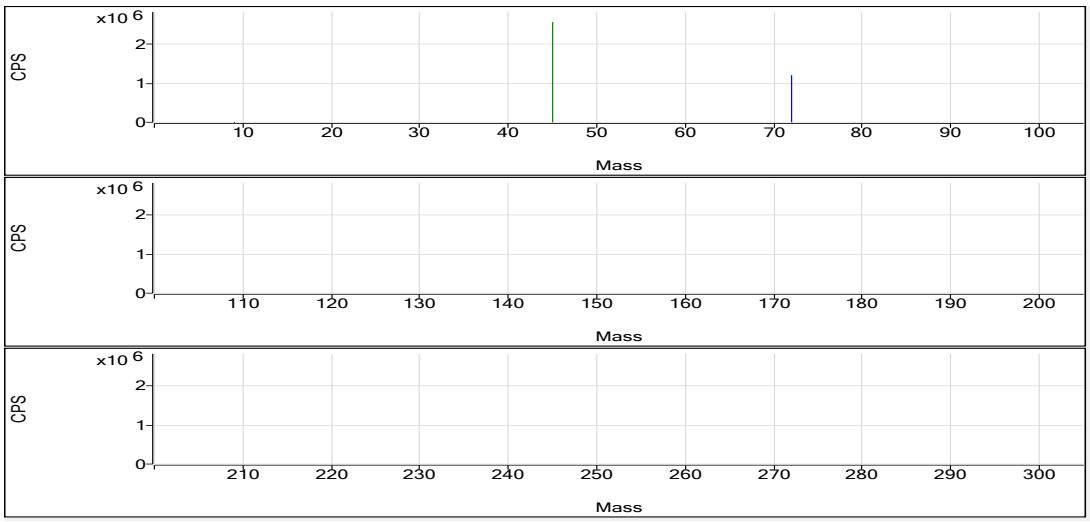
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.038	ppb	N/A	16.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.050	ppb	N/A	2.22	0.0000	Pulse	1.5000	3
Na	23	45	He	11.022	ppb	30.9	23298.99	0.4563	Pulse	0.1000	3
Mg	24	45	He	-0.421	ppb	N/A	193.34	0.0038	Pulse	0.1000	3
Al	27	45	He	-1.212	ppb	N/A	70.00	0.0014	Pulse	0.1000	3
K	39	45	He	7.841	ppb	26.3	21469.63	0.4204	Pulse	0.1000	3
Ca	44	45	He	4.112	ppb	339.6	183.34	0.0036	Pulse	0.1000	3
Ti	47	45	He	0.125	ppb	173.2	3.33	0.0001	Pulse	0.1000	3
V	51	45	He	-0.243	ppb	N/A	1359.40	0.0266	Pulse	0.5000	3
Cr	52	45	He	-0.148	ppb	N/A	1970.21	0.0386	Pulse	0.1000	3
Mn	55	45	He	0.091	ppb	126.9	200.01	0.0039	Pulse	0.1000	3
Fe	57	45	He	-0.444	ppb	N/A	126.67	0.0025	Pulse	0.1000	3
Co	59	45	He	-0.026	ppb	N/A	113.34	0.0022	Pulse	0.1000	3
Ni	60	72	He	-1.229	ppb	N/A	230.01	0.0027	Pulse	0.1000	3
Cu	63	72	He	-0.116	ppb	N/A	520.03	0.0062	Pulse	0.1000	3
Zn	66	72	He	-0.102	ppb	N/A	473.36	0.0056	Pulse	0.1000	3
As	75	72	He	0.061	ppb	223.6	84.67	0.0010	Pulse	0.5000	3
Sr	88	115	He	-0.014	ppb	N/A	50.00	0.0006	Pulse	0.1000	3
Mo	98	115	He	-0.063	ppb	N/A	40.00	0.0004	Pulse	0.1000	3
Ag	107	115	He	-0.008	ppb	N/A	63.33	0.0007	Pulse	0.1000	3
Cd	111	115	He	-0.007	ppb	N/A	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.034	ppb	21.4	1370.11	0.0154	Pulse	0.1000	3
Sb	121	115	He	-0.011	ppb	N/A	10.00	0.0001	Pulse	0.1000	3
Ba	137	115	He	-0.017	ppb	N/A	16.67	0.0002	Pulse	0.1000	3
Tl	205	159	He	-0.095	ppb	N/A	166.68	0.0004	Pulse	0.1000	3
Pb	208	159	He	-0.023	ppb	N/A	573.36	0.0014	Pulse	0.1000	3
U	238	209	He	-0.006	ppb	N/A	33.33	0.0001	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2566457.20	1.1	98.4	Analog	0.1000	3
No Gas	Ge	72	1207250.53	0.3	93.7	Pulse	0.1000	3
H2	Sc	45	204084.78	0.3	99.0	Pulse	0.1000	3
H2	Ge	72	166588.81	2.0	102.4	Pulse	0.1000	3
H2	In	115	405373.00	0.5	100.4	Pulse	0.1000	3
He	Sc	45	51070.55	1.7	99.8	Pulse	0.1000	3
He	Ge	72	84525.91	0.7	103.3	Pulse	0.1000	3
He	In	115	89201.94	0.2	101.8	Pulse	0.1000	3
He	Tb	159	403083.89	0.4	100.4	Pulse	0.1000	3
He	Bi	209	310949.89	0.5	101.6	Pulse	0.1000	3

No Gas



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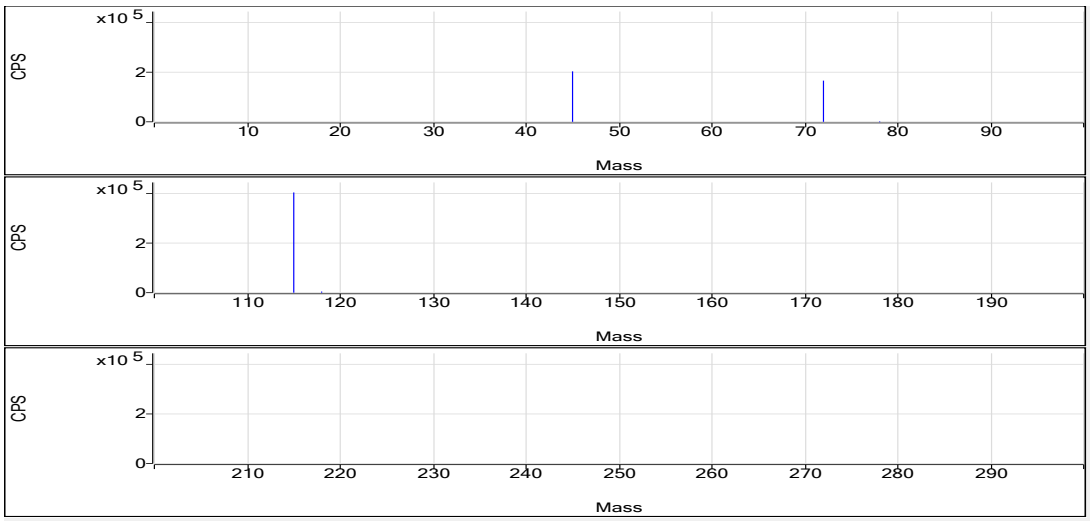
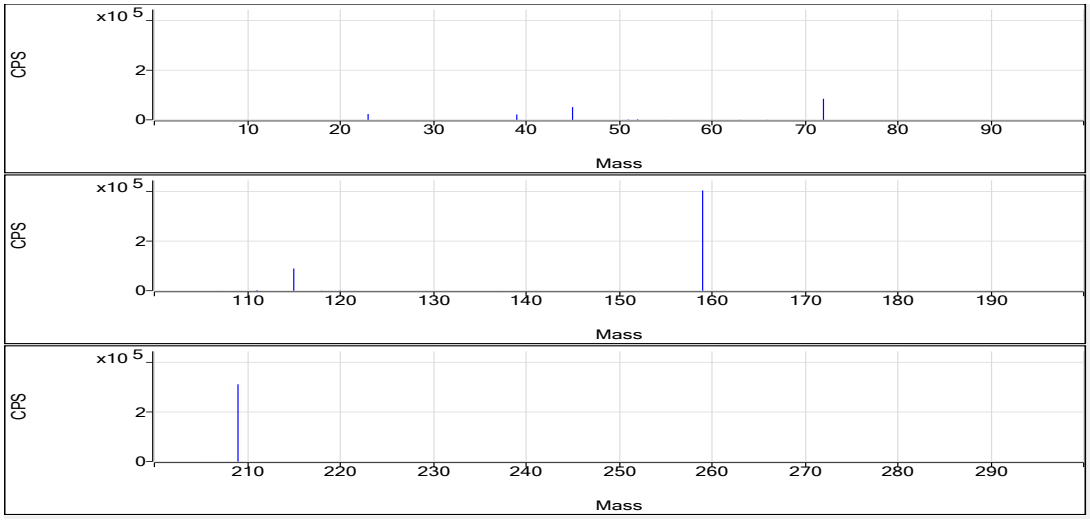


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.038	0	16.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.038	0	16.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.037	0	18.00	0.0007	3.404E-05
Se	78	2	H2	-0.026	0	4.00	0.0004	3.546E-05
Se	78	2	H2	-0.072	0	0.67	0.0004	3.546E-05
Se	78	2	H2	-0.053	0	2.00	0.0004	3.546E-05
Na	23	3	He	9.68	0.4516	23278.83	0.0036	0.4171
Na	23	3	He	14.9	0.4702	23549.31	0.0036	0.4171
Na	23	3	He	8.487	0.4473	23068.83	0.0036	0.4171
Mg	24	3	He	-0.802	0.0031	160.01	0.0018	0.004553
Mg	24	3	He	-0.089	0.0044	220.01	0.0018	0.004553
Mg	24	3	He	-0.373	0.0039	200.01	0.0018	0.004553
Al	27	3	He	-2.912	0.0004	20.00	0.0006	0.002085
Al	27	3	He	0.191	0.0022	110.00	0.0006	0.002085
Al	27	3	He	-0.916	0.0016	80.00	0.0006	0.002085
K	39	3	He	9.927	0.4228	21796.77	0.0012	0.4112
K	39	3	He	5.805	0.418	20935.58	0.0012	0.4112
K	39	3	He	7.792	0.4203	21676.54	0.0012	0.4112
Ca	44	3	He	2.516	0.0035	180.01	0.0001	0.003322
Ca	44	3	He	18.805	0.0046	230.01	0.0001	0.003322
Ca	44	3	He	-8.985	0.0027	140.01	0.0001	0.003322
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.375	0.0002	10.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	-0.229	0.0269	1388.07	0.0213	0.0318
V	51	3	He	-0.16	0.0284	1422.08	0.0213	0.0318
V	51	3	He	-0.339	0.0246	1268.06	0.0213	0.0318
Cr	52	3	He	-0.293	0.0343	1770.19	0.0294	0.04297
Cr	52	3	He	0.019	0.0435	2180.24	0.0294	0.04297
Cr	52	3	He	-0.169	0.038	1960.19	0.0294	0.04297
Mn	55	3	He	0.024	0.0031	160.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.224	0.0056	280.01	0.0124	0.002801
Mn	55	3	He	0.024	0.0031	160.01	0.0124	0.002801
Fe	57	3	He	-0.367	0.0025	130.01	0.0006	0.002732
Fe	57	3	He	-0.936	0.0022	110.00	0.0006	0.002732
Fe	57	3	He	-0.03	0.0027	140.00	0.0006	0.002732
Co	59	3	He	-0.035	0.0017	90.00	0.0549	0.003644
Co	59	3	He	-0.026	0.0022	110.00	0.0549	0.003644
Co	59	3	He	-0.017	0.0027	140.01	0.0549	0.003644
Ni	60	3	He	-1.154	0.0034	290.01	0.0093	0.01413
Ni	60	3	He	-1.239	0.0026	220.01	0.0093	0.01413
Ni	60	3	He	-1.293	0.0021	180.01	0.0093	0.01413
Cu	63	3	He	-0.112	0.0062	530.03	0.0274	0.009321
Cu	63	3	He	-0.122	0.006	500.03	0.0274	0.009321
Cu	63	3	He	-0.112	0.0062	530.03	0.0274	0.009321
Zn	66	3	He	-0.275	0.0051	430.02	0.0031	0.005913
Zn	66	3	He	-0.139	0.0055	460.03	0.0031	0.005913
Zn	66	3	He	0.108	0.0062	530.03	0.0031	0.005913
As	75	3	He	0.199	0.0013	110.00	0.0021	0.0008698
As	75	3	He	0.061	0.001	84.00	0.0021	0.0008698
As	75	3	He	-0.076	0.0007	60.00	0.0021	0.0008698
Sr	88	3	He	-0.027	0.0004	40.00	0.0088	0.0006843
Sr	88	3	He	0.011	0.0008	70.00	0.0088	0.0006843
Sr	88	3	He	-0.027	0.0004	40.00	0.0088	0.0006843
Mo	98	3	He	-0.073	0.0002	20.00	0.0219	0.001827
Mo	98	3	He	-0.048	0.0008	70.00	0.0219	0.001827
Mo	98	3	He	-0.068	0.0003	30.00	0.0219	0.001827
Ag	107	3	He	-0.006	0.0008	70.00	0.047	0.001064
Ag	107	3	He	-0.006	0.0008	70.00	0.047	0.001064
Ag	107	3	He	-0.011	0.0006	50.00	0.047	0.001064
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Sn	120	3	He	0.036	0.0154	1370.11	0.0154	0.01483
Sn	120	3	He	0.04	0.0155	1380.12	0.0154	0.01483
Sn	120	3	He	0.026	0.0152	1360.11	0.0154	0.01483
Sb	121	3	He	-0.019	0	0.00	0.0143	0.0002661
Sb	121	3	He	-0.011	0.0001	10.00	0.0143	0.0002661
Sb	121	3	He	-0.003	0.0002	20.00	0.0143	0.0002661
Ba	137	3	He	0.015	0.0003	30.00	0.0048	0.0002665
Ba	137	3	He	-0.056	0	0.00	0.0048	0.0002665
Ba	137	3	He	-0.009	0.0002	20.00	0.0048	0.0002665
Tl	205	3	He	-0.095	0.0004	170.01	0.0246	0.002755
Tl	205	3	He	-0.096	0.0004	160.01	0.0246	0.002755
Tl	205	3	He	-0.095	0.0004	170.01	0.0246	0.002755
Pb	208	3	He	-0.018	0.0016	410.02	0.0324	0.002158
Pb	208	3	He	-0.025	0.0013	300.02	0.0324	0.002158
Pb	208	3	He	-0.024	0.0014	250.01	0.0324	0.002158
U	238	3	He	-0.006	0.0001	30.00	0.0492	0.0004023
U	238	3	He	-0.006	0.0001	40.00	0.0492	0.0004023
U	238	3	He	-0.006	0.0001	30.00	0.0492	0.0004023
Sc	45	1	No Gas			2592475.59		
Sc	45	1	No Gas			2535415.74		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2571480.27		
Ge	72	1	No Gas			1209367.56		
Ge	72	1	No Gas			1203578.03		
Ge	72	1	No Gas			1208806.00		
Sc	45	2	H2			203416.21		
Sc	45	2	H2			204348.96		
Sc	45	2	H2			204489.18		
Ge	72	2	H2			165893.20		
Ge	72	2	H2			170174.14		
Ge	72	2	H2			163699.08		
In	115	2	H2			404298.59		
In	115	2	H2			407551.24		
In	115	2	H2			404269.17		
Sc	45	3	He			51552.06		
Sc	45	3	He			50087.01		
Sc	45	3	He			51572.58		
Ge	72	3	He			84830.22		
Ge	72	3	He			83875.53		
Ge	72	3	He			84871.98		
In	115	3	He			89024.96		
In	115	3	He			89315.68		
In	115	3	He			89286.56		
Tb	159	3	He			402882.34		
Tb	159	3	He			404860.03		
Tb	159	3	He			401509.29		
Bi	209	3	He			310923.59		
Bi	209	3	He			312478.90		
Bi	209	3	He			309447.18		

Quantitation Report

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Sample Type	CCV
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

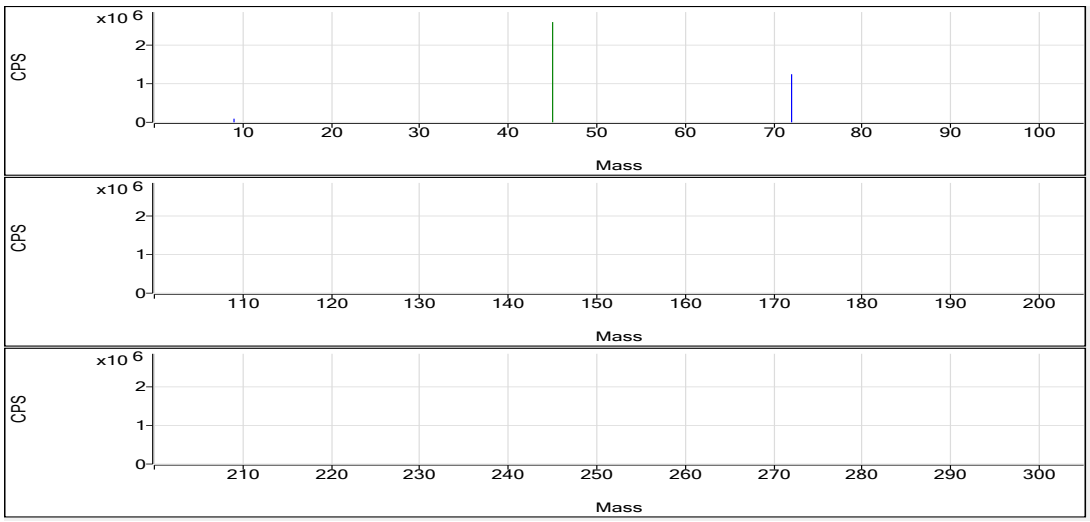
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	49.444	ppb	1.3	93062.97	0.0361	Pulse	0.5000	3
Se	78	72	H2	50.758	ppb	1.3	3719.15	0.0223	Pulse	1.5000	3
Na	23	45	He	4921.310	ppb	1.6	901043.76	17.9586	Pulse	0.1000	3
Mg	24	45	He	5061.746	ppb	2.1	459052.74	9.1501	Pulse	0.1000	3
Al	27	45	He	5097.005	ppb	1.1	149098.07	2.9716	Pulse	0.1000	3
K	39	45	He	5181.162	ppb	1.1	325072.62	6.4787	Pulse	0.1000	3
Ca	44	45	He	5212.744	ppb	3.0	17841.34	0.3555	Pulse	0.1000	3
Ti	47	45	He	5167.458	ppb	1.2	137899.10	2.7484	Pulse	0.1000	3
V	51	45	He	523.940	ppb	1.6	560219.04	11.1660	Pulse	0.5000	3
Cr	52	45	He	499.037	ppb	1.2	738571.66	14.7197	Pulse	0.1000	3
Mn	55	45	He	520.702	ppb	1.4	324934.79	6.4762	Pulse	0.1000	3
Fe	57	45	He	5184.729	ppb	1.7	148968.97	2.9692	Pulse	0.1000	3
Co	59	45	He	513.520	ppb	4.3	1413910.45	28.1894	Mix	0.1000	3
Ni	60	72	He	494.666	ppb	1.3	389596.43	4.6060	Pulse	0.1000	3
Cu	63	72	He	471.408	ppb	2.1	1094243.79	12.9382	Pulse	0.1000	3
Zn	66	72	He	501.538	ppb	3.3	130715.01	1.5458	Pulse	0.1000	3
As	75	72	He	509.380	ppb	2.2	92511.62	1.0939	Pulse	0.5000	3
Sr	88	115	He	51.754	ppb	1.6	40732.72	0.4561	Pulse	0.1000	3
Mo	98	115	He	50.328	ppb	0.1	98809.70	1.1063	Pulse	0.1000	3
Ag	107	115	He	49.984	ppb	0.6	210098.91	2.3523	Pulse	0.1000	3
Cd	111	115	He	50.655	ppb	0.5	24099.43	0.2698	Pulse	0.5000	3
Sn	120	115	He	51.828	ppb	1.7	72705.15	0.8140	Pulse	0.1000	3
Sb	121	115	He	52.240	ppb	0.2	66513.46	0.7447	Pulse	0.1000	3
Ba	137	115	He	515.558	ppb	1.0	220074.17	2.4640	Pulse	0.1000	3
Tl	205	159	He	51.193	ppb	0.2	509164.33	1.2601	Pulse	0.1000	3
Pb	208	159	He	51.292	ppb	0.6	672482.31	1.6642	Pulse	0.1000	3
U	238	209	He	50.075	ppb	0.4	766125.04	2.4665	Pulse	0.1000	3

ISTD Table:

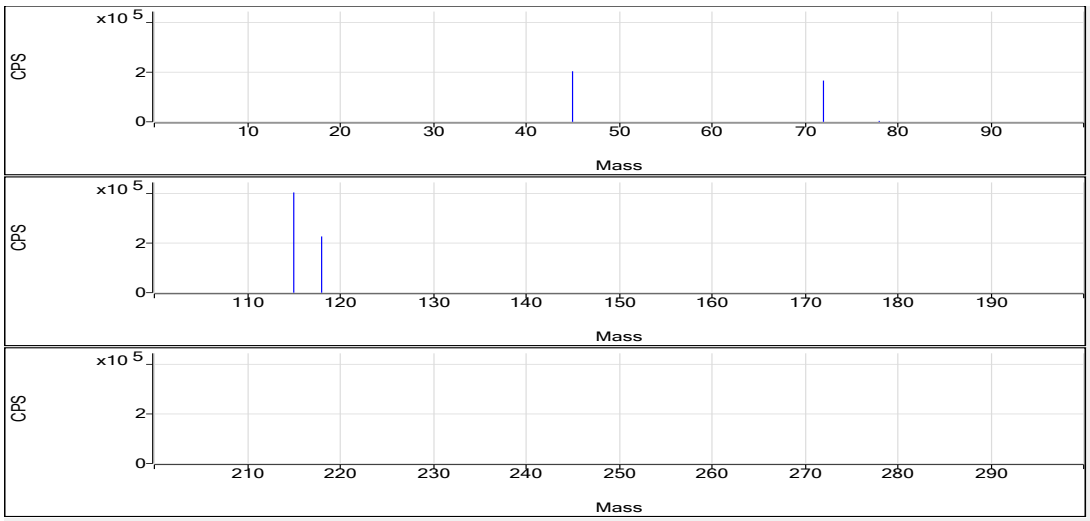
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2581539.18	1.8	99.0	Analog	0.1000	3
No Gas	Ge	72	1238211.91	0.6	96.1	Pulse	0.1000	3
H2	Sc	45	204563.55	0.8	99.3	Pulse	0.1000	3
H2	Ge	72	166915.15	1.0	102.6	Pulse	0.1000	3
H2	In	115	405522.69	0.1	100.5	Pulse	0.1000	3
He	Sc	45	50180.90	1.6	98.0	Pulse	0.1000	3
He	Ge	72	84600.18	2.2	103.3	Pulse	0.1000	3
He	In	115	89316.48	0.4	101.9	Pulse	0.1000	3
He	Tb	159	404074.92	0.5	100.6	Pulse	0.1000	3
He	Bi	209	310617.77	0.1	101.5	Pulse	0.1000	3

No Gas

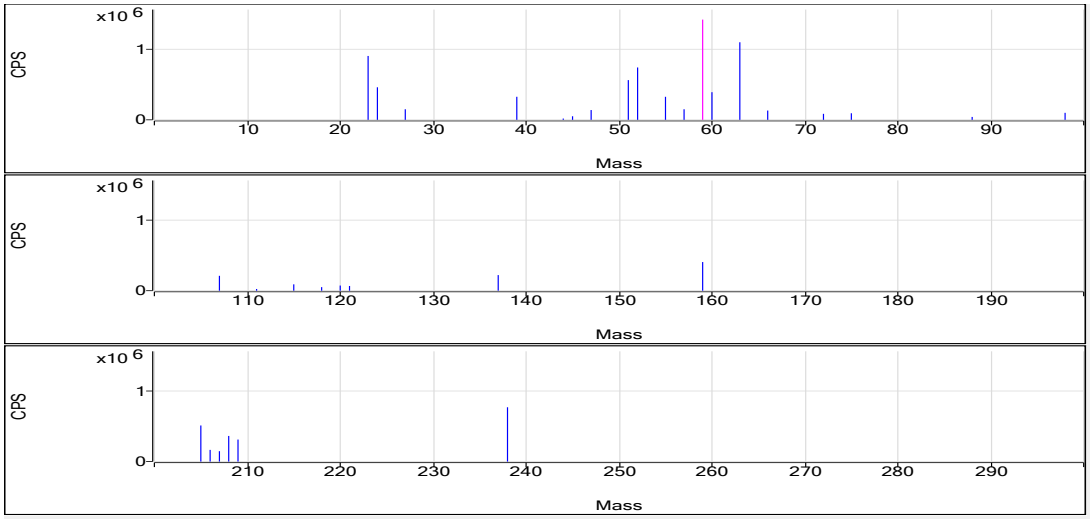


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	48.924	0.0357	93529.90	0.0007	3.404E-05
Be	9	1	No Gas	50.184	0.0366	92589.91	0.0007	3.404E-05
Be	9	1	No Gas	49.223	0.0359	93069.10	0.0007	3.404E-05
Se	78	2	H2	51.215	0.0225	3723.82	0.0004	3.546E-05
Se	78	2	H2	49.995	0.0219	3703.15	0.0004	3.546E-05
Se	78	2	H2	51.063	0.0224	3730.49	0.0004	3.546E-05
Na	23	3	He	4974.826	18.1494	895386.24	0.0036	0.4171
Na	23	3	He	4957.195	18.0865	908450.22	0.0036	0.4171
Na	23	3	He	4831.909	17.64	899294.83	0.0036	0.4171
Mg	24	3	He	5178.804	9.3616	461845.58	0.0018	0.004553
Mg	24	3	He	5038.924	9.1088	457517.88	0.0018	0.004553
Mg	24	3	He	4967.51	8.9798	457794.76	0.0018	0.004553
Al	27	3	He	5148.079	3.0013	148068.01	0.0006	0.002085
Al	27	3	He	5107.833	2.9779	149572.66	0.0006	0.002085
Al	27	3	He	5035.104	2.9355	149653.54	0.0006	0.002085
K	39	3	He	5233.813	6.5404	322664.49	0.0012	0.4112
K	39	3	He	5186.141	6.4845	325705.66	0.0012	0.4112
K	39	3	He	5123.532	6.4112	326847.71	0.0012	0.4112
Ca	44	3	He	5057.633	0.345	17020.38	0.0001	0.003322
Ca	44	3	He	5373.915	0.3664	18401.94	0.0001	0.003322
Ca	44	3	He	5206.684	0.3551	18101.69	0.0001	0.003322
Ti	47	3	He	5238.574	2.7862	137454.79	0.0005	0
Ti	47	3	He	5136.328	2.7318	137213.43	0.0005	0
Ti	47	3	He	5127.471	2.7271	139029.09	0.0005	0
V	51	3	He	532.819	11.3547	560174.50	0.0213	0.0318
V	51	3	He	523.273	11.1518	560133.06	0.0213	0.0318
V	51	3	He	515.727	10.9914	560349.56	0.0213	0.0318
Cr	52	3	He	501.872	14.8031	730297.96	0.0294	0.04297
Cr	52	3	He	503.093	14.839	745332.65	0.0294	0.04297
Cr	52	3	He	492.145	14.517	740084.36	0.0294	0.04297
Mn	55	3	He	527.446	6.5601	323636.67	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	521.571	6.487	325831.03	0.0124	0.002801
Mn	55	3	He	513.089	6.3816	325336.66	0.0124	0.002801
Fe	57	3	He	5286.561	3.0274	149356.52	0.0006	0.002732
Fe	57	3	He	5150.577	2.9496	148154.32	0.0006	0.002732
Fe	57	3	He	5117.049	2.9305	149396.08	0.0006	0.002732
Co	59	3	He	535.811	29.4129	1451065.13	0.0549	0.003644
Co	59	3	He	512.802	28.15	1413919.04	0.0549	0.003644
Co	59	3	He	491.947	27.0054	1376747.17	0.0549	0.003644
Ni	60	3	He	487.368	4.5383	393256.75	0.0093	0.01413
Ni	60	3	He	496.609	4.6241	388963.67	0.0093	0.01413
Ni	60	3	He	500.019	4.6557	386568.86	0.0093	0.01413
Cu	63	3	He	461.221	12.6588	1096918.66	0.0274	0.009321
Cu	63	3	He	472.393	12.9652	1090591.62	0.0274	0.009321
Cu	63	3	He	480.611	13.1906	1095221.08	0.0274	0.009321
Zn	66	3	He	482.567	1.4876	128904.45	0.0031	0.005913
Zn	66	3	He	507.69	1.5647	131620.52	0.0031	0.005913
Zn	66	3	He	514.355	1.5852	131620.05	0.0031	0.005913
As	75	3	He	497.949	1.0693	92661.13	0.0021	0.0008698
As	75	3	He	509.438	1.094	92023.10	0.0021	0.0008698
As	75	3	He	520.753	1.1183	92850.63	0.0021	0.0008698
Sr	88	3	He	51.21	0.4513	40488.46	0.0088	0.0006843
Sr	88	3	He	51.328	0.4523	40298.41	0.0088	0.0006843
Sr	88	3	He	52.722	0.4646	41411.28	0.0088	0.0006843
Mo	98	3	He	50.28	1.1052	99159.22	0.0219	0.001827
Mo	98	3	He	50.329	1.1063	98564.39	0.0219	0.001827
Mo	98	3	He	50.377	1.1074	98705.48	0.0219	0.001827
Ag	107	3	He	50.033	2.3546	211253.75	0.047	0.001064
Ag	107	3	He	50.243	2.3645	210658.45	0.047	0.001064
Ag	107	3	He	49.676	2.3378	208384.53	0.047	0.001064
Cd	111	3	He	50.38	0.2684	24076.69	0.0053	6.086E-05
Cd	111	3	He	50.788	0.2705	24102.80	0.0053	6.086E-05
Cd	111	3	He	50.798	0.2706	24118.81	0.0053	6.086E-05
Sn	120	3	He	51.034	0.8018	71938.12	0.0154	0.01483
Sn	120	3	He	52.753	0.8283	73797.40	0.0154	0.01483
Sn	120	3	He	51.696	0.812	72379.93	0.0154	0.01483
Sb	121	3	He	52.113	0.7429	66650.80	0.0143	0.0002661
Sb	121	3	He	52.352	0.7463	66489.65	0.0143	0.0002661
Sb	121	3	He	52.256	0.7449	66399.94	0.0143	0.0002661
Ba	137	3	He	511.96	2.4468	219527.54	0.0048	0.0002665
Ba	137	3	He	513.022	2.4519	218448.69	0.0048	0.0002665
Ba	137	3	He	521.692	2.4933	222246.29	0.0048	0.0002665
Tl	205	3	He	51.101	1.2578	508615.15	0.0246	0.002755
Tl	205	3	He	51.334	1.2635	508001.16	0.0246	0.002755
Tl	205	3	He	51.145	1.2589	510876.67	0.0246	0.002755
Pb	208	3	He	50.959	1.6534	358933.55	0.0324	0.002158
Pb	208	3	He	51.404	1.6679	362434.33	0.0324	0.002158
Pb	208	3	He	51.515	1.6715	362674.76	0.0324	0.002158
U	238	3	He	50.251	2.4752	768159.44	0.0492	0.0004023
U	238	3	He	49.885	2.4571	764526.79	0.0492	0.0004023
U	238	3	He	50.088	2.4671	765688.89	0.0492	0.0004023
Sc	45	1	No Gas			2621602.15		
Sc	45	1	No Gas			2530163.71		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2592851.68		
Ge	72	1	No Gas			1234895.84		
Ge	72	1	No Gas			1233267.48		
Ge	72	1	No Gas			1246472.40		
Sc	45	2	H2			203616.77		
Sc	45	2	H2			206569.72		
Sc	45	2	H2			203504.16		
Ge	72	2	H2			165620.39		
Ge	72	2	H2			168715.54		
Ge	72	2	H2			166409.51		
In	115	2	H2			405225.66		
In	115	2	H2			405159.95		
In	115	2	H2			406182.45		
Sc	45	3	He			49334.24		
Sc	45	3	He			50227.96		
Sc	45	3	He			50980.51		
Ge	72	3	He			86652.89		
Ge	72	3	He			84116.96		
Ge	72	3	He			83030.69		
In	115	3	He			90110.93		
In	115	3	He			89487.60		
In	115	3	He			89527.73		
Tb	159	3	He			404367.73		
Tb	159	3	He			402046.01		
Tb	159	3	He			405811.01		
Bi	209	3	He			310348.45		
Bi	209	3	He			311147.57		
Bi	209	3	He			310357.28		

Quantitation Report

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Sample Type	CCB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

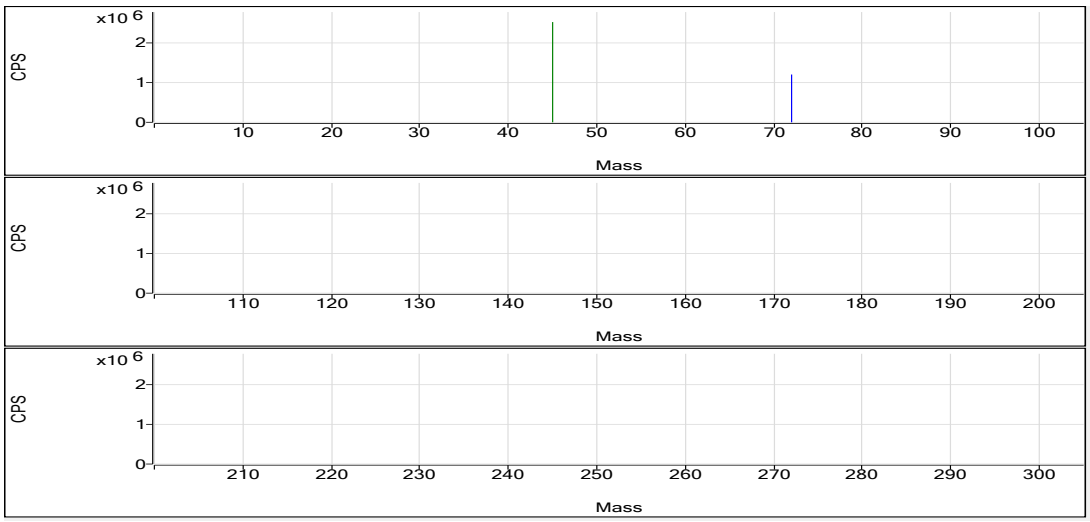
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.019	ppb	N/A	52.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.000	ppb	1897.7	5.78	0.0000	Pulse	1.5000	3
Na	23	45	He	-8.227	ppb	N/A	19686.87	0.3877	Pulse	0.1000	3
Mg	24	45	He	0.568	ppb	44.5	283.35	0.0056	Pulse	0.1000	3
Al	27	45	He	-0.536	ppb	N/A	90.00	0.0018	Pulse	0.1000	3
K	39	45	He	10.760	ppb	93.1	21516.42	0.4238	Pulse	0.1000	3
Ca	44	45	He	-4.414	ppb	N/A	153.34	0.0030	Pulse	0.1000	3
Ti	47	45	He	1.111	ppb	0.8	30.00	0.0006	Pulse	0.1000	3
V	51	45	He	-0.279	ppb	N/A	1313.40	0.0259	Pulse	0.5000	3
Cr	52	45	He	-0.054	ppb	N/A	2100.22	0.0414	Pulse	0.1000	3
Mn	55	45	He	0.123	ppb	27.5	220.01	0.0043	Pulse	0.1000	3
Fe	57	45	He	1.533	ppb	66.3	183.34	0.0036	Pulse	0.1000	3
Co	59	45	He	0.034	ppb	17.3	280.01	0.0055	Pulse	0.1000	3
Ni	60	72	He	-1.167	ppb	N/A	276.68	0.0033	Pulse	0.1000	3
Cu	63	72	He	-0.044	ppb	N/A	683.37	0.0081	Pulse	0.1000	3
Zn	66	72	He	-0.104	ppb	N/A	470.02	0.0056	Pulse	0.1000	3
As	75	72	He	0.082	ppb	103.1	88.00	0.0010	Pulse	0.5000	3
Sr	88	115	He	0.007	ppb	666.6	66.67	0.0008	Pulse	0.1000	3
Mo	98	115	He	-0.017	ppb	N/A	130.00	0.0015	Pulse	0.1000	3
Ag	107	115	He	-0.005	ppb	N/A	73.34	0.0008	Pulse	0.1000	3
Cd	111	115	He	-0.010	ppb	N/A	0.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.084	ppb	108.8	1440.13	0.0161	Pulse	0.1000	3
Sb	121	115	He	0.036	ppb	36.5	70.00	0.0008	Pulse	0.1000	3
Ba	137	115	He	0.046	ppb	77.5	43.33	0.0005	Pulse	0.1000	3
Tl	205	159	He	-0.029	ppb	N/A	823.39	0.0020	Pulse	0.1000	3
Pb	208	159	He	-0.014	ppb	N/A	686.70	0.0017	Pulse	0.1000	3
U	238	209	He	0.036	ppb	14.2	683.38	0.0022	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2529082.99	1.6	97.0	Analog	0.1000	3
No Gas	Ge	72	1205713.73	0.7	93.5	Pulse	0.1000	3
H2	Sc	45	201023.09	1.6	97.6	Pulse	0.1000	3
H2	Ge	72	162342.09	1.6	99.7	Pulse	0.1000	3
H2	In	115	401764.46	0.8	99.5	Pulse	0.1000	3
He	Sc	45	50775.81	0.8	99.2	Pulse	0.1000	3
He	Ge	72	84003.22	1.3	102.6	Pulse	0.1000	3
He	In	115	89387.04	1.5	102.0	Pulse	0.1000	3
He	Tb	159	402157.44	0.3	100.1	Pulse	0.1000	3
He	Bi	209	311662.71	0.4	101.8	Pulse	0.1000	3

No Gas



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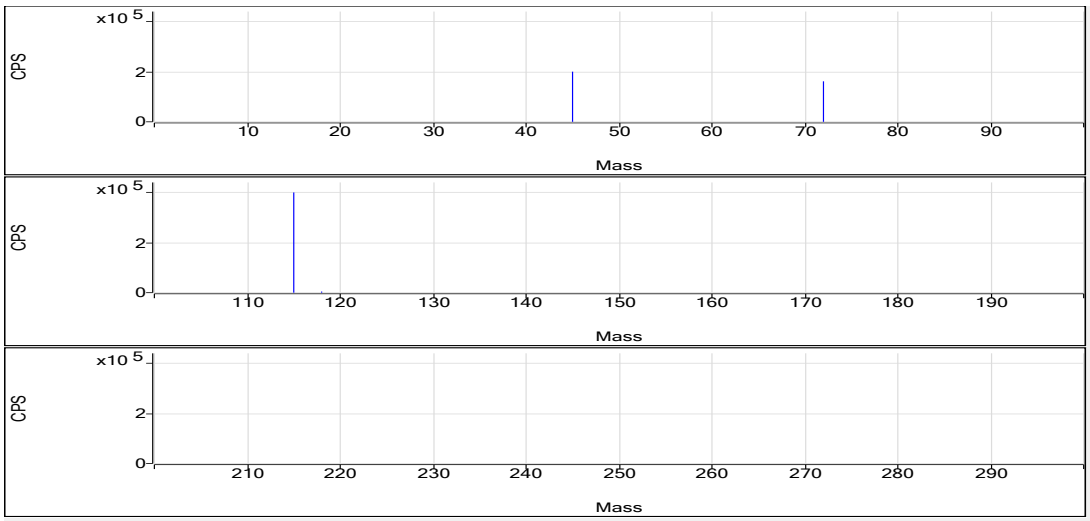
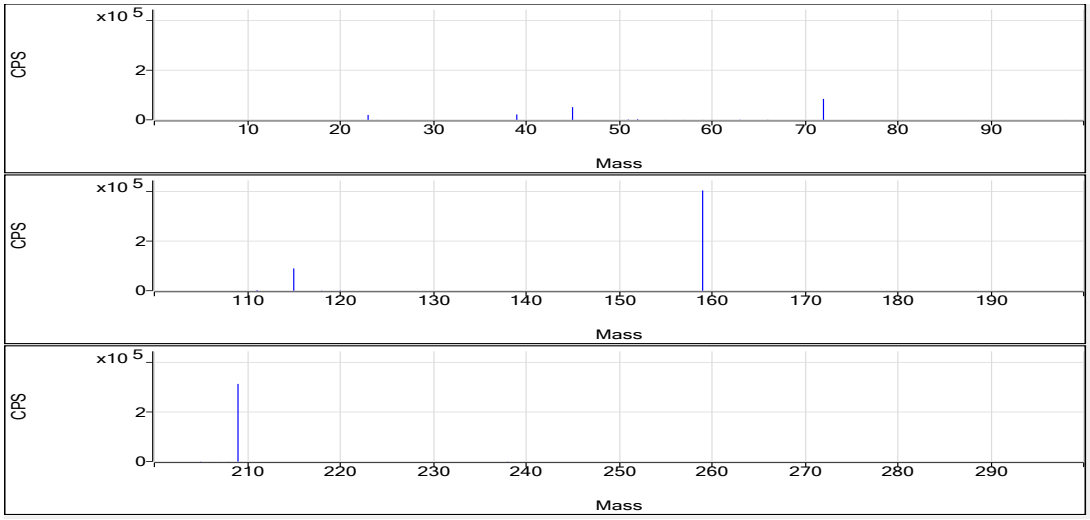


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.013	0	62.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.022	0	46.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.02	0	48.00	0.0007	3.404E-05
Se	78	2	H2	0.005	0	6.00	0.0004	3.546E-05
Se	78	2	H2	-0.007	0	5.33	0.0004	3.546E-05
Se	78	2	H2	0.003	0	6.00	0.0004	3.546E-05
Na	23	3	He	-7.392	0.3907	19753.62	0.0036	0.4171
Na	23	3	He	-8.372	0.3872	19573.30	0.0036	0.4171
Na	23	3	He	-8.918	0.3853	19733.69	0.0036	0.4171
Mg	24	3	He	0.326	0.0051	260.01	0.0018	0.004553
Mg	24	3	He	0.546	0.0055	280.01	0.0018	0.004553
Mg	24	3	He	0.83	0.0061	310.02	0.0018	0.004553
Al	27	3	He	-0.862	0.0016	80.00	0.0006	0.002085
Al	27	3	He	-0.183	0.002	100.00	0.0006	0.002085
Al	27	3	He	-0.562	0.0018	90.00	0.0006	0.002085
K	39	3	He	22.273	0.4373	22107.52	0.0012	0.4112
K	39	3	He	5.926	0.4181	21135.73	0.0012	0.4112
K	39	3	He	4.082	0.416	21306.01	0.0012	0.4112
Ca	44	3	He	21.099	0.0047	240.01	0.0001	0.003322
Ca	44	3	He	-16.959	0.0022	110.00	0.0001	0.003322
Ca	44	3	He	-17.382	0.0021	110.00	0.0001	0.003322
Ti	47	3	He	1.116	0.0006	30.00	0.0005	0
Ti	47	3	He	1.116	0.0006	30.00	0.0005	0
Ti	47	3	He	1.101	0.0006	30.00	0.0005	0
V	51	3	He	-0.242	0.0267	1348.07	0.0213	0.0318
V	51	3	He	-0.269	0.0261	1318.07	0.0213	0.0318
V	51	3	He	-0.326	0.0249	1274.06	0.0213	0.0318
Cr	52	3	He	0.012	0.0433	2190.24	0.0294	0.04297
Cr	52	3	He	0.053	0.0445	2250.25	0.0294	0.04297
Cr	52	3	He	-0.226	0.0363	1860.18	0.0294	0.04297
Mn	55	3	He	0.157	0.0047	240.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.125	0.0044	220.02	0.0124	0.002801
Mn	55	3	He	0.089	0.0039	200.01	0.0124	0.002801
Fe	57	3	He	0.411	0.003	150.01	0.0006	0.002732
Fe	57	3	He	1.795	0.0038	190.01	0.0006	0.002732
Fe	57	3	He	2.391	0.0041	210.01	0.0006	0.002732
Co	59	3	He	0.038	0.0057	290.01	0.0549	0.003644
Co	59	3	He	0.027	0.0051	260.01	0.0549	0.003644
Co	59	3	He	0.037	0.0057	290.01	0.0549	0.003644
Ni	60	3	He	-1.158	0.0034	280.01	0.0093	0.01413
Ni	60	3	He	-1.073	0.0042	350.02	0.0093	0.01413
Ni	60	3	He	-1.269	0.0024	200.01	0.0093	0.01413
Cu	63	3	He	-0.072	0.0074	610.03	0.0274	0.009321
Cu	63	3	He	-0.079	0.0071	600.03	0.0274	0.009321
Cu	63	3	He	0.02	0.0099	840.05	0.0274	0.009321
Zn	66	3	He	-0.238	0.0052	430.03	0.0031	0.005913
Zn	66	3	He	0.092	0.0062	520.02	0.0031	0.005913
Zn	66	3	He	-0.165	0.0054	460.02	0.0031	0.005913
As	75	3	He	0.089	0.0011	88.00	0.0021	0.0008698
As	75	3	He	-0.006	0.0009	72.00	0.0021	0.0008698
As	75	3	He	0.164	0.0012	104.00	0.0021	0.0008698
Sr	88	3	He	0.065	0.0013	110.00	0.0088	0.0006843
Sr	88	3	He	-0.027	0.0004	40.00	0.0088	0.0006843
Sr	88	3	He	-0.015	0.0006	50.00	0.0088	0.0006843
Mo	98	3	He	-0.011	0.0016	140.00	0.0219	0.001827
Mo	98	3	He	-0.012	0.0016	140.00	0.0219	0.001827
Mo	98	3	He	-0.028	0.0012	110.00	0.0219	0.001827
Ag	107	3	He	-0.011	0.0006	50.00	0.047	0.001064
Ag	107	3	He	-0.008	0.0007	60.00	0.047	0.001064
Ag	107	3	He	0.003	0.0012	110.01	0.047	0.001064
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Sn	120	3	He	0.145	0.0171	1500.13	0.0154	0.01483
Sn	120	3	He	0.126	0.0168	1510.13	0.0154	0.01483
Sn	120	3	He	-0.021	0.0145	1310.12	0.0154	0.01483
Sb	121	3	He	0.029	0.0007	60.00	0.0143	0.0002661
Sb	121	3	He	0.051	0.001	90.00	0.0143	0.0002661
Sb	121	3	He	0.028	0.0007	60.00	0.0143	0.0002661
Ba	137	3	He	0.04	0.0005	40.00	0.0048	0.0002665
Ba	137	3	He	0.084	0.0007	60.00	0.0048	0.0002665
Ba	137	3	He	0.014	0.0003	30.00	0.0048	0.0002665
Tl	205	3	He	-0.022	0.0022	890.06	0.0246	0.002755
Tl	205	3	He	-0.027	0.0021	840.06	0.0246	0.002755
Tl	205	3	He	-0.037	0.0018	740.05	0.0246	0.002755
Pb	208	3	He	-0.006	0.002	410.02	0.0324	0.002158
Pb	208	3	He	-0.021	0.0015	340.02	0.0324	0.002158
Pb	208	3	He	-0.014	0.0017	320.02	0.0324	0.002158
U	238	3	He	0.036	0.0022	670.04	0.0492	0.0004023
U	238	3	He	0.032	0.002	610.04	0.0492	0.0004023
U	238	3	He	0.042	0.0025	770.06	0.0492	0.0004023
Sc	45	1	No Gas			2550484.81		
Sc	45	1	No Gas			2555205.12		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2481559.03		
Ge	72	1	No Gas			1209195.06		
Ge	72	1	No Gas			1212144.28		
Ge	72	1	No Gas			1195801.86		
Sc	45	2	H2			199098.18		
Sc	45	2	H2			199145.54		
Sc	45	2	H2			204825.54		
Ge	72	2	H2			159278.17		
Ge	72	2	H2			163656.75		
Ge	72	2	H2			164091.35		
In	115	2	H2			400677.77		
In	115	2	H2			399055.42		
In	115	2	H2			405560.19		
Sc	45	3	He			50558.17		
Sc	45	3	He			50548.71		
Sc	45	3	He			51220.55		
Ge	72	3	He			82970.52		
Ge	72	3	He			83936.46		
Ge	72	3	He			85102.68		
In	115	3	He			87866.89		
In	115	3	He			90021.23		
In	115	3	He			90293.37		
Tb	159	3	He			401784.13		
Tb	159	3	He			403478.59		
Tb	159	3	He			401209.60		
Bi	209	3	He			310226.58		
Bi	209	3	He			311943.26		
Bi	209	3	He			312818.28		

Quantitation Report

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Sample Name	410-136482-H-2-H
Sample Type	Sample
Comment	I7 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

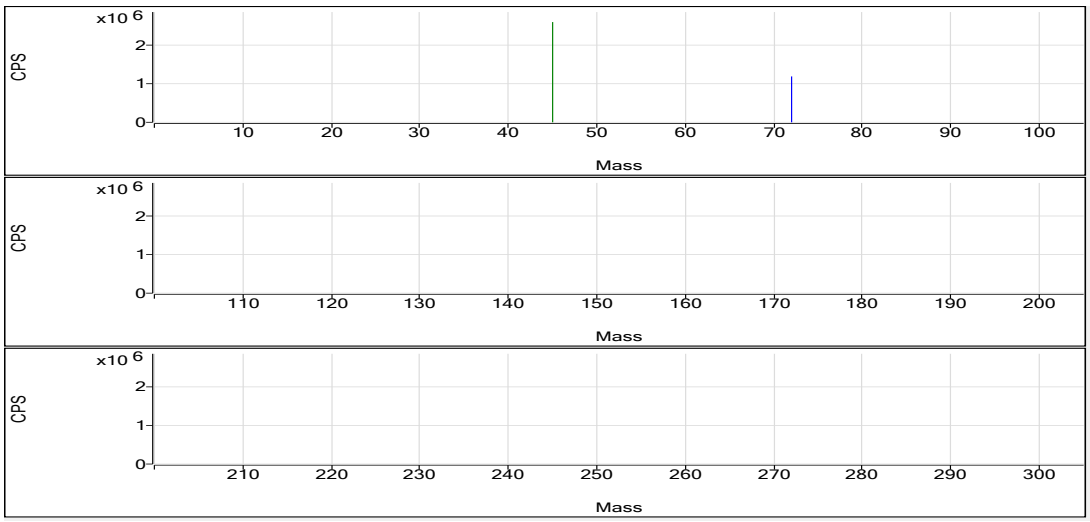
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.025	ppb	N/A	41.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.006	ppb	N/A	5.33	0.0000	Pulse	1.5000	3
Na	23	45	He	98023.068	ppb	2.0	18119929.31	349.8117	Analog	0.1000	3
Mg	24	45	He	184.402	ppb	1.6	17497.48	0.3377	Pulse	0.1000	3
Al	27	45	He	4.382	ppb	40.4	240.01	0.0046	Pulse	0.1000	3
K	39	45	He	142.963	ppb	7.0	29971.47	0.5786	Pulse	0.1000	3
Ca	44	45	He	3706.083	ppb	1.9	13146.33	0.2537	Pulse	0.1000	3
Ti	47	45	He	0.849	ppb	49.9	23.33	0.0005	Pulse	0.1000	3
V	51	45	He	-0.328	ppb	N/A	1286.07	0.0248	Pulse	0.5000	3
Cr	52	45	He	-0.056	ppb	N/A	2140.23	0.0413	Pulse	0.1000	3
Mn	55	45	He	64.507	ppb	2.7	41684.15	0.8048	Pulse	0.1000	3
Fe	57	45	He	1.948	ppb	129.2	200.01	0.0038	Pulse	0.1000	3
Co	59	45	He	15.068	ppb	2.8	43025.14	0.8307	Pulse	0.1000	3
Ni	60	72	He	4.795	ppb	3.2	4871.01	0.0586	Pulse	0.1000	3
Cu	63	72	He	2.941	ppb	5.1	7472.20	0.0900	Pulse	0.1000	3
Zn	66	72	He	102.697	ppb	2.0	26682.30	0.3212	Pulse	0.1000	3
As	75	72	He	0.077	ppb	20.0	86.00	0.0010	Pulse	0.5000	3
Sr	88	115	He	19.903	ppb	4.6	15829.32	0.1758	Pulse	0.1000	3
Mo	98	115	He	-0.056	ppb	N/A	53.33	0.0006	Pulse	0.1000	3
Ag	107	115	He	-0.012	ppb	N/A	43.33	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.339	ppb	17.8	168.00	0.0019	Pulse	0.5000	3
Sn	120	115	He	-0.076	ppb	N/A	1230.11	0.0137	Pulse	0.1000	3
Sb	121	115	He	0.078	ppb	25.8	123.34	0.0014	Pulse	0.1000	3
Ba	137	115	He	28.617	ppb	1.4	12335.99	0.1370	Pulse	0.1000	3
Tl	205	159	He	-0.085	ppb	N/A	270.01	0.0007	Pulse	0.1000	3
Pb	208	159	He	2.876	ppb	2.8	38650.49	0.0954	Pulse	0.1000	3
U	238	209	He	0.006	ppb	67.1	213.35	0.0007	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2604561.94	0.7	99.9	Analog	0.1000	3
No Gas	Ge	72	1191927.22	0.1	92.5	Pulse	0.1000	3
H2	Sc	45	207152.71	1.4	100.5	Pulse	0.1000	3
H2	Ge	72	162880.34	0.3	100.1	Pulse	0.1000	3
H2	In	115	411840.21	0.3	102.0	Pulse	0.1000	3
He	Sc	45	51812.96	2.0	101.2	Pulse	0.1000	3
He	Ge	72	83067.60	1.2	101.5	Pulse	0.1000	3
He	In	115	90034.44	0.4	102.7	Pulse	0.1000	3
He	Tb	159	405329.82	0.3	100.9	Pulse	0.1000	3
He	Bi	209	311573.43	1.1	101.8	Pulse	0.1000	3

No Gas



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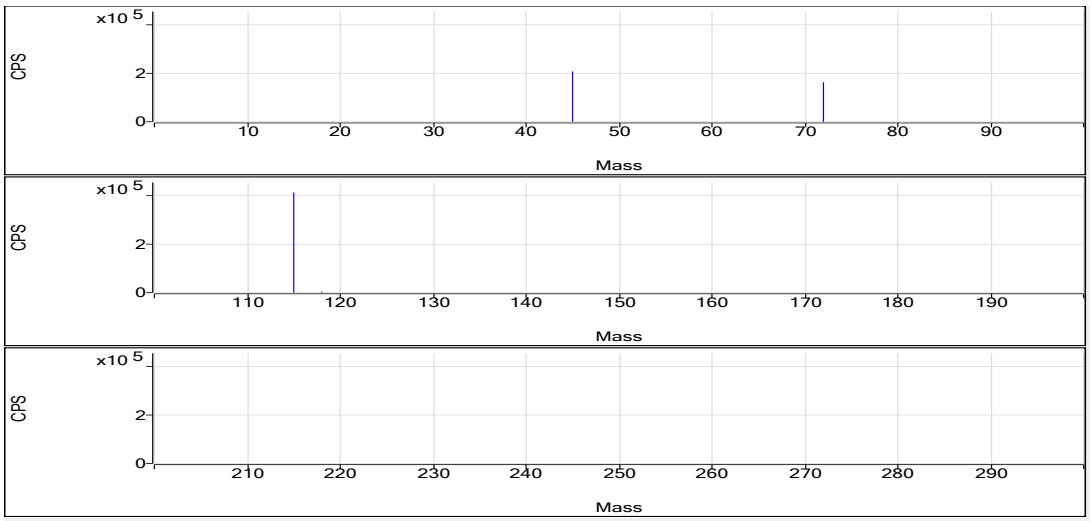
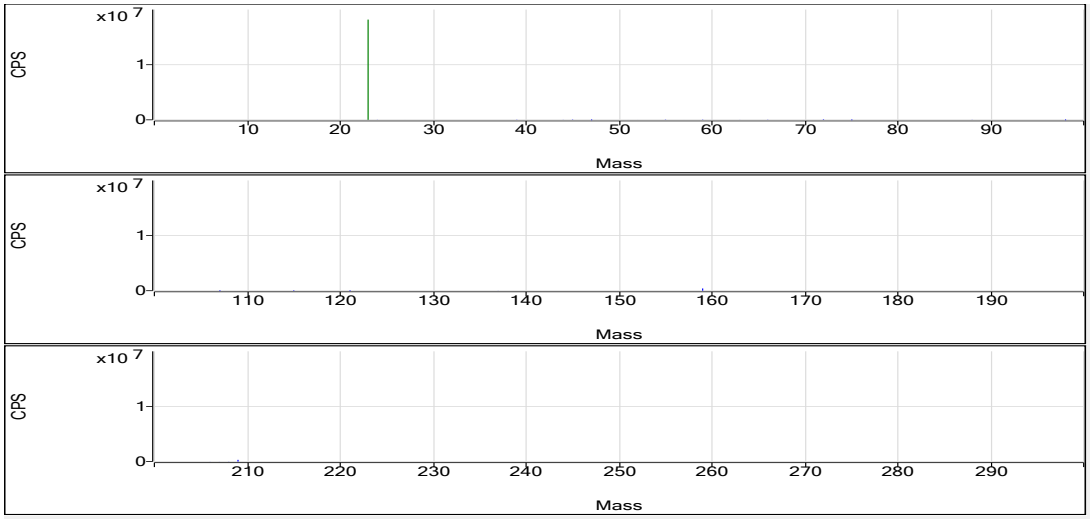


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.026	0	40.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.023	0	46.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.027	0	38.00	0.0007	3.404E-05
Se	78	2	H2	0.031	0	8.00	0.0004	3.546E-05
Se	78	2	H2	-0.025	0	4.00	0.0004	3.546E-05
Se	78	2	H2	-0.025	0	4.00	0.0004	3.546E-05
Na	23	3	He	100146.253	357.3796	18093689.73	0.0036	0.4171
Na	23	3	He	97579.051	348.229	18161634.73	0.0036	0.4171
Na	23	3	He	96343.899	343.8264	18104463.48	0.0036	0.4171
Mg	24	3	He	184.748	0.3384	17130.44	0.0018	0.004553
Mg	24	3	He	187.131	0.3427	17871.18	0.0018	0.004553
Mg	24	3	He	181.327	0.3322	17490.83	0.0018	0.004553
Al	27	3	He	5.576	0.0053	270.01	0.0006	0.002085
Al	27	3	He	2.346	0.0035	180.01	0.0006	0.002085
Al	27	3	He	5.224	0.0051	270.01	0.0006	0.002085
K	39	3	He	152.87	0.5902	29881.50	0.0012	0.4112
K	39	3	He	143.043	0.5787	30181.69	0.0012	0.4112
K	39	3	He	132.977	0.5669	29851.21	0.0012	0.4112
Ca	44	3	He	3683.203	0.2521	12765.98	0.0001	0.003322
Ca	44	3	He	3650.739	0.25	13036.25	0.0001	0.003322
Ca	44	3	He	3784.306	0.259	13636.75	0.0001	0.003322
Ti	47	3	He	1.114	0.0006	30.00	0.0005	0
Ti	47	3	He	0.361	0.0002	10.00	0.0005	0
Ti	47	3	He	1.071	0.0006	30.00	0.0005	0
V	51	3	He	-0.323	0.0249	1262.06	0.0213	0.0318
V	51	3	He	-0.318	0.025	1306.07	0.0213	0.0318
V	51	3	He	-0.343	0.0245	1290.07	0.0213	0.0318
Cr	52	3	He	-0.051	0.0415	2100.22	0.0294	0.04297
Cr	52	3	He	0.045	0.0443	2310.27	0.0294	0.04297
Cr	52	3	He	-0.163	0.0382	2010.20	0.0294	0.04297
Mn	55	3	He	65.947	0.8227	41650.65	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	65.033	0.8113	42312.68	0.0124	0.002801
Mn	55	3	He	62.542	0.7803	41089.11	0.0124	0.002801
Fe	57	3	He	0.404	0.003	150.01	0.0006	0.002732
Fe	57	3	He	0.588	0.0031	160.01	0.0006	0.002732
Fe	57	3	He	4.852	0.0055	290.01	0.0006	0.002732
Co	59	3	He	15.46	0.8522	43145.37	0.0549	0.003644
Co	59	3	He	15.128	0.834	43496.56	0.0549	0.003644
Co	59	3	He	14.616	0.8059	42433.49	0.0549	0.003644
Ni	60	3	He	4.664	0.0574	4710.96	0.0093	0.01413
Ni	60	3	He	4.963	0.0602	5011.08	0.0093	0.01413
Ni	60	3	He	4.756	0.0583	4890.98	0.0093	0.01413
Cu	63	3	He	3.11	0.0946	7762.31	0.0274	0.009321
Cu	63	3	He	2.819	0.0866	7212.09	0.0274	0.009321
Cu	63	3	He	2.893	0.0887	7442.21	0.0274	0.009321
Zn	66	3	He	104.576	0.327	26825.87	0.0031	0.005913
Zn	66	3	He	100.446	0.3143	26164.64	0.0031	0.005913
Zn	66	3	He	103.071	0.3224	27056.40	0.0031	0.005913
As	75	3	He	0.095	0.0011	88.00	0.0021	0.0008698
As	75	3	He	0.065	0.001	84.00	0.0021	0.0008698
As	75	3	He	0.072	0.001	86.00	0.0021	0.0008698
Sr	88	3	He	20.949	0.185	16670.38	0.0088	0.0006843
Sr	88	3	He	19.282	0.1703	15398.84	0.0088	0.0006843
Sr	88	3	He	19.479	0.1721	15418.74	0.0088	0.0006843
Mo	98	3	He	-0.068	0.0003	30.00	0.0219	0.001827
Mo	98	3	He	-0.053	0.0007	60.00	0.0219	0.001827
Mo	98	3	He	-0.048	0.0008	70.00	0.0219	0.001827
Ag	107	3	He	-0.016	0.0003	30.00	0.047	0.001064
Ag	107	3	He	-0.011	0.0006	50.00	0.047	0.001064
Ag	107	3	He	-0.011	0.0006	50.00	0.047	0.001064
Cd	111	3	He	0.405	0.0022	200.00	0.0053	6.086E-05
Cd	111	3	He	0.288	0.0016	144.00	0.0053	6.086E-05
Cd	111	3	He	0.324	0.0018	160.00	0.0053	6.086E-05
Sn	120	3	He	-0.084	0.0135	1220.12	0.0154	0.01483
Sn	120	3	He	-0.036	0.0143	1290.11	0.0154	0.01483
Sn	120	3	He	-0.108	0.0132	1180.09	0.0154	0.01483
Sb	121	3	He	0.059	0.0011	100.00	0.0143	0.0002661
Sb	121	3	He	0.074	0.0013	120.01	0.0143	0.0002661
Sb	121	3	He	0.099	0.0017	150.01	0.0143	0.0002661
Ba	137	3	He	28.617	0.137	12346.00	0.0048	0.0002665
Ba	137	3	He	28.223	0.1351	12215.89	0.0048	0.0002665
Ba	137	3	He	29.011	0.1389	12446.09	0.0048	0.0002665
Tl	205	3	He	-0.081	0.0008	310.01	0.0246	0.002755
Tl	205	3	He	-0.092	0.0005	200.01	0.0246	0.002755
Tl	205	3	He	-0.082	0.0007	300.02	0.0246	0.002755
Pb	208	3	He	2.938	0.0974	21478.32	0.0324	0.002158
Pb	208	3	He	2.785	0.0924	20075.95	0.0324	0.002158
Pb	208	3	He	2.906	0.0963	20806.95	0.0324	0.002158
U	238	3	He	0.01	0.0009	280.02	0.0492	0.0004023
U	238	3	He	0.003	0.0006	170.01	0.0492	0.0004023
U	238	3	He	0.004	0.0006	190.01	0.0492	0.0004023
Sc	45	1	No Gas			2589454.02		
Sc	45	1	No Gas			2626011.21		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2598220.59		
Ge	72	1	No Gas			1190726.39		
Ge	72	1	No Gas			1192333.58		
Ge	72	1	No Gas			1192721.70		
Sc	45	2	H2			210412.54		
Sc	45	2	H2			205320.27		
Sc	45	2	H2			205725.31		
Ge	72	2	H2			162558.02		
Ge	72	2	H2			162634.43		
Ge	72	2	H2			163448.57		
In	115	2	H2			412122.57		
In	115	2	H2			413030.89		
In	115	2	H2			410367.18		
Sc	45	3	He			50628.77		
Sc	45	3	He			52154.28		
Sc	45	3	He			52655.82		
Ge	72	3	He			82035.15		
Ge	72	3	He			83241.41		
Ge	72	3	He			83926.25		
In	115	3	He			90111.56		
In	115	3	He			90403.12		
In	115	3	He			89608.60		
Tb	159	3	He			404042.30		
Tb	159	3	He			406025.03		
Tb	159	3	He			405922.14		
Bi	209	3	He			310468.45		
Bi	209	3	He			308722.51		
Bi	209	3	He			315529.33		

Quantitation Report

Data File Name	151SMPL.d
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Sample Type	Sample
Comment	I7 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

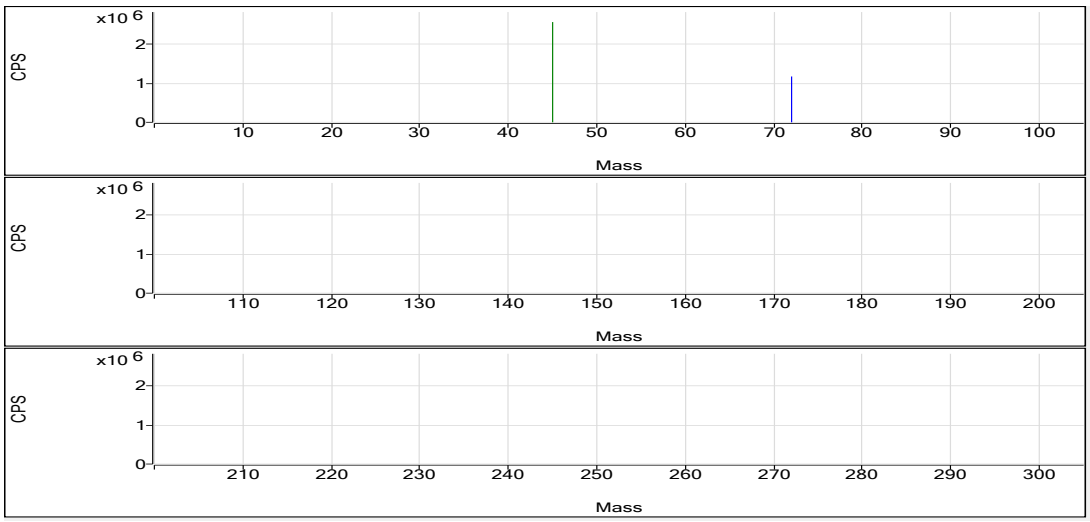
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.021	ppb	N/A	48.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.037	ppb	N/A	3.11	0.0000	Pulse	1.5000	3
Na	23	45	He	120805.005	ppb	0.6	22391311.33	431.0159	Analog	0.1000	3
Mg	24	45	He	153.915	ppb	2.3	14684.44	0.2826	Pulse	0.1000	3
Al	27	45	He	29.898	ppb	8.8	1013.41	0.0195	Pulse	0.1000	3
K	39	45	He	267.610	ppb	1.4	37642.43	0.7246	Pulse	0.1000	3
Ca	44	45	He	4062.084	ppb	3.5	14427.57	0.2777	Pulse	0.1000	3
Ti	47	45	He	0.121	ppb	173.2	3.33	0.0001	Pulse	0.1000	3
V	51	45	He	-0.334	ppb	N/A	1283.40	0.0247	Pulse	0.5000	3
Cr	52	45	He	0.453	ppb	14.9	2923.74	0.0563	Pulse	0.1000	3
Mn	55	45	He	183.468	ppb	1.3	118634.27	2.2837	Pulse	0.1000	3
Fe	57	45	He	101.225	ppb	2.8	3150.45	0.0606	Pulse	0.1000	3
Co	59	45	He	3.987	ppb	1.7	11558.29	0.2225	Pulse	0.1000	3
Ni	60	72	He	4.015	ppb	11.7	4237.43	0.0514	Pulse	0.1000	3
Cu	63	72	He	3.482	ppb	3.0	8639.55	0.1048	Pulse	0.1000	3
Zn	66	72	He	210.296	ppb	1.4	53708.02	0.6516	Pulse	0.1000	3
As	75	72	He	0.108	ppb	102.4	90.67	0.0011	Pulse	0.5000	3
Sr	88	115	He	19.599	ppb	2.1	15692.59	0.1731	Pulse	0.1000	3
Mo	98	115	He	-0.065	ppb	N/A	36.67	0.0004	Pulse	0.1000	3
Ag	107	115	He	-0.011	ppb	N/A	50.00	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.546	ppb	12.3	268.67	0.0030	Pulse	0.5000	3
Sn	120	115	He	0.003	ppb	5283.5	1346.78	0.0149	Pulse	0.1000	3
Sb	121	115	He	0.056	ppb	19.4	96.67	0.0011	Pulse	0.1000	3
Ba	137	115	He	78.500	ppb	0.7	34026.45	0.3754	Pulse	0.1000	3
Tl	205	159	He	-0.080	ppb	N/A	323.35	0.0008	Pulse	0.1000	3
Pb	208	159	He	56.353	ppb	0.5	748794.52	1.8282	Pulse	0.1000	3
U	238	209	He	0.014	ppb	11.5	336.68	0.0011	Pulse	0.1000	3

ISTD Table:

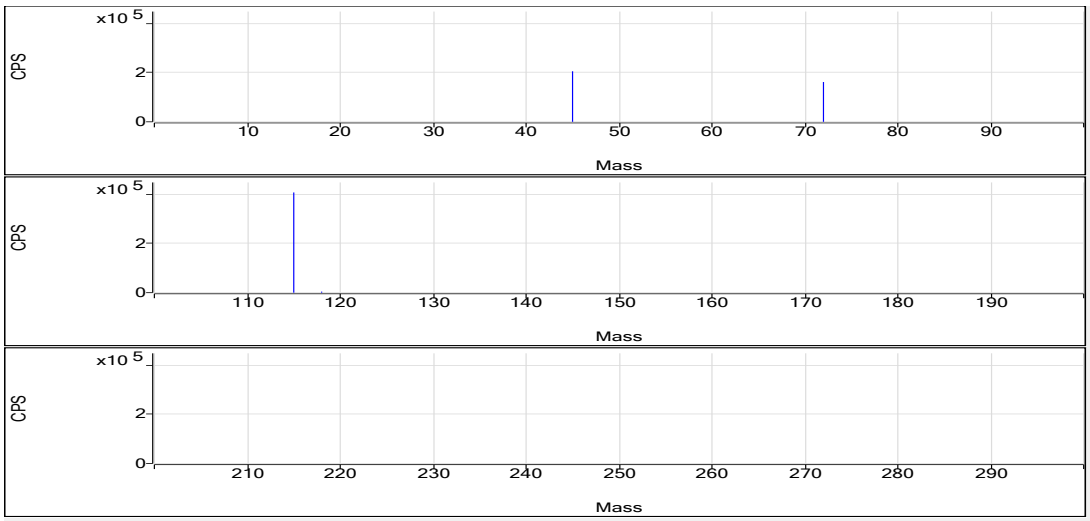
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2561356.37	1.0	98.2	Analog	0.1000	3
No Gas	Ge	72	1170734.20	0.8	90.8	Pulse	0.1000	3
H2	Sc	45	205039.12	0.5	99.5	Pulse	0.1000	3
H2	Ge	72	161410.27	0.5	99.2	Pulse	0.1000	3
H2	In	115	406597.95	0.6	100.7	Pulse	0.1000	3
He	Sc	45	51950.23	0.4	101.5	Pulse	0.1000	3
He	Ge	72	82421.12	0.4	100.7	Pulse	0.1000	3
He	In	115	90644.55	1.3	103.4	Pulse	0.1000	3
He	Tb	159	409577.06	0.2	102.0	Pulse	0.1000	3
He	Bi	209	314269.97	0.3	102.7	Pulse	0.1000	3

No Gas

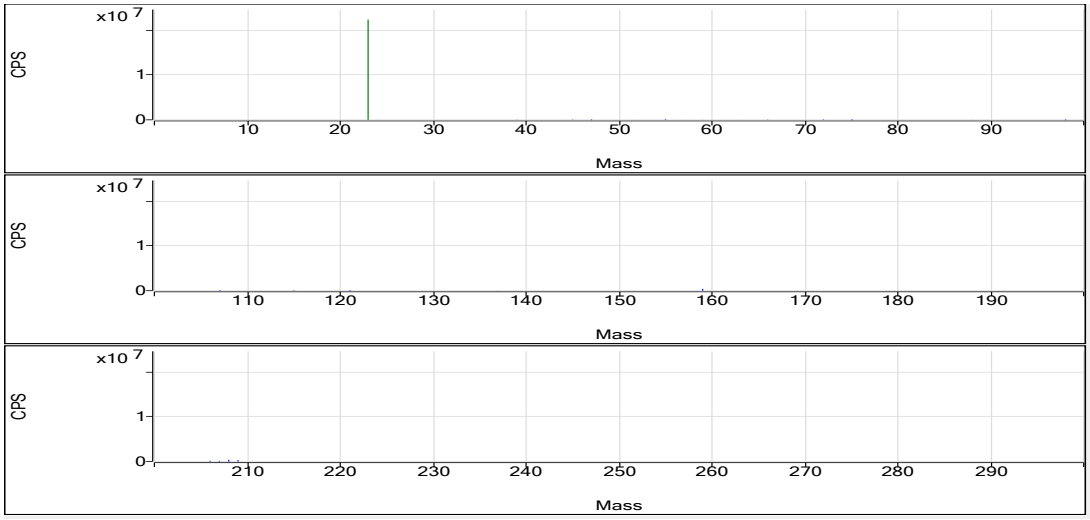


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.021	0	48.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.017	0	54.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.024	0	42.00	0.0007	3.404E-05
Se	78	2	H2	-0.071	0	0.67	0.0004	3.546E-05
Se	78	2	H2	-0.015	0	4.67	0.0004	3.546E-05
Se	78	2	H2	-0.025	0	4.00	0.0004	3.546E-05
Na	23	3	He	121682.548	434.1438	22529317.16	0.0036	0.4171
Na	23	3	He	120407.952	429.6007	22426997.17	0.0036	0.4171
Na	23	3	He	120324.516	429.3033	22217619.67	0.0036	0.4171
Mg	24	3	He	153.491	0.2819	14627.75	0.0018	0.004553
Mg	24	3	He	157.656	0.2894	15108.13	0.0018	0.004553
Mg	24	3	He	150.597	0.2767	14317.44	0.0018	0.004553
Al	27	3	He	28.508	0.0187	970.07	0.0006	0.002085
Al	27	3	He	32.921	0.0213	1110.09	0.0006	0.002085
Al	27	3	He	28.264	0.0186	960.06	0.0006	0.002085
K	39	3	He	263.947	0.7203	37378.38	0.0012	0.4112
K	39	3	He	271.437	0.7291	38060.02	0.0012	0.4112
K	39	3	He	267.445	0.7244	37488.90	0.0012	0.4112
Ca	44	3	He	4023.365	0.2751	14277.46	0.0001	0.003322
Ca	44	3	He	3942.368	0.2697	14077.26	0.0001	0.003322
Ca	44	3	He	4220.519	0.2884	14927.99	0.0001	0.003322
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.363	0.0002	10.00	0.0005	0
V	51	3	He	-0.332	0.0247	1284.06	0.0213	0.0318
V	51	3	He	-0.303	0.0254	1324.07	0.0213	0.0318
V	51	3	He	-0.367	0.024	1242.06	0.0213	0.0318
Cr	52	3	He	0.446	0.0561	2910.42	0.0294	0.04297
Cr	52	3	He	0.389	0.0544	2840.40	0.0294	0.04297
Cr	52	3	He	0.523	0.0584	3020.41	0.0294	0.04297
Mn	55	3	He	183.941	2.2896	118814.99	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	180.92	2.252	117565.41	0.0124	0.002801
Mn	55	3	He	185.542	2.3095	119522.42	0.0124	0.002801
Fe	57	3	He	103.354	0.0619	3210.45	0.0006	0.002732
Fe	57	3	He	98.023	0.0588	3070.43	0.0006	0.002732
Fe	57	3	He	102.298	0.0613	3170.46	0.0006	0.002732
Co	59	3	He	3.91	0.2182	11324.79	0.0549	0.003644
Co	59	3	He	4.022	0.2244	11715.03	0.0549	0.003644
Co	59	3	He	4.03	0.2248	11635.05	0.0549	0.003644
Ni	60	3	He	4.529	0.0562	4650.91	0.0093	0.01413
Ni	60	3	He	3.91	0.0504	4150.73	0.0093	0.01413
Ni	60	3	He	3.607	0.0476	3910.66	0.0093	0.01413
Cu	63	3	He	3.484	0.1049	8682.92	0.0274	0.009321
Cu	63	3	He	3.378	0.102	8392.80	0.0274	0.009321
Cu	63	3	He	3.585	0.1076	8842.92	0.0274	0.009321
Zn	66	3	He	212.743	0.6591	54574.91	0.0031	0.005913
Zn	66	3	He	211.177	0.6543	53861.68	0.0031	0.005913
Zn	66	3	He	206.967	0.6414	52687.47	0.0031	0.005913
As	75	3	He	-0.011	0.0008	70.00	0.0021	0.0008698
As	75	3	He	0.206	0.0013	108.00	0.0021	0.0008698
As	75	3	He	0.128	0.0011	94.00	0.0021	0.0008698
Sr	88	3	He	19.164	0.1693	15519.00	0.0088	0.0006843
Sr	88	3	He	19.635	0.1734	15489.09	0.0088	0.0006843
Sr	88	3	He	19.999	0.1766	16069.68	0.0088	0.0006843
Mo	98	3	He	-0.058	0.0005	50.00	0.0219	0.001827
Mo	98	3	He	-0.073	0.0002	20.00	0.0219	0.001827
Mo	98	3	He	-0.063	0.0004	40.00	0.0219	0.001827
Ag	107	3	He	-0.006	0.0008	70.00	0.047	0.001064
Ag	107	3	He	-0.013	0.0004	40.00	0.047	0.001064
Ag	107	3	He	-0.013	0.0004	40.00	0.047	0.001064
Cd	111	3	He	0.488	0.0027	244.00	0.0053	6.086E-05
Cd	111	3	He	0.619	0.0034	300.01	0.0053	6.086E-05
Cd	111	3	He	0.529	0.0029	262.00	0.0053	6.086E-05
Sn	120	3	He	-0.106	0.0132	1210.09	0.0154	0.01483
Sn	120	3	He	0.193	0.0178	1590.14	0.0154	0.01483
Sn	120	3	He	-0.078	0.0136	1240.10	0.0154	0.01483
Sb	121	3	He	0.066	0.0012	110.00	0.0143	0.0002661
Sb	121	3	He	0.044	0.0009	80.00	0.0143	0.0002661
Sb	121	3	He	0.058	0.0011	100.00	0.0143	0.0002661
Ba	137	3	He	78.278	0.3743	34313.74	0.0048	0.0002665
Ba	137	3	He	79.107	0.3783	33782.50	0.0048	0.0002665
Ba	137	3	He	78.116	0.3736	33983.10	0.0048	0.0002665
Tl	205	3	He	-0.07	0.001	420.02	0.0246	0.002755
Tl	205	3	He	-0.081	0.0008	310.01	0.0246	0.002755
Tl	205	3	He	-0.088	0.0006	240.01	0.0246	0.002755
Pb	208	3	He	56.629	1.8372	399122.85	0.0324	0.002158
Pb	208	3	He	56.346	1.828	400824.92	0.0324	0.002158
Pb	208	3	He	56.083	1.8195	399749.45	0.0324	0.002158
U	238	3	He	0.015	0.0011	350.02	0.0492	0.0004023
U	238	3	He	0.012	0.001	310.01	0.0492	0.0004023
U	238	3	He	0.014	0.0011	350.02	0.0492	0.0004023
Sc	45	1	No Gas			2561715.12		
Sc	45	1	No Gas			2534559.81		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2587794.18		
Ge	72	1	No Gas			1180310.45		
Ge	72	1	No Gas			1169546.70		
Ge	72	1	No Gas			1162345.45		
Sc	45	2	H2			206060.52		
Sc	45	2	H2			204192.97		
Sc	45	2	H2			204863.86		
Ge	72	2	H2			161847.55		
Ge	72	2	H2			160523.00		
Ge	72	2	H2			161860.26		
In	115	2	H2			406298.59		
In	115	2	H2			408992.88		
In	115	2	H2			404502.38		
Sc	45	3	He			51893.67		
Sc	45	3	He			52204.29		
Sc	45	3	He			51752.74		
Ge	72	3	He			82799.54		
Ge	72	3	He			82317.66		
Ge	72	3	He			82146.16		
In	115	3	He			91671.93		
In	115	3	He			89307.38		
In	115	3	He			90976.48		
Tb	159	3	He			408580.23		
Tb	159	3	He			410467.49		
Tb	159	3	He			409683.47		
Bi	209	3	He			313446.81		
Bi	209	3	He			315421.56		
Bi	209	3	He			313941.54		

Quantitation Report

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Sample Type	Sample
Comment	I7 ICP
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

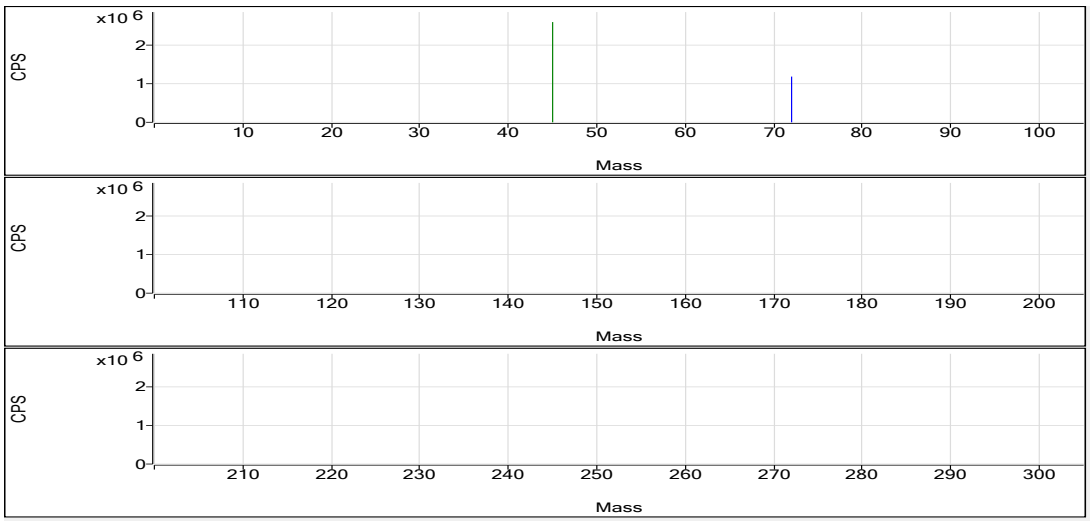
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.020	ppb	N/A	50.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.000	ppb	165515.2	5.78	0.0000	Pulse	1.5000	3
Na	23	45	He	105540.541	ppb	1.5	19558356.38	376.6071	Analog	0.1000	3
Mg	24	45	He	187.091	ppb	2.2	17791.23	0.3426	Pulse	0.1000	3
Al	27	45	He	35.092	ppb	4.0	1170.09	0.0225	Pulse	0.1000	3
K	39	45	He	295.620	ppb	5.3	39330.25	0.7574	Pulse	0.1000	3
Ca	44	45	He	1911.989	ppb	4.1	6881.87	0.1325	Pulse	0.1000	3
Ti	47	45	He	0.362	ppb	1.4	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	-0.347	ppb	N/A	1268.06	0.0244	Pulse	0.5000	3
Cr	52	45	He	-0.061	ppb	N/A	2140.23	0.0412	Pulse	0.1000	3
Mn	55	45	He	158.587	ppb	1.9	102535.31	1.9744	Pulse	0.1000	3
Fe	57	45	He	26.836	ppb	9.7	940.06	0.0181	Pulse	0.1000	3
Co	59	45	He	1.308	ppb	7.0	3917.31	0.0755	Pulse	0.1000	3
Ni	60	72	He	-0.273	ppb	N/A	950.06	0.0116	Pulse	0.1000	3
Cu	63	72	He	0.924	ppb	3.4	2840.37	0.0347	Pulse	0.1000	3
Zn	66	72	He	59.741	ppb	1.8	15515.48	0.1893	Pulse	0.1000	3
As	75	72	He	0.110	ppb	13.8	90.67	0.0011	Pulse	0.5000	3
Sr	88	115	He	10.663	ppb	1.8	8566.22	0.0945	Pulse	0.1000	3
Mo	98	115	He	-0.035	ppb	N/A	96.67	0.0011	Pulse	0.1000	3
Ag	107	115	He	-0.014	ppb	N/A	36.67	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.234	ppb	12.2	118.67	0.0013	Pulse	0.5000	3
Sn	120	115	He	-0.062	ppb	N/A	1256.77	0.0139	Pulse	0.1000	3
Sb	121	115	He	0.020	ppb	40.0	50.00	0.0006	Pulse	0.1000	3
Ba	137	115	He	25.656	ppb	2.3	11138.26	0.1229	Pulse	0.1000	3
Tl	205	159	He	-0.098	ppb	N/A	140.01	0.0003	Pulse	0.1000	3
Pb	208	159	He	5.233	ppb	2.4	69641.65	0.1717	Pulse	0.1000	3
U	238	209	He	0.002	ppb	215.7	153.34	0.0005	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2597330.01	0.9	99.6	Analog	0.1000	3
No Gas	Ge	72	1184337.30	0.8	91.9	Pulse	0.1000	3
H2	Sc	45	208491.20	0.3	101.2	Pulse	0.1000	3
H2	Ge	72	162845.67	1.1	100.1	Pulse	0.1000	3
H2	In	115	411870.37	0.4	102.0	Pulse	0.1000	3
He	Sc	45	51940.07	1.4	101.4	Pulse	0.1000	3
He	Ge	72	81948.26	1.7	100.1	Pulse	0.1000	3
He	In	115	90644.10	1.2	103.4	Pulse	0.1000	3
He	Tb	159	405556.10	0.3	101.0	Pulse	0.1000	3
He	Bi	209	311680.26	0.4	101.8	Pulse	0.1000	3

No Gas



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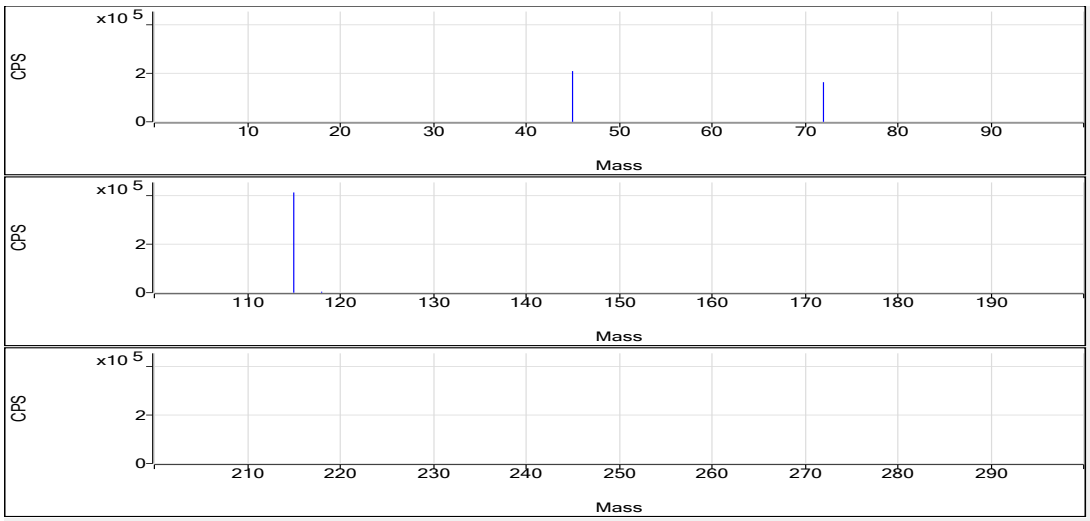
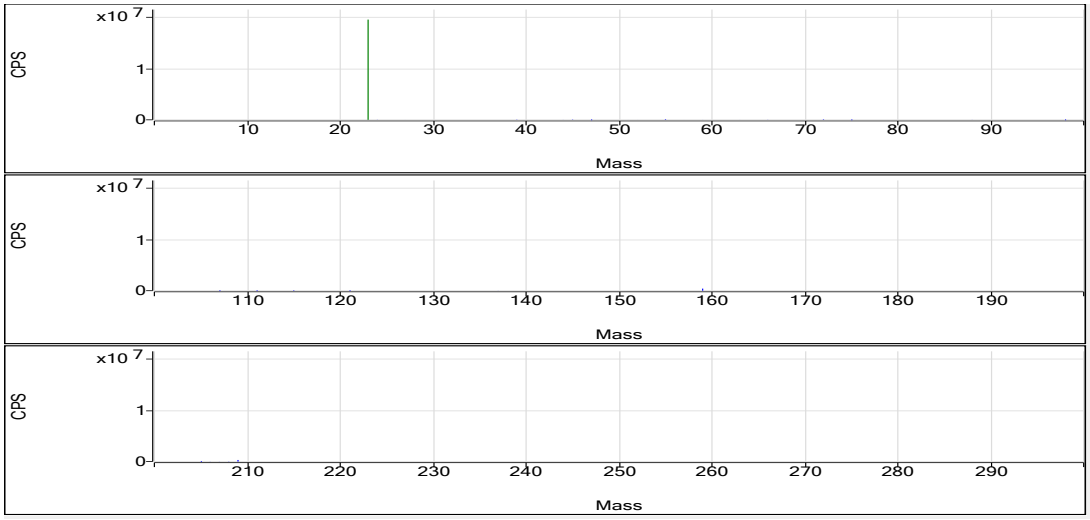


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.028	0	36.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.019	0	52.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.013	0	64.00	0.0007	3.404E-05
Se	78	2	H2	-0.034	0	3.33	0.0004	3.546E-05
Se	78	2	H2	0.014	0	6.67	0.0004	3.546E-05
Se	78	2	H2	0.021	0	7.33	0.0004	3.546E-05
Na	23	3	He	103705.597	370.0666	19530722.21	0.0036	0.4171
Na	23	3	He	106808.547	381.1268	19678489.71	0.0036	0.4171
Na	23	3	He	106107.48	378.6279	19465857.21	0.0036	0.4171
Mg	24	3	He	183.113	0.3354	17701.14	0.0018	0.004553
Mg	24	3	He	191.196	0.35	18071.58	0.0018	0.004553
Mg	24	3	He	186.962	0.3424	17600.96	0.0018	0.004553
Al	27	3	He	35.128	0.0225	1190.10	0.0006	0.002085
Al	27	3	He	33.658	0.0217	1120.09	0.0006	0.002085
Al	27	3	He	36.489	0.0233	1200.09	0.0006	0.002085
K	39	3	He	278.32	0.7371	38902.41	0.0012	0.4112
K	39	3	He	308.349	0.7723	39874.98	0.0012	0.4112
K	39	3	He	300.192	0.7627	39213.35	0.0012	0.4112
Ca	44	3	He	1909.05	0.1323	6981.87	0.0001	0.003322
Ca	44	3	He	1992.596	0.1379	7121.97	0.0001	0.003322
Ca	44	3	He	1834.32	0.1272	6541.78	0.0001	0.003322
Ti	47	3	He	0.356	0.0002	10.00	0.0005	0
Ti	47	3	He	0.364	0.0002	10.00	0.0005	0
Ti	47	3	He	0.366	0.0002	10.00	0.0005	0
V	51	3	He	-0.36	0.0241	1274.06	0.0213	0.0318
V	51	3	He	-0.279	0.0259	1336.07	0.0213	0.0318
V	51	3	He	-0.403	0.0232	1194.06	0.0213	0.0318
Cr	52	3	He	0.027	0.0438	2310.28	0.0294	0.04297
Cr	52	3	He	-0.052	0.0415	2140.22	0.0294	0.04297
Cr	52	3	He	-0.158	0.0383	1970.19	0.0294	0.04297
Mn	55	3	He	155.662	1.938	102280.65	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	161.562	2.0114	103851.39	0.0124	0.002801
Mn	55	3	He	158.537	1.9738	101473.88	0.0124	0.002801
Fe	57	3	He	29.338	0.0195	1030.07	0.0006	0.002732
Fe	57	3	He	27.047	0.0182	940.07	0.0006	0.002732
Fe	57	3	He	24.124	0.0165	850.05	0.0006	0.002732
Co	59	3	He	1.218	0.0705	3720.59	0.0549	0.003644
Co	59	3	He	1.402	0.0806	4160.71	0.0549	0.003644
Co	59	3	He	1.305	0.0753	3870.64	0.0549	0.003644
Ni	60	3	He	-0.175	0.0125	1040.07	0.0093	0.01413
Ni	60	3	He	-0.46	0.0099	810.05	0.0093	0.01413
Ni	60	3	He	-0.183	0.0124	1000.07	0.0093	0.01413
Cu	63	3	He	0.888	0.0337	2800.38	0.0274	0.009321
Cu	63	3	He	0.947	0.0353	2900.38	0.0274	0.009321
Cu	63	3	He	0.938	0.0351	2820.36	0.0274	0.009321
Zn	66	3	He	60.254	0.1909	15879.05	0.0031	0.005913
Zn	66	3	He	58.526	0.1856	15258.60	0.0031	0.005913
Zn	66	3	He	60.442	0.1915	15408.79	0.0031	0.005913
As	75	3	He	0.099	0.0011	90.00	0.0021	0.0008698
As	75	3	He	0.128	0.0011	94.00	0.0021	0.0008698
As	75	3	He	0.104	0.0011	88.00	0.0021	0.0008698
Sr	88	3	He	10.591	0.0939	8432.77	0.0088	0.0006843
Sr	88	3	He	10.879	0.0964	8703.03	0.0088	0.0006843
Sr	88	3	He	10.52	0.0933	8562.86	0.0088	0.0006843
Mo	98	3	He	-0.058	0.0006	50.00	0.0219	0.001827
Mo	98	3	He	-0.013	0.0016	140.01	0.0219	0.001827
Mo	98	3	He	-0.034	0.0011	100.00	0.0219	0.001827
Ag	107	3	He	-0.013	0.0004	40.00	0.047	0.001064
Ag	107	3	He	-0.011	0.0006	50.00	0.047	0.001064
Ag	107	3	He	-0.018	0.0002	20.00	0.047	0.001064
Cd	111	3	He	0.206	0.0012	104.00	0.0053	6.086E-05
Cd	111	3	He	0.263	0.0015	132.00	0.0053	6.086E-05
Cd	111	3	He	0.234	0.0013	120.00	0.0053	6.086E-05
Sn	120	3	He	0.042	0.0155	1390.12	0.0154	0.01483
Sn	120	3	He	-0.114	0.0131	1180.09	0.0154	0.01483
Sn	120	3	He	-0.114	0.0131	1200.10	0.0154	0.01483
Sb	121	3	He	0.02	0.0006	50.00	0.0143	0.0002661
Sb	121	3	He	0.028	0.0007	60.00	0.0143	0.0002661
Sb	121	3	He	0.012	0.0004	40.00	0.0143	0.0002661
Ba	137	3	He	25.929	0.1242	11155.01	0.0048	0.0002665
Ba	137	3	He	24.966	0.1196	10794.60	0.0048	0.0002665
Ba	137	3	He	26.072	0.1249	11465.16	0.0048	0.0002665
Tl	205	3	He	-0.099	0.0003	130.01	0.0246	0.002755
Tl	205	3	He	-0.094	0.0004	180.01	0.0246	0.002755
Tl	205	3	He	-0.101	0.0003	110.00	0.0246	0.002755
Pb	208	3	He	5.34	0.1752	37595.19	0.0324	0.002158
Pb	208	3	He	5.092	0.1672	36281.19	0.0324	0.002158
Pb	208	3	He	5.266	0.1728	37915.64	0.0324	0.002158
U	238	3	He	-0.002	0.0003	90.00	0.0492	0.0004023
U	238	3	He	0.002	0.0005	160.01	0.0492	0.0004023
U	238	3	He	0.006	0.0007	210.01	0.0492	0.0004023
Sc	45	1	No Gas			2571622.77		
Sc	45	1	No Gas			2610540.27		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2609826.99		
Ge	72	1	No Gas			1174821.00		
Ge	72	1	No Gas			1184226.54		
Ge	72	1	No Gas			1193964.36		
Sc	45	2	H2			209144.08		
Sc	45	2	H2			208008.22		
Sc	45	2	H2			208321.29		
Ge	72	2	H2			162961.28		
Ge	72	2	H2			161069.09		
Ge	72	2	H2			164506.64		
In	115	2	H2			412505.11		
In	115	2	H2			410056.36		
In	115	2	H2			413049.64		
Sc	45	3	He			52776.24		
Sc	45	3	He			51632.40		
Sc	45	3	He			51411.58		
Ge	72	3	He			83171.84		
Ge	72	3	He			82207.01		
Ge	72	3	He			80465.93		
In	115	3	He			89840.08		
In	115	3	He			90282.04		
In	115	3	He			91833.35		
Tb	159	3	He			406705.31		
Tb	159	3	He			405451.75		
Tb	159	3	He			404511.24		
Bi	209	3	He			312930.80		
Bi	209	3	He			310397.26		
Bi	209	3	He			311712.73		

Quantitation Report

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Acq Time	8/9/2023 6:59:42 PM
Sample Name	LB 410-402538/1-D
Sample Type	Sample
Comment	I7 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

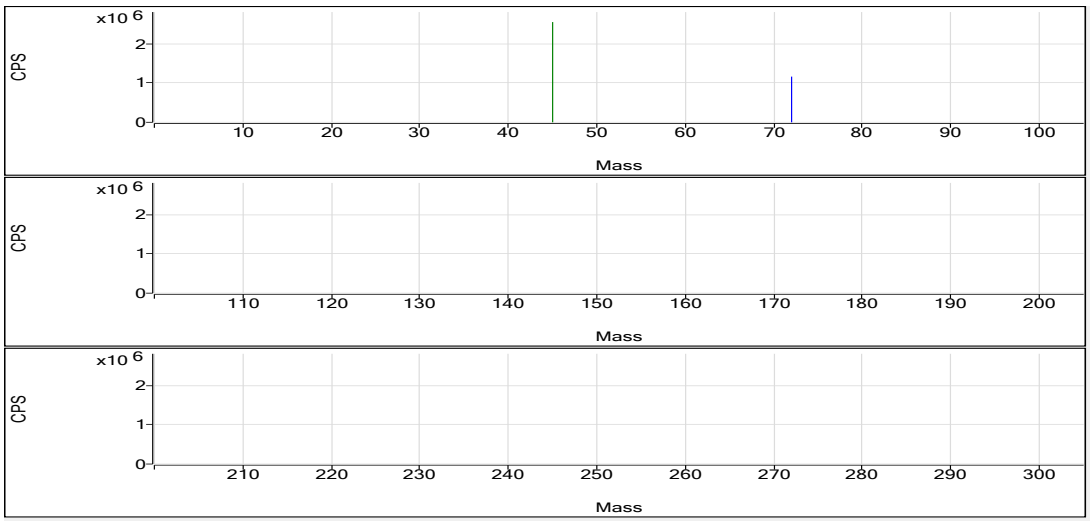
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.035	ppb	N/A	22.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.050	ppb	N/A	2.22	0.0000	Pulse	1.5000	3
Na	23	45	He	134481.289	ppb	1.0	24210912.97	479.7638	Analog	0.1000	3
Mg	24	45	He	3.470	ppb	18.5	546.70	0.0108	Pulse	0.1000	3
Al	27	45	He	5.044	ppb	21.6	253.34	0.0050	Pulse	0.1000	3
K	39	45	He	27.704	ppb	11.1	22387.82	0.4436	Pulse	0.1000	3
Ca	44	45	He	33.988	ppb	36.6	283.34	0.0056	Pulse	0.1000	3
Ti	47	45	He	0.374	ppb	100.8	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	-0.333	ppb	N/A	1246.73	0.0247	Pulse	0.5000	3
Cr	52	45	He	-0.084	ppb	N/A	2043.55	0.0405	Pulse	0.1000	3
Mn	55	45	He	0.307	ppb	35.9	333.35	0.0066	Pulse	0.1000	3
Fe	57	45	He	2.503	ppb	27.4	210.01	0.0042	Pulse	0.1000	3
Co	59	45	He	0.244	ppb	6.4	860.05	0.0170	Pulse	0.1000	3
Ni	60	72	He	-1.027	ppb	N/A	376.69	0.0046	Pulse	0.1000	3
Cu	63	72	He	1.147	ppb	5.0	3347.19	0.0408	Pulse	0.1000	3
Zn	66	72	He	0.256	ppb	124.5	550.03	0.0067	Pulse	0.1000	3
As	75	72	He	0.022	ppb	331.3	75.33	0.0009	Pulse	0.5000	3
Sr	88	115	He	0.857	ppb	18.9	743.38	0.0082	Pulse	0.1000	3
Mo	98	115	He	-0.056	ppb	N/A	53.33	0.0006	Pulse	0.1000	3
Ag	107	115	He	-0.016	ppb	N/A	30.00	0.0003	Pulse	0.1000	3
Cd	111	115	He	-0.007	ppb	N/A	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.002	ppb	N/A	1336.78	0.0148	Pulse	0.1000	3
Sb	121	115	He	0.002	ppb	217.9	26.67	0.0003	Pulse	0.1000	3
Ba	137	115	He	29.855	ppb	3.5	12909.85	0.1429	Pulse	0.1000	3
Tl	205	159	He	-0.099	ppb	N/A	136.67	0.0003	Pulse	0.1000	3
Pb	208	159	He	0.153	ppb	7.0	2903.57	0.0071	Pulse	0.1000	3
U	238	209	He	-0.003	ppb	N/A	80.00	0.0003	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2553856.47	1.0	97.9	Analog	0.1000	3
No Gas	Ge	72	1163814.07	0.5	90.3	Pulse	0.1000	3
H2	Sc	45	207598.53	1.1	100.7	Pulse	0.1000	3
H2	Ge	72	162746.94	1.2	100.0	Pulse	0.1000	3
H2	In	115	409099.67	0.6	101.3	Pulse	0.1000	3
He	Sc	45	50468.30	1.2	98.6	Pulse	0.1000	3
He	Ge	72	82071.95	0.2	100.3	Pulse	0.1000	3
He	In	115	90326.15	0.9	103.1	Pulse	0.1000	3
He	Tb	159	407933.58	0.6	101.6	Pulse	0.1000	3
He	Bi	209	313817.55	1.0	102.5	Pulse	0.1000	3

No Gas



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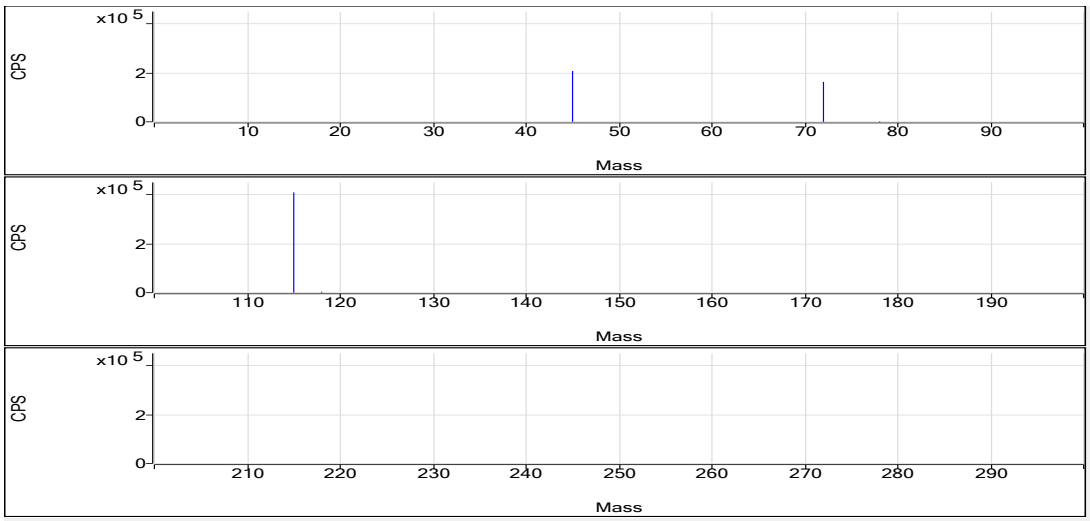
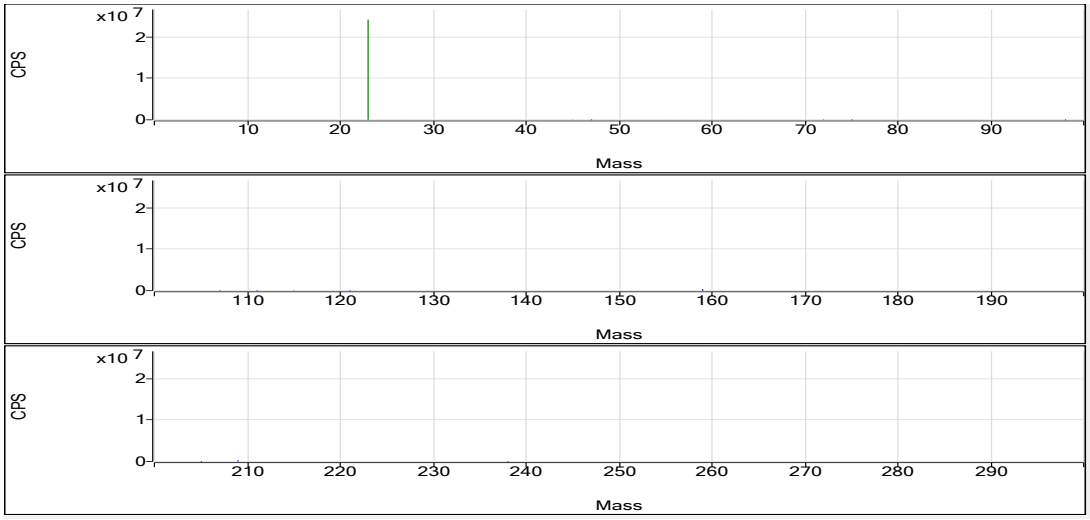


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.033	0	26.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.032	0	28.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.039	0	14.00	0.0007	3.404E-05
Se	78	2	H2	-0.035	0	3.33	0.0004	3.546E-05
Se	78	2	H2	-0.062	0	1.33	0.0004	3.546E-05
Se	78	2	H2	-0.053	0	2.00	0.0004	3.546E-05
Na	23	3	He	136066.471	485.4141	24186057.14	0.0036	0.4171
Na	23	3	He	133934.099	477.8134	24157587.14	0.0036	0.4171
Na	23	3	He	133443.297	476.064	24289094.64	0.0036	0.4171
Mg	24	3	He	2.812	0.0096	480.02	0.0018	0.004553
Mg	24	3	He	3.501	0.0109	550.04	0.0018	0.004553
Mg	24	3	He	4.098	0.012	610.04	0.0018	0.004553
Al	27	3	He	5.379	0.0052	260.01	0.0006	0.002085
Al	27	3	He	5.928	0.0055	280.01	0.0006	0.002085
Al	27	3	He	3.824	0.0043	220.01	0.0006	0.002085
K	39	3	He	31.194	0.4477	22307.73	0.0012	0.4112
K	39	3	He	26.496	0.4422	22357.77	0.0012	0.4112
K	39	3	He	25.423	0.441	22497.96	0.0012	0.4112
Ca	44	3	He	45.899	0.0064	320.01	0.0001	0.003322
Ca	44	3	He	21.098	0.0047	240.01	0.0001	0.003322
Ca	44	3	He	34.968	0.0057	290.01	0.0001	0.003322
Ti	47	3	He	0.755	0.0004	20.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.369	0.0002	10.00	0.0005	0
V	51	3	He	-0.242	0.0267	1328.07	0.0213	0.0318
V	51	3	He	-0.424	0.0228	1152.05	0.0213	0.0318
V	51	3	He	-0.334	0.0247	1260.07	0.0213	0.0318
Cr	52	3	He	-0.062	0.0411	2050.23	0.0294	0.04297
Cr	52	3	He	-0.076	0.0407	2060.20	0.0294	0.04297
Cr	52	3	He	-0.115	0.0396	2020.23	0.0294	0.04297
Mn	55	3	He	0.421	0.008	400.02	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.3	0.0065	330.01	0.0124	0.002801
Mn	55	3	He	0.2	0.0053	270.01	0.0124	0.002801
Fe	57	3	He	3.294	0.0046	230.01	0.0006	0.002732
Fe	57	3	He	2.14	0.004	200.01	0.0006	0.002732
Fe	57	3	He	2.077	0.0039	200.01	0.0006	0.002732
Co	59	3	He	0.226	0.0161	800.05	0.0549	0.003644
Co	59	3	He	0.251	0.0174	880.06	0.0549	0.003644
Co	59	3	He	0.255	0.0176	900.05	0.0549	0.003644
Ni	60	3	He	-1.048	0.0044	360.02	0.0093	0.01413
Ni	60	3	He	-1.102	0.0039	320.02	0.0093	0.01413
Ni	60	3	He	-0.933	0.0055	450.03	0.0093	0.01413
Cu	63	3	He	1.17	0.0414	3390.54	0.0274	0.009321
Cu	63	3	He	1.082	0.039	3200.46	0.0274	0.009321
Cu	63	3	He	1.189	0.0419	3450.56	0.0274	0.009321
Zn	66	3	He	-0.016	0.0059	480.02	0.0031	0.005913
Zn	66	3	He	0.178	0.0065	530.03	0.0031	0.005913
Zn	66	3	He	0.608	0.0078	640.04	0.0031	0.005913
As	75	3	He	0.095	0.0011	88.00	0.0021	0.0008698
As	75	3	He	-0.053	0.0008	62.00	0.0021	0.0008698
As	75	3	He	0.025	0.0009	76.00	0.0021	0.0008698
Sr	88	3	He	1.019	0.0096	880.06	0.0088	0.0006843
Sr	88	3	He	0.856	0.0082	740.05	0.0088	0.0006843
Sr	88	3	He	0.695	0.0068	610.03	0.0088	0.0006843
Mo	98	3	He	-0.053	0.0007	60.00	0.0219	0.001827
Mo	98	3	He	-0.048	0.0008	70.00	0.0219	0.001827
Mo	98	3	He	-0.068	0.0003	30.00	0.0219	0.001827
Ag	107	3	He	-0.02	0.0001	10.00	0.047	0.001064
Ag	107	3	He	-0.016	0.0003	30.00	0.047	0.001064
Ag	107	3	He	-0.011	0.0006	50.00	0.047	0.001064
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Sn	120	3	He	-0.045	0.0141	1290.11	0.0154	0.01483
Sn	120	3	He	0.025	0.0152	1370.12	0.0154	0.01483
Sn	120	3	He	0.014	0.015	1350.12	0.0154	0.01483
Sb	121	3	He	0.004	0.0003	30.00	0.0143	0.0002661
Sb	121	3	He	-0.003	0.0002	20.00	0.0143	0.0002661
Sb	121	3	He	0.005	0.0003	30.00	0.0143	0.0002661
Ba	137	3	He	29.092	0.1393	12706.41	0.0048	0.0002665
Ba	137	3	He	31.031	0.1486	13376.98	0.0048	0.0002665
Ba	137	3	He	29.442	0.141	12646.16	0.0048	0.0002665
Tl	205	3	He	-0.098	0.0003	140.01	0.0246	0.002755
Tl	205	3	He	-0.094	0.0004	180.01	0.0246	0.002755
Tl	205	3	He	-0.103	0.0002	90.00	0.0246	0.002755
Pb	208	3	He	0.165	0.0075	1620.15	0.0324	0.002158
Pb	208	3	He	0.144	0.0068	1470.14	0.0324	0.002158
Pb	208	3	He	0.15	0.007	1480.14	0.0324	0.002158
U	238	3	He	-0.005	0.0002	50.00	0.0492	0.0004023
U	238	3	He	-0.002	0.0003	90.00	0.0492	0.0004023
U	238	3	He	-0.002	0.0003	100.00	0.0492	0.0004023
Sc	45	1	No Gas			2561728.09		
Sc	45	1	No Gas			2525248.71		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2574592.62		
Ge	72	1	No Gas			1162050.61		
Ge	72	1	No Gas			1158903.34		
Ge	72	1	No Gas			1170488.26		
Sc	45	2	H2			205005.52		
Sc	45	2	H2			208748.73		
Sc	45	2	H2			209041.34		
Ge	72	2	H2			164548.20		
Ge	72	2	H2			162968.92		
Ge	72	2	H2			160723.71		
In	115	2	H2			411936.83		
In	115	2	H2			407814.76		
In	115	2	H2			407547.42		
Sc	45	3	He			49825.62		
Sc	45	3	He			50558.62		
Sc	45	3	He			51020.65		
Ge	72	3	He			81883.98		
Ge	72	3	He			82045.30		
Ge	72	3	He			82286.58		
In	115	3	He			91229.49		
In	115	3	He			90051.03		
In	115	3	He			89718.85		
Tb	159	3	He			409071.48		
Tb	159	3	He			409755.23		
Tb	159	3	He			404974.02		
Bi	209	3	He			314907.85		
Bi	209	3	He			316111.17		
Bi	209	3	He			310433.63		

Quantitation Report

Data File Name	154SMPL.d
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Sample Type	Sample
Comment	I7 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

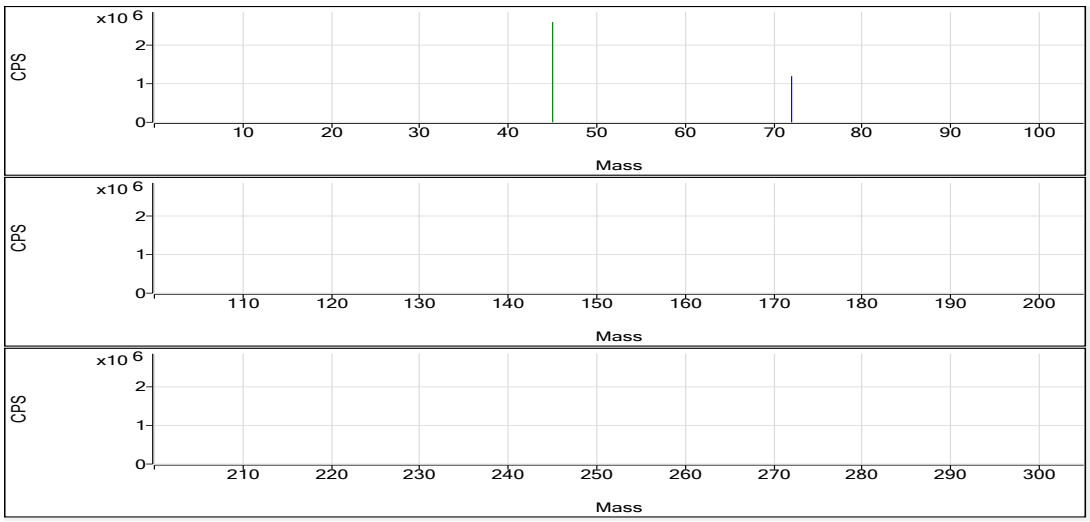
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.035	ppb	N/A	22.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.002	ppb	2007.8	6.00	0.0000	Pulse	1.5000	3
Na	23	45	He	126483.271	ppb	1.4	23356526.32	451.2556	Analog	0.1000	3
Mg	24	45	He	200.420	ppb	0.5	18979.45	0.3667	Pulse	0.1000	3
Al	27	45	He	11.020	ppb	26.3	440.02	0.0085	Pulse	0.1000	3
K	39	45	He	269.086	ppb	3.6	37592.42	0.7263	Pulse	0.1000	3
Ca	44	45	He	11659.130	ppb	2.8	40945.20	0.7910	Pulse	0.1000	3
Ti	47	45	He	0.241	ppb	86.6	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	-0.389	ppb	N/A	1218.06	0.0235	Pulse	0.5000	3
Cr	52	45	He	0.142	ppb	60.0	2440.29	0.0471	Pulse	0.1000	3
Mn	55	45	He	108.743	ppb	1.4	70117.71	1.3547	Pulse	0.1000	3
Fe	57	45	He	7.147	ppb	33.4	353.35	0.0068	Pulse	0.1000	3
Co	59	45	He	2.171	ppb	5.4	6358.30	0.1228	Pulse	0.1000	3
Ni	60	72	He	3.967	ppb	7.2	4320.81	0.0510	Pulse	0.1000	3
Cu	63	72	He	79.612	ppb	1.4	185949.49	2.1928	Pulse	0.1000	3
Zn	66	72	He	913.071	ppb	1.4	238240.65	2.8094	Pulse	0.1000	3
As	75	72	He	0.170	ppb	25.4	104.67	0.0012	Pulse	0.5000	3
Sr	88	115	He	59.229	ppb	3.9	48233.26	0.5218	Pulse	0.1000	3
Mo	98	115	He	-0.054	ppb	N/A	60.00	0.0006	Pulse	0.1000	3
Ag	107	115	He	-0.011	ppb	N/A	50.00	0.0005	Pulse	0.1000	3
Cd	111	115	He	1.080	ppb	1.0	537.34	0.0058	Pulse	0.5000	3
Sn	120	115	He	-0.069	ppb	N/A	1273.45	0.0138	Pulse	0.1000	3
Sb	121	115	He	5.841	ppb	7.3	7722.43	0.0835	Pulse	0.1000	3
Ba	137	115	He	85.395	ppb	2.3	37746.21	0.4084	Pulse	0.1000	3
Tl	205	159	He	-0.087	ppb	N/A	253.35	0.0006	Pulse	0.1000	3
Pb	208	159	He	158.400	ppb	1.1	2109877.88	5.1350	Pulse	0.1000	3
U	238	209	He	0.006	ppb	93.7	213.34	0.0007	Pulse	0.1000	3

ISTD Table:

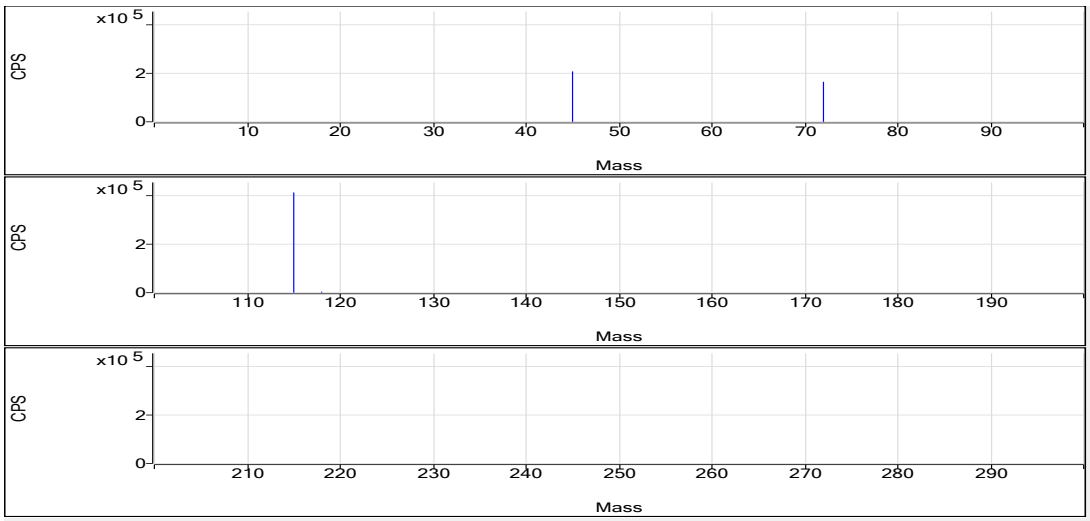
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2597338.66	0.5	99.6	Analog	0.1000	3
No Gas	Ge	72	1194691.00	0.4	92.7	Pulse	0.1000	3
H2	Sc	45	207971.82	0.9	100.9	Pulse	0.1000	3
H2	Ge	72	165068.25	1.5	101.4	Pulse	0.1000	3
H2	In	115	413435.52	0.3	102.4	Pulse	0.1000	3
He	Sc	45	51762.57	0.9	101.1	Pulse	0.1000	3
He	Ge	72	84807.70	1.0	103.6	Pulse	0.1000	3
He	In	115	92442.82	0.9	105.5	Pulse	0.1000	3
He	Tb	159	410923.34	1.4	102.3	Pulse	0.1000	3
He	Bi	209	314136.84	0.2	102.6	Pulse	0.1000	3

No Gas

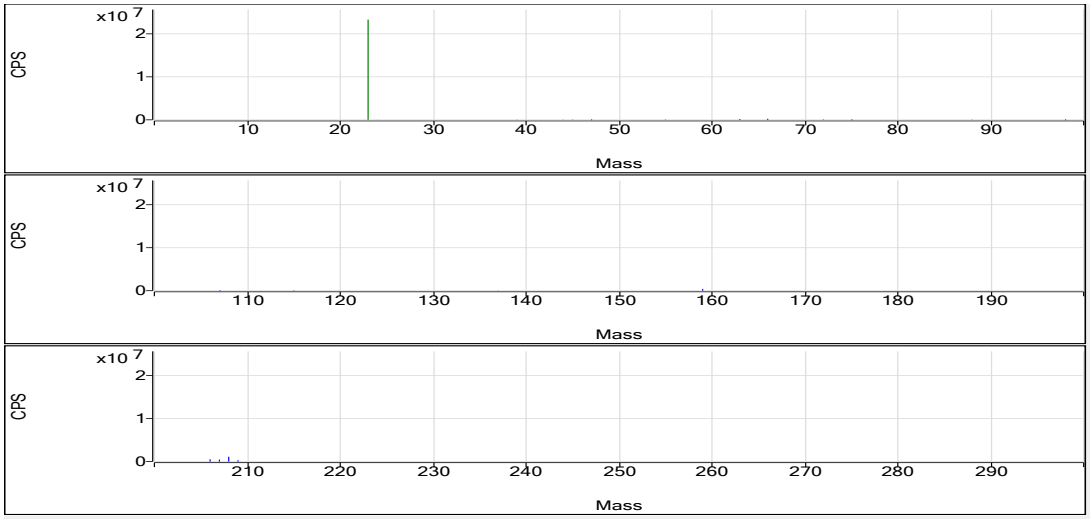


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.038	0	16.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.029	0	34.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.037	0	18.00	0.0007	3.404E-05
Se	78	2	H2	-0.045	0	2.67	0.0004	3.546E-05
Se	78	2	H2	0.003	0	6.00	0.0004	3.546E-05
Se	78	2	H2	0.048	0.0001	9.33	0.0004	3.546E-05
Na	23	3	He	128131.901	457.132	23598022.15	0.0036	0.4171
Na	23	3	He	124530.403	444.2948	23229752.15	0.0036	0.4171
Na	23	3	He	126787.507	452.34	23241804.65	0.0036	0.4171
Mg	24	3	He	201.649	0.3689	19042.86	0.0018	0.004553
Mg	24	3	He	199.591	0.3652	19092.89	0.0018	0.004553
Mg	24	3	He	200.018	0.3659	18802.61	0.0018	0.004553
Al	27	3	He	8.393	0.007	360.02	0.0006	0.002085
Al	27	3	He	10.539	0.0082	430.02	0.0006	0.002085
Al	27	3	He	14.128	0.0103	530.03	0.0006	0.002085
K	39	3	He	277.139	0.7357	37980.15	0.0012	0.4112
K	39	3	He	258.368	0.7138	37318.35	0.0012	0.4112
K	39	3	He	271.749	0.7294	37478.75	0.0012	0.4112
Ca	44	3	He	11977.14	0.8125	41940.93	0.0001	0.003322
Ca	44	3	He	11674.505	0.792	41410.34	0.0001	0.003322
Ca	44	3	He	11325.745	0.7685	39484.32	0.0001	0.003322
Ti	47	3	He	0.364	0.0002	10.00	0.0005	0
Ti	47	3	He	0.36	0.0002	10.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	-0.371	0.0239	1234.06	0.0213	0.0318
V	51	3	He	-0.407	0.0231	1210.06	0.0213	0.0318
V	51	3	He	-0.388	0.0236	1210.06	0.0213	0.0318
Cr	52	3	He	0.061	0.0448	2310.26	0.0294	0.04297
Cr	52	3	He	0.23	0.0497	2600.31	0.0294	0.04297
Cr	52	3	He	0.134	0.0469	2410.30	0.0294	0.04297
Mn	55	3	He	109.82	1.3681	70623.64	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	106.987	1.3329	69688.67	0.0124	0.002801
Mn	55	3	He	109.423	1.3632	70040.81	0.0124	0.002801
Fe	57	3	He	8.769	0.0077	400.02	0.0006	0.002732
Fe	57	3	He	8.263	0.0075	390.02	0.0006	0.002732
Fe	57	3	He	4.41	0.0053	270.01	0.0006	0.002732
Co	59	3	He	2.038	0.1155	5961.44	0.0549	0.003644
Co	59	3	He	2.22	0.1255	6561.78	0.0549	0.003644
Co	59	3	He	2.257	0.1275	6551.69	0.0549	0.003644
Ni	60	3	He	3.641	0.0479	4080.77	0.0093	0.01413
Ni	60	3	He	4.094	0.0521	4370.82	0.0093	0.01413
Ni	60	3	He	4.166	0.0528	4510.85	0.0093	0.01413
Cu	63	3	He	80.072	2.2054	187773.59	0.0274	0.009321
Cu	63	3	He	80.423	2.215	185716.03	0.0274	0.009321
Cu	63	3	He	78.34	2.1579	184358.84	0.0274	0.009321
Zn	66	3	He	913.548	2.8109	239327.57	0.0031	0.005913
Zn	66	3	He	925.245	2.8468	238689.33	0.0031	0.005913
Zn	66	3	He	900.42	2.7706	236705.04	0.0031	0.005913
As	75	3	He	0.12	0.0011	96.00	0.0021	0.0008698
As	75	3	He	0.195	0.0013	108.00	0.0021	0.0008698
As	75	3	He	0.195	0.0013	110.00	0.0021	0.0008698
Sr	88	3	He	57.226	0.5042	46537.20	0.0088	0.0006843
Sr	88	3	He	61.722	0.5438	49838.93	0.0088	0.0006843
Sr	88	3	He	58.738	0.5175	48323.65	0.0088	0.0006843
Mo	98	3	He	-0.044	0.0009	80.00	0.0219	0.001827
Mo	98	3	He	-0.053	0.0007	60.00	0.0219	0.001827
Mo	98	3	He	-0.064	0.0004	40.00	0.0219	0.001827
Ag	107	3	He	-0.013	0.0004	40.00	0.047	0.001064
Ag	107	3	He	-0.004	0.0009	80.00	0.047	0.001064
Ag	107	3	He	-0.016	0.0003	30.00	0.047	0.001064
Cd	111	3	He	1.091	0.0059	542.01	0.0053	6.086E-05
Cd	111	3	He	1.079	0.0058	532.01	0.0053	6.086E-05
Cd	111	3	He	1.07	0.0058	538.01	0.0053	6.086E-05
Sn	120	3	He	-0.083	0.0135	1250.11	0.0154	0.01483
Sn	120	3	He	-0.099	0.0133	1220.13	0.0154	0.01483
Sn	120	3	He	-0.024	0.0145	1350.11	0.0154	0.01483
Sb	121	3	He	6.005	0.0858	7922.53	0.0143	0.0002661
Sb	121	3	He	5.358	0.0766	7022.03	0.0143	0.0002661
Sb	121	3	He	6.161	0.0881	8222.74	0.0143	0.0002661
Ba	137	3	He	83.695	0.4002	36940.30	0.0048	0.0002665
Ba	137	3	He	87.559	0.4187	38375.02	0.0048	0.0002665
Ba	137	3	He	84.93	0.4061	37923.31	0.0048	0.0002665
Tl	205	3	He	-0.085	0.0007	280.01	0.0246	0.002755
Tl	205	3	He	-0.086	0.0006	260.02	0.0246	0.002755
Tl	205	3	He	-0.09	0.0005	220.01	0.0246	0.002755
Pb	208	3	He	156.866	5.0853	1131001.23	0.0324	0.002158
Pb	208	3	He	157.945	5.1202	1127869.67	0.0324	0.002158
Pb	208	3	He	160.391	5.1995	1125540.14	0.0324	0.002158
U	238	3	He	0	0.0004	120.01	0.0492	0.0004023
U	238	3	He	0.009	0.0009	270.01	0.0492	0.0004023
U	238	3	He	0.008	0.0008	250.01	0.0492	0.0004023
Sc	45	1	No Gas			2599711.84		
Sc	45	1	No Gas			2609762.15		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2582541.99		
Ge	72	1	No Gas			1189341.23		
Ge	72	1	No Gas			1197534.75		
Ge	72	1	No Gas			1197197.01		
Sc	45	2	H2			209966.72		
Sc	45	2	H2			206468.61		
Sc	45	2	H2			207480.13		
Ge	72	2	H2			167715.45		
Ge	72	2	H2			162749.36		
Ge	72	2	H2			164739.94		
In	115	2	H2			413486.91		
In	115	2	H2			414466.87		
In	115	2	H2			412352.77		
Sc	45	3	He			51621.90		
Sc	45	3	He			52284.55		
Sc	45	3	He			51381.27		
Ge	72	3	He			85143.08		
Ge	72	3	He			83844.78		
Ge	72	3	He			85435.24		
In	115	3	He			92305.80		
In	115	3	He			91660.57		
In	115	3	He			93383.46		
Tb	159	3	He			416667.96		
Tb	159	3	He			410921.87		
Tb	159	3	He			405180.19		
Bi	209	3	He			314045.19		
Bi	209	3	He			313484.35		
Bi	209	3	He			314880.97		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

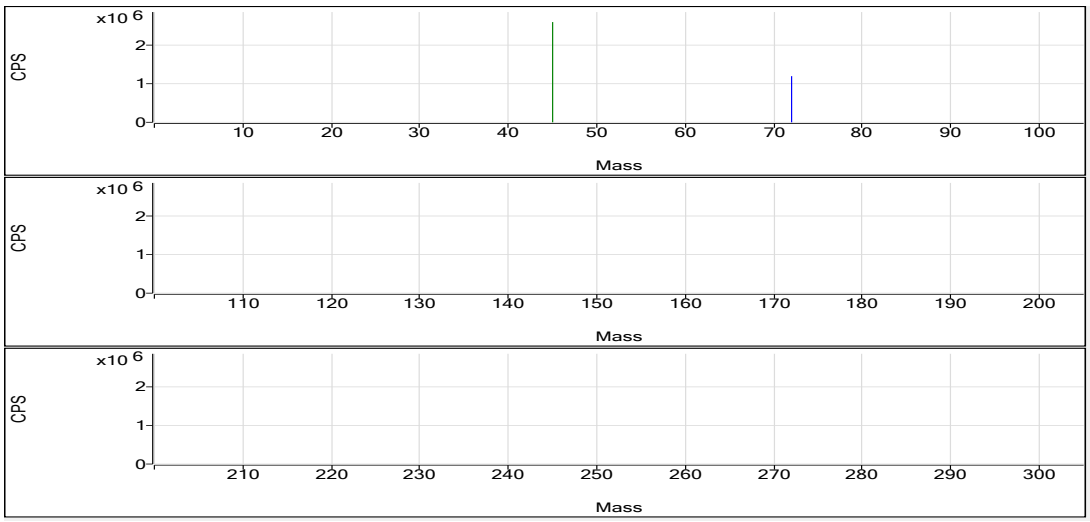
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.006	ppb	N/A	76.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.260	ppb	16.3	24.67	0.0001	Pulse	1.5000	3
Na	23	45	He	117845.377	ppb	2.7	21558262.18	420.4666	Analog	0.1000	3
Mg	24	45	He	498.518	ppb	2.8	46414.01	0.9053	Pulse	0.1000	3
Al	27	45	He	21.630	ppb	1.3	753.38	0.0147	Pulse	0.1000	3
K	39	45	He	550.499	ppb	6.2	54127.74	1.0559	Pulse	0.1000	3
Ca	44	45	He	2695.365	ppb	2.0	9513.42	0.1854	Pulse	0.1000	3
Ti	47	45	He	0.123	ppb	173.2	3.33	0.0001	Pulse	0.1000	3
V	51	45	He	-0.174	ppb	N/A	1442.08	0.0281	Pulse	0.5000	3
Cr	52	45	He	-0.082	ppb	N/A	2080.24	0.0406	Pulse	0.1000	3
Mn	55	45	He	62.376	ppb	2.8	39902.47	0.7783	Pulse	0.1000	3
Fe	57	45	He	1.479	ppb	41.8	183.34	0.0036	Pulse	0.1000	3
Co	59	45	He	10.347	ppb	2.3	29307.22	0.5716	Pulse	0.1000	3
Ni	60	72	He	5.926	ppb	4.5	5904.74	0.0691	Pulse	0.1000	3
Cu	63	72	He	1.329	ppb	2.2	3910.66	0.0458	Pulse	0.1000	3
Zn	66	72	He	17.610	ppb	0.4	5124.42	0.0600	Pulse	0.1000	3
As	75	72	He	0.438	ppb	27.3	154.67	0.0018	Pulse	0.5000	3
Sr	88	115	He	41.035	ppb	1.6	33213.16	0.3617	Pulse	0.1000	3
Mo	98	115	He	0.072	ppb	74.8	313.35	0.0034	Pulse	0.1000	3
Ag	107	115	He	-0.016	ppb	N/A	30.00	0.0003	Pulse	0.1000	3
Cd	111	115	He	-0.007	ppb	N/A	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.016	ppb	N/A	1340.11	0.0146	Pulse	0.1000	3
Sb	121	115	He	0.129	ppb	21.7	193.34	0.0021	Pulse	0.1000	3
Ba	137	115	He	62.926	ppb	0.5	27632.03	0.3010	Pulse	0.1000	3
Tl	205	159	He	-0.100	ppb	N/A	126.67	0.0003	Pulse	0.1000	3
Pb	208	159	He	0.210	ppb	8.3	3663.68	0.0090	Pulse	0.1000	3
U	238	209	He	0.004	ppb	63.6	186.68	0.0006	Pulse	0.1000	3

ISTD Table:

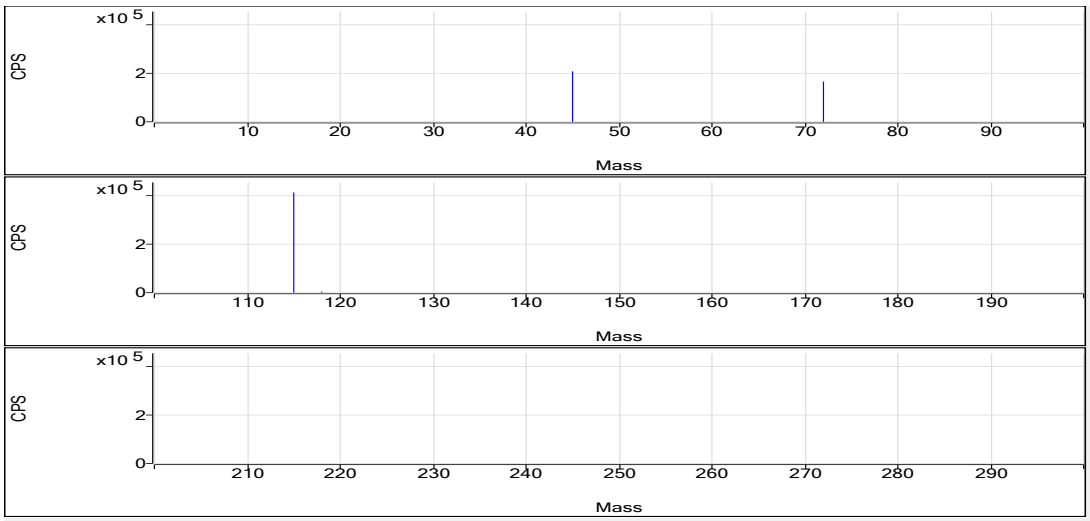
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2586177.41	1.6	99.2	Analog	0.1000	3
No Gas	Ge	72	1190355.50	0.4	92.4	Pulse	0.1000	3
H2	Sc	45	207599.00	0.4	100.7	Pulse	0.1000	3
H2	Ge	72	165390.80	0.8	101.6	Pulse	0.1000	3
H2	In	115	412191.92	0.1	102.1	Pulse	0.1000	3
He	Sc	45	51294.44	2.4	100.2	Pulse	0.1000	3
He	Ge	72	85431.37	1.3	104.4	Pulse	0.1000	3
He	In	115	91806.19	0.7	104.7	Pulse	0.1000	3
He	Tb	159	409146.11	0.6	101.9	Pulse	0.1000	3
He	Bi	209	313279.52	1.3	102.3	Pulse	0.1000	3

No Gas

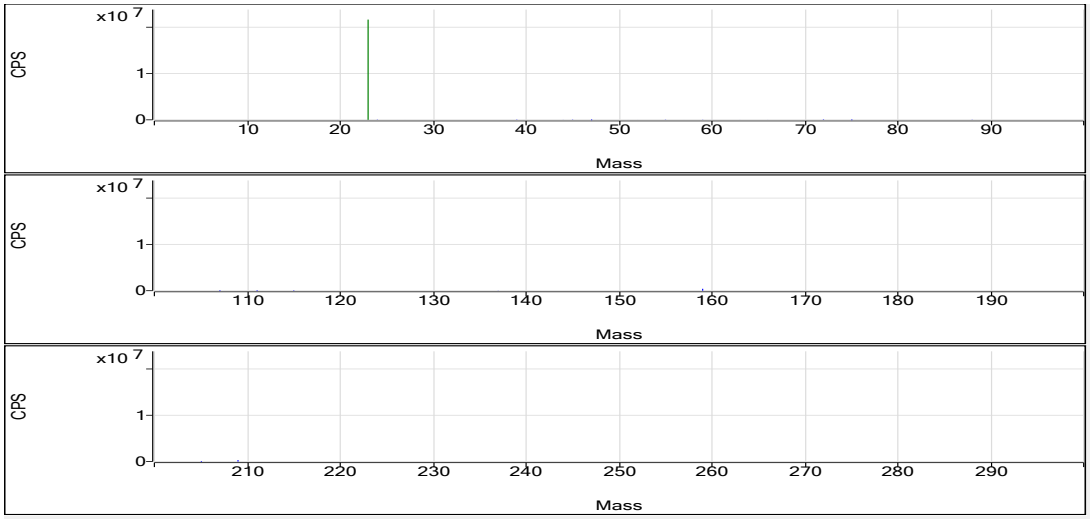


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.007	0	74.00	0.0007	3.404E-05
Be	9	1	No Gas	0.001	0	90.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.013	0	64.00	0.0007	3.404E-05
Se	78	2	H2	0.29	0.0002	26.67	0.0004	3.546E-05
Se	78	2	H2	0.277	0.0002	26.00	0.0004	3.546E-05
Se	78	2	H2	0.211	0.0001	21.33	0.0004	3.546E-05
Na	23	3	He	114650.976	409.0804	21544739.68	0.0036	0.4171
Na	23	3	He	121039.776	431.8527	21681987.18	0.0036	0.4171
Na	23	3	He	117845.38	420.4666	21448059.68	0.0036	0.4171
Mg	24	3	He	482.922	0.8771	46193.13	0.0018	0.004553
Mg	24	3	He	510.354	0.9267	46524.46	0.0018	0.004553
Mg	24	3	He	502.277	0.9121	46524.44	0.0018	0.004553
Al	27	3	He	21.845	0.0148	780.06	0.0006	0.002085
Al	27	3	He	21.722	0.0147	740.04	0.0006	0.002085
Al	27	3	He	21.324	0.0145	740.04	0.0006	0.002085
K	39	3	He	517.927	1.0177	53599.39	0.0012	0.4112
K	39	3	He	585.764	1.0972	55085.00	0.0012	0.4112
K	39	3	He	547.806	1.0527	53698.82	0.0012	0.4112
Ca	44	3	He	2739.964	0.1884	9923.70	0.0001	0.003322
Ca	44	3	He	2634.67	0.1813	9103.15	0.0001	0.003322
Ca	44	3	He	2711.461	0.1865	9513.42	0.0001	0.003322
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.369	0.0002	10.00	0.0005	0
V	51	3	He	-0.181	0.028	1472.08	0.0213	0.0318
V	51	3	He	-0.227	0.027	1354.07	0.0213	0.0318
V	51	3	He	-0.112	0.0294	1500.09	0.0213	0.0318
Cr	52	3	He	-0.112	0.0397	2090.23	0.0294	0.04297
Cr	52	3	He	-0.079	0.0406	2040.24	0.0294	0.04297
Cr	52	3	He	-0.054	0.0414	2110.24	0.0294	0.04297
Mn	55	3	He	60.432	0.7541	39715.34	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	63.82	0.7962	39975.95	0.0124	0.002801
Mn	55	3	He	62.875	0.7845	40016.11	0.0124	0.002801
Fe	57	3	He	1.199	0.0034	180.01	0.0006	0.002732
Fe	57	3	He	2.188	0.004	200.01	0.0006	0.002732
Fe	57	3	He	1.05	0.0033	170.01	0.0006	0.002732
Co	59	3	He	10.118	0.559	29440.81	0.0549	0.003644
Co	59	3	He	10.584	0.5846	29350.77	0.0549	0.003644
Co	59	3	He	10.338	0.5711	29130.09	0.0549	0.003644
Ni	60	3	He	6.119	0.0709	6031.45	0.0093	0.01413
Ni	60	3	He	6.034	0.0701	5931.39	0.0093	0.01413
Ni	60	3	He	5.625	0.0663	5751.37	0.0093	0.01413
Cu	63	3	He	1.328	0.0458	3890.65	0.0274	0.009321
Cu	63	3	He	1.359	0.0466	3940.67	0.0274	0.009321
Cu	63	3	He	1.301	0.045	3900.65	0.0274	0.009321
Zn	66	3	He	17.689	0.0602	5121.10	0.0031	0.005913
Zn	66	3	He	17.565	0.0598	5061.07	0.0031	0.005913
Zn	66	3	He	17.576	0.0599	5191.10	0.0031	0.005913
As	75	3	He	0.548	0.002	174.00	0.0021	0.0008698
As	75	3	He	0.311	0.0015	130.00	0.0021	0.0008698
As	75	3	He	0.455	0.0018	160.00	0.0021	0.0008698
Sr	88	3	He	40.316	0.3554	32357.85	0.0088	0.0006843
Sr	88	3	He	41.542	0.3662	33771.22	0.0088	0.0006843
Sr	88	3	He	41.248	0.3636	33510.41	0.0088	0.0006843
Mo	98	3	He	0.047	0.0029	260.01	0.0219	0.001827
Mo	98	3	He	0.134	0.0048	440.02	0.0219	0.001827
Mo	98	3	He	0.035	0.0026	240.01	0.0219	0.001827
Ag	107	3	He	-0.02	0.0001	10.00	0.047	0.001064
Ag	107	3	He	-0.013	0.0004	40.00	0.047	0.001064
Ag	107	3	He	-0.013	0.0004	40.00	0.047	0.001064
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Sn	120	3	He	-0.192	0.0119	1080.08	0.0154	0.01483
Sn	120	3	He	-0.069	0.0138	1270.10	0.0154	0.01483
Sn	120	3	He	0.213	0.0181	1670.16	0.0154	0.01483
Sb	121	3	He	0.097	0.0016	150.01	0.0143	0.0002661
Sb	121	3	He	0.149	0.0024	220.01	0.0143	0.0002661
Sb	121	3	He	0.141	0.0023	210.01	0.0143	0.0002661
Ba	137	3	He	62.689	0.2998	27298.32	0.0048	0.0002665
Ba	137	3	He	63.251	0.3025	27899.21	0.0048	0.0002665
Ba	137	3	He	62.838	0.3006	27698.56	0.0048	0.0002665
Tl	205	3	He	-0.101	0.0003	110.00	0.0246	0.002755
Tl	205	3	He	-0.098	0.0003	140.01	0.0246	0.002755
Tl	205	3	He	-0.099	0.0003	130.01	0.0246	0.002755
Pb	208	3	He	0.203	0.0087	1920.22	0.0324	0.002158
Pb	208	3	He	0.23	0.0096	1970.22	0.0324	0.002158
Pb	208	3	He	0.196	0.0085	1910.21	0.0324	0.002158
U	238	3	He	0.001	0.0005	140.01	0.0492	0.0004023
U	238	3	He	0.005	0.0007	210.01	0.0492	0.0004023
U	238	3	He	0.005	0.0007	210.01	0.0492	0.0004023
Sc	45	1	No Gas			2545738.40		
Sc	45	1	No Gas			2585900.74		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2626893.09		
Ge	72	1	No Gas			1184944.44		
Ge	72	1	No Gas			1195228.65		
Ge	72	1	No Gas			1190893.42		
Sc	45	2	H2			206639.27		
Sc	45	2	H2			207896.79		
Sc	45	2	H2			208260.93		
Ge	72	2	H2			163859.72		
Ge	72	2	H2			165742.20		
Ge	72	2	H2			166570.47		
In	115	2	H2			412097.65		
In	115	2	H2			412664.49		
In	115	2	H2			411813.63		
Sc	45	3	He			52666.27		
Sc	45	3	He			50206.90		
Sc	45	3	He			51010.14		
Ge	72	3	He			85031.74		
Ge	72	3	He			84569.26		
Ge	72	3	He			86693.11		
In	115	3	He			91048.31		
In	115	3	He			92225.05		
In	115	3	He			92164.08		
Tb	159	3	He			408247.57		
Tb	159	3	He			407437.65		
Tb	159	3	He			411753.12		
Bi	209	3	He			308710.80		
Bi	209	3	He			316286.32		
Bi	209	3	He			314841.44		

Quantitation Report

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Sample Type	Sample
Comment	I7 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

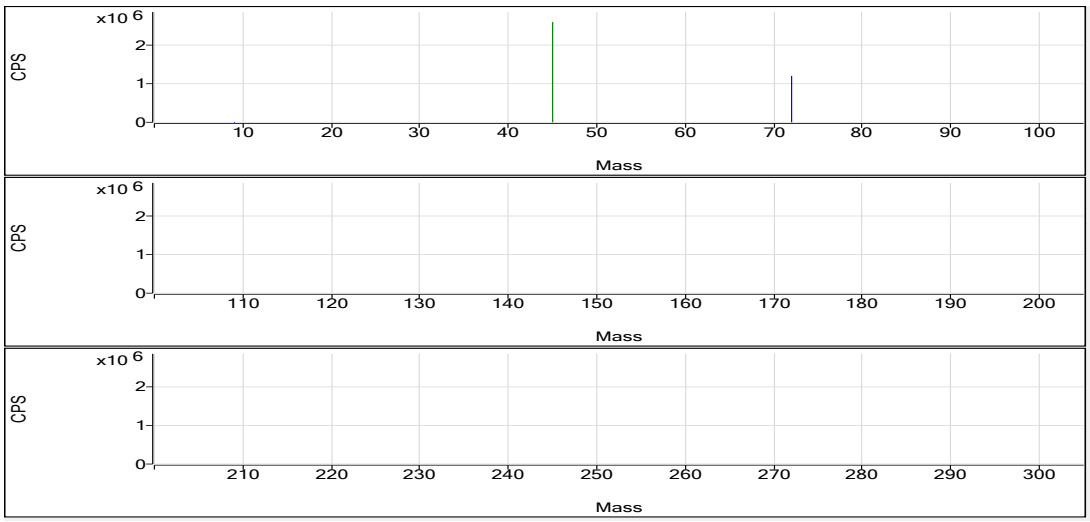
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.037	ppb	N/A	18.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.032	ppb	N/A	3.56	0.0000	Pulse	1.5000	3
Na	23	45	He	157103.489	ppb	1.4	28820396.24	560.3987	Analog	0.1000	3
Mg	24	45	He	730.203	ppb	0.7	68091.00	1.3239	Pulse	0.1000	3
Al	27	45	He	0.768	ppb	202.2	130.01	0.0025	Pulse	0.1000	3
K	39	45	He	19537.648	ppb	1.1	1197829.35	23.2912	Pulse	0.1000	3
Ca	44	45	He	1433.552	ppb	3.2	5151.07	0.1002	Pulse	0.1000	3
Ti	47	45	He	0.000	ppb	N/A	0.00	0.0000	Pulse	0.1000	3
V	51	45	He	-0.344	ppb	N/A	1259.40	0.0245	Pulse	0.5000	3
Cr	52	45	He	-0.062	ppb	N/A	2116.91	0.0412	Pulse	0.1000	3
Mn	55	45	He	37.636	ppb	3.0	24210.90	0.4707	Pulse	0.1000	3
Fe	57	45	He	1.122	ppb	207.8	173.34	0.0034	Pulse	0.1000	3
Co	59	45	He	0.251	ppb	6.0	896.72	0.0174	Pulse	0.1000	3
Ni	60	72	He	-0.784	ppb	N/A	576.70	0.0069	Pulse	0.1000	3
Cu	63	72	He	0.215	ppb	15.9	1280.11	0.0152	Pulse	0.1000	3
Zn	66	72	He	2.062	ppb	21.4	1030.07	0.0122	Pulse	0.1000	3
As	75	72	He	0.163	ppb	73.8	102.67	0.0012	Pulse	0.5000	3
Sr	88	115	He	16.906	ppb	6.0	13526.86	0.1494	Pulse	0.1000	3
Mo	98	115	He	-0.028	ppb	N/A	110.00	0.0012	Pulse	0.1000	3
Ag	107	115	He	-0.015	ppb	N/A	33.33	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.002	ppb	99.1	6.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.008	ppb	790.5	1353.45	0.0150	Pulse	0.1000	3
Sb	121	115	He	0.007	ppb	125.1	33.33	0.0004	Pulse	0.1000	3
Ba	137	115	He	5.532	ppb	3.1	2416.97	0.0267	Pulse	0.1000	3
Tl	205	159	He	-0.099	ppb	N/A	130.00	0.0003	Pulse	0.1000	3
Pb	208	159	He	0.544	ppb	3.8	8054.64	0.0198	Pulse	0.1000	3
U	238	209	He	-0.004	ppb	N/A	56.67	0.0002	Pulse	0.1000	3

ISTD Table:

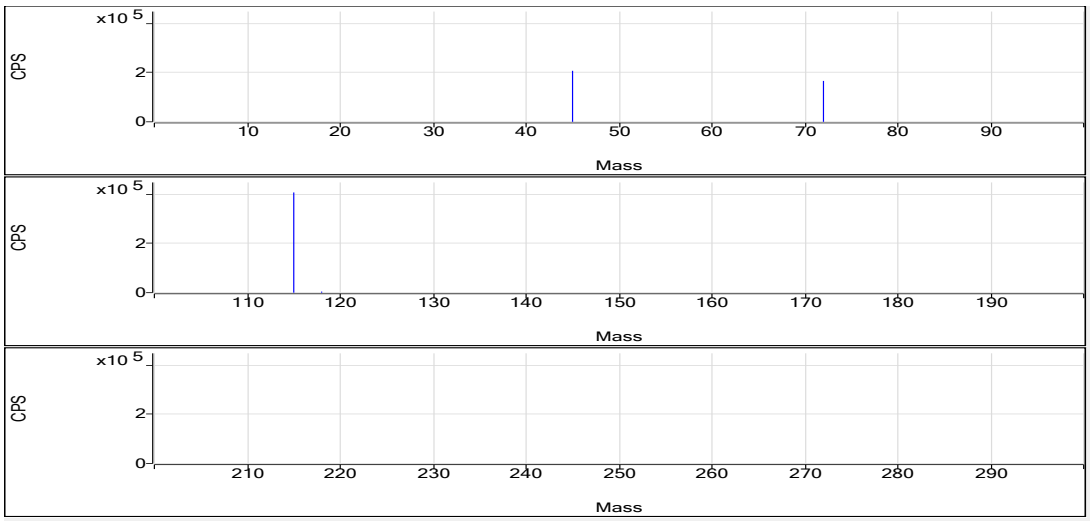
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2586376.26	0.4	99.2	Analog	0.1000	3
No Gas	Ge	72	1197675.37	1.1	92.9	Pulse	0.1000	3
H2	Sc	45	207348.74	1.0	100.6	Pulse	0.1000	3
H2	Ge	72	166227.06	1.5	102.1	Pulse	0.1000	3
H2	In	115	407318.65	0.9	100.9	Pulse	0.1000	3
He	Sc	45	51431.72	1.0	100.5	Pulse	0.1000	3
He	Ge	72	84147.66	0.8	102.8	Pulse	0.1000	3
He	In	115	90513.74	0.4	103.3	Pulse	0.1000	3
He	Tb	159	407002.87	0.3	101.3	Pulse	0.1000	3
He	Bi	209	312215.08	0.4	102.0	Pulse	0.1000	3

No Gas

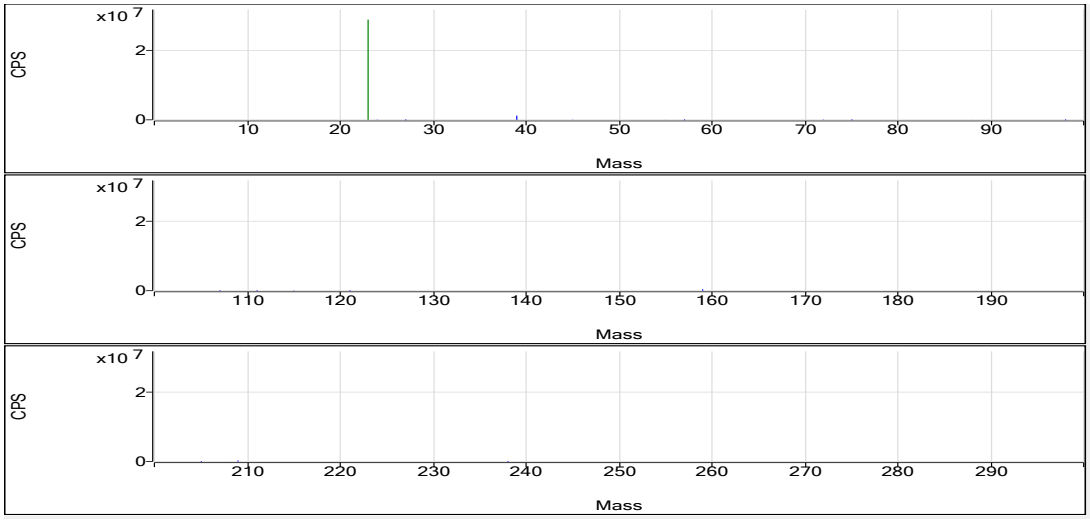


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.032	0	28.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.04	0	12.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.039	0	14.00	0.0007	3.404E-05
Se	78	2	H2	0.002	0	6.00	0.0004	3.546E-05
Se	78	2	H2	-0.053	0	2.00	0.0004	3.546E-05
Se	78	2	H2	-0.045	0	2.67	0.0004	3.546E-05
Na	23	3	He	155973.469	556.3708	28911092.07	0.0036	0.4171
Na	23	3	He	155746.889	555.5632	28523414.57	0.0036	0.4171
Na	23	3	He	159590.111	569.262	29026682.07	0.0036	0.4171
Mg	24	3	He	735.199	1.3329	69262.59	0.0018	0.004553
Mg	24	3	He	724.873	1.3142	67475.33	0.0018	0.004553
Mg	24	3	He	730.535	1.3245	67535.09	0.0018	0.004553
Al	27	3	He	-0.936	0.0015	80.00	0.0006	0.002085
Al	27	3	He	2.106	0.0033	170.01	0.0006	0.002085
Al	27	3	He	1.135	0.0027	140.01	0.0006	0.002085
K	39	3	He	19323.642	23.0406	1197276.62	0.0012	0.4112
K	39	3	He	19549.893	23.3056	1196542.40	0.0012	0.4112
K	39	3	He	19739.41	23.5275	1199669.04	0.0012	0.4112
Ca	44	3	He	1383.947	0.0968	5030.99	0.0001	0.003322
Ca	44	3	He	1473.434	0.1029	5281.13	0.0001	0.003322
Ca	44	3	He	1443.275	0.1008	5141.09	0.0001	0.003322
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	-0.303	0.0254	1318.07	0.0213	0.0318
V	51	3	He	-0.341	0.0245	1260.06	0.0213	0.0318
V	51	3	He	-0.389	0.0235	1200.06	0.0213	0.0318
Cr	52	3	He	-0.028	0.0421	2190.25	0.0294	0.04297
Cr	52	3	He	-0.156	0.0384	1970.22	0.0294	0.04297
Cr	52	3	He	-0.001	0.043	2190.25	0.0294	0.04297
Mn	55	3	He	38.585	0.4825	25072.37	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	36.403	0.4554	23379.43	0.0124	0.002801
Mn	55	3	He	37.92	0.4742	24180.89	0.0124	0.002801
Fe	57	3	He	-0.739	0.0023	120.00	0.0006	0.002732
Fe	57	3	He	3.736	0.0049	250.01	0.0006	0.002732
Fe	57	3	He	0.367	0.0029	150.01	0.0006	0.002732
Co	59	3	He	0.26	0.0179	930.06	0.0549	0.003644
Co	59	3	He	0.26	0.0179	920.06	0.0549	0.003644
Co	59	3	He	0.234	0.0165	840.05	0.0549	0.003644
Ni	60	3	He	-0.806	0.0066	560.03	0.0093	0.01413
Ni	60	3	He	-0.721	0.0074	630.03	0.0093	0.01413
Ni	60	3	He	-0.824	0.0065	540.03	0.0093	0.01413
Cu	63	3	He	0.197	0.0147	1240.10	0.0274	0.009321
Cu	63	3	He	0.254	0.0163	1380.12	0.0274	0.009321
Cu	63	3	He	0.193	0.0146	1220.10	0.0274	0.009321
Zn	66	3	He	1.553	0.0107	900.07	0.0031	0.005913
Zn	66	3	He	2.302	0.013	1100.08	0.0031	0.005913
Zn	66	3	He	2.33	0.0131	1090.07	0.0031	0.005913
As	75	3	He	0.07	0.001	86.00	0.0021	0.0008698
As	75	3	He	0.299	0.0015	128.00	0.0021	0.0008698
As	75	3	He	0.12	0.0011	94.00	0.0021	0.0008698
Sr	88	3	He	16.714	0.1477	13306.70	0.0088	0.0006843
Sr	88	3	He	17.996	0.159	14447.78	0.0088	0.0006843
Sr	88	3	He	16.006	0.1415	12826.10	0.0088	0.0006843
Mo	98	3	He	-0.033	0.0011	100.00	0.0219	0.001827
Mo	98	3	He	-0.038	0.001	90.00	0.0219	0.001827
Mo	98	3	He	-0.013	0.0015	140.01	0.0219	0.001827
Ag	107	3	He	-0.013	0.0004	40.00	0.047	0.001064
Ag	107	3	He	-0.018	0.0002	20.00	0.047	0.001064
Ag	107	3	He	-0.013	0.0004	40.00	0.047	0.001064
Cd	111	3	He	0.001	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	0.001	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	0.005	0.0001	8.00	0.0053	6.086E-05
Sn	120	3	He	0.061	0.0158	1420.14	0.0154	0.01483
Sn	120	3	He	-0.062	0.0139	1260.11	0.0154	0.01483
Sn	120	3	He	0.026	0.0152	1380.11	0.0154	0.01483
Sb	121	3	He	0.012	0.0004	40.00	0.0143	0.0002661
Sb	121	3	He	0.012	0.0004	40.00	0.0143	0.0002661
Sb	121	3	He	-0.003	0.0002	20.00	0.0143	0.0002661
Ba	137	3	He	5.382	0.026	2340.29	0.0048	0.0002665
Ba	137	3	He	5.496	0.0265	2410.29	0.0048	0.0002665
Ba	137	3	He	5.717	0.0276	2500.33	0.0048	0.0002665
Tl	205	3	He	-0.101	0.0003	110.00	0.0246	0.002755
Tl	205	3	He	-0.101	0.0003	110.00	0.0246	0.002755
Tl	205	3	He	-0.095	0.0004	170.01	0.0246	0.002755
Pb	208	3	He	0.522	0.0191	4180.88	0.0324	0.002158
Pb	208	3	He	0.563	0.0204	4430.91	0.0324	0.002158
Pb	208	3	He	0.547	0.0199	4300.84	0.0324	0.002158
U	238	3	He	-0.002	0.0003	100.00	0.0492	0.0004023
U	238	3	He	-0.005	0.0002	50.00	0.0492	0.0004023
U	238	3	He	-0.007	0.0001	20.00	0.0492	0.0004023
Sc	45	1	No Gas			2599128.24		
Sc	45	1	No Gas			2581452.77		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2578547.77		
Ge	72	1	No Gas			1208464.59		
Ge	72	1	No Gas			1183773.11		
Ge	72	1	No Gas			1200788.42		
Sc	45	2	H2			205200.39		
Sc	45	2	H2			209316.23		
Sc	45	2	H2			207529.61		
Ge	72	2	H2			164630.68		
Ge	72	2	H2			164951.25		
Ge	72	2	H2			169099.26		
In	115	2	H2			410332.18		
In	115	2	H2			408124.06		
In	115	2	H2			403499.72		
Sc	45	3	He			51963.71		
Sc	45	3	He			51341.44		
Sc	45	3	He			50990.02		
Ge	72	3	He			84278.23		
Ge	72	3	He			84740.43		
Ge	72	3	He			83424.32		
In	115	3	He			90071.35		
In	115	3	He			90855.98		
In	115	3	He			90636.20		
Tb	159	3	He			406156.20		
Tb	159	3	He			408598.00		
Tb	159	3	He			406254.41		
Bi	209	3	He			311305.50		
Bi	209	3	He			313588.63		
Bi	209	3	He			311751.11		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

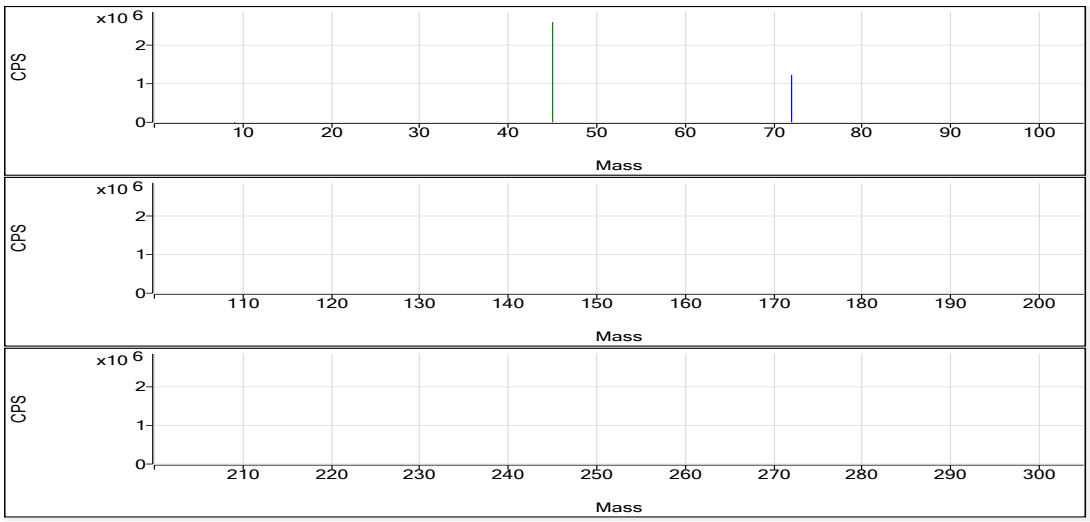
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.039	ppb	N/A	14.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.029	ppb	N/A	3.78	0.0000	Pulse	1.5000	3
Na	23	45	He	31.235	ppb	28.3	27048.73	0.5284	Pulse	0.1000	3
Mg	24	45	He	0.282	ppb	235.9	260.01	0.0051	Pulse	0.1000	3
Al	27	45	He	-1.339	ppb	N/A	66.67	0.0013	Pulse	0.1000	3
K	39	45	He	6.246	ppb	249.6	21429.58	0.4185	Pulse	0.1000	3
Ca	44	45	He	-9.620	ppb	N/A	136.67	0.0027	Pulse	0.1000	3
Ti	47	45	He	0.125	ppb	173.2	3.33	0.0001	Pulse	0.1000	3
V	51	45	He	-0.342	ppb	N/A	1255.40	0.0245	Pulse	0.5000	3
Cr	52	45	He	-0.013	ppb	N/A	2180.24	0.0426	Pulse	0.1000	3
Mn	55	45	He	0.089	ppb	24.6	200.01	0.0039	Pulse	0.1000	3
Fe	57	45	He	-1.034	ppb	N/A	110.00	0.0021	Pulse	0.1000	3
Co	59	45	He	-0.027	ppb	N/A	110.00	0.0021	Pulse	0.1000	3
Ni	60	72	He	-1.163	ppb	N/A	283.35	0.0033	Pulse	0.1000	3
Cu	63	72	He	-0.082	ppb	N/A	600.03	0.0071	Pulse	0.1000	3
Zn	66	72	He	0.045	ppb	946.2	513.36	0.0061	Pulse	0.1000	3
As	75	72	He	0.012	ppb	216.7	76.00	0.0009	Pulse	0.5000	3
Sr	88	115	He	0.023	ppb	250.1	80.00	0.0009	Pulse	0.1000	3
Mo	98	115	He	-0.048	ppb	N/A	70.00	0.0008	Pulse	0.1000	3
Ag	107	115	He	-0.016	ppb	N/A	30.00	0.0003	Pulse	0.1000	3
Cd	111	115	He	-0.006	ppb	N/A	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.055	ppb	242.4	1416.80	0.0157	Pulse	0.1000	3
Sb	121	115	He	-0.001	ppb	N/A	23.33	0.0003	Pulse	0.1000	3
Ba	137	115	He	-0.025	ppb	N/A	13.33	0.0001	Pulse	0.1000	3
Tl	205	159	He	-0.100	ppb	N/A	123.34	0.0003	Pulse	0.1000	3
Pb	208	159	He	-0.019	ppb	N/A	626.69	0.0015	Pulse	0.1000	3
U	238	209	He	-0.005	ppb	N/A	43.33	0.0001	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2583207.78	1.4	99.1	Analog	0.1000	3
No Gas	Ge	72	1221355.19	1.0	94.8	Pulse	0.1000	3
H2	Sc	45	208206.27	1.5	101.0	Pulse	0.1000	3
H2	Ge	72	167740.77	0.5	103.1	Pulse	0.1000	3
H2	In	115	411563.36	0.4	101.9	Pulse	0.1000	3
He	Sc	45	51234.13	2.1	100.1	Pulse	0.1000	3
He	Ge	72	84938.99	0.9	103.8	Pulse	0.1000	3
He	In	115	90251.36	1.5	103.0	Pulse	0.1000	3
He	Tb	159	410158.01	1.1	102.1	Pulse	0.1000	3
He	Bi	209	312954.85	0.8	102.2	Pulse	0.1000	3

No Gas



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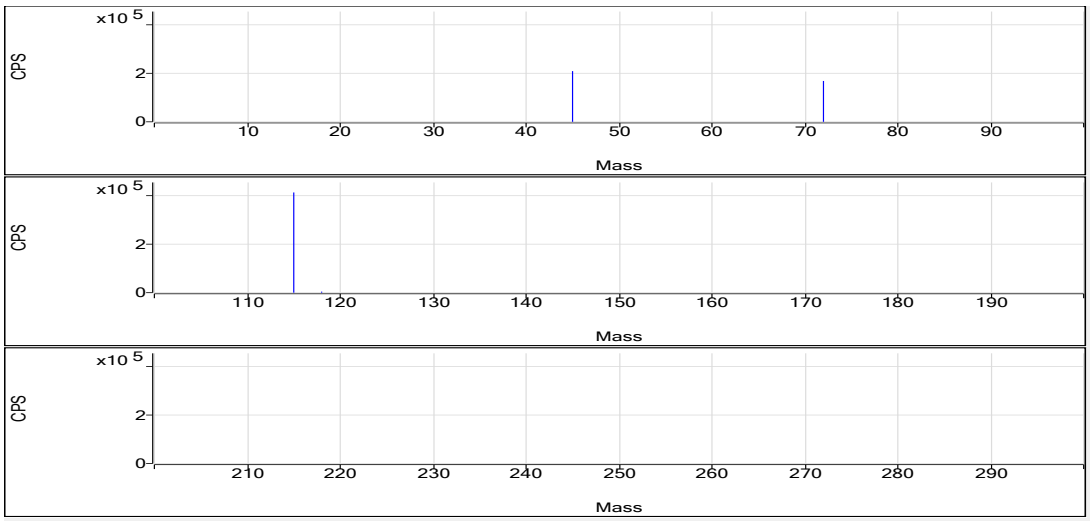
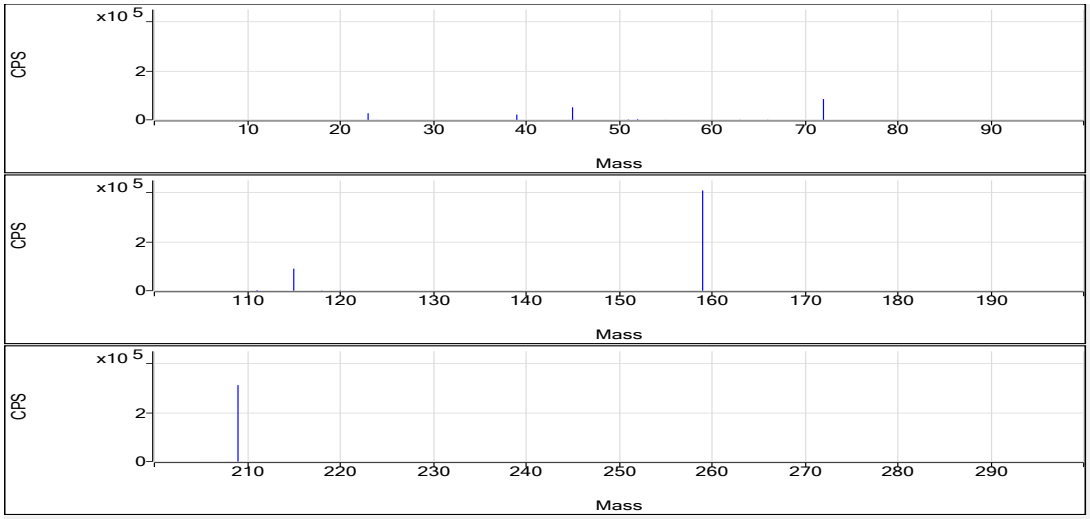


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.041	0	10.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.037	0	18.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.039	0	14.00	0.0007	3.404E-05
Se	78	2	H2	-0.026	0	4.00	0.0004	3.546E-05
Se	78	2	H2	0.001	0	6.00	0.0004	3.546E-05
Se	78	2	H2	-0.063	0	1.33	0.0004	3.546E-05
Na	23	3	He	41.431	0.5647	28217.67	0.0036	0.4171
Na	23	3	He	26.121	0.5102	26484.31	0.0036	0.4171
Na	23	3	He	26.154	0.5103	26444.21	0.0036	0.4171
Mg	24	3	He	-0.304	0.004	200.01	0.0018	0.004553
Mg	24	3	He	0.146	0.0048	250.01	0.0018	0.004553
Mg	24	3	He	1.005	0.0064	330.01	0.0018	0.004553
Al	27	3	He	-0.83	0.0016	80.00	0.0006	0.002085
Al	27	3	He	-1.264	0.0013	70.00	0.0006	0.002085
Al	27	3	He	-1.922	0.001	50.00	0.0006	0.002085
K	39	3	He	22.583	0.4376	21866.85	0.0012	0.4112
K	39	3	He	4.615	0.4166	21626.60	0.0012	0.4112
K	39	3	He	-8.462	0.4013	20795.29	0.0012	0.4112
Ca	44	3	He	-4.731	0.003	150.01	0.0001	0.003322
Ca	44	3	He	-17.806	0.0021	110.00	0.0001	0.003322
Ca	44	3	He	-6.323	0.0029	150.01	0.0001	0.003322
Ti	47	3	He	0.376	0.0002	10.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	-0.219	0.0271	1356.07	0.0213	0.0318
V	51	3	He	-0.338	0.0246	1278.07	0.0213	0.0318
V	51	3	He	-0.468	0.0218	1132.05	0.0213	0.0318
Cr	52	3	He	0.036	0.044	2200.25	0.0294	0.04297
Cr	52	3	He	-0.046	0.0416	2160.23	0.0294	0.04297
Cr	52	3	He	-0.031	0.0421	2180.24	0.0294	0.04297
Mn	55	3	He	0.113	0.0042	210.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.085	0.0039	200.01	0.0124	0.002801
Mn	55	3	He	0.07	0.0037	190.01	0.0124	0.002801
Fe	57	3	He	-1.976	0.0016	80.00	0.0006	0.002732
Fe	57	3	He	-0.398	0.0025	130.00	0.0006	0.002732
Fe	57	3	He	-0.728	0.0023	120.00	0.0006	0.002732
Co	59	3	He	-0.034	0.0018	90.00	0.0549	0.003644
Co	59	3	He	-0.042	0.0013	70.00	0.0549	0.003644
Co	59	3	He	-0.007	0.0033	170.01	0.0549	0.003644
Ni	60	3	He	-1.19	0.0031	260.01	0.0093	0.01413
Ni	60	3	He	-1.095	0.004	340.02	0.0093	0.01413
Ni	60	3	He	-1.204	0.003	250.01	0.0093	0.01413
Cu	63	3	He	-0.042	0.0082	690.04	0.0274	0.009321
Cu	63	3	He	-0.098	0.0066	570.03	0.0274	0.009321
Cu	63	3	He	-0.107	0.0064	540.03	0.0274	0.009321
Zn	66	3	He	0.507	0.0075	630.04	0.0031	0.005913
Zn	66	3	He	-0.331	0.0049	420.02	0.0031	0.005913
Zn	66	3	He	-0.041	0.0058	490.03	0.0031	0.005913
As	75	3	He	0.037	0.0009	80.00	0.0021	0.0008698
As	75	3	He	-0.014	0.0008	72.00	0.0021	0.0008698
As	75	3	He	0.013	0.0009	76.00	0.0021	0.0008698
Sr	88	3	He	0.086	0.0014	130.01	0.0088	0.0006843
Sr	88	3	He	-0.028	0.0004	40.00	0.0088	0.0006843
Sr	88	3	He	0.012	0.0008	70.00	0.0088	0.0006843
Mo	98	3	He	-0.048	0.0008	70.00	0.0219	0.001827
Mo	98	3	He	-0.058	0.0005	50.00	0.0219	0.001827
Mo	98	3	He	-0.037	0.001	90.00	0.0219	0.001827
Ag	107	3	He	-0.013	0.0004	40.00	0.047	0.001064
Ag	107	3	He	-0.016	0.0003	30.00	0.047	0.001064
Ag	107	3	He	-0.018	0.0002	20.00	0.047	0.001064
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	0.001	0.0001	6.00	0.0053	6.086E-05
Sn	120	3	He	-0.084	0.0135	1220.09	0.0154	0.01483
Sn	120	3	He	0.185	0.0177	1620.17	0.0154	0.01483
Sn	120	3	He	0.065	0.0158	1410.13	0.0154	0.01483
Sb	121	3	He	0.012	0.0004	40.00	0.0143	0.0002661
Sb	121	3	He	-0.003	0.0002	20.00	0.0143	0.0002661
Sb	121	3	He	-0.011	0.0001	10.00	0.0143	0.0002661
Ba	137	3	He	-0.033	0.0001	10.00	0.0048	0.0002665
Ba	137	3	He	-0.056	0	0.00	0.0048	0.0002665
Ba	137	3	He	0.015	0.0003	30.00	0.0048	0.0002665
Tl	205	3	He	-0.094	0.0004	180.01	0.0246	0.002755
Tl	205	3	He	-0.099	0.0003	130.01	0.0246	0.002755
Tl	205	3	He	-0.106	0.0001	60.00	0.0246	0.002755
Pb	208	3	He	-0.016	0.0016	290.01	0.0324	0.002158
Pb	208	3	He	-0.029	0.0012	260.01	0.0324	0.002158
Pb	208	3	He	-0.014	0.0017	390.02	0.0324	0.002158
U	238	3	He	-0.006	0.0001	40.00	0.0492	0.0004023
U	238	3	He	-0.004	0.0002	60.00	0.0492	0.0004023
U	238	3	He	-0.006	0.0001	30.00	0.0492	0.0004023
Sc	45	1	No Gas			2626128.09		
Sc	45	1	No Gas			2563984.65		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2559510.59		
Ge	72	1	No Gas			1234195.22		
Ge	72	1	No Gas			1210950.29		
Ge	72	1	No Gas			1218920.06		
Sc	45	2	H2			211590.58		
Sc	45	2	H2			205737.54		
Sc	45	2	H2			207290.68		
Ge	72	2	H2			167663.06		
Ge	72	2	H2			166924.65		
Ge	72	2	H2			168634.61		
In	115	2	H2			410780.81		
In	115	2	H2			413344.17		
In	115	2	H2			410565.11		
Sc	45	3	He			49966.20		
Sc	45	3	He			51913.38		
Sc	45	3	He			51822.81		
Ge	72	3	He			84348.14		
Ge	72	3	He			85807.78		
Ge	72	3	He			84661.04		
In	115	3	He			90111.58		
In	115	3	He			91641.83		
In	115	3	He			89024.76		
Tb	159	3	He			408103.31		
Tb	159	3	He			407222.22		
Tb	159	3	He			415148.51		
Bi	209	3	He			314425.84		
Bi	209	3	He			314299.70		
Bi	209	3	He			310139.02		

Quantitation Report

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Sample Type	CCV
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

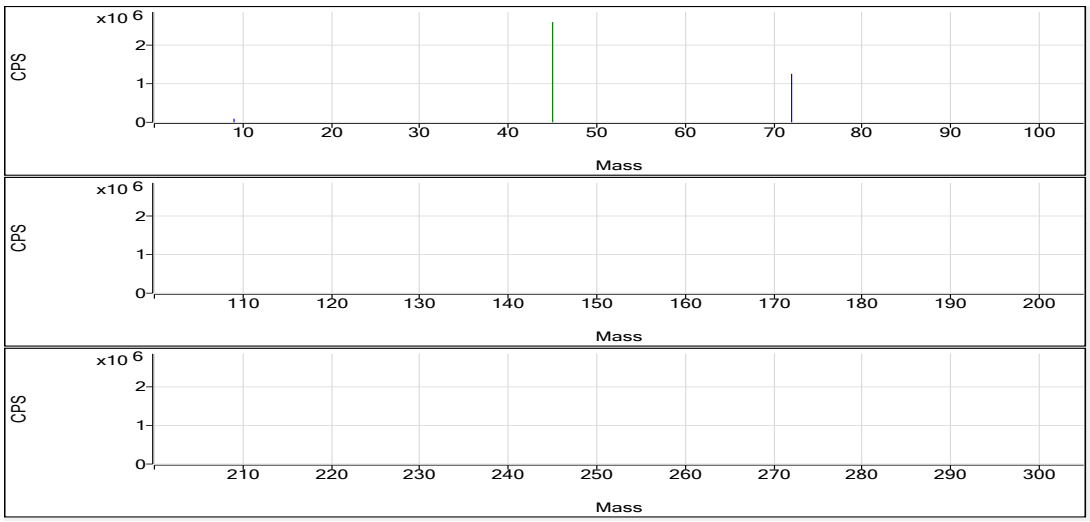
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	49.036	ppb	2.3	92349.81	0.0358	Pulse	0.5000	3
Se	78	72	H2	49.437	ppb	0.8	3699.59	0.0217	Pulse	1.5000	3
Na	23	45	He	4895.605	ppb	2.2	907913.89	17.8670	Pulse	0.1000	3
Mg	24	45	He	5074.380	ppb	3.2	466053.51	9.1729	Pulse	0.1000	3
Al	27	45	He	5109.729	ppb	2.1	151378.54	2.9790	Pulse	0.1000	3
K	39	45	He	5166.953	ppb	2.2	328386.21	6.4621	Pulse	0.1000	3
Ca	44	45	He	5147.001	ppb	1.2	17841.47	0.3510	Pulse	0.1000	3
Ti	47	45	He	5124.063	ppb	2.1	138487.55	2.7253	Pulse	0.1000	3
V	51	45	He	516.709	ppb	2.2	559585.13	11.0123	Pulse	0.5000	3
Cr	52	45	He	489.505	ppb	2.4	733712.93	14.4394	Pulse	0.1000	3
Mn	55	45	He	516.604	ppb	3.3	326449.09	6.4253	Pulse	0.1000	3
Fe	57	45	He	5100.908	ppb	2.1	148444.76	2.9212	Pulse	0.1000	3
Co	59	45	He	506.264	ppb	2.0	1412386.07	27.7912	Mix	0.1000	3
Ni	60	72	He	484.582	ppb	1.1	392217.27	4.5124	Pulse	0.1000	3
Cu	63	72	He	462.540	ppb	1.5	1103395.37	12.6950	Pulse	0.1000	3
Zn	66	72	He	494.090	ppb	1.3	132376.42	1.5230	Pulse	0.1000	3
As	75	72	He	499.776	ppb	1.8	93280.62	1.0733	Pulse	0.5000	3
Sr	88	115	He	52.537	ppb	2.4	40936.83	0.4630	Pulse	0.1000	3
Mo	98	115	He	50.056	ppb	1.0	97313.11	1.1003	Pulse	0.1000	3
Ag	107	115	He	50.475	ppb	2.1	210052.30	2.3754	Pulse	0.1000	3
Cd	111	115	He	51.318	ppb	0.8	24174.90	0.2734	Pulse	0.5000	3
Sn	120	115	He	53.374	ppb	1.8	74095.16	0.8379	Pulse	0.1000	3
Sb	121	115	He	52.731	ppb	1.4	66483.33	0.7517	Pulse	0.1000	3
Ba	137	115	He	526.123	ppb	2.0	222354.16	2.5145	Pulse	0.1000	3
Tl	205	159	He	50.656	ppb	0.5	512893.99	1.2469	Pulse	0.1000	3
Pb	208	159	He	50.522	ppb	0.9	674307.83	1.6393	Pulse	0.1000	3
U	238	209	He	50.254	ppb	0.7	776482.23	2.4753	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2583237.98	1.6	99.1	Analog	0.1000	3
No Gas	Ge	72	1249191.21	0.1	96.9	Pulse	0.1000	3
H2	Sc	45	204806.60	0.5	99.4	Pulse	0.1000	3
H2	Ge	72	170463.11	1.3	104.7	Pulse	0.1000	3
H2	In	115	409572.07	0.3	101.5	Pulse	0.1000	3
He	Sc	45	50829.76	2.1	99.3	Pulse	0.1000	3
He	Ge	72	86927.87	1.4	106.2	Pulse	0.1000	3
He	In	115	88442.91	1.2	100.9	Pulse	0.1000	3
He	Tb	159	411344.24	0.3	102.4	Pulse	0.1000	3
He	Bi	209	313706.61	0.7	102.5	Pulse	0.1000	3

No Gas



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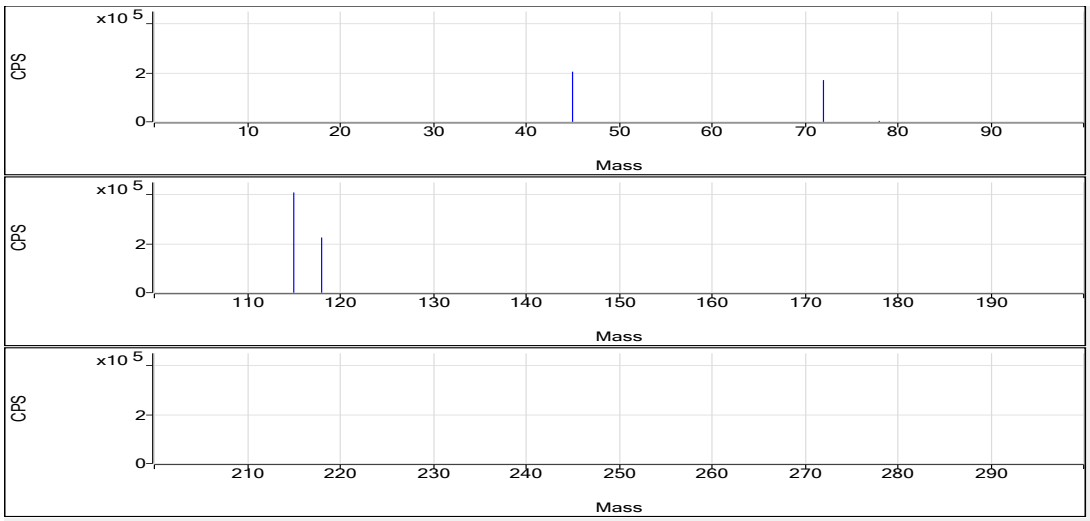
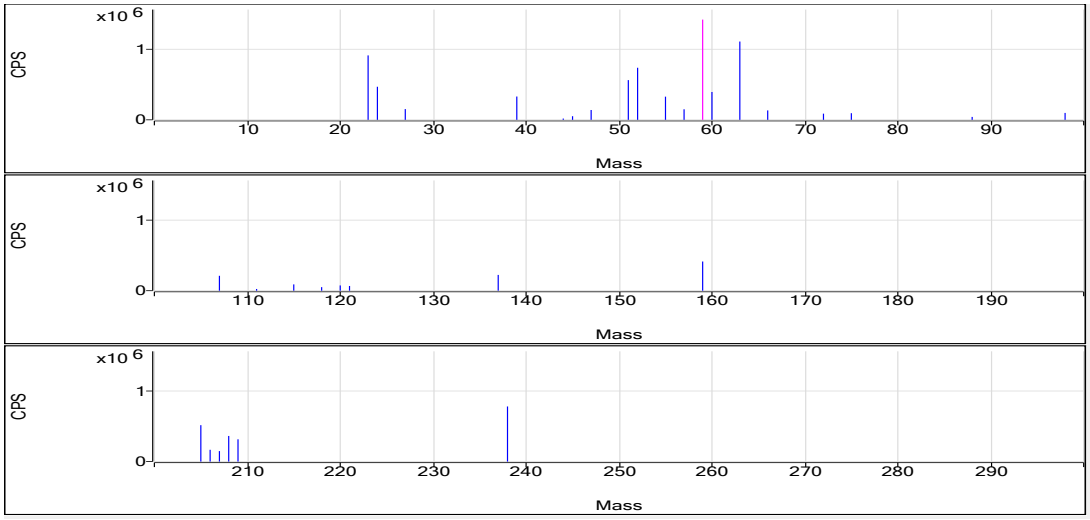


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.219	0.0366	93038.71	0.0007	3.404E-05
Be	9	1	No Gas	47.952	0.035	91724.55	0.0007	3.404E-05
Be	9	1	No Gas	48.938	0.0357	92286.16	0.0007	3.404E-05
Se	78	2	H2	49.053	0.0215	3695.82	0.0004	3.546E-05
Se	78	2	H2	49.402	0.0217	3725.82	0.0004	3.546E-05
Se	78	2	H2	49.855	0.0219	3677.14	0.0004	3.546E-05
Na	23	3	He	4843.875	17.6826	911050.77	0.0036	0.4171
Na	23	3	He	5018.697	18.3058	908429.36	0.0036	0.4171
Na	23	3	He	4824.243	17.6126	904261.55	0.0036	0.4171
Mg	24	3	He	4969.304	8.983	462827.57	0.0018	0.004553
Mg	24	3	He	5259.118	9.5067	471771.75	0.0018	0.004553
Mg	24	3	He	4994.718	9.029	463561.20	0.0018	0.004553
Al	27	3	He	5028.934	2.9319	151058.98	0.0006	0.002085
Al	27	3	He	5228.303	3.0481	151261.04	0.0006	0.002085
Al	27	3	He	5071.949	2.957	151815.59	0.0006	0.002085
K	39	3	He	5158.262	6.4519	332417.18	0.0012	0.4112
K	39	3	He	5284.997	6.6003	327542.85	0.0012	0.4112
K	39	3	He	5057.6	6.334	325198.61	0.0012	0.4112
Ca	44	3	He	5171.545	0.3527	18171.78	0.0001	0.003322
Ca	44	3	He	5194.934	0.3543	17581.11	0.0001	0.003322
Ca	44	3	He	5074.525	0.3461	17771.51	0.0001	0.003322
Ti	47	3	He	5090.492	2.7074	139493.49	0.0005	0
Ti	47	3	He	5246.431	2.7904	138473.17	0.0005	0
Ti	47	3	He	5035.265	2.6781	137495.99	0.0005	0
V	51	3	He	508.45	10.8368	558337.88	0.0213	0.0318
V	51	3	He	529.668	11.2877	560156.50	0.0213	0.0318
V	51	3	He	512.008	10.9124	560261.00	0.0213	0.0318
Cr	52	3	He	481.888	14.2154	732408.74	0.0294	0.04297
Cr	52	3	He	502.787	14.83	735943.19	0.0294	0.04297
Cr	52	3	He	483.841	14.2728	732786.86	0.0294	0.04297
Mn	55	3	He	506.191	6.2958	324376.32	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	536.208	6.669	330951.67	0.0124	0.002801
Mn	55	3	He	507.415	6.311	324019.29	0.0124	0.002801
Fe	57	3	He	4995.08	2.8607	147388.52	0.0006	0.002732
Fe	57	3	He	5212.472	2.9851	148134.12	0.0006	0.002732
Fe	57	3	He	5095.173	2.9179	149811.65	0.0006	0.002732
Co	59	3	He	509.711	27.9804	1441614.04	0.0549	0.003644
Co	59	3	He	514.091	28.2208	1400466.70	0.0549	0.003644
Co	59	3	He	494.991	27.1725	1395077.48	0.0549	0.003644
Ni	60	3	He	485.561	4.5215	392712.26	0.0093	0.01413
Ni	60	3	He	489.166	4.555	390530.81	0.0093	0.01413
Ni	60	3	He	479.019	4.4608	393408.74	0.0093	0.01413
Cu	63	3	He	463.486	12.7209	1104860.76	0.0274	0.009321
Cu	63	3	He	468.732	12.8648	1102985.37	0.0274	0.009321
Cu	63	3	He	455.404	12.4992	1102339.98	0.0274	0.009321
Zn	66	3	He	499.195	1.5386	133637.92	0.0031	0.005913
Zn	66	3	He	496.293	1.5297	131155.17	0.0031	0.005913
Zn	66	3	He	486.782	1.5005	132336.17	0.0031	0.005913
As	75	3	He	502.359	1.0788	93698.05	0.0021	0.0008698
As	75	3	He	507.125	1.089	93369.76	0.0021	0.0008698
As	75	3	He	489.845	1.0519	92774.04	0.0021	0.0008698
Sr	88	3	He	53.984	0.4757	41481.53	0.0088	0.0006843
Sr	88	3	He	51.752	0.456	40569.04	0.0088	0.0006843
Sr	88	3	He	51.874	0.4571	40759.93	0.0088	0.0006843
Mo	98	3	He	50.091	1.1011	96017.92	0.0219	0.001827
Mo	98	3	He	50.551	1.1112	98847.28	0.0219	0.001827
Mo	98	3	He	49.526	1.0887	97074.14	0.0219	0.001827
Ag	107	3	He	51.622	2.4293	211845.00	0.047	0.001064
Ag	107	3	He	50.247	2.3646	210353.79	0.047	0.001064
Ag	107	3	He	49.558	2.3322	207958.12	0.047	0.001064
Cd	111	3	He	51.665	0.2752	23998.58	0.0053	6.086E-05
Cd	111	3	He	51.39	0.2737	24351.23	0.0053	6.086E-05
Cd	111	3	He	50.898	0.2711	24174.88	0.0053	6.086E-05
Sn	120	3	He	54.5	0.8553	74581.23	0.0154	0.01483
Sn	120	3	He	52.937	0.8312	73937.79	0.0154	0.01483
Sn	120	3	He	52.686	0.8273	73766.47	0.0154	0.01483
Sb	121	3	He	52.476	0.7481	65233.94	0.0143	0.0002661
Sb	121	3	He	53.573	0.7637	67936.96	0.0143	0.0002661
Sb	121	3	He	52.143	0.7433	66279.08	0.0143	0.0002661
Ba	137	3	He	537.992	2.5712	224219.45	0.0048	0.0002665
Ba	137	3	He	522.577	2.4976	222178.30	0.0048	0.0002665
Ba	137	3	He	517.8	2.4747	220664.74	0.0048	0.0002665
Tl	205	3	He	50.908	1.2531	514770.58	0.0246	0.002755
Tl	205	3	He	50.67	1.2472	511727.80	0.0246	0.002755
Tl	205	3	He	50.39	1.2404	512183.59	0.0246	0.002755
Pb	208	3	He	50.112	1.626	358234.84	0.0324	0.002158
Pb	208	3	He	50.97	1.6538	361605.46	0.0324	0.002158
Pb	208	3	He	50.484	1.638	362657.89	0.0324	0.002158
U	238	3	He	50.003	2.4629	775997.96	0.0492	0.0004023
U	238	3	He	50.077	2.4666	776396.55	0.0492	0.0004023
U	238	3	He	50.68	2.4963	777052.18	0.0492	0.0004023
Sc	45	1	No Gas			2540667.93		
Sc	45	1	No Gas			2623067.46		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2585978.56		
Ge	72	1	No Gas			1249577.64		
Ge	72	1	No Gas			1247376.15		
Ge	72	1	No Gas			1250619.83		
Sc	45	2	H2			204205.93		
Sc	45	2	H2			206080.37		
Sc	45	2	H2			204133.49		
Ge	72	2	H2			171608.92		
Ge	72	2	H2			171781.79		
Ge	72	2	H2			167998.63		
In	115	2	H2			409883.12		
In	115	2	H2			408341.17		
In	115	2	H2			410491.91		
Sc	45	3	He			51522.37		
Sc	45	3	He			49625.32		
Sc	45	3	He			51341.60		
Ge	72	3	He			86854.08		
Ge	72	3	He			85736.95		
Ge	72	3	He			88192.59		
In	115	3	He			87586.00		
In	115	3	He			89356.97		
In	115	3	He			89557.91		
Tb	159	3	He			410809.92		
Tb	159	3	He			410290.03		
Tb	159	3	He			412932.77		
Bi	209	3	He			315069.55		
Bi	209	3	He			314766.48		
Bi	209	3	He			311283.80		

Quantitation Report

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Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

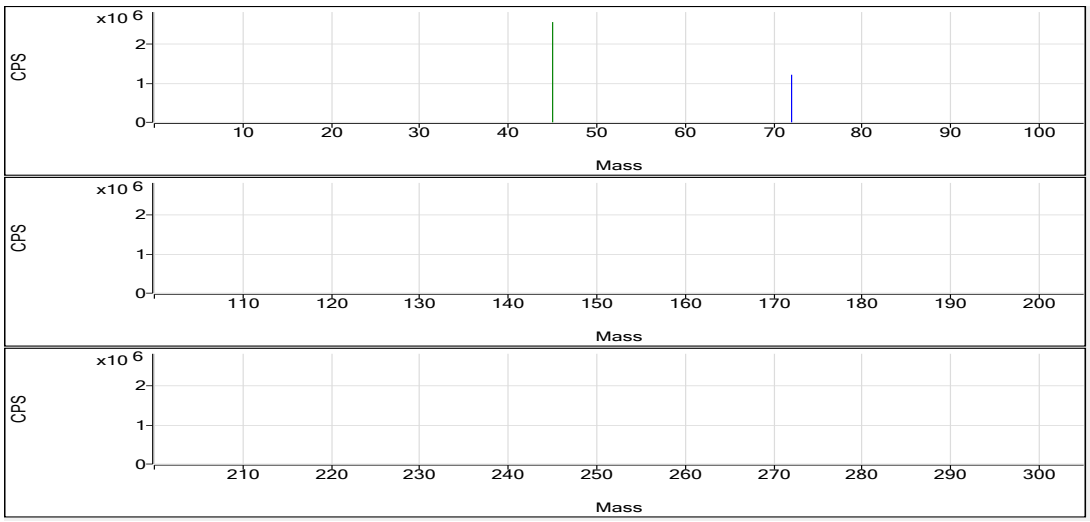
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.019	ppb	N/A	51.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.005	ppb	296.0	6.22	0.0000	Pulse	1.5000	3
Na	23	45	He	2.156	ppb	130.5	21693.12	0.4247	Pulse	0.1000	3
Mg	24	45	He	0.151	ppb	384.5	246.68	0.0048	Pulse	0.1000	3
Al	27	45	He	0.342	ppb	147.2	116.67	0.0023	Pulse	0.1000	3
K	39	45	He	3.755	ppb	338.3	21229.24	0.4156	Pulse	0.1000	3
Ca	44	45	He	-0.832	ppb	N/A	166.67	0.0033	Pulse	0.1000	3
Ti	47	45	He	1.105	ppb	57.8	30.00	0.0006	Pulse	0.1000	3
V	51	45	He	-0.244	ppb	N/A	1359.41	0.0266	Pulse	0.5000	3
Cr	52	45	He	0.017	ppb	181.7	2220.25	0.0435	Pulse	0.1000	3
Mn	55	45	He	0.058	ppb	72.0	180.01	0.0035	Pulse	0.1000	3
Fe	57	45	He	-0.323	ppb	N/A	130.01	0.0025	Pulse	0.1000	3
Co	59	45	He	0.050	ppb	57.9	326.68	0.0064	Pulse	0.1000	3
Ni	60	72	He	-1.097	ppb	N/A	333.35	0.0039	Pulse	0.1000	3
Cu	63	72	He	-0.061	ppb	N/A	646.71	0.0077	Pulse	0.1000	3
Zn	66	72	He	0.268	ppb	26.4	570.03	0.0067	Pulse	0.1000	3
As	75	72	He	0.161	ppb	32.3	102.67	0.0012	Pulse	0.5000	3
Sr	88	115	He	0.028	ppb	33.2	83.33	0.0009	Pulse	0.1000	3
Mo	98	115	He	-0.043	ppb	N/A	80.00	0.0009	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	1750.9	96.67	0.0011	Pulse	0.1000	3
Cd	111	115	He	0.007	ppb	131.5	8.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.106	ppb	88.5	1476.81	0.0165	Pulse	0.1000	3
Sb	121	115	He	0.041	ppb	30.2	76.67	0.0009	Pulse	0.1000	3
Ba	137	115	He	0.029	ppb	159.9	36.67	0.0004	Pulse	0.1000	3
Tl	205	159	He	-0.036	ppb	N/A	756.72	0.0019	Pulse	0.1000	3
Pb	208	159	He	-0.009	ppb	N/A	753.38	0.0019	Pulse	0.1000	3
U	238	209	He	0.042	ppb	10.4	773.39	0.0025	Pulse	0.1000	3

ISTD Table:

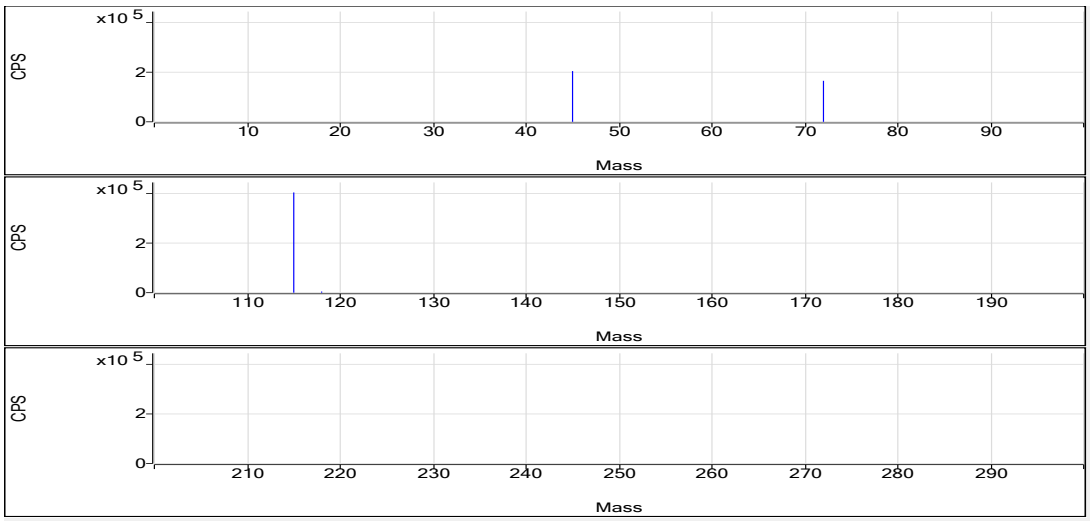
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2571929.75	1.8	98.6	Analog	0.1000	3
No Gas	Ge	72	1220281.83	1.4	94.7	Pulse	0.1000	3
H2	Sc	45	204837.23	1.1	99.4	Pulse	0.1000	3
H2	Ge	72	165600.64	0.9	101.7	Pulse	0.1000	3
H2	In	115	404665.11	0.6	100.2	Pulse	0.1000	3
He	Sc	45	51077.06	0.6	99.8	Pulse	0.1000	3
He	Ge	72	84587.06	1.4	103.3	Pulse	0.1000	3
He	In	115	89758.07	1.9	102.4	Pulse	0.1000	3
He	Tb	159	404975.97	0.5	100.8	Pulse	0.1000	3
He	Bi	209	313218.08	0.6	102.3	Pulse	0.1000	3

No Gas

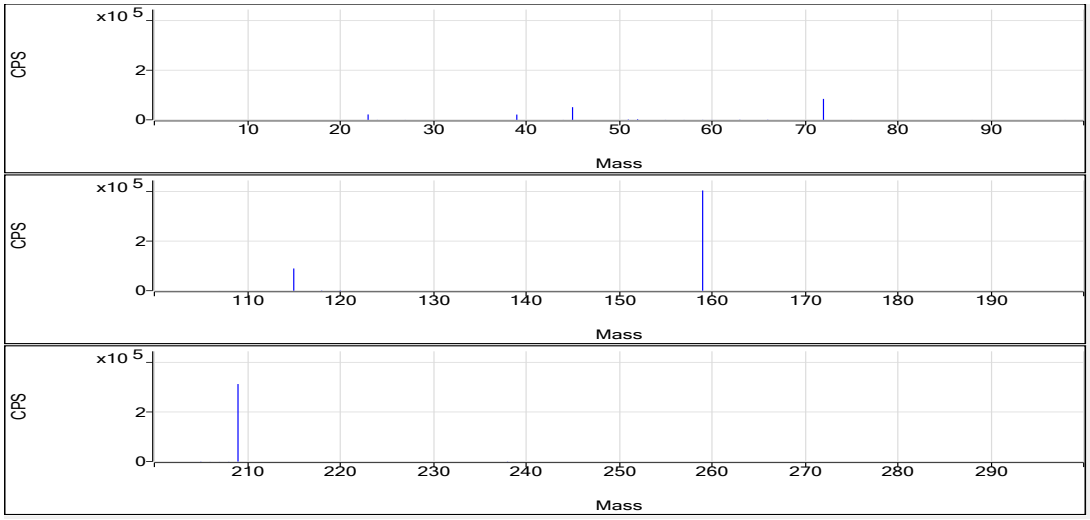


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.023	0	46.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.02	0	50.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.016	0	58.00	0.0007	3.404E-05
Se	78	2	H2	0.003	0	6.00	0.0004	3.546E-05
Se	78	2	H2	0.02	0	7.33	0.0004	3.546E-05
Se	78	2	H2	-0.008	0	5.33	0.0004	3.546E-05
Na	23	3	He	-0.936	0.4137	21265.82	0.0036	0.4171
Na	23	3	He	4.563	0.4333	22117.14	0.0036	0.4171
Na	23	3	He	2.842	0.4272	21696.40	0.0036	0.4171
Mg	24	3	He	0.818	0.006	310.01	0.0018	0.004553
Mg	24	3	He	-0.243	0.0041	210.01	0.0018	0.004553
Mg	24	3	He	-0.122	0.0043	220.01	0.0018	0.004553
Al	27	3	He	0.763	0.0025	130.01	0.0006	0.002085
Al	27	3	He	-0.215	0.002	100.00	0.0006	0.002085
Al	27	3	He	0.477	0.0024	120.00	0.0006	0.002085
K	39	3	He	10.983	0.424	21796.68	0.0012	0.4112
K	39	3	He	11.195	0.4243	21656.43	0.0012	0.4112
K	39	3	He	-10.913	0.3984	20234.60	0.0012	0.4112
Ca	44	3	He	-17.493	0.0021	110.00	0.0001	0.003322
Ca	44	3	He	17.534	0.0045	230.01	0.0001	0.003322
Ca	44	3	He	-2.536	0.0032	160.01	0.0001	0.003322
Ti	47	3	He	0.732	0.0004	20.00	0.0005	0
Ti	47	3	He	1.842	0.001	50.00	0.0005	0
Ti	47	3	He	0.74	0.0004	20.00	0.0005	0
V	51	3	He	-0.284	0.0258	1324.07	0.0213	0.0318
V	51	3	He	-0.248	0.0265	1354.07	0.0213	0.0318
V	51	3	He	-0.199	0.0276	1400.08	0.0213	0.0318
Cr	52	3	He	0.008	0.0432	2220.23	0.0294	0.04297
Cr	52	3	He	0.051	0.0445	2270.26	0.0294	0.04297
Cr	52	3	He	-0.008	0.0427	2170.26	0.0294	0.04297
Mn	55	3	He	0.072	0.0037	190.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.011	0.0029	150.01	0.0124	0.002801
Mn	55	3	He	0.091	0.0039	200.01	0.0124	0.002801
Fe	57	3	He	-1.034	0.0021	110.01	0.0006	0.002732
Fe	57	3	He	-0.323	0.0025	130.01	0.0006	0.002732
Fe	57	3	He	0.388	0.003	150.01	0.0006	0.002732
Co	59	3	He	0.082	0.0082	420.02	0.0549	0.003644
Co	59	3	He	0.041	0.0059	300.02	0.0549	0.003644
Co	59	3	He	0.027	0.0051	260.01	0.0549	0.003644
Ni	60	3	He	-1.171	0.0033	280.02	0.0093	0.01413
Ni	60	3	He	-0.93	0.0055	460.02	0.0093	0.01413
Ni	60	3	He	-1.189	0.0031	260.01	0.0093	0.01413
Cu	63	3	He	-0.09	0.0069	590.04	0.0274	0.009321
Cu	63	3	He	-0.066	0.0075	630.05	0.0274	0.009321
Cu	63	3	He	-0.028	0.0086	720.05	0.0274	0.009321
Zn	66	3	He	0.348	0.007	600.04	0.0031	0.005913
Zn	66	3	He	0.213	0.0066	550.03	0.0031	0.005913
Zn	66	3	He	0.244	0.0067	560.03	0.0031	0.005913
As	75	3	He	0.104	0.0011	94.00	0.0021	0.0008698
As	75	3	He	0.207	0.0013	110.00	0.0021	0.0008698
As	75	3	He	0.171	0.0012	104.00	0.0021	0.0008698
Sr	88	3	He	0.023	0.0009	80.00	0.0088	0.0006843
Sr	88	3	He	0.022	0.0009	80.00	0.0088	0.0006843
Sr	88	3	He	0.038	0.001	90.00	0.0088	0.0006843
Mo	98	3	He	-0.058	0.0006	50.00	0.0219	0.001827
Mo	98	3	He	-0.043	0.0009	80.00	0.0219	0.001827
Mo	98	3	He	-0.026	0.0013	110.01	0.0219	0.001827
Ag	107	3	He	0.003	0.0012	110.00	0.047	0.001064
Ag	107	3	He	-0.006	0.0008	70.00	0.047	0.001064
Ag	107	3	He	0.004	0.0012	110.00	0.047	0.001064
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Cd	111	3	He	0.009	0.0001	10.00	0.0053	6.086E-05
Cd	111	3	He	0.014	0.0001	12.00	0.0053	6.086E-05
Sn	120	3	He	0.028	0.0153	1370.13	0.0154	0.01483
Sn	120	3	He	0.08	0.0161	1470.15	0.0154	0.01483
Sn	120	3	He	0.21	0.0181	1590.15	0.0154	0.01483
Sb	121	3	He	0.028	0.0007	60.00	0.0143	0.0002661
Sb	121	3	He	0.043	0.0009	80.00	0.0143	0.0002661
Sb	121	3	He	0.053	0.001	90.00	0.0143	0.0002661
Ba	137	3	He	-0.009	0.0002	20.00	0.0048	0.0002665
Ba	137	3	He	0.081	0.0007	60.00	0.0048	0.0002665
Ba	137	3	He	0.016	0.0003	30.00	0.0048	0.0002665
Tl	205	3	He	-0.032	0.002	790.06	0.0246	0.002755
Tl	205	3	He	-0.033	0.0019	790.05	0.0246	0.002755
Tl	205	3	He	-0.043	0.0017	690.05	0.0246	0.002755
Pb	208	3	He	-0.006	0.002	380.02	0.0324	0.002158
Pb	208	3	He	-0.008	0.0019	450.03	0.0324	0.002158
Pb	208	3	He	-0.013	0.0017	330.02	0.0324	0.002158
U	238	3	He	0.044	0.0025	800.06	0.0492	0.0004023
U	238	3	He	0.037	0.0022	700.04	0.0492	0.0004023
U	238	3	He	0.045	0.0026	820.06	0.0492	0.0004023
Sc	45	1	No Gas			2616051.68		
Sc	45	1	No Gas			2524859.65		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2574877.93		
Ge	72	1	No Gas			1234769.83		
Ge	72	1	No Gas			1201610.29		
Ge	72	1	No Gas			1224465.37		
Sc	45	2	H2			203687.87		
Sc	45	2	H2			207368.08		
Sc	45	2	H2			203455.74		
Ge	72	2	H2			164123.98		
Ge	72	2	H2			165500.06		
Ge	72	2	H2			167177.87		
In	115	2	H2			402416.05		
In	115	2	H2			404535.15		
In	115	2	H2			407044.13		
Sc	45	3	He			51401.53		
Sc	45	3	He			51040.80		
Sc	45	3	He			50788.85		
Ge	72	3	He			85938.44		
Ge	72	3	He			83744.69		
Ge	72	3	He			84078.05		
In	115	3	He			89798.66		
In	115	3	He			91490.28		
In	115	3	He			88007.59		
Tb	159	3	He			402877.69		
Tb	159	3	He			405643.20		
Tb	159	3	He			406407.03		
Bi	209	3	He			314323.22		
Bi	209	3	He			314411.50		
Bi	209	3	He			310919.53		

Quantitation Report

Data File Name	160SMPL.d
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Sample Type	Sample
Comment	F6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

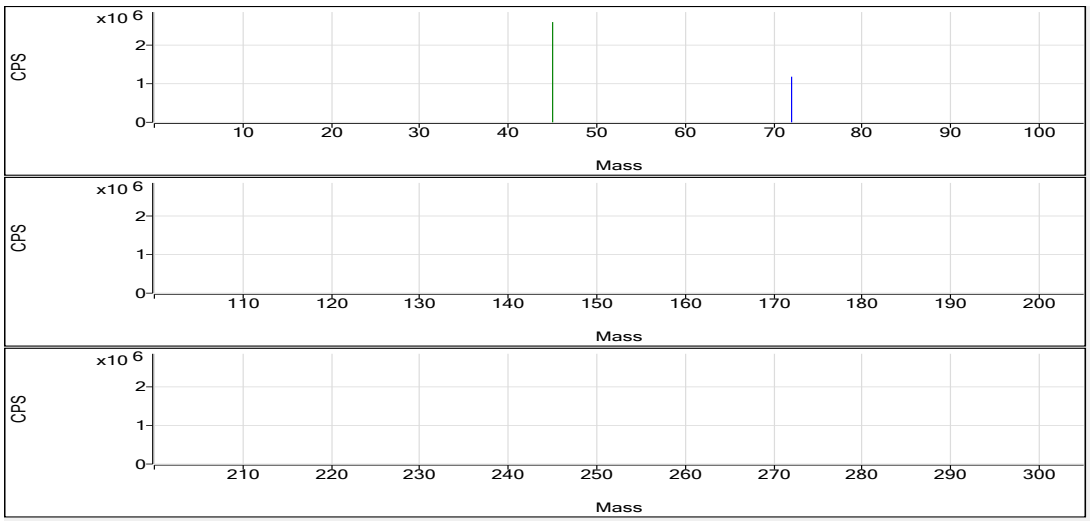
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.035	ppb	N/A	21.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.047	ppb	N/A	2.44	0.0000	Pulse	1.5000	3
Na	23	45	He	169153.389	ppb	0.6	31022805.37	603.3495	Analog	0.1000	3
Mg	24	45	He	0.064	ppb	459.0	240.01	0.0047	Pulse	0.1000	3
Al	27	45	He	0.311	ppb	869.1	116.67	0.0023	Pulse	0.1000	3
K	39	45	He	2.539	ppb	309.6	21296.18	0.4142	Pulse	0.1000	3
Ca	44	45	He	-7.896	ppb	N/A	143.34	0.0028	Pulse	0.1000	3
Ti	47	45	He	0.366	ppb	0.4	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	-0.447	ppb	N/A	1146.72	0.0223	Pulse	0.5000	3
Cr	52	45	He	0.073	ppb	61.4	2320.26	0.0451	Pulse	0.1000	3
Mn	55	45	He	0.082	ppb	42.5	196.68	0.0038	Pulse	0.1000	3
Fe	57	45	He	0.550	ppb	309.5	156.67	0.0030	Pulse	0.1000	3
Co	59	45	He	-0.009	ppb	N/A	163.34	0.0032	Pulse	0.1000	3
Ni	60	72	He	-1.064	ppb	N/A	350.01	0.0042	Pulse	0.1000	3
Cu	63	72	He	-0.101	ppb	N/A	540.03	0.0065	Pulse	0.1000	3
Zn	66	72	He	-0.702	ppb	N/A	310.01	0.0038	Pulse	0.1000	3
As	75	72	He	-0.014	ppb	N/A	69.33	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.083	ppb	76.5	126.67	0.0014	Pulse	0.1000	3
Mo	98	115	He	-0.053	ppb	N/A	60.00	0.0007	Pulse	0.1000	3
Ag	107	115	He	0.029	ppb	12.5	216.68	0.0024	Pulse	0.1000	3
Cd	111	115	He	-0.007	ppb	N/A	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.081	ppb	58.8	1440.12	0.0161	Pulse	0.1000	3
Sb	121	115	He	0.026	ppb	88.7	56.67	0.0006	Pulse	0.1000	3
Ba	137	115	He	0.240	ppb	39.7	126.67	0.0014	Pulse	0.1000	3
Tl	205	159	He	-0.095	ppb	N/A	173.34	0.0004	Pulse	0.1000	3
Pb	208	159	He	-0.023	ppb	N/A	580.03	0.0014	Pulse	0.1000	3
U	238	209	He	-0.003	ppb	N/A	76.67	0.0002	Pulse	0.1000	3

ISTD Table:

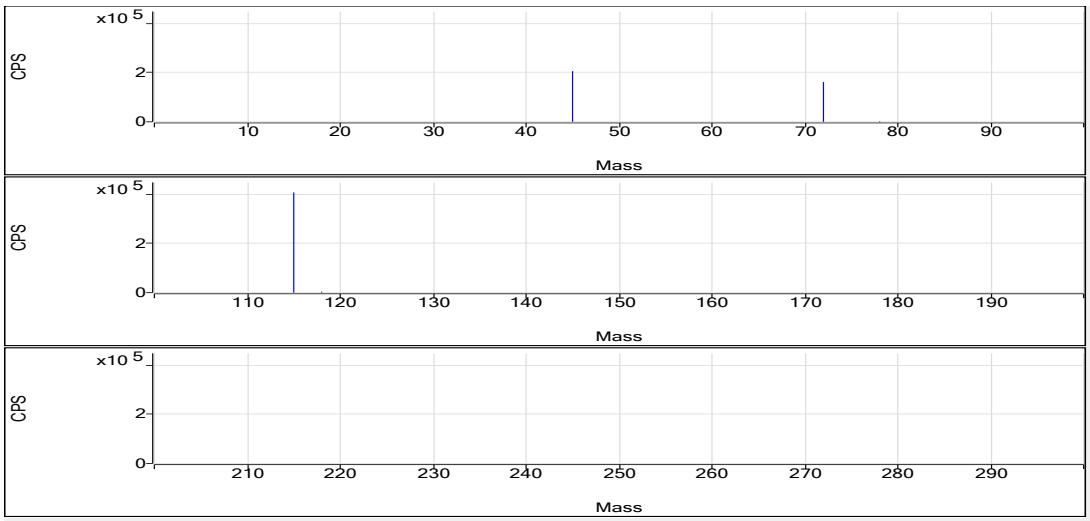
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2581980.07	1.1	99.0	Analog	0.1000	3
No Gas	Ge	72	1174508.63	0.6	91.1	Pulse	0.1000	3
H2	Sc	45	206659.92	1.4	100.3	Pulse	0.1000	3
H2	Ge	72	162636.51	1.2	99.9	Pulse	0.1000	3
H2	In	115	408439.25	1.0	101.2	Pulse	0.1000	3
He	Sc	45	51418.31	0.4	100.4	Pulse	0.1000	3
He	Ge	72	82487.53	1.1	100.8	Pulse	0.1000	3
He	In	115	89540.16	1.0	102.2	Pulse	0.1000	3
He	Tb	159	408560.40	0.2	101.7	Pulse	0.1000	3
He	Bi	209	314460.18	0.6	102.7	Pulse	0.1000	3

No Gas

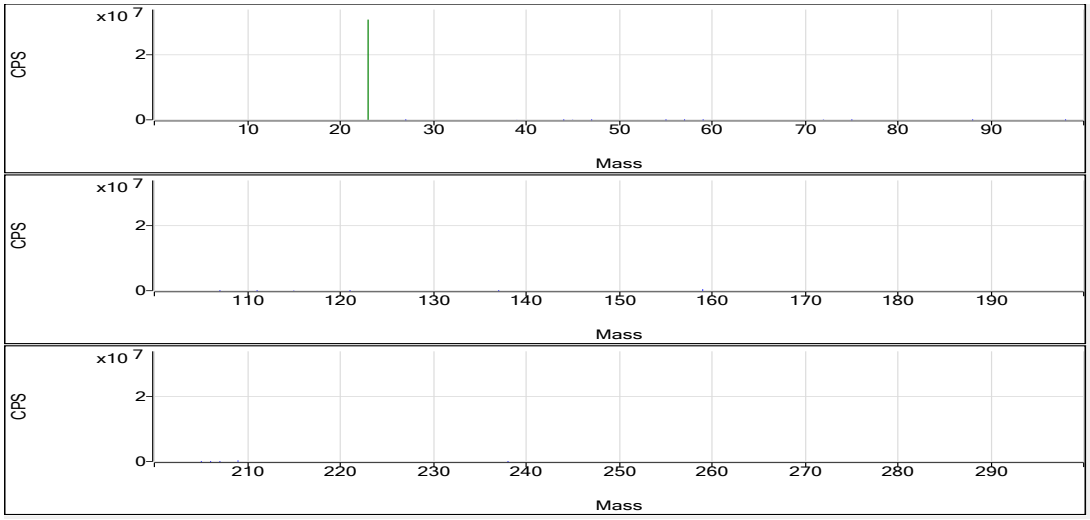


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.034	0	24.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.037	0	18.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.035	0	22.00	0.0007	3.404E-05
Se	78	2	H2	-0.062	0	1.33	0.0004	3.546E-05
Se	78	2	H2	-0.034	0	3.33	0.0004	3.546E-05
Se	78	2	H2	-0.044	0	2.67	0.0004	3.546E-05
Na	23	3	He	169944.898	606.1708	31024462.04	0.0036	0.4171
Na	23	3	He	167901.114	598.8859	30885712.04	0.0036	0.4171
Na	23	3	He	169614.155	604.9919	31158242.04	0.0036	0.4171
Mg	24	3	He	0.4	0.0053	270.01	0.0018	0.004553
Mg	24	3	He	-0.051	0.0045	230.01	0.0018	0.004553
Mg	24	3	He	-0.156	0.0043	220.01	0.0018	0.004553
Al	27	3	He	-1.566	0.0012	60.00	0.0006	0.002085
Al	27	3	He	3.412	0.0041	210.01	0.0006	0.002085
Al	27	3	He	-0.912	0.0016	80.00	0.0006	0.002085
K	39	3	He	-1.823	0.4091	20935.66	0.0012	0.4112
K	39	3	He	11.614	0.4248	21907.09	0.0012	0.4112
K	39	3	He	-2.173	0.4086	21045.80	0.0012	0.4112
Ca	44	3	He	-5.786	0.0029	150.01	0.0001	0.003322
Ca	44	3	He	-17.595	0.0021	110.01	0.0001	0.003322
Ca	44	3	He	-0.308	0.0033	170.01	0.0001	0.003322
Ti	47	3	He	0.367	0.0002	10.00	0.0005	0
Ti	47	3	He	0.365	0.0002	10.00	0.0005	0
Ti	47	3	He	0.365	0.0002	10.00	0.0005	0
V	51	3	He	-0.496	0.0213	1088.05	0.0213	0.0318
V	51	3	He	-0.423	0.0228	1176.06	0.0213	0.0318
V	51	3	He	-0.422	0.0228	1176.06	0.0213	0.0318
Cr	52	3	He	0.027	0.0438	2240.25	0.0294	0.04297
Cr	52	3	He	0.075	0.0452	2330.27	0.0294	0.04297
Cr	52	3	He	0.117	0.0464	2390.27	0.0294	0.04297
Mn	55	3	He	0.042	0.0033	170.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.102	0.0041	210.01	0.0124	0.002801
Mn	55	3	He	0.103	0.0041	210.01	0.0124	0.002801
Fe	57	3	He	0.348	0.0029	150.01	0.0006	0.002732
Fe	57	3	He	2.343	0.0041	210.01	0.0006	0.002732
Fe	57	3	He	-1.042	0.0021	110.00	0.0006	0.002732
Co	59	3	He	-0.017	0.0027	140.01	0.0549	0.003644
Co	59	3	He	0.008	0.0041	210.01	0.0549	0.003644
Co	59	3	He	-0.017	0.0027	140.01	0.0549	0.003644
Ni	60	3	He	-0.968	0.0051	420.02	0.0093	0.01413
Ni	60	3	He	-1.083	0.0041	340.01	0.0093	0.01413
Ni	60	3	He	-1.142	0.0035	290.01	0.0093	0.01413
Cu	63	3	He	-0.085	0.007	570.03	0.0274	0.009321
Cu	63	3	He	-0.108	0.0064	530.03	0.0274	0.009321
Cu	63	3	He	-0.11	0.0063	520.02	0.0274	0.009321
Zn	66	3	He	-0.769	0.0036	290.01	0.0031	0.005913
Zn	66	3	He	-0.56	0.0042	350.02	0.0031	0.005913
Zn	66	3	He	-0.779	0.0035	290.01	0.0031	0.005913
As	75	3	He	-0.063	0.0007	60.00	0.0021	0.0008698
As	75	3	He	0.075	0.001	86.00	0.0021	0.0008698
As	75	3	He	-0.055	0.0008	62.00	0.0021	0.0008698
Sr	88	3	He	0.114	0.0017	150.01	0.0088	0.0006843
Sr	88	3	He	0.126	0.0018	160.01	0.0088	0.0006843
Sr	88	3	He	0.01	0.0008	70.00	0.0088	0.0006843
Mo	98	3	He	-0.053	0.0007	60.00	0.0219	0.001827
Mo	98	3	He	-0.053	0.0007	60.00	0.0219	0.001827
Mo	98	3	He	-0.053	0.0007	60.00	0.0219	0.001827
Ag	107	3	He	0.032	0.0026	230.01	0.047	0.001064
Ag	107	3	He	0.025	0.0022	200.01	0.047	0.001064
Ag	107	3	He	0.029	0.0024	220.01	0.047	0.001064
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Sn	120	3	He	0.131	0.0169	1500.14	0.0154	0.01483
Sn	120	3	He	0.036	0.0154	1370.11	0.0154	0.01483
Sn	120	3	He	0.076	0.016	1450.11	0.0154	0.01483
Sb	121	3	He	0.013	0.0004	40.00	0.0143	0.0002661
Sb	121	3	He	0.052	0.001	90.00	0.0143	0.0002661
Sb	121	3	He	0.012	0.0004	40.00	0.0143	0.0002661
Ba	137	3	He	0.132	0.0009	80.00	0.0048	0.0002665
Ba	137	3	He	0.273	0.0016	140.01	0.0048	0.0002665
Ba	137	3	He	0.314	0.0018	160.01	0.0048	0.0002665
Tl	205	3	He	-0.094	0.0004	180.01	0.0246	0.002755
Tl	205	3	He	-0.098	0.0003	140.01	0.0246	0.002755
Tl	205	3	He	-0.092	0.0005	200.01	0.0246	0.002755
Pb	208	3	He	-0.018	0.0016	360.02	0.0324	0.002158
Pb	208	3	He	-0.025	0.0013	280.02	0.0324	0.002158
Pb	208	3	He	-0.025	0.0013	330.02	0.0324	0.002158
U	238	3	He	-0.003	0.0003	80.00	0.0492	0.0004023
U	238	3	He	-0.003	0.0003	80.00	0.0492	0.0004023
U	238	3	He	-0.004	0.0002	70.00	0.0492	0.0004023
Sc	45	1	No Gas			2598713.24		
Sc	45	1	No Gas			2598518.87		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2548708.09		
Ge	72	1	No Gas			1181578.42		
Ge	72	1	No Gas			1174325.14		
Ge	72	1	No Gas			1167622.33		
Sc	45	2	H2			205349.25		
Sc	45	2	H2			204643.71		
Sc	45	2	H2			209986.81		
Ge	72	2	H2			161038.48		
Ge	72	2	H2			162029.25		
Ge	72	2	H2			164841.79		
In	115	2	H2			412039.10		
In	115	2	H2			404156.17		
In	115	2	H2			409122.49		
Sc	45	3	He			51181.06		
Sc	45	3	He			51571.95		
Sc	45	3	He			51501.92		
Ge	72	3	He			81652.57		
Ge	72	3	He			83453.17		
Ge	72	3	He			82356.85		
In	115	3	He			89014.57		
In	115	3	He			89045.35		
In	115	3	He			90584.12		
Tb	159	3	He			407784.17		
Tb	159	3	He			408225.35		
Tb	159	3	He			409671.67		
Bi	209	3	He			314831.40		
Bi	209	3	He			312464.41		
Bi	209	3	He			316084.74		

Quantitation Report

Data File Name	161SMPL.d
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Sample Type	Sample
Comment	F6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

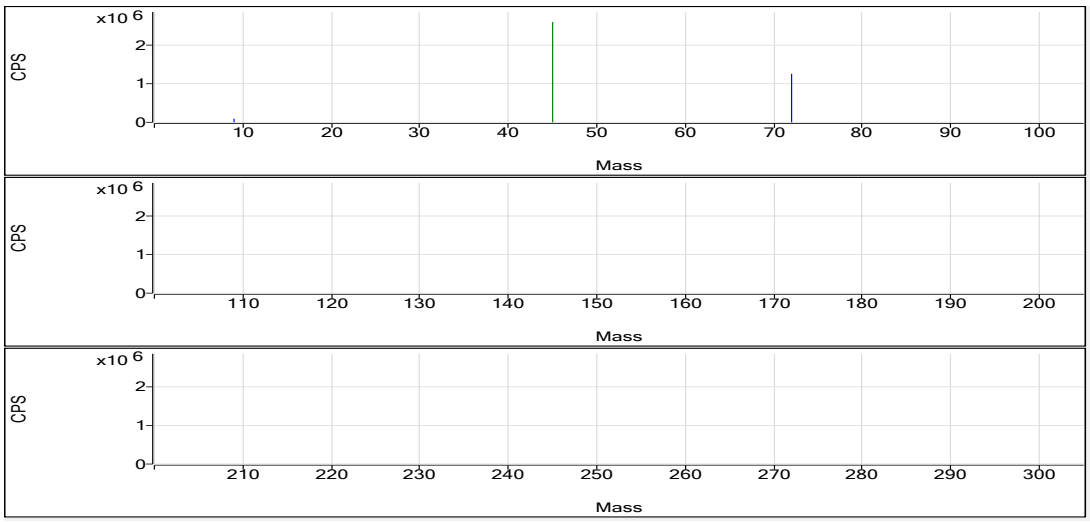
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	49.274	ppb	0.7	93685.43	0.0359	Pulse	0.5000	3
Se	78	72	H2	98.814	ppb	1.5	7499.53	0.0433	Pulse	1.5000	3
Na	23	45	He	152463.834	ppb	1.0	28239238.75	543.8610	Analog	0.1000	3
Mg	24	45	He	4894.993	ppb	1.0	459470.06	8.8488	Pulse	0.1000	3
Al	27	45	He	4941.673	ppb	1.4	149593.75	2.8811	Pulse	0.1000	3
K	39	45	He	4964.345	ppb	1.9	323207.96	6.2248	Pulse	0.1000	3
Ca	44	45	He	5099.777	ppb	2.9	18061.65	0.3478	Pulse	0.1000	3
Ti	47	45	He	514.458	ppb	0.9	14207.38	0.2736	Pulse	0.1000	3
V	51	45	He	504.681	ppb	1.0	558529.19	10.7567	Pulse	0.5000	3
Cr	52	45	He	475.945	ppb	0.8	729057.78	14.0406	Pulse	0.1000	3
Mn	55	45	He	499.245	ppb	1.0	322421.44	6.2095	Pulse	0.1000	3
Fe	57	45	He	5001.039	ppb	3.0	148706.68	2.8641	Pulse	0.1000	3
Co	59	45	He	489.265	ppb	2.1	1394754.72	26.8581	Mix	0.1000	3
Ni	60	72	He	471.408	ppb	0.8	386003.76	4.3901	Pulse	0.1000	3
Cu	63	72	He	458.145	ppb	0.1	1105626.99	12.5744	Pulse	0.1000	3
Zn	66	72	He	491.146	ppb	0.7	133113.40	1.5139	Pulse	0.1000	3
As	75	72	He	492.421	ppb	1.0	92979.41	1.0575	Pulse	0.5000	3
Sr	88	115	He	53.203	ppb	1.0	41528.59	0.4688	Pulse	0.1000	3
Mo	98	115	He	50.049	ppb	1.8	97444.12	1.1002	Pulse	0.1000	3
Ag	107	115	He	49.265	ppb	2.8	205319.83	2.3185	Pulse	0.1000	3
Cd	111	115	He	51.801	ppb	2.9	24435.38	0.2759	Pulse	0.5000	3
Sn	120	115	He	104.791	ppb	2.7	144420.37	1.6308	Pulse	0.1000	3
Sb	121	115	He	106.910	ppb	1.9	134959.32	1.5238	Pulse	0.1000	3
Ba	137	115	He	522.204	ppb	1.7	221058.97	2.4958	Pulse	0.1000	3
Tl	205	159	He	100.962	ppb	0.5	1008870.48	2.4824	Pulse	0.1000	3
Pb	208	159	He	50.737	ppb	0.9	669039.49	1.6463	Pulse	0.1000	3
U	238	209	He	50.461	ppb	0.2	771384.31	2.4855	Pulse	0.1000	3

ISTD Table:

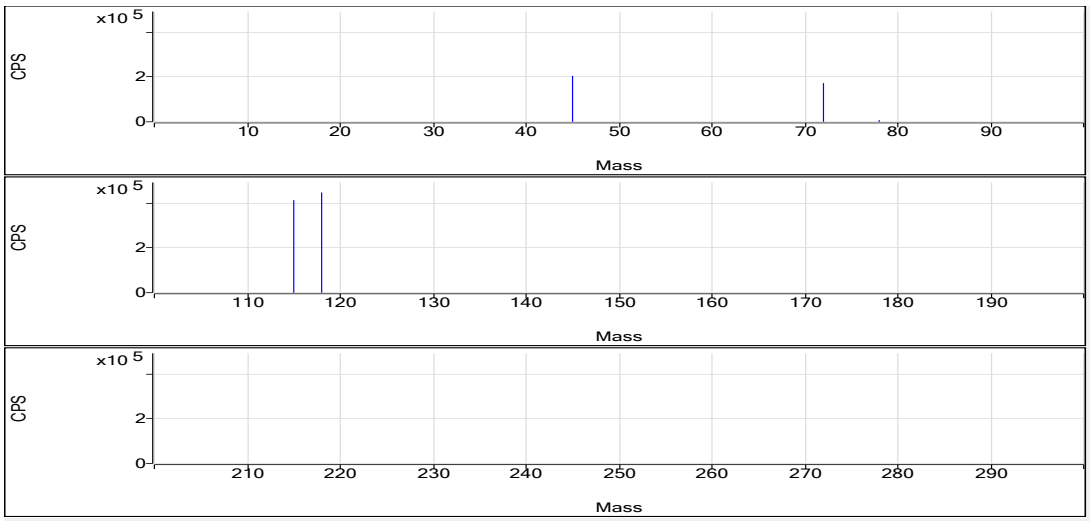
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2607466.84	1.6	100.0	Analog	0.1000	3
No Gas	Ge	72	1261511.86	0.7	97.9	Pulse	0.1000	3
H2	Sc	45	204985.97	0.3	99.5	Pulse	0.1000	3
H2	Ge	72	173007.37	0.2	106.3	Pulse	0.1000	3
H2	In	115	413425.65	1.3	102.4	Pulse	0.1000	3
He	Sc	45	51926.93	1.0	101.4	Pulse	0.1000	3
He	Ge	72	87926.73	0.4	107.4	Pulse	0.1000	3
He	In	115	88595.56	2.3	101.1	Pulse	0.1000	3
He	Tb	159	406417.70	0.9	101.2	Pulse	0.1000	3
He	Bi	209	310354.11	0.7	101.4	Pulse	0.1000	3

No Gas

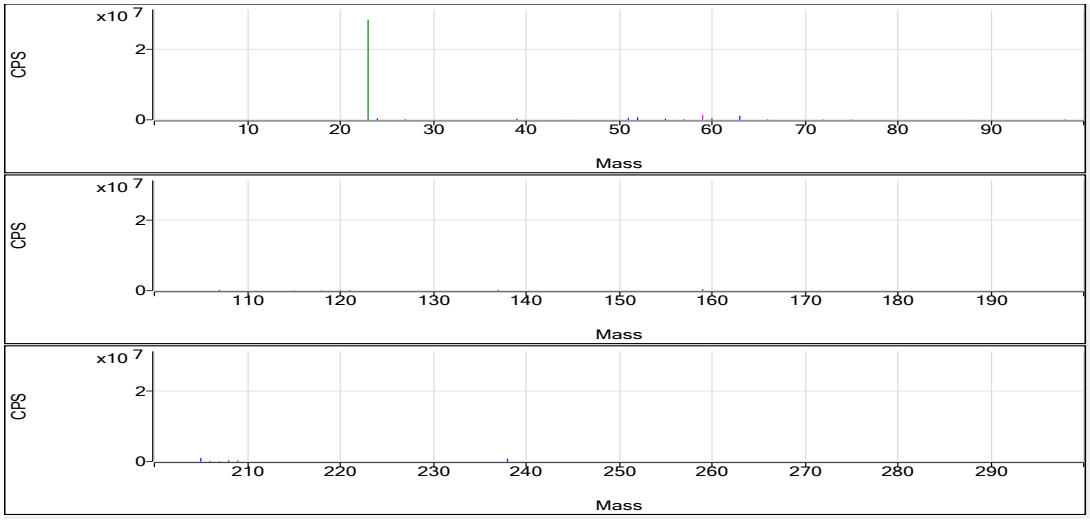


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	49.016	0.0357	94918.66	0.0007	3.404E-05
Be	9	1	No Gas	49.692	0.0362	93278.07	0.0007	3.404E-05
Be	9	1	No Gas	49.115	0.0358	92859.57	0.0007	3.404E-05
Se	78	2	H2	99.601	0.0437	7546.00	0.0004	3.546E-05
Se	78	2	H2	99.709	0.0437	7588.03	0.0004	3.546E-05
Se	78	2	H2	97.132	0.0426	7364.57	0.0004	3.546E-05
Na	23	3	He	151550.907	540.607	28324989.58	0.0036	0.4171
Na	23	3	He	154193.355	550.0258	28244802.08	0.0036	0.4171
Na	23	3	He	151647.24	540.9504	28147924.58	0.0036	0.4171
Mg	24	3	He	4897.204	8.8528	463839.13	0.0018	0.004553
Mg	24	3	He	4944.03	8.9374	458950.19	0.0018	0.004553
Mg	24	3	He	4843.743	8.7562	455620.85	0.0018	0.004553
Al	27	3	He	4922.602	2.87	150371.07	0.0006	0.002085
Al	27	3	He	5018.305	2.9257	150240.82	0.0006	0.002085
Al	27	3	He	4884.111	2.8475	148169.35	0.0006	0.002085
K	39	3	He	4954.789	6.2136	325561.25	0.0012	0.4112
K	39	3	He	5061.554	6.3386	325500.89	0.0012	0.4112
K	39	3	He	4876.691	6.1222	318561.75	0.0012	0.4112
Ca	44	3	He	5166.623	0.3524	18462.06	0.0001	0.003322
Ca	44	3	He	5203.306	0.3548	18221.80	0.0001	0.003322
Ca	44	3	He	4929.401	0.3363	17501.10	0.0001	0.003322
Ti	47	3	He	510.908	0.2717	14237.36	0.0005	0
Ti	47	3	He	519.824	0.2765	14197.44	0.0005	0
Ti	47	3	He	512.641	0.2727	14187.34	0.0005	0
V	51	3	He	502.311	10.7064	560957.06	0.0213	0.0318
V	51	3	He	510.36	10.8774	558574.19	0.0213	0.0318
V	51	3	He	501.37	10.6864	556056.31	0.0213	0.0318
Cr	52	3	He	475.997	14.0421	735732.88	0.0294	0.04297
Cr	52	3	He	479.867	14.1559	726931.32	0.0294	0.04297
Cr	52	3	He	471.972	13.9237	724509.13	0.0294	0.04297
Mn	55	3	He	498.069	6.1949	324578.73	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	504.857	6.2793	322450.76	0.0124	0.002801
Mn	55	3	He	494.807	6.1543	320234.84	0.0124	0.002801
Fe	57	3	He	5025.338	2.878	150791.30	0.0006	0.002732
Fe	57	3	He	5138.158	2.9425	151104.30	0.0006	0.002732
Fe	57	3	He	4839.619	2.7717	144224.44	0.0006	0.002732
Co	59	3	He	500.479	27.4737	1439477.48	0.0549	0.003644
Co	59	3	He	487.631	26.7684	1374607.32	0.0549	0.003644
Co	59	3	He	479.684	26.3323	1370179.35	0.0549	0.003644
Ni	60	3	He	472.739	4.4025	387421.21	0.0093	0.01413
Ni	60	3	He	466.915	4.3484	383539.88	0.0093	0.01413
Ni	60	3	He	474.57	4.4195	387050.19	0.0093	0.01413
Cu	63	3	He	458.76	12.5913	1108037.95	0.0274	0.009321
Cu	63	3	He	457.715	12.5626	1108045.37	0.0274	0.009321
Cu	63	3	He	457.96	12.5693	1100797.64	0.0274	0.009321
Zn	66	3	He	492.861	1.5192	133690.27	0.0031	0.005913
Zn	66	3	He	487.026	1.5013	132416.03	0.0031	0.005913
Zn	66	3	He	493.55	1.5213	133233.89	0.0031	0.005913
As	75	3	He	497.089	1.0675	93939.77	0.0021	0.0008698
As	75	3	He	487.156	1.0462	92274.75	0.0021	0.0008698
As	75	3	He	493.018	1.0588	92723.70	0.0021	0.0008698
Sr	88	3	He	53.127	0.4681	41581.95	0.0088	0.0006843
Sr	88	3	He	52.703	0.4644	42023.49	0.0088	0.0006843
Sr	88	3	He	53.78	0.4739	40980.34	0.0088	0.0006843
Mo	98	3	He	50.271	1.105	98153.02	0.0219	0.001827
Mo	98	3	He	49.051	1.0783	97567.96	0.0219	0.001827
Mo	98	3	He	50.826	1.1172	96611.39	0.0219	0.001827
Ag	107	3	He	49.285	2.3194	206018.90	0.047	0.001064
Ag	107	3	He	47.879	2.2533	203891.13	0.047	0.001064
Ag	107	3	He	50.631	2.3827	206049.47	0.047	0.001064
Cd	111	3	He	51.502	0.2743	24367.24	0.0053	6.086E-05
Cd	111	3	He	50.497	0.269	24339.20	0.0053	6.086E-05
Cd	111	3	He	53.405	0.2845	24599.71	0.0053	6.086E-05
Sn	120	3	He	104.393	1.6246	144306.17	0.0154	0.01483
Sn	120	3	He	102.204	1.5909	143952.80	0.0154	0.01483
Sn	120	3	He	107.775	1.6768	145002.14	0.0154	0.01483
Sb	121	3	He	106.982	1.5248	135436.91	0.0143	0.0002661
Sb	121	3	He	104.828	1.4941	135195.00	0.0143	0.0002661
Sb	121	3	He	108.921	1.5524	134246.05	0.0143	0.0002661
Ba	137	3	He	522.093	2.4952	221637.42	0.0048	0.0002665
Ba	137	3	He	513.552	2.4544	222093.51	0.0048	0.0002665
Ba	137	3	He	530.967	2.5377	219445.99	0.0048	0.0002665
Tl	205	3	He	101.345	2.4918	1010615.45	0.0246	0.002755
Tl	205	3	He	100.384	2.4682	1012720.84	0.0246	0.002755
Tl	205	3	He	101.157	2.4872	1003275.14	0.0246	0.002755
Pb	208	3	He	51.072	1.6571	357314.88	0.0324	0.002158
Pb	208	3	He	50.186	1.6284	355988.55	0.0324	0.002158
Pb	208	3	He	50.954	1.6533	356006.91	0.0324	0.002158
U	238	3	He	50.425	2.4837	766302.18	0.0492	0.0004023
U	238	3	He	50.389	2.482	776603.50	0.0492	0.0004023
U	238	3	He	50.57	2.4909	771247.25	0.0492	0.0004023
Sc	45	1	No Gas			2655526.84		
Sc	45	1	No Gas			2574177.62		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2592696.06		
Ge	72	1	No Gas			1271368.81		
Ge	72	1	No Gas			1259640.92		
Ge	72	1	No Gas			1253525.84		
Sc	45	2	H2			205573.28		
Sc	45	2	H2			205189.04		
Sc	45	2	H2			204195.58		
Ge	72	2	H2			172706.09		
Ge	72	2	H2			173480.80		
Ge	72	2	H2			172835.21		
In	115	2	H2			410107.03		
In	115	2	H2			419398.47		
In	115	2	H2			410771.44		
Sc	45	3	He			52394.79		
Sc	45	3	He			51351.78		
Sc	45	3	He			52034.21		
Ge	72	3	He			88000.43		
Ge	72	3	He			88201.78		
Ge	72	3	He			87577.99		
In	115	3	He			89598.13		
In	115	3	He			91249.01		
In	115	3	He			87233.19		
Tb	159	3	He			405572.65		
Tb	159	3	He			410303.51		
Tb	159	3	He			403376.95		
Bi	209	3	He			308531.23		
Bi	209	3	He			312899.53		
Bi	209	3	He			309631.56		

Quantitation Report

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Acq Time	8/9/2023 7:19:14 PM
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Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

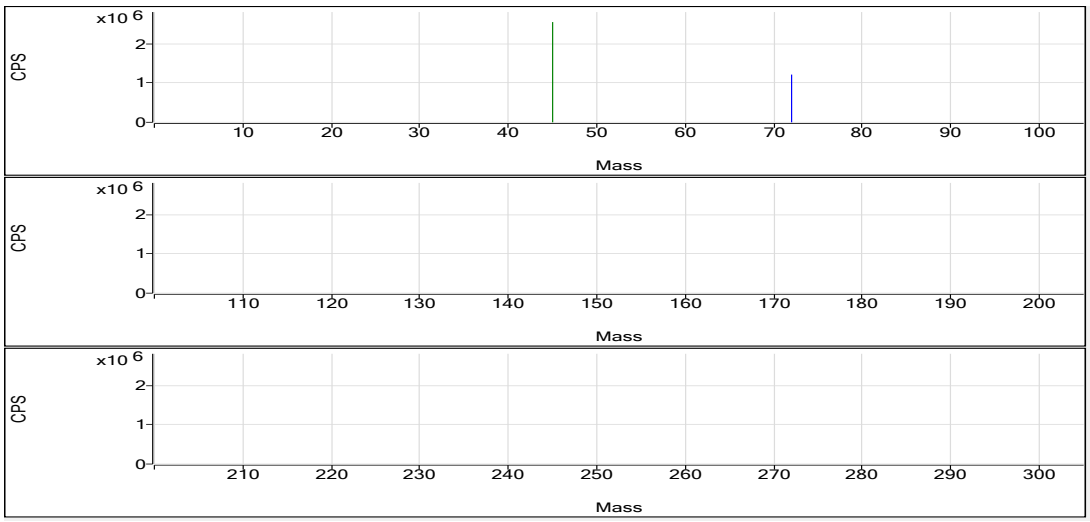
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.015	ppb	N/A	58.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.049	ppb	67.8	9.33	0.0001	Pulse	1.5000	3
Na	23	45	He	21.657	ppb	20.7	24894.90	0.4943	Pulse	0.1000	3
Mg	24	45	He	-0.021	ppb	N/A	226.68	0.0045	Pulse	0.1000	3
Al	27	45	He	-0.749	ppb	N/A	83.33	0.0016	Pulse	0.1000	3
K	39	45	He	0.661	ppb	1308.1	20748.67	0.4120	Pulse	0.1000	3
Ca	44	45	He	-6.232	ppb	N/A	146.67	0.0029	Pulse	0.1000	3
Ti	47	45	He	0.123	ppb	173.2	3.33	0.0001	Pulse	0.1000	3
V	51	45	He	-0.285	ppb	N/A	1296.73	0.0257	Pulse	0.5000	3
Cr	52	45	He	-0.052	ppb	N/A	2086.90	0.0415	Pulse	0.1000	3
Mn	55	45	He	0.041	ppb	68.2	166.68	0.0033	Pulse	0.1000	3
Fe	57	45	He	-0.156	ppb	N/A	133.34	0.0026	Pulse	0.1000	3
Co	59	45	He	0.042	ppb	66.6	300.01	0.0060	Pulse	0.1000	3
Ni	60	72	He	-1.111	ppb	N/A	323.35	0.0038	Pulse	0.1000	3
Cu	63	72	He	-0.039	ppb	N/A	700.04	0.0083	Pulse	0.1000	3
Zn	66	72	He	0.255	ppb	144.1	566.70	0.0067	Pulse	0.1000	3
As	75	72	He	0.098	ppb	145.0	91.33	0.0011	Pulse	0.5000	3
Sr	88	115	He	0.021	ppb	253.9	76.67	0.0009	Pulse	0.1000	3
Mo	98	115	He	0.009	ppb	364.6	180.01	0.0020	Pulse	0.1000	3
Ag	107	115	He	-0.010	ppb	N/A	53.33	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.003	ppb	90.6	6.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.121	ppb	40.4	1480.13	0.0167	Pulse	0.1000	3
Sb	121	115	He	0.013	ppb	183.1	40.00	0.0005	Pulse	0.1000	3
Ba	137	115	He	0.047	ppb	106.9	43.33	0.0005	Pulse	0.1000	3
Tl	205	159	He	0.036	ppb	30.7	1466.81	0.0036	Pulse	0.1000	3
Pb	208	159	He	-0.022	ppb	N/A	586.70	0.0015	Pulse	0.1000	3
U	238	209	He	0.056	ppb	18.5	993.41	0.0032	Pulse	0.1000	3

ISTD Table:

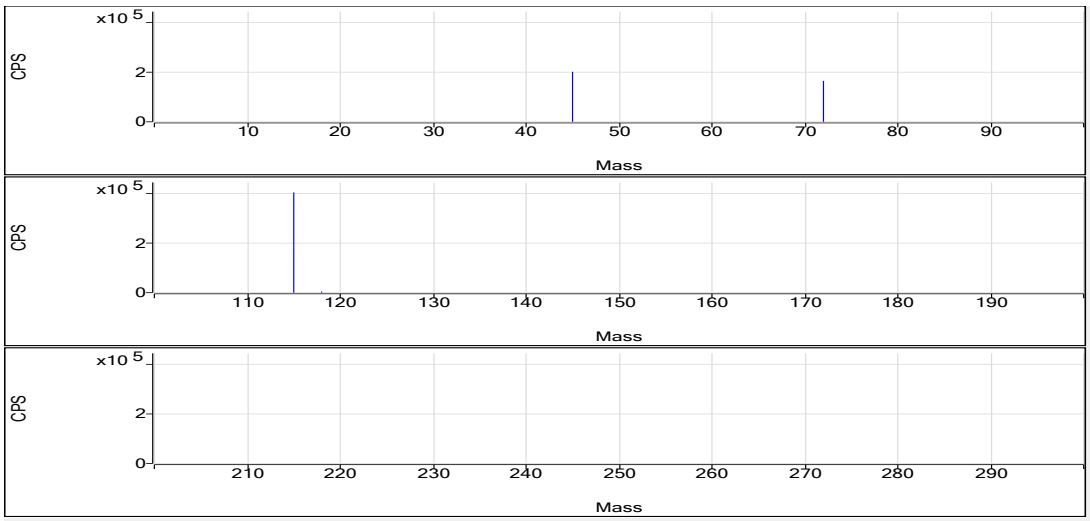
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2544251.42	0.4	97.6	Analog	0.1000	3
No Gas	Ge	72	1211141.13	0.4	94.0	Pulse	0.1000	3
H2	Sc	45	201340.39	0.4	97.7	Pulse	0.1000	3
H2	Ge	72	164716.80	0.6	101.2	Pulse	0.1000	3
H2	In	115	403278.39	0.7	99.9	Pulse	0.1000	3
He	Sc	45	50377.86	1.8	98.4	Pulse	0.1000	3
He	Ge	72	84720.34	1.4	103.5	Pulse	0.1000	3
He	In	115	88667.75	1.2	101.2	Pulse	0.1000	3
He	Tb	159	402911.71	0.3	100.3	Pulse	0.1000	3
He	Bi	209	312433.18	0.4	102.1	Pulse	0.1000	3

No Gas

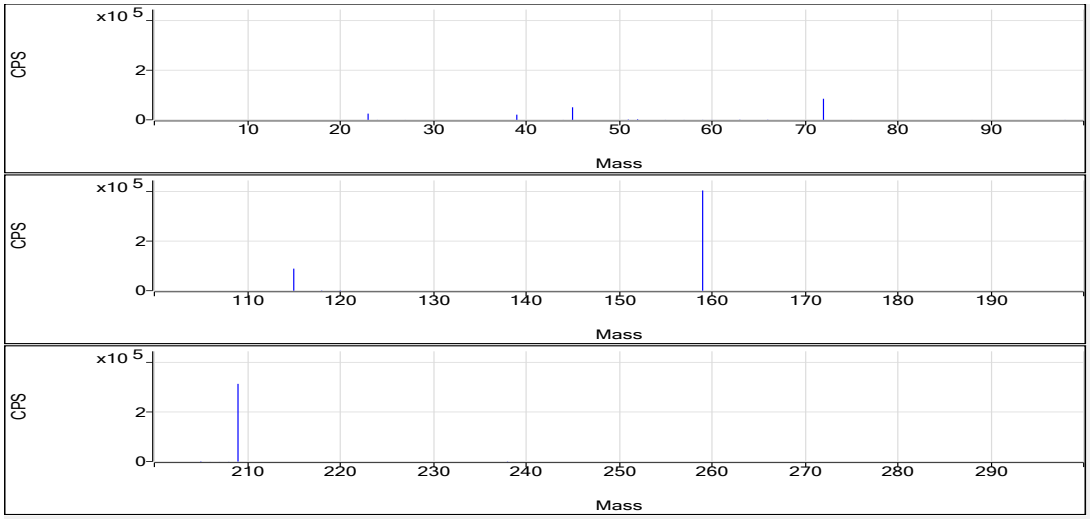


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.014	0	60.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.01	0	68.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.022	0	46.00	0.0007	3.404E-05
Se	78	2	H2	0.03	0	8.00	0.0004	3.546E-05
Se	78	2	H2	0.086	0.0001	12.00	0.0004	3.546E-05
Se	78	2	H2	0.029	0	8.00	0.0004	3.546E-05
Na	23	3	He	23.378	0.5004	24681.23	0.0036	0.4171
Na	23	3	He	25.029	0.5063	25712.98	0.0036	0.4171
Na	23	3	He	16.563	0.4761	24290.48	0.0036	0.4171
Mg	24	3	He	0.847	0.0061	300.01	0.0018	0.004553
Mg	24	3	He	-0.667	0.0033	170.01	0.0018	0.004553
Mg	24	3	He	-0.242	0.0041	210.01	0.0018	0.004553
Al	27	3	He	-1.838	0.001	50.00	0.0006	0.002085
Al	27	3	He	0.477	0.0024	120.00	0.0006	0.002085
Al	27	3	He	-0.887	0.0016	80.00	0.0006	0.002085
K	39	3	He	9.417	0.4222	20825.48	0.0012	0.4112
K	39	3	He	-7.884	0.402	20414.81	0.0012	0.4112
K	39	3	He	0.451	0.4117	21005.71	0.0012	0.4112
Ca	44	3	He	-19.161	0.002	100.00	0.0001	0.003322
Ca	44	3	He	-14.197	0.0024	120.00	0.0001	0.003322
Ca	44	3	He	14.66	0.0043	220.01	0.0001	0.003322
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.37	0.0002	10.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	-0.309	0.0252	1244.06	0.0213	0.0318
V	51	3	He	-0.301	0.0254	1290.07	0.0213	0.0318
V	51	3	He	-0.246	0.0266	1356.07	0.0213	0.0318
Cr	52	3	He	0.021	0.0436	2150.25	0.0294	0.04297
Cr	52	3	He	-0.015	0.0425	2160.24	0.0294	0.04297
Cr	52	3	He	-0.161	0.0382	1950.20	0.0294	0.04297
Mn	55	3	He	0.068	0.0036	180.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.012	0.003	150.01	0.0124	0.002801
Mn	55	3	He	0.043	0.0033	170.01	0.0124	0.002801
Fe	57	3	He	-0.877	0.0022	110.00	0.0006	0.002732
Fe	57	3	He	0.388	0.003	150.01	0.0006	0.002732
Fe	57	3	He	0.022	0.0027	140.01	0.0006	0.002732
Co	59	3	He	0.074	0.0077	380.02	0.0549	0.003644
Co	59	3	He	0.034	0.0055	280.01	0.0549	0.003644
Co	59	3	He	0.019	0.0047	240.01	0.0549	0.003644
Ni	60	3	He	-1.059	0.0043	360.02	0.0093	0.01413
Ni	60	3	He	-1.058	0.0043	370.02	0.0093	0.01413
Ni	60	3	He	-1.215	0.0028	240.01	0.0093	0.01413
Cu	63	3	He	-0.04	0.0082	690.04	0.0274	0.009321
Cu	63	3	He	-0.035	0.0084	720.05	0.0274	0.009321
Cu	63	3	He	-0.041	0.0082	690.04	0.0274	0.009321
Zn	66	3	He	0.678	0.008	670.04	0.0031	0.005913
Zn	66	3	He	0.005	0.0059	510.03	0.0031	0.005913
Zn	66	3	He	0.083	0.0062	520.03	0.0031	0.005913
As	75	3	He	0.262	0.0014	120.00	0.0021	0.0008698
As	75	3	He	0.017	0.0009	78.00	0.0021	0.0008698
As	75	3	He	0.015	0.0009	76.00	0.0021	0.0008698
Sr	88	3	He	0.078	0.0014	120.00	0.0088	0.0006843
Sr	88	3	He	-0.027	0.0004	40.00	0.0088	0.0006843
Sr	88	3	He	0.012	0.0008	70.00	0.0088	0.0006843
Mo	98	3	He	-0.026	0.0013	110.01	0.0219	0.001827
Mo	98	3	He	0.013	0.0021	190.01	0.0219	0.001827
Mo	98	3	He	0.04	0.0027	240.01	0.0219	0.001827
Ag	107	3	He	-0.013	0.0005	40.00	0.047	0.001064
Ag	107	3	He	-0.008	0.0007	60.00	0.047	0.001064
Ag	107	3	He	-0.008	0.0007	60.00	0.047	0.001064
Cd	111	3	He	0.001	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	0.001	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	0.006	0.0001	8.00	0.0053	6.086E-05
Sn	120	3	He	0.141	0.017	1490.13	0.0154	0.01483
Sn	120	3	He	0.065	0.0158	1420.12	0.0154	0.01483
Sn	120	3	He	0.156	0.0172	1530.15	0.0154	0.01483
Sb	121	3	He	0.037	0.0008	70.00	0.0143	0.0002661
Sb	121	3	He	-0.011	0.0001	10.00	0.0143	0.0002661
Sb	121	3	He	0.013	0.0005	40.00	0.0143	0.0002661
Ba	137	3	He	0.088	0.0007	60.00	0.0048	0.0002665
Ba	137	3	He	-0.009	0.0002	20.00	0.0048	0.0002665
Ba	137	3	He	0.062	0.0006	50.00	0.0048	0.0002665
Tl	205	3	He	0.029	0.0035	1400.13	0.0246	0.002755
Tl	205	3	He	0.03	0.0035	1410.13	0.0246	0.002755
Tl	205	3	He	0.049	0.004	1590.16	0.0246	0.002755
Pb	208	3	He	-0.024	0.0014	300.02	0.0324	0.002158
Pb	208	3	He	-0.022	0.0015	360.02	0.0324	0.002158
Pb	208	3	He	-0.02	0.0015	390.02	0.0324	0.002158
U	238	3	He	0.049	0.0028	870.07	0.0492	0.0004023
U	238	3	He	0.052	0.003	930.06	0.0492	0.0004023
U	238	3	He	0.068	0.0038	1180.10	0.0492	0.0004023
Sc	45	1	No Gas			2537789.02		
Sc	45	1	No Gas			2539811.99		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2555153.24		
Ge	72	1	No Gas			1209107.48		
Ge	72	1	No Gas			1217270.68		
Ge	72	1	No Gas			1207045.22		
Sc	45	2	H2			201093.41		
Sc	45	2	H2			200787.48		
Sc	45	2	H2			202140.29		
Ge	72	2	H2			165185.04		
Ge	72	2	H2			163557.66		
Ge	72	2	H2			165407.71		
In	115	2	H2			402173.82		
In	115	2	H2			401386.60		
In	115	2	H2			406274.76		
Sc	45	3	He			49324.44		
Sc	45	3	He			50788.95		
Sc	45	3	He			51020.20		
Ge	72	3	He			83814.88		
Ge	72	3	He			86028.19		
Ge	72	3	He			84317.94		
In	115	3	He			87605.90		
In	115	3	He			89679.05		
In	115	3	He			88742.87		
Tb	159	3	He			402484.02		
Tb	159	3	He			404160.62		
Tb	159	3	He			402090.50		
Bi	209	3	He			311322.96		
Bi	209	3	He			312157.05		
Bi	209	3	He			313819.53		

Quantitation Report

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Sample Type	CCV
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

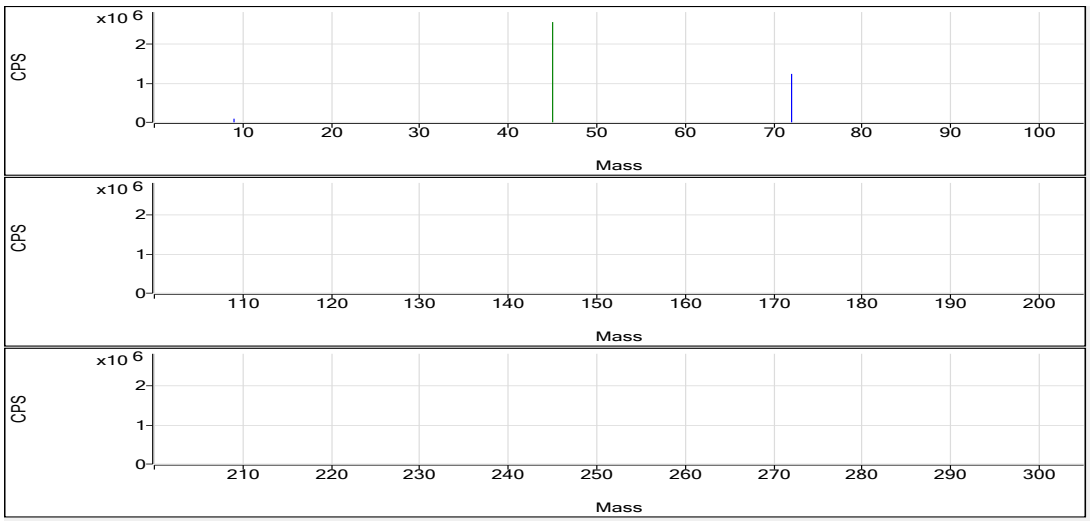
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	49.357	ppb	0.3	92676.50	0.0360	Pulse	0.5000	3
Se	78	72	H2	49.808	ppb	1.9	3645.14	0.0219	Pulse	1.5000	3
Na	23	45	He	4878.807	ppb	2.8	898453.27	17.8071	Pulse	0.1000	3
Mg	24	45	He	5072.157	ppb	1.7	462659.09	9.1689	Pulse	0.1000	3
Al	27	45	He	5072.068	ppb	1.9	149209.91	2.9570	Pulse	0.1000	3
K	39	45	He	5144.061	ppb	1.6	324730.02	6.4353	Pulse	0.1000	3
Ca	44	45	He	5047.594	ppb	3.1	17374.19	0.3443	Pulse	0.1000	3
Ti	47	45	He	5169.998	ppb	1.3	138756.65	2.7497	Pulse	0.1000	3
V	51	45	He	516.778	ppb	1.8	555755.60	11.0138	Pulse	0.5000	3
Cr	52	45	He	491.269	ppb	1.9	731216.13	14.4912	Pulse	0.1000	3
Mn	55	45	He	513.505	ppb	1.6	322307.62	6.3868	Pulse	0.1000	3
Fe	57	45	He	5104.670	ppb	0.9	147527.66	2.9234	Pulse	0.1000	3
Co	59	45	He	502.101	ppb	3.5	1390558.31	27.5627	Mix	0.1000	3
Ni	60	72	He	489.518	ppb	1.9	387194.94	4.5583	Pulse	0.1000	3
Cu	63	72	He	469.442	ppb	1.7	1094489.05	12.8842	Pulse	0.1000	3
Zn	66	72	He	493.759	ppb	1.6	129279.35	1.5220	Pulse	0.1000	3
As	75	72	He	502.226	ppb	1.2	91615.84	1.0785	Pulse	0.5000	3
Sr	88	115	He	51.213	ppb	0.3	40271.52	0.4513	Pulse	0.1000	3
Mo	98	115	He	50.455	ppb	0.5	98964.10	1.1091	Pulse	0.1000	3
Ag	107	115	He	49.658	ppb	0.4	208534.16	2.3370	Pulse	0.1000	3
Cd	111	115	He	49.913	ppb	1.8	23721.46	0.2659	Pulse	0.5000	3
Sn	120	115	He	51.856	ppb	1.0	72677.50	0.8145	Pulse	0.1000	3
Sb	121	115	He	52.298	ppb	1.7	66520.30	0.7455	Pulse	0.1000	3
Ba	137	115	He	514.822	ppb	0.7	219550.23	2.4605	Pulse	0.1000	3
Tl	205	159	He	51.240	ppb	0.1	511799.76	1.2612	Pulse	0.1000	3
Pb	208	159	He	51.244	ppb	1.1	674681.97	1.6627	Pulse	0.1000	3
U	238	209	He	50.227	ppb	1.6	770653.37	2.4740	Pulse	0.1000	3

ISTD Table:

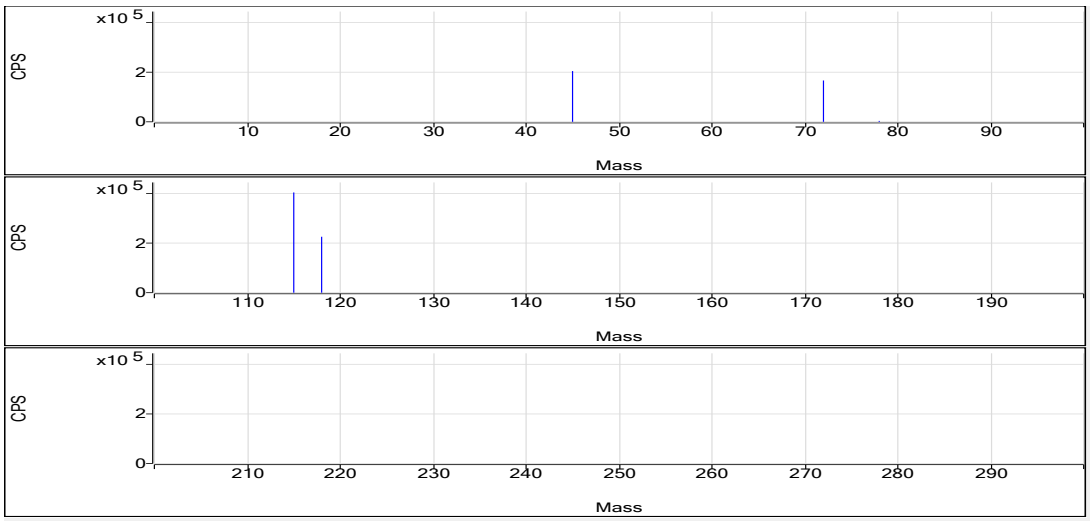
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2574873.56	0.4	98.7	Analog	0.1000	3
No Gas	Ge	72	1243397.77	0.2	96.5	Pulse	0.1000	3
H2	Sc	45	204607.96	1.0	99.3	Pulse	0.1000	3
H2	Ge	72	166671.78	1.1	102.4	Pulse	0.1000	3
H2	In	115	404139.06	1.1	100.1	Pulse	0.1000	3
He	Sc	45	50468.54	1.5	98.6	Pulse	0.1000	3
He	Ge	72	84956.01	1.4	103.8	Pulse	0.1000	3
He	In	115	89234.31	1.1	101.8	Pulse	0.1000	3
He	Tb	159	405795.55	0.6	101.0	Pulse	0.1000	3
He	Bi	209	311568.56	2.0	101.8	Pulse	0.1000	3

No Gas

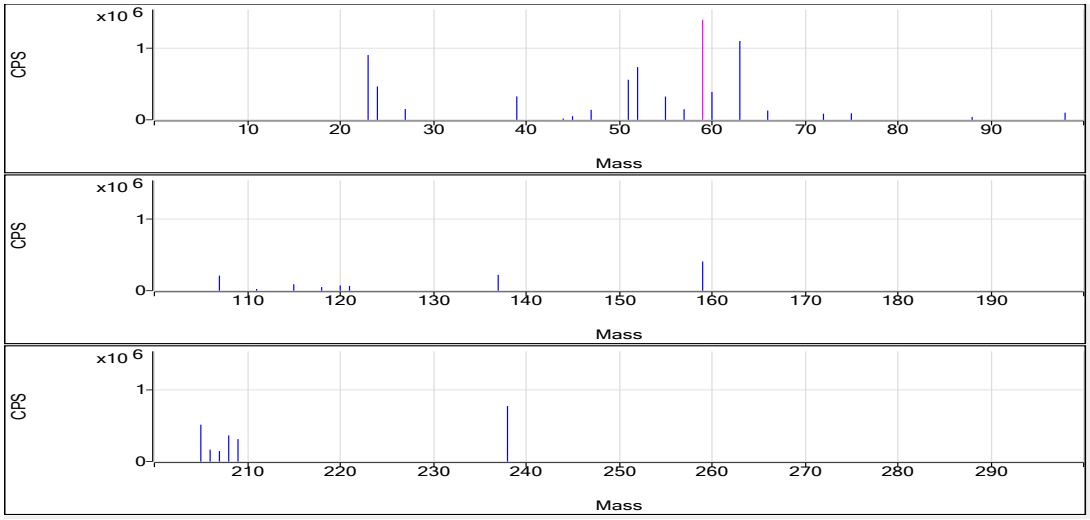


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	49.35	0.036	92857.50	0.0007	3.404E-05
Be	9	1	No Gas	49.511	0.0361	93183.60	0.0007	3.404E-05
Be	9	1	No Gas	49.211	0.0359	91988.41	0.0007	3.404E-05
Se	78	2	H2	49.713	0.0218	3625.80	0.0004	3.546E-05
Se	78	2	H2	48.937	0.0215	3547.11	0.0004	3.546E-05
Se	78	2	H2	50.773	0.0223	3762.50	0.0004	3.546E-05
Na	23	3	He	4836.198	17.6553	899356.71	0.0036	0.4171
Na	23	3	He	4766.859	17.4081	886074.52	0.0036	0.4171
Na	23	3	He	5033.365	18.358	909928.58	0.0036	0.4171
Mg	24	3	He	5023.756	9.0814	462606.59	0.0018	0.004553
Mg	24	3	He	5021.689	9.0777	462055.34	0.0018	0.004553
Mg	24	3	He	5171.024	9.3475	463315.34	0.0018	0.004553
Al	27	3	He	4980.268	2.9036	147906.85	0.0006	0.002085
Al	27	3	He	5060.156	2.9501	150160.39	0.0006	0.002085
Al	27	3	He	5175.78	3.0175	149562.48	0.0006	0.002085
K	39	3	He	5073.259	6.3524	323588.16	0.0012	0.4112
K	39	3	He	5123.481	6.4112	326329.14	0.0012	0.4112
K	39	3	He	5235.444	6.5423	324272.75	0.0012	0.4112
Ca	44	3	He	5114.929	0.3489	17771.50	0.0001	0.003322
Ca	44	3	He	4868.48	0.3322	16910.17	0.0001	0.003322
Ca	44	3	He	5159.374	0.3519	17440.90	0.0001	0.003322
Ti	47	3	He	5116.313	2.7212	138615.96	0.0005	0
Ti	47	3	He	5150.107	2.7391	139422.61	0.0005	0
Ti	47	3	He	5243.574	2.7889	138231.37	0.0005	0
V	51	3	He	515.155	10.9793	559283.69	0.0213	0.0318
V	51	3	He	508.519	10.8383	551669.50	0.0213	0.0318
V	51	3	He	526.659	11.2238	556313.63	0.0213	0.0318
Cr	52	3	He	488.754	14.4173	734414.13	0.0294	0.04297
Cr	52	3	He	483.469	14.2619	725929.91	0.0294	0.04297
Cr	52	3	He	501.584	14.7946	733304.36	0.0294	0.04297
Mn	55	3	He	518.39	6.4475	328434.72	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	504.258	6.2718	319235.62	0.0124	0.002801
Mn	55	3	He	517.868	6.441	319252.51	0.0124	0.002801
Fe	57	3	He	5108.344	2.9255	149023.30	0.0006	0.002732
Fe	57	3	He	5058.903	2.8972	147467.10	0.0006	0.002732
Fe	57	3	He	5146.762	2.9475	146092.58	0.0006	0.002732
Co	59	3	He	495.429	27.1965	1385384.98	0.0549	0.003644
Co	59	3	He	488.859	26.8359	1365948.26	0.0549	0.003644
Co	59	3	He	522.016	28.6558	1420341.70	0.0549	0.003644
Ni	60	3	He	497.732	4.6345	392640.85	0.0093	0.01413
Ni	60	3	He	479.082	4.4614	384933.00	0.0093	0.01413
Ni	60	3	He	491.741	4.5789	384010.97	0.0093	0.01413
Cu	63	3	He	477.6	13.108	1110524.91	0.0274	0.009321
Cu	63	3	He	461.818	12.6752	1093627.48	0.0274	0.009321
Cu	63	3	He	468.908	12.8696	1079314.75	0.0274	0.009321
Zn	66	3	He	495.249	1.5265	129330.04	0.0031	0.005913
Zn	66	3	He	485.04	1.4952	129006.69	0.0031	0.005913
Zn	66	3	He	500.988	1.5442	129501.33	0.0031	0.005913
As	75	3	He	504.75	1.0839	91832.02	0.0021	0.0008698
As	75	3	He	495.268	1.0636	91767.33	0.0021	0.0008698
As	75	3	He	506.661	1.088	91248.16	0.0021	0.0008698
Sr	88	3	He	51.167	0.4509	40739.86	0.0088	0.0006843
Sr	88	3	He	51.068	0.45	39946.92	0.0088	0.0006843
Sr	88	3	He	51.405	0.453	40127.77	0.0088	0.0006843
Mo	98	3	He	50.174	1.1029	99651.70	0.0219	0.001827
Mo	98	3	He	50.552	1.1112	98635.45	0.0219	0.001827
Mo	98	3	He	50.64	1.1131	98605.15	0.0219	0.001827
Ag	107	3	He	49.54	2.3314	210649.80	0.047	0.001064
Ag	107	3	He	49.529	2.3309	206901.75	0.047	0.001064
Ag	107	3	He	49.907	2.3486	208050.93	0.047	0.001064
Cd	111	3	He	48.868	0.2603	23519.78	0.0053	6.086E-05
Cd	111	3	He	50.277	0.2678	23772.21	0.0053	6.086E-05
Cd	111	3	He	50.593	0.2695	23872.39	0.0053	6.086E-05
Sn	120	3	He	51.513	0.8092	73112.87	0.0154	0.01483
Sn	120	3	He	52.481	0.8241	73153.78	0.0154	0.01483
Sn	120	3	He	51.575	0.8101	71765.86	0.0154	0.01483
Sb	121	3	He	51.419	0.733	66228.80	0.0143	0.0002661
Sb	121	3	He	53.173	0.758	67283.62	0.0143	0.0002661
Sb	121	3	He	52.304	0.7456	66048.48	0.0143	0.0002661
Ba	137	3	He	510.803	2.4413	220579.57	0.0048	0.0002665
Ba	137	3	He	516.373	2.4679	219065.82	0.0048	0.0002665
Ba	137	3	He	517.291	2.4723	219005.29	0.0048	0.0002665
Tl	205	3	He	51.221	1.2608	515339.21	0.0246	0.002755
Tl	205	3	He	51.187	1.2599	509784.09	0.0246	0.002755
Tl	205	3	He	51.312	1.263	510275.97	0.0246	0.002755
Pb	208	3	He	50.616	1.6423	362034.84	0.0324	0.002158
Pb	208	3	He	51.576	1.6734	365444.60	0.0324	0.002158
Pb	208	3	He	51.541	1.6723	361503.04	0.0324	0.002158
U	238	3	He	49.321	2.4293	773700.38	0.0492	0.0004023
U	238	3	He	50.446	2.4847	768232.33	0.0492	0.0004023
U	238	3	He	50.916	2.5079	770027.41	0.0492	0.0004023
Sc	45	1	No Gas			2580298.56		
Sc	45	1	No Gas			2580972.93		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2563349.18		
Ge	72	1	No Gas			1241431.31		
Ge	72	1	No Gas			1245766.70		
Ge	72	1	No Gas			1242995.29		
Sc	45	2	H2			203181.89		
Sc	45	2	H2			203770.06		
Sc	45	2	H2			206871.93		
Ge	72	2	H2			166126.25		
Ge	72	2	H2			165093.32		
Ge	72	2	H2			168795.76		
In	115	2	H2			403906.01		
In	115	2	H2			399776.05		
In	115	2	H2			408735.11		
Sc	45	3	He			50939.87		
Sc	45	3	He			50900.10		
Sc	45	3	He			49565.66		
Ge	72	3	He			84721.31		
Ge	72	3	He			86281.20		
Ge	72	3	He			83865.52		
In	115	3	He			90745.64		
In	115	3	He			89155.98		
In	115	3	He			88975.02		
Tb	159	3	He			408752.10		
Tb	159	3	He			404614.21		
Tb	159	3	He			404020.35		
Bi	209	3	He			318483.34		
Bi	209	3	He			309181.60		
Bi	209	3	He			307040.74		

Quantitation Report

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Sample Type	CCB
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Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

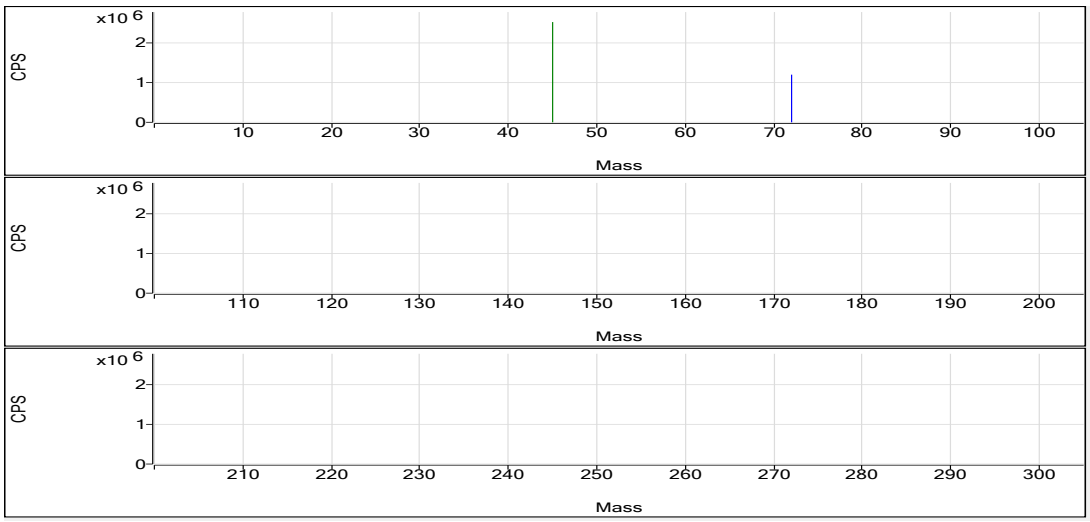
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.022	ppb	N/A	45.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.009	ppb	211.5	6.44	0.0000	Pulse	1.5000	3
Na	23	45	He	-6.913	ppb	N/A	20067.48	0.3924	Pulse	0.1000	3
Mg	24	45	He	1.056	ppb	70.3	330.01	0.0065	Pulse	0.1000	3
Al	27	45	He	-0.005	ppb	N/A	106.67	0.0021	Pulse	0.1000	3
K	39	45	He	-16.310	ppb	N/A	20047.67	0.3921	Pulse	0.1000	3
Ca	44	45	He	8.805	ppb	208.7	200.01	0.0039	Pulse	0.1000	3
Ti	47	45	He	0.615	ppb	91.5	16.67	0.0003	Pulse	0.1000	3
V	51	45	He	-0.250	ppb	N/A	1354.74	0.0265	Pulse	0.5000	3
Cr	52	45	He	-0.041	ppb	N/A	2136.89	0.0418	Pulse	0.1000	3
Mn	55	45	He	0.153	ppb	43.4	240.01	0.0047	Pulse	0.1000	3
Fe	57	45	He	-1.696	ppb	N/A	90.00	0.0018	Pulse	0.1000	3
Co	59	45	He	0.037	ppb	54.5	290.01	0.0057	Pulse	0.1000	3
Ni	60	72	He	-1.164	ppb	N/A	276.68	0.0033	Pulse	0.1000	3
Cu	63	72	He	-0.054	ppb	N/A	653.37	0.0078	Pulse	0.1000	3
Zn	66	72	He	0.355	ppb	109.1	583.37	0.0070	Pulse	0.1000	3
As	75	72	He	0.139	ppb	50.2	97.33	0.0012	Pulse	0.5000	3
Sr	88	115	He	0.017	ppb	177.6	73.33	0.0008	Pulse	0.1000	3
Mo	98	115	He	-0.009	ppb	N/A	143.34	0.0016	Pulse	0.1000	3
Ag	107	115	He	-0.005	ppb	N/A	73.33	0.0008	Pulse	0.1000	3
Cd	111	115	He	-0.001	ppb	N/A	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.012	ppb	924.9	1316.78	0.0150	Pulse	0.1000	3
Sb	121	115	He	0.011	ppb	113.1	36.67	0.0004	Pulse	0.1000	3
Ba	137	115	He	0.040	ppb	60.8	40.00	0.0005	Pulse	0.1000	3
Tl	205	159	He	-0.023	ppb	N/A	890.06	0.0022	Pulse	0.1000	3
Pb	208	159	He	-0.017	ppb	N/A	653.36	0.0016	Pulse	0.1000	3
U	238	209	He	0.041	ppb	17.6	753.39	0.0024	Pulse	0.1000	3

ISTD Table:

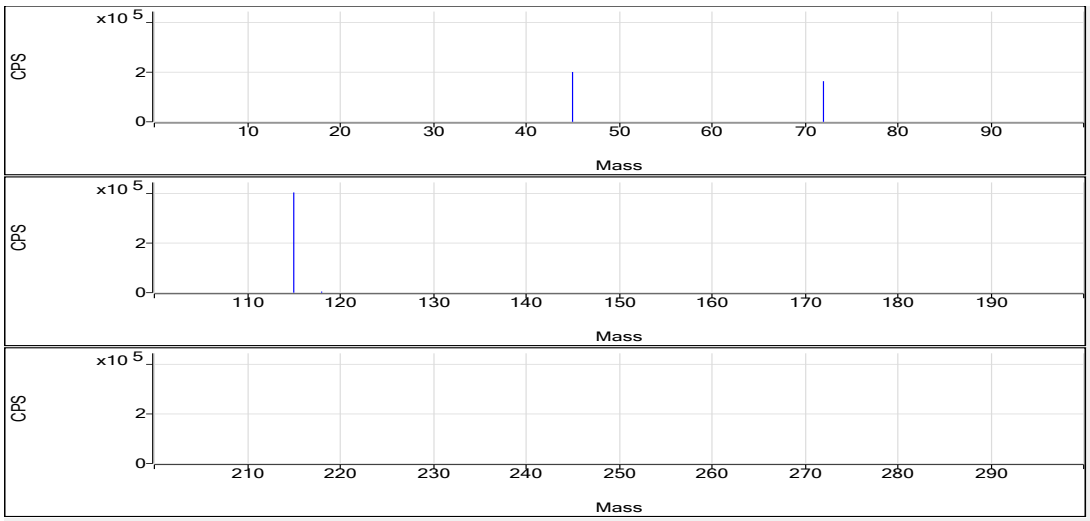
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2534166.52	1.4	97.2	Analog	0.1000	3
No Gas	Ge	72	1204337.27	0.3	93.4	Pulse	0.1000	3
H2	Sc	45	200562.50	0.2	97.3	Pulse	0.1000	3
H2	Ge	72	163570.06	0.6	100.5	Pulse	0.1000	3
H2	In	115	403454.27	0.4	99.9	Pulse	0.1000	3
He	Sc	45	51140.66	0.9	99.9	Pulse	0.1000	3
He	Ge	72	83416.68	1.2	101.9	Pulse	0.1000	3
He	In	115	87743.68	1.0	100.1	Pulse	0.1000	3
He	Tb	159	404984.20	0.4	100.8	Pulse	0.1000	3
He	Bi	209	311896.43	0.1	101.9	Pulse	0.1000	3

No Gas

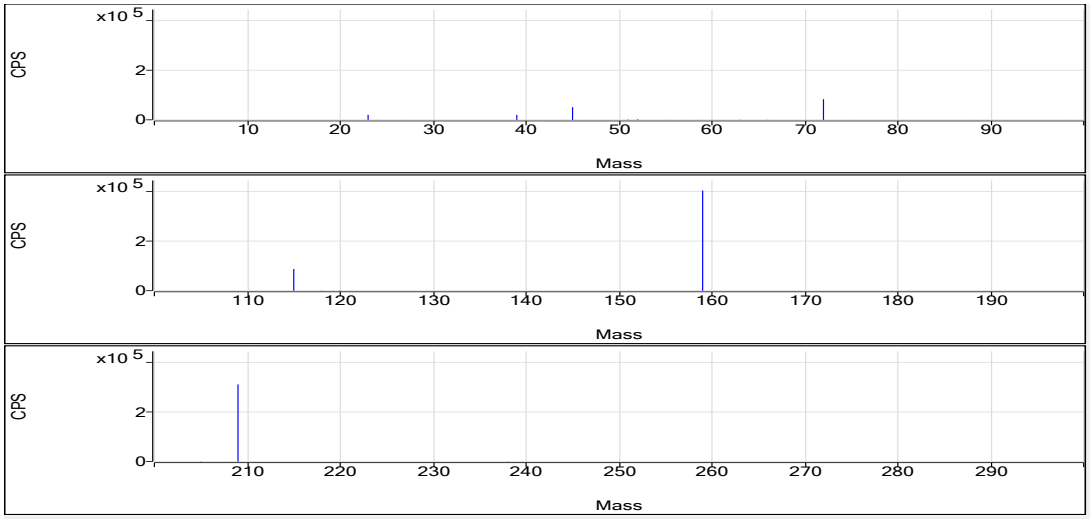


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.029	0	32.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.014	0	60.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.023	0	44.00	0.0007	3.404E-05
Se	78	2	H2	0.03	0	8.00	0.0004	3.546E-05
Se	78	2	H2	-0.006	0	5.33	0.0004	3.546E-05
Se	78	2	H2	0.003	0	6.00	0.0004	3.546E-05
Na	23	3	He	-6.487	0.3939	20134.22	0.0036	0.4171
Na	23	3	He	-6.255	0.3948	20014.11	0.0036	0.4171
Na	23	3	He	-7.997	0.3886	20054.10	0.0036	0.4171
Mg	24	3	He	0.945	0.0063	320.01	0.0018	0.004553
Mg	24	3	He	1.847	0.0079	400.02	0.0018	0.004553
Mg	24	3	He	0.376	0.0052	270.01	0.0018	0.004553
Al	27	3	He	0.116	0.0022	110.00	0.0006	0.002085
Al	27	3	He	-1.208	0.0014	70.00	0.0006	0.002085
Al	27	3	He	1.078	0.0027	140.01	0.0006	0.002085
K	39	3	He	-11.717	0.3975	20314.63	0.0012	0.4112
K	39	3	He	-8.118	0.4017	20364.79	0.0012	0.4112
K	39	3	He	-29.096	0.3771	19463.60	0.0012	0.4112
Ca	44	3	He	23.236	0.0049	250.01	0.0001	0.003322
Ca	44	3	He	15.064	0.0043	220.01	0.0001	0.003322
Ca	44	3	He	-11.884	0.0025	130.01	0.0001	0.003322
Ti	47	3	He	1.104	0.0006	30.00	0.0005	0
Ti	47	3	He	0.742	0.0004	20.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	-0.281	0.0258	1320.07	0.0213	0.0318
V	51	3	He	-0.21	0.0273	1386.08	0.0213	0.0318
V	51	3	He	-0.258	0.0263	1358.07	0.0213	0.0318
Cr	52	3	He	0.116	0.0464	2370.27	0.0294	0.04297
Cr	52	3	He	-0.173	0.0379	1920.20	0.0294	0.04297
Cr	52	3	He	-0.064	0.0411	2120.21	0.0294	0.04297
Mn	55	3	He	0.152	0.0047	240.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.219	0.0055	280.01	0.0124	0.002801
Mn	55	3	He	0.086	0.0039	200.01	0.0124	0.002801
Fe	57	3	He	0.355	0.0029	150.01	0.0006	0.002732
Fe	57	3	He	-2.362	0.0014	70.00	0.0006	0.002732
Fe	57	3	He	-3.082	0.001	50.00	0.0006	0.002732
Co	59	3	He	0.058	0.0068	350.02	0.0549	0.003644
Co	59	3	He	0.034	0.0055	280.01	0.0549	0.003644
Co	59	3	He	0.018	0.0047	240.01	0.0549	0.003644
Ni	60	3	He	-1.084	0.0041	340.02	0.0093	0.01413
Ni	60	3	He	-1.292	0.0021	180.01	0.0093	0.01413
Ni	60	3	He	-1.116	0.0038	310.01	0.0093	0.01413
Cu	63	3	He	-0.035	0.0084	700.04	0.0274	0.009321
Cu	63	3	He	-0.072	0.0074	620.03	0.0274	0.009321
Cu	63	3	He	-0.056	0.0078	640.04	0.0274	0.009321
Zn	66	3	He	0.448	0.0073	610.04	0.0031	0.005913
Zn	66	3	He	-0.07	0.0057	480.03	0.0031	0.005913
Zn	66	3	He	0.687	0.008	660.04	0.0031	0.005913
As	75	3	He	0.085	0.0011	88.00	0.0021	0.0008698
As	75	3	He	0.115	0.0011	94.00	0.0021	0.0008698
As	75	3	He	0.218	0.0013	110.00	0.0021	0.0008698
Sr	88	3	He	0.053	0.0012	100.00	0.0088	0.0006843
Sr	88	3	He	-0.001	0.0007	60.00	0.0088	0.0006843
Sr	88	3	He	0	0.0007	60.00	0.0088	0.0006843
Mo	98	3	He	-0.031	0.0012	100.00	0.0219	0.001827
Mo	98	3	He	-0.006	0.0017	150.01	0.0219	0.001827
Mo	98	3	He	0.01	0.002	180.01	0.0219	0.001827
Ag	107	3	He	-0.01	0.0006	50.00	0.047	0.001064
Ag	107	3	He	-0.001	0.001	90.00	0.047	0.001064
Ag	107	3	He	-0.003	0.0009	80.00	0.047	0.001064
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Cd	111	3	He	0.01	0.0001	10.00	0.0053	6.086E-05
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Sn	120	3	He	0.001	0.0149	1290.10	0.0154	0.01483
Sn	120	3	He	-0.09	0.0134	1190.09	0.0154	0.01483
Sn	120	3	He	0.124	0.0167	1470.16	0.0154	0.01483
Sb	121	3	He	-0.003	0.0002	20.00	0.0143	0.0002661
Sb	121	3	He	0.021	0.0006	50.00	0.0143	0.0002661
Sb	121	3	He	0.013	0.0005	40.00	0.0143	0.0002661
Ba	137	3	He	0.041	0.0005	40.00	0.0048	0.0002665
Ba	137	3	He	0.015	0.0003	30.00	0.0048	0.0002665
Ba	137	3	He	0.063	0.0006	50.00	0.0048	0.0002665
Tl	205	3	He	-0.014	0.0024	980.08	0.0246	0.002755
Tl	205	3	He	-0.02	0.0023	910.06	0.0246	0.002755
Tl	205	3	He	-0.034	0.0019	780.05	0.0246	0.002755
Pb	208	3	He	-0.01	0.0018	370.02	0.0324	0.002158
Pb	208	3	He	-0.021	0.0015	340.02	0.0324	0.002158
Pb	208	3	He	-0.019	0.0016	280.01	0.0324	0.002158
U	238	3	He	0.037	0.0022	700.05	0.0492	0.0004023
U	238	3	He	0.049	0.0028	880.07	0.0492	0.0004023
U	238	3	He	0.036	0.0022	680.04	0.0492	0.0004023
Sc	45	1	No Gas			2494773.56		
Sc	45	1	No Gas			2549771.52		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2557954.49		
Ge	72	1	No Gas			1199996.39		
Ge	72	1	No Gas			1208104.12		
Ge	72	1	No Gas			1204911.31		
Sc	45	2	H2			200049.37		
Sc	45	2	H2			201011.81		
Sc	45	2	H2			200626.33		
Ge	72	2	H2			164537.60		
Ge	72	2	H2			162454.35		
Ge	72	2	H2			163718.23		
In	115	2	H2			404109.92		
In	115	2	H2			404740.15		
In	115	2	H2			401512.73		
Sc	45	3	He			51110.53		
Sc	45	3	He			50699.19		
Sc	45	3	He			51612.26		
Ge	72	3	He			83705.15		
Ge	72	3	He			84258.06		
Ge	72	3	He			82286.82		
In	115	3	He			86871.54		
In	115	3	He			88552.12		
In	115	3	He			87827.13		
Tb	159	3	He			406481.83		
Tb	159	3	He			403046.52		
Tb	159	3	He			405424.25		
Bi	209	3	He			312108.69		
Bi	209	3	He			311657.61		
Bi	209	3	He			311923.00		

Quantitation Report

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Sample Type	Sample
Comment	I7 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

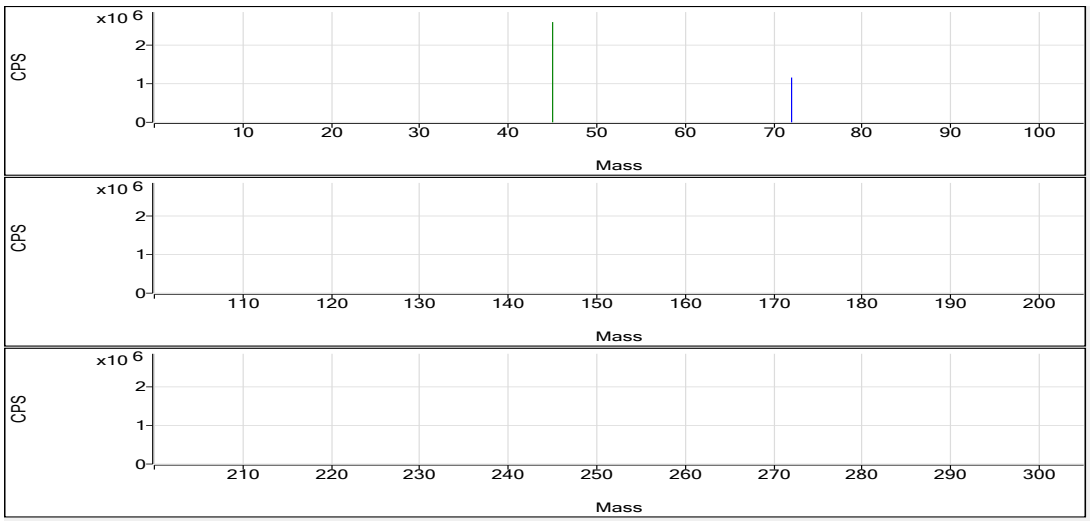
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.027	ppb	N/A	36.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.010	ppb	N/A	4.89	0.0000	Pulse	1.5000	3
Na	23	45	He	24605.245	ppb	0.7	4473622.95	88.1203	Analog	0.1000	3
Mg	24	45	He	36.961	ppb	8.6	3623.91	0.0713	Pulse	0.1000	3
Al	27	45	He	2.046	ppb	79.1	166.67	0.0033	Pulse	0.1000	3
K	39	45	He	53.382	ppb	11.7	24046.95	0.4737	Pulse	0.1000	3
Ca	44	45	He	2225.508	ppb	5.8	7802.35	0.1537	Pulse	0.1000	3
Ti	47	45	He	0.493	ppb	86.6	13.33	0.0003	Pulse	0.1000	3
V	51	45	He	-0.372	ppb	N/A	1213.39	0.0239	Pulse	0.5000	3
Cr	52	45	He	0.072	ppb	258.8	2286.94	0.0451	Pulse	0.1000	3
Mn	55	45	He	21.282	ppb	5.3	13570.09	0.2674	Pulse	0.1000	3
Fe	57	45	He	1.175	ppb	213.1	173.34	0.0034	Pulse	0.1000	3
Co	59	45	He	0.461	ppb	7.7	1470.12	0.0290	Pulse	0.1000	3
Ni	60	72	He	-0.036	ppb	N/A	1100.08	0.0138	Pulse	0.1000	3
Cu	63	72	He	16.150	ppb	1.8	36059.34	0.4522	Pulse	0.1000	3
Zn	66	72	He	177.686	ppb	0.3	43971.65	0.5515	Pulse	0.1000	3
As	75	72	He	0.086	ppb	100.0	84.00	0.0011	Pulse	0.5000	3
Sr	88	115	He	10.603	ppb	8.0	8469.51	0.0940	Pulse	0.1000	3
Mo	98	115	He	-0.041	ppb	N/A	83.33	0.0009	Pulse	0.1000	3
Ag	107	115	He	-0.009	ppb	N/A	56.67	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.223	ppb	27.9	112.67	0.0012	Pulse	0.5000	3
Sn	120	115	He	0.091	ppb	81.4	1463.46	0.0162	Pulse	0.1000	3
Sb	121	115	He	1.186	ppb	10.5	1546.81	0.0172	Pulse	0.1000	3
Ba	137	115	He	15.895	ppb	1.8	6871.99	0.0762	Pulse	0.1000	3
Tl	205	159	He	-0.079	ppb	N/A	326.68	0.0008	Pulse	0.1000	3
Pb	208	159	He	30.320	ppb	1.0	400373.83	0.9847	Pulse	0.1000	3
U	238	209	He	0.002	ppb	149.7	153.34	0.0005	Pulse	0.1000	3

ISTD Table:

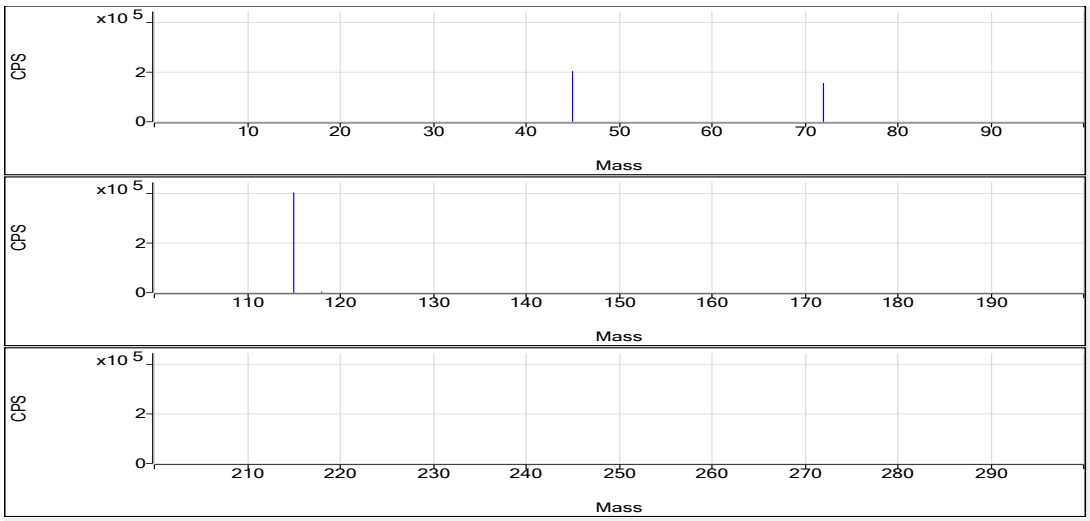
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2591840.22	1.3	99.4	Analog	0.1000	3
No Gas	Ge	72	1157234.67	0.6	89.8	Pulse	0.1000	3
H2	Sc	45	204774.27	0.9	99.4	Pulse	0.1000	3
H2	Ge	72	156637.40	1.0	96.2	Pulse	0.1000	3
H2	In	115	405596.44	0.7	100.5	Pulse	0.1000	3
He	Sc	45	50769.40	1.2	99.2	Pulse	0.1000	3
He	Ge	72	79732.32	0.9	97.4	Pulse	0.1000	3
He	In	115	90153.87	0.7	102.9	Pulse	0.1000	3
He	Tb	159	406614.86	0.1	101.2	Pulse	0.1000	3
He	Bi	209	314640.01	0.3	102.8	Pulse	0.1000	3

No Gas

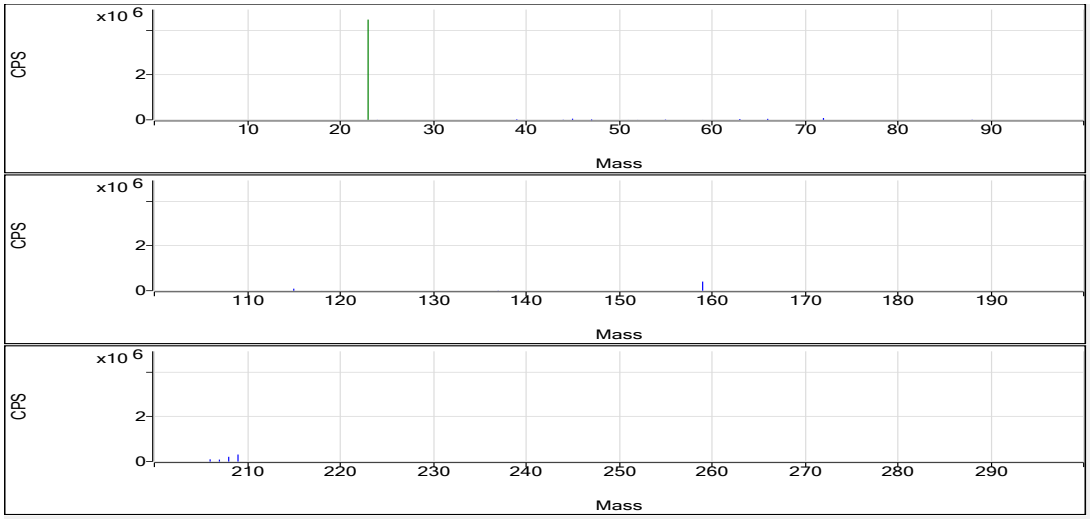


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.023	0	44.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.028	0	36.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.031	0	30.00	0.0007	3.404E-05
Se	78	2	H2	-0.013	0	4.67	0.0004	3.546E-05
Se	78	2	H2	-0.013	0	4.67	0.0004	3.546E-05
Se	78	2	H2	-0.002	0	5.33	0.0004	3.546E-05
Na	23	3	He	24412.084	87.4318	4494972.43	0.0036	0.4171
Na	23	3	He	24647.829	88.2721	4432844.93	0.0036	0.4171
Na	23	3	He	24755.822	88.657	4493051.50	0.0036	0.4171
Mg	24	3	He	40.442	0.0776	3990.66	0.0018	0.004553
Mg	24	3	He	34.187	0.0663	3330.53	0.0018	0.004553
Mg	24	3	He	36.256	0.0701	3550.54	0.0018	0.004553
Al	27	3	He	3.1	0.0039	200.01	0.0006	0.002085
Al	27	3	He	0.182	0.0022	110.00	0.0006	0.002085
Al	27	3	He	2.857	0.0037	190.01	0.0006	0.002085
K	39	3	He	49.01	0.4686	24090.30	0.0012	0.4112
K	39	3	He	60.562	0.4821	24210.52	0.0012	0.4112
K	39	3	He	50.574	0.4704	23840.04	0.0012	0.4112
Ca	44	3	He	2303.875	0.159	8172.59	0.0001	0.003322
Ca	44	3	He	2294.885	0.1584	7952.41	0.0001	0.003322
Ca	44	3	He	2077.762	0.1437	7282.05	0.0001	0.003322
Ti	47	3	He	0.731	0.0004	20.00	0.0005	0
Ti	47	3	He	0.749	0.0004	20.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	-0.369	0.024	1232.06	0.0213	0.0318
V	51	3	He	-0.346	0.0245	1228.06	0.0213	0.0318
V	51	3	He	-0.401	0.0233	1180.05	0.0213	0.0318
Cr	52	3	He	-0.046	0.0416	2140.23	0.0294	0.04297
Cr	52	3	He	0.286	0.0514	2580.34	0.0294	0.04297
Cr	52	3	He	-0.025	0.0422	2140.25	0.0294	0.04297
Mn	55	3	He	20.453	0.2571	13216.42	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	22.579	0.2835	14237.38	0.0124	0.002801
Mn	55	3	He	20.815	0.2616	13256.47	0.0124	0.002801
Fe	57	3	He	4.065	0.0051	260.01	0.0006	0.002732
Fe	57	3	He	-0.25	0.0026	130.01	0.0006	0.002732
Fe	57	3	He	-0.291	0.0026	130.01	0.0006	0.002732
Co	59	3	He	0.458	0.0288	1480.13	0.0549	0.003644
Co	59	3	He	0.427	0.0271	1360.11	0.0549	0.003644
Co	59	3	He	0.498	0.031	1570.13	0.0549	0.003644
Ni	60	3	He	0.03	0.0144	1160.09	0.0093	0.01413
Ni	60	3	He	-0.045	0.0137	1090.07	0.0093	0.01413
Ni	60	3	He	-0.092	0.0133	1050.07	0.0093	0.01413
Cu	63	3	He	16.307	0.4565	36777.76	0.0274	0.009321
Cu	63	3	He	15.82	0.4432	35243.96	0.0274	0.009321
Cu	63	3	He	16.323	0.457	36156.30	0.0274	0.009321
Zn	66	3	He	178.23	0.5532	44560.18	0.0031	0.005913
Zn	66	3	He	177.577	0.5511	43827.82	0.0031	0.005913
Zn	66	3	He	177.25	0.5501	43526.96	0.0031	0.005913
As	75	3	He	0	0.0009	70.00	0.0021	0.0008698
As	75	3	He	0.087	0.0011	84.00	0.0021	0.0008698
As	75	3	He	0.172	0.0012	98.00	0.0021	0.0008698
Sr	88	3	He	9.675	0.0858	7792.40	0.0088	0.0006843
Sr	88	3	He	11.337	0.1004	9003.24	0.0088	0.0006843
Sr	88	3	He	10.797	0.0957	8612.89	0.0088	0.0006843
Mo	98	3	He	-0.058	0.0006	50.00	0.0219	0.001827
Mo	98	3	He	-0.027	0.0012	110.00	0.0219	0.001827
Mo	98	3	He	-0.038	0.001	90.00	0.0219	0.001827
Ag	107	3	He	-0.009	0.0007	60.00	0.047	0.001064
Ag	107	3	He	-0.008	0.0007	60.00	0.047	0.001064
Ag	107	3	He	-0.011	0.0006	50.00	0.047	0.001064
Cd	111	3	He	0.249	0.0014	126.00	0.0053	6.086E-05
Cd	111	3	He	0.152	0.0009	78.00	0.0053	6.086E-05
Cd	111	3	He	0.268	0.0015	134.00	0.0053	6.086E-05
Sn	120	3	He	0.031	0.0153	1390.11	0.0154	0.01483
Sn	120	3	He	0.174	0.0175	1570.15	0.0154	0.01483
Sn	120	3	He	0.068	0.0159	1430.13	0.0154	0.01483
Sb	121	3	He	1.056	0.0153	1390.12	0.0143	0.0002661
Sb	121	3	He	1.304	0.0189	1690.15	0.0143	0.0002661
Sb	121	3	He	1.198	0.0173	1560.15	0.0143	0.0002661
Ba	137	3	He	15.918	0.0763	6932.01	0.0048	0.0002665
Ba	137	3	He	16.173	0.0776	6952.08	0.0048	0.0002665
Ba	137	3	He	15.594	0.0748	6731.88	0.0048	0.0002665
Tl	205	3	He	-0.075	0.0009	370.02	0.0246	0.002755
Tl	205	3	He	-0.079	0.0008	330.02	0.0246	0.002755
Tl	205	3	He	-0.084	0.0007	280.01	0.0246	0.002755
Pb	208	3	He	29.962	0.973	209979.33	0.0324	0.002158
Pb	208	3	He	30.464	0.9893	213260.39	0.0324	0.002158
Pb	208	3	He	30.534	0.9916	215752.07	0.0324	0.002158
U	238	3	He	0.002	0.0005	160.01	0.0492	0.0004023
U	238	3	He	-0.001	0.0004	110.01	0.0492	0.0004023
U	238	3	He	0.004	0.0006	190.01	0.0492	0.0004023
Sc	45	1	No Gas			2567875.12		
Sc	45	1	No Gas			2630459.34		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2577186.21		
Ge	72	1	No Gas			1151453.42		
Ge	72	1	No Gas			1164701.39		
Ge	72	1	No Gas			1155549.20		
Sc	45	2	H2			204400.31		
Sc	45	2	H2			206680.54		
Sc	45	2	H2			203241.97		
Ge	72	2	H2			157256.84		
Ge	72	2	H2			157784.47		
Ge	72	2	H2			154870.89		
In	115	2	H2			406116.48		
In	115	2	H2			408056.20		
In	115	2	H2			402616.63		
Sc	45	3	He			51411.19		
Sc	45	3	He			50217.97		
Sc	45	3	He			50679.03		
Ge	72	3	He			80556.80		
Ge	72	3	He			79521.04		
Ge	72	3	He			79119.11		
In	115	3	He			90815.15		
In	115	3	He			89648.96		
In	115	3	He			90021.04		
Tb	159	3	He			407082.96		
Tb	159	3	He			406662.45		
Tb	159	3	He			406099.17		
Bi	209	3	He			314672.71		
Bi	209	3	He			313574.25		
Bi	209	3	He			315673.06		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

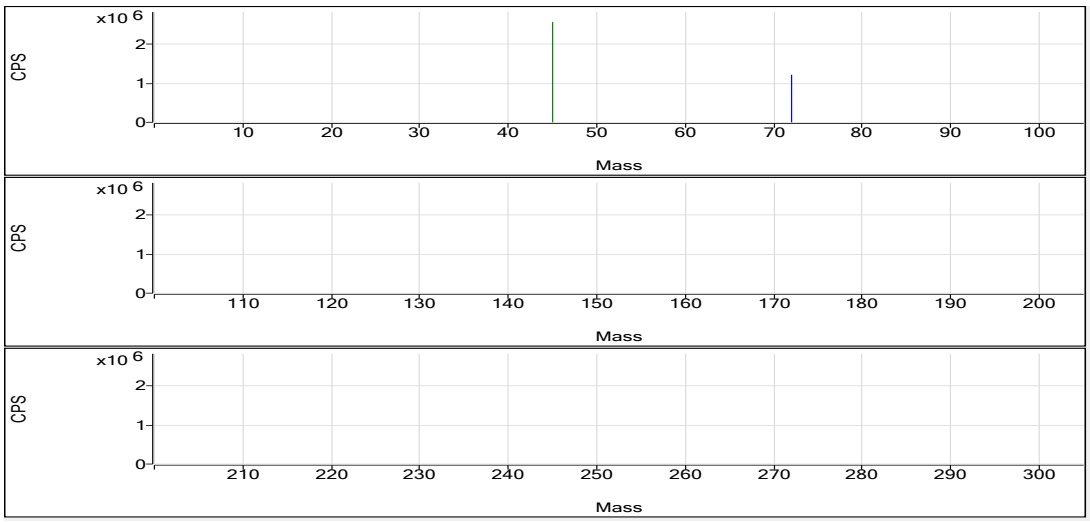
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.037	ppb	N/A	18.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.013	ppb	N/A	4.89	0.0000	Pulse	1.5000	3
Na	23	45	He	-3.571	ppb	N/A	19877.26	0.4043	Pulse	0.1000	3
Mg	24	45	He	-0.756	ppb	N/A	156.68	0.0032	Pulse	0.1000	3
Al	27	45	He	-1.495	ppb	N/A	60.00	0.0012	Pulse	0.1000	3
K	39	45	He	17.518	ppb	112.4	21209.47	0.4317	Pulse	0.1000	3
Ca	44	45	He	4.004	ppb	221.3	176.68	0.0036	Pulse	0.1000	3
Ti	47	45	He	0.639	ppb	35.2	16.67	0.0003	Pulse	0.1000	3
V	51	45	He	-0.308	ppb	N/A	1241.39	0.0253	Pulse	0.5000	3
Cr	52	45	He	-0.035	ppb	N/A	2063.56	0.0419	Pulse	0.1000	3
Mn	55	45	He	-0.035	ppb	N/A	116.67	0.0024	Pulse	0.1000	3
Fe	57	45	He	-1.110	ppb	N/A	103.34	0.0021	Pulse	0.1000	3
Co	59	45	He	-0.015	ppb	N/A	140.01	0.0028	Pulse	0.1000	3
Ni	60	72	He	-1.149	ppb	N/A	290.02	0.0035	Pulse	0.1000	3
Cu	63	72	He	-0.095	ppb	N/A	563.37	0.0067	Pulse	0.1000	3
Zn	66	72	He	0.211	ppb	17.6	550.03	0.0066	Pulse	0.1000	3
As	75	72	He	0.013	ppb	1353.0	75.33	0.0009	Pulse	0.5000	3
Sr	88	115	He	0.017	ppb	192.8	73.33	0.0008	Pulse	0.1000	3
Mo	98	115	He	-0.059	ppb	N/A	46.67	0.0005	Pulse	0.1000	3
Ag	107	115	He	-0.011	ppb	N/A	46.67	0.0005	Pulse	0.1000	3
Cd	111	115	He	-0.007	ppb	N/A	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.050	ppb	308.8	1373.45	0.0156	Pulse	0.1000	3
Sb	121	115	He	0.000	ppb	N/A	23.33	0.0003	Pulse	0.1000	3
Ba	137	115	He	0.047	ppb	154.9	43.33	0.0005	Pulse	0.1000	3
Tl	205	159	He	-0.086	ppb	N/A	260.01	0.0006	Pulse	0.1000	3
Pb	208	159	He	-0.017	ppb	N/A	646.70	0.0016	Pulse	0.1000	3
U	238	209	He	0.001	ppb	136.4	133.34	0.0004	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2565981.68	2.0	98.4	Analog	0.1000	3
No Gas	Ge	72	1216546.02	0.6	94.4	Pulse	0.1000	3
H2	Sc	45	204239.80	1.6	99.1	Pulse	0.1000	3
H2	Ge	72	163810.00	1.8	100.6	Pulse	0.1000	3
H2	In	115	400378.30	0.3	99.2	Pulse	0.1000	3
He	Sc	45	49160.63	1.8	96.0	Pulse	0.1000	3
He	Ge	72	83838.68	1.4	102.4	Pulse	0.1000	3
He	In	115	87914.37	1.9	100.3	Pulse	0.1000	3
He	Tb	159	404124.11	0.7	100.6	Pulse	0.1000	3
He	Bi	209	309074.04	0.6	101.0	Pulse	0.1000	3

No Gas



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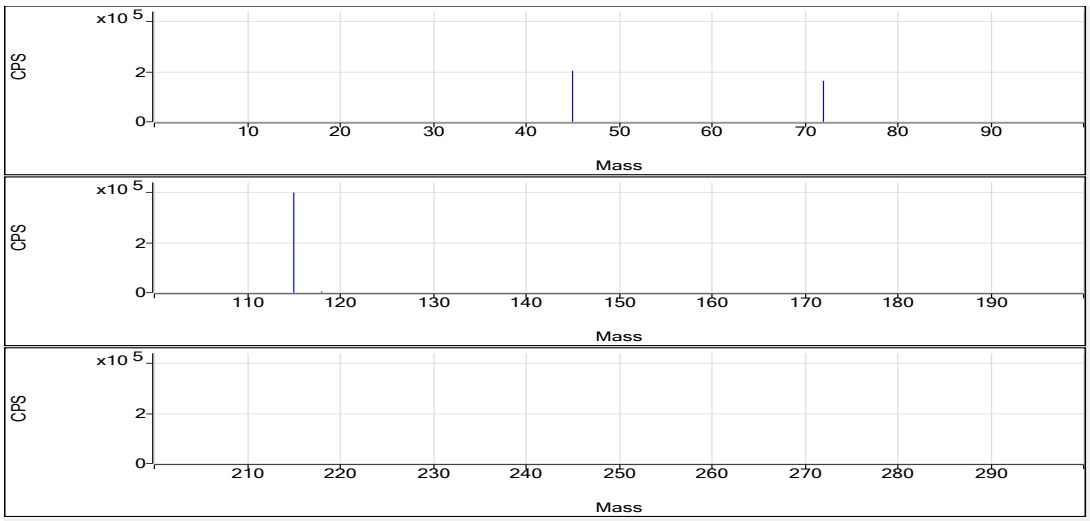
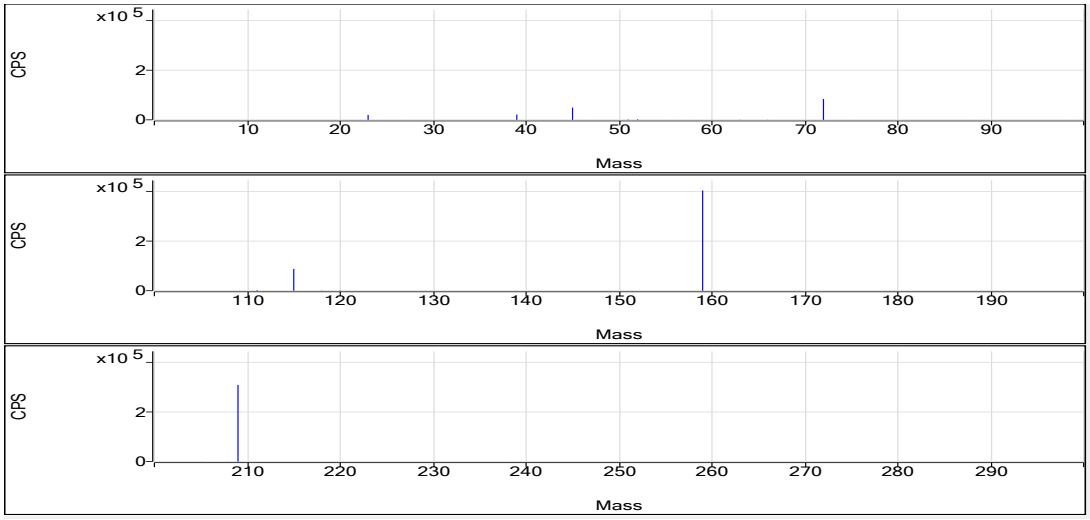


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.034	0	24.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.035	0	22.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.041	0	10.00	0.0007	3.404E-05
Se	78	2	H2	0.004	0	6.00	0.0004	3.546E-05
Se	78	2	H2	-0.034	0	3.33	0.0004	3.546E-05
Se	78	2	H2	-0.008	0	5.33	0.0004	3.546E-05
Na	23	3	He	-3.59	0.4043	19473.41	0.0036	0.4171
Na	23	3	He	-4.186	0.4021	19924.06	0.0036	0.4171
Na	23	3	He	-2.937	0.4066	20234.30	0.0036	0.4171
Mg	24	3	He	-0.796	0.0031	150.01	0.0018	0.004553
Mg	24	3	He	-0.732	0.0032	160.01	0.0018	0.004553
Mg	24	3	He	-0.74	0.0032	160.01	0.0018	0.004553
Al	27	3	He	-2.509	0.0006	30.00	0.0006	0.002085
Al	27	3	He	-1.846	0.001	50.00	0.0006	0.002085
Al	27	3	He	-0.129	0.002	100.00	0.0006	0.002085
K	39	3	He	40.244	0.4583	22077.29	0.0012	0.4112
K	39	3	He	6.954	0.4193	20775.81	0.0012	0.4112
K	39	3	He	5.357	0.4175	20775.31	0.0012	0.4112
Ca	44	3	He	3.072	0.0035	170.01	0.0001	0.003322
Ca	44	3	He	-4.353	0.003	150.01	0.0001	0.003322
Ca	44	3	He	13.294	0.0042	210.01	0.0001	0.003322
Ti	47	3	He	0.781	0.0004	20.00	0.0005	0
Ti	47	3	He	0.379	0.0002	10.00	0.0005	0
Ti	47	3	He	0.756	0.0004	20.00	0.0005	0
V	51	3	He	-0.291	0.0256	1234.06	0.0213	0.0318
V	51	3	He	-0.298	0.0255	1262.06	0.0213	0.0318
V	51	3	He	-0.335	0.0247	1228.06	0.0213	0.0318
Cr	52	3	He	-0.141	0.0388	1870.20	0.0294	0.04297
Cr	52	3	He	0.063	0.0448	2220.25	0.0294	0.04297
Cr	52	3	He	-0.026	0.0422	2100.22	0.0294	0.04297
Mn	55	3	He	-0.075	0.0019	90.00	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.063	0.002	100.00	0.0124	0.002801
Mn	55	3	He	0.033	0.0032	160.01	0.0124	0.002801
Fe	57	3	He	-1.872	0.0017	80.00	0.0006	0.002732
Fe	57	3	He	-1.953	0.0016	80.00	0.0006	0.002732
Fe	57	3	He	0.494	0.003	150.01	0.0006	0.002732
Co	59	3	He	-0.013	0.0029	140.01	0.0549	0.003644
Co	59	3	He	-0.022	0.0024	120.00	0.0549	0.003644
Co	59	3	He	-0.008	0.0032	160.01	0.0549	0.003644
Ni	60	3	He	-1.178	0.0032	270.01	0.0093	0.01413
Ni	60	3	He	-1.139	0.0036	300.02	0.0093	0.01413
Ni	60	3	He	-1.13	0.0036	300.02	0.0093	0.01413
Cu	63	3	He	-0.09	0.0069	580.03	0.0274	0.009321
Cu	63	3	He	-0.059	0.0077	650.04	0.0274	0.009321
Cu	63	3	He	-0.136	0.0056	460.03	0.0274	0.009321
Zn	66	3	He	0.228	0.0066	560.03	0.0031	0.005913
Zn	66	3	He	0.235	0.0066	560.03	0.0031	0.005913
Zn	66	3	He	0.168	0.0064	530.03	0.0031	0.005913
As	75	3	He	-0.108	0.0006	54.00	0.0021	0.0008698
As	75	3	He	0.213	0.0013	112.00	0.0021	0.0008698
As	75	3	He	-0.066	0.0007	60.00	0.0021	0.0008698
Sr	88	3	He	0.053	0.0011	100.00	0.0088	0.0006843
Sr	88	3	He	-0.012	0.0006	50.00	0.0088	0.0006843
Sr	88	3	He	0.011	0.0008	70.00	0.0088	0.0006843
Mo	98	3	He	-0.062	0.0005	40.00	0.0219	0.001827
Mo	98	3	He	-0.062	0.0005	40.00	0.0219	0.001827
Mo	98	3	He	-0.053	0.0007	60.00	0.0219	0.001827
Ag	107	3	He	-0.01	0.0006	50.00	0.047	0.001064
Ag	107	3	He	-0.018	0.0002	20.00	0.047	0.001064
Ag	107	3	He	-0.006	0.0008	70.00	0.047	0.001064
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Sn	120	3	He	0.176	0.0175	1530.13	0.0154	0.01483
Sn	120	3	He	-0.124	0.0129	1120.10	0.0154	0.01483
Sn	120	3	He	0.099	0.0164	1470.13	0.0154	0.01483
Sb	121	3	He	-0.003	0.0002	20.00	0.0143	0.0002661
Sb	121	3	He	-0.002	0.0002	20.00	0.0143	0.0002661
Sb	121	3	He	0.005	0.0003	30.00	0.0143	0.0002661
Ba	137	3	He	-0.032	0.0001	10.00	0.0048	0.0002665
Ba	137	3	He	0.113	0.0008	70.00	0.0048	0.0002665
Ba	137	3	He	0.061	0.0006	50.00	0.0048	0.0002665
Tl	205	3	He	-0.082	0.0007	300.02	0.0246	0.002755
Tl	205	3	He	-0.085	0.0007	270.01	0.0246	0.002755
Tl	205	3	He	-0.091	0.0005	210.01	0.0246	0.002755
Pb	208	3	He	-0.015	0.0017	390.02	0.0324	0.002158
Pb	208	3	He	-0.025	0.0014	320.02	0.0324	0.002158
Pb	208	3	He	-0.011	0.0018	370.02	0.0324	0.002158
U	238	3	He	0	0.0004	120.00	0.0492	0.0004023
U	238	3	He	0.001	0.0005	140.01	0.0492	0.0004023
U	238	3	He	0.001	0.0005	140.01	0.0492	0.0004023
Sc	45	1	No Gas			2558537.93		
Sc	45	1	No Gas			2519439.02		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2619968.09		
Ge	72	1	No Gas			1208483.73		
Ge	72	1	No Gas			1220975.68		
Ge	72	1	No Gas			1220178.65		
Sc	45	2	H2			200443.02		
Sc	45	2	H2			205737.09		
Sc	45	2	H2			206539.29		
Ge	72	2	H2			161361.10		
Ge	72	2	H2			163079.93		
Ge	72	2	H2			166988.98		
In	115	2	H2			400387.49		
In	115	2	H2			399012.10		
In	115	2	H2			401735.31		
Sc	45	3	He			48170.58		
Sc	45	3	He			49545.30		
Sc	45	3	He			49766.01		
Ge	72	3	He			84670.51		
Ge	72	3	He			84398.50		
Ge	72	3	He			82447.02		
In	115	3	He			87203.79		
In	115	3	He			86689.73		
In	115	3	He			89870.65		
Tb	159	3	He			404468.78		
Tb	159	3	He			406566.09		
Tb	159	3	He			401337.45		
Bi	209	3	He			311339.06		
Bi	209	3	He			308194.29		
Bi	209	3	He			307688.78		

Quantitation Report

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Auto Dilution	1.0000
Total Dilution	1.0000
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Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

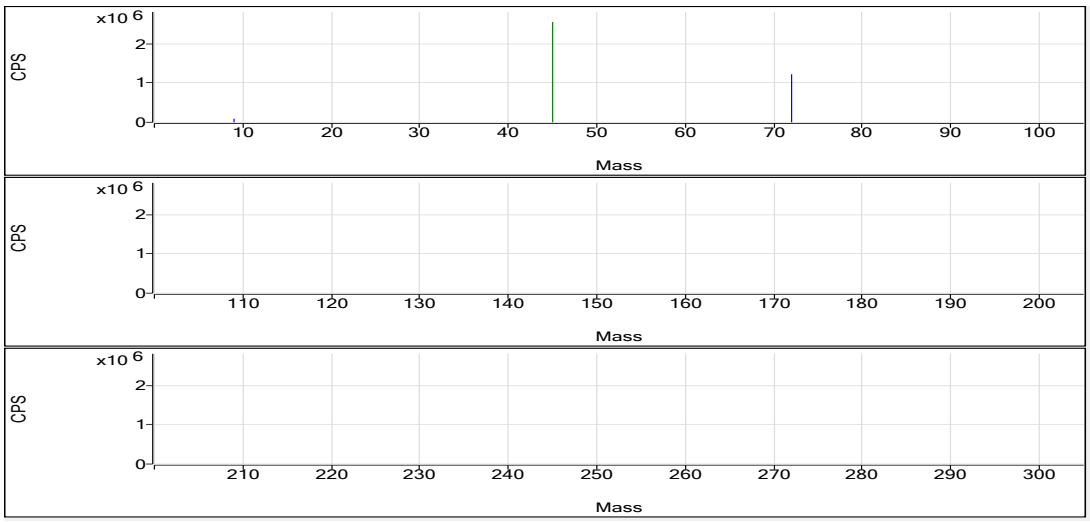
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	49.054	ppb	1.3	91279.26	0.0358	Pulse	0.5000	3
Se	78	72	H2	49.729	ppb	2.2	3592.68	0.0218	Pulse	1.5000	3
Na	23	45	He	4900.581	ppb	0.7	893390.20	17.8847	Pulse	0.1000	3
Mg	24	45	He	5052.479	ppb	0.5	456240.80	9.1333	Pulse	0.1000	3
Al	27	45	He	5052.543	ppb	0.9	147145.47	2.9457	Pulse	0.1000	3
K	39	45	He	5120.493	ppb	0.6	320082.48	6.4077	Pulse	0.1000	3
Ca	44	45	He	5220.159	ppb	3.0	17781.34	0.3560	Pulse	0.1000	3
Ti	47	45	He	5069.105	ppb	0.5	134675.98	2.6961	Pulse	0.1000	3
V	51	45	He	514.748	ppb	0.5	548017.75	10.9707	Pulse	0.5000	3
Cr	52	45	He	489.932	ppb	0.7	721912.07	14.4519	Pulse	0.1000	3
Mn	55	45	He	512.282	ppb	0.7	318275.47	6.3716	Pulse	0.1000	3
Fe	57	45	He	5105.335	ppb	0.7	146048.74	2.9238	Pulse	0.1000	3
Co	59	45	He	502.989	ppb	2.8	1379198.63	27.6114	Mix	0.1000	3
Ni	60	72	He	486.400	ppb	1.8	383300.49	4.5293	Pulse	0.1000	3
Cu	63	72	He	465.905	ppb	1.7	1082165.32	12.7872	Pulse	0.1000	3
Zn	66	72	He	490.905	ppb	2.1	128054.05	1.5132	Pulse	0.1000	3
As	75	72	He	497.905	ppb	2.1	90483.42	1.0692	Pulse	0.5000	3
Sr	88	115	He	50.900	ppb	1.4	39499.37	0.4485	Pulse	0.1000	3
Mo	98	115	He	50.931	ppb	1.2	98591.01	1.1195	Pulse	0.1000	3
Ag	107	115	He	50.037	ppb	1.7	207360.56	2.3548	Pulse	0.1000	3
Cd	111	115	He	50.860	ppb	1.0	23858.39	0.2709	Pulse	0.5000	3
Sn	120	115	He	51.188	ppb	0.8	70824.73	0.8042	Pulse	0.1000	3
Sb	121	115	He	51.832	ppb	0.2	65073.02	0.7389	Pulse	0.1000	3
Ba	137	115	He	516.395	ppb	1.4	217337.46	2.4680	Pulse	0.1000	3
Tl	205	159	He	50.695	ppb	0.5	503542.95	1.2478	Pulse	0.1000	3
Pb	208	159	He	50.831	ppb	0.4	665559.51	1.6493	Pulse	0.1000	3
U	238	209	He	50.280	ppb	1.2	762968.87	2.4765	Pulse	0.1000	3

ISTD Table:

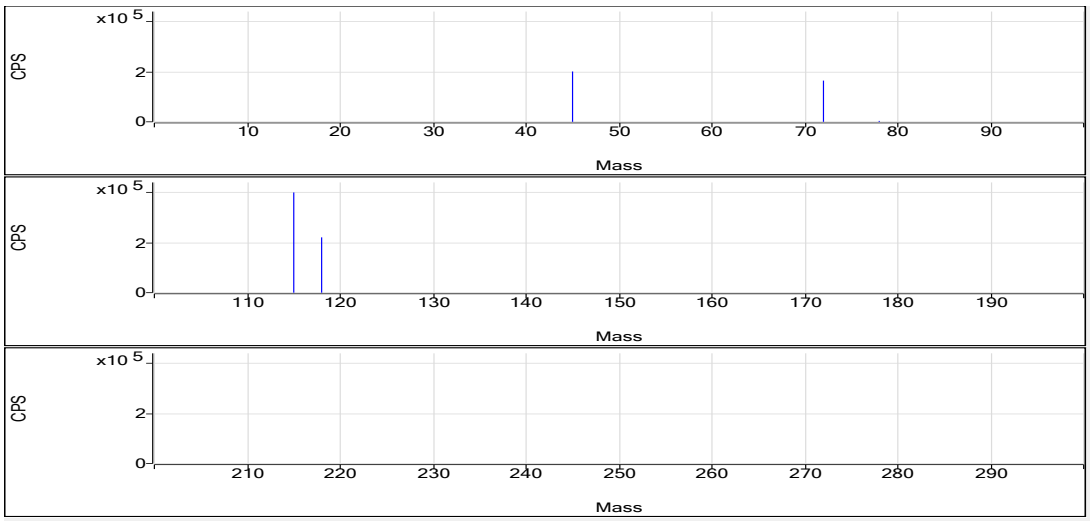
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2552015.01	1.5	97.9	Analog	0.1000	3
No Gas	Ge	72	1223045.58	0.7	94.9	Pulse	0.1000	3
H2	Sc	45	200963.11	1.6	97.5	Pulse	0.1000	3
H2	Ge	72	164568.30	0.9	101.1	Pulse	0.1000	3
H2	In	115	400195.63	0.4	99.1	Pulse	0.1000	3
He	Sc	45	49953.36	0.4	97.6	Pulse	0.1000	3
He	Ge	72	84644.14	1.7	103.4	Pulse	0.1000	3
He	In	115	88069.14	1.1	100.5	Pulse	0.1000	3
He	Tb	159	403535.23	0.6	100.5	Pulse	0.1000	3
He	Bi	209	308099.94	1.0	100.6	Pulse	0.1000	3

No Gas

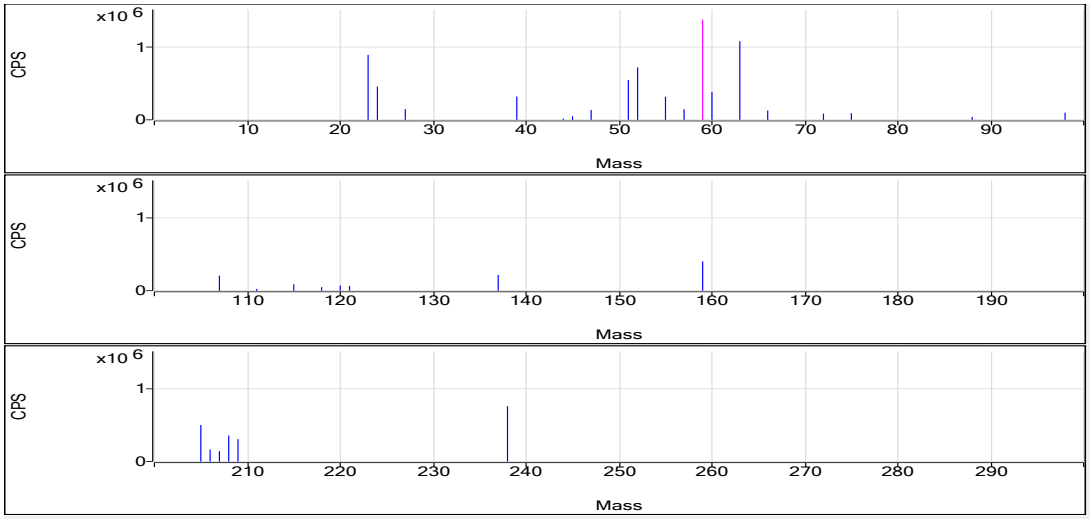


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	48.778	0.0356	92036.41	0.0007	3.404E-05
Be	9	1	No Gas	48.581	0.0354	90629.95	0.0007	3.404E-05
Be	9	1	No Gas	49.805	0.0363	91171.41	0.0007	3.404E-05
Se	78	2	H2	49.475	0.0217	3607.13	0.0004	3.546E-05
Se	78	2	H2	48.802	0.0214	3522.44	0.0004	3.546E-05
Se	78	2	H2	50.909	0.0223	3648.47	0.0004	3.546E-05
Na	23	3	He	4889.211	17.8442	890726.16	0.0036	0.4171
Na	23	3	He	4873.064	17.7867	891957.72	0.0036	0.4171
Na	23	3	He	4939.467	18.0234	897486.71	0.0036	0.4171
Mg	24	3	He	5080.485	9.1839	458431.75	0.0018	0.004553
Mg	24	3	He	5046.424	9.1224	457465.07	0.0018	0.004553
Mg	24	3	He	5030.527	9.0937	452825.58	0.0018	0.004553
Al	27	3	He	5000.456	2.9153	145523.36	0.0006	0.002085
Al	27	3	He	5064.856	2.9528	148077.61	0.0006	0.002085
Al	27	3	He	5092.315	2.9688	147835.44	0.0006	0.002085
K	39	3	He	5091.633	6.3739	318163.18	0.0012	0.4112
K	39	3	He	5114.546	6.4007	320979.70	0.0012	0.4112
K	39	3	He	5155.3	6.4484	321104.57	0.0012	0.4112
Ca	44	3	He	5164.305	0.3522	17581.08	0.0001	0.003322
Ca	44	3	He	5098.93	0.3478	17440.88	0.0001	0.003322
Ca	44	3	He	5397.242	0.3679	18322.07	0.0001	0.003322
Ti	47	3	He	5060.358	2.6914	134346.43	0.0005	0
Ti	47	3	He	5051.411	2.6866	134728.90	0.0005	0
Ti	47	3	He	5095.544	2.7101	134952.60	0.0005	0
V	51	3	He	517.739	11.0342	550792.44	0.0213	0.0318
V	51	3	He	512.315	10.9189	547558.13	0.0213	0.0318
V	51	3	He	514.191	10.9588	545702.69	0.0213	0.0318
Cr	52	3	He	492.661	14.5322	725399.68	0.0294	0.04297
Cr	52	3	He	486.316	14.3456	719396.00	0.0294	0.04297
Cr	52	3	He	490.817	14.478	720940.54	0.0294	0.04297
Mn	55	3	He	513.71	6.3893	318934.10	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	507.973	6.318	316832.03	0.0124	0.002801
Mn	55	3	He	515.163	6.4074	319060.27	0.0124	0.002801
Fe	57	3	He	5109.148	2.9259	146053.22	0.0006	0.002732
Fe	57	3	He	5066.203	2.9014	145496.26	0.0006	0.002732
Fe	57	3	He	5140.653	2.944	146596.74	0.0006	0.002732
Co	59	3	He	499.405	27.4147	1368452.79	0.0549	0.003644
Co	59	3	He	490.879	26.9468	1351313.89	0.0549	0.003644
Co	59	3	He	518.684	28.4729	1417829.20	0.0549	0.003644
Ni	60	3	He	496.425	4.6224	384310.27	0.0093	0.01413
Ni	60	3	He	483.639	4.5037	381783.94	0.0093	0.01413
Ni	60	3	He	479.135	4.4619	383807.26	0.0093	0.01413
Cu	63	3	He	474.677	13.0278	1083151.23	0.0274	0.009321
Cu	63	3	He	463.105	12.7104	1077484.59	0.0274	0.009321
Cu	63	3	He	459.932	12.6234	1085860.14	0.0274	0.009321
Zn	66	3	He	502.279	1.5481	128712.88	0.0031	0.005913
Zn	66	3	He	487.432	1.5025	127372.08	0.0031	0.005913
Zn	66	3	He	483.003	1.4889	128077.20	0.0031	0.005913
As	75	3	He	508.517	1.092	90791.45	0.0021	0.0008698
As	75	3	He	497.645	1.0687	90594.06	0.0021	0.0008698
As	75	3	He	487.552	1.047	90064.74	0.0021	0.0008698
Sr	88	3	He	50.117	0.4417	39235.39	0.0088	0.0006843
Sr	88	3	He	51.066	0.45	39756.53	0.0088	0.0006843
Sr	88	3	He	51.516	0.454	39506.20	0.0088	0.0006843
Mo	98	3	He	50.268	1.105	98161.18	0.0219	0.001827
Mo	98	3	He	51.462	1.1312	99933.70	0.0219	0.001827
Mo	98	3	He	51.064	1.1224	97678.16	0.0219	0.001827
Ag	107	3	He	49.465	2.3279	206801.11	0.047	0.001064
Ag	107	3	He	49.662	2.3371	206476.38	0.047	0.001064
Ag	107	3	He	50.985	2.3994	208804.20	0.047	0.001064
Cd	111	3	He	50.961	0.2715	24114.86	0.0053	6.086E-05
Cd	111	3	He	50.32	0.268	23680.08	0.0053	6.086E-05
Cd	111	3	He	51.3	0.2733	23780.22	0.0053	6.086E-05
Sn	120	3	He	51	0.8013	71182.87	0.0154	0.01483
Sn	120	3	He	51.672	0.8116	71705.70	0.0154	0.01483
Sn	120	3	He	50.892	0.7996	69585.63	0.0154	0.01483
Sb	121	3	He	51.773	0.738	65565.93	0.0143	0.0002661
Sb	121	3	He	51.98	0.741	65463.91	0.0143	0.0002661
Sb	121	3	He	51.742	0.7376	64189.22	0.0143	0.0002661
Ba	137	3	He	508.407	2.4298	215860.15	0.0048	0.0002665
Ba	137	3	He	518.446	2.4778	218905.54	0.0048	0.0002665
Ba	137	3	He	522.333	2.4964	217246.70	0.0048	0.0002665
Tl	205	3	He	50.508	1.2432	499597.53	0.0246	0.002755
Tl	205	3	He	50.575	1.2449	505636.87	0.0246	0.002755
Tl	205	3	He	51.002	1.2554	505394.45	0.0246	0.002755
Pb	208	3	He	50.59	1.6415	353083.86	0.0324	0.002158
Pb	208	3	He	50.939	1.6528	360611.71	0.0324	0.002158
Pb	208	3	He	50.964	1.6536	359175.78	0.0324	0.002158
U	238	3	He	49.613	2.4437	760117.88	0.0492	0.0004023
U	238	3	He	50.731	2.4988	761925.30	0.0492	0.0004023
U	238	3	He	50.494	2.4871	766863.43	0.0492	0.0004023
Sc	45	1	No Gas			2587444.02		
Sc	45	1	No Gas			2558252.62		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2510348.40		
Ge	72	1	No Gas			1232636.54		
Ge	72	1	No Gas			1220874.67		
Ge	72	1	No Gas			1215625.53		
Sc	45	2	H2			199429.29		
Sc	45	2	H2			198708.63		
Sc	45	2	H2			204751.40		
Ge	72	2	H2			166065.45		
Ge	72	2	H2			164396.44		
Ge	72	2	H2			163243.02		
In	115	2	H2			401019.21		
In	115	2	H2			401346.01		
In	115	2	H2			398221.67		
Sc	45	3	He			49916.78		
Sc	45	3	He			50147.55		
Sc	45	3	He			49795.76		
Ge	72	3	He			83141.42		
Ge	72	3	He			84771.61		
Ge	72	3	He			86019.39		
In	115	3	He			89215.35		
In	115	3	He			88723.35		
In	115	3	He			87414.08		
Tb	159	3	He			401851.44		
Tb	159	3	He			406171.79		
Tb	159	3	He			402582.45		
Bi	209	3	He			311050.78		
Bi	209	3	He			304916.25		
Bi	209	3	He			308332.79		

Quantitation Report

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Acq Time	8/9/2023 7:31:34 PM
Sample Name	CCB 4654618
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

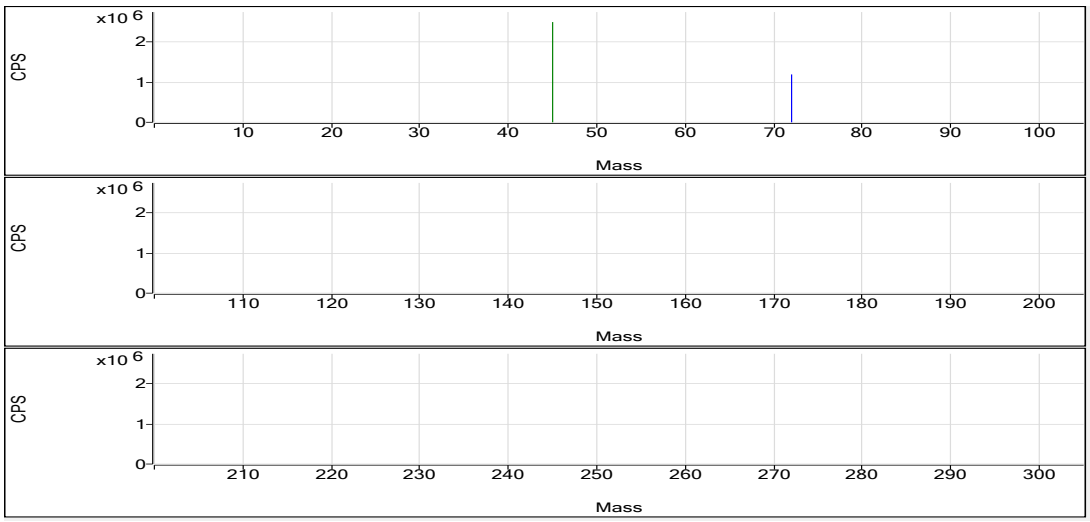
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.020	ppb	N/A	48.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.012	ppb	N/A	4.89	0.0000	Pulse	1.5000	3
Na	23	45	He	-9.232	ppb	N/A	19409.99	0.3842	Pulse	0.1000	3
Mg	24	45	He	-0.295	ppb	N/A	203.34	0.0040	Pulse	0.1000	3
Al	27	45	He	-0.523	ppb	N/A	90.00	0.0018	Pulse	0.1000	3
K	39	45	He	7.419	ppb	156.2	21206.01	0.4199	Pulse	0.1000	3
Ca	44	45	He	-16.807	ppb	N/A	110.01	0.0022	Pulse	0.1000	3
Ti	47	45	He	1.725	ppb	48.3	46.67	0.0009	Pulse	0.1000	3
V	51	45	He	-0.326	ppb	N/A	1256.06	0.0249	Pulse	0.5000	3
Cr	52	45	He	-0.163	ppb	N/A	1930.19	0.0382	Pulse	0.1000	3
Mn	55	45	He	0.030	ppb	162.5	160.01	0.0032	Pulse	0.1000	3
Fe	57	45	He	-0.271	ppb	N/A	130.01	0.0026	Pulse	0.1000	3
Co	59	45	He	0.065	ppb	20.4	363.35	0.0072	Pulse	0.1000	3
Ni	60	72	He	-1.064	ppb	N/A	350.01	0.0043	Pulse	0.1000	3
Cu	63	72	He	-0.021	ppb	N/A	720.04	0.0087	Pulse	0.1000	3
Zn	66	72	He	0.258	ppb	92.7	553.36	0.0067	Pulse	0.1000	3
As	75	72	He	0.050	ppb	196.5	80.67	0.0010	Pulse	0.5000	3
Sr	88	115	He	0.013	ppb	204.6	70.00	0.0008	Pulse	0.1000	3
Mo	98	115	He	-0.016	ppb	N/A	130.01	0.0015	Pulse	0.1000	3
Ag	107	115	He	-0.007	ppb	N/A	63.33	0.0007	Pulse	0.1000	3
Cd	111	115	He	-0.003	ppb	N/A	4.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.026	ppb	N/A	1270.11	0.0144	Pulse	0.1000	3
Sb	121	115	He	0.035	ppb	50.1	66.67	0.0008	Pulse	0.1000	3
Ba	137	115	He	0.072	ppb	140.6	53.33	0.0006	Pulse	0.1000	3
Tl	205	159	He	-0.031	ppb	N/A	800.05	0.0020	Pulse	0.1000	3
Pb	208	159	He	-0.013	ppb	N/A	703.37	0.0018	Pulse	0.1000	3
U	238	209	He	0.037	ppb	22.1	690.05	0.0022	Pulse	0.1000	3

ISTD Table:

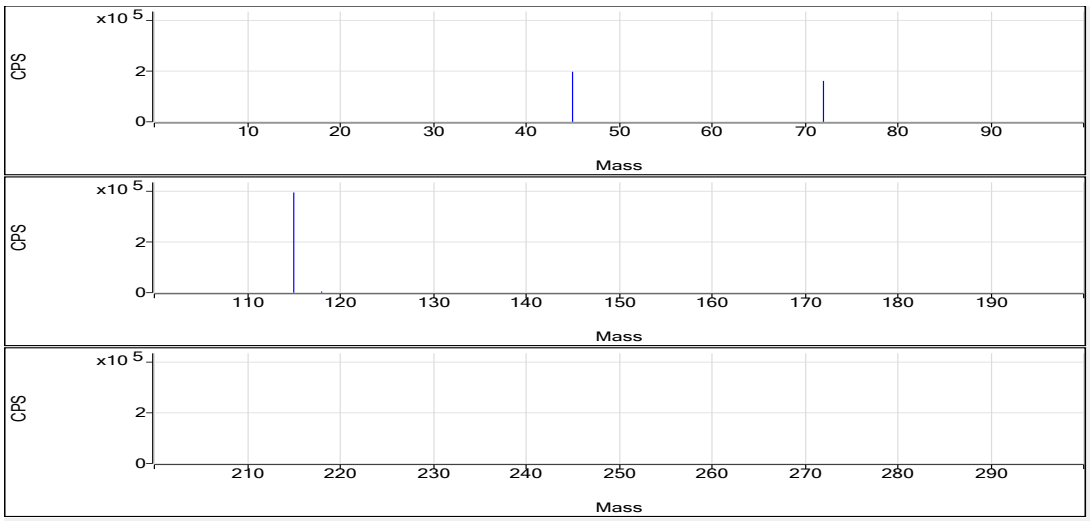
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2501919.03	0.2	95.9	Analog	0.1000	3
No Gas	Ge	72	1195048.47	0.3	92.7	Pulse	0.1000	3
H2	Sc	45	197873.46	0.4	96.0	Pulse	0.1000	3
H2	Ge	72	161823.73	0.9	99.4	Pulse	0.1000	3
H2	In	115	396152.17	0.3	98.1	Pulse	0.1000	3
He	Sc	45	50528.62	2.2	98.7	Pulse	0.1000	3
He	Ge	72	82444.34	1.3	100.7	Pulse	0.1000	3
He	In	115	88004.96	2.0	100.4	Pulse	0.1000	3
He	Tb	159	401585.41	0.6	100.0	Pulse	0.1000	3
He	Bi	209	309743.47	0.6	101.2	Pulse	0.1000	3

No Gas

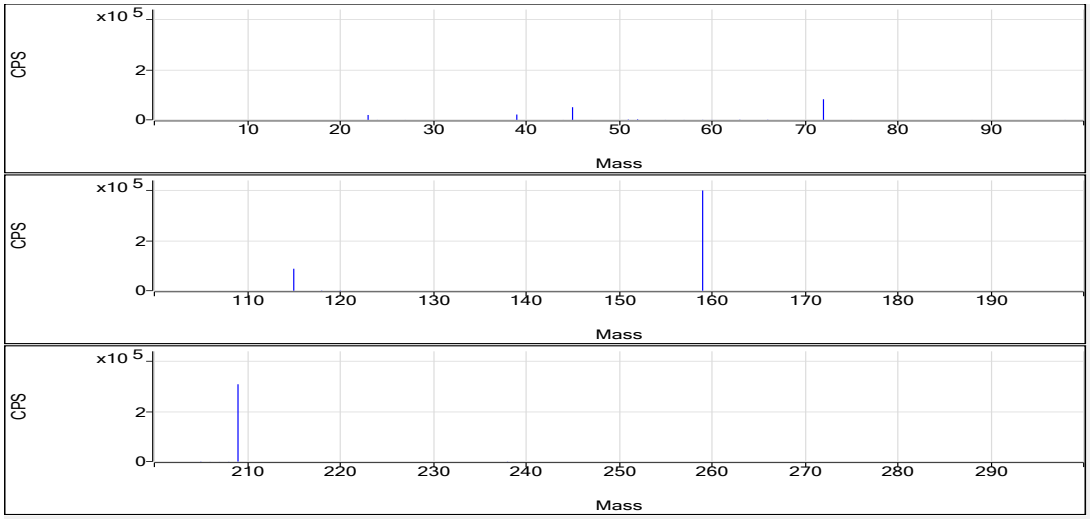


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.02	0	48.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.016	0	56.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.025	0	40.00	0.0007	3.404E-05
Se	78	2	H2	-0.006	0	5.33	0.0004	3.546E-05
Se	78	2	H2	0.004	0	6.00	0.0004	3.546E-05
Se	78	2	H2	-0.034	0	3.33	0.0004	3.546E-05
Na	23	3	He	-9.812	0.3821	19593.66	0.0036	0.4171
Na	23	3	He	-8.846	0.3855	19673.54	0.0036	0.4171
Na	23	3	He	-9.038	0.3848	18962.78	0.0036	0.4171
Mg	24	3	He	-0.253	0.0041	210.01	0.0018	0.004553
Mg	24	3	He	-0.134	0.0043	220.01	0.0018	0.004553
Mg	24	3	He	-0.498	0.0037	180.01	0.0018	0.004553
Al	27	3	He	-1.235	0.0014	70.00	0.0006	0.002085
Al	27	3	He	0.458	0.0024	120.00	0.0006	0.002085
Al	27	3	He	-0.791	0.0016	80.00	0.0006	0.002085
K	39	3	He	1.995	0.4135	21205.89	0.0012	0.4112
K	39	3	He	-0.46	0.4106	20955.59	0.0012	0.4112
K	39	3	He	20.722	0.4355	21456.56	0.0012	0.4112
Ca	44	3	He	-31.852	0.0012	60.00	0.0001	0.003322
Ca	44	3	He	-11.459	0.0025	130.01	0.0001	0.003322
Ca	44	3	He	-7.111	0.0028	140.01	0.0001	0.003322
Ti	47	3	He	2.2	0.0012	60.00	0.0005	0
Ti	47	3	He	2.211	0.0012	60.00	0.0005	0
Ti	47	3	He	0.763	0.0004	20.00	0.0005	0
V	51	3	He	-0.324	0.0249	1278.06	0.0213	0.0318
V	51	3	He	-0.369	0.0239	1222.06	0.0213	0.0318
V	51	3	He	-0.285	0.0257	1268.07	0.0213	0.0318
Cr	52	3	He	-0.201	0.0371	1900.19	0.0294	0.04297
Cr	52	3	He	-0.075	0.0408	2080.20	0.0294	0.04297
Cr	52	3	He	-0.212	0.0367	1810.17	0.0294	0.04297
Mn	55	3	He	-0.021	0.0025	130.00	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.074	0.0037	190.01	0.0124	0.002801
Mn	55	3	He	0.036	0.0032	160.01	0.0124	0.002801
Fe	57	3	He	-1.366	0.002	100.00	0.0006	0.002732
Fe	57	3	He	0.363	0.0029	150.01	0.0006	0.002732
Fe	57	3	He	0.192	0.0028	140.01	0.0006	0.002732
Co	59	3	He	0.065	0.0072	370.02	0.0549	0.003644
Co	59	3	He	0.051	0.0065	330.02	0.0549	0.003644
Co	59	3	He	0.078	0.0079	390.02	0.0549	0.003644
Ni	60	3	He	-1.048	0.0044	360.01	0.0093	0.01413
Ni	60	3	He	-0.955	0.0053	430.02	0.0093	0.01413
Ni	60	3	He	-1.187	0.0031	260.01	0.0093	0.01413
Cu	63	3	He	-0.01	0.009	740.04	0.0274	0.009321
Cu	63	3	He	-0.032	0.0084	690.04	0.0274	0.009321
Cu	63	3	He	-0.022	0.0087	730.05	0.0274	0.009321
Zn	66	3	He	0.182	0.0065	530.03	0.0031	0.005913
Zn	66	3	He	0.066	0.0061	500.03	0.0031	0.005913
Zn	66	3	He	0.527	0.0075	630.03	0.0031	0.005913
As	75	3	He	-0.007	0.0009	70.00	0.0021	0.0008698
As	75	3	He	-0.006	0.0009	70.00	0.0021	0.0008698
As	75	3	He	0.163	0.0012	102.00	0.0021	0.0008698
Sr	88	3	He	0.011	0.0008	70.00	0.0088	0.0006843
Sr	88	3	He	0.039	0.001	90.00	0.0088	0.0006843
Sr	88	3	He	-0.012	0.0006	50.00	0.0088	0.0006843
Mo	98	3	He	-0.028	0.0012	110.01	0.0219	0.001827
Mo	98	3	He	0	0.0018	160.01	0.0219	0.001827
Mo	98	3	He	-0.02	0.0014	120.01	0.0219	0.001827
Ag	107	3	He	-0.004	0.0009	80.00	0.047	0.001064
Ag	107	3	He	-0.013	0.0005	40.00	0.047	0.001064
Ag	107	3	He	-0.005	0.0008	70.00	0.047	0.001064
Cd	111	3	He	0.001	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Sn	120	3	He	0.011	0.015	1350.11	0.0154	0.01483
Sn	120	3	He	-0.139	0.0127	1110.09	0.0154	0.01483
Sn	120	3	He	0.049	0.0156	1350.12	0.0154	0.01483
Sb	121	3	He	0.028	0.0007	60.00	0.0143	0.0002661
Sb	121	3	He	0.021	0.0006	50.00	0.0143	0.0002661
Sb	121	3	He	0.054	0.001	90.00	0.0143	0.0002661
Ba	137	3	He	-0.009	0.0002	20.00	0.0048	0.0002665
Ba	137	3	He	0.04	0.0005	40.00	0.0048	0.0002665
Ba	137	3	He	0.186	0.0012	100.00	0.0048	0.0002665
Tl	205	3	He	-0.035	0.0019	760.05	0.0246	0.002755
Tl	205	3	He	-0.032	0.002	800.05	0.0246	0.002755
Tl	205	3	He	-0.027	0.0021	840.06	0.0246	0.002755
Pb	208	3	He	-0.019	0.0015	290.01	0.0324	0.002158
Pb	208	3	He	-0.003	0.0021	490.03	0.0324	0.002158
Pb	208	3	He	-0.016	0.0017	340.02	0.0324	0.002158
U	238	3	He	0.03	0.0019	590.04	0.0492	0.0004023
U	238	3	He	0.035	0.0021	650.05	0.0492	0.0004023
U	238	3	He	0.046	0.0027	830.06	0.0492	0.0004023
Sc	45	1	No Gas			2504629.34		
Sc	45	1	No Gas			2495019.96		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2506107.78		
Ge	72	1	No Gas			1190716.31		
Ge	72	1	No Gas			1197381.78		
Ge	72	1	No Gas			1197047.33		
Sc	45	2	H2			197842.28		
Sc	45	2	H2			198639.25		
Sc	45	2	H2			197138.86		
Ge	72	2	H2			163292.82		
Ge	72	2	H2			160453.44		
Ge	72	2	H2			161724.92		
In	115	2	H2			397553.90		
In	115	2	H2			395116.71		
In	115	2	H2			395785.89		
Sc	45	3	He			51281.16		
Sc	45	3	He			51030.57		
Sc	45	3	He			49274.14		
Ge	72	3	He			81884.77		
Ge	72	3	He			81773.39		
Ge	72	3	He			83674.86		
In	115	3	He			89960.58		
In	115	3	He			87485.41		
In	115	3	He			86590.19		
Tb	159	3	He			400952.14		
Tb	159	3	He			404358.12		
Tb	159	3	He			399445.97		
Bi	209	3	He			311281.38		
Bi	209	3	He			307713.61		
Bi	209	3	He			310235.43		

Quantitation Report

Data File Name	169SMPL.d
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Sample Type	Sample
Comment	F6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

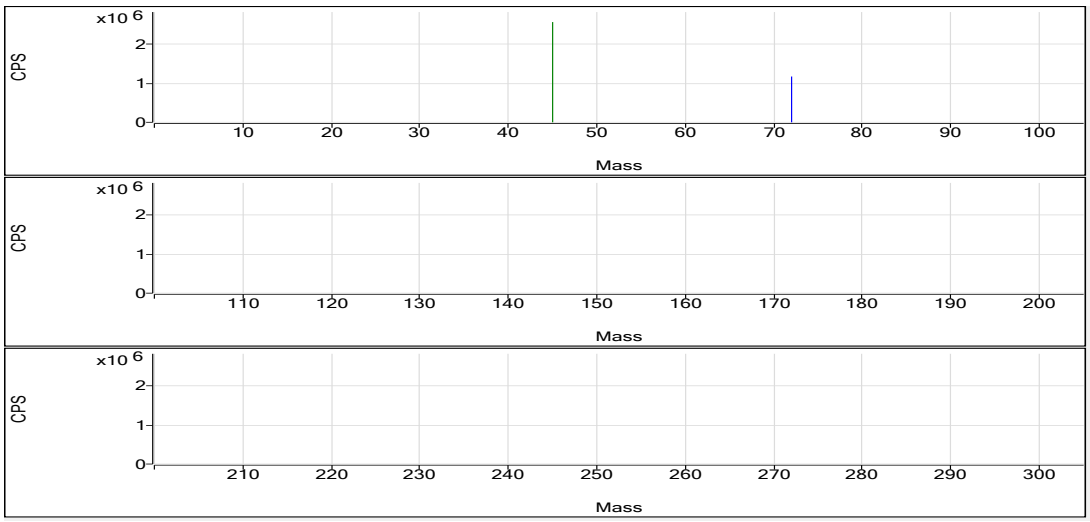
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.015	ppb	N/A	58.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.023	ppb	248.6	7.33	0.0000	Pulse	1.5000	3
Na	23	45	He	149113.693	ppb	1.2	26811895.43	531.9198	Analog	0.1000	3
Mg	24	45	He	221.796	ppb	4.6	20428.02	0.4053	Pulse	0.1000	3
Al	27	45	He	73.115	ppb	6.6	2253.58	0.0447	Pulse	0.1000	3
K	39	45	He	169.447	ppb	2.8	30729.70	0.6096	Pulse	0.1000	3
Ca	44	45	He	3118.093	ppb	5.1	10784.34	0.2140	Pulse	0.1000	3
Ti	47	45	He	0.501	ppb	115.5	13.33	0.0003	Pulse	0.1000	3
V	51	45	He	-0.375	ppb	N/A	1200.73	0.0238	Pulse	0.5000	3
Cr	52	45	He	0.463	ppb	14.6	2853.72	0.0566	Pulse	0.1000	3
Mn	55	45	He	45.834	ppb	1.4	28862.82	0.5726	Pulse	0.1000	3
Fe	57	45	He	699.746	ppb	1.7	20321.61	0.4031	Pulse	0.1000	3
Co	59	45	He	0.659	ppb	15.6	2003.54	0.0398	Pulse	0.1000	3
Ni	60	72	He	5.349	ppb	4.0	5264.48	0.0638	Pulse	0.1000	3
Cu	63	72	He	1.562	ppb	6.5	4304.12	0.0522	Pulse	0.1000	3
Zn	66	72	He	10627.602	ppb	0.4	2694170.90	32.6371	Analog	0.1000	3
As	75	72	He	0.129	ppb	51.9	94.67	0.0011	Pulse	0.5000	3
Sr	88	115	He	28.424	ppb	2.2	22054.51	0.2508	Pulse	0.1000	3
Mo	98	115	He	0.241	ppb	4.1	626.70	0.0071	Pulse	0.1000	3
Ag	107	115	He	-0.015	ppb	N/A	33.33	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.027	ppb	54.4	18.00	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.019	ppb	527.6	1330.11	0.0151	Pulse	0.1000	3
Sb	121	115	He	0.261	ppb	11.4	350.02	0.0040	Pulse	0.1000	3
Ba	137	115	He	68.607	ppb	2.6	28861.23	0.3281	Pulse	0.1000	3
Tl	205	159	He	-0.083	ppb	N/A	286.68	0.0007	Pulse	0.1000	3
Pb	208	159	He	0.362	ppb	4.2	5580.70	0.0139	Pulse	0.1000	3
U	238	209	He	0.088	ppb	14.9	1473.48	0.0047	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2570957.20	1.3	98.6	Analog	0.1000	3
No Gas	Ge	72	1174169.72	1.3	91.1	Pulse	0.1000	3
H2	Sc	45	202468.74	0.7	98.3	Pulse	0.1000	3
H2	Ge	72	160678.09	0.9	98.7	Pulse	0.1000	3
H2	In	115	401134.19	0.8	99.4	Pulse	0.1000	3
He	Sc	45	50411.39	1.3	98.5	Pulse	0.1000	3
He	Ge	72	82551.49	1.0	100.8	Pulse	0.1000	3
He	In	115	87947.76	0.8	100.3	Pulse	0.1000	3
He	Tb	159	402002.86	0.7	100.1	Pulse	0.1000	3
He	Bi	209	311059.79	0.7	101.6	Pulse	0.1000	3

No Gas



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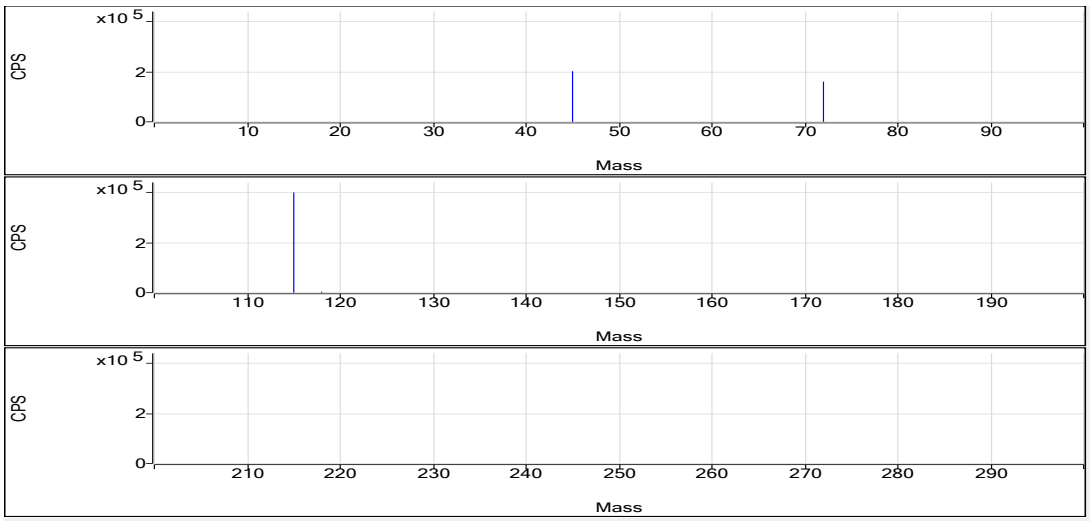
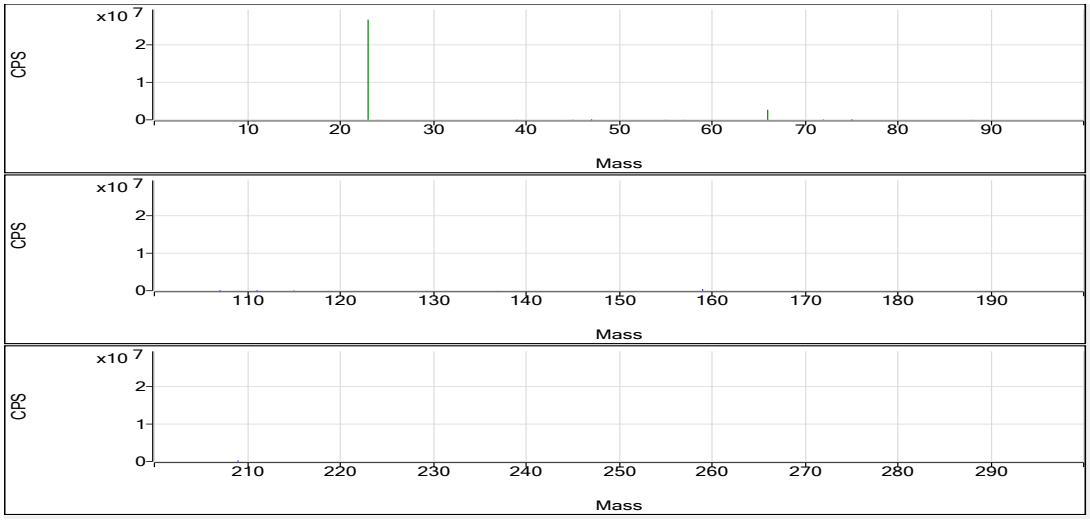


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.028	0	34.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.007	0	76.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.011	0	66.00	0.0007	3.404E-05
Se	78	2	H2	0.09	0.0001	12.00	0.0004	3.546E-05
Se	78	2	H2	-0.014	0	4.67	0.0004	3.546E-05
Se	78	2	H2	-0.006	0	5.33	0.0004	3.546E-05
Na	23	3	He	147490.283	526.1332	26848979.60	0.0036	0.4171
Na	23	3	He	151123.21	539.0825	26795219.60	0.0036	0.4171
Na	23	3	He	148727.587	530.5435	26791487.10	0.0036	0.4171
Mg	24	3	He	224.323	0.4099	20915.29	0.0018	0.004553
Mg	24	3	He	230.484	0.421	20925.37	0.0018	0.004553
Mg	24	3	He	210.583	0.385	19443.41	0.0018	0.004553
Al	27	3	He	78.503	0.0478	2440.28	0.0006	0.002085
Al	27	3	He	69.294	0.0425	2110.22	0.0006	0.002085
Al	27	3	He	71.549	0.0438	2210.24	0.0006	0.002085
K	39	3	He	163.983	0.6032	30782.90	0.0012	0.4112
K	39	3	He	172.734	0.6135	30492.67	0.0012	0.4112
K	39	3	He	171.624	0.6122	30913.52	0.0012	0.4112
Ca	44	3	He	2951.26	0.2027	10343.97	0.0001	0.003322
Ca	44	3	He	3132.643	0.215	10684.36	0.0001	0.003322
Ca	44	3	He	3270.377	0.2243	11324.69	0.0001	0.003322
Ti	47	3	He	0.368	0.0002	10.00	0.0005	0
Ti	47	3	He	1.135	0.0006	30.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	-0.403	0.0232	1186.06	0.0213	0.0318
V	51	3	He	-0.33	0.0248	1232.06	0.0213	0.0318
V	51	3	He	-0.393	0.0234	1184.06	0.0213	0.0318
Cr	52	3	He	0.511	0.058	2960.43	0.0294	0.04297
Cr	52	3	He	0.386	0.0543	2700.35	0.0294	0.04297
Cr	52	3	He	0.492	0.0574	2900.39	0.0294	0.04297
Mn	55	3	He	45.185	0.5645	28809.26	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	46.477	0.5806	28859.49	0.0124	0.002801
Mn	55	3	He	45.84	0.5727	28919.72	0.0124	0.002801
Fe	57	3	He	696.498	0.4012	20475.25	0.0006	0.002732
Fe	57	3	He	689.839	0.3974	19754.03	0.0006	0.002732
Fe	57	3	He	712.903	0.4106	20735.55	0.0006	0.002732
Co	59	3	He	0.591	0.0361	1840.18	0.0549	0.003644
Co	59	3	He	0.777	0.0463	2300.27	0.0549	0.003644
Co	59	3	He	0.608	0.037	1870.17	0.0549	0.003644
Ni	60	3	He	5.109	0.0616	5131.10	0.0093	0.01413
Ni	60	3	He	5.426	0.0645	5271.11	0.0093	0.01413
Ni	60	3	He	5.513	0.0653	5391.22	0.0093	0.01413
Cu	63	3	He	1.449	0.0491	4090.73	0.0274	0.009321
Cu	63	3	He	1.646	0.0545	4450.83	0.0274	0.009321
Cu	63	3	He	1.591	0.0529	4370.81	0.0274	0.009321
Zn	66	3	He	10581.059	32.4942	2708809.96	0.0031	0.005913
Zn	66	3	He	10663.595	32.7476	2676560.27	0.0031	0.005913
Zn	66	3	He	10638.153	32.6695	2697142.46	0.0031	0.005913
As	75	3	He	0.075	0.001	86.00	0.0021	0.0008698
As	75	3	He	0.108	0.0011	90.00	0.0021	0.0008698
As	75	3	He	0.204	0.0013	108.00	0.0021	0.0008698
Sr	88	3	He	28.655	0.2528	22368.15	0.0088	0.0006843
Sr	88	3	He	28.897	0.2549	22228.13	0.0088	0.0006843
Sr	88	3	He	27.718	0.2446	21567.24	0.0088	0.0006843
Mo	98	3	He	0.252	0.0073	650.04	0.0219	0.001827
Mo	98	3	He	0.241	0.0071	620.04	0.0219	0.001827
Mo	98	3	He	0.232	0.0069	610.03	0.0219	0.001827
Ag	107	3	He	-0.011	0.0006	50.00	0.047	0.001064
Ag	107	3	He	-0.015	0.0003	30.00	0.047	0.001064
Ag	107	3	He	-0.018	0.0002	20.00	0.047	0.001064
Cd	111	3	He	0.018	0.0002	14.00	0.0053	6.086E-05
Cd	111	3	He	0.019	0.0002	14.00	0.0053	6.086E-05
Cd	111	3	He	0.044	0.0003	26.00	0.0053	6.086E-05
Sn	120	3	He	-0.097	0.0133	1180.09	0.0154	0.01483
Sn	120	3	He	0.094	0.0163	1420.11	0.0154	0.01483
Sn	120	3	He	0.06	0.0158	1390.12	0.0154	0.01483
Sb	121	3	He	0.227	0.0035	310.01	0.0143	0.0002661
Sb	121	3	He	0.271	0.0041	360.02	0.0143	0.0002661
Sb	121	3	He	0.284	0.0043	380.02	0.0143	0.0002661
Ba	137	3	He	69.155	0.3307	29262.31	0.0048	0.0002665
Ba	137	3	He	66.592	0.3185	27768.74	0.0048	0.0002665
Ba	137	3	He	70.073	0.3351	29552.63	0.0048	0.0002665
Tl	205	3	He	-0.08	0.0008	320.01	0.0246	0.002755
Tl	205	3	He	-0.083	0.0007	290.01	0.0246	0.002755
Tl	205	3	He	-0.087	0.0006	250.01	0.0246	0.002755
Pb	208	3	He	0.346	0.0134	2990.47	0.0324	0.002158
Pb	208	3	He	0.375	0.0143	3110.46	0.0324	0.002158
Pb	208	3	He	0.364	0.014	3150.52	0.0324	0.002158
U	238	3	He	0.087	0.0047	1460.13	0.0492	0.0004023
U	238	3	He	0.102	0.0054	1670.18	0.0492	0.0004023
U	238	3	He	0.075	0.0041	1290.12	0.0492	0.0004023
Sc	45	1	No Gas			2554686.52		
Sc	45	1	No Gas			2608621.05		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2549564.02		
Ge	72	1	No Gas			1166914.12		
Ge	72	1	No Gas			1191393.73		
Ge	72	1	No Gas			1164201.31		
Sc	45	2	H2			200900.78		
Sc	45	2	H2			203069.86		
Sc	45	2	H2			203435.58		
Ge	72	2	H2			160068.10		
Ge	72	2	H2			159573.84		
Ge	72	2	H2			162392.33		
In	115	2	H2			401894.17		
In	115	2	H2			403863.98		
In	115	2	H2			397644.41		
Sc	45	3	He			51030.76		
Sc	45	3	He			49705.23		
Sc	45	3	He			50498.19		
Ge	72	3	He			83362.95		
Ge	72	3	He			81733.04		
Ge	72	3	He			82558.49		
In	115	3	He			88481.29		
In	115	3	He			87193.54		
In	115	3	He			88189.35		
Tb	159	3	He			404312.73		
Tb	159	3	He			402883.59		
Tb	159	3	He			398812.26		
Bi	209	3	He			310935.17		
Bi	209	3	He			308898.82		
Bi	209	3	He			313345.37		

Quantitation Report

Data File Name	170SMPL.d
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Sample Type	Sample
Comment	F6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

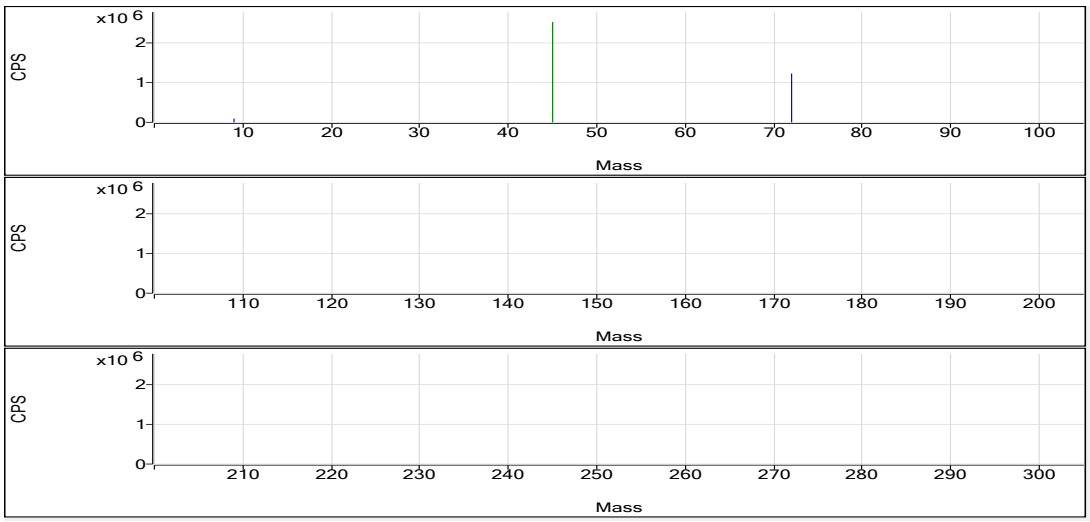
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.090	ppb	1.0	94616.47	0.0373	Pulse	0.5000	3
Se	78	72	H2	99.247	ppb	1.3	7297.65	0.0435	Pulse	1.5000	3
Na	23	45	He	151721.296	ppb	2.3	26945790.43	541.2143	Analog	0.1000	3
Mg	24	45	He	5314.740	ppb	1.5	478346.97	9.6072	Pulse	0.1000	3
Al	27	45	He	5198.551	ppb	1.8	150903.26	3.0307	Pulse	0.1000	3
K	39	45	He	5256.539	ppb	1.8	326979.45	6.5670	Pulse	0.1000	3
Ca	44	45	He	8244.745	ppb	2.1	27897.42	0.5603	Pulse	0.1000	3
Ti	47	45	He	517.767	ppb	2.4	13710.28	0.2754	Pulse	0.1000	3
V	51	45	He	520.260	ppb	1.6	552058.73	11.0878	Pulse	0.5000	3
Cr	52	45	He	491.810	ppb	1.2	722328.01	14.5071	Pulse	0.1000	3
Mn	55	45	He	560.264	ppb	1.6	346936.91	6.9681	Pulse	0.1000	3
Fe	57	45	He	5751.928	ppb	2.0	163985.77	3.2937	Pulse	0.1000	3
Co	59	45	He	499.377	ppb	1.8	1364933.42	27.4131	Mix	0.1000	3
Ni	60	72	He	484.324	ppb	0.5	384222.65	4.5100	Pulse	0.1000	3
Cu	63	72	He	465.297	ppb	0.7	1087965.56	12.7706	Pulse	0.1000	3
Zn	66	72	He	10477.565	ppb	0.7	2741153.29	32.1764	Analog	0.1000	3
As	75	72	He	495.701	ppb	0.5	90689.50	1.0645	Pulse	0.5000	3
Sr	88	115	He	80.205	ppb	2.6	61420.26	0.7064	Pulse	0.1000	3
Mo	98	115	He	50.546	ppb	2.4	96604.27	1.1111	Pulse	0.1000	3
Ag	107	115	He	45.537	ppb	1.5	186362.36	2.1431	Pulse	0.1000	3
Cd	111	115	He	51.000	ppb	1.7	23622.66	0.2717	Pulse	0.5000	3
Sn	120	115	He	103.696	ppb	2.0	140334.98	1.6139	Pulse	0.1000	3
Sb	121	115	He	104.544	ppb	1.1	129585.82	1.4900	Pulse	0.1000	3
Ba	137	115	He	592.068	ppb	0.4	246095.26	2.8296	Pulse	0.1000	3
Tl	205	159	He	101.728	ppb	0.2	997904.70	2.5012	Pulse	0.1000	3
Pb	208	159	He	51.605	ppb	0.8	668005.87	1.6744	Pulse	0.1000	3
U	238	209	He	51.521	ppb	1.1	771897.51	2.5377	Pulse	0.1000	3

ISTD Table:

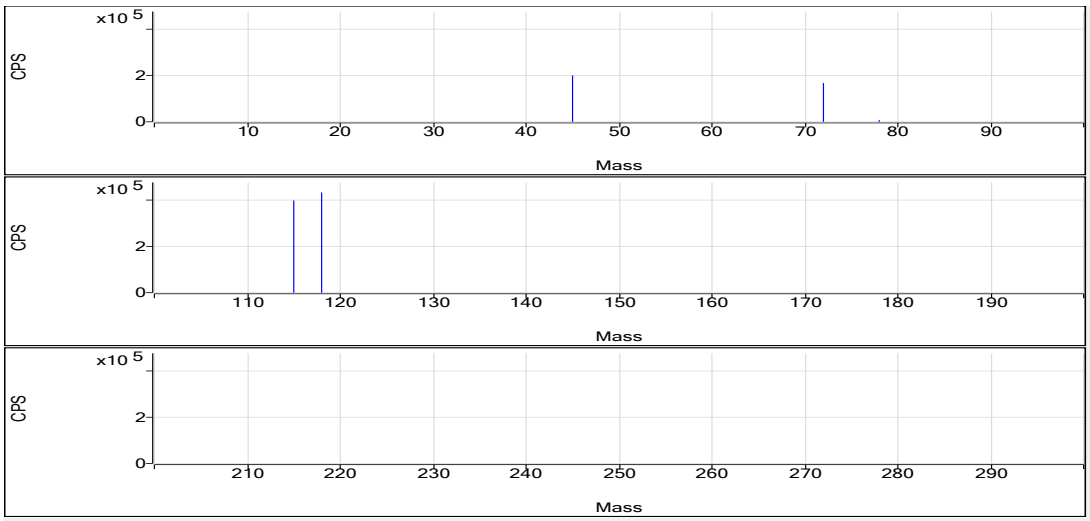
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2539876.84	1.1	97.4	Analog	0.1000	3
No Gas	Ge	72	1236214.05	0.7	95.9	Pulse	0.1000	3
H2	Sc	45	200499.27	0.3	97.3	Pulse	0.1000	3
H2	Ge	72	167625.69	1.1	103.0	Pulse	0.1000	3
H2	In	115	398522.73	0.4	98.7	Pulse	0.1000	3
He	Sc	45	49796.09	1.3	97.3	Pulse	0.1000	3
He	Ge	72	85193.71	0.6	104.1	Pulse	0.1000	3
He	In	115	86974.70	1.9	99.2	Pulse	0.1000	3
He	Tb	159	398969.10	0.7	99.3	Pulse	0.1000	3
He	Bi	209	304190.13	0.9	99.4	Pulse	0.1000	3

No Gas

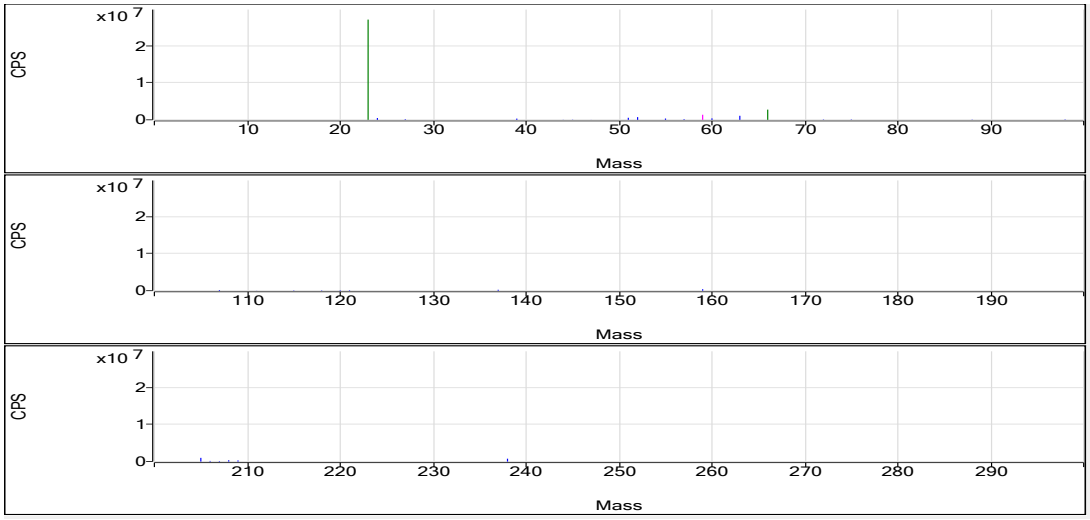


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.672	0.0369	94995.08	0.0007	3.404E-05
Be	9	1	No Gas	50.933	0.0371	93922.00	0.0007	3.404E-05
Be	9	1	No Gas	51.665	0.0377	94932.34	0.0007	3.404E-05
Se	78	2	H2	98.867	0.0434	7362.57	0.0004	3.546E-05
Se	78	2	H2	98.229	0.0431	7193.82	0.0004	3.546E-05
Se	78	2	H2	100.644	0.0441	7336.55	0.0004	3.546E-05
Na	23	3	He	155669.504	555.2874	27288914.59	0.0036	0.4171
Na	23	3	He	149782.832	534.3048	26938747.10	0.0036	0.4171
Na	23	3	He	149711.551	534.0508	26609709.60	0.0036	0.4171
Mg	24	3	He	5407.046	9.7739	480328.66	0.0018	0.004553
Mg	24	3	He	5273.719	9.5331	480640.54	0.0018	0.004553
Mg	24	3	He	5263.455	9.5145	474071.71	0.0018	0.004553
Al	27	3	He	5298.938	3.0892	151815.57	0.0006	0.002085
Al	27	3	He	5182.435	3.0213	152330.81	0.0006	0.002085
Al	27	3	He	5114.281	2.9816	148563.39	0.0006	0.002085
K	39	3	He	5359.432	6.6875	328648.28	0.0012	0.4112
K	39	3	He	5241.178	6.549	330189.60	0.0012	0.4112
K	39	3	He	5169.006	6.4645	322100.48	0.0012	0.4112
Ca	44	3	He	8441.121	0.5736	28187.90	0.0001	0.003322
Ca	44	3	He	8170.619	0.5553	27997.59	0.0001	0.003322
Ca	44	3	He	8122.494	0.5521	27506.78	0.0001	0.003322
Ti	47	3	He	532.071	0.283	13907.10	0.0005	0
Ti	47	3	He	509.666	0.2711	13666.98	0.0005	0
Ti	47	3	He	511.564	0.2721	13556.75	0.0005	0
V	51	3	He	529.701	11.2884	554755.31	0.0213	0.0318
V	51	3	He	514.64	10.9684	553006.31	0.0213	0.0318
V	51	3	He	516.438	11.0066	548414.56	0.0213	0.0318
Cr	52	3	He	497.976	14.6885	721848.11	0.0294	0.04297
Cr	52	3	He	486.739	14.358	723906.71	0.0294	0.04297
Cr	52	3	He	490.714	14.4749	721229.21	0.0294	0.04297
Mn	55	3	He	568.693	7.0729	347587.57	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	551.082	6.8539	345563.51	0.0124	0.002801
Mn	55	3	He	561.018	6.9774	347659.64	0.0124	0.002801
Fe	57	3	He	5880.797	3.3674	165488.40	0.0006	0.002732
Fe	57	3	He	5655.28	3.2384	163274.86	0.0006	0.002732
Fe	57	3	He	5719.709	3.2753	163194.06	0.0006	0.002732
Co	59	3	He	501.459	27.5274	1352801.39	0.0549	0.003644
Co	59	3	He	489.396	26.8653	1354505.14	0.0549	0.003644
Co	59	3	He	507.275	27.8467	1387493.73	0.0549	0.003644
Ni	60	3	He	482.521	4.4933	385555.93	0.0093	0.01413
Ni	60	3	He	486.868	4.5337	385191.01	0.0093	0.01413
Ni	60	3	He	483.584	4.5032	381921.01	0.0093	0.01413
Cu	63	3	He	464.09	12.7375	1092960.92	0.0274	0.009321
Cu	63	3	He	468.848	12.8679	1093293.97	0.0274	0.009321
Cu	63	3	He	462.954	12.7063	1077641.78	0.0274	0.009321
Zn	66	3	He	10396.169	31.9265	2739511.21	0.0031	0.005913
Zn	66	3	He	10536.24	32.3566	2749098.40	0.0031	0.005913
Zn	66	3	He	10500.288	32.2462	2734850.27	0.0031	0.005913
As	75	3	He	494.937	1.0629	91201.84	0.0021	0.0008698
As	75	3	He	498.437	1.0704	90942.64	0.0021	0.0008698
As	75	3	He	493.728	1.0603	89924.02	0.0021	0.0008698
Sr	88	3	He	78.441	0.6909	60720.79	0.0088	0.0006843
Sr	88	3	He	79.679	0.7018	61724.48	0.0088	0.0006843
Sr	88	3	He	82.497	0.7266	61815.51	0.0088	0.0006843
Mo	98	3	He	49.683	1.0921	95985.98	0.0219	0.001827
Mo	98	3	He	50.001	1.0991	96671.56	0.0219	0.001827
Mo	98	3	He	51.953	1.1419	97155.28	0.0219	0.001827
Ag	107	3	He	45.289	2.1314	187331.81	0.047	0.001064
Ag	107	3	He	45.015	2.1186	186339.41	0.047	0.001064
Ag	107	3	He	46.308	2.1793	185415.86	0.047	0.001064
Cd	111	3	He	50.316	0.268	23555.97	0.0053	6.086E-05
Cd	111	3	He	50.71	0.2701	23758.19	0.0053	6.086E-05
Cd	111	3	He	51.974	0.2768	23553.83	0.0053	6.086E-05
Sn	120	3	He	103.484	1.6106	141556.33	0.0154	0.01483
Sn	120	3	He	101.709	1.5832	139254.74	0.0154	0.01483
Sn	120	3	He	105.896	1.6478	140193.87	0.0154	0.01483
Sb	121	3	He	105.112	1.4981	131671.17	0.0143	0.0002661
Sb	121	3	He	103.23	1.4713	129410.87	0.0143	0.0002661
Sb	121	3	He	105.29	1.5007	127675.41	0.0143	0.0002661
Ba	137	3	He	591.09	2.825	248285.89	0.0048	0.0002665
Ba	137	3	He	590.357	2.8215	248164.20	0.0048	0.0002665
Ba	137	3	He	594.758	2.8425	241835.70	0.0048	0.0002665
Tl	205	3	He	101.473	2.495	1000718.42	0.0246	0.002755
Tl	205	3	He	101.779	2.5025	1000802.25	0.0246	0.002755
Tl	205	3	He	101.934	2.5063	992193.42	0.0246	0.002755
Pb	208	3	He	51.264	1.6633	355771.13	0.0324	0.002158
Pb	208	3	He	51.461	1.6697	357589.33	0.0324	0.002158
Pb	208	3	He	52.091	1.6901	354561.05	0.0324	0.002158
U	238	3	He	50.972	2.5107	770123.58	0.0492	0.0004023
U	238	3	He	51.507	2.537	772139.21	0.0492	0.0004023
U	238	3	He	52.085	2.5655	773429.75	0.0492	0.0004023
Sc	45	1	No Gas			2570909.65		
Sc	45	1	No Gas			2528840.90		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2519879.96		
Ge	72	1	No Gas			1234415.53		
Ge	72	1	No Gas			1245187.33		
Ge	72	1	No Gas			1229039.28		
Sc	45	2	H2			199908.84		
Sc	45	2	H2			200911.44		
Sc	45	2	H2			200677.52		
Ge	72	2	H2			169758.34		
Ge	72	2	H2			166943.51		
Ge	72	2	H2			166175.21		
In	115	2	H2			398606.28		
In	115	2	H2			400105.93		
In	115	2	H2			396855.97		
Sc	45	3	He			49143.77		
Sc	45	3	He			50418.31		
Sc	45	3	He			49826.18		
Ge	72	3	He			85806.86		
Ge	72	3	He			84962.63		
Ge	72	3	He			84811.63		
In	115	3	He			88662.40		
In	115	3	He			88713.37		
In	115	3	He			85834.26		
Tb	159	3	He			401097.42		
Tb	159	3	He			399926.09		
Tb	159	3	He			395883.78		
Bi	209	3	He			306741.52		
Bi	209	3	He			304349.88		
Bi	209	3	He			301478.98		

Quantitation Report

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Sample Name	410-136541-D-1-H SD@5
Sample Type	Sample
Comment	F6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

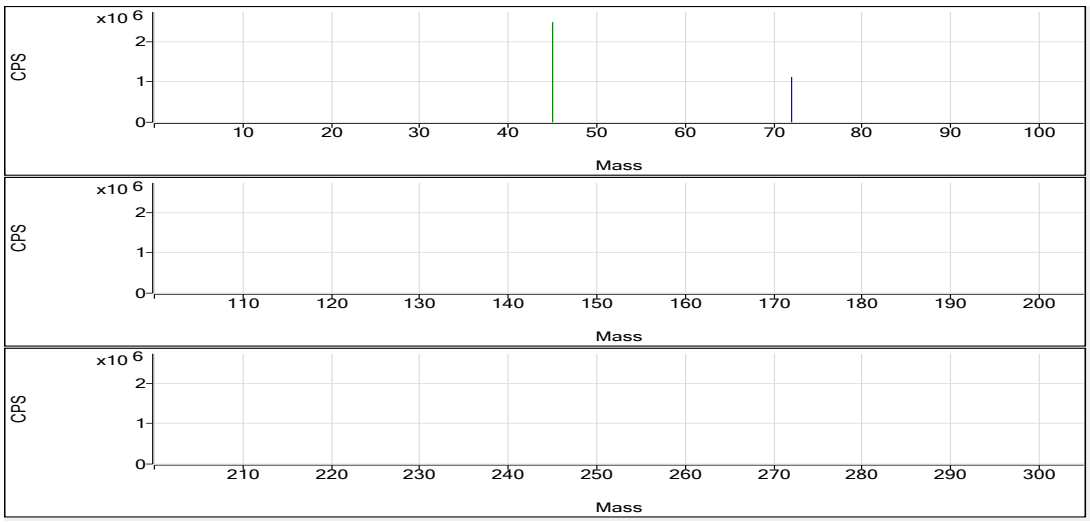
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.017	ppb	N/A	54.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.035	ppb	105.0	7.78	0.0001	Pulse	1.5000	3
Na	23	45	He	28232.439	ppb	1.8	5119796.80	101.0491	Analog	0.1000	3
Mg	24	45	He	42.234	ppb	4.1	4097.38	0.0809	Pulse	0.1000	3
Al	27	45	He	16.078	ppb	18.8	580.03	0.0115	Pulse	0.1000	3
K	39	45	He	38.572	ppb	17.2	23122.21	0.4564	Pulse	0.1000	3
Ca	44	45	He	614.726	ppb	7.9	2273.58	0.0449	Pulse	0.1000	3
Ti	47	45	He	0.498	ppb	86.6	13.33	0.0003	Pulse	0.1000	3
V	51	45	He	-0.309	ppb	N/A	1278.06	0.0252	Pulse	0.5000	3
Cr	52	45	He	-0.058	ppb	N/A	2090.23	0.0413	Pulse	0.1000	3
Mn	55	45	He	9.314	ppb	5.7	6008.14	0.1186	Pulse	0.1000	3
Fe	57	45	He	127.989	ppb	7.9	3847.34	0.0760	Pulse	0.1000	3
Co	59	45	He	0.190	ppb	15.2	713.38	0.0141	Pulse	0.1000	3
Ni	60	72	He	0.699	ppb	32.5	1600.14	0.0206	Pulse	0.1000	3
Cu	63	72	He	0.781	ppb	12.4	2386.94	0.0307	Pulse	0.1000	3
Zn	66	72	He	2034.511	ppb	1.8	485793.40	6.2527	Pulse	0.1000	3
As	75	72	He	0.282	ppb	15.6	114.67	0.0015	Pulse	0.5000	3
Sr	88	115	He	5.444	ppb	4.5	4314.17	0.0486	Pulse	0.1000	3
Mo	98	115	He	0.069	ppb	14.7	296.68	0.0033	Pulse	0.1000	3
Ag	107	115	He	-0.002	ppb	N/A	86.67	0.0010	Pulse	0.1000	3
Cd	111	115	He	-0.006	ppb	N/A	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.070	ppb	56.7	1413.46	0.0159	Pulse	0.1000	3
Sb	121	115	He	0.308	ppb	11.3	413.36	0.0047	Pulse	0.1000	3
Ba	137	115	He	13.383	ppb	5.4	5704.72	0.0642	Pulse	0.1000	3
Tl	205	159	He	0.058	ppb	20.7	1680.17	0.0042	Pulse	0.1000	3
Pb	208	159	He	0.088	ppb	9.4	2010.14	0.0050	Pulse	0.1000	3
U	238	209	He	0.073	ppb	10.4	1236.77	0.0040	Pulse	0.1000	3

ISTD Table:

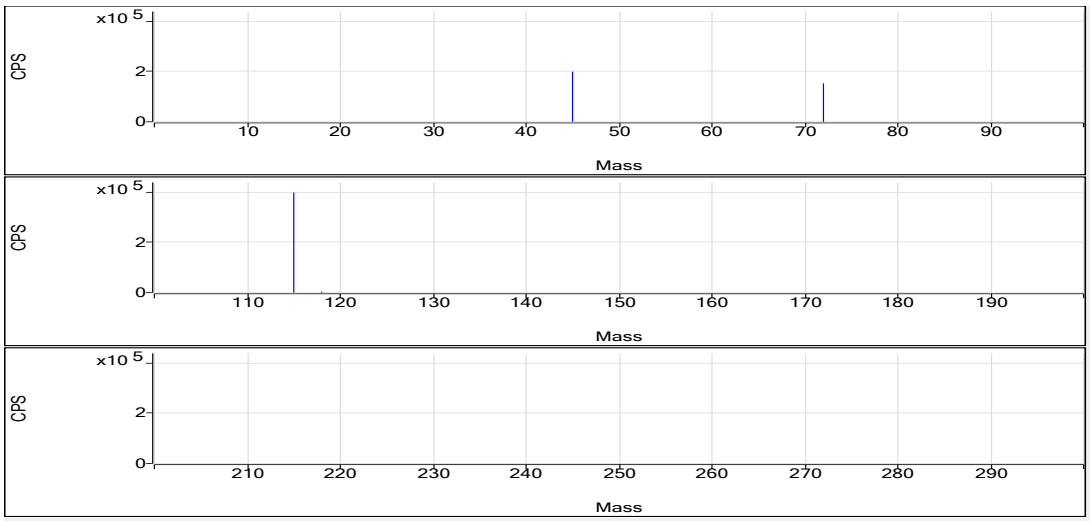
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2489901.89	1.5	95.5	Analog	0.1000	3
No Gas	Ge	72	1126658.68	0.2	87.4	Pulse	0.1000	3
H2	Sc	45	198985.62	1.1	96.6	Pulse	0.1000	3
H2	Ge	72	152708.62	0.6	93.8	Pulse	0.1000	3
H2	In	115	397748.78	0.6	98.5	Pulse	0.1000	3
He	Sc	45	50672.19	1.0	99.0	Pulse	0.1000	3
He	Ge	72	77704.93	1.4	94.9	Pulse	0.1000	3
He	In	115	88809.24	0.9	101.3	Pulse	0.1000	3
He	Tb	159	402295.85	0.4	100.2	Pulse	0.1000	3
He	Bi	209	311384.60	0.5	101.7	Pulse	0.1000	3

No Gas

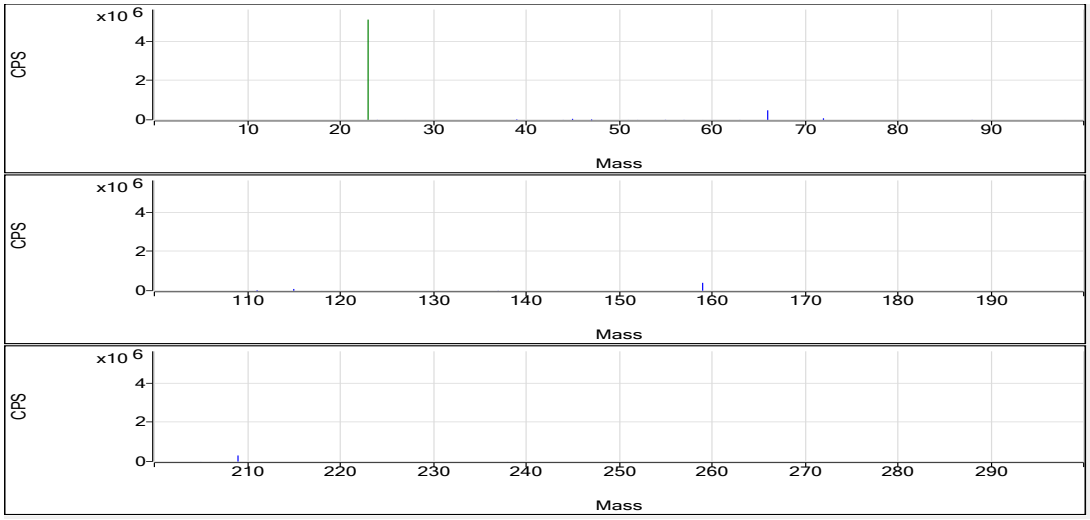


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.017	0	54.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.014	0	58.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.02	0	50.00	0.0007	3.404E-05
Se	78	2	H2	0.077	0.0001	10.67	0.0004	3.546E-05
Se	78	2	H2	0.019	0	6.67	0.0004	3.546E-05
Se	78	2	H2	0.009	0	6.00	0.0004	3.546E-05
Na	23	3	He	28436.569	101.7767	5119093.99	0.0036	0.4171
Na	23	3	He	27662.787	99.0186	5075832.11	0.0036	0.4171
Na	23	3	He	28597.962	102.352	5164464.30	0.0036	0.4171
Mg	24	3	He	43.815	0.0837	4210.74	0.0018	0.004553
Mg	24	3	He	42.511	0.0814	4170.73	0.0018	0.004553
Mg	24	3	He	40.376	0.0775	3910.68	0.0018	0.004553
Al	27	3	He	14.51	0.0105	530.03	0.0006	0.002085
Al	27	3	He	14.17	0.0103	530.03	0.0006	0.002085
Al	27	3	He	19.555	0.0135	680.04	0.0006	0.002085
K	39	3	He	40.019	0.4581	23038.73	0.0012	0.4112
K	39	3	He	31.328	0.4479	22958.59	0.0012	0.4112
K	39	3	He	44.369	0.4631	23369.31	0.0012	0.4112
Ca	44	3	He	560.083	0.0412	2070.21	0.0001	0.003322
Ca	44	3	He	652.599	0.0474	2430.28	0.0001	0.003322
Ca	44	3	He	631.496	0.046	2320.25	0.0001	0.003322
Ti	47	3	He	0.748	0.0004	20.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.745	0.0004	20.00	0.0005	0
V	51	3	He	-0.254	0.0264	1328.07	0.0213	0.0318
V	51	3	He	-0.343	0.0245	1256.06	0.0213	0.0318
V	51	3	He	-0.33	0.0248	1250.06	0.0213	0.0318
Cr	52	3	He	0.033	0.0439	2210.26	0.0294	0.04297
Cr	52	3	He	-0.154	0.0384	1970.21	0.0294	0.04297
Cr	52	3	He	-0.053	0.0414	2090.21	0.0294	0.04297
Mn	55	3	He	9.132	0.1163	5851.41	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	8.894	0.1134	5811.41	0.0124	0.002801
Mn	55	3	He	9.916	0.1261	6361.61	0.0124	0.002801
Fe	57	3	He	138.766	0.0821	4130.75	0.0006	0.002732
Fe	57	3	He	118.673	0.0706	3620.63	0.0006	0.002732
Fe	57	3	He	126.527	0.0751	3790.63	0.0006	0.002732
Co	59	3	He	0.191	0.0141	710.04	0.0549	0.003644
Co	59	3	He	0.161	0.0125	640.04	0.0549	0.003644
Co	59	3	He	0.219	0.0157	790.05	0.0549	0.003644
Ni	60	3	He	0.513	0.0189	1490.13	0.0093	0.01413
Ni	60	3	He	0.631	0.02	1550.13	0.0093	0.01413
Ni	60	3	He	0.952	0.023	1760.17	0.0093	0.01413
Cu	63	3	He	0.672	0.0278	2190.24	0.0274	0.009321
Cu	63	3	He	0.859	0.0329	2550.29	0.0274	0.009321
Cu	63	3	He	0.812	0.0316	2420.28	0.0274	0.009321
Zn	66	3	He	2009.527	6.176	487212.81	0.0031	0.005913
Zn	66	3	He	2018.206	6.2026	481207.88	0.0031	0.005913
Zn	66	3	He	2075.801	6.3795	488959.52	0.0031	0.005913
As	75	3	He	0.327	0.0016	124.00	0.0021	0.0008698
As	75	3	He	0.279	0.0015	114.00	0.0021	0.0008698
As	75	3	He	0.239	0.0014	106.00	0.0021	0.0008698
Sr	88	3	He	5.669	0.0506	4500.88	0.0088	0.0006843
Sr	88	3	He	5.48	0.0489	4300.88	0.0088	0.0006843
Sr	88	3	He	5.183	0.0463	4140.74	0.0088	0.0006843
Mo	98	3	He	0.081	0.0036	320.02	0.0219	0.001827
Mo	98	3	He	0.062	0.0032	280.01	0.0219	0.001827
Mo	98	3	He	0.064	0.0032	290.01	0.0219	0.001827
Ag	107	3	He	0.004	0.0012	110.01	0.047	0.001064
Ag	107	3	He	-0.001	0.001	90.00	0.047	0.001064
Ag	107	3	He	-0.008	0.0007	60.00	0.047	0.001064
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	0.001	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Sn	120	3	He	0.08	0.0161	1430.13	0.0154	0.01483
Sn	120	3	He	0.026	0.0152	1340.12	0.0154	0.01483
Sn	120	3	He	0.104	0.0164	1470.13	0.0154	0.01483
Sb	121	3	He	0.32	0.0048	430.02	0.0143	0.0002661
Sb	121	3	He	0.269	0.0041	360.02	0.0143	0.0002661
Sb	121	3	He	0.334	0.005	450.03	0.0143	0.0002661
Ba	137	3	He	13.065	0.0627	5581.33	0.0048	0.0002665
Ba	137	3	He	12.866	0.0618	5431.20	0.0048	0.0002665
Ba	137	3	He	14.217	0.0682	6101.63	0.0048	0.0002665
Tl	205	3	He	0.059	0.0042	1690.17	0.0246	0.002755
Tl	205	3	He	0.045	0.0039	1550.14	0.0246	0.002755
Tl	205	3	He	0.069	0.0045	1800.19	0.0246	0.002755
Pb	208	3	He	0.096	0.0053	1080.09	0.0324	0.002158
Pb	208	3	He	0.088	0.005	1070.09	0.0324	0.002158
Pb	208	3	He	0.079	0.0047	1010.09	0.0324	0.002158
U	238	3	He	0.064	0.0035	1110.09	0.0492	0.0004023
U	238	3	He	0.076	0.0041	1290.11	0.0492	0.0004023
U	238	3	He	0.078	0.0042	1310.12	0.0492	0.0004023
Sc	45	1	No Gas			2476618.24		
Sc	45	1	No Gas			2461367.62		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2531719.81		
Ge	72	1	No Gas			1124263.19		
Ge	72	1	No Gas			1126848.97		
Ge	72	1	No Gas			1128863.89		
Sc	45	2	H2			201357.58		
Sc	45	2	H2			198581.72		
Sc	45	2	H2			197017.56		
Ge	72	2	H2			153689.26		
Ge	72	2	H2			152364.16		
Ge	72	2	H2			152072.44		
In	115	2	H2			397530.93		
In	115	2	H2			400166.63		
In	115	2	H2			395548.78		
Sc	45	3	He			50297.30		
Sc	45	3	He			51261.38		
Sc	45	3	He			50457.88		
Ge	72	3	He			78888.12		
Ge	72	3	He			77581.07		
Ge	72	3	He			76645.59		
In	115	3	He			89024.47		
In	115	3	He			87958.60		
In	115	3	He			89467.65		
Tb	159	3	He			402656.83		
Tb	159	3	He			400449.25		
Tb	159	3	He			403781.48		
Bi	209	3	He			312728.02		
Bi	209	3	He			311864.70		
Bi	209	3	He			309561.09		

Quantitation Report

Data File Name	172SMPL.d
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Sample Type	Sample
Comment	F6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

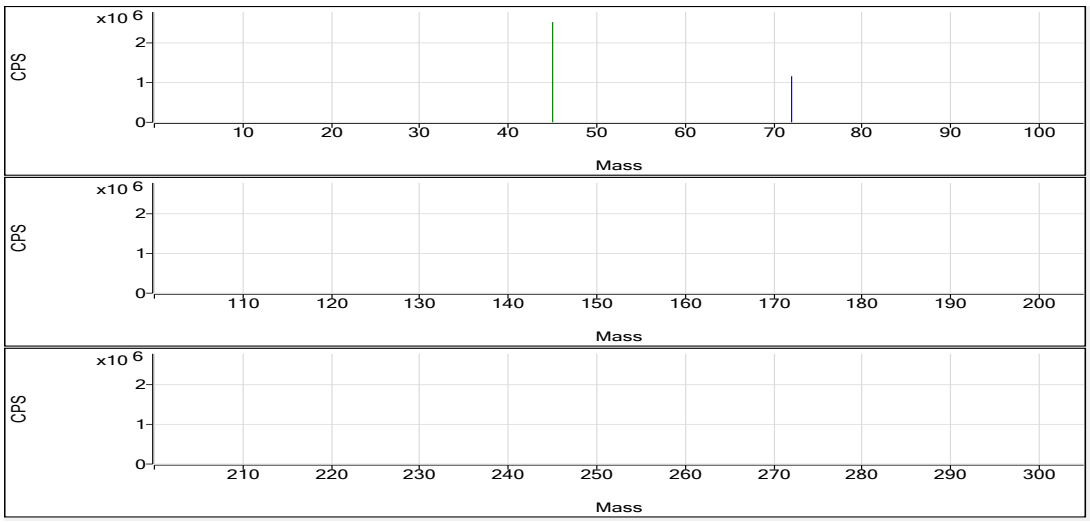
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.017	ppb	N/A	55.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.011	ppb	N/A	4.89	0.0000	Pulse	1.5000	3
Na	23	45	He	150558.244	ppb	0.6	26855117.10	537.0687	Analog	0.1000	3
Mg	24	45	He	229.334	ppb	2.6	20945.52	0.4189	Pulse	0.1000	3
Al	27	45	He	74.826	ppb	11.1	2283.59	0.0457	Pulse	0.1000	3
K	39	45	He	183.024	ppb	2.3	31277.60	0.6255	Pulse	0.1000	3
Ca	44	45	He	3106.845	ppb	3.1	10660.92	0.2132	Pulse	0.1000	3
Ti	47	45	He	0.502	ppb	86.6	13.33	0.0003	Pulse	0.1000	3
V	51	45	He	-0.427	ppb	N/A	1136.05	0.0227	Pulse	0.5000	3
Cr	52	45	He	0.407	ppb	40.4	2747.04	0.0549	Pulse	0.1000	3
Mn	55	45	He	46.017	ppb	1.9	28745.94	0.5749	Pulse	0.1000	3
Fe	57	45	He	661.228	ppb	1.5	19053.22	0.3811	Pulse	0.1000	3
Co	59	45	He	0.672	ppb	3.9	2026.88	0.0405	Pulse	0.1000	3
Ni	60	72	He	5.014	ppb	8.5	4917.68	0.0607	Pulse	0.1000	3
Cu	63	72	He	1.660	ppb	4.8	4447.50	0.0549	Pulse	0.1000	3
Zn	66	72	He	10753.140	ppb	0.3	2677879.13	33.0225	Analog	0.1000	3
As	75	72	He	0.162	ppb	23.5	98.67	0.0012	Pulse	0.5000	3
Sr	88	115	He	28.557	ppb	0.2	22301.56	0.2520	Pulse	0.1000	3
Mo	98	115	He	0.255	ppb	24.6	656.71	0.0074	Pulse	0.1000	3
Ag	107	115	He	-0.007	ppb	N/A	63.33	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.024	ppb	96.3	16.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.084	ppb	N/A	1196.76	0.0135	Pulse	0.1000	3
Sb	121	115	He	0.273	ppb	23.0	366.68	0.0042	Pulse	0.1000	3
Ba	137	115	He	69.245	ppb	0.8	29315.34	0.3312	Pulse	0.1000	3
Tl	205	159	He	-0.066	ppb	N/A	456.69	0.0011	Pulse	0.1000	3
Pb	208	159	He	0.357	ppb	2.7	5480.65	0.0137	Pulse	0.1000	3
U	238	209	He	0.093	ppb	6.0	1546.82	0.0050	Pulse	0.1000	3

ISTD Table:

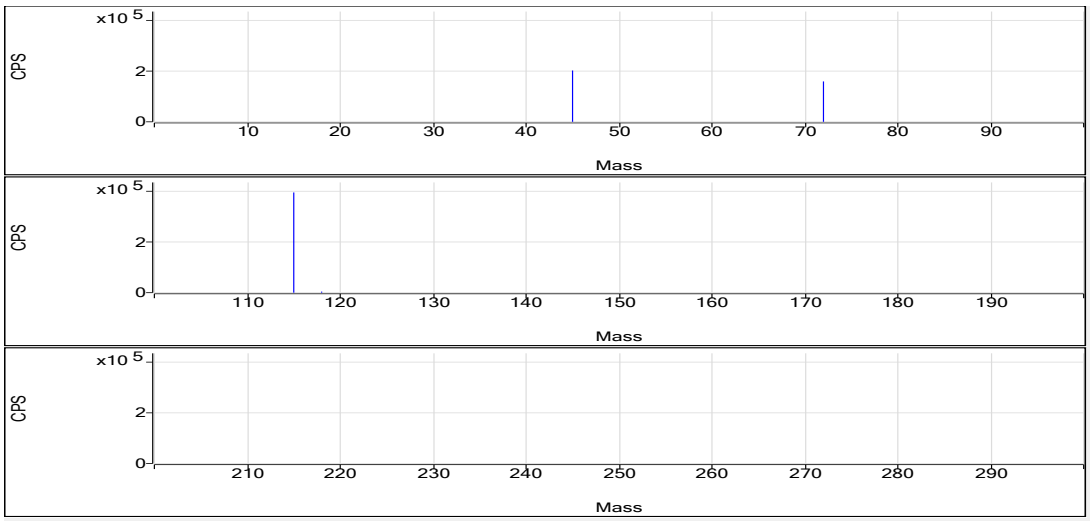
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2539608.82	0.9	97.4	Analog	0.1000	3
No Gas	Ge	72	1167067.25	0.7	90.5	Pulse	0.1000	3
H2	Sc	45	202971.68	1.1	98.5	Pulse	0.1000	3
H2	Ge	72	159731.28	1.3	98.1	Pulse	0.1000	3
H2	In	115	396364.06	0.5	98.2	Pulse	0.1000	3
He	Sc	45	50003.35	0.4	97.7	Pulse	0.1000	3
He	Ge	72	81093.66	1.2	99.1	Pulse	0.1000	3
He	In	115	88514.99	1.4	101.0	Pulse	0.1000	3
He	Tb	159	399605.84	0.7	99.5	Pulse	0.1000	3
He	Bi	209	310714.98	0.7	101.5	Pulse	0.1000	3

No Gas

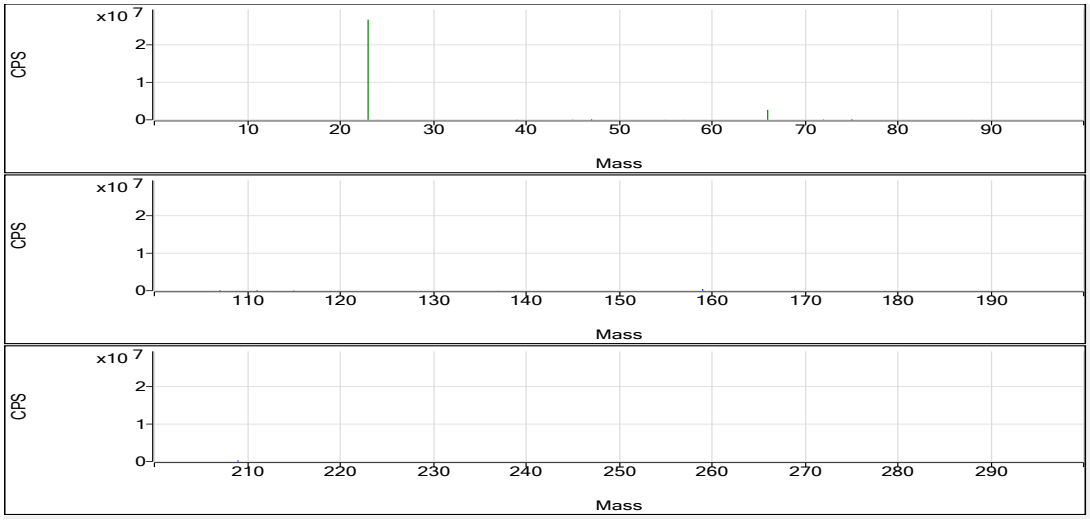


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.013	0	62.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.022	0	46.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.015	0	58.00	0.0007	3.404E-05
Se	78	2	H2	-0.004	0	5.33	0.0004	3.546E-05
Se	78	2	H2	0.006	0	6.00	0.0004	3.546E-05
Se	78	2	H2	-0.034	0	3.33	0.0004	3.546E-05
Na	23	3	He	150989.149	538.6047	27031167.10	0.0036	0.4171
Na	23	3	He	149534.875	533.421	26695967.10	0.0036	0.4171
Na	23	3	He	151150.709	539.1805	26838217.10	0.0036	0.4171
Mg	24	3	He	225.486	0.412	20675.12	0.0018	0.004553
Mg	24	3	He	226.348	0.4135	20695.10	0.0018	0.004553
Mg	24	3	He	236.168	0.4313	21466.34	0.0018	0.004553
Al	27	3	He	74.409	0.0454	2280.26	0.0006	0.002085
Al	27	3	He	66.739	0.041	2050.22	0.0006	0.002085
Al	27	3	He	83.331	0.0506	2520.30	0.0006	0.002085
K	39	3	He	182.194	0.6245	31344.49	0.0012	0.4112
K	39	3	He	179.247	0.6211	31083.89	0.0012	0.4112
K	39	3	He	187.631	0.6309	31404.41	0.0012	0.4112
Ca	44	3	He	3137.444	0.2153	10804.28	0.0001	0.003322
Ca	44	3	He	2998.42	0.2059	10303.95	0.0001	0.003322
Ca	44	3	He	3184.673	0.2185	10874.52	0.0001	0.003322
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.751	0.0004	20.00	0.0005	0
Ti	47	3	He	0.755	0.0004	20.00	0.0005	0
V	51	3	He	-0.394	0.0234	1176.05	0.0213	0.0318
V	51	3	He	-0.471	0.0218	1090.05	0.0213	0.0318
V	51	3	He	-0.417	0.0229	1142.05	0.0213	0.0318
Cr	52	3	He	0.504	0.0578	2900.41	0.0294	0.04297
Cr	52	3	He	0.217	0.0494	2470.30	0.0294	0.04297
Cr	52	3	He	0.5	0.0577	2870.40	0.0294	0.04297
Mn	55	3	He	46.253	0.5778	28999.67	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	45.063	0.563	28177.99	0.0124	0.002801
Mn	55	3	He	46.735	0.5838	29060.16	0.0124	0.002801
Fe	57	3	He	654.578	0.3772	18933.14	0.0006	0.002732
Fe	57	3	He	656.779	0.3785	18943.09	0.0006	0.002732
Fe	57	3	He	672.328	0.3874	19283.43	0.0006	0.002732
Co	59	3	He	0.7	0.042	2110.23	0.0549	0.003644
Co	59	3	He	0.647	0.0392	1960.20	0.0549	0.003644
Co	59	3	He	0.669	0.0404	2010.21	0.0549	0.003644
Ni	60	3	He	4.742	0.0581	4760.92	0.0093	0.01413
Ni	60	3	He	5.506	0.0652	5221.19	0.0093	0.01413
Ni	60	3	He	4.794	0.0586	4770.94	0.0093	0.01413
Cu	63	3	He	1.571	0.0524	4290.77	0.0274	0.009321
Cu	63	3	He	1.683	0.0555	4440.85	0.0274	0.009321
Cu	63	3	He	1.726	0.0567	4610.89	0.0274	0.009321
Zn	66	3	He	10717.365	32.9127	2694702.46	0.0031	0.005913
Zn	66	3	He	10768.135	33.0686	2646640.90	0.0031	0.005913
Zn	66	3	He	10773.921	33.0863	2692294.02	0.0031	0.005913
As	75	3	He	0.118	0.0011	92.00	0.0021	0.0008698
As	75	3	He	0.189	0.0013	102.00	0.0021	0.0008698
As	75	3	He	0.179	0.0013	102.00	0.0021	0.0008698
Sr	88	3	He	28.497	0.2514	22578.56	0.0088	0.0006843
Sr	88	3	He	28.628	0.2526	22308.29	0.0088	0.0006843
Sr	88	3	He	28.547	0.2519	22017.82	0.0088	0.0006843
Mo	98	3	He	0.186	0.0059	530.03	0.0219	0.001827
Mo	98	3	He	0.273	0.0078	690.04	0.0219	0.001827
Mo	98	3	He	0.308	0.0086	750.05	0.0219	0.001827
Ag	107	3	He	-0.001	0.001	90.00	0.047	0.001064
Ag	107	3	He	-0.015	0.0003	30.00	0.047	0.001064
Ag	107	3	He	-0.006	0.0008	70.00	0.047	0.001064
Cd	111	3	He	0.047	0.0003	28.00	0.0053	6.086E-05
Cd	111	3	He	0.023	0.0002	16.00	0.0053	6.086E-05
Cd	111	3	He	0.001	0.0001	6.00	0.0053	6.086E-05
Sn	120	3	He	-0.182	0.012	1080.09	0.0154	0.01483
Sn	120	3	He	-0.022	0.0145	1280.10	0.0154	0.01483
Sn	120	3	He	-0.049	0.0141	1230.09	0.0154	0.01483
Sb	121	3	He	0.2	0.0031	280.01	0.0143	0.0002661
Sb	121	3	He	0.307	0.0046	410.02	0.0143	0.0002661
Sb	121	3	He	0.31	0.0047	410.02	0.0143	0.0002661
Ba	137	3	He	69.765	0.3337	29963.41	0.0048	0.0002665
Ba	137	3	He	68.726	0.3287	29031.25	0.0048	0.0002665
Ba	137	3	He	69.246	0.3312	28951.37	0.0048	0.0002665
Tl	205	3	He	-0.06	0.0013	510.03	0.0246	0.002755
Tl	205	3	He	-0.072	0.001	400.02	0.0246	0.002755
Tl	205	3	He	-0.065	0.0012	460.02	0.0246	0.002755
Pb	208	3	He	0.346	0.0134	2740.38	0.0324	0.002158
Pb	208	3	He	0.361	0.0138	3080.46	0.0324	0.002158
Pb	208	3	He	0.364	0.0139	2950.43	0.0324	0.002158
U	238	3	He	0.087	0.0047	1470.14	0.0492	0.0004023
U	238	3	He	0.098	0.0052	1630.16	0.0492	0.0004023
U	238	3	He	0.093	0.005	1540.15	0.0492	0.0004023
Sc	45	1	No Gas			2517921.68		
Sc	45	1	No Gas			2564114.34		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2536790.43		
Ge	72	1	No Gas			1162654.36		
Ge	72	1	No Gas			1176922.56		
Ge	72	1	No Gas			1161624.83		
Sc	45	2	H2			200464.16		
Sc	45	2	H2			204257.52		
Sc	45	2	H2			204193.36		
Ge	72	2	H2			158723.95		
Ge	72	2	H2			158329.76		
Ge	72	2	H2			162140.13		
In	115	2	H2			394394.92		
In	115	2	H2			396700.07		
In	115	2	H2			397997.18		
Sc	45	3	He			50187.40		
Sc	45	3	He			50046.71		
Sc	45	3	He			49775.94		
Ge	72	3	He			81874.27		
Ge	72	3	He			80034.93		
Ge	72	3	He			81371.77		
In	115	3	He			89809.66		
In	115	3	He			88329.47		
In	115	3	He			87425.89		
Tb	159	3	He			400619.64		
Tb	159	3	He			401552.22		
Tb	159	3	He			396645.66		
Bi	209	3	He			312930.17		
Bi	209	3	He			310568.16		
Bi	209	3	He			308646.60		

Quantitation Report

Data File Name	173SMPL.d
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Acq Time	8/9/2023 7:41:48 PM
Sample Name	410-136541-D-1-J MS @100
Sample Type	Sample
Comment	F6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

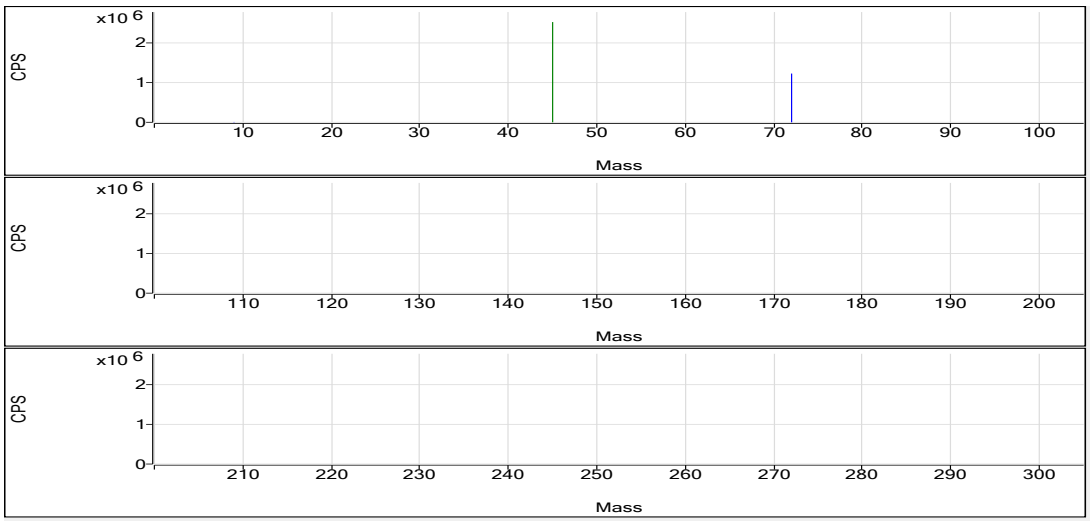
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	4.537	ppb	1.8	8413.08	0.0033	Pulse	0.5000	3
Se	78	72	H2	0.902	ppb	3.1	71.78	0.0004	Pulse	1.5000	3
Na	23	45	He	1480.370	ppb	0.8	285980.62	5.6937	Pulse	0.1000	3
Mg	24	45	He	50.256	ppb	7.1	4784.27	0.0954	Pulse	0.1000	3
Al	27	45	He	9.240	ppb	36.4	373.35	0.0075	Pulse	0.1000	3
K	39	45	He	62.295	ppb	16.8	24310.87	0.4841	Pulse	0.1000	3
Ca	44	45	He	126.258	ppb	21.3	596.70	0.0119	Pulse	0.1000	3
Ti	47	45	He	8.818	ppb	27.0	236.68	0.0047	Pulse	0.1000	3
V	51	45	He	4.466	ppb	6.2	6359.42	0.1267	Pulse	0.5000	3
Cr	52	45	He	4.653	ppb	8.0	9023.16	0.1798	Pulse	0.1000	3
Mn	55	45	He	5.256	ppb	4.9	3420.51	0.0681	Pulse	0.1000	3
Fe	57	45	He	12.895	ppb	33.1	510.03	0.0101	Pulse	0.1000	3
Co	59	45	He	4.631	ppb	2.6	12946.19	0.2578	Pulse	0.1000	3
Ni	60	72	He	3.667	ppb	5.9	4050.71	0.0482	Pulse	0.1000	3
Cu	63	72	He	4.293	ppb	5.7	10680.98	0.1271	Pulse	0.1000	3
Zn	66	72	He	102.384	ppb	3.3	26942.56	0.3203	Pulse	0.1000	3
As	75	72	He	4.902	ppb	5.0	958.04	0.0114	Pulse	0.5000	3
Sr	88	115	He	5.042	ppb	2.6	4004.05	0.0450	Pulse	0.1000	3
Mo	98	115	He	8.897	ppb	2.0	17511.52	0.1971	Pulse	0.1000	3
Ag	107	115	He	4.498	ppb	1.8	18893.34	0.2126	Pulse	0.1000	3
Cd	111	115	He	0.947	ppb	8.6	453.34	0.0051	Pulse	0.5000	3
Sn	120	115	He	47.365	ppb	1.5	66208.82	0.7452	Pulse	0.1000	3
Sb	121	115	He	4.733	ppb	6.8	6011.54	0.0677	Pulse	0.1000	3
Ba	137	115	He	94.336	ppb	3.4	40065.98	0.4511	Pulse	0.1000	3
Tl	205	159	He	4.706	ppb	1.1	47212.46	0.1183	Pulse	0.1000	3
Pb	208	159	He	4.822	ppb	0.7	63195.48	0.1584	Pulse	0.1000	3
U	238	209	He	0.001	ppb	679.5	133.34	0.0004	Pulse	0.1000	3

ISTD Table:

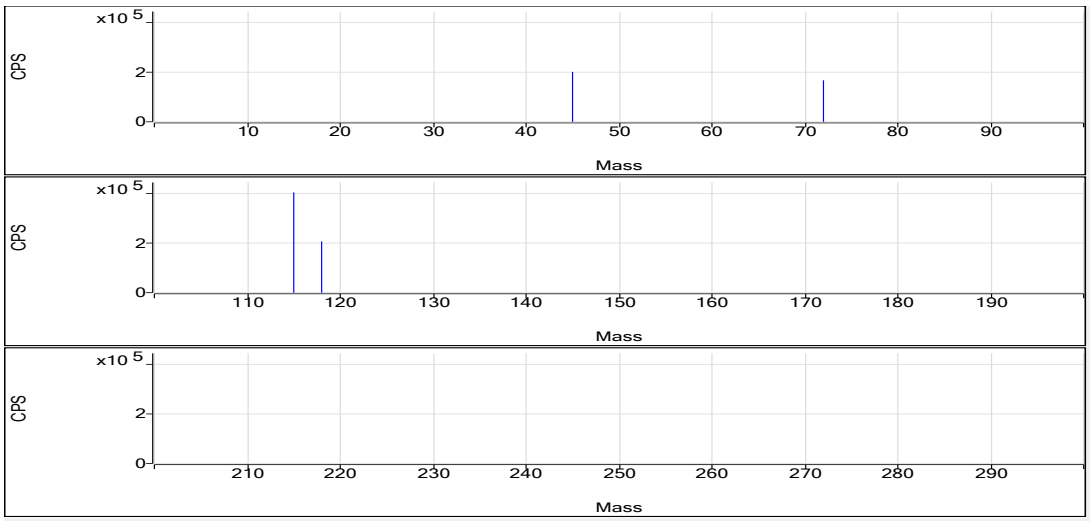
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2519629.18	1.3	96.6	Analog	0.1000	3
No Gas	Ge	72	1225101.03	0.8	95.1	Pulse	0.1000	3
H2	Sc	45	200467.91	0.6	97.3	Pulse	0.1000	3
H2	Ge	72	166709.20	1.5	102.4	Pulse	0.1000	3
H2	In	115	402434.88	0.6	99.7	Pulse	0.1000	3
He	Sc	45	50234.38	2.7	98.1	Pulse	0.1000	3
He	Ge	72	84103.81	1.5	102.7	Pulse	0.1000	3
He	In	115	88860.74	2.0	101.4	Pulse	0.1000	3
He	Tb	159	398955.59	0.9	99.3	Pulse	0.1000	3
He	Bi	209	310657.98	1.1	101.5	Pulse	0.1000	3

No Gas

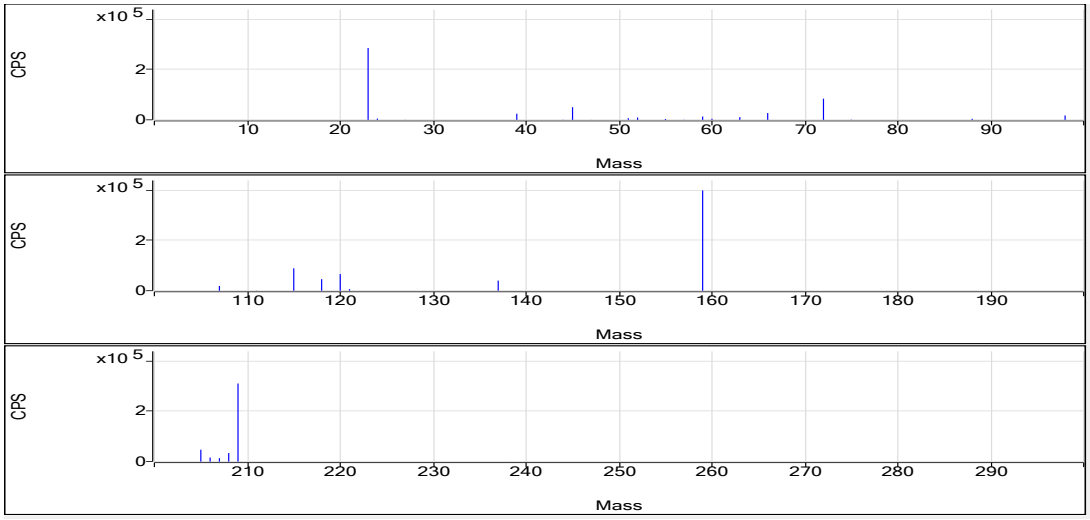


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	4.623	0.0034	8444.43	0.0007	3.404E-05
Be	9	1	No Gas	4.456	0.0033	8328.37	0.0007	3.404E-05
Be	9	1	No Gas	4.532	0.0033	8466.43	0.0007	3.404E-05
Se	78	2	H2	0.913	0.0004	72.00	0.0004	3.546E-05
Se	78	2	H2	0.87	0.0004	70.67	0.0004	3.546E-05
Se	78	2	H2	0.922	0.0004	72.67	0.0004	3.546E-05
Na	23	3	He	1466.717	5.645	292431.52	0.0036	0.4171
Na	23	3	He	1484.956	5.7101	283423.96	0.0036	0.4171
Na	23	3	He	1489.436	5.726	282086.38	0.0036	0.4171
Mg	24	3	He	46.315	0.0882	4570.85	0.0018	0.004553
Mg	24	3	He	51.236	0.0971	4820.94	0.0018	0.004553
Mg	24	3	He	53.216	0.1007	4961.02	0.0018	0.004553
Al	27	3	He	5.368	0.0052	270.01	0.0006	0.002085
Al	27	3	He	10.947	0.0085	420.02	0.0006	0.002085
Al	27	3	He	11.405	0.0087	430.02	0.0006	0.002085
K	39	3	He	51.269	0.4712	24411.02	0.0012	0.4112
K	39	3	He	72.114	0.4956	24601.44	0.0012	0.4112
K	39	3	He	63.501	0.4856	23920.14	0.0012	0.4112
Ca	44	3	He	153.716	0.0137	710.04	0.0001	0.003322
Ca	44	3	He	99.947	0.0101	500.03	0.0001	0.003322
Ca	44	3	He	125.11	0.0118	580.03	0.0001	0.003322
Ti	47	3	He	11.252	0.006	310.02	0.0005	0
Ti	47	3	He	8.713	0.0046	230.01	0.0005	0
Ti	47	3	He	6.489	0.0035	170.01	0.0005	0
V	51	3	He	4.153	0.1201	6219.36	0.0213	0.0318
V	51	3	He	4.555	0.1286	6383.43	0.0213	0.0318
V	51	3	He	4.689	0.1314	6475.48	0.0213	0.0318
Cr	52	3	He	4.225	0.1672	8662.91	0.0294	0.04297
Cr	52	3	He	4.912	0.1874	9303.36	0.0294	0.04297
Cr	52	3	He	4.822	0.1848	9103.21	0.0294	0.04297
Mn	55	3	He	4.977	0.0647	3350.49	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	5.302	0.0687	3410.51	0.0124	0.002801
Mn	55	3	He	5.49	0.0711	3500.53	0.0124	0.002801
Fe	57	3	He	17.494	0.0127	660.04	0.0006	0.002732
Fe	57	3	He	12.128	0.0097	480.02	0.0006	0.002732
Fe	57	3	He	9.062	0.0079	390.02	0.0006	0.002732
Co	59	3	He	4.536	0.2526	13086.30	0.0549	0.003644
Co	59	3	He	4.59	0.2556	12685.96	0.0549	0.003644
Co	59	3	He	4.766	0.2652	13066.32	0.0549	0.003644
Ni	60	3	He	3.444	0.0461	3910.67	0.0093	0.01413
Ni	60	3	He	3.678	0.0483	3990.68	0.0093	0.01413
Ni	60	3	He	3.878	0.0501	4250.78	0.0093	0.01413
Cu	63	3	He	4.055	0.1205	10224.05	0.0274	0.009321
Cu	63	3	He	4.54	0.1338	11064.60	0.0274	0.009321
Cu	63	3	He	4.284	0.1268	10754.30	0.0274	0.009321
Zn	66	3	He	106.104	0.3317	28138.02	0.0031	0.005913
Zn	66	3	He	99.601	0.3117	25773.62	0.0031	0.005913
Zn	66	3	He	101.448	0.3174	26916.03	0.0031	0.005913
As	75	3	He	5.188	0.012	1018.04	0.0021	0.0008698
As	75	3	He	4.758	0.0111	916.03	0.0021	0.0008698
As	75	3	He	4.761	0.0111	940.04	0.0021	0.0008698
Sr	88	3	He	5.055	0.0452	3990.73	0.0088	0.0006843
Sr	88	3	He	4.905	0.0438	3830.65	0.0088	0.0006843
Sr	88	3	He	5.165	0.0461	4190.78	0.0088	0.0006843
Mo	98	3	He	9.107	0.2017	17821.84	0.0219	0.001827
Mo	98	3	He	8.788	0.1947	17010.81	0.0219	0.001827
Mo	98	3	He	8.797	0.1949	17701.91	0.0219	0.001827
Ag	107	3	He	4.445	0.2102	18572.87	0.047	0.001064
Ag	107	3	He	4.589	0.2169	18953.39	0.047	0.001064
Ag	107	3	He	4.46	0.2109	19153.75	0.047	0.001064
Cd	111	3	He	0.902	0.0049	430.01	0.0053	6.086E-05
Cd	111	3	He	1.042	0.0056	490.01	0.0053	6.086E-05
Cd	111	3	He	0.898	0.0048	440.01	0.0053	6.086E-05
Sn	120	3	He	47.189	0.7425	65616.00	0.0154	0.01483
Sn	120	3	He	48.163	0.7575	66188.97	0.0154	0.01483
Sn	120	3	He	46.741	0.7356	66821.48	0.0154	0.01483
Sb	121	3	He	4.66	0.0667	5891.51	0.0143	0.0002661
Sb	121	3	He	5.083	0.0727	6351.70	0.0143	0.0002661
Sb	121	3	He	4.455	0.0638	5791.40	0.0143	0.0002661
Ba	137	3	He	96.181	0.4599	40641.29	0.0048	0.0002665
Ba	137	3	He	96.173	0.4599	40179.58	0.0048	0.0002665
Ba	137	3	He	90.654	0.4335	39377.06	0.0048	0.0002665
Tl	205	3	He	4.688	0.1179	47506.86	0.0246	0.002755
Tl	205	3	He	4.667	0.1174	46673.65	0.0246	0.002755
Tl	205	3	He	4.764	0.1198	47456.87	0.0246	0.002755
Pb	208	3	He	4.834	0.1588	33944.62	0.0324	0.002158
Pb	208	3	He	4.783	0.1571	33473.45	0.0324	0.002158
Pb	208	3	He	4.848	0.1593	34235.96	0.0324	0.002158
U	238	3	He	-0.002	0.0003	100.00	0.0492	0.0004023
U	238	3	He	-0.002	0.0003	100.00	0.0492	0.0004023
U	238	3	He	0.005	0.0007	200.01	0.0492	0.0004023
Sc	45	1	No Gas			2482090.74		
Sc	45	1	No Gas			2538904.18		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2537892.62		
Ge	72	1	No Gas			1214226.78		
Ge	72	1	No Gas			1230503.58		
Ge	72	1	No Gas			1230572.72		
Sc	45	2	H2			200697.07		
Sc	45	2	H2			201560.33		
Sc	45	2	H2			199146.34		
Ge	72	2	H2			165276.19		
Ge	72	2	H2			169505.17		
Ge	72	2	H2			165346.23		
In	115	2	H2			404497.03		
In	115	2	H2			403151.56		
In	115	2	H2			399656.05		
Sc	45	3	He			51803.24		
Sc	45	3	He			49635.97		
Sc	45	3	He			49263.93		
Ge	72	3	He			84830.62		
Ge	72	3	He			82679.30		
Ge	72	3	He			84801.52		
In	115	3	He			88732.75		
In	115	3	He			87735.62		
In	115	3	He			91188.24		
Tb	159	3	He			402956.67		
Tb	159	3	He			397624.53		
Tb	159	3	He			396285.58		
Bi	209	3	He			314075.78		
Bi	209	3	He			310404.74		
Bi	209	3	He			307493.43		

Quantitation Report

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Sample Name	410-136541-D-1-K MSD @100
Sample Type	Sample
Comment	F6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

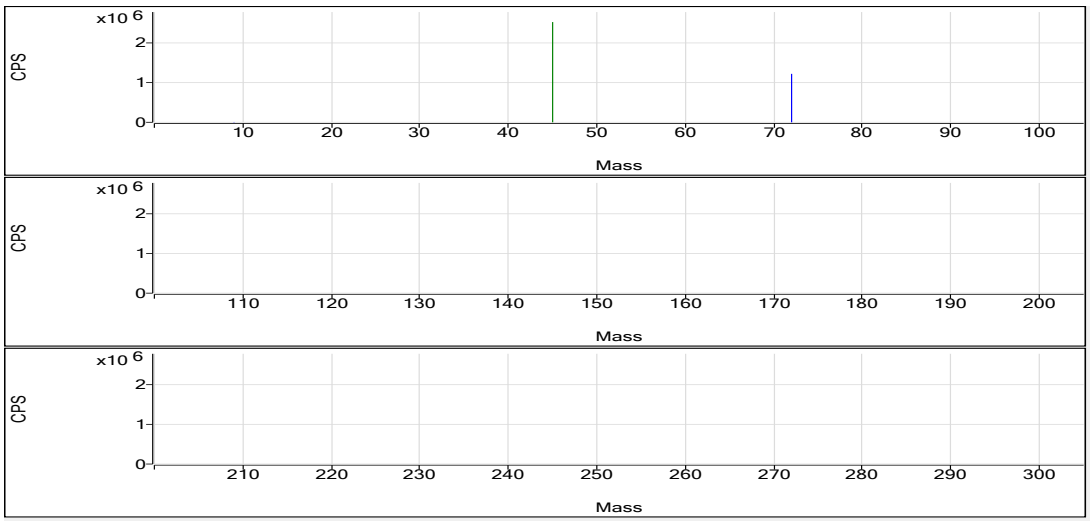
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	4.272	ppb	3.4	7970.83	0.0031	Pulse	0.5000	3
Se	78	72	H2	0.765	ppb	11.1	61.11	0.0004	Pulse	1.5000	3
Na	23	45	He	1373.902	ppb	1.1	264985.59	5.3142	Pulse	0.1000	3
Mg	24	45	He	48.317	ppb	2.6	4580.86	0.0919	Pulse	0.1000	3
Al	27	45	He	10.317	ppb	19.4	403.35	0.0081	Pulse	0.1000	3
K	39	45	He	56.575	ppb	20.1	23803.34	0.4774	Pulse	0.1000	3
Ca	44	45	He	65.651	ppb	15.5	386.68	0.0078	Pulse	0.1000	3
Ti	47	45	He	7.792	ppb	5.4	206.68	0.0041	Pulse	0.1000	3
V	51	45	He	4.053	ppb	3.0	5881.22	0.1179	Pulse	0.5000	3
Cr	52	45	He	4.359	ppb	1.7	8536.15	0.1712	Pulse	0.1000	3
Mn	55	45	He	4.857	ppb	2.4	3150.46	0.0632	Pulse	0.1000	3
Fe	57	45	He	9.465	ppb	25.9	406.69	0.0081	Pulse	0.1000	3
Co	59	45	He	4.402	ppb	2.4	12228.86	0.2453	Pulse	0.1000	3
Ni	60	72	He	3.416	ppb	8.2	3857.30	0.0458	Pulse	0.1000	3
Cu	63	72	He	4.278	ppb	4.5	10657.60	0.1267	Pulse	0.1000	3
Zn	66	72	He	91.637	ppb	3.8	24174.39	0.2873	Pulse	0.1000	3
As	75	72	He	4.446	ppb	6.4	876.03	0.0104	Pulse	0.5000	3
Sr	88	115	He	4.702	ppb	8.6	3720.63	0.0421	Pulse	0.1000	3
Mo	98	115	He	8.576	ppb	3.1	16810.62	0.1900	Pulse	0.1000	3
Ag	107	115	He	4.380	ppb	1.7	18319.17	0.2071	Pulse	0.1000	3
Cd	111	115	He	0.879	ppb	1.7	419.34	0.0047	Pulse	0.5000	3
Sn	120	115	He	45.085	ppb	1.2	62816.68	0.7101	Pulse	0.1000	3
Sb	121	115	He	4.626	ppb	4.3	5854.78	0.0662	Pulse	0.1000	3
Ba	137	115	He	90.103	ppb	1.2	38113.60	0.4309	Pulse	0.1000	3
Tl	205	159	He	4.378	ppb	2.4	43978.13	0.1103	Pulse	0.1000	3
Pb	208	159	He	4.450	ppb	0.7	58352.83	0.1463	Pulse	0.1000	3
U	238	209	He	-0.003	ppb	N/A	83.33	0.0003	Pulse	0.1000	3

ISTD Table:

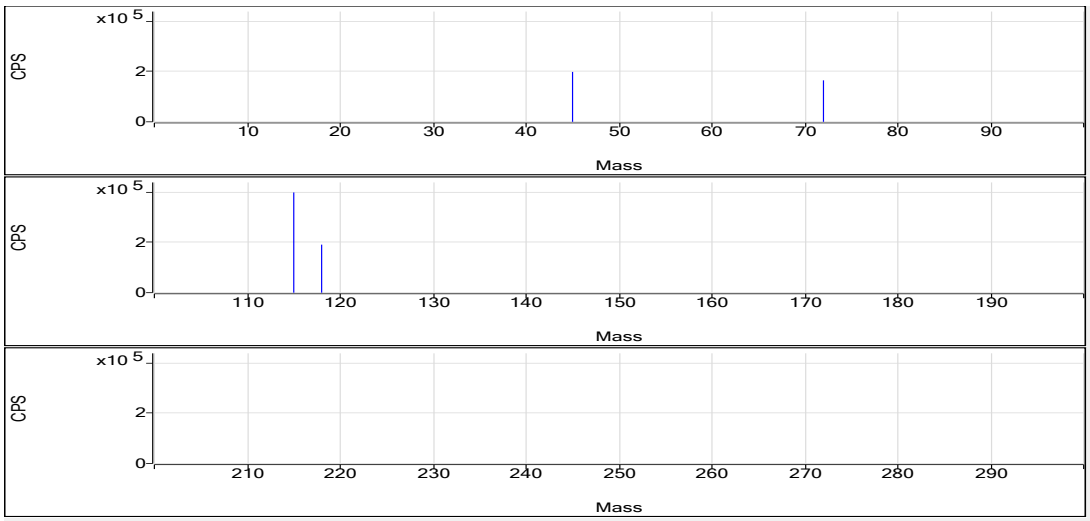
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2534616.06	1.8	97.2	Analog	0.1000	3
No Gas	Ge	72	1225114.70	1.2	95.1	Pulse	0.1000	3
H2	Sc	45	198439.95	1.4	96.3	Pulse	0.1000	3
H2	Ge	72	164918.21	1.0	101.3	Pulse	0.1000	3
H2	In	115	398532.15	0.4	98.7	Pulse	0.1000	3
He	Sc	45	49866.23	1.1	97.4	Pulse	0.1000	3
He	Ge	72	84174.02	1.2	102.8	Pulse	0.1000	3
He	In	115	88463.72	0.3	100.9	Pulse	0.1000	3
He	Tb	159	398724.17	0.5	99.3	Pulse	0.1000	3
He	Bi	209	308243.44	0.3	100.7	Pulse	0.1000	3

No Gas

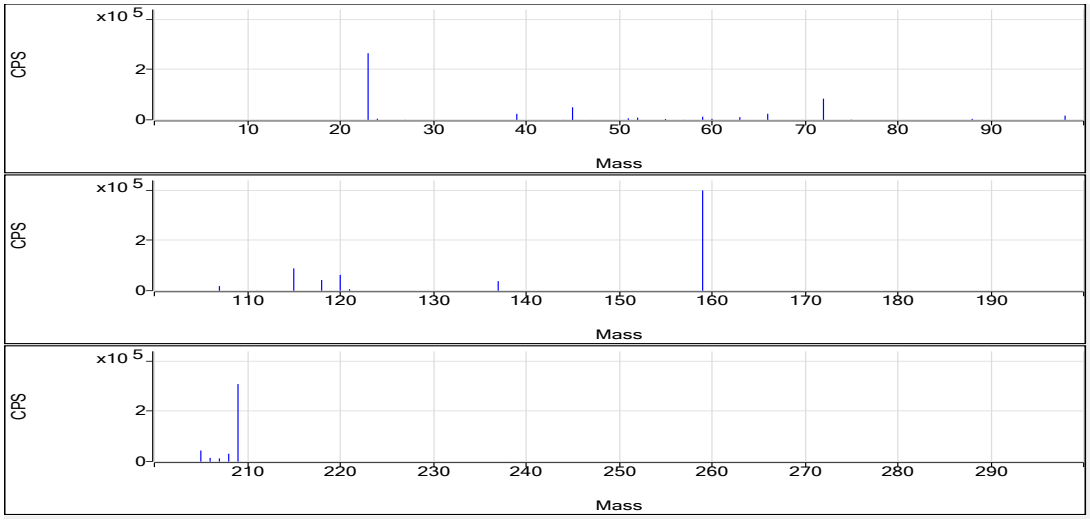


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	4.435	0.0033	8104.24	0.0007	3.404E-05
Be	9	1	No Gas	4.163	0.0031	7840.10	0.0007	3.404E-05
Be	9	1	No Gas	4.217	0.0031	7968.16	0.0007	3.404E-05
Se	78	2	H2	0.667	0.0003	54.67	0.0004	3.546E-05
Se	78	2	H2	0.816	0.0004	64.67	0.0004	3.546E-05
Se	78	2	H2	0.812	0.0004	64.00	0.0004	3.546E-05
Na	23	3	He	1356.109	5.2508	264105.54	0.0036	0.4171
Na	23	3	He	1382.324	5.3442	267407.14	0.0036	0.4171
Na	23	3	He	1383.274	5.3476	263444.08	0.0036	0.4171
Mg	24	3	He	48.327	0.0919	4620.88	0.0018	0.004553
Mg	24	3	He	49.589	0.0941	4710.90	0.0018	0.004553
Mg	24	3	He	47.034	0.0895	4410.80	0.0018	0.004553
Al	27	3	He	8.025	0.0068	340.01	0.0006	0.002085
Al	27	3	He	11.173	0.0086	430.02	0.0006	0.002085
Al	27	3	He	11.753	0.0089	440.02	0.0006	0.002085
K	39	3	He	48.344	0.4678	23529.57	0.0012	0.4112
K	39	3	He	51.8	0.4718	23609.64	0.0012	0.4112
K	39	3	He	69.581	0.4927	24270.82	0.0012	0.4112
Ca	44	3	He	68.551	0.008	400.02	0.0001	0.003322
Ca	44	3	He	54.373	0.007	350.01	0.0001	0.003322
Ca	44	3	He	74.028	0.0083	410.02	0.0001	0.003322
Ti	47	3	He	7.477	0.004	200.01	0.0005	0
Ti	47	3	He	8.267	0.0044	220.01	0.0005	0
Ti	47	3	He	7.634	0.0041	200.01	0.0005	0
V	51	3	He	4.186	0.1207	6073.29	0.0213	0.0318
V	51	3	He	3.944	0.1156	5785.19	0.0213	0.0318
V	51	3	He	4.03	0.1174	5785.18	0.0213	0.0318
Cr	52	3	He	4.442	0.1736	8732.95	0.0294	0.04297
Cr	52	3	He	4.337	0.1705	8532.82	0.0294	0.04297
Cr	52	3	He	4.297	0.1693	8342.68	0.0294	0.04297
Mn	55	3	He	4.749	0.0618	3110.44	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	4.839	0.063	3150.43	0.0124	0.002801
Mn	55	3	He	4.984	0.0648	3190.50	0.0124	0.002801
Fe	57	3	He	12.253	0.0097	490.02	0.0006	0.002732
Fe	57	3	He	8.499	0.0076	380.02	0.0006	0.002732
Fe	57	3	He	7.643	0.0071	350.02	0.0006	0.002732
Co	59	3	He	4.282	0.2387	12005.30	0.0549	0.003644
Co	59	3	He	4.491	0.2501	12515.81	0.0549	0.003644
Co	59	3	He	4.433	0.2469	12165.48	0.0549	0.003644
Ni	60	3	He	3.738	0.0488	4080.72	0.0093	0.01413
Ni	60	3	He	3.283	0.0446	3730.60	0.0093	0.01413
Ni	60	3	He	3.227	0.0441	3760.58	0.0093	0.01413
Cu	63	3	He	4.322	0.1278	10684.25	0.0274	0.009321
Cu	63	3	He	4.445	0.1312	10974.59	0.0274	0.009321
Cu	63	3	He	4.068	0.1209	10313.97	0.0274	0.009321
Zn	66	3	He	93.167	0.292	24401.27	0.0031	0.005913
Zn	66	3	He	94.074	0.2948	24652.00	0.0031	0.005913
Zn	66	3	He	87.671	0.2751	23469.90	0.0031	0.005913
As	75	3	He	4.346	0.0102	852.03	0.0021	0.0008698
As	75	3	He	4.766	0.0111	928.04	0.0021	0.0008698
As	75	3	He	4.227	0.0099	848.03	0.0021	0.0008698
Sr	88	3	He	4.244	0.038	3360.49	0.0088	0.0006843
Sr	88	3	He	4.863	0.0435	3860.71	0.0088	0.0006843
Sr	88	3	He	4.999	0.0447	3940.70	0.0088	0.0006843
Mo	98	3	He	8.863	0.1963	17351.35	0.0219	0.001827
Mo	98	3	He	8.523	0.1889	16770.54	0.0219	0.001827
Mo	98	3	He	8.342	0.1849	16309.96	0.0219	0.001827
Ag	107	3	He	4.394	0.2078	18362.64	0.047	0.001064
Ag	107	3	He	4.445	0.2102	18662.87	0.047	0.001064
Ag	107	3	He	4.299	0.2033	17931.99	0.047	0.001064
Cd	111	3	He	0.868	0.0047	414.01	0.0053	6.086E-05
Cd	111	3	He	0.872	0.0047	418.01	0.0053	6.086E-05
Cd	111	3	He	0.895	0.0048	426.01	0.0053	6.086E-05
Sn	120	3	He	44.915	0.7074	62521.64	0.0154	0.01483
Sn	120	3	He	45.671	0.7191	63857.43	0.0154	0.01483
Sn	120	3	He	44.668	0.7036	62070.97	0.0154	0.01483
Sb	121	3	He	4.818	0.0689	6091.54	0.0143	0.0002661
Sb	121	3	He	4.424	0.0633	5621.34	0.0143	0.0002661
Sb	121	3	He	4.636	0.0663	5851.45	0.0143	0.0002661
Ba	137	3	He	90.426	0.4324	38213.84	0.0048	0.0002665
Ba	137	3	He	88.932	0.4253	37762.73	0.0048	0.0002665
Ba	137	3	He	90.951	0.4349	38364.23	0.0048	0.0002665
Tl	205	3	He	4.347	0.1095	43473.17	0.0246	0.002755
Tl	205	3	He	4.498	0.1132	45389.37	0.0246	0.002755
Tl	205	3	He	4.291	0.1081	43071.84	0.0246	0.002755
Pb	208	3	He	4.418	0.1453	31197.88	0.0324	0.002158
Pb	208	3	He	4.458	0.1466	31077.52	0.0324	0.002158
Pb	208	3	He	4.474	0.1471	30867.28	0.0324	0.002158
U	238	3	He	-0.002	0.0003	90.00	0.0492	0.0004023
U	238	3	He	-0.005	0.0002	50.00	0.0492	0.0004023
U	238	3	He	-0.001	0.0004	110.00	0.0492	0.0004023
Sc	45	1	No Gas			2482012.93		
Sc	45	1	No Gas			2556346.37		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2565488.87		
Ge	72	1	No Gas			1208943.03		
Ge	72	1	No Gas			1229762.25		
Ge	72	1	No Gas			1236638.81		
Sc	45	2	H2			200046.72		
Sc	45	2	H2			195193.53		
Sc	45	2	H2			200079.59		
Ge	72	2	H2			166700.43		
Ge	72	2	H2			164547.56		
Ge	72	2	H2			163506.65		
In	115	2	H2			399766.91		
In	115	2	H2			399163.70		
In	115	2	H2			396665.85		
Sc	45	3	He			50298.25		
Sc	45	3	He			50036.60		
Sc	45	3	He			49263.85		
Ge	72	3	He			83573.56		
Ge	72	3	He			83634.14		
Ge	72	3	He			85314.37		
In	115	3	He			88713.01		
In	115	3	He			89124.96		
In	115	3	He			88551.58		
Tb	159	3	He			396973.90		
Tb	159	3	He			400881.91		
Tb	159	3	He			398316.71		
Bi	209	3	He			308819.04		
Bi	209	3	He			308582.93		
Bi	209	3	He			307328.35		

Quantitation Report

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Sample Type	Sample
Comment	F6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

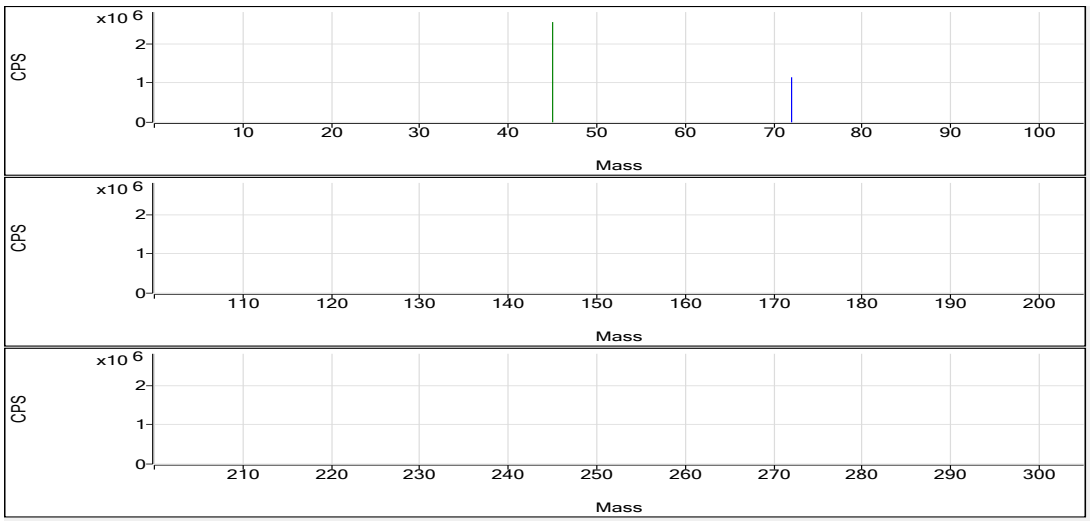
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.026	ppb	N/A	38.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.038	ppb	N/A	2.89	0.0000	Pulse	1.5000	3
Na	23	45	He	166419.348	ppb	1.8	29854827.05	593.6042	Analog	0.1000	3
Mg	24	45	He	4.121	ppb	30.0	603.37	0.0120	Pulse	0.1000	3
Al	27	45	He	1.984	ppb	98.3	163.34	0.0032	Pulse	0.1000	3
K	39	45	He	16.130	ppb	74.3	21626.55	0.4301	Pulse	0.1000	3
Ca	44	45	He	10.567	ppb	137.3	203.34	0.0040	Pulse	0.1000	3
Ti	47	45	He	0.000	ppb	N/A	0.00	0.0000	Pulse	0.1000	3
V	51	45	He	-0.452	ppb	N/A	1115.39	0.0222	Pulse	0.5000	3
Cr	52	45	He	-0.069	ppb	N/A	2060.22	0.0409	Pulse	0.1000	3
Mn	55	45	He	0.222	ppb	18.6	280.01	0.0056	Pulse	0.1000	3
Fe	57	45	He	1.723	ppb	76.2	186.68	0.0037	Pulse	0.1000	3
Co	59	45	He	0.173	ppb	26.3	660.04	0.0131	Pulse	0.1000	3
Ni	60	72	He	-0.877	ppb	N/A	476.69	0.0060	Pulse	0.1000	3
Cu	63	72	He	1.484	ppb	2.4	3980.67	0.0500	Pulse	0.1000	3
Zn	66	72	He	1.416	ppb	20.3	816.72	0.0103	Pulse	0.1000	3
As	75	72	He	-0.070	ppb	N/A	57.33	0.0007	Pulse	0.5000	3
Sr	88	115	He	0.187	ppb	38.3	206.68	0.0023	Pulse	0.1000	3
Mo	98	115	He	-0.025	ppb	N/A	113.34	0.0013	Pulse	0.1000	3
Ag	107	115	He	-0.012	ppb	N/A	43.33	0.0005	Pulse	0.1000	3
Cd	111	115	He	-0.007	ppb	N/A	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.078	ppb	129.9	1420.12	0.0160	Pulse	0.1000	3
Sb	121	115	He	0.016	ppb	27.9	43.33	0.0005	Pulse	0.1000	3
Ba	137	115	He	1.156	ppb	9.1	513.36	0.0058	Pulse	0.1000	3
Tl	205	159	He	-0.083	ppb	N/A	290.01	0.0007	Pulse	0.1000	3
Pb	208	159	He	0.248	ppb	1.0	4067.07	0.0102	Pulse	0.1000	3
U	238	209	He	-0.004	ppb	N/A	70.00	0.0002	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2544035.28	0.4	97.6	Analog	0.1000	3
No Gas	Ge	72	1143081.60	0.9	88.7	Pulse	0.1000	3
H2	Sc	45	201187.39	0.3	97.6	Pulse	0.1000	3
H2	Ge	72	154292.23	0.8	94.8	Pulse	0.1000	3
H2	In	115	396391.55	0.3	98.2	Pulse	0.1000	3
He	Sc	45	50304.46	1.8	98.3	Pulse	0.1000	3
He	Ge	72	79571.97	1.0	97.2	Pulse	0.1000	3
He	In	115	88588.75	1.7	101.1	Pulse	0.1000	3
He	Tb	159	398711.53	0.4	99.3	Pulse	0.1000	3
He	Bi	209	309124.21	0.5	101.0	Pulse	0.1000	3

No Gas



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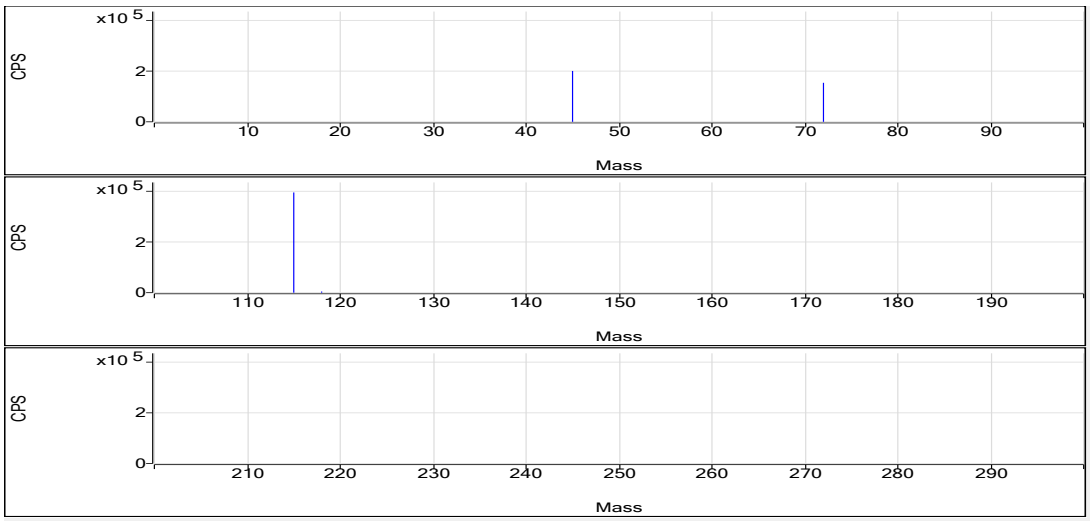
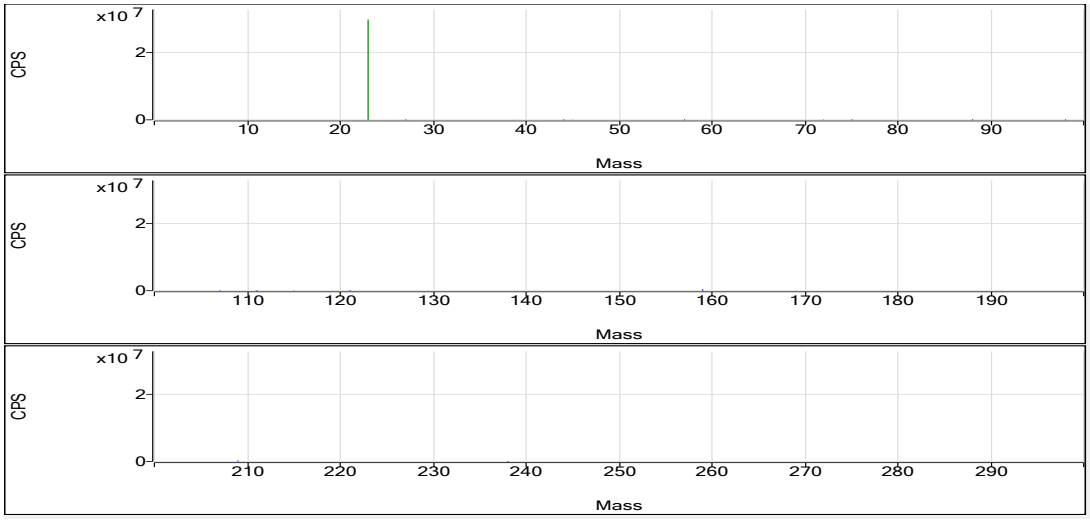


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.021	0	48.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.024	0	42.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.034	0	24.00	0.0007	3.404E-05
Se	78	2	H2	-0.032	0	3.33	0.0004	3.546E-05
Se	78	2	H2	-0.041	0	2.67	0.0004	3.546E-05
Se	78	2	H2	-0.041	0	2.67	0.0004	3.546E-05
Na	23	3	He	169915.139	606.0647	29875492.05	0.0036	0.4171
Na	23	3	He	164167.909	585.5792	29664879.56	0.0036	0.4171
Na	23	3	He	165174.994	589.1689	30024109.55	0.0036	0.4171
Mg	24	3	He	4.554	0.0128	630.03	0.0018	0.004553
Mg	24	3	He	2.725	0.0095	480.03	0.0018	0.004553
Mg	24	3	He	5.083	0.0137	700.04	0.0018	0.004553
Al	27	3	He	0.6	0.0024	120.00	0.0006	0.002085
Al	27	3	He	4.215	0.0045	230.01	0.0006	0.002085
Al	27	3	He	1.138	0.0027	140.01	0.0006	0.002085
K	39	3	He	29.065	0.4452	21946.96	0.0012	0.4112
K	39	3	He	13.93	0.4275	21656.71	0.0012	0.4112
K	39	3	He	5.394	0.4175	21275.97	0.0012	0.4112
Ca	44	3	He	-1.122	0.0032	160.01	0.0001	0.003322
Ca	44	3	He	26.803	0.0051	260.01	0.0001	0.003322
Ca	44	3	He	6.021	0.0037	190.01	0.0001	0.003322
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	-0.402	0.0232	1146.06	0.0213	0.0318
V	51	3	He	-0.504	0.0211	1068.05	0.0213	0.0318
V	51	3	He	-0.451	0.0222	1132.05	0.0213	0.0318
Cr	52	3	He	-0.102	0.04	1970.20	0.0294	0.04297
Cr	52	3	He	-0.125	0.0393	1990.21	0.0294	0.04297
Cr	52	3	He	0.02	0.0436	2220.25	0.0294	0.04297
Mn	55	3	He	0.215	0.0055	270.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.267	0.0061	310.01	0.0124	0.002801
Mn	55	3	He	0.185	0.0051	260.01	0.0124	0.002801
Fe	57	3	He	3.026	0.0045	220.01	0.0006	0.002732
Fe	57	3	He	0.401	0.003	150.01	0.0006	0.002732
Fe	57	3	He	1.742	0.0037	190.01	0.0006	0.002732
Co	59	3	He	0.215	0.0154	760.05	0.0549	0.003644
Co	59	3	He	0.124	0.0105	530.02	0.0549	0.003644
Co	59	3	He	0.18	0.0135	690.04	0.0549	0.003644
Ni	60	3	He	-0.772	0.007	560.03	0.0093	0.01413
Ni	60	3	He	-0.912	0.0057	450.02	0.0093	0.01413
Ni	60	3	He	-0.948	0.0053	420.02	0.0093	0.01413
Cu	63	3	He	1.483	0.05	4020.69	0.0274	0.009321
Cu	63	3	He	1.45	0.0491	3900.68	0.0274	0.009321
Cu	63	3	He	1.52	0.051	4020.65	0.0274	0.009321
Zn	66	3	He	1.517	0.0106	850.06	0.0031	0.005913
Zn	66	3	He	1.64	0.0109	870.06	0.0031	0.005913
Zn	66	3	He	1.091	0.0093	730.04	0.0031	0.005913
As	75	3	He	-0.023	0.0008	66.00	0.0021	0.0008698
As	75	3	He	-0.065	0.0007	58.00	0.0021	0.0008698
As	75	3	He	-0.122	0.0006	48.00	0.0021	0.0008698
Sr	88	3	He	0.105	0.0016	140.01	0.0088	0.0006843
Sr	88	3	He	0.214	0.0026	230.01	0.0088	0.0006843
Sr	88	3	He	0.241	0.0028	250.01	0.0088	0.0006843
Mo	98	3	He	-0.026	0.0013	110.00	0.0219	0.001827
Mo	98	3	He	-0.027	0.0012	110.01	0.0219	0.001827
Mo	98	3	He	-0.022	0.0013	120.01	0.0219	0.001827
Ag	107	3	He	-0.015	0.0003	30.00	0.047	0.001064
Ag	107	3	He	-0.02	0.0001	10.00	0.047	0.001064
Ag	107	3	He	-0.001	0.001	90.00	0.047	0.001064
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Sn	120	3	He	0.136	0.0169	1470.13	0.0154	0.01483
Sn	120	3	He	0.138	0.017	1520.13	0.0154	0.01483
Sn	120	3	He	-0.039	0.0142	1270.10	0.0154	0.01483
Sb	121	3	He	0.014	0.0005	40.00	0.0143	0.0002661
Sb	121	3	He	0.013	0.0004	40.00	0.0143	0.0002661
Sb	121	3	He	0.021	0.0006	50.00	0.0143	0.0002661
Ba	137	3	He	1.077	0.0054	470.03	0.0048	0.0002665
Ba	137	3	He	1.275	0.0064	570.03	0.0048	0.0002665
Ba	137	3	He	1.116	0.0056	500.03	0.0048	0.0002665
Tl	205	3	He	-0.078	0.0009	340.02	0.0246	0.002755
Tl	205	3	He	-0.083	0.0007	280.01	0.0246	0.002755
Tl	205	3	He	-0.087	0.0006	250.01	0.0246	0.002755
Pb	208	3	He	0.251	0.0103	2300.31	0.0324	0.002158
Pb	208	3	He	0.248	0.0102	2050.23	0.0324	0.002158
Pb	208	3	He	0.246	0.0101	2150.25	0.0324	0.002158
U	238	3	He	-0.003	0.0003	80.00	0.0492	0.0004023
U	238	3	He	-0.004	0.0002	60.00	0.0492	0.0004023
U	238	3	He	-0.004	0.0002	70.00	0.0492	0.0004023
Sc	45	1	No Gas			2548980.43		
Sc	45	1	No Gas			2532446.06		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2550679.34		
Ge	72	1	No Gas			1131366.47		
Ge	72	1	No Gas			1150644.51		
Ge	72	1	No Gas			1147233.81		
Sc	45	2	H2			200667.32		
Sc	45	2	H2			201893.26		
Sc	45	2	H2			201001.60		
Ge	72	2	H2			155641.50		
Ge	72	2	H2			154142.73		
Ge	72	2	H2			153092.46		
In	115	2	H2			395100.70		
In	115	2	H2			397188.16		
In	115	2	H2			396885.78		
Sc	45	3	He			49294.23		
Sc	45	3	He			50659.04		
Sc	45	3	He			50960.11		
Ge	72	3	He			80416.79		
Ge	72	3	He			79481.01		
Ge	72	3	He			78818.12		
In	115	3	He			86850.84		
In	115	3	He			89670.34		
In	115	3	He			89266.60		
Tb	159	3	He			399452.73		
Tb	159	3	He			396954.64		
Tb	159	3	He			399727.22		
Bi	209	3	He			308978.43		
Bi	209	3	He			307578.00		
Bi	209	3	He			310816.19		

Quantitation Report

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Auto Dilution	1.0000
Total Dilution	1.0000
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Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

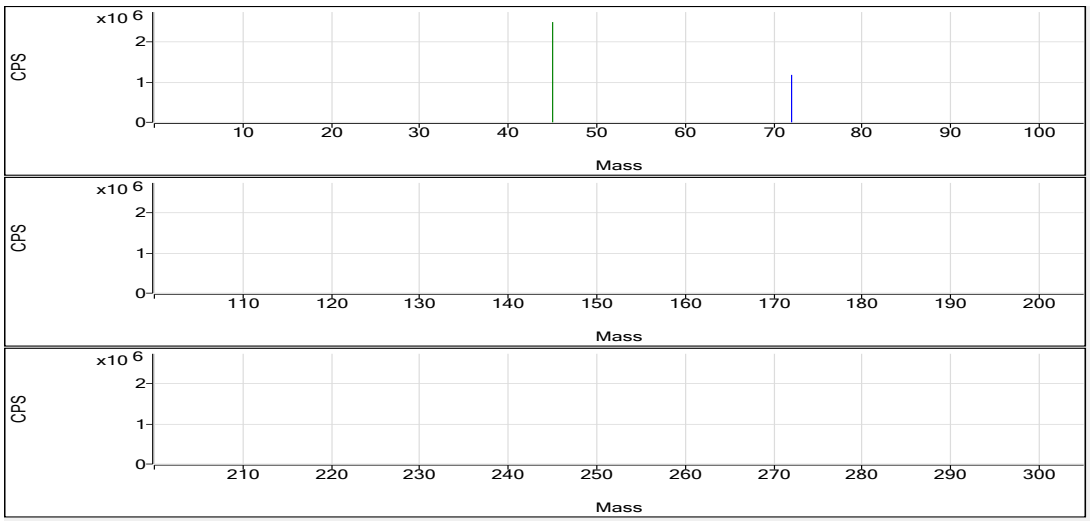
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.036	ppb	N/A	18.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.041	ppb	N/A	2.89	0.0000	Pulse	1.5000	3
Na	23	45	He	17.864	ppb	34.4	24153.61	0.4807	Pulse	0.1000	3
Mg	24	45	He	-0.242	ppb	N/A	206.68	0.0041	Pulse	0.1000	3
Al	27	45	He	-2.210	ppb	N/A	40.00	0.0008	Pulse	0.1000	3
K	39	45	He	8.662	ppb	58.5	21165.87	0.4213	Pulse	0.1000	3
Ca	44	45	He	2.919	ppb	317.0	176.68	0.0035	Pulse	0.1000	3
Ti	47	45	He	0.746	ppb	86.6	20.00	0.0004	Pulse	0.1000	3
V	51	45	He	-0.299	ppb	N/A	1278.73	0.0255	Pulse	0.5000	3
Cr	52	45	He	-0.070	ppb	N/A	2053.55	0.0409	Pulse	0.1000	3
Mn	55	45	He	0.122	ppb	17.9	216.68	0.0043	Pulse	0.1000	3
Fe	57	45	He	-1.528	ppb	N/A	93.33	0.0019	Pulse	0.1000	3
Co	59	45	He	-0.002	ppb	N/A	176.68	0.0035	Pulse	0.1000	3
Ni	60	72	He	-1.125	ppb	N/A	300.02	0.0037	Pulse	0.1000	3
Cu	63	72	He	-0.084	ppb	N/A	573.37	0.0070	Pulse	0.1000	3
Zn	66	72	He	0.347	ppb	78.4	570.03	0.0070	Pulse	0.1000	3
As	75	72	He	-0.018	ppb	N/A	68.00	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.039	ppb	102.0	90.00	0.0010	Pulse	0.1000	3
Mo	98	115	He	-0.059	ppb	N/A	46.67	0.0005	Pulse	0.1000	3
Ag	107	115	He	-0.010	ppb	N/A	53.33	0.0006	Pulse	0.1000	3
Cd	111	115	He	-0.007	ppb	N/A	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.144	ppb	10.9	1496.80	0.0170	Pulse	0.1000	3
Sb	121	115	He	0.000	ppb	96753.5	23.33	0.0003	Pulse	0.1000	3
Ba	137	115	He	0.024	ppb	152.5	33.33	0.0004	Pulse	0.1000	3
Tl	205	159	He	-0.089	ppb	N/A	223.34	0.0006	Pulse	0.1000	3
Pb	208	159	He	-0.028	ppb	N/A	506.68	0.0013	Pulse	0.1000	3
U	238	209	He	-0.003	ppb	N/A	80.00	0.0003	Pulse	0.1000	3

ISTD Table:

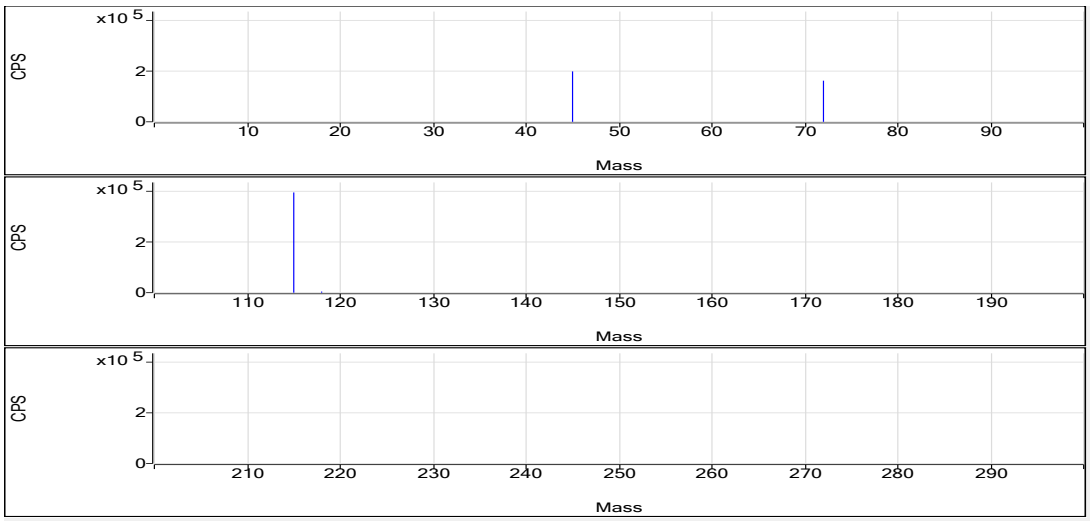
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2505498.24	1.6	96.1	Analog	0.1000	3
No Gas	Ge	72	1185564.91	1.8	92.0	Pulse	0.1000	3
H2	Sc	45	199819.68	1.1	97.0	Pulse	0.1000	3
H2	Ge	72	163015.51	0.9	100.2	Pulse	0.1000	3
H2	In	115	397208.99	1.1	98.4	Pulse	0.1000	3
He	Sc	45	50237.63	0.9	98.1	Pulse	0.1000	3
He	Ge	72	81704.14	1.6	99.8	Pulse	0.1000	3
He	In	115	87796.90	0.8	100.2	Pulse	0.1000	3
He	Tb	159	400033.19	0.6	99.6	Pulse	0.1000	3
He	Bi	209	308533.41	0.2	100.8	Pulse	0.1000	3

No Gas

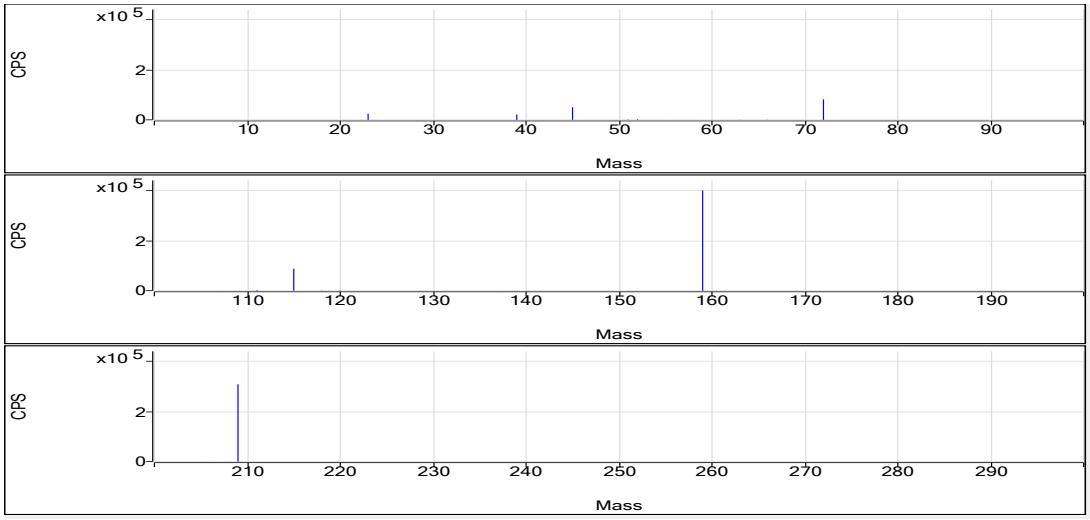


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.037	0	18.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.036	0	20.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.037	0	18.00	0.0007	3.404E-05
Se	78	2	H2	-0.053	0	2.00	0.0004	3.546E-05
Se	78	2	H2	-0.053	0	2.00	0.0004	3.546E-05
Se	78	2	H2	-0.016	0	4.67	0.0004	3.546E-05
Na	23	3	He	23.287	0.5001	25051.83	0.0036	0.4171
Na	23	3	He	19.13	0.4852	24620.85	0.0036	0.4171
Na	23	3	He	11.176	0.4569	22788.14	0.0036	0.4171
Mg	24	3	He	0.132	0.0048	240.01	0.0018	0.004553
Mg	24	3	He	-0.556	0.0035	180.01	0.0018	0.004553
Mg	24	3	He	-0.3	0.004	200.01	0.0018	0.004553
Al	27	3	He	-1.865	0.001	50.00	0.0006	0.002085
Al	27	3	He	-2.563	0.0006	30.00	0.0006	0.002085
Al	27	3	He	-2.202	0.0008	40.00	0.0006	0.002085
K	39	3	He	14.433	0.4281	21446.16	0.0012	0.4112
K	39	3	He	4.926	0.417	21155.86	0.0012	0.4112
K	39	3	He	6.628	0.4189	20895.60	0.0012	0.4112
Ca	44	3	He	12.881	0.0042	210.01	0.0001	0.003322
Ca	44	3	He	-5.408	0.003	150.01	0.0001	0.003322
Ca	44	3	He	1.285	0.0034	170.01	0.0001	0.003322
Ti	47	3	He	1.126	0.0006	30.00	0.0005	0
Ti	47	3	He	1.112	0.0006	30.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	-0.337	0.0246	1234.06	0.0213	0.0318
V	51	3	He	-0.276	0.0259	1316.07	0.0213	0.0318
V	51	3	He	-0.283	0.0258	1286.07	0.0213	0.0318
Cr	52	3	He	0.019	0.0435	2180.24	0.0294	0.04297
Cr	52	3	He	-0.221	0.0365	1850.16	0.0294	0.04297
Cr	52	3	He	-0.009	0.0427	2130.24	0.0294	0.04297
Mn	55	3	He	0.128	0.0044	220.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.139	0.0045	230.01	0.0124	0.002801
Mn	55	3	He	0.097	0.004	200.01	0.0124	0.002801
Fe	57	3	He	-3.379	0.0008	40.00	0.0006	0.002732
Fe	57	3	He	-0.986	0.0022	110.00	0.0006	0.002732
Fe	57	3	He	-0.219	0.0026	130.00	0.0006	0.002732
Co	59	3	He	0.003	0.0038	190.01	0.0549	0.003644
Co	59	3	He	-0.016	0.0028	140.01	0.0549	0.003644
Co	59	3	He	0.007	0.004	200.01	0.0549	0.003644
Ni	60	3	He	-1.082	0.0041	330.02	0.0093	0.01413
Ni	60	3	He	-1.069	0.0042	340.02	0.0093	0.01413
Ni	60	3	He	-1.224	0.0028	230.01	0.0093	0.01413
Cu	63	3	He	-0.074	0.0073	590.04	0.0274	0.009321
Cu	63	3	He	-0.101	0.0065	530.03	0.0274	0.009321
Cu	63	3	He	-0.077	0.0072	600.03	0.0274	0.009321
Zn	66	3	He	0.651	0.0079	640.04	0.0031	0.005913
Zn	66	3	He	0.126	0.0063	510.03	0.0031	0.005913
Zn	66	3	He	0.265	0.0067	560.03	0.0031	0.005913
As	75	3	He	-0.037	0.0008	64.00	0.0021	0.0008698
As	75	3	He	-0.014	0.0008	68.00	0.0021	0.0008698
As	75	3	He	-0.002	0.0009	72.00	0.0021	0.0008698
Sr	88	3	He	0.038	0.001	90.00	0.0088	0.0006843
Sr	88	3	He	0	0.0007	60.00	0.0088	0.0006843
Sr	88	3	He	0.079	0.0014	120.00	0.0088	0.0006843
Mo	98	3	He	-0.068	0.0003	30.00	0.0219	0.001827
Mo	98	3	He	-0.057	0.0006	50.00	0.0219	0.001827
Mo	98	3	He	-0.052	0.0007	60.00	0.0219	0.001827
Ag	107	3	He	-0.018	0.0002	20.00	0.047	0.001064
Ag	107	3	He	-0.008	0.0007	60.00	0.047	0.001064
Ag	107	3	He	-0.003	0.0009	80.00	0.047	0.001064
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Sn	120	3	He	0.147	0.0171	1510.13	0.0154	0.01483
Sn	120	3	He	0.157	0.0173	1520.15	0.0154	0.01483
Sn	120	3	He	0.127	0.0168	1460.13	0.0154	0.01483
Sb	121	3	He	-0.011	0.0001	10.00	0.0143	0.0002661
Sb	121	3	He	0.005	0.0003	30.00	0.0143	0.0002661
Sb	121	3	He	0.006	0.0003	30.00	0.0143	0.0002661
Ba	137	3	He	0.063	0.0006	50.00	0.0048	0.0002665
Ba	137	3	He	-0.008	0.0002	20.00	0.0048	0.0002665
Ba	137	3	He	0.016	0.0003	30.00	0.0048	0.0002665
Tl	205	3	He	-0.088	0.0006	240.01	0.0246	0.002755
Tl	205	3	He	-0.09	0.0005	220.01	0.0246	0.002755
Tl	205	3	He	-0.091	0.0005	210.01	0.0246	0.002755
Pb	208	3	He	-0.025	0.0013	280.01	0.0324	0.002158
Pb	208	3	He	-0.034	0.001	270.01	0.0324	0.002158
Pb	208	3	He	-0.023	0.0014	360.02	0.0324	0.002158
U	238	3	He	-0.002	0.0003	90.00	0.0492	0.0004023
U	238	3	He	-0.004	0.0002	60.00	0.0492	0.0004023
U	238	3	He	-0.002	0.0003	90.00	0.0492	0.0004023
Sc	45	1	No Gas			2530487.93		
Sc	45	1	No Gas			2460576.53		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2525430.27		
Ge	72	1	No Gas			1193026.47		
Ge	72	1	No Gas			1161752.80		
Ge	72	1	No Gas			1201915.45		
Sc	45	2	H2			200808.69		
Sc	45	2	H2			201244.82		
Sc	45	2	H2			197405.54		
Ge	72	2	H2			163388.44		
Ge	72	2	H2			161321.84		
Ge	72	2	H2			164336.25		
In	115	2	H2			392990.89		
In	115	2	H2			401359.41		
In	115	2	H2			397276.67		
Sc	45	3	He			50097.49		
Sc	45	3	He			50739.03		
Sc	45	3	He			49876.38		
Ge	72	3	He			80889.67		
Ge	72	3	He			80969.23		
Ge	72	3	He			83253.52		
In	115	3	He			88311.03		
In	115	3	He			88099.36		
In	115	3	He			87001.05		
Tb	159	3	He			401809.13		
Tb	159	3	He			400791.32		
Tb	159	3	He			397499.13		
Bi	209	3	He			309329.86		
Bi	209	3	He			308127.81		
Bi	209	3	He			308142.57		

Quantitation Report

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Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

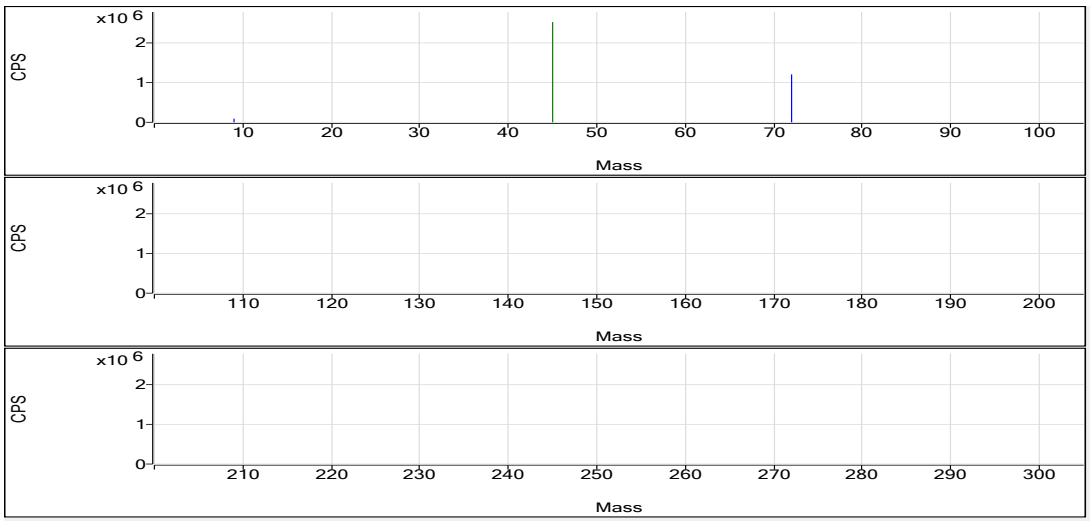
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.425	ppb	0.8	93146.05	0.0368	Pulse	0.5000	3
Se	78	72	H2	50.029	ppb	2.0	3550.89	0.0220	Pulse	1.5000	3
Na	23	45	He	4866.442	ppb	0.8	884433.74	17.7631	Pulse	0.1000	3
Mg	24	45	He	5076.498	ppb	0.9	456900.99	9.1767	Pulse	0.1000	3
Al	27	45	He	5094.217	ppb	1.4	147863.18	2.9699	Pulse	0.1000	3
K	39	45	He	5062.240	ppb	1.3	315620.00	6.3395	Pulse	0.1000	3
Ca	44	45	He	4971.018	ppb	2.2	16886.99	0.3391	Pulse	0.1000	3
Ti	47	45	He	5065.234	ppb	0.5	134138.87	2.6940	Pulse	0.1000	3
V	51	45	He	508.264	ppb	1.3	539331.71	10.8328	Pulse	0.5000	3
Cr	52	45	He	485.885	ppb	1.6	713564.00	14.3329	Pulse	0.1000	3
Mn	55	45	He	506.630	ppb	2.3	313702.18	6.3013	Pulse	0.1000	3
Fe	57	45	He	5055.255	ppb	1.2	144140.67	2.8951	Pulse	0.1000	3
Co	59	45	He	491.090	ppb	1.7	1342132.32	26.9583	Pulse	0.1000	3
Ni	60	72	He	489.087	ppb	1.0	377442.98	4.5543	Pulse	0.1000	3
Cu	63	72	He	466.127	ppb	1.4	1060255.06	12.7933	Pulse	0.1000	3
Zn	66	72	He	492.251	ppb	2.2	125743.67	1.5173	Pulse	0.1000	3
As	75	72	He	501.537	ppb	1.1	89261.28	1.0770	Pulse	0.5000	3
Sr	88	115	He	50.472	ppb	1.6	38546.68	0.4448	Pulse	0.1000	3
Mo	98	115	He	49.560	ppb	1.3	94402.98	1.0894	Pulse	0.1000	3
Ag	107	115	He	49.495	ppb	2.0	201836.89	2.3293	Pulse	0.1000	3
Cd	111	115	He	50.909	ppb	1.6	23497.76	0.2712	Pulse	0.5000	3
Sn	120	115	He	51.506	ppb	1.2	70110.91	0.8091	Pulse	0.1000	3
Sb	121	115	He	52.300	ppb	1.2	64611.56	0.7456	Pulse	0.1000	3
Ba	137	115	He	510.994	ppb	1.4	211623.73	2.4422	Pulse	0.1000	3
Tl	205	159	He	50.998	ppb	0.5	499632.34	1.2553	Pulse	0.1000	3
Pb	208	159	He	51.129	ppb	0.2	660312.19	1.6590	Pulse	0.1000	3
U	238	209	He	50.172	ppb	0.2	756552.46	2.4712	Pulse	0.1000	3

ISTD Table:

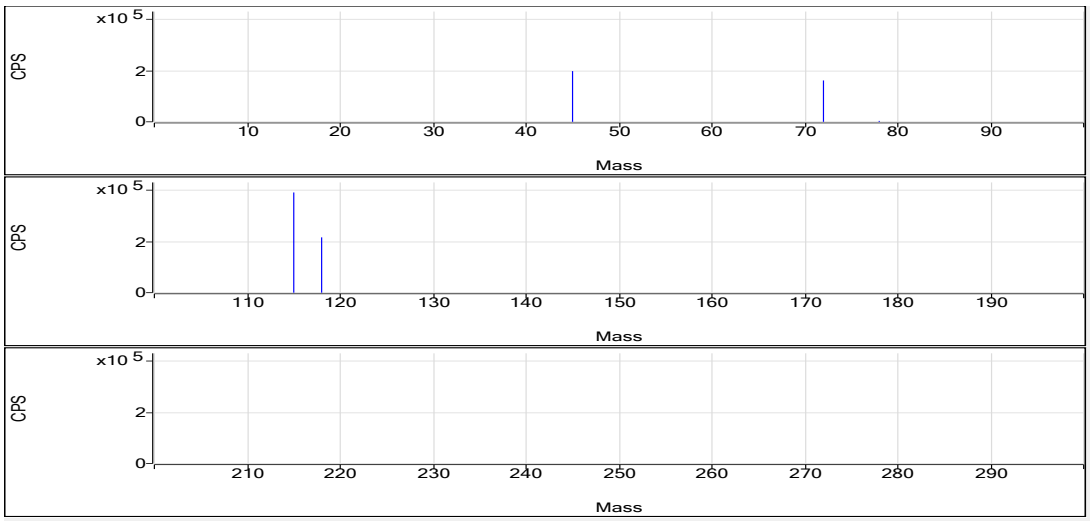
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2533314.96	0.7	97.1	Analog	0.1000	3
No Gas	Ge	72	1210608.71	0.3	93.9	Pulse	0.1000	3
H2	Sc	45	198180.28	0.8	96.2	Pulse	0.1000	3
H2	Ge	72	161682.15	0.6	99.3	Pulse	0.1000	3
H2	In	115	391702.56	1.4	97.0	Pulse	0.1000	3
He	Sc	45	49792.53	1.4	97.3	Pulse	0.1000	3
He	Ge	72	82883.01	1.1	101.2	Pulse	0.1000	3
He	In	115	86659.25	0.8	98.9	Pulse	0.1000	3
He	Tb	159	398027.81	0.4	99.1	Pulse	0.1000	3
He	Bi	209	306143.00	0.4	100.0	Pulse	0.1000	3

No Gas

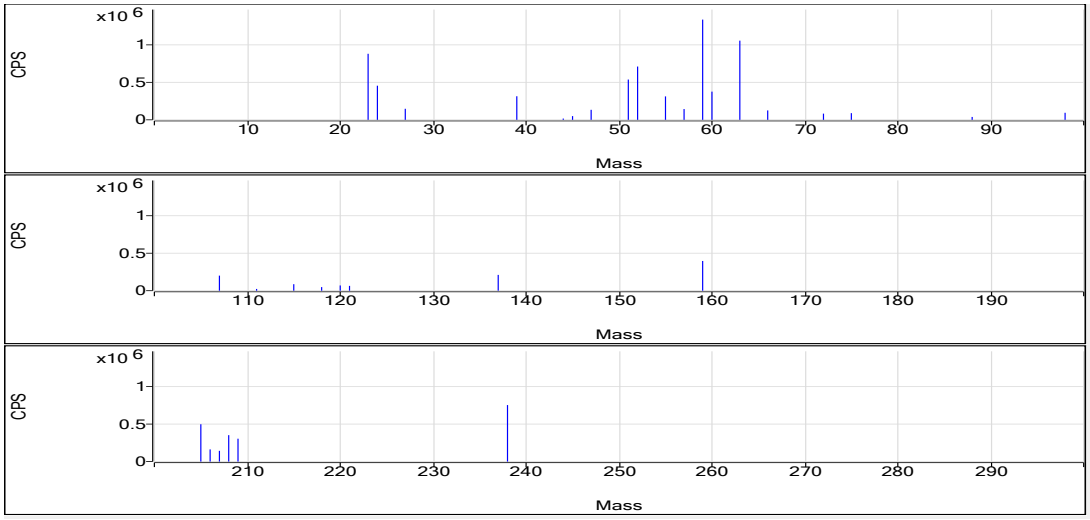


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.529	0.0368	93026.40	0.0007	3.404E-05
Be	9	1	No Gas	50.754	0.037	93286.38	0.0007	3.404E-05
Be	9	1	No Gas	49.991	0.0365	93125.38	0.0007	3.404E-05
Se	78	2	H2	48.893	0.0215	3495.77	0.0004	3.546E-05
Se	78	2	H2	50.518	0.0222	3568.45	0.0004	3.546E-05
Se	78	2	H2	50.674	0.0222	3588.46	0.0004	3.546E-05
Na	23	3	He	4853.971	17.7186	896184.67	0.0036	0.4171
Na	23	3	He	4910.53	17.9202	881922.41	0.0036	0.4171
Na	23	3	He	4834.826	17.6504	875194.13	0.0036	0.4171
Mg	24	3	He	5044.077	9.1181	461183.86	0.0018	0.004553
Mg	24	3	He	5128.236	9.2702	456222.02	0.0018	0.004553
Mg	24	3	He	5057.18	9.1418	453297.10	0.0018	0.004553
Al	27	3	He	5031.661	2.9335	148372.64	0.0006	0.002085
Al	27	3	He	5174.078	3.0165	148452.08	0.0006	0.002085
Al	27	3	He	5076.911	2.9599	146764.82	0.0006	0.002085
K	39	3	He	4988.862	6.2535	316295.07	0.0012	0.4112
K	39	3	He	5123.478	6.4112	315518.10	0.0012	0.4112
K	39	3	He	5074.38	6.3537	315046.83	0.0012	0.4112
Ca	44	3	He	4999.424	0.3411	17250.83	0.0001	0.003322
Ca	44	3	He	5064.126	0.3454	17000.43	0.0001	0.003322
Ca	44	3	He	4849.502	0.3309	16409.70	0.0001	0.003322
Ti	47	3	He	5061.675	2.6921	136163.40	0.0005	0
Ti	47	3	He	5090.299	2.7073	133238.22	0.0005	0
Ti	47	3	He	5043.728	2.6826	133014.98	0.0005	0
V	51	3	He	501.872	10.697	541042.13	0.0213	0.0318
V	51	3	He	515.217	10.9806	540397.88	0.0213	0.0318
V	51	3	He	507.702	10.8209	536555.13	0.0213	0.0318
Cr	52	3	He	477.268	14.0795	712122.26	0.0294	0.04297
Cr	52	3	He	492.116	14.5162	714396.24	0.0294	0.04297
Cr	52	3	He	488.269	14.403	714173.50	0.0294	0.04297
Mn	55	3	He	498.11	6.1954	313353.71	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	519.618	6.4628	318057.16	0.0124	0.002801
Mn	55	3	He	502.162	6.2457	309695.66	0.0124	0.002801
Fe	57	3	He	5008.391	2.8683	145074.26	0.0006	0.002732
Fe	57	3	He	5122.977	2.9338	144385.86	0.0006	0.002732
Fe	57	3	He	5034.398	2.8832	142961.89	0.0006	0.002732
Co	59	3	He	484.155	26.5777	1344265.29	0.0549	0.003644
Co	59	3	He	500.533	27.4766	1352228.73	0.0549	0.003644
Co	59	3	He	488.582	26.8207	1329902.95	0.0549	0.003644
Ni	60	3	He	484.85	4.5149	377873.63	0.0093	0.01413
Ni	60	3	He	494.57	4.6052	377274.29	0.0093	0.01413
Ni	60	3	He	487.842	4.5427	377181.01	0.0093	0.01413
Cu	63	3	He	462.752	12.7008	1062983.34	0.0274	0.009321
Cu	63	3	He	473.437	12.9938	1064509.44	0.0274	0.009321
Cu	63	3	He	462.192	12.6854	1053272.41	0.0274	0.009321
Zn	66	3	He	487.84	1.5038	125858.33	0.0031	0.005913
Zn	66	3	He	504.596	1.5552	127411.53	0.0031	0.005913
Zn	66	3	He	484.316	1.493	123961.14	0.0031	0.005913
As	75	3	He	495.82	1.0648	89115.04	0.0021	0.0008698
As	75	3	He	506.448	1.0876	89098.85	0.0021	0.0008698
As	75	3	He	502.342	1.0788	89569.94	0.0021	0.0008698
Sr	88	3	He	51.351	0.4525	39425.58	0.0088	0.0006843
Sr	88	3	He	49.824	0.4391	37701.29	0.0088	0.0006843
Sr	88	3	He	50.239	0.4427	38513.17	0.0088	0.0006843
Mo	98	3	He	49.31	1.0839	94436.94	0.0219	0.001827
Mo	98	3	He	50.291	1.1055	94919.22	0.0219	0.001827
Mo	98	3	He	49.08	1.0789	93852.79	0.0219	0.001827
Ag	107	3	He	49.324	2.3212	202236.38	0.047	0.001064
Ag	107	3	He	50.538	2.3783	204214.55	0.047	0.001064
Ag	107	3	He	48.624	2.2883	199059.74	0.047	0.001064
Cd	111	3	He	50.136	0.2671	23267.35	0.0053	6.086E-05
Cd	111	3	He	51.775	0.2758	23680.10	0.0053	6.086E-05
Cd	111	3	He	50.815	0.2707	23545.83	0.0053	6.086E-05
Sn	120	3	He	51.4	0.8074	70348.56	0.0154	0.01483
Sn	120	3	He	52.184	0.8195	70368.96	0.0154	0.01483
Sn	120	3	He	50.935	0.8003	69615.20	0.0154	0.01483
Sb	121	3	He	51.982	0.741	64561.06	0.0143	0.0002661
Sb	121	3	He	51.884	0.7396	63507.02	0.0143	0.0002661
Sb	121	3	He	53.035	0.756	65766.60	0.0143	0.0002661
Ba	137	3	He	507.225	2.4242	211206.70	0.0048	0.0002665
Ba	137	3	He	519.423	2.4825	213156.74	0.0048	0.0002665
Ba	137	3	He	506.332	2.4199	210507.75	0.0048	0.0002665
Tl	205	3	He	51.113	1.2581	501813.63	0.0246	0.002755
Tl	205	3	He	50.711	1.2482	497907.10	0.0246	0.002755
Tl	205	3	He	51.17	1.2595	499176.28	0.0246	0.002755
Pb	208	3	He	51.155	1.6598	355392.81	0.0324	0.002158
Pb	208	3	He	51.189	1.6609	353945.23	0.0324	0.002158
Pb	208	3	He	51.042	1.6561	351501.21	0.0324	0.002158
U	238	3	He	50.277	2.4764	760260.54	0.0492	0.0004023
U	238	3	He	50.09	2.4672	756583.27	0.0492	0.0004023
U	238	3	He	50.148	2.4701	752813.58	0.0492	0.0004023
Sc	45	1	No Gas			2524729.96		
Sc	45	1	No Gas			2520606.21		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2554608.71		
Ge	72	1	No Gas			1206398.03		
Ge	72	1	No Gas			1211355.45		
Ge	72	1	No Gas			1214072.64		
Sc	45	2	H2			196520.80		
Sc	45	2	H2			198153.77		
Sc	45	2	H2			199866.27		
Ge	72	2	H2			162848.83		
Ge	72	2	H2			160896.66		
Ge	72	2	H2			161300.97		
In	115	2	H2			386079.60		
In	115	2	H2			396925.46		
In	115	2	H2			392102.61		
Sc	45	3	He			50578.72		
Sc	45	3	He			49213.84		
Sc	45	3	He			49585.03		
Ge	72	3	He			83694.38		
Ge	72	3	He			81924.42		
Ge	72	3	He			83030.24		
In	115	3	He			87494.76		
In	115	3	He			86247.56		
In	115	3	He			87363.66		
Tb	159	3	He			398863.98		
Tb	159	3	He			398889.02		
Tb	159	3	He			396330.42		
Bi	209	3	He			307002.24		
Bi	209	3	He			306654.64		
Bi	209	3	He			304772.12		

Quantitation Report

Data File Name	178_CCB.d
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Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

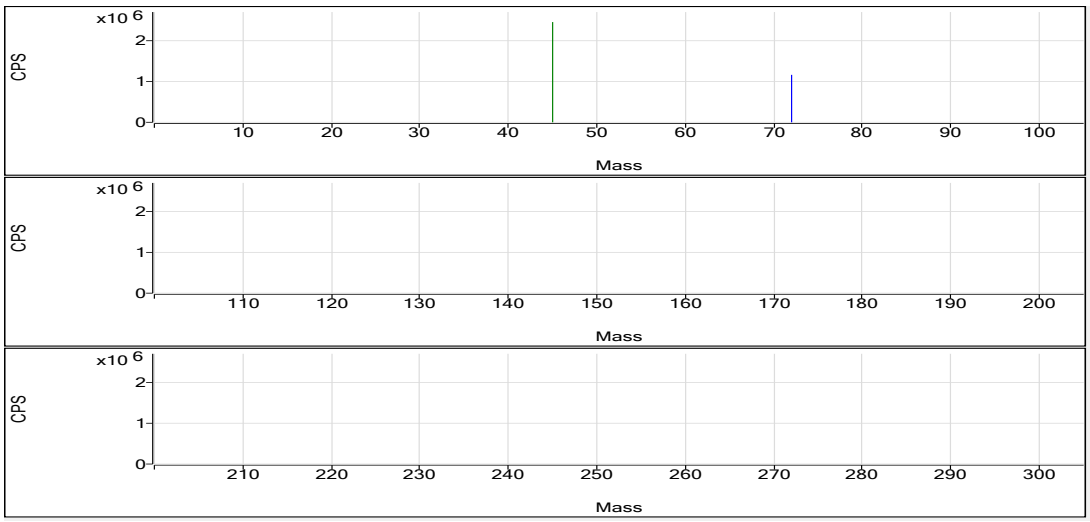
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.022	ppb	N/A	44.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.004	ppb	N/A	5.33	0.0000	Pulse	1.5000	3
Na	23	45	He	-3.272	ppb	N/A	19793.87	0.4054	Pulse	0.1000	3
Mg	24	45	He	0.157	ppb	300.3	236.68	0.0048	Pulse	0.1000	3
Al	27	45	He	-0.524	ppb	N/A	86.67	0.0018	Pulse	0.1000	3
K	39	45	He	15.126	ppb	2.2	20948.90	0.4289	Pulse	0.1000	3
Ca	44	45	He	4.474	ppb	285.9	176.68	0.0036	Pulse	0.1000	3
Ti	47	45	He	0.769	ppb	49.2	20.00	0.0004	Pulse	0.1000	3
V	51	45	He	-0.307	ppb	N/A	1234.06	0.0253	Pulse	0.5000	3
Cr	52	45	He	0.096	ppb	150.7	2236.91	0.0458	Pulse	0.1000	3
Mn	55	45	He	0.231	ppb	37.0	276.68	0.0057	Pulse	0.1000	3
Fe	57	45	He	0.115	ppb	1586.0	136.67	0.0028	Pulse	0.1000	3
Co	59	45	He	0.036	ppb	40.2	273.34	0.0056	Pulse	0.1000	3
Ni	60	72	He	-1.082	ppb	N/A	333.35	0.0041	Pulse	0.1000	3
Cu	63	72	He	-0.041	ppb	N/A	670.04	0.0082	Pulse	0.1000	3
Zn	66	72	He	0.481	ppb	83.7	603.36	0.0074	Pulse	0.1000	3
As	75	72	He	0.127	ppb	43.5	93.33	0.0011	Pulse	0.5000	3
Sr	88	115	He	0.038	ppb	38.3	86.67	0.0010	Pulse	0.1000	3
Mo	98	115	He	-0.032	ppb	N/A	96.67	0.0011	Pulse	0.1000	3
Ag	107	115	He	-0.015	ppb	N/A	30.00	0.0003	Pulse	0.1000	3
Cd	111	115	He	0.008	ppb	219.7	8.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.067	ppb	59.0	1350.12	0.0159	Pulse	0.1000	3
Sb	121	115	He	0.053	ppb	22.2	86.67	0.0010	Pulse	0.1000	3
Ba	137	115	He	0.051	ppb	76.8	43.33	0.0005	Pulse	0.1000	3
Tl	205	159	He	-0.036	ppb	N/A	736.71	0.0019	Pulse	0.1000	3
Pb	208	159	He	-0.022	ppb	N/A	573.36	0.0015	Pulse	0.1000	3
U	238	209	He	0.034	ppb	14.7	633.37	0.0021	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2473138.45	1.0	94.8	Analog	0.1000	3
No Gas	Ge	72	1170964.02	1.2	90.9	Pulse	0.1000	3
H2	Sc	45	195399.64	0.9	94.8	Pulse	0.1000	3
H2	Ge	72	158254.70	0.4	97.2	Pulse	0.1000	3
H2	In	115	387771.37	0.1	96.1	Pulse	0.1000	3
He	Sc	45	48842.97	1.5	95.4	Pulse	0.1000	3
He	Ge	72	81626.01	0.5	99.7	Pulse	0.1000	3
He	In	115	85076.68	1.4	97.1	Pulse	0.1000	3
He	Tb	159	393816.39	0.6	98.1	Pulse	0.1000	3
He	Bi	209	307831.21	0.5	100.6	Pulse	0.1000	3

No Gas



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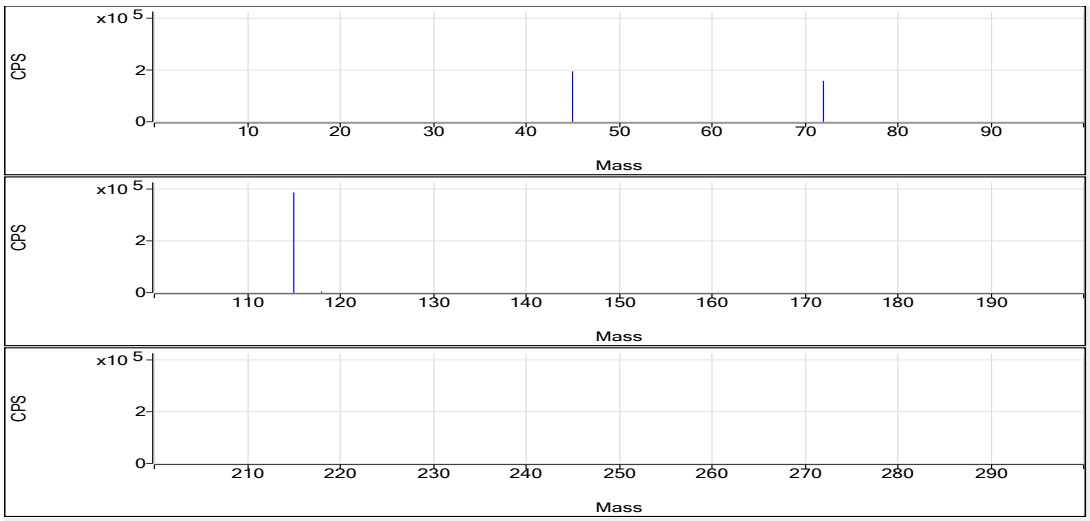
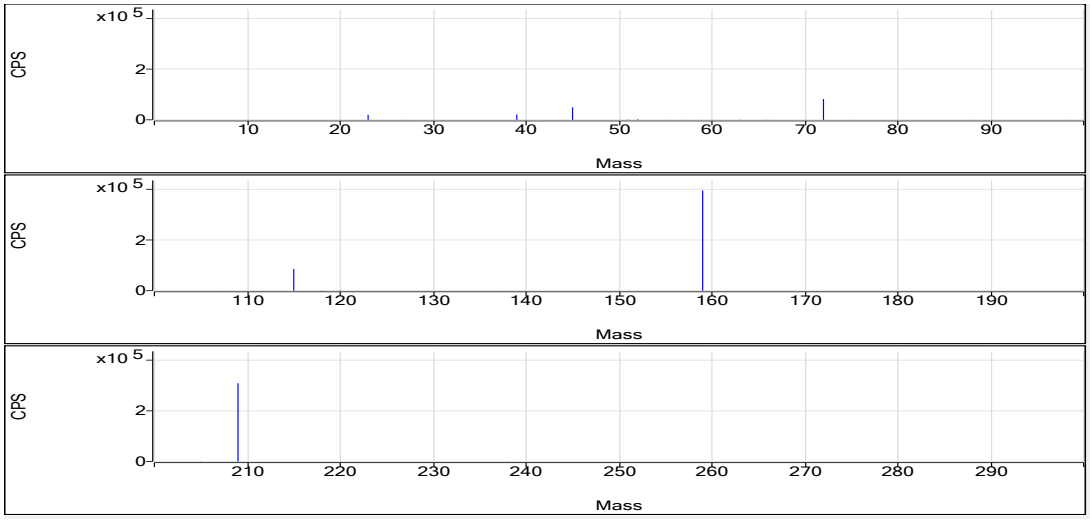


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.026	0	38.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.025	0	40.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.015	0	56.00	0.0007	3.404E-05
Se	78	2	H2	-0.052	0	2.00	0.0004	3.546E-05
Se	78	2	H2	0.035	0.0001	8.00	0.0004	3.546E-05
Se	78	2	H2	0.006	0	6.00	0.0004	3.546E-05
Na	23	3	He	1.487	0.4224	20294.54	0.0036	0.4171
Na	23	3	He	-5.495	0.3975	19473.39	0.0036	0.4171
Na	23	3	He	-5.808	0.3964	19613.67	0.0036	0.4171
Mg	24	3	He	-0.331	0.004	190.01	0.0018	0.004553
Mg	24	3	He	0.191	0.0049	240.01	0.0018	0.004553
Mg	24	3	He	0.612	0.0057	280.01	0.0018	0.004553
Al	27	3	He	0.351	0.0023	110.00	0.0006	0.002085
Al	27	3	He	-0.425	0.0018	90.00	0.0006	0.002085
Al	27	3	He	-1.497	0.0012	60.00	0.0006	0.002085
K	39	3	He	14.884	0.4286	20595.22	0.0012	0.4112
K	39	3	He	14.991	0.4287	21005.54	0.0012	0.4112
K	39	3	He	15.503	0.4293	21245.94	0.0012	0.4112
Ca	44	3	He	12.444	0.0042	200.01	0.0001	0.003322
Ca	44	3	He	11.258	0.0041	200.01	0.0001	0.003322
Ca	44	3	He	-10.281	0.0026	130.01	0.0001	0.003322
Ti	47	3	He	0.783	0.0004	20.00	0.0005	0
Ti	47	3	He	0.384	0.0002	10.00	0.0005	0
Ti	47	3	He	1.14	0.0006	30.00	0.0005	0
V	51	3	He	-0.26	0.0263	1262.07	0.0213	0.0318
V	51	3	He	-0.278	0.0259	1268.06	0.0213	0.0318
V	51	3	He	-0.382	0.0237	1172.06	0.0213	0.0318
Cr	52	3	He	0.103	0.046	2210.23	0.0294	0.04297
Cr	52	3	He	-0.052	0.0414	2030.22	0.0294	0.04297
Cr	52	3	He	0.236	0.0499	2470.29	0.0294	0.04297
Mn	55	3	He	0.277	0.0062	300.02	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.284	0.0063	310.01	0.0124	0.002801
Mn	55	3	He	0.132	0.0044	220.01	0.0124	0.002801
Fe	57	3	He	0.682	0.0031	150.01	0.0006	0.002732
Fe	57	3	He	-1.921	0.0016	80.00	0.0006	0.002732
Fe	57	3	He	1.583	0.0036	180.01	0.0006	0.002732
Co	59	3	He	0.051	0.0065	310.01	0.0549	0.003644
Co	59	3	He	0.023	0.0049	240.01	0.0549	0.003644
Co	59	3	He	0.033	0.0055	270.01	0.0549	0.003644
Ni	60	3	He	-1.206	0.0029	240.01	0.0093	0.01413
Ni	60	3	He	-1.075	0.0042	340.02	0.0093	0.01413
Ni	60	3	He	-0.964	0.0052	420.02	0.0093	0.01413
Cu	63	3	He	-0.046	0.0081	660.03	0.0274	0.009321
Cu	63	3	He	-0.024	0.0087	710.05	0.0274	0.009321
Cu	63	3	He	-0.052	0.0079	640.04	0.0274	0.009321
Zn	66	3	He	0.939	0.0088	720.04	0.0031	0.005913
Zn	66	3	He	0.182	0.0065	530.02	0.0031	0.005913
Zn	66	3	He	0.322	0.0069	560.03	0.0031	0.005913
As	75	3	He	0.187	0.0013	104.00	0.0021	0.0008698
As	75	3	He	0.118	0.0011	92.00	0.0021	0.0008698
As	75	3	He	0.077	0.001	84.00	0.0021	0.0008698
Sr	88	3	He	0.055	0.0012	100.00	0.0088	0.0006843
Sr	88	3	He	0.028	0.0009	80.00	0.0088	0.0006843
Sr	88	3	He	0.031	0.001	80.00	0.0088	0.0006843
Mo	98	3	He	-0.025	0.0013	110.00	0.0219	0.001827
Mo	98	3	He	-0.03	0.0012	100.00	0.0219	0.001827
Mo	98	3	He	-0.04	0.001	80.00	0.0219	0.001827
Ag	107	3	He	-0.01	0.0006	50.00	0.047	0.001064
Ag	107	3	He	-0.013	0.0005	40.00	0.047	0.001064
Ag	107	3	He	-0.023	0	0.00	0.047	0.001064
Cd	111	3	He	0.019	0.0002	14.00	0.0053	6.086E-05
Cd	111	3	He	0.015	0.0001	12.00	0.0053	6.086E-05
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Sn	120	3	He	0.089	0.0162	1390.12	0.0154	0.01483
Sn	120	3	He	0.022	0.0152	1300.11	0.0154	0.01483
Sn	120	3	He	0.092	0.0163	1360.12	0.0154	0.01483
Sb	121	3	He	0.055	0.001	90.00	0.0143	0.0002661
Sb	121	3	He	0.063	0.0012	100.00	0.0143	0.0002661
Sb	121	3	He	0.04	0.0008	70.00	0.0143	0.0002661
Ba	137	3	He	0.017	0.0003	30.00	0.0048	0.0002665
Ba	137	3	He	0.042	0.0005	40.00	0.0048	0.0002665
Ba	137	3	He	0.094	0.0007	60.00	0.0048	0.0002665
Tl	205	3	He	-0.039	0.0018	710.04	0.0246	0.002755
Tl	205	3	He	-0.034	0.0019	760.05	0.0246	0.002755
Tl	205	3	He	-0.035	0.0019	740.05	0.0246	0.002755
Pb	208	3	He	-0.021	0.0015	240.01	0.0324	0.002158
Pb	208	3	He	-0.013	0.0017	430.02	0.0324	0.002158
Pb	208	3	He	-0.03	0.0012	240.01	0.0324	0.002158
U	238	3	He	0.035	0.0021	650.04	0.0492	0.0004023
U	238	3	He	0.038	0.0023	700.05	0.0492	0.0004023
U	238	3	He	0.028	0.0018	550.03	0.0492	0.0004023
Sc	45	1	No Gas			2497341.37		
Sc	45	1	No Gas			2473142.78		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2448931.21		
Ge	72	1	No Gas			1187709.04		
Ge	72	1	No Gas			1161285.92		
Ge	72	1	No Gas			1163897.09		
Sc	45	2	H2			197320.33		
Sc	45	2	H2			194292.73		
Sc	45	2	H2			194585.86		
Ge	72	2	H2			158763.86		
Ge	72	2	H2			157571.00		
Ge	72	2	H2			158429.24		
In	115	2	H2			387736.87		
In	115	2	H2			388306.01		
In	115	2	H2			387271.24		
Sc	45	3	He			48050.50		
Sc	45	3	He			48993.42		
Sc	45	3	He			49484.99		
Ge	72	3	He			81854.05		
Ge	72	3	He			81893.95		
Ge	72	3	He			81130.02		
In	115	3	He			85835.15		
In	115	3	He			85744.18		
In	115	3	He			83672.56		
Tb	159	3	He			396440.58		
Tb	159	3	He			393373.43		
Tb	159	3	He			391635.15		
Bi	209	3	He			309202.83		
Bi	209	3	He			307863.65		
Bi	209	3	He			306427.14		

Quantitation Report

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Sample Type	Sample
Comment	F6
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

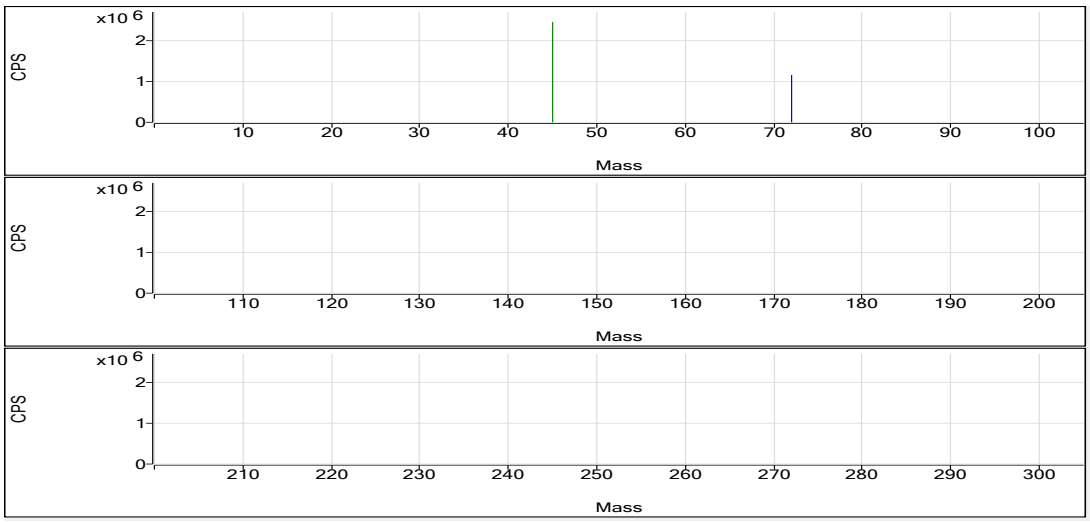
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.025	ppb	N/A	38.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.001	ppb	N/A	5.56	0.0000	Pulse	1.5000	3
Na	23	45	He	144388.556	ppb	3.5	25618671.28	515.0774	Analog	0.1000	3
Mg	24	45	He	5316.350	ppb	2.2	478068.71	9.6101	Pulse	0.1000	3
Al	27	45	He	473.254	ppb	5.3	13813.57	0.2778	Pulse	0.1000	3
K	39	45	He	66.403	ppb	7.6	24327.59	0.4889	Pulse	0.1000	3
Ca	44	45	He	622.963	ppb	8.1	2260.26	0.0454	Pulse	0.1000	3
Ti	47	45	He	0.502	ppb	42.1	13.33	0.0003	Pulse	0.1000	3
V	51	45	He	56.087	ppb	3.1	60867.85	1.2237	Pulse	0.5000	3
Cr	52	45	He	0.627	ppb	24.5	3053.75	0.0614	Pulse	0.1000	3
Mn	55	45	He	8.785	ppb	6.3	5571.26	0.1120	Pulse	0.1000	3
Fe	57	45	He	539.866	ppb	5.7	15495.51	0.3116	Pulse	0.1000	3
Co	59	45	He	0.549	ppb	6.8	1680.15	0.0338	Pulse	0.1000	3
Ni	60	72	He	7.903	ppb	8.4	7208.78	0.0875	Pulse	0.1000	3
Cu	63	72	He	1.076	ppb	16.8	3197.15	0.0388	Pulse	0.1000	3
Zn	66	72	He	9.066	ppb	0.5	2780.38	0.0337	Pulse	0.1000	3
As	75	72	He	0.330	ppb	17.9	130.00	0.0016	Pulse	0.5000	3
Sr	88	115	He	13.918	ppb	1.4	10764.48	0.1232	Pulse	0.1000	3
Mo	98	115	He	3.687	ppb	3.3	7232.12	0.0827	Pulse	0.1000	3
Ag	107	115	He	-0.007	ppb	N/A	63.33	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.027	ppb	69.3	18.00	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.003	ppb	2959.5	1300.11	0.0149	Pulse	0.1000	3
Sb	121	115	He	0.123	ppb	15.5	176.68	0.0020	Pulse	0.1000	3
Ba	137	115	He	28.277	ppb	2.0	11835.59	0.1354	Pulse	0.1000	3
Tl	205	159	He	-0.053	ppb	N/A	576.70	0.0014	Pulse	0.1000	3
Pb	208	159	He	4.002	ppb	2.9	52680.27	0.1319	Pulse	0.1000	3
U	238	209	He	0.041	ppb	4.0	736.72	0.0024	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2468867.52	1.7	94.7	Analog	0.1000	3
No Gas	Ge	72	1166511.52	0.9	90.5	Pulse	0.1000	3
H2	Sc	45	197824.51	0.6	96.0	Pulse	0.1000	3
H2	Ge	72	159428.27	0.9	98.0	Pulse	0.1000	3
H2	In	115	391981.17	1.5	97.1	Pulse	0.1000	3
He	Sc	45	49762.58	2.2	97.2	Pulse	0.1000	3
He	Ge	72	82384.13	0.5	100.6	Pulse	0.1000	3
He	In	115	87407.59	0.9	99.7	Pulse	0.1000	3
He	Tb	159	399530.29	0.0	99.5	Pulse	0.1000	3
He	Bi	209	305916.77	0.6	99.9	Pulse	0.1000	3

No Gas



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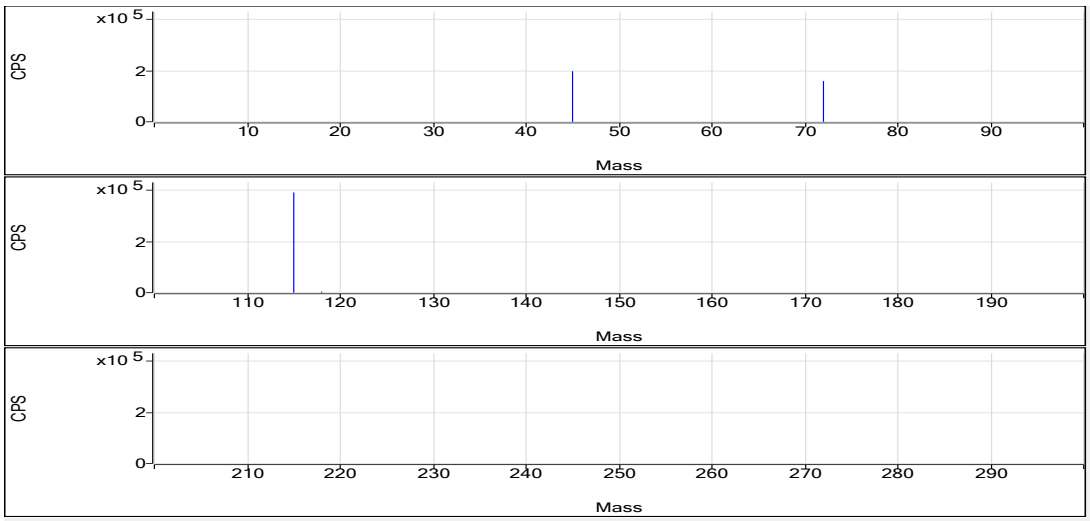
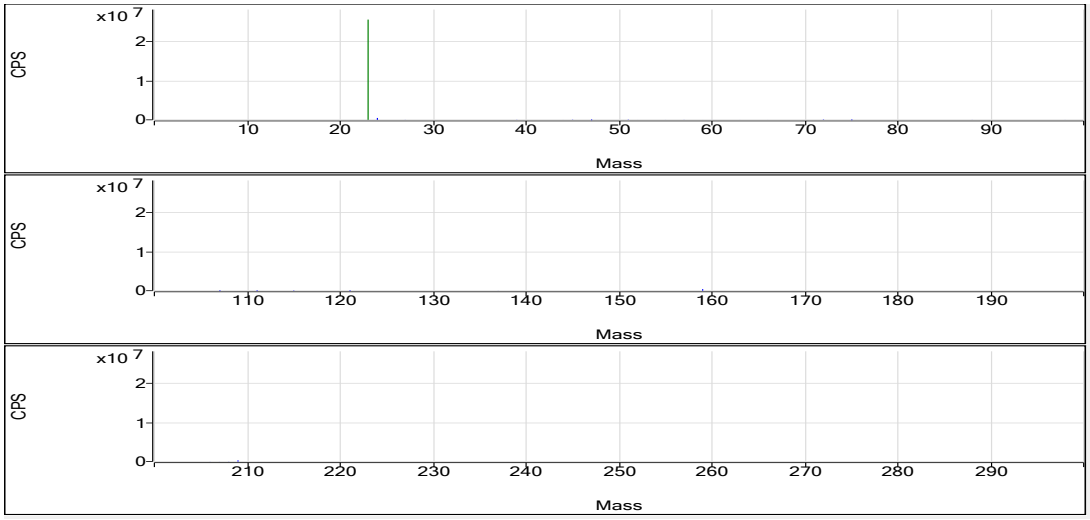


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.022	0	44.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.024	0	42.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.03	0	30.00	0.0007	3.404E-05
Se	78	2	H2	-0.033	0	3.33	0.0004	3.546E-05
Se	78	2	H2	0.015	0	6.67	0.0004	3.546E-05
Se	78	2	H2	0.014	0	6.67	0.0004	3.546E-05
Na	23	3	He	141675.311	505.4063	25466392.12	0.0036	0.4171
Na	23	3	He	150229.085	535.8955	26002677.11	0.0036	0.4171
Na	23	3	He	141261.272	503.9305	25386944.62	0.0036	0.4171
Mg	24	3	He	5257.379	9.5035	478863.59	0.0018	0.004553
Mg	24	3	He	5453.525	9.8579	478325.54	0.0018	0.004553
Mg	24	3	He	5238.145	9.4688	477016.99	0.0018	0.004553
Al	27	3	He	461.98	0.2712	13666.78	0.0006	0.002085
Al	27	3	He	502.192	0.2947	14297.40	0.0006	0.002085
Al	27	3	He	455.591	0.2675	13476.54	0.0006	0.002085
K	39	3	He	66.136	0.4886	24621.36	0.0012	0.4112
K	39	3	He	71.604	0.495	24020.27	0.0012	0.4112
K	39	3	He	61.469	0.4832	24341.14	0.0012	0.4112
Ca	44	3	He	582.491	0.0427	2150.22	0.0001	0.003322
Ca	44	3	He	606.789	0.0443	2150.24	0.0001	0.003322
Ca	44	3	He	679.609	0.0492	2480.32	0.0001	0.003322
Ti	47	3	He	0.746	0.0004	20.00	0.0005	0
Ti	47	3	He	0.387	0.0002	10.00	0.0005	0
Ti	47	3	He	0.373	0.0002	10.00	0.0005	0
V	51	3	He	55.435	1.2098	60961.02	0.0213	0.0318
V	51	3	He	58.082	1.2661	61432.86	0.0213	0.0318
V	51	3	He	54.744	1.1952	60209.66	0.0213	0.0318
Cr	52	3	He	0.651	0.0621	3130.44	0.0294	0.04297
Cr	52	3	He	0.768	0.0655	3180.47	0.0294	0.04297
Cr	52	3	He	0.463	0.0566	2850.35	0.0294	0.04297
Mn	55	3	He	8.157	0.1042	5251.12	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	9.209	0.1173	5691.31	0.0124	0.002801
Mn	55	3	He	8.99	0.1146	5771.34	0.0124	0.002801
Fe	57	3	He	537.692	0.3104	15639.04	0.0006	0.002732
Fe	57	3	He	571.897	0.3299	16009.47	0.0006	0.002732
Fe	57	3	He	510.01	0.2945	14838.02	0.0006	0.002732
Co	59	3	He	0.512	0.0318	1600.14	0.0549	0.003644
Co	59	3	He	0.587	0.0359	1740.16	0.0549	0.003644
Co	59	3	He	0.548	0.0337	1700.15	0.0549	0.003644
Ni	60	3	He	8.542	0.0934	7742.44	0.0093	0.01413
Ni	60	3	He	7.216	0.0811	6671.83	0.0093	0.01413
Ni	60	3	He	7.951	0.0879	7212.06	0.0093	0.01413
Cu	63	3	He	0.888	0.0337	2790.38	0.0274	0.009321
Cu	63	3	He	1.092	0.0393	3230.50	0.0274	0.009321
Cu	63	3	He	1.248	0.0435	3570.57	0.0274	0.009321
Zn	66	3	He	9.04	0.0337	2790.38	0.0031	0.005913
Zn	66	3	He	9.123	0.0339	2790.39	0.0031	0.005913
Zn	66	3	He	9.036	0.0337	2760.38	0.0031	0.005913
As	75	3	He	0.393	0.0017	142.00	0.0021	0.0008698
As	75	3	He	0.32	0.0016	128.00	0.0021	0.0008698
As	75	3	He	0.277	0.0015	120.00	0.0021	0.0008698
Sr	88	3	He	13.869	0.1227	10614.32	0.0088	0.0006843
Sr	88	3	He	14.133	0.125	10974.73	0.0088	0.0006843
Sr	88	3	He	13.753	0.1217	10704.39	0.0088	0.0006843
Mo	98	3	He	3.616	0.0812	7022.01	0.0219	0.001827
Mo	98	3	He	3.827	0.0858	7532.28	0.0219	0.001827
Mo	98	3	He	3.617	0.0812	7142.08	0.0219	0.001827
Ag	107	3	He	0.002	0.0012	100.00	0.047	0.001064
Ag	107	3	He	-0.015	0.0003	30.00	0.047	0.001064
Ag	107	3	He	-0.008	0.0007	60.00	0.047	0.001064
Cd	111	3	He	0.041	0.0003	24.00	0.0053	6.086E-05
Cd	111	3	He	0.036	0.0003	22.00	0.0053	6.086E-05
Cd	111	3	He	0.006	0.0001	8.00	0.0053	6.086E-05
Sn	120	3	He	0.103	0.0164	1420.12	0.0154	0.01483
Sn	120	3	He	-0.001	0.0148	1300.11	0.0154	0.01483
Sn	120	3	He	-0.092	0.0134	1180.10	0.0154	0.01483
Sb	121	3	He	0.103	0.0017	150.01	0.0143	0.0002661
Sb	121	3	He	0.125	0.0021	180.01	0.0143	0.0002661
Sb	121	3	He	0.141	0.0023	200.01	0.0143	0.0002661
Ba	137	3	He	27.901	0.1336	11555.40	0.0048	0.0002665
Ba	137	3	He	28.019	0.1342	11775.56	0.0048	0.0002665
Ba	137	3	He	28.91	0.1384	12175.82	0.0048	0.0002665
Tl	205	3	He	-0.057	0.0014	540.03	0.0246	0.002755
Tl	205	3	He	-0.051	0.0015	600.04	0.0246	0.002755
Tl	205	3	He	-0.052	0.0015	590.04	0.0246	0.002755
Pb	208	3	He	3.982	0.1312	28171.14	0.0324	0.002158
Pb	208	3	He	3.898	0.1285	27328.95	0.0324	0.002158
Pb	208	3	He	4.128	0.1359	29233.74	0.0324	0.002158
U	238	3	He	0.043	0.0025	760.05	0.0492	0.0004023
U	238	3	He	0.04	0.0024	730.05	0.0492	0.0004023
U	238	3	He	0.039	0.0023	720.05	0.0492	0.0004023
Sc	45	1	No Gas			2450292.78		
Sc	45	1	No Gas			2515820.90		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2440488.87		
Ge	72	1	No Gas			1157476.23		
Ge	72	1	No Gas			1178080.37		
Ge	72	1	No Gas			1163977.95		
Sc	45	2	H2			199148.04		
Sc	45	2	H2			197100.41		
Sc	45	2	H2			197225.08		
Ge	72	2	H2			158995.31		
Ge	72	2	H2			158229.81		
Ge	72	2	H2			161059.69		
In	115	2	H2			389620.81		
In	115	2	H2			387755.74		
In	115	2	H2			398566.95		
Sc	45	3	He			50387.96		
Sc	45	3	He			48521.92		
Sc	45	3	He			50377.87		
Ge	72	3	He			82879.37		
Ge	72	3	He			82256.62		
Ge	72	3	He			82016.41		
In	115	3	He			86498.58		
In	115	3	He			87776.30		
In	115	3	He			87968.48		
Tb	159	3	He			399549.45		
Tb	159	3	He			399575.89		
Tb	159	3	He			399465.54		
Bi	209	3	He			304508.35		
Bi	209	3	He			305058.61		
Bi	209	3	He			308183.34		

Quantitation Report

Data File Name	180SMPL.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H09B00.b
Acq Time	8/9/2023 7:56:15 PM
Sample Name	410-136338-D-1-C
Sample Type	Sample
Comment	F6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

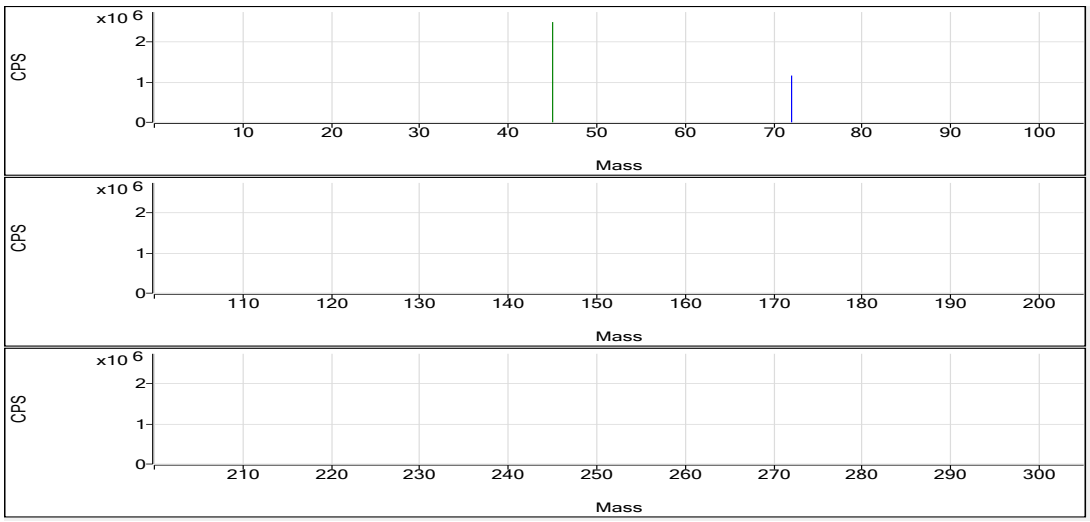
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.028	ppb	19.9	135.33	0.0001	Pulse	0.5000	3
Se	78	72	H2	-0.017	ppb	N/A	4.44	0.0000	Pulse	1.5000	3
Na	23	45	He	149068.158	ppb	1.5	26576029.60	531.7574	Analog	0.1000	3
Mg	24	45	He	776.216	ppb	1.9	70317.80	1.4070	Pulse	0.1000	3
Al	27	45	He	36.606	ppb	2.9	1170.09	0.0234	Pulse	0.1000	3
K	39	45	He	436.980	ppb	3.4	46126.82	0.9229	Pulse	0.1000	3
Ca	44	45	He	28641.011	ppb	0.6	96874.62	1.9382	Pulse	0.1000	3
Ti	47	45	He	0.376	ppb	100.6	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	-0.008	ppb	N/A	1580.10	0.0316	Pulse	0.5000	3
Cr	52	45	He	0.449	ppb	39.2	2807.04	0.0562	Pulse	0.1000	3
Mn	55	45	He	200.095	ppb	2.0	124462.13	2.4904	Pulse	0.1000	3
Fe	57	45	He	237.611	ppb	0.6	6931.89	0.1387	Pulse	0.1000	3
Co	59	45	He	1.421	ppb	9.5	4080.72	0.0816	Pulse	0.1000	3
Ni	60	72	He	2.370	ppb	17.2	2960.42	0.0361	Pulse	0.1000	3
Cu	63	72	He	2.168	ppb	3.2	5644.65	0.0688	Pulse	0.1000	3
Zn	66	72	He	11.849	ppb	2.4	3470.55	0.0423	Pulse	0.1000	3
As	75	72	He	-0.001	ppb	N/A	71.33	0.0009	Pulse	0.5000	3
Sr	88	115	He	72.453	ppb	1.5	55134.66	0.6382	Pulse	0.1000	3
Mo	98	115	He	0.414	ppb	20.2	943.40	0.0109	Pulse	0.1000	3
Ag	107	115	He	-0.013	ppb	N/A	40.00	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.074	ppb	13.0	39.33	0.0005	Pulse	0.5000	3
Sn	120	115	He	-0.003	ppb	N/A	1276.77	0.0148	Pulse	0.1000	3
Sb	121	115	He	0.119	ppb	12.4	170.01	0.0020	Pulse	0.1000	3
Ba	137	115	He	55.591	ppb	1.6	22973.25	0.2659	Pulse	0.1000	3
Tl	205	159	He	-0.093	ppb	N/A	186.68	0.0005	Pulse	0.1000	3
Pb	208	159	He	0.293	ppb	3.6	4623.83	0.0117	Pulse	0.1000	3
U	238	209	He	0.123	ppb	5.7	1986.90	0.0064	Pulse	0.1000	3

ISTD Table:

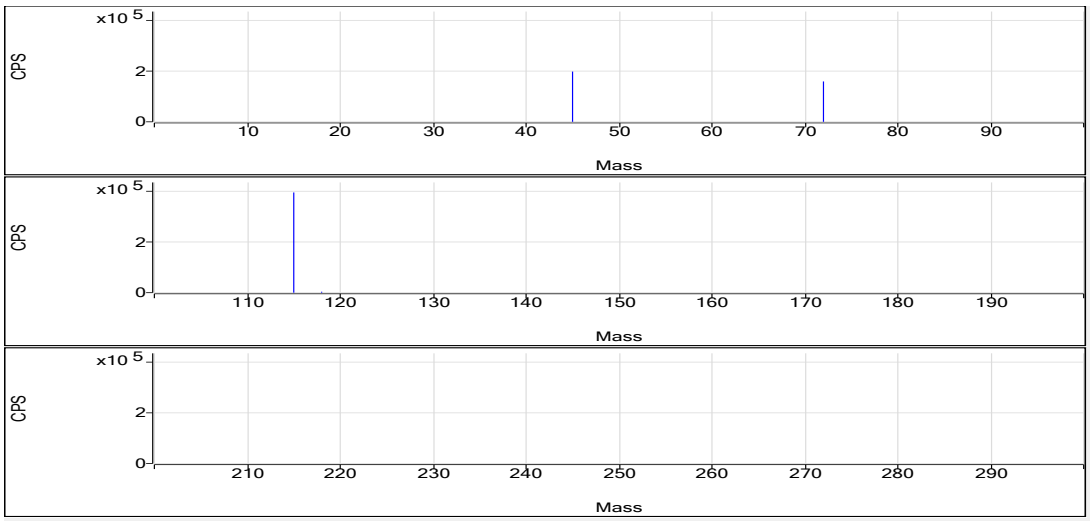
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2502805.17	1.5	96.0	Analog	0.1000	3
No Gas	Ge	72	1166960.08	1.4	90.5	Pulse	0.1000	3
H2	Sc	45	197369.50	1.1	95.8	Pulse	0.1000	3
H2	Ge	72	158563.67	0.2	97.4	Pulse	0.1000	3
H2	In	115	393659.81	0.6	97.5	Pulse	0.1000	3
He	Sc	45	49983.15	1.1	97.6	Pulse	0.1000	3
He	Ge	72	82055.84	2.1	100.2	Pulse	0.1000	3
He	In	115	86394.48	0.6	98.6	Pulse	0.1000	3
He	Tb	159	396578.76	0.8	98.7	Pulse	0.1000	3
He	Bi	209	308307.66	1.1	100.7	Pulse	0.1000	3

No Gas

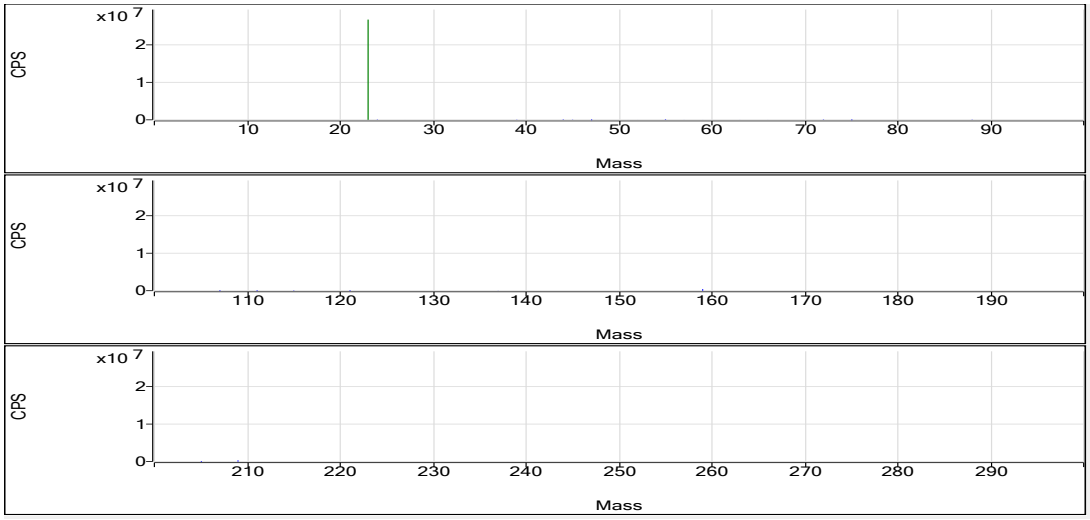


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.033	0.0001	144.00	0.0007	3.404E-05
Be	9	1	No Gas	0.027	0.0001	134.00	0.0007	3.404E-05
Be	9	1	No Gas	0.022	0.0001	128.00	0.0007	3.404E-05
Se	78	2	H2	-0.014	0	4.67	0.0004	3.546E-05
Se	78	2	H2	-0.033	0	3.33	0.0004	3.546E-05
Se	78	2	H2	-0.004	0	5.33	0.0004	3.546E-05
Na	23	3	He	146568.676	522.8483	26465904.61	0.0036	0.4171
Na	23	3	He	150558.011	537.0679	26625119.60	0.0036	0.4171
Na	23	3	He	150077.788	535.3562	26637064.60	0.0036	0.4171
Mg	24	3	He	761.724	1.3808	69895.74	0.0018	0.004553
Mg	24	3	He	790.6	1.433	71041.00	0.0018	0.004553
Mg	24	3	He	776.324	1.4072	70016.65	0.0018	0.004553
Al	27	3	He	36.099	0.0231	1170.10	0.0006	0.002085
Al	27	3	He	35.895	0.023	1140.08	0.0006	0.002085
Al	27	3	He	37.822	0.0241	1200.08	0.0006	0.002085
K	39	3	He	429.333	0.914	46263.82	0.0012	0.4112
K	39	3	He	453.889	0.9427	46735.53	0.0012	0.4112
K	39	3	He	427.719	0.9121	45381.10	0.0012	0.4112
Ca	44	3	He	28437.833	1.9245	97415.82	0.0001	0.003322
Ca	44	3	He	28688.431	1.9414	96246.41	0.0001	0.003322
Ca	44	3	He	28796.768	1.9488	96961.62	0.0001	0.003322
Ti	47	3	He	0.371	0.0002	10.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.756	0.0004	20.00	0.0005	0
V	51	3	He	-0.063	0.0305	1542.09	0.0213	0.0318
V	51	3	He	0.013	0.0321	1590.10	0.0213	0.0318
V	51	3	He	0.025	0.0323	1608.10	0.0213	0.0318
Cr	52	3	He	0.326	0.0526	2660.33	0.0294	0.04297
Cr	52	3	He	0.37	0.0539	2670.35	0.0294	0.04297
Cr	52	3	He	0.651	0.0621	3090.43	0.0294	0.04297
Mn	55	3	He	196.431	2.4449	123755.55	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	204.288	2.5425	126045.98	0.0124	0.002801
Mn	55	3	He	199.566	2.4838	123584.86	0.0124	0.002801
Fe	57	3	He	238.372	0.1391	7041.91	0.0006	0.002732
Fe	57	3	He	236.083	0.1378	6831.78	0.0006	0.002732
Fe	57	3	He	238.376	0.1391	6921.98	0.0006	0.002732
Co	59	3	He	1.474	0.0846	4280.78	0.0549	0.003644
Co	59	3	He	1.522	0.0872	4320.81	0.0549	0.003644
Co	59	3	He	1.267	0.0732	3640.57	0.0549	0.003644
Ni	60	3	He	2.095	0.0336	2780.37	0.0093	0.01413
Ni	60	3	He	2.178	0.0343	2860.38	0.0093	0.01413
Ni	60	3	He	2.838	0.0405	3240.50	0.0093	0.01413
Cu	63	3	He	2.131	0.0678	5611.29	0.0274	0.009321
Cu	63	3	He	2.249	0.071	5911.47	0.0274	0.009321
Cu	63	3	He	2.124	0.0676	5411.19	0.0274	0.009321
Zn	66	3	He	12.155	0.0432	3580.60	0.0031	0.005913
Zn	66	3	He	11.609	0.0416	3460.55	0.0031	0.005913
Zn	66	3	He	11.783	0.0421	3370.50	0.0031	0.005913
As	75	3	He	0.045	0.001	80.00	0.0021	0.0008698
As	75	3	He	0.009	0.0009	74.00	0.0021	0.0008698
As	75	3	He	-0.056	0.0007	60.00	0.0021	0.0008698
Sr	88	3	He	72.723	0.6406	55609.65	0.0088	0.0006843
Sr	88	3	He	73.392	0.6465	55509.89	0.0088	0.0006843
Sr	88	3	He	71.244	0.6276	54284.43	0.0088	0.0006843
Mo	98	3	He	0.51	0.013	1130.09	0.0219	0.001827
Mo	98	3	He	0.378	0.0101	870.06	0.0219	0.001827
Mo	98	3	He	0.354	0.0096	830.05	0.0219	0.001827
Ag	107	3	He	-0.008	0.0007	60.00	0.047	0.001064
Ag	107	3	He	-0.015	0.0003	30.00	0.047	0.001064
Ag	107	3	He	-0.015	0.0003	30.00	0.047	0.001064
Cd	111	3	He	0.079	0.0005	42.00	0.0053	6.086E-05
Cd	111	3	He	0.063	0.0004	34.00	0.0053	6.086E-05
Cd	111	3	He	0.08	0.0005	42.00	0.0053	6.086E-05
Sn	120	3	He	-0.073	0.0137	1190.11	0.0154	0.01483
Sn	120	3	He	0.133	0.0169	1450.11	0.0154	0.01483
Sn	120	3	He	-0.07	0.0138	1190.09	0.0154	0.01483
Sb	121	3	He	0.111	0.0018	160.01	0.0143	0.0002661
Sb	121	3	He	0.137	0.0022	190.01	0.0143	0.0002661
Sb	121	3	He	0.111	0.0018	160.01	0.0143	0.0002661
Ba	137	3	He	55.022	0.2632	22849.80	0.0048	0.0002665
Ba	137	3	He	56.604	0.2708	23250.37	0.0048	0.0002665
Ba	137	3	He	55.147	0.2638	22819.57	0.0048	0.0002665
Tl	205	3	He	-0.092	0.0005	200.01	0.0246	0.002755
Tl	205	3	He	-0.095	0.0004	170.01	0.0246	0.002755
Tl	205	3	He	-0.093	0.0005	190.01	0.0246	0.002755
Pb	208	3	He	0.287	0.0115	2390.30	0.0324	0.002158
Pb	208	3	He	0.287	0.0115	2560.35	0.0324	0.002158
Pb	208	3	He	0.306	0.0121	2580.35	0.0324	0.002158
U	238	3	He	0.12	0.0063	1960.21	0.0492	0.0004023
U	238	3	He	0.118	0.0062	1920.23	0.0492	0.0004023
U	238	3	He	0.131	0.0068	2080.26	0.0492	0.0004023
Sc	45	1	No Gas			2470497.15		
Sc	45	1	No Gas			2495409.03		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2542509.34		
Ge	72	1	No Gas			1164289.12		
Ge	72	1	No Gas			1151536.23		
Ge	72	1	No Gas			1185054.90		
Sc	45	2	H2			197960.33		
Sc	45	2	H2			194969.86		
Sc	45	2	H2			199178.32		
Ge	72	2	H2			158995.70		
Ge	72	2	H2			158336.93		
Ge	72	2	H2			158358.39		
In	115	2	H2			394597.81		
In	115	2	H2			390789.41		
In	115	2	H2			395592.22		
Sc	45	3	He			50618.71		
Sc	45	3	He			49574.96		
Sc	45	3	He			49755.78		
Ge	72	3	He			82819.55		
Ge	72	3	He			83273.65		
Ge	72	3	He			80074.33		
In	115	3	He			86820.26		
In	115	3	He			85875.04		
In	115	3	He			86508.50		
Tb	159	3	He			397469.56		
Tb	159	3	He			399152.77		
Tb	159	3	He			393113.94		
Bi	209	3	He			310379.06		
Bi	209	3	He			310185.27		
Bi	209	3	He			304358.65		

Quantitation Report

Data File Name	181SMPL.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H09B00.b
Acq Time	8/9/2023 7:58:16 PM
Sample Name	410-136415-D-1-C
Sample Type	Sample
Comment	F6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

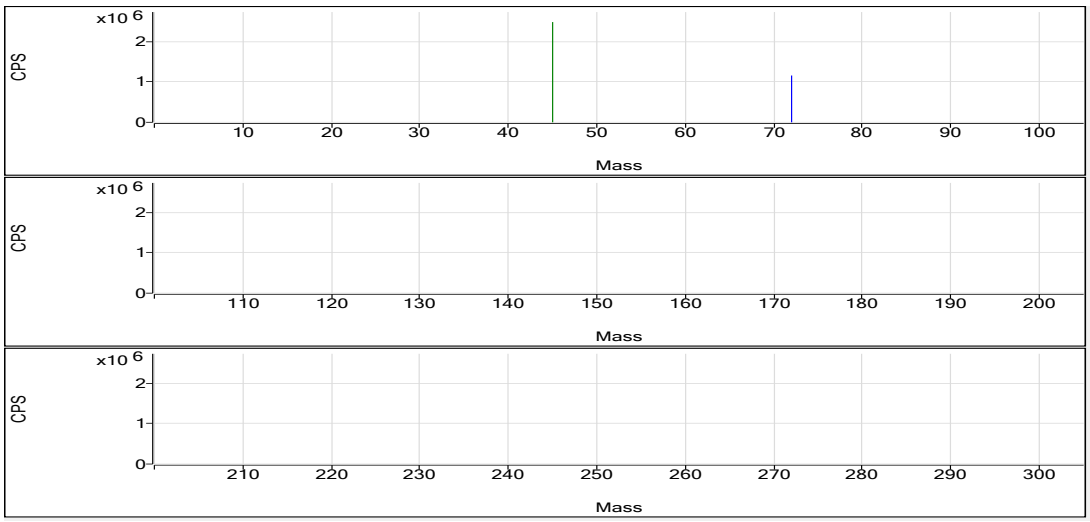
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.020	ppb	N/A	47.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.020	ppb	N/A	4.22	0.0000	Pulse	1.5000	3
Na	23	45	He	138218.278	ppb	0.5	23634785.48	493.0840	Analog	0.1000	3
Mg	24	45	He	1858.416	ppb	1.5	161163.28	3.3623	Pulse	0.1000	3
Al	27	45	He	58.497	ppb	3.9	1733.50	0.0362	Pulse	0.1000	3
K	39	45	He	553.719	ppb	1.6	50792.25	1.0596	Pulse	0.1000	3
Ca	44	45	He	6938.836	ppb	1.6	22628.21	0.4721	Pulse	0.1000	3
Ti	47	45	He	0.523	ppb	86.6	13.33	0.0003	Pulse	0.1000	3
V	51	45	He	13.335	ppb	0.4	15107.23	0.3152	Pulse	0.5000	3
Cr	52	45	He	2.496	ppb	8.9	5577.93	0.1164	Pulse	0.1000	3
Mn	55	45	He	325.691	ppb	1.3	194220.94	4.0518	Pulse	0.1000	3
Fe	57	45	He	15430.016	ppb	0.9	423303.38	8.8310	Pulse	0.1000	3
Co	59	45	He	5.754	ppb	1.8	15311.97	0.3194	Pulse	0.1000	3
Ni	60	72	He	95.103	ppb	0.9	72757.55	0.8970	Pulse	0.1000	3
Cu	63	72	He	0.754	ppb	7.1	2433.62	0.0300	Pulse	0.1000	3
Zn	66	72	He	299.497	ppb	1.4	75069.80	0.9255	Pulse	0.1000	3
As	75	72	He	3.118	ppb	3.7	613.35	0.0076	Pulse	0.5000	3
Sr	88	115	He	27.360	ppb	3.1	20849.35	0.2414	Pulse	0.1000	3
Mo	98	115	He	14.656	ppb	0.7	27931.95	0.3235	Pulse	0.1000	3
Ag	107	115	He	-0.018	ppb	N/A	20.00	0.0002	Pulse	0.1000	3
Cd	111	115	He	0.000	ppb	3257.4	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.068	ppb	232.7	1370.38	0.0159	Pulse	0.1000	3
Sb	121	115	He	0.117	ppb	4.6	166.68	0.0019	Pulse	0.1000	3
Ba	137	115	He	9.221	ppb	5.1	3827.34	0.0443	Pulse	0.1000	3
Tl	205	159	He	-0.098	ppb	N/A	136.67	0.0003	Pulse	0.1000	3
Pb	208	159	He	0.599	ppb	2.6	8514.71	0.0216	Pulse	0.1000	3
U	238	209	He	0.046	ppb	8.8	823.39	0.0027	Pulse	0.1000	3

ISTD Table:

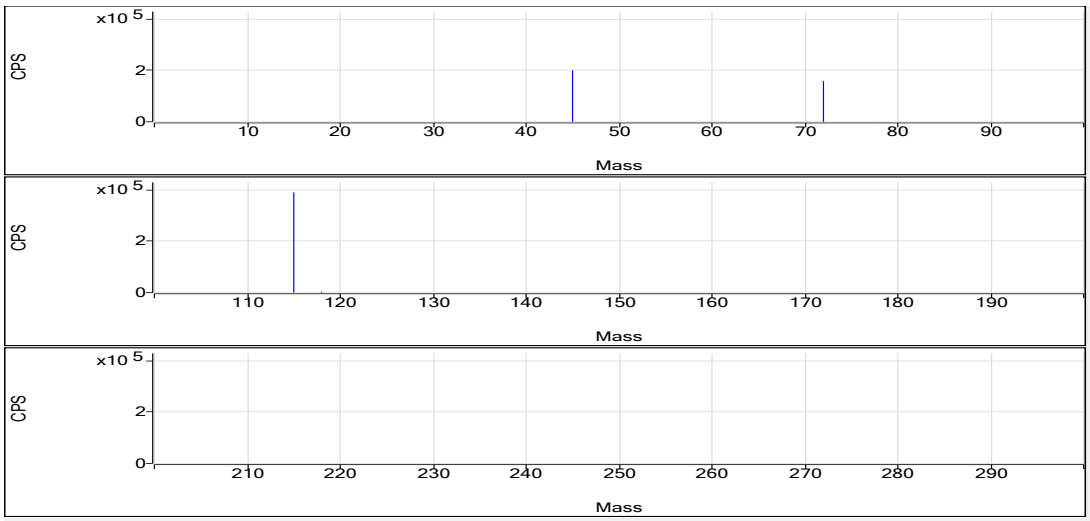
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2473834.34	0.2	94.9	Analog	0.1000	3
No Gas	Ge	72	1154752.61	0.6	89.6	Pulse	0.1000	3
H2	Sc	45	200315.38	1.1	97.2	Pulse	0.1000	3
H2	Ge	72	159067.43	0.7	97.7	Pulse	0.1000	3
H2	In	115	390198.00	0.4	96.7	Pulse	0.1000	3
He	Sc	45	47933.03	0.3	93.6	Pulse	0.1000	3
He	Ge	72	81120.10	1.0	99.1	Pulse	0.1000	3
He	In	115	86351.50	0.6	98.5	Pulse	0.1000	3
He	Tb	159	394601.79	0.3	98.3	Pulse	0.1000	3
He	Bi	209	307487.50	0.8	100.4	Pulse	0.1000	3

No Gas

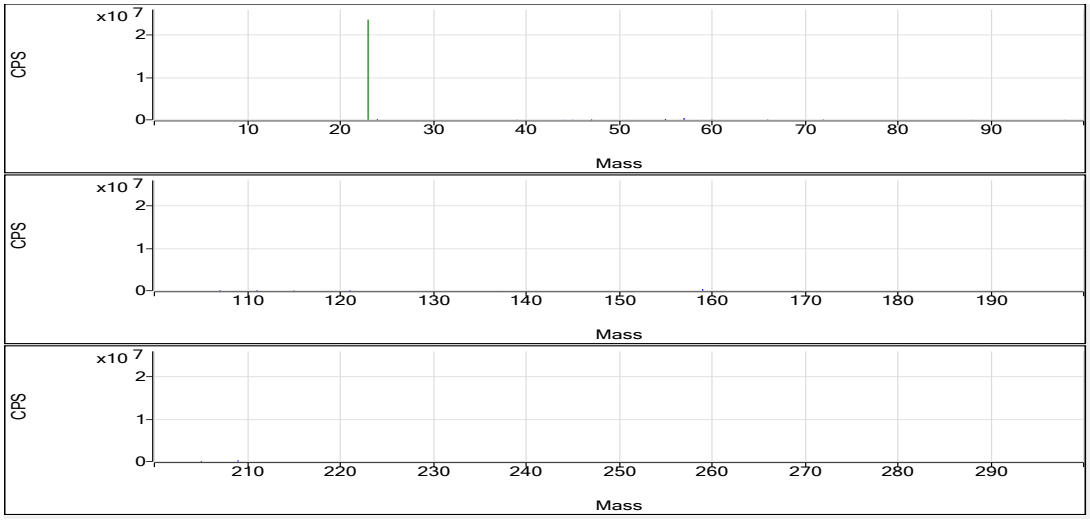


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.026	0	38.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.017	0	54.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.019	0	50.00	0.0007	3.404E-05
Se	78	2	H2	-0.033	0	3.33	0.0004	3.546E-05
Se	78	2	H2	-0.004	0	5.33	0.0004	3.546E-05
Se	78	2	H2	-0.024	0	4.00	0.0004	3.546E-05
Na	23	3	He	139093.873	496.205	23713169.65	0.0036	0.4171
Na	23	3	He	137825.715	491.6847	23610662.15	0.0036	0.4171
Na	23	3	He	137735.245	491.3623	23580524.65	0.0036	0.4171
Mg	24	3	He	1877.695	3.3972	162346.74	0.0018	0.004553
Mg	24	3	He	1827.623	3.3067	158786.71	0.0018	0.004553
Mg	24	3	He	1869.93	3.3831	162356.39	0.0018	0.004553
Al	27	3	He	58.565	0.0362	1730.16	0.0006	0.002085
Al	27	3	He	60.769	0.0375	1800.17	0.0006	0.002085
Al	27	3	He	56.158	0.0348	1670.16	0.0006	0.002085
K	39	3	He	544.387	1.0487	50116.58	0.0012	0.4112
K	39	3	He	562.209	1.0696	51360.94	0.0012	0.4112
K	39	3	He	554.562	1.0606	50899.24	0.0012	0.4112
Ca	44	3	He	7049.738	0.4796	22918.79	0.0001	0.003322
Ca	44	3	He	6941.468	0.4723	22678.27	0.0001	0.003322
Ca	44	3	He	6825.303	0.4644	22287.57	0.0001	0.003322
Ti	47	3	He	0.787	0.0004	20.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.784	0.0004	20.00	0.0005	0
V	51	3	He	13.388	0.3163	15115.92	0.0213	0.0318
V	51	3	He	13.344	0.3154	15143.93	0.0213	0.0318
V	51	3	He	13.273	0.3139	15061.85	0.0213	0.0318
Cr	52	3	He	2.724	0.1231	5881.46	0.0294	0.04297
Cr	52	3	He	2.278	0.11	5281.10	0.0294	0.04297
Cr	52	3	He	2.486	0.1161	5571.22	0.0294	0.04297
Mn	55	3	He	320.798	3.991	190726.25	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	327.842	4.0786	195852.93	0.0124	0.002801
Mn	55	3	He	328.433	4.0859	196083.63	0.0124	0.002801
Fe	57	3	He	15306.022	8.7601	418636.13	0.0006	0.002732
Fe	57	3	He	15570.363	8.9113	427921.17	0.0006	0.002732
Fe	57	3	He	15413.664	8.8217	423352.85	0.0006	0.002732
Co	59	3	He	5.671	0.3149	15048.43	0.0549	0.003644
Co	59	3	He	5.719	0.3175	15248.55	0.0549	0.003644
Co	59	3	He	5.871	0.3259	15638.92	0.0549	0.003644
Ni	60	3	He	94.263	0.8892	72914.88	0.0093	0.01413
Ni	60	3	He	95.162	0.8975	72543.64	0.0093	0.01413
Ni	60	3	He	95.885	0.9042	72814.12	0.0093	0.01413
Cu	63	3	He	0.79	0.031	2540.30	0.0274	0.009321
Cu	63	3	He	0.779	0.0307	2480.30	0.0274	0.009321
Cu	63	3	He	0.693	0.0283	2280.26	0.0274	0.009321
Zn	66	3	He	295.328	0.9127	74845.12	0.0031	0.005913
Zn	66	3	He	299.695	0.9261	74855.53	0.0031	0.005913
Zn	66	3	He	303.466	0.9377	75508.75	0.0031	0.005913
As	75	3	He	3.13	0.0076	622.02	0.0021	0.0008698
As	75	3	He	2.997	0.0073	590.02	0.0021	0.0008698
As	75	3	He	3.229	0.0078	628.02	0.0021	0.0008698
Sr	88	3	He	28.301	0.2497	21697.42	0.0088	0.0006843
Sr	88	3	He	27.097	0.2391	20565.53	0.0088	0.0006843
Sr	88	3	He	26.683	0.2355	20285.11	0.0088	0.0006843
Mo	98	3	He	14.757	0.3257	28299.49	0.0219	0.001827
Mo	98	3	He	14.543	0.321	27607.86	0.0219	0.001827
Mo	98	3	He	14.668	0.3237	27888.51	0.0219	0.001827
Ag	107	3	He	-0.02	0.0001	10.00	0.047	0.001064
Ag	107	3	He	-0.018	0.0002	20.00	0.047	0.001064
Ag	107	3	He	-0.015	0.0003	30.00	0.047	0.001064
Cd	111	3	He	0.006	0.0001	8.00	0.0053	6.086E-05
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Sn	120	3	He	-0.104	0.0132	1150.10	0.0154	0.01483
Sn	120	3	He	0.208	0.018	1550.90	0.0154	0.01483
Sn	120	3	He	0.1	0.0164	1410.13	0.0154	0.01483
Sb	121	3	He	0.111	0.0018	160.01	0.0143	0.0002661
Sb	121	3	He	0.12	0.002	170.01	0.0143	0.0002661
Sb	121	3	He	0.12	0.002	170.01	0.0143	0.0002661
Ba	137	3	He	8.687	0.0418	3630.63	0.0048	0.0002665
Ba	137	3	He	9.58	0.046	3960.72	0.0048	0.0002665
Ba	137	3	He	9.395	0.0452	3890.66	0.0048	0.0002665
Tl	205	3	He	-0.096	0.0004	160.01	0.0246	0.002755
Tl	205	3	He	-0.104	0.0002	80.00	0.0246	0.002755
Tl	205	3	He	-0.095	0.0004	170.01	0.0246	0.002755
Pb	208	3	He	0.617	0.0222	4640.99	0.0324	0.002158
Pb	208	3	He	0.587	0.0212	4300.86	0.0324	0.002158
Pb	208	3	He	0.594	0.0214	4400.88	0.0324	0.002158
U	238	3	He	0.05	0.0029	870.06	0.0492	0.0004023
U	238	3	He	0.042	0.0025	760.05	0.0492	0.0004023
U	238	3	He	0.047	0.0027	840.06	0.0492	0.0004023
Sc	45	1	No Gas			2470056.37		
Sc	45	1	No Gas			2480716.06		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2470730.59		
Ge	72	1	No Gas			1147580.92		
Ge	72	1	No Gas			1159909.51		
Ge	72	1	No Gas			1156767.40		
Sc	45	2	H2			198212.83		
Sc	45	2	H2			200292.71		
Sc	45	2	H2			202440.60		
Ge	72	2	H2			160089.22		
Ge	72	2	H2			157803.30		
Ge	72	2	H2			159309.77		
In	115	2	H2			392154.99		
In	115	2	H2			389348.90		
In	115	2	H2			389090.11		
Sc	45	3	He			47789.06		
Sc	45	3	He			48019.92		
Sc	45	3	He			47990.10		
Ge	72	3	He			82004.61		
Ge	72	3	He			80828.54		
Ge	72	3	He			80527.15		
In	115	3	He			86900.44		
In	115	3	He			86015.47		
In	115	3	He			86155.99		
Tb	159	3	He			395090.81		
Tb	159	3	He			395549.33		
Tb	159	3	He			393165.23		
Bi	209	3	He			304825.35		
Bi	209	3	He			309030.82		
Bi	209	3	He			308606.34		

Quantitation Report

Data File Name	182SMPL.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H09B00.b
Acq Time	8/9/2023 8:00:20 PM
Sample Name	Z410-136532-C-1-C
Sample Type	Sample
Comment	F6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

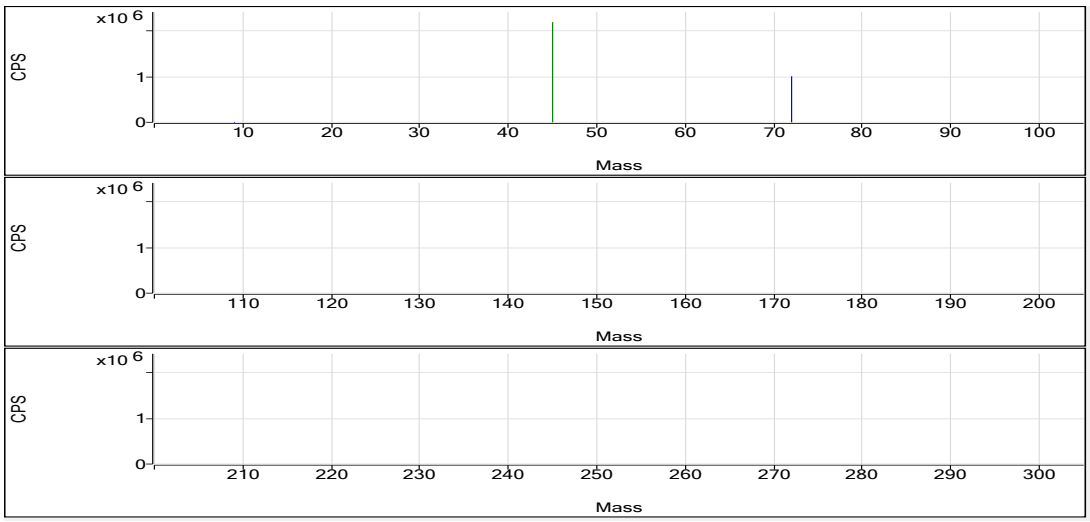
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas		ppb	0.00261292891177952			Pulse	0.5000	3
Se	78	72	H2		ppb	0.0158277559925067			Pulse	1.5000	3
Na	23	45	He		ppb	6.96134393330141			Pulse	0.1000	3
Mg	24	45	He		ppb	0.245429634290488			Pulse	0.1000	3
Al	27	45	He		ppb	0.160803505964848			Pulse	0.1000	3
K	39	45	He		ppb	4.60736852215245			Pulse	0.1000	3
Ca	44	45	He		ppb	20.3104294992402			Pulse	0.1000	3
Ti	47	45	He		ppb	0.169557011024053			Pulse	0.1000	3
V	51	45	He		ppb	0.0500007992508185			Pulse	0.5000	3
Cr	52	45	He		ppb	0.0901593937319697			Pulse	0.1000	3
Mn	55	45	He		ppb	0.0628281489794061			Pulse	0.1000	3
Fe	57	45	He		ppb	1.39999642891259			Pulse	0.1000	3
Co	59	45	He		ppb	0.0143414929782122			Pulse	0.1000	3
Ni	60	72	He		ppb	0.0497247215908503			Pulse	0.1000	3
Cu	63	72	He		ppb	0.0112741774081129			Pulse	0.1000	3
Zn	66	72	He		ppb	0.0818189716705644			Pulse	0.1000	3
As	75	72	He		ppb	0.0511522635355222			Pulse	0.5000	3
Sr	88	115	He		ppb	0.0212099429794535			Pulse	0.1000	3
Mo	98	115	He		ppb	0.00948153266918928			Pulse	0.1000	3
Ag	107	115	He		ppb	0.00480126320875854			Pulse	0.1000	3
Cd	111	115	He		ppb	0.00197094548143043			Pulse	0.5000	3
Sn	120	115	He		ppb	0.0448882040331314			Pulse	0.1000	3
Sb	121	115	He		ppb	0.0183472182613451			Pulse	0.1000	3
Ba	137	115	He		ppb	0.0434800786335899			Pulse	0.1000	3
Tl	205	159	He		ppb	0.00323395096791145			Pulse	0.1000	3
Pb	208	159	He		ppb	0.000808338788581292			Pulse	0.1000	3
U	238	209	He		ppb	0.00269732837926739			Pulse	0.1000	3

ISTD Table:

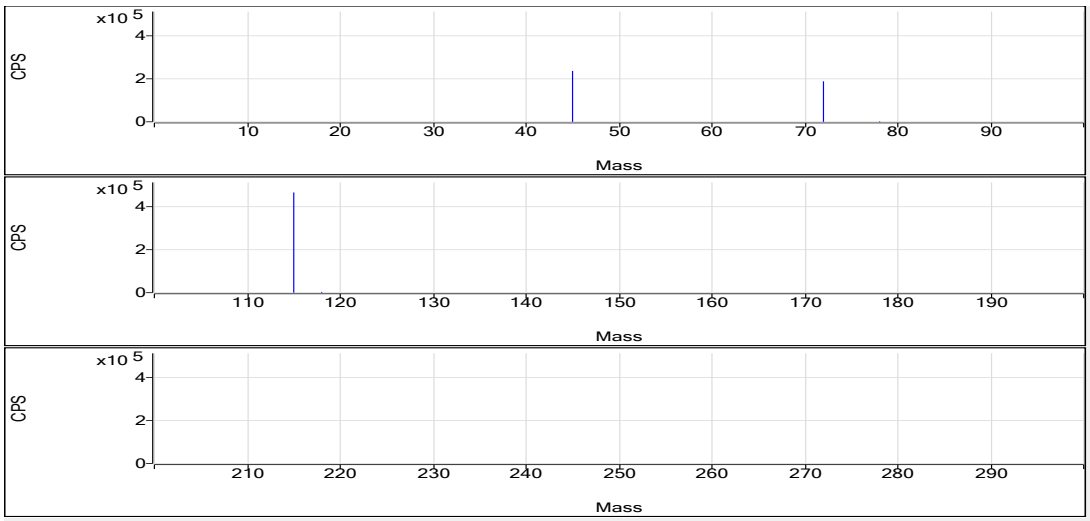
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45				Analog	0.1000	3
No Gas	Ge	72				Pulse	0.1000	3
H2	Sc	45				Pulse	0.1000	3
H2	Ge	72				Pulse	0.1000	3
H2	In	115				Pulse	0.1000	3
He	Sc	45				Pulse	0.1000	3
He	Ge	72				Pulse	0.1000	3
He	In	115				Pulse	0.1000	3
He	Tb	159				Pulse	0.1000	3
He	Bi	209				Pulse	0.1000	3

No Gas

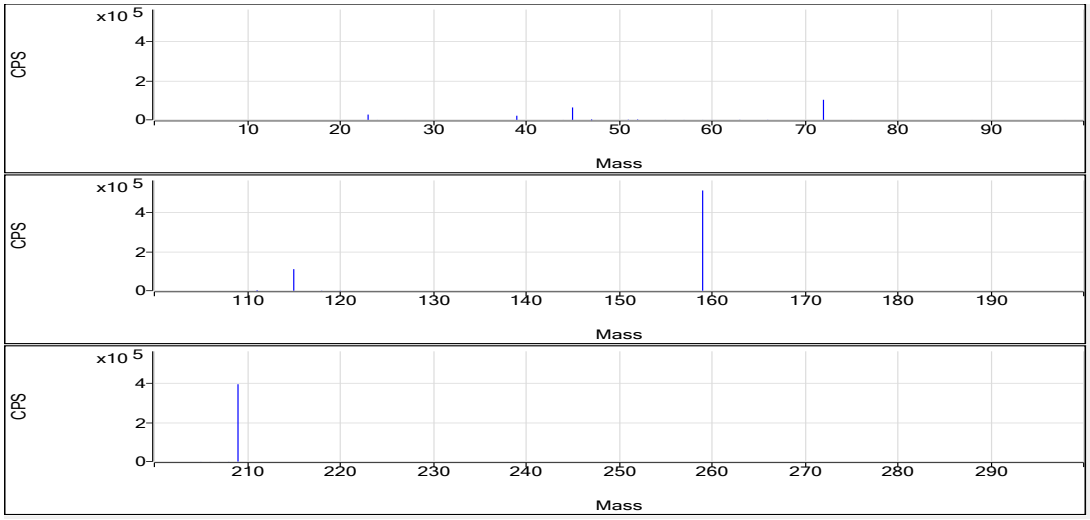


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.037		14.00		
Be	9	1	No Gas	-0.041		10.00		
Be	9	1	No Gas	-0.042		8.00		
Se	78	2	H2	-0.064		1.33		
Se	78	2	H2	-0.033		4.00		
Se	78	2	H2	-0.05		2.67		
Na	23	3	He	7.789		28477.94		
Na	23	3	He	4.277		27185.96		
Na	23	3	He	-5.635		25402.46		
Mg	24	3	He	-1.31		140.01		
Mg	24	3	He	-0.848		190.01		
Mg	24	3	He	-1.222		150.01		
Al	27	3	He	-2.774		30.00		
Al	27	3	He	-2.486		40.00		
Al	27	3	He	-2.505		40.00		
K	39	3	He	-65.201		21436.34		
K	39	3	He	-66.161		20985.70		
K	39	3	He	-73.618		20795.27		
Ca	44	3	He	-37.61		50.00		
Ca	44	3	He	-9.154		170.01		
Ca	44	3	He	1.722		220.01		
Ti	47	3	He	0.294		10.00		
Ti	47	3	He	0		0.00		
Ti	47	3	He	0		0.00		
V	51	3	He	-0.675		1118.05		
V	51	3	He	-0.66		1118.05		
V	51	3	He	-0.581		1244.06		
Cr	52	3	He	-0.478		1850.19		
Cr	52	3	He	-0.298		2150.24		
Cr	52	3	He	-0.398		2000.21		
Mn	55	3	He	0.089		250.01		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.031		200.01		
Mn	55	3	He	-0.037		150.01		
Fe	57	3	He	1.232		220.01		
Fe	57	3	He	-1.162		130.00		
Fe	57	3	He	-1.224		130.01		
Co	59	3	He	-0.021		160.01		
Co	59	3	He	-0.029		130.01		
Co	59	3	He	-0.001		230.01		
Ni	60	3	He	-1.238		270.01		
Ni	60	3	He	-1.154		350.02		
Ni	60	3	He	-1.243		270.01		
Cu	63	3	He	-0.133		580.04		
Cu	63	3	He	-0.116		630.04		
Cu	63	3	He	-0.137		580.03		
Zn	66	3	He	-0.653		400.02		
Zn	66	3	He	-0.561		430.02		
Zn	66	3	He	-0.49		460.02		
As	75	3	He	-0.041		80.00		
As	75	3	He	-0.124		62.00		
As	75	3	He	-0.03		84.00		
Sr	88	3	He	-0.047		30.00		
Sr	88	3	He	-0.006		70.00		
Sr	88	3	He	-0.016		60.00		
Mo	98	3	He	-0.058		60.00		
Mo	98	3	He	-0.059		60.00		
Mo	98	3	He	-0.042		100.00		
Ag	107	3	He	-0.011		60.00		
Ag	107	3	He	-0.005		90.00		
Ag	107	3	He	-0.015		40.00		
Cd	111	3	He	-0.005		4.00		
Cd	111	3	He	-0.008		2.00		
Cd	111	3	He	-0.008		2.00		
Sn	120	3	He	-0.281		1160.10		
Sn	120	3	He	-0.192		1320.12		
Sn	120	3	He	-0.242		1230.09		
Sb	121	3	He	0.019		60.00		
Sb	121	3	He	-0.012		10.00		
Sb	121	3	He	-0.012		10.00		
Ba	137	3	He	-0.056		0.00		
Ba	137	3	He	0.02		40.00		
Ba	137	3	He	-0.056		0.00		
Tl	205	3	He	-0.092		260.01		
Tl	205	3	He	-0.09		280.01		
Tl	205	3	He	-0.096		200.01		
Pb	208	3	He	-0.029		320.02		
Pb	208	3	He	-0.03		330.02		
Pb	208	3	He	-0.029		350.02		
U	238	3	He	-0.006		50.00		
U	238	3	He	-0.007		30.00		
U	238	3	He	-0.002		130.01		
Sc	45	1	No Gas			1980067.78		
Sc	45	1	No Gas			2215686.06		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2388629.34		
Ge	72	1	No Gas			905636.78		
Ge	72	1	No Gas			1020461.16		
Ge	72	1	No Gas			1093398.89		
Sc	45	2	H2			230115.17		
Sc	45	2	H2			238282.54		
Sc	45	2	H2			242682.13		
Ge	72	2	H2			182320.08		
Ge	72	2	H2			189056.87		
Ge	72	2	H2			194639.90		
In	115	2	H2			455448.94		
In	115	2	H2			468089.37		
In	115	2	H2			477242.73		
Sc	45	3	He			64021.42		
Sc	45	3	He			62886.67		
Sc	45	3	He			63990.54		
Ge	72	3	He			102385.29		
Ge	72	3	He			102627.82		
Ge	72	3	He			104359.46		
In	115	3	He			110518.75		
In	115	3	He			111152.01		
In	115	3	He			110900.38		
Tb	159	3	He			515125.07		
Tb	159	3	He			517448.90		
Tb	159	3	He			514125.85		
Bi	209	3	He			396956.36		
Bi	209	3	He			398274.13		
Bi	209	3	He			398187.06		

Quantitation Report

Data File Name	183SMPL.d
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Acq Time	8/9/2023 8:03:29 PM
Sample Name	410-136532-C-1-C
Sample Type	Sample
Comment	F6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

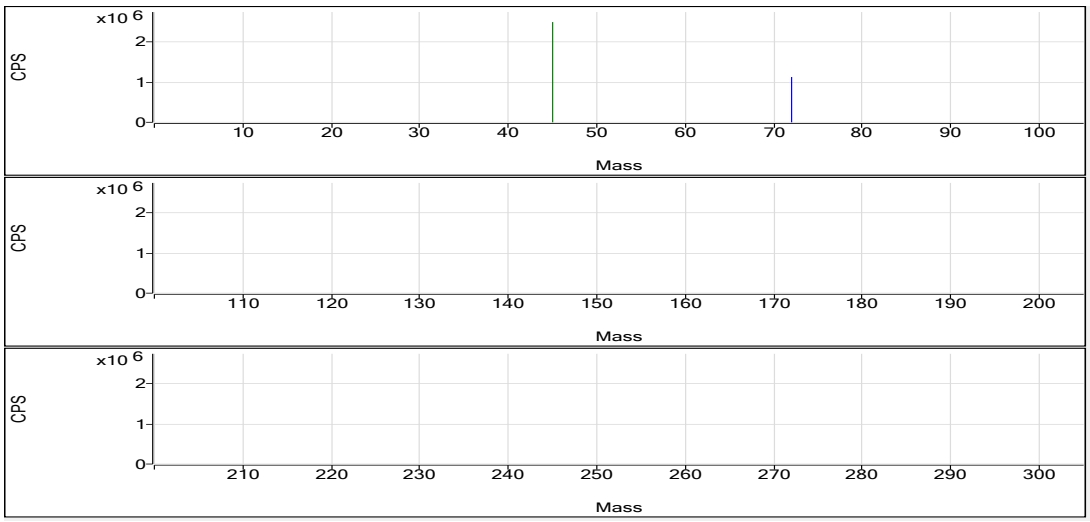
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.026	ppb	N/A	38.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.002	ppb	2258.0	5.56	0.0000	Pulse	1.5000	3
Na	23	45	He	156125.756	ppb	1.5	27317432.92	556.9136	Analog	0.1000	3
Mg	24	45	He	1677.236	ppb	0.6	148881.18	3.0350	Pulse	0.1000	3
Al	27	45	He	1.555	ppb	127.7	146.67	0.0030	Pulse	0.1000	3
K	39	45	He	405.806	ppb	4.0	43478.76	0.8864	Pulse	0.1000	3
Ca	44	45	He	80507.651	ppb	1.5	266948.61	5.4422	Pulse	0.1000	3
Ti	47	45	He	0.383	ppb	1.1	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	-0.413	ppb	N/A	1128.72	0.0230	Pulse	0.5000	3
Cr	52	45	He	-0.085	ppb	N/A	1983.55	0.0405	Pulse	0.1000	3
Mn	55	45	He	267.410	ppb	2.6	163205.35	3.3273	Pulse	0.1000	3
Fe	57	45	He	6.278	ppb	17.0	310.01	0.0063	Pulse	0.1000	3
Co	59	45	He	1.073	ppb	1.3	3067.08	0.0625	Pulse	0.1000	3
Ni	60	72	He	2.182	ppb	10.1	2703.69	0.0344	Pulse	0.1000	3
Cu	63	72	He	0.808	ppb	12.5	2473.64	0.0315	Pulse	0.1000	3
Zn	66	72	He	0.350	ppb	64.3	550.03	0.0070	Pulse	0.1000	3
As	75	72	He	0.096	ppb	80.5	84.67	0.0011	Pulse	0.5000	3
Sr	88	115	He	163.192	ppb	1.0	124508.09	1.4366	Pulse	0.1000	3
Mo	98	115	He	0.348	ppb	3.0	820.06	0.0095	Pulse	0.1000	3
Ag	107	115	He	-0.016	ppb	N/A	26.67	0.0003	Pulse	0.1000	3
Cd	111	115	He	0.067	ppb	12.2	36.00	0.0004	Pulse	0.5000	3
Sn	120	115	He	-0.119	ppb	N/A	1126.76	0.0130	Pulse	0.1000	3
Sb	121	115	He	0.038	ppb	56.6	70.00	0.0008	Pulse	0.1000	3
Ba	137	115	He	65.138	ppb	2.0	27000.53	0.3115	Pulse	0.1000	3
Tl	205	159	He	-0.086	ppb	N/A	250.01	0.0006	Pulse	0.1000	3
Pb	208	159	He	0.453	ppb	1.7	6634.24	0.0168	Pulse	0.1000	3
U	238	209	He	0.275	ppb	0.6	4227.51	0.0140	Pulse	0.1000	3

ISTD Table:

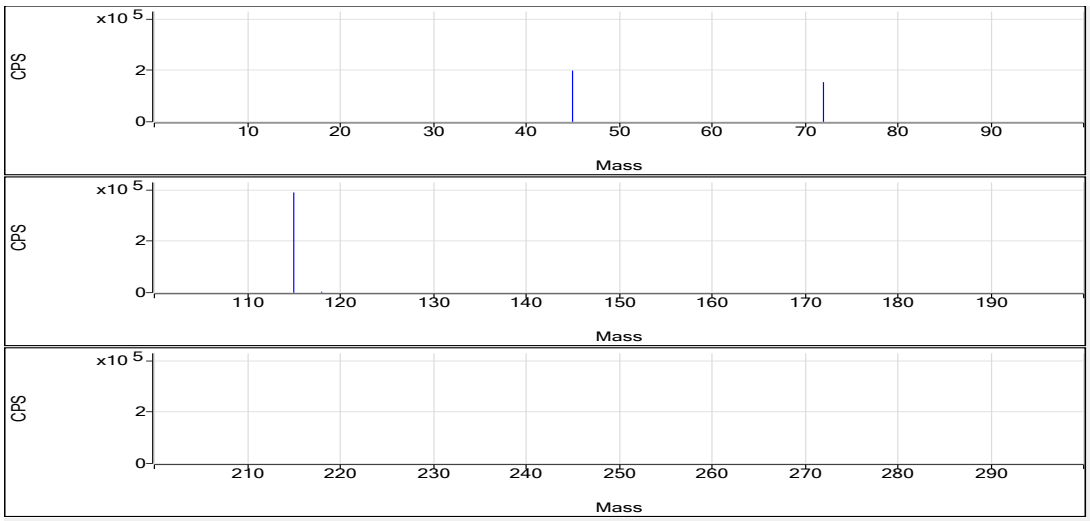
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2494263.51	1.3	95.6	Analog	0.1000	3
No Gas	Ge	72	1126533.71	0.2	87.4	Pulse	0.1000	3
H2	Sc	45	199062.49	1.8	96.6	Pulse	0.1000	3
H2	Ge	72	154192.29	2.6	94.7	Pulse	0.1000	3
H2	In	115	389610.98	0.7	96.5	Pulse	0.1000	3
He	Sc	45	49057.01	1.1	95.8	Pulse	0.1000	3
He	Ge	72	78649.70	1.3	96.1	Pulse	0.1000	3
He	In	115	86673.46	0.7	98.9	Pulse	0.1000	3
He	Tb	159	394134.00	0.3	98.1	Pulse	0.1000	3
He	Bi	209	302722.12	0.6	98.9	Pulse	0.1000	3

No Gas

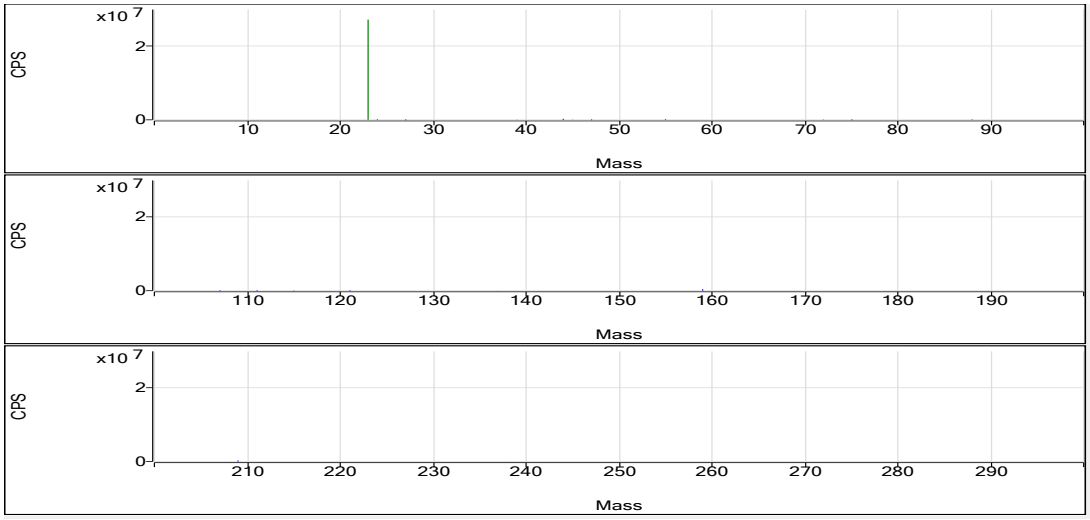


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.027	0	36.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.027	0	36.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.024	0	42.00	0.0007	3.404E-05
Se	78	2	H2	-0.043	0	2.67	0.0004	3.546E-05
Se	78	2	H2	0.05	0.0001	8.67	0.0004	3.546E-05
Se	78	2	H2	-0.001	0	5.33	0.0004	3.546E-05
Na	23	3	He	155878.661	556.0329	27348149.59	0.0036	0.4171
Na	23	3	He	158647.098	565.9007	27424342.09	0.0036	0.4171
Na	23	3	He	153851.51	548.8073	27179807.09	0.0036	0.4171
Mg	24	3	He	1682.529	3.0445	149743.34	0.0018	0.004553
Mg	24	3	He	1683.556	3.0464	147632.08	0.0018	0.004553
Mg	24	3	He	1665.622	3.014	149268.13	0.0018	0.004553
Al	27	3	He	3.751	0.0043	210.01	0.0006	0.002085
Al	27	3	He	1.027	0.0027	130.01	0.0006	0.002085
Al	27	3	He	-0.112	0.002	100.00	0.0006	0.002085
K	39	3	He	410.816	0.8923	43886.40	0.0012	0.4112
K	39	3	He	419.016	0.9019	43706.64	0.0012	0.4112
K	39	3	He	387.587	0.8651	42843.25	0.0012	0.4112
Ca	44	3	He	79994.084	5.4075	265964.61	0.0001	0.003322
Ca	44	3	He	81888.587	5.5355	268257.38	0.0001	0.003322
Ca	44	3	He	79640.28	5.3836	266623.84	0.0001	0.003322
Ti	47	3	He	0.382	0.0002	10.00	0.0005	0
Ti	47	3	He	0.388	0.0002	10.00	0.0005	0
Ti	47	3	He	0.38	0.0002	10.00	0.0005	0
V	51	3	He	-0.432	0.0226	1112.05	0.0213	0.0318
V	51	3	He	-0.387	0.0236	1142.05	0.0213	0.0318
V	51	3	He	-0.421	0.0229	1132.05	0.0213	0.0318
Cr	52	3	He	-0.21	0.0368	1810.20	0.0294	0.04297
Cr	52	3	He	0.062	0.0448	2170.25	0.0294	0.04297
Cr	52	3	He	-0.108	0.0398	1970.21	0.0294	0.04297
Mn	55	3	He	272.07	3.3852	166499.41	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	270.726	3.3685	163242.12	0.0124	0.002801
Mn	55	3	He	259.436	3.2281	159874.51	0.0124	0.002801
Fe	57	3	He	5.886	0.0061	300.01	0.0006	0.002732
Fe	57	3	He	7.488	0.007	340.01	0.0006	0.002732
Fe	57	3	He	5.46	0.0059	290.01	0.0006	0.002732
Co	59	3	He	1.064	0.062	3050.40	0.0549	0.003644
Co	59	3	He	1.065	0.0621	3010.39	0.0549	0.003644
Co	59	3	He	1.089	0.0634	3140.45	0.0549	0.003644
Ni	60	3	He	1.928	0.032	2530.32	0.0093	0.01413
Ni	60	3	He	2.332	0.0358	2840.39	0.0093	0.01413
Ni	60	3	He	2.286	0.0353	2740.37	0.0093	0.01413
Cu	63	3	He	0.828	0.032	2530.32	0.0274	0.009321
Cu	63	3	He	0.698	0.0285	2260.26	0.0274	0.009321
Cu	63	3	He	0.897	0.0339	2630.35	0.0274	0.009321
Zn	66	3	He	0.465	0.0073	580.03	0.0031	0.005913
Zn	66	3	He	0.495	0.0074	590.03	0.0031	0.005913
Zn	66	3	He	0.091	0.0062	480.02	0.0031	0.005913
As	75	3	He	0.031	0.0009	74.00	0.0021	0.0008698
As	75	3	He	0.182	0.0013	100.00	0.0021	0.0008698
As	75	3	He	0.076	0.001	80.00	0.0021	0.0008698
Sr	88	3	He	161.386	1.4207	124151.77	0.0088	0.0006843
Sr	88	3	He	164.785	1.4506	125029.39	0.0088	0.0006843
Sr	88	3	He	163.404	1.4385	124343.10	0.0088	0.0006843
Mo	98	3	He	0.339	0.0093	810.06	0.0219	0.001827
Mo	98	3	He	0.345	0.0094	810.05	0.0219	0.001827
Mo	98	3	He	0.36	0.0097	840.07	0.0219	0.001827
Ag	107	3	He	-0.015	0.0003	30.00	0.047	0.001064
Ag	107	3	He	-0.015	0.0003	30.00	0.047	0.001064
Ag	107	3	He	-0.018	0.0002	20.00	0.047	0.001064
Cd	111	3	He	0.075	0.0005	40.00	0.0053	6.086E-05
Cd	111	3	He	0.058	0.0004	32.00	0.0053	6.086E-05
Cd	111	3	He	0.067	0.0004	36.00	0.0053	6.086E-05
Sn	120	3	He	-0.131	0.0128	1120.09	0.0154	0.01483
Sn	120	3	He	-0.074	0.0137	1180.10	0.0154	0.01483
Sn	120	3	He	-0.152	0.0125	1080.08	0.0154	0.01483
Sb	121	3	He	0.03	0.0007	60.00	0.0143	0.0002661
Sb	121	3	He	0.022	0.0006	50.00	0.0143	0.0002661
Sb	121	3	He	0.063	0.0012	100.00	0.0143	0.0002661
Ba	137	3	He	63.655	0.3045	26606.38	0.0048	0.0002665
Ba	137	3	He	65.514	0.3133	27007.36	0.0048	0.0002665
Ba	137	3	He	66.244	0.3168	27387.86	0.0048	0.0002665
Tl	205	3	He	-0.086	0.0006	250.01	0.0246	0.002755
Tl	205	3	He	-0.084	0.0007	270.01	0.0246	0.002755
Tl	205	3	He	-0.088	0.0006	230.01	0.0246	0.002755
Pb	208	3	He	0.456	0.0169	3410.57	0.0324	0.002158
Pb	208	3	He	0.444	0.0165	3440.60	0.0324	0.002158
Pb	208	3	He	0.459	0.017	3600.64	0.0324	0.002158
U	238	3	He	0.273	0.0139	4180.83	0.0492	0.0004023
U	238	3	He	0.277	0.014	4230.84	0.0492	0.0004023
U	238	3	He	0.276	0.014	4270.85	0.0492	0.0004023
Sc	45	1	No Gas			2529813.56		
Sc	45	1	No Gas			2468111.06		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2484865.90		
Ge	72	1	No Gas			1124127.33		
Ge	72	1	No Gas			1129132.01		
Ge	72	1	No Gas			1126341.78		
Sc	45	2	H2			202815.35		
Sc	45	2	H2			195599.57		
Sc	45	2	H2			198772.56		
Ge	72	2	H2			158733.98		
Ge	72	2	H2			151234.21		
Ge	72	2	H2			152608.69		
In	115	2	H2			392626.17		
In	115	2	H2			387793.04		
In	115	2	H2			388413.74		
Sc	45	3	He			49184.41		
Sc	45	3	He			48461.40		
Sc	45	3	He			49525.23		
Ge	72	3	He			79017.91		
Ge	72	3	He			79400.09		
Ge	72	3	He			77531.09		
In	115	3	He			87394.68		
In	115	3	He			86198.09		
In	115	3	He			86448.58		
Tb	159	3	He			393063.43		
Tb	159	3	He			395227.26		
Tb	159	3	He			394111.32		
Bi	209	3	He			301500.78		
Bi	209	3	He			301730.82		
Bi	209	3	He			304934.76		

Quantitation Report

Data File Name	184SMPL.d
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Sample Name	410-136599-M-1-E
Sample Type	Sample
Comment	F6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

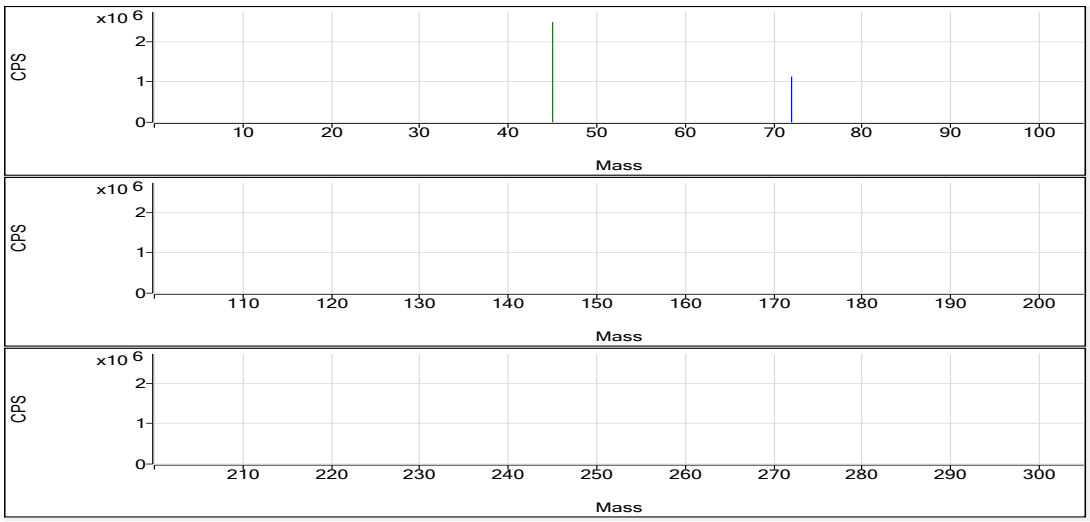
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.010	ppb	N/A	66.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.406	ppb	13.0	33.33	0.0002	Pulse	1.5000	3
Na	23	45	He	157638.002	ppb	2.8	27557453.76	562.3039	Analog	0.1000	3
Mg	24	45	He	838.276	ppb	2.1	74461.60	1.5191	Pulse	0.1000	3
Al	27	45	He	14.417	ppb	55.2	513.43	0.0105	Pulse	0.1000	3
K	39	45	He	364.298	ppb	5.6	41061.64	0.8378	Pulse	0.1000	3
Ca	44	45	He	5635.904	ppb	2.7	18822.67	0.3841	Pulse	0.1000	3
Ti	47	45	He	0.000	ppb	N/A	0.00	0.0000	Pulse	0.1000	3
V	51	45	He	0.310	ppb	4.0	1882.13	0.0384	Pulse	0.5000	3
Cr	52	45	He	-0.035	ppb	N/A	2060.23	0.0419	Pulse	0.1000	3
Mn	55	45	He	380.738	ppb	2.0	232143.16	4.7362	Pulse	0.1000	3
Fe	57	45	He	7.322	ppb	17.6	340.02	0.0069	Pulse	0.1000	3
Co	59	45	He	1.383	ppb	9.2	3894.00	0.0795	Pulse	0.1000	3
Ni	60	72	He	1.840	ppb	16.6	2490.30	0.0312	Pulse	0.1000	3
Cu	63	72	He	1.810	ppb	6.3	4707.60	0.0590	Pulse	0.1000	3
Zn	66	72	He	1.295	ppb	19.7	790.05	0.0099	Pulse	0.1000	3
As	75	72	He	0.657	ppb	6.8	182.00	0.0023	Pulse	0.5000	3
Sr	88	115	He	25.743	ppb	2.7	19791.12	0.2272	Pulse	0.1000	3
Mo	98	115	He	0.198	ppb	28.0	536.70	0.0062	Pulse	0.1000	3
Ag	107	115	He	-0.013	ppb	N/A	40.00	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.195	ppb	8.5	96.00	0.0011	Pulse	0.5000	3
Sn	120	115	He	0.019	ppb	618.7	1316.77	0.0151	Pulse	0.1000	3
Sb	121	115	He	0.108	ppb	17.0	156.68	0.0018	Pulse	0.1000	3
Ba	137	115	He	106.898	ppb	1.4	44516.45	0.5111	Pulse	0.1000	3
Tl	205	159	He	-0.098	ppb	N/A	140.01	0.0004	Pulse	0.1000	3
Pb	208	159	He	0.393	ppb	8.3	5874.07	0.0149	Pulse	0.1000	3
U	238	209	He	0.118	ppb	3.5	1890.22	0.0062	Pulse	0.1000	3

ISTD Table:

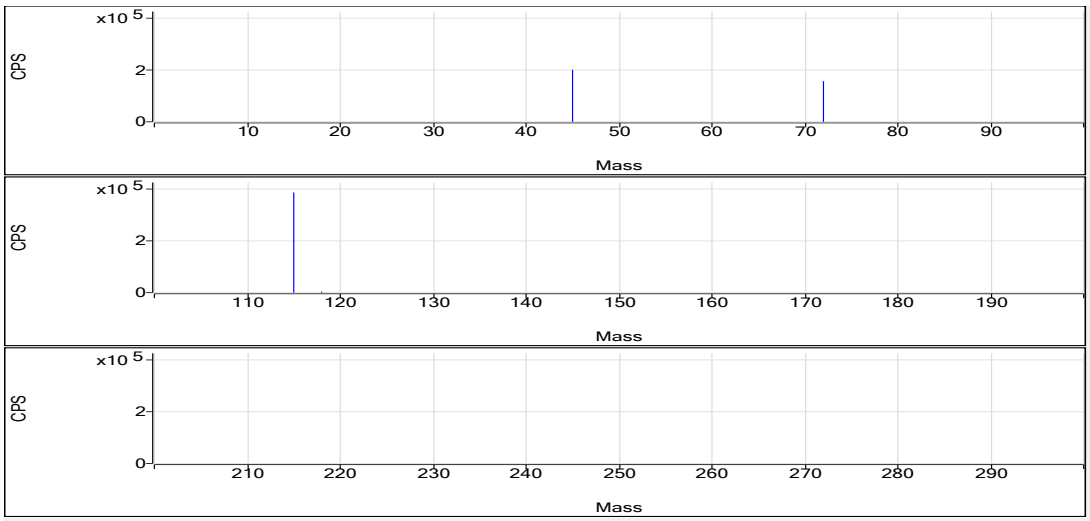
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2485717.52	1.1	95.3	Analog	0.1000	3
No Gas	Ge	72	1134699.93	0.5	88.0	Pulse	0.1000	3
H2	Sc	45	200130.73	0.7	97.1	Pulse	0.1000	3
H2	Ge	72	156242.85	0.4	96.0	Pulse	0.1000	3
H2	In	115	385578.52	1.2	95.5	Pulse	0.1000	3
He	Sc	45	49033.32	2.9	95.8	Pulse	0.1000	3
He	Ge	72	79883.12	1.5	97.6	Pulse	0.1000	3
He	In	115	87104.39	1.1	99.4	Pulse	0.1000	3
He	Tb	159	394268.08	0.7	98.2	Pulse	0.1000	3
He	Bi	209	304434.84	0.1	99.5	Pulse	0.1000	3

No Gas

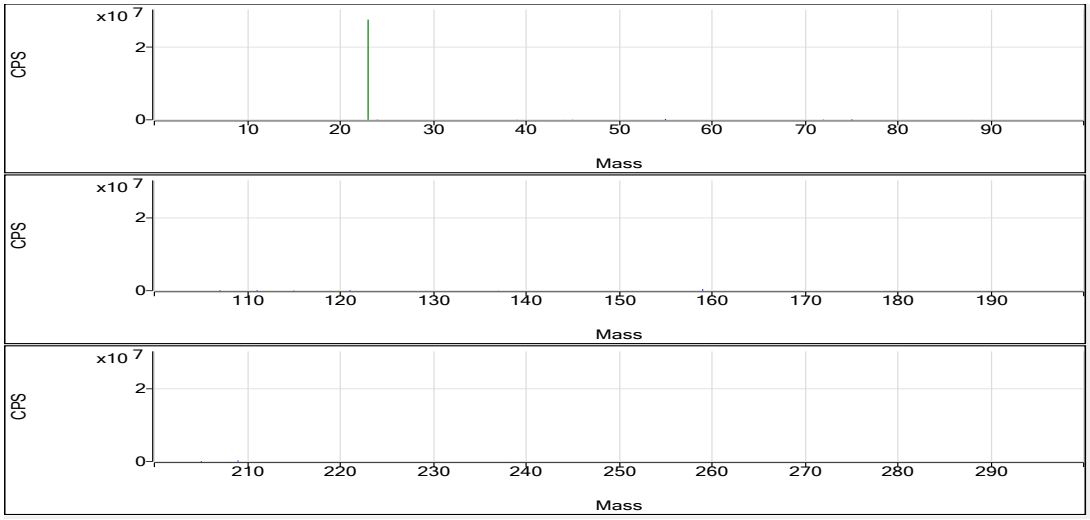


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.009	0	68.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.013	0	62.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.009	0	68.00	0.0007	3.404E-05
Se	78	2	H2	0.445	0.0002	36.00	0.0004	3.546E-05
Se	78	2	H2	0.427	0.0002	34.67	0.0004	3.546E-05
Se	78	2	H2	0.346	0.0002	29.33	0.0004	3.546E-05
Na	23	3	He	161138.629	574.7816	27751029.59	0.0036	0.4171
Na	23	3	He	152694.908	544.6847	27593039.59	0.0036	0.4171
Na	23	3	He	159080.468	567.4455	27328292.09	0.0036	0.4171
Mg	24	3	He	839.626	1.5216	73463.42	0.0018	0.004553
Mg	24	3	He	820.3	1.4867	75312.42	0.0018	0.004553
Mg	24	3	He	854.903	1.5492	74608.97	0.0018	0.004553
Al	27	3	He	23.094	0.0155	750.25	0.0006	0.002085
Al	27	3	He	12.687	0.0095	480.03	0.0006	0.002085
Al	27	3	He	7.471	0.0064	310.01	0.0006	0.002085
K	39	3	He	384.989	0.862	41620.00	0.0012	0.4112
K	39	3	He	344.011	0.814	41238.67	0.0012	0.4112
K	39	3	He	363.896	0.8373	40326.25	0.0012	0.4112
Ca	44	3	He	5690.874	0.3878	18722.47	0.0001	0.003322
Ca	44	3	He	5465.388	0.3725	18872.82	0.0001	0.003322
Ca	44	3	He	5751.45	0.3919	18872.72	0.0001	0.003322
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	0.313	0.0384	1856.13	0.0213	0.0318
V	51	3	He	0.297	0.0381	1930.14	0.0213	0.0318
V	51	3	He	0.321	0.0386	1860.13	0.0213	0.0318
Cr	52	3	He	-0.207	0.0369	1780.18	0.0294	0.04297
Cr	52	3	He	0.143	0.0472	2390.29	0.0294	0.04297
Cr	52	3	He	-0.042	0.0417	2010.21	0.0294	0.04297
Mn	55	3	He	383.439	4.7698	230289.37	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	372.099	4.6288	234488.20	0.0124	0.002801
Mn	55	3	He	386.677	4.81	231651.91	0.0124	0.002801
Fe	57	3	He	7.172	0.0068	330.02	0.0006	0.002732
Fe	57	3	He	8.681	0.0077	390.02	0.0006	0.002732
Fe	57	3	He	6.113	0.0062	300.01	0.0006	0.002732
Co	59	3	He	1.428	0.082	3960.67	0.0549	0.003644
Co	59	3	He	1.239	0.0717	3630.59	0.0549	0.003644
Co	59	3	He	1.481	0.0849	4090.73	0.0549	0.003644
Ni	60	3	He	1.506	0.0281	2280.25	0.0093	0.01413
Ni	60	3	He	2.107	0.0337	2650.34	0.0093	0.01413
Ni	60	3	He	1.906	0.0318	2540.30	0.0093	0.01413
Cu	63	3	He	1.678	0.0554	4490.82	0.0274	0.009321
Cu	63	3	He	1.862	0.0604	4750.97	0.0274	0.009321
Cu	63	3	He	1.889	0.0611	4881.00	0.0274	0.009321
Zn	66	3	He	1.206	0.0096	780.05	0.0031	0.005913
Zn	66	3	He	1.096	0.0093	730.05	0.0031	0.005913
Zn	66	3	He	1.583	0.0108	860.06	0.0031	0.005913
As	75	3	He	0.606	0.0022	176.00	0.0021	0.0008698
As	75	3	He	0.684	0.0023	184.00	0.0021	0.0008698
As	75	3	He	0.68	0.0023	186.00	0.0021	0.0008698
Sr	88	3	He	25.485	0.2249	19333.86	0.0088	0.0006843
Sr	88	3	He	25.209	0.2225	19494.08	0.0088	0.0006843
Sr	88	3	He	26.535	0.2342	20545.41	0.0088	0.0006843
Mo	98	3	He	0.251	0.0073	630.04	0.0219	0.001827
Mo	98	3	He	0.203	0.0063	550.03	0.0219	0.001827
Mo	98	3	He	0.14	0.0049	430.02	0.0219	0.001827
Ag	107	3	He	-0.013	0.0005	40.00	0.047	0.001064
Ag	107	3	He	-0.008	0.0007	60.00	0.047	0.001064
Ag	107	3	He	-0.018	0.0002	20.00	0.047	0.001064
Cd	111	3	He	0.176	0.001	86.00	0.0053	6.086E-05
Cd	111	3	He	0.207	0.0012	102.00	0.0053	6.086E-05
Cd	111	3	He	0.203	0.0011	100.00	0.0053	6.086E-05
Sn	120	3	He	0.034	0.0154	1320.11	0.0154	0.01483
Sn	120	3	He	-0.103	0.0132	1160.08	0.0154	0.01483
Sn	120	3	He	0.125	0.0168	1470.13	0.0154	0.01483
Sb	121	3	He	0.128	0.0021	180.01	0.0143	0.0002661
Sb	121	3	He	0.093	0.0016	140.01	0.0143	0.0002661
Sb	121	3	He	0.101	0.0017	150.01	0.0143	0.0002661
Ba	137	3	He	108.16	0.5171	44452.94	0.0048	0.0002665
Ba	137	3	He	107.239	0.5127	44924.45	0.0048	0.0002665
Ba	137	3	He	105.295	0.5035	44171.96	0.0048	0.0002665
Tl	205	3	He	-0.101	0.0003	110.00	0.0246	0.002755
Tl	205	3	He	-0.1	0.0003	120.01	0.0246	0.002755
Tl	205	3	He	-0.093	0.0005	190.01	0.0246	0.002755
Pb	208	3	He	0.39	0.0148	3160.49	0.0324	0.002158
Pb	208	3	He	0.428	0.016	3420.56	0.0324	0.002158
Pb	208	3	He	0.362	0.0139	2800.39	0.0324	0.002158
U	238	3	He	0.114	0.006	1830.20	0.0492	0.0004023
U	238	3	He	0.122	0.0064	1950.24	0.0492	0.0004023
U	238	3	He	0.118	0.0062	1890.22	0.0492	0.0004023
Sc	45	1	No Gas			2482038.87		
Sc	45	1	No Gas			2515250.28		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2459863.40		
Ge	72	1	No Gas			1140494.20		
Ge	72	1	No Gas			1133364.36		
Ge	72	1	No Gas			1130241.23		
Sc	45	2	H2			198611.36		
Sc	45	2	H2			200960.02		
Sc	45	2	H2			200820.80		
Ge	72	2	H2			156144.85		
Ge	72	2	H2			155729.87		
Ge	72	2	H2			156853.83		
In	115	2	H2			390237.96		
In	115	2	H2			385800.42		
In	115	2	H2			380697.18		
Sc	45	3	He			48281.00		
Sc	45	3	He			50658.74		
Sc	45	3	He			48160.21		
Ge	72	3	He			81129.72		
Ge	72	3	He			78686.72		
Ge	72	3	He			79832.93		
In	115	3	He			85965.18		
In	115	3	He			87624.98		
In	115	3	He			87746.41		
Tb	159	3	He			391066.05		
Tb	159	3	He			395985.74		
Tb	159	3	He			395752.46		
Bi	209	3	He			304759.90		
Bi	209	3	He			304039.70		
Bi	209	3	He			304504.92		

Quantitation Report

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Sample Type	Sample
Comment	F6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

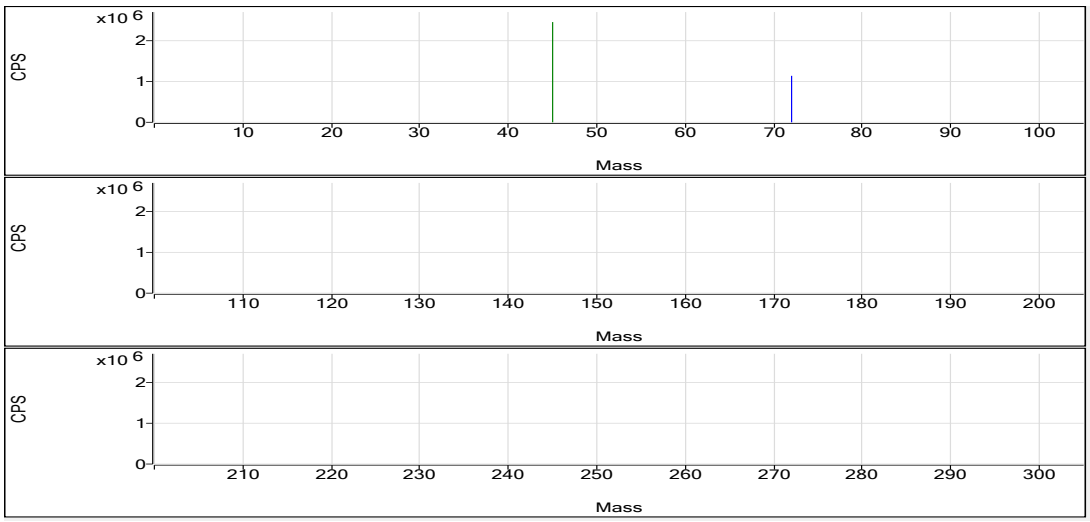
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.007	ppb	N/A	70.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.013	ppb	N/A	4.66	0.0000	Pulse	1.5000	3
Na	23	45	He	153350.079	ppb	0.8	27094783.76	547.0200	Analog	0.1000	3
Mg	24	45	He	1146.478	ppb	1.2	102830.60	2.0760	Pulse	0.1000	3
Al	27	45	He	23.449	ppb	8.9	780.05	0.0157	Pulse	0.1000	3
K	39	45	He	332.691	ppb	0.7	39664.49	0.8008	Pulse	0.1000	3
Ca	44	45	He	5638.492	ppb	2.0	19033.03	0.3842	Pulse	0.1000	3
Ti	47	45	He	0.380	ppb	100.2	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	-0.046	ppb	N/A	1526.76	0.0308	Pulse	0.5000	3
Cr	52	45	He	-0.061	ppb	N/A	2040.21	0.0412	Pulse	0.1000	3
Mn	55	45	He	88.442	ppb	0.6	54600.73	1.1023	Pulse	0.1000	3
Fe	57	45	He	15.687	ppb	17.6	580.03	0.0117	Pulse	0.1000	3
Co	59	45	He	0.178	ppb	10.0	663.37	0.0134	Pulse	0.1000	3
Ni	60	72	He	0.750	ppb	23.7	1670.15	0.0211	Pulse	0.1000	3
Cu	63	72	He	1.061	ppb	6.9	3043.76	0.0384	Pulse	0.1000	3
Zn	66	72	He	0.499	ppb	20.4	590.03	0.0074	Pulse	0.1000	3
As	75	72	He	0.868	ppb	17.7	216.67	0.0027	Pulse	0.5000	3
Sr	88	115	He	32.910	ppb	0.6	25153.17	0.2903	Pulse	0.1000	3
Mo	98	115	He	-0.032	ppb	N/A	96.67	0.0011	Pulse	0.1000	3
Ag	107	115	He	-0.017	ppb	N/A	23.33	0.0003	Pulse	0.1000	3
Cd	111	115	He	0.123	ppb	3.5	62.00	0.0007	Pulse	0.5000	3
Sn	120	115	He	0.012	ppb	1215.2	1300.10	0.0150	Pulse	0.1000	3
Sb	121	115	He	0.060	ppb	76.9	96.67	0.0011	Pulse	0.1000	3
Ba	137	115	He	100.273	ppb	0.3	41547.20	0.4795	Pulse	0.1000	3
Tl	205	159	He	-0.103	ppb	N/A	90.00	0.0002	Pulse	0.1000	3
Pb	208	159	He	0.138	ppb	4.4	2623.54	0.0066	Pulse	0.1000	3
U	238	209	He	0.047	ppb	17.2	836.73	0.0027	Pulse	0.1000	3

ISTD Table:

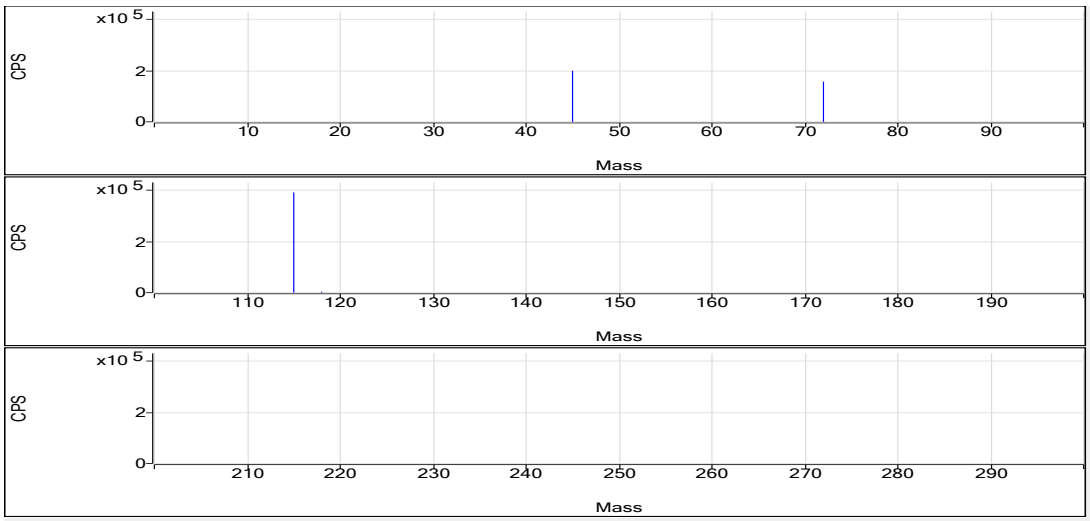
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2446298.66	0.5	93.8	Analog	0.1000	3
No Gas	Ge	72	1134125.87	0.8	88.0	Pulse	0.1000	3
H2	Sc	45	199317.72	1.7	96.7	Pulse	0.1000	3
H2	Ge	72	156781.56	1.1	96.3	Pulse	0.1000	3
H2	In	115	391416.39	0.7	97.0	Pulse	0.1000	3
He	Sc	45	49531.72	0.3	96.7	Pulse	0.1000	3
He	Ge	72	79223.28	0.9	96.8	Pulse	0.1000	3
He	In	115	86656.50	0.6	98.9	Pulse	0.1000	3
He	Tb	159	395969.49	0.7	98.6	Pulse	0.1000	3
He	Bi	209	306019.96	0.6	100.0	Pulse	0.1000	3

No Gas

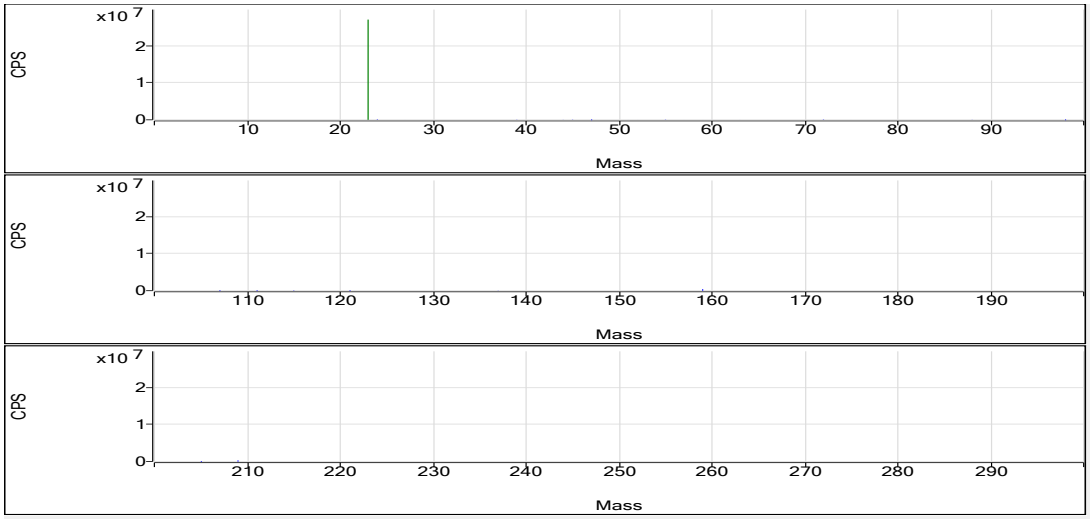


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.004	0	90.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.013	0	60.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.012	0	62.00	0.0007	3.404E-05
Se	78	2	H2	-0.003	0	5.33	0.0004	3.546E-05
Se	78	2	H2	-0.032	0	3.33	0.0004	3.546E-05
Se	78	2	H2	-0.004	0	5.33	0.0004	3.546E-05
Na	23	3	He	154440.944	550.9083	27339109.59	0.0036	0.4171
Na	23	3	He	153468.489	547.442	27007752.10	0.0036	0.4171
Na	23	3	He	152140.802	542.7096	26937489.60	0.0036	0.4171
Mg	24	3	He	1153.958	2.0895	103693.12	0.0018	0.004553
Mg	24	3	He	1130.387	2.0469	100983.88	0.0018	0.004553
Mg	24	3	He	1155.09	2.0916	103814.81	0.0018	0.004553
Al	27	3	He	24.095	0.0161	800.06	0.0006	0.002085
Al	27	3	He	21.126	0.0144	710.05	0.0006	0.002085
Al	27	3	He	25.126	0.0167	830.05	0.0006	0.002085
K	39	3	He	330.02	0.7977	39584.48	0.0012	0.4112
K	39	3	He	334.035	0.8024	39584.28	0.0012	0.4112
K	39	3	He	334.02	0.8023	39824.71	0.0012	0.4112
Ca	44	3	He	5660.825	0.3858	19143.11	0.0001	0.003322
Ca	44	3	He	5514.274	0.3759	18542.39	0.0001	0.003322
Ca	44	3	He	5740.377	0.3911	19413.59	0.0001	0.003322
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.762	0.0004	20.00	0.0005	0
Ti	47	3	He	0.379	0.0002	10.00	0.0005	0
V	51	3	He	0.017	0.0322	1596.10	0.0213	0.0318
V	51	3	He	-0.127	0.0291	1436.08	0.0213	0.0318
V	51	3	He	-0.029	0.0312	1548.09	0.0213	0.0318
Cr	52	3	He	-0.036	0.0419	2080.22	0.0294	0.04297
Cr	52	3	He	-0.131	0.0391	1930.18	0.0294	0.04297
Cr	52	3	He	-0.015	0.0425	2110.24	0.0294	0.04297
Mn	55	3	He	88.752	1.1062	54894.88	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	87.806	1.0944	53992.60	0.0124	0.002801
Mn	55	3	He	88.767	1.1064	54914.72	0.0124	0.002801
Fe	57	3	He	15.654	0.0117	580.04	0.0006	0.002732
Fe	57	3	He	12.94	0.0101	500.02	0.0006	0.002732
Fe	57	3	He	18.467	0.0133	660.04	0.0006	0.002732
Co	59	3	He	0.18	0.0135	670.04	0.0549	0.003644
Co	59	3	He	0.159	0.0124	610.03	0.0549	0.003644
Co	59	3	He	0.194	0.0143	710.05	0.0549	0.003644
Ni	60	3	He	0.807	0.0216	1700.16	0.0093	0.01413
Ni	60	3	He	0.892	0.0224	1770.17	0.0093	0.01413
Ni	60	3	He	0.551	0.0192	1540.13	0.0093	0.01413
Cu	63	3	He	1.065	0.0385	3030.40	0.0274	0.009321
Cu	63	3	He	0.985	0.0363	2870.38	0.0274	0.009321
Cu	63	3	He	1.132	0.0404	3230.50	0.0274	0.009321
Zn	66	3	He	0.394	0.0071	560.03	0.0031	0.005913
Zn	66	3	He	0.507	0.0075	590.03	0.0031	0.005913
Zn	66	3	He	0.597	0.0077	620.03	0.0031	0.005913
As	75	3	He	0.709	0.0024	188.00	0.0021	0.0008698
As	75	3	He	0.881	0.0028	218.00	0.0021	0.0008698
As	75	3	He	1.015	0.003	244.00	0.0021	0.0008698
Sr	88	3	He	33.035	0.2914	25343.40	0.0088	0.0006843
Sr	88	3	He	33.026	0.2913	25313.56	0.0088	0.0006843
Sr	88	3	He	32.669	0.2881	24802.55	0.0088	0.0006843
Mo	98	3	He	-0.036	0.001	90.00	0.0219	0.001827
Mo	98	3	He	-0.041	0.0009	80.00	0.0219	0.001827
Mo	98	3	He	-0.02	0.0014	120.00	0.0219	0.001827
Ag	107	3	He	-0.018	0.0002	20.00	0.047	0.001064
Ag	107	3	He	-0.018	0.0002	20.00	0.047	0.001064
Ag	107	3	He	-0.015	0.0003	30.00	0.047	0.001064
Cd	111	3	He	0.127	0.0007	64.00	0.0053	6.086E-05
Cd	111	3	He	0.118	0.0007	60.00	0.0053	6.086E-05
Cd	111	3	He	0.124	0.0007	62.00	0.0053	6.086E-05
Sn	120	3	He	-0.007	0.0147	1280.10	0.0154	0.01483
Sn	120	3	He	-0.119	0.013	1130.09	0.0154	0.01483
Sn	120	3	He	0.161	0.0173	1490.12	0.0154	0.01483
Sb	121	3	He	0.022	0.0006	50.00	0.0143	0.0002661
Sb	121	3	He	0.111	0.0018	160.01	0.0143	0.0002661
Sb	121	3	He	0.047	0.0009	80.00	0.0143	0.0002661
Ba	137	3	He	100.247	0.4793	41694.18	0.0048	0.0002665
Ba	137	3	He	100.025	0.4783	41563.94	0.0048	0.0002665
Ba	137	3	He	100.547	0.4808	41383.48	0.0048	0.0002665
Tl	205	3	He	-0.106	0.0002	60.00	0.0246	0.002755
Tl	205	3	He	-0.103	0.0002	90.00	0.0246	0.002755
Tl	205	3	He	-0.1	0.0003	120.00	0.0246	0.002755
Pb	208	3	He	0.131	0.0064	1450.13	0.0324	0.002158
Pb	208	3	He	0.143	0.0068	1490.16	0.0324	0.002158
Pb	208	3	He	0.139	0.0067	1280.12	0.0324	0.002158
U	238	3	He	0.055	0.0031	950.07	0.0492	0.0004023
U	238	3	He	0.049	0.0028	860.06	0.0492	0.0004023
U	238	3	He	0.039	0.0023	700.05	0.0492	0.0004023
Sc	45	1	No Gas			2434277.15		
Sc	45	1	No Gas			2456063.71		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2448555.12		
Ge	72	1	No Gas			1124232.25		
Ge	72	1	No Gas			1141507.56		
Ge	72	1	No Gas			1136637.80		
Sc	45	2	H2			199083.81		
Sc	45	2	H2			196053.59		
Sc	45	2	H2			202815.76		
Ge	72	2	H2			157106.74		
Ge	72	2	H2			154961.70		
Ge	72	2	H2			158276.24		
In	115	2	H2			393829.13		
In	115	2	H2			391960.07		
In	115	2	H2			388459.96		
Sc	45	3	He			49625.52		
Sc	45	3	He			49334.45		
Sc	45	3	He			49635.18		
Ge	72	3	He			78636.64		
Ge	72	3	He			78988.69		
Ge	72	3	He			80044.51		
In	115	3	He			86991.74		
In	115	3	He			86912.31		
In	115	3	He			86085.65		
Tb	159	3	He			397922.42		
Tb	159	3	He			392875.11		
Tb	159	3	He			397110.93		
Bi	209	3	He			306990.05		
Bi	209	3	He			307115.66		
Bi	209	3	He			303954.16		

Quantitation Report

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Sample Type	Sample
Comment	F6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

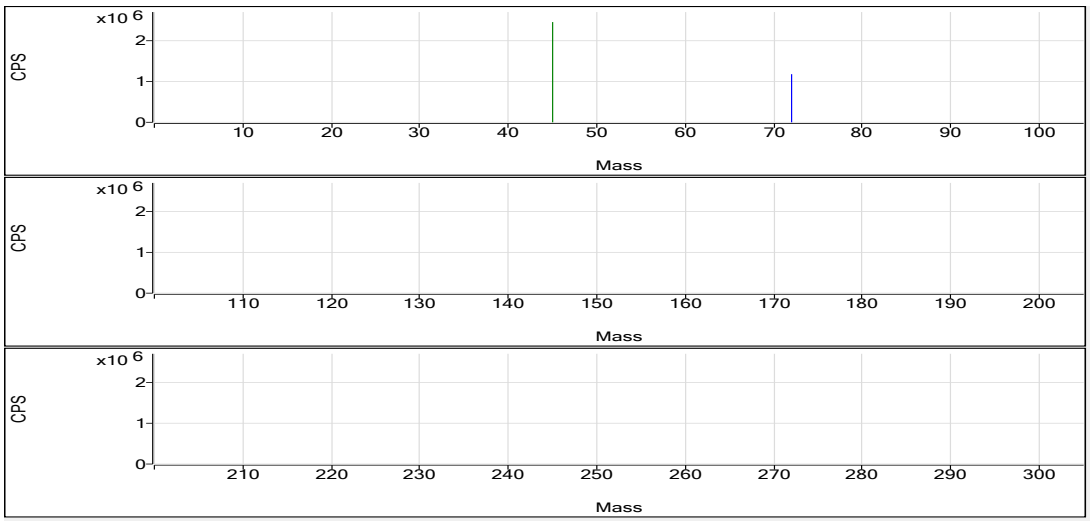
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.034	ppb	N/A	22.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.040	ppb	N/A	2.89	0.0000	Pulse	1.5000	3
Na	23	45	He	170253.046	ppb	1.3	29981105.39	607.2691	Analog	0.1000	3
Mg	24	45	He	3777.739	ppb	1.2	337207.85	6.8301	Pulse	0.1000	3
Al	27	45	He	1.059	ppb	23.8	133.34	0.0027	Pulse	0.1000	3
K	39	45	He	267.475	ppb	6.4	35761.27	0.7244	Pulse	0.1000	3
Ca	44	45	He	29988.748	ppb	1.4	100187.67	2.0293	Pulse	0.1000	3
Ti	47	45	He	0.257	ppb	173.2	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	2.630	ppb	2.3	4328.67	0.0877	Pulse	0.5000	3
Cr	52	45	He	0.396	ppb	9.9	2697.06	0.0546	Pulse	0.1000	3
Mn	55	45	He	465.608	ppb	0.9	285924.81	5.7913	Pulse	0.1000	3
Fe	57	45	He	11104.468	ppb	2.2	313790.49	6.3562	Pulse	0.1000	3
Co	59	45	He	10.367	ppb	1.4	28271.85	0.5726	Pulse	0.1000	3
Ni	60	72	He	209.912	ppb	1.3	159076.38	1.9627	Pulse	0.1000	3
Cu	63	72	He	0.205	ppb	3.0	1210.10	0.0149	Pulse	0.1000	3
Zn	66	72	He	30.800	ppb	4.0	8142.56	0.1005	Pulse	0.1000	3
As	75	72	He	6.319	ppb	3.9	1169.39	0.0144	Pulse	0.5000	3
Sr	88	115	He	202.015	ppb	0.9	152778.32	1.7782	Pulse	0.1000	3
Mo	98	115	He	123.544	ppb	1.5	233079.58	2.7130	Pulse	0.1000	3
Ag	107	115	He	-0.008	ppb	N/A	60.00	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.003	ppb	71.2	6.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.021	ppb	246.1	1303.44	0.0152	Pulse	0.1000	3
Sb	121	115	He	0.104	ppb	7.9	150.01	0.0017	Pulse	0.1000	3
Ba	137	115	He	1.139	ppb	12.6	490.03	0.0057	Pulse	0.1000	3
Tl	205	159	He	-0.100	ppb	N/A	113.34	0.0003	Pulse	0.1000	3
Pb	208	159	He	0.062	ppb	2.4	1630.10	0.0042	Pulse	0.1000	3
U	238	209	He	-0.003	ppb	N/A	70.00	0.0002	Pulse	0.1000	3

ISTD Table:

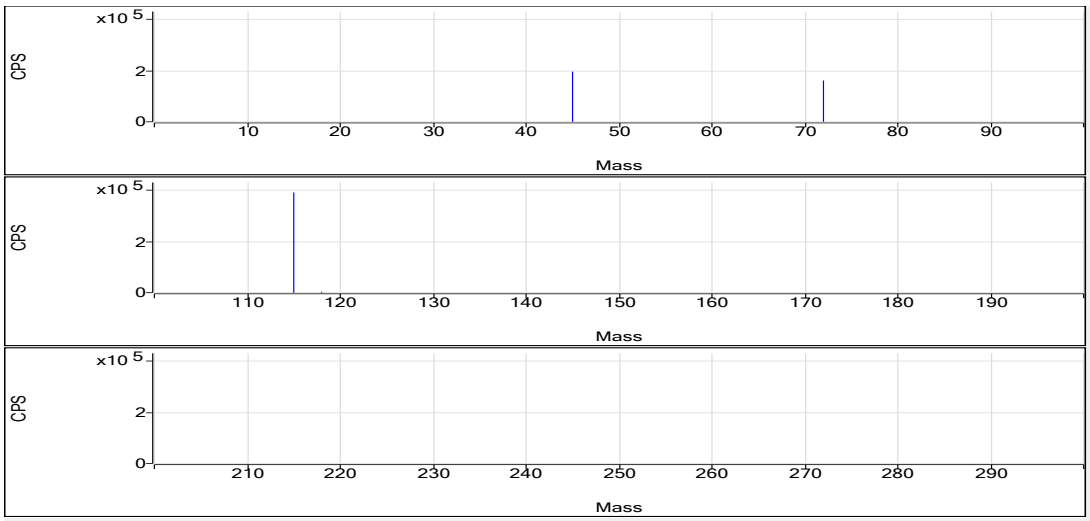
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2452860.54	1.3	94.1	Analog	0.1000	3
No Gas	Ge	72	1177611.05	0.4	91.4	Pulse	0.1000	3
H2	Sc	45	196383.83	0.5	95.3	Pulse	0.1000	3
H2	Ge	72	161582.45	0.9	99.3	Pulse	0.1000	3
H2	In	115	392163.19	0.4	97.1	Pulse	0.1000	3
He	Sc	45	49374.68	1.1	96.4	Pulse	0.1000	3
He	Ge	72	81056.67	1.1	99.0	Pulse	0.1000	3
He	In	115	85928.30	2.0	98.0	Pulse	0.1000	3
He	Tb	159	391269.08	0.7	97.4	Pulse	0.1000	3
He	Bi	209	302497.36	0.4	98.8	Pulse	0.1000	3

No Gas

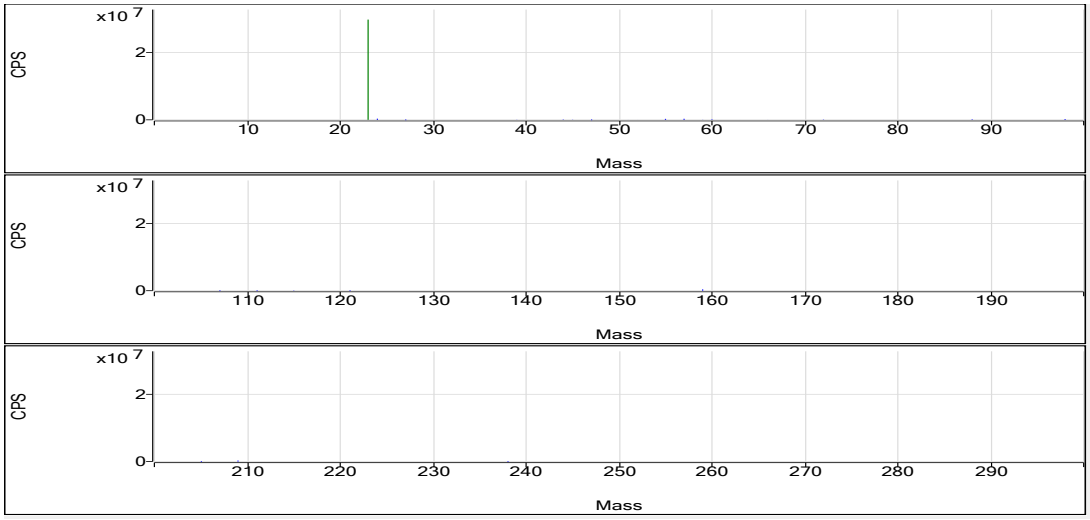


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.035	0	20.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.033	0	24.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.034	0	22.00	0.0007	3.404E-05
Se	78	2	H2	-0.033	0	3.33	0.0004	3.546E-05
Se	78	2	H2	-0.053	0	2.00	0.0004	3.546E-05
Se	78	2	H2	-0.034	0	3.33	0.0004	3.546E-05
Na	23	3	He	172709.72	616.0257	30039034.55	0.0036	0.4171
Na	23	3	He	168665.811	601.6116	29843092.06	0.0036	0.4171
Na	23	3	He	169383.607	604.1701	30061189.55	0.0036	0.4171
Mg	24	3	He	3824.482	6.9146	337173.51	0.0018	0.004553
Mg	24	3	He	3776.582	6.828	338706.79	0.0018	0.004553
Mg	24	3	He	3732.154	6.7478	335743.24	0.0018	0.004553
Al	27	3	He	1.35	0.0029	140.01	0.0006	0.002085
Al	27	3	He	0.92	0.0026	130.01	0.0006	0.002085
Al	27	3	He	0.906	0.0026	130.00	0.0006	0.002085
K	39	3	He	286.767	0.747	36426.27	0.0012	0.4112
K	39	3	He	254.191	0.7089	35163.33	0.0012	0.4112
K	39	3	He	261.466	0.7174	35694.22	0.0012	0.4112
Ca	44	3	He	30377.84	2.0556	100234.69	0.0001	0.003322
Ca	44	3	He	29566.466	2.0007	99247.68	0.0001	0.003322
Ca	44	3	He	30021.938	2.0315	101080.65	0.0001	0.003322
Ti	47	3	He	0.771	0.0004	20.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	2.698	0.0891	4346.68	0.0213	0.0318
V	51	3	He	2.604	0.0871	4322.67	0.0213	0.0318
V	51	3	He	2.586	0.0868	4316.66	0.0213	0.0318
Cr	52	3	He	0.387	0.0544	2650.35	0.0294	0.04297
Cr	52	3	He	0.362	0.0536	2660.34	0.0294	0.04297
Cr	52	3	He	0.439	0.0559	2780.50	0.0294	0.04297
Mn	55	3	He	470.411	5.851	285310.66	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	463.854	5.7695	286197.40	0.0124	0.002801
Mn	55	3	He	462.558	5.7534	286266.38	0.0124	0.002801
Fe	57	3	He	11363.832	6.5046	317179.29	0.0006	0.002732
Fe	57	3	He	10888.954	6.2329	309182.30	0.0006	0.002732
Fe	57	3	He	11060.617	6.3311	315009.88	0.0006	0.002732
Co	59	3	He	10.477	0.5787	28218.28	0.0549	0.003644
Co	59	3	He	10.423	0.5757	28559.02	0.0549	0.003644
Co	59	3	He	10.2	0.5635	28038.24	0.0549	0.003644
Ni	60	3	He	212.737	1.9889	159302.54	0.0093	0.01413
Ni	60	3	He	207.476	1.9401	158766.61	0.0093	0.01413
Ni	60	3	He	209.524	1.9591	159160.00	0.0093	0.01413
Cu	63	3	He	0.211	0.0151	1210.11	0.0274	0.009321
Cu	63	3	He	0.204	0.0149	1220.10	0.0274	0.009321
Cu	63	3	He	0.199	0.0148	1200.09	0.0274	0.009321
Zn	66	3	He	32.161	0.1047	8382.73	0.0031	0.005913
Zn	66	3	He	29.803	0.0974	7972.46	0.0031	0.005913
Zn	66	3	He	30.436	0.0994	8072.50	0.0031	0.005913
As	75	3	He	6.566	0.015	1198.06	0.0021	0.0008698
As	75	3	He	6.315	0.0144	1180.06	0.0021	0.0008698
As	75	3	He	6.077	0.0139	1130.05	0.0021	0.0008698
Sr	88	3	He	199.863	1.7593	154586.81	0.0088	0.0006843
Sr	88	3	He	203.145	1.7881	151455.83	0.0088	0.0006843
Sr	88	3	He	203.035	1.7872	152292.32	0.0088	0.0006843
Mo	98	3	He	121.473	2.6676	234399.86	0.0219	0.001827
Mo	98	3	He	124.746	2.7394	232026.42	0.0219	0.001827
Mo	98	3	He	124.413	2.7321	232812.46	0.0219	0.001827
Ag	107	3	He	-0.011	0.0006	50.00	0.047	0.001064
Ag	107	3	He	-0.008	0.0007	60.00	0.047	0.001064
Ag	107	3	He	-0.005	0.0008	70.00	0.047	0.001064
Cd	111	3	He	0.006	0.0001	8.00	0.0053	6.086E-05
Cd	111	3	He	0.002	0.0001	6.00	0.0053	6.086E-05
Cd	111	3	He	0.002	0.0001	6.00	0.0053	6.086E-05
Sn	120	3	He	0.071	0.0159	1400.12	0.0154	0.01483
Sn	120	3	He	0.026	0.0152	1290.10	0.0154	0.01483
Sn	120	3	He	-0.033	0.0143	1220.11	0.0154	0.01483
Sb	121	3	He	0.101	0.0017	150.01	0.0143	0.0002661
Sb	121	3	He	0.097	0.0017	140.01	0.0143	0.0002661
Sb	121	3	He	0.113	0.0019	160.01	0.0143	0.0002661
Ba	137	3	He	0.992	0.005	440.02	0.0048	0.0002665
Ba	137	3	He	1.278	0.0064	540.03	0.0048	0.0002665
Ba	137	3	He	1.148	0.0058	490.03	0.0048	0.0002665
Tl	205	3	He	-0.103	0.0002	90.00	0.0246	0.002755
Tl	205	3	He	-0.1	0.0003	120.01	0.0246	0.002755
Tl	205	3	He	-0.099	0.0003	130.01	0.0246	0.002755
Pb	208	3	He	0.061	0.0041	910.07	0.0324	0.002158
Pb	208	3	He	0.061	0.0041	860.05	0.0324	0.002158
Pb	208	3	He	0.064	0.0042	850.07	0.0324	0.002158
U	238	3	He	-0.002	0.0003	90.00	0.0492	0.0004023
U	238	3	He	-0.003	0.0002	70.00	0.0492	0.0004023
U	238	3	He	-0.005	0.0002	50.00	0.0492	0.0004023
Sc	45	1	No Gas			2421853.71		
Sc	45	1	No Gas			2487615.12		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2449112.78		
Ge	72	1	No Gas			1171764.83		
Ge	72	1	No Gas			1180413.03		
Ge	72	1	No Gas			1180655.29		
Sc	45	2	H2			195196.15		
Sc	45	2	H2			196886.23		
Sc	45	2	H2			197069.10		
Ge	72	2	H2			159926.63		
Ge	72	2	H2			162031.18		
Ge	72	2	H2			162789.54		
In	115	2	H2			390953.67		
In	115	2	H2			391541.21		
In	115	2	H2			393994.68		
Sc	45	3	He			48762.63		
Sc	45	3	He			49605.25		
Sc	45	3	He			49756.17		
Ge	72	3	He			80094.58		
Ge	72	3	He			81834.48		
Ge	72	3	He			81240.95		
In	115	3	He			87876.58		
In	115	3	He			84707.24		
In	115	3	He			85221.12		
Tb	159	3	He			394318.04		
Tb	159	3	He			388538.86		
Tb	159	3	He			390950.35		
Bi	209	3	He			303737.52		
Bi	209	3	He			302303.55		
Bi	209	3	He			301451.01		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

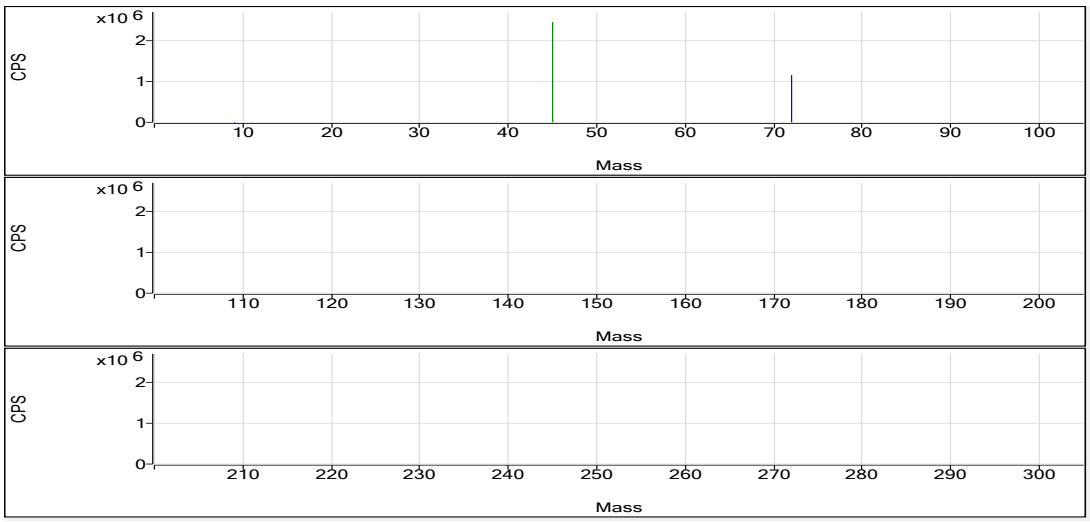
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.039	ppb	N/A	13.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.042	ppb	N/A	2.67	0.0000	Pulse	1.5000	3
Na	23	45	He	41.912	ppb	19.4	27409.43	0.5664	Pulse	0.1000	3
Mg	24	45	He	-0.276	ppb	N/A	196.68	0.0041	Pulse	0.1000	3
Al	27	45	He	-1.331	ppb	N/A	63.33	0.0013	Pulse	0.1000	3
K	39	45	He	5.981	ppb	145.7	20231.28	0.4182	Pulse	0.1000	3
Ca	44	45	He	-4.277	ppb	N/A	146.68	0.0030	Pulse	0.1000	3
Ti	47	45	He	0.000	ppb	N/A	0.00	0.0000	Pulse	0.1000	3
V	51	45	He	-0.353	ppb	N/A	1176.06	0.0243	Pulse	0.5000	3
Cr	52	45	He	-0.149	ppb	N/A	1866.85	0.0386	Pulse	0.1000	3
Mn	55	45	He	0.101	ppb	128.5	196.67	0.0041	Pulse	0.1000	3
Fe	57	45	He	1.482	ppb	117.8	173.34	0.0036	Pulse	0.1000	3
Co	59	45	He	-0.020	ppb	N/A	123.34	0.0026	Pulse	0.1000	3
Ni	60	72	He	-1.152	ppb	N/A	276.68	0.0034	Pulse	0.1000	3
Cu	63	72	He	-0.102	ppb	N/A	526.70	0.0065	Pulse	0.1000	3
Zn	66	72	He	0.214	ppb	188.5	530.03	0.0066	Pulse	0.1000	3
As	75	72	He	-0.012	ppb	N/A	68.00	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.073	ppb	90.0	113.34	0.0013	Pulse	0.1000	3
Mo	98	115	He	0.106	ppb	22.0	353.35	0.0042	Pulse	0.1000	3
Ag	107	115	He	-0.004	ppb	N/A	76.67	0.0009	Pulse	0.1000	3
Cd	111	115	He	-0.008	ppb	N/A	1.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.010	ppb	780.5	1273.44	0.0150	Pulse	0.1000	3
Sb	121	115	He	0.017	ppb	25.8	43.33	0.0005	Pulse	0.1000	3
Ba	137	115	He	0.002	ppb	2020.9	23.33	0.0003	Pulse	0.1000	3
Tl	205	159	He	-0.101	ppb	N/A	106.67	0.0003	Pulse	0.1000	3
Pb	208	159	He	-0.026	ppb	N/A	520.02	0.0013	Pulse	0.1000	3
U	238	209	He	-0.005	ppb	N/A	40.00	0.0001	Pulse	0.1000	3

ISTD Table:

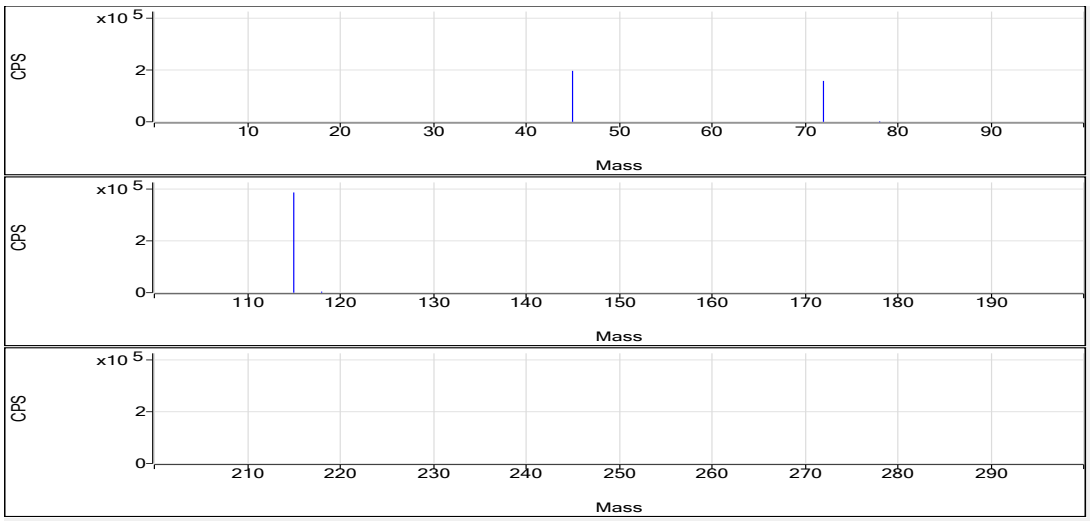
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2454823.09	1.9	94.1	Analog	0.1000	3
No Gas	Ge	72	1156543.37	1.1	89.7	Pulse	0.1000	3
H2	Sc	45	195893.44	0.9	95.1	Pulse	0.1000	3
H2	Ge	72	157236.60	0.7	96.6	Pulse	0.1000	3
H2	In	115	385120.32	0.5	95.4	Pulse	0.1000	3
He	Sc	45	48394.40	2.1	94.5	Pulse	0.1000	3
He	Ge	72	80563.82	1.3	98.4	Pulse	0.1000	3
He	In	115	84999.16	0.9	97.0	Pulse	0.1000	3
He	Tb	159	392907.77	0.6	97.8	Pulse	0.1000	3
He	Bi	209	304945.39	1.3	99.6	Pulse	0.1000	3

No Gas

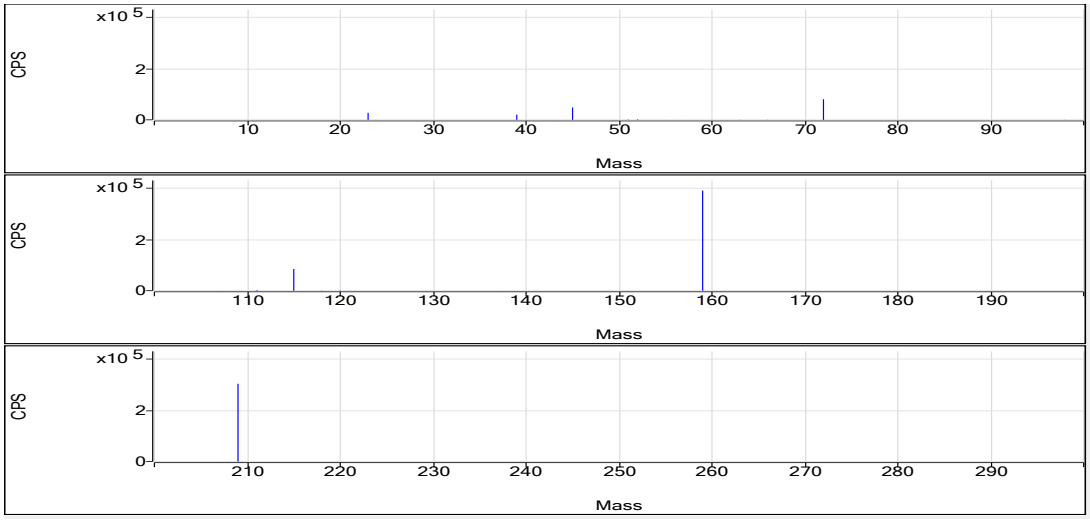


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.038	0	16.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.039	0	14.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.041	0	10.00	0.0007	3.404E-05
Se	78	2	H2	-0.042	0	2.67	0.0004	3.546E-05
Se	78	2	H2	-0.042	0	2.67	0.0004	3.546E-05
Se	78	2	H2	-0.042	0	2.67	0.0004	3.546E-05
Na	23	3	He	50.219	0.5961	29059.22	0.0036	0.4171
Na	23	3	He	33.951	0.5381	26464.29	0.0036	0.4171
Na	23	3	He	41.565	0.5652	26704.78	0.0036	0.4171
Mg	24	3	He	-0.363	0.0039	190.01	0.0018	0.004553
Mg	24	3	He	0.181	0.0049	240.01	0.0018	0.004553
Mg	24	3	He	-0.645	0.0034	160.01	0.0018	0.004553
Al	27	3	He	-0.762	0.0016	80.00	0.0006	0.002085
Al	27	3	He	-1.833	0.001	50.00	0.0006	0.002085
Al	27	3	He	-1.398	0.0013	60.00	0.0006	0.002085
K	39	3	He	1.195	0.4126	20114.46	0.0012	0.4112
K	39	3	He	0.711	0.412	20264.61	0.0012	0.4112
K	39	3	He	16.037	0.43	20314.76	0.0012	0.4112
Ca	44	3	He	-3.624	0.0031	150.01	0.0001	0.003322
Ca	44	3	He	-7.033	0.0028	140.01	0.0001	0.003322
Ca	44	3	He	-2.173	0.0032	150.01	0.0001	0.003322
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	-0.355	0.0242	1182.06	0.0213	0.0318
V	51	3	He	-0.352	0.0243	1196.06	0.0213	0.0318
V	51	3	He	-0.351	0.0243	1150.05	0.0213	0.0318
Cr	52	3	He	-0.226	0.0363	1770.16	0.0294	0.04297
Cr	52	3	He	-0.134	0.039	1920.19	0.0294	0.04297
Cr	52	3	He	-0.086	0.0404	1910.20	0.0294	0.04297
Mn	55	3	He	-0.027	0.0025	120.00	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.233	0.0057	280.01	0.0124	0.002801
Mn	55	3	He	0.098	0.004	190.01	0.0124	0.002801
Fe	57	3	He	3.471	0.0047	230.01	0.0006	0.002732
Fe	57	3	He	0.201	0.0028	140.01	0.0006	0.002732
Fe	57	3	He	0.775	0.0032	150.01	0.0006	0.002732
Co	59	3	He	-0.01	0.0031	150.01	0.0549	0.003644
Co	59	3	He	-0.033	0.0018	90.00	0.0549	0.003644
Co	59	3	He	-0.016	0.0028	130.01	0.0549	0.003644
Ni	60	3	He	-1.148	0.0035	280.01	0.0093	0.01413
Ni	60	3	He	-1.178	0.0032	260.01	0.0093	0.01413
Ni	60	3	He	-1.129	0.0037	290.01	0.0093	0.01413
Cu	63	3	He	-0.028	0.0085	690.04	0.0274	0.009321
Cu	63	3	He	-0.107	0.0064	520.03	0.0274	0.009321
Cu	63	3	He	-0.17	0.0047	370.02	0.0274	0.009321
Zn	66	3	He	0.375	0.0071	570.03	0.0031	0.005913
Zn	66	3	He	0.511	0.0075	610.04	0.0031	0.005913
Zn	66	3	He	-0.244	0.0052	410.02	0.0031	0.005913
As	75	3	He	-0.047	0.0008	62.00	0.0021	0.0008698
As	75	3	He	0.006	0.0009	72.00	0.0021	0.0008698
As	75	3	He	0.005	0.0009	70.00	0.0021	0.0008698
Sr	88	3	He	0.134	0.0019	160.01	0.0088	0.0006843
Sr	88	3	He	0.003	0.0007	60.00	0.0088	0.0006843
Sr	88	3	He	0.084	0.0014	120.00	0.0088	0.0006843
Mo	98	3	He	0.087	0.0037	320.01	0.0219	0.001827
Mo	98	3	He	0.132	0.0047	400.02	0.0219	0.001827
Mo	98	3	He	0.1	0.004	340.02	0.0219	0.001827
Ag	107	3	He	0.005	0.0013	110.00	0.047	0.001064
Ag	107	3	He	-0.003	0.0009	80.00	0.047	0.001064
Ag	107	3	He	-0.013	0.0005	40.00	0.047	0.001064
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Cd	111	3	He	-0.011	0	0.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Sn	120	3	He	0.027	0.0153	1310.11	0.0154	0.01483
Sn	120	3	He	-0.073	0.0137	1160.09	0.0154	0.01483
Sn	120	3	He	0.075	0.016	1350.11	0.0154	0.01483
Sb	121	3	He	0.022	0.0006	50.00	0.0143	0.0002661
Sb	121	3	He	0.014	0.0005	40.00	0.0143	0.0002661
Sb	121	3	He	0.015	0.0005	40.00	0.0143	0.0002661
Ba	137	3	He	-0.031	0.0001	10.00	0.0048	0.0002665
Ba	137	3	He	-0.006	0.0002	20.00	0.0048	0.0002665
Ba	137	3	He	0.043	0.0005	40.00	0.0048	0.0002665
Tl	205	3	He	-0.101	0.0003	110.00	0.0246	0.002755
Tl	205	3	He	-0.1	0.0003	120.00	0.0246	0.002755
Tl	205	3	He	-0.103	0.0002	90.00	0.0246	0.002755
Pb	208	3	He	-0.025	0.0013	310.01	0.0324	0.002158
Pb	208	3	He	-0.025	0.0014	280.01	0.0324	0.002158
Pb	208	3	He	-0.027	0.0013	250.01	0.0324	0.002158
U	238	3	He	-0.008	0	10.00	0.0492	0.0004023
U	238	3	He	-0.004	0.0002	60.00	0.0492	0.0004023
U	238	3	He	-0.005	0.0002	50.00	0.0492	0.0004023
Sc	45	1	No Gas			2449372.15		
Sc	45	1	No Gas			2412283.25		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2502813.87		
Ge	72	1	No Gas			1158697.17		
Ge	72	1	No Gas			1142353.58		
Ge	72	1	No Gas			1168579.36		
Sc	45	2	H2			197708.69		
Sc	45	2	H2			195902.15		
Sc	45	2	H2			194069.49		
Ge	72	2	H2			157731.20		
Ge	72	2	H2			158064.50		
Ge	72	2	H2			155914.11		
In	115	2	H2			384439.92		
In	115	2	H2			387327.57		
In	115	2	H2			383593.47		
Sc	45	3	He			48752.19		
Sc	45	3	He			49183.66		
Sc	45	3	He			47247.35		
Ge	72	3	He			80708.53		
Ge	72	3	He			81552.66		
Ge	72	3	He			79430.27		
In	115	3	He			85915.10		
In	115	3	He			84657.68		
In	115	3	He			84445.92		
Tb	159	3	He			395550.93		
Tb	159	3	He			391522.38		
Tb	159	3	He			391649.99		
Bi	209	3	He			308629.35		
Bi	209	3	He			300933.10		
Bi	209	3	He			305273.71		

Quantitation Report

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Sample Type	CCV
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

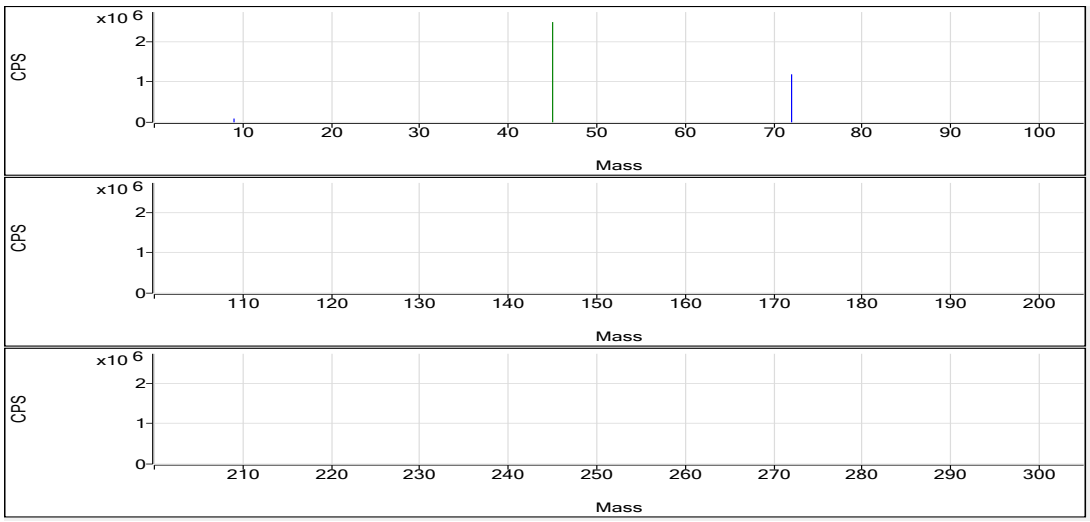
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.368	ppb	0.7	93162.17	0.0375	Pulse	0.5000	3
Se	78	72	H2	49.345	ppb	1.2	3554.23	0.0217	Pulse	1.5000	3
Na	23	45	He	4908.708	ppb	0.7	878713.87	17.9137	Pulse	0.1000	3
Mg	24	45	He	5109.539	ppb	0.3	453080.31	9.2364	Pulse	0.1000	3
Al	27	45	He	5102.086	ppb	0.8	145907.58	2.9745	Pulse	0.1000	3
K	39	45	He	5093.007	ppb	0.6	312731.02	6.3755	Pulse	0.1000	3
Ca	44	45	He	5084.381	ppb	1.5	17013.72	0.3468	Pulse	0.1000	3
Ti	47	45	He	5058.655	ppb	1.2	131967.99	2.6905	Pulse	0.1000	3
V	51	45	He	509.576	ppb	0.9	532723.11	10.8607	Pulse	0.5000	3
Cr	52	45	He	486.502	ppb	1.4	703900.48	14.3510	Pulse	0.1000	3
Mn	55	45	He	509.217	ppb	2.3	310634.94	6.3335	Pulse	0.1000	3
Fe	57	45	He	5015.340	ppb	1.1	140885.73	2.8723	Pulse	0.1000	3
Co	59	45	He	491.826	ppb	0.8	1324308.78	26.9987	Pulse	0.1000	3
Ni	60	72	He	491.192	ppb	1.6	372677.64	4.5738	Pulse	0.1000	3
Cu	63	72	He	472.093	ppb	1.7	1055742.56	12.9569	Pulse	0.1000	3
Zn	66	72	He	499.236	ppb	2.4	125371.27	1.5388	Pulse	0.1000	3
As	75	72	He	504.704	ppb	1.4	88315.56	1.0838	Pulse	0.5000	3
Sr	88	115	He	50.540	ppb	1.6	38118.83	0.4454	Pulse	0.1000	3
Mo	98	115	He	49.971	ppb	1.9	94008.26	1.0984	Pulse	0.1000	3
Ag	107	115	He	49.818	ppb	3.2	200602.87	2.3445	Pulse	0.1000	3
Cd	111	115	He	50.702	ppb	2.5	23111.11	0.2701	Pulse	0.5000	3
Sn	120	115	He	51.853	ppb	3.4	69685.83	0.8144	Pulse	0.1000	3
Sb	121	115	He	51.968	ppb	3.4	63385.80	0.7408	Pulse	0.1000	3
Ba	137	115	He	517.574	ppb	2.2	211697.51	2.4736	Pulse	0.1000	3
Tl	205	159	He	51.728	ppb	0.3	502042.61	1.2732	Pulse	0.1000	3
Pb	208	159	He	51.463	ppb	0.8	658403.88	1.6698	Pulse	0.1000	3
U	238	209	He	50.025	ppb	0.6	758216.45	2.4640	Pulse	0.1000	3

ISTD Table:

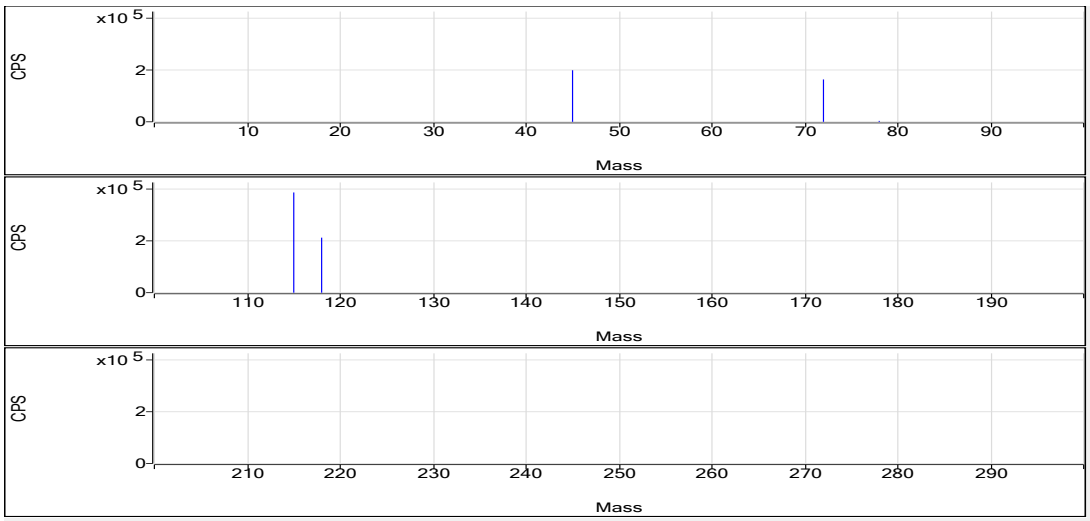
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2487178.61	0.6	95.4	Analog	0.1000	3
No Gas	Ge	72	1191041.29	0.6	92.4	Pulse	0.1000	3
H2	Sc	45	199673.65	0.5	96.9	Pulse	0.1000	3
H2	Ge	72	164069.49	0.8	100.8	Pulse	0.1000	3
H2	In	115	388159.28	0.4	96.2	Pulse	0.1000	3
He	Sc	45	49053.72	1.1	95.8	Pulse	0.1000	3
He	Ge	72	81499.27	2.1	99.6	Pulse	0.1000	3
He	In	115	85608.37	2.4	97.7	Pulse	0.1000	3
He	Tb	159	394312.53	0.5	98.2	Pulse	0.1000	3
He	Bi	209	307723.21	0.7	100.5	Pulse	0.1000	3

No Gas

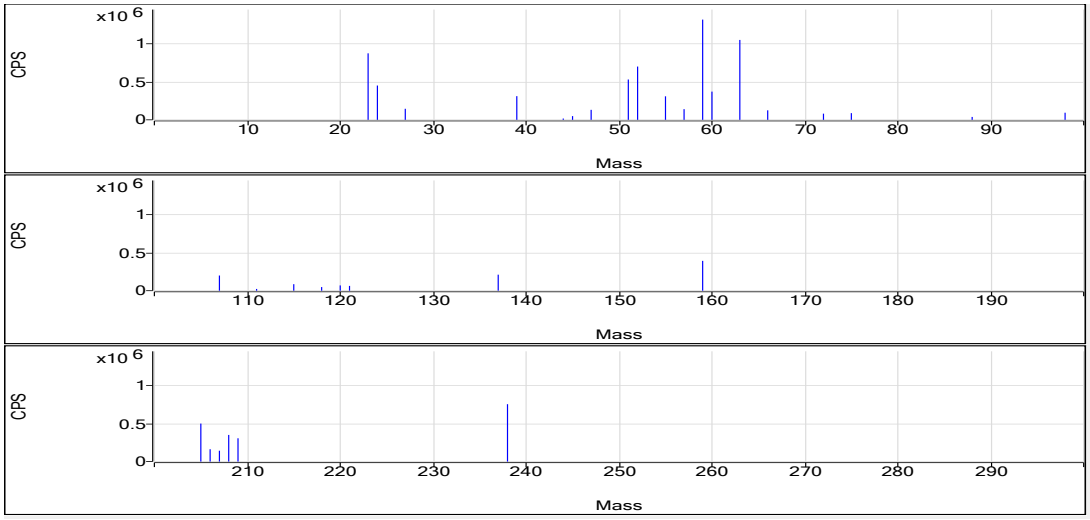


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	51.612	0.0376	93072.93	0.0007	3.404E-05
Be	9	1	No Gas	50.984	0.0372	92423.12	0.0007	3.404E-05
Be	9	1	No Gas	51.507	0.0376	93990.46	0.0007	3.404E-05
Se	78	2	H2	48.907	0.0215	3529.11	0.0004	3.546E-05
Se	78	2	H2	49.986	0.0219	3567.79	0.0004	3.546E-05
Se	78	2	H2	49.141	0.0216	3565.78	0.0004	3.546E-05
Na	23	3	He	4891.941	17.854	887269.44	0.0036	0.4171
Na	23	3	He	4888.5	17.8417	869827.88	0.0036	0.4171
Na	23	3	He	4945.684	18.0455	879044.28	0.0036	0.4171
Mg	24	3	He	5109.762	9.2368	459032.69	0.0018	0.004553
Mg	24	3	He	5093.768	9.2079	448909.76	0.0018	0.004553
Mg	24	3	He	5125.087	9.2645	451298.47	0.0018	0.004553
Al	27	3	He	5078.836	2.961	147148.91	0.0006	0.002085
Al	27	3	He	5146.611	3.0005	146280.52	0.0006	0.002085
Al	27	3	He	5080.811	2.9621	144293.30	0.0006	0.002085
K	39	3	He	5065.413	6.3432	315229.86	0.0012	0.4112
K	39	3	He	5128.503	6.4171	312847.63	0.0012	0.4112
K	39	3	He	5085.103	6.3662	310115.56	0.0012	0.4112
Ca	44	3	He	5154.634	0.3516	17470.84	0.0001	0.003322
Ca	44	3	He	5006.106	0.3415	16649.99	0.0001	0.003322
Ca	44	3	He	5092.402	0.3474	16920.34	0.0001	0.003322
Ti	47	3	He	4994.268	2.6563	132005.29	0.0005	0
Ti	47	3	He	5069.098	2.6961	131439.66	0.0005	0
Ti	47	3	He	5112.599	2.7192	132459.03	0.0005	0
V	51	3	He	504.209	10.7467	534067.44	0.0213	0.0318
V	51	3	He	511.088	10.8929	531055.69	0.0213	0.0318
V	51	3	He	513.431	10.9427	533046.19	0.0213	0.0318
Cr	52	3	He	478.922	14.1281	702110.46	0.0294	0.04297
Cr	52	3	He	489.617	14.4427	704117.02	0.0294	0.04297
Cr	52	3	He	490.967	14.4824	705473.97	0.0294	0.04297
Mn	55	3	He	498.393	6.1989	308059.98	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	507.85	6.3165	307943.86	0.0124	0.002801
Mn	55	3	He	521.406	6.485	315900.97	0.0124	0.002801
Fe	57	3	He	4965.599	2.8438	141325.55	0.0006	0.002732
Fe	57	3	He	5006.085	2.867	139771.97	0.0006	0.002732
Fe	57	3	He	5074.336	2.906	141559.68	0.0006	0.002732
Co	59	3	He	487.306	26.7506	1329399.04	0.0549	0.003644
Co	59	3	He	495.078	27.1772	1324959.36	0.0549	0.003644
Co	59	3	He	493.094	27.0683	1318567.95	0.0549	0.003644
Ni	60	3	He	482.881	4.4966	374310.81	0.0093	0.01413
Ni	60	3	He	498.95	4.6458	371217.14	0.0093	0.01413
Ni	60	3	He	491.746	4.5789	372504.96	0.0093	0.01413
Cu	63	3	He	463.165	12.7121	1058184.28	0.0274	0.009321
Cu	63	3	He	478.479	13.1321	1049302.72	0.0274	0.009321
Cu	63	3	He	474.634	13.0266	1059740.69	0.0274	0.009321
Zn	66	3	He	485.611	1.4969	124608.71	0.0031	0.005913
Zn	66	3	He	506.88	1.5622	124829.10	0.0031	0.005913
Zn	66	3	He	505.216	1.5571	126676.01	0.0031	0.005913
As	75	3	He	498.899	1.0714	89183.78	0.0021	0.0008698
As	75	3	He	512.472	1.1005	87933.93	0.0021	0.0008698
As	75	3	He	502.741	1.0796	87828.97	0.0021	0.0008698
Sr	88	3	He	50.253	0.4429	38573.19	0.0088	0.0006843
Sr	88	3	He	51.467	0.4535	37751.48	0.0088	0.0006843
Sr	88	3	He	49.9	0.4397	38031.81	0.0088	0.0006843
Mo	98	3	He	49.244	1.0825	94287.10	0.0219	0.001827
Mo	98	3	He	51.015	1.1214	93340.24	0.0219	0.001827
Mo	98	3	He	49.654	1.0915	94397.44	0.0219	0.001827
Ag	107	3	He	48.621	2.2882	199304.04	0.047	0.001064
Ag	107	3	He	51.607	2.4286	202155.80	0.047	0.001064
Ag	107	3	He	49.225	2.3166	200348.77	0.047	0.001064
Cd	111	3	He	49.968	0.2662	23183.26	0.0053	6.086E-05
Cd	111	3	He	52.165	0.2779	23129.10	0.0053	6.086E-05
Cd	111	3	He	49.972	0.2662	23020.96	0.0053	6.086E-05
Sn	120	3	He	50.629	0.7956	69294.22	0.0154	0.01483
Sn	120	3	He	53.853	0.8453	70359.14	0.0154	0.01483
Sn	120	3	He	51.079	0.8025	69404.14	0.0154	0.01483
Sb	121	3	He	50.976	0.7267	63295.10	0.0143	0.0002661
Sb	121	3	He	54.012	0.7699	64088.72	0.0143	0.0002661
Sb	121	3	He	50.916	0.7258	62773.59	0.0143	0.0002661
Ba	137	3	He	514.679	2.4598	214254.22	0.0048	0.0002665
Ba	137	3	He	530.09	2.5335	210880.68	0.0048	0.0002665
Ba	137	3	He	507.952	2.4277	209957.63	0.0048	0.0002665
Tl	205	3	He	51.629	1.2708	498365.27	0.0246	0.002755
Tl	205	3	He	51.642	1.2711	503374.13	0.0246	0.002755
Tl	205	3	He	51.912	1.2777	504388.43	0.0246	0.002755
Pb	208	3	He	51.881	1.6833	353549.41	0.0324	0.002158
Pb	208	3	He	51.063	1.6568	350863.32	0.0324	0.002158
Pb	208	3	He	51.446	1.6692	351537.49	0.0324	0.002158
U	238	3	He	50.009	2.4632	761483.97	0.0492	0.0004023
U	238	3	He	50.34	2.4795	756404.68	0.0492	0.0004023
U	238	3	He	49.727	2.4493	756760.69	0.0492	0.0004023
Sc	45	1	No Gas			2473064.96		
Sc	45	1	No Gas			2485981.21		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2502489.65		
Ge	72	1	No Gas			1188978.11		
Ge	72	1	No Gas			1185282.64		
Ge	72	1	No Gas			1198863.11		
Sc	45	2	H2			199065.64		
Sc	45	2	H2			199167.18		
Sc	45	2	H2			200788.14		
Ge	72	2	H2			164356.25		
Ge	72	2	H2			162576.76		
Ge	72	2	H2			165275.45		
In	115	2	H2			388659.92		
In	115	2	H2			389510.66		
In	115	2	H2			386307.26		
Sc	45	3	He			49695.97		
Sc	45	3	He			48752.56		
Sc	45	3	He			48712.62		
Ge	72	3	He			83242.28		
Ge	72	3	He			79903.67		
Ge	72	3	He			81351.85		
In	115	3	He			87475.16		
In	115	3	He			83611.52		
In	115	3	He			86861.56		
Tb	159	3	He			392172.30		
Tb	159	3	He			396012.14		
Tb	159	3	He			394753.16		
Bi	209	3	He			309140.41		
Bi	209	3	He			305061.01		
Bi	209	3	He			308968.20		

Quantitation Report

Data File Name	189_CCB.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H09B00.b
Acq Time	8/9/2023 8:15:43 PM
Sample Name	CCB 4654618
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/9/2023 1:29:24 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

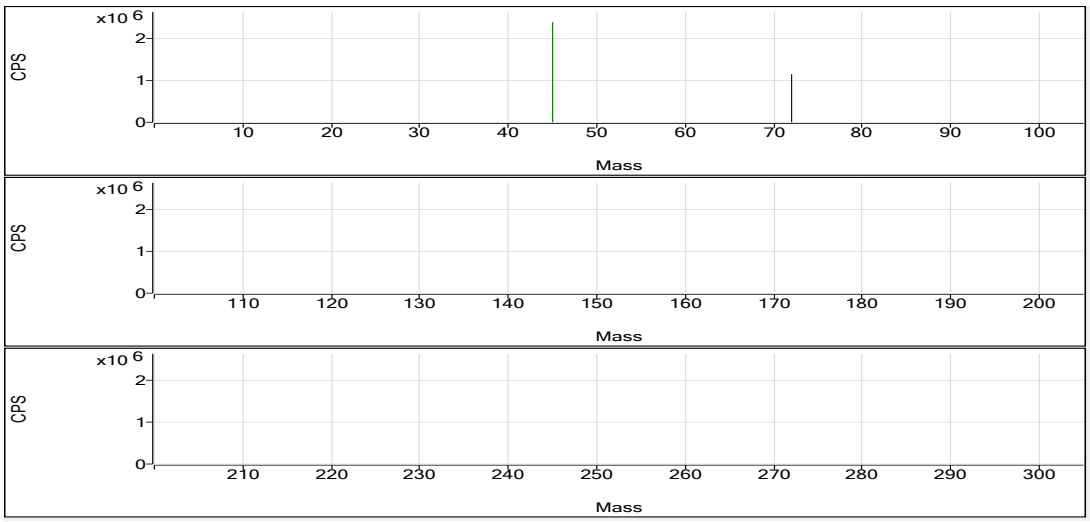
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.017	ppb	N/A	51.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.033	ppb	N/A	3.33	0.0000	Pulse	1.5000	3
Na	23	45	He	4.437	ppb	87.0	21152.39	0.4329	Pulse	0.1000	3
Mg	24	45	He	-0.366	ppb	N/A	190.01	0.0039	Pulse	0.1000	3
Al	27	45	He	-0.301	ppb	N/A	93.33	0.0019	Pulse	0.1000	3
K	39	45	He	9.863	ppb	75.5	20655.10	0.4227	Pulse	0.1000	3
Ca	44	45	He	-5.744	ppb	N/A	143.34	0.0029	Pulse	0.1000	3
Ti	47	45	He	1.799	ppb	81.5	46.67	0.0010	Pulse	0.1000	3
V	51	45	He	-0.262	ppb	N/A	1282.07	0.0262	Pulse	0.5000	3
Cr	52	45	He	0.035	ppb	375.7	2150.24	0.0440	Pulse	0.1000	3
Mn	55	45	He	0.027	ppb	125.1	153.34	0.0031	Pulse	0.1000	3
Fe	57	45	He	1.307	ppb	28.2	170.01	0.0035	Pulse	0.1000	3
Co	59	45	He	0.052	ppb	40.3	316.68	0.0065	Pulse	0.1000	3
Ni	60	72	He	-1.094	ppb	N/A	320.02	0.0040	Pulse	0.1000	3
Cu	63	72	He	-0.035	ppb	N/A	673.38	0.0084	Pulse	0.1000	3
Zn	66	72	He	-0.186	ppb	N/A	430.02	0.0053	Pulse	0.1000	3
As	75	72	He	0.181	ppb	31.6	101.33	0.0013	Pulse	0.5000	3
Sr	88	115	He	0.011	ppb	475.6	66.67	0.0008	Pulse	0.1000	3
Mo	98	115	He	0.011	ppb	447.9	176.68	0.0021	Pulse	0.1000	3
Ag	107	115	He	-0.002	ppb	N/A	83.34	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.002	ppb	711.8	6.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.083	ppb	63.4	1383.45	0.0161	Pulse	0.1000	3
Sb	121	115	He	0.014	ppb	55.4	40.00	0.0005	Pulse	0.1000	3
Ba	137	115	He	0.042	ppb	154.7	40.00	0.0005	Pulse	0.1000	3
Tl	205	159	He	-0.041	ppb	N/A	690.04	0.0017	Pulse	0.1000	3
Pb	208	159	He	-0.018	ppb	N/A	626.70	0.0016	Pulse	0.1000	3
U	238	209	He	0.033	ppb	14.7	623.37	0.0020	Pulse	0.1000	3

ISTD Table:

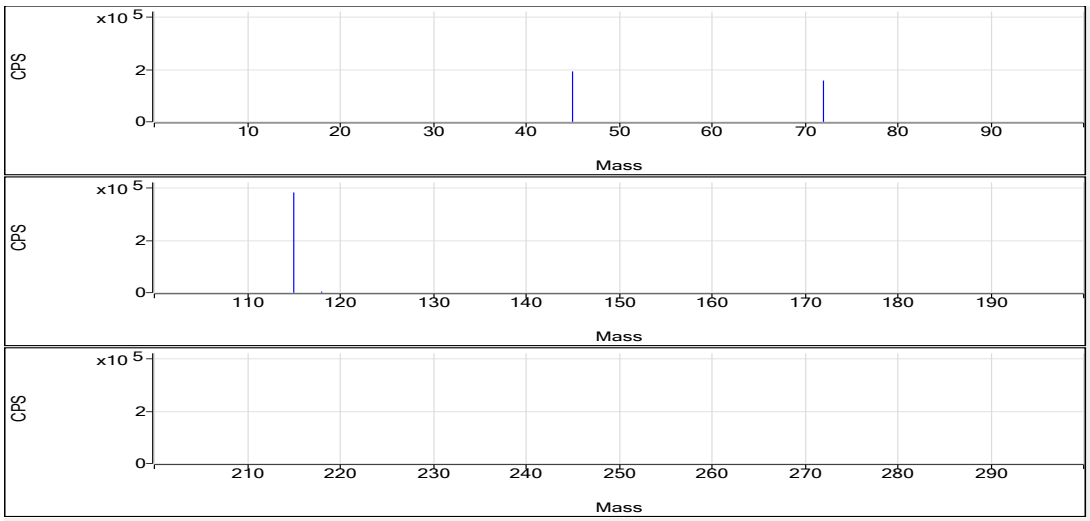
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2408146.37	0.6	92.3	Analog	0.1000	3
No Gas	Ge	72	1156710.27	0.9	89.7	Pulse	0.1000	3
H2	Sc	45	192881.26	1.7	93.6	Pulse	0.1000	3
H2	Ge	72	157876.76	1.0	97.0	Pulse	0.1000	3
H2	In	115	383379.29	0.5	95.0	Pulse	0.1000	3
He	Sc	45	48862.67	0.4	95.4	Pulse	0.1000	3
He	Ge	72	80621.37	1.1	98.5	Pulse	0.1000	3
He	In	115	85861.05	1.4	98.0	Pulse	0.1000	3
He	Tb	159	395192.62	0.8	98.4	Pulse	0.1000	3
He	Bi	209	304066.71	0.4	99.3	Pulse	0.1000	3

No Gas

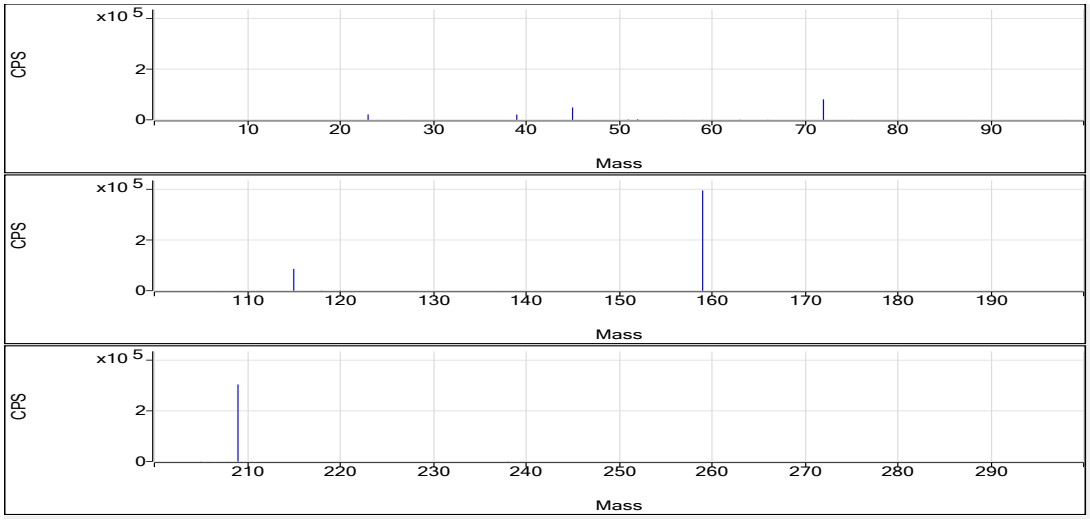


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.02	0	48.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.015	0	56.00	0.0007	3.404E-05
Be	9	1	No Gas	-0.018	0	50.00	0.0007	3.404E-05
Se	78	2	H2	-0.014	0	4.67	0.0004	3.546E-05
Se	78	2	H2	-0.052	0	2.00	0.0004	3.546E-05
Se	78	2	H2	-0.033	0	3.33	0.0004	3.546E-05
Na	23	3	He	8.318	0.4467	21916.91	0.0036	0.4171
Na	23	3	He	0.6	0.4192	20474.62	0.0036	0.4171
Na	23	3	He	4.394	0.4327	21065.65	0.0036	0.4171
Mg	24	3	He	-0.828	0.0031	150.01	0.0018	0.004553
Mg	24	3	He	-0.48	0.0037	180.01	0.0018	0.004553
Mg	24	3	He	0.209	0.0049	240.01	0.0018	0.004553
Al	27	3	He	0.27	0.0022	110.00	0.0006	0.002085
Al	27	3	He	-0.415	0.0018	90.00	0.0006	0.002085
Al	27	3	He	-0.757	0.0016	80.00	0.0006	0.002085
K	39	3	He	1.397	0.4128	20254.39	0.0012	0.4112
K	39	3	He	15.423	0.4292	20965.55	0.0012	0.4112
K	39	3	He	12.769	0.4261	20745.36	0.0012	0.4112
Ca	44	3	He	-12.967	0.0024	120.00	0.0001	0.003322
Ca	44	3	He	8.414	0.0039	190.01	0.0001	0.003322
Ca	44	3	He	-12.68	0.0025	120.01	0.0001	0.003322
Ti	47	3	He	1.15	0.0006	30.00	0.0005	0
Ti	47	3	He	0.77	0.0004	20.00	0.0005	0
Ti	47	3	He	3.476	0.0018	90.00	0.0005	0
V	51	3	He	-0.244	0.0266	1306.07	0.0213	0.0318
V	51	3	He	-0.244	0.0266	1300.07	0.0213	0.0318
V	51	3	He	-0.298	0.0255	1240.06	0.0213	0.0318
Cr	52	3	He	-0.019	0.0424	2080.23	0.0294	0.04297
Cr	52	3	He	-0.062	0.0412	2010.21	0.0294	0.04297
Cr	52	3	He	0.187	0.0485	2360.28	0.0294	0.04297
Mn	55	3	He	0.053	0.0035	170.01	0.0124	0.002801

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.011	0.0027	130.01	0.0124	0.002801
Mn	55	3	He	0.039	0.0033	160.01	0.0124	0.002801
Fe	57	3	He	1.282	0.0035	170.01	0.0006	0.002732
Fe	57	3	He	0.951	0.0033	160.01	0.0006	0.002732
Fe	57	3	He	1.688	0.0037	180.01	0.0006	0.002732
Co	59	3	He	0.075	0.0077	380.02	0.0549	0.003644
Co	59	3	He	0.034	0.0055	270.01	0.0549	0.003644
Co	59	3	He	0.046	0.0062	300.01	0.0549	0.003644
Ni	60	3	He	-1.126	0.0037	300.02	0.0093	0.01413
Ni	60	3	He	-0.984	0.005	400.02	0.0093	0.01413
Ni	60	3	He	-1.172	0.0032	260.01	0.0093	0.01413
Cu	63	3	He	-0.041	0.0082	670.04	0.0274	0.009321
Cu	63	3	He	-0.021	0.0087	700.05	0.0274	0.009321
Cu	63	3	He	-0.044	0.0081	650.04	0.0274	0.009321
Zn	66	3	He	-0.649	0.0039	320.01	0.0031	0.005913
Zn	66	3	He	-0.014	0.0059	470.03	0.0031	0.005913
Zn	66	3	He	0.107	0.0062	500.03	0.0031	0.005913
As	75	3	He	0.143	0.0012	96.00	0.0021	0.0008698
As	75	3	He	0.246	0.0014	112.00	0.0021	0.0008698
As	75	3	He	0.153	0.0012	96.00	0.0021	0.0008698
Sr	88	3	He	-0.025	0.0005	40.00	0.0088	0.0006843
Sr	88	3	He	-0.013	0.0006	50.00	0.0088	0.0006843
Sr	88	3	He	0.07	0.0013	110.01	0.0088	0.0006843
Mo	98	3	He	0.061	0.0032	270.02	0.0219	0.001827
Mo	98	3	He	-0.036	0.001	90.00	0.0219	0.001827
Mo	98	3	He	0.008	0.002	170.01	0.0219	0.001827
Ag	107	3	He	0.007	0.0014	120.01	0.047	0.001064
Ag	107	3	He	-0.01	0.0006	50.00	0.047	0.001064
Ag	107	3	He	-0.003	0.0009	80.00	0.047	0.001064
Cd	111	3	He	-0.003	0	4.00	0.0053	6.086E-05
Cd	111	3	He	0.014	0.0001	12.00	0.0053	6.086E-05
Cd	111	3	He	-0.007	0	2.00	0.0053	6.086E-05
Sn	120	3	He	0.024	0.0152	1300.11	0.0154	0.01483
Sn	120	3	He	0.102	0.0164	1430.12	0.0154	0.01483
Sn	120	3	He	0.123	0.0167	1420.12	0.0154	0.01483
Sb	121	3	He	0.014	0.0005	40.00	0.0143	0.0002661
Sb	121	3	He	0.022	0.0006	50.00	0.0143	0.0002661
Sb	121	3	He	0.006	0.0004	30.00	0.0143	0.0002661
Ba	137	3	He	0.115	0.0008	70.00	0.0048	0.0002665
Ba	137	3	He	-0.008	0.0002	20.00	0.0048	0.0002665
Ba	137	3	He	0.018	0.0004	30.00	0.0048	0.0002665
Tl	205	3	He	-0.025	0.0021	840.06	0.0246	0.002755
Tl	205	3	He	-0.049	0.0016	620.04	0.0246	0.002755
Tl	205	3	He	-0.049	0.0015	610.03	0.0246	0.002755
Pb	208	3	He	-0.009	0.0019	430.02	0.0324	0.002158
Pb	208	3	He	-0.02	0.0015	330.02	0.0324	0.002158
Pb	208	3	He	-0.024	0.0014	300.02	0.0324	0.002158
U	238	3	He	0.029	0.0018	550.03	0.0492	0.0004023
U	238	3	He	0.033	0.002	620.04	0.0492	0.0004023
U	238	3	He	0.039	0.0023	700.04	0.0492	0.0004023
Sc	45	1	No Gas			2420842.15		
Sc	45	1	No Gas			2391767.62		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2411829.34		
Ge	72	1	No Gas			1168037.40		
Ge	72	1	No Gas			1146499.67		
Ge	72	1	No Gas			1155593.73		
Sc	45	2	H2			191183.28		
Sc	45	2	H2			190818.16		
Sc	45	2	H2			196642.34		
Ge	72	2	H2			159653.81		
Ge	72	2	H2			156984.22		
Ge	72	2	H2			156992.25		
In	115	2	H2			385355.27		
In	115	2	H2			382927.49		
In	115	2	H2			381855.11		
Sc	45	3	He			49063.32		
Sc	45	3	He			48842.62		
Sc	45	3	He			48682.07		
Ge	72	3	He			81633.70		
Ge	72	3	He			80094.91		
Ge	72	3	He			80135.49		
In	115	3	He			85573.34		
In	115	3	He			87162.29		
In	115	3	He			84869.67		
Tb	159	3	He			392832.10		
Tb	159	3	He			398901.28		
Tb	159	3	He			393844.49		
Bi	209	3	He			302603.39		
Bi	209	3	He			305152.46		
Bi	209	3	He			304444.27		

US EPA Tune Check Report

Operator Name	us19_usr_ins22323
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA_ICPMS.b
Acq. Date-Time	8/9/2023 11:41:10 AM
Report Comment	E09 Tune Report
Instrument Name	G8403A SG20064740

[No Gas]

Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	5102	51018.00			0.321	5.000
24	10.00	23052	230520.35			0.191	5.000
25	10.00	3101	31011.37			0.423	5.000
26	10.00	3644	36437.60			0.597	5.000
59	10.00	42364	423643.76			0.240	5.000
115	10.00	61184	611840.56			0.494	5.000
206	10.00	13899	138987.94			1.108	5.000
207	10.00	12193	121932.68			1.080	5.000
208	10.00	29318	293181.88			1.012	5.000

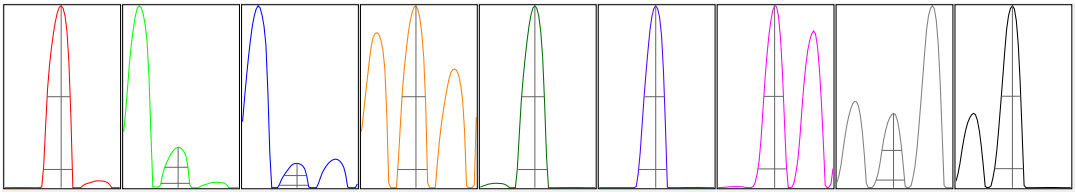
Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
9	5122	5114	5084	5101	5088
24	23001	23063	23033	23120	23043
25	3092	3116	3104	3084	3110
26	3642	3636	3622	3639	3680
59	42225	42440	42464	42399	42294
115	60680	61157	61271	61356	61456
206	13676	13804	13966	14009	14039
207	12021	12155	12152	12273	12367
208	28936	29177	29280	29482	29716

Integration Time [sec] 0.1

Resolution/Axis

US EPA Tune Check Report



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	9176.80	9.00	8.90 - 9.10	
24	41166.74	23.95	23.90 - 24.10	
25	5506.66	24.95	24.90 - 25.10	
26	6466.90	25.95	25.90 - 26.10	
59	77355.16	58.95	58.90 - 59.10	
115	121062.67	115.00	114.90 - 115.10	
206	28072.66	206.00	205.90 - 206.10	
207	24187.48	207.00	206.90 - 207.10	
208	59164.71	208.00	207.90 - 208.10	

Mass	W-50%	W-10%	W-10% (Required)	W-10% (Flag)
9	0.59	0.744	0.900	
24	0.60	0.739	0.900	
25	0.59	0.758	0.900	
26	0.60	0.761	0.900	
59	0.58	0.774	0.900	
115	0.52	0.725	0.900	
206	0.50	0.740	0.900	
207	0.51	0.732	0.900	
208	0.50	0.743	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	235
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	General Purpose	Nebulizer Gas	1.05 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	0.90 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	10.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	8.0 V	Deflect	12.8 V
Extract 2	-165.0 V	Cell Entrance	-30 V	Plate Bias	-45 V
Omega Bias	-90 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.5 V

US EPA Tune Check Report

He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	170 V		

QP Parameters

Mass Gain	131	Axis Gain	1.0004	QP Bias	-2.5 V
Mass Offset	124	Axis Offset	-0.01		

Hardware Settings

Torch

Torch H	-0.8 mm	Torch V	-0.7 mm		

EM

Discriminator	3.8 mV	Analog HV	2187 V	Pulse HV	1732 V

Quantitation Report

Data File Name	023CALB.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	8/10/2023 8:01:28 AM
Sample Name	ICIS 4654618
Sample Type	CalBlk
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

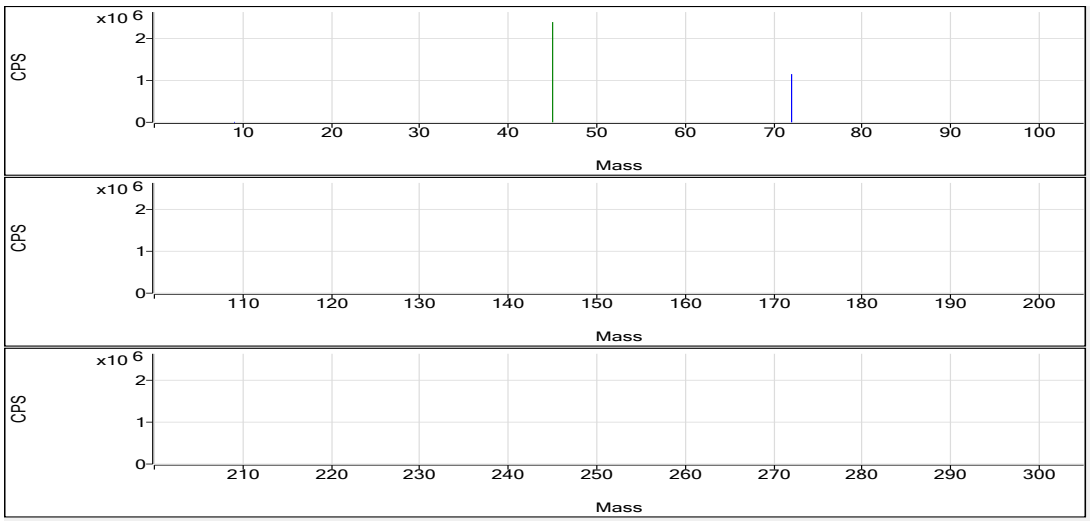
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.000	ppb	N/A	11.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.000	ppb	N/A	2.00	0.0000	Pulse	1.5000	3
Na	23	45	He	0.000	ppb	N/A	16089.21	0.3452	Pulse	0.1000	3
Mg	24	45	He	0.000	ppb	N/A	163.34	0.0035	Pulse	0.1000	3
Al	27	45	He	0.000	ppb	N/A	30.00	0.0006	Pulse	0.1000	3
K	39	45	He	0.000	ppb	N/A	18425.44	0.3951	Pulse	0.1000	3
Ca	44	45	He	0.000	ppb	N/A	126.67	0.0027	Pulse	0.1000	3
Ti	47	45	He	0.000	ppb	N/A	3.33	0.0001	Pulse	0.1000	3
V	51	45	He	0.000	ppb	N/A	1160.06	0.0249	Pulse	0.5000	3
Cr	52	45	He	0.000	ppb	N/A	1866.85	0.0400	Pulse	0.1000	3
Mn	55	45	He	0.000	ppb	N/A	123.34	0.0026	Pulse	0.1000	3
Fe	57	45	He	0.000	ppb	N/A	66.67	0.0014	Pulse	0.1000	3
Co	59	45	He	0.000	ppb	N/A	100.00	0.0021	Pulse	0.1000	3
Ni	60	72	He	0.000	ppb	N/A	230.01	0.0028	Pulse	0.1000	3
Cu	63	72	He	0.000	ppb	N/A	386.69	0.0048	Pulse	0.1000	3
Zn	66	72	He	0.000	ppb	N/A	310.02	0.0038	Pulse	0.1000	3
As	75	72	He	0.000	ppb	N/A	65.33	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.000	ppb	N/A	83.34	0.0010	Pulse	0.1000	3
Mo	98	115	He	0.000	ppb	N/A	23.33	0.0003	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	N/A	53.33	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.000	ppb	N/A	0.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.000	ppb	N/A	1420.12	0.0165	Pulse	0.1000	3
Sb	121	115	He	0.000	ppb	N/A	23.33	0.0003	Pulse	0.1000	3
Ba	137	115	He	0.000	ppb	N/A	20.00	0.0002	Pulse	0.1000	3
Tl	205	159	He	0.000	ppb	N/A	53.33	0.0001	Pulse	0.1000	3
Pb	208	159	He	0.000	ppb	N/A	426.68	0.0011	Pulse	0.1000	3
U	238	209	He	0.000	ppb	N/A	23.33	0.0001	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2398817.93	2.1	100.0	Analog	0.1000	3
No Gas	Ge	72	1153302.77	0.8	100.0	Pulse	0.1000	3
H2	Sc	45	187008.05	0.2	100.0	Pulse	0.1000	3
H2	Ge	72	163714.51	0.9	100.0	Pulse	0.1000	3
H2	In	115	389092.85	0.6	100.0	Pulse	0.1000	3
He	Sc	45	46642.13	3.1	100.0	Pulse	0.1000	3
He	Ge	72	81194.04	1.0	100.0	Pulse	0.1000	3
He	In	115	86196.29	1.5	100.0	Pulse	0.1000	3
He	Tb	159	398606.67	0.9	100.0	Pulse	0.1000	3
He	Bi	209	309284.32	0.7	100.0	Pulse	0.1000	3

No Gas



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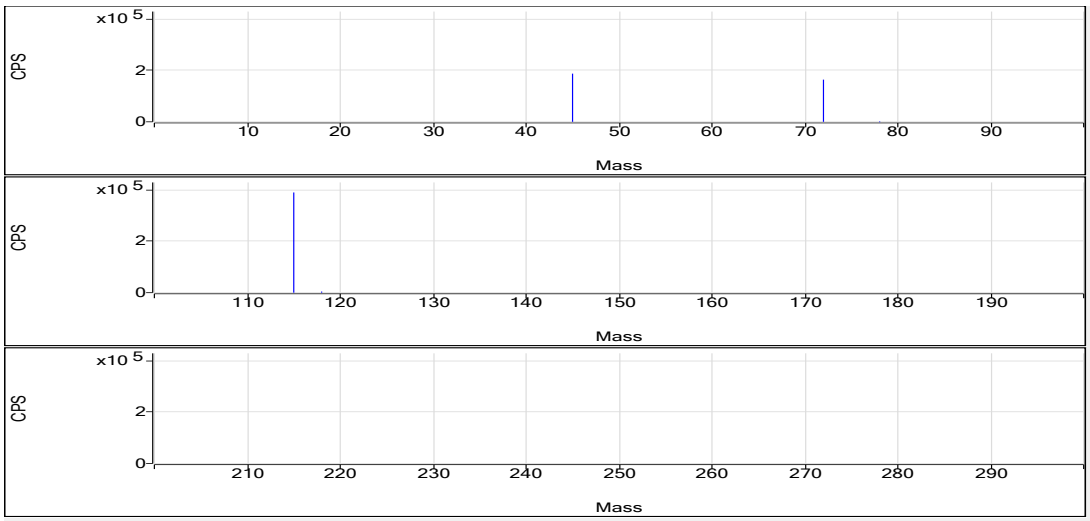
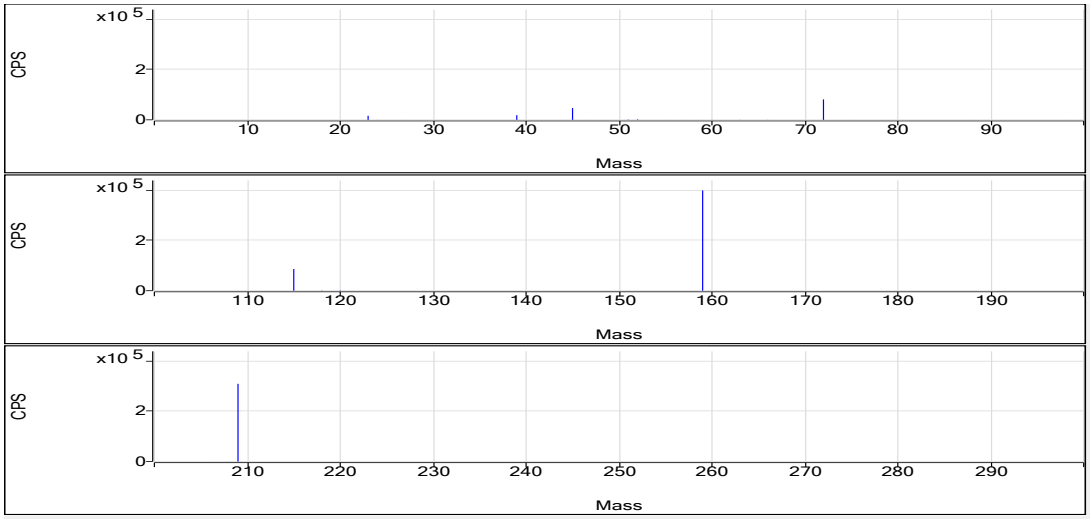


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0	0	12.00	0.0008	4.685E-06
Be	9	1	No Gas	0.003	0	18.00	0.0008	4.685E-06
Be	9	1	No Gas	-0.004	0	4.00	0.0008	4.685E-06
Se	78	2	H2	0	0	2.00	0.0004	1.219E-05
Se	78	2	H2	-0.029	0	0.00	0.0004	1.219E-05
Se	78	2	H2	0.029	0	4.00	0.0004	1.219E-05
Na	23	3	He	-2.407	0.3365	16019.22	0.0036	0.3452
Na	23	3	He	3.193	0.3566	16039.02	0.0036	0.3452
Na	23	3	He	-0.786	0.3423	16209.39	0.0036	0.3452
Mg	24	3	He	-0.427	0.0027	130.01	0.0018	0.003497
Mg	24	3	He	-0.214	0.0031	140.00	0.0018	0.003497
Mg	24	3	He	0.641	0.0046	220.01	0.0018	0.003497
Al	27	3	He	0.337	0.0008	40.00	0.0006	0.0006432
Al	27	3	He	0.041	0.0007	30.00	0.0006	0.0006432
Al	27	3	He	-0.377	0.0004	20.00	0.0006	0.0006432
K	39	3	He	-4.192	0.3902	18572.24	0.0012	0.3951
K	39	3	He	0.976	0.3962	17821.31	0.0012	0.3951
K	39	3	He	3.216	0.3988	18882.77	0.0012	0.3951
Ca	44	3	He	0.24	0.0027	130.00	0.0001	0.002715
Ca	44	3	He	-0.698	0.0027	120.00	0.0001	0.002715
Ca	44	3	He	0.457	0.0027	130.01	0.0001	0.002715
Ti	47	3	He	0.261	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	0.014	0.0252	1198.06	0.0219	0.02486
V	51	3	He	-0.017	0.0245	1102.05	0.0219	0.02486
V	51	3	He	0.003	0.0249	1180.06	0.0219	0.02486
Cr	52	3	He	0.075	0.0422	2010.21	0.0299	0.03997
Cr	52	3	He	-0.095	0.0371	1670.15	0.0299	0.03997
Cr	52	3	He	0.019	0.0406	1920.20	0.0299	0.03997
Mn	55	3	He	0.105	0.004	190.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.015	0.0024	110.00	0.0128	0.002639
Mn	55	3	He	-0.09	0.0015	70.00	0.0128	0.002639
Fe	57	3	He	-1.013	0.0008	40.00	0.0006	0.001429
Fe	57	3	He	-0.163	0.0013	60.00	0.0006	0.001429
Fe	57	3	He	1.176	0.0021	100.00	0.0006	0.001429
Co	59	3	He	-0.001	0.0021	100.00	0.0563	0.002149
Co	59	3	He	0.005	0.0024	110.01	0.0563	0.002149
Co	59	3	He	-0.004	0.0019	90.00	0.0563	0.002149
Ni	60	3	He	-0.004	0.0028	230.01	0.0086	0.002834
Ni	60	3	He	0.046	0.0032	260.01	0.0086	0.002834
Ni	60	3	He	-0.042	0.0025	200.01	0.0086	0.002834
Cu	63	3	He	0.038	0.0057	470.02	0.0257	0.004757
Cu	63	3	He	-0.03	0.004	320.02	0.0257	0.004757
Cu	63	3	He	-0.007	0.0046	370.02	0.0257	0.004757
Zn	66	3	He	-0.014	0.0038	310.02	0.0029	0.003818
Zn	66	3	He	-0.117	0.0035	280.01	0.0029	0.003818
Zn	66	3	He	0.131	0.0042	340.02	0.0029	0.003818
As	75	3	He	-0.12	0.0006	46.00	0.002	0.0008061
As	75	3	He	0.079	0.001	78.00	0.002	0.0008061
As	75	3	He	0.041	0.0009	72.00	0.002	0.0008061
Sr	88	3	He	-0.016	0.0008	70.00	0.009	0.0009645
Sr	88	3	He	0.046	0.0014	120.01	0.009	0.0009645
Sr	88	3	He	-0.03	0.0007	60.00	0.009	0.0009645
Mo	98	3	He	-0.002	0.0002	20.00	0.0219	0.0002706
Mo	98	3	He	-0.002	0.0002	20.00	0.0219	0.0002706
Mo	98	3	He	0.003	0.0003	30.00	0.0219	0.0002706
Ag	107	3	He	0.004	0.0008	70.00	0.0465	0.0006206
Ag	107	3	He	-0.003	0.0005	40.00	0.0465	0.0006206
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Sn	120	3	He	-0.005	0.0164	1390.11	0.0158	0.01648
Sn	120	3	He	-0.014	0.0163	1420.12	0.0158	0.01648
Sn	120	3	He	0.019	0.0168	1450.12	0.0158	0.01648
Sb	121	3	He	-0.002	0.0002	20.00	0.0149	0.0002698
Sb	121	3	He	0.013	0.0005	40.00	0.0149	0.0002698
Sb	121	3	He	-0.01	0.0001	10.00	0.0149	0.0002698
Ba	137	3	He	0.001	0.0002	20.00	0.0048	0.0002317
Ba	137	3	He	0.023	0.0003	30.00	0.0048	0.0002317
Ba	137	3	He	-0.024	0.0001	10.00	0.0048	0.0002317
Tl	205	3	He	0	0.0001	50.00	0.0247	0.0001339
Tl	205	3	He	0.001	0.0002	60.00	0.0247	0.0001339
Tl	205	3	He	0	0.0001	50.00	0.0247	0.0001339
Pb	208	3	He	0.001	0.0011	320.02	0.0327	0.00107
Pb	208	3	He	0.001	0.0011	250.01	0.0327	0.00107
Pb	208	3	He	-0.003	0.001	220.01	0.0327	0.00107
U	238	3	He	0	0.0001	20.00	0.0493	7.55E-05
U	238	3	He	-0.001	0	10.00	0.0493	7.55E-05
U	238	3	He	0.001	0.0001	40.00	0.0493	7.55E-05
Sc	45	1	No Gas			2400611.84		
Sc	45	1	No Gas			2448308.71		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2347533.25		
Ge	72	1	No Gas			1149635.14		
Ge	72	1	No Gas			1164291.70		
Ge	72	1	No Gas			1145981.47		
Sc	45	2	H2			186786.97		
Sc	45	2	H2			186905.90		
Sc	45	2	H2			187331.29		
Ge	72	2	H2			162042.25		
Ge	72	2	H2			164086.29		
Ge	72	2	H2			165014.98		
In	115	2	H2			388188.67		
In	115	2	H2			391562.14		
In	115	2	H2			387527.73		
Sc	45	3	He			47598.45		
Sc	45	3	He			44980.23		
Sc	45	3	He			47347.72		
Ge	72	3	He			82095.69		
Ge	72	3	He			80506.82		
Ge	72	3	He			80979.60		
In	115	3	He			84818.94		
In	115	3	He			87353.49		
In	115	3	He			86438.82		
Tb	159	3	He			402724.41		
Tb	159	3	He			396459.60		
Tb	159	3	He			396636.01		
Bi	209	3	He			311672.50		
Bi	209	3	He			308186.95		
Bi	209	3	He			307993.51		

Quantitation Report

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Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	8/10/2023 8:03:31 AM
Sample Name	STD1 4674033
Sample Type	CalStd
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

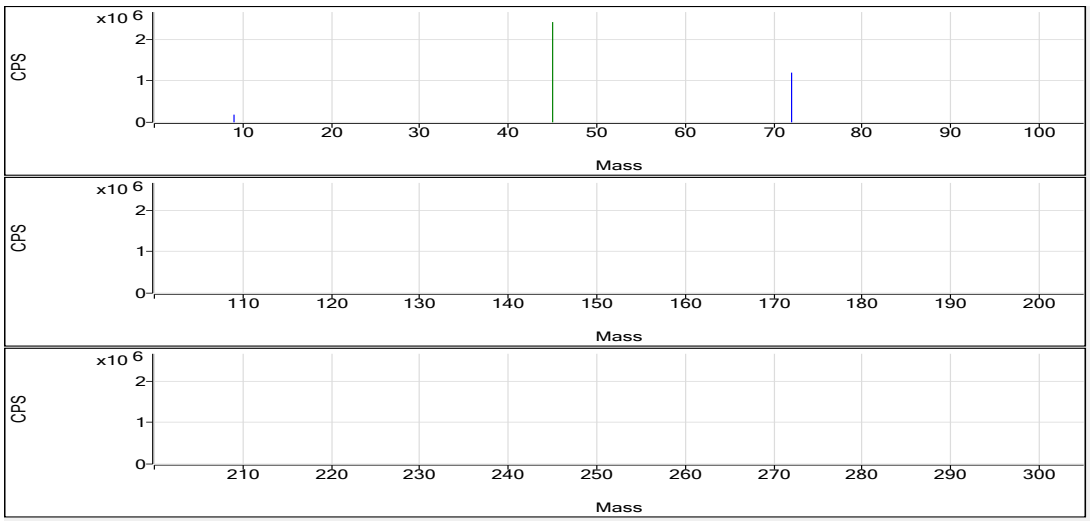
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	100.000	ppb	0.7	184120.12	0.0763	Pulse	0.5000	3
Se	78	72	H2	100.000	ppb	1.2	6768.50	0.0417	Pulse	1.5000	3
Na	23	45	He	10000.000	ppb	1.3	1676784.66	36.1156	Analog	0.1000	3
Mg	24	45	He	10000.000	ppb	0.3	833281.24	17.9467	Pulse	0.1000	3
Al	27	45	He	10000.000	ppb	0.3	271671.49	5.8510	Pulse	0.1000	3
K	39	45	He	10000.000	ppb	0.6	558939.00	12.0383	Pulse	0.1000	3
Ca	44	45	He	10000.000	ppb	2.2	31491.38	0.6782	Pulse	0.1000	3
Ti	47	45	He	10000.000	ppb	0.7	249310.77	5.3696	Pulse	0.1000	3
V	51	45	He	1000.000	ppb	0.6	1016077.31	21.8840	Pulse	0.5000	3
Cr	52	45	He	1000.000	ppb	0.9	1392012.79	29.9807	Analog	0.1000	3
Mn	55	45	He	1000.000	ppb	0.7	596000.11	12.8365	Pulse	0.1000	3
Fe	57	45	He	10000.000	ppb	0.8	269817.25	5.8113	Pulse	0.1000	3
Co	59	45	He	1000.000	ppb	0.6	2613351.11	56.2844	Analog	0.1000	3
Ni	60	72	He	1000.000	ppb	0.1	703401.37	8.5860	Pulse	0.1000	3
Cu	63	72	He	1000.000	ppb	0.6	2103440.49	25.6758	Analog	0.1000	3
Zn	66	72	He	1000.000	ppb	0.6	238844.32	2.9154	Pulse	0.1000	3
As	75	72	He	1000.000	ppb	0.5	167914.56	2.0497	Pulse	0.5000	3
Sr	88	115	He	100.000	ppb	1.4	75890.23	0.8979	Pulse	0.1000	3
Mo	98	115	He	100.000	ppb	0.9	185318.88	2.1929	Pulse	0.1000	3
Ag	107	115	He	100.000	ppb	1.3	392899.22	4.6493	Pulse	0.1000	3
Cd	111	115	He	100.000	ppb	0.7	45186.03	0.5347	Pulse	0.5000	3
Sn	120	115	He	100.000	ppb	0.5	134908.31	1.5963	Pulse	0.1000	3
Sb	121	115	He	100.000	ppb	0.3	125552.05	1.4856	Pulse	0.1000	3
Ba	137	115	He	1000.000	ppb	0.3	405612.73	4.7996	Pulse	0.1000	3
Tl	205	159	He	100.000	ppb	1.2	979417.64	2.4728	Pulse	0.1000	3
Pb	208	159	He	100.000	ppb	0.7	1296803.26	3.2740	Pulse	0.1000	3
U	238	209	He	100.000	ppb	0.9	1502888.15	4.9261	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2413614.60	0.3	100.6	Analog	0.1000	3
No Gas	Ge	72	1196151.31	0.3	103.7	Pulse	0.1000	3
H2	Sc	45	188433.96	1.5	100.8	Pulse	0.1000	3
H2	Ge	72	162259.14	1.9	99.1	Pulse	0.1000	3
H2	In	115	386577.38	0.5	99.4	Pulse	0.1000	3
He	Sc	45	46431.67	0.9	99.5	Pulse	0.1000	3
He	Ge	72	81924.69	0.8	100.9	Pulse	0.1000	3
He	In	115	84511.42	0.6	98.0	Pulse	0.1000	3
He	Tb	159	396093.30	0.4	99.4	Pulse	0.1000	3
He	Bi	209	305102.46	0.8	98.6	Pulse	0.1000	3

No Gas



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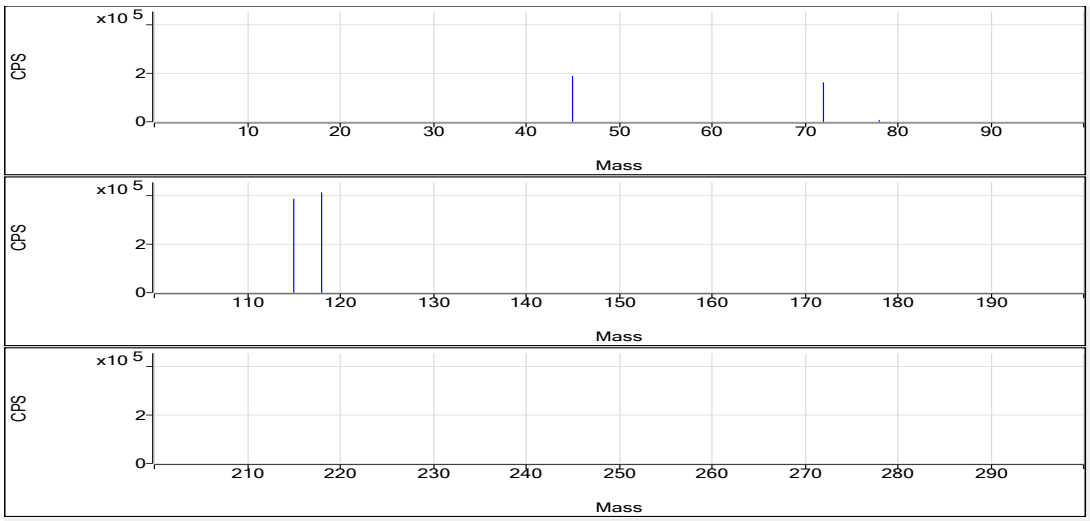
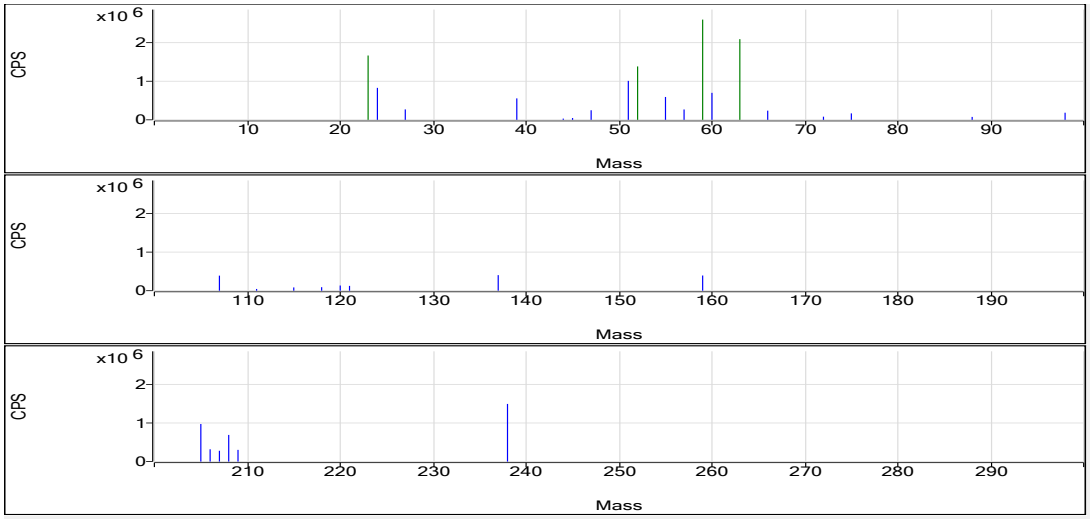


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	99.631	0.076	182774.08	0.0008	4.685E-06
Be	9	1	No Gas	99.513	0.0759	183385.19	0.0008	4.685E-06
Be	9	1	No Gas	100.856	0.0769	186201.08	0.0008	4.685E-06
Se	78	2	H2	101.014	0.0421	6690.23	0.0004	1.219E-05
Se	78	2	H2	98.707	0.0412	6762.28	0.0004	1.219E-05
Se	78	2	H2	100.279	0.0418	6852.98	0.0004	1.219E-05
Na	23	3	He	9859.817	35.6142	1671249.35	0.0036	0.3452
Na	23	3	He	10113.622	36.5221	1686379.35	0.0036	0.3452
Na	23	3	He	10026.561	36.2107	1672725.29	0.0036	0.3452
Mg	24	3	He	9967.036	17.8876	839400.61	0.0018	0.003497
Mg	24	3	He	10022.829	17.9877	830567.41	0.0018	0.003497
Mg	24	3	He	10010.135	17.9649	829875.69	0.0018	0.003497
Al	27	3	He	10000.75	5.8514	274587.03	0.0006	0.0006432
Al	27	3	He	9973.639	5.8356	269452.98	0.0006	0.0006432
Al	27	3	He	10025.611	5.866	270974.47	0.0006	0.0006432
K	39	3	He	9927.687	11.9541	560965.54	0.0012	0.3951
K	39	3	He	10038.482	12.0831	557929.72	0.0012	0.3951
K	39	3	He	10033.832	12.0777	557921.75	0.0012	0.3951
Ca	44	3	He	9996.402	0.678	31815.73	0.0001	0.002715
Ca	44	3	He	10220.822	0.6932	32005.72	0.0001	0.002715
Ca	44	3	He	9782.775	0.6636	30652.68	0.0001	0.002715
Ti	47	3	He	9949.482	5.3424	250701.68	0.0005	7.003E-05
Ti	47	3	He	10076.311	5.4105	249827.38	0.0005	7.003E-05
Ti	47	3	He	9974.207	5.3557	247403.24	0.0005	7.003E-05
V	51	3	He	993.547	21.743	1020321.13	0.0219	0.02486
V	51	3	He	1003.867	21.9686	1014381.56	0.0219	0.02486
V	51	3	He	1002.587	21.9406	1013529.25	0.0219	0.02486
Cr	52	3	He	994.657	29.8207	1399381.54	0.0299	0.03997
Cr	52	3	He	1010.333	30.2901	1398620.76	0.0299	0.03997
Cr	52	3	He	995.011	29.8313	1378036.07	0.0299	0.03997
Mn	55	3	He	993.371	12.7514	598380.23	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	998.939	12.8229	592087.49	0.0128	0.002639
Mn	55	3	He	1007.69	12.9352	597532.61	0.0128	0.002639
Fe	57	3	He	9911.693	5.76	270298.02	0.0006	0.001429
Fe	57	3	He	10076.27	5.8556	270380.17	0.0006	0.001429
Fe	57	3	He	10012.036	5.8183	268773.57	0.0006	0.001429
Co	59	3	He	997.717	56.156	2635201.21	0.0563	0.002149
Co	59	3	He	995.562	56.0347	2587357.93	0.0563	0.002149
Co	59	3	He	1006.721	56.6627	2617494.18	0.0563	0.002149
Ni	60	3	He	999.532	8.582	709637.18	0.0086	0.002834
Ni	60	3	He	999.463	8.5814	701295.77	0.0086	0.002834
Ni	60	3	He	1001.005	8.5946	699271.16	0.0086	0.002834
Cu	63	3	He	997.227	25.6046	2117230.28	0.0257	0.004757
Cu	63	3	He	995.985	25.5728	2089884.34	0.0257	0.004757
Cu	63	3	He	1006.789	25.8501	2103206.84	0.0257	0.004757
Zn	66	3	He	1000.374	2.9165	241165.29	0.0029	0.003818
Zn	66	3	He	993.76	2.8973	236773.34	0.0029	0.003818
Zn	66	3	He	1005.867	2.9325	238594.33	0.0029	0.003818
As	75	3	He	995.131	2.0397	168661.33	0.002	0.0008061
As	75	3	He	1000.147	2.05	167530.33	0.002	0.0008061
As	75	3	He	1004.722	2.0593	167552.03	0.002	0.0008061
Sr	88	3	He	99.516	0.8936	75712.47	0.009	0.0009645
Sr	88	3	He	98.921	0.8883	74525.85	0.009	0.0009645
Sr	88	3	He	101.562	0.912	77432.37	0.009	0.0009645
Mo	98	3	He	99.682	2.1859	185206.83	0.0219	0.0002706
Mo	98	3	He	101.05	2.2159	185917.22	0.0219	0.0002706
Mo	98	3	He	99.268	2.1769	184832.58	0.0219	0.0002706
Ag	107	3	He	99.608	4.6311	392376.32	0.0465	0.0006206
Ag	107	3	He	101.498	4.719	395922.22	0.0465	0.0006206
Ag	107	3	He	98.894	4.5979	390399.13	0.0465	0.0006206
Cd	111	3	He	99.784	0.5335	45204.77	0.0053	0
Cd	111	3	He	100.816	0.5391	45226.82	0.0053	0
Cd	111	3	He	99.399	0.5315	45126.50	0.0053	0
Sn	120	3	He	99.368	1.5864	134407.18	0.0158	0.01648
Sn	120	3	He	100.28	1.6008	134304.54	0.0158	0.01648
Sn	120	3	He	100.352	1.6019	136013.21	0.0158	0.01648
Sb	121	3	He	99.756	1.482	125564.36	0.0149	0.0002698
Sb	121	3	He	99.898	1.4841	124516.57	0.0149	0.0002698
Sb	121	3	He	100.345	1.4907	126575.21	0.0149	0.0002698
Ba	137	3	He	999.813	4.7987	406574.95	0.0048	0.0002317
Ba	137	3	He	1003.417	4.816	404060.03	0.0048	0.0002317
Ba	137	3	He	996.77	4.7841	406203.20	0.0048	0.0002317
Tl	205	3	He	99.28	2.455	975483.89	0.0247	0.0001339
Tl	205	3	He	101.328	2.5056	987946.08	0.0247	0.0001339
Tl	205	3	He	99.392	2.4577	974822.95	0.0247	0.0001339
Pb	208	3	He	99.557	3.2595	693976.16	0.0327	0.00107
Pb	208	3	He	100.754	3.2987	698896.63	0.0327	0.00107
Pb	208	3	He	99.689	3.2639	691421.16	0.0327	0.00107
U	238	3	He	99.382	4.8956	1496903.57	0.0493	7.55E-05
U	238	3	He	99.611	4.9069	1507364.51	0.0493	7.55E-05
U	238	3	He	101.007	4.9757	1504396.38	0.0493	7.55E-05
Sc	45	1	No Gas			2404878.40		
Sc	45	1	No Gas			2415758.71		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2420206.68		
Ge	72	1	No Gas			1196304.04		
Ge	72	1	No Gas			1199978.26		
Ge	72	1	No Gas			1192171.62		
Sc	45	2	H2			187434.31		
Sc	45	2	H2			186339.33		
Sc	45	2	H2			191528.24		
Ge	72	2	H2			158754.37		
Ge	72	2	H2			164214.33		
Ge	72	2	H2			163808.72		
In	115	2	H2			388200.97		
In	115	2	H2			384558.31		
In	115	2	H2			386972.85		
Sc	45	3	He			46926.48		
Sc	45	3	He			46174.24		
Sc	45	3	He			46194.28		
Ge	72	3	He			82689.35		
Ge	72	3	He			81723.07		
Ge	72	3	He			81361.66		
In	115	3	He			85433.02		
In	115	3	He			84617.23		
In	115	3	He			85623.97		
Tb	159	3	He			397351.48		
Tb	159	3	He			394292.53		
Tb	159	3	He			396635.89		
Bi	209	3	He			305764.25		
Bi	209	3	He			307191.97		
Bi	209	3	He			302351.17		

Quantitation Report

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Sample Type	ICV
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

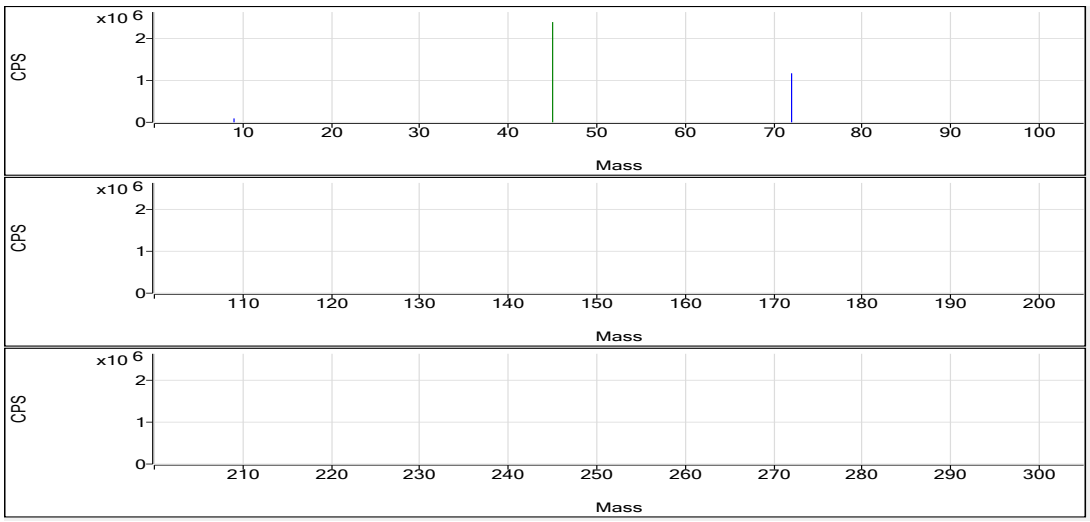
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.838	ppb	1.3	92283.95	0.0388	Pulse	0.5000	3
Se	78	72	H2	50.001	ppb	1.7	3378.63	0.0209	Pulse	1.5000	3
Na	23	45	He	4702.655	ppb	1.2	804705.25	17.1668	Pulse	0.1000	3
Mg	24	45	He	4963.057	ppb	0.2	417615.07	8.9088	Pulse	0.1000	3
Al	27	45	He	4965.717	ppb	1.3	136212.65	2.9058	Pulse	0.1000	3
K	39	45	He	4938.533	ppb	1.0	288056.74	6.1451	Pulse	0.1000	3
Ca	44	45	He	5165.481	ppb	3.3	16483.15	0.3517	Pulse	0.1000	3
Ti	47	45	He	4889.115	ppb	1.3	123060.62	2.6253	Pulse	0.1000	3
V	51	45	He	491.290	ppb	0.6	504577.98	10.7641	Pulse	0.5000	3
Cr	52	45	He	472.146	ppb	0.5	664532.13	14.1764	Pulse	0.1000	3
Mn	55	45	He	494.285	ppb	0.5	297486.32	6.3462	Pulse	0.1000	3
Fe	57	45	He	4985.836	ppb	0.5	135855.05	2.8982	Pulse	0.1000	3
Co	59	45	He	474.418	ppb	0.7	1251755.27	26.7035	Pulse	0.1000	3
Ni	60	72	He	504.371	ppb	0.1	353043.26	4.3319	Pulse	0.1000	3
Cu	63	72	He	483.575	ppb	0.6	1012067.02	12.4186	Pulse	0.1000	3
Zn	66	72	He	507.628	ppb	0.6	120768.98	1.4818	Pulse	0.1000	3
As	75	72	He	494.292	ppb	0.8	82599.01	1.0135	Pulse	0.5000	3
Sr	88	115	He	50.342	ppb	2.3	38396.12	0.4525	Pulse	0.1000	3
Mo	98	115	He	49.593	ppb	1.3	92292.31	1.0877	Pulse	0.1000	3
Ag	107	115	He	49.442	ppb	1.6	195077.02	2.2990	Pulse	0.1000	3
Cd	111	115	He	54.062	ppb	0.7	24530.17	0.2891	Pulse	0.5000	3
Sn	120	115	He	50.835	ppb	1.8	69558.18	0.8196	Pulse	0.1000	3
Sb	121	115	He	53.293	ppb	1.8	67193.48	0.7919	Pulse	0.1000	3
Ba	137	115	He	502.104	ppb	1.5	204493.62	2.4100	Pulse	0.1000	3
Tl	205	159	He	49.907	ppb	0.1	491326.37	1.2341	Pulse	0.1000	3
Pb	208	159	He	50.061	ppb	0.1	652724.39	1.6396	Pulse	0.1000	3
U	238	209	He	50.644	ppb	0.5	768658.14	2.4948	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2379759.08	1.4	99.2	Analog	0.1000	3
No Gas	Ge	72	1163753.81	1.2	100.9	Pulse	0.1000	3
H2	Sc	45	186408.50	1.9	99.7	Pulse	0.1000	3
H2	Ge	72	161929.88	0.7	98.9	Pulse	0.1000	3
H2	In	115	382674.66	0.4	98.4	Pulse	0.1000	3
He	Sc	45	46876.56	0.3	100.5	Pulse	0.1000	3
He	Ge	72	81498.47	0.8	100.4	Pulse	0.1000	3
He	In	115	84859.08	0.9	98.4	Pulse	0.1000	3
He	Tb	159	398111.67	0.5	99.9	Pulse	0.1000	3
He	Bi	209	308102.21	0.6	99.6	Pulse	0.1000	3

No Gas



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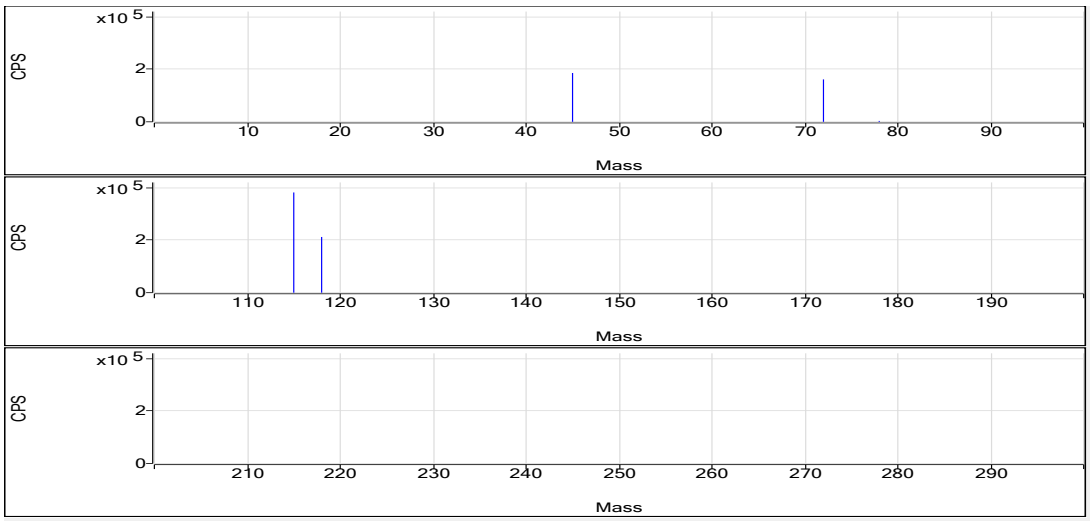
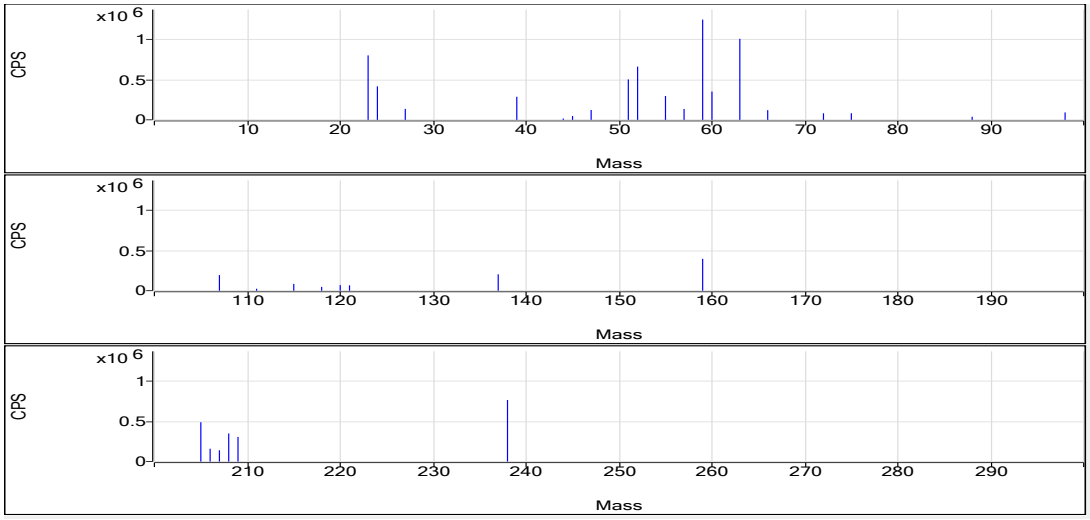


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.132	0.0382	92324.27	0.0008	4.685E-06
Be	9	1	No Gas	50.989	0.0389	92396.59	0.0008	4.685E-06
Be	9	1	No Gas	51.393	0.0392	92130.98	0.0008	4.685E-06
Se	78	2	H2	49.455	0.0206	3369.07	0.0004	1.219E-05
Se	78	2	H2	50.979	0.0213	3425.08	0.0004	1.219E-05
Se	78	2	H2	49.57	0.0207	3341.73	0.0004	1.219E-05
Na	23	3	He	4728.347	17.2587	806250.69	0.0036	0.3452
Na	23	3	He	4739.623	17.299	811266.32	0.0036	0.3452
Na	23	3	He	4639.995	16.9426	796598.74	0.0036	0.3452
Mg	24	3	He	4957.108	8.8981	415682.53	0.0018	0.003497
Mg	24	3	He	4973.946	8.9284	418710.11	0.0018	0.003497
Mg	24	3	He	4958.118	8.9	418452.57	0.0018	0.003497
Al	27	3	He	4924.648	2.8817	134622.05	0.0006	0.0006432
Al	27	3	He	5042.463	2.9507	138376.07	0.0006	0.0006432
Al	27	3	He	4930.039	2.8849	135639.83	0.0006	0.0006432
K	39	3	He	4988.568	6.2034	289795.31	0.0012	0.3951
K	39	3	He	4939.658	6.1464	288247.61	0.0012	0.3951
K	39	3	He	4887.374	6.0856	286127.30	0.0012	0.3951
Ca	44	3	He	5324.773	0.3624	16930.38	0.0001	0.002715
Ca	44	3	He	5183.949	0.3529	16549.86	0.0001	0.002715
Ca	44	3	He	4987.719	0.3396	15969.21	0.0001	0.002715
Ti	47	3	He	4947.553	2.6567	124107.30	0.0005	7.003E-05
Ti	47	3	He	4894.767	2.6283	123258.99	0.0005	7.003E-05
Ti	47	3	He	4825.026	2.5909	121815.58	0.0005	7.003E-05
V	51	3	He	492.099	10.7817	503676.25	0.0219	0.02486
V	51	3	He	493.841	10.8198	507413.56	0.0219	0.02486
V	51	3	He	487.93	10.6906	502644.13	0.0219	0.02486
Cr	52	3	He	474.499	14.2468	665549.44	0.0299	0.03997
Cr	52	3	He	471.846	14.1674	664403.43	0.0299	0.03997
Cr	52	3	He	470.092	14.1149	663643.51	0.0299	0.03997
Mn	55	3	He	496.563	6.3755	297834.29	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	494.683	6.3513	297856.52	0.0128	0.002639
Mn	55	3	He	491.609	6.3119	296768.14	0.0128	0.002639
Fe	57	3	He	5005.256	2.9094	135916.20	0.0006	0.001429
Fe	57	3	He	4955.138	2.8803	135077.32	0.0006	0.001429
Fe	57	3	He	4997.113	2.9047	136571.62	0.0006	0.001429
Co	59	3	He	475.829	26.7829	1251181.62	0.0563	0.002149
Co	59	3	He	476.738	26.8341	1258428.97	0.0563	0.002149
Co	59	3	He	470.687	26.4935	1245655.22	0.0563	0.002149
Ni	60	3	He	503.856	4.3275	352482.18	0.0086	0.002834
Ni	60	3	He	504.166	4.3302	355963.78	0.0086	0.002834
Ni	60	3	He	505.091	4.3381	350683.82	0.0086	0.002834
Cu	63	3	He	484.587	12.4446	1013634.91	0.0257	0.004757
Cu	63	3	He	480.263	12.3336	1013894.05	0.0257	0.004757
Cu	63	3	He	485.875	12.4777	1008672.09	0.0257	0.004757
Zn	66	3	He	510.893	1.4913	121472.30	0.0029	0.003818
Zn	66	3	He	507.373	1.4811	121754.31	0.0029	0.003818
Zn	66	3	He	504.618	1.4731	119080.34	0.0029	0.003818
As	75	3	He	492.395	1.0097	82238.30	0.002	0.0008061
As	75	3	He	491.481	1.0078	82845.73	0.002	0.0008061
As	75	3	He	499.001	1.0232	82713.01	0.002	0.0008061
Sr	88	3	He	51.409	0.4621	38843.79	0.009	0.0009645
Sr	88	3	He	49.092	0.4413	37731.27	0.009	0.0009645
Sr	88	3	He	50.526	0.4542	38613.31	0.009	0.0009645
Mo	98	3	He	50.209	1.1012	92564.88	0.0219	0.0002706
Mo	98	3	He	48.923	1.073	91738.22	0.0219	0.0002706
Mo	98	3	He	49.648	1.0889	92573.84	0.0219	0.0002706
Ag	107	3	He	50.34	2.3408	196768.06	0.0465	0.0006206
Ag	107	3	He	49.043	2.2805	194978.75	0.0465	0.0006206
Ag	107	3	He	48.942	2.2758	193484.24	0.0465	0.0006206
Cd	111	3	He	54.094	0.2892	24313.10	0.0053	0
Cd	111	3	He	54.446	0.2911	24890.16	0.0053	0
Cd	111	3	He	53.647	0.2868	24387.25	0.0053	0
Sn	120	3	He	49.901	0.8048	67655.49	0.0158	0.01648
Sn	120	3	He	51.745	0.834	71303.69	0.0158	0.01648
Sn	120	3	He	50.861	0.82	69715.37	0.0158	0.01648
Sb	121	3	He	54.047	0.8031	67505.07	0.0149	0.0002698
Sb	121	3	He	53.612	0.7966	68107.74	0.0149	0.0002698
Sb	121	3	He	52.22	0.7759	65967.62	0.0149	0.0002698
Ba	137	3	He	508.878	2.4425	205318.12	0.0048	0.0002317
Ba	137	3	He	494.209	2.3721	202811.83	0.0048	0.0002317
Ba	137	3	He	503.225	2.4154	205350.90	0.0048	0.0002317
Tl	205	3	He	49.897	1.2339	491531.28	0.0247	0.0001339
Tl	205	3	He	49.856	1.2329	492916.05	0.0247	0.0001339
Tl	205	3	He	49.968	1.2357	489531.79	0.0247	0.0001339
Pb	208	3	He	50.035	1.6387	350698.67	0.0327	0.00107
Pb	208	3	He	50.039	1.6388	353251.21	0.0327	0.00107
Pb	208	3	He	50.109	1.6411	350919.21	0.0327	0.00107
U	238	3	He	50.451	2.4853	766015.30	0.0493	7.55E-05
U	238	3	He	50.901	2.5075	777065.38	0.0493	7.55E-05
U	238	3	He	50.579	2.4916	762893.74	0.0493	7.55E-05
Sc	45	1	No Gas			2414059.81		
Sc	45	1	No Gas			2375324.03		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2349893.40		
Ge	72	1	No Gas			1175438.03		
Ge	72	1	No Gas			1167420.45		
Ge	72	1	No Gas			1148402.95		
Sc	45	2	H2			185177.07		
Sc	45	2	H2			190454.18		
Sc	45	2	H2			183594.26		
Ge	72	2	H2			163244.79		
Ge	72	2	H2			160999.79		
Ge	72	2	H2			161545.06		
In	115	2	H2			384360.58		
In	115	2	H2			381245.15		
In	115	2	H2			382418.24		
Sc	45	3	He			46715.64		
Sc	45	3	He			46896.66		
Sc	45	3	He			47017.37		
Ge	72	3	He			81451.67		
Ge	72	3	He			82205.68		
Ge	72	3	He			80838.07		
In	115	3	He			84426.43		
In	115	3	He			85884.21		
In	115	3	He			85381.82		
Tb	159	3	He			398356.83		
Tb	159	3	He			399804.99		
Tb	159	3	He			396173.20		
Bi	209	3	He			308219.74		
Bi	209	3	He			309901.75		
Bi	209	3	He			306185.13		

Quantitation Report

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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

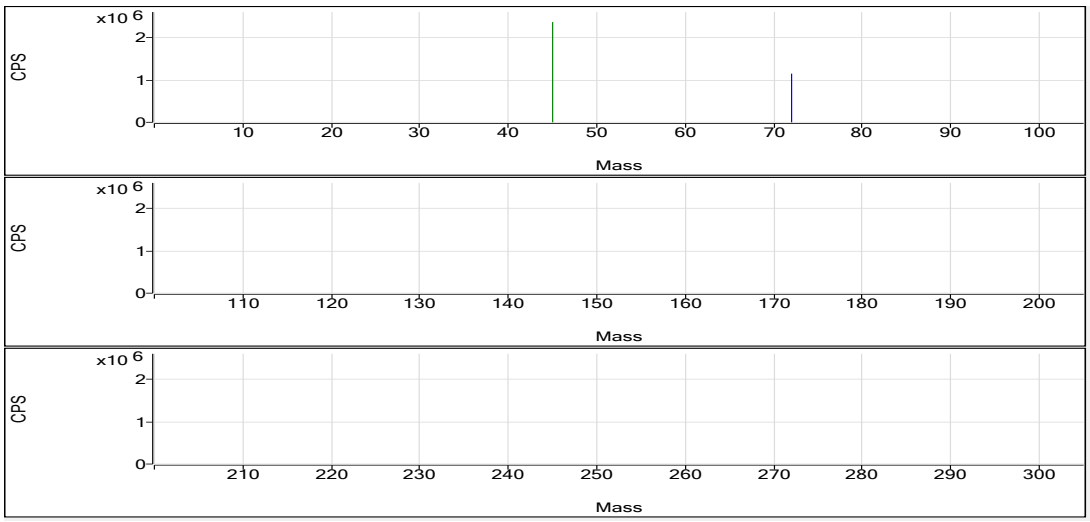
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.030	ppb	24.8	65.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.038	ppb	82.3	4.45	0.0000	Pulse	1.5000	3
Na	23	45	He	-4.985	ppb	N/A	15481.90	0.3273	Pulse	0.1000	3
Mg	24	45	He	0.369	ppb	202.9	196.68	0.0042	Pulse	0.1000	3
Al	27	45	He	1.544	ppb	51.5	73.33	0.0015	Pulse	0.1000	3
K	39	45	He	0.068	ppb	13866.1	18685.76	0.3951	Pulse	0.1000	3
Ca	44	45	He	1.668	ppb	793.2	133.34	0.0028	Pulse	0.1000	3
Ti	47	45	He	1.970	ppb	11.6	53.33	0.0011	Pulse	0.1000	3
V	51	45	He	-0.009	ppb	N/A	1167.39	0.0247	Pulse	0.5000	3
Cr	52	45	He	-0.061	ppb	N/A	1803.50	0.0382	Pulse	0.1000	3
Mn	55	45	He	0.063	ppb	73.9	163.34	0.0034	Pulse	0.1000	3
Fe	57	45	He	3.245	ppb	18.3	156.68	0.0033	Pulse	0.1000	3
Co	59	45	He	0.087	ppb	17.5	333.35	0.0070	Pulse	0.1000	3
Ni	60	72	He	0.096	ppb	150.5	290.01	0.0037	Pulse	0.1000	3
Cu	63	72	He	0.168	ppb	30.3	720.05	0.0091	Pulse	0.1000	3
Zn	66	72	He	0.001	ppb	7233.1	303.35	0.0038	Pulse	0.1000	3
As	75	72	He	0.185	ppb	47.2	94.00	0.0012	Pulse	0.5000	3
Sr	88	115	He	-0.041	ppb	N/A	50.00	0.0006	Pulse	0.1000	3
Mo	98	115	He	0.054	ppb	68.7	123.34	0.0015	Pulse	0.1000	3
Ag	107	115	He	0.002	ppb	225.3	60.00	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.007	ppb	34.2	3.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.126	ppb	85.2	1553.49	0.0185	Pulse	0.1000	3
Sb	121	115	He	0.051	ppb	55.2	86.67	0.0010	Pulse	0.1000	3
Ba	137	115	He	0.109	ppb	53.7	63.33	0.0008	Pulse	0.1000	3
Tl	205	159	He	0.108	ppb	6.7	1110.09	0.0028	Pulse	0.1000	3
Pb	208	159	He	0.019	ppb	2.2	670.04	0.0017	Pulse	0.1000	3
U	238	209	He	0.066	ppb	17.4	1020.08	0.0033	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2369272.15	0.9	98.8	Analog	0.1000	3
No Gas	Ge	72	1149774.59	0.3	99.7	Pulse	0.1000	3
H2	Sc	45	184750.64	1.1	98.8	Pulse	0.1000	3
H2	Ge	72	158471.40	1.0	96.8	Pulse	0.1000	3
H2	In	115	383662.05	0.9	98.6	Pulse	0.1000	3
He	Sc	45	47301.14	1.5	101.4	Pulse	0.1000	3
He	Ge	72	79423.92	1.1	97.8	Pulse	0.1000	3
He	In	115	84086.61	1.3	97.6	Pulse	0.1000	3
He	Tb	159	395801.22	1.3	99.3	Pulse	0.1000	3
He	Bi	209	305202.02	1.2	98.7	Pulse	0.1000	3

No Gas



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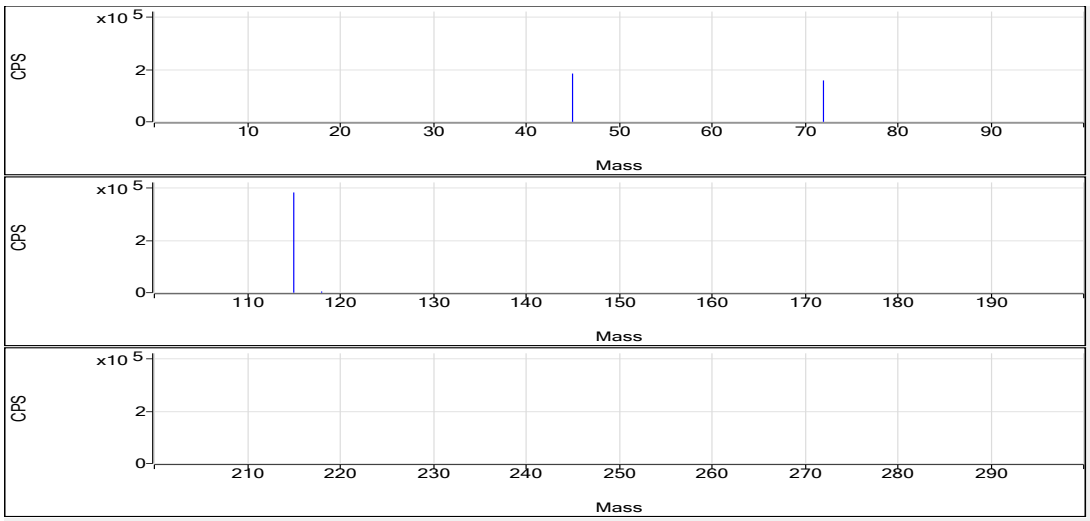
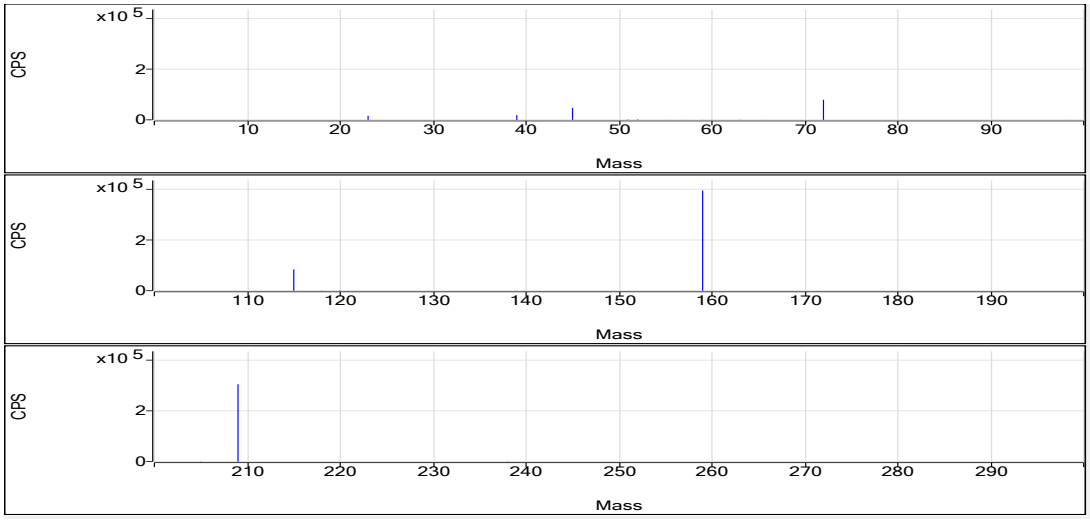


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.027	0	60.00	0.0008	4.685E-06
Be	9	1	No Gas	0.039	0	80.00	0.0008	4.685E-06
Be	9	1	No Gas	0.025	0	56.00	0.0008	4.685E-06
Se	78	2	H2	0.073	0	6.67	0.0004	1.219E-05
Se	78	2	H2	0.011	0	2.67	0.0004	1.219E-05
Se	78	2	H2	0.031	0	4.00	0.0004	1.219E-05
Na	23	3	He	-5.576	0.3252	15388.48	0.0036	0.3452
Na	23	3	He	-5.332	0.3261	15648.81	0.0036	0.3452
Na	23	3	He	-4.047	0.3307	15408.40	0.0036	0.3452
Mg	24	3	He	1.231	0.0057	270.01	0.0018	0.003497
Mg	24	3	He	-0.091	0.0033	160.01	0.0018	0.003497
Mg	24	3	He	-0.035	0.0034	160.01	0.0018	0.003497
Al	27	3	He	1.068	0.0013	60.00	0.0006	0.0006432
Al	27	3	He	2.462	0.0021	100.00	0.0006	0.0006432
Al	27	3	He	1.102	0.0013	60.00	0.0006	0.0006432
K	39	3	He	-1.114	0.3938	18632.36	0.0012	0.3951
K	39	3	He	-8.717	0.3849	18472.14	0.0012	0.3951
K	39	3	He	10.035	0.4068	18952.77	0.0012	0.3951
Ca	44	3	He	3.612	0.003	140.01	0.0001	0.002715
Ca	44	3	He	-12.428	0.0019	90.00	0.0001	0.002715
Ca	44	3	He	13.822	0.0036	170.01	0.0001	0.002715
Ti	47	3	He	2.231	0.0013	60.00	0.0005	7.003E-05
Ti	47	3	He	1.81	0.001	50.00	0.0005	7.003E-05
Ti	47	3	He	1.868	0.0011	50.00	0.0005	7.003E-05
V	51	3	He	0.021	0.0253	1198.06	0.0219	0.02486
V	51	3	He	-0.018	0.0245	1174.05	0.0219	0.02486
V	51	3	He	-0.028	0.0243	1130.05	0.0219	0.02486
Cr	52	3	He	-0.036	0.0389	1840.17	0.0299	0.03997
Cr	52	3	He	-0.166	0.035	1680.15	0.0299	0.03997
Cr	52	3	He	0.02	0.0406	1890.19	0.0299	0.03997
Mn	55	3	He	0.074	0.0036	170.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.103	0.004	190.01	0.0128	0.002639
Mn	55	3	He	0.012	0.0028	130.01	0.0128	0.002639
Fe	57	3	He	2.634	0.003	140.01	0.0006	0.001429
Fe	57	3	He	3.28	0.0033	160.01	0.0006	0.001429
Fe	57	3	He	3.821	0.0036	170.01	0.0006	0.001429
Co	59	3	He	0.105	0.008	380.02	0.0563	0.002149
Co	59	3	He	0.077	0.0065	310.01	0.0563	0.002149
Co	59	3	He	0.08	0.0067	310.01	0.0563	0.002149
Ni	60	3	He	0.249	0.005	390.02	0.0086	0.002834
Ni	60	3	He	0.077	0.0035	280.01	0.0086	0.002834
Ni	60	3	He	-0.038	0.0025	200.01	0.0086	0.002834
Cu	63	3	He	0.212	0.0102	800.05	0.0257	0.004757
Cu	63	3	He	0.18	0.0094	750.05	0.0257	0.004757
Cu	63	3	He	0.112	0.0076	610.04	0.0257	0.004757
Zn	66	3	He	0.091	0.0041	320.02	0.0029	0.003818
Zn	66	3	He	-0.024	0.0037	300.01	0.0029	0.003818
Zn	66	3	He	-0.064	0.0036	290.01	0.0029	0.003818
As	75	3	He	0.279	0.0014	108.00	0.002	0.0008061
As	75	3	He	0.107	0.001	82.00	0.002	0.0008061
As	75	3	He	0.169	0.0012	92.00	0.002	0.0008061
Sr	88	3	He	-0.027	0.0007	60.00	0.009	0.0009645
Sr	88	3	He	-0.027	0.0007	60.00	0.009	0.0009645
Sr	88	3	He	-0.068	0.0004	30.00	0.009	0.0009645
Mo	98	3	He	0.015	0.0006	50.00	0.0219	0.0002706
Mo	98	3	He	0.059	0.0016	130.01	0.0219	0.0002706
Mo	98	3	He	0.089	0.0022	190.01	0.0219	0.0002706
Ag	107	3	He	0.005	0.0008	70.00	0.0465	0.0006206
Ag	107	3	He	0.005	0.0008	70.00	0.0465	0.0006206
Ag	107	3	He	-0.003	0.0005	40.00	0.0465	0.0006206
Cd	111	3	He	0.009	0	4.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.009	0	4.00	0.0053	0
Sn	120	3	He	0.224	0.02	1670.17	0.0158	0.01648
Sn	120	3	He	0.011	0.0166	1390.13	0.0158	0.01648
Sn	120	3	He	0.144	0.0188	1600.17	0.0158	0.01648
Sb	121	3	He	0.022	0.0006	50.00	0.0149	0.0002698
Sb	121	3	He	0.079	0.0014	120.01	0.0149	0.0002698
Sb	121	3	He	0.053	0.0011	90.00	0.0149	0.0002698
Ba	137	3	He	0.176	0.0011	90.00	0.0048	0.0002317
Ba	137	3	He	0.076	0.0006	50.00	0.0048	0.0002317
Ba	137	3	He	0.074	0.0006	50.00	0.0048	0.0002317
Tl	205	3	He	0.106	0.0028	1110.09	0.0247	0.0001339
Tl	205	3	He	0.116	0.003	1180.10	0.0247	0.0001339
Tl	205	3	He	0.102	0.0026	1040.08	0.0247	0.0001339
Pb	208	3	He	0.019	0.0017	370.02	0.0327	0.00107
Pb	208	3	He	0.019	0.0017	420.02	0.0327	0.00107
Pb	208	3	He	0.019	0.0017	390.02	0.0327	0.00107
U	238	3	He	0.053	0.0027	830.06	0.0493	7.55E-05
U	238	3	He	0.073	0.0037	1110.10	0.0493	7.55E-05
U	238	3	He	0.073	0.0037	1120.09	0.0493	7.55E-05
Sc	45	1	No Gas			2370097.78		
Sc	45	1	No Gas			2346547.62		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2391171.06		
Ge	72	1	No Gas			1153020.61		
Ge	72	1	No Gas			1145627.09		
Ge	72	1	No Gas			1150676.08		
Sc	45	2	H2			186504.59		
Sc	45	2	H2			185164.20		
Sc	45	2	H2			182583.14		
Ge	72	2	H2			156923.65		
Ge	72	2	H2			158491.25		
Ge	72	2	H2			159999.29		
In	115	2	H2			385387.65		
In	115	2	H2			385729.56		
In	115	2	H2			379868.94		
Sc	45	3	He			47317.89		
Sc	45	3	He			47989.99		
Sc	45	3	He			46595.54		
Ge	72	3	He			78394.77		
Ge	72	3	He			80044.12		
Ge	72	3	He			79832.87		
In	115	3	He			83450.56		
In	115	3	He			83511.12		
In	115	3	He			85321.63		
Tb	159	3	He			401555.66		
Tb	159	3	He			393115.42		
Tb	159	3	He			392732.57		
Bi	209	3	He			308498.78		
Bi	209	3	He			301336.91		
Bi	209	3	He			305770.37		

Quantitation Report

Data File Name	028_LLC.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	8/10/2023 8:18:31 AM
Sample Name	CRI 4604525
Sample Type	CRI
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

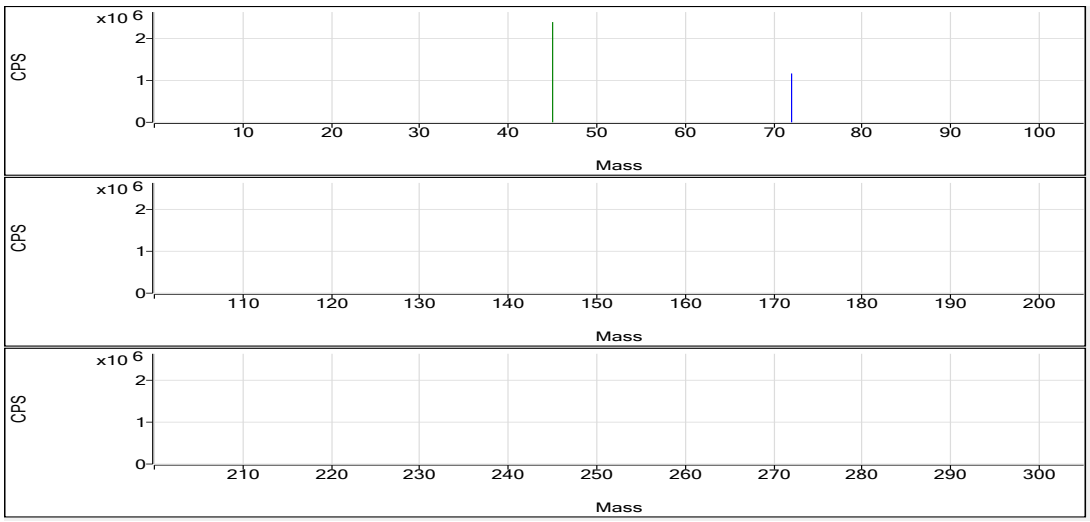
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.488	ppb	7.1	903.37	0.0004	Pulse	0.5000	3
Se	78	72	H2	0.938	ppb	6.6	65.33	0.0004	Pulse	1.5000	3
Na	23	45	He	183.562	ppb	2.9	47427.00	1.0018	Pulse	0.1000	3
Mg	24	45	He	50.677	ppb	1.8	4470.80	0.0944	Pulse	0.1000	3
Al	27	45	He	27.444	ppb	16.2	790.05	0.0167	Pulse	0.1000	3
K	39	45	He	202.462	ppb	8.3	29861.27	0.6308	Pulse	0.1000	3
Ca	44	45	He	104.606	ppb	26.3	463.36	0.0098	Pulse	0.1000	3
Ti	47	45	He	9.043	ppb	10.0	233.34	0.0049	Pulse	0.1000	3
V	51	45	He	1.888	ppb	4.6	3131.69	0.0661	Pulse	0.5000	3
Cr	52	45	He	2.025	ppb	6.8	4764.28	0.1006	Pulse	0.1000	3
Mn	55	45	He	2.049	ppb	3.5	1370.11	0.0289	Pulse	0.1000	3
Fe	57	45	He	50.489	ppb	6.2	1456.80	0.0308	Pulse	0.1000	3
Co	59	45	He	0.497	ppb	8.0	1426.79	0.0301	Pulse	0.1000	3
Ni	60	72	He	1.138	ppb	11.0	1030.08	0.0126	Pulse	0.1000	3
Cu	63	72	He	1.018	ppb	3.3	2523.64	0.0309	Pulse	0.1000	3
Zn	66	72	He	12.132	ppb	1.8	3197.14	0.0391	Pulse	0.1000	3
As	75	72	He	2.069	ppb	7.5	412.01	0.0050	Pulse	0.5000	3
Sr	88	115	He	0.958	ppb	8.2	823.38	0.0096	Pulse	0.1000	3
Mo	98	115	He	0.526	ppb	10.5	1016.74	0.0118	Pulse	0.1000	3
Ag	107	115	He	0.534	ppb	8.4	2190.25	0.0254	Pulse	0.1000	3
Cd	111	115	He	0.453	ppb	3.0	208.67	0.0024	Pulse	0.5000	3
Sn	120	115	He	2.017	ppb	2.4	4164.12	0.0483	Pulse	0.1000	3
Sb	121	115	He	0.912	ppb	5.2	1190.10	0.0138	Pulse	0.1000	3
Ba	137	115	He	1.982	ppb	11.9	840.06	0.0097	Pulse	0.1000	3
Tl	205	159	He	0.502	ppb	2.3	4951.12	0.0125	Pulse	0.1000	3
Pb	208	159	He	0.504	ppb	4.9	6931.00	0.0176	Pulse	0.1000	3
U	238	209	He	0.970	ppb	3.4	14755.55	0.0478	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2400438.98	1.2	100.1	Analog	0.1000	3
No Gas	Ge	72	1169400.35	0.3	101.4	Pulse	0.1000	3
H2	Sc	45	188425.95	0.6	100.8	Pulse	0.1000	3
H2	Ge	72	162036.93	1.0	99.0	Pulse	0.1000	3
H2	In	115	389017.54	1.3	100.0	Pulse	0.1000	3
He	Sc	45	47347.73	1.0	101.5	Pulse	0.1000	3
He	Ge	72	81679.66	0.8	100.6	Pulse	0.1000	3
He	In	115	86136.72	1.0	99.9	Pulse	0.1000	3
He	Tb	159	394778.02	1.5	99.0	Pulse	0.1000	3
He	Bi	209	308521.80	0.7	99.8	Pulse	0.1000	3

No Gas



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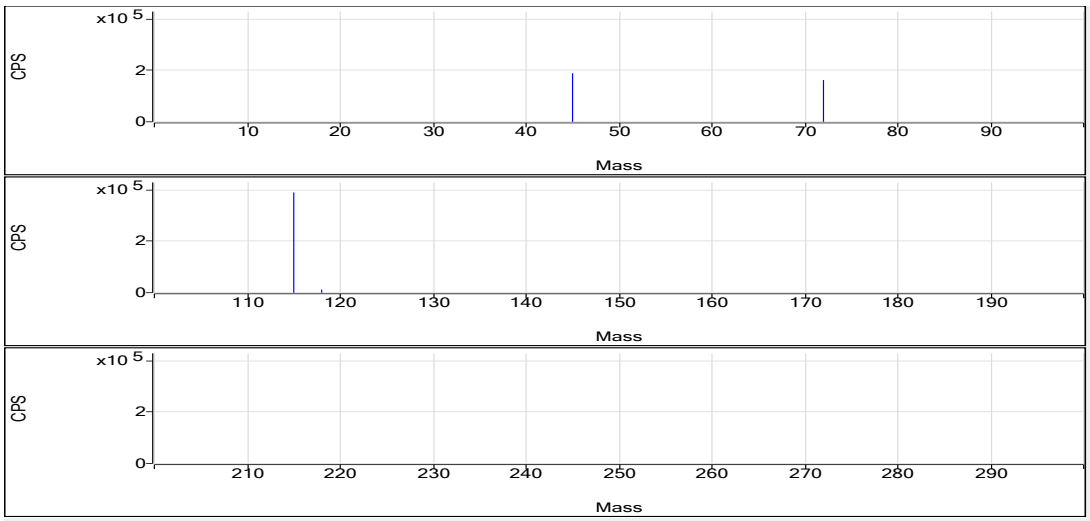
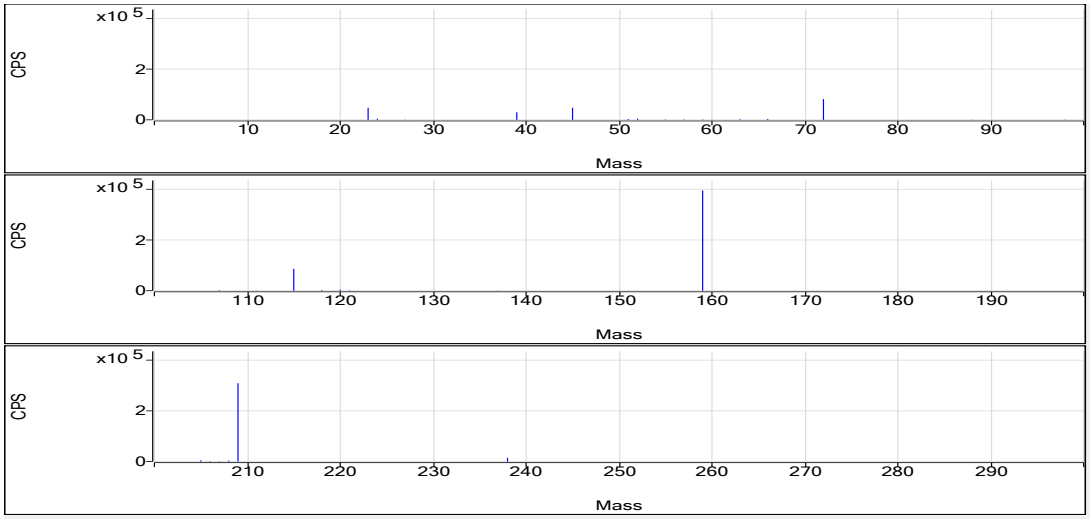


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.474	0.0004	884.03	0.0008	4.685E-06
Be	9	1	No Gas	0.462	0.0004	864.03	0.0008	4.685E-06
Be	9	1	No Gas	0.527	0.0004	962.04	0.0008	4.685E-06
Se	78	2	H2	0.934	0.0004	64.67	0.0004	1.219E-05
Se	78	2	H2	1.001	0.0004	69.33	0.0004	1.219E-05
Se	78	2	H2	0.878	0.0004	62.00	0.0004	1.219E-05
Na	23	3	He	189.314	1.0223	48139.24	0.0036	0.3452
Na	23	3	He	178.786	0.9847	47146.01	0.0036	0.3452
Na	23	3	He	182.586	0.9983	46995.74	0.0036	0.3452
Mg	24	3	He	50.019	0.0932	4390.76	0.0018	0.003497
Mg	24	3	He	50.324	0.0938	4490.80	0.0018	0.003497
Mg	24	3	He	51.689	0.0962	4530.83	0.0018	0.003497
Al	27	3	He	32.299	0.0195	920.06	0.0006	0.0006432
Al	27	3	He	23.535	0.0144	690.04	0.0006	0.0006432
Al	27	3	He	26.497	0.0161	760.05	0.0006	0.0006432
K	39	3	He	217.606	0.6484	30532.75	0.0012	0.3951
K	39	3	He	184.303	0.6097	29189.86	0.0012	0.3951
K	39	3	He	205.476	0.6343	29861.20	0.0012	0.3951
Ca	44	3	He	123.298	0.011	520.03	0.0001	0.002715
Ca	44	3	He	117.502	0.0107	510.03	0.0001	0.002715
Ca	44	3	He	73.019	0.0076	360.02	0.0001	0.002715
Ti	47	3	He	8.176	0.0045	210.01	0.0005	7.003E-05
Ti	47	3	He	9.983	0.0054	260.01	0.0005	7.003E-05
Ti	47	3	He	8.969	0.0049	230.01	0.0005	7.003E-05
V	51	3	He	1.962	0.0678	3190.37	0.0219	0.02486
V	51	3	He	1.911	0.0666	3190.37	0.0219	0.02486
V	51	3	He	1.792	0.064	3014.33	0.0219	0.02486
Cr	52	3	He	2.141	0.1041	4901.02	0.0299	0.03997
Cr	52	3	He	2.063	0.1017	4870.98	0.0299	0.03997
Cr	52	3	He	1.872	0.096	4520.84	0.0299	0.03997
Mn	55	3	He	2.029	0.0287	1350.10	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1.992	0.0282	1350.11	0.0128	0.002639
Mn	55	3	He	2.128	0.03	1410.12	0.0128	0.002639
Fe	57	3	He	52.376	0.0319	1500.14	0.0006	0.001429
Fe	57	3	He	52.188	0.0317	1520.14	0.0006	0.001429
Fe	57	3	He	46.903	0.0287	1350.12	0.0006	0.001429
Co	59	3	He	0.528	0.0319	1500.13	0.0563	0.002149
Co	59	3	He	0.511	0.0309	1480.12	0.0563	0.002149
Co	59	3	He	0.452	0.0276	1300.11	0.0563	0.002149
Ni	60	3	He	1.203	0.0132	1080.08	0.0086	0.002834
Ni	60	3	He	0.995	0.0114	920.06	0.0086	0.002834
Ni	60	3	He	1.218	0.0133	1090.09	0.0086	0.002834
Cu	63	3	He	0.982	0.03	2460.29	0.0257	0.004757
Cu	63	3	He	1.023	0.031	2510.29	0.0257	0.004757
Cu	63	3	He	1.049	0.0317	2600.33	0.0257	0.004757
Zn	66	3	He	12.373	0.0398	3270.52	0.0029	0.003818
Zn	66	3	He	12.062	0.0389	3150.46	0.0029	0.003818
Zn	66	3	He	11.961	0.0386	3170.44	0.0029	0.003818
As	75	3	He	2.092	0.0051	418.01	0.002	0.0008061
As	75	3	He	2.213	0.0053	432.01	0.002	0.0008061
As	75	3	He	1.903	0.0047	386.01	0.002	0.0008061
Sr	88	3	He	0.93	0.0093	810.05	0.009	0.0009645
Sr	88	3	He	1.047	0.0104	890.06	0.009	0.0009645
Sr	88	3	He	0.898	0.009	770.04	0.009	0.0009645
Mo	98	3	He	0.585	0.0131	1140.09	0.0219	0.0002706
Mo	98	3	He	0.476	0.0107	920.06	0.0219	0.0002706
Mo	98	3	He	0.516	0.0116	990.08	0.0219	0.0002706
Ag	107	3	He	0.528	0.0252	2190.25	0.0465	0.0006206
Ag	107	3	He	0.492	0.0235	2020.20	0.0465	0.0006206
Ag	107	3	He	0.581	0.0276	2360.29	0.0465	0.0006206
Cd	111	3	He	0.438	0.0023	204.00	0.0053	0
Cd	111	3	He	0.457	0.0024	210.00	0.0053	0
Cd	111	3	He	0.464	0.0025	212.00	0.0053	0
Sn	120	3	He	1.961	0.0475	4130.76	0.0158	0.01648
Sn	120	3	He	2.043	0.0487	4190.79	0.0158	0.01648
Sn	120	3	He	2.049	0.0488	4170.81	0.0158	0.01648
Sb	121	3	He	0.964	0.0146	1270.11	0.0149	0.0002698
Sb	121	3	He	0.898	0.0136	1170.09	0.0149	0.0002698
Sb	121	3	He	0.873	0.0132	1130.10	0.0149	0.0002698
Ba	137	3	He	2.202	0.0108	940.07	0.0048	0.0002317
Ba	137	3	He	2.012	0.0099	850.05	0.0048	0.0002317
Ba	137	3	He	1.733	0.0085	730.05	0.0048	0.0002317
Tl	205	3	He	0.507	0.0127	5071.15	0.0247	0.0001339
Tl	205	3	He	0.488	0.0122	4751.03	0.0247	0.0001339
Tl	205	3	He	0.51	0.0128	5031.19	0.0247	0.0001339
Pb	208	3	He	0.476	0.0167	3690.71	0.0327	0.00107
Pb	208	3	He	0.513	0.0179	3870.68	0.0327	0.00107
Pb	208	3	He	0.523	0.0182	3880.71	0.0327	0.00107
U	238	3	He	1.006	0.0497	15199.39	0.0493	7.55E-05
U	238	3	He	0.959	0.0473	14618.83	0.0493	7.55E-05
U	238	3	He	0.943	0.0465	14448.44	0.0493	7.55E-05
Sc	45	1	No Gas			2412490.75		
Sc	45	1	No Gas			2422035.28		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2366790.90		
Ge	72	1	No Gas			1173426.31		
Ge	72	1	No Gas			1168977.33		
Ge	72	1	No Gas			1165797.40		
Sc	45	2	H2			189509.86		
Sc	45	2	H2			188657.63		
Sc	45	2	H2			187110.37		
Ge	72	2	H2			160948.19		
Ge	72	2	H2			161330.92		
Ge	72	2	H2			163831.69		
In	115	2	H2			391947.06		
In	115	2	H2			391821.01		
In	115	2	H2			383284.56		
Sc	45	3	He			47087.10		
Sc	45	3	He			47879.29		
Sc	45	3	He			47076.80		
Ge	72	3	He			82085.92		
Ge	72	3	He			80908.27		
Ge	72	3	He			82044.79		
In	115	3	He			87072.70		
In	115	3	He			85985.57		
In	115	3	He			85412.42		
Tb	159	3	He			400621.91		
Tb	159	3	He			389163.04		
Tb	159	3	He			394549.10		
Bi	209	3	He			306122.83		
Bi	209	3	He			308803.14		
Bi	209	3	He			310639.43		

Quantitation Report

Data File Name	029ICSA.d
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Sample Name	ICSA 4677791
Sample Type	ICSA
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

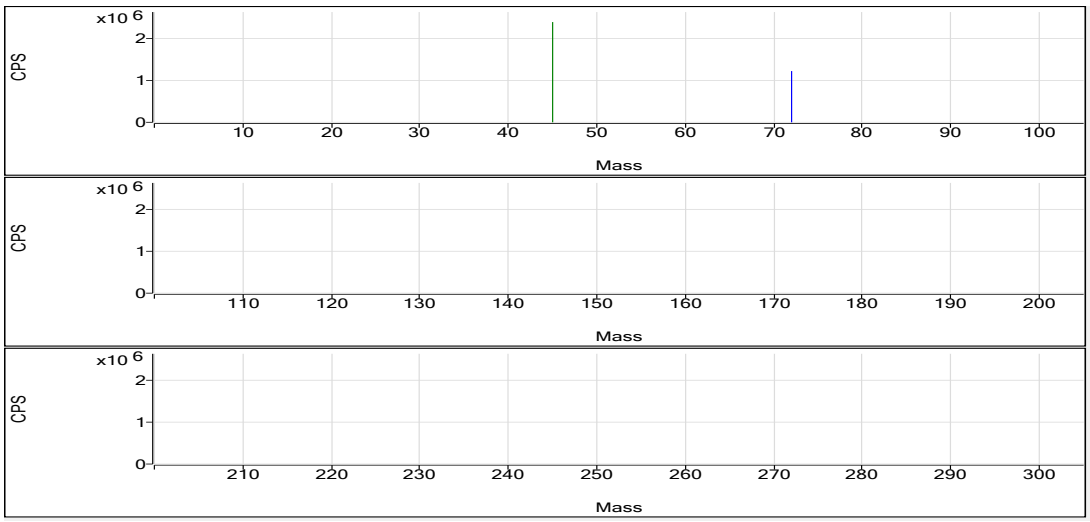
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.005	ppb	58.2	20.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.032	ppb	68.4	4.22	0.0000	Pulse	1.5000	3
Na	23	45	He	234346.856	ppb	1.3	39464061.91	838.6153	Analog	0.1000	3
Mg	24	45	He	97432.473	ppb	1.5	8227054.05	174.8287	Analog	0.1000	3
Al	27	45	He	101206.014	ppb	1.3	2786333.29	59.2097	Analog	0.1000	3
K	39	45	He	98145.012	ppb	1.3	5396327.63	114.6679	Analog	0.1000	3
Ca	44	45	He	288367.072	ppb	0.9	916857.96	19.4825	Pulse	0.1000	3
Ti	47	45	He	1991.143	ppb	2.4	50314.44	1.0692	Pulse	0.1000	3
V	51	45	He	-0.179	ppb	N/A	986.04	0.0209	Pulse	0.5000	3
Cr	52	45	He	3.125	ppb	1.1	6284.91	0.1335	Pulse	0.1000	3
Mn	55	45	He	0.854	ppb	8.1	640.04	0.0136	Pulse	0.1000	3
Fe	57	45	He	242317.822	ppb	1.6	6625050.32	140.7859	Analog	0.1000	3
Co	59	45	He	0.209	ppb	24.2	653.37	0.0139	Pulse	0.1000	3
Ni	60	72	He	0.638	ppb	9.5	696.71	0.0083	Pulse	0.1000	3
Cu	63	72	He	0.040	ppb	119.4	486.69	0.0058	Pulse	0.1000	3
Zn	66	72	He	3.070	ppb	2.9	1070.08	0.0128	Pulse	0.1000	3
As	75	72	He	0.184	ppb	13.0	99.33	0.0012	Pulse	0.5000	3
Sr	88	115	He	1.977	ppb	5.7	1520.13	0.0187	Pulse	0.1000	3
Mo	98	115	He	2139.131	ppb	1.7	3813862.03	46.9038	Analog	0.1000	3
Ag	107	115	He	0.008	ppb	149.9	80.00	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.314	ppb	10.8	136.67	0.0017	Pulse	0.5000	3
Sn	120	115	He	0.135	ppb	75.4	1513.47	0.0186	Pulse	0.1000	3
Sb	121	115	He	0.139	ppb	21.3	190.01	0.0023	Pulse	0.1000	3
Ba	137	115	He	0.533	ppb	18.1	226.68	0.0028	Pulse	0.1000	3
Tl	205	159	He	0.015	ppb	11.4	193.34	0.0005	Pulse	0.1000	3
Pb	208	159	He	0.079	ppb	4.3	1426.75	0.0037	Pulse	0.1000	3
U	238	209	He	0.055	ppb	8.2	800.06	0.0028	Pulse	0.1000	3

ISTD Table:

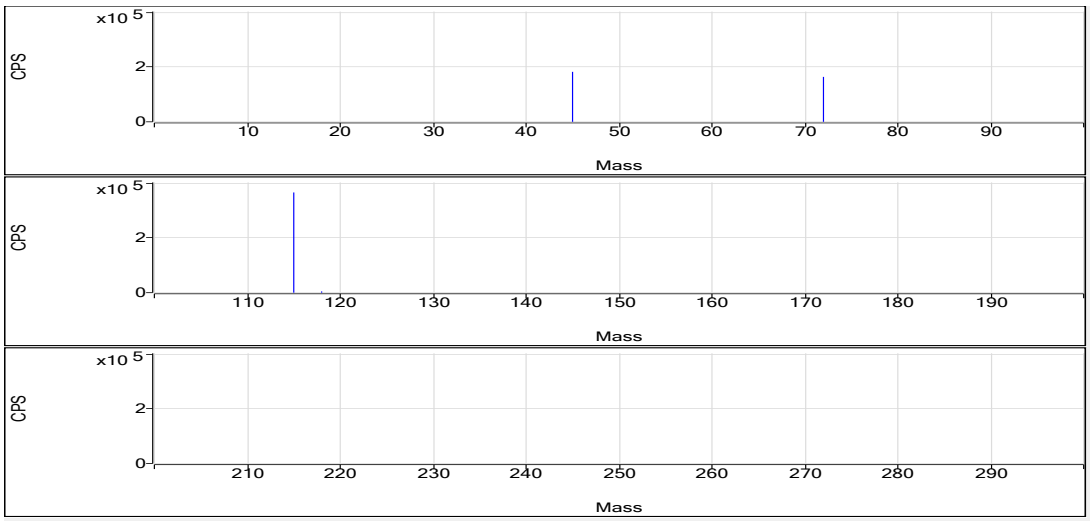
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2381332.57	1.0	99.3	Analog	0.1000	3
No Gas	Ge	72	1217028.50	0.2	105.5	Pulse	0.1000	3
H2	Sc	45	183160.71	0.9	97.9	Pulse	0.1000	3
H2	Ge	72	164651.69	0.8	100.6	Pulse	0.1000	3
H2	In	115	367288.78	0.9	94.4	Pulse	0.1000	3
He	Sc	45	47063.35	1.2	100.9	Pulse	0.1000	3
He	Ge	72	83879.05	1.3	103.3	Pulse	0.1000	3
He	In	115	81323.21	1.2	94.3	Pulse	0.1000	3
He	Tb	159	389400.61	1.0	97.7	Pulse	0.1000	3
He	Bi	209	287728.23	0.6	93.0	Pulse	0.1000	3

No Gas

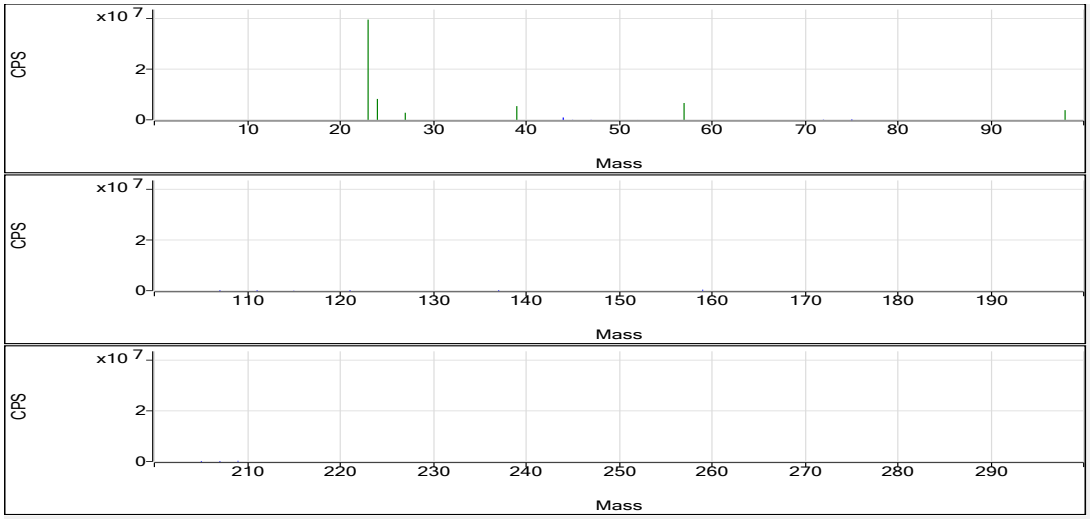


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.006	0	22.00	0.0008	4.685E-06
Be	9	1	No Gas	0.007	0	24.00	0.0008	4.685E-06
Be	9	1	No Gas	0.002	0	14.00	0.0008	4.685E-06
Se	78	2	H2	0.02	0	3.33	0.0004	1.219E-05
Se	78	2	H2	0.019	0	3.33	0.0004	1.219E-05
Se	78	2	H2	0.057	0	6.00	0.0004	1.219E-05
Na	23	3	He	231437.481	828.2084	39462811.91	0.0036	0.3452
Na	23	3	He	237407.869	849.5647	39526084.41	0.0036	0.3452
Na	23	3	He	234195.218	838.0729	39403289.41	0.0036	0.3452
Mg	24	3	He	95927.77	172.1288	8201663.63	0.0018	0.003497
Mg	24	3	He	98802.095	177.2863	8248261.13	0.0018	0.003497
Mg	24	3	He	97567.554	175.0711	8231237.38	0.0018	0.003497
Al	27	3	He	100095.037	58.5597	2790277.77	0.0006	0.0006432
Al	27	3	He	102624.656	60.0396	2793350.27	0.0006	0.0006432
Al	27	3	He	100898.35	59.0297	2775371.83	0.0006	0.0006432
K	39	3	He	96823.185	113.1289	5390411.17	0.0012	0.3951
K	39	3	He	98168.697	114.6955	5336219.30	0.0012	0.3951
K	39	3	He	99443.155	116.1794	5462352.42	0.0012	0.3951
Ca	44	3	He	285497.167	19.2886	919070.77	0.0001	0.002715
Ca	44	3	He	289365.82	19.5499	909562.33	0.0001	0.002715
Ca	44	3	He	290238.23	19.6089	921940.77	0.0001	0.002715
Ti	47	3	He	1939.9	1.0417	49635.22	0.0005	7.003E-05
Ti	47	3	He	1996.805	1.0723	49886.66	0.0005	7.003E-05
Ti	47	3	He	2036.726	1.0937	51421.43	0.0005	7.003E-05
V	51	3	He	-0.147	0.0217	1032.04	0.0219	0.02486
V	51	3	He	-0.158	0.0214	996.04	0.0219	0.02486
V	51	3	He	-0.233	0.0198	930.04	0.0219	0.02486
Cr	52	3	He	3.089	0.1325	6311.59	0.0299	0.03997
Cr	52	3	He	3.131	0.1337	6221.55	0.0299	0.03997
Cr	52	3	He	3.156	0.1345	6321.60	0.0299	0.03997
Mn	55	3	He	0.857	0.0136	650.04	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.783	0.0127	590.03	0.0128	0.002639
Mn	55	3	He	0.921	0.0145	680.04	0.0128	0.002639
Fe	57	3	He	239252.225	139.0048	6623356.78	0.0006	0.001429
Fe	57	3	He	246824.848	143.4044	6671904.28	0.0006	0.001429
Fe	57	3	He	240876.394	139.9484	6579889.90	0.0006	0.001429
Co	59	3	He	0.152	0.0107	510.03	0.0563	0.002149
Co	59	3	He	0.248	0.0161	750.05	0.0563	0.002149
Co	59	3	He	0.226	0.0149	700.04	0.0563	0.002149
Ni	60	3	He	0.57	0.0077	650.04	0.0086	0.002834
Ni	60	3	He	0.657	0.0085	700.04	0.0086	0.002834
Ni	60	3	He	0.686	0.0087	740.05	0.0086	0.002834
Cu	63	3	He	0.023	0.0053	450.02	0.0257	0.004757
Cu	63	3	He	0.003	0.0048	400.02	0.0257	0.004757
Cu	63	3	He	0.095	0.0072	610.03	0.0257	0.004757
Zn	66	3	He	3.136	0.0129	1090.09	0.0029	0.003818
Zn	66	3	He	2.97	0.0125	1030.08	0.0029	0.003818
Zn	66	3	He	3.103	0.0129	1090.07	0.0029	0.003818
As	75	3	He	0.21	0.0012	104.00	0.002	0.0008061
As	75	3	He	0.162	0.0011	94.00	0.002	0.0008061
As	75	3	He	0.182	0.0012	100.00	0.002	0.0008061
Sr	88	3	He	2.087	0.0197	1580.14	0.009	0.0009645
Sr	88	3	He	1.86	0.0177	1450.12	0.009	0.0009645
Sr	88	3	He	1.984	0.0188	1530.14	0.009	0.0009645
Mo	98	3	He	2175.652	47.7045	3829426.51	0.0219	0.0002706
Mo	98	3	He	2102.3	46.0962	3786926.19	0.0219	0.0002706
Mo	98	3	He	2139.442	46.9106	3825233.38	0.0219	0.0002706
Ag	107	3	He	0.021	0.0016	130.01	0.0465	0.0006206
Ag	107	3	He	0	0.0006	50.00	0.0465	0.0006206
Ag	107	3	He	0.002	0.0007	60.00	0.0465	0.0006206
Cd	111	3	He	0.335	0.0018	144.00	0.0053	0
Cd	111	3	He	0.332	0.0018	146.00	0.0053	0
Cd	111	3	He	0.275	0.0015	120.00	0.0053	0
Sn	120	3	He	0.077	0.0177	1420.12	0.0158	0.01648
Sn	120	3	He	0.252	0.0205	1680.17	0.0158	0.01648
Sn	120	3	He	0.075	0.0177	1440.13	0.0158	0.01648
Sb	121	3	He	0.15	0.0025	200.01	0.0149	0.0002698
Sb	121	3	He	0.162	0.0027	220.01	0.0149	0.0002698
Sb	121	3	He	0.106	0.0018	150.01	0.0149	0.0002698
Ba	137	3	He	0.627	0.0032	260.01	0.0048	0.0002317
Ba	137	3	He	0.434	0.0023	190.01	0.0048	0.0002317
Ba	137	3	He	0.539	0.0028	230.01	0.0048	0.0002317
Tl	205	3	He	0.013	0.0005	180.01	0.0247	0.0001339
Tl	205	3	He	0.017	0.0005	210.01	0.0247	0.0001339
Tl	205	3	He	0.014	0.0005	190.01	0.0247	0.0001339
Pb	208	3	He	0.078	0.0036	820.06	0.0327	0.00107
Pb	208	3	He	0.076	0.0036	710.04	0.0327	0.00107
Pb	208	3	He	0.083	0.0038	850.05	0.0327	0.00107
U	238	3	He	0.055	0.0028	800.06	0.0493	7.55E-05
U	238	3	He	0.06	0.003	860.06	0.0493	7.55E-05
U	238	3	He	0.051	0.0026	740.05	0.0493	7.55E-05
Sc	45	1	No Gas			2393531.21		
Sc	45	1	No Gas			2395411.68		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2355054.81		
Ge	72	1	No Gas			1220167.17		
Ge	72	1	No Gas			1216263.42		
Ge	72	1	No Gas			1214654.90		
Sc	45	2	H2			181642.15		
Sc	45	2	H2			182998.20		
Sc	45	2	H2			184841.77		
Ge	72	2	H2			163403.78		
Ge	72	2	H2			164638.24		
Ge	72	2	H2			165913.04		
In	115	2	H2			367142.22		
In	115	2	H2			364238.55		
In	115	2	H2			370485.58		
Sc	45	3	He			47648.41		
Sc	45	3	He			46525.10		
Sc	45	3	He			47016.54		
Ge	72	3	He			84176.96		
Ge	72	3	He			82638.73		
Ge	72	3	He			84821.45		
In	115	3	He			80282.67		
In	115	3	He			82162.59		
In	115	3	He			81549.18		
Tb	159	3	He			387776.67		
Tb	159	3	He			386706.99		
Tb	159	3	He			393718.16		
Bi	209	3	He			288656.30		
Bi	209	3	He			285855.43		
Bi	209	3	He			288672.96		

Quantitation Report

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Sample Type	ICSAB
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Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

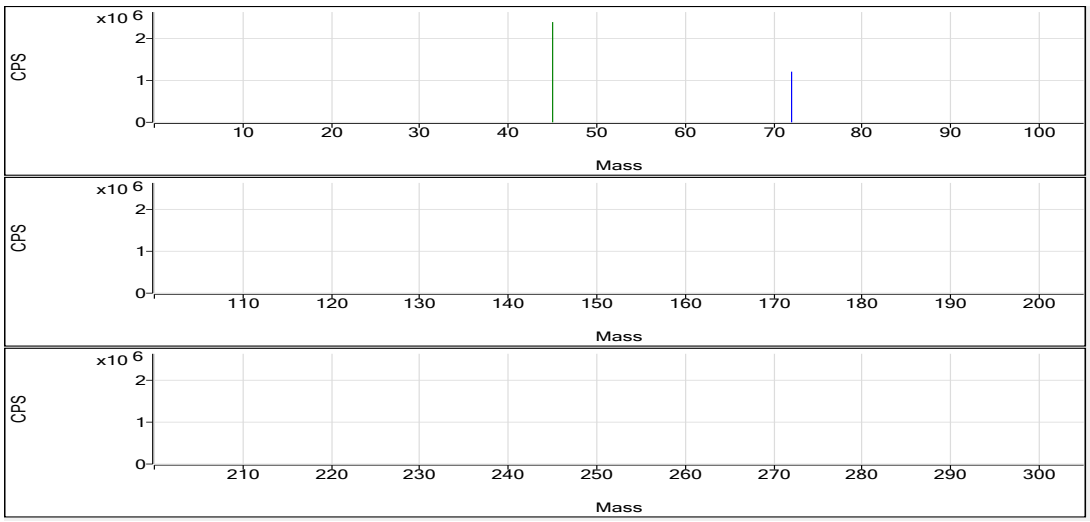
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.007	ppb	78.7	24.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	97.826	ppb	0.5	6874.55	0.0408	Pulse	1.5000	3
Na	23	45	He	231440.972	ppb	2.0	39442110.24	828.2209	Analog	0.1000	3
Mg	24	45	He	96711.550	ppb	2.3	8263953.21	173.5352	Analog	0.1000	3
Al	27	45	He	99640.291	ppb	1.8	2776153.50	58.2937	Analog	0.1000	3
K	39	45	He	97543.265	ppb	2.2	5427252.83	113.9673	Analog	0.1000	3
Ca	44	45	He	287492.774	ppb	1.5	925060.09	19.4234	Pulse	0.1000	3
Ti	47	45	He	1970.032	ppb	2.3	50381.42	1.0579	Pulse	0.1000	3
V	51	45	He	198.300	ppb	2.0	207612.90	4.3595	Pulse	0.5000	3
Cr	52	45	He	190.159	ppb	2.5	273030.59	5.7335	Pulse	0.1000	3
Mn	55	45	He	196.457	ppb	2.3	120193.70	2.5239	Pulse	0.1000	3
Fe	57	45	He	242062.616	ppb	1.7	6697962.82	140.6376	Analog	0.1000	3
Co	59	45	He	185.584	ppb	2.7	497479.03	10.4472	Pulse	0.1000	3
Ni	60	72	He	190.055	ppb	0.9	139431.89	1.6341	Pulse	0.1000	3
Cu	63	72	He	180.031	ppb	0.7	394754.55	4.6263	Pulse	0.1000	3
Zn	66	72	He	98.587	ppb	2.7	24815.34	0.2909	Pulse	0.1000	3
As	75	72	He	97.390	ppb	1.8	17093.57	0.2003	Pulse	0.5000	3
Sr	88	115	He	1.934	ppb	11.0	1523.47	0.0183	Pulse	0.1000	3
Mo	98	115	He	2102.198	ppb	1.5	3831902.44	46.0940	Analog	0.1000	3
Ag	107	115	He	49.270	ppb	0.3	190476.33	2.2911	Pulse	0.1000	3
Cd	111	115	He	101.085	ppb	1.1	44933.91	0.5405	Pulse	0.5000	3
Sn	120	115	He	0.145	ppb	20.0	1560.16	0.0188	Pulse	0.1000	3
Sb	121	115	He	0.114	ppb	23.9	163.34	0.0020	Pulse	0.1000	3
Ba	137	115	He	0.461	ppb	24.7	203.34	0.0024	Pulse	0.1000	3
Tl	205	159	He	0.018	ppb	40.0	230.01	0.0006	Pulse	0.1000	3
Pb	208	159	He	0.068	ppb	12.9	1303.41	0.0033	Pulse	0.1000	3
U	238	209	He	0.053	ppb	21.1	780.05	0.0027	Pulse	0.1000	3

ISTD Table:

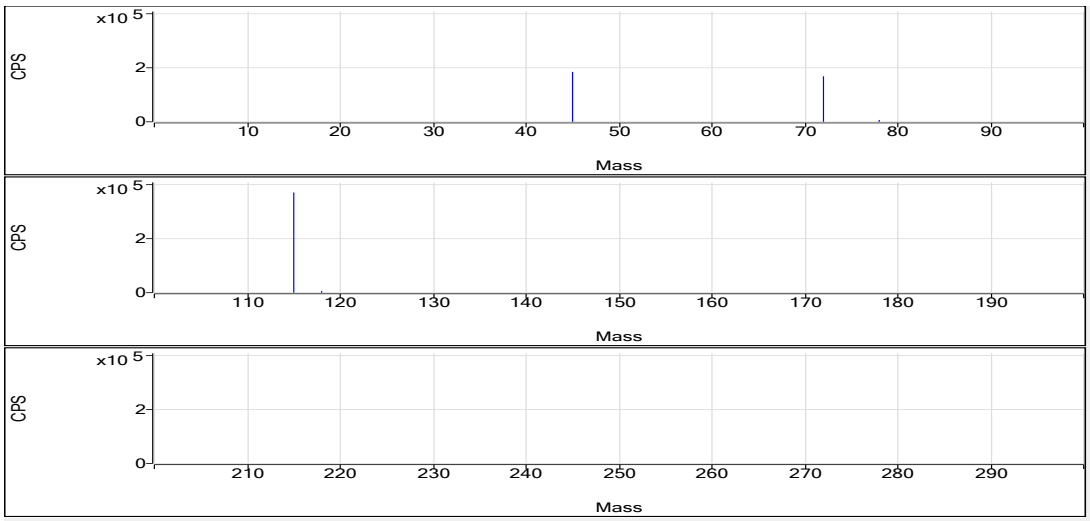
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2403477.83	0.2	100.2	Analog	0.1000	3
No Gas	Ge	72	1213993.86	0.8	105.3	Pulse	0.1000	3
H2	Sc	45	184752.61	0.8	98.8	Pulse	0.1000	3
H2	Ge	72	168445.93	1.0	102.9	Pulse	0.1000	3
H2	In	115	370907.83	0.4	95.3	Pulse	0.1000	3
He	Sc	45	47635.30	2.0	102.1	Pulse	0.1000	3
He	Ge	72	85331.41	1.1	105.1	Pulse	0.1000	3
He	In	115	83140.36	1.0	96.5	Pulse	0.1000	3
He	Tb	159	396336.62	0.5	99.4	Pulse	0.1000	3
He	Bi	209	292945.15	0.8	94.7	Pulse	0.1000	3

No Gas

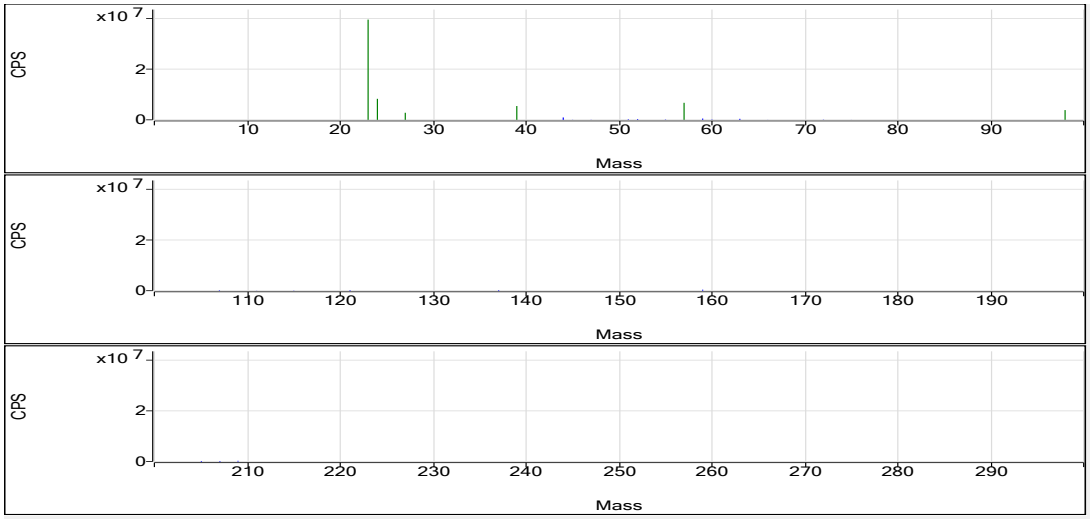


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.012	0	34.00	0.0008	4.685E-06
Be	9	1	No Gas	0.001	0	14.00	0.0008	4.685E-06
Be	9	1	No Gas	0.007	0	24.00	0.0008	4.685E-06
Se	78	2	H2	98.347	0.041	6881.67	0.0004	1.219E-05
Se	78	2	H2	97.492	0.0407	6931.69	0.0004	1.219E-05
Se	78	2	H2	97.639	0.0407	6810.29	0.0004	1.219E-05
Na	23	3	He	236702.143	847.0403	39493729.41	0.0036	0.3452
Na	23	3	He	229816.722	822.4108	39268891.91	0.0036	0.3452
Na	23	3	He	227804.049	815.2114	39563709.41	0.0036	0.3452
Mg	24	3	He	98697.019	177.0977	8257280.50	0.0018	0.003497
Mg	24	3	He	97101.535	174.2349	8319457.38	0.0018	0.003497
Mg	24	3	He	94336.098	169.2728	8215121.75	0.0018	0.003497
Al	27	3	He	101546.32	59.4088	2769967.46	0.0006	0.0006432
Al	27	3	He	99477.926	58.1987	2778900.90	0.0006	0.0006432
Al	27	3	He	97896.627	57.2736	2779592.15	0.0006	0.0006432
K	39	3	He	99722.975	116.5052	5432119.29	0.0012	0.3951
K	39	3	He	97545.95	113.9704	5441917.42	0.0012	0.3951
K	39	3	He	95360.871	111.4263	5407721.79	0.0012	0.3951
Ca	44	3	He	292106.628	19.7351	920158.89	0.0001	0.002715
Ca	44	3	He	286438.224	19.3522	924036.94	0.0001	0.002715
Ca	44	3	He	283933.471	19.183	930984.44	0.0001	0.002715
Ti	47	3	He	2018.141	1.0837	50528.55	0.0005	7.003E-05
Ti	47	3	He	1930.37	1.0366	49495.18	0.0005	7.003E-05
Ti	47	3	He	1961.583	1.0533	51120.54	0.0005	7.003E-05
V	51	3	He	202.293	4.4468	207335.41	0.0219	0.02486
V	51	3	He	198.185	4.357	208041.70	0.0219	0.02486
V	51	3	He	194.421	4.2748	207461.58	0.0219	0.02486
Cr	52	3	He	194.187	5.8541	272948.77	0.0299	0.03997
Cr	52	3	He	191.306	5.7678	275404.64	0.0299	0.03997
Cr	52	3	He	184.985	5.5786	270738.37	0.0299	0.03997
Mn	55	3	He	201.606	2.59	120761.56	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	194.442	2.4981	119279.47	0.0128	0.002639
Mn	55	3	He	193.324	2.4837	120540.06	0.0128	0.002639
Fe	57	3	He	244997.626	142.3428	6636813.03	0.0006	0.001429
Fe	57	3	He	243829.244	141.664	6764244.27	0.0006	0.001429
Fe	57	3	He	237360.979	137.906	6692831.15	0.0006	0.001429
Co	59	3	He	190.364	10.7163	499653.23	0.0563	0.002149
Co	59	3	He	186.123	10.4776	500288.47	0.0563	0.002149
Co	59	3	He	180.265	10.1479	492495.38	0.0563	0.002149
Ni	60	3	He	190.289	1.6361	139024.33	0.0086	0.002834
Ni	60	3	He	188.285	1.6189	139842.49	0.0086	0.002834
Ni	60	3	He	191.592	1.6473	139428.85	0.0086	0.002834
Cu	63	3	He	179.988	4.6252	393018.35	0.0257	0.004757
Cu	63	3	He	178.858	4.5962	397026.24	0.0257	0.004757
Cu	63	3	He	181.246	4.6575	394219.06	0.0257	0.004757
Zn	66	3	He	100.597	0.2967	25212.75	0.0029	0.003818
Zn	66	3	He	95.55	0.282	24361.19	0.0029	0.003818
Zn	66	3	He	99.613	0.2939	24872.09	0.0029	0.003818
As	75	3	He	98.565	0.2028	17228.40	0.002	0.0008061
As	75	3	He	95.322	0.1961	16940.02	0.002	0.0008061
As	75	3	He	98.283	0.2022	17112.30	0.002	0.0008061
Sr	88	3	He	1.903	0.018	1490.14	0.009	0.0009645
Sr	88	3	He	2.161	0.0203	1710.17	0.009	0.0009645
Sr	88	3	He	1.738	0.0166	1370.10	0.009	0.0009645
Mo	98	3	He	2126.327	46.623	3851919.63	0.0219	0.0002706
Mo	98	3	He	2066.369	45.3084	3808460.88	0.0219	0.0002706
Mo	98	3	He	2113.898	46.3505	3835326.82	0.0219	0.0002706
Ag	107	3	He	49.326	2.2937	189498.24	0.0465	0.0006206
Ag	107	3	He	49.105	2.2834	191932.87	0.0465	0.0006206
Ag	107	3	He	49.38	2.2962	189997.89	0.0465	0.0006206
Cd	111	3	He	102.203	0.5465	45148.53	0.0053	0
Cd	111	3	He	100.058	0.535	44970.04	0.0053	0
Cd	111	3	He	100.994	0.54	44683.17	0.0053	0
Sn	120	3	He	0.122	0.0184	1520.14	0.0158	0.01648
Sn	120	3	He	0.177	0.0193	1620.21	0.0158	0.01648
Sn	120	3	He	0.135	0.0186	1540.13	0.0158	0.01648
Sb	121	3	He	0.088	0.0016	130.01	0.0149	0.0002698
Sb	121	3	He	0.142	0.0024	200.01	0.0149	0.0002698
Sb	121	3	He	0.112	0.0019	160.01	0.0149	0.0002698
Ba	137	3	He	0.532	0.0028	230.01	0.0048	0.0002317
Ba	137	3	He	0.522	0.0027	230.01	0.0048	0.0002317
Ba	137	3	He	0.329	0.0018	150.01	0.0048	0.0002317
Tl	205	3	He	0.025	0.0008	300.01	0.0247	0.0001339
Tl	205	3	He	0.018	0.0006	230.01	0.0247	0.0001339
Tl	205	3	He	0.011	0.0004	160.01	0.0247	0.0001339
Pb	208	3	He	0.078	0.0036	730.05	0.0327	0.00107
Pb	208	3	He	0.062	0.0031	690.05	0.0327	0.00107
Pb	208	3	He	0.064	0.0032	700.04	0.0327	0.00107
U	238	3	He	0.063	0.0032	930.07	0.0493	7.55E-05
U	238	3	He	0.054	0.0027	790.05	0.0493	7.55E-05
U	238	3	He	0.041	0.0021	620.04	0.0493	7.55E-05
Sc	45	1	No Gas			2398964.96		
Sc	45	1	No Gas			2403438.87		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2408029.65		
Ge	72	1	No Gas			1211425.22		
Ge	72	1	No Gas			1205236.31		
Ge	72	1	No Gas			1225320.06		
Sc	45	2	H2			186138.92		
Sc	45	2	H2			184792.85		
Sc	45	2	H2			183326.05		
Ge	72	2	H2			167725.58		
Ge	72	2	H2			170424.53		
Ge	72	2	H2			167187.69		
In	115	2	H2			369851.71		
In	115	2	H2			372520.42		
In	115	2	H2			370351.36		
Sc	45	3	He			46625.56		
Sc	45	3	He			47748.51		
Sc	45	3	He			48531.84		
Ge	72	3	He			84972.41		
Ge	72	3	He			86380.55		
Ge	72	3	He			84641.26		
In	115	3	He			82625.82		
In	115	3	He			84064.12		
In	115	3	He			82755.64		
Tb	159	3	He			395297.57		
Tb	159	3	He			395215.66		
Tb	159	3	He			398496.63		
Bi	209	3	He			291955.62		
Bi	209	3	He			291291.48		
Bi	209	3	He			295588.35		

Quantitation Report

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Acq Time	8/10/2023 8:33:50 AM
Sample Name	LRC 4661368
Sample Type	LRC
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

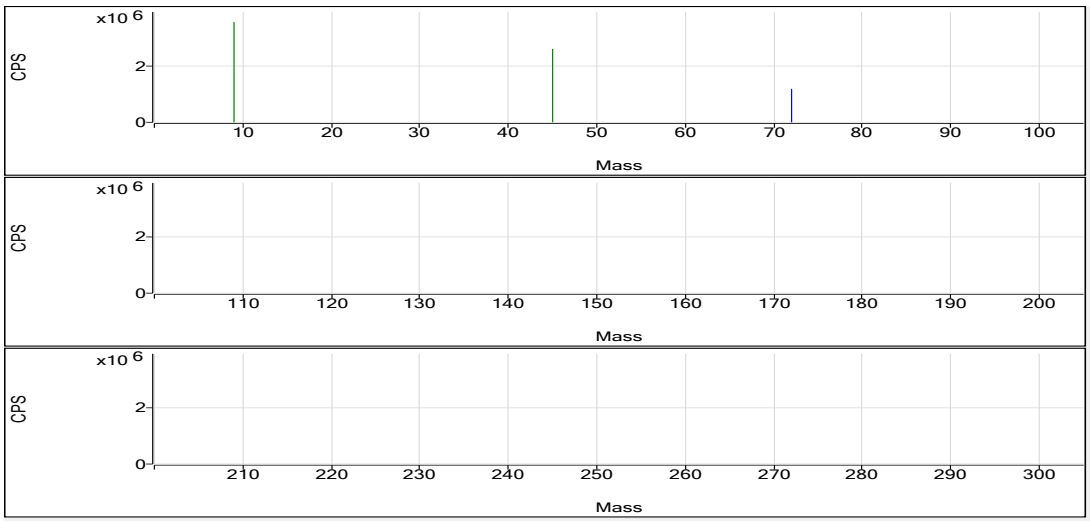
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	1790.005	ppb	1.9	3553874.67	1.3654	Analog	0.5000	3
Se	78	72	H2	1999.788	ppb	1.6	137532.22	0.8341	Pulse	1.5000	3
Na	23	45	He	174873.715	ppb	1.5	31898660.36	625.8770	Analog	0.1000	3
Mg	24	45	He	184538.600	ppb	1.6	16875776.83	331.1252	Analog	0.1000	3
Al	27	45	He	188307.029	ppb	1.4	5614822.00	110.1668	Analog	0.1000	3
K	39	45	He	186613.375	ppb	1.4	11093948.17	217.6740	Analog	0.1000	3
Ca	44	45	He	189112.912	ppb	1.2	651238.32	12.7777	Pulse	0.1000	3
Ti	47	45	He	1915.011	ppb	2.2	52405.31	1.0283	Pulse	0.1000	3
V	51	45	He	1876.875	ppb	2.4	2092028.08	41.0518	Analog	0.5000	3
Cr	52	45	He	1808.823	ppb	2.4	2761947.46	54.1974	Analog	0.1000	3
Mn	55	45	He	5605.142	ppb	1.3	3666410.36	71.9383	Analog	0.1000	3
Fe	57	45	He	147336.526	ppb	1.8	4362784.21	85.6026	Analog	0.1000	3
Co	59	45	He	1769.916	ppb	2.5	5076477.01	99.6171	Analog	0.1000	3
Ni	60	72	He	1933.971	ppb	1.6	1373836.49	16.6024	Pulse	0.1000	3
Cu	63	72	He	1910.528	ppb	1.3	4059080.46	49.0501	Analog	0.1000	3
Zn	66	72	He	1976.327	ppb	1.5	476493.09	5.7581	Pulse	0.1000	3
As	75	72	He	2004.621	ppb	1.7	339932.99	4.1080	Pulse	0.5000	3
Sr	88	115	He	2050.894	ppb	1.5	1662776.17	18.3971	Analog	0.1000	3
Mo	98	115	He	2003.153	ppb	0.7	3970111.19	43.9222	Analog	0.1000	3
Ag	107	115	He	1900.054	ppb	1.7	7983358.63	88.3286	Analog	0.1000	3
Cd	111	115	He	1869.114	ppb	1.2	903309.98	9.9940	Pulse	0.5000	3
Sn	120	115	He	2014.431	ppb	0.9	2878128.60	31.8418	Analog	0.1000	3
Sb	121	115	He	2029.997	ppb	1.2	2725382.15	30.1527	Analog	0.1000	3
Ba	137	115	He	1922.876	ppb	1.6	834111.11	9.2288	Pulse	0.1000	3
Tl	205	159	He	2028.951	ppb	1.0	19864453.87	50.1687	Analog	0.1000	3
Pb	208	159	He	2037.917	ppb	0.7	26410757.32	66.7015	Analog	0.1000	3
U	238	209	He	219.997	ppb	0.4	3138170.68	10.8371	Analog	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2603096.53	0.9	108.5	Analog	0.1000	3
No Gas	Ge	72	1184581.88	0.5	102.7	Pulse	0.1000	3
H2	Sc	45	187068.83	1.2	100.0	Pulse	0.1000	3
H2	Ge	72	164935.16	2.3	100.7	Pulse	0.1000	3
H2	In	115	481503.78	0.9	123.8	Pulse	0.1000	3
He	Sc	45	50973.40	1.6	109.3	Pulse	0.1000	3
He	Ge	72	82766.11	1.9	101.9	Pulse	0.1000	3
He	In	115	90395.23	1.4	104.9	Pulse	0.1000	3
He	Tb	159	395957.05	0.1	99.3	Pulse	0.1000	3
He	Bi	209	289572.46	1.0	93.6	Pulse	0.1000	3

No Gas



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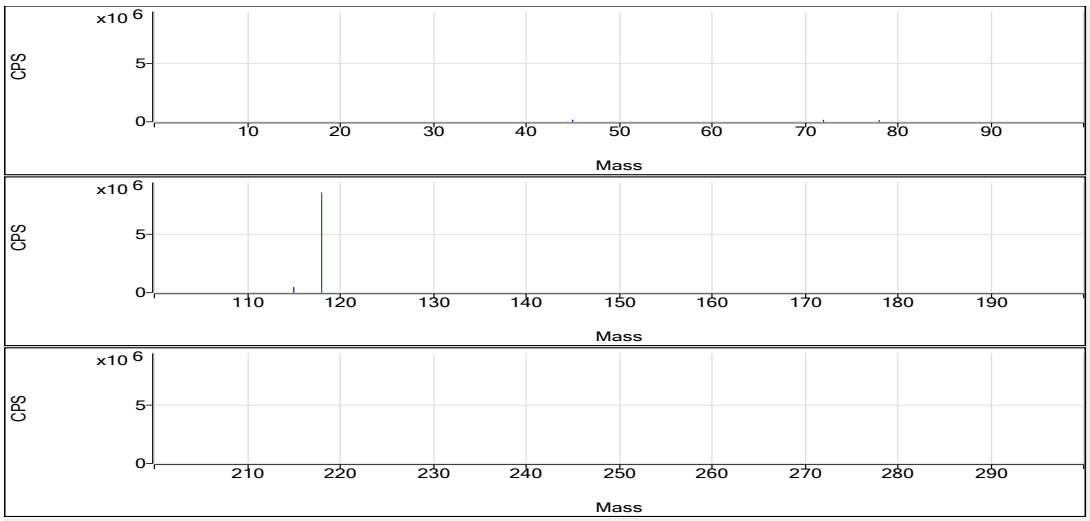
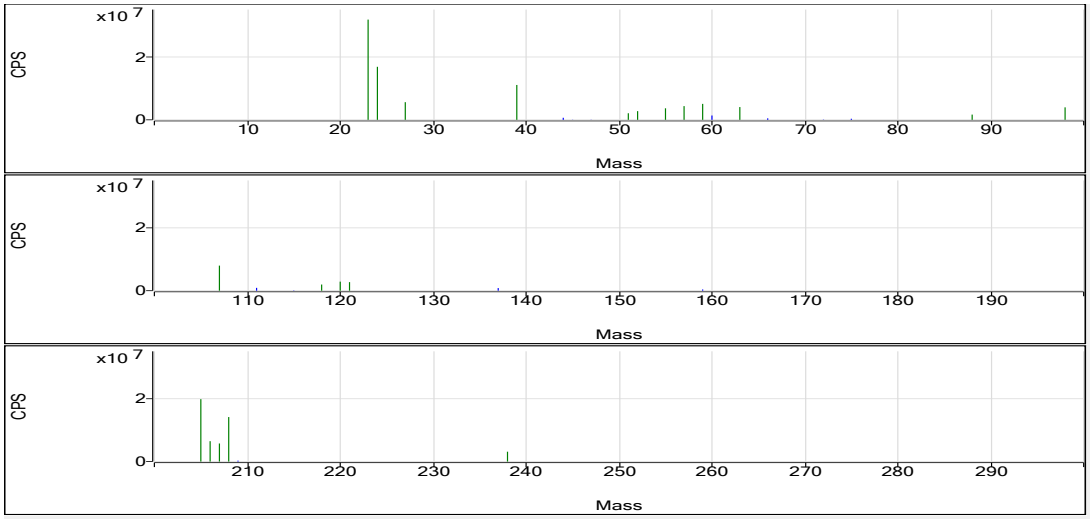


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	1796.515	1.3704	3551875.25	0.0008	4.685E-06
Be	9	1	No Gas	1753.304	1.3374	3516167.75	0.0008	4.685E-06
Be	9	1	No Gas	1820.196	1.3884	3593581.00	0.0008	4.685E-06
Se	78	2	H2	2029.344	0.8464	136300.04	0.0004	1.219E-05
Se	78	2	H2	1966.058	0.82	138310.81	0.0004	1.219E-05
Se	78	2	H2	2003.962	0.8358	137985.80	0.0004	1.219E-05
Na	23	3	He	172338.24	616.8075	31636827.03	0.0036	0.3452
Na	23	3	He	174557.858	624.7472	32238384.52	0.0036	0.3452
Na	23	3	He	177725.048	636.0764	31820769.53	0.0036	0.3452
Mg	24	3	He	182671.489	327.775	16811987.25	0.0018	0.003497
Mg	24	3	He	183069.125	328.4884	16950756.00	0.0018	0.003497
Mg	24	3	He	187875.186	337.1121	16864587.25	0.0018	0.003497
Al	27	3	He	186033.037	108.8364	5582357.42	0.0006	0.0006432
Al	27	3	He	187676.364	109.7979	5665820.54	0.0006	0.0006432
Al	27	3	He	191211.684	111.8661	5596288.04	0.0006	0.0006432
K	39	3	He	185287.456	216.1302	11085587.33	0.0012	0.3951
K	39	3	He	185005.007	215.8013	11135842.33	0.0012	0.3951
K	39	3	He	189547.662	221.0905	11060414.84	0.0012	0.3951
Ca	44	3	He	187358.825	12.6592	649304.17	0.0001	0.002715
Ca	44	3	He	188208.792	12.7166	656204.52	0.0001	0.002715
Ca	44	3	He	191771.118	12.9572	648206.28	0.0001	0.002715
Ti	47	3	He	1906.344	1.0237	52505.81	0.0005	7.003E-05
Ti	47	3	He	1878.183	1.0086	52043.93	0.0005	7.003E-05
Ti	47	3	He	1960.507	1.0528	52666.18	0.0005	7.003E-05
V	51	3	He	1873.826	40.9851	2102179.50	0.0219	0.02486
V	51	3	He	1833.869	40.1117	2069856.75	0.0219	0.02486
V	51	3	He	1922.931	42.0585	2104048.00	0.0219	0.02486
Cr	52	3	He	1775.776	53.208	2729104.02	0.0299	0.03997
Cr	52	3	He	1792.108	53.697	2770888.08	0.0299	0.03997
Cr	52	3	He	1858.584	55.6873	2785850.27	0.0299	0.03997
Mn	55	3	He	5583.997	71.667	3675888.38	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	5543.33	71.1451	3671247.76	0.0128	0.002639
Mn	55	3	He	5688.098	73.003	3652094.95	0.0128	0.002639
Fe	57	3	He	144637.454	84.0345	4310232.75	0.0006	0.001429
Fe	57	3	He	147303.421	85.5834	4416297.75	0.0006	0.001429
Fe	57	3	He	150068.702	87.19	4361822.12	0.0006	0.001429
Co	59	3	He	1742.849	98.0937	5031349.61	0.0563	0.002149
Co	59	3	He	1746.15	98.2795	5071446.80	0.0563	0.002149
Co	59	3	He	1820.749	102.4781	5126634.61	0.0563	0.002149
Ni	60	3	He	1964.866	16.8676	1374575.92	0.0086	0.002834
Ni	60	3	He	1901.413	16.3229	1379609.82	0.0086	0.002834
Ni	60	3	He	1935.632	16.6166	1367323.73	0.0086	0.002834
Cu	63	3	He	1936.11	49.7068	4050716.50	0.0257	0.004757
Cu	63	3	He	1888.083	48.4739	4096995.88	0.0257	0.004757
Cu	63	3	He	1907.392	48.9696	4029529.00	0.0257	0.004757
Zn	66	3	He	2008.889	5.8529	476968.43	0.0029	0.003818
Zn	66	3	He	1948.985	5.6785	479946.24	0.0029	0.003818
Zn	66	3	He	1971.107	5.7429	472564.60	0.0029	0.003818
As	75	3	He	2031.299	4.1627	339225.28	0.002	0.0008061
As	75	3	He	1967.556	4.0321	340789.19	0.002	0.0008061
As	75	3	He	2015.007	4.1293	339784.50	0.002	0.0008061
Sr	88	3	He	2063.487	18.5101	1657851.54	0.009	0.0009645
Sr	88	3	He	2015.965	18.0838	1662005.60	0.009	0.0009645
Sr	88	3	He	2073.23	18.5975	1668471.38	0.009	0.0009645
Mo	98	3	He	2016.233	44.2091	3959578.38	0.0219	0.0002706
Mo	98	3	He	1988.429	43.5994	4007035.88	0.0219	0.0002706
Mo	98	3	He	2004.797	43.9583	3943719.32	0.0219	0.0002706
Ag	107	3	He	1932.539	89.8388	8046398.01	0.0465	0.0006206
Ag	107	3	He	1869.153	86.8921	7985885.51	0.0465	0.0006206
Ag	107	3	He	1898.469	88.2549	7917792.38	0.0465	0.0006206
Cd	111	3	He	1891.55	10.1139	905853.06	0.0053	0
Cd	111	3	He	1845.837	9.8695	907064.81	0.0053	0
Cd	111	3	He	1869.954	9.9985	897012.06	0.0053	0
Sn	120	3	He	2033.964	32.1504	2879547.46	0.0158	0.01648
Sn	120	3	He	1996.755	31.5626	2900781.21	0.0158	0.01648
Sn	120	3	He	2012.574	31.8125	2854057.14	0.0158	0.01648
Sb	121	3	He	2055.898	30.5374	2735080.58	0.0149	0.0002698
Sb	121	3	He	2006.07	29.7973	2738544.65	0.0149	0.0002698
Sb	121	3	He	2028.024	30.1234	2702521.21	0.0149	0.0002698
Ba	137	3	He	1944.917	9.3345	836046.71	0.0048	0.0002317
Ba	137	3	He	1888.808	9.0653	833148.89	0.0048	0.0002317
Ba	137	3	He	1934.905	9.2865	833137.72	0.0048	0.0002317
Tl	205	3	He	2020.267	49.954	19788320.96	0.0247	0.0001339
Tl	205	3	He	2052.876	50.7603	20066255.95	0.0247	0.0001339
Tl	205	3	He	2013.71	49.7918	19738784.71	0.0247	0.0001339
Pb	208	3	He	2034.742	66.5976	14112654.79	0.0327	0.00107
Pb	208	3	He	2053.879	67.224	14303471.04	0.0327	0.00107
Pb	208	3	He	2025.131	66.283	14083296.04	0.0327	0.00107
U	238	3	He	219.617	10.8184	3095244.64	0.0493	7.55E-05
U	238	3	He	221.063	10.8896	3176541.83	0.0493	7.55E-05
U	238	3	He	219.311	10.8033	3142725.58	0.0493	7.55E-05
Sc	45	1	No Gas			2591930.90		
Sc	45	1	No Gas			2629110.59		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2588248.09		
Ge	72	1	No Gas			1178464.12		
Ge	72	1	No Gas			1188858.42		
Ge	72	1	No Gas			1186423.11		
Sc	45	2	H2			184448.69		
Sc	45	2	H2			187847.01		
Sc	45	2	H2			188910.80		
Ge	72	2	H2			161037.72		
Ge	72	2	H2			168673.49		
Ge	72	2	H2			165094.26		
In	115	2	H2			477231.59		
In	115	2	H2			485727.92		
In	115	2	H2			481551.83		
Sc	45	3	He			51291.25		
Sc	45	3	He			51602.29		
Sc	45	3	He			50026.65		
Ge	72	3	He			81492.24		
Ge	72	3	He			84519.68		
Ge	72	3	He			82286.41		
In	115	3	He			104783.02		
In	115	3	He			107413.48		
In	115	3	He			104924.84		
Tb	159	3	He			396131.09		
Tb	159	3	He			395314.02		
Tb	159	3	He			396426.05		
Bi	209	3	He			286110.03		
Bi	209	3	He			291703.59		
Bi	209	3	He			290903.75		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

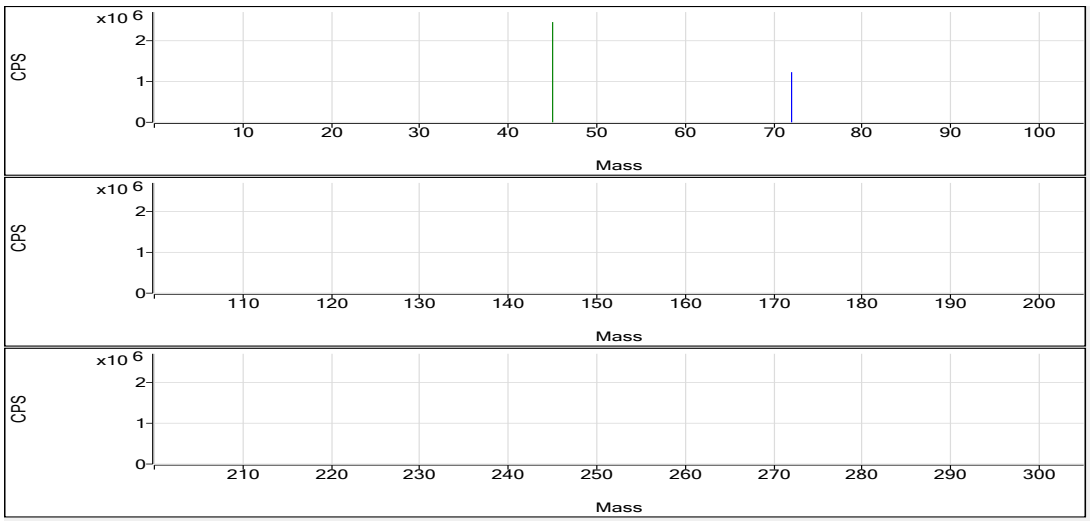
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.737	ppb	14.9	1385.41	0.0006	Pulse	0.5000	3
Se	78	72	H2	0.964	ppb	10.5	69.56	0.0004	Pulse	1.5000	3
Na	23	45	He	53.656	ppb	3.6	25495.97	0.5371	Pulse	0.1000	3
Mg	24	45	He	21.253	ppb	9.2	1976.86	0.0416	Pulse	0.1000	3
Al	27	45	He	21.576	ppb	12.5	630.04	0.0133	Pulse	0.1000	3
K	39	45	He	18.461	ppb	50.6	19774.03	0.4166	Pulse	0.1000	3
Ca	44	45	He	67.908	ppb	22.4	346.68	0.0073	Pulse	0.1000	3
Ti	47	45	He	0.261	ppb	149.4	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	0.448	ppb	9.1	1645.44	0.0347	Pulse	0.5000	3
Cr	52	45	He	-0.111	ppb	N/A	1740.17	0.0367	Pulse	0.1000	3
Mn	55	45	He	0.758	ppb	12.9	586.70	0.0124	Pulse	0.1000	3
Fe	57	45	He	32.325	ppb	19.2	960.07	0.0202	Pulse	0.1000	3
Co	59	45	He	0.273	ppb	12.8	830.05	0.0175	Pulse	0.1000	3
Ni	60	72	He	0.377	ppb	15.4	516.70	0.0061	Pulse	0.1000	3
Cu	63	72	He	0.311	ppb	29.5	1083.41	0.0127	Pulse	0.1000	3
Zn	66	72	He	-0.086	ppb	N/A	303.35	0.0036	Pulse	0.1000	3
As	75	72	He	0.272	ppb	13.0	116.00	0.0014	Pulse	0.5000	3
Sr	88	115	He	0.206	ppb	49.8	240.01	0.0028	Pulse	0.1000	3
Mo	98	115	He	2.113	ppb	12.5	3980.72	0.0466	Pulse	0.1000	3
Ag	107	115	He	0.225	ppb	10.3	943.40	0.0111	Pulse	0.1000	3
Cd	111	115	He	0.241	ppb	13.7	110.00	0.0013	Pulse	0.5000	3
Sn	120	115	He	0.938	ppb	18.3	2670.35	0.0313	Pulse	0.1000	3
Sb	121	115	He	0.256	ppb	20.9	346.68	0.0041	Pulse	0.1000	3
Ba	137	115	He	0.220	ppb	12.0	110.01	0.0013	Pulse	0.1000	3
Tl	205	159	He	1.107	ppb	4.4	10958.27	0.0275	Pulse	0.1000	3
Pb	208	159	He	0.303	ppb	11.1	4377.12	0.0110	Pulse	0.1000	3
U	238	209	He	0.155	ppb	6.1	2376.98	0.0077	Pulse	0.1000	3

ISTD Table:

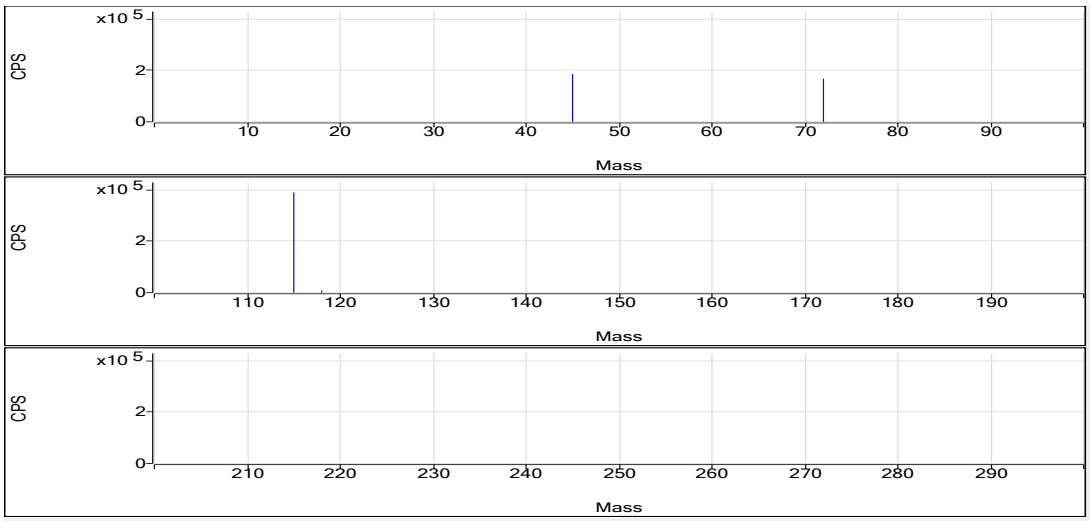
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2446955.69	0.7	102.0	Analog	0.1000	3
No Gas	Ge	72	1223821.49	0.3	106.1	Pulse	0.1000	3
H2	Sc	45	185806.77	1.8	99.4	Pulse	0.1000	3
H2	Ge	72	167907.37	0.1	102.6	Pulse	0.1000	3
H2	In	115	390210.41	0.8	100.3	Pulse	0.1000	3
He	Sc	45	47468.10	0.7	101.8	Pulse	0.1000	3
He	Ge	72	85126.03	0.7	104.8	Pulse	0.1000	3
He	In	115	85341.01	1.3	99.0	Pulse	0.1000	3
He	Tb	159	398642.45	0.9	100.0	Pulse	0.1000	3
He	Bi	209	307894.69	1.0	99.6	Pulse	0.1000	3

No Gas

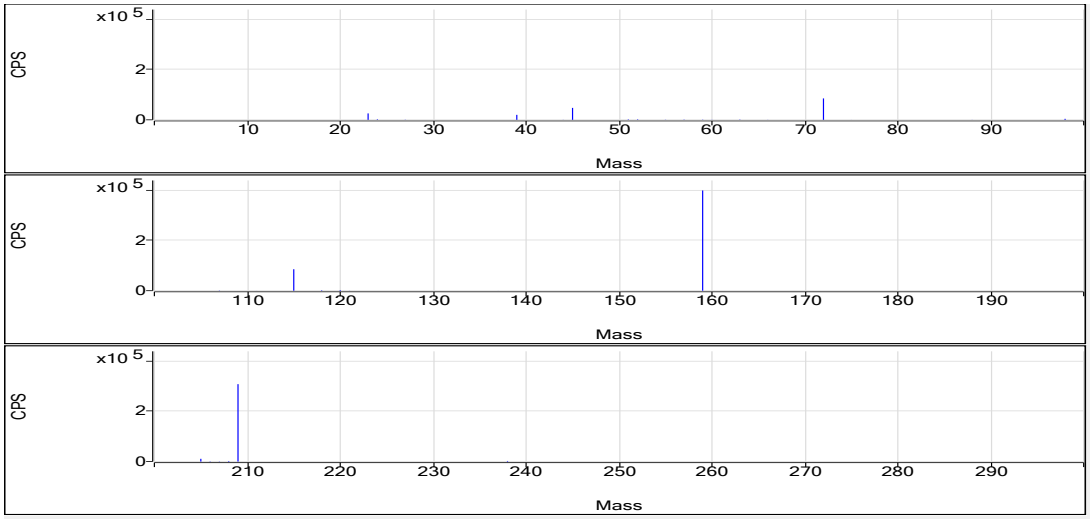


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.842	0.0006	1570.09	0.0008	4.685E-06
Be	9	1	No Gas	0.745	0.0006	1404.07	0.0008	4.685E-06
Be	9	1	No Gas	0.623	0.0005	1182.06	0.0008	4.685E-06
Se	78	2	H2	1.066	0.0005	76.67	0.0004	1.219E-05
Se	78	2	H2	0.864	0.0004	62.67	0.0004	1.219E-05
Se	78	2	H2	0.962	0.0004	69.33	0.0004	1.219E-05
Na	23	3	He	55.583	0.544	26023.62	0.0036	0.3452
Na	23	3	He	51.679	0.53	25041.86	0.0036	0.3452
Na	23	3	He	53.707	0.5373	25422.42	0.0036	0.3452
Mg	24	3	He	23.45	0.0456	2180.23	0.0018	0.003497
Mg	24	3	He	20.583	0.0404	1910.19	0.0018	0.003497
Mg	24	3	He	19.725	0.0389	1840.16	0.0018	0.003497
Al	27	3	He	24.628	0.0151	720.04	0.0006	0.0006432
Al	27	3	He	20.609	0.0127	600.04	0.0006	0.0006432
Al	27	3	He	19.493	0.012	570.04	0.0006	0.0006432
K	39	3	He	20.368	0.4188	20034.22	0.0012	0.3951
K	39	3	He	8.316	0.4047	19123.27	0.0012	0.3951
K	39	3	He	26.699	0.4262	20164.60	0.0012	0.3951
Ca	44	3	He	74.309	0.0077	370.02	0.0001	0.002715
Ca	44	3	He	78.877	0.008	380.02	0.0001	0.002715
Ca	44	3	He	50.539	0.0061	290.01	0.0001	0.002715
Ti	47	3	He	0.648	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	0.264	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	0.479	0.0353	1690.11	0.0219	0.02486
V	51	3	He	0.402	0.0337	1590.10	0.0219	0.02486
V	51	3	He	0.464	0.035	1656.11	0.0219	0.02486
Cr	52	3	He	-0.057	0.0383	1830.18	0.0299	0.03997
Cr	52	3	He	-0.197	0.0341	1610.15	0.0299	0.03997
Cr	52	3	He	-0.079	0.0376	1780.17	0.0299	0.03997
Mn	55	3	He	0.674	0.0113	540.03	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.734	0.0121	570.03	0.0128	0.002639
Mn	55	3	He	0.865	0.0137	650.05	0.0128	0.002639
Fe	57	3	He	39.28	0.0242	1160.10	0.0006	0.001429
Fe	57	3	He	27.415	0.0174	820.05	0.0006	0.001429
Fe	57	3	He	30.281	0.019	900.06	0.0006	0.001429
Co	59	3	He	0.244	0.0159	760.05	0.0563	0.002149
Co	59	3	He	0.312	0.0197	930.06	0.0563	0.002149
Co	59	3	He	0.262	0.0169	800.05	0.0563	0.002149
Ni	60	3	He	0.343	0.0058	490.03	0.0086	0.002834
Ni	60	3	He	0.344	0.0058	490.03	0.0086	0.002834
Ni	60	3	He	0.444	0.0066	570.03	0.0086	0.002834
Cu	63	3	He	0.361	0.014	1190.09	0.0257	0.004757
Cu	63	3	He	0.367	0.0142	1200.09	0.0257	0.004757
Cu	63	3	He	0.205	0.01	860.05	0.0257	0.004757
Zn	66	3	He	-0.137	0.0034	290.01	0.0029	0.003818
Zn	66	3	He	0.189	0.0044	370.02	0.0029	0.003818
Zn	66	3	He	-0.31	0.0029	250.01	0.0029	0.003818
As	75	3	He	0.239	0.0013	110.00	0.002	0.0008061
As	75	3	He	0.309	0.0014	122.00	0.002	0.0008061
As	75	3	He	0.266	0.0014	116.00	0.002	0.0008061
Sr	88	3	He	0.144	0.0023	190.01	0.009	0.0009645
Sr	88	3	He	0.325	0.0039	330.02	0.009	0.0009645
Sr	88	3	He	0.15	0.0023	200.01	0.009	0.0009645
Mo	98	3	He	1.81	0.0399	3370.56	0.0219	0.0002706
Mo	98	3	He	2.281	0.0503	4280.78	0.0219	0.0002706
Mo	98	3	He	2.25	0.0496	4290.82	0.0219	0.0002706
Ag	107	3	He	0.247	0.0121	1020.08	0.0465	0.0006206
Ag	107	3	He	0.227	0.0112	950.07	0.0465	0.0006206
Ag	107	3	He	0.2	0.0099	860.06	0.0465	0.0006206
Cd	111	3	He	0.279	0.0015	126.00	0.0053	0
Cd	111	3	He	0.224	0.0012	102.00	0.0053	0
Cd	111	3	He	0.22	0.0012	102.00	0.0053	0
Sn	120	3	He	0.833	0.0296	2500.31	0.0158	0.01648
Sn	120	3	He	1.136	0.0344	2930.40	0.0158	0.01648
Sn	120	3	He	0.845	0.0298	2580.35	0.0158	0.01648
Sb	121	3	He	0.317	0.005	420.02	0.0149	0.0002698
Sb	121	3	He	0.219	0.0035	300.01	0.0149	0.0002698
Sb	121	3	He	0.231	0.0037	320.02	0.0149	0.0002698
Ba	137	3	He	0.223	0.0013	110.01	0.0048	0.0002317
Ba	137	3	He	0.245	0.0014	120.01	0.0048	0.0002317
Ba	137	3	He	0.193	0.0012	100.00	0.0048	0.0002317
Tl	205	3	He	1.163	0.0289	11405.29	0.0247	0.0001339
Tl	205	3	He	1.078	0.0268	10714.78	0.0247	0.0001339
Tl	205	3	He	1.078	0.0268	10754.75	0.0247	0.0001339
Pb	208	3	He	0.325	0.0117	2230.26	0.0327	0.00107
Pb	208	3	He	0.32	0.0115	2310.30	0.0327	0.00107
Pb	208	3	He	0.264	0.0097	2310.30	0.0327	0.00107
U	238	3	He	0.15	0.0075	2290.28	0.0493	7.55E-05
U	238	3	He	0.149	0.0074	2270.28	0.0493	7.55E-05
U	238	3	He	0.166	0.0083	2570.38	0.0493	7.55E-05
Sc	45	1	No Gas			2428182.15		
Sc	45	1	No Gas			2450253.87		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2462431.06		
Ge	72	1	No Gas			1223339.67		
Ge	72	1	No Gas			1227228.65		
Ge	72	1	No Gas			1220896.15		
Sc	45	2	H2			182298.83		
Sc	45	2	H2			186208.77		
Sc	45	2	H2			188912.71		
Ge	72	2	H2			167797.11		
Ge	72	2	H2			168168.59		
Ge	72	2	H2			167756.40		
In	115	2	H2			390003.55		
In	115	2	H2			393257.73		
In	115	2	H2			387369.96		
Sc	45	3	He			47839.27		
Sc	45	3	He			47247.26		
Sc	45	3	He			47317.78		
Ge	72	3	He			84861.73		
Ge	72	3	He			84720.32		
Ge	72	3	He			85796.03		
In	115	3	He			84385.17		
In	115	3	He			85151.15		
In	115	3	He			86528.54		
Tb	159	3	He			394679.25		
Tb	159	3	He			399868.39		
Tb	159	3	He			401379.72		
Bi	209	3	He			305990.82		
Bi	209	3	He			306421.66		
Bi	209	3	He			311271.58		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

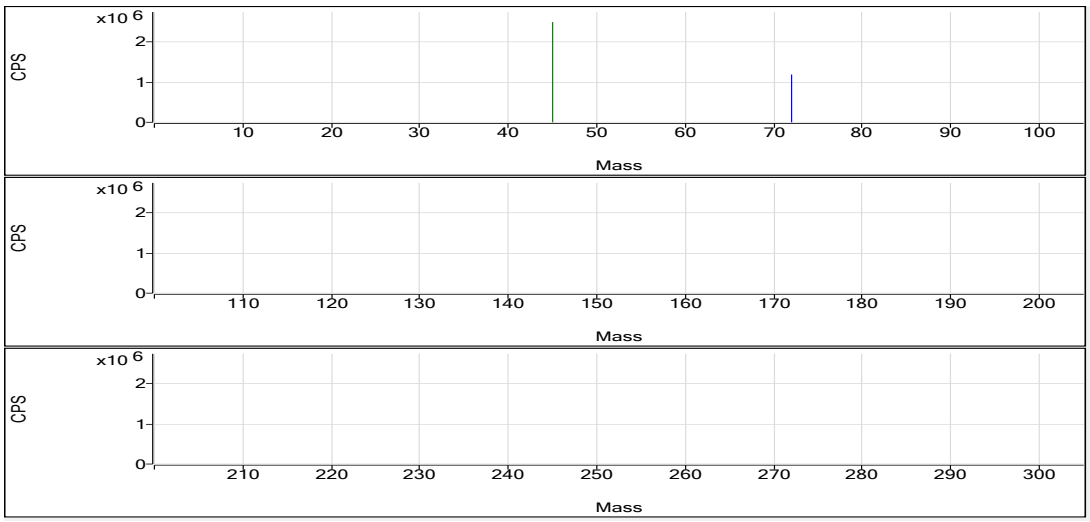
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.192	ppb	4.2	378.01	0.0002	Pulse	0.5000	3
Se	78	72	H2	0.273	ppb	17.8	21.11	0.0001	Pulse	1.5000	3
Na	23	45	He	11.984	ppb	18.3	19600.22	0.3880	Pulse	0.1000	3
Mg	24	45	He	5.850	ppb	7.0	706.71	0.0140	Pulse	0.1000	3
Al	27	45	He	6.112	ppb	44.7	213.34	0.0042	Pulse	0.1000	3
K	39	45	He	-5.371	ppb	N/A	19640.44	0.3888	Pulse	0.1000	3
Ca	44	45	He	18.379	ppb	130.8	200.01	0.0040	Pulse	0.1000	3
Ti	47	45	He	0.486	ppb	117.8	16.67	0.0003	Pulse	0.1000	3
V	51	45	He	-0.169	ppb	N/A	1070.05	0.0212	Pulse	0.5000	3
Cr	52	45	He	0.168	ppb	96.3	2270.25	0.0450	Pulse	0.1000	3
Mn	55	45	He	0.160	ppb	25.3	236.68	0.0047	Pulse	0.1000	3
Fe	57	45	He	9.918	ppb	5.9	363.35	0.0072	Pulse	0.1000	3
Co	59	45	He	0.065	ppb	27.1	293.35	0.0058	Pulse	0.1000	3
Ni	60	72	He	0.070	ppb	29.9	286.68	0.0034	Pulse	0.1000	3
Cu	63	72	He	0.062	ppb	31.9	530.03	0.0063	Pulse	0.1000	3
Zn	66	72	He	-0.598	ppb	N/A	173.34	0.0021	Pulse	0.1000	3
As	75	72	He	0.046	ppb	378.0	75.33	0.0009	Pulse	0.5000	3
Sr	88	115	He	0.053	ppb	182.2	130.00	0.0014	Pulse	0.1000	3
Mo	98	115	He	0.760	ppb	24.9	1516.81	0.0169	Pulse	0.1000	3
Ag	107	115	He	0.051	ppb	26.7	270.01	0.0030	Pulse	0.1000	3
Cd	111	115	He	0.054	ppb	49.7	26.00	0.0003	Pulse	0.5000	3
Sn	120	115	He	-0.073	ppb	N/A	1376.78	0.0153	Pulse	0.1000	3
Sb	121	115	He	0.042	ppb	30.2	80.00	0.0009	Pulse	0.1000	3
Ba	137	115	He	0.045	ppb	91.2	40.00	0.0004	Pulse	0.1000	3
Tl	205	159	He	0.574	ppb	6.5	5884.87	0.0143	Pulse	0.1000	3
Pb	208	159	He	0.096	ppb	13.8	1733.45	0.0042	Pulse	0.1000	3
U	238	209	He	0.045	ppb	3.5	730.05	0.0023	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2502031.47	0.9	104.3	Analog	0.1000	3
No Gas	Ge	72	1192254.13	0.5	103.4	Pulse	0.1000	3
H2	Sc	45	195382.47	0.9	104.5	Pulse	0.1000	3
H2	Ge	72	167664.42	0.3	102.4	Pulse	0.1000	3
H2	In	115	404257.60	0.3	103.9	Pulse	0.1000	3
He	Sc	45	50522.06	2.5	108.3	Pulse	0.1000	3
He	Ge	72	83544.63	0.6	102.9	Pulse	0.1000	3
He	In	115	89802.25	1.5	104.2	Pulse	0.1000	3
He	Tb	159	410813.68	0.7	103.1	Pulse	0.1000	3
He	Bi	209	319184.76	0.5	103.2	Pulse	0.1000	3

No Gas



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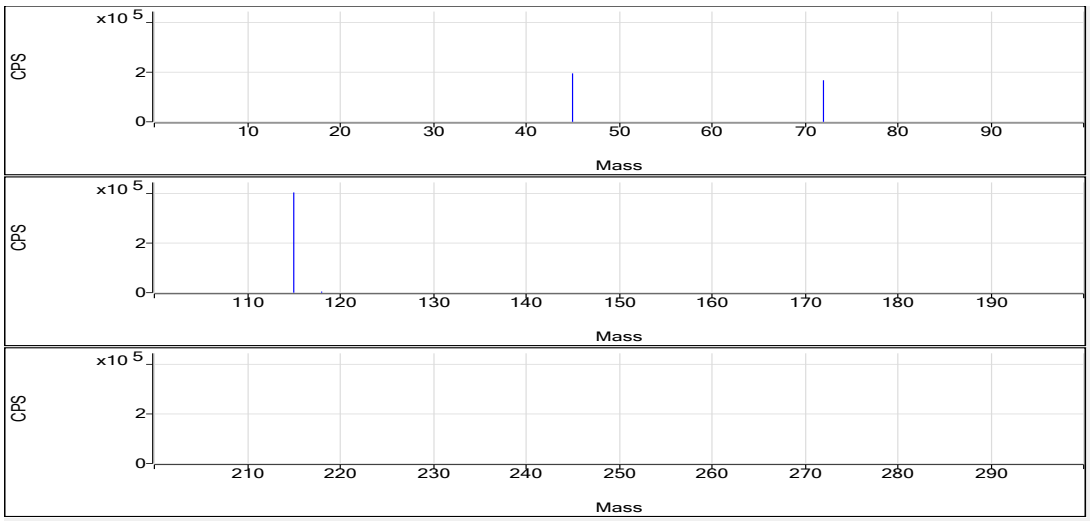
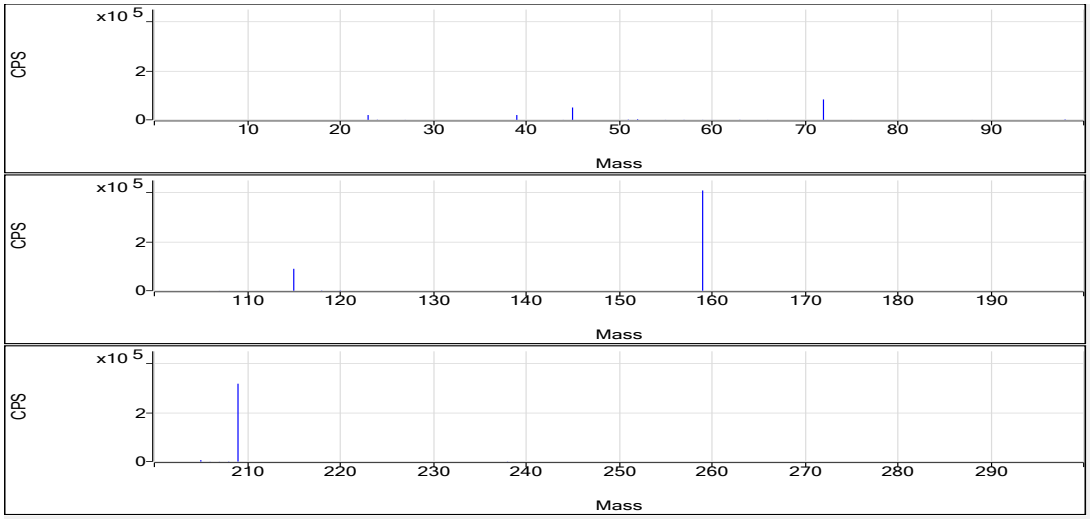


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.195	0.0002	384.01	0.0008	4.685E-06
Be	9	1	No Gas	0.198	0.0002	386.01	0.0008	4.685E-06
Be	9	1	No Gas	0.183	0.0001	364.01	0.0008	4.685E-06
Se	78	2	H2	0.313	0.0001	24.00	0.0004	1.219E-05
Se	78	2	H2	0.286	0.0001	22.00	0.0004	1.219E-05
Se	78	2	H2	0.219	0.0001	17.33	0.0004	1.219E-05
Na	23	3	He	9.911	0.3806	19743.74	0.0036	0.3452
Na	23	3	He	11.751	0.3872	19132.96	0.0036	0.3452
Na	23	3	He	14.29	0.3963	19923.97	0.0036	0.3452
Mg	24	3	He	5.787	0.0139	720.04	0.0018	0.003497
Mg	24	3	He	6.285	0.0148	730.05	0.0018	0.003497
Mg	24	3	He	5.478	0.0133	670.04	0.0018	0.003497
Al	27	3	He	5.491	0.0039	200.01	0.0006	0.0006432
Al	27	3	He	3.744	0.0028	140.01	0.0006	0.0006432
Al	27	3	He	9.1	0.006	300.01	0.0006	0.0006432
K	39	3	He	-8.433	0.3852	19984.16	0.0012	0.3951
K	39	3	He	-1.534	0.3933	19433.73	0.0012	0.3951
K	39	3	He	-6.145	0.3879	19503.44	0.0012	0.3951
Ca	44	3	He	11.18	0.0035	180.01	0.0001	0.002715
Ca	44	3	He	-1.243	0.0026	130.01	0.0001	0.002715
Ca	44	3	He	45.2	0.0058	290.02	0.0001	0.002715
Ti	47	3	He	0.588	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	1	0.0006	30.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	-0.143	0.0217	1128.05	0.0219	0.02486
V	51	3	He	-0.195	0.0206	1018.04	0.0219	0.02486
V	51	3	He	-0.169	0.0212	1064.05	0.0219	0.02486
Cr	52	3	He	-0.002	0.0399	2070.21	0.0299	0.03997
Cr	52	3	He	0.186	0.0455	2250.24	0.0299	0.03997
Cr	52	3	He	0.319	0.0495	2490.30	0.0299	0.03997
Mn	55	3	He	0.125	0.0042	220.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.204	0.0053	260.01	0.0128	0.002639
Mn	55	3	He	0.151	0.0046	230.01	0.0128	0.002639
Fe	57	3	He	9.818	0.0071	370.02	0.0006	0.001429
Fe	57	3	He	9.384	0.0069	340.02	0.0006	0.001429
Fe	57	3	He	10.55	0.0076	380.02	0.0006	0.001429
Co	59	3	He	0.075	0.0064	330.02	0.0563	0.002149
Co	59	3	He	0.045	0.0047	230.01	0.0563	0.002149
Co	59	3	He	0.075	0.0064	320.01	0.0563	0.002149
Ni	60	3	He	0.089	0.0036	300.02	0.0086	0.002834
Ni	60	3	He	0.048	0.0032	270.01	0.0086	0.002834
Ni	60	3	He	0.072	0.0034	290.01	0.0086	0.002834
Cu	63	3	He	0.081	0.0068	570.03	0.0257	0.004757
Cu	63	3	He	0.063	0.0064	530.03	0.0257	0.004757
Cu	63	3	He	0.042	0.0058	490.03	0.0257	0.004757
Zn	66	3	He	-0.652	0.0019	160.01	0.0029	0.003818
Zn	66	3	He	-0.486	0.0024	200.01	0.0029	0.003818
Zn	66	3	He	-0.658	0.0019	160.01	0.0029	0.003818
As	75	3	He	-0.03	0.0007	62.00	0.002	0.0008061
As	75	3	He	-0.077	0.0006	54.00	0.002	0.0008061
As	75	3	He	0.245	0.0013	110.00	0.002	0.0008061
Sr	88	3	He	0.015	0.0011	100.00	0.009	0.0009645
Sr	88	3	He	0.164	0.0024	220.01	0.009	0.0009645
Sr	88	3	He	-0.019	0.0008	70.00	0.009	0.0009645
Mo	98	3	He	0.576	0.0129	1170.09	0.0219	0.0002706
Mo	98	3	He	0.75	0.0167	1510.14	0.0219	0.0002706
Mo	98	3	He	0.954	0.0212	1870.19	0.0219	0.0002706
Ag	107	3	He	0.051	0.003	270.01	0.0465	0.0006206
Ag	107	3	He	0.065	0.0037	330.02	0.0465	0.0006206
Ag	107	3	He	0.038	0.0024	210.01	0.0465	0.0006206
Cd	111	3	He	0.082	0.0004	40.00	0.0053	0
Cd	111	3	He	0.029	0.0002	14.00	0.0053	0
Cd	111	3	He	0.051	0.0003	24.00	0.0053	0
Sn	120	3	He	-0.052	0.0157	1420.12	0.0158	0.01648
Sn	120	3	He	-0.062	0.0155	1400.11	0.0158	0.01648
Sn	120	3	He	-0.104	0.0148	1310.10	0.0158	0.01648
Sb	121	3	He	0.034	0.0008	70.00	0.0149	0.0002698
Sb	121	3	He	0.056	0.0011	100.00	0.0149	0.0002698
Sb	121	3	He	0.035	0.0008	70.00	0.0149	0.0002698
Ba	137	3	He	-0.002	0.0002	20.00	0.0048	0.0002317
Ba	137	3	He	0.067	0.0006	50.00	0.0048	0.0002317
Ba	137	3	He	0.07	0.0006	50.00	0.0048	0.0002317
Tl	205	3	He	0.6	0.015	6191.66	0.0247	0.0001339
Tl	205	3	He	0.531	0.0133	5441.31	0.0247	0.0001339
Tl	205	3	He	0.591	0.0147	6021.63	0.0247	0.0001339
Pb	208	3	He	0.109	0.0046	1000.08	0.0327	0.00107
Pb	208	3	He	0.097	0.0042	870.06	0.0327	0.00107
Pb	208	3	He	0.082	0.0038	820.06	0.0327	0.00107
U	238	3	He	0.046	0.0023	750.06	0.0493	7.55E-05
U	238	3	He	0.043	0.0022	700.05	0.0493	7.55E-05
U	238	3	He	0.046	0.0023	740.05	0.0493	7.55E-05
Sc	45	1	No Gas			2500570.43		
Sc	45	1	No Gas			2480404.96		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2525119.02		
Ge	72	1	No Gas			1193263.97		
Ge	72	1	No Gas			1185580.22		
Ge	72	1	No Gas			1197918.19		
Sc	45	2	H2			196369.24		
Sc	45	2	H2			196519.98		
Sc	45	2	H2			193258.20		
Ge	72	2	H2			168222.60		
Ge	72	2	H2			167207.13		
Ge	72	2	H2			167563.53		
In	115	2	H2			405696.56		
In	115	2	H2			403211.95		
In	115	2	H2			403864.29		
Sc	45	3	He			51873.60		
Sc	45	3	He			49414.50		
Sc	45	3	He			50278.07		
Ge	72	3	He			83322.94		
Ge	72	3	He			83223.17		
Ge	72	3	He			84087.77		
In	115	3	He			90726.57		
In	115	3	He			90392.89		
In	115	3	He			88309.44		
Tb	159	3	He			413931.60		
Tb	159	3	He			409929.37		
Tb	159	3	He			408580.07		
Bi	209	3	He			321032.05		
Bi	209	3	He			318485.00		
Bi	209	3	He			318037.24		

Quantitation Report

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Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
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Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

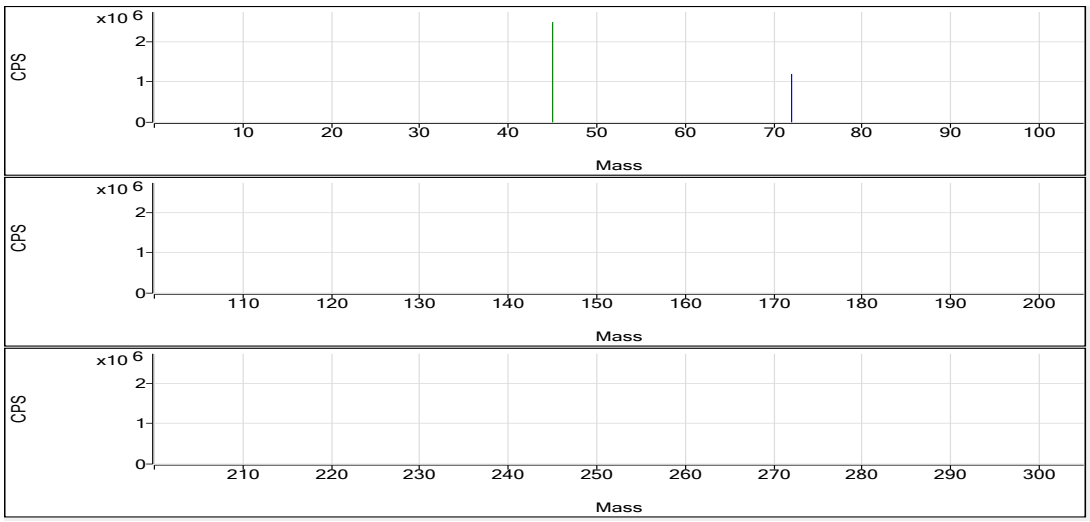
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.101	ppb	11.5	204.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.097	ppb	72.1	8.67	0.0001	Pulse	1.5000	3
Na	23	45	He	7.661	ppb	47.5	17861.33	0.3726	Pulse	0.1000	3
Mg	24	45	He	3.331	ppb	41.6	453.36	0.0095	Pulse	0.1000	3
Al	27	45	He	3.400	ppb	45.1	126.67	0.0026	Pulse	0.1000	3
K	39	45	He	10.766	ppb	110.7	19543.52	0.4076	Pulse	0.1000	3
Ca	44	45	He	-6.240	ppb	N/A	110.00	0.0023	Pulse	0.1000	3
Ti	47	45	He	0.263	ppb	149.9	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	0.041	ppb	63.9	1236.06	0.0258	Pulse	0.5000	3
Cr	52	45	He	-0.021	ppb	N/A	1886.85	0.0394	Pulse	0.1000	3
Mn	55	45	He	0.059	ppb	88.3	163.34	0.0034	Pulse	0.1000	3
Fe	57	45	He	5.426	ppb	14.5	220.01	0.0046	Pulse	0.1000	3
Co	59	45	He	0.036	ppb	60.8	200.01	0.0042	Pulse	0.1000	3
Ni	60	72	He	0.126	ppb	21.3	326.68	0.0039	Pulse	0.1000	3
Cu	63	72	He	0.081	ppb	49.5	570.03	0.0068	Pulse	0.1000	3
Zn	66	72	He	-0.104	ppb	N/A	293.35	0.0035	Pulse	0.1000	3
As	75	72	He	0.009	ppb	1052.9	68.67	0.0008	Pulse	0.5000	3
Sr	88	115	He	-0.020	ppb	N/A	70.00	0.0008	Pulse	0.1000	3
Mo	98	115	He	0.334	ppb	20.5	670.04	0.0076	Pulse	0.1000	3
Ag	107	115	He	0.016	ppb	24.1	120.00	0.0014	Pulse	0.1000	3
Cd	111	115	He	0.038	ppb	2.6	18.00	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.112	ppb	62.4	1613.49	0.0182	Pulse	0.1000	3
Sb	121	115	He	0.035	ppb	35.7	70.00	0.0008	Pulse	0.1000	3
Ba	137	115	He	-0.017	ppb	N/A	13.33	0.0002	Pulse	0.1000	3
Tl	205	159	He	0.195	ppb	1.8	2003.56	0.0050	Pulse	0.1000	3
Pb	208	159	He	0.054	ppb	6.9	1143.39	0.0028	Pulse	0.1000	3
U	238	209	He	0.011	ppb	45.6	196.67	0.0006	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2484546.06	0.5	103.6	Analog	0.1000	3
No Gas	Ge	72	1198824.18	0.9	103.9	Pulse	0.1000	3
H2	Sc	45	193765.95	0.6	103.6	Pulse	0.1000	3
H2	Ge	72	164722.80	0.1	100.6	Pulse	0.1000	3
H2	In	115	400006.75	0.7	102.8	Pulse	0.1000	3
He	Sc	45	47963.15	2.0	102.8	Pulse	0.1000	3
He	Ge	72	83339.38	1.4	102.6	Pulse	0.1000	3
He	In	115	88536.00	2.6	102.7	Pulse	0.1000	3
He	Tb	159	403908.65	0.7	101.3	Pulse	0.1000	3
He	Bi	209	313952.13	0.9	101.5	Pulse	0.1000	3

No Gas



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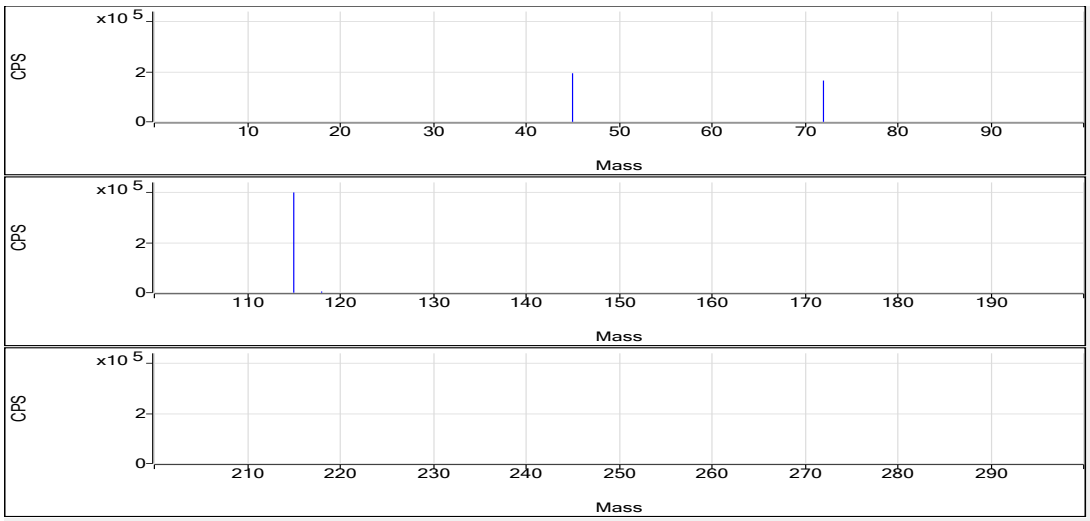
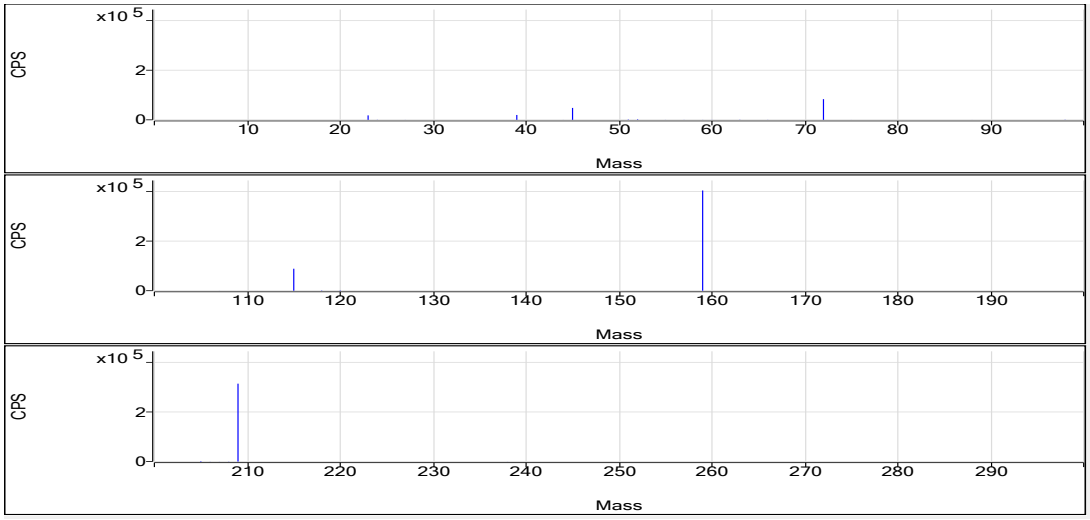


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.107	0.0001	216.00	0.0008	4.685E-06
Be	9	1	No Gas	0.109	0.0001	218.00	0.0008	4.685E-06
Be	9	1	No Gas	0.088	0.0001	178.00	0.0008	4.685E-06
Se	78	2	H2	0.077	0	7.33	0.0004	1.219E-05
Se	78	2	H2	0.174	0.0001	14.00	0.0004	1.219E-05
Se	78	2	H2	0.039	0	4.67	0.0004	1.219E-05
Na	23	3	He	10.414	0.3824	18171.76	0.0036	0.3452
Na	23	3	He	3.533	0.3578	17550.99	0.0036	0.3452
Na	23	3	He	9.035	0.3775	17861.24	0.0036	0.3452
Mg	24	3	He	4.854	0.0122	580.04	0.0018	0.003497
Mg	24	3	He	2.142	0.0073	360.02	0.0018	0.003497
Mg	24	3	He	2.998	0.0089	420.02	0.0018	0.003497
Al	27	3	He	1.778	0.0017	80.00	0.0006	0.0006432
Al	27	3	He	4.825	0.0035	170.01	0.0006	0.0006432
Al	27	3	He	3.597	0.0027	130.00	0.0006	0.0006432
K	39	3	He	23.515	0.4224	20074.18	0.0012	0.3951
K	39	3	He	-0.104	0.3949	19373.31	0.0012	0.3951
K	39	3	He	8.886	0.4054	19183.07	0.0012	0.3951
Ca	44	3	He	0.308	0.0027	130.00	0.0001	0.002715
Ca	44	3	He	-6.994	0.0022	110.00	0.0001	0.002715
Ca	44	3	He	-12.034	0.0019	90.00	0.0001	0.002715
Ti	47	3	He	0.261	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.657	0.0004	20.00	0.0005	7.003E-05
V	51	3	He	0.012	0.0251	1194.06	0.0219	0.02486
V	51	3	He	0.049	0.0259	1272.07	0.0219	0.02486
V	51	3	He	0.063	0.0262	1242.06	0.0219	0.02486
Cr	52	3	He	-0.014	0.0396	1880.20	0.0299	0.03997
Cr	52	3	He	-0.069	0.0379	1860.18	0.0299	0.03997
Cr	52	3	He	0.02	0.0406	1920.18	0.0299	0.03997
Mn	55	3	He	0.008	0.0027	130.00	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.112	0.0041	200.01	0.0128	0.002639
Mn	55	3	He	0.058	0.0034	160.01	0.0128	0.002639
Fe	57	3	He	5.148	0.0044	210.01	0.0006	0.001429
Fe	57	3	He	6.313	0.0051	250.01	0.0006	0.001429
Fe	57	3	He	4.816	0.0042	200.01	0.0006	0.001429
Co	59	3	He	0.048	0.0048	230.01	0.0563	0.002149
Co	59	3	He	0.049	0.0049	240.01	0.0563	0.002149
Co	59	3	He	0.011	0.0027	130.01	0.0563	0.002149
Ni	60	3	He	0.11	0.0038	310.02	0.0086	0.002834
Ni	60	3	He	0.158	0.0042	350.01	0.0086	0.002834
Ni	60	3	He	0.112	0.0038	320.02	0.0086	0.002834
Cu	63	3	He	0.052	0.0061	500.03	0.0257	0.004757
Cu	63	3	He	0.127	0.008	670.04	0.0257	0.004757
Cu	63	3	He	0.064	0.0064	540.03	0.0257	0.004757
Zn	66	3	He	-0.348	0.0028	230.01	0.0029	0.003818
Zn	66	3	He	0.085	0.0041	340.02	0.0029	0.003818
Zn	66	3	He	-0.049	0.0037	310.01	0.0029	0.003818
As	75	3	He	0.059	0.0009	76.00	0.002	0.0008061
As	75	3	He	0.074	0.001	80.00	0.002	0.0008061
As	75	3	He	-0.104	0.0006	50.00	0.002	0.0008061
Sr	88	3	He	-0.033	0.0007	60.00	0.009	0.0009645
Sr	88	3	He	0.004	0.001	90.00	0.009	0.0009645
Sr	88	3	He	-0.03	0.0007	60.00	0.009	0.0009645
Mo	98	3	He	0.272	0.0062	560.04	0.0219	0.0002706
Mo	98	3	He	0.323	0.0074	660.04	0.0219	0.0002706
Mo	98	3	He	0.407	0.0092	790.05	0.0219	0.0002706
Ag	107	3	He	0.02	0.0016	140.00	0.0465	0.0006206
Ag	107	3	He	0.013	0.0012	110.01	0.0465	0.0006206
Ag	107	3	He	0.014	0.0013	110.00	0.0465	0.0006206
Cd	111	3	He	0.037	0.0002	18.00	0.0053	0
Cd	111	3	He	0.038	0.0002	18.00	0.0053	0
Cd	111	3	He	0.039	0.0002	18.00	0.0053	0
Sn	120	3	He	0.125	0.0185	1660.16	0.0158	0.01648
Sn	120	3	He	0.036	0.017	1530.14	0.0158	0.01648
Sn	120	3	He	0.173	0.0192	1650.16	0.0158	0.01648
Sb	121	3	He	0.027	0.0007	60.00	0.0149	0.0002698
Sb	121	3	He	0.049	0.001	90.00	0.0149	0.0002698
Sb	121	3	He	0.029	0.0007	60.00	0.0149	0.0002698
Ba	137	3	He	-0.025	0.0001	10.00	0.0048	0.0002317
Ba	137	3	He	-0.025	0.0001	10.00	0.0048	0.0002317
Ba	137	3	He	0	0.0002	20.00	0.0048	0.0002317
Tl	205	3	He	0.197	0.005	2040.24	0.0247	0.0001339
Tl	205	3	He	0.197	0.005	2020.22	0.0247	0.0001339
Tl	205	3	He	0.191	0.0049	1950.23	0.0247	0.0001339
Pb	208	3	He	0.057	0.0029	550.04	0.0327	0.00107
Pb	208	3	He	0.055	0.0029	570.03	0.0327	0.00107
Pb	208	3	He	0.05	0.0027	680.04	0.0327	0.00107
U	238	3	He	0.006	0.0003	110.00	0.0493	7.55E-05
U	238	3	He	0.015	0.0008	260.01	0.0493	7.55E-05
U	238	3	He	0.013	0.0007	220.01	0.0493	7.55E-05
Sc	45	1	No Gas			2499079.03		
Sc	45	1	No Gas			2477901.99		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2476657.15		
Ge	72	1	No Gas			1211836.47		
Ge	72	1	No Gas			1193874.59		
Ge	72	1	No Gas			1190761.47		
Sc	45	2	H2			194923.36		
Sc	45	2	H2			193682.58		
Sc	45	2	H2			192691.91		
Ge	72	2	H2			164790.15		
Ge	72	2	H2			164891.74		
Ge	72	2	H2			164486.52		
In	115	2	H2			401281.67		
In	115	2	H2			401793.78		
In	115	2	H2			396944.80		
Sc	45	3	He			47519.03		
Sc	45	3	He			49053.08		
Sc	45	3	He			47317.34		
Ge	72	3	He			82024.74		
Ge	72	3	He			83614.56		
Ge	72	3	He			84378.83		
In	115	3	He			89970.66		
In	115	3	He			89769.54		
In	115	3	He			85895.34		
Tb	159	3	He			406895.38		
Tb	159	3	He			403653.35		
Tb	159	3	He			401177.22		
Bi	209	3	He			315567.14		
Bi	209	3	He			310671.34		
Bi	209	3	He			315617.91		

Quantitation Report

Data File Name	035SMPL.d
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Acq Time	8/10/2023 8:41:58 AM
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Sample Type	Sample
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

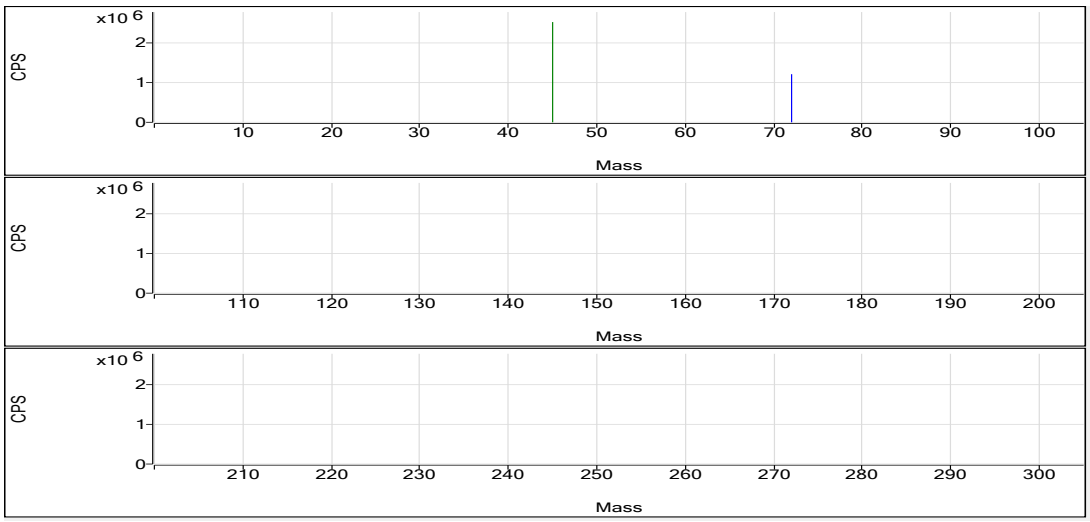
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.085	ppb	14.0	175.33	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.076	ppb	72.4	7.11	0.0000	Pulse	1.5000	3
Na	23	45	He	4.310	ppb	50.7	17651.08	0.3606	Pulse	0.1000	3
Mg	24	45	He	1.694	ppb	40.3	320.02	0.0065	Pulse	0.1000	3
Al	27	45	He	3.199	ppb	55.0	123.34	0.0025	Pulse	0.1000	3
K	39	45	He	5.452	ppb	298.7	19650.39	0.4014	Pulse	0.1000	3
Ca	44	45	He	2.198	ppb	738.6	140.00	0.0029	Pulse	0.1000	3
Ti	47	45	He	-0.130	ppb	N/A	0.00	0.0000	Pulse	0.1000	3
V	51	45	He	0.149	ppb	59.0	1376.74	0.0281	Pulse	0.5000	3
Cr	52	45	He	-0.075	ppb	N/A	1846.85	0.0377	Pulse	0.1000	3
Mn	55	45	He	0.055	ppb	120.2	163.34	0.0033	Pulse	0.1000	3
Fe	57	45	He	3.750	ppb	29.7	176.68	0.0036	Pulse	0.1000	3
Co	59	45	He	0.024	ppb	31.3	170.01	0.0035	Pulse	0.1000	3
Ni	60	72	He	0.126	ppb	32.9	326.68	0.0039	Pulse	0.1000	3
Cu	63	72	He	0.052	ppb	125.7	506.70	0.0061	Pulse	0.1000	3
Zn	66	72	He	-0.257	ppb	N/A	256.68	0.0031	Pulse	0.1000	3
As	75	72	He	-0.043	ppb	N/A	60.00	0.0007	Pulse	0.5000	3
Sr	88	115	He	-0.040	ppb	N/A	53.33	0.0006	Pulse	0.1000	3
Mo	98	115	He	0.184	ppb	14.8	380.02	0.0043	Pulse	0.1000	3
Ag	107	115	He	0.005	ppb	277.5	76.67	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.018	ppb	82.2	8.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.116	ppb	96.3	1613.48	0.0183	Pulse	0.1000	3
Sb	121	115	He	0.007	ppb	265.5	33.33	0.0004	Pulse	0.1000	3
Ba	137	115	He	-0.009	ppb	N/A	16.67	0.0002	Pulse	0.1000	3
Tl	205	159	He	0.131	ppb	9.9	1373.45	0.0034	Pulse	0.1000	3
Pb	208	159	He	0.041	ppb	8.7	990.05	0.0024	Pulse	0.1000	3
U	238	209	He	0.006	ppb	34.5	110.00	0.0004	Pulse	0.1000	3

ISTD Table:

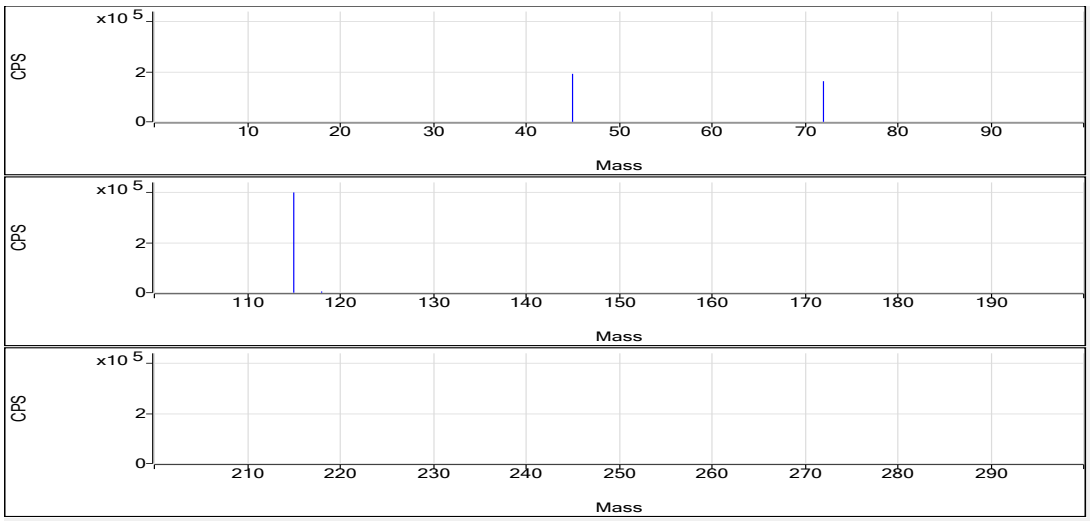
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2514908.82	1.4	104.8	Analog	0.1000	3
No Gas	Ge	72	1207085.14	1.0	104.7	Pulse	0.1000	3
H2	Sc	45	191550.97	1.2	102.4	Pulse	0.1000	3
H2	Ge	72	162188.51	0.8	99.1	Pulse	0.1000	3
H2	In	115	400152.14	0.6	102.8	Pulse	0.1000	3
He	Sc	45	48956.41	0.6	105.0	Pulse	0.1000	3
He	Ge	72	83506.82	1.2	102.8	Pulse	0.1000	3
He	In	115	88171.62	1.8	102.3	Pulse	0.1000	3
He	Tb	159	407784.56	0.5	102.3	Pulse	0.1000	3
He	Bi	209	313080.26	0.5	101.2	Pulse	0.1000	3

No Gas

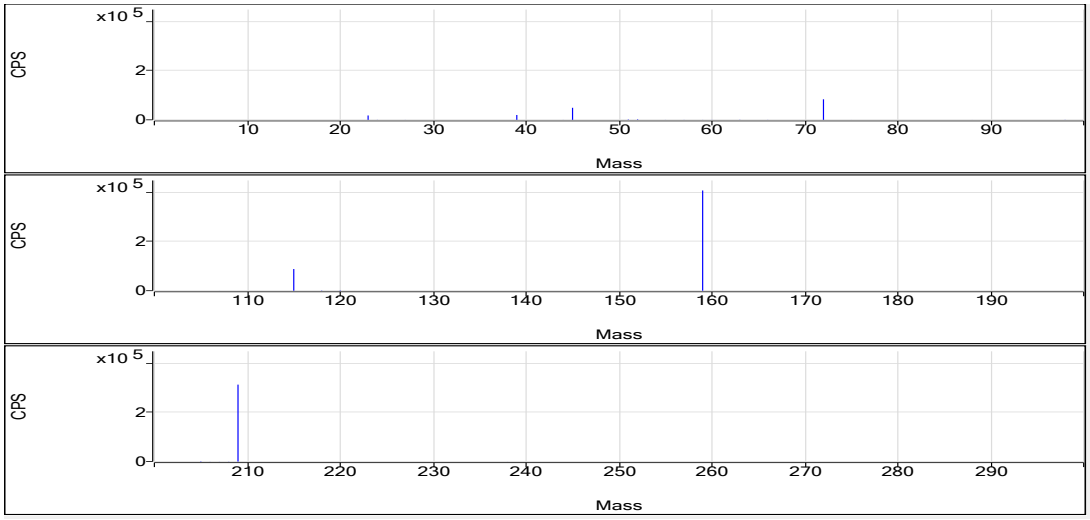


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.097	0.0001	196.00	0.0008	4.685E-06
Be	9	1	No Gas	0.086	0.0001	176.00	0.0008	4.685E-06
Be	9	1	No Gas	0.073	0.0001	154.00	0.0008	4.685E-06
Se	78	2	H2	0.13	0.0001	10.67	0.0004	1.219E-05
Se	78	2	H2	0.02	0	3.33	0.0004	1.219E-05
Se	78	2	H2	0.078	0	7.33	0.0004	1.219E-05
Na	23	3	He	6.681	0.3691	17981.47	0.0036	0.3452
Na	23	3	He	3.869	0.359	17530.82	0.0036	0.3452
Na	23	3	He	2.379	0.3537	17440.94	0.0036	0.3452
Mg	24	3	He	1.025	0.0053	260.01	0.0018	0.003497
Mg	24	3	He	2.388	0.0078	380.02	0.0018	0.003497
Mg	24	3	He	1.668	0.0065	320.02	0.0018	0.003497
Al	27	3	He	1.707	0.0016	80.00	0.0006	0.0006432
Al	27	3	He	2.751	0.0023	110.00	0.0006	0.0006432
Al	27	3	He	5.14	0.0037	180.01	0.0006	0.0006432
K	39	3	He	23.205	0.4221	20565.10	0.0012	0.3951
K	39	3	He	-8.788	0.3848	18792.42	0.0012	0.3951
K	39	3	He	1.938	0.3973	19593.65	0.0012	0.3951
Ca	44	3	He	20.578	0.0041	200.01	0.0001	0.002715
Ca	44	3	He	-3.813	0.0025	120.00	0.0001	0.002715
Ca	44	3	He	-10.172	0.002	100.00	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	0.25	0.0303	1478.09	0.0219	0.02486
V	51	3	He	0.09	0.0268	1310.07	0.0219	0.02486
V	51	3	He	0.108	0.0272	1342.07	0.0219	0.02486
Cr	52	3	He	-0.067	0.038	1850.19	0.0299	0.03997
Cr	52	3	He	-0.042	0.0387	1890.20	0.0299	0.03997
Cr	52	3	He	-0.116	0.0365	1800.17	0.0299	0.03997
Mn	55	3	He	0.13	0.0043	210.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.018	0.0029	140.01	0.0128	0.002639
Mn	55	3	He	0.016	0.0028	140.01	0.0128	0.002639
Fe	57	3	He	2.487	0.0029	140.01	0.0006	0.001429
Fe	57	3	He	4.591	0.0041	200.01	0.0006	0.001429
Fe	57	3	He	4.173	0.0039	190.01	0.0006	0.001429
Co	59	3	He	0.031	0.0039	190.01	0.0563	0.002149
Co	59	3	He	0.016	0.0031	150.01	0.0563	0.002149
Co	59	3	He	0.023	0.0034	170.01	0.0563	0.002149
Ni	60	3	He	0.107	0.0038	310.01	0.0086	0.002834
Ni	60	3	He	0.097	0.0037	310.01	0.0086	0.002834
Ni	60	3	He	0.173	0.0043	360.02	0.0086	0.002834
Cu	63	3	He	0.126	0.008	660.04	0.0257	0.004757
Cu	63	3	He	0.008	0.005	420.02	0.0257	0.004757
Cu	63	3	He	0.02	0.0053	440.03	0.0257	0.004757
Zn	66	3	He	-0.355	0.0028	230.01	0.0029	0.003818
Zn	66	3	He	-0.093	0.0035	300.01	0.0029	0.003818
Zn	66	3	He	-0.322	0.0029	240.01	0.0029	0.003818
As	75	3	He	-0.015	0.0008	64.00	0.002	0.0008061
As	75	3	He	-0.047	0.0007	60.00	0.002	0.0008061
As	75	3	He	-0.066	0.0007	56.00	0.002	0.0008061
Sr	88	3	He	-0.033	0.0007	60.00	0.009	0.0009645
Sr	88	3	He	-0.044	0.0006	50.00	0.009	0.0009645
Sr	88	3	He	-0.043	0.0006	50.00	0.009	0.0009645
Mo	98	3	He	0.18	0.0042	380.02	0.0219	0.0002706
Mo	98	3	He	0.159	0.0038	330.02	0.0219	0.0002706
Mo	98	3	He	0.213	0.005	430.02	0.0219	0.0002706
Ag	107	3	He	0.003	0.0008	70.00	0.0465	0.0006206
Ag	107	3	He	0.021	0.0016	140.01	0.0465	0.0006206
Ag	107	3	He	-0.008	0.0002	20.00	0.0465	0.0006206
Cd	111	3	He	0.017	0.0001	8.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.034	0.0002	16.00	0.0053	0
Sn	120	3	He	0.105	0.0181	1630.15	0.0158	0.01648
Sn	120	3	He	0.01	0.0166	1460.13	0.0158	0.01648
Sn	120	3	He	0.233	0.0202	1750.16	0.0158	0.01648
Sb	121	3	He	0.004	0.0003	30.00	0.0149	0.0002698
Sb	121	3	He	-0.01	0.0001	10.00	0.0149	0.0002698
Sb	121	3	He	0.028	0.0007	60.00	0.0149	0.0002698
Ba	137	3	He	0.021	0.0003	30.00	0.0048	0.0002317
Ba	137	3	He	-0.025	0.0001	10.00	0.0048	0.0002317
Ba	137	3	He	-0.024	0.0001	10.00	0.0048	0.0002317
Tl	205	3	He	0.117	0.003	1230.10	0.0247	0.0001339
Tl	205	3	He	0.142	0.0036	1490.12	0.0247	0.0001339
Tl	205	3	He	0.134	0.0034	1400.12	0.0247	0.0001339
Pb	208	3	He	0.039	0.0024	490.03	0.0327	0.00107
Pb	208	3	He	0.046	0.0026	510.03	0.0327	0.00107
Pb	208	3	He	0.04	0.0024	520.03	0.0327	0.00107
U	238	3	He	0.004	0.0003	80.00	0.0493	7.55E-05
U	238	3	He	0.008	0.0004	140.01	0.0493	7.55E-05
U	238	3	He	0.006	0.0003	110.00	0.0493	7.55E-05
Sc	45	1	No Gas			2498845.59		
Sc	45	1	No Gas			2491842.78		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2554038.09		
Ge	72	1	No Gas			1201126.15		
Ge	72	1	No Gas			1199523.73		
Ge	72	1	No Gas			1220605.53		
Sc	45	2	H2			189217.63		
Sc	45	2	H2			191507.52		
Sc	45	2	H2			193927.77		
Ge	72	2	H2			160685.58		
Ge	72	2	H2			162522.99		
Ge	72	2	H2			163356.97		
In	115	2	H2			401250.11		
In	115	2	H2			397595.66		
In	115	2	H2			401610.66		
Sc	45	3	He			48722.63		
Sc	45	3	He			48832.47		
Sc	45	3	He			49314.12		
Ge	72	3	He			82618.61		
Ge	72	3	He			84548.59		
Ge	72	3	He			83353.27		
In	115	3	He			89889.89		
In	115	3	He			87786.77		
In	115	3	He			86861.22		
Tb	159	3	He			407833.98		
Tb	159	3	He			409637.53		
Tb	159	3	He			405882.18		
Bi	209	3	He			311414.04		
Bi	209	3	He			313092.91		
Bi	209	3	He			314733.82		

Quantitation Report

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Sample Type	Sample
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

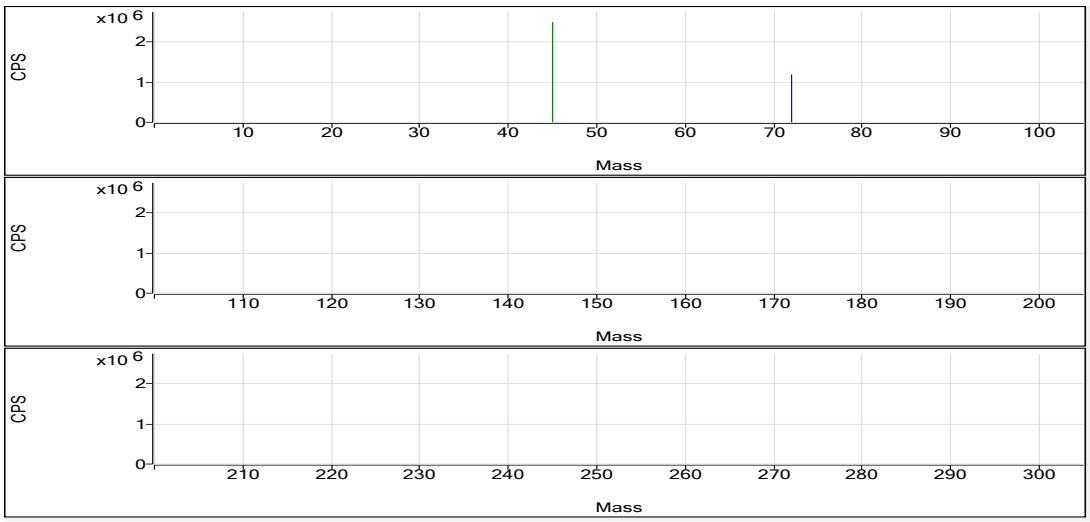
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.049	ppb	35.8	106.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.017	ppb	125.3	3.11	0.0000	Pulse	1.5000	3
Na	23	45	He	-0.578	ppb	N/A	16926.87	0.3431	Pulse	0.1000	3
Mg	24	45	He	0.503	ppb	91.9	216.68	0.0044	Pulse	0.1000	3
Al	27	45	He	0.992	ppb	156.0	60.00	0.0012	Pulse	0.1000	3
K	39	45	He	-0.695	ppb	N/A	19446.82	0.3943	Pulse	0.1000	3
Ca	44	45	He	0.783	ppb	1416.3	136.68	0.0028	Pulse	0.1000	3
Ti	47	45	He	0.122	ppb	179.0	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	0.098	ppb	24.0	1332.74	0.0270	Pulse	0.5000	3
Cr	52	45	He	-0.067	ppb	N/A	1873.52	0.0380	Pulse	0.1000	3
Mn	55	45	He	0.015	ppb	261.2	140.01	0.0028	Pulse	0.1000	3
Fe	57	45	He	3.249	ppb	37.0	163.34	0.0033	Pulse	0.1000	3
Co	59	45	He	0.010	ppb	133.6	133.34	0.0027	Pulse	0.1000	3
Ni	60	72	He	0.069	ppb	102.4	286.68	0.0034	Pulse	0.1000	3
Cu	63	72	He	0.052	ppb	99.8	510.02	0.0061	Pulse	0.1000	3
Zn	66	72	He	-0.244	ppb	N/A	260.02	0.0031	Pulse	0.1000	3
As	75	72	He	-0.016	ppb	N/A	64.67	0.0008	Pulse	0.5000	3
Sr	88	115	He	-0.023	ppb	N/A	66.67	0.0008	Pulse	0.1000	3
Mo	98	115	He	0.109	ppb	12.7	236.68	0.0027	Pulse	0.1000	3
Ag	107	115	He	0.009	ppb	64.1	93.33	0.0011	Pulse	0.1000	3
Cd	111	115	He	0.011	ppb	56.8	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.050	ppb	132.3	1530.15	0.0173	Pulse	0.1000	3
Sb	121	115	He	-0.003	ppb	N/A	20.00	0.0002	Pulse	0.1000	3
Ba	137	115	He	-0.001	ppb	N/A	20.00	0.0002	Pulse	0.1000	3
Tl	205	159	He	0.104	ppb	13.0	1093.42	0.0027	Pulse	0.1000	3
Pb	208	159	He	0.027	ppb	25.9	786.71	0.0019	Pulse	0.1000	3
U	238	209	He	0.006	ppb	42.4	113.34	0.0004	Pulse	0.1000	3

ISTD Table:

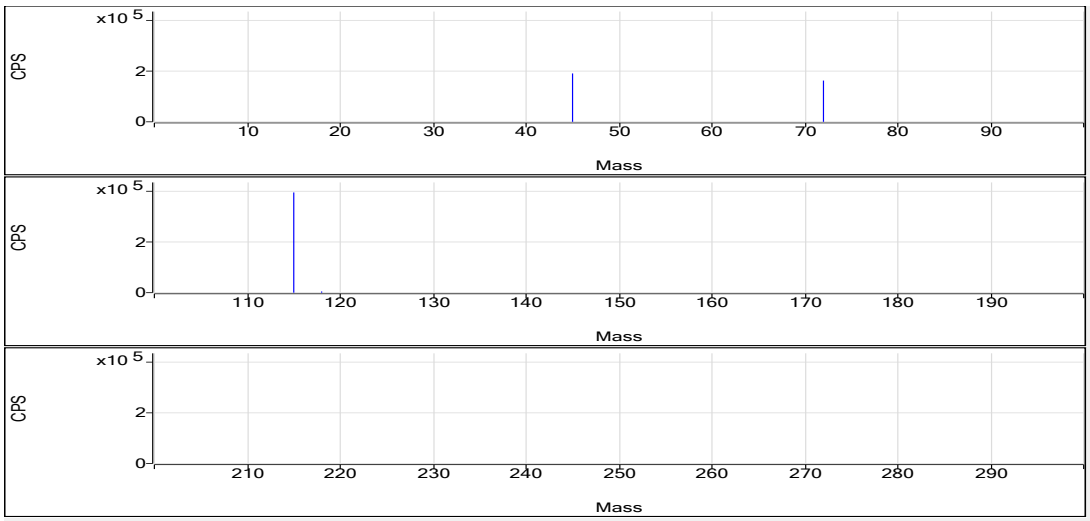
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2500414.75	0.8	104.2	Analog	0.1000	3
No Gas	Ge	72	1192225.58	0.4	103.4	Pulse	0.1000	3
H2	Sc	45	191269.32	1.0	102.3	Pulse	0.1000	3
H2	Ge	72	163094.63	0.8	99.6	Pulse	0.1000	3
H2	In	115	396300.99	0.7	101.9	Pulse	0.1000	3
He	Sc	45	49337.75	1.3	105.8	Pulse	0.1000	3
He	Ge	72	83772.11	0.6	103.2	Pulse	0.1000	3
He	In	115	88581.49	1.6	102.8	Pulse	0.1000	3
He	Tb	159	405345.92	0.4	101.7	Pulse	0.1000	3
He	Bi	209	310633.88	0.3	100.4	Pulse	0.1000	3

No Gas

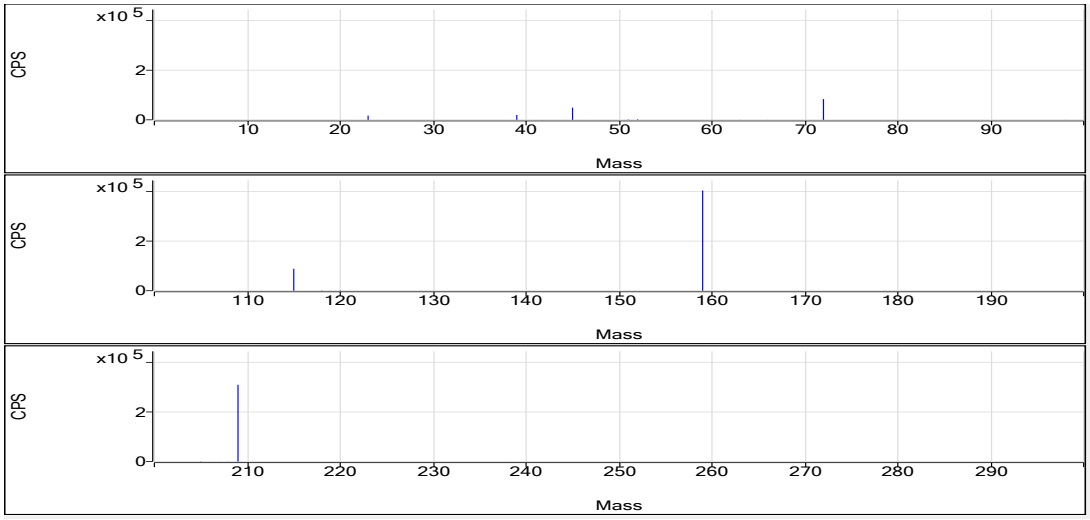


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.052	0	112.00	0.0008	4.685E-06
Be	9	1	No Gas	0.066	0.0001	136.00	0.0008	4.685E-06
Be	9	1	No Gas	0.031	0	70.00	0.0008	4.685E-06
Se	78	2	H2	0.04	0	4.67	0.0004	1.219E-05
Se	78	2	H2	0	0	2.00	0.0004	1.219E-05
Se	78	2	H2	0.01	0	2.67	0.0004	1.219E-05
Na	23	3	He	-0.224	0.3444	16739.95	0.0036	0.3452
Na	23	3	He	0.683	0.3476	17270.69	0.0036	0.3452
Na	23	3	He	-2.192	0.3373	16769.96	0.0036	0.3452
Mg	24	3	He	1.032	0.0053	260.01	0.0018	0.003497
Mg	24	3	He	0.182	0.0038	190.01	0.0018	0.003497
Mg	24	3	He	0.293	0.004	200.01	0.0018	0.003497
Al	27	3	He	2.769	0.0023	110.01	0.0006	0.0006432
Al	27	3	He	-0.067	0.0006	30.00	0.0006	0.0006432
Al	27	3	He	0.276	0.0008	40.00	0.0006	0.0006432
K	39	3	He	11.113	0.408	19833.97	0.0012	0.3951
K	39	3	He	-10.65	0.3827	19012.96	0.0012	0.3951
K	39	3	He	-2.548	0.3921	19493.54	0.0012	0.3951
Ca	44	3	He	-3.645	0.0025	120.01	0.0001	0.002715
Ca	44	3	He	-7.414	0.0022	110.01	0.0001	0.002715
Ca	44	3	He	13.409	0.0036	180.01	0.0001	0.002715
Ti	47	3	He	0.253	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	0.244	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	0.107	0.0272	1322.07	0.0219	0.02486
V	51	3	He	0.117	0.0274	1362.07	0.0219	0.02486
V	51	3	He	0.072	0.0264	1314.07	0.0219	0.02486
Cr	52	3	He	-0.112	0.0366	1780.16	0.0299	0.03997
Cr	52	3	He	-0.132	0.036	1790.18	0.0299	0.03997
Cr	52	3	He	0.042	0.0412	2050.23	0.0299	0.03997
Mn	55	3	He	-0.013	0.0025	120.00	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.061	0.0034	170.01	0.0128	0.002639
Mn	55	3	He	-0.002	0.0026	130.01	0.0128	0.002639
Fe	57	3	He	4.623	0.0041	200.01	0.0006	0.001429
Fe	57	3	He	2.737	0.003	150.01	0.0006	0.001429
Fe	57	3	He	2.388	0.0028	140.01	0.0006	0.001429
Co	59	3	He	0.024	0.0035	170.01	0.0563	0.002149
Co	59	3	He	0.008	0.0026	130.01	0.0563	0.002149
Co	59	3	He	-0.002	0.002	100.00	0.0563	0.002149
Ni	60	3	He	0.118	0.0038	320.01	0.0086	0.002834
Ni	60	3	He	0.1	0.0037	310.01	0.0086	0.002834
Ni	60	3	He	-0.012	0.0027	230.01	0.0086	0.002834
Cu	63	3	He	-0.007	0.0046	380.02	0.0257	0.004757
Cu	63	3	He	0.075	0.0067	560.02	0.0257	0.004757
Cu	63	3	He	0.088	0.007	590.03	0.0257	0.004757
Zn	66	3	He	0.051	0.004	330.02	0.0029	0.003818
Zn	66	3	He	-0.246	0.0031	260.02	0.0029	0.003818
Zn	66	3	He	-0.536	0.0023	190.01	0.0029	0.003818
As	75	3	He	0.064	0.0009	78.00	0.002	0.0008061
As	75	3	He	-0.044	0.0007	60.00	0.002	0.0008061
As	75	3	He	-0.069	0.0007	56.00	0.002	0.0008061
Sr	88	3	He	-0.057	0.0005	40.00	0.009	0.0009645
Sr	88	3	He	-0.021	0.0008	70.00	0.009	0.0009645
Sr	88	3	He	0.008	0.001	90.00	0.009	0.0009645
Mo	98	3	He	0.106	0.0026	230.01	0.0219	0.0002706
Mo	98	3	He	0.125	0.003	270.01	0.0219	0.0002706
Mo	98	3	He	0.098	0.0024	210.01	0.0219	0.0002706
Ag	107	3	He	0.016	0.0014	120.00	0.0465	0.0006206
Ag	107	3	He	0.008	0.001	90.00	0.0465	0.0006206
Ag	107	3	He	0.004	0.0008	70.00	0.0465	0.0006206
Cd	111	3	He	0.017	0.0001	8.00	0.0053	0
Cd	111	3	He	0.012	0.0001	6.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Sn	120	3	He	0.04	0.0171	1520.14	0.0158	0.01648
Sn	120	3	He	0.12	0.0184	1650.18	0.0158	0.01648
Sn	120	3	He	-0.01	0.0163	1420.12	0.0158	0.01648
Sb	121	3	He	0.02	0.0006	50.00	0.0149	0.0002698
Sb	121	3	He	-0.011	0.0001	10.00	0.0149	0.0002698
Sb	121	3	He	-0.018	0	0.00	0.0149	0.0002698
Ba	137	3	He	-0.025	0.0001	10.00	0.0048	0.0002317
Ba	137	3	He	-0.002	0.0002	20.00	0.0048	0.0002317
Ba	137	3	He	0.024	0.0003	30.00	0.0048	0.0002317
Tl	205	3	He	0.118	0.0031	1240.11	0.0247	0.0001339
Tl	205	3	He	0.092	0.0024	980.07	0.0247	0.0001339
Tl	205	3	He	0.101	0.0026	1060.08	0.0247	0.0001339
Pb	208	3	He	0.02	0.0017	370.02	0.0327	0.00107
Pb	208	3	He	0.026	0.0019	350.02	0.0327	0.00107
Pb	208	3	He	0.034	0.0022	530.03	0.0327	0.00107
U	238	3	He	0.007	0.0004	130.01	0.0493	7.55E-05
U	238	3	He	0.003	0.0002	70.00	0.0493	7.55E-05
U	238	3	He	0.008	0.0005	140.01	0.0493	7.55E-05
Sc	45	1	No Gas			2520113.40		
Sc	45	1	No Gas			2482531.68		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2498599.18		
Ge	72	1	No Gas			1191321.15		
Ge	72	1	No Gas			1187502.40		
Ge	72	1	No Gas			1197853.19		
Sc	45	2	H2			190026.74		
Sc	45	2	H2			193390.88		
Sc	45	2	H2			190390.33		
Ge	72	2	H2			161626.06		
Ge	72	2	H2			163616.06		
Ge	72	2	H2			164041.76		
In	115	2	H2			396123.16		
In	115	2	H2			399136.52		
In	115	2	H2			393643.28		
Sc	45	3	He			48611.98		
Sc	45	3	He			49685.46		
Sc	45	3	He			49715.80		
Ge	72	3	He			83232.20		
Ge	72	3	He			83876.01		
Ge	72	3	He			84208.11		
In	115	3	He			88894.51		
In	115	3	He			89799.87		
In	115	3	He			87073.09		
Tb	159	3	He			404835.46		
Tb	159	3	He			407049.80		
Tb	159	3	He			404152.49		
Bi	209	3	He			310570.27		
Bi	209	3	He			311496.11		
Bi	209	3	He			309835.27		

Quantitation Report

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Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

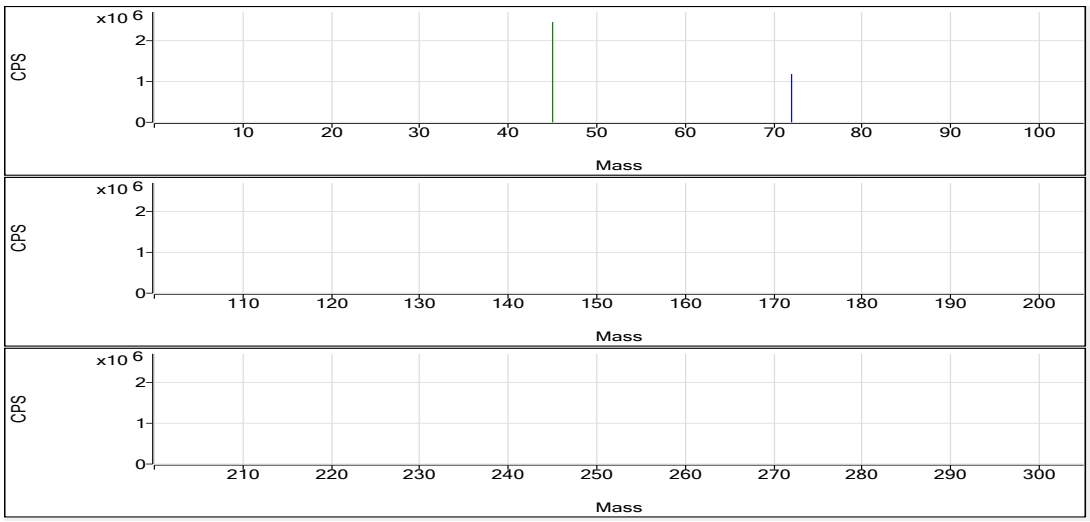
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.036	ppb	29.6	79.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.040	ppb	91.0	4.67	0.0000	Pulse	1.5000	3
Na	23	45	He	0.255	ppb	1084.8	16950.17	0.3461	Pulse	0.1000	3
Mg	24	45	He	0.279	ppb	192.7	196.68	0.0040	Pulse	0.1000	3
Al	27	45	He	0.984	ppb	126.2	60.00	0.0012	Pulse	0.1000	3
K	39	45	He	-1.908	ppb	N/A	19216.63	0.3928	Pulse	0.1000	3
Ca	44	45	He	-2.672	ppb	N/A	123.34	0.0025	Pulse	0.1000	3
Ti	47	45	He	-0.008	ppb	N/A	3.33	0.0001	Pulse	0.1000	3
V	51	45	He	0.128	ppb	39.8	1354.74	0.0277	Pulse	0.5000	3
Cr	52	45	He	-0.035	ppb	N/A	1906.86	0.0389	Pulse	0.1000	3
Mn	55	45	He	0.038	ppb	79.2	153.34	0.0031	Pulse	0.1000	3
Fe	57	45	He	2.011	ppb	123.2	126.67	0.0026	Pulse	0.1000	3
Co	59	45	He	0.022	ppb	93.3	166.67	0.0034	Pulse	0.1000	3
Ni	60	72	He	0.062	ppb	7.6	283.34	0.0034	Pulse	0.1000	3
Cu	63	72	He	0.036	ppb	79.4	476.69	0.0057	Pulse	0.1000	3
Zn	66	72	He	-0.276	ppb	N/A	253.34	0.0030	Pulse	0.1000	3
As	75	72	He	0.083	ppb	64.0	82.00	0.0010	Pulse	0.5000	3
Sr	88	115	He	-0.041	ppb	N/A	53.33	0.0006	Pulse	0.1000	3
Mo	98	115	He	0.083	ppb	15.6	186.68	0.0021	Pulse	0.1000	3
Ag	107	115	He	0.006	ppb	38.5	80.00	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.010	ppb	138.2	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.017	ppb	N/A	1450.13	0.0162	Pulse	0.1000	3
Sb	121	115	He	0.009	ppb	184.8	36.67	0.0004	Pulse	0.1000	3
Ba	137	115	He	0.014	ppb	257.5	26.67	0.0003	Pulse	0.1000	3
Tl	205	159	He	0.067	ppb	11.8	730.05	0.0018	Pulse	0.1000	3
Pb	208	159	He	0.024	ppb	28.8	753.37	0.0019	Pulse	0.1000	3
U	238	209	He	0.002	ppb	76.4	56.67	0.0002	Pulse	0.1000	3

ISTD Table:

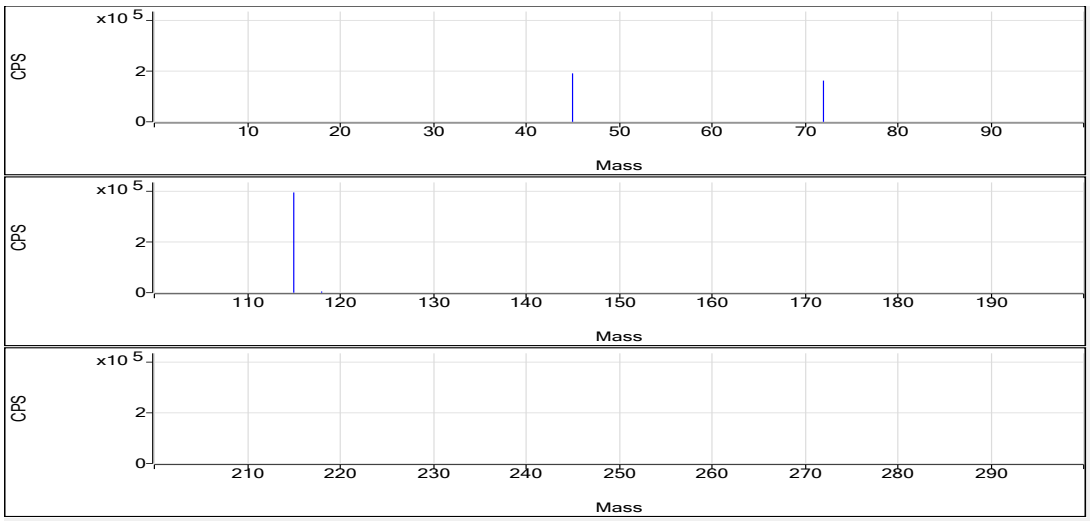
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2464505.95	0.2	102.7	Analog	0.1000	3
No Gas	Ge	72	1186124.80	0.5	102.8	Pulse	0.1000	3
H2	Sc	45	192091.00	0.9	102.7	Pulse	0.1000	3
H2	Ge	72	163409.76	1.6	99.8	Pulse	0.1000	3
H2	In	115	397307.11	0.2	102.1	Pulse	0.1000	3
He	Sc	45	49003.45	3.4	105.1	Pulse	0.1000	3
He	Ge	72	84077.53	0.8	103.6	Pulse	0.1000	3
He	In	115	89493.49	0.9	103.8	Pulse	0.1000	3
He	Tb	159	405503.14	0.6	101.7	Pulse	0.1000	3
He	Bi	209	311206.56	0.5	100.6	Pulse	0.1000	3

No Gas

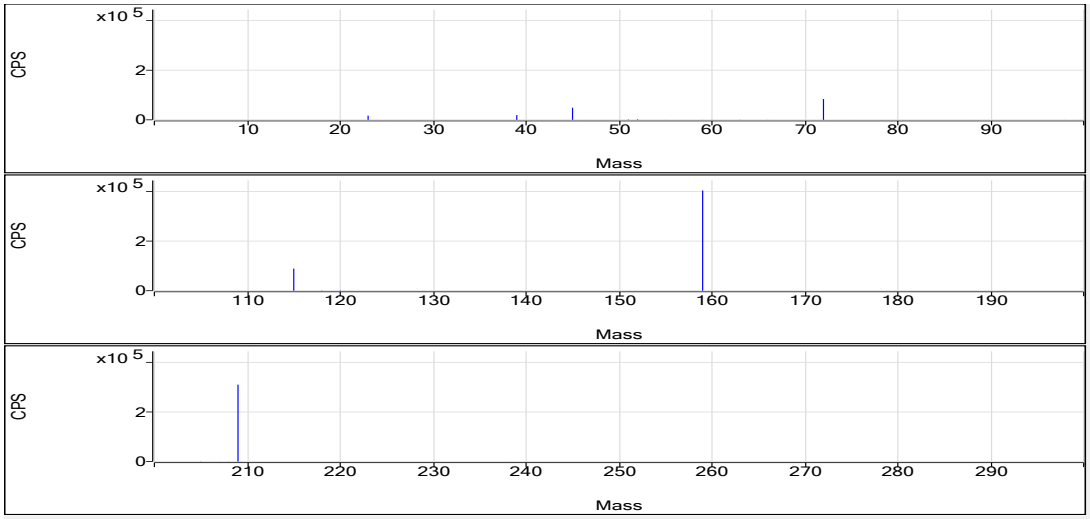


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.046	0	98.00	0.0008	4.685E-06
Be	9	1	No Gas	0.025	0	58.00	0.0008	4.685E-06
Be	9	1	No Gas	0.037	0	82.00	0.0008	4.685E-06
Se	78	2	H2	0.05	0	5.33	0.0004	1.219E-05
Se	78	2	H2	0	0	2.00	0.0004	1.219E-05
Se	78	2	H2	0.069	0	6.67	0.0004	1.219E-05
Na	23	3	He	3.328	0.3571	16870.23	0.0036	0.3452
Na	23	3	He	-0.536	0.3432	17350.57	0.0036	0.3452
Na	23	3	He	-2.028	0.3379	16629.70	0.0036	0.3452
Mg	24	3	He	-0.297	0.003	140.01	0.0018	0.003497
Mg	24	3	He	0.367	0.0042	210.01	0.0018	0.003497
Mg	24	3	He	0.769	0.0049	240.01	0.0018	0.003497
Al	27	3	He	-0.014	0.0006	30.00	0.0006	0.0006432
Al	27	3	He	0.591	0.001	50.00	0.0006	0.0006432
Al	27	3	He	2.374	0.002	100.00	0.0006	0.0006432
K	39	3	He	22.332	0.4211	19894.28	0.0012	0.3951
K	39	3	He	-32.086	0.3577	18081.77	0.0012	0.3951
K	39	3	He	4.031	0.3998	19673.85	0.0012	0.3951
Ca	44	3	He	13.077	0.0036	170.01	0.0001	0.002715
Ca	44	3	He	-7.974	0.0022	110.01	0.0001	0.002715
Ca	44	3	He	-13.119	0.0018	90.00	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.238	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	0.187	0.029	1368.07	0.0219	0.02486
V	51	3	He	0.101	0.0271	1368.07	0.0219	0.02486
V	51	3	He	0.097	0.027	1328.07	0.0219	0.02486
Cr	52	3	He	-0.041	0.0387	1830.19	0.0299	0.03997
Cr	52	3	He	-0.126	0.0362	1830.17	0.0299	0.03997
Cr	52	3	He	0.063	0.0419	2060.22	0.0299	0.03997
Mn	55	3	He	0.025	0.003	140.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.072	0.0036	180.01	0.0128	0.002639
Mn	55	3	He	0.016	0.0028	140.01	0.0128	0.002639
Fe	57	3	He	1.912	0.0025	120.00	0.0006	0.001429
Fe	57	3	He	-0.416	0.0012	60.00	0.0006	0.001429
Fe	57	3	He	4.536	0.0041	200.01	0.0006	0.001429
Co	59	3	He	-0.001	0.0021	100.00	0.0563	0.002149
Co	59	3	He	0.039	0.0044	220.01	0.0563	0.002149
Co	59	3	He	0.027	0.0037	180.01	0.0563	0.002149
Ni	60	3	He	0.068	0.0034	290.01	0.0086	0.002834
Ni	60	3	He	0.06	0.0033	280.01	0.0086	0.002834
Ni	60	3	He	0.06	0.0033	280.01	0.0086	0.002834
Cu	63	3	He	0.03	0.0055	470.02	0.0257	0.004757
Cu	63	3	He	0.066	0.0065	540.03	0.0257	0.004757
Cu	63	3	He	0.01	0.005	420.02	0.0257	0.004757
Zn	66	3	He	-0.34	0.0028	240.01	0.0029	0.003818
Zn	66	3	He	-0.367	0.0027	230.01	0.0029	0.003818
Zn	66	3	He	-0.121	0.0035	290.01	0.0029	0.003818
As	75	3	He	0.09	0.001	84.00	0.002	0.0008061
As	75	3	He	0.131	0.0011	90.00	0.002	0.0008061
As	75	3	He	0.027	0.0009	72.00	0.002	0.0008061
Sr	88	3	He	-0.045	0.0006	50.00	0.009	0.0009645
Sr	88	3	He	-0.033	0.0007	60.00	0.009	0.0009645
Sr	88	3	He	-0.045	0.0006	50.00	0.009	0.0009645
Mo	98	3	He	0.094	0.0023	210.01	0.0219	0.0002706
Mo	98	3	He	0.069	0.0018	160.01	0.0219	0.0002706
Mo	98	3	He	0.085	0.0021	190.01	0.0219	0.0002706
Ag	107	3	He	0.006	0.0009	80.00	0.0465	0.0006206
Ag	107	3	He	0.008	0.001	90.00	0.0465	0.0006206
Ag	107	3	He	0.004	0.0008	70.00	0.0465	0.0006206
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0.025	0.0001	12.00	0.0053	0
Sn	120	3	He	-0.071	0.0154	1380.12	0.0158	0.01648
Sn	120	3	He	-0.002	0.0164	1480.12	0.0158	0.01648
Sn	120	3	He	0.022	0.0168	1490.15	0.0158	0.01648
Sb	121	3	He	0.019	0.0006	50.00	0.0149	0.0002698
Sb	121	3	He	0.019	0.0006	50.00	0.0149	0.0002698
Sb	121	3	He	-0.011	0.0001	10.00	0.0149	0.0002698
Ba	137	3	He	0.021	0.0003	30.00	0.0048	0.0002317
Ba	137	3	He	-0.025	0.0001	10.00	0.0048	0.0002317
Ba	137	3	He	0.046	0.0005	40.00	0.0048	0.0002317
Tl	205	3	He	0.072	0.0019	780.04	0.0247	0.0001339
Tl	205	3	He	0.058	0.0016	640.04	0.0247	0.0001339
Tl	205	3	He	0.072	0.0019	770.06	0.0247	0.0001339
Pb	208	3	He	0.022	0.0018	460.02	0.0327	0.00107
Pb	208	3	He	0.018	0.0017	280.01	0.0327	0.00107
Pb	208	3	He	0.032	0.0021	460.03	0.0327	0.00107
U	238	3	He	0	0.0001	30.00	0.0493	7.55E-05
U	238	3	He	0.002	0.0002	60.00	0.0493	7.55E-05
U	238	3	He	0.004	0.0003	80.00	0.0493	7.55E-05
Sc	45	1	No Gas			2464843.09		
Sc	45	1	No Gas			2458683.24		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2469991.53		
Ge	72	1	No Gas			1193246.47		
Ge	72	1	No Gas			1183802.72		
Ge	72	1	No Gas			1181325.22		
Sc	45	2	H2			191121.77		
Sc	45	2	H2			194039.10		
Sc	45	2	H2			191112.13		
Ge	72	2	H2			161839.33		
Ge	72	2	H2			166348.32		
Ge	72	2	H2			162041.63		
In	115	2	H2			396709.49		
In	115	2	H2			397289.02		
In	115	2	H2			397922.81		
Sc	45	3	He			47247.19		
Sc	45	3	He			50549.03		
Sc	45	3	He			49214.12		
Ge	72	3	He			84873.07		
Ge	72	3	He			83685.20		
Ge	72	3	He			83674.31		
In	115	3	He			89869.46		
In	115	3	He			90011.21		
In	115	3	He			88621.87		
Tb	159	3	He			406931.71		
Tb	159	3	He			406879.02		
Tb	159	3	He			402698.70		
Bi	209	3	He			311515.78		
Bi	209	3	He			312578.90		
Bi	209	3	He			309525.00		

Quantitation Report

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Sample Type	CCV
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

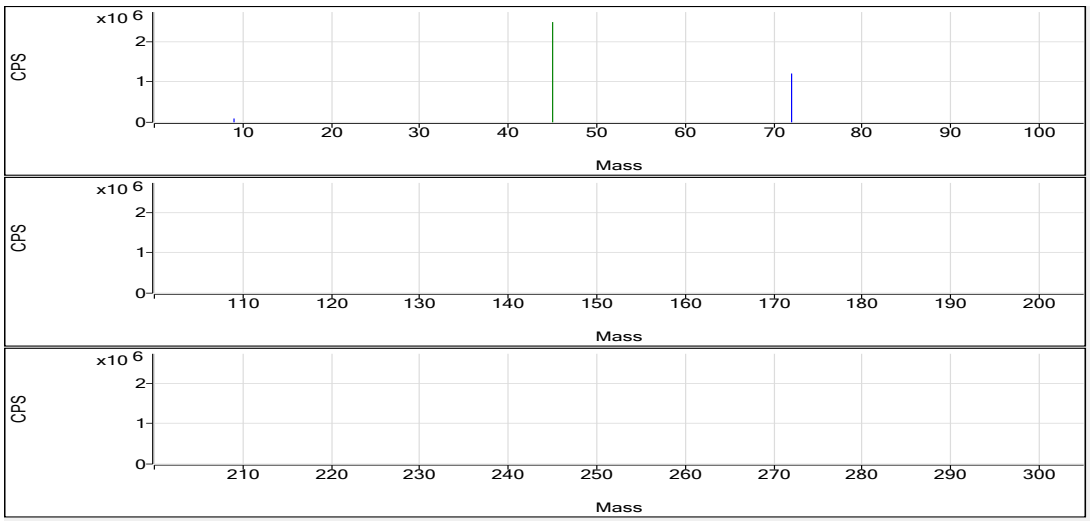
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	49.851	ppb	0.9	94113.28	0.0380	Pulse	0.5000	3
Se	78	72	H2	53.221	ppb	1.7	3674.70	0.0222	Pulse	1.5000	3
Na	23	45	He	4723.693	ppb	2.3	858046.34	17.2420	Pulse	0.1000	3
Mg	24	45	He	4962.815	ppb	1.5	443384.08	8.9084	Pulse	0.1000	3
Al	27	45	He	5010.566	ppb	1.5	145924.26	2.9320	Pulse	0.1000	3
K	39	45	He	5026.360	ppb	2.0	310915.46	6.2474	Pulse	0.1000	3
Ca	44	45	He	5207.659	ppb	1.3	17644.55	0.3545	Pulse	0.1000	3
Ti	47	45	He	4990.408	ppb	2.0	133357.29	2.6797	Pulse	0.1000	3
V	51	45	He	499.381	ppb	1.7	544509.52	10.9409	Pulse	0.5000	3
Cr	52	45	He	480.614	ppb	1.2	718194.26	14.4299	Pulse	0.1000	3
Mn	55	45	He	501.729	ppb	2.1	320579.79	6.4418	Pulse	0.1000	3
Fe	57	45	He	5021.817	ppb	2.6	145257.80	2.9191	Pulse	0.1000	3
Co	59	45	He	480.758	ppb	1.8	1346719.51	27.0603	Pulse	0.1000	3
Ni	60	72	He	536.915	ppb	0.8	383071.14	4.6113	Pulse	0.1000	3
Cu	63	72	He	506.941	ppb	0.4	1081494.75	13.0185	Pulse	0.1000	3
Zn	66	72	He	524.847	ppb	0.1	127267.31	1.5320	Pulse	0.1000	3
As	75	72	He	533.416	ppb	0.3	90859.18	1.0937	Pulse	0.5000	3
Sr	88	115	He	51.879	ppb	1.0	41592.01	0.4663	Pulse	0.1000	3
Mo	98	115	He	50.865	ppb	1.0	99500.63	1.1156	Pulse	0.1000	3
Ag	107	115	He	50.360	ppb	1.2	208866.12	2.3417	Pulse	0.1000	3
Cd	111	115	He	51.319	ppb	0.8	24474.73	0.2744	Pulse	0.5000	3
Sn	120	115	He	50.357	ppb	1.3	72432.49	0.8121	Pulse	0.1000	3
Sb	121	115	He	50.900	ppb	1.0	67458.32	0.7563	Pulse	0.1000	3
Ba	137	115	He	514.201	ppb	0.8	220141.13	2.4681	Pulse	0.1000	3
Tl	205	159	He	50.683	ppb	0.2	514987.68	1.2533	Pulse	0.1000	3
Pb	208	159	He	50.783	ppb	0.5	683380.99	1.6632	Pulse	0.1000	3
U	238	209	He	50.576	ppb	0.7	780965.69	2.4914	Pulse	0.1000	3

ISTD Table:

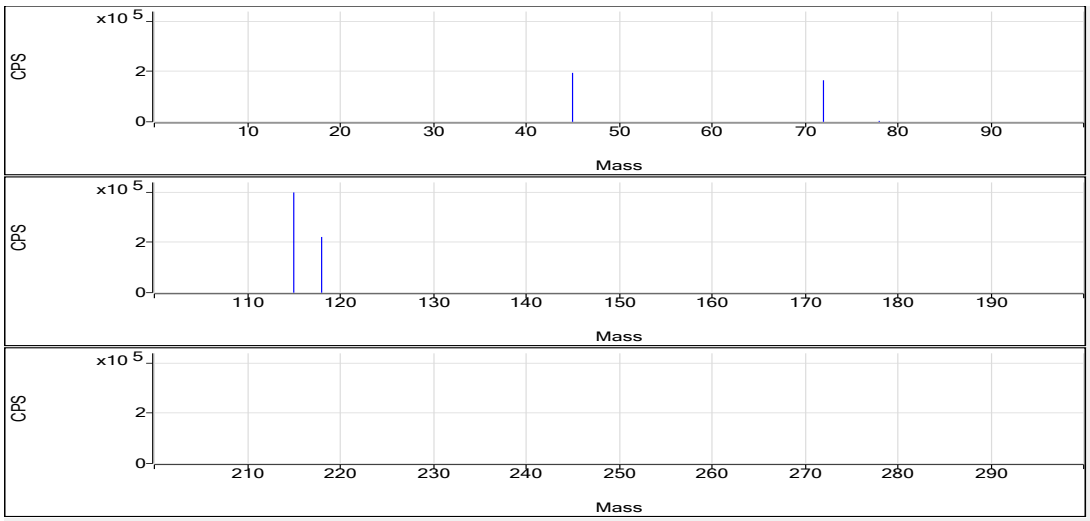
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2474616.79	0.6	103.2	Analog	0.1000	3
No Gas	Ge	72	1204349.83	1.4	104.4	Pulse	0.1000	3
H2	Sc	45	194910.51	0.3	104.2	Pulse	0.1000	3
H2	Ge	72	165475.52	1.2	101.1	Pulse	0.1000	3
H2	In	115	399056.99	0.6	102.6	Pulse	0.1000	3
He	Sc	45	49779.13	2.0	106.7	Pulse	0.1000	3
He	Ge	72	83074.51	0.4	102.3	Pulse	0.1000	3
He	In	115	89195.73	0.3	103.5	Pulse	0.1000	3
He	Tb	159	410890.84	0.5	103.1	Pulse	0.1000	3
He	Bi	209	313469.79	0.7	101.4	Pulse	0.1000	3

No Gas

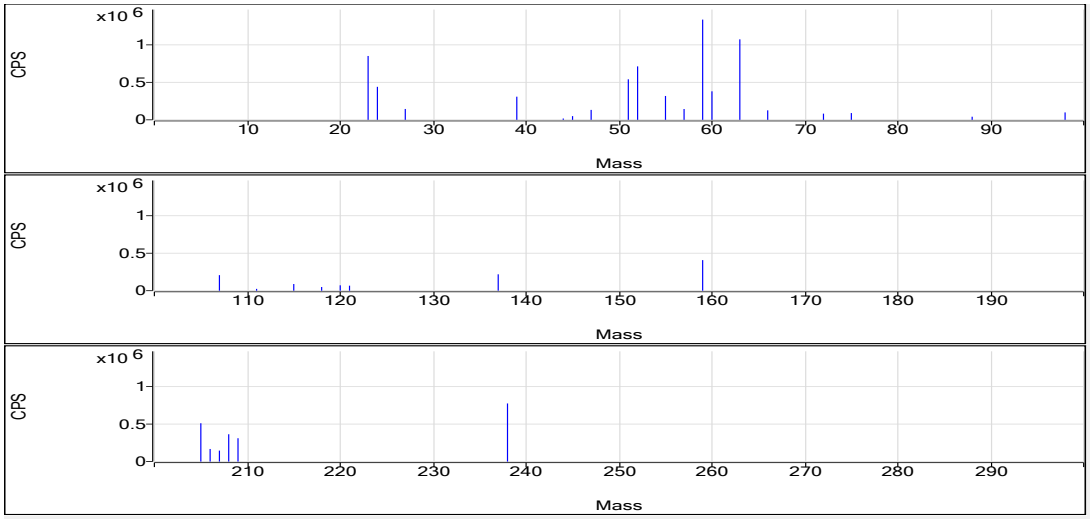


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	49.608	0.0378	93440.95	0.0008	4.685E-06
Be	9	1	No Gas	50.34	0.0384	95723.37	0.0008	4.685E-06
Be	9	1	No Gas	49.604	0.0378	93175.51	0.0008	4.685E-06
Se	78	2	H2	52.769	0.022	3691.82	0.0004	1.219E-05
Se	78	2	H2	52.609	0.022	3622.47	0.0004	1.219E-05
Se	78	2	H2	54.285	0.0227	3709.82	0.0004	1.219E-05
Na	23	3	He	4601.145	16.8037	855634.75	0.0036	0.3452
Na	23	3	He	4808.827	17.5466	864246.71	0.0036	0.3452
Na	23	3	He	4761.108	17.3759	854257.57	0.0036	0.3452
Mg	24	3	He	4894.427	8.7857	447362.10	0.0018	0.003497
Mg	24	3	He	5041.107	9.0489	445696.99	0.0018	0.003497
Mg	24	3	He	4952.912	8.8906	437093.16	0.0018	0.003497
Al	27	3	He	4926.302	2.8827	146785.69	0.0006	0.0006432
Al	27	3	He	5054.333	2.9576	145675.19	0.0006	0.0006432
Al	27	3	He	5051.063	2.9557	145311.91	0.0006	0.0006432
K	39	3	He	4913.69	6.1162	311434.12	0.0012	0.3951
K	39	3	He	5099.435	6.3325	311902.61	0.0012	0.3951
K	39	3	He	5065.954	6.2935	309409.66	0.0012	0.3951
Ca	44	3	He	5146.702	0.3504	17841.40	0.0001	0.002715
Ca	44	3	He	5279.948	0.3594	17701.34	0.0001	0.002715
Ca	44	3	He	5196.326	0.3537	17390.91	0.0001	0.002715
Ti	47	3	He	4880.696	2.6208	133447.51	0.0005	7.003E-05
Ti	47	3	He	5014.469	2.6926	132621.80	0.0005	7.003E-05
Ti	47	3	He	5076.059	2.7257	134002.55	0.0005	7.003E-05
V	51	3	He	489.841	10.7324	546487.31	0.0219	0.02486
V	51	3	He	503.414	11.0291	543231.75	0.0219	0.02486
V	51	3	He	504.886	11.0613	543809.50	0.0219	0.02486
Cr	52	3	He	473.973	14.2311	724639.21	0.0299	0.03997
Cr	52	3	He	482.654	14.491	713745.93	0.0299	0.03997
Cr	52	3	He	485.216	14.5677	716197.65	0.0299	0.03997
Mn	55	3	He	490.16	6.2933	320450.89	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	505.017	6.484	319364.02	0.0128	0.002639
Mn	55	3	He	510.01	6.548	321924.45	0.0128	0.002639
Fe	57	3	He	4869.278	2.8304	144124.28	0.0006	0.001429
Fe	57	3	He	5106.966	2.9685	146213.30	0.0006	0.001429
Fe	57	3	He	5089.207	2.9582	145435.81	0.0006	0.001429
Co	59	3	He	470.972	26.5095	1349851.85	0.0563	0.002149
Co	59	3	He	483.345	27.2059	1340012.17	0.0563	0.002149
Co	59	3	He	487.956	27.4654	1350294.51	0.0563	0.002149
Ni	60	3	He	534.505	4.5906	382496.09	0.0086	0.002834
Ni	60	3	He	541.592	4.6514	384854.68	0.0086	0.002834
Ni	60	3	He	534.649	4.5918	381862.65	0.0086	0.002834
Cu	63	3	He	505.433	12.9798	1081501.55	0.0257	0.004757
Cu	63	3	He	509.036	13.0723	1081592.56	0.0257	0.004757
Cu	63	3	He	506.355	13.0034	1081390.14	0.0257	0.004757
Zn	66	3	He	524.294	1.5304	127512.89	0.0029	0.003818
Zn	66	3	He	525.692	1.5344	126958.07	0.0029	0.003818
Zn	66	3	He	524.556	1.5311	127330.98	0.0029	0.003818
As	75	3	He	535.005	1.097	91401.17	0.002	0.0008061
As	75	3	He	533.54	1.094	90513.70	0.002	0.0008061
As	75	3	He	531.703	1.0902	90662.66	0.002	0.0008061
Sr	88	3	He	51.342	0.4615	41240.71	0.009	0.0009645
Sr	88	3	He	51.915	0.4666	41682.18	0.009	0.0009645
Sr	88	3	He	52.38	0.4708	41853.13	0.009	0.0009645
Mo	98	3	He	50.418	1.1058	98815.48	0.0219	0.0002706
Mo	98	3	He	50.774	1.1136	99470.37	0.0219	0.0002706
Mo	98	3	He	51.401	1.1273	100216.03	0.0219	0.0002706
Ag	107	3	He	49.675	2.3098	206416.42	0.0465	0.0006206
Ag	107	3	He	50.544	2.3503	209940.72	0.0465	0.0006206
Ag	107	3	He	50.861	2.365	210241.21	0.0465	0.0006206
Cd	111	3	He	50.85	0.2719	24297.05	0.0053	0
Cd	111	3	He	51.501	0.2754	24597.63	0.0053	0
Cd	111	3	He	51.606	0.2759	24529.52	0.0053	0
Sn	120	3	He	51.092	0.8237	73605.13	0.0158	0.01648
Sn	120	3	He	50.031	0.8069	72077.42	0.0158	0.01648
Sn	120	3	He	49.948	0.8056	71614.91	0.0158	0.01648
Sb	121	3	He	50.346	0.7481	66851.59	0.0149	0.0002698
Sb	121	3	He	51.012	0.758	67706.55	0.0149	0.0002698
Sb	121	3	He	51.341	0.7629	67816.83	0.0149	0.0002698
Ba	137	3	He	518.838	2.4903	222543.24	0.0048	0.0002317
Ba	137	3	He	510.949	2.4524	219067.34	0.0048	0.0002317
Ba	137	3	He	512.816	2.4614	218812.81	0.0048	0.0002317
Tl	205	3	He	50.582	1.2508	511402.14	0.0247	0.0001339
Tl	205	3	He	50.731	1.2545	518279.88	0.0247	0.0001339
Tl	205	3	He	50.736	1.2547	515281.01	0.0247	0.0001339
Pb	208	3	He	51.06	1.6722	366758.47	0.0327	0.00107
Pb	208	3	He	50.662	1.6592	370109.80	0.0327	0.00107
Pb	208	3	He	50.628	1.6581	363992.38	0.0327	0.00107
U	238	3	He	50.974	2.511	781405.07	0.0493	7.55E-05
U	238	3	He	50.326	2.4791	782562.88	0.0493	7.55E-05
U	238	3	He	50.428	2.4842	778929.13	0.0493	7.55E-05
Sc	45	1	No Gas			2469031.84		
Sc	45	1	No Gas			2492569.03		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2462249.49		
Ge	72	1	No Gas			1204928.11		
Ge	72	1	No Gas			1220458.97		
Ge	72	1	No Gas			1187662.40		
Sc	45	2	H2			194687.95		
Sc	45	2	H2			194474.49		
Sc	45	2	H2			195569.08		
Ge	72	2	H2			167652.99		
Ge	72	2	H2			165004.92		
Ge	72	2	H2			163768.66		
In	115	2	H2			399167.10		
In	115	2	H2			396762.77		
In	115	2	H2			401241.09		
Sc	45	3	He			50919.49		
Sc	45	3	He			49254.46		
Sc	45	3	He			49163.43		
Ge	72	3	He			83322.16		
Ge	72	3	He			82739.53		
Ge	72	3	He			83161.84		
In	115	3	He			89749.74		
In	115	3	He			89708.92		
In	115	3	He			89285.86		
Tb	159	3	He			408846.52		
Tb	159	3	He			413130.62		
Tb	159	3	He			410695.38		
Bi	209	3	He			311188.47		
Bi	209	3	He			315662.24		
Bi	209	3	He			313558.65		

Quantitation Report

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Sample Name	CCB 4654618
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

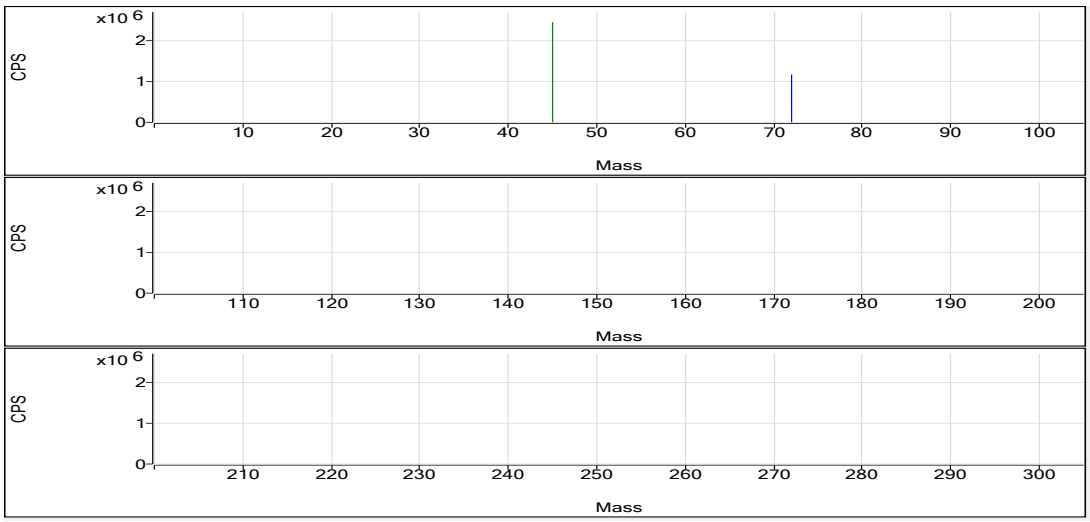
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.047	ppb	17.1	99.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.042	ppb	51.9	4.89	0.0000	Pulse	1.5000	3
Na	23	45	He	0.437	ppb	591.6	16789.95	0.3467	Pulse	0.1000	3
Mg	24	45	He	0.585	ppb	55.1	220.01	0.0045	Pulse	0.1000	3
Al	27	45	He	1.491	ppb	49.8	73.34	0.0015	Pulse	0.1000	3
K	39	45	He	-1.004	ppb	N/A	19069.69	0.3939	Pulse	0.1000	3
Ca	44	45	He	10.644	ppb	200.8	166.67	0.0034	Pulse	0.1000	3
Ti	47	45	He	1.412	ppb	48.4	40.00	0.0008	Pulse	0.1000	3
V	51	45	He	0.066	ppb	73.7	1273.40	0.0263	Pulse	0.5000	3
Cr	52	45	He	-0.133	ppb	N/A	1743.50	0.0360	Pulse	0.1000	3
Mn	55	45	He	0.410	ppb	148.8	380.54	0.0079	Pulse	0.1000	3
Fe	57	45	He	9.702	ppb	113.0	340.28	0.0071	Pulse	0.1000	3
Co	59	45	He	0.064	ppb	15.7	280.01	0.0058	Pulse	0.1000	3
Ni	60	72	He	0.070	ppb	101.0	283.35	0.0034	Pulse	0.1000	3
Cu	63	72	He	0.164	ppb	35.9	740.07	0.0090	Pulse	0.1000	3
Zn	66	72	He	-0.076	ppb	N/A	296.68	0.0036	Pulse	0.1000	3
As	75	72	He	0.218	ppb	26.1	103.33	0.0013	Pulse	0.5000	3
Sr	88	115	He	-0.031	ppb	N/A	60.00	0.0007	Pulse	0.1000	3
Mo	98	115	He	0.147	ppb	30.9	306.68	0.0035	Pulse	0.1000	3
Ag	107	115	He	0.009	ppb	88.0	93.33	0.0011	Pulse	0.1000	3
Cd	111	115	He	0.011	ppb	78.4	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.031	ppb	492.8	1493.47	0.0170	Pulse	0.1000	3
Sb	121	115	He	0.020	ppb	37.5	50.00	0.0006	Pulse	0.1000	3
Ba	137	115	He	0.046	ppb	48.2	40.00	0.0005	Pulse	0.1000	3
Tl	205	159	He	0.117	ppb	4.4	1230.11	0.0030	Pulse	0.1000	3
Pb	208	159	He	0.026	ppb	12.5	776.71	0.0019	Pulse	0.1000	3
U	238	209	He	0.046	ppb	0.5	733.38	0.0024	Pulse	0.1000	3

ISTD Table:

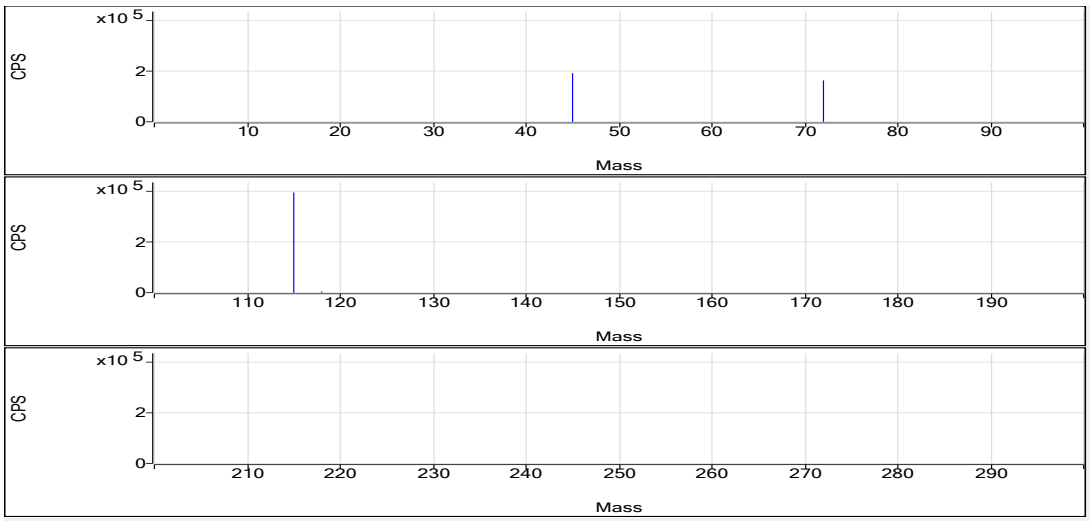
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2465487.20	0.9	102.8	Analog	0.1000	3
No Gas	Ge	72	1175667.98	0.9	101.9	Pulse	0.1000	3
H2	Sc	45	192026.02	0.7	102.7	Pulse	0.1000	3
H2	Ge	72	163449.02	1.0	99.8	Pulse	0.1000	3
H2	In	115	395296.99	1.1	101.6	Pulse	0.1000	3
He	Sc	45	48427.91	0.9	103.8	Pulse	0.1000	3
He	Ge	72	82550.95	0.7	101.7	Pulse	0.1000	3
He	In	115	87892.67	1.5	102.0	Pulse	0.1000	3
He	Tb	159	407031.57	0.5	102.1	Pulse	0.1000	3
He	Bi	209	310721.19	0.3	100.5	Pulse	0.1000	3

No Gas

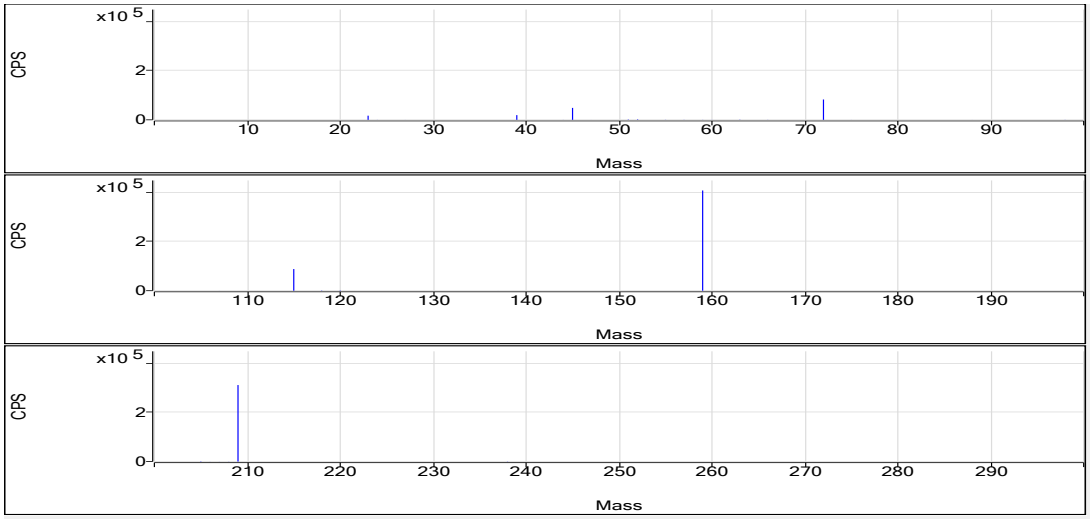


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.054	0	112.00	0.0008	4.685E-06
Be	9	1	No Gas	0.048	0	102.00	0.0008	4.685E-06
Be	9	1	No Gas	0.038	0	84.00	0.0008	4.685E-06
Se	78	2	H2	0.068	0	6.67	0.0004	1.219E-05
Se	78	2	H2	0.029	0	4.00	0.0004	1.219E-05
Se	78	2	H2	0.03	0	4.00	0.0004	1.219E-05
Na	23	3	He	-2.453	0.3364	16399.59	0.0036	0.3452
Na	23	3	He	1.226	0.3495	16749.86	0.0036	0.3452
Na	23	3	He	2.539	0.3542	17220.40	0.0036	0.3452
Mg	24	3	He	0.223	0.0039	190.01	0.0018	0.003497
Mg	24	3	He	0.843	0.005	240.01	0.0018	0.003497
Mg	24	3	He	0.688	0.0047	230.01	0.0018	0.003497
Al	27	3	He	0.654	0.001	50.00	0.0006	0.0006432
Al	27	3	He	1.754	0.0017	80.00	0.0006	0.0006432
Al	27	3	He	2.065	0.0019	90.01	0.0006	0.0006432
K	39	3	He	-4.537	0.3898	19002.92	0.0012	0.3951
K	39	3	He	20.307	0.4187	20064.33	0.0012	0.3951
K	39	3	He	-18.784	0.3732	18141.83	0.0012	0.3951
Ca	44	3	He	14.469	0.0037	180.01	0.0001	0.002715
Ca	44	3	He	-12.388	0.0019	90.00	0.0001	0.002715
Ca	44	3	He	29.852	0.0047	230.01	0.0001	0.002715
Ti	47	3	He	1.016	0.0006	30.00	0.0005	7.003E-05
Ti	47	3	He	2.201	0.0013	60.00	0.0005	7.003E-05
Ti	47	3	He	1.019	0.0006	30.00	0.0005	7.003E-05
V	51	3	He	0.015	0.0252	1228.06	0.0219	0.02486
V	51	3	He	0.111	0.0273	1308.07	0.0219	0.02486
V	51	3	He	0.071	0.0264	1284.06	0.0219	0.02486
Cr	52	3	He	-0.143	0.0357	1740.16	0.0299	0.03997
Cr	52	3	He	-0.164	0.0351	1680.16	0.0299	0.03997
Cr	52	3	He	-0.091	0.0372	1810.19	0.0299	0.03997
Mn	55	3	He	0.098	0.0039	190.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1.114	0.0169	811.59	0.0128	0.002639
Mn	55	3	He	0.019	0.0029	140.01	0.0128	0.002639
Fe	57	3	He	3.19	0.0033	160.01	0.0006	0.001429
Fe	57	3	He	22.354	0.0144	690.83	0.0006	0.001429
Fe	57	3	He	3.56	0.0035	170.01	0.0006	0.001429
Co	59	3	He	0.075	0.0064	310.01	0.0563	0.002149
Co	59	3	He	0.055	0.0052	250.01	0.0563	0.002149
Co	59	3	He	0.064	0.0058	280.01	0.0563	0.002149
Ni	60	3	He	0.009	0.0029	240.01	0.0086	0.002834
Ni	60	3	He	0.054	0.0033	270.01	0.0086	0.002834
Ni	60	3	He	0.146	0.0041	340.02	0.0086	0.002834
Cu	63	3	He	0.112	0.0076	630.04	0.0257	0.004757
Cu	63	3	He	0.228	0.0106	870.12	0.0257	0.004757
Cu	63	3	He	0.152	0.0087	720.04	0.0257	0.004757
Zn	66	3	He	-0.229	0.0032	260.01	0.0029	0.003818
Zn	66	3	He	0.239	0.0045	370.02	0.0029	0.003818
Zn	66	3	He	-0.237	0.0031	260.01	0.0029	0.003818
As	75	3	He	0.281	0.0014	114.00	0.002	0.0008061
As	75	3	He	0.202	0.0012	100.00	0.002	0.0008061
As	75	3	He	0.17	0.0012	96.00	0.002	0.0008061
Sr	88	3	He	-0.005	0.0009	80.00	0.009	0.0009645
Sr	88	3	He	-0.07	0.0003	30.00	0.009	0.0009645
Sr	88	3	He	-0.018	0.0008	70.00	0.009	0.0009645
Mo	98	3	He	0.151	0.0036	310.01	0.0219	0.0002706
Mo	98	3	He	0.1	0.0025	220.01	0.0219	0.0002706
Mo	98	3	He	0.191	0.0044	390.02	0.0219	0.0002706
Ag	107	3	He	0.009	0.001	90.00	0.0465	0.0006206
Ag	107	3	He	0.018	0.0015	130.00	0.0465	0.0006206
Ag	107	3	He	0.001	0.0007	60.00	0.0465	0.0006206
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.008	0	4.00	0.0053	0
Cd	111	3	He	0.021	0.0001	10.00	0.0053	0
Sn	120	3	He	-0.087	0.0151	1310.11	0.0158	0.01648
Sn	120	3	He	0.205	0.0197	1760.18	0.0158	0.01648
Sn	120	3	He	-0.025	0.0161	1410.11	0.0158	0.01648
Sb	121	3	He	0.013	0.0005	40.00	0.0149	0.0002698
Sb	121	3	He	0.02	0.0006	50.00	0.0149	0.0002698
Sb	121	3	He	0.028	0.0007	60.00	0.0149	0.0002698
Ba	137	3	He	0.024	0.0003	30.00	0.0048	0.0002317
Ba	137	3	He	0.068	0.0006	50.00	0.0048	0.0002317
Ba	137	3	He	0.047	0.0005	40.00	0.0048	0.0002317
Tl	205	3	He	0.119	0.0031	1250.11	0.0247	0.0001339
Tl	205	3	He	0.111	0.0029	1170.11	0.0247	0.0001339
Tl	205	3	He	0.12	0.0031	1270.11	0.0247	0.0001339
Pb	208	3	He	0.024	0.0019	360.02	0.0327	0.00107
Pb	208	3	He	0.024	0.0018	410.02	0.0327	0.00107
Pb	208	3	He	0.029	0.002	430.02	0.0327	0.00107
U	238	3	He	0.047	0.0024	740.05	0.0493	7.55E-05
U	238	3	He	0.046	0.0024	730.05	0.0493	7.55E-05
U	238	3	He	0.046	0.0024	730.05	0.0493	7.55E-05
Sc	45	1	No Gas			2446843.24		
Sc	45	1	No Gas			2459941.21		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2489677.15		
Ge	72	1	No Gas			1173275.45		
Ge	72	1	No Gas			1166431.86		
Ge	72	1	No Gas			1187296.62		
Sc	45	2	H2			190836.83		
Sc	45	2	H2			191769.74		
Sc	45	2	H2			193471.50		
Ge	72	2	H2			164872.52		
Ge	72	2	H2			163899.78		
Ge	72	2	H2			161574.77		
In	115	2	H2			393610.38		
In	115	2	H2			391951.17		
In	115	2	H2			400329.41		
Sc	45	3	He			48752.37		
Sc	45	3	He			47919.30		
Sc	45	3	He			48612.05		
Ge	72	3	He			82537.18		
Ge	72	3	He			81984.87		
Ge	72	3	He			83130.79		
In	115	3	He			86760.10		
In	115	3	He			89286.43		
In	115	3	He			87655.83		
Tb	159	3	He			405334.84		
Tb	159	3	He			406720.62		
Tb	159	3	He			409039.25		
Bi	209	3	He			311700.87		
Bi	209	3	He			310289.53		
Bi	209	3	He			310173.18		

Quantitation Report

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Acq Time	8/10/2023 11:08:06 AM
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Sample Type	CRI
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

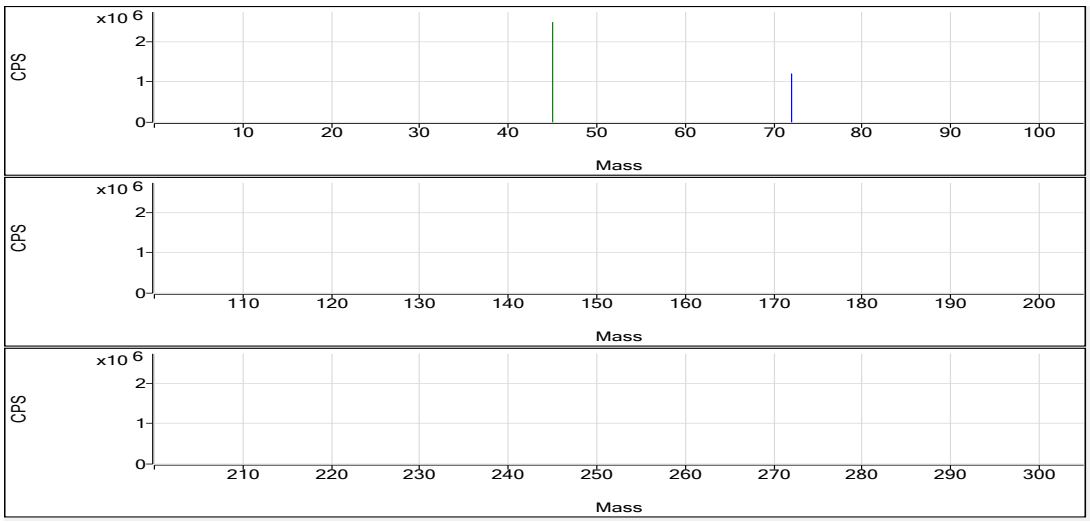
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.460	ppb	9.0	885.37	0.0004	Pulse	0.5000	3
Se	78	72	H2	1.030	ppb	12.3	71.33	0.0004	Pulse	1.5000	3
Na	23	45	He	182.926	ppb	4.9	49376.53	0.9995	Pulse	0.1000	3
Mg	24	45	He	50.155	ppb	5.5	4617.55	0.0935	Pulse	0.1000	3
Al	27	45	He	21.861	ppb	8.2	663.37	0.0134	Pulse	0.1000	3
K	39	45	He	177.245	ppb	10.9	29707.56	0.6014	Pulse	0.1000	3
Ca	44	45	He	99.606	ppb	7.1	466.69	0.0094	Pulse	0.1000	3
Ti	47	45	He	9.933	ppb	10.6	266.68	0.0054	Pulse	0.1000	3
V	51	45	He	2.108	ppb	6.5	3504.44	0.0709	Pulse	0.5000	3
Cr	52	45	He	1.925	ppb	8.9	4820.97	0.0976	Pulse	0.1000	3
Mn	55	45	He	2.003	ppb	10.9	1400.12	0.0283	Pulse	0.1000	3
Fe	57	45	He	54.389	ppb	5.1	1633.49	0.0330	Pulse	0.1000	3
Co	59	45	He	0.489	ppb	6.4	1466.79	0.0297	Pulse	0.1000	3
Ni	60	72	He	1.059	ppb	25.6	1023.41	0.0119	Pulse	0.1000	3
Cu	63	72	He	1.034	ppb	7.1	2687.02	0.0313	Pulse	0.1000	3
Zn	66	72	He	21.845	ppb	0.9	5788.05	0.0674	Pulse	0.1000	3
As	75	72	He	2.050	ppb	8.3	430.01	0.0050	Pulse	0.5000	3
Sr	88	115	He	1.043	ppb	17.4	943.40	0.0103	Pulse	0.1000	3
Mo	98	115	He	0.446	ppb	12.0	920.06	0.0101	Pulse	0.1000	3
Ag	107	115	He	0.472	ppb	5.3	2063.55	0.0226	Pulse	0.1000	3
Cd	111	115	He	0.493	ppb	9.7	241.33	0.0026	Pulse	0.5000	3
Sn	120	115	He	1.794	ppb	13.3	4094.09	0.0448	Pulse	0.1000	3
Sb	121	115	He	1.038	ppb	11.6	1433.46	0.0157	Pulse	0.1000	3
Ba	137	115	He	1.676	ppb	9.0	756.71	0.0083	Pulse	0.1000	3
Tl	205	159	He	0.489	ppb	1.4	4947.78	0.0122	Pulse	0.1000	3
Pb	208	159	He	0.545	ppb	3.0	7641.14	0.0189	Pulse	0.1000	3
U	238	209	He	0.991	ppb	3.2	15209.36	0.0489	Pulse	0.1000	3

ISTD Table:

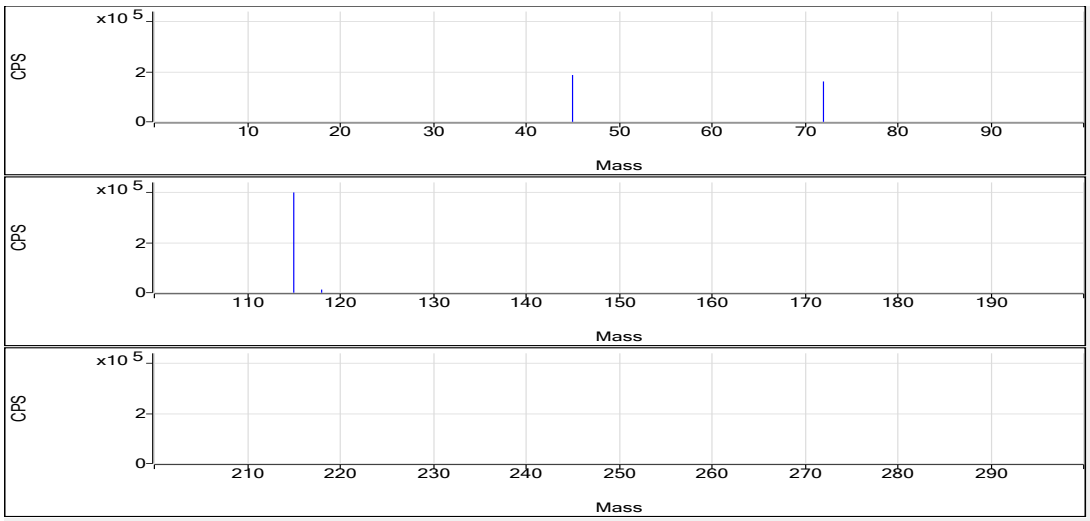
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2487126.68	1.2	103.7	Analog	0.1000	3
No Gas	Ge	72	1210760.89	0.5	105.0	Pulse	0.1000	3
H2	Sc	45	187422.52	0.8	100.2	Pulse	0.1000	3
H2	Ge	72	161640.01	1.6	98.7	Pulse	0.1000	3
H2	In	115	401396.65	0.7	103.2	Pulse	0.1000	3
He	Sc	45	49421.46	2.2	106.0	Pulse	0.1000	3
He	Ge	72	85850.67	0.7	105.7	Pulse	0.1000	3
He	In	115	91410.10	1.4	106.0	Pulse	0.1000	3
He	Tb	159	404548.16	1.2	101.5	Pulse	0.1000	3
He	Bi	209	310926.80	0.3	100.5	Pulse	0.1000	3

No Gas

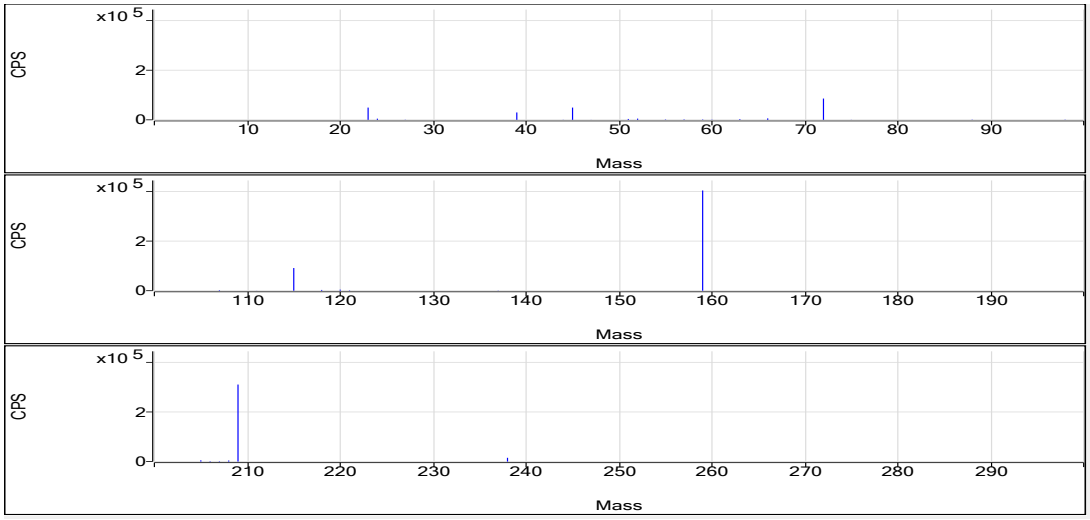


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.455	0.0004	884.03	0.0008	4.685E-06
Be	9	1	No Gas	0.422	0.0003	800.03	0.0008	4.685E-06
Be	9	1	No Gas	0.504	0.0004	972.04	0.0008	4.685E-06
Se	78	2	H2	0.896	0.0004	62.67	0.0004	1.219E-05
Se	78	2	H2	1.044	0.0004	73.33	0.0004	1.219E-05
Se	78	2	H2	1.149	0.0005	78.00	0.0004	1.219E-05
Na	23	3	He	178.447	0.9835	49654.28	0.0036	0.3452
Na	23	3	He	193.338	1.0367	50075.53	0.0036	0.3452
Na	23	3	He	176.994	0.9783	48399.79	0.0036	0.3452
Mg	24	3	He	46.96	0.0878	4430.82	0.0018	0.003497
Mg	24	3	He	51.6	0.0961	4640.93	0.0018	0.003497
Mg	24	3	He	51.906	0.0966	4780.91	0.0018	0.003497
Al	27	3	He	19.892	0.0123	620.04	0.0006	0.0006432
Al	27	3	He	22.258	0.0137	660.04	0.0006	0.0006432
Al	27	3	He	23.432	0.0144	710.04	0.0006	0.0006432
K	39	3	He	159.118	0.5803	29300.17	0.0012	0.3951
K	39	3	He	197.545	0.6251	30191.72	0.0012	0.3951
K	39	3	He	175.073	0.5989	29630.78	0.0012	0.3951
Ca	44	3	He	103.485	0.0097	490.02	0.0001	0.002715
Ca	44	3	He	103.865	0.0097	470.03	0.0001	0.002715
Ca	44	3	He	91.469	0.0089	440.02	0.0001	0.002715
Ti	47	3	He	8.723	0.0048	240.01	0.0005	7.003E-05
Ti	47	3	He	10.666	0.0058	280.01	0.0005	7.003E-05
Ti	47	3	He	10.41	0.0057	280.01	0.0005	7.003E-05
V	51	3	He	1.953	0.0675	3410.42	0.0219	0.02486
V	51	3	He	2.204	0.0731	3528.45	0.0219	0.02486
V	51	3	He	2.168	0.0722	3574.46	0.0219	0.02486
Cr	52	3	He	1.788	0.0935	4720.93	0.0299	0.03997
Cr	52	3	He	2.116	0.1033	4991.05	0.0299	0.03997
Cr	52	3	He	1.872	0.096	4750.93	0.0299	0.03997
Mn	55	3	He	1.801	0.0258	1300.10	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1.972	0.028	1350.12	0.0128	0.002639
Mn	55	3	He	2.236	0.0313	1550.14	0.0128	0.002639
Fe	57	3	He	56.865	0.0345	1740.17	0.0006	0.001429
Fe	57	3	He	51.354	0.0313	1510.14	0.0006	0.001429
Fe	57	3	He	54.949	0.0334	1650.15	0.0006	0.001429
Co	59	3	He	0.525	0.0317	1600.14	0.0563	0.002149
Co	59	3	He	0.473	0.0288	1390.12	0.0563	0.002149
Co	59	3	He	0.468	0.0285	1410.12	0.0563	0.002149
Ni	60	3	He	1.309	0.0141	1200.09	0.0086	0.002834
Ni	60	3	He	0.771	0.0094	810.06	0.0086	0.002834
Ni	60	3	He	1.097	0.0123	1060.08	0.0086	0.002834
Cu	63	3	He	0.993	0.0303	2580.33	0.0257	0.004757
Cu	63	3	He	1.119	0.0335	2870.39	0.0257	0.004757
Cu	63	3	He	0.99	0.0302	2610.34	0.0257	0.004757
Zn	66	3	He	21.891	0.0676	5761.36	0.0029	0.003818
Zn	66	3	He	22.006	0.0679	5821.41	0.0029	0.003818
Zn	66	3	He	21.638	0.0668	5781.37	0.0029	0.003818
As	75	3	He	1.953	0.0048	410.01	0.002	0.0008061
As	75	3	He	1.952	0.0048	412.01	0.002	0.0008061
As	75	3	He	2.247	0.0054	468.01	0.002	0.0008061
Sr	88	3	He	1.224	0.0119	1100.09	0.009	0.0009645
Sr	88	3	He	0.86	0.0087	800.05	0.009	0.0009645
Sr	88	3	He	1.045	0.0103	930.07	0.009	0.0009645
Mo	98	3	He	0.508	0.0114	1050.07	0.0219	0.0002706
Mo	98	3	He	0.423	0.0095	880.06	0.0219	0.0002706
Mo	98	3	He	0.409	0.0092	830.05	0.0219	0.0002706
Ag	107	3	He	0.475	0.0227	2090.21	0.0465	0.0006206
Ag	107	3	He	0.495	0.0237	2180.23	0.0465	0.0006206
Ag	107	3	He	0.446	0.0214	1920.21	0.0465	0.0006206
Cd	111	3	He	0.544	0.0029	268.00	0.0053	0
Cd	111	3	He	0.487	0.0026	240.00	0.0053	0
Cd	111	3	He	0.449	0.0024	216.00	0.0053	0
Sn	120	3	He	1.555	0.041	3780.63	0.0158	0.01648
Sn	120	3	He	1.794	0.0448	4130.76	0.0158	0.01648
Sn	120	3	He	2.033	0.0486	4370.87	0.0158	0.01648
Sb	121	3	He	0.903	0.0137	1260.10	0.0149	0.0002698
Sb	121	3	He	1.077	0.0163	1500.14	0.0149	0.0002698
Sb	121	3	He	1.135	0.0171	1540.15	0.0149	0.0002698
Ba	137	3	He	1.58	0.0078	720.04	0.0048	0.0002317
Ba	137	3	He	1.851	0.0091	840.06	0.0048	0.0002317
Ba	137	3	He	1.597	0.0079	710.04	0.0048	0.0002317
Tl	205	3	He	0.491	0.0123	4971.14	0.0247	0.0001339
Tl	205	3	He	0.495	0.0124	5061.13	0.0247	0.0001339
Tl	205	3	He	0.481	0.012	4811.06	0.0247	0.0001339
Pb	208	3	He	0.546	0.0189	4180.81	0.0327	0.00107
Pb	208	3	He	0.528	0.0183	4070.74	0.0327	0.00107
Pb	208	3	He	0.56	0.0194	4220.84	0.0327	0.00107
U	238	3	He	0.973	0.048	14979.08	0.0493	7.55E-05
U	238	3	He	1.028	0.0507	15760.09	0.0493	7.55E-05
U	238	3	He	0.973	0.048	14888.92	0.0493	7.55E-05
Sc	45	1	No Gas			2510879.96		
Sc	45	1	No Gas			2452471.53		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2498028.56		
Ge	72	1	No Gas			1208497.01		
Ge	72	1	No Gas			1217154.90		
Ge	72	1	No Gas			1206630.76		
Sc	45	2	H2			185986.36		
Sc	45	2	H2			189056.29		
Sc	45	2	H2			187224.92		
Ge	72	2	H2			162343.43		
Ge	72	2	H2			163882.73		
Ge	72	2	H2			158693.86		
In	115	2	H2			399518.78		
In	115	2	H2			404854.29		
In	115	2	H2			399816.87		
Sc	45	3	He			50488.68		
Sc	45	3	He			48301.09		
Sc	45	3	He			49474.61		
Ge	72	3	He			85283.96		
Ge	72	3	He			85746.44		
Ge	72	3	He			86521.61		
In	115	3	He			92135.57		
In	115	3	He			92204.59		
In	115	3	He			89961.60		
Tb	159	3	He			404986.52		
Tb	159	3	He			408992.53		
Tb	159	3	He			399665.42		
Bi	209	3	He			311886.32		
Bi	209	3	He			310881.15		
Bi	209	3	He			310012.93		

Quantitation Report

Data File Name	103SMPL.d
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Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

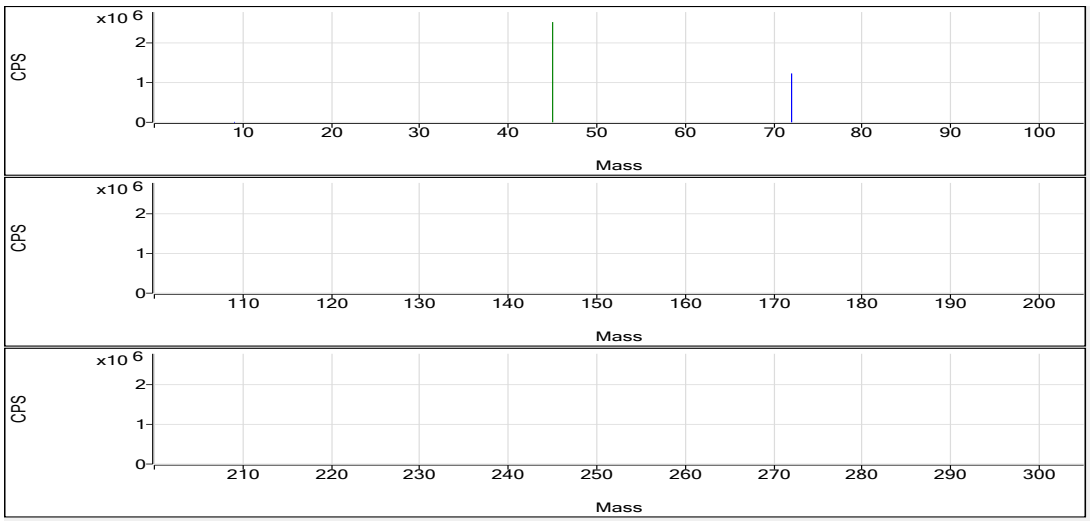
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.003	ppb	82.5	18.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.004	ppb	N/A	1.78	0.0000	Pulse	1.5000	3
Na	23	45	He	-4.313	ppb	N/A	15878.99	0.3297	Pulse	0.1000	3
Mg	24	45	He	-0.136	ppb	N/A	156.68	0.0033	Pulse	0.1000	3
Al	27	45	He	0.911	ppb	44.4	56.67	0.0012	Pulse	0.1000	3
K	39	45	He	-8.074	ppb	N/A	18572.30	0.3857	Pulse	0.1000	3
Ca	44	45	He	19.254	ppb	40.9	193.34	0.0040	Pulse	0.1000	3
Ti	47	45	He	-0.002	ppb	N/A	3.33	0.0001	Pulse	0.1000	3
V	51	45	He	0.130	ppb	23.9	1334.74	0.0277	Pulse	0.5000	3
Cr	52	45	He	-0.006	ppb	N/A	1916.87	0.0398	Pulse	0.1000	3
Mn	55	45	He	0.021	ppb	268.0	140.01	0.0029	Pulse	0.1000	3
Fe	57	45	He	1.473	ppb	151.5	110.00	0.0023	Pulse	0.1000	3
Co	59	45	He	-0.019	ppb	N/A	53.33	0.0011	Pulse	0.1000	3
Ni	60	72	He	0.025	ppb	212.6	253.34	0.0030	Pulse	0.1000	3
Cu	63	72	He	-0.037	ppb	N/A	316.68	0.0038	Pulse	0.1000	3
Zn	66	72	He	4.897	ppb	9.3	1500.14	0.0181	Pulse	0.1000	3
As	75	72	He	-0.052	ppb	N/A	58.00	0.0007	Pulse	0.5000	3
Sr	88	115	He	-0.004	ppb	N/A	80.00	0.0009	Pulse	0.1000	3
Mo	98	115	He	0.161	ppb	23.0	326.68	0.0038	Pulse	0.1000	3
Ag	107	115	He	-0.003	ppb	N/A	40.00	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.003	ppb	173.2	1.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.081	ppb	N/A	1306.78	0.0152	Pulse	0.1000	3
Sb	121	115	He	0.003	ppb	1097.7	26.67	0.0003	Pulse	0.1000	3
Ba	137	115	He	-0.024	ppb	N/A	10.00	0.0001	Pulse	0.1000	3
Tl	205	159	He	0.007	ppb	60.0	120.01	0.0003	Pulse	0.1000	3
Pb	208	159	He	0.002	ppb	42.9	450.02	0.0011	Pulse	0.1000	3
U	238	209	He	0.002	ppb	19.7	53.33	0.0002	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2525253.04	1.8	105.3	Analog	0.1000	3
No Gas	Ge	72	1231188.89	1.3	106.8	Pulse	0.1000	3
H2	Sc	45	187551.94	0.6	100.3	Pulse	0.1000	3
H2	Ge	72	165681.64	1.4	101.2	Pulse	0.1000	3
H2	In	115	395221.34	0.2	101.6	Pulse	0.1000	3
He	Sc	45	48157.16	0.3	103.2	Pulse	0.1000	3
He	Ge	72	82954.04	1.6	102.2	Pulse	0.1000	3
He	In	115	85965.06	0.4	99.7	Pulse	0.1000	3
He	Tb	159	398262.78	0.1	99.9	Pulse	0.1000	3
He	Bi	209	305490.84	1.1	98.8	Pulse	0.1000	3

No Gas



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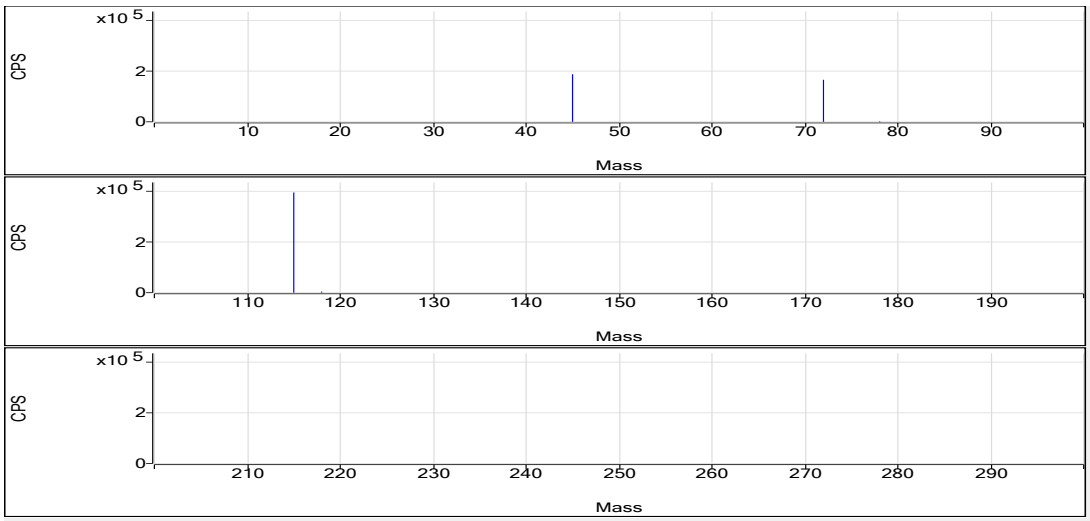
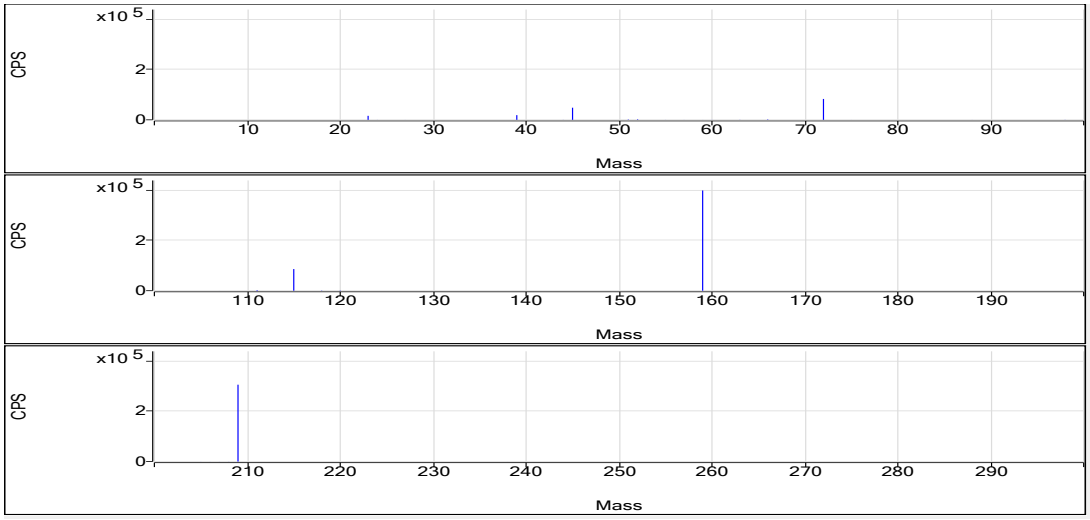


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.005	0	22.00	0.0008	4.685E-06
Be	9	1	No Gas	0	0	12.00	0.0008	4.685E-06
Be	9	1	No Gas	0.004	0	20.00	0.0008	4.685E-06
Se	78	2	H2	0.01	0	2.67	0.0004	1.219E-05
Se	78	2	H2	-0.019	0	0.67	0.0004	1.219E-05
Se	78	2	H2	-0.001	0	2.00	0.0004	1.219E-05
Na	23	3	He	-4.105	0.3305	15959.14	0.0036	0.3452
Na	23	3	He	-3.892	0.3312	15959.06	0.0036	0.3452
Na	23	3	He	-4.944	0.3275	15718.77	0.0036	0.3452
Mg	24	3	He	0.129	0.0037	180.01	0.0018	0.003497
Mg	24	3	He	-0.329	0.0029	140.01	0.0018	0.003497
Mg	24	3	He	-0.207	0.0031	150.01	0.0018	0.003497
Al	27	3	He	1.378	0.0014	70.00	0.0006	0.0006432
Al	27	3	He	0.674	0.001	50.00	0.0006	0.0006432
Al	27	3	He	0.681	0.001	50.00	0.0006	0.0006432
K	39	3	He	-10.068	0.3833	18512.22	0.0012	0.3951
K	39	3	He	-8.416	0.3853	18562.26	0.0012	0.3951
K	39	3	He	-5.738	0.3884	18642.43	0.0012	0.3951
Ca	44	3	He	18.056	0.0039	190.01	0.0001	0.002715
Ca	44	3	He	12.045	0.0035	170.01	0.0001	0.002715
Ca	44	3	He	27.662	0.0046	220.01	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.256	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	0.136	0.0278	1344.07	0.0219	0.02486
V	51	3	He	0.097	0.027	1300.07	0.0219	0.02486
V	51	3	He	0.159	0.0283	1360.07	0.0219	0.02486
Cr	52	3	He	0.097	0.0429	2070.22	0.0299	0.03997
Cr	52	3	He	-0.025	0.0392	1890.20	0.0299	0.03997
Cr	52	3	He	-0.089	0.0373	1790.18	0.0299	0.03997
Mn	55	3	He	0.053	0.0033	160.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.044	0.0021	100.00	0.0128	0.002639
Mn	55	3	He	0.054	0.0033	160.01	0.0128	0.002639
Fe	57	3	He	-0.321	0.0012	60.00	0.0006	0.001429
Fe	57	3	He	3.972	0.0037	180.01	0.0006	0.001429
Fe	57	3	He	0.768	0.0019	90.00	0.0006	0.001429
Co	59	3	He	-0.016	0.0012	60.00	0.0563	0.002149
Co	59	3	He	-0.012	0.0015	70.00	0.0563	0.002149
Co	59	3	He	-0.027	0.0006	30.00	0.0563	0.002149
Ni	60	3	He	0.086	0.0036	300.01	0.0086	0.002834
Ni	60	3	He	-0.016	0.0027	220.01	0.0086	0.002834
Ni	60	3	He	0.005	0.0029	240.01	0.0086	0.002834
Cu	63	3	He	0	0.0048	400.02	0.0257	0.004757
Cu	63	3	He	-0.066	0.0031	250.01	0.0257	0.004757
Cu	63	3	He	-0.045	0.0036	300.02	0.0257	0.004757
Zn	66	3	He	4.861	0.018	1510.13	0.0029	0.003818
Zn	66	3	He	4.462	0.0168	1370.12	0.0029	0.003818
Zn	66	3	He	5.367	0.0194	1620.17	0.0029	0.003818
As	75	3	He	-0.068	0.0007	56.00	0.002	0.0008061
As	75	3	He	-0.01	0.0008	64.00	0.002	0.0008061
As	75	3	He	-0.077	0.0006	54.00	0.002	0.0008061
Sr	88	3	He	-0.029	0.0007	60.00	0.009	0.0009645
Sr	88	3	He	-0.017	0.0008	70.00	0.009	0.0009645
Sr	88	3	He	0.035	0.0013	110.00	0.009	0.0009645
Mo	98	3	He	0.121	0.0029	250.01	0.0219	0.0002706
Mo	98	3	He	0.168	0.0039	340.02	0.0219	0.0002706
Mo	98	3	He	0.194	0.0045	390.02	0.0219	0.0002706
Ag	107	3	He	-0.006	0.0004	30.00	0.0465	0.0006206
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Ag	107	3	He	-0.003	0.0005	40.00	0.0465	0.0006206
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0.009	0	4.00	0.0053	0
Sn	120	3	He	-0.022	0.0161	1380.12	0.0158	0.01648
Sn	120	3	He	-0.058	0.0156	1340.12	0.0158	0.01648
Sn	120	3	He	-0.162	0.0139	1200.09	0.0158	0.01648
Sb	121	3	He	-0.01	0.0001	10.00	0.0149	0.0002698
Sb	121	3	He	0.037	0.0008	70.00	0.0149	0.0002698
Sb	121	3	He	-0.018	0	0.00	0.0149	0.0002698
Ba	137	3	He	0	0.0002	20.00	0.0048	0.0002317
Ba	137	3	He	-0.024	0.0001	10.00	0.0048	0.0002317
Ba	137	3	He	-0.048	0	0.00	0.0048	0.0002317
Tl	205	3	He	0.007	0.0003	120.01	0.0247	0.0001339
Tl	205	3	He	0.003	0.0002	80.00	0.0247	0.0001339
Tl	205	3	He	0.011	0.0004	160.01	0.0247	0.0001339
Pb	208	3	He	0.002	0.0011	230.01	0.0327	0.00107
Pb	208	3	He	0.003	0.0012	260.01	0.0327	0.00107
Pb	208	3	He	0.001	0.0011	200.01	0.0327	0.00107
U	238	3	He	0.002	0.0002	50.00	0.0493	7.55E-05
U	238	3	He	0.002	0.0002	60.00	0.0493	7.55E-05
U	238	3	He	0.002	0.0002	50.00	0.0493	7.55E-05
Sc	45	1	No Gas			2545051.06		
Sc	45	1	No Gas			2474193.09		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2556514.96		
Ge	72	1	No Gas			1229712.01		
Ge	72	1	No Gas			1216248.19		
Ge	72	1	No Gas			1247606.47		
Sc	45	2	H2			186674.59		
Sc	45	2	H2			188699.00		
Sc	45	2	H2			187282.22		
Ge	72	2	H2			164781.89		
Ge	72	2	H2			164012.63		
Ge	72	2	H2			168250.41		
In	115	2	H2			394764.25		
In	115	2	H2			394991.99		
In	115	2	H2			395907.77		
Sc	45	3	He			48291.41		
Sc	45	3	He			48180.24		
Sc	45	3	He			47999.84		
Ge	72	3	He			84027.77		
Ge	72	3	He			81512.59		
Ge	72	3	He			83321.76		
In	115	3	He			85553.15		
In	115	3	He			86147.13		
In	115	3	He			86216.59		
Tb	159	3	He			398868.04		
Tb	159	3	He			397800.70		
Tb	159	3	He			398119.60		
Bi	209	3	He			302726.13		
Bi	209	3	He			304489.29		
Bi	209	3	He			309257.09		

Quantitation Report

Data File Name	104SMPL.d
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Sample Type	Sample
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

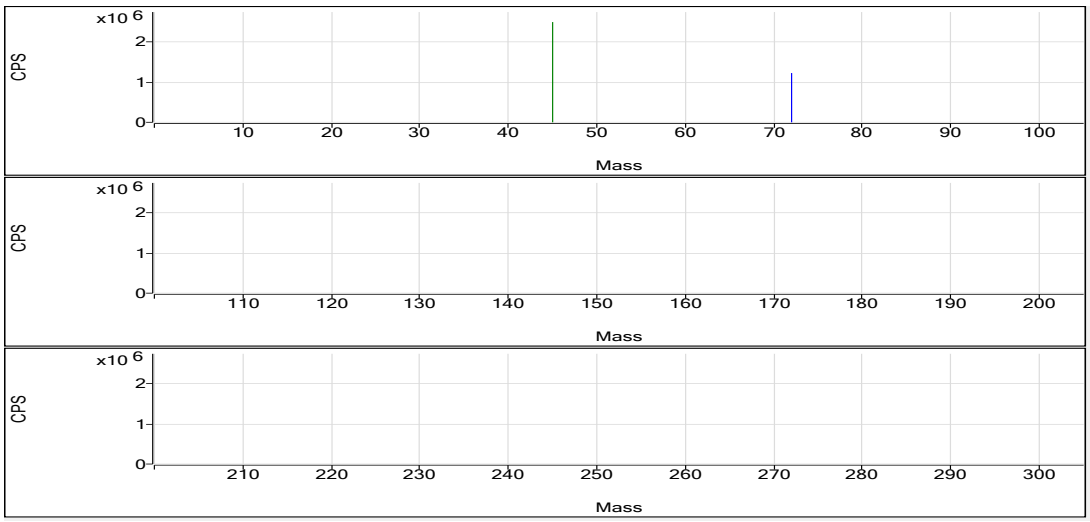
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.003	ppb	112.9	18.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.003	ppb	N/A	1.78	0.0000	Pulse	1.5000	3
Na	23	45	He	-1.770	ppb	N/A	16072.59	0.3388	Pulse	0.1000	3
Mg	24	45	He	0.360	ppb	112.1	196.68	0.0041	Pulse	0.1000	3
Al	27	45	He	0.461	ppb	161.8	43.33	0.0009	Pulse	0.1000	3
K	39	45	He	-5.871	ppb	N/A	18422.16	0.3882	Pulse	0.1000	3
Ca	44	45	He	9.711	ppb	145.7	160.01	0.0034	Pulse	0.1000	3
Ti	47	45	He	0.134	ppb	341.6	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	0.133	ppb	34.0	1318.07	0.0278	Pulse	0.5000	3
Cr	52	45	He	0.040	ppb	223.1	1953.53	0.0412	Pulse	0.1000	3
Mn	55	45	He	-0.013	ppb	N/A	116.67	0.0025	Pulse	0.1000	3
Fe	57	45	He	0.683	ppb	26.5	86.67	0.0018	Pulse	0.1000	3
Co	59	45	He	-0.011	ppb	N/A	73.33	0.0016	Pulse	0.1000	3
Ni	60	72	He	0.004	ppb	2017.2	240.01	0.0029	Pulse	0.1000	3
Cu	63	72	He	0.005	ppb	704.6	410.02	0.0049	Pulse	0.1000	3
Zn	66	72	He	4.321	ppb	16.6	1370.11	0.0164	Pulse	0.1000	3
As	75	72	He	-0.035	ppb	N/A	61.33	0.0007	Pulse	0.5000	3
Sr	88	115	He	0.009	ppb	422.1	90.00	0.0010	Pulse	0.1000	3
Mo	98	115	He	0.032	ppb	25.8	83.33	0.0010	Pulse	0.1000	3
Ag	107	115	He	-0.008	ppb	N/A	23.33	0.0003	Pulse	0.1000	3
Cd	111	115	He	0.000	ppb	N/A	0.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.017	ppb	N/A	1393.46	0.0162	Pulse	0.1000	3
Sb	121	115	He	-0.002	ppb	N/A	20.00	0.0002	Pulse	0.1000	3
Ba	137	115	He	-0.024	ppb	N/A	10.00	0.0001	Pulse	0.1000	3
Tl	205	159	He	-0.001	ppb	N/A	46.67	0.0001	Pulse	0.1000	3
Pb	208	159	He	0.008	ppb	54.9	526.69	0.0013	Pulse	0.1000	3
U	238	209	He	0.000	ppb	7.1	30.00	0.0001	Pulse	0.1000	3

ISTD Table:

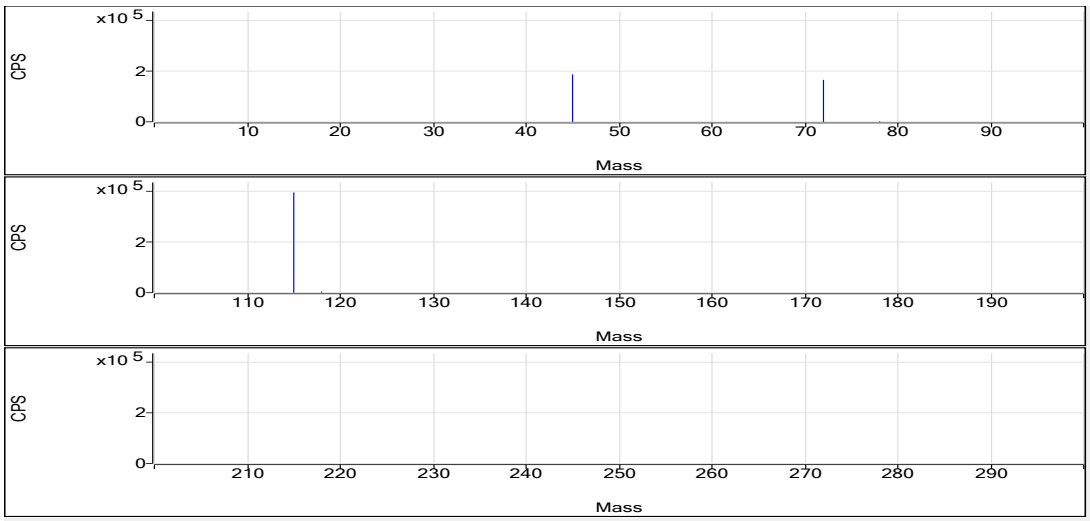
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2490679.96	1.1	103.8	Analog	0.1000	3
No Gas	Ge	72	1223794.72	1.0	106.1	Pulse	0.1000	3
H2	Sc	45	186505.00	0.7	99.7	Pulse	0.1000	3
H2	Ge	72	165005.74	0.6	100.8	Pulse	0.1000	3
H2	In	115	394362.43	0.2	101.4	Pulse	0.1000	3
He	Sc	45	47451.57	1.0	101.7	Pulse	0.1000	3
He	Ge	72	83648.21	1.6	103.0	Pulse	0.1000	3
He	In	115	85957.65	1.0	99.7	Pulse	0.1000	3
He	Tb	159	399356.75	0.4	100.2	Pulse	0.1000	3
He	Bi	209	308379.50	1.6	99.7	Pulse	0.1000	3

No Gas

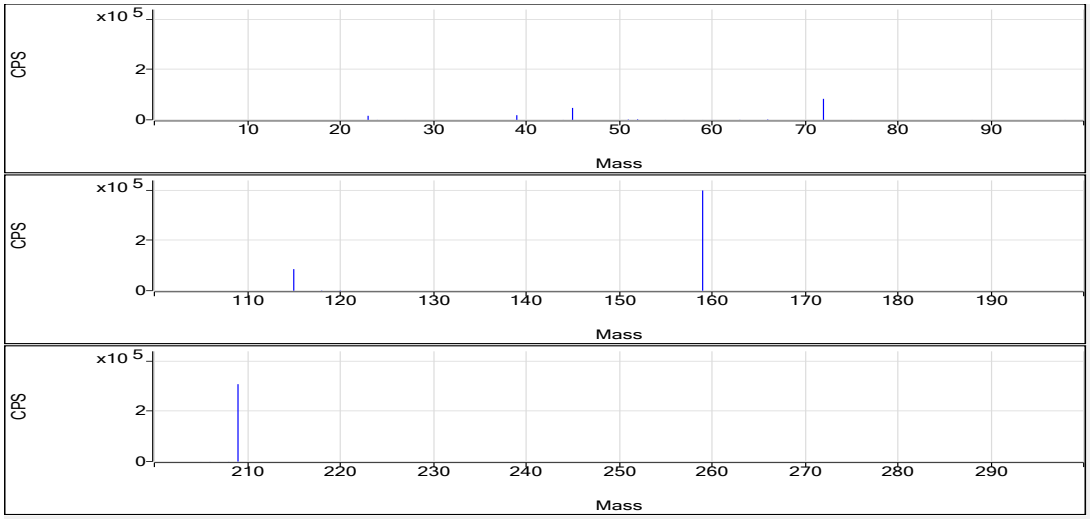


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.002	0	16.00	0.0008	4.685E-06
Be	9	1	No Gas	0	0	12.00	0.0008	4.685E-06
Be	9	1	No Gas	0.007	0	26.00	0.0008	4.685E-06
Se	78	2	H2	0	0	2.00	0.0004	1.219E-05
Se	78	2	H2	-0.019	0	0.67	0.0004	1.219E-05
Se	78	2	H2	0.009	0	2.67	0.0004	1.219E-05
Na	23	3	He	-6.27	0.3227	15458.52	0.0036	0.3452
Na	23	3	He	2.757	0.355	16659.90	0.0036	0.3452
Na	23	3	He	-1.797	0.3387	16099.35	0.0036	0.3452
Mg	24	3	He	0.727	0.0048	230.01	0.0018	0.003497
Mg	24	3	He	0.427	0.0043	200.01	0.0018	0.003497
Mg	24	3	He	-0.073	0.0034	160.01	0.0018	0.003497
Al	27	3	He	1.042	0.0013	60.00	0.0006	0.0006432
Al	27	3	He	0.722	0.0011	50.00	0.0006	0.0006432
Al	27	3	He	-0.38	0.0004	20.00	0.0006	0.0006432
K	39	3	He	-8.09	0.3856	18472.23	0.0012	0.3951
K	39	3	He	-7.27	0.3866	18141.95	0.0012	0.3951
K	39	3	He	-2.253	0.3924	18652.29	0.0012	0.3951
Ca	44	3	He	21.623	0.0042	200.01	0.0001	0.002715
Ca	44	3	He	13.44	0.0036	170.01	0.0001	0.002715
Ca	44	3	He	-5.93	0.0023	110.00	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.663	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	0.146	0.0281	1344.07	0.0219	0.02486
V	51	3	He	0.171	0.0286	1342.07	0.0219	0.02486
V	51	3	He	0.083	0.0267	1268.07	0.0219	0.02486
Cr	52	3	He	0.004	0.0401	1920.19	0.0299	0.03997
Cr	52	3	He	-0.025	0.0392	1840.17	0.0299	0.03997
Cr	52	3	He	0.141	0.0442	2100.23	0.0299	0.03997
Mn	55	3	He	-0.092	0.0015	70.00	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.143	0.0045	210.01	0.0128	0.002639
Mn	55	3	He	-0.091	0.0015	70.00	0.0128	0.002639
Fe	57	3	He	0.775	0.0019	90.00	0.0006	0.001429
Fe	57	3	He	0.475	0.0017	80.00	0.0006	0.001429
Fe	57	3	He	0.8	0.0019	90.00	0.0006	0.001429
Co	59	3	He	-0.016	0.0013	60.00	0.0563	0.002149
Co	59	3	He	0.011	0.0028	130.00	0.0563	0.002149
Co	59	3	He	-0.027	0.0006	30.00	0.0563	0.002149
Ni	60	3	He	0.101	0.0037	310.02	0.0086	0.002834
Ni	60	3	He	-0.07	0.0022	190.01	0.0086	0.002834
Ni	60	3	He	-0.018	0.0027	220.01	0.0086	0.002834
Cu	63	3	He	0.047	0.006	500.03	0.0257	0.004757
Cu	63	3	He	-0.002	0.0047	400.02	0.0257	0.004757
Cu	63	3	He	-0.029	0.004	330.02	0.0257	0.004757
Zn	66	3	He	4.632	0.0173	1450.12	0.0029	0.003818
Zn	66	3	He	3.501	0.014	1190.09	0.0029	0.003818
Zn	66	3	He	4.83	0.0179	1470.13	0.0029	0.003818
As	75	3	He	-0.091	0.0006	52.00	0.002	0.0008061
As	75	3	He	-0.026	0.0008	64.00	0.002	0.0008061
As	75	3	He	0.01	0.0008	68.00	0.002	0.0008061
Sr	88	3	He	-0.031	0.0007	60.00	0.009	0.0009645
Sr	88	3	He	0.049	0.0014	120.01	0.009	0.0009645
Sr	88	3	He	0.01	0.0011	90.00	0.009	0.0009645
Mo	98	3	He	0.03	0.0009	80.00	0.0219	0.0002706
Mo	98	3	He	0.025	0.0008	70.00	0.0219	0.0002706
Mo	98	3	He	0.041	0.0012	100.00	0.0219	0.0002706
Ag	107	3	He	-0.008	0.0002	20.00	0.0465	0.0006206
Ag	107	3	He	-0.003	0.0005	40.00	0.0465	0.0006206
Ag	107	3	He	-0.011	0.0001	10.00	0.0465	0.0006206
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Sn	120	3	He	-0.001	0.0165	1430.12	0.0158	0.01648
Sn	120	3	He	-0.035	0.0159	1360.12	0.0158	0.01648
Sn	120	3	He	-0.014	0.0163	1390.13	0.0158	0.01648
Sb	121	3	He	-0.003	0.0002	20.00	0.0149	0.0002698
Sb	121	3	He	0.005	0.0004	30.00	0.0149	0.0002698
Sb	121	3	He	-0.01	0.0001	10.00	0.0149	0.0002698
Ba	137	3	He	-0.048	0	0.00	0.0048	0.0002317
Ba	137	3	He	0.001	0.0002	20.00	0.0048	0.0002317
Ba	137	3	He	-0.024	0.0001	10.00	0.0048	0.0002317
Tl	205	3	He	-0.001	0.0001	40.00	0.0247	0.0001339
Tl	205	3	He	-0.001	0.0001	40.00	0.0247	0.0001339
Tl	205	3	He	0.001	0.0002	60.00	0.0247	0.0001339
Pb	208	3	He	0.005	0.0012	200.01	0.0327	0.00107
Pb	208	3	He	0.005	0.0012	200.01	0.0327	0.00107
Pb	208	3	He	0.012	0.0015	280.01	0.0327	0.00107
U	238	3	He	0	0.0001	30.00	0.0493	7.55E-05
U	238	3	He	0	0.0001	30.00	0.0493	7.55E-05
U	238	3	He	0	0.0001	30.00	0.0493	7.55E-05
Sc	45	1	No Gas			2458346.06		
Sc	45	1	No Gas			2508545.74		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2505148.09		
Ge	72	1	No Gas			1209961.00		
Ge	72	1	No Gas			1231676.23		
Ge	72	1	No Gas			1229746.93		
Sc	45	2	H2			186603.79		
Sc	45	2	H2			185102.85		
Sc	45	2	H2			187808.36		
Ge	72	2	H2			164446.77		
Ge	72	2	H2			164445.15		
Ge	72	2	H2			166125.29		
In	115	2	H2			394156.21		
In	115	2	H2			393806.95		
In	115	2	H2			395124.13		
Sc	45	3	He			47899.33		
Sc	45	3	He			46926.73		
Sc	45	3	He			47528.66		
Ge	72	3	He			83795.20		
Ge	72	3	He			84932.75		
Ge	72	3	He			82216.68		
In	115	3	He			86930.95		
In	115	3	He			85452.20		
In	115	3	He			85512.36		
Tb	159	3	He			400662.03		
Tb	159	3	He			397651.44		
Tb	159	3	He			399756.79		
Bi	209	3	He			308586.60		
Bi	209	3	He			313194.51		
Bi	209	3	He			303357.40		

Quantitation Report

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Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
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Sample Type	ICSA
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

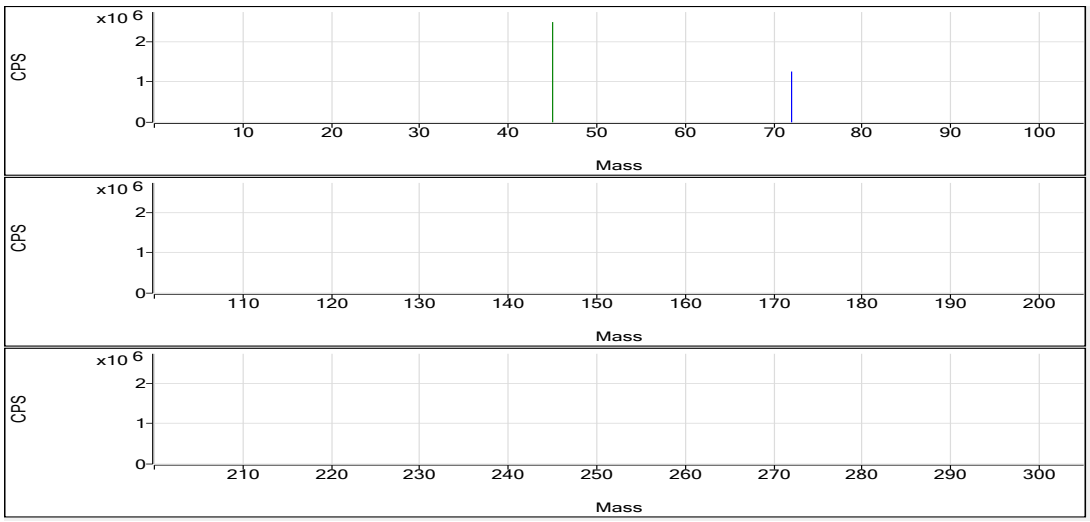
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.006	ppb	121.5	22.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.050	ppb	93.3	5.55	0.0000	Pulse	1.5000	3
Na	23	45	He	238111.041	ppb	1.7	39775131.91	852.0800	Analog	0.1000	3
Mg	24	45	He	98258.588	ppb	0.8	8230949.67	176.3110	Analog	0.1000	3
Al	27	45	He	100417.026	ppb	1.4	2742409.44	58.7481	Analog	0.1000	3
K	39	45	He	100031.169	ppb	1.8	5455162.00	116.8640	Analog	0.1000	3
Ca	44	45	He	293623.344	ppb	1.3	926039.39	19.8375	Pulse	0.1000	3
Ti	47	45	He	1993.607	ppb	0.4	49980.06	1.0705	Pulse	0.1000	3
V	51	45	He	-0.203	ppb	N/A	953.37	0.0204	Pulse	0.5000	3
Cr	52	45	He	3.098	ppb	6.2	6194.90	0.1327	Pulse	0.1000	3
Mn	55	45	He	0.768	ppb	4.9	583.36	0.0125	Pulse	0.1000	3
Fe	57	45	He	249987.594	ppb	1.9	6779765.94	145.2419	Analog	0.1000	3
Co	59	45	He	0.228	ppb	6.9	700.04	0.0150	Pulse	0.1000	3
Ni	60	72	He	0.650	ppb	5.2	736.71	0.0084	Pulse	0.1000	3
Cu	63	72	He	0.067	ppb	71.6	566.69	0.0065	Pulse	0.1000	3
Zn	66	72	He	6.457	ppb	13.4	1980.20	0.0226	Pulse	0.1000	3
As	75	72	He	0.168	ppb	12.0	100.67	0.0012	Pulse	0.5000	3
Sr	88	115	He	1.812	ppb	5.6	1413.45	0.0172	Pulse	0.1000	3
Mo	98	115	He	2194.268	ppb	0.9	3947378.48	48.1127	Analog	0.1000	3
Ag	107	115	He	0.006	ppb	130.3	73.33	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.316	ppb	13.2	138.67	0.0017	Pulse	0.5000	3
Sn	120	115	He	0.131	ppb	82.9	1520.13	0.0185	Pulse	0.1000	3
Sb	121	115	He	0.108	ppb	5.9	153.34	0.0019	Pulse	0.1000	3
Ba	137	115	He	0.503	ppb	35.0	216.68	0.0026	Pulse	0.1000	3
Tl	205	159	He	0.011	ppb	39.9	160.01	0.0004	Pulse	0.1000	3
Pb	208	159	He	0.085	ppb	0.7	1506.76	0.0039	Pulse	0.1000	3
U	238	209	He	0.061	ppb	5.7	890.06	0.0031	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2484291.06	1.2	103.6	Analog	0.1000	3
No Gas	Ge	72	1258293.81	1.1	109.1	Pulse	0.1000	3
H2	Sc	45	186117.40	1.7	99.5	Pulse	0.1000	3
H2	Ge	72	168244.44	0.4	102.8	Pulse	0.1000	3
H2	In	115	372636.87	0.9	95.8	Pulse	0.1000	3
He	Sc	45	46685.67	1.1	100.1	Pulse	0.1000	3
He	Ge	72	87533.94	0.6	107.8	Pulse	0.1000	3
He	In	115	82050.63	1.3	95.2	Pulse	0.1000	3
He	Tb	159	390831.19	0.5	98.0	Pulse	0.1000	3
He	Bi	209	289732.30	0.8	93.7	Pulse	0.1000	3

No Gas



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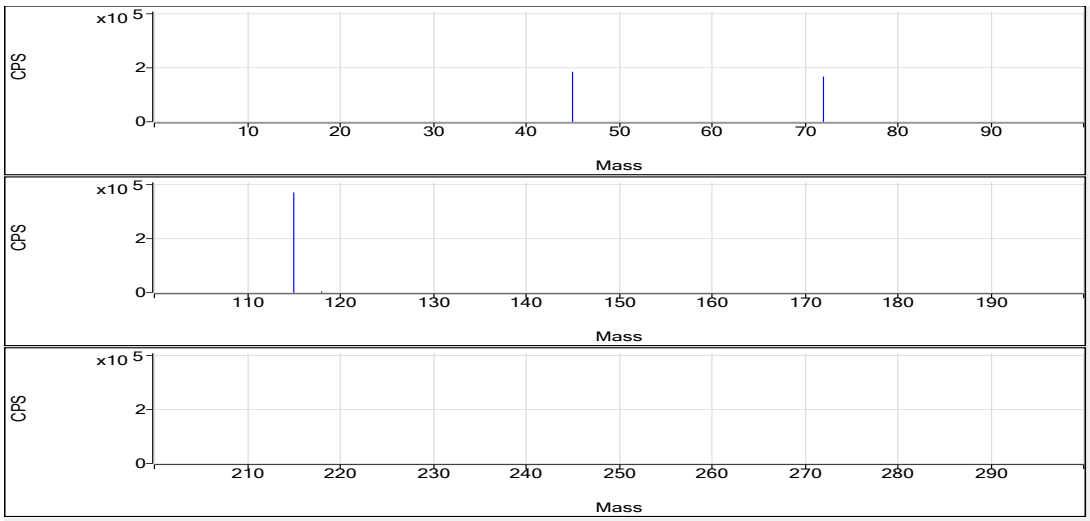
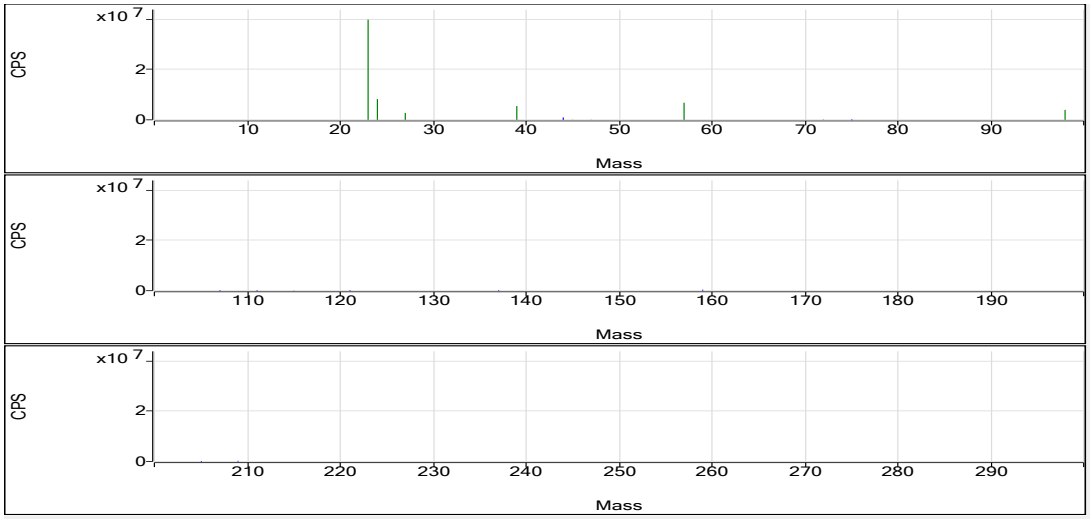


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.014	0	38.00	0.0008	4.685E-06
Be	9	1	No Gas	0	0	12.00	0.0008	4.685E-06
Be	9	1	No Gas	0.003	0	18.00	0.0008	4.685E-06
Se	78	2	H2	0.103	0.0001	9.33	0.0004	1.219E-05
Se	78	2	H2	0.028	0	4.00	0.0004	1.219E-05
Se	78	2	H2	0.018	0	3.33	0.0004	1.219E-05
Na	23	3	He	242758.479	868.7041	40041891.90	0.0036	0.3452
Na	23	3	He	236335.755	845.7297	39814469.41	0.0036	0.3452
Na	23	3	He	235238.889	841.8062	39469034.41	0.0036	0.3452
Mg	24	3	He	98865.036	177.3992	8177006.75	0.0018	0.003497
Mg	24	3	He	98592.58	176.9103	8328418.00	0.0018	0.003497
Mg	24	3	He	97318.15	174.6236	8187424.25	0.0018	0.003497
Al	27	3	He	101987.471	59.6669	2750273.71	0.0006	0.0006432
Al	27	3	He	99280.306	58.0831	2734380.58	0.0006	0.0006432
Al	27	3	He	99983.303	58.4944	2742574.02	0.0006	0.0006432
K	39	3	He	102059.269	119.2254	5495553.67	0.0012	0.3951
K	39	3	He	98825.021	115.4597	5435501.79	0.0012	0.3951
K	39	3	He	99209.216	115.907	5434430.54	0.0012	0.3951
Ca	44	3	He	298106.784	20.1404	928347.80	0.0001	0.002715
Ca	44	3	He	291514.185	19.6951	927185.22	0.0001	0.002715
Ca	44	3	He	291249.064	19.6771	922585.14	0.0001	0.002715
Ti	47	3	He	1985.073	1.066	49133.86	0.0005	7.003E-05
Ti	47	3	He	1998.783	1.0733	50528.51	0.0005	7.003E-05
Ti	47	3	He	1996.965	1.0723	50277.81	0.0005	7.003E-05
V	51	3	He	-0.167	0.0212	978.04	0.0219	0.02486
V	51	3	He	-0.183	0.0209	982.04	0.0219	0.02486
V	51	3	He	-0.259	0.0192	900.03	0.0219	0.02486
Cr	52	3	He	3.303	0.1389	6401.60	0.0299	0.03997
Cr	52	3	He	2.923	0.1275	6001.51	0.0299	0.03997
Cr	52	3	He	3.068	0.1318	6181.58	0.0299	0.03997
Mn	55	3	He	0.792	0.0128	590.03	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.788	0.0127	600.03	0.0128	0.002639
Mn	55	3	He	0.725	0.0119	560.03	0.0128	0.002639
Fe	57	3	He	255336.721	148.3497	6838005.52	0.0006	0.001429
Fe	57	3	He	246467.333	143.1967	6741279.27	0.0006	0.001429
Fe	57	3	He	248158.728	144.1794	6760013.02	0.0006	0.001429
Co	59	3	He	0.243	0.0158	730.05	0.0563	0.002149
Co	59	3	He	0.23	0.0151	710.04	0.0563	0.002149
Co	59	3	He	0.212	0.0141	660.03	0.0563	0.002149
Ni	60	3	He	0.677	0.0086	760.05	0.0086	0.002834
Ni	60	3	He	0.612	0.0081	710.04	0.0086	0.002834
Ni	60	3	He	0.662	0.0085	740.04	0.0086	0.002834
Cu	63	3	He	0.014	0.0051	450.02	0.0257	0.004757
Cu	63	3	He	0.108	0.0075	660.03	0.0257	0.004757
Cu	63	3	He	0.079	0.0068	590.03	0.0257	0.004757
Zn	66	3	He	7.402	0.0254	2230.24	0.0029	0.003818
Zn	66	3	He	5.694	0.0204	1790.17	0.0029	0.003818
Zn	66	3	He	6.276	0.0221	1920.20	0.0029	0.003818
As	75	3	He	0.162	0.0011	100.00	0.002	0.0008061
As	75	3	He	0.152	0.0011	98.00	0.002	0.0008061
As	75	3	He	0.191	0.0012	104.00	0.002	0.0008061
Sr	88	3	He	1.698	0.0162	1310.10	0.009	0.0009645
Sr	88	3	He	1.893	0.0179	1490.13	0.009	0.0009645
Sr	88	3	He	1.846	0.0175	1440.12	0.009	0.0009645
Mo	98	3	He	2211.939	48.5002	3923981.82	0.0219	0.0002706
Mo	98	3	He	2172.431	47.6339	3955520.25	0.0219	0.0002706
Mo	98	3	He	2198.435	48.2041	3962633.38	0.0219	0.0002706
Ag	107	3	He	0.011	0.0011	90.00	0.0465	0.0006206
Ag	107	3	He	-0.003	0.0005	40.00	0.0465	0.0006206
Ag	107	3	He	0.01	0.0011	90.00	0.0465	0.0006206
Cd	111	3	He	0.361	0.0019	156.00	0.0053	0
Cd	111	3	He	0.311	0.0017	138.00	0.0053	0
Cd	111	3	He	0.278	0.0015	122.00	0.0053	0
Sn	120	3	He	0.248	0.0204	1650.15	0.0158	0.01648
Sn	120	3	He	0.108	0.0182	1510.13	0.0158	0.01648
Sn	120	3	He	0.035	0.017	1400.11	0.0158	0.01648
Sb	121	3	He	0.115	0.002	160.01	0.0149	0.0002698
Sb	121	3	He	0.103	0.0018	150.01	0.0149	0.0002698
Sb	121	3	He	0.105	0.0018	150.01	0.0149	0.0002698
Ba	137	3	He	0.699	0.0036	290.01	0.0048	0.0002317
Ba	137	3	He	0.454	0.0024	200.01	0.0048	0.0002317
Ba	137	3	He	0.357	0.0019	160.01	0.0048	0.0002317
Tl	205	3	He	0.009	0.0004	140.01	0.0247	0.0001339
Tl	205	3	He	0.016	0.0005	210.01	0.0247	0.0001339
Tl	205	3	He	0.008	0.0003	130.01	0.0247	0.0001339
Pb	208	3	He	0.084	0.0038	810.05	0.0327	0.00107
Pb	208	3	He	0.086	0.0039	810.06	0.0327	0.00107
Pb	208	3	He	0.085	0.0039	810.05	0.0327	0.00107
U	238	3	He	0.06	0.003	880.07	0.0493	7.55E-05
U	238	3	He	0.065	0.0033	940.06	0.0493	7.55E-05
U	238	3	He	0.058	0.0029	850.06	0.0493	7.55E-05
Sc	45	1	No Gas			2517571.68		
Sc	45	1	No Gas			2461601.06		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2473700.43		
Ge	72	1	No Gas			1268345.76		
Ge	72	1	No Gas			1263528.57		
Ge	72	1	No Gas			1243007.09		
Sc	45	2	H2			183585.09		
Sc	45	2	H2			189540.84		
Sc	45	2	H2			185226.27		
Ge	72	2	H2			169019.49		
Ge	72	2	H2			168178.47		
Ge	72	2	H2			167535.35		
In	115	2	H2			368590.85		
In	115	2	H2			375063.39		
In	115	2	H2			374256.36		
Sc	45	3	He			46093.82		
Sc	45	3	He			47077.06		
Sc	45	3	He			46886.13		
Ge	72	3	He			87909.41		
Ge	72	3	He			87768.65		
Ge	72	3	He			86923.75		
In	115	3	He			80915.13		
In	115	3	He			83048.11		
In	115	3	He			82213.13		
Tb	159	3	He			391320.35		
Tb	159	3	He			392396.52		
Tb	159	3	He			388776.71		
Bi	209	3	He			292470.27		
Bi	209	3	He			287724.72		
Bi	209	3	He			289001.91		

Quantitation Report

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Sample Type	ICSAB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

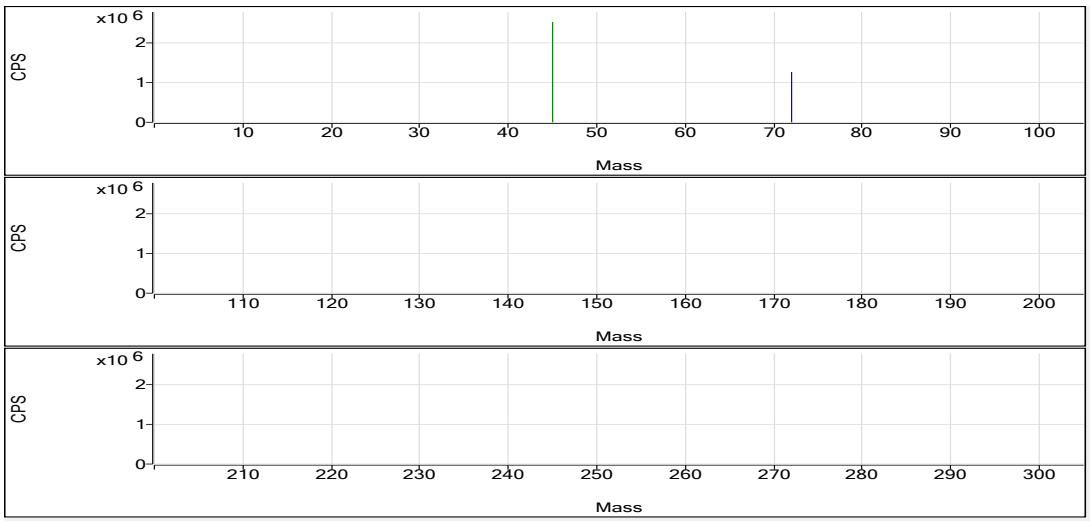
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.004	ppb	39.5	20.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	100.000	ppb	2.5	6790.95	0.0417	Pulse	1.5000	3
Na	23	45	He	235833.483	ppb	0.5	39533396.08	843.9331	Analog	0.1000	3
Mg	24	45	He	96878.661	ppb	2.3	8141995.51	173.8350	Analog	0.1000	3
Al	27	45	He	98828.377	ppb	1.5	2708237.87	57.8187	Analog	0.1000	3
K	39	45	He	98595.781	ppb	1.2	5395940.34	115.1928	Analog	0.1000	3
Ca	44	45	He	289221.567	ppb	1.0	915310.58	19.5402	Pulse	0.1000	3
Ti	47	45	He	1954.174	ppb	0.8	49157.11	1.0494	Pulse	0.1000	3
V	51	45	He	204.873	ppb	1.1	210939.83	4.5032	Pulse	0.5000	3
Cr	52	45	He	196.289	ppb	2.2	277155.94	5.9170	Pulse	0.1000	3
Mn	55	45	He	197.987	ppb	2.5	119135.08	2.5436	Pulse	0.1000	3
Fe	57	45	He	245923.008	ppb	1.6	6692637.81	142.8804	Analog	0.1000	3
Co	59	45	He	191.110	ppb	0.7	503959.72	10.7583	Pulse	0.1000	3
Ni	60	72	He	184.718	ppb	0.9	139957.94	1.5883	Pulse	0.1000	3
Cu	63	72	He	177.198	ppb	0.8	401253.25	4.5536	Pulse	0.1000	3
Zn	66	72	He	99.349	ppb	1.8	25824.13	0.2931	Pulse	0.1000	3
As	75	72	He	93.320	ppb	0.5	16919.39	0.1920	Pulse	0.5000	3
Sr	88	115	He	2.080	ppb	6.0	1616.81	0.0196	Pulse	0.1000	3
Mo	98	115	He	2147.409	ppb	2.1	3878061.92	47.0853	Analog	0.1000	3
Ag	107	115	He	50.025	ppb	1.8	191588.58	2.3261	Pulse	0.1000	3
Cd	111	115	He	102.188	ppb	1.1	45004.78	0.5464	Pulse	0.5000	3
Sn	120	115	He	0.069	ppb	128.8	1446.79	0.0176	Pulse	0.1000	3
Sb	121	115	He	0.118	ppb	23.4	166.68	0.0020	Pulse	0.1000	3
Ba	137	115	He	0.559	ppb	14.4	240.01	0.0029	Pulse	0.1000	3
Tl	205	159	He	0.020	ppb	17.0	243.34	0.0006	Pulse	0.1000	3
Pb	208	159	He	0.071	ppb	7.8	1323.41	0.0034	Pulse	0.1000	3
U	238	209	He	0.050	ppb	8.1	740.05	0.0026	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2517238.82	1.1	104.9	Analog	0.1000	3
No Gas	Ge	72	1263918.37	0.4	109.6	Pulse	0.1000	3
H2	Sc	45	181393.27	1.0	97.0	Pulse	0.1000	3
H2	Ge	72	162815.74	1.4	99.5	Pulse	0.1000	3
H2	In	115	368978.77	0.2	94.8	Pulse	0.1000	3
He	Sc	45	46846.23	1.3	100.4	Pulse	0.1000	3
He	Ge	72	88121.51	1.0	108.5	Pulse	0.1000	3
He	In	115	82372.98	1.1	95.6	Pulse	0.1000	3
He	Tb	159	390691.40	0.2	98.0	Pulse	0.1000	3
He	Bi	209	289724.72	0.6	93.7	Pulse	0.1000	3

No Gas



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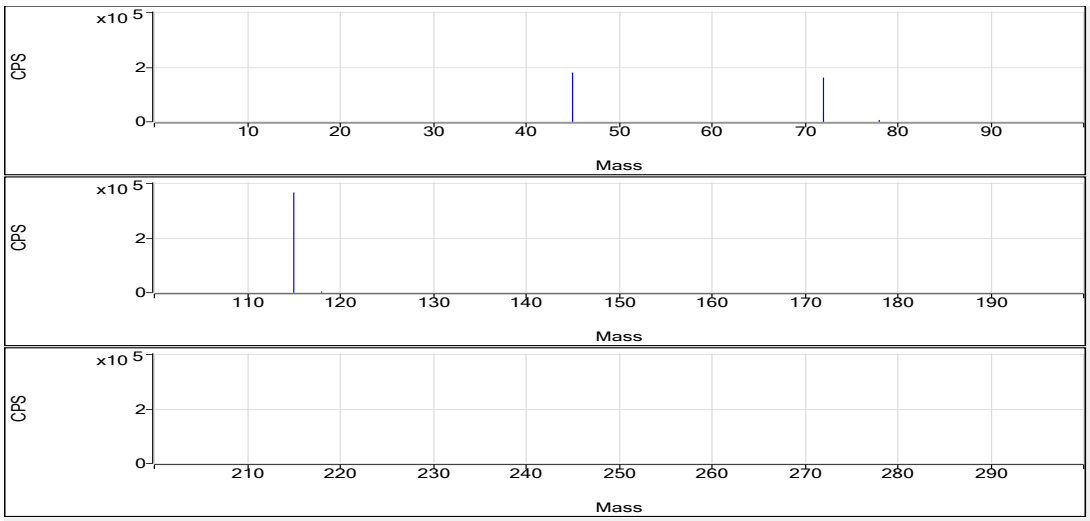
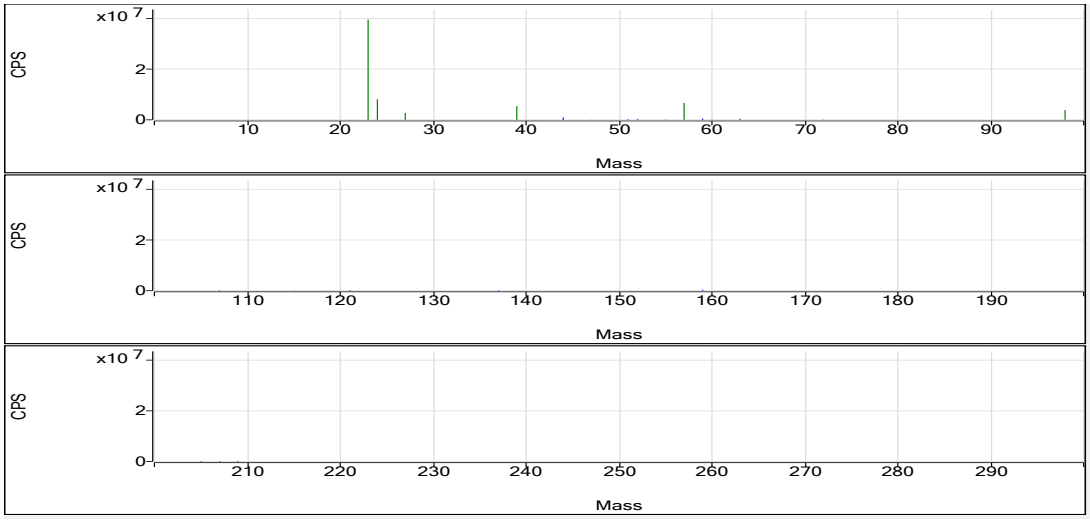


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.006	0	24.00	0.0008	4.685E-06
Be	9	1	No Gas	0.003	0	18.00	0.0008	4.685E-06
Be	9	1	No Gas	0.003	0	18.00	0.0008	4.685E-06
Se	78	2	H2	102.791	0.0429	6878.99	0.0004	1.219E-05
Se	78	2	H2	99.375	0.0415	6766.94	0.0004	1.219E-05
Se	78	2	H2	97.835	0.0408	6726.92	0.0004	1.219E-05
Na	23	3	He	234499.102	839.1599	39825036.91	0.0036	0.3452
Na	23	3	He	236840.212	847.5342	39210254.42	0.0036	0.3452
Na	23	3	He	236161.134	845.1051	39564896.91	0.0036	0.3452
Mg	24	3	He	94337.107	169.2746	8033473.01	0.0018	0.003497
Mg	24	3	He	98521.744	176.7832	8178684.88	0.0018	0.003497
Mg	24	3	He	97777.133	175.4472	8213828.63	0.0018	0.003497
Al	27	3	He	97435.871	57.004	2705309.33	0.0006	0.0006432
Al	27	3	He	100453.144	58.7692	2718894.96	0.0006	0.0006432
Al	27	3	He	98596.117	57.6828	2700509.33	0.0006	0.0006432
K	39	3	He	97271.201	113.6505	5393651.17	0.0012	0.3951
K	39	3	He	98949.61	115.6047	5348328.05	0.0012	0.3951
K	39	3	He	99566.532	116.323	5445841.79	0.0012	0.3951
Ca	44	3	He	286917.226	19.3845	919954.83	0.0001	0.002715
Ca	44	3	He	292432.843	19.7571	914041.39	0.0001	0.002715
Ca	44	3	He	288314.632	19.4789	911935.53	0.0001	0.002715
Ti	47	3	He	1939.791	1.0416	49434.34	0.0005	7.003E-05
Ti	47	3	He	1953.132	1.0488	48521.71	0.0005	7.003E-05
Ti	47	3	He	1969.6	1.0576	49515.28	0.0005	7.003E-05
V	51	3	He	202.522	4.4518	211275.41	0.0219	0.02486
V	51	3	He	206.977	4.5492	210464.20	0.0219	0.02486
V	51	3	He	205.122	4.5087	211079.88	0.0219	0.02486
Cr	52	3	He	195.146	5.8828	279186.32	0.0299	0.03997
Cr	52	3	He	201.124	6.0618	280441.05	0.0299	0.03997
Cr	52	3	He	192.598	5.8065	271840.45	0.0299	0.03997
Mn	55	3	He	195.004	2.5053	118896.96	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	203.726	2.6172	121083.71	0.0128	0.002639
Mn	55	3	He	195.229	2.5082	117424.56	0.0128	0.002639
Fe	57	3	He	243720.12	141.6006	6720111.77	0.0006	0.001429
Fe	57	3	He	250577.161	145.5845	6735308.02	0.0006	0.001429
Fe	57	3	He	243471.742	141.4563	6622493.65	0.0006	0.001429
Co	59	3	He	190.348	10.7154	508531.63	0.0563	0.002149
Co	59	3	He	192.55	10.8393	501469.13	0.0563	0.002149
Co	59	3	He	190.432	10.7201	501878.39	0.0563	0.002149
Ni	60	3	He	184.236	1.5842	141145.18	0.0086	0.002834
Ni	60	3	He	183.308	1.5762	138642.20	0.0086	0.002834
Ni	60	3	He	186.611	1.6045	140086.45	0.0086	0.002834
Cu	63	3	He	175.648	4.5138	402171.99	0.0257	0.004757
Cu	63	3	He	178.019	4.5747	402391.99	0.0257	0.004757
Cu	63	3	He	177.928	4.5724	399195.78	0.0257	0.004757
Zn	66	3	He	97.308	0.2871	25583.64	0.0029	0.003818
Zn	66	3	He	100.227	0.2956	26004.54	0.0029	0.003818
Zn	66	3	He	100.514	0.2965	25884.20	0.0029	0.003818
As	75	3	He	92.875	0.1911	17026.21	0.002	0.0008061
As	75	3	He	93.237	0.1918	16873.96	0.002	0.0008061
As	75	3	He	93.849	0.1931	16857.99	0.002	0.0008061
Sr	88	3	He	1.953	0.0185	1510.13	0.009	0.0009645
Sr	88	3	He	2.203	0.0207	1700.16	0.009	0.0009645
Sr	88	3	He	2.086	0.0197	1640.14	0.009	0.0009645
Mo	98	3	He	2197.086	48.1745	3936456.19	0.0219	0.0002706
Mo	98	3	He	2136.134	46.8381	3842305.57	0.0219	0.0002706
Mo	98	3	He	2109.008	46.2433	3855424.01	0.0219	0.0002706
Ag	107	3	He	50.226	2.3355	190837.83	0.0465	0.0006206
Ag	107	3	He	50.792	2.3618	193747.50	0.0465	0.0006206
Ag	107	3	He	49.056	2.2811	190180.41	0.0465	0.0006206
Cd	111	3	He	102.29	0.5469	44691.18	0.0053	0
Cd	111	3	He	103.261	0.5521	45293.05	0.0053	0
Cd	111	3	He	101.013	0.5401	45030.11	0.0053	0
Sn	120	3	He	-0.028	0.016	1310.11	0.0158	0.01648
Sn	120	3	He	0.146	0.0188	1540.13	0.0158	0.01648
Sn	120	3	He	0.088	0.0179	1490.13	0.0158	0.01648
Sb	121	3	He	0.122	0.0021	170.01	0.0149	0.0002698
Sb	121	3	He	0.089	0.0016	130.01	0.0149	0.0002698
Sb	121	3	He	0.143	0.0024	200.01	0.0149	0.0002698
Ba	137	3	He	0.564	0.0029	240.01	0.0048	0.0002317
Ba	137	3	He	0.638	0.0033	270.02	0.0048	0.0002317
Ba	137	3	He	0.477	0.0025	210.01	0.0048	0.0002317
Tl	205	3	He	0.018	0.0006	230.01	0.0247	0.0001339
Tl	205	3	He	0.024	0.0007	280.01	0.0247	0.0001339
Tl	205	3	He	0.017	0.0006	220.01	0.0247	0.0001339
Pb	208	3	He	0.074	0.0035	710.05	0.0327	0.00107
Pb	208	3	He	0.064	0.0032	790.05	0.0327	0.00107
Pb	208	3	He	0.074	0.0035	590.03	0.0327	0.00107
U	238	3	He	0.046	0.0023	680.05	0.0493	7.55E-05
U	238	3	He	0.051	0.0026	750.05	0.0493	7.55E-05
U	238	3	He	0.054	0.0027	790.06	0.0493	7.55E-05
Sc	45	1	No Gas			2547969.02		
Sc	45	1	No Gas			2507197.15		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2496550.28		
Ge	72	1	No Gas			1258888.42		
Ge	72	1	No Gas			1268610.68		
Ge	72	1	No Gas			1264256.00		
Sc	45	2	H2			181087.15		
Sc	45	2	H2			183269.61		
Sc	45	2	H2			179823.06		
Ge	72	2	H2			160412.79		
Ge	72	2	H2			163223.13		
Ge	72	2	H2			164811.29		
In	115	2	H2			368558.74		
In	115	2	H2			369840.50		
In	115	2	H2			368537.06		
Sc	45	3	He			47458.22		
Sc	45	3	He			46263.92		
Sc	45	3	He			46816.54		
Ge	72	3	He			89097.95		
Ge	72	3	He			87960.24		
Ge	72	3	He			87306.35		
In	115	3	He			81720.71		
In	115	3	He			82042.73		
In	115	3	He			83380.37		
Tb	159	3	He			391500.81		
Tb	159	3	He			390080.70		
Tb	159	3	He			390492.69		
Bi	209	3	He			291545.66		
Bi	209	3	He			287880.13		
Bi	209	3	He			289748.37		

Quantitation Report

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Sample Type	Sample
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

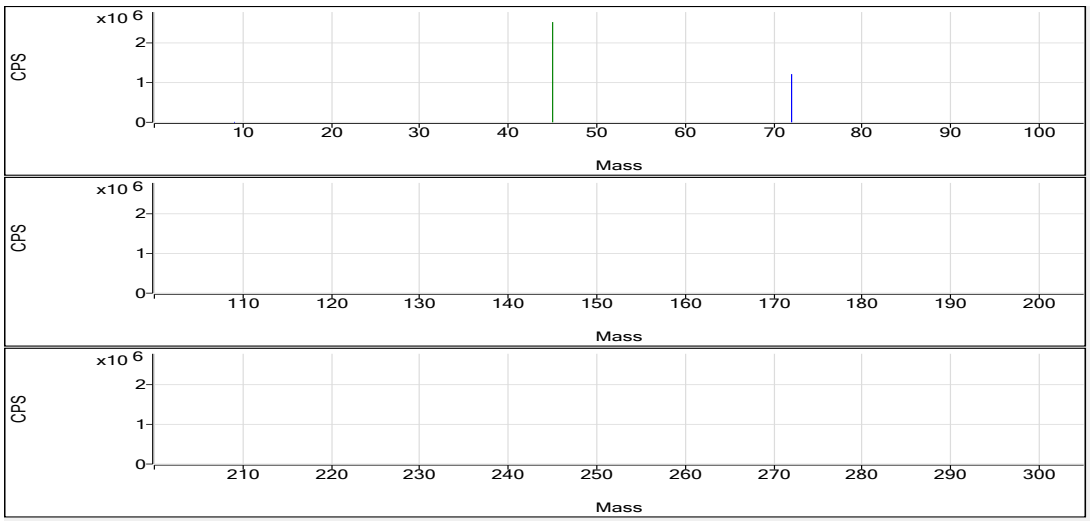
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.002	ppb	142.2	14.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.065	ppb	44.3	6.22	0.0000	Pulse	1.5000	3
Na	23	45	He	67.676	ppb	13.8	27553.13	0.5872	Pulse	0.1000	3
Mg	24	45	He	12.181	ppb	8.6	1190.09	0.0254	Pulse	0.1000	3
Al	27	45	He	11.285	ppb	17.8	340.02	0.0072	Pulse	0.1000	3
K	39	45	He	-3.560	ppb	N/A	18338.67	0.3909	Pulse	0.1000	3
Ca	44	45	He	31.293	ppb	18.9	226.68	0.0048	Pulse	0.1000	3
Ti	47	45	He	0.268	ppb	148.5	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	-0.179	ppb	N/A	982.71	0.0209	Pulse	0.5000	3
Cr	52	45	He	0.019	ppb	499.6	1903.52	0.0406	Pulse	0.1000	3
Mn	55	45	He	-0.012	ppb	N/A	116.67	0.0025	Pulse	0.1000	3
Fe	57	45	He	36.560	ppb	14.0	1063.42	0.0227	Pulse	0.1000	3
Co	59	45	He	0.010	ppb	40.3	126.67	0.0027	Pulse	0.1000	3
Ni	60	72	He	-0.027	ppb	N/A	213.34	0.0026	Pulse	0.1000	3
Cu	63	72	He	0.063	ppb	26.6	523.36	0.0064	Pulse	0.1000	3
Zn	66	72	He	3.916	ppb	6.4	1250.10	0.0152	Pulse	0.1000	3
As	75	72	He	-0.053	ppb	N/A	57.33	0.0007	Pulse	0.5000	3
Sr	88	115	He	-0.031	ppb	N/A	60.00	0.0007	Pulse	0.1000	3
Mo	98	115	He	2.427	ppb	10.4	4644.28	0.0535	Pulse	0.1000	3
Ag	107	115	He	0.004	ppb	112.2	70.00	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.010	ppb	64.0	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.150	ppb	N/A	1226.77	0.0141	Pulse	0.1000	3
Sb	121	115	He	-0.013	ppb	N/A	6.67	0.0001	Pulse	0.1000	3
Ba	137	115	He	-0.024	ppb	N/A	10.00	0.0001	Pulse	0.1000	3
Tl	205	159	He	0.000	ppb	2540.9	53.33	0.0001	Pulse	0.1000	3
Pb	208	159	He	0.009	ppb	23.2	543.36	0.0014	Pulse	0.1000	3
U	238	209	He	0.001	ppb	40.7	36.67	0.0001	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2512254.65	0.5	104.7	Analog	0.1000	3
No Gas	Ge	72	1207818.60	0.8	104.7	Pulse	0.1000	3
H2	Sc	45	178965.86	1.0	95.7	Pulse	0.1000	3
H2	Ge	72	157600.46	0.8	96.3	Pulse	0.1000	3
H2	In	115	388931.30	0.5	100.0	Pulse	0.1000	3
He	Sc	45	46919.54	0.9	100.6	Pulse	0.1000	3
He	Ge	72	82152.71	0.4	101.2	Pulse	0.1000	3
He	In	115	86897.39	1.6	100.8	Pulse	0.1000	3
He	Tb	159	395396.32	0.8	99.2	Pulse	0.1000	3
He	Bi	209	303094.42	0.5	98.0	Pulse	0.1000	3

No Gas



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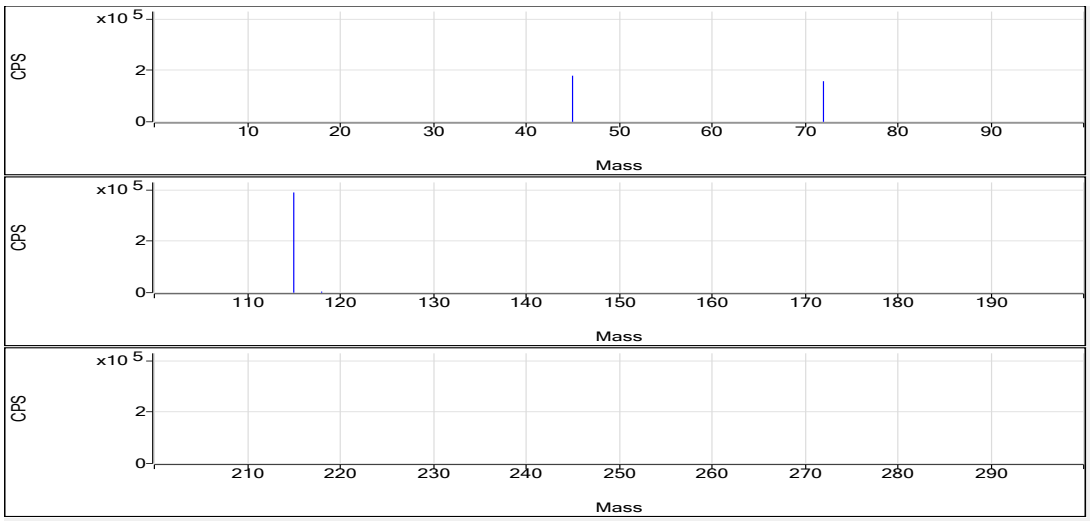
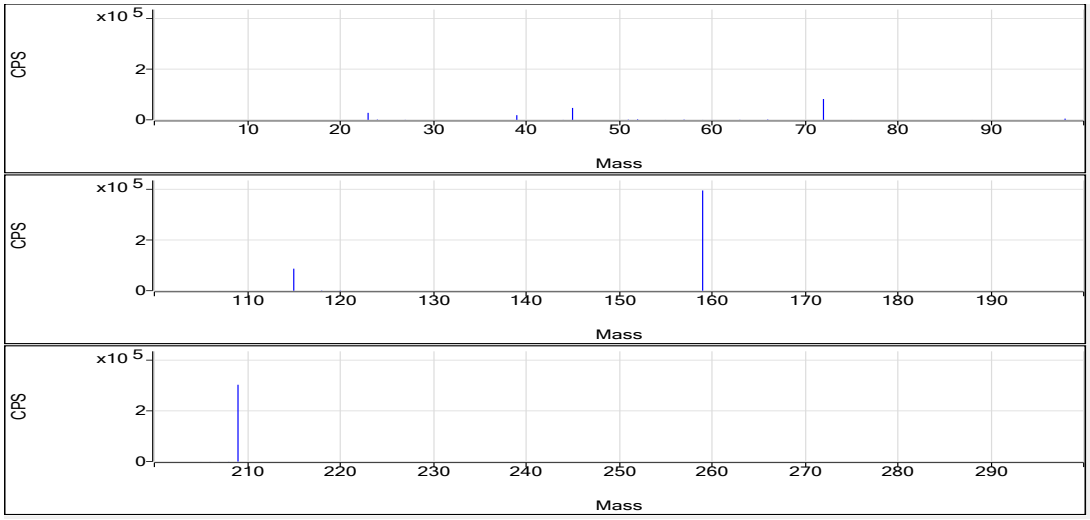


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.001	0	10.00	0.0008	4.685E-06
Be	9	1	No Gas	0.002	0	16.00	0.0008	4.685E-06
Be	9	1	No Gas	0.003	0	18.00	0.0008	4.685E-06
Se	78	2	H2	0.081	0	7.33	0.0004	1.219E-05
Se	78	2	H2	0.083	0	7.33	0.0004	1.219E-05
Se	78	2	H2	0.032	0	4.00	0.0004	1.219E-05
Na	23	3	He	76.348	0.6183	28838.93	0.0036	0.3452
Na	23	3	He	68.85	0.5914	28027.10	0.0036	0.3452
Na	23	3	He	57.83	0.552	25793.35	0.0036	0.3452
Mg	24	3	He	11.314	0.0238	1110.09	0.0018	0.003497
Mg	24	3	He	13.341	0.0274	1300.10	0.0018	0.003497
Mg	24	3	He	11.888	0.0248	1160.09	0.0018	0.003497
Al	27	3	He	9.161	0.006	280.01	0.0006	0.0006432
Al	27	3	He	11.526	0.0074	350.02	0.0006	0.0006432
Al	27	3	He	13.168	0.0083	390.02	0.0006	0.0006432
K	39	3	He	3.394	0.399	18612.34	0.0012	0.3951
K	39	3	He	-15.044	0.3776	17891.31	0.0012	0.3951
K	39	3	He	0.969	0.3962	18512.35	0.0012	0.3951
Ca	44	3	He	26.458	0.0045	210.01	0.0001	0.002715
Ca	44	3	He	37.91	0.0053	250.01	0.0001	0.002715
Ca	44	3	He	29.512	0.0047	220.01	0.0001	0.002715
Ti	47	3	He	0.269	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.667	0.0004	20.00	0.0005	7.003E-05
V	51	3	He	-0.17	0.0211	986.04	0.0219	0.02486
V	51	3	He	-0.176	0.021	996.04	0.0219	0.02486
V	51	3	He	-0.192	0.0207	966.04	0.0219	0.02486
Cr	52	3	He	-0.032	0.039	1820.17	0.0299	0.03997
Cr	52	3	He	0.131	0.0439	2080.22	0.0299	0.03997
Cr	52	3	He	-0.041	0.0387	1810.18	0.0299	0.03997
Mn	55	3	He	-0.005	0.0026	120.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.041	0.0021	100.00	0.0128	0.002639
Mn	55	3	He	0.011	0.0028	130.01	0.0128	0.002639
Fe	57	3	He	42.193	0.0259	1210.10	0.0006	0.001429
Fe	57	3	He	35.318	0.0219	1040.08	0.0006	0.001429
Fe	57	3	He	32.17	0.0201	940.07	0.0006	0.001429
Co	59	3	He	0.008	0.0026	120.00	0.0563	0.002149
Co	59	3	He	0.014	0.003	140.00	0.0563	0.002149
Co	59	3	He	0.007	0.0026	120.01	0.0563	0.002149
Ni	60	3	He	-0.132	0.0017	140.00	0.0086	0.002834
Ni	60	3	He	-0.033	0.0025	210.01	0.0086	0.002834
Ni	60	3	He	0.083	0.0035	290.01	0.0086	0.002834
Cu	63	3	He	0.08	0.0068	560.03	0.0257	0.004757
Cu	63	3	He	0.046	0.0059	490.03	0.0257	0.004757
Cu	63	3	He	0.062	0.0064	520.02	0.0257	0.004757
Zn	66	3	He	3.698	0.0146	1200.10	0.0029	0.003818
Zn	66	3	He	3.859	0.0151	1240.09	0.0029	0.003818
Zn	66	3	He	4.19	0.016	1310.10	0.0029	0.003818
As	75	3	He	-0.014	0.0008	64.00	0.002	0.0008061
As	75	3	He	-0.085	0.0006	52.00	0.002	0.0008061
As	75	3	He	-0.059	0.0007	56.00	0.002	0.0008061
Sr	88	3	He	-0.032	0.0007	60.00	0.009	0.0009645
Sr	88	3	He	-0.017	0.0008	70.00	0.009	0.0009645
Sr	88	3	He	-0.043	0.0006	50.00	0.009	0.0009645
Mo	98	3	He	2.159	0.0476	4210.79	0.0219	0.0002706
Mo	98	3	He	2.464	0.0543	4660.93	0.0219	0.0002706
Mo	98	3	He	2.659	0.0586	5061.11	0.0219	0.0002706
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Ag	107	3	He	0.007	0.0009	80.00	0.0465	0.0006206
Ag	107	3	He	0.007	0.0009	80.00	0.0465	0.0006206
Cd	111	3	He	0.017	0.0001	8.00	0.0053	0
Cd	111	3	He	0.009	0	4.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Sn	120	3	He	-0.098	0.0149	1320.12	0.0158	0.01648
Sn	120	3	He	-0.188	0.0135	1160.09	0.0158	0.01648
Sn	120	3	He	-0.164	0.0139	1200.09	0.0158	0.01648
Sb	121	3	He	-0.018	0	0.00	0.0149	0.0002698
Sb	121	3	He	-0.01	0.0001	10.00	0.0149	0.0002698
Sb	121	3	He	-0.01	0.0001	10.00	0.0149	0.0002698
Ba	137	3	He	-0.048	0	0.00	0.0048	0.0002317
Ba	137	3	He	-0.024	0.0001	10.00	0.0048	0.0002317
Ba	137	3	He	0	0.0002	20.00	0.0048	0.0002317
Tl	205	3	He	0.001	0.0002	60.00	0.0247	0.0001339
Tl	205	3	He	-0.001	0.0001	40.00	0.0247	0.0001339
Tl	205	3	He	0.001	0.0002	60.00	0.0247	0.0001339
Pb	208	3	He	0.008	0.0013	230.01	0.0327	0.00107
Pb	208	3	He	0.012	0.0015	360.02	0.0327	0.00107
Pb	208	3	He	0.008	0.0013	260.01	0.0327	0.00107
U	238	3	He	0.001	0.0001	40.00	0.0493	7.55E-05
U	238	3	He	0.001	0.0001	40.00	0.0493	7.55E-05
U	238	3	He	0	0.0001	30.00	0.0493	7.55E-05
Sc	45	1	No Gas			2500090.59		
Sc	45	1	No Gas			2512176.84		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2524496.52		
Ge	72	1	No Gas			1218833.18		
Ge	72	1	No Gas			1203297.64		
Ge	72	1	No Gas			1201324.98		
Sc	45	2	H2			180739.12		
Sc	45	2	H2			178890.21		
Sc	45	2	H2			177268.26		
Ge	72	2	H2			158976.06		
Ge	72	2	H2			156982.76		
Ge	72	2	H2			156842.55		
In	115	2	H2			391247.18		
In	115	2	H2			387153.43		
In	115	2	H2			388393.28		
Sc	45	3	He			46645.35		
Sc	45	3	He			47387.89		
Sc	45	3	He			46725.39		
Ge	72	3	He			82286.98		
Ge	72	3	He			82377.14		
Ge	72	3	He			81794.01		
In	115	3	He			88440.87		
In	115	3	He			85864.93		
In	115	3	He			86409.15		
Tb	159	3	He			392694.10		
Tb	159	3	He			398783.43		
Tb	159	3	He			394711.44		
Bi	209	3	He			303646.42		
Bi	209	3	He			304317.30		
Bi	209	3	He			301319.53		

Quantitation Report

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Sample Type	Sample
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

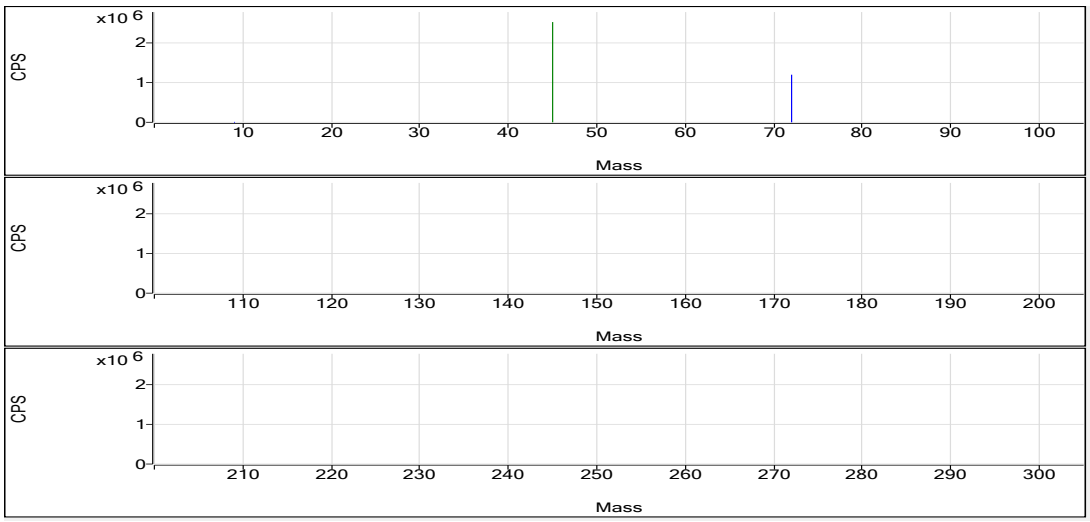
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.002	ppb	417.7	14.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.015	ppb	172.3	2.89	0.0000	Pulse	1.5000	3
Na	23	45	He	30.292	ppb	8.0	21476.17	0.4535	Pulse	0.1000	3
Mg	24	45	He	3.308	ppb	19.8	446.69	0.0094	Pulse	0.1000	3
Al	27	45	He	3.125	ppb	39.1	116.67	0.0025	Pulse	0.1000	3
K	39	45	He	-2.952	ppb	N/A	18548.95	0.3916	Pulse	0.1000	3
Ca	44	45	He	0.573	ppb	2971.5	130.01	0.0028	Pulse	0.1000	3
Ti	47	45	He	-0.002	ppb	N/A	3.33	0.0001	Pulse	0.1000	3
V	51	45	He	-0.185	ppb	N/A	986.71	0.0208	Pulse	0.5000	3
Cr	52	45	He	0.086	ppb	155.3	2016.89	0.0425	Pulse	0.1000	3
Mn	55	45	He	-0.041	ppb	N/A	100.00	0.0021	Pulse	0.1000	3
Fe	57	45	He	10.993	ppb	9.7	370.02	0.0078	Pulse	0.1000	3
Co	59	45	He	-0.004	ppb	N/A	90.00	0.0019	Pulse	0.1000	3
Ni	60	72	He	0.228	ppb	14.1	396.69	0.0048	Pulse	0.1000	3
Cu	63	72	He	0.007	ppb	345.9	410.02	0.0049	Pulse	0.1000	3
Zn	66	72	He	4.340	ppb	5.5	1363.44	0.0165	Pulse	0.1000	3
As	75	72	He	-0.028	ppb	N/A	62.00	0.0007	Pulse	0.5000	3
Sr	88	115	He	-0.030	ppb	N/A	60.00	0.0007	Pulse	0.1000	3
Mo	98	115	He	0.585	ppb	8.9	1123.42	0.0131	Pulse	0.1000	3
Ag	107	115	He	-0.004	ppb	N/A	36.67	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.013	ppb	33.2	6.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.020	ppb	477.3	1440.12	0.0168	Pulse	0.1000	3
Sb	121	115	He	0.000	ppb	6138.0	23.33	0.0003	Pulse	0.1000	3
Ba	137	115	He	-0.040	ppb	N/A	3.33	0.0000	Pulse	0.1000	3
Tl	205	159	He	0.001	ppb	132.0	60.00	0.0002	Pulse	0.1000	3
Pb	208	159	He	0.008	ppb	81.8	520.03	0.0013	Pulse	0.1000	3
U	238	209	He	-0.001	ppb	N/A	10.00	0.0000	Pulse	0.1000	3

ISTD Table:

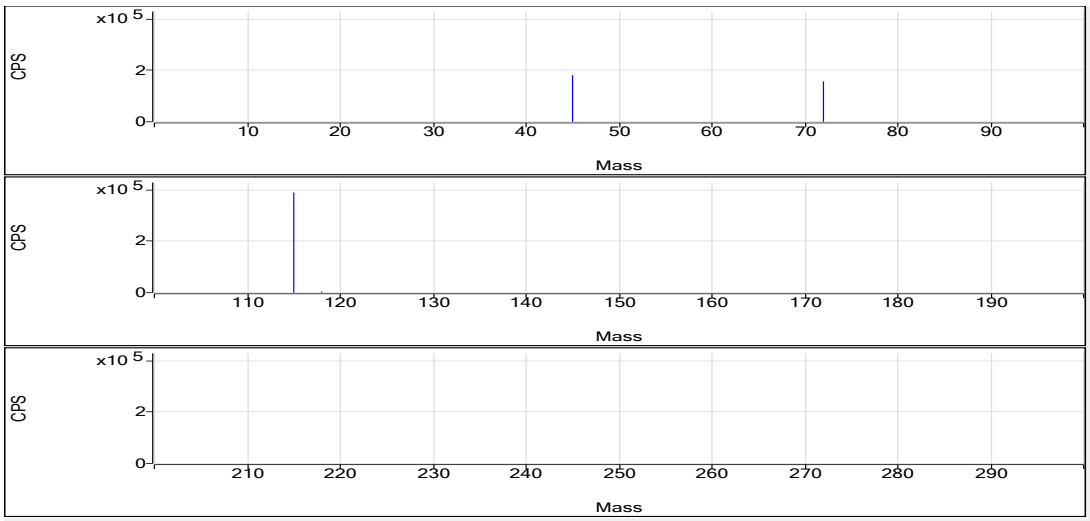
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2524868.35	2.1	105.3	Analog	0.1000	3
No Gas	Ge	72	1198698.71	1.6	103.9	Pulse	0.1000	3
H2	Sc	45	180838.81	0.7	96.7	Pulse	0.1000	3
H2	Ge	72	157015.43	0.4	95.9	Pulse	0.1000	3
H2	In	115	389364.15	0.5	100.1	Pulse	0.1000	3
He	Sc	45	47364.48	1.7	101.5	Pulse	0.1000	3
He	Ge	72	82849.56	0.5	102.0	Pulse	0.1000	3
He	In	115	85739.78	0.2	99.5	Pulse	0.1000	3
He	Tb	159	393337.35	0.6	98.7	Pulse	0.1000	3
He	Bi	209	307513.04	1.1	99.4	Pulse	0.1000	3

No Gas

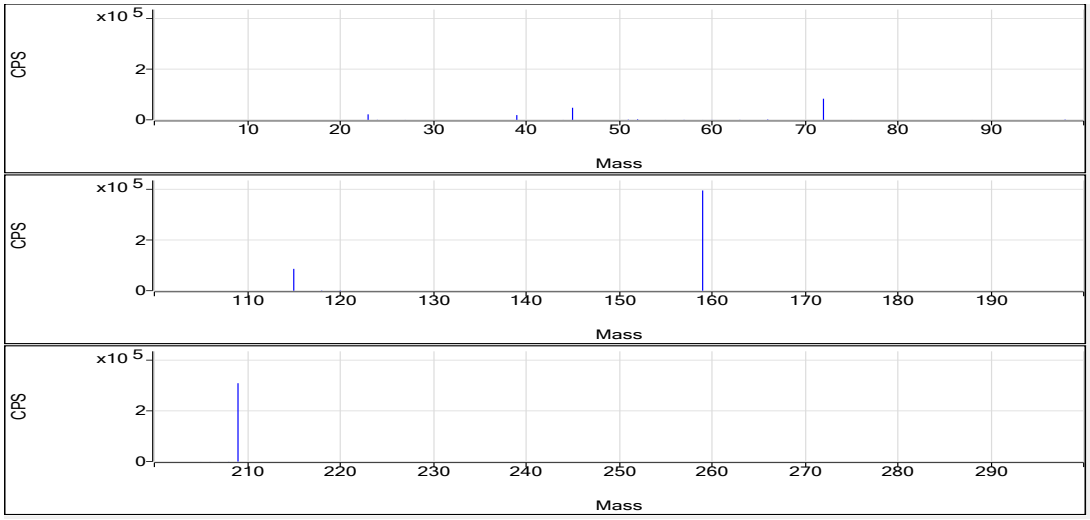


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.009	0	28.00	0.0008	4.685E-06
Be	9	1	No Gas	-0.004	0	4.00	0.0008	4.685E-06
Be	9	1	No Gas	0	0	12.00	0.0008	4.685E-06
Se	78	2	H2	-0.009	0	1.33	0.0004	1.219E-05
Se	78	2	H2	0.012	0	2.67	0.0004	1.219E-05
Se	78	2	H2	0.042	0	4.67	0.0004	1.219E-05
Na	23	3	He	32.607	0.4618	21656.44	0.0036	0.3452
Na	23	3	He	27.783	0.4445	21476.18	0.0036	0.3452
Na	23	3	He	30.485	0.4542	21295.90	0.0036	0.3452
Mg	24	3	He	3.993	0.0107	500.02	0.0018	0.003497
Mg	24	3	He	3.243	0.0093	450.02	0.0018	0.003497
Mg	24	3	He	2.687	0.0083	390.02	0.0018	0.003497
Al	27	3	He	4.004	0.003	140.01	0.0006	0.0006432
Al	27	3	He	1.731	0.0017	80.00	0.0006	0.0006432
Al	27	3	He	3.64	0.0028	130.01	0.0006	0.0006432
K	39	3	He	-5.956	0.3881	18201.92	0.0012	0.3951
K	39	3	He	-3.615	0.3909	18882.76	0.0012	0.3951
K	39	3	He	0.715	0.3959	18562.18	0.0012	0.3951
Ca	44	3	He	19.789	0.0041	190.01	0.0001	0.002715
Ca	44	3	He	-12.613	0.0019	90.00	0.0001	0.002715
Ca	44	3	He	-5.457	0.0023	110.01	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.255	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	-0.156	0.0215	1006.04	0.0219	0.02486
V	51	3	He	-0.177	0.021	1014.04	0.0219	0.02486
V	51	3	He	-0.22	0.02	940.04	0.0219	0.02486
Cr	52	3	He	-0.046	0.0386	1810.18	0.0299	0.03997
Cr	52	3	He	0.221	0.0466	2250.26	0.0299	0.03997
Cr	52	3	He	0.083	0.0424	1990.22	0.0299	0.03997
Mn	55	3	He	-0.073	0.0017	80.00	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.06	0.0019	90.00	0.0128	0.002639
Mn	55	3	He	0.01	0.0028	130.01	0.0128	0.002639
Fe	57	3	He	12.222	0.0085	400.02	0.0006	0.001429
Fe	57	3	He	10.367	0.0075	360.02	0.0006	0.001429
Fe	57	3	He	10.39	0.0075	350.01	0.0006	0.001429
Co	59	3	He	-0.012	0.0015	70.00	0.0563	0.002149
Co	59	3	He	-0.009	0.0017	80.00	0.0563	0.002149
Co	59	3	He	0.007	0.0026	120.00	0.0563	0.002149
Ni	60	3	He	0.264	0.0051	420.03	0.0086	0.002834
Ni	60	3	He	0.218	0.0047	390.02	0.0086	0.002834
Ni	60	3	He	0.202	0.0046	380.02	0.0086	0.002834
Cu	63	3	He	-0.015	0.0044	360.02	0.0257	0.004757
Cu	63	3	He	0.036	0.0057	470.02	0.0257	0.004757
Cu	63	3	He	0.002	0.0048	400.02	0.0257	0.004757
Zn	66	3	He	4.066	0.0157	1290.09	0.0029	0.003818
Zn	66	3	He	4.449	0.0168	1390.12	0.0029	0.003818
Zn	66	3	He	4.505	0.0169	1410.11	0.0029	0.003818
As	75	3	He	0.033	0.0009	72.00	0.002	0.0008061
As	75	3	He	-0.075	0.0007	54.00	0.002	0.0008061
As	75	3	He	-0.042	0.0007	60.00	0.002	0.0008061
Sr	88	3	He	0.022	0.0012	100.00	0.009	0.0009645
Sr	88	3	He	-0.003	0.0009	80.00	0.009	0.0009645
Sr	88	3	He	-0.108	0	0.00	0.009	0.0009645
Mo	98	3	He	0.529	0.0119	1020.07	0.0219	0.0002706
Mo	98	3	He	0.632	0.0141	1210.09	0.0219	0.0002706
Mo	98	3	He	0.594	0.0133	1140.09	0.0219	0.0002706
Ag	107	3	He	0.002	0.0007	60.00	0.0465	0.0006206
Ag	107	3	He	-0.003	0.0005	40.00	0.0465	0.0006206
Ag	107	3	He	-0.011	0.0001	10.00	0.0465	0.0006206
Cd	111	3	He	0.017	0.0001	8.00	0.0053	0
Cd	111	3	He	0.013	0.0001	6.00	0.0053	0
Cd	111	3	He	0.009	0	4.00	0.0053	0
Sn	120	3	He	-0.078	0.0152	1310.10	0.0158	0.01648
Sn	120	3	He	0.022	0.0168	1440.12	0.0158	0.01648
Sn	120	3	He	0.117	0.0183	1570.14	0.0158	0.01648
Sb	121	3	He	0.005	0.0003	30.00	0.0149	0.0002698
Sb	121	3	He	-0.01	0.0001	10.00	0.0149	0.0002698
Sb	121	3	He	0.005	0.0004	30.00	0.0149	0.0002698
Ba	137	3	He	-0.024	0.0001	10.00	0.0048	0.0002317
Ba	137	3	He	-0.048	0	0.00	0.0048	0.0002317
Ba	137	3	He	-0.048	0	0.00	0.0048	0.0002317
Tl	205	3	He	0	0.0001	50.00	0.0247	0.0001339
Tl	205	3	He	0.002	0.0002	70.00	0.0247	0.0001339
Tl	205	3	He	0.001	0.0002	60.00	0.0247	0.0001339
Pb	208	3	He	0.013	0.0015	380.02	0.0327	0.00107
Pb	208	3	He	0.01	0.0014	280.01	0.0327	0.00107
Pb	208	3	He	0.001	0.0011	200.01	0.0327	0.00107
U	238	3	He	-0.002	0	0.00	0.0493	7.55E-05
U	238	3	He	-0.001	0	10.00	0.0493	7.55E-05
U	238	3	He	0	0.0001	20.00	0.0493	7.55E-05
Sc	45	1	No Gas			2481986.99		
Sc	45	1	No Gas			2585381.99		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2507236.06		
Ge	72	1	No Gas			1188789.44		
Ge	72	1	No Gas			1220165.92		
Ge	72	1	No Gas			1187140.76		
Sc	45	2	H2			182208.75		
Sc	45	2	H2			180346.76		
Sc	45	2	H2			179960.92		
Ge	72	2	H2			157702.36		
Ge	72	2	H2			156449.12		
Ge	72	2	H2			156894.82		
In	115	2	H2			389499.72		
In	115	2	H2			387501.83		
In	115	2	H2			391090.89		
Sc	45	3	He			46896.24		
Sc	45	3	He			48311.11		
Sc	45	3	He			46886.09		
Ge	72	3	He			82396.49		
Ge	72	3	He			82889.56		
Ge	72	3	He			83262.62		
In	115	3	He			85934.93		
In	115	3	He			85604.04		
In	115	3	He			85704.39		
Tb	159	3	He			390460.23		
Tb	159	3	He			395213.12		
Tb	159	3	He			394338.71		
Bi	209	3	He			303794.27		
Bi	209	3	He			310719.78		
Bi	209	3	He			308025.07		

Quantitation Report

Data File Name	109SMPL.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	8/10/2023 2:16:59 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

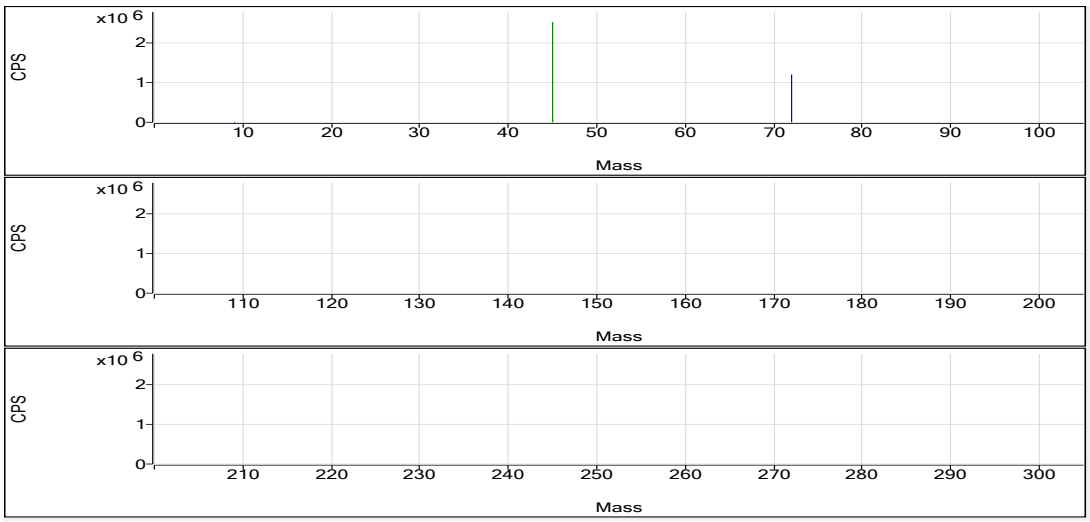
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.002	ppb	175.7	15.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.011	ppb	89.9	2.67	0.0000	Pulse	1.5000	3
Na	23	45	He	17.655	ppb	12.9	19396.57	0.4083	Pulse	0.1000	3
Mg	24	45	He	1.611	ppb	30.4	303.35	0.0064	Pulse	0.1000	3
Al	27	45	He	3.937	ppb	47.3	140.00	0.0029	Pulse	0.1000	3
K	39	45	He	-13.101	ppb	N/A	18045.00	0.3798	Pulse	0.1000	3
Ca	44	45	He	6.444	ppb	371.4	150.01	0.0032	Pulse	0.1000	3
Ti	47	45	He	0.261	ppb	259.7	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	-0.130	ppb	N/A	1046.05	0.0220	Pulse	0.5000	3
Cr	52	45	He	-0.088	ppb	N/A	1773.52	0.0373	Pulse	0.1000	3
Mn	55	45	He	-0.003	ppb	N/A	123.34	0.0026	Pulse	0.1000	3
Fe	57	45	He	6.111	ppb	29.4	236.68	0.0050	Pulse	0.1000	3
Co	59	45	He	-0.008	ppb	N/A	80.00	0.0017	Pulse	0.1000	3
Ni	60	72	He	0.080	ppb	99.9	293.35	0.0035	Pulse	0.1000	3
Cu	63	72	He	0.011	ppb	89.9	420.02	0.0050	Pulse	0.1000	3
Zn	66	72	He	3.905	ppb	4.0	1266.77	0.0152	Pulse	0.1000	3
As	75	72	He	-0.054	ppb	N/A	58.00	0.0007	Pulse	0.5000	3
Sr	88	115	He	-0.016	ppb	N/A	70.00	0.0008	Pulse	0.1000	3
Mo	98	115	He	0.236	ppb	11.1	466.69	0.0054	Pulse	0.1000	3
Ag	107	115	He	-0.008	ppb	N/A	20.00	0.0002	Pulse	0.1000	3
Cd	111	115	He	0.004	ppb	99.5	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.012	ppb	1576.2	1430.21	0.0167	Pulse	0.1000	3
Sb	121	115	He	-0.005	ppb	N/A	16.67	0.0002	Pulse	0.1000	3
Ba	137	115	He	-0.040	ppb	N/A	3.33	0.0000	Pulse	0.1000	3
Tl	205	159	He	-0.001	ppb	N/A	46.67	0.0001	Pulse	0.1000	3
Pb	208	159	He	0.005	ppb	119.8	493.36	0.0012	Pulse	0.1000	3
U	238	209	He	0.001	ppb	56.8	33.33	0.0001	Pulse	0.1000	3

ISTD Table:

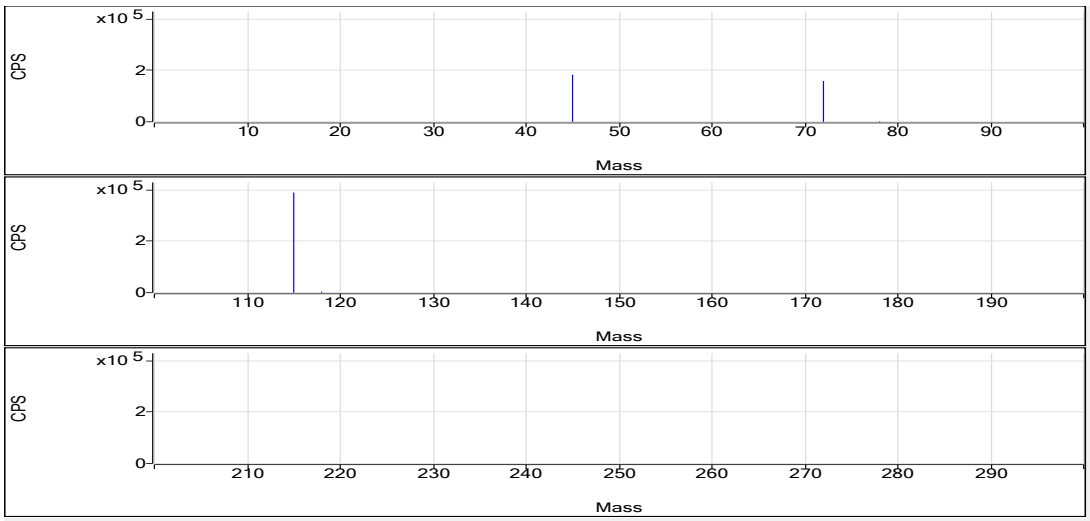
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2526964.86	1.6	105.3	Analog	0.1000	3
No Gas	Ge	72	1205181.55	0.6	104.5	Pulse	0.1000	3
H2	Sc	45	183251.28	1.5	98.0	Pulse	0.1000	3
H2	Ge	72	158807.63	0.4	97.0	Pulse	0.1000	3
H2	In	115	390382.81	1.0	100.3	Pulse	0.1000	3
He	Sc	45	47505.01	0.8	101.9	Pulse	0.1000	3
He	Ge	72	83412.98	1.3	102.7	Pulse	0.1000	3
He	In	115	85777.16	0.8	99.5	Pulse	0.1000	3
He	Tb	159	398281.84	0.6	99.9	Pulse	0.1000	3
He	Bi	209	306979.14	0.8	99.3	Pulse	0.1000	3

No Gas

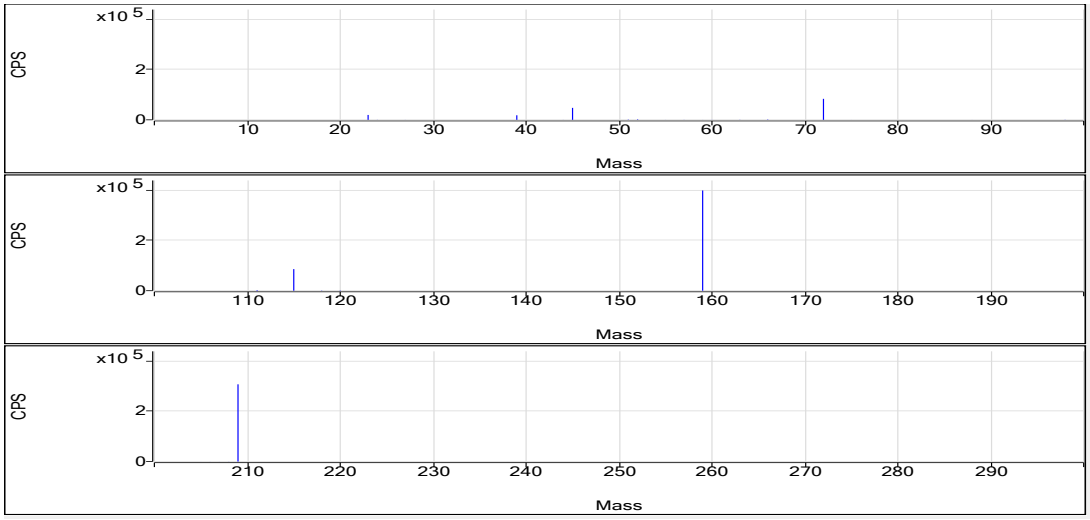


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.001	0	10.00	0.0008	4.685E-06
Be	9	1	No Gas	0.001	0	14.00	0.0008	4.685E-06
Be	9	1	No Gas	0.005	0	22.00	0.0008	4.685E-06
Se	78	2	H2	0.011	0	2.67	0.0004	1.219E-05
Se	78	2	H2	0.001	0	2.00	0.0004	1.219E-05
Se	78	2	H2	0.021	0	3.33	0.0004	1.219E-05
Na	23	3	He	18.987	0.4131	19773.77	0.0036	0.3452
Na	23	3	He	15.033	0.3989	18972.59	0.0036	0.3452
Na	23	3	He	18.945	0.4129	19443.34	0.0036	0.3452
Mg	24	3	He	1.661	0.0065	310.02	0.0018	0.003497
Mg	24	3	He	1.098	0.0055	260.01	0.0018	0.003497
Mg	24	3	He	2.075	0.0072	340.01	0.0018	0.003497
Al	27	3	He	2.828	0.0023	110.00	0.0006	0.0006432
Al	27	3	He	6.089	0.0042	200.01	0.0006	0.0006432
Al	27	3	He	2.894	0.0023	110.00	0.0006	0.0006432
K	39	3	He	-10.939	0.3823	18301.95	0.0012	0.3951
K	39	3	He	-5.898	0.3882	18462.20	0.0012	0.3951
K	39	3	He	-22.464	0.3689	17370.86	0.0012	0.3951
Ca	44	3	He	34.031	0.005	240.01	0.0001	0.002715
Ca	44	3	He	-5.948	0.0023	110.01	0.0001	0.002715
Ca	44	3	He	-8.752	0.0021	100.00	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	1.044	0.0006	30.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	-0.134	0.0219	1050.05	0.0219	0.02486
V	51	3	He	-0.077	0.0232	1102.05	0.0219	0.02486
V	51	3	He	-0.18	0.0209	986.04	0.0219	0.02486
Cr	52	3	He	-0.219	0.0334	1600.16	0.0299	0.03997
Cr	52	3	He	0.042	0.0412	1960.22	0.0299	0.03997
Cr	52	3	He	-0.087	0.0374	1760.18	0.0299	0.03997
Mn	55	3	He	-0.043	0.0021	100.00	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.025	0.0023	110.00	0.0128	0.002639
Mn	55	3	He	0.059	0.0034	160.01	0.0128	0.002639
Fe	57	3	He	5.811	0.0048	230.01	0.0006	0.001429
Fe	57	3	He	8.037	0.0061	290.01	0.0006	0.001429
Fe	57	3	He	4.486	0.004	190.01	0.0006	0.001429
Co	59	3	He	-0.001	0.0021	100.00	0.0563	0.002149
Co	59	3	He	-0.008	0.0017	80.00	0.0563	0.002149
Co	59	3	He	-0.016	0.0013	60.00	0.0563	0.002149
Ni	60	3	He	0.16	0.0042	350.02	0.0086	0.002834
Ni	60	3	He	0	0.0028	240.01	0.0086	0.002834
Ni	60	3	He	0.08	0.0035	290.01	0.0086	0.002834
Cu	63	3	He	0.007	0.0049	410.02	0.0257	0.004757
Cu	63	3	He	0.022	0.0053	450.02	0.0257	0.004757
Cu	63	3	He	0.004	0.0049	400.02	0.0257	0.004757
Zn	66	3	He	3.728	0.0147	1220.10	0.0029	0.003818
Zn	66	3	He	3.964	0.0154	1300.11	0.0029	0.003818
Zn	66	3	He	4.022	0.0155	1280.09	0.0029	0.003818
As	75	3	He	-0.065	0.0007	56.00	0.002	0.0008061
As	75	3	He	-0.001	0.0008	68.00	0.002	0.0008061
As	75	3	He	-0.097	0.0006	50.00	0.002	0.0008061
Sr	88	3	He	0.05	0.0014	120.00	0.009	0.0009645
Sr	88	3	He	-0.03	0.0007	60.00	0.009	0.0009645
Sr	88	3	He	-0.069	0.0003	30.00	0.009	0.0009645
Mo	98	3	He	0.213	0.0049	420.03	0.0219	0.0002706
Mo	98	3	He	0.23	0.0053	460.02	0.0219	0.0002706
Mo	98	3	He	0.264	0.0061	520.03	0.0219	0.0002706
Ag	107	3	He	-0.006	0.0004	30.00	0.0465	0.0006206
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Ag	107	3	He	-0.013	0	0.00	0.0465	0.0006206
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.009	0	4.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Sn	120	3	He	-0.076	0.0153	1300.11	0.0158	0.01648
Sn	120	3	He	0.224	0.02	1730.40	0.0158	0.01648
Sn	120	3	He	-0.112	0.0147	1260.11	0.0158	0.01648
Sb	121	3	He	-0.018	0	0.00	0.0149	0.0002698
Sb	121	3	He	0.013	0.0005	40.00	0.0149	0.0002698
Sb	121	3	He	-0.01	0.0001	10.00	0.0149	0.0002698
Ba	137	3	He	-0.048	0	0.00	0.0048	0.0002317
Ba	137	3	He	-0.024	0.0001	10.00	0.0048	0.0002317
Ba	137	3	He	-0.048	0	0.00	0.0048	0.0002317
Tl	205	3	He	0	0.0001	50.00	0.0247	0.0001339
Tl	205	3	He	0.002	0.0002	70.00	0.0247	0.0001339
Tl	205	3	He	-0.003	0	20.00	0.0247	0.0001339
Pb	208	3	He	0.009	0.0014	320.02	0.0327	0.00107
Pb	208	3	He	-0.002	0.001	190.01	0.0327	0.00107
Pb	208	3	He	0.008	0.0013	340.02	0.0327	0.00107
U	238	3	He	0	0.0001	30.00	0.0493	7.55E-05
U	238	3	He	0	0.0001	30.00	0.0493	7.55E-05
U	238	3	He	0.001	0.0001	40.00	0.0493	7.55E-05
Sc	45	1	No Gas			2569638.71		
Sc	45	1	No Gas			2491375.90		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2519879.96		
Ge	72	1	No Gas			1207926.00		
Ge	72	1	No Gas			1210588.58		
Ge	72	1	No Gas			1197030.06		
Sc	45	2	H2			186278.84		
Sc	45	2	H2			181004.57		
Sc	45	2	H2			182470.43		
Ge	72	2	H2			159015.73		
Ge	72	2	H2			158068.09		
Ge	72	2	H2			159339.06		
In	115	2	H2			394630.03		
In	115	2	H2			387589.45		
In	115	2	H2			388928.94		
Sc	45	3	He			47869.55		
Sc	45	3	He			47558.59		
Sc	45	3	He			47086.90		
Ge	72	3	He			83161.95		
Ge	72	3	He			84639.86		
Ge	72	3	He			82437.12		
In	115	3	He			85150.64		
In	115	3	He			86478.40		
In	115	3	He			85723.74		
Tb	159	3	He			396042.03		
Tb	159	3	He			397719.60		
Tb	159	3	He			401083.90		
Bi	209	3	He			304546.56		
Bi	209	3	He			309375.46		
Bi	209	3	He			307015.41		

Quantitation Report

Data File Name	110SMPL.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	8/10/2023 2:19:04 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

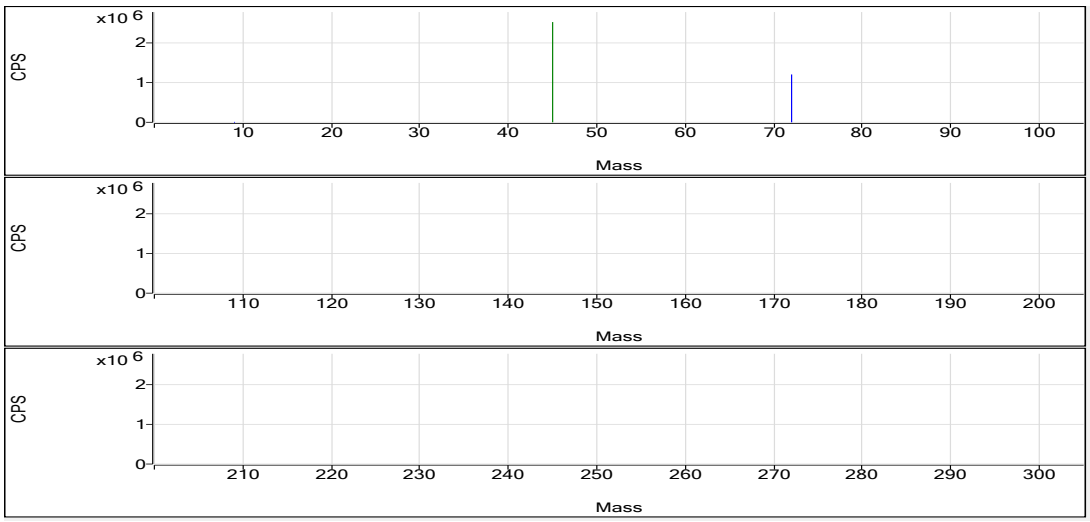
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.002	ppb	221.3	16.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.015	ppb	278.1	2.89	0.0000	Pulse	1.5000	3
Na	23	45	He	13.429	ppb	11.3	18829.22	0.3932	Pulse	0.1000	3
Mg	24	45	He	0.764	ppb	25.6	233.34	0.0049	Pulse	0.1000	3
Al	27	45	He	0.811	ppb	71.8	53.33	0.0011	Pulse	0.1000	3
K	39	45	He	-14.571	ppb	N/A	18108.41	0.3781	Pulse	0.1000	3
Ca	44	45	He	16.705	ppb	108.4	183.34	0.0038	Pulse	0.1000	3
Ti	47	45	He	0.002	ppb	14422.9	3.33	0.0001	Pulse	0.1000	3
V	51	45	He	-0.069	ppb	N/A	1118.06	0.0234	Pulse	0.5000	3
Cr	52	45	He	-0.094	ppb	N/A	1780.17	0.0371	Pulse	0.1000	3
Mn	55	45	He	-0.027	ppb	N/A	110.00	0.0023	Pulse	0.1000	3
Fe	57	45	He	4.393	ppb	43.8	190.01	0.0040	Pulse	0.1000	3
Co	59	45	He	-0.010	ppb	N/A	76.67	0.0016	Pulse	0.1000	3
Ni	60	72	He	0.044	ppb	167.6	263.34	0.0032	Pulse	0.1000	3
Cu	63	72	He	0.000	ppb	N/A	390.02	0.0048	Pulse	0.1000	3
Zn	66	72	He	4.116	ppb	7.1	1296.77	0.0158	Pulse	0.1000	3
As	75	72	He	-0.064	ppb	N/A	55.33	0.0007	Pulse	0.5000	3
Sr	88	115	He	-0.005	ppb	N/A	80.00	0.0009	Pulse	0.1000	3
Mo	98	115	He	0.135	ppb	11.3	280.01	0.0032	Pulse	0.1000	3
Ag	107	115	He	-0.008	ppb	N/A	23.33	0.0003	Pulse	0.1000	3
Cd	111	115	He	0.001	ppb	173.2	0.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.044	ppb	N/A	1370.12	0.0158	Pulse	0.1000	3
Sb	121	115	He	-0.008	ppb	N/A	13.33	0.0002	Pulse	0.1000	3
Ba	137	115	He	-0.032	ppb	N/A	6.67	0.0001	Pulse	0.1000	3
Tl	205	159	He	0.001	ppb	514.0	60.00	0.0002	Pulse	0.1000	3
Pb	208	159	He	0.004	ppb	101.0	480.02	0.0012	Pulse	0.1000	3
U	238	209	He	-0.001	ppb	N/A	10.00	0.0000	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2529623.35	1.2	105.5	Analog	0.1000	3
No Gas	Ge	72	1207494.70	1.2	104.7	Pulse	0.1000	3
H2	Sc	45	181409.27	0.9	97.0	Pulse	0.1000	3
H2	Ge	72	157341.33	0.7	96.1	Pulse	0.1000	3
H2	In	115	389320.27	0.6	100.1	Pulse	0.1000	3
He	Sc	45	47896.08	1.9	102.7	Pulse	0.1000	3
He	Ge	72	82035.22	1.2	101.0	Pulse	0.1000	3
He	In	115	86795.74	1.0	100.7	Pulse	0.1000	3
He	Tb	159	395517.91	1.1	99.2	Pulse	0.1000	3
He	Bi	209	305896.44	0.3	98.9	Pulse	0.1000	3

No Gas



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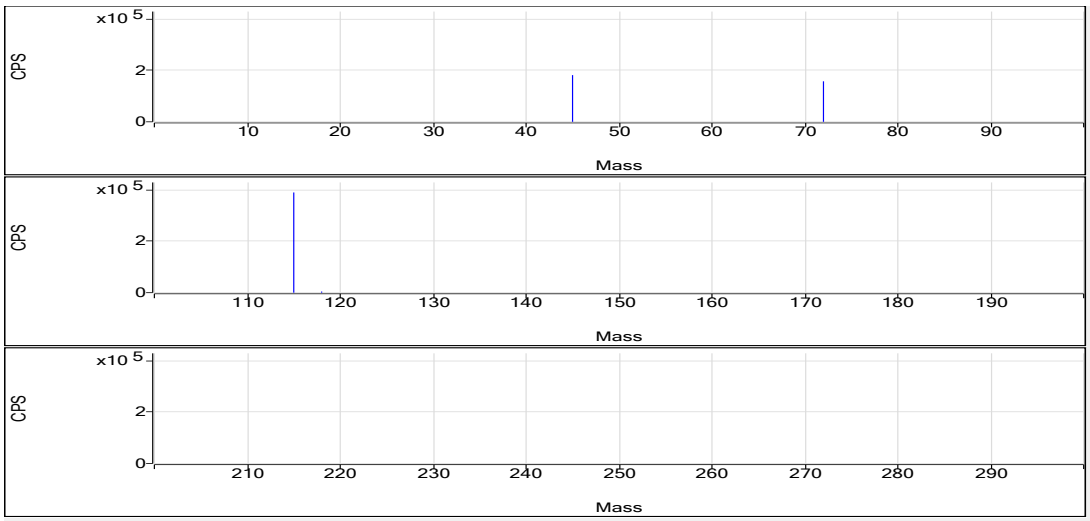
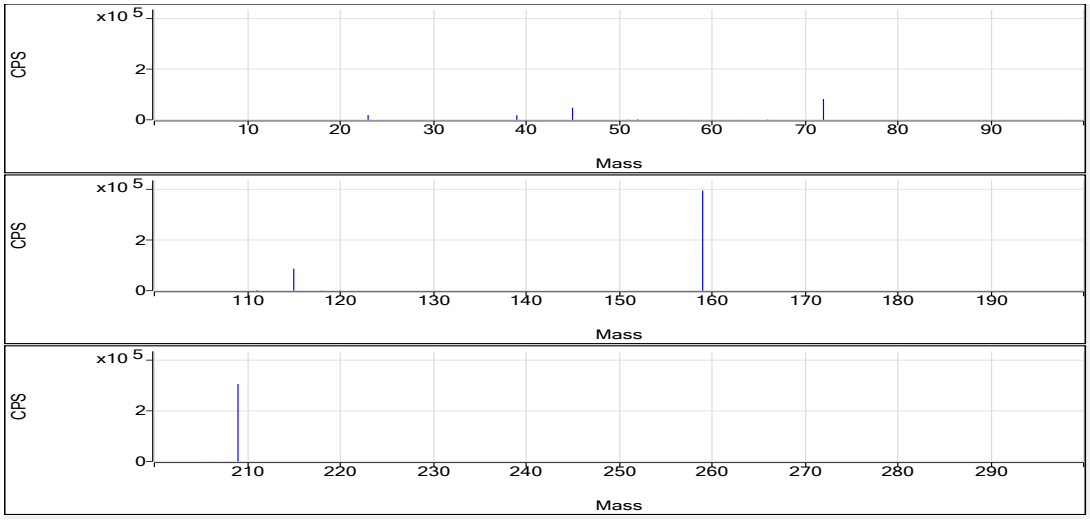


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.007	0	26.00	0.0008	4.685E-06
Be	9	1	No Gas	0.001	0	14.00	0.0008	4.685E-06
Be	9	1	No Gas	-0.002	0	8.00	0.0008	4.685E-06
Se	78	2	H2	0.063	0	6.00	0.0004	1.219E-05
Se	78	2	H2	-0.009	0	1.33	0.0004	1.219E-05
Se	78	2	H2	-0.009	0	1.33	0.0004	1.219E-05
Na	23	3	He	12.023	0.3882	18962.75	0.0036	0.3452
Na	23	3	He	13.219	0.3924	18762.41	0.0036	0.3452
Na	23	3	He	15.045	0.399	18762.49	0.0036	0.3452
Mg	24	3	He	0.903	0.0051	250.01	0.0018	0.003497
Mg	24	3	He	0.849	0.005	240.01	0.0018	0.003497
Mg	24	3	He	0.54	0.0045	210.01	0.0018	0.003497
Al	27	3	He	0.3	0.0008	40.00	0.0006	0.0006432
Al	27	3	He	0.688	0.001	50.00	0.0006	0.0006432
Al	27	3	He	1.445	0.0015	70.00	0.0006	0.0006432
K	39	3	He	-20.713	0.371	18121.77	0.0012	0.3951
K	39	3	He	-4.048	0.3904	18662.43	0.0012	0.3951
K	39	3	He	-18.952	0.373	17541.03	0.0012	0.3951
Ca	44	3	He	-0.795	0.0027	130.01	0.0001	0.002715
Ca	44	3	He	15.547	0.0038	180.01	0.0001	0.002715
Ca	44	3	He	35.361	0.0051	240.01	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.266	0.0002	10.00	0.0005	7.003E-05
V	51	3	He	-0.13	0.022	1076.05	0.0219	0.02486
V	51	3	He	-0.045	0.0239	1142.06	0.0219	0.02486
V	51	3	He	-0.032	0.0242	1136.06	0.0219	0.02486
Cr	52	3	He	-0.07	0.0379	1850.19	0.0299	0.03997
Cr	52	3	He	-0.043	0.0387	1850.17	0.0299	0.03997
Cr	52	3	He	-0.17	0.0349	1640.15	0.0299	0.03997
Mn	55	3	He	0.018	0.0029	140.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.059	0.0019	90.00	0.0128	0.002639
Mn	55	3	He	-0.04	0.0021	100.00	0.0128	0.002639
Fe	57	3	He	2.474	0.0029	140.01	0.0006	0.001429
Fe	57	3	He	4.381	0.004	190.01	0.0006	0.001429
Fe	57	3	He	6.325	0.0051	240.01	0.0006	0.001429
Co	59	3	He	-0.005	0.0018	90.00	0.0563	0.002149
Co	59	3	He	-0.027	0.0006	30.00	0.0563	0.002149
Co	59	3	He	0.003	0.0023	110.00	0.0563	0.002149
Ni	60	3	He	-0.036	0.0025	210.01	0.0086	0.002834
Ni	60	3	He	0.058	0.0033	270.01	0.0086	0.002834
Ni	60	3	He	0.111	0.0038	310.01	0.0086	0.002834
Cu	63	3	He	0.002	0.0048	400.02	0.0257	0.004757
Cu	63	3	He	-0.003	0.0047	380.02	0.0257	0.004757
Cu	63	3	He	0	0.0048	390.02	0.0257	0.004757
Zn	66	3	He	4.434	0.0167	1390.11	0.0029	0.003818
Zn	66	3	He	3.855	0.015	1220.10	0.0029	0.003818
Zn	66	3	He	4.058	0.0156	1280.10	0.0029	0.003818
As	75	3	He	-0.1	0.0006	50.00	0.002	0.0008061
As	75	3	He	0.016	0.0008	68.00	0.002	0.0008061
As	75	3	He	-0.107	0.0006	48.00	0.002	0.0008061
Sr	88	3	He	0.007	0.001	90.00	0.009	0.0009645
Sr	88	3	He	-0.043	0.0006	50.00	0.009	0.0009645
Sr	88	3	He	0.022	0.0012	100.00	0.009	0.0009645
Mo	98	3	He	0.123	0.003	260.01	0.0219	0.0002706
Mo	98	3	He	0.13	0.0031	270.01	0.0219	0.0002706
Mo	98	3	He	0.152	0.0036	310.02	0.0219	0.0002706
Ag	107	3	He	-0.011	0.0001	10.00	0.0465	0.0006206
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Sn	120	3	He	-0.018	0.0162	1420.13	0.0158	0.01648
Sn	120	3	He	-0.006	0.0164	1420.12	0.0158	0.01648
Sn	120	3	He	-0.108	0.0148	1270.11	0.0158	0.01648
Sb	121	3	He	-0.003	0.0002	20.00	0.0149	0.0002698
Sb	121	3	He	-0.01	0.0001	10.00	0.0149	0.0002698
Sb	121	3	He	-0.01	0.0001	10.00	0.0149	0.0002698
Ba	137	3	He	-0.048	0	0.00	0.0048	0.0002317
Ba	137	3	He	-0.048	0	0.00	0.0048	0.0002317
Ba	137	3	He	0	0.0002	20.00	0.0048	0.0002317
Tl	205	3	He	0.002	0.0002	70.00	0.0247	0.0001339
Tl	205	3	He	0.004	0.0002	90.00	0.0247	0.0001339
Tl	205	3	He	-0.003	0.0001	20.00	0.0247	0.0001339
Pb	208	3	He	-0.001	0.001	210.01	0.0327	0.00107
Pb	208	3	He	0.006	0.0013	280.02	0.0327	0.00107
Pb	208	3	He	0.008	0.0013	270.01	0.0327	0.00107
U	238	3	He	0	0.0001	20.00	0.0493	7.55E-05
U	238	3	He	-0.002	0	0.00	0.0493	7.55E-05
U	238	3	He	-0.001	0	10.00	0.0493	7.55E-05
Sc	45	1	No Gas			2534637.62		
Sc	45	1	No Gas			2557539.49		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2496692.93		
Ge	72	1	No Gas			1205998.81		
Ge	72	1	No Gas			1222474.36		
Ge	72	1	No Gas			1194010.92		
Sc	45	2	H2			182257.65		
Sc	45	2	H2			182372.09		
Sc	45	2	H2			179598.06		
Ge	72	2	H2			156023.93		
Ge	72	2	H2			157822.36		
Ge	72	2	H2			158177.69		
In	115	2	H2			391809.13		
In	115	2	H2			387626.17		
In	115	2	H2			388525.50		
Sc	45	3	He			48852.32		
Sc	45	3	He			47809.07		
Sc	45	3	He			47026.84		
Ge	72	3	He			83101.11		
Ge	72	3	He			81119.95		
Ge	72	3	He			81884.60		
In	115	3	He			87706.29		
In	115	3	He			86710.38		
In	115	3	He			85995.44		
Tb	159	3	He			400671.52		
Tb	159	3	He			392201.44		
Tb	159	3	He			393680.78		
Bi	209	3	He			306904.04		
Bi	209	3	He			304929.60		
Bi	209	3	He			305855.68		

Quantitation Report

Data File Name	111_CCV.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	8/10/2023 2:21:07 PM
Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

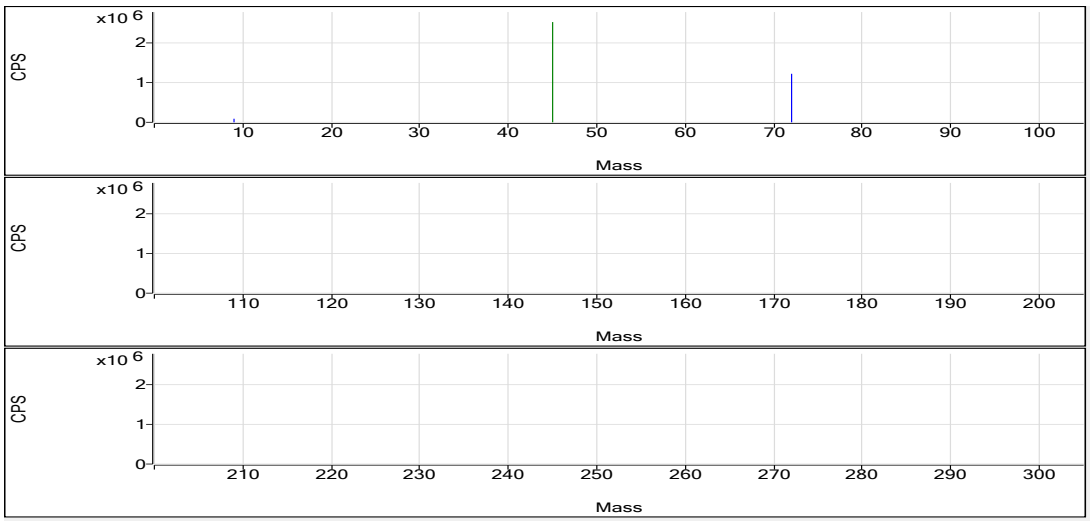
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	46.543	ppb	0.3	89563.14	0.0355	Pulse	0.5000	3
Se	78	72	H2	50.789	ppb	1.9	3429.75	0.0212	Pulse	1.5000	3
Na	23	45	He	4833.708	ppb	1.3	846901.13	17.6356	Pulse	0.1000	3
Mg	24	45	He	5007.187	ppb	1.8	431590.33	8.9880	Pulse	0.1000	3
Al	27	45	He	4924.868	ppb	0.8	138398.27	2.8819	Pulse	0.1000	3
K	39	45	He	5016.159	ppb	0.9	299450.64	6.2355	Pulse	0.1000	3
Ca	44	45	He	5161.628	ppb	1.8	16877.06	0.3514	Pulse	0.1000	3
Ti	47	45	He	5058.676	ppb	2.0	130431.54	2.7163	Pulse	0.1000	3
V	51	45	He	510.854	ppb	1.2	537438.00	11.1917	Pulse	0.5000	3
Cr	52	45	He	488.313	ppb	0.8	704040.20	14.6604	Pulse	0.1000	3
Mn	55	45	He	506.156	ppb	1.3	312072.78	6.4986	Pulse	0.1000	3
Fe	57	45	He	5135.625	ppb	1.1	143353.39	2.9852	Pulse	0.1000	3
Co	59	45	He	493.683	ppb	1.5	1334365.29	27.7877	Pulse	0.1000	3
Ni	60	72	He	520.527	ppb	0.4	376993.39	4.4706	Pulse	0.1000	3
Cu	63	72	He	496.024	ppb	0.6	1074176.52	12.7382	Pulse	0.1000	3
Zn	66	72	He	512.741	ppb	0.9	126221.69	1.4967	Pulse	0.1000	3
As	75	72	He	516.676	ppb	1.0	89335.21	1.0594	Pulse	0.5000	3
Sr	88	115	He	50.716	ppb	2.5	38884.22	0.4559	Pulse	0.1000	3
Mo	98	115	He	53.159	ppb	2.1	99430.47	1.1659	Pulse	0.1000	3
Ag	107	115	He	52.138	ppb	2.0	206762.07	2.4243	Pulse	0.1000	3
Cd	111	115	He	52.025	ppb	2.3	23723.50	0.2782	Pulse	0.5000	3
Sn	120	115	He	51.881	ppb	2.9	71300.26	0.8361	Pulse	0.1000	3
Sb	121	115	He	52.395	ppb	1.8	66399.83	0.7785	Pulse	0.1000	3
Ba	137	115	He	523.230	ppb	2.7	214163.05	2.5114	Pulse	0.1000	3
Tl	205	159	He	51.115	ppb	0.3	504034.54	1.2640	Pulse	0.1000	3
Pb	208	159	He	51.464	ppb	0.2	672093.75	1.6855	Pulse	0.1000	3
U	238	209	He	50.915	ppb	0.6	769823.64	2.5081	Pulse	0.1000	3

ISTD Table:

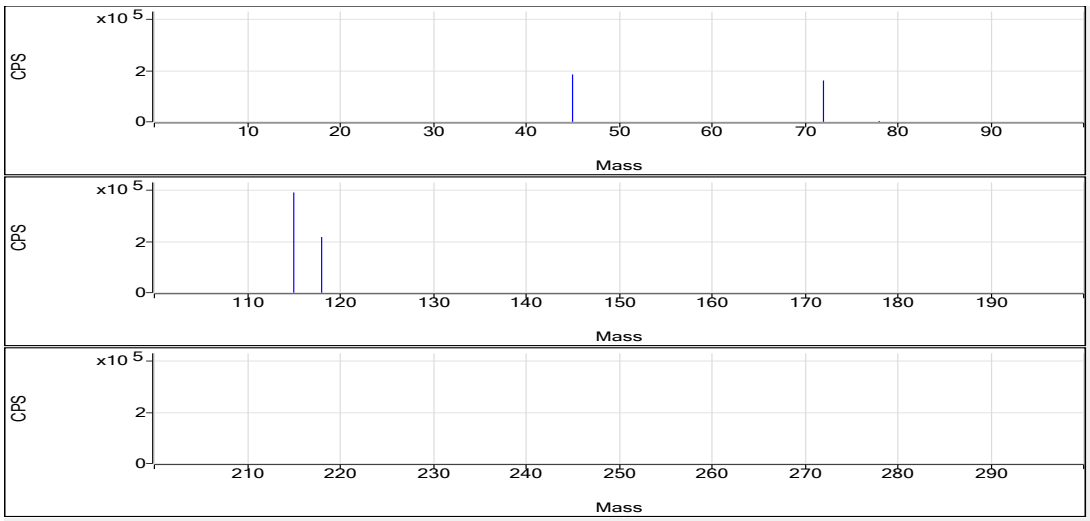
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2522460.59	0.6	105.2	Analog	0.1000	3
No Gas	Ge	72	1220697.64	0.7	105.8	Pulse	0.1000	3
H2	Sc	45	185424.91	0.8	99.2	Pulse	0.1000	3
H2	Ge	72	161840.34	1.0	98.9	Pulse	0.1000	3
H2	In	115	392402.90	0.3	100.9	Pulse	0.1000	3
He	Sc	45	48026.81	1.5	103.0	Pulse	0.1000	3
He	Ge	72	84328.98	0.7	103.9	Pulse	0.1000	3
He	In	115	85310.70	2.3	99.0	Pulse	0.1000	3
He	Tb	159	398755.78	0.5	100.0	Pulse	0.1000	3
He	Bi	209	306931.21	0.2	99.2	Pulse	0.1000	3

No Gas

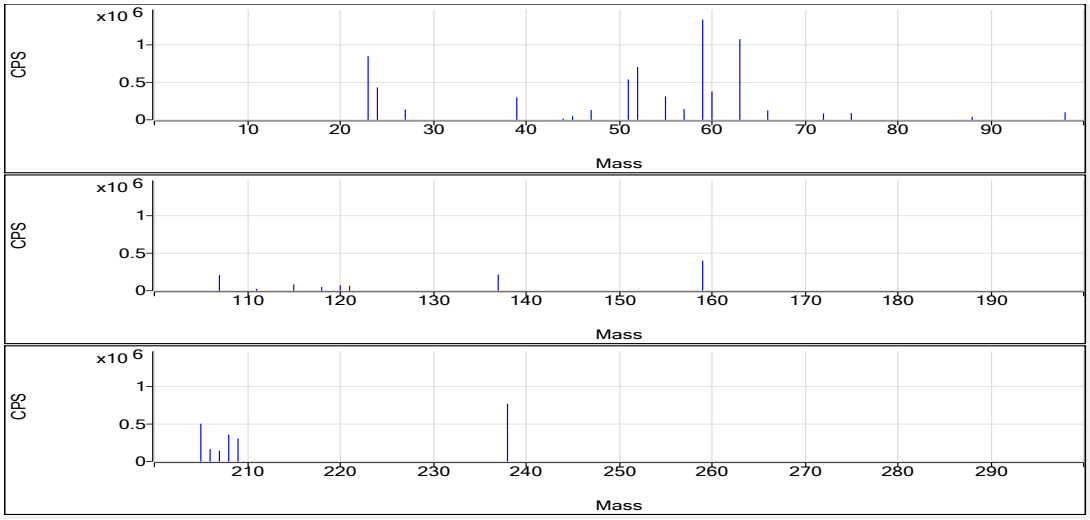


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	46.375	0.0354	89843.17	0.0008	4.685E-06
Be	9	1	No Gas	46.591	0.0355	89570.12	0.0008	4.685E-06
Be	9	1	No Gas	46.662	0.0356	89276.14	0.0008	4.685E-06
Se	78	2	H2	51.63	0.0215	3453.09	0.0004	1.219E-05
Se	78	2	H2	50.969	0.0213	3443.09	0.0004	1.219E-05
Se	78	2	H2	49.768	0.0208	3393.08	0.0004	1.219E-05
Na	23	3	He	4901.314	17.8774	850398.74	0.0036	0.3452
Na	23	3	He	4817.006	17.5758	837997.33	0.0036	0.3452
Na	23	3	He	4782.802	17.4535	852307.33	0.0036	0.3452
Mg	24	3	He	5086.232	9.1298	434291.36	0.0018	0.003497
Mg	24	3	He	5028.841	9.0269	430391.20	0.0018	0.003497
Mg	24	3	He	4906.487	8.8073	430088.43	0.0018	0.003497
Al	27	3	He	4970.094	2.9083	138344.10	0.0006	0.0006432
Al	27	3	He	4912.639	2.8747	137063.11	0.0006	0.0006432
Al	27	3	He	4891.872	2.8626	139787.61	0.0006	0.0006432
K	39	3	He	5061.874	6.2887	299145.17	0.0012	0.3951
K	39	3	He	5013.429	6.2323	297151.34	0.0012	0.3951
K	39	3	He	4973.173	6.1855	302055.41	0.0012	0.3951
Ca	44	3	He	5231.704	0.3561	16940.36	0.0001	0.002715
Ca	44	3	He	5054.79	0.3442	16409.94	0.0001	0.002715
Ca	44	3	He	5198.391	0.3539	17280.87	0.0001	0.002715
Ti	47	3	He	5144.837	2.7626	131411.69	0.0005	7.003E-05
Ti	47	3	He	5083.99	2.7299	130159.49	0.0005	7.003E-05
Ti	47	3	He	4947.202	2.6565	129723.45	0.0005	7.003E-05
V	51	3	He	514.306	11.2672	535961.13	0.0219	0.02486
V	51	3	He	514.712	11.276	537630.44	0.0219	0.02486
V	51	3	He	503.544	11.0319	538722.44	0.0219	0.02486
Cr	52	3	He	489.557	14.6977	699143.58	0.0299	0.03997
Cr	52	3	He	491.539	14.757	703598.27	0.0299	0.03997
Cr	52	3	He	483.843	14.5266	709378.74	0.0299	0.03997
Mn	55	3	He	513.044	6.587	313331.91	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	505.334	6.488	309342.85	0.0128	0.002639
Mn	55	3	He	500.089	6.4207	313543.57	0.0128	0.002639
Fe	57	3	He	5175.521	3.0084	143102.74	0.0006	0.001429
Fe	57	3	He	5160.336	2.9995	143014.82	0.0006	0.001429
Fe	57	3	He	5071.019	2.9476	143942.62	0.0006	0.001429
Co	59	3	He	499.428	28.1111	1337199.20	0.0563	0.002149
Co	59	3	He	496.239	27.9316	1331751.54	0.0563	0.002149
Co	59	3	He	485.381	27.3205	1334145.14	0.0563	0.002149
Ni	60	3	He	519.189	4.4591	378139.29	0.0086	0.002834
Ni	60	3	He	519.396	4.4609	377036.17	0.0086	0.002834
Ni	60	3	He	522.996	4.4918	375804.72	0.0086	0.002834
Cu	63	3	He	495.09	12.7143	1078187.95	0.0257	0.004757
Cu	63	3	He	493.79	12.6809	1071794.20	0.0257	0.004757
Cu	63	3	He	499.192	12.8196	1072547.41	0.0257	0.004757
Zn	66	3	He	517.496	1.5106	128098.29	0.0029	0.003818
Zn	66	3	He	511.841	1.4941	126282.33	0.0029	0.003818
Zn	66	3	He	508.887	1.4855	124284.46	0.0029	0.003818
As	75	3	He	515.45	1.0569	89626.32	0.002	0.0008061
As	75	3	He	512.25	1.0503	88775.16	0.002	0.0008061
As	75	3	He	522.328	1.071	89604.15	0.002	0.0008061
Sr	88	3	He	49.256	0.4428	38242.66	0.009	0.0009645
Sr	88	3	He	51.486	0.4628	38452.74	0.009	0.0009645
Sr	88	3	He	51.407	0.4621	39957.25	0.009	0.0009645
Mo	98	3	He	52.912	1.1604	100225.21	0.0219	0.0002706
Mo	98	3	He	54.37	1.1924	99077.88	0.0219	0.0002706
Mo	98	3	He	52.196	1.1447	98988.32	0.0219	0.0002706
Ag	107	3	He	51.433	2.3916	206558.16	0.0465	0.0006206
Ag	107	3	He	53.315	2.4791	205990.00	0.0465	0.0006206
Ag	107	3	He	51.664	2.4023	207738.06	0.0465	0.0006206
Cd	111	3	He	51.854	0.2773	23946.54	0.0053	0
Cd	111	3	He	53.296	0.285	23678.11	0.0053	0
Cd	111	3	He	50.925	0.2723	23545.86	0.0053	0
Sn	120	3	He	51.419	0.8288	71584.40	0.0158	0.01648
Sn	120	3	He	53.558	0.8626	71676.20	0.0158	0.01648
Sn	120	3	He	50.664	0.8169	70640.17	0.0158	0.01648
Sb	121	3	He	51.584	0.7665	66198.37	0.0149	0.0002698
Sb	121	3	He	53.4	0.7934	65927.46	0.0149	0.0002698
Sb	121	3	He	52.203	0.7757	67073.66	0.0149	0.0002698
Ba	137	3	He	513.793	2.4661	212993.16	0.0048	0.0002317
Ba	137	3	He	539.294	2.5885	215078.92	0.0048	0.0002317
Ba	137	3	He	516.604	2.4796	214417.07	0.0048	0.0002317
Tl	205	3	He	51.309	1.2688	504658.94	0.0247	0.0001339
Tl	205	3	He	50.965	1.2603	501185.58	0.0247	0.0001339
Tl	205	3	He	51.071	1.2629	506259.09	0.0247	0.0001339
Pb	208	3	He	51.451	1.685	360598.28	0.0327	0.00107
Pb	208	3	He	51.56	1.6886	357814.21	0.0327	0.00107
Pb	208	3	He	51.382	1.6828	362028.16	0.0327	0.00107
U	238	3	He	50.974	2.511	769764.60	0.0493	7.55E-05
U	238	3	He	50.565	2.4909	765857.18	0.0493	7.55E-05
U	238	3	He	51.207	2.5225	773849.13	0.0493	7.55E-05
Sc	45	1	No Gas			2539461.84		
Sc	45	1	No Gas			2519996.68		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2507923.24		
Ge	72	1	No Gas			1230789.90		
Ge	72	1	No Gas			1213028.11		
Ge	72	1	No Gas			1218274.90		
Sc	45	2	H2			186228.49		
Sc	45	2	H2			183757.40		
Sc	45	2	H2			186288.84		
Ge	72	2	H2			160270.11		
Ge	72	2	H2			161876.17		
Ge	72	2	H2			163374.73		
In	115	2	H2			392273.78		
In	115	2	H2			391143.39		
In	115	2	H2			393791.52		
Sc	45	3	He			47568.37		
Sc	45	3	He			47678.97		
Sc	45	3	He			48833.10		
Ge	72	3	He			84801.47		
Ge	72	3	He			84520.53		
Ge	72	3	He			83664.95		
In	115	3	He			86741.40		
In	115	3	He			83470.80		
In	115	3	He			86850.92		
Tb	159	3	He			397740.35		
Tb	159	3	He			397668.31		
Tb	159	3	He			400858.67		
Bi	209	3	He			306553.22		
Bi	209	3	He			307462.91		
Bi	209	3	He			306777.50		

Quantitation Report

Data File Name	112_CCB.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	8/10/2023 2:23:12 PM
Sample Name	CCB 4654618
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

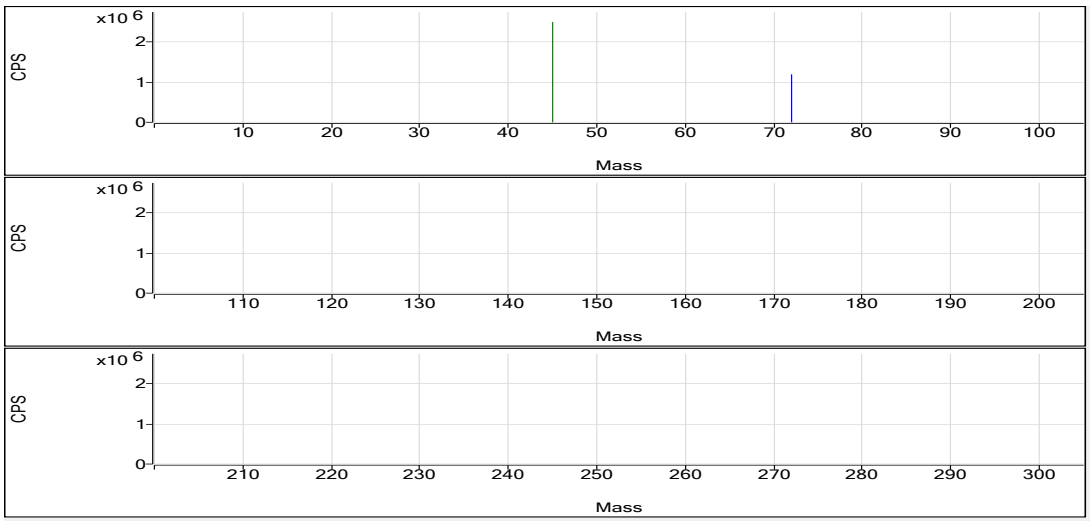
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.023	ppb	9.3	55.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.031	ppb	31.0	4.00	0.0000	Pulse	1.5000	3
Na	23	45	He	8.088	ppb	34.0	18088.20	0.3741	Pulse	0.1000	3
Mg	24	45	He	0.358	ppb	42.7	200.01	0.0041	Pulse	0.1000	3
Al	27	45	He	2.067	ppb	87.6	90.00	0.0019	Pulse	0.1000	3
K	39	45	He	-14.716	ppb	N/A	18275.36	0.3779	Pulse	0.1000	3
Ca	44	45	He	-0.433	ppb	N/A	130.01	0.0027	Pulse	0.1000	3
Ti	47	45	He	1.284	ppb	76.5	36.67	0.0008	Pulse	0.1000	3
V	51	45	He	-0.060	ppb	N/A	1139.39	0.0236	Pulse	0.5000	3
Cr	52	45	He	0.017	ppb	580.5	1956.86	0.0405	Pulse	0.1000	3
Mn	55	45	He	0.031	ppb	160.3	146.67	0.0030	Pulse	0.1000	3
Fe	57	45	He	2.177	ppb	61.6	130.01	0.0027	Pulse	0.1000	3
Co	59	45	He	0.040	ppb	28.9	213.34	0.0044	Pulse	0.1000	3
Ni	60	72	He	0.002	ppb	3164.5	233.34	0.0028	Pulse	0.1000	3
Cu	63	72	He	0.102	ppb	58.8	603.37	0.0074	Pulse	0.1000	3
Zn	66	72	He	3.828	ppb	12.4	1223.44	0.0150	Pulse	0.1000	3
As	75	72	He	0.182	ppb	58.8	96.67	0.0012	Pulse	0.5000	3
Sr	88	115	He	-0.043	ppb	N/A	50.00	0.0006	Pulse	0.1000	3
Mo	98	115	He	0.134	ppb	23.0	276.68	0.0032	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	N/A	53.33	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.006	ppb	115.0	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.018	ppb	301.9	1450.13	0.0168	Pulse	0.1000	3
Sb	121	115	He	0.031	ppb	79.3	63.33	0.0007	Pulse	0.1000	3
Ba	137	115	He	0.032	ppb	241.5	33.33	0.0004	Pulse	0.1000	3
Tl	205	159	He	0.072	ppb	13.0	756.72	0.0019	Pulse	0.1000	3
Pb	208	159	He	0.009	ppb	119.6	533.36	0.0014	Pulse	0.1000	3
U	238	209	He	0.045	ppb	10.2	706.71	0.0023	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2500323.97	1.1	104.2	Analog	0.1000	3
No Gas	Ge	72	1196401.23	1.0	103.7	Pulse	0.1000	3
H2	Sc	45	182031.53	1.2	97.3	Pulse	0.1000	3
H2	Ge	72	157797.22	1.3	96.4	Pulse	0.1000	3
H2	In	115	388175.77	1.2	99.8	Pulse	0.1000	3
He	Sc	45	48361.10	1.7	103.7	Pulse	0.1000	3
He	Ge	72	81823.94	1.6	100.8	Pulse	0.1000	3
He	In	115	86514.12	0.7	100.4	Pulse	0.1000	3
He	Tb	159	394589.34	0.8	99.0	Pulse	0.1000	3
He	Bi	209	308153.69	0.3	99.6	Pulse	0.1000	3

No Gas



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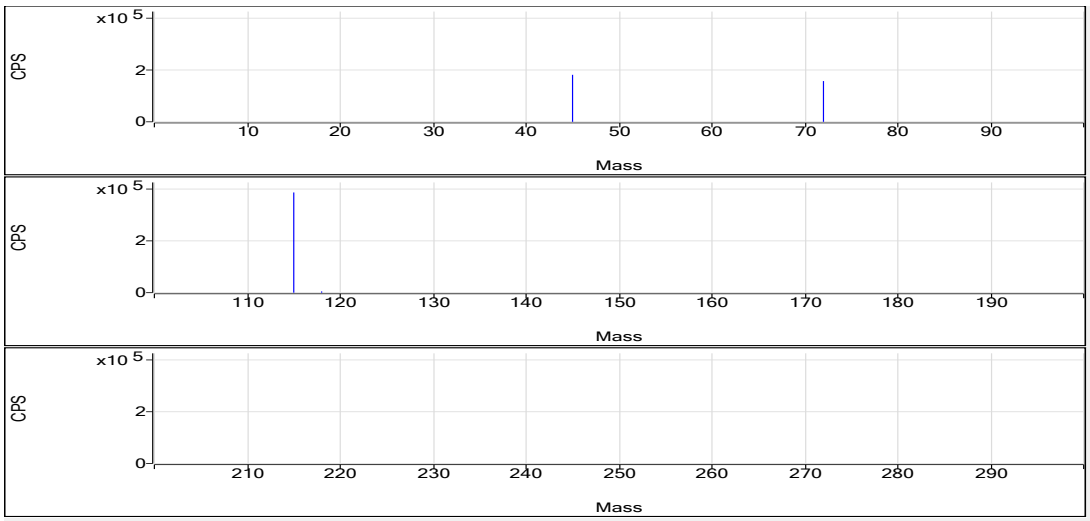
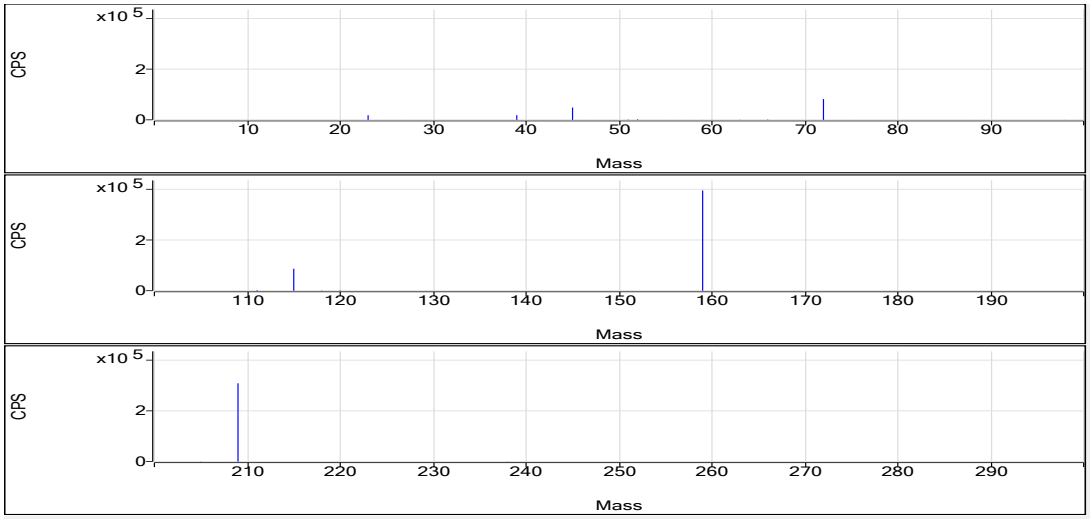


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.023	0	54.00	0.0008	4.685E-06
Be	9	1	No Gas	0.021	0	52.00	0.0008	4.685E-06
Be	9	1	No Gas	0.025	0	60.00	0.0008	4.685E-06
Se	78	2	H2	0.031	0	4.00	0.0004	1.219E-05
Se	78	2	H2	0.022	0	3.33	0.0004	1.219E-05
Se	78	2	H2	0.042	0	4.67	0.0004	1.219E-05
Na	23	3	He	5.382	0.3644	17941.40	0.0036	0.3452
Na	23	3	He	10.876	0.3841	18512.11	0.0036	0.3452
Na	23	3	He	8.007	0.3738	17811.08	0.0036	0.3452
Mg	24	3	He	0.202	0.0039	190.01	0.0018	0.003497
Mg	24	3	He	0.364	0.0041	200.01	0.0018	0.003497
Mg	24	3	He	0.508	0.0044	210.01	0.0018	0.003497
Al	27	3	He	3.067	0.0024	120.01	0.0006	0.0006432
Al	27	3	He	3.156	0.0025	120.00	0.0006	0.0006432
Al	27	3	He	-0.023	0.0006	30.00	0.0006	0.0006432
K	39	3	He	-20.562	0.3711	18272.08	0.0012	0.3951
K	39	3	He	-6.591	0.3874	18672.54	0.0012	0.3951
K	39	3	He	-16.995	0.3753	17881.47	0.0012	0.3951
Ca	44	3	He	1.907	0.0028	140.01	0.0001	0.002715
Ca	44	3	He	2.809	0.0029	140.01	0.0001	0.002715
Ca	44	3	He	-6.016	0.0023	110.00	0.0001	0.002715
Ti	47	3	He	1.383	0.0008	40.00	0.0005	7.003E-05
Ti	47	3	He	0.256	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	2.215	0.0013	60.00	0.0005	7.003E-05
V	51	3	He	-0.03	0.0242	1192.06	0.0219	0.02486
V	51	3	He	-0.073	0.0233	1122.05	0.0219	0.02486
V	51	3	He	-0.077	0.0232	1104.05	0.0219	0.02486
Cr	52	3	He	0.035	0.041	2020.22	0.0299	0.03997
Cr	52	3	He	-0.088	0.0373	1800.17	0.0299	0.03997
Cr	52	3	He	0.102	0.043	2050.20	0.0299	0.03997
Mn	55	3	He	0	0.0026	130.00	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.005	0.0027	130.01	0.0128	0.002639
Mn	55	3	He	0.089	0.0038	180.01	0.0128	0.002639
Fe	57	3	He	1.736	0.0024	120.01	0.0006	0.001429
Fe	57	3	He	1.112	0.0021	100.00	0.0006	0.001429
Fe	57	3	He	3.682	0.0036	170.01	0.0006	0.001429
Co	59	3	He	0.052	0.0051	250.01	0.0563	0.002149
Co	59	3	He	0.039	0.0044	210.01	0.0563	0.002149
Co	59	3	He	0.029	0.0038	180.01	0.0563	0.002149
Ni	60	3	He	0.007	0.0029	240.01	0.0086	0.002834
Ni	60	3	He	-0.055	0.0024	190.01	0.0086	0.002834
Ni	60	3	He	0.053	0.0033	270.01	0.0086	0.002834
Cu	63	3	He	0.143	0.0084	700.05	0.0257	0.004757
Cu	63	3	He	0.129	0.0081	650.04	0.0257	0.004757
Cu	63	3	He	0.033	0.0056	460.03	0.0257	0.004757
Zn	66	3	He	3.655	0.0145	1200.11	0.0029	0.003818
Zn	66	3	He	4.367	0.0165	1330.11	0.0029	0.003818
Zn	66	3	He	3.463	0.0139	1140.09	0.0029	0.003818
As	75	3	He	0.3	0.0014	118.00	0.002	0.0008061
As	75	3	He	0.092	0.001	80.00	0.002	0.0008061
As	75	3	He	0.154	0.0011	92.00	0.002	0.0008061
Sr	88	3	He	-0.056	0.0005	40.00	0.009	0.0009645
Sr	88	3	He	-0.082	0.0002	20.00	0.009	0.0009645
Sr	88	3	He	0.009	0.001	90.00	0.009	0.0009645
Mo	98	3	He	0.108	0.0026	230.01	0.0219	0.0002706
Mo	98	3	He	0.168	0.0039	340.02	0.0219	0.0002706
Mo	98	3	He	0.125	0.003	260.01	0.0219	0.0002706
Ag	107	3	He	0.001	0.0007	60.00	0.0465	0.0006206
Ag	107	3	He	0.007	0.0009	80.00	0.0465	0.0006206
Ag	107	3	He	-0.008	0.0002	20.00	0.0465	0.0006206
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.013	0.0001	6.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Sn	120	3	He	-0.019	0.0162	1410.13	0.0158	0.01648
Sn	120	3	He	0.082	0.0178	1530.14	0.0158	0.01648
Sn	120	3	He	-0.008	0.0164	1410.13	0.0158	0.01648
Sb	121	3	He	0.059	0.0011	100.00	0.0149	0.0002698
Sb	121	3	He	0.013	0.0005	40.00	0.0149	0.0002698
Sb	121	3	He	0.021	0.0006	50.00	0.0149	0.0002698
Ba	137	3	He	-0.024	0.0001	10.00	0.0048	0.0002317
Ba	137	3	He	0.121	0.0008	70.00	0.0048	0.0002317
Ba	137	3	He	0	0.0002	20.00	0.0048	0.0002317
Tl	205	3	He	0.075	0.002	780.06	0.0247	0.0001339
Tl	205	3	He	0.062	0.0017	650.04	0.0247	0.0001339
Tl	205	3	He	0.08	0.0021	840.06	0.0247	0.0001339
Pb	208	3	He	-0.001	0.001	160.01	0.0327	0.00107
Pb	208	3	He	0.02	0.0017	340.02	0.0327	0.00107
Pb	208	3	He	0.007	0.0013	250.01	0.0327	0.00107
U	238	3	He	0.04	0.002	630.03	0.0493	7.55E-05
U	238	3	He	0.046	0.0024	730.05	0.0493	7.55E-05
U	238	3	He	0.049	0.0025	760.05	0.0493	7.55E-05
Sc	45	1	No Gas			2469122.62		
Sc	45	1	No Gas			2517753.09		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2514096.21		
Ge	72	1	No Gas			1183820.06		
Ge	72	1	No Gas			1206390.69		
Ge	72	1	No Gas			1198992.95		
Sc	45	2	H2			181716.38		
Sc	45	2	H2			180082.46		
Sc	45	2	H2			184295.74		
Ge	72	2	H2			159693.71		
Ge	72	2	H2			155590.12		
Ge	72	2	H2			158107.84		
In	115	2	H2			393172.69		
In	115	2	H2			384532.49		
In	115	2	H2			386822.14		
Sc	45	3	He			49234.21		
Sc	45	3	He			48200.62		
Sc	45	3	He			47648.47		
Ge	72	3	He			83001.42		
Ge	72	3	He			80456.09		
Ge	72	3	He			82014.32		
In	115	3	He			87193.40		
In	115	3	He			86136.91		
In	115	3	He			86237.08		
Tb	159	3	He			394405.97		
Tb	159	3	He			391656.17		
Tb	159	3	He			397705.89		
Bi	209	3	He			308716.03		
Bi	209	3	He			308794.02		
Bi	209	3	He			306951.03		

Quantitation Report

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Acq Time	8/10/2023 2:28:32 PM
Sample Name	MB 410-405009/1-A
Sample Type	Sample
Comment	D2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

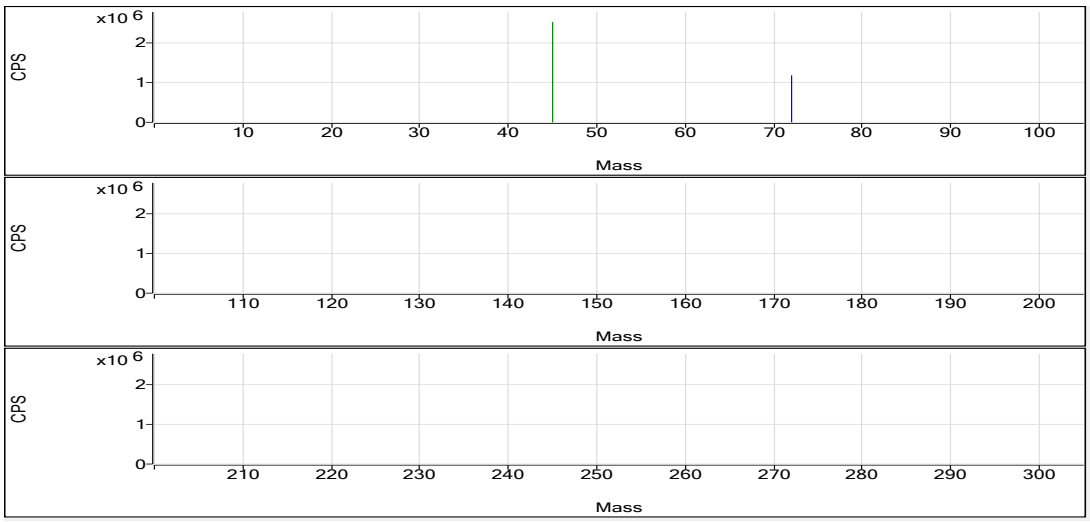
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.006	ppb	62.3	23.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.013	ppb	N/A	1.11	0.0000	Pulse	1.5000	3
Na	23	45	He	0.063	ppb	4949.4	16543.07	0.3454	Pulse	0.1000	3
Mg	24	45	He	0.421	ppb	98.7	203.34	0.0043	Pulse	0.1000	3
Al	27	45	He	15.441	ppb	18.0	463.36	0.0097	Pulse	0.1000	3
K	39	45	He	-6.611	ppb	N/A	18559.04	0.3874	Pulse	0.1000	3
Ca	44	45	He	2.983	ppb	395.9	140.00	0.0029	Pulse	0.1000	3
Ti	47	45	He	0.128	ppb	174.6	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	-0.223	ppb	N/A	958.04	0.0200	Pulse	0.5000	3
Cr	52	45	He	-0.238	ppb	N/A	1573.47	0.0328	Pulse	0.1000	3
Mn	55	45	He	-0.054	ppb	N/A	93.33	0.0019	Pulse	0.1000	3
Fe	57	45	He	1.479	ppb	78.9	110.00	0.0023	Pulse	0.1000	3
Co	59	45	He	-0.016	ppb	N/A	60.00	0.0013	Pulse	0.1000	3
Ni	60	72	He	-0.038	ppb	N/A	210.01	0.0025	Pulse	0.1000	3
Cu	63	72	He	0.137	ppb	29.4	693.38	0.0083	Pulse	0.1000	3
Zn	66	72	He	3.350	ppb	18.5	1136.75	0.0136	Pulse	0.1000	3
As	75	72	He	-0.114	ppb	N/A	48.00	0.0006	Pulse	0.5000	3
Sr	88	115	He	-0.031	ppb	N/A	60.00	0.0007	Pulse	0.1000	3
Mo	98	115	He	0.074	ppb	34.5	166.68	0.0019	Pulse	0.1000	3
Ag	107	115	He	-0.004	ppb	N/A	36.67	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.001	ppb	173.2	0.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.255	ppb	N/A	1090.08	0.0124	Pulse	0.1000	3
Sb	121	115	He	0.000	ppb	N/A	23.33	0.0003	Pulse	0.1000	3
Ba	137	115	He	-0.025	ppb	N/A	10.00	0.0001	Pulse	0.1000	3
Tl	205	159	He	0.008	ppb	94.9	130.01	0.0003	Pulse	0.1000	3
Pb	208	159	He	0.009	ppb	22.8	556.70	0.0014	Pulse	0.1000	3
U	238	209	He	0.004	ppb	18.0	80.00	0.0003	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2518712.77	1.2	105.0	Analog	0.1000	3
No Gas	Ge	72	1179788.68	0.8	102.3	Pulse	0.1000	3
H2	Sc	45	188446.34	2.0	100.8	Pulse	0.1000	3
H2	Ge	72	162599.88	0.7	99.3	Pulse	0.1000	3
H2	In	115	399020.75	1.2	102.6	Pulse	0.1000	3
He	Sc	45	47916.28	1.8	102.7	Pulse	0.1000	3
He	Ge	72	83762.09	0.1	103.2	Pulse	0.1000	3
He	In	115	87720.73	1.6	101.8	Pulse	0.1000	3
He	Tb	159	405999.67	0.7	101.9	Pulse	0.1000	3
He	Bi	209	315045.30	0.6	101.9	Pulse	0.1000	3

No Gas



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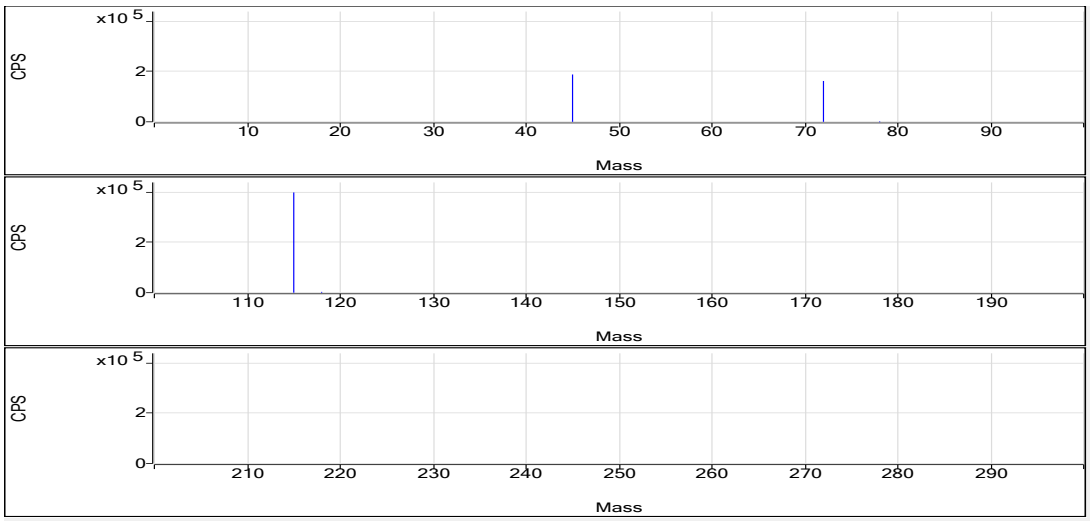
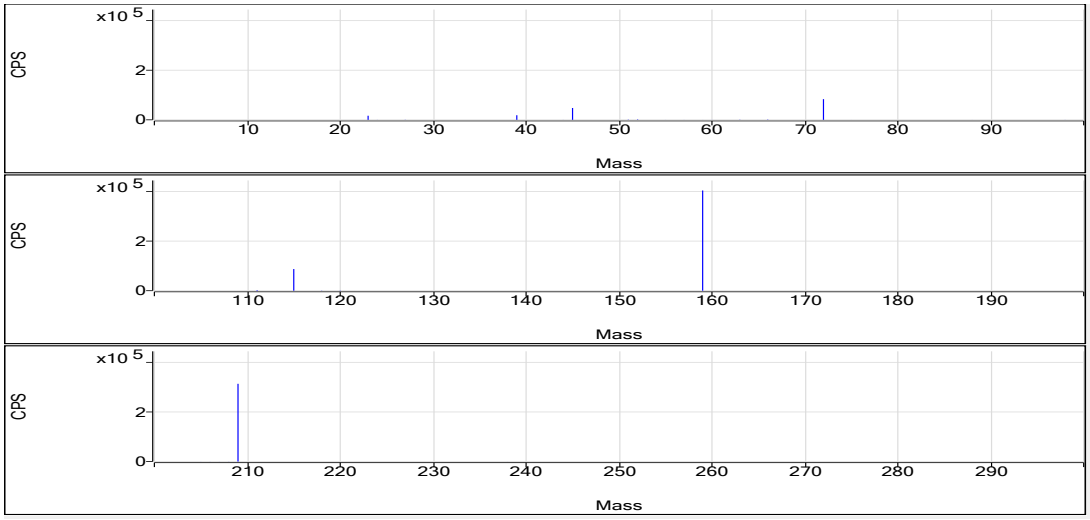


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.01	0	30.00	0.0008	4.685E-06
Be	9	1	No Gas	0.006	0	24.00	0.0008	4.685E-06
Be	9	1	No Gas	0.002	0	16.00	0.0008	4.685E-06
Se	78	2	H2	-0.029	0	0.00	0.0004	1.219E-05
Se	78	2	H2	0	0	2.00	0.0004	1.219E-05
Se	78	2	H2	-0.01	0	1.33	0.0004	1.219E-05
Na	23	3	He	-3.448	0.3328	16259.44	0.0036	0.3452
Na	23	3	He	1.179	0.3494	16699.90	0.0036	0.3452
Na	23	3	He	2.457	0.3539	16669.87	0.0036	0.3452
Mg	24	3	He	0.105	0.0037	180.01	0.0018	0.003497
Mg	24	3	He	0.267	0.004	190.01	0.0018	0.003497
Mg	24	3	He	0.891	0.0051	240.01	0.0018	0.003497
Al	27	3	He	13.247	0.0084	410.02	0.0006	0.0006432
Al	27	3	He	18.57	0.0115	550.03	0.0006	0.0006432
Al	27	3	He	14.507	0.0091	430.02	0.0006	0.0006432
K	39	3	He	-9.627	0.3839	18752.54	0.0012	0.3951
K	39	3	He	-7.214	0.3867	18482.27	0.0012	0.3951
K	39	3	He	-2.993	0.3916	18442.32	0.0012	0.3951
Ca	44	3	He	14.356	0.0037	180.01	0.0001	0.002715
Ca	44	3	He	-9.221	0.0021	100.00	0.0001	0.002715
Ca	44	3	He	3.814	0.003	140.00	0.0001	0.002715
Ti	47	3	He	0.251	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.265	0.0002	10.00	0.0005	7.003E-05
V	51	3	He	-0.24	0.0196	958.04	0.0219	0.02486
V	51	3	He	-0.211	0.0203	968.04	0.0219	0.02486
V	51	3	He	-0.217	0.0201	948.04	0.0219	0.02486
Cr	52	3	He	-0.282	0.0315	1540.14	0.0299	0.03997
Cr	52	3	He	-0.175	0.0347	1660.15	0.0299	0.03997
Cr	52	3	He	-0.257	0.0323	1520.12	0.0299	0.03997
Mn	55	3	He	-0.094	0.0014	70.00	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.023	0.0029	140.00	0.0128	0.002639
Mn	55	3	He	-0.09	0.0015	70.00	0.0128	0.002639
Fe	57	3	He	2.826	0.0031	150.01	0.0006	0.001429
Fe	57	3	He	0.782	0.0019	90.00	0.0006	0.001429
Fe	57	3	He	0.83	0.0019	90.00	0.0006	0.001429
Co	59	3	He	-0.027	0.0006	30.00	0.0563	0.002149
Co	59	3	He	-0.001	0.0021	100.00	0.0563	0.002149
Co	59	3	He	-0.019	0.0011	50.00	0.0563	0.002149
Ni	60	3	He	-0.038	0.0025	210.01	0.0086	0.002834
Ni	60	3	He	-0.024	0.0026	220.01	0.0086	0.002834
Ni	60	3	He	-0.052	0.0024	200.01	0.0086	0.002834
Cu	63	3	He	0.103	0.0074	620.05	0.0257	0.004757
Cu	63	3	He	0.126	0.008	670.04	0.0257	0.004757
Cu	63	3	He	0.182	0.0094	790.05	0.0257	0.004757
Zn	66	3	He	3.247	0.0133	1110.08	0.0029	0.003818
Zn	66	3	He	2.788	0.0119	1000.07	0.0029	0.003818
Zn	66	3	He	4.014	0.0155	1300.11	0.0029	0.003818
As	75	3	He	-0.055	0.0007	58.00	0.002	0.0008061
As	75	3	He	-0.079	0.0006	54.00	0.002	0.0008061
As	75	3	He	-0.207	0.0004	32.00	0.002	0.0008061
Sr	88	3	He	-0.069	0.0003	30.00	0.009	0.0009645
Sr	88	3	He	-0.033	0.0007	60.00	0.009	0.0009645
Sr	88	3	He	0.008	0.001	90.00	0.009	0.0009645
Mo	98	3	He	0.082	0.0021	180.01	0.0219	0.0002706
Mo	98	3	He	0.095	0.0024	210.01	0.0219	0.0002706
Mo	98	3	He	0.046	0.0013	110.01	0.0219	0.0002706
Ag	107	3	He	-0.004	0.0005	40.00	0.0465	0.0006206
Ag	107	3	He	-0.004	0.0004	40.00	0.0465	0.0006206
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Sn	120	3	He	-0.268	0.0122	1070.07	0.0158	0.01648
Sn	120	3	He	-0.362	0.0108	960.06	0.0158	0.01648
Sn	120	3	He	-0.136	0.0143	1240.10	0.0158	0.01648
Sb	121	3	He	-0.003	0.0002	20.00	0.0149	0.0002698
Sb	121	3	He	0.004	0.0003	30.00	0.0149	0.0002698
Sb	121	3	He	-0.003	0.0002	20.00	0.0149	0.0002698
Ba	137	3	He	-0.001	0.0002	20.00	0.0048	0.0002317
Ba	137	3	He	-0.025	0.0001	10.00	0.0048	0.0002317
Ba	137	3	He	-0.048	0	0.00	0.0048	0.0002317
Tl	205	3	He	0.009	0.0004	150.01	0.0247	0.0001339
Tl	205	3	He	0.013	0.0005	190.01	0.0247	0.0001339
Tl	205	3	He	0	0.0001	50.00	0.0247	0.0001339
Pb	208	3	He	0.012	0.0014	300.02	0.0327	0.00107
Pb	208	3	He	0.009	0.0013	260.02	0.0327	0.00107
Pb	208	3	He	0.008	0.0013	270.01	0.0327	0.00107
U	238	3	He	0.003	0.0002	70.00	0.0493	7.55E-05
U	238	3	He	0.004	0.0003	80.00	0.0493	7.55E-05
U	238	3	He	0.004	0.0003	90.00	0.0493	7.55E-05
Sc	45	1	No Gas			2507663.87		
Sc	45	1	No Gas			2494903.24		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2553571.21		
Ge	72	1	No Gas			1181641.31		
Ge	72	1	No Gas			1169154.12		
Ge	72	1	No Gas			1188570.61		
Sc	45	2	H2			185225.13		
Sc	45	2	H2			187474.08		
Sc	45	2	H2			192639.80		
Ge	72	2	H2			161373.03		
Ge	72	2	H2			162860.75		
Ge	72	2	H2			163565.87		
In	115	2	H2			394980.81		
In	115	2	H2			397797.65		
In	115	2	H2			404283.78		
Sc	45	3	He			48852.81		
Sc	45	3	He			47798.98		
Sc	45	3	He			47097.06		
Ge	72	3	He			83644.70		
Ge	72	3	He			83795.37		
Ge	72	3	He			83846.19		
In	115	3	He			87434.70		
In	115	3	He			89215.37		
In	115	3	He			86528.80		
Tb	159	3	He			407567.06		
Tb	159	3	He			407710.50		
Tb	159	3	He			402721.44		
Bi	209	3	He			316767.92		
Bi	209	3	He			312878.14		
Bi	209	3	He			315489.84		

Quantitation Report

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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

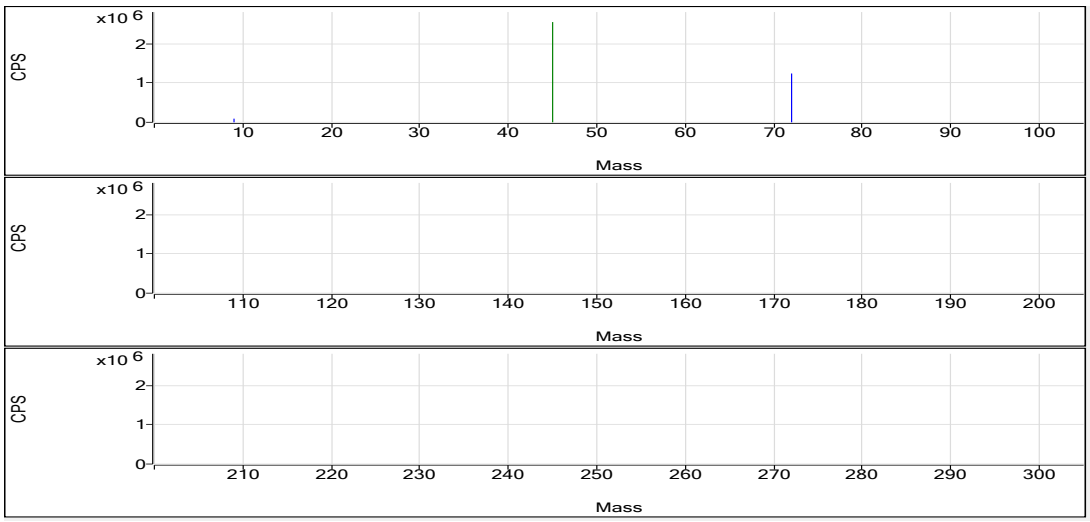
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	47.527	ppb	2.0	92280.07	0.0363	Pulse	0.5000	3
Se	78	72	H2	100.732	ppb	0.3	7130.89	0.0420	Pulse	1.5000	3
Na	23	45	He	4680.196	ppb	1.0	849513.66	17.0864	Pulse	0.1000	3
Mg	24	45	He	4907.422	ppb	1.1	437965.06	8.8090	Pulse	0.1000	3
Al	27	45	He	4849.909	ppb	2.2	141088.23	2.8380	Pulse	0.1000	3
K	39	45	He	4900.723	ppb	1.6	303326.33	6.1011	Pulse	0.1000	3
Ca	44	45	He	4941.137	ppb	1.4	16730.13	0.3365	Pulse	0.1000	3
Ti	47	45	He	508.842	ppb	2.1	13586.80	0.2733	Pulse	0.1000	3
V	51	45	He	501.875	ppb	1.3	546661.58	10.9954	Pulse	0.5000	3
Cr	52	45	He	473.379	ppb	1.4	706640.43	14.2133	Pulse	0.1000	3
Mn	55	45	He	498.124	ppb	1.1	317972.36	6.3955	Pulse	0.1000	3
Fe	57	45	He	4995.319	ppb	0.9	144372.47	2.9037	Pulse	0.1000	3
Co	59	45	He	483.312	ppb	1.4	1352497.27	27.2041	Pulse	0.1000	3
Ni	60	72	He	500.503	ppb	0.1	377597.13	4.2987	Pulse	0.1000	3
Cu	63	72	He	479.527	ppb	0.3	1081719.57	12.3147	Pulse	0.1000	3
Zn	66	72	He	508.657	ppb	0.6	130426.49	1.4848	Pulse	0.1000	3
As	75	72	He	505.299	ppb	0.4	91009.59	1.0361	Pulse	0.5000	3
Sr	88	115	He	51.719	ppb	0.7	40676.07	0.4649	Pulse	0.1000	3
Mo	98	115	He	51.008	ppb	1.1	97880.04	1.1187	Pulse	0.1000	3
Ag	107	115	He	50.974	ppb	0.9	207391.46	2.3703	Pulse	0.1000	3
Cd	111	115	He	52.088	ppb	1.6	24367.24	0.2785	Pulse	0.5000	3
Sn	120	115	He	103.190	ppb	1.0	144086.92	1.6467	Pulse	0.1000	3
Sb	121	115	He	99.595	ppb	1.4	129457.53	1.4796	Pulse	0.1000	3
Ba	137	115	He	521.707	ppb	1.3	219092.37	2.5041	Pulse	0.1000	3
Tl	205	159	He	102.444	ppb	0.4	1020790.61	2.5332	Pulse	0.1000	3
Pb	208	159	He	51.286	ppb	0.5	676831.82	1.6796	Pulse	0.1000	3
U	238	209	He	49.669	ppb	0.8	769005.27	2.4468	Pulse	0.1000	3

ISTD Table:

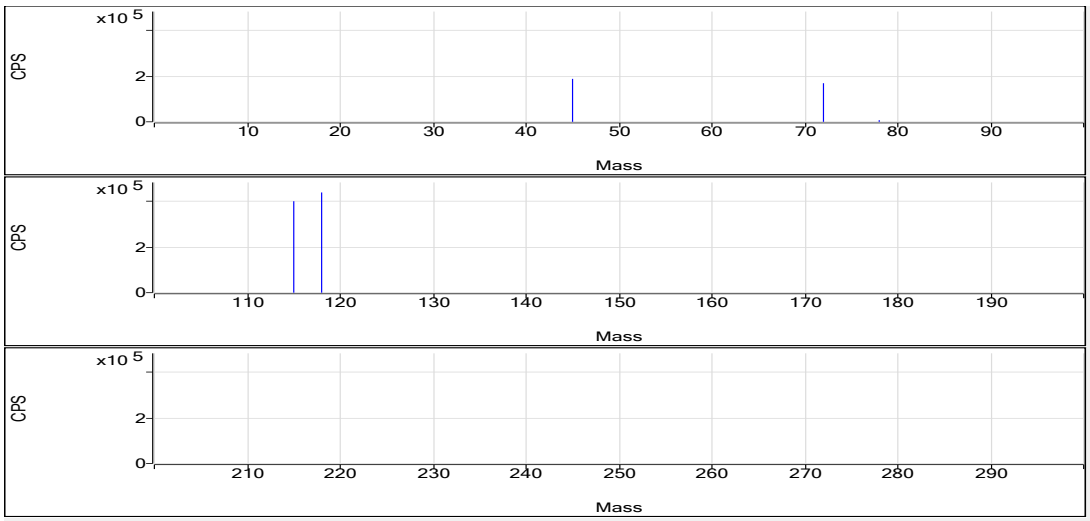
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2545915.64	2.3	106.1	Analog	0.1000	3
No Gas	Ge	72	1239523.13	0.9	107.5	Pulse	0.1000	3
H2	Sc	45	188784.74	0.6	101.0	Pulse	0.1000	3
H2	Ge	72	169687.19	0.9	103.6	Pulse	0.1000	3
H2	In	115	402016.83	0.4	103.3	Pulse	0.1000	3
He	Sc	45	49722.17	1.2	106.6	Pulse	0.1000	3
He	Ge	72	87839.31	0.2	108.2	Pulse	0.1000	3
He	In	115	87502.10	1.1	101.5	Pulse	0.1000	3
He	Tb	159	402964.30	0.2	101.1	Pulse	0.1000	3
He	Bi	209	314309.13	0.8	101.6	Pulse	0.1000	3

No Gas

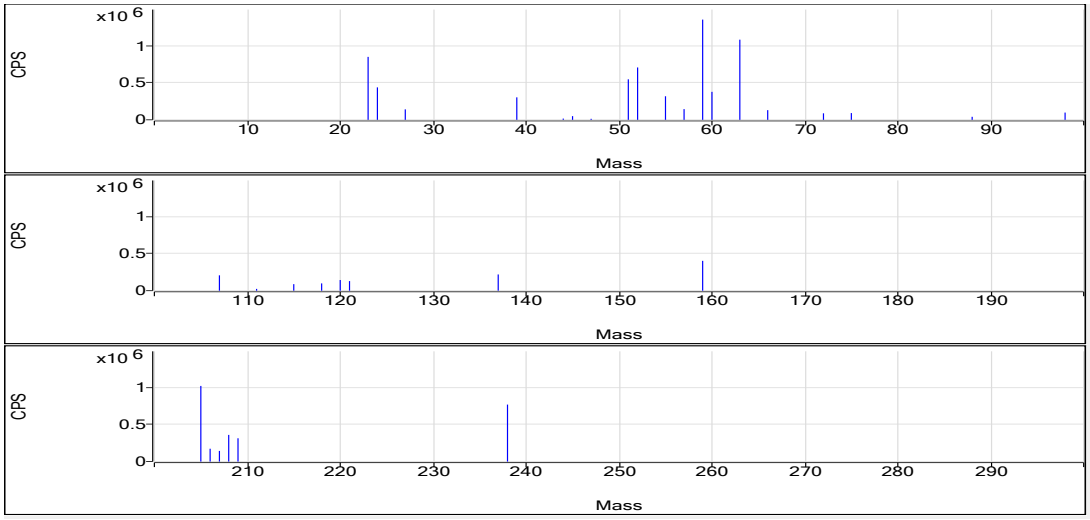


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	47.88	0.0365	92221.83	0.0008	4.685E-06
Be	9	1	No Gas	46.464	0.0354	92577.87	0.0008	4.685E-06
Be	9	1	No Gas	48.236	0.0368	92040.50	0.0008	4.685E-06
Se	78	2	H2	100.679	0.042	7196.48	0.0004	1.219E-05
Se	78	2	H2	101.015	0.0421	7093.10	0.0004	1.219E-05
Se	78	2	H2	100.5	0.0419	7103.10	0.0004	1.219E-05
Na	23	3	He	4630.955	16.9103	851728.11	0.0036	0.3452
Na	23	3	He	4690.928	17.1248	848448.66	0.0036	0.3452
Na	23	3	He	4718.706	17.2242	848364.21	0.0036	0.3452
Mg	24	3	He	4849.835	8.7057	438481.36	0.0018	0.003497
Mg	24	3	He	4914.4	8.8215	437061.17	0.0018	0.003497
Mg	24	3	He	4958.032	8.8998	438352.65	0.0018	0.003497
Al	27	3	He	4729.17	2.7674	139385.29	0.0006	0.0006432
Al	27	3	He	4893.729	2.8636	141879.08	0.0006	0.0006432
Al	27	3	He	4926.829	2.883	142000.33	0.0006	0.0006432
K	39	3	He	4822.231	6.0097	302693.80	0.0012	0.3951
K	39	3	He	4899.963	6.1002	302235.13	0.0012	0.3951
K	39	3	He	4979.973	6.1934	305050.05	0.0012	0.3951
Ca	44	3	He	4871.072	0.3318	16710.14	0.0001	0.002715
Ca	44	3	He	5012.414	0.3413	16910.33	0.0001	0.002715
Ca	44	3	He	4939.926	0.3364	16569.92	0.0001	0.002715
Ti	47	3	He	497.067	0.267	13446.57	0.0005	7.003E-05
Ti	47	3	He	517.746	0.2781	13777.11	0.0005	7.003E-05
Ti	47	3	He	511.713	0.2748	13536.71	0.0005	7.003E-05
V	51	3	He	494.353	10.831	545529.44	0.0219	0.02486
V	51	3	He	504.634	11.0557	547756.06	0.0219	0.02486
V	51	3	He	506.638	11.0995	546699.25	0.0219	0.02486
Cr	52	3	He	466.451	14.0058	705437.96	0.0299	0.03997
Cr	52	3	He	474.318	14.2414	705588.74	0.0299	0.03997
Cr	52	3	He	479.367	14.3926	708894.60	0.0299	0.03997
Mn	55	3	He	491.766	6.3139	318014.90	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	501.858	6.4434	319238.86	0.0128	0.002639
Mn	55	3	He	500.747	6.4292	316663.32	0.0128	0.002639
Fe	57	3	He	4963.369	2.8851	145314.95	0.0006	0.001429
Fe	57	3	He	5047.211	2.9338	145355.50	0.0006	0.001429
Fe	57	3	He	4975.377	2.8921	142446.96	0.0006	0.001429
Co	59	3	He	475.535	26.7664	1348152.17	0.0563	0.002149
Co	59	3	He	485.94	27.352	1355152.17	0.0563	0.002149
Co	59	3	He	488.461	27.4938	1354187.48	0.0563	0.002149
Ni	60	3	He	499.846	4.2931	376797.73	0.0086	0.002834
Ni	60	3	He	501.243	4.3051	378978.55	0.0086	0.002834
Ni	60	3	He	500.419	4.298	377015.11	0.0086	0.002834
Cu	63	3	He	477.955	12.2744	1077305.14	0.0257	0.004757
Cu	63	3	He	480.886	12.3496	1087143.03	0.0257	0.004757
Cu	63	3	He	479.739	12.3202	1080710.53	0.0257	0.004757
Zn	66	3	He	512.199	1.4951	131226.66	0.0029	0.003818
Zn	66	3	He	507.521	1.4815	130419.53	0.0029	0.003818
Zn	66	3	He	506.252	1.4778	129633.28	0.0029	0.003818
As	75	3	He	504.435	1.0343	90781.40	0.002	0.0008061
As	75	3	He	503.624	1.0327	90906.20	0.002	0.0008061
As	75	3	He	507.836	1.0413	91341.16	0.002	0.0008061
Sr	88	3	He	51.305	0.4612	40589.02	0.009	0.0009645
Sr	88	3	He	51.783	0.4654	40990.41	0.009	0.0009645
Sr	88	3	He	52.069	0.468	40448.77	0.009	0.0009645
Mo	98	3	He	50.446	1.1064	97376.11	0.0219	0.0002706
Mo	98	3	He	50.964	1.1177	98433.67	0.0219	0.0002706
Mo	98	3	He	51.613	1.132	97830.33	0.0219	0.0002706
Ag	107	3	He	50.587	2.3523	207034.90	0.0465	0.0006206
Ag	107	3	He	50.877	2.3658	208343.38	0.0465	0.0006206
Ag	107	3	He	51.458	2.3928	206796.11	0.0465	0.0006206
Cd	111	3	He	51.493	0.2753	24232.98	0.0053	0
Cd	111	3	He	51.735	0.2766	24361.26	0.0053	0
Cd	111	3	He	53.034	0.2836	24507.48	0.0053	0
Sn	120	3	He	102.01	1.6281	143295.45	0.0158	0.01648
Sn	120	3	He	103.554	1.6525	145528.01	0.0158	0.01648
Sn	120	3	He	104.008	1.6597	143437.29	0.0158	0.01648
Sb	121	3	He	98.246	1.4596	128462.17	0.0149	0.0002698
Sb	121	3	He	99.593	1.4796	130299.44	0.0149	0.0002698
Sb	121	3	He	100.947	1.4997	129610.97	0.0149	0.0002698
Ba	137	3	He	520.342	2.4975	219818.34	0.0048	0.0002317
Ba	137	3	He	515.504	2.4743	217903.08	0.0048	0.0002317
Ba	137	3	He	529.275	2.5404	219555.70	0.0048	0.0002317
Tl	205	3	He	102.004	2.5223	1015734.13	0.0247	0.0001339
Tl	205	3	He	102.872	2.5438	1023092.88	0.0247	0.0001339
Tl	205	3	He	102.457	2.5335	1023544.83	0.0247	0.0001339
Pb	208	3	He	51.379	1.6827	360659.14	0.0327	0.00107
Pb	208	3	He	51.461	1.6854	358740.66	0.0327	0.00107
Pb	208	3	He	51.017	1.6709	360349.96	0.0327	0.00107
U	238	3	He	49.47	2.437	767027.41	0.0493	7.55E-05
U	238	3	He	50.136	2.4698	769908.50	0.0493	7.55E-05
U	238	3	He	49.399	2.4335	770079.91	0.0493	7.55E-05
Sc	45	1	No Gas			2524781.84		
Sc	45	1	No Gas			2611746.37		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2501218.71		
Ge	72	1	No Gas			1246229.83		
Ge	72	1	No Gas			1245507.17		
Ge	72	1	No Gas			1226832.40		
Sc	45	2	H2			190018.10		
Sc	45	2	H2			188689.86		
Sc	45	2	H2			187646.25		
Ge	72	2	H2			171335.45		
Ge	72	2	H2			168312.91		
Ge	72	2	H2			169413.22		
In	115	2	H2			400458.78		
In	115	2	H2			401777.81		
In	115	2	H2			403813.90		
Sc	45	3	He			50367.38		
Sc	45	3	He			49544.92		
Sc	45	3	He			49254.20		
Ge	72	3	He			87768.61		
Ge	72	3	He			88030.57		
Ge	72	3	He			87718.74		
In	115	3	He			88783.35		
In	115	3	He			88843.88		
In	115	3	He			87182.78		
Tb	159	3	He			402698.47		
Tb	159	3	He			402193.04		
Tb	159	3	He			404001.40		
Bi	209	3	He			314745.13		
Bi	209	3	He			311730.82		
Bi	209	3	He			316451.44		

Quantitation Report

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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

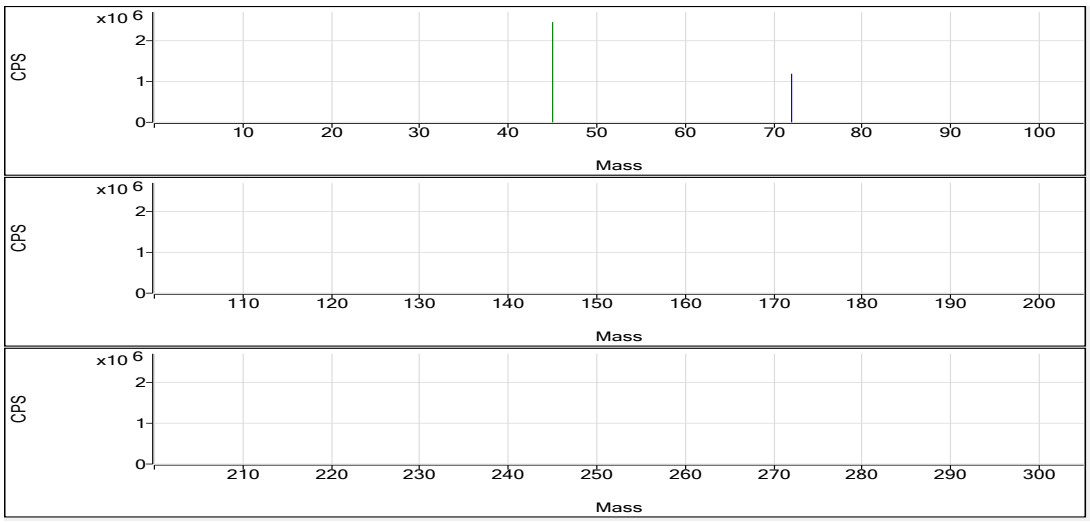
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.020	ppb	49.0	48.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.095	ppb	33.3	8.22	0.0001	Pulse	1.5000	3
Na	23	45	He	1.972	ppb	62.7	16943.50	0.3522	Pulse	0.1000	3
Mg	24	45	He	0.330	ppb	17.2	196.68	0.0041	Pulse	0.1000	3
Al	27	45	He	1.737	ppb	52.2	80.00	0.0017	Pulse	0.1000	3
K	39	45	He	-9.044	ppb	N/A	18498.91	0.3845	Pulse	0.1000	3
Ca	44	45	He	1.939	ppb	576.7	136.67	0.0028	Pulse	0.1000	3
Ti	47	45	He	0.646	ppb	104.6	20.00	0.0004	Pulse	0.1000	3
V	51	45	He	0.063	ppb	136.7	1262.73	0.0262	Pulse	0.5000	3
Cr	52	45	He	-0.002	ppb	N/A	1920.19	0.0399	Pulse	0.1000	3
Mn	55	45	He	0.096	ppb	89.7	186.68	0.0039	Pulse	0.1000	3
Fe	57	45	He	3.144	ppb	16.2	156.68	0.0033	Pulse	0.1000	3
Co	59	45	He	0.024	ppb	103.1	170.01	0.0035	Pulse	0.1000	3
Ni	60	72	He	0.043	ppb	50.3	270.01	0.0032	Pulse	0.1000	3
Cu	63	72	He	0.034	ppb	153.0	473.36	0.0056	Pulse	0.1000	3
Zn	66	72	He	3.539	ppb	13.0	1190.09	0.0141	Pulse	0.1000	3
As	75	72	He	0.286	ppb	19.0	117.33	0.0014	Pulse	0.5000	3
Sr	88	115	He	-0.026	ppb	N/A	63.33	0.0007	Pulse	0.1000	3
Mo	98	115	He	0.147	ppb	36.6	303.35	0.0035	Pulse	0.1000	3
Ag	107	115	He	0.007	ppb	153.0	80.00	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.010	ppb	99.8	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.230	ppb	90.2	1733.51	0.0201	Pulse	0.1000	3
Sb	121	115	He	0.448	ppb	16.8	596.70	0.0069	Pulse	0.1000	3
Ba	137	115	He	0.105	ppb	59.6	63.33	0.0007	Pulse	0.1000	3
Tl	205	159	He	0.239	ppb	6.5	2403.63	0.0060	Pulse	0.1000	3
Pb	208	159	He	0.016	ppb	84.5	630.03	0.0016	Pulse	0.1000	3
U	238	209	He	0.162	ppb	12.6	2477.00	0.0080	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2456206.37	0.4	102.4	Analog	0.1000	3
No Gas	Ge	72	1190137.82	0.8	103.2	Pulse	0.1000	3
H2	Sc	45	182695.18	0.6	97.7	Pulse	0.1000	3
H2	Ge	72	159014.82	1.5	97.1	Pulse	0.1000	3
H2	In	115	389049.88	0.6	100.0	Pulse	0.1000	3
He	Sc	45	48107.07	1.0	103.1	Pulse	0.1000	3
He	Ge	72	84248.55	0.9	103.8	Pulse	0.1000	3
He	In	115	86330.35	1.4	100.2	Pulse	0.1000	3
He	Tb	159	398150.23	1.0	99.9	Pulse	0.1000	3
He	Bi	209	308059.46	0.4	99.6	Pulse	0.1000	3

No Gas



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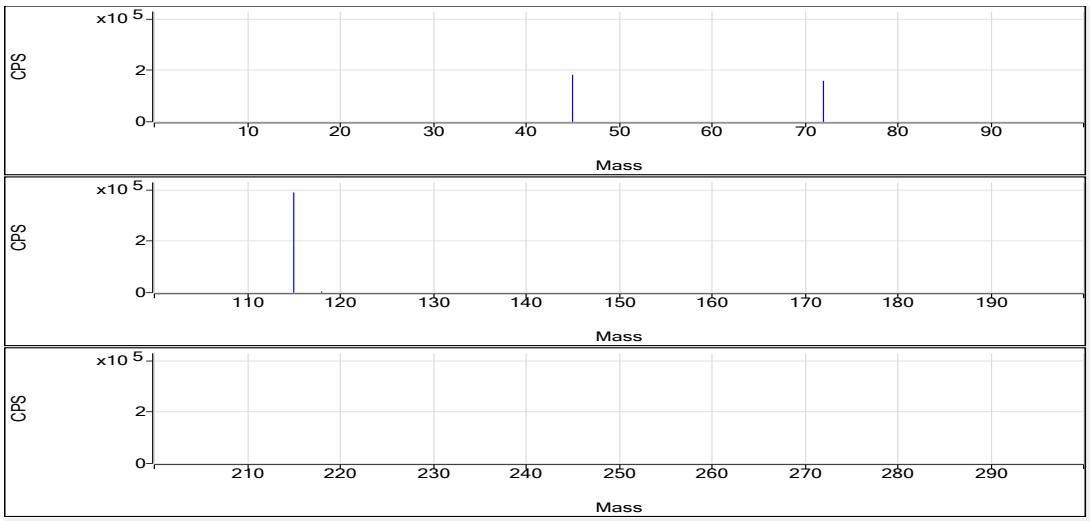
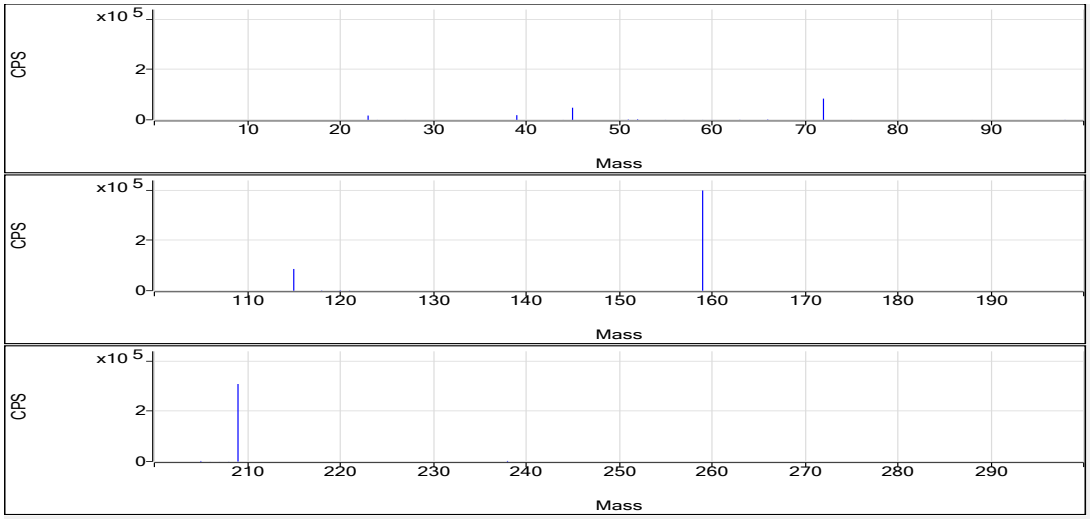


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.03	0	68.00	0.0008	4.685E-06
Be	9	1	No Gas	0.011	0	32.00	0.0008	4.685E-06
Be	9	1	No Gas	0.018	0	46.00	0.0008	4.685E-06
Se	78	2	H2	0.104	0.0001	8.67	0.0004	1.219E-05
Se	78	2	H2	0.121	0.0001	10.00	0.0004	1.219E-05
Se	78	2	H2	0.06	0	6.00	0.0004	1.219E-05
Na	23	3	He	0.84	0.3482	16669.86	0.0036	0.3452
Na	23	3	He	1.785	0.3515	17110.33	0.0036	0.3452
Na	23	3	He	3.29	0.3569	17050.31	0.0036	0.3452
Mg	24	3	He	0.379	0.0042	200.01	0.0018	0.003497
Mg	24	3	He	0.341	0.0041	200.01	0.0018	0.003497
Mg	24	3	He	0.268	0.004	190.01	0.0018	0.003497
Al	27	3	He	1.4	0.0015	70.00	0.0006	0.0006432
Al	27	3	He	2.764	0.0023	110.00	0.0006	0.0006432
Al	27	3	He	1.047	0.0013	60.00	0.0006	0.0006432
K	39	3	He	-16.932	0.3754	17971.56	0.0012	0.3951
K	39	3	He	-8.047	0.3857	18772.70	0.0012	0.3951
K	39	3	He	-2.154	0.3926	18752.46	0.0012	0.3951
Ca	44	3	He	3.098	0.0029	140.01	0.0001	0.002715
Ca	44	3	He	-9.776	0.0021	100.00	0.0001	0.002715
Ca	44	3	He	12.494	0.0036	170.01	0.0001	0.002715
Ti	47	3	He	1.425	0.0008	40.00	0.0005	7.003E-05
Ti	47	3	He	0.252	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	0.259	0.0002	10.00	0.0005	7.003E-05
V	51	3	He	-0.033	0.0241	1156.05	0.0219	0.02486
V	51	3	He	0.133	0.0278	1352.07	0.0219	0.02486
V	51	3	He	0.088	0.0268	1280.07	0.0219	0.02486
Cr	52	3	He	0.046	0.0414	1980.19	0.0299	0.03997
Cr	52	3	He	0.072	0.0421	2050.22	0.0299	0.03997
Cr	52	3	He	-0.125	0.0362	1730.15	0.0299	0.03997
Mn	55	3	He	0.104	0.004	190.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.179	0.0049	240.01	0.0128	0.002639
Mn	55	3	He	0.006	0.0027	130.01	0.0128	0.002639
Fe	57	3	He	2.574	0.0029	140.01	0.0006	0.001429
Fe	57	3	He	3.553	0.0035	170.01	0.0006	0.001429
Fe	57	3	He	3.306	0.0033	160.01	0.0006	0.001429
Co	59	3	He	0.025	0.0036	170.01	0.0563	0.002149
Co	59	3	He	0.049	0.0049	240.01	0.0563	0.002149
Co	59	3	He	-0.001	0.0021	100.00	0.0563	0.002149
Ni	60	3	He	0.053	0.0033	280.01	0.0086	0.002834
Ni	60	3	He	0.018	0.003	250.01	0.0086	0.002834
Ni	60	3	He	0.058	0.0033	280.01	0.0086	0.002834
Cu	63	3	He	-0.002	0.0047	400.02	0.0257	0.004757
Cu	63	3	He	0.01	0.005	420.02	0.0257	0.004757
Cu	63	3	He	0.093	0.0071	600.04	0.0257	0.004757
Zn	66	3	He	3.897	0.0152	1290.11	0.0029	0.003818
Zn	66	3	He	3.701	0.0146	1220.10	0.0029	0.003818
Zn	66	3	He	3.02	0.0126	1060.07	0.0029	0.003818
As	75	3	He	0.284	0.0014	118.00	0.002	0.0008061
As	75	3	He	0.342	0.0015	126.00	0.002	0.0008061
As	75	3	He	0.234	0.0013	108.00	0.002	0.0008061
Sr	88	3	He	-0.003	0.0009	80.00	0.009	0.0009645
Sr	88	3	He	-0.043	0.0006	50.00	0.009	0.0009645
Sr	88	3	He	-0.031	0.0007	60.00	0.009	0.0009645
Mo	98	3	He	0.1	0.0025	210.01	0.0219	0.0002706
Mo	98	3	He	0.136	0.0033	280.01	0.0219	0.0002706
Mo	98	3	He	0.206	0.0048	420.02	0.0219	0.0002706
Ag	107	3	He	0.017	0.0014	120.00	0.0465	0.0006206
Ag	107	3	He	0.007	0.0009	80.00	0.0465	0.0006206
Ag	107	3	He	-0.004	0.0005	40.00	0.0465	0.0006206
Cd	111	3	He	0.022	0.0001	10.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Sn	120	3	He	0.44	0.0234	2000.21	0.0158	0.01648
Sn	120	3	He	0.225	0.02	1720.16	0.0158	0.01648
Sn	120	3	He	0.025	0.0169	1480.15	0.0158	0.01648
Sb	121	3	He	0.534	0.0082	700.05	0.0149	0.0002698
Sb	121	3	He	0.413	0.0064	550.03	0.0149	0.0002698
Sb	121	3	He	0.396	0.0062	540.03	0.0149	0.0002698
Ba	137	3	He	0.171	0.0011	90.00	0.0048	0.0002317
Ba	137	3	He	0.097	0.0007	60.00	0.0048	0.0002317
Ba	137	3	He	0.047	0.0005	40.00	0.0048	0.0002317
Tl	205	3	He	0.24	0.0061	2430.29	0.0247	0.0001339
Tl	205	3	He	0.223	0.0056	2220.27	0.0247	0.0001339
Tl	205	3	He	0.254	0.0064	2560.32	0.0247	0.0001339
Pb	208	3	He	0.028	0.002	420.02	0.0327	0.00107
Pb	208	3	He	0.001	0.0011	200.01	0.0327	0.00107
Pb	208	3	He	0.018	0.0017	420.02	0.0327	0.00107
U	238	3	He	0.139	0.0069	2120.25	0.0493	7.55E-05
U	238	3	He	0.168	0.0084	2580.37	0.0493	7.55E-05
U	238	3	He	0.178	0.0088	2730.39	0.0493	7.55E-05
Sc	45	1	No Gas			2453509.03		
Sc	45	1	No Gas			2466321.53		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2448788.56		
Ge	72	1	No Gas			1198423.03		
Ge	72	1	No Gas			1179483.81		
Ge	72	1	No Gas			1192506.62		
Sc	45	2	H2			182918.55		
Sc	45	2	H2			183597.03		
Sc	45	2	H2			181569.96		
Ge	72	2	H2			156451.49		
Ge	72	2	H2			159268.69		
Ge	72	2	H2			161324.28		
In	115	2	H2			386947.03		
In	115	2	H2			391542.69		
In	115	2	H2			388659.92		
Sc	45	3	He			47879.24		
Sc	45	3	He			48672.11		
Sc	45	3	He			47769.86		
Ge	72	3	He			85072.76		
Ge	72	3	He			83604.26		
Ge	72	3	He			84068.64		
In	115	3	He			85382.55		
In	115	3	He			85905.59		
In	115	3	He			87726.85		
Tb	159	3	He			400933.31		
Tb	159	3	He			393606.56		
Tb	159	3	He			399910.81		
Bi	209	3	He			306762.89		
Bi	209	3	He			308221.79		
Bi	209	3	He			309193.71		

Quantitation Report

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Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	8/10/2023 2:34:45 PM
Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

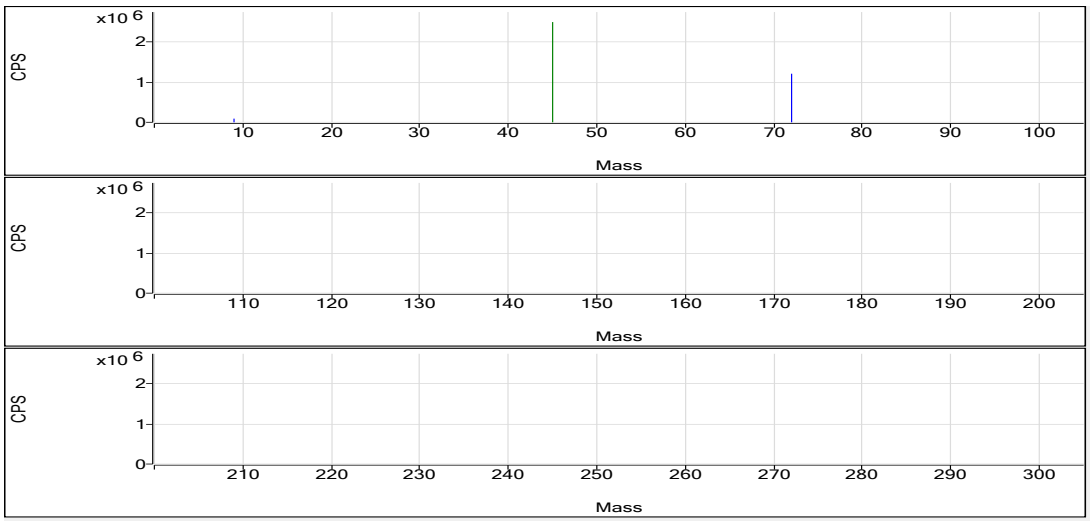
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	47.807	ppb	0.9	91165.91	0.0365	Pulse	0.5000	3
Se	78	72	H2	53.123	ppb	4.2	3566.23	0.0222	Pulse	1.5000	3
Na	23	45	He	4765.721	ppb	3.1	847800.38	17.3924	Pulse	0.1000	3
Mg	24	45	He	4950.773	ppb	2.6	433225.35	8.8868	Pulse	0.1000	3
Al	27	45	He	4888.778	ppb	2.8	139455.85	2.8607	Pulse	0.1000	3
K	39	45	He	5075.791	ppb	3.1	307345.13	6.3049	Pulse	0.1000	3
Ca	44	45	He	5041.200	ppb	3.0	16733.42	0.3433	Pulse	0.1000	3
Ti	47	45	He	5015.880	ppb	1.4	131330.29	2.6933	Pulse	0.1000	3
V	51	45	He	507.301	ppb	2.6	541799.23	11.1140	Pulse	0.5000	3
Cr	52	45	He	483.354	ppb	2.3	707483.74	14.5119	Pulse	0.1000	3
Mn	55	45	He	501.963	ppb	4.2	314089.86	6.4448	Pulse	0.1000	3
Fe	57	45	He	5058.546	ppb	2.5	143346.57	2.9404	Pulse	0.1000	3
Co	59	45	He	489.058	ppb	2.2	1342051.07	27.5275	Pulse	0.1000	3
Ni	60	72	He	514.817	ppb	0.8	377205.80	4.4216	Pulse	0.1000	3
Cu	63	72	He	490.166	ppb	0.9	1073865.56	12.5878	Pulse	0.1000	3
Zn	66	72	He	510.666	ppb	1.3	127169.45	1.4907	Pulse	0.1000	3
As	75	72	He	518.379	ppb	0.6	90676.01	1.0629	Pulse	0.5000	3
Sr	88	115	He	52.597	ppb	1.7	40632.39	0.4727	Pulse	0.1000	3
Mo	98	115	He	52.405	ppb	0.7	98789.11	1.1493	Pulse	0.1000	3
Ag	107	115	He	51.852	ppb	0.9	207245.80	2.4111	Pulse	0.1000	3
Cd	111	115	He	52.089	ppb	1.7	23939.16	0.2785	Pulse	0.5000	3
Sn	120	115	He	51.616	ppb	0.2	71508.28	0.8319	Pulse	0.1000	3
Sb	121	115	He	52.728	ppb	0.8	67340.94	0.7835	Pulse	0.1000	3
Ba	137	115	He	523.875	ppb	0.4	216134.83	2.5145	Pulse	0.1000	3
Tl	205	159	He	51.111	ppb	0.5	510059.51	1.2639	Pulse	0.1000	3
Pb	208	159	He	51.261	ppb	0.7	677503.38	1.6788	Pulse	0.1000	3
U	238	209	He	50.731	ppb	0.6	770744.36	2.4991	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2499688.51	0.1	104.2	Analog	0.1000	3
No Gas	Ge	72	1211285.03	0.2	105.0	Pulse	0.1000	3
H2	Sc	45	185588.29	1.1	99.2	Pulse	0.1000	3
H2	Ge	72	160961.73	2.0	98.3	Pulse	0.1000	3
H2	In	115	392291.67	0.3	100.8	Pulse	0.1000	3
He	Sc	45	48772.52	2.8	104.6	Pulse	0.1000	3
He	Ge	72	85310.93	0.3	105.1	Pulse	0.1000	3
He	In	115	85955.16	0.6	99.7	Pulse	0.1000	3
He	Tb	159	403563.80	0.6	101.2	Pulse	0.1000	3
He	Bi	209	308416.75	0.6	99.7	Pulse	0.1000	3

No Gas



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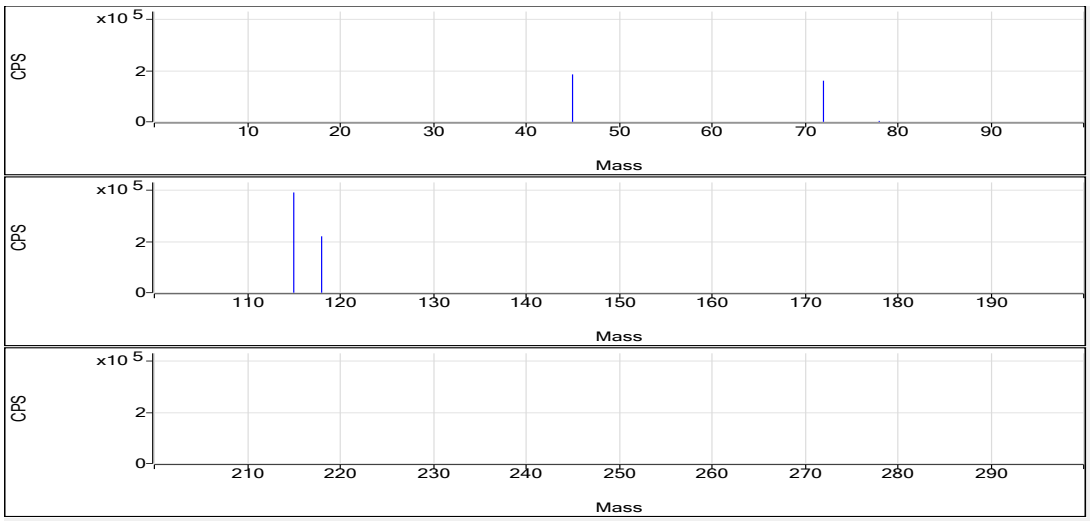
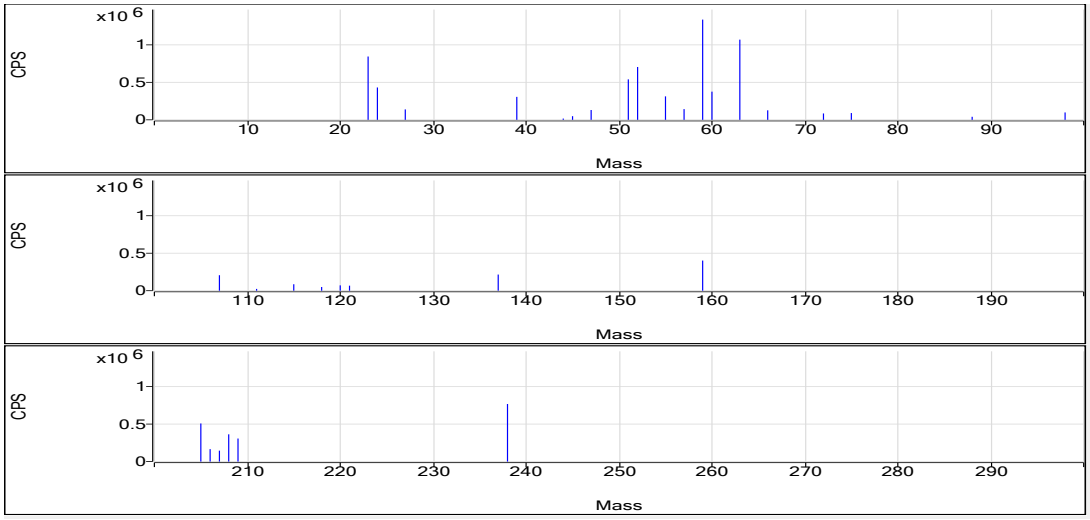


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	47.33	0.0361	90301.87	0.0008	4.685E-06
Be	9	1	No Gas	48.138	0.0367	91648.42	0.0008	4.685E-06
Be	9	1	No Gas	47.952	0.0366	91547.45	0.0008	4.685E-06
Se	78	2	H2	55.247	0.0231	3649.14	0.0004	1.219E-05
Se	78	2	H2	50.77	0.0212	3487.76	0.0004	1.219E-05
Se	78	2	H2	53.354	0.0223	3561.78	0.0004	1.219E-05
Na	23	3	He	4599.241	16.7969	844338.11	0.0036	0.3452
Na	23	3	He	4820.006	17.5866	850854.83	0.0036	0.3452
Na	23	3	He	4877.917	17.7937	848208.19	0.0036	0.3452
Mg	24	3	He	4810.46	8.635	434061.17	0.0018	0.003497
Mg	24	3	He	4980.964	8.941	432571.95	0.0018	0.003497
Mg	24	3	He	5060.895	9.0844	433042.92	0.0018	0.003497
Al	27	3	He	4744.734	2.7765	139566.84	0.0006	0.0006432
Al	27	3	He	4909.821	2.8731	139001.42	0.0006	0.0006432
Al	27	3	He	5011.779	2.9327	139799.29	0.0006	0.0006432
K	39	3	He	4905.178	6.1063	306948.75	0.0012	0.3951
K	39	3	He	5108.876	6.3435	306903.12	0.0012	0.3951
K	39	3	He	5213.318	6.4651	308183.51	0.0012	0.3951
Ca	44	3	He	4871.981	0.3318	16680.12	0.0001	0.002715
Ca	44	3	He	5152.334	0.3508	16970.35	0.0001	0.002715
Ca	44	3	He	5099.285	0.3472	16549.79	0.0001	0.002715
Ti	47	3	He	4954.161	2.6602	133721.95	0.0005	7.003E-05
Ti	47	3	He	4999.34	2.6845	129876.86	0.0005	7.003E-05
Ti	47	3	He	5094.14	2.7354	130392.07	0.0005	7.003E-05
V	51	3	He	492.2	10.784	542083.56	0.0219	0.02486
V	51	3	He	512.23	11.2218	542921.19	0.0219	0.02486
V	51	3	He	517.471	11.3364	540392.94	0.0219	0.02486
Cr	52	3	He	471.294	14.1509	711330.22	0.0299	0.03997
Cr	52	3	He	485.168	14.5662	704729.13	0.0299	0.03997
Cr	52	3	He	493.599	14.8187	706391.86	0.0299	0.03997
Mn	55	3	He	477.705	6.1335	308313.80	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	512.446	6.5793	318313.28	0.0128	0.002639
Mn	55	3	He	515.737	6.6215	315642.51	0.0128	0.002639
Fe	57	3	He	4910.327	2.8543	143477.97	0.0006	0.001429
Fe	57	3	He	5135.007	2.9848	144408.56	0.0006	0.001429
Fe	57	3	He	5130.305	2.9821	142153.19	0.0006	0.001429
Co	59	3	He	477.081	26.8534	1349853.73	0.0563	0.002149
Co	59	3	He	492.829	27.7397	1342074.98	0.0563	0.002149
Co	59	3	He	497.265	27.9894	1334224.51	0.0563	0.002149
Ni	60	3	He	519.329	4.4603	379852.69	0.0086	0.002834
Ni	60	3	He	511.931	4.3968	376175.66	0.0086	0.002834
Ni	60	3	He	513.191	4.4076	375589.06	0.0086	0.002834
Cu	63	3	He	491.431	12.6203	1074783.58	0.0257	0.004757
Cu	63	3	He	485.338	12.4639	1066368.58	0.0257	0.004757
Cu	63	3	He	493.728	12.6793	1080444.52	0.0257	0.004757
Zn	66	3	He	518.341	1.513	128853.90	0.0029	0.003818
Zn	66	3	He	506.151	1.4775	126412.81	0.0029	0.003818
Zn	66	3	He	507.504	1.4815	126241.64	0.0029	0.003818
As	75	3	He	522.003	1.0703	91151.72	0.002	0.0008061
As	75	3	He	516.42	1.0589	90594.18	0.002	0.0008061
As	75	3	He	516.713	1.0595	90282.13	0.002	0.0008061
Sr	88	3	He	51.601	0.4638	40147.80	0.009	0.0009645
Sr	88	3	He	52.908	0.4755	40689.46	0.009	0.0009645
Sr	88	3	He	53.28	0.4789	41059.91	0.009	0.0009645
Mo	98	3	He	52.17	1.1442	99038.23	0.0219	0.0002706
Mo	98	3	He	52.819	1.1584	99117.58	0.0219	0.0002706
Mo	98	3	He	52.228	1.1454	98211.51	0.0219	0.0002706
Ag	107	3	He	51.89	2.4128	208852.99	0.0465	0.0006206
Ag	107	3	He	51.37	2.3887	204387.09	0.0465	0.0006206
Ag	107	3	He	52.296	2.4317	208497.32	0.0465	0.0006206
Cd	111	3	He	51.861	0.2773	24002.65	0.0053	0
Cd	111	3	He	53.042	0.2836	24267.04	0.0053	0
Cd	111	3	He	51.364	0.2746	23547.80	0.0053	0
Sn	120	3	He	51.481	0.8298	71827.14	0.0158	0.01648
Sn	120	3	He	51.704	0.8333	71303.98	0.0158	0.01648
Sn	120	3	He	51.662	0.8327	71393.71	0.0158	0.01648
Sb	121	3	He	52.221	0.7759	67163.55	0.0149	0.0002698
Sb	121	3	He	52.962	0.7869	67334.53	0.0149	0.0002698
Sb	121	3	He	53.002	0.7875	67524.75	0.0149	0.0002698
Ba	137	3	He	525.498	2.5223	218325.70	0.0048	0.0002317
Ba	137	3	He	524.356	2.5168	215348.57	0.0048	0.0002317
Ba	137	3	He	521.771	2.5044	214730.21	0.0048	0.0002317
Tl	205	3	He	51.384	1.2707	510702.73	0.0247	0.0001339
Tl	205	3	He	51.103	1.2637	508821.87	0.0247	0.0001339
Tl	205	3	He	50.845	1.2573	510653.94	0.0247	0.0001339
Pb	208	3	He	51.578	1.6892	363968.04	0.0327	0.00107
Pb	208	3	He	51.337	1.6813	364672.10	0.0327	0.00107
Pb	208	3	He	50.87	1.666	365758.90	0.0327	0.00107
U	238	3	He	50.623	2.4937	774602.02	0.0493	7.55E-05
U	238	3	He	51.083	2.5164	772684.75	0.0493	7.55E-05
U	238	3	He	50.486	2.487	764946.32	0.0493	7.55E-05
Sc	45	1	No Gas			2500920.43		
Sc	45	1	No Gas			2495616.53		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2502528.56		
Ge	72	1	No Gas			1211399.04		
Ge	72	1	No Gas			1208982.87		
Ge	72	1	No Gas			1213473.19		
Sc	45	2	H2			184002.83		
Sc	45	2	H2			187820.51		
Sc	45	2	H2			184941.54		
Ge	72	2	H2			158288.15		
Ge	72	2	H2			164619.37		
Ge	72	2	H2			159977.68		
In	115	2	H2			391460.07		
In	115	2	H2			393772.92		
In	115	2	H2			391642.03		
Sc	45	3	He			50267.59		
Sc	45	3	He			48380.98		
Sc	45	3	He			47669.00		
Ge	72	3	He			85162.89		
Ge	72	3	He			85556.47		
Ge	72	3	He			85213.43		
In	115	3	He			86942.56		
In	115	3	He			85955.37		
In	115	3	He			86125.75		
Tb	159	3	He			401914.80		
Tb	159	3	He			402638.20		
Tb	159	3	He			406138.39		
Bi	209	3	He			310617.48		
Bi	209	3	He			307055.91		
Bi	209	3	He			307576.85		

Quantitation Report

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Sample Type	CCB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

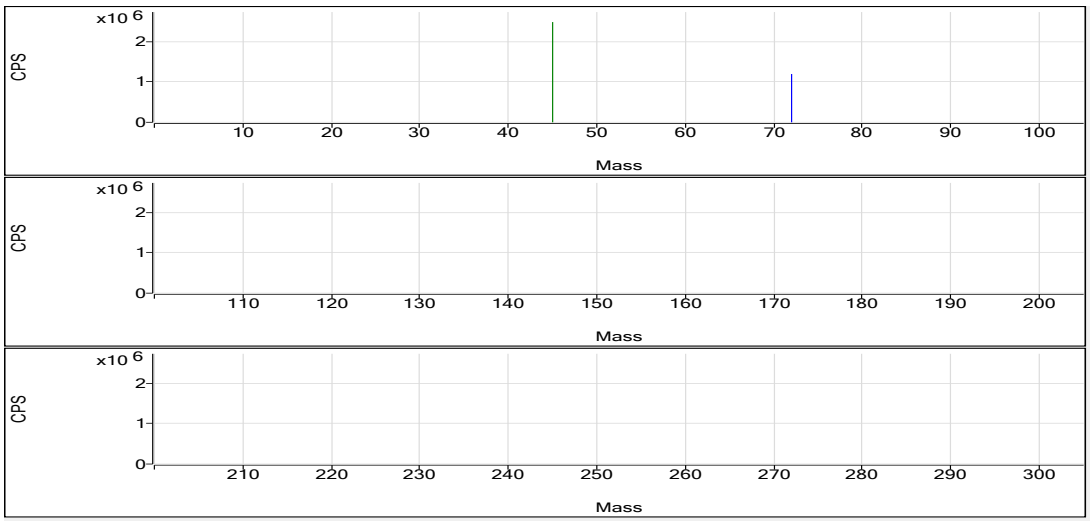
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.024	ppb	26.8	56.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.044	ppb	69.1	4.89	0.0000	Pulse	1.5000	3
Na	23	45	He	0.824	ppb	303.7	16643.17	0.3481	Pulse	0.1000	3
Mg	24	45	He	0.380	ppb	155.8	200.01	0.0042	Pulse	0.1000	3
Al	27	45	He	0.687	ppb	50.2	50.00	0.0010	Pulse	0.1000	3
K	39	45	He	5.388	ppb	62.0	19193.13	0.4013	Pulse	0.1000	3
Ca	44	45	He	0.167	ppb	5434.5	130.00	0.0027	Pulse	0.1000	3
Ti	47	45	He	0.772	ppb	56.5	23.33	0.0005	Pulse	0.1000	3
V	51	45	He	0.091	ppb	74.8	1283.40	0.0269	Pulse	0.5000	3
Cr	52	45	He	0.022	ppb	250.4	1943.53	0.0406	Pulse	0.1000	3
Mn	55	45	He	0.072	ppb	45.4	170.01	0.0036	Pulse	0.1000	3
Fe	57	45	He	2.085	ppb	61.2	126.67	0.0026	Pulse	0.1000	3
Co	59	45	He	0.039	ppb	33.8	206.68	0.0043	Pulse	0.1000	3
Ni	60	72	He	0.090	ppb	71.7	300.01	0.0036	Pulse	0.1000	3
Cu	63	72	He	0.061	ppb	44.2	526.70	0.0063	Pulse	0.1000	3
Zn	66	72	He	3.835	ppb	2.2	1246.77	0.0150	Pulse	0.1000	3
As	75	72	He	0.122	ppb	72.0	88.00	0.0011	Pulse	0.5000	3
Sr	88	115	He	-0.040	ppb	N/A	53.33	0.0006	Pulse	0.1000	3
Mo	98	115	He	0.075	ppb	34.7	170.01	0.0019	Pulse	0.1000	3
Ag	107	115	He	-0.002	ppb	N/A	46.67	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.008	ppb	48.9	4.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.023	ppb	N/A	1420.12	0.0161	Pulse	0.1000	3
Sb	121	115	He	0.074	ppb	31.9	120.01	0.0014	Pulse	0.1000	3
Ba	137	115	He	0.030	ppb	41.6	33.33	0.0004	Pulse	0.1000	3
Tl	205	159	He	0.092	ppb	2.1	966.74	0.0024	Pulse	0.1000	3
Pb	208	159	He	0.013	ppb	24.4	600.03	0.0015	Pulse	0.1000	3
U	238	209	He	0.056	ppb	23.7	873.40	0.0028	Pulse	0.1000	3

ISTD Table:

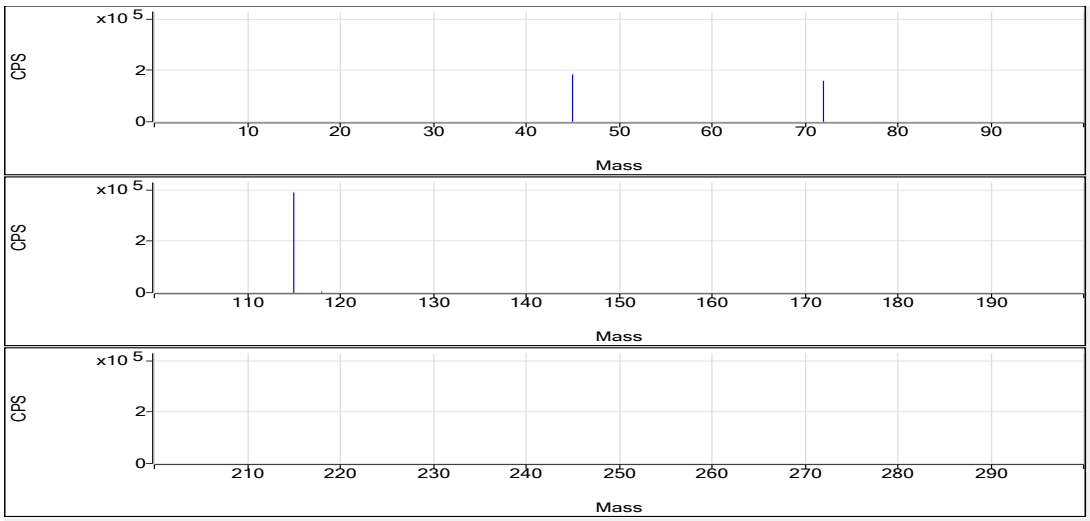
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2475831.47	1.2	103.2	Analog	0.1000	3
No Gas	Ge	72	1192659.96	0.6	103.4	Pulse	0.1000	3
H2	Sc	45	184199.94	1.3	98.5	Pulse	0.1000	3
H2	Ge	72	159437.53	0.4	97.4	Pulse	0.1000	3
H2	In	115	389921.83	0.8	100.2	Pulse	0.1000	3
He	Sc	45	47826.14	2.1	102.5	Pulse	0.1000	3
He	Ge	72	83215.08	1.1	102.5	Pulse	0.1000	3
He	In	115	88122.08	1.3	102.2	Pulse	0.1000	3
He	Tb	159	400901.55	0.5	100.6	Pulse	0.1000	3
He	Bi	209	309235.22	0.9	100.0	Pulse	0.1000	3

No Gas

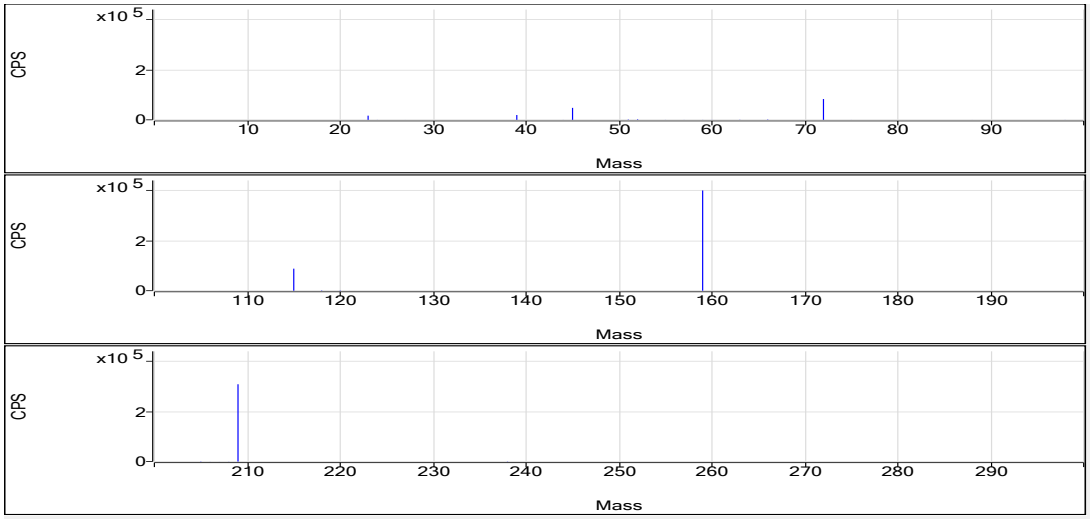


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.023	0	54.00	0.0008	4.685E-06
Be	9	1	No Gas	0.031	0	70.00	0.0008	4.685E-06
Be	9	1	No Gas	0.018	0	46.00	0.0008	4.685E-06
Se	78	2	H2	0.071	0	6.67	0.0004	1.219E-05
Se	78	2	H2	0.011	0	2.67	0.0004	1.219E-05
Se	78	2	H2	0.051	0	5.33	0.0004	1.219E-05
Na	23	3	He	1.594	0.3509	16880.12	0.0036	0.3452
Na	23	3	He	-1.973	0.3381	16459.56	0.0036	0.3452
Na	23	3	He	2.849	0.3554	16589.84	0.0036	0.3452
Mg	24	3	He	1.063	0.0054	260.01	0.0018	0.003497
Mg	24	3	He	-0.003	0.0035	170.01	0.0018	0.003497
Mg	24	3	He	0.081	0.0036	170.01	0.0018	0.003497
Al	27	3	He	0.322	0.0008	40.00	0.0006	0.0006432
Al	27	3	He	1.007	0.0012	60.00	0.0006	0.0006432
Al	27	3	He	0.731	0.0011	50.00	0.0006	0.0006432
K	39	3	He	1.718	0.3971	19103.05	0.0012	0.3951
K	39	3	He	6.192	0.4023	19583.68	0.0012	0.3951
K	39	3	He	8.254	0.4047	18892.66	0.0012	0.3951
Ca	44	3	He	-6.344	0.0023	110.00	0.0001	0.002715
Ca	44	3	He	-3.701	0.0025	120.00	0.0001	0.002715
Ca	44	3	He	10.546	0.0034	160.01	0.0001	0.002715
Ti	47	3	He	1.031	0.0006	30.00	0.0005	7.003E-05
Ti	47	3	He	1.017	0.0006	30.00	0.0005	7.003E-05
Ti	47	3	He	0.268	0.0002	10.00	0.0005	7.003E-05
V	51	3	He	0.097	0.027	1298.07	0.0219	0.02486
V	51	3	He	0.02	0.0253	1232.06	0.0219	0.02486
V	51	3	He	0.156	0.0283	1320.07	0.0219	0.02486
Cr	52	3	He	0.081	0.0424	2040.21	0.0299	0.03997
Cr	52	3	He	0.01	0.0403	1960.21	0.0299	0.03997
Cr	52	3	He	-0.026	0.0392	1830.18	0.0299	0.03997
Mn	55	3	He	0.086	0.0037	180.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.035	0.0031	150.01	0.0128	0.002639
Mn	55	3	He	0.095	0.0039	180.01	0.0128	0.002639
Fe	57	3	He	1.476	0.0023	110.00	0.0006	0.001429
Fe	57	3	He	3.552	0.0035	170.01	0.0006	0.001429
Fe	57	3	He	1.228	0.0021	100.00	0.0006	0.001429
Co	59	3	He	0.036	0.0042	200.01	0.0563	0.002149
Co	59	3	He	0.028	0.0037	180.01	0.0563	0.002149
Co	59	3	He	0.053	0.0051	240.01	0.0563	0.002149
Ni	60	3	He	0.164	0.0042	350.01	0.0086	0.002834
Ni	60	3	He	0.043	0.0032	270.01	0.0086	0.002834
Ni	60	3	He	0.063	0.0034	280.01	0.0086	0.002834
Cu	63	3	He	0.07	0.0065	540.03	0.0257	0.004757
Cu	63	3	He	0.083	0.0069	580.04	0.0257	0.004757
Cu	63	3	He	0.031	0.0055	460.02	0.0257	0.004757
Zn	66	3	He	3.851	0.015	1240.10	0.0029	0.003818
Zn	66	3	He	3.745	0.0147	1240.11	0.0029	0.003818
Zn	66	3	He	3.909	0.0152	1260.10	0.0029	0.003818
As	75	3	He	0.021	0.0008	70.00	0.002	0.0008061
As	75	3	He	0.174	0.0012	98.00	0.002	0.0008061
As	75	3	He	0.172	0.0012	96.00	0.002	0.0008061
Sr	88	3	He	-0.045	0.0006	50.00	0.009	0.0009645
Sr	88	3	He	-0.031	0.0007	60.00	0.009	0.0009645
Sr	88	3	He	-0.044	0.0006	50.00	0.009	0.0009645
Mo	98	3	He	0.105	0.0026	230.01	0.0219	0.0002706
Mo	98	3	He	0.056	0.0015	130.01	0.0219	0.0002706
Mo	98	3	He	0.065	0.0017	150.01	0.0219	0.0002706
Ag	107	3	He	-0.004	0.0004	40.00	0.0465	0.0006206
Ag	107	3	He	0.004	0.0008	70.00	0.0465	0.0006206
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Cd	111	3	He	0.013	0.0001	6.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.009	0	4.00	0.0053	0
Sn	120	3	He	-0.036	0.0159	1420.13	0.0158	0.01648
Sn	120	3	He	-0.069	0.0154	1340.10	0.0158	0.01648
Sn	120	3	He	0.036	0.017	1500.12	0.0158	0.01648
Sb	121	3	He	0.05	0.001	90.00	0.0149	0.0002698
Sb	121	3	He	0.075	0.0014	120.01	0.0149	0.0002698
Sb	121	3	He	0.097	0.0017	150.01	0.0149	0.0002698
Ba	137	3	He	0.045	0.0004	40.00	0.0048	0.0002317
Ba	137	3	He	0.024	0.0003	30.00	0.0048	0.0002317
Ba	137	3	He	0.023	0.0003	30.00	0.0048	0.0002317
Tl	205	3	He	0.09	0.0024	950.08	0.0247	0.0001339
Tl	205	3	He	0.094	0.0025	980.07	0.0247	0.0001339
Tl	205	3	He	0.093	0.0024	970.07	0.0247	0.0001339
Pb	208	3	He	0.015	0.0016	430.02	0.0327	0.00107
Pb	208	3	He	0.015	0.0016	310.02	0.0327	0.00107
Pb	208	3	He	0.009	0.0014	330.02	0.0327	0.00107
U	238	3	He	0.041	0.0021	640.04	0.0493	7.55E-05
U	238	3	He	0.06	0.003	940.08	0.0493	7.55E-05
U	238	3	He	0.066	0.0033	1040.08	0.0493	7.55E-05
Sc	45	1	No Gas			2441150.28		
Sc	45	1	No Gas			2490468.24		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2495875.90		
Ge	72	1	No Gas			1188268.34		
Ge	72	1	No Gas			1200829.28		
Ge	72	1	No Gas			1188882.25		
Sc	45	2	H2			185528.83		
Sc	45	2	H2			181398.55		
Sc	45	2	H2			185672.44		
Ge	72	2	H2			159755.86		
Ge	72	2	H2			159813.57		
Ge	72	2	H2			158743.17		
In	115	2	H2			389560.97		
In	115	2	H2			393331.83		
In	115	2	H2			386872.69		
Sc	45	3	He			48110.38		
Sc	45	3	He			48682.26		
Sc	45	3	He			46685.77		
Ge	72	3	He			82507.58		
Ge	72	3	He			84237.44		
Ge	72	3	He			82900.21		
In	115	3	He			89306.51		
In	115	3	He			87093.01		
In	115	3	He			87998.42		
Tb	159	3	He			403148.43		
Tb	159	3	He			399987.49		
Tb	159	3	He			399568.74		
Bi	209	3	He			306061.69		
Bi	209	3	He			310362.38		
Bi	209	3	He			311281.58		

Quantitation Report

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Auto Dilution	1.0000
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Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

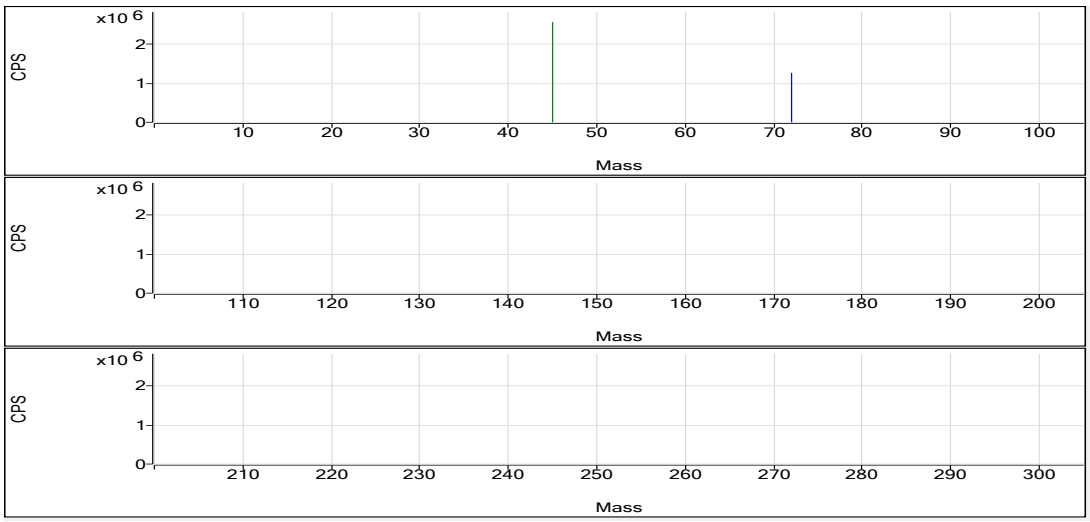
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.068	ppb	4.2	144.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.102	ppb	34.9	9.56	0.0001	Pulse	1.5000	3
Na	23	45	He	7475.373	ppb	2.8	1345382.69	27.0849	Analog	0.1000	3
Mg	24	45	He	9612.652	ppb	2.4	856890.56	17.2517	Pulse	0.1000	3
Al	27	45	He	28.889	ppb	31.4	873.39	0.0175	Pulse	0.1000	3
K	39	45	He	3643.052	ppb	2.1	230316.97	4.6368	Pulse	0.1000	3
Ca	44	45	He	66937.997	ppb	2.2	224735.53	4.5245	Pulse	0.1000	3
Ti	47	45	He	0.738	ppb	75.5	23.33	0.0005	Pulse	0.1000	3
V	51	45	He	-0.230	ppb	N/A	984.71	0.0198	Pulse	0.5000	3
Cr	52	45	He	-0.169	ppb	N/A	1733.49	0.0349	Pulse	0.1000	3
Mn	55	45	He	208.877	ppb	1.1	133300.02	2.6833	Pulse	0.1000	3
Fe	57	45	He	5.389	ppb	18.2	226.68	0.0046	Pulse	0.1000	3
Co	59	45	He	1.003	ppb	9.0	2913.72	0.0586	Pulse	0.1000	3
Ni	60	72	He	14.320	ppb	1.9	11381.57	0.1257	Pulse	0.1000	3
Cu	63	72	He	0.592	ppb	20.8	1803.50	0.0199	Pulse	0.1000	3
Zn	66	72	He	22.199	ppb	10.2	6191.53	0.0685	Pulse	0.1000	3
As	75	72	He	0.002	ppb	4669.0	73.33	0.0008	Pulse	0.5000	3
Sr	88	115	He	365.848	ppb	0.9	299370.41	3.2826	Pulse	0.1000	3
Mo	98	115	He	0.259	ppb	19.6	543.36	0.0060	Pulse	0.1000	3
Ag	107	115	He	-0.004	ppb	N/A	40.00	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.081	ppb	6.7	39.33	0.0004	Pulse	0.5000	3
Sn	120	115	He	-0.263	ppb	N/A	1123.42	0.0123	Pulse	0.1000	3
Sb	121	115	He	0.029	ppb	30.7	63.33	0.0007	Pulse	0.1000	3
Ba	137	115	He	9.206	ppb	5.8	4050.72	0.0444	Pulse	0.1000	3
Tl	205	159	He	0.076	ppb	14.9	820.06	0.0020	Pulse	0.1000	3
Pb	208	159	He	0.008	ppb	54.3	546.69	0.0013	Pulse	0.1000	3
U	238	209	He	0.062	ppb	17.9	1006.75	0.0031	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2561455.80	1.1	106.8	Analog	0.1000	3
No Gas	Ge	72	1262871.28	0.5	109.5	Pulse	0.1000	3
H2	Sc	45	193154.14	1.4	103.3	Pulse	0.1000	3
H2	Ge	72	174565.54	1.0	106.6	Pulse	0.1000	3
H2	In	115	407347.18	0.7	104.7	Pulse	0.1000	3
He	Sc	45	49682.52	1.7	106.5	Pulse	0.1000	3
He	Ge	72	90526.14	1.6	111.5	Pulse	0.1000	3
He	In	115	91202.32	0.8	105.8	Pulse	0.1000	3
He	Tb	159	407404.79	1.0	102.2	Pulse	0.1000	3
He	Bi	209	322806.21	0.6	104.4	Pulse	0.1000	3

No Gas



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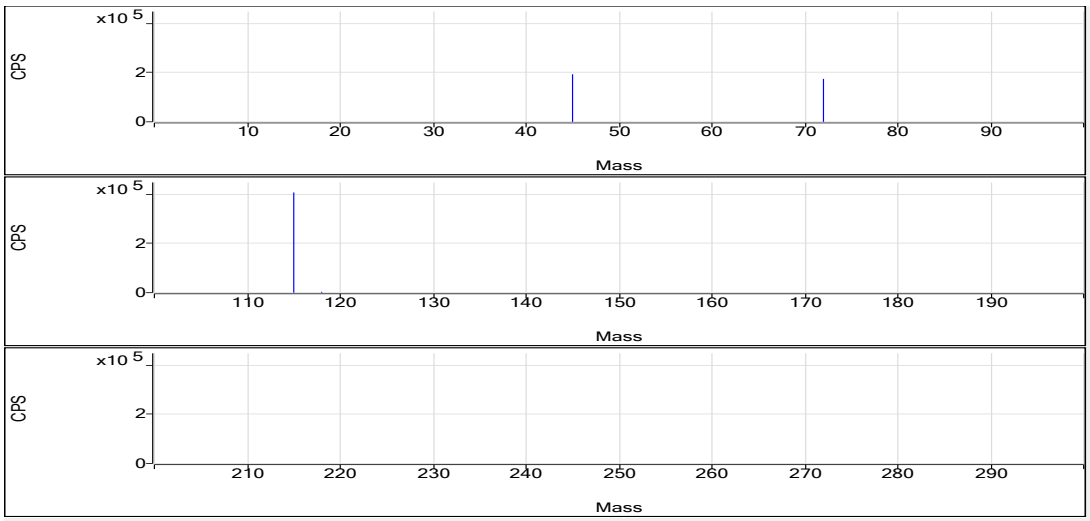
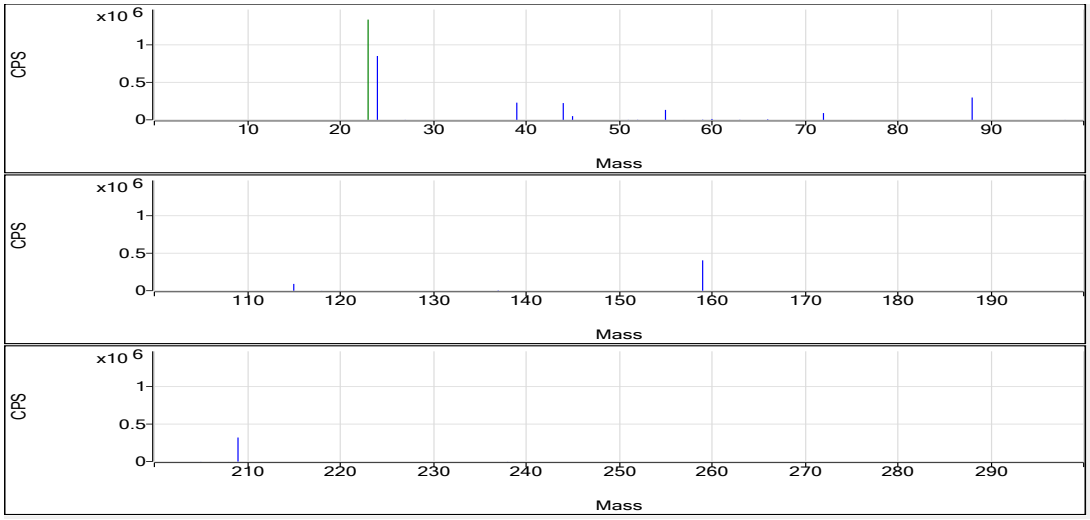


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.067	0.0001	144.00	0.0008	4.685E-06
Be	9	1	No Gas	0.065	0.0001	140.00	0.0008	4.685E-06
Be	9	1	No Gas	0.071	0.0001	148.00	0.0008	4.685E-06
Se	78	2	H2	0.061	0	6.67	0.0004	1.219E-05
Se	78	2	H2	0.128	0.0001	11.33	0.0004	1.219E-05
Se	78	2	H2	0.117	0.0001	10.67	0.0004	1.219E-05
Na	23	3	He	7457.088	27.0195	1363100.60	0.0036	0.3452
Na	23	3	He	7691.329	27.8574	1359798.89	0.0036	0.3452
Na	23	3	He	7277.701	26.3779	1313248.57	0.0036	0.3452
Mg	24	3	He	9446.894	16.9543	855321.00	0.0018	0.003497
Mg	24	3	He	9872.3	17.7176	864844.91	0.0018	0.003497
Mg	24	3	He	9518.763	17.0832	850505.77	0.0018	0.003497
Al	27	3	He	38.884	0.0234	1180.09	0.0006	0.0006432
Al	27	3	He	26.566	0.0162	790.05	0.0006	0.0006432
Al	27	3	He	21.218	0.0131	650.03	0.0006	0.0006432
K	39	3	He	3575.874	4.5586	229973.10	0.0012	0.3951
K	39	3	He	3728.019	4.7357	231162.73	0.0012	0.3951
K	39	3	He	3625.262	4.6161	229815.07	0.0012	0.3951
Ca	44	3	He	65495.55	4.4271	223339.72	0.0001	0.002715
Ca	44	3	He	68385.504	4.6223	225626.77	0.0001	0.002715
Ca	44	3	He	66932.939	4.5242	225240.09	0.0001	0.002715
Ti	47	3	He	1.346	0.0008	40.00	0.0005	7.003E-05
Ti	47	3	He	0.251	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	0.618	0.0004	20.00	0.0005	7.003E-05
V	51	3	He	-0.254	0.0193	974.04	0.0219	0.02486
V	51	3	He	-0.198	0.0205	1002.04	0.0219	0.02486
V	51	3	He	-0.239	0.0196	978.04	0.0219	0.02486
Cr	52	3	He	-0.19	0.0343	1730.16	0.0299	0.03997
Cr	52	3	He	-0.11	0.0367	1790.15	0.0299	0.03997
Cr	52	3	He	-0.208	0.0337	1680.17	0.0299	0.03997
Mn	55	3	He	206.239	2.6495	133662.94	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	210.645	2.706	132089.08	0.0128	0.002639
Mn	55	3	He	209.746	2.6945	134148.05	0.0128	0.002639
Fe	57	3	He	6.412	0.0052	260.01	0.0006	0.001429
Fe	57	3	He	5.299	0.0045	220.01	0.0006	0.001429
Fe	57	3	He	4.456	0.004	200.01	0.0006	0.001429
Co	59	3	He	1.071	0.0624	3150.44	0.0563	0.002149
Co	59	3	He	0.901	0.0529	2580.31	0.0563	0.002149
Co	59	3	He	1.036	0.0605	3010.41	0.0563	0.002149
Ni	60	3	He	14.628	0.1284	11494.97	0.0086	0.002834
Ni	60	3	He	14.155	0.1243	11174.75	0.0086	0.002834
Ni	60	3	He	14.175	0.1245	11474.99	0.0086	0.002834
Cu	63	3	He	0.568	0.0193	1730.17	0.0257	0.004757
Cu	63	3	He	0.725	0.0234	2100.21	0.0257	0.004757
Cu	63	3	He	0.483	0.0171	1580.13	0.0257	0.004757
Zn	66	3	He	22.441	0.0692	6191.55	0.0029	0.003818
Zn	66	3	He	24.335	0.0747	6711.76	0.0029	0.003818
Zn	66	3	He	19.823	0.0615	5671.28	0.0029	0.003818
As	75	3	He	-0.066	0.0007	60.00	0.002	0.0008061
As	75	3	He	0.128	0.0011	96.00	0.002	0.0008061
As	75	3	He	-0.055	0.0007	64.00	0.002	0.0008061
Sr	88	3	He	362.17	3.2496	298362.94	0.009	0.0009645
Sr	88	3	He	366.574	3.2891	297188.18	0.009	0.0009645
Sr	88	3	He	368.802	3.309	302560.11	0.009	0.0009645
Mo	98	3	He	0.306	0.007	640.04	0.0219	0.0002706
Mo	98	3	He	0.205	0.0048	430.02	0.0219	0.0002706
Mo	98	3	He	0.267	0.0061	560.03	0.0219	0.0002706
Ag	107	3	He	0.001	0.0007	60.00	0.0465	0.0006206
Ag	107	3	He	-0.013	0	0.00	0.0465	0.0006206
Ag	107	3	He	0.001	0.0007	60.00	0.0465	0.0006206
Cd	111	3	He	0.077	0.0004	38.00	0.0053	0
Cd	111	3	He	0.087	0.0005	42.00	0.0053	0
Cd	111	3	He	0.078	0.0004	38.00	0.0053	0
Sn	120	3	He	-0.374	0.0106	970.07	0.0158	0.01648
Sn	120	3	He	-0.272	0.0122	1100.08	0.0158	0.01648
Sn	120	3	He	-0.143	0.0142	1300.10	0.0158	0.01648
Sb	121	3	He	0.018	0.0005	50.00	0.0149	0.0002698
Sb	121	3	He	0.034	0.0008	70.00	0.0149	0.0002698
Sb	121	3	He	0.033	0.0008	70.00	0.0149	0.0002698
Ba	137	3	He	8.849	0.0427	3920.67	0.0048	0.0002317
Ba	137	3	He	8.947	0.0432	3900.69	0.0048	0.0002317
Ba	137	3	He	9.821	0.0474	4330.81	0.0048	0.0002317
Tl	205	3	He	0.086	0.0023	930.07	0.0247	0.0001339
Tl	205	3	He	0.078	0.0021	840.06	0.0247	0.0001339
Tl	205	3	He	0.064	0.0017	690.04	0.0247	0.0001339
Pb	208	3	He	0.004	0.0012	240.01	0.0327	0.00107
Pb	208	3	He	0.013	0.0015	340.02	0.0327	0.00107
Pb	208	3	He	0.007	0.0013	240.01	0.0327	0.00107
U	238	3	He	0.058	0.0029	940.08	0.0493	7.55E-05
U	238	3	He	0.053	0.0027	870.06	0.0493	7.55E-05
U	238	3	He	0.074	0.0037	1210.11	0.0493	7.55E-05
Sc	45	1	No Gas			2573892.31		
Sc	45	1	No Gas			2582645.74		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2527829.34		
Ge	72	1	No Gas			1269812.25		
Ge	72	1	No Gas			1262694.82		
Ge	72	1	No Gas			1256106.78		
Sc	45	2	H2			194839.55		
Sc	45	2	H2			190106.75		
Sc	45	2	H2			194516.13		
Ge	72	2	H2			176324.43		
Ge	72	2	H2			172723.75		
Ge	72	2	H2			174648.43		
In	115	2	H2			410041.44		
In	115	2	H2			404308.04		
In	115	2	H2			407692.06		
Sc	45	3	He			50448.72		
Sc	45	3	He			48812.81		
Sc	45	3	He			49786.03		
Ge	72	3	He			89530.35		
Ge	72	3	He			89882.08		
Ge	72	3	He			92165.98		
In	115	3	He			91822.44		
In	115	3	He			90362.93		
In	115	3	He			91439.83		
Tb	159	3	He			412130.58		
Tb	159	3	He			405669.02		
Tb	159	3	He			404414.76		
Bi	209	3	He			320467.38		
Bi	209	3	He			323578.26		
Bi	209	3	He			324373.00		

Quantitation Report

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Acq Time	8/10/2023 2:40:55 PM
Sample Name	410-137743-L-4-A PDS
Sample Type	Sample
Comment	D2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

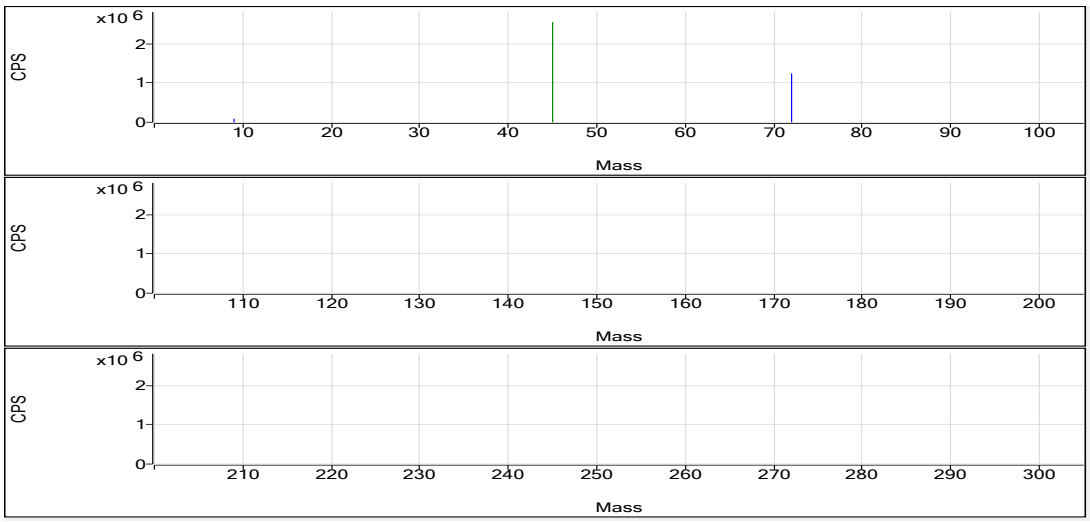
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	46.854	ppb	1.2	91450.48	0.0357	Pulse	0.5000	3
Se	78	72	H2	101.301	ppb	0.6	7270.52	0.0423	Pulse	1.5000	3
Na	23	45	He	12125.337	ppb	1.8	2172025.59	43.7181	Analog	0.1000	3
Mg	24	45	He	14738.896	ppb	0.7	1314321.34	26.4498	Analog	0.1000	3
Al	27	45	He	4869.339	ppb	0.8	141582.64	2.8494	Pulse	0.1000	3
K	39	45	He	8462.279	ppb	1.4	509166.89	10.2479	Pulse	0.1000	3
Ca	44	45	He	70207.416	ppb	1.0	235782.74	4.7454	Pulse	0.1000	3
Ti	47	45	He	520.028	ppb	2.4	13880.43	0.2793	Pulse	0.1000	3
V	51	45	He	509.122	ppb	1.4	554175.39	11.1539	Pulse	0.5000	3
Cr	52	45	He	479.570	ppb	1.2	715410.04	14.3987	Pulse	0.1000	3
Mn	55	45	He	698.952	ppb	1.5	445812.20	8.9729	Pulse	0.1000	3
Fe	57	45	He	4997.201	ppb	1.8	144321.76	2.9048	Pulse	0.1000	3
Co	59	45	He	481.068	ppb	1.4	1345348.99	27.0777	Pulse	0.1000	3
Ni	60	72	He	518.442	ppb	2.0	387355.38	4.4527	Pulse	0.1000	3
Cu	63	72	He	481.382	ppb	1.4	1075509.15	12.3623	Pulse	0.1000	3
Zn	66	72	He	528.237	ppb	1.7	134132.61	1.5418	Pulse	0.1000	3
As	75	72	He	521.415	ppb	1.5	93011.56	1.0691	Pulse	0.5000	3
Sr	88	115	He	410.542	ppb	2.1	329398.73	3.6834	Pulse	0.1000	3
Mo	98	115	He	50.681	ppb	0.7	99411.22	1.1115	Pulse	0.1000	3
Ag	107	115	He	50.180	ppb	0.8	208682.43	2.3333	Pulse	0.1000	3
Cd	111	115	He	51.485	ppb	1.2	24620.34	0.2753	Pulse	0.5000	3
Sn	120	115	He	103.342	ppb	2.1	147478.52	1.6491	Pulse	0.1000	3
Sb	121	115	He	99.367	ppb	1.4	132032.94	1.4762	Pulse	0.1000	3
Ba	137	115	He	515.184	ppb	0.7	221154.29	2.4728	Pulse	0.1000	3
Tl	205	159	He	102.903	ppb	0.3	1026544.25	2.5446	Pulse	0.1000	3
Pb	208	159	He	51.633	ppb	1.2	682156.64	1.6910	Pulse	0.1000	3
U	238	209	He	50.141	ppb	1.0	775995.17	2.4700	Pulse	0.1000	3

ISTD Table:

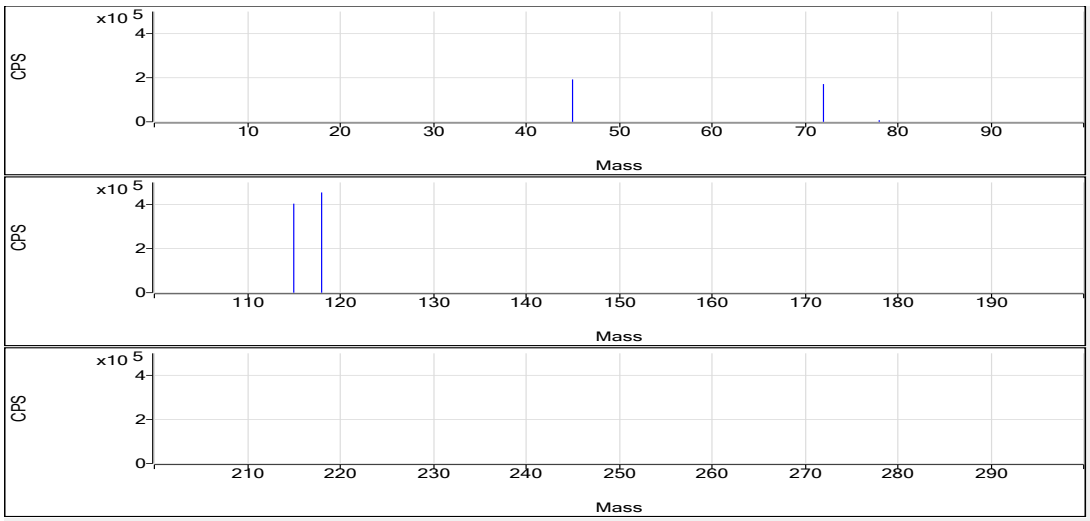
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2558784.39	1.6	106.7	Analog	0.1000	3
No Gas	Ge	72	1249395.97	0.4	108.3	Pulse	0.1000	3
H2	Sc	45	193222.85	1.2	103.3	Pulse	0.1000	3
H2	Ge	72	172038.51	0.2	105.1	Pulse	0.1000	3
H2	In	115	405785.74	0.8	104.3	Pulse	0.1000	3
He	Sc	45	49692.55	1.7	106.5	Pulse	0.1000	3
He	Ge	72	87011.10	1.6	107.2	Pulse	0.1000	3
He	In	115	89440.36	1.1	103.8	Pulse	0.1000	3
He	Tb	159	403433.99	0.9	101.2	Pulse	0.1000	3
He	Bi	209	314183.37	0.8	101.6	Pulse	0.1000	3

No Gas

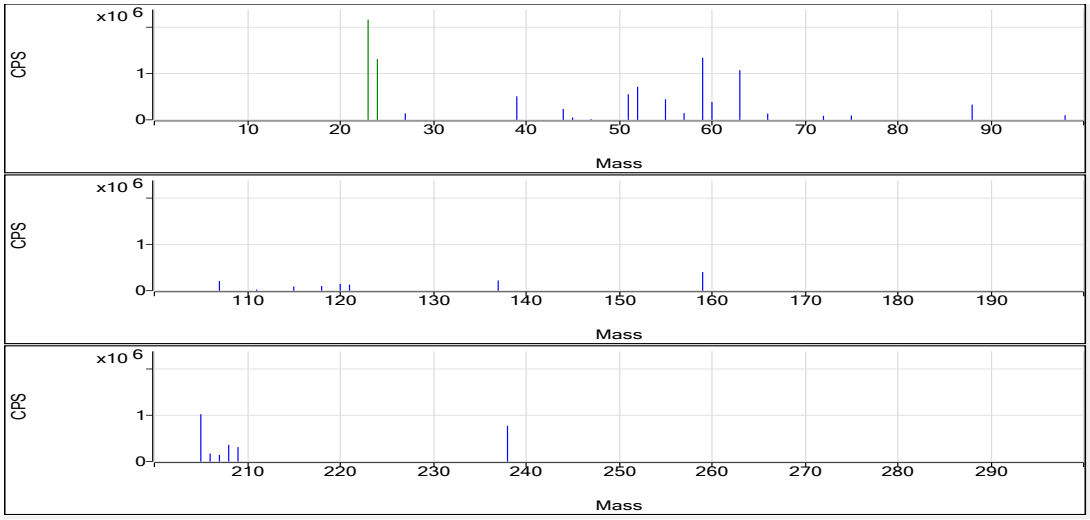


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	46.289	0.0353	91911.80	0.0008	4.685E-06
Be	9	1	No Gas	46.908	0.0358	91270.17	0.0008	4.685E-06
Be	9	1	No Gas	47.364	0.0361	91169.48	0.0008	4.685E-06
Se	78	2	H2	100.59	0.042	7235.17	0.0004	1.219E-05
Se	78	2	H2	101.799	0.0425	7286.52	0.0004	1.219E-05
Se	78	2	H2	101.512	0.0423	7289.86	0.0004	1.219E-05
Na	23	3	He	12077	43.5452	2179326.06	0.0036	0.3452
Na	23	3	He	11931.662	43.0253	2164081.22	0.0036	0.3452
Na	23	3	He	12367.35	44.5838	2172669.50	0.0036	0.3452
Mg	24	3	He	14628.199	26.2512	1313805.92	0.0018	0.003497
Mg	24	3	He	14791.727	26.5446	1335137.95	0.0018	0.003497
Mg	24	3	He	14796.761	26.5536	1294020.14	0.0018	0.003497
Al	27	3	He	4883.219	2.8575	143010.47	0.0006	0.0006432
Al	27	3	He	4824.556	2.8232	141999.78	0.0006	0.0006432
Al	27	3	He	4900.242	2.8675	139737.68	0.0006	0.0006432
K	39	3	He	8432.833	10.2136	511166.75	0.0012	0.3951
K	39	3	He	8357.797	10.1263	509329.99	0.0012	0.3951
K	39	3	He	8596.208	10.4039	507003.94	0.0012	0.3951
Ca	44	3	He	69834.139	4.7201	236231.27	0.0001	0.002715
Ca	44	3	He	69775.97	4.7162	237215.60	0.0001	0.002715
Ca	44	3	He	71012.139	4.7997	233901.36	0.0001	0.002715
Ti	47	3	He	509.561	0.2737	13696.90	0.0005	7.003E-05
Ti	47	3	He	533.71	0.2866	14417.63	0.0005	7.003E-05
Ti	47	3	He	516.814	0.2776	13526.76	0.0005	7.003E-05
V	51	3	He	506.725	11.1014	555599.25	0.0219	0.02486
V	51	3	He	503.405	11.0289	554729.31	0.0219	0.02486
V	51	3	He	517.237	11.3312	552197.63	0.0219	0.02486
Cr	52	3	He	476.622	14.3104	716199.13	0.0299	0.03997
Cr	52	3	He	475.909	14.289	718707.96	0.0299	0.03997
Cr	52	3	He	486.18	14.5965	711323.04	0.0299	0.03997
Mn	55	3	He	693.127	8.8981	445329.84	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	692.817	8.8942	447357.73	0.0128	0.002639
Mn	55	3	He	710.91	9.1264	444749.02	0.0128	0.002639
Fe	57	3	He	4904.469	2.8509	142679.36	0.0006	0.001429
Fe	57	3	He	4999.271	2.906	146163.61	0.0006	0.001429
Fe	57	3	He	5087.861	2.9574	144122.31	0.0006	0.001429
Co	59	3	He	477.301	26.8657	1344561.85	0.0563	0.002149
Co	59	3	He	476.987	26.8481	1350402.64	0.0563	0.002149
Co	59	3	He	488.914	27.5194	1341082.48	0.0563	0.002149
Ni	60	3	He	508.33	4.3659	386750.31	0.0086	0.002834
Ni	60	3	He	528.781	4.5414	390050.85	0.0086	0.002834
Ni	60	3	He	518.214	4.4507	385264.99	0.0086	0.002834
Cu	63	3	He	474.945	12.1971	1080472.72	0.0257	0.004757
Cu	63	3	He	488.359	12.5414	1077148.58	0.0257	0.004757
Cu	63	3	He	480.841	12.3485	1068906.16	0.0257	0.004757
Zn	66	3	He	518.384	1.5132	134041.63	0.0029	0.003818
Zn	66	3	He	536.404	1.5656	134466.48	0.0029	0.003818
Zn	66	3	He	529.923	1.5468	133889.71	0.0029	0.003818
As	75	3	He	514.536	1.055	93458.40	0.002	0.0008061
As	75	3	He	530.124	1.087	93355.88	0.002	0.0008061
As	75	3	He	519.586	1.0654	92220.39	0.002	0.0008061
Sr	88	3	He	408.374	3.664	327845.11	0.009	0.0009645
Sr	88	3	He	420.068	3.7689	333308.63	0.009	0.0009645
Sr	88	3	He	403.182	3.6174	327042.46	0.009	0.0009645
Mo	98	3	He	50.494	1.1074	99089.34	0.0219	0.0002706
Mo	98	3	He	51.083	1.1203	99079.17	0.0219	0.0002706
Mo	98	3	He	50.467	1.1068	100065.14	0.0219	0.0002706
Ag	107	3	He	50.305	2.3391	209299.00	0.0465	0.0006206
Ag	107	3	He	50.526	2.3494	207777.16	0.0465	0.0006206
Ag	107	3	He	49.709	2.3114	208971.13	0.0465	0.0006206
Cd	111	3	He	51.962	0.2778	24860.11	0.0053	0
Cd	111	3	He	51.684	0.2763	24439.36	0.0053	0
Cd	111	3	He	50.81	0.2717	24561.56	0.0053	0
Sn	120	3	He	104.228	1.6631	148812.89	0.0158	0.01648
Sn	120	3	He	104.924	1.6741	148055.11	0.0158	0.01648
Sn	120	3	He	100.873	1.6101	145567.55	0.0158	0.01648
Sb	121	3	He	100.94	1.4996	134177.99	0.0149	0.0002698
Sb	121	3	He	98.553	1.4641	129482.36	0.0149	0.0002698
Sb	121	3	He	98.606	1.4649	132438.48	0.0149	0.0002698
Ba	137	3	He	514.171	2.4679	220821.97	0.0048	0.0002317
Ba	137	3	He	519.256	2.4923	220412.07	0.0048	0.0002317
Ba	137	3	He	512.124	2.4581	222228.82	0.0048	0.0002317
Tl	205	3	He	102.709	2.5398	1033397.56	0.0247	0.0001339
Tl	205	3	He	102.728	2.5402	1024979.98	0.0247	0.0001339
Tl	205	3	He	103.272	2.5537	1021255.22	0.0247	0.0001339
Pb	208	3	He	51.031	1.6713	360906.56	0.0327	0.00107
Pb	208	3	He	51.563	1.6887	361489.25	0.0327	0.00107
Pb	208	3	He	52.304	1.713	363863.47	0.0327	0.00107
U	238	3	He	50.566	2.4909	778684.52	0.0493	7.55E-05
U	238	3	He	50.297	2.4777	774916.63	0.0493	7.55E-05
U	238	3	He	49.561	2.4414	774384.36	0.0493	7.55E-05
Sc	45	1	No Gas			2602733.40		
Sc	45	1	No Gas			2550484.81		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2523134.96		
Ge	72	1	No Gas			1253694.90		
Ge	72	1	No Gas			1250794.12		
Ge	72	1	No Gas			1243698.89		
Sc	45	2	H2			195305.70		
Sc	45	2	H2			190879.51		
Sc	45	2	H2			193483.34		
Ge	72	2	H2			172408.77		
Ge	72	2	H2			171571.42		
Ge	72	2	H2			172135.33		
In	115	2	H2			408252.14		
In	115	2	H2			402287.81		
In	115	2	H2			406817.26		
Sc	45	3	He			50047.47		
Sc	45	3	He			50297.88		
Sc	45	3	He			48732.29		
Ge	72	3	He			88584.29		
Ge	72	3	He			85887.09		
Ge	72	3	He			86561.93		
In	115	3	He			90272.46		
In	115	3	He			89245.92		
In	115	3	He			91199.89		
Tb	159	3	He			406887.45		
Tb	159	3	He			403498.04		
Tb	159	3	He			399916.48		
Bi	209	3	He			312605.70		
Bi	209	3	He			312759.14		
Bi	209	3	He			317185.27		

Quantitation Report

Data File Name	120SMPL.d
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Sample Type	Sample
Comment	D2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

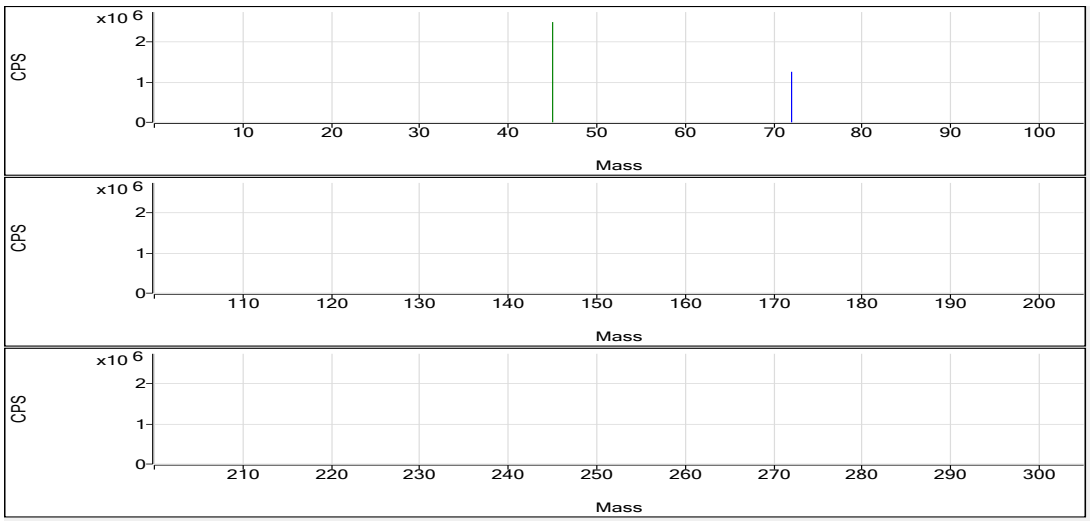
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.032	ppb	7.9	72.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.144	ppb	9.8	12.22	0.0001	Pulse	1.5000	3
Na	23	45	He	1298.638	ppb	1.5	243108.78	4.9905	Pulse	0.1000	3
Mg	24	45	He	1733.542	ppb	0.8	151703.16	3.1140	Pulse	0.1000	3
Al	27	45	He	5.792	ppb	24.2	196.68	0.0040	Pulse	0.1000	3
K	39	45	He	637.942	ppb	3.2	55432.79	1.1378	Pulse	0.1000	3
Ca	44	45	He	12098.289	ppb	2.5	39942.22	0.8200	Pulse	0.1000	3
Ti	47	45	He	0.507	ppb	44.0	16.67	0.0003	Pulse	0.1000	3
V	51	45	He	0.037	ppb	221.8	1251.39	0.0257	Pulse	0.5000	3
Cr	52	45	He	0.003	ppb	5200.1	1950.20	0.0401	Pulse	0.1000	3
Mn	55	45	He	38.431	ppb	0.5	24157.40	0.4959	Pulse	0.1000	3
Fe	57	45	He	4.016	ppb	12.2	183.34	0.0038	Pulse	0.1000	3
Co	59	45	He	0.205	ppb	20.5	666.71	0.0137	Pulse	0.1000	3
Ni	60	72	He	2.577	ppb	12.2	2226.92	0.0250	Pulse	0.1000	3
Cu	63	72	He	0.250	ppb	25.9	1000.07	0.0112	Pulse	0.1000	3
Zn	66	72	He	8.405	ppb	4.9	2526.97	0.0283	Pulse	0.1000	3
As	75	72	He	0.196	ppb	56.8	108.00	0.0012	Pulse	0.5000	3
Sr	88	115	He	66.150	ppb	0.7	53525.20	0.5943	Pulse	0.1000	3
Mo	98	115	He	0.172	ppb	16.9	363.35	0.0040	Pulse	0.1000	3
Ag	107	115	He	0.002	ppb	339.5	63.33	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.025	ppb	33.3	12.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.044	ppb	14.9	1546.82	0.0172	Pulse	0.1000	3
Sb	121	115	He	0.418	ppb	20.2	583.36	0.0065	Pulse	0.1000	3
Ba	137	115	He	1.587	ppb	17.0	706.71	0.0078	Pulse	0.1000	3
Tl	205	159	He	0.221	ppb	2.2	2256.93	0.0056	Pulse	0.1000	3
Pb	208	159	He	0.028	ppb	37.2	806.71	0.0020	Pulse	0.1000	3
U	238	209	He	0.140	ppb	12.4	2226.95	0.0070	Pulse	0.1000	3

ISTD Table:

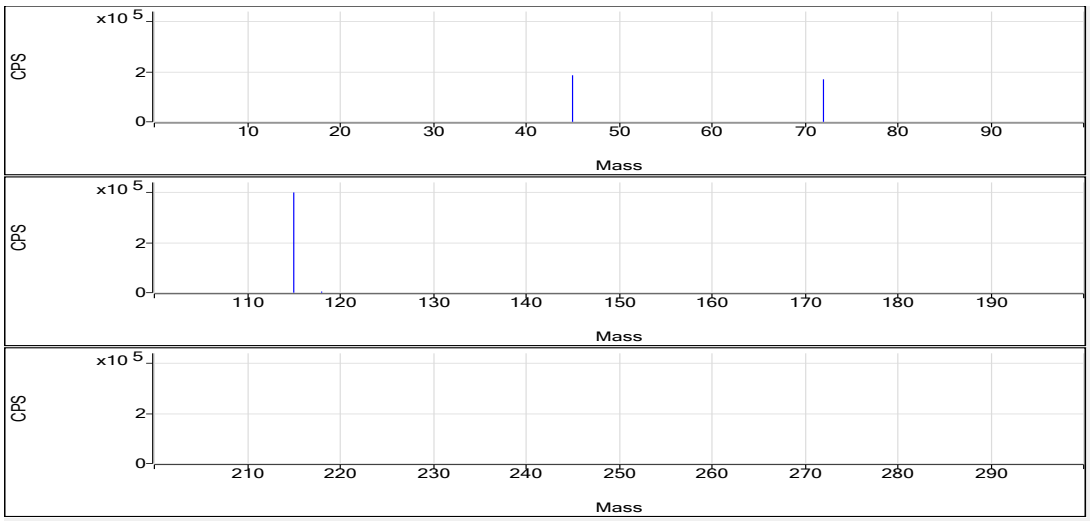
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2500985.33	2.4	104.3	Analog	0.1000	3
No Gas	Ge	72	1260361.86	1.0	109.3	Pulse	0.1000	3
H2	Sc	45	185648.72	0.6	99.3	Pulse	0.1000	3
H2	Ge	72	169461.57	1.8	103.5	Pulse	0.1000	3
H2	In	115	399642.50	0.4	102.7	Pulse	0.1000	3
He	Sc	45	48718.68	1.0	104.5	Pulse	0.1000	3
He	Ge	72	89342.02	2.0	110.0	Pulse	0.1000	3
He	In	115	90063.39	0.5	104.5	Pulse	0.1000	3
He	Tb	159	403810.34	1.2	101.3	Pulse	0.1000	3
He	Bi	209	319747.11	1.8	103.4	Pulse	0.1000	3

No Gas

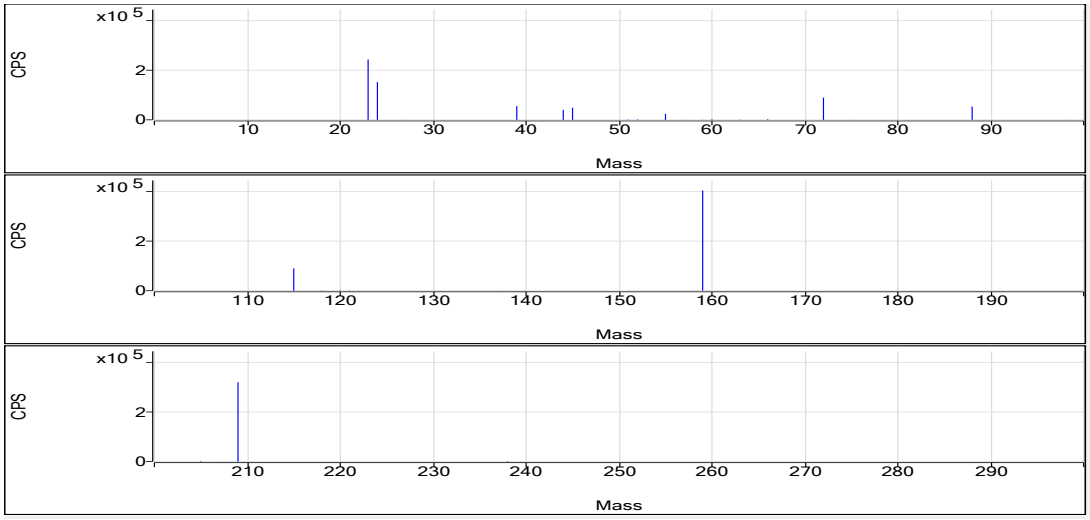


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.035	0	76.00	0.0008	4.685E-06
Be	9	1	No Gas	0.03	0	68.00	0.0008	4.685E-06
Be	9	1	No Gas	0.032	0	74.00	0.0008	4.685E-06
Se	78	2	H2	0.129	0.0001	11.33	0.0004	1.219E-05
Se	78	2	H2	0.158	0.0001	13.33	0.0004	1.219E-05
Se	78	2	H2	0.144	0.0001	12.00	0.0004	1.219E-05
Na	23	3	He	1318.981	5.0632	243896.01	0.0036	0.3452
Na	23	3	He	1281.488	4.9291	241343.18	0.0036	0.3452
Na	23	3	He	1295.447	4.979	244087.16	0.0036	0.3452
Mg	24	3	He	1750.171	3.1439	151440.58	0.0018	0.003497
Mg	24	3	He	1727.887	3.1039	151975.01	0.0018	0.003497
Mg	24	3	He	1722.57	3.0943	151693.89	0.0018	0.003497
Al	27	3	He	4.224	0.0031	150.01	0.0006	0.0006432
Al	27	3	He	6.93	0.0047	230.01	0.0006	0.0006432
Al	27	3	He	6.223	0.0043	210.01	0.0006	0.0006432
K	39	3	He	643.375	1.1442	55114.64	0.0012	0.3951
K	39	3	He	615.15	1.1113	54412.53	0.0012	0.3951
K	39	3	He	655.303	1.1581	56771.21	0.0012	0.3951
Ca	44	3	He	12411.424	0.8411	40517.39	0.0001	0.002715
Ca	44	3	He	12088.482	0.8193	40116.02	0.0001	0.002715
Ca	44	3	He	11794.959	0.7995	39193.24	0.0001	0.002715
Ti	47	3	He	0.643	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	0.25	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	0.629	0.0004	20.00	0.0005	7.003E-05
V	51	3	He	-0.028	0.0242	1168.05	0.0219	0.02486
V	51	3	He	0.01	0.0251	1228.06	0.0219	0.02486
V	51	3	He	0.13	0.0277	1358.07	0.0219	0.02486
Cr	52	3	He	0.142	0.0442	2130.22	0.0299	0.03997
Cr	52	3	He	-0.134	0.0359	1760.17	0.0299	0.03997
Cr	52	3	He	0	0.04	1960.21	0.0299	0.03997
Mn	55	3	He	38.471	0.4964	23910.34	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	38.211	0.493	24140.61	0.0128	0.002639
Mn	55	3	He	38.61	0.4982	24421.24	0.0128	0.002639
Fe	57	3	He	3.616	0.0035	170.01	0.0006	0.001429
Fe	57	3	He	3.869	0.0037	180.01	0.0006	0.001429
Fe	57	3	He	4.563	0.0041	200.01	0.0006	0.001429
Co	59	3	He	0.22	0.0145	700.05	0.0563	0.002149
Co	59	3	He	0.238	0.0155	760.05	0.0563	0.002149
Co	59	3	He	0.158	0.011	540.03	0.0563	0.002149
Ni	60	3	He	2.313	0.0227	2040.21	0.0086	0.002834
Ni	60	3	He	2.494	0.0242	2200.25	0.0086	0.002834
Ni	60	3	He	2.925	0.0279	2440.30	0.0086	0.002834
Cu	63	3	He	0.296	0.0123	1110.09	0.0257	0.004757
Cu	63	3	He	0.278	0.0119	1080.08	0.0257	0.004757
Cu	63	3	He	0.176	0.0093	810.05	0.0257	0.004757
Zn	66	3	He	7.933	0.0269	2420.28	0.0029	0.003818
Zn	66	3	He	8.643	0.029	2630.33	0.0029	0.003818
Zn	66	3	He	8.638	0.029	2530.29	0.0029	0.003818
As	75	3	He	0.323	0.0015	132.00	0.002	0.0008061
As	75	3	He	0.112	0.001	94.00	0.002	0.0008061
As	75	3	He	0.154	0.0011	98.00	0.002	0.0008061
Sr	88	3	He	66.56	0.598	53532.35	0.009	0.0009645
Sr	88	3	He	65.666	0.59	53361.02	0.009	0.0009645
Sr	88	3	He	66.225	0.595	53682.22	0.009	0.0009645
Mo	98	3	He	0.156	0.0037	330.02	0.0219	0.0002706
Mo	98	3	He	0.154	0.0036	330.02	0.0219	0.0002706
Mo	98	3	He	0.205	0.0048	430.02	0.0219	0.0002706
Ag	107	3	He	0.008	0.001	90.00	0.0465	0.0006206
Ag	107	3	He	0.001	0.0007	60.00	0.0465	0.0006206
Ag	107	3	He	-0.004	0.0004	40.00	0.0465	0.0006206
Cd	111	3	He	0.025	0.0001	12.00	0.0053	0
Cd	111	3	He	0.017	0.0001	8.00	0.0053	0
Cd	111	3	He	0.033	0.0002	16.00	0.0053	0
Sn	120	3	He	0.039	0.0171	1530.16	0.0158	0.01648
Sn	120	3	He	0.042	0.0171	1550.17	0.0158	0.01648
Sn	120	3	He	0.052	0.0173	1560.14	0.0158	0.01648
Sb	121	3	He	0.335	0.0053	470.02	0.0149	0.0002698
Sb	121	3	He	0.414	0.0064	580.03	0.0149	0.0002698
Sb	121	3	He	0.504	0.0078	700.04	0.0149	0.0002698
Ba	137	3	He	1.488	0.0074	660.04	0.0048	0.0002317
Ba	137	3	He	1.38	0.0069	620.04	0.0048	0.0002317
Ba	137	3	He	1.892	0.0093	840.06	0.0048	0.0002317
Tl	205	3	He	0.215	0.0055	2180.24	0.0247	0.0001339
Tl	205	3	He	0.221	0.0056	2290.29	0.0247	0.0001339
Tl	205	3	He	0.225	0.0057	2300.27	0.0247	0.0001339
Pb	208	3	He	0.039	0.0024	520.03	0.0327	0.00107
Pb	208	3	He	0.018	0.0017	330.02	0.0327	0.00107
Pb	208	3	He	0.028	0.002	480.03	0.0327	0.00107
U	238	3	He	0.122	0.0061	1990.24	0.0493	7.55E-05
U	238	3	He	0.141	0.007	2220.28	0.0493	7.55E-05
U	238	3	He	0.157	0.0078	2470.32	0.0493	7.55E-05
Sc	45	1	No Gas			2445014.81		
Sc	45	1	No Gas			2494099.18		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2563841.99		
Ge	72	1	No Gas			1246972.95		
Ge	72	1	No Gas			1261272.72		
Ge	72	1	No Gas			1272839.90		
Sc	45	2	H2			186805.27		
Sc	45	2	H2			185357.89		
Sc	45	2	H2			184783.01		
Ge	72	2	H2			171277.20		
Ge	72	2	H2			171122.91		
Ge	72	2	H2			165984.59		
In	115	2	H2			401073.63		
In	115	2	H2			399783.94		
In	115	2	H2			398069.92		
Sc	45	3	He			48170.17		
Sc	45	3	He			48962.88		
Sc	45	3	He			49022.99		
Ge	72	3	He			89922.95		
Ge	72	3	He			90757.60		
Ge	72	3	He			87345.51		
In	115	3	He			89527.97		
In	115	3	He			90454.05		
In	115	3	He			90232.81		
Tb	159	3	He			399210.50		
Tb	159	3	He			408727.92		
Tb	159	3	He			403492.61		
Bi	209	3	He			326229.16		
Bi	209	3	He			316948.80		
Bi	209	3	He			316063.37		

Quantitation Report

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Comment	D2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

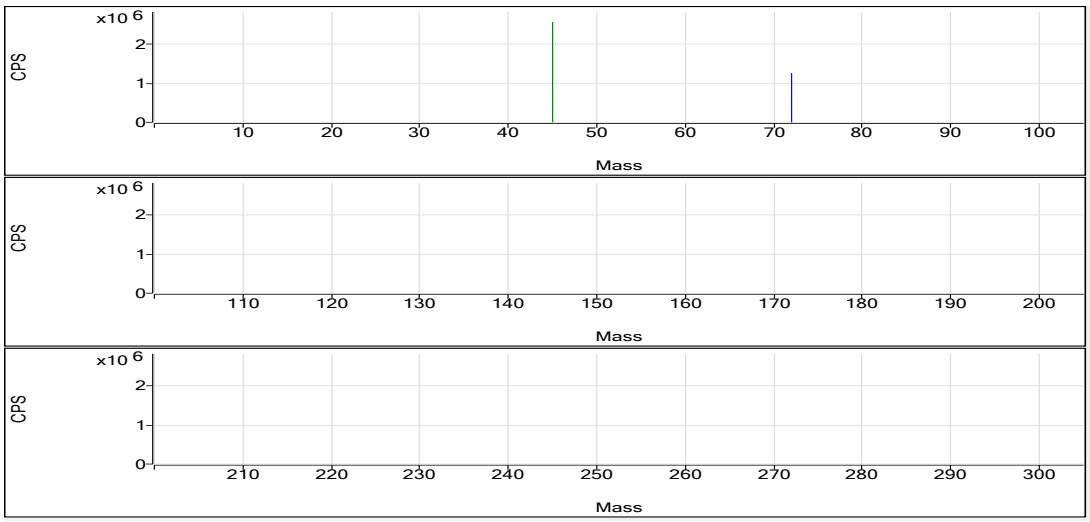
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.071	ppb	4.6	150.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.110	ppb	37.6	10.00	0.0001	Pulse	1.5000	3
Na	23	45	He	7511.977	ppb	1.2	1350416.18	27.2159	Analog	0.1000	3
Mg	24	45	He	9575.826	ppb	1.1	852728.48	17.1856	Pulse	0.1000	3
Al	27	45	He	29.112	ppb	8.5	876.72	0.0177	Pulse	0.1000	3
K	39	45	He	3633.457	ppb	2.6	229496.87	4.6256	Pulse	0.1000	3
Ca	44	45	He	67003.859	ppb	2.0	224710.88	4.5290	Pulse	0.1000	3
Ti	47	45	He	0.118	ppb	364.8	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	-0.186	ppb	N/A	1032.04	0.0208	Pulse	0.5000	3
Cr	52	45	He	-0.110	ppb	N/A	1820.17	0.0367	Pulse	0.1000	3
Mn	55	45	He	207.361	ppb	1.9	132172.96	2.6639	Pulse	0.1000	3
Fe	57	45	He	4.481	ppb	9.2	200.01	0.0040	Pulse	0.1000	3
Co	59	45	He	0.987	ppb	8.2	2863.71	0.0577	Pulse	0.1000	3
Ni	60	72	He	14.799	ppb	1.4	11635.07	0.1299	Pulse	0.1000	3
Cu	63	72	He	0.574	ppb	3.8	1746.83	0.0195	Pulse	0.1000	3
Zn	66	72	He	23.430	ppb	1.3	6455.00	0.0720	Pulse	0.1000	3
As	75	72	He	0.112	ppb	59.0	92.67	0.0010	Pulse	0.5000	3
Sr	88	115	He	376.618	ppb	0.5	303574.56	3.3792	Pulse	0.1000	3
Mo	98	115	He	0.255	ppb	17.8	526.69	0.0059	Pulse	0.1000	3
Ag	107	115	He	-0.005	ppb	N/A	33.33	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.100	ppb	15.5	48.00	0.0005	Pulse	0.5000	3
Sn	120	115	He	-0.198	ppb	N/A	1200.09	0.0134	Pulse	0.1000	3
Sb	121	115	He	0.084	ppb	32.0	136.67	0.0015	Pulse	0.1000	3
Ba	137	115	He	8.425	ppb	3.0	3653.95	0.0407	Pulse	0.1000	3
Tl	205	159	He	0.095	ppb	4.0	1013.41	0.0025	Pulse	0.1000	3
Pb	208	159	He	0.002	ppb	135.2	463.35	0.0011	Pulse	0.1000	3
U	238	209	He	0.069	ppb	9.5	1120.09	0.0035	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2565277.10	0.7	106.9	Analog	0.1000	3
No Gas	Ge	72	1259327.64	0.5	109.2	Pulse	0.1000	3
H2	Sc	45	191930.10	1.0	102.6	Pulse	0.1000	3
H2	Ge	72	172723.03	1.1	105.5	Pulse	0.1000	3
H2	In	115	404639.72	0.8	104.0	Pulse	0.1000	3
He	Sc	45	49622.00	1.0	106.4	Pulse	0.1000	3
He	Ge	72	89596.72	1.5	110.3	Pulse	0.1000	3
He	In	115	89841.10	1.3	104.2	Pulse	0.1000	3
He	Tb	159	409295.24	0.6	102.7	Pulse	0.1000	3
He	Bi	209	320766.28	0.3	103.7	Pulse	0.1000	3

No Gas



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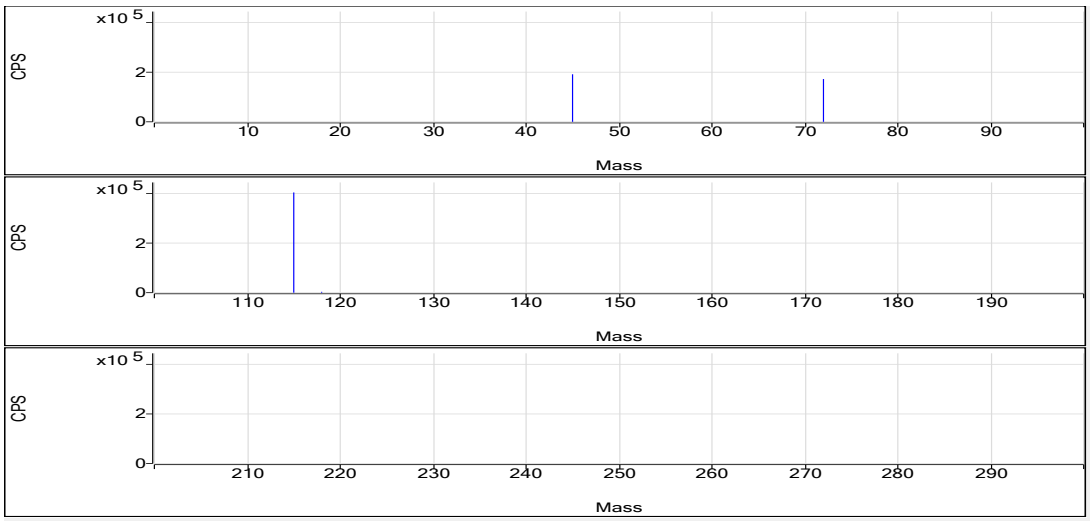
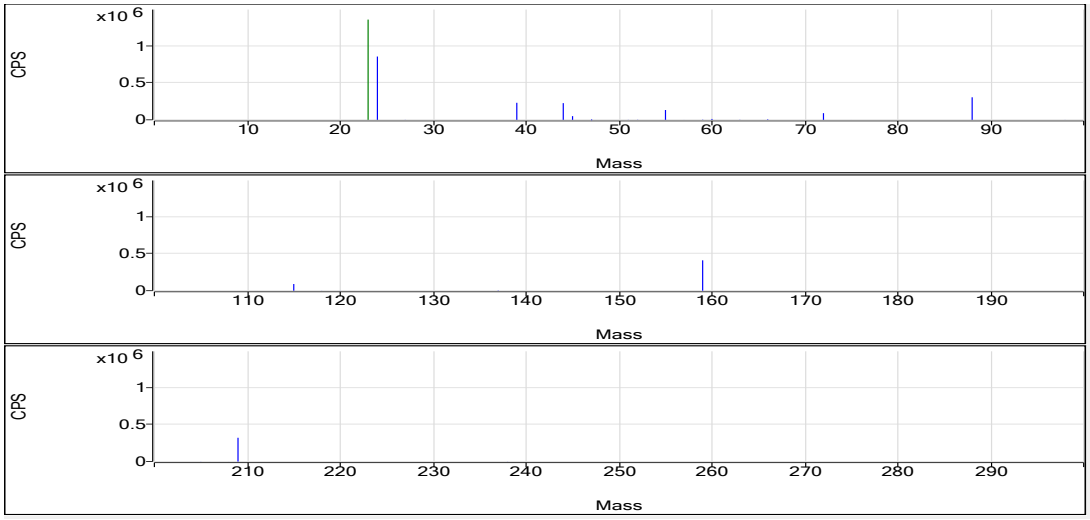


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.067	0.0001	142.00	0.0008	4.685E-06
Be	9	1	No Gas	0.072	0.0001	152.00	0.0008	4.685E-06
Be	9	1	No Gas	0.073	0.0001	156.00	0.0008	4.685E-06
Se	78	2	H2	0.157	0.0001	13.33	0.0004	1.219E-05
Se	78	2	H2	0.082	0	8.00	0.0004	1.219E-05
Se	78	2	H2	0.09	0	8.67	0.0004	1.219E-05
Na	23	3	He	7490.42	27.1388	1356833.89	0.0036	0.3452
Na	23	3	He	7435.519	26.9424	1341623.26	0.0036	0.3452
Na	23	3	He	7609.992	27.5665	1352791.39	0.0036	0.3452
Mg	24	3	He	9534.097	17.1107	855471.32	0.0018	0.003497
Mg	24	3	He	9499.789	17.0492	848981.32	0.0018	0.003497
Mg	24	3	He	9693.591	17.3969	853732.80	0.0018	0.003497
Al	27	3	He	26.253	0.016	800.05	0.0006	0.0006432
Al	27	3	He	30.483	0.0185	920.06	0.0006	0.0006432
Al	27	3	He	30.599	0.0185	910.06	0.0006	0.0006432
K	39	3	He	3584.307	4.5684	228401.05	0.0012	0.3951
K	39	3	He	3573.073	4.5553	226835.37	0.0012	0.3951
K	39	3	He	3742.992	4.7531	233254.20	0.0012	0.3951
Ca	44	3	He	65496.491	4.4271	221339.43	0.0001	0.002715
Ca	44	3	He	67402.351	4.5559	226864.35	0.0001	0.002715
Ca	44	3	He	68112.735	4.6039	225928.86	0.0001	0.002715
Ti	47	3	He	0.615	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	-0.204	0.0204	1020.04	0.0219	0.02486
V	51	3	He	-0.169	0.0212	1054.05	0.0219	0.02486
V	51	3	He	-0.185	0.0208	1022.04	0.0219	0.02486
Cr	52	3	He	-0.213	0.0336	1680.14	0.0299	0.03997
Cr	52	3	He	-0.02	0.0394	1960.19	0.0299	0.03997
Cr	52	3	He	-0.096	0.0371	1820.17	0.0299	0.03997
Mn	55	3	He	206.487	2.6527	132623.32	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	203.861	2.619	130414.28	0.0128	0.002639
Mn	55	3	He	211.734	2.72	133481.29	0.0128	0.002639
Fe	57	3	He	4.082	0.0038	190.01	0.0006	0.001429
Fe	57	3	He	4.454	0.004	200.01	0.0006	0.001429
Fe	57	3	He	4.907	0.0043	210.01	0.0006	0.001429
Co	59	3	He	1.06	0.0618	3090.43	0.0563	0.002149
Co	59	3	He	0.9	0.0528	2630.33	0.0563	0.002149
Co	59	3	He	1.001	0.0585	2870.38	0.0563	0.002149
Ni	60	3	He	14.572	0.1279	11394.92	0.0086	0.002834
Ni	60	3	He	14.872	0.1305	11885.27	0.0086	0.002834
Ni	60	3	He	14.954	0.1312	11625.01	0.0086	0.002834
Cu	63	3	He	0.58	0.0196	1750.17	0.0257	0.004757
Cu	63	3	He	0.55	0.0189	1720.15	0.0257	0.004757
Cu	63	3	He	0.593	0.02	1770.17	0.0257	0.004757
Zn	66	3	He	23.369	0.0719	6401.68	0.0029	0.003818
Zn	66	3	He	23.769	0.073	6651.76	0.0029	0.003818
Zn	66	3	He	23.151	0.0712	6311.57	0.0029	0.003818
As	75	3	He	0.187	0.0012	106.00	0.002	0.0008061
As	75	3	He	0.067	0.0009	86.00	0.002	0.0008061
As	75	3	He	0.08	0.001	86.00	0.002	0.0008061
Sr	88	3	He	376.819	3.381	303318.77	0.009	0.0009645
Sr	88	3	He	378.362	3.3948	301214.49	0.009	0.0009645
Sr	88	3	He	374.674	3.3617	306190.43	0.009	0.0009645
Mo	98	3	He	0.206	0.0048	430.02	0.0219	0.0002706
Mo	98	3	He	0.296	0.0068	600.03	0.0219	0.0002706
Mo	98	3	He	0.263	0.006	550.03	0.0219	0.0002706
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Ag	107	3	He	-0.009	0.0002	20.00	0.0465	0.0006206
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Cd	111	3	He	0.108	0.0006	52.00	0.0053	0
Cd	111	3	He	0.11	0.0006	52.00	0.0053	0
Cd	111	3	He	0.082	0.0004	40.00	0.0053	0
Sn	120	3	He	-0.274	0.0122	1090.09	0.0158	0.01648
Sn	120	3	He	-0.187	0.0135	1200.09	0.0158	0.01648
Sn	120	3	He	-0.132	0.0144	1310.10	0.0158	0.01648
Sb	121	3	He	0.072	0.0013	120.01	0.0149	0.0002698
Sb	121	3	He	0.065	0.0012	110.00	0.0149	0.0002698
Sb	121	3	He	0.115	0.002	180.01	0.0149	0.0002698
Ba	137	3	He	8.198	0.0396	3550.62	0.0048	0.0002317
Ba	137	3	He	8.384	0.0405	3590.59	0.0048	0.0002317
Ba	137	3	He	8.692	0.0419	3820.64	0.0048	0.0002317
Tl	205	3	He	0.092	0.0024	990.07	0.0247	0.0001339
Tl	205	3	He	0.099	0.0026	1050.08	0.0247	0.0001339
Tl	205	3	He	0.093	0.0024	1000.08	0.0247	0.0001339
Pb	208	3	He	0.001	0.0011	290.01	0.0327	0.00107
Pb	208	3	He	0	0.0011	210.01	0.0327	0.00107
Pb	208	3	He	0.005	0.0012	240.01	0.0327	0.00107
U	238	3	He	0.068	0.0034	1100.09	0.0493	7.55E-05
U	238	3	He	0.076	0.0038	1230.10	0.0493	7.55E-05
U	238	3	He	0.063	0.0032	1030.08	0.0493	7.55E-05
Sc	45	1	No Gas			2550990.59		
Sc	45	1	No Gas			2559510.59		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2585330.12		
Ge	72	1	No Gas			1258468.26		
Ge	72	1	No Gas			1265678.57		
Ge	72	1	No Gas			1253836.08		
Sc	45	2	H2			192083.81		
Sc	45	2	H2			193717.36		
Sc	45	2	H2			189989.14		
Ge	72	2	H2			171469.41		
Ge	72	2	H2			171831.97		
Ge	72	2	H2			174867.71		
In	115	2	H2			403819.33		
In	115	2	H2			408160.19		
In	115	2	H2			401939.64		
Sc	45	3	He			49996.17		
Sc	45	3	He			49796.03		
Sc	45	3	He			49073.79		
Ge	72	3	He			89086.76		
Ge	72	3	He			91089.22		
Ge	72	3	He			88614.19		
In	115	3	He			89720.35		
In	115	3	He			88732.87		
In	115	3	He			91088.02		
Tb	159	3	He			411785.11		
Tb	159	3	He			406881.99		
Tb	159	3	He			409218.63		
Bi	209	3	He			320204.62		
Bi	209	3	He			320223.43		
Bi	209	3	He			321870.80		

Quantitation Report

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Acq Time	8/10/2023 2:47:05 PM
Sample Name	410-137743-N-4-A MS
Sample Type	Sample
Comment	D2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

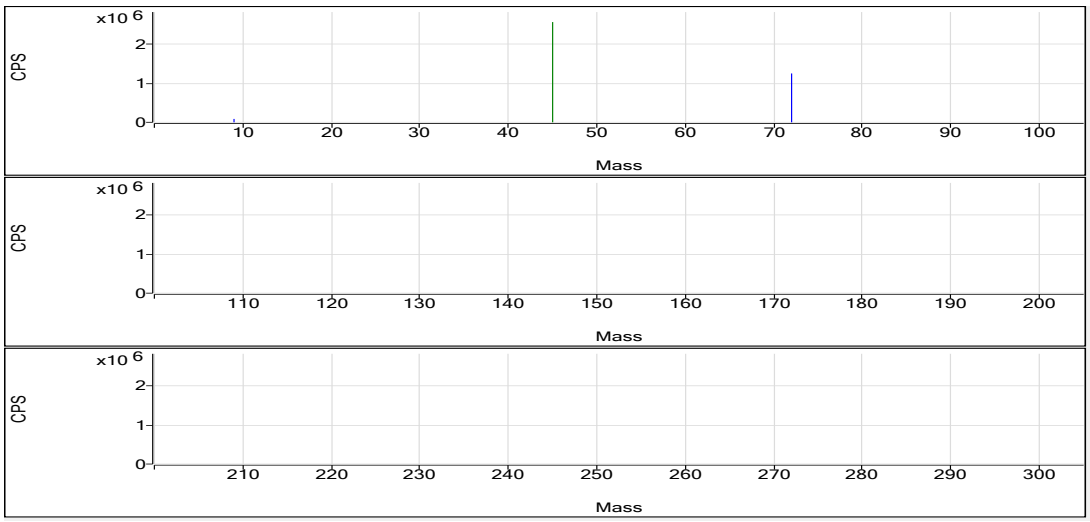
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	44.050	ppb	1.5	86417.50	0.0336	Pulse	0.5000	3
Se	78	72	H2	96.079	ppb	2.2	6854.09	0.0401	Pulse	1.5000	3
Na	23	45	He	11907.939	ppb	1.9	2142860.59	42.9404	Analog	0.1000	3
Mg	24	45	He	14583.567	ppb	0.6	1306001.88	26.1711	Analog	0.1000	3
Al	27	45	He	4642.466	ppb	0.8	135567.36	2.7166	Pulse	0.1000	3
K	39	45	He	8289.301	ppb	0.2	501348.35	10.0465	Pulse	0.1000	3
Ca	44	45	He	70126.733	ppb	0.6	236536.24	4.7399	Pulse	0.1000	3
Ti	47	45	He	503.067	ppb	0.6	13483.37	0.2702	Pulse	0.1000	3
V	51	45	He	485.470	ppb	0.6	530801.56	10.6368	Pulse	0.5000	3
Cr	52	45	He	457.170	ppb	0.4	685061.71	13.7280	Pulse	0.1000	3
Mn	55	45	He	676.274	ppb	1.0	433245.06	8.6819	Pulse	0.1000	3
Fe	57	45	He	4768.067	ppb	0.5	138310.77	2.7716	Pulse	0.1000	3
Co	59	45	He	456.694	ppb	0.5	1282792.66	25.7059	Pulse	0.1000	3
Ni	60	72	He	484.664	ppb	0.4	369294.72	4.1628	Pulse	0.1000	3
Cu	63	72	He	451.534	ppb	1.0	1028702.33	11.5961	Pulse	0.1000	3
Zn	66	72	He	499.948	ppb	1.2	129472.90	1.4595	Pulse	0.1000	3
As	75	72	He	491.322	ppb	1.0	89372.68	1.0075	Pulse	0.5000	3
Sr	88	115	He	428.405	ppb	1.8	336512.95	3.8437	Pulse	0.1000	3
Mo	98	115	He	50.436	ppb	2.7	96832.46	1.1062	Pulse	0.1000	3
Ag	107	115	He	48.845	ppb	1.8	198852.18	2.2713	Pulse	0.1000	3
Cd	111	115	He	49.601	ppb	1.7	23219.30	0.2652	Pulse	0.5000	3
Sn	120	115	He	101.229	ppb	1.9	141460.00	1.6158	Pulse	0.1000	3
Sb	121	115	He	98.511	ppb	2.7	128115.27	1.4635	Pulse	0.1000	3
Ba	137	115	He	509.848	ppb	2.0	214242.33	2.4472	Pulse	0.1000	3
Tl	205	159	He	97.204	ppb	1.1	984396.31	2.4036	Pulse	0.1000	3
Pb	208	159	He	48.430	ppb	0.8	649614.38	1.5862	Pulse	0.1000	3
U	238	209	He	47.605	ppb	0.8	746958.01	2.3451	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2571644.44	0.5	107.2	Analog	0.1000	3
No Gas	Ge	72	1253206.34	0.3	108.7	Pulse	0.1000	3
H2	Sc	45	189974.10	0.9	101.6	Pulse	0.1000	3
H2	Ge	72	171020.00	1.5	104.5	Pulse	0.1000	3
H2	In	115	404564.02	0.4	104.0	Pulse	0.1000	3
He	Sc	45	49902.68	0.2	107.0	Pulse	0.1000	3
He	Ge	72	88714.71	0.6	109.3	Pulse	0.1000	3
He	In	115	87569.41	1.9	101.6	Pulse	0.1000	3
He	Tb	159	409573.01	1.3	102.8	Pulse	0.1000	3
He	Bi	209	318523.46	0.8	103.0	Pulse	0.1000	3

No Gas



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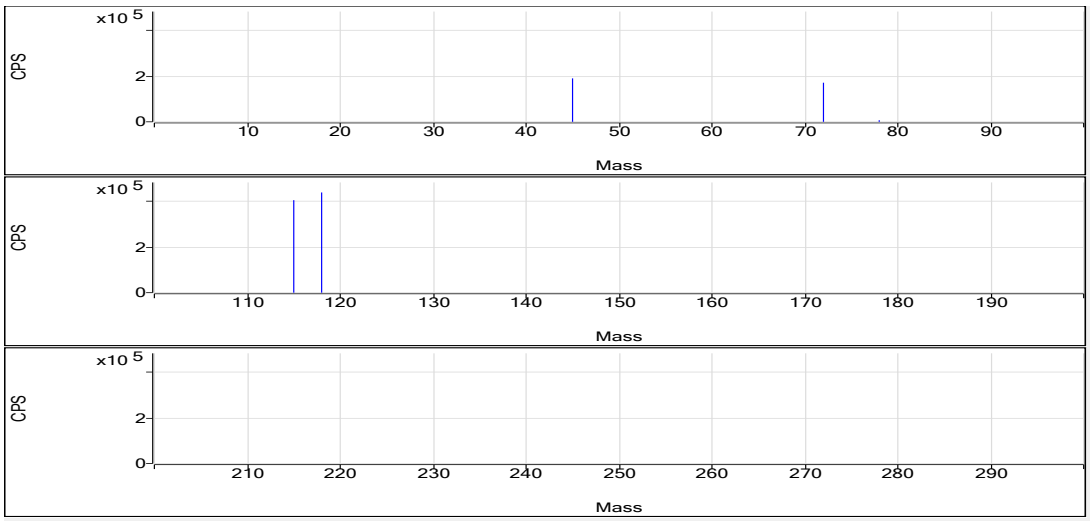
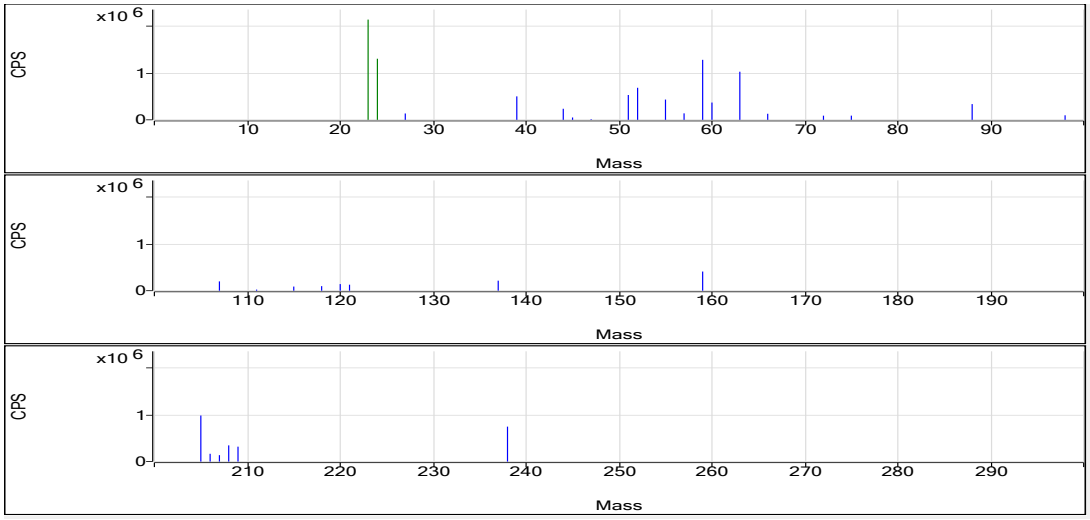


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	43.386	0.0331	85435.90	0.0008	4.685E-06
Be	9	1	No Gas	44.071	0.0336	86574.34	0.0008	4.685E-06
Be	9	1	No Gas	44.693	0.0341	87242.25	0.0008	4.685E-06
Se	78	2	H2	94.785	0.0395	6880.99	0.0004	1.219E-05
Se	78	2	H2	98.513	0.0411	6949.03	0.0004	1.219E-05
Se	78	2	H2	94.939	0.0396	6732.26	0.0004	1.219E-05
Na	23	3	He	12158.671	43.8373	2188190.28	0.0036	0.3452
Na	23	3	He	11822.96	42.6365	2132520.75	0.0036	0.3452
Na	23	3	He	11742.185	42.3475	2107870.75	0.0036	0.3452
Mg	24	3	He	14656.409	26.3018	1312885.29	0.0018	0.003497
Mg	24	3	He	14494.633	26.0115	1301002.25	0.0018	0.003497
Mg	24	3	He	14599.659	26.2	1304118.11	0.0018	0.003497
Al	27	3	He	4681.411	2.7394	136741.89	0.0006	0.0006432
Al	27	3	He	4606.505	2.6956	134824.55	0.0006	0.0006432
Al	27	3	He	4639.481	2.7149	135135.64	0.0006	0.0006432
K	39	3	He	8306.55	10.0666	502486.09	0.0012	0.3951
K	39	3	He	8279.837	10.0355	501939.25	0.0012	0.3951
K	39	3	He	8281.516	10.0375	499619.72	0.0012	0.3951
Ca	44	3	He	70322.25	4.7531	237257.30	0.0001	0.002715
Ca	44	3	He	70391.919	4.7578	237969.00	0.0001	0.002715
Ca	44	3	He	69666.03	4.7088	234382.42	0.0001	0.002715
Ti	47	3	He	501.189	0.2692	13436.59	0.0005	7.003E-05
Ti	47	3	He	506.527	0.272	13606.91	0.0005	7.003E-05
Ti	47	3	He	501.484	0.2693	13406.61	0.0005	7.003E-05
V	51	3	He	485.64	10.6405	531135.06	0.0219	0.02486
V	51	3	He	482.713	10.5766	529001.44	0.0219	0.02486
V	51	3	He	488.056	10.6934	532268.19	0.0219	0.02486
Cr	52	3	He	459.028	13.7836	688024.83	0.0299	0.03997
Cr	52	3	He	455.821	13.6876	684603.35	0.0299	0.03997
Cr	52	3	He	456.66	13.7127	682556.94	0.0299	0.03997
Mn	55	3	He	682.853	8.7663	437579.45	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	669.805	8.5988	430082.57	0.0128	0.002639
Mn	55	3	He	676.163	8.6804	432073.16	0.0128	0.002639
Fe	57	3	He	4770.789	2.7732	138428.14	0.0006	0.001429
Fe	57	3	He	4742.852	2.757	137894.22	0.0006	0.001429
Fe	57	3	He	4790.561	2.7847	138609.96	0.0006	0.001429
Co	59	3	He	459.332	25.8544	1290551.39	0.0563	0.002149
Co	59	3	He	454.713	25.5945	1280141.93	0.0563	0.002149
Co	59	3	He	456.036	25.6689	1277684.67	0.0563	0.002149
Ni	60	3	He	486.919	4.1821	369502.53	0.0086	0.002834
Ni	60	3	He	483.951	4.1567	367500.85	0.0086	0.002834
Ni	60	3	He	483.122	4.1495	370880.78	0.0086	0.002834
Cu	63	3	He	454.782	11.6795	1031915.53	0.0257	0.004757
Cu	63	3	He	453.339	11.6425	1029340.84	0.0257	0.004757
Cu	63	3	He	446.48	11.4664	1024850.61	0.0257	0.004757
Zn	66	3	He	507.111	1.4803	130791.23	0.0029	0.003818
Zn	66	3	He	496.457	1.4493	128137.36	0.0029	0.003818
Zn	66	3	He	496.275	1.4488	129490.10	0.0029	0.003818
As	75	3	He	493.138	1.0112	89340.46	0.002	0.0008061
As	75	3	He	495.236	1.0155	89781.24	0.002	0.0008061
As	75	3	He	485.593	0.9957	88996.34	0.002	0.0008061
Sr	88	3	He	422.608	3.7917	335464.06	0.009	0.0009645
Sr	88	3	He	437.345	3.9239	336184.45	0.009	0.0009645
Sr	88	3	He	425.262	3.8155	337890.35	0.009	0.0009645
Mo	98	3	He	49.566	1.0871	96177.57	0.0219	0.0002706
Mo	98	3	He	52.016	1.1408	97739.24	0.0219	0.0002706
Mo	98	3	He	49.727	1.0906	96580.56	0.0219	0.0002706
Ag	107	3	He	48.467	2.2537	199395.39	0.0465	0.0006206
Ag	107	3	He	49.855	2.3182	198617.09	0.0465	0.0006206
Ag	107	3	He	48.215	2.242	198544.06	0.0465	0.0006206
Cd	111	3	He	49.032	0.2622	23195.29	0.0053	0
Cd	111	3	He	50.585	0.2705	23173.22	0.0053	0
Cd	111	3	He	49.185	0.263	23289.40	0.0053	0
Sn	120	3	He	99.617	1.5903	140698.55	0.0158	0.01648
Sn	120	3	He	103.321	1.6488	141265.32	0.0158	0.01648
Sn	120	3	He	100.749	1.6082	142416.13	0.0158	0.01648
Sb	121	3	He	97.705	1.4515	128421.35	0.0149	0.0002698
Sb	121	3	He	101.498	1.5079	129188.70	0.0149	0.0002698
Sb	121	3	He	96.331	1.4311	126735.76	0.0149	0.0002698
Ba	137	3	He	505.107	2.4244	214496.44	0.0048	0.0002317
Ba	137	3	He	521.767	2.5044	214566.25	0.0048	0.0002317
Ba	137	3	He	502.67	2.4127	213664.29	0.0048	0.0002317
Tl	205	3	He	97.731	2.4167	994988.97	0.0247	0.0001339
Tl	205	3	He	95.933	2.3722	980682.88	0.0247	0.0001339
Tl	205	3	He	97.948	2.422	977517.09	0.0247	0.0001339
Pb	208	3	He	48.605	1.5919	349652.69	0.0327	0.00107
Pb	208	3	He	47.976	1.5713	345024.96	0.0327	0.00107
Pb	208	3	He	48.708	1.5953	343920.03	0.0327	0.00107
U	238	3	He	48.054	2.3672	753319.60	0.0493	7.55E-05
U	238	3	He	47.468	2.3383	739384.21	0.0493	7.55E-05
U	238	3	He	47.294	2.3298	748170.22	0.0493	7.55E-05
Sc	45	1	No Gas			2581232.31		
Sc	45	1	No Gas			2574968.56		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2558732.46		
Ge	72	1	No Gas			1248799.59		
Ge	72	1	No Gas			1255012.64		
Ge	72	1	No Gas			1255806.78		
Sc	45	2	H2			192012.46		
Sc	45	2	H2			189129.06		
Sc	45	2	H2			188780.78		
Ge	72	2	H2			174008.73		
Ge	72	2	H2			169080.39		
Ge	72	2	H2			169970.88		
In	115	2	H2			404931.75		
In	115	2	H2			402945.74		
In	115	2	H2			405814.56		
Sc	45	3	He			49916.15		
Sc	45	3	He			50016.36		
Sc	45	3	He			49775.53		
Ge	72	3	He			88352.67		
Ge	72	3	He			88412.70		
Ge	72	3	He			89378.77		
In	115	3	He			89225.96		
In	115	3	He			86439.90		
In	115	3	He			89317.48		
Tb	159	3	He			411720.15		
Tb	159	3	He			413406.32		
Tb	159	3	He			403592.57		
Bi	209	3	He			318231.83		
Bi	209	3	He			316203.41		
Bi	209	3	He			321135.15		

Quantitation Report

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Sample Type	Sample
Comment	D2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

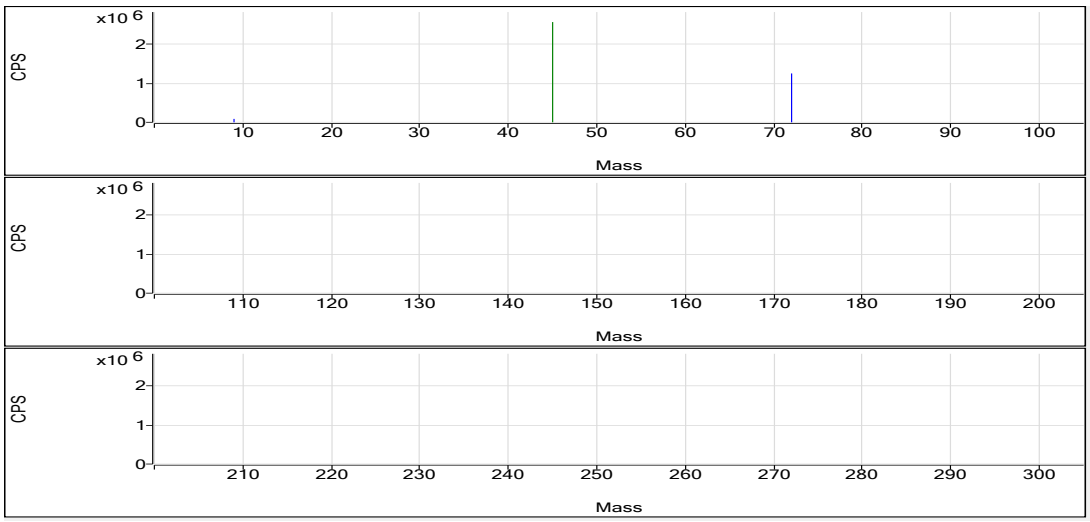
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	44.482	ppb	0.6	87394.43	0.0339	Pulse	0.5000	3
Se	78	72	H2	98.973	ppb	2.3	7038.18	0.0413	Pulse	1.5000	3
Na	23	45	He	11879.848	ppb	2.2	2159286.58	42.8400	Analog	0.1000	3
Mg	24	45	He	14652.914	ppb	0.4	1325554.20	26.2955	Analog	0.1000	3
Al	27	45	He	4684.625	ppb	1.8	138173.60	2.7413	Pulse	0.1000	3
K	39	45	He	8298.055	ppb	1.2	506927.05	10.0567	Pulse	0.1000	3
Ca	44	45	He	70000.649	ppb	0.9	238500.02	4.7314	Pulse	0.1000	3
Ti	47	45	He	486.355	ppb	2.2	13169.73	0.2612	Pulse	0.1000	3
V	51	45	He	491.100	ppb	0.9	542383.71	10.7599	Pulse	0.5000	3
Cr	52	45	He	464.559	ppb	1.0	703144.52	13.9492	Pulse	0.1000	3
Mn	55	45	He	683.377	ppb	1.8	442197.60	8.7730	Pulse	0.1000	3
Fe	57	45	He	4840.075	ppb	1.8	141814.80	2.8135	Pulse	0.1000	3
Co	59	45	He	465.803	ppb	1.5	1321554.41	26.2186	Pulse	0.1000	3
Ni	60	72	He	498.083	ppb	0.3	381252.83	4.2780	Pulse	0.1000	3
Cu	63	72	He	463.445	ppb	0.3	1060699.80	11.9019	Pulse	0.1000	3
Zn	66	72	He	507.480	ppb	0.9	132023.99	1.4814	Pulse	0.1000	3
As	75	72	He	501.597	ppb	0.8	91661.64	1.0285	Pulse	0.5000	3
Sr	88	115	He	418.885	ppb	0.8	335384.34	3.7583	Pulse	0.1000	3
Mo	98	115	He	49.468	ppb	1.5	96815.94	1.0849	Pulse	0.1000	3
Ag	107	115	He	49.324	ppb	1.0	204671.76	2.2936	Pulse	0.1000	3
Cd	111	115	He	50.038	ppb	0.5	23875.74	0.2676	Pulse	0.5000	3
Sn	120	115	He	101.038	ppb	0.7	143918.79	1.6127	Pulse	0.1000	3
Sb	121	115	He	99.157	ppb	0.9	131456.50	1.4731	Pulse	0.1000	3
Ba	137	115	He	510.244	ppb	0.6	218549.89	2.4491	Pulse	0.1000	3
Tl	205	159	He	100.747	ppb	0.9	1018093.09	2.4912	Pulse	0.1000	3
Pb	208	159	He	49.958	ppb	1.8	668592.41	1.6362	Pulse	0.1000	3
U	238	209	He	49.205	ppb	0.7	766985.35	2.4239	Pulse	0.1000	3

ISTD Table:

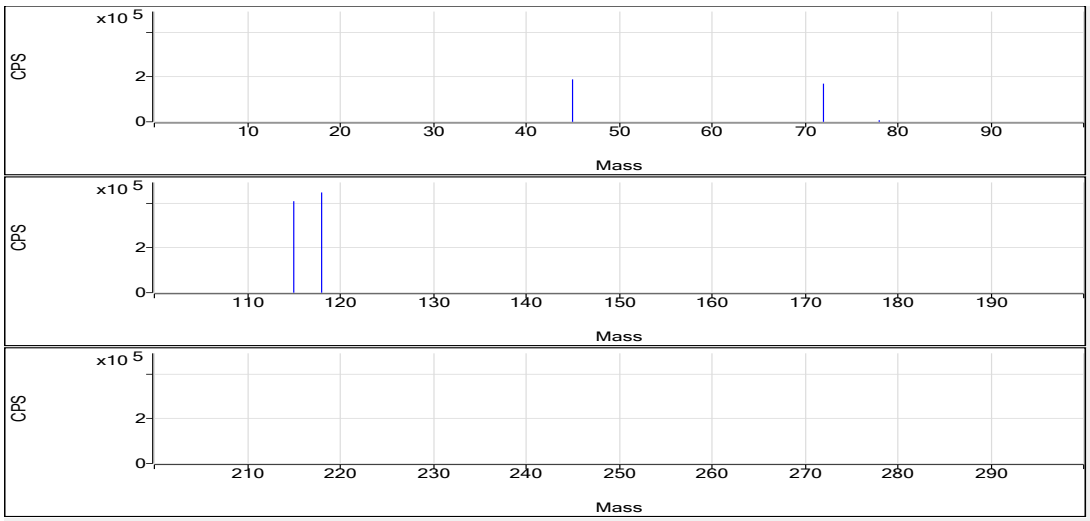
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2575405.22	0.8	107.4	Analog	0.1000	3
No Gas	Ge	72	1255220.32	0.5	108.8	Pulse	0.1000	3
H2	Sc	45	189610.37	0.9	101.4	Pulse	0.1000	3
H2	Ge	72	170505.40	2.0	104.1	Pulse	0.1000	3
H2	In	115	408683.30	0.9	105.0	Pulse	0.1000	3
He	Sc	45	50411.37	1.2	108.1	Pulse	0.1000	3
He	Ge	72	89120.71	0.2	109.8	Pulse	0.1000	3
He	In	115	89238.58	0.1	103.5	Pulse	0.1000	3
He	Tb	159	408700.49	1.4	102.5	Pulse	0.1000	3
He	Bi	209	316437.20	0.9	102.3	Pulse	0.1000	3

No Gas

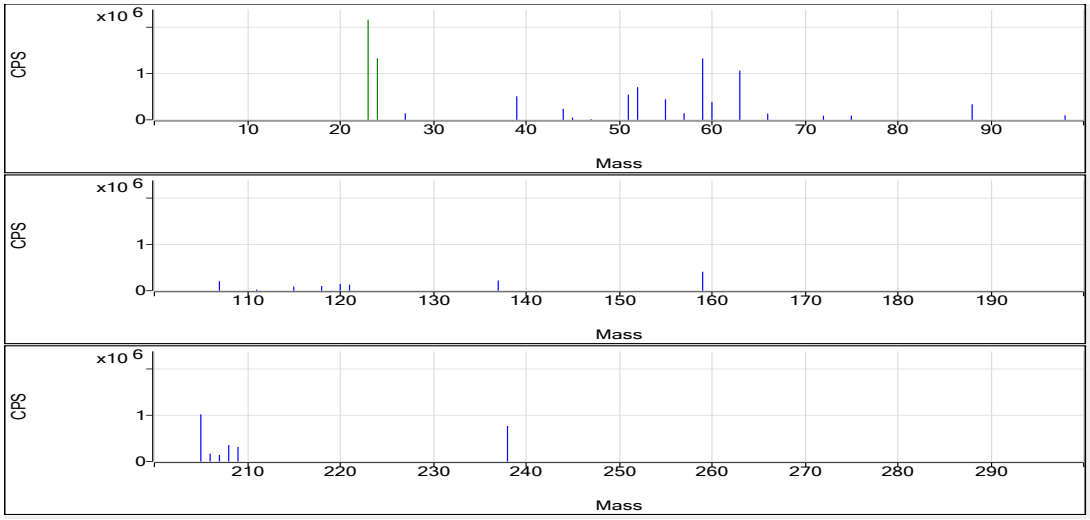


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	44.525	0.034	86892.21	0.0008	4.685E-06
Be	9	1	No Gas	44.205	0.0337	87670.70	0.0008	4.685E-06
Be	9	1	No Gas	44.716	0.0341	87620.38	0.0008	4.685E-06
Se	78	2	H2	97.376	0.0406	7019.73	0.0004	1.219E-05
Se	78	2	H2	101.537	0.0424	7056.41	0.0004	1.219E-05
Se	78	2	H2	98.008	0.0409	7038.40	0.0004	1.219E-05
Na	23	3	He	12140.593	43.7727	2176179.81	0.0036	0.3452
Na	23	3	He	11610.371	41.876	2126857.78	0.0036	0.3452
Na	23	3	He	11888.58	42.8712	2174822.16	0.0036	0.3452
Mg	24	3	He	14715.895	26.4085	1312914.51	0.0018	0.003497
Mg	24	3	He	14597.046	26.1953	1330443.11	0.0018	0.003497
Mg	24	3	He	14645.802	26.2828	1333304.98	0.0018	0.003497
Al	27	3	He	4781.777	2.7981	139111.41	0.0006	0.0006432
Al	27	3	He	4643.346	2.7172	138003.02	0.0006	0.0006432
Al	27	3	He	4628.751	2.7086	137406.38	0.0006	0.0006432
K	39	3	He	8412.342	10.1898	506590.15	0.0012	0.3951
K	39	3	He	8269.479	10.0234	509084.45	0.0012	0.3951
K	39	3	He	8212.342	9.9569	505106.55	0.0012	0.3951
Ca	44	3	He	70694.354	4.7783	237553.30	0.0001	0.002715
Ca	44	3	He	69911.439	4.7254	239998.45	0.0001	0.002715
Ca	44	3	He	69396.155	4.6906	237948.32	0.0001	0.002715
Ti	47	3	He	478.466	0.257	12775.99	0.0005	7.003E-05
Ti	47	3	He	481.932	0.2588	13146.48	0.0005	7.003E-05
Ti	47	3	He	498.666	0.2678	13586.71	0.0005	7.003E-05
V	51	3	He	496.135	10.87	540405.81	0.0219	0.02486
V	51	3	He	489.206	10.7185	544386.50	0.0219	0.02486
V	51	3	He	487.959	10.6913	542358.81	0.0219	0.02486
Cr	52	3	He	469.789	14.1058	701277.57	0.0299	0.03997
Cr	52	3	He	463.087	13.9051	706232.88	0.0299	0.03997
Cr	52	3	He	460.8	13.8367	701923.11	0.0299	0.03997
Mn	55	3	He	697.294	8.9516	445034.33	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	676.145	8.6802	440862.22	0.0128	0.002639
Mn	55	3	He	676.693	8.6872	440696.24	0.0128	0.002639
Fe	57	3	He	4915.948	2.8575	142064.54	0.0006	0.001429
Fe	57	3	He	4747.287	2.7596	140156.33	0.0006	0.001429
Fe	57	3	He	4856.988	2.8233	143223.53	0.0006	0.001429
Co	59	3	He	473.984	26.679	1326362.17	0.0563	0.002149
Co	59	3	He	461.326	25.9666	1318829.82	0.0563	0.002149
Co	59	3	He	462.098	26.0101	1319471.23	0.0563	0.002149
Ni	60	3	He	499.276	4.2882	381678.59	0.0086	0.002834
Ni	60	3	He	498.222	4.2791	380960.11	0.0086	0.002834
Ni	60	3	He	496.751	4.2665	381119.80	0.0086	0.002834
Cu	63	3	He	465.068	11.9435	1063058.34	0.0257	0.004757
Cu	63	3	He	463.439	11.9017	1059578.50	0.0257	0.004757
Cu	63	3	He	461.827	11.8604	1059462.56	0.0257	0.004757
Zn	66	3	He	511.833	1.4941	132983.46	0.0029	0.003818
Zn	66	3	He	502.716	1.4675	130650.32	0.0029	0.003818
Zn	66	3	He	507.892	1.4826	132438.20	0.0029	0.003818
As	75	3	He	505.921	1.0374	92333.27	0.002	0.0008061
As	75	3	He	497.961	1.0211	90902.22	0.002	0.0008061
As	75	3	He	500.911	1.0271	91749.42	0.002	0.0008061
Sr	88	3	He	422.519	3.7909	338393.39	0.009	0.0009645
Sr	88	3	He	417.072	3.742	333450.74	0.009	0.0009645
Sr	88	3	He	417.064	3.7419	334308.90	0.009	0.0009645
Mo	98	3	He	49.868	1.0937	97629.36	0.0219	0.0002706
Mo	98	3	He	49.928	1.095	97576.43	0.0219	0.0002706
Mo	98	3	He	48.607	1.0661	95242.04	0.0219	0.0002706
Ag	107	3	He	49.368	2.2956	204915.39	0.0465	0.0006206
Ag	107	3	He	49.772	2.3144	206232.26	0.0465	0.0006206
Ag	107	3	He	48.833	2.2707	202867.63	0.0465	0.0006206
Cd	111	3	He	50.117	0.268	23920.50	0.0053	0
Cd	111	3	He	50.234	0.2686	23934.50	0.0053	0
Cd	111	3	He	49.764	0.2661	23772.23	0.0053	0
Sn	120	3	He	100.394	1.6026	143053.16	0.0158	0.01648
Sn	120	3	He	100.85	1.6098	143446.19	0.0158	0.01648
Sn	120	3	He	101.869	1.6259	145257.02	0.0158	0.01648
Sb	121	3	He	100.158	1.488	132822.41	0.0149	0.0002698
Sb	121	3	He	98.99	1.4706	131045.63	0.0149	0.0002698
Sb	121	3	He	98.324	1.4607	130501.45	0.0149	0.0002698
Ba	137	3	He	511.399	2.4546	219110.62	0.0048	0.0002317
Ba	137	3	He	512.76	2.4611	219311.70	0.0048	0.0002317
Ba	137	3	He	506.573	2.4314	217227.36	0.0048	0.0002317
Tl	205	3	He	100.007	2.4729	1023197.33	0.0247	0.0001339
Tl	205	3	He	101.706	2.515	1012784.05	0.0247	0.0001339
Tl	205	3	He	100.528	2.4858	1018297.88	0.0247	0.0001339
Pb	208	3	He	49.172	1.6104	353076.60	0.0327	0.00107
Pb	208	3	He	50.972	1.6694	357493.39	0.0327	0.00107
Pb	208	3	He	49.729	1.6287	356741.24	0.0327	0.00107
U	238	3	He	48.832	2.4056	768564.83	0.0493	7.55E-05
U	238	3	He	49.474	2.4372	764880.22	0.0493	7.55E-05
U	238	3	He	49.309	2.429	767511.00	0.0493	7.55E-05
Sc	45	1	No Gas			2558058.24		
Sc	45	1	No Gas			2599659.96		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2568497.46		
Ge	72	1	No Gas			1247924.12		
Ge	72	1	No Gas			1258823.50		
Ge	72	1	No Gas			1258913.34		
Sc	45	2	H2			191357.13		
Sc	45	2	H2			188144.33		
Sc	45	2	H2			189329.65		
Ge	72	2	H2			172795.62		
Ge	72	2	H2			166582.67		
Ge	72	2	H2			172137.91		
In	115	2	H2			413066.67		
In	115	2	H2			407287.22		
In	115	2	H2			405696.01		
Sc	45	3	He			49715.51		
Sc	45	3	He			50789.39		
Sc	45	3	He			50729.22		
Ge	72	3	He			89006.96		
Ge	72	3	He			89027.16		
Ge	72	3	He			89328.02		
In	115	3	He			90029.91		
In	115	3	He			89889.89		
In	115	3	He			90131.91		
Tb	159	3	He			413756.83		
Tb	159	3	He			402703.70		
Tb	159	3	He			409640.93		
Bi	209	3	He			319496.26		
Bi	209	3	He			313841.19		
Bi	209	3	He			315974.16		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

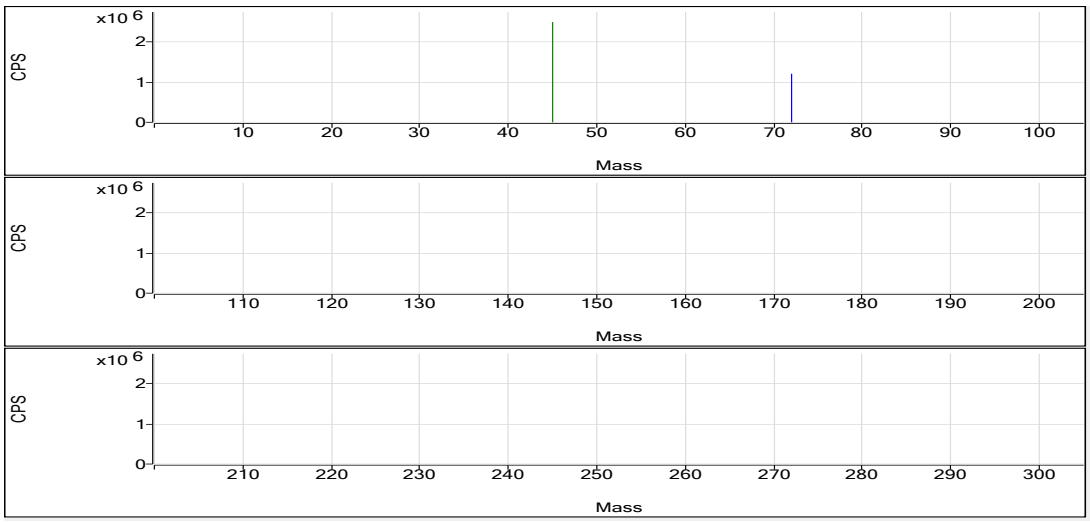
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.023	ppb	28.3	56.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.111	ppb	15.8	9.34	0.0001	Pulse	1.5000	3
Na	23	45	He	0.682	ppb	418.9	16663.21	0.3476	Pulse	0.1000	3
Mg	24	45	He	1.770	ppb	42.6	320.02	0.0067	Pulse	0.1000	3
Al	27	45	He	2.462	ppb	80.3	100.01	0.0021	Pulse	0.1000	3
K	39	45	He	-8.070	ppb	N/A	18488.91	0.3857	Pulse	0.1000	3
Ca	44	45	He	15.395	ppb	20.0	180.01	0.0038	Pulse	0.1000	3
Ti	47	45	He	0.517	ppb	86.6	16.67	0.0003	Pulse	0.1000	3
V	51	45	He	0.136	ppb	23.1	1334.74	0.0278	Pulse	0.5000	3
Cr	52	45	He	-0.030	ppb	N/A	1873.52	0.0391	Pulse	0.1000	3
Mn	55	45	He	0.119	ppb	62.1	200.01	0.0042	Pulse	0.1000	3
Fe	57	45	He	2.086	ppb	97.4	126.67	0.0026	Pulse	0.1000	3
Co	59	45	He	0.092	ppb	14.3	350.02	0.0073	Pulse	0.1000	3
Ni	60	72	He	0.069	ppb	65.9	286.68	0.0034	Pulse	0.1000	3
Cu	63	72	He	0.088	ppb	17.7	586.70	0.0070	Pulse	0.1000	3
Zn	66	72	He	3.533	ppb	9.7	1180.09	0.0141	Pulse	0.1000	3
As	75	72	He	0.104	ppb	46.1	85.33	0.0010	Pulse	0.5000	3
Sr	88	115	He	0.019	ppb	64.6	100.00	0.0011	Pulse	0.1000	3
Mo	98	115	He	0.171	ppb	2.5	353.35	0.0040	Pulse	0.1000	3
Ag	107	115	He	-0.001	ppb	N/A	50.00	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.010	ppb	24.0	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.071	ppb	92.5	1550.14	0.0176	Pulse	0.1000	3
Sb	121	115	He	0.496	ppb	16.8	673.38	0.0076	Pulse	0.1000	3
Ba	137	115	He	0.015	ppb	182.2	26.67	0.0003	Pulse	0.1000	3
Tl	205	159	He	0.246	ppb	2.4	2500.33	0.0062	Pulse	0.1000	3
Pb	208	159	He	0.021	ppb	41.3	703.37	0.0017	Pulse	0.1000	3
U	238	209	He	0.164	ppb	12.0	2533.68	0.0082	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2503907.51	0.9	104.4	Analog	0.1000	3
No Gas	Ge	72	1213061.88	1.4	105.2	Pulse	0.1000	3
H2	Sc	45	184821.42	1.2	98.8	Pulse	0.1000	3
H2	Ge	72	159974.34	1.7	97.7	Pulse	0.1000	3
H2	In	115	394436.43	0.7	101.4	Pulse	0.1000	3
He	Sc	45	47939.74	0.3	102.8	Pulse	0.1000	3
He	Ge	72	83684.65	0.7	103.1	Pulse	0.1000	3
He	In	115	88084.29	1.0	102.2	Pulse	0.1000	3
He	Tb	159	402080.99	0.5	100.9	Pulse	0.1000	3
He	Bi	209	310657.78	1.4	100.4	Pulse	0.1000	3

No Gas



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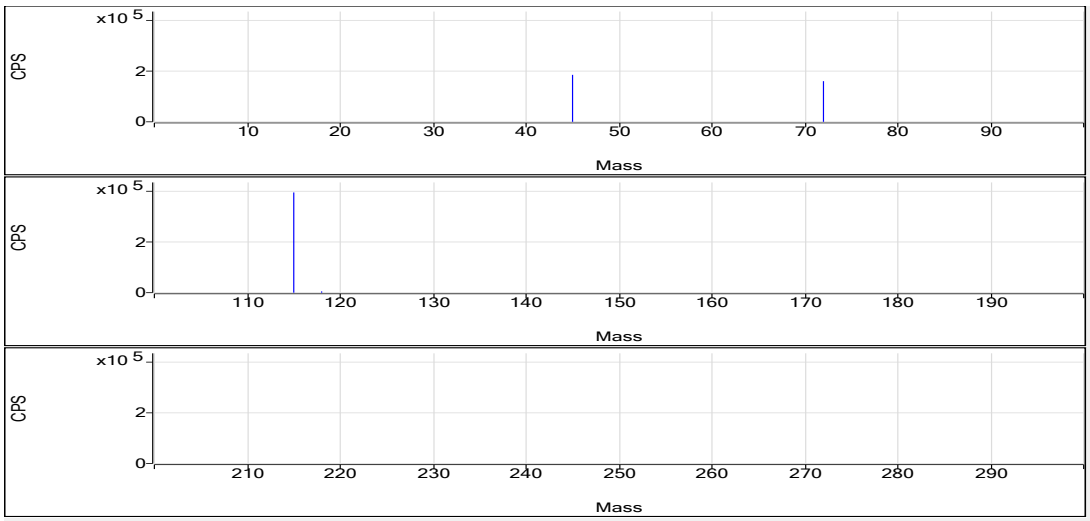
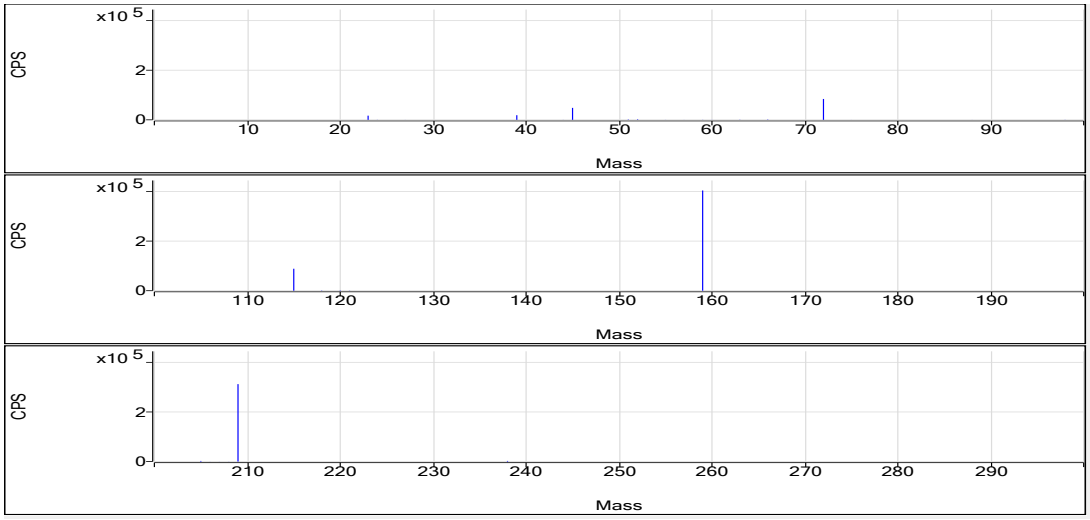


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.018	0	46.00	0.0008	4.685E-06
Be	9	1	No Gas	0.021	0	52.00	0.0008	4.685E-06
Be	9	1	No Gas	0.031	0	70.00	0.0008	4.685E-06
Se	78	2	H2	0.131	0.0001	10.67	0.0004	1.219E-05
Se	78	2	H2	0.103	0.0001	8.67	0.0004	1.219E-05
Se	78	2	H2	0.099	0.0001	8.67	0.0004	1.219E-05
Na	23	3	He	1.972	0.3522	16920.15	0.0036	0.3452
Na	23	3	He	-2.593	0.3359	16129.18	0.0036	0.3452
Na	23	3	He	2.667	0.3547	16940.31	0.0036	0.3452
Mg	24	3	He	1.648	0.0065	310.02	0.0018	0.003497
Mg	24	3	He	2.578	0.0081	390.02	0.0018	0.003497
Mg	24	3	He	1.085	0.0054	260.01	0.0018	0.003497
Al	27	3	He	2.815	0.0023	110.01	0.0006	0.0006432
Al	27	3	He	4.24	0.0031	150.01	0.0006	0.0006432
Al	27	3	He	0.332	0.0008	40.00	0.0006	0.0006432
K	39	3	He	-9.775	0.3837	18432.11	0.0012	0.3951
K	39	3	He	-6.595	0.3874	18602.39	0.0012	0.3951
K	39	3	He	-7.84	0.3859	18432.22	0.0012	0.3951
Ca	44	3	He	18.361	0.004	190.01	0.0001	0.002715
Ca	44	3	He	12.219	0.0035	170.01	0.0001	0.002715
Ca	44	3	He	15.605	0.0038	180.01	0.0001	0.002715
Ti	47	3	He	0.257	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	1.033	0.0006	30.00	0.0005	7.003E-05
Ti	47	3	He	0.26	0.0002	10.00	0.0005	7.003E-05
V	51	3	He	0.101	0.0271	1300.07	0.0219	0.02486
V	51	3	He	0.16	0.0284	1362.07	0.0219	0.02486
V	51	3	He	0.148	0.0281	1342.07	0.0219	0.02486
Cr	52	3	He	0.028	0.0408	1960.20	0.0299	0.03997
Cr	52	3	He	-0.069	0.0379	1820.17	0.0299	0.03997
Cr	52	3	He	-0.048	0.0385	1840.18	0.0299	0.03997
Mn	55	3	He	0.054	0.0033	160.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.2	0.0052	250.01	0.0128	0.002639
Mn	55	3	He	0.104	0.004	190.01	0.0128	0.002639
Fe	57	3	He	1.482	0.0023	110.00	0.0006	0.001429
Fe	57	3	He	4.351	0.004	190.01	0.0006	0.001429
Fe	57	3	He	0.424	0.0017	80.00	0.0006	0.001429
Co	59	3	He	0.076	0.0065	310.01	0.0563	0.002149
Co	59	3	He	0.099	0.0077	370.02	0.0563	0.002149
Co	59	3	He	0.099	0.0077	370.02	0.0563	0.002149
Ni	60	3	He	0.104	0.0037	310.01	0.0086	0.002834
Ni	60	3	He	0.085	0.0036	300.02	0.0086	0.002834
Ni	60	3	He	0.018	0.003	250.01	0.0086	0.002834
Cu	63	3	He	0.101	0.0073	610.04	0.0257	0.004757
Cu	63	3	He	0.092	0.0071	600.03	0.0257	0.004757
Cu	63	3	He	0.071	0.0066	550.03	0.0257	0.004757
Zn	66	3	He	3.483	0.014	1160.10	0.0029	0.003818
Zn	66	3	He	3.216	0.0132	1110.08	0.0029	0.003818
Zn	66	3	He	3.898	0.0152	1270.10	0.0029	0.003818
As	75	3	He	0.1	0.001	84.00	0.002	0.0008061
As	75	3	He	0.059	0.0009	78.00	0.002	0.0008061
As	75	3	He	0.154	0.0011	94.00	0.002	0.0008061
Sr	88	3	He	0.031	0.0012	110.00	0.009	0.0009645
Sr	88	3	He	0.02	0.0011	100.00	0.009	0.0009645
Sr	88	3	He	0.006	0.001	90.00	0.009	0.0009645
Mo	98	3	He	0.173	0.0041	360.02	0.0219	0.0002706
Mo	98	3	He	0.166	0.0039	340.01	0.0219	0.0002706
Mo	98	3	He	0.174	0.0041	360.02	0.0219	0.0002706
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Ag	107	3	He	0.006	0.0009	80.00	0.0465	0.0006206
Ag	107	3	He	-0.004	0.0005	40.00	0.0465	0.0006206
Cd	111	3	He	0.013	0.0001	6.00	0.0053	0
Cd	111	3	He	0.009	0	4.00	0.0053	0
Cd	111	3	He	0.008	0	4.00	0.0053	0
Sn	120	3	He	0.14	0.0187	1660.17	0.0158	0.01648
Sn	120	3	He	0.011	0.0166	1450.13	0.0158	0.01648
Sn	120	3	He	0.061	0.0174	1540.13	0.0158	0.01648
Sb	121	3	He	0.437	0.0068	600.04	0.0149	0.0002698
Sb	121	3	He	0.461	0.0071	620.04	0.0149	0.0002698
Sb	121	3	He	0.592	0.0091	800.06	0.0149	0.0002698
Ba	137	3	He	0.046	0.0005	40.00	0.0048	0.0002317
Ba	137	3	He	0	0.0002	20.00	0.0048	0.0002317
Ba	137	3	He	-0.001	0.0002	20.00	0.0048	0.0002317
Tl	205	3	He	0.245	0.0062	2490.33	0.0247	0.0001339
Tl	205	3	He	0.241	0.0061	2460.32	0.0247	0.0001339
Tl	205	3	He	0.252	0.0064	2550.33	0.0247	0.0001339
Pb	208	3	He	0.022	0.0018	290.01	0.0327	0.00107
Pb	208	3	He	0.029	0.002	370.02	0.0327	0.00107
Pb	208	3	He	0.012	0.0014	280.02	0.0327	0.00107
U	238	3	He	0.143	0.0071	2230.28	0.0493	7.55E-05
U	238	3	He	0.181	0.009	2810.41	0.0493	7.55E-05
U	238	3	He	0.168	0.0084	2560.36	0.0493	7.55E-05
Sc	45	1	No Gas			2485008.56		
Sc	45	1	No Gas			2527518.24		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2499195.74		
Ge	72	1	No Gas			1201452.79		
Ge	72	1	No Gas			1232660.76		
Ge	72	1	No Gas			1205072.09		
Sc	45	2	H2			184070.41		
Sc	45	2	H2			183050.23		
Sc	45	2	H2			187343.63		
Ge	72	2	H2			159916.67		
Ge	72	2	H2			157348.61		
Ge	72	2	H2			162657.73		
In	115	2	H2			391983.98		
In	115	2	H2			394164.56		
In	115	2	H2			397160.74		
Sc	45	3	He			48039.69		
Sc	45	3	He			48020.04		
Sc	45	3	He			47759.49		
Ge	72	3	He			83101.39		
Ge	72	3	He			84217.99		
Ge	72	3	He			83734.56		
In	115	3	He			88824.20		
In	115	3	He			87133.03		
In	115	3	He			88319.58		
Tb	159	3	He			402311.87		
Tb	159	3	He			403841.60		
Tb	159	3	He			400089.49		
Bi	209	3	He			314017.01		
Bi	209	3	He			312117.24		
Bi	209	3	He			305839.08		

Quantitation Report

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Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

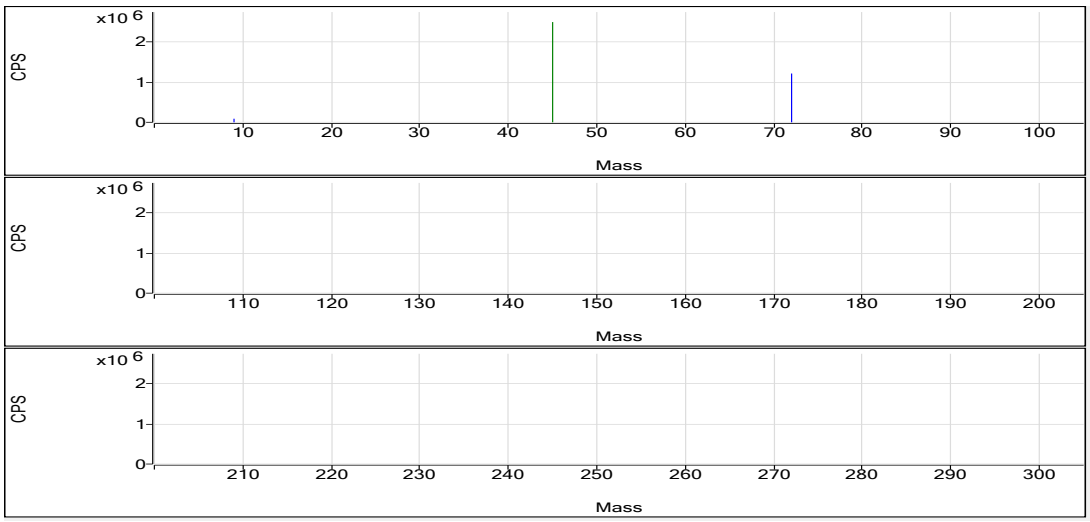
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	46.692	ppb	0.5	88951.53	0.0356	Pulse	0.5000	3
Se	78	72	H2	53.080	ppb	3.0	3601.35	0.0222	Pulse	1.5000	3
Na	23	45	He	4738.898	ppb	2.3	846219.88	17.2964	Pulse	0.1000	3
Mg	24	45	He	4928.672	ppb	1.7	432870.32	8.8471	Pulse	0.1000	3
Al	27	45	He	4915.865	ppb	0.9	140757.43	2.8766	Pulse	0.1000	3
K	39	45	He	5069.101	ppb	1.4	308143.03	6.2972	Pulse	0.1000	3
Ca	44	45	He	5146.567	ppb	2.9	17150.64	0.3504	Pulse	0.1000	3
Ti	47	45	He	5044.900	ppb	1.1	132549.51	2.7089	Pulse	0.1000	3
V	51	45	He	507.297	ppb	1.7	543777.02	11.1139	Pulse	0.5000	3
Cr	52	45	He	483.642	ppb	1.3	710498.09	14.5206	Pulse	0.1000	3
Mn	55	45	He	501.488	ppb	1.3	315041.42	6.4387	Pulse	0.1000	3
Fe	57	45	He	5032.145	ppb	2.1	143110.38	2.9251	Pulse	0.1000	3
Co	59	45	He	484.880	ppb	1.2	1335433.15	27.2923	Pulse	0.1000	3
Ni	60	72	He	518.888	ppb	1.5	377508.34	4.4565	Pulse	0.1000	3
Cu	63	72	He	495.180	ppb	1.0	1077220.29	12.7166	Pulse	0.1000	3
Zn	66	72	He	522.477	ppb	2.3	129187.79	1.5251	Pulse	0.1000	3
As	75	72	He	523.467	ppb	0.6	90924.34	1.0733	Pulse	0.5000	3
Sr	88	115	He	51.337	ppb	2.0	40893.21	0.4615	Pulse	0.1000	3
Mo	98	115	He	50.629	ppb	2.1	98400.35	1.1104	Pulse	0.1000	3
Ag	107	115	He	50.700	ppb	2.5	208909.94	2.3575	Pulse	0.1000	3
Cd	111	115	He	51.123	ppb	1.8	24224.34	0.2733	Pulse	0.5000	3
Sn	120	115	He	51.208	ppb	2.6	73150.46	0.8255	Pulse	0.1000	3
Sb	121	115	He	51.528	ppb	2.1	67853.41	0.7656	Pulse	0.1000	3
Ba	137	115	He	515.440	ppb	1.7	219251.23	2.4740	Pulse	0.1000	3
Tl	205	159	He	51.257	ppb	1.2	511555.06	1.2675	Pulse	0.1000	3
Pb	208	159	He	51.473	ppb	1.6	680334.46	1.6858	Pulse	0.1000	3
U	238	209	He	50.534	ppb	1.4	776077.62	2.4894	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2497241.84	1.0	104.1	Analog	0.1000	3
No Gas	Ge	72	1215202.17	1.6	105.4	Pulse	0.1000	3
H2	Sc	45	187509.09	1.5	100.3	Pulse	0.1000	3
H2	Ge	72	162629.83	1.4	99.3	Pulse	0.1000	3
H2	In	115	400174.67	0.3	102.8	Pulse	0.1000	3
He	Sc	45	48936.43	1.6	104.9	Pulse	0.1000	3
He	Ge	72	84714.04	0.7	104.3	Pulse	0.1000	3
He	In	115	88637.27	1.6	102.8	Pulse	0.1000	3
He	Tb	159	403617.10	1.0	101.3	Pulse	0.1000	3
He	Bi	209	311780.49	0.8	100.8	Pulse	0.1000	3

No Gas



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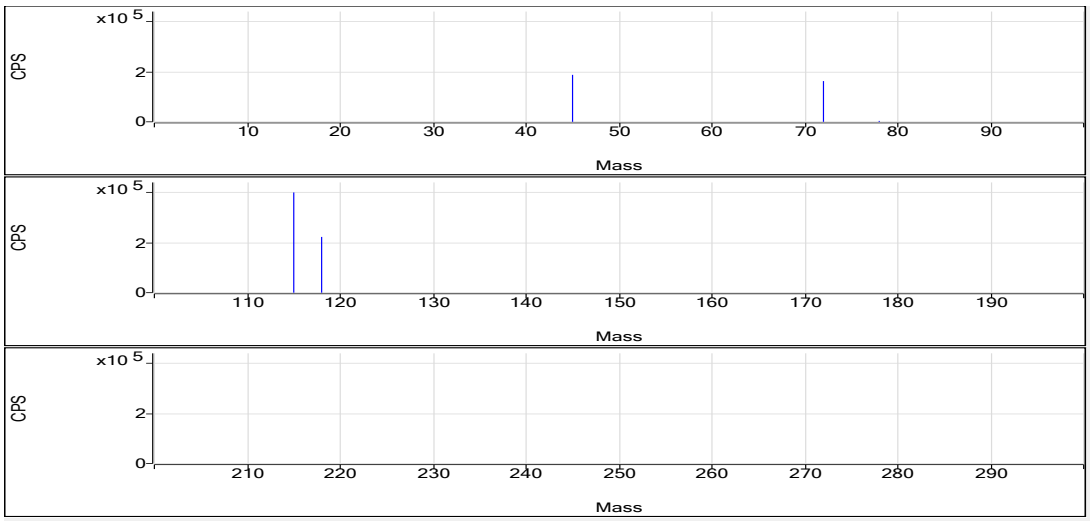
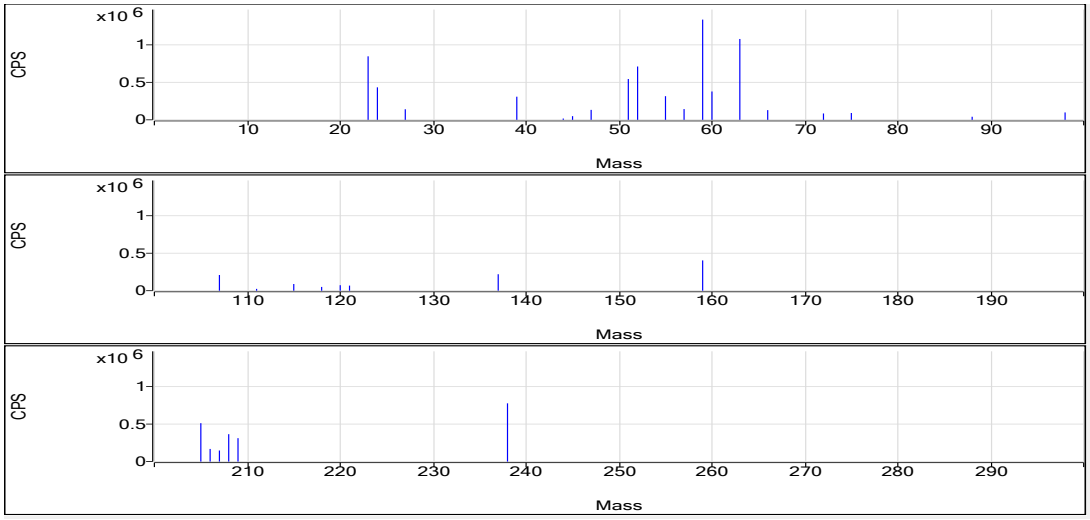


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	46.482	0.0355	89519.67	0.0008	4.685E-06
Be	9	1	No Gas	46.972	0.0358	88781.09	0.0008	4.685E-06
Be	9	1	No Gas	46.623	0.0356	88553.84	0.0008	4.685E-06
Se	78	2	H2	54.917	0.0229	3675.81	0.0004	1.219E-05
Se	78	2	H2	52.009	0.0217	3582.45	0.0004	1.219E-05
Se	78	2	H2	52.313	0.0218	3545.78	0.0004	1.219E-05
Na	23	3	He	4631.722	16.9131	840336.63	0.0036	0.3452
Na	23	3	He	4851.438	17.699	851680.85	0.0036	0.3452
Na	23	3	He	4733.536	17.2772	846642.17	0.0036	0.3452
Mg	24	3	He	4845.942	8.6987	432199.72	0.0018	0.003497
Mg	24	3	He	5009	8.9913	432662.02	0.0018	0.003497
Mg	24	3	He	4931.073	8.8514	433749.21	0.0018	0.003497
Al	27	3	He	4865.211	2.847	141453.20	0.0006	0.0006432
Al	27	3	He	4951.497	2.8974	139425.77	0.0006	0.0006432
Al	27	3	He	4930.886	2.8854	141393.31	0.0006	0.0006432
K	39	3	He	5000.117	6.2168	308887.71	0.0012	0.3951
K	39	3	He	5066.201	6.2938	302858.61	0.0012	0.3951
K	39	3	He	5140.984	6.3809	312682.77	0.0012	0.3951
Ca	44	3	He	5317.3	0.3619	17981.68	0.0001	0.002715
Ca	44	3	He	5051.126	0.3439	16549.93	0.0001	0.002715
Ca	44	3	He	5071.274	0.3453	16920.31	0.0001	0.002715
Ti	47	3	He	4990.921	2.6799	133154.67	0.0005	7.003E-05
Ti	47	3	He	5101.741	2.7394	131822.96	0.0005	7.003E-05
Ti	47	3	He	5042.037	2.7074	132670.90	0.0005	7.003E-05
V	51	3	He	498.89	10.9302	543073.63	0.0219	0.02486
V	51	3	He	516.343	11.3117	544322.56	0.0219	0.02486
V	51	3	He	506.657	11.1	543934.88	0.0219	0.02486
Cr	52	3	He	480.106	14.4147	716204.60	0.0299	0.03997
Cr	52	3	He	490.741	14.7331	708962.10	0.0299	0.03997
Cr	52	3	He	480.079	14.4139	706327.57	0.0299	0.03997
Mn	55	3	He	494.913	6.3543	315717.03	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	508.205	6.5249	313979.23	0.0128	0.002639
Mn	55	3	He	501.348	6.4369	315428.00	0.0128	0.002639
Fe	57	3	He	4928.638	2.8649	142345.61	0.0006	0.001429
Fe	57	3	He	5136.778	2.9858	143680.02	0.0006	0.001429
Fe	57	3	He	5031.02	2.9244	143305.50	0.0006	0.001429
Co	59	3	He	478.586	26.9381	1338436.07	0.0563	0.002149
Co	59	3	He	489.39	27.5461	1325529.04	0.0563	0.002149
Co	59	3	He	486.664	27.3927	1342334.35	0.0563	0.002149
Ni	60	3	He	525.308	4.5116	378959.49	0.0086	0.002834
Ni	60	3	He	520.955	4.4743	380326.32	0.0086	0.002834
Ni	60	3	He	510.401	4.3837	373239.21	0.0086	0.002834
Cu	63	3	He	500.623	12.8563	1079877.48	0.0257	0.004757
Cu	63	3	He	492.39	12.6449	1074856.62	0.0257	0.004757
Cu	63	3	He	492.527	12.6485	1076926.78	0.0257	0.004757
Zn	66	3	He	530.512	1.5485	130065.11	0.0029	0.003818
Zn	66	3	He	508.397	1.4841	126150.77	0.0029	0.003818
Zn	66	3	He	528.522	1.5427	131347.48	0.0029	0.003818
As	75	3	He	525.168	1.0768	90447.52	0.002	0.0008061
As	75	3	He	519.6	1.0654	90561.96	0.002	0.0008061
As	75	3	He	525.633	1.0778	91763.55	0.002	0.0008061
Sr	88	3	He	52.475	0.4717	41100.32	0.009	0.0009645
Sr	88	3	He	50.481	0.4538	40799.84	0.009	0.0009645
Sr	88	3	He	51.056	0.4589	40779.48	0.009	0.0009645
Mo	98	3	He	51.838	1.1369	99068.62	0.0219	0.0002706
Mo	98	3	He	49.81	1.0924	98222.59	0.0219	0.0002706
Mo	98	3	He	50.24	1.1019	97909.83	0.0219	0.0002706
Ag	107	3	He	52.068	2.4211	210975.97	0.0465	0.0006206
Ag	107	3	He	49.553	2.3042	207176.58	0.0465	0.0006206
Ag	107	3	He	50.48	2.3473	208577.28	0.0465	0.0006206
Cd	111	3	He	52.161	0.2789	24303.13	0.0053	0
Cd	111	3	He	50.41	0.2695	24235.01	0.0053	0
Cd	111	3	He	50.798	0.2716	24134.87	0.0053	0
Sn	120	3	He	52.723	0.8494	74018.76	0.0158	0.01648
Sn	120	3	He	50.356	0.812	73013.00	0.0158	0.01648
Sn	120	3	He	50.544	0.815	72419.63	0.0158	0.01648
Sb	121	3	He	52.098	0.7741	67455.37	0.0149	0.0002698
Sb	121	3	He	50.295	0.7473	67193.81	0.0149	0.0002698
Sb	121	3	He	52.193	0.7755	68911.05	0.0149	0.0002698
Ba	137	3	He	523.427	2.5123	218924.49	0.0048	0.0002317
Ba	137	3	He	506.225	2.4298	218469.06	0.0048	0.0002317
Ba	137	3	He	516.668	2.4799	220360.13	0.0048	0.0002317
Tl	205	3	He	50.606	1.2514	510374.02	0.0247	0.0001339
Tl	205	3	He	51.313	1.2689	511969.60	0.0247	0.0001339
Tl	205	3	He	51.852	1.2822	512321.55	0.0247	0.0001339
Pb	208	3	He	50.588	1.6568	362358.74	0.0327	0.00107
Pb	208	3	He	51.561	1.6886	364997.30	0.0327	0.00107
Pb	208	3	He	52.271	1.7119	367076.60	0.0327	0.00107
U	238	3	He	50.523	2.4888	776926.47	0.0493	7.55E-05
U	238	3	He	49.848	2.4556	771518.11	0.0493	7.55E-05
U	238	3	He	51.23	2.5237	779788.27	0.0493	7.55E-05
Sc	45	1	No Gas			2524483.56		
Sc	45	1	No Gas			2477551.84		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2489690.12		
Ge	72	1	No Gas			1236041.62		
Ge	72	1	No Gas			1197948.03		
Ge	72	1	No Gas			1211616.86		
Sc	45	2	H2			190665.88		
Sc	45	2	H2			185469.16		
Sc	45	2	H2			186392.24		
Ge	72	2	H2			160402.60		
Ge	72	2	H2			165063.18		
Ge	72	2	H2			162423.71		
In	115	2	H2			400285.50		
In	115	2	H2			401189.37		
In	115	2	H2			399049.13		
Sc	45	3	He			49685.68		
Sc	45	3	He			48120.31		
Sc	45	3	He			49003.30		
Ge	72	3	He			83996.15		
Ge	72	3	He			85002.99		
Ge	72	3	He			85142.97		
In	115	3	He			87536.45		
In	115	3	He			90302.95		
In	115	3	He			89246.66		
Tb	159	3	He			407827.73		
Tb	159	3	He			403469.68		
Tb	159	3	He			399553.90		
Bi	209	3	He			312163.88		
Bi	209	3	He			314188.43		
Bi	209	3	He			308989.16		

Quantitation Report

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Sample Type	CCB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

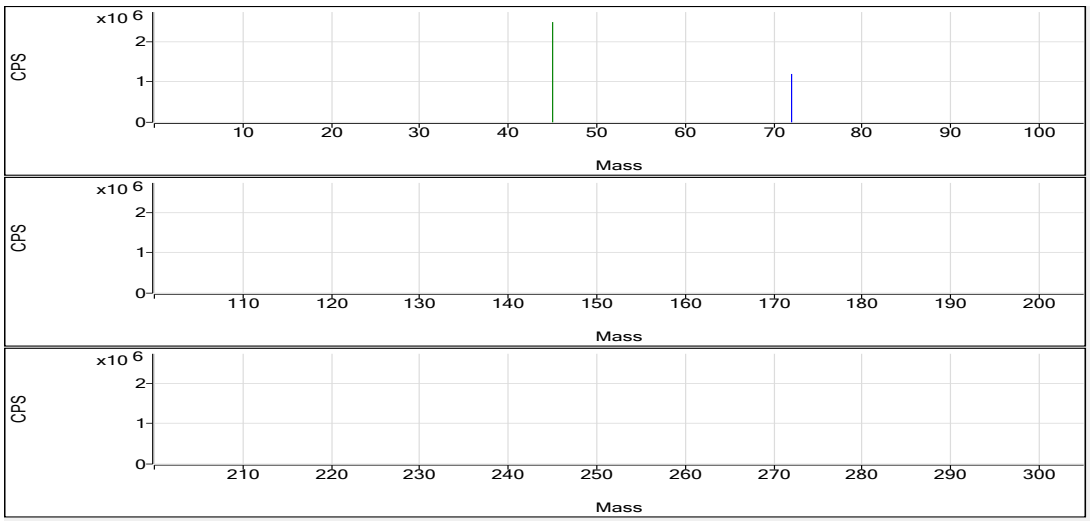
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.023	ppb	15.3	55.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.051	ppb	90.4	5.34	0.0000	Pulse	1.5000	3
Na	23	45	He	-2.484	ppb	N/A	16309.48	0.3363	Pulse	0.1000	3
Mg	24	45	He	0.391	ppb	140.4	203.34	0.0042	Pulse	0.1000	3
Al	27	45	He	1.130	ppb	64.4	63.33	0.0013	Pulse	0.1000	3
K	39	45	He	-7.699	ppb	N/A	18729.20	0.3861	Pulse	0.1000	3
Ca	44	45	He	-2.586	ppb	N/A	123.34	0.0025	Pulse	0.1000	3
Ti	47	45	He	1.021	ppb	75.4	30.00	0.0006	Pulse	0.1000	3
V	51	45	He	0.154	ppb	8.4	1369.41	0.0282	Pulse	0.5000	3
Cr	52	45	He	0.012	ppb	898.3	1956.88	0.0403	Pulse	0.1000	3
Mn	55	45	He	0.095	ppb	41.9	186.68	0.0039	Pulse	0.1000	3
Fe	57	45	He	1.088	ppb	29.7	100.00	0.0021	Pulse	0.1000	3
Co	59	45	He	0.083	ppb	19.2	330.02	0.0068	Pulse	0.1000	3
Ni	60	72	He	0.019	ppb	113.9	253.34	0.0030	Pulse	0.1000	3
Cu	63	72	He	0.113	ppb	39.1	646.70	0.0077	Pulse	0.1000	3
Zn	66	72	He	3.046	ppb	11.3	1073.41	0.0127	Pulse	0.1000	3
As	75	72	He	0.181	ppb	68.4	99.33	0.0012	Pulse	0.5000	3
Sr	88	115	He	-0.018	ppb	N/A	70.00	0.0008	Pulse	0.1000	3
Mo	98	115	He	0.073	ppb	19.6	163.34	0.0019	Pulse	0.1000	3
Ag	107	115	He	-0.003	ppb	N/A	40.00	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.007	ppb	91.4	3.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.010	ppb	810.7	1460.14	0.0166	Pulse	0.1000	3
Sb	121	115	He	0.084	ppb	44.0	133.34	0.0015	Pulse	0.1000	3
Ba	137	115	He	0.047	ppb	53.2	40.00	0.0005	Pulse	0.1000	3
Tl	205	159	He	0.098	ppb	3.3	1033.41	0.0026	Pulse	0.1000	3
Pb	208	159	He	0.023	ppb	25.2	730.04	0.0018	Pulse	0.1000	3
U	238	209	He	0.056	ppb	12.2	890.07	0.0028	Pulse	0.1000	3

ISTD Table:

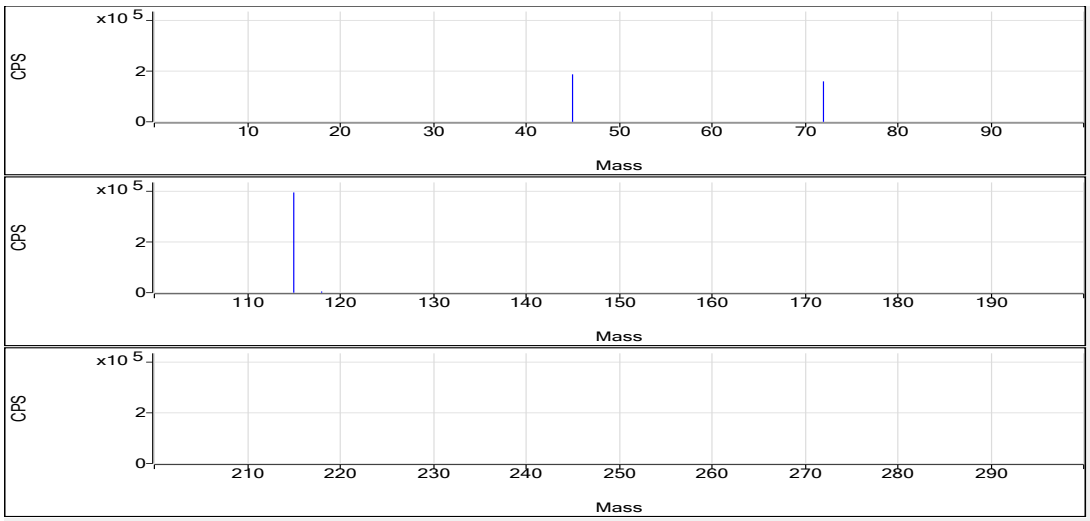
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2477089.39	1.6	103.3	Analog	0.1000	3
No Gas	Ge	72	1194471.91	1.3	103.6	Pulse	0.1000	3
H2	Sc	45	187554.78	0.4	100.3	Pulse	0.1000	3
H2	Ge	72	159782.49	1.6	97.6	Pulse	0.1000	3
H2	In	115	395916.44	0.6	101.8	Pulse	0.1000	3
He	Sc	45	48501.42	0.9	104.0	Pulse	0.1000	3
He	Ge	72	84570.14	1.2	104.2	Pulse	0.1000	3
He	In	115	87816.66	1.6	101.9	Pulse	0.1000	3
He	Tb	159	402966.76	0.3	101.1	Pulse	0.1000	3
He	Bi	209	312643.06	1.1	101.1	Pulse	0.1000	3

No Gas

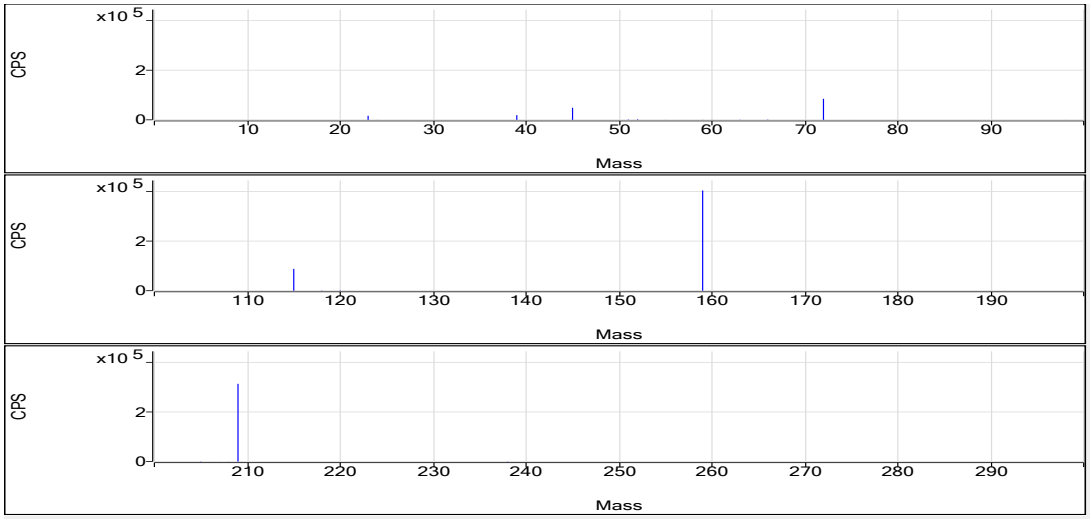


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.021	0	52.00	0.0008	4.685E-06
Be	9	1	No Gas	0.021	0	52.00	0.0008	4.685E-06
Be	9	1	No Gas	0.027	0	62.00	0.0008	4.685E-06
Se	78	2	H2	0.101	0.0001	8.67	0.0004	1.219E-05
Se	78	2	H2	0.01	0	2.67	0.0004	1.219E-05
Se	78	2	H2	0.042	0	4.67	0.0004	1.219E-05
Na	23	3	He	-2.763	0.3353	16429.53	0.0036	0.3452
Na	23	3	He	-2.193	0.3373	16309.56	0.0036	0.3452
Na	23	3	He	-2.497	0.3362	16189.35	0.0036	0.3452
Mg	24	3	He	-0.243	0.0031	150.01	0.0018	0.003497
Mg	24	3	He	0.702	0.0048	230.01	0.0018	0.003497
Mg	24	3	He	0.713	0.0048	230.01	0.0018	0.003497
Al	27	3	He	1.342	0.0014	70.00	0.0006	0.0006432
Al	27	3	He	1.729	0.0017	80.00	0.0006	0.0006432
Al	27	3	He	0.32	0.0008	40.00	0.0006	0.0006432
K	39	3	He	0.948	0.3962	19413.51	0.0012	0.3951
K	39	3	He	-9.942	0.3835	18542.24	0.0012	0.3951
K	39	3	He	-14.103	0.3786	18231.85	0.0012	0.3951
Ca	44	3	He	5.126	0.0031	150.01	0.0001	0.002715
Ca	44	3	He	-6.513	0.0023	110.00	0.0001	0.002715
Ca	44	3	He	-6.372	0.0023	110.00	0.0001	0.002715
Ti	47	3	He	1.01	0.0006	30.00	0.0005	7.003E-05
Ti	47	3	He	1.795	0.001	50.00	0.0005	7.003E-05
Ti	47	3	He	0.256	0.0002	10.00	0.0005	7.003E-05
V	51	3	He	0.158	0.0283	1388.08	0.0219	0.02486
V	51	3	He	0.164	0.0285	1376.08	0.0219	0.02486
V	51	3	He	0.14	0.0279	1344.07	0.0219	0.02486
Cr	52	3	He	0.035	0.041	2010.22	0.0299	0.03997
Cr	52	3	He	0.109	0.0432	2090.25	0.0299	0.03997
Cr	52	3	He	-0.107	0.0368	1770.17	0.0299	0.03997
Mn	55	3	He	0.049	0.0033	160.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.117	0.0041	200.01	0.0128	0.002639
Mn	55	3	He	0.118	0.0042	200.01	0.0128	0.002639
Fe	57	3	He	1.404	0.0022	110.00	0.0006	0.001429
Fe	57	3	He	1.101	0.0021	100.00	0.0006	0.001429
Fe	57	3	He	0.758	0.0019	90.00	0.0006	0.001429
Co	59	3	He	0.089	0.0071	350.02	0.0563	0.002149
Co	59	3	He	0.065	0.0058	280.01	0.0563	0.002149
Co	59	3	He	0.095	0.0075	360.02	0.0563	0.002149
Ni	60	3	He	0.004	0.0029	240.01	0.0086	0.002834
Ni	60	3	He	0.01	0.0029	250.01	0.0086	0.002834
Ni	60	3	He	0.044	0.0032	270.01	0.0086	0.002834
Cu	63	3	He	0.164	0.009	750.05	0.0257	0.004757
Cu	63	3	He	0.092	0.0071	610.03	0.0257	0.004757
Cu	63	3	He	0.083	0.0069	580.03	0.0257	0.004757
Zn	66	3	He	3.076	0.0128	1070.09	0.0029	0.003818
Zn	66	3	He	3.375	0.0136	1170.08	0.0029	0.003818
Zn	66	3	He	2.687	0.0116	980.07	0.0029	0.003818
As	75	3	He	0.236	0.0013	108.00	0.002	0.0008061
As	75	3	He	0.039	0.0009	76.00	0.002	0.0008061
As	75	3	He	0.267	0.0014	114.00	0.002	0.0008061
Sr	88	3	He	-0.07	0.0003	30.00	0.009	0.0009645
Sr	88	3	He	0.006	0.001	90.00	0.009	0.0009645
Sr	88	3	He	0.009	0.001	90.00	0.009	0.0009645
Mo	98	3	He	0.07	0.0018	160.01	0.0219	0.0002706
Mo	98	3	He	0.06	0.0016	140.01	0.0219	0.0002706
Mo	98	3	He	0.088	0.0022	190.01	0.0219	0.0002706
Ag	107	3	He	-0.009	0.0002	20.00	0.0465	0.0006206
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Ag	107	3	He	0.004	0.0008	70.00	0.0465	0.0006206
Cd	111	3	He	0.013	0.0001	6.00	0.0053	0
Cd	111	3	He	0.008	0	4.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Sn	120	3	He	-0.075	0.0153	1360.12	0.0158	0.01648
Sn	120	3	He	0.013	0.0167	1470.15	0.0158	0.01648
Sn	120	3	He	0.094	0.018	1550.14	0.0158	0.01648
Sb	121	3	He	0.095	0.0017	150.01	0.0149	0.0002698
Sb	121	3	He	0.043	0.0009	80.00	0.0149	0.0002698
Sb	121	3	He	0.114	0.002	170.01	0.0149	0.0002698
Ba	137	3	He	0.045	0.0004	40.00	0.0048	0.0002317
Ba	137	3	He	0.023	0.0003	30.00	0.0048	0.0002317
Ba	137	3	He	0.072	0.0006	50.00	0.0048	0.0002317
Tl	205	3	He	0.095	0.0025	1000.08	0.0247	0.0001339
Tl	205	3	He	0.098	0.0026	1030.08	0.0247	0.0001339
Tl	205	3	He	0.102	0.0026	1070.08	0.0247	0.0001339
Pb	208	3	He	0.017	0.0016	340.02	0.0327	0.00107
Pb	208	3	He	0.028	0.002	470.03	0.0327	0.00107
Pb	208	3	He	0.023	0.0018	450.02	0.0327	0.00107
U	238	3	He	0.052	0.0026	830.06	0.0493	7.55E-05
U	238	3	He	0.064	0.0032	1020.08	0.0493	7.55E-05
U	238	3	He	0.052	0.0027	820.06	0.0493	7.55E-05
Sc	45	1	No Gas			2495590.59		
Sc	45	1	No Gas			2503643.87		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2432033.71		
Ge	72	1	No Gas			1195842.09		
Ge	72	1	No Gas			1209861.08		
Ge	72	1	No Gas			1177712.56		
Sc	45	2	H2			187868.22		
Sc	45	2	H2			188031.81		
Sc	45	2	H2			186764.31		
Ge	72	2	H2			159431.18		
Ge	72	2	H2			162444.60		
Ge	72	2	H2			157471.68		
In	115	2	H2			397994.88		
In	115	2	H2			396712.65		
In	115	2	H2			393041.79		
Sc	45	3	He			49002.88		
Sc	45	3	He			48351.23		
Sc	45	3	He			48150.14		
Ge	72	3	He			83766.13		
Ge	72	3	He			85757.26		
Ge	72	3	He			84187.03		
In	115	3	He			88985.20		
In	115	3	He			88168.97		
In	115	3	He			86317.41		
Tb	159	3	He			402229.53		
Tb	159	3	He			402504.95		
Tb	159	3	He			404165.81		
Bi	209	3	He			313676.09		
Bi	209	3	He			315416.75		
Bi	209	3	He			308836.34		

Quantitation Report

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Auto Dilution	1.0000
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Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

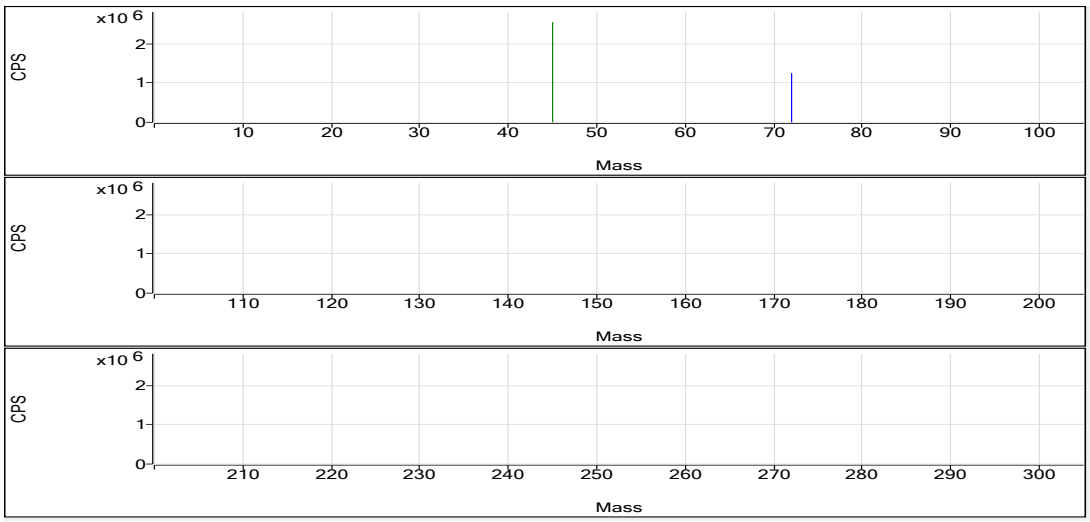
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.086	ppb	18.7	179.33	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.087	ppb	15.9	8.44	0.0000	Pulse	1.5000	3
Na	23	45	He	12899.837	ppb	0.4	2318137.41	46.4885	Analog	0.1000	3
Mg	24	45	He	16895.066	ppb	0.5	1511858.47	30.3187	Analog	0.1000	3
Al	27	45	He	33.166	ppb	8.4	1000.07	0.0200	Pulse	0.1000	3
K	39	45	He	5051.944	ppb	1.8	312983.36	6.2772	Pulse	0.1000	3
Ca	44	45	He	108890.264	ppb	1.1	366915.60	7.3585	Pulse	0.1000	3
Ti	47	45	He	0.122	ppb	359.0	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	-0.222	ppb	N/A	997.38	0.0200	Pulse	0.5000	3
Cr	52	45	He	-0.140	ppb	N/A	1783.50	0.0358	Pulse	0.1000	3
Mn	55	45	He	7836.070	ppb	1.9	5014390.76	100.5698	Analog	0.1000	3
Fe	57	45	He	79.334	ppb	4.7	2370.28	0.0475	Pulse	0.1000	3
Co	59	45	He	4.828	ppb	4.6	13656.88	0.2739	Pulse	0.1000	3
Ni	60	72	He	50.191	ppb	5.9	38605.98	0.4336	Pulse	0.1000	3
Cu	63	72	He	0.557	ppb	13.9	1696.83	0.0191	Pulse	0.1000	3
Zn	66	72	He	70.649	ppb	2.7	18659.33	0.2095	Pulse	0.1000	3
As	75	72	He	-0.021	ppb	N/A	68.00	0.0008	Pulse	0.5000	3
Sr	88	115	He	662.576	ppb	0.4	536301.87	5.9442	Pulse	0.1000	3
Mo	98	115	He	1.034	ppb	3.7	2070.24	0.0229	Pulse	0.1000	3
Ag	107	115	He	-0.002	ppb	N/A	46.67	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.775	ppb	5.9	374.01	0.0041	Pulse	0.5000	3
Sn	120	115	He	-0.250	ppb	N/A	1130.09	0.0125	Pulse	0.1000	3
Sb	121	115	He	0.066	ppb	18.3	113.34	0.0013	Pulse	0.1000	3
Ba	137	115	He	6.948	ppb	8.8	3030.45	0.0336	Pulse	0.1000	3
Tl	205	159	He	0.080	ppb	6.4	856.72	0.0021	Pulse	0.1000	3
Pb	208	159	He	0.017	ppb	11.3	666.70	0.0016	Pulse	0.1000	3
U	238	209	He	0.316	ppb	5.3	5034.49	0.0157	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2544796.11	1.5	106.1	Analog	0.1000	3
No Gas	Ge	72	1248700.40	1.2	108.3	Pulse	0.1000	3
H2	Sc	45	195147.05	0.7	104.4	Pulse	0.1000	3
H2	Ge	72	174477.21	0.9	106.6	Pulse	0.1000	3
H2	In	115	406517.16	0.8	104.5	Pulse	0.1000	3
He	Sc	45	49866.21	1.1	106.9	Pulse	0.1000	3
He	Ge	72	89080.14	1.5	109.7	Pulse	0.1000	3
He	In	115	90225.58	1.1	104.7	Pulse	0.1000	3
He	Tb	159	407205.23	0.8	102.2	Pulse	0.1000	3
He	Bi	209	321487.69	0.3	103.9	Pulse	0.1000	3

No Gas



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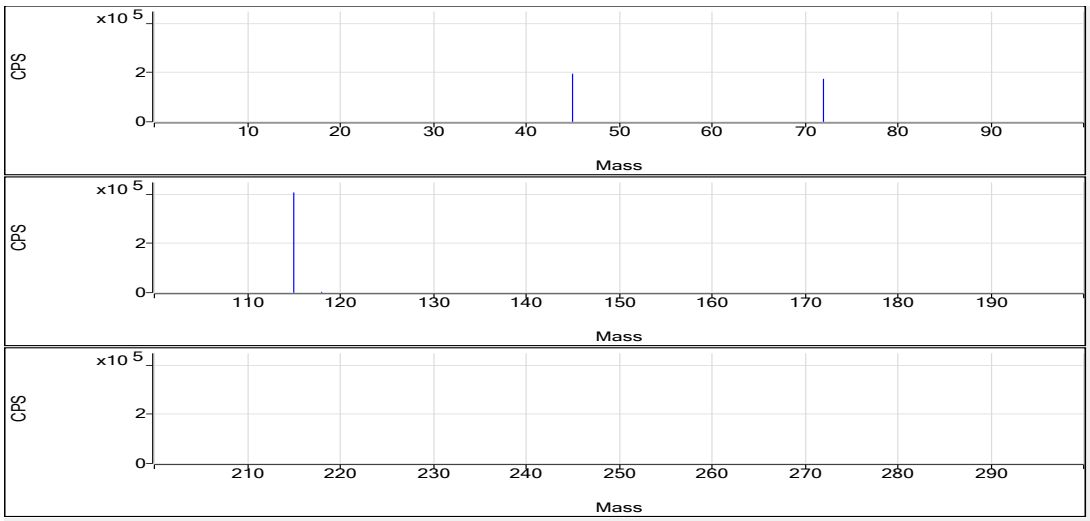
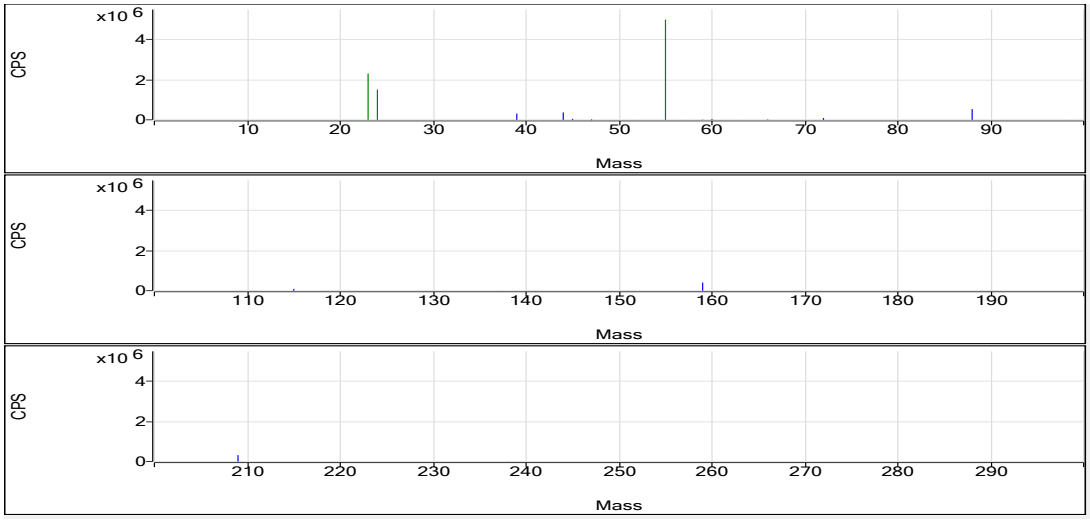


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.091	0.0001	192.00	0.0008	4.685E-06
Be	9	1	No Gas	0.099	0.0001	202.00	0.0008	4.685E-06
Be	9	1	No Gas	0.068	0.0001	144.00	0.0008	4.685E-06
Se	78	2	H2	0.098	0.0001	9.33	0.0004	1.219E-05
Se	78	2	H2	0.071	0	7.33	0.0004	1.219E-05
Se	78	2	H2	0.091	0.0001	8.67	0.0004	1.219E-05
Na	23	3	He	12876.612	46.4054	2324764.50	0.0036	0.3452
Na	23	3	He	12961.974	46.7108	2301174.18	0.0036	0.3452
Na	23	3	He	12860.923	46.3493	2328473.56	0.0036	0.3452
Mg	24	3	He	16960.227	30.4356	1524727.01	0.0018	0.003497
Mg	24	3	He	16919.031	30.3617	1495747.48	0.0018	0.003497
Mg	24	3	He	16805.94	30.1588	1515100.91	0.0018	0.003497
Al	27	3	He	31.999	0.0194	970.07	0.0006	0.0006432
Al	27	3	He	31.17	0.0189	930.06	0.0006	0.0006432
Al	27	3	He	36.33	0.0219	1100.07	0.0006	0.0006432
K	39	3	He	4998.803	6.2153	311367.07	0.0012	0.3951
K	39	3	He	5154.443	6.3965	315120.21	0.0012	0.3951
K	39	3	He	5002.587	6.2197	312462.79	0.0012	0.3951
Ca	44	3	He	109205.078	7.3797	369700.81	0.0001	0.002715
Ca	44	3	He	109889.723	7.426	365835.54	0.0001	0.002715
Ca	44	3	He	107575.992	7.2697	365210.46	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.626	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	-0.215	0.0202	1010.04	0.0219	0.02486
V	51	3	He	-0.164	0.0213	1048.05	0.0219	0.02486
V	51	3	He	-0.287	0.0186	934.04	0.0219	0.02486
Cr	52	3	He	-0.182	0.0345	1730.16	0.0299	0.03997
Cr	52	3	He	-0.115	0.0365	1800.18	0.0299	0.03997
Cr	52	3	He	-0.125	0.0362	1820.17	0.0299	0.03997
Mn	55	3	He	7828.072	100.4671	5033084.30	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	7991.855	102.5691	5052996.49	0.0128	0.002639
Mn	55	3	He	7688.285	98.6731	4957091.49	0.0128	0.002639
Fe	57	3	He	77.946	0.0467	2340.27	0.0006	0.001429
Fe	57	3	He	76.51	0.0459	2260.26	0.0006	0.001429
Fe	57	3	He	83.547	0.05	2510.30	0.0006	0.001429
Co	59	3	He	5.018	0.2846	14257.44	0.0563	0.002149
Co	59	3	He	4.884	0.277	13646.88	0.0563	0.002149
Co	59	3	He	4.583	0.2601	13066.33	0.0563	0.002149
Ni	60	3	He	48.449	0.4187	37559.76	0.0086	0.002834
Ni	60	3	He	53.639	0.4632	40568.15	0.0086	0.002834
Ni	60	3	He	48.487	0.419	37690.04	0.0086	0.002834
Cu	63	3	He	0.518	0.0181	1620.15	0.0257	0.004757
Cu	63	3	He	0.647	0.0214	1870.20	0.0257	0.004757
Cu	63	3	He	0.508	0.0178	1600.15	0.0257	0.004757
Zn	66	3	He	69.601	0.2065	18522.53	0.0029	0.003818
Zn	66	3	He	72.82	0.2158	18902.91	0.0029	0.003818
Zn	66	3	He	69.526	0.2062	18552.54	0.0029	0.003818
As	75	3	He	-0.023	0.0008	68.00	0.002	0.0008061
As	75	3	He	-0.037	0.0007	64.00	0.002	0.0008061
As	75	3	He	-0.003	0.0008	72.00	0.002	0.0008061
Sr	88	3	He	660.17	5.9226	540923.08	0.009	0.0009645
Sr	88	3	He	665.626	5.9715	534940.23	0.009	0.0009645
Sr	88	3	He	661.933	5.9384	533042.30	0.009	0.0009645
Mo	98	3	He	1.021	0.0227	2070.24	0.0219	0.0002706
Mo	98	3	He	1.077	0.0239	2140.24	0.0219	0.0002706
Mo	98	3	He	1.004	0.0223	2000.23	0.0219	0.0002706
Ag	107	3	He	-0.004	0.0004	40.00	0.0465	0.0006206
Ag	107	3	He	0.001	0.0007	60.00	0.0465	0.0006206
Ag	107	3	He	-0.004	0.0004	40.00	0.0465	0.0006206
Cd	111	3	He	0.799	0.0043	390.01	0.0053	0
Cd	111	3	He	0.722	0.0039	346.01	0.0053	0
Cd	111	3	He	0.804	0.0043	386.01	0.0053	0
Sn	120	3	He	-0.232	0.0128	1170.09	0.0158	0.01648
Sn	120	3	He	-0.216	0.0131	1170.10	0.0158	0.01648
Sn	120	3	He	-0.302	0.0117	1050.08	0.0158	0.01648
Sb	121	3	He	0.056	0.0011	100.00	0.0149	0.0002698
Sb	121	3	He	0.08	0.0015	130.01	0.0149	0.0002698
Sb	121	3	He	0.064	0.0012	110.00	0.0149	0.0002698
Ba	137	3	He	7.299	0.0353	3220.50	0.0048	0.0002317
Ba	137	3	He	7.303	0.0353	3160.49	0.0048	0.0002317
Ba	137	3	He	6.243	0.0302	2710.36	0.0048	0.0002317
Tl	205	3	He	0.082	0.0022	890.06	0.0247	0.0001339
Tl	205	3	He	0.083	0.0022	890.06	0.0247	0.0001339
Tl	205	3	He	0.074	0.002	790.05	0.0247	0.0001339
Pb	208	3	He	0.02	0.0017	400.02	0.0327	0.00107
Pb	208	3	He	0.017	0.0016	400.02	0.0327	0.00107
Pb	208	3	He	0.016	0.0016	390.02	0.0327	0.00107
U	238	3	He	0.311	0.0154	4951.12	0.0493	7.55E-05
U	238	3	He	0.335	0.0166	5341.27	0.0493	7.55E-05
U	238	3	He	0.303	0.015	4811.09	0.0493	7.55E-05
Sc	45	1	No Gas			2586782.62		
Sc	45	1	No Gas			2510763.40		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2536842.31		
Ge	72	1	No Gas			1266271.23		
Ge	72	1	No Gas			1238841.62		
Ge	72	1	No Gas			1240988.34		
Sc	45	2	H2			196731.77		
Sc	45	2	H2			194628.77		
Sc	45	2	H2			194080.60		
Ge	72	2	H2			175971.33		
Ge	72	2	H2			174727.36		
Ge	72	2	H2			172732.93		
In	115	2	H2			407027.22		
In	115	2	H2			409477.42		
In	115	2	H2			403046.83		
Sc	45	3	He			50096.82		
Sc	45	3	He			49264.31		
Sc	45	3	He			50237.50		
Ge	72	3	He			89710.50		
Ge	72	3	He			87577.91		
Ge	72	3	He			89952.00		
In	115	3	He			91338.92		
In	115	3	He			89588.01		
In	115	3	He			89769.47		
Tb	159	3	He			409625.50		
Tb	159	3	He			408551.36		
Tb	159	3	He			403438.82		
Bi	209	3	He			322086.93		
Bi	209	3	He			322090.76		
Bi	209	3	He			320285.39		

Quantitation Report

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Sample Name	410-137743-N-1-A
Sample Type	Sample
Comment	D2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

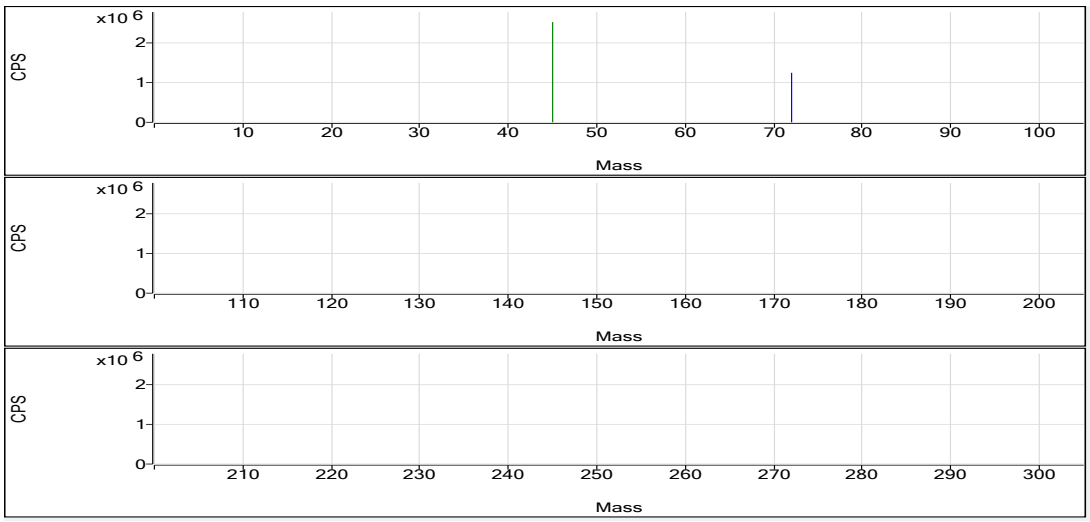
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.183	ppb	9.3	366.01	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.112	ppb	22.8	10.22	0.0001	Pulse	1.5000	3
Na	23	45	He	4754.470	ppb	2.7	866679.44	17.3521	Pulse	0.1000	3
Mg	24	45	He	7247.420	ppb	2.2	649732.90	13.0077	Pulse	0.1000	3
Al	27	45	He	82.203	ppb	9.5	2433.63	0.0487	Pulse	0.1000	3
K	39	45	He	3126.746	ppb	3.0	201563.71	4.0356	Pulse	0.1000	3
Ca	44	45	He	45486.627	ppb	2.4	153620.84	3.0754	Pulse	0.1000	3
Ti	47	45	He	0.237	ppb	154.3	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	0.051	ppb	41.9	1298.07	0.0260	Pulse	0.5000	3
Cr	52	45	He	-0.216	ppb	N/A	1673.49	0.0335	Pulse	0.1000	3
Mn	55	45	He	1216.528	ppb	2.2	779988.22	15.6154	Pulse	0.1000	3
Fe	57	45	He	3.971	ppb	1.9	186.68	0.0037	Pulse	0.1000	3
Co	59	45	He	5.855	ppb	0.9	16573.40	0.3317	Pulse	0.1000	3
Ni	60	72	He	24.799	ppb	0.9	19507.10	0.2157	Pulse	0.1000	3
Cu	63	72	He	1.253	ppb	1.9	3340.51	0.0369	Pulse	0.1000	3
Zn	66	72	He	56.704	ppb	4.0	15278.66	0.1689	Pulse	0.1000	3
As	75	72	He	0.135	ppb	52.2	98.00	0.0011	Pulse	0.5000	3
Sr	88	115	He	273.902	ppb	1.2	227850.43	2.4578	Pulse	0.1000	3
Mo	98	115	He	0.203	ppb	6.1	436.69	0.0047	Pulse	0.1000	3
Ag	107	115	He	-0.003	ppb	N/A	46.67	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.328	ppb	6.3	162.67	0.0018	Pulse	0.5000	3
Sn	120	115	He	-0.285	ppb	N/A	1110.09	0.0120	Pulse	0.1000	3
Sb	121	115	He	0.047	ppb	53.6	90.00	0.0010	Pulse	0.1000	3
Ba	137	115	He	15.660	ppb	3.5	6988.71	0.0754	Pulse	0.1000	3
Tl	205	159	He	0.078	ppb	4.0	846.73	0.0021	Pulse	0.1000	3
Pb	208	159	He	0.008	ppb	49.8	550.03	0.0013	Pulse	0.1000	3
U	238	209	He	0.097	ppb	10.6	1573.49	0.0048	Pulse	0.1000	3

ISTD Table:

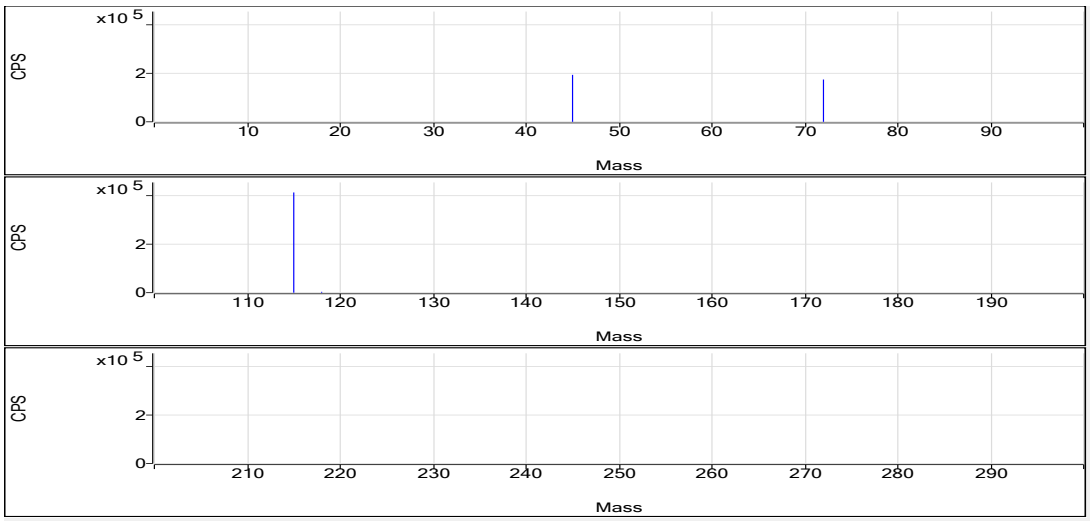
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2541225.54	0.7	105.9	Analog	0.1000	3
No Gas	Ge	72	1255385.84	1.0	108.9	Pulse	0.1000	3
H2	Sc	45	193015.68	0.5	103.2	Pulse	0.1000	3
H2	Ge	72	173843.84	1.0	106.2	Pulse	0.1000	3
H2	In	115	412005.33	0.3	105.9	Pulse	0.1000	3
He	Sc	45	49966.89	2.4	107.1	Pulse	0.1000	3
He	Ge	72	90442.20	0.4	111.4	Pulse	0.1000	3
He	In	115	92709.82	0.7	107.6	Pulse	0.1000	3
He	Tb	159	409736.65	0.0	102.8	Pulse	0.1000	3
He	Bi	209	325548.54	0.5	105.3	Pulse	0.1000	3

No Gas

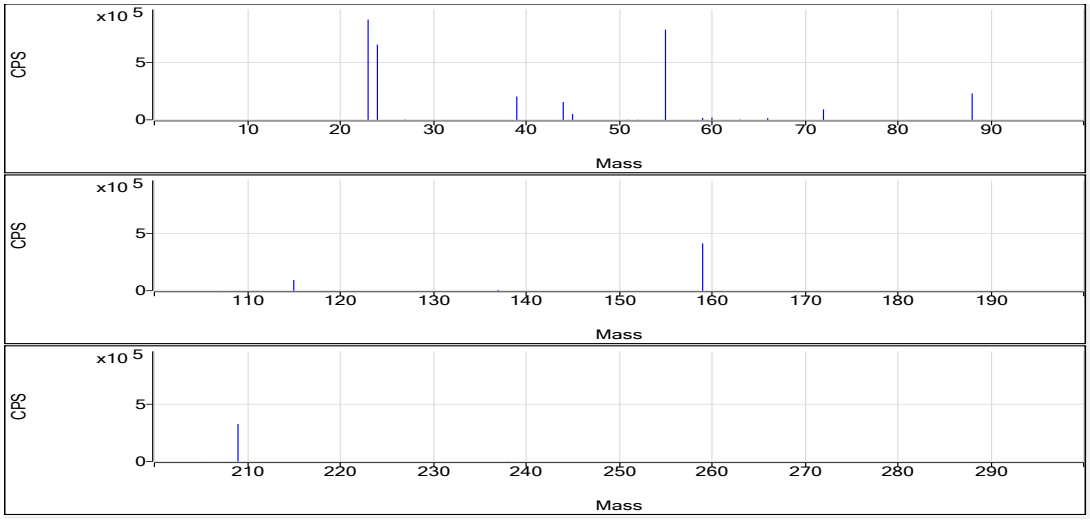


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.167	0.0001	338.01	0.0008	4.685E-06
Be	9	1	No Gas	0.201	0.0002	400.01	0.0008	4.685E-06
Be	9	1	No Gas	0.18	0.0001	360.01	0.0008	4.685E-06
Se	78	2	H2	0.125	0.0001	11.33	0.0004	1.219E-05
Se	78	2	H2	0.127	0.0001	11.33	0.0004	1.219E-05
Se	78	2	H2	0.082	0	8.00	0.0004	1.219E-05
Na	23	3	He	4904.341	17.8882	870668.19	0.0036	0.3452
Na	23	3	He	4673.49	17.0625	870362.80	0.0036	0.3452
Na	23	3	He	4685.579	17.1057	859007.33	0.0036	0.3452
Mg	24	3	He	7422.67	13.3222	648425.15	0.0018	0.003497
Mg	24	3	He	7121.854	12.7824	652034.99	0.0018	0.003497
Mg	24	3	He	7197.736	12.9186	648738.55	0.0018	0.003497
Al	27	3	He	88.463	0.0524	2550.30	0.0006	0.0006432
Al	27	3	He	84.695	0.0502	2560.34	0.0006	0.0006432
Al	27	3	He	73.452	0.0436	2190.24	0.0006	0.0006432
K	39	3	He	3236.02	4.1629	202617.13	0.0012	0.3951
K	39	3	He	3067.758	3.9669	202355.11	0.0012	0.3951
K	39	3	He	3076.459	3.9771	199718.88	0.0012	0.3951
Ca	44	3	He	46692.517	3.1569	153654.01	0.0001	0.002715
Ca	44	3	He	45119.858	3.0506	155614.71	0.0001	0.002715
Ca	44	3	He	44647.506	3.0187	151593.80	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.6	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	0.24	0.0002	10.00	0.0005	7.003E-05
V	51	3	He	0.071	0.0264	1286.07	0.0219	0.02486
V	51	3	He	0.054	0.026	1328.07	0.0219	0.02486
V	51	3	He	0.029	0.0255	1280.06	0.0219	0.02486
Cr	52	3	He	-0.175	0.0347	1690.15	0.0299	0.03997
Cr	52	3	He	-0.242	0.0327	1670.16	0.0299	0.03997
Cr	52	3	He	-0.231	0.0331	1660.15	0.0299	0.03997
Mn	55	3	He	1247.481	16.0126	779378.74	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1198.698	15.3866	784875.61	0.0128	0.002639
Mn	55	3	He	1203.405	15.447	775710.30	0.0128	0.002639
Fe	57	3	He	3.906	0.0037	180.01	0.0006	0.001429
Fe	57	3	He	3.952	0.0037	190.01	0.0006	0.001429
Fe	57	3	He	4.053	0.0038	190.01	0.0006	0.001429
Co	59	3	He	5.832	0.3304	16079.58	0.0563	0.002149
Co	59	3	He	5.817	0.3295	16810.27	0.0563	0.002149
Co	59	3	He	5.917	0.3351	16830.36	0.0563	0.002149
Ni	60	3	He	24.65	0.2144	19443.60	0.0086	0.002834
Ni	60	3	He	25.068	0.218	19754.22	0.0086	0.002834
Ni	60	3	He	24.678	0.2147	19323.49	0.0086	0.002834
Cu	63	3	He	1.271	0.0374	3390.51	0.0257	0.004757
Cu	63	3	He	1.264	0.0372	3370.53	0.0257	0.004757
Cu	63	3	He	1.226	0.0362	3260.49	0.0257	0.004757
Zn	66	3	He	57.084	0.17	15418.88	0.0029	0.003818
Zn	66	3	He	58.759	0.1749	15849.28	0.0029	0.003818
Zn	66	3	He	54.268	0.1618	14567.82	0.0029	0.003818
As	75	3	He	0.199	0.0012	110.00	0.002	0.0008061
As	75	3	He	0.059	0.0009	84.00	0.002	0.0008061
As	75	3	He	0.149	0.0011	100.00	0.002	0.0008061
Sr	88	3	He	272.068	2.4414	227403.16	0.009	0.0009645
Sr	88	3	He	277.801	2.4928	229180.47	0.009	0.0009645
Sr	88	3	He	271.838	2.4393	226967.65	0.009	0.0009645
Mo	98	3	He	0.188	0.0044	410.02	0.0219	0.0002706
Mo	98	3	He	0.211	0.0049	450.03	0.0219	0.0002706
Mo	98	3	He	0.208	0.0048	450.03	0.0219	0.0002706
Ag	107	3	He	0.001	0.0006	60.00	0.0465	0.0006206
Ag	107	3	He	0.001	0.0007	60.00	0.0465	0.0006206
Ag	107	3	He	-0.009	0.0002	20.00	0.0465	0.0006206
Cd	111	3	He	0.345	0.0018	172.00	0.0053	0
Cd	111	3	He	0.305	0.0016	150.00	0.0053	0
Cd	111	3	He	0.334	0.0018	166.00	0.0053	0
Sn	120	3	He	-0.336	0.0112	1040.08	0.0158	0.01648
Sn	120	3	He	-0.368	0.0107	980.07	0.0158	0.01648
Sn	120	3	He	-0.152	0.0141	1310.11	0.0158	0.01648
Sb	121	3	He	0.061	0.0012	110.00	0.0149	0.0002698
Sb	121	3	He	0.062	0.0012	110.00	0.0149	0.0002698
Sb	121	3	He	0.018	0.0005	50.00	0.0149	0.0002698
Ba	137	3	He	15.772	0.0759	7072.05	0.0048	0.0002317
Ba	137	3	He	16.138	0.0777	7142.15	0.0048	0.0002317
Ba	137	3	He	15.072	0.0726	6751.92	0.0048	0.0002317
Tl	205	3	He	0.075	0.002	810.06	0.0247	0.0001339
Tl	205	3	He	0.08	0.0021	870.06	0.0247	0.0001339
Tl	205	3	He	0.079	0.0021	860.07	0.0247	0.0001339
Pb	208	3	He	0.009	0.0014	310.01	0.0327	0.00107
Pb	208	3	He	0.012	0.0015	310.02	0.0327	0.00107
Pb	208	3	He	0.004	0.0012	290.02	0.0327	0.00107
U	238	3	He	0.085	0.0042	1380.12	0.0493	7.55E-05
U	238	3	He	0.102	0.0051	1660.18	0.0493	7.55E-05
U	238	3	He	0.103	0.0051	1680.18	0.0493	7.55E-05
Sc	45	1	No Gas			2560561.06		
Sc	45	1	No Gas			2534313.56		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2528801.99		
Ge	72	1	No Gas			1241940.92		
Ge	72	1	No Gas			1267509.82		
Ge	72	1	No Gas			1256706.78		
Sc	45	2	H2			192418.63		
Sc	45	2	H2			194181.29		
Sc	45	2	H2			192447.11		
Ge	72	2	H2			175578.14		
Ge	72	2	H2			173806.54		
Ge	72	2	H2			172146.83		
In	115	2	H2			413320.50		
In	115	2	H2			411209.33		
In	115	2	H2			411486.17		
Sc	45	3	He			48672.69		
Sc	45	3	He			51010.39		
Sc	45	3	He			50217.59		
Ge	72	3	He			90685.95		
Ge	72	3	He			90618.02		
Ge	72	3	He			90022.62		
In	115	3	He			93151.85		
In	115	3	He			91942.71		
In	115	3	He			93051.44		
Tb	159	3	He			409648.74		
Tb	159	3	He			409875.89		
Tb	159	3	He			409685.31		
Bi	209	3	He			324900.70		
Bi	209	3	He			324309.82		
Bi	209	3	He			327435.09		

Quantitation Report

Data File Name	129SMPL.d
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Sample Type	Sample
Comment	D2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

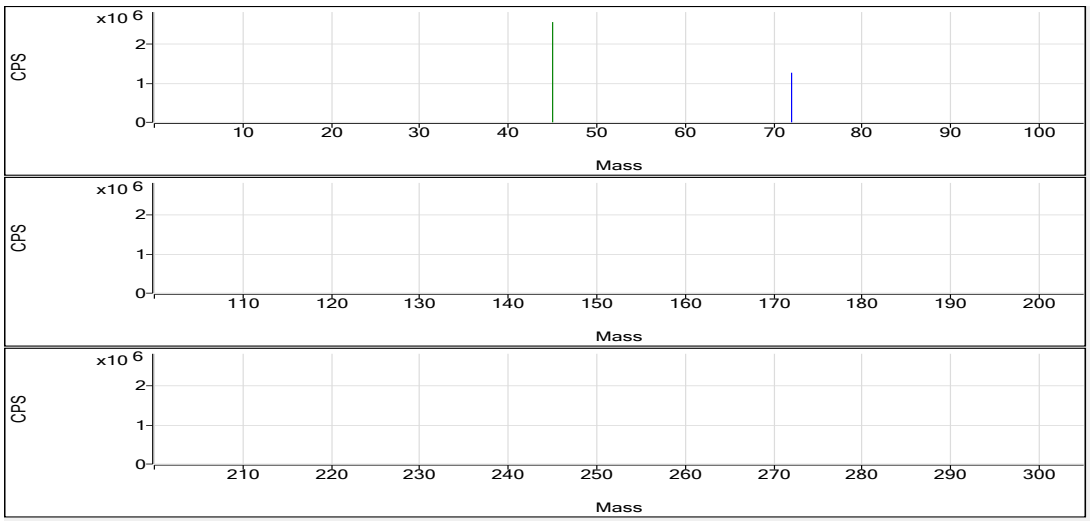
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.339	ppb	6.4	676.69	0.0003	Pulse	0.5000	3
Se	78	72	H2	0.096	ppb	38.5	8.89	0.0001	Pulse	1.5000	3
Na	23	45	He	5075.095	ppb	0.8	911043.03	18.4990	Pulse	0.1000	3
Mg	24	45	He	7967.396	ppb	1.3	704207.49	14.2996	Pulse	0.1000	3
Al	27	45	He	381.209	ppb	1.7	11014.43	0.2237	Pulse	0.1000	3
K	39	45	He	3245.974	ppb	1.8	205572.54	4.1744	Pulse	0.1000	3
Ca	44	45	He	49054.915	ppb	0.5	163341.13	3.3165	Pulse	0.1000	3
Ti	47	45	He	0.250	ppb	152.0	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	-0.106	ppb	N/A	1110.72	0.0226	Pulse	0.5000	3
Cr	52	45	He	-0.184	ppb	N/A	1696.82	0.0345	Pulse	0.1000	3
Mn	55	45	He	1331.212	ppb	1.9	841456.91	17.0872	Pulse	0.1000	3
Fe	57	45	He	5.702	ppb	22.5	233.34	0.0047	Pulse	0.1000	3
Co	59	45	He	9.476	ppb	4.1	26368.15	0.5355	Pulse	0.1000	3
Ni	60	72	He	30.928	ppb	1.2	23934.02	0.2683	Pulse	0.1000	3
Cu	63	72	He	2.505	ppb	5.7	6161.58	0.0691	Pulse	0.1000	3
Zn	66	72	He	71.628	ppb	1.0	18946.35	0.2124	Pulse	0.1000	3
As	75	72	He	-0.018	ppb	N/A	68.67	0.0008	Pulse	0.5000	3
Sr	88	115	He	285.823	ppb	1.2	232663.29	2.5647	Pulse	0.1000	3
Mo	98	115	He	0.072	ppb	58.4	166.67	0.0018	Pulse	0.1000	3
Ag	107	115	He	-0.008	ppb	N/A	23.33	0.0003	Pulse	0.1000	3
Cd	111	115	He	0.369	ppb	10.3	178.67	0.0020	Pulse	0.5000	3
Sn	120	115	He	-0.259	ppb	N/A	1123.42	0.0124	Pulse	0.1000	3
Sb	121	115	He	0.024	ppb	65.3	56.67	0.0006	Pulse	0.1000	3
Ba	137	115	He	13.405	ppb	6.5	5854.76	0.0646	Pulse	0.1000	3
Tl	205	159	He	0.081	ppb	6.9	876.73	0.0021	Pulse	0.1000	3
Pb	208	159	He	0.011	ppb	39.4	583.37	0.0014	Pulse	0.1000	3
U	238	209	He	0.124	ppb	10.1	2023.57	0.0062	Pulse	0.1000	3

ISTD Table:

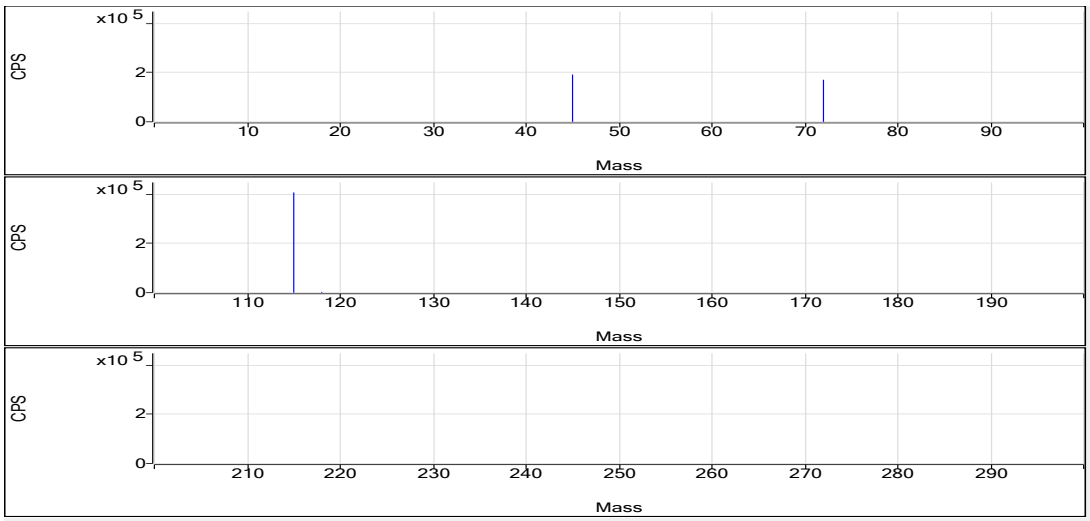
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2572115.64	0.7	107.2	Analog	0.1000	3
No Gas	Ge	72	1272298.73	1.0	110.3	Pulse	0.1000	3
H2	Sc	45	191692.33	1.0	102.5	Pulse	0.1000	3
H2	Ge	72	170514.53	1.5	104.2	Pulse	0.1000	3
H2	In	115	406617.93	0.9	104.5	Pulse	0.1000	3
He	Sc	45	49250.81	1.1	105.6	Pulse	0.1000	3
He	Ge	72	89214.58	1.1	109.9	Pulse	0.1000	3
He	In	115	90726.33	1.4	105.3	Pulse	0.1000	3
He	Tb	159	410177.99	0.9	102.9	Pulse	0.1000	3
He	Bi	209	326046.61	0.9	105.4	Pulse	0.1000	3

No Gas

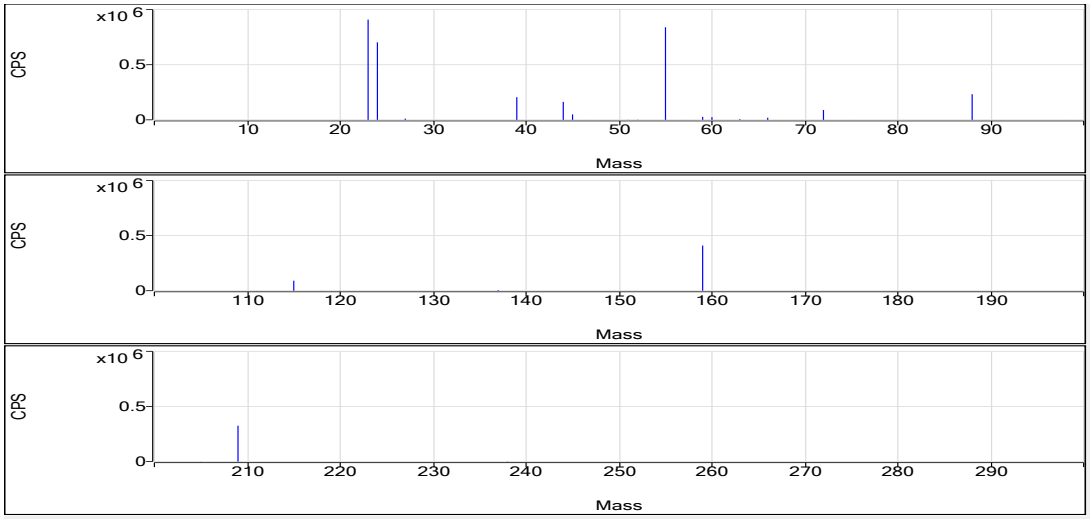


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.363	0.0003	730.02	0.0008	4.685E-06
Be	9	1	No Gas	0.322	0.0003	644.02	0.0008	4.685E-06
Be	9	1	No Gas	0.33	0.0003	656.02	0.0008	4.685E-06
Se	78	2	H2	0.073	0	7.33	0.0004	1.219E-05
Se	78	2	H2	0.076	0	7.33	0.0004	1.219E-05
Se	78	2	H2	0.138	0.0001	12.00	0.0004	1.219E-05
Na	23	3	He	5027.285	18.328	913580.46	0.0036	0.3452
Na	23	3	He	5092.03	18.5596	906315.22	0.0036	0.3452
Na	23	3	He	5105.97	18.6095	913233.42	0.0036	0.3452
Mg	24	3	He	7878.569	14.1402	704833.82	0.0018	0.003497
Mg	24	3	He	8085.161	14.5109	708605.22	0.0018	0.003497
Mg	24	3	He	7938.46	14.2476	699183.43	0.0018	0.003497
Al	27	3	He	375.571	0.2204	10984.37	0.0006	0.0006432
Al	27	3	He	388.295	0.2278	11124.53	0.0006	0.0006432
Al	27	3	He	379.76	0.2228	10934.40	0.0006	0.0006432
K	39	3	He	3178.963	4.0964	204190.66	0.0012	0.3951
K	39	3	He	3267.139	4.1991	205052.54	0.0012	0.3951
K	39	3	He	3291.821	4.2278	207474.41	0.0012	0.3951
Ca	44	3	He	49110.751	3.3202	165501.17	0.0001	0.002715
Ca	44	3	He	48794.47	3.2989	161092.91	0.0001	0.002715
Ca	44	3	He	49259.523	3.3303	163429.30	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.251	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	0.629	0.0004	20.00	0.0005	7.003E-05
V	51	3	He	-0.146	0.0217	1080.05	0.0219	0.02486
V	51	3	He	-0.154	0.0215	1050.05	0.0219	0.02486
V	51	3	He	-0.017	0.0245	1202.06	0.0219	0.02486
Cr	52	3	He	-0.249	0.0325	1620.16	0.0299	0.03997
Cr	52	3	He	-0.076	0.0377	1840.17	0.0299	0.03997
Cr	52	3	He	-0.226	0.0332	1630.14	0.0299	0.03997
Mn	55	3	He	1302.513	16.7189	833374.28	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1339.825	17.1978	839813.97	0.0128	0.002639
Mn	55	3	He	1351.297	17.345	851182.49	0.0128	0.002639
Fe	57	3	He	4.447	0.004	200.01	0.0006	0.001429
Fe	57	3	He	5.648	0.0047	230.01	0.0006	0.001429
Fe	57	3	He	7.011	0.0055	270.01	0.0006	0.001429
Co	59	3	He	9.12	0.5155	25693.75	0.0563	0.002149
Co	59	3	He	9.416	0.5321	25984.19	0.0563	0.002149
Co	59	3	He	9.892	0.5589	27426.52	0.0563	0.002149
Ni	60	3	He	31.36	0.272	24050.84	0.0086	0.002834
Ni	60	3	He	30.655	0.2659	24010.86	0.0086	0.002834
Ni	60	3	He	30.77	0.2669	23740.35	0.0086	0.002834
Cu	63	3	He	2.401	0.0664	5871.44	0.0257	0.004757
Cu	63	3	He	2.447	0.0676	6101.55	0.0257	0.004757
Cu	63	3	He	2.667	0.0732	6511.74	0.0257	0.004757
Zn	66	3	He	71.256	0.2113	18682.62	0.0029	0.003818
Zn	66	3	He	71.207	0.2111	19063.11	0.0029	0.003818
Zn	66	3	He	72.422	0.2147	19093.32	0.0029	0.003818
As	75	3	He	-0.051	0.0007	62.00	0.002	0.0008061
As	75	3	He	-0.026	0.0008	68.00	0.002	0.0008061
As	75	3	He	0.024	0.0009	76.00	0.002	0.0008061
Sr	88	3	He	288.592	2.5896	232554.72	0.009	0.0009645
Sr	88	3	He	281.825	2.5289	233032.18	0.009	0.0009645
Sr	88	3	He	287.051	2.5758	232402.97	0.009	0.0009645
Mo	98	3	He	0.12	0.0029	260.01	0.0219	0.0002706
Mo	98	3	He	0.052	0.0014	130.00	0.0219	0.0002706
Mo	98	3	He	0.043	0.0012	110.00	0.0219	0.0002706
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Ag	107	3	He	-0.011	0.0001	10.00	0.0465	0.0006206
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Cd	111	3	He	0.412	0.0022	198.00	0.0053	0
Cd	111	3	He	0.349	0.0019	172.00	0.0053	0
Cd	111	3	He	0.344	0.0018	166.00	0.0053	0
Sn	120	3	He	-0.26	0.0124	1110.09	0.0158	0.01648
Sn	120	3	He	-0.315	0.0115	1060.08	0.0158	0.01648
Sn	120	3	He	-0.201	0.0133	1200.09	0.0158	0.01648
Sb	121	3	He	0.012	0.0004	40.00	0.0149	0.0002698
Sb	121	3	He	0.018	0.0005	50.00	0.0149	0.0002698
Sb	121	3	He	0.042	0.0009	80.00	0.0149	0.0002698
Ba	137	3	He	13.76	0.0663	5951.43	0.0048	0.0002317
Ba	137	3	He	12.414	0.0598	5511.29	0.0048	0.0002317
Ba	137	3	He	14.042	0.0676	6101.55	0.0048	0.0002317
Tl	205	3	He	0.08	0.0021	860.06	0.0247	0.0001339
Tl	205	3	He	0.076	0.002	830.06	0.0247	0.0001339
Tl	205	3	He	0.087	0.0023	940.08	0.0247	0.0001339
Pb	208	3	He	0.015	0.0016	350.02	0.0327	0.00107
Pb	208	3	He	0.007	0.0013	290.02	0.0327	0.00107
Pb	208	3	He	0.01	0.0014	330.02	0.0327	0.00107
U	238	3	He	0.11	0.0055	1790.20	0.0493	7.55E-05
U	238	3	He	0.134	0.0067	2200.27	0.0493	7.55E-05
U	238	3	He	0.129	0.0064	2080.24	0.0493	7.55E-05
Sc	45	1	No Gas			2590361.84		
Sc	45	1	No Gas			2569599.81		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2556385.27		
Ge	72	1	No Gas			1285192.09		
Ge	72	1	No Gas			1258586.00		
Ge	72	1	No Gas			1273118.11		
Sc	45	2	H2			190129.68		
Sc	45	2	H2			193877.15		
Sc	45	2	H2			191070.15		
Ge	72	2	H2			171954.10		
Ge	72	2	H2			167503.96		
Ge	72	2	H2			172085.52		
In	115	2	H2			409953.51		
In	115	2	H2			402771.17		
In	115	2	H2			407129.10		
Sc	45	3	He			49846.15		
Sc	45	3	He			48832.69		
Sc	45	3	He			49073.60		
Ge	72	3	He			88422.71		
Ge	72	3	He			90284.15		
Ge	72	3	He			88936.89		
In	115	3	He			89809.26		
In	115	3	He			92154.83		
In	115	3	He			90232.61		
Tb	159	3	He			405787.22		
Tb	159	3	He			413148.98		
Tb	159	3	He			411597.77		
Bi	209	3	He			325181.26		
Bi	209	3	He			329180.89		
Bi	209	3	He			323777.69		

Quantitation Report

Data File Name	130SMPL.d
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Sample Type	Sample
Comment	D2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

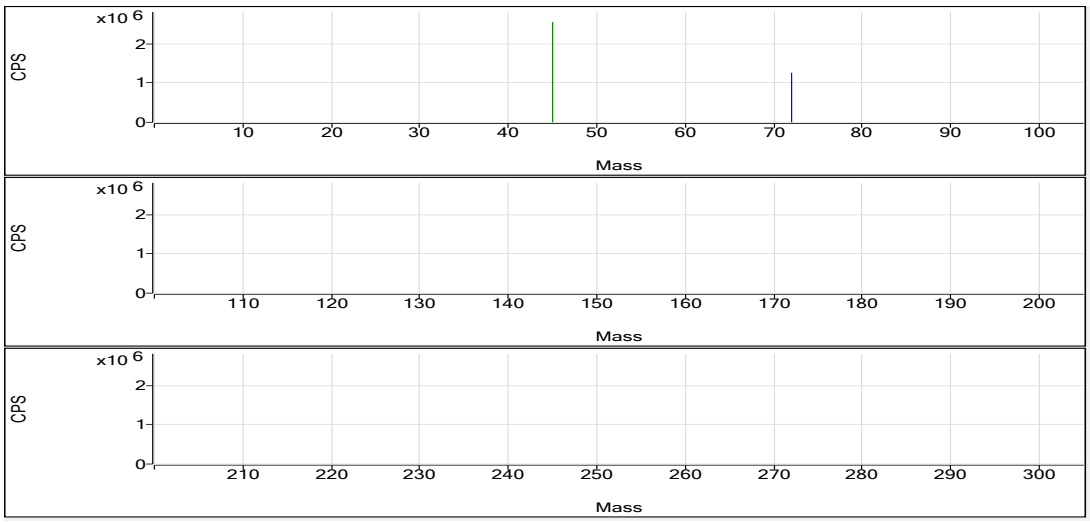
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.202	ppb	14.5	404.01	0.0002	Pulse	0.5000	3
Se	78	72	H2	0.088	ppb	15.5	8.44	0.0000	Pulse	1.5000	3
Na	23	45	He	4797.435	ppb	3.4	870108.50	17.5058	Pulse	0.1000	3
Mg	24	45	He	7252.384	ppb	2.9	647026.44	13.0166	Pulse	0.1000	3
Al	27	45	He	91.060	ppb	6.8	2680.34	0.0539	Pulse	0.1000	3
K	39	45	He	3111.238	ppb	2.8	199716.44	4.0176	Pulse	0.1000	3
Ca	44	45	He	45276.502	ppb	3.5	152151.45	3.0612	Pulse	0.1000	3
Ti	47	45	He	0.369	ppb	153.1	13.33	0.0003	Pulse	0.1000	3
V	51	45	He	0.039	ppb	160.4	1280.07	0.0257	Pulse	0.5000	3
Cr	52	45	He	-0.168	ppb	N/A	1736.84	0.0349	Pulse	0.1000	3
Mn	55	45	He	1216.816	ppb	2.2	776482.38	15.6191	Pulse	0.1000	3
Fe	57	45	He	3.659	ppb	8.2	176.68	0.0036	Pulse	0.1000	3
Co	59	45	He	5.944	ppb	4.2	16733.58	0.3367	Pulse	0.1000	3
Ni	60	72	He	25.202	ppb	4.0	19734.09	0.2191	Pulse	0.1000	3
Cu	63	72	He	1.306	ppb	7.8	3447.22	0.0383	Pulse	0.1000	3
Zn	66	72	He	56.556	ppb	0.0	15171.76	0.1685	Pulse	0.1000	3
As	75	72	He	0.033	ppb	76.4	78.67	0.0009	Pulse	0.5000	3
Sr	88	115	He	280.345	ppb	0.9	227686.67	2.5156	Pulse	0.1000	3
Mo	98	115	He	0.177	ppb	1.2	376.69	0.0042	Pulse	0.1000	3
Ag	107	115	He	-0.005	ppb	N/A	33.33	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.299	ppb	3.1	144.67	0.0016	Pulse	0.5000	3
Sn	120	115	He	-0.329	ppb	N/A	1020.07	0.0113	Pulse	0.1000	3
Sb	121	115	He	0.039	ppb	28.8	76.67	0.0008	Pulse	0.1000	3
Ba	137	115	He	16.720	ppb	7.9	7282.20	0.0805	Pulse	0.1000	3
Tl	205	159	He	0.064	ppb	5.3	703.38	0.0017	Pulse	0.1000	3
Pb	208	159	He	0.010	ppb	1.3	570.02	0.0014	Pulse	0.1000	3
U	238	209	He	0.096	ppb	3.2	1556.82	0.0048	Pulse	0.1000	3

ISTD Table:

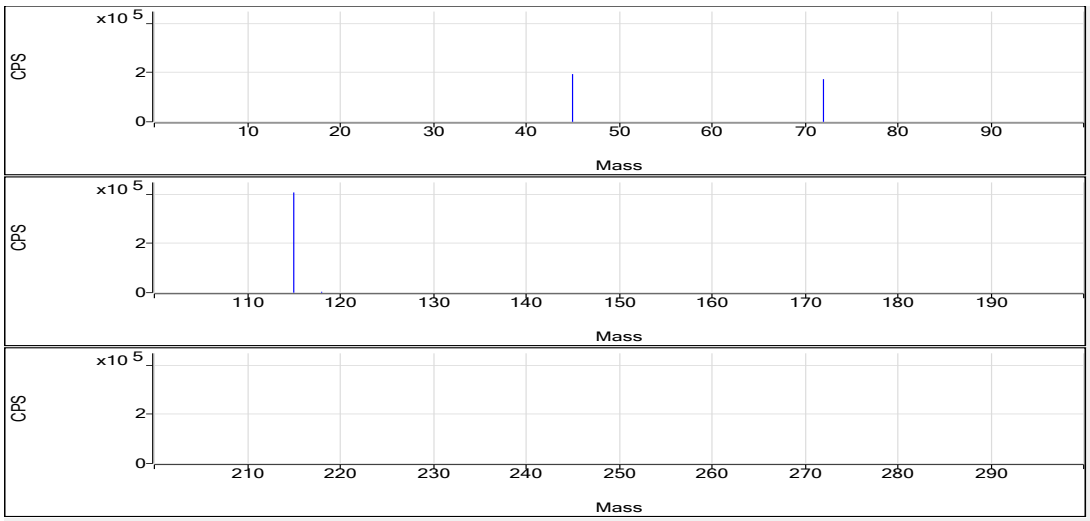
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2545003.61	1.0	106.1	Analog	0.1000	3
No Gas	Ge	72	1257031.41	0.3	109.0	Pulse	0.1000	3
H2	Sc	45	193837.50	1.4	103.7	Pulse	0.1000	3
H2	Ge	72	173269.78	0.5	105.8	Pulse	0.1000	3
H2	In	115	407130.86	0.2	104.6	Pulse	0.1000	3
He	Sc	45	49732.41	2.6	106.6	Pulse	0.1000	3
He	Ge	72	90046.23	0.1	110.9	Pulse	0.1000	3
He	In	115	90511.83	0.5	105.0	Pulse	0.1000	3
He	Tb	159	407573.69	0.3	102.2	Pulse	0.1000	3
He	Bi	209	322649.47	1.0	104.3	Pulse	0.1000	3

No Gas

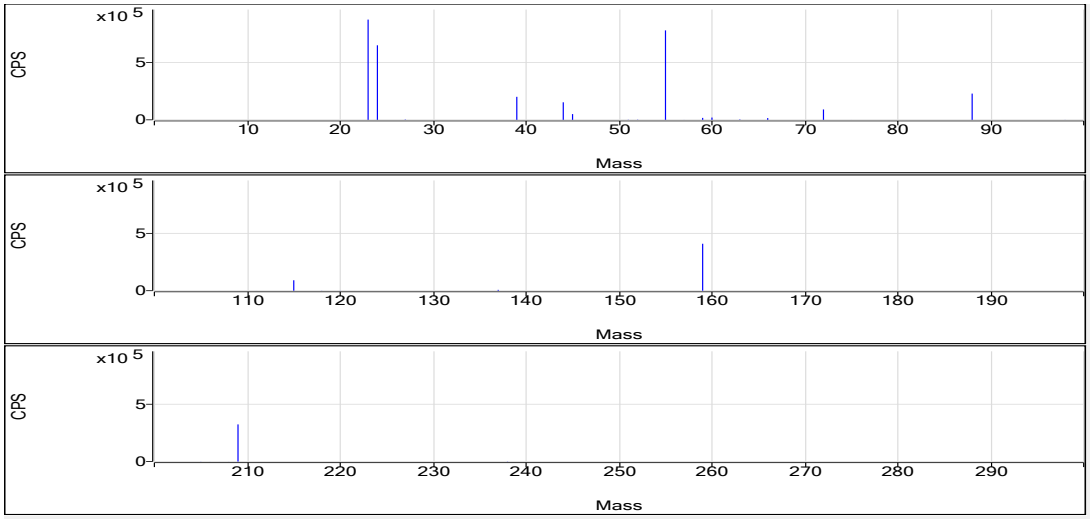


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.236	0.0002	466.01	0.0008	4.685E-06
Be	9	1	No Gas	0.186	0.0001	378.01	0.0008	4.685E-06
Be	9	1	No Gas	0.184	0.0001	368.01	0.0008	4.685E-06
Se	78	2	H2	0.099	0.0001	9.33	0.0004	1.219E-05
Se	78	2	H2	0.073	0	7.33	0.0004	1.219E-05
Se	78	2	H2	0.09	0	8.67	0.0004	1.219E-05
Na	23	3	He	4674.823	17.0672	864778.74	0.0036	0.3452
Na	23	3	He	4736.394	17.2875	868994.05	0.0036	0.3452
Na	23	3	He	4981.089	18.1628	876552.72	0.0036	0.3452
Mg	24	3	He	7085.761	12.7176	644389.25	0.0018	0.003497
Mg	24	3	He	7184.985	12.8957	648230.26	0.0018	0.003497
Mg	24	3	He	7486.407	13.4365	648459.80	0.0018	0.003497
Al	27	3	He	84.259	0.0499	2530.30	0.0006	0.0006432
Al	27	3	He	96.506	0.0571	2870.40	0.0006	0.0006432
Al	27	3	He	92.415	0.0547	2640.32	0.0006	0.0006432
K	39	3	He	3055.155	3.9523	200257.15	0.0012	0.3951
K	39	3	He	3067.212	3.9663	199375.21	0.0012	0.3951
K	39	3	He	3211.349	4.1341	199516.97	0.0012	0.3951
Ca	44	3	He	44296.123	2.995	151753.66	0.0001	0.002715
Ca	44	3	He	44442.517	3.0049	151047.70	0.0001	0.002715
Ca	44	3	He	47090.867	3.1838	153652.99	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.981	0.0006	30.00	0.0005	7.003E-05
Ti	47	3	He	0.255	0.0002	10.00	0.0005	7.003E-05
V	51	3	He	0.045	0.0259	1310.07	0.0219	0.02486
V	51	3	He	0.098	0.027	1358.07	0.0219	0.02486
V	51	3	He	-0.026	0.0243	1172.06	0.0219	0.02486
Cr	52	3	He	-0.241	0.0328	1660.16	0.0299	0.03997
Cr	52	3	He	-0.112	0.0366	1840.19	0.0299	0.03997
Cr	52	3	He	-0.152	0.0354	1710.16	0.0299	0.03997
Mn	55	3	He	1202.633	15.4371	782181.16	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1199.639	15.3987	774048.58	0.0128	0.002639
Mn	55	3	He	1248.177	16.0216	773217.41	0.0128	0.002639
Fe	57	3	He	3.656	0.0036	180.01	0.0006	0.001429
Fe	57	3	He	3.362	0.0034	170.01	0.0006	0.001429
Fe	57	3	He	3.961	0.0037	180.01	0.0006	0.001429
Co	59	3	He	5.713	0.3237	16400.01	0.0563	0.002149
Co	59	3	He	5.914	0.335	16840.35	0.0563	0.002149
Co	59	3	He	6.206	0.3514	16960.38	0.0563	0.002149
Ni	60	3	He	25.628	0.2228	20054.62	0.0086	0.002834
Ni	60	3	He	24.062	0.2094	18832.78	0.0086	0.002834
Ni	60	3	He	25.917	0.2253	20314.87	0.0086	0.002834
Cu	63	3	He	1.282	0.0377	3390.53	0.0257	0.004757
Cu	63	3	He	1.218	0.036	3240.47	0.0257	0.004757
Cu	63	3	He	1.418	0.0412	3710.65	0.0257	0.004757
Zn	66	3	He	56.528	0.1684	15158.46	0.0029	0.003818
Zn	66	3	He	56.566	0.1685	15158.42	0.0029	0.003818
Zn	66	3	He	56.576	0.1685	15198.39	0.0029	0.003818
As	75	3	He	0.062	0.0009	84.00	0.002	0.0008061
As	75	3	He	0.019	0.0008	76.00	0.002	0.0008061
As	75	3	He	0.018	0.0008	76.00	0.002	0.0008061
Sr	88	3	He	282.498	2.5349	228237.24	0.009	0.0009645
Sr	88	3	He	280.833	2.52	228305.35	0.009	0.0009645
Sr	88	3	He	277.705	2.4919	226517.42	0.009	0.0009645
Mo	98	3	He	0.175	0.0041	370.02	0.0219	0.0002706
Mo	98	3	He	0.179	0.0042	380.02	0.0219	0.0002706
Mo	98	3	He	0.178	0.0042	380.02	0.0219	0.0002706
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Ag	107	3	He	-0.004	0.0004	40.00	0.0465	0.0006206
Cd	111	3	He	0.295	0.0016	142.00	0.0053	0
Cd	111	3	He	0.31	0.0017	150.00	0.0053	0
Cd	111	3	He	0.292	0.0016	142.00	0.0053	0
Sn	120	3	He	-0.241	0.0127	1140.09	0.0158	0.01648
Sn	120	3	He	-0.421	0.0098	890.06	0.0158	0.01648
Sn	120	3	He	-0.326	0.0113	1030.07	0.0158	0.01648
Sb	121	3	He	0.027	0.0007	60.00	0.0149	0.0002698
Sb	121	3	He	0.049	0.001	90.00	0.0149	0.0002698
Sb	121	3	He	0.041	0.0009	80.00	0.0149	0.0002698
Ba	137	3	He	18.24	0.0878	7902.58	0.0048	0.0002317
Ba	137	3	He	15.871	0.0764	6921.97	0.0048	0.0002317
Ba	137	3	He	16.048	0.0772	7022.05	0.0048	0.0002317
Tl	205	3	He	0.068	0.0018	740.05	0.0247	0.0001339
Tl	205	3	He	0.063	0.0017	690.05	0.0247	0.0001339
Tl	205	3	He	0.062	0.0017	680.04	0.0247	0.0001339
Pb	208	3	He	0.01	0.0014	270.01	0.0327	0.00107
Pb	208	3	He	0.01	0.0014	330.02	0.0327	0.00107
Pb	208	3	He	0.01	0.0014	230.01	0.0327	0.00107
U	238	3	He	0.097	0.0049	1580.16	0.0493	7.55E-05
U	238	3	He	0.093	0.0047	1510.14	0.0493	7.55E-05
U	238	3	He	0.099	0.005	1580.15	0.0493	7.55E-05
Sc	45	1	No Gas			2524315.12		
Sc	45	1	No Gas			2574488.87		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2536206.84		
Ge	72	1	No Gas			1259411.07		
Ge	72	1	No Gas			1252878.73		
Ge	72	1	No Gas			1258804.43		
Sc	45	2	H2			196259.06		
Sc	45	2	H2			190799.14		
Sc	45	2	H2			194454.31		
Ge	72	2	H2			173854.74		
Ge	72	2	H2			172340.06		
Ge	72	2	H2			173614.55		
In	115	2	H2			406103.82		
In	115	2	H2			407888.74		
In	115	2	H2			407400.03		
Sc	45	3	He			50668.96		
Sc	45	3	He			50267.27		
Sc	45	3	He			48260.99		
Ge	72	3	He			90012.36		
Ge	72	3	He			89952.60		
Ge	72	3	He			90173.74		
In	115	3	He			90041.27		
In	115	3	He			90604.73		
In	115	3	He			90906.73		
Tb	159	3	He			406198.67		
Tb	159	3	He			408004.33		
Tb	159	3	He			408518.08		
Bi	209	3	He			325006.28		
Bi	209	3	He			323990.84		
Bi	209	3	He			318951.28		

Quantitation Report

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Sample Name	Z410-137726-O-1-A
Sample Type	Sample
Comment	D2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

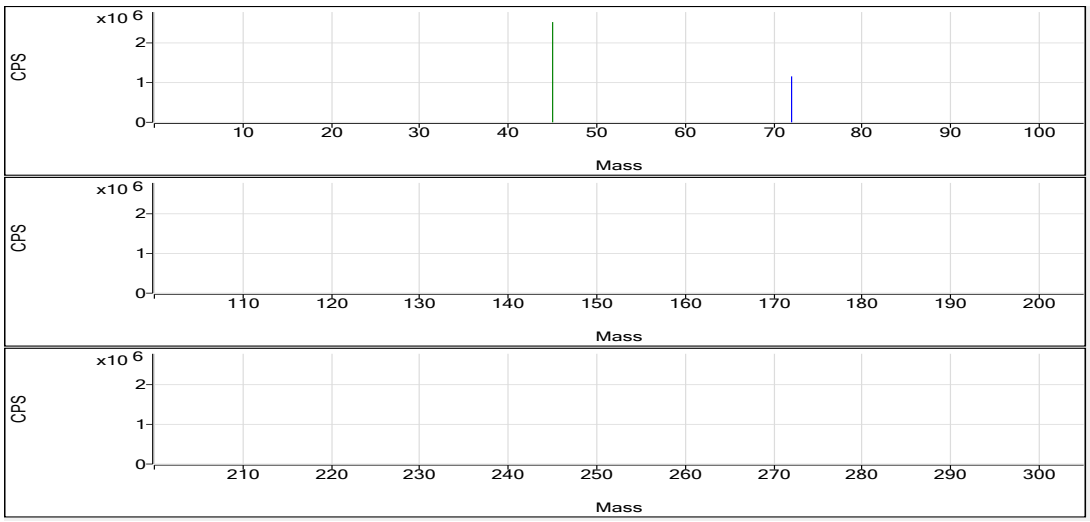
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas		ppb	0.00232113337113573			Pulse	0.5000	3
Se	78	72	H2		ppb	0.0786946902901992			Pulse	1.5000	3
Na	23	45	He		ppb	51.0132249168271			Analog	0.1000	3
Mg	24	45	He		ppb	990.140936164727			Analog	0.1000	3
Al	27	45	He		ppb	2.8650138138469			Pulse	0.1000	3
K	39	45	He		ppb	206.109432537403			Pulse	0.1000	3
Ca	44	45	He		ppb	6739.57890278957			Analog	0.1000	3
Ti	47	45	He		ppb	1.86264514923096E-09			Pulse	0.1000	3
V	51	45	He		ppb	0.0361669317911737			Pulse	0.5000	3
Cr	52	45	He		ppb	0.145697259718969			Pulse	0.1000	3
Mn	55	45	He		ppb	151.218440856271			Analog	0.1000	3
Fe	57	45	He		ppb	9.83362387810317			Pulse	0.1000	3
Co	59	45	He		ppb	0.276167456879964			Pulse	0.1000	3
Ni	60	72	He		ppb	0.483675534613026			Pulse	0.1000	3
Cu	63	72	He		ppb	0.047751580474067			Pulse	0.1000	3
Zn	66	72	He		ppb	0.910387528698394			Pulse	0.1000	3
As	75	72	He		ppb	0.140925052032443			Pulse	0.5000	3
Sr	88	115	He		ppb	30.9390029101465			Analog	0.1000	3
Mo	98	115	He		ppb	0.0493480593607248			Pulse	0.1000	3
Ag	107	115	He		ppb	0.00368849652845494			Pulse	0.1000	3
Cd	111	115	He		ppb	0.00424516798094181			Pulse	0.5000	3
Sn	120	115	He		ppb	0.0455054716046804			Pulse	0.1000	3
Sb	121	115	He		ppb	0.034997128582582			Pulse	0.1000	3
Ba	137	115	He		ppb	1.7733927071838			Pulse	0.1000	3
Tl	205	159	He		ppb	0.00340395467092721			Pulse	0.1000	3
Pb	208	159	He		ppb	0.00706253950957902			Pulse	0.1000	3
U	238	209	He		ppb	0.0928924710172574			Pulse	0.1000	3

ISTD Table:

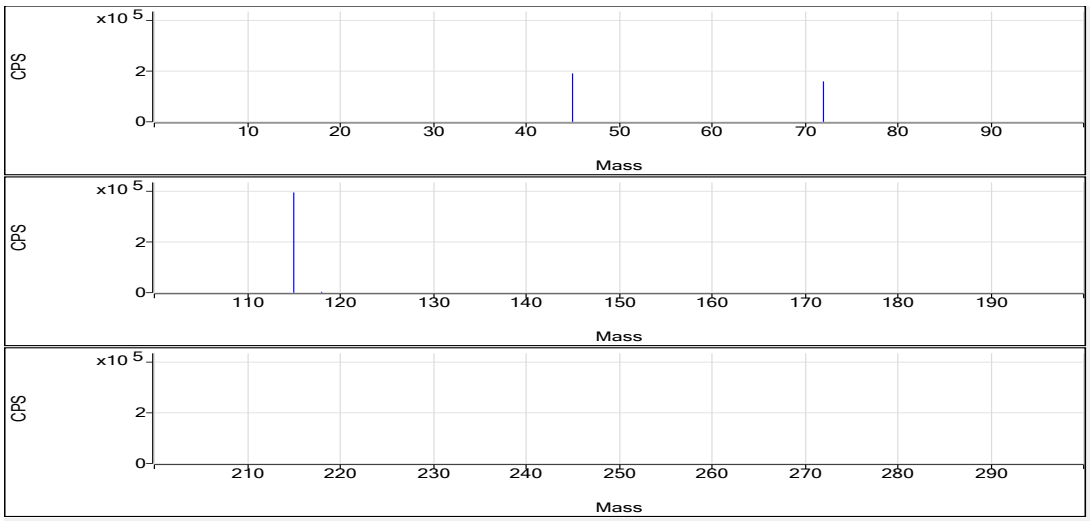
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45				Analog	0.1000	3
No Gas	Ge	72				Pulse	0.1000	3
H2	Sc	45				Pulse	0.1000	3
H2	Ge	72				Pulse	0.1000	3
H2	In	115				Pulse	0.1000	3
He	Sc	45				Pulse	0.1000	3
He	Ge	72				Pulse	0.1000	3
He	In	115				Pulse	0.1000	3
He	Tb	159				Pulse	0.1000	3
He	Bi	209				Pulse	0.1000	3

No Gas

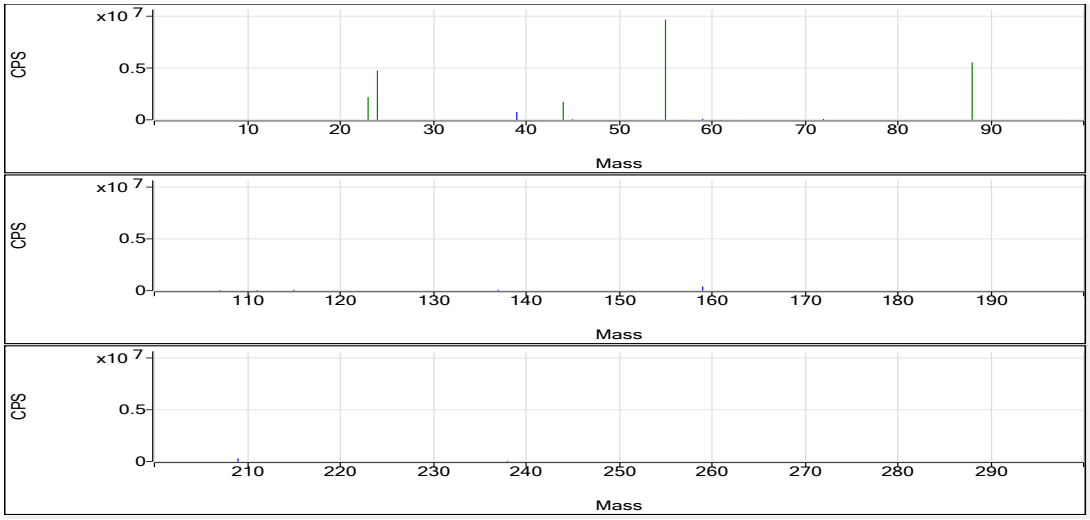


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.009		30.00		
Be	9	1	No Gas	0.005		22.00		
Be	9	1	No Gas	0.005		22.00		
Se	78	2	H2	0.48		34.00		
Se	78	2	H2	0.342		24.67		
Se	78	2	H2	0.347		24.67		
Na	23	3	He	12434.292		2170395.44		
Na	23	3	He	12529.597		2184183.09		
Na	23	3	He	12450.406		2220479.34		
Mg	24	3	He	55153.182		4792057.43		
Mg	24	3	He	53911.263		4678329.93		
Mg	24	3	He	53196.421		4722632.43		
Al	27	3	He	6.667		220.01		
Al	27	3	He	10.918		340.01		
Al	27	3	He	5.465		190.01		
K	39	3	He	13139.526		759911.32		
K	39	3	He	12999.733		751094.75		
K	39	3	He	12733.792		753076.16		
Ca	44	3	He	528418.259		1728558.88		
Ca	44	3	He	531680.091		1737065.13		
Ca	44	3	He	518722.829		1733772.32		
Ti	47	3	He	-0.13		0.00		
Ti	47	3	He	-0.13		0.00		
Ti	47	3	He	-0.13		0.00		
V	51	3	He	-0.187		1006.04		
V	51	3	He	-0.254		934.04		
V	51	3	He	-0.244		966.04		
Cr	52	3	He	-0.197		1650.16		
Cr	52	3	He	0.06		2020.20		
Cr	52	3	He	-0.187		1700.16		
Mn	55	3	He	15523.934		9647196.11		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	15399.686		9558082.98		
Mn	55	3	He	15223.015		9666067.98		
Fe	57	3	He	298.716		8472.74		
Fe	57	3	He	280.929		7962.43		
Fe	57	3	He	282.555		8192.59		
Co	59	3	He	33.961		92657.52		
Co	59	3	He	34.015		92687.00		
Co	59	3	He	33.512		93422.18		
Ni	60	3	He	17.161		12555.88		
Ni	60	3	He	17.899		13016.39		
Ni	60	3	He	18.071		13036.38		
Cu	63	3	He	1.916		4510.85		
Cu	63	3	He	2.011		4690.89		
Cu	63	3	He	1.963		4550.89		
Zn	66	3	He	10.025		2760.38		
Zn	66	3	He	11.035		2990.43		
Zn	66	3	He	9.218		2530.30		
As	75	3	He	7.847		1412.08		
As	75	3	He	7.727		1384.08		
As	75	3	He	7.566		1346.07		
Sr	88	3	He	7033.046		5571404.92		
Sr	88	3	He	6971.337		5509926.17		
Sr	88	3	He	6998.241		5479370.54		
Mo	98	3	He	2.482		4830.98		
Mo	98	3	He	2.55		4951.06		
Mo	98	3	He	2.454		4720.95		
Ag	107	3	He	-0.001		50.00		
Ag	107	3	He	0.001		60.00		
Ag	107	3	He	-0.006		30.00		
Cd	111	3	He	0		0.00		
Cd	111	3	He	0.008		4.00		
Cd	111	3	He	0.004		2.00		
Sn	120	3	He	-0.269		1080.08		
Sn	120	3	He	-0.267		1080.08		
Sn	120	3	He	-0.347		960.07		
Sb	121	3	He	0.538		730.05		
Sb	121	3	He	0.486		660.04		
Sb	121	3	He	0.553		740.04		
Ba	137	3	He	227.315		96368.07		
Ba	137	3	He	224.979		95160.40		
Ba	137	3	He	223.836		93789.98		
Tl	205	3	He	0.012		170.01		
Tl	205	3	He	0.017		230.01		
Tl	205	3	He	0.012		170.01		
Pb	208	3	He	0.096		850.05		
Pb	208	3	He	0.096		970.08		
Pb	208	3	He	0.108		1010.09		
U	238	3	He	4.841		72324.22		
U	238	3	He	4.967		73519.75		
U	238	3	He	4.786		71187.87		
Sc	45	1	No Gas			2538748.56		
Sc	45	1	No Gas			2508688.40		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2519685.43		
Ge	72	1	No Gas			1146773.34		
Ge	72	1	No Gas			1154898.42		
Ge	72	1	No Gas			1165223.34		
Sc	45	2	H2			188304.20		
Sc	45	2	H2			191800.68		
Sc	45	2	H2			191233.57		
Ge	72	2	H2			159977.44		
Ge	72	2	H2			159523.63		
Ge	72	2	H2			157357.79		
In	115	2	H2			391672.73		
In	115	2	H2			397842.69		
In	115	2	H2			393033.67		
Sc	45	3	He			48421.22		
Sc	45	3	He			48361.00		
Sc	45	3	He			49474.96		
Ge	72	3	He			83634.30		
Ge	72	3	He			83191.11		
Ge	72	3	He			82538.12		
In	115	3	He			88319.67		
In	115	3	He			88119.51		
In	115	3	He			87294.49		
Tb	159	3	He			404571.67		
Tb	159	3	He			406070.66		
Tb	159	3	He			403753.16		
Bi	209	3	He			303197.93		
Bi	209	3	He			300393.98		
Bi	209	3	He			301878.10		

Quantitation Report

Data File Name	132SMPL.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	8/10/2023 3:07:40 PM
Sample Name	410-137721-AE-1-A
Sample Type	Sample
Comment	D2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

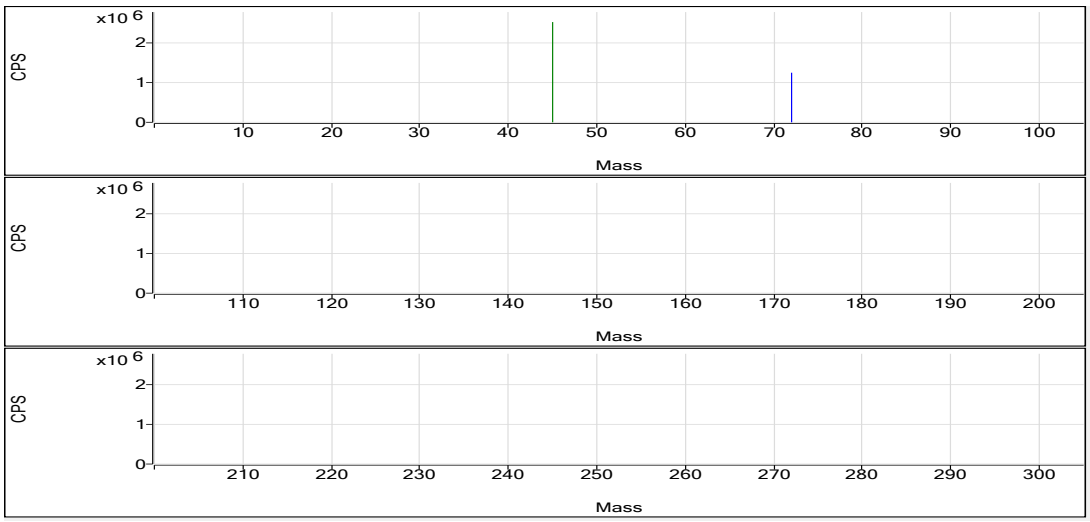
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.007	ppb	52.2	24.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.050	ppb	10.7	5.78	0.0000	Pulse	1.5000	3
Na	23	45	He	1324.280	ppb	0.5	250263.52	5.0822	Pulse	0.1000	3
Mg	24	45	He	1795.942	ppb	2.0	158844.75	3.2260	Pulse	0.1000	3
Al	27	45	He	1.674	ppb	54.3	80.00	0.0016	Pulse	0.1000	3
K	39	45	He	908.500	ppb	1.7	71538.94	1.4529	Pulse	0.1000	3
Ca	44	45	He	12133.308	ppb	2.0	40490.50	0.8223	Pulse	0.1000	3
Ti	47	45	He	0.123	ppb	357.3	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	-0.098	ppb	N/A	1119.38	0.0227	Pulse	0.5000	3
Cr	52	45	He	-0.075	ppb	N/A	1856.85	0.0377	Pulse	0.1000	3
Mn	55	45	He	22.054	ppb	1.4	14067.27	0.2857	Pulse	0.1000	3
Fe	57	45	He	8.277	ppb	29.3	306.68	0.0062	Pulse	0.1000	3
Co	59	45	He	0.066	ppb	12.6	290.01	0.0059	Pulse	0.1000	3
Ni	60	72	He	0.020	ppb	82.9	270.01	0.0030	Pulse	0.1000	3
Cu	63	72	He	1.178	ppb	4.8	3143.79	0.0350	Pulse	0.1000	3
Zn	66	72	He	3.733	ppb	3.1	1320.11	0.0147	Pulse	0.1000	3
As	75	72	He	0.252	ppb	41.3	118.67	0.0013	Pulse	0.5000	3
Sr	88	115	He	28.582	ppb	1.8	22822.34	0.2573	Pulse	0.1000	3
Mo	98	115	He	0.043	ppb	40.1	106.67	0.0012	Pulse	0.1000	3
Ag	107	115	He	-0.002	ppb	N/A	46.67	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.004	ppb	99.2	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.338	ppb	N/A	986.74	0.0111	Pulse	0.1000	3
Sb	121	115	He	0.020	ppb	67.9	50.00	0.0006	Pulse	0.1000	3
Ba	137	115	He	17.379	ppb	3.5	7418.95	0.0836	Pulse	0.1000	3
Tl	205	159	He	0.007	ppb	77.3	126.67	0.0003	Pulse	0.1000	3
Pb	208	159	He	0.035	ppb	13.6	896.71	0.0022	Pulse	0.1000	3
U	238	209	He	0.039	ppb	15.0	630.04	0.0020	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2517541.37	1.3	104.9	Analog	0.1000	3
No Gas	Ge	72	1245494.20	1.8	108.0	Pulse	0.1000	3
H2	Sc	45	192603.58	0.4	103.0	Pulse	0.1000	3
H2	Ge	72	174490.52	0.2	106.6	Pulse	0.1000	3
H2	In	115	408681.21	1.1	105.0	Pulse	0.1000	3
He	Sc	45	49244.05	1.1	105.6	Pulse	0.1000	3
He	Ge	72	89912.75	2.3	110.7	Pulse	0.1000	3
He	In	115	88693.67	1.3	102.9	Pulse	0.1000	3
He	Tb	159	407515.91	1.0	102.2	Pulse	0.1000	3
He	Bi	209	316742.60	0.7	102.4	Pulse	0.1000	3

No Gas



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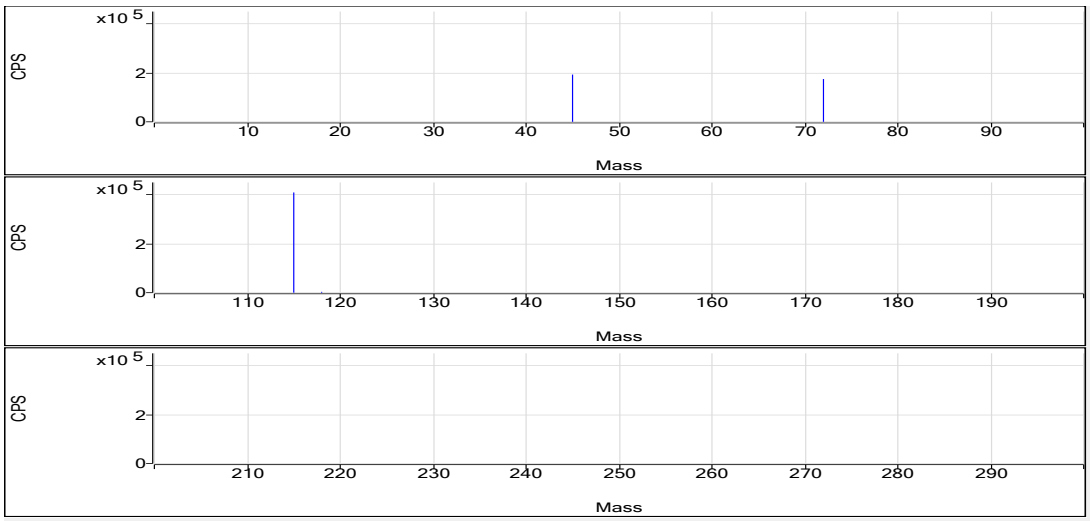
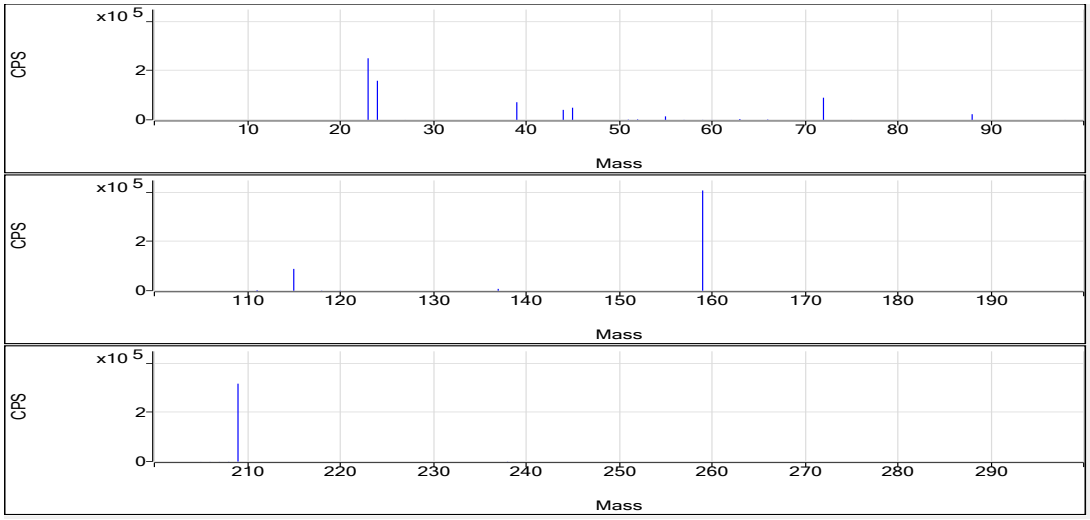


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.006	0	24.00	0.0008	4.685E-06
Be	9	1	No Gas	0.003	0	18.00	0.0008	4.685E-06
Be	9	1	No Gas	0.01	0	32.00	0.0008	4.685E-06
Se	78	2	H2	0.053	0	6.00	0.0004	1.219E-05
Se	78	2	H2	0.044	0	5.33	0.0004	1.219E-05
Se	78	2	H2	0.053	0	6.00	0.0004	1.219E-05
Na	23	3	He	1331.486	5.1079	249436.23	0.0036	0.3452
Na	23	3	He	1318.45	5.0613	248273.80	0.0036	0.3452
Na	23	3	He	1322.903	5.0772	253080.54	0.0036	0.3452
Mg	24	3	He	1837.683	3.3009	161192.33	0.0018	0.003497
Mg	24	3	He	1776.941	3.1919	156572.83	0.0018	0.003497
Mg	24	3	He	1773.201	3.1852	158769.08	0.0018	0.003497
Al	27	3	He	0.651	0.001	50.00	0.0006	0.0006432
Al	27	3	He	2.385	0.002	100.00	0.0006	0.0006432
Al	27	3	He	1.987	0.0018	90.01	0.0006	0.0006432
K	39	3	He	925.022	1.4721	71886.72	0.0012	0.3951
K	39	3	He	905.638	1.4495	71103.77	0.0012	0.3951
K	39	3	He	894.839	1.437	71626.33	0.0012	0.3951
Ca	44	3	He	12196.788	0.8266	40366.85	0.0001	0.002715
Ca	44	3	He	12332.43	0.8358	40998.35	0.0001	0.002715
Ca	44	3	He	11870.707	0.8046	40106.30	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.629	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	-0.083	0.0231	1126.05	0.0219	0.02486
V	51	3	He	-0.108	0.0225	1104.05	0.0219	0.02486
V	51	3	He	-0.102	0.0226	1128.05	0.0219	0.02486
Cr	52	3	He	-0.083	0.0375	1830.18	0.0299	0.03997
Cr	52	3	He	-0.028	0.0391	1920.19	0.0299	0.03997
Cr	52	3	He	-0.115	0.0365	1820.18	0.0299	0.03997
Mn	55	3	He	22.416	0.2903	14177.32	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	21.853	0.2831	13887.06	0.0128	0.002639
Mn	55	3	He	21.894	0.2836	14137.43	0.0128	0.002639
Fe	57	3	He	9.525	0.007	340.01	0.0006	0.001429
Fe	57	3	He	9.822	0.0071	350.02	0.0006	0.001429
Fe	57	3	He	5.483	0.0046	230.01	0.0006	0.001429
Co	59	3	He	0.06	0.0055	270.01	0.0563	0.002149
Co	59	3	He	0.063	0.0057	280.01	0.0563	0.002149
Co	59	3	He	0.076	0.0064	320.02	0.0563	0.002149
Ni	60	3	He	0.03	0.0031	280.01	0.0086	0.002834
Ni	60	3	He	0.029	0.0031	270.01	0.0086	0.002834
Ni	60	3	He	0.001	0.0028	260.01	0.0086	0.002834
Cu	63	3	He	1.187	0.0352	3190.45	0.0257	0.004757
Cu	63	3	He	1.229	0.0363	3180.47	0.0257	0.004757
Cu	63	3	He	1.117	0.0334	3060.44	0.0257	0.004757
Zn	66	3	He	3.693	0.0146	1320.13	0.0029	0.003818
Zn	66	3	He	3.863	0.0151	1320.10	0.0029	0.003818
Zn	66	3	He	3.643	0.0144	1320.10	0.0029	0.003818
As	75	3	He	0.145	0.0011	100.00	0.002	0.0008061
As	75	3	He	0.353	0.0015	134.00	0.002	0.0008061
As	75	3	He	0.257	0.0013	122.00	0.002	0.0008061
Sr	88	3	He	29.127	0.2622	22979.19	0.009	0.0009645
Sr	88	3	He	28.497	0.2566	23059.50	0.009	0.0009645
Sr	88	3	He	28.122	0.2532	22428.33	0.009	0.0009645
Mo	98	3	He	0.055	0.0015	130.00	0.0219	0.0002706
Mo	98	3	He	0.023	0.0008	70.00	0.0219	0.0002706
Mo	98	3	He	0.049	0.0014	120.01	0.0219	0.0002706
Ag	107	3	He	0.004	0.0008	70.00	0.0465	0.0006206
Ag	107	3	He	-0.004	0.0004	40.00	0.0465	0.0006206
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.008	0	4.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Sn	120	3	He	-0.263	0.0123	1080.08	0.0158	0.01648
Sn	120	3	He	-0.472	0.009	810.05	0.0158	0.01648
Sn	120	3	He	-0.278	0.0121	1070.09	0.0158	0.01648
Sb	121	3	He	0.028	0.0007	60.00	0.0149	0.0002698
Sb	121	3	He	0.004	0.0003	30.00	0.0149	0.0002698
Sb	121	3	He	0.027	0.0007	60.00	0.0149	0.0002698
Ba	137	3	He	17.624	0.0848	7432.27	0.0048	0.0002317
Ba	137	3	He	17.832	0.0858	7712.48	0.0048	0.0002317
Ba	137	3	He	16.682	0.0803	7112.09	0.0048	0.0002317
Tl	205	3	He	0.001	0.0002	70.00	0.0247	0.0001339
Tl	205	3	He	0.008	0.0003	130.01	0.0247	0.0001339
Tl	205	3	He	0.013	0.0004	180.01	0.0247	0.0001339
Pb	208	3	He	0.039	0.0024	490.03	0.0327	0.00107
Pb	208	3	He	0.03	0.002	420.02	0.0327	0.00107
Pb	208	3	He	0.034	0.0022	440.02	0.0327	0.00107
U	238	3	He	0.037	0.0019	600.04	0.0493	7.55E-05
U	238	3	He	0.045	0.0023	730.05	0.0493	7.55E-05
U	238	3	He	0.034	0.0018	560.03	0.0493	7.55E-05
Sc	45	1	No Gas			2503410.43		
Sc	45	1	No Gas			2493139.65		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2556074.02		
Ge	72	1	No Gas			1238315.92		
Ge	72	1	No Gas			1227245.06		
Ge	72	1	No Gas			1270921.62		
Sc	45	2	H2			191639.88		
Sc	45	2	H2			193237.40		
Sc	45	2	H2			192933.45		
Ge	72	2	H2			174766.62		
Ge	72	2	H2			174635.54		
Ge	72	2	H2			174069.39		
In	115	2	H2			405565.31		
In	115	2	H2			413875.23		
In	115	2	H2			406603.08		
Sc	45	3	He			48832.96		
Sc	45	3	He			49053.17		
Sc	45	3	He			49846.02		
Ge	72	3	He			90596.78		
Ge	72	3	He			87628.26		
Ge	72	3	He			91513.20		
In	115	3	He			87637.65		
In	115	3	He			89880.05		
In	115	3	He			88581.33		
Tb	159	3	He			412108.12		
Tb	159	3	He			405350.27		
Tb	159	3	He			405089.33		
Bi	209	3	He			319217.51		
Bi	209	3	He			315193.71		
Bi	209	3	He			315816.58		

Quantitation Report

Data File Name	133SMPL.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	8/10/2023 3:10:52 PM
Sample Name	410-137722-AE-1-A
Sample Type	Sample
Comment	D2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

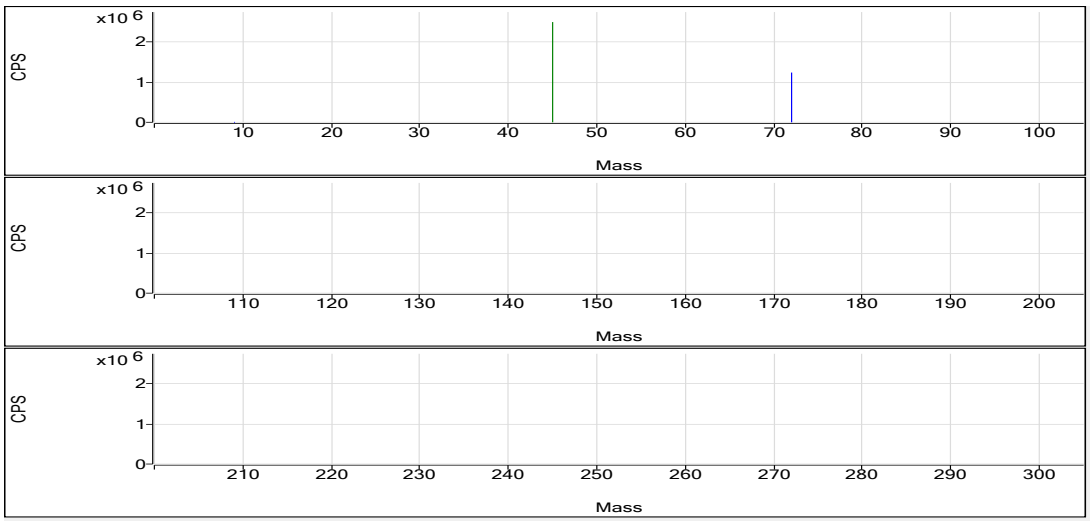
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.003	ppb	151.8	16.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.068	ppb	41.6	7.11	0.0000	Pulse	1.5000	3
Na	23	45	He	1383.310	ppb	1.6	260632.08	5.2933	Pulse	0.1000	3
Mg	24	45	He	1784.763	ppb	2.0	157850.22	3.2059	Pulse	0.1000	3
Al	27	45	He	9.315	ppb	13.4	300.01	0.0061	Pulse	0.1000	3
K	39	45	He	734.065	ppb	3.0	61533.80	1.2498	Pulse	0.1000	3
Ca	44	45	He	11940.386	ppb	3.6	39845.64	0.8093	Pulse	0.1000	3
Ti	47	45	He	-0.005	ppb	N/A	3.33	0.0001	Pulse	0.1000	3
V	51	45	He	-0.112	ppb	N/A	1104.05	0.0224	Pulse	0.5000	3
Cr	52	45	He	0.014	ppb	622.2	1990.21	0.0404	Pulse	0.1000	3
Mn	55	45	He	23.059	ppb	1.4	14701.27	0.2986	Pulse	0.1000	3
Fe	57	45	He	11.994	ppb	22.3	413.36	0.0084	Pulse	0.1000	3
Co	59	45	He	0.045	ppb	44.5	230.01	0.0047	Pulse	0.1000	3
Ni	60	72	He	0.084	ppb	36.7	316.68	0.0036	Pulse	0.1000	3
Cu	63	72	He	1.254	ppb	0.4	3290.49	0.0370	Pulse	0.1000	3
Zn	66	72	He	3.498	ppb	7.9	1246.76	0.0140	Pulse	0.1000	3
As	75	72	He	0.093	ppb	90.0	88.67	0.0010	Pulse	0.5000	3
Sr	88	115	He	28.280	ppb	1.0	23106.19	0.2546	Pulse	0.1000	3
Mo	98	115	He	0.088	ppb	19.8	200.01	0.0022	Pulse	0.1000	3
Ag	107	115	He	-0.009	ppb	N/A	20.00	0.0002	Pulse	0.1000	3
Cd	111	115	He	0.011	ppb	21.8	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.262	ppb	N/A	1120.09	0.0123	Pulse	0.1000	3
Sb	121	115	He	0.024	ppb	47.1	56.67	0.0006	Pulse	0.1000	3
Ba	137	115	He	14.812	ppb	5.4	6471.74	0.0713	Pulse	0.1000	3
Tl	205	159	He	0.008	ppb	5.5	133.34	0.0003	Pulse	0.1000	3
Pb	208	159	He	0.035	ppb	9.6	893.38	0.0022	Pulse	0.1000	3
U	238	209	He	0.021	ppb	21.4	353.35	0.0011	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2505792.15	1.8	104.5	Analog	0.1000	3
No Gas	Ge	72	1243551.28	0.6	107.8	Pulse	0.1000	3
H2	Sc	45	195909.15	0.9	104.8	Pulse	0.1000	3
H2	Ge	72	174858.99	1.9	106.8	Pulse	0.1000	3
H2	In	115	406621.85	1.5	104.5	Pulse	0.1000	3
He	Sc	45	49240.80	0.6	105.6	Pulse	0.1000	3
He	Ge	72	89039.79	0.9	109.7	Pulse	0.1000	3
He	In	115	90744.10	0.2	105.3	Pulse	0.1000	3
He	Tb	159	405081.02	1.1	101.6	Pulse	0.1000	3
He	Bi	209	314781.25	1.7	101.8	Pulse	0.1000	3

No Gas



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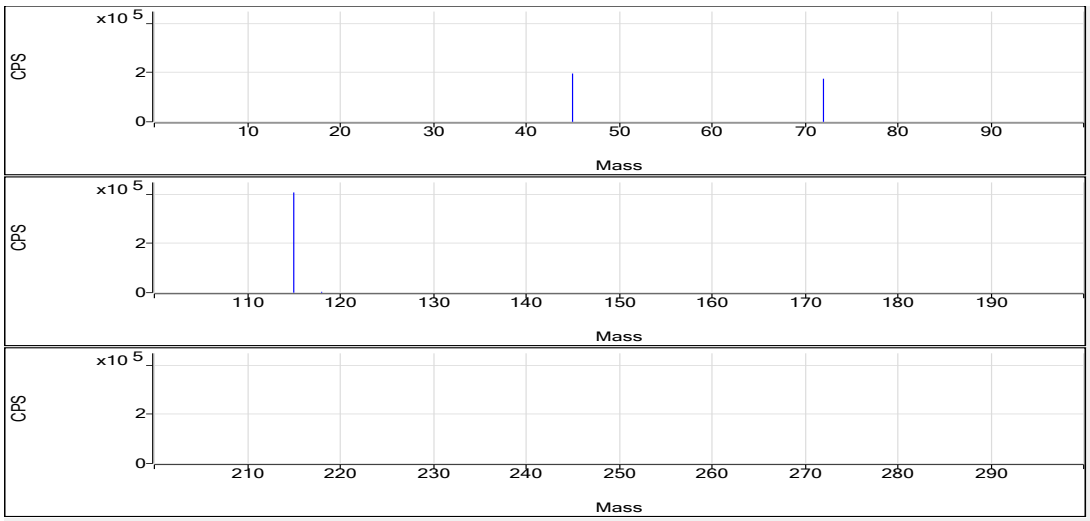
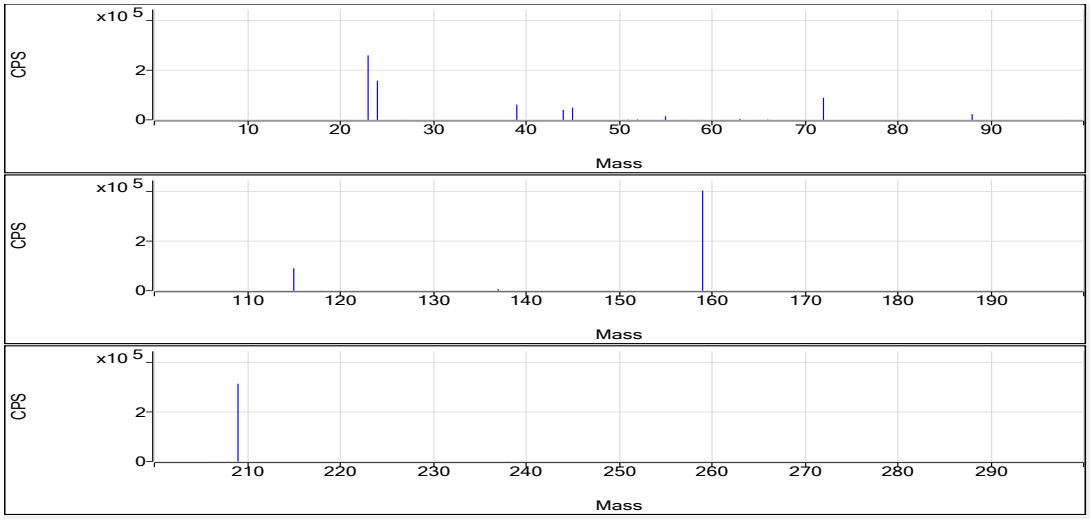


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.005	0	22.00	0.0008	4.685E-06
Be	9	1	No Gas	0.004	0	20.00	0.0008	4.685E-06
Be	9	1	No Gas	-0.002	0	8.00	0.0008	4.685E-06
Se	78	2	H2	0.099	0.0001	9.33	0.0004	1.219E-05
Se	78	2	H2	0.064	0	6.67	0.0004	1.219E-05
Se	78	2	H2	0.042	0	5.33	0.0004	1.219E-05
Na	23	3	He	1358.053	5.203	257990.97	0.0036	0.3452
Na	23	3	He	1395.642	5.3374	261336.71	0.0036	0.3452
Na	23	3	He	1396.233	5.3396	262568.57	0.0036	0.3452
Mg	24	3	He	1753.338	3.1495	156171.08	0.0018	0.003497
Mg	24	3	He	1823.464	3.2754	160372.18	0.0018	0.003497
Mg	24	3	He	1777.486	3.1929	157007.41	0.0018	0.003497
Al	27	3	He	8.898	0.0058	290.01	0.0006	0.0006432
Al	27	3	He	8.327	0.0055	270.01	0.0006	0.0006432
Al	27	3	He	10.72	0.0069	340.02	0.0006	0.0006432
K	39	3	He	711.328	1.2233	60656.86	0.0012	0.3951
K	39	3	He	754.623	1.2737	62363.83	0.0012	0.3951
K	39	3	He	736.245	1.2523	61580.70	0.0012	0.3951
Ca	44	3	He	11448.338	0.7761	38481.70	0.0001	0.002715
Ca	44	3	He	12134.169	0.8224	40267.18	0.0001	0.002715
Ca	44	3	He	12238.65	0.8295	40788.03	0.0001	0.002715
Ti	47	3	He	0.245	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	-0.084	0.023	1142.05	0.0219	0.02486
V	51	3	He	-0.035	0.0241	1180.05	0.0219	0.02486
V	51	3	He	-0.216	0.0201	990.04	0.0219	0.02486
Cr	52	3	He	0.1	0.043	2130.24	0.0299	0.03997
Cr	52	3	He	-0.08	0.0376	1840.18	0.0299	0.03997
Cr	52	3	He	0.023	0.0407	2000.20	0.0299	0.03997
Mn	55	3	He	22.781	0.295	14627.80	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	23.408	0.3031	14838.25	0.0128	0.002639
Mn	55	3	He	22.989	0.2977	14637.76	0.0128	0.002639
Fe	57	3	He	11.773	0.0083	410.02	0.0006	0.001429
Fe	57	3	He	14.767	0.01	490.03	0.0006	0.001429
Fe	57	3	He	9.442	0.0069	340.02	0.0006	0.001429
Co	59	3	He	0.048	0.0048	240.01	0.0563	0.002149
Co	59	3	He	0.024	0.0035	170.01	0.0563	0.002149
Co	59	3	He	0.063	0.0057	280.01	0.0563	0.002149
Ni	60	3	He	0.053	0.0033	290.01	0.0086	0.002834
Ni	60	3	He	0.115	0.0038	340.01	0.0086	0.002834
Ni	60	3	He	0.085	0.0036	320.02	0.0086	0.002834
Cu	63	3	He	1.25	0.0368	3250.50	0.0257	0.004757
Cu	63	3	He	1.254	0.0369	3290.50	0.0257	0.004757
Cu	63	3	He	1.259	0.0371	3330.48	0.0257	0.004757
Zn	66	3	He	3.361	0.0136	1200.10	0.0029	0.003818
Zn	66	3	He	3.817	0.0149	1330.09	0.0029	0.003818
Zn	66	3	He	3.316	0.0135	1210.09	0.0029	0.003818
As	75	3	He	0.06	0.0009	82.00	0.002	0.0008061
As	75	3	He	0.187	0.0012	106.00	0.002	0.0008061
As	75	3	He	0.03	0.0009	78.00	0.002	0.0008061
Sr	88	3	He	28.264	0.2545	23049.17	0.009	0.0009645
Sr	88	3	He	28.572	0.2573	23400.11	0.009	0.0009645
Sr	88	3	He	28.002	0.2521	22869.28	0.009	0.0009645
Mo	98	3	He	0.078	0.002	180.01	0.0219	0.0002706
Mo	98	3	He	0.078	0.002	180.01	0.0219	0.0002706
Mo	98	3	He	0.108	0.0026	240.01	0.0219	0.0002706
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Ag	107	3	He	-0.009	0.0002	20.00	0.0465	0.0006206
Ag	107	3	He	-0.011	0.0001	10.00	0.0465	0.0006206
Cd	111	3	He	0.012	0.0001	6.00	0.0053	0
Cd	111	3	He	0.008	0	4.00	0.0053	0
Cd	111	3	He	0.012	0.0001	6.00	0.0053	0
Sn	120	3	He	-0.155	0.014	1270.11	0.0158	0.01648
Sn	120	3	He	-0.236	0.0128	1160.08	0.0158	0.01648
Sn	120	3	He	-0.394	0.0103	930.07	0.0158	0.01648
Sb	121	3	He	0.012	0.0004	40.00	0.0149	0.0002698
Sb	121	3	He	0.034	0.0008	70.00	0.0149	0.0002698
Sb	121	3	He	0.026	0.0007	60.00	0.0149	0.0002698
Ba	137	3	He	15.347	0.0739	6691.86	0.0048	0.0002317
Ba	137	3	He	15.189	0.0731	6651.87	0.0048	0.0002317
Ba	137	3	He	13.9	0.0669	6071.48	0.0048	0.0002317
Tl	205	3	He	0.008	0.0003	140.01	0.0247	0.0001339
Tl	205	3	He	0.008	0.0003	130.01	0.0247	0.0001339
Tl	205	3	He	0.008	0.0003	130.01	0.0247	0.0001339
Pb	208	3	He	0.036	0.0022	520.03	0.0327	0.00107
Pb	208	3	He	0.031	0.0021	420.02	0.0327	0.00107
Pb	208	3	He	0.037	0.0023	460.03	0.0327	0.00107
U	238	3	He	0.017	0.0009	290.01	0.0493	7.55E-05
U	238	3	He	0.021	0.0011	350.02	0.0493	7.55E-05
U	238	3	He	0.026	0.0014	420.03	0.0493	7.55E-05
Sc	45	1	No Gas			2548319.02		
Sc	45	1	No Gas			2508545.74		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2460511.68		
Ge	72	1	No Gas			1244434.20		
Ge	72	1	No Gas			1250782.87		
Ge	72	1	No Gas			1235436.78		
Sc	45	2	H2			197184.61		
Sc	45	2	H2			193795.19		
Sc	45	2	H2			196747.65		
Ge	72	2	H2			174625.31		
Ge	72	2	H2			171579.67		
Ge	72	2	H2			178371.99		
In	115	2	H2			407652.18		
In	115	2	H2			400027.53		
In	115	2	H2			412185.85		
Sc	45	3	He			49585.22		
Sc	45	3	He			48962.94		
Sc	45	3	He			49174.25		
Ge	72	3	He			88221.67		
Ge	72	3	He			89076.82		
Ge	72	3	He			89820.89		
In	115	3	He			90576.09		
In	115	3	He			90967.23		
In	115	3	He			90706.06		
Tb	159	3	He			409978.74		
Tb	159	3	He			403337.53		
Tb	159	3	He			401926.79		
Bi	209	3	He			317607.07		
Bi	209	3	He			318094.51		
Bi	209	3	He			308642.16		

Quantitation Report

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Comment	D2
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

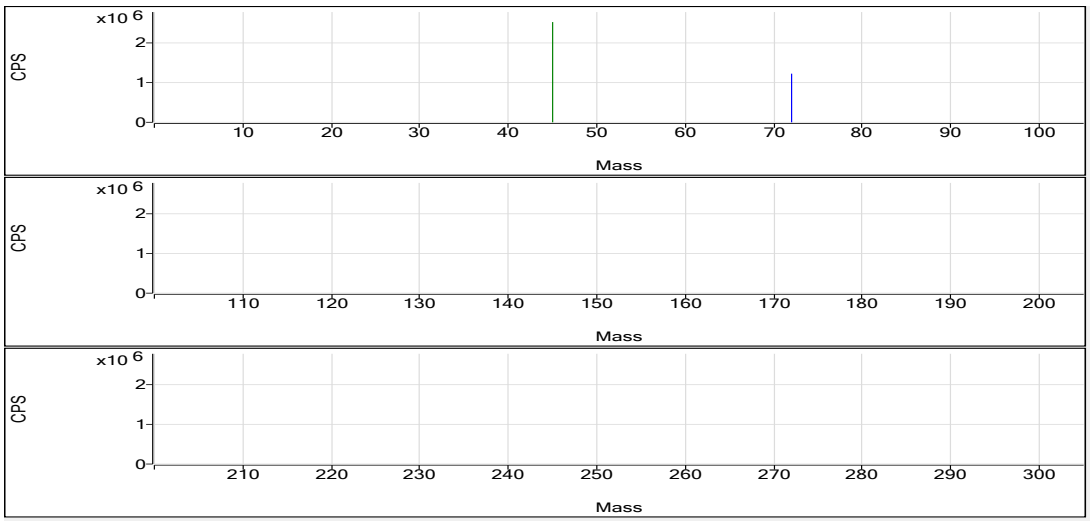
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.006	ppb	45.4	22.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.237	ppb	28.4	18.67	0.0001	Pulse	1.5000	3
Na	23	45	He	54923.127	ppb	2.1	9574539.24	196.8079	Analog	0.1000	3
Mg	24	45	He	16767.464	ppb	2.1	1463761.28	30.0897	Analog	0.1000	3
Al	27	45	He	5.934	ppb	27.7	200.01	0.0041	Pulse	0.1000	3
K	39	45	He	5403.552	ppb	1.6	325284.99	6.6866	Pulse	0.1000	3
Ca	44	45	He	111553.078	ppb	1.4	366739.60	7.5383	Pulse	0.1000	3
Ti	47	45	He	-0.130	ppb	N/A	0.00	0.0000	Pulse	0.1000	3
V	51	45	He	-0.050	ppb	N/A	1156.06	0.0238	Pulse	0.5000	3
Cr	52	45	He	0.334	ppb	17.7	2430.30	0.0500	Pulse	0.1000	3
Mn	55	45	He	302.145	ppb	2.4	188790.41	3.8803	Pulse	0.1000	3
Fe	57	45	He	49.906	ppb	6.2	1480.13	0.0304	Pulse	0.1000	3
Co	59	45	He	0.629	ppb	5.9	1826.86	0.0375	Pulse	0.1000	3
Ni	60	72	He	1.459	ppb	8.2	1346.78	0.0154	Pulse	0.1000	3
Cu	63	72	He	1.040	ppb	1.4	2757.03	0.0315	Pulse	0.1000	3
Zn	66	72	He	5.301	ppb	8.9	1686.82	0.0193	Pulse	0.1000	3
As	75	72	He	0.041	ppb	53.8	78.00	0.0009	Pulse	0.5000	3
Sr	88	115	He	489.617	ppb	1.4	389077.66	4.3927	Pulse	0.1000	3
Mo	98	115	He	0.557	ppb	6.3	1106.75	0.0125	Pulse	0.1000	3
Ag	107	115	He	-0.005	ppb	N/A	33.33	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.017	ppb	24.3	8.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.262	ppb	N/A	1093.41	0.0123	Pulse	0.1000	3
Sb	121	115	He	0.007	ppb	120.9	33.33	0.0004	Pulse	0.1000	3
Ba	137	115	He	121.085	ppb	2.5	51487.29	0.5814	Pulse	0.1000	3
Tl	205	159	He	0.025	ppb	34.4	306.68	0.0008	Pulse	0.1000	3
Pb	208	159	He	0.053	ppb	12.8	1136.73	0.0028	Pulse	0.1000	3
U	238	209	He	0.422	ppb	2.5	6498.54	0.0209	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2515003.92	0.8	104.8	Analog	0.1000	3
No Gas	Ge	72	1219948.11	0.2	105.8	Pulse	0.1000	3
H2	Sc	45	190053.82	0.9	101.6	Pulse	0.1000	3
H2	Ge	72	168065.45	1.2	102.7	Pulse	0.1000	3
H2	In	115	400286.54	0.2	102.9	Pulse	0.1000	3
He	Sc	45	48655.45	1.6	104.3	Pulse	0.1000	3
He	Ge	72	87658.15	0.9	108.0	Pulse	0.1000	3
He	In	115	88579.21	1.1	102.8	Pulse	0.1000	3
He	Tb	159	403519.03	0.8	101.2	Pulse	0.1000	3
He	Bi	209	311567.17	0.8	100.7	Pulse	0.1000	3

No Gas



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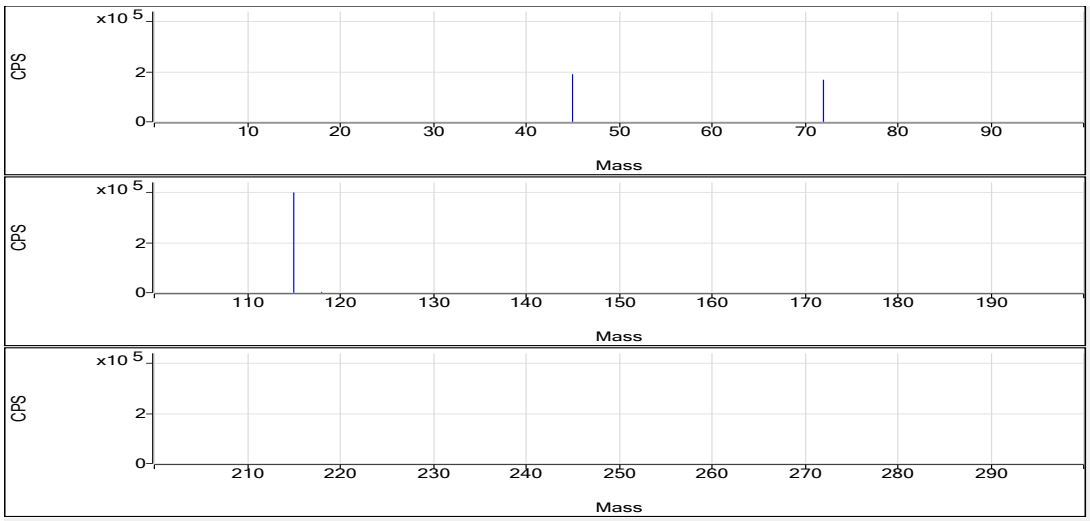
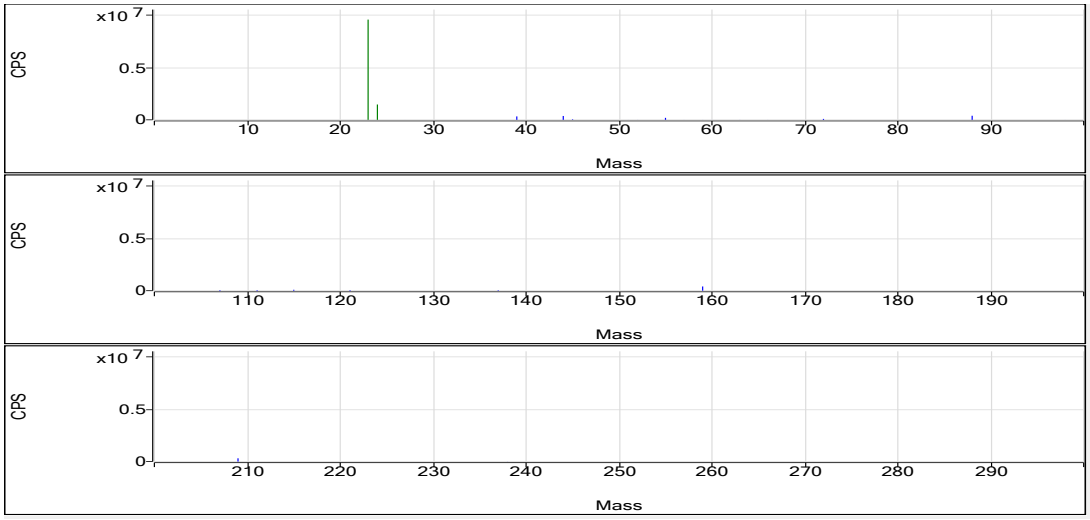


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.003	0	18.00	0.0008	4.685E-06
Be	9	1	No Gas	0.008	0	28.00	0.0008	4.685E-06
Be	9	1	No Gas	0.005	0	22.00	0.0008	4.685E-06
Se	78	2	H2	0.312	0.0001	24.00	0.0004	1.219E-05
Se	78	2	H2	0.183	0.0001	14.67	0.0004	1.219E-05
Se	78	2	H2	0.216	0.0001	17.33	0.0004	1.219E-05
Na	23	3	He	56117.574	201.0805	9623681.11	0.0036	0.3452
Na	23	3	He	54798.901	196.3635	9712997.36	0.0036	0.3452
Na	23	3	He	53852.908	192.9796	9386939.24	0.0036	0.3452
Mg	24	3	He	17165.521	30.804	1474273.26	0.0018	0.003497
Mg	24	3	He	16601.699	29.7923	1473656.85	0.0018	0.003497
Mg	24	3	He	16535.173	29.6729	1443353.73	0.0018	0.003497
Al	27	3	He	5.687	0.004	190.01	0.0006	0.0006432
Al	27	3	He	4.43	0.0032	160.01	0.0006	0.0006432
Al	27	3	He	7.686	0.0051	250.01	0.0006	0.0006432
K	39	3	He	5491.169	6.7886	324900.46	0.0012	0.3951
K	39	3	He	5321.351	6.5909	326012.57	0.0012	0.3951
K	39	3	He	5398.135	6.6803	324941.95	0.0012	0.3951
Ca	44	3	He	113340.62	7.6591	366562.89	0.0001	0.002715
Ca	44	3	He	111007.04	7.5015	371054.60	0.0001	0.002715
Ca	44	3	He	110311.574	7.4545	362601.32	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	-0.025	0.0243	1164.06	0.0219	0.02486
V	51	3	He	-0.126	0.0221	1094.05	0.0219	0.02486
V	51	3	He	0.001	0.0249	1210.06	0.0219	0.02486
Cr	52	3	He	0.368	0.051	2440.30	0.0299	0.03997
Cr	52	3	He	0.265	0.0479	2370.28	0.0299	0.03997
Cr	52	3	He	0.368	0.051	2480.31	0.0299	0.03997
Mn	55	3	He	307.621	3.9506	189075.39	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	304.892	3.9156	193682.11	0.0128	0.002639
Mn	55	3	He	293.921	3.7748	183613.73	0.0128	0.002639
Fe	57	3	He	48.613	0.0297	1420.12	0.0006	0.001429
Fe	57	3	He	47.652	0.0291	1440.12	0.0006	0.001429
Fe	57	3	He	53.454	0.0325	1580.14	0.0006	0.001429
Co	59	3	He	0.619	0.037	1770.19	0.0563	0.002149
Co	59	3	He	0.67	0.0398	1970.22	0.0563	0.002149
Co	59	3	He	0.597	0.0358	1740.17	0.0563	0.002149
Ni	60	3	He	1.576	0.0164	1440.12	0.0086	0.002834
Ni	60	3	He	1.466	0.0154	1360.11	0.0086	0.002834
Ni	60	3	He	1.336	0.0143	1240.10	0.0086	0.002834
Cu	63	3	He	1.023	0.031	2730.35	0.0257	0.004757
Cu	63	3	He	1.051	0.0317	2800.38	0.0257	0.004757
Cu	63	3	He	1.046	0.0316	2740.36	0.0257	0.004757
Zn	66	3	He	5.284	0.0192	1690.15	0.0029	0.003818
Zn	66	3	He	4.839	0.0179	1580.13	0.0029	0.003818
Zn	66	3	He	5.779	0.0206	1790.18	0.0029	0.003818
As	75	3	He	0.017	0.0008	74.00	0.002	0.0008061
As	75	3	He	0.06	0.0009	82.00	0.002	0.0008061
As	75	3	He	0.046	0.0009	78.00	0.002	0.0008061
Sr	88	3	He	482.303	4.3271	387675.15	0.009	0.0009645
Sr	88	3	He	495.906	4.4492	393324.72	0.009	0.0009645
Sr	88	3	He	490.643	4.4019	386233.12	0.009	0.0009645
Mo	98	3	He	0.548	0.0123	1100.09	0.0219	0.0002706
Mo	98	3	He	0.596	0.0133	1180.08	0.0219	0.0002706
Mo	98	3	He	0.528	0.0119	1040.08	0.0219	0.0002706
Ag	107	3	He	0.001	0.0007	60.00	0.0465	0.0006206
Ag	107	3	He	-0.008	0.0002	20.00	0.0465	0.0006206
Ag	107	3	He	-0.008	0.0002	20.00	0.0465	0.0006206
Cd	111	3	He	0.021	0.0001	10.00	0.0053	0
Cd	111	3	He	0.013	0.0001	6.00	0.0053	0
Cd	111	3	He	0.017	0.0001	8.00	0.0053	0
Sn	120	3	He	-0.244	0.0126	1130.08	0.0158	0.01648
Sn	120	3	He	-0.227	0.0129	1140.09	0.0158	0.01648
Sn	120	3	He	-0.314	0.0115	1010.07	0.0158	0.01648
Sb	121	3	He	0.012	0.0004	40.00	0.0149	0.0002698
Sb	121	3	He	0.012	0.0005	40.00	0.0149	0.0002698
Sb	121	3	He	-0.003	0.0002	20.00	0.0149	0.0002698
Ba	137	3	He	117.64	0.5648	50603.75	0.0048	0.0002317
Ba	137	3	He	122.226	0.5868	51878.85	0.0048	0.0002317
Ba	137	3	He	123.388	0.5924	51979.26	0.0048	0.0002317
Tl	205	3	He	0.02	0.0006	250.01	0.0247	0.0001339
Tl	205	3	He	0.035	0.001	410.02	0.0247	0.0001339
Tl	205	3	He	0.021	0.0006	260.01	0.0247	0.0001339
Pb	208	3	He	0.051	0.0027	580.03	0.0327	0.00107
Pb	208	3	He	0.061	0.0031	640.04	0.0327	0.00107
Pb	208	3	He	0.048	0.0026	600.04	0.0327	0.00107
U	238	3	He	0.41	0.0203	6341.79	0.0493	7.55E-05
U	238	3	He	0.425	0.021	6571.93	0.0493	7.55E-05
U	238	3	He	0.431	0.0213	6581.89	0.0493	7.55E-05
Sc	45	1	No Gas			2518634.96		
Sc	45	1	No Gas			2532770.27		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2493606.53		
Ge	72	1	No Gas			1218441.08		
Ge	72	1	No Gas			1218389.83		
Ge	72	1	No Gas			1223013.42		
Sc	45	2	H2			189035.09		
Sc	45	2	H2			189073.98		
Sc	45	2	H2			192052.38		
Ge	72	2	H2			168583.85		
Ge	72	2	H2			165834.24		
Ge	72	2	H2			169778.26		
In	115	2	H2			399268.78		
In	115	2	H2			401131.71		
In	115	2	H2			400459.13		
Sc	45	3	He			47859.85		
Sc	45	3	He			49464.37		
Sc	45	3	He			48642.12		
Ge	72	3	He			88020.92		
Ge	72	3	He			88241.56		
Ge	72	3	He			86711.96		
In	115	3	He			89598.22		
In	115	3	He			88410.61		
In	115	3	He			87747.52		
Tb	159	3	He			402438.98		
Tb	159	3	He			407311.05		
Tb	159	3	He			400807.06		
Bi	209	3	He			312706.60		
Bi	209	3	He			313116.58		
Bi	209	3	He			308878.32		

Quantitation Report

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Sample Name	RINSE
Sample Type	Sample
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

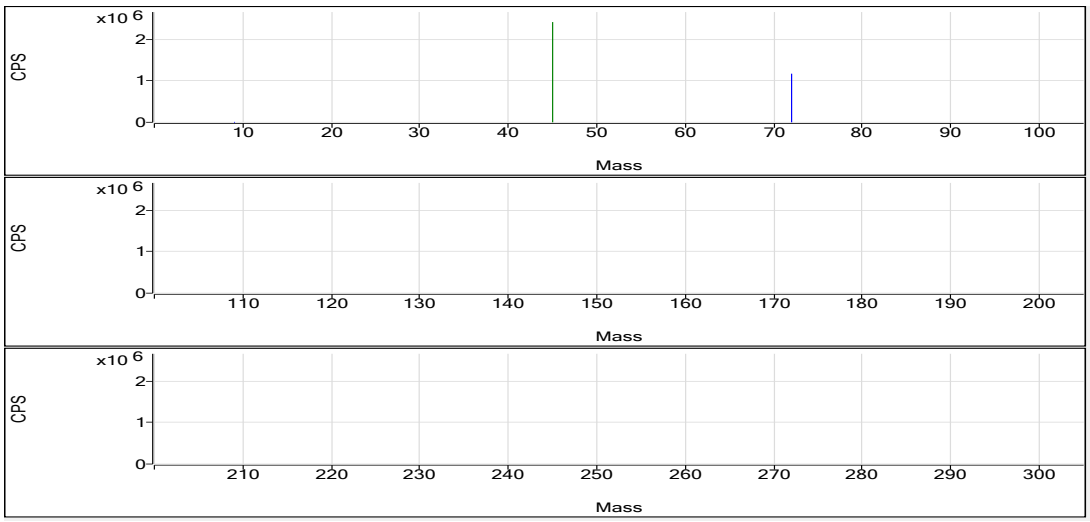
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.002	ppb	160.9	15.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.004	ppb	377.1	2.22	0.0000	Pulse	1.5000	3
Na	23	45	He	5.656	ppb	9.6	17847.92	0.3654	Pulse	0.1000	3
Mg	24	45	He	2.653	ppb	20.3	403.35	0.0083	Pulse	0.1000	3
Al	27	45	He	0.416	ppb	127.5	43.33	0.0009	Pulse	0.1000	3
K	39	45	He	-4.528	ppb	N/A	19039.71	0.3898	Pulse	0.1000	3
Ca	44	45	He	16.389	ppb	22.0	186.68	0.0038	Pulse	0.1000	3
Ti	47	45	He	-0.130	ppb	N/A	0.00	0.0000	Pulse	0.1000	3
V	51	45	He	0.111	ppb	12.5	1333.40	0.0273	Pulse	0.5000	3
Cr	52	45	He	-0.141	ppb	N/A	1746.83	0.0358	Pulse	0.1000	3
Mn	55	45	He	0.347	ppb	52.1	346.68	0.0071	Pulse	0.1000	3
Fe	57	45	He	1.535	ppb	27.1	113.34	0.0023	Pulse	0.1000	3
Co	59	45	He	0.014	ppb	66.5	143.34	0.0029	Pulse	0.1000	3
Ni	60	72	He	0.046	ppb	164.0	266.68	0.0032	Pulse	0.1000	3
Cu	63	72	He	0.021	ppb	58.0	436.69	0.0053	Pulse	0.1000	3
Zn	66	72	He	3.625	ppb	7.8	1186.76	0.0144	Pulse	0.1000	3
As	75	72	He	0.021	ppb	209.5	70.00	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.122	ppb	9.6	180.01	0.0021	Pulse	0.1000	3
Mo	98	115	He	0.022	ppb	13.1	66.67	0.0008	Pulse	0.1000	3
Ag	107	115	He	-0.004	ppb	N/A	36.67	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.004	ppb	99.7	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.019	ppb	N/A	1413.47	0.0162	Pulse	0.1000	3
Sb	121	115	He	0.000	ppb	N/A	23.33	0.0003	Pulse	0.1000	3
Ba	137	115	He	0.047	ppb	86.6	40.00	0.0005	Pulse	0.1000	3
Tl	205	159	He	0.011	ppb	27.5	160.01	0.0004	Pulse	0.1000	3
Pb	208	159	He	0.008	ppb	84.2	530.03	0.0013	Pulse	0.1000	3
U	238	209	He	0.004	ppb	0.3	80.00	0.0003	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2419225.49	1.7	100.9	Analog	0.1000	3
No Gas	Ge	72	1173097.69	1.8	101.7	Pulse	0.1000	3
H2	Sc	45	184952.91	1.3	98.9	Pulse	0.1000	3
H2	Ge	72	159919.94	0.1	97.7	Pulse	0.1000	3
H2	In	115	395657.45	0.2	101.7	Pulse	0.1000	3
He	Sc	45	48846.07	0.3	104.7	Pulse	0.1000	3
He	Ge	72	82541.65	1.3	101.7	Pulse	0.1000	3
He	In	115	87461.12	0.6	101.5	Pulse	0.1000	3
He	Tb	159	399538.93	0.5	100.2	Pulse	0.1000	3
He	Bi	209	307328.45	0.2	99.4	Pulse	0.1000	3

No Gas



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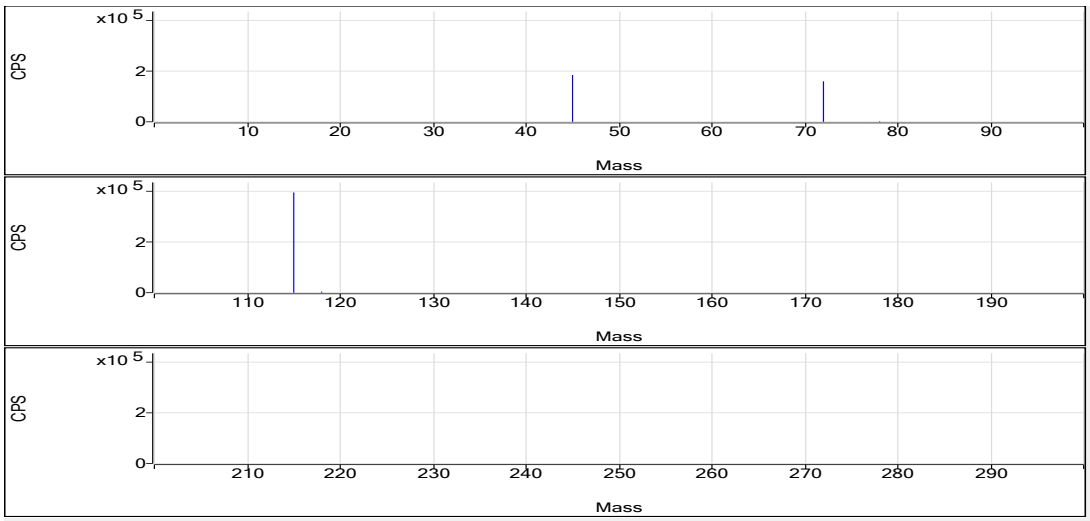
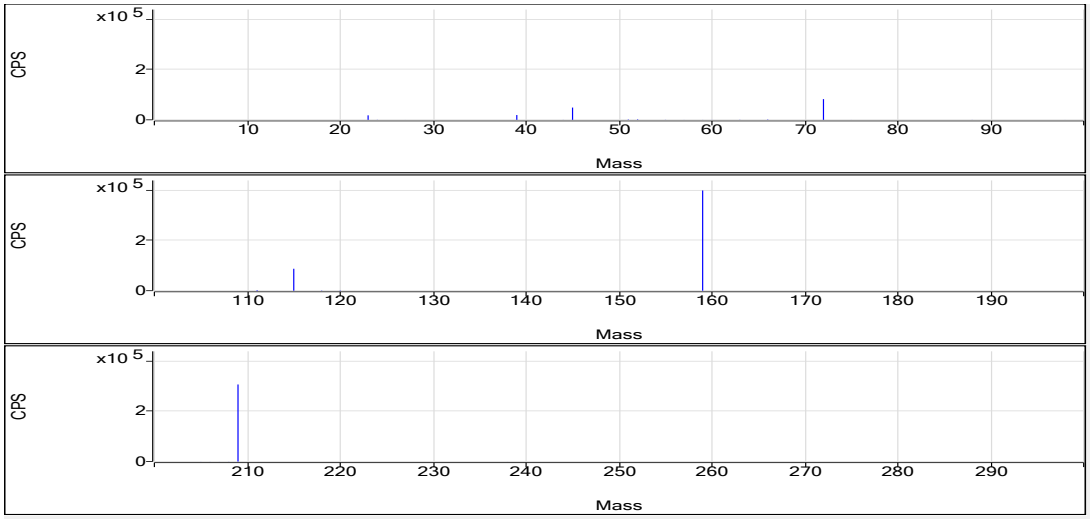


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.003	0	18.00	0.0008	4.685E-06
Be	9	1	No Gas	-0.002	0	8.00	0.0008	4.685E-06
Be	9	1	No Gas	0.005	0	20.00	0.0008	4.685E-06
Se	78	2	H2	-0.009	0	1.33	0.0004	1.219E-05
Se	78	2	H2	0.001	0	2.00	0.0004	1.219E-05
Se	78	2	H2	0.021	0	3.33	0.0004	1.219E-05
Na	23	3	He	5.996	0.3666	17891.29	0.0036	0.3452
Na	23	3	He	5.94	0.3664	17951.38	0.0036	0.3452
Na	23	3	He	5.031	0.3632	17701.09	0.0036	0.3452
Mg	24	3	He	2.048	0.0072	350.02	0.0018	0.003497
Mg	24	3	He	2.829	0.0086	420.02	0.0018	0.003497
Mg	24	3	He	3.082	0.009	440.02	0.0018	0.003497
Al	27	3	He	-0.049	0.0006	30.00	0.0006	0.0006432
Al	27	3	He	0.994	0.0012	60.00	0.0006	0.0006432
Al	27	3	He	0.303	0.0008	40.00	0.0006	0.0006432
K	39	3	He	0.232	0.3953	19293.43	0.0012	0.3951
K	39	3	He	-8.111	0.3856	18892.86	0.0012	0.3951
K	39	3	He	-5.704	0.3884	18932.85	0.0012	0.3951
Ca	44	3	He	14.412	0.0037	180.01	0.0001	0.002715
Ca	44	3	He	14.2	0.0037	180.01	0.0001	0.002715
Ca	44	3	He	20.554	0.0041	200.01	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	0.1	0.027	1320.07	0.0219	0.02486
V	51	3	He	0.127	0.0276	1354.07	0.0219	0.02486
V	51	3	He	0.107	0.0272	1326.07	0.0219	0.02486
Cr	52	3	He	0.006	0.0402	1960.20	0.0299	0.03997
Cr	52	3	He	-0.128	0.0361	1770.16	0.0299	0.03997
Cr	52	3	He	-0.3	0.031	1510.13	0.0299	0.03997
Mn	55	3	He	0.497	0.009	440.02	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.399	0.0078	380.02	0.0128	0.002639
Mn	55	3	He	0.146	0.0045	220.01	0.0128	0.002639
Fe	57	3	He	1.773	0.0025	120.01	0.0006	0.001429
Fe	57	3	He	1.054	0.002	100.00	0.0006	0.001429
Fe	57	3	He	1.778	0.0025	120.00	0.0006	0.001429
Co	59	3	He	0.013	0.0029	140.01	0.0563	0.002149
Co	59	3	He	0.005	0.0024	120.00	0.0563	0.002149
Co	59	3	He	0.024	0.0035	170.01	0.0563	0.002149
Ni	60	3	He	0.006	0.0029	240.01	0.0086	0.002834
Ni	60	3	He	0.133	0.004	330.02	0.0086	0.002834
Ni	60	3	He	-0.001	0.0028	230.01	0.0086	0.002834
Cu	63	3	He	0.03	0.0055	460.02	0.0257	0.004757
Cu	63	3	He	0.007	0.0049	410.02	0.0257	0.004757
Cu	63	3	He	0.026	0.0054	440.02	0.0257	0.004757
Zn	66	3	He	3.637	0.0144	1200.10	0.0029	0.003818
Zn	66	3	He	3.902	0.0152	1260.10	0.0029	0.003818
Zn	66	3	He	3.336	0.0135	1100.09	0.0029	0.003818
As	75	3	He	0.04	0.0009	74.00	0.002	0.0008061
As	75	3	He	-0.029	0.0007	62.00	0.002	0.0008061
As	75	3	He	0.051	0.0009	74.00	0.002	0.0008061
Sr	88	3	He	0.11	0.0019	170.01	0.009	0.0009645
Sr	88	3	He	0.123	0.0021	180.01	0.009	0.0009645
Sr	88	3	He	0.133	0.0022	190.01	0.009	0.0009645
Mo	98	3	He	0.019	0.0007	60.00	0.0219	0.0002706
Mo	98	3	He	0.024	0.0008	70.00	0.0219	0.0002706
Mo	98	3	He	0.024	0.0008	70.00	0.0219	0.0002706
Ag	107	3	He	-0.003	0.0005	40.00	0.0465	0.0006206
Ag	107	3	He	0.001	0.0007	60.00	0.0465	0.0006206
Ag	107	3	He	-0.011	0.0001	10.00	0.0465	0.0006206
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0.008	0	4.00	0.0053	0
Sn	120	3	He	0.097	0.018	1570.14	0.0158	0.01648
Sn	120	3	He	0.09	0.0179	1560.19	0.0158	0.01648
Sn	120	3	He	-0.245	0.0126	1110.09	0.0158	0.01648
Sb	121	3	He	0.005	0.0003	30.00	0.0149	0.0002698
Sb	121	3	He	-0.003	0.0002	20.00	0.0149	0.0002698
Sb	121	3	He	-0.003	0.0002	20.00	0.0149	0.0002698
Ba	137	3	He	0.023	0.0003	30.00	0.0048	0.0002317
Ba	137	3	He	0.023	0.0003	30.00	0.0048	0.0002317
Ba	137	3	He	0.094	0.0007	60.00	0.0048	0.0002317
Tl	205	3	He	0.014	0.0005	190.01	0.0247	0.0001339
Tl	205	3	He	0.011	0.0004	160.01	0.0247	0.0001339
Tl	205	3	He	0.008	0.0003	130.00	0.0247	0.0001339
Pb	208	3	He	0.002	0.0011	240.01	0.0327	0.00107
Pb	208	3	He	0.015	0.0016	360.02	0.0327	0.00107
Pb	208	3	He	0.007	0.0013	250.01	0.0327	0.00107
U	238	3	He	0.004	0.0003	80.00	0.0493	7.55E-05
U	238	3	He	0.004	0.0003	80.00	0.0493	7.55E-05
U	238	3	He	0.004	0.0003	80.00	0.0493	7.55E-05
Sc	45	1	No Gas			2466282.62		
Sc	45	1	No Gas			2398524.03		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2392869.81		
Ge	72	1	No Gas			1197068.81		
Ge	72	1	No Gas			1156919.44		
Ge	72	1	No Gas			1165304.83		
Sc	45	2	H2			184699.37		
Sc	45	2	H2			182775.80		
Sc	45	2	H2			187383.55		
Ge	72	2	H2			160006.67		
Ge	72	2	H2			159826.07		
Ge	72	2	H2			159927.09		
In	115	2	H2			395033.39		
In	115	2	H2			395230.85		
In	115	2	H2			396708.12		
Sc	45	3	He			48802.55		
Sc	45	3	He			48993.09		
Sc	45	3	He			48742.56		
Ge	72	3	He			83302.92		
Ge	72	3	He			83021.07		
Ge	72	3	He			81300.96		
In	115	3	He			87194.38		
In	115	3	He			87173.49		
In	115	3	He			88039.51		
Tb	159	3	He			401487.77		
Tb	159	3	He			399521.36		
Tb	159	3	He			397607.65		
Bi	209	3	He			307986.07		
Bi	209	3	He			307077.85		
Bi	209	3	He			306921.44		

Quantitation Report

Data File Name	136_CCV.d
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Acq Time	8/10/2023 3:17:01 PM
Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

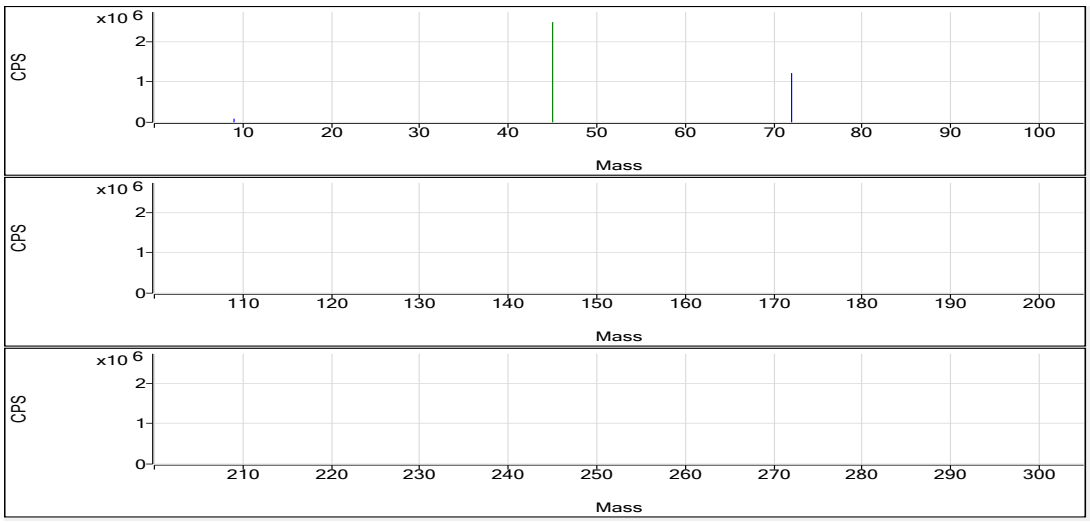
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	47.652	ppb	0.5	89958.09	0.0364	Pulse	0.5000	3
Se	78	72	H2	52.687	ppb	2.0	3548.00	0.0220	Pulse	1.5000	3
Na	23	45	He	4822.490	ppb	1.8	850039.13	17.5954	Pulse	0.1000	3
Mg	24	45	He	4998.429	ppb	2.0	433433.64	8.9723	Pulse	0.1000	3
Al	27	45	He	4948.062	ppb	2.1	139870.53	2.8954	Pulse	0.1000	3
K	39	45	He	5031.640	ppb	2.6	302080.59	6.2535	Pulse	0.1000	3
Ca	44	45	He	5340.983	ppb	1.1	17567.81	0.3635	Pulse	0.1000	3
Ti	47	45	He	5066.090	ppb	1.6	131426.61	2.7203	Pulse	0.1000	3
V	51	45	He	510.957	ppb	1.8	540773.50	11.1940	Pulse	0.5000	3
Cr	52	45	He	485.034	ppb	2.3	703441.53	14.5622	Pulse	0.1000	3
Mn	55	45	He	506.884	ppb	2.5	314365.05	6.5079	Pulse	0.1000	3
Fe	57	45	He	5064.224	ppb	2.4	142204.74	2.9437	Pulse	0.1000	3
Co	59	45	He	493.489	ppb	2.1	1341841.54	27.7768	Pulse	0.1000	3
Ni	60	72	He	513.464	ppb	0.5	372249.02	4.4100	Pulse	0.1000	3
Cu	63	72	He	492.895	ppb	0.8	1068430.09	12.6579	Pulse	0.1000	3
Zn	66	72	He	517.119	ppb	2.3	127398.45	1.5095	Pulse	0.1000	3
As	75	72	He	517.613	ppb	1.1	89585.28	1.0613	Pulse	0.5000	3
Sr	88	115	He	50.873	ppb	2.3	40067.48	0.4573	Pulse	0.1000	3
Mo	98	115	He	51.822	ppb	2.7	99581.23	1.1365	Pulse	0.1000	3
Ag	107	115	He	50.776	ppb	2.3	206875.95	2.3610	Pulse	0.1000	3
Cd	111	115	He	50.821	ppb	1.4	23811.61	0.2717	Pulse	0.5000	3
Sn	120	115	He	51.857	ppb	1.7	73234.27	0.8357	Pulse	0.1000	3
Sb	121	115	He	51.450	ppb	0.6	66995.87	0.7645	Pulse	0.1000	3
Ba	137	115	He	516.392	ppb	2.1	217178.62	2.4786	Pulse	0.1000	3
Tl	205	159	He	51.079	ppb	0.8	508039.56	1.2631	Pulse	0.1000	3
Pb	208	159	He	51.446	ppb	1.7	677641.75	1.6849	Pulse	0.1000	3
U	238	209	He	50.814	ppb	0.2	770922.93	2.5031	Pulse	0.1000	3

ISTD Table:

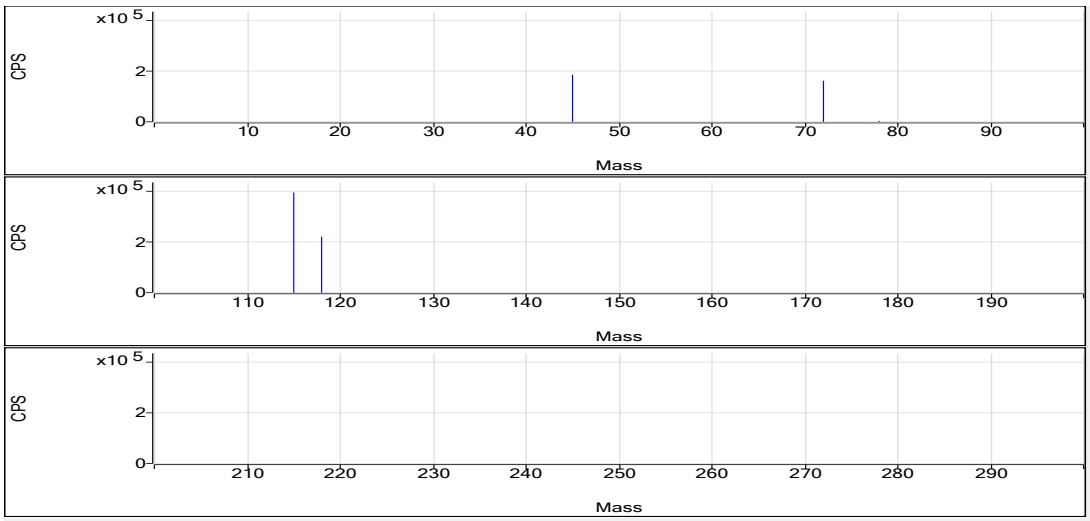
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2474603.82	0.2	103.2	Analog	0.1000	3
No Gas	Ge	72	1215033.44	0.6	105.4	Pulse	0.1000	3
H2	Sc	45	185395.93	0.8	99.1	Pulse	0.1000	3
H2	Ge	72	161402.89	1.3	98.6	Pulse	0.1000	3
H2	In	115	393994.25	0.6	101.3	Pulse	0.1000	3
He	Sc	45	48321.26	2.1	103.6	Pulse	0.1000	3
He	Ge	72	84412.27	1.0	104.0	Pulse	0.1000	3
He	In	115	87640.34	1.5	101.7	Pulse	0.1000	3
He	Tb	159	402226.41	0.8	100.9	Pulse	0.1000	3
He	Bi	209	307981.23	0.5	99.6	Pulse	0.1000	3

No Gas

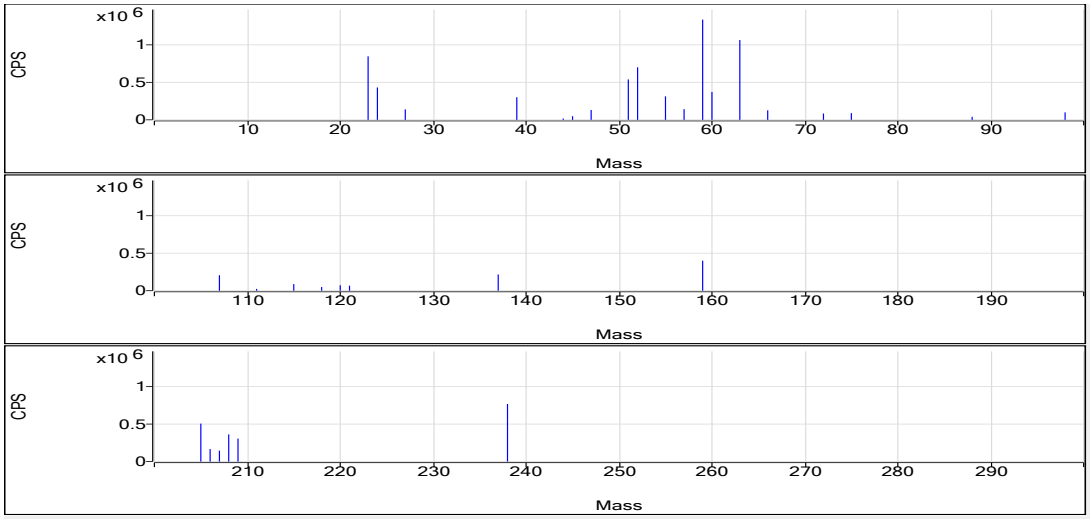


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	47.771	0.0364	90141.14	0.0008	4.685E-06
Be	9	1	No Gas	47.394	0.0362	89644.18	0.0008	4.685E-06
Be	9	1	No Gas	47.79	0.0365	90088.96	0.0008	4.685E-06
Se	78	2	H2	52.678	0.022	3554.45	0.0004	1.219E-05
Se	78	2	H2	51.613	0.0215	3517.10	0.0004	1.219E-05
Se	78	2	H2	53.769	0.0224	3572.45	0.0004	1.219E-05
Na	23	3	He	4810.644	17.5531	855403.66	0.0036	0.3452
Na	23	3	He	4912.475	17.9173	845471.08	0.0036	0.3452
Na	23	3	He	4744.352	17.3159	849242.64	0.0036	0.3452
Mg	24	3	He	4981.171	8.9413	435732.34	0.0018	0.003497
Mg	24	3	He	5108.117	9.1691	432665.77	0.0018	0.003497
Mg	24	3	He	4905.998	8.8064	431902.81	0.0018	0.003497
Al	27	3	He	4924.004	2.8814	140415.53	0.0006	0.0006432
Al	27	3	He	5063.63	2.963	139818.18	0.0006	0.0006432
Al	27	3	He	4856.552	2.8419	139377.89	0.0006	0.0006432
K	39	3	He	5003.989	6.2213	303181.19	0.0012	0.3951
K	39	3	He	5172.676	6.4178	302836.73	0.0012	0.3951
K	39	3	He	4918.255	6.1215	300223.86	0.0012	0.3951
Ca	44	3	He	5346.036	0.3638	17731.29	0.0001	0.002715
Ca	44	3	He	5277.412	0.3592	16950.37	0.0001	0.002715
Ca	44	3	He	5399.501	0.3675	18021.78	0.0001	0.002715
Ti	47	3	He	4980.966	2.6746	130339.53	0.0005	7.003E-05
Ti	47	3	He	5146.1	2.7633	130391.13	0.0005	7.003E-05
Ti	47	3	He	5071.204	2.723	133549.17	0.0005	7.003E-05
V	51	3	He	507.681	11.1224	542019.63	0.0219	0.02486
V	51	3	He	521.295	11.4199	538876.56	0.0219	0.02486
V	51	3	He	503.894	11.0396	541424.31	0.0219	0.02486
Cr	52	3	He	479.078	14.3839	700963.58	0.0299	0.03997
Cr	52	3	He	498.145	14.9548	705677.18	0.0299	0.03997
Cr	52	3	He	477.879	14.348	703683.82	0.0299	0.03997
Mn	55	3	He	504.712	6.4801	315788.86	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	520.568	6.6835	315378.86	0.0128	0.002639
Mn	55	3	He	495.37	6.3602	311927.42	0.0128	0.002639
Fe	57	3	He	5093.229	2.9605	144274.71	0.0006	0.001429
Fe	57	3	He	5166.127	3.0029	141698.98	0.0006	0.001429
Fe	57	3	He	4933.317	2.8676	140640.54	0.0006	0.001429
Co	59	3	He	493.49	27.7769	1353637.17	0.0563	0.002149
Co	59	3	He	504.094	28.3737	1338882.17	0.0563	0.002149
Co	59	3	He	482.881	27.1798	1333005.29	0.0563	0.002149
Ni	60	3	He	513.451	4.4099	375733.12	0.0086	0.002834
Ni	60	3	He	511.126	4.3899	370855.39	0.0086	0.002834
Ni	60	3	He	515.813	4.4301	370158.55	0.0086	0.002834
Cu	63	3	He	490.333	12.5921	1072886.47	0.0257	0.004757
Cu	63	3	He	490.933	12.6075	1065074.28	0.0257	0.004757
Cu	63	3	He	497.418	12.774	1067329.52	0.0257	0.004757
Zn	66	3	He	505.695	1.4762	125777.18	0.0029	0.003818
Zn	66	3	He	515.905	1.5059	127220.07	0.0029	0.003818
Zn	66	3	He	529.758	1.5463	129198.09	0.0029	0.003818
As	75	3	He	517.608	1.0613	90427.20	0.002	0.0008061
As	75	3	He	511.825	1.0495	88658.08	0.002	0.0008061
As	75	3	He	523.405	1.0732	89670.55	0.002	0.0008061
Sr	88	3	He	52.216	0.4693	40448.59	0.009	0.0009645
Sr	88	3	He	50.073	0.4501	39886.70	0.009	0.0009645
Sr	88	3	He	50.329	0.4524	39867.14	0.009	0.0009645
Mo	98	3	He	53.452	1.1723	101031.55	0.0219	0.0002706
Mo	98	3	He	51.052	1.1197	99218.75	0.0219	0.0002706
Mo	98	3	He	50.962	1.1177	98493.40	0.0219	0.0002706
Ag	107	3	He	52.095	2.4224	208770.31	0.0465	0.0006206
Ag	107	3	He	49.939	2.3221	205775.04	0.0465	0.0006206
Ag	107	3	He	50.293	2.3386	206082.50	0.0465	0.0006206
Cd	111	3	He	51.635	0.2761	23794.26	0.0053	0
Cd	111	3	He	50.311	0.269	23838.32	0.0053	0
Cd	111	3	He	50.516	0.2701	23802.25	0.0053	0
Sn	120	3	He	52.736	0.8496	73224.53	0.0158	0.01648
Sn	120	3	He	51.016	0.8225	72882.30	0.0158	0.01648
Sn	120	3	He	51.82	0.8352	73595.97	0.0158	0.01648
Sb	121	3	He	51.702	0.7682	66208.64	0.0149	0.0002698
Sb	121	3	He	51.139	0.7599	67334.33	0.0149	0.0002698
Sb	121	3	He	51.509	0.7654	67444.63	0.0149	0.0002698
Ba	137	3	He	528.816	2.5382	218751.72	0.0048	0.0002317
Ba	137	3	He	509.491	2.4455	216703.20	0.0048	0.0002317
Ba	137	3	He	510.868	2.4521	216080.93	0.0048	0.0002317
Tl	205	3	He	50.68	1.2533	508458.43	0.0247	0.0001339
Tl	205	3	He	51.095	1.2635	507722.06	0.0247	0.0001339
Tl	205	3	He	51.46	1.2726	507938.20	0.0247	0.0001339
Pb	208	3	He	50.452	1.6524	358726.32	0.0327	0.00107
Pb	208	3	He	51.77	1.6955	367264.21	0.0327	0.00107
Pb	208	3	He	52.116	1.7068	365223.20	0.0327	0.00107
U	238	3	He	50.725	2.4988	770283.35	0.0493	7.55E-05
U	238	3	He	50.826	2.5038	766864.91	0.0493	7.55E-05
U	238	3	He	50.89	2.5069	775620.54	0.0493	7.55E-05
Sc	45	1	No Gas			2473441.06		
Sc	45	1	No Gas			2479354.49		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2471015.90		
Ge	72	1	No Gas			1217663.34		
Ge	72	1	No Gas			1207366.70		
Ge	72	1	No Gas			1220070.29		
Sc	45	2	H2			187070.25		
Sc	45	2	H2			184213.43		
Sc	45	2	H2			184904.12		
Ge	72	2	H2			161696.05		
Ge	72	2	H2			163294.21		
Ge	72	2	H2			159218.41		
In	115	2	H2			396936.99		
In	115	2	H2			392362.81		
In	115	2	H2			392682.96		
Sc	45	3	He			48732.43		
Sc	45	3	He			47187.36		
Sc	45	3	He			49043.99		
Ge	72	3	He			85202.92		
Ge	72	3	He			84479.13		
Ge	72	3	He			83554.76		
In	115	3	He			86569.73		
In	115	3	He			89004.13		
In	115	3	He			88491.52		
Tb	159	3	He			405703.86		
Tb	159	3	He			401827.18		
Tb	159	3	He			399148.20		
Bi	209	3	He			308262.16		
Bi	209	3	He			306285.91		
Bi	209	3	He			309395.62		

Quantitation Report

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Sample Type	CCB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

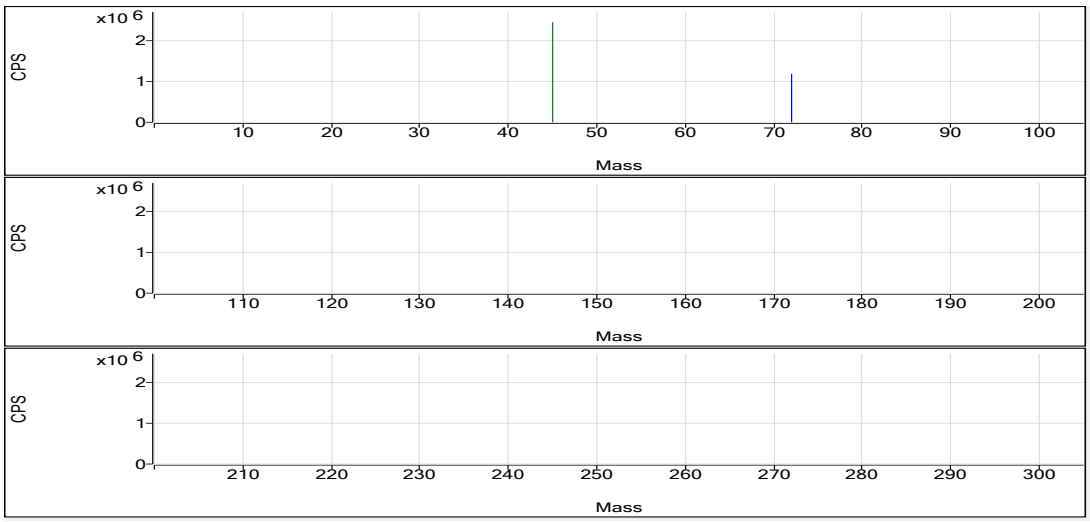
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.017	ppb	9.0	42.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.035	ppb	33.7	4.22	0.0000	Pulse	1.5000	3
Na	23	45	He	-1.198	ppb	N/A	16513.06	0.3409	Pulse	0.1000	3
Mg	24	45	He	0.890	ppb	30.3	246.68	0.0051	Pulse	0.1000	3
Al	27	45	He	1.719	ppb	89.0	80.00	0.0016	Pulse	0.1000	3
K	39	45	He	-6.550	ppb	N/A	18765.98	0.3874	Pulse	0.1000	3
Ca	44	45	He	1.515	ppb	1364.8	136.67	0.0028	Pulse	0.1000	3
Ti	47	45	He	0.895	ppb	49.5	26.67	0.0006	Pulse	0.1000	3
V	51	45	He	0.158	ppb	35.6	1371.41	0.0283	Pulse	0.5000	3
Cr	52	45	He	-0.050	ppb	N/A	1863.52	0.0385	Pulse	0.1000	3
Mn	55	45	He	0.234	ppb	46.4	273.35	0.0056	Pulse	0.1000	3
Fe	57	45	He	1.452	ppb	107.2	110.01	0.0023	Pulse	0.1000	3
Co	59	45	He	0.074	ppb	22.2	306.68	0.0063	Pulse	0.1000	3
Ni	60	72	He	0.081	ppb	30.3	290.01	0.0035	Pulse	0.1000	3
Cu	63	72	He	0.069	ppb	91.5	536.70	0.0065	Pulse	0.1000	3
Zn	66	72	He	2.994	ppb	3.5	1030.07	0.0125	Pulse	0.1000	3
As	75	72	He	0.169	ppb	39.4	94.67	0.0012	Pulse	0.5000	3
Sr	88	115	He	0.047	ppb	109.0	120.01	0.0014	Pulse	0.1000	3
Mo	98	115	He	0.058	ppb	42.1	133.34	0.0015	Pulse	0.1000	3
Ag	107	115	He	-0.001	ppb	N/A	50.00	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.014	ppb	68.7	6.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.077	ppb	154.7	1533.48	0.0177	Pulse	0.1000	3
Sb	121	115	He	0.041	ppb	56.8	76.67	0.0009	Pulse	0.1000	3
Ba	137	115	He	0.056	ppb	23.8	43.33	0.0005	Pulse	0.1000	3
Tl	205	159	He	0.075	ppb	16.1	793.38	0.0020	Pulse	0.1000	3
Pb	208	159	He	0.017	ppb	47.2	643.37	0.0016	Pulse	0.1000	3
U	238	209	He	0.044	ppb	14.9	700.05	0.0023	Pulse	0.1000	3

ISTD Table:

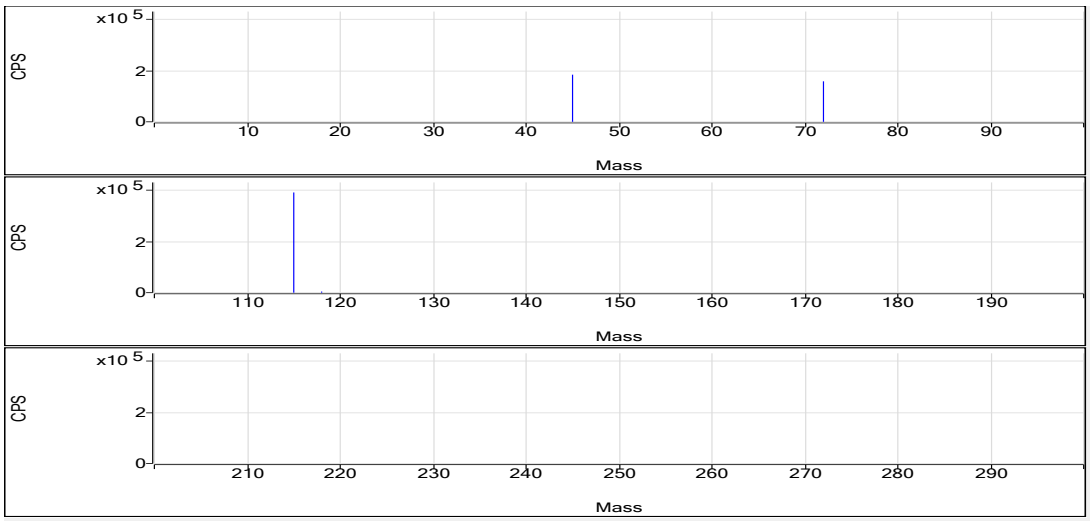
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2467376.27	0.9	102.9	Analog	0.1000	3
No Gas	Ge	72	1192190.27	0.5	103.4	Pulse	0.1000	3
H2	Sc	45	183944.21	0.9	98.4	Pulse	0.1000	3
H2	Ge	72	158022.04	0.7	96.5	Pulse	0.1000	3
H2	In	115	391166.58	0.4	100.5	Pulse	0.1000	3
He	Sc	45	48438.05	0.5	103.9	Pulse	0.1000	3
He	Ge	72	82179.48	1.1	101.2	Pulse	0.1000	3
He	In	115	86625.11	1.1	100.5	Pulse	0.1000	3
He	Tb	159	397773.25	0.2	99.8	Pulse	0.1000	3
He	Bi	209	309316.78	1.2	100.0	Pulse	0.1000	3

No Gas

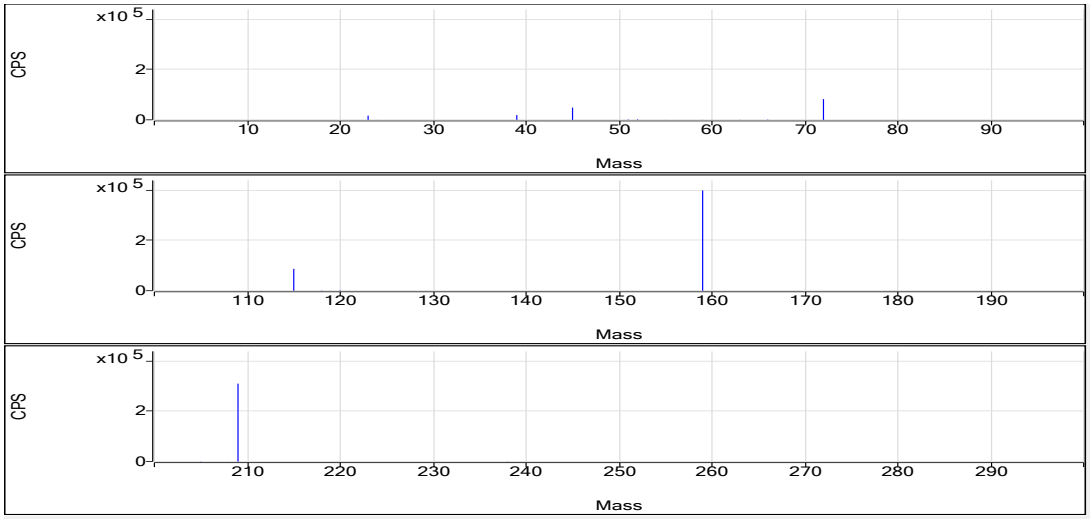


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.018	0	46.00	0.0008	4.685E-06
Be	9	1	No Gas	0.015	0	40.00	0.0008	4.685E-06
Be	9	1	No Gas	0.016	0	42.00	0.0008	4.685E-06
Se	78	2	H2	0.042	0	4.67	0.0004	1.219E-05
Se	78	2	H2	0.041	0	4.67	0.0004	1.219E-05
Se	78	2	H2	0.021	0	3.33	0.0004	1.219E-05
Na	23	3	He	2.552	0.3543	17240.53	0.0036	0.3452
Na	23	3	He	-2.428	0.3365	16319.48	0.0036	0.3452
Na	23	3	He	-3.718	0.3319	15979.16	0.0036	0.3452
Mg	24	3	He	1.029	0.0053	260.01	0.0018	0.003497
Mg	24	3	He	0.579	0.0045	220.01	0.0018	0.003497
Mg	24	3	He	1.061	0.0054	260.01	0.0018	0.003497
Al	27	3	He	2.413	0.0021	100.01	0.0006	0.0006432
Al	27	3	He	2.777	0.0023	110.00	0.0006	0.0006432
Al	27	3	He	-0.035	0.0006	30.00	0.0006	0.0006432
K	39	3	He	-15.226	0.3773	18362.14	0.0012	0.3951
K	39	3	He	-0.324	0.3947	19143.05	0.0012	0.3951
K	39	3	He	-4.099	0.3903	18792.75	0.0012	0.3951
Ca	44	3	He	8.486	0.0033	160.01	0.0001	0.002715
Ca	44	3	He	17.803	0.0039	190.01	0.0001	0.002715
Ca	44	3	He	-21.744	0.0012	60.00	0.0001	0.002715
Ti	47	3	He	0.635	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	1.406	0.0008	40.00	0.0005	7.003E-05
Ti	47	3	He	0.643	0.0004	20.00	0.0005	7.003E-05
V	51	3	He	0.179	0.0288	1400.08	0.0219	0.02486
V	51	3	He	0.2	0.0292	1418.08	0.0219	0.02486
V	51	3	He	0.094	0.0269	1296.07	0.0219	0.02486
Cr	52	3	He	-0.079	0.0376	1830.17	0.0299	0.03997
Cr	52	3	He	-0.047	0.0386	1870.19	0.0299	0.03997
Cr	52	3	He	-0.024	0.0393	1890.20	0.0299	0.03997
Mn	55	3	He	0.195	0.0051	250.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.357	0.0072	350.02	0.0128	0.002639
Mn	55	3	He	0.15	0.0046	220.01	0.0128	0.002639
Fe	57	3	He	2.139	0.0027	130.01	0.0006	0.001429
Fe	57	3	He	-0.33	0.0012	60.00	0.0006	0.001429
Fe	57	3	He	2.546	0.0029	140.01	0.0006	0.001429
Co	59	3	He	0.093	0.0074	360.02	0.0563	0.002149
Co	59	3	He	0.064	0.0058	280.02	0.0563	0.002149
Co	59	3	He	0.065	0.0058	280.01	0.0563	0.002149
Ni	60	3	He	0.055	0.0033	270.01	0.0086	0.002834
Ni	60	3	He	0.083	0.0035	290.02	0.0086	0.002834
Ni	60	3	He	0.104	0.0037	310.01	0.0086	0.002834
Cu	63	3	He	0.053	0.0061	500.03	0.0257	0.004757
Cu	63	3	He	0.015	0.0051	420.03	0.0257	0.004757
Cu	63	3	He	0.138	0.0083	690.04	0.0257	0.004757
Zn	66	3	He	3.107	0.0129	1050.07	0.0029	0.003818
Zn	66	3	He	2.977	0.0125	1020.07	0.0029	0.003818
Zn	66	3	He	2.9	0.0123	1020.07	0.0029	0.003818
As	75	3	He	0.097	0.001	82.00	0.002	0.0008061
As	75	3	He	0.228	0.0013	104.00	0.002	0.0008061
As	75	3	He	0.181	0.0012	98.00	0.002	0.0008061
Sr	88	3	He	0.097	0.0018	160.01	0.009	0.0009645
Sr	88	3	He	0.049	0.0014	120.01	0.009	0.0009645
Sr	88	3	He	-0.005	0.0009	80.00	0.009	0.0009645
Mo	98	3	He	0.066	0.0017	150.01	0.0219	0.0002706
Mo	98	3	He	0.03	0.0009	80.00	0.0219	0.0002706
Mo	98	3	He	0.077	0.002	170.01	0.0219	0.0002706
Ag	107	3	He	-0.003	0.0005	40.00	0.0465	0.0006206
Ag	107	3	He	0.004	0.0008	70.00	0.0465	0.0006206
Ag	107	3	He	-0.003	0.0005	40.00	0.0465	0.0006206
Cd	111	3	He	0.026	0.0001	12.00	0.0053	0
Cd	111	3	He	0.009	0	4.00	0.0053	0
Cd	111	3	He	0.009	0	4.00	0.0053	0
Sn	120	3	He	0.213	0.0198	1730.20	0.0158	0.01648
Sn	120	3	He	0.03	0.0169	1450.13	0.0158	0.01648
Sn	120	3	He	-0.011	0.0163	1420.12	0.0158	0.01648
Sb	121	3	He	0.02	0.0006	50.00	0.0149	0.0002698
Sb	121	3	He	0.037	0.0008	70.00	0.0149	0.0002698
Sb	121	3	He	0.067	0.0013	110.00	0.0149	0.0002698
Ba	137	3	He	0.047	0.0005	40.00	0.0048	0.0002317
Ba	137	3	He	0.049	0.0005	40.00	0.0048	0.0002317
Ba	137	3	He	0.071	0.0006	50.00	0.0048	0.0002317
Tl	205	3	He	0.079	0.0021	830.06	0.0247	0.0001339
Tl	205	3	He	0.062	0.0017	660.04	0.0247	0.0001339
Tl	205	3	He	0.085	0.0022	890.05	0.0247	0.0001339
Pb	208	3	He	0.011	0.0014	320.02	0.0327	0.00107
Pb	208	3	He	0.013	0.0015	330.02	0.0327	0.00107
Pb	208	3	He	0.026	0.0019	370.02	0.0327	0.00107
U	238	3	He	0.037	0.0019	590.04	0.0493	7.55E-05
U	238	3	He	0.049	0.0025	760.05	0.0493	7.55E-05
U	238	3	He	0.047	0.0024	750.05	0.0493	7.55E-05
Sc	45	1	No Gas			2489832.78		
Sc	45	1	No Gas			2466892.15		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2445403.87		
Ge	72	1	No Gas			1185064.75		
Ge	72	1	No Gas			1197746.78		
Ge	72	1	No Gas			1193759.28		
Sc	45	2	H2			185844.70		
Sc	45	2	H2			183171.05		
Sc	45	2	H2			182816.89		
Ge	72	2	H2			156973.90		
Ge	72	2	H2			159067.25		
Ge	72	2	H2			158024.98		
In	115	2	H2			392930.11		
In	115	2	H2			389454.88		
In	115	2	H2			391114.76		
Sc	45	3	He			48662.31		
Sc	45	3	He			48501.60		
Sc	45	3	He			48150.24		
Ge	72	3	He			81633.26		
Ge	72	3	He			81703.99		
Ge	72	3	He			83201.19		
In	115	3	He			87182.53		
In	115	3	He			85562.72		
In	115	3	He			87152.95		
Tb	159	3	He			398612.34		
Tb	159	3	He			397265.81		
Tb	159	3	He			397441.60		
Bi	209	3	He			311897.30		
Bi	209	3	He			305189.94		
Bi	209	3	He			310863.10		

Quantitation Report

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Auto Dilution	1.0000
Total Dilution	1.0000
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Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

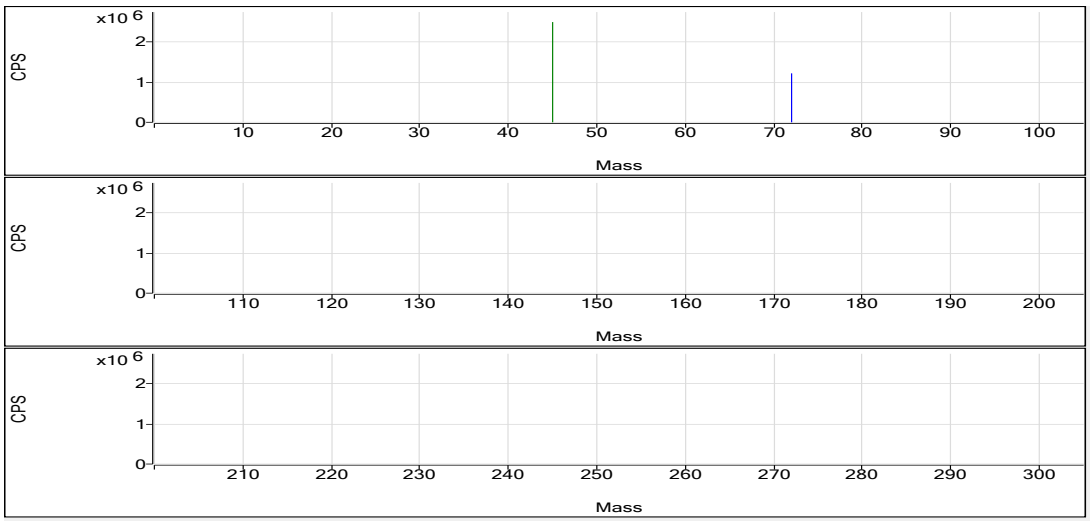
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.005	ppb	38.4	22.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.477	ppb	4.3	35.11	0.0002	Pulse	1.5000	3
Na	23	45	He	47838.433	ppb	0.6	8355358.00	171.4656	Analog	0.1000	3
Mg	24	45	He	15798.694	ppb	2.2	1381547.79	28.3514	Analog	0.1000	3
Al	27	45	He	2.525	ppb	71.2	103.34	0.0021	Pulse	0.1000	3
K	39	45	He	7589.788	ppb	0.3	449868.34	9.2321	Pulse	0.1000	3
Ca	44	45	He	105273.583	ppb	0.7	346665.87	7.1141	Pulse	0.1000	3
Ti	47	45	He	0.507	ppb	115.2	16.67	0.0003	Pulse	0.1000	3
V	51	45	He	0.045	ppb	43.8	1260.06	0.0259	Pulse	0.5000	3
Cr	52	45	He	0.420	ppb	25.7	2560.32	0.0525	Pulse	0.1000	3
Mn	55	45	He	17.040	ppb	6.4	10784.35	0.2213	Pulse	0.1000	3
Fe	57	45	He	17.205	ppb	10.5	556.70	0.0114	Pulse	0.1000	3
Co	59	45	He	0.532	ppb	8.0	1563.48	0.0321	Pulse	0.1000	3
Ni	60	72	He	1.617	ppb	6.4	1450.12	0.0167	Pulse	0.1000	3
Cu	63	72	He	1.203	ppb	2.8	3090.44	0.0356	Pulse	0.1000	3
Zn	66	72	He	4.997	ppb	0.2	1593.49	0.0184	Pulse	0.1000	3
As	75	72	He	0.027	ppb	396.9	74.67	0.0009	Pulse	0.5000	3
Sr	88	115	He	452.206	ppb	1.4	358717.24	4.0572	Pulse	0.1000	3
Mo	98	115	He	0.399	ppb	13.8	796.72	0.0090	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	1527.6	56.67	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.011	ppb	108.2	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.266	ppb	N/A	1083.42	0.0123	Pulse	0.1000	3
Sb	121	115	He	0.012	ppb	165.3	40.00	0.0005	Pulse	0.1000	3
Ba	137	115	He	107.845	ppb	1.0	45784.02	0.5178	Pulse	0.1000	3
Tl	205	159	He	0.026	ppb	41.0	313.35	0.0008	Pulse	0.1000	3
Pb	208	159	He	0.040	ppb	0.8	963.39	0.0024	Pulse	0.1000	3
U	238	209	He	0.484	ppb	4.3	7392.39	0.0239	Pulse	0.1000	3

ISTD Table:

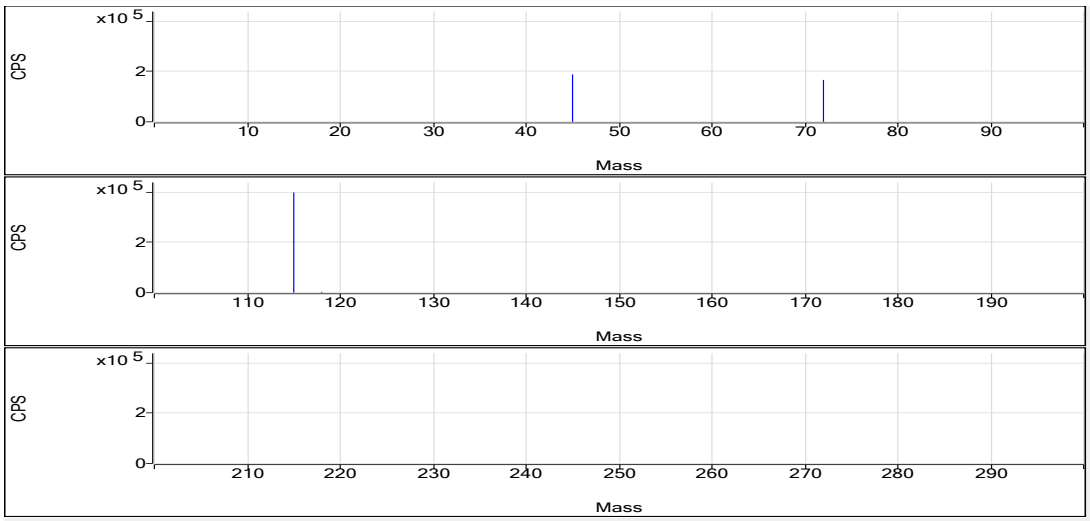
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2503933.45	0.3	104.4	Analog	0.1000	3
No Gas	Ge	72	1222960.87	0.8	106.0	Pulse	0.1000	3
H2	Sc	45	188053.33	1.1	100.6	Pulse	0.1000	3
H2	Ge	72	166234.36	0.9	101.5	Pulse	0.1000	3
H2	In	115	397520.33	0.8	102.2	Pulse	0.1000	3
He	Sc	45	48729.00	0.2	104.5	Pulse	0.1000	3
He	Ge	72	86756.05	0.8	106.9	Pulse	0.1000	3
He	In	115	88422.23	1.1	102.6	Pulse	0.1000	3
He	Tb	159	403013.70	1.0	101.1	Pulse	0.1000	3
He	Bi	209	308925.70	0.4	99.9	Pulse	0.1000	3

No Gas

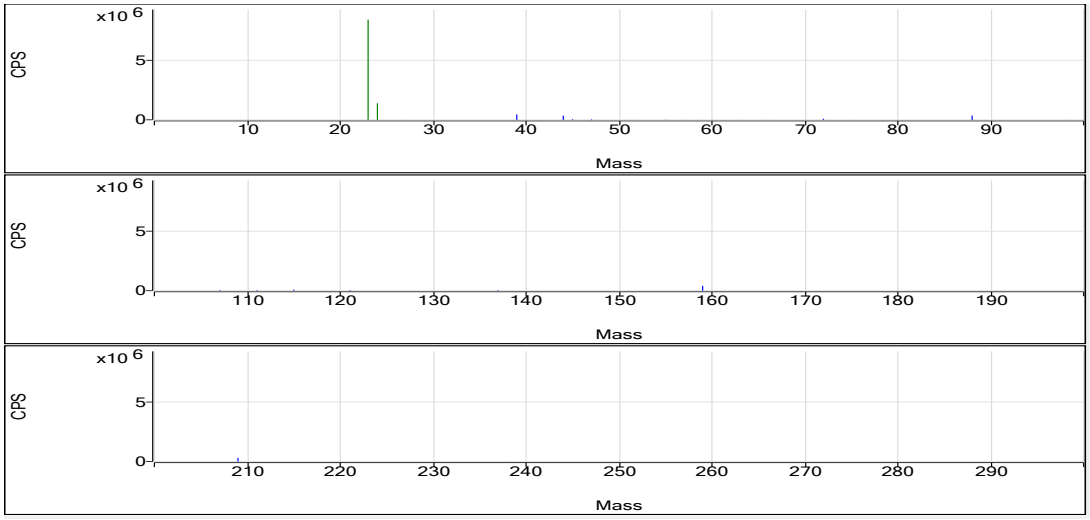


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.007	0	26.00	0.0008	4.685E-06
Be	9	1	No Gas	0.005	0	22.00	0.0008	4.685E-06
Be	9	1	No Gas	0.003	0	18.00	0.0008	4.685E-06
Se	78	2	H2	0.466	0.0002	34.67	0.0004	1.219E-05
Se	78	2	H2	0.501	0.0002	36.67	0.0004	1.219E-05
Se	78	2	H2	0.465	0.0002	34.00	0.0004	1.219E-05
Na	23	3	He	48150.738	172.5827	8415564.25	0.0036	0.3452
Na	23	3	He	47638.182	170.7493	8329571.13	0.0036	0.3452
Na	23	3	He	47726.379	171.0648	8320938.63	0.0036	0.3452
Mg	24	3	He	15492.244	27.8016	1355674.04	0.0018	0.003497
Mg	24	3	He	16184.873	29.0444	1416856.07	0.0018	0.003497
Mg	24	3	He	15718.966	28.2084	1372113.26	0.0018	0.003497
Al	27	3	He	1.004	0.0012	60.00	0.0006	0.0006432
Al	27	3	He	4.507	0.0033	160.01	0.0006	0.0006432
Al	27	3	He	2.063	0.0019	90.00	0.0006	0.0006432
K	39	3	He	7610.074	9.2557	451330.03	0.0012	0.3951
K	39	3	He	7559.808	9.1972	448659.80	0.0012	0.3951
K	39	3	He	7599.482	9.2433	449615.19	0.0012	0.3951
Ca	44	3	He	104590.226	7.068	344652.57	0.0001	0.002715
Ca	44	3	He	106054.894	7.1669	349620.31	0.0001	0.002715
Ca	44	3	He	105175.63	7.1075	345724.72	0.0001	0.002715
Ti	47	3	He	1.015	0.0006	30.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.635	0.0004	20.00	0.0005	7.003E-05
V	51	3	He	0.047	0.0259	1262.06	0.0219	0.02486
V	51	3	He	0.065	0.0263	1282.06	0.0219	0.02486
V	51	3	He	0.025	0.0254	1236.06	0.0219	0.02486
Cr	52	3	He	0.453	0.0535	2610.33	0.0299	0.03997
Cr	52	3	He	0.507	0.0551	2690.34	0.0299	0.03997
Cr	52	3	He	0.299	0.0489	2380.28	0.0299	0.03997
Mn	55	3	He	16.739	0.2175	10604.17	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	16.125	0.2096	10223.94	0.0128	0.002639
Mn	55	3	He	18.256	0.2369	11524.93	0.0128	0.002639
Fe	57	3	He	15.191	0.0103	500.03	0.0006	0.001429
Fe	57	3	He	18.712	0.0123	600.03	0.0006	0.001429
Fe	57	3	He	17.712	0.0117	570.04	0.0006	0.001429
Co	59	3	He	0.483	0.0293	1430.13	0.0563	0.002149
Co	59	3	He	0.559	0.0336	1640.16	0.0563	0.002149
Co	59	3	He	0.554	0.0333	1620.16	0.0563	0.002149
Ni	60	3	He	1.694	0.0174	1520.12	0.0086	0.002834
Ni	60	3	He	1.657	0.0171	1470.13	0.0086	0.002834
Ni	60	3	He	1.5	0.0157	1360.11	0.0086	0.002834
Cu	63	3	He	1.164	0.0346	3030.44	0.0257	0.004757
Cu	63	3	He	1.216	0.036	3100.45	0.0257	0.004757
Cu	63	3	He	1.228	0.0363	3140.42	0.0257	0.004757
Zn	66	3	He	5.008	0.0184	1610.16	0.0029	0.003818
Zn	66	3	He	4.986	0.0183	1580.17	0.0029	0.003818
Zn	66	3	He	4.997	0.0184	1590.14	0.0029	0.003818
As	75	3	He	-0.048	0.0007	62.00	0.002	0.0008061
As	75	3	He	0.15	0.0011	96.00	0.002	0.0008061
As	75	3	He	-0.021	0.0008	66.00	0.002	0.0008061
Sr	88	3	He	459.151	4.1195	360116.75	0.009	0.0009645
Sr	88	3	He	450.371	4.0407	361251.24	0.009	0.0009645
Sr	88	3	He	447.095	4.0113	354783.74	0.009	0.0009645
Mo	98	3	He	0.462	0.0104	910.06	0.0219	0.0002706
Mo	98	3	He	0.37	0.0084	750.05	0.0219	0.0002706
Mo	98	3	He	0.364	0.0083	730.04	0.0219	0.0002706
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Ag	107	3	He	0.006	0.0009	80.00	0.0465	0.0006206
Ag	107	3	He	0.001	0.0007	60.00	0.0465	0.0006206
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.025	0.0001	12.00	0.0053	0
Sn	120	3	He	-0.109	0.0148	1290.12	0.0158	0.01648
Sn	120	3	He	-0.413	0.01	890.06	0.0158	0.01648
Sn	120	3	He	-0.277	0.0121	1070.09	0.0158	0.01648
Sb	121	3	He	0.036	0.0008	70.00	0.0149	0.0002698
Sb	121	3	He	-0.003	0.0002	20.00	0.0149	0.0002698
Sb	121	3	He	0.005	0.0003	30.00	0.0149	0.0002698
Ba	137	3	He	108.081	0.5189	45365.70	0.0048	0.0002317
Ba	137	3	He	106.617	0.5119	45767.50	0.0048	0.0002317
Ba	137	3	He	108.835	0.5226	46218.85	0.0048	0.0002317
Tl	205	3	He	0.025	0.0008	310.02	0.0247	0.0001339
Tl	205	3	He	0.037	0.0011	420.02	0.0247	0.0001339
Tl	205	3	He	0.016	0.0005	210.01	0.0247	0.0001339
Pb	208	3	He	0.04	0.0024	570.03	0.0327	0.00107
Pb	208	3	He	0.041	0.0024	540.03	0.0327	0.00107
Pb	208	3	He	0.04	0.0024	600.04	0.0327	0.00107
U	238	3	He	0.494	0.0244	7532.48	0.0493	7.55E-05
U	238	3	He	0.499	0.0246	7642.48	0.0493	7.55E-05
U	238	3	He	0.46	0.0227	7002.20	0.0493	7.55E-05
Sc	45	1	No Gas			2512384.34		
Sc	45	1	No Gas			2499130.90		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2500285.12		
Ge	72	1	No Gas			1232042.25		
Ge	72	1	No Gas			1223596.54		
Ge	72	1	No Gas			1213243.81		
Sc	45	2	H2			190231.48		
Sc	45	2	H2			187809.80		
Sc	45	2	H2			186118.71		
Ge	72	2	H2			167876.85		
Ge	72	2	H2			165791.50		
Ge	72	2	H2			165034.72		
In	115	2	H2			400928.67		
In	115	2	H2			395019.37		
In	115	2	H2			396612.96		
Sc	45	3	He			48762.50		
Sc	45	3	He			48782.47		
Sc	45	3	He			48642.04		
Ge	72	3	He			87507.39		
Ge	72	3	He			86179.55		
Ge	72	3	He			86581.22		
In	115	3	He			87424.67		
In	115	3	He			89407.89		
In	115	3	He			88450.91		
Tb	159	3	He			407619.25		
Tb	159	3	He			399825.54		
Tb	159	3	He			401596.32		
Bi	209	3	He			308723.51		
Bi	209	3	He			310238.12		
Bi	209	3	He			307815.46		

Quantitation Report

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Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	8/10/2023 3:23:12 PM
Sample Name	410-137632-G-1-A
Sample Type	Sample
Comment	D2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

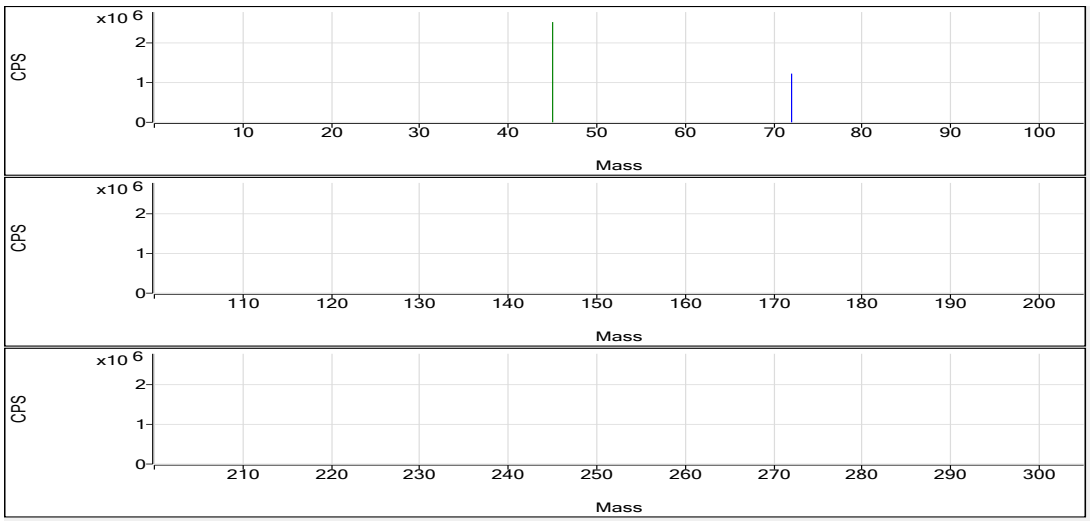
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.005	ppb	96.2	20.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.655	ppb	13.7	47.33	0.0003	Pulse	1.5000	3
Na	23	45	He	58399.974	ppb	1.8	10148257.14	209.2447	Analog	0.1000	3
Mg	24	45	He	15966.428	ppb	0.8	1389798.11	28.6524	Analog	0.1000	3
Al	27	45	He	4.644	ppb	27.0	163.34	0.0034	Pulse	0.1000	3
K	39	45	He	6347.231	ppb	2.4	377537.00	7.7853	Pulse	0.1000	3
Ca	44	45	He	109505.155	ppb	2.6	358833.08	7.4000	Pulse	0.1000	3
Ti	47	45	He	0.254	ppb	153.6	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	0.020	ppb	91.8	1226.73	0.0253	Pulse	0.5000	3
Cr	52	45	He	0.820	ppb	10.4	3130.45	0.0645	Pulse	0.1000	3
Mn	55	45	He	4.776	ppb	4.5	3100.42	0.0639	Pulse	0.1000	3
Fe	57	45	He	20.114	ppb	5.6	636.71	0.0131	Pulse	0.1000	3
Co	59	45	He	0.752	ppb	5.4	2156.90	0.0445	Pulse	0.1000	3
Ni	60	72	He	2.907	ppb	2.9	2390.28	0.0278	Pulse	0.1000	3
Cu	63	72	He	1.200	ppb	5.9	3060.44	0.0356	Pulse	0.1000	3
Zn	66	72	He	5.597	ppb	9.3	1730.17	0.0201	Pulse	0.1000	3
As	75	72	He	-0.027	ppb	N/A	64.67	0.0008	Pulse	0.5000	3
Sr	88	115	He	450.558	ppb	1.0	358965.33	4.0424	Pulse	0.1000	3
Mo	98	115	He	0.486	ppb	9.5	970.07	0.0109	Pulse	0.1000	3
Ag	107	115	He	0.002	ppb	306.6	63.33	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.004	ppb	99.9	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.285	ppb	N/A	1063.42	0.0120	Pulse	0.1000	3
Sb	121	115	He	0.000	ppb	N/A	23.33	0.0003	Pulse	0.1000	3
Ba	137	115	He	98.184	ppb	1.2	41864.69	0.4715	Pulse	0.1000	3
Tl	205	159	He	0.018	ppb	44.8	230.01	0.0006	Pulse	0.1000	3
Pb	208	159	He	0.043	ppb	29.6	1003.39	0.0025	Pulse	0.1000	3
U	238	209	He	0.318	ppb	1.3	4894.45	0.0158	Pulse	0.1000	3

ISTD Table:

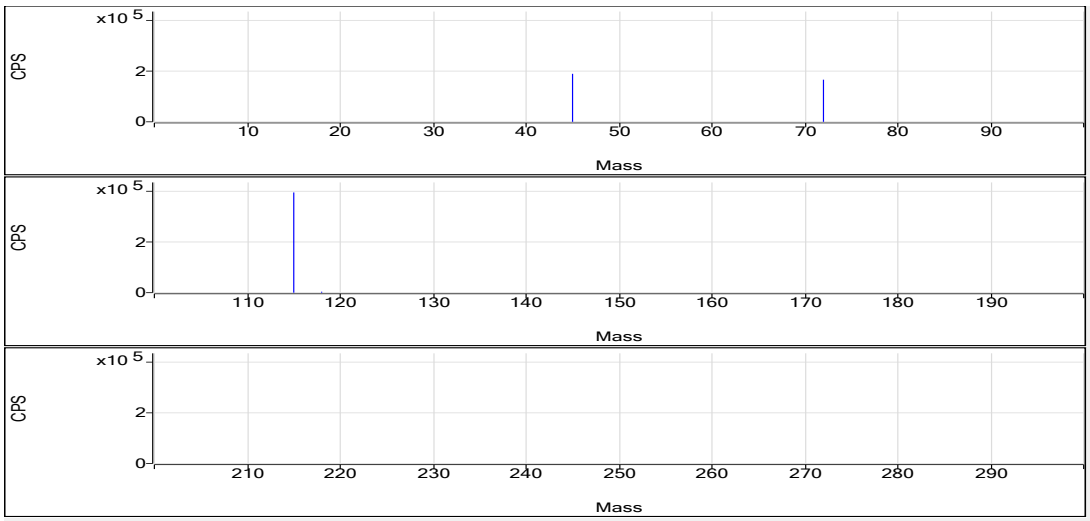
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2516287.72	1.2	104.9	Analog	0.1000	3
No Gas	Ge	72	1221778.63	1.1	105.9	Pulse	0.1000	3
H2	Sc	45	189102.04	1.2	101.1	Pulse	0.1000	3
H2	Ge	72	165927.73	0.4	101.4	Pulse	0.1000	3
H2	In	115	394829.91	0.2	101.5	Pulse	0.1000	3
He	Sc	45	48511.80	2.5	104.0	Pulse	0.1000	3
He	Ge	72	86038.15	0.6	106.0	Pulse	0.1000	3
He	In	115	88801.08	0.2	103.0	Pulse	0.1000	3
He	Tb	159	403853.00	0.3	101.3	Pulse	0.1000	3
He	Bi	209	310574.80	1.0	100.4	Pulse	0.1000	3

No Gas

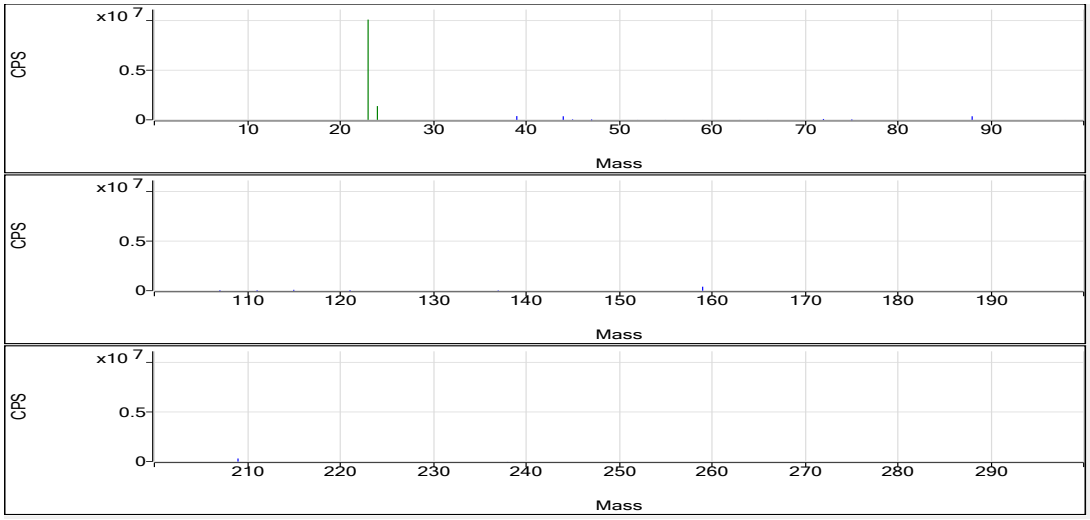


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.003	0	18.00	0.0008	4.685E-06
Be	9	1	No Gas	0.01	0	30.00	0.0008	4.685E-06
Be	9	1	No Gas	0.001	0	14.00	0.0008	4.685E-06
Se	78	2	H2	0.711	0.0003	51.33	0.0004	1.219E-05
Se	78	2	H2	0.551	0.0002	40.00	0.0004	1.219E-05
Se	78	2	H2	0.701	0.0003	50.67	0.0004	1.219E-05
Na	23	3	He	59493.382	213.1559	10201560.47	0.0036	0.3452
Na	23	3	He	58356.652	209.0898	9983927.35	0.0036	0.3452
Na	23	3	He	57349.889	205.4885	10259283.60	0.0036	0.3452
Mg	24	3	He	16062.219	28.8243	1379519.51	0.0018	0.003497
Mg	24	3	He	16015.225	28.74	1372318.42	0.0018	0.003497
Mg	24	3	He	15821.841	28.393	1417556.39	0.0018	0.003497
Al	27	3	He	5.33	0.0038	180.01	0.0006	0.0006432
Al	27	3	He	3.197	0.0025	120.01	0.0006	0.0006432
Al	27	3	He	5.406	0.0038	190.01	0.0006	0.0006432
K	39	3	He	6434.328	7.8867	377455.70	0.0012	0.3951
K	39	3	He	6433.491	7.8858	376540.50	0.0012	0.3951
K	39	3	He	6173.874	7.5835	378614.80	0.0012	0.3951
Ca	44	3	He	110631.577	7.4761	357802.77	0.0001	0.002715
Ca	44	3	He	111579.828	7.5401	360038.00	0.0001	0.002715
Ca	44	3	He	106304.061	7.1838	358658.47	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.65	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	0.243	0.0002	10.00	0.0005	7.003E-05
V	51	3	He	0.036	0.0257	1228.06	0.0219	0.02486
V	51	3	He	0.022	0.0253	1210.06	0.0219	0.02486
V	51	3	He	0.001	0.0249	1242.06	0.0219	0.02486
Cr	52	3	He	0.877	0.0662	3170.47	0.0299	0.03997
Cr	52	3	He	0.722	0.0616	2940.41	0.0299	0.03997
Cr	52	3	He	0.859	0.0657	3280.48	0.0299	0.03997
Mn	55	3	He	5.021	0.0671	3210.45	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	4.691	0.0628	3000.39	0.0128	0.002639
Mn	55	3	He	4.618	0.0619	3090.43	0.0128	0.002639
Fe	57	3	He	19.12	0.0125	600.04	0.0006	0.001429
Fe	57	3	He	19.891	0.013	620.03	0.0006	0.001429
Fe	57	3	He	21.33	0.0138	690.05	0.0006	0.001429
Co	59	3	He	0.775	0.0458	2190.22	0.0563	0.002149
Co	59	3	He	0.777	0.0459	2190.23	0.0563	0.002149
Co	59	3	He	0.706	0.0419	2090.24	0.0563	0.002149
Ni	60	3	He	3.002	0.0286	2460.31	0.0086	0.002834
Ni	60	3	He	2.872	0.0275	2350.25	0.0086	0.002834
Ni	60	3	He	2.846	0.0273	2360.27	0.0086	0.002834
Cu	63	3	He	1.119	0.0335	2880.39	0.0257	0.004757
Cu	63	3	He	1.232	0.0364	3110.47	0.0257	0.004757
Cu	63	3	He	1.25	0.0369	3190.45	0.0257	0.004757
Zn	66	3	He	5.836	0.0208	1790.18	0.0029	0.003818
Zn	66	3	He	5.959	0.0212	1810.18	0.0029	0.003818
Zn	66	3	He	4.997	0.0184	1590.15	0.0029	0.003818
As	75	3	He	-0.03	0.0007	64.00	0.002	0.0008061
As	75	3	He	-0.051	0.0007	60.00	0.002	0.0008061
As	75	3	He	0.001	0.0008	70.00	0.002	0.0008061
Sr	88	3	He	450.241	4.0395	359561.01	0.009	0.0009645
Sr	88	3	He	446.4	4.0051	355640.78	0.009	0.0009645
Sr	88	3	He	455.032	4.0825	361694.21	0.009	0.0009645
Mo	98	3	He	0.5	0.0112	1000.07	0.0219	0.0002706
Mo	98	3	He	0.435	0.0098	870.06	0.0219	0.0002706
Mo	98	3	He	0.523	0.0117	1040.08	0.0219	0.0002706
Ag	107	3	He	0.001	0.0007	60.00	0.0465	0.0006206
Ag	107	3	He	-0.004	0.0005	40.00	0.0465	0.0006206
Ag	107	3	He	0.009	0.001	90.00	0.0465	0.0006206
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0.008	0	4.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Sn	120	3	He	-0.332	0.0112	1000.07	0.0158	0.01648
Sn	120	3	He	-0.28	0.0121	1070.09	0.0158	0.01648
Sn	120	3	He	-0.243	0.0126	1120.09	0.0158	0.01648
Sb	121	3	He	-0.011	0.0001	10.00	0.0149	0.0002698
Sb	121	3	He	-0.003	0.0002	20.00	0.0149	0.0002698
Sb	121	3	He	0.012	0.0005	40.00	0.0149	0.0002698
Ba	137	3	He	96.824	0.4649	41383.01	0.0048	0.0002317
Ba	137	3	He	98.799	0.4744	42125.33	0.0048	0.0002317
Ba	137	3	He	98.93	0.475	42085.73	0.0048	0.0002317
Tl	205	3	He	0.012	0.0004	170.01	0.0247	0.0001339
Tl	205	3	He	0.015	0.0005	200.01	0.0247	0.0001339
Tl	205	3	He	0.027	0.0008	320.01	0.0247	0.0001339
Pb	208	3	He	0.04	0.0024	600.04	0.0327	0.00107
Pb	208	3	He	0.057	0.0029	600.03	0.0327	0.00107
Pb	208	3	He	0.032	0.0021	460.03	0.0327	0.00107
U	238	3	He	0.317	0.0157	4921.10	0.0493	7.55E-05
U	238	3	He	0.315	0.0156	4851.12	0.0493	7.55E-05
U	238	3	He	0.323	0.016	4911.13	0.0493	7.55E-05
Sc	45	1	No Gas			2519568.71		
Sc	45	1	No Gas			2484541.68		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2544752.77		
Ge	72	1	No Gas			1234613.50		
Ge	72	1	No Gas			1206946.00		
Ge	72	1	No Gas			1223776.39		
Sc	45	2	H2			191058.94		
Sc	45	2	H2			186654.39		
Sc	45	2	H2			189592.79		
Ge	72	2	H2			166197.28		
Ge	72	2	H2			165246.68		
Ge	72	2	H2			166339.24		
In	115	2	H2			394479.25		
In	115	2	H2			395917.49		
In	115	2	H2			394093.00		
Sc	45	3	He			47859.62		
Sc	45	3	He			47749.48		
Sc	45	3	He			49926.31		
Ge	72	3	He			86027.21		
Ge	72	3	He			85515.70		
Ge	72	3	He			86571.54		
In	115	3	He			89015.30		
In	115	3	He			88802.81		
In	115	3	He			88601.98		
Tb	159	3	He			402336.09		
Tb	159	3	He			404285.19		
Tb	159	3	He			404937.73		
Bi	209	3	He			313183.96		
Bi	209	3	He			311180.01		
Bi	209	3	He			307360.44		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

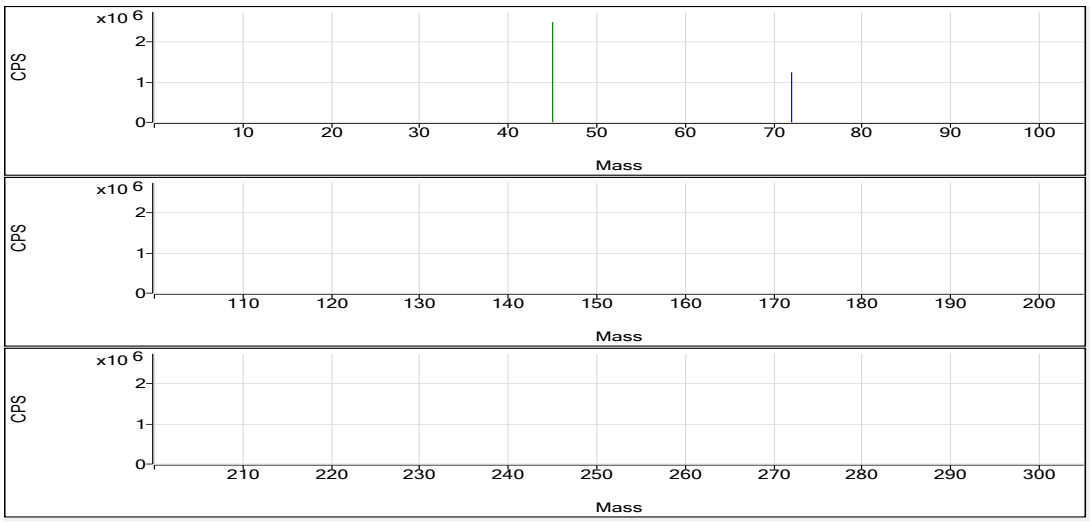
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.009	ppb	92.4	28.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.145	ppb	46.9	12.22	0.0001	Pulse	1.5000	3
Na	23	45	He	27454.367	ppb	1.9	4682112.33	98.5508	Analog	0.1000	3
Mg	24	45	He	3615.532	ppb	2.5	308354.96	6.4909	Pulse	0.1000	3
Al	27	45	He	43.681	ppb	34.9	1250.67	0.0262	Pulse	0.1000	3
K	39	45	He	7721.902	ppb	2.5	445891.02	9.3859	Pulse	0.1000	3
Ca	44	45	He	18290.548	ppb	0.9	58843.01	1.2383	Pulse	0.1000	3
Ti	47	45	He	3.305	ppb	88.8	86.68	0.0018	Pulse	0.1000	3
V	51	45	He	2.227	ppb	4.9	3493.77	0.0735	Pulse	0.5000	3
Cr	52	45	He	-0.046	ppb	N/A	1833.51	0.0386	Pulse	0.1000	3
Mn	55	45	He	33.616	ppb	2.1	20621.95	0.4341	Pulse	0.1000	3
Fe	57	45	He	34.045	ppb	10.0	1006.78	0.0212	Pulse	0.1000	3
Co	59	45	He	0.325	ppb	14.7	970.07	0.0204	Pulse	0.1000	3
Ni	60	72	He	0.779	ppb	12.4	836.72	0.0095	Pulse	0.1000	3
Cu	63	72	He	1.258	ppb	4.5	3257.14	0.0370	Pulse	0.1000	3
Zn	66	72	He	6.192	ppb	5.6	1920.19	0.0218	Pulse	0.1000	3
As	75	72	He	1.275	ppb	8.8	300.67	0.0034	Pulse	0.5000	3
Sr	88	115	He	154.549	ppb	1.9	123971.10	1.3872	Pulse	0.1000	3
Mo	98	115	He	4.980	ppb	1.5	9783.72	0.1095	Pulse	0.1000	3
Ag	107	115	He	-0.004	ppb	N/A	40.00	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.015	ppb	77.5	7.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.251	ppb	3.5	1826.86	0.0204	Pulse	0.1000	3
Sb	121	115	He	0.783	ppb	10.1	1063.41	0.0119	Pulse	0.1000	3
Ba	137	115	He	50.621	ppb	0.5	21734.56	0.2432	Pulse	0.1000	3
Tl	205	159	He	0.023	ppb	21.6	280.02	0.0007	Pulse	0.1000	3
Pb	208	159	He	0.044	ppb	26.9	1003.39	0.0025	Pulse	0.1000	3
U	238	209	He	0.012	ppb	44.3	213.34	0.0007	Pulse	0.1000	3

ISTD Table:

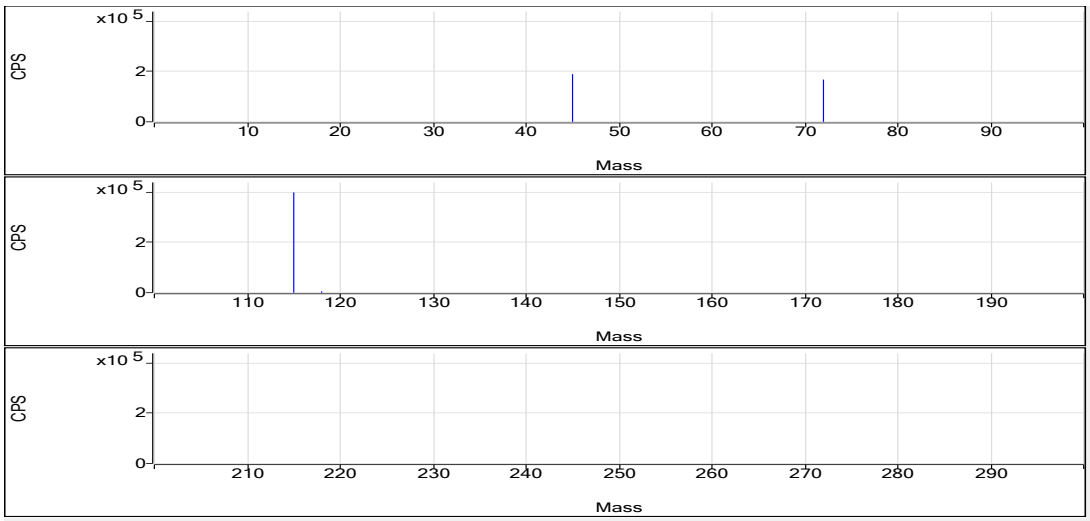
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2495434.96	0.4	104.0	Analog	0.1000	3
No Gas	Ge	72	1243321.36	0.4	107.8	Pulse	0.1000	3
H2	Sc	45	189615.59	0.6	101.4	Pulse	0.1000	3
H2	Ge	72	168264.65	0.8	102.8	Pulse	0.1000	3
H2	In	115	399158.96	0.4	102.6	Pulse	0.1000	3
He	Sc	45	47521.74	2.0	101.9	Pulse	0.1000	3
He	Ge	72	87916.98	1.1	108.3	Pulse	0.1000	3
He	In	115	89377.82	1.2	103.7	Pulse	0.1000	3
He	Tb	159	402570.91	1.5	101.0	Pulse	0.1000	3
He	Bi	209	319174.66	0.4	103.2	Pulse	0.1000	3

No Gas

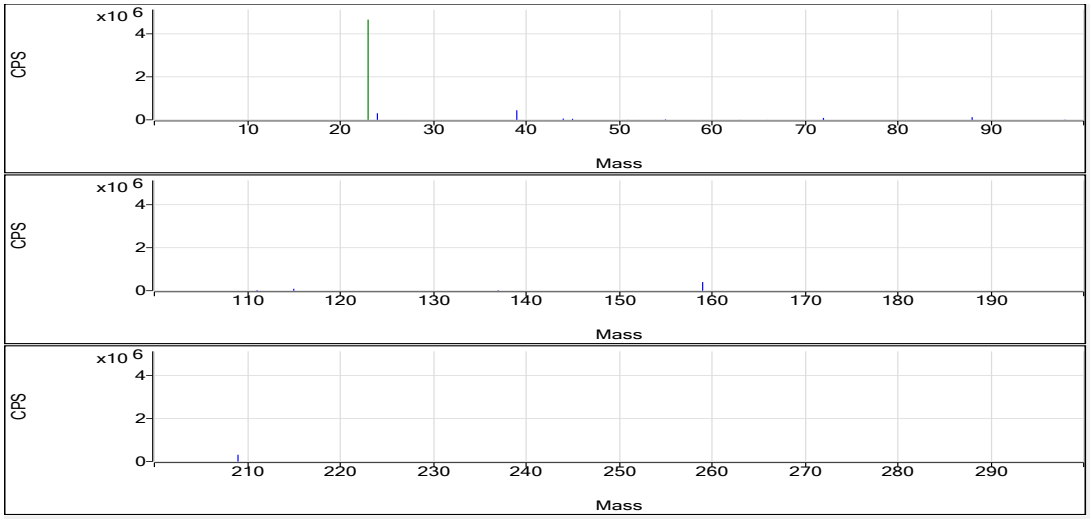


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0	0	12.00	0.0008	4.685E-06
Be	9	1	No Gas	0.016	0	42.00	0.0008	4.685E-06
Be	9	1	No Gas	0.01	0	30.00	0.0008	4.685E-06
Se	78	2	H2	0.066	0	6.67	0.0004	1.219E-05
Se	78	2	H2	0.187	0.0001	15.33	0.0004	1.219E-05
Se	78	2	H2	0.18	0.0001	14.67	0.0004	1.219E-05
Na	23	3	He	27409.989	98.392	4696146.49	0.0036	0.3452
Na	23	3	He	26954.232	96.7618	4679554.93	0.0036	0.3452
Na	23	3	He	27998.879	100.4985	4670635.56	0.0036	0.3452
Mg	24	3	He	3583.718	6.4338	307080.29	0.0018	0.003497
Mg	24	3	He	3543.567	6.3618	307666.77	0.0018	0.003497
Mg	24	3	He	3719.311	6.6771	310317.83	0.0018	0.003497
Al	27	3	He	47.624	0.0285	1360.51	0.0006	0.0006432
Al	27	3	He	56.561	0.0337	1631.41	0.0006	0.0006432
Al	27	3	He	26.856	0.0164	760.10	0.0006	0.0006432
K	39	3	He	7695.862	9.3556	446531.01	0.0012	0.3951
K	39	3	He	7544.723	9.1796	443939.68	0.0012	0.3951
K	39	3	He	7925.122	9.6225	447202.38	0.0012	0.3951
Ca	44	3	He	18103.6	1.2256	58498.85	0.0001	0.002715
Ca	44	3	He	18366.997	1.2434	60134.79	0.0001	0.002715
Ca	44	3	He	18401.047	1.2457	57895.39	0.0001	0.002715
Ti	47	3	He	1.821	0.001	50.00	0.0005	7.003E-05
Ti	47	3	He	1.41	0.0008	40.00	0.0005	7.003E-05
Ti	47	3	He	6.684	0.0037	170.05	0.0005	7.003E-05
V	51	3	He	2.289	0.0749	3574.46	0.0219	0.02486
V	51	3	He	2.102	0.0708	3424.42	0.0219	0.02486
V	51	3	He	2.29	0.0749	3482.44	0.0219	0.02486
Cr	52	3	He	0.009	0.0402	1920.18	0.0299	0.03997
Cr	52	3	He	-0.14	0.0358	1730.17	0.0299	0.03997
Cr	52	3	He	-0.005	0.0398	1850.18	0.0299	0.03997
Mn	55	3	He	33.122	0.4277	20414.95	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	33.299	0.43	20795.41	0.0128	0.002639
Mn	55	3	He	34.425	0.4444	20655.48	0.0128	0.002639
Fe	57	3	He	31.443	0.0197	940.12	0.0006	0.001429
Fe	57	3	He	32.779	0.0205	990.10	0.0006	0.001429
Fe	57	3	He	37.913	0.0235	1090.11	0.0006	0.001429
Co	59	3	He	0.345	0.0216	1030.07	0.0563	0.002149
Co	59	3	He	0.27	0.0174	840.06	0.0563	0.002149
Co	59	3	He	0.359	0.0224	1040.07	0.0563	0.002149
Ni	60	3	He	0.678	0.0087	770.05	0.0086	0.002834
Ni	60	3	He	0.871	0.0103	900.06	0.0086	0.002834
Ni	60	3	He	0.789	0.0096	840.06	0.0086	0.002834
Cu	63	3	He	1.268	0.0373	3320.48	0.0257	0.004757
Cu	63	3	He	1.309	0.0384	3350.50	0.0257	0.004757
Cu	63	3	He	1.196	0.0355	3100.45	0.0257	0.004757
Zn	66	3	He	5.867	0.0209	1860.17	0.0029	0.003818
Zn	66	3	He	6.555	0.0229	2000.21	0.0029	0.003818
Zn	66	3	He	6.154	0.0217	1900.18	0.0029	0.003818
As	75	3	He	1.384	0.0036	324.01	0.002	0.0008061
As	75	3	He	1.283	0.0034	300.01	0.002	0.0008061
As	75	3	He	1.159	0.0032	278.00	0.002	0.0008061
Sr	88	3	He	151.282	1.3579	122981.88	0.009	0.0009645
Sr	88	3	He	157.138	1.4105	125181.74	0.009	0.0009645
Sr	88	3	He	155.228	1.3933	123749.68	0.009	0.0009645
Mo	98	3	He	4.98	0.1095	9913.81	0.0219	0.0002706
Mo	98	3	He	5.056	0.1111	9863.74	0.0219	0.0002706
Mo	98	3	He	4.904	0.1078	9573.60	0.0219	0.0002706
Ag	107	3	He	0.001	0.0007	60.00	0.0465	0.0006206
Ag	107	3	He	-0.004	0.0005	40.00	0.0465	0.0006206
Ag	107	3	He	-0.009	0.0002	20.00	0.0465	0.0006206
Cd	111	3	He	0.029	0.0002	14.00	0.0053	0
Cd	111	3	He	0.008	0	4.00	0.0053	0
Cd	111	3	He	0.008	0	4.00	0.0053	0
Sn	120	3	He	0.257	0.0205	1860.20	0.0158	0.01648
Sn	120	3	He	0.241	0.0203	1800.18	0.0158	0.01648
Sn	120	3	He	0.254	0.0205	1820.20	0.0158	0.01648
Sb	121	3	He	0.703	0.0107	970.07	0.0149	0.0002698
Sb	121	3	He	0.862	0.0131	1160.08	0.0149	0.0002698
Sb	121	3	He	0.785	0.0119	1060.08	0.0149	0.0002698
Ba	137	3	He	50.517	0.2427	21978.27	0.0048	0.0002317
Ba	137	3	He	50.421	0.2422	21497.58	0.0048	0.0002317
Ba	137	3	He	50.925	0.2446	21727.83	0.0048	0.0002317
Tl	205	3	He	0.025	0.0008	310.02	0.0247	0.0001339
Tl	205	3	He	0.017	0.0006	220.01	0.0247	0.0001339
Tl	205	3	He	0.026	0.0008	310.02	0.0247	0.0001339
Pb	208	3	He	0.04	0.0024	430.03	0.0327	0.00107
Pb	208	3	He	0.057	0.0029	710.05	0.0327	0.00107
Pb	208	3	He	0.034	0.0022	510.03	0.0327	0.00107
U	238	3	He	0.006	0.0004	120.01	0.0493	7.55E-05
U	238	3	He	0.014	0.0008	240.01	0.0493	7.55E-05
U	238	3	He	0.016	0.0009	280.01	0.0493	7.55E-05
Sc	45	1	No Gas			2485293.87		
Sc	45	1	No Gas			2498326.84		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2502684.18		
Ge	72	1	No Gas			1245330.61		
Ge	72	1	No Gas			1238084.51		
Ge	72	1	No Gas			1246548.97		
Sc	45	2	H2			189844.43		
Sc	45	2	H2			188397.93		
Sc	45	2	H2			190604.41		
Ge	72	2	H2			167075.37		
Ge	72	2	H2			169768.71		
Ge	72	2	H2			167949.86		
In	115	2	H2			397903.90		
In	115	2	H2			400682.53		
In	115	2	H2			398890.46		
Sc	45	3	He			47728.93		
Sc	45	3	He			48361.61		
Sc	45	3	He			46474.67		
Ge	72	3	He			88996.41		
Ge	72	3	He			87336.93		
Ge	72	3	He			87417.59		
In	115	3	He			90573.99		
In	115	3	He			88762.31		
In	115	3	He			88824.06		
Tb	159	3	He			408566.40		
Tb	159	3	He			396714.02		
Tb	159	3	He			402432.30		
Bi	209	3	He			320095.74		
Bi	209	3	He			319779.60		
Bi	209	3	He			317648.65		

Quantitation Report

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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

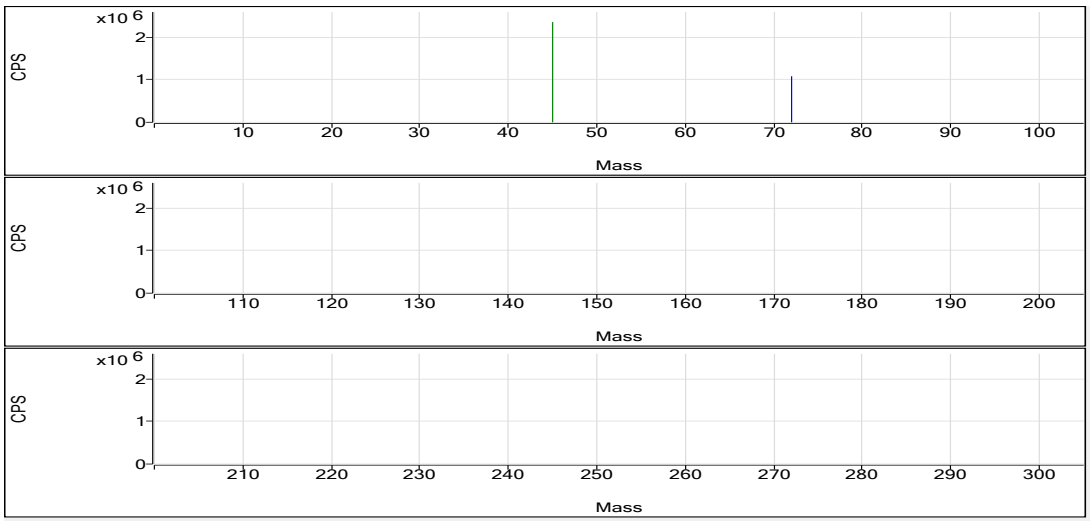
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.008	ppb	14.2	25.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.022	ppb	N/A	0.44	0.0000	Pulse	1.5000	3
Na	23	45	He	2193147.716	ppb	0.4	376209461.06	7 845.3420	Analog	0.1000	3
Mg	24	45	He	567221.442	ppb	0.5	48806185.94	1 017.7814	Analog	0.1000	3
Al	27	45	He	6.865	ppb	44.4	223.34	0.0047	Pulse	0.1000	3
K	39	45	He	10520.048	ppb	0.4	606314.23	12.6438	Pulse	0.1000	3
Ca	44	45	He	1003828.158	ppb	0.4	3251880.99	67.8132	Analog	0.1000	3
Ti	47	45	He	-0.130	ppb	N/A	0.00	0.0000	Pulse	0.1000	3
V	51	45	He	0.493	ppb	15.0	1709.44	0.0356	Pulse	0.5000	3
Cr	52	45	He	-0.327	ppb	N/A	1446.79	0.0302	Pulse	0.1000	3
Mn	55	45	He	13503.341	ppb	0.4	8310381.13	173.3028	Analog	0.1000	3
Fe	57	45	He	395.638	ppb	3.5	11091.25	0.2313	Pulse	0.1000	3
Co	59	45	He	12.148	ppb	2.1	32888.19	0.6858	Pulse	0.1000	3
Ni	60	72	He	16.878	ppb	2.2	11841.91	0.1477	Pulse	0.1000	3
Cu	63	72	He	0.784	ppb	18.6	1996.87	0.0249	Pulse	0.1000	3
Zn	66	72	He	11.886	ppb	3.8	3080.43	0.0384	Pulse	0.1000	3
As	75	72	He	10.812	ppb	0.9	1840.80	0.0230	Pulse	0.5000	3
Sr	88	115	He	8980.464	ppb	2.1	6661175.94	80.5541	Analog	0.1000	3
Mo	98	115	He	3.443	ppb	2.8	6264.99	0.0758	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	N/A	50.00	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.005	ppb	100.7	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.271	ppb	N/A	1010.08	0.0122	Pulse	0.1000	3
Sb	121	115	He	0.009	ppb	53.8	33.33	0.0004	Pulse	0.1000	3
Ba	137	115	He	349.024	ppb	1.9	138541.60	1.6753	Pulse	0.1000	3
Tl	205	159	He	0.003	ppb	89.4	80.00	0.0002	Pulse	0.1000	3
Pb	208	159	He	0.065	ppb	9.7	1196.73	0.0032	Pulse	0.1000	3
U	238	209	He	9.426	ppb	0.8	124512.32	0.4644	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2358832.83	1.1	98.3	Analog	0.1000	3
No Gas	Ge	72	1083353.84	0.5	93.9	Pulse	0.1000	3
H2	Sc	45	189011.08	1.5	101.1	Pulse	0.1000	3
H2	Ge	72	155472.11	1.4	95.0	Pulse	0.1000	3
H2	In	115	359835.80	1.1	92.5	Pulse	0.1000	3
He	Sc	45	47953.25	0.2	102.8	Pulse	0.1000	3
He	Ge	72	80178.35	0.6	98.7	Pulse	0.1000	3
He	In	115	82710.30	1.6	96.0	Pulse	0.1000	3
He	Tb	159	375084.84	1.3	94.1	Pulse	0.1000	3
He	Bi	209	268128.95	0.5	86.7	Pulse	0.1000	3

No Gas



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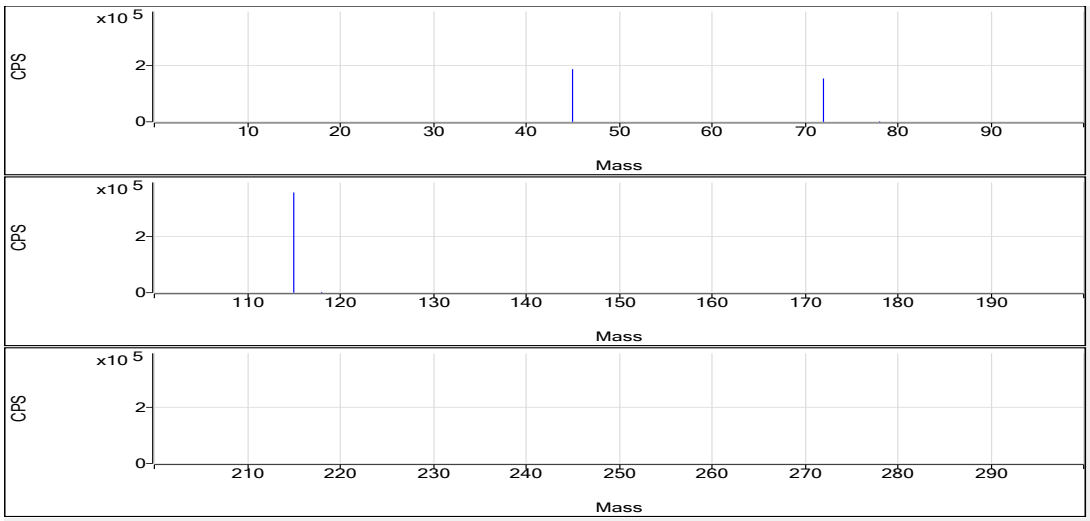
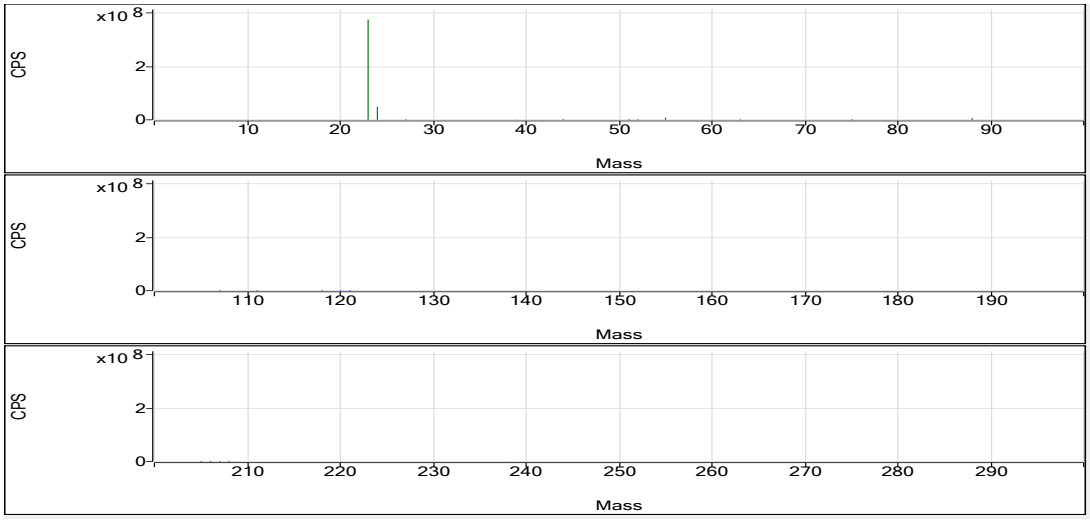


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.009	0	28.00	0.0008	4.685E-06
Be	9	1	No Gas	0.007	0	24.00	0.0008	4.685E-06
Be	9	1	No Gas	0.007	0	24.00	0.0008	4.685E-06
Se	78	2	H2	-0.029	0	0.00	0.0004	1.219E-05
Se	78	2	H2	-0.029	0	0.00	0.0004	1.219E-05
Se	78	2	H2	-0.009	0	1.33	0.0004	1.219E-05
Na	23	3	He	2204321.719	7885.3119	378177274.36	0.0036	0.3452
Na	23	3	He	2186270.223	7820.7409	375868794.40	0.0036	0.3452
Na	23	3	He	2188851.206	7829.9732	374582314.42	0.0036	0.3452
Mg	24	3	He	565194.483	1014.1444	48638069.28	0.0018	0.003497
Mg	24	3	He	570274.717	1023.2599	49178394.27	0.0018	0.003497
Mg	24	3	He	566195.126	1015.9398	48602094.28	0.0018	0.003497
Al	27	3	He	4.603	0.0033	160.01	0.0006	0.0006432
Al	27	3	He	5.658	0.004	190.01	0.0006	0.0006432
Al	27	3	He	10.334	0.0067	320.01	0.0006	0.0006432
K	39	3	He	10480.408	12.5977	604181.28	0.0012	0.3951
K	39	3	He	10553.84	12.6832	609560.26	0.0012	0.3951
K	39	3	He	10525.896	12.6506	605201.16	0.0012	0.3951
Ca	44	3	He	1001240.62	67.6384	3243919.33	0.0001	0.002715
Ca	44	3	He	1008548.459	68.1321	3274462.76	0.0001	0.002715
Ca	44	3	He	1001695.394	67.6691	3237260.89	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	0.417	0.034	1630.10	0.0219	0.02486
V	51	3	He	0.498	0.0357	1718.11	0.0219	0.02486
V	51	3	He	0.565	0.0372	1780.12	0.0219	0.02486
Cr	52	3	He	-0.29	0.0313	1500.15	0.0299	0.03997
Cr	52	3	He	-0.348	0.0295	1420.11	0.0299	0.03997
Cr	52	3	He	-0.344	0.0297	1420.12	0.0299	0.03997
Mn	55	3	He	13494.505	173.1894	8306115.50	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	13450.95	172.6305	8296708.00	0.0128	0.002639
Mn	55	3	He	13564.568	174.0886	8328319.88	0.0128	0.002639
Fe	57	3	He	380.261	0.2224	10664.18	0.0006	0.001429
Fe	57	3	He	406.344	0.2375	11414.90	0.0006	0.001429
Fe	57	3	He	400.308	0.234	11194.66	0.0006	0.001429
Co	59	3	He	11.879	0.6707	32166.57	0.0563	0.002149
Co	59	3	He	12.176	0.6874	33038.64	0.0563	0.002149
Co	59	3	He	12.389	0.6994	33459.35	0.0563	0.002149
Ni	60	3	He	17.253	0.1509	12025.43	0.0086	0.002834
Ni	60	3	He	16.854	0.1475	11905.31	0.0086	0.002834
Ni	60	3	He	16.528	0.1447	11594.98	0.0086	0.002834
Cu	63	3	He	0.617	0.0206	1640.14	0.0257	0.004757
Cu	63	3	He	0.852	0.0266	2150.22	0.0257	0.004757
Cu	63	3	He	0.884	0.0275	2200.25	0.0257	0.004757
Zn	66	3	He	12.397	0.0399	3180.44	0.0029	0.003818
Zn	66	3	He	11.54	0.0374	3020.42	0.0029	0.003818
Zn	66	3	He	11.72	0.0379	3040.43	0.0029	0.003818
As	75	3	He	10.706	0.0227	1812.13	0.002	0.0008061
As	75	3	He	10.83	0.023	1856.13	0.002	0.0008061
As	75	3	He	10.9	0.0231	1854.14	0.002	0.0008061
Sr	88	3	He	9028.11	80.9815	6667068.03	0.009	0.0009645
Sr	88	3	He	8772.399	78.6878	6622976.15	0.009	0.0009645
Sr	88	3	He	9140.884	81.993	6693483.65	0.009	0.0009645
Mo	98	3	He	3.451	0.0759	6251.65	0.0219	0.0002706
Mo	98	3	He	3.343	0.0736	6191.64	0.0219	0.0002706
Mo	98	3	He	3.536	0.0778	6351.69	0.0219	0.0002706
Ag	107	3	He	0.005	0.0009	70.00	0.0465	0.0006206
Ag	107	3	He	-0.003	0.0005	40.00	0.0465	0.0006206
Ag	107	3	He	-0.003	0.0005	40.00	0.0465	0.0006206
Cd	111	3	He	0.009	0	4.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Sn	120	3	He	-0.32	0.0114	940.07	0.0158	0.01648
Sn	120	3	He	-0.17	0.0138	1160.09	0.0158	0.01648
Sn	120	3	He	-0.322	0.0114	930.07	0.0158	0.01648
Sb	121	3	He	0.015	0.0005	40.00	0.0149	0.0002698
Sb	121	3	He	0.006	0.0004	30.00	0.0149	0.0002698
Sb	121	3	He	0.007	0.0004	30.00	0.0149	0.0002698
Ba	137	3	He	354.604	1.7021	140130.78	0.0048	0.0002317
Ba	137	3	He	341.527	1.6393	137979.03	0.0048	0.0002317
Ba	137	3	He	350.941	1.6845	137515.00	0.0048	0.0002317
Tl	205	3	He	0.002	0.0002	70.00	0.0247	0.0001339
Tl	205	3	He	0.006	0.0003	110.00	0.0247	0.0001339
Tl	205	3	He	0.001	0.0002	60.00	0.0247	0.0001339
Pb	208	3	He	0.058	0.003	590.03	0.0327	0.00107
Pb	208	3	He	0.07	0.0034	690.05	0.0327	0.00107
Pb	208	3	He	0.066	0.0032	660.05	0.0327	0.00107
U	238	3	He	9.341	0.4602	123923.30	0.0493	7.55E-05
U	238	3	He	9.455	0.4658	125094.83	0.0493	7.55E-05
U	238	3	He	9.481	0.4671	124518.82	0.0493	7.55E-05
Sc	45	1	No Gas			2387954.96		
Sc	45	1	No Gas			2353135.43		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2335408.09		
Ge	72	1	No Gas			1087912.64		
Ge	72	1	No Gas			1077791.16		
Ge	72	1	No Gas			1084357.72		
Sc	45	2	H2			190785.95		
Sc	45	2	H2			185845.51		
Sc	45	2	H2			190401.79		
Ge	72	2	H2			158016.19		
Ge	72	2	H2			153791.37		
Ge	72	2	H2			154608.77		
In	115	2	H2			362928.67		
In	115	2	H2			361034.76		
In	115	2	H2			355543.98		
Sc	45	3	He			47959.71		
Sc	45	3	He			48060.51		
Sc	45	3	He			47839.54		
Ge	72	3	He			79682.22		
Ge	72	3	He			80718.59		
Ge	72	3	He			80134.24		
In	115	3	He			82334.33		
In	115	3	He			84173.86		
In	115	3	He			81639.55		
Tb	159	3	He			380595.03		
Tb	159	3	He			373661.05		
Tb	159	3	He			370998.43		
Bi	209	3	He			269271.27		
Bi	209	3	He			268537.22		
Bi	209	3	He			266578.36		

Quantitation Report

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Acq Time	8/10/2023 3:29:26 PM
Sample Name	410-137325-J-1-A
Sample Type	Sample
Comment	D2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

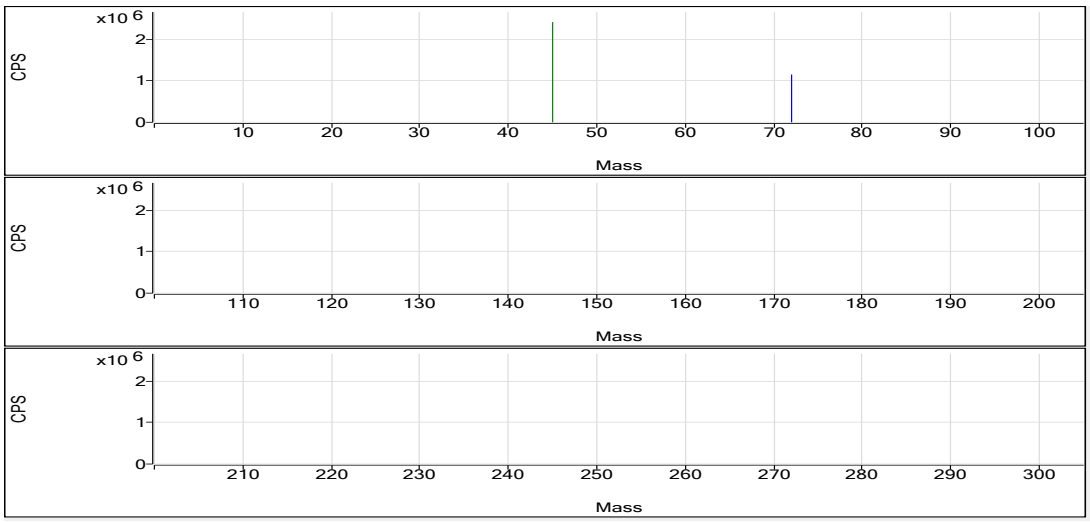
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.012	ppb	26.7	32.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.019	ppb	102.4	3.33	0.0000	Pulse	1.5000	3
Na	23	45	He	2476057.301	ppb	1.2	430723566.92	8 857.3234	Analog	0.1000	3
Mg	24	45	He	610326.666	ppb	1.6	53253387.54	1 095.1260	Analog	0.1000	3
Al	27	45	He	4.060	ppb	30.9	146.67	0.0030	Pulse	0.1000	3
K	39	45	He	19233.742	ppb	1.4	1108222.07	22.7894	Pulse	0.1000	3
Ca	44	45	He	1096604.597	ppb	1.3	3602420.57	74.0804	Analog	0.1000	3
Ti	47	45	He	0.252	ppb	151.0	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	1.323	ppb	1.8	2615.58	0.0538	Pulse	0.5000	3
Cr	52	45	He	-0.170	ppb	N/A	1696.83	0.0349	Pulse	0.1000	3
Mn	55	45	He	8856.859	ppb	1.1	5527697.83	113.6705	Analog	0.1000	3
Fe	57	45	He	1858.631	ppb	0.5	52583.20	1.0813	Pulse	0.1000	3
Co	59	45	He	6.940	ppb	1.5	19099.89	0.3927	Pulse	0.1000	3
Ni	60	72	He	11.005	ppb	0.9	8119.23	0.0973	Pulse	0.1000	3
Cu	63	72	He	0.082	ppb	44.6	573.37	0.0069	Pulse	0.1000	3
Zn	66	72	He	5.221	ppb	6.8	1586.81	0.0190	Pulse	0.1000	3
As	75	72	He	5.043	ppb	4.5	929.37	0.0111	Pulse	0.5000	3
Sr	88	115	He	13403.070	ppb	1.5	10027596.10	120.2241	Analog	0.1000	3
Mo	98	115	He	1.007	ppb	11.3	1863.53	0.0224	Pulse	0.1000	3
Ag	107	115	He	0.001	ppb	423.7	56.67	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.008	ppb	92.2	3.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.242	ppb	N/A	1056.75	0.0126	Pulse	0.1000	3
Sb	121	115	He	0.014	ppb	96.3	40.00	0.0005	Pulse	0.1000	3
Ba	137	115	He	1551.085	ppb	1.3	620936.71	7.4444	Pulse	0.1000	3
Tl	205	159	He	0.011	ppb	52.3	153.34	0.0004	Pulse	0.1000	3
Pb	208	159	He	0.007	ppb	69.0	483.35	0.0013	Pulse	0.1000	3
U	238	209	He	3.180	ppb	0.5	41755.31	0.1567	Pulse	0.1000	3

ISTD Table:

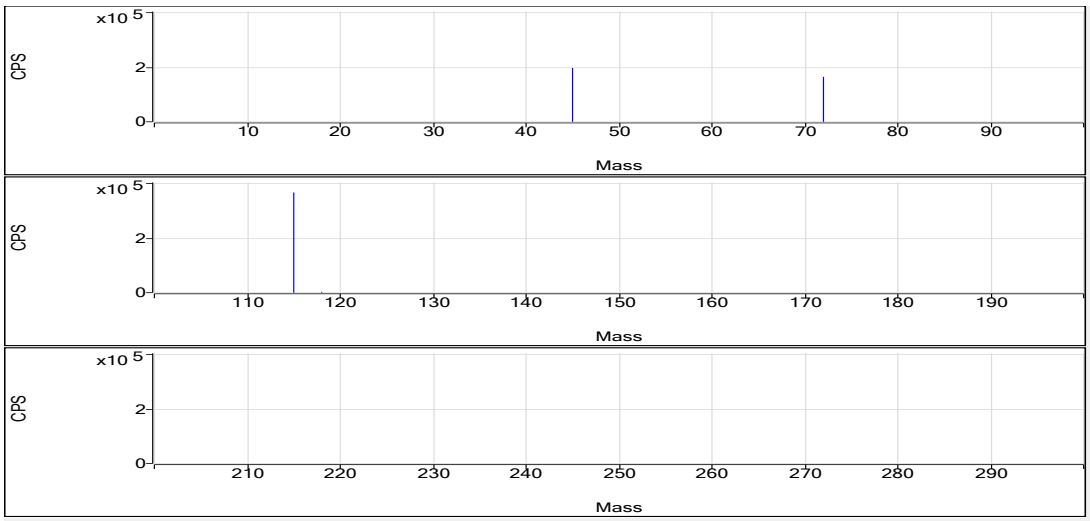
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2423427.15	0.8	101.0	Analog	0.1000	3
No Gas	Ge	72	1155477.69	0.7	100.2	Pulse	0.1000	3
H2	Sc	45	197591.96	0.3	105.7	Pulse	0.1000	3
H2	Ge	72	164915.96	0.7	100.7	Pulse	0.1000	3
H2	In	115	367637.31	0.4	94.5	Pulse	0.1000	3
He	Sc	45	48631.98	0.8	104.3	Pulse	0.1000	3
He	Ge	72	83452.99	0.6	102.8	Pulse	0.1000	3
He	In	115	83421.36	1.7	96.8	Pulse	0.1000	3
He	Tb	159	376764.64	1.2	94.5	Pulse	0.1000	3
He	Bi	209	266428.96	1.1	86.1	Pulse	0.1000	3

No Gas

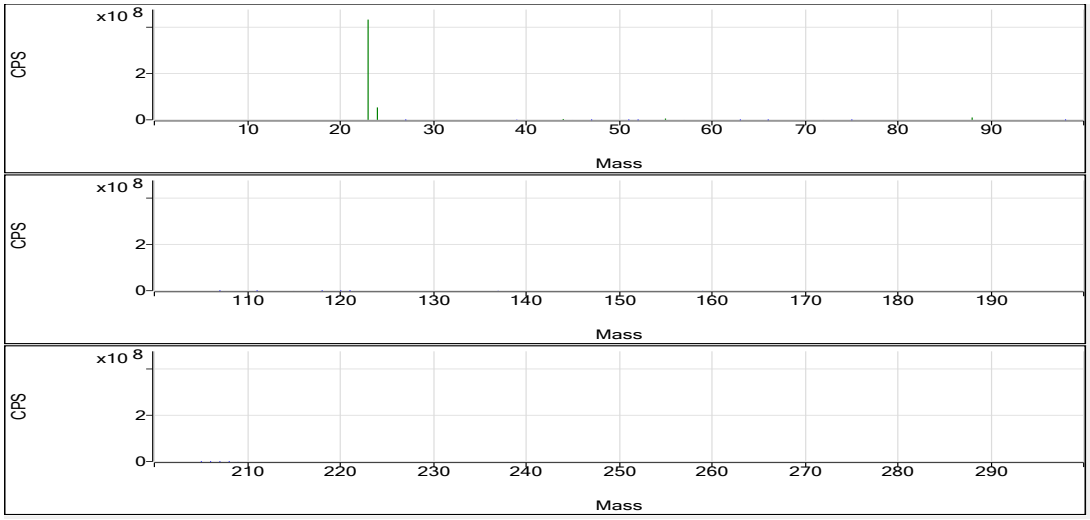


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.013	0	36.00	0.0008	4.685E-06
Be	9	1	No Gas	0.008	0	26.00	0.0008	4.685E-06
Be	9	1	No Gas	0.013	0	36.00	0.0008	4.685E-06
Se	78	2	H2	0.039	0	4.67	0.0004	1.219E-05
Se	78	2	H2	0	0	2.00	0.0004	1.219E-05
Se	78	2	H2	0.019	0	3.33	0.0004	1.219E-05
Na	23	3	He	2441278.238	8732.917	428207233.62	0.0036	0.3452
Na	23	3	He	2494682.847	8923.9479	430406113.59	0.0036	0.3452
Na	23	3	He	2492210.819	8915.1054	433557353.54	0.0036	0.3452
Mg	24	3	He	600431.866	1077.3716	52827514.21	0.0018	0.003497
Mg	24	3	He	620229.921	1112.8957	53675469.20	0.0018	0.003497
Mg	24	3	He	610318.212	1095.1109	53257179.21	0.0018	0.003497
Al	27	3	He	2.735	0.0022	110.00	0.0006	0.0006432
Al	27	3	He	4.217	0.0031	150.01	0.0006	0.0006432
Al	27	3	He	5.227	0.0037	180.01	0.0006	0.0006432
K	39	3	He	18925.36	22.4304	1099843.89	0.0012	0.3951
K	39	3	He	19391.411	22.973	1107998.50	0.0012	0.3951
K	39	3	He	19384.453	22.9649	1116823.81	0.0012	0.3951
Ca	44	3	He	1081394.732	73.053	3582058.38	0.0001	0.002715
Ca	44	3	He	1109911.714	74.9794	3616289.32	0.0001	0.002715
Ca	44	3	He	1098507.344	74.209	3608914.01	0.0001	0.002715
Ti	47	3	He	0.629	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	0.256	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	1.328	0.0539	2642.26	0.0219	0.02486
V	51	3	He	1.344	0.0542	2616.25	0.0219	0.02486
V	51	3	He	1.297	0.0532	2588.24	0.0219	0.02486
Cr	52	3	He	-0.15	0.0355	1740.18	0.0299	0.03997
Cr	52	3	He	-0.13	0.0361	1740.17	0.0299	0.03997
Cr	52	3	He	-0.229	0.0331	1610.15	0.0299	0.03997
Mn	55	3	He	8780.655	112.6925	5525729.29	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	8968.195	115.0993	5551294.29	0.0128	0.002639
Mn	55	3	He	8821.728	113.2196	5506069.92	0.0128	0.002639
Fe	57	3	He	1848.026	1.0751	52716.85	0.0006	0.001429
Fe	57	3	He	1865.974	1.0855	52356.22	0.0006	0.001429
Fe	57	3	He	1861.892	1.0832	52676.53	0.0006	0.001429
Co	59	3	He	7.004	0.3963	19433.74	0.0563	0.002149
Co	59	3	He	6.996	0.3959	19093.10	0.0563	0.002149
Co	59	3	He	6.82	0.386	18772.84	0.0563	0.002149
Ni	60	3	He	10.9	0.0964	8092.47	0.0086	0.002834
Ni	60	3	He	11.107	0.0982	8142.59	0.0086	0.002834
Ni	60	3	He	11.01	0.0973	8122.63	0.0086	0.002834
Cu	63	3	He	0.084	0.0069	580.03	0.0257	0.004757
Cu	63	3	He	0.045	0.0059	490.03	0.0257	0.004757
Cu	63	3	He	0.118	0.0078	650.04	0.0257	0.004757
Zn	66	3	He	4.826	0.0179	1500.13	0.0029	0.003818
Zn	66	3	He	5.521	0.0199	1650.15	0.0029	0.003818
Zn	66	3	He	5.315	0.0193	1610.14	0.0029	0.003818
As	75	3	He	4.781	0.0106	890.03	0.002	0.0008061
As	75	3	He	5.173	0.0114	946.04	0.002	0.0008061
As	75	3	He	5.175	0.0114	952.04	0.002	0.0008061
Sr	88	3	He	13214.965	118.5368	10028354.85	0.009	0.0009645
Sr	88	3	He	13614.401	122.1197	9999891.73	0.009	0.0009645
Sr	88	3	He	13379.845	120.0157	10054541.73	0.009	0.0009645
Mo	98	3	He	0.877	0.0195	1650.16	0.0219	0.0002706
Mo	98	3	He	1.057	0.0234	1920.21	0.0219	0.0002706
Mo	98	3	He	1.087	0.0241	2020.21	0.0219	0.0002706
Ag	107	3	He	0.007	0.0009	80.00	0.0465	0.0006206
Ag	107	3	He	-0.003	0.0005	40.00	0.0465	0.0006206
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0.014	0.0001	6.00	0.0053	0
Cd	111	3	He	0.009	0	4.00	0.0053	0
Sn	120	3	He	-0.085	0.0151	1280.11	0.0158	0.01648
Sn	120	3	He	-0.332	0.0112	920.06	0.0158	0.01648
Sn	120	3	He	-0.31	0.0116	970.07	0.0158	0.01648
Sb	121	3	He	0.03	0.0007	60.00	0.0149	0.0002698
Sb	121	3	He	0.006	0.0004	30.00	0.0149	0.0002698
Sb	121	3	He	0.006	0.0004	30.00	0.0149	0.0002698
Ba	137	3	He	1528.905	7.338	620799.91	0.0048	0.0002317
Ba	137	3	He	1569.84	7.5344	616963.55	0.0048	0.0002317
Ba	137	3	He	1554.511	7.4609	625046.67	0.0048	0.0002317
Tl	205	3	He	0.004	0.0002	90.00	0.0247	0.0001339
Tl	205	3	He	0.014	0.0005	180.01	0.0247	0.0001339
Tl	205	3	He	0.015	0.0005	190.01	0.0247	0.0001339
Pb	208	3	He	0.012	0.0015	240.01	0.0327	0.00107
Pb	208	3	He	0.004	0.0012	220.01	0.0327	0.00107
Pb	208	3	He	0.004	0.0012	240.01	0.0327	0.00107
U	238	3	He	3.19	0.1572	41929.19	0.0493	7.55E-05
U	238	3	He	3.163	0.1559	41948.90	0.0493	7.55E-05
U	238	3	He	3.187	0.1571	41387.84	0.0493	7.55E-05
Sc	45	1	No Gas			2410960.43		
Sc	45	1	No Gas			2414085.75		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2445235.28		
Ge	72	1	No Gas			1151719.20		
Ge	72	1	No Gas			1150300.61		
Ge	72	1	No Gas			1164413.26		
Sc	45	2	H2			197899.18		
Sc	45	2	H2			196886.79		
Sc	45	2	H2			197989.90		
Ge	72	2	H2			163515.89		
Ge	72	2	H2			165672.19		
Ge	72	2	H2			165559.80		
In	115	2	H2			366444.99		
In	115	2	H2			369141.67		
In	115	2	H2			367325.27		
Sc	45	3	He			49033.70		
Sc	45	3	He			48230.46		
Sc	45	3	He			48631.77		
Ge	72	3	He			83956.40		
Ge	72	3	He			82949.49		
Ge	72	3	He			83453.09		
In	115	3	He			84606.82		
In	115	3	He			81890.92		
In	115	3	He			83781.70		
Tb	159	3	He			371432.10		
Tb	159	3	He			379167.57		
Tb	159	3	He			379694.25		
Bi	209	3	He			266709.94		
Bi	209	3	He			269089.61		
Bi	209	3	He			263487.32		

Quantitation Report

Data File Name	143SMPL.d
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Sample Type	Sample
Comment	D2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

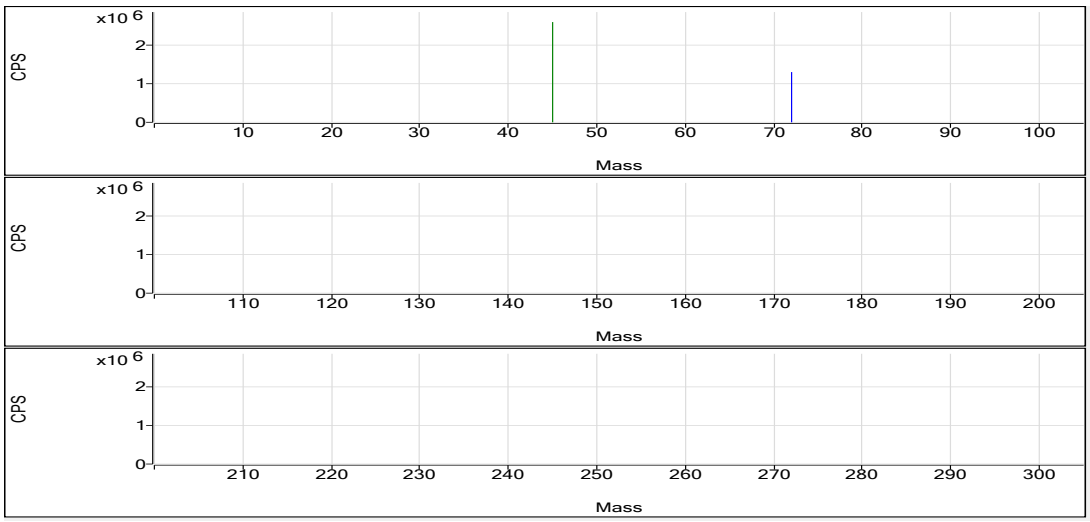
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.027	ppb	11.7	66.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.847	ppb	14.5	66.00	0.0004	Pulse	1.5000	3
Na	23	45	He	94152.284	ppb	1.1	17315504.32	337.1325	Analog	0.1000	3
Mg	24	45	He	12561.949	ppb	0.5	1157914.78	22.5437	Analog	0.1000	3
Al	27	45	He	3.451	ppb	20.7	136.68	0.0027	Pulse	0.1000	3
K	39	45	He	908.771	ppb	1.1	74637.57	1.4532	Pulse	0.1000	3
Ca	44	45	He	51782.748	ppb	1.2	179808.07	3.5007	Pulse	0.1000	3
Ti	47	45	He	0.113	ppb	186.7	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	0.944	ppb	3.8	2337.54	0.0455	Pulse	0.5000	3
Cr	52	45	He	0.696	ppb	10.0	3123.77	0.0608	Pulse	0.1000	3
Mn	55	45	He	2.332	ppb	9.1	1673.49	0.0326	Pulse	0.1000	3
Fe	57	45	He	9.587	ppb	27.4	360.02	0.0070	Pulse	0.1000	3
Co	59	45	He	0.018	ppb	52.3	163.34	0.0032	Pulse	0.1000	3
Ni	60	72	He	0.167	ppb	44.4	383.35	0.0043	Pulse	0.1000	3
Cu	63	72	He	2.680	ppb	6.2	6608.45	0.0736	Pulse	0.1000	3
Zn	66	72	He	4.793	ppb	4.9	1596.81	0.0178	Pulse	0.1000	3
As	75	72	He	0.353	ppb	17.9	137.33	0.0015	Pulse	0.5000	3
Sr	88	115	He	153.068	ppb	1.5	126361.51	1.3740	Pulse	0.1000	3
Mo	98	115	He	1.704	ppb	7.8	3463.91	0.0376	Pulse	0.1000	3
Ag	107	115	He	-0.001	ppb	N/A	53.33	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.015	ppb	32.9	7.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.280	ppb	N/A	1106.75	0.0120	Pulse	0.1000	3
Sb	121	115	He	0.109	ppb	36.9	173.34	0.0019	Pulse	0.1000	3
Ba	137	115	He	14.485	ppb	1.0	6415.07	0.0697	Pulse	0.1000	3
Tl	205	159	He	0.002	ppb	173.5	70.00	0.0002	Pulse	0.1000	3
Pb	208	159	He	0.031	ppb	35.8	856.71	0.0021	Pulse	0.1000	3
U	238	209	He	0.324	ppb	1.5	4977.81	0.0160	Pulse	0.1000	3

ISTD Table:

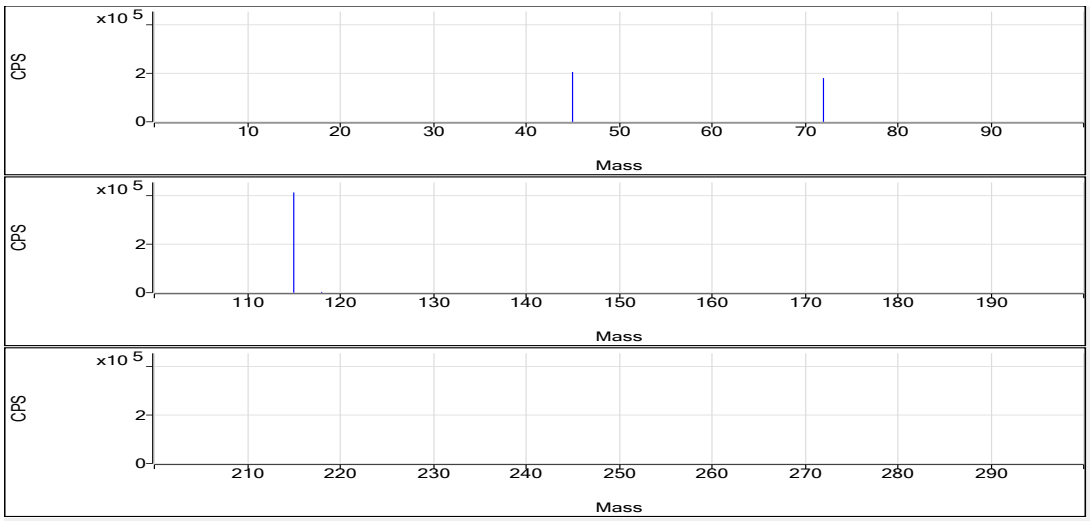
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2605932.25	0.5	108.6	Analog	0.1000	3
No Gas	Ge	72	1305339.36	0.2	113.2	Pulse	0.1000	3
H2	Sc	45	205523.15	1.0	109.9	Pulse	0.1000	3
H2	Ge	72	180501.08	0.9	110.3	Pulse	0.1000	3
H2	In	115	413356.80	0.4	106.2	Pulse	0.1000	3
He	Sc	45	51364.94	1.1	110.1	Pulse	0.1000	3
He	Ge	72	89872.28	1.1	110.7	Pulse	0.1000	3
He	In	115	91977.36	1.2	106.7	Pulse	0.1000	3
He	Tb	159	409120.37	0.8	102.6	Pulse	0.1000	3
He	Bi	209	310845.52	0.6	100.5	Pulse	0.1000	3

No Gas

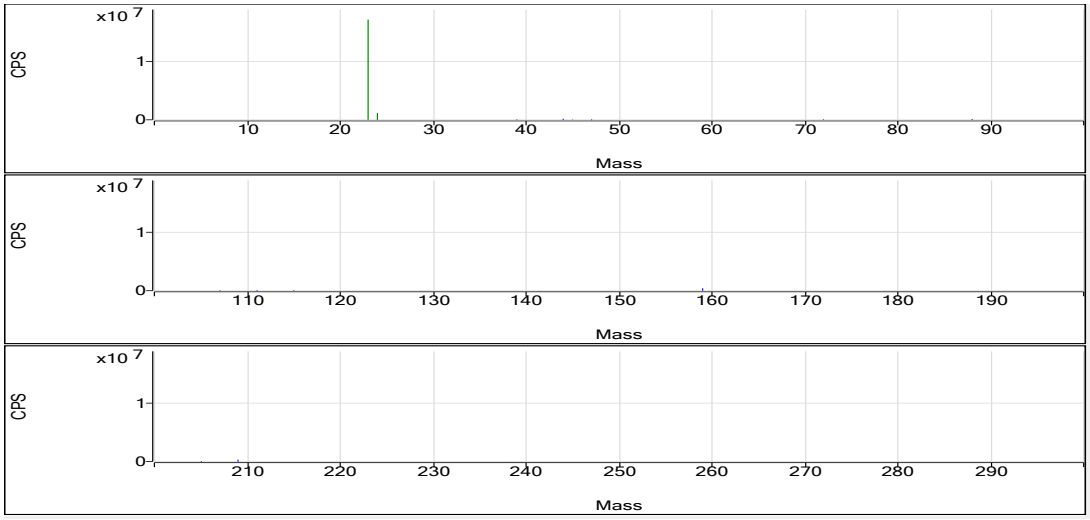


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.031	0	74.00	0.0008	4.685E-06
Be	9	1	No Gas	0.026	0	64.00	0.0008	4.685E-06
Be	9	1	No Gas	0.025	0	62.00	0.0008	4.685E-06
Se	78	2	H2	0.712	0.0003	55.33	0.0004	1.219E-05
Se	78	2	H2	0.953	0.0004	74.67	0.0004	1.219E-05
Se	78	2	H2	0.875	0.0004	68.00	0.0004	1.219E-05
Na	23	3	He	92989.344	332.9726	17312527.24	0.0036	0.3452
Na	23	3	He	94777.811	339.37	17393100.99	0.0036	0.3452
Na	23	3	He	94689.698	339.0548	17240884.74	0.0036	0.3452
Mg	24	3	He	12495.228	22.424	1165907.95	0.0018	0.003497
Mg	24	3	He	12585.658	22.5862	1157569.44	0.0018	0.003497
Mg	24	3	He	12604.962	22.6209	1150266.94	0.0018	0.003497
Al	27	3	He	2.846	0.0023	120.01	0.0006	0.0006432
Al	27	3	He	4.237	0.0031	160.01	0.0006	0.0006432
Al	27	3	He	3.271	0.0026	130.01	0.0006	0.0006432
K	39	3	He	898.301	1.441	74922.20	0.0012	0.3951
K	39	3	He	909.327	1.4538	74509.91	0.0012	0.3951
K	39	3	He	918.685	1.4647	74480.59	0.0012	0.3951
Ca	44	3	He	51709.733	3.4958	181760.41	0.0001	0.002715
Ca	44	3	He	51199.862	3.4614	177398.81	0.0001	0.002715
Ca	44	3	He	52438.648	3.545	180265.00	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.233	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	0.236	0.0002	10.00	0.0005	7.003E-05
V	51	3	He	0.925	0.0451	2344.21	0.0219	0.02486
V	51	3	He	0.985	0.0464	2378.21	0.0219	0.02486
V	51	3	He	0.923	0.045	2290.20	0.0219	0.02486
Cr	52	3	He	0.65	0.0594	3090.43	0.0299	0.03997
Cr	52	3	He	0.777	0.0632	3240.47	0.0299	0.03997
Cr	52	3	He	0.662	0.0598	3040.41	0.0299	0.03997
Mn	55	3	He	2.567	0.0356	1850.18	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2.151	0.0302	1550.13	0.0128	0.002639
Mn	55	3	He	2.277	0.0319	1620.15	0.0128	0.002639
Fe	57	3	He	11.776	0.0083	430.02	0.0006	0.001429
Fe	57	3	He	10.303	0.0074	380.02	0.0006	0.001429
Fe	57	3	He	6.68	0.0053	270.01	0.0006	0.001429
Co	59	3	He	0.023	0.0035	180.01	0.0563	0.002149
Co	59	3	He	0.024	0.0035	180.01	0.0563	0.002149
Co	59	3	He	0.007	0.0026	130.01	0.0563	0.002149
Ni	60	3	He	0.241	0.0049	440.02	0.0086	0.002834
Ni	60	3	He	0.093	0.0036	330.01	0.0086	0.002834
Ni	60	3	He	0.167	0.0043	380.02	0.0086	0.002834
Cu	63	3	He	2.699	0.074	6641.78	0.0257	0.004757
Cu	63	3	He	2.507	0.0691	6281.61	0.0257	0.004757
Cu	63	3	He	2.835	0.0775	6901.95	0.0257	0.004757
Zn	66	3	He	4.815	0.0178	1600.14	0.0029	0.003818
Zn	66	3	He	4.546	0.0171	1550.13	0.0029	0.003818
Zn	66	3	He	5.017	0.0184	1640.15	0.0029	0.003818
As	75	3	He	0.292	0.0014	126.00	0.002	0.0008061
As	75	3	He	0.348	0.0015	138.00	0.002	0.0008061
As	75	3	He	0.418	0.0017	148.00	0.002	0.0008061
Sr	88	3	He	154.072	1.383	127937.31	0.009	0.0009645
Sr	88	3	He	150.377	1.3498	125200.00	0.009	0.0009645
Sr	88	3	He	154.754	1.3891	125947.22	0.009	0.0009645
Mo	98	3	He	1.827	0.0403	3730.70	0.0219	0.0002706
Mo	98	3	He	1.724	0.0381	3530.58	0.0219	0.0002706
Mo	98	3	He	1.562	0.0345	3130.44	0.0219	0.0002706
Ag	107	3	He	0.005	0.0009	80.00	0.0465	0.0006206
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Cd	111	3	He	0.012	0.0001	6.00	0.0053	0
Cd	111	3	He	0.012	0.0001	6.00	0.0053	0
Cd	111	3	He	0.021	0.0001	10.00	0.0053	0
Sn	120	3	He	-0.283	0.012	1110.08	0.0158	0.01648
Sn	120	3	He	-0.408	0.01	930.06	0.0158	0.01648
Sn	120	3	He	-0.149	0.0141	1280.11	0.0158	0.01648
Sb	121	3	He	0.149	0.0025	230.01	0.0149	0.0002698
Sb	121	3	He	0.069	0.0013	120.01	0.0149	0.0002698
Sb	121	3	He	0.108	0.0019	170.01	0.0149	0.0002698
Ba	137	3	He	14.573	0.0702	6491.78	0.0048	0.0002317
Ba	137	3	He	14.31	0.0689	6391.72	0.0048	0.0002317
Ba	137	3	He	14.571	0.0702	6361.72	0.0048	0.0002317
Tl	205	3	He	-0.001	0.0001	50.00	0.0247	0.0001339
Tl	205	3	He	0.004	0.0002	100.00	0.0247	0.0001339
Tl	205	3	He	0.001	0.0001	60.00	0.0247	0.0001339
Pb	208	3	He	0.033	0.0021	460.03	0.0327	0.00107
Pb	208	3	He	0.02	0.0017	370.02	0.0327	0.00107
Pb	208	3	He	0.042	0.0024	500.03	0.0327	0.00107
U	238	3	He	0.319	0.0158	4941.08	0.0493	7.55E-05
U	238	3	He	0.322	0.016	4961.17	0.0493	7.55E-05
U	238	3	He	0.329	0.0163	5031.18	0.0493	7.55E-05
Sc	45	1	No Gas			2609930.74		
Sc	45	1	No Gas			2590660.12		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2617205.90		
Ge	72	1	No Gas			1305447.25		
Ge	72	1	No Gas			1308222.32		
Ge	72	1	No Gas			1302348.50		
Sc	45	2	H2			203371.70		
Sc	45	2	H2			205907.38		
Sc	45	2	H2			207290.37		
Ge	72	2	H2			178979.41		
Ge	72	2	H2			182208.06		
Ge	72	2	H2			180315.76		
In	115	2	H2			412939.17		
In	115	2	H2			415301.63		
In	115	2	H2			411829.60		
Sc	45	3	He			51993.85		
Sc	45	3	He			51251.14		
Sc	45	3	He			50849.84		
Ge	72	3	He			89701.46		
Ge	72	3	He			90899.33		
Ge	72	3	He			89016.05		
In	115	3	He			92516.90		
In	115	3	He			92758.83		
In	115	3	He			90675.46		
Tb	159	3	He			412284.80		
Tb	159	3	He			409367.88		
Tb	159	3	He			405708.43		
Bi	209	3	He			312641.17		
Bi	209	3	He			310864.39		
Bi	209	3	He			309030.99		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

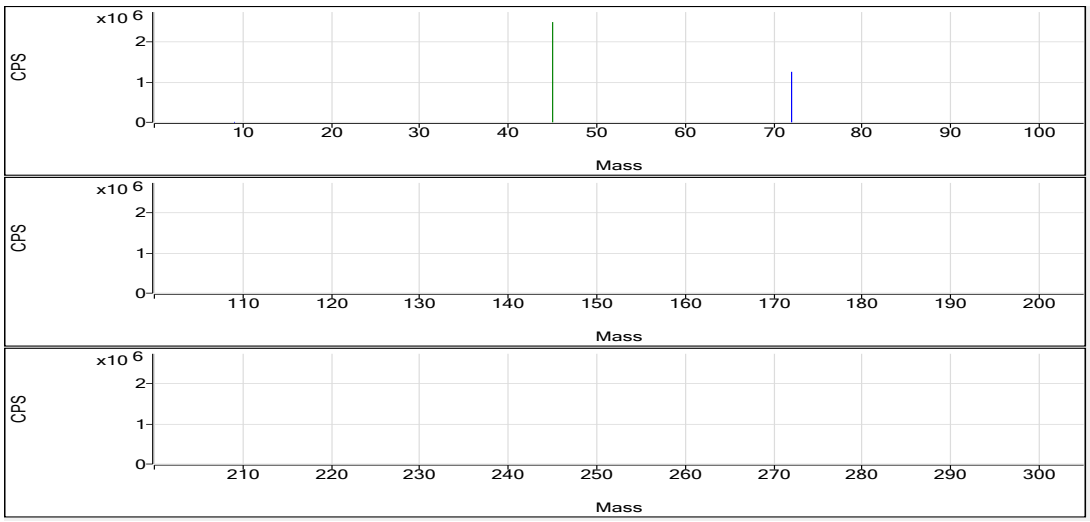
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.000	ppb	664.3	12.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.007	ppb	N/A	1.56	0.0000	Pulse	1.5000	3
Na	23	45	He	440.592	ppb	4.3	93850.74	1.9212	Pulse	0.1000	3
Mg	24	45	He	26.884	ppb	7.1	2526.96	0.0517	Pulse	0.1000	3
Al	27	45	He	-0.049	ppb	N/A	30.00	0.0006	Pulse	0.1000	3
K	39	45	He	9.011	ppb	4.6	19814.04	0.4056	Pulse	0.1000	3
Ca	44	45	He	54.731	ppb	15.3	313.35	0.0064	Pulse	0.1000	3
Ti	47	45	He	-0.130	ppb	N/A	0.00	0.0000	Pulse	0.1000	3
V	51	45	He	1.171	ppb	2.3	2465.56	0.0505	Pulse	0.5000	3
Cr	52	45	He	-0.038	ppb	N/A	1896.86	0.0388	Pulse	0.1000	3
Mn	55	45	He	0.607	ppb	22.8	510.03	0.0104	Pulse	0.1000	3
Fe	57	45	He	1.183	ppb	147.6	103.34	0.0021	Pulse	0.1000	3
Co	59	45	He	-0.005	ppb	N/A	90.00	0.0018	Pulse	0.1000	3
Ni	60	72	He	-0.092	ppb	N/A	173.34	0.0020	Pulse	0.1000	3
Cu	63	72	He	0.086	ppb	21.7	590.03	0.0070	Pulse	0.1000	3
Zn	66	72	He	4.251	ppb	8.2	1373.44	0.0162	Pulse	0.1000	3
As	75	72	He	0.240	ppb	32.8	110.00	0.0013	Pulse	0.5000	3
Sr	88	115	He	0.606	ppb	36.0	563.36	0.0064	Pulse	0.1000	3
Mo	98	115	He	0.053	ppb	22.9	126.67	0.0014	Pulse	0.1000	3
Ag	107	115	He	0.005	ppb	50.9	76.67	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.001	ppb	173.2	0.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.076	ppb	121.2	1553.47	0.0177	Pulse	0.1000	3
Sb	121	115	He	0.007	ppb	298.4	33.33	0.0004	Pulse	0.1000	3
Ba	137	115	He	0.054	ppb	109.0	43.33	0.0005	Pulse	0.1000	3
Tl	205	159	He	0.009	ppb	67.1	136.67	0.0003	Pulse	0.1000	3
Pb	208	159	He	0.012	ppb	22.5	576.70	0.0014	Pulse	0.1000	3
U	238	209	He	0.013	ppb	18.7	220.01	0.0007	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2493347.10	1.0	103.9	Analog	0.1000	3
No Gas	Ge	72	1255945.55	0.9	108.9	Pulse	0.1000	3
H2	Sc	45	194993.87	0.9	104.3	Pulse	0.1000	3
H2	Ge	72	166831.05	1.0	101.9	Pulse	0.1000	3
H2	In	115	396997.48	0.5	102.0	Pulse	0.1000	3
He	Sc	45	48856.01	0.7	104.7	Pulse	0.1000	3
He	Ge	72	84747.56	1.6	104.4	Pulse	0.1000	3
He	In	115	87873.45	0.8	101.9	Pulse	0.1000	3
He	Tb	159	397836.92	0.6	99.8	Pulse	0.1000	3
He	Bi	209	308522.90	0.3	99.8	Pulse	0.1000	3

No Gas



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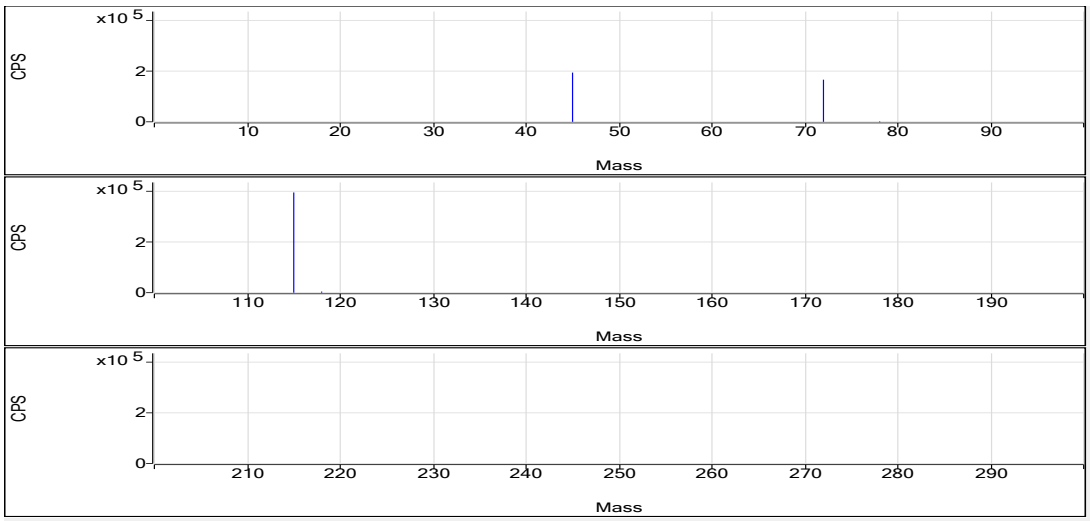
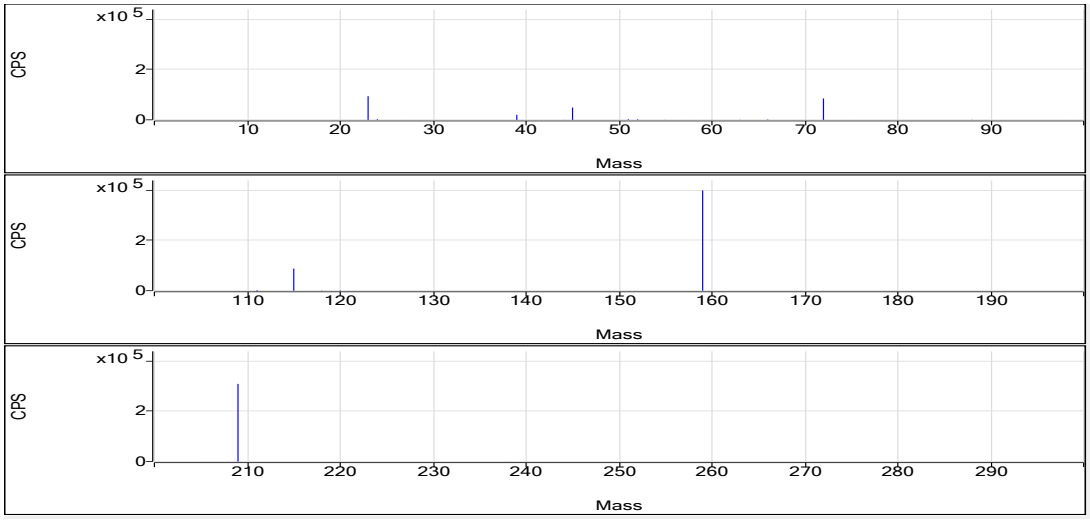


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.001	0	10.00	0.0008	4.685E-06
Be	9	1	No Gas	-0.002	0	8.00	0.0008	4.685E-06
Be	9	1	No Gas	0.004	0	20.00	0.0008	4.685E-06
Se	78	2	H2	-0.02	0	0.67	0.0004	1.219E-05
Se	78	2	H2	-0.001	0	2.00	0.0004	1.219E-05
Se	78	2	H2	0	0	2.00	0.0004	1.219E-05
Na	23	3	He	459.771	1.9898	96986.68	0.0036	0.3452
Na	23	3	He	439.673	1.9179	93212.94	0.0036	0.3452
Na	23	3	He	422.331	1.8559	91352.59	0.0036	0.3452
Mg	24	3	He	28.698	0.055	2680.33	0.0018	0.003497
Mg	24	3	He	27.066	0.0521	2530.29	0.0018	0.003497
Mg	24	3	He	24.887	0.0482	2370.27	0.0018	0.003497
Al	27	3	He	0.303	0.0008	40.00	0.0006	0.0006432
Al	27	3	He	-0.044	0.0006	30.00	0.0006	0.0006432
Al	27	3	He	-0.405	0.0004	20.00	0.0006	0.0006432
K	39	3	He	9.295	0.4059	19783.97	0.0012	0.3951
K	39	3	He	8.536	0.405	19683.98	0.0012	0.3951
K	39	3	He	9.203	0.4058	19974.17	0.0012	0.3951
Ca	44	3	He	60.039	0.0068	330.02	0.0001	0.002715
Ca	44	3	He	45.096	0.0058	280.01	0.0001	0.002715
Ca	44	3	He	59.058	0.0067	330.02	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	1.143	0.0499	2430.22	0.0219	0.02486
V	51	3	He	1.197	0.051	2480.23	0.0219	0.02486
V	51	3	He	1.173	0.0505	2486.23	0.0219	0.02486
Cr	52	3	He	-0.184	0.0345	1680.15	0.0299	0.03997
Cr	52	3	He	0.053	0.0416	2020.21	0.0299	0.03997
Cr	52	3	He	0.015	0.0404	1990.21	0.0299	0.03997
Mn	55	3	He	0.61	0.0105	510.03	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.468	0.0086	420.02	0.0128	0.002639
Mn	55	3	He	0.744	0.0122	600.03	0.0128	0.002639
Fe	57	3	He	3.191	0.0033	160.01	0.0006	0.001429
Fe	57	3	He	0.02	0.0014	70.00	0.0006	0.001429
Fe	57	3	He	0.338	0.0016	80.00	0.0006	0.001429
Co	59	3	He	-0.016	0.0012	60.00	0.0563	0.002149
Co	59	3	He	-0.005	0.0019	90.00	0.0563	0.002149
Co	59	3	He	0.005	0.0024	120.00	0.0563	0.002149
Ni	60	3	He	-0.148	0.0016	130.00	0.0086	0.002834
Ni	60	3	He	-0.113	0.0019	160.01	0.0086	0.002834
Ni	60	3	He	-0.016	0.0027	230.01	0.0086	0.002834
Cu	63	3	He	0.072	0.0066	550.03	0.0257	0.004757
Cu	63	3	He	0.078	0.0068	580.03	0.0257	0.004757
Cu	63	3	He	0.107	0.0075	640.04	0.0257	0.004757
Zn	66	3	He	3.851	0.015	1250.09	0.0029	0.003818
Zn	66	3	He	4.493	0.0169	1450.12	0.0029	0.003818
Zn	66	3	He	4.409	0.0167	1420.11	0.0029	0.003818
As	75	3	He	0.264	0.0013	112.00	0.002	0.0008061
As	75	3	He	0.153	0.0011	96.00	0.002	0.0008061
As	75	3	He	0.305	0.0014	122.00	0.002	0.0008061
Sr	88	3	He	0.815	0.0083	730.04	0.009	0.0009645
Sr	88	3	He	0.625	0.0066	580.03	0.009	0.0009645
Sr	88	3	He	0.379	0.0044	380.02	0.009	0.0009645
Mo	98	3	He	0.039	0.0011	100.00	0.0219	0.0002706
Mo	98	3	He	0.06	0.0016	140.01	0.0219	0.0002706
Mo	98	3	He	0.061	0.0016	140.01	0.0219	0.0002706
Ag	107	3	He	0.009	0.001	90.00	0.0465	0.0006206
Ag	107	3	He	0.004	0.0008	70.00	0.0465	0.0006206
Ag	107	3	He	0.004	0.0008	70.00	0.0465	0.0006206
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Sn	120	3	He	0.155	0.0189	1670.15	0.0158	0.01648
Sn	120	3	He	0.097	0.018	1590.14	0.0158	0.01648
Sn	120	3	He	-0.025	0.0161	1400.13	0.0158	0.01648
Sb	121	3	He	-0.018	0	0.00	0.0149	0.0002698
Sb	121	3	He	0.02	0.0006	50.00	0.0149	0.0002698
Sb	121	3	He	0.021	0.0006	50.00	0.0149	0.0002698
Ba	137	3	He	0.117	0.0008	70.00	0.0048	0.0002317
Ba	137	3	He	-0.001	0.0002	20.00	0.0048	0.0002317
Ba	137	3	He	0.047	0.0005	40.00	0.0048	0.0002317
Tl	205	3	He	0.006	0.0003	110.00	0.0247	0.0001339
Tl	205	3	He	0.005	0.0003	100.00	0.0247	0.0001339
Tl	205	3	He	0.015	0.0005	200.01	0.0247	0.0001339
Pb	208	3	He	0.013	0.0015	370.02	0.0327	0.00107
Pb	208	3	He	0.009	0.0014	320.02	0.0327	0.00107
Pb	208	3	He	0.013	0.0015	330.02	0.0327	0.00107
U	238	3	He	0.016	0.0008	260.01	0.0493	7.55E-05
U	238	3	He	0.012	0.0007	210.01	0.0493	7.55E-05
U	238	3	He	0.011	0.0006	190.01	0.0493	7.55E-05
Sc	45	1	No Gas			2480301.21		
Sc	45	1	No Gas			2477214.65		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2522525.43		
Ge	72	1	No Gas			1242449.20		
Ge	72	1	No Gas			1264221.07		
Ge	72	1	No Gas			1261166.39		
Sc	45	2	H2			195679.76		
Sc	45	2	H2			196247.59		
Sc	45	2	H2			193054.25		
Ge	72	2	H2			166642.69		
Ge	72	2	H2			168634.57		
Ge	72	2	H2			165215.88		
In	115	2	H2			396748.43		
In	115	2	H2			398972.81		
In	115	2	H2			395271.21		
Sc	45	3	He			48742.33		
Sc	45	3	He			48601.80		
Sc	45	3	He			49223.89		
Ge	72	3	He			83171.43		
Ge	72	3	He			85807.36		
Ge	72	3	He			85263.89		
In	115	3	He			88249.74		
In	115	3	He			88341.15		
In	115	3	He			87051.70		
Tb	159	3	He			399011.91		
Tb	159	3	He			399600.97		
Tb	159	3	He			394897.88		
Bi	209	3	He			307472.07		
Bi	209	3	He			308949.55		
Bi	209	3	He			309147.07		

Quantitation Report

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Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

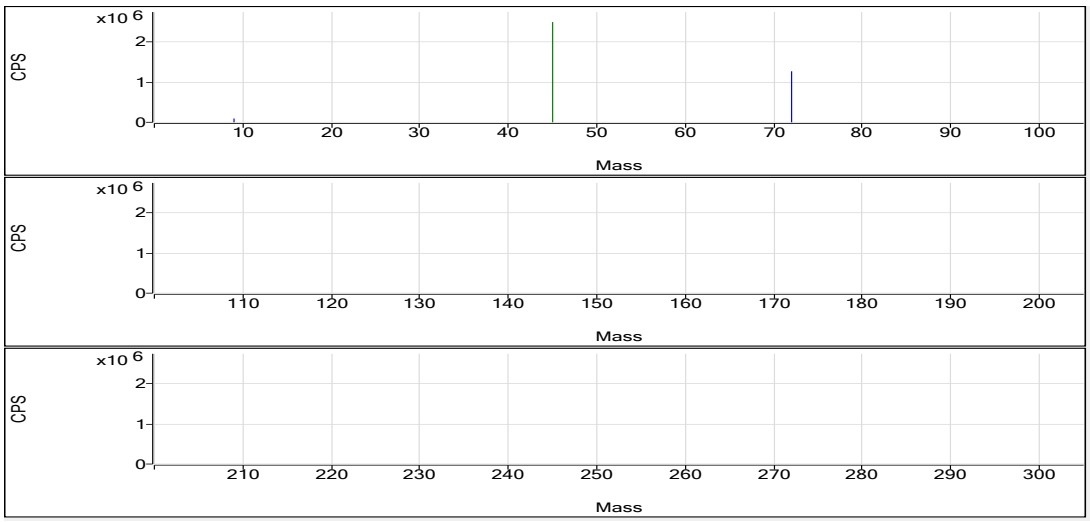
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	49.569	ppb	0.6	94197.86	0.0378	Pulse	0.5000	3
Se	78	72	H2	51.486	ppb	0.7	3577.12	0.0215	Pulse	1.5000	3
Na	23	45	He	5099.643	ppb	1.1	903906.21	18.5868	Pulse	0.1000	3
Mg	24	45	He	5059.108	ppb	0.6	441634.56	9.0812	Pulse	0.1000	3
Al	27	45	He	5041.350	ppb	0.6	143466.21	2.9500	Pulse	0.1000	3
K	39	45	He	5104.626	ppb	0.9	308259.03	6.3385	Pulse	0.1000	3
Ca	44	45	He	5250.486	ppb	1.5	17380.89	0.3574	Pulse	0.1000	3
Ti	47	45	He	5128.178	ppb	0.8	133915.77	2.7536	Pulse	0.1000	3
V	51	45	He	508.607	ppb	0.6	541886.90	11.1426	Pulse	0.5000	3
Cr	52	45	He	483.787	ppb	0.3	706376.89	14.5249	Pulse	0.1000	3
Mn	55	45	He	504.396	ppb	0.1	314943.36	6.4760	Pulse	0.1000	3
Fe	57	45	He	4967.435	ppb	0.8	140422.12	2.8875	Pulse	0.1000	3
Co	59	45	He	483.941	ppb	0.5	1324717.43	27.2395	Pulse	0.1000	3
Ni	60	72	He	523.096	ppb	0.6	373514.76	4.4926	Pulse	0.1000	3
Cu	63	72	He	496.058	ppb	1.0	1059094.36	12.7391	Pulse	0.1000	3
Zn	66	72	He	519.088	ppb	1.5	125966.42	1.5152	Pulse	0.1000	3
As	75	72	He	526.254	ppb	0.4	89710.67	1.0790	Pulse	0.5000	3
Sr	88	115	He	51.718	ppb	0.8	40401.73	0.4649	Pulse	0.1000	3
Mo	98	115	He	50.927	ppb	2.6	97048.56	1.1169	Pulse	0.1000	3
Ag	107	115	He	50.787	ppb	1.3	205203.07	2.3616	Pulse	0.1000	3
Cd	111	115	He	50.934	ppb	0.7	23665.39	0.2723	Pulse	0.5000	3
Sn	120	115	He	51.498	ppb	2.9	72117.81	0.8301	Pulse	0.1000	3
Sb	121	115	He	50.959	ppb	1.9	65790.13	0.7572	Pulse	0.1000	3
Ba	137	115	He	523.744	ppb	1.4	218431.54	2.5139	Pulse	0.1000	3
Tl	205	159	He	51.112	ppb	0.5	506099.48	1.2640	Pulse	0.1000	3
Pb	208	159	He	51.257	ppb	0.4	672153.49	1.6787	Pulse	0.1000	3
U	238	209	He	50.432	ppb	0.3	762268.43	2.4843	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2491086.37	0.8	103.8	Analog	0.1000	3
No Gas	Ge	72	1267666.99	0.9	109.9	Pulse	0.1000	3
H2	Sc	45	190689.94	0.8	102.0	Pulse	0.1000	3
H2	Ge	72	166493.23	0.5	101.7	Pulse	0.1000	3
H2	In	115	393929.17	0.1	101.2	Pulse	0.1000	3
He	Sc	45	48632.34	0.3	104.3	Pulse	0.1000	3
He	Ge	72	83141.55	0.8	102.4	Pulse	0.1000	3
He	In	115	86903.00	1.5	100.8	Pulse	0.1000	3
He	Tb	159	400404.39	0.5	100.5	Pulse	0.1000	3
He	Bi	209	306837.29	0.9	99.2	Pulse	0.1000	3

No Gas



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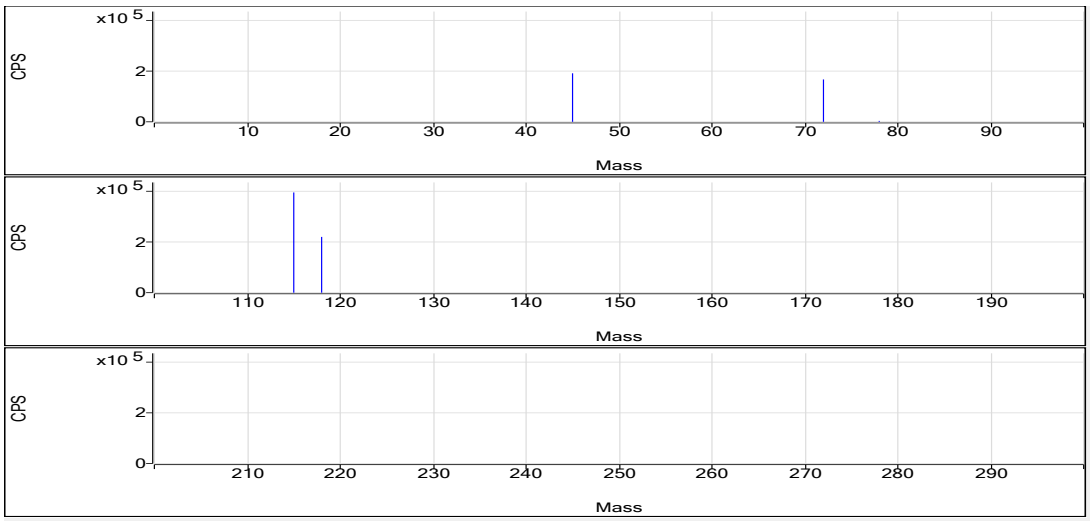
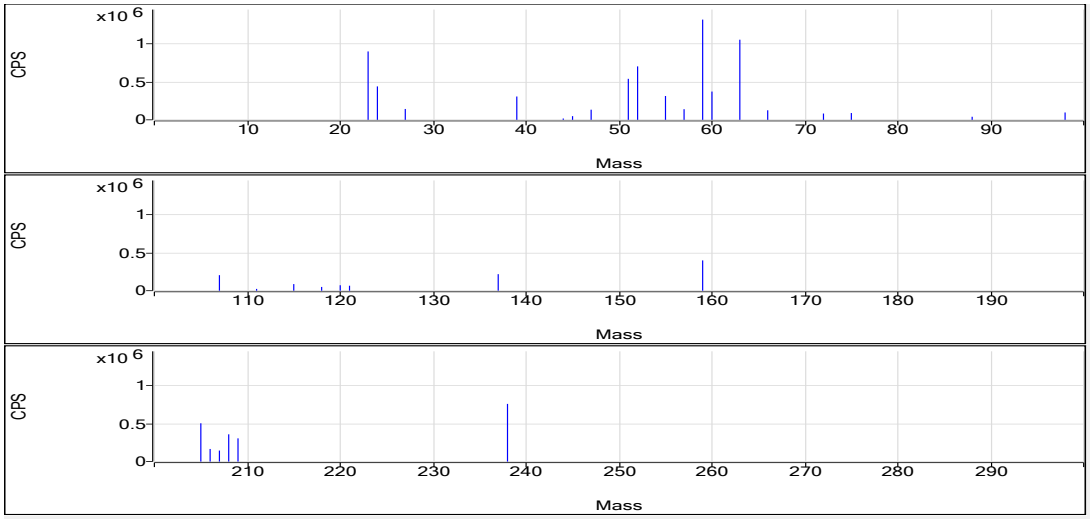


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	49.747	0.038	94389.10	0.0008	4.685E-06
Be	9	1	No Gas	49.715	0.0379	93815.51	0.0008	4.685E-06
Be	9	1	No Gas	49.244	0.0376	94388.98	0.0008	4.685E-06
Se	78	2	H2	51.088	0.0213	3553.78	0.0004	1.219E-05
Se	78	2	H2	51.651	0.0216	3569.12	0.0004	1.219E-05
Se	78	2	H2	51.717	0.0216	3608.46	0.0004	1.219E-05
Na	23	3	He	5162.186	18.8106	911788.58	0.0036	0.3452
Na	23	3	He	5089.739	18.5514	904802.02	0.0036	0.3452
Na	23	3	He	5047.004	18.3985	895128.03	0.0036	0.3452
Mg	24	3	He	5070.054	9.1008	441135.97	0.0018	0.003497
Mg	24	3	He	5023.688	9.0176	439813.20	0.0018	0.003497
Mg	24	3	He	5083.583	9.1251	443954.52	0.0018	0.003497
Al	27	3	He	5048.282	2.9541	143189.94	0.0006	0.0006432
Al	27	3	He	5069.252	2.9663	144676.04	0.0006	0.0006432
Al	27	3	He	5006.515	2.9296	142532.64	0.0006	0.0006432
K	39	3	He	5104.171	6.338	307216.21	0.0012	0.3951
K	39	3	He	5148.589	6.3897	311643.18	0.0012	0.3951
K	39	3	He	5061.117	6.2879	305917.71	0.0012	0.3951
Ca	44	3	He	5228.167	0.3559	17250.65	0.0001	0.002715
Ca	44	3	He	5186.622	0.3531	17220.72	0.0001	0.002715
Ca	44	3	He	5336.671	0.3632	17671.29	0.0001	0.002715
Ti	47	3	He	5150.01	2.7654	134043.20	0.0005	7.003E-05
Ti	47	3	He	5151.825	2.7663	134921.77	0.0005	7.003E-05
Ti	47	3	He	5082.698	2.7292	132782.35	0.0005	7.003E-05
V	51	3	He	511.734	11.2109	543418.88	0.0219	0.02486
V	51	3	He	508.841	11.1477	543703.75	0.0219	0.02486
V	51	3	He	505.248	11.0692	538538.06	0.0219	0.02486
Cr	52	3	He	485.307	14.5704	706260.38	0.0299	0.03997
Cr	52	3	He	483.188	14.507	707544.36	0.0299	0.03997
Cr	52	3	He	482.866	14.4973	705325.93	0.0299	0.03997
Mn	55	3	He	504.223	6.4738	313797.85	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	504.933	6.4829	316187.83	0.0128	0.002639
Mn	55	3	He	504.033	6.4713	314844.41	0.0128	0.002639
Fe	57	3	He	5014.508	2.9148	141287.33	0.0006	0.001429
Fe	57	3	He	4954.379	2.8799	140459.41	0.0006	0.001429
Fe	57	3	He	4933.417	2.8677	139519.63	0.0006	0.001429
Co	59	3	He	483.221	27.1989	1318392.32	0.0563	0.002149
Co	59	3	He	481.992	27.1297	1323190.76	0.0563	0.002149
Co	59	3	He	486.611	27.3897	1332569.20	0.0563	0.002149
Ni	60	3	He	520.352	4.4691	373680.07	0.0086	0.002834
Ni	60	3	He	522.595	4.4883	374295.70	0.0086	0.002834
Ni	60	3	He	526.341	4.5205	372568.51	0.0086	0.002834
Cu	63	3	He	491.48	12.6216	1055343.50	0.0257	0.004757
Cu	63	3	He	495.334	12.7205	1060799.52	0.0257	0.004757
Cu	63	3	He	501.358	12.8752	1061140.06	0.0257	0.004757
Zn	66	3	He	513.755	1.4997	125394.20	0.0029	0.003818
Zn	66	3	He	515.29	1.5041	125434.73	0.0029	0.003818
Zn	66	3	He	528.218	1.5418	127070.34	0.0029	0.003818
As	75	3	He	524.488	1.0754	89919.93	0.002	0.0008061
As	75	3	He	525.811	1.0781	89907.77	0.002	0.0008061
As	75	3	He	528.464	1.0836	89304.30	0.002	0.0008061
Sr	88	3	He	51.448	0.4624	39746.61	0.009	0.0009645
Sr	88	3	He	52.222	0.4694	41471.32	0.009	0.0009645
Sr	88	3	He	51.485	0.4628	39987.27	0.009	0.0009645
Mo	98	3	He	50.558	1.1088	95303.11	0.0219	0.0002706
Mo	98	3	He	49.837	1.093	96571.95	0.0219	0.0002706
Mo	98	3	He	52.385	1.1489	99270.61	0.0219	0.0002706
Ag	107	3	He	51.062	2.3744	204075.31	0.0465	0.0006206
Ag	107	3	He	50.035	2.3266	205563.43	0.0465	0.0006206
Ag	107	3	He	51.264	2.3837	205970.47	0.0465	0.0006206
Cd	111	3	He	51.131	0.2734	23497.79	0.0053	0
Cd	111	3	He	50.533	0.2702	23872.41	0.0053	0
Cd	111	3	He	51.138	0.2734	23625.97	0.0053	0
Sn	120	3	He	53.082	0.8551	73494.84	0.0158	0.01648
Sn	120	3	He	50.054	0.8073	71323.71	0.0158	0.01648
Sn	120	3	He	51.359	0.8279	71534.87	0.0158	0.01648
Sb	121	3	He	51.442	0.7644	65696.59	0.0149	0.0002698
Sb	121	3	He	49.866	0.741	65465.63	0.0149	0.0002698
Sb	121	3	He	51.568	0.7662	66208.18	0.0149	0.0002698
Ba	137	3	He	530.114	2.5444	218691.91	0.0048	0.0002317
Ba	137	3	He	515.671	2.4751	218683.40	0.0048	0.0002317
Ba	137	3	He	525.445	2.522	217919.31	0.0048	0.0002317
Tl	205	3	He	50.814	1.2566	500931.98	0.0247	0.0001339
Tl	205	3	He	51.21	1.2664	509933.31	0.0247	0.0001339
Tl	205	3	He	51.313	1.2689	507433.16	0.0247	0.0001339
Pb	208	3	He	51.486	1.6862	358808.24	0.0327	0.00107
Pb	208	3	He	51.063	1.6723	362487.92	0.0327	0.00107
Pb	208	3	He	51.223	1.6776	359184.53	0.0327	0.00107
U	238	3	He	50.612	2.4932	757557.57	0.0493	7.55E-05
U	238	3	He	50.271	2.4764	766041.08	0.0493	7.55E-05
U	238	3	He	50.411	2.4833	763206.63	0.0493	7.55E-05
Sc	45	1	No Gas			2487135.43		
Sc	45	1	No Gas			2473609.65		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2512514.03		
Ge	72	1	No Gas			1278093.50		
Ge	72	1	No Gas			1256072.25		
Ge	72	1	No Gas			1268835.22		
Sc	45	2	H2			192368.22		
Sc	45	2	H2			190222.03		
Sc	45	2	H2			189479.57		
Ge	72	2	H2			166691.62		
Ge	72	2	H2			165589.41		
Ge	72	2	H2			167198.65		
In	115	2	H2			393421.05		
In	115	2	H2			394373.39		
In	115	2	H2			393993.08		
Sc	45	3	He			48472.19		
Sc	45	3	He			48772.70		
Sc	45	3	He			48652.12		
Ge	72	3	He			83614.28		
Ge	72	3	He			83392.79		
Ge	72	3	He			82417.58		
In	115	3	He			86337.39		
In	115	3	He			88742.32		
In	115	3	He			86790.69		
Tb	159	3	He			398643.86		
Tb	159	3	He			402675.89		
Tb	159	3	He			399893.43		
Bi	209	3	He			303848.37		
Bi	209	3	He			309332.03		
Bi	209	3	He			307331.46		

Quantitation Report

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Sample Type	CCB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

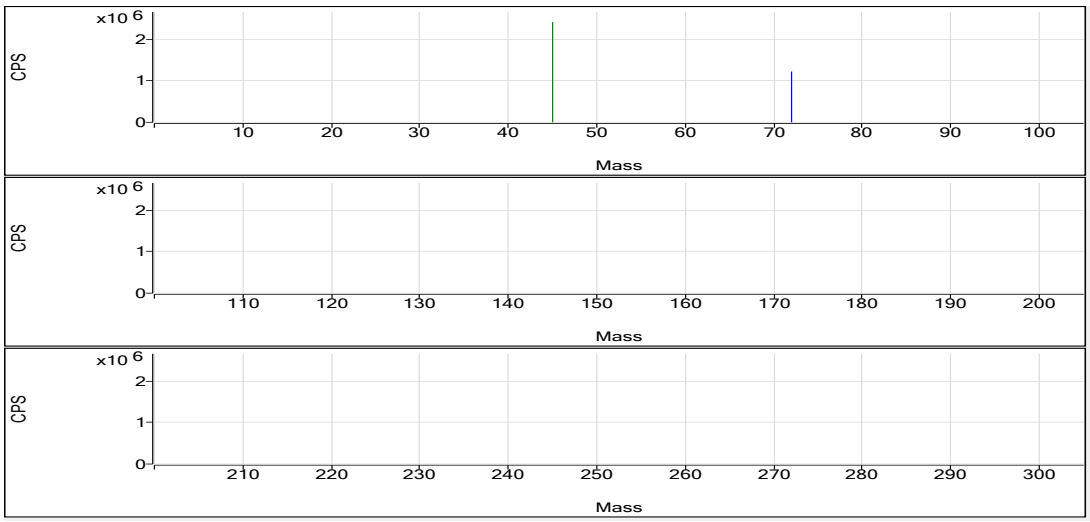
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.022	ppb	42.0	51.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.047	ppb	23.7	5.11	0.0000	Pulse	1.5000	3
Na	23	45	He	210.108	ppb	2.6	52982.14	1.0967	Pulse	0.1000	3
Mg	24	45	He	5.557	ppb	11.6	650.04	0.0135	Pulse	0.1000	3
Al	27	45	He	1.481	ppb	66.2	73.33	0.0015	Pulse	0.1000	3
K	39	45	He	1.738	ppb	898.7	19173.23	0.3971	Pulse	0.1000	3
Ca	44	45	He	16.790	ppb	92.5	186.68	0.0038	Pulse	0.1000	3
Ti	47	45	He	0.521	ppb	115.4	16.67	0.0003	Pulse	0.1000	3
V	51	45	He	1.189	ppb	3.1	2456.22	0.0508	Pulse	0.5000	3
Cr	52	45	He	-0.038	ppb	N/A	1880.18	0.0388	Pulse	0.1000	3
Mn	55	45	He	0.542	ppb	11.2	463.36	0.0096	Pulse	0.1000	3
Fe	57	45	He	2.160	ppb	38.7	130.01	0.0027	Pulse	0.1000	3
Co	59	45	He	0.052	ppb	41.2	246.68	0.0051	Pulse	0.1000	3
Ni	60	72	He	-0.081	ppb	N/A	176.68	0.0021	Pulse	0.1000	3
Cu	63	72	He	0.082	ppb	52.7	566.70	0.0069	Pulse	0.1000	3
Zn	66	72	He	3.832	ppb	12.0	1236.76	0.0150	Pulse	0.1000	3
As	75	72	He	0.338	ppb	33.3	124.00	0.0015	Pulse	0.5000	3
Sr	88	115	He	0.174	ppb	32.8	216.68	0.0025	Pulse	0.1000	3
Mo	98	115	He	0.048	ppb	6.0	113.34	0.0013	Pulse	0.1000	3
Ag	107	115	He	0.003	ppb	353.3	66.67	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.012	ppb	56.4	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.048	ppb	101.1	1483.47	0.0172	Pulse	0.1000	3
Sb	121	115	He	0.042	ppb	26.6	76.67	0.0009	Pulse	0.1000	3
Ba	137	115	He	0.016	ppb	87.7	26.67	0.0003	Pulse	0.1000	3
Tl	205	159	He	0.078	ppb	7.6	816.72	0.0021	Pulse	0.1000	3
Pb	208	159	He	0.013	ppb	28.7	596.69	0.0015	Pulse	0.1000	3
U	238	209	He	0.047	ppb	7.1	733.39	0.0024	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2418961.84	1.0	100.8	Analog	0.1000	3
No Gas	Ge	72	1225147.85	0.1	106.2	Pulse	0.1000	3
H2	Sc	45	190269.84	1.3	101.7	Pulse	0.1000	3
H2	Ge	72	160985.84	1.3	98.3	Pulse	0.1000	3
H2	In	115	391774.20	0.3	100.7	Pulse	0.1000	3
He	Sc	45	48317.41	2.3	103.6	Pulse	0.1000	3
He	Ge	72	82665.80	1.8	101.8	Pulse	0.1000	3
He	In	115	86039.99	1.6	99.8	Pulse	0.1000	3
He	Tb	159	395713.17	0.3	99.3	Pulse	0.1000	3
He	Bi	209	306183.35	0.5	99.0	Pulse	0.1000	3

No Gas



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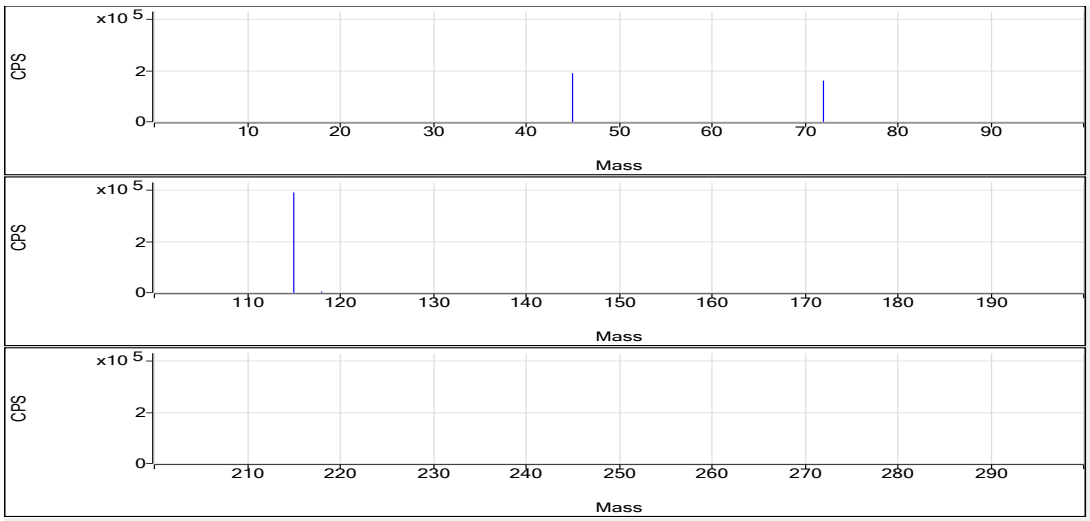
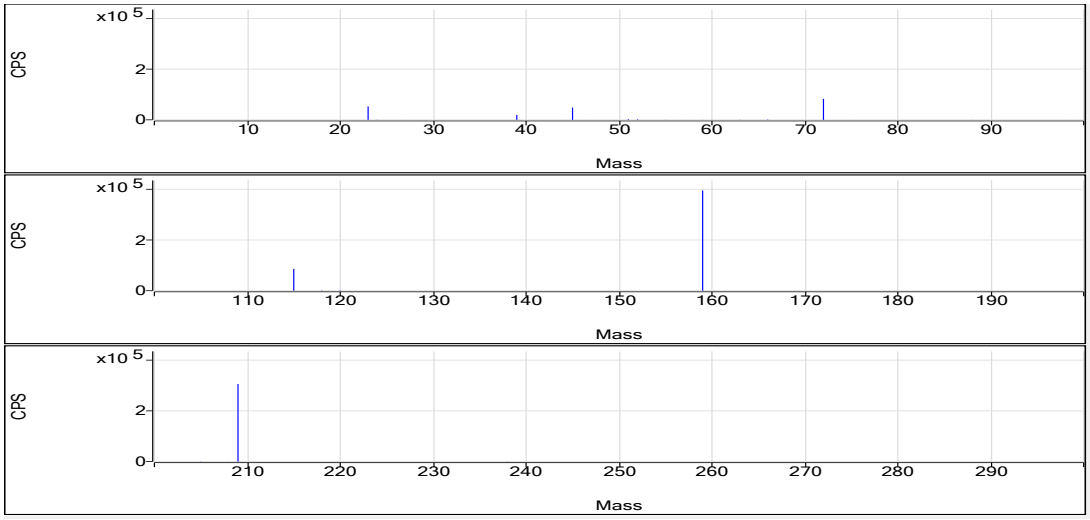


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.026	0	60.00	0.0008	4.685E-06
Be	9	1	No Gas	0.028	0	62.00	0.0008	4.685E-06
Be	9	1	No Gas	0.011	0	32.00	0.0008	4.685E-06
Se	78	2	H2	0.04	0	4.67	0.0004	1.219E-05
Se	78	2	H2	0.06	0	6.00	0.0004	1.219E-05
Se	78	2	H2	0.041	0	4.67	0.0004	1.219E-05
Na	23	3	He	209.568	1.0948	54109.34	0.0036	0.3452
Na	23	3	He	215.717	1.1168	52664.30	0.0036	0.3452
Na	23	3	He	205.039	1.0786	52172.79	0.0036	0.3452
Mg	24	3	He	4.817	0.0121	600.03	0.0018	0.003497
Mg	24	3	He	5.852	0.014	660.04	0.0018	0.003497
Mg	24	3	He	6.002	0.0143	690.04	0.0018	0.003497
Al	27	3	He	2.013	0.0018	90.00	0.0006	0.0006432
Al	27	3	He	0.35	0.0008	40.00	0.0006	0.0006432
Al	27	3	He	2.081	0.0019	90.00	0.0006	0.0006432
K	39	3	He	-15.696	0.3768	18622.61	0.0012	0.3951
K	39	3	He	14.449	0.4119	19423.47	0.0012	0.3951
K	39	3	He	6.46	0.4026	19473.62	0.0012	0.3951
Ca	44	3	He	34.692	0.0051	250.01	0.0001	0.002715
Ca	44	3	He	6.9	0.0032	150.01	0.0001	0.002715
Ca	44	3	He	8.779	0.0033	160.01	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	1.054	0.0006	30.00	0.0005	7.003E-05
Ti	47	3	He	0.64	0.0004	20.00	0.0005	7.003E-05
V	51	3	He	1.149	0.05	2470.23	0.0219	0.02486
V	51	3	He	1.22	0.0515	2430.22	0.0219	0.02486
V	51	3	He	1.197	0.051	2468.22	0.0219	0.02486
Cr	52	3	He	0.084	0.0425	2100.20	0.0299	0.03997
Cr	52	3	He	-0.216	0.0335	1580.14	0.0299	0.03997
Cr	52	3	He	0.018	0.0405	1960.20	0.0299	0.03997
Mn	55	3	He	0.472	0.0087	430.02	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.571	0.01	470.03	0.0128	0.002639
Mn	55	3	He	0.584	0.0101	490.03	0.0128	0.002639
Fe	57	3	He	3.113	0.0032	160.01	0.0006	0.001429
Fe	57	3	He	1.556	0.0023	110.00	0.0006	0.001429
Fe	57	3	He	1.811	0.0025	120.01	0.0006	0.001429
Co	59	3	He	0.077	0.0065	320.02	0.0563	0.002149
Co	59	3	He	0.037	0.0042	200.01	0.0563	0.002149
Co	59	3	He	0.043	0.0045	220.01	0.0563	0.002149
Ni	60	3	He	-0.067	0.0023	190.01	0.0086	0.002834
Ni	60	3	He	-0.043	0.0025	200.01	0.0086	0.002834
Ni	60	3	He	-0.133	0.0017	140.01	0.0086	0.002834
Cu	63	3	He	0.088	0.007	590.03	0.0257	0.004757
Cu	63	3	He	0.122	0.0079	640.04	0.0257	0.004757
Cu	63	3	He	0.036	0.0057	470.02	0.0257	0.004757
Zn	66	3	He	3.631	0.0144	1210.10	0.0029	0.003818
Zn	66	3	He	4.359	0.0165	1340.11	0.0029	0.003818
Zn	66	3	He	3.505	0.014	1160.08	0.0029	0.003818
As	75	3	He	0.349	0.0015	128.00	0.002	0.0008061
As	75	3	He	0.22	0.0013	102.00	0.002	0.0008061
As	75	3	He	0.444	0.0017	142.00	0.002	0.0008061
Sr	88	3	He	0.123	0.0021	180.01	0.009	0.0009645
Sr	88	3	He	0.236	0.0031	260.01	0.009	0.0009645
Sr	88	3	He	0.163	0.0024	210.01	0.009	0.0009645
Mo	98	3	He	0.045	0.0013	110.00	0.0219	0.0002706
Mo	98	3	He	0.047	0.0013	110.00	0.0219	0.0002706
Mo	98	3	He	0.051	0.0014	120.01	0.0219	0.0002706
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Ag	107	3	He	0.017	0.0014	120.00	0.0465	0.0006206
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Cd	111	3	He	0.017	0.0001	8.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.013	0.0001	6.00	0.0053	0
Sn	120	3	He	0.019	0.0168	1460.13	0.0158	0.01648
Sn	120	3	He	0.021	0.0168	1420.13	0.0158	0.01648
Sn	120	3	He	0.105	0.0181	1570.15	0.0158	0.01648
Sb	121	3	He	0.051	0.001	90.00	0.0149	0.0002698
Sb	121	3	He	0.03	0.0007	60.00	0.0149	0.0002698
Sb	121	3	He	0.044	0.0009	80.00	0.0149	0.0002698
Ba	137	3	He	0.024	0.0003	30.00	0.0048	0.0002317
Ba	137	3	He	0.026	0.0004	30.00	0.0048	0.0002317
Ba	137	3	He	0	0.0002	20.00	0.0048	0.0002317
Tl	205	3	He	0.073	0.0019	760.06	0.0247	0.0001339
Tl	205	3	He	0.084	0.0022	880.05	0.0247	0.0001339
Tl	205	3	He	0.077	0.002	810.05	0.0247	0.0001339
Pb	208	3	He	0.016	0.0016	290.01	0.0327	0.00107
Pb	208	3	He	0.015	0.0016	370.02	0.0327	0.00107
Pb	208	3	He	0.009	0.0014	340.02	0.0327	0.00107
U	238	3	He	0.046	0.0023	720.05	0.0493	7.55E-05
U	238	3	He	0.044	0.0023	690.05	0.0493	7.55E-05
U	238	3	He	0.051	0.0026	790.06	0.0493	7.55E-05
Sc	45	1	No Gas			2445390.90		
Sc	45	1	No Gas			2396008.25		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2415486.37		
Ge	72	1	No Gas			1223602.33		
Ge	72	1	No Gas			1225463.26		
Ge	72	1	No Gas			1226377.95		
Sc	45	2	H2			187363.81		
Sc	45	2	H2			191829.12		
Sc	45	2	H2			191616.60		
Ge	72	2	H2			162618.31		
Ge	72	2	H2			161748.12		
Ge	72	2	H2			158591.08		
In	115	2	H2			391550.03		
In	115	2	H2			390564.99		
In	115	2	H2			393207.57		
Sc	45	3	He			49424.25		
Sc	45	3	He			47156.90		
Sc	45	3	He			48371.07		
Ge	72	3	He			84097.36		
Ge	72	3	He			81171.00		
Ge	72	3	He			82729.05		
In	115	3	He			87041.69		
In	115	3	He			84487.41		
In	115	3	He			86620.15		
Tb	159	3	He			394470.97		
Tb	159	3	He			396854.33		
Tb	159	3	He			395814.21		
Bi	209	3	He			307881.83		
Bi	209	3	He			304660.15		
Bi	209	3	He			306008.08		

Quantitation Report

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Auto Dilution	1.0000
Total Dilution	1.0000
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Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

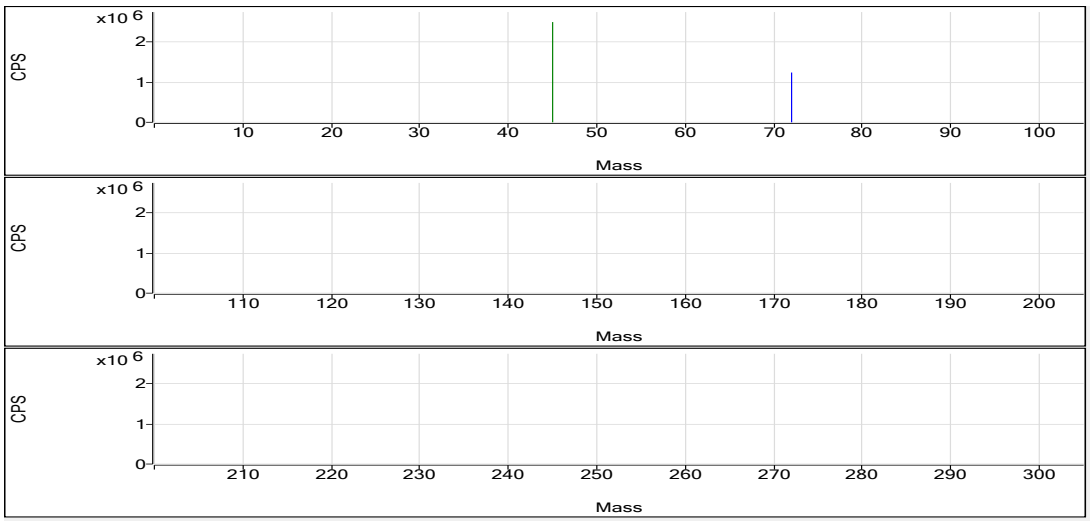
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.012	ppb	16.4	34.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	1.062	ppb	3.3	77.56	0.0005	Pulse	1.5000	3
Na	23	45	He	237862.414	ppb	1.5	41008996.06	851.1907	Analog	0.1000	3
Mg	24	45	He	27571.726	ppb	2.2	2383539.23	49.4760	Analog	0.1000	3
Al	27	45	He	9.805	ppb	41.4	306.68	0.0064	Pulse	0.1000	3
K	39	45	He	40744.376	ppb	1.9	2304500.28	47.8348	Analog	0.1000	3
Ca	44	45	He	39978.748	ppb	2.1	130235.39	2.7034	Pulse	0.1000	3
Ti	47	45	He	0.637	ppb	121.1	20.00	0.0004	Pulse	0.1000	3
V	51	45	He	6.898	ppb	4.1	8460.51	0.1756	Pulse	0.5000	3
Cr	52	45	He	-0.023	ppb	N/A	1893.52	0.0393	Pulse	0.1000	3
Mn	55	45	He	7577.321	ppb	2.2	4684976.39	97.2490	Analog	0.1000	3
Fe	57	45	He	11.968	ppb	15.5	403.35	0.0084	Pulse	0.1000	3
Co	59	45	He	29.350	ppb	1.7	79687.13	1.6540	Pulse	0.1000	3
Ni	60	72	He	5.273	ppb	3.9	4157.44	0.0481	Pulse	0.1000	3
Cu	63	72	He	0.265	ppb	4.4	1000.07	0.0116	Pulse	0.1000	3
Zn	66	72	He	5.893	ppb	5.2	1813.52	0.0210	Pulse	0.1000	3
As	75	72	He	0.713	ppb	16.4	196.00	0.0023	Pulse	0.5000	3
Sr	88	115	He	311.001	ppb	1.3	240814.25	2.7906	Pulse	0.1000	3
Mo	98	115	He	0.885	ppb	7.1	1696.82	0.0197	Pulse	0.1000	3
Ag	107	115	He	-0.001	ppb	N/A	50.00	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.036	ppb	25.2	16.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.287	ppb	N/A	1030.08	0.0119	Pulse	0.1000	3
Sb	121	115	He	0.258	ppb	15.9	353.35	0.0041	Pulse	0.1000	3
Ba	137	115	He	23.598	ppb	1.9	9793.90	0.1135	Pulse	0.1000	3
Tl	205	159	He	0.052	ppb	12.1	566.70	0.0014	Pulse	0.1000	3
Pb	208	159	He	0.034	ppb	18.1	873.38	0.0022	Pulse	0.1000	3
U	238	209	He	0.011	ppb	14.4	193.34	0.0006	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2495279.39	0.7	104.0	Analog	0.1000	3
No Gas	Ge	72	1238995.61	0.3	107.4	Pulse	0.1000	3
H2	Sc	45	191732.19	0.6	102.5	Pulse	0.1000	3
H2	Ge	72	170402.61	0.8	104.1	Pulse	0.1000	3
H2	In	115	391582.60	0.2	100.6	Pulse	0.1000	3
He	Sc	45	48187.38	1.8	103.3	Pulse	0.1000	3
He	Ge	72	86447.83	0.4	106.5	Pulse	0.1000	3
He	In	115	86298.03	0.8	100.1	Pulse	0.1000	3
He	Tb	159	397607.86	0.6	99.7	Pulse	0.1000	3
He	Bi	209	304999.24	0.3	98.6	Pulse	0.1000	3

No Gas



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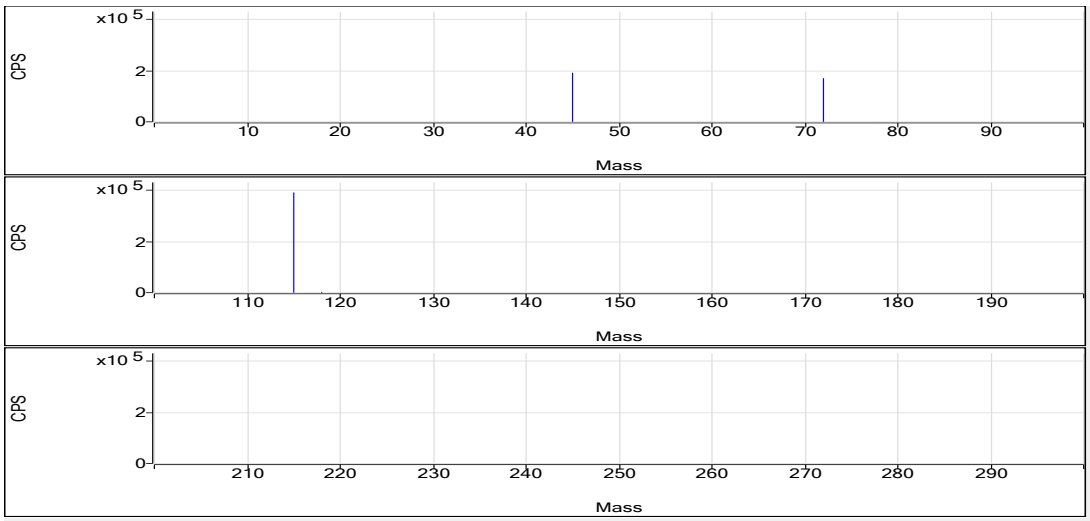
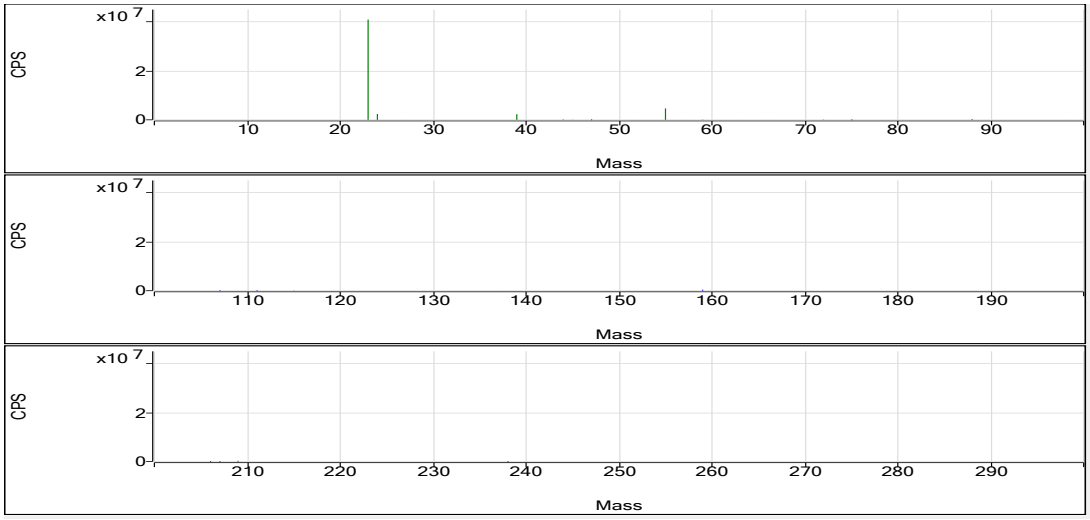


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.011	0	32.00	0.0008	4.685E-06
Be	9	1	No Gas	0.014	0	38.00	0.0008	4.685E-06
Be	9	1	No Gas	0.011	0	32.00	0.0008	4.685E-06
Se	78	2	H2	1.022	0.0004	74.67	0.0004	1.219E-05
Se	78	2	H2	1.077	0.0005	78.00	0.0004	1.219E-05
Se	78	2	H2	1.087	0.0005	80.00	0.0004	1.219E-05
Na	23	3	He	234420.839	838.88	41116234.39	0.0036	0.3452
Na	23	3	He	237457.572	849.7425	41026571.89	0.0036	0.3452
Na	23	3	He	241708.832	864.9495	40884181.89	0.0036	0.3452
Mg	24	3	He	26908.684	48.2863	2366670.43	0.0018	0.003497
Mg	24	3	He	27753.592	49.8024	2404517.46	0.0018	0.003497
Mg	24	3	He	28052.902	50.3394	2379429.81	0.0018	0.003497
Al	27	3	He	10.061	0.0065	320.02	0.0006	0.0006432
Al	27	3	He	5.627	0.0039	190.01	0.0006	0.0006432
Al	27	3	He	13.728	0.0087	410.02	0.0006	0.0006432
K	39	3	He	40075.412	47.0559	2306364.34	0.0012	0.3951
K	39	3	He	40536.945	47.5933	2297861.22	0.0012	0.3951
K	39	3	He	41620.772	48.8552	2309275.28	0.0012	0.3951
Ca	44	3	He	39259.232	2.6548	130117.97	0.0001	0.002715
Ca	44	3	He	39805.552	2.6917	129956.32	0.0001	0.002715
Ca	44	3	He	40871.461	2.7637	130631.88	0.0001	0.002715
Ti	47	3	He	0.63	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	1.413	0.0008	40.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	6.767	0.1728	8468.51	0.0219	0.02486
V	51	3	He	6.706	0.1715	8278.41	0.0219	0.02486
V	51	3	He	7.219	0.1827	8634.61	0.0219	0.02486
Cr	52	3	He	-0.054	0.0384	1880.18	0.0299	0.03997
Cr	52	3	He	0.111	0.0433	2090.23	0.0299	0.03997
Cr	52	3	He	-0.127	0.0362	1710.15	0.0299	0.03997
Mn	55	3	He	7390.361	94.8496	4648887.74	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	7622.611	97.8303	4723361.80	0.0128	0.002639
Mn	55	3	He	7718.99	99.0672	4682679.62	0.0128	0.002639
Fe	57	3	He	9.832	0.0071	350.02	0.0006	0.001429
Fe	57	3	He	12.871	0.0089	430.02	0.0006	0.001429
Fe	57	3	He	13.199	0.0091	430.02	0.0006	0.001429
Co	59	3	He	28.773	1.6216	79479.03	0.0563	0.002149
Co	59	3	He	29.54	1.6647	80374.73	0.0563	0.002149
Co	59	3	He	29.735	1.6757	79207.63	0.0563	0.002149
Ni	60	3	He	5.283	0.0482	4150.78	0.0086	0.002834
Ni	60	3	He	5.474	0.0498	4300.79	0.0086	0.002834
Ni	60	3	He	5.063	0.0463	4020.75	0.0086	0.002834
Cu	63	3	He	0.253	0.0113	970.07	0.0257	0.004757
Cu	63	3	He	0.266	0.0116	1000.07	0.0257	0.004757
Cu	63	3	He	0.277	0.0119	1030.08	0.0257	0.004757
Zn	66	3	He	5.666	0.0203	1750.17	0.0029	0.003818
Zn	66	3	He	5.771	0.0206	1780.17	0.0029	0.003818
Zn	66	3	He	6.242	0.022	1910.23	0.0029	0.003818
As	75	3	He	0.694	0.0022	192.00	0.002	0.0008061
As	75	3	He	0.839	0.0025	218.00	0.002	0.0008061
As	75	3	He	0.607	0.002	178.00	0.002	0.0008061
Sr	88	3	He	307.44	2.7586	240097.79	0.009	0.0009645
Sr	88	3	He	315.166	2.8279	243771.54	0.009	0.0009645
Sr	88	3	He	310.397	2.7852	238573.41	0.009	0.0009645
Mo	98	3	He	0.847	0.0188	1640.15	0.0219	0.0002706
Mo	98	3	He	0.85	0.0189	1630.15	0.0219	0.0002706
Mo	98	3	He	0.957	0.0212	1820.17	0.0219	0.0002706
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Cd	111	3	He	0.039	0.0002	18.00	0.0053	0
Cd	111	3	He	0.026	0.0001	12.00	0.0053	0
Cd	111	3	He	0.044	0.0002	20.00	0.0053	0
Sn	120	3	He	-0.286	0.012	1040.08	0.0158	0.01648
Sn	120	3	He	-0.301	0.0117	1010.07	0.0158	0.01648
Sn	120	3	He	-0.274	0.0121	1040.08	0.0158	0.01648
Sb	121	3	He	0.222	0.0036	310.02	0.0149	0.0002698
Sb	121	3	He	0.302	0.0048	410.02	0.0149	0.0002698
Sb	121	3	He	0.249	0.004	340.02	0.0149	0.0002698
Ba	137	3	He	23.901	0.1149	10003.96	0.0048	0.0002317
Ba	137	3	He	23.069	0.1109	9563.81	0.0048	0.0002317
Ba	137	3	He	23.824	0.1146	9813.93	0.0048	0.0002317
Tl	205	3	He	0.048	0.0013	530.03	0.0247	0.0001339
Tl	205	3	He	0.059	0.0016	640.04	0.0247	0.0001339
Tl	205	3	He	0.049	0.0013	530.03	0.0247	0.0001339
Pb	208	3	He	0.034	0.0022	420.02	0.0327	0.00107
Pb	208	3	He	0.041	0.0024	450.02	0.0327	0.00107
Pb	208	3	He	0.028	0.002	440.02	0.0327	0.00107
U	238	3	He	0.01	0.0006	170.01	0.0493	7.55E-05
U	238	3	He	0.011	0.0006	190.01	0.0493	7.55E-05
U	238	3	He	0.013	0.0007	220.01	0.0493	7.55E-05
Sc	45	1	No Gas			2513564.49		
Sc	45	1	No Gas			2479938.09		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2492335.59		
Ge	72	1	No Gas			1243549.83		
Ge	72	1	No Gas			1237611.15		
Ge	72	1	No Gas			1235825.84		
Sc	45	2	H2			192984.22		
Sc	45	2	H2			190756.56		
Sc	45	2	H2			191455.80		
Ge	72	2	H2			170385.11		
Ge	72	2	H2			169010.60		
Ge	72	2	H2			171812.13		
In	115	2	H2			391763.74		
In	115	2	H2			390869.25		
In	115	2	H2			392114.80		
Sc	45	3	He			49013.25		
Sc	45	3	He			48281.18		
Sc	45	3	He			47267.71		
Ge	72	3	He			86149.47		
Ge	72	3	He			86329.98		
Ge	72	3	He			86864.03		
In	115	3	He			87041.33		
In	115	3	He			86206.92		
In	115	3	He			85663.69		
Tb	159	3	He			399151.44		
Tb	159	3	He			398809.56		
Tb	159	3	He			394862.57		
Bi	209	3	He			304037.36		
Bi	209	3	He			304830.03		
Bi	209	3	He			306130.33		

Quantitation Report

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Sample Type	Sample
Comment	D2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

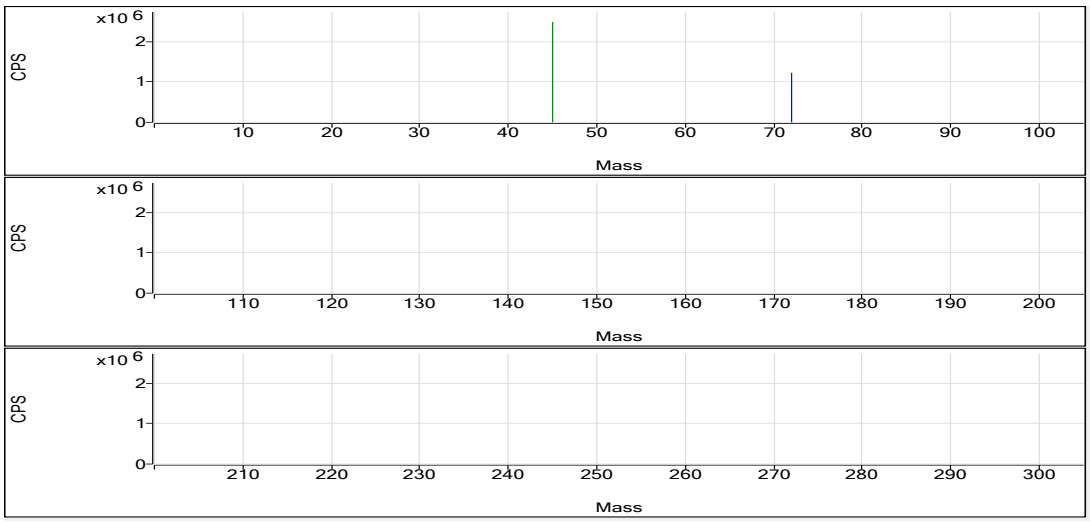
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.006	ppb	77.2	23.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	1.071	ppb	14.9	78.00	0.0005	Pulse	1.5000	3
Na	23	45	He	238228.667	ppb	2.1	41078196.06	852.5008	Analog	0.1000	3
Mg	24	45	He	27228.629	ppb	2.5	2354249.03	48.8604	Analog	0.1000	3
Al	27	45	He	8.487	ppb	14.1	270.01	0.0056	Pulse	0.1000	3
K	39	45	He	40984.449	ppb	2.0	2318472.88	48.1144	Analog	0.1000	3
Ca	44	45	He	39985.208	ppb	2.8	130275.20	2.7038	Pulse	0.1000	3
Ti	47	45	He	-0.130	ppb	N/A	0.00	0.0000	Pulse	0.1000	3
V	51	45	He	6.977	ppb	1.4	8548.56	0.1774	Pulse	0.5000	3
Cr	52	45	He	-0.088	ppb	N/A	1800.18	0.0373	Pulse	0.1000	3
Mn	55	45	He	7510.186	ppb	2.8	4644130.14	96.3874	Analog	0.1000	3
Fe	57	45	He	10.628	ppb	6.4	366.68	0.0076	Pulse	0.1000	3
Co	59	45	He	29.688	ppb	2.4	80632.15	1.6731	Pulse	0.1000	3
Ni	60	72	He	5.054	ppb	3.9	3997.36	0.0462	Pulse	0.1000	3
Cu	63	72	He	0.225	ppb	28.3	910.06	0.0105	Pulse	0.1000	3
Zn	66	72	He	5.136	ppb	13.9	1623.48	0.0188	Pulse	0.1000	3
As	75	72	He	0.570	ppb	6.0	170.67	0.0020	Pulse	0.5000	3
Sr	88	115	He	309.217	ppb	0.9	241026.40	2.7746	Pulse	0.1000	3
Mo	98	115	He	0.929	ppb	4.4	1793.51	0.0206	Pulse	0.1000	3
Ag	107	115	He	-0.002	ppb	N/A	46.67	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.037	ppb	35.5	17.33	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.193	ppb	N/A	1166.75	0.0134	Pulse	0.1000	3
Sb	121	115	He	0.240	ppb	12.6	333.35	0.0038	Pulse	0.1000	3
Ba	137	115	He	24.899	ppb	1.3	10400.97	0.1197	Pulse	0.1000	3
Tl	205	159	He	0.043	ppb	15.0	470.03	0.0012	Pulse	0.1000	3
Pb	208	159	He	0.045	ppb	3.1	1000.06	0.0025	Pulse	0.1000	3
U	238	209	He	0.005	ppb	48.2	100.00	0.0003	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2484321.32	0.8	103.6	Analog	0.1000	3
No Gas	Ge	72	1224873.05	0.7	106.2	Pulse	0.1000	3
H2	Sc	45	192020.69	0.3	102.7	Pulse	0.1000	3
H2	Ge	72	169954.26	1.0	103.8	Pulse	0.1000	3
H2	In	115	392790.18	0.9	101.0	Pulse	0.1000	3
He	Sc	45	48197.00	1.7	103.3	Pulse	0.1000	3
He	Ge	72	86488.14	0.3	106.5	Pulse	0.1000	3
He	In	115	86867.73	0.4	100.8	Pulse	0.1000	3
He	Tb	159	395312.94	0.9	99.2	Pulse	0.1000	3
He	Bi	209	306235.21	1.3	99.0	Pulse	0.1000	3

No Gas



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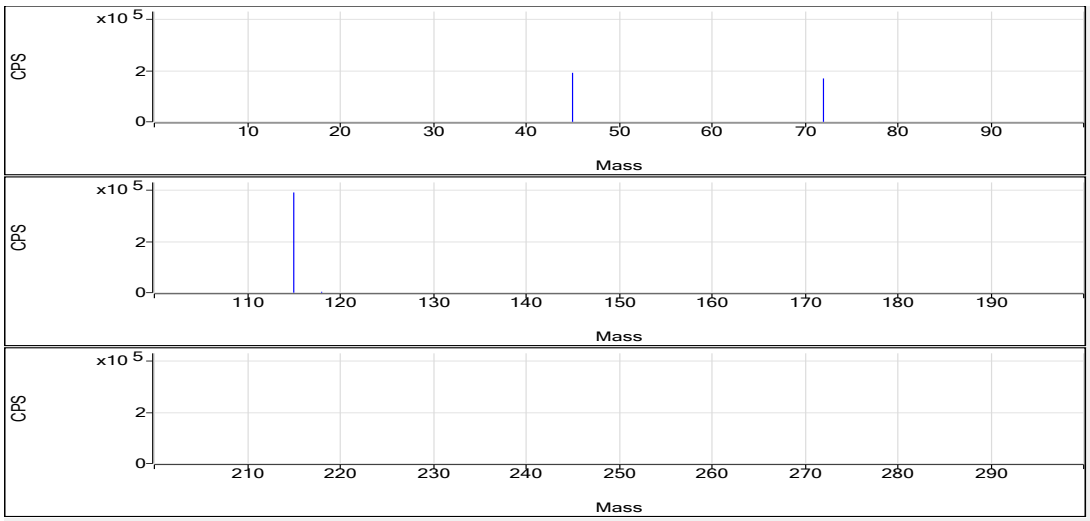
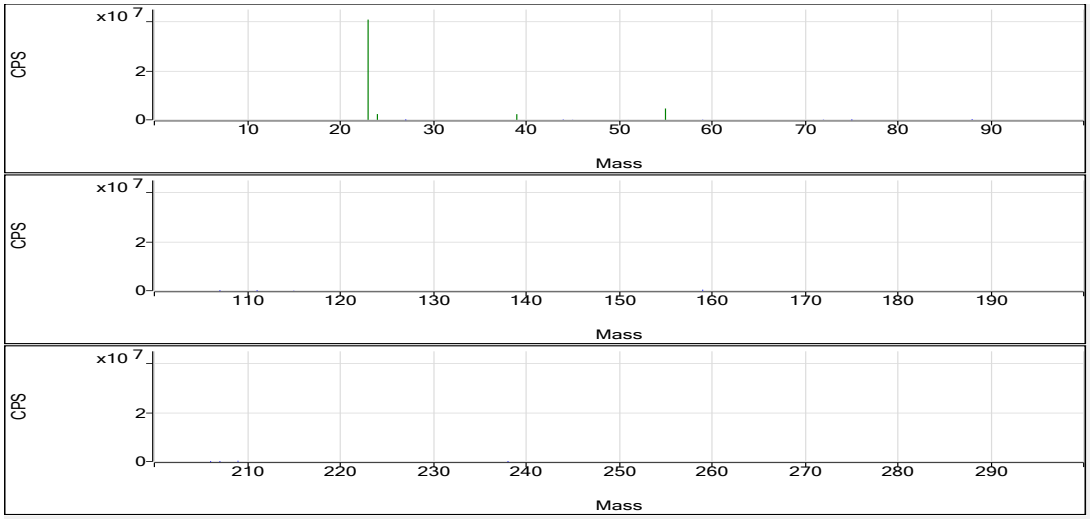


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.007	0	24.00	0.0008	4.685E-06
Be	9	1	No Gas	0.011	0	32.00	0.0008	4.685E-06
Be	9	1	No Gas	0.001	0	14.00	0.0008	4.685E-06
Se	78	2	H2	1.197	0.0005	86.00	0.0004	1.219E-05
Se	78	2	H2	1.126	0.0005	82.67	0.0004	1.219E-05
Se	78	2	H2	0.892	0.0004	65.33	0.0004	1.219E-05
Na	23	3	He	243776.958	872.3473	41233491.89	0.0036	0.3452
Na	23	3	He	234436.905	838.9375	41018101.89	0.0036	0.3452
Na	23	3	He	236472.137	846.2176	40982994.39	0.0036	0.3452
Mg	24	3	He	27945.851	50.1474	2370329.34	0.0018	0.003497
Mg	24	3	He	26585.349	47.7062	2332494.03	0.0018	0.003497
Mg	24	3	He	27154.686	48.7277	2359923.71	0.0018	0.003497
Al	27	3	He	9.75	0.0063	300.01	0.0006	0.0006432
Al	27	3	He	8.34	0.0055	270.01	0.0006	0.0006432
Al	27	3	He	7.371	0.005	240.01	0.0006	0.0006432
K	39	3	He	41723.296	48.9746	2314897.15	0.0012	0.3951
K	39	3	He	40086.666	47.069	2301342.78	0.0012	0.3951
K	39	3	He	41143.383	48.2994	2339178.72	0.0012	0.3951
Ca	44	3	He	41035.586	2.7747	131154.77	0.0001	0.002715
Ca	44	3	He	38837.048	2.6262	128404.13	0.0001	0.002715
Ca	44	3	He	40082.99	2.7104	131266.71	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	7.045	0.1789	8454.51	0.0219	0.02486
V	51	3	He	7.024	0.1784	8722.65	0.0219	0.02486
V	51	3	He	6.862	0.1749	8468.51	0.0219	0.02486
Cr	52	3	He	-0.091	0.0372	1760.17	0.0299	0.03997
Cr	52	3	He	-0.092	0.0372	1820.19	0.0299	0.03997
Cr	52	3	He	-0.08	0.0376	1820.18	0.0299	0.03997
Mn	55	3	He	7719.707	99.0764	4683073.37	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	7301.539	93.7097	4581740.24	0.0128	0.002639
Mn	55	3	He	7509.311	96.3762	4667576.81	0.0128	0.002639
Fe	57	3	He	9.922	0.0072	340.01	0.0006	0.001429
Fe	57	3	He	11.271	0.008	390.02	0.0006	0.001429
Fe	57	3	He	10.691	0.0076	370.02	0.0006	0.001429
Co	59	3	He	29.611	1.6687	78875.59	0.0563	0.002149
Co	59	3	He	29.016	1.6352	79951.74	0.0563	0.002149
Co	59	3	He	30.437	1.7152	83069.12	0.0563	0.002149
Ni	60	3	He	5.056	0.0462	4000.71	0.0086	0.002834
Ni	60	3	He	5.249	0.0479	4150.73	0.0086	0.002834
Ni	60	3	He	4.858	0.0445	3840.65	0.0086	0.002834
Cu	63	3	He	0.292	0.0122	1060.08	0.0257	0.004757
Cu	63	3	He	0.165	0.009	780.05	0.0257	0.004757
Cu	63	3	He	0.217	0.0103	890.06	0.0257	0.004757
Zn	66	3	He	4.325	0.0164	1420.13	0.0029	0.003818
Zn	66	3	He	5.425	0.0196	1700.15	0.0029	0.003818
Zn	66	3	He	5.659	0.0203	1750.17	0.0029	0.003818
As	75	3	He	0.588	0.002	174.00	0.002	0.0008061
As	75	3	He	0.53	0.0019	164.00	0.002	0.0008061
As	75	3	He	0.591	0.002	174.00	0.002	0.0008061
Sr	88	3	He	311.809	2.7978	244073.61	0.009	0.0009645
Sr	88	3	He	306.136	2.747	238089.55	0.009	0.0009645
Sr	88	3	He	309.706	2.779	240916.05	0.009	0.0009645
Mo	98	3	He	0.976	0.0217	1890.19	0.0219	0.0002706
Mo	98	3	He	0.898	0.02	1730.17	0.0219	0.0002706
Mo	98	3	He	0.914	0.0203	1760.16	0.0219	0.0002706
Ag	107	3	He	0.001	0.0007	60.00	0.0465	0.0006206
Ag	107	3	He	-0.008	0.0002	20.00	0.0465	0.0006206
Ag	107	3	He	0.002	0.0007	60.00	0.0465	0.0006206
Cd	111	3	He	0.026	0.0001	12.00	0.0053	0
Cd	111	3	He	0.052	0.0003	24.00	0.0053	0
Cd	111	3	He	0.035	0.0002	16.00	0.0053	0
Sn	120	3	He	-0.15	0.0141	1230.09	0.0158	0.01648
Sn	120	3	He	-0.115	0.0147	1270.10	0.0158	0.01648
Sn	120	3	He	-0.313	0.0115	1000.07	0.0158	0.01648
Sb	121	3	He	0.206	0.0033	290.02	0.0149	0.0002698
Sb	121	3	He	0.261	0.0042	360.02	0.0149	0.0002698
Sb	121	3	He	0.254	0.004	350.02	0.0149	0.0002698
Ba	137	3	He	25.113	0.1208	10534.45	0.0048	0.0002317
Ba	137	3	He	25.06	0.1205	10444.34	0.0048	0.0002317
Ba	137	3	He	24.525	0.1179	10224.11	0.0048	0.0002317
Tl	205	3	He	0.047	0.0013	510.03	0.0247	0.0001339
Tl	205	3	He	0.035	0.001	400.02	0.0247	0.0001339
Tl	205	3	He	0.046	0.0013	500.03	0.0247	0.0001339
Pb	208	3	He	0.045	0.0025	500.03	0.0327	0.00107
Pb	208	3	He	0.046	0.0026	500.03	0.0327	0.00107
Pb	208	3	He	0.043	0.0025	670.04	0.0327	0.00107
U	238	3	He	0.002	0.0002	60.00	0.0493	7.55E-05
U	238	3	He	0.006	0.0004	110.00	0.0493	7.55E-05
U	238	3	He	0.007	0.0004	130.01	0.0493	7.55E-05
Sc	45	1	No Gas			2462975.74		
Sc	45	1	No Gas			2489456.68		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2500531.53		
Ge	72	1	No Gas			1214423.50		
Ge	72	1	No Gas			1230160.76		
Ge	72	1	No Gas			1230034.90		
Sc	45	2	H2			191325.88		
Sc	45	2	H2			192572.48		
Sc	45	2	H2			192163.71		
Ge	72	2	H2			168220.43		
Ge	72	2	H2			171549.31		
Ge	72	2	H2			170093.04		
In	115	2	H2			390043.90		
In	115	2	H2			391737.53		
In	115	2	H2			396589.10		
Sc	45	3	He			47267.29		
Sc	45	3	He			48892.92		
Sc	45	3	He			48430.80		
Ge	72	3	He			86541.64		
Ge	72	3	He			86682.34		
Ge	72	3	He			86240.44		
In	115	3	He			87243.21		
In	115	3	He			86679.73		
In	115	3	He			86699.53		
Tb	159	3	He			397218.43		
Tb	159	3	He			397523.78		
Tb	159	3	He			391196.60		
Bi	209	3	He			310440.11		
Bi	209	3	He			305571.66		
Bi	209	3	He			302693.86		

Quantitation Report

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Sample Type	Sample
Comment	D2
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

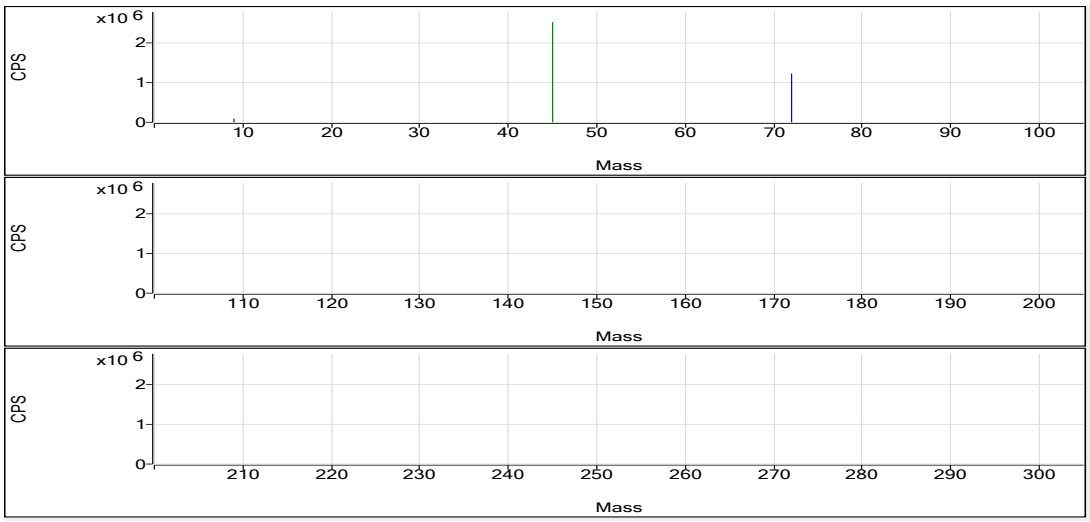
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	46.965	ppb	1.2	90808.61	0.0358	Pulse	0.5000	3
Se	78	72	H2	97.371	ppb	0.9	6900.33	0.0406	Pulse	1.5000	3
Na	23	45	He	235707.174	ppb	2.8	41123442.72	843.4813	Analog	0.1000	3
Mg	24	45	He	31369.273	ppb	1.3	2744833.29	56.2901	Analog	0.1000	3
Al	27	45	He	4828.111	ppb	2.1	137752.73	2.8253	Pulse	0.1000	3
K	39	45	He	44834.832	ppb	2.3	2564498.82	52.5975	Analog	0.1000	3
Ca	44	45	He	44211.082	ppb	1.1	145766.72	2.9893	Pulse	0.1000	3
Ti	47	45	He	498.896	ppb	1.1	13066.27	0.2680	Pulse	0.1000	3
V	51	45	He	498.408	ppb	1.6	532446.04	10.9197	Pulse	0.5000	3
Cr	52	45	He	457.609	ppb	1.9	669999.81	13.7411	Pulse	0.1000	3
Mn	55	45	He	7868.638	ppb	1.5	4924256.07	100.9878	Analog	0.1000	3
Fe	57	45	He	4829.719	ppb	1.3	136901.61	2.8075	Pulse	0.1000	3
Co	59	45	He	487.749	ppb	1.6	1338666.86	27.4538	Pulse	0.1000	3
Ni	60	72	He	475.833	ppb	0.8	354652.14	4.0870	Pulse	0.1000	3
Cu	63	72	He	449.040	ppb	1.2	1000692.49	11.5321	Pulse	0.1000	3
Zn	66	72	He	481.492	ppb	0.8	121995.24	1.4057	Pulse	0.1000	3
As	75	72	He	493.224	ppb	0.9	87761.34	1.0114	Pulse	0.5000	3
Sr	88	115	He	359.917	ppb	0.9	278413.15	3.2294	Pulse	0.1000	3
Mo	98	115	He	49.876	ppb	1.3	94305.43	1.0939	Pulse	0.1000	3
Ag	107	115	He	46.791	ppb	1.2	187581.78	2.1758	Pulse	0.1000	3
Cd	111	115	He	49.560	ppb	0.9	22846.02	0.2650	Pulse	0.5000	3
Sn	120	115	He	101.742	ppb	1.5	139994.45	1.6239	Pulse	0.1000	3
Sb	121	115	He	101.990	ppb	1.6	130624.66	1.5152	Pulse	0.1000	3
Ba	137	115	He	527.943	ppb	1.1	218462.24	2.5340	Pulse	0.1000	3
Tl	205	159	He	96.785	ppb	1.2	947634.78	2.3933	Pulse	0.1000	3
Pb	208	159	He	48.979	ppb	0.8	635174.35	1.6041	Pulse	0.1000	3
U	238	209	He	48.687	ppb	0.2	735817.41	2.3984	Pulse	0.1000	3

ISTD Table:

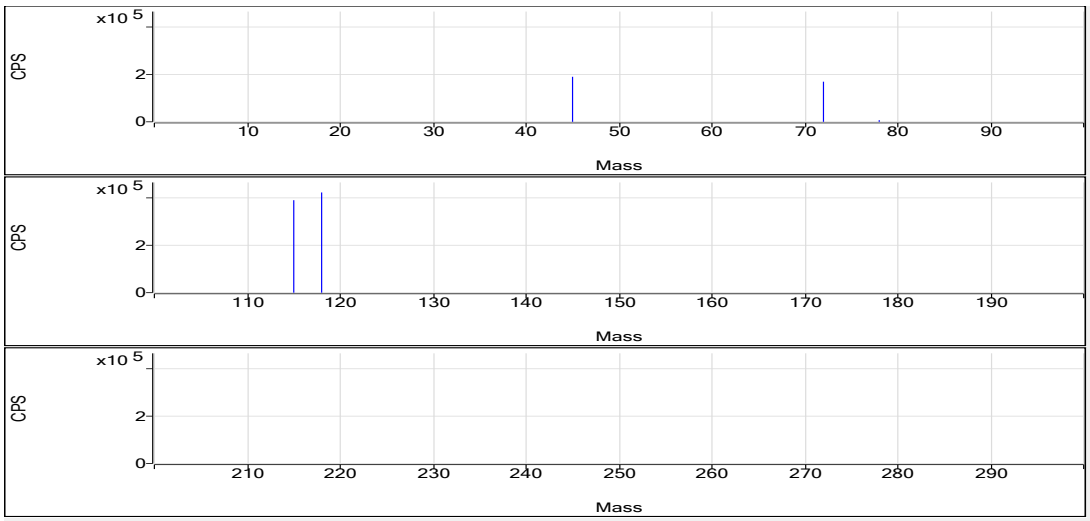
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2535000.80	2.6	105.7	Analog	0.1000	3
No Gas	Ge	72	1231834.17	1.3	106.8	Pulse	0.1000	3
H2	Sc	45	190625.57	0.4	101.9	Pulse	0.1000	3
H2	Ge	72	169868.99	0.7	103.8	Pulse	0.1000	3
H2	In	115	391533.65	0.6	100.6	Pulse	0.1000	3
He	Sc	45	48768.96	1.6	104.6	Pulse	0.1000	3
He	Ge	72	86779.84	0.8	106.9	Pulse	0.1000	3
He	In	115	86215.26	0.5	100.0	Pulse	0.1000	3
He	Tb	159	395974.62	0.7	99.3	Pulse	0.1000	3
He	Bi	209	306797.64	1.1	99.2	Pulse	0.1000	3

No Gas

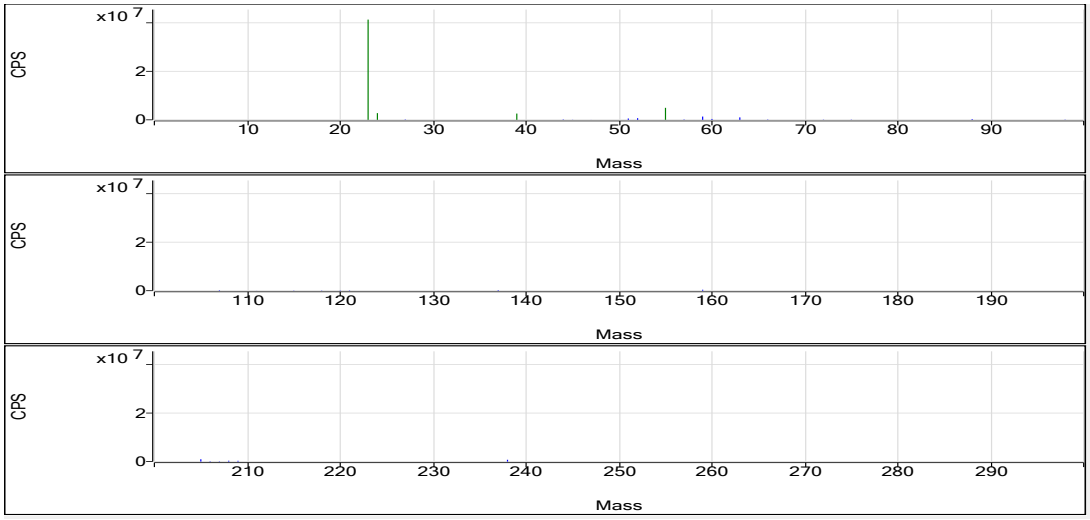


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	46.697	0.0356	90489.30	0.0008	4.685E-06
Be	9	1	No Gas	46.572	0.0355	92270.30	0.0008	4.685E-06
Be	9	1	No Gas	47.626	0.0363	89666.23	0.0008	4.685E-06
Se	78	2	H2	97.362	0.0406	6951.69	0.0004	1.219E-05
Se	78	2	H2	96.518	0.0403	6839.63	0.0004	1.219E-05
Se	78	2	H2	98.232	0.041	6909.67	0.0004	1.219E-05
Na	23	3	He	243380.774	870.9301	41690631.88	0.0036	0.3452
Na	23	3	He	231676.106	829.0619	40651816.89	0.0036	0.3452
Na	23	3	He	232064.643	830.4518	41027879.39	0.0036	0.3452
Mg	24	3	He	31816.854	57.0932	2732998.40	0.0018	0.003497
Mg	24	3	He	31207.587	56	2745874.33	0.0018	0.003497
Mg	24	3	He	31083.377	55.7771	2755627.15	0.0018	0.003497
Al	27	3	He	4943.931	2.893	138486.01	0.0006	0.0006432
Al	27	3	He	4792.369	2.8043	137506.93	0.0006	0.0006432
Al	27	3	He	4748.032	2.7784	137265.24	0.0006	0.0006432
K	39	3	He	45917.032	53.8575	2578109.02	0.0012	0.3951
K	39	3	He	44693.979	52.4335	2570996.37	0.0012	0.3951
K	39	3	He	43893.485	51.5014	2544391.06	0.0012	0.3951
Ca	44	3	He	44683.83	3.0212	144621.75	0.0001	0.002715
Ca	44	3	He	44204.261	2.9888	146551.21	0.0001	0.002715
Ca	44	3	He	43745.156	2.9578	146127.20	0.0001	0.002715
Ti	47	3	He	503.936	0.2707	12956.14	0.0005	7.003E-05
Ti	47	3	He	499.953	0.2685	13166.45	0.0005	7.003E-05
Ti	47	3	He	492.799	0.2647	13076.23	0.0005	7.003E-05
V	51	3	He	507.259	11.1131	531975.63	0.0219	0.02486
V	51	3	He	496.646	10.8811	533540.13	0.0219	0.02486
V	51	3	He	491.319	10.7647	531822.38	0.0219	0.02486
Cr	52	3	He	467.458	14.036	671890.15	0.0299	0.03997
Cr	52	3	He	454.944	13.6613	669863.12	0.0299	0.03997
Cr	52	3	He	450.427	13.5261	668246.16	0.0299	0.03997
Mn	55	3	He	7999.033	102.6612	4914299.93	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	7840.848	100.6311	4934296.49	0.0128	0.002639
Mn	55	3	He	7766.032	99.6709	4924171.80	0.0128	0.002639
Fe	57	3	He	4893.669	2.8446	136168.68	0.0006	0.001429
Fe	57	3	He	4772.052	2.7739	136016.36	0.0006	0.001429
Fe	57	3	He	4823.436	2.8038	138519.80	0.0006	0.001429
Co	59	3	He	496.528	27.9479	1337839.36	0.0563	0.002149
Co	59	3	He	483.679	27.2247	1334924.36	0.0563	0.002149
Co	59	3	He	483.039	27.1887	1343236.85	0.0563	0.002149
Ni	60	3	He	476.033	4.0887	355817.34	0.0086	0.002834
Ni	60	3	He	471.921	4.0534	354090.62	0.0086	0.002834
Ni	60	3	He	479.544	4.1188	354048.47	0.0086	0.002834
Cu	63	3	He	445.041	11.4294	994642.09	0.0257	0.004757
Cu	63	3	He	447.006	11.4799	1002840.38	0.0257	0.004757
Cu	63	3	He	455.073	11.687	1004594.99	0.0257	0.004757
Zn	66	3	He	483.3	1.411	122791.89	0.0029	0.003818
Zn	66	3	He	484.116	1.4134	123467.54	0.0029	0.003818
Zn	66	3	He	477.061	1.3928	119726.28	0.0029	0.003818
As	75	3	He	490.941	1.0067	87605.82	0.002	0.0008061
As	75	3	He	490.647	1.0061	87887.30	0.002	0.0008061
As	75	3	He	498.085	1.0213	87790.91	0.002	0.0008061
Sr	88	3	He	361.44	3.243	278019.59	0.009	0.0009645
Sr	88	3	He	362.255	3.2503	280436.52	0.009	0.0009645
Sr	88	3	He	356.056	3.1947	276783.34	0.009	0.0009645
Mo	98	3	He	50.399	1.1053	94758.92	0.0219	0.0002706
Mo	98	3	He	50.087	1.0985	94777.68	0.0219	0.0002706
Mo	98	3	He	49.144	1.0778	93379.69	0.0219	0.0002706
Ag	107	3	He	47.414	2.2048	189012.69	0.0465	0.0006206
Ag	107	3	He	46.465	2.1606	186419.37	0.0465	0.0006206
Ag	107	3	He	46.495	2.162	187313.28	0.0465	0.0006206
Cd	111	3	He	49.942	0.267	22892.72	0.0053	0
Cd	111	3	He	49.05	0.2623	22628.34	0.0053	0
Cd	111	3	He	49.687	0.2657	23017.01	0.0053	0
Sn	120	3	He	103.332	1.649	141364.99	0.0158	0.01648
Sn	120	3	He	101.553	1.6209	139849.32	0.0158	0.01648
Sn	120	3	He	100.34	1.6017	138769.05	0.0158	0.01648
Sb	121	3	He	103.061	1.5311	131257.85	0.0149	0.0002698
Sb	121	3	He	102.772	1.5268	131730.95	0.0149	0.0002698
Sb	121	3	He	100.136	1.4876	128885.17	0.0149	0.0002698
Ba	137	3	He	534.684	2.5664	220010.60	0.0048	0.0002317
Ba	137	3	He	524.242	2.5162	217100.39	0.0048	0.0002317
Ba	137	3	He	524.902	2.5194	218275.72	0.0048	0.0002317
Tl	205	3	He	95.747	2.3676	945491.08	0.0247	0.0001339
Tl	205	3	He	96.555	2.3876	941564.52	0.0247	0.0001339
Tl	205	3	He	98.054	2.4247	955848.74	0.0247	0.0001339
Pb	208	3	He	48.538	1.5897	337479.84	0.0327	0.00107
Pb	208	3	He	49.203	1.6115	334311.83	0.0327	0.00107
Pb	208	3	He	49.196	1.6112	338794.88	0.0327	0.00107
U	238	3	He	48.765	2.4022	745453.50	0.0493	7.55E-05
U	238	3	He	48.732	2.4006	728387.49	0.0493	7.55E-05
U	238	3	He	48.563	2.3923	733611.24	0.0493	7.55E-05
Sc	45	1	No Gas			2540084.34		
Sc	45	1	No Gas			2597014.49		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2467903.56		
Ge	72	1	No Gas			1233375.37		
Ge	72	1	No Gas			1246972.25		
Ge	72	1	No Gas			1215154.90		
Sc	45	2	H2			190504.18		
Sc	45	2	H2			191427.28		
Sc	45	2	H2			189945.25		
Ge	72	2	H2			171144.70		
Ge	72	2	H2			169858.08		
Ge	72	2	H2			168604.18		
In	115	2	H2			389663.86		
In	115	2	H2			390886.95		
In	115	2	H2			394050.15		
Sc	45	3	He			47869.09		
Sc	45	3	He			49033.51		
Sc	45	3	He			49404.29		
Ge	72	3	He			87024.62		
Ge	72	3	He			87356.35		
Ge	72	3	He			85958.56		
In	115	3	He			86468.94		
In	115	3	He			87032.63		
In	115	3	He			87384.50		
Tb	159	3	He			399345.19		
Tb	159	3	He			394359.21		
Tb	159	3	He			394219.45		
Bi	209	3	He			310318.39		
Bi	209	3	He			303419.98		
Bi	209	3	He			306654.55		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

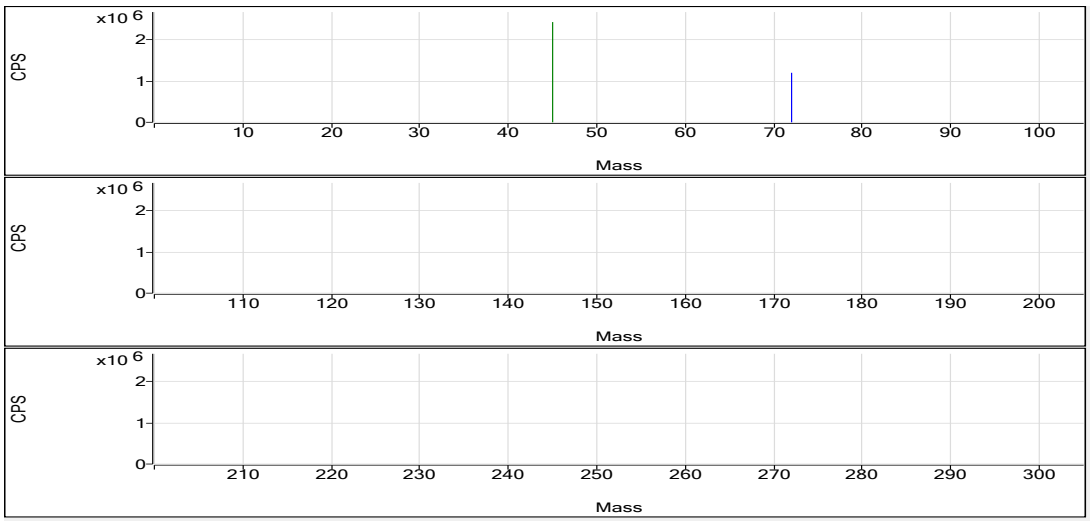
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.020	ppb	17.9	48.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.106	ppb	61.7	9.11	0.0001	Pulse	1.5000	3
Na	23	45	He	147.967	ppb	4.1	42117.55	0.8744	Pulse	0.1000	3
Mg	24	45	He	5.000	ppb	21.1	600.04	0.0125	Pulse	0.1000	3
Al	27	45	He	0.789	ppb	91.9	53.33	0.0011	Pulse	0.1000	3
K	39	45	He	9.354	ppb	96.6	19553.52	0.4060	Pulse	0.1000	3
Ca	44	45	He	14.063	ppb	51.8	176.68	0.0037	Pulse	0.1000	3
Ti	47	45	He	0.254	ppb	151.3	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	0.700	ppb	8.9	1934.14	0.0402	Pulse	0.5000	3
Cr	52	45	He	-0.023	ppb	N/A	1893.52	0.0393	Pulse	0.1000	3
Mn	55	45	He	1.756	ppb	9.3	1213.43	0.0252	Pulse	0.1000	3
Fe	57	45	He	1.602	ppb	117.3	113.34	0.0024	Pulse	0.1000	3
Co	59	45	He	0.094	ppb	44.8	356.69	0.0074	Pulse	0.1000	3
Ni	60	72	He	-0.003	ppb	N/A	233.34	0.0028	Pulse	0.1000	3
Cu	63	72	He	0.068	ppb	47.4	540.03	0.0065	Pulse	0.1000	3
Zn	66	72	He	3.743	ppb	7.7	1220.10	0.0147	Pulse	0.1000	3
As	75	72	He	0.250	ppb	15.6	109.33	0.0013	Pulse	0.5000	3
Sr	88	115	He	0.158	ppb	17.8	206.68	0.0024	Pulse	0.1000	3
Mo	98	115	He	0.145	ppb	13.0	300.02	0.0035	Pulse	0.1000	3
Ag	107	115	He	0.007	ppb	40.9	83.33	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.010	ppb	88.9	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.054	ppb	176.7	1503.46	0.0173	Pulse	0.1000	3
Sb	121	115	He	0.018	ppb	88.1	46.67	0.0005	Pulse	0.1000	3
Ba	137	115	He	0.080	ppb	46.7	53.33	0.0006	Pulse	0.1000	3
Tl	205	159	He	0.193	ppb	6.1	1933.56	0.0049	Pulse	0.1000	3
Pb	208	159	He	0.026	ppb	17.0	760.04	0.0019	Pulse	0.1000	3
U	238	209	He	0.130	ppb	11.2	1976.89	0.0065	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2427563.97	1.0	101.2	Analog	0.1000	3
No Gas	Ge	72	1199285.53	0.3	104.0	Pulse	0.1000	3
H2	Sc	45	189365.17	0.5	101.3	Pulse	0.1000	3
H2	Ge	72	161146.05	0.9	98.4	Pulse	0.1000	3
H2	In	115	389471.11	0.4	100.1	Pulse	0.1000	3
He	Sc	45	48170.42	1.0	103.3	Pulse	0.1000	3
He	Ge	72	82856.81	1.9	102.0	Pulse	0.1000	3
He	In	115	86695.72	0.8	100.6	Pulse	0.1000	3
He	Tb	159	394409.09	0.9	98.9	Pulse	0.1000	3
He	Bi	209	305992.98	1.3	98.9	Pulse	0.1000	3

No Gas



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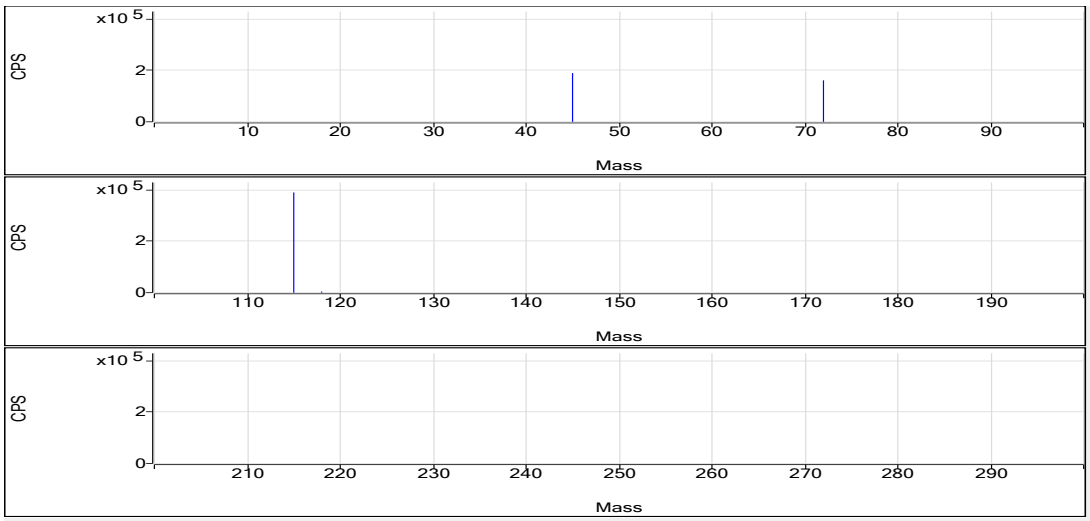
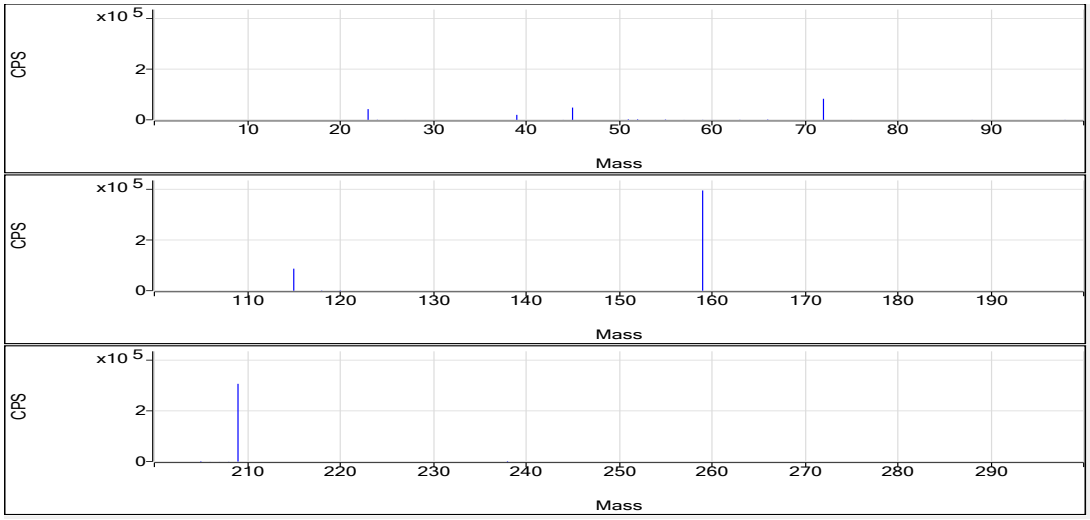


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.018	0	44.00	0.0008	4.685E-06
Be	9	1	No Gas	0.024	0	56.00	0.0008	4.685E-06
Be	9	1	No Gas	0.018	0	44.00	0.0008	4.685E-06
Se	78	2	H2	0.14	0.0001	11.33	0.0004	1.219E-05
Se	78	2	H2	0.147	0.0001	12.00	0.0004	1.219E-05
Se	78	2	H2	0.031	0	4.00	0.0004	1.219E-05
Na	23	3	He	152.864	0.892	42491.94	0.0036	0.3452
Na	23	3	He	141.266	0.8505	41198.10	0.0036	0.3452
Na	23	3	He	149.77	0.8809	42662.60	0.0036	0.3452
Mg	24	3	He	6.124	0.0145	690.04	0.0018	0.003497
Mg	24	3	He	4.034	0.0107	520.03	0.0018	0.003497
Mg	24	3	He	4.841	0.0122	590.04	0.0018	0.003497
Al	27	3	He	-0.023	0.0006	30.00	0.0006	0.0006432
Al	27	3	He	1.018	0.0012	60.00	0.0006	0.0006432
Al	27	3	He	1.371	0.0014	70.00	0.0006	0.0006432
K	39	3	He	14.659	0.4121	19633.61	0.0012	0.3951
K	39	3	He	14.477	0.4119	19954.08	0.0012	0.3951
K	39	3	He	-1.075	0.3938	19072.88	0.0012	0.3951
Ca	44	3	He	6.424	0.0031	150.01	0.0001	0.002715
Ca	44	3	He	14.82	0.0037	180.01	0.0001	0.002715
Ca	44	3	He	20.944	0.0041	200.01	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.638	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	0.254	0.0002	10.00	0.0005	7.003E-05
V	51	3	He	0.772	0.0417	1988.15	0.0219	0.02486
V	51	3	He	0.666	0.0394	1910.13	0.0219	0.02486
V	51	3	He	0.661	0.0393	1904.14	0.0219	0.02486
Cr	52	3	He	-0.199	0.034	1620.14	0.0299	0.03997
Cr	52	3	He	0.065	0.0419	2030.21	0.0299	0.03997
Cr	52	3	He	0.065	0.0419	2030.21	0.0299	0.03997
Mn	55	3	He	1.61	0.0233	1110.07	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1.934	0.0275	1330.11	0.0128	0.002639
Mn	55	3	He	1.725	0.0248	1200.10	0.0128	0.002639
Fe	57	3	He	3.683	0.0036	170.01	0.0006	0.001429
Fe	57	3	He	1.094	0.0021	100.00	0.0006	0.001429
Fe	57	3	He	0.029	0.0014	70.00	0.0006	0.001429
Co	59	3	He	0.126	0.0092	440.03	0.0563	0.002149
Co	59	3	He	0.109	0.0083	400.03	0.0563	0.002149
Co	59	3	He	0.046	0.0047	230.01	0.0563	0.002149
Ni	60	3	He	0.044	0.0032	270.01	0.0086	0.002834
Ni	60	3	He	-0.043	0.0025	200.01	0.0086	0.002834
Ni	60	3	He	-0.009	0.0028	230.01	0.0086	0.002834
Cu	63	3	He	0.088	0.007	590.03	0.0257	0.004757
Cu	63	3	He	0.031	0.0056	450.02	0.0257	0.004757
Cu	63	3	He	0.085	0.0069	580.03	0.0257	0.004757
Zn	66	3	He	4.005	0.0155	1300.11	0.0029	0.003818
Zn	66	3	He	3.433	0.0138	1120.08	0.0029	0.003818
Zn	66	3	He	3.79	0.0149	1240.10	0.0029	0.003818
As	75	3	He	0.292	0.0014	118.00	0.002	0.0008061
As	75	3	He	0.245	0.0013	106.00	0.002	0.0008061
As	75	3	He	0.215	0.0012	104.00	0.002	0.0008061
Sr	88	3	He	0.19	0.0027	230.01	0.009	0.0009645
Sr	88	3	He	0.147	0.0023	200.01	0.009	0.0009645
Sr	88	3	He	0.137	0.0022	190.01	0.009	0.0009645
Mo	98	3	He	0.131	0.0031	270.01	0.0219	0.0002706
Mo	98	3	He	0.139	0.0033	290.02	0.0219	0.0002706
Mo	98	3	He	0.167	0.0039	340.02	0.0219	0.0002706
Ag	107	3	He	0.009	0.001	90.00	0.0465	0.0006206
Ag	107	3	He	0.004	0.0008	70.00	0.0465	0.0006206
Ag	107	3	He	0.009	0.001	90.00	0.0465	0.0006206
Cd	111	3	He	0.013	0.0001	6.00	0.0053	0
Cd	111	3	He	0.017	0.0001	8.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Sn	120	3	He	0.053	0.0173	1490.12	0.0158	0.01648
Sn	120	3	He	0.152	0.0189	1650.15	0.0158	0.01648
Sn	120	3	He	-0.041	0.0158	1370.11	0.0158	0.01648
Sb	121	3	He	0.013	0.0005	40.00	0.0149	0.0002698
Sb	121	3	He	0.036	0.0008	70.00	0.0149	0.0002698
Sb	121	3	He	0.005	0.0003	30.00	0.0149	0.0002698
Ba	137	3	He	0.121	0.0008	70.00	0.0048	0.0002317
Ba	137	3	He	0.071	0.0006	50.00	0.0048	0.0002317
Ba	137	3	He	0.048	0.0005	40.00	0.0048	0.0002317
Tl	205	3	He	0.179	0.0046	1820.22	0.0247	0.0001339
Tl	205	3	He	0.2	0.0051	2000.23	0.0247	0.0001339
Tl	205	3	He	0.199	0.0051	1980.22	0.0247	0.0001339
Pb	208	3	He	0.023	0.0018	380.02	0.0327	0.00107
Pb	208	3	He	0.024	0.0019	400.02	0.0327	0.00107
Pb	208	3	He	0.031	0.0021	460.02	0.0327	0.00107
U	238	3	He	0.118	0.0059	1820.17	0.0493	7.55E-05
U	238	3	He	0.126	0.0063	1890.22	0.0493	7.55E-05
U	238	3	He	0.146	0.0073	2220.29	0.0493	7.55E-05
Sc	45	1	No Gas			2400663.71		
Sc	45	1	No Gas			2448204.96		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2433823.24		
Ge	72	1	No Gas			1197668.89		
Ge	72	1	No Gas			1196861.86		
Ge	72	1	No Gas			1203325.84		
Sc	45	2	H2			189510.50		
Sc	45	2	H2			190199.12		
Sc	45	2	H2			188385.88		
Ge	72	2	H2			160310.99		
Ge	72	2	H2			162827.18		
Ge	72	2	H2			160299.99		
In	115	2	H2			388339.92		
In	115	2	H2			391011.67		
In	115	2	H2			389061.75		
Sc	45	3	He			47638.86		
Sc	45	3	He			48441.29		
Sc	45	3	He			48431.12		
Ge	72	3	He			83996.32		
Ge	72	3	He			81080.21		
Ge	72	3	He			83493.91		
In	115	3	He			86106.05		
In	115	3	He			87445.46		
In	115	3	He			86559.83		
Tb	159	3	He			398491.20		
Tb	159	3	He			393419.80		
Tb	159	3	He			391316.28		
Bi	209	3	He			309937.44		
Bi	209	3	He			302053.04		
Bi	209	3	He			305988.47		

Quantitation Report

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Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

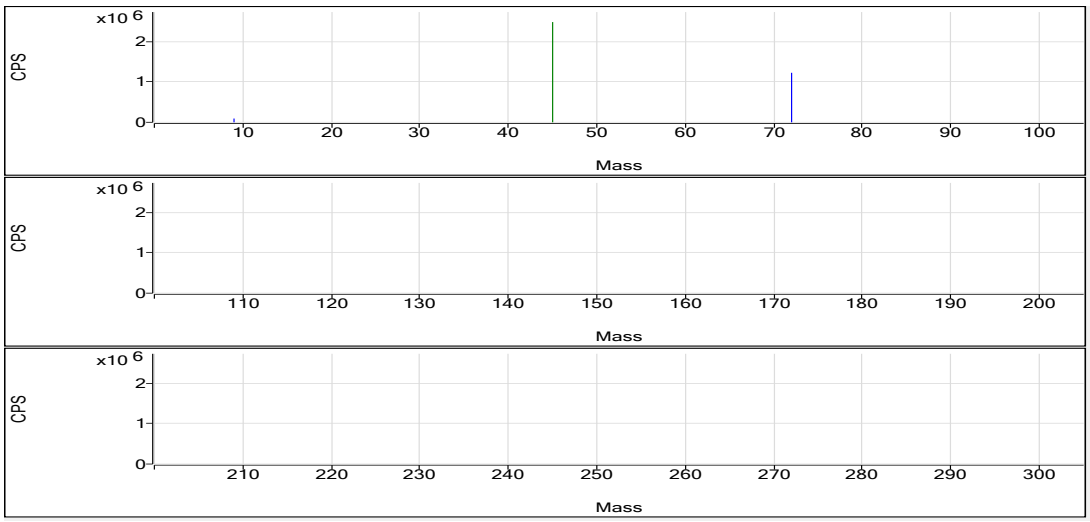
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	49.099	ppb	1.1	92807.32	0.0375	Pulse	0.5000	3
Se	78	72	H2	52.321	ppb	0.5	3552.67	0.0218	Pulse	1.5000	3
Na	23	45	He	4997.956	ppb	3.7	878572.62	18.2231	Pulse	0.1000	3
Mg	24	45	He	5077.960	ppb	3.1	439492.56	9.1150	Pulse	0.1000	3
Al	27	45	He	5033.596	ppb	3.5	142009.56	2.9455	Pulse	0.1000	3
K	39	45	He	5116.015	ppb	3.1	306272.19	6.3518	Pulse	0.1000	3
Ca	44	45	He	5125.706	ppb	2.7	16833.57	0.3490	Pulse	0.1000	3
Ti	47	45	He	5053.715	ppb	2.3	130862.53	2.7137	Pulse	0.1000	3
V	51	45	He	514.003	ppb	3.2	542935.62	11.2605	Pulse	0.5000	3
Cr	52	45	He	488.123	ppb	3.4	706568.51	14.6547	Pulse	0.1000	3
Mn	55	45	He	506.932	ppb	3.9	313771.49	6.5085	Pulse	0.1000	3
Fe	57	45	He	5053.782	ppb	3.4	141636.27	2.9376	Pulse	0.1000	3
Co	59	45	He	489.879	ppb	3.2	1329489.10	27.5737	Pulse	0.1000	3
Ni	60	72	He	512.044	ppb	1.2	374096.27	4.3978	Pulse	0.1000	3
Cu	63	72	He	487.933	ppb	0.8	1065927.09	12.5305	Pulse	0.1000	3
Zn	66	72	He	508.901	ppb	1.0	126369.70	1.4855	Pulse	0.1000	3
As	75	72	He	520.196	ppb	1.2	90731.83	1.0666	Pulse	0.5000	3
Sr	88	115	He	51.178	ppb	1.6	39800.01	0.4600	Pulse	0.1000	3
Mo	98	115	He	51.955	ppb	1.3	98564.67	1.1395	Pulse	0.1000	3
Ag	107	115	He	51.426	ppb	0.8	206853.13	2.3913	Pulse	0.1000	3
Cd	111	115	He	51.191	ppb	2.0	23674.72	0.2737	Pulse	0.5000	3
Sn	120	115	He	51.132	ppb	1.8	71303.50	0.8243	Pulse	0.1000	3
Sb	121	115	He	52.990	ppb	2.2	68104.65	0.7874	Pulse	0.1000	3
Ba	137	115	He	527.474	ppb	0.7	219008.48	2.5318	Pulse	0.1000	3
Tl	205	159	He	51.122	ppb	0.1	506450.14	1.2642	Pulse	0.1000	3
Pb	208	159	He	51.365	ppb	0.3	673915.41	1.6822	Pulse	0.1000	3
U	238	209	He	50.834	ppb	0.9	770336.58	2.5042	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2477919.34	1.2	103.3	Analog	0.1000	3
No Gas	Ge	72	1224177.25	0.0	106.1	Pulse	0.1000	3
H2	Sc	45	188408.72	0.7	100.7	Pulse	0.1000	3
H2	Ge	72	162714.89	0.8	99.4	Pulse	0.1000	3
H2	In	115	393086.46	0.9	101.0	Pulse	0.1000	3
He	Sc	45	48244.24	2.8	103.4	Pulse	0.1000	3
He	Ge	72	85069.11	0.8	104.8	Pulse	0.1000	3
He	In	115	86510.24	1.5	100.4	Pulse	0.1000	3
He	Tb	159	400609.76	0.2	100.5	Pulse	0.1000	3
He	Bi	209	307627.13	0.4	99.5	Pulse	0.1000	3

No Gas



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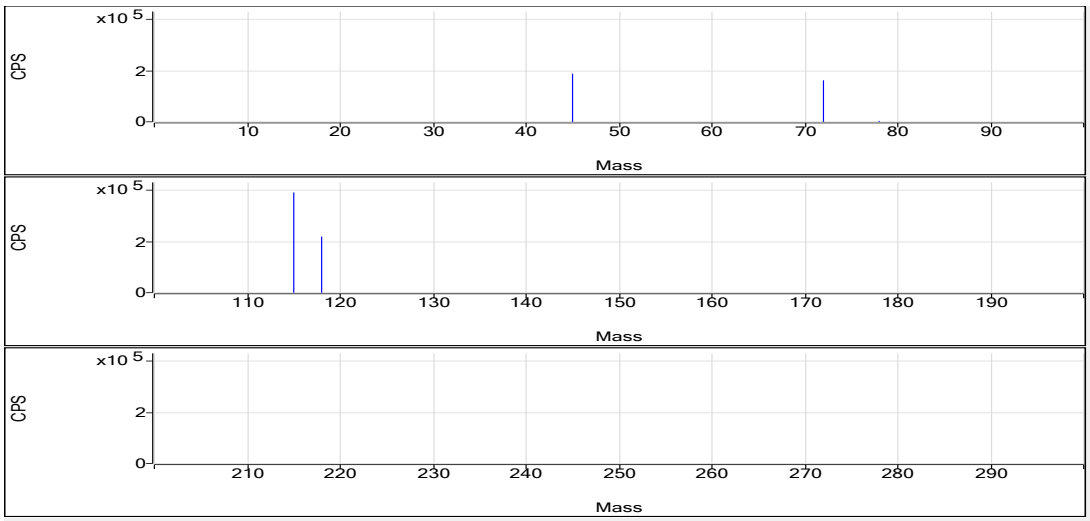
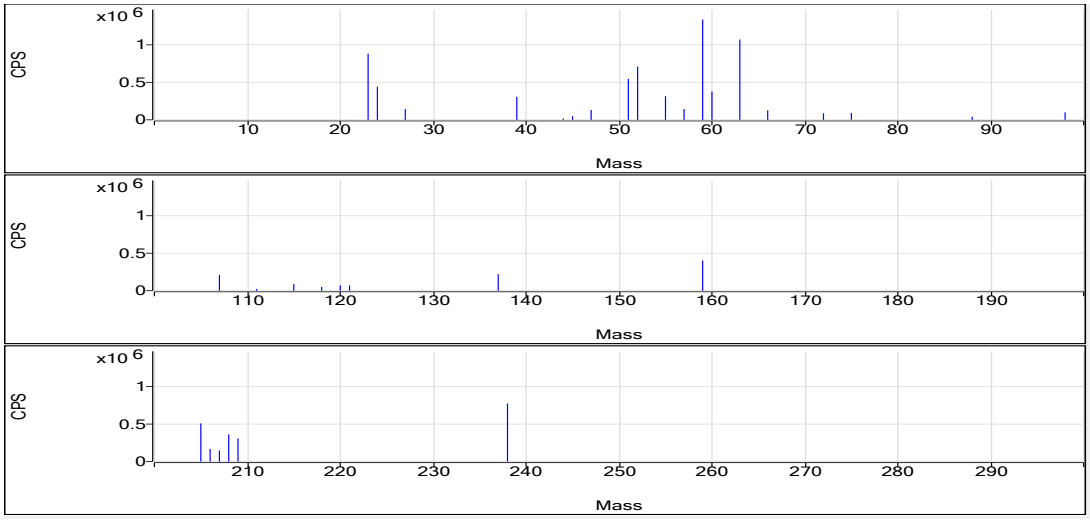


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	48.968	0.0374	93201.78	0.0008	4.685E-06
Be	9	1	No Gas	49.677	0.0379	92654.34	0.0008	4.685E-06
Be	9	1	No Gas	48.652	0.0371	92565.84	0.0008	4.685E-06
Se	78	2	H2	52.225	0.0218	3572.45	0.0004	1.219E-05
Se	78	2	H2	52.625	0.022	3577.12	0.0004	1.219E-05
Se	78	2	H2	52.113	0.0217	3508.44	0.0004	1.219E-05
Na	23	3	He	4987.375	18.1852	877816.86	0.0036	0.3452
Na	23	3	He	5186.015	18.8958	885951.08	0.0036	0.3452
Na	23	3	He	4820.479	17.5882	871949.91	0.0036	0.3452
Mg	24	3	He	5068.322	9.0977	439153.47	0.0018	0.003497
Mg	24	3	He	5240.084	9.4059	441006.36	0.0018	0.003497
Mg	24	3	He	4925.474	8.8414	438317.85	0.0018	0.003497
Al	27	3	He	5033.617	2.9455	142180.98	0.0006	0.0006432
Al	27	3	He	5209.93	3.0486	142938.77	0.0006	0.0006432
Al	27	3	He	4857.24	2.8423	140908.93	0.0006	0.0006432
K	39	3	He	5090.496	6.3221	305171.40	0.0012	0.3951
K	39	3	He	5286.028	6.5497	307091.73	0.0012	0.3951
K	39	3	He	4971.521	6.1835	306553.43	0.0012	0.3951
Ca	44	3	He	5280.86	0.3594	17350.81	0.0001	0.002715
Ca	44	3	He	5083.983	0.3461	16229.54	0.0001	0.002715
Ca	44	3	He	5012.274	0.3413	16920.37	0.0001	0.002715
Ti	47	3	He	5076.097	2.7257	131570.62	0.0005	7.003E-05
Ti	47	3	He	5158.775	2.7701	129877.95	0.0005	7.003E-05
Ti	47	3	He	4926.272	2.6452	131139.03	0.0005	7.003E-05
V	51	3	He	515.863	11.3012	545518.31	0.0219	0.02486
V	51	3	He	529.462	11.5985	543807.31	0.0219	0.02486
V	51	3	He	496.684	10.882	539481.25	0.0219	0.02486
Cr	52	3	He	489.987	14.7105	710089.60	0.0299	0.03997
Cr	52	3	He	503.52	15.1157	708718.27	0.0299	0.03997
Cr	52	3	He	470.862	14.1379	700897.65	0.0299	0.03997
Mn	55	3	He	508.629	6.5303	315223.78	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	525.935	6.7524	316595.11	0.0128	0.002639
Mn	55	3	He	486.233	6.2429	309495.58	0.0128	0.002639
Fe	57	3	He	5083.647	2.955	142639.39	0.0006	0.001429
Fe	57	3	He	5207.16	3.0267	141912.30	0.0006	0.001429
Fe	57	3	He	4870.538	2.8312	140357.11	0.0006	0.001429
Co	59	3	He	487.514	27.4406	1324579.36	0.0563	0.002149
Co	59	3	He	506.537	28.5112	1336782.48	0.0563	0.002149
Co	59	3	He	475.587	26.7693	1327105.45	0.0563	0.002149
Ni	60	3	He	510.471	4.3843	375229.25	0.0086	0.002834
Ni	60	3	He	518.635	4.4544	375717.42	0.0086	0.002834
Ni	60	3	He	507.025	4.3547	371342.14	0.0086	0.002834
Cu	63	3	He	487.804	12.5272	1072142.64	0.0257	0.004757
Cu	63	3	He	492.131	12.6383	1066018.89	0.0257	0.004757
Cu	63	3	He	483.865	12.4261	1059619.75	0.0257	0.004757
Zn	66	3	He	509.582	1.4875	127310.11	0.0029	0.003818
Zn	66	3	He	513.546	1.4991	126443.97	0.0029	0.003818
Zn	66	3	He	503.573	1.47	125355.01	0.0029	0.003818
As	75	3	He	518.531	1.0632	90994.71	0.002	0.0008061
As	75	3	He	526.885	1.0803	91123.66	0.002	0.0008061
As	75	3	He	515.173	1.0563	90077.12	0.002	0.0008061
Sr	88	3	He	50.924	0.4577	39997.21	0.009	0.0009645
Sr	88	3	He	52.079	0.4681	40769.50	0.009	0.0009645
Sr	88	3	He	50.53	0.4542	38633.32	0.009	0.0009645
Mo	98	3	He	51.17	1.1222	98061.12	0.0219	0.0002706
Mo	98	3	He	52.191	1.1446	99692.81	0.0219	0.0002706
Mo	98	3	He	52.503	1.1515	97940.07	0.0219	0.0002706
Ag	107	3	He	51.068	2.3746	207494.51	0.0465	0.0006206
Ag	107	3	He	51.319	2.3863	207835.21	0.0465	0.0006206
Ag	107	3	He	51.891	2.4129	205229.68	0.0465	0.0006206
Cd	111	3	He	50.83	0.2718	23748.16	0.0053	0
Cd	111	3	He	50.385	0.2694	23463.72	0.0053	0
Cd	111	3	He	52.36	0.28	23812.29	0.0053	0
Sn	120	3	He	50.091	0.8079	70589.95	0.0158	0.01648
Sn	120	3	He	51.77	0.8344	72670.53	0.0158	0.01648
Sn	120	3	He	51.533	0.8306	70650.02	0.0158	0.01648
Sb	121	3	He	53.294	0.7919	69193.25	0.0149	0.0002698
Sb	121	3	He	51.713	0.7684	66922.31	0.0149	0.0002698
Sb	121	3	He	53.963	0.8018	68198.40	0.0149	0.0002698
Ba	137	3	He	526.448	2.5268	220793.82	0.0048	0.0002317
Ba	137	3	He	524.239	2.5162	219151.87	0.0048	0.0002317
Ba	137	3	He	531.736	2.5522	217079.76	0.0048	0.0002317
Tl	205	3	He	51.126	1.2643	507357.53	0.0247	0.0001339
Tl	205	3	He	51.08	1.2632	505982.30	0.0247	0.0001339
Tl	205	3	He	51.161	1.2652	506010.58	0.0247	0.0001339
Pb	208	3	He	51.41	1.6837	362190.66	0.0327	0.00107
Pb	208	3	He	51.514	1.6871	361112.06	0.0327	0.00107
Pb	208	3	He	51.171	1.6759	359379.49	0.0327	0.00107
U	238	3	He	50.366	2.4811	767059.68	0.0493	7.55E-05
U	238	3	He	51.259	2.5251	775676.24	0.0493	7.55E-05
U	238	3	He	50.878	2.5063	768273.82	0.0493	7.55E-05
Sc	45	1	No Gas			2494890.28		
Sc	45	1	No Gas			2444885.12		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2493982.62		
Ge	72	1	No Gas			1223551.70		
Ge	72	1	No Gas			1224499.83		
Ge	72	1	No Gas			1224480.22		
Sc	45	2	H2			189872.89		
Sc	45	2	H2			187940.70		
Sc	45	2	H2			187412.58		
Ge	72	2	H2			163921.83		
Ge	72	2	H2			162890.94		
Ge	72	2	H2			161331.90		
In	115	2	H2			397015.58		
In	115	2	H2			390732.18		
In	115	2	H2			391511.63		
Sc	45	3	He			48270.83		
Sc	45	3	He			46886.17		
Sc	45	3	He			49575.71		
Ge	72	3	He			85585.13		
Ge	72	3	He			84348.39		
Ge	72	3	He			85273.81		
In	115	3	He			87766.56		
In	115	3	He			87485.38		
In	115	3	He			85442.61		
Tb	159	3	He			401300.35		
Tb	159	3	He			400569.45		
Tb	159	3	He			399959.49		
Bi	209	3	He			309161.36		
Bi	209	3	He			307187.46		
Bi	209	3	He			306532.57		

Quantitation Report

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Sample Type	CCB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

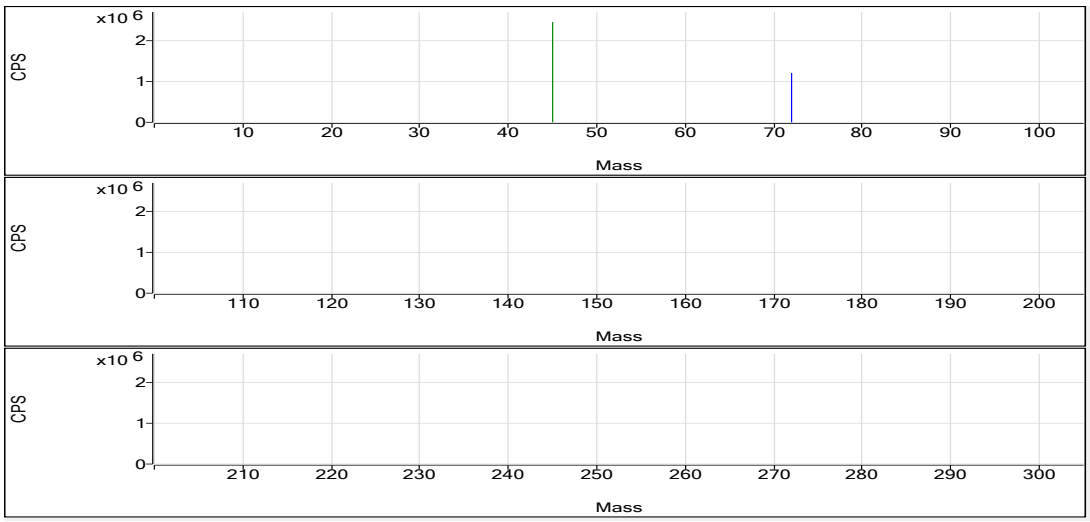
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.028	ppb	16.6	64.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.022	ppb	141.3	3.33	0.0000	Pulse	1.5000	3
Na	23	45	He	88.624	ppb	2.5	32189.11	0.6622	Pulse	0.1000	3
Mg	24	45	He	2.993	ppb	27.5	430.02	0.0089	Pulse	0.1000	3
Al	27	45	He	1.489	ppb	40.9	73.33	0.0015	Pulse	0.1000	3
K	39	45	He	-3.029	ppb	N/A	19026.32	0.3915	Pulse	0.1000	3
Ca	44	45	He	8.243	ppb	213.1	160.01	0.0033	Pulse	0.1000	3
Ti	47	45	He	1.261	ppb	68.5	36.67	0.0007	Pulse	0.1000	3
V	51	45	He	0.644	ppb	7.8	1893.47	0.0389	Pulse	0.5000	3
Cr	52	45	He	-0.029	ppb	N/A	1900.19	0.0391	Pulse	0.1000	3
Mn	55	45	He	0.661	ppb	14.5	540.03	0.0111	Pulse	0.1000	3
Fe	57	45	He	1.182	ppb	84.0	103.34	0.0021	Pulse	0.1000	3
Co	59	45	He	0.092	ppb	12.9	356.68	0.0073	Pulse	0.1000	3
Ni	60	72	He	-0.015	ppb	N/A	226.68	0.0027	Pulse	0.1000	3
Cu	63	72	He	0.105	ppb	25.4	623.37	0.0074	Pulse	0.1000	3
Zn	66	72	He	3.255	ppb	12.8	1113.42	0.0133	Pulse	0.1000	3
As	75	72	He	0.271	ppb	29.2	114.00	0.0014	Pulse	0.5000	3
Sr	88	115	He	0.051	ppb	73.7	123.34	0.0014	Pulse	0.1000	3
Mo	98	115	He	0.079	ppb	46.2	173.34	0.0020	Pulse	0.1000	3
Ag	107	115	He	0.011	ppb	157.0	96.67	0.0011	Pulse	0.1000	3
Cd	111	115	He	0.009	ppb	99.4	4.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.061	ppb	95.0	1513.47	0.0174	Pulse	0.1000	3
Sb	121	115	He	0.031	ppb	37.3	63.33	0.0007	Pulse	0.1000	3
Ba	137	115	He	0.136	ppb	28.0	76.67	0.0009	Pulse	0.1000	3
Tl	205	159	He	0.105	ppb	6.3	1076.75	0.0027	Pulse	0.1000	3
Pb	208	159	He	0.024	ppb	32.5	736.70	0.0019	Pulse	0.1000	3
U	238	209	He	0.056	ppb	19.3	883.40	0.0028	Pulse	0.1000	3

ISTD Table:

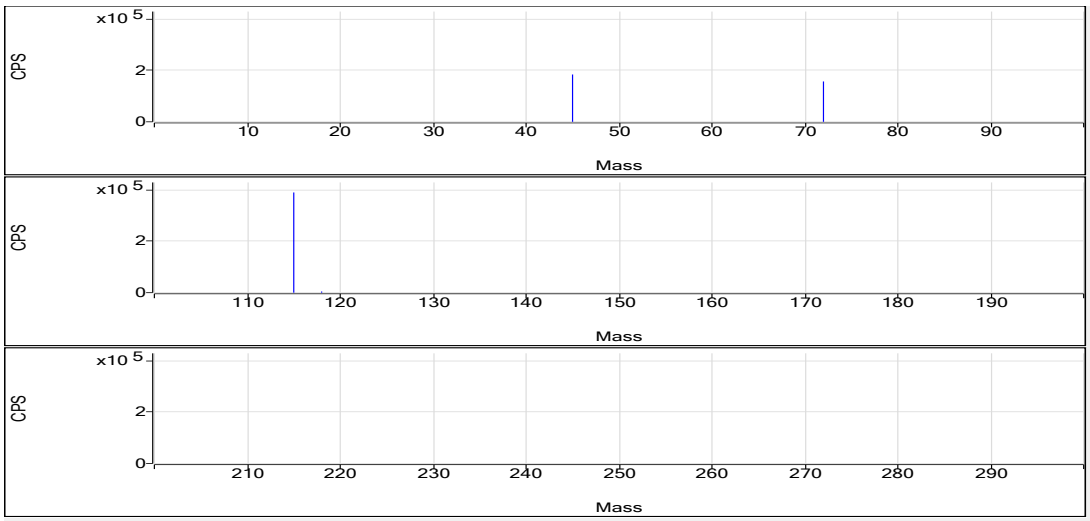
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2472638.71	1.5	103.1	Analog	0.1000	3
No Gas	Ge	72	1217659.80	0.5	105.6	Pulse	0.1000	3
H2	Sc	45	184425.76	0.1	98.6	Pulse	0.1000	3
H2	Ge	72	157267.73	1.4	96.1	Pulse	0.1000	3
H2	In	115	390563.68	0.8	100.4	Pulse	0.1000	3
He	Sc	45	48621.76	2.7	104.2	Pulse	0.1000	3
He	Ge	72	83728.49	0.7	103.1	Pulse	0.1000	3
He	In	115	86773.64	1.2	100.7	Pulse	0.1000	3
He	Tb	159	394636.33	0.9	99.0	Pulse	0.1000	3
He	Bi	209	310216.63	0.3	100.3	Pulse	0.1000	3

No Gas

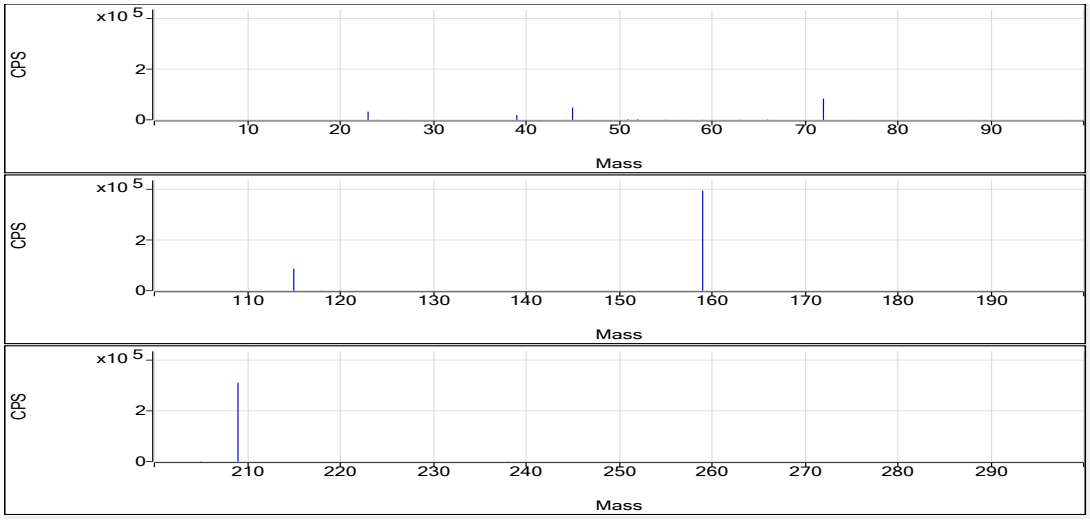


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.023	0	54.00	0.0008	4.685E-06
Be	9	1	No Gas	0.03	0	70.00	0.0008	4.685E-06
Be	9	1	No Gas	0.031	0	70.00	0.0008	4.685E-06
Se	78	2	H2	0.022	0	3.33	0.0004	1.219E-05
Se	78	2	H2	0.052	0	5.33	0.0004	1.219E-05
Se	78	2	H2	-0.009	0	1.33	0.0004	1.219E-05
Na	23	3	He	86.179	0.6534	32596.60	0.0036	0.3452
Na	23	3	He	90.606	0.6693	31654.52	0.0036	0.3452
Na	23	3	He	89.086	0.6638	32316.22	0.0036	0.3452
Mg	24	3	He	2.52	0.008	400.02	0.0018	0.003497
Mg	24	3	He	3.943	0.0106	500.03	0.0018	0.003497
Mg	24	3	He	2.516	0.008	390.02	0.0018	0.003497
Al	27	3	He	0.956	0.0012	60.00	0.0006	0.0006432
Al	27	3	He	2.153	0.0019	90.00	0.0006	0.0006432
Al	27	3	He	1.358	0.0014	70.00	0.0006	0.0006432
K	39	3	He	-11.281	0.3819	19052.93	0.0012	0.3951
K	39	3	He	10.307	0.4071	19253.29	0.0012	0.3951
K	39	3	He	-8.113	0.3856	18772.75	0.0012	0.3951
Ca	44	3	He	19.162	0.004	200.01	0.0001	0.002715
Ca	44	3	He	-12.022	0.0019	90.00	0.0001	0.002715
Ca	44	3	He	17.588	0.0039	190.01	0.0001	0.002715
Ti	47	3	He	1.736	0.001	50.00	0.0005	7.003E-05
Ti	47	3	He	0.263	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	1.782	0.001	50.00	0.0005	7.003E-05
V	51	3	He	0.675	0.0396	1976.15	0.0219	0.02486
V	51	3	He	0.671	0.0395	1870.13	0.0219	0.02486
V	51	3	He	0.586	0.0377	1834.13	0.0219	0.02486
Cr	52	3	He	-0.096	0.0371	1850.18	0.0299	0.03997
Cr	52	3	He	0.035	0.041	1940.20	0.0299	0.03997
Cr	52	3	He	-0.025	0.0392	1910.19	0.0299	0.03997
Mn	55	3	He	0.638	0.0108	540.04	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.766	0.0125	590.03	0.0128	0.002639
Mn	55	3	He	0.579	0.0101	490.03	0.0128	0.002639
Fe	57	3	He	2.027	0.0026	130.01	0.0006	0.001429
Fe	57	3	He	0.088	0.0015	70.00	0.0006	0.001429
Fe	57	3	He	1.43	0.0023	110.00	0.0006	0.001429
Co	59	3	He	0.101	0.0078	390.02	0.0563	0.002149
Co	59	3	He	0.097	0.0076	360.02	0.0563	0.002149
Co	59	3	He	0.079	0.0066	320.01	0.0563	0.002149
Ni	60	3	He	0.044	0.0032	270.01	0.0086	0.002834
Ni	60	3	He	-0.053	0.0024	200.01	0.0086	0.002834
Ni	60	3	He	-0.036	0.0025	210.01	0.0086	0.002834
Cu	63	3	He	0.116	0.0077	650.03	0.0257	0.004757
Cu	63	3	He	0.074	0.0067	560.03	0.0257	0.004757
Cu	63	3	He	0.124	0.0079	660.04	0.0257	0.004757
Zn	66	3	He	3.714	0.0146	1230.10	0.0029	0.003818
Zn	66	3	He	2.9	0.0123	1030.07	0.0029	0.003818
Zn	66	3	He	3.153	0.013	1080.08	0.0029	0.003818
As	75	3	He	0.234	0.0013	108.00	0.002	0.0008061
As	75	3	He	0.362	0.0015	130.00	0.002	0.0008061
As	75	3	He	0.217	0.0013	104.00	0.002	0.0008061
Sr	88	3	He	0.075	0.0016	140.01	0.009	0.0009645
Sr	88	3	He	0.008	0.001	90.00	0.009	0.0009645
Sr	88	3	He	0.071	0.0016	140.01	0.009	0.0009645
Mo	98	3	He	0.041	0.0012	100.00	0.0219	0.0002706
Mo	98	3	He	0.113	0.0028	240.01	0.0219	0.0002706
Mo	98	3	He	0.081	0.0021	180.01	0.0219	0.0002706
Ag	107	3	He	0.029	0.002	170.01	0.0465	0.0006206
Ag	107	3	He	0.006	0.0009	80.00	0.0465	0.0006206
Ag	107	3	He	-0.004	0.0005	40.00	0.0465	0.0006206
Cd	111	3	He	0.009	0	4.00	0.0053	0
Cd	111	3	He	0.017	0.0001	8.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Sn	120	3	He	0.037	0.0171	1460.13	0.0158	0.01648
Sn	120	3	He	0.127	0.0185	1610.15	0.0158	0.01648
Sn	120	3	He	0.019	0.0168	1470.14	0.0158	0.01648
Sb	121	3	He	0.029	0.0007	60.00	0.0149	0.0002698
Sb	121	3	He	0.02	0.0006	50.00	0.0149	0.0002698
Sb	121	3	He	0.043	0.0009	80.00	0.0149	0.0002698
Ba	137	3	He	0.171	0.0011	90.00	0.0048	0.0002317
Ba	137	3	He	0.095	0.0007	60.00	0.0048	0.0002317
Ba	137	3	He	0.142	0.0009	80.00	0.0048	0.0002317
Tl	205	3	He	0.097	0.0025	1010.07	0.0247	0.0001339
Tl	205	3	He	0.108	0.0028	1100.09	0.0247	0.0001339
Tl	205	3	He	0.109	0.0028	1120.10	0.0247	0.0001339
Pb	208	3	He	0.026	0.0019	430.02	0.0327	0.00107
Pb	208	3	He	0.016	0.0016	330.02	0.0327	0.00107
Pb	208	3	He	0.031	0.0021	530.03	0.0327	0.00107
U	238	3	He	0.059	0.003	930.07	0.0493	7.55E-05
U	238	3	He	0.044	0.0023	700.04	0.0493	7.55E-05
U	238	3	He	0.065	0.0033	1020.08	0.0493	7.55E-05
Sc	45	1	No Gas			2449307.31		
Sc	45	1	No Gas			2516132.15		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2452476.68		
Ge	72	1	No Gas			1213015.06		
Ge	72	1	No Gas			1223731.00		
Ge	72	1	No Gas			1216233.34		
Sc	45	2	H2			184567.61		
Sc	45	2	H2			184446.03		
Sc	45	2	H2			184263.63		
Ge	72	2	H2			155022.71		
Ge	72	2	H2			157296.66		
Ge	72	2	H2			159483.83		
In	115	2	H2			391414.13		
In	115	2	H2			392976.09		
In	115	2	H2			387300.81		
Sc	45	3	He			49885.65		
Sc	45	3	He			47297.62		
Sc	45	3	He			48682.01		
Ge	72	3	He			84077.10		
Ge	72	3	He			84007.49		
Ge	72	3	He			83100.88		
In	115	3	He			85613.55		
In	115	3	He			87104.07		
In	115	3	He			87626.01		
Tb	159	3	He			397630.89		
Tb	159	3	He			390718.82		
Tb	159	3	He			395559.29		
Bi	209	3	He			310832.34		
Bi	209	3	He			310481.34		
Bi	209	3	He			309336.21		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

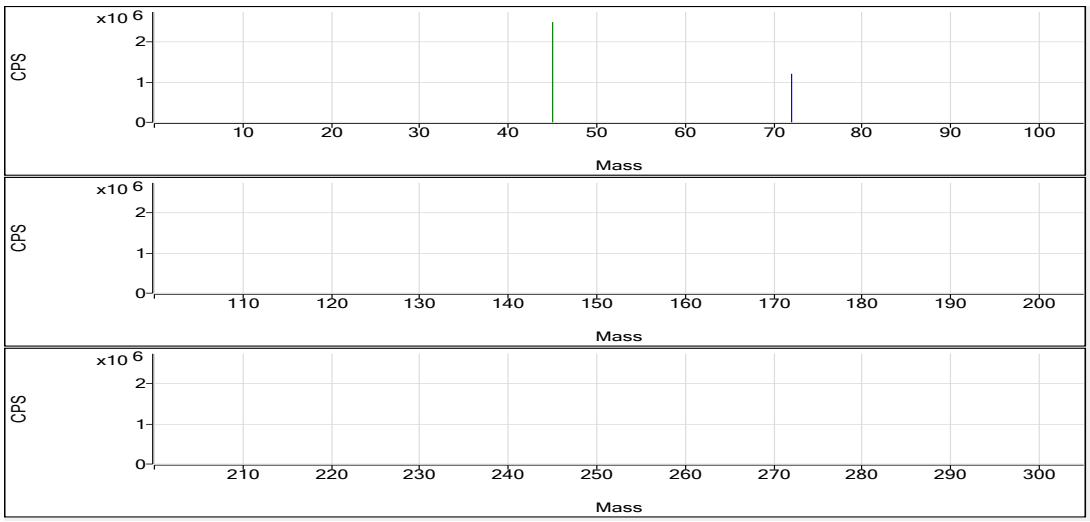
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.005	ppb	25.0	20.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.001	ppb	1251.7	2.00	0.0000	Pulse	1.5000	3
Na	23	45	He	69.770	ppb	6.0	28688.54	0.5947	Pulse	0.1000	3
Mg	24	45	He	1.063	ppb	80.6	260.01	0.0054	Pulse	0.1000	3
Al	27	45	He	0.322	ppb	194.1	40.00	0.0008	Pulse	0.1000	3
K	39	45	He	2.234	ppb	449.7	19186.46	0.3977	Pulse	0.1000	3
Ca	44	45	He	-2.407	ppb	N/A	123.34	0.0026	Pulse	0.1000	3
Ti	47	45	He	0.390	ppb	154.4	13.33	0.0003	Pulse	0.1000	3
V	51	45	He	0.562	ppb	11.7	1792.12	0.0372	Pulse	0.5000	3
Cr	52	45	He	-0.002	ppb	N/A	1926.87	0.0399	Pulse	0.1000	3
Mn	55	45	He	0.500	ppb	13.1	436.69	0.0091	Pulse	0.1000	3
Fe	57	45	He	0.277	ppb	81.3	76.67	0.0016	Pulse	0.1000	3
Co	59	45	He	0.020	ppb	81.8	156.67	0.0033	Pulse	0.1000	3
Ni	60	72	He	-0.109	ppb	N/A	156.68	0.0019	Pulse	0.1000	3
Cu	63	72	He	0.060	ppb	35.0	520.03	0.0063	Pulse	0.1000	3
Zn	66	72	He	3.548	ppb	5.9	1166.75	0.0141	Pulse	0.1000	3
As	75	72	He	0.104	ppb	82.2	84.00	0.0010	Pulse	0.5000	3
Sr	88	115	He	0.039	ppb	164.4	113.34	0.0013	Pulse	0.1000	3
Mo	98	115	He	0.007	ppb	46.3	36.67	0.0004	Pulse	0.1000	3
Ag	107	115	He	-0.001	ppb	N/A	50.00	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.010	ppb	49.6	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.119	ppb	N/A	1256.76	0.0146	Pulse	0.1000	3
Sb	121	115	He	0.008	ppb	116.7	33.33	0.0004	Pulse	0.1000	3
Ba	137	115	He	0.024	ppb	4.5	30.00	0.0003	Pulse	0.1000	3
Tl	205	159	He	0.018	ppb	46.2	233.35	0.0006	Pulse	0.1000	3
Pb	208	159	He	0.007	ppb	37.9	510.03	0.0013	Pulse	0.1000	3
U	238	209	He	0.008	ppb	41.6	150.01	0.0005	Pulse	0.1000	3

ISTD Table:

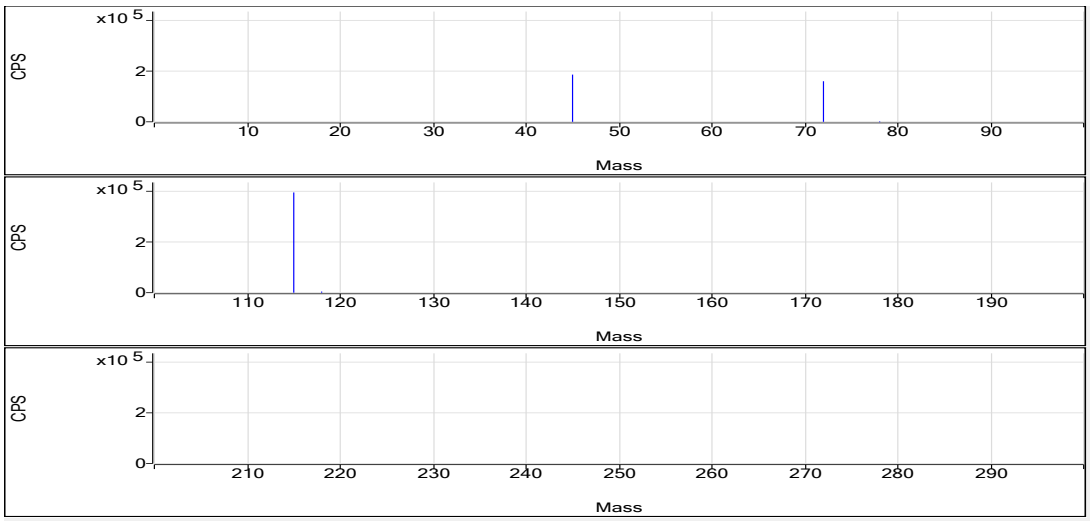
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2490978.25	0.7	103.8	Analog	0.1000	3
No Gas	Ge	72	1205204.93	0.7	104.5	Pulse	0.1000	3
H2	Sc	45	185989.24	0.8	99.5	Pulse	0.1000	3
H2	Ge	72	159858.80	1.0	97.6	Pulse	0.1000	3
H2	In	115	394882.50	0.9	101.5	Pulse	0.1000	3
He	Sc	45	48250.60	1.6	103.4	Pulse	0.1000	3
He	Ge	72	82467.57	1.2	101.6	Pulse	0.1000	3
He	In	115	86165.99	1.5	100.0	Pulse	0.1000	3
He	Tb	159	394850.75	0.8	99.1	Pulse	0.1000	3
He	Bi	209	306809.34	1.1	99.2	Pulse	0.1000	3

No Gas

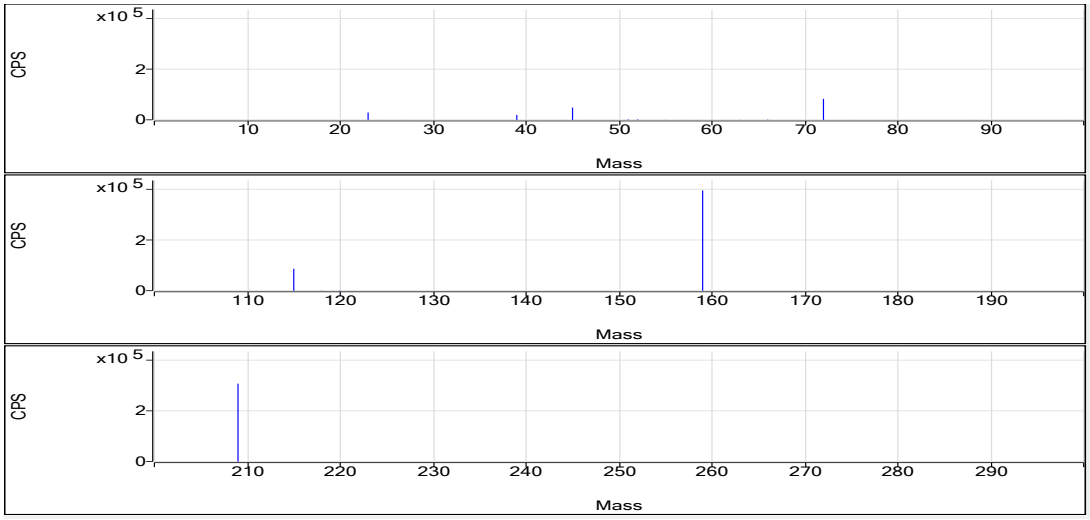


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.003	0	18.00	0.0008	4.685E-06
Be	9	1	No Gas	0.005	0	22.00	0.0008	4.685E-06
Be	9	1	No Gas	0.005	0	22.00	0.0008	4.685E-06
Se	78	2	H2	-0.009	0	1.33	0.0004	1.219E-05
Se	78	2	H2	0.011	0	2.67	0.0004	1.219E-05
Se	78	2	H2	0.001	0	2.00	0.0004	1.219E-05
Na	23	3	He	65.887	0.5808	28358.10	0.0036	0.3452
Na	23	3	He	74.185	0.6105	28918.96	0.0036	0.3452
Na	23	3	He	69.238	0.5928	28788.55	0.0036	0.3452
Mg	24	3	He	0.22	0.0039	190.01	0.0018	0.003497
Mg	24	3	He	1.934	0.007	330.01	0.0018	0.003497
Mg	24	3	He	1.035	0.0054	260.01	0.0018	0.003497
Al	27	3	He	-0.399	0.0004	20.00	0.0006	0.0006432
Al	27	3	He	0.705	0.0011	50.00	0.0006	0.0006432
Al	27	3	He	0.66	0.001	50.00	0.0006	0.0006432
K	39	3	He	9.426	0.406	19824.03	0.0012	0.3951
K	39	3	He	6.521	0.4027	19073.01	0.0012	0.3951
K	39	3	He	-9.245	0.3843	18662.34	0.0012	0.3951
Ca	44	3	He	-0.774	0.0027	130.00	0.0001	0.002715
Ca	44	3	He	-8.938	0.0021	100.00	0.0001	0.002715
Ca	44	3	He	2.49	0.0029	140.01	0.0001	0.002715
Ti	47	3	He	0.251	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	1.049	0.0006	30.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	0.534	0.0365	1784.12	0.0219	0.02486
V	51	3	He	0.638	0.0388	1838.12	0.0219	0.02486
V	51	3	He	0.515	0.0361	1754.12	0.0219	0.02486
Cr	52	3	He	0.122	0.0436	2130.23	0.0299	0.03997
Cr	52	3	He	-0.101	0.0369	1750.16	0.0299	0.03997
Cr	52	3	He	-0.028	0.0391	1900.21	0.0299	0.03997
Mn	55	3	He	0.497	0.009	440.02	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.568	0.0099	470.03	0.0128	0.002639
Mn	55	3	He	0.436	0.0082	400.02	0.0128	0.002639
Fe	57	3	He	0.361	0.0016	80.00	0.0006	0.001429
Fe	57	3	He	0.448	0.0017	80.00	0.0006	0.001429
Fe	57	3	He	0.022	0.0014	70.00	0.0006	0.001429
Co	59	3	He	0.002	0.0023	110.00	0.0563	0.002149
Co	59	3	He	0.033	0.004	190.01	0.0563	0.002149
Co	59	3	He	0.024	0.0035	170.01	0.0563	0.002149
Ni	60	3	He	-0.13	0.0017	140.01	0.0086	0.002834
Ni	60	3	He	-0.107	0.0019	160.01	0.0086	0.002834
Ni	60	3	He	-0.09	0.0021	170.01	0.0086	0.002834
Cu	63	3	He	0.078	0.0067	550.03	0.0257	0.004757
Cu	63	3	He	0.067	0.0065	540.03	0.0257	0.004757
Cu	63	3	He	0.037	0.0057	470.03	0.0257	0.004757
Zn	66	3	He	3.618	0.0144	1170.08	0.0029	0.003818
Zn	66	3	He	3.711	0.0146	1220.10	0.0029	0.003818
Zn	66	3	He	3.314	0.0135	1110.08	0.0029	0.003818
As	75	3	He	0.109	0.001	84.00	0.002	0.0008061
As	75	3	He	0.016	0.0008	70.00	0.002	0.0008061
As	75	3	He	0.187	0.0012	98.00	0.002	0.0008061
Sr	88	3	He	0.097	0.0018	160.01	0.009	0.0009645
Sr	88	3	He	-0.03	0.0007	60.00	0.009	0.0009645
Sr	88	3	He	0.05	0.0014	120.01	0.009	0.0009645
Mo	98	3	He	0.003	0.0003	30.00	0.0219	0.0002706
Mo	98	3	He	0.009	0.0005	40.00	0.0219	0.0002706
Mo	98	3	He	0.009	0.0005	40.00	0.0219	0.0002706
Ag	107	3	He	0.001	0.0007	60.00	0.0465	0.0006206
Ag	107	3	He	0.002	0.0007	60.00	0.0465	0.0006206
Ag	107	3	He	-0.006	0.0004	30.00	0.0465	0.0006206
Cd	111	3	He	0.013	0.0001	6.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.013	0.0001	6.00	0.0053	0
Sn	120	3	He	-0.239	0.0127	1110.08	0.0158	0.01648
Sn	120	3	He	-0.103	0.0148	1280.10	0.0158	0.01648
Sn	120	3	He	-0.013	0.0163	1380.10	0.0158	0.01648
Sb	121	3	He	-0.003	0.0002	20.00	0.0149	0.0002698
Sb	121	3	He	0.013	0.0005	40.00	0.0149	0.0002698
Sb	121	3	He	0.014	0.0005	40.00	0.0149	0.0002698
Ba	137	3	He	0.023	0.0003	30.00	0.0048	0.0002317
Ba	137	3	He	0.024	0.0003	30.00	0.0048	0.0002317
Ba	137	3	He	0.025	0.0004	30.00	0.0048	0.0002317
Tl	205	3	He	0.01	0.0004	150.01	0.0247	0.0001339
Tl	205	3	He	0.027	0.0008	320.02	0.0247	0.0001339
Tl	205	3	He	0.018	0.0006	230.01	0.0247	0.0001339
Pb	208	3	He	0.009	0.0014	300.02	0.0327	0.00107
Pb	208	3	He	0.004	0.0012	210.01	0.0327	0.00107
Pb	208	3	He	0.007	0.0013	260.02	0.0327	0.00107
U	238	3	He	0.012	0.0007	210.01	0.0493	7.55E-05
U	238	3	He	0.006	0.0004	120.01	0.0493	7.55E-05
U	238	3	He	0.006	0.0004	120.01	0.0493	7.55E-05
Sc	45	1	No Gas			2481001.37		
Sc	45	1	No Gas			2509674.03		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2482259.34		
Ge	72	1	No Gas			1211896.31		
Ge	72	1	No Gas			1207163.42		
Ge	72	1	No Gas			1196555.06		
Sc	45	2	H2			187799.24		
Sc	45	2	H2			185193.77		
Sc	45	2	H2			184974.72		
Ge	72	2	H2			161513.26		
Ge	72	2	H2			158479.29		
Ge	72	2	H2			159583.86		
In	115	2	H2			398706.95		
In	115	2	H2			393966.52		
In	115	2	H2			391974.02		
Sc	45	3	He			48822.62		
Sc	45	3	He			47367.58		
Sc	45	3	He			48561.59		
Ge	72	3	He			81522.23		
Ge	72	3	He			83443.07		
Ge	72	3	He			82437.41		
In	115	3	He			87434.41		
In	115	3	He			86216.82		
In	115	3	He			84868.89		
Tb	159	3	He			393486.24		
Tb	159	3	He			398445.11		
Tb	159	3	He			392620.89		
Bi	209	3	He			305072.10		
Bi	209	3	He			310527.03		
Bi	209	3	He			304828.88		

Quantitation Report

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Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
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Sample Type	Sample
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

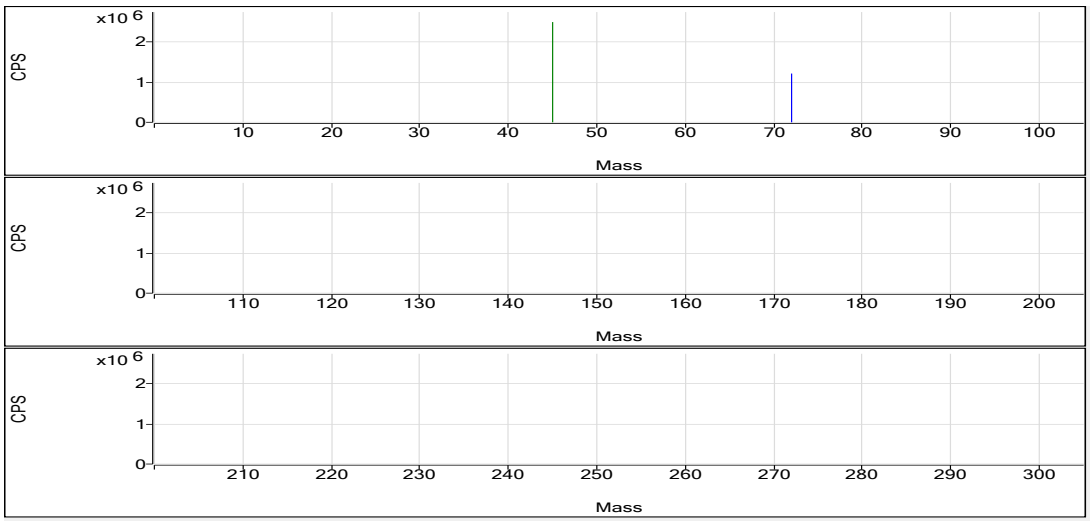
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.005	ppb	110.2	20.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.003	ppb	N/A	1.78	0.0000	Pulse	1.5000	3
Na	23	45	He	64.710	ppb	8.8	28468.18	0.5766	Pulse	0.1000	3
Mg	24	45	He	0.848	ppb	85.9	246.68	0.0050	Pulse	0.1000	3
Al	27	45	He	0.065	ppb	1668.3	33.33	0.0007	Pulse	0.1000	3
K	39	45	He	6.585	ppb	206.7	19874.02	0.4027	Pulse	0.1000	3
Ca	44	45	He	13.239	ppb	165.5	176.68	0.0036	Pulse	0.1000	3
Ti	47	45	He	-0.130	ppb	N/A	0.00	0.0000	Pulse	0.1000	3
V	51	45	He	0.535	ppb	7.9	1804.79	0.0366	Pulse	0.5000	3
Cr	52	45	He	-0.056	ppb	N/A	1890.18	0.0383	Pulse	0.1000	3
Mn	55	45	He	0.322	ppb	17.8	333.35	0.0068	Pulse	0.1000	3
Fe	57	45	He	2.669	ppb	79.1	146.67	0.0030	Pulse	0.1000	3
Co	59	45	He	0.036	ppb	18.0	206.68	0.0042	Pulse	0.1000	3
Ni	60	72	He	-0.106	ppb	N/A	163.34	0.0019	Pulse	0.1000	3
Cu	63	72	He	0.082	ppb	61.7	580.03	0.0069	Pulse	0.1000	3
Zn	66	72	He	3.396	ppb	11.6	1160.09	0.0137	Pulse	0.1000	3
As	75	72	He	0.044	ppb	350.8	76.00	0.0009	Pulse	0.5000	3
Sr	88	115	He	0.070	ppb	117.4	140.01	0.0016	Pulse	0.1000	3
Mo	98	115	He	0.017	ppb	70.2	56.67	0.0006	Pulse	0.1000	3
Ag	107	115	He	-0.004	ppb	N/A	40.00	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.001	ppb	173.2	0.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.014	ppb	154.6	1463.47	0.0167	Pulse	0.1000	3
Sb	121	115	He	-0.005	ppb	N/A	16.67	0.0002	Pulse	0.1000	3
Ba	137	115	He	-0.001	ppb	N/A	20.00	0.0002	Pulse	0.1000	3
Tl	205	159	He	0.012	ppb	14.3	170.01	0.0004	Pulse	0.1000	3
Pb	208	159	He	0.006	ppb	100.5	503.36	0.0013	Pulse	0.1000	3
U	238	209	He	0.008	ppb	74.7	140.00	0.0005	Pulse	0.1000	3

ISTD Table:

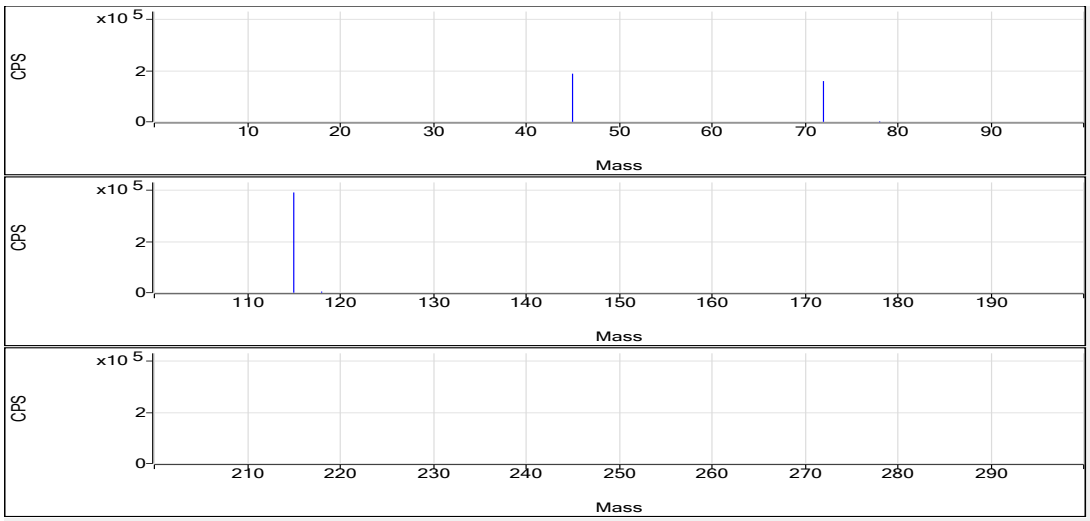
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2491596.37	1.1	103.9	Analog	0.1000	3
No Gas	Ge	72	1211760.50	0.4	105.1	Pulse	0.1000	3
H2	Sc	45	188279.05	1.2	100.7	Pulse	0.1000	3
H2	Ge	72	159296.81	1.3	97.3	Pulse	0.1000	3
H2	In	115	391968.47	0.1	100.7	Pulse	0.1000	3
He	Sc	45	49387.94	3.3	105.9	Pulse	0.1000	3
He	Ge	72	84680.55	1.0	104.3	Pulse	0.1000	3
He	In	115	87665.23	0.8	101.7	Pulse	0.1000	3
He	Tb	159	396142.91	0.4	99.4	Pulse	0.1000	3
He	Bi	209	306189.72	0.4	99.0	Pulse	0.1000	3

No Gas

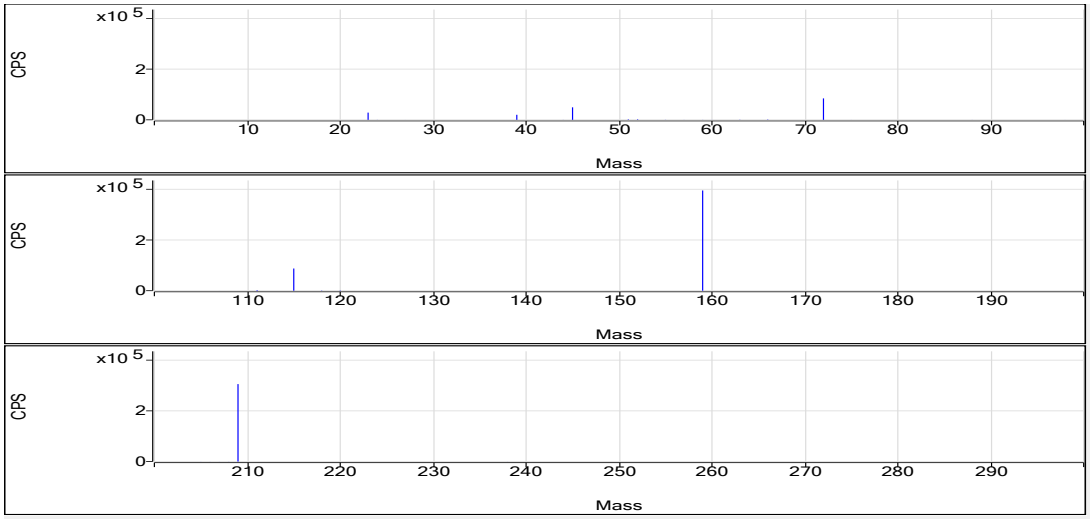


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.011	0	32.00	0.0008	4.685E-06
Be	9	1	No Gas	0.002	0	16.00	0.0008	4.685E-06
Be	9	1	No Gas	0.001	0	14.00	0.0008	4.685E-06
Se	78	2	H2	0.02	0	3.33	0.0004	1.219E-05
Se	78	2	H2	-0.019	0	0.67	0.0004	1.219E-05
Se	78	2	H2	-0.009	0	1.33	0.0004	1.219E-05
Na	23	3	He	65.591	0.5798	29510.43	0.0036	0.3452
Na	23	3	He	58.617	0.5548	27506.27	0.0036	0.3452
Na	23	3	He	69.921	0.5953	28387.84	0.0036	0.3452
Mg	24	3	He	0.57	0.0045	230.01	0.0018	0.003497
Mg	24	3	He	0.3	0.004	200.01	0.0018	0.003497
Mg	24	3	He	1.674	0.0065	310.01	0.0018	0.003497
Al	27	3	He	0.244	0.0008	40.00	0.0006	0.0006432
Al	27	3	He	-1.099	0	0.00	0.0006	0.0006432
Al	27	3	He	1.051	0.0013	60.00	0.0006	0.0006432
K	39	3	He	-2.607	0.392	19954.12	0.0012	0.3951
K	39	3	He	0.138	0.3952	19593.59	0.0012	0.3951
K	39	3	He	22.224	0.4209	20074.34	0.0012	0.3951
Ca	44	3	He	-5.287	0.0024	120.01	0.0001	0.002715
Ca	44	3	He	7.589	0.0032	160.01	0.0001	0.002715
Ca	44	3	He	37.416	0.0052	250.01	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	0.507	0.036	1830.13	0.0219	0.02486
V	51	3	He	0.514	0.0361	1790.12	0.0219	0.02486
V	51	3	He	0.584	0.0376	1794.13	0.0219	0.02486
Cr	52	3	He	-0.114	0.0365	1860.16	0.0299	0.03997
Cr	52	3	He	-0.035	0.0389	1930.20	0.0299	0.03997
Cr	52	3	He	-0.018	0.0394	1880.19	0.0299	0.03997
Mn	55	3	He	0.269	0.0061	310.02	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.313	0.0067	330.02	0.0128	0.002639
Mn	55	3	He	0.383	0.0075	360.02	0.0128	0.002639
Fe	57	3	He	3.29	0.0033	170.01	0.0006	0.001429
Fe	57	3	He	0.318	0.0016	80.00	0.0006	0.001429
Fe	57	3	He	4.399	0.004	190.01	0.0006	0.001429
Co	59	3	He	0.032	0.0039	200.01	0.0563	0.002149
Co	59	3	He	0.033	0.004	200.01	0.0563	0.002149
Co	59	3	He	0.044	0.0046	220.01	0.0563	0.002149
Ni	60	3	He	-0.044	0.0025	210.01	0.0086	0.002834
Ni	60	3	He	-0.136	0.0017	140.01	0.0086	0.002834
Ni	60	3	He	-0.137	0.0017	140.00	0.0086	0.002834
Cu	63	3	He	0.092	0.0071	610.04	0.0257	0.004757
Cu	63	3	He	0.126	0.008	670.04	0.0257	0.004757
Cu	63	3	He	0.027	0.0054	460.02	0.0257	0.004757
Zn	66	3	He	2.943	0.0124	1060.08	0.0029	0.003818
Zn	66	3	He	3.64	0.0144	1210.10	0.0029	0.003818
Zn	66	3	He	3.606	0.0143	1210.09	0.0029	0.003818
As	75	3	He	0.029	0.0009	74.00	0.002	0.0008061
As	75	3	He	-0.103	0.0006	50.00	0.002	0.0008061
As	75	3	He	0.207	0.0012	104.00	0.002	0.0008061
Sr	88	3	He	-0.019	0.0008	70.00	0.009	0.0009645
Sr	88	3	He	0.085	0.0017	150.01	0.009	0.0009645
Sr	88	3	He	0.145	0.0023	200.01	0.009	0.0009645
Mo	98	3	He	0.003	0.0003	30.00	0.0219	0.0002706
Mo	98	3	He	0.024	0.0008	70.00	0.0219	0.0002706
Mo	98	3	He	0.024	0.0008	70.00	0.0219	0.0002706
Ag	107	3	He	-0.008	0.0002	20.00	0.0465	0.0006206
Ag	107	3	He	0.004	0.0008	70.00	0.0465	0.0006206
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Sn	120	3	He	-0.011	0.0163	1430.12	0.0158	0.01648
Sn	120	3	He	0.028	0.0169	1470.15	0.0158	0.01648
Sn	120	3	He	0.025	0.0169	1490.13	0.0158	0.01648
Sb	121	3	He	-0.018	0	0.00	0.0149	0.0002698
Sb	121	3	He	0.005	0.0003	30.00	0.0149	0.0002698
Sb	121	3	He	-0.003	0.0002	20.00	0.0149	0.0002698
Ba	137	3	He	-0.048	0	0.00	0.0048	0.0002317
Ba	137	3	He	-0.024	0.0001	10.00	0.0048	0.0002317
Ba	137	3	He	0.07	0.0006	50.00	0.0048	0.0002317
Tl	205	3	He	0.011	0.0004	160.01	0.0247	0.0001339
Tl	205	3	He	0.014	0.0005	190.01	0.0247	0.0001339
Tl	205	3	He	0.011	0.0004	160.01	0.0247	0.0001339
Pb	208	3	He	0.012	0.0015	310.01	0.0327	0.00107
Pb	208	3	He	0.006	0.0013	170.01	0.0327	0.00107
Pb	208	3	He	0	0.0011	240.01	0.0327	0.00107
U	238	3	He	0.005	0.0003	100.00	0.0493	7.55E-05
U	238	3	He	0.004	0.0003	80.00	0.0493	7.55E-05
U	238	3	He	0.014	0.0008	240.01	0.0493	7.55E-05
Sc	45	1	No Gas			2485151.21		
Sc	45	1	No Gas			2468577.93		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2521059.96		
Ge	72	1	No Gas			1208213.89		
Ge	72	1	No Gas			1210047.17		
Ge	72	1	No Gas			1217020.45		
Sc	45	2	H2			190878.92		
Sc	45	2	H2			186897.36		
Sc	45	2	H2			187060.86		
Ge	72	2	H2			161647.32		
Ge	72	2	H2			158208.01		
Ge	72	2	H2			158035.11		
In	115	2	H2			392568.86		
In	115	2	H2			391845.97		
In	115	2	H2			391490.58		
Sc	45	3	He			50899.28		
Sc	45	3	He			49575.56		
Sc	45	3	He			47688.97		
Ge	72	3	He			85575.38		
Ge	72	3	He			83946.37		
Ge	72	3	He			84519.91		
In	115	3	He			87717.13		
In	115	3	He			86940.77		
In	115	3	He			88360.41		
Tb	159	3	He			395769.76		
Tb	159	3	He			397791.09		
Tb	159	3	He			394867.88		
Bi	209	3	He			305240.97		
Bi	209	3	He			307507.83		
Bi	209	3	He			305820.37		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

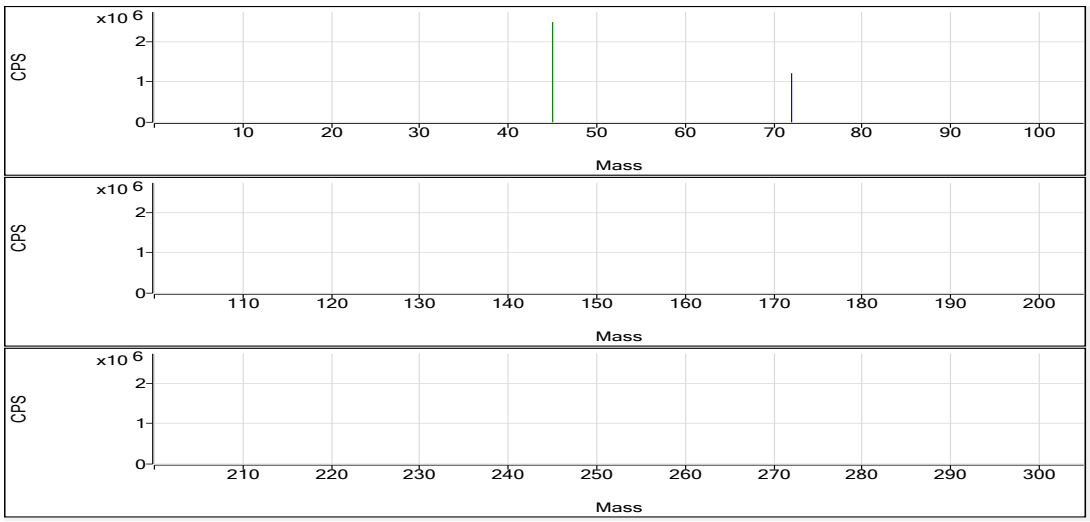
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.005	ppb	12.5	21.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.017	ppb	187.2	3.11	0.0000	Pulse	1.5000	3
Na	23	45	He	61.259	ppb	0.5	27843.73	0.5643	Pulse	0.1000	3
Mg	24	45	He	0.874	ppb	58.7	250.01	0.0051	Pulse	0.1000	3
Al	27	45	He	1.096	ppb	20.7	63.33	0.0013	Pulse	0.1000	3
K	39	45	He	0.533	ppb	1859.7	19530.23	0.3957	Pulse	0.1000	3
Ca	44	45	He	28.857	ppb	33.0	230.01	0.0047	Pulse	0.1000	3
Ti	47	45	He	0.121	ppb	180.0	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	0.558	ppb	7.0	1828.80	0.0371	Pulse	0.5000	3
Cr	52	45	He	-0.121	ppb	N/A	1793.51	0.0363	Pulse	0.1000	3
Mn	55	45	He	0.200	ppb	9.4	256.68	0.0052	Pulse	0.1000	3
Fe	57	45	He	0.463	ppb	348.8	83.34	0.0017	Pulse	0.1000	3
Co	59	45	He	0.024	ppb	33.8	173.34	0.0035	Pulse	0.1000	3
Ni	60	72	He	-0.039	ppb	N/A	213.34	0.0025	Pulse	0.1000	3
Cu	63	72	He	0.024	ppb	163.2	456.69	0.0054	Pulse	0.1000	3
Zn	66	72	He	3.740	ppb	11.5	1253.44	0.0147	Pulse	0.1000	3
As	75	72	He	0.099	ppb	53.4	86.00	0.0010	Pulse	0.5000	3
Sr	88	115	He	0.010	ppb	503.1	93.34	0.0011	Pulse	0.1000	3
Mo	98	115	He	0.018	ppb	27.4	60.00	0.0007	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	2094.4	56.67	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.006	ppb	43.3	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.048	ppb	N/A	1400.12	0.0157	Pulse	0.1000	3
Sb	121	115	He	-0.008	ppb	N/A	13.33	0.0001	Pulse	0.1000	3
Ba	137	115	He	0.030	ppb	164.2	33.33	0.0004	Pulse	0.1000	3
Tl	205	159	He	0.009	ppb	43.2	143.34	0.0004	Pulse	0.1000	3
Pb	208	159	He	0.013	ppb	28.9	596.69	0.0015	Pulse	0.1000	3
U	238	209	He	0.005	ppb	7.4	103.33	0.0003	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2482652.72	0.3	103.5	Analog	0.1000	3
No Gas	Ge	72	1215040.01	0.9	105.4	Pulse	0.1000	3
H2	Sc	45	188709.76	0.9	100.9	Pulse	0.1000	3
H2	Ge	72	161142.85	0.9	98.4	Pulse	0.1000	3
H2	In	115	390517.94	0.6	100.4	Pulse	0.1000	3
He	Sc	45	49344.34	1.4	105.8	Pulse	0.1000	3
He	Ge	72	85200.34	1.1	104.9	Pulse	0.1000	3
He	In	115	89057.37	0.8	103.3	Pulse	0.1000	3
He	Tb	159	400593.29	1.0	100.5	Pulse	0.1000	3
He	Bi	209	308401.49	0.9	99.7	Pulse	0.1000	3

No Gas



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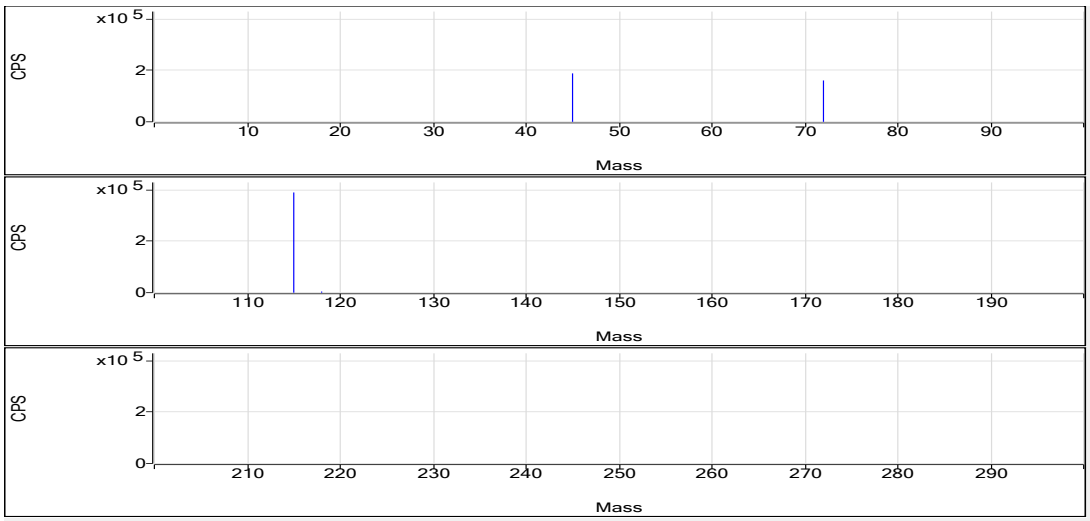
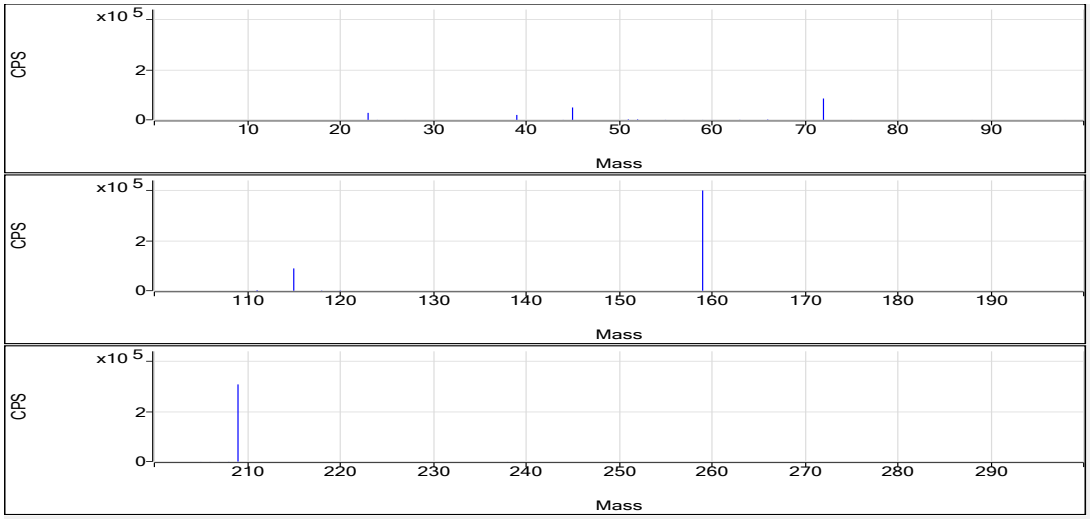


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.005	0	22.00	0.0008	4.685E-06
Be	9	1	No Gas	0.006	0	22.00	0.0008	4.685E-06
Be	9	1	No Gas	0.004	0	20.00	0.0008	4.685E-06
Se	78	2	H2	-0.019	0	0.67	0.0004	1.219E-05
Se	78	2	H2	0.04	0	4.67	0.0004	1.219E-05
Se	78	2	H2	0.03	0	4.00	0.0004	1.219E-05
Na	23	3	He	61.223	0.5642	27786.85	0.0036	0.3452
Na	23	3	He	60.95	0.5632	28207.82	0.0036	0.3452
Na	23	3	He	61.604	0.5655	27536.52	0.0036	0.3452
Mg	24	3	He	1.446	0.0061	300.02	0.0018	0.003497
Mg	24	3	He	0.722	0.0048	240.01	0.0018	0.003497
Mg	24	3	He	0.455	0.0043	210.01	0.0018	0.003497
Al	27	3	He	0.983	0.0012	60.00	0.0006	0.0006432
Al	27	3	He	0.948	0.0012	60.00	0.0006	0.0006432
Al	27	3	He	1.358	0.0014	70.00	0.0006	0.0006432
K	39	3	He	-2.533	0.3921	19313.32	0.0012	0.3951
K	39	3	He	11.612	0.4086	20464.75	0.0012	0.3951
K	39	3	He	-7.48	0.3864	18812.63	0.0012	0.3951
Ca	44	3	He	19.923	0.0041	200.01	0.0001	0.002715
Ca	44	3	He	27.79	0.0046	230.01	0.0001	0.002715
Ca	44	3	He	38.857	0.0053	260.01	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.241	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	0.252	0.0002	10.00	0.0005	7.003E-05
V	51	3	He	0.562	0.0372	1830.13	0.0219	0.02486
V	51	3	He	0.518	0.0362	1812.13	0.0219	0.02486
V	51	3	He	0.595	0.0379	1844.13	0.0219	0.02486
Cr	52	3	He	-0.203	0.0339	1670.15	0.0299	0.03997
Cr	52	3	He	-0.088	0.0373	1870.18	0.0299	0.03997
Cr	52	3	He	-0.073	0.0378	1840.21	0.0299	0.03997
Mn	55	3	He	0.206	0.0053	260.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.214	0.0054	270.01	0.0128	0.002639
Mn	55	3	He	0.178	0.0049	240.01	0.0128	0.002639
Fe	57	3	He	0.336	0.0016	80.00	0.0006	0.001429
Fe	57	3	He	-1.085	0.0008	40.00	0.0006	0.001429
Fe	57	3	He	2.136	0.0027	130.01	0.0006	0.001429
Co	59	3	He	0.023	0.0035	170.01	0.0563	0.002149
Co	59	3	He	0.033	0.004	200.01	0.0563	0.002149
Co	59	3	He	0.017	0.0031	150.01	0.0563	0.002149
Ni	60	3	He	0.007	0.0029	250.01	0.0086	0.002834
Ni	60	3	He	-0.013	0.0027	230.01	0.0086	0.002834
Ni	60	3	He	-0.11	0.0019	160.01	0.0086	0.002834
Cu	63	3	He	-0.014	0.0044	380.02	0.0257	0.004757
Cu	63	3	He	0.064	0.0064	540.03	0.0257	0.004757
Cu	63	3	He	0.021	0.0053	450.03	0.0257	0.004757
Zn	66	3	He	4.101	0.0158	1360.12	0.0029	0.003818
Zn	66	3	He	3.854	0.015	1270.10	0.0029	0.003818
Zn	66	3	He	3.264	0.0133	1130.09	0.0029	0.003818
As	75	3	He	0.082	0.001	84.00	0.002	0.0008061
As	75	3	He	0.057	0.0009	78.00	0.002	0.0008061
As	75	3	He	0.159	0.0011	96.00	0.002	0.0008061
Sr	88	3	He	-0.045	0.0006	50.00	0.009	0.0009645
Sr	88	3	He	0.043	0.0013	120.01	0.009	0.0009645
Sr	88	3	He	0.031	0.0012	110.00	0.009	0.0009645
Mo	98	3	He	0.018	0.0007	60.00	0.0219	0.0002706
Mo	98	3	He	0.024	0.0008	70.00	0.0219	0.0002706
Mo	98	3	He	0.013	0.0006	50.00	0.0219	0.0002706
Ag	107	3	He	-0.009	0.0002	20.00	0.0465	0.0006206
Ag	107	3	He	0.006	0.0009	80.00	0.0465	0.0006206
Ag	107	3	He	0.004	0.0008	70.00	0.0465	0.0006206
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.008	0	4.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Sn	120	3	He	-0.099	0.0149	1340.12	0.0158	0.01648
Sn	120	3	He	0.059	0.0174	1550.15	0.0158	0.01648
Sn	120	3	He	-0.104	0.0148	1310.10	0.0158	0.01648
Sb	121	3	He	-0.003	0.0002	20.00	0.0149	0.0002698
Sb	121	3	He	-0.011	0.0001	10.00	0.0149	0.0002698
Sb	121	3	He	-0.011	0.0001	10.00	0.0149	0.0002698
Ba	137	3	He	0.045	0.0004	40.00	0.0048	0.0002317
Ba	137	3	He	0.069	0.0006	50.00	0.0048	0.0002317
Ba	137	3	He	-0.025	0.0001	10.00	0.0048	0.0002317
Tl	205	3	He	0.012	0.0004	170.01	0.0247	0.0001339
Tl	205	3	He	0.005	0.0002	100.00	0.0247	0.0001339
Tl	205	3	He	0.011	0.0004	160.01	0.0247	0.0001339
Pb	208	3	He	0.016	0.0016	350.02	0.0327	0.00107
Pb	208	3	He	0.009	0.0014	270.01	0.0327	0.00107
Pb	208	3	He	0.013	0.0015	340.01	0.0327	0.00107
U	238	3	He	0.005	0.0003	100.00	0.0493	7.55E-05
U	238	3	He	0.006	0.0004	110.00	0.0493	7.55E-05
U	238	3	He	0.005	0.0003	100.00	0.0493	7.55E-05
Sc	45	1	No Gas			2480197.46		
Sc	45	1	No Gas			2477331.37		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2490429.34		
Ge	72	1	No Gas			1212766.39		
Ge	72	1	No Gas			1205692.87		
Ge	72	1	No Gas			1226660.76		
Sc	45	2	H2			190725.56		
Sc	45	2	H2			188101.99		
Sc	45	2	H2			187301.74		
Ge	72	2	H2			159582.33		
Ge	72	2	H2			161301.22		
Ge	72	2	H2			162545.00		
In	115	2	H2			388499.02		
In	115	2	H2			393290.19		
In	115	2	H2			389764.60		
Sc	45	3	He			49253.93		
Sc	45	3	He			50086.73		
Sc	45	3	He			48692.36		
Ge	72	3	He			86309.85		
Ge	72	3	He			84459.55		
Ge	72	3	He			84831.61		
In	115	3	He			89839.44		
In	115	3	He			89024.68		
In	115	3	He			88331.41		
Tb	159	3	He			400343.20		
Tb	159	3	He			404605.89		
Tb	159	3	He			396830.78		
Bi	209	3	He			311346.07		
Bi	209	3	He			308252.16		
Bi	209	3	He			305606.25		

Quantitation Report

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Sample Type	CCV
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

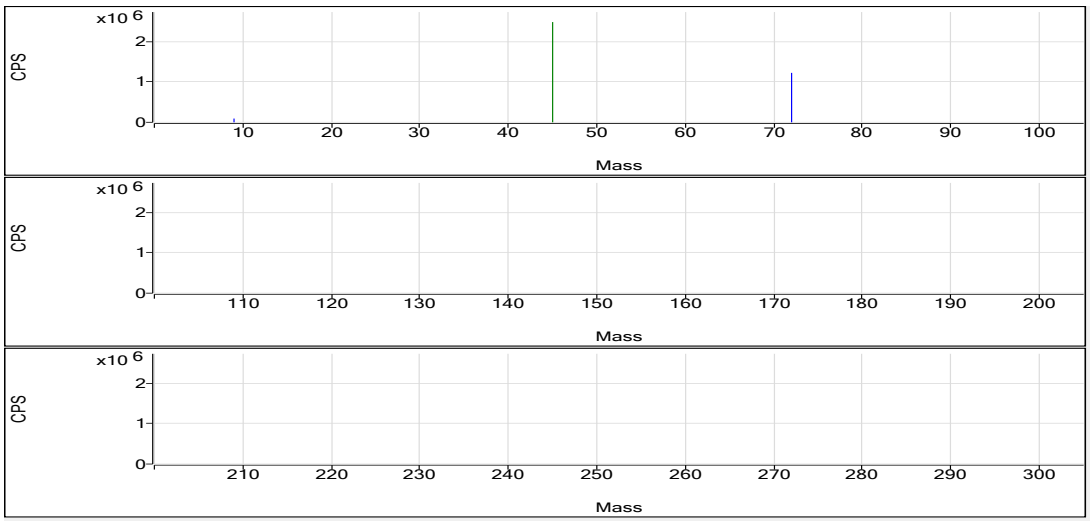
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	48.883	ppb	1.4	92524.31	0.0373	Pulse	0.5000	3
Se	78	72	H2	52.941	ppb	1.0	3672.92	0.0221	Pulse	1.5000	3
Na	23	45	He	4884.295	ppb	0.7	867382.35	17.8165	Pulse	0.1000	3
Mg	24	45	He	5045.861	ppb	1.2	440942.38	9.0574	Pulse	0.1000	3
Al	27	45	He	4909.238	ppb	0.8	139859.86	2.8727	Pulse	0.1000	3
K	39	45	He	5124.823	ppb	1.2	309729.80	6.3620	Pulse	0.1000	3
Ca	44	45	He	5093.949	ppb	3.8	16887.05	0.3468	Pulse	0.1000	3
Ti	47	45	He	5077.157	ppb	0.6	132725.55	2.7262	Pulse	0.1000	3
V	51	45	He	510.003	ppb	0.6	543964.67	11.1731	Pulse	0.5000	3
Cr	52	45	He	485.798	ppb	0.9	710082.31	14.5851	Pulse	0.1000	3
Mn	55	45	He	503.816	ppb	0.2	314922.78	6.4686	Pulse	0.1000	3
Fe	57	45	He	4981.341	ppb	0.2	140970.03	2.8955	Pulse	0.1000	3
Co	59	45	He	486.264	ppb	0.6	1332524.04	27.3702	Pulse	0.1000	3
Ni	60	72	He	513.031	ppb	1.6	375895.96	4.4063	Pulse	0.1000	3
Cu	63	72	He	488.382	ppb	1.0	1069981.10	12.5420	Pulse	0.1000	3
Zn	66	72	He	511.305	ppb	1.3	127332.02	1.4925	Pulse	0.1000	3
As	75	72	He	518.102	ppb	1.3	90627.68	1.0623	Pulse	0.5000	3
Sr	88	115	He	51.390	ppb	2.0	40475.59	0.4619	Pulse	0.1000	3
Mo	98	115	He	51.571	ppb	1.0	99095.61	1.1310	Pulse	0.1000	3
Ag	107	115	He	51.065	ppb	1.1	208002.00	2.3745	Pulse	0.1000	3
Cd	111	115	He	50.672	ppb	0.5	23735.47	0.2709	Pulse	0.5000	3
Sn	120	115	He	51.249	ppb	1.5	72379.71	0.8261	Pulse	0.1000	3
Sb	121	115	He	51.592	ppb	1.7	67166.85	0.7666	Pulse	0.1000	3
Ba	137	115	He	517.659	ppb	0.9	217663.09	2.4846	Pulse	0.1000	3
Tl	205	159	He	51.145	ppb	0.9	506352.21	1.2648	Pulse	0.1000	3
Pb	208	159	He	51.645	ppb	1.0	677141.72	1.6914	Pulse	0.1000	3
U	238	209	He	50.435	ppb	0.8	772741.63	2.4845	Pulse	0.1000	3

ISTD Table:

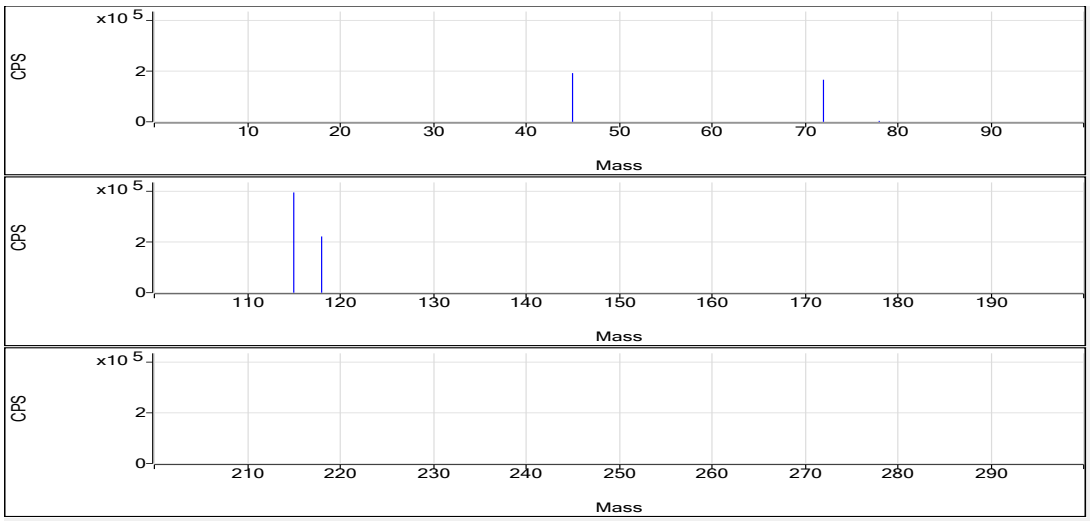
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2481347.25	1.2	103.4	Analog	0.1000	3
No Gas	Ge	72	1223905.19	0.6	106.1	Pulse	0.1000	3
H2	Sc	45	192401.23	0.4	102.9	Pulse	0.1000	3
H2	Ge	72	166247.37	0.8	101.5	Pulse	0.1000	3
H2	In	115	395925.44	0.2	101.8	Pulse	0.1000	3
He	Sc	45	48685.49	0.6	104.4	Pulse	0.1000	3
He	Ge	72	85314.32	0.5	105.1	Pulse	0.1000	3
He	In	115	87608.38	1.3	101.6	Pulse	0.1000	3
He	Tb	159	400373.39	1.1	100.4	Pulse	0.1000	3
He	Bi	209	311025.61	0.2	100.6	Pulse	0.1000	3

No Gas

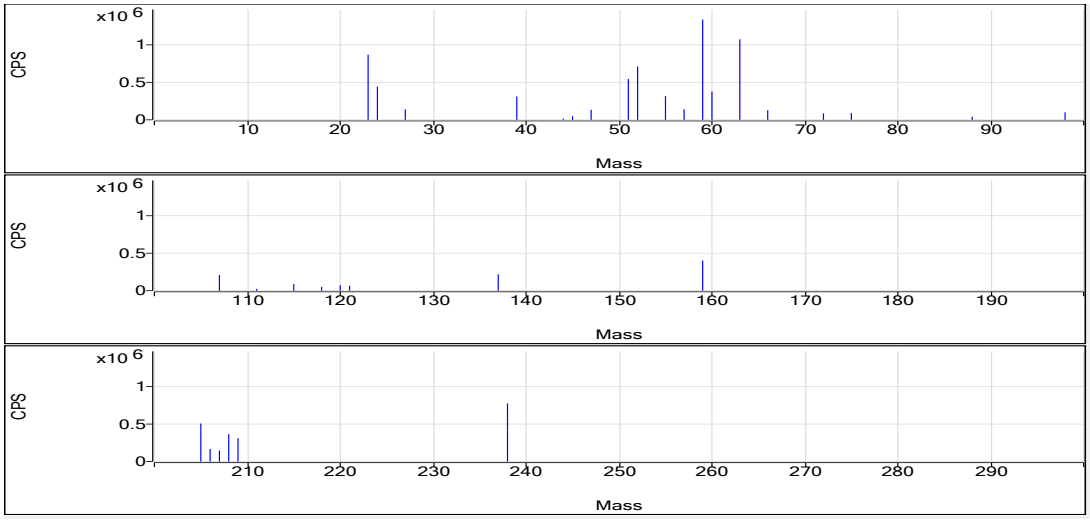


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	48.556	0.037	92175.59	0.0008	4.685E-06
Be	9	1	No Gas	48.397	0.0369	92517.61	0.0008	4.685E-06
Be	9	1	No Gas	49.696	0.0379	92879.73	0.0008	4.685E-06
Se	78	2	H2	52.397	0.0219	3623.80	0.0004	1.219E-05
Se	78	2	H2	53.442	0.0223	3741.83	0.0004	1.219E-05
Se	78	2	H2	52.984	0.0221	3653.14	0.0004	1.219E-05
Na	23	3	He	4880.16	17.8017	870020.61	0.0036	0.3452
Na	23	3	He	4850.507	17.6957	864483.42	0.0036	0.3452
Na	23	3	He	4922.219	17.9522	867643.03	0.0036	0.3452
Mg	24	3	He	5002.032	8.9788	438816.83	0.0018	0.003497
Mg	24	3	He	5023.032	9.0164	440478.43	0.0018	0.003497
Mg	24	3	He	5112.519	9.177	443531.87	0.0018	0.003497
Al	27	3	He	4950.814	2.897	141586.56	0.0006	0.0006432
Al	27	3	He	4867.678	2.8484	139152.68	0.0006	0.0006432
Al	27	3	He	4909.222	2.8727	138840.34	0.0006	0.0006432
K	39	3	He	5148.234	6.3893	312262.69	0.0012	0.3951
K	39	3	He	5056.498	6.2825	306917.12	0.0012	0.3951
K	39	3	He	5169.736	6.4143	310009.59	0.0012	0.3951
Ca	44	3	He	5309.362	0.3614	17661.29	0.0001	0.002715
Ca	44	3	He	5032.445	0.3427	16740.22	0.0001	0.002715
Ca	44	3	He	4940.039	0.3364	16259.64	0.0001	0.002715
Ti	47	3	He	5050.552	2.712	132541.06	0.0005	7.003E-05
Ti	47	3	He	5072.63	2.7238	133066.07	0.0005	7.003E-05
Ti	47	3	He	5108.289	2.743	132569.51	0.0005	7.003E-05
V	51	3	He	512.332	11.224	548549.25	0.0219	0.02486
V	51	3	He	506.598	11.0987	542202.50	0.0219	0.02486
V	51	3	He	511.079	11.1966	541142.25	0.0219	0.02486
Cr	52	3	He	489.864	14.7068	718764.91	0.0299	0.03997
Cr	52	3	He	481.348	14.4519	706015.93	0.0299	0.03997
Cr	52	3	He	486.182	14.5966	705466.08	0.0299	0.03997
Mn	55	3	He	502.995	6.458	315621.32	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	503.896	6.4696	316057.03	0.0128	0.002639
Mn	55	3	He	504.557	6.4781	313090.00	0.0128	0.002639
Fe	57	3	He	4973.383	2.8909	141287.31	0.0006	0.001429
Fe	57	3	He	4981.038	2.8954	141446.89	0.0006	0.001429
Fe	57	3	He	4989.604	2.9003	140175.89	0.0006	0.001429
Co	59	3	He	488.524	27.4974	1343876.39	0.0563	0.002149
Co	59	3	He	483.186	27.197	1328649.82	0.0563	0.002149
Co	59	3	He	487.081	27.4162	1325045.92	0.0563	0.002149
Ni	60	3	He	520.748	4.4725	379995.31	0.0086	0.002834
Ni	60	3	He	513.71	4.4121	375707.49	0.0086	0.002834
Ni	60	3	He	504.634	4.3342	371985.07	0.0086	0.002834
Cu	63	3	He	493.674	12.6779	1077148.66	0.0257	0.004757
Cu	63	3	He	487.536	12.5203	1066160.06	0.0257	0.004757
Cu	63	3	He	483.935	12.4279	1066634.59	0.0257	0.004757
Zn	66	3	He	509.052	1.486	126253.20	0.0029	0.003818
Zn	66	3	He	518.969	1.5149	128996.58	0.0029	0.003818
Zn	66	3	He	505.893	1.4768	126746.27	0.0029	0.003818
As	75	3	He	522.458	1.0713	91016.70	0.002	0.0008061
As	75	3	He	521.606	1.0695	91073.10	0.002	0.0008061
As	75	3	He	510.242	1.0462	89793.23	0.002	0.0008061
Sr	88	3	He	52.375	0.4708	41852.89	0.009	0.0009645
Sr	88	3	He	51.454	0.4625	40378.42	0.009	0.0009645
Sr	88	3	He	50.342	0.4525	39195.46	0.009	0.0009645
Mo	98	3	He	51.919	1.1387	101234.41	0.0219	0.0002706
Mo	98	3	He	51.845	1.137	99269.23	0.0219	0.0002706
Mo	98	3	He	50.949	1.1174	96783.20	0.0219	0.0002706
Ag	107	3	He	50.456	2.3462	208587.77	0.0465	0.0006206
Ag	107	3	He	51.119	2.377	207521.72	0.0465	0.0006206
Ag	107	3	He	51.619	2.4002	207896.52	0.0465	0.0006206
Cd	111	3	He	50.412	0.2696	23964.52	0.0053	0
Cd	111	3	He	50.65	0.2708	23643.99	0.0053	0
Cd	111	3	He	50.954	0.2724	23597.89	0.0053	0
Sn	120	3	He	51.225	0.8258	73415.25	0.0158	0.01648
Sn	120	3	He	52.038	0.8386	73214.04	0.0158	0.01648
Sn	120	3	He	50.484	0.8141	70509.83	0.0158	0.01648
Sb	121	3	He	52.516	0.7803	69374.11	0.0149	0.0002698
Sb	121	3	He	50.837	0.7554	65947.83	0.0149	0.0002698
Sb	121	3	He	51.422	0.7641	66178.62	0.0149	0.0002698
Ba	137	3	He	512.842	2.4615	218844.12	0.0048	0.0002317
Ba	137	3	He	521.935	2.5052	218713.71	0.0048	0.0002317
Ba	137	3	He	518.198	2.4872	215431.44	0.0048	0.0002317
Tl	205	3	He	51.073	1.263	511142.45	0.0247	0.0001339
Tl	205	3	He	50.712	1.2541	502646.05	0.0247	0.0001339
Tl	205	3	He	51.65	1.2773	505268.12	0.0247	0.0001339
Pb	208	3	He	51.293	1.6799	363034.49	0.0327	0.00107
Pb	208	3	He	51.428	1.6843	363116.36	0.0327	0.00107
Pb	208	3	He	52.213	1.71	362958.12	0.0327	0.00107
U	238	3	He	50.847	2.5048	779210.93	0.0493	7.55E-05
U	238	3	He	50.007	2.4634	767275.61	0.0493	7.55E-05
U	238	3	He	50.452	2.4853	771738.35	0.0493	7.55E-05
Sc	45	1	No Gas			2488393.24		
Sc	45	1	No Gas			2505796.53		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2449851.99		
Ge	72	1	No Gas			1226558.50		
Ge	72	1	No Gas			1229136.15		
Ge	72	1	No Gas			1216020.92		
Sc	45	2	H2			193210.04		
Sc	45	2	H2			191961.93		
Sc	45	2	H2			192031.72		
Ge	72	2	H2			165732.01		
Ge	72	2	H2			167785.95		
Ge	72	2	H2			165224.14		
In	115	2	H2			395743.67		
In	115	2	H2			396690.89		
In	115	2	H2			395341.75		
Sc	45	3	He			48872.81		
Sc	45	3	He			48852.85		
Sc	45	3	He			48330.80		
Ge	72	3	He			84962.78		
Ge	72	3	He			85154.27		
Ge	72	3	He			85825.90		
In	115	3	He			89296.22		
In	115	3	He			87695.59		
In	115	3	He			87002.16		
Tb	159	3	He			404712.57		
Tb	159	3	He			400817.14		
Tb	159	3	He			395590.46		
Bi	209	3	He			311088.10		
Bi	209	3	He			311469.57		
Bi	209	3	He			310519.16		

Quantitation Report

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Acq Time	8/10/2023 4:01:32 PM
Sample Name	CCB 4654618
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

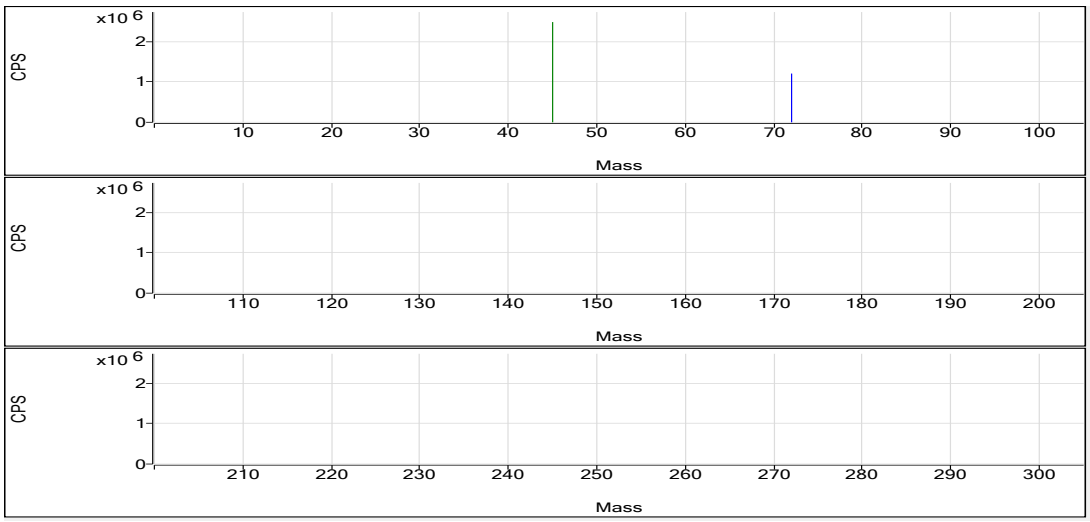
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.023	ppb	31.2	54.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.052	ppb	34.7	5.33	0.0000	Pulse	1.5000	3
Na	23	45	He	54.904	ppb	3.8	25743.14	0.5416	Pulse	0.1000	3
Mg	24	45	He	1.924	ppb	28.5	330.03	0.0069	Pulse	0.1000	3
Al	27	45	He	1.062	ppb	61.0	60.00	0.0013	Pulse	0.1000	3
K	39	45	He	4.129	ppb	242.7	19006.23	0.3999	Pulse	0.1000	3
Ca	44	45	He	11.467	ppb	181.6	166.67	0.0035	Pulse	0.1000	3
Ti	47	45	He	0.917	ppb	26.6	26.67	0.0006	Pulse	0.1000	3
V	51	45	He	0.617	ppb	7.5	1823.46	0.0383	Pulse	0.5000	3
Cr	52	45	He	-0.014	ppb	N/A	1880.19	0.0396	Pulse	0.1000	3
Mn	55	45	He	0.400	ppb	18.6	370.02	0.0078	Pulse	0.1000	3
Fe	57	45	He	1.146	ppb	140.1	100.00	0.0021	Pulse	0.1000	3
Co	59	45	He	0.064	ppb	11.4	273.34	0.0058	Pulse	0.1000	3
Ni	60	72	He	0.010	ppb	796.3	243.34	0.0029	Pulse	0.1000	3
Cu	63	72	He	0.122	ppb	34.8	656.71	0.0079	Pulse	0.1000	3
Zn	66	72	He	3.569	ppb	32.7	1176.76	0.0142	Pulse	0.1000	3
As	75	72	He	0.237	ppb	20.7	107.33	0.0013	Pulse	0.5000	3
Sr	88	115	He	0.076	ppb	36.7	143.34	0.0016	Pulse	0.1000	3
Mo	98	115	He	0.069	ppb	37.6	156.67	0.0018	Pulse	0.1000	3
Ag	107	115	He	-0.003	ppb	N/A	40.00	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.006	ppb	43.3	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.072	ppb	22.4	1536.81	0.0176	Pulse	0.1000	3
Sb	121	115	He	0.041	ppb	48.3	76.67	0.0009	Pulse	0.1000	3
Ba	137	115	He	0.127	ppb	71.6	73.33	0.0008	Pulse	0.1000	3
Tl	205	159	He	0.060	ppb	6.8	633.37	0.0016	Pulse	0.1000	3
Pb	208	159	He	0.020	ppb	48.2	676.70	0.0017	Pulse	0.1000	3
U	238	209	He	0.044	ppb	8.0	693.38	0.0023	Pulse	0.1000	3

ISTD Table:

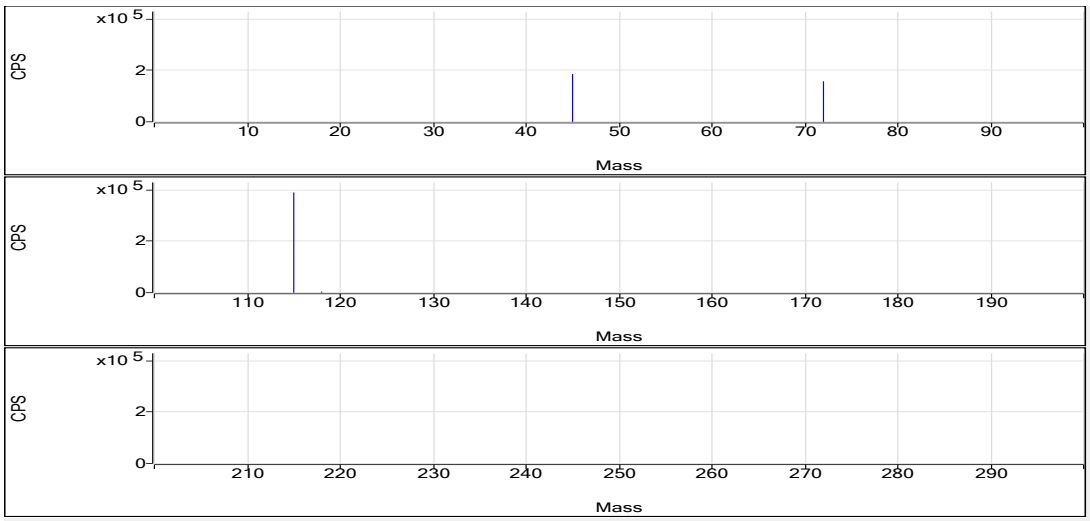
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2485697.67	1.6	103.6	Analog	0.1000	3
No Gas	Ge	72	1208646.10	0.4	104.8	Pulse	0.1000	3
H2	Sc	45	185908.80	0.9	99.4	Pulse	0.1000	3
H2	Ge	72	157812.92	0.8	96.4	Pulse	0.1000	3
H2	In	115	390172.03	0.4	100.3	Pulse	0.1000	3
He	Sc	45	47541.70	1.9	101.9	Pulse	0.1000	3
He	Ge	72	83135.20	2.3	102.4	Pulse	0.1000	3
He	In	115	87268.32	0.7	101.2	Pulse	0.1000	3
He	Tb	159	392050.11	0.7	98.4	Pulse	0.1000	3
He	Bi	209	306522.68	0.5	99.1	Pulse	0.1000	3

No Gas

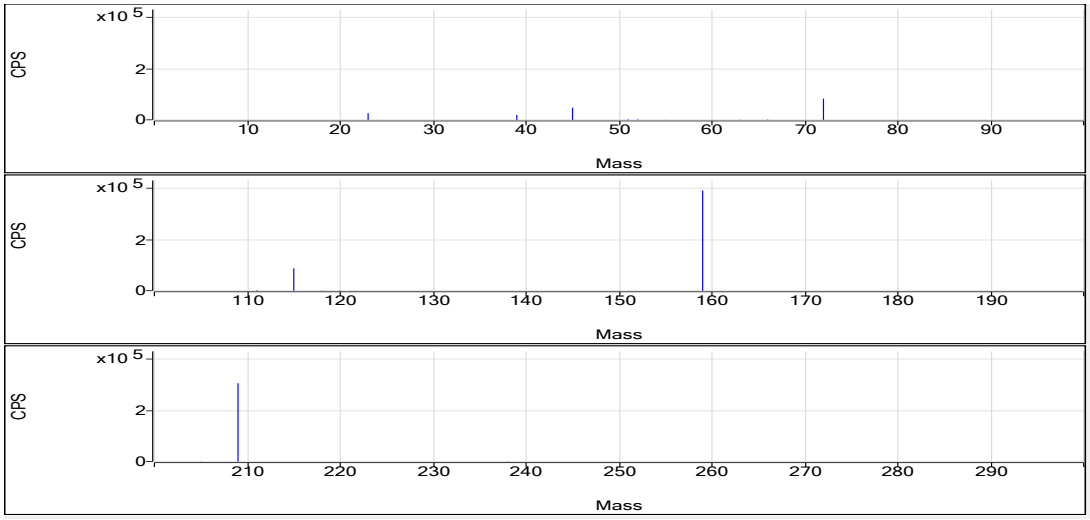


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.028	0	64.00	0.0008	4.685E-06
Be	9	1	No Gas	0.015	0	40.00	0.0008	4.685E-06
Be	9	1	No Gas	0.026	0	60.00	0.0008	4.685E-06
Se	78	2	H2	0.063	0	6.00	0.0004	1.219E-05
Se	78	2	H2	0.062	0	6.00	0.0004	1.219E-05
Se	78	2	H2	0.031	0	4.00	0.0004	1.219E-05
Na	23	3	He	53.225	0.5355	26033.85	0.0036	0.3452
Na	23	3	He	54.223	0.5391	25342.25	0.0036	0.3452
Na	23	3	He	57.264	0.55	25853.31	0.0036	0.3452
Mg	24	3	He	1.605	0.0064	310.01	0.0018	0.003497
Mg	24	3	He	1.608	0.0064	300.01	0.0018	0.003497
Mg	24	3	He	2.557	0.0081	380.08	0.0018	0.003497
Al	27	3	He	0.659	0.001	50.00	0.0006	0.0006432
Al	27	3	He	1.81	0.0017	80.01	0.0006	0.0006432
Al	27	3	He	0.719	0.0011	50.00	0.0006	0.0006432
K	39	3	He	-3.038	0.3915	19032.96	0.0012	0.3951
K	39	3	He	-0.156	0.3949	18562.31	0.0012	0.3951
K	39	3	He	15.581	0.4132	19423.43	0.0012	0.3951
Ca	44	3	He	32.898	0.0049	240.01	0.0001	0.002715
Ca	44	3	He	-8.699	0.0021	100.00	0.0001	0.002715
Ca	44	3	He	10.2	0.0034	160.01	0.0001	0.002715
Ti	47	3	He	0.636	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	1.058	0.0006	30.00	0.0005	7.003E-05
Ti	47	3	He	1.058	0.0006	30.00	0.0005	7.003E-05
V	51	3	He	0.637	0.0388	1886.13	0.0219	0.02486
V	51	3	He	0.649	0.0391	1836.13	0.0219	0.02486
V	51	3	He	0.564	0.0372	1748.12	0.0219	0.02486
Cr	52	3	He	-0.064	0.0381	1850.18	0.0299	0.03997
Cr	52	3	He	0.022	0.0406	1910.20	0.0299	0.03997
Cr	52	3	He	0.001	0.04	1880.20	0.0299	0.03997
Mn	55	3	He	0.484	0.0088	430.02	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.341	0.007	330.01	0.0128	0.002639
Mn	55	3	He	0.375	0.0074	350.02	0.0128	0.002639
Fe	57	3	He	2.498	0.0029	140.01	0.0006	0.001429
Fe	57	3	He	-0.628	0.0011	50.00	0.0006	0.001429
Fe	57	3	He	1.569	0.0023	110.00	0.0006	0.001429
Co	59	3	He	0.057	0.0053	260.01	0.0563	0.002149
Co	59	3	He	0.064	0.0057	270.01	0.0563	0.002149
Co	59	3	He	0.071	0.0062	290.01	0.0563	0.002149
Ni	60	3	He	0.093	0.0036	310.01	0.0086	0.002834
Ni	60	3	He	-0.005	0.0028	230.01	0.0086	0.002834
Ni	60	3	He	-0.059	0.0023	190.01	0.0086	0.002834
Cu	63	3	He	0.162	0.0089	760.05	0.0257	0.004757
Cu	63	3	He	0.127	0.008	660.04	0.0257	0.004757
Cu	63	3	He	0.077	0.0067	550.03	0.0257	0.004757
Zn	66	3	He	2.271	0.0104	890.06	0.0029	0.003818
Zn	66	3	He	3.898	0.0152	1250.10	0.0029	0.003818
Zn	66	3	He	4.537	0.017	1390.12	0.0029	0.003818
As	75	3	He	0.19	0.0012	102.00	0.002	0.0008061
As	75	3	He	0.234	0.0013	106.00	0.002	0.0008061
As	75	3	He	0.288	0.0014	114.00	0.002	0.0008061
Sr	88	3	He	0.098	0.0018	160.01	0.009	0.0009645
Sr	88	3	He	0.045	0.0014	120.00	0.009	0.0009645
Sr	88	3	He	0.084	0.0017	150.01	0.009	0.0009645
Mo	98	3	He	0.046	0.0013	110.00	0.0219	0.0002706
Mo	98	3	He	0.066	0.0017	150.01	0.0219	0.0002706
Mo	98	3	He	0.097	0.0024	210.01	0.0219	0.0002706
Ag	107	3	He	0.002	0.0007	60.00	0.0465	0.0006206
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.009	0	4.00	0.0053	0
Sn	120	3	He	0.09	0.0179	1550.13	0.0158	0.01648
Sn	120	3	He	0.059	0.0174	1530.15	0.0158	0.01648
Sn	120	3	He	0.066	0.0175	1530.14	0.0158	0.01648
Sb	121	3	He	0.06	0.0012	100.00	0.0149	0.0002698
Sb	121	3	He	0.02	0.0006	50.00	0.0149	0.0002698
Sb	121	3	He	0.044	0.0009	80.00	0.0149	0.0002698
Ba	137	3	He	0.168	0.001	90.00	0.0048	0.0002317
Ba	137	3	He	0.023	0.0003	30.00	0.0048	0.0002317
Ba	137	3	He	0.19	0.0011	100.00	0.0048	0.0002317
Tl	205	3	He	0.061	0.0016	650.04	0.0247	0.0001339
Tl	205	3	He	0.063	0.0017	660.04	0.0247	0.0001339
Tl	205	3	He	0.055	0.0015	590.03	0.0247	0.0001339
Pb	208	3	He	0.018	0.0017	430.02	0.0327	0.00107
Pb	208	3	He	0.011	0.0014	290.01	0.0327	0.00107
Pb	208	3	He	0.03	0.0021	490.03	0.0327	0.00107
U	238	3	He	0.041	0.0021	640.04	0.0493	7.55E-05
U	238	3	He	0.045	0.0023	700.04	0.0493	7.55E-05
U	238	3	He	0.048	0.0024	740.05	0.0493	7.55E-05
Sc	45	1	No Gas			2483296.84		
Sc	45	1	No Gas			2527510.43		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2446285.74		
Ge	72	1	No Gas			1204335.45		
Ge	72	1	No Gas			1214201.62		
Ge	72	1	No Gas			1207401.23		
Sc	45	2	H2			183899.31		
Sc	45	2	H2			186970.33		
Sc	45	2	H2			186856.76		
Ge	72	2	H2			156567.72		
Ge	72	2	H2			157883.45		
Ge	72	2	H2			158987.58		
In	115	2	H2			389503.28		
In	115	2	H2			388866.67		
In	115	2	H2			392146.13		
Sc	45	3	He			48611.81		
Sc	45	3	He			47006.87		
Sc	45	3	He			47006.41		
Ge	72	3	He			85344.95		
Ge	72	3	He			82418.01		
Ge	72	3	He			81642.65		
In	115	3	He			86620.10		
In	115	3	He			87887.13		
In	115	3	He			87323.32		
Tb	159	3	He			394797.26		
Tb	159	3	He			388967.53		
Tb	159	3	He			392385.54		
Bi	209	3	He			307799.45		
Bi	209	3	He			307060.64		
Bi	209	3	He			304707.96		

Quantitation Report

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Sample Type	Sample
Comment	A12
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

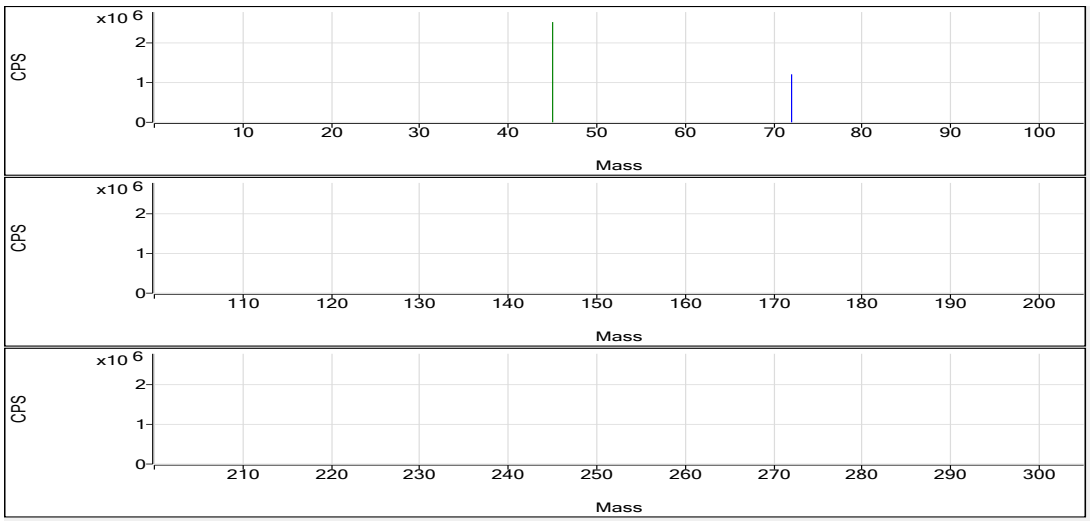
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.012	ppb	8.2	34.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.026	ppb	108.0	3.78	0.0000	Pulse	1.5000	3
Na	23	45	He	37.883	ppb	6.0	23742.97	0.4807	Pulse	0.1000	3
Mg	24	45	He	0.457	ppb	100.9	213.34	0.0043	Pulse	0.1000	3
Al	27	45	He	1.557	ppb	78.3	76.67	0.0016	Pulse	0.1000	3
K	39	45	He	-0.323	ppb	N/A	19496.96	0.3947	Pulse	0.1000	3
Ca	44	45	He	2.698	ppb	375.0	143.34	0.0029	Pulse	0.1000	3
Ti	47	45	He	0.744	ppb	104.7	23.33	0.0005	Pulse	0.1000	3
V	51	45	He	0.296	ppb	30.7	1548.09	0.0313	Pulse	0.5000	3
Cr	52	45	He	-0.319	ppb	N/A	1503.46	0.0304	Pulse	0.1000	3
Mn	55	45	He	0.356	ppb	24.2	356.68	0.0072	Pulse	0.1000	3
Fe	57	45	He	1.028	ppb	70.3	100.00	0.0020	Pulse	0.1000	3
Co	59	45	He	0.010	ppb	117.1	133.34	0.0027	Pulse	0.1000	3
Ni	60	72	He	-0.033	ppb	N/A	220.01	0.0025	Pulse	0.1000	3
Cu	63	72	He	0.052	ppb	64.5	526.70	0.0061	Pulse	0.1000	3
Zn	66	72	He	2.560	ppb	9.2	973.40	0.0113	Pulse	0.1000	3
As	75	72	He	0.013	ppb	661.2	72.00	0.0008	Pulse	0.5000	3
Sr	88	115	He	-0.019	ppb	N/A	70.00	0.0008	Pulse	0.1000	3
Mo	98	115	He	0.015	ppb	37.6	53.33	0.0006	Pulse	0.1000	3
Ag	107	115	He	-0.001	ppb	N/A	50.00	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.003	ppb	173.2	1.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.277	ppb	N/A	1073.42	0.0121	Pulse	0.1000	3
Sb	121	115	He	0.012	ppb	58.8	40.00	0.0004	Pulse	0.1000	3
Ba	137	115	He	-0.010	ppb	N/A	16.67	0.0002	Pulse	0.1000	3
Tl	205	159	He	0.016	ppb	47.8	216.68	0.0005	Pulse	0.1000	3
Pb	208	159	He	0.011	ppb	54.6	576.70	0.0014	Pulse	0.1000	3
U	238	209	He	0.008	ppb	10.0	143.34	0.0005	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2515276.27	0.6	104.9	Analog	0.1000	3
No Gas	Ge	72	1204429.38	0.7	104.4	Pulse	0.1000	3
H2	Sc	45	190669.05	0.9	102.0	Pulse	0.1000	3
H2	Ge	72	164463.57	0.8	100.5	Pulse	0.1000	3
H2	In	115	401178.04	1.3	103.1	Pulse	0.1000	3
He	Sc	45	49401.15	1.0	105.9	Pulse	0.1000	3
He	Ge	72	86333.84	0.6	106.3	Pulse	0.1000	3
He	In	115	88746.20	1.5	103.0	Pulse	0.1000	3
He	Tb	159	404658.43	1.4	101.5	Pulse	0.1000	3
He	Bi	209	315062.09	0.3	101.9	Pulse	0.1000	3

No Gas



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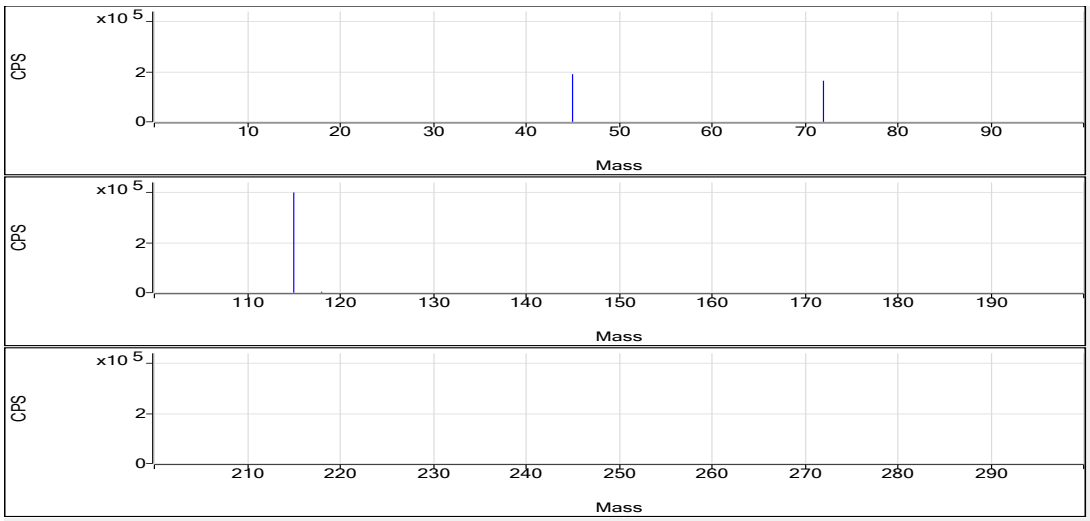
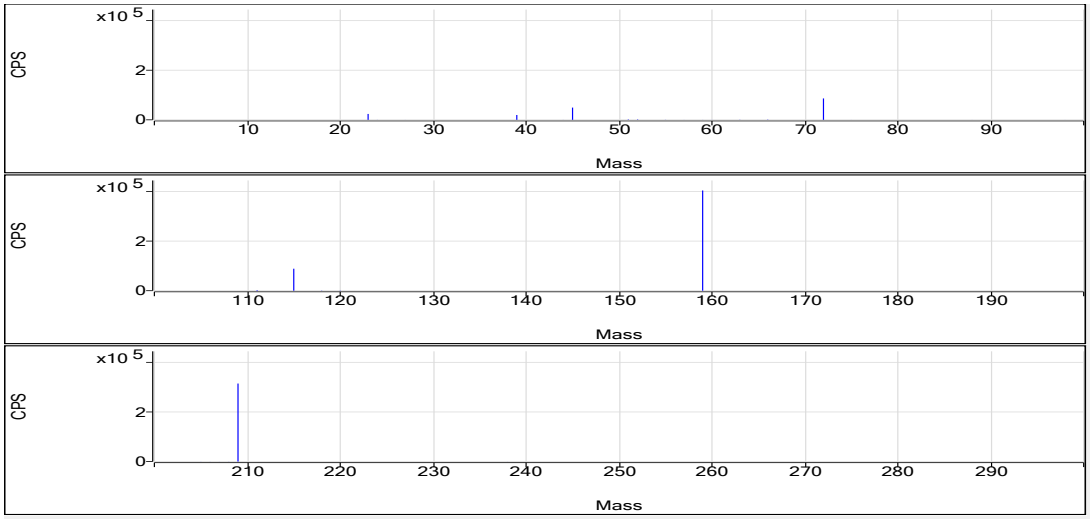


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.013	0	36.00	0.0008	4.685E-06
Be	9	1	No Gas	0.012	0	34.00	0.0008	4.685E-06
Be	9	1	No Gas	0.011	0	32.00	0.0008	4.685E-06
Se	78	2	H2	0.009	0	2.67	0.0004	1.219E-05
Se	78	2	H2	0.01	0	2.67	0.0004	1.219E-05
Se	78	2	H2	0.058	0	6.00	0.0004	1.219E-05
Na	23	3	He	36.422	0.4754	23689.55	0.0036	0.3452
Na	23	3	He	36.72	0.4765	23589.48	0.0036	0.3452
Na	23	3	He	40.505	0.49	23949.89	0.0036	0.3452
Mg	24	3	He	0.288	0.004	200.01	0.0018	0.003497
Mg	24	3	He	0.978	0.0053	260.01	0.0018	0.003497
Mg	24	3	He	0.104	0.0037	180.01	0.0018	0.003497
Al	27	3	He	0.273	0.0008	40.00	0.0006	0.0006432
Al	27	3	He	2.699	0.0022	110.00	0.0006	0.0006432
Al	27	3	He	1.698	0.0016	80.00	0.0006	0.0006432
K	39	3	He	-2.776	0.3918	19523.62	0.0012	0.3951
K	39	3	He	-1.631	0.3932	19463.64	0.0012	0.3951
K	39	3	He	3.44	0.3991	19503.61	0.0012	0.3951
Ca	44	3	He	13.29	0.0036	180.01	0.0001	0.002715
Ca	44	3	He	1.677	0.0028	140.01	0.0001	0.002715
Ca	44	3	He	-6.872	0.0023	110.00	0.0001	0.002715
Ti	47	3	He	1.365	0.0008	40.00	0.0005	7.003E-05
Ti	47	3	He	0.998	0.0006	30.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	0.311	0.0317	1578.09	0.0219	0.02486
V	51	3	He	0.199	0.0292	1446.08	0.0219	0.02486
V	51	3	He	0.379	0.0331	1620.10	0.0219	0.02486
Cr	52	3	He	-0.202	0.0339	1690.15	0.0299	0.03997
Cr	52	3	He	-0.37	0.0289	1430.11	0.0299	0.03997
Cr	52	3	He	-0.385	0.0284	1390.11	0.0299	0.03997
Mn	55	3	He	0.404	0.0078	390.02	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.408	0.0079	390.02	0.0128	0.002639
Mn	55	3	He	0.257	0.0059	290.01	0.0128	0.002639
Fe	57	3	He	0.995	0.002	100.00	0.0006	0.001429
Fe	57	3	He	0.322	0.0016	80.00	0.0006	0.001429
Fe	57	3	He	1.767	0.0025	120.00	0.0006	0.001429
Co	59	3	He	0.005	0.0024	120.00	0.0563	0.002149
Co	59	3	He	0.023	0.0034	170.01	0.0563	0.002149
Co	59	3	He	0.002	0.0023	110.00	0.0563	0.002149
Ni	60	3	He	0.02	0.003	260.01	0.0086	0.002834
Ni	60	3	He	-0.035	0.0025	220.01	0.0086	0.002834
Ni	60	3	He	-0.085	0.0021	180.01	0.0086	0.002834
Cu	63	3	He	0.089	0.0071	610.04	0.0257	0.004757
Cu	63	3	He	0.044	0.0059	510.03	0.0257	0.004757
Cu	63	3	He	0.024	0.0054	460.02	0.0257	0.004757
Zn	66	3	He	2.74	0.0118	1020.06	0.0029	0.003818
Zn	66	3	He	2.646	0.0115	1000.07	0.0029	0.003818
Zn	66	3	He	2.295	0.0105	900.06	0.0029	0.003818
As	75	3	He	0.081	0.001	84.00	0.002	0.0008061
As	75	3	He	0.045	0.0009	78.00	0.002	0.0008061
As	75	3	He	-0.086	0.0006	54.00	0.002	0.0008061
Sr	88	3	He	-0.046	0.0006	50.00	0.009	0.0009645
Sr	88	3	He	-0.007	0.0009	80.00	0.009	0.0009645
Sr	88	3	He	-0.006	0.0009	80.00	0.009	0.0009645
Mo	98	3	He	0.018	0.0007	60.00	0.0219	0.0002706
Mo	98	3	He	0.019	0.0007	60.00	0.0219	0.0002706
Mo	98	3	He	0.009	0.0005	40.00	0.0219	0.0002706
Ag	107	3	He	-0.004	0.0004	40.00	0.0465	0.0006206
Ag	107	3	He	0.004	0.0008	70.00	0.0465	0.0006206
Ag	107	3	He	-0.004	0.0005	40.00	0.0465	0.0006206
Cd	111	3	He	0.008	0	4.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Sn	120	3	He	-0.243	0.0126	1140.09	0.0158	0.01648
Sn	120	3	He	-0.35	0.011	970.08	0.0158	0.01648
Sn	120	3	He	-0.24	0.0127	1110.09	0.0158	0.01648
Sb	121	3	He	0.019	0.0006	50.00	0.0149	0.0002698
Sb	121	3	He	0.012	0.0005	40.00	0.0149	0.0002698
Sb	121	3	He	0.005	0.0003	30.00	0.0149	0.0002698
Ba	137	3	He	0.044	0.0004	40.00	0.0048	0.0002317
Ba	137	3	He	-0.048	0	0.00	0.0048	0.0002317
Ba	137	3	He	-0.024	0.0001	10.00	0.0048	0.0002317
Tl	205	3	He	0.025	0.0008	310.02	0.0247	0.0001339
Tl	205	3	He	0.012	0.0004	170.01	0.0247	0.0001339
Tl	205	3	He	0.012	0.0004	170.01	0.0247	0.0001339
Pb	208	3	He	0.004	0.0012	190.01	0.0327	0.00107
Pb	208	3	He	0.012	0.0015	280.02	0.0327	0.00107
Pb	208	3	He	0.016	0.0016	370.02	0.0327	0.00107
U	238	3	He	0.007	0.0004	130.01	0.0493	7.55E-05
U	238	3	He	0.008	0.0005	150.01	0.0493	7.55E-05
U	238	3	He	0.008	0.0005	150.01	0.0493	7.55E-05
Sc	45	1	No Gas			2524029.81		
Sc	45	1	No Gas			2525002.31		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2496796.68		
Ge	72	1	No Gas			1195517.64		
Ge	72	1	No Gas			1205122.72		
Ge	72	1	No Gas			1212647.79		
Sc	45	2	H2			191069.72		
Sc	45	2	H2			192218.18		
Sc	45	2	H2			188719.26		
Ge	72	2	H2			165561.11		
Ge	72	2	H2			163039.14		
Ge	72	2	H2			164790.45		
In	115	2	H2			407053.74		
In	115	2	H2			397951.56		
In	115	2	H2			398528.82		
Sc	45	3	He			49826.23		
Sc	45	3	He			49504.75		
Sc	45	3	He			48872.46		
Ge	72	3	He			86480.76		
Ge	72	3	He			86803.32		
Ge	72	3	He			85717.43		
In	115	3	He			90181.50		
In	115	3	He			88571.04		
In	115	3	He			87505.24		
Tb	159	3	He			410940.54		
Tb	159	3	He			403318.63		
Tb	159	3	He			399716.13		
Bi	209	3	He			316037.38		
Bi	209	3	He			313884.45		
Bi	209	3	He			315264.45		

Quantitation Report

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Sample Type	Sample
Comment	A12
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

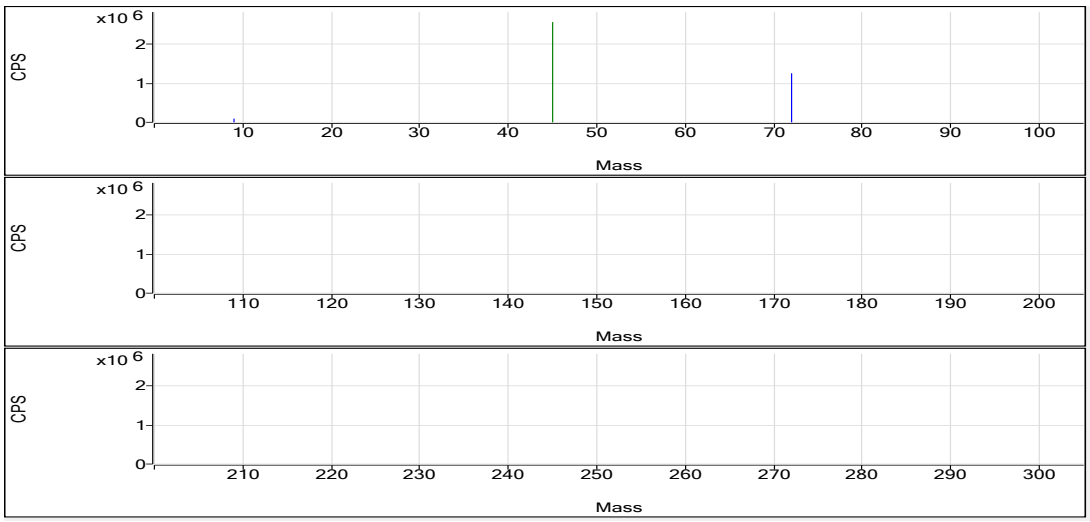
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	47.738	ppb	0.8	93318.40	0.0364	Pulse	0.5000	3
Se	78	72	H2	100.901	ppb	0.4	7191.15	0.0421	Pulse	1.5000	3
Na	23	45	He	4674.787	ppb	1.9	860295.61	17.0671	Pulse	0.1000	3
Mg	24	45	He	4900.251	ppb	1.6	443389.93	8.7961	Pulse	0.1000	3
Al	27	45	He	4848.266	ppb	1.5	143008.81	2.8370	Pulse	0.1000	3
K	39	45	He	4896.337	ppb	2.1	307273.25	6.0960	Pulse	0.1000	3
Ca	44	45	He	5120.129	ppb	1.8	17571.16	0.3486	Pulse	0.1000	3
Ti	47	45	He	514.918	ppb	1.5	13940.49	0.2766	Pulse	0.1000	3
V	51	45	He	495.606	ppb	1.6	547344.27	10.8584	Pulse	0.5000	3
Cr	52	45	He	466.486	ppb	2.1	706015.87	14.0069	Pulse	0.1000	3
Mn	55	45	He	487.994	ppb	1.8	315821.56	6.2655	Pulse	0.1000	3
Fe	57	45	He	4876.381	ppb	1.1	142888.73	2.8346	Pulse	0.1000	3
Co	59	45	He	472.433	ppb	1.7	1340412.95	26.5918	Pulse	0.1000	3
Ni	60	72	He	491.538	ppb	1.0	373364.56	4.2218	Pulse	0.1000	3
Cu	63	72	He	471.586	ppb	1.0	1071063.74	12.1109	Pulse	0.1000	3
Zn	66	72	He	499.100	ppb	1.4	128851.35	1.4570	Pulse	0.1000	3
As	75	72	He	503.346	ppb	0.3	91279.75	1.0321	Pulse	0.5000	3
Sr	88	115	He	51.670	ppb	3.0	40722.93	0.4644	Pulse	0.1000	3
Mo	98	115	He	51.162	ppb	1.1	98403.92	1.1221	Pulse	0.1000	3
Ag	107	115	He	50.440	ppb	1.2	205675.75	2.3454	Pulse	0.1000	3
Cd	111	115	He	51.842	ppb	0.6	24309.11	0.2772	Pulse	0.5000	3
Sn	120	115	He	103.491	ppb	1.7	144827.68	1.6515	Pulse	0.1000	3
Sb	121	115	He	104.200	ppb	1.1	135746.90	1.5480	Pulse	0.1000	3
Ba	137	115	He	518.192	ppb	0.3	218120.58	2.4872	Pulse	0.1000	3
Tl	205	159	He	103.016	ppb	1.1	1024944.80	2.5473	Pulse	0.1000	3
Pb	208	159	He	51.952	ppb	1.2	684580.83	1.7015	Pulse	0.1000	3
U	238	209	He	49.751	ppb	0.4	770798.42	2.4508	Pulse	0.1000	3

ISTD Table:

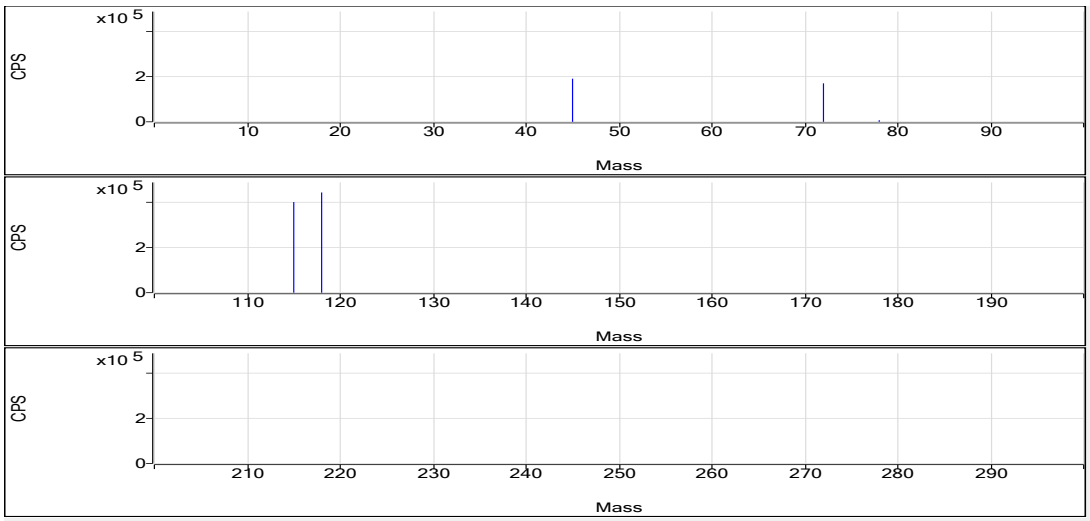
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2562540.85	1.1	106.8	Analog	0.1000	3
No Gas	Ge	72	1254097.40	0.8	108.7	Pulse	0.1000	3
H2	Sc	45	191415.98	0.5	102.4	Pulse	0.1000	3
H2	Ge	72	170831.76	0.5	104.3	Pulse	0.1000	3
H2	In	115	402245.05	0.4	103.4	Pulse	0.1000	3
He	Sc	45	50414.82	1.4	108.1	Pulse	0.1000	3
He	Ge	72	88442.64	0.8	108.9	Pulse	0.1000	3
He	In	115	87698.18	1.1	101.7	Pulse	0.1000	3
He	Tb	159	402377.52	0.8	100.9	Pulse	0.1000	3
He	Bi	209	314509.86	0.2	101.7	Pulse	0.1000	3

No Gas

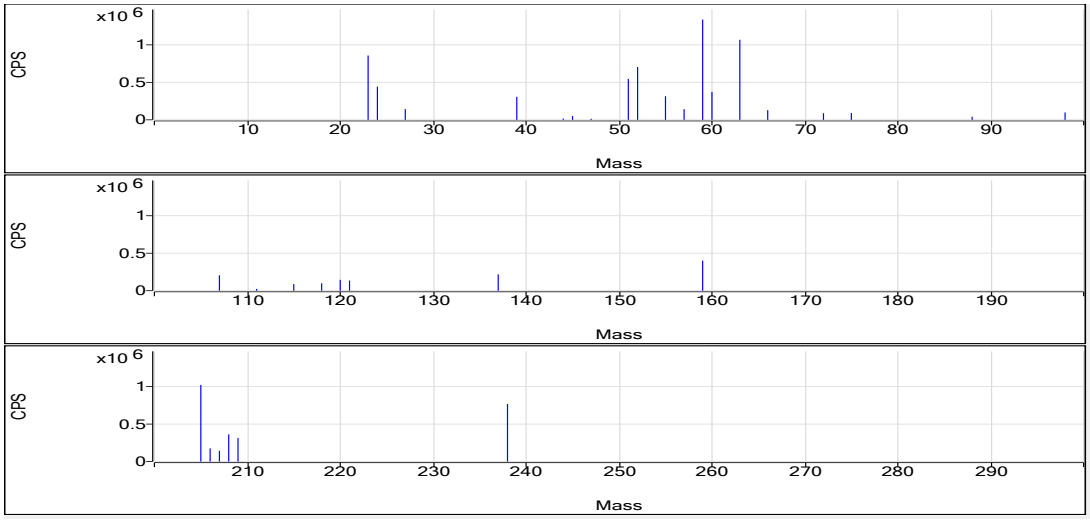


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	48.084	0.0367	92845.48	0.0008	4.685E-06
Be	9	1	No Gas	47.324	0.0361	93398.88	0.0008	4.685E-06
Be	9	1	No Gas	47.805	0.0365	93710.84	0.0008	4.685E-06
Se	78	2	H2	100.466	0.0419	7135.12	0.0004	1.219E-05
Se	78	2	H2	101.025	0.0421	7243.84	0.0004	1.219E-05
Se	78	2	H2	101.212	0.0422	7194.49	0.0004	1.219E-05
Na	23	3	He	4604.675	16.8163	852580.22	0.0036	0.3452
Na	23	3	He	4773.908	17.4217	864029.83	0.0036	0.3452
Na	23	3	He	4645.778	16.9633	864276.78	0.0036	0.3452
Mg	24	3	He	4880.505	8.7607	444163.74	0.0018	0.003497
Mg	24	3	He	4984.277	8.9469	443722.45	0.0018	0.003497
Mg	24	3	He	4835.973	8.6808	442283.59	0.0018	0.003497
Al	27	3	He	4838.353	2.8312	143543.17	0.0006	0.0006432
Al	27	3	He	4927.423	2.8834	143000.51	0.0006	0.0006432
Al	27	3	He	4779.022	2.7965	142482.75	0.0006	0.0006432
K	39	3	He	4838.883	6.0291	305673.37	0.0012	0.3951
K	39	3	He	5012.702	6.2315	309051.58	0.0012	0.3951
K	39	3	He	4837.427	6.0274	307094.80	0.0012	0.3951
Ca	44	3	He	5066.875	0.345	17490.96	0.0001	0.002715
Ca	44	3	He	5225.455	0.3557	17641.21	0.0001	0.002715
Ca	44	3	He	5068.058	0.3451	17581.31	0.0001	0.002715
Ti	47	3	He	514.035	0.2761	13997.18	0.0005	7.003E-05
Ti	47	3	He	523.233	0.281	13937.19	0.0005	7.003E-05
Ti	47	3	He	507.488	0.2726	13887.11	0.0005	7.003E-05
V	51	3	He	491.79	10.775	546287.38	0.0219	0.02486
V	51	3	He	504.476	11.0523	548140.38	0.0219	0.02486
V	51	3	He	490.553	10.748	547605.06	0.0219	0.02486
Cr	52	3	He	463.612	13.9208	705781.55	0.0299	0.03997
Cr	52	3	He	477.397	14.3336	710876.86	0.0299	0.03997
Cr	52	3	He	458.45	13.7663	701389.21	0.0299	0.03997
Mn	55	3	He	482.954	6.2008	314378.67	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	497.976	6.3936	317091.60	0.0128	0.002639
Mn	55	3	He	483.053	6.2021	315994.41	0.0128	0.002639
Fe	57	3	He	4846.177	2.817	142821.47	0.0006	0.001429
Fe	57	3	He	4939.739	2.8714	142406.10	0.0006	0.001429
Fe	57	3	He	4843.226	2.8153	143438.63	0.0006	0.001429
Co	59	3	He	472.081	26.572	1347188.89	0.0563	0.002149
Co	59	3	He	480.638	27.0535	1341724.51	0.0563	0.002149
Co	59	3	He	464.581	26.1498	1332325.45	0.0563	0.002149
Ni	60	3	He	490.153	4.2099	373603.51	0.0086	0.002834
Ni	60	3	He	496.891	4.2677	373797.18	0.0086	0.002834
Ni	60	3	He	487.57	4.1877	372693.00	0.0086	0.002834
Cu	63	3	He	471.909	12.1192	1075505.14	0.0257	0.004757
Cu	63	3	He	475.923	12.2222	1070507.02	0.0257	0.004757
Cu	63	3	He	466.925	11.9912	1067179.05	0.0257	0.004757
Zn	66	3	He	497.411	1.4521	128864.25	0.0029	0.003818
Zn	66	3	He	506.694	1.4791	129551.40	0.0029	0.003818
Zn	66	3	He	493.195	1.4398	128138.41	0.0029	0.003818
As	75	3	He	502.282	1.0299	91399.13	0.002	0.0008061
As	75	3	He	505.178	1.0358	90726.98	0.002	0.0008061
As	75	3	He	502.579	1.0305	91713.16	0.002	0.0008061
Sr	88	3	He	53.267	0.4788	41762.52	0.009	0.0009645
Sr	88	3	He	50.132	0.4506	40027.50	0.009	0.0009645
Sr	88	3	He	51.611	0.4639	40378.76	0.009	0.0009645
Mo	98	3	He	51.737	1.1347	98977.88	0.0219	0.0002706
Mo	98	3	He	51.123	1.1212	99591.90	0.0219	0.0002706
Mo	98	3	He	50.626	1.1103	96641.99	0.0219	0.0002706
Ag	107	3	He	51.055	2.374	207087.09	0.0465	0.0006206
Ag	107	3	He	49.809	2.3161	205724.74	0.0465	0.0006206
Ag	107	3	He	50.457	2.3462	204215.43	0.0465	0.0006206
Cd	111	3	He	51.6	0.2759	24066.72	0.0053	0
Cd	111	3	He	51.72	0.2765	24563.50	0.0053	0
Cd	111	3	He	52.207	0.2791	24297.11	0.0053	0
Sn	120	3	He	105.567	1.6843	146921.27	0.0158	0.01648
Sn	120	3	He	102.611	1.6376	145457.68	0.0158	0.01648
Sn	120	3	He	102.297	1.6326	142104.08	0.0158	0.01648
Sb	121	3	He	105.105	1.5614	136204.89	0.0149	0.0002698
Sb	121	3	He	102.982	1.5299	135892.21	0.0149	0.0002698
Sb	121	3	He	104.514	1.5527	135143.60	0.0149	0.0002698
Ba	137	3	He	519.835	2.4951	217647.28	0.0048	0.0002317
Ba	137	3	He	516.885	2.4809	220367.30	0.0048	0.0002317
Ba	137	3	He	517.857	2.4856	216347.15	0.0048	0.0002317
Tl	205	3	He	104.162	2.5757	1033828.89	0.0247	0.0001339
Tl	205	3	He	101.869	2.519	1023152.25	0.0247	0.0001339
Tl	205	3	He	103.016	2.5473	1017853.27	0.0247	0.0001339
Pb	208	3	He	51.9	1.6997	363299.33	0.0327	0.00107
Pb	208	3	He	51.343	1.6815	362237.10	0.0327	0.00107
Pb	208	3	He	52.615	1.7231	366832.96	0.0327	0.00107
U	238	3	He	49.748	2.4506	772146.55	0.0493	7.55E-05
U	238	3	He	49.93	2.4596	774224.75	0.0493	7.55E-05
U	238	3	He	49.574	2.4421	766023.97	0.0493	7.55E-05
Sc	45	1	No Gas			2531071.52		
Sc	45	1	No Gas			2587016.06		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2569534.96		
Ge	72	1	No Gas			1243092.95		
Ge	72	1	No Gas			1257335.53		
Ge	72	1	No Gas			1261863.73		
Sc	45	2	H2			191130.08		
Sc	45	2	H2			190615.50		
Sc	45	2	H2			192502.36		
Ge	72	2	H2			170235.45		
Ge	72	2	H2			171873.08		
Ge	72	2	H2			170386.76		
In	115	2	H2			403628.28		
In	115	2	H2			402330.54		
In	115	2	H2			400776.32		
Sc	45	3	He			50699.61		
Sc	45	3	He			49595.14		
Sc	45	3	He			50949.70		
Ge	72	3	He			88744.20		
Ge	72	3	He			87587.10		
Ge	72	3	He			88996.61		
In	115	3	He			88009.06		
In	115	3	He			89608.35		
In	115	3	He			87797.26		
Tb	159	3	He			401380.42		
Tb	159	3	He			406178.04		
Tb	159	3	He			399574.10		
Bi	209	3	He			315078.80		
Bi	209	3	He			314776.48		
Bi	209	3	He			313674.29		

Quantitation Report

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Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	8/10/2023 4:07:39 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

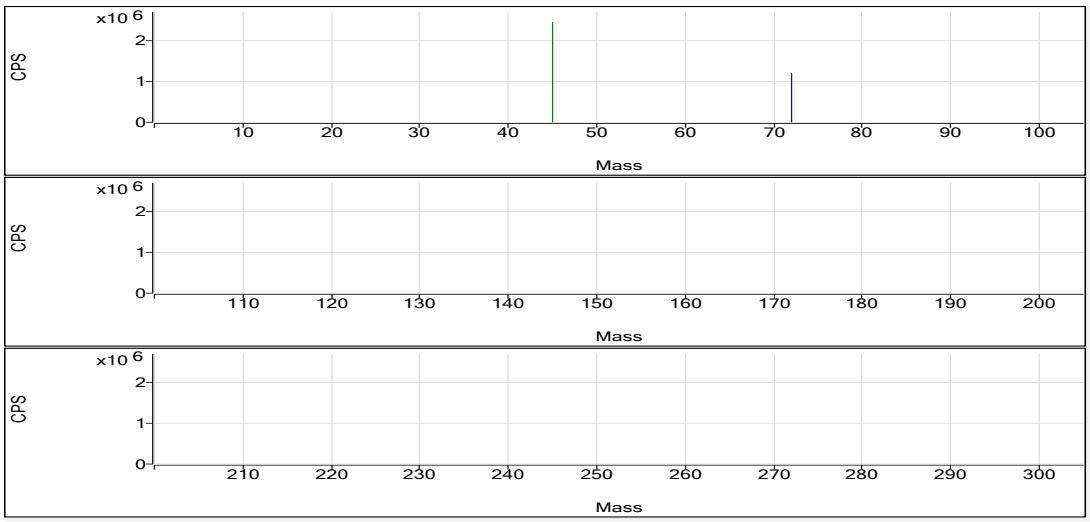
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.027	ppb	11.3	62.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.107	ppb	28.0	8.89	0.0001	Pulse	1.5000	3
Na	23	45	He	39.905	ppb	3.5	23395.72	0.4879	Pulse	0.1000	3
Mg	24	45	He	1.574	ppb	32.6	303.34	0.0063	Pulse	0.1000	3
Al	27	45	He	1.871	ppb	22.1	83.33	0.0017	Pulse	0.1000	3
K	39	45	He	11.328	ppb	100.3	19573.74	0.4083	Pulse	0.1000	3
Ca	44	45	He	12.330	ppb	53.7	170.01	0.0035	Pulse	0.1000	3
Ti	47	45	He	0.644	ppb	59.3	20.00	0.0004	Pulse	0.1000	3
V	51	45	He	0.533	ppb	9.2	1750.78	0.0365	Pulse	0.5000	3
Cr	52	45	He	0.016	ppb	678.8	1940.20	0.0405	Pulse	0.1000	3
Mn	55	45	He	0.314	ppb	51.9	320.02	0.0067	Pulse	0.1000	3
Fe	57	45	He	1.363	ppb	104.8	106.67	0.0022	Pulse	0.1000	3
Co	59	45	He	0.073	ppb	31.4	300.02	0.0063	Pulse	0.1000	3
Ni	60	72	He	-0.051	ppb	N/A	196.67	0.0024	Pulse	0.1000	3
Cu	63	72	He	0.099	ppb	17.0	600.04	0.0073	Pulse	0.1000	3
Zn	66	72	He	3.974	ppb	18.6	1263.44	0.0154	Pulse	0.1000	3
As	75	72	He	0.304	ppb	17.8	117.33	0.0014	Pulse	0.5000	3
Sr	88	115	He	-0.026	ppb	N/A	63.33	0.0007	Pulse	0.1000	3
Mo	98	115	He	0.170	ppb	21.9	346.68	0.0040	Pulse	0.1000	3
Ag	107	115	He	0.001	ppb	200.0	56.67	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.012	ppb	94.8	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.171	ppb	116.8	1656.83	0.0192	Pulse	0.1000	3
Sb	121	115	He	0.096	ppb	49.4	146.67	0.0017	Pulse	0.1000	3
Ba	137	115	He	0.080	ppb	96.0	53.33	0.0006	Pulse	0.1000	3
Tl	205	159	He	0.228	ppb	8.2	2303.62	0.0058	Pulse	0.1000	3
Pb	208	159	He	0.022	ppb	21.3	720.04	0.0018	Pulse	0.1000	3
U	238	209	He	0.147	ppb	9.2	2243.62	0.0073	Pulse	0.1000	3

ISTD Table:

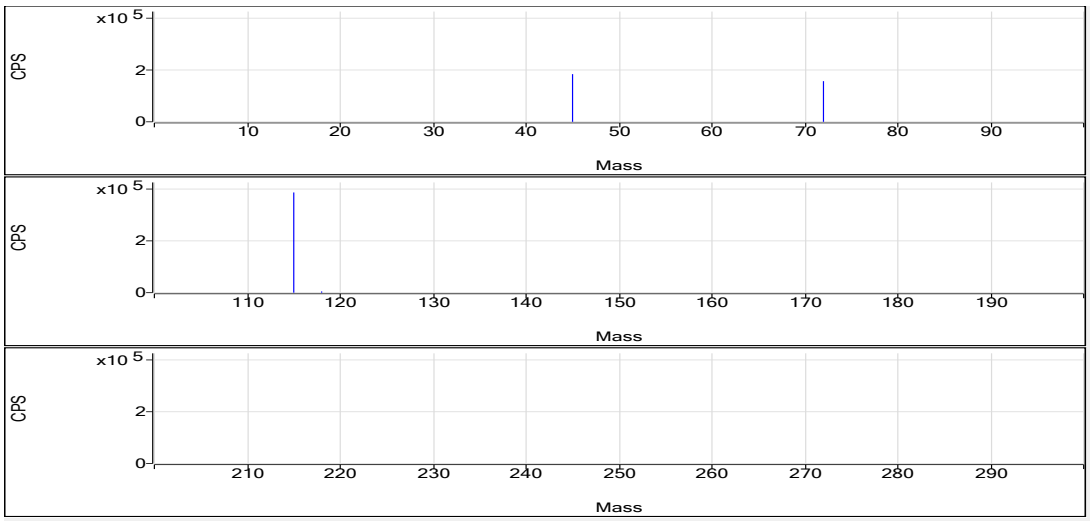
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2443881.01	1.9	101.9	Analog	0.1000	3
No Gas	Ge	72	1199383.91	1.0	104.0	Pulse	0.1000	3
H2	Sc	45	183455.00	2.4	98.1	Pulse	0.1000	3
H2	Ge	72	156438.61	0.6	95.6	Pulse	0.1000	3
H2	In	115	385637.97	0.8	99.1	Pulse	0.1000	3
He	Sc	45	47953.07	0.8	102.8	Pulse	0.1000	3
He	Ge	72	82156.07	1.3	101.2	Pulse	0.1000	3
He	In	115	86501.56	0.9	100.4	Pulse	0.1000	3
He	Tb	159	398822.23	0.1	100.1	Pulse	0.1000	3
He	Bi	209	307339.77	0.7	99.4	Pulse	0.1000	3

No Gas

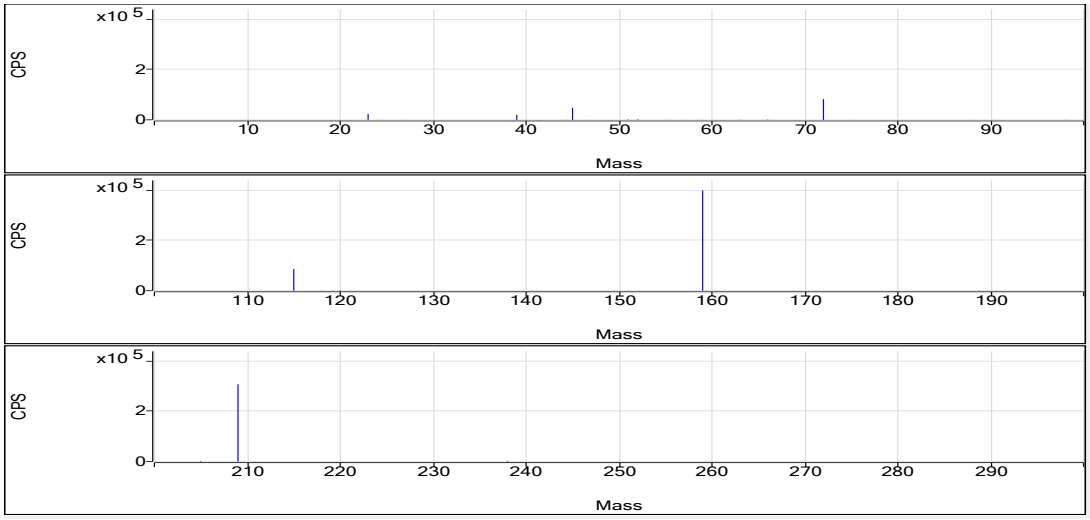


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.024	0	56.00	0.0008	4.685E-06
Be	9	1	No Gas	0.029	0	64.00	0.0008	4.685E-06
Be	9	1	No Gas	0.03	0	68.00	0.0008	4.685E-06
Se	78	2	H2	0.072	0	6.67	0.0004	1.219E-05
Se	78	2	H2	0.124	0.0001	10.00	0.0004	1.219E-05
Se	78	2	H2	0.125	0.0001	10.00	0.0004	1.219E-05
Na	23	3	He	39.933	0.488	23198.74	0.0036	0.3452
Na	23	3	He	38.51	0.4829	23348.98	0.0036	0.3452
Na	23	3	He	41.273	0.4928	23639.44	0.0036	0.3452
Mg	24	3	He	0.982	0.0053	250.01	0.0018	0.003497
Mg	24	3	He	1.855	0.0068	330.01	0.0018	0.003497
Mg	24	3	He	1.885	0.0069	330.01	0.0018	0.003497
Al	27	3	He	2.137	0.0019	90.00	0.0006	0.0006432
Al	27	3	He	2.082	0.0019	90.00	0.0006	0.0006432
Al	27	3	He	1.395	0.0015	70.00	0.0006	0.0006432
K	39	3	He	24.277	0.4233	20124.51	0.0012	0.3951
K	39	3	He	3.047	0.3986	19273.23	0.0012	0.3951
K	39	3	He	6.66	0.4028	19323.47	0.0012	0.3951
Ca	44	3	He	18.979	0.004	190.01	0.0001	0.002715
Ca	44	3	He	5.738	0.0031	150.01	0.0001	0.002715
Ca	44	3	He	12.274	0.0035	170.01	0.0001	0.002715
Ti	47	3	He	0.261	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	1.025	0.0006	30.00	0.0005	7.003E-05
Ti	47	3	He	0.646	0.0004	20.00	0.0005	7.003E-05
V	51	3	He	0.566	0.0372	1770.12	0.0219	0.02486
V	51	3	He	0.477	0.0353	1706.11	0.0219	0.02486
V	51	3	He	0.556	0.037	1776.12	0.0219	0.02486
Cr	52	3	He	0.063	0.0419	1990.20	0.0299	0.03997
Cr	52	3	He	0.095	0.0428	2070.23	0.0299	0.03997
Cr	52	3	He	-0.11	0.0367	1760.17	0.0299	0.03997
Mn	55	3	He	0.352	0.0072	340.02	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.455	0.0085	410.02	0.0128	0.002639
Mn	55	3	He	0.136	0.0044	210.01	0.0128	0.002639
Fe	57	3	He	-0.287	0.0013	60.00	0.0006	0.001429
Fe	57	3	He	2.169	0.0027	130.01	0.0006	0.001429
Fe	57	3	He	2.206	0.0027	130.01	0.0006	0.001429
Co	59	3	He	0.081	0.0067	320.02	0.0563	0.002149
Co	59	3	He	0.09	0.0072	350.02	0.0563	0.002149
Co	59	3	He	0.047	0.0048	230.01	0.0563	0.002149
Ni	60	3	He	-0.028	0.0026	210.01	0.0086	0.002834
Ni	60	3	He	-0.19	0.0012	100.00	0.0086	0.002834
Ni	60	3	He	0.065	0.0034	280.01	0.0086	0.002834
Cu	63	3	He	0.099	0.0073	590.04	0.0257	0.004757
Cu	63	3	He	0.083	0.0069	570.03	0.0257	0.004757
Cu	63	3	He	0.116	0.0077	640.04	0.0257	0.004757
Zn	66	3	He	4.332	0.0164	1330.12	0.0029	0.003818
Zn	66	3	He	3.124	0.0129	1070.08	0.0029	0.003818
Zn	66	3	He	4.466	0.0168	1390.12	0.0029	0.003818
As	75	3	He	0.366	0.0016	126.00	0.002	0.0008061
As	75	3	He	0.278	0.0014	114.00	0.002	0.0008061
As	75	3	He	0.268	0.0014	112.00	0.002	0.0008061
Sr	88	3	He	-0.018	0.0008	70.00	0.009	0.0009645
Sr	88	3	He	-0.068	0.0004	30.00	0.009	0.0009645
Sr	88	3	He	0.008	0.001	90.00	0.009	0.0009645
Mo	98	3	He	0.15	0.0036	310.01	0.0219	0.0002706
Mo	98	3	He	0.148	0.0035	300.01	0.0219	0.0002706
Mo	98	3	He	0.213	0.0049	430.02	0.0219	0.0002706
Ag	107	3	He	0.001	0.0007	60.00	0.0465	0.0006206
Ag	107	3	He	0.002	0.0007	60.00	0.0465	0.0006206
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0.022	0.0001	10.00	0.0053	0
Cd	111	3	He	0.013	0.0001	6.00	0.0053	0
Sn	120	3	He	0.005	0.0166	1440.13	0.0158	0.01648
Sn	120	3	He	0.392	0.0227	1940.20	0.0158	0.01648
Sn	120	3	He	0.115	0.0183	1590.15	0.0158	0.01648
Sb	121	3	He	0.137	0.0023	200.01	0.0149	0.0002698
Sb	121	3	He	0.108	0.0019	160.01	0.0149	0.0002698
Sb	121	3	He	0.044	0.0009	80.00	0.0149	0.0002698
Ba	137	3	He	0.048	0.0005	40.00	0.0048	0.0002317
Ba	137	3	He	0.025	0.0004	30.00	0.0048	0.0002317
Ba	137	3	He	0.168	0.001	90.00	0.0048	0.0002317
Tl	205	3	He	0.249	0.0063	2510.33	0.0247	0.0001339
Tl	205	3	He	0.213	0.0054	2150.26	0.0247	0.0001339
Tl	205	3	He	0.223	0.0056	2250.27	0.0247	0.0001339
Pb	208	3	He	0.019	0.0017	360.02	0.0327	0.00107
Pb	208	3	He	0.028	0.002	380.02	0.0327	0.00107
Pb	208	3	He	0.021	0.0018	360.02	0.0327	0.00107
U	238	3	He	0.132	0.0066	2010.24	0.0493	7.55E-05
U	238	3	He	0.15	0.0075	2320.28	0.0493	7.55E-05
U	238	3	He	0.158	0.0079	2400.34	0.0493	7.55E-05
Sc	45	1	No Gas			2442862.15		
Sc	45	1	No Gas			2398636.84		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2490144.03		
Ge	72	1	No Gas			1202611.62		
Ge	72	1	No Gas			1185906.78		
Ge	72	1	No Gas			1209633.34		
Sc	45	2	H2			188275.31		
Sc	45	2	H2			182169.06		
Sc	45	2	H2			179920.62		
Ge	72	2	H2			157287.29		
Ge	72	2	H2			156499.56		
Ge	72	2	H2			155528.99		
In	115	2	H2			383044.96		
In	115	2	H2			385086.21		
In	115	2	H2			388782.73		
Sc	45	3	He			47538.23		
Sc	45	3	He			48350.65		
Sc	45	3	He			47970.32		
Ge	72	3	He			80959.21		
Ge	72	3	He			82869.71		
Ge	72	3	He			82639.28		
In	115	3	He			87022.07		
In	115	3	He			85605.05		
In	115	3	He			86901.43		
Tb	159	3	He			399083.98		
Tb	159	3	He			398928.12		
Tb	159	3	He			398454.60		
Bi	209	3	He			306442.69		
Bi	209	3	He			309846.32		
Bi	209	3	He			305730.31		

Quantitation Report

Data File Name	161_CCV.d
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Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

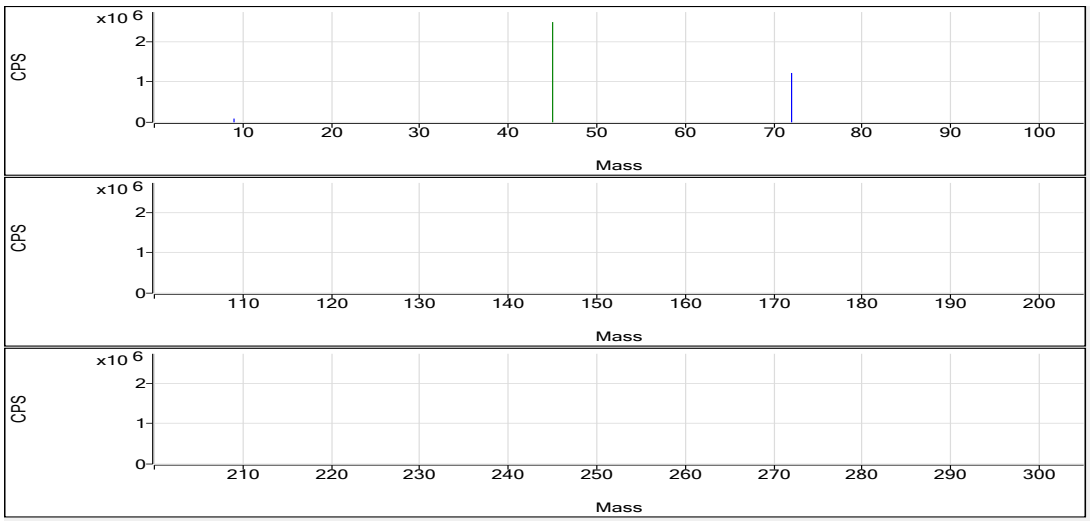
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	48.738	ppb	0.9	92081.57	0.0372	Pulse	0.5000	3
Se	78	72	H2	51.599	ppb	1.2	3496.88	0.0215	Pulse	1.5000	3
Na	23	45	He	4898.230	ppb	0.2	858712.64	17.8664	Pulse	0.1000	3
Mg	24	45	He	5009.706	ppb	1.1	432195.71	8.9925	Pulse	0.1000	3
Al	27	45	He	4960.346	ppb	0.4	139507.90	2.9026	Pulse	0.1000	3
K	39	45	He	5102.763	ppb	0.3	304549.36	6.3363	Pulse	0.1000	3
Ca	44	45	He	5128.512	ppb	2.4	16780.20	0.3492	Pulse	0.1000	3
Ti	47	45	He	5018.964	ppb	0.3	129530.47	2.6950	Pulse	0.1000	3
V	51	45	He	512.415	ppb	0.6	539542.44	11.2258	Pulse	0.5000	3
Cr	52	45	He	489.268	ppb	1.2	705974.94	14.6890	Pulse	0.1000	3
Mn	55	45	He	506.561	ppb	1.3	312578.37	6.5038	Pulse	0.1000	3
Fe	57	45	He	5111.900	ppb	1.1	142811.27	2.9714	Pulse	0.1000	3
Co	59	45	He	490.911	ppb	1.2	1328021.02	27.6318	Pulse	0.1000	3
Ni	60	72	He	516.166	ppb	1.7	374109.40	4.4332	Pulse	0.1000	3
Cu	63	72	He	488.438	ppb	1.9	1058514.52	12.5435	Pulse	0.1000	3
Zn	66	72	He	517.813	ppb	1.7	127555.98	1.5115	Pulse	0.1000	3
As	75	72	He	520.405	ppb	1.9	90043.32	1.0670	Pulse	0.5000	3
Sr	88	115	He	52.108	ppb	1.7	40481.99	0.4684	Pulse	0.1000	3
Mo	98	115	He	51.209	ppb	1.2	97077.49	1.1231	Pulse	0.1000	3
Ag	107	115	He	51.428	ppb	1.7	206693.05	2.3914	Pulse	0.1000	3
Cd	111	115	He	51.764	ppb	1.0	23923.13	0.2768	Pulse	0.5000	3
Sn	120	115	He	50.953	ppb	3.4	70997.02	0.8215	Pulse	0.1000	3
Sb	121	115	He	52.003	ppb	0.0	66788.34	0.7727	Pulse	0.1000	3
Ba	137	115	He	526.406	ppb	0.2	218395.01	2.5266	Pulse	0.1000	3
Tl	205	159	He	51.482	ppb	0.1	508564.09	1.2731	Pulse	0.1000	3
Pb	208	159	He	51.597	ppb	0.4	675027.68	1.6898	Pulse	0.1000	3
U	238	209	He	50.571	ppb	0.9	768479.55	2.4912	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2476708.97	0.9	103.2	Analog	0.1000	3
No Gas	Ge	72	1218843.00	0.8	105.7	Pulse	0.1000	3
H2	Sc	45	188045.42	0.2	100.6	Pulse	0.1000	3
H2	Ge	72	162392.96	0.7	99.2	Pulse	0.1000	3
H2	In	115	393669.80	0.9	101.2	Pulse	0.1000	3
He	Sc	45	48063.41	0.6	103.0	Pulse	0.1000	3
He	Ge	72	84405.90	1.9	104.0	Pulse	0.1000	3
He	In	115	86436.51	0.6	100.3	Pulse	0.1000	3
He	Tb	159	399471.59	0.4	100.2	Pulse	0.1000	3
He	Bi	209	308489.92	0.7	99.7	Pulse	0.1000	3

No Gas



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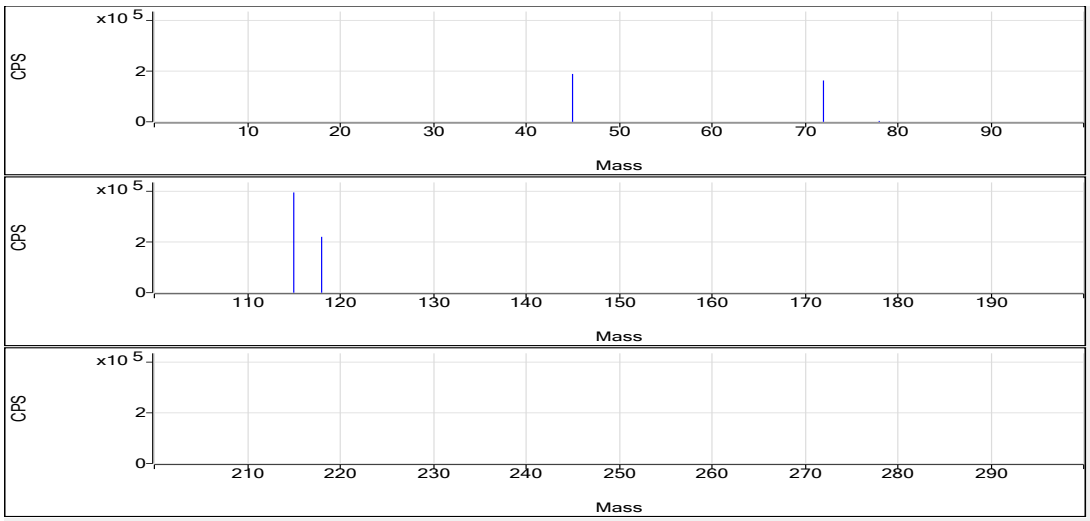
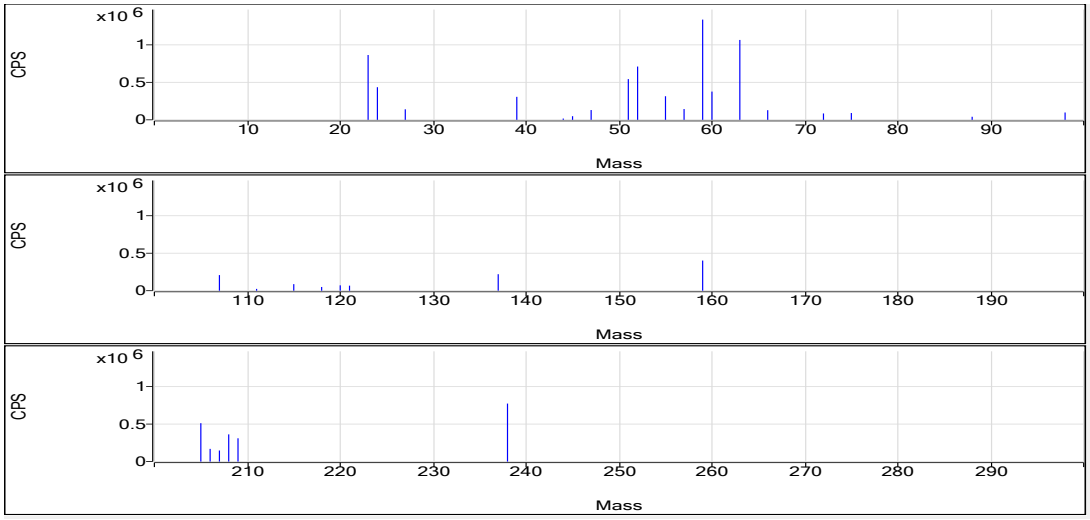


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	48.306	0.0369	92141.22	0.0008	4.685E-06
Be	9	1	No Gas	48.696	0.0371	91921.91	0.0008	4.685E-06
Be	9	1	No Gas	49.211	0.0375	92181.58	0.0008	4.685E-06
Se	78	2	H2	50.933	0.0213	3427.08	0.0004	1.219E-05
Se	78	2	H2	52.081	0.0217	3554.45	0.0004	1.219E-05
Se	78	2	H2	51.782	0.0216	3509.10	0.0004	1.219E-05
Na	23	3	He	4907.939	17.9011	855125.53	0.0036	0.3452
Na	23	3	He	4896.899	17.8616	859503.89	0.0036	0.3452
Na	23	3	He	4889.852	17.8364	861508.50	0.0036	0.3452
Mg	24	3	He	5070.919	9.1024	434814.68	0.0018	0.003497
Mg	24	3	He	4973.356	8.9273	429583.31	0.0018	0.003497
Mg	24	3	He	4984.842	8.9479	432189.13	0.0018	0.003497
Al	27	3	He	4981.992	2.9153	139261.42	0.0006	0.0006432
Al	27	3	He	4948.604	2.8957	139343.99	0.0006	0.0006432
Al	27	3	He	4950.442	2.8968	139918.30	0.0006	0.0006432
K	39	3	He	5092.219	6.3241	302097.50	0.0012	0.3951
K	39	3	He	5093.306	6.3253	304376.46	0.0012	0.3951
K	39	3	He	5122.763	6.3596	307174.12	0.0012	0.3951
Ca	44	3	He	5268.492	0.3586	17130.68	0.0001	0.002715
Ca	44	3	He	5063.469	0.3448	16590.01	0.0001	0.002715
Ca	44	3	He	5053.575	0.3441	16619.92	0.0001	0.002715
Ti	47	3	He	5017.375	2.6941	128697.82	0.0005	7.003E-05
Ti	47	3	He	5033.426	2.7028	130057.50	0.0005	7.003E-05
Ti	47	3	He	5006.09	2.6881	129836.10	0.0005	7.003E-05
V	51	3	He	514.398	11.2692	538322.63	0.0219	0.02486
V	51	3	He	513.794	11.256	541639.44	0.0219	0.02486
V	51	3	He	509.054	11.1524	538665.25	0.0219	0.02486
Cr	52	3	He	494.318	14.8402	708908.74	0.0299	0.03997
Cr	52	3	He	490.546	14.7273	708679.68	0.0299	0.03997
Cr	52	3	He	482.94	14.4995	700336.40	0.0299	0.03997
Mn	55	3	He	513.876	6.5977	315166.34	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	504.752	6.4806	311846.07	0.0128	0.002639
Mn	55	3	He	501.054	6.4331	310722.69	0.0128	0.002639
Fe	57	3	He	5169.874	3.0051	143550.93	0.0006	0.001429
Fe	57	3	He	5059.751	2.9411	141526.18	0.0006	0.001429
Fe	57	3	He	5106.075	2.968	143356.69	0.0006	0.001429
Co	59	3	He	495.924	27.9139	1333431.39	0.0563	0.002149
Co	59	3	He	492.714	27.7332	1334527.64	0.0563	0.002149
Co	59	3	He	484.096	27.2482	1316104.04	0.0563	0.002149
Ni	60	3	He	512.368	4.4006	376807.03	0.0086	0.002834
Ni	60	3	He	526.443	4.5214	373594.17	0.0086	0.002834
Ni	60	3	He	509.688	4.3776	371926.99	0.0086	0.002834
Cu	63	3	He	484.488	12.4421	1065378.19	0.0257	0.004757
Cu	63	3	He	498.796	12.8094	1058419.36	0.0257	0.004757
Cu	63	3	He	482.03	12.379	1051746.00	0.0257	0.004757
Zn	66	3	He	516.056	1.5064	128986.34	0.0029	0.003818
Zn	66	3	He	527.404	1.5394	127199.59	0.0029	0.003818
Zn	66	3	He	509.98	1.4887	126482.00	0.0029	0.003818
As	75	3	He	512.024	1.0499	89897.80	0.002	0.0008061
As	75	3	He	531.666	1.0901	90074.85	0.002	0.0008061
As	75	3	He	517.525	1.0611	90157.32	0.002	0.0008061
Sr	88	3	He	53.113	0.4774	41130.57	0.009	0.0009645
Sr	88	3	He	51.429	0.4623	40237.83	0.009	0.0009645
Sr	88	3	He	51.783	0.4654	40077.58	0.009	0.0009645
Mo	98	3	He	51.804	1.1361	97889.63	0.0219	0.0002706
Mo	98	3	He	51.214	1.1232	97768.74	0.0219	0.0002706
Mo	98	3	He	50.61	1.11	95574.09	0.0219	0.0002706
Ag	107	3	He	52.444	2.4386	210109.02	0.0465	0.0006206
Ag	107	3	He	50.731	2.3589	205331.19	0.0465	0.0006206
Ag	107	3	He	51.111	2.3766	204638.94	0.0465	0.0006206
Cd	111	3	He	52.306	0.2797	24096.77	0.0053	0
Cd	111	3	He	51.318	0.2744	23884.39	0.0053	0
Cd	111	3	He	51.669	0.2763	23788.22	0.0053	0
Sn	120	3	He	52.642	0.8482	73076.94	0.0158	0.01648
Sn	120	3	He	49.207	0.7939	69102.59	0.0158	0.01648
Sn	120	3	He	51.011	0.8224	70811.53	0.0158	0.01648
Sb	121	3	He	52.023	0.773	66600.17	0.0149	0.0002698
Sb	121	3	He	51.976	0.7723	67223.78	0.0149	0.0002698
Sb	121	3	He	52.009	0.7728	66541.08	0.0149	0.0002698
Ba	137	3	He	526.022	2.5248	217535.35	0.0048	0.0002317
Ba	137	3	He	527.828	2.5335	220522.11	0.0048	0.0002317
Ba	137	3	He	525.366	2.5216	217127.57	0.0048	0.0002317
Tl	205	3	He	51.489	1.2733	509284.05	0.0247	0.0001339
Tl	205	3	He	51.538	1.2745	510567.84	0.0247	0.0001339
Tl	205	3	He	51.419	1.2715	505840.38	0.0247	0.0001339
Pb	208	3	He	51.615	1.6904	360709.64	0.0327	0.00107
Pb	208	3	He	51.399	1.6833	360030.81	0.0327	0.00107
Pb	208	3	He	51.776	1.6957	360114.84	0.0327	0.00107
U	238	3	He	50.708	2.4979	765008.04	0.0493	7.55E-05
U	238	3	He	50.065	2.4663	766471.00	0.0493	7.55E-05
U	238	3	He	50.939	2.5093	773959.60	0.0493	7.55E-05
Sc	45	1	No Gas			2500298.09		
Sc	45	1	No Gas			2474387.62		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2455441.21		
Ge	72	1	No Gas			1227990.61		
Ge	72	1	No Gas			1208318.42		
Ge	72	1	No Gas			1220219.98		
Sc	45	2	H2			187678.79		
Sc	45	2	H2			188324.96		
Sc	45	2	H2			188132.50		
Ge	72	2	H2			161239.57		
Ge	72	2	H2			163545.64		
Ge	72	2	H2			162393.68		
In	115	2	H2			394756.40		
In	115	2	H2			389832.10		
In	115	2	H2			396420.89		
Sc	45	3	He			47769.45		
Sc	45	3	He			48120.19		
Sc	45	3	He			48300.58		
Ge	72	3	He			85627.00		
Ge	72	3	He			82628.47		
Ge	72	3	He			84962.23		
In	115	3	He			86538.75		
In	115	3	He			87434.35		
In	115	3	He			86488.70		
Tb	159	3	He			399983.74		
Tb	159	3	He			400610.46		
Tb	159	3	He			397820.58		
Bi	209	3	He			306257.61		
Bi	209	3	He			310778.43		
Bi	209	3	He			308433.73		

Quantitation Report

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Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

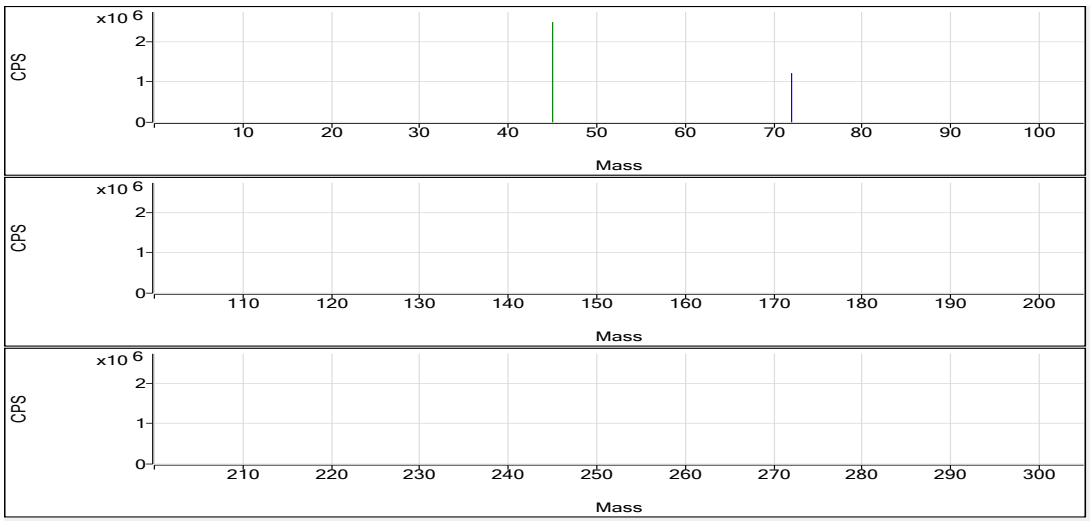
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.019	ppb	43.0	47.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.046	ppb	70.1	4.89	0.0000	Pulse	1.5000	3
Na	23	45	He	37.845	ppb	7.0	23275.64	0.4805	Pulse	0.1000	3
Mg	24	45	He	1.042	ppb	50.1	260.01	0.0054	Pulse	0.1000	3
Al	27	45	He	0.194	ppb	420.4	36.67	0.0008	Pulse	0.1000	3
K	39	45	He	-7.562	ppb	N/A	18709.24	0.3863	Pulse	0.1000	3
Ca	44	45	He	-0.461	ppb	N/A	130.01	0.0027	Pulse	0.1000	3
Ti	47	45	He	1.536	ppb	76.6	43.33	0.0009	Pulse	0.1000	3
V	51	45	He	0.465	ppb	2.0	1696.78	0.0350	Pulse	0.5000	3
Cr	52	45	He	-0.080	ppb	N/A	1820.18	0.0376	Pulse	0.1000	3
Mn	55	45	He	0.197	ppb	57.5	250.01	0.0052	Pulse	0.1000	3
Fe	57	45	He	1.686	ppb	43.6	116.67	0.0024	Pulse	0.1000	3
Co	59	45	He	0.075	ppb	42.1	310.02	0.0064	Pulse	0.1000	3
Ni	60	72	He	-0.059	ppb	N/A	193.34	0.0023	Pulse	0.1000	3
Cu	63	72	He	0.131	ppb	21.3	673.38	0.0081	Pulse	0.1000	3
Zn	66	72	He	3.935	ppb	1.1	1266.77	0.0153	Pulse	0.1000	3
As	75	72	He	0.120	ppb	37.1	87.33	0.0011	Pulse	0.5000	3
Sr	88	115	He	-0.013	ppb	N/A	73.33	0.0008	Pulse	0.1000	3
Mo	98	115	He	0.082	ppb	28.8	180.01	0.0021	Pulse	0.1000	3
Ag	107	115	He	0.009	ppb	52.4	90.00	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.010	ppb	108.9	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.004	ppb	N/A	1423.46	0.0164	Pulse	0.1000	3
Sb	121	115	He	0.059	ppb	12.8	100.00	0.0012	Pulse	0.1000	3
Ba	137	115	He	0.104	ppb	24.5	63.33	0.0007	Pulse	0.1000	3
Tl	205	159	He	0.086	ppb	1.7	896.74	0.0023	Pulse	0.1000	3
Pb	208	159	He	0.018	ppb	22.1	663.37	0.0017	Pulse	0.1000	3
U	238	209	He	0.050	ppb	15.2	786.72	0.0025	Pulse	0.1000	3

ISTD Table:

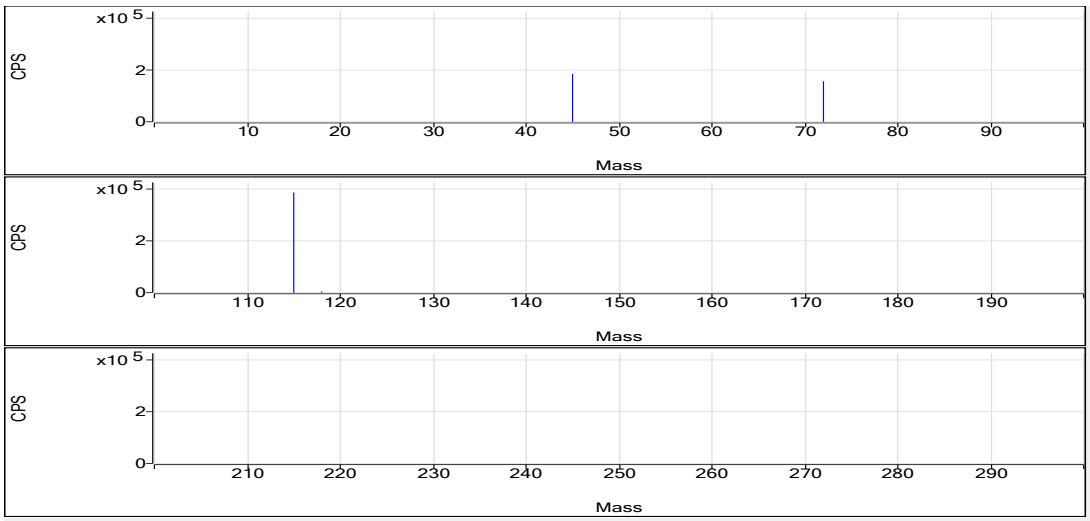
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2478269.44	2.0	103.3	Analog	0.1000	3
No Gas	Ge	72	1216604.15	0.7	105.5	Pulse	0.1000	3
H2	Sc	45	185664.88	0.1	99.3	Pulse	0.1000	3
H2	Ge	72	157040.93	1.4	95.9	Pulse	0.1000	3
H2	In	115	388463.29	0.8	99.8	Pulse	0.1000	3
He	Sc	45	48438.18	0.2	103.9	Pulse	0.1000	3
He	Ge	72	82927.30	1.5	102.1	Pulse	0.1000	3
He	In	115	86780.09	1.7	100.7	Pulse	0.1000	3
He	Tb	159	398278.07	0.4	99.9	Pulse	0.1000	3
He	Bi	209	311208.35	0.3	100.6	Pulse	0.1000	3

No Gas

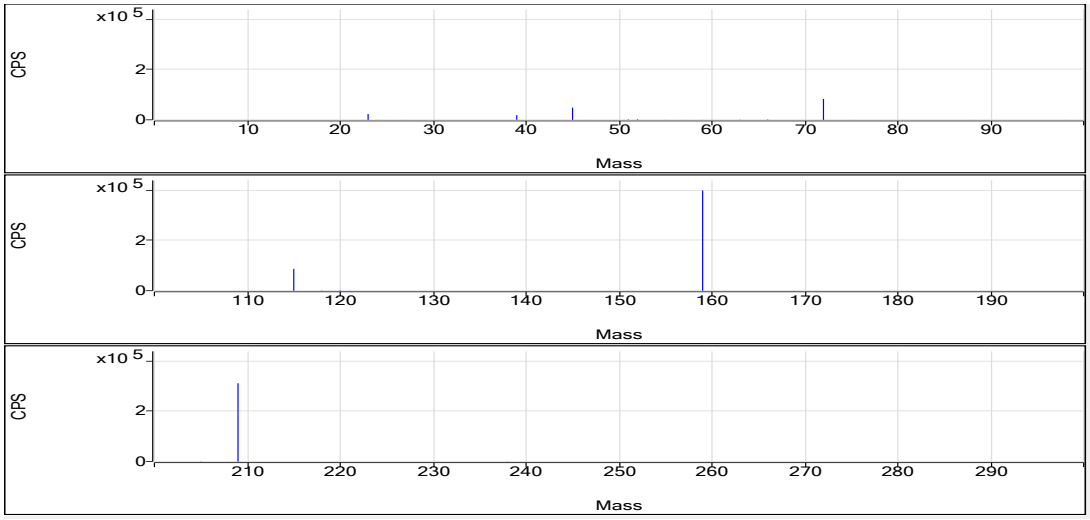


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.015	0	40.00	0.0008	4.685E-06
Be	9	1	No Gas	0.028	0	66.00	0.0008	4.685E-06
Be	9	1	No Gas	0.013	0	36.00	0.0008	4.685E-06
Se	78	2	H2	0.052	0	5.33	0.0004	1.219E-05
Se	78	2	H2	0.011	0	2.67	0.0004	1.219E-05
Se	78	2	H2	0.074	0	6.67	0.0004	1.219E-05
Na	23	3	He	35.348	0.4716	22878.33	0.0036	0.3452
Na	23	3	He	40.651	0.4906	23719.73	0.0036	0.3452
Na	23	3	He	37.536	0.4794	23228.87	0.0036	0.3452
Mg	24	3	He	1.498	0.0062	300.01	0.0018	0.003497
Mg	24	3	He	0.472	0.0043	210.01	0.0018	0.003497
Mg	24	3	He	1.157	0.0056	270.01	0.0018	0.003497
Al	27	3	He	0.662	0.001	50.00	0.0006	0.0006432
Al	27	3	He	-0.746	0.0002	10.00	0.0006	0.0006432
Al	27	3	He	0.664	0.001	50.00	0.0006	0.0006432
K	39	3	He	-12.982	0.38	18432.19	0.0012	0.3951
K	39	3	He	4.469	0.4003	19353.58	0.0012	0.3951
K	39	3	He	-14.173	0.3786	18341.94	0.0012	0.3951
Ca	44	3	He	-0.518	0.0027	130.01	0.0001	0.002715
Ca	44	3	He	-3.451	0.0025	120.00	0.0001	0.002715
Ca	44	3	He	2.587	0.0029	140.01	0.0001	0.002715
Ti	47	3	He	1.789	0.001	50.00	0.0005	7.003E-05
Ti	47	3	He	2.566	0.0014	70.00	0.0005	7.003E-05
Ti	47	3	He	0.254	0.0002	10.00	0.0005	7.003E-05
V	51	3	He	0.471	0.0352	1706.11	0.0219	0.02486
V	51	3	He	0.469	0.0351	1698.11	0.0219	0.02486
V	51	3	He	0.455	0.0348	1686.11	0.0219	0.02486
Cr	52	3	He	-0.034	0.039	1890.18	0.0299	0.03997
Cr	52	3	He	-0.195	0.0341	1650.16	0.0299	0.03997
Cr	52	3	He	-0.011	0.0396	1920.20	0.0299	0.03997
Mn	55	3	He	0.196	0.0052	250.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.31	0.0066	320.02	0.0128	0.002639
Mn	55	3	He	0.084	0.0037	180.01	0.0128	0.002639
Fe	57	3	He	2.508	0.0029	140.00	0.0006	0.001429
Fe	57	3	He	1.457	0.0023	110.00	0.0006	0.001429
Fe	57	3	He	1.093	0.0021	100.00	0.0006	0.001429
Co	59	3	He	0.097	0.0076	370.02	0.0563	0.002149
Co	59	3	He	0.039	0.0043	210.01	0.0563	0.002149
Co	59	3	He	0.09	0.0072	350.02	0.0563	0.002149
Ni	60	3	He	-0.09	0.0021	170.01	0.0086	0.002834
Ni	60	3	He	-0.046	0.0024	200.01	0.0086	0.002834
Ni	60	3	He	-0.04	0.0025	210.01	0.0086	0.002834
Cu	63	3	He	0.136	0.0083	680.04	0.0257	0.004757
Cu	63	3	He	0.156	0.0088	720.05	0.0257	0.004757
Cu	63	3	He	0.101	0.0074	620.04	0.0257	0.004757
Zn	66	3	He	3.904	0.0152	1250.09	0.0029	0.003818
Zn	66	3	He	3.917	0.0152	1250.10	0.0029	0.003818
Zn	66	3	He	3.983	0.0154	1300.11	0.0029	0.003818
As	75	3	He	0.069	0.0009	78.00	0.002	0.0008061
As	75	3	He	0.141	0.0011	90.00	0.002	0.0008061
As	75	3	He	0.151	0.0011	94.00	0.002	0.0008061
Sr	88	3	He	0.007	0.001	90.00	0.009	0.0009645
Sr	88	3	He	-0.018	0.0008	70.00	0.009	0.0009645
Sr	88	3	He	-0.029	0.0007	60.00	0.009	0.0009645
Mo	98	3	He	0.091	0.0023	200.01	0.0219	0.0002706
Mo	98	3	He	0.055	0.0015	130.00	0.0219	0.0002706
Mo	98	3	He	0.1	0.0025	210.01	0.0219	0.0002706
Ag	107	3	He	0.006	0.0009	80.00	0.0465	0.0006206
Ag	107	3	He	0.006	0.0009	80.00	0.0465	0.0006206
Ag	107	3	He	0.014	0.0013	110.00	0.0465	0.0006206
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0.009	0	4.00	0.0053	0
Cd	111	3	He	0.022	0.0001	10.00	0.0053	0
Sn	120	3	He	-0.07	0.0154	1350.12	0.0158	0.01648
Sn	120	3	He	0	0.0165	1440.13	0.0158	0.01648
Sn	120	3	He	0.059	0.0174	1480.13	0.0158	0.01648
Sb	121	3	He	0.066	0.0013	110.00	0.0149	0.0002698
Sb	121	3	He	0.051	0.001	90.00	0.0149	0.0002698
Sb	121	3	He	0.061	0.0012	100.01	0.0149	0.0002698
Ba	137	3	He	0.118	0.0008	70.00	0.0048	0.0002317
Ba	137	3	He	0.119	0.0008	70.00	0.0048	0.0002317
Ba	137	3	He	0.074	0.0006	50.00	0.0048	0.0002317
Tl	205	3	He	0.085	0.0022	890.08	0.0247	0.0001339
Tl	205	3	He	0.087	0.0023	910.07	0.0247	0.0001339
Tl	205	3	He	0.085	0.0022	890.06	0.0247	0.0001339
Pb	208	3	He	0.022	0.0018	360.02	0.0327	0.00107
Pb	208	3	He	0.019	0.0017	280.01	0.0327	0.00107
Pb	208	3	He	0.014	0.0015	370.02	0.0327	0.00107
U	238	3	He	0.052	0.0026	820.05	0.0493	7.55E-05
U	238	3	He	0.041	0.0021	660.05	0.0493	7.55E-05
U	238	3	He	0.056	0.0028	880.07	0.0493	7.55E-05
Sc	45	1	No Gas			2475036.06		
Sc	45	1	No Gas			2529722.77		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2430049.50		
Ge	72	1	No Gas			1220923.42		
Ge	72	1	No Gas			1221618.65		
Ge	72	1	No Gas			1207270.37		
Sc	45	2	H2			185782.32		
Sc	45	2	H2			185631.74		
Sc	45	2	H2			185580.58		
Ge	72	2	H2			157691.23		
Ge	72	2	H2			158884.75		
Ge	72	2	H2			154546.82		
In	115	2	H2			388760.27		
In	115	2	H2			391389.02		
In	115	2	H2			385240.58		
Sc	45	3	He			48511.95		
Sc	45	3	He			48351.27		
Sc	45	3	He			48451.31		
Ge	72	3	He			82327.07		
Ge	72	3	He			82116.14		
Ge	72	3	He			84338.70		
In	115	3	He			87888.30		
In	115	3	He			87413.98		
In	115	3	He			85062.09		
Tb	159	3	He			397746.05		
Tb	159	3	He			397071.28		
Tb	159	3	He			400016.87		
Bi	209	3	He			311108.26		
Bi	209	3	He			312246.71		
Bi	209	3	He			310270.07		

Quantitation Report

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Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	8/10/2023 4:13:49 PM
Sample Name	410-138038-C-2-A
Sample Type	Sample
Comment	A12
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

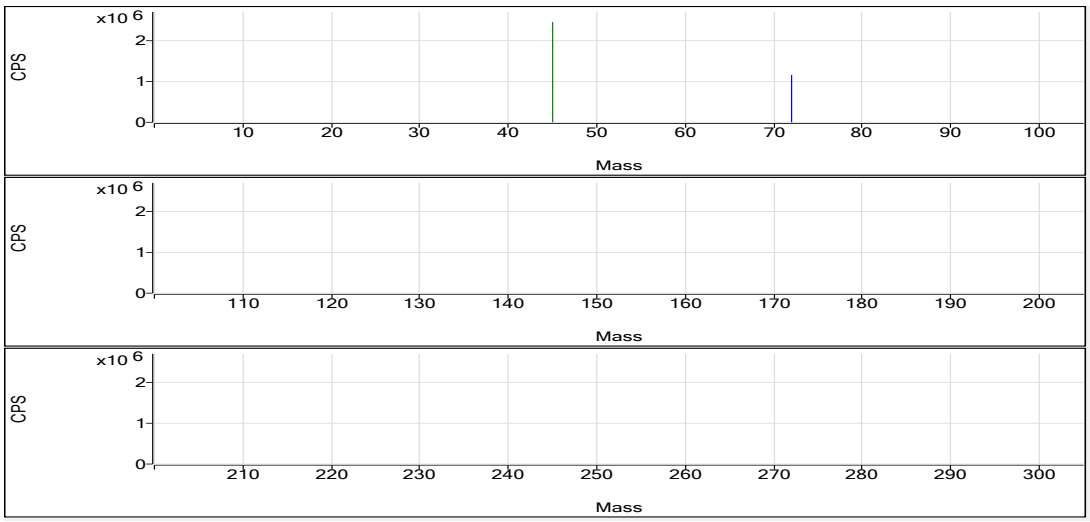
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.016	ppb	46.6	40.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.232	ppb	32.6	17.33	0.0001	Pulse	1.5000	3
Na	23	45	He	918868.411	ppb	1.1	159660810.95	3 287.1825	Analog	0.1000	3
Mg	24	45	He	114158.186	ppb	2.7	9947016.73	204.8400	Analog	0.1000	3
Al	27	45	He	80.317	ppb	5.5	2313.81	0.0476	Pulse	0.1000	3
K	39	45	He	37473.210	ppb	1.6	2138247.78	44.0261	Analog	0.1000	3
Ca	44	45	He	49678.158	ppb	0.5	163142.64	3.3586	Pulse	0.1000	3
Ti	47	45	He	1.536	ppb	64.5	43.34	0.0009	Pulse	0.1000	3
V	51	45	He	2.854	ppb	6.4	4235.98	0.0872	Pulse	0.5000	3
Cr	52	45	He	113.719	ppb	2.0	167297.61	3.4448	Pulse	0.1000	3
Mn	55	45	He	13.550	ppb	1.7	8576.20	0.1765	Pulse	0.1000	3
Fe	57	45	He	93.501	ppb	5.8	2710.35	0.0558	Pulse	0.1000	3
Co	59	45	He	0.146	ppb	3.4	503.36	0.0104	Pulse	0.1000	3
Ni	60	72	He	1.056	ppb	2.9	990.08	0.0119	Pulse	0.1000	3
Cu	63	72	He	1.950	ppb	6.2	4560.88	0.0548	Pulse	0.1000	3
Zn	66	72	He	19.411	ppb	4.5	5021.05	0.0603	Pulse	0.1000	3
As	75	72	He	0.998	ppb	11.1	237.33	0.0029	Pulse	0.5000	3
Sr	88	115	He	770.272	ppb	0.3	601107.22	6.9102	Pulse	0.1000	3
Mo	98	115	He	2.298	ppb	1.8	4407.49	0.0507	Pulse	0.1000	3
Ag	107	115	He	0.147	ppb	8.5	646.70	0.0074	Pulse	0.1000	3
Cd	111	115	He	0.032	ppb	41.8	14.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.145	ppb	N/A	1233.68	0.0142	Pulse	0.1000	3
Sb	121	115	He	1.780	ppb	6.5	2323.60	0.0267	Pulse	0.1000	3
Ba	137	115	He	27.743	ppb	3.7	11602.01	0.1334	Pulse	0.1000	3
Tl	205	159	He	0.030	ppb	28.0	346.69	0.0009	Pulse	0.1000	3
Pb	208	159	He	0.579	ppb	2.3	7834.53	0.0200	Pulse	0.1000	3
U	238	209	He	0.410	ppb	7.2	5901.60	0.0203	Pulse	0.1000	3

ISTD Table:

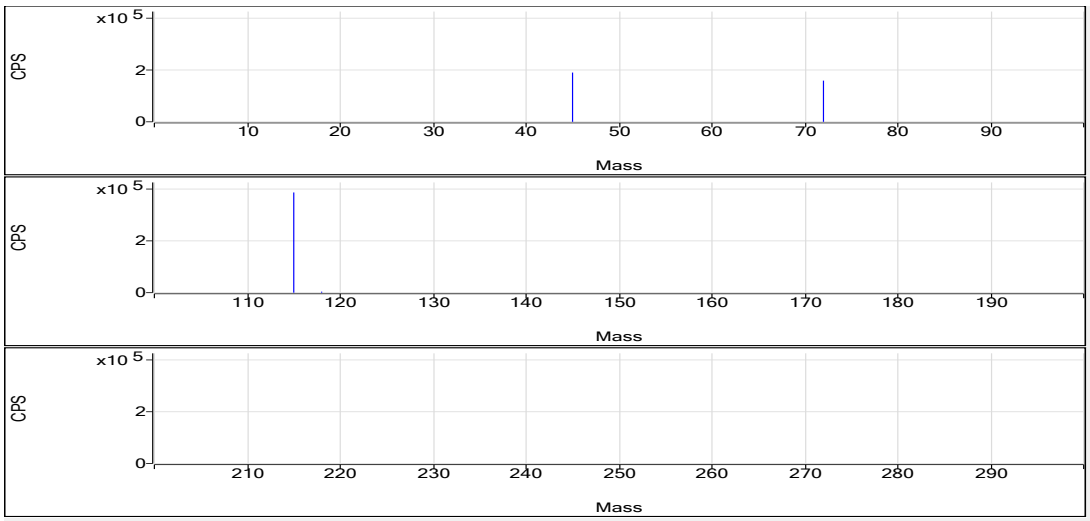
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2457412.41	0.3	102.4	Analog	0.1000	3
No Gas	Ge	72	1159549.51	0.5	100.5	Pulse	0.1000	3
H2	Sc	45	189713.98	0.5	101.4	Pulse	0.1000	3
H2	Ge	72	158661.76	1.9	96.9	Pulse	0.1000	3
H2	In	115	386097.09	0.9	99.2	Pulse	0.1000	3
He	Sc	45	48578.59	2.2	104.2	Pulse	0.1000	3
He	Ge	72	83214.90	0.5	102.5	Pulse	0.1000	3
He	In	115	86988.48	0.2	100.9	Pulse	0.1000	3
He	Tb	159	391366.69	0.7	98.2	Pulse	0.1000	3
He	Bi	209	290858.54	0.6	94.0	Pulse	0.1000	3

No Gas

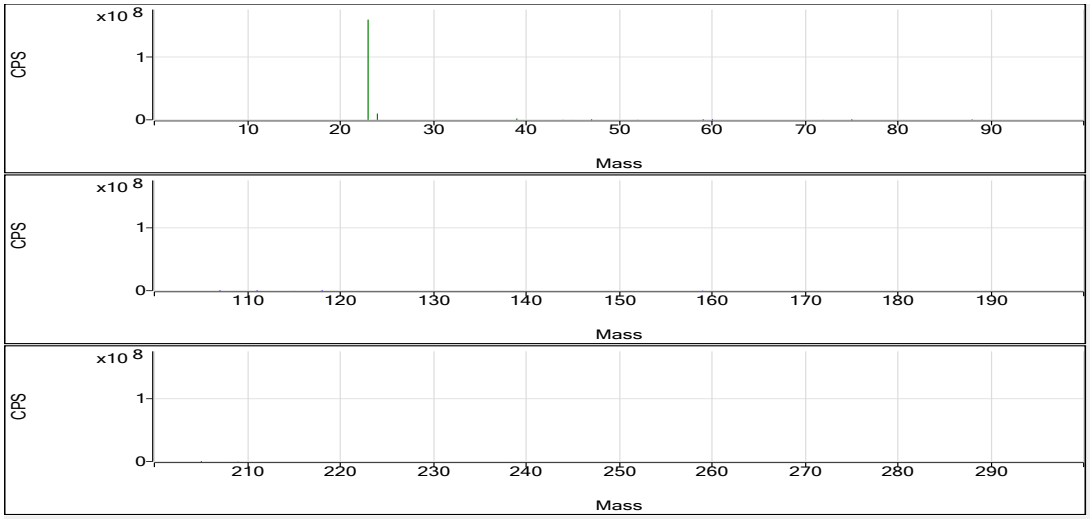


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.013	0	36.00	0.0008	4.685E-06
Be	9	1	No Gas	0.024	0	56.00	0.0008	4.685E-06
Be	9	1	No Gas	0.01	0	30.00	0.0008	4.685E-06
Se	78	2	H2	0.18	0.0001	14.00	0.0004	1.219E-05
Se	78	2	H2	0.198	0.0001	14.67	0.0004	1.219E-05
Se	78	2	H2	0.319	0.0001	23.33	0.0004	1.219E-05
Na	23	3	He	906885.237	3244.3181	161454527.59	0.0036	0.3452
Na	23	3	He	925600.501	3311.2635	158077997.64	0.0036	0.3452
Na	23	3	He	924119.495	3305.9659	159449907.62	0.0036	0.3452
Mg	24	3	He	110822.662	198.855	9896084.23	0.0018	0.003497
Mg	24	3	He	116748.996	209.4888	10000885.48	0.0018	0.003497
Mg	24	3	He	114902.9	206.1763	9944080.48	0.0018	0.003497
Al	27	3	He	81.363	0.0482	2400.84	0.0006	0.0006432
Al	27	3	He	84.128	0.0499	2380.33	0.0006	0.0006432
Al	27	3	He	75.46	0.0448	2160.25	0.0006	0.0006432
K	39	3	He	36828.209	43.2751	2153600.75	0.0012	0.3951
K	39	3	He	37970.905	44.6056	2129448.25	0.0012	0.3951
K	39	3	He	37620.516	44.1976	2131694.34	0.0012	0.3951
Ca	44	3	He	49374.559	3.3381	166119.65	0.0001	0.002715
Ca	44	3	He	49806.157	3.3672	160749.13	0.0001	0.002715
Ca	44	3	He	49853.759	3.3704	162559.14	0.0001	0.002715
Ti	47	3	He	1.367	0.0008	40.00	0.0005	7.003E-05
Ti	47	3	He	2.601	0.0015	70.01	0.0005	7.003E-05
Ti	47	3	He	0.642	0.0004	20.00	0.0005	7.003E-05
V	51	3	He	2.658	0.083	4128.61	0.0219	0.02486
V	51	3	He	2.882	0.0879	4194.63	0.0219	0.02486
V	51	3	He	3.021	0.0909	4384.69	0.0219	0.02486
Cr	52	3	He	111.135	3.3674	167581.36	0.0299	0.03997
Cr	52	3	He	114.981	3.4826	166256.68	0.0299	0.03997
Cr	52	3	He	115.041	3.4844	168054.78	0.0299	0.03997
Mn	55	3	He	13.671	0.1781	8862.99	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	13.689	0.1783	8512.85	0.0128	0.002639
Mn	55	3	He	13.289	0.1732	8352.75	0.0128	0.002639
Fe	57	3	He	99.585	0.0593	2950.41	0.0006	0.001429
Fe	57	3	He	91.653	0.0547	2610.32	0.0006	0.001429
Fe	57	3	He	89.267	0.0533	2570.32	0.0006	0.001429
Co	59	3	He	0.14	0.01	500.03	0.0563	0.002149
Co	59	3	He	0.148	0.0105	500.03	0.0563	0.002149
Co	59	3	He	0.15	0.0106	510.02	0.0563	0.002149
Ni	60	3	He	1.072	0.012	1000.09	0.0086	0.002834
Ni	60	3	He	1.02	0.0116	970.07	0.0086	0.002834
Ni	60	3	He	1.076	0.0121	1000.08	0.0086	0.002834
Cu	63	3	He	2.014	0.0565	4690.90	0.0257	0.004757
Cu	63	3	He	1.812	0.0513	4290.77	0.0257	0.004757
Cu	63	3	He	2.025	0.0567	4700.97	0.0257	0.004757
Zn	66	3	He	18.409	0.0574	4770.92	0.0029	0.003818
Zn	66	3	He	19.95	0.0619	5181.11	0.0029	0.003818
Zn	66	3	He	19.874	0.0617	5111.13	0.0029	0.003818
As	75	3	He	1.099	0.0031	254.00	0.002	0.0008061
As	75	3	He	1.018	0.0029	242.00	0.002	0.0008061
As	75	3	He	0.879	0.0026	216.00	0.002	0.0008061
Sr	88	3	He	773.002	6.9347	604676.48	0.009	0.0009645
Sr	88	3	He	768.129	6.8909	598511.71	0.009	0.0009645
Sr	88	3	He	769.684	6.9049	600133.47	0.009	0.0009645
Mo	98	3	He	2.279	0.0502	4380.81	0.0219	0.0002706
Mo	98	3	He	2.346	0.0517	4490.86	0.0219	0.0002706
Mo	98	3	He	2.271	0.0501	4350.81	0.0219	0.0002706
Ag	107	3	He	0.157	0.0079	690.04	0.0465	0.0006206
Ag	107	3	He	0.133	0.0068	590.03	0.0465	0.0006206
Ag	107	3	He	0.15	0.0076	660.04	0.0465	0.0006206
Cd	111	3	He	0.017	0.0001	8.00	0.0053	0
Cd	111	3	He	0.043	0.0002	20.00	0.0053	0
Cd	111	3	He	0.034	0.0002	16.00	0.0053	0
Sn	120	3	He	0.054	0.0173	1510.87	0.0158	0.01648
Sn	120	3	He	-0.256	0.0124	1080.09	0.0158	0.01648
Sn	120	3	He	-0.234	0.0128	1110.09	0.0158	0.01648
Sb	121	3	He	1.65	0.0248	2160.22	0.0149	0.0002698
Sb	121	3	He	1.873	0.0281	2440.31	0.0149	0.0002698
Sb	121	3	He	1.818	0.0273	2370.28	0.0149	0.0002698
Ba	137	3	He	26.631	0.128	11165.02	0.0048	0.0002317
Ba	137	3	He	27.937	0.1343	11665.34	0.0048	0.0002317
Ba	137	3	He	28.661	0.1378	11975.68	0.0048	0.0002317
Tl	205	3	He	0.026	0.0008	300.02	0.0247	0.0001339
Tl	205	3	He	0.025	0.0008	300.01	0.0247	0.0001339
Tl	205	3	He	0.04	0.0011	440.03	0.0247	0.0001339
Pb	208	3	He	0.564	0.0195	4010.76	0.0327	0.00107
Pb	208	3	He	0.59	0.0204	4150.81	0.0327	0.00107
Pb	208	3	He	0.582	0.0201	4290.83	0.0327	0.00107
U	238	3	He	0.439	0.0217	6271.83	0.0493	7.55E-05
U	238	3	He	0.413	0.0204	5931.61	0.0493	7.55E-05
U	238	3	He	0.38	0.0188	5501.35	0.0493	7.55E-05
Sc	45	1	No Gas			2449203.56		
Sc	45	1	No Gas			2459474.34		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2463559.34		
Ge	72	1	No Gas			1160339.98		
Ge	72	1	No Gas			1165358.58		
Ge	72	1	No Gas			1152949.98		
Sc	45	2	H2			190079.51		
Sc	45	2	H2			188659.94		
Sc	45	2	H2			190402.48		
Ge	72	2	H2			160360.71		
Ge	72	2	H2			155114.01		
Ge	72	2	H2			160510.56		
In	115	2	H2			390192.73		
In	115	2	H2			384212.92		
In	115	2	H2			383885.62		
Sc	45	3	He			49765.32		
Sc	45	3	He			47739.48		
Sc	45	3	He			48230.96		
Ge	72	3	He			83090.70		
Ge	72	3	He			83694.46		
Ge	72	3	He			82859.54		
In	115	3	He			87204.14		
In	115	3	He			86861.43		
In	115	3	He			86921.63		
Tb	159	3	He			389947.42		
Tb	159	3	He			394557.14		
Tb	159	3	He			389595.50		
Bi	209	3	He			289127.81		
Bi	209	3	He			290764.41		
Bi	209	3	He			292683.41		

Quantitation Report

Data File Name	164SMPL.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	8/10/2023 4:15:57 PM
Sample Name	410-138038-C-2-A PDS
Sample Type	Sample
Comment	A12
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

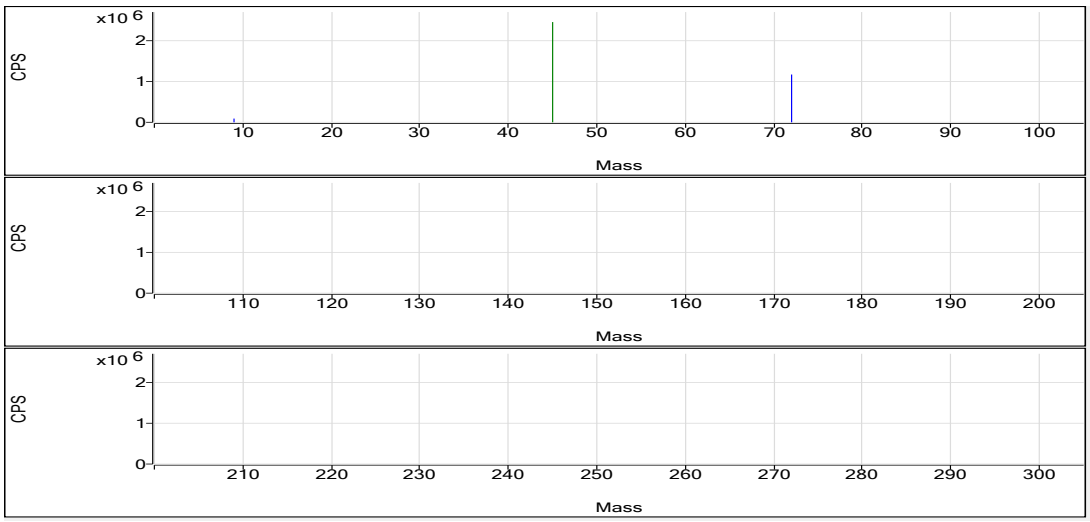
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	48.583	ppb	0.8	91400.15	0.0371	Pulse	0.5000	3
Se	78	72	H2	104.314	ppb	1.6	7237.61	0.0435	Pulse	1.5000	3
Na	23	45	He	866044.761	ppb	0.5	157188197.65	3 098.2297	Analog	0.1000	3
Mg	24	45	He	110604.042	ppb	1.6	10068590.06	198.4628	Analog	0.1000	3
Al	27	45	He	4899.732	ppb	1.8	145464.05	2.8672	Pulse	0.1000	3
K	39	45	He	39855.238	ppb	1.8	2374316.63	46.7996	Analog	0.1000	3
Ca	44	45	He	51511.320	ppb	0.7	176682.71	3.4824	Pulse	0.1000	3
Ti	47	45	He	495.379	ppb	1.5	13499.99	0.2661	Pulse	0.1000	3
V	51	45	He	500.225	ppb	0.8	556014.46	10.9594	Pulse	0.5000	3
Cr	52	45	He	561.127	ppb	1.1	854374.91	16.8405	Pulse	0.1000	3
Mn	55	45	He	494.097	ppb	0.8	321869.10	6.3438	Pulse	0.1000	3
Fe	57	45	He	4837.258	ppb	0.7	142665.75	2.8118	Pulse	0.1000	3
Co	59	45	He	454.231	ppb	0.7	1297143.81	25.5673	Pulse	0.1000	3
Ni	60	72	He	488.889	ppb	1.4	359198.38	4.1990	Pulse	0.1000	3
Cu	63	72	He	469.155	ppb	1.8	1030607.43	12.0485	Pulse	0.1000	3
Zn	66	72	He	515.055	ppb	3.0	128595.81	1.5035	Pulse	0.1000	3
As	75	72	He	528.162	ppb	1.8	92633.13	1.0829	Pulse	0.5000	3
Sr	88	115	He	818.371	ppb	0.8	637974.74	7.3416	Pulse	0.1000	3
Mo	98	115	He	53.257	ppb	1.7	101502.70	1.1680	Pulse	0.1000	3
Ag	107	115	He	39.903	ppb	2.4	161225.45	1.8556	Pulse	0.1000	3
Cd	111	115	He	50.237	ppb	1.8	23340.84	0.2686	Pulse	0.5000	3
Sn	120	115	He	102.112	ppb	0.7	141622.89	1.6297	Pulse	0.1000	3
Sb	121	115	He	103.516	ppb	2.8	133616.17	1.5378	Pulse	0.1000	3
Ba	137	115	He	545.074	ppb	0.6	227351.33	2.6162	Pulse	0.1000	3
Tl	205	159	He	98.649	ppb	1.1	963777.48	2.4394	Pulse	0.1000	3
Pb	208	159	He	49.813	ppb	1.4	644560.03	1.6314	Pulse	0.1000	3
U	238	209	He	52.979	ppb	0.8	760181.37	2.6098	Pulse	0.1000	3

ISTD Table:

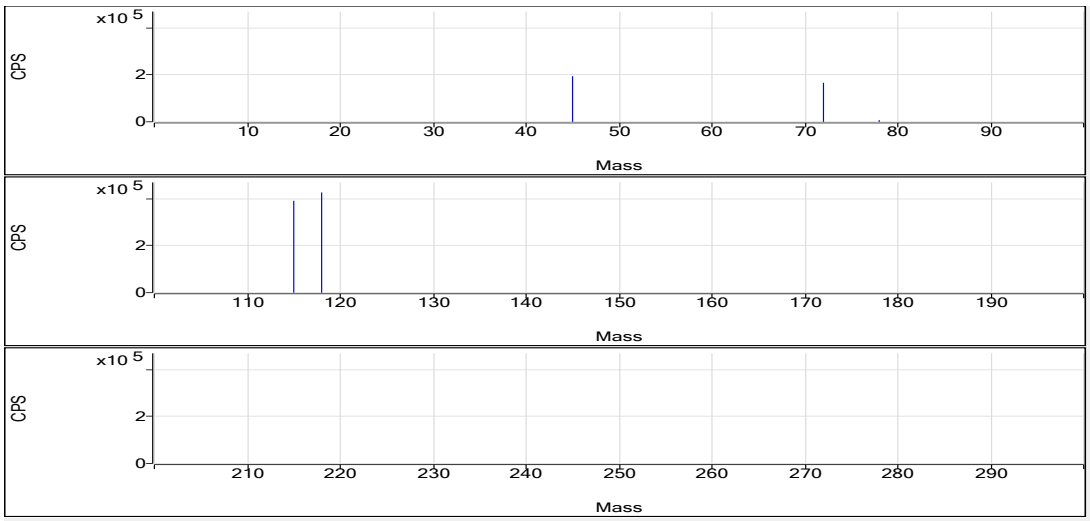
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2466144.23	0.5	102.8	Analog	0.1000	3
No Gas	Ge	72	1175580.97	0.6	101.9	Pulse	0.1000	3
H2	Sc	45	194369.45	0.3	103.9	Pulse	0.1000	3
H2	Ge	72	166324.91	0.7	101.6	Pulse	0.1000	3
H2	In	115	391810.31	0.3	100.7	Pulse	0.1000	3
He	Sc	45	50736.12	0.7	108.8	Pulse	0.1000	3
He	Ge	72	85555.38	1.6	105.4	Pulse	0.1000	3
He	In	115	86904.81	1.3	100.8	Pulse	0.1000	3
He	Tb	159	395135.66	1.4	99.1	Pulse	0.1000	3
He	Bi	209	291275.82	0.5	94.2	Pulse	0.1000	3

No Gas

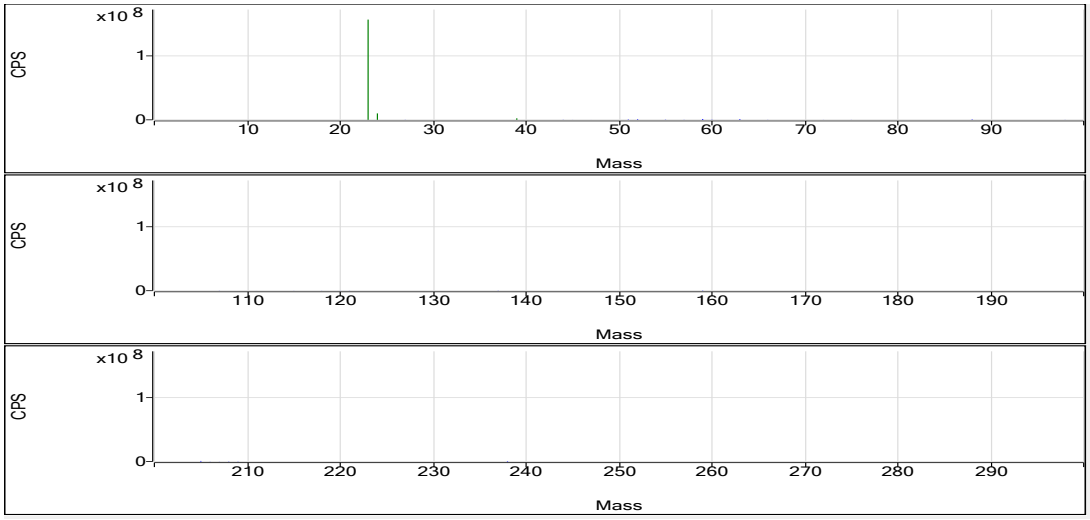


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	48.268	0.0368	91098.95	0.0008	4.685E-06
Be	9	1	No Gas	49.043	0.0374	91769.31	0.0008	4.685E-06
Be	9	1	No Gas	48.438	0.037	91332.20	0.0008	4.685E-06
Se	78	2	H2	105.984	0.0442	7308.54	0.0004	1.219E-05
Se	78	2	H2	104.29	0.0435	7223.83	0.0004	1.219E-05
Se	78	2	H2	102.668	0.0428	7180.47	0.0004	1.219E-05
Na	23	3	He	861490.879	3081.9402	157397677.65	0.0036	0.3452
Na	23	3	He	866198.477	3098.7795	157447067.65	0.0036	0.3452
Na	23	3	He	870444.928	3113.9693	156719847.66	0.0036	0.3452
Mg	24	3	He	108631.527	194.9234	9954928.60	0.0018	0.003497
Mg	24	3	He	111427.528	199.9404	10158845.47	0.0018	0.003497
Mg	24	3	He	111753.07	200.5245	10091996.10	0.0018	0.003497
Al	27	3	He	4812.447	2.8161	143820.57	0.0006	0.0006432
Al	27	3	He	4987.93	2.9188	148300.18	0.0006	0.0006432
Al	27	3	He	4898.819	2.8666	144271.39	0.0006	0.0006432
K	39	3	He	39058.372	45.8718	2342715.75	0.0012	0.3951
K	39	3	He	40483.607	47.5312	2415031.21	0.0012	0.3951
K	39	3	He	40023.735	46.9958	2365202.93	0.0012	0.3951
Ca	44	3	He	51214.269	3.4623	176824.88	0.0001	0.002715
Ca	44	3	He	51888.2	3.5079	178232.28	0.0001	0.002715
Ca	44	3	He	51431.492	3.477	174990.97	0.0001	0.002715
Ti	47	3	He	502.262	0.2698	13776.85	0.0005	7.003E-05
Ti	47	3	He	496.046	0.2664	13536.70	0.0005	7.003E-05
Ti	47	3	He	487.829	0.262	13186.41	0.0005	7.003E-05
V	51	3	He	496.926	10.8873	556023.00	0.0219	0.02486
V	51	3	He	499.22	10.9374	555722.75	0.0219	0.02486
V	51	3	He	504.529	11.0534	556297.63	0.0219	0.02486
Cr	52	3	He	555.338	16.6672	851209.44	0.0299	0.03997
Cr	52	3	He	560.04	16.808	854003.35	0.0299	0.03997
Cr	52	3	He	568.004	17.0464	857911.94	0.0299	0.03997
Mn	55	3	He	494.153	6.3445	324021.91	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	498.025	6.3942	324886.91	0.0128	0.002639
Mn	55	3	He	490.113	6.2927	316698.47	0.0128	0.002639
Fe	57	3	He	4873.827	2.8331	144688.03	0.0006	0.001429
Fe	57	3	He	4827.477	2.8061	142578.69	0.0006	0.001429
Fe	57	3	He	4810.469	2.7963	140730.54	0.0006	0.001429
Co	59	3	He	451.339	25.4045	1297433.89	0.0563	0.002149
Co	59	3	He	454.098	25.5598	1298679.67	0.0563	0.002149
Co	59	3	He	457.255	25.7375	1295317.87	0.0563	0.002149
Ni	60	3	He	489.945	4.2081	358164.99	0.0086	0.002834
Ni	60	3	He	481.787	4.1381	360445.03	0.0086	0.002834
Ni	60	3	He	494.935	4.2509	358985.11	0.0086	0.002834
Cu	63	3	He	472.763	12.1411	1033367.17	0.0257	0.004757
Cu	63	3	He	459.267	11.7946	1027363.81	0.0257	0.004757
Cu	63	3	He	475.436	12.2097	1031091.31	0.0257	0.004757
Zn	66	3	He	509	1.4858	126463.88	0.0029	0.003818
Zn	66	3	He	503.696	1.4704	128077.15	0.0029	0.003818
Zn	66	3	He	532.468	1.5542	131246.39	0.0029	0.003818
As	75	3	He	531.023	1.0888	92671.45	0.002	0.0008061
As	75	3	He	517.408	1.0609	92409.70	0.002	0.0008061
As	75	3	He	536.054	1.0991	92818.25	0.002	0.0008061
Sr	88	3	He	816.996	7.3293	640712.02	0.009	0.0009645
Sr	88	3	He	812.314	7.2873	639092.26	0.009	0.0009645
Sr	88	3	He	825.801	7.4083	634119.95	0.009	0.0009645
Mo	98	3	He	52.23	1.1455	100136.02	0.0219	0.0002706
Mo	98	3	He	54	1.1843	103863.35	0.0219	0.0002706
Mo	98	3	He	53.54	1.1742	100508.74	0.0219	0.0002706
Ag	107	3	He	39.283	1.8268	159694.66	0.0465	0.0006206
Ag	107	3	He	39.425	1.8334	160787.11	0.0465	0.0006206
Ag	107	3	He	40.999	1.9066	163194.57	0.0465	0.0006206
Cd	111	3	He	50.593	0.2705	23648.00	0.0053	0
Cd	111	3	He	49.209	0.2631	23075.11	0.0053	0
Cd	111	3	He	50.908	0.2722	23299.42	0.0053	0
Sn	120	3	He	101.351	1.6177	141415.91	0.0158	0.01648
Sn	120	3	He	102.148	1.6303	142975.62	0.0158	0.01648
Sn	120	3	He	102.837	1.6412	140477.14	0.0158	0.01648
Sb	121	3	He	103.704	1.5406	134678.58	0.0149	0.0002698
Sb	121	3	He	100.558	1.4939	131015.16	0.0149	0.0002698
Sb	121	3	He	106.286	1.579	135154.77	0.0149	0.0002698
Ba	137	3	He	541.796	2.6005	227330.31	0.0048	0.0002317
Ba	137	3	He	544.627	2.6141	229254.02	0.0048	0.0002317
Ba	137	3	He	548.799	2.6341	225469.66	0.0048	0.0002317
Tl	205	3	He	98.656	2.4395	962336.78	0.0247	0.0001339
Tl	205	3	He	97.563	2.4125	967321.31	0.0247	0.0001339
Tl	205	3	He	99.726	2.466	961674.36	0.0247	0.0001339
Pb	208	3	He	49.84	1.6323	345367.61	0.0327	0.00107
Pb	208	3	He	49.115	1.6086	342043.35	0.0327	0.00107
Pb	208	3	He	50.485	1.6534	342349.88	0.0327	0.00107
U	238	3	He	53.365	2.6288	768524.60	0.0493	7.55E-05
U	238	3	He	53.053	2.6135	757392.64	0.0493	7.55E-05
U	238	3	He	52.519	2.5872	754626.86	0.0493	7.55E-05
Sc	45	1	No Gas			2473998.56		
Sc	45	1	No Gas			2452834.65		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2471599.49		
Ge	72	1	No Gas			1182972.95		
Ge	72	1	No Gas			1172838.58		
Ge	72	1	No Gas			1170931.39		
Sc	45	2	H2			194402.81		
Sc	45	2	H2			193684.72		
Sc	45	2	H2			195020.82		
Ge	72	2	H2			165296.29		
Ge	72	2	H2			166034.63		
Ge	72	2	H2			167643.81		
In	115	2	H2			392959.21		
In	115	2	H2			391387.81		
In	115	2	H2			391083.90		
Sc	45	3	He			51070.97		
Sc	45	3	He			50809.38		
Sc	45	3	He			50328.00		
Ge	72	3	He			85113.25		
Ge	72	3	He			87104.43		
Ge	72	3	He			84448.47		
In	115	3	He			88179.59		
In	115	3	He			88460.53		
In	115	3	He			86347.77		
Tb	159	3	He			394474.99		
Tb	159	3	He			400958.82		
Tb	159	3	He			389973.16		
Bi	209	3	He			292343.67		
Bi	209	3	He			289801.95		
Bi	209	3	He			291681.85		

Quantitation Report

Data File Name	165SMPL.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	8/10/2023 4:18:02 PM
Sample Name	410-138038-C-2-A SD@5
Sample Type	Sample
Comment	A12
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

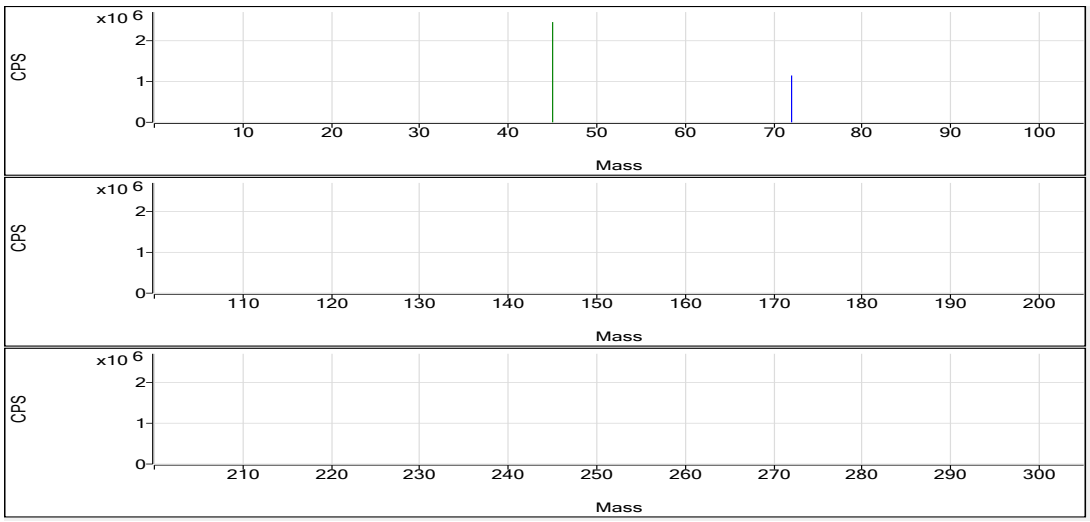
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.026	ppb	52.3	61.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.117	ppb	52.8	9.78	0.0001	Pulse	1.5000	3
Na	23	45	He	182010.710	ppb	1.8	32309762.85	651.4064	Analog	0.1000	3
Mg	24	45	He	23161.096	ppb	0.3	2061723.51	41.5620	Analog	0.1000	3
Al	27	45	He	13.712	ppb	25.1	430.02	0.0087	Pulse	0.1000	3
K	39	45	He	7082.807	ppb	0.7	428660.11	8.6418	Pulse	0.1000	3
Ca	44	45	He	9565.999	ppb	1.7	32186.42	0.6489	Pulse	0.1000	3
Ti	47	45	He	0.619	ppb	60.1	20.00	0.0004	Pulse	0.1000	3
V	51	45	He	1.316	ppb	5.4	2660.93	0.0536	Pulse	0.5000	3
Cr	52	45	He	22.236	ppb	0.8	35009.67	0.7057	Pulse	0.1000	3
Mn	55	45	He	2.810	ppb	2.3	1920.20	0.0387	Pulse	0.1000	3
Fe	57	45	He	18.803	ppb	19.0	613.37	0.0124	Pulse	0.1000	3
Co	59	45	He	0.085	ppb	17.9	343.35	0.0069	Pulse	0.1000	3
Ni	60	72	He	0.239	ppb	46.9	400.02	0.0049	Pulse	0.1000	3
Cu	63	72	He	0.612	ppb	6.0	1680.15	0.0205	Pulse	0.1000	3
Zn	66	72	He	7.044	ppb	6.7	1996.87	0.0243	Pulse	0.1000	3
As	75	72	He	0.669	ppb	15.6	178.67	0.0022	Pulse	0.5000	3
Sr	88	115	He	152.438	ppb	0.7	122935.04	1.3683	Pulse	0.1000	3
Mo	98	115	He	0.584	ppb	11.3	1173.42	0.0131	Pulse	0.1000	3
Ag	107	115	He	0.031	ppb	30.4	186.67	0.0021	Pulse	0.1000	3
Cd	111	115	He	0.011	ppb	86.6	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.124	ppb	88.6	1656.83	0.0184	Pulse	0.1000	3
Sb	121	115	He	0.766	ppb	10.3	1046.74	0.0117	Pulse	0.1000	3
Ba	137	115	He	5.332	ppb	1.5	2320.28	0.0258	Pulse	0.1000	3
Tl	205	159	He	0.146	ppb	5.6	1503.49	0.0037	Pulse	0.1000	3
Pb	208	159	He	0.147	ppb	12.8	2360.18	0.0059	Pulse	0.1000	3
U	238	209	He	0.213	ppb	4.3	3200.52	0.0106	Pulse	0.1000	3

ISTD Table:

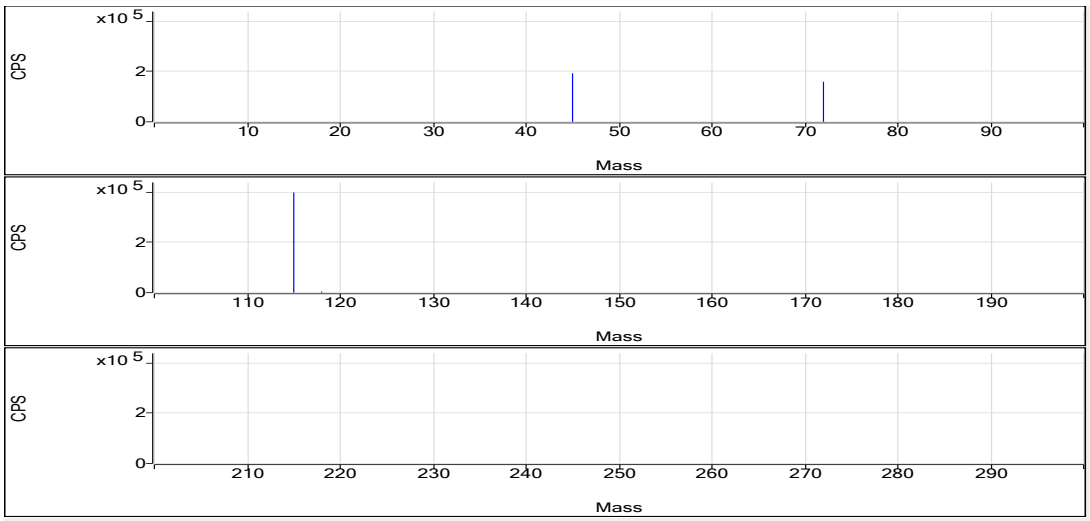
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2468953.97	0.3	102.9	Analog	0.1000	3
No Gas	Ge	72	1153029.52	0.9	100.0	Pulse	0.1000	3
H2	Sc	45	193039.45	0.8	103.2	Pulse	0.1000	3
H2	Ge	72	159385.36	1.6	97.4	Pulse	0.1000	3
H2	In	115	398759.50	0.3	102.5	Pulse	0.1000	3
He	Sc	45	49605.19	0.9	106.4	Pulse	0.1000	3
He	Ge	72	82055.42	1.1	101.1	Pulse	0.1000	3
He	In	115	89849.47	1.2	104.2	Pulse	0.1000	3
He	Tb	159	401210.48	0.9	100.7	Pulse	0.1000	3
He	Bi	209	302898.62	1.0	97.9	Pulse	0.1000	3

No Gas

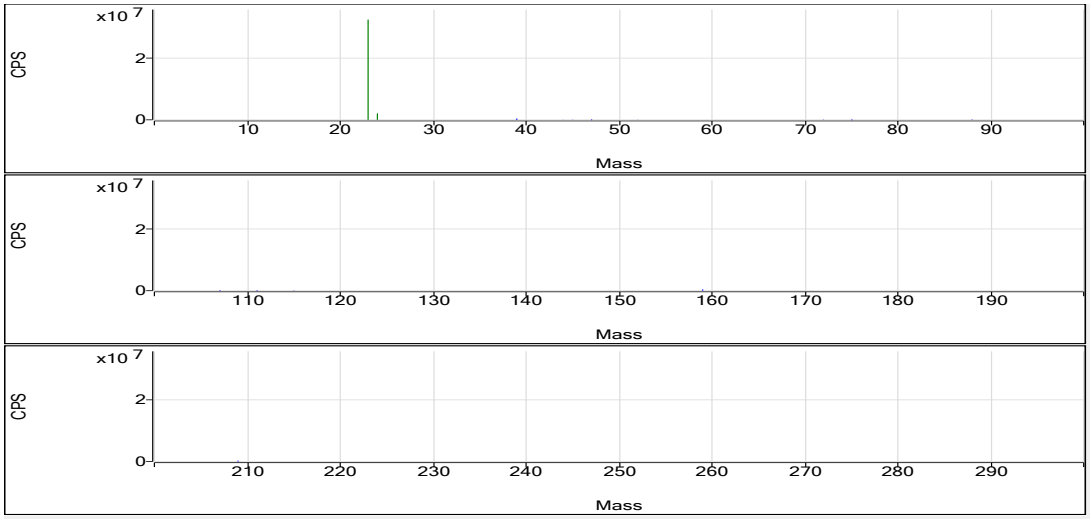


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.037	0	82.00	0.0008	4.685E-06
Be	9	1	No Gas	0.031	0	70.00	0.0008	4.685E-06
Be	9	1	No Gas	0.011	0	32.00	0.0008	4.685E-06
Se	78	2	H2	0.188	0.0001	14.67	0.0004	1.219E-05
Se	78	2	H2	0.071	0	6.67	0.0004	1.219E-05
Se	78	2	H2	0.093	0.0001	8.00	0.0004	1.219E-05
Na	23	3	He	179765.478	643.3751	32127719.52	0.0036	0.3452
Na	23	3	He	185768.346	664.8476	32653207.01	0.0036	0.3452
Na	23	3	He	180498.307	645.9964	32148362.02	0.0036	0.3452
Mg	24	3	He	23226.715	41.6797	2081326.69	0.0018	0.003497
Mg	24	3	He	23089.951	41.4343	2034996.84	0.0018	0.003497
Mg	24	3	He	23166.624	41.5719	2068847.00	0.0018	0.003497
Al	27	3	He	17.386	0.0108	540.03	0.0006	0.0006432
Al	27	3	He	13.17	0.0083	410.02	0.0006	0.0006432
Al	27	3	He	10.579	0.0068	340.01	0.0006	0.0006432
K	39	3	He	7060.749	8.6161	430254.68	0.0012	0.3951
K	39	3	He	7141.978	8.7107	427813.86	0.0012	0.3951
K	39	3	He	7045.694	8.5986	427911.79	0.0012	0.3951
Ca	44	3	He	9453.832	0.6413	32026.06	0.0001	0.002715
Ca	44	3	He	9754.804	0.6617	32497.17	0.0001	0.002715
Ca	44	3	He	9489.362	0.6437	32036.04	0.0001	0.002715
Ti	47	3	He	0.615	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	0.249	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	0.992	0.0006	30.00	0.0005	7.003E-05
V	51	3	He	1.32	0.0537	2682.27	0.0219	0.02486
V	51	3	He	1.244	0.052	2556.24	0.0219	0.02486
V	51	3	He	1.385	0.0551	2744.28	0.0219	0.02486
Cr	52	3	He	22.445	0.712	35554.25	0.0299	0.03997
Cr	52	3	He	22.114	0.7021	34481.90	0.0299	0.03997
Cr	52	3	He	22.15	0.7032	34992.87	0.0299	0.03997
Mn	55	3	He	2.884	0.0397	1980.20	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2.777	0.0383	1880.19	0.0128	0.002639
Mn	55	3	He	2.77	0.0382	1900.20	0.0128	0.002639
Fe	57	3	He	21.325	0.0138	690.04	0.0006	0.001429
Fe	57	3	He	14.714	0.01	490.03	0.0006	0.001429
Fe	57	3	He	20.369	0.0133	660.03	0.0006	0.001429
Co	59	3	He	0.101	0.0078	390.02	0.0563	0.002149
Co	59	3	He	0.07	0.0061	300.01	0.0563	0.002149
Co	59	3	He	0.083	0.0068	340.02	0.0563	0.002149
Ni	60	3	He	0.257	0.005	410.02	0.0086	0.002834
Ni	60	3	He	0.34	0.0058	470.02	0.0086	0.002834
Ni	60	3	He	0.118	0.0039	320.02	0.0086	0.002834
Cu	63	3	He	0.6	0.0202	1640.14	0.0257	0.004757
Cu	63	3	He	0.654	0.0215	1760.17	0.0257	0.004757
Cu	63	3	He	0.583	0.0197	1640.15	0.0257	0.004757
Zn	66	3	He	6.502	0.0227	1850.19	0.0029	0.003818
Zn	66	3	He	7.306	0.0251	2050.22	0.0029	0.003818
Zn	66	3	He	7.325	0.0251	2090.21	0.0029	0.003818
As	75	3	He	0.711	0.0023	184.00	0.002	0.0008061
As	75	3	He	0.55	0.0019	158.00	0.002	0.0008061
As	75	3	He	0.746	0.0023	194.00	0.002	0.0008061
Sr	88	3	He	153.244	1.3755	122517.13	0.009	0.0009645
Sr	88	3	He	151.319	1.3583	123738.85	0.009	0.0009645
Sr	88	3	He	152.751	1.3711	122549.13	0.009	0.0009645
Mo	98	3	He	0.658	0.0147	1310.10	0.0219	0.0002706
Mo	98	3	He	0.558	0.0125	1140.09	0.0219	0.0002706
Mo	98	3	He	0.534	0.012	1070.07	0.0219	0.0002706
Ag	107	3	He	0.037	0.0024	210.01	0.0465	0.0006206
Ag	107	3	He	0.036	0.0023	210.01	0.0465	0.0006206
Ag	107	3	He	0.02	0.0016	140.00	0.0465	0.0006206
Cd	111	3	He	0.017	0.0001	8.00	0.0053	0
Cd	111	3	He	0.016	0.0001	8.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Sn	120	3	He	0.172	0.0192	1710.16	0.0158	0.01648
Sn	120	3	He	0.201	0.0197	1790.19	0.0158	0.01648
Sn	120	3	He	-0.002	0.0164	1470.13	0.0158	0.01648
Sb	121	3	He	0.708	0.0108	960.07	0.0149	0.0002698
Sb	121	3	He	0.736	0.0112	1020.07	0.0149	0.0002698
Sb	121	3	He	0.856	0.013	1160.09	0.0149	0.0002698
Ba	137	3	He	5.403	0.0262	2330.28	0.0048	0.0002317
Ba	137	3	He	5.35	0.0259	2360.30	0.0048	0.0002317
Ba	137	3	He	5.244	0.0254	2270.26	0.0048	0.0002317
Tl	205	3	He	0.141	0.0036	1440.14	0.0247	0.0001339
Tl	205	3	He	0.155	0.004	1600.18	0.0247	0.0001339
Tl	205	3	He	0.142	0.0036	1470.14	0.0247	0.0001339
Pb	208	3	He	0.167	0.0065	1510.15	0.0327	0.00107
Pb	208	3	He	0.146	0.0058	1230.11	0.0327	0.00107
Pb	208	3	He	0.129	0.0053	1080.09	0.0327	0.00107
U	238	3	He	0.204	0.0101	3040.47	0.0493	7.55E-05
U	238	3	He	0.223	0.011	3370.57	0.0493	7.55E-05
U	238	3	He	0.212	0.0105	3190.52	0.0493	7.55E-05
Sc	45	1	No Gas			2467734.96		
Sc	45	1	No Gas			2477396.21		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2461730.74		
Ge	72	1	No Gas			1162877.25		
Ge	72	1	No Gas			1141708.97		
Ge	72	1	No Gas			1154502.33		
Sc	45	2	H2			194819.80		
Sc	45	2	H2			191636.81		
Sc	45	2	H2			192661.74		
Ge	72	2	H2			162060.97		
Ge	72	2	H2			159258.53		
Ge	72	2	H2			156836.57		
In	115	2	H2			399846.56		
In	115	2	H2			397714.92		
In	115	2	H2			398717.03		
Sc	45	3	He			49936.22		
Sc	45	3	He			49113.82		
Sc	45	3	He			49765.54		
Ge	72	3	He			81331.40		
Ge	72	3	He			81713.33		
Ge	72	3	He			83121.54		
In	115	3	He			89075.02		
In	115	3	He			91107.82		
In	115	3	He			89386.93		
Tb	159	3	He			397098.47		
Tb	159	3	He			402183.51		
Tb	159	3	He			404349.45		
Bi	209	3	He			299634.29		
Bi	209	3	He			305230.80		
Bi	209	3	He			303830.76		

Quantitation Report

Data File Name	166SMPL.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	8/10/2023 4:20:06 PM
Sample Name	410-138038-E-2-A DU
Sample Type	Sample
Comment	A12
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

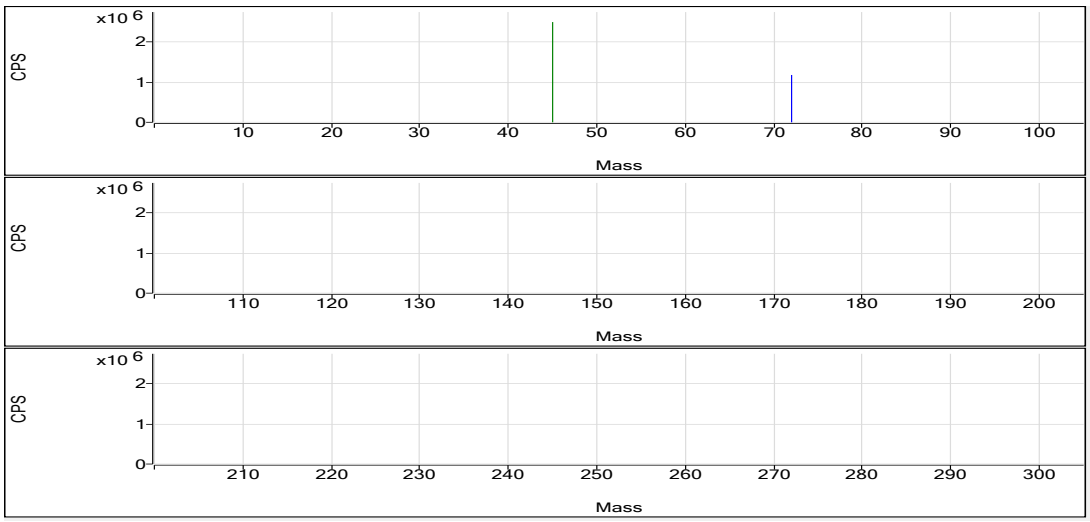
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.017	ppb	57.9	43.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.212	ppb	40.2	16.67	0.0001	Pulse	1.5000	3
Na	23	45	He	892020.876	ppb	1.2	161890867.59	3 191.1475	Analog	0.1000	3
Mg	24	45	He	110513.296	ppb	1.9	10059512.98	198.2999	Analog	0.1000	3
Al	27	45	He	101.680	ppb	38.5	3042.03	0.0601	Pulse	0.1000	3
K	39	45	He	36834.277	ppb	1.1	2195782.57	43.2822	Analog	0.1000	3
Ca	44	45	He	49027.384	ppb	1.3	168172.72	3.3146	Pulse	0.1000	3
Ti	47	45	He	1.831	ppb	31.9	53.33	0.0011	Pulse	0.1000	3
V	51	45	He	3.029	ppb	3.7	4620.10	0.0911	Pulse	0.5000	3
Cr	52	45	He	110.234	ppb	2.6	169455.44	3.3405	Pulse	0.1000	3
Mn	55	45	He	13.094	ppb	1.3	8659.50	0.1707	Pulse	0.1000	3
Fe	57	45	He	81.104	ppb	2.7	2463.64	0.0485	Pulse	0.1000	3
Co	59	45	He	0.124	ppb	22.0	463.36	0.0091	Pulse	0.1000	3
Ni	60	72	He	1.146	ppb	13.8	1070.08	0.0127	Pulse	0.1000	3
Cu	63	72	He	1.975	ppb	3.2	4687.57	0.0555	Pulse	0.1000	3
Zn	66	72	He	19.414	ppb	4.6	5101.08	0.0603	Pulse	0.1000	3
As	75	72	He	1.294	ppb	22.9	292.00	0.0035	Pulse	0.5000	3
Sr	88	115	He	786.533	ppb	0.7	621302.88	7.0560	Pulse	0.1000	3
Mo	98	115	He	2.281	ppb	6.4	4427.53	0.0503	Pulse	0.1000	3
Ag	107	115	He	0.150	ppb	15.7	670.04	0.0076	Pulse	0.1000	3
Cd	111	115	He	0.024	ppb	53.7	11.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.171	ppb	N/A	1213.43	0.0138	Pulse	0.1000	3
Sb	121	115	He	2.074	ppb	5.3	2737.02	0.0311	Pulse	0.1000	3
Ba	137	115	He	27.494	ppb	3.1	11638.69	0.1322	Pulse	0.1000	3
Tl	205	159	He	0.037	ppb	18.4	420.02	0.0011	Pulse	0.1000	3
Pb	208	159	He	0.580	ppb	3.8	7971.46	0.0201	Pulse	0.1000	3
U	238	209	He	0.406	ppb	3.0	5834.90	0.0201	Pulse	0.1000	3

ISTD Table:

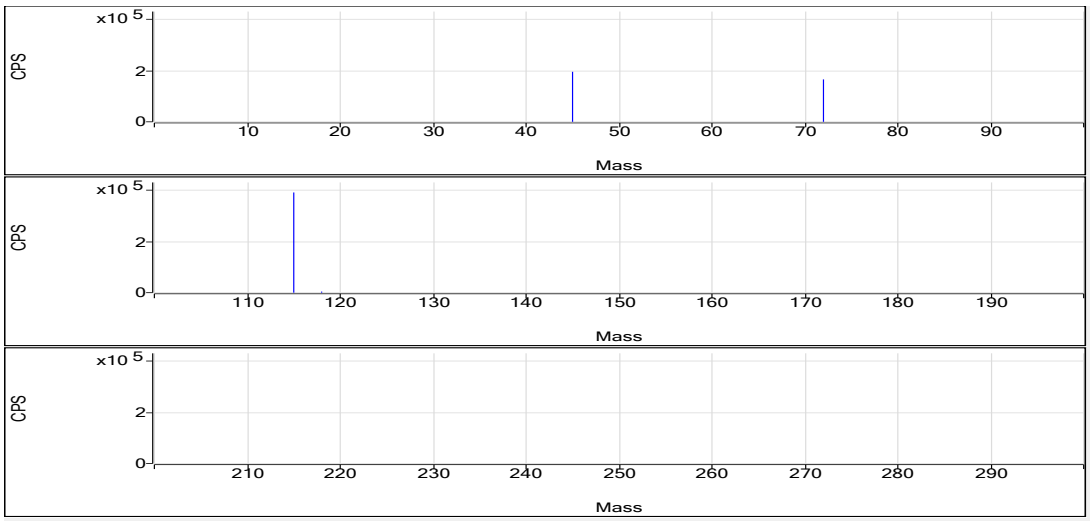
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2498681.32	1.1	104.2	Analog	0.1000	3
No Gas	Ge	72	1179551.13	0.5	102.3	Pulse	0.1000	3
H2	Sc	45	196022.77	1.4	104.8	Pulse	0.1000	3
H2	Ge	72	166119.34	2.0	101.5	Pulse	0.1000	3
H2	In	115	392633.89	0.5	100.9	Pulse	0.1000	3
He	Sc	45	50736.05	1.2	108.8	Pulse	0.1000	3
He	Ge	72	84549.88	1.6	104.1	Pulse	0.1000	3
He	In	115	88052.17	0.2	102.2	Pulse	0.1000	3
He	Tb	159	397382.27	0.6	99.7	Pulse	0.1000	3
He	Bi	209	291018.09	0.5	94.1	Pulse	0.1000	3

No Gas

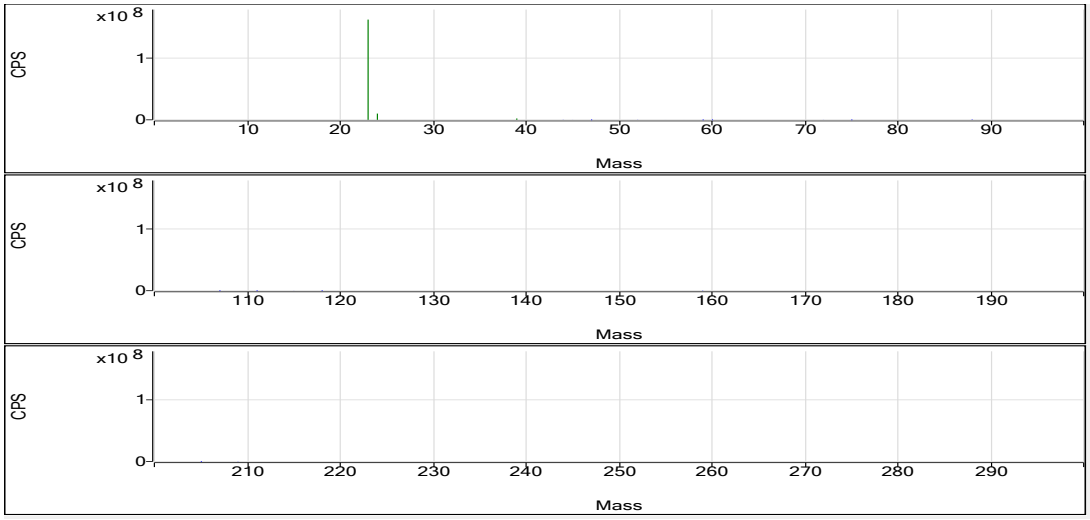


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.027	0	64.00	0.0008	4.685E-06
Be	9	1	No Gas	0.014	0	38.00	0.0008	4.685E-06
Be	9	1	No Gas	0.009	0	28.00	0.0008	4.685E-06
Se	78	2	H2	0.135	0.0001	11.33	0.0004	1.219E-05
Se	78	2	H2	0.197	0.0001	16.00	0.0004	1.219E-05
Se	78	2	H2	0.304	0.0001	22.67	0.0004	1.219E-05
Na	23	3	He	903518.039	3232.2735	161863947.59	0.0036	0.3452
Na	23	3	He	881662.558	3154.0953	161587457.59	0.0036	0.3452
Na	23	3	He	890882.031	3187.0738	162221197.58	0.0036	0.3452
Mg	24	3	He	112600.397	202.0449	10117887.35	0.0018	0.003497
Mg	24	3	He	108412.362	194.5302	9965975.48	0.0018	0.003497
Mg	24	3	He	110527.128	198.3247	10094676.10	0.0018	0.003497
Al	27	3	He	146.881	0.0866	4335.39	0.0006	0.0006432
Al	27	3	He	78.989	0.0469	2400.41	0.0006	0.0006432
Al	27	3	He	79.171	0.047	2390.30	0.0006	0.0006432
K	39	3	He	37266.065	43.7849	2192637.15	0.0012	0.3951
K	39	3	He	36465.398	42.8527	2195386.69	0.0012	0.3951
K	39	3	He	36771.368	43.2089	2199323.87	0.0012	0.3951
Ca	44	3	He	48713.732	3.2934	164926.03	0.0001	0.002715
Ca	44	3	He	48594.897	3.2854	168313.96	0.0001	0.002715
Ca	44	3	He	49773.521	3.365	171278.16	0.0001	0.002715
Ti	47	3	He	2.473	0.0014	70.00	0.0005	7.003E-05
Ti	47	3	He	1.687	0.001	50.00	0.0005	7.003E-05
Ti	47	3	He	1.333	0.0008	40.00	0.0005	7.003E-05
V	51	3	He	3.102	0.0927	4640.78	0.0219	0.02486
V	51	3	He	2.899	0.0882	4520.74	0.0219	0.02486
V	51	3	He	3.086	0.0923	4698.79	0.0219	0.02486
Cr	52	3	He	113.234	3.4303	171779.31	0.0299	0.03997
Cr	52	3	He	109.81	3.3278	170484.37	0.0299	0.03997
Cr	52	3	He	107.658	3.2633	166102.63	0.0299	0.03997
Mn	55	3	He	13.164	0.1716	8592.79	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	12.894	0.1681	8612.76	0.0128	0.002639
Mn	55	3	He	13.224	0.1724	8772.94	0.0128	0.002639
Fe	57	3	He	79.353	0.0475	2380.30	0.0006	0.001429
Fe	57	3	He	83.559	0.05	2560.32	0.0006	0.001429
Fe	57	3	He	80.399	0.0481	2450.31	0.0006	0.001429
Co	59	3	He	0.1	0.0078	390.02	0.0563	0.002149
Co	59	3	He	0.118	0.0088	450.02	0.0563	0.002149
Co	59	3	He	0.154	0.0108	550.03	0.0563	0.002149
Ni	60	3	He	1.2	0.0131	1100.07	0.0086	0.002834
Ni	60	3	He	1.27	0.0137	1150.10	0.0086	0.002834
Ni	60	3	He	0.968	0.0111	960.07	0.0086	0.002834
Cu	63	3	He	1.982	0.0556	4660.88	0.0257	0.004757
Cu	63	3	He	2.034	0.057	4770.95	0.0257	0.004757
Cu	63	3	He	1.909	0.0538	4630.88	0.0257	0.004757
Zn	66	3	He	18.825	0.0586	4910.99	0.0029	0.003818
Zn	66	3	He	20.432	0.0633	5301.13	0.0029	0.003818
Zn	66	3	He	18.985	0.0591	5091.11	0.0029	0.003818
As	75	3	He	1.145	0.0032	264.00	0.002	0.0008061
As	75	3	He	1.635	0.0042	348.01	0.002	0.0008061
As	75	3	He	1.102	0.0031	264.00	0.002	0.0008061
Sr	88	3	He	780.469	7.0016	615171.63	0.009	0.0009645
Sr	88	3	He	790.014	7.0872	623902.10	0.009	0.0009645
Sr	88	3	He	789.116	7.0792	624834.91	0.009	0.0009645
Mo	98	3	He	2.314	0.051	4480.88	0.0219	0.0002706
Mo	98	3	He	2.408	0.0531	4670.95	0.0219	0.0002706
Mo	98	3	He	2.122	0.0468	4130.76	0.0219	0.0002706
Ag	107	3	He	0.163	0.0082	720.05	0.0465	0.0006206
Ag	107	3	He	0.165	0.0083	730.05	0.0465	0.0006206
Ag	107	3	He	0.123	0.0063	560.03	0.0465	0.0006206
Cd	111	3	He	0.021	0.0001	10.00	0.0053	0
Cd	111	3	He	0.013	0.0001	6.00	0.0053	0
Cd	111	3	He	0.038	0.0002	18.00	0.0053	0
Sn	120	3	He	-0.193	0.0134	1180.09	0.0158	0.01648
Sn	120	3	He	-0.166	0.0139	1220.10	0.0158	0.01648
Sn	120	3	He	-0.154	0.014	1240.10	0.0158	0.01648
Sb	121	3	He	1.959	0.0294	2580.32	0.0149	0.0002698
Sb	121	3	He	2.085	0.0312	2750.37	0.0149	0.0002698
Sb	121	3	He	2.179	0.0326	2880.38	0.0149	0.0002698
Ba	137	3	He	28.471	0.1369	12025.71	0.0048	0.0002317
Ba	137	3	He	27.089	0.1302	11465.29	0.0048	0.0002317
Ba	137	3	He	26.923	0.1294	11425.08	0.0048	0.0002317
Tl	205	3	He	0.044	0.0012	490.03	0.0247	0.0001339
Tl	205	3	He	0.037	0.0011	420.02	0.0247	0.0001339
Tl	205	3	He	0.03	0.0009	350.02	0.0247	0.0001339
Pb	208	3	He	0.595	0.0206	4260.85	0.0327	0.00107
Pb	208	3	He	0.591	0.0204	4630.95	0.0327	0.00107
Pb	208	3	He	0.555	0.0192	3830.73	0.0327	0.00107
U	238	3	He	0.392	0.0194	5671.44	0.0493	7.55E-05
U	238	3	He	0.408	0.0202	5841.61	0.0493	7.55E-05
U	238	3	He	0.416	0.0206	5991.64	0.0493	7.55E-05
Sc	45	1	No Gas			2514225.90		
Sc	45	1	No Gas			2514770.43		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2467047.62		
Ge	72	1	No Gas			1175857.79		
Ge	72	1	No Gas			1187004.51		
Ge	72	1	No Gas			1175791.08		
Sc	45	2	H2			195530.54		
Sc	45	2	H2			198882.34		
Sc	45	2	H2			193655.43		
Ge	72	2	H2			165204.88		
Ge	72	2	H2			169798.81		
Ge	72	2	H2			163354.32		
In	115	2	H2			392689.64		
In	115	2	H2			394673.43		
In	115	2	H2			390538.59		
Sc	45	3	He			50077.43		
Sc	45	3	He			51231.00		
Sc	45	3	He			50899.73		
Ge	72	3	He			83765.17		
Ge	72	3	He			83734.60		
Ge	72	3	He			86149.88		
In	115	3	He			87866.99		
In	115	3	He			88038.49		
In	115	3	He			88270.53		
Tb	159	3	He			399594.33		
Tb	159	3	He			397647.06		
Tb	159	3	He			394905.42		
Bi	209	3	He			292382.87		
Bi	209	3	He			289362.12		
Bi	209	3	He			291309.27		

Quantitation Report

Data File Name	167SMPL.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	8/10/2023 4:22:13 PM
Sample Name	410-138038-D-2-A MS
Sample Type	Sample
Comment	A12
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

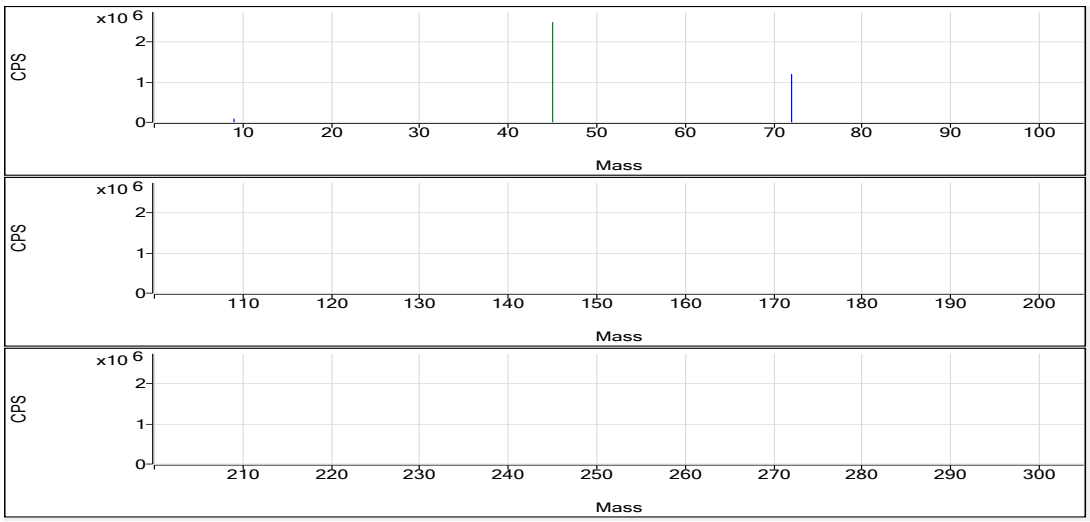
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	47.635	ppb	1.5	90512.09	0.0363	Pulse	0.5000	3
Se	78	72	H2	104.321	ppb	1.1	7416.15	0.0435	Pulse	1.5000	3
Na	23	45	He	890682.855	ppb	0.4	162019207.59	3 186.3614	Analog	0.1000	3
Mg	24	45	He	113705.868	ppb	1.7	10372480.47	204.0284	Analog	0.1000	3
Al	27	45	He	4964.029	ppb	2.3	147668.38	2.9048	Pulse	0.1000	3
K	39	45	He	41431.492	ppb	1.7	2472544.60	48.6349	Analog	0.1000	3
Ca	44	45	He	53850.209	ppb	1.2	185083.01	3.6404	Pulse	0.1000	3
Ti	47	45	He	509.547	ppb	1.2	13913.67	0.2737	Pulse	0.1000	3
V	51	45	He	508.392	ppb	1.1	566262.75	11.1379	Pulse	0.5000	3
Cr	52	45	He	574.543	ppb	1.8	876563.37	17.2422	Pulse	0.1000	3
Mn	55	45	He	497.805	ppb	1.5	324938.50	6.3914	Pulse	0.1000	3
Fe	57	45	He	4870.331	ppb	0.8	143940.91	2.8310	Pulse	0.1000	3
Co	59	45	He	461.968	ppb	1.2	1322000.50	26.0028	Pulse	0.1000	3
Ni	60	72	He	487.772	ppb	0.9	364974.91	4.1895	Pulse	0.1000	3
Cu	63	72	He	469.408	ppb	0.4	1050235.14	12.0550	Pulse	0.1000	3
Zn	66	72	He	516.081	ppb	0.9	131245.63	1.5064	Pulse	0.1000	3
As	75	72	He	530.740	ppb	0.5	94805.09	1.0882	Pulse	0.5000	3
Sr	88	115	He	834.379	ppb	0.6	664963.53	7.4852	Pulse	0.1000	3
Mo	98	115	He	53.789	ppb	1.6	104796.10	1.1797	Pulse	0.1000	3
Ag	107	115	He	47.068	ppb	0.1	194436.96	2.1887	Pulse	0.1000	3
Cd	111	115	He	49.795	ppb	1.3	23652.68	0.2662	Pulse	0.5000	3
Sn	120	115	He	102.399	ppb	1.3	145177.72	1.6342	Pulse	0.1000	3
Sb	121	115	He	107.084	ppb	0.5	141325.43	1.5908	Pulse	0.1000	3
Ba	137	115	He	546.100	ppb	0.7	232852.03	2.6211	Pulse	0.1000	3
Tl	205	159	He	97.864	ppb	0.1	970848.09	2.4200	Pulse	0.1000	3
Pb	208	159	He	49.406	ppb	0.2	649158.85	1.6181	Pulse	0.1000	3
U	238	209	He	52.241	ppb	0.5	755946.81	2.5735	Pulse	0.1000	3

ISTD Table:

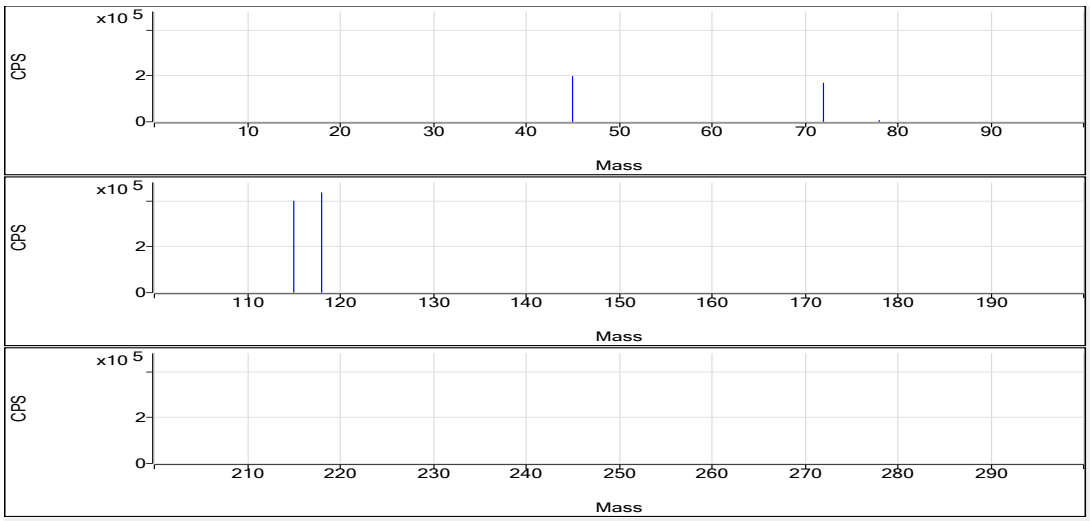
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2491120.90	1.9	103.8	Analog	0.1000	3
No Gas	Ge	72	1200978.60	0.6	104.1	Pulse	0.1000	3
H2	Sc	45	199371.07	0.1	106.6	Pulse	0.1000	3
H2	Ge	72	170405.93	0.5	104.1	Pulse	0.1000	3
H2	In	115	401447.13	0.5	103.2	Pulse	0.1000	3
He	Sc	45	50846.32	1.4	109.0	Pulse	0.1000	3
He	Ge	72	87121.38	0.8	107.3	Pulse	0.1000	3
He	In	115	88838.31	0.6	103.1	Pulse	0.1000	3
He	Tb	159	401179.91	0.7	100.6	Pulse	0.1000	3
He	Bi	209	293756.19	0.9	95.0	Pulse	0.1000	3

No Gas

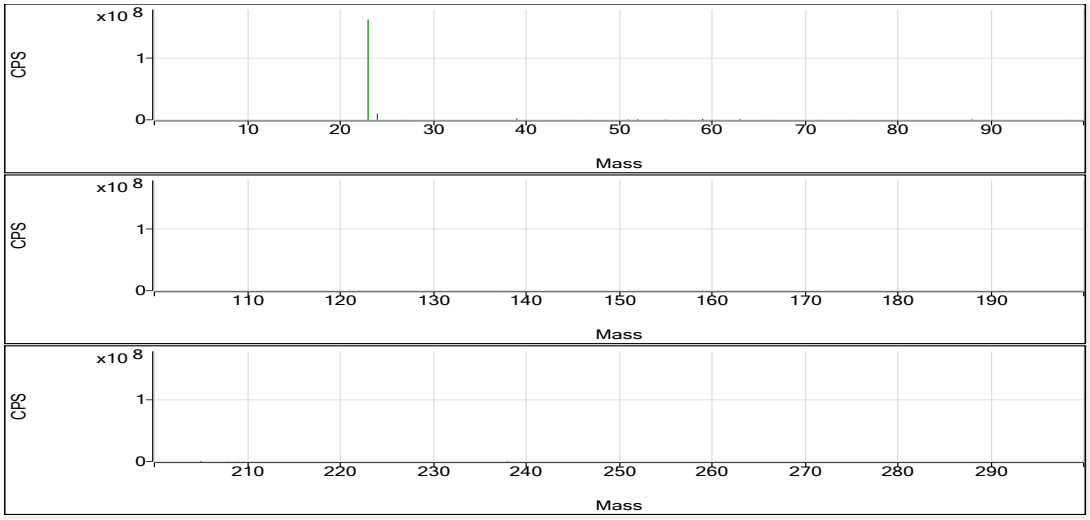


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	47.918	0.0366	91251.71	0.0008	4.685E-06
Be	9	1	No Gas	46.818	0.0357	90602.13	0.0008	4.685E-06
Be	9	1	No Gas	48.17	0.0367	89682.43	0.0008	4.685E-06
Se	78	2	H2	103.078	0.043	7329.22	0.0004	1.219E-05
Se	78	2	H2	104.489	0.0436	7461.28	0.0004	1.219E-05
Se	78	2	H2	105.397	0.044	7457.95	0.0004	1.219E-05
Na	23	3	He	892988.452	3194.6086	162059427.59	0.0036	0.3452
Na	23	3	He	892536.639	3192.9924	164735037.55	0.0036	0.3452
Na	23	3	He	886523.474	3171.4831	159263157.63	0.0036	0.3452
Mg	24	3	He	114175.293	204.8707	10392895.47	0.0018	0.003497
Mg	24	3	He	111567.948	200.1923	10328457.97	0.0018	0.003497
Mg	24	3	He	115374.363	207.0222	10396087.97	0.0018	0.003497
Al	27	3	He	4936.01	2.8884	146524.80	0.0006	0.0006432
Al	27	3	He	4867.684	2.8484	146957.01	0.0006	0.0006432
Al	27	3	He	5088.391	2.9775	149523.33	0.0006	0.0006432
K	39	3	He	41281.723	48.4605	2458353.40	0.0012	0.3951
K	39	3	He	40814.728	47.9167	2472153.09	0.0012	0.3951
K	39	3	He	42198.025	49.5273	2487127.31	0.0012	0.3951
Ca	44	3	He	54326.584	3.6726	186306.42	0.0001	0.002715
Ca	44	3	He	53094.857	3.5894	185185.41	0.0001	0.002715
Ca	44	3	He	54129.186	3.6592	183757.20	0.0001	0.002715
Ti	47	3	He	508.221	0.273	13846.93	0.0005	7.003E-05
Ti	47	3	He	504.047	0.2707	13967.05	0.0005	7.003E-05
Ti	47	3	He	516.372	0.2773	13927.03	0.0005	7.003E-05
V	51	3	He	510.621	11.1866	567486.06	0.0219	0.02486
V	51	3	He	501.808	10.994	567208.56	0.0219	0.02486
V	51	3	He	512.746	11.2331	564093.63	0.0219	0.02486
Cr	52	3	He	573.929	17.2238	873747.64	0.0299	0.03997
Cr	52	3	He	564.658	16.9463	874302.57	0.0299	0.03997
Cr	52	3	He	585.041	17.5565	881639.91	0.0299	0.03997
Mn	55	3	He	495.493	6.3617	322724.66	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	491.736	6.3135	325731.38	0.0128	0.002639
Mn	55	3	He	506.185	6.499	326359.47	0.0128	0.002639
Fe	57	3	He	4842.597	2.8149	142798.85	0.0006	0.001429
Fe	57	3	He	4852.88	2.8209	145538.17	0.0006	0.001429
Fe	57	3	He	4915.517	2.8573	143485.70	0.0006	0.001429
Co	59	3	He	462.027	26.0061	1319264.67	0.0563	0.002149
Co	59	3	He	456.291	25.6833	1325067.95	0.0563	0.002149
Co	59	3	He	467.587	26.319	1321668.89	0.0563	0.002149
Ni	60	3	He	492.607	4.231	365343.55	0.0086	0.002834
Ni	60	3	He	485.766	4.1722	365394.96	0.0086	0.002834
Ni	60	3	He	484.943	4.1652	364186.21	0.0086	0.002834
Cu	63	3	He	470.685	12.0878	1043780.22	0.0257	0.004757
Cu	63	3	He	470.277	12.0773	1057701.62	0.0257	0.004757
Cu	63	3	He	467.262	11.9999	1049223.58	0.0257	0.004757
Zn	66	3	He	515.052	1.5035	129823.27	0.0029	0.003818
Zn	66	3	He	521.028	1.5209	133192.73	0.0029	0.003818
Zn	66	3	He	512.164	1.495	130720.88	0.0029	0.003818
As	75	3	He	533.707	1.0943	94493.09	0.002	0.0008061
As	75	3	He	528.99	1.0846	94990.13	0.002	0.0008061
As	75	3	He	529.524	1.0857	94932.07	0.002	0.0008061
Sr	88	3	He	829.45	7.441	661722.49	0.009	0.0009645
Sr	88	3	He	834.903	7.4899	669007.41	0.009	0.0009645
Sr	88	3	He	838.783	7.5247	664160.69	0.009	0.0009645
Mo	98	3	He	52.85	1.1591	103076.63	0.0219	0.0002706
Mo	98	3	He	53.945	1.1831	105675.95	0.0219	0.0002706
Mo	98	3	He	54.571	1.1968	105635.71	0.0219	0.0002706
Ag	107	3	He	47.017	2.1863	194428.04	0.0465	0.0006206
Ag	107	3	He	47.06	2.1883	195460.35	0.0465	0.0006206
Ag	107	3	He	47.127	2.1914	193422.50	0.0465	0.0006206
Cd	111	3	He	49.059	0.2623	23327.49	0.0053	0
Cd	111	3	He	50.01	0.2674	23884.38	0.0053	0
Cd	111	3	He	50.316	0.269	23746.18	0.0053	0
Sn	120	3	He	101.316	1.6171	143810.43	0.0158	0.01648
Sn	120	3	He	101.955	1.6272	145345.67	0.0158	0.01648
Sn	120	3	He	103.928	1.6584	146377.05	0.0158	0.01648
Sb	121	3	He	106.461	1.5816	140649.11	0.0149	0.0002698
Sb	121	3	He	107.256	1.5934	142324.07	0.0149	0.0002698
Sb	121	3	He	107.534	1.5975	141003.12	0.0149	0.0002698
Ba	137	3	He	544.309	2.6126	232332.91	0.0048	0.0002317
Ba	137	3	He	543.394	2.6082	232964.70	0.0048	0.0002317
Ba	137	3	He	550.597	2.6427	233258.49	0.0048	0.0002317
Tl	205	3	He	97.77	2.4176	966084.13	0.0247	0.0001339
Tl	205	3	He	98.021	2.4238	980654.36	0.0247	0.0001339
Tl	205	3	He	97.802	2.4184	965805.77	0.0247	0.0001339
Pb	208	3	He	49.322	1.6154	343816.95	0.0327	0.00107
Pb	208	3	He	49.366	1.6168	348786.52	0.0327	0.00107
Pb	208	3	He	49.531	1.6222	344875.78	0.0327	0.00107
U	238	3	He	52.335	2.5781	753213.82	0.0493	7.55E-05
U	238	3	He	51.936	2.5584	759759.60	0.0493	7.55E-05
U	238	3	He	52.453	2.5839	754867.02	0.0493	7.55E-05
Sc	45	1	No Gas			2496226.06		
Sc	45	1	No Gas			2536686.68		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2440449.96		
Ge	72	1	No Gas			1204578.81		
Ge	72	1	No Gas			1205542.72		
Ge	72	1	No Gas			1192814.28		
Sc	45	2	H2			199128.32		
Sc	45	2	H2			199583.67		
Sc	45	2	H2			199401.21		
Ge	72	2	H2			170436.83		
Ge	72	2	H2			171165.27		
Ge	72	2	H2			169615.68		
In	115	2	H2			401773.67		
In	115	2	H2			403156.20		
In	115	2	H2			399411.52		
Sc	45	3	He			50729.04		
Sc	45	3	He			51592.68		
Sc	45	3	He			50217.25		
Ge	72	3	He			86350.20		
Ge	72	3	He			87577.79		
Ge	72	3	He			87436.14		
In	115	3	He			89698.42		
In	115	3	He			90112.47		
In	115	3	He			89024.79		
Tb	159	3	He			399599.99		
Tb	159	3	He			404587.30		
Tb	159	3	He			399352.45		
Bi	209	3	He			292160.43		
Bi	209	3	He			296965.11		
Bi	209	3	He			292143.02		

Quantitation Report

Data File Name	168SMPL.d
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Acq Time	8/10/2023 4:24:19 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

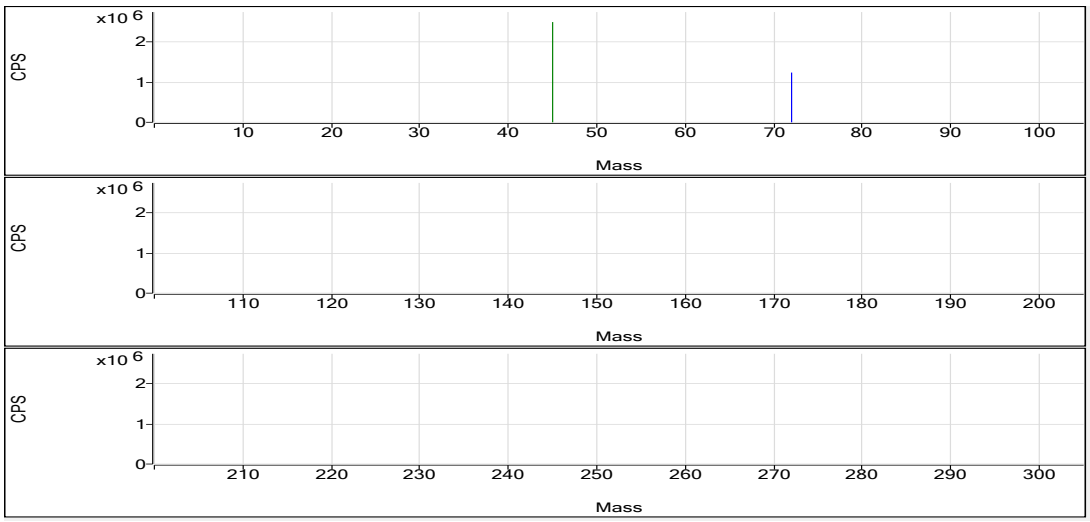
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.021	ppb	14.0	52.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.080	ppb	6.8	7.78	0.0000	Pulse	1.5000	3
Na	23	45	He	297.006	ppb	5.1	70036.86	1.4076	Pulse	0.1000	3
Mg	24	45	He	16.270	ppb	10.7	1626.82	0.0327	Pulse	0.1000	3
Al	27	45	He	2.337	ppb	15.1	100.00	0.0020	Pulse	0.1000	3
K	39	45	He	12.932	ppb	81.8	20404.81	0.4101	Pulse	0.1000	3
Ca	44	45	He	6.444	ppb	150.1	156.67	0.0032	Pulse	0.1000	3
Ti	47	45	He	0.367	ppb	234.8	13.33	0.0003	Pulse	0.1000	3
V	51	45	He	1.157	ppb	5.8	2495.57	0.0502	Pulse	0.5000	3
Cr	52	45	He	0.032	ppb	487.8	2036.89	0.0409	Pulse	0.1000	3
Mn	55	45	He	0.150	ppb	68.4	226.68	0.0046	Pulse	0.1000	3
Fe	57	45	He	3.537	ppb	29.7	173.34	0.0035	Pulse	0.1000	3
Co	59	45	He	0.061	ppb	14.2	276.68	0.0056	Pulse	0.1000	3
Ni	60	72	He	-0.040	ppb	N/A	213.34	0.0025	Pulse	0.1000	3
Cu	63	72	He	0.103	ppb	55.2	633.37	0.0074	Pulse	0.1000	3
Zn	66	72	He	3.861	ppb	9.7	1290.11	0.0151	Pulse	0.1000	3
As	75	72	He	0.354	ppb	35.3	131.33	0.0015	Pulse	0.5000	3
Sr	88	115	He	0.172	ppb	16.1	230.01	0.0025	Pulse	0.1000	3
Mo	98	115	He	0.155	ppb	18.9	336.69	0.0037	Pulse	0.1000	3
Ag	107	115	He	0.011	ppb	55.0	103.34	0.0011	Pulse	0.1000	3
Cd	111	115	He	0.011	ppb	44.5	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.048	ppb	251.1	1583.48	0.0172	Pulse	0.1000	3
Sb	121	115	He	0.077	ppb	10.2	130.00	0.0014	Pulse	0.1000	3
Ba	137	115	He	0.065	ppb	60.4	50.00	0.0005	Pulse	0.1000	3
Tl	205	159	He	0.148	ppb	9.4	1553.48	0.0038	Pulse	0.1000	3
Pb	208	159	He	0.022	ppb	9.8	730.04	0.0018	Pulse	0.1000	3
U	238	209	He	0.127	ppb	13.1	1990.23	0.0064	Pulse	0.1000	3

ISTD Table:

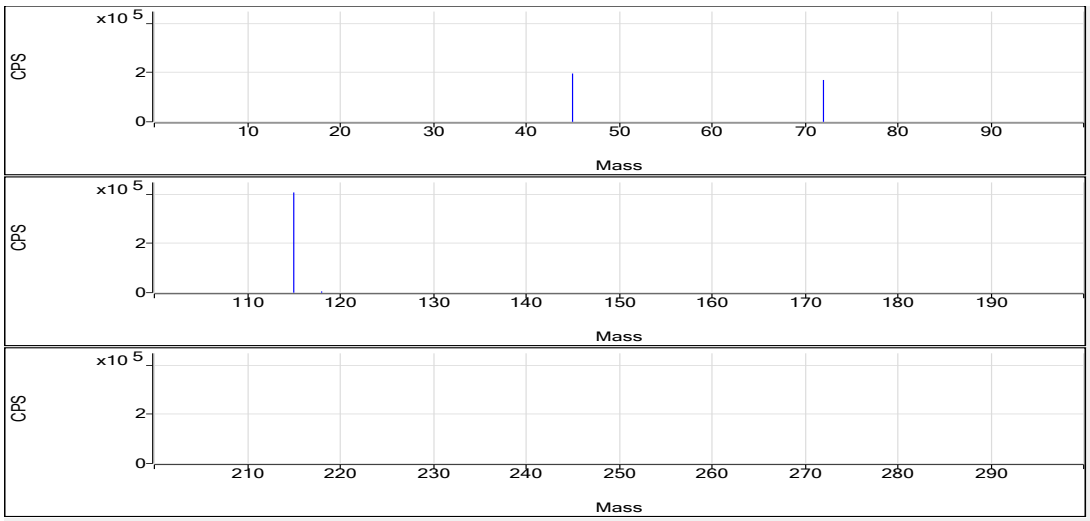
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2500380.22	2.0	104.2	Analog	0.1000	3
No Gas	Ge	72	1240619.67	0.9	107.6	Pulse	0.1000	3
H2	Sc	45	196475.36	0.8	105.1	Pulse	0.1000	3
H2	Ge	72	170219.64	0.9	104.0	Pulse	0.1000	3
H2	In	115	407738.75	0.3	104.8	Pulse	0.1000	3
He	Sc	45	49752.45	0.4	106.7	Pulse	0.1000	3
He	Ge	72	85632.53	1.1	105.5	Pulse	0.1000	3
He	In	115	91893.22	1.2	106.6	Pulse	0.1000	3
He	Tb	159	409037.13	1.1	102.6	Pulse	0.1000	3
He	Bi	209	313012.96	0.6	101.2	Pulse	0.1000	3

No Gas

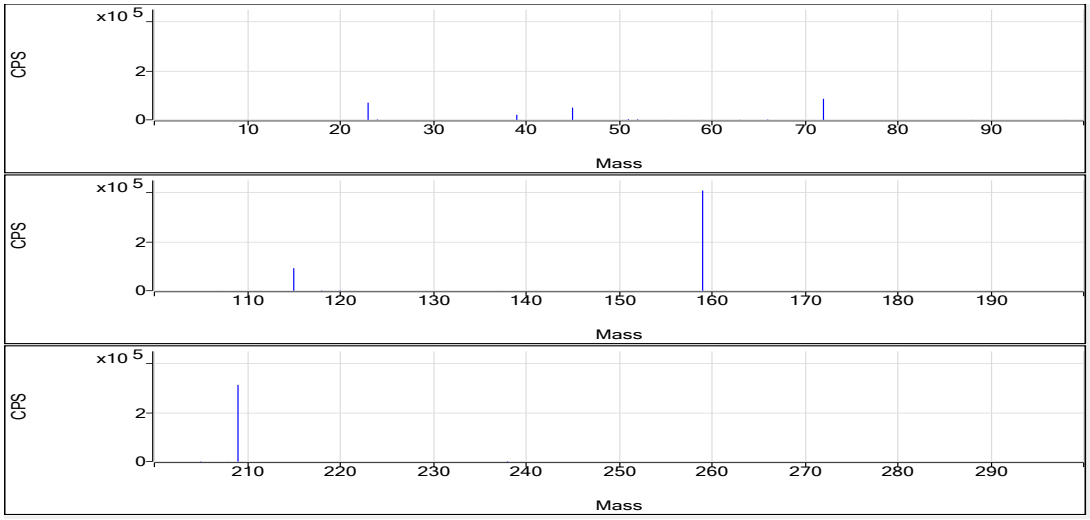


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.021	0	50.00	0.0008	4.685E-06
Be	9	1	No Gas	0.019	0	48.00	0.0008	4.685E-06
Be	9	1	No Gas	0.025	0	60.00	0.0008	4.685E-06
Se	78	2	H2	0.074	0	7.33	0.0004	1.219E-05
Se	78	2	H2	0.084	0	8.00	0.0004	1.219E-05
Se	78	2	H2	0.082	0	8.00	0.0004	1.219E-05
Na	23	3	He	312.083	1.4615	72980.98	0.0036	0.3452
Na	23	3	He	296.886	1.4071	70056.17	0.0036	0.3452
Na	23	3	He	282.048	1.3541	67073.42	0.0036	0.3452
Mg	24	3	He	18.142	0.036	1800.17	0.0018	0.003497
Mg	24	3	He	15.963	0.0321	1600.14	0.0018	0.003497
Mg	24	3	He	14.704	0.0299	1480.14	0.0018	0.003497
Al	27	3	He	2.323	0.002	100.00	0.0006	0.0006432
Al	27	3	He	1.99	0.0018	90.00	0.0006	0.0006432
Al	27	3	He	2.696	0.0022	110.00	0.0006	0.0006432
K	39	3	He	6.302	0.4024	20094.39	0.0012	0.3951
K	39	3	He	25.131	0.4243	21125.71	0.0012	0.3951
K	39	3	He	7.363	0.4036	19994.32	0.0012	0.3951
Ca	44	3	He	-4.617	0.0024	120.00	0.0001	0.002715
Ca	44	3	He	13.333	0.0036	180.01	0.0001	0.002715
Ca	44	3	He	10.616	0.0034	170.01	0.0001	0.002715
Ti	47	3	He	1.361	0.0008	40.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	1.201	0.0511	2552.25	0.0219	0.02486
V	51	3	He	1.191	0.0509	2534.24	0.0219	0.02486
V	51	3	He	1.079	0.0485	2400.21	0.0219	0.02486
Cr	52	3	He	-0.098	0.0371	1850.20	0.0299	0.03997
Cr	52	3	He	0.208	0.0462	2300.26	0.0299	0.03997
Cr	52	3	He	-0.013	0.0396	1960.20	0.0299	0.03997
Mn	55	3	He	0.044	0.0032	160.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.248	0.0058	290.01	0.0128	0.002639
Mn	55	3	He	0.156	0.0046	230.01	0.0128	0.002639
Fe	57	3	He	4.435	0.004	200.01	0.0006	0.001429
Fe	57	3	He	2.381	0.0028	140.01	0.0006	0.001429
Fe	57	3	He	3.796	0.0036	180.01	0.0006	0.001429
Co	59	3	He	0.069	0.006	300.01	0.0563	0.002149
Co	59	3	He	0.062	0.0056	280.01	0.0563	0.002149
Co	59	3	He	0.051	0.005	250.01	0.0563	0.002149
Ni	60	3	He	-0.11	0.0019	160.01	0.0086	0.002834
Ni	60	3	He	0.078	0.0035	300.01	0.0086	0.002834
Ni	60	3	He	-0.088	0.0021	180.01	0.0086	0.002834
Cu	63	3	He	0.169	0.0091	770.05	0.0257	0.004757
Cu	63	3	He	0.074	0.0067	570.03	0.0257	0.004757
Cu	63	3	He	0.067	0.0065	560.03	0.0257	0.004757
Zn	66	3	He	3.433	0.0138	1170.09	0.0029	0.003818
Zn	66	3	He	4.028	0.0155	1330.12	0.0029	0.003818
Zn	66	3	He	4.121	0.0158	1370.11	0.0029	0.003818
As	75	3	He	0.263	0.0013	114.00	0.002	0.0008061
As	75	3	He	0.302	0.0014	122.00	0.002	0.0008061
As	75	3	He	0.497	0.0018	158.00	0.002	0.0008061
Sr	88	3	He	0.144	0.0023	210.01	0.009	0.0009645
Sr	88	3	He	0.171	0.0025	230.01	0.009	0.0009645
Sr	88	3	He	0.2	0.0028	250.01	0.009	0.0009645
Mo	98	3	He	0.125	0.003	280.02	0.0219	0.0002706
Mo	98	3	He	0.156	0.0037	340.02	0.0219	0.0002706
Mo	98	3	He	0.184	0.0043	390.02	0.0219	0.0002706
Ag	107	3	He	0.005	0.0009	80.00	0.0465	0.0006206
Ag	107	3	He	0.017	0.0014	130.01	0.0465	0.0006206
Ag	107	3	He	0.01	0.0011	100.00	0.0465	0.0006206
Cd	111	3	He	0.008	0	4.00	0.0053	0
Cd	111	3	He	0.008	0	4.00	0.0053	0
Cd	111	3	He	0.016	0.0001	8.00	0.0053	0
Sn	120	3	He	0.047	0.0172	1600.14	0.0158	0.01648
Sn	120	3	He	-0.072	0.0153	1410.13	0.0158	0.01648
Sn	120	3	He	0.171	0.0192	1740.18	0.0158	0.01648
Sb	121	3	He	0.069	0.0013	120.00	0.0149	0.0002698
Sb	121	3	He	0.084	0.0015	140.01	0.0149	0.0002698
Sb	121	3	He	0.078	0.0014	130.00	0.0149	0.0002698
Ba	137	3	He	0.086	0.0006	60.00	0.0048	0.0002317
Ba	137	3	He	0.02	0.0003	30.00	0.0048	0.0002317
Ba	137	3	He	0.089	0.0007	60.00	0.0048	0.0002317
Tl	205	3	He	0.156	0.004	1620.16	0.0247	0.0001339
Tl	205	3	He	0.132	0.0034	1410.13	0.0247	0.0001339
Tl	205	3	He	0.157	0.004	1630.16	0.0247	0.0001339
Pb	208	3	He	0.022	0.0018	430.02	0.0327	0.00107
Pb	208	3	He	0.024	0.0019	360.02	0.0327	0.00107
Pb	208	3	He	0.02	0.0017	310.02	0.0327	0.00107
U	238	3	He	0.11	0.0055	1700.18	0.0493	7.55E-05
U	238	3	He	0.13	0.0065	2040.25	0.0493	7.55E-05
U	238	3	He	0.142	0.0071	2230.27	0.0493	7.55E-05
Sc	45	1	No Gas			2446739.65		
Sc	45	1	No Gas			2510192.78		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2544208.24		
Ge	72	1	No Gas			1227385.37		
Ge	72	1	No Gas			1249041.86		
Ge	72	1	No Gas			1245431.78		
Sc	45	2	H2			197280.47		
Sc	45	2	H2			194668.18		
Sc	45	2	H2			197477.44		
Ge	72	2	H2			170070.84		
Ge	72	2	H2			168704.39		
Ge	72	2	H2			171883.69		
In	115	2	H2			407946.95		
In	115	2	H2			406300.27		
In	115	2	H2			408969.02		
Sc	45	3	He			49935.81		
Sc	45	3	He			49786.41		
Sc	45	3	He			49535.14		
Ge	72	3	He			84700.12		
Ge	72	3	He			85565.69		
Ge	72	3	He			86631.78		
In	115	3	He			92980.12		
In	115	3	He			91963.43		
In	115	3	He			90765.84		
Tb	159	3	He			405653.12		
Tb	159	3	He			414321.09		
Tb	159	3	He			407137.18		
Bi	209	3	He			310759.08		
Bi	209	3	He			313904.25		
Bi	209	3	He			314375.56		

Quantitation Report

Data File Name	169_CCV.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	8/10/2023 4:26:22 PM
Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

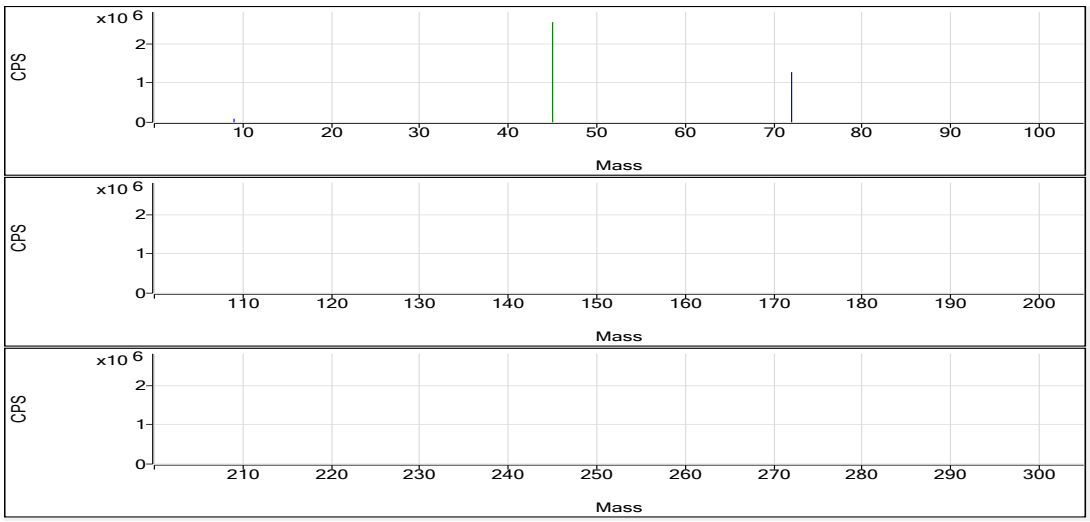
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	47.070	ppb	0.4	91664.32	0.0359	Pulse	0.5000	3
Se	78	72	H2	51.988	ppb	1.2	3759.16	0.0217	Pulse	1.5000	3
Na	23	45	He	5025.944	ppb	1.1	914228.14	18.3232	Pulse	0.1000	3
Mg	24	45	He	5064.140	ppb	1.2	453547.17	9.0902	Pulse	0.1000	3
Al	27	45	He	5039.906	ppb	1.4	147145.20	2.9492	Pulse	0.1000	3
K	39	45	He	5186.417	ppb	0.6	321012.98	6.4338	Pulse	0.1000	3
Ca	44	45	He	5182.653	ppb	1.2	17604.40	0.3528	Pulse	0.1000	3
Ti	47	45	He	5124.333	ppb	0.7	137289.93	2.7516	Pulse	0.1000	3
V	51	45	He	515.935	ppb	0.9	563950.94	11.3028	Pulse	0.5000	3
Cr	52	45	He	485.493	ppb	1.7	727245.33	14.5760	Pulse	0.1000	3
Mn	55	45	He	513.723	ppb	1.6	329088.14	6.5957	Pulse	0.1000	3
Fe	57	45	He	5106.899	ppb	2.0	148106.57	2.9685	Pulse	0.1000	3
Co	59	45	He	498.778	ppb	2.8	1400682.74	28.0745	Mix	0.1000	3
Ni	60	72	He	513.146	ppb	2.2	387261.39	4.4072	Pulse	0.1000	3
Cu	63	72	He	488.586	ppb	1.7	1102536.39	12.5473	Pulse	0.1000	3
Zn	66	72	He	516.872	ppb	1.9	132571.88	1.5088	Pulse	0.1000	3
As	75	72	He	525.049	ppb	1.8	94597.77	1.0766	Pulse	0.5000	3
Sr	88	115	He	50.563	ppb	2.0	41682.30	0.4545	Pulse	0.1000	3
Mo	98	115	He	49.846	ppb	1.6	100256.43	1.0932	Pulse	0.1000	3
Ag	107	115	He	50.046	ppb	0.9	213400.16	2.3271	Pulse	0.1000	3
Cd	111	115	He	50.284	ppb	2.4	24653.73	0.2689	Pulse	0.5000	3
Sn	120	115	He	50.436	ppb	1.8	74577.85	0.8133	Pulse	0.1000	3
Sb	121	115	He	51.458	ppb	1.1	70114.61	0.7646	Pulse	0.1000	3
Ba	137	115	He	517.559	ppb	1.0	227800.73	2.4842	Pulse	0.1000	3
Tl	205	159	He	51.357	ppb	0.9	519485.37	1.2700	Pulse	0.1000	3
Pb	208	159	He	51.534	ppb	0.9	690358.55	1.6878	Pulse	0.1000	3
U	238	209	He	50.372	ppb	0.6	783931.21	2.4814	Pulse	0.1000	3

ISTD Table:

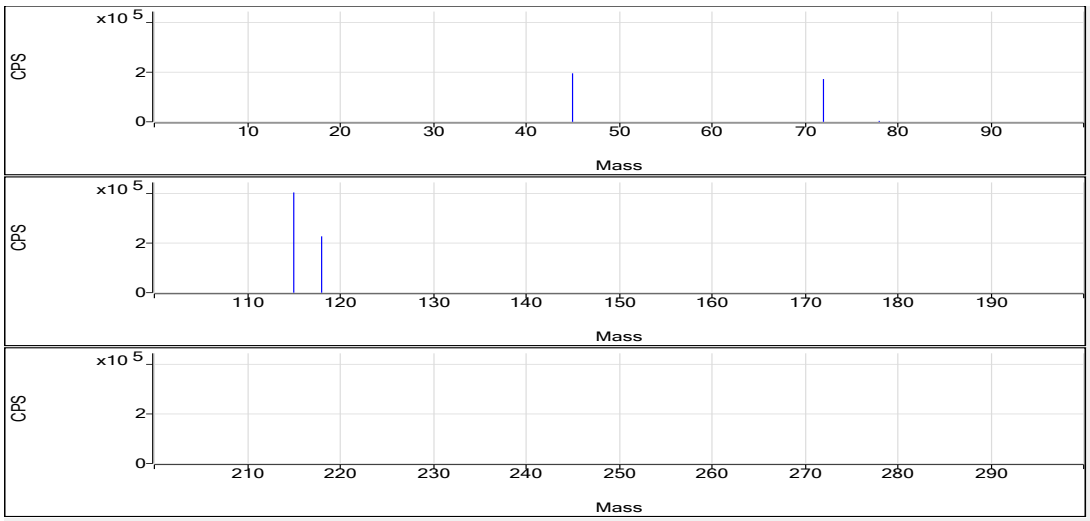
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2552680.74	0.4	106.4	Analog	0.1000	3
No Gas	Ge	72	1277806.73	1.1	110.8	Pulse	0.1000	3
H2	Sc	45	196475.32	1.1	105.1	Pulse	0.1000	3
H2	Ge	72	173290.25	1.0	105.8	Pulse	0.1000	3
H2	In	115	406067.71	1.0	104.4	Pulse	0.1000	3
He	Sc	45	49896.12	0.5	107.0	Pulse	0.1000	3
He	Ge	72	87886.83	1.7	108.2	Pulse	0.1000	3
He	In	115	91703.99	0.5	106.4	Pulse	0.1000	3
He	Tb	159	409064.86	1.1	102.6	Pulse	0.1000	3
He	Bi	209	315933.09	0.6	102.1	Pulse	0.1000	3

No Gas

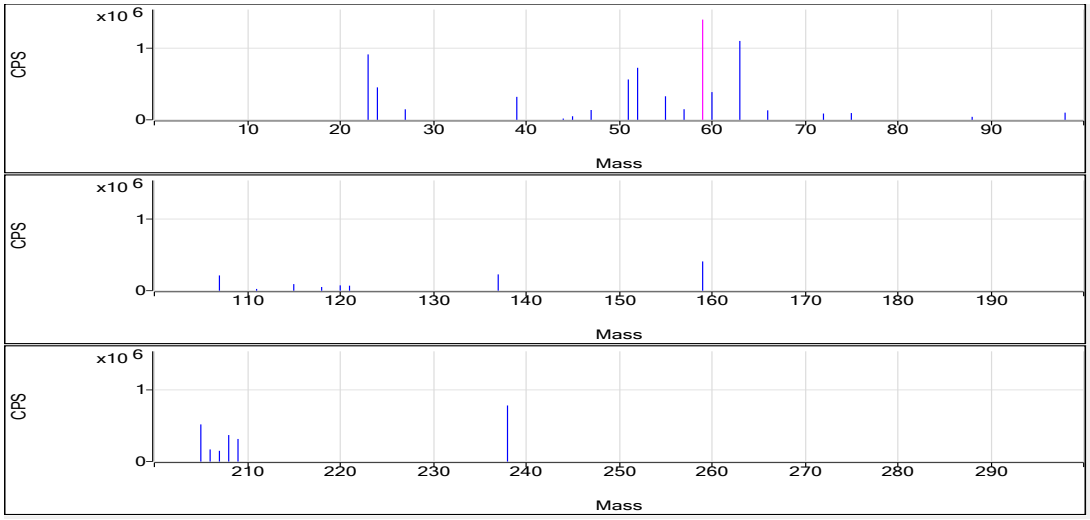


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	47.099	0.0359	91487.38	0.0008	4.685E-06
Be	9	1	No Gas	47.237	0.036	92412.87	0.0008	4.685E-06
Be	9	1	No Gas	46.873	0.0358	91092.70	0.0008	4.685E-06
Se	78	2	H2	51.615	0.0215	3736.49	0.0004	1.219E-05
Se	78	2	H2	51.634	0.0215	3770.50	0.0004	1.219E-05
Se	78	2	H2	52.714	0.022	3770.50	0.0004	1.219E-05
Na	23	3	He	5040.526	18.3754	918146.94	0.0036	0.3452
Na	23	3	He	5073.093	18.4919	917659.67	0.0036	0.3452
Na	23	3	He	4964.213	18.1024	906877.80	0.0036	0.3452
Mg	24	3	He	5055.187	9.0741	453399.56	0.0018	0.003497
Mg	24	3	He	5131.276	9.2107	457079.49	0.0018	0.003497
Mg	24	3	He	5005.956	8.9858	450162.45	0.0018	0.003497
Al	27	3	He	5031.29	2.9441	147106.57	0.0006	0.0006432
Al	27	3	He	5114.313	2.9927	148512.65	0.0006	0.0006432
Al	27	3	He	4974.114	2.9107	145816.38	0.0006	0.0006432
K	39	3	He	5181.745	6.4283	321198.08	0.0012	0.3951
K	39	3	He	5221.646	6.4748	321310.76	0.0012	0.3951
K	39	3	He	5155.861	6.3982	320530.11	0.0012	0.3951
Ca	44	3	He	5132.93	0.3495	17460.89	0.0001	0.002715
Ca	44	3	He	5159.511	0.3512	17430.79	0.0001	0.002715
Ca	44	3	He	5255.519	0.3577	17921.51	0.0001	0.002715
Ti	47	3	He	5109.62	2.7437	137091.00	0.0005	7.003E-05
Ti	47	3	He	5164.524	2.7732	137618.05	0.0005	7.003E-05
Ti	47	3	He	5098.856	2.7379	137160.74	0.0005	7.003E-05
V	51	3	He	517.334	11.3334	566284.69	0.0219	0.02486
V	51	3	He	519.675	11.3845	564958.25	0.0219	0.02486
V	51	3	He	510.797	11.1905	560609.88	0.0219	0.02486
Cr	52	3	He	484.999	14.5612	727567.88	0.0299	0.03997
Cr	52	3	He	494.196	14.8366	736265.93	0.0299	0.03997
Cr	52	3	He	477.284	14.3302	717902.18	0.0299	0.03997
Mn	55	3	He	518.681	6.6593	332741.09	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	518.099	6.6519	330098.75	0.0128	0.002639
Mn	55	3	He	504.39	6.4759	324424.59	0.0128	0.002639
Fe	57	3	He	5091.647	2.9596	147881.36	0.0006	0.001429
Fe	57	3	He	5215.969	3.0319	150456.19	0.0006	0.001429
Fe	57	3	He	5013.08	2.914	145982.16	0.0006	0.001429
Co	59	3	He	494.664	27.843	1391206.39	0.0563	0.002149
Co	59	3	He	514.276	28.9468	1436486.23	0.0563	0.002149
Co	59	3	He	487.394	27.4338	1374355.60	0.0563	0.002149
Ni	60	3	He	501.272	4.3053	385541.21	0.0086	0.002834
Ni	60	3	He	523.914	4.4997	392990.15	0.0086	0.002834
Ni	60	3	He	514.251	4.4167	383252.81	0.0086	0.002834
Cu	63	3	He	479.297	12.3088	1102252.95	0.0257	0.004757
Cu	63	3	He	491.717	12.6277	1102870.69	0.0257	0.004757
Cu	63	3	He	494.745	12.7054	1102485.53	0.0257	0.004757
Zn	66	3	He	505.976	1.477	132267.60	0.0029	0.003818
Zn	66	3	He	520.325	1.5188	132648.84	0.0029	0.003818
Zn	66	3	He	524.315	1.5304	132799.19	0.0029	0.003818
As	75	3	He	514.238	1.0544	94422.55	0.002	0.0008061
As	75	3	He	531.708	1.0902	95215.91	0.002	0.0008061
As	75	3	He	529.202	1.0851	94154.86	0.002	0.0008061
Sr	88	3	He	51.725	0.4649	42845.33	0.009	0.0009645
Sr	88	3	He	49.961	0.4491	40960.13	0.009	0.0009645
Sr	88	3	He	50.003	0.4495	41241.43	0.009	0.0009645
Mo	98	3	He	50.74	1.1128	102551.59	0.0219	0.0002706
Mo	98	3	He	49.306	1.0814	98624.94	0.0219	0.0002706
Mo	98	3	He	49.491	1.0854	99592.76	0.0219	0.0002706
Ag	107	3	He	49.793	2.3153	213369.33	0.0465	0.0006206
Ag	107	3	He	50.592	2.3525	214557.34	0.0465	0.0006206
Ag	107	3	He	49.754	2.3135	212273.81	0.0465	0.0006206
Cd	111	3	He	49.29	0.2635	24287.19	0.0053	0
Cd	111	3	He	51.591	0.2759	25158.58	0.0053	0
Cd	111	3	He	49.971	0.2672	24515.43	0.0053	0
Sn	120	3	He	49.631	0.8006	73777.39	0.0158	0.01648
Sn	120	3	He	51.408	0.8287	75575.93	0.0158	0.01648
Sn	120	3	He	50.269	0.8107	74380.23	0.0158	0.01648
Sb	121	3	He	51.082	0.759	69947.09	0.0149	0.0002698
Sb	121	3	He	52.134	0.7746	70650.04	0.0149	0.0002698
Sb	121	3	He	51.159	0.7602	69746.70	0.0149	0.0002698
Ba	137	3	He	512.959	2.4621	226893.59	0.0048	0.0002317
Ba	137	3	He	522.856	2.5096	228884.23	0.0048	0.0002317
Ba	137	3	He	516.861	2.4808	227624.37	0.0048	0.0002317
Tl	205	3	He	50.89	1.2585	521236.44	0.0247	0.0001339
Tl	205	3	He	51.824	1.2815	521580.93	0.0247	0.0001339
Tl	205	3	He	51.356	1.27	515638.74	0.0247	0.0001339
Pb	208	3	He	50.975	1.6695	370227.03	0.0327	0.00107
Pb	208	3	He	51.881	1.6991	370435.31	0.0327	0.00107
Pb	208	3	He	51.746	1.6947	370827.81	0.0327	0.00107
U	238	3	He	50.013	2.4637	784014.21	0.0493	7.55E-05
U	238	3	He	50.582	2.4917	785267.80	0.0493	7.55E-05
U	238	3	He	50.521	2.4887	782511.63	0.0493	7.55E-05
Sc	45	1	No Gas			2546205.27		
Sc	45	1	No Gas			2564425.59		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2547411.37		
Ge	72	1	No Gas			1273369.75		
Ge	72	1	No Gas			1293756.39		
Ge	72	1	No Gas			1266294.04		
Sc	45	2	H2			199066.05		
Sc	45	2	H2			195305.41		
Sc	45	2	H2			195054.49		
Ge	72	2	H2			173474.22		
Ge	72	2	H2			174990.08		
Ge	72	2	H2			171406.44		
In	115	2	H2			410840.85		
In	115	2	H2			404200.97		
In	115	2	H2			403161.32		
Sc	45	3	He			49966.18		
Sc	45	3	He			49625.06		
Sc	45	3	He			50097.13		
Ge	72	3	He			89549.89		
Ge	72	3	He			87337.61		
Ge	72	3	He			86773.00		
In	115	3	He			92567.08		
In	115	3	He			91612.23		
In	115	3	He			92143.95		
Tb	159	3	He			414182.88		
Tb	159	3	He			406993.35		
Tb	159	3	He			406018.35		
Bi	209	3	He			318225.44		
Bi	209	3	He			315150.52		
Bi	209	3	He			314423.30		

Quantitation Report

Data File Name	170_CCB.d
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Acq Time	8/10/2023 4:28:25 PM
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Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

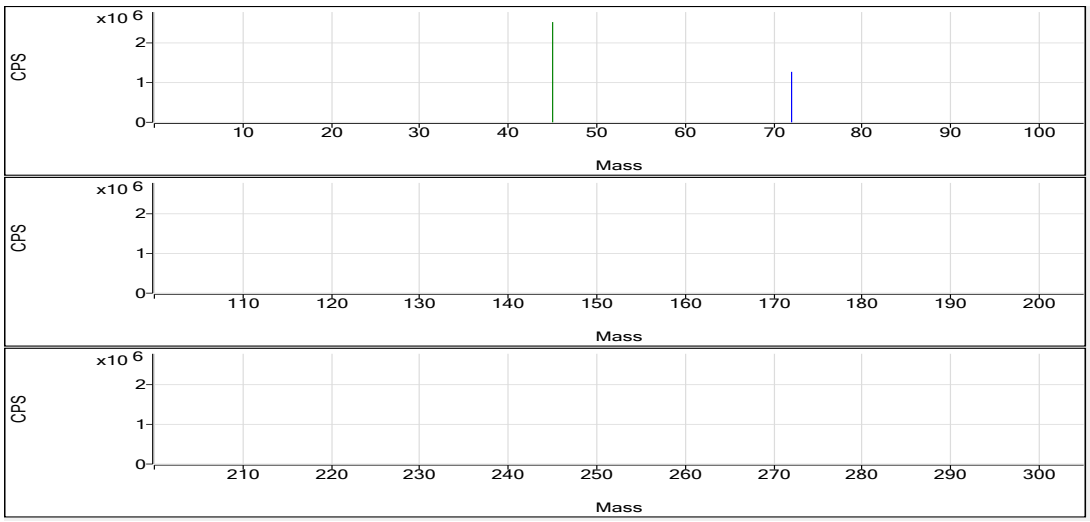
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.026	ppb	12.3	60.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.081	ppb	61.0	7.55	0.0000	Pulse	1.5000	3
Na	23	45	He	181.191	ppb	4.1	49296.23	0.9933	Pulse	0.1000	3
Mg	24	45	He	4.411	ppb	18.4	566.70	0.0114	Pulse	0.1000	3
Al	27	45	He	1.659	ppb	42.6	80.00	0.0016	Pulse	0.1000	3
K	39	45	He	-3.335	ppb	N/A	19416.81	0.3912	Pulse	0.1000	3
Ca	44	45	He	12.534	ppb	144.0	176.67	0.0036	Pulse	0.1000	3
Ti	47	45	He	0.995	ppb	0.7	30.00	0.0006	Pulse	0.1000	3
V	51	45	He	0.929	ppb	6.9	2241.52	0.0452	Pulse	0.5000	3
Cr	52	45	He	-0.014	ppb	N/A	1963.53	0.0396	Pulse	0.1000	3
Mn	55	45	He	0.229	ppb	46.5	276.68	0.0056	Pulse	0.1000	3
Fe	57	45	He	2.053	ppb	46.0	130.01	0.0026	Pulse	0.1000	3
Co	59	45	He	0.091	ppb	33.8	360.02	0.0072	Pulse	0.1000	3
Ni	60	72	He	-0.040	ppb	N/A	216.68	0.0025	Pulse	0.1000	3
Cu	63	72	He	0.130	ppb	22.8	703.37	0.0081	Pulse	0.1000	3
Zn	66	72	He	3.590	ppb	19.0	1243.43	0.0143	Pulse	0.1000	3
As	75	72	He	0.328	ppb	21.5	128.67	0.0015	Pulse	0.5000	3
Sr	88	115	He	0.045	ppb	18.7	123.34	0.0014	Pulse	0.1000	3
Mo	98	115	He	0.062	ppb	29.6	146.67	0.0016	Pulse	0.1000	3
Ag	107	115	He	0.003	ppb	121.3	70.00	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.006	ppb	42.9	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.172	ppb	32.1	1730.17	0.0192	Pulse	0.1000	3
Sb	121	115	He	0.039	ppb	106.3	76.67	0.0009	Pulse	0.1000	3
Ba	137	115	He	0.044	ppb	1.7	40.00	0.0004	Pulse	0.1000	3
Tl	205	159	He	0.098	ppb	13.1	1036.75	0.0026	Pulse	0.1000	3
Pb	208	159	He	0.018	ppb	36.5	676.70	0.0017	Pulse	0.1000	3
U	238	209	He	0.056	ppb	13.8	893.40	0.0028	Pulse	0.1000	3

ISTD Table:

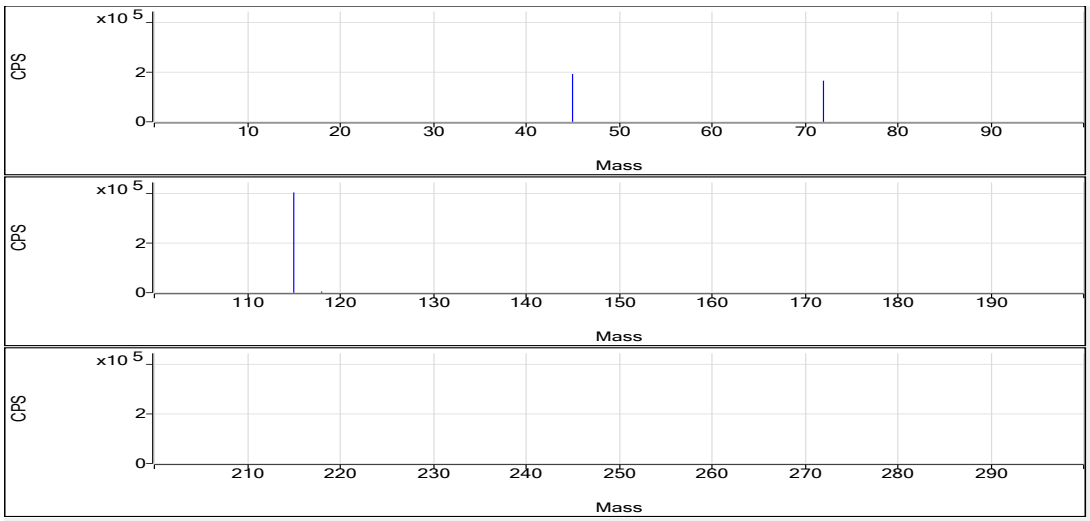
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2510140.85	1.2	104.6	Analog	0.1000	3
No Gas	Ge	72	1263642.25	0.8	109.6	Pulse	0.1000	3
H2	Sc	45	192272.13	1.2	102.8	Pulse	0.1000	3
H2	Ge	72	165168.66	1.9	100.9	Pulse	0.1000	3
H2	In	115	402591.13	0.8	103.5	Pulse	0.1000	3
He	Sc	45	49631.97	0.7	106.4	Pulse	0.1000	3
He	Ge	72	86954.59	2.3	107.1	Pulse	0.1000	3
He	In	115	90127.55	0.8	104.6	Pulse	0.1000	3
He	Tb	159	405462.31	0.8	101.7	Pulse	0.1000	3
He	Bi	209	314326.19	0.6	101.6	Pulse	0.1000	3

No Gas

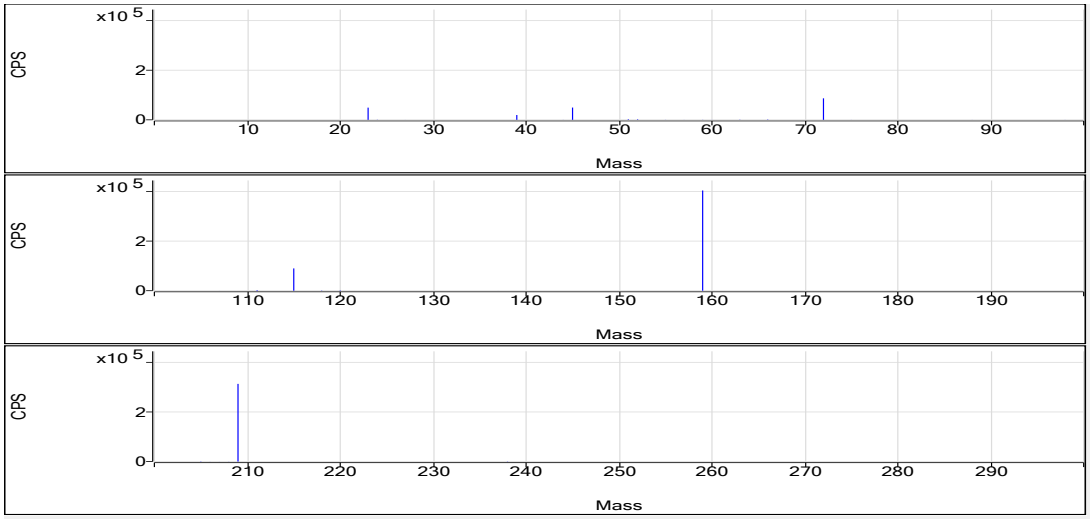


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.024	0	56.00	0.0008	4.685E-06
Be	9	1	No Gas	0.029	0	68.00	0.0008	4.685E-06
Be	9	1	No Gas	0.024	0	58.00	0.0008	4.685E-06
Se	78	2	H2	0.049	0	5.33	0.0004	1.219E-05
Se	78	2	H2	0.138	0.0001	11.33	0.0004	1.219E-05
Se	78	2	H2	0.056	0	6.00	0.0004	1.219E-05
Na	23	3	He	173.681	0.9664	48269.42	0.0036	0.3452
Na	23	3	He	188.711	1.0202	50657.43	0.0036	0.3452
Na	23	3	He	181.181	0.9933	48961.84	0.0036	0.3452
Mg	24	3	He	4.97	0.0124	620.04	0.0018	0.003497
Mg	24	3	He	4.786	0.0121	600.03	0.0018	0.003497
Mg	24	3	He	3.478	0.0097	480.02	0.0018	0.003497
Al	27	3	He	0.954	0.0012	60.00	0.0006	0.0006432
Al	27	3	He	1.654	0.0016	80.00	0.0006	0.0006432
Al	27	3	He	2.368	0.002	100.00	0.0006	0.0006432
K	39	3	He	6.574	0.4027	20114.42	0.0012	0.3951
K	39	3	He	-9.757	0.3837	19052.96	0.0012	0.3951
K	39	3	He	-6.822	0.3871	19083.06	0.0012	0.3951
Ca	44	3	He	-4.624	0.0024	120.00	0.0001	0.002715
Ca	44	3	He	31.362	0.0048	240.01	0.0001	0.002715
Ca	44	3	He	10.864	0.0034	170.01	0.0001	0.002715
Ti	47	3	He	0.988	0.0006	30.00	0.0005	7.003E-05
Ti	47	3	He	0.995	0.0006	30.00	0.0005	7.003E-05
Ti	47	3	He	1.003	0.0006	30.00	0.0005	7.003E-05
V	51	3	He	0.856	0.0436	2176.18	0.0219	0.02486
V	51	3	He	0.972	0.0461	2290.20	0.0219	0.02486
V	51	3	He	0.958	0.0458	2258.19	0.0219	0.02486
Cr	52	3	He	-0.018	0.0394	1970.20	0.0299	0.03997
Cr	52	3	He	-0.01	0.0397	1970.19	0.0299	0.03997
Cr	52	3	He	-0.014	0.0396	1950.20	0.0299	0.03997
Mn	55	3	He	0.106	0.004	200.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.297	0.0064	320.02	0.0128	0.002639
Mn	55	3	He	0.284	0.0063	310.01	0.0128	0.002639
Fe	57	3	He	1.676	0.0024	120.01	0.0006	0.001429
Fe	57	3	He	1.354	0.0022	110.00	0.0006	0.001429
Fe	57	3	He	3.128	0.0032	160.01	0.0006	0.001429
Co	59	3	He	0.104	0.008	400.02	0.0563	0.002149
Co	59	3	He	0.112	0.0085	420.02	0.0563	0.002149
Co	59	3	He	0.056	0.0053	260.01	0.0563	0.002149
Ni	60	3	He	-0.017	0.0027	240.01	0.0086	0.002834
Ni	60	3	He	-0.017	0.0027	230.01	0.0086	0.002834
Ni	60	3	He	-0.086	0.0021	180.01	0.0086	0.002834
Cu	63	3	He	0.116	0.0077	690.04	0.0257	0.004757
Cu	63	3	He	0.11	0.0076	650.03	0.0257	0.004757
Cu	63	3	He	0.164	0.009	770.04	0.0257	0.004757
Zn	66	3	He	4.343	0.0165	1470.13	0.0029	0.003818
Zn	66	3	He	3.018	0.0126	1080.08	0.0029	0.003818
Zn	66	3	He	3.409	0.0137	1180.09	0.0029	0.003818
As	75	3	He	0.405	0.0016	146.00	0.002	0.0008061
As	75	3	He	0.313	0.0014	124.00	0.002	0.0008061
As	75	3	He	0.266	0.0014	116.00	0.002	0.0008061
Sr	88	3	He	0.04	0.0013	120.00	0.009	0.0009645
Sr	88	3	He	0.04	0.0013	120.01	0.009	0.0009645
Sr	88	3	He	0.055	0.0015	130.00	0.009	0.0009645
Mo	98	3	He	0.043	0.0012	110.00	0.0219	0.0002706
Mo	98	3	He	0.063	0.0017	150.01	0.0219	0.0002706
Mo	98	3	He	0.08	0.002	180.01	0.0219	0.0002706
Ag	107	3	He	0.001	0.0007	60.00	0.0465	0.0006206
Ag	107	3	He	0.008	0.001	90.00	0.0465	0.0006206
Ag	107	3	He	0.001	0.0007	60.00	0.0465	0.0006206
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.008	0	4.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Sn	120	3	He	0.222	0.02	1810.17	0.0158	0.01648
Sn	120	3	He	0.181	0.0193	1750.18	0.0158	0.01648
Sn	120	3	He	0.113	0.0183	1630.15	0.0158	0.01648
Sb	121	3	He	0.012	0.0004	40.00	0.0149	0.0002698
Sb	121	3	He	0.019	0.0006	50.00	0.0149	0.0002698
Sb	121	3	He	0.087	0.0016	140.01	0.0149	0.0002698
Ba	137	3	He	0.044	0.0004	40.00	0.0048	0.0002317
Ba	137	3	He	0.044	0.0004	40.00	0.0048	0.0002317
Ba	137	3	He	0.045	0.0004	40.00	0.0048	0.0002317
Tl	205	3	He	0.11	0.0029	1170.10	0.0247	0.0001339
Tl	205	3	He	0.099	0.0026	1040.08	0.0247	0.0001339
Tl	205	3	He	0.085	0.0022	900.07	0.0247	0.0001339
Pb	208	3	He	0.011	0.0014	330.02	0.0327	0.00107
Pb	208	3	He	0.022	0.0018	340.01	0.0327	0.00107
Pb	208	3	He	0.022	0.0018	390.02	0.0327	0.00107
U	238	3	He	0.052	0.0027	840.06	0.0493	7.55E-05
U	238	3	He	0.051	0.0026	810.05	0.0493	7.55E-05
U	238	3	He	0.065	0.0033	1030.08	0.0493	7.55E-05
Sc	45	1	No Gas			2475853.09		
Sc	45	1	No Gas			2526662.31		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2527907.15		
Ge	72	1	No Gas			1251704.20		
Ge	72	1	No Gas			1267283.11		
Ge	72	1	No Gas			1271939.43		
Sc	45	2	H2			189521.25		
Sc	45	2	H2			193844.20		
Sc	45	2	H2			193450.93		
Ge	72	2	H2			163910.70		
Ge	72	2	H2			162900.83		
Ge	72	2	H2			168694.45		
In	115	2	H2			399009.37		
In	115	2	H2			403049.21		
In	115	2	H2			405714.80		
Sc	45	3	He			49946.34		
Sc	45	3	He			49655.11		
Sc	45	3	He			49294.45		
Ge	72	3	He			89299.14		
Ge	72	3	He			85696.38		
Ge	72	3	He			85868.26		
In	115	3	He			90574.73		
In	115	3	He			90544.60		
In	115	3	He			89286.56		
Tb	159	3	He			409157.10		
Tb	159	3	He			402999.29		
Tb	159	3	He			404230.54		
Bi	209	3	He			316319.14		
Bi	209	3	He			312725.91		
Bi	209	3	He			313933.51		

Quantitation Report

Data File Name	171SMPL.d
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Sample Name	410-138038-C-3-A
Sample Type	Sample
Comment	A12
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

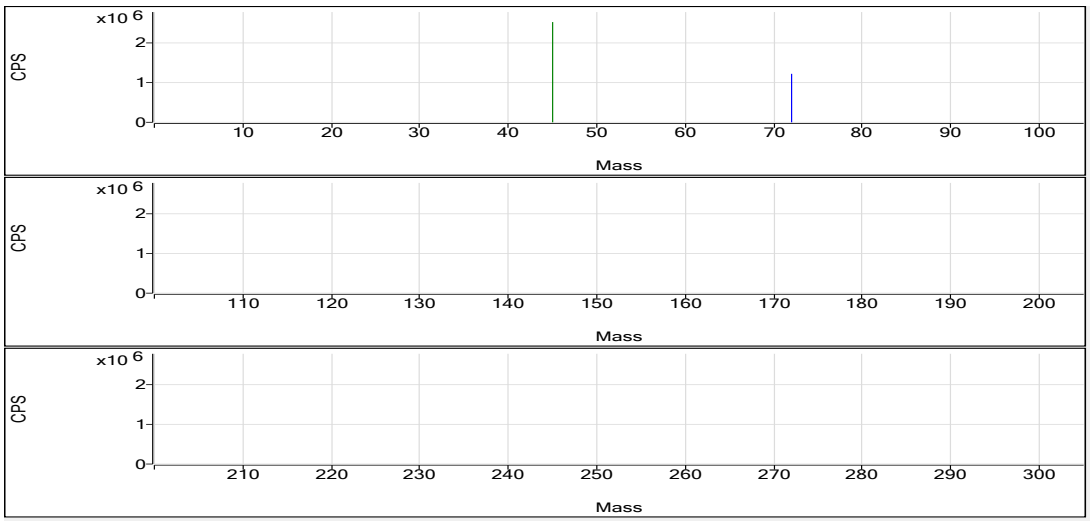
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.012	ppb	37.3	36.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.020	ppb	110.8	3.55	0.0000	Pulse	1.5000	3
Na	23	45	He	164.248	ppb	2.8	46908.25	0.9327	Pulse	0.1000	3
Mg	24	45	He	5.961	ppb	4.4	713.37	0.0142	Pulse	0.1000	3
Al	27	45	He	0.947	ppb	98.6	60.00	0.0012	Pulse	0.1000	3
K	39	45	He	41.278	ppb	57.1	22264.27	0.4431	Pulse	0.1000	3
Ca	44	45	He	4.037	ppb	208.4	150.01	0.0030	Pulse	0.1000	3
Ti	47	45	He	0.617	ppb	106.7	20.00	0.0004	Pulse	0.1000	3
V	51	45	He	0.601	ppb	24.1	1908.80	0.0380	Pulse	0.5000	3
Cr	52	45	He	-0.036	ppb	N/A	1953.53	0.0389	Pulse	0.1000	3
Mn	55	45	He	0.172	ppb	57.2	243.34	0.0048	Pulse	0.1000	3
Fe	57	45	He	2.124	ppb	96.8	133.34	0.0027	Pulse	0.1000	3
Co	59	45	He	0.035	ppb	68.1	206.68	0.0041	Pulse	0.1000	3
Ni	60	72	He	0.037	ppb	172.8	280.02	0.0031	Pulse	0.1000	3
Cu	63	72	He	0.326	ppb	27.0	1170.09	0.0131	Pulse	0.1000	3
Zn	66	72	He	2.661	ppb	6.3	1030.07	0.0116	Pulse	0.1000	3
As	75	72	He	0.147	ppb	66.4	98.67	0.0011	Pulse	0.5000	3
Sr	88	115	He	0.026	ppb	350.1	110.00	0.0012	Pulse	0.1000	3
Mo	98	115	He	0.042	ppb	2.1	110.00	0.0012	Pulse	0.1000	3
Ag	107	115	He	0.120	ppb	4.8	570.03	0.0062	Pulse	0.1000	3
Cd	111	115	He	0.003	ppb	86.6	1.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.200	ppb	N/A	1226.77	0.0133	Pulse	0.1000	3
Sb	121	115	He	0.050	ppb	38.9	93.33	0.0010	Pulse	0.1000	3
Ba	137	115	He	0.110	ppb	22.2	70.00	0.0008	Pulse	0.1000	3
Tl	205	159	He	0.023	ppb	32.3	283.35	0.0007	Pulse	0.1000	3
Pb	208	159	He	0.009	ppb	28.8	550.03	0.0014	Pulse	0.1000	3
U	238	209	He	0.015	ppb	16.4	253.34	0.0008	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2537507.93	0.8	105.8	Analog	0.1000	3
No Gas	Ge	72	1227108.37	0.7	106.4	Pulse	0.1000	3
H2	Sc	45	199508.15	0.5	106.7	Pulse	0.1000	3
H2	Ge	72	170805.37	2.4	104.3	Pulse	0.1000	3
H2	In	115	413373.33	0.4	106.2	Pulse	0.1000	3
He	Sc	45	50297.67	2.9	107.8	Pulse	0.1000	3
He	Ge	72	89039.89	1.0	109.7	Pulse	0.1000	3
He	In	115	92047.25	1.6	106.8	Pulse	0.1000	3
He	Tb	159	406230.70	0.6	101.9	Pulse	0.1000	3
He	Bi	209	318788.11	0.7	103.1	Pulse	0.1000	3

No Gas



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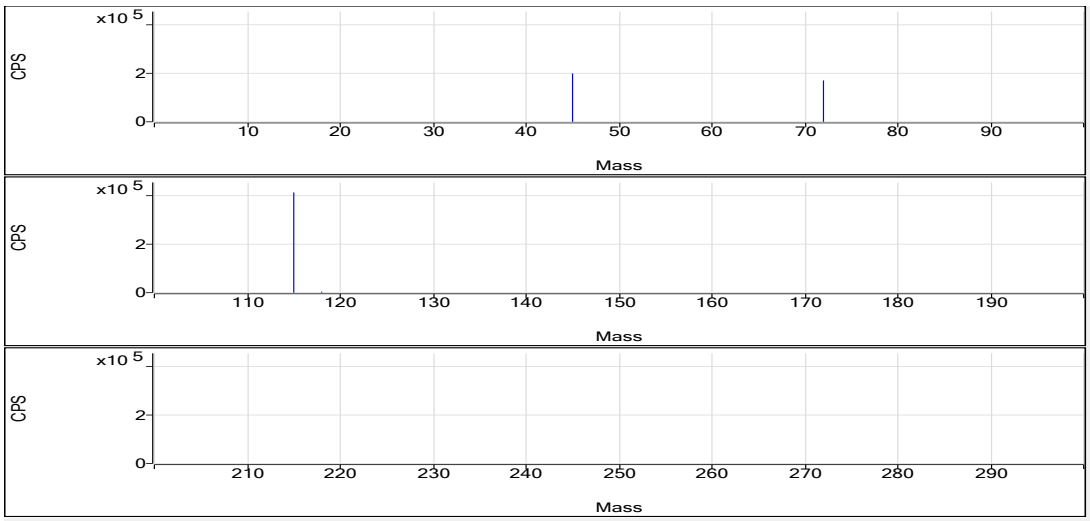
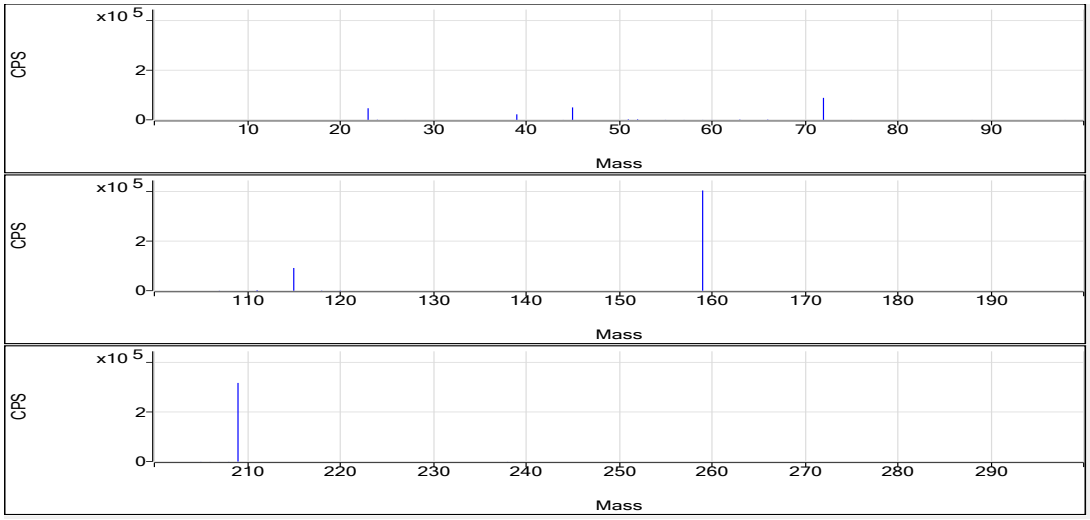


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.014	0	38.00	0.0008	4.685E-06
Be	9	1	No Gas	0.007	0	26.00	0.0008	4.685E-06
Be	9	1	No Gas	0.016	0	44.00	0.0008	4.685E-06
Se	78	2	H2	0.019	0	3.33	0.0004	1.219E-05
Se	78	2	H2	0.044	0	5.33	0.0004	1.219E-05
Se	78	2	H2	-0.001	0	2.00	0.0004	1.219E-05
Na	23	3	He	163.257	0.9291	48299.33	0.0036	0.3452
Na	23	3	He	169.321	0.9508	46984.93	0.0036	0.3452
Na	23	3	He	160.166	0.9181	45440.50	0.0036	0.3452
Mg	24	3	He	5.664	0.0137	710.04	0.0018	0.003497
Mg	24	3	He	6.172	0.0146	720.04	0.0018	0.003497
Mg	24	3	He	6.046	0.0143	710.04	0.0018	0.003497
Al	27	3	He	0.545	0.001	50.00	0.0006	0.0006432
Al	27	3	He	2.014	0.0018	90.00	0.0006	0.0006432
Al	27	3	He	0.282	0.0008	40.00	0.0006	0.0006432
K	39	3	He	17.179	0.4151	21576.57	0.0012	0.3951
K	39	3	He	64.259	0.4699	23219.26	0.0012	0.3951
K	39	3	He	42.394	0.4444	21996.99	0.0012	0.3951
Ca	44	3	He	-0.319	0.0027	140.01	0.0001	0.002715
Ca	44	3	He	13.736	0.0036	180.01	0.0001	0.002715
Ca	44	3	He	-1.306	0.0026	130.01	0.0001	0.002715
Ti	47	3	He	0.228	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	1.377	0.0008	40.01	0.0005	7.003E-05
Ti	47	3	He	0.246	0.0002	10.00	0.0005	7.003E-05
V	51	3	He	0.441	0.0345	1794.12	0.0219	0.02486
V	51	3	He	0.638	0.0388	1918.14	0.0219	0.02486
V	51	3	He	0.724	0.0407	2014.15	0.0219	0.02486
Cr	52	3	He	-0.127	0.0362	1880.19	0.0299	0.03997
Cr	52	3	He	0.118	0.0435	2150.24	0.0299	0.03997
Cr	52	3	He	-0.1	0.037	1830.17	0.0299	0.03997
Mn	55	3	He	0.139	0.0044	230.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.094	0.0038	190.01	0.0128	0.002639
Mn	55	3	He	0.282	0.0063	310.01	0.0128	0.002639
Fe	57	3	He	0.852	0.0019	100.00	0.0006	0.001429
Fe	57	3	He	1.024	0.002	100.00	0.0006	0.001429
Fe	57	3	He	4.496	0.004	200.01	0.0006	0.001429
Co	59	3	He	0.023	0.0035	180.01	0.0563	0.002149
Co	59	3	He	0.062	0.0057	280.01	0.0563	0.002149
Co	59	3	He	0.019	0.0032	160.01	0.0563	0.002149
Ni	60	3	He	0.05	0.0033	290.02	0.0086	0.002834
Ni	60	3	He	0.092	0.0036	320.02	0.0086	0.002834
Ni	60	3	He	-0.032	0.0026	230.01	0.0086	0.002834
Cu	63	3	He	0.236	0.0108	960.07	0.0257	0.004757
Cu	63	3	He	0.331	0.0132	1170.10	0.0257	0.004757
Cu	63	3	He	0.412	0.0153	1380.11	0.0257	0.004757
Zn	66	3	He	2.48	0.011	980.07	0.0029	0.003818
Zn	66	3	He	2.694	0.0117	1030.07	0.0029	0.003818
Zn	66	3	He	2.81	0.012	1080.08	0.0029	0.003818
As	75	3	He	0.178	0.0012	104.00	0.002	0.0008061
As	75	3	He	0.038	0.0009	78.00	0.002	0.0008061
As	75	3	He	0.225	0.0013	114.00	0.002	0.0008061
Sr	88	3	He	-0.072	0.0003	30.00	0.009	0.0009645
Sr	88	3	He	0.11	0.0019	180.01	0.009	0.0009645
Sr	88	3	He	0.04	0.0013	120.00	0.009	0.0009645
Mo	98	3	He	0.041	0.0012	110.00	0.0219	0.0002706
Mo	98	3	He	0.042	0.0012	110.00	0.0219	0.0002706
Mo	98	3	He	0.043	0.0012	110.00	0.0219	0.0002706
Ag	107	3	He	0.113	0.0059	550.03	0.0465	0.0006206
Ag	107	3	He	0.124	0.0064	590.04	0.0465	0.0006206
Ag	107	3	He	0.122	0.0063	570.03	0.0465	0.0006206
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Sn	120	3	He	-0.08	0.0152	1420.15	0.0158	0.01648
Sn	120	3	He	-0.323	0.0114	1050.07	0.0158	0.01648
Sn	120	3	He	-0.196	0.0134	1210.10	0.0158	0.01648
Sb	121	3	He	0.032	0.0007	70.00	0.0149	0.0002698
Sb	121	3	He	0.047	0.001	90.00	0.0149	0.0002698
Sb	121	3	He	0.071	0.0013	120.00	0.0149	0.0002698
Ba	137	3	He	0.108	0.0007	70.00	0.0048	0.0002317
Ba	137	3	He	0.087	0.0006	60.00	0.0048	0.0002317
Ba	137	3	He	0.136	0.0009	80.00	0.0048	0.0002317
Tl	205	3	He	0.031	0.0009	370.02	0.0247	0.0001339
Tl	205	3	He	0.018	0.0006	240.01	0.0247	0.0001339
Tl	205	3	He	0.019	0.0006	240.01	0.0247	0.0001339
Pb	208	3	He	0.006	0.0013	260.02	0.0327	0.00107
Pb	208	3	He	0.009	0.0014	290.01	0.0327	0.00107
Pb	208	3	He	0.011	0.0014	290.01	0.0327	0.00107
U	238	3	He	0.016	0.0009	280.01	0.0493	7.55E-05
U	238	3	He	0.012	0.0007	210.01	0.0493	7.55E-05
U	238	3	He	0.016	0.0008	270.01	0.0493	7.55E-05
Sc	45	1	No Gas			2521449.02		
Sc	45	1	No Gas			2529606.06		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2561468.71		
Ge	72	1	No Gas			1220242.01		
Ge	72	1	No Gas			1224928.89		
Ge	72	1	No Gas			1236154.20		
Sc	45	2	H2			200656.56		
Sc	45	2	H2			198628.26		
Sc	45	2	H2			199239.63		
Ge	72	2	H2			166461.36		
Ge	72	2	H2			174393.57		
Ge	72	2	H2			171561.17		
In	115	2	H2			414869.80		
In	115	2	H2			411531.24		
In	115	2	H2			413718.94		
Sc	45	3	He			51983.09		
Sc	45	3	He			49414.79		
Sc	45	3	He			49495.12		
Ge	72	3	He			88795.16		
Ge	72	3	He			88322.36		
Ge	72	3	He			90002.16		
In	115	3	He			93343.06		
In	115	3	He			92366.74		
In	115	3	He			90453.09		
Tb	159	3	He			407992.77		
Tb	159	3	He			407387.38		
Tb	159	3	He			403311.95		
Bi	209	3	He			317105.44		
Bi	209	3	He			317986.17		
Bi	209	3	He			321272.71		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

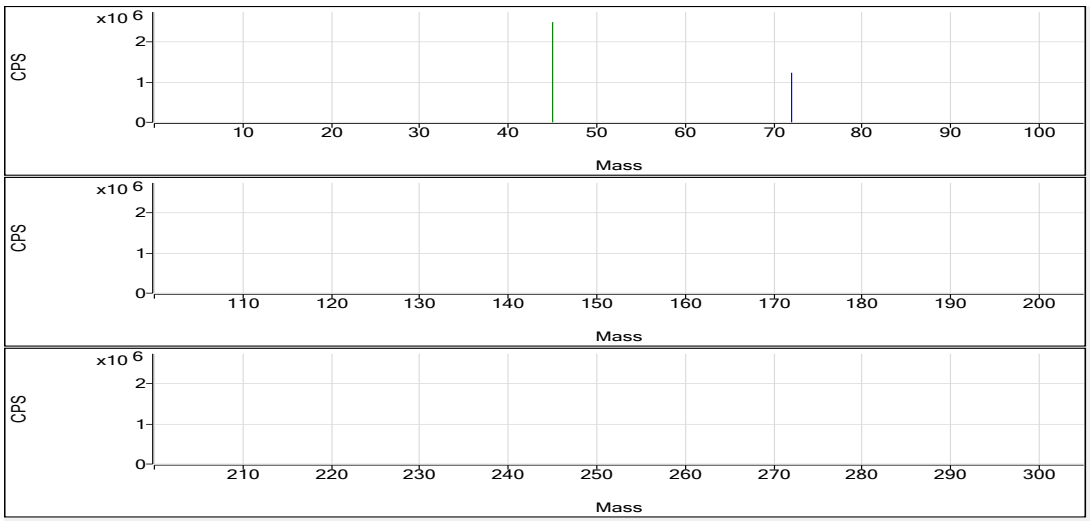
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.005	ppb	79.2	20.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.026	ppb	114.8	3.78	0.0000	Pulse	1.5000	3
Na	23	45	He	125.282	ppb	5.1	39206.08	0.7933	Pulse	0.1000	3
Mg	24	45	He	2.110	ppb	10.1	360.02	0.0073	Pulse	0.1000	3
Al	27	45	He	1.863	ppb	132.5	86.67	0.0017	Pulse	0.1000	3
K	39	45	He	9.028	ppb	109.6	20044.41	0.4056	Pulse	0.1000	3
Ca	44	45	He	21.858	ppb	54.0	206.68	0.0042	Pulse	0.1000	3
Ti	47	45	He	-0.130	ppb	N/A	0.00	0.0000	Pulse	0.1000	3
V	51	45	He	0.820	ppb	6.3	2115.50	0.0428	Pulse	0.5000	3
Cr	52	45	He	-0.054	ppb	N/A	1893.52	0.0384	Pulse	0.1000	3
Mn	55	45	He	0.119	ppb	89.8	206.68	0.0042	Pulse	0.1000	3
Fe	57	45	He	2.777	ppb	47.6	150.01	0.0030	Pulse	0.1000	3
Co	59	45	He	0.030	ppb	40.4	190.01	0.0039	Pulse	0.1000	3
Ni	60	72	He	-0.088	ppb	N/A	180.01	0.0021	Pulse	0.1000	3
Cu	63	72	He	0.034	ppb	120.8	486.69	0.0056	Pulse	0.1000	3
Zn	66	72	He	3.289	ppb	11.8	1160.09	0.0134	Pulse	0.1000	3
As	75	72	He	0.147	ppb	22.4	96.00	0.0011	Pulse	0.5000	3
Sr	88	115	He	0.031	ppb	146.4	113.34	0.0012	Pulse	0.1000	3
Mo	98	115	He	0.011	ppb	95.6	46.67	0.0005	Pulse	0.1000	3
Ag	107	115	He	-0.005	ppb	N/A	36.67	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.006	ppb	44.5	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.037	ppb	N/A	1443.46	0.0159	Pulse	0.1000	3
Sb	121	115	He	0.011	ppb	65.9	40.00	0.0004	Pulse	0.1000	3
Ba	137	115	He	0.013	ppb	200.3	26.67	0.0003	Pulse	0.1000	3
Tl	205	159	He	0.019	ppb	61.5	240.01	0.0006	Pulse	0.1000	3
Pb	208	159	He	0.011	ppb	31.4	580.03	0.0014	Pulse	0.1000	3
U	238	209	He	0.012	ppb	40.3	213.35	0.0007	Pulse	0.1000	3

ISTD Table:

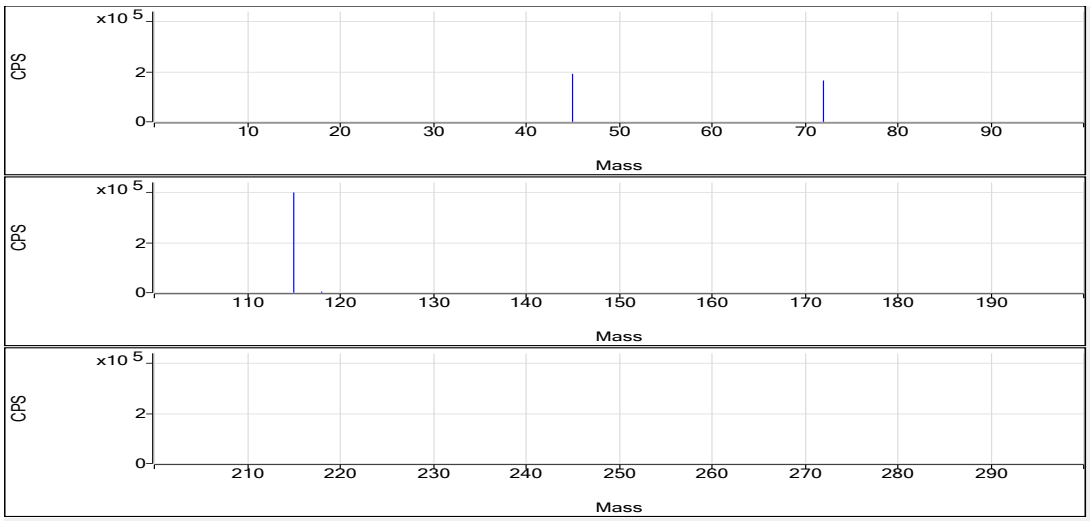
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2506548.66	0.4	104.5	Analog	0.1000	3
No Gas	Ge	72	1239675.47	0.9	107.5	Pulse	0.1000	3
H2	Sc	45	191591.04	0.6	102.5	Pulse	0.1000	3
H2	Ge	72	164985.82	0.5	100.8	Pulse	0.1000	3
H2	In	115	400225.37	0.4	102.9	Pulse	0.1000	3
He	Sc	45	49441.53	2.1	106.0	Pulse	0.1000	3
He	Ge	72	86662.39	1.3	106.7	Pulse	0.1000	3
He	In	115	90919.65	1.8	105.5	Pulse	0.1000	3
He	Tb	159	403794.49	1.0	101.3	Pulse	0.1000	3
He	Bi	209	313895.22	0.8	101.5	Pulse	0.1000	3

No Gas

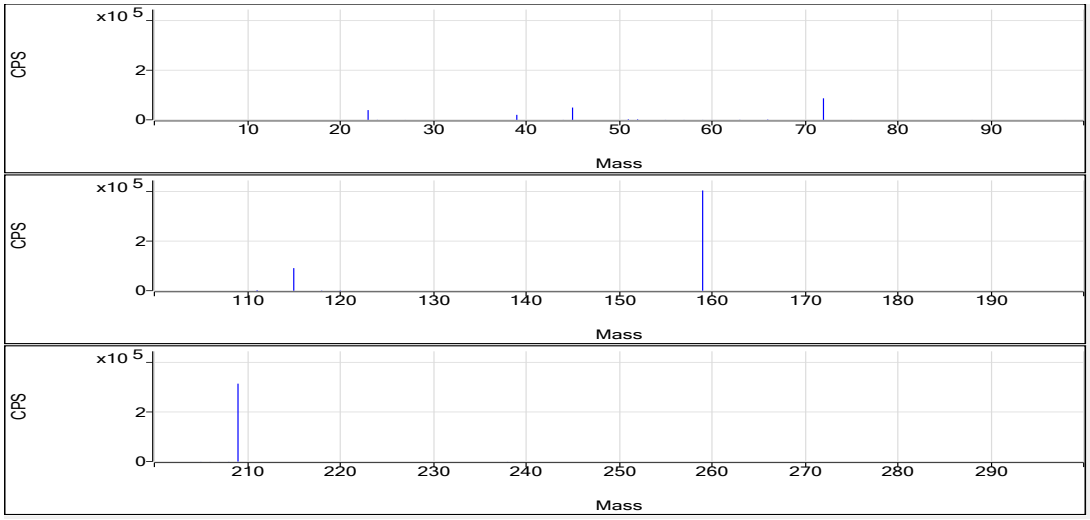


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.009	0	28.00	0.0008	4.685E-06
Be	9	1	No Gas	0.004	0	20.00	0.0008	4.685E-06
Be	9	1	No Gas	0.001	0	14.00	0.0008	4.685E-06
Se	78	2	H2	0	0	2.00	0.0004	1.219E-05
Se	78	2	H2	0.019	0	3.33	0.0004	1.219E-05
Se	78	2	H2	0.058	0	6.00	0.0004	1.219E-05
Na	23	3	He	131.801	0.8166	39533.76	0.0036	0.3452
Na	23	3	He	124.941	0.7921	39132.26	0.0036	0.3452
Na	23	3	He	119.104	0.7712	38952.21	0.0036	0.3452
Mg	24	3	He	2.311	0.0076	370.02	0.0018	0.003497
Mg	24	3	He	1.887	0.0069	340.01	0.0018	0.003497
Mg	24	3	He	2.134	0.0073	370.02	0.0018	0.003497
Al	27	3	He	-0.04	0.0006	30.00	0.0006	0.0006432
Al	27	3	He	0.976	0.0012	60.00	0.0006	0.0006432
Al	27	3	He	4.654	0.0034	170.01	0.0006	0.0006432
K	39	3	He	18.078	0.4161	20144.79	0.0012	0.3951
K	39	3	He	10.543	0.4073	20124.48	0.0012	0.3951
K	39	3	He	-1.535	0.3933	19863.96	0.0012	0.3951
Ca	44	3	He	33.2	0.005	240.01	0.0001	0.002715
Ca	44	3	He	22.736	0.0043	210.01	0.0001	0.002715
Ca	44	3	He	9.637	0.0034	170.01	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	0.836	0.0431	2088.16	0.0219	0.02486
V	51	3	He	0.863	0.0437	2160.18	0.0219	0.02486
V	51	3	He	0.763	0.0415	2098.17	0.0219	0.02486
Cr	52	3	He	0.059	0.0417	2020.20	0.0299	0.03997
Cr	52	3	He	-0.017	0.0395	1950.20	0.0299	0.03997
Cr	52	3	He	-0.204	0.0339	1710.15	0.0299	0.03997
Mn	55	3	He	0.052	0.0033	160.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.063	0.0034	170.01	0.0128	0.002639
Mn	55	3	He	0.242	0.0057	290.02	0.0128	0.002639
Fe	57	3	He	3.23	0.0033	160.01	0.0006	0.001429
Fe	57	3	He	3.812	0.0036	180.01	0.0006	0.001429
Fe	57	3	He	1.289	0.0022	110.00	0.0006	0.001429
Co	59	3	He	0.043	0.0045	220.01	0.0563	0.002149
Co	59	3	He	0.03	0.0038	190.01	0.0563	0.002149
Co	59	3	He	0.018	0.0032	160.01	0.0563	0.002149
Ni	60	3	He	-0.09	0.0021	180.01	0.0086	0.002834
Ni	60	3	He	-0.112	0.0019	160.01	0.0086	0.002834
Ni	60	3	He	-0.063	0.0023	200.01	0.0086	0.002834
Cu	63	3	He	0.033	0.0056	490.03	0.0257	0.004757
Cu	63	3	He	0.075	0.0067	570.03	0.0257	0.004757
Cu	63	3	He	-0.007	0.0046	400.02	0.0257	0.004757
Zn	66	3	He	2.856	0.0121	1060.08	0.0029	0.003818
Zn	66	3	He	3.599	0.0143	1220.10	0.0029	0.003818
Zn	66	3	He	3.412	0.0138	1200.08	0.0029	0.003818
As	75	3	He	0.109	0.001	90.00	0.002	0.0008061
As	75	3	He	0.167	0.0011	98.00	0.002	0.0008061
As	75	3	He	0.166	0.0011	100.00	0.002	0.0008061
Sr	88	3	He	0.049	0.0014	130.01	0.009	0.0009645
Sr	88	3	He	0.066	0.0016	140.01	0.009	0.0009645
Sr	88	3	He	-0.021	0.0008	70.00	0.009	0.0009645
Mo	98	3	He	0.007	0.0004	40.00	0.0219	0.0002706
Mo	98	3	He	0.023	0.0008	70.00	0.0219	0.0002706
Mo	98	3	He	0.003	0.0003	30.00	0.0219	0.0002706
Ag	107	3	He	0.001	0.0006	60.00	0.0465	0.0006206
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Ag	107	3	He	-0.009	0.0002	20.00	0.0465	0.0006206
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.008	0	4.00	0.0053	0
Sn	120	3	He	-0.094	0.015	1390.11	0.0158	0.01648
Sn	120	3	He	-0.018	0.0162	1460.13	0.0158	0.01648
Sn	120	3	He	0	0.0165	1480.13	0.0158	0.01648
Sb	121	3	He	0.011	0.0004	40.00	0.0149	0.0002698
Sb	121	3	He	0.004	0.0003	30.00	0.0149	0.0002698
Sb	121	3	He	0.019	0.0006	50.00	0.0149	0.0002698
Ba	137	3	He	0.042	0.0004	40.00	0.0048	0.0002317
Ba	137	3	He	-0.002	0.0002	20.00	0.0048	0.0002317
Ba	137	3	He	-0.002	0.0002	20.00	0.0048	0.0002317
Tl	205	3	He	0.032	0.0009	370.02	0.0247	0.0001339
Tl	205	3	He	0.01	0.0004	150.01	0.0247	0.0001339
Tl	205	3	He	0.014	0.0005	200.01	0.0247	0.0001339
Pb	208	3	He	0.007	0.0013	310.01	0.0327	0.00107
Pb	208	3	He	0.014	0.0015	310.02	0.0327	0.00107
Pb	208	3	He	0.012	0.0015	300.02	0.0327	0.00107
U	238	3	He	0.009	0.0005	170.01	0.0493	7.55E-05
U	238	3	He	0.009	0.0005	170.01	0.0493	7.55E-05
U	238	3	He	0.018	0.001	300.02	0.0493	7.55E-05
Sc	45	1	No Gas			2498054.49		
Sc	45	1	No Gas			2517416.06		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2504175.43		
Ge	72	1	No Gas			1233453.26		
Ge	72	1	No Gas			1253257.01		
Ge	72	1	No Gas			1232316.15		
Sc	45	2	H2			192844.49		
Sc	45	2	H2			190521.85		
Sc	45	2	H2			191406.79		
Ge	72	2	H2			164184.74		
Ge	72	2	H2			165042.30		
Ge	72	2	H2			165730.41		
In	115	2	H2			398732.49		
In	115	2	H2			400286.63		
In	115	2	H2			401656.99		
Sc	45	3	He			48411.58		
Sc	45	3	He			49404.44		
Sc	45	3	He			50508.58		
Ge	72	3	He			87376.65		
Ge	72	3	He			85345.01		
Ge	72	3	He			87265.51		
In	115	3	He			92789.34		
In	115	3	He			90182.03		
In	115	3	He			89809.64		
Tb	159	3	He			405318.67		
Tb	159	3	He			399271.60		
Tb	159	3	He			406793.20		
Bi	209	3	He			316759.10		
Bi	209	3	He			313050.58		
Bi	209	3	He			311875.97		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
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Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

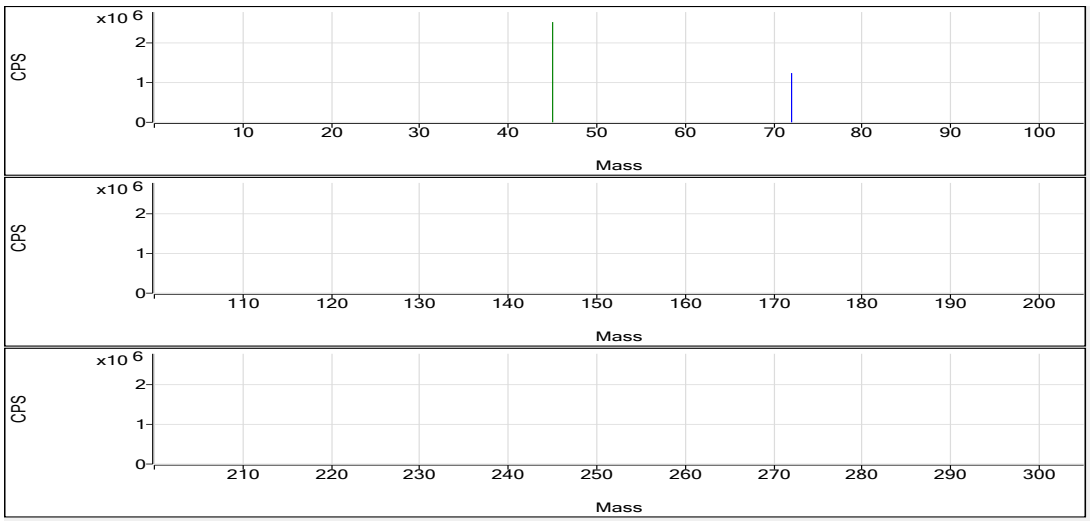
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.005	ppb	18.6	22.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.021	ppb	69.9	3.56	0.0000	Pulse	1.5000	3
Na	23	45	He	111.738	ppb	6.5	37327.89	0.7448	Pulse	0.1000	3
Mg	24	45	He	1.806	ppb	37.6	336.68	0.0067	Pulse	0.1000	3
Al	27	45	He	0.702	ppb	147.4	53.33	0.0011	Pulse	0.1000	3
K	39	45	He	7.984	ppb	156.6	20264.70	0.4044	Pulse	0.1000	3
Ca	44	45	He	13.962	ppb	62.4	183.34	0.0037	Pulse	0.1000	3
Ti	47	45	He	0.357	ppb	118.2	13.33	0.0003	Pulse	0.1000	3
V	51	45	He	0.865	ppb	7.0	2194.85	0.0438	Pulse	0.5000	3
Cr	52	45	He	-0.163	ppb	N/A	1760.17	0.0351	Pulse	0.1000	3
Mn	55	45	He	0.063	ppb	68.1	173.34	0.0034	Pulse	0.1000	3
Fe	57	45	He	1.572	ppb	84.3	116.67	0.0023	Pulse	0.1000	3
Co	59	45	He	0.016	ppb	44.2	153.34	0.0031	Pulse	0.1000	3
Ni	60	72	He	-0.025	ppb	N/A	230.01	0.0026	Pulse	0.1000	3
Cu	63	72	He	0.051	ppb	50.3	533.36	0.0061	Pulse	0.1000	3
Zn	66	72	He	3.488	ppb	8.1	1226.76	0.0140	Pulse	0.1000	3
As	75	72	He	0.077	ppb	102.8	84.67	0.0010	Pulse	0.5000	3
Sr	88	115	He	0.024	ppb	164.5	106.67	0.0012	Pulse	0.1000	3
Mo	98	115	He	0.028	ppb	18.1	80.00	0.0009	Pulse	0.1000	3
Ag	107	115	He	0.003	ppb	302.7	66.67	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.010	ppb	25.1	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.022	ppb	N/A	1456.79	0.0161	Pulse	0.1000	3
Sb	121	115	He	0.014	ppb	62.0	43.33	0.0005	Pulse	0.1000	3
Ba	137	115	He	0.029	ppb	47.6	33.33	0.0004	Pulse	0.1000	3
Tl	205	159	He	0.020	ppb	26.1	253.34	0.0006	Pulse	0.1000	3
Pb	208	159	He	0.007	ppb	137.1	523.35	0.0013	Pulse	0.1000	3
U	238	209	He	0.007	ppb	38.6	133.34	0.0004	Pulse	0.1000	3

ISTD Table:

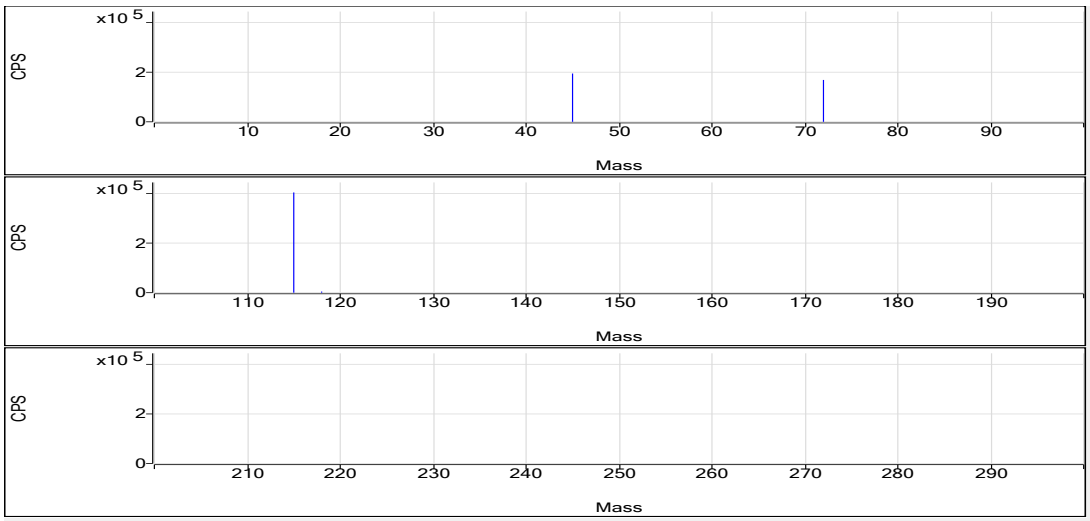
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2515453.45	0.7	104.9	Analog	0.1000	3
No Gas	Ge	72	1235516.60	0.8	107.1	Pulse	0.1000	3
H2	Sc	45	195155.04	0.7	104.4	Pulse	0.1000	3
H2	Ge	72	169192.47	1.2	103.3	Pulse	0.1000	3
H2	In	115	405002.91	1.1	104.1	Pulse	0.1000	3
He	Sc	45	50150.35	3.1	107.5	Pulse	0.1000	3
He	Ge	72	87835.93	1.4	108.2	Pulse	0.1000	3
He	In	115	90368.51	0.7	104.8	Pulse	0.1000	3
He	Tb	159	406795.42	0.7	102.1	Pulse	0.1000	3
He	Bi	209	312236.77	0.6	101.0	Pulse	0.1000	3

No Gas

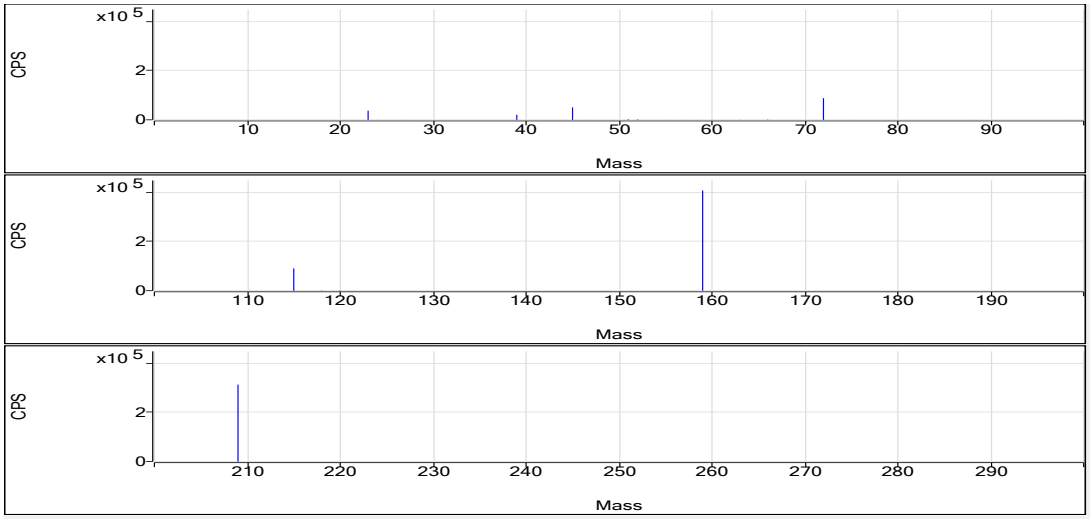


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.004	0	20.00	0.0008	4.685E-06
Be	9	1	No Gas	0.006	0	24.00	0.0008	4.685E-06
Be	9	1	No Gas	0.005	0	22.00	0.0008	4.685E-06
Se	78	2	H2	0.008	0	2.67	0.0004	1.219E-05
Se	78	2	H2	0.018	0	3.33	0.0004	1.219E-05
Se	78	2	H2	0.037	0	4.67	0.0004	1.219E-05
Na	23	3	He	111.618	0.7444	37308.08	0.0036	0.3452
Na	23	3	He	104.529	0.7191	37177.28	0.0036	0.3452
Na	23	3	He	119.066	0.7711	37498.31	0.0036	0.3452
Mg	24	3	He	1.943	0.007	350.02	0.0018	0.003497
Mg	24	3	He	1.069	0.0054	280.01	0.0018	0.003497
Mg	24	3	He	2.406	0.0078	380.02	0.0018	0.003497
Al	27	3	He	-0.076	0.0006	30.00	0.0006	0.0006432
Al	27	3	He	1.876	0.0017	90.00	0.0006	0.0006432
Al	27	3	He	0.306	0.0008	40.00	0.0006	0.0006432
K	39	3	He	12.607	0.4097	20535.15	0.0012	0.3951
K	39	3	He	-6.171	0.3879	20054.36	0.0012	0.3951
K	39	3	He	17.514	0.4155	20204.59	0.0012	0.3951
Ca	44	3	He	4.119	0.003	150.01	0.0001	0.002715
Ca	44	3	He	17.076	0.0039	200.01	0.0001	0.002715
Ca	44	3	He	20.692	0.0041	200.01	0.0001	0.002715
Ti	47	3	He	0.613	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	0.59	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	0.927	0.0451	2262.19	0.0219	0.02486
V	51	3	He	0.806	0.0425	2196.18	0.0219	0.02486
V	51	3	He	0.863	0.0437	2126.17	0.0219	0.02486
Cr	52	3	He	-0.015	0.0395	1980.21	0.0299	0.03997
Cr	52	3	He	-0.217	0.0335	1730.16	0.0299	0.03997
Cr	52	3	He	-0.257	0.0323	1570.13	0.0299	0.03997
Mn	55	3	He	0.028	0.003	150.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.111	0.0041	210.01	0.0128	0.002639
Mn	55	3	He	0.051	0.0033	160.01	0.0128	0.002639
Fe	57	3	He	1.662	0.0024	120.00	0.0006	0.001429
Fe	57	3	He	0.204	0.0015	80.00	0.0006	0.001429
Fe	57	3	He	2.85	0.0031	150.01	0.0006	0.001429
Co	59	3	He	0.008	0.0026	130.00	0.0563	0.002149
Co	59	3	He	0.02	0.0033	170.01	0.0563	0.002149
Co	59	3	He	0.02	0.0033	160.01	0.0563	0.002149
Ni	60	3	He	-0.042	0.0025	220.01	0.0086	0.002834
Ni	60	3	He	0.04	0.0032	280.02	0.0086	0.002834
Ni	60	3	He	-0.074	0.0022	190.01	0.0086	0.002834
Cu	63	3	He	0.078	0.0068	600.03	0.0257	0.004757
Cu	63	3	He	0.049	0.006	530.03	0.0257	0.004757
Cu	63	3	He	0.027	0.0054	470.02	0.0257	0.004757
Zn	66	3	He	3.326	0.0135	1200.09	0.0029	0.003818
Zn	66	3	He	3.324	0.0135	1190.09	0.0029	0.003818
Zn	66	3	He	3.815	0.0149	1290.10	0.0029	0.003818
As	75	3	He	0.002	0.0008	72.00	0.002	0.0008061
As	75	3	He	0.16	0.0011	100.00	0.002	0.0008061
As	75	3	He	0.07	0.0009	82.00	0.002	0.0008061
Sr	88	3	He	0.054	0.0014	130.01	0.009	0.0009645
Sr	88	3	He	0.039	0.0013	120.00	0.009	0.0009645
Sr	88	3	He	-0.021	0.0008	70.00	0.009	0.0009645
Mo	98	3	He	0.033	0.001	90.00	0.0219	0.0002706
Mo	98	3	He	0.028	0.0009	80.00	0.0219	0.0002706
Mo	98	3	He	0.023	0.0008	70.00	0.0219	0.0002706
Ag	107	3	He	0.008	0.001	90.00	0.0465	0.0006206
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Ag	107	3	He	0.006	0.0009	80.00	0.0465	0.0006206
Cd	111	3	He	0.008	0	4.00	0.0053	0
Cd	111	3	He	0.008	0	4.00	0.0053	0
Cd	111	3	He	0.012	0.0001	6.00	0.0053	0
Sn	120	3	He	0.026	0.0169	1520.13	0.0158	0.01648
Sn	120	3	He	-0.063	0.0155	1410.12	0.0158	0.01648
Sn	120	3	He	-0.031	0.016	1440.13	0.0158	0.01648
Sb	121	3	He	0.019	0.0006	50.00	0.0149	0.0002698
Sb	121	3	He	0.004	0.0003	30.00	0.0149	0.0002698
Sb	121	3	He	0.019	0.0006	50.00	0.0149	0.0002698
Ba	137	3	He	0.044	0.0004	40.00	0.0048	0.0002317
Ba	137	3	He	0.02	0.0003	30.00	0.0048	0.0002317
Ba	137	3	He	0.021	0.0003	30.00	0.0048	0.0002317
Tl	205	3	He	0.014	0.0005	200.01	0.0247	0.0001339
Tl	205	3	He	0.02	0.0006	260.01	0.0247	0.0001339
Tl	205	3	He	0.025	0.0007	300.01	0.0247	0.0001339
Pb	208	3	He	0.005	0.0012	300.02	0.0327	0.00107
Pb	208	3	He	0.016	0.0016	370.02	0.0327	0.00107
Pb	208	3	He	-0.002	0.001	230.01	0.0327	0.00107
U	238	3	He	0.005	0.0003	100.00	0.0493	7.55E-05
U	238	3	He	0.006	0.0004	120.00	0.0493	7.55E-05
U	238	3	He	0.01	0.0006	180.01	0.0493	7.55E-05
Sc	45	1	No Gas			2511606.21		
Sc	45	1	No Gas			2534676.52		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2500077.62		
Ge	72	1	No Gas			1232358.11		
Ge	72	1	No Gas			1246558.11		
Ge	72	1	No Gas			1227633.58		
Sc	45	2	H2			196369.65		
Sc	45	2	H2			195551.07		
Sc	45	2	H2			193544.39		
Ge	72	2	H2			171448.42		
Ge	72	2	H2			167957.20		
Ge	72	2	H2			168171.79		
In	115	2	H2			409870.66		
In	115	2	H2			401270.15		
In	115	2	H2			403867.92		
Sc	45	3	He			50116.82		
Sc	45	3	He			51702.24		
Sc	45	3	He			48632.00		
Ge	72	3	He			88885.82		
Ge	72	3	He			88181.46		
Ge	72	3	He			86440.50		
In	115	3	He			90001.18		
In	115	3	He			91068.02		
In	115	3	He			90061.22		
Tb	159	3	He			409912.53		
Tb	159	3	He			405830.42		
Tb	159	3	He			404643.31		
Bi	209	3	He			314209.08		
Bi	209	3	He			311977.63		
Bi	209	3	He			310523.61		

Quantitation Report

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Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	8/10/2023 4:36:39 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

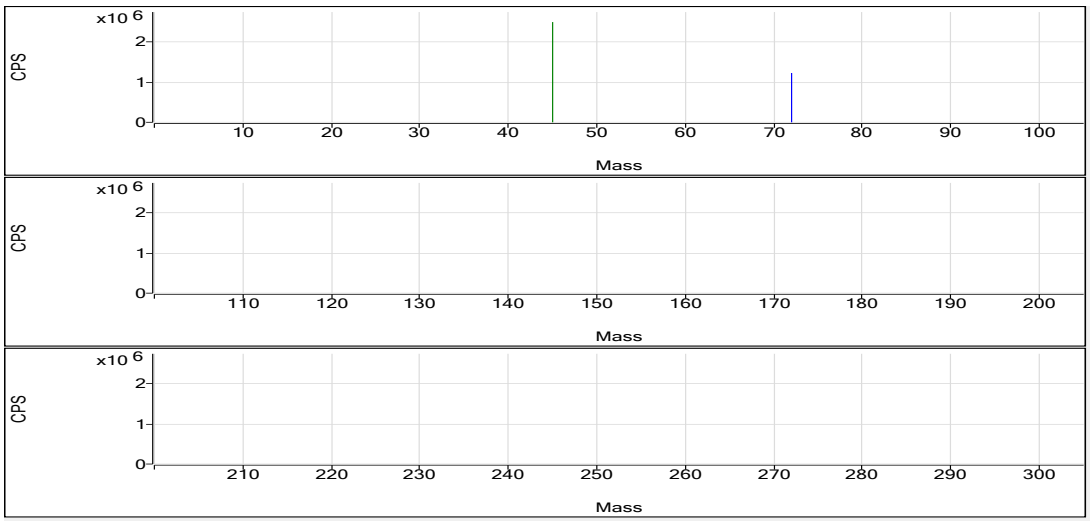
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.008	ppb	87.0	26.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.001	ppb	N/A	2.00	0.0000	Pulse	1.5000	3
Na	23	45	He	102.052	ppb	4.7	35329.60	0.7102	Pulse	0.1000	3
Mg	24	45	He	1.001	ppb	86.3	263.35	0.0053	Pulse	0.1000	3
Al	27	45	He	0.622	ppb	59.0	50.00	0.0010	Pulse	0.1000	3
K	39	45	He	6.929	ppb	185.6	20057.77	0.4031	Pulse	0.1000	3
Ca	44	45	He	12.434	ppb	43.4	176.68	0.0036	Pulse	0.1000	3
Ti	47	45	He	0.240	ppb	152.5	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	0.874	ppb	8.1	2187.51	0.0440	Pulse	0.5000	3
Cr	52	45	He	-0.069	ppb	N/A	1886.86	0.0379	Pulse	0.1000	3
Mn	55	45	He	0.093	ppb	65.9	190.01	0.0038	Pulse	0.1000	3
Fe	57	45	He	0.193	ppb	730.8	76.67	0.0015	Pulse	0.1000	3
Co	59	45	He	0.015	ppb	84.6	150.01	0.0030	Pulse	0.1000	3
Ni	60	72	He	-0.060	ppb	N/A	200.01	0.0023	Pulse	0.1000	3
Cu	63	72	He	0.029	ppb	97.6	476.70	0.0055	Pulse	0.1000	3
Zn	66	72	He	2.968	ppb	4.9	1076.74	0.0125	Pulse	0.1000	3
As	75	72	He	0.186	ppb	59.3	102.67	0.0012	Pulse	0.5000	3
Sr	88	115	He	-0.004	ppb	N/A	83.33	0.0009	Pulse	0.1000	3
Mo	98	115	He	0.019	ppb	77.7	63.33	0.0007	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	3514.4	56.67	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.003	ppb	173.2	1.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.074	ppb	148.1	1600.26	0.0176	Pulse	0.1000	3
Sb	121	115	He	-0.006	ppb	N/A	16.67	0.0002	Pulse	0.1000	3
Ba	137	115	He	-0.017	ppb	N/A	13.33	0.0001	Pulse	0.1000	3
Tl	205	159	He	0.015	ppb	56.4	203.34	0.0005	Pulse	0.1000	3
Pb	208	159	He	0.009	ppb	20.8	553.36	0.0014	Pulse	0.1000	3
U	238	209	He	0.006	ppb	49.1	123.34	0.0004	Pulse	0.1000	3

ISTD Table:

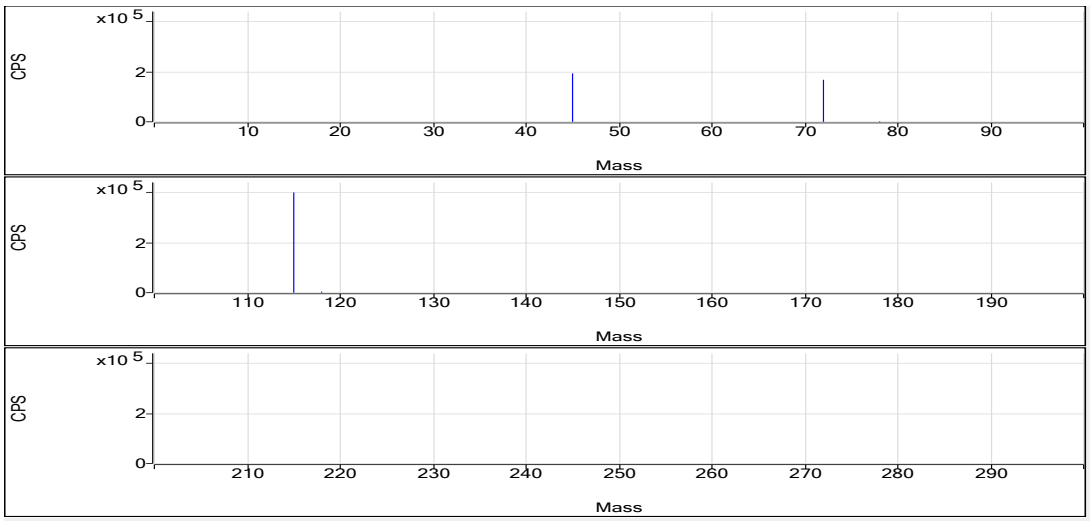
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2504785.02	1.5	104.4	Analog	0.1000	3
No Gas	Ge	72	1231868.00	0.4	106.8	Pulse	0.1000	3
H2	Sc	45	193493.41	0.8	103.5	Pulse	0.1000	3
H2	Ge	72	167896.87	1.1	102.6	Pulse	0.1000	3
H2	In	115	400393.35	0.9	102.9	Pulse	0.1000	3
He	Sc	45	49759.22	1.9	106.7	Pulse	0.1000	3
He	Ge	72	86407.08	1.2	106.4	Pulse	0.1000	3
He	In	115	90654.61	1.4	105.2	Pulse	0.1000	3
He	Tb	159	406418.54	0.6	102.0	Pulse	0.1000	3
He	Bi	209	314224.81	0.5	101.6	Pulse	0.1000	3

No Gas

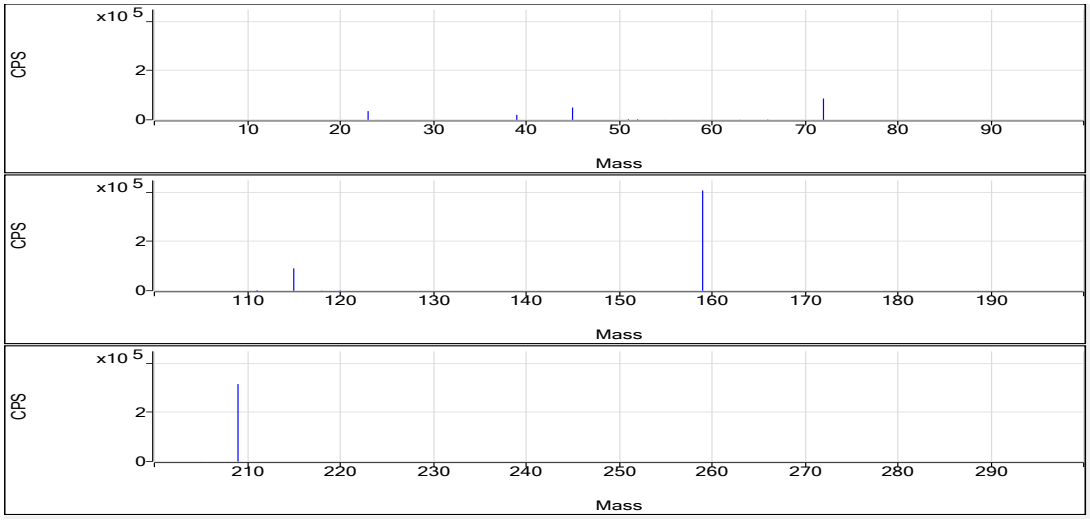


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.015	0	40.00	0.0008	4.685E-06
Be	9	1	No Gas	0.003	0	18.00	0.0008	4.685E-06
Be	9	1	No Gas	0.004	0	20.00	0.0008	4.685E-06
Se	78	2	H2	0.018	0	3.33	0.0004	1.219E-05
Se	78	2	H2	-0.02	0	0.67	0.0004	1.219E-05
Se	78	2	H2	-0.001	0	2.00	0.0004	1.219E-05
Na	23	3	He	96.806	0.6914	35152.40	0.0036	0.3452
Na	23	3	He	103.037	0.7137	35032.23	0.0036	0.3452
Na	23	3	He	106.314	0.7254	35804.16	0.0036	0.3452
Mg	24	3	He	1.121	0.0055	280.01	0.0018	0.003497
Mg	24	3	He	1.798	0.0067	330.02	0.0018	0.003497
Mg	24	3	He	0.084	0.0036	180.01	0.0018	0.003497
Al	27	3	He	0.245	0.0008	40.00	0.0006	0.0006432
Al	27	3	He	0.642	0.001	50.00	0.0006	0.0006432
Al	27	3	He	0.978	0.0012	60.00	0.0006	0.0006432
K	39	3	He	6.08	0.4021	20444.90	0.0012	0.3951
K	39	3	He	20.192	0.4186	20545.23	0.0012	0.3951
K	39	3	He	-5.484	0.3887	19183.17	0.0012	0.3951
Ca	44	3	He	6.401	0.0031	160.01	0.0001	0.002715
Ca	44	3	He	14.1	0.0037	180.01	0.0001	0.002715
Ca	44	3	He	16.801	0.0038	190.01	0.0001	0.002715
Ti	47	3	He	0.602	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	0.249	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	0.803	0.0424	2156.17	0.0219	0.02486
V	51	3	He	0.945	0.0455	2234.19	0.0219	0.02486
V	51	3	He	0.876	0.044	2172.18	0.0219	0.02486
Cr	52	3	He	-0.028	0.0391	1990.21	0.0299	0.03997
Cr	52	3	He	-0.056	0.0383	1880.19	0.0299	0.03997
Cr	52	3	He	-0.124	0.0363	1790.18	0.0299	0.03997
Mn	55	3	He	0.024	0.003	150.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.112	0.0041	200.01	0.0128	0.002639
Mn	55	3	He	0.142	0.0045	220.01	0.0128	0.002639
Fe	57	3	He	-0.089	0.0014	70.00	0.0006	0.001429
Fe	57	3	He	-1.057	0.0008	40.00	0.0006	0.001429
Fe	57	3	He	1.726	0.0024	120.00	0.0006	0.001429
Co	59	3	He	0.007	0.0026	130.00	0.0563	0.002149
Co	59	3	He	0.031	0.0039	190.01	0.0563	0.002149
Co	59	3	He	0.009	0.0026	130.01	0.0563	0.002149
Ni	60	3	He	0.051	0.0033	280.01	0.0086	0.002834
Ni	60	3	He	-0.181	0.0013	110.00	0.0086	0.002834
Ni	60	3	He	-0.051	0.0024	210.01	0.0086	0.002834
Cu	63	3	He	-0.003	0.0047	400.02	0.0257	0.004757
Cu	63	3	He	0.041	0.0058	500.03	0.0257	0.004757
Cu	63	3	He	0.05	0.0061	530.04	0.0257	0.004757
Zn	66	3	He	3.061	0.0127	1090.08	0.0029	0.003818
Zn	66	3	He	2.802	0.012	1030.07	0.0029	0.003818
Zn	66	3	He	3.042	0.0127	1110.08	0.0029	0.003818
As	75	3	He	0.097	0.001	86.00	0.002	0.0008061
As	75	3	He	0.151	0.0011	96.00	0.002	0.0008061
As	75	3	He	0.309	0.0014	126.00	0.002	0.0008061
Sr	88	3	He	0.067	0.0016	140.00	0.009	0.0009645
Sr	88	3	He	0.002	0.001	90.00	0.009	0.0009645
Sr	88	3	He	-0.083	0.0002	20.00	0.009	0.0009645
Mo	98	3	He	0.003	0.0003	30.00	0.0219	0.0002706
Mo	98	3	He	0.033	0.001	90.00	0.0219	0.0002706
Mo	98	3	He	0.023	0.0008	70.00	0.0219	0.0002706
Ag	107	3	He	0.001	0.0007	60.00	0.0465	0.0006206
Ag	107	3	He	-0.004	0.0004	40.00	0.0465	0.0006206
Ag	107	3	He	0.003	0.0008	70.01	0.0465	0.0006206
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0.008	0	4.00	0.0053	0
Sn	120	3	He	-0.014	0.0163	1450.13	0.0158	0.01648
Sn	120	3	He	0.039	0.0171	1560.15	0.0158	0.01648
Sn	120	3	He	0.196	0.0196	1790.50	0.0158	0.01648
Sb	121	3	He	0.004	0.0003	30.00	0.0149	0.0002698
Sb	121	3	He	-0.018	0	0.00	0.0149	0.0002698
Sb	121	3	He	-0.003	0.0002	20.00	0.0149	0.0002698
Ba	137	3	He	-0.002	0.0002	20.00	0.0048	0.0002317
Ba	137	3	He	-0.025	0.0001	10.00	0.0048	0.0002317
Ba	137	3	He	-0.025	0.0001	10.00	0.0048	0.0002317
Tl	205	3	He	0.005	0.0003	110.00	0.0247	0.0001339
Tl	205	3	He	0.022	0.0007	270.01	0.0247	0.0001339
Tl	205	3	He	0.017	0.0006	230.01	0.0247	0.0001339
Pb	208	3	He	0.011	0.0014	280.01	0.0327	0.00107
Pb	208	3	He	0.009	0.0014	280.01	0.0327	0.00107
Pb	208	3	He	0.007	0.0013	260.01	0.0327	0.00107
U	238	3	He	0.004	0.0003	90.00	0.0493	7.55E-05
U	238	3	He	0.005	0.0003	100.00	0.0493	7.55E-05
U	238	3	He	0.01	0.0006	180.01	0.0493	7.55E-05
Sc	45	1	No Gas			2477551.84		
Sc	45	1	No Gas			2490416.37		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2546386.84		
Ge	72	1	No Gas			1230549.43		
Ge	72	1	No Gas			1227518.50		
Ge	72	1	No Gas			1237536.08		
Sc	45	2	H2			194949.82		
Sc	45	2	H2			192027.79		
Sc	45	2	H2			193502.63		
Ge	72	2	H2			169617.07		
Ge	72	2	H2			166015.76		
Ge	72	2	H2			168057.79		
In	115	2	H2			396369.64		
In	115	2	H2			401375.31		
In	115	2	H2			403435.11		
Sc	45	3	He			50839.59		
Sc	45	3	He			49083.60		
Sc	45	3	He			49354.48		
Ge	72	3	He			85625.89		
Ge	72	3	He			86018.21		
Ge	72	3	He			87577.13		
In	115	3	He			89194.70		
In	115	3	He			91309.70		
In	115	3	He			91480.96		
Tb	159	3	He			408088.43		
Tb	159	3	He			403583.63		
Tb	159	3	He			407583.55		
Bi	209	3	He			314724.60		
Bi	209	3	He			312621.40		
Bi	209	3	He			315328.43		

Quantitation Report

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Sample Type	CCV
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

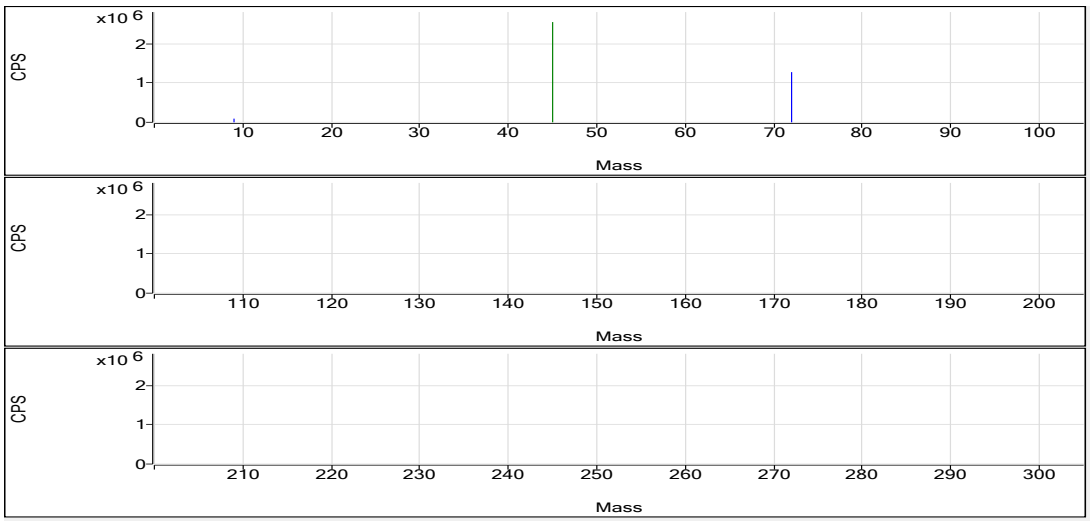
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	47.775	ppb	1.0	92920.09	0.0364	Pulse	0.5000	3
Se	78	72	H2	51.302	ppb	1.6	3606.02	0.0214	Pulse	1.5000	3
Na	23	45	He	4905.364	ppb	1.1	877191.21	17.8919	Pulse	0.1000	3
Mg	24	45	He	5027.978	ppb	0.6	442492.21	9.0253	Pulse	0.1000	3
Al	27	45	He	4963.913	ppb	1.5	142406.60	2.9047	Pulse	0.1000	3
K	39	45	He	5122.799	ppb	1.6	311788.10	6.3597	Pulse	0.1000	3
Ca	44	45	He	5216.847	ppb	3.2	17410.92	0.3551	Pulse	0.1000	3
Ti	47	45	He	5116.796	ppb	0.9	134707.23	2.7475	Pulse	0.1000	3
V	51	45	He	518.174	ppb	1.1	556537.25	11.3517	Pulse	0.5000	3
Cr	52	45	He	490.291	ppb	1.2	721667.10	14.7196	Pulse	0.1000	3
Mn	55	45	He	513.978	ppb	1.5	323526.08	6.5990	Pulse	0.1000	3
Fe	57	45	He	5114.735	ppb	0.9	145763.21	2.9730	Pulse	0.1000	3
Co	59	45	He	500.696	ppb	1.9	1381912.53	28.1825	Mix	0.1000	3
Ni	60	72	He	506.105	ppb	2.8	384186.91	4.3468	Pulse	0.1000	3
Cu	63	72	He	480.690	ppb	1.9	1091136.34	12.3446	Pulse	0.1000	3
Zn	66	72	He	507.405	ppb	2.3	130922.65	1.4812	Pulse	0.1000	3
As	75	72	He	511.285	ppb	1.8	92665.39	1.0484	Pulse	0.5000	3
Sr	88	115	He	51.153	ppb	1.2	40943.52	0.4598	Pulse	0.1000	3
Mo	98	115	He	51.325	ppb	0.7	100232.99	1.1257	Pulse	0.1000	3
Ag	107	115	He	51.117	ppb	0.9	211649.03	2.3769	Pulse	0.1000	3
Cd	111	115	He	51.256	ppb	1.2	24403.29	0.2741	Pulse	0.5000	3
Sn	120	115	He	51.249	ppb	0.9	73562.53	0.8261	Pulse	0.1000	3
Sb	121	115	He	52.464	ppb	1.7	69411.31	0.7795	Pulse	0.1000	3
Ba	137	115	He	521.968	ppb	1.0	223096.61	2.5053	Pulse	0.1000	3
Tl	205	159	He	50.991	ppb	0.3	513708.24	1.2610	Pulse	0.1000	3
Pb	208	159	He	51.567	ppb	0.5	688014.19	1.6888	Pulse	0.1000	3
U	238	209	He	50.379	ppb	0.6	775493.71	2.4817	Pulse	0.1000	3

ISTD Table:

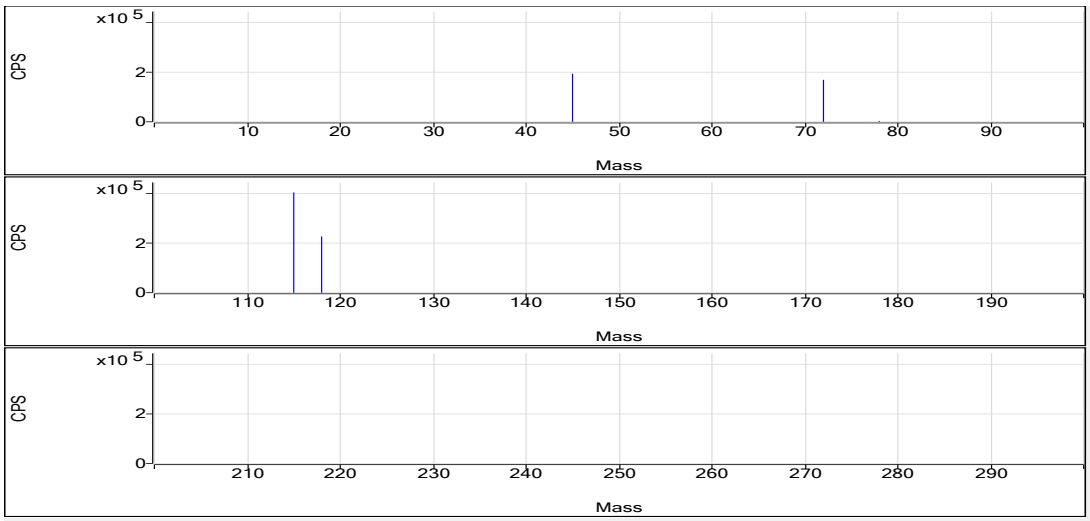
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2549637.57	1.1	106.3	Analog	0.1000	3
No Gas	Ge	72	1276019.77	0.6	110.6	Pulse	0.1000	3
H2	Sc	45	192941.45	0.6	103.2	Pulse	0.1000	3
H2	Ge	72	168429.19	0.5	102.9	Pulse	0.1000	3
H2	In	115	402297.60	1.4	103.4	Pulse	0.1000	3
He	Sc	45	49029.80	0.9	105.1	Pulse	0.1000	3
He	Ge	72	88403.08	1.2	108.9	Pulse	0.1000	3
He	In	115	89048.50	1.0	103.3	Pulse	0.1000	3
He	Tb	159	407397.73	0.5	102.2	Pulse	0.1000	3
He	Bi	209	312488.21	1.2	101.0	Pulse	0.1000	3

No Gas

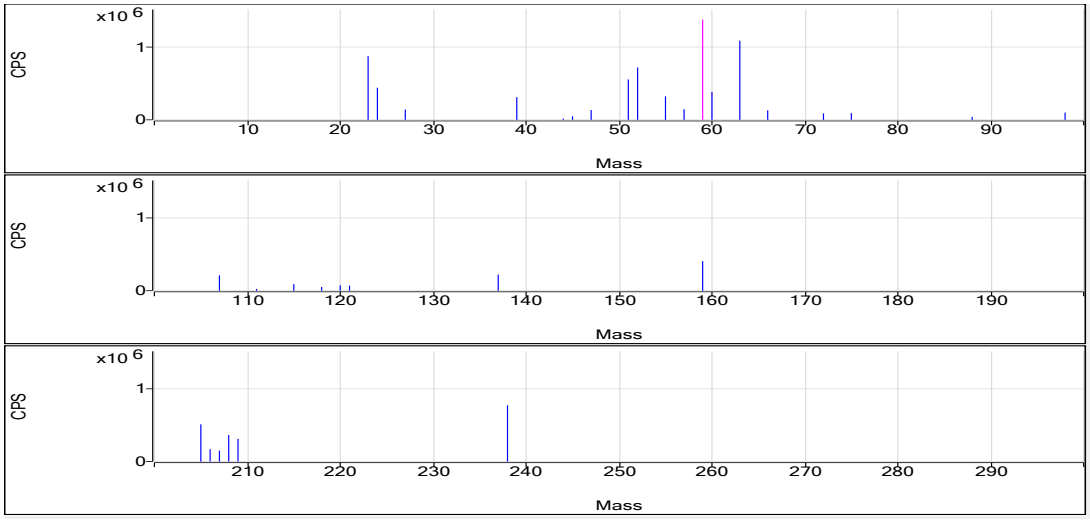


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	48.318	0.0369	92893.98	0.0008	4.685E-06
Be	9	1	No Gas	47.379	0.0361	92326.33	0.0008	4.685E-06
Be	9	1	No Gas	47.627	0.0363	93539.97	0.0008	4.685E-06
Se	78	2	H2	50.356	0.021	3518.44	0.0004	1.219E-05
Se	78	2	H2	51.797	0.0216	3657.14	0.0004	1.219E-05
Se	78	2	H2	51.752	0.0216	3642.47	0.0004	1.219E-05
Na	23	3	He	4892.65	17.8464	882230.38	0.0036	0.3452
Na	23	3	He	4963.333	18.0992	878563.74	0.0036	0.3452
Na	23	3	He	4860.108	17.73	870779.52	0.0036	0.3452
Mg	24	3	He	5005.43	8.9848	444162.61	0.0018	0.003497
Mg	24	3	He	5064.641	9.0911	441294.92	0.0018	0.003497
Mg	24	3	He	5013.863	9	442019.09	0.0018	0.003497
Al	27	3	He	4944.758	2.8935	143039.02	0.0006	0.0006432
Al	27	3	He	5047.509	2.9536	143372.62	0.0006	0.0006432
Al	27	3	He	4899.472	2.867	140808.16	0.0006	0.0006432
K	39	3	He	5087.241	6.3183	312341.62	0.0012	0.3951
K	39	3	He	5218.462	6.4711	314114.74	0.0012	0.3951
K	39	3	He	5062.694	6.2897	308907.93	0.0012	0.3951
Ca	44	3	He	5068.639	0.3451	17060.44	0.0001	0.002715
Ca	44	3	He	5187.108	0.3531	17140.67	0.0001	0.002715
Ca	44	3	He	5394.793	0.3671	18031.64	0.0001	0.002715
Ti	47	3	He	5127.383	2.7532	136104.07	0.0005	7.003E-05
Ti	47	3	He	5157.763	2.7695	134436.83	0.0005	7.003E-05
Ti	47	3	He	5065.244	2.7198	133580.80	0.0005	7.003E-05
V	51	3	He	514.114	11.263	556780.38	0.0219	0.02486
V	51	3	He	524.372	11.4872	557605.88	0.0219	0.02486
V	51	3	He	516.036	11.305	555225.50	0.0219	0.02486
Cr	52	3	He	490.219	14.7175	727553.50	0.0299	0.03997
Cr	52	3	He	496.137	14.8947	723009.05	0.0299	0.03997
Cr	52	3	He	484.516	14.5467	714438.74	0.0299	0.03997
Mn	55	3	He	513.346	6.5909	325816.60	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	521.874	6.7003	325242.38	0.0128	0.002639
Mn	55	3	He	506.715	6.5058	319519.27	0.0128	0.002639
Fe	57	3	He	5065.122	2.9442	145546.30	0.0006	0.001429
Fe	57	3	He	5127.635	2.9805	144679.65	0.0006	0.001429
Fe	57	3	He	5151.45	2.9944	147063.68	0.0006	0.001429
Co	59	3	He	511.728	28.8034	1423884.67	0.0563	0.002149
Co	59	3	He	494.63	27.8411	1351445.76	0.0563	0.002149
Co	59	3	He	495.73	27.903	1370407.17	0.0563	0.002149
Ni	60	3	He	520.988	4.4746	390613.24	0.0086	0.002834
Ni	60	3	He	492.936	4.2338	378409.25	0.0086	0.002834
Ni	60	3	He	504.392	4.3321	383538.24	0.0086	0.002834
Cu	63	3	He	490.263	12.5903	1099092.64	0.0257	0.004757
Cu	63	3	He	472.309	12.1294	1084112.48	0.0257	0.004757
Cu	63	3	He	479.497	12.314	1090203.89	0.0257	0.004757
Zn	66	3	He	513.819	1.4999	130932.92	0.0029	0.003818
Zn	66	3	He	493.908	1.4419	128873.93	0.0029	0.003818
Zn	66	3	He	514.488	1.5018	132961.10	0.0029	0.003818
As	75	3	He	520.467	1.0672	93160.74	0.002	0.0008061
As	75	3	He	502.255	1.0299	92047.54	0.002	0.0008061
As	75	3	He	511.132	1.048	92787.89	0.002	0.0008061
Sr	88	3	He	50.704	0.4558	40980.08	0.009	0.0009645
Sr	88	3	He	50.934	0.4578	40378.52	0.009	0.0009645
Sr	88	3	He	51.821	0.4658	41471.96	0.009	0.0009645
Mo	98	3	He	50.892	1.1161	100357.46	0.0219	0.0002706
Mo	98	3	He	51.603	1.1317	99813.48	0.0219	0.0002706
Mo	98	3	He	51.481	1.1291	100528.03	0.0219	0.0002706
Ag	107	3	He	50.698	2.3574	211966.97	0.0465	0.0006206
Ag	107	3	He	51.63	2.4007	211732.81	0.0465	0.0006206
Ag	107	3	He	51.024	2.3726	211247.30	0.0465	0.0006206
Cd	111	3	He	51.047	0.2729	24541.56	0.0053	0
Cd	111	3	He	51.936	0.2777	24491.41	0.0053	0
Cd	111	3	He	50.785	0.2715	24176.89	0.0053	0
Sn	120	3	He	50.773	0.8186	73605.63	0.0158	0.01648
Sn	120	3	He	51.74	0.8339	73545.60	0.0158	0.01648
Sn	120	3	He	51.235	0.8259	73536.37	0.0158	0.01648
Sb	121	3	He	52.062	0.7736	69554.84	0.0149	0.0002698
Sb	121	3	He	53.5	0.7949	70108.13	0.0149	0.0002698
Sb	121	3	He	51.832	0.7701	68570.95	0.0149	0.0002698
Ba	137	3	He	519.239	2.4922	224088.24	0.0048	0.0002317
Ba	137	3	He	518.582	2.4891	219523.22	0.0048	0.0002317
Ba	137	3	He	528.083	2.5347	225678.36	0.0048	0.0002317
Tl	205	3	He	51.114	1.264	516136.75	0.0247	0.0001339
Tl	205	3	He	51.003	1.2612	511101.13	0.0247	0.0001339
Tl	205	3	He	50.856	1.2576	513886.83	0.0247	0.0001339
Pb	208	3	He	51.425	1.6842	366903.00	0.0327	0.00107
Pb	208	3	He	51.862	1.6985	365898.86	0.0327	0.00107
Pb	208	3	He	51.412	1.6838	366929.06	0.0327	0.00107
U	238	3	He	50.323	2.479	784784.91	0.0493	7.55E-05
U	238	3	He	50.693	2.4972	772330.61	0.0493	7.55E-05
U	238	3	He	50.12	2.469	769365.61	0.0493	7.55E-05
Sc	45	1	No Gas			2520100.43		
Sc	45	1	No Gas			2554336.37		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2574475.90		
Ge	72	1	No Gas			1272703.73		
Ge	72	1	No Gas			1270618.89		
Ge	72	1	No Gas			1284736.70		
Sc	45	2	H2			194180.31		
Sc	45	2	H2			192195.37		
Sc	45	2	H2			192448.67		
Ge	72	2	H2			167431.79		
Ge	72	2	H2			169192.97		
Ge	72	2	H2			168662.81		
In	115	2	H2			401807.14		
In	115	2	H2			408230.35		
In	115	2	H2			396855.31		
Sc	45	3	He			49434.62		
Sc	45	3	He			48541.46		
Sc	45	3	He			49113.33		
Ge	72	3	He			87296.62		
Ge	72	3	He			89378.65		
Ge	72	3	He			88533.98		
In	115	3	He			90312.94		
In	115	3	He			88591.80		
In	115	3	He			89437.23		
Tb	159	3	He			408337.34		
Tb	159	3	He			405235.07		
Tb	159	3	He			408620.78		
Bi	209	3	He			316576.87		
Bi	209	3	He			309277.91		
Bi	209	3	He			311609.86		

Quantitation Report

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Sample Type	CCB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

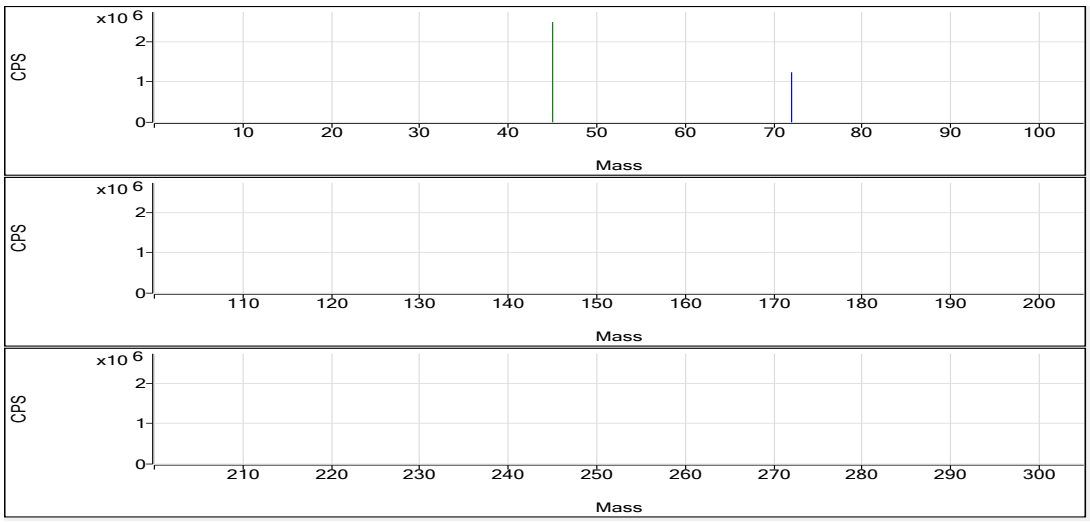
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.019	ppb	28.4	48.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.057	ppb	25.5	5.78	0.0000	Pulse	1.5000	3
Na	23	45	He	95.996	ppb	5.5	33121.24	0.6885	Pulse	0.1000	3
Mg	24	45	He	1.527	ppb	35.0	300.01	0.0062	Pulse	0.1000	3
Al	27	45	He	0.677	ppb	187.8	50.00	0.0010	Pulse	0.1000	3
K	39	45	He	-1.171	ppb	N/A	18946.16	0.3937	Pulse	0.1000	3
Ca	44	45	He	-1.204	ppb	N/A	126.67	0.0026	Pulse	0.1000	3
Ti	47	45	He	1.172	ppb	85.6	33.33	0.0007	Pulse	0.1000	3
V	51	45	He	0.759	ppb	12.4	1994.15	0.0415	Pulse	0.5000	3
Cr	52	45	He	-0.088	ppb	N/A	1796.83	0.0373	Pulse	0.1000	3
Mn	55	45	He	0.264	ppb	26.3	290.01	0.0060	Pulse	0.1000	3
Fe	57	45	He	2.087	ppb	73.3	126.67	0.0026	Pulse	0.1000	3
Co	59	45	He	0.069	ppb	8.0	290.01	0.0060	Pulse	0.1000	3
Ni	60	72	He	-0.003	ppb	N/A	243.34	0.0028	Pulse	0.1000	3
Cu	63	72	He	0.096	ppb	40.1	626.70	0.0072	Pulse	0.1000	3
Zn	66	72	He	3.347	ppb	18.0	1176.75	0.0136	Pulse	0.1000	3
As	75	72	He	0.255	ppb	14.9	115.33	0.0013	Pulse	0.5000	3
Sr	88	115	He	-0.056	ppb	N/A	40.00	0.0005	Pulse	0.1000	3
Mo	98	115	He	0.056	ppb	17.4	130.00	0.0015	Pulse	0.1000	3
Ag	107	115	He	0.004	ppb	166.7	70.00	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.009	ppb	86.6	4.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.015	ppb	N/A	1410.13	0.0162	Pulse	0.1000	3
Sb	121	115	He	0.033	ppb	34.4	66.67	0.0008	Pulse	0.1000	3
Ba	137	115	He	0.064	ppb	59.1	46.67	0.0005	Pulse	0.1000	3
Tl	205	159	He	0.070	ppb	13.5	743.38	0.0019	Pulse	0.1000	3
Pb	208	159	He	0.010	ppb	102.3	553.36	0.0014	Pulse	0.1000	3
U	238	209	He	0.042	ppb	19.4	670.04	0.0022	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2477824.23	0.4	103.3	Analog	0.1000	3
No Gas	Ge	72	1236075.53	0.0	107.2	Pulse	0.1000	3
H2	Sc	45	190262.94	0.6	101.7	Pulse	0.1000	3
H2	Ge	72	161362.73	1.1	98.6	Pulse	0.1000	3
H2	In	115	392727.03	1.1	100.9	Pulse	0.1000	3
He	Sc	45	48117.25	1.9	103.2	Pulse	0.1000	3
He	Ge	72	86873.91	1.5	107.0	Pulse	0.1000	3
He	In	115	86900.01	1.2	100.8	Pulse	0.1000	3
He	Tb	159	399997.58	0.4	100.3	Pulse	0.1000	3
He	Bi	209	310140.76	1.0	100.3	Pulse	0.1000	3

No Gas



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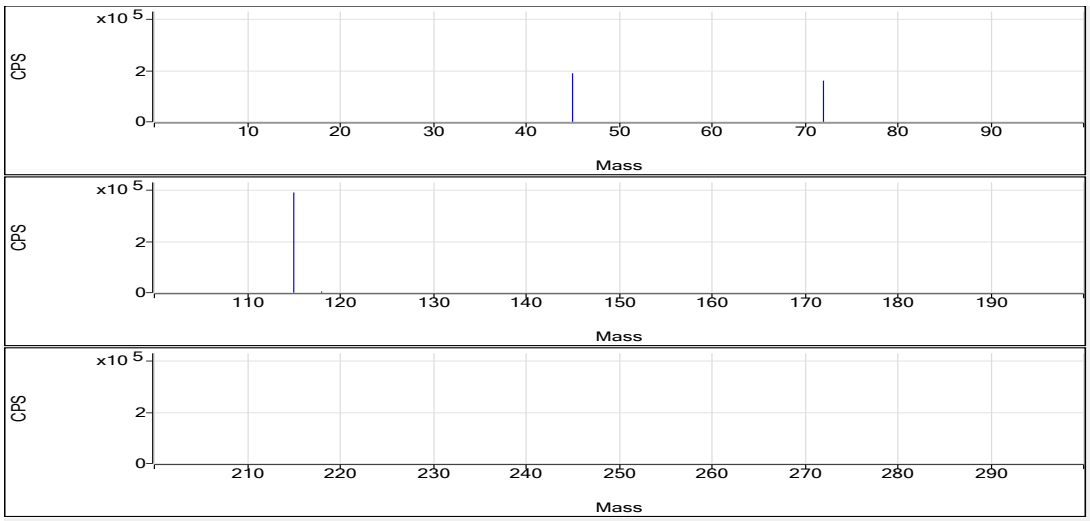
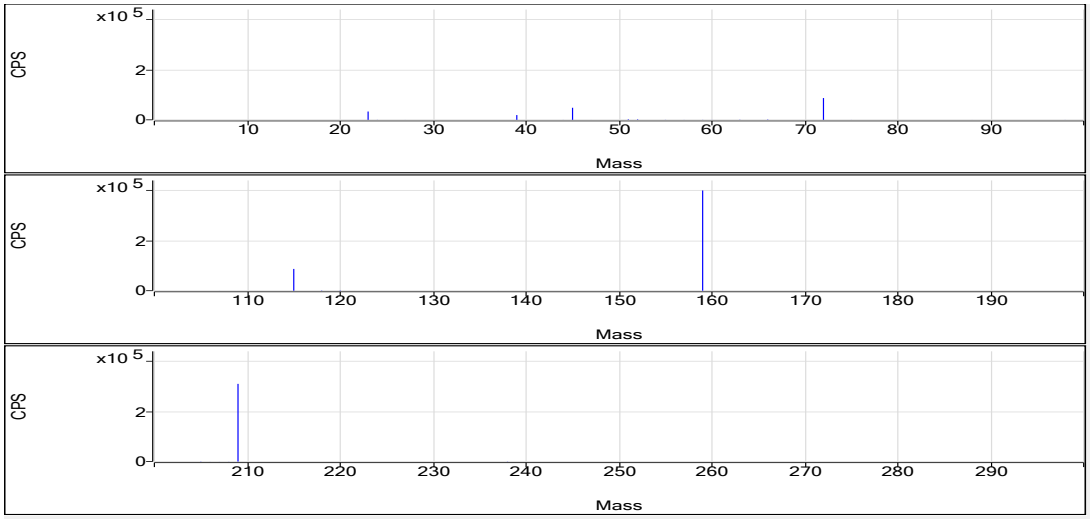


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.016	0	42.00	0.0008	4.685E-06
Be	9	1	No Gas	0.026	0	60.00	0.0008	4.685E-06
Be	9	1	No Gas	0.016	0	42.00	0.0008	4.685E-06
Se	78	2	H2	0.059	0	6.00	0.0004	1.219E-05
Se	78	2	H2	0.041	0	4.67	0.0004	1.219E-05
Se	78	2	H2	0.069	0	6.67	0.0004	1.219E-05
Na	23	3	He	98.039	0.6958	33659.21	0.0036	0.3452
Na	23	3	He	99.945	0.7027	33107.88	0.0036	0.3452
Na	23	3	He	90.003	0.6671	32596.63	0.0036	0.3452
Mg	24	3	He	2.084	0.0072	350.02	0.0018	0.003497
Mg	24	3	He	1.481	0.0062	290.01	0.0018	0.003497
Mg	24	3	He	1.017	0.0053	260.01	0.0018	0.003497
Al	27	3	He	-0.746	0.0002	10.00	0.0006	0.0006432
Al	27	3	He	1.077	0.0013	60.00	0.0006	0.0006432
Al	27	3	He	1.699	0.0016	80.00	0.0006	0.0006432
K	39	3	He	1.121	0.3964	19173.07	0.0012	0.3951
K	39	3	He	-5.149	0.3891	18332.03	0.0012	0.3951
K	39	3	He	0.515	0.3957	19333.39	0.0012	0.3951
Ca	44	3	He	-3.466	0.0025	120.00	0.0001	0.002715
Ca	44	3	He	0.656	0.0028	130.01	0.0001	0.002715
Ca	44	3	He	-0.803	0.0027	130.01	0.0001	0.002715
Ti	47	3	He	1.025	0.0006	30.00	0.0005	7.003E-05
Ti	47	3	He	2.241	0.0013	60.00	0.0005	7.003E-05
Ti	47	3	He	0.251	0.0002	10.00	0.0005	7.003E-05
V	51	3	He	0.665	0.0394	1906.14	0.0219	0.02486
V	51	3	He	0.853	0.0435	2050.16	0.0219	0.02486
V	51	3	He	0.759	0.0415	2026.16	0.0219	0.02486
Cr	52	3	He	-0.03	0.0391	1890.18	0.0299	0.03997
Cr	52	3	He	-0.102	0.0369	1740.16	0.0299	0.03997
Cr	52	3	He	-0.132	0.036	1760.16	0.0299	0.03997
Mn	55	3	He	0.342	0.007	340.02	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.241	0.0057	270.01	0.0128	0.002639
Mn	55	3	He	0.209	0.0053	260.01	0.0128	0.002639
Fe	57	3	He	0.743	0.0019	90.00	0.0006	0.001429
Fe	57	3	He	3.751	0.0036	170.01	0.0006	0.001429
Fe	57	3	He	1.768	0.0025	120.00	0.0006	0.001429
Co	59	3	He	0.068	0.006	290.01	0.0563	0.002149
Co	59	3	He	0.064	0.0057	270.01	0.0563	0.002149
Co	59	3	He	0.075	0.0063	310.02	0.0563	0.002149
Ni	60	3	He	-0.026	0.0026	230.01	0.0086	0.002834
Ni	60	3	He	0.038	0.0032	270.01	0.0086	0.002834
Ni	60	3	He	-0.022	0.0026	230.01	0.0086	0.002834
Cu	63	3	He	0.133	0.0082	720.04	0.0257	0.004757
Cu	63	3	He	0.097	0.0073	620.03	0.0257	0.004757
Cu	63	3	He	0.056	0.0062	540.03	0.0257	0.004757
Zn	66	3	He	2.899	0.0123	1080.07	0.0029	0.003818
Zn	66	3	He	4.031	0.0156	1330.10	0.0029	0.003818
Zn	66	3	He	3.11	0.0129	1120.09	0.0029	0.003818
As	75	3	He	0.216	0.0012	110.00	0.002	0.0008061
As	75	3	He	0.292	0.0014	120.00	0.002	0.0008061
As	75	3	He	0.257	0.0013	116.00	0.002	0.0008061
Sr	88	3	He	-0.069	0.0003	30.00	0.009	0.0009645
Sr	88	3	He	-0.044	0.0006	50.00	0.009	0.0009645
Sr	88	3	He	-0.056	0.0005	40.00	0.009	0.0009645
Mo	98	3	He	0.051	0.0014	120.00	0.0219	0.0002706
Mo	98	3	He	0.05	0.0014	120.00	0.0219	0.0002706
Mo	98	3	He	0.067	0.0017	150.01	0.0219	0.0002706
Ag	107	3	He	0.007	0.0009	80.00	0.0465	0.0006206
Ag	107	3	He	-0.004	0.0005	40.00	0.0465	0.0006206
Ag	107	3	He	0.009	0.001	90.00	0.0465	0.0006206
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0.013	0.0001	6.00	0.0053	0
Cd	111	3	He	0.013	0.0001	6.00	0.0053	0
Sn	120	3	He	-0.057	0.0156	1350.11	0.0158	0.01648
Sn	120	3	He	-0.065	0.0155	1360.13	0.0158	0.01648
Sn	120	3	He	0.076	0.0177	1520.14	0.0158	0.01648
Sb	121	3	He	0.021	0.0006	50.00	0.0149	0.0002698
Sb	121	3	He	0.043	0.0009	80.00	0.0149	0.0002698
Sb	121	3	He	0.037	0.0008	70.00	0.0149	0.0002698
Ba	137	3	He	0.072	0.0006	50.00	0.0048	0.0002317
Ba	137	3	He	0.023	0.0003	30.00	0.0048	0.0002317
Ba	137	3	He	0.097	0.0007	60.00	0.0048	0.0002317
Tl	205	3	He	0.074	0.002	780.05	0.0247	0.0001339
Tl	205	3	He	0.059	0.0016	640.04	0.0247	0.0001339
Tl	205	3	He	0.077	0.002	810.05	0.0247	0.0001339
Pb	208	3	He	0	0.0011	210.01	0.0327	0.00107
Pb	208	3	He	0.019	0.0017	390.02	0.0327	0.00107
Pb	208	3	He	0.01	0.0014	310.02	0.0327	0.00107
U	238	3	He	0.034	0.0018	550.03	0.0493	7.55E-05
U	238	3	He	0.043	0.0022	670.04	0.0493	7.55E-05
U	238	3	He	0.051	0.0026	790.06	0.0493	7.55E-05
Sc	45	1	No Gas			2486020.12		
Sc	45	1	No Gas			2481831.37		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2465621.21		
Ge	72	1	No Gas			1236170.45		
Ge	72	1	No Gas			1236158.89		
Ge	72	1	No Gas			1235897.25		
Sc	45	2	H2			189114.70		
Sc	45	2	H2			190291.03		
Sc	45	2	H2			191383.08		
Ge	72	2	H2			162605.48		
Ge	72	2	H2			159432.69		
Ge	72	2	H2			162050.02		
In	115	2	H2			396295.31		
In	115	2	H2			394046.28		
In	115	2	H2			387839.49		
Sc	45	3	He			48371.44		
Sc	45	3	He			47117.40		
Sc	45	3	He			48862.91		
Ge	72	3	He			88111.17		
Ge	72	3	He			85505.83		
Ge	72	3	He			87004.74		
In	115	3	He			86690.33		
In	115	3	He			88007.80		
In	115	3	He			86025.93		
Tb	159	3	He			398418.31		
Tb	159	3	He			401864.25		
Tb	159	3	He			399710.19		
Bi	209	3	He			313604.31		
Bi	209	3	He			308618.24		
Bi	209	3	He			308199.72		

Quantitation Report

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Sample Name	410-138038-C-1-A
Sample Type	Sample
Comment	A12
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

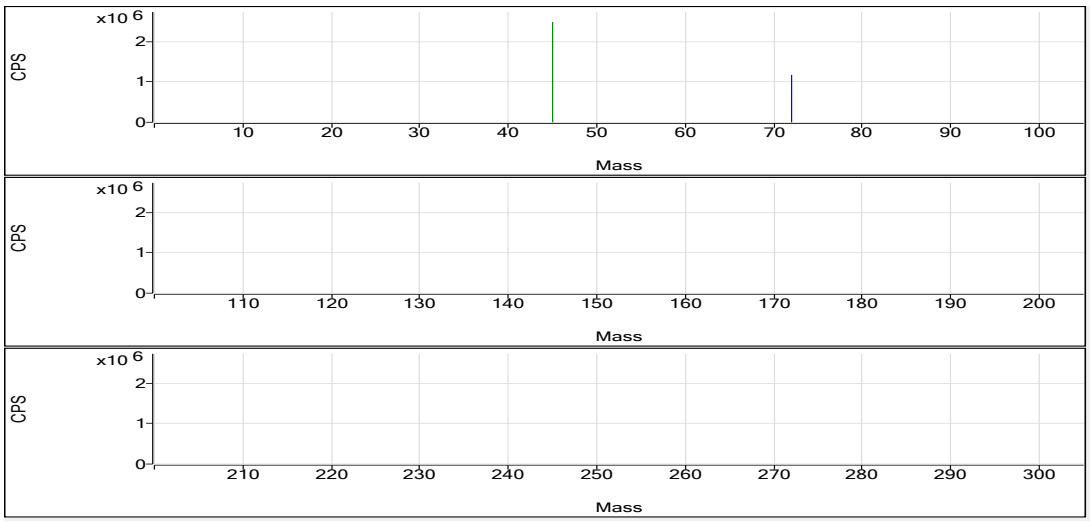
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.008	ppb	20.9	27.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.234	ppb	36.9	17.55	0.0001	Pulse	1.5000	3
Na	23	45	He	919038.879	ppb	1.2	162618394.24	3 287.7923	Analog	0.1000	3
Mg	24	45	He	113882.295	ppb	1.3	10107042.77	204.3450	Analog	0.1000	3
Al	27	45	He	71.277	ppb	4.9	2093.62	0.0423	Pulse	0.1000	3
K	39	45	He	37294.174	ppb	1.8	2167120.59	43.8177	Analog	0.1000	3
Ca	44	45	He	49470.691	ppb	1.4	165418.31	3.3446	Pulse	0.1000	3
Ti	47	45	He	0.994	ppb	63.8	30.00	0.0006	Pulse	0.1000	3
V	51	45	He	2.986	ppb	3.5	4457.38	0.0901	Pulse	0.5000	3
Cr	52	45	He	112.187	ppb	1.1	168112.42	3.3989	Pulse	0.1000	3
Mn	55	45	He	12.870	ppb	4.7	8302.65	0.1678	Pulse	0.1000	3
Fe	57	45	He	78.386	ppb	1.9	2323.59	0.0470	Pulse	0.1000	3
Co	59	45	He	0.116	ppb	5.3	430.02	0.0087	Pulse	0.1000	3
Ni	60	72	He	1.152	ppb	21.5	1073.41	0.0127	Pulse	0.1000	3
Cu	63	72	He	1.745	ppb	4.9	4184.10	0.0495	Pulse	0.1000	3
Zn	66	72	He	17.921	ppb	1.2	4727.62	0.0560	Pulse	0.1000	3
As	75	72	He	1.121	ppb	20.1	262.00	0.0031	Pulse	0.5000	3
Sr	88	115	He	790.388	ppb	2.6	612493.32	7.0906	Pulse	0.1000	3
Mo	98	115	He	2.335	ppb	5.4	4444.21	0.0515	Pulse	0.1000	3
Ag	107	115	He	0.136	ppb	10.3	600.03	0.0069	Pulse	0.1000	3
Cd	111	115	He	0.020	ppb	55.0	9.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.054	ppb	N/A	1353.45	0.0156	Pulse	0.1000	3
Sb	121	115	He	1.969	ppb	4.0	2550.33	0.0295	Pulse	0.1000	3
Ba	137	115	He	27.050	ppb	0.9	11238.33	0.1301	Pulse	0.1000	3
Tl	205	159	He	0.019	ppb	43.4	240.01	0.0006	Pulse	0.1000	3
Pb	208	159	He	0.541	ppb	4.7	7367.76	0.0188	Pulse	0.1000	3
U	238	209	He	0.410	ppb	7.9	5854.90	0.0203	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2486525.85	0.9	103.7	Analog	0.1000	3
No Gas	Ge	72	1177373.06	0.5	102.1	Pulse	0.1000	3
H2	Sc	45	191537.18	0.8	102.4	Pulse	0.1000	3
H2	Ge	72	160363.55	0.6	98.0	Pulse	0.1000	3
H2	In	115	388274.29	1.1	99.8	Pulse	0.1000	3
He	Sc	45	49465.00	1.3	106.1	Pulse	0.1000	3
He	Ge	72	84429.14	1.0	104.0	Pulse	0.1000	3
He	In	115	86418.78	2.6	100.3	Pulse	0.1000	3
He	Tb	159	392351.53	0.2	98.4	Pulse	0.1000	3
He	Bi	209	289066.42	0.6	93.5	Pulse	0.1000	3

No Gas



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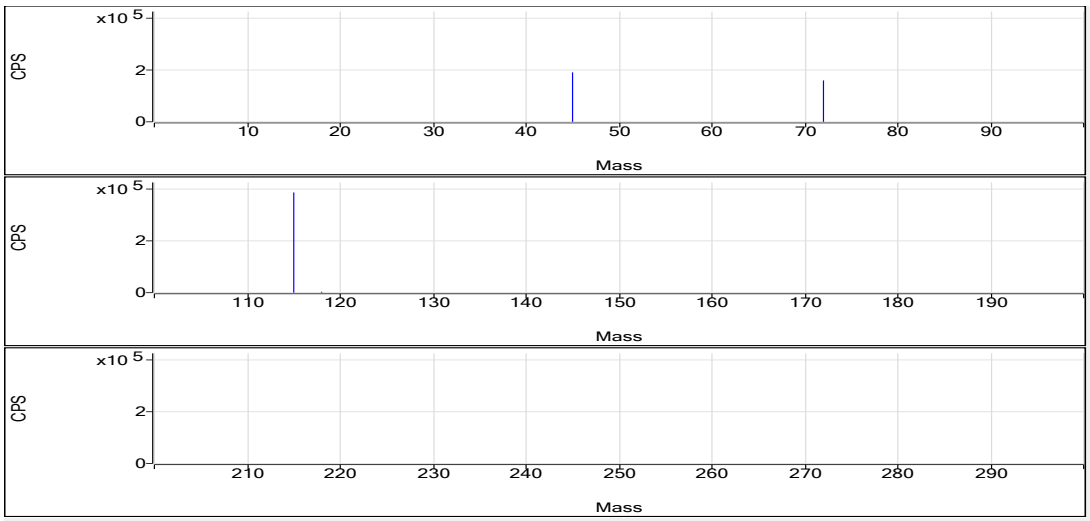
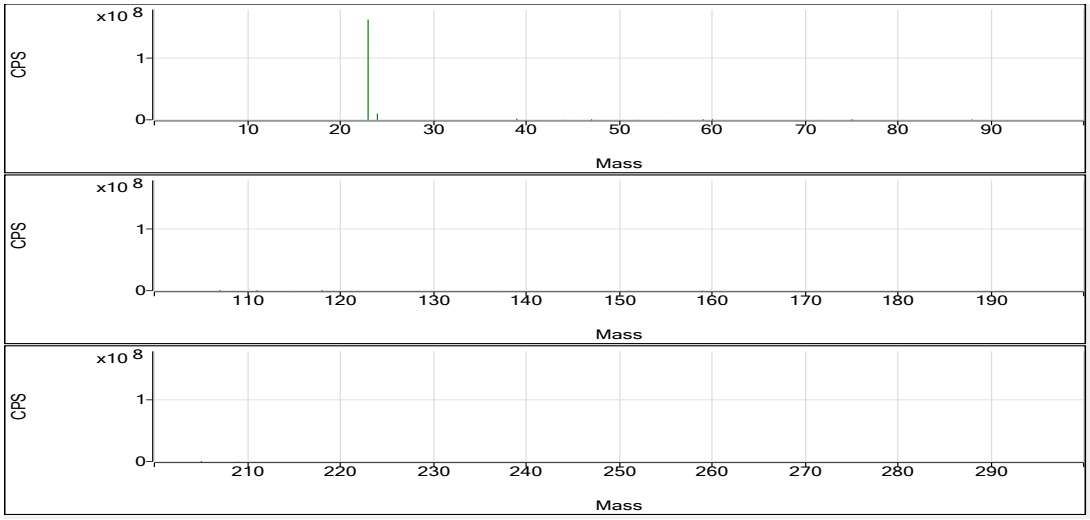


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.009	0	28.00	0.0008	4.685E-06
Be	9	1	No Gas	0.01	0	30.00	0.0008	4.685E-06
Be	9	1	No Gas	0.006	0	24.00	0.0008	4.685E-06
Se	78	2	H2	0.23	0.0001	17.33	0.0004	1.219E-05
Se	78	2	H2	0.322	0.0001	23.33	0.0004	1.219E-05
Se	78	2	H2	0.149	0.0001	12.00	0.0004	1.219E-05
Na	23	3	He	912790.097	3265.4401	163818637.56	0.0036	0.3452
Na	23	3	He	912937.714	3265.9681	161058897.60	0.0036	0.3452
Na	23	3	He	931388.827	3331.9686	162977647.57	0.0036	0.3452
Mg	24	3	He	112284.929	201.4788	10107667.97	0.0018	0.003497
Mg	24	3	He	115195.461	206.7012	10193324.85	0.0018	0.003497
Mg	24	3	He	114166.496	204.8549	10020135.48	0.0018	0.003497
Al	27	3	He	67.736	0.0403	2020.31	0.0006	0.0006432
Al	27	3	He	71.352	0.0424	2090.27	0.0006	0.0006432
Al	27	3	He	74.742	0.0444	2170.28	0.0006	0.0006432
K	39	3	He	36528.772	42.9265	2153510.28	0.0012	0.3951
K	39	3	He	37629.031	44.2075	2180063.87	0.0012	0.3951
K	39	3	He	37724.721	44.319	2167787.62	0.0012	0.3951
Ca	44	3	He	48755.357	3.2962	165363.40	0.0001	0.002715
Ca	44	3	He	49482.964	3.3454	164975.21	0.0001	0.002715
Ca	44	3	He	50173.753	3.392	165916.31	0.0001	0.002715
Ti	47	3	He	1.726	0.001	50.00	0.0005	7.003E-05
Ti	47	3	He	0.625	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	0.631	0.0004	20.00	0.0005	7.003E-05
V	51	3	He	2.883	0.0879	4408.69	0.0219	0.02486
V	51	3	He	2.98	0.09	4438.71	0.0219	0.02486
V	51	3	He	3.094	0.0925	4524.73	0.0219	0.02486
Cr	52	3	He	111.014	3.3638	168753.43	0.0299	0.03997
Cr	52	3	He	112.066	3.3953	167437.28	0.0299	0.03997
Cr	52	3	He	113.48	3.4376	168146.56	0.0299	0.03997
Mn	55	3	He	13.063	0.1703	8542.80	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	13.356	0.174	8582.83	0.0128	0.002639
Mn	55	3	He	12.192	0.1591	7782.31	0.0128	0.002639
Fe	57	3	He	78.862	0.0472	2370.26	0.0006	0.001429
Fe	57	3	He	79.571	0.0477	2350.26	0.0006	0.001429
Fe	57	3	He	76.724	0.046	2250.24	0.0006	0.001429
Co	59	3	He	0.118	0.0088	440.02	0.0563	0.002149
Co	59	3	He	0.11	0.0083	410.02	0.0563	0.002149
Co	59	3	He	0.122	0.009	440.02	0.0563	0.002149
Ni	60	3	He	1.176	0.0129	1100.08	0.0086	0.002834
Ni	60	3	He	0.894	0.0105	890.06	0.0086	0.002834
Ni	60	3	He	1.388	0.0147	1230.09	0.0086	0.002834
Cu	63	3	He	1.801	0.051	4340.82	0.0257	0.004757
Cu	63	3	He	1.787	0.0506	4290.80	0.0257	0.004757
Cu	63	3	He	1.645	0.047	3920.67	0.0257	0.004757
Zn	66	3	He	17.699	0.0553	4710.95	0.0029	0.003818
Zn	66	3	He	18.106	0.0565	4790.96	0.0029	0.003818
Zn	66	3	He	17.958	0.0561	4680.95	0.0029	0.003818
As	75	3	He	0.971	0.0028	238.00	0.002	0.0008061
As	75	3	He	1.381	0.0036	308.01	0.002	0.0008061
As	75	3	He	1.011	0.0029	240.00	0.002	0.0008061
Sr	88	3	He	798.589	7.1642	614595.03	0.009	0.0009645
Sr	88	3	He	767.358	6.884	611969.95	0.009	0.0009645
Sr	88	3	He	805.218	7.2236	610914.99	0.009	0.0009645
Mo	98	3	He	2.412	0.0532	4560.91	0.0219	0.0002706
Mo	98	3	He	2.189	0.0483	4290.83	0.0219	0.0002706
Mo	98	3	He	2.404	0.053	4480.88	0.0219	0.0002706
Ag	107	3	He	0.152	0.0077	660.04	0.0465	0.0006206
Ag	107	3	He	0.129	0.0066	590.03	0.0465	0.0006206
Ag	107	3	He	0.127	0.0065	550.03	0.0465	0.0006206
Cd	111	3	He	0.009	0	4.00	0.0053	0
Cd	111	3	He	0.021	0.0001	10.00	0.0053	0
Cd	111	3	He	0.031	0.0002	14.00	0.0053	0
Sn	120	3	He	-0.135	0.0143	1230.11	0.0158	0.01648
Sn	120	3	He	0.111	0.0182	1620.15	0.0158	0.01648
Sn	120	3	He	-0.137	0.0143	1210.10	0.0158	0.01648
Sb	121	3	He	2.054	0.0308	2640.37	0.0149	0.0002698
Sb	121	3	He	1.898	0.0285	2530.31	0.0149	0.0002698
Sb	121	3	He	1.956	0.0293	2480.32	0.0149	0.0002698
Ba	137	3	He	27.337	0.1314	11275.04	0.0048	0.0002317
Ba	137	3	He	26.848	0.1291	11475.21	0.0048	0.0002317
Ba	137	3	He	26.966	0.1297	10964.75	0.0048	0.0002317
Tl	205	3	He	0.021	0.0007	260.02	0.0247	0.0001339
Tl	205	3	He	0.01	0.0004	150.01	0.0247	0.0001339
Tl	205	3	He	0.026	0.0008	310.01	0.0247	0.0001339
Pb	208	3	He	0.569	0.0197	4170.79	0.0327	0.00107
Pb	208	3	He	0.519	0.0181	3700.67	0.0327	0.00107
Pb	208	3	He	0.535	0.0186	4060.77	0.0327	0.00107
U	238	3	He	0.377	0.0186	5381.30	0.0493	7.55E-05
U	238	3	He	0.442	0.0218	6351.84	0.0493	7.55E-05
U	238	3	He	0.41	0.0203	5831.56	0.0493	7.55E-05
Sc	45	1	No Gas			2482479.81		
Sc	45	1	No Gas			2467281.06		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2509816.68		
Ge	72	1	No Gas			1179186.39		
Ge	72	1	No Gas			1170268.97		
Ge	72	1	No Gas			1182663.81		
Sc	45	2	H2			189979.25		
Sc	45	2	H2			193187.48		
Sc	45	2	H2			191444.80		
Ge	72	2	H2			160593.56		
Ge	72	2	H2			159387.92		
Ge	72	2	H2			161109.18		
In	115	2	H2			388604.88		
In	115	2	H2			383857.65		
In	115	2	H2			392360.35		
Sc	45	3	He			50167.40		
Sc	45	3	He			49314.29		
Sc	45	3	He			48913.32		
Ge	72	3	He			85113.46		
Ge	72	3	He			84740.88		
Ge	72	3	He			83433.08		
In	115	3	He			85794.10		
In	115	3	He			88904.45		
In	115	3	He			84577.59		
Tb	159	3	He			391964.02		
Tb	159	3	He			391657.38		
Tb	159	3	He			393433.20		
Bi	209	3	He			288734.76		
Bi	209	3	He			290822.46		
Bi	209	3	He			287642.03		

Quantitation Report

Data File Name	178SMPL.d
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Sample Type	Sample
Comment	A12
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

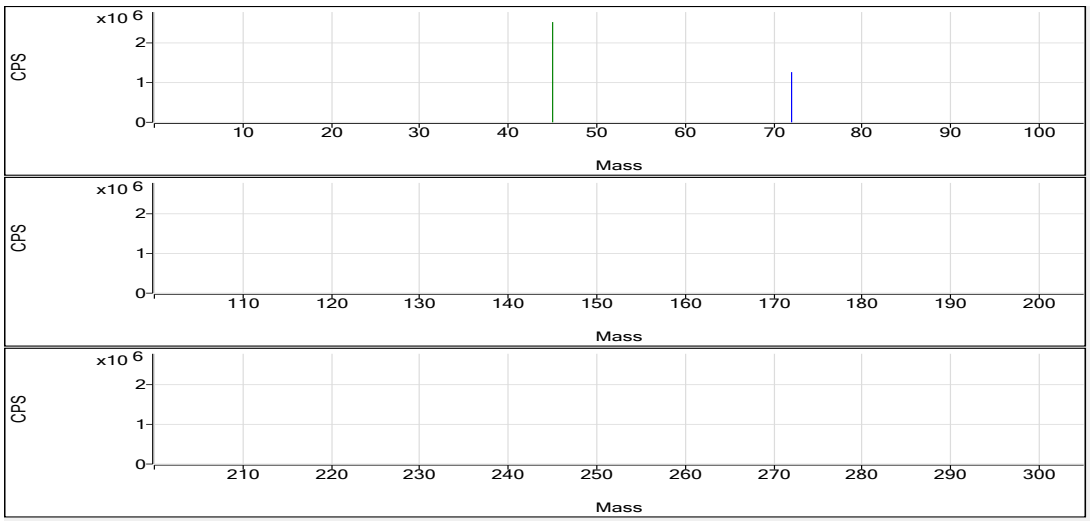
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.004	ppb	42.4	20.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.340	ppb	12.0	26.67	0.0002	Pulse	1.5000	3
Na	23	45	He	96282.333	ppb	0.7	16819766.42	344.7518	Analog	0.1000	3
Mg	24	45	He	22674.074	ppb	0.6	1985112.94	40.6881	Analog	0.1000	3
Al	27	45	He	6.024	ppb	29.3	203.34	0.0042	Pulse	0.1000	3
K	39	45	He	6277.229	ppb	1.4	375851.02	7.7038	Pulse	0.1000	3
Ca	44	45	He	51486.627	ppb	0.8	169818.02	3.4807	Pulse	0.1000	3
Ti	47	45	He	0.507	ppb	87.5	16.67	0.0003	Pulse	0.1000	3
V	51	45	He	0.836	ppb	7.5	2104.83	0.0431	Pulse	0.5000	3
Cr	52	45	He	0.139	ppb	48.8	2153.57	0.0441	Pulse	0.1000	3
Mn	55	45	He	2422.544	ppb	0.8	1516986.49	31.0933	Analog	0.1000	3
Fe	57	45	He	34.241	ppb	9.8	1040.07	0.0213	Pulse	0.1000	3
Co	59	45	He	1.334	ppb	3.9	3767.29	0.0772	Pulse	0.1000	3
Ni	60	72	He	1.089	ppb	3.2	1093.42	0.0122	Pulse	0.1000	3
Cu	63	72	He	0.066	ppb	79.6	580.03	0.0065	Pulse	0.1000	3
Zn	66	72	He	9.023	ppb	8.8	2700.35	0.0301	Pulse	0.1000	3
As	75	72	He	0.263	ppb	17.4	120.67	0.0013	Pulse	0.5000	3
Sr	88	115	He	290.818	ppb	0.8	232778.58	2.6095	Pulse	0.1000	3
Mo	98	115	He	0.357	ppb	23.1	723.38	0.0081	Pulse	0.1000	3
Ag	107	115	He	-0.007	ppb	N/A	26.67	0.0003	Pulse	0.1000	3
Cd	111	115	He	0.031	ppb	8.4	14.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.221	ppb	N/A	1160.09	0.0130	Pulse	0.1000	3
Sb	121	115	He	0.100	ppb	42.5	156.67	0.0018	Pulse	0.1000	3
Ba	137	115	He	64.727	ppb	0.6	27732.04	0.3109	Pulse	0.1000	3
Tl	205	159	He	0.034	ppb	40.5	393.35	0.0010	Pulse	0.1000	3
Pb	208	159	He	0.019	ppb	29.2	683.37	0.0017	Pulse	0.1000	3
U	238	209	He	0.014	ppb	11.8	240.01	0.0008	Pulse	0.1000	3

ISTD Table:

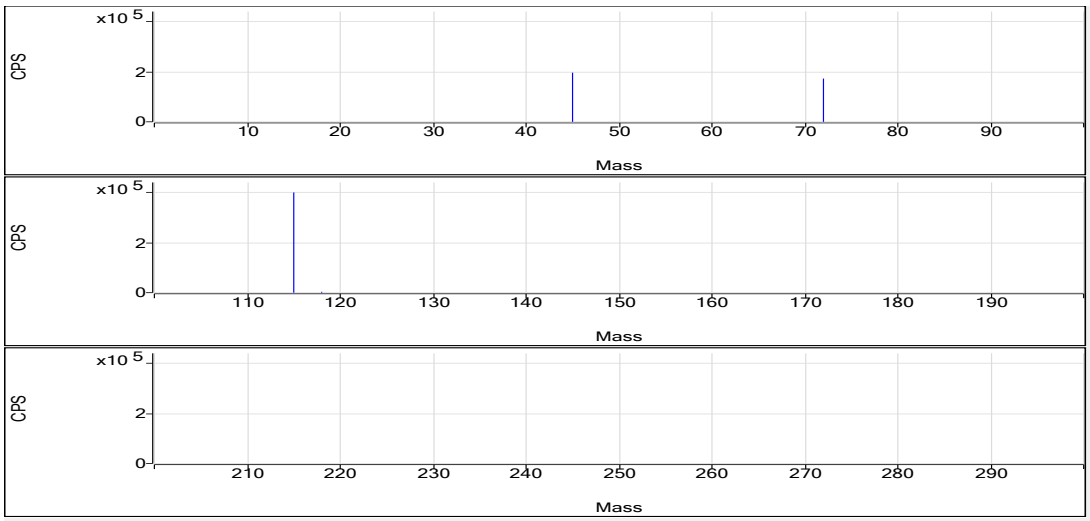
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2525741.53	0.5	105.3	Analog	0.1000	3
No Gas	Ge	72	1264244.09	0.3	109.6	Pulse	0.1000	3
H2	Sc	45	196811.46	0.5	105.2	Pulse	0.1000	3
H2	Ge	72	173222.63	1.0	105.8	Pulse	0.1000	3
H2	In	115	401432.26	0.7	103.2	Pulse	0.1000	3
He	Sc	45	48789.16	0.5	104.6	Pulse	0.1000	3
He	Ge	72	89791.03	1.1	110.6	Pulse	0.1000	3
He	In	115	89209.61	1.7	103.5	Pulse	0.1000	3
He	Tb	159	404550.09	0.9	101.5	Pulse	0.1000	3
He	Bi	209	308471.61	0.7	99.7	Pulse	0.1000	3

No Gas

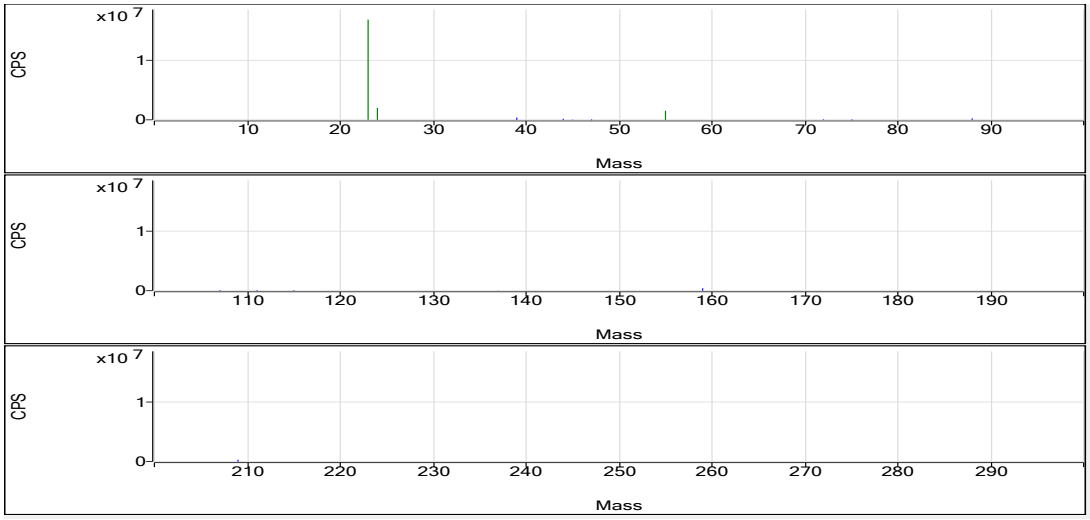


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.003	0	18.00	0.0008	4.685E-06
Be	9	1	No Gas	0.003	0	18.00	0.0008	4.685E-06
Be	9	1	No Gas	0.006	0	24.00	0.0008	4.685E-06
Se	78	2	H2	0.309	0.0001	24.67	0.0004	1.219E-05
Se	78	2	H2	0.386	0.0002	30.00	0.0004	1.219E-05
Se	78	2	H2	0.325	0.0001	25.33	0.0004	1.219E-05
Na	23	3	He	96537.213	345.6635	16824241.00	0.0036	0.3452
Na	23	3	He	96826.131	346.697	16864058.50	0.0036	0.3452
Na	23	3	He	95483.654	341.8949	16770999.75	0.0036	0.3452
Mg	24	3	He	22834.171	40.9754	1994364.97	0.0018	0.003497
Mg	24	3	He	22625.01	40.6	1974870.44	0.0018	0.003497
Mg	24	3	He	22563.04	40.4889	1986103.41	0.0018	0.003497
Al	27	3	He	4.169	0.0031	150.01	0.0006	0.0006432
Al	27	3	He	7.686	0.0051	250.01	0.0006	0.0006432
Al	27	3	He	6.218	0.0043	210.01	0.0006	0.0006432
K	39	3	He	6371.427	7.8135	380300.54	0.0012	0.3951
K	39	3	He	6261.663	7.6857	373847.77	0.0012	0.3951
K	39	3	He	6198.597	7.6123	373404.76	0.0012	0.3951
Ca	44	3	He	51656.148	3.4922	169972.77	0.0001	0.002715
Ca	44	3	He	51771.647	3.5	170246.68	0.0001	0.002715
Ca	44	3	He	51032.085	3.45	169234.61	0.0001	0.002715
Ti	47	3	He	0.252	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	1.018	0.0006	30.00	0.0005	7.003E-05
Ti	47	3	He	0.249	0.0002	10.00	0.0005	7.003E-05
V	51	3	He	0.908	0.0447	2176.18	0.0219	0.02486
V	51	3	He	0.794	0.0422	2054.16	0.0219	0.02486
V	51	3	He	0.806	0.0425	2084.16	0.0219	0.02486
Cr	52	3	He	0.216	0.0464	2260.27	0.0299	0.03997
Cr	52	3	He	0.086	0.0426	2070.21	0.0299	0.03997
Cr	52	3	He	0.115	0.0434	2130.23	0.0299	0.03997
Mn	55	3	He	2414.659	30.9921	1508455.76	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2445.557	31.3886	1526807.16	0.0128	0.002639
Mn	55	3	He	2407.415	30.8991	1515696.54	0.0128	0.002639
Fe	57	3	He	33.614	0.021	1020.07	0.0006	0.001429
Fe	57	3	He	37.882	0.0234	1140.08	0.0006	0.001429
Fe	57	3	He	31.228	0.0196	960.06	0.0006	0.001429
Co	59	3	He	1.378	0.0797	3880.65	0.0563	0.002149
Co	59	3	He	1.277	0.074	3600.60	0.0563	0.002149
Co	59	3	He	1.346	0.0779	3820.61	0.0563	0.002149
Ni	60	3	He	1.106	0.0123	1120.09	0.0086	0.002834
Ni	60	3	He	1.049	0.0118	1060.08	0.0086	0.002834
Ni	60	3	He	1.11	0.0124	1100.08	0.0086	0.002834
Cu	63	3	He	0.123	0.0079	720.04	0.0257	0.004757
Cu	63	3	He	0.054	0.0061	550.03	0.0257	0.004757
Cu	63	3	He	0.02	0.0053	470.02	0.0257	0.004757
Zn	66	3	He	8.407	0.0283	2570.29	0.0029	0.003818
Zn	66	3	He	8.738	0.0293	2620.36	0.0029	0.003818
Zn	66	3	He	9.923	0.0327	2910.39	0.0029	0.003818
As	75	3	He	0.241	0.0013	118.00	0.002	0.0008061
As	75	3	He	0.315	0.0015	130.00	0.002	0.0008061
As	75	3	He	0.232	0.0013	114.00	0.002	0.0008061
Sr	88	3	He	289.042	2.5936	235682.50	0.009	0.0009645
Sr	88	3	He	289.776	2.6002	230889.98	0.009	0.0009645
Sr	88	3	He	293.635	2.6348	231763.26	0.009	0.0009645
Mo	98	3	He	0.384	0.0087	790.05	0.0219	0.0002706
Mo	98	3	He	0.265	0.0061	540.03	0.0219	0.0002706
Mo	98	3	He	0.423	0.0096	840.05	0.0219	0.0002706
Ag	107	3	He	0.001	0.0007	60.00	0.0465	0.0006206
Ag	107	3	He	-0.009	0.0002	20.00	0.0465	0.0006206
Ag	107	3	He	-0.013	0	0.00	0.0465	0.0006206
Cd	111	3	He	0.029	0.0002	14.00	0.0053	0
Cd	111	3	He	0.034	0.0002	16.00	0.0053	0
Cd	111	3	He	0.03	0.0002	14.00	0.0053	0
Sn	120	3	He	-0.095	0.015	1360.11	0.0158	0.01648
Sn	120	3	He	-0.287	0.0119	1060.08	0.0158	0.01648
Sn	120	3	He	-0.28	0.0121	1060.08	0.0158	0.01648
Sb	121	3	He	0.056	0.0011	100.00	0.0149	0.0002698
Sb	121	3	He	0.141	0.0024	210.01	0.0149	0.0002698
Sb	121	3	He	0.104	0.0018	160.01	0.0149	0.0002698
Ba	137	3	He	64.544	0.31	28169.66	0.0048	0.0002317
Ba	137	3	He	64.453	0.3096	27488.20	0.0048	0.0002317
Ba	137	3	He	65.184	0.3131	27538.26	0.0048	0.0002317
Tl	205	3	He	0.031	0.0009	370.02	0.0247	0.0001339
Tl	205	3	He	0.049	0.0013	540.03	0.0247	0.0001339
Tl	205	3	He	0.022	0.0007	270.01	0.0247	0.0001339
Pb	208	3	He	0.014	0.0015	250.01	0.0327	0.00107
Pb	208	3	He	0.017	0.0016	380.02	0.0327	0.00107
Pb	208	3	He	0.025	0.0019	390.02	0.0327	0.00107
U	238	3	He	0.016	0.0008	260.01	0.0493	7.55E-05
U	238	3	He	0.012	0.0007	210.01	0.0493	7.55E-05
U	238	3	He	0.015	0.0008	250.01	0.0493	7.55E-05
Sc	45	1	No Gas			2511878.56		
Sc	45	1	No Gas			2539409.96		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2525936.06		
Ge	72	1	No Gas			1266131.70		
Ge	72	1	No Gas			1266583.18		
Ge	72	1	No Gas			1260017.40		
Sc	45	2	H2			197827.48		
Sc	45	2	H2			196420.29		
Sc	45	2	H2			196186.62		
Ge	72	2	H2			174929.29		
Ge	72	2	H2			173137.83		
Ge	72	2	H2			171600.78		
In	115	2	H2			402956.91		
In	115	2	H2			403021.60		
In	115	2	H2			398318.28		
Sc	45	3	He			48672.31		
Sc	45	3	He			48642.07		
Sc	45	3	He			49053.09		
Ge	72	3	He			90837.93		
Ge	72	3	He			89559.43		
Ge	72	3	He			88975.73		
In	115	3	He			90876.06		
In	115	3	He			88802.95		
In	115	3	He			87967.29		
Tb	159	3	He			408961.01		
Tb	159	3	He			402753.08		
Tb	159	3	He			401936.17		
Bi	209	3	He			307874.14		
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Bi	209	3	He			310953.67		

Quantitation Report

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Sample Type	Sample
Comment	A12
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

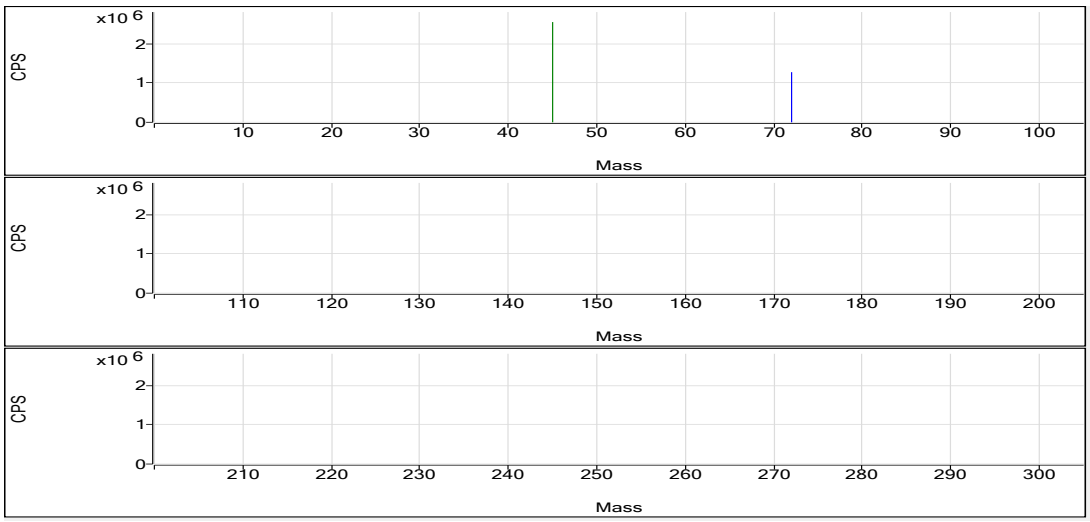
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.266	ppb	2.5	528.68	0.0002	Pulse	0.5000	3
Se	78	72	H2	0.078	ppb	41.1	8.00	0.0000	Pulse	1.5000	3
Na	23	45	He	5279.242	ppb	1.5	960701.49	19.2293	Pulse	0.1000	3
Mg	24	45	He	7916.869	ppb	2.5	709786.08	14.2089	Pulse	0.1000	3
Al	27	45	He	239.614	ppb	2.5	7035.22	0.1408	Pulse	0.1000	3
K	39	45	He	3313.762	ppb	3.2	212460.80	4.2534	Pulse	0.1000	3
Ca	44	45	He	49089.132	ppb	1.5	165808.07	3.3188	Pulse	0.1000	3
Ti	47	45	He	0.113	ppb	373.8	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	0.788	ppb	7.5	2102.84	0.0421	Pulse	0.5000	3
Cr	52	45	He	-0.035	ppb	N/A	1946.87	0.0389	Pulse	0.1000	3
Mn	55	45	He	1201.717	ppb	2.0	770613.95	15.4253	Pulse	0.1000	3
Fe	57	45	He	78.448	ppb	6.7	2346.94	0.0470	Pulse	0.1000	3
Co	59	45	He	6.533	ppb	0.7	18482.45	0.3699	Pulse	0.1000	3
Ni	60	72	He	28.119	ppb	2.9	21927.30	0.2442	Pulse	0.1000	3
Cu	63	72	He	1.832	ppb	2.5	4650.93	0.0518	Pulse	0.1000	3
Zn	66	72	He	62.852	ppb	2.4	16776.93	0.1868	Pulse	0.1000	3
As	75	72	He	0.179	ppb	22.9	105.33	0.0012	Pulse	0.5000	3
Sr	88	115	He	296.790	ppb	1.7	237638.79	2.6631	Pulse	0.1000	3
Mo	98	115	He	0.141	ppb	1.2	300.01	0.0034	Pulse	0.1000	3
Ag	107	115	He	-0.002	ppb	N/A	46.67	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.394	ppb	4.7	188.00	0.0021	Pulse	0.5000	3
Sn	120	115	He	-0.231	ppb	N/A	1143.42	0.0128	Pulse	0.1000	3
Sb	121	115	He	0.067	ppb	23.6	113.34	0.0013	Pulse	0.1000	3
Ba	137	115	He	15.521	ppb	6.9	6665.18	0.0747	Pulse	0.1000	3
Tl	205	159	He	0.082	ppb	16.4	880.07	0.0022	Pulse	0.1000	3
Pb	208	159	He	0.014	ppb	26.6	626.70	0.0015	Pulse	0.1000	3
U	238	209	He	0.131	ppb	8.9	2113.59	0.0065	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2543386.89	0.5	106.0	Analog	0.1000	3
No Gas	Ge	72	1271801.41	0.5	110.3	Pulse	0.1000	3
H2	Sc	45	197714.08	1.2	105.7	Pulse	0.1000	3
H2	Ge	72	178363.24	0.3	108.9	Pulse	0.1000	3
H2	In	115	411034.75	0.4	105.6	Pulse	0.1000	3
He	Sc	45	49969.98	2.0	107.1	Pulse	0.1000	3
He	Ge	72	89808.59	0.7	110.6	Pulse	0.1000	3
He	In	115	89243.21	1.1	103.5	Pulse	0.1000	3
He	Tb	159	407044.45	0.6	102.1	Pulse	0.1000	3
He	Bi	209	323403.78	1.3	104.6	Pulse	0.1000	3

No Gas



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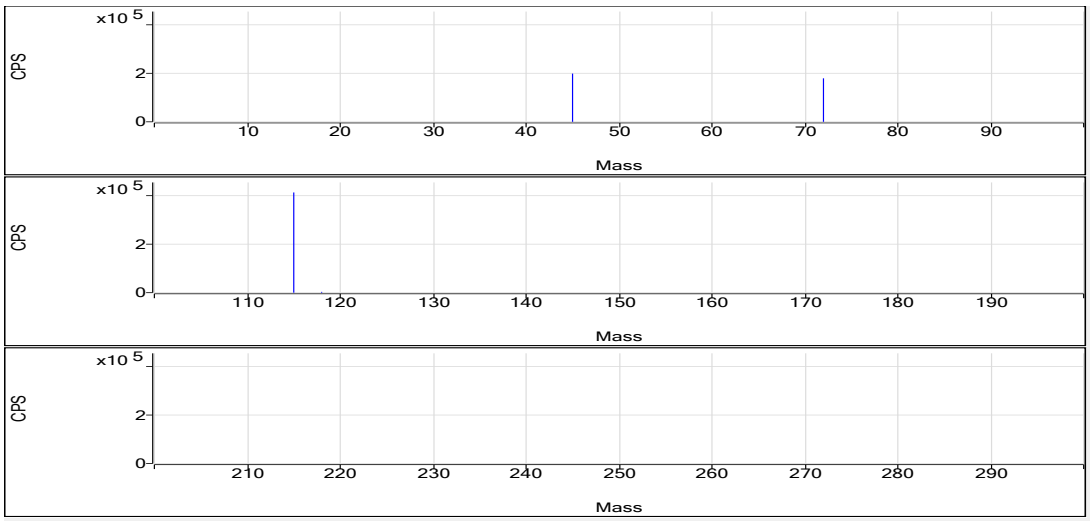
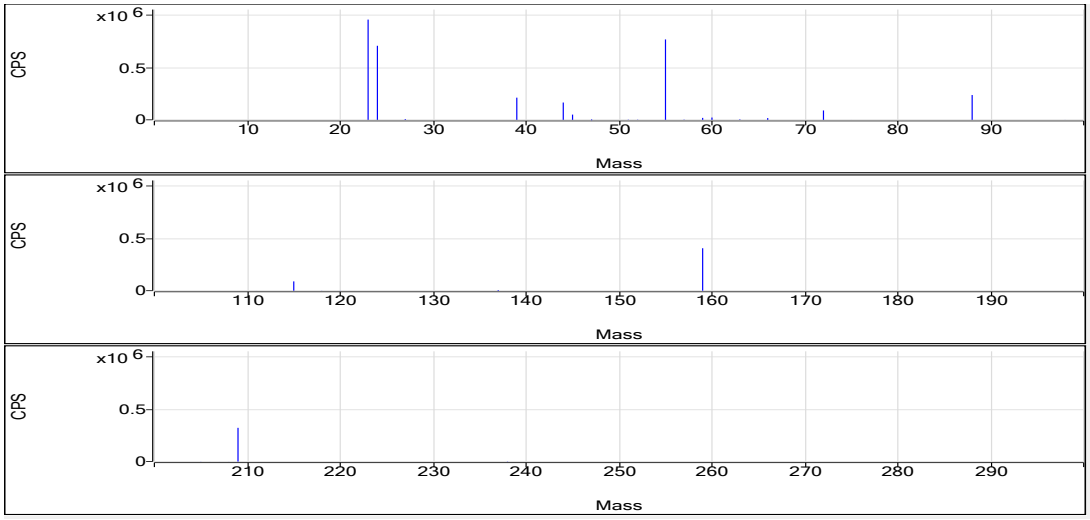


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.265	0.0002	524.01	0.0008	4.685E-06
Be	9	1	No Gas	0.26	0.0002	516.01	0.0008	4.685E-06
Be	9	1	No Gas	0.274	0.0002	546.01	0.0008	4.685E-06
Se	78	2	H2	0.105	0.0001	10.00	0.0004	1.219E-05
Se	78	2	H2	0.087	0	8.67	0.0004	1.219E-05
Se	78	2	H2	0.043	0	5.33	0.0004	1.219E-05
Na	23	3	He	5306.79	19.3278	960697.17	0.0036	0.3452
Na	23	3	He	5191.948	18.917	966293.50	0.0036	0.3452
Na	23	3	He	5338.989	19.443	955113.81	0.0036	0.3452
Mg	24	3	He	8013.914	14.383	714915.22	0.0018	0.003497
Mg	24	3	He	7689.16	13.8003	704929.76	0.0018	0.003497
Mg	24	3	He	8047.533	14.4434	709513.27	0.0018	0.003497
Al	27	3	He	244.848	0.1439	7152.00	0.0006	0.0006432
Al	27	3	He	233.203	0.1371	7001.89	0.0006	0.0006432
Al	27	3	He	240.792	0.1415	6951.77	0.0006	0.0006432
K	39	3	He	3369.755	4.3186	214656.05	0.0012	0.3951
K	39	3	He	3191.95	4.1115	210020.09	0.0012	0.3951
K	39	3	He	3379.58	4.33	212706.27	0.0012	0.3951
Ca	44	3	He	48930.396	3.3081	164428.40	0.0001	0.002715
Ca	44	3	He	48426.829	3.274	167240.10	0.0001	0.002715
Ca	44	3	He	49910.172	3.3742	165755.70	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.599	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	0.783	0.042	2086.17	0.0219	0.02486
V	51	3	He	0.733	0.0409	2088.16	0.0219	0.02486
V	51	3	He	0.85	0.0434	2134.18	0.0219	0.02486
Cr	52	3	He	-0.172	0.0348	1730.16	0.0299	0.03997
Cr	52	3	He	0.071	0.0421	2150.23	0.0299	0.03997
Cr	52	3	He	-0.002	0.0399	1960.21	0.0299	0.03997
Mn	55	3	He	1218.533	15.6411	777449.83	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1174.138	15.0714	769855.85	0.0128	0.002639
Mn	55	3	He	1212.479	15.5634	764536.16	0.0128	0.002639
Fe	57	3	He	81.35	0.0487	2420.29	0.0006	0.001429
Fe	57	3	He	72.354	0.0435	2220.25	0.0006	0.001429
Fe	57	3	He	81.641	0.0489	2400.27	0.0006	0.001429
Co	59	3	He	6.586	0.3728	18532.51	0.0563	0.002149
Co	59	3	He	6.523	0.3693	18862.90	0.0563	0.002149
Co	59	3	He	6.491	0.3675	18051.95	0.0563	0.002149
Ni	60	3	He	27.93	0.2426	21897.09	0.0086	0.002834
Ni	60	3	He	29.024	0.2519	22458.18	0.0086	0.002834
Ni	60	3	He	27.403	0.238	21426.62	0.0086	0.002834
Cu	63	3	He	1.783	0.0505	4560.89	0.0257	0.004757
Cu	63	3	He	1.873	0.0529	4710.96	0.0257	0.004757
Cu	63	3	He	1.84	0.052	4680.93	0.0257	0.004757
Zn	66	3	He	63.101	0.1875	16930.46	0.0029	0.003818
Zn	66	3	He	64.231	0.1908	17010.50	0.0029	0.003818
Zn	66	3	He	61.226	0.1821	16389.82	0.0029	0.003818
As	75	3	He	0.18	0.0012	106.00	0.002	0.0008061
As	75	3	He	0.22	0.0013	112.00	0.002	0.0008061
As	75	3	He	0.138	0.0011	98.00	0.002	0.0008061
Sr	88	3	He	290.954	2.6108	235800.37	0.009	0.0009645
Sr	88	3	He	299.044	2.6833	237028.12	0.009	0.0009645
Sr	88	3	He	300.373	2.6953	240087.87	0.009	0.0009645
Mo	98	3	He	0.139	0.0033	300.01	0.0219	0.0002706
Mo	98	3	He	0.143	0.0034	300.01	0.0219	0.0002706
Mo	98	3	He	0.141	0.0034	300.01	0.0219	0.0002706
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Ag	107	3	He	-0.004	0.0004	40.00	0.0465	0.0006206
Cd	111	3	He	0.402	0.0021	194.00	0.0053	0
Cd	111	3	He	0.373	0.002	176.00	0.0053	0
Cd	111	3	He	0.407	0.0022	194.00	0.0053	0
Sn	120	3	He	-0.37	0.0106	960.07	0.0158	0.01648
Sn	120	3	He	-0.118	0.0146	1290.11	0.0158	0.01648
Sn	120	3	He	-0.204	0.0132	1180.09	0.0158	0.01648
Sb	121	3	He	0.071	0.0013	120.01	0.0149	0.0002698
Sb	121	3	He	0.081	0.0015	130.01	0.0149	0.0002698
Sb	121	3	He	0.05	0.001	90.00	0.0149	0.0002698
Ba	137	3	He	14.697	0.0708	6391.67	0.0048	0.0002317
Ba	137	3	He	16.728	0.0805	7112.12	0.0048	0.0002317
Ba	137	3	He	15.137	0.0729	6491.75	0.0048	0.0002317
Tl	205	3	He	0.07	0.0019	760.07	0.0247	0.0001339
Tl	205	3	He	0.08	0.0021	860.06	0.0247	0.0001339
Tl	205	3	He	0.096	0.0025	1020.07	0.0247	0.0001339
Pb	208	3	He	0.014	0.0015	380.02	0.0327	0.00107
Pb	208	3	He	0.019	0.0017	370.02	0.0327	0.00107
Pb	208	3	He	0.011	0.0014	330.02	0.0327	0.00107
U	238	3	He	0.119	0.0059	1900.22	0.0493	7.55E-05
U	238	3	He	0.142	0.0071	2270.28	0.0493	7.55E-05
U	238	3	He	0.133	0.0066	2170.27	0.0493	7.55E-05
Sc	45	1	No Gas			2535000.74		
Sc	45	1	No Gas			2537153.56		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2558006.37		
Ge	72	1	No Gas			1266714.75		
Ge	72	1	No Gas			1279249.90		
Ge	72	1	No Gas			1269439.59		
Sc	45	2	H2			194991.38		
Sc	45	2	H2			199268.96		
Sc	45	2	H2			198881.91		
Ge	72	2	H2			178300.47		
Ge	72	2	H2			178965.45		
Ge	72	2	H2			177823.79		
In	115	2	H2			412752.65		
In	115	2	H2			410391.60		
In	115	2	H2			409959.99		
Sc	45	3	He			49705.44		
Sc	45	3	He			51080.66		
Sc	45	3	He			49123.83		
Ge	72	3	He			90275.04		
Ge	72	3	He			89137.99		
Ge	72	3	He			90012.73		
In	115	3	He			90323.77		
In	115	3	He			88340.31		
In	115	3	He			89084.49		
Tb	159	3	He			409732.34		
Tb	159	3	He			405819.68		
Tb	159	3	He			405581.32		
Bi	209	3	He			320847.69		
Bi	209	3	He			321266.05		
Bi	209	3	He			328097.61		

Quantitation Report

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Sample Name	410-137900-L-1-A
Sample Type	Sample
Comment	A12
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

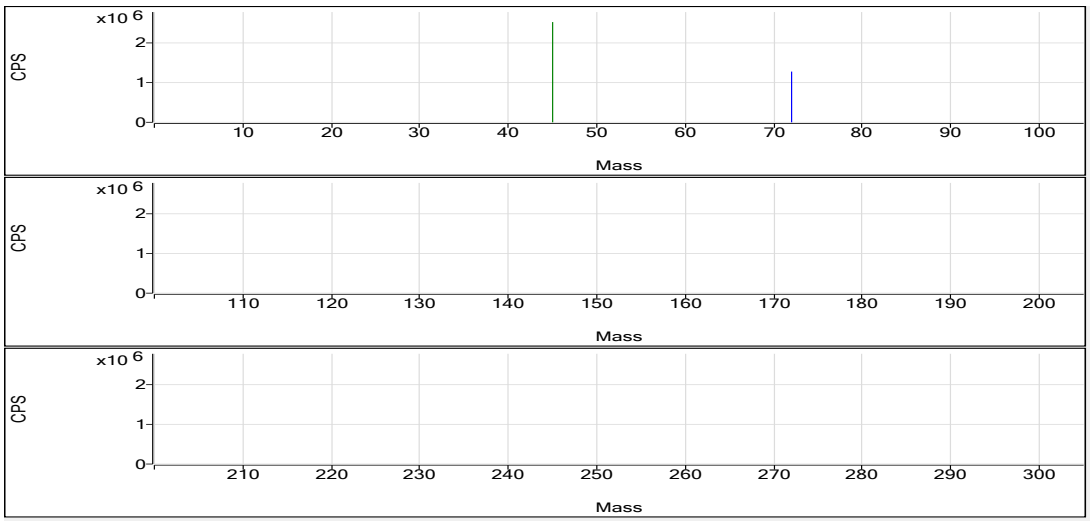
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.246	ppb	6.8	485.34	0.0002	Pulse	0.5000	3
Se	78	72	H2	0.090	ppb	39.7	8.67	0.0000	Pulse	1.5000	3
Na	23	45	He	5273.172	ppb	0.5	953105.51	19.2076	Pulse	0.1000	3
Mg	24	45	He	7944.901	ppb	0.9	707528.37	14.2592	Pulse	0.1000	3
Al	27	45	He	148.047	ppb	3.1	4330.79	0.0873	Pulse	0.1000	3
K	39	45	He	3310.401	ppb	0.5	210861.10	4.2495	Pulse	0.1000	3
Ca	44	45	He	49994.502	ppb	1.3	167736.19	3.3799	Pulse	0.1000	3
Ti	47	45	He	0.993	ppb	36.6	30.00	0.0006	Pulse	0.1000	3
V	51	45	He	1.311	ppb	5.7	2656.26	0.0535	Pulse	0.5000	3
Cr	52	45	He	-0.202	ppb	N/A	1683.49	0.0339	Pulse	0.1000	3
Mn	55	45	He	827.112	ppb	1.8	526820.07	10.6177	Pulse	0.1000	3
Fe	57	45	He	97.050	ppb	9.0	2867.06	0.0578	Pulse	0.1000	3
Co	59	45	He	3.822	ppb	2.5	10777.72	0.2172	Pulse	0.1000	3
Ni	60	72	He	21.686	ppb	5.0	16963.82	0.1890	Pulse	0.1000	3
Cu	63	72	He	1.231	ppb	7.7	3260.49	0.0364	Pulse	0.1000	3
Zn	66	72	He	46.294	ppb	3.8	12435.78	0.1386	Pulse	0.1000	3
As	75	72	He	0.147	ppb	87.6	99.33	0.0011	Pulse	0.5000	3
Sr	88	115	He	291.725	ppb	1.5	237314.20	2.6177	Pulse	0.1000	3
Mo	98	115	He	0.120	ppb	50.6	263.35	0.0029	Pulse	0.1000	3
Ag	107	115	He	-0.002	ppb	N/A	46.67	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.260	ppb	13.6	126.00	0.0014	Pulse	0.5000	3
Sn	120	115	He	-0.194	ppb	N/A	1216.76	0.0134	Pulse	0.1000	3
Sb	121	115	He	0.081	ppb	18.7	133.34	0.0015	Pulse	0.1000	3
Ba	137	115	He	15.368	ppb	5.2	6705.17	0.0740	Pulse	0.1000	3
Tl	205	159	He	0.064	ppb	13.4	696.72	0.0017	Pulse	0.1000	3
Pb	208	159	He	0.033	ppb	9.6	870.05	0.0022	Pulse	0.1000	3
U	238	209	He	0.105	ppb	4.3	1690.18	0.0052	Pulse	0.1000	3

ISTD Table:

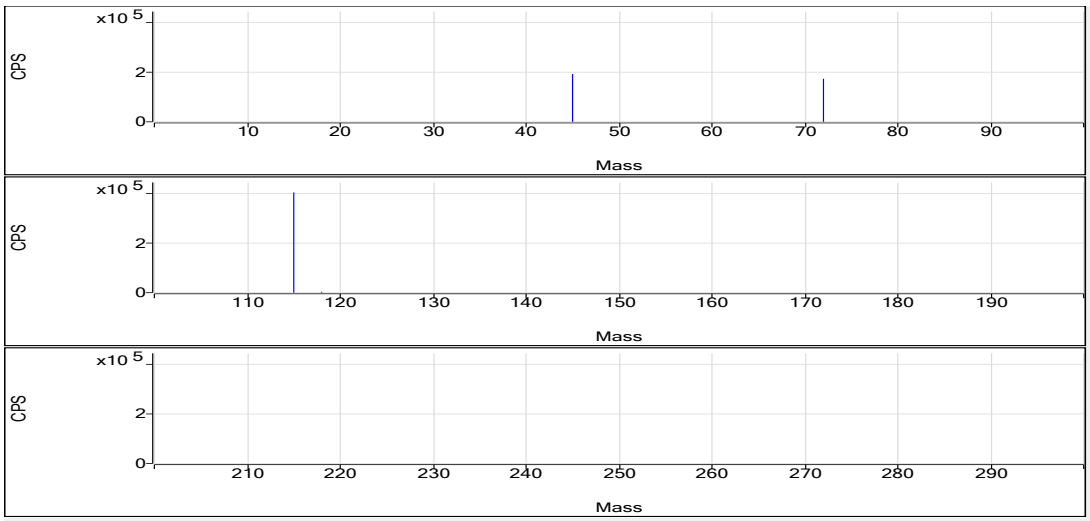
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2527211.27	1.2	105.4	Analog	0.1000	3
No Gas	Ge	72	1278816.88	0.3	110.9	Pulse	0.1000	3
H2	Sc	45	192994.62	0.4	103.2	Pulse	0.1000	3
H2	Ge	72	173931.03	0.9	106.2	Pulse	0.1000	3
H2	In	115	405052.26	0.3	104.1	Pulse	0.1000	3
He	Sc	45	49622.29	1.1	106.4	Pulse	0.1000	3
He	Ge	72	89735.22	1.2	110.5	Pulse	0.1000	3
He	In	115	90668.99	1.3	105.2	Pulse	0.1000	3
He	Tb	159	403354.53	0.9	101.2	Pulse	0.1000	3
He	Bi	209	322991.08	1.5	104.4	Pulse	0.1000	3

No Gas

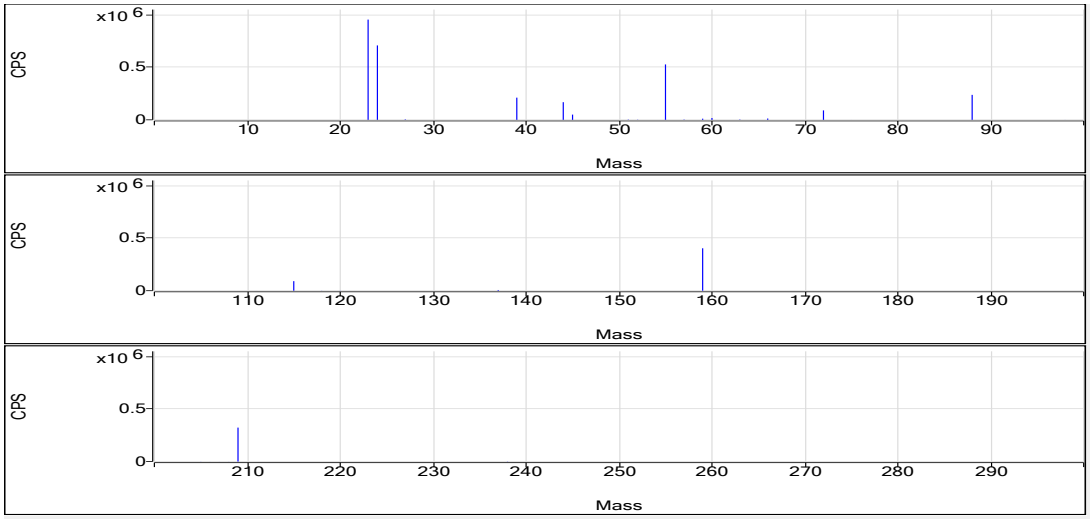


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.229	0.0002	450.01	0.0008	4.685E-06
Be	9	1	No Gas	0.262	0.0002	524.01	0.0008	4.685E-06
Be	9	1	No Gas	0.246	0.0002	482.01	0.0008	4.685E-06
Se	78	2	H2	0.125	0.0001	11.33	0.0004	1.219E-05
Se	78	2	H2	0.054	0	6.00	0.0004	1.219E-05
Se	78	2	H2	0.091	0.0001	8.67	0.0004	1.219E-05
Na	23	3	He	5255.263	19.1435	961726.63	0.0036	0.3452
Na	23	3	He	5302.383	19.312	953338.81	0.0036	0.3452
Na	23	3	He	5261.868	19.1671	944251.08	0.0036	0.3452
Mg	24	3	He	7863.158	14.1125	708982.41	0.0018	0.003497
Mg	24	3	He	7968.428	14.3014	705989.52	0.0018	0.003497
Mg	24	3	He	8003.117	14.3637	707613.19	0.0018	0.003497
Al	27	3	He	153.399	0.0904	4540.85	0.0006	0.0006432
Al	27	3	He	145.393	0.0857	4230.75	0.0006	0.0006432
Al	27	3	He	145.347	0.0857	4220.77	0.0006	0.0006432
K	39	3	He	3293.142	4.2294	212473.61	0.0012	0.3951
K	39	3	He	3309.006	4.2478	209694.12	0.0012	0.3951
K	39	3	He	3329.055	4.2712	210415.56	0.0012	0.3951
Ca	44	3	He	50745.534	3.4307	172349.37	0.0001	0.002715
Ca	44	3	He	49734.959	3.3624	165985.15	0.0001	0.002715
Ca	44	3	He	49503.013	3.3467	164874.06	0.0001	0.002715
Ti	47	3	He	1.352	0.0008	40.00	0.0005	7.003E-05
Ti	47	3	He	1.001	0.0006	30.00	0.0005	7.003E-05
Ti	47	3	He	0.626	0.0004	20.00	0.0005	7.003E-05
V	51	3	He	1.361	0.0546	2744.28	0.0219	0.02486
V	51	3	He	1.226	0.0517	2550.24	0.0219	0.02486
V	51	3	He	1.346	0.0543	2674.26	0.0219	0.02486
Cr	52	3	He	-0.191	0.0342	1720.16	0.0299	0.03997
Cr	52	3	He	-0.28	0.0316	1560.13	0.0299	0.03997
Cr	52	3	He	-0.135	0.0359	1770.17	0.0299	0.03997
Mn	55	3	He	812.492	10.4301	523983.12	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	843.007	10.8217	534212.34	0.0128	0.002639
Mn	55	3	He	825.837	10.6013	522264.76	0.0128	0.002639
Fe	57	3	He	86.974	0.052	2610.35	0.0006	0.001429
Fe	57	3	He	102.504	0.061	3010.41	0.0006	0.001429
Fe	57	3	He	101.672	0.0605	2980.43	0.0006	0.001429
Co	59	3	He	3.712	0.2111	10604.21	0.0563	0.002149
Co	59	3	He	3.865	0.2197	10844.45	0.0563	0.002149
Co	59	3	He	3.887	0.2209	10884.50	0.0563	0.002149
Ni	60	3	He	22.931	0.1997	18161.98	0.0086	0.002834
Ni	60	3	He	21.126	0.1842	16419.88	0.0086	0.002834
Ni	60	3	He	21.002	0.1831	16309.61	0.0086	0.002834
Cu	63	3	He	1.125	0.0336	3060.44	0.0257	0.004757
Cu	63	3	He	1.257	0.037	3300.48	0.0257	0.004757
Cu	63	3	He	1.311	0.0384	3420.54	0.0257	0.004757
Zn	66	3	He	45.073	0.1351	12285.58	0.0029	0.003818
Zn	66	3	He	45.514	0.1363	12155.49	0.0029	0.003818
Zn	66	3	He	48.296	0.1444	12866.28	0.0029	0.003818
As	75	3	He	0.197	0.0012	110.00	0.002	0.0008061
As	75	3	He	0.001	0.0008	72.00	0.002	0.0008061
As	75	3	He	0.242	0.0013	116.00	0.002	0.0008061
Sr	88	3	He	296.855	2.6637	238329.63	0.009	0.0009645
Sr	88	3	He	288.781	2.5913	238178.61	0.009	0.0009645
Sr	88	3	He	289.54	2.5981	235434.37	0.009	0.0009645
Mo	98	3	He	0.074	0.0019	170.01	0.0219	0.0002706
Mo	98	3	He	0.097	0.0024	220.01	0.0219	0.0002706
Mo	98	3	He	0.189	0.0044	400.02	0.0219	0.0002706
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Ag	107	3	He	-0.002	0.0005	50.00	0.0465	0.0006206
Ag	107	3	He	0.001	0.0007	60.00	0.0465	0.0006206
Cd	111	3	He	0.301	0.0016	144.00	0.0053	0
Cd	111	3	He	0.24	0.0013	118.00	0.0053	0
Cd	111	3	He	0.239	0.0013	116.00	0.0053	0
Sn	120	3	He	-0.229	0.0129	1150.10	0.0158	0.01648
Sn	120	3	He	-0.196	0.0134	1230.10	0.0158	0.01648
Sn	120	3	He	-0.156	0.014	1270.09	0.0158	0.01648
Sb	121	3	He	0.087	0.0016	140.01	0.0149	0.0002698
Sb	121	3	He	0.092	0.0016	150.01	0.0149	0.0002698
Sb	121	3	He	0.064	0.0012	110.00	0.0149	0.0002698
Ba	137	3	He	16.211	0.078	6981.98	0.0048	0.0002317
Ba	137	3	He	14.622	0.0704	6471.72	0.0048	0.0002317
Ba	137	3	He	15.27	0.0735	6661.82	0.0048	0.0002317
Tl	205	3	He	0.073	0.0019	780.06	0.0247	0.0001339
Tl	205	3	He	0.055	0.0015	610.04	0.0247	0.0001339
Tl	205	3	He	0.066	0.0018	700.05	0.0247	0.0001339
Pb	208	3	He	0.036	0.0022	470.03	0.0327	0.00107
Pb	208	3	He	0.03	0.002	430.03	0.0327	0.00107
Pb	208	3	He	0.034	0.0022	420.03	0.0327	0.00107
U	238	3	He	0.103	0.0052	1640.15	0.0493	7.55E-05
U	238	3	He	0.11	0.0055	1770.20	0.0493	7.55E-05
U	238	3	He	0.101	0.0051	1660.18	0.0493	7.55E-05
Sc	45	1	No Gas			2511878.56		
Sc	45	1	No Gas			2561053.87		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2508701.37		
Ge	72	1	No Gas			1279929.51		
Ge	72	1	No Gas			1282067.95		
Ge	72	1	No Gas			1274453.18		
Sc	45	2	H2			192761.21		
Sc	45	2	H2			192347.32		
Sc	45	2	H2			193875.33		
Ge	72	2	H2			175687.67		
Ge	72	2	H2			173097.75		
Ge	72	2	H2			173007.67		
In	115	2	H2			406023.28		
In	115	2	H2			405537.85		
In	115	2	H2			403595.66		
Sc	45	3	He			50237.78		
Sc	45	3	He			49364.99		
Sc	45	3	He			49264.11		
Ge	72	3	He			90968.79		
Ge	72	3	He			89158.53		
Ge	72	3	He			89078.35		
In	115	3	He			89478.00		
In	115	3	He			91922.41		
In	115	3	He			90624.03		
Tb	159	3	He			404795.70		
Tb	159	3	He			406247.96		
Tb	159	3	He			399019.92		
Bi	209	3	He			318154.33		
Bi	209	3	He			322677.05		
Bi	209	3	He			328141.87		

Quantitation Report

Data File Name	181SMPL.d
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Sample Name	410-137887-V-1-A
Sample Type	Sample
Comment	A12
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

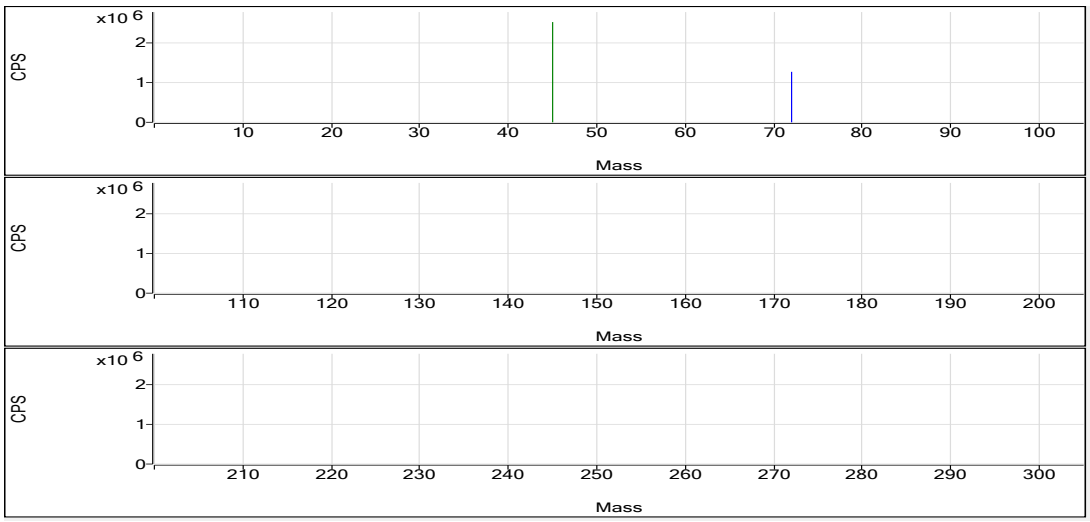
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.009	ppb	41.2	30.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.038	ppb	36.4	4.89	0.0000	Pulse	1.5000	3
Na	23	45	He	2341.937	ppb	1.8	432596.84	8.7224	Pulse	0.1000	3
Mg	24	45	He	3063.966	ppb	1.1	272847.59	5.5012	Pulse	0.1000	3
Al	27	45	He	12.466	ppb	19.5	393.36	0.0079	Pulse	0.1000	3
K	39	45	He	2342.752	ppb	1.5	154883.52	3.1228	Pulse	0.1000	3
Ca	44	45	He	9655.031	ppb	2.9	32480.29	0.6549	Pulse	0.1000	3
Ti	47	45	He	-0.006	ppb	N/A	3.33	0.0001	Pulse	0.1000	3
V	51	45	He	0.509	ppb	3.9	1784.79	0.0360	Pulse	0.5000	3
Cr	52	45	He	-0.186	ppb	N/A	1706.82	0.0344	Pulse	0.1000	3
Mn	55	45	He	20.742	ppb	3.1	13333.18	0.2688	Pulse	0.1000	3
Fe	57	45	He	171.353	ppb	6.8	5007.71	0.1010	Pulse	0.1000	3
Co	59	45	He	0.090	ppb	13.2	356.68	0.0072	Pulse	0.1000	3
Ni	60	72	He	0.164	ppb	92.8	376.69	0.0042	Pulse	0.1000	3
Cu	63	72	He	1.391	ppb	5.4	3600.58	0.0405	Pulse	0.1000	3
Zn	66	72	He	2.739	ppb	37.5	1050.07	0.0118	Pulse	0.1000	3
As	75	72	He	0.904	ppb	19.3	236.67	0.0027	Pulse	0.5000	3
Sr	88	115	He	32.033	ppb	5.0	25924.55	0.2883	Pulse	0.1000	3
Mo	98	115	He	0.016	ppb	146.0	56.67	0.0006	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	1338.2	56.67	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.011	ppb	21.6	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.259	ppb	N/A	1113.42	0.0124	Pulse	0.1000	3
Sb	121	115	He	0.044	ppb	42.7	83.33	0.0009	Pulse	0.1000	3
Ba	137	115	He	53.193	ppb	1.5	22976.56	0.2555	Pulse	0.1000	3
Tl	205	159	He	0.006	ppb	101.2	116.67	0.0003	Pulse	0.1000	3
Pb	208	159	He	0.081	ppb	9.1	1506.76	0.0037	Pulse	0.1000	3
U	238	209	He	0.009	ppb	16.6	156.68	0.0005	Pulse	0.1000	3

ISTD Table:

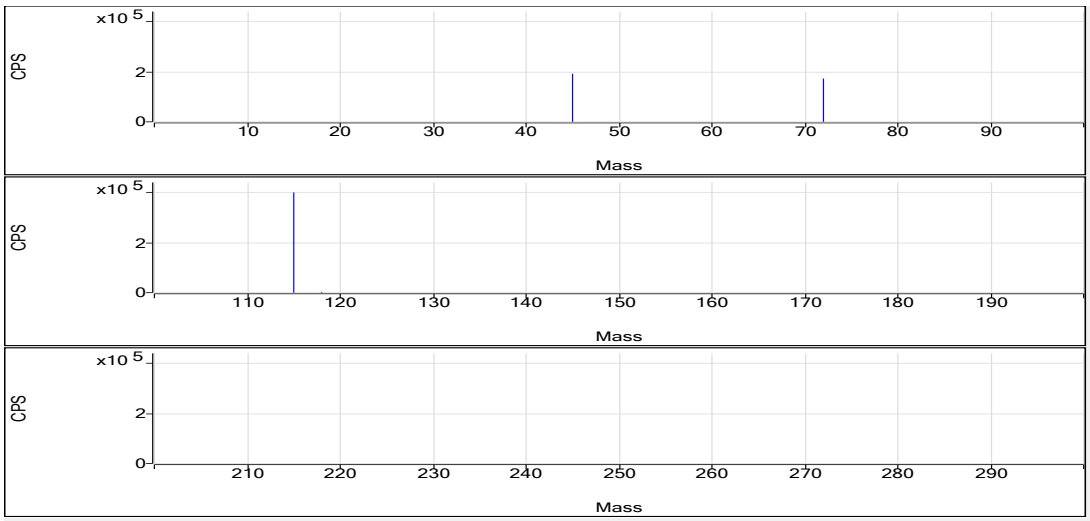
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2517208.45	2.0	104.9	Analog	0.1000	3
No Gas	Ge	72	1267602.14	1.0	109.9	Pulse	0.1000	3
H2	Sc	45	192366.46	1.0	102.9	Pulse	0.1000	3
H2	Ge	72	173207.61	0.3	105.8	Pulse	0.1000	3
H2	In	115	401098.65	1.1	103.1	Pulse	0.1000	3
He	Sc	45	49598.86	0.6	106.3	Pulse	0.1000	3
He	Ge	72	89006.24	0.8	109.6	Pulse	0.1000	3
He	In	115	89920.86	0.1	104.3	Pulse	0.1000	3
He	Tb	159	405488.94	1.1	101.7	Pulse	0.1000	3
He	Bi	209	316974.01	1.1	102.5	Pulse	0.1000	3

No Gas

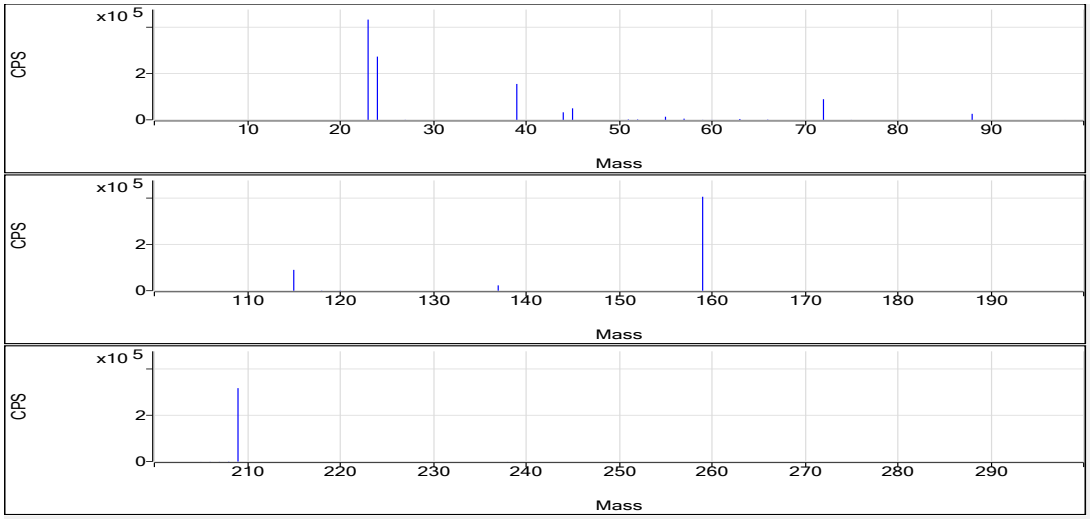


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.01	0	30.00	0.0008	4.685E-06
Be	9	1	No Gas	0.013	0	38.00	0.0008	4.685E-06
Be	9	1	No Gas	0.005	0	22.00	0.0008	4.685E-06
Se	78	2	H2	0.036	0	4.67	0.0004	1.219E-05
Se	78	2	H2	0.026	0	4.00	0.0004	1.219E-05
Se	78	2	H2	0.054	0	6.00	0.0004	1.219E-05
Na	23	3	He	2370.587	8.8249	437678.74	0.0036	0.3452
Na	23	3	He	2294.802	8.5538	426800.15	0.0036	0.3452
Na	23	3	He	2360.421	8.7885	433311.63	0.0036	0.3452
Mg	24	3	He	3095.449	5.5577	275641.64	0.0018	0.003497
Mg	24	3	He	3027.238	5.4353	271202.07	0.0018	0.003497
Mg	24	3	He	3069.21	5.5106	271699.06	0.0018	0.003497
Al	27	3	He	11.653	0.0075	370.02	0.0006	0.0006432
Al	27	3	He	10.549	0.0068	340.02	0.0006	0.0006432
Al	27	3	He	15.196	0.0095	470.03	0.0006	0.0006432
K	39	3	He	2378	3.1638	156913.86	0.0012	0.3951
K	39	3	He	2310.014	3.0847	153913.38	0.0012	0.3951
K	39	3	He	2340.241	3.1199	153823.33	0.0012	0.3951
Ca	44	3	He	9752.198	0.6615	32807.54	0.0001	0.002715
Ca	44	3	He	9342.527	0.6338	31625.17	0.0001	0.002715
Ca	44	3	He	9870.37	0.6695	33008.16	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.243	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	0.525	0.0363	1802.12	0.0219	0.02486
V	51	3	He	0.515	0.0361	1802.12	0.0219	0.02486
V	51	3	He	0.486	0.0355	1750.12	0.0219	0.02486
Cr	52	3	He	-0.217	0.0335	1660.16	0.0299	0.03997
Cr	52	3	He	-0.117	0.0365	1820.17	0.0299	0.03997
Cr	52	3	He	-0.224	0.0333	1640.14	0.0299	0.03997
Mn	55	3	He	20.055	0.26	12896.03	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	20.84	0.2701	13476.67	0.0128	0.002639
Mn	55	3	He	21.33	0.2764	13626.84	0.0128	0.002639
Fe	57	3	He	162.071	0.0956	4740.93	0.0006	0.001429
Fe	57	3	He	167.64	0.0988	4931.05	0.0006	0.001429
Fe	57	3	He	184.348	0.1085	5351.16	0.0006	0.001429
Co	59	3	He	0.091	0.0073	360.02	0.0563	0.002149
Co	59	3	He	0.101	0.0078	390.02	0.0563	0.002149
Co	59	3	He	0.077	0.0065	320.01	0.0563	0.002149
Ni	60	3	He	0.204	0.0046	410.02	0.0086	0.002834
Ni	60	3	He	0.291	0.0053	470.03	0.0086	0.002834
Ni	60	3	He	-0.004	0.0028	250.01	0.0086	0.002834
Cu	63	3	He	1.31	0.0384	3430.51	0.0257	0.004757
Cu	63	3	He	1.458	0.0422	3720.63	0.0257	0.004757
Cu	63	3	He	1.405	0.0408	3650.61	0.0257	0.004757
Zn	66	3	He	3.915	0.0152	1360.10	0.0029	0.003818
Zn	66	3	He	2.271	0.0104	920.06	0.0029	0.003818
Zn	66	3	He	2.03	0.0097	870.06	0.0029	0.003818
As	75	3	He	1.092	0.003	272.01	0.002	0.0008061
As	75	3	He	0.746	0.0023	206.00	0.002	0.0008061
As	75	3	He	0.873	0.0026	232.00	0.002	0.0008061
Sr	88	3	He	32.156	0.2894	25994.67	0.009	0.0009645
Sr	88	3	He	30.37	0.2734	24571.79	0.009	0.0009645
Sr	88	3	He	33.574	0.3021	27207.18	0.009	0.0009645
Mo	98	3	He	-0.002	0.0002	20.00	0.0219	0.0002706
Mo	98	3	He	0.008	0.0004	40.00	0.0219	0.0002706
Mo	98	3	He	0.043	0.0012	110.00	0.0219	0.0002706
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Ag	107	3	He	0.003	0.0008	70.00	0.0465	0.0006206
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Cd	111	3	He	0.008	0	4.00	0.0053	0
Cd	111	3	He	0.012	0.0001	6.00	0.0053	0
Cd	111	3	He	0.012	0.0001	6.00	0.0053	0
Sn	120	3	He	-0.352	0.0109	980.06	0.0158	0.01648
Sn	120	3	He	-0.282	0.012	1080.08	0.0158	0.01648
Sn	120	3	He	-0.143	0.0142	1280.11	0.0158	0.01648
Sb	121	3	He	0.064	0.0012	110.00	0.0149	0.0002698
Sb	121	3	He	0.027	0.0007	60.00	0.0149	0.0002698
Sb	121	3	He	0.042	0.0009	80.00	0.0149	0.0002698
Ba	137	3	He	53.699	0.258	23170.31	0.0048	0.0002317
Ba	137	3	He	53.594	0.2574	23140.19	0.0048	0.0002317
Ba	137	3	He	52.286	0.2512	22619.19	0.0048	0.0002317
Tl	205	3	He	0.013	0.0005	190.01	0.0247	0.0001339
Tl	205	3	He	0.002	0.0002	70.00	0.0247	0.0001339
Tl	205	3	He	0.004	0.0002	90.00	0.0247	0.0001339
Pb	208	3	He	0.073	0.0035	780.06	0.0327	0.00107
Pb	208	3	He	0.082	0.0038	840.06	0.0327	0.00107
Pb	208	3	He	0.088	0.0039	750.04	0.0327	0.00107
U	238	3	He	0.008	0.0005	150.01	0.0493	7.55E-05
U	238	3	He	0.01	0.0006	180.01	0.0493	7.55E-05
U	238	3	He	0.007	0.0004	140.01	0.0493	7.55E-05
Sc	45	1	No Gas			2484995.59		
Sc	45	1	No Gas			2574981.52		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2491648.24		
Ge	72	1	No Gas			1259274.67		
Ge	72	1	No Gas			1281677.79		
Ge	72	1	No Gas			1261853.97		
Sc	45	2	H2			193064.27		
Sc	45	2	H2			193744.47		
Sc	45	2	H2			190290.64		
Ge	72	2	H2			172530.08		
Ge	72	2	H2			173439.20		
Ge	72	2	H2			173653.55		
In	115	2	H2			397778.51		
In	115	2	H2			405856.28		
In	115	2	H2			399661.17		
Sc	45	3	He			49596.09		
Sc	45	3	He			49896.10		
Sc	45	3	He			49304.38		
Ge	72	3	He			89379.00		
Ge	72	3	He			88211.52		
Ge	72	3	He			89428.19		
In	115	3	He			89829.53		
In	115	3	He			89890.07		
In	115	3	He			90061.47		
Tb	159	3	He			410598.47		
Tb	159	3	He			401771.60		
Tb	159	3	He			404096.75		
Bi	209	3	He			320444.29		
Bi	209	3	He			313742.44		
Bi	209	3	He			316735.29		

Quantitation Report

Data File Name	182SMPL.d
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Sample Type	Sample
Comment	A12
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

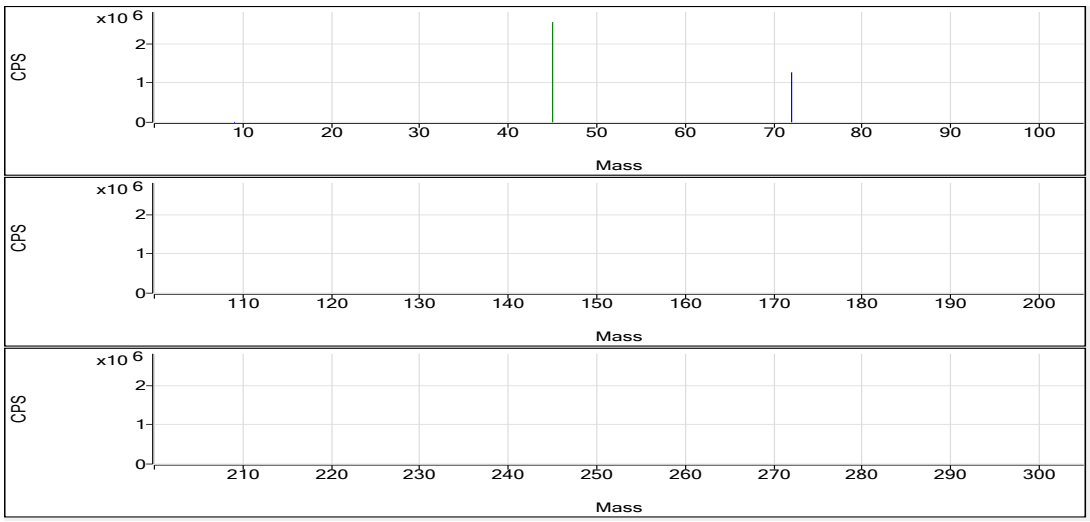
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.002	ppb	86.1	16.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.023	ppb	93.8	3.78	0.0000	Pulse	1.5000	3
Na	23	45	He	9266.986	ppb	1.6	1679854.56	33.4936	Analog	0.1000	3
Mg	24	45	He	9359.951	ppb	0.6	842536.66	16.7983	Pulse	0.1000	3
Al	27	45	He	2.765	ppb	40.0	113.34	0.0023	Pulse	0.1000	3
K	39	45	He	992.293	ppb	1.1	77763.90	1.5504	Pulse	0.1000	3
Ca	44	45	He	25429.185	ppb	0.9	86295.56	1.7205	Pulse	0.1000	3
Ti	47	45	He	0.241	ppb	154.6	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	0.510	ppb	6.3	1806.12	0.0360	Pulse	0.5000	3
Cr	52	45	He	-0.254	ppb	N/A	1623.48	0.0324	Pulse	0.1000	3
Mn	55	45	He	30.832	ppb	3.3	19981.14	0.3983	Pulse	0.1000	3
Fe	57	45	He	7.733	ppb	53.5	296.69	0.0059	Pulse	0.1000	3
Co	59	45	He	0.000	ppb	N/A	106.67	0.0021	Pulse	0.1000	3
Ni	60	72	He	-0.101	ppb	N/A	180.01	0.0020	Pulse	0.1000	3
Cu	63	72	He	19.247	ppb	2.5	45743.49	0.4988	Pulse	0.1000	3
Zn	66	72	He	13.112	ppb	2.9	3850.65	0.0420	Pulse	0.1000	3
As	75	72	He	0.455	ppb	26.3	159.33	0.0017	Pulse	0.5000	3
Sr	88	115	He	169.013	ppb	0.5	137610.54	1.5170	Pulse	0.1000	3
Mo	98	115	He	0.278	ppb	14.1	576.70	0.0064	Pulse	0.1000	3
Ag	107	115	He	-0.002	ppb	N/A	50.00	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.008	ppb	50.3	4.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.175	ppb	N/A	1243.43	0.0137	Pulse	0.1000	3
Sb	121	115	He	0.029	ppb	74.2	63.33	0.0007	Pulse	0.1000	3
Ba	137	115	He	95.958	ppb	1.1	41797.94	0.4608	Pulse	0.1000	3
Tl	205	159	He	0.005	ppb	29.4	106.67	0.0003	Pulse	0.1000	3
Pb	208	159	He	1.213	ppb	2.1	16701.46	0.0408	Pulse	0.1000	3
U	238	209	He	0.564	ppb	4.4	8756.67	0.0278	Pulse	0.1000	3

ISTD Table:

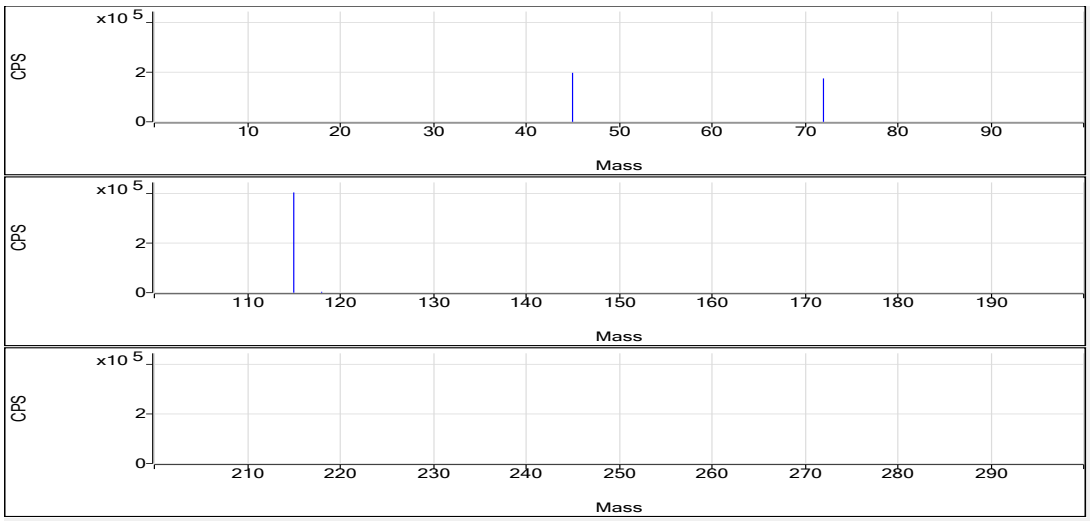
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2555097.09	1.0	106.5	Analog	0.1000	3
No Gas	Ge	72	1274292.87	0.6	110.5	Pulse	0.1000	3
H2	Sc	45	197286.98	0.4	105.5	Pulse	0.1000	3
H2	Ge	72	174727.80	0.5	106.7	Pulse	0.1000	3
H2	In	115	403615.87	0.6	103.7	Pulse	0.1000	3
He	Sc	45	50157.08	0.5	107.5	Pulse	0.1000	3
He	Ge	72	91713.50	1.3	113.0	Pulse	0.1000	3
He	In	115	90712.74	0.5	105.2	Pulse	0.1000	3
He	Tb	159	409834.24	0.7	102.8	Pulse	0.1000	3
He	Bi	209	314518.73	0.9	101.7	Pulse	0.1000	3

No Gas

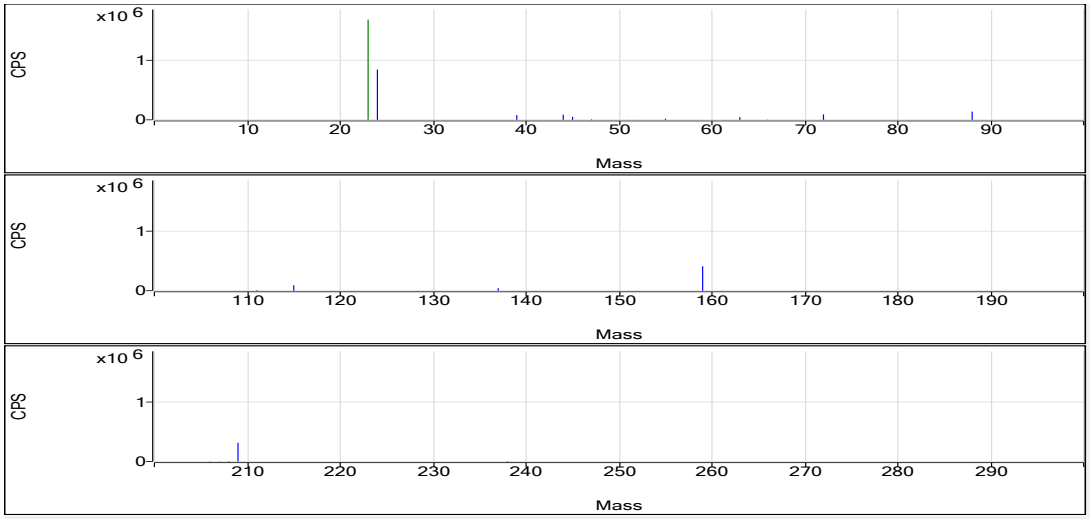


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.004	0	20.00	0.0008	4.685E-06
Be	9	1	No Gas	0.003	0	18.00	0.0008	4.685E-06
Be	9	1	No Gas	0	0	12.00	0.0008	4.685E-06
Se	78	2	H2	0.035	0	4.67	0.0004	1.219E-05
Se	78	2	H2	-0.002	0	2.00	0.0004	1.219E-05
Se	78	2	H2	0.035	0	4.67	0.0004	1.219E-05
Na	23	3	He	9096.742	32.8847	1658981.69	0.0036	0.3452
Na	23	3	He	9340.387	33.7562	1687009.66	0.0036	0.3452
Na	23	3	He	9363.828	33.84	1693572.32	0.0036	0.3452
Mg	24	3	He	9299.837	16.6904	842005.77	0.0018	0.003497
Mg	24	3	He	9376.777	16.8285	841024.21	0.0018	0.003497
Mg	24	3	He	9403.237	16.8759	844579.99	0.0018	0.003497
Al	27	3	He	1.95	0.0018	90.00	0.0006	0.0006432
Al	27	3	He	2.321	0.002	100.00	0.0006	0.0006432
Al	27	3	He	4.024	0.003	150.01	0.0006	0.0006432
K	39	3	He	990.289	1.5481	78098.67	0.0012	0.3951
K	39	3	He	1004.066	1.5641	78169.30	0.0012	0.3951
K	39	3	He	982.524	1.539	77023.73	0.0012	0.3951
Ca	44	3	He	25397.287	1.7184	86688.20	0.0001	0.002715
Ca	44	3	He	25211.376	1.7058	85249.18	0.0001	0.002715
Ca	44	3	He	25678.892	1.7374	86949.30	0.0001	0.002715
Ti	47	3	He	0.239	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	0.615	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	0.497	0.0357	1802.12	0.0219	0.02486
V	51	3	He	0.486	0.0355	1774.12	0.0219	0.02486
V	51	3	He	0.546	0.0368	1842.13	0.0219	0.02486
Cr	52	3	He	-0.329	0.0301	1520.13	0.0299	0.03997
Cr	52	3	He	-0.252	0.0324	1620.16	0.0299	0.03997
Cr	52	3	He	-0.18	0.0346	1730.16	0.0299	0.03997
Mn	55	3	He	31.651	0.4088	20625.43	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	29.672	0.3834	19163.22	0.0128	0.002639
Mn	55	3	He	31.174	0.4027	20154.76	0.0128	0.002639
Fe	57	3	He	4.365	0.004	200.01	0.0006	0.001429
Fe	57	3	He	12.351	0.0086	430.04	0.0006	0.001429
Fe	57	3	He	6.483	0.0052	260.01	0.0006	0.001429
Co	59	3	He	0.018	0.0032	160.01	0.0563	0.002149
Co	59	3	He	-0.01	0.0016	80.00	0.0563	0.002149
Co	59	3	He	-0.01	0.0016	80.00	0.0563	0.002149
Ni	60	3	He	-0.13	0.0017	160.01	0.0086	0.002834
Ni	60	3	He	-0.1	0.002	180.01	0.0086	0.002834
Ni	60	3	He	-0.074	0.0022	200.01	0.0086	0.002834
Cu	63	3	He	18.826	0.488	45422.75	0.0257	0.004757
Cu	63	3	He	19.145	0.4962	45201.40	0.0257	0.004757
Cu	63	3	He	19.77	0.5123	46606.33	0.0257	0.004757
Zn	66	3	He	12.677	0.0407	3790.64	0.0029	0.003818
Zn	66	3	He	13.283	0.0425	3870.66	0.0029	0.003818
Zn	66	3	He	13.376	0.0428	3890.66	0.0029	0.003818
As	75	3	He	0.372	0.0016	146.00	0.002	0.0008061
As	75	3	He	0.592	0.002	184.00	0.002	0.0008061
As	75	3	He	0.401	0.0016	148.00	0.002	0.0008061
Sr	88	3	He	169.777	1.5238	138088.66	0.009	0.0009645
Sr	88	3	He	168.101	1.5088	136239.99	0.009	0.0009645
Sr	88	3	He	169.16	1.5183	138502.98	0.009	0.0009645
Mo	98	3	He	0.3	0.0068	620.03	0.0219	0.0002706
Mo	98	3	He	0.301	0.0069	620.04	0.0219	0.0002706
Mo	98	3	He	0.233	0.0054	490.02	0.0219	0.0002706
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Ag	107	3	He	-0.004	0.0004	40.00	0.0465	0.0006206
Ag	107	3	He	0.001	0.0007	60.00	0.0465	0.0006206
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.012	0.0001	6.00	0.0053	0
Cd	111	3	He	0.008	0	4.00	0.0053	0
Sn	120	3	He	-0.198	0.0134	1210.11	0.0158	0.01648
Sn	120	3	He	-0.16	0.014	1260.09	0.0158	0.01648
Sn	120	3	He	-0.169	0.0138	1260.10	0.0158	0.01648
Sb	121	3	He	0.004	0.0003	30.00	0.0149	0.0002698
Sb	121	3	He	0.041	0.0009	80.00	0.0149	0.0002698
Sb	121	3	He	0.041	0.0009	80.00	0.0149	0.0002698
Ba	137	3	He	96.974	0.4656	42196.22	0.0048	0.0002317
Ba	137	3	He	94.866	0.4555	41132.44	0.0048	0.0002317
Ba	137	3	He	96.033	0.4611	42065.16	0.0048	0.0002317
Tl	205	3	He	0.005	0.0003	110.00	0.0247	0.0001339
Tl	205	3	He	0.006	0.0003	120.01	0.0247	0.0001339
Tl	205	3	He	0.004	0.0002	90.00	0.0247	0.0001339
Pb	208	3	He	1.186	0.0399	8593.15	0.0327	0.00107
Pb	208	3	He	1.214	0.0408	8553.12	0.0327	0.00107
Pb	208	3	He	1.237	0.0416	9273.61	0.0327	0.00107
U	238	3	He	0.59	0.0291	9173.62	0.0493	7.55E-05
U	238	3	He	0.561	0.0277	8623.30	0.0493	7.55E-05
U	238	3	He	0.541	0.0267	8473.10	0.0493	7.55E-05
Sc	45	1	No Gas			2569094.02		
Sc	45	1	No Gas			2571843.24		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2524354.02		
Ge	72	1	No Gas			1280604.04		
Ge	72	1	No Gas			1265891.39		
Ge	72	1	No Gas			1276383.18		
Sc	45	2	H2			196694.51		
Sc	45	2	H2			196958.63		
Sc	45	2	H2			198207.79		
Ge	72	2	H2			175254.00		
Ge	72	2	H2			175274.47		
Ge	72	2	H2			173654.92		
In	115	2	H2			406506.63		
In	115	2	H2			402628.55		
In	115	2	H2			401712.42		
Sc	45	3	He			50448.51		
Sc	45	3	He			49976.32		
Sc	45	3	He			50046.42		
Ge	72	3	He			93071.82		
Ge	72	3	He			91089.73		
Ge	72	3	He			90978.96		
In	115	3	He			90624.98		
In	115	3	He			90303.32		
In	115	3	He			91228.10		
Tb	159	3	He			413025.85		
Tb	159	3	He			408283.82		
Tb	159	3	He			408193.04		
Bi	209	3	He			315036.93		
Bi	209	3	He			311312.61		
Bi	209	3	He			317206.64		

Quantitation Report

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Sample Name	410-137706-B-9-A
Sample Type	Sample
Comment	A12
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

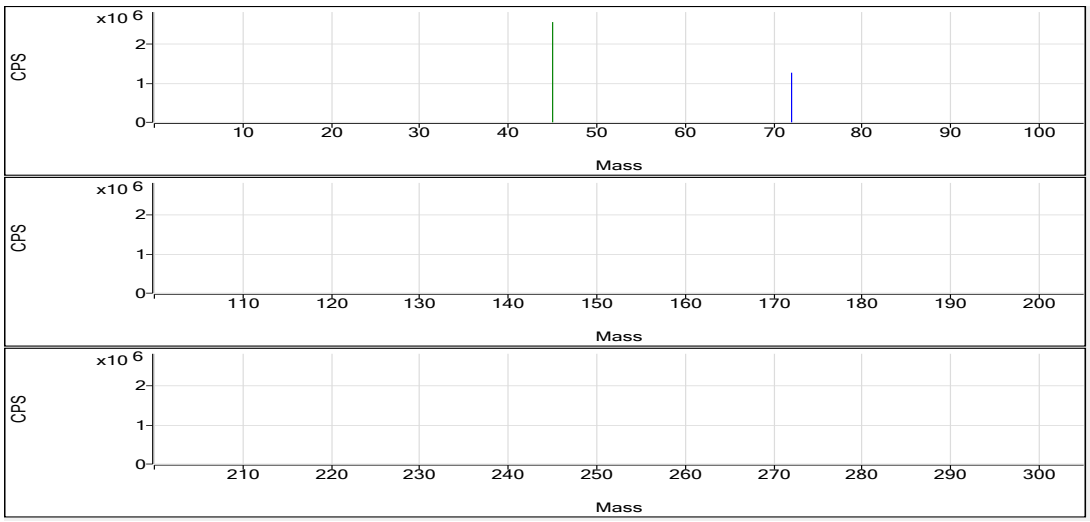
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.016	ppb	46.2	42.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.558	ppb	10.5	42.44	0.0002	Pulse	1.5000	3
Na	23	45	He	324022.251	ppb	0.4	58278230.80	1 159.3886	Analog	0.1000	3
Mg	24	45	He	53022.889	ppb	1.1	4782378.16	95.1436	Analog	0.1000	3
Al	27	45	He	238.936	ppb	2.4	7058.61	0.1404	Pulse	0.1000	3
K	39	45	He	10993.009	ppb	0.9	663238.43	13.1945	Pulse	0.1000	3
Ca	44	45	He	26328.235	ppb	1.6	89531.33	1.7812	Pulse	0.1000	3
Ti	47	45	He	10.118	ppb	7.1	276.68	0.0055	Pulse	0.1000	3
V	51	45	He	5.617	ppb	1.9	7421.26	0.1476	Pulse	0.5000	3
Cr	52	45	He	5.710	ppb	2.6	10604.23	0.2109	Pulse	0.1000	3
Mn	55	45	He	185.323	ppb	1.4	119683.08	2.3811	Pulse	0.1000	3
Fe	57	45	He	1563.592	ppb	0.4	45736.51	0.9099	Pulse	0.1000	3
Co	59	45	He	0.442	ppb	3.5	1360.11	0.0271	Pulse	0.1000	3
Ni	60	72	He	11.911	ppb	4.4	9593.53	0.1051	Pulse	0.1000	3
Cu	63	72	He	41.051	ppb	0.8	96667.00	1.0586	Pulse	0.1000	3
Zn	66	72	He	473.774	ppb	0.2	126315.66	1.3833	Pulse	0.1000	3
As	75	72	He	1.253	ppb	11.3	308.01	0.0034	Pulse	0.5000	3
Sr	88	115	He	163.570	ppb	0.9	129936.69	1.4682	Pulse	0.1000	3
Mo	98	115	He	4.913	ppb	1.9	9556.93	0.1080	Pulse	0.1000	3
Ag	107	115	He	0.019	ppb	36.3	133.34	0.0015	Pulse	0.1000	3
Cd	111	115	He	0.121	ppb	15.1	57.33	0.0006	Pulse	0.5000	3
Sn	120	115	He	0.166	ppb	14.2	1690.17	0.0191	Pulse	0.1000	3
Sb	121	115	He	0.638	ppb	14.9	863.40	0.0098	Pulse	0.1000	3
Ba	137	115	He	1008.123	ppb	1.2	428205.20	4.8386	Pulse	0.1000	3
Tl	205	159	He	0.017	ppb	12.8	226.68	0.0006	Pulse	0.1000	3
Pb	208	159	He	2.183	ppb	5.1	29247.14	0.0725	Pulse	0.1000	3
U	238	209	He	0.314	ppb	6.1	4737.73	0.0156	Pulse	0.1000	3

ISTD Table:

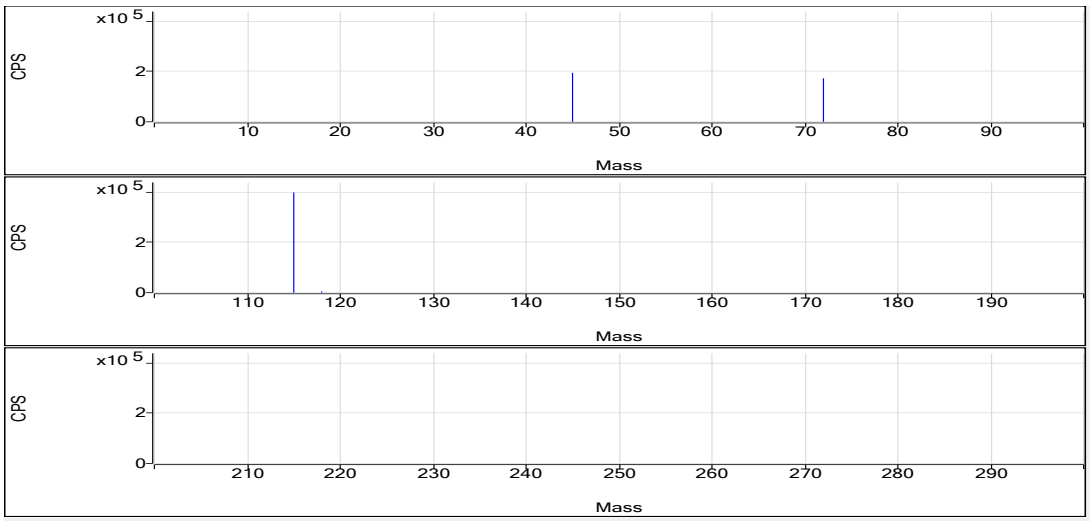
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2568527.77	1.5	107.1	Analog	0.1000	3
No Gas	Ge	72	1271007.20	0.5	110.2	Pulse	0.1000	3
H2	Sc	45	194955.28	0.8	104.2	Pulse	0.1000	3
H2	Ge	72	173336.85	0.7	105.9	Pulse	0.1000	3
H2	In	115	398803.00	1.6	102.5	Pulse	0.1000	3
He	Sc	45	50267.40	0.7	107.8	Pulse	0.1000	3
He	Ge	72	91317.60	0.6	112.5	Pulse	0.1000	3
He	In	115	88502.71	0.6	102.7	Pulse	0.1000	3
He	Tb	159	403357.26	0.6	101.2	Pulse	0.1000	3
He	Bi	209	304707.57	0.5	98.5	Pulse	0.1000	3

No Gas

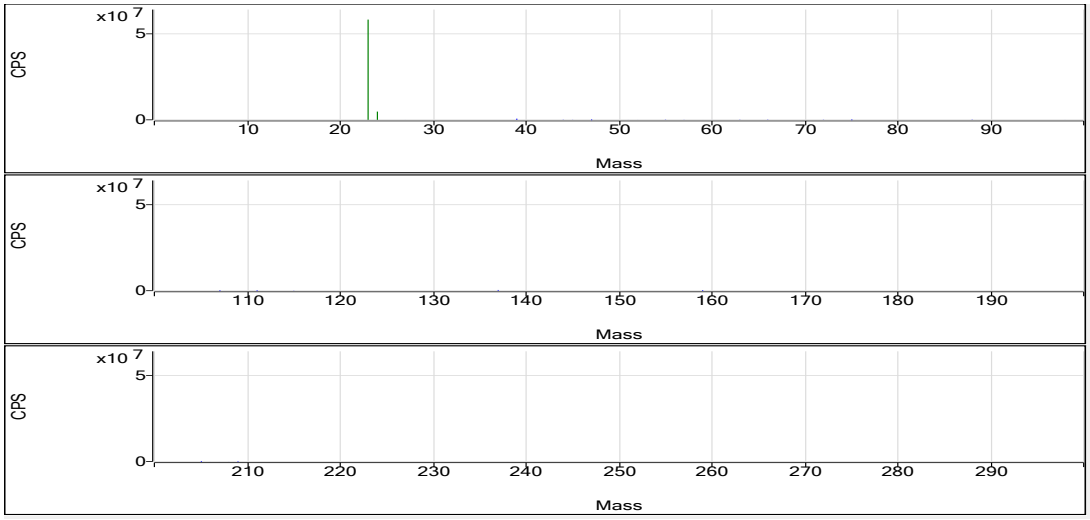


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.019	0	50.00	0.0008	4.685E-06
Be	9	1	No Gas	0.02	0	52.00	0.0008	4.685E-06
Be	9	1	No Gas	0.007	0	26.00	0.0008	4.685E-06
Se	78	2	H2	0.598	0.0003	45.33	0.0004	1.219E-05
Se	78	2	H2	0.491	0.0002	37.33	0.0004	1.219E-05
Se	78	2	H2	0.584	0.0003	44.67	0.0004	1.219E-05
Na	23	3	He	322861.245	1155.2357	58279224.13	0.0036	0.3452
Na	23	3	He	325638.158	1165.1688	58067364.13	0.0036	0.3452
Na	23	3	He	323567.35	1157.7614	58488104.13	0.0036	0.3452
Mg	24	3	He	52951.287	95.0152	4793315.87	0.0018	0.003497
Mg	24	3	He	53629.216	96.2316	4795797.74	0.0018	0.003497
Mg	24	3	He	52488.164	94.1842	4758020.87	0.0018	0.003497
Al	27	3	He	242.923	0.1428	7202.02	0.0006	0.0006432
Al	27	3	He	241.458	0.1419	7071.97	0.0006	0.0006432
Al	27	3	He	232.426	0.1366	6901.83	0.0006	0.0006432
K	39	3	He	11057.134	13.2692	669402.49	0.0012	0.3951
K	39	3	He	11045.806	13.256	660625.77	0.0012	0.3951
K	39	3	He	10876.088	13.0584	659687.02	0.0012	0.3951
Ca	44	3	He	26238.699	1.7752	89554.58	0.0001	0.002715
Ca	44	3	He	26782.644	1.8119	90299.54	0.0001	0.002715
Ca	44	3	He	25963.361	1.7566	88739.86	0.0001	0.002715
Ti	47	3	He	9.837	0.0054	270.01	0.0005	7.003E-05
Ti	47	3	He	9.586	0.0052	260.01	0.0005	7.003E-05
Ti	47	3	He	10.93	0.0059	300.01	0.0005	7.003E-05
V	51	3	He	5.705	0.1496	7545.99	0.0219	0.02486
V	51	3	He	5.65	0.1484	7393.92	0.0219	0.02486
V	51	3	He	5.495	0.145	7323.87	0.0219	0.02486
Cr	52	3	He	5.785	0.2132	10754.31	0.0299	0.03997
Cr	52	3	He	5.537	0.2058	10254.01	0.0299	0.03997
Cr	52	3	He	5.808	0.2139	10804.36	0.0299	0.03997
Mn	55	3	He	182.609	2.3462	118362.11	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	187.74	2.4121	120208.29	0.0128	0.002639
Mn	55	3	He	185.62	2.3849	120478.84	0.0128	0.002639
Fe	57	3	He	1570.209	0.9137	46094.55	0.0006	0.001429
Fe	57	3	He	1561.79	0.9088	45291.69	0.0006	0.001429
Fe	57	3	He	1558.777	0.9071	45823.29	0.0006	0.001429
Co	59	3	He	0.455	0.0278	1400.11	0.0563	0.002149
Co	59	3	He	0.425	0.0261	1300.10	0.0563	0.002149
Co	59	3	He	0.447	0.0273	1380.11	0.0563	0.002149
Ni	60	3	He	12.389	0.1092	9903.75	0.0086	0.002834
Ni	60	3	He	11.355	0.1003	9173.24	0.0086	0.002834
Ni	60	3	He	11.989	0.1057	9703.60	0.0086	0.002834
Cu	63	3	He	41.115	1.0602	96180.20	0.0257	0.004757
Cu	63	3	He	40.714	1.0499	96029.30	0.0257	0.004757
Cu	63	3	He	41.323	1.0656	97791.51	0.0257	0.004757
Zn	66	3	He	474.61	1.3857	125707.19	0.0029	0.003818
Zn	66	3	He	473.843	1.3835	126534.14	0.0029	0.003818
Zn	66	3	He	472.869	1.3806	126705.64	0.0029	0.003818
As	75	3	He	1.404	0.0037	334.01	0.002	0.0008061
As	75	3	He	1.122	0.0031	284.00	0.002	0.0008061
As	75	3	He	1.234	0.0033	306.01	0.002	0.0008061
Sr	88	3	He	164.293	1.4746	131387.11	0.009	0.0009645
Sr	88	3	He	161.859	1.4528	128299.21	0.009	0.0009645
Sr	88	3	He	164.557	1.477	130123.74	0.009	0.0009645
Mo	98	3	He	4.888	0.1075	9573.61	0.0219	0.0002706
Mo	98	3	He	5.014	0.1102	9733.71	0.0219	0.0002706
Mo	98	3	He	4.835	0.1063	9363.46	0.0219	0.0002706
Ag	107	3	He	0.023	0.0017	150.01	0.0465	0.0006206
Ag	107	3	He	0.023	0.0017	150.01	0.0465	0.0006206
Ag	107	3	He	0.011	0.0011	100.00	0.0465	0.0006206
Cd	111	3	He	0.101	0.0005	48.00	0.0053	0
Cd	111	3	He	0.127	0.0007	60.00	0.0053	0
Cd	111	3	He	0.136	0.0007	64.00	0.0053	0
Sn	120	3	He	0.172	0.0192	1710.17	0.0158	0.01648
Sn	120	3	He	0.14	0.0187	1650.15	0.0158	0.01648
Sn	120	3	He	0.186	0.0194	1710.18	0.0158	0.01648
Sb	121	3	He	0.73	0.0111	990.08	0.0149	0.0002698
Sb	121	3	He	0.645	0.0099	870.06	0.0149	0.0002698
Sb	121	3	He	0.54	0.0083	730.05	0.0149	0.0002698
Ba	137	3	He	995.166	4.7764	425561.91	0.0048	0.0002317
Ba	137	3	He	1010.966	4.8522	428503.51	0.0048	0.0002317
Ba	137	3	He	1018.237	4.8871	430550.19	0.0048	0.0002317
Tl	205	3	He	0.02	0.0006	250.01	0.0247	0.0001339
Tl	205	3	He	0.016	0.0005	210.01	0.0247	0.0001339
Tl	205	3	He	0.017	0.0005	220.01	0.0247	0.0001339
Pb	208	3	He	2.289	0.076	16110.57	0.0327	0.00107
Pb	208	3	He	2.194	0.0729	15369.59	0.0327	0.00107
Pb	208	3	He	2.066	0.0687	14608.58	0.0327	0.00107
U	238	3	He	0.31	0.0154	4691.05	0.0493	7.55E-05
U	238	3	He	0.297	0.0147	4500.92	0.0493	7.55E-05
U	238	3	He	0.335	0.0166	5021.21	0.0493	7.55E-05
Sc	45	1	No Gas			2610708.87		
Sc	45	1	No Gas			2562596.99		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2532277.46		
Ge	72	1	No Gas			1278458.97		
Ge	72	1	No Gas			1266647.64		
Ge	72	1	No Gas			1267914.98		
Sc	45	2	H2			194579.84		
Sc	45	2	H2			196673.40		
Sc	45	2	H2			193612.61		
Ge	72	2	H2			173257.75		
Ge	72	2	H2			172126.38		
Ge	72	2	H2			174626.42		
In	115	2	H2			396237.69		
In	115	2	H2			394148.43		
In	115	2	H2			406022.88		
Sc	45	3	He			50447.91		
Sc	45	3	He			49836.01		
Sc	45	3	He			50518.27		
Ge	72	3	He			90717.46		
Ge	72	3	He			91461.60		
Ge	72	3	He			91773.74		
In	115	3	He			89105.10		
In	115	3	He			88319.64		
In	115	3	He			88108.66		
Tb	159	3	He			400854.80		
Tb	159	3	He			405553.28		
Tb	159	3	He			403663.70		
Bi	209	3	He			305299.39		
Bi	209	3	He			305752.38		
Bi	209	3	He			303070.95		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

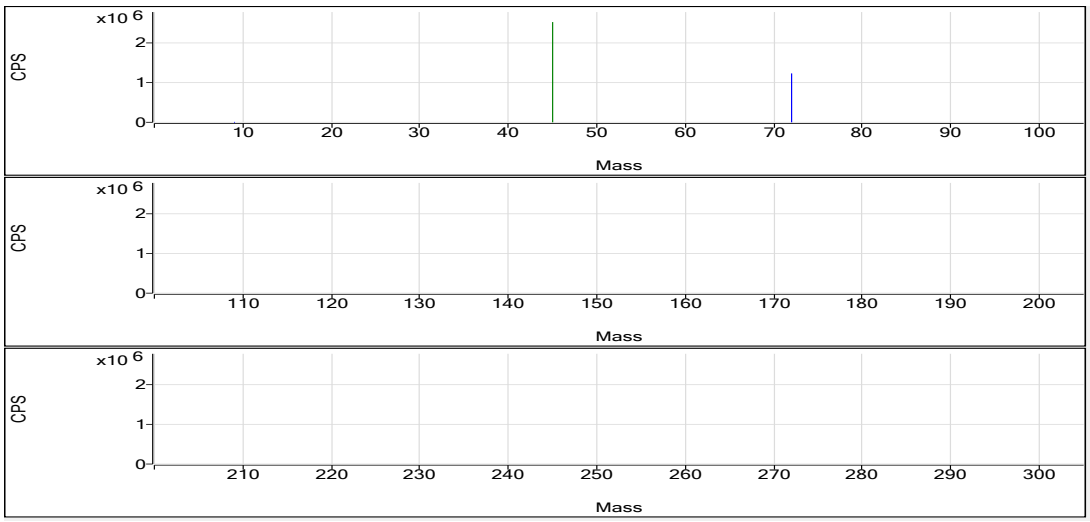
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.003	ppb	92.6	17.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.016	ppb	184.2	3.11	0.0000	Pulse	1.5000	3
Na	23	45	He	113.945	ppb	4.8	36970.38	0.7527	Pulse	0.1000	3
Mg	24	45	He	6.742	ppb	20.7	766.72	0.0156	Pulse	0.1000	3
Al	27	45	He	0.631	ppb	143.7	50.00	0.0010	Pulse	0.1000	3
K	39	45	He	20.972	ppb	59.6	20595.02	0.4195	Pulse	0.1000	3
Ca	44	45	He	3.106	ppb	265.9	143.34	0.0029	Pulse	0.1000	3
Ti	47	45	He	3.618	ppb	144.4	96.74	0.0020	Pulse	0.1000	3
V	51	45	He	0.714	ppb	9.3	1986.82	0.0405	Pulse	0.5000	3
Cr	52	45	He	-0.022	ppb	N/A	1930.21	0.0393	Pulse	0.1000	3
Mn	55	45	He	0.181	ppb	17.3	243.34	0.0050	Pulse	0.1000	3
Fe	57	45	He	0.595	ppb	161.4	86.67	0.0018	Pulse	0.1000	3
Co	59	45	He	0.007	ppb	218.9	123.34	0.0025	Pulse	0.1000	3
Ni	60	72	He	-0.068	ppb	N/A	193.34	0.0023	Pulse	0.1000	3
Cu	63	72	He	0.019	ppb	233.3	450.03	0.0052	Pulse	0.1000	3
Zn	66	72	He	3.578	ppb	3.3	1223.43	0.0142	Pulse	0.1000	3
As	75	72	He	0.213	ppb	44.6	106.67	0.0012	Pulse	0.5000	3
Sr	88	115	He	0.018	ppb	257.8	100.00	0.0011	Pulse	0.1000	3
Mo	98	115	He	0.029	ppb	36.6	80.00	0.0009	Pulse	0.1000	3
Ag	107	115	He	-0.004	ppb	N/A	36.67	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.003	ppb	173.2	1.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.006	ppb	2944.7	1476.80	0.0166	Pulse	0.1000	3
Sb	121	115	He	-0.003	ppb	N/A	20.00	0.0002	Pulse	0.1000	3
Ba	137	115	He	0.099	ppb	57.3	63.33	0.0007	Pulse	0.1000	3
Tl	205	159	He	0.011	ppb	41.1	160.01	0.0004	Pulse	0.1000	3
Pb	208	159	He	0.009	ppb	82.7	543.35	0.0013	Pulse	0.1000	3
U	238	209	He	0.005	ppb	63.0	93.34	0.0003	Pulse	0.1000	3

ISTD Table:

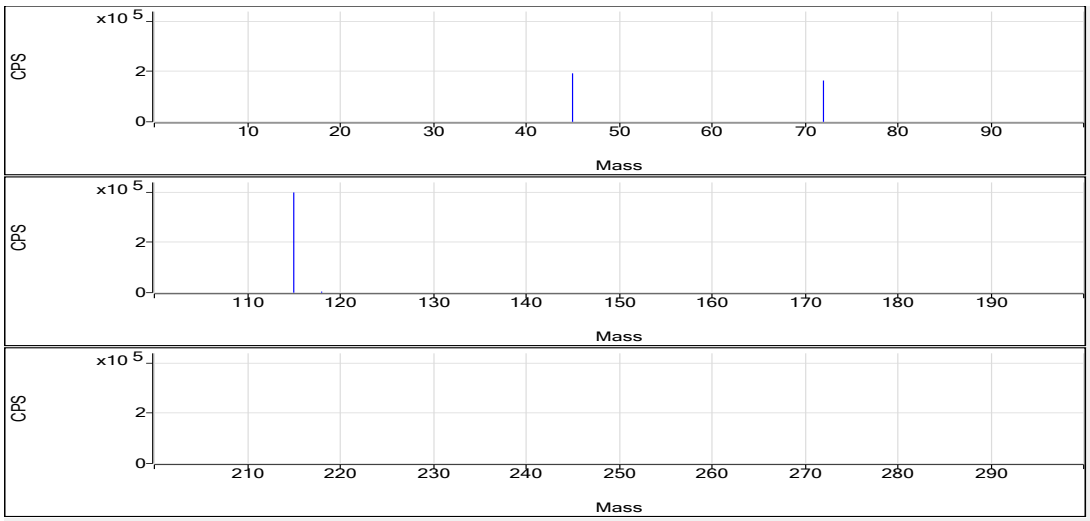
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2509358.45	1.0	104.6	Analog	0.1000	3
No Gas	Ge	72	1224017.40	0.6	106.1	Pulse	0.1000	3
H2	Sc	45	192551.51	1.7	103.0	Pulse	0.1000	3
H2	Ge	72	164003.95	1.8	100.2	Pulse	0.1000	3
H2	In	115	397986.95	0.6	102.3	Pulse	0.1000	3
He	Sc	45	49126.97	2.8	105.3	Pulse	0.1000	3
He	Ge	72	85941.71	0.5	105.8	Pulse	0.1000	3
He	In	115	89204.89	1.6	103.5	Pulse	0.1000	3
He	Tb	159	403175.66	0.5	101.1	Pulse	0.1000	3
He	Bi	209	310271.76	1.3	100.3	Pulse	0.1000	3

No Gas

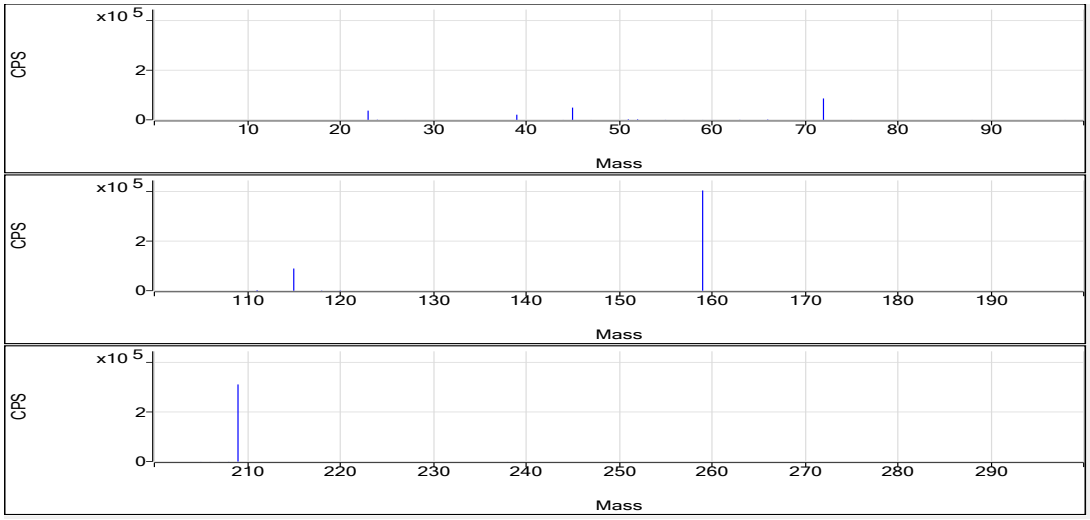


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0	0	12.00	0.0008	4.685E-06
Be	9	1	No Gas	0.003	0	18.00	0.0008	4.685E-06
Be	9	1	No Gas	0.005	0	22.00	0.0008	4.685E-06
Se	78	2	H2	0.049	0	5.33	0.0004	1.219E-05
Se	78	2	H2	-0.009	0	1.33	0.0004	1.219E-05
Se	78	2	H2	0.009	0	2.67	0.0004	1.219E-05
Na	23	3	He	120.028	0.7745	37137.41	0.0036	0.3452
Na	23	3	He	112.31	0.7469	37829.32	0.0036	0.3452
Na	23	3	He	109.496	0.7368	35944.40	0.0036	0.3452
Mg	24	3	He	7.466	0.0169	810.06	0.0018	0.003497
Mg	24	3	He	7.625	0.0172	870.06	0.0018	0.003497
Mg	24	3	He	5.135	0.0127	620.04	0.0018	0.003497
Al	27	3	He	-0.387	0.0004	20.00	0.0006	0.0006432
Al	27	3	He	0.925	0.0012	60.00	0.0006	0.0006432
Al	27	3	He	1.353	0.0014	70.00	0.0006	0.0006432
K	39	3	He	33.712	0.4343	20825.44	0.0012	0.3951
K	39	3	He	8.735	0.4052	20524.70	0.0012	0.3951
K	39	3	He	20.469	0.4189	20434.93	0.0012	0.3951
Ca	44	3	He	3.034	0.0029	140.01	0.0001	0.002715
Ca	44	3	He	-5.117	0.0024	120.00	0.0001	0.002715
Ca	44	3	He	11.4	0.0035	170.01	0.0001	0.002715
Ti	47	3	He	9.588	0.0052	250.21	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	1.397	0.0008	40.00	0.0005	7.003E-05
V	51	3	He	0.79	0.0421	2020.15	0.0219	0.02486
V	51	3	He	0.671	0.0395	2002.15	0.0219	0.02486
V	51	3	He	0.68	0.0397	1938.15	0.0219	0.02486
Cr	52	3	He	0.016	0.0405	1940.21	0.0299	0.03997
Cr	52	3	He	-0.062	0.0381	1930.21	0.0299	0.03997
Cr	52	3	He	-0.02	0.0394	1920.21	0.0299	0.03997
Mn	55	3	He	0.217	0.0054	260.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.164	0.0047	240.01	0.0128	0.002639
Mn	55	3	He	0.162	0.0047	230.01	0.0128	0.002639
Fe	57	3	He	1.49	0.0023	110.01	0.0006	0.001429
Fe	57	3	He	-0.42	0.0012	60.00	0.0006	0.001429
Fe	57	3	He	0.716	0.0018	90.00	0.0006	0.001429
Co	59	3	He	0.014	0.0029	140.01	0.0563	0.002149
Co	59	3	He	-0.01	0.0016	80.00	0.0563	0.002149
Co	59	3	He	0.016	0.0031	150.01	0.0563	0.002149
Ni	60	3	He	-0.06	0.0023	200.01	0.0086	0.002834
Ni	60	3	He	-0.087	0.0021	180.01	0.0086	0.002834
Ni	60	3	He	-0.058	0.0023	200.01	0.0086	0.002834
Cu	63	3	He	0.041	0.0058	500.03	0.0257	0.004757
Cu	63	3	He	-0.032	0.0039	340.02	0.0257	0.004757
Cu	63	3	He	0.047	0.006	510.03	0.0257	0.004757
Zn	66	3	He	3.555	0.0142	1220.08	0.0029	0.003818
Zn	66	3	He	3.707	0.0146	1260.10	0.0029	0.003818
Zn	66	3	He	3.471	0.0139	1190.10	0.0029	0.003818
As	75	3	He	0.196	0.0012	104.00	0.002	0.0008061
As	75	3	He	0.127	0.0011	92.00	0.002	0.0008061
As	75	3	He	0.315	0.0015	124.00	0.002	0.0008061
Sr	88	3	He	0.007	0.001	90.00	0.009	0.0009645
Sr	88	3	He	-0.021	0.0008	70.00	0.009	0.0009645
Sr	88	3	He	0.067	0.0016	140.01	0.009	0.0009645
Mo	98	3	He	0.029	0.0009	80.00	0.0219	0.0002706
Mo	98	3	He	0.018	0.0007	60.00	0.0219	0.0002706
Mo	98	3	He	0.039	0.0011	100.00	0.0219	0.0002706
Ag	107	3	He	-0.004	0.0005	40.00	0.0465	0.0006206
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Ag	107	3	He	-0.004	0.0004	40.00	0.0465	0.0006206
Cd	111	3	He	0.009	0	4.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Sn	120	3	He	-0.026	0.0161	1410.11	0.0158	0.01648
Sn	120	3	He	-0.142	0.0142	1290.11	0.0158	0.01648
Sn	120	3	He	0.184	0.0194	1730.17	0.0158	0.01648
Sb	121	3	He	-0.01	0.0001	10.00	0.0149	0.0002698
Sb	121	3	He	0.004	0.0003	30.00	0.0149	0.0002698
Sb	121	3	He	-0.003	0.0002	20.00	0.0149	0.0002698
Ba	137	3	He	0.094	0.0007	60.00	0.0048	0.0002317
Ba	137	3	He	0.159	0.001	90.00	0.0048	0.0002317
Ba	137	3	He	0.045	0.0004	40.00	0.0048	0.0002317
Tl	205	3	He	0.014	0.0005	190.01	0.0247	0.0001339
Tl	205	3	He	0.006	0.0003	110.00	0.0247	0.0001339
Tl	205	3	He	0.013	0.0004	180.01	0.0247	0.0001339
Pb	208	3	He	0.001	0.0011	240.01	0.0327	0.00107
Pb	208	3	He	0.009	0.0014	310.01	0.0327	0.00107
Pb	208	3	He	0.015	0.0016	340.01	0.0327	0.00107
U	238	3	He	0.002	0.0002	50.00	0.0493	7.55E-05
U	238	3	He	0.007	0.0004	140.01	0.0493	7.55E-05
U	238	3	He	0.004	0.0003	90.00	0.0493	7.55E-05
Sc	45	1	No Gas			2530059.96		
Sc	45	1	No Gas			2516469.34		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2481546.06		
Ge	72	1	No Gas			1232075.29		
Ge	72	1	No Gas			1220265.22		
Ge	72	1	No Gas			1219711.70		
Sc	45	2	H2			191092.40		
Sc	45	2	H2			190190.17		
Sc	45	2	H2			196371.97		
Ge	72	2	H2			164044.41		
Ge	72	2	H2			161009.82		
Ge	72	2	H2			166957.61		
In	115	2	H2			399775.42		
In	115	2	H2			395282.03		
In	115	2	H2			398903.39		
Sc	45	3	He			47949.78		
Sc	45	3	He			50648.67		
Sc	45	3	He			48782.47		
Ge	72	3	He			86109.61		
Ge	72	3	He			86239.71		
Ge	72	3	He			85475.80		
In	115	3	He			87756.41		
In	115	3	He			90624.21		
In	115	3	He			89256.27		
Tb	159	3	He			404990.81		
Tb	159	3	He			403425.15		
Tb	159	3	He			401111.01		
Bi	209	3	He			307082.26		
Bi	209	3	He			314748.47		
Bi	209	3	He			308984.55		

Quantitation Report

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Sample Type	CCV
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Auto Dilution	1.0000
Total Dilution	1.0000
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Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

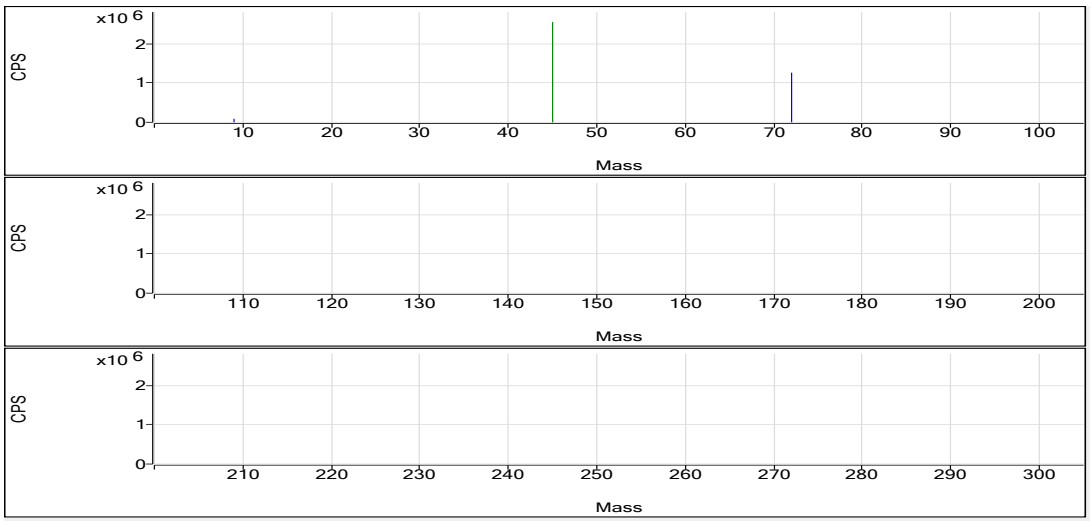
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	46.280	ppb	0.1	89867.80	0.0353	Pulse	0.5000	3
Se	78	72	H2	52.748	ppb	1.1	3646.03	0.0220	Pulse	1.5000	3
Na	23	45	He	4891.529	ppb	1.3	874457.20	17.8424	Pulse	0.1000	3
Mg	24	45	He	5029.610	ppb	0.2	442525.68	9.0282	Pulse	0.1000	3
Al	27	45	He	4974.584	ppb	1.9	142655.57	2.9109	Pulse	0.1000	3
K	39	45	He	5154.161	ppb	1.5	313475.94	6.3962	Pulse	0.1000	3
Ca	44	45	He	5359.348	ppb	0.3	17878.17	0.3647	Pulse	0.1000	3
Ti	47	45	He	5065.038	ppb	1.0	133300.62	2.7197	Pulse	0.1000	3
V	51	45	He	515.825	ppb	1.4	553820.69	11.3004	Pulse	0.5000	3
Cr	52	45	He	486.440	ppb	2.2	715708.14	14.6043	Pulse	0.1000	3
Mn	55	45	He	509.736	ppb	2.4	320703.96	6.5445	Pulse	0.1000	3
Fe	57	45	He	5086.327	ppb	0.9	144905.88	2.9565	Pulse	0.1000	3
Co	59	45	He	500.866	ppb	3.9	1381345.50	28.1920	Mix	0.1000	3
Ni	60	72	He	506.450	ppb	2.4	382211.85	4.3498	Pulse	0.1000	3
Cu	63	72	He	482.018	ppb	1.8	1087796.34	12.3787	Pulse	0.1000	3
Zn	66	72	He	509.160	ppb	2.2	130606.93	1.4863	Pulse	0.1000	3
As	75	72	He	514.307	ppb	1.2	92679.50	1.0546	Pulse	0.5000	3
Sr	88	115	He	51.716	ppb	1.7	41575.19	0.4649	Pulse	0.1000	3
Mo	98	115	He	50.809	ppb	1.3	99668.74	1.1143	Pulse	0.1000	3
Ag	107	115	He	50.739	ppb	1.4	211021.13	2.3593	Pulse	0.1000	3
Cd	111	115	He	50.964	ppb	1.0	24373.26	0.2725	Pulse	0.5000	3
Sn	120	115	He	51.044	ppb	2.0	73599.11	0.8229	Pulse	0.1000	3
Sb	121	115	He	51.539	ppb	1.2	68496.21	0.7658	Pulse	0.1000	3
Ba	137	115	He	518.299	ppb	1.5	222509.66	2.4877	Pulse	0.1000	3
Tl	205	159	He	50.968	ppb	1.7	512228.61	1.2604	Pulse	0.1000	3
Pb	208	159	He	51.362	ppb	1.6	683641.44	1.6821	Pulse	0.1000	3
U	238	209	He	50.412	ppb	0.6	774069.80	2.4834	Pulse	0.1000	3

ISTD Table:

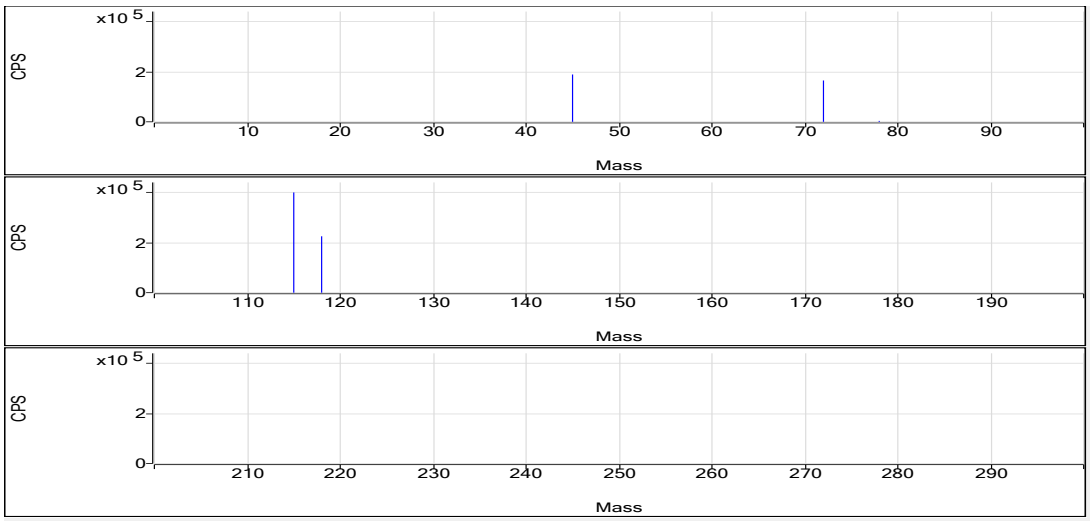
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2545371.01	0.4	106.1	Analog	0.1000	3
No Gas	Ge	72	1260072.98	0.9	109.3	Pulse	0.1000	3
H2	Sc	45	189645.37	1.0	101.4	Pulse	0.1000	3
H2	Ge	72	165637.74	1.3	101.2	Pulse	0.1000	3
H2	In	115	401617.00	0.2	103.2	Pulse	0.1000	3
He	Sc	45	49016.68	1.7	105.1	Pulse	0.1000	3
He	Ge	72	87896.37	1.9	108.3	Pulse	0.1000	3
He	In	115	89444.50	0.7	103.8	Pulse	0.1000	3
He	Tb	159	406469.73	1.4	102.0	Pulse	0.1000	3
He	Bi	209	311717.48	1.8	100.8	Pulse	0.1000	3

No Gas

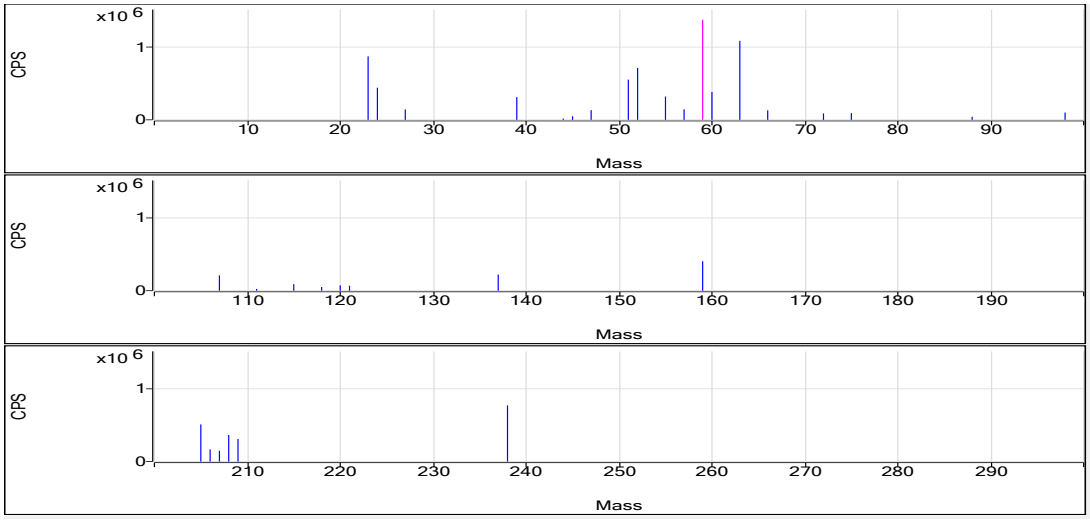


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	46.28	0.0353	89698.93	0.0008	4.685E-06
Be	9	1	No Gas	46.342	0.0354	89734.98	0.0008	4.685E-06
Be	9	1	No Gas	46.219	0.0353	90169.50	0.0008	4.685E-06
Se	78	2	H2	52.286	0.0218	3569.78	0.0004	1.219E-05
Se	78	2	H2	53.379	0.0223	3685.15	0.0004	1.219E-05
Se	78	2	H2	52.579	0.0219	3683.15	0.0004	1.219E-05
Na	23	3	He	4829.674	17.6211	880289.28	0.0036	0.3452
Na	23	3	He	4887.243	17.8271	868400.85	0.0036	0.3452
Na	23	3	He	4957.67	18.079	874681.47	0.0036	0.3452
Mg	24	3	He	5018.234	9.0078	449998.78	0.0018	0.003497
Mg	24	3	He	5040.779	9.0483	440764.13	0.0018	0.003497
Mg	24	3	He	5029.818	9.0286	436814.13	0.0018	0.003497
Al	27	3	He	4876.141	2.8534	142543.46	0.0006	0.0006432
Al	27	3	He	4987.275	2.9184	142161.19	0.0006	0.0006432
Al	27	3	He	5060.336	2.9611	143262.07	0.0006	0.0006432
K	39	3	He	5083.636	6.3141	315428.84	0.0012	0.3951
K	39	3	He	5145.548	6.3862	311086.01	0.0012	0.3951
K	39	3	He	5233.3	6.4883	313912.96	0.0012	0.3951
Ca	44	3	He	5341.644	0.3636	18161.82	0.0001	0.002715
Ca	44	3	He	5360.44	0.3648	17771.43	0.0001	0.002715
Ca	44	3	He	5375.96	0.3659	17701.26	0.0001	0.002715
Ti	47	3	He	5027.11	2.6994	134850.99	0.0005	7.003E-05
Ti	47	3	He	5045.181	2.7091	131965.81	0.0005	7.003E-05
Ti	47	3	He	5122.823	2.7508	133085.06	0.0005	7.003E-05
V	51	3	He	507.295	11.1139	555211.94	0.0219	0.02486
V	51	3	He	520.61	11.405	555564.13	0.0219	0.02486
V	51	3	He	519.571	11.3823	550686.00	0.0219	0.02486
Cr	52	3	He	475.004	14.262	712476.24	0.0299	0.03997
Cr	52	3	He	496.222	14.8972	725680.22	0.0299	0.03997
Cr	52	3	He	488.092	14.6538	708967.96	0.0299	0.03997
Mn	55	3	He	495.705	6.3645	317945.64	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	514.886	6.6106	322019.98	0.0128	0.002639
Mn	55	3	He	518.618	6.6585	322146.26	0.0128	0.002639
Fe	57	3	He	5033.544	2.9259	146166.10	0.0006	0.001429
Fe	57	3	He	5122.151	2.9774	145034.22	0.0006	0.001429
Fe	57	3	He	5103.287	2.9664	143517.32	0.0006	0.001429
Co	59	3	He	483.61	27.2208	1359856.23	0.0563	0.002149
Co	59	3	He	496.851	27.9661	1362296.85	0.0563	0.002149
Co	59	3	He	522.137	29.3892	1421883.42	0.0563	0.002149
Ni	60	3	He	492.595	4.2308	380147.81	0.0086	0.002834
Ni	60	3	He	514.427	4.4182	383735.35	0.0086	0.002834
Ni	60	3	He	512.327	4.4002	382752.38	0.0086	0.002834
Cu	63	3	He	472.371	12.131	1089990.45	0.0257	0.004757
Cu	63	3	He	489.183	12.5626	1091096.86	0.0257	0.004757
Cu	63	3	He	484.5	12.4424	1082301.70	0.0257	0.004757
Zn	66	3	He	497.283	1.4517	130438.63	0.0029	0.003818
Zn	66	3	He	510.071	1.4889	129319.20	0.0029	0.003818
Zn	66	3	He	520.127	1.5182	132062.95	0.0029	0.003818
As	75	3	He	508.487	1.0426	93681.78	0.002	0.0008061
As	75	3	He	520.323	1.0669	92661.45	0.002	0.0008061
As	75	3	He	514.111	1.0542	91695.27	0.002	0.0008061
Sr	88	3	He	52.414	0.4711	41902.83	0.009	0.0009645
Sr	88	3	He	50.732	0.456	41100.77	0.009	0.0009645
Sr	88	3	He	52.004	0.4674	41721.98	0.009	0.0009645
Mo	98	3	He	51.493	1.1293	100448.22	0.0219	0.0002706
Mo	98	3	He	50.754	1.1131	100325.76	0.0219	0.0002706
Mo	98	3	He	50.18	1.1005	98232.23	0.0219	0.0002706
Ag	107	3	He	51.587	2.3988	213358.63	0.0465	0.0006206
Ag	107	3	He	50.345	2.341	210994.08	0.0465	0.0006206
Ag	107	3	He	50.286	2.3383	208710.68	0.0465	0.0006206
Cd	111	3	He	51.477	0.2752	24481.47	0.0053	0
Cd	111	3	He	50.975	0.2726	24565.57	0.0053	0
Cd	111	3	He	50.44	0.2697	24072.75	0.0053	0
Sn	120	3	He	52.246	0.8419	74882.16	0.0158	0.01648
Sn	120	3	He	50.402	0.8128	73253.85	0.0158	0.01648
Sn	120	3	He	50.484	0.8141	72661.32	0.0158	0.01648
Sb	121	3	He	52.142	0.7748	68911.34	0.0149	0.0002698
Sb	121	3	He	51.585	0.7665	69082.56	0.0149	0.0002698
Sb	121	3	He	50.891	0.7562	67494.72	0.0149	0.0002698
Ba	137	3	He	525.92	2.5243	224525.13	0.0048	0.0002317
Ba	137	3	He	518.706	2.4897	224392.50	0.0048	0.0002317
Ba	137	3	He	510.27	2.4492	218611.36	0.0048	0.0002317
Tl	205	3	He	50.736	1.2546	514730.23	0.0247	0.0001339
Tl	205	3	He	50.216	1.2418	508434.29	0.0247	0.0001339
Tl	205	3	He	51.953	1.2847	513521.32	0.0247	0.0001339
Pb	208	3	He	51.072	1.6726	371924.72	0.0327	0.00107
Pb	208	3	He	50.737	1.6617	360825.03	0.0327	0.00107
Pb	208	3	He	52.279	1.7121	366416.28	0.0327	0.00107
U	238	3	He	50.224	2.4741	786988.19	0.0493	7.55E-05
U	238	3	He	50.773	2.5012	768678.58	0.0493	7.55E-05
U	238	3	He	50.239	2.4748	766542.64	0.0493	7.55E-05
Sc	45	1	No Gas			2540577.15		
Sc	45	1	No Gas			2538229.81		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2557306.06		
Ge	72	1	No Gas			1248676.23		
Ge	72	1	No Gas			1261279.75		
Ge	72	1	No Gas			1270262.95		
Sc	45	2	H2			187504.26		
Sc	45	2	H2			191151.23		
Sc	45	2	H2			190280.62		
Ge	72	2	H2			163608.92		
Ge	72	2	H2			165438.65		
Ge	72	2	H2			167865.64		
In	115	2	H2			402393.43		
In	115	2	H2			400743.20		
In	115	2	H2			401714.37		
Sc	45	3	He			49956.43		
Sc	45	3	He			48712.49		
Sc	45	3	He			48381.11		
Ge	72	3	He			89851.45		
Ge	72	3	He			86852.71		
Ge	72	3	He			86984.94		
In	115	3	He			89346.60		
In	115	3	He			90534.76		
In	115	3	He			89649.19		
Tb	159	3	He			410261.40		
Tb	159	3	He			409436.91		
Tb	159	3	He			399710.89		
Bi	209	3	He			318089.53		
Bi	209	3	He			307328.39		
Bi	209	3	He			309734.53		

Quantitation Report

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Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
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Sample Name	CCB 4654618
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

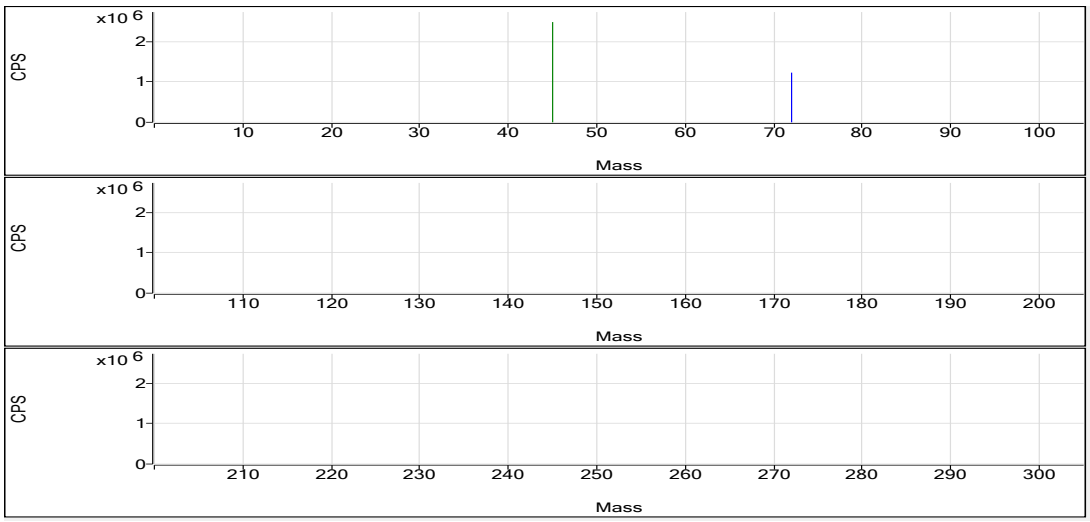
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.017	ppb	70.3	44.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.033	ppb	63.7	4.22	0.0000	Pulse	1.5000	3
Na	23	45	He	77.875	ppb	2.6	30388.60	0.6237	Pulse	0.1000	3
Mg	24	45	He	1.791	ppb	26.3	326.68	0.0067	Pulse	0.1000	3
Al	27	45	He	0.416	ppb	173.2	43.33	0.0009	Pulse	0.1000	3
K	39	45	He	9.496	ppb	155.6	19787.27	0.4061	Pulse	0.1000	3
Ca	44	45	He	8.390	ppb	128.2	160.01	0.0033	Pulse	0.1000	3
Ti	47	45	He	0.127	ppb	350.5	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	0.624	ppb	4.4	1876.13	0.0385	Pulse	0.5000	3
Cr	52	45	He	-0.112	ppb	N/A	1783.50	0.0366	Pulse	0.1000	3
Mn	55	45	He	0.167	ppb	56.8	233.34	0.0048	Pulse	0.1000	3
Fe	57	45	He	1.658	ppb	41.9	116.67	0.0024	Pulse	0.1000	3
Co	59	45	He	0.053	ppb	46.7	250.01	0.0051	Pulse	0.1000	3
Ni	60	72	He	0.061	ppb	117.7	283.35	0.0034	Pulse	0.1000	3
Cu	63	72	He	0.115	ppb	7.2	650.04	0.0077	Pulse	0.1000	3
Zn	66	72	He	2.539	ppb	2.5	946.73	0.0112	Pulse	0.1000	3
As	75	72	He	0.234	ppb	39.0	108.67	0.0013	Pulse	0.5000	3
Sr	88	115	He	0.077	ppb	75.0	146.69	0.0017	Pulse	0.1000	3
Mo	98	115	He	0.045	ppb	31.9	110.01	0.0012	Pulse	0.1000	3
Ag	107	115	He	0.005	ppb	139.1	73.33	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.006	ppb	42.3	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.020	ppb	N/A	1426.79	0.0162	Pulse	0.1000	3
Sb	121	115	He	0.035	ppb	79.8	70.00	0.0008	Pulse	0.1000	3
Ba	137	115	He	0.038	ppb	142.4	36.67	0.0004	Pulse	0.1000	3
Tl	205	159	He	0.070	ppb	10.6	743.38	0.0019	Pulse	0.1000	3
Pb	208	159	He	0.014	ppb	12.7	610.03	0.0015	Pulse	0.1000	3
U	238	209	He	0.036	ppb	20.2	576.70	0.0019	Pulse	0.1000	3

ISTD Table:

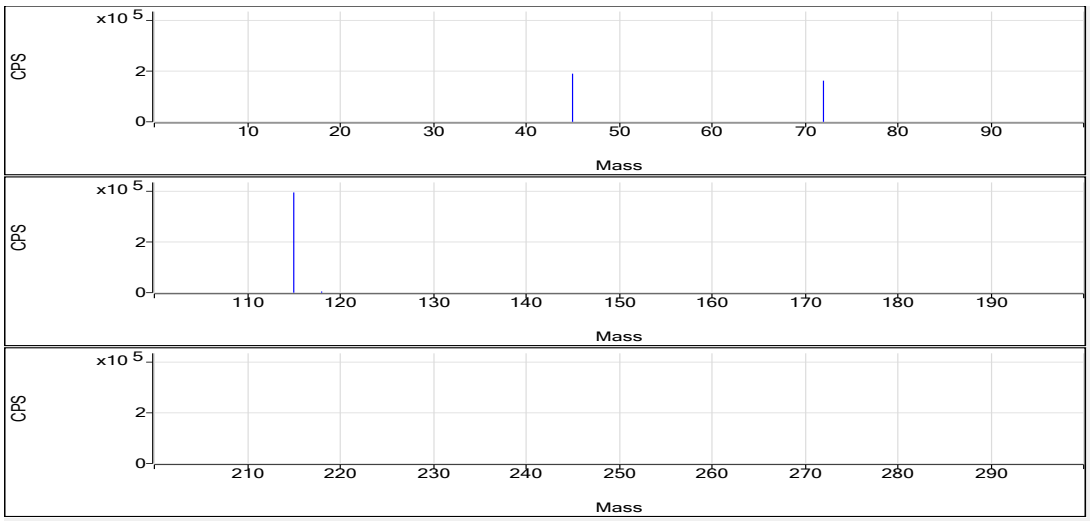
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2484269.39	0.9	103.6	Analog	0.1000	3
No Gas	Ge	72	1230818.65	0.6	106.7	Pulse	0.1000	3
H2	Sc	45	189595.18	0.8	101.4	Pulse	0.1000	3
H2	Ge	72	162056.44	1.5	99.0	Pulse	0.1000	3
H2	In	115	394636.50	1.4	101.4	Pulse	0.1000	3
He	Sc	45	48725.46	1.1	104.5	Pulse	0.1000	3
He	Ge	72	84456.28	1.4	104.0	Pulse	0.1000	3
He	In	115	88315.61	1.2	102.5	Pulse	0.1000	3
He	Tb	159	399011.63	1.2	100.1	Pulse	0.1000	3
He	Bi	209	309222.73	0.7	100.0	Pulse	0.1000	3

No Gas

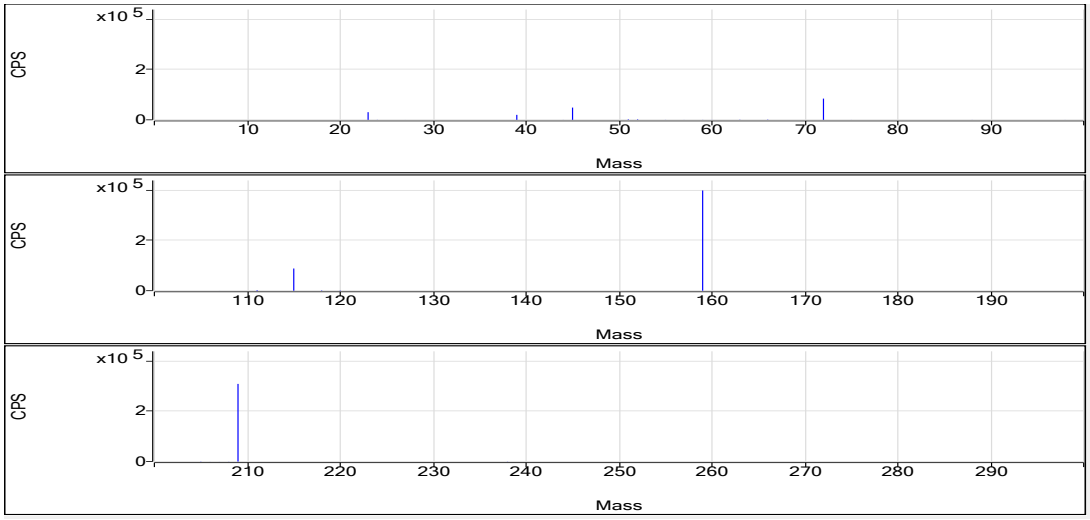


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.01	0	30.00	0.0008	4.685E-06
Be	9	1	No Gas	0.031	0	70.00	0.0008	4.685E-06
Be	9	1	No Gas	0.011	0	32.00	0.0008	4.685E-06
Se	78	2	H2	0.04	0	4.67	0.0004	1.219E-05
Se	78	2	H2	0.051	0	5.33	0.0004	1.219E-05
Se	78	2	H2	0.01	0	2.67	0.0004	1.219E-05
Na	23	3	He	75.8	0.6163	30311.62	0.0036	0.3452
Na	23	3	He	79.925	0.6311	30392.00	0.0036	0.3452
Na	23	3	He	77.9	0.6238	30462.17	0.0036	0.3452
Mg	24	3	He	1.564	0.0063	310.01	0.0018	0.003497
Mg	24	3	He	2.333	0.0077	370.02	0.0018	0.003497
Mg	24	3	He	1.475	0.0061	300.02	0.0018	0.003497
Al	27	3	He	0.638	0.001	50.00	0.0006	0.0006432
Al	27	3	He	-0.39	0.0004	20.00	0.0006	0.0006432
Al	27	3	He	1.001	0.0012	60.00	0.0006	0.0006432
K	39	3	He	17.535	0.4155	20434.85	0.0012	0.3951
K	39	3	He	18.505	0.4166	20064.28	0.0012	0.3951
K	39	3	He	-7.552	0.3863	18862.69	0.0012	0.3951
Ca	44	3	He	4.96	0.0031	150.01	0.0001	0.002715
Ca	44	3	He	-0.232	0.0027	130.00	0.0001	0.002715
Ca	44	3	He	20.442	0.0041	200.01	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.643	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	0.593	0.0378	1860.13	0.0219	0.02486
V	51	3	He	0.641	0.0389	1872.13	0.0219	0.02486
V	51	3	He	0.639	0.0388	1896.14	0.0219	0.02486
Cr	52	3	He	-0.201	0.034	1670.15	0.0299	0.03997
Cr	52	3	He	-0.107	0.0368	1770.18	0.0299	0.03997
Cr	52	3	He	-0.029	0.0391	1910.18	0.0299	0.03997
Mn	55	3	He	0.254	0.0059	290.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.183	0.005	240.01	0.0128	0.002639
Mn	55	3	He	0.066	0.0035	170.01	0.0128	0.002639
Fe	57	3	He	2.44	0.0028	140.00	0.0006	0.001429
Fe	57	3	He	1.115	0.0021	100.00	0.0006	0.001429
Fe	57	3	He	1.418	0.0023	110.01	0.0006	0.001429
Co	59	3	He	0.049	0.0049	240.01	0.0563	0.002149
Co	59	3	He	0.08	0.0066	320.02	0.0563	0.002149
Co	59	3	He	0.031	0.0039	190.01	0.0563	0.002149
Ni	60	3	He	0.016	0.003	250.01	0.0086	0.002834
Ni	60	3	He	0.023	0.003	260.01	0.0086	0.002834
Ni	60	3	He	0.144	0.0041	340.02	0.0086	0.002834
Cu	63	3	He	0.121	0.0079	660.03	0.0257	0.004757
Cu	63	3	He	0.105	0.0075	640.04	0.0257	0.004757
Cu	63	3	He	0.118	0.0078	650.04	0.0257	0.004757
Zn	66	3	He	2.612	0.0114	960.07	0.0029	0.003818
Zn	66	3	He	2.491	0.0111	950.06	0.0029	0.003818
Zn	66	3	He	2.514	0.0111	930.06	0.0029	0.003818
As	75	3	He	0.141	0.0011	92.00	0.002	0.0008061
As	75	3	He	0.323	0.0015	126.00	0.002	0.0008061
As	75	3	He	0.238	0.0013	108.00	0.002	0.0008061
Sr	88	3	He	0.142	0.0022	200.06	0.009	0.0009645
Sr	88	3	He	0.031	0.0012	110.00	0.009	0.0009645
Sr	88	3	He	0.059	0.0015	130.01	0.009	0.0009645
Mo	98	3	He	0.029	0.0009	80.00	0.0219	0.0002706
Mo	98	3	He	0.049	0.0014	120.01	0.0219	0.0002706
Mo	98	3	He	0.056	0.0015	130.01	0.0219	0.0002706
Ag	107	3	He	0.004	0.0008	70.00	0.0465	0.0006206
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Ag	107	3	He	0.011	0.0011	100.00	0.0465	0.0006206
Cd	111	3	He	0.008	0	4.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Sn	120	3	He	-0.05	0.0157	1400.12	0.0158	0.01648
Sn	120	3	He	-0.021	0.0162	1430.13	0.0158	0.01648
Sn	120	3	He	0.01	0.0166	1450.13	0.0158	0.01648
Sb	121	3	He	0.012	0.0004	40.00	0.0149	0.0002698
Sb	121	3	He	0.027	0.0007	60.00	0.0149	0.0002698
Sb	121	3	He	0.067	0.0013	110.01	0.0149	0.0002698
Ba	137	3	He	0.068	0.0006	50.00	0.0048	0.0002317
Ba	137	3	He	0.069	0.0006	50.00	0.0048	0.0002317
Ba	137	3	He	-0.024	0.0001	10.00	0.0048	0.0002317
Tl	205	3	He	0.062	0.0017	660.04	0.0247	0.0001339
Tl	205	3	He	0.077	0.002	810.05	0.0247	0.0001339
Tl	205	3	He	0.071	0.0019	760.04	0.0247	0.0001339
Pb	208	3	He	0.016	0.0016	400.02	0.0327	0.00107
Pb	208	3	He	0.013	0.0015	400.02	0.0327	0.00107
Pb	208	3	He	0.013	0.0015	320.02	0.0327	0.00107
U	238	3	He	0.035	0.0018	560.04	0.0493	7.55E-05
U	238	3	He	0.03	0.0015	470.02	0.0493	7.55E-05
U	238	3	He	0.044	0.0022	700.04	0.0493	7.55E-05
Sc	45	1	No Gas			2509842.62		
Sc	45	1	No Gas			2471417.93		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2471547.62		
Ge	72	1	No Gas			1231887.79		
Ge	72	1	No Gas			1237966.00		
Ge	72	1	No Gas			1222602.17		
Sc	45	2	H2			189104.57		
Sc	45	2	H2			188437.15		
Sc	45	2	H2			191243.81		
Ge	72	2	H2			162008.09		
Ge	72	2	H2			159624.03		
Ge	72	2	H2			164537.19		
In	115	2	H2			388809.80		
In	115	2	H2			394999.60		
In	115	2	H2			400100.11		
Sc	45	3	He			49183.35		
Sc	45	3	He			48160.56		
Sc	45	3	He			48832.46		
Ge	72	3	He			84046.47		
Ge	72	3	He			85818.57		
Ge	72	3	He			83503.80		
In	115	3	He			89246.10		
In	115	3	He			88552.63		
In	115	3	He			87182.33		
Tb	159	3	He			395024.29		
Tb	159	3	He			397600.19		
Tb	159	3	He			404410.42		
Bi	209	3	He			308598.75		
Bi	209	3	He			307297.22		
Bi	209	3	He			311772.22		

Quantitation Report

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Sample Type	Sample
Comment	T20
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

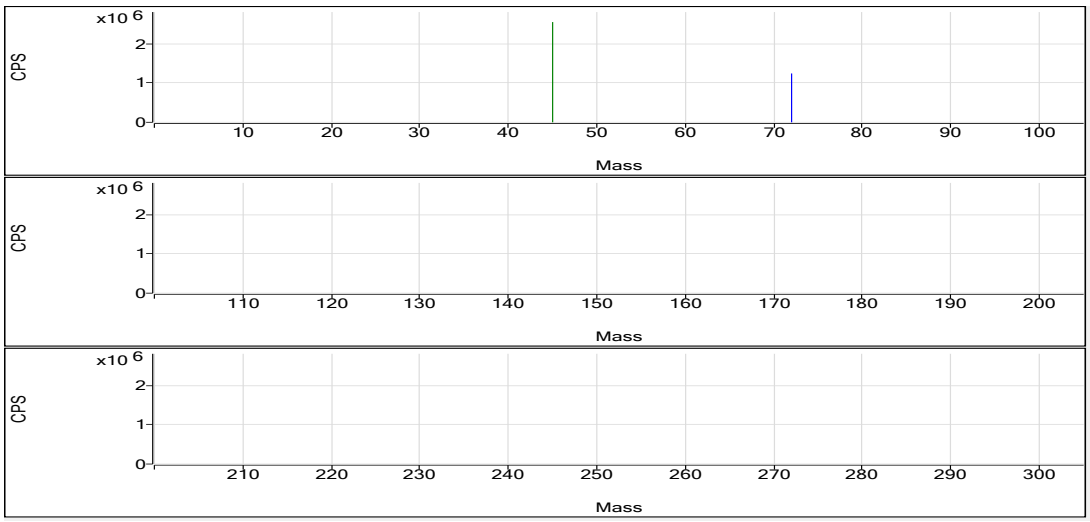
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.009	ppb	32.0	28.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.003	ppb	N/A	1.78	0.0000	Pulse	1.5000	3
Na	23	45	He	64.718	ppb	3.3	28635.15	0.5767	Pulse	0.1000	3
Mg	24	45	He	1.307	ppb	39.9	290.01	0.0058	Pulse	0.1000	3
Al	27	45	He	2.358	ppb	79.5	100.01	0.0020	Pulse	0.1000	3
K	39	45	He	0.237	ppb	3107.6	19630.48	0.3953	Pulse	0.1000	3
Ca	44	45	He	1.403	ppb	1264.9	140.01	0.0028	Pulse	0.1000	3
Ti	47	45	He	0.248	ppb	153.4	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	0.428	ppb	8.8	1700.11	0.0342	Pulse	0.5000	3
Cr	52	45	He	-0.092	ppb	N/A	1846.85	0.0372	Pulse	0.1000	3
Mn	55	45	He	0.155	ppb	59.2	230.01	0.0046	Pulse	0.1000	3
Fe	57	45	He	2.630	ppb	78.1	146.67	0.0030	Pulse	0.1000	3
Co	59	45	He	0.024	ppb	125.9	173.34	0.0035	Pulse	0.1000	3
Ni	60	72	He	-0.013	ppb	N/A	236.68	0.0027	Pulse	0.1000	3
Cu	63	72	He	0.103	ppb	3.1	643.37	0.0074	Pulse	0.1000	3
Zn	66	72	He	2.733	ppb	3.5	1023.41	0.0118	Pulse	0.1000	3
As	75	72	He	0.028	ppb	557.3	74.67	0.0009	Pulse	0.5000	3
Sr	88	115	He	-0.045	ppb	N/A	50.00	0.0006	Pulse	0.1000	3
Mo	98	115	He	0.012	ppb	70.2	46.67	0.0005	Pulse	0.1000	3
Ag	107	115	He	-0.001	ppb	N/A	53.33	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.004	ppb	2.0	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.290	ppb	N/A	1060.08	0.0119	Pulse	0.1000	3
Sb	121	115	He	0.022	ppb	42.3	53.33	0.0006	Pulse	0.1000	3
Ba	137	115	He	-0.009	ppb	N/A	16.67	0.0002	Pulse	0.1000	3
Tl	205	159	He	0.014	ppb	67.6	196.68	0.0005	Pulse	0.1000	3
Pb	208	159	He	0.059	ppb	11.0	1213.40	0.0030	Pulse	0.1000	3
U	238	209	He	0.008	ppb	14.6	140.01	0.0004	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2552490.48	1.3	106.4	Analog	0.1000	3
No Gas	Ge	72	1243702.01	0.7	107.8	Pulse	0.1000	3
H2	Sc	45	190076.13	1.2	101.6	Pulse	0.1000	3
H2	Ge	72	164338.95	0.4	100.4	Pulse	0.1000	3
H2	In	115	403049.25	0.9	103.6	Pulse	0.1000	3
He	Sc	45	49662.05	1.2	106.5	Pulse	0.1000	3
He	Ge	72	86933.60	2.0	107.1	Pulse	0.1000	3
He	In	115	89299.02	2.0	103.6	Pulse	0.1000	3
He	Tb	159	405690.25	0.6	101.8	Pulse	0.1000	3
He	Bi	209	313958.69	0.3	101.5	Pulse	0.1000	3

No Gas



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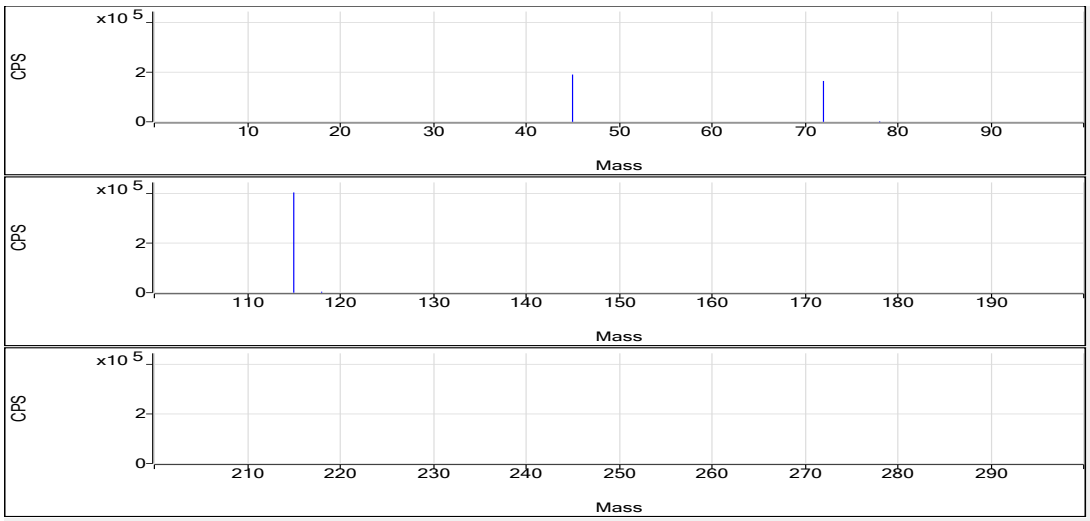
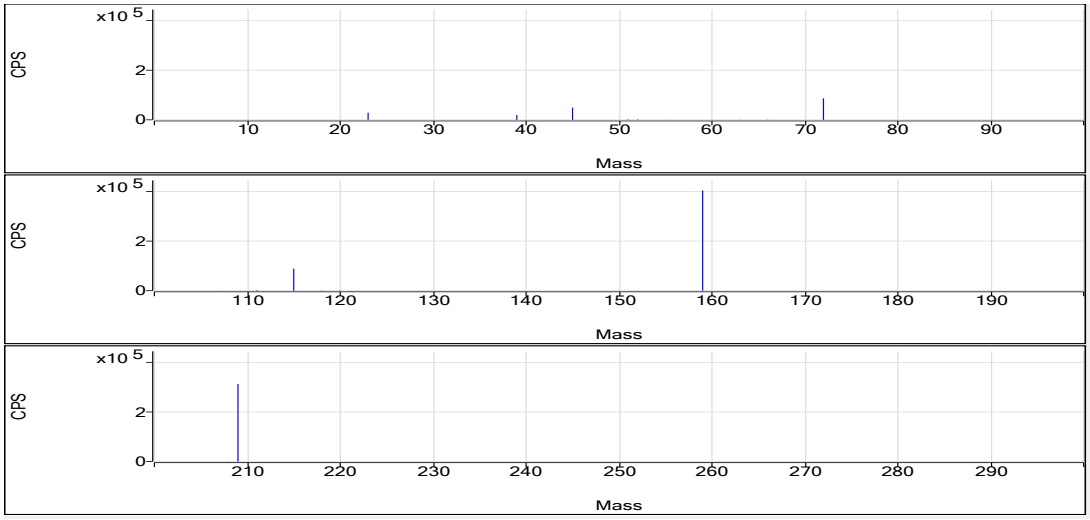


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.011	0	34.00	0.0008	4.685E-06
Be	9	1	No Gas	0.008	0	28.00	0.0008	4.685E-06
Be	9	1	No Gas	0.006	0	24.00	0.0008	4.685E-06
Se	78	2	H2	0	0	2.00	0.0004	1.219E-05
Se	78	2	H2	0	0	2.00	0.0004	1.219E-05
Se	78	2	H2	-0.01	0	1.33	0.0004	1.219E-05
Na	23	3	He	65.205	0.5784	28778.72	0.0036	0.3452
Na	23	3	He	62.405	0.5684	28548.25	0.0036	0.3452
Na	23	3	He	66.546	0.5832	28578.47	0.0036	0.3452
Mg	24	3	He	1.86	0.0068	340.01	0.0018	0.003497
Mg	24	3	He	0.825	0.005	250.01	0.0018	0.003497
Mg	24	3	He	1.236	0.0057	280.02	0.0018	0.003497
Al	27	3	He	1.649	0.0016	80.00	0.0006	0.0006432
Al	27	3	He	0.942	0.0012	60.00	0.0006	0.0006432
Al	27	3	He	4.483	0.0033	160.03	0.0006	0.0006432
K	39	3	He	3.578	0.3992	19864.14	0.0012	0.3951
K	39	3	He	-8.202	0.3855	19363.38	0.0012	0.3951
K	39	3	He	5.335	0.4013	19663.91	0.0012	0.3951
Ca	44	3	He	10.391	0.0034	170.01	0.0001	0.002715
Ca	44	3	He	12.864	0.0036	180.01	0.0001	0.002715
Ca	44	3	He	-19.044	0.0014	70.00	0.0001	0.002715
Ti	47	3	He	0.244	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.63	0.0004	20.00	0.0005	7.003E-05
V	51	3	He	0.44	0.0345	1716.11	0.0219	0.02486
V	51	3	He	0.458	0.0349	1752.11	0.0219	0.02486
V	51	3	He	0.386	0.0333	1632.10	0.0219	0.02486
Cr	52	3	He	-0.147	0.0356	1770.17	0.0299	0.03997
Cr	52	3	He	-0.165	0.035	1760.16	0.0299	0.03997
Cr	52	3	He	0.035	0.041	2010.21	0.0299	0.03997
Mn	55	3	He	0.092	0.0038	190.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.26	0.006	300.01	0.0128	0.002639
Mn	55	3	He	0.112	0.0041	200.01	0.0128	0.002639
Fe	57	3	He	0.308	0.0016	80.00	0.0006	0.001429
Fe	57	3	He	3.367	0.0034	170.01	0.0006	0.001429
Fe	57	3	He	4.215	0.0039	190.01	0.0006	0.001429
Co	59	3	He	0.023	0.0034	170.01	0.0563	0.002149
Co	59	3	He	0.054	0.0052	260.01	0.0563	0.002149
Co	59	3	He	-0.006	0.0018	90.00	0.0563	0.002149
Ni	60	3	He	-0.02	0.0027	230.01	0.0086	0.002834
Ni	60	3	He	-0.002	0.0028	250.01	0.0086	0.002834
Ni	60	3	He	-0.017	0.0027	230.01	0.0086	0.002834
Cu	63	3	He	0.103	0.0074	640.04	0.0257	0.004757
Cu	63	3	He	0.1	0.0073	650.04	0.0257	0.004757
Cu	63	3	He	0.106	0.0075	640.03	0.0257	0.004757
Zn	66	3	He	2.822	0.012	1040.08	0.0029	0.003818
Zn	66	3	He	2.633	0.0115	1020.08	0.0029	0.003818
Zn	66	3	He	2.744	0.0118	1010.07	0.0029	0.003818
As	75	3	He	0.013	0.0008	72.00	0.002	0.0008061
As	75	3	He	-0.119	0.0006	50.00	0.002	0.0008061
As	75	3	He	0.189	0.0012	102.00	0.002	0.0008061
Sr	88	3	He	-0.045	0.0006	50.00	0.009	0.0009645
Sr	88	3	He	-0.034	0.0007	60.00	0.009	0.0009645
Sr	88	3	He	-0.057	0.0005	40.00	0.009	0.0009645
Mo	98	3	He	0.019	0.0007	60.00	0.0219	0.0002706
Mo	98	3	He	0.003	0.0003	30.00	0.0219	0.0002706
Mo	98	3	He	0.014	0.0006	50.00	0.0219	0.0002706
Ag	107	3	He	-0.004	0.0005	40.00	0.0465	0.0006206
Ag	107	3	He	0.001	0.0007	60.00	0.0465	0.0006206
Ag	107	3	He	0.001	0.0007	60.00	0.0465	0.0006206
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Sn	120	3	He	-0.264	0.0123	1090.08	0.0158	0.01648
Sn	120	3	He	-0.405	0.0101	920.06	0.0158	0.01648
Sn	120	3	He	-0.201	0.0133	1170.09	0.0158	0.01648
Sb	121	3	He	0.027	0.0007	60.00	0.0149	0.0002698
Sb	121	3	He	0.011	0.0004	40.00	0.0149	0.0002698
Sb	121	3	He	0.028	0.0007	60.00	0.0149	0.0002698
Ba	137	3	He	-0.001	0.0002	20.00	0.0048	0.0002317
Ba	137	3	He	-0.003	0.0002	20.00	0.0048	0.0002317
Ba	137	3	He	-0.025	0.0001	10.00	0.0048	0.0002317
Tl	205	3	He	0.025	0.0007	300.02	0.0247	0.0001339
Tl	205	3	He	0.006	0.0003	110.00	0.0247	0.0001339
Tl	205	3	He	0.012	0.0004	180.01	0.0247	0.0001339
Pb	208	3	He	0.062	0.0031	680.05	0.0327	0.00107
Pb	208	3	He	0.051	0.0027	640.04	0.0327	0.00107
Pb	208	3	He	0.063	0.0031	740.05	0.0327	0.00107
U	238	3	He	0.008	0.0005	150.01	0.0493	7.55E-05
U	238	3	He	0.008	0.0005	150.01	0.0493	7.55E-05
U	238	3	He	0.006	0.0004	120.01	0.0493	7.55E-05
Sc	45	1	No Gas			2529839.49		
Sc	45	1	No Gas			2535714.02		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2591917.93		
Ge	72	1	No Gas			1247582.79		
Ge	72	1	No Gas			1234235.22		
Ge	72	1	No Gas			1249288.03		
Sc	45	2	H2			190130.21		
Sc	45	2	H2			187699.80		
Sc	45	2	H2			192398.38		
Ge	72	2	H2			164901.21		
Ge	72	2	H2			163738.84		
Ge	72	2	H2			164376.81		
In	115	2	H2			404117.57		
In	115	2	H2			399160.11		
In	115	2	H2			405870.07		
Sc	45	3	He			49755.86		
Sc	45	3	He			50227.09		
Sc	45	3	He			49003.20		
Ge	72	3	He			86430.22		
Ge	72	3	He			88824.62		
Ge	72	3	He			85545.97		
In	115	3	He			88642.04		
In	115	3	He			91309.24		
In	115	3	He			87967.71		
Tb	159	3	He			404915.42		
Tb	159	3	He			403840.46		
Tb	159	3	He			408314.88		
Bi	209	3	He			314585.27		
Bi	209	3	He			314372.53		
Bi	209	3	He			312918.28		

Quantitation Report

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Sample Type	Sample
Comment	T20
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

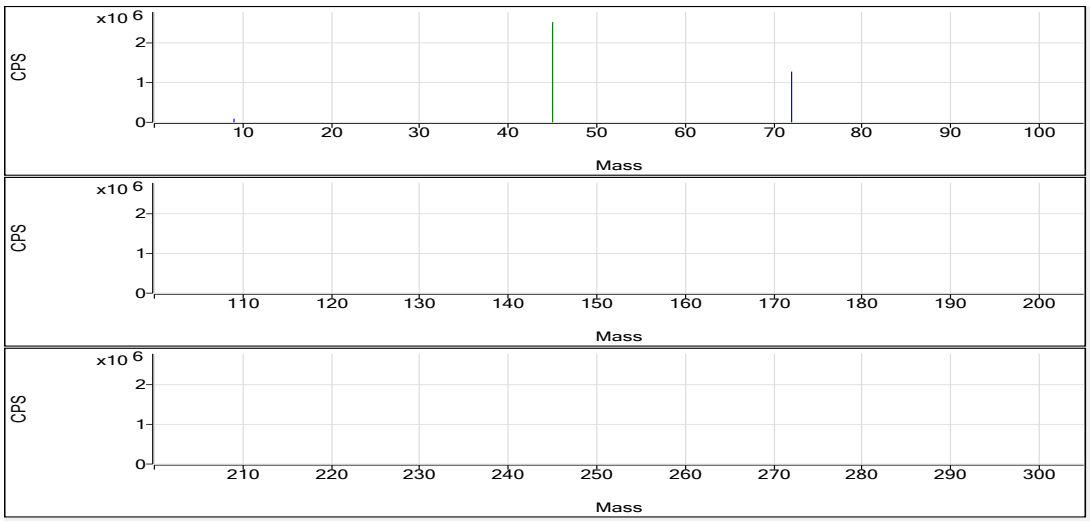
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	46.763	ppb	0.9	90491.95	0.0357	Pulse	0.5000	3
Se	78	72	H2	98.716	ppb	1.3	6973.93	0.0412	Pulse	1.5000	3
Na	23	45	He	4803.597	ppb	2.0	868191.18	17.5279	Pulse	0.1000	3
Mg	24	45	He	4973.549	ppb	1.6	442223.64	8.9276	Pulse	0.1000	3
Al	27	45	He	4913.762	ppb	1.1	142435.68	2.8754	Pulse	0.1000	3
K	39	45	He	5030.197	ppb	1.2	309692.56	6.2519	Pulse	0.1000	3
Ca	44	45	He	5221.780	ppb	1.2	17607.80	0.3555	Pulse	0.1000	3
Ti	47	45	He	501.668	ppb	1.8	13349.89	0.2694	Pulse	0.1000	3
V	51	45	He	503.386	ppb	1.1	546313.90	11.0285	Pulse	0.5000	3
Cr	52	45	He	479.449	ppb	1.3	713068.01	14.3950	Pulse	0.1000	3
Mn	55	45	He	498.344	ppb	1.0	316952.24	6.3983	Pulse	0.1000	3
Fe	57	45	He	5055.837	ppb	1.1	145578.71	2.9388	Pulse	0.1000	3
Co	59	45	He	483.216	ppb	1.4	1347296.96	27.1987	Pulse	0.1000	3
Ni	60	72	He	487.171	ppb	0.7	374517.64	4.1843	Pulse	0.1000	3
Cu	63	72	He	469.824	ppb	0.8	1079934.02	12.0657	Pulse	0.1000	3
Zn	66	72	He	496.515	ppb	1.0	129735.29	1.4495	Pulse	0.1000	3
As	75	72	He	501.802	ppb	0.8	92095.74	1.0289	Pulse	0.5000	3
Sr	88	115	He	51.657	ppb	1.4	40966.76	0.4643	Pulse	0.1000	3
Mo	98	115	He	50.726	ppb	1.8	98151.53	1.1125	Pulse	0.1000	3
Ag	107	115	He	50.090	ppb	0.7	205502.78	2.3292	Pulse	0.1000	3
Cd	111	115	He	51.475	ppb	1.4	24283.10	0.2752	Pulse	0.5000	3
Sn	120	115	He	103.903	ppb	1.0	146285.42	1.6580	Pulse	0.1000	3
Sb	121	115	He	103.748	ppb	0.7	135988.23	1.5413	Pulse	0.1000	3
Ba	137	115	He	520.065	ppb	1.5	220229.86	2.4962	Pulse	0.1000	3
Tl	205	159	He	103.145	ppb	0.9	1028010.95	2.5505	Pulse	0.1000	3
Pb	208	159	He	51.750	ppb	0.8	683106.18	1.6948	Pulse	0.1000	3
U	238	209	He	50.231	ppb	0.7	771472.44	2.4744	Pulse	0.1000	3

ISTD Table:

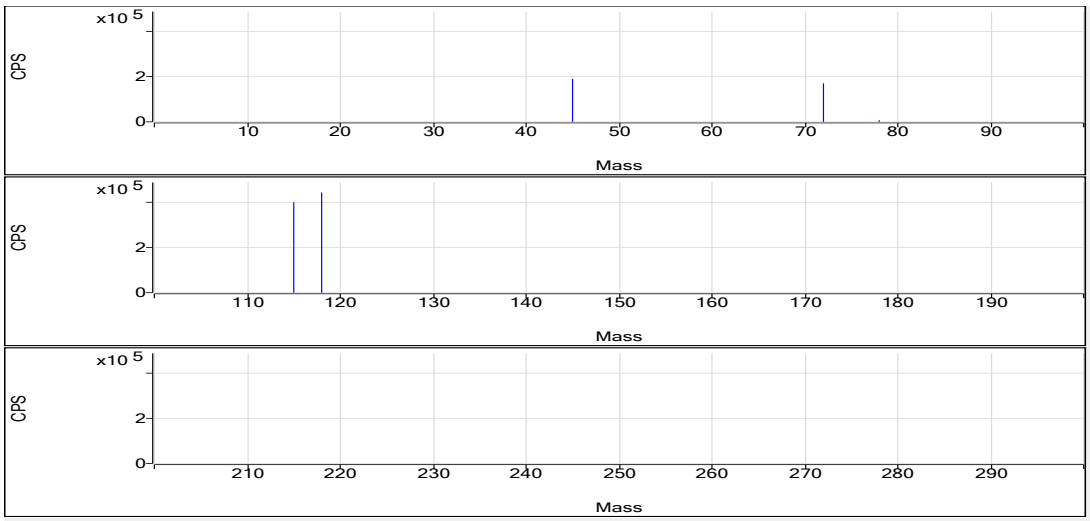
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2536556.99	0.2	105.7	Analog	0.1000	3
No Gas	Ge	72	1282699.23	0.3	111.2	Pulse	0.1000	3
H2	Sc	45	189095.95	1.5	101.1	Pulse	0.1000	3
H2	Ge	72	169349.29	0.7	103.4	Pulse	0.1000	3
H2	In	115	398320.33	0.1	102.4	Pulse	0.1000	3
He	Sc	45	49541.82	1.5	106.2	Pulse	0.1000	3
He	Ge	72	89509.18	1.0	110.2	Pulse	0.1000	3
He	In	115	88232.78	0.7	102.4	Pulse	0.1000	3
He	Tb	159	403066.26	0.5	101.1	Pulse	0.1000	3
He	Bi	209	311787.68	0.7	100.8	Pulse	0.1000	3

No Gas

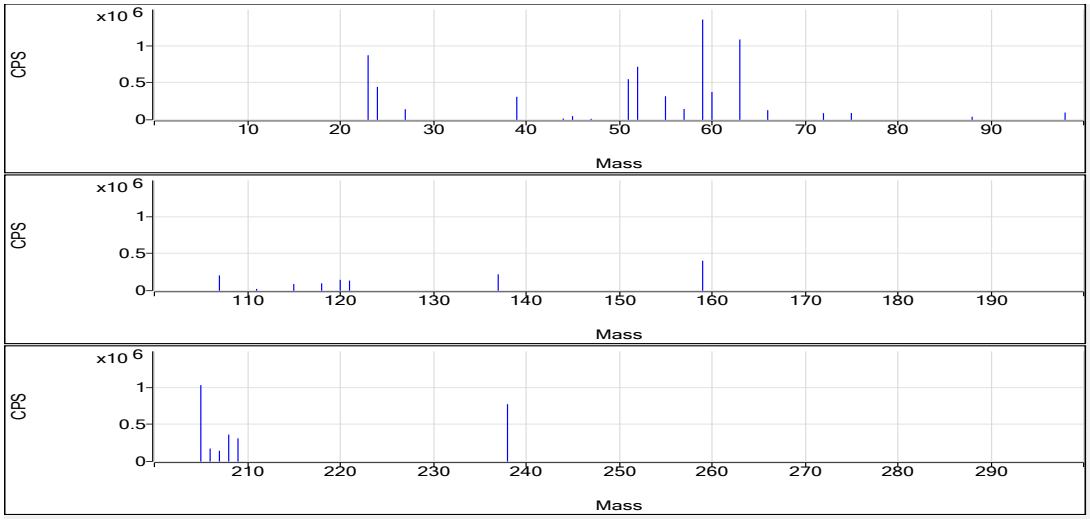


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	46.421	0.0354	89682.32	0.0008	4.685E-06
Be	9	1	No Gas	46.658	0.0356	90449.26	0.0008	4.685E-06
Be	9	1	No Gas	47.211	0.036	91344.27	0.0008	4.685E-06
Se	78	2	H2	97.587	0.0407	6924.35	0.0004	1.219E-05
Se	78	2	H2	98.375	0.041	6977.04	0.0004	1.219E-05
Se	78	2	H2	100.185	0.0418	7020.39	0.0004	1.219E-05
Na	23	3	He	4713.427	17.2053	865046.94	0.0036	0.3452
Na	23	3	He	4791.359	17.4841	866428.97	0.0036	0.3452
Na	23	3	He	4906.003	17.8942	873097.64	0.0036	0.3452
Mg	24	3	He	4891.416	8.7803	441453.43	0.0018	0.003497
Mg	24	3	He	4984.071	8.9465	443347.61	0.0018	0.003497
Mg	24	3	He	5045.162	9.0561	441869.88	0.0018	0.003497
Al	27	3	He	4853.556	2.8401	142796.34	0.0006	0.0006432
Al	27	3	He	4929.181	2.8844	142936.58	0.0006	0.0006432
Al	27	3	He	4958.549	2.9016	141574.11	0.0006	0.0006432
K	39	3	He	4969.758	6.1815	310792.12	0.0012	0.3951
K	39	3	He	5026.562	6.2476	309602.93	0.0012	0.3951
K	39	3	He	5094.272	6.3265	308682.63	0.0012	0.3951
Ca	44	3	He	5159.799	0.3513	17661.07	0.0001	0.002715
Ca	44	3	He	5217.749	0.3552	17601.24	0.0001	0.002715
Ca	44	3	He	5287.793	0.3599	17561.10	0.0001	0.002715
Ti	47	3	He	502.401	0.2698	13566.66	0.0005	7.003E-05
Ti	47	3	He	510.109	0.274	13576.80	0.0005	7.003E-05
Ti	47	3	He	492.493	0.2645	12906.22	0.0005	7.003E-05
V	51	3	He	497.323	10.8959	547824.94	0.0219	0.02486
V	51	3	He	504.988	11.0635	548254.44	0.0219	0.02486
V	51	3	He	507.847	11.126	542862.31	0.0219	0.02486
Cr	52	3	He	474.306	14.2411	716009.99	0.0299	0.03997
Cr	52	3	He	477.881	14.3481	711023.66	0.0299	0.03997
Cr	52	3	He	486.16	14.596	712170.38	0.0299	0.03997
Mn	55	3	He	493.617	6.3377	318643.75	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	497.55	6.3881	316565.60	0.0128	0.002639
Mn	55	3	He	503.867	6.4692	315647.36	0.0128	0.002639
Fe	57	3	He	4990.905	2.9011	145861.11	0.0006	0.001429
Fe	57	3	He	5074.219	2.9495	146163.49	0.0006	0.001429
Fe	57	3	He	5102.387	2.9659	144711.54	0.0006	0.001429
Co	59	3	He	478.803	26.9503	1355002.48	0.0563	0.002149
Co	59	3	He	479.612	26.9958	1337784.20	0.0563	0.002149
Co	59	3	He	491.234	27.6499	1349104.20	0.0563	0.002149
Ni	60	3	He	483.66	4.1542	376015.97	0.0086	0.002834
Ni	60	3	He	490.765	4.2151	375130.46	0.0086	0.002834
Ni	60	3	He	487.089	4.1836	372406.48	0.0086	0.002834
Cu	63	3	He	465.73	11.9605	1082614.52	0.0257	0.004757
Cu	63	3	He	471.205	12.1011	1076947.87	0.0257	0.004757
Cu	63	3	He	472.539	12.1353	1080239.67	0.0257	0.004757
Zn	66	3	He	492.052	1.4365	130024.24	0.0029	0.003818
Zn	66	3	He	495.804	1.4474	128813.64	0.0029	0.003818
Zn	66	3	He	501.69	1.4645	130367.98	0.0029	0.003818
As	75	3	He	498.708	1.0226	92560.59	0.002	0.0008061
As	75	3	He	506.458	1.0385	92419.86	0.002	0.0008061
As	75	3	He	500.241	1.0257	91306.76	0.002	0.0008061
Sr	88	3	He	51.726	0.4649	40719.73	0.009	0.0009645
Sr	88	3	He	52.322	0.4703	41491.42	0.009	0.0009645
Sr	88	3	He	50.924	0.4577	40689.14	0.009	0.0009645
Mo	98	3	He	51.796	1.136	99490.26	0.0219	0.0002706
Mo	98	3	He	50.263	1.1024	97255.73	0.0219	0.0002706
Mo	98	3	He	50.119	1.0992	97708.60	0.0219	0.0002706
Ag	107	3	He	50.513	2.3488	205714.06	0.0465	0.0006206
Ag	107	3	He	49.928	2.3216	204825.43	0.0465	0.0006206
Ag	107	3	He	49.831	2.3171	205968.84	0.0465	0.0006206
Cd	111	3	He	52.3	0.2796	24491.51	0.0053	0
Cd	111	3	He	51.107	0.2733	24108.73	0.0053	0
Cd	111	3	He	51.02	0.2728	24249.07	0.0053	0
Sn	120	3	He	105.03	1.6758	146769.97	0.0158	0.01648
Sn	120	3	He	103.182	1.6466	145274.18	0.0158	0.01648
Sn	120	3	He	103.498	1.6516	146812.10	0.0158	0.01648
Sb	121	3	He	104.038	1.5456	135365.13	0.0149	0.0002698
Sb	121	3	He	104.25	1.5487	136638.55	0.0149	0.0002698
Sb	121	3	He	102.957	1.5295	135961.02	0.0149	0.0002698
Ba	137	3	He	528.546	2.5369	222186.29	0.0048	0.0002317
Ba	137	3	He	518.935	2.4908	219750.41	0.0048	0.0002317
Ba	137	3	He	512.714	2.4609	218752.87	0.0048	0.0002317
Tl	205	3	He	103.34	2.5553	1032311.08	0.0247	0.0001339
Tl	205	3	He	102.18	2.5267	1022001.08	0.0247	0.0001339
Tl	205	3	He	103.916	2.5696	1029720.69	0.0247	0.0001339
Pb	208	3	He	51.535	1.6878	362672.81	0.0327	0.00107
Pb	208	3	He	51.509	1.6869	363567.18	0.0327	0.00107
Pb	208	3	He	52.204	1.7097	362128.04	0.0327	0.00107
U	238	3	He	50.226	2.4742	770558.19	0.0493	7.55E-05
U	238	3	He	49.902	2.4582	772198.74	0.0493	7.55E-05
U	238	3	He	50.564	2.4908	771660.38	0.0493	7.55E-05
Sc	45	1	No Gas			2532407.15		
Sc	45	1	No Gas			2541082.93		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2536180.90		
Ge	72	1	No Gas			1281253.34		
Ge	72	1	No Gas			1287221.62		
Ge	72	1	No Gas			1279622.72		
Sc	45	2	H2			189793.51		
Sc	45	2	H2			191535.97		
Sc	45	2	H2			185958.36		
Ge	72	2	H2			170079.61		
Ge	72	2	H2			170000.11		
Ge	72	2	H2			167968.16		
In	115	2	H2			398240.66		
In	115	2	H2			398072.30		
In	115	2	H2			398648.04		
Sc	45	3	He			50277.88		
Sc	45	3	He			49555.29		
Sc	45	3	He			48792.29		
Ge	72	3	He			90515.57		
Ge	72	3	He			88995.99		
Ge	72	3	He			89015.97		
In	115	3	He			88350.25		
In	115	3	He			89014.02		
In	115	3	He			89657.72		
Tb	159	3	He			403980.66		
Tb	159	3	He			404485.85		
Tb	159	3	He			400732.26		
Bi	209	3	He			311435.95		
Bi	209	3	He			314128.06		
Bi	209	3	He			309799.02		

Quantitation Report

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Acq Time	8/10/2023 5:07:39 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

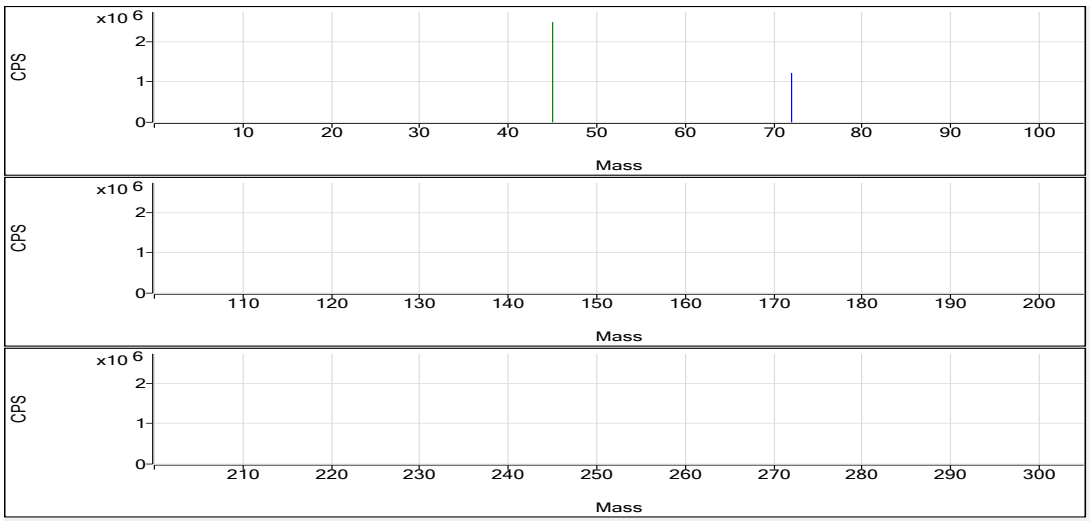
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.015	ppb	29.6	40.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.090	ppb	41.4	7.78	0.0000	Pulse	1.5000	3
Na	23	45	He	52.962	ppb	2.2	25883.41	0.5346	Pulse	0.1000	3
Mg	24	45	He	1.396	ppb	62.5	290.02	0.0060	Pulse	0.1000	3
Al	27	45	He	1.017	ppb	91.0	60.00	0.0012	Pulse	0.1000	3
K	39	45	He	7.822	ppb	189.6	19563.69	0.4042	Pulse	0.1000	3
Ca	44	45	He	-0.603	ppb	N/A	130.00	0.0027	Pulse	0.1000	3
Ti	47	45	He	0.258	ppb	151.2	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	0.633	ppb	9.5	1872.80	0.0387	Pulse	0.5000	3
Cr	52	45	He	1.388	ppb	180.1	3945.69	0.0815	Mix	0.1000	3
Mn	55	45	He	0.175	ppb	36.3	236.68	0.0049	Pulse	0.1000	3
Fe	57	45	He	0.504	ppb	163.3	83.33	0.0017	Pulse	0.1000	3
Co	59	45	He	0.060	ppb	7.1	266.68	0.0055	Pulse	0.1000	3
Ni	60	72	He	0.043	ppb	362.5	266.68	0.0032	Pulse	0.1000	3
Cu	63	72	He	0.090	ppb	23.2	590.04	0.0071	Pulse	0.1000	3
Zn	66	72	He	3.151	ppb	15.3	1083.42	0.0130	Pulse	0.1000	3
As	75	72	He	0.188	ppb	48.9	99.33	0.0012	Pulse	0.5000	3
Sr	88	115	He	0.029	ppb	218.9	106.67	0.0012	Pulse	0.1000	3
Mo	98	115	He	0.073	ppb	11.4	163.34	0.0019	Pulse	0.1000	3
Ag	107	115	He	0.003	ppb	124.6	66.67	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.007	ppb	125.4	3.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.128	ppb	59.4	1613.49	0.0185	Pulse	0.1000	3
Sb	121	115	He	0.015	ppb	75.7	43.33	0.0005	Pulse	0.1000	3
Ba	137	115	He	0.047	ppb	183.0	40.00	0.0005	Pulse	0.1000	3
Tl	205	159	He	0.139	ppb	11.8	1413.46	0.0036	Pulse	0.1000	3
Pb	208	159	He	0.017	ppb	27.9	640.04	0.0016	Pulse	0.1000	3
U	238	209	He	0.061	ppb	6.2	953.40	0.0031	Pulse	0.1000	3

ISTD Table:

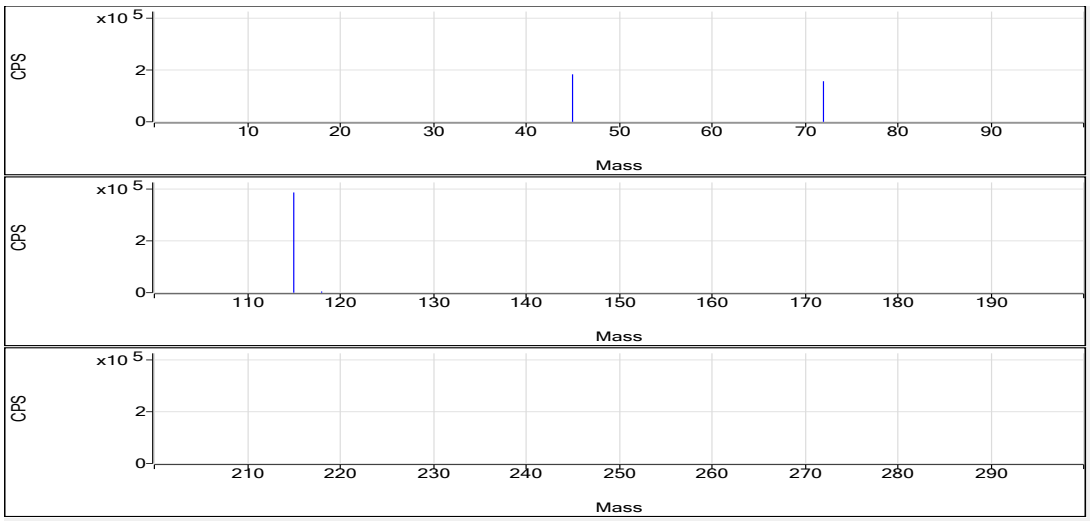
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2488868.76	1.7	103.8	Analog	0.1000	3
No Gas	Ge	72	1226065.11	1.2	106.3	Pulse	0.1000	3
H2	Sc	45	183879.59	0.5	98.3	Pulse	0.1000	3
H2	Ge	72	157159.30	1.2	96.0	Pulse	0.1000	3
H2	In	115	388073.96	0.2	99.7	Pulse	0.1000	3
He	Sc	45	48414.62	1.5	103.8	Pulse	0.1000	3
He	Ge	72	83396.34	0.2	102.7	Pulse	0.1000	3
He	In	115	87228.42	0.7	101.2	Pulse	0.1000	3
He	Tb	159	397113.77	0.4	99.6	Pulse	0.1000	3
He	Bi	209	307629.65	0.5	99.5	Pulse	0.1000	3

No Gas

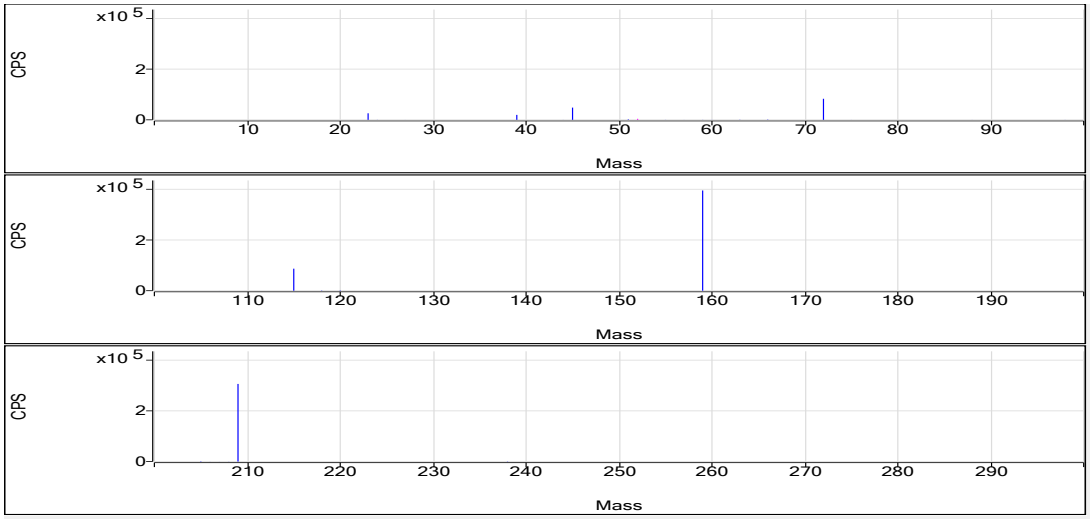


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.014	0	38.00	0.0008	4.685E-06
Be	9	1	No Gas	0.011	0	34.00	0.0008	4.685E-06
Be	9	1	No Gas	0.02	0	50.00	0.0008	4.685E-06
Se	78	2	H2	0.051	0	5.33	0.0004	1.219E-05
Se	78	2	H2	0.093	0.0001	8.00	0.0004	1.219E-05
Se	78	2	H2	0.125	0.0001	10.00	0.0004	1.219E-05
Na	23	3	He	52.743	0.5338	26234.05	0.0036	0.3452
Na	23	3	He	54.196	0.539	26083.73	0.0036	0.3452
Na	23	3	He	51.948	0.531	25332.44	0.0036	0.3452
Mg	24	3	He	1.113	0.0055	270.02	0.0018	0.003497
Mg	24	3	He	0.7	0.0048	230.01	0.0018	0.003497
Mg	24	3	He	2.374	0.0078	370.02	0.0018	0.003497
Al	27	3	He	1.683	0.0016	80.00	0.0006	0.0006432
Al	27	3	He	-0.04	0.0006	30.00	0.0006	0.0006432
Al	27	3	He	1.408	0.0015	70.00	0.0006	0.0006432
K	39	3	He	7.146	0.4034	19823.96	0.0012	0.3951
K	39	3	He	-6.659	0.3873	18742.50	0.0012	0.3951
K	39	3	He	22.978	0.4218	20124.61	0.0012	0.3951
Ca	44	3	He	23.07	0.0043	210.01	0.0001	0.002715
Ca	44	3	He	-15.718	0.0017	80.00	0.0001	0.002715
Ca	44	3	He	-9.162	0.0021	100.00	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.254	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	0.65	0.0004	20.00	0.0005	7.003E-05
V	51	3	He	0.57	0.0373	1834.13	0.0219	0.02486
V	51	3	He	0.638	0.0388	1878.13	0.0219	0.02486
V	51	3	He	0.69	0.04	1906.14	0.0219	0.02486
Cr	52	3	He	-0.084	0.0374	1840.20	0.0299	0.03997
Cr	52	3	He	4.274	0.1679	8126.68	0.0299	0.03997
Cr	52	3	He	-0.026	0.0392	1870.19	0.0299	0.03997
Mn	55	3	He	0.159	0.0047	230.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.245	0.0058	280.02	0.0128	0.002639
Mn	55	3	He	0.121	0.0042	200.01	0.0128	0.002639
Fe	57	3	He	-0.008	0.0014	70.00	0.0006	0.001429
Fe	57	3	He	1.453	0.0023	110.00	0.0006	0.001429
Fe	57	3	He	0.066	0.0015	70.00	0.0006	0.001429
Co	59	3	He	0.063	0.0057	280.01	0.0563	0.002149
Co	59	3	He	0.061	0.0056	270.01	0.0563	0.002149
Co	59	3	He	0.055	0.0052	250.01	0.0563	0.002149
Ni	60	3	He	0.118	0.0038	320.02	0.0086	0.002834
Ni	60	3	He	0.145	0.0041	340.02	0.0086	0.002834
Ni	60	3	He	-0.135	0.0017	140.01	0.0086	0.002834
Cu	63	3	He	0.068	0.0065	540.03	0.0257	0.004757
Cu	63	3	He	0.109	0.0076	630.04	0.0257	0.004757
Cu	63	3	He	0.094	0.0072	600.04	0.0257	0.004757
Zn	66	3	He	3.065	0.0127	1060.08	0.0029	0.003818
Zn	66	3	He	3.67	0.0145	1210.10	0.0029	0.003818
Zn	66	3	He	2.717	0.0117	980.07	0.0029	0.003818
As	75	3	He	0.264	0.0013	112.00	0.002	0.0008061
As	75	3	He	0.215	0.0012	104.00	0.002	0.0008061
As	75	3	He	0.086	0.001	82.00	0.002	0.0008061
Sr	88	3	He	0.072	0.0016	140.01	0.009	0.0009645
Sr	88	3	He	0.06	0.0015	130.01	0.009	0.0009645
Sr	88	3	He	-0.044	0.0006	50.00	0.009	0.0009645
Mo	98	3	He	0.066	0.0017	150.01	0.0219	0.0002706
Mo	98	3	He	0.082	0.0021	180.01	0.0219	0.0002706
Mo	98	3	He	0.071	0.0018	160.01	0.0219	0.0002706
Ag	107	3	He	0.004	0.0008	70.00	0.0465	0.0006206
Ag	107	3	He	0.006	0.0009	80.00	0.0465	0.0006206
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0.017	0.0001	8.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Sn	120	3	He	0.04	0.0171	1490.14	0.0158	0.01648
Sn	120	3	He	0.169	0.0191	1660.16	0.0158	0.01648
Sn	120	3	He	0.174	0.0192	1690.16	0.0158	0.01648
Sb	121	3	He	0.013	0.0005	40.00	0.0149	0.0002698
Sb	121	3	He	0.005	0.0003	30.00	0.0149	0.0002698
Sb	121	3	He	0.028	0.0007	60.00	0.0149	0.0002698
Ba	137	3	He	0.119	0.0008	70.00	0.0048	0.0002317
Ba	137	3	He	-0.048	0	0.00	0.0048	0.0002317
Ba	137	3	He	0.07	0.0006	50.00	0.0048	0.0002317
Tl	205	3	He	0.12	0.0031	1230.11	0.0247	0.0001339
Tl	205	3	He	0.148	0.0038	1500.13	0.0247	0.0001339
Tl	205	3	He	0.148	0.0038	1510.15	0.0247	0.0001339
Pb	208	3	He	0.022	0.0018	390.02	0.0327	0.00107
Pb	208	3	He	0.014	0.0015	330.02	0.0327	0.00107
Pb	208	3	He	0.014	0.0015	330.02	0.0327	0.00107
U	238	3	He	0.065	0.0033	1020.08	0.0493	7.55E-05
U	238	3	He	0.061	0.0031	940.07	0.0493	7.55E-05
U	238	3	He	0.058	0.0029	900.06	0.0493	7.55E-05
Sc	45	1	No Gas			2450941.21		
Sc	45	1	No Gas			2535415.74		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2480249.34		
Ge	72	1	No Gas			1218127.09		
Ge	72	1	No Gas			1243055.14		
Ge	72	1	No Gas			1217013.11		
Sc	45	2	H2			183730.21		
Sc	45	2	H2			183118.57		
Sc	45	2	H2			184790.00		
Ge	72	2	H2			159228.32		
Ge	72	2	H2			156793.11		
Ge	72	2	H2			155456.47		
In	115	2	H2			388975.54		
In	115	2	H2			387635.38		
In	115	2	H2			387610.97		
Sc	45	3	He			49143.80		
Sc	45	3	He			48391.11		
Sc	45	3	He			47708.96		
Ge	72	3	He			83191.61		
Ge	72	3	He			83442.74		
Ge	72	3	He			83554.67		
In	115	3	He			87092.92		
In	115	3	He			86710.86		
In	115	3	He			87906.42		
Tb	159	3	He			397637.49		
Tb	159	3	He			395535.54		
Tb	159	3	He			398168.28		
Bi	209	3	He			309307.77		
Bi	209	3	He			306046.21		
Bi	209	3	He			307534.96		

Quantitation Report

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Sample Type	CCV
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

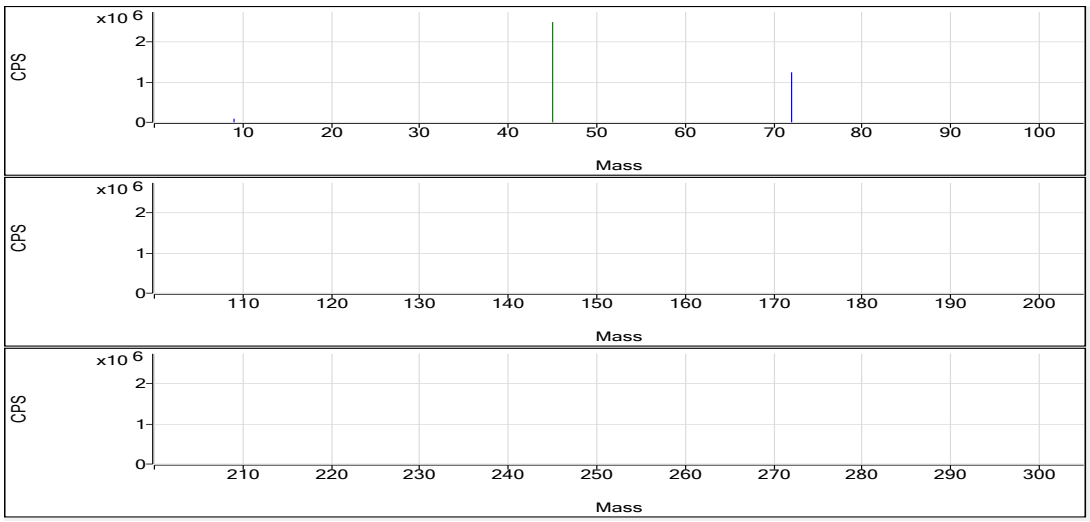
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	47.337	ppb	2.5	90338.21	0.0361	Pulse	0.5000	3
Se	78	72	H2	52.019	ppb	1.9	3494.66	0.0217	Pulse	1.5000	3
Na	23	45	He	4872.754	ppb	2.6	857550.07	17.7752	Pulse	0.1000	3
Mg	24	45	He	4991.271	ppb	2.2	432268.72	8.9594	Pulse	0.1000	3
Al	27	45	He	4926.728	ppb	2.7	139081.50	2.8830	Pulse	0.1000	3
K	39	45	He	5097.173	ppb	2.0	305412.45	6.3298	Pulse	0.1000	3
Ca	44	45	He	5165.241	ppb	3.8	16963.73	0.3516	Pulse	0.1000	3
Ti	47	45	He	5055.833	ppb	2.7	130975.78	2.7148	Pulse	0.1000	3
V	51	45	He	511.628	ppb	2.6	540746.52	11.2086	Pulse	0.5000	3
Cr	52	45	He	486.541	ppb	2.4	704737.23	14.6074	Pulse	0.1000	3
Mn	55	45	He	506.064	ppb	2.7	313452.52	6.4974	Pulse	0.1000	3
Fe	57	45	He	5048.859	ppb	3.9	141552.17	2.9348	Pulse	0.1000	3
Co	59	45	He	485.097	ppb	2.0	1317387.74	27.3045	Pulse	0.1000	3
Ni	60	72	He	508.616	ppb	1.5	369753.69	4.3684	Pulse	0.1000	3
Cu	63	72	He	484.681	ppb	1.7	1053544.57	12.4470	Pulse	0.1000	3
Zn	66	72	He	504.834	ppb	1.0	124745.57	1.4737	Pulse	0.1000	3
As	75	72	He	521.203	ppb	1.8	90455.23	1.0687	Pulse	0.5000	3
Sr	88	115	He	51.219	ppb	1.0	40401.80	0.4604	Pulse	0.1000	3
Mo	98	115	He	50.490	ppb	1.0	97174.57	1.1073	Pulse	0.1000	3
Ag	107	115	He	50.514	ppb	0.2	206127.85	2.3489	Pulse	0.1000	3
Cd	111	115	He	51.154	ppb	0.4	24002.60	0.2735	Pulse	0.5000	3
Sn	120	115	He	50.706	ppb	0.1	71745.85	0.8176	Pulse	0.1000	3
Sb	121	115	He	52.104	ppb	0.8	67940.27	0.7742	Pulse	0.1000	3
Ba	137	115	He	513.189	ppb	1.3	216159.65	2.4632	Pulse	0.1000	3
Tl	205	159	He	51.086	ppb	0.4	505447.32	1.2633	Pulse	0.1000	3
Pb	208	159	He	51.310	ppb	0.2	672351.83	1.6804	Pulse	0.1000	3
U	238	209	He	50.043	ppb	0.3	768457.62	2.4652	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2502286.47	1.7	104.3	Analog	0.1000	3
No Gas	Ge	72	1247395.71	1.0	108.2	Pulse	0.1000	3
H2	Sc	45	184868.66	1.6	98.9	Pulse	0.1000	3
H2	Ge	72	161021.92	1.7	98.4	Pulse	0.1000	3
H2	In	115	390110.75	0.5	100.3	Pulse	0.1000	3
He	Sc	45	48264.16	2.5	103.5	Pulse	0.1000	3
He	Ge	72	84653.97	1.2	104.3	Pulse	0.1000	3
He	In	115	87755.73	0.3	101.8	Pulse	0.1000	3
He	Tb	159	400105.98	0.6	100.4	Pulse	0.1000	3
He	Bi	209	311722.53	0.2	100.8	Pulse	0.1000	3

No Gas



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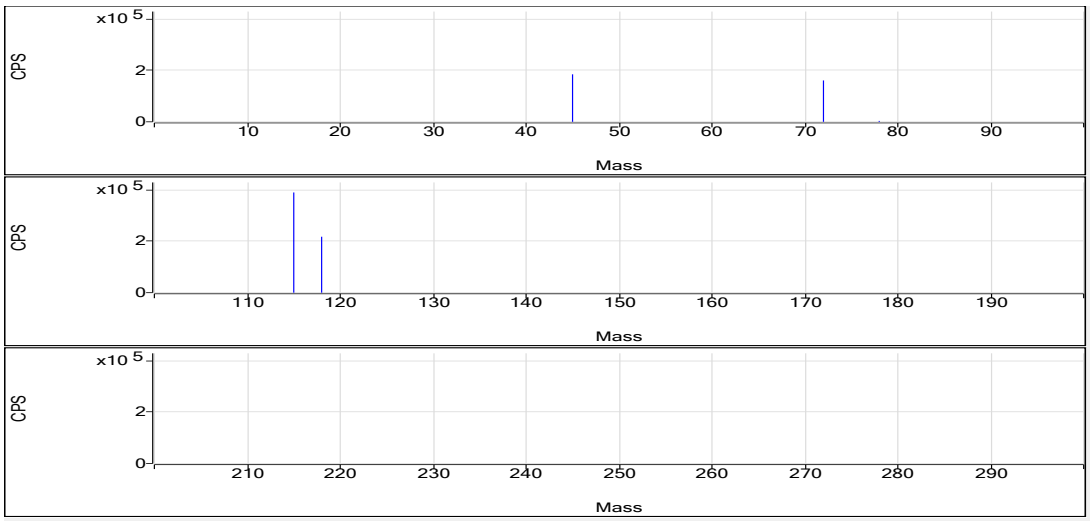
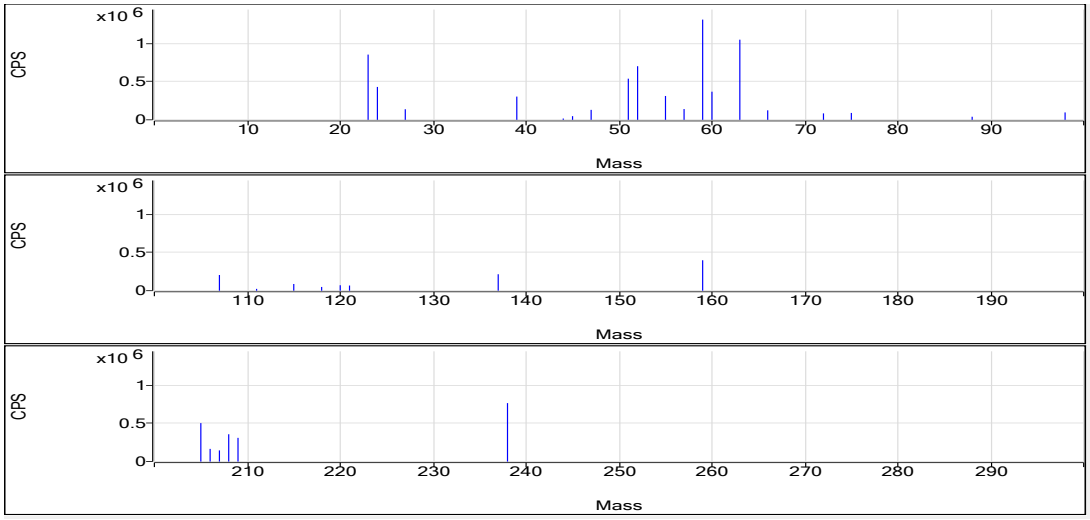


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	47.771	0.0364	90225.64	0.0008	4.685E-06
Be	9	1	No Gas	45.979	0.0351	89523.23	0.0008	4.685E-06
Be	9	1	No Gas	48.261	0.0368	91265.77	0.0008	4.685E-06
Se	78	2	H2	51.55	0.0215	3497.10	0.0004	1.219E-05
Se	78	2	H2	53.157	0.0222	3500.44	0.0004	1.219E-05
Se	78	2	H2	51.351	0.0214	3486.43	0.0004	1.219E-05
Na	23	3	He	5005.376	18.2496	857854.05	0.0036	0.3452
Na	23	3	He	4756.476	17.3593	857278.74	0.0036	0.3452
Na	23	3	He	4856.41	17.7168	857517.41	0.0036	0.3452
Mg	24	3	He	5112.66	9.1773	431391.95	0.0018	0.003497
Mg	24	3	He	4906.261	8.8069	434923.82	0.0018	0.003497
Mg	24	3	He	4954.89	8.8942	430490.38	0.0018	0.003497
Al	27	3	He	5058.176	2.9599	139132.72	0.0006	0.0006432
Al	27	3	He	4791.481	2.8038	138465.25	0.0006	0.0006432
Al	27	3	He	4930.526	2.8852	139646.52	0.0006	0.0006432
K	39	3	He	5193.149	6.4416	302797.44	0.0012	0.3951
K	39	3	He	4992.254	6.2077	306562.51	0.0012	0.3951
K	39	3	He	5106.116	6.3403	306877.40	0.0012	0.3951
Ca	44	3	He	5253.713	0.3576	16810.20	0.0001	0.002715
Ca	44	3	He	4941.8	0.3365	16619.97	0.0001	0.002715
Ca	44	3	He	5300.209	0.3608	17461.02	0.0001	0.002715
Ti	47	3	He	5211.852	2.7986	131551.34	0.0005	7.003E-05
Ti	47	3	He	4984.46	2.6765	132175.91	0.0005	7.003E-05
Ti	47	3	He	4971.186	2.6693	129200.09	0.0005	7.003E-05
V	51	3	He	526.642	11.5368	542306.81	0.0219	0.02486
V	51	3	He	501.036	10.9771	542097.06	0.0219	0.02486
V	51	3	He	507.206	11.112	537835.69	0.0219	0.02486
Cr	52	3	He	498.941	14.9786	704094.44	0.0299	0.03997
Cr	52	3	He	476.136	14.2958	705991.24	0.0299	0.03997
Cr	52	3	He	484.546	14.5476	704126.01	0.0299	0.03997
Mn	55	3	He	520.719	6.6855	314262.03	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	493.725	6.339	313049.88	0.0128	0.002639
Mn	55	3	He	503.749	6.4677	313045.66	0.0128	0.002639
Fe	57	3	He	5254.031	3.054	143556.99	0.0006	0.001429
Fe	57	3	He	4856.732	2.8231	139419.33	0.0006	0.001429
Fe	57	3	He	5035.813	2.9272	141680.20	0.0006	0.001429
Co	59	3	He	496.054	27.9212	1312482.79	0.0563	0.002149
Co	59	3	He	476.739	26.8341	1325185.14	0.0563	0.002149
Co	59	3	He	482.497	27.1582	1314495.29	0.0563	0.002149
Ni	60	3	He	508.828	4.3702	370599.56	0.0086	0.002834
Ni	60	3	He	516.355	4.4348	370588.67	0.0086	0.002834
Ni	60	3	He	500.666	4.3001	368072.85	0.0086	0.002834
Cu	63	3	He	483.558	12.4182	1053088.73	0.0257	0.004757
Cu	63	3	He	493.552	12.6748	1059156.00	0.0257	0.004757
Cu	63	3	He	476.933	12.2481	1048388.97	0.0257	0.004757
Zn	66	3	He	501.883	1.4651	124244.02	0.0029	0.003818
Zn	66	3	He	510.622	1.4906	124556.69	0.0029	0.003818
Zn	66	3	He	501.999	1.4654	125435.99	0.0029	0.003818
As	75	3	He	519.256	1.0647	90288.13	0.002	0.0008061
As	75	3	He	531.303	1.0894	91032.75	0.002	0.0008061
As	75	3	He	513.05	1.052	90044.82	0.002	0.0008061
Sr	88	3	He	51.496	0.4629	40759.32	0.009	0.0009645
Sr	88	3	He	51.537	0.4632	40549.16	0.009	0.0009645
Sr	88	3	He	50.624	0.4551	39896.92	0.009	0.0009645
Mo	98	3	He	50.333	1.1039	97205.45	0.0219	0.0002706
Mo	98	3	He	50.072	1.0982	96127.17	0.0219	0.0002706
Mo	98	3	He	51.065	1.1199	98191.08	0.0219	0.0002706
Ag	107	3	He	50.458	2.3463	206606.81	0.0465	0.0006206
Ag	107	3	He	50.633	2.3544	206091.64	0.0465	0.0006206
Ag	107	3	He	50.452	2.346	205685.11	0.0465	0.0006206
Cd	111	3	He	51.021	0.2728	24022.63	0.0053	0
Cd	111	3	He	51.048	0.273	23892.40	0.0053	0
Cd	111	3	He	51.393	0.2748	24092.77	0.0053	0
Sn	120	3	He	50.731	0.818	72026.98	0.0158	0.01648
Sn	120	3	He	50.757	0.8184	71635.44	0.0158	0.01648
Sn	120	3	He	50.63	0.8164	71575.14	0.0158	0.01648
Sb	121	3	He	52.453	0.7794	68630.67	0.0149	0.0002698
Sb	121	3	He	51.67	0.7677	67203.59	0.0149	0.0002698
Sb	121	3	He	52.187	0.7754	67986.54	0.0149	0.0002698
Ba	137	3	He	511.121	2.4533	216029.37	0.0048	0.0002317
Ba	137	3	He	507.807	2.4374	213352.01	0.0048	0.0002317
Ba	137	3	He	520.639	2.499	219097.57	0.0048	0.0002317
Tl	205	3	He	51.084	1.2632	505696.05	0.0247	0.0001339
Tl	205	3	He	51.305	1.2687	504598.00	0.0247	0.0001339
Tl	205	3	He	50.869	1.2579	506047.92	0.0247	0.0001339
Pb	208	3	He	51.196	1.6767	358443.98	0.0327	0.00107
Pb	208	3	He	51.376	1.6826	358473.04	0.0327	0.00107
Pb	208	3	He	51.358	1.682	360004.02	0.0327	0.00107
U	238	3	He	50.168	2.4714	771134.21	0.0493	7.55E-05
U	238	3	He	49.898	2.458	764605.93	0.0493	7.55E-05
U	238	3	He	50.063	2.4662	769632.72	0.0493	7.55E-05
Sc	45	1	No Gas			2475775.28		
Sc	45	1	No Gas			2552209.49		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2478874.65		
Ge	72	1	No Gas			1235537.87		
Ge	72	1	No Gas			1246680.76		
Ge	72	1	No Gas			1259968.50		
Sc	45	2	H2			188133.10		
Sc	45	2	H2			182239.14		
Sc	45	2	H2			184233.73		
Ge	72	2	H2			162565.34		
Ge	72	2	H2			157802.33		
Ge	72	2	H2			162698.08		
In	115	2	H2			389667.06		
In	115	2	H2			388282.18		
In	115	2	H2			392383.00		
Sc	45	3	He			47006.64		
Sc	45	3	He			49384.39		
Sc	45	3	He			48401.44		
Ge	72	3	He			84801.94		
Ge	72	3	He			83564.15		
Ge	72	3	He			85595.81		
In	115	3	He			88431.78		
In	115	3	He			87917.39		
In	115	3	He			88068.54		
Tb	159	3	He			400313.63		
Tb	159	3	He			397720.54		
Tb	159	3	He			402283.78		
Bi	209	3	He			312028.51		
Bi	209	3	He			311064.06		
Bi	209	3	He			312075.01		

Quantitation Report

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Sample Type	CCB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

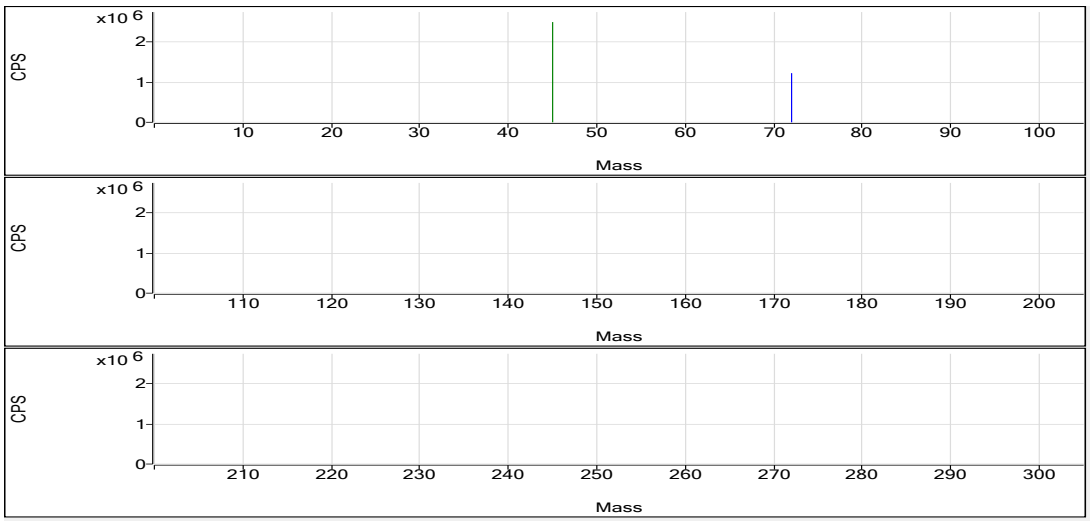
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.020	ppb	16.8	49.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.038	ppb	84.7	4.44	0.0000	Pulse	1.5000	3
Na	23	45	He	53.830	ppb	7.5	25636.21	0.5377	Pulse	0.1000	3
Mg	24	45	He	1.052	ppb	109.7	256.68	0.0054	Pulse	0.1000	3
Al	27	45	He	1.530	ppb	54.2	73.33	0.0015	Pulse	0.1000	3
K	39	45	He	11.510	ppb	46.2	19473.50	0.4085	Pulse	0.1000	3
Ca	44	45	He	0.144	ppb	9751.9	130.00	0.0027	Pulse	0.1000	3
Ti	47	45	He	0.913	ppb	65.6	26.67	0.0006	Pulse	0.1000	3
V	51	45	He	0.604	ppb	19.4	1814.79	0.0381	Pulse	0.5000	3
Cr	52	45	He	0.004	ppb	3285.0	1910.18	0.0401	Pulse	0.1000	3
Mn	55	45	He	0.132	ppb	58.3	206.68	0.0043	Pulse	0.1000	3
Fe	57	45	He	1.638	ppb	84.6	113.34	0.0024	Pulse	0.1000	3
Co	59	45	He	0.100	ppb	27.5	370.02	0.0078	Pulse	0.1000	3
Ni	60	72	He	-0.009	ppb	N/A	230.01	0.0028	Pulse	0.1000	3
Cu	63	72	He	0.089	ppb	30.5	586.70	0.0070	Pulse	0.1000	3
Zn	66	72	He	2.740	ppb	22.3	983.40	0.0118	Pulse	0.1000	3
As	75	72	He	0.188	ppb	37.1	99.33	0.0012	Pulse	0.5000	3
Sr	88	115	He	0.004	ppb	1071.7	86.67	0.0010	Pulse	0.1000	3
Mo	98	115	He	0.044	ppb	18.9	106.67	0.0012	Pulse	0.1000	3
Ag	107	115	He	0.003	ppb	200.8	66.67	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.010	ppb	98.5	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.069	ppb	N/A	1340.12	0.0154	Pulse	0.1000	3
Sb	121	115	He	0.015	ppb	153.8	43.33	0.0005	Pulse	0.1000	3
Ba	137	115	He	0.047	ppb	181.6	40.00	0.0005	Pulse	0.1000	3
Tl	205	159	He	0.081	ppb	12.7	846.73	0.0021	Pulse	0.1000	3
Pb	208	159	He	0.018	ppb	38.6	653.36	0.0016	Pulse	0.1000	3
U	238	209	He	0.046	ppb	10.4	716.71	0.0023	Pulse	0.1000	3

ISTD Table:

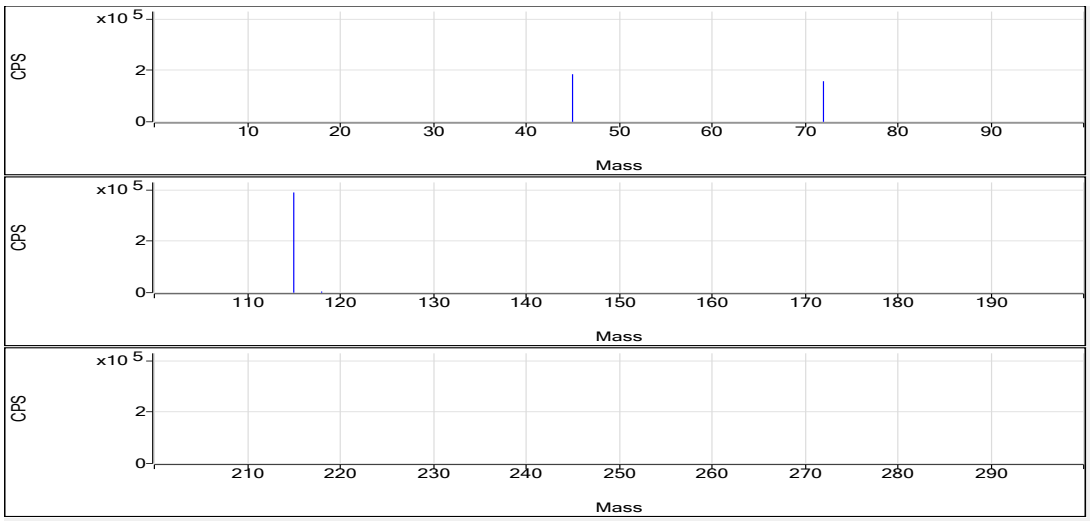
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2491873.04	0.5	103.9	Analog	0.1000	3
No Gas	Ge	72	1221919.15	0.7	105.9	Pulse	0.1000	3
H2	Sc	45	184844.69	1.0	98.8	Pulse	0.1000	3
H2	Ge	72	157695.20	0.3	96.3	Pulse	0.1000	3
H2	In	115	389279.81	0.2	100.0	Pulse	0.1000	3
He	Sc	45	47672.14	0.5	102.2	Pulse	0.1000	3
He	Ge	72	83379.77	0.2	102.7	Pulse	0.1000	3
He	In	115	87108.40	0.6	101.1	Pulse	0.1000	3
He	Tb	159	396499.97	0.4	99.5	Pulse	0.1000	3
He	Bi	209	306859.57	0.8	99.2	Pulse	0.1000	3

No Gas

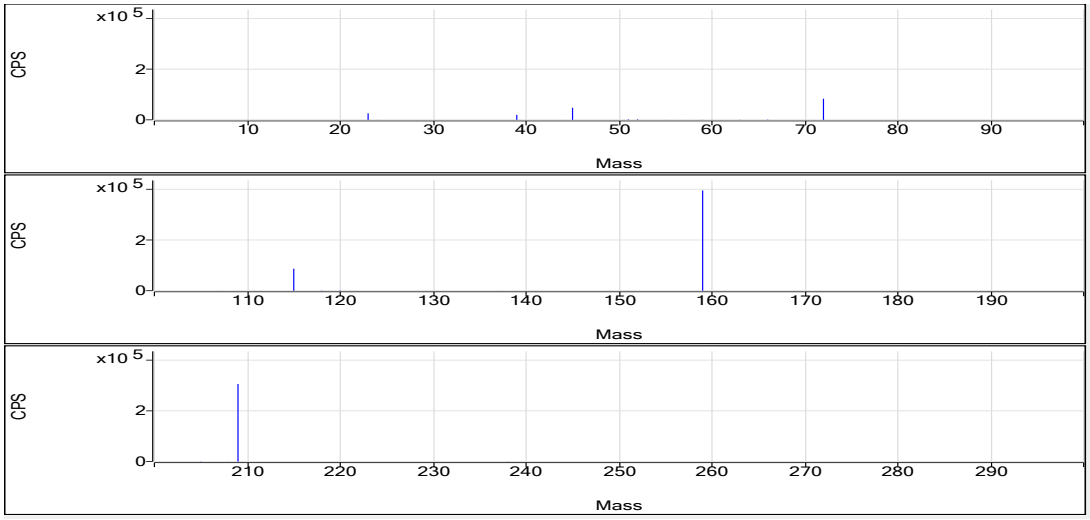


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.017	0	44.00	0.0008	4.685E-06
Be	9	1	No Gas	0.023	0	56.00	0.0008	4.685E-06
Be	9	1	No Gas	0.019	0	48.00	0.0008	4.685E-06
Se	78	2	H2	0.052	0	5.33	0.0004	1.219E-05
Se	78	2	H2	0.062	0	6.00	0.0004	1.219E-05
Se	78	2	H2	0.001	0	2.00	0.0004	1.219E-05
Na	23	3	He	55.393	0.5433	25893.29	0.0036	0.3452
Na	23	3	He	56.841	0.5485	26293.96	0.0036	0.3452
Na	23	3	He	49.257	0.5214	24721.37	0.0036	0.3452
Mg	24	3	He	2.378	0.0078	370.02	0.0018	0.003497
Mg	24	3	He	0.493	0.0044	210.01	0.0018	0.003497
Mg	24	3	He	0.284	0.004	190.01	0.0018	0.003497
Al	27	3	He	2.487	0.0021	100.00	0.0006	0.0006432
Al	27	3	He	1.04	0.0013	60.00	0.0006	0.0006432
Al	27	3	He	1.063	0.0013	60.00	0.0006	0.0006432
K	39	3	He	13.789	0.4111	19593.70	0.0012	0.3951
K	39	3	He	15.311	0.4129	19793.88	0.0012	0.3951
K	39	3	He	5.429	0.4014	19032.93	0.0012	0.3951
Ca	44	3	He	-12.236	0.0019	90.00	0.0001	0.002715
Ca	44	3	He	15.395	0.0038	180.01	0.0001	0.002715
Ca	44	3	He	-2.728	0.0025	120.00	0.0001	0.002715
Ti	47	3	He	1.433	0.0008	40.00	0.0005	7.003E-05
Ti	47	3	He	0.258	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	1.048	0.0006	30.00	0.0005	7.003E-05
V	51	3	He	0.736	0.041	1952.14	0.0219	0.02486
V	51	3	He	0.563	0.0372	1782.12	0.0219	0.02486
V	51	3	He	0.512	0.0361	1710.11	0.0219	0.02486
Cr	52	3	He	0.018	0.0405	1930.19	0.0299	0.03997
Cr	52	3	He	-0.123	0.0363	1740.16	0.0299	0.03997
Cr	52	3	He	0.116	0.0434	2060.20	0.0299	0.03997
Mn	55	3	He	0.089	0.0038	180.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.087	0.0038	180.01	0.0128	0.002639
Mn	55	3	He	0.222	0.0055	260.01	0.0128	0.002639
Fe	57	3	He	2.236	0.0027	130.01	0.0006	0.001429
Fe	57	3	He	0.054	0.0015	70.00	0.0006	0.001429
Fe	57	3	He	2.623	0.003	140.01	0.0006	0.001429
Co	59	3	He	0.103	0.008	380.02	0.0563	0.002149
Co	59	3	He	0.125	0.0092	440.02	0.0563	0.002149
Co	59	3	He	0.07	0.0061	290.01	0.0563	0.002149
Ni	60	3	He	-0.078	0.0022	180.01	0.0086	0.002834
Ni	60	3	He	0.005	0.0029	240.01	0.0086	0.002834
Ni	60	3	He	0.046	0.0032	270.01	0.0086	0.002834
Cu	63	3	He	0.1	0.0073	610.04	0.0257	0.004757
Cu	63	3	He	0.058	0.0062	520.03	0.0257	0.004757
Cu	63	3	He	0.109	0.0075	630.03	0.0257	0.004757
Zn	66	3	He	2.524	0.0112	930.07	0.0029	0.003818
Zn	66	3	He	3.43	0.0138	1150.09	0.0029	0.003818
Zn	66	3	He	2.266	0.0104	870.05	0.0029	0.003818
As	75	3	He	0.181	0.0012	98.00	0.002	0.0008061
As	75	3	He	0.122	0.0011	88.00	0.002	0.0008061
As	75	3	He	0.261	0.0013	112.00	0.002	0.0008061
Sr	88	3	He	-0.018	0.0008	70.00	0.009	0.0009645
Sr	88	3	He	0.047	0.0014	120.00	0.009	0.0009645
Sr	88	3	He	-0.018	0.0008	70.00	0.009	0.0009645
Mo	98	3	He	0.034	0.001	90.00	0.0219	0.0002706
Mo	98	3	He	0.046	0.0013	110.00	0.0219	0.0002706
Mo	98	3	He	0.051	0.0014	120.00	0.0219	0.0002706
Ag	107	3	He	-0.004	0.0005	40.00	0.0465	0.0006206
Ag	107	3	He	0.009	0.001	90.00	0.0465	0.0006206
Ag	107	3	He	0.004	0.0008	70.00	0.0465	0.0006206
Cd	111	3	He	0.021	0.0001	10.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Sn	120	3	He	0.041	0.0171	1500.15	0.0158	0.01648
Sn	120	3	He	-0.13	0.0144	1250.10	0.0158	0.01648
Sn	120	3	He	-0.119	0.0146	1270.11	0.0158	0.01648
Sb	121	3	He	0.036	0.0008	70.00	0.0149	0.0002698
Sb	121	3	He	-0.01	0.0001	10.00	0.0149	0.0002698
Sb	121	3	He	0.021	0.0006	50.00	0.0149	0.0002698
Ba	137	3	He	0.142	0.0009	80.00	0.0048	0.0002317
Ba	137	3	He	-0.024	0.0001	10.00	0.0048	0.0002317
Ba	137	3	He	0.024	0.0003	30.00	0.0048	0.0002317
Tl	205	3	He	0.092	0.0024	950.07	0.0247	0.0001339
Tl	205	3	He	0.08	0.0021	840.06	0.0247	0.0001339
Tl	205	3	He	0.071	0.0019	750.05	0.0247	0.0001339
Pb	208	3	He	0.018	0.0017	370.02	0.0327	0.00107
Pb	208	3	He	0.024	0.0019	380.02	0.0327	0.00107
Pb	208	3	He	0.011	0.0014	290.01	0.0327	0.00107
U	238	3	He	0.042	0.0021	660.04	0.0493	7.55E-05
U	238	3	He	0.045	0.0023	700.05	0.0493	7.55E-05
U	238	3	He	0.051	0.0026	790.05	0.0493	7.55E-05
Sc	45	1	No Gas			2494981.06		
Sc	45	1	No Gas			2478381.84		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2502256.21		
Ge	72	1	No Gas			1227990.45		
Ge	72	1	No Gas			1211700.45		
Ge	72	1	No Gas			1226066.54		
Sc	45	2	H2			184648.84		
Sc	45	2	H2			186806.33		
Sc	45	2	H2			183078.90		
Ge	72	2	H2			157935.27		
Ge	72	2	H2			158044.00		
Ge	72	2	H2			157106.34		
In	115	2	H2			389342.14		
In	115	2	H2			390199.41		
In	115	2	H2			388297.88		
Sc	45	3	He			47659.13		
Sc	45	3	He			47939.48		
Sc	45	3	He			47417.82		
Ge	72	3	He			83292.56		
Ge	72	3	He			83312.64		
Ge	72	3	He			83534.11		
In	115	3	He			87656.12		
In	115	3	He			86679.32		
In	115	3	He			87011.83		
Tb	159	3	He			395402.14		
Tb	159	3	He			398205.81		
Tb	159	3	He			395891.95		
Bi	209	3	He			309517.01		
Bi	209	3	He			306679.14		
Bi	209	3	He			304382.57		

Quantitation Report

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Acq Time	8/10/2023 5:13:47 PM
Sample Name	410-136722-Q-2-A
Sample Type	Sample
Comment	T20
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

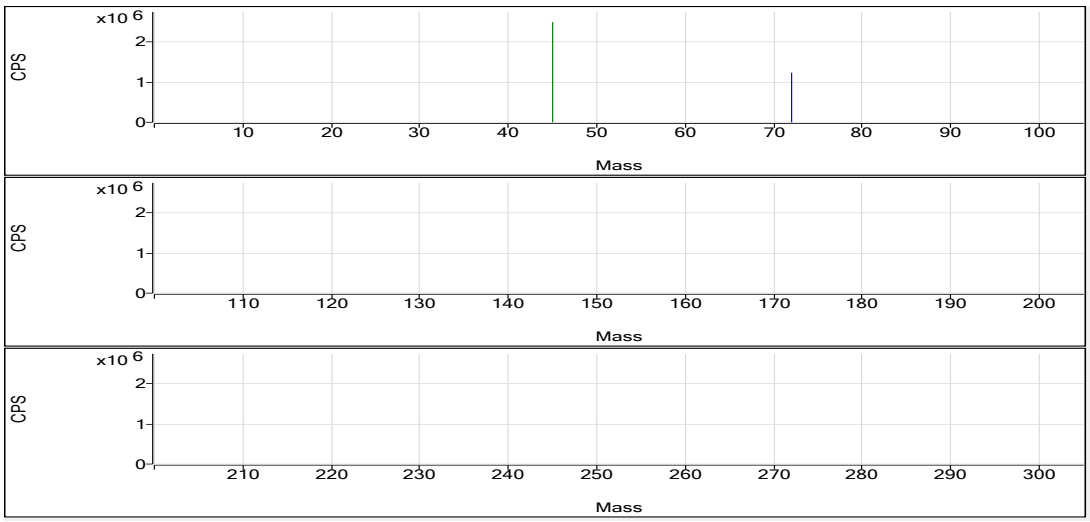
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.045	ppb	16.7	97.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.163	ppb	19.0	13.11	0.0001	Pulse	1.5000	3
Na	23	45	He	301597.176	ppb	1.7	52934055.88	1 079.1730	Analog	0.1000	3
Mg	24	45	He	6244.643	ppb	1.4	549779.34	11.2084	Pulse	0.1000	3
Al	27	45	He	378.327	ppb	10.6	10892.60	0.2220	Pulse	0.1000	3
K	39	45	He	5849.300	ppb	1.3	353440.34	7.2056	Pulse	0.1000	3
Ca	44	45	He	72737.035	ppb	1.6	241147.03	4.9162	Pulse	0.1000	3
Ti	47	45	He	4.800	ppb	28.0	130.01	0.0026	Pulse	0.1000	3
V	51	45	He	2.065	ppb	6.0	3433.76	0.0700	Pulse	0.5000	3
Cr	52	45	He	0.494	ppb	27.3	2687.02	0.0548	Pulse	0.1000	3
Mn	55	45	He	39.812	ppb	0.7	25192.48	0.5136	Pulse	0.1000	3
Fe	57	45	He	550.123	ppb	4.1	15745.72	0.3210	Pulse	0.1000	3
Co	59	45	He	0.518	ppb	8.1	1536.80	0.0313	Pulse	0.1000	3
Ni	60	72	He	1.557	ppb	3.2	1376.78	0.0162	Pulse	0.1000	3
Cu	63	72	He	3.025	ppb	5.1	7005.28	0.0824	Pulse	0.1000	3
Zn	66	72	He	5.304	ppb	8.0	1636.82	0.0193	Pulse	0.1000	3
As	75	72	He	1.249	ppb	13.4	286.00	0.0034	Pulse	0.5000	3
Sr	88	115	He	747.700	ppb	1.0	584544.52	6.7077	Pulse	0.1000	3
Mo	98	115	He	0.392	ppb	4.6	773.38	0.0089	Pulse	0.1000	3
Ag	107	115	He	0.014	ppb	70.7	110.00	0.0013	Pulse	0.1000	3
Cd	111	115	He	0.109	ppb	34.0	50.67	0.0006	Pulse	0.5000	3
Sn	120	115	He	-0.091	ppb	N/A	1310.11	0.0150	Pulse	0.1000	3
Sb	121	115	He	0.304	ppb	9.1	416.69	0.0048	Pulse	0.1000	3
Ba	137	115	He	65.010	ppb	3.0	27207.78	0.3122	Pulse	0.1000	3
Tl	205	159	He	0.034	ppb	16.7	390.02	0.0010	Pulse	0.1000	3
Pb	208	159	He	0.577	ppb	0.9	7927.90	0.0200	Pulse	0.1000	3
U	238	209	He	0.282	ppb	3.3	4264.20	0.0140	Pulse	0.1000	3

ISTD Table:

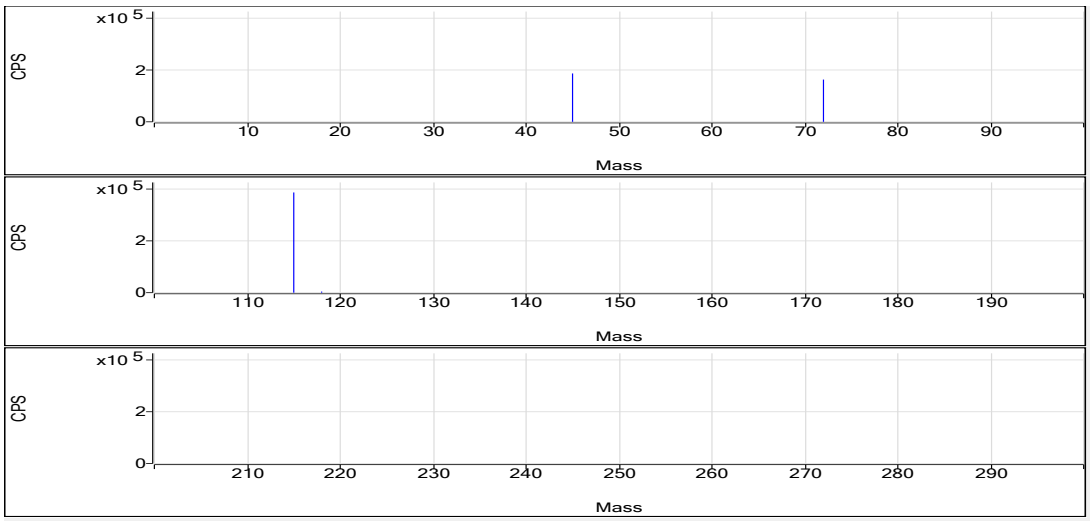
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2496174.18	0.7	104.1	Analog	0.1000	3
No Gas	Ge	72	1234077.66	0.6	107.0	Pulse	0.1000	3
H2	Sc	45	186562.54	1.1	99.8	Pulse	0.1000	3
H2	Ge	72	162943.64	2.2	99.5	Pulse	0.1000	3
H2	In	115	386675.70	1.3	99.4	Pulse	0.1000	3
He	Sc	45	49053.43	0.6	105.2	Pulse	0.1000	3
He	Ge	72	85029.66	1.3	104.7	Pulse	0.1000	3
He	In	115	87145.92	0.6	101.1	Pulse	0.1000	3
He	Tb	159	397341.64	0.3	99.7	Pulse	0.1000	3
He	Bi	209	305523.82	0.6	98.8	Pulse	0.1000	3

No Gas

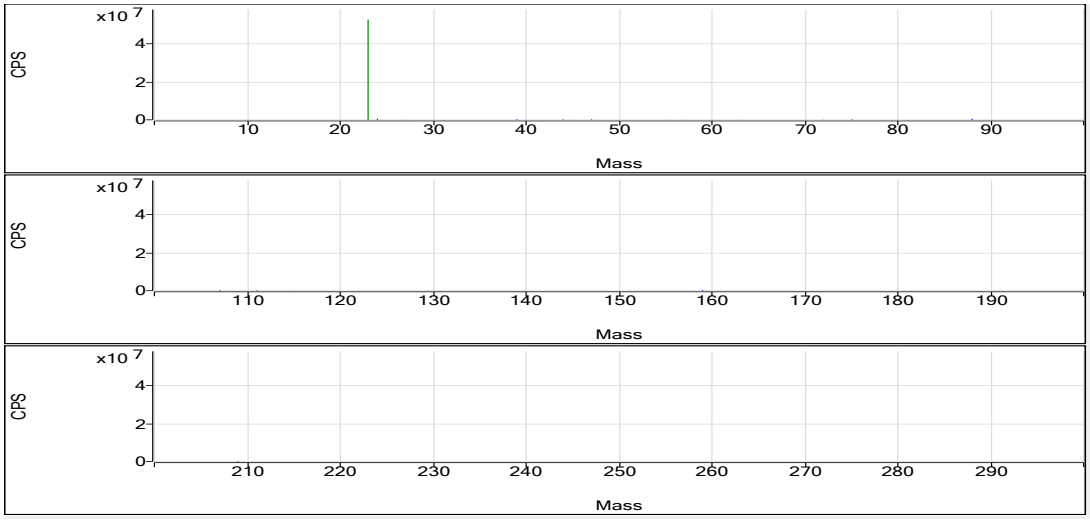


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.042	0	92.00	0.0008	4.685E-06
Be	9	1	No Gas	0.053	0	114.00	0.0008	4.685E-06
Be	9	1	No Gas	0.039	0	86.00	0.0008	4.685E-06
Se	78	2	H2	0.13	0.0001	10.67	0.0004	1.219E-05
Se	78	2	H2	0.169	0.0001	13.33	0.0004	1.219E-05
Se	78	2	H2	0.191	0.0001	15.33	0.0004	1.219E-05
Na	23	3	He	297407.076	1064.1848	52297959.22	0.0036	0.3452
Na	23	3	He	307099.867	1098.8564	53527659.20	0.0036	0.3452
Na	23	3	He	300284.585	1074.4778	52976549.21	0.0036	0.3452
Mg	24	3	He	6209.103	11.1446	547687.92	0.0018	0.003497
Mg	24	3	He	6341.729	11.3826	554470.97	0.0018	0.003497
Mg	24	3	He	6183.097	11.098	547179.13	0.0018	0.003497
Al	27	3	He	360.776	0.2117	10404.21	0.0006	0.0006432
Al	27	3	He	349.942	0.2054	10004.09	0.0006	0.0006432
Al	27	3	He	424.262	0.2489	12269.49	0.0006	0.0006432
K	39	3	He	5851.07	7.2076	354209.14	0.0012	0.3951
K	39	3	He	5923.649	7.2921	355215.27	0.0012	0.3951
K	39	3	He	5773.18	7.1169	350896.60	0.0012	0.3951
Ca	44	3	He	71635.015	4.8418	237943.71	0.0001	0.002715
Ca	44	3	He	73892.246	4.9943	243281.97	0.0001	0.002715
Ca	44	3	He	72683.843	4.9126	242215.41	0.0001	0.002715
Ti	47	3	He	5.175	0.0028	140.01	0.0005	7.003E-05
Ti	47	3	He	3.31	0.0018	90.00	0.0005	7.003E-05
Ti	47	3	He	5.914	0.0032	160.01	0.0005	7.003E-05
V	51	3	He	1.922	0.0669	3286.39	0.0219	0.02486
V	51	3	He	2.142	0.0717	3492.44	0.0219	0.02486
V	51	3	He	2.131	0.0714	3522.45	0.0219	0.02486
Cr	52	3	He	0.643	0.0592	2910.40	0.0299	0.03997
Cr	52	3	He	0.462	0.0538	2620.34	0.0299	0.03997
Cr	52	3	He	0.379	0.0513	2530.32	0.0299	0.03997
Mn	55	3	He	39.992	0.5159	25352.71	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	39.947	0.5153	25102.31	0.0128	0.002639
Mn	55	3	He	39.497	0.5095	25122.41	0.0128	0.002639
Fe	57	3	He	545.274	0.3182	15638.90	0.0006	0.001429
Fe	57	3	He	574.536	0.3352	16329.73	0.0006	0.001429
Fe	57	3	He	530.559	0.3097	15268.53	0.0006	0.001429
Co	59	3	He	0.472	0.0287	1410.11	0.0563	0.002149
Co	59	3	He	0.531	0.032	1560.13	0.0563	0.002149
Co	59	3	He	0.553	0.0333	1640.16	0.0563	0.002149
Ni	60	3	He	1.608	0.0166	1400.14	0.0086	0.002834
Ni	60	3	He	1.506	0.0158	1360.10	0.0086	0.002834
Ni	60	3	He	1.556	0.0162	1370.10	0.0086	0.002834
Cu	63	3	He	3.087	0.084	7072.01	0.0257	0.004757
Cu	63	3	He	2.849	0.0779	6721.81	0.0257	0.004757
Cu	63	3	He	3.139	0.0853	7222.03	0.0257	0.004757
Zn	66	3	He	5.747	0.0206	1730.17	0.0029	0.003818
Zn	66	3	He	4.899	0.0181	1560.13	0.0029	0.003818
Zn	66	3	He	5.265	0.0191	1620.15	0.0029	0.003818
As	75	3	He	1.439	0.0038	316.01	0.002	0.0008061
As	75	3	He	1.123	0.0031	268.00	0.002	0.0008061
As	75	3	He	1.187	0.0032	274.00	0.002	0.0008061
Sr	88	3	He	754.77	6.7711	587490.23	0.009	0.0009645
Sr	88	3	He	748.17	6.7119	588558.74	0.009	0.0009645
Sr	88	3	He	740.158	6.6401	577584.60	0.009	0.0009645
Mo	98	3	He	0.413	0.0093	810.05	0.0219	0.0002706
Mo	98	3	He	0.383	0.0087	760.05	0.0219	0.0002706
Mo	98	3	He	0.381	0.0086	750.05	0.0219	0.0002706
Ag	107	3	He	0.014	0.0013	110.00	0.0465	0.0006206
Ag	107	3	He	0.023	0.0017	150.01	0.0465	0.0006206
Ag	107	3	He	0.004	0.0008	70.00	0.0465	0.0006206
Cd	111	3	He	0.147	0.0008	68.00	0.0053	0
Cd	111	3	He	0.073	0.0004	34.00	0.0053	0
Cd	111	3	He	0.108	0.0006	50.00	0.0053	0
Sn	120	3	He	-0.124	0.0145	1260.10	0.0158	0.01648
Sn	120	3	He	-0.047	0.0157	1380.11	0.0158	0.01648
Sn	120	3	He	-0.104	0.0148	1290.11	0.0158	0.01648
Sb	121	3	He	0.292	0.0046	400.02	0.0149	0.0002698
Sb	121	3	He	0.335	0.0052	460.02	0.0149	0.0002698
Sb	121	3	He	0.284	0.0045	390.02	0.0149	0.0002698
Ba	137	3	He	65.026	0.3123	27097.62	0.0048	0.0002317
Ba	137	3	He	63.054	0.3028	26556.46	0.0048	0.0002317
Ba	137	3	He	66.949	0.3215	27969.26	0.0048	0.0002317
Tl	205	3	He	0.029	0.0009	340.02	0.0247	0.0001339
Tl	205	3	He	0.033	0.001	380.02	0.0247	0.0001339
Tl	205	3	He	0.041	0.0011	450.03	0.0247	0.0001339
Pb	208	3	He	0.578	0.02	4320.84	0.0327	0.00107
Pb	208	3	He	0.581	0.0201	4350.88	0.0327	0.00107
Pb	208	3	He	0.571	0.0198	4290.83	0.0327	0.00107
U	238	3	He	0.285	0.0141	4330.91	0.0493	7.55E-05
U	238	3	He	0.271	0.0134	4110.81	0.0493	7.55E-05
U	238	3	He	0.29	0.0143	4350.87	0.0493	7.55E-05
Sc	45	1	No Gas			2506250.43		
Sc	45	1	No Gas			2506509.81		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2475762.31		
Ge	72	1	No Gas			1229535.22		
Ge	72	1	No Gas			1241915.68		
Ge	72	1	No Gas			1230782.09		
Sc	45	2	H2			186683.30		
Sc	45	2	H2			184497.40		
Sc	45	2	H2			188506.91		
Ge	72	2	H2			160877.08		
Ge	72	2	H2			160937.19		
Ge	72	2	H2			167016.66		
In	115	2	H2			386295.46		
In	115	2	H2			381975.70		
In	115	2	H2			391755.93		
Sc	45	3	He			49143.68		
Sc	45	3	He			48712.15		
Sc	45	3	He			49304.46		
Ge	72	3	He			84187.59		
Ge	72	3	He			86281.01		
Ge	72	3	He			84620.38		
In	115	3	He			86770.64		
In	115	3	He			87695.82		
In	115	3	He			86991.36		
Tb	159	3	He			397040.27		
Tb	159	3	He			398795.54		
Tb	159	3	He			396189.10		
Bi	209	3	He			307244.02		
Bi	209	3	He			305844.90		
Bi	209	3	He			303482.55		

Quantitation Report

Data File Name	193SMPL.d
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Sample Name	410-136722-Q-2-A PDS
Sample Type	Sample
Comment	T20
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

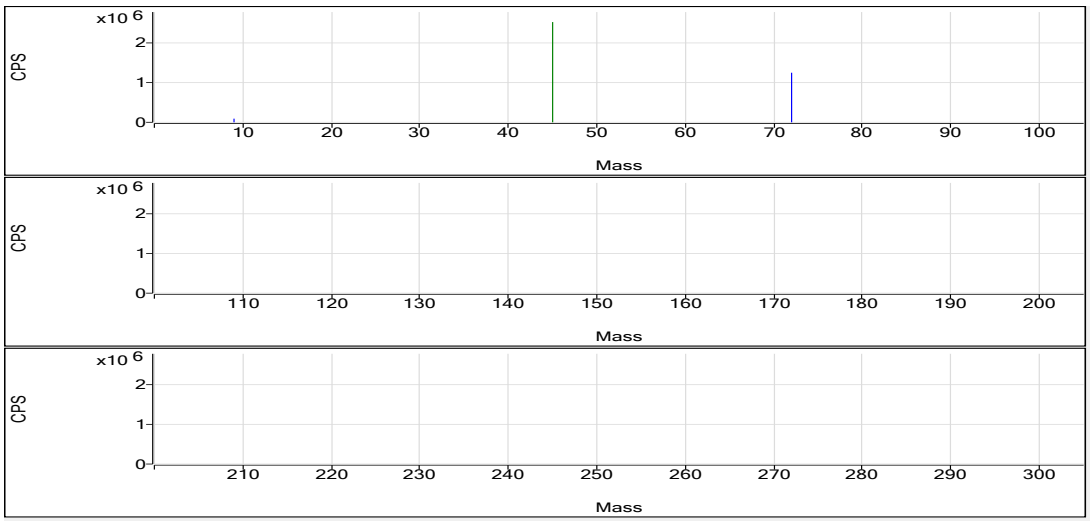
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	47.467	ppb	1.5	91051.98	0.0362	Pulse	0.5000	3
Se	78	72	H2	103.091	ppb	1.3	6975.71	0.0430	Pulse	1.5000	3
Na	23	45	He	302471.286	ppb	1.4	52369019.22	1 082.2998	Analog	0.1000	3
Mg	24	45	He	11179.577	ppb	1.4	970799.13	20.0633	Pulse	0.1000	3
Al	27	45	He	5309.550	ppb	1.2	150337.09	3.1069	Pulse	0.1000	3
K	39	45	He	10816.965	ppb	0.8	628547.76	12.9895	Pulse	0.1000	3
Ca	44	45	He	75945.178	ppb	0.6	248390.77	5.1330	Pulse	0.1000	3
Ti	47	45	He	521.969	ppb	4.1	13566.78	0.2803	Pulse	0.1000	3
V	51	45	He	516.448	ppb	0.8	547470.16	11.3140	Pulse	0.5000	3
Cr	52	45	He	479.966	ppb	1.7	697260.69	14.4105	Pulse	0.1000	3
Mn	55	45	He	534.742	ppb	0.3	332222.06	6.8654	Pulse	0.1000	3
Fe	57	45	He	5449.856	ppb	2.0	153269.84	3.1677	Pulse	0.1000	3
Co	59	45	He	480.002	ppb	1.0	1307338.81	27.0178	Pulse	0.1000	3
Ni	60	72	He	493.696	ppb	2.4	363394.00	4.2403	Pulse	0.1000	3
Cu	63	72	He	478.379	ppb	2.2	1052860.64	12.2853	Pulse	0.1000	3
Zn	66	72	He	514.302	ppb	2.4	128659.16	1.5013	Pulse	0.1000	3
As	75	72	He	517.336	ppb	2.4	90907.53	1.0608	Pulse	0.5000	3
Sr	88	115	He	802.023	ppb	1.2	612112.71	7.1950	Pulse	0.1000	3
Mo	98	115	He	52.733	ppb	2.3	98376.48	1.1565	Pulse	0.1000	3
Ag	107	115	He	53.175	ppb	3.2	210298.61	2.4726	Pulse	0.1000	3
Cd	111	115	He	51.806	ppb	1.9	23563.85	0.2770	Pulse	0.5000	3
Sn	120	115	He	104.266	ppb	2.3	141524.03	1.6637	Pulse	0.1000	3
Sb	121	115	He	103.813	ppb	2.0	131194.38	1.5422	Pulse	0.1000	3
Ba	137	115	He	594.027	ppb	2.3	242530.96	2.8512	Pulse	0.1000	3
Tl	205	159	He	101.459	ppb	0.5	994362.64	2.5089	Pulse	0.1000	3
Pb	208	159	He	51.316	ppb	0.6	666105.44	1.6806	Pulse	0.1000	3
U	238	209	He	52.708	ppb	0.9	773409.34	2.5965	Pulse	0.1000	3

ISTD Table:

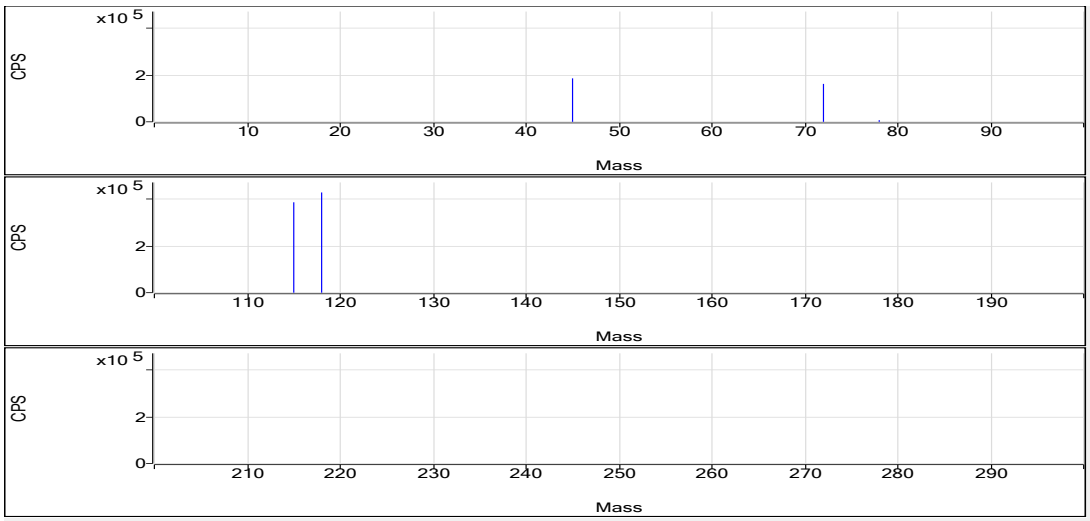
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2514969.34	2.2	104.8	Analog	0.1000	3
No Gas	Ge	72	1244055.42	0.9	107.9	Pulse	0.1000	3
H2	Sc	45	185888.36	0.5	99.4	Pulse	0.1000	3
H2	Ge	72	162198.84	0.3	99.1	Pulse	0.1000	3
H2	In	115	386630.87	0.3	99.4	Pulse	0.1000	3
He	Sc	45	48391.53	1.1	103.8	Pulse	0.1000	3
He	Ge	72	85730.48	2.3	105.6	Pulse	0.1000	3
He	In	115	85088.06	1.9	98.7	Pulse	0.1000	3
He	Tb	159	396346.85	0.4	99.4	Pulse	0.1000	3
He	Bi	209	297877.46	0.6	96.3	Pulse	0.1000	3

No Gas

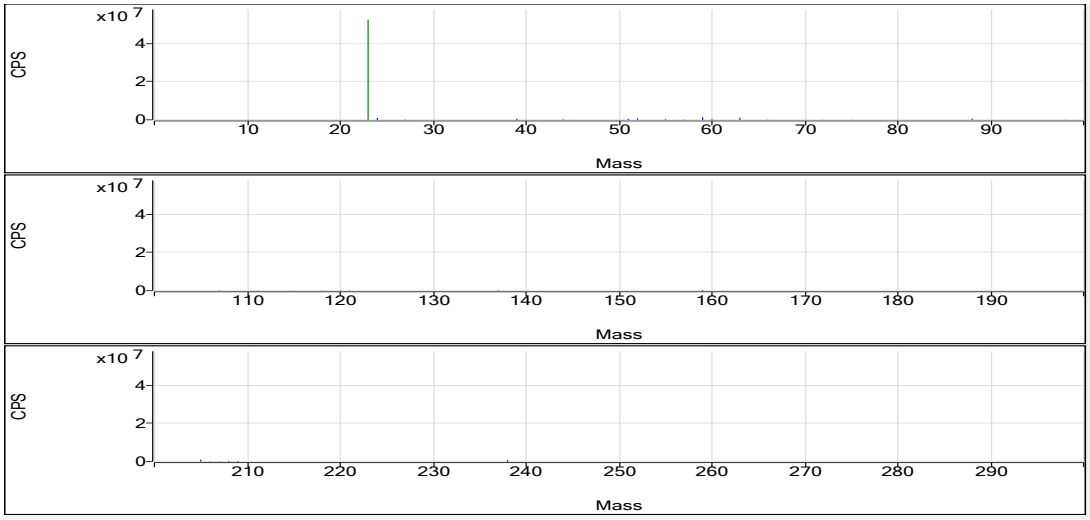


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	48.26	0.0368	90249.83	0.0008	4.685E-06
Be	9	1	No Gas	47.159	0.036	91491.33	0.0008	4.685E-06
Be	9	1	No Gas	46.981	0.0358	91414.79	0.0008	4.685E-06
Se	78	2	H2	102.113	0.0426	6915.01	0.0004	1.219E-05
Se	78	2	H2	104.637	0.0437	7057.08	0.0004	1.219E-05
Se	78	2	H2	102.524	0.0428	6955.03	0.0004	1.219E-05
Na	23	3	He	298192.278	1066.9935	52168654.22	0.0036	0.3452
Na	23	3	He	302873.777	1083.7395	52508804.22	0.0036	0.3452
Na	23	3	He	306347.802	1096.1663	52429599.22	0.0036	0.3452
Mg	24	3	He	11012.834	19.7641	966327.09	0.0018	0.003497
Mg	24	3	He	11215.614	20.1279	975227.88	0.0018	0.003497
Mg	24	3	He	11310.282	20.2978	970842.41	0.0018	0.003497
Al	27	3	He	5278.089	3.0885	151006.87	0.0006	0.0006432
Al	27	3	He	5270.301	3.084	149422.13	0.0006	0.0006432
Al	27	3	He	5380.26	3.1483	150582.27	0.0006	0.0006432
K	39	3	He	10726.043	12.8837	629923.66	0.0012	0.3951
K	39	3	He	10821.83	12.9952	629637.49	0.0012	0.3951
K	39	3	He	10903.022	13.0897	626082.14	0.0012	0.3951
Ca	44	3	He	75623.233	5.1112	249902.98	0.0001	0.002715
Ca	44	3	He	76434.312	5.166	250300.37	0.0001	0.002715
Ca	44	3	He	75777.988	5.1217	244968.96	0.0001	0.002715
Ti	47	3	He	510.917	0.2744	13416.60	0.0005	7.003E-05
Ti	47	3	He	546.743	0.2936	14227.44	0.0005	7.003E-05
Ti	47	3	He	508.248	0.273	13056.31	0.0005	7.003E-05
V	51	3	He	512.459	11.2268	548913.56	0.0219	0.02486
V	51	3	He	516.307	11.3109	548030.13	0.0219	0.02486
V	51	3	He	520.579	11.4043	545466.81	0.0219	0.02486
Cr	52	3	He	471.923	14.1697	692799.91	0.0299	0.03997
Cr	52	3	He	479.953	14.4101	698192.10	0.0299	0.03997
Cr	52	3	He	488.022	14.6517	700790.07	0.0299	0.03997
Mn	55	3	He	532.727	6.8396	334409.21	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	535.378	6.8736	333036.87	0.0128	0.002639
Mn	55	3	He	536.12	6.8831	329220.11	0.0128	0.002639
Fe	57	3	He	5347.095	3.108	151961.89	0.0006	0.001429
Fe	57	3	He	5441.119	3.1627	153236.05	0.0006	0.001429
Fe	57	3	He	5561.355	3.2325	154611.57	0.0006	0.001429
Co	59	3	He	475.091	26.7414	1307470.06	0.0563	0.002149
Co	59	3	He	480.406	27.0405	1310152.40	0.0563	0.002149
Co	59	3	He	484.51	27.2715	1304393.96	0.0563	0.002149
Ni	60	3	He	484.852	4.1644	360770.97	0.0086	0.002834
Ni	60	3	He	507.259	4.3567	363670.62	0.0086	0.002834
Ni	60	3	He	488.976	4.1998	365740.42	0.0086	0.002834
Cu	63	3	He	474.22	12.1785	1055052.25	0.0257	0.004757
Cu	63	3	He	490.555	12.5978	1051587.25	0.0257	0.004757
Cu	63	3	He	470.361	12.0794	1051942.41	0.0257	0.004757
Zn	66	3	He	505.604	1.4759	127864.45	0.0029	0.003818
Zn	66	3	He	528.277	1.542	128712.89	0.0029	0.003818
Zn	66	3	He	509.024	1.4859	129400.14	0.0029	0.003818
As	75	3	He	508.844	1.0434	90388.83	0.002	0.0008061
As	75	3	He	531.303	1.0894	90934.16	0.002	0.0008061
As	75	3	He	511.86	1.0495	91399.59	0.002	0.0008061
Sr	88	3	He	812.736	7.2911	606957.73	0.009	0.0009645
Sr	88	3	He	794.058	7.1235	614627.10	0.009	0.0009645
Sr	88	3	He	799.274	7.1703	614753.31	0.009	0.0009645
Mo	98	3	He	54.08	1.1861	98735.42	0.0219	0.0002706
Mo	98	3	He	51.725	1.1344	97879.27	0.0219	0.0002706
Mo	98	3	He	52.392	1.149	98514.76	0.0219	0.0002706
Ag	107	3	He	55.139	2.5639	213432.89	0.0465	0.0006206
Ag	107	3	He	51.926	2.4145	208325.60	0.0465	0.0006206
Ag	107	3	He	52.46	2.4393	209137.34	0.0465	0.0006206
Cd	111	3	He	52.948	0.2831	23567.83	0.0053	0
Cd	111	3	He	51.412	0.2749	23718.09	0.0053	0
Cd	111	3	He	51.057	0.273	23405.64	0.0053	0
Sn	120	3	He	106.967	1.7064	142053.07	0.0158	0.01648
Sn	120	3	He	102.538	1.6364	141193.58	0.0158	0.01648
Sn	120	3	He	103.294	1.6484	141325.45	0.0158	0.01648
Sb	121	3	He	106.061	1.5756	131167.43	0.0149	0.0002698
Sb	121	3	He	102.086	1.5166	130854.50	0.0149	0.0002698
Sb	121	3	He	103.291	1.5345	131561.20	0.0149	0.0002698
Ba	137	3	He	609.191	2.9239	243409.22	0.0048	0.0002317
Ba	137	3	He	583.733	2.8018	241739.82	0.0048	0.0002317
Ba	137	3	He	589.158	2.8278	242443.84	0.0048	0.0002317
Tl	205	3	He	101.571	2.5116	994444.05	0.0247	0.0001339
Tl	205	3	He	100.923	2.4956	993662.17	0.0247	0.0001339
Tl	205	3	He	101.884	2.5194	994981.70	0.0247	0.0001339
Pb	208	3	He	51.193	1.6766	354466.71	0.0327	0.00107
Pb	208	3	He	51.113	1.674	355710.50	0.0327	0.00107
Pb	208	3	He	51.643	1.6913	354260.78	0.0327	0.00107
U	238	3	He	52.212	2.572	770694.60	0.0493	7.55E-05
U	238	3	He	53.147	2.6181	776011.86	0.0493	7.55E-05
U	238	3	He	52.767	2.5994	773521.55	0.0493	7.55E-05
Sc	45	1	No Gas			2451317.31		
Sc	45	1	No Gas			2543041.06		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2550549.65		
Ge	72	1	No Gas			1231709.04		
Ge	72	1	No Gas			1247139.04		
Ge	72	1	No Gas			1253318.18		
Sc	45	2	H2			186006.74		
Sc	45	2	H2			186694.20		
Sc	45	2	H2			184964.14		
Ge	72	2	H2			162324.10		
Ge	72	2	H2			161664.22		
Ge	72	2	H2			162608.20		
In	115	2	H2			385379.92		
In	115	2	H2			387937.53		
In	115	2	H2			386575.15		
Sc	45	3	He			48893.13		
Sc	45	3	He			48451.50		
Sc	45	3	He			47829.97		
Ge	72	3	He			86632.33		
Ge	72	3	He			83473.69		
Ge	72	3	He			87085.43		
In	115	3	He			84003.76		
In	115	3	He			87042.98		
In	115	3	He			86499.30		
Tb	159	3	He			395939.02		
Tb	159	3	He			398165.78		
Tb	159	3	He			394935.74		
Bi	209	3	He			299646.13		
Bi	209	3	He			296405.56		
Bi	209	3	He			297580.68		

Quantitation Report

Data File Name	194SMPL.d
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Acq Time	8/10/2023 5:17:52 PM
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Sample Type	Sample
Comment	T20
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

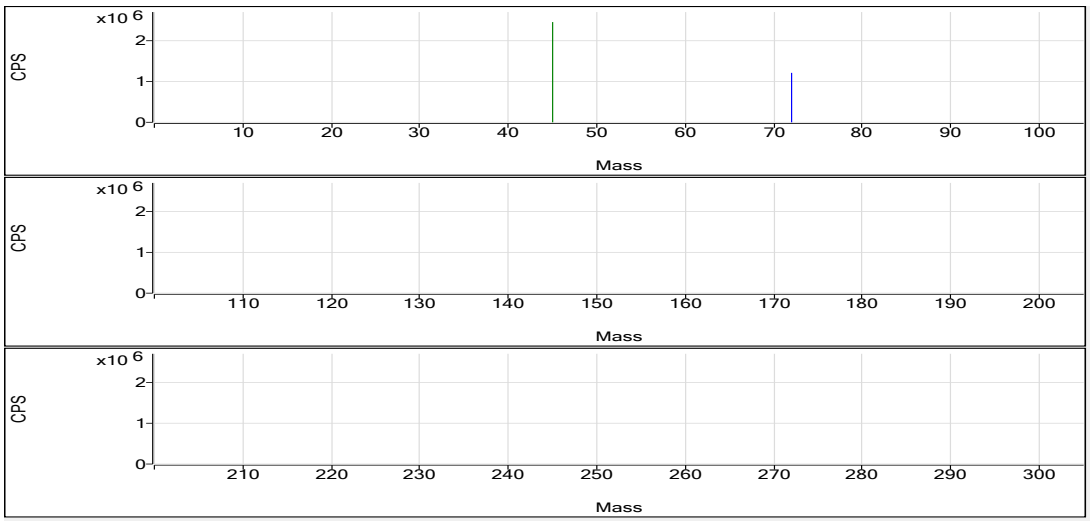
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.029	ppb	6.6	66.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.159	ppb	36.0	12.45	0.0001	Pulse	1.5000	3
Na	23	45	He	60050.086	ppb	1.3	10400070.88	215.1473	Analog	0.1000	3
Mg	24	45	He	1258.316	ppb	0.3	109323.23	2.2613	Pulse	0.1000	3
Al	27	45	He	71.586	ppb	24.6	2053.63	0.0425	Pulse	0.1000	3
K	39	45	He	1183.368	ppb	2.2	85697.51	1.7729	Pulse	0.1000	3
Ca	44	45	He	14324.961	ppb	2.5	46903.35	0.9704	Pulse	0.1000	3
Ti	47	45	He	1.156	ppb	20.7	33.33	0.0007	Pulse	0.1000	3
V	51	45	He	0.758	ppb	9.5	2002.82	0.0414	Pulse	0.5000	3
Cr	52	45	He	0.058	ppb	54.4	2016.88	0.0417	Pulse	0.1000	3
Mn	55	45	He	8.660	ppb	3.0	5501.24	0.1138	Pulse	0.1000	3
Fe	57	45	He	113.041	ppb	5.8	3243.83	0.0671	Pulse	0.1000	3
Co	59	45	He	0.204	ppb	7.4	660.04	0.0137	Pulse	0.1000	3
Ni	60	72	He	0.306	ppb	44.3	453.36	0.0055	Pulse	0.1000	3
Cu	63	72	He	0.716	ppb	9.0	1920.19	0.0231	Pulse	0.1000	3
Zn	66	72	He	3.553	ppb	6.4	1176.75	0.0142	Pulse	0.1000	3
As	75	72	He	0.414	ppb	39.2	137.33	0.0017	Pulse	0.5000	3
Sr	88	115	He	145.102	ppb	1.6	114719.09	1.3025	Pulse	0.1000	3
Mo	98	115	He	0.134	ppb	9.7	283.35	0.0032	Pulse	0.1000	3
Ag	107	115	He	0.009	ppb	83.4	90.00	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.031	ppb	40.3	14.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.002	ppb	N/A	1446.79	0.0164	Pulse	0.1000	3
Sb	121	115	He	0.247	ppb	14.1	346.68	0.0039	Pulse	0.1000	3
Ba	137	115	He	12.846	ppb	0.5	5451.27	0.0619	Pulse	0.1000	3
Tl	205	159	He	0.171	ppb	8.8	1746.84	0.0044	Pulse	0.1000	3
Pb	208	159	He	0.128	ppb	2.1	2100.15	0.0053	Pulse	0.1000	3
U	238	209	He	0.105	ppb	8.4	1633.49	0.0052	Pulse	0.1000	3

ISTD Table:

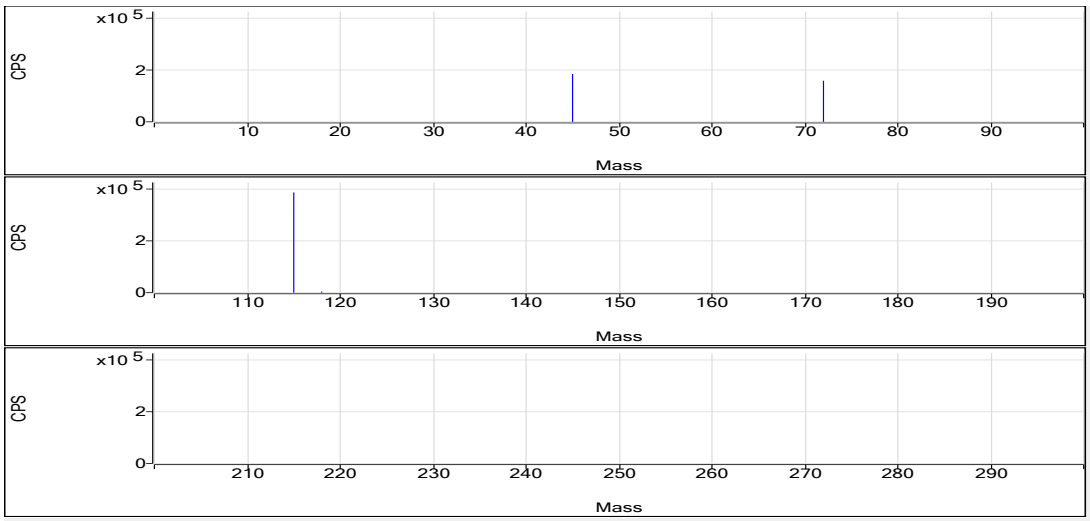
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2455026.21	1.4	102.3	Analog	0.1000	3
No Gas	Ge	72	1211202.67	0.4	105.0	Pulse	0.1000	3
H2	Sc	45	185466.65	0.5	99.2	Pulse	0.1000	3
H2	Ge	72	159100.34	1.0	97.2	Pulse	0.1000	3
H2	In	115	388274.47	1.2	99.8	Pulse	0.1000	3
He	Sc	45	48344.32	1.2	103.6	Pulse	0.1000	3
He	Ge	72	83061.30	1.1	102.3	Pulse	0.1000	3
He	In	115	88091.64	1.7	102.2	Pulse	0.1000	3
He	Tb	159	399833.13	0.1	100.3	Pulse	0.1000	3
He	Bi	209	311681.51	0.3	100.8	Pulse	0.1000	3

No Gas

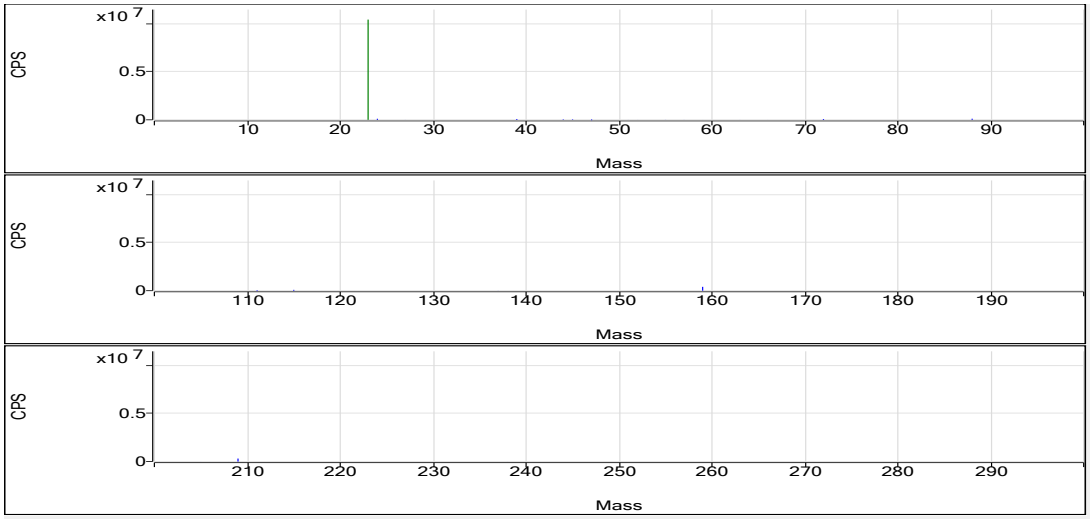


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.031	0	70.00	0.0008	4.685E-06
Be	9	1	No Gas	0.027	0	62.00	0.0008	4.685E-06
Be	9	1	No Gas	0.03	0	66.00	0.0008	4.685E-06
Se	78	2	H2	0.1	0.0001	8.67	0.0004	1.219E-05
Se	78	2	H2	0.161	0.0001	12.67	0.0004	1.219E-05
Se	78	2	H2	0.215	0.0001	16.00	0.0004	1.219E-05
Na	23	3	He	60905.162	218.2059	10408221.09	0.0036	0.3452
Na	23	3	He	59791.356	214.2218	10377146.72	0.0036	0.3452
Na	23	3	He	59453.738	213.0141	10414844.84	0.0036	0.3452
Mg	24	3	He	1254.778	2.255	107560.12	0.0018	0.003497
Mg	24	3	He	1263.105	2.2699	109957.22	0.0018	0.003497
Mg	24	3	He	1257.064	2.2591	110452.36	0.0018	0.003497
Al	27	3	He	87.785	0.052	2480.37	0.0006	0.0006432
Al	27	3	He	52.893	0.0316	1530.12	0.0006	0.0006432
Al	27	3	He	74.079	0.044	2150.41	0.0006	0.0006432
K	39	3	He	1207.804	1.8013	85922.51	0.0012	0.3951
K	39	3	He	1186.049	1.776	86032.20	0.0012	0.3951
K	39	3	He	1156.249	1.7413	85137.83	0.0012	0.3951
Ca	44	3	He	14735.291	0.9981	47609.02	0.0001	0.002715
Ca	44	3	He	14190.092	0.9613	46565.63	0.0001	0.002715
Ca	44	3	He	14049.501	0.9518	46535.41	0.0001	0.002715
Ti	47	3	He	1.431	0.0008	40.00	0.0005	7.003E-05
Ti	47	3	He	1.023	0.0006	30.00	0.0005	7.003E-05
Ti	47	3	He	1.012	0.0006	30.00	0.0005	7.003E-05
V	51	3	He	0.817	0.0427	2038.15	0.0219	0.02486
V	51	3	He	0.78	0.0419	2030.16	0.0219	0.02486
V	51	3	He	0.678	0.0397	1940.14	0.0219	0.02486
Cr	52	3	He	0.023	0.0407	1940.20	0.0299	0.03997
Cr	52	3	He	0.085	0.0425	2060.22	0.0299	0.03997
Cr	52	3	He	0.065	0.0419	2050.22	0.0299	0.03997
Mn	55	3	He	8.65	0.1137	5421.15	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	8.402	0.1105	5351.23	0.0128	0.002639
Mn	55	3	He	8.928	0.1172	5731.33	0.0128	0.002639
Fe	57	3	He	111.584	0.0663	3160.46	0.0006	0.001429
Fe	57	3	He	120.145	0.0712	3450.56	0.0006	0.001429
Fe	57	3	He	107.392	0.0638	3120.46	0.0006	0.001429
Co	59	3	He	0.211	0.014	670.04	0.0563	0.002149
Co	59	3	He	0.215	0.0142	690.05	0.0563	0.002149
Co	59	3	He	0.187	0.0127	620.04	0.0563	0.002149
Ni	60	3	He	0.462	0.0068	560.03	0.0086	0.002834
Ni	60	3	He	0.248	0.005	410.02	0.0086	0.002834
Ni	60	3	He	0.21	0.0046	390.02	0.0086	0.002834
Cu	63	3	He	0.77	0.0245	2020.20	0.0257	0.004757
Cu	63	3	He	0.733	0.0236	1950.20	0.0257	0.004757
Cu	63	3	He	0.644	0.0213	1790.17	0.0257	0.004757
Zn	66	3	He	3.524	0.0141	1160.08	0.0029	0.003818
Zn	66	3	He	3.341	0.0135	1120.08	0.0029	0.003818
Zn	66	3	He	3.795	0.0149	1250.10	0.0029	0.003818
As	75	3	He	0.602	0.002	168.00	0.002	0.0008061
As	75	3	He	0.315	0.0015	120.00	0.002	0.0008061
As	75	3	He	0.326	0.0015	124.00	0.002	0.0008061
Sr	88	3	He	144.767	1.2995	114763.33	0.009	0.0009645
Sr	88	3	He	142.989	1.2835	114812.65	0.009	0.0009645
Sr	88	3	He	147.55	1.3245	114581.28	0.009	0.0009645
Mo	98	3	He	0.137	0.0033	290.02	0.0219	0.0002706
Mo	98	3	He	0.12	0.0029	260.01	0.0219	0.0002706
Mo	98	3	He	0.146	0.0035	300.01	0.0219	0.0002706
Ag	107	3	He	0.016	0.0014	120.00	0.0465	0.0006206
Ag	107	3	He	0.008	0.001	90.00	0.0465	0.0006206
Ag	107	3	He	0.002	0.0007	60.00	0.0465	0.0006206
Cd	111	3	He	0.038	0.0002	18.00	0.0053	0
Cd	111	3	He	0.017	0.0001	8.00	0.0053	0
Cd	111	3	He	0.039	0.0002	18.00	0.0053	0
Sn	120	3	He	-0.068	0.0154	1360.11	0.0158	0.01648
Sn	120	3	He	-0.102	0.0149	1330.11	0.0158	0.01648
Sn	120	3	He	0.164	0.0191	1650.16	0.0158	0.01648
Sb	121	3	He	0.287	0.0045	400.02	0.0149	0.0002698
Sb	121	3	He	0.223	0.0036	320.01	0.0149	0.0002698
Sb	121	3	He	0.231	0.0037	320.01	0.0149	0.0002698
Ba	137	3	He	12.908	0.0622	5491.28	0.0048	0.0002317
Ba	137	3	He	12.79	0.0616	5511.29	0.0048	0.0002317
Ba	137	3	He	12.84	0.0619	5351.23	0.0048	0.0002317
Tl	205	3	He	0.168	0.0043	1710.17	0.0247	0.0001339
Tl	205	3	He	0.158	0.0041	1620.16	0.0247	0.0001339
Tl	205	3	He	0.188	0.0048	1910.20	0.0247	0.0001339
Pb	208	3	He	0.125	0.0052	1080.10	0.0327	0.00107
Pb	208	3	He	0.13	0.0053	1120.09	0.0327	0.00107
Pb	208	3	He	0.129	0.0053	1050.08	0.0327	0.00107
U	238	3	He	0.098	0.0049	1520.14	0.0493	7.55E-05
U	238	3	He	0.115	0.0057	1790.18	0.0493	7.55E-05
U	238	3	He	0.102	0.0051	1590.16	0.0493	7.55E-05
Sc	45	1	No Gas			2489871.68		
Sc	45	1	No Gas			2453664.49		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2421542.46		
Ge	72	1	No Gas			1212407.33		
Ge	72	1	No Gas			1215200.69		
Ge	72	1	No Gas			1205999.98		
Sc	45	2	H2			185814.16		
Sc	45	2	H2			184458.38		
Sc	45	2	H2			186127.42		
Ge	72	2	H2			160422.33		
Ge	72	2	H2			159510.90		
Ge	72	2	H2			157367.79		
In	115	2	H2			384487.06		
In	115	2	H2			386966.99		
In	115	2	H2			393369.37		
Sc	45	3	He			47699.08		
Sc	45	3	He			48441.14		
Sc	45	3	He			48892.75		
Ge	72	3	He			82407.43		
Ge	72	3	He			82689.01		
Ge	72	3	He			84087.46		
In	115	3	He			88321.05		
In	115	3	He			89457.32		
In	115	3	He			86519.56		
Tb	159	3	He			399520.54		
Tb	159	3	He			400031.63		
Tb	159	3	He			399947.22		
Bi	209	3	He			311335.29		
Bi	209	3	He			312787.71		
Bi	209	3	He			310921.52		

Quantitation Report

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Acq Time	8/10/2023 5:19:57 PM
Sample Name	410-136722-T-2-A DU
Sample Type	Sample
Comment	T20
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

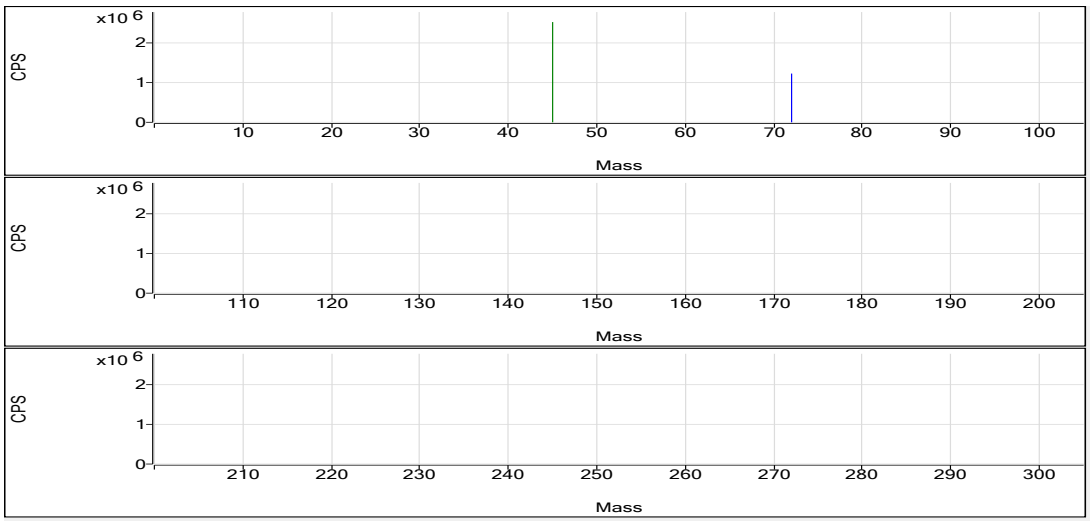
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.045	ppb	19.6	99.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.204	ppb	5.4	15.33	0.0001	Pulse	1.5000	3
Na	23	45	He	310095.368	ppb	2.0	53654552.53	1 109.5715	Analog	0.1000	3
Mg	24	45	He	6417.353	ppb	2.0	556960.85	11.5183	Pulse	0.1000	3
Al	27	45	He	386.312	ppb	3.2	10958.12	0.2266	Pulse	0.1000	3
K	39	45	He	6000.032	ppb	1.8	356923.12	7.3811	Pulse	0.1000	3
Ca	44	45	He	74997.028	ppb	1.5	245124.67	5.0689	Pulse	0.1000	3
Ti	47	45	He	9.560	ppb	72.3	250.08	0.0052	Pulse	0.1000	3
V	51	45	He	2.119	ppb	5.2	3441.76	0.0712	Pulse	0.5000	3
Cr	52	45	He	0.558	ppb	35.0	2737.02	0.0567	Pulse	0.1000	3
Mn	55	45	He	41.234	ppb	3.2	25713.64	0.5318	Pulse	0.1000	3
Fe	57	45	He	570.177	ppb	1.5	16089.42	0.3327	Pulse	0.1000	3
Co	59	45	He	0.565	ppb	2.8	1643.49	0.0340	Pulse	0.1000	3
Ni	60	72	He	1.400	ppb	7.9	1273.44	0.0149	Pulse	0.1000	3
Cu	63	72	He	3.105	ppb	5.3	7238.73	0.0845	Pulse	0.1000	3
Zn	66	72	He	5.743	ppb	9.1	1760.17	0.0205	Pulse	0.1000	3
As	75	72	He	1.327	ppb	9.2	302.01	0.0035	Pulse	0.5000	3
Sr	88	115	He	767.225	ppb	0.4	593106.93	6.8828	Pulse	0.1000	3
Mo	98	115	He	0.353	ppb	6.2	690.05	0.0080	Pulse	0.1000	3
Ag	107	115	He	0.009	ppb	26.6	90.00	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.107	ppb	18.7	49.33	0.0006	Pulse	0.5000	3
Sn	120	115	He	-0.012	ppb	N/A	1403.45	0.0163	Pulse	0.1000	3
Sb	121	115	He	0.253	ppb	13.1	346.68	0.0040	Pulse	0.1000	3
Ba	137	115	He	66.760	ppb	1.0	27628.44	0.3206	Pulse	0.1000	3
Tl	205	159	He	0.057	ppb	10.5	620.04	0.0016	Pulse	0.1000	3
Pb	208	159	He	0.572	ppb	2.7	7884.57	0.0198	Pulse	0.1000	3
U	238	209	He	0.281	ppb	5.0	4254.23	0.0139	Pulse	0.1000	3

ISTD Table:

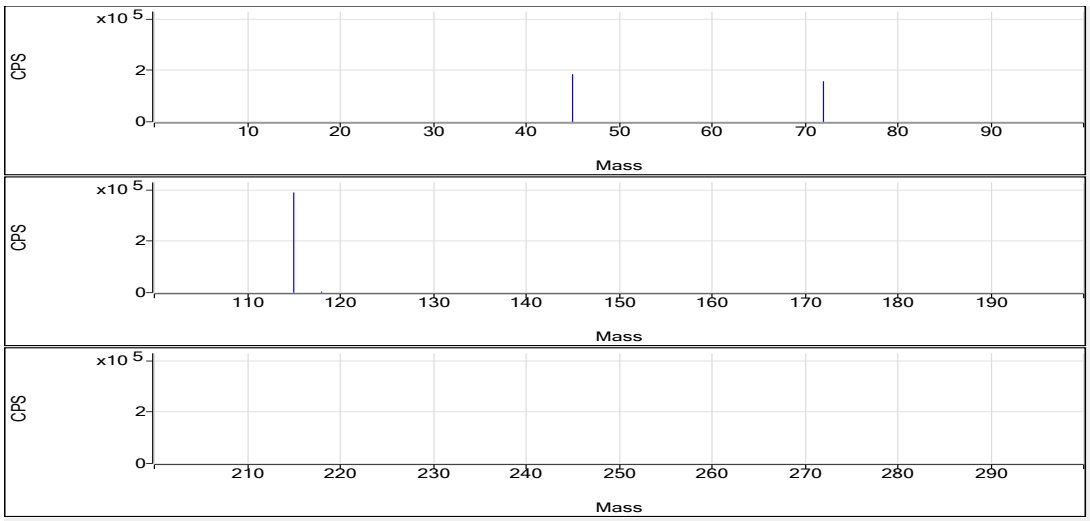
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2541571.32	0.2	106.0	Analog	0.1000	3
No Gas	Ge	72	1235383.60	0.5	107.1	Pulse	0.1000	3
H2	Sc	45	185014.48	1.1	98.9	Pulse	0.1000	3
H2	Ge	72	157540.29	1.2	96.2	Pulse	0.1000	3
H2	In	115	389469.75	0.6	100.1	Pulse	0.1000	3
He	Sc	45	48367.84	2.0	103.7	Pulse	0.1000	3
He	Ge	72	85763.76	1.9	105.6	Pulse	0.1000	3
He	In	115	86172.23	0.7	100.0	Pulse	0.1000	3
He	Tb	159	398474.42	0.6	100.0	Pulse	0.1000	3
He	Bi	209	305996.76	0.7	98.9	Pulse	0.1000	3

No Gas

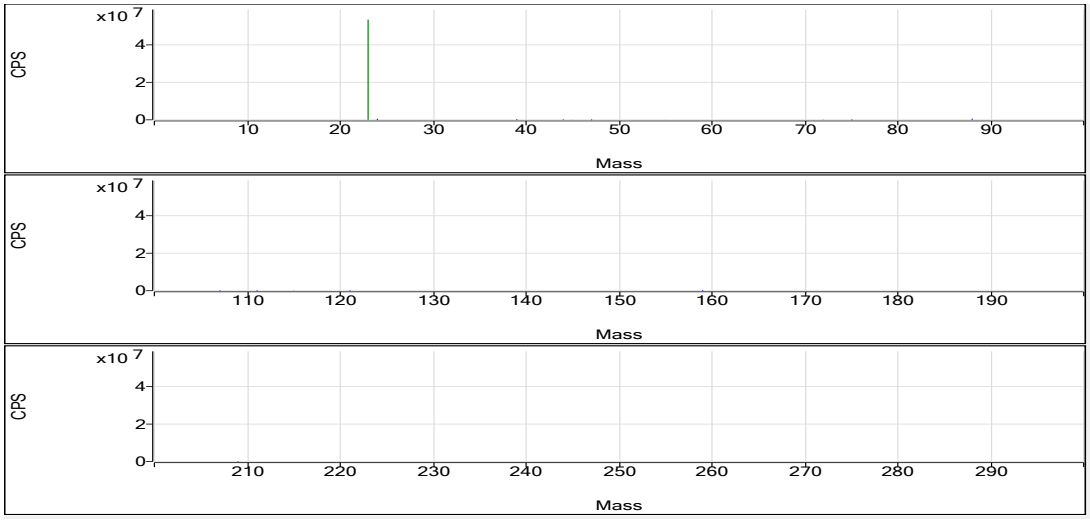


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.055	0	118.00	0.0008	4.685E-06
Be	9	1	No Gas	0.037	0	84.00	0.0008	4.685E-06
Be	9	1	No Gas	0.043	0	96.00	0.0008	4.685E-06
Se	78	2	H2	0.195	0.0001	14.67	0.0004	1.219E-05
Se	78	2	H2	0.201	0.0001	15.33	0.0004	1.219E-05
Se	78	2	H2	0.216	0.0001	16.00	0.0004	1.219E-05
Na	23	3	He	315015.348	1127.1705	54217374.19	0.0036	0.3452
Na	23	3	He	302989.038	1084.1518	53627449.20	0.0036	0.3452
Na	23	3	He	312281.716	1117.3922	53118834.21	0.0036	0.3452
Mg	24	3	He	6473.91	11.6198	558916.09	0.0018	0.003497
Mg	24	3	He	6267.056	11.2486	556411.44	0.0018	0.003497
Mg	24	3	He	6511.092	11.6865	555555.03	0.0018	0.003497
Al	27	3	He	383.56	0.225	10824.49	0.0006	0.0006432
Al	27	3	He	375.37	0.2202	10894.54	0.0006	0.0006432
Al	27	3	He	400.006	0.2347	11155.34	0.0006	0.0006432
K	39	3	He	6054.583	7.4446	358087.38	0.0012	0.3951
K	39	3	He	5873.101	7.2333	357793.12	0.0012	0.3951
K	39	3	He	6072.412	7.4653	354888.86	0.0012	0.3951
Ca	44	3	He	74757.504	5.0527	243038.28	0.0001	0.002715
Ca	44	3	He	73973.612	4.9998	247313.24	0.0001	0.002715
Ca	44	3	He	76259.969	5.1542	245022.50	0.0001	0.002715
Ti	47	3	He	4.903	0.0027	130.01	0.0005	7.003E-05
Ti	47	3	He	6.271	0.0034	170.01	0.0005	7.003E-05
Ti	47	3	He	17.508	0.0095	450.22	0.0005	7.003E-05
V	51	3	He	2.108	0.0709	3412.42	0.0219	0.02486
V	51	3	He	2.015	0.0689	3408.42	0.0219	0.02486
V	51	3	He	2.235	0.0737	3504.45	0.0219	0.02486
Cr	52	3	He	0.596	0.0578	2780.37	0.0299	0.03997
Cr	52	3	He	0.346	0.0503	2490.31	0.0299	0.03997
Cr	52	3	He	0.731	0.0619	2940.38	0.0299	0.03997
Mn	55	3	He	42.195	0.5442	26174.38	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	39.748	0.5128	25363.28	0.0128	0.002639
Mn	55	3	He	41.76	0.5386	25603.26	0.0128	0.002639
Fe	57	3	He	565.751	0.3301	15879.15	0.0006	0.001429
Fe	57	3	He	565.061	0.3297	16309.75	0.0006	0.001429
Fe	57	3	He	579.72	0.3382	16079.36	0.0006	0.001429
Co	59	3	He	0.553	0.0333	1600.16	0.0563	0.002149
Co	59	3	He	0.583	0.035	1730.17	0.0563	0.002149
Co	59	3	He	0.56	0.0337	1600.15	0.0563	0.002149
Ni	60	3	He	1.524	0.0159	1360.11	0.0086	0.002834
Ni	60	3	He	1.308	0.0141	1230.10	0.0086	0.002834
Ni	60	3	He	1.37	0.0146	1230.10	0.0086	0.002834
Cu	63	3	He	3.133	0.0852	7282.07	0.0257	0.004757
Cu	63	3	He	2.928	0.0799	6991.95	0.0257	0.004757
Cu	63	3	He	3.253	0.0883	7442.18	0.0257	0.004757
Zn	66	3	He	5.439	0.0197	1680.15	0.0029	0.003818
Zn	66	3	He	5.441	0.0197	1720.16	0.0029	0.003818
Zn	66	3	He	6.348	0.0223	1880.19	0.0029	0.003818
As	75	3	He	1.365	0.0036	308.01	0.002	0.0008061
As	75	3	He	1.191	0.0032	284.00	0.002	0.0008061
As	75	3	He	1.424	0.0037	314.01	0.002	0.0008061
Sr	88	3	He	769.722	6.9052	590979.37	0.009	0.0009645
Sr	88	3	He	763.38	6.8483	590259.72	0.009	0.0009645
Sr	88	3	He	768.574	6.8949	598081.71	0.009	0.0009645
Mo	98	3	He	0.334	0.0076	650.04	0.0219	0.0002706
Mo	98	3	He	0.348	0.0079	680.05	0.0219	0.0002706
Mo	98	3	He	0.377	0.0085	740.05	0.0219	0.0002706
Ag	107	3	He	0.007	0.0009	80.00	0.0465	0.0006206
Ag	107	3	He	0.012	0.0012	100.00	0.0465	0.0006206
Ag	107	3	He	0.009	0.001	90.00	0.0465	0.0006206
Cd	111	3	He	0.096	0.0005	44.00	0.0053	0
Cd	111	3	He	0.13	0.0007	60.00	0.0053	0
Cd	111	3	He	0.095	0.0005	44.00	0.0053	0
Sn	120	3	He	0.074	0.0176	1510.13	0.0158	0.01648
Sn	120	3	He	-0.088	0.0151	1300.11	0.0158	0.01648
Sn	120	3	He	-0.021	0.0161	1400.11	0.0158	0.01648
Sb	121	3	He	0.281	0.0044	380.02	0.0149	0.0002698
Sb	121	3	He	0.216	0.0035	300.01	0.0149	0.0002698
Sb	121	3	He	0.261	0.0042	360.02	0.0149	0.0002698
Ba	137	3	He	67.484	0.3241	27738.76	0.0048	0.0002317
Ba	137	3	He	66.694	0.3203	27608.46	0.0048	0.0002317
Ba	137	3	He	66.101	0.3175	27538.09	0.0048	0.0002317
Tl	205	3	He	0.053	0.0014	570.03	0.0247	0.0001339
Tl	205	3	He	0.055	0.0015	600.04	0.0247	0.0001339
Tl	205	3	He	0.064	0.0017	690.05	0.0247	0.0001339
Pb	208	3	He	0.59	0.0204	4290.87	0.0327	0.00107
Pb	208	3	He	0.565	0.0196	4230.85	0.0327	0.00107
Pb	208	3	He	0.561	0.0194	4060.75	0.0327	0.00107
U	238	3	He	0.267	0.0132	4020.77	0.0493	7.55E-05
U	238	3	He	0.295	0.0146	4491.04	0.0493	7.55E-05
U	238	3	He	0.279	0.0138	4250.88	0.0493	7.55E-05
Sc	45	1	No Gas			2544221.21		
Sc	45	1	No Gas			2534520.90		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2545971.84		
Ge	72	1	No Gas			1242248.97		
Ge	72	1	No Gas			1231512.48		
Ge	72	1	No Gas			1232389.36		
Sc	45	2	H2			184770.92		
Sc	45	2	H2			187099.84		
Sc	45	2	H2			183172.69		
Ge	72	2	H2			156922.53		
Ge	72	2	H2			159583.34		
Ge	72	2	H2			156114.99		
In	115	2	H2			387135.46		
In	115	2	H2			391956.56		
In	115	2	H2			389317.22		
Sc	45	3	He			48100.42		
Sc	45	3	He			49464.89		
Sc	45	3	He			47538.22		
Ge	72	3	He			85484.84		
Ge	72	3	He			87497.87		
Ge	72	3	He			84308.58		
In	115	3	He			85593.20		
In	115	3	He			86197.66		
In	115	3	He			86750.17		
Tb	159	3	He			395593.12		
Tb	159	3	He			399869.10		
Tb	159	3	He			399961.05		
Bi	209	3	He			303583.75		
Bi	209	3	He			307199.98		
Bi	209	3	He			307206.54		

Quantitation Report

Data File Name	196SMPL.d
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Sample Name	410-136722-R-2-A MS
Sample Type	Sample
Comment	T20
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

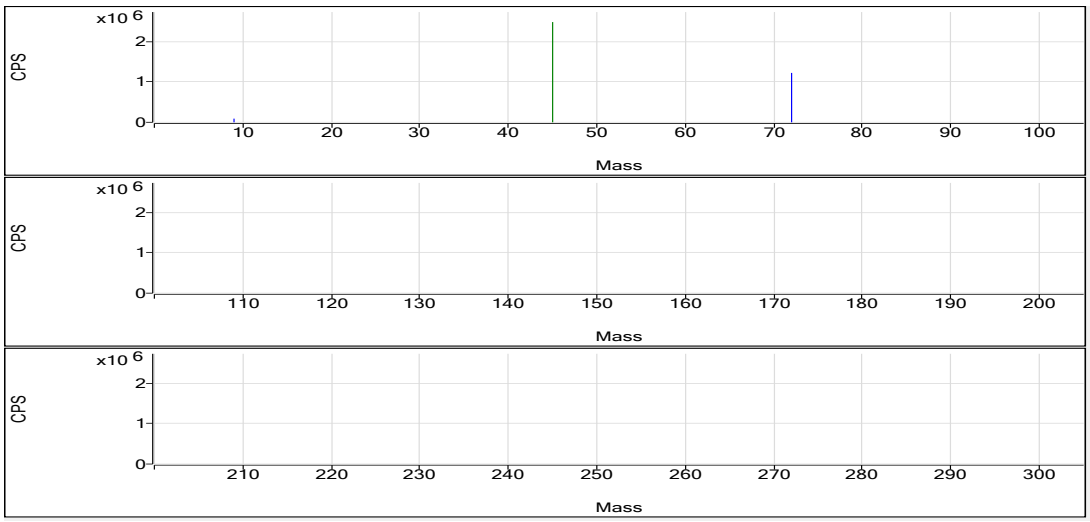
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	47.738	ppb	0.7	90474.36	0.0364	Pulse	0.5000	3
Se	78	72	H2	102.371	ppb	2.9	6945.25	0.0427	Pulse	1.5000	3
Na	23	45	He	313716.311	ppb	0.9	54460219.19	1 122.5238	Analog	0.1000	3
Mg	24	45	He	11382.410	ppb	0.5	991018.53	20.4272	Pulse	0.1000	3
Al	27	45	He	5659.620	ppb	0.9	160662.20	3.3117	Pulse	0.1000	3
K	39	45	He	10959.062	ppb	0.7	638199.25	13.1550	Pulse	0.1000	3
Ca	44	45	He	79193.141	ppb	0.7	259666.46	5.3524	Pulse	0.1000	3
Ti	47	45	He	529.644	ppb	0.8	13800.34	0.2845	Pulse	0.1000	3
V	51	45	He	514.532	ppb	0.1	546870.02	11.2721	Pulse	0.5000	3
Cr	52	45	He	477.750	ppb	0.3	695904.67	14.3442	Pulse	0.1000	3
Mn	55	45	He	534.169	ppb	0.9	332707.96	6.8581	Pulse	0.1000	3
Fe	57	45	He	5524.114	ppb	0.8	155772.54	3.2109	Pulse	0.1000	3
Co	59	45	He	479.060	ppb	0.9	1308148.39	26.9648	Pulse	0.1000	3
Ni	60	72	He	493.772	ppb	2.0	362000.83	4.2410	Pulse	0.1000	3
Cu	63	72	He	477.724	ppb	2.2	1047173.79	12.2684	Pulse	0.1000	3
Zn	66	72	He	511.364	ppb	2.1	127411.93	1.4927	Pulse	0.1000	3
As	75	72	He	519.259	ppb	2.0	90880.61	1.0647	Pulse	0.5000	3
Sr	88	115	He	812.151	ppb	1.4	631900.65	7.2858	Pulse	0.1000	3
Mo	98	115	He	51.447	ppb	2.8	97849.51	1.1283	Pulse	0.1000	3
Ag	107	115	He	49.351	ppb	2.2	199014.17	2.2948	Pulse	0.1000	3
Cd	111	115	He	50.902	ppb	1.1	23605.97	0.2722	Pulse	0.5000	3
Sn	120	115	He	102.723	ppb	2.4	142170.19	1.6394	Pulse	0.1000	3
Sb	121	115	He	104.925	ppb	0.9	135199.03	1.5588	Pulse	0.1000	3
Ba	137	115	He	586.649	ppb	0.4	244232.57	2.8158	Pulse	0.1000	3
Tl	205	159	He	102.017	ppb	1.2	999039.65	2.5226	Pulse	0.1000	3
Pb	208	159	He	51.279	ppb	1.4	665095.79	1.6794	Pulse	0.1000	3
U	238	209	He	52.235	ppb	0.6	772230.72	2.5732	Pulse	0.1000	3

ISTD Table:

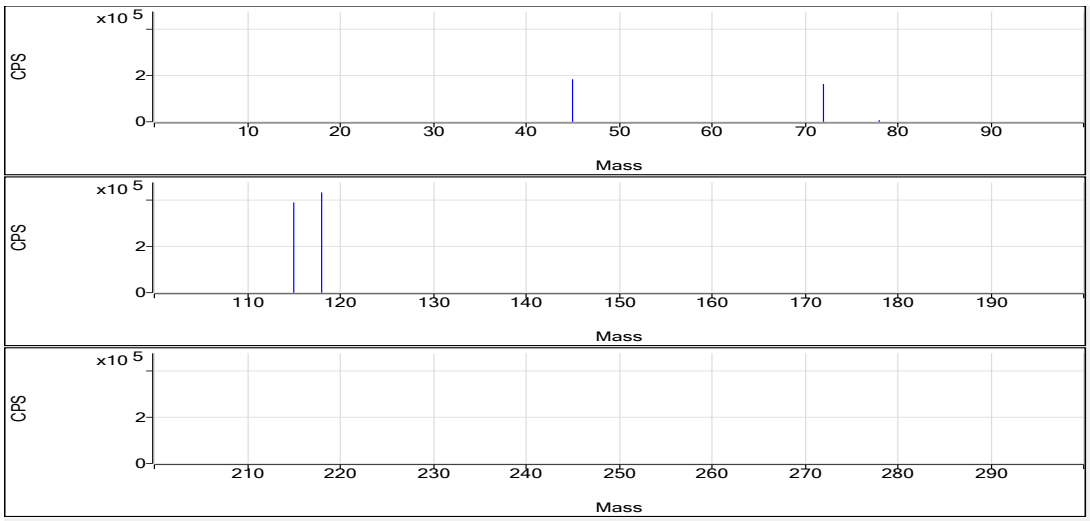
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2484373.14	0.6	103.6	Analog	0.1000	3
No Gas	Ge	72	1224352.12	0.7	106.2	Pulse	0.1000	3
H2	Sc	45	183250.76	0.7	98.0	Pulse	0.1000	3
H2	Ge	72	162647.57	1.0	99.3	Pulse	0.1000	3
H2	In	115	388277.56	0.3	99.8	Pulse	0.1000	3
He	Sc	45	48515.05	0.6	104.0	Pulse	0.1000	3
He	Ge	72	85381.50	2.1	105.2	Pulse	0.1000	3
He	In	115	86741.13	1.4	100.6	Pulse	0.1000	3
He	Tb	159	396054.27	0.8	99.4	Pulse	0.1000	3
He	Bi	209	300116.62	0.7	97.0	Pulse	0.1000	3

No Gas

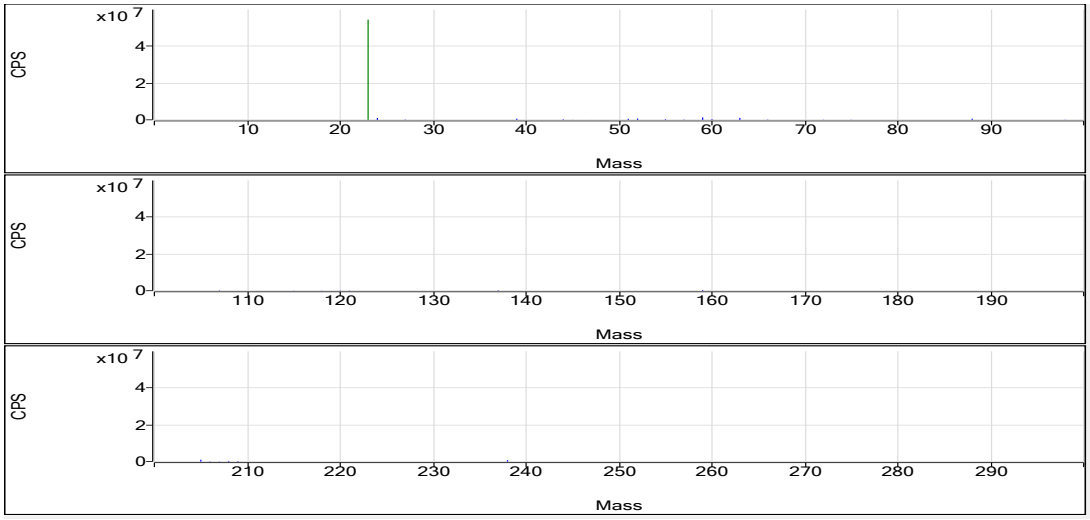


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	47.954	0.0366	90555.55	0.0008	4.685E-06
Be	9	1	No Gas	47.899	0.0365	90469.07	0.0008	4.685E-06
Be	9	1	No Gas	47.36	0.0361	90398.47	0.0008	4.685E-06
Se	78	2	H2	100.764	0.042	6913.01	0.0004	1.219E-05
Se	78	2	H2	105.846	0.0442	7115.11	0.0004	1.219E-05
Se	78	2	H2	100.502	0.0419	6807.63	0.0004	1.219E-05
Na	23	3	He	313834.16	1122.9453	54847659.18	0.0036	0.3452
Na	23	3	He	316406.978	1132.1484	54888729.18	0.0036	0.3452
Na	23	3	He	310907.794	1112.4776	53644269.20	0.0036	0.3452
Mg	24	3	He	11383.129	20.4285	997782.41	0.0018	0.003497
Mg	24	3	He	11327.996	20.3296	985616.55	0.0018	0.003497
Mg	24	3	He	11436.104	20.5235	989656.63	0.0018	0.003497
Al	27	3	He	5612.473	3.2841	160405.97	0.0006	0.0006432
Al	27	3	He	5654.967	3.309	160426.48	0.0006	0.0006432
Al	27	3	He	5711.421	3.342	161154.16	0.0006	0.0006432
K	39	3	He	10871.339	13.0529	637536.47	0.0012	0.3951
K	39	3	He	11010.96	13.2154	640708.94	0.0012	0.3951
K	39	3	He	10994.888	13.1967	636352.33	0.0012	0.3951
Ca	44	3	He	78702.687	5.3192	259805.52	0.0001	0.002715
Ca	44	3	He	79739.053	5.3892	261280.70	0.0001	0.002715
Ca	44	3	He	79137.682	5.3486	257913.16	0.0001	0.002715
Ti	47	3	He	527.858	0.2835	13847.04	0.0005	7.003E-05
Ti	47	3	He	526.789	0.2829	13716.93	0.0005	7.003E-05
Ti	47	3	He	534.284	0.287	13837.04	0.0005	7.003E-05
V	51	3	He	514.984	11.282	551042.88	0.0219	0.02486
V	51	3	He	514.941	11.281	546926.69	0.0219	0.02486
V	51	3	He	513.672	11.2533	542640.50	0.0219	0.02486
Cr	52	3	He	476.555	14.3084	698859.83	0.0299	0.03997
Cr	52	3	He	479.497	14.3965	697967.72	0.0299	0.03997
Cr	52	3	He	477.198	14.3276	690886.47	0.0299	0.03997
Mn	55	3	He	528.484	6.7851	331404.37	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	535.987	6.8814	333625.07	0.0128	0.002639
Mn	55	3	He	538.036	6.9077	333094.45	0.0128	0.002639
Fe	57	3	He	5506.867	3.2009	156338.97	0.0006	0.001429
Fe	57	3	He	5488.602	3.1903	154669.76	0.0006	0.001429
Fe	57	3	He	5576.874	3.2415	156308.88	0.0006	0.001429
Co	59	3	He	475.277	26.7518	1306630.45	0.0563	0.002149
Co	59	3	He	478.293	26.9216	1305209.75	0.0563	0.002149
Co	59	3	He	483.611	27.2209	1312604.98	0.0563	0.002149
Ni	60	3	He	483.021	4.1487	362829.53	0.0086	0.002834
Ni	60	3	He	501.732	4.3093	362788.04	0.0086	0.002834
Ni	60	3	He	496.564	4.2649	360384.92	0.0086	0.002834
Cu	63	3	He	465.44	11.9531	1045380.77	0.0257	0.004757
Cu	63	3	He	482.526	12.3917	1043230.38	0.0257	0.004757
Cu	63	3	He	485.205	12.4605	1052910.22	0.0257	0.004757
Zn	66	3	He	498.851	1.4563	127361.67	0.0029	0.003818
Zn	66	3	He	518.516	1.5135	127421.43	0.0029	0.003818
Zn	66	3	He	516.723	1.5083	127452.69	0.0029	0.003818
As	75	3	He	507.662	1.0409	91037.20	0.002	0.0008061
As	75	3	He	527.201	1.081	91004.59	0.002	0.0008061
As	75	3	He	522.915	1.0722	90600.03	0.002	0.0008061
Sr	88	3	He	801.677	7.1919	629858.70	0.009	0.0009645
Sr	88	3	He	824.489	7.3965	631673.58	0.009	0.0009645
Sr	88	3	He	810.285	7.2691	634169.68	0.009	0.0009645
Mo	98	3	He	50.953	1.1175	97868.90	0.0219	0.0002706
Mo	98	3	He	53.076	1.164	99410.72	0.0219	0.0002706
Mo	98	3	He	50.314	1.1035	96268.90	0.0219	0.0002706
Ag	107	3	He	48.838	2.271	198889.02	0.0465	0.0006206
Ag	107	3	He	50.615	2.3536	200998.34	0.0465	0.0006206
Ag	107	3	He	48.599	2.2599	197155.15	0.0465	0.0006206
Cd	111	3	He	50.603	0.2706	23696.16	0.0053	0
Cd	111	3	He	51.533	0.2755	23531.83	0.0053	0
Cd	111	3	He	50.571	0.2704	23589.93	0.0053	0
Sn	120	3	He	101.251	1.6161	141537.64	0.0158	0.01648
Sn	120	3	He	105.551	1.684	143820.43	0.0158	0.01648
Sn	120	3	He	101.367	1.6179	141152.51	0.0158	0.01648
Sb	121	3	He	103.925	1.5439	135215.29	0.0149	0.0002698
Sb	121	3	He	105.877	1.5729	134328.92	0.0149	0.0002698
Sb	121	3	He	104.973	1.5595	136052.89	0.0149	0.0002698
Ba	137	3	He	584.511	2.8055	245703.34	0.0048	0.0002317
Ba	137	3	He	589.4	2.829	241598.53	0.0048	0.0002317
Ba	137	3	He	586.036	2.8128	245395.84	0.0048	0.0002317
Tl	205	3	He	103.367	2.556	1002668.42	0.0247	0.0001339
Tl	205	3	He	101.672	2.5141	1000261.55	0.0247	0.0001339
Tl	205	3	He	101.012	2.4978	994188.97	0.0247	0.0001339
Pb	208	3	He	52.037	1.7042	357291.67	0.0327	0.00107
Pb	208	3	He	51.167	1.6757	355002.14	0.0327	0.00107
Pb	208	3	He	50.634	1.6583	347681.21	0.0327	0.00107
U	238	3	He	52.218	2.5723	774830.07	0.0493	7.55E-05
U	238	3	He	52.572	2.5897	771053.58	0.0493	7.55E-05
U	238	3	He	51.916	2.5575	770808.50	0.0493	7.55E-05
Sc	45	1	No Gas			2475308.40		
Sc	45	1	No Gas			2475788.24		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2502022.78		
Ge	72	1	No Gas			1215504.04		
Ge	72	1	No Gas			1233326.78		
Ge	72	1	No Gas			1224225.53		
Sc	45	2	H2			184597.67		
Sc	45	2	H2			183220.52		
Sc	45	2	H2			181934.08		
Ge	72	2	H2			164448.71		
Ge	72	2	H2			161131.22		
Ge	72	2	H2			162362.79		
In	115	2	H2			388100.74		
In	115	2	H2			389535.81		
In	115	2	H2			387196.13		
Sc	45	3	He			48842.68		
Sc	45	3	He			48481.92		
Sc	45	3	He			48220.54		
Ge	72	3	He			87456.82		
Ge	72	3	He			84187.79		
Ge	72	3	He			84499.90		
In	115	3	He			88340.49		
In	115	3	He			86156.20		
In	115	3	He			88007.98		
Tb	159	3	He			392278.28		
Tb	159	3	He			397859.29		
Tb	159	3	He			398025.23		
Bi	209	3	He			301219.80		
Bi	209	3	He			297733.35		
Bi	209	3	He			301396.71		

Quantitation Report

Data File Name	197SMPL.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	8/10/2023 5:24:07 PM
Sample Name	410-136722-S-2-A MSD
Sample Type	Sample
Comment	T20
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

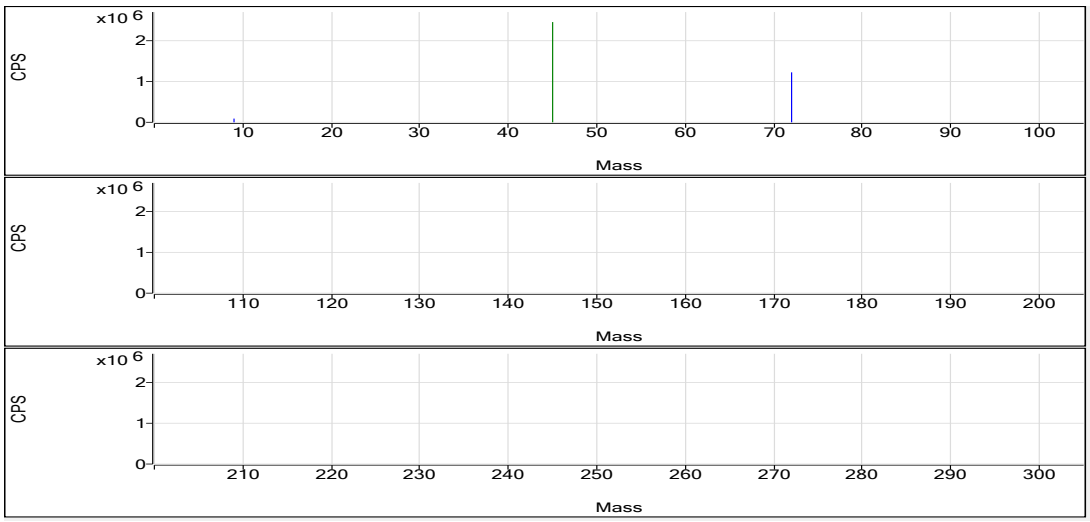
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	48.359	ppb	0.9	91164.01	0.0369	Pulse	0.5000	3
Se	78	72	H2	103.008	ppb	1.4	6914.35	0.0430	Pulse	1.5000	3
Na	23	45	He	319036.077	ppb	0.8	54909897.52	1 141.5528	Analog	0.1000	3
Mg	24	45	He	11484.746	ppb	0.7	991403.32	20.6108	Pulse	0.1000	3
Al	27	45	He	5664.775	ppb	0.5	159446.19	3.3147	Pulse	0.1000	3
K	39	45	He	11137.749	ppb	1.2	642757.95	13.3630	Pulse	0.1000	3
Ca	44	45	He	80130.144	ppb	1.3	260489.79	5.4157	Pulse	0.1000	3
Ti	47	45	He	545.691	ppb	4.2	14101.01	0.2931	Pulse	0.1000	3
V	51	45	He	517.835	ppb	1.5	545644.73	11.3443	Pulse	0.5000	3
Cr	52	45	He	485.029	ppb	1.3	700421.92	14.5621	Pulse	0.1000	3
Mn	55	45	He	538.005	ppb	1.9	332224.58	6.9073	Pulse	0.1000	3
Fe	57	45	He	5593.463	ppb	1.8	156376.31	3.2512	Pulse	0.1000	3
Co	59	45	He	479.371	ppb	1.1	1297839.91	26.9822	Pulse	0.1000	3
Ni	60	72	He	488.569	ppb	2.2	361560.19	4.1963	Pulse	0.1000	3
Cu	63	72	He	471.969	ppb	1.8	1044377.56	12.1207	Pulse	0.1000	3
Zn	66	72	He	503.850	ppb	2.2	126725.81	1.4708	Pulse	0.1000	3
As	75	72	He	517.678	ppb	1.1	91467.88	1.0615	Pulse	0.5000	3
Sr	88	115	He	826.645	ppb	1.6	636619.46	7.4158	Pulse	0.1000	3
Mo	98	115	He	52.312	ppb	2.4	98480.91	1.1473	Pulse	0.1000	3
Ag	107	115	He	49.383	ppb	1.4	197138.37	2.2963	Pulse	0.1000	3
Cd	111	115	He	51.561	ppb	1.8	23666.05	0.2757	Pulse	0.5000	3
Sn	120	115	He	103.957	ppb	1.9	142402.37	1.6589	Pulse	0.1000	3
Sb	121	115	He	105.005	ppb	1.7	133913.08	1.5600	Pulse	0.1000	3
Ba	137	115	He	591.923	ppb	1.2	243900.77	2.8411	Pulse	0.1000	3
Tl	205	159	He	101.805	ppb	0.3	997766.57	2.5174	Pulse	0.1000	3
Pb	208	159	He	51.168	ppb	0.8	664199.73	1.6758	Pulse	0.1000	3
U	238	209	He	52.142	ppb	0.5	776667.33	2.5686	Pulse	0.1000	3

ISTD Table:

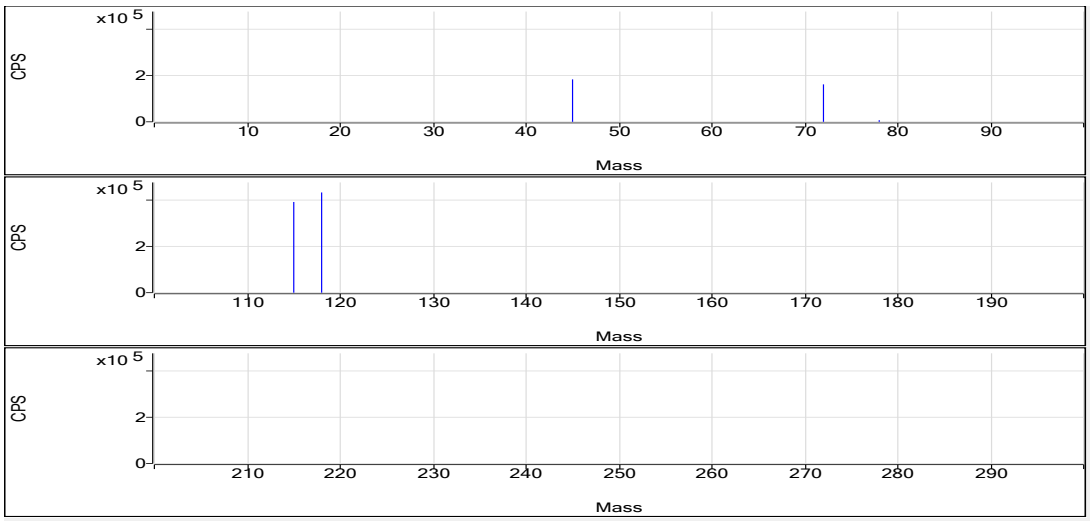
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2471033.30	0.5	103.0	Analog	0.1000	3
No Gas	Ge	72	1231345.24	1.0	106.8	Pulse	0.1000	3
H2	Sc	45	182357.24	1.5	97.5	Pulse	0.1000	3
H2	Ge	72	160913.73	1.2	98.3	Pulse	0.1000	3
H2	In	115	389762.46	0.8	100.2	Pulse	0.1000	3
He	Sc	45	48103.73	1.1	103.1	Pulse	0.1000	3
He	Ge	72	86182.99	1.9	106.1	Pulse	0.1000	3
He	In	115	85856.74	1.3	99.6	Pulse	0.1000	3
He	Tb	159	396349.82	0.2	99.4	Pulse	0.1000	3
He	Bi	209	302379.33	0.8	97.8	Pulse	0.1000	3

No Gas

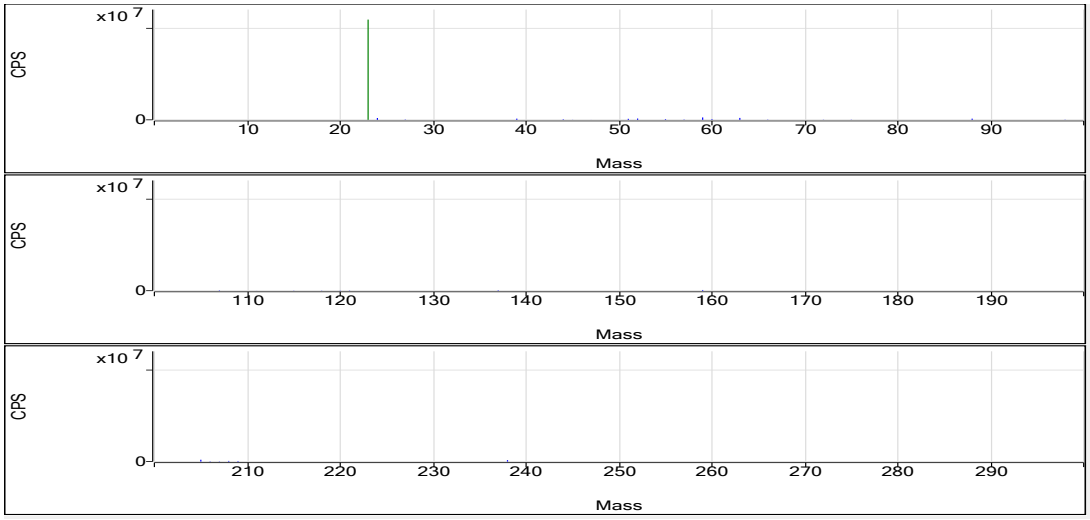


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	47.895	0.0365	89879.69	0.0008	4.685E-06
Be	9	1	No Gas	48.507	0.037	91915.75	0.0008	4.685E-06
Be	9	1	No Gas	48.677	0.0371	91696.59	0.0008	4.685E-06
Se	78	2	H2	103.598	0.0432	6949.03	0.0004	1.219E-05
Se	78	2	H2	101.388	0.0423	6887.67	0.0004	1.219E-05
Se	78	2	H2	104.039	0.0434	6906.34	0.0004	1.219E-05
Na	23	3	He	321558.425	1150.5754	55031584.18	0.0036	0.3452
Na	23	3	He	316229.45	1131.5134	55141284.18	0.0036	0.3452
Na	23	3	He	319320.356	1142.5697	54556824.19	0.0036	0.3452
Mg	24	3	He	11511.342	20.6586	988090.61	0.0018	0.003497
Mg	24	3	He	11390.081	20.441	996136.08	0.0018	0.003497
Mg	24	3	He	11552.816	20.733	989983.27	0.0018	0.003497
Al	27	3	He	5662.065	3.3131	158466.62	0.0006	0.0006432
Al	27	3	He	5639.698	3.3001	160819.76	0.0006	0.0006432
Al	27	3	He	5692.561	3.331	159052.19	0.0006	0.0006432
K	39	3	He	11213.148	13.4508	643348.23	0.0012	0.3951
K	39	3	He	10989.321	13.1902	642790.42	0.0012	0.3951
K	39	3	He	11210.778	13.4481	642135.19	0.0012	0.3951
Ca	44	3	He	80981.283	5.4732	261778.92	0.0001	0.002715
Ca	44	3	He	78995.305	5.339	260181.83	0.0001	0.002715
Ca	44	3	He	80413.844	5.4348	259508.63	0.0001	0.002715
Ti	47	3	He	519.941	0.2793	13356.51	0.0005	7.003E-05
Ti	47	3	He	563.911	0.3029	14759.16	0.0005	7.003E-05
Ti	47	3	He	553.222	0.2971	14187.35	0.0005	7.003E-05
V	51	3	He	524.078	11.4808	549121.63	0.0219	0.02486
V	51	3	He	509.108	11.1535	543538.38	0.0219	0.02486
V	51	3	He	520.318	11.3986	544274.19	0.0219	0.02486
Cr	52	3	He	486.655	14.6108	698827.26	0.0299	0.03997
Cr	52	3	He	477.912	14.349	699260.54	0.0299	0.03997
Cr	52	3	He	490.519	14.7265	703177.96	0.0299	0.03997
Mn	55	3	He	546.513	7.0165	335597.61	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	526.908	6.7649	329669.96	0.0128	0.002639
Mn	55	3	He	540.594	6.9406	331406.17	0.0128	0.002639
Fe	57	3	He	5695.506	3.3105	158338.30	0.0006	0.001429
Fe	57	3	He	5493.002	3.1928	155593.19	0.0006	0.001429
Fe	57	3	He	5591.882	3.2503	155197.45	0.0006	0.001429
Co	59	3	He	483.8	27.2315	1302474.36	0.0563	0.002149
Co	59	3	He	473.276	26.6392	1298190.61	0.0563	0.002149
Co	59	3	He	481.035	27.0759	1292854.75	0.0563	0.002149
Ni	60	3	He	498.381	4.2805	365705.07	0.0086	0.002834
Ni	60	3	He	490.427	4.2122	358351.21	0.0086	0.002834
Ni	60	3	He	476.9	4.0961	360624.29	0.0086	0.002834
Cu	63	3	He	478.726	12.2942	1050352.02	0.0257	0.004757
Cu	63	3	He	474.773	12.1927	1037278.11	0.0257	0.004757
Cu	63	3	He	462.409	11.8753	1045502.56	0.0257	0.004757
Zn	66	3	He	508.491	1.4843	126815.19	0.0029	0.003818
Zn	66	3	He	512.01	1.4946	127150.98	0.0029	0.003818
Zn	66	3	He	491.049	1.4336	126211.27	0.0029	0.003818
As	75	3	He	521.823	1.07	91411.38	0.002	0.0008061
As	75	3	He	519.93	1.0661	90695.07	0.002	0.0008061
As	75	3	He	511.281	1.0484	92297.20	0.002	0.0008061
Sr	88	3	He	828.143	7.4293	641180.19	0.009	0.0009645
Sr	88	3	He	813.108	7.2944	632442.22	0.009	0.0009645
Sr	88	3	He	838.684	7.5238	636235.97	0.009	0.0009645
Mo	98	3	He	51.967	1.1397	98362.71	0.0219	0.0002706
Mo	98	3	He	51.279	1.1246	97508.13	0.0219	0.0002706
Mo	98	3	He	53.689	1.1775	99571.90	0.0219	0.0002706
Ag	107	3	He	49.873	2.3191	200147.54	0.0465	0.0006206
Ag	107	3	He	48.61	2.2603	195977.69	0.0465	0.0006206
Ag	107	3	He	49.665	2.3094	195289.88	0.0465	0.0006206
Cd	111	3	He	51.259	0.2741	23654.02	0.0053	0
Cd	111	3	He	50.833	0.2718	23565.88	0.0053	0
Cd	111	3	He	52.589	0.2812	23778.26	0.0053	0
Sn	120	3	He	104.221	1.663	143527.14	0.0158	0.01648
Sn	120	3	He	101.843	1.6255	140930.74	0.0158	0.01648
Sn	120	3	He	105.807	1.6881	142749.24	0.0158	0.01648
Sb	121	3	He	104.334	1.55	133771.82	0.0149	0.0002698
Sb	121	3	He	103.706	1.5407	133579.55	0.0149	0.0002698
Sb	121	3	He	106.974	1.5892	134387.87	0.0149	0.0002698
Ba	137	3	He	587.414	2.8194	243329.92	0.0048	0.0002317
Ba	137	3	He	588.535	2.8248	244917.91	0.0048	0.0002317
Ba	137	3	He	599.821	2.879	243454.47	0.0048	0.0002317
Tl	205	3	He	102.018	2.5227	1001166.70	0.0247	0.0001339
Tl	205	3	He	101.952	2.521	997175.53	0.0247	0.0001339
Tl	205	3	He	101.444	2.5085	994957.49	0.0247	0.0001339
Pb	208	3	He	51.64	1.6912	355339.10	0.0327	0.00107
Pb	208	3	He	50.938	1.6683	350116.32	0.0327	0.00107
Pb	208	3	He	50.926	1.6679	351403.86	0.0327	0.00107
U	238	3	He	51.862	2.5548	779375.30	0.0493	7.55E-05
U	238	3	He	52.198	2.5714	774053.11	0.0493	7.55E-05
U	238	3	He	52.366	2.5796	776573.58	0.0493	7.55E-05
Sc	45	1	No Gas			2459902.31		
Sc	45	1	No Gas			2483880.43		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2469317.15		
Ge	72	1	No Gas			1219421.70		
Ge	72	1	No Gas			1243774.51		
Ge	72	1	No Gas			1230839.51		
Sc	45	2	H2			185418.01		
Sc	45	2	H2			181126.09		
Sc	45	2	H2			180527.63		
Ge	72	2	H2			160784.51		
Ge	72	2	H2			162836.58		
Ge	72	2	H2			159120.09		
In	115	2	H2			392400.31		
In	115	2	H2			386458.67		
In	115	2	H2			390428.39		
Sc	45	3	He			47829.62		
Sc	45	3	He			48732.33		
Sc	45	3	He			47749.23		
Ge	72	3	He			85434.98		
Ge	72	3	He			85073.85		
Ge	72	3	He			88040.14		
In	115	3	He			87052.61		
In	115	3	He			87454.04		
In	115	3	He			85311.65		
Tb	159	3	He			396867.49		
Tb	159	3	He			395542.18		
Tb	159	3	He			396639.80		
Bi	209	3	He			305065.66		
Bi	209	3	He			301028.57		
Bi	209	3	He			301043.77		

Quantitation Report

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Acq Time	8/10/2023 5:26:12 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

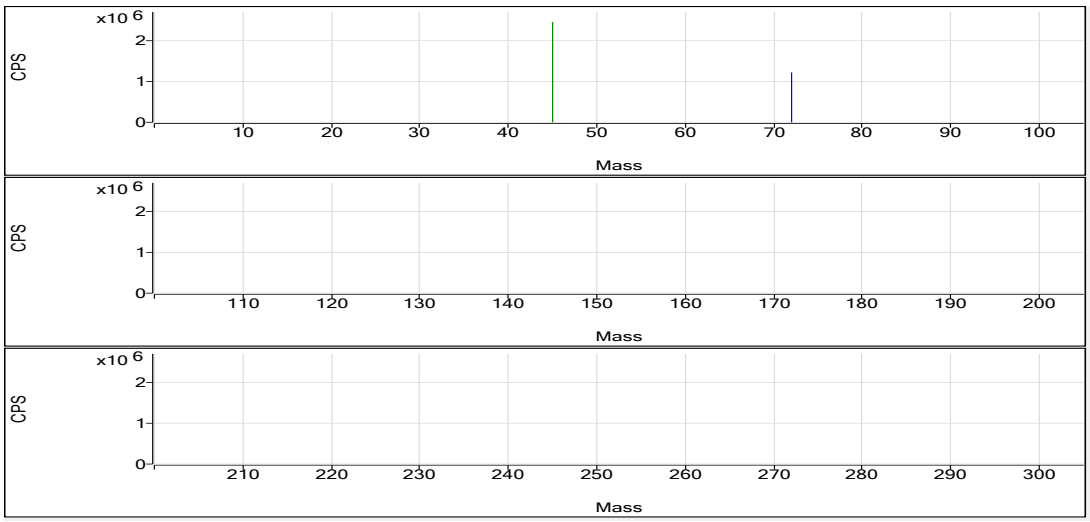
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.026	ppb	13.7	61.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.146	ppb	17.9	11.33	0.0001	Pulse	1.5000	3
Na	23	45	He	129.474	ppb	7.1	38280.25	0.8083	Pulse	0.1000	3
Mg	24	45	He	2.443	ppb	33.6	373.35	0.0079	Pulse	0.1000	3
Al	27	45	He	1.064	ppb	101.0	60.00	0.0013	Pulse	0.1000	3
K	39	45	He	6.778	ppb	121.5	19083.03	0.4030	Pulse	0.1000	3
Ca	44	45	He	17.151	ppb	124.9	183.34	0.0039	Pulse	0.1000	3
Ti	47	45	He	0.393	ppb	57.1	13.33	0.0003	Pulse	0.1000	3
V	51	45	He	0.442	ppb	12.1	1634.77	0.0345	Pulse	0.5000	3
Cr	52	45	He	-0.063	ppb	N/A	1803.51	0.0381	Pulse	0.1000	3
Mn	55	45	He	0.200	ppb	20.2	246.68	0.0052	Pulse	0.1000	3
Fe	57	45	He	1.902	ppb	18.3	120.00	0.0025	Pulse	0.1000	3
Co	59	45	He	0.118	ppb	26.6	416.69	0.0088	Pulse	0.1000	3
Ni	60	72	He	0.088	ppb	106.0	300.01	0.0036	Pulse	0.1000	3
Cu	63	72	He	0.141	ppb	23.2	700.04	0.0084	Pulse	0.1000	3
Zn	66	72	He	2.733	ppb	8.6	983.40	0.0118	Pulse	0.1000	3
As	75	72	He	0.194	ppb	75.5	100.67	0.0012	Pulse	0.5000	3
Sr	88	115	He	0.083	ppb	26.0	150.01	0.0017	Pulse	0.1000	3
Mo	98	115	He	0.100	ppb	10.5	216.68	0.0025	Pulse	0.1000	3
Ag	107	115	He	0.005	ppb	128.5	76.67	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.013	ppb	33.7	6.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.153	ppb	146.6	1653.49	0.0189	Pulse	0.1000	3
Sb	121	115	He	0.056	ppb	51.5	96.67	0.0011	Pulse	0.1000	3
Ba	137	115	He	0.047	ppb	183.0	40.00	0.0005	Pulse	0.1000	3
Tl	205	159	He	0.174	ppb	13.6	1750.19	0.0044	Pulse	0.1000	3
Pb	208	159	He	0.017	ppb	72.9	636.69	0.0016	Pulse	0.1000	3
U	238	209	He	0.069	ppb	9.7	1066.75	0.0035	Pulse	0.1000	3

ISTD Table:

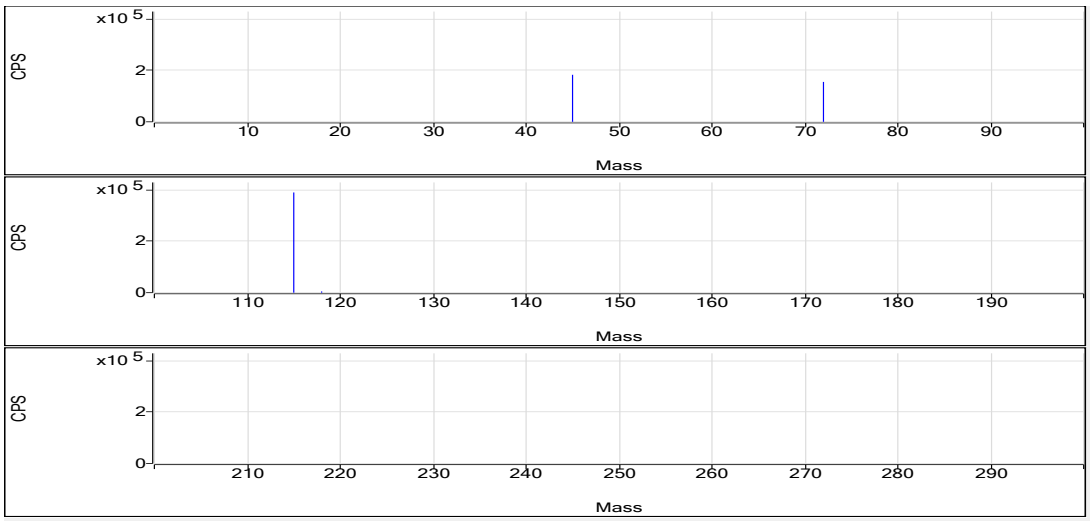
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2462219.24	1.2	102.6	Analog	0.1000	3
No Gas	Ge	72	1224015.30	1.8	106.1	Pulse	0.1000	3
H2	Sc	45	182690.49	0.6	97.7	Pulse	0.1000	3
H2	Ge	72	154989.32	0.7	94.7	Pulse	0.1000	3
H2	In	115	389390.67	0.5	100.1	Pulse	0.1000	3
He	Sc	45	47354.68	0.4	101.5	Pulse	0.1000	3
He	Ge	72	83537.27	0.8	102.9	Pulse	0.1000	3
He	In	115	87560.37	0.4	101.6	Pulse	0.1000	3
He	Tb	159	394921.48	0.7	99.1	Pulse	0.1000	3
He	Bi	209	307904.39	0.1	99.6	Pulse	0.1000	3

No Gas

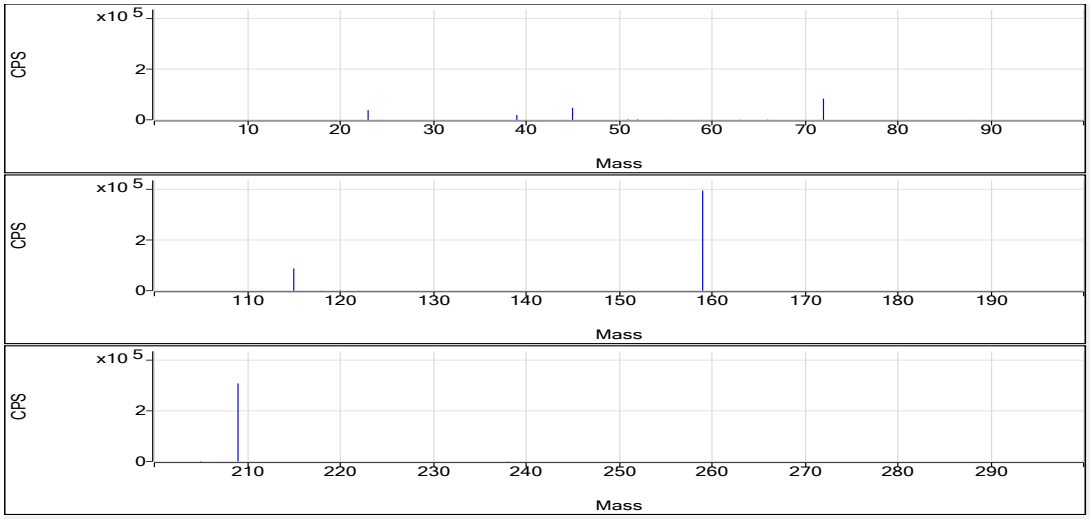


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.025	0	58.00	0.0008	4.685E-06
Be	9	1	No Gas	0.031	0	70.00	0.0008	4.685E-06
Be	9	1	No Gas	0.024	0	56.00	0.0008	4.685E-06
Se	78	2	H2	0.127	0.0001	10.00	0.0004	1.219E-05
Se	78	2	H2	0.176	0.0001	13.33	0.0004	1.219E-05
Se	78	2	H2	0.136	0.0001	10.67	0.0004	1.219E-05
Na	23	3	He	139.304	0.8435	40105.09	0.0036	0.3452
Na	23	3	He	127.991	0.803	37979.54	0.0036	0.3452
Na	23	3	He	121.127	0.7784	36756.12	0.0036	0.3452
Mg	24	3	He	3.326	0.0095	450.02	0.0018	0.003497
Mg	24	3	He	1.704	0.0066	310.01	0.0018	0.003497
Mg	24	3	He	2.3	0.0076	360.02	0.0018	0.003497
Al	27	3	He	2.136	0.0019	90.00	0.0006	0.0006432
Al	27	3	He	1.069	0.0013	60.00	0.0006	0.0006432
Al	27	3	He	-0.013	0.0006	30.00	0.0006	0.0006432
K	39	3	He	16.238	0.414	19683.78	0.0012	0.3951
K	39	3	He	1.214	0.3965	18752.62	0.0012	0.3951
K	39	3	He	2.883	0.3984	18812.68	0.0012	0.3951
Ca	44	3	He	9.626	0.0034	160.01	0.0001	0.002715
Ca	44	3	He	0.5	0.0027	130.01	0.0001	0.002715
Ca	44	3	He	41.326	0.0055	260.01	0.0001	0.002715
Ti	47	3	He	0.653	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	0.263	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	0.264	0.0002	10.00	0.0005	7.003E-05
V	51	3	He	0.492	0.0356	1694.11	0.0219	0.02486
V	51	3	He	0.447	0.0346	1638.10	0.0219	0.02486
V	51	3	He	0.386	0.0333	1572.09	0.0219	0.02486
Cr	52	3	He	0.028	0.0408	1940.20	0.0299	0.03997
Cr	52	3	He	-0.24	0.0328	1550.12	0.0299	0.03997
Cr	52	3	He	0.023	0.0407	1920.20	0.0299	0.03997
Mn	55	3	He	0.237	0.0057	270.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.157	0.0047	220.01	0.0128	0.002639
Mn	55	3	He	0.207	0.0053	250.01	0.0128	0.002639
Fe	57	3	He	2.247	0.0027	130.01	0.0006	0.001429
Fe	57	3	He	1.908	0.0025	120.00	0.0006	0.001429
Fe	57	3	He	1.551	0.0023	110.00	0.0006	0.001429
Co	59	3	He	0.149	0.0105	500.03	0.0563	0.002149
Co	59	3	He	0.12	0.0089	420.02	0.0563	0.002149
Co	59	3	He	0.086	0.007	330.01	0.0563	0.002149
Ni	60	3	He	0.195	0.0045	380.02	0.0086	0.002834
Ni	60	3	He	0.034	0.0031	260.01	0.0086	0.002834
Ni	60	3	He	0.034	0.0031	260.01	0.0086	0.002834
Cu	63	3	He	0.138	0.0083	700.04	0.0257	0.004757
Cu	63	3	He	0.175	0.0093	770.05	0.0257	0.004757
Cu	63	3	He	0.11	0.0076	630.04	0.0257	0.004757
Zn	66	3	He	2.479	0.011	930.06	0.0029	0.003818
Zn	66	3	He	2.775	0.0119	990.07	0.0029	0.003818
Zn	66	3	He	2.945	0.0124	1030.08	0.0029	0.003818
As	75	3	He	0.244	0.0013	110.00	0.002	0.0008061
As	75	3	He	0.31	0.0014	120.00	0.002	0.0008061
As	75	3	He	0.029	0.0009	72.00	0.002	0.0008061
Sr	88	3	He	0.108	0.0019	170.01	0.009	0.0009645
Sr	88	3	He	0.07	0.0016	140.00	0.009	0.0009645
Sr	88	3	He	0.072	0.0016	140.01	0.009	0.0009645
Mo	98	3	He	0.112	0.0027	240.01	0.0219	0.0002706
Mo	98	3	He	0.097	0.0024	210.01	0.0219	0.0002706
Mo	98	3	He	0.092	0.0023	200.01	0.0219	0.0002706
Ag	107	3	He	0.001	0.0007	60.00	0.0465	0.0006206
Ag	107	3	He	0.014	0.0013	110.00	0.0465	0.0006206
Ag	107	3	He	0.001	0.0007	60.00	0.0465	0.0006206
Cd	111	3	He	0.013	0.0001	6.00	0.0053	0
Cd	111	3	He	0.009	0	4.00	0.0053	0
Cd	111	3	He	0.017	0.0001	8.00	0.0053	0
Sn	120	3	He	0.285	0.021	1840.20	0.0158	0.01648
Sn	120	3	He	-0.106	0.0148	1300.10	0.0158	0.01648
Sn	120	3	He	0.28	0.0209	1820.18	0.0158	0.01648
Sb	121	3	He	0.036	0.0008	70.00	0.0149	0.0002698
Sb	121	3	He	0.089	0.0016	140.01	0.0149	0.0002698
Sb	121	3	He	0.044	0.0009	80.00	0.0149	0.0002698
Ba	137	3	He	0.142	0.0009	80.00	0.0048	0.0002317
Ba	137	3	He	0.023	0.0003	30.00	0.0048	0.0002317
Ba	137	3	He	-0.024	0.0001	10.00	0.0048	0.0002317
Tl	205	3	He	0.157	0.004	1590.16	0.0247	0.0001339
Tl	205	3	He	0.164	0.0042	1660.19	0.0247	0.0001339
Tl	205	3	He	0.201	0.0051	2000.23	0.0247	0.0001339
Pb	208	3	He	0.03	0.0021	510.03	0.0327	0.00107
Pb	208	3	He	0.01	0.0014	220.01	0.0327	0.00107
Pb	208	3	He	0.009	0.0014	310.01	0.0327	0.00107
U	238	3	He	0.074	0.0037	1140.09	0.0493	7.55E-05
U	238	3	He	0.072	0.0036	1110.10	0.0493	7.55E-05
U	238	3	He	0.061	0.0031	950.07	0.0493	7.55E-05
Sc	45	1	No Gas			2442693.56		
Sc	45	1	No Gas			2496615.12		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2447349.03		
Ge	72	1	No Gas			1211084.98		
Ge	72	1	No Gas			1249967.72		
Ge	72	1	No Gas			1210993.19		
Sc	45	2	H2			181478.59		
Sc	45	2	H2			183442.97		
Sc	45	2	H2			183149.90		
Ge	72	2	H2			153800.28		
Ge	72	2	H2			155892.49		
Ge	72	2	H2			155275.20		
In	115	2	H2			391513.71		
In	115	2	H2			388755.03		
In	115	2	H2			387903.28		
Sc	45	3	He			47548.45		
Sc	45	3	He			47297.72		
Sc	45	3	He			47217.87		
Ge	72	3	He			84267.87		
Ge	72	3	He			83222.27		
Ge	72	3	He			83121.66		
In	115	3	He			87746.96		
In	115	3	He			87837.27		
In	115	3	He			87122.84		
Tb	159	3	He			396902.85		
Tb	159	3	He			395886.40		
Tb	159	3	He			391975.19		
Bi	209	3	He			308226.62		
Bi	209	3	He			308071.99		
Bi	209	3	He			307414.55		

Quantitation Report

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Sample Type	CCV
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

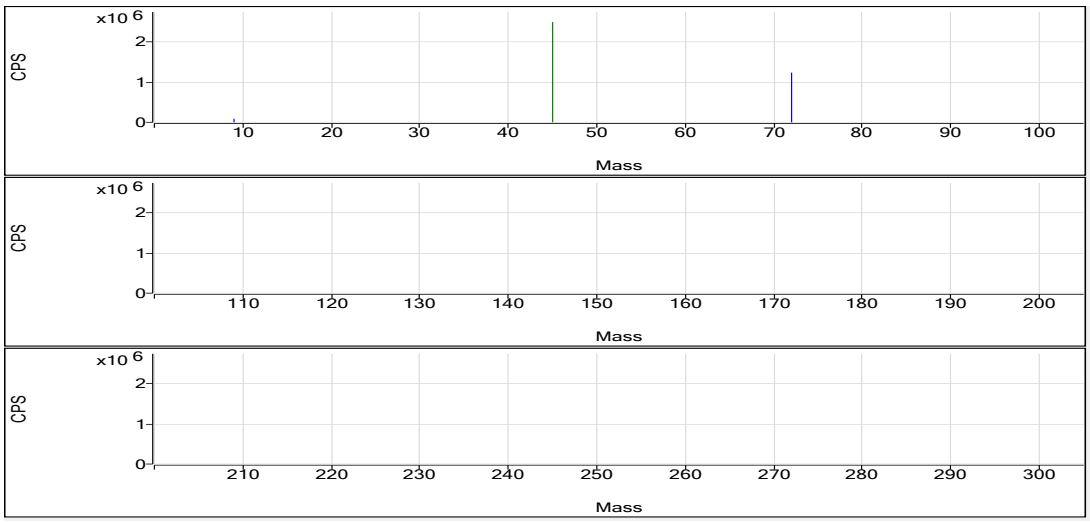
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	46.622	ppb	1.3	89116.54	0.0356	Pulse	0.5000	3
Se	78	72	H2	54.273	ppb	1.5	3546.00	0.0226	Pulse	1.5000	3
Na	23	45	He	4977.988	ppb	0.9	865755.69	18.1517	Pulse	0.1000	3
Mg	24	45	He	5039.021	ppb	2.1	431371.19	9.0451	Pulse	0.1000	3
Al	27	45	He	4993.503	ppb	2.1	139354.71	2.9220	Pulse	0.1000	3
K	39	45	He	5190.525	ppb	1.8	307070.97	6.4385	Pulse	0.1000	3
Ca	44	45	He	5314.298	ppb	2.2	17250.70	0.3617	Pulse	0.1000	3
Ti	47	45	He	5096.856	ppb	3.0	130512.01	2.7368	Pulse	0.1000	3
V	51	45	He	519.164	ppb	1.0	542457.38	11.3734	Pulse	0.5000	3
Cr	52	45	He	493.223	ppb	1.7	706203.82	14.8074	Pulse	0.1000	3
Mn	55	45	He	514.512	ppb	1.3	315058.82	6.6058	Pulse	0.1000	3
Fe	57	45	He	5133.821	ppb	1.5	142322.76	2.9841	Pulse	0.1000	3
Co	59	45	He	493.195	ppb	2.0	1323930.81	27.7603	Pulse	0.1000	3
Ni	60	72	He	512.739	ppb	1.4	373739.72	4.4037	Pulse	0.1000	3
Cu	63	72	He	487.581	ppb	1.2	1062659.33	12.5215	Pulse	0.1000	3
Zn	66	72	He	515.504	ppb	1.0	127707.55	1.5048	Pulse	0.1000	3
As	75	72	He	517.284	ppb	1.7	90011.23	1.0607	Pulse	0.5000	3
Sr	88	115	He	51.613	ppb	2.7	40365.32	0.4639	Pulse	0.1000	3
Mo	98	115	He	51.262	ppb	2.4	97815.90	1.1243	Pulse	0.1000	3
Ag	107	115	He	51.010	ppb	1.2	206382.90	2.3719	Pulse	0.1000	3
Cd	111	115	He	51.640	ppb	1.0	24025.31	0.2761	Pulse	0.5000	3
Sn	120	115	He	51.808	ppb	1.5	72650.99	0.8350	Pulse	0.1000	3
Sb	121	115	He	51.204	ppb	2.8	66195.71	0.7608	Pulse	0.1000	3
Ba	137	115	He	521.927	ppb	1.2	217974.67	2.5051	Pulse	0.1000	3
Tl	205	159	He	51.712	ppb	0.9	511731.31	1.2788	Pulse	0.1000	3
Pb	208	159	He	51.756	ppb	0.4	678304.43	1.6950	Pulse	0.1000	3
U	238	209	He	50.746	ppb	0.5	774799.05	2.4998	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2505783.56	1.0	104.5	Analog	0.1000	3
No Gas	Ge	72	1242116.88	0.2	107.7	Pulse	0.1000	3
H2	Sc	45	183136.47	0.1	97.9	Pulse	0.1000	3
H2	Ge	72	156570.24	0.4	95.6	Pulse	0.1000	3
H2	In	115	391023.50	0.7	100.5	Pulse	0.1000	3
He	Sc	45	47699.09	1.2	102.3	Pulse	0.1000	3
He	Ge	72	84874.86	1.2	104.5	Pulse	0.1000	3
He	In	115	87019.03	1.1	101.0	Pulse	0.1000	3
He	Tb	159	400178.72	0.5	100.4	Pulse	0.1000	3
He	Bi	209	309949.73	0.6	100.2	Pulse	0.1000	3

No Gas



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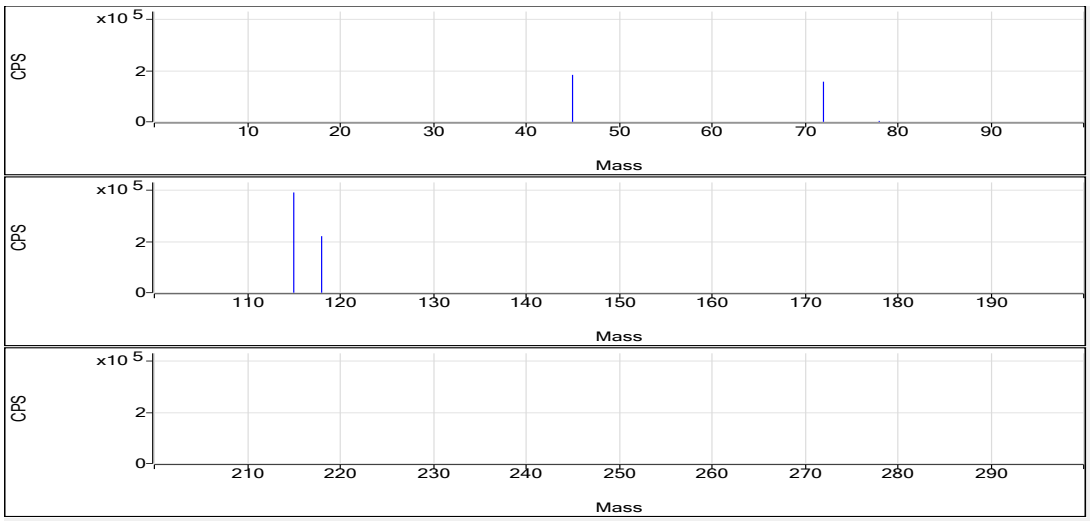
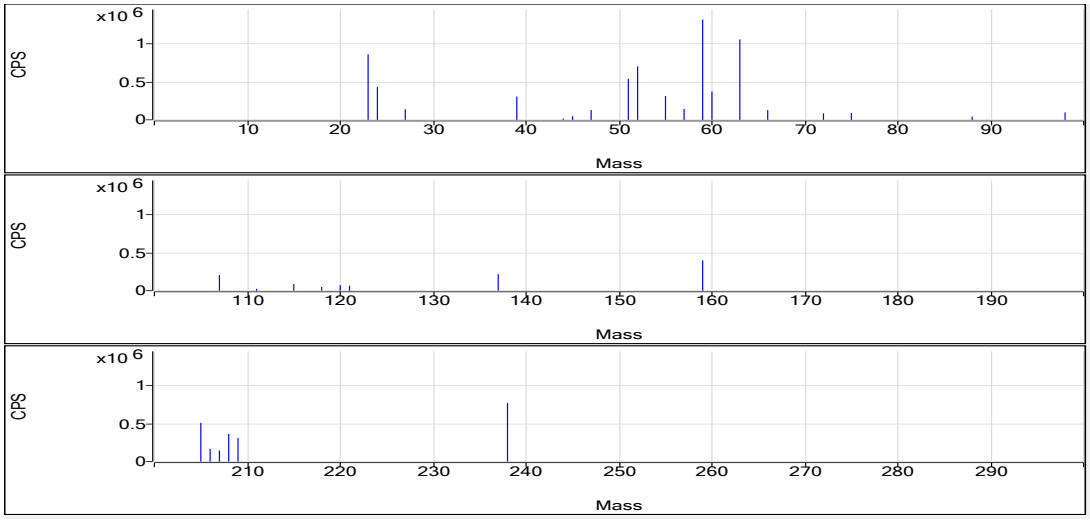


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	45.931	0.035	88851.59	0.0008	4.685E-06
Be	9	1	No Gas	47.064	0.0359	89328.56	0.0008	4.685E-06
Be	9	1	No Gas	46.872	0.0358	89169.47	0.0008	4.685E-06
Se	78	2	H2	55.111	0.023	3595.12	0.0004	1.219E-05
Se	78	2	H2	54.195	0.0226	3557.11	0.0004	1.219E-05
Se	78	2	H2	53.514	0.0223	3485.76	0.0004	1.219E-05
Na	23	3	He	5025.012	18.3199	862260.85	0.0036	0.3452
Na	23	3	He	4972.113	18.1307	866634.05	0.0036	0.3452
Na	23	3	He	4936.839	18.0045	868372.17	0.0036	0.3452
Mg	24	3	He	5137.545	9.2219	434047.18	0.0018	0.003497
Mg	24	3	He	5055.935	9.0755	433801.99	0.0018	0.003497
Mg	24	3	He	4923.584	8.838	426264.41	0.0018	0.003497
Al	27	3	He	5112.584	2.9917	140809.45	0.0006	0.0006432
Al	27	3	He	4943.574	2.8928	138274.36	0.0006	0.0006432
Al	27	3	He	4924.353	2.8816	138980.31	0.0006	0.0006432
K	39	3	He	5300.924	6.5671	309092.24	0.0012	0.3951
K	39	3	He	5138.744	6.3782	304876.13	0.0012	0.3951
K	39	3	He	5131.907	6.3703	307244.53	0.0012	0.3951
Ca	44	3	He	5376.028	0.3659	17220.67	0.0001	0.002715
Ca	44	3	He	5389.161	0.3668	17531.05	0.0001	0.002715
Ca	44	3	He	5177.704	0.3525	17000.37	0.0001	0.002715
Ti	47	3	He	5261.867	2.8254	132984.19	0.0005	7.003E-05
Ti	47	3	He	5064.864	2.7196	129997.32	0.0005	7.003E-05
Ti	47	3	He	4963.836	2.6654	128554.53	0.0005	7.003E-05
V	51	3	He	523.84	11.4756	540120.50	0.0219	0.02486
V	51	3	He	519.704	11.3852	544203.44	0.0219	0.02486
V	51	3	He	513.948	11.2593	543048.19	0.0219	0.02486
Cr	52	3	He	501.547	15.0567	708671.47	0.0299	0.03997
Cr	52	3	He	493.407	14.8129	708048.97	0.0299	0.03997
Cr	52	3	He	484.716	14.5527	701891.01	0.0299	0.03997
Mn	55	3	He	522.511	6.7085	315747.65	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	510.815	6.5584	313486.15	0.0128	0.002639
Mn	55	3	He	510.211	6.5506	315942.65	0.0128	0.002639
Fe	57	3	He	5218.219	3.0332	142761.94	0.0006	0.001429
Fe	57	3	He	5117.049	2.9744	142173.91	0.0006	0.001429
Fe	57	3	He	5066.196	2.9448	142032.43	0.0006	0.001429
Co	59	3	He	503.999	28.3684	1335212.95	0.0563	0.002149
Co	59	3	He	490.134	27.588	1318689.98	0.0563	0.002149
Co	59	3	He	485.453	27.3246	1317889.51	0.0563	0.002149
Ni	60	3	He	507.025	4.3547	374542.57	0.0086	0.002834
Ni	60	3	He	510.421	4.3839	369591.56	0.0086	0.002834
Ni	60	3	He	520.771	4.4727	377085.03	0.0086	0.002834
Cu	63	3	He	480.726	12.3455	1061822.02	0.0257	0.004757
Cu	63	3	He	490.456	12.5953	1061877.25	0.0257	0.004757
Cu	63	3	He	491.56	12.6236	1064278.73	0.0257	0.004757
Zn	66	3	He	509.848	1.4883	128006.64	0.0029	0.003818
Zn	66	3	He	518.6	1.5138	127623.07	0.0029	0.003818
Zn	66	3	He	518.064	1.5122	127492.95	0.0029	0.003818
As	75	3	He	507.352	1.0403	89475.20	0.002	0.0008061
As	75	3	He	523.633	1.0737	90517.57	0.002	0.0008061
As	75	3	He	520.867	1.068	90040.91	0.002	0.0008061
Sr	88	3	He	50.568	0.4545	40067.25	0.009	0.0009645
Sr	88	3	He	51.063	0.459	39636.81	0.009	0.0009645
Sr	88	3	He	53.208	0.4782	41391.90	0.009	0.0009645
Mo	98	3	He	49.989	1.0964	96641.14	0.0219	0.0002706
Mo	98	3	He	52.387	1.1489	99218.69	0.0219	0.0002706
Mo	98	3	He	51.41	1.1275	97587.86	0.0219	0.0002706
Ag	107	3	He	50.315	2.3396	206234.16	0.0465	0.0006206
Ag	107	3	He	51.286	2.3848	205941.70	0.0465	0.0006206
Ag	107	3	He	51.427	2.3913	206972.83	0.0465	0.0006206
Cd	111	3	He	51.041	0.2729	24056.65	0.0053	0
Cd	111	3	He	51.909	0.2776	23968.59	0.0053	0
Cd	111	3	He	51.969	0.2779	24050.69	0.0053	0
Sn	120	3	He	50.938	0.8212	72389.86	0.0158	0.01648
Sn	120	3	He	52.495	0.8458	73042.68	0.0158	0.01648
Sn	120	3	He	51.992	0.8379	72520.43	0.0158	0.01648
Sb	121	3	He	49.813	0.7402	65244.38	0.0149	0.0002698
Sb	121	3	He	51.152	0.7601	65636.22	0.0149	0.0002698
Sb	121	3	He	52.647	0.7823	67706.54	0.0149	0.0002698
Ba	137	3	He	514.585	2.4699	217715.93	0.0048	0.0002317
Ba	137	3	He	524.43	2.5171	217372.36	0.0048	0.0002317
Ba	137	3	He	526.766	2.5284	218835.72	0.0048	0.0002317
Tl	205	3	He	51.878	1.2829	513434.45	0.0247	0.0001339
Tl	205	3	He	52.047	1.2871	512229.25	0.0247	0.0001339
Tl	205	3	He	51.212	1.2664	509530.23	0.0247	0.0001339
Pb	208	3	He	51.735	1.6943	364861.64	0.0327	0.00107
Pb	208	3	He	51.968	1.702	364581.21	0.0327	0.00107
Pb	208	3	He	51.564	1.6888	363168.35	0.0327	0.00107
U	238	3	He	50.883	2.5066	776266.08	0.0493	7.55E-05
U	238	3	He	50.461	2.4858	775548.82	0.0493	7.55E-05
U	238	3	He	50.893	2.5071	772582.25	0.0493	7.55E-05
Sc	45	1	No Gas			2535701.06		
Sc	45	1	No Gas			2487952.31		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2493697.31		
Ge	72	1	No Gas			1242351.70		
Ge	72	1	No Gas			1244008.03		
Ge	72	1	No Gas			1239990.92		
Sc	45	2	H2			182856.93		
Sc	45	2	H2			183230.90		
Sc	45	2	H2			183321.58		
Ge	72	2	H2			156327.39		
Ge	72	2	H2			157288.04		
Ge	72	2	H2			156095.29		
In	115	2	H2			392598.04		
In	115	2	H2			392450.78		
In	115	2	H2			388021.67		
Sc	45	3	He			47066.97		
Sc	45	3	He			47799.39		
Sc	45	3	He			48230.91		
Ge	72	3	He			86008.72		
Ge	72	3	He			84307.42		
Ge	72	3	He			84308.43		
In	115	3	He			88531.41		
In	115	3	He			86740.05		
In	115	3	He			86931.61		
Tb	159	3	He			400215.35		
Tb	159	3	He			397984.17		
Tb	159	3	He			402336.63		
Bi	209	3	He			309692.42		
Bi	209	3	He			311995.43		
Bi	209	3	He			308161.34		

Quantitation Report

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Sample Type	CCB
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Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

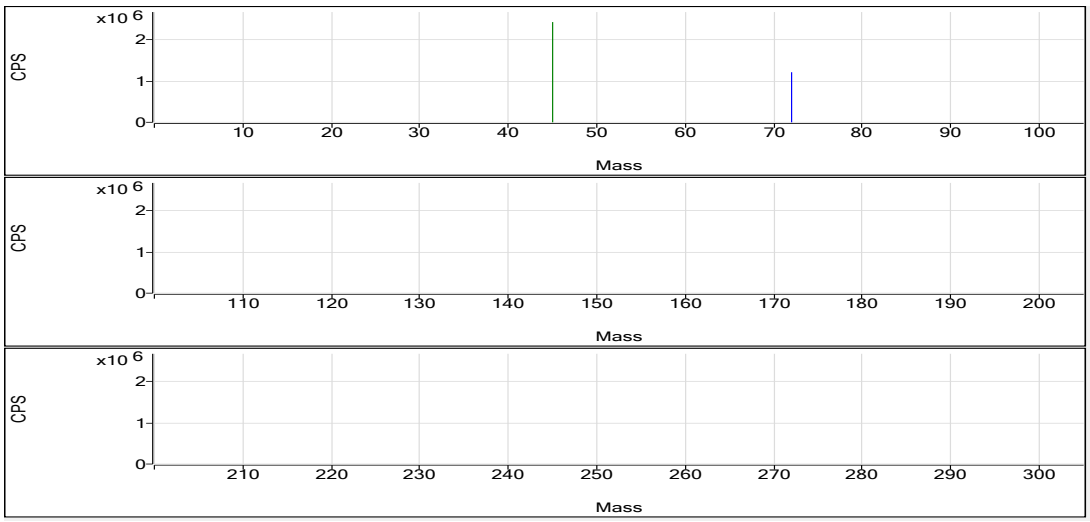
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.029	ppb	4.6	65.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.122	ppb	28.4	10.00	0.0001	Pulse	1.5000	3
Na	23	45	He	68.699	ppb	6.7	28578.28	0.5909	Pulse	0.1000	3
Mg	24	45	He	1.816	ppb	28.9	326.68	0.0068	Pulse	0.1000	3
Al	27	45	He	1.965	ppb	37.9	86.67	0.0018	Pulse	0.1000	3
K	39	45	He	0.438	ppb	988.0	19133.11	0.3956	Pulse	0.1000	3
Ca	44	45	He	-5.452	ppb	N/A	113.34	0.0023	Pulse	0.1000	3
Ti	47	45	He	1.029	ppb	112.8	30.00	0.0006	Pulse	0.1000	3
V	51	45	He	0.324	ppb	10.9	1545.43	0.0320	Pulse	0.5000	3
Cr	52	45	He	-0.090	ppb	N/A	1803.52	0.0373	Pulse	0.1000	3
Mn	55	45	He	0.143	ppb	39.2	216.68	0.0045	Pulse	0.1000	3
Fe	57	45	He	2.759	ppb	13.8	146.68	0.0030	Pulse	0.1000	3
Co	59	45	He	0.085	ppb	45.4	336.68	0.0070	Pulse	0.1000	3
Ni	60	72	He	0.087	ppb	117.6	296.68	0.0036	Pulse	0.1000	3
Cu	63	72	He	0.120	ppb	17.1	650.04	0.0078	Pulse	0.1000	3
Zn	66	72	He	2.683	ppb	15.4	963.40	0.0116	Pulse	0.1000	3
As	75	72	He	0.192	ppb	37.3	99.33	0.0012	Pulse	0.5000	3
Sr	88	115	He	0.092	ppb	18.0	156.68	0.0018	Pulse	0.1000	3
Mo	98	115	He	0.083	ppb	12.6	183.34	0.0021	Pulse	0.1000	3
Ag	107	115	He	0.006	ppb	115.8	76.67	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.006	ppb	114.6	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.109	ppb	155.2	1593.48	0.0182	Pulse	0.1000	3
Sb	121	115	He	0.049	ppb	49.8	86.67	0.0010	Pulse	0.1000	3
Ba	137	115	He	0.079	ppb	47.2	53.33	0.0006	Pulse	0.1000	3
Tl	205	159	He	0.102	ppb	8.1	1060.08	0.0027	Pulse	0.1000	3
Pb	208	159	He	0.017	ppb	13.5	650.03	0.0016	Pulse	0.1000	3
U	238	209	He	0.049	ppb	11.5	773.39	0.0025	Pulse	0.1000	3

ISTD Table:

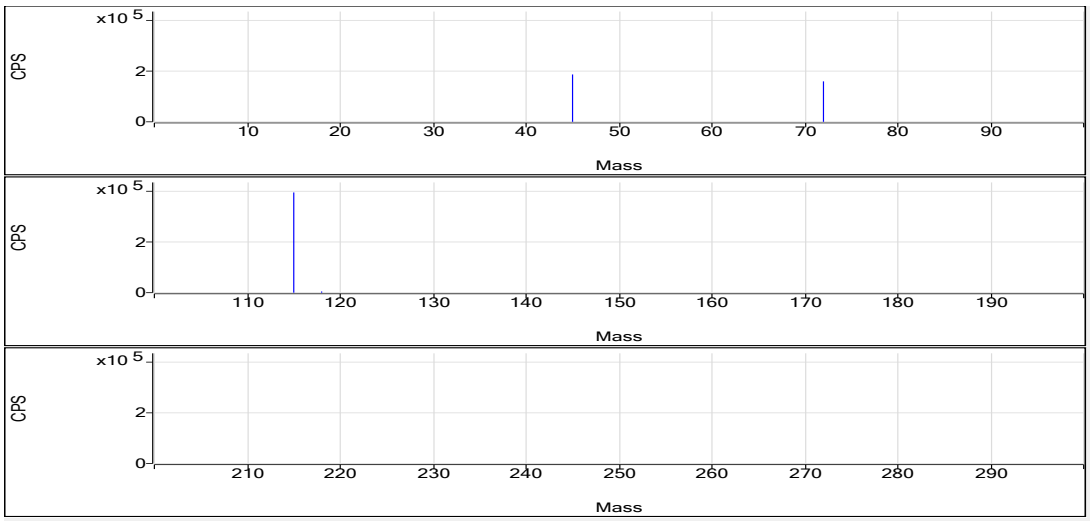
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2434151.84	0.7	101.5	Analog	0.1000	3
No Gas	Ge	72	1215968.42	0.2	105.4	Pulse	0.1000	3
H2	Sc	45	185909.66	0.5	99.4	Pulse	0.1000	3
H2	Ge	72	158783.20	1.2	97.0	Pulse	0.1000	3
H2	In	115	393431.02	1.3	101.1	Pulse	0.1000	3
He	Sc	45	48367.58	0.6	103.7	Pulse	0.1000	3
He	Ge	72	82833.42	0.3	102.0	Pulse	0.1000	3
He	In	115	87665.20	1.5	101.7	Pulse	0.1000	3
He	Tb	159	399933.27	1.0	100.3	Pulse	0.1000	3
He	Bi	209	309203.30	0.7	100.0	Pulse	0.1000	3

No Gas

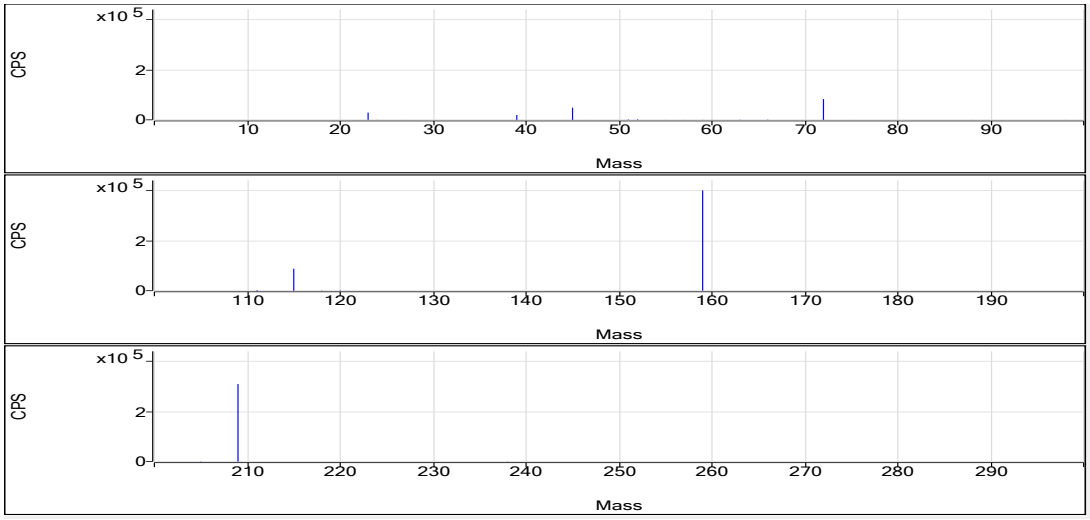


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.031	0	68.00	0.0008	4.685E-06
Be	9	1	No Gas	0.028	0	64.00	0.0008	4.685E-06
Be	9	1	No Gas	0.029	0	64.00	0.0008	4.685E-06
Se	78	2	H2	0.113	0.0001	9.33	0.0004	1.219E-05
Se	78	2	H2	0.16	0.0001	12.67	0.0004	1.219E-05
Se	78	2	H2	0.092	0.0001	8.00	0.0004	1.219E-05
Na	23	3	He	65.918	0.581	28287.67	0.0036	0.3452
Na	23	3	He	74.029	0.61	29369.90	0.0036	0.3452
Na	23	3	He	66.151	0.5818	28077.27	0.0036	0.3452
Mg	24	3	He	1.828	0.0068	330.01	0.0018	0.003497
Mg	24	3	He	2.334	0.0077	370.02	0.0018	0.003497
Mg	24	3	He	1.285	0.0058	280.01	0.0018	0.003497
Al	27	3	He	1.358	0.0014	70.00	0.0006	0.0006432
Al	27	3	He	1.74	0.0017	80.00	0.0006	0.0006432
Al	27	3	He	2.797	0.0023	110.01	0.0006	0.0006432
K	39	3	He	1.532	0.3969	19323.40	0.0012	0.3951
K	39	3	He	4.115	0.3999	19253.23	0.0012	0.3951
K	39	3	He	-4.332	0.39	18822.70	0.0012	0.3951
Ca	44	3	He	-18.909	0.0014	70.00	0.0001	0.002715
Ca	44	3	He	9.003	0.0033	160.01	0.0001	0.002715
Ca	44	3	He	-6.449	0.0023	110.00	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	2.19	0.0012	60.00	0.0005	7.003E-05
Ti	47	3	He	1.027	0.0006	30.00	0.0005	7.003E-05
V	51	3	He	0.338	0.0322	1570.10	0.0219	0.02486
V	51	3	He	0.284	0.0311	1496.09	0.0219	0.02486
V	51	3	He	0.351	0.0325	1570.09	0.0219	0.02486
Cr	52	3	He	-0.059	0.0382	1860.20	0.0299	0.03997
Cr	52	3	He	-0.024	0.0393	1890.19	0.0299	0.03997
Cr	52	3	He	-0.186	0.0344	1660.16	0.0299	0.03997
Mn	55	3	He	0.146	0.0045	220.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.086	0.0037	180.01	0.0128	0.002639
Mn	55	3	He	0.198	0.0052	250.01	0.0128	0.002639
Fe	57	3	He	3.197	0.0033	160.01	0.0006	0.001429
Fe	57	3	He	2.546	0.0029	140.01	0.0006	0.001429
Fe	57	3	He	2.534	0.0029	140.01	0.0006	0.001429
Co	59	3	He	0.13	0.0094	460.02	0.0563	0.002149
Co	59	3	He	0.058	0.0054	260.01	0.0563	0.002149
Co	59	3	He	0.069	0.006	290.01	0.0563	0.002149
Ni	60	3	He	0.034	0.0031	260.01	0.0086	0.002834
Ni	60	3	He	0.205	0.0046	380.03	0.0086	0.002834
Ni	60	3	He	0.022	0.003	250.01	0.0086	0.002834
Cu	63	3	He	0.143	0.0084	700.05	0.0257	0.004757
Cu	63	3	He	0.102	0.0074	610.04	0.0257	0.004757
Cu	63	3	He	0.116	0.0077	640.04	0.0257	0.004757
Zn	66	3	He	2.821	0.012	1000.08	0.0029	0.003818
Zn	66	3	He	3.01	0.0126	1040.07	0.0029	0.003818
Zn	66	3	He	2.218	0.0103	850.06	0.0029	0.003818
As	75	3	He	0.205	0.0012	102.00	0.002	0.0008061
As	75	3	He	0.114	0.001	86.00	0.002	0.0008061
As	75	3	He	0.256	0.0013	110.00	0.002	0.0008061
Sr	88	3	He	0.111	0.002	170.01	0.009	0.0009645
Sr	88	3	He	0.08	0.0017	150.01	0.009	0.0009645
Sr	88	3	He	0.085	0.0017	150.01	0.009	0.0009645
Mo	98	3	He	0.077	0.002	170.01	0.0219	0.0002706
Mo	98	3	He	0.095	0.0024	210.01	0.0219	0.0002706
Mo	98	3	He	0.077	0.002	170.01	0.0219	0.0002706
Ag	107	3	He	0.006	0.0009	80.00	0.0465	0.0006206
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Ag	107	3	He	0.011	0.0012	100.00	0.0465	0.0006206
Cd	111	3	He	0.013	0.0001	6.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Sn	120	3	He	0.152	0.0189	1640.15	0.0158	0.01648
Sn	120	3	He	-0.078	0.0152	1360.12	0.0158	0.01648
Sn	120	3	He	0.253	0.0205	1780.17	0.0158	0.01648
Sb	121	3	He	0.044	0.0009	80.00	0.0149	0.0002698
Sb	121	3	He	0.027	0.0007	60.00	0.0149	0.0002698
Sb	121	3	He	0.075	0.0014	120.01	0.0149	0.0002698
Ba	137	3	He	0.12	0.0008	70.00	0.0048	0.0002317
Ba	137	3	He	0.069	0.0006	50.00	0.0048	0.0002317
Ba	137	3	He	0.048	0.0005	40.00	0.0048	0.0002317
Tl	205	3	He	0.099	0.0026	1040.08	0.0247	0.0001339
Tl	205	3	He	0.095	0.0025	1000.07	0.0247	0.0001339
Tl	205	3	He	0.111	0.0029	1140.09	0.0247	0.0001339
Pb	208	3	He	0.014	0.0015	360.02	0.0327	0.00107
Pb	208	3	He	0.018	0.0017	270.01	0.0327	0.00107
Pb	208	3	He	0.018	0.0017	220.01	0.0327	0.00107
U	238	3	He	0.046	0.0023	720.05	0.0493	7.55E-05
U	238	3	He	0.046	0.0023	730.05	0.0493	7.55E-05
U	238	3	He	0.056	0.0028	870.06	0.0493	7.55E-05
Sc	45	1	No Gas			2429375.28		
Sc	45	1	No Gas			2452951.37		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2420128.87		
Ge	72	1	No Gas			1217073.26		
Ge	72	1	No Gas			1213665.45		
Ge	72	1	No Gas			1217166.54		
Sc	45	2	H2			186159.43		
Sc	45	2	H2			186677.11		
Sc	45	2	H2			184892.44		
Ge	72	2	H2			157752.40		
Ge	72	2	H2			160897.10		
Ge	72	2	H2			157700.11		
In	115	2	H2			396168.47		
In	115	2	H2			396620.78		
In	115	2	H2			387503.82		
Sc	45	3	He			48691.90		
Sc	45	3	He			48150.24		
Sc	45	3	He			48260.60		
Ge	72	3	He			83121.06		
Ge	72	3	He			82659.57		
Ge	72	3	He			82719.62		
In	115	3	He			86861.68		
In	115	3	He			89206.81		
In	115	3	He			86951.93		
Tb	159	3	He			402899.17		
Tb	159	3	He			401452.45		
Tb	159	3	He			395448.20		
Bi	209	3	He			307861.23		
Bi	209	3	He			311653.30		
Bi	209	3	He			308095.37		

Quantitation Report

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Acq Time	8/10/2023 5:32:20 PM
Sample Name	410-136736-H-2-A
Sample Type	Sample
Comment	T20
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

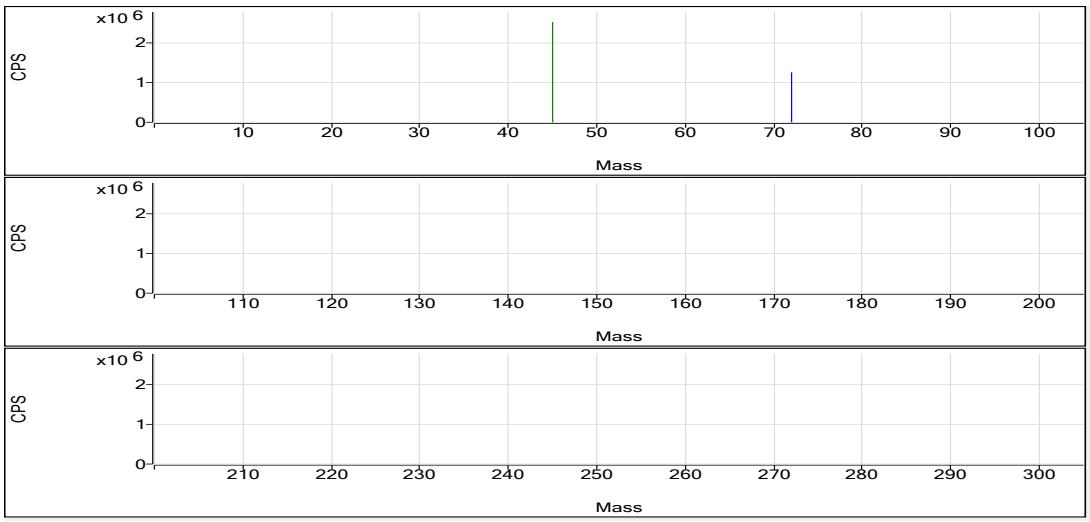
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.049	ppb	19.9	107.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.143	ppb	29.1	11.78	0.0001	Pulse	1.5000	3
Na	23	45	He	47757.286	ppb	0.2	8391576.75	171.1753	Analog	0.1000	3
Mg	24	45	He	47819.517	ppb	1.7	4206241.19	85.8071	Analog	0.1000	3
Al	27	45	He	403.857	ppb	2.9	11615.09	0.2369	Pulse	0.1000	3
K	39	45	He	12489.091	ppb	0.9	732207.28	14.9364	Pulse	0.1000	3
Ca	44	45	He	259797.126	ppb	1.4	860430.77	17.5525	Pulse	0.1000	3
Ti	47	45	He	12.160	ppb	19.5	323.35	0.0066	Pulse	0.1000	3
V	51	45	He	2.138	ppb	2.1	3510.44	0.0716	Pulse	0.5000	3
Cr	52	45	He	0.548	ppb	16.4	2763.69	0.0564	Pulse	0.1000	3
Mn	55	45	He	561.238	ppb	1.3	353217.91	7.2055	Pulse	0.1000	3
Fe	57	45	He	5479.814	ppb	1.9	156132.96	3.1852	Pulse	0.1000	3
Co	59	45	He	0.434	ppb	3.5	1303.44	0.0266	Pulse	0.1000	3
Ni	60	72	He	1.146	ppb	1.9	1106.75	0.0127	Pulse	0.1000	3
Cu	63	72	He	0.655	ppb	12.1	1883.52	0.0216	Pulse	0.1000	3
Zn	66	72	He	20.871	ppb	4.3	5641.33	0.0646	Pulse	0.1000	3
As	75	72	He	9.137	ppb	2.3	1705.45	0.0195	Pulse	0.5000	3
Sr	88	115	He	3164.353	ppb	1.9	2431339.03	28.3846	Analog	0.1000	3
Mo	98	115	He	8.710	ppb	4.1	16380.07	0.1913	Pulse	0.1000	3
Ag	107	115	He	-0.001	ppb	N/A	50.00	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.023	ppb	45.9	10.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.218	ppb	14.6	1706.84	0.0199	Pulse	0.1000	3
Sb	121	115	He	0.108	ppb	17.2	160.01	0.0019	Pulse	0.1000	3
Ba	137	115	He	305.546	ppb	2.6	125615.94	1.4667	Pulse	0.1000	3
Tl	205	159	He	0.040	ppb	10.6	450.03	0.0011	Pulse	0.1000	3
Pb	208	159	He	0.624	ppb	4.5	8568.07	0.0215	Pulse	0.1000	3
U	238	209	He	12.772	ppb	0.9	192021.42	0.6292	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2534603.09	1.2	105.7	Analog	0.1000	3
No Gas	Ge	72	1262862.51	0.5	109.5	Pulse	0.1000	3
H2	Sc	45	184669.31	0.8	98.7	Pulse	0.1000	3
H2	Ge	72	163884.89	1.0	100.1	Pulse	0.1000	3
H2	In	115	388270.31	0.8	99.8	Pulse	0.1000	3
He	Sc	45	49023.48	0.7	105.1	Pulse	0.1000	3
He	Ge	72	87349.43	0.7	107.6	Pulse	0.1000	3
He	In	115	85681.25	2.3	99.4	Pulse	0.1000	3
He	Tb	159	398686.82	0.6	100.0	Pulse	0.1000	3
He	Bi	209	305187.10	1.4	98.7	Pulse	0.1000	3

No Gas



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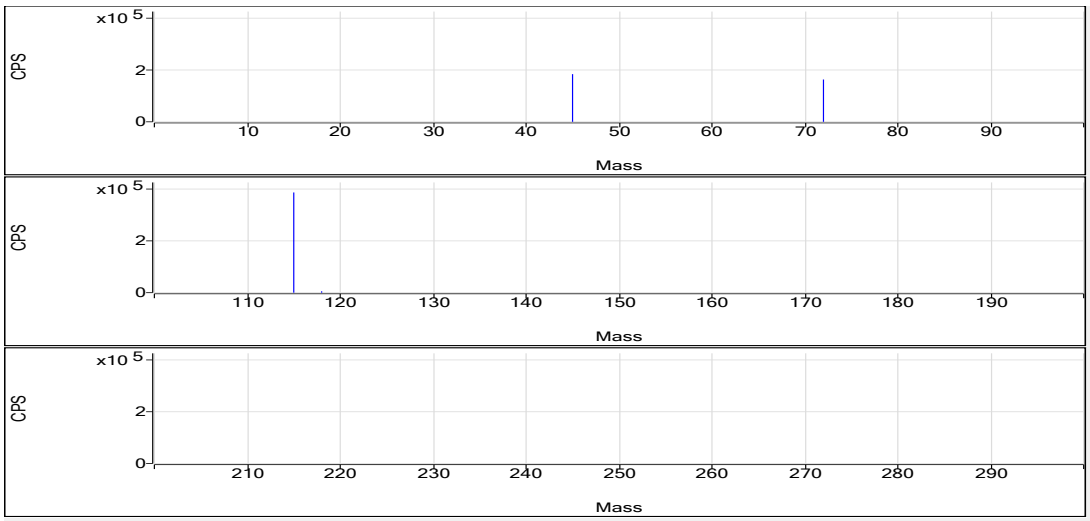
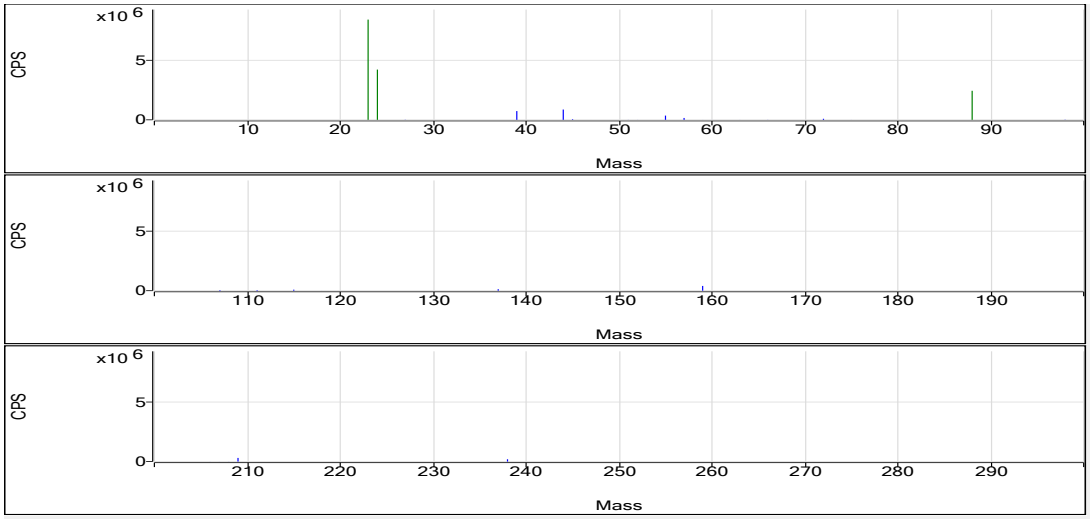


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.059	0	126.00	0.0008	4.685E-06
Be	9	1	No Gas	0.05	0	110.00	0.0008	4.685E-06
Be	9	1	No Gas	0.039	0	86.00	0.0008	4.685E-06
Se	78	2	H2	0.097	0.0001	8.67	0.0004	1.219E-05
Se	78	2	H2	0.155	0.0001	12.67	0.0004	1.219E-05
Se	78	2	H2	0.178	0.0001	14.00	0.0004	1.219E-05
Na	23	3	He	47850.228	171.5078	8388949.25	0.0036	0.3452
Na	23	3	He	47694.137	170.9494	8449134.25	0.0036	0.3452
Na	23	3	He	47727.493	171.0687	8336646.75	0.0036	0.3452
Mg	24	3	He	48336.344	86.7345	4242437.44	0.0018	0.003497
Mg	24	3	He	46908.275	84.172	4160183.06	0.0018	0.003497
Mg	24	3	He	48213.933	86.5148	4216103.06	0.0018	0.003497
Al	27	3	He	390.458	0.2291	11204.72	0.0006	0.0006432
Al	27	3	He	413.061	0.2423	11975.54	0.0006	0.0006432
Al	27	3	He	408.051	0.2394	11665.02	0.0006	0.0006432
K	39	3	He	12538.4	14.9939	733393.74	0.0012	0.3951
K	39	3	He	12367.15	14.7945	731213.04	0.0012	0.3951
K	39	3	He	12561.723	15.021	732015.07	0.0012	0.3951
Ca	44	3	He	259651.644	17.5427	858063.97	0.0001	0.002715
Ca	44	3	He	256363.6	17.3206	856064.75	0.0001	0.002715
Ca	44	3	He	263376.133	17.7943	867163.58	0.0001	0.002715
Ti	47	3	He	14.72	0.008	390.02	0.0005	7.003E-05
Ti	47	3	He	10.044	0.0055	270.01	0.0005	7.003E-05
Ti	47	3	He	11.717	0.0064	310.01	0.0005	7.003E-05
V	51	3	He	2.088	0.0705	3448.43	0.0219	0.02486
V	51	3	He	2.154	0.072	3556.45	0.0219	0.02486
V	51	3	He	2.173	0.0724	3526.45	0.0219	0.02486
Cr	52	3	He	0.625	0.0587	2870.35	0.0299	0.03997
Cr	52	3	He	0.449	0.0534	2640.35	0.0299	0.03997
Cr	52	3	He	0.57	0.0571	2780.36	0.0299	0.03997
Mn	55	3	He	567.042	7.28	356085.70	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	552.815	7.0974	350787.26	0.0128	0.002639
Mn	55	3	He	563.856	7.2391	352780.78	0.0128	0.002639
Fe	57	3	He	5530.939	3.2149	157247.95	0.0006	0.001429
Fe	57	3	He	5360.686	3.1159	154004.49	0.0006	0.001429
Fe	57	3	He	5547.816	3.2247	157146.44	0.0006	0.001429
Co	59	3	He	0.438	0.0268	1310.11	0.0563	0.002149
Co	59	3	He	0.447	0.0273	1350.11	0.0563	0.002149
Co	59	3	He	0.418	0.0257	1250.09	0.0563	0.002149
Ni	60	3	He	1.154	0.0127	1120.08	0.0086	0.002834
Ni	60	3	He	1.121	0.0125	1080.09	0.0086	0.002834
Ni	60	3	He	1.163	0.0128	1120.09	0.0086	0.002834
Cu	63	3	He	0.595	0.02	1760.16	0.0257	0.004757
Cu	63	3	He	0.745	0.0239	2070.21	0.0257	0.004757
Cu	63	3	He	0.626	0.0208	1820.19	0.0257	0.004757
Zn	66	3	He	21.315	0.0659	5791.39	0.0029	0.003818
Zn	66	3	He	21.469	0.0663	5751.42	0.0029	0.003818
Zn	66	3	He	19.829	0.0616	5381.19	0.0029	0.003818
As	75	3	He	8.946	0.0191	1682.11	0.002	0.0008061
As	75	3	He	9.356	0.02	1732.12	0.002	0.0008061
As	75	3	He	9.109	0.0195	1702.11	0.002	0.0008061
Sr	88	3	He	3232.94	28.9999	2418923.09	0.009	0.0009645
Sr	88	3	He	3135.544	28.1262	2447049.96	0.009	0.0009645
Sr	88	3	He	3124.574	28.0278	2428044.03	0.009	0.0009645
Mo	98	3	He	8.977	0.1971	16440.12	0.0219	0.0002706
Mo	98	3	He	8.306	0.1824	15869.44	0.0219	0.0002706
Mo	98	3	He	8.848	0.1943	16830.66	0.0219	0.0002706
Ag	107	3	He	0.005	0.0008	70.00	0.0465	0.0006206
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Cd	111	3	He	0.036	0.0002	16.00	0.0053	0
Cd	111	3	He	0.017	0.0001	8.00	0.0053	0
Cd	111	3	He	0.017	0.0001	8.00	0.0053	0
Sn	120	3	He	0.217	0.0199	1660.16	0.0158	0.01648
Sn	120	3	He	0.187	0.0194	1690.18	0.0158	0.01648
Sn	120	3	He	0.251	0.0204	1770.19	0.0158	0.01648
Sb	121	3	He	0.127	0.0022	180.01	0.0149	0.0002698
Sb	121	3	He	0.09	0.0016	140.01	0.0149	0.0002698
Sb	121	3	He	0.106	0.0018	160.01	0.0149	0.0002698
Ba	137	3	He	314.186	1.5081	125794.44	0.0048	0.0002317
Ba	137	3	He	298.778	1.4342	124776.14	0.0048	0.0002317
Ba	137	3	He	303.674	1.4577	126277.24	0.0048	0.0002317
Tl	205	3	He	0.045	0.0012	500.03	0.0247	0.0001339
Tl	205	3	He	0.037	0.0011	420.03	0.0247	0.0001339
Tl	205	3	He	0.039	0.0011	430.02	0.0247	0.0001339
Pb	208	3	He	0.627	0.0216	4620.95	0.0327	0.00107
Pb	208	3	He	0.594	0.0205	4350.87	0.0327	0.00107
Pb	208	3	He	0.651	0.0224	4661.01	0.0327	0.00107
U	238	3	He	12.766	0.6289	194318.81	0.0493	7.55E-05
U	238	3	He	12.895	0.6353	191018.14	0.0493	7.55E-05
U	238	3	He	12.655	0.6235	190727.30	0.0493	7.55E-05
Sc	45	1	No Gas			2552676.37		
Sc	45	1	No Gas			2552987.62		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2498145.28		
Ge	72	1	No Gas			1267106.39		
Ge	72	1	No Gas			1265888.03		
Ge	72	1	No Gas			1255593.11		
Sc	45	2	H2			185954.67		
Sc	45	2	H2			185126.42		
Sc	45	2	H2			182926.83		
Ge	72	2	H2			164568.75		
Ge	72	2	H2			165105.90		
Ge	72	2	H2			161980.03		
In	115	2	H2			391541.17		
In	115	2	H2			388187.26		
In	115	2	H2			385082.49		
Sc	45	3	He			48912.94		
Sc	45	3	He			49424.76		
Sc	45	3	He			48732.73		
Ge	72	3	He			87909.87		
Ge	72	3	He			86711.85		
Ge	72	3	He			87426.58		
In	115	3	He			83421.01		
In	115	3	He			87011.32		
In	115	3	He			86639.43		
Tb	159	3	He			400553.67		
Tb	159	3	He			399719.76		
Tb	159	3	He			395787.03		
Bi	209	3	He			308960.56		
Bi	209	3	He			300683.08		
Bi	209	3	He			305917.67		

US EPA Tune Check Report

Operator Name	us19_usr_ins22323
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA_ICPMS.b
Acq. Date-Time	8/10/2023 6:41:08 AM
Report Comment	E09 Tune Report
Instrument Name	G8403A SG20064740

[No Gas]

Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	4596	45955.53			0.247	5.000
24	10.00	18924	189241.02			0.365	5.000
25	10.00	2611	26107.30			0.389	5.000
26	10.00	3030	30301.01			0.447	5.000
59	10.00	32772	327724.78			0.165	5.000
115	10.00	52992	529918.24			0.547	5.000
206	10.00	13550	135501.62			1.008	5.000
207	10.00	11878	118779.86			0.742	5.000
208	10.00	28284	282837.36			0.549	5.000

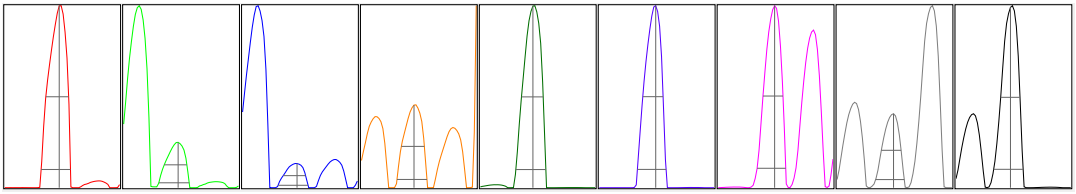
Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
9	4615	4589	4596	4588	4589
24	18920	18983	18970	18938	18809
25	2605	2614	2623	2615	2596
26	3041	3044	3023	3031	3011
59	32692	32757	32769	32821	32823
115	52508	52940	53155	53217	53140
206	13323	13544	13587	13615	13682
207	11743	11876	11861	11973	11938
208	28020	28274	28340	28388	28397

Integration Time [sec] 0.1

Resolution/Axis

US EPA Tune Check Report



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	8555.76	8.95	8.90 - 9.10	
24	35154.04	23.95	23.90 - 24.10	
25	4668.56	24.95	24.90 - 25.10	
26	5436.15	25.90	25.90 - 26.10	
59	62162.42	58.90	58.90 - 59.10	
115	105743.77	115.00	114.90 - 115.10	
206	26867.82	206.00	205.90 - 206.10	
207	23272.60	207.00	206.90 - 207.10	
208	56734.19	207.95	207.90 - 208.10	

Mass	W-50%	W-10%	W-10% (Required)	W-10% (Flag)
9	0.59	0.755	0.900	
24	0.58	0.781	0.900	
25	0.57	0.771	0.900	
26	0.59	0.771	0.900	
59	0.56	0.772	0.900	
115	0.52	0.738	0.900	
206	0.51	0.735	0.900	
207	0.51	0.737	0.900	
208	0.50	0.758	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	235
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	General Purpose	Nebulizer Gas	1.05 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	0.90 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	10.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	8.4 V	Deflect	12.8 V
Extract 2	-170.0 V	Cell Entrance	-30 V	Plate Bias	-45 V
Omega Bias	-95 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.5 V

US EPA Tune Check Report

He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	160 V		

QP Parameters

Mass Gain	131	Axis Gain	1.0006	QP Bias	-2.5 V
Mass Offset	124	Axis Offset	-0.05		

Hardware Settings

Torch

Torch H	-0.8 mm	Torch V	-0.7 mm		

EM

Discriminator	3.8 mV	Analog HV	2187 V	Pulse HV	1732 V

Quantitation Report

Data File Name	202SMPL.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	8/10/2023 5:34:24 PM
Sample Name	410-136736-H-3-A
Sample Type	Sample
Comment	T20
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

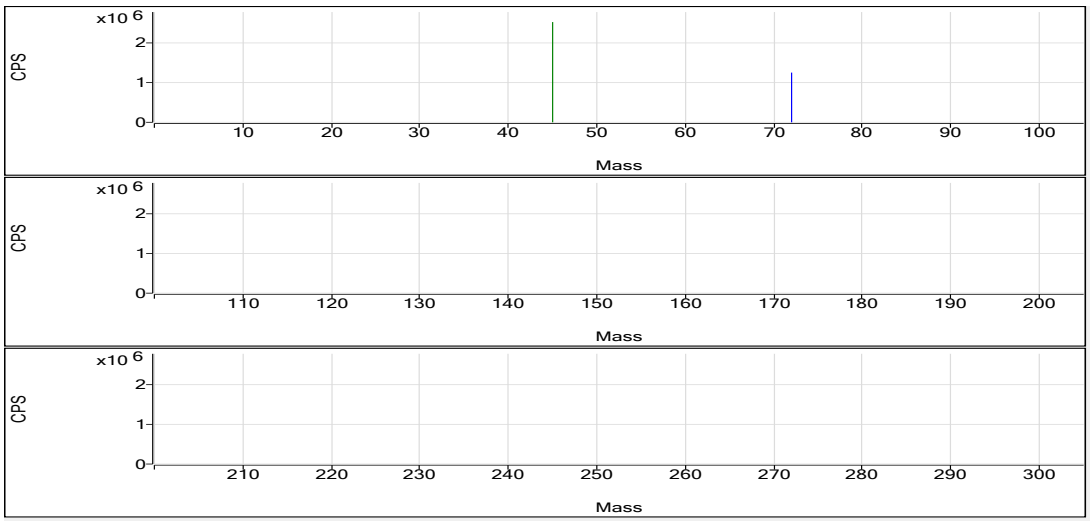
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.020	ppb	27.4	50.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	1.312	ppb	10.5	92.00	0.0006	Pulse	1.5000	3
Na	23	45	He	67292.390	ppb	1.5	11432134.41	241.0533	Analog	0.1000	3
Mg	24	45	He	49664.880	ppb	1.2	4226698.79	89.1183	Analog	0.1000	3
Al	27	45	He	39.502	ppb	17.6	1126.82	0.0238	Pulse	0.1000	3
K	39	45	He	16165.125	ppb	0.7	911386.73	19.2166	Pulse	0.1000	3
Ca	44	45	He	274198.951	ppb	1.0	878623.14	18.5254	Pulse	0.1000	3
Ti	47	45	He	1.967	ppb	64.7	53.34	0.0011	Pulse	0.1000	3
V	51	45	He	11.115	ppb	1.0	12702.24	0.2678	Pulse	0.5000	3
Cr	52	45	He	0.297	ppb	5.4	2316.93	0.0489	Pulse	0.1000	3
Mn	55	45	He	829.474	ppb	0.2	505012.18	10.6480	Pulse	0.1000	3
Fe	57	45	He	663.780	ppb	4.4	18358.92	0.3871	Pulse	0.1000	3
Co	59	45	He	1.205	ppb	5.3	3317.16	0.0699	Pulse	0.1000	3
Ni	60	72	He	7.740	ppb	0.8	5974.75	0.0693	Pulse	0.1000	3
Cu	63	72	He	0.396	ppb	5.1	1286.77	0.0149	Pulse	0.1000	3
Zn	66	72	He	3.614	ppb	13.9	1236.76	0.0143	Pulse	0.1000	3
As	75	72	He	20.022	ppb	1.6	3607.81	0.0418	Pulse	0.5000	3
Sr	88	115	He	2246.296	ppb	1.3	1723351.54	20.1498	Analog	0.1000	3
Mo	98	115	He	12.398	ppb	3.2	23276.69	0.2721	Pulse	0.1000	3
Ag	107	115	He	-0.002	ppb	N/A	43.33	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.114	ppb	7.2	52.00	0.0006	Pulse	0.5000	3
Sn	120	115	He	-0.090	ppb	N/A	1286.78	0.0151	Pulse	0.1000	3
Sb	121	115	He	0.447	ppb	27.7	590.03	0.0069	Pulse	0.1000	3
Ba	137	115	He	178.489	ppb	1.5	73282.79	0.8569	Pulse	0.1000	3
Tl	205	159	He	0.053	ppb	6.8	576.70	0.0015	Pulse	0.1000	3
Pb	208	159	He	0.071	ppb	14.4	1346.75	0.0034	Pulse	0.1000	3
U	238	209	He	12.081	ppb	1.8	179396.04	0.5952	Pulse	0.1000	3

ISTD Table:

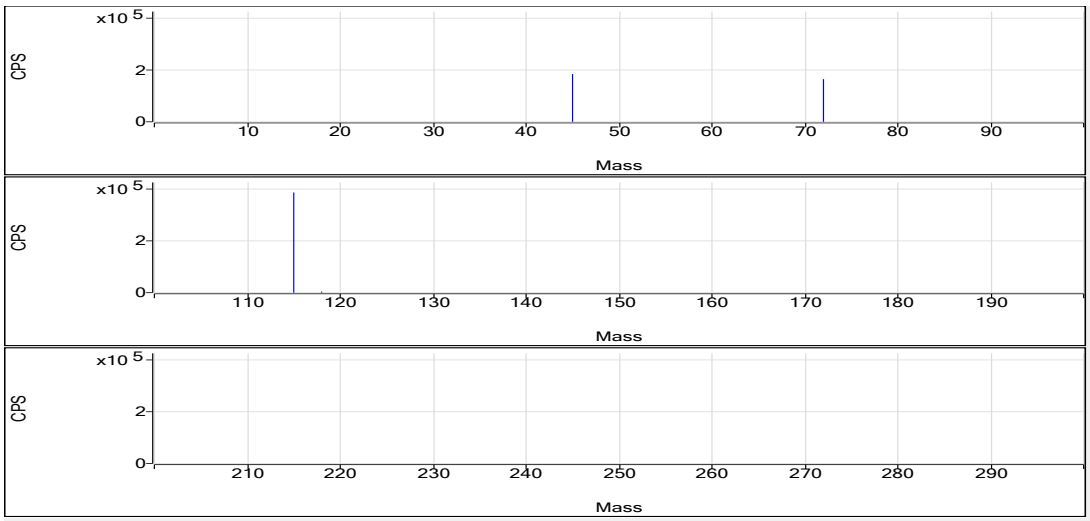
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2520182.51	1.6	105.1	Analog	0.1000	3
No Gas	Ge	72	1249744.82	0.2	108.4	Pulse	0.1000	3
H2	Sc	45	184277.78	0.9	98.5	Pulse	0.1000	3
H2	Ge	72	164538.48	0.4	100.5	Pulse	0.1000	3
H2	In	115	386400.16	0.4	99.3	Pulse	0.1000	3
He	Sc	45	47428.08	0.5	101.7	Pulse	0.1000	3
He	Ge	72	86256.21	0.8	106.2	Pulse	0.1000	3
He	In	115	85535.59	1.3	99.2	Pulse	0.1000	3
He	Tb	159	396173.67	0.8	99.4	Pulse	0.1000	3
He	Bi	209	301411.62	0.7	97.5	Pulse	0.1000	3

No Gas

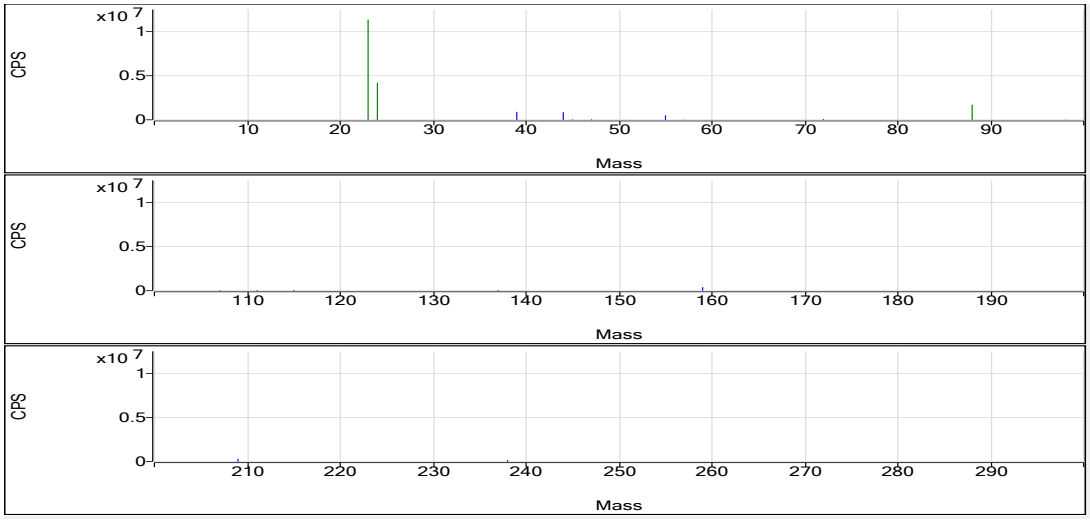


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.014	0	40.00	0.0008	4.685E-06
Be	9	1	No Gas	0.025	0	60.00	0.0008	4.685E-06
Be	9	1	No Gas	0.021	0	52.00	0.0008	4.685E-06
Se	78	2	H2	1.406	0.0006	98.00	0.0004	1.219E-05
Se	78	2	H2	1.375	0.0006	96.67	0.0004	1.219E-05
Se	78	2	H2	1.154	0.0005	81.33	0.0004	1.219E-05
Na	23	3	He	66354.416	237.6982	11335661.08	0.0036	0.3452
Na	23	3	He	67189.636	240.6858	11405593.58	0.0036	0.3452
Na	23	3	He	68333.117	244.7761	11555148.58	0.0036	0.3452
Mg	24	3	He	49883.152	89.5099	4268666.81	0.0018	0.003497
Mg	24	3	He	48991.753	87.9105	4165892.75	0.0018	0.003497
Mg	24	3	He	50119.736	89.9344	4245536.81	0.0018	0.003497
Al	27	3	He	45.145	0.0271	1290.22	0.0006	0.0006432
Al	27	3	He	31.727	0.0192	910.06	0.0006	0.0006432
Al	27	3	He	41.633	0.025	1180.17	0.0006	0.0006432
K	39	3	He	16095.646	19.1357	912566.24	0.0012	0.3951
K	39	3	He	16103.157	19.1444	907212.96	0.0012	0.3951
K	39	3	He	16296.571	19.3696	914381.00	0.0012	0.3951
Ca	44	3	He	275350.653	18.6032	887172.64	0.0001	0.002715
Ca	44	3	He	271166.283	18.3205	868170.69	0.0001	0.002715
Ca	44	3	He	276079.917	18.6524	880526.08	0.0001	0.002715
Ti	47	3	He	1.432	0.0008	40.00	0.0005	7.003E-05
Ti	47	3	He	1.049	0.0006	30.00	0.0005	7.003E-05
Ti	47	3	He	3.421	0.0019	90.01	0.0005	7.003E-05
V	51	3	He	11.106	0.2676	12763.63	0.0219	0.02486
V	51	3	He	11.005	0.2654	12577.46	0.0219	0.02486
V	51	3	He	11.233	0.2704	12765.64	0.0219	0.02486
Cr	52	3	He	0.283	0.0484	2310.26	0.0299	0.03997
Cr	52	3	He	0.314	0.0494	2340.27	0.0299	0.03997
Cr	52	3	He	0.292	0.0487	2300.27	0.0299	0.03997
Mn	55	3	He	827.655	10.6247	506682.65	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	831.515	10.6742	505828.12	0.0128	0.002639
Mn	55	3	He	829.251	10.6451	502525.77	0.0128	0.002639
Fe	57	3	He	657.374	0.3834	18282.04	0.0006	0.001429
Fe	57	3	He	695.76	0.4057	19223.32	0.0006	0.001429
Fe	57	3	He	638.205	0.3722	17571.39	0.0006	0.001429
Co	59	3	He	1.136	0.0661	3150.44	0.0563	0.002149
Co	59	3	He	1.263	0.0732	3470.55	0.0563	0.002149
Co	59	3	He	1.215	0.0706	3330.49	0.0563	0.002149
Ni	60	3	He	7.679	0.0687	5981.38	0.0086	0.002834
Ni	60	3	He	7.747	0.0693	5951.38	0.0086	0.002834
Ni	60	3	He	7.796	0.0697	5991.49	0.0086	0.002834
Cu	63	3	He	0.379	0.0145	1260.11	0.0257	0.004757
Cu	63	3	He	0.418	0.0155	1330.10	0.0257	0.004757
Cu	63	3	He	0.391	0.0148	1270.10	0.0257	0.004757
Zn	66	3	He	3.584	0.0143	1240.09	0.0029	0.003818
Zn	66	3	He	4.13	0.0158	1360.11	0.0029	0.003818
Zn	66	3	He	3.127	0.0129	1110.09	0.0029	0.003818
As	75	3	He	19.858	0.0415	3610.48	0.002	0.0008061
As	75	3	He	19.815	0.0414	3554.47	0.002	0.0008061
As	75	3	He	20.392	0.0426	3658.49	0.002	0.0008061
Sr	88	3	He	2225.044	19.9592	1716829.35	0.009	0.0009645
Sr	88	3	He	2278.344	20.4373	1722421.07	0.009	0.0009645
Sr	88	3	He	2235.5	20.053	1730804.19	0.009	0.0009645
Mo	98	3	He	12.023	0.2639	22699.12	0.0219	0.0002706
Mo	98	3	He	12.358	0.2712	22859.32	0.0219	0.0002706
Mo	98	3	He	12.813	0.2812	24271.62	0.0219	0.0002706
Ag	107	3	He	-0.003	0.0005	40.00	0.0465	0.0006206
Ag	107	3	He	-0.006	0.0004	30.00	0.0465	0.0006206
Ag	107	3	He	0.002	0.0007	60.00	0.0465	0.0006206
Cd	111	3	He	0.104	0.0006	48.00	0.0053	0
Cd	111	3	He	0.12	0.0006	54.00	0.0053	0
Cd	111	3	He	0.117	0.0006	54.00	0.0053	0
Sn	120	3	He	-0.093	0.015	1290.12	0.0158	0.01648
Sn	120	3	He	0.009	0.0166	1400.12	0.0158	0.01648
Sn	120	3	He	-0.185	0.0136	1170.10	0.0158	0.01648
Sb	121	3	He	0.318	0.005	430.02	0.0149	0.0002698
Sb	121	3	He	0.565	0.0087	730.04	0.0149	0.0002698
Sb	121	3	He	0.458	0.0071	610.04	0.0149	0.0002698
Ba	137	3	He	177.501	0.8521	73296.61	0.0048	0.0002317
Ba	137	3	He	181.436	0.871	73406.67	0.0048	0.0002317
Ba	137	3	He	176.529	0.8475	73145.10	0.0048	0.0002317
Tl	205	3	He	0.05	0.0014	540.03	0.0247	0.0001339
Tl	205	3	He	0.053	0.0014	570.03	0.0247	0.0001339
Tl	205	3	He	0.057	0.0016	620.04	0.0247	0.0001339
Pb	208	3	He	0.067	0.0033	620.04	0.0327	0.00107
Pb	208	3	He	0.064	0.0032	660.05	0.0327	0.00107
Pb	208	3	He	0.083	0.0038	810.06	0.0327	0.00107
U	238	3	He	12.199	0.601	179739.88	0.0493	7.55E-05
U	238	3	He	11.832	0.5829	176100.64	0.0493	7.55E-05
U	238	3	He	12.213	0.6017	182347.61	0.0493	7.55E-05
Sc	45	1	No Gas			2567200.74		
Sc	45	1	No Gas			2504175.43		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2489171.37		
Ge	72	1	No Gas			1251510.68		
Ge	72	1	No Gas			1246636.23		
Ge	72	1	No Gas			1251087.56		
Sc	45	2	H2			182553.84		
Sc	45	2	H2			184244.06		
Sc	45	2	H2			186035.43		
Ge	72	2	H2			163749.42		
Ge	72	2	H2			165094.14		
Ge	72	2	H2			164771.87		
In	115	2	H2			387666.36		
In	115	2	H2			386593.51		
In	115	2	H2			384940.62		
Sc	45	3	He			47689.31		
Sc	45	3	He			47387.90		
Sc	45	3	He			47207.02		
Ge	72	3	He			87014.49		
Ge	72	3	He			85846.88		
Ge	72	3	He			85907.26		
In	115	3	He			86025.99		
In	115	3	He			84284.95		
In	115	3	He			86317.53		
Tb	159	3	He			393169.56		
Tb	159	3	He			395839.02		
Tb	159	3	He			399512.42		
Bi	209	3	He			299072.67		
Bi	209	3	He			302100.44		
Bi	209	3	He			303061.75		

Quantitation Report

Data File Name	203SMPL.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	8/10/2023 5:36:26 PM
Sample Name	410-136736-H-4-A
Sample Type	Sample
Comment	T20
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

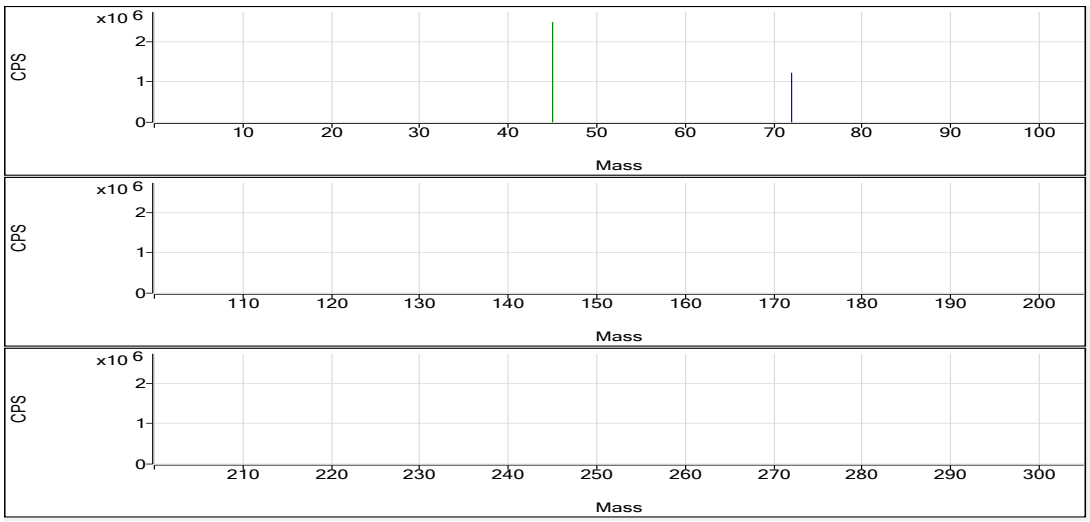
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.010	ppb	46.7	31.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.017	ppb	120.7	3.11	0.0000	Pulse	1.5000	3
Na	23	45	He	54.344	ppb	5.2	26033.50	0.5395	Pulse	0.1000	3
Mg	24	45	He	8.522	ppb	3.6	906.72	0.0188	Pulse	0.1000	3
Al	27	45	He	3.029	ppb	40.6	116.67	0.0024	Pulse	0.1000	3
K	39	45	He	7.416	ppb	93.0	19473.58	0.4037	Pulse	0.1000	3
Ca	44	45	He	58.819	ppb	41.9	323.35	0.0067	Pulse	0.1000	3
Ti	47	45	He	0.000	ppb	N/A	3.33	0.0001	Pulse	0.1000	3
V	51	45	He	0.399	ppb	14.9	1619.44	0.0336	Pulse	0.5000	3
Cr	52	45	He	-0.061	ppb	N/A	1840.19	0.0381	Pulse	0.1000	3
Mn	55	45	He	0.247	ppb	36.7	280.01	0.0058	Pulse	0.1000	3
Fe	57	45	He	2.890	ppb	36.4	150.01	0.0031	Pulse	0.1000	3
Co	59	45	He	0.045	ppb	56.3	226.68	0.0047	Pulse	0.1000	3
Ni	60	72	He	0.206	ppb	37.7	390.02	0.0046	Pulse	0.1000	3
Cu	63	72	He	0.024	ppb	133.5	456.69	0.0054	Pulse	0.1000	3
Zn	66	72	He	2.609	ppb	17.9	966.74	0.0114	Pulse	0.1000	3
As	75	72	He	0.026	ppb	307.4	72.67	0.0009	Pulse	0.5000	3
Sr	88	115	He	0.310	ppb	23.5	330.01	0.0037	Pulse	0.1000	3
Mo	98	115	He	0.015	ppb	140.2	53.33	0.0006	Pulse	0.1000	3
Ag	107	115	He	-0.006	ppb	N/A	30.00	0.0003	Pulse	0.1000	3
Cd	111	115	He	0.003	ppb	173.2	1.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.113	ppb	N/A	1293.44	0.0147	Pulse	0.1000	3
Sb	121	115	He	0.010	ppb	224.2	36.67	0.0004	Pulse	0.1000	3
Ba	137	115	He	-0.001	ppb	N/A	20.00	0.0002	Pulse	0.1000	3
Tl	205	159	He	0.017	ppb	17.3	220.01	0.0006	Pulse	0.1000	3
Pb	208	159	He	0.011	ppb	26.3	573.36	0.0014	Pulse	0.1000	3
U	238	209	He	0.022	ppb	19.1	370.02	0.0012	Pulse	0.1000	3

ISTD Table:

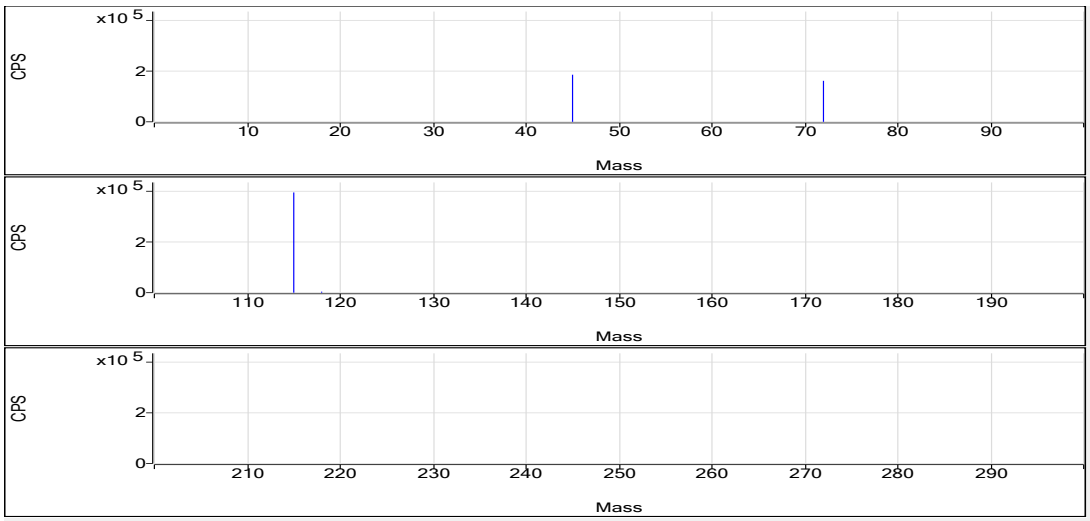
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2473968.35	0.8	103.1	Analog	0.1000	3
No Gas	Ge	72	1222519.88	0.2	106.0	Pulse	0.1000	3
H2	Sc	45	184955.70	0.5	98.9	Pulse	0.1000	3
H2	Ge	72	161026.08	0.5	98.4	Pulse	0.1000	3
H2	In	115	393623.86	0.7	101.2	Pulse	0.1000	3
He	Sc	45	48244.28	1.5	103.4	Pulse	0.1000	3
He	Ge	72	84728.05	1.0	104.4	Pulse	0.1000	3
He	In	115	88107.56	0.8	102.2	Pulse	0.1000	3
He	Tb	159	398840.67	1.5	100.1	Pulse	0.1000	3
He	Bi	209	312481.85	1.0	101.0	Pulse	0.1000	3

No Gas

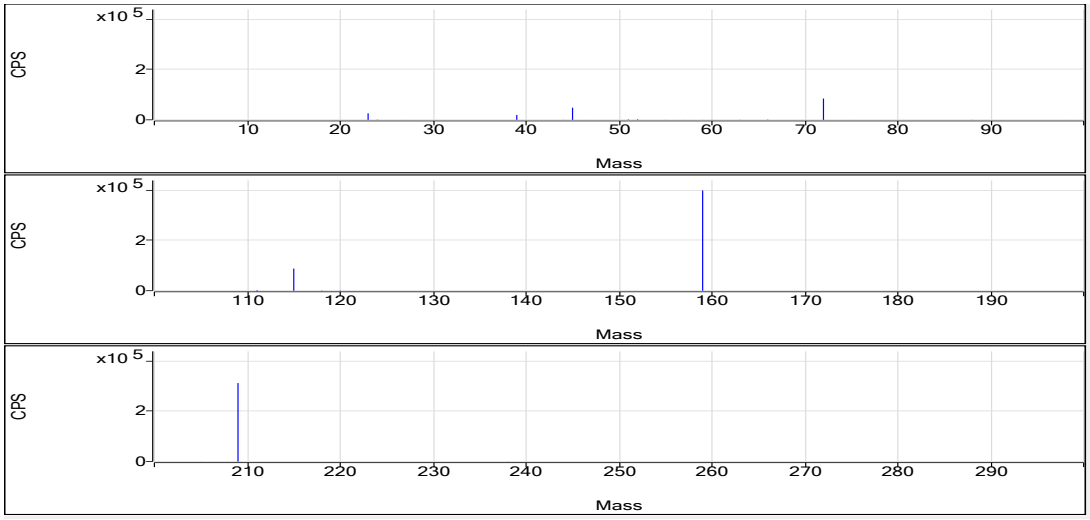


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.009	0	28.00	0.0008	4.685E-06
Be	9	1	No Gas	0.016	0	42.00	0.0008	4.685E-06
Be	9	1	No Gas	0.007	0	24.00	0.0008	4.685E-06
Se	78	2	H2	0.04	0	4.67	0.0004	1.219E-05
Se	78	2	H2	0.01	0	2.67	0.0004	1.219E-05
Se	78	2	H2	0.001	0	2.00	0.0004	1.219E-05
Na	23	3	He	57.277	0.55	26965.15	0.0036	0.3452
Na	23	3	He	54.115	0.5387	25642.84	0.0036	0.3452
Na	23	3	He	51.639	0.5299	25492.50	0.0036	0.3452
Mg	24	3	He	8.852	0.0194	950.06	0.0018	0.003497
Mg	24	3	He	8.238	0.0183	870.05	0.0018	0.003497
Mg	24	3	He	8.477	0.0187	900.06	0.0018	0.003497
Al	27	3	He	3.085	0.0024	120.01	0.0006	0.0006432
Al	27	3	He	1.773	0.0017	80.00	0.0006	0.0006432
Al	27	3	He	4.23	0.0031	150.01	0.0006	0.0006432
K	39	3	He	4.311	0.4001	19613.74	0.0012	0.3951
K	39	3	He	15.322	0.4129	19653.80	0.0012	0.3951
K	39	3	He	2.613	0.3981	19153.21	0.0012	0.3951
Ca	44	3	He	86.64	0.0086	420.02	0.0001	0.002715
Ca	44	3	He	50.004	0.0061	290.01	0.0001	0.002715
Ca	44	3	He	39.814	0.0054	260.01	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.261	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	0.344	0.0324	1588.10	0.0219	0.02486
V	51	3	He	0.462	0.035	1664.11	0.0219	0.02486
V	51	3	He	0.39	0.0334	1606.10	0.0219	0.02486
Cr	52	3	He	-0.006	0.0398	1950.20	0.0299	0.03997
Cr	52	3	He	-0.072	0.0378	1800.18	0.0299	0.03997
Cr	52	3	He	-0.106	0.0368	1770.18	0.0299	0.03997
Mn	55	3	He	0.208	0.0053	260.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.351	0.0071	340.02	0.0128	0.002639
Mn	55	3	He	0.183	0.005	240.01	0.0128	0.002639
Fe	57	3	He	2.808	0.0031	150.01	0.0006	0.001429
Fe	57	3	He	1.88	0.0025	120.01	0.0006	0.001429
Fe	57	3	He	3.981	0.0037	180.01	0.0006	0.001429
Co	59	3	He	0.067	0.0059	290.01	0.0563	0.002149
Co	59	3	He	0.051	0.005	240.01	0.0563	0.002149
Co	59	3	He	0.017	0.0031	150.01	0.0563	0.002149
Ni	60	3	He	0.226	0.0048	400.03	0.0086	0.002834
Ni	60	3	He	0.121	0.0039	330.02	0.0086	0.002834
Ni	60	3	He	0.272	0.0052	440.02	0.0086	0.002834
Cu	63	3	He	-0.013	0.0044	370.02	0.0257	0.004757
Cu	63	3	He	0.043	0.0059	500.03	0.0257	0.004757
Cu	63	3	He	0.044	0.0059	500.03	0.0257	0.004757
Zn	66	3	He	2.829	0.0121	1010.08	0.0029	0.003818
Zn	66	3	He	2.071	0.0098	840.06	0.0029	0.003818
Zn	66	3	He	2.927	0.0123	1050.07	0.0029	0.003818
As	75	3	He	0.108	0.001	86.00	0.002	0.0008061
As	75	3	He	0.019	0.0008	72.00	0.002	0.0008061
As	75	3	He	-0.049	0.0007	60.00	0.002	0.0008061
Sr	88	3	He	0.3	0.0037	320.01	0.009	0.0009645
Sr	88	3	He	0.388	0.0044	390.02	0.009	0.0009645
Sr	88	3	He	0.244	0.0031	280.01	0.009	0.0009645
Mo	98	3	He	-0.002	0.0002	20.00	0.0219	0.0002706
Mo	98	3	He	0.008	0.0005	40.00	0.0219	0.0002706
Mo	98	3	He	0.039	0.0011	100.00	0.0219	0.0002706
Ag	107	3	He	-0.008	0.0002	20.00	0.0465	0.0006206
Ag	107	3	He	-0.004	0.0005	40.00	0.0465	0.0006206
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Cd	111	3	He	0.009	0	4.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Sn	120	3	He	0.019	0.0168	1470.13	0.0158	0.01648
Sn	120	3	He	-0.011	0.0163	1430.13	0.0158	0.01648
Sn	120	3	He	-0.345	0.011	980.07	0.0158	0.01648
Sb	121	3	He	-0.003	0.0002	20.00	0.0149	0.0002698
Sb	121	3	He	0.036	0.0008	70.00	0.0149	0.0002698
Sb	121	3	He	-0.003	0.0002	20.00	0.0149	0.0002698
Ba	137	3	He	0.047	0.0005	40.00	0.0048	0.0002317
Ba	137	3	He	-0.025	0.0001	10.00	0.0048	0.0002317
Ba	137	3	He	-0.025	0.0001	10.00	0.0048	0.0002317
Tl	205	3	He	0.014	0.0005	190.01	0.0247	0.0001339
Tl	205	3	He	0.02	0.0006	250.01	0.0247	0.0001339
Tl	205	3	He	0.017	0.0006	220.01	0.0247	0.0001339
Pb	208	3	He	0.012	0.0015	340.02	0.0327	0.00107
Pb	208	3	He	0.008	0.0013	250.01	0.0327	0.00107
Pb	208	3	He	0.014	0.0015	360.02	0.0327	0.00107
U	238	3	He	0.019	0.001	320.02	0.0493	7.55E-05
U	238	3	He	0.021	0.0011	340.02	0.0493	7.55E-05
U	238	3	He	0.027	0.0014	450.02	0.0493	7.55E-05
Sc	45	1	No Gas			2455700.59		
Sc	45	1	No Gas			2494708.71		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2471495.74		
Ge	72	1	No Gas			1225666.15		
Ge	72	1	No Gas			1221312.01		
Ge	72	1	No Gas			1220581.47		
Sc	45	2	H2			184962.73		
Sc	45	2	H2			185944.78		
Sc	45	2	H2			183959.59		
Ge	72	2	H2			161109.83		
Ge	72	2	H2			161738.30		
Ge	72	2	H2			160230.10		
In	115	2	H2			390600.70		
In	115	2	H2			396394.76		
In	115	2	H2			393876.13		
Sc	45	3	He			49023.75		
Sc	45	3	He			47598.64		
Sc	45	3	He			48110.44		
Ge	72	3	He			83785.71		
Ge	72	3	He			85294.86		
Ge	72	3	He			85103.58		
In	115	3	He			87655.01		
In	115	3	He			87756.48		
In	115	3	He			88934.03		
Tb	159	3	He			399806.20		
Tb	159	3	He			404133.74		
Tb	159	3	He			392582.06		
Bi	209	3	He			309688.35		
Bi	209	3	He			311867.01		
Bi	209	3	He			315890.19		

Quantitation Report

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Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	8/10/2023 5:38:29 PM
Sample Name	410-136736-H-1-A
Sample Type	Sample
Comment	T20
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

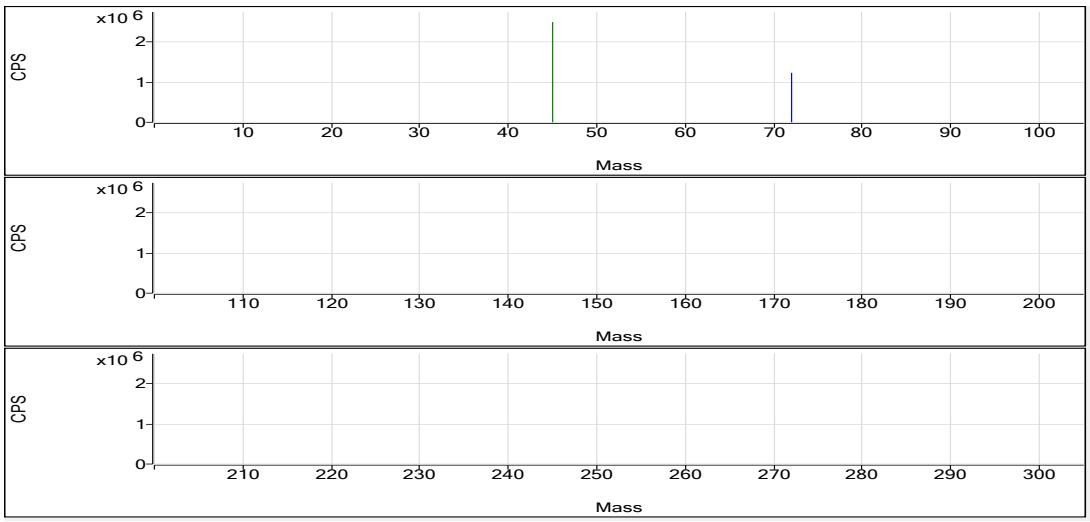
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.043	ppb	30.7	94.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	1.794	ppb	4.6	125.11	0.0008	Pulse	1.5000	3
Na	23	45	He	53504.838	ppb	2.7	9160231.95	191.7346	Analog	0.1000	3
Mg	24	45	He	55908.800	ppb	0.9	4794084.93	100.3219	Analog	0.1000	3
Al	27	45	He	445.258	ppb	7.4	12462.82	0.2611	Pulse	0.1000	3
K	39	45	He	13794.913	ppb	2.4	786205.69	16.4569	Pulse	0.1000	3
Ca	44	45	He	303030.943	ppb	2.9	977970.14	20.4730	Pulse	0.1000	3
Ti	47	45	He	11.903	ppb	34.6	306.68	0.0065	Pulse	0.1000	3
V	51	45	He	5.383	ppb	5.2	6806.97	0.1425	Pulse	0.5000	3
Cr	52	45	He	0.415	ppb	11.5	2503.65	0.0524	Pulse	0.1000	3
Mn	55	45	He	316.132	ppb	1.9	193970.56	4.0598	Pulse	0.1000	3
Fe	57	45	He	559.163	ppb	5.6	15578.92	0.3263	Pulse	0.1000	3
Co	59	45	He	1.506	ppb	6.2	4154.05	0.0869	Pulse	0.1000	3
Ni	60	72	He	8.233	ppb	4.3	6338.26	0.0735	Pulse	0.1000	3
Cu	63	72	He	0.860	ppb	9.2	2313.60	0.0268	Pulse	0.1000	3
Zn	66	72	He	9.748	ppb	7.1	2777.01	0.0322	Pulse	0.1000	3
As	75	72	He	3.139	ppb	5.7	624.02	0.0072	Pulse	0.5000	3
Sr	88	115	He	3347.466	ppb	0.4	2569325.01	30.0271	Analog	0.1000	3
Mo	98	115	He	12.483	ppb	1.6	23443.49	0.2740	Pulse	0.1000	3
Ag	107	115	He	0.002	ppb	527.1	60.00	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.198	ppb	2.7	90.67	0.0011	Pulse	0.5000	3
Sn	120	115	He	0.164	ppb	113.0	1630.68	0.0191	Pulse	0.1000	3
Sb	121	115	He	0.470	ppb	6.6	620.04	0.0072	Pulse	0.1000	3
Ba	137	115	He	194.942	ppb	1.5	80070.12	0.9358	Pulse	0.1000	3
Tl	205	159	He	0.102	ppb	19.1	1056.75	0.0027	Pulse	0.1000	3
Pb	208	159	He	0.588	ppb	4.1	8061.30	0.0203	Pulse	0.1000	3
U	238	209	He	20.477	ppb	1.1	307578.51	1.0088	Pulse	0.1000	3

ISTD Table:

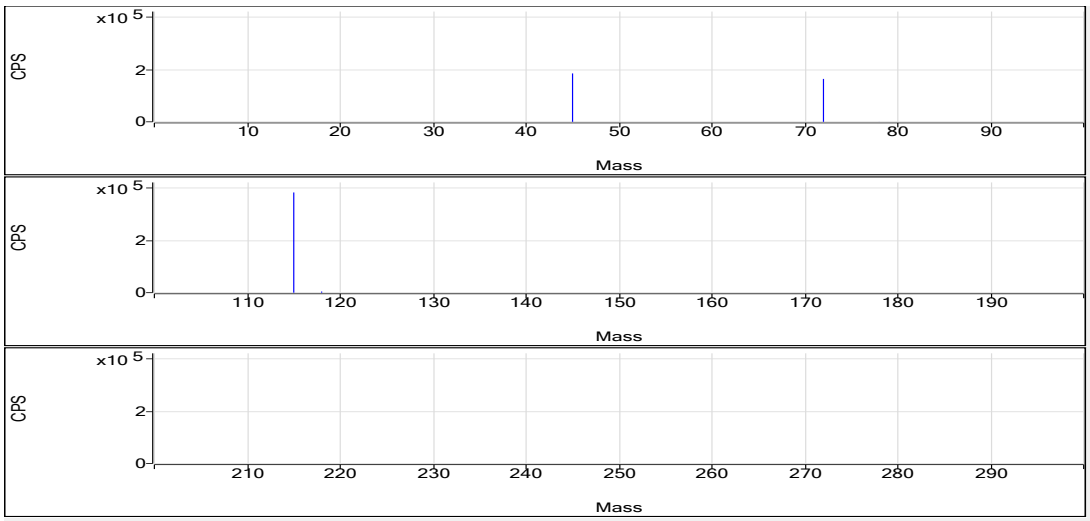
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2505852.72	1.9	104.5	Analog	0.1000	3
No Gas	Ge	72	1237454.64	0.9	107.3	Pulse	0.1000	3
H2	Sc	45	185633.27	0.4	99.3	Pulse	0.1000	3
H2	Ge	72	164608.86	0.7	100.5	Pulse	0.1000	3
H2	In	115	384524.36	0.1	98.8	Pulse	0.1000	3
He	Sc	45	47795.97	3.0	102.5	Pulse	0.1000	3
He	Ge	72	86280.24	1.8	106.3	Pulse	0.1000	3
He	In	115	85565.10	0.7	99.3	Pulse	0.1000	3
He	Tb	159	397054.26	0.7	99.6	Pulse	0.1000	3
He	Bi	209	304911.70	1.0	98.6	Pulse	0.1000	3

No Gas

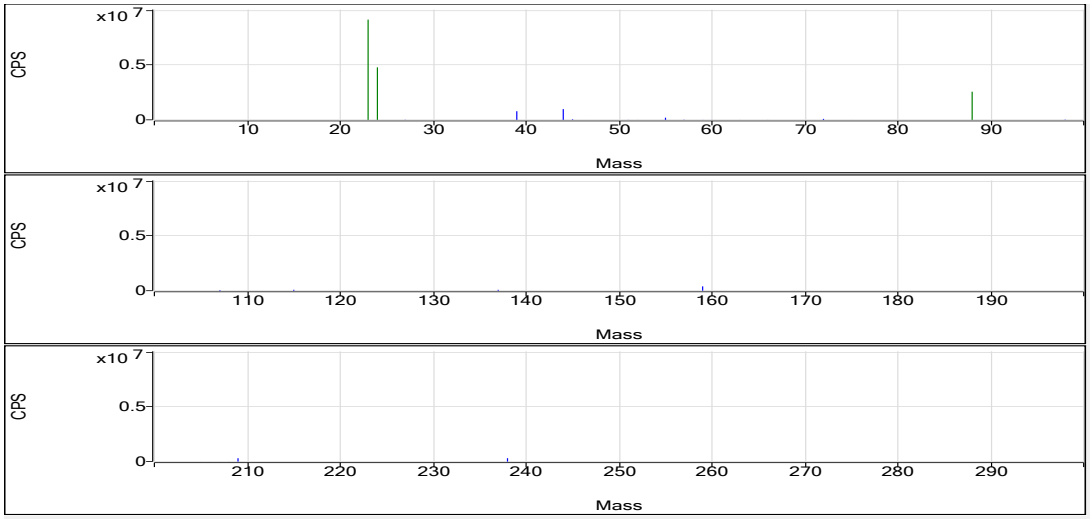


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.038	0	86.00	0.0008	4.685E-06
Be	9	1	No Gas	0.058	0	124.00	0.0008	4.685E-06
Be	9	1	No Gas	0.033	0	74.00	0.0008	4.685E-06
Se	78	2	H2	1.736	0.0007	122.00	0.0004	1.219E-05
Se	78	2	H2	1.889	0.0008	130.67	0.0004	1.219E-05
Se	78	2	H2	1.755	0.0007	122.67	0.0004	1.219E-05
Na	23	3	He	52714.195	188.9064	9319601.74	0.0036	0.3452
Na	23	3	He	52630.511	188.6071	8977481.74	0.0036	0.3452
Na	23	3	He	55169.808	197.6903	9183612.36	0.0036	0.3452
Mg	24	3	He	55376.486	99.3667	4902207.43	0.0018	0.003497
Mg	24	3	He	55938.688	100.3755	4777759.93	0.0018	0.003497
Mg	24	3	He	56411.227	101.2234	4702287.43	0.0018	0.003497
Al	27	3	He	413.462	0.2425	11965.25	0.0006	0.0006432
Al	27	3	He	442.959	0.2598	12365.69	0.0006	0.0006432
Al	27	3	He	479.354	0.2811	13057.53	0.0006	0.0006432
K	39	3	He	13453.021	16.0588	792251.55	0.0012	0.3951
K	39	3	He	13832.565	16.5007	785414.05	0.0012	0.3951
K	39	3	He	14099.154	16.8111	780951.47	0.0012	0.3951
Ca	44	3	He	294713.096	19.9111	982306.24	0.0001	0.002715
Ca	44	3	He	302299.751	20.4236	972141.94	0.0001	0.002715
Ca	44	3	He	312079.984	21.0843	979462.25	0.0001	0.002715
Ti	47	3	He	7.42	0.0041	200.01	0.0005	7.003E-05
Ti	47	3	He	12.782	0.0069	330.02	0.0005	7.003E-05
Ti	47	3	He	15.506	0.0084	390.02	0.0005	7.003E-05
V	51	3	He	5.086	0.136	6711.59	0.0219	0.02486
V	51	3	He	5.428	0.1435	6831.64	0.0219	0.02486
V	51	3	He	5.635	0.1481	6877.67	0.0219	0.02486
Cr	52	3	He	0.378	0.0513	2530.31	0.0299	0.03997
Cr	52	3	He	0.469	0.054	2570.35	0.0299	0.03997
Cr	52	3	He	0.398	0.0519	2410.29	0.0299	0.03997
Mn	55	3	He	310.545	3.9881	196752.91	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	315.178	4.0476	192660.70	0.0128	0.002639
Mn	55	3	He	322.674	4.1438	192498.08	0.0128	0.002639
Fe	57	3	He	531.984	0.3105	15318.68	0.0006	0.001429
Fe	57	3	He	551.83	0.322	15328.60	0.0006	0.001429
Fe	57	3	He	593.675	0.3463	16089.47	0.0006	0.001429
Co	59	3	He	1.547	0.0892	4400.79	0.0563	0.002149
Co	59	3	He	1.399	0.0809	3850.60	0.0563	0.002149
Co	59	3	He	1.572	0.0906	4210.76	0.0563	0.002149
Ni	60	3	He	7.876	0.0704	6191.54	0.0086	0.002834
Ni	60	3	He	8.59	0.0766	6501.64	0.0086	0.002834
Ni	60	3	He	8.233	0.0735	6321.59	0.0086	0.002834
Cu	63	3	He	0.794	0.0251	2210.24	0.0257	0.004757
Cu	63	3	He	0.838	0.0263	2230.23	0.0257	0.004757
Cu	63	3	He	0.947	0.0291	2500.34	0.0257	0.004757
Zn	66	3	He	9.082	0.0303	2660.31	0.0029	0.003818
Zn	66	3	He	9.691	0.032	2720.36	0.0029	0.003818
Zn	66	3	He	10.47	0.0343	2950.37	0.0029	0.003818
As	75	3	He	2.949	0.0068	602.02	0.002	0.0008061
As	75	3	He	3.308	0.0076	644.02	0.002	0.0008061
As	75	3	He	3.159	0.0073	626.02	0.002	0.0008061
Sr	88	3	He	3355.362	30.098	2582275.74	0.009	0.0009645
Sr	88	3	He	3355.62	30.1003	2590052.15	0.009	0.0009645
Sr	88	3	He	3331.415	29.8832	2535647.15	0.009	0.0009645
Mo	98	3	He	12.703	0.2788	23920.92	0.0219	0.0002706
Mo	98	3	He	12.422	0.2726	23460.20	0.0219	0.0002706
Mo	98	3	He	12.323	0.2705	22949.34	0.0219	0.0002706
Ag	107	3	He	0.012	0.0012	100.00	0.0465	0.0006206
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Ag	107	3	He	-0.006	0.0004	30.00	0.0465	0.0006206
Cd	111	3	He	0.196	0.001	90.00	0.0053	0
Cd	111	3	He	0.204	0.0011	94.00	0.0053	0
Cd	111	3	He	0.194	0.001	88.00	0.0053	0
Sn	120	3	He	-0.025	0.0161	1380.12	0.0158	0.01648
Sn	120	3	He	0.171	0.0192	1650.17	0.0158	0.01648
Sn	120	3	He	0.346	0.0219	1861.75	0.0158	0.01648
Sb	121	3	He	0.453	0.007	600.03	0.0149	0.0002698
Sb	121	3	He	0.451	0.007	600.04	0.0149	0.0002698
Sb	121	3	He	0.506	0.0078	660.04	0.0149	0.0002698
Ba	137	3	He	196.909	0.9453	81099.53	0.0048	0.0002317
Ba	137	3	He	191.533	0.9195	79117.28	0.0048	0.0002317
Ba	137	3	He	196.383	0.9427	79993.55	0.0048	0.0002317
Tl	205	3	He	0.106	0.0028	1100.09	0.0247	0.0001339
Tl	205	3	He	0.119	0.0031	1230.10	0.0247	0.0001339
Tl	205	3	He	0.081	0.0021	840.05	0.0247	0.0001339
Pb	208	3	He	0.59	0.0204	4150.90	0.0327	0.00107
Pb	208	3	He	0.562	0.0195	4150.76	0.0327	0.00107
Pb	208	3	He	0.61	0.021	4280.90	0.0327	0.00107
U	238	3	He	20.448	1.0073	304424.41	0.0493	7.55E-05
U	238	3	He	20.27	0.9986	307712.12	0.0493	7.55E-05
U	238	3	He	20.714	1.0204	310599.00	0.0493	7.55E-05
Sc	45	1	No Gas			2545543.87		
Sc	45	1	No Gas			2518609.02		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2453405.28		
Ge	72	1	No Gas			1237856.70		
Ge	72	1	No Gas			1248078.50		
Ge	72	1	No Gas			1226428.73		
Sc	45	2	H2			186329.20		
Sc	45	2	H2			185650.49		
Sc	45	2	H2			184920.11		
Ge	72	2	H2			165680.84		
Ge	72	2	H2			163323.45		
Ge	72	2	H2			164822.30		
In	115	2	H2			384129.84		
In	115	2	H2			384467.77		
In	115	2	H2			384975.46		
Sc	45	3	He			49334.49		
Sc	45	3	He			47598.86		
Sc	45	3	He			46454.55		
Ge	72	3	He			87910.06		
Ge	72	3	He			84921.74		
Ge	72	3	He			86008.93		
In	115	3	He			85803.53		
In	115	3	He			86055.45		
In	115	3	He			84859.17		
Tb	159	3	He			397687.65		
Tb	159	3	He			399458.70		
Tb	159	3	He			394016.44		
Bi	209	3	He			302205.82		
Bi	209	3	He			308150.11		
Bi	209	3	He			304379.16		

Quantitation Report

Data File Name	205SMPL.d
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Sample Type	Sample
Comment	T20
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

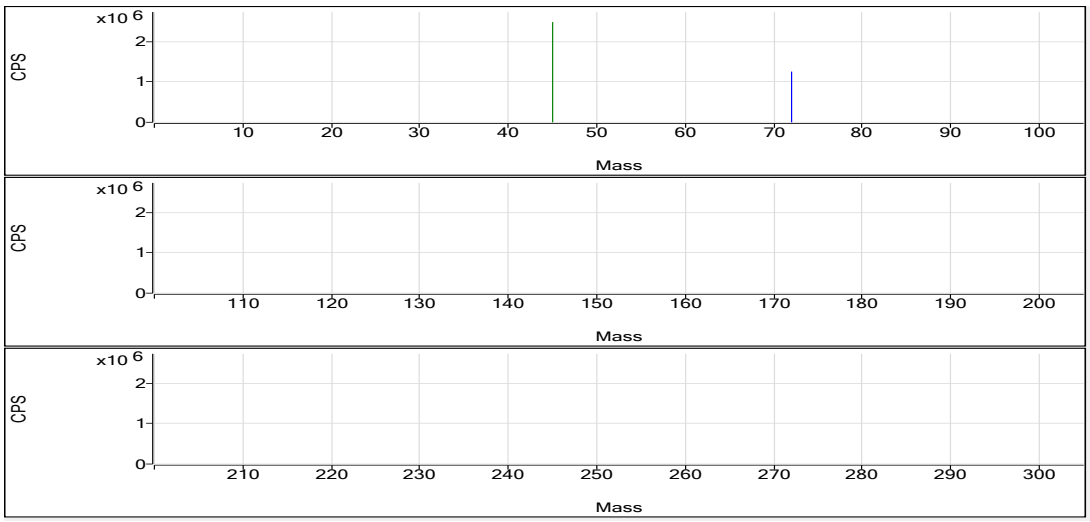
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.014	ppb	53.4	38.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.070	ppb	20.7	6.89	0.0000	Pulse	1.5000	3
Na	23	45	He	13908.524	ppb	2.1	2408601.89	50.0966	Analog	0.1000	3
Mg	24	45	He	7955.964	ppb	1.3	686586.92	14.2791	Pulse	0.1000	3
Al	27	45	He	12.610	ppb	24.2	386.70	0.0080	Pulse	0.1000	3
K	39	45	He	1003.989	ppb	1.1	75210.19	1.5640	Pulse	0.1000	3
Ca	44	45	He	21181.590	ppb	2.6	68926.60	1.4336	Pulse	0.1000	3
Ti	47	45	He	0.381	ppb	152.2	13.33	0.0003	Pulse	0.1000	3
V	51	45	He	0.365	ppb	7.0	1579.43	0.0328	Pulse	0.5000	3
Cr	52	45	He	-0.005	ppb	N/A	1916.86	0.0398	Pulse	0.1000	3
Mn	55	45	He	12.829	ppb	1.6	8045.84	0.1673	Pulse	0.1000	3
Fe	57	45	He	61.629	ppb	4.5	1790.17	0.0372	Pulse	0.1000	3
Co	59	45	He	0.095	ppb	19.2	360.02	0.0075	Pulse	0.1000	3
Ni	60	72	He	1.165	ppb	11.6	1123.42	0.0128	Pulse	0.1000	3
Cu	63	72	He	0.160	ppb	24.8	776.71	0.0089	Pulse	0.1000	3
Zn	66	72	He	5.804	ppb	13.1	1813.51	0.0207	Pulse	0.1000	3
As	75	72	He	0.242	ppb	27.5	114.00	0.0013	Pulse	0.5000	3
Sr	88	115	He	86.155	ppb	1.2	67407.92	0.7738	Pulse	0.1000	3
Mo	98	115	He	0.071	ppb	13.1	160.01	0.0018	Pulse	0.1000	3
Ag	107	115	He	-0.003	ppb	N/A	43.33	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.014	ppb	34.4	6.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.009	ppb	N/A	1423.46	0.0163	Pulse	0.1000	3
Sb	121	115	He	0.121	ppb	12.1	180.01	0.0021	Pulse	0.1000	3
Ba	137	115	He	5.088	ppb	5.8	2146.90	0.0247	Pulse	0.1000	3
Tl	205	159	He	0.015	ppb	33.7	206.68	0.0005	Pulse	0.1000	3
Pb	208	159	He	0.033	ppb	13.6	866.72	0.0022	Pulse	0.1000	3
U	238	209	He	0.027	ppb	15.7	436.69	0.0014	Pulse	0.1000	3

ISTD Table:

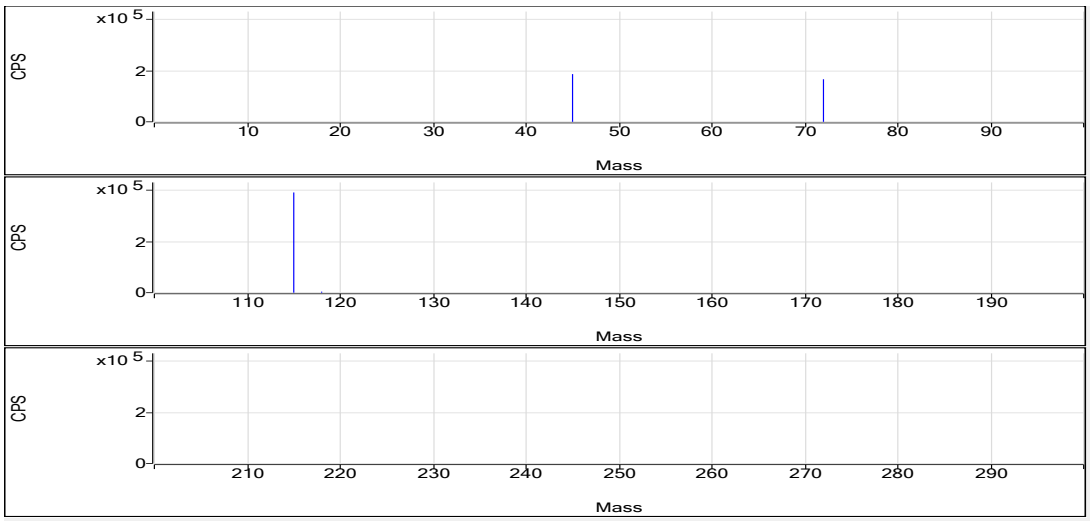
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2488311.16	1.4	103.7	Analog	0.1000	3
No Gas	Ge	72	1259314.23	1.3	109.2	Pulse	0.1000	3
H2	Sc	45	186428.84	2.1	99.7	Pulse	0.1000	3
H2	Ge	72	166323.03	1.5	101.6	Pulse	0.1000	3
H2	In	115	391644.20	0.3	100.7	Pulse	0.1000	3
He	Sc	45	48090.35	1.7	103.1	Pulse	0.1000	3
He	Ge	72	87557.92	0.6	107.8	Pulse	0.1000	3
He	In	115	87115.41	0.7	101.1	Pulse	0.1000	3
He	Tb	159	401214.88	0.7	100.7	Pulse	0.1000	3
He	Bi	209	308833.59	0.2	99.9	Pulse	0.1000	3

No Gas

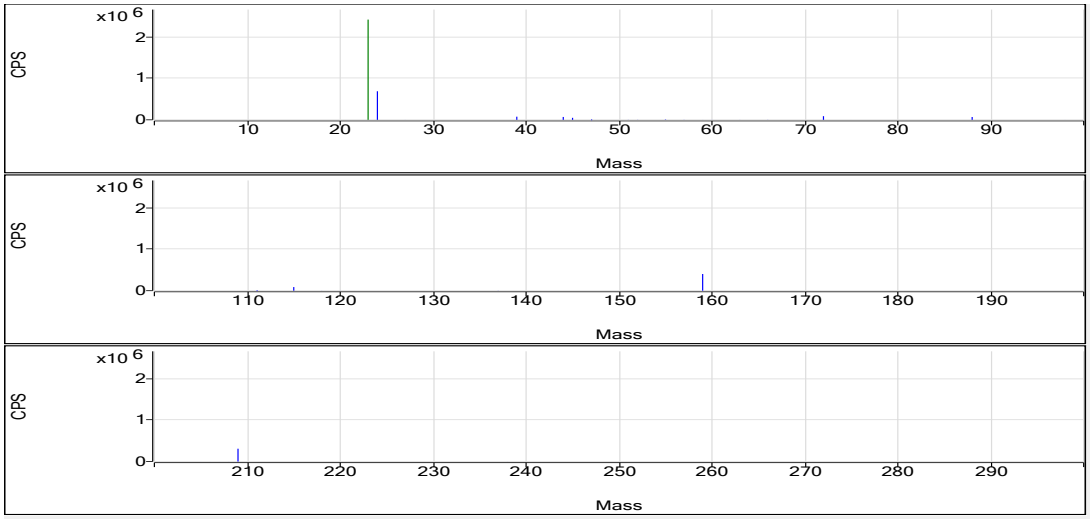


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.02	0	50.00	0.0008	4.685E-06
Be	9	1	No Gas	0.016	0	42.00	0.0008	4.685E-06
Be	9	1	No Gas	0.006	0	22.00	0.0008	4.685E-06
Se	78	2	H2	0.086	0	8.00	0.0004	1.219E-05
Se	78	2	H2	0.058	0	6.00	0.0004	1.219E-05
Se	78	2	H2	0.065	0	6.67	0.0004	1.219E-05
Na	23	3	He	13965.249	50.2995	2406806.21	0.0036	0.3452
Na	23	3	He	14164.733	51.0131	2418927.00	0.0036	0.3452
Na	23	3	He	13595.591	48.9773	2400072.46	0.0036	0.3452
Mg	24	3	He	7989.607	14.3394	686133.82	0.0018	0.003497
Mg	24	3	He	8034.784	14.4205	683787.18	0.0018	0.003497
Mg	24	3	He	7843.502	14.0773	689839.76	0.0018	0.003497
Al	27	3	He	11.761	0.0075	360.02	0.0006	0.0006432
Al	27	3	He	10.076	0.0065	310.02	0.0006	0.0006432
Al	27	3	He	15.994	0.01	490.05	0.0006	0.0006432
K	39	3	He	1014.863	1.5767	75444.20	0.0012	0.3951
K	39	3	He	1004.068	1.5641	74167.55	0.0012	0.3951
K	39	3	He	993.035	1.5513	76018.82	0.0012	0.3951
Ca	44	3	He	20875.749	1.4129	67607.07	0.0001	0.002715
Ca	44	3	He	21806.46	1.4758	69978.32	0.0001	0.002715
Ca	44	3	He	20862.561	1.412	69194.41	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.262	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	1.01	0.0006	30.00	0.0005	7.003E-05
V	51	3	He	0.388	0.0334	1596.10	0.0219	0.02486
V	51	3	He	0.37	0.0329	1562.09	0.0219	0.02486
V	51	3	He	0.338	0.0322	1580.10	0.0219	0.02486
Cr	52	3	He	-0.016	0.0395	1890.20	0.0299	0.03997
Cr	52	3	He	-0.102	0.0369	1750.18	0.0299	0.03997
Cr	52	3	He	0.103	0.0431	2110.21	0.0299	0.03997
Mn	55	3	He	12.907	0.1683	8052.49	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	12.599	0.1643	7792.41	0.0128	0.002639
Mn	55	3	He	12.98	0.1692	8292.61	0.0128	0.002639
Fe	57	3	He	59.417	0.0359	1720.16	0.0006	0.001429
Fe	57	3	He	64.7	0.039	1850.19	0.0006	0.001429
Fe	57	3	He	60.77	0.0367	1800.17	0.0006	0.001429
Co	59	3	He	0.114	0.0086	410.02	0.0563	0.002149
Co	59	3	He	0.078	0.0065	310.02	0.0563	0.002149
Co	59	3	He	0.092	0.0073	360.02	0.0563	0.002149
Ni	60	3	He	1.018	0.0116	1020.07	0.0086	0.002834
Ni	60	3	He	1.192	0.0131	1140.10	0.0086	0.002834
Ni	60	3	He	1.285	0.0139	1210.10	0.0086	0.002834
Cu	63	3	He	0.115	0.0077	680.04	0.0257	0.004757
Cu	63	3	He	0.176	0.0093	810.05	0.0257	0.004757
Cu	63	3	He	0.19	0.0096	840.05	0.0257	0.004757
Zn	66	3	He	5.352	0.0194	1710.16	0.0029	0.003818
Zn	66	3	He	6.68	0.0233	2030.23	0.0029	0.003818
Zn	66	3	He	5.38	0.0195	1700.15	0.0029	0.003818
As	75	3	He	0.271	0.0014	120.00	0.002	0.0008061
As	75	3	He	0.289	0.0014	122.00	0.002	0.0008061
As	75	3	He	0.166	0.0011	100.00	0.002	0.0008061
Sr	88	3	He	86.665	0.7783	67522.59	0.009	0.0009645
Sr	88	3	He	85.007	0.7635	66255.84	0.009	0.0009645
Sr	88	3	He	86.792	0.7795	68445.32	0.009	0.0009645
Mo	98	3	He	0.067	0.0017	150.01	0.0219	0.0002706
Mo	98	3	He	0.082	0.0021	180.01	0.0219	0.0002706
Mo	98	3	He	0.066	0.0017	150.01	0.0219	0.0002706
Ag	107	3	He	-0.003	0.0005	40.00	0.0465	0.0006206
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Ag	107	3	He	-0.004	0.0005	40.00	0.0465	0.0006206
Cd	111	3	He	0.017	0.0001	8.00	0.0053	0
Cd	111	3	He	0.009	0	4.00	0.0053	0
Cd	111	3	He	0.017	0.0001	8.00	0.0053	0
Sn	120	3	He	-0.05	0.0157	1360.11	0.0158	0.01648
Sn	120	3	He	-0.007	0.0164	1420.13	0.0158	0.01648
Sn	120	3	He	0.031	0.017	1490.14	0.0158	0.01648
Sb	121	3	He	0.106	0.0018	160.01	0.0149	0.0002698
Sb	121	3	He	0.121	0.0021	180.01	0.0149	0.0002698
Sb	121	3	He	0.135	0.0023	200.01	0.0149	0.0002698
Ba	137	3	He	5.26	0.0255	2210.25	0.0048	0.0002317
Ba	137	3	He	5.258	0.0255	2210.24	0.0048	0.0002317
Ba	137	3	He	4.745	0.023	2020.21	0.0048	0.0002317
Tl	205	3	He	0.015	0.0005	200.01	0.0247	0.0001339
Tl	205	3	He	0.021	0.0007	260.01	0.0247	0.0001339
Tl	205	3	He	0.011	0.0004	160.01	0.0247	0.0001339
Pb	208	3	He	0.03	0.002	520.03	0.0327	0.00107
Pb	208	3	He	0.032	0.0021	410.02	0.0327	0.00107
Pb	208	3	He	0.038	0.0023	500.04	0.0327	0.00107
U	238	3	He	0.024	0.0013	390.02	0.0493	7.55E-05
U	238	3	He	0.025	0.0013	410.02	0.0493	7.55E-05
U	238	3	He	0.032	0.0017	510.03	0.0493	7.55E-05
Sc	45	1	No Gas			2529878.40		
Sc	45	1	No Gas			2468513.09		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2466541.99		
Ge	72	1	No Gas			1277517.32		
Ge	72	1	No Gas			1247823.50		
Ge	72	1	No Gas			1252601.86		
Sc	45	2	H2			185388.86		
Sc	45	2	H2			183191.23		
Sc	45	2	H2			190706.44		
Ge	72	2	H2			165915.04		
Ge	72	2	H2			163993.69		
Ge	72	2	H2			169060.37		
In	115	2	H2			390367.38		
In	115	2	H2			392797.92		
In	115	2	H2			391767.30		
Sc	45	3	He			47849.47		
Sc	45	3	He			47417.76		
Sc	45	3	He			49003.82		
Ge	72	3	He			88151.45		
Ge	72	3	He			87256.21		
Ge	72	3	He			87266.09		
In	115	3	He			86760.12		
In	115	3	He			86791.56		
In	115	3	He			87817.24		
Tb	159	3	He			400918.74		
Tb	159	3	He			398745.23		
Tb	159	3	He			403980.66		
Bi	209	3	He			309567.71		
Bi	209	3	He			308595.66		
Bi	209	3	He			308337.40		

Quantitation Report

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Sample Type	Sample
Comment	T20
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

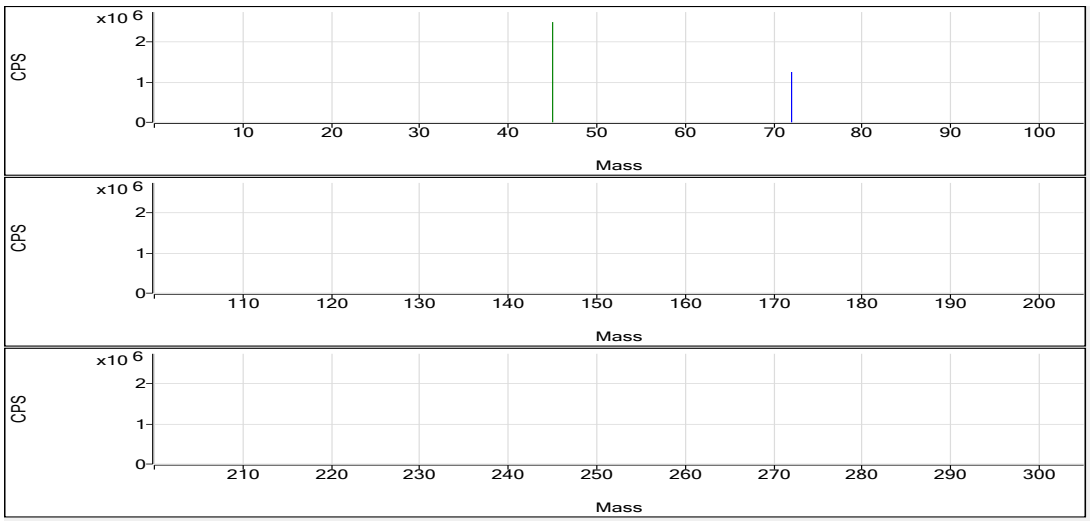
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.010	ppb	48.4	30.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.067	ppb	51.3	6.67	0.0000	Pulse	1.5000	3
Na	23	45	He	14624.720	ppb	1.1	2565285.43	52.6585	Analog	0.1000	3
Mg	24	45	He	7331.577	ppb	0.4	641031.80	13.1587	Pulse	0.1000	3
Al	27	45	He	22.069	ppb	10.2	660.04	0.0136	Pulse	0.1000	3
K	39	45	He	776.739	ppb	3.5	63301.16	1.2994	Pulse	0.1000	3
Ca	44	45	He	19144.550	ppb	1.9	63127.77	1.2960	Pulse	0.1000	3
Ti	47	45	He	0.253	ppb	152.3	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	0.320	ppb	7.4	1552.09	0.0319	Pulse	0.5000	3
Cr	52	45	He	0.137	ppb	29.7	2146.90	0.0441	Pulse	0.1000	3
Mn	55	45	He	3.670	ppb	12.2	2423.62	0.0497	Pulse	0.1000	3
Fe	57	45	He	372.934	ppb	5.1	10624.25	0.2181	Pulse	0.1000	3
Co	59	45	He	0.094	ppb	11.8	363.35	0.0075	Pulse	0.1000	3
Ni	60	72	He	1.256	ppb	21.3	1206.76	0.0136	Pulse	0.1000	3
Cu	63	72	He	0.149	ppb	27.2	760.04	0.0086	Pulse	0.1000	3
Zn	66	72	He	3.455	ppb	17.5	1230.10	0.0139	Pulse	0.1000	3
As	75	72	He	0.205	ppb	65.4	108.67	0.0012	Pulse	0.5000	3
Sr	88	115	He	76.368	ppb	1.6	60151.51	0.6860	Pulse	0.1000	3
Mo	98	115	He	0.067	ppb	19.6	153.34	0.0017	Pulse	0.1000	3
Ag	107	115	He	-0.004	ppb	N/A	36.67	0.0004	Pulse	0.1000	3
Cd	111	115	He	1.305	ppb	6.0	612.02	0.0070	Pulse	0.5000	3
Sn	120	115	He	-0.049	ppb	N/A	1376.78	0.0157	Pulse	0.1000	3
Sb	121	115	He	0.023	ppb	69.9	53.33	0.0006	Pulse	0.1000	3
Ba	137	115	He	5.831	ppb	12.7	2473.65	0.0282	Pulse	0.1000	3
Tl	205	159	He	0.012	ppb	15.3	170.01	0.0004	Pulse	0.1000	3
Pb	208	159	He	0.056	ppb	5.5	1160.07	0.0029	Pulse	0.1000	3
U	238	209	He	0.016	ppb	25.0	270.01	0.0009	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2503345.54	1.5	104.4	Analog	0.1000	3
No Gas	Ge	72	1256022.53	1.1	108.9	Pulse	0.1000	3
H2	Sc	45	186055.47	0.8	99.5	Pulse	0.1000	3
H2	Ge	72	166365.19	1.2	101.6	Pulse	0.1000	3
H2	In	115	392646.39	0.3	100.9	Pulse	0.1000	3
He	Sc	45	48715.75	0.8	104.4	Pulse	0.1000	3
He	Ge	72	88690.94	0.9	109.2	Pulse	0.1000	3
He	In	115	87686.51	0.2	101.7	Pulse	0.1000	3
He	Tb	159	400147.82	0.7	100.4	Pulse	0.1000	3
He	Bi	209	312128.49	0.5	100.9	Pulse	0.1000	3

No Gas



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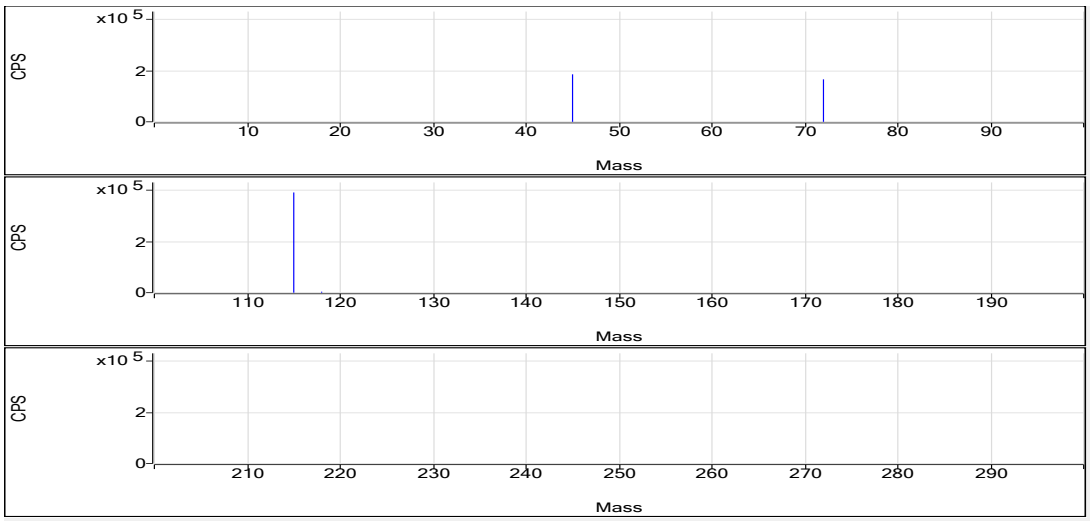
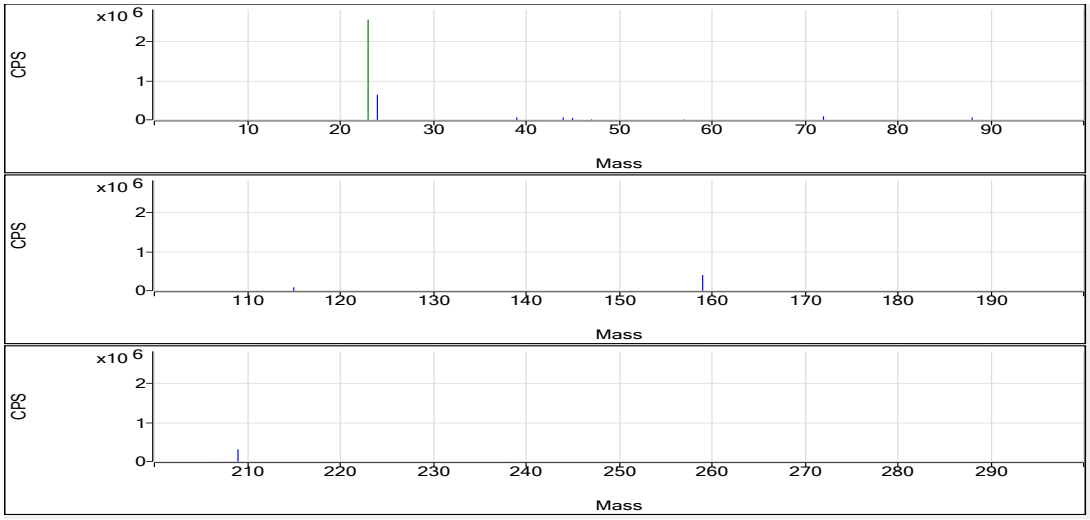


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.014	0	38.00	0.0008	4.685E-06
Be	9	1	No Gas	0.011	0	34.00	0.0008	4.685E-06
Be	9	1	No Gas	0.005	0	20.00	0.0008	4.685E-06
Se	78	2	H2	0.029	0	4.00	0.0004	1.219E-05
Se	78	2	H2	0.096	0.0001	8.67	0.0004	1.219E-05
Se	78	2	H2	0.075	0	7.33	0.0004	1.219E-05
Na	23	3	He	14793.7	53.2629	2600992.77	0.0036	0.3452
Na	23	3	He	14486.347	52.1635	2557753.24	0.0036	0.3452
Na	23	3	He	14594.114	52.549	2537110.27	0.0036	0.3452
Mg	24	3	He	7299.485	13.1011	639767.92	0.0018	0.003497
Mg	24	3	He	7345.179	13.1831	646412.30	0.0018	0.003497
Mg	24	3	He	7350.068	13.1919	636915.19	0.0018	0.003497
Al	27	3	He	19.903	0.0123	600.03	0.0006	0.0006432
Al	27	3	He	21.91	0.0135	660.05	0.0006	0.0006432
Al	27	3	He	24.393	0.0149	720.05	0.0006	0.0006432
K	39	3	He	803.276	1.3303	64964.67	0.0012	0.3951
K	39	3	He	749.541	1.2678	62163.37	0.0012	0.3951
K	39	3	He	777.4	1.3002	62775.44	0.0012	0.3951
Ca	44	3	He	19154.425	1.2966	63318.55	0.0001	0.002715
Ca	44	3	He	18772.773	1.2709	62314.12	0.0001	0.002715
Ca	44	3	He	19506.454	1.3204	63750.64	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.249	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	0.641	0.0004	20.00	0.0005	7.003E-05
V	51	3	He	0.322	0.0319	1558.09	0.0219	0.02486
V	51	3	He	0.296	0.0313	1536.09	0.0219	0.02486
V	51	3	He	0.343	0.0324	1562.09	0.0219	0.02486
Cr	52	3	He	0.183	0.0455	2220.26	0.0299	0.03997
Cr	52	3	He	0.109	0.0432	2120.22	0.0299	0.03997
Cr	52	3	He	0.118	0.0435	2100.22	0.0299	0.03997
Mn	55	3	He	4.183	0.0563	2750.36	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	3.482	0.0473	2320.26	0.0128	0.002639
Mn	55	3	He	3.345	0.0456	2200.23	0.0128	0.002639
Fe	57	3	He	392.118	0.2292	11194.77	0.0006	0.001429
Fe	57	3	He	354.317	0.2073	10163.83	0.0006	0.001429
Fe	57	3	He	372.367	0.2178	10514.14	0.0006	0.001429
Co	59	3	He	0.086	0.007	340.01	0.0563	0.002149
Co	59	3	He	0.107	0.0082	400.02	0.0563	0.002149
Co	59	3	He	0.091	0.0072	350.02	0.0563	0.002149
Ni	60	3	He	1.219	0.0133	1170.09	0.0086	0.002834
Ni	60	3	He	1.009	0.0115	1030.07	0.0086	0.002834
Ni	60	3	He	1.54	0.0161	1420.11	0.0086	0.002834
Cu	63	3	He	0.195	0.0098	860.05	0.0257	0.004757
Cu	63	3	He	0.128	0.008	720.04	0.0257	0.004757
Cu	63	3	He	0.123	0.0079	700.04	0.0257	0.004757
Zn	66	3	He	4.153	0.0159	1400.13	0.0029	0.003818
Zn	66	3	He	3.059	0.0127	1140.08	0.0029	0.003818
Zn	66	3	He	3.153	0.013	1150.09	0.0029	0.003818
As	75	3	He	0.106	0.001	90.00	0.002	0.0008061
As	75	3	He	0.151	0.0011	100.00	0.002	0.0008061
As	75	3	He	0.357	0.0015	136.00	0.002	0.0008061
Sr	88	3	He	76.698	0.6889	60349.59	0.009	0.0009645
Sr	88	3	He	77.374	0.695	61111.76	0.009	0.0009645
Sr	88	3	He	75.032	0.674	58993.19	0.009	0.0009645
Mo	98	3	He	0.081	0.0021	180.01	0.0219	0.0002706
Mo	98	3	He	0.055	0.0015	130.00	0.0219	0.0002706
Mo	98	3	He	0.066	0.0017	150.01	0.0219	0.0002706
Ag	107	3	He	-0.004	0.0005	40.00	0.0465	0.0006206
Ag	107	3	He	-0.004	0.0005	40.00	0.0465	0.0006206
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Cd	111	3	He	1.396	0.0075	654.02	0.0053	0
Cd	111	3	He	1.255	0.0067	590.02	0.0053	0
Cd	111	3	He	1.265	0.0068	592.02	0.0053	0
Sn	120	3	He	-0.009	0.0163	1430.12	0.0158	0.01648
Sn	120	3	He	-0.049	0.0157	1380.11	0.0158	0.01648
Sn	120	3	He	-0.088	0.0151	1320.12	0.0158	0.01648
Sb	121	3	He	0.028	0.0007	60.00	0.0149	0.0002698
Sb	121	3	He	0.035	0.0008	70.00	0.0149	0.0002698
Sb	121	3	He	0.005	0.0003	30.00	0.0149	0.0002698
Ba	137	3	He	6.613	0.032	2800.39	0.0048	0.0002317
Ba	137	3	He	5.142	0.0249	2190.25	0.0048	0.0002317
Ba	137	3	He	5.737	0.0278	2430.31	0.0048	0.0002317
Tl	205	3	He	0.011	0.0004	160.01	0.0247	0.0001339
Tl	205	3	He	0.011	0.0004	160.01	0.0247	0.0001339
Tl	205	3	He	0.014	0.0005	190.01	0.0247	0.0001339
Pb	208	3	He	0.054	0.0028	610.05	0.0327	0.00107
Pb	208	3	He	0.059	0.003	690.04	0.0327	0.00107
Pb	208	3	He	0.055	0.0029	610.04	0.0327	0.00107
U	238	3	He	0.014	0.0008	240.01	0.0493	7.55E-05
U	238	3	He	0.013	0.0007	230.01	0.0493	7.55E-05
U	238	3	He	0.021	0.0011	340.02	0.0493	7.55E-05
Sc	45	1	No Gas			2513694.18		
Sc	45	1	No Gas			2535558.40		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2460784.03		
Ge	72	1	No Gas			1253534.28		
Ge	72	1	No Gas			1270502.17		
Ge	72	1	No Gas			1244031.15		
Sc	45	2	H2			184264.20		
Sc	45	2	H2			186738.90		
Sc	45	2	H2			187163.30		
Ge	72	2	H2			164494.92		
Ge	72	2	H2			166177.95		
Ge	72	2	H2			168422.71		
In	115	2	H2			393395.85		
In	115	2	H2			391246.44		
In	115	2	H2			393296.87		
Sc	45	3	He			48833.06		
Sc	45	3	He			49033.36		
Sc	45	3	He			48280.83		
Ge	72	3	He			88009.87		
Ge	72	3	He			89590.63		
Ge	72	3	He			88472.33		
In	115	3	He			87606.52		
In	115	3	He			87937.58		
In	115	3	He			87535.86		
Tb	159	3	He			403452.88		
Tb	159	3	He			398041.32		
Tb	159	3	He			398949.25		
Bi	209	3	He			313925.56		
Bi	209	3	He			311239.21		
Bi	209	3	He			311220.70		

Quantitation Report

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Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	8/10/2023 5:44:38 PM
Sample Name	410-136722-Q-5-A
Sample Type	Sample
Comment	T20
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

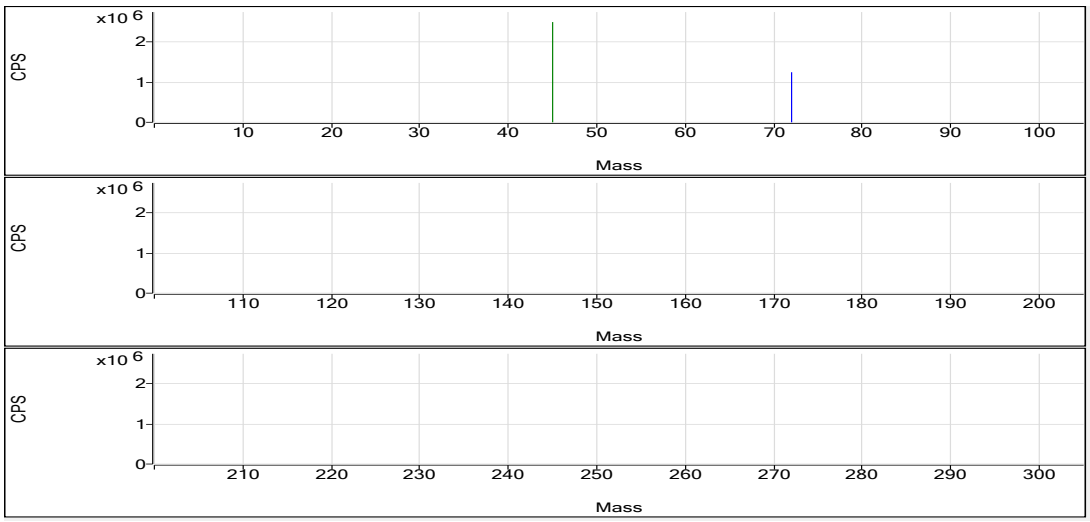
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.213	ppb	16.1	419.34	0.0002	Pulse	0.5000	3
Se	78	72	H2	0.100	ppb	47.1	8.89	0.0001	Pulse	1.5000	3
Na	23	45	He	24612.974	ppb	2.3	4183687.85	88.3870	Analog	0.1000	3
Mg	24	45	He	8273.446	ppb	1.3	702950.95	14.8487	Pulse	0.1000	3
Al	27	45	He	1153.105	ppb	3.2	31959.02	0.6752	Pulse	0.1000	3
K	39	45	He	1296.109	ppb	2.0	90140.82	1.9042	Pulse	0.1000	3
Ca	44	45	He	51220.800	ppb	1.9	163913.82	3.4628	Pulse	0.1000	3
Ti	47	45	He	26.481	ppb	16.4	676.71	0.0143	Pulse	0.1000	3
V	51	45	He	1.720	ppb	4.0	2956.98	0.0625	Pulse	0.5000	3
Cr	52	45	He	2.095	ppb	12.0	4857.65	0.1027	Pulse	0.1000	3
Mn	55	45	He	1840.387	ppb	2.3	1118184.90	23.6219	Pulse	0.1000	3
Fe	57	45	He	22249.846	ppb	2.1	611974.52	12.9284	Pulse	0.1000	3
Co	59	45	He	5.858	ppb	4.7	15702.33	0.3318	Pulse	0.1000	3
Ni	60	72	He	4.632	ppb	7.8	3657.26	0.0426	Pulse	0.1000	3
Cu	63	72	He	7.832	ppb	3.5	17664.86	0.2058	Pulse	0.1000	3
Zn	66	72	He	52.986	ppb	4.2	13573.56	0.1581	Pulse	0.1000	3
As	75	72	He	5.996	ppb	6.3	1123.39	0.0131	Pulse	0.5000	3
Sr	88	115	He	255.740	ppb	2.6	198074.03	2.2949	Pulse	0.1000	3
Mo	98	115	He	0.420	ppb	8.0	816.72	0.0095	Pulse	0.1000	3
Ag	107	115	He	0.015	ppb	23.3	113.34	0.0013	Pulse	0.1000	3
Cd	111	115	He	0.830	ppb	6.4	383.34	0.0044	Pulse	0.5000	3
Sn	120	115	He	0.141	ppb	94.7	1613.49	0.0187	Pulse	0.1000	3
Sb	121	115	He	0.567	ppb	17.0	750.05	0.0087	Pulse	0.1000	3
Ba	137	115	He	27.491	ppb	2.7	11411.88	0.1322	Pulse	0.1000	3
Tl	205	159	He	0.040	ppb	16.3	446.69	0.0011	Pulse	0.1000	3
Pb	208	159	He	16.467	ppb	0.7	214393.23	0.5400	Pulse	0.1000	3
U	238	209	He	0.203	ppb	10.7	3134.48	0.0101	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2505264.81	0.6	104.4	Analog	0.1000	3
No Gas	Ge	72	1251200.29	0.2	108.5	Pulse	0.1000	3
H2	Sc	45	182097.34	1.4	97.4	Pulse	0.1000	3
H2	Ge	72	164358.95	0.7	100.4	Pulse	0.1000	3
H2	In	115	386584.42	0.7	99.4	Pulse	0.1000	3
He	Sc	45	47347.89	2.0	101.5	Pulse	0.1000	3
He	Ge	72	85841.05	0.8	105.7	Pulse	0.1000	3
He	In	115	86337.44	2.0	100.2	Pulse	0.1000	3
He	Tb	159	396997.90	0.3	99.6	Pulse	0.1000	3
He	Bi	209	310331.91	0.6	100.3	Pulse	0.1000	3

No Gas



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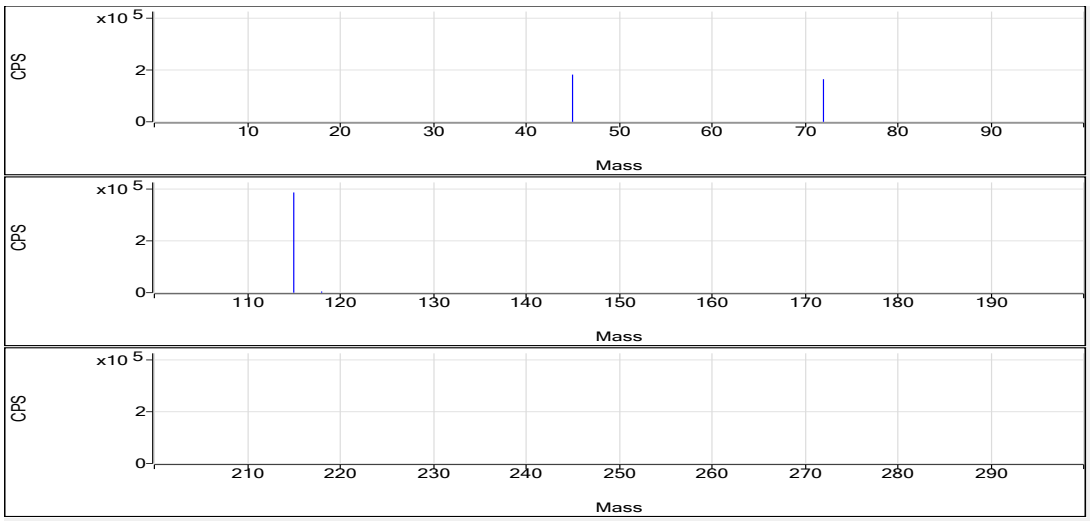
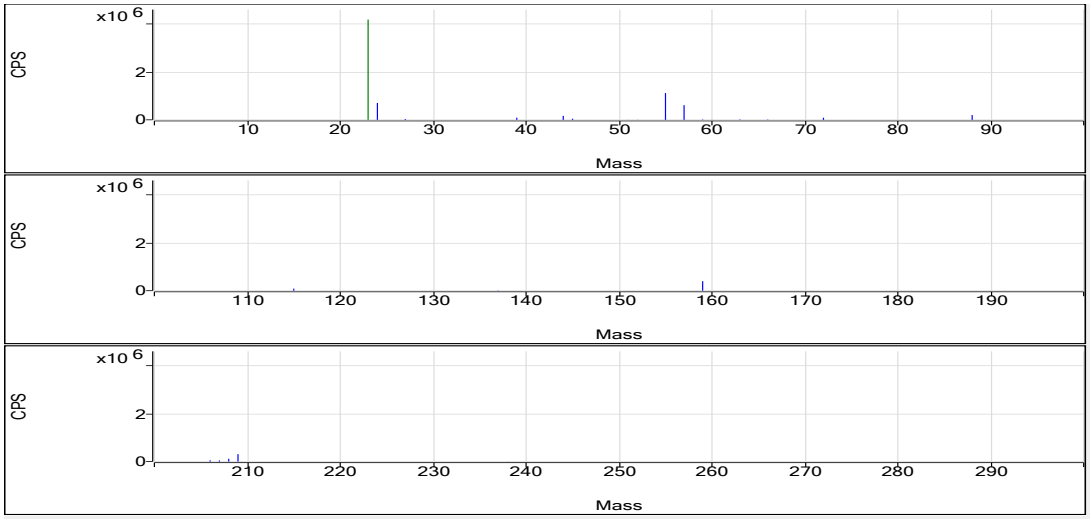


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.201	0.0002	394.01	0.0008	4.685E-06
Be	9	1	No Gas	0.186	0.0001	368.01	0.0008	4.685E-06
Be	9	1	No Gas	0.252	0.0002	496.01	0.0008	4.685E-06
Se	78	2	H2	0.068	0	6.67	0.0004	1.219E-05
Se	78	2	H2	0.155	0.0001	12.67	0.0004	1.219E-05
Se	78	2	H2	0.079	0	7.33	0.0004	1.219E-05
Na	23	3	He	24812.231	89.0997	4181123.06	0.0036	0.3452
Na	23	3	He	23973.009	86.0978	4168097.13	0.0036	0.3452
Na	23	3	He	25053.681	89.9634	4201843.37	0.0036	0.3452
Mg	24	3	He	8363.337	15.01	704364.99	0.0018	0.003497
Mg	24	3	He	8159.18	14.6437	708918.74	0.0018	0.003497
Mg	24	3	He	8297.819	14.8925	695569.13	0.0018	0.003497
Al	27	3	He	1180.048	0.691	32426.68	0.0006	0.0006432
Al	27	3	He	1111.642	0.651	31515.33	0.0006	0.0006432
Al	27	3	He	1167.624	0.6837	31935.05	0.0006	0.0006432
K	39	3	He	1295.684	1.9037	89332.06	0.0012	0.3951
K	39	3	He	1270.184	1.874	90721.42	0.0012	0.3951
K	39	3	He	1322.46	1.9348	90368.99	0.0012	0.3951
Ca	44	3	He	51779.862	3.5005	164267.65	0.0001	0.002715
Ca	44	3	He	50070.451	3.3851	163875.27	0.0001	0.002715
Ca	44	3	He	51812.088	3.5027	163598.54	0.0001	0.002715
Ti	47	3	He	21.699	0.0117	550.03	0.0005	7.003E-05
Ti	47	3	He	27.569	0.0149	720.04	0.0005	7.003E-05
Ti	47	3	He	30.176	0.0163	760.05	0.0005	7.003E-05
V	51	3	He	1.746	0.063	2958.31	0.0219	0.02486
V	51	3	He	1.643	0.0608	2942.32	0.0219	0.02486
V	51	3	He	1.772	0.0636	2970.32	0.0219	0.02486
Cr	52	3	He	2.288	0.1085	5091.09	0.0299	0.03997
Cr	52	3	He	1.812	0.0942	4560.87	0.0299	0.03997
Cr	52	3	He	2.184	0.1054	4920.99	0.0299	0.03997
Mn	55	3	He	1881.839	24.1539	1133455.37	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1798.834	23.0887	1117749.59	0.0128	0.002639
Mn	55	3	He	1840.487	23.6232	1103349.75	0.0128	0.002639
Fe	57	3	He	22615.822	13.141	616659.56	0.0006	0.001429
Fe	57	3	He	21726.332	12.6242	611154.05	0.0006	0.001429
Fe	57	3	He	22407.385	13.0199	608109.95	0.0006	0.001429
Co	59	3	He	6.088	0.3448	16179.49	0.0563	0.002149
Co	59	3	He	5.551	0.3146	15228.54	0.0563	0.002149
Co	59	3	He	5.934	0.3361	15698.97	0.0563	0.002149
Ni	60	3	He	4.699	0.0432	3690.58	0.0086	0.002834
Ni	60	3	He	4.24	0.0392	3350.49	0.0086	0.002834
Ni	60	3	He	4.957	0.0454	3930.70	0.0086	0.002834
Cu	63	3	He	8.039	0.2111	18052.06	0.0257	0.004757
Cu	63	3	He	7.939	0.2086	17811.74	0.0257	0.004757
Cu	63	3	He	7.519	0.1978	17130.77	0.0257	0.004757
Zn	66	3	He	52.942	0.158	13506.86	0.0029	0.003818
Zn	66	3	He	50.792	0.1517	12956.25	0.0029	0.003818
Zn	66	3	He	55.225	0.1646	14257.57	0.0029	0.003818
As	75	3	He	6.308	0.0137	1174.06	0.002	0.0008061
As	75	3	He	6.099	0.0133	1136.05	0.002	0.0008061
As	75	3	He	5.58	0.0122	1060.05	0.002	0.0008061
Sr	88	3	He	263.355	2.3632	199833.94	0.009	0.0009645
Sr	88	3	He	251.599	2.2578	198638.67	0.009	0.0009645
Sr	88	3	He	252.266	2.2637	195749.47	0.009	0.0009645
Mo	98	3	He	0.457	0.0103	870.06	0.0219	0.0002706
Mo	98	3	He	0.392	0.0089	780.04	0.0219	0.0002706
Mo	98	3	He	0.41	0.0093	800.05	0.0219	0.0002706
Ag	107	3	He	0.015	0.0013	110.00	0.0465	0.0006206
Ag	107	3	He	0.018	0.0015	130.01	0.0465	0.0006206
Ag	107	3	He	0.012	0.0012	100.00	0.0465	0.0006206
Cd	111	3	He	0.796	0.0043	360.01	0.0053	0
Cd	111	3	He	0.804	0.0043	378.01	0.0053	0
Cd	111	3	He	0.891	0.0048	412.01	0.0053	0
Sn	120	3	He	0.26	0.0206	1740.17	0.0158	0.01648
Sn	120	3	He	0.166	0.0191	1680.16	0.0158	0.01648
Sn	120	3	He	-0.003	0.0164	1420.13	0.0158	0.01648
Sb	121	3	He	0.635	0.0097	820.05	0.0149	0.0002698
Sb	121	3	He	0.609	0.0093	820.06	0.0149	0.0002698
Sb	121	3	He	0.457	0.0071	610.04	0.0149	0.0002698
Ba	137	3	He	27.71	0.1332	11265.08	0.0048	0.0002317
Ba	137	3	He	28.1	0.1351	11885.68	0.0048	0.0002317
Ba	137	3	He	26.662	0.1282	11084.89	0.0048	0.0002317
Tl	205	3	He	0.048	0.0013	520.03	0.0247	0.0001339
Tl	205	3	He	0.035	0.001	400.02	0.0247	0.0001339
Tl	205	3	He	0.037	0.0011	420.02	0.0247	0.0001339
Pb	208	3	He	16.418	0.5384	113680.50	0.0327	0.00107
Pb	208	3	He	16.381	0.5372	115819.87	0.0327	0.00107
Pb	208	3	He	16.603	0.5445	115546.87	0.0327	0.00107
U	238	3	He	0.189	0.0094	2910.45	0.0493	7.55E-05
U	238	3	He	0.193	0.0096	2960.46	0.0493	7.55E-05
U	238	3	He	0.228	0.0113	3532.53	0.0493	7.55E-05
Sc	45	1	No Gas			2491233.24		
Sc	45	1	No Gas			2505277.78		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2519283.40		
Ge	72	1	No Gas			1249394.12		
Ge	72	1	No Gas			1249895.53		
Ge	72	1	No Gas			1254311.23		
Sc	45	2	H2			179323.20		
Sc	45	2	H2			182947.89		
Sc	45	2	H2			184020.92		
Ge	72	2	H2			164728.40		
Ge	72	2	H2			165277.71		
Ge	72	2	H2			163070.74		
In	115	2	H2			389295.42		
In	115	2	H2			384077.06		
In	115	2	H2			386380.78		
Sc	45	3	He			46926.33		
Sc	45	3	He			48411.20		
Sc	45	3	He			46706.14		
Ge	72	3	He			85505.48		
Ge	72	3	He			85405.08		
Ge	72	3	He			86612.59		
In	115	3	He			84567.36		
In	115	3	He			87988.46		
In	115	3	He			86478.02		
Tb	159	3	He			397142.85		
Tb	159	3	He			397998.86		
Tb	159	3	He			395851.99		
Bi	209	3	He			310882.24		
Bi	209	3	He			308234.57		
Bi	209	3	He			311878.92		

Quantitation Report

Data File Name	208SMPL.d
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Sample Type	Sample
Comment	T20
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

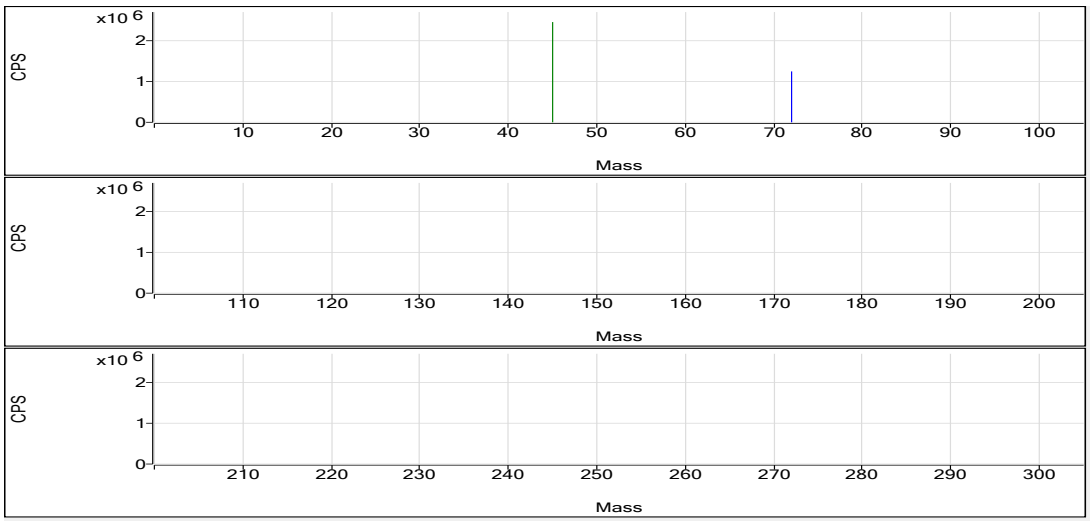
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.051	ppb	11.4	107.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.124	ppb	25.3	10.44	0.0001	Pulse	1.5000	3
Na	23	45	He	31165.346	ppb	3.0	5265187.53	111.8251	Analog	0.1000	3
Mg	24	45	He	966.830	ppb	4.6	81824.02	1.7383	Pulse	0.1000	3
Al	27	45	He	270.665	ppb	5.7	7482.94	0.1590	Pulse	0.1000	3
K	39	45	He	55.980	ppb	2.9	21676.65	0.4602	Pulse	0.1000	3
Ca	44	45	He	12335.596	ppb	1.7	39370.72	0.8360	Pulse	0.1000	3
Ti	47	45	He	3.564	ppb	8.7	93.33	0.0020	Pulse	0.1000	3
V	51	45	He	2.221	ppb	6.8	3455.77	0.0734	Pulse	0.5000	3
Cr	52	45	He	0.507	ppb	14.8	2597.00	0.0552	Pulse	0.1000	3
Mn	55	45	He	680.743	ppb	2.8	411458.77	8.7392	Pulse	0.1000	3
Fe	57	45	He	2359.675	ppb	2.8	64615.53	1.3724	Pulse	0.1000	3
Co	59	45	He	5.716	ppb	5.2	15245.15	0.3239	Pulse	0.1000	3
Ni	60	72	He	3.109	ppb	8.8	2550.32	0.0295	Pulse	0.1000	3
Cu	63	72	He	1.338	ppb	1.6	3373.84	0.0391	Pulse	0.1000	3
Zn	66	72	He	3.841	ppb	14.2	1293.45	0.0150	Pulse	0.1000	3
As	75	72	He	2.558	ppb	8.3	522.01	0.0060	Pulse	0.5000	3
Sr	88	115	He	65.863	ppb	2.3	51551.72	0.5917	Pulse	0.1000	3
Mo	98	115	He	0.164	ppb	6.2	336.68	0.0039	Pulse	0.1000	3
Ag	107	115	He	0.015	ppb	27.4	116.67	0.0013	Pulse	0.1000	3
Cd	111	115	He	0.600	ppb	14.5	279.34	0.0032	Pulse	0.5000	3
Sn	120	115	He	-0.054	ppb	N/A	1363.45	0.0156	Pulse	0.1000	3
Sb	121	115	He	0.180	ppb	15.3	256.68	0.0029	Pulse	0.1000	3
Ba	137	115	He	14.785	ppb	3.2	6205.00	0.0712	Pulse	0.1000	3
Tl	205	159	He	0.023	ppb	5.1	276.68	0.0007	Pulse	0.1000	3
Pb	208	159	He	0.797	ppb	0.9	10752.14	0.0271	Pulse	0.1000	3
U	238	209	He	0.152	ppb	4.6	2363.65	0.0075	Pulse	0.1000	3

ISTD Table:

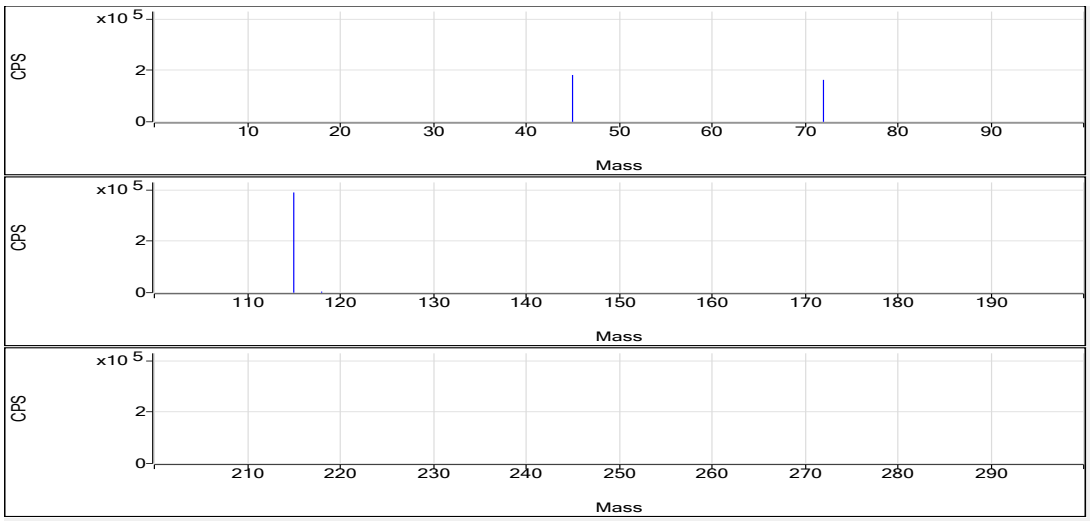
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2454455.64	1.0	102.3	Analog	0.1000	3
No Gas	Ge	72	1246434.51	0.5	108.1	Pulse	0.1000	3
H2	Sc	45	182178.99	0.6	97.4	Pulse	0.1000	3
H2	Ge	72	163230.10	0.7	99.7	Pulse	0.1000	3
H2	In	115	389916.99	0.6	100.2	Pulse	0.1000	3
He	Sc	45	47100.59	2.1	101.0	Pulse	0.1000	3
He	Ge	72	86310.30	1.7	106.3	Pulse	0.1000	3
He	In	115	87136.01	2.1	101.1	Pulse	0.1000	3
He	Tb	159	396153.83	0.2	99.4	Pulse	0.1000	3
He	Bi	209	313512.89	0.9	101.4	Pulse	0.1000	3

No Gas

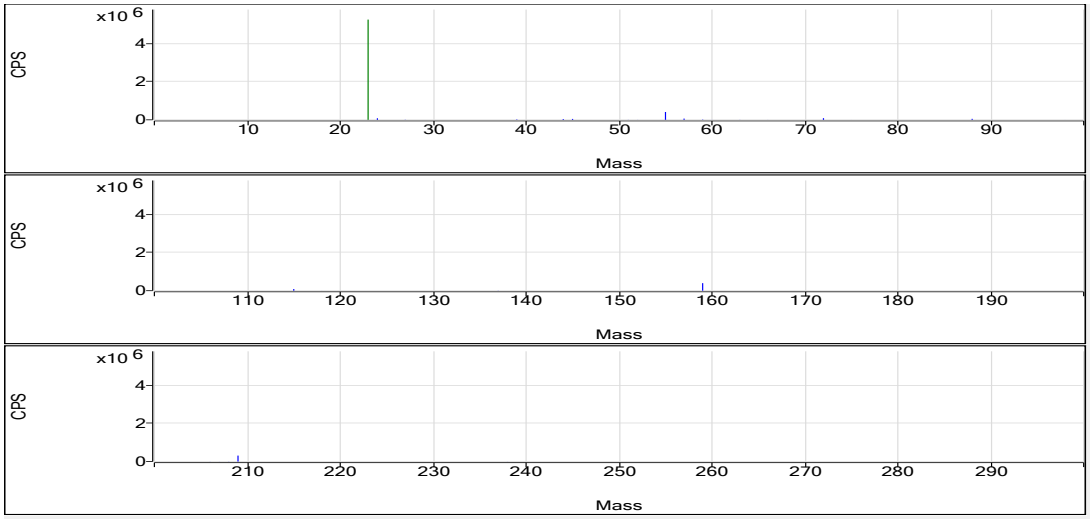


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.053	0	112.00	0.0008	4.685E-06
Be	9	1	No Gas	0.045	0	94.00	0.0008	4.685E-06
Be	9	1	No Gas	0.056	0	116.00	0.0008	4.685E-06
Se	78	2	H2	0.088	0	8.00	0.0004	1.219E-05
Se	78	2	H2	0.138	0.0001	11.33	0.0004	1.219E-05
Se	78	2	H2	0.146	0.0001	12.00	0.0004	1.219E-05
Na	23	3	He	31243.711	112.1054	5341728.05	0.0036	0.3452
Na	23	3	He	32048.082	114.9827	5283861.80	0.0036	0.3452
Na	23	3	He	30204.244	108.3872	5169972.74	0.0036	0.3452
Mg	24	3	He	954.654	1.7165	81787.56	0.0018	0.003497
Mg	24	3	He	1016.042	1.8266	83938.91	0.0018	0.003497
Mg	24	3	He	929.794	1.6718	79745.58	0.0018	0.003497
Al	27	3	He	257.261	0.1511	7202.15	0.0006	0.0006432
Al	27	3	He	287.696	0.169	7764.10	0.0006	0.0006432
Al	27	3	He	267.038	0.1569	7482.56	0.0006	0.0006432
K	39	3	He	54.658	0.4587	21856.96	0.0012	0.3951
K	39	3	He	57.774	0.4623	21245.91	0.0012	0.3951
K	39	3	He	55.508	0.4597	21927.07	0.0012	0.3951
Ca	44	3	He	12438.578	0.843	40166.54	0.0001	0.002715
Ca	44	3	He	12478.971	0.8457	38862.59	0.0001	0.002715
Ca	44	3	He	12089.237	0.8194	39083.02	0.0001	0.002715
Ti	47	3	He	3.387	0.0019	90.00	0.0005	7.003E-05
Ti	47	3	He	3.922	0.0022	100.00	0.0005	7.003E-05
Ti	47	3	He	3.384	0.0019	90.00	0.0005	7.003E-05
V	51	3	He	2.233	0.0737	3510.44	0.0219	0.02486
V	51	3	He	2.365	0.0766	3518.45	0.0219	0.02486
V	51	3	He	2.064	0.07	3338.41	0.0219	0.02486
Cr	52	3	He	0.446	0.0533	2540.32	0.0299	0.03997
Cr	52	3	He	0.591	0.0577	2650.32	0.0299	0.03997
Cr	52	3	He	0.486	0.0545	2600.35	0.0299	0.03997
Mn	55	3	He	669.21	8.5912	409363.28	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	702.894	9.0235	414661.20	0.0128	0.002639
Mn	55	3	He	670.124	8.6029	410351.83	0.0128	0.002639
Fe	57	3	He	2303.289	1.3396	63831.67	0.0006	0.001429
Fe	57	3	He	2433.171	1.4151	65027.87	0.0006	0.001429
Fe	57	3	He	2342.565	1.3624	64987.06	0.0006	0.001429
Co	59	3	He	5.696	0.3227	15378.56	0.0563	0.002149
Co	59	3	He	6.024	0.3412	15679.11	0.0563	0.002149
Co	59	3	He	5.429	0.3077	14677.79	0.0563	0.002149
Ni	60	3	He	3.391	0.0319	2810.39	0.0086	0.002834
Ni	60	3	He	3.093	0.0294	2520.30	0.0086	0.002834
Ni	60	3	He	2.844	0.0272	2320.28	0.0086	0.002834
Cu	63	3	He	1.334	0.039	3430.51	0.0257	0.004757
Cu	63	3	He	1.318	0.0386	3310.51	0.0257	0.004757
Cu	63	3	He	1.361	0.0397	3380.51	0.0257	0.004757
Zn	66	3	He	3.413	0.0138	1210.11	0.0029	0.003818
Zn	66	3	He	3.654	0.0145	1240.11	0.0029	0.003818
Zn	66	3	He	4.456	0.0168	1430.13	0.0029	0.003818
As	75	3	He	2.658	0.0063	550.01	0.002	0.0008061
As	75	3	He	2.315	0.0055	476.01	0.002	0.0008061
As	75	3	He	2.701	0.0063	540.01	0.002	0.0008061
Sr	88	3	He	64.095	0.5759	50812.34	0.009	0.0009645
Sr	88	3	He	66.966	0.6016	51183.53	0.009	0.0009645
Sr	88	3	He	66.529	0.5977	52659.30	0.009	0.0009645
Mo	98	3	He	0.174	0.0041	360.02	0.0219	0.0002706
Mo	98	3	He	0.165	0.0039	330.01	0.0219	0.0002706
Mo	98	3	He	0.153	0.0036	320.02	0.0219	0.0002706
Ag	107	3	He	0.016	0.0014	120.01	0.0465	0.0006206
Ag	107	3	He	0.02	0.0015	130.01	0.0465	0.0006206
Ag	107	3	He	0.011	0.0011	100.00	0.0465	0.0006206
Cd	111	3	He	0.636	0.0034	300.01	0.0053	0
Cd	111	3	He	0.664	0.0035	302.01	0.0053	0
Cd	111	3	He	0.501	0.0027	236.00	0.0053	0
Sn	120	3	He	-0.003	0.0164	1450.13	0.0158	0.01648
Sn	120	3	He	-0.224	0.0129	1100.08	0.0158	0.01648
Sn	120	3	He	0.064	0.0175	1540.15	0.0158	0.01648
Sb	121	3	He	0.15	0.0025	220.01	0.0149	0.0002698
Sb	121	3	He	0.188	0.0031	260.01	0.0149	0.0002698
Sb	121	3	He	0.203	0.0033	290.02	0.0149	0.0002698
Ba	137	3	He	15.329	0.0738	6511.84	0.0048	0.0002317
Ba	137	3	He	14.43	0.0695	5911.55	0.0048	0.0002317
Ba	137	3	He	14.595	0.0703	6191.60	0.0048	0.0002317
Tl	205	3	He	0.024	0.0007	290.01	0.0247	0.0001339
Tl	205	3	He	0.022	0.0007	270.01	0.0247	0.0001339
Tl	205	3	He	0.022	0.0007	270.01	0.0247	0.0001339
Pb	208	3	He	0.8	0.0273	5671.41	0.0327	0.00107
Pb	208	3	He	0.801	0.0273	5661.41	0.0327	0.00107
Pb	208	3	He	0.788	0.0269	5671.48	0.0327	0.00107
U	238	3	He	0.152	0.0075	2350.32	0.0493	7.55E-05
U	238	3	He	0.158	0.0079	2460.33	0.0493	7.55E-05
U	238	3	He	0.145	0.0072	2280.31	0.0493	7.55E-05
Sc	45	1	No Gas			2477111.06		
Sc	45	1	No Gas			2428234.03		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2458021.84		
Ge	72	1	No Gas			1243618.89		
Ge	72	1	No Gas			1254197.09		
Ge	72	1	No Gas			1241487.56		
Sc	45	2	H2			181400.00		
Sc	45	2	H2			183424.45		
Sc	45	2	H2			181712.52		
Ge	72	2	H2			163365.04		
Ge	72	2	H2			162058.69		
Ge	72	2	H2			164266.58		
In	115	2	H2			391339.60		
In	115	2	H2			387107.34		
In	115	2	H2			391304.02		
Sc	45	3	He			47649.14		
Sc	45	3	He			45953.53		
Sc	45	3	He			47699.10		
Ge	72	3	He			87980.38		
Ge	72	3	He			85787.28		
Ge	72	3	He			85163.23		
In	115	3	He			88240.15		
In	115	3	He			85079.78		
In	115	3	He			88110.09		
Tb	159	3	He			396480.93		
Tb	159	3	He			396633.90		
Tb	159	3	He			395346.67		
Bi	209	3	He			311649.59		
Bi	209	3	He			312195.19		
Bi	209	3	He			316693.90		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

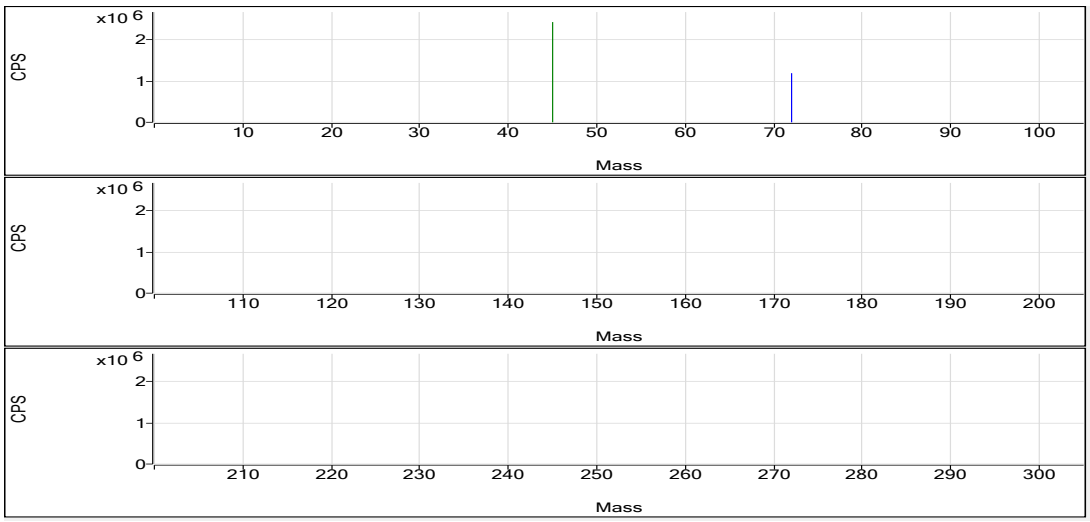
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.005	ppb	82.7	20.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.012	ppb	224.3	2.67	0.0000	Pulse	1.5000	3
Na	23	45	He	38.592	ppb	7.9	23198.76	0.4832	Pulse	0.1000	3
Mg	24	45	He	1.069	ppb	9.9	260.01	0.0054	Pulse	0.1000	3
Al	27	45	He	1.536	ppb	139.7	73.34	0.0015	Pulse	0.1000	3
K	39	45	He	-6.657	ppb	N/A	18595.70	0.3873	Pulse	0.1000	3
Ca	44	45	He	13.168	ppb	91.5	173.34	0.0036	Pulse	0.1000	3
Ti	47	45	He	0.131	ppb	173.0	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	0.404	ppb	16.8	1618.77	0.0337	Pulse	0.5000	3
Cr	52	45	He	-0.101	ppb	N/A	1773.50	0.0369	Pulse	0.1000	3
Mn	55	45	He	0.185	ppb	72.3	240.01	0.0050	Pulse	0.1000	3
Fe	57	45	He	2.548	ppb	33.3	140.01	0.0029	Pulse	0.1000	3
Co	59	45	He	0.017	ppb	74.7	150.01	0.0031	Pulse	0.1000	3
Ni	60	72	He	-0.008	ppb	N/A	226.68	0.0028	Pulse	0.1000	3
Cu	63	72	He	0.067	ppb	89.7	533.37	0.0065	Pulse	0.1000	3
Zn	66	72	He	2.837	ppb	2.5	993.41	0.0121	Pulse	0.1000	3
As	75	72	He	0.076	ppb	222.2	79.33	0.0010	Pulse	0.5000	3
Sr	88	115	He	0.076	ppb	48.7	143.34	0.0016	Pulse	0.1000	3
Mo	98	115	He	0.012	ppb	125.0	46.67	0.0005	Pulse	0.1000	3
Ag	107	115	He	-0.005	ppb	N/A	33.33	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.000	ppb	N/A	0.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.013	ppb	177.9	1450.13	0.0167	Pulse	0.1000	3
Sb	121	115	He	0.005	ppb	404.9	30.00	0.0003	Pulse	0.1000	3
Ba	137	115	He	-0.008	ppb	N/A	16.67	0.0002	Pulse	0.1000	3
Tl	205	159	He	0.012	ppb	22.1	166.68	0.0004	Pulse	0.1000	3
Pb	208	159	He	0.001	ppb	563.1	436.69	0.0011	Pulse	0.1000	3
U	238	209	He	0.004	ppb	48.1	86.67	0.0003	Pulse	0.1000	3

ISTD Table:

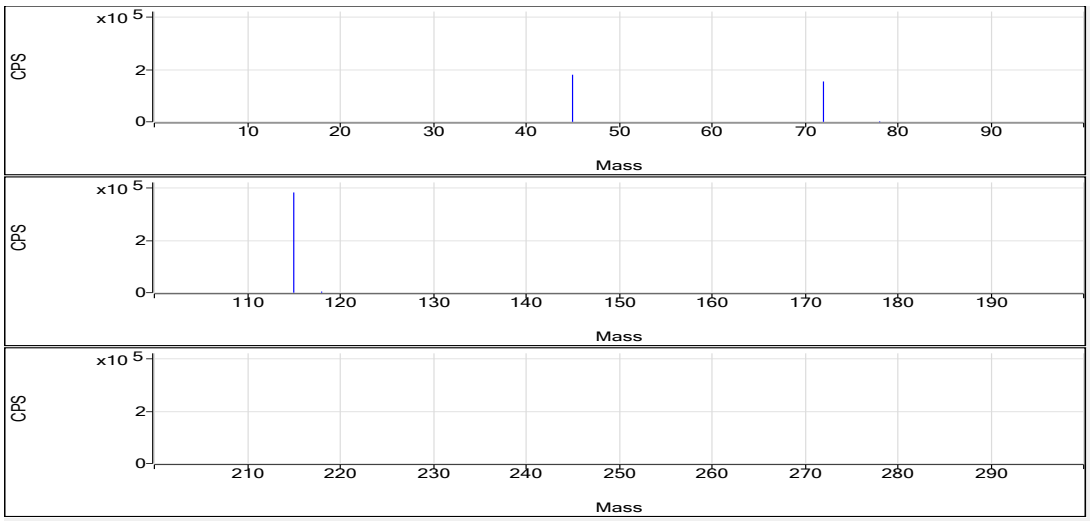
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2429690.75	0.9	101.3	Analog	0.1000	3
No Gas	Ge	72	1190695.74	0.4	103.2	Pulse	0.1000	3
H2	Sc	45	180682.75	0.3	96.6	Pulse	0.1000	3
H2	Ge	72	154842.09	2.0	94.6	Pulse	0.1000	3
H2	In	115	384608.56	0.8	98.8	Pulse	0.1000	3
He	Sc	45	48023.26	1.9	103.0	Pulse	0.1000	3
He	Ge	72	82243.39	1.5	101.3	Pulse	0.1000	3
He	In	115	86930.46	0.2	100.9	Pulse	0.1000	3
He	Tb	159	395488.44	0.1	99.2	Pulse	0.1000	3
He	Bi	209	307986.45	0.1	99.6	Pulse	0.1000	3

No Gas

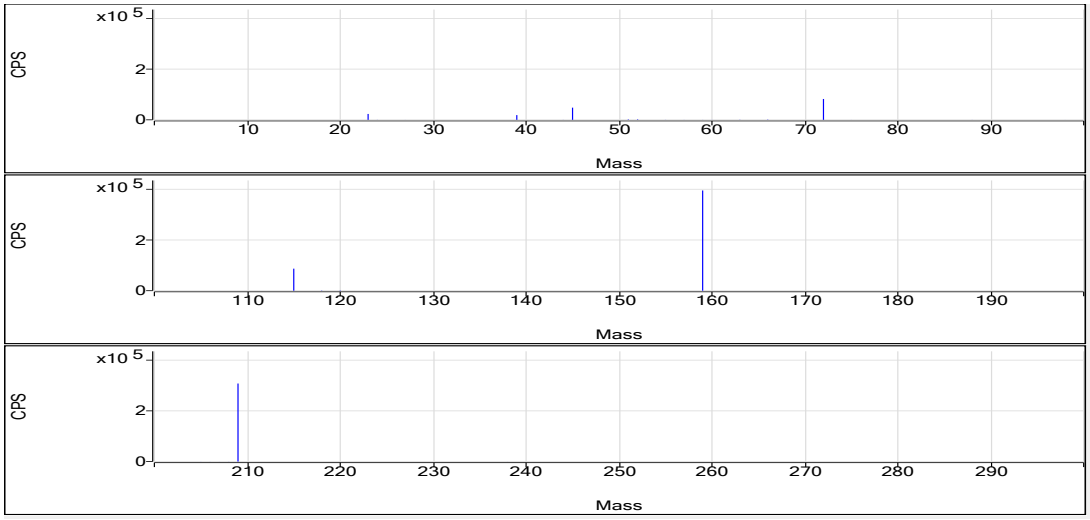


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0	0	12.00	0.0008	4.685E-06
Be	9	1	No Gas	0.008	0	26.00	0.0008	4.685E-06
Be	9	1	No Gas	0.006	0	22.00	0.0008	4.685E-06
Se	78	2	H2	-0.009	0	1.33	0.0004	1.219E-05
Se	78	2	H2	0.042	0	4.67	0.0004	1.219E-05
Se	78	2	H2	0.002	0	2.00	0.0004	1.219E-05
Na	23	3	He	40.047	0.4884	23409.00	0.0036	0.3452
Na	23	3	He	40.649	0.4906	23128.68	0.0036	0.3452
Na	23	3	He	35.082	0.4706	23058.60	0.0036	0.3452
Mg	24	3	He	1.191	0.0056	270.01	0.0018	0.003497
Mg	24	3	He	1.006	0.0053	250.01	0.0018	0.003497
Mg	24	3	He	1.009	0.0053	260.01	0.0018	0.003497
Al	27	3	He	0.684	0.001	50.00	0.0006	0.0006432
Al	27	3	He	3.976	0.003	140.01	0.0006	0.0006432
Al	27	3	He	-0.053	0.0006	30.00	0.0006	0.0006432
K	39	3	He	-3.452	0.391	18742.62	0.0012	0.3951
K	39	3	He	-2.262	0.3924	18502.20	0.0012	0.3951
K	39	3	He	-14.257	0.3785	18542.27	0.0012	0.3951
Ca	44	3	He	24.673	0.0044	210.01	0.0001	0.002715
Ca	44	3	He	0.63	0.0028	130.01	0.0001	0.002715
Ca	44	3	He	14.2	0.0037	180.01	0.0001	0.002715
Ti	47	3	He	0.258	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	0.265	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	0.35	0.0325	1558.09	0.0219	0.02486
V	51	3	He	0.382	0.0332	1566.09	0.0219	0.02486
V	51	3	He	0.48	0.0354	1732.12	0.0219	0.02486
Cr	52	3	He	-0.039	0.0388	1860.19	0.0299	0.03997
Cr	52	3	He	-0.102	0.0369	1740.17	0.0299	0.03997
Cr	52	3	He	-0.162	0.0351	1720.15	0.0299	0.03997
Mn	55	3	He	0.103	0.004	190.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.34	0.007	330.02	0.0128	0.002639
Mn	55	3	He	0.112	0.0041	200.01	0.0128	0.002639
Fe	57	3	He	2.209	0.0027	130.00	0.0006	0.001429
Fe	57	3	He	1.922	0.0025	120.01	0.0006	0.001429
Fe	57	3	He	3.513	0.0035	170.01	0.0006	0.001429
Co	59	3	He	0.032	0.004	190.01	0.0563	0.002149
Co	59	3	He	0.011	0.0028	130.01	0.0563	0.002149
Co	59	3	He	0.009	0.0027	130.01	0.0563	0.002149
Ni	60	3	He	-0.135	0.0017	140.01	0.0086	0.002834
Ni	60	3	He	0.039	0.0032	260.01	0.0086	0.002834
Ni	60	3	He	0.072	0.0035	280.01	0.0086	0.002834
Cu	63	3	He	0.029	0.0055	460.03	0.0257	0.004757
Cu	63	3	He	0.137	0.0083	680.04	0.0257	0.004757
Cu	63	3	He	0.036	0.0057	460.03	0.0257	0.004757
Zn	66	3	He	2.885	0.0122	1020.08	0.0029	0.003818
Zn	66	3	He	2.87	0.0122	1000.08	0.0029	0.003818
Zn	66	3	He	2.756	0.0118	960.07	0.0029	0.003818
As	75	3	He	0.144	0.0011	92.00	0.002	0.0008061
As	75	3	He	0.201	0.0012	100.00	0.002	0.0008061
As	75	3	He	-0.117	0.0006	46.00	0.002	0.0008061
Sr	88	3	He	0.033	0.0013	110.00	0.009	0.0009645
Sr	88	3	He	0.098	0.0018	160.01	0.009	0.0009645
Sr	88	3	He	0.098	0.0018	160.01	0.009	0.0009645
Mo	98	3	He	0.003	0.0003	30.00	0.0219	0.0002706
Mo	98	3	He	0.003	0.0003	30.00	0.0219	0.0002706
Mo	98	3	He	0.03	0.0009	80.00	0.0219	0.0002706
Ag	107	3	He	-0.008	0.0002	20.00	0.0465	0.0006206
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Sn	120	3	He	0.012	0.0167	1450.14	0.0158	0.01648
Sn	120	3	He	-0.01	0.0163	1420.13	0.0158	0.01648
Sn	120	3	He	0.037	0.0171	1480.13	0.0158	0.01648
Sb	121	3	He	0.028	0.0007	60.00	0.0149	0.0002698
Sb	121	3	He	-0.003	0.0002	20.00	0.0149	0.0002698
Sb	121	3	He	-0.01	0.0001	10.00	0.0149	0.0002698
Ba	137	3	He	-0.024	0.0001	10.00	0.0048	0.0002317
Ba	137	3	He	-0.048	0	0.00	0.0048	0.0002317
Ba	137	3	He	0.048	0.0005	40.00	0.0048	0.0002317
Tl	205	3	He	0.009	0.0004	140.01	0.0247	0.0001339
Tl	205	3	He	0.012	0.0004	170.01	0.0247	0.0001339
Tl	205	3	He	0.014	0.0005	190.01	0.0247	0.0001339
Pb	208	3	He	-0.006	0.0009	170.01	0.0327	0.00107
Pb	208	3	He	0.005	0.0012	300.01	0.0327	0.00107
Pb	208	3	He	0.004	0.0012	220.01	0.0327	0.00107
U	238	3	He	0.004	0.0003	80.00	0.0493	7.55E-05
U	238	3	He	0.006	0.0004	120.00	0.0493	7.55E-05
U	238	3	He	0.002	0.0002	60.00	0.0493	7.55E-05
Sc	45	1	No Gas			2424149.03		
Sc	45	1	No Gas			2454792.78		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2410130.43		
Ge	72	1	No Gas			1196593.58		
Ge	72	1	No Gas			1188146.47		
Ge	72	1	No Gas			1187347.17		
Sc	45	2	H2			180721.21		
Sc	45	2	H2			181266.56		
Sc	45	2	H2			180060.47		
Ge	72	2	H2			154014.51		
Ge	72	2	H2			158189.28		
Ge	72	2	H2			152322.48		
In	115	2	H2			381724.45		
In	115	2	H2			387549.10		
In	115	2	H2			384552.14		
Sc	45	3	He			47929.27		
Sc	45	3	He			47147.38		
Sc	45	3	He			48993.13		
Ge	72	3	He			83493.48		
Ge	72	3	He			82156.16		
Ge	72	3	He			81080.54		
In	115	3	He			87032.67		
In	115	3	He			87000.96		
In	115	3	He			86780.85		
Tb	159	3	He			395289.99		
Tb	159	3	He			395926.99		
Tb	159	3	He			395248.35		
Bi	209	3	He			308251.99		
Bi	209	3	He			308232.09		
Bi	209	3	He			307475.27		

Quantitation Report

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Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

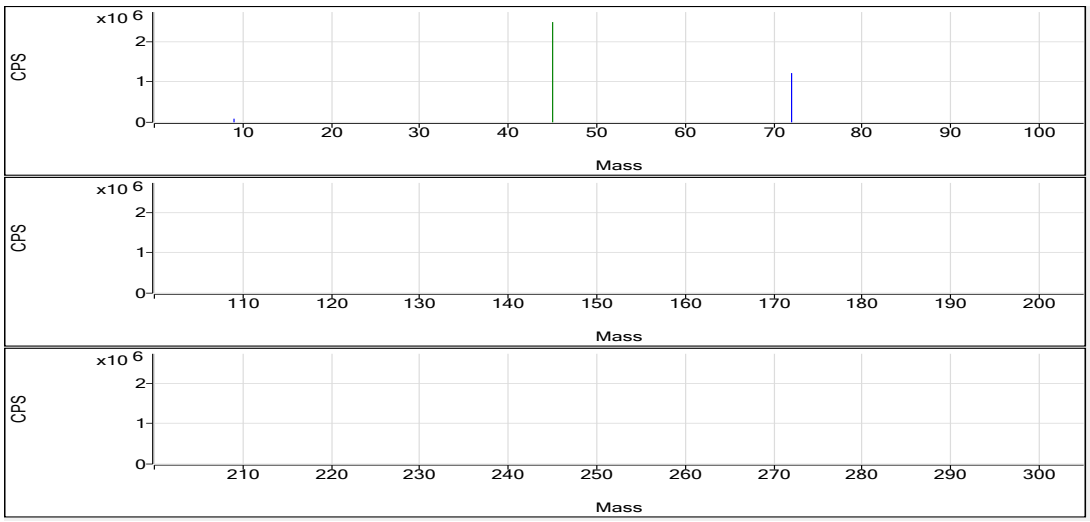
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	47.241	ppb	1.8	89468.44	0.0360	Pulse	0.5000	3
Se	78	72	H2	52.125	ppb	1.3	3447.31	0.0218	Pulse	1.5000	3
Na	23	45	He	4916.048	ppb	2.3	850882.44	17.9301	Pulse	0.1000	3
Mg	24	45	He	5036.619	ppb	2.5	429011.12	9.0408	Pulse	0.1000	3
Al	27	45	He	4977.765	ppb	2.4	138227.35	2.9128	Pulse	0.1000	3
K	39	45	He	5160.090	ppb	2.2	303865.27	6.4031	Pulse	0.1000	3
Ca	44	45	He	5143.474	ppb	3.7	16616.66	0.3502	Pulse	0.1000	3
Ti	47	45	He	5106.456	ppb	1.7	130130.83	2.7420	Pulse	0.1000	3
V	51	45	He	516.567	ppb	2.9	536962.29	11.3166	Pulse	0.5000	3
Cr	52	45	He	489.166	ppb	2.4	696898.82	14.6860	Pulse	0.1000	3
Mn	55	45	He	510.696	ppb	2.3	311152.20	6.5568	Pulse	0.1000	3
Fe	57	45	He	5109.848	ppb	3.4	140922.19	2.9702	Pulse	0.1000	3
Co	59	45	He	493.324	ppb	2.4	1317660.29	27.7676	Pulse	0.1000	3
Ni	60	72	He	509.689	ppb	0.2	369141.01	4.3776	Pulse	0.1000	3
Cu	63	72	He	487.501	ppb	0.6	1055675.04	12.5194	Pulse	0.1000	3
Zn	66	72	He	509.349	ppb	1.3	125370.82	1.4868	Pulse	0.1000	3
As	75	72	He	516.673	ppb	0.8	89330.39	1.0594	Pulse	0.5000	3
Sr	88	115	He	51.171	ppb	1.9	39663.45	0.4600	Pulse	0.1000	3
Mo	98	115	He	51.768	ppb	0.9	97906.85	1.1354	Pulse	0.1000	3
Ag	107	115	He	51.564	ppb	0.1	206770.13	2.3977	Pulse	0.1000	3
Cd	111	115	He	51.495	ppb	2.7	23741.52	0.2753	Pulse	0.5000	3
Sn	120	115	He	50.911	ppb	0.1	70784.06	0.8208	Pulse	0.1000	3
Sb	121	115	He	51.720	ppb	1.4	66269.19	0.7685	Pulse	0.1000	3
Ba	137	115	He	524.309	ppb	0.8	217015.80	2.5166	Pulse	0.1000	3
Tl	205	159	He	51.547	ppb	1.2	505116.68	1.2747	Pulse	0.1000	3
Pb	208	159	He	52.020	ppb	1.5	675080.87	1.7037	Pulse	0.1000	3
U	238	209	He	51.203	ppb	0.5	770444.26	2.5223	Pulse	0.1000	3

ISTD Table:

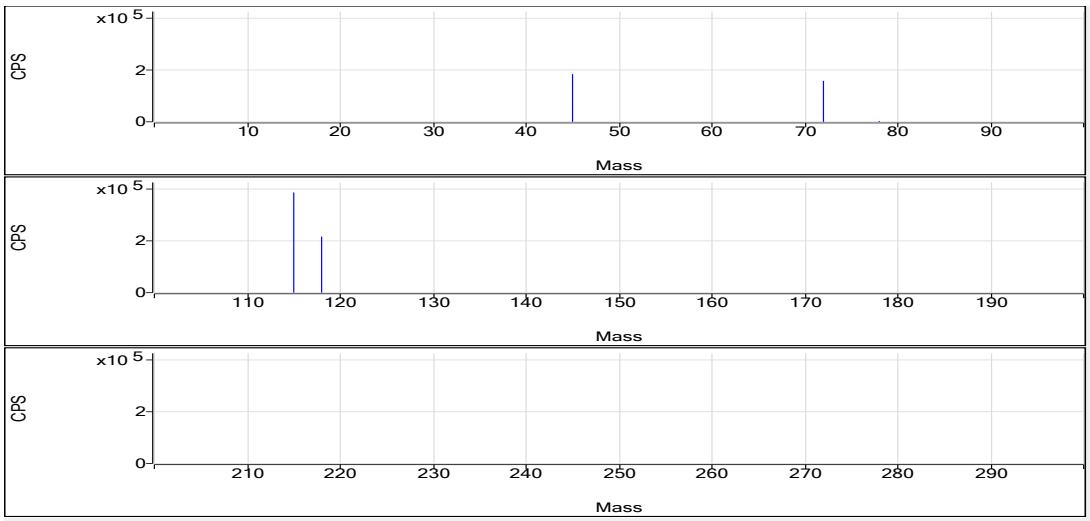
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2482942.36	1.4	103.5	Analog	0.1000	3
No Gas	Ge	72	1219180.55	0.4	105.7	Pulse	0.1000	3
H2	Sc	45	184436.46	0.8	98.6	Pulse	0.1000	3
H2	Ge	72	158495.24	0.7	96.8	Pulse	0.1000	3
H2	In	115	387986.78	0.5	99.7	Pulse	0.1000	3
He	Sc	45	47471.58	2.5	101.8	Pulse	0.1000	3
He	Ge	72	84325.00	0.7	103.9	Pulse	0.1000	3
He	In	115	86237.46	0.8	100.0	Pulse	0.1000	3
He	Tb	159	396307.30	1.4	99.4	Pulse	0.1000	3
He	Bi	209	305453.33	0.5	98.8	Pulse	0.1000	3

No Gas

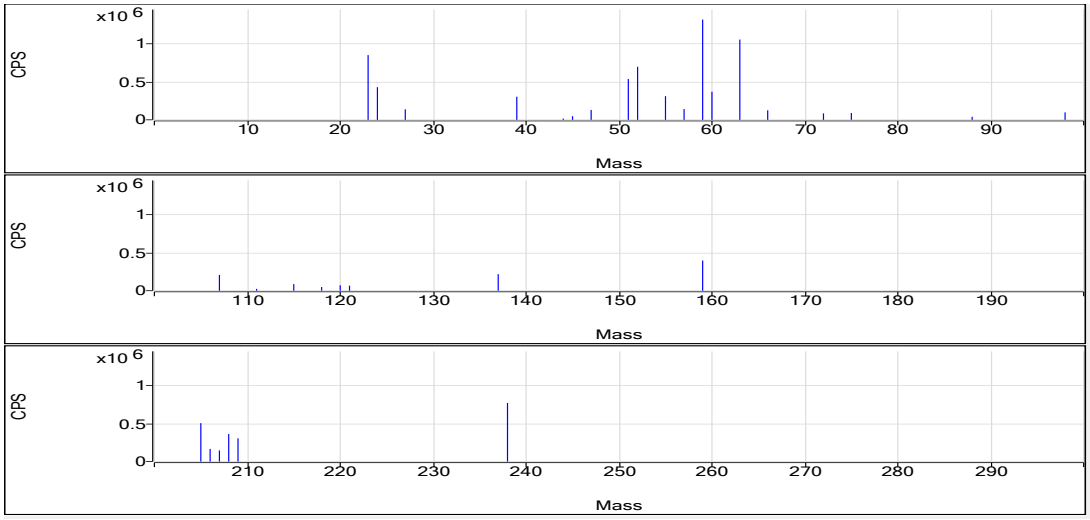


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	48.207	0.0368	89974.14	0.0008	4.685E-06
Be	9	1	No Gas	46.962	0.0358	89098.91	0.0008	4.685E-06
Be	9	1	No Gas	46.553	0.0355	89332.27	0.0008	4.685E-06
Se	78	2	H2	51.478	0.0215	3429.08	0.0004	1.219E-05
Se	78	2	H2	52.833	0.022	3467.76	0.0004	1.219E-05
Se	78	2	H2	52.062	0.0217	3445.09	0.0004	1.219E-05
Na	23	3	He	4841.387	17.663	842864.60	0.0036	0.3452
Na	23	3	He	4859.961	17.7295	859734.52	0.0036	0.3452
Na	23	3	He	5046.795	18.3978	850048.19	0.0036	0.3452
Mg	24	3	He	4974.204	8.9288	426075.42	0.0018	0.003497
Mg	24	3	He	4953.285	8.8913	431154.52	0.0018	0.003497
Mg	24	3	He	5182.369	9.3023	429803.43	0.0018	0.003497
Al	27	3	He	4897.318	2.8657	136750.82	0.0006	0.0006432
Al	27	3	He	4922.77	2.8806	139687.21	0.0006	0.0006432
Al	27	3	He	5113.207	2.992	138244.01	0.0006	0.0006432
K	39	3	He	5107.898	6.3423	302650.31	0.0012	0.3951
K	39	3	He	5082.188	6.3124	306099.37	0.0012	0.3951
K	39	3	He	5290.184	6.5546	302846.13	0.0012	0.3951
Ca	44	3	He	5286.506	0.3598	17170.70	0.0001	0.002715
Ca	44	3	He	4926.519	0.3355	16269.52	0.0001	0.002715
Ca	44	3	He	5217.396	0.3552	16409.75	0.0001	0.002715
Ti	47	3	He	5079.252	2.7274	130147.69	0.0005	7.003E-05
Ti	47	3	He	5038.639	2.7056	131197.64	0.0005	7.003E-05
Ti	47	3	He	5201.476	2.793	129047.16	0.0005	7.003E-05
V	51	3	He	512.14	11.2198	535399.88	0.0219	0.02486
V	51	3	He	504.245	11.0472	535701.13	0.0219	0.02486
V	51	3	He	533.316	11.6827	539785.88	0.0219	0.02486
Cr	52	3	He	484.796	14.5551	694558.04	0.0299	0.03997
Cr	52	3	He	480.371	14.4226	699379.52	0.0299	0.03997
Cr	52	3	He	502.331	15.0801	696758.90	0.0299	0.03997
Mn	55	3	He	505.312	6.4878	309590.00	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	502.866	6.4564	313080.37	0.0128	0.002639
Mn	55	3	He	523.909	6.7264	310786.23	0.0128	0.002639
Fe	57	3	He	5060.158	2.9413	140357.88	0.0006	0.001429
Fe	57	3	He	4966.524	2.8869	139992.65	0.0006	0.001429
Fe	57	3	He	5302.862	3.0823	142416.03	0.0006	0.001429
Co	59	3	He	491.95	27.6902	1321353.73	0.0563	0.002149
Co	59	3	He	482.339	27.1493	1316518.42	0.0563	0.002149
Co	59	3	He	505.684	28.4632	1315108.73	0.0563	0.002149
Ni	60	3	He	510.556	4.385	372869.76	0.0086	0.002834
Ni	60	3	He	509.405	4.3751	367756.87	0.0086	0.002834
Ni	60	3	He	509.106	4.3726	366796.40	0.0086	0.002834
Cu	63	3	He	484.808	12.4503	1058685.53	0.0257	0.004757
Cu	63	3	He	487.34	12.5153	1051987.25	0.0257	0.004757
Cu	63	3	He	490.356	12.5927	1056352.33	0.0257	0.004757
Zn	66	3	He	502.554	1.4671	124748.55	0.0029	0.003818
Zn	66	3	He	509.229	1.4865	124949.42	0.0029	0.003818
Zn	66	3	He	516.264	1.507	126414.48	0.0029	0.003818
As	75	3	He	511.885	1.0496	89249.80	0.002	0.0008061
As	75	3	He	518.399	1.0629	89346.43	0.002	0.0008061
As	75	3	He	519.734	1.0657	89394.95	0.002	0.0008061
Sr	88	3	He	50.047	0.4499	39015.19	0.009	0.0009645
Sr	88	3	He	51.775	0.4654	40268.62	0.009	0.0009645
Sr	88	3	He	51.691	0.4646	39706.54	0.009	0.0009645
Mo	98	3	He	51.795	1.1359	98514.12	0.0219	0.0002706
Mo	98	3	He	51.302	1.1251	97356.31	0.0219	0.0002706
Mo	98	3	He	52.207	1.145	97850.11	0.0219	0.0002706
Ag	107	3	He	51.566	2.3978	207946.38	0.0465	0.0006206
Ag	107	3	He	51.601	2.3994	207614.70	0.0465	0.0006206
Ag	107	3	He	51.525	2.3959	204749.31	0.0465	0.0006206
Cd	111	3	He	51.404	0.2749	23836.32	0.0053	0
Cd	111	3	He	50.139	0.2681	23197.24	0.0053	0
Cd	111	3	He	52.941	0.2831	24191.00	0.0053	0
Sn	120	3	He	50.954	0.8215	71242.85	0.0158	0.01648
Sn	120	3	He	50.837	0.8196	70921.25	0.0158	0.01648
Sn	120	3	He	50.943	0.8213	70188.07	0.0158	0.01648
Sb	121	3	He	51.942	0.7718	66932.05	0.0149	0.0002698
Sb	121	3	He	50.926	0.7567	65475.69	0.0149	0.0002698
Sb	121	3	He	52.291	0.777	66399.84	0.0149	0.0002698
Ba	137	3	He	524.473	2.5174	218315.43	0.0048	0.0002317
Ba	137	3	He	520.281	2.4972	216081.77	0.0048	0.0002317
Ba	137	3	He	528.174	2.5351	216650.19	0.0048	0.0002317
Tl	205	3	He	50.88	1.2582	506662.84	0.0247	0.0001339
Tl	205	3	He	51.728	1.2792	502934.95	0.0247	0.0001339
Tl	205	3	He	52.032	1.2867	505752.26	0.0247	0.0001339
Pb	208	3	He	51.12	1.6742	359487.81	0.0327	0.00107
Pb	208	3	He	52.278	1.7121	360288.47	0.0327	0.00107
Pb	208	3	He	52.662	1.7247	366120.15	0.0327	0.00107
U	238	3	He	50.936	2.5092	767627.10	0.0493	7.55E-05
U	238	3	He	51.487	2.5363	770032.10	0.0493	7.55E-05
U	238	3	He	51.187	2.5215	773673.58	0.0493	7.55E-05
Sc	45	1	No Gas			2446519.18		
Sc	45	1	No Gas			2486966.84		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2515341.06		
Ge	72	1	No Gas			1220938.81		
Ge	72	1	No Gas			1214102.95		
Ge	72	1	No Gas			1222499.90		
Sc	45	2	H2			185246.95		
Sc	45	2	H2			182703.40		
Sc	45	2	H2			185359.02		
Ge	72	2	H2			159624.20		
Ge	72	2	H2			157288.78		
Ge	72	2	H2			158572.74		
In	115	2	H2			387303.39		
In	115	2	H2			386370.89		
In	115	2	H2			390286.05		
Sc	45	3	He			47719.12		
Sc	45	3	He			48491.81		
Sc	45	3	He			46203.82		
Ge	72	3	He			85032.90		
Ge	72	3	He			84056.20		
Ge	72	3	He			83885.90		
In	115	3	He			87112.35		
In	115	3	He			86901.44		
In	115	3	He			85834.70		
Tb	159	3	He			402688.90		
Tb	159	3	He			393169.64		
Tb	159	3	He			393063.35		
Bi	209	3	He			305929.88		
Bi	209	3	He			303604.59		
Bi	209	3	He			306825.52		

Quantitation Report

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Sample Type	CCB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

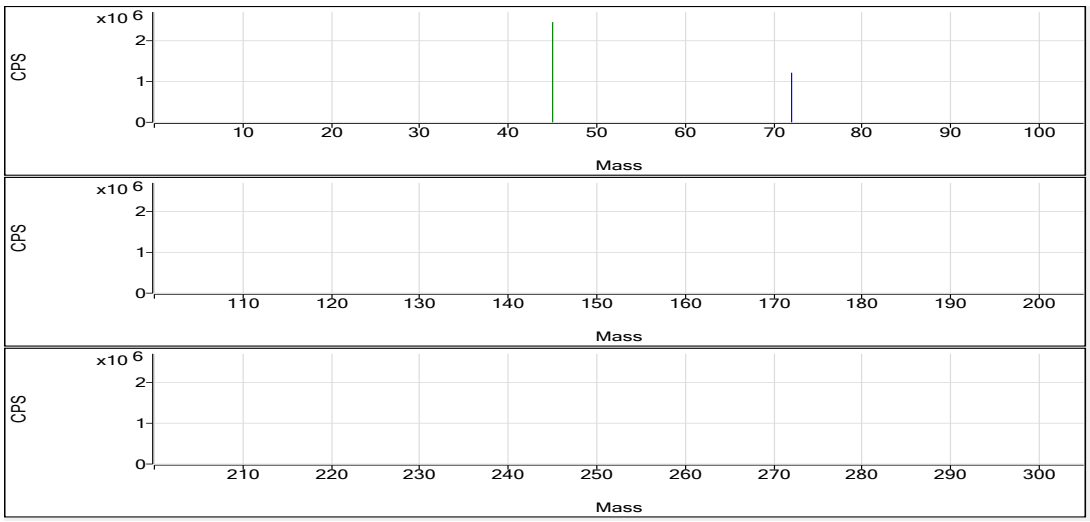
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.023	ppb	31.9	54.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.037	ppb	108.8	4.22	0.0000	Pulse	1.5000	3
Na	23	45	He	29.080	ppb	5.0	21319.31	0.4492	Pulse	0.1000	3
Mg	24	45	He	1.609	ppb	53.3	303.35	0.0064	Pulse	0.1000	3
Al	27	45	He	1.182	ppb	97.9	63.33	0.0013	Pulse	0.1000	3
K	39	45	He	-4.327	ppb	N/A	18512.27	0.3900	Pulse	0.1000	3
Ca	44	45	He	-0.754	ppb	N/A	126.67	0.0027	Pulse	0.1000	3
Ti	47	45	He	1.048	ppb	38.0	30.00	0.0006	Pulse	0.1000	3
V	51	45	He	0.488	ppb	13.9	1686.11	0.0355	Pulse	0.5000	3
Cr	52	45	He	-0.059	ppb	N/A	1813.51	0.0382	Pulse	0.1000	3
Mn	55	45	He	0.210	ppb	20.6	253.34	0.0053	Pulse	0.1000	3
Fe	57	45	He	0.925	ppb	148.2	93.33	0.0020	Pulse	0.1000	3
Co	59	45	He	0.087	ppb	41.2	333.35	0.0070	Pulse	0.1000	3
Ni	60	72	He	-0.011	ppb	N/A	226.68	0.0027	Pulse	0.1000	3
Cu	63	72	He	0.070	ppb	64.8	543.36	0.0066	Pulse	0.1000	3
Zn	66	72	He	2.352	ppb	32.7	883.39	0.0107	Pulse	0.1000	3
As	75	72	He	0.235	ppb	42.6	106.67	0.0013	Pulse	0.5000	3
Sr	88	115	He	-0.017	ppb	N/A	70.00	0.0008	Pulse	0.1000	3
Mo	98	115	He	0.060	ppb	28.7	136.67	0.0016	Pulse	0.1000	3
Ag	107	115	He	0.011	ppb	57.0	100.00	0.0012	Pulse	0.1000	3
Cd	111	115	He	0.009	ppb	86.6	4.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.093	ppb	68.5	1553.48	0.0179	Pulse	0.1000	3
Sb	121	115	He	0.026	ppb	62.8	56.67	0.0007	Pulse	0.1000	3
Ba	137	115	He	0.056	ppb	108.4	43.33	0.0005	Pulse	0.1000	3
Tl	205	159	He	0.065	ppb	4.3	690.05	0.0017	Pulse	0.1000	3
Pb	208	159	He	0.011	ppb	55.1	563.36	0.0014	Pulse	0.1000	3
U	238	209	He	0.048	ppb	9.3	746.71	0.0024	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2457624.18	1.3	102.5	Analog	0.1000	3
No Gas	Ge	72	1215947.41	0.3	105.4	Pulse	0.1000	3
H2	Sc	45	182188.46	0.2	97.4	Pulse	0.1000	3
H2	Ge	72	154861.69	1.7	94.6	Pulse	0.1000	3
H2	In	115	386431.17	0.5	99.3	Pulse	0.1000	3
He	Sc	45	47464.85	0.7	101.8	Pulse	0.1000	3
He	Ge	72	82819.50	0.4	102.0	Pulse	0.1000	3
He	In	115	86568.24	0.4	100.4	Pulse	0.1000	3
He	Tb	159	396455.68	0.2	99.5	Pulse	0.1000	3
He	Bi	209	308239.90	0.7	99.7	Pulse	0.1000	3

No Gas



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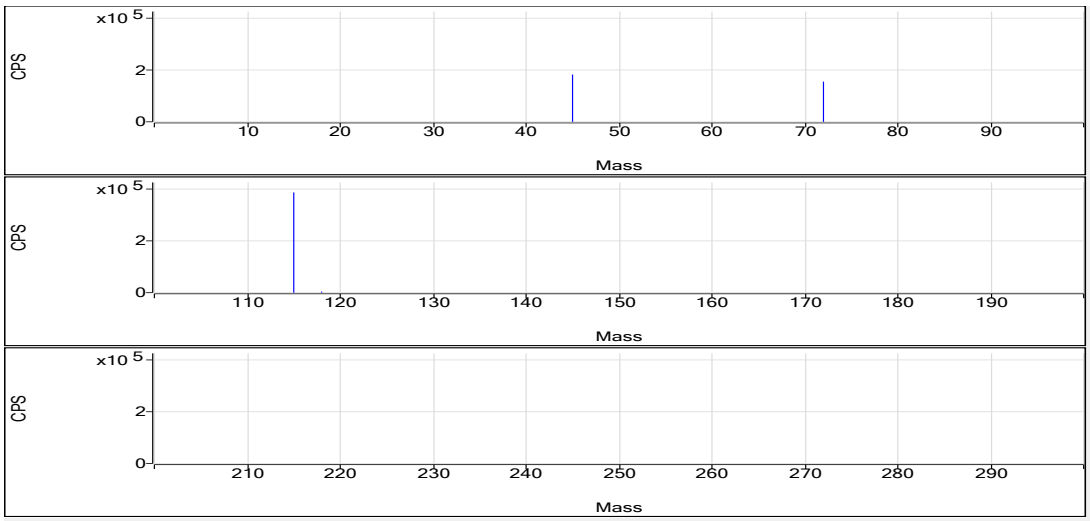
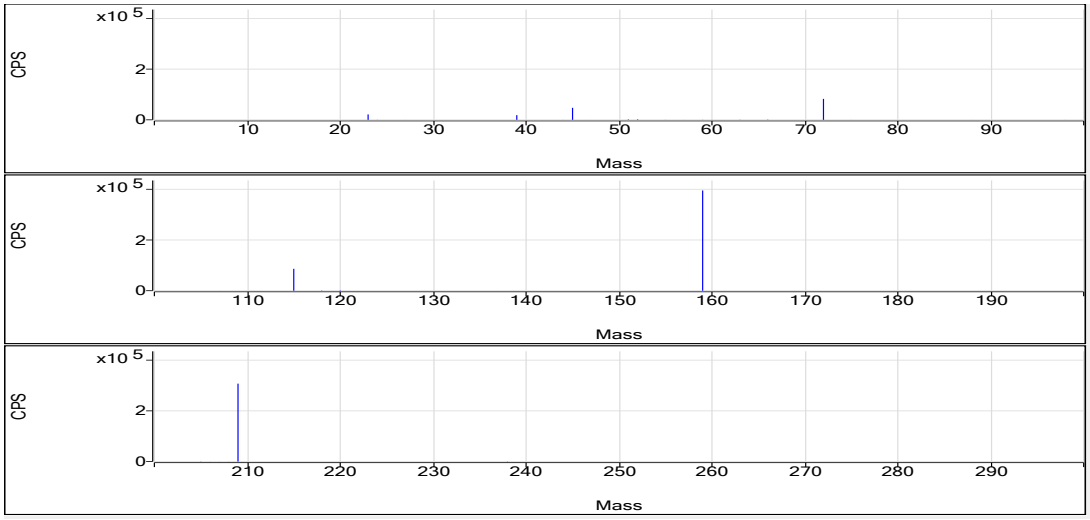


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.031	0	70.00	0.0008	4.685E-06
Be	9	1	No Gas	0.019	0	46.00	0.0008	4.685E-06
Be	9	1	No Gas	0.018	0	46.00	0.0008	4.685E-06
Se	78	2	H2	0.064	0	6.00	0.0004	1.219E-05
Se	78	2	H2	0.054	0	5.33	0.0004	1.219E-05
Se	78	2	H2	-0.009	0	1.33	0.0004	1.219E-05
Na	23	3	He	30.014	0.4525	21326.01	0.0036	0.3452
Na	23	3	He	27.402	0.4432	21165.74	0.0036	0.3452
Na	23	3	He	29.824	0.4518	21466.18	0.0036	0.3452
Mg	24	3	He	0.771	0.0049	230.01	0.0018	0.003497
Mg	24	3	He	2.486	0.008	380.02	0.0018	0.003497
Mg	24	3	He	1.571	0.0063	300.01	0.0018	0.003497
Al	27	3	He	0.714	0.0011	50.00	0.0006	0.0006432
Al	27	3	He	0.332	0.0008	40.00	0.0006	0.0006432
Al	27	3	He	2.498	0.0021	100.00	0.0006	0.0006432
K	39	3	He	-3.758	0.3907	18412.13	0.0012	0.3951
K	39	3	He	-7.117	0.3868	18472.28	0.0012	0.3951
K	39	3	He	-2.107	0.3926	18652.40	0.0012	0.3951
Ca	44	3	He	-11.92	0.0019	90.00	0.0001	0.002715
Ca	44	3	He	21.804	0.0042	200.01	0.0001	0.002715
Ca	44	3	He	-12.147	0.0019	90.00	0.0001	0.002715
Ti	47	3	He	1.45	0.0008	40.00	0.0005	7.003E-05
Ti	47	3	He	1.039	0.0006	30.00	0.0005	7.003E-05
Ti	47	3	He	0.654	0.0004	20.00	0.0005	7.003E-05
V	51	3	He	0.552	0.0369	1740.11	0.0219	0.02486
V	51	3	He	0.495	0.0357	1704.11	0.0219	0.02486
V	51	3	He	0.417	0.034	1614.10	0.0219	0.02486
Cr	52	3	He	0.09	0.0427	2010.21	0.0299	0.03997
Cr	52	3	He	-0.076	0.0377	1800.17	0.0299	0.03997
Cr	52	3	He	-0.189	0.0343	1630.16	0.0299	0.03997
Mn	55	3	He	0.257	0.0059	280.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.202	0.0052	250.01	0.0128	0.002639
Mn	55	3	He	0.172	0.0048	230.01	0.0128	0.002639
Fe	57	3	He	1.558	0.0023	110.00	0.0006	0.001429
Fe	57	3	He	1.865	0.0025	120.00	0.0006	0.001429
Fe	57	3	He	-0.648	0.0011	50.00	0.0006	0.001429
Co	59	3	He	0.094	0.0074	350.02	0.0563	0.002149
Co	59	3	He	0.118	0.0088	420.02	0.0563	0.002149
Co	59	3	He	0.048	0.0048	230.01	0.0563	0.002149
Ni	60	3	He	-0.033	0.0025	210.01	0.0086	0.002834
Ni	60	3	He	0.007	0.0029	240.01	0.0086	0.002834
Ni	60	3	He	-0.008	0.0028	230.01	0.0086	0.002834
Cu	63	3	He	0.122	0.0079	650.03	0.0257	0.004757
Cu	63	3	He	0.054	0.0061	510.03	0.0257	0.004757
Cu	63	3	He	0.035	0.0057	470.02	0.0257	0.004757
Zn	66	3	He	2.273	0.0104	860.05	0.0029	0.003818
Zn	66	3	He	3.159	0.013	1080.09	0.0029	0.003818
Zn	66	3	He	1.625	0.0085	710.04	0.0029	0.003818
As	75	3	He	0.234	0.0013	106.00	0.002	0.0008061
As	75	3	He	0.336	0.0015	124.00	0.002	0.0008061
As	75	3	He	0.135	0.0011	90.00	0.002	0.0008061
Sr	88	3	He	-0.004	0.0009	80.00	0.009	0.0009645
Sr	88	3	He	-0.005	0.0009	80.00	0.009	0.0009645
Sr	88	3	He	-0.043	0.0006	50.00	0.009	0.0009645
Mo	98	3	He	0.072	0.0019	160.01	0.0219	0.0002706
Mo	98	3	He	0.04	0.0012	100.00	0.0219	0.0002706
Mo	98	3	He	0.067	0.0017	150.01	0.0219	0.0002706
Ag	107	3	He	0.004	0.0008	70.00	0.0465	0.0006206
Ag	107	3	He	0.014	0.0013	110.00	0.0465	0.0006206
Ag	107	3	He	0.017	0.0014	120.00	0.0465	0.0006206
Cd	111	3	He	0.013	0.0001	6.00	0.0053	0
Cd	111	3	He	0.013	0.0001	6.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Sn	120	3	He	0.02	0.0168	1450.13	0.0158	0.01648
Sn	120	3	He	0.122	0.0184	1600.15	0.0158	0.01648
Sn	120	3	He	0.137	0.0186	1610.17	0.0158	0.01648
Sb	121	3	He	0.044	0.0009	80.00	0.0149	0.0002698
Sb	121	3	He	0.021	0.0006	50.00	0.0149	0.0002698
Sb	121	3	He	0.013	0.0005	40.00	0.0149	0.0002698
Ba	137	3	He	0.121	0.0008	70.00	0.0048	0.0002317
Ba	137	3	He	0.048	0.0005	40.00	0.0048	0.0002317
Ba	137	3	He	0	0.0002	20.00	0.0048	0.0002317
Tl	205	3	He	0.064	0.0017	680.05	0.0247	0.0001339
Tl	205	3	He	0.068	0.0018	720.05	0.0247	0.0001339
Tl	205	3	He	0.063	0.0017	670.04	0.0247	0.0001339
Pb	208	3	He	0.009	0.0014	220.01	0.0327	0.00107
Pb	208	3	He	0.006	0.0013	280.01	0.0327	0.00107
Pb	208	3	He	0.017	0.0016	320.02	0.0327	0.00107
U	238	3	He	0.043	0.0022	670.04	0.0493	7.55E-05
U	238	3	He	0.051	0.0026	800.05	0.0493	7.55E-05
U	238	3	He	0.049	0.0025	770.05	0.0493	7.55E-05
Sc	45	1	No Gas			2472572.15		
Sc	45	1	No Gas			2422268.71		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2478031.68		
Ge	72	1	No Gas			1214441.86		
Ge	72	1	No Gas			1213012.33		
Ge	72	1	No Gas			1220388.03		
Sc	45	2	H2			181772.65		
Sc	45	2	H2			182239.63		
Sc	45	2	H2			182553.10		
Ge	72	2	H2			154053.28		
Ge	72	2	H2			152778.06		
Ge	72	2	H2			157753.74		
In	115	2	H2			387639.29		
In	115	2	H2			384426.17		
In	115	2	H2			387228.04		
Sc	45	3	He			47127.03		
Sc	45	3	He			47759.19		
Sc	45	3	He			47508.33		
Ge	72	3	He			82407.15		
Ge	72	3	He			82991.07		
Ge	72	3	He			83060.28		
In	115	3	He			86378.03		
In	115	3	He			86932.06		
In	115	3	He			86418.12		
Tb	159	3	He			395908.04		
Tb	159	3	He			396069.68		
Tb	159	3	He			397389.33		
Bi	209	3	He			306979.55		
Bi	209	3	He			306897.61		
Bi	209	3	He			310842.55		

Quantitation Report

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Auto Dilution	1.0000
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Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

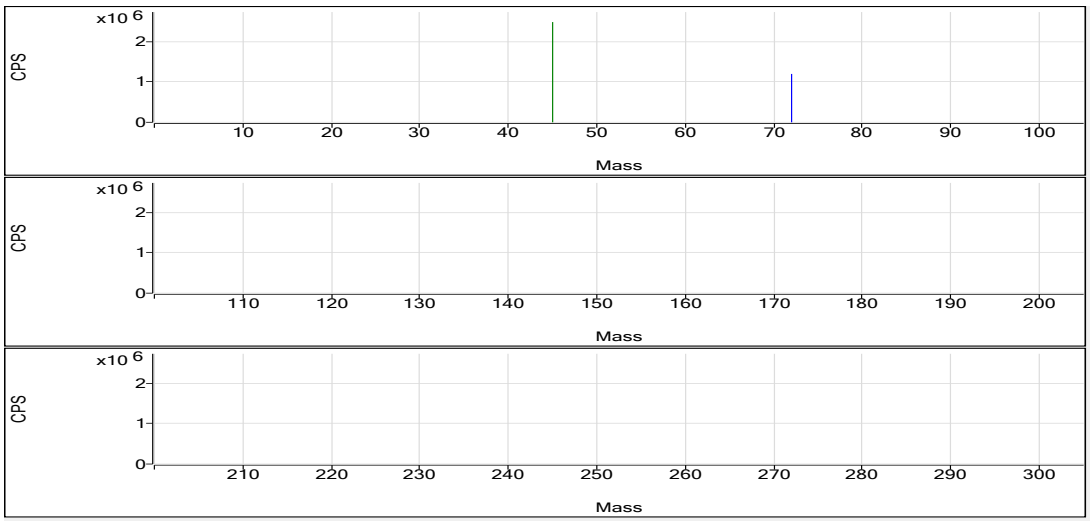
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.021	ppb	13.1	52.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.499	ppb	4.7	34.44	0.0002	Pulse	1.5000	3
Na	23	45	He	394149.224	ppb	0.5	67301929.00	1 410.2362	Analog	0.1000	3
Mg	24	45	He	11197.509	ppb	1.5	958993.76	20.0954	Pulse	0.1000	3
Al	27	45	He	57.559	ppb	9.6	1636.82	0.0343	Pulse	0.1000	3
K	39	45	He	5607.015	ppb	1.3	330407.06	6.9235	Pulse	0.1000	3
Ca	44	45	He	107689.989	ppb	0.8	347297.80	7.2774	Pulse	0.1000	3
Ti	47	45	He	0.913	ppb	50.5	26.67	0.0006	Pulse	0.1000	3
V	51	45	He	0.489	ppb	11.1	1696.11	0.0355	Pulse	0.5000	3
Cr	52	45	He	0.386	ppb	27.1	2460.30	0.0515	Pulse	0.1000	3
Mn	55	45	He	3522.783	ppb	1.2	2157721.17	45.2136	Analog	0.1000	3
Fe	57	45	He	12167.538	ppb	0.6	337438.81	7.0707	Pulse	0.1000	3
Co	59	45	He	1.150	ppb	7.2	3193.79	0.0669	Pulse	0.1000	3
Ni	60	72	He	1.040	ppb	4.4	970.07	0.0118	Pulse	0.1000	3
Cu	63	72	He	1.313	ppb	12.0	3170.46	0.0385	Pulse	0.1000	3
Zn	66	72	He	19.127	ppb	4.1	4907.69	0.0595	Pulse	0.1000	3
As	75	72	He	2.123	ppb	4.7	425.34	0.0052	Pulse	0.5000	3
Sr	88	115	He	721.688	ppb	1.4	554020.37	6.4744	Pulse	0.1000	3
Mo	98	115	He	4.772	ppb	4.8	8976.53	0.1049	Pulse	0.1000	3
Ag	107	115	He	0.320	ppb	8.1	1326.78	0.0155	Pulse	0.1000	3
Cd	111	115	He	0.596	ppb	2.8	272.67	0.0032	Pulse	0.5000	3
Sn	120	115	He	-0.125	ppb	N/A	1240.10	0.0145	Pulse	0.1000	3
Sb	121	115	He	0.097	ppb	33.7	146.67	0.0017	Pulse	0.1000	3
Ba	137	115	He	12.002	ppb	5.5	4947.73	0.0578	Pulse	0.1000	3
Tl	205	159	He	0.018	ppb	43.5	223.35	0.0006	Pulse	0.1000	3
Pb	208	159	He	0.549	ppb	2.9	7447.77	0.0190	Pulse	0.1000	3
U	238	209	He	0.516	ppb	2.1	7685.92	0.0255	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2484718.97	0.4	103.6	Analog	0.1000	3
No Gas	Ge	72	1199005.11	0.3	104.0	Pulse	0.1000	3
H2	Sc	45	182982.39	1.6	97.8	Pulse	0.1000	3
H2	Ge	72	156428.92	1.4	95.5	Pulse	0.1000	3
H2	In	115	383031.91	0.7	98.4	Pulse	0.1000	3
He	Sc	45	47725.60	1.1	102.3	Pulse	0.1000	3
He	Ge	72	82484.15	1.3	101.6	Pulse	0.1000	3
He	In	115	85582.58	1.4	99.3	Pulse	0.1000	3
He	Tb	159	391159.98	0.7	98.1	Pulse	0.1000	3
He	Bi	209	301678.20	1.1	97.5	Pulse	0.1000	3

No Gas



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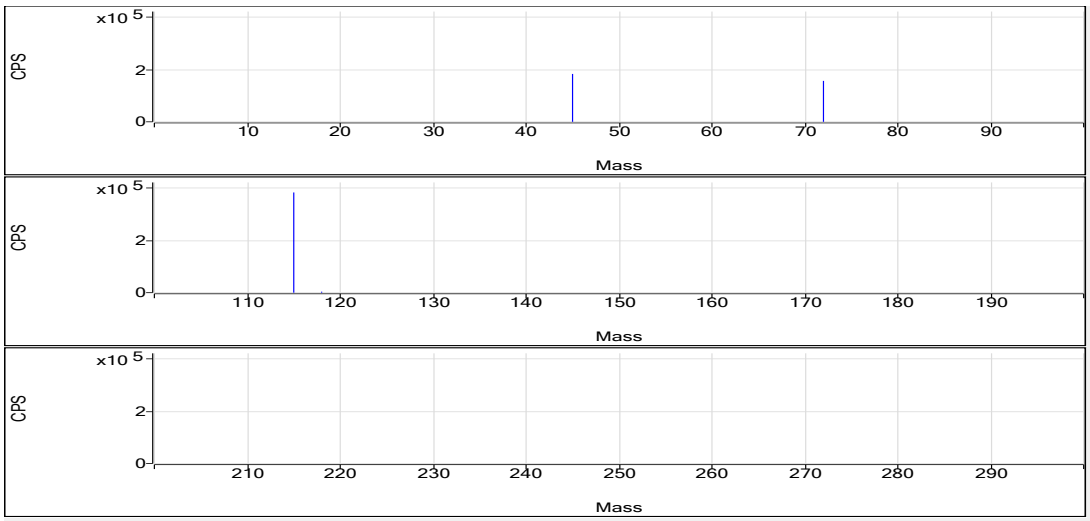
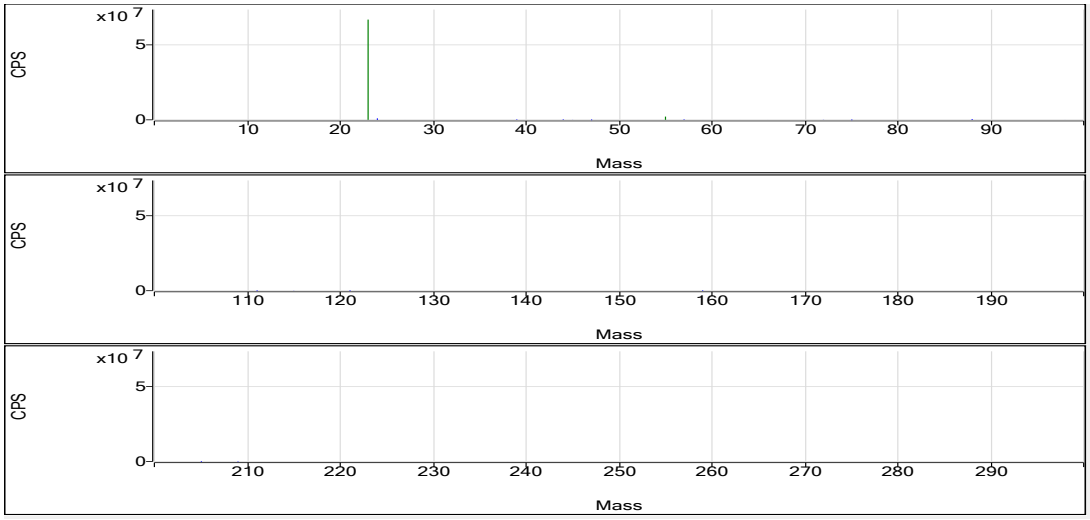


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.022	0	54.00	0.0008	4.685E-06
Be	9	1	No Gas	0.018	0	46.00	0.0008	4.685E-06
Be	9	1	No Gas	0.024	0	56.00	0.0008	4.685E-06
Se	78	2	H2	0.525	0.0002	36.67	0.0004	1.219E-05
Se	78	2	H2	0.489	0.0002	33.33	0.0004	1.219E-05
Se	78	2	H2	0.481	0.0002	33.33	0.0004	1.219E-05
Na	23	3	He	396450.852	1418.4693	67089994.00	0.0036	0.3452
Na	23	3	He	393828.147	1409.0877	67070674.00	0.0036	0.3452
Na	23	3	He	392168.673	1403.1517	67745118.99	0.0036	0.3452
Mg	24	3	He	11206.423	20.1114	951219.44	0.0018	0.003497
Mg	24	3	He	11363.127	20.3926	970660.45	0.0018	0.003497
Mg	24	3	He	11022.978	19.7823	955101.39	0.0018	0.003497
Al	27	3	He	63.596	0.0378	1790.17	0.0006	0.0006432
Al	27	3	He	56.363	0.0336	1600.14	0.0006	0.0006432
Al	27	3	He	52.719	0.0315	1520.14	0.0006	0.0006432
K	39	3	He	5609.411	6.9263	327594.19	0.0012	0.3951
K	39	3	He	5676.606	7.0045	333404.25	0.0012	0.3951
K	39	3	He	5535.027	6.8396	330222.73	0.0012	0.3951
Ca	44	3	He	108338.167	7.3212	346272.49	0.0001	0.002715
Ca	44	3	He	108021.847	7.2998	347460.46	0.0001	0.002715
Ca	44	3	He	106709.952	7.2112	348160.46	0.0001	0.002715
Ti	47	3	He	1.445	0.0008	40.00	0.0005	7.003E-05
Ti	47	3	He	0.652	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	0.641	0.0004	20.00	0.0005	7.003E-05
V	51	3	He	0.499	0.0358	1692.11	0.0219	0.02486
V	51	3	He	0.537	0.0366	1742.11	0.0219	0.02486
V	51	3	He	0.43	0.0343	1654.11	0.0219	0.02486
Cr	52	3	He	0.31	0.0493	2330.27	0.0299	0.03997
Cr	52	3	He	0.342	0.0502	2390.30	0.0299	0.03997
Cr	52	3	He	0.505	0.0551	2660.34	0.0299	0.03997
Mn	55	3	He	3524.629	45.2373	2139608.87	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	3562.936	45.7289	2176634.97	0.0128	0.002639
Mn	55	3	He	3480.784	44.6746	2156919.66	0.0128	0.002639
Fe	57	3	He	12192.221	7.085	335102.38	0.0006	0.001429
Fe	57	3	He	12226.755	7.1051	338191.32	0.0006	0.001429
Fe	57	3	He	12083.64	7.0219	339022.73	0.0006	0.001429
Co	59	3	He	1.055	0.0615	2910.39	0.0563	0.002149
Co	59	3	He	1.201	0.0698	3320.49	0.0563	0.002149
Co	59	3	He	1.195	0.0694	3350.49	0.0563	0.002149
Ni	60	3	He	1.025	0.0116	970.07	0.0086	0.002834
Ni	60	3	He	1.004	0.0114	930.07	0.0086	0.002834
Ni	60	3	He	1.091	0.0122	1010.08	0.0086	0.002834
Cu	63	3	He	1.132	0.0338	2820.37	0.0257	0.004757
Cu	63	3	He	1.388	0.0404	3280.48	0.0257	0.004757
Cu	63	3	He	1.419	0.0412	3410.52	0.0257	0.004757
Zn	66	3	He	19.329	0.0601	5011.08	0.0029	0.003818
Zn	66	3	He	19.789	0.0614	4991.05	0.0029	0.003818
Zn	66	3	He	18.264	0.057	4720.95	0.0029	0.003818
As	75	3	He	2.124	0.0052	430.01	0.002	0.0008061
As	75	3	He	2.022	0.0049	402.01	0.002	0.0008061
As	75	3	He	2.223	0.0054	444.01	0.002	0.0008061
Sr	88	3	He	728.101	6.5319	553914.72	0.009	0.0009645
Sr	88	3	He	727.289	6.5246	554668.31	0.009	0.0009645
Sr	88	3	He	709.674	6.3666	553478.08	0.009	0.0009645
Mo	98	3	He	4.598	0.1011	8572.97	0.0219	0.0002706
Mo	98	3	He	5.032	0.1106	9403.48	0.0219	0.0002706
Mo	98	3	He	4.685	0.103	8953.15	0.0219	0.0002706
Ag	107	3	He	0.337	0.0163	1380.12	0.0465	0.0006206
Ag	107	3	He	0.29	0.0141	1200.09	0.0465	0.0006206
Ag	107	3	He	0.333	0.0161	1400.12	0.0465	0.0006206
Cd	111	3	He	0.604	0.0032	274.00	0.0053	0
Cd	111	3	He	0.607	0.0032	276.00	0.0053	0
Cd	111	3	He	0.577	0.0031	268.00	0.0053	0
Sn	120	3	He	-0.028	0.016	1360.11	0.0158	0.01648
Sn	120	3	He	-0.142	0.0142	1210.09	0.0158	0.01648
Sn	120	3	He	-0.205	0.0132	1150.09	0.0158	0.01648
Sb	121	3	He	0.093	0.0017	140.01	0.0149	0.0002698
Sb	121	3	He	0.132	0.0022	190.01	0.0149	0.0002698
Sb	121	3	He	0.067	0.0013	110.00	0.0149	0.0002698
Ba	137	3	He	12.756	0.0615	5211.18	0.0048	0.0002317
Ba	137	3	He	11.743	0.0566	4810.98	0.0048	0.0002317
Ba	137	3	He	11.507	0.0555	4821.02	0.0048	0.0002317
Tl	205	3	He	0.014	0.0005	190.01	0.0247	0.0001339
Tl	205	3	He	0.026	0.0008	310.02	0.0247	0.0001339
Tl	205	3	He	0.012	0.0004	170.01	0.0247	0.0001339
Pb	208	3	He	0.533	0.0185	3850.70	0.0327	0.00107
Pb	208	3	He	0.55	0.0191	3610.63	0.0327	0.00107
Pb	208	3	He	0.565	0.0196	3990.77	0.0327	0.00107
U	238	3	He	0.522	0.0258	7692.60	0.0493	7.55E-05
U	238	3	He	0.503	0.0249	7512.46	0.0493	7.55E-05
U	238	3	He	0.522	0.0258	7852.69	0.0493	7.55E-05
Sc	45	1	No Gas			2496109.34		
Sc	45	1	No Gas			2482337.15		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2475710.43		
Ge	72	1	No Gas			1200042.33		
Ge	72	1	No Gas			1195228.34		
Ge	72	1	No Gas			1201744.67		
Sc	45	2	H2			185916.23		
Sc	45	2	H2			180020.29		
Sc	45	2	H2			183010.66		
Ge	72	2	H2			158561.70		
Ge	72	2	H2			154215.29		
Ge	72	2	H2			156509.78		
In	115	2	H2			384999.99		
In	115	2	H2			380089.76		
In	115	2	H2			384005.97		
Sc	45	3	He			47297.46		
Sc	45	3	He			47598.65		
Sc	45	3	He			48280.68		
Ge	72	3	He			83382.30		
Ge	72	3	He			81240.28		
Ge	72	3	He			82829.87		
In	115	3	He			84808.78		
In	115	3	He			85019.58		
In	115	3	He			86941.85		
Tb	159	3	He			391852.73		
Tb	159	3	He			393395.35		
Tb	159	3	He			388231.87		
Bi	209	3	He			298151.15		
Bi	209	3	He			302222.55		
Bi	209	3	He			304660.89		

Quantitation Report

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Sample Name	410-136722-Q-3-A
Sample Type	Sample
Comment	T20
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

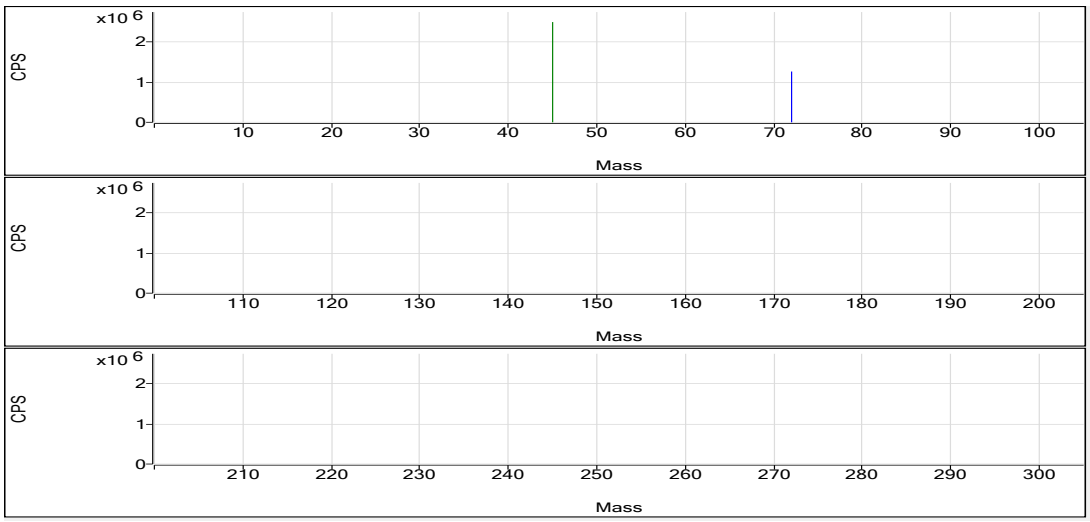
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.221	ppb	4.9	434.01	0.0002	Pulse	0.5000	3
Se	78	72	H2	0.176	ppb	31.0	14.00	0.0001	Pulse	1.5000	3
Na	23	45	He	24741.820	ppb	1.8	4203609.52	88.8479	Analog	0.1000	3
Mg	24	45	He	8282.047	ppb	0.9	703305.87	14.8642	Pulse	0.1000	3
Al	27	45	He	1276.935	ppb	2.8	35374.66	0.7477	Pulse	0.1000	3
K	39	45	He	1305.813	ppb	1.2	90630.47	1.9155	Pulse	0.1000	3
Ca	44	45	He	51334.228	ppb	0.6	164207.42	3.4704	Pulse	0.1000	3
Ti	47	45	He	43.164	ppb	18.7	1100.30	0.0232	Pulse	0.1000	3
V	51	45	He	1.883	ppb	5.2	3124.36	0.0660	Pulse	0.5000	3
Cr	52	45	He	2.560	ppb	3.8	5517.93	0.1166	Pulse	0.1000	3
Mn	55	45	He	1870.731	ppb	2.2	1136010.14	24.0114	Pulse	0.1000	3
Fe	57	45	He	27983.845	ppb	1.9	769286.68	16.2598	Pulse	0.1000	3
Co	59	45	He	7.948	ppb	2.4	21266.37	0.4495	Pulse	0.1000	3
Ni	60	72	He	4.873	ppb	7.1	3900.69	0.0447	Pulse	0.1000	3
Cu	63	72	He	8.445	ppb	1.7	19346.82	0.2215	Pulse	0.1000	3
Zn	66	72	He	64.086	ppb	4.6	16626.85	0.1904	Pulse	0.1000	3
As	75	72	He	6.550	ppb	8.1	1242.73	0.0142	Pulse	0.5000	3
Sr	88	115	He	257.181	ppb	2.0	198256.39	2.3078	Pulse	0.1000	3
Mo	98	115	He	0.511	ppb	11.8	986.74	0.0115	Pulse	0.1000	3
Ag	107	115	He	0.039	ppb	20.8	210.01	0.0024	Pulse	0.1000	3
Cd	111	115	He	1.070	ppb	7.6	491.34	0.0057	Pulse	0.5000	3
Sn	120	115	He	0.055	ppb	191.1	1490.14	0.0174	Pulse	0.1000	3
Sb	121	115	He	0.464	ppb	22.0	616.70	0.0072	Pulse	0.1000	3
Ba	137	115	He	28.156	ppb	1.3	11631.96	0.1354	Pulse	0.1000	3
Tl	205	159	He	0.067	ppb	6.3	713.38	0.0018	Pulse	0.1000	3
Pb	208	159	He	18.983	ppb	0.4	247793.76	0.6224	Pulse	0.1000	3
U	238	209	He	0.205	ppb	6.6	3164.01	0.0102	Pulse	0.1000	3

ISTD Table:

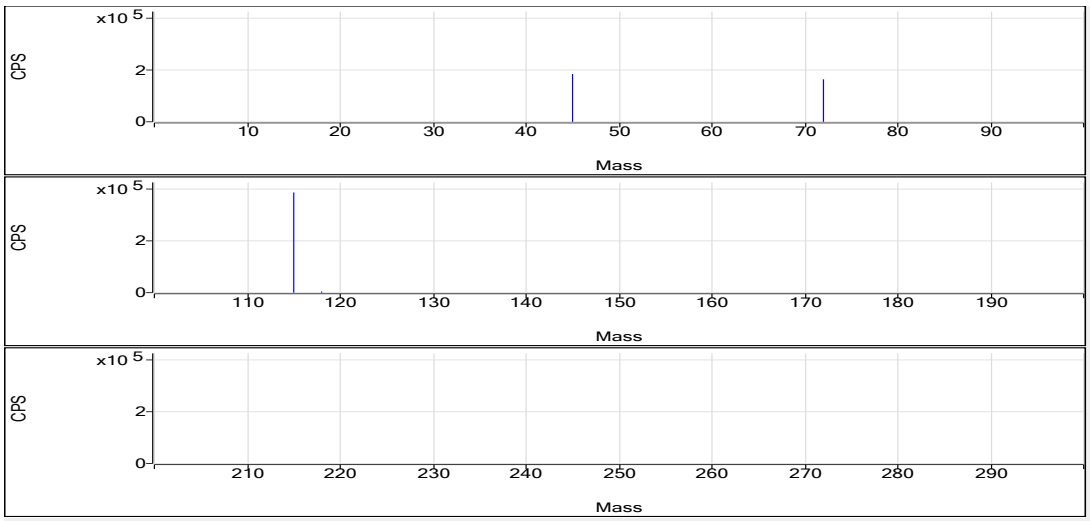
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2502688.50	1.0	104.3	Analog	0.1000	3
No Gas	Ge	72	1267973.03	1.1	109.9	Pulse	0.1000	3
H2	Sc	45	184028.56	0.2	98.4	Pulse	0.1000	3
H2	Ge	72	163701.86	1.2	100.0	Pulse	0.1000	3
H2	In	115	386132.74	0.3	99.2	Pulse	0.1000	3
He	Sc	45	47317.85	1.0	101.4	Pulse	0.1000	3
He	Ge	72	87326.52	0.5	107.6	Pulse	0.1000	3
He	In	115	85921.41	1.7	99.7	Pulse	0.1000	3
He	Tb	159	398131.94	0.9	99.9	Pulse	0.1000	3
He	Bi	209	310896.84	0.3	100.5	Pulse	0.1000	3

No Gas

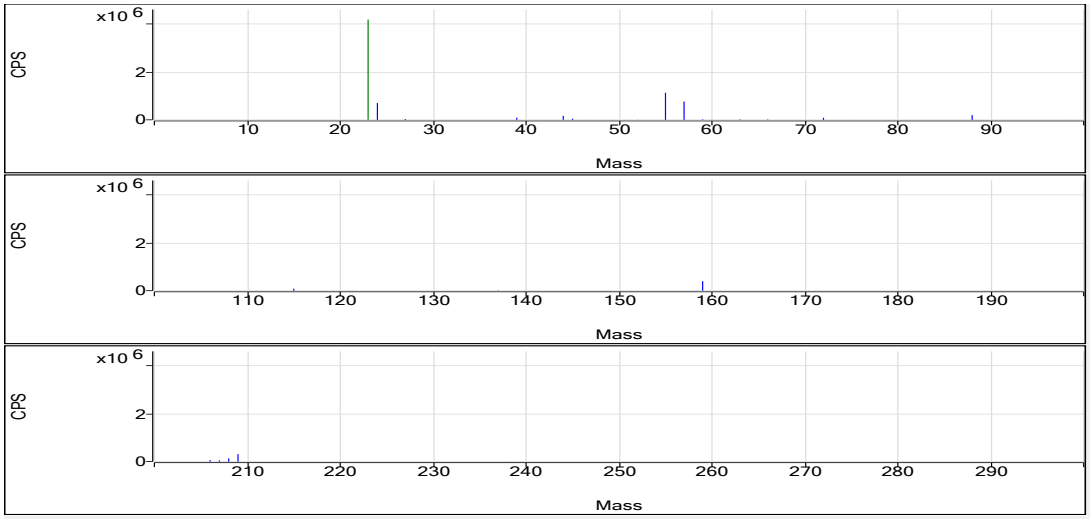


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.218	0.0002	426.01	0.0008	4.685E-06
Be	9	1	No Gas	0.233	0.0002	462.01	0.0008	4.685E-06
Be	9	1	No Gas	0.212	0.0002	414.01	0.0008	4.685E-06
Se	78	2	H2	0.183	0.0001	14.67	0.0004	1.219E-05
Se	78	2	H2	0.118	0.0001	10.00	0.0004	1.219E-05
Se	78	2	H2	0.227	0.0001	17.33	0.0004	1.219E-05
Na	23	3	He	24909.595	89.448	4232498.69	0.0036	0.3452
Na	23	3	He	25084.824	90.0748	4219671.19	0.0036	0.3452
Na	23	3	He	24231.041	87.0208	4158658.69	0.0036	0.3452
Mg	24	3	He	8324.975	14.9412	706986.55	0.0018	0.003497
Mg	24	3	He	8320.76	14.9336	699584.83	0.0018	0.003497
Mg	24	3	He	8200.405	14.7177	703346.24	0.0018	0.003497
Al	27	3	He	1248.47	0.731	34591.41	0.0006	0.0006432
Al	27	3	He	1316.409	0.7708	36108.57	0.0006	0.0006432
Al	27	3	He	1265.927	0.7413	35424.00	0.0006	0.0006432
K	39	3	He	1315.023	1.9262	91143.09	0.0012	0.3951
K	39	3	He	1314.733	1.9258	90218.70	0.0012	0.3951
K	39	3	He	1287.684	1.8944	90529.62	0.0012	0.3951
Ca	44	3	He	51487.216	3.4808	164703.22	0.0001	0.002715
Ca	44	3	He	51555.438	3.4854	163277.30	0.0001	0.002715
Ca	44	3	He	50960.028	3.4452	164641.74	0.0001	0.002715
Ti	47	3	He	52.246	0.0281	1330.74	0.0005	7.003E-05
Ti	47	3	He	36.844	0.0199	930.07	0.0005	7.003E-05
Ti	47	3	He	40.403	0.0218	1040.10	0.0005	7.003E-05
V	51	3	He	1.92	0.0668	3162.36	0.0219	0.02486
V	51	3	He	1.771	0.0636	2978.33	0.0219	0.02486
V	51	3	He	1.957	0.0676	3232.38	0.0219	0.02486
Cr	52	3	He	2.449	0.1133	5361.20	0.0299	0.03997
Cr	52	3	He	2.637	0.1189	5571.28	0.0299	0.03997
Cr	52	3	He	2.594	0.1176	5621.32	0.0299	0.03997
Mn	55	3	He	1889.716	24.255	1147698.58	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1899.882	24.3855	1142370.06	0.0128	0.002639
Mn	55	3	He	1822.593	23.3936	1117961.78	0.0128	0.002639
Fe	57	3	He	28148.444	16.3554	773905.30	0.0006	0.001429
Fe	57	3	He	28402.143	16.5028	773095.77	0.0006	0.001429
Fe	57	3	He	27400.949	15.9211	760858.97	0.0006	0.001429
Co	59	3	He	7.97	0.4507	21326.44	0.0563	0.002149
Co	59	3	He	8.126	0.4595	21526.84	0.0563	0.002149
Co	59	3	He	7.749	0.4383	20945.82	0.0563	0.002149
Ni	60	3	He	5.266	0.048	4220.80	0.0086	0.002834
Ni	60	3	He	4.623	0.0425	3700.64	0.0086	0.002834
Ni	60	3	He	4.73	0.0434	3780.62	0.0086	0.002834
Cu	63	3	He	8.438	0.2214	19453.63	0.0257	0.004757
Cu	63	3	He	8.592	0.2253	19613.86	0.0257	0.004757
Cu	63	3	He	8.305	0.2179	18972.97	0.0257	0.004757
Zn	66	3	He	62.782	0.1866	16399.79	0.0029	0.003818
Zn	66	3	He	67.466	0.2003	17431.14	0.0029	0.003818
Zn	66	3	He	62.009	0.1844	16049.62	0.0029	0.003818
As	75	3	He	7.138	0.0154	1356.07	0.002	0.0008061
As	75	3	He	6.414	0.0139	1214.06	0.002	0.0008061
As	75	3	He	6.099	0.0133	1158.05	0.002	0.0008061
Sr	88	3	He	262.806	2.3583	198868.73	0.009	0.0009645
Sr	88	3	He	255.602	2.2937	200210.66	0.009	0.0009645
Sr	88	3	He	253.136	2.2715	195689.78	0.009	0.0009645
Mo	98	3	He	0.534	0.012	1010.07	0.0219	0.0002706
Mo	98	3	He	0.557	0.0125	1090.09	0.0219	0.0002706
Mo	98	3	He	0.443	0.01	860.06	0.0219	0.0002706
Ag	107	3	He	0.048	0.0028	240.01	0.0465	0.0006206
Ag	107	3	He	0.038	0.0024	210.01	0.0465	0.0006206
Ag	107	3	He	0.032	0.0021	180.01	0.0465	0.0006206
Cd	111	3	He	1.149	0.0061	518.01	0.0053	0
Cd	111	3	He	1.076	0.0058	502.01	0.0053	0
Cd	111	3	He	0.986	0.0053	454.01	0.0053	0
Sn	120	3	He	0.053	0.0173	1460.12	0.0158	0.01648
Sn	120	3	He	-0.049	0.0157	1370.12	0.0158	0.01648
Sn	120	3	He	0.162	0.019	1640.17	0.0158	0.01648
Sb	121	3	He	0.349	0.0055	460.02	0.0149	0.0002698
Sb	121	3	He	0.499	0.0077	670.04	0.0149	0.0002698
Sb	121	3	He	0.545	0.0084	720.04	0.0149	0.0002698
Ba	137	3	He	27.836	0.1338	11285.03	0.0048	0.0002317
Ba	137	3	He	28.538	0.1372	11975.61	0.0048	0.0002317
Ba	137	3	He	28.093	0.1351	11635.25	0.0048	0.0002317
Tl	205	3	He	0.071	0.0019	760.05	0.0247	0.0001339
Tl	205	3	He	0.063	0.0017	670.04	0.0247	0.0001339
Tl	205	3	He	0.067	0.0018	710.05	0.0247	0.0001339
Pb	208	3	He	18.94	0.621	134131.46	0.0327	0.00107
Pb	208	3	He	19.065	0.6251	133534.20	0.0327	0.00107
Pb	208	3	He	18.946	0.6212	131927.88	0.0327	0.00107
U	238	3	He	0.202	0.01	3110.51	0.0493	7.55E-05
U	238	3	He	0.22	0.0109	3401.10	0.0493	7.55E-05
U	238	3	He	0.193	0.0096	2980.43	0.0493	7.55E-05
Sc	45	1	No Gas			2487057.62		
Sc	45	1	No Gas			2532459.02		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2488548.87		
Ge	72	1	No Gas			1268268.03		
Ge	72	1	No Gas			1281515.92		
Ge	72	1	No Gas			1254135.14		
Sc	45	2	H2			184384.76		
Sc	45	2	H2			183983.02		
Sc	45	2	H2			183717.91		
Ge	72	2	H2			165882.32		
Ge	72	2	H2			162757.05		
Ge	72	2	H2			162466.20		
In	115	2	H2			387297.34		
In	115	2	H2			386201.44		
In	115	2	H2			384899.45		
Sc	45	3	He			47317.98		
Sc	45	3	He			46846.30		
Sc	45	3	He			47789.26		
Ge	72	3	He			87879.75		
Ge	72	3	He			87045.53		
Ge	72	3	He			87054.28		
In	115	3	He			84335.95		
In	115	3	He			87294.33		
In	115	3	He			86156.57		
Tb	159	3	He			401646.20		
Tb	159	3	He			397960.50		
Tb	159	3	He			394789.13		
Bi	209	3	He			310586.15		
Bi	209	3	He			311833.24		
Bi	209	3	He			310271.13		

Quantitation Report

Data File Name	214SMPL.d
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Acq Time	8/10/2023 5:59:04 PM
Sample Name	410-136722-Q-9-A
Sample Type	Sample
Comment	T20
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

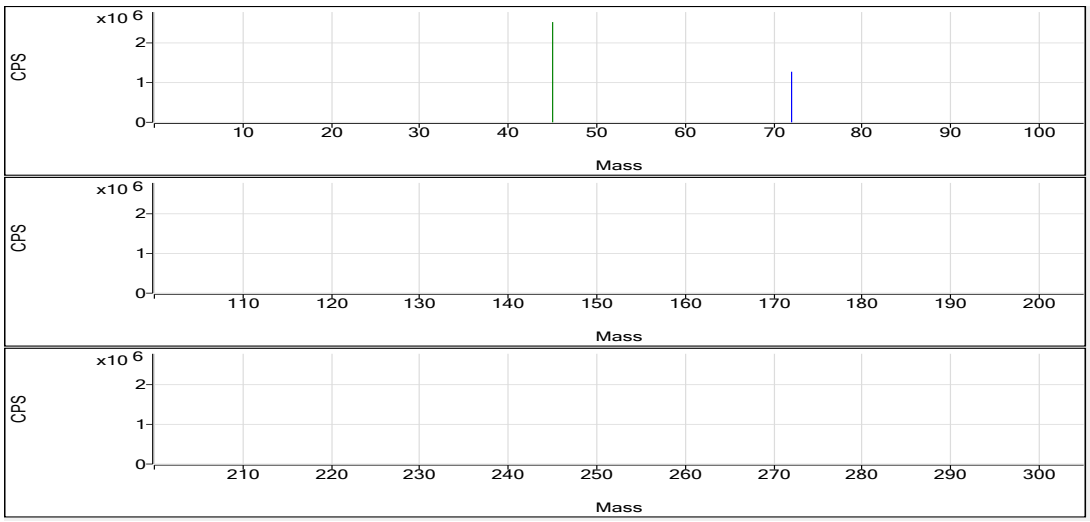
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.042	ppb	17.0	91.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.026	ppb	57.6	3.78	0.0000	Pulse	1.5000	3
Na	23	45	He	11402.899	ppb	1.5	2014602.42	41.1339	Analog	0.1000	3
Mg	24	45	He	8711.982	ppb	0.6	765847.80	15.6356	Pulse	0.1000	3
Al	27	45	He	35.775	ppb	2.6	1056.74	0.0216	Pulse	0.1000	3
K	39	45	He	559.175	ppb	2.6	51237.12	1.0461	Pulse	0.1000	3
Ca	44	45	He	22257.275	ppb	1.2	73773.73	1.5062	Pulse	0.1000	3
Ti	47	45	He	0.369	ppb	234.5	13.33	0.0003	Pulse	0.1000	3
V	51	45	He	0.208	ppb	12.9	1440.08	0.0294	Pulse	0.5000	3
Cr	52	45	He	0.102	ppb	104.2	2106.89	0.0430	Pulse	0.1000	3
Mn	55	45	He	1248.739	ppb	2.0	784999.83	16.0288	Pulse	0.1000	3
Fe	57	45	He	10801.400	ppb	1.9	307412.04	6.2769	Pulse	0.1000	3
Co	59	45	He	4.304	ppb	2.7	11968.63	0.2444	Pulse	0.1000	3
Ni	60	72	He	1.727	ppb	1.0	1546.80	0.0177	Pulse	0.1000	3
Cu	63	72	He	0.572	ppb	20.1	1703.50	0.0194	Pulse	0.1000	3
Zn	66	72	He	3.235	ppb	17.7	1160.09	0.0132	Pulse	0.1000	3
As	75	72	He	30.581	ppb	1.8	5558.45	0.0635	Pulse	0.5000	3
Sr	88	115	He	91.855	ppb	0.7	72824.49	0.8249	Pulse	0.1000	3
Mo	98	115	He	0.366	ppb	20.7	730.05	0.0083	Pulse	0.1000	3
Ag	107	115	He	-0.005	ppb	N/A	33.33	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.013	ppb	58.7	6.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.080	ppb	N/A	1340.12	0.0152	Pulse	0.1000	3
Sb	121	115	He	0.073	ppb	45.4	120.01	0.0014	Pulse	0.1000	3
Ba	137	115	He	9.748	ppb	5.1	4150.78	0.0470	Pulse	0.1000	3
Tl	205	159	He	0.008	ppb	70.0	130.01	0.0003	Pulse	0.1000	3
Pb	208	159	He	0.603	ppb	5.6	8341.34	0.0208	Pulse	0.1000	3
U	238	209	He	0.021	ppb	9.1	353.35	0.0011	Pulse	0.1000	3

ISTD Table:

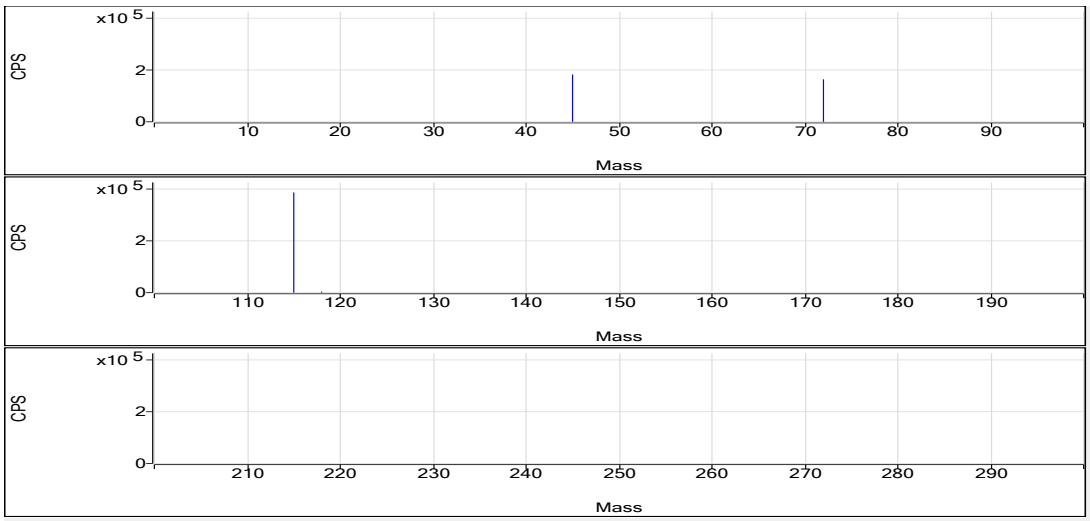
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2511342.57	0.4	104.7	Analog	0.1000	3
No Gas	Ge	72	1266878.86	0.6	109.8	Pulse	0.1000	3
H2	Sc	45	183162.40	0.5	97.9	Pulse	0.1000	3
H2	Ge	72	164791.30	0.6	100.7	Pulse	0.1000	3
H2	In	115	388441.99	1.4	99.8	Pulse	0.1000	3
He	Sc	45	48983.41	1.4	105.0	Pulse	0.1000	3
He	Ge	72	87584.38	0.9	107.9	Pulse	0.1000	3
He	In	115	88292.86	2.4	102.4	Pulse	0.1000	3
He	Tb	159	400852.62	0.7	100.6	Pulse	0.1000	3
He	Bi	209	313009.47	1.0	101.2	Pulse	0.1000	3

No Gas

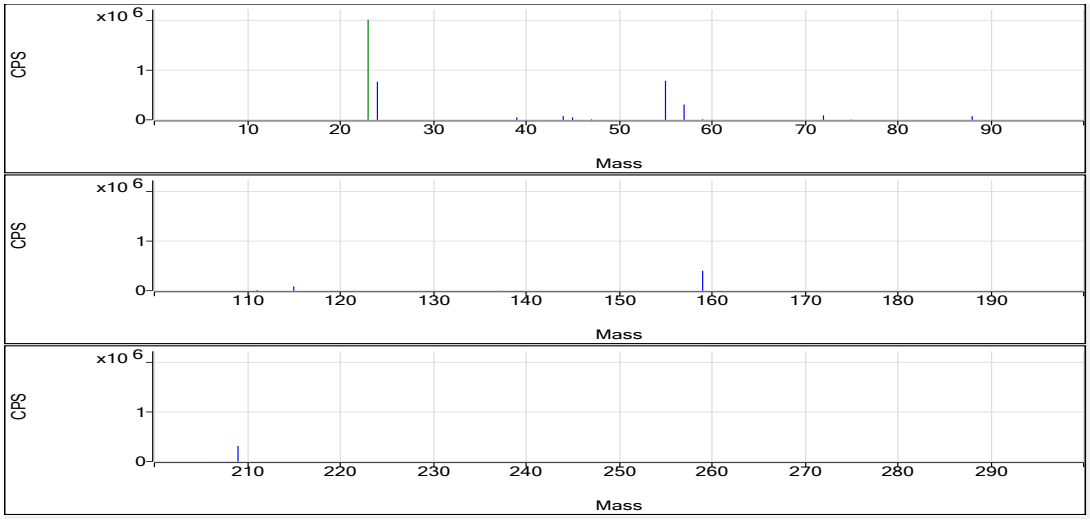


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.047	0	102.00	0.0008	4.685E-06
Be	9	1	No Gas	0.034	0	76.00	0.0008	4.685E-06
Be	9	1	No Gas	0.044	0	96.00	0.0008	4.685E-06
Se	78	2	H2	0.01	0	2.67	0.0004	1.219E-05
Se	78	2	H2	0.029	0	4.00	0.0004	1.219E-05
Se	78	2	H2	0.039	0	4.67	0.0004	1.219E-05
Na	23	3	He	11485.44	41.4291	2019757.63	0.0036	0.3452
Na	23	3	He	11515.747	41.5375	2012162.78	0.0036	0.3452
Na	23	3	He	11207.51	40.435	2011886.85	0.0036	0.3452
Mg	24	3	He	8757.113	15.7166	766216.16	0.0018	0.003497
Mg	24	3	He	8724.661	15.6583	758521.94	0.0018	0.003497
Mg	24	3	He	8654.172	15.5319	772805.30	0.0018	0.003497
Al	27	3	He	36.769	0.0222	1080.07	0.0006	0.0006432
Al	27	3	He	34.894	0.0211	1020.07	0.0006	0.0006432
Al	27	3	He	35.661	0.0215	1070.07	0.0006	0.0006432
K	39	3	He	552.079	1.0379	50598.18	0.0012	0.3951
K	39	3	He	576.106	1.0658	51631.57	0.0012	0.3951
K	39	3	He	549.341	1.0347	51481.60	0.0012	0.3951
Ca	44	3	He	22151.314	1.4991	73083.22	0.0001	0.002715
Ca	44	3	He	22570.09	1.5274	73988.77	0.0001	0.002715
Ca	44	3	He	22050.422	1.4923	74249.20	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	1.367	0.0008	40.00	0.0005	7.003E-05
V	51	3	He	0.218	0.0296	1444.08	0.0219	0.02486
V	51	3	He	0.228	0.0299	1446.08	0.0219	0.02486
V	51	3	He	0.177	0.0287	1430.08	0.0219	0.02486
Cr	52	3	He	0.22	0.0466	2270.26	0.0299	0.03997
Cr	52	3	He	0.072	0.0421	2040.22	0.0299	0.03997
Cr	52	3	He	0.014	0.0404	2010.20	0.0299	0.03997
Mn	55	3	He	1256.657	16.1304	786391.63	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1268.516	16.2826	788762.80	0.0128	0.002639
Mn	55	3	He	1221.043	15.6734	779845.07	0.0128	0.002639
Fe	57	3	He	10876.881	6.3208	308152.14	0.0006	0.001429
Fe	57	3	He	10956.131	6.3668	308422.63	0.0006	0.001429
Fe	57	3	He	10571.188	6.1432	305661.36	0.0006	0.001429
Co	59	3	He	4.301	0.2442	11905.27	0.0563	0.002149
Co	59	3	He	4.424	0.2511	12165.46	0.0563	0.002149
Co	59	3	He	4.188	0.2379	11835.17	0.0563	0.002149
Ni	60	3	He	1.714	0.0175	1520.12	0.0086	0.002834
Ni	60	3	He	1.721	0.0176	1550.13	0.0086	0.002834
Ni	60	3	He	1.747	0.0178	1570.14	0.0086	0.002834
Cu	63	3	He	0.566	0.0193	1670.16	0.0257	0.004757
Cu	63	3	He	0.461	0.0166	1460.14	0.0257	0.004757
Cu	63	3	He	0.691	0.0225	1980.20	0.0257	0.004757
Zn	66	3	He	2.693	0.0117	1010.07	0.0029	0.003818
Zn	66	3	He	3.175	0.0131	1150.09	0.0029	0.003818
Zn	66	3	He	3.837	0.015	1320.11	0.0029	0.003818
As	75	3	He	30.487	0.0633	5481.09	0.002	0.0008061
As	75	3	He	31.176	0.0647	5695.16	0.002	0.0008061
As	75	3	He	30.081	0.0624	5499.09	0.002	0.0008061
Sr	88	3	He	91.415	0.8209	74285.93	0.009	0.0009645
Sr	88	3	He	92.598	0.8316	71812.76	0.009	0.0009645
Sr	88	3	He	91.55	0.8222	72374.78	0.009	0.0009645
Mo	98	3	He	0.33	0.0075	680.04	0.0219	0.0002706
Mo	98	3	He	0.452	0.0102	880.06	0.0219	0.0002706
Mo	98	3	He	0.314	0.0072	630.04	0.0219	0.0002706
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Ag	107	3	He	0.002	0.0007	60.00	0.0465	0.0006206
Ag	107	3	He	-0.011	0.0001	10.00	0.0465	0.0006206
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.017	0.0001	8.00	0.0053	0
Cd	111	3	He	0.017	0.0001	8.00	0.0053	0
Sn	120	3	He	-0.203	0.0133	1200.09	0.0158	0.01648
Sn	120	3	He	0.137	0.0186	1610.16	0.0158	0.01648
Sn	120	3	He	-0.173	0.0137	1210.10	0.0158	0.01648
Sb	121	3	He	0.101	0.0018	160.01	0.0149	0.0002698
Sb	121	3	He	0.036	0.0008	70.00	0.0149	0.0002698
Sb	121	3	He	0.081	0.0015	130.01	0.0149	0.0002698
Ba	137	3	He	9.486	0.0458	4140.75	0.0048	0.0002317
Ba	137	3	He	9.436	0.0455	3930.74	0.0048	0.0002317
Ba	137	3	He	10.321	0.0498	4380.84	0.0048	0.0002317
Tl	205	3	He	0.01	0.0004	150.01	0.0247	0.0001339
Tl	205	3	He	0.002	0.0002	70.00	0.0247	0.0001339
Tl	205	3	He	0.012	0.0004	170.01	0.0247	0.0001339
Pb	208	3	He	0.639	0.022	4681.00	0.0327	0.00107
Pb	208	3	He	0.572	0.0198	4220.84	0.0327	0.00107
Pb	208	3	He	0.599	0.0207	4300.85	0.0327	0.00107
U	238	3	He	0.021	0.0011	340.02	0.0493	7.55E-05
U	238	3	He	0.024	0.0012	390.02	0.0493	7.55E-05
U	238	3	He	0.02	0.0011	330.02	0.0493	7.55E-05
Sc	45	1	No Gas			2505511.21		
Sc	45	1	No Gas			2505316.68		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2523199.81		
Ge	72	1	No Gas			1261138.65		
Ge	72	1	No Gas			1264490.22		
Ge	72	1	No Gas			1275007.72		
Sc	45	2	H2			182866.48		
Sc	45	2	H2			184095.25		
Sc	45	2	H2			182525.47		
Ge	72	2	H2			164357.34		
Ge	72	2	H2			165893.30		
Ge	72	2	H2			164123.26		
In	115	2	H2			382355.07		
In	115	2	H2			391217.18		
In	115	2	H2			391753.71		
Sc	45	3	He			48752.10		
Sc	45	3	He			48442.02		
Sc	45	3	He			49756.11		
Ge	72	3	He			86631.40		
Ge	72	3	He			88050.31		
Ge	72	3	He			88071.43		
In	115	3	He			90494.46		
In	115	3	He			86367.56		
In	115	3	He			88037.85		
Tb	159	3	He			401996.28		
Tb	159	3	He			402876.17		
Tb	159	3	He			397685.42		
Bi	209	3	He			309348.78		
Bi	209	3	He			315684.43		
Bi	209	3	He			313995.21		

Quantitation Report

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Sample Type	Sample
Comment	T20
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

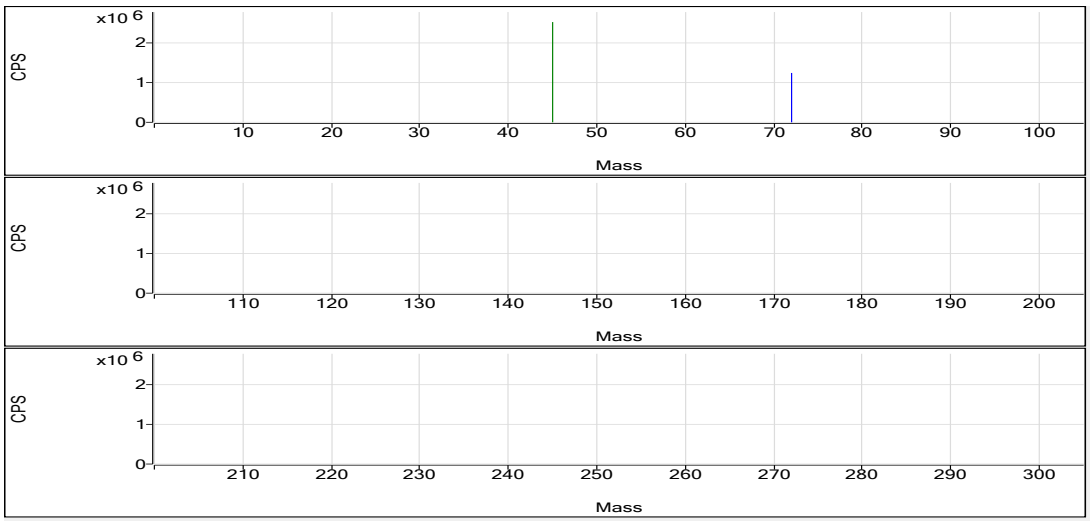
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.864	ppb	5.7	1674.77	0.0007	Pulse	0.5000	3
Se	78	72	H2	0.394	ppb	1.0	28.22	0.0002	Pulse	1.5000	3
Na	23	45	He	191891.402	ppb	0.8	33316234.50	686.7501	Analog	0.1000	3
Mg	24	45	He	3730.928	ppb	1.9	324920.27	6.6980	Pulse	0.1000	3
Al	27	45	He	6419.672	ppb	1.2	182234.05	3.7564	Pulse	0.1000	3
K	39	45	He	9952.424	ppb	1.7	581303.49	11.9829	Pulse	0.1000	3
Ca	44	45	He	33606.985	ppb	1.5	110262.65	2.2729	Pulse	0.1000	3
Ti	47	45	He	62.453	ppb	8.2	1630.14	0.0336	Pulse	0.1000	3
V	51	45	He	8.351	ppb	2.0	10062.87	0.2074	Pulse	0.5000	3
Cr	52	45	He	9.216	ppb	1.7	15325.20	0.3159	Pulse	0.1000	3
Mn	55	45	He	3389.233	ppb	0.8	2110349.45	43.4996	Analog	0.1000	3
Fe	57	45	He	38110.721	ppb	1.2	1074223.40	22.1434	Pulse	0.1000	3
Co	59	45	He	36.709	ppb	0.9	100334.06	2.0682	Pulse	0.1000	3
Ni	60	72	He	11.242	ppb	4.3	8546.15	0.0993	Pulse	0.1000	3
Cu	63	72	He	24.127	ppb	1.2	53694.54	0.6241	Pulse	0.1000	3
Zn	66	72	He	449.017	ppb	1.6	112803.76	1.3112	Pulse	0.1000	3
As	75	72	He	18.393	ppb	2.4	3311.74	0.0385	Pulse	0.5000	3
Sr	88	115	He	263.220	ppb	1.6	203917.70	2.3620	Pulse	0.1000	3
Mo	98	115	He	3.689	ppb	3.2	7005.33	0.0811	Pulse	0.1000	3
Ag	107	115	He	0.095	ppb	24.4	433.36	0.0050	Pulse	0.1000	3
Cd	111	115	He	0.272	ppb	13.3	125.33	0.0015	Pulse	0.5000	3
Sn	120	115	He	0.450	ppb	23.6	2036.88	0.0236	Pulse	0.1000	3
Sb	121	115	He	0.416	ppb	22.1	556.70	0.0064	Pulse	0.1000	3
Ba	137	115	He	192.266	ppb	0.3	79691.49	0.9230	Pulse	0.1000	3
Tl	205	159	He	0.071	ppb	21.1	773.38	0.0019	Pulse	0.1000	3
Pb	208	159	He	10.998	ppb	1.2	148477.84	0.3610	Pulse	0.1000	3
U	238	209	He	0.964	ppb	3.3	14508.59	0.0476	Pulse	0.1000	3

ISTD Table:

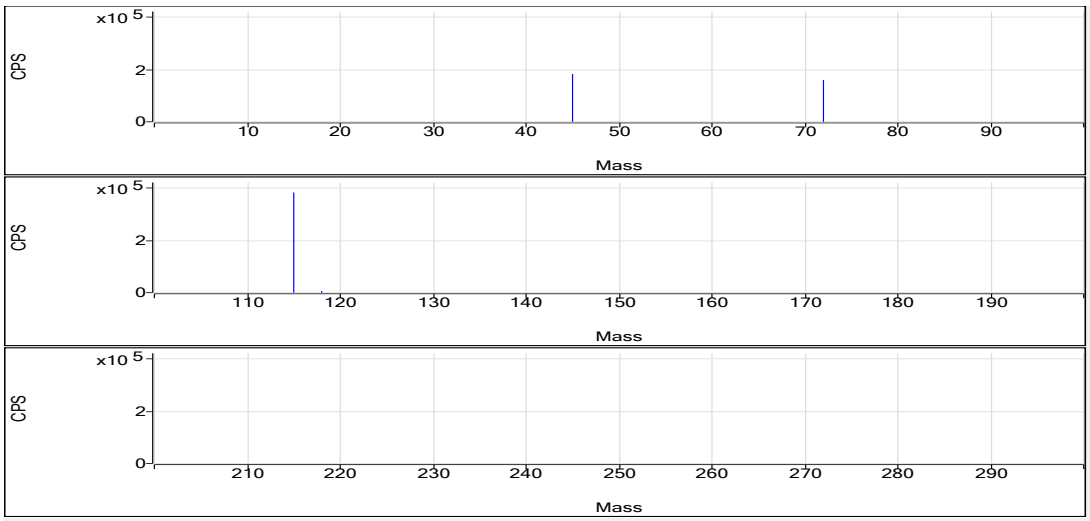
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2524643.56	0.4	105.2	Analog	0.1000	3
No Gas	Ge	72	1242915.32	0.8	107.8	Pulse	0.1000	3
H2	Sc	45	183409.91	0.2	98.1	Pulse	0.1000	3
H2	Ge	72	159980.43	0.6	97.7	Pulse	0.1000	3
H2	In	115	384131.83	0.6	98.7	Pulse	0.1000	3
He	Sc	45	48514.63	0.7	104.0	Pulse	0.1000	3
He	Ge	72	86035.19	0.5	106.0	Pulse	0.1000	3
He	In	115	86340.29	0.9	100.2	Pulse	0.1000	3
He	Tb	159	411289.45	0.9	103.2	Pulse	0.1000	3
He	Bi	209	305129.31	0.7	98.7	Pulse	0.1000	3

No Gas

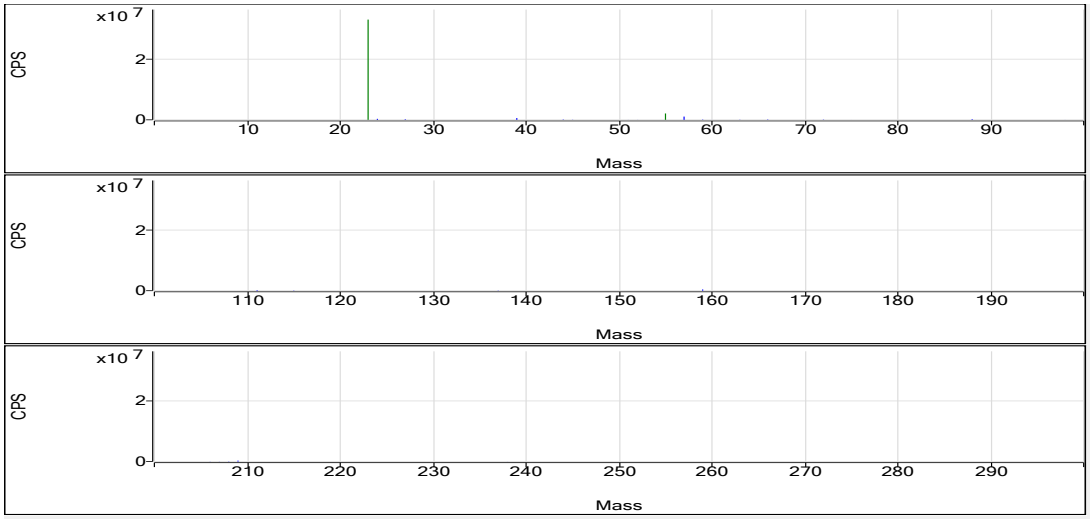


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.811	0.0006	1580.09	0.0008	4.685E-06
Be	9	1	No Gas	0.872	0.0007	1686.11	0.0008	4.685E-06
Be	9	1	No Gas	0.908	0.0007	1758.11	0.0008	4.685E-06
Se	78	2	H2	0.391	0.0002	28.00	0.0004	1.219E-05
Se	78	2	H2	0.398	0.0002	28.67	0.0004	1.219E-05
Se	78	2	H2	0.393	0.0002	28.00	0.0004	1.219E-05
Na	23	3	He	193593.95	692.8402	33346544.50	0.0036	0.3452
Na	23	3	He	191137.577	684.0536	33252757.00	0.0036	0.3452
Na	23	3	He	190942.679	683.3565	33349402.00	0.0036	0.3452
Mg	24	3	He	3808.966	6.838	329114.80	0.0018	0.003497
Mg	24	3	He	3717.58	6.674	324433.61	0.0018	0.003497
Mg	24	3	He	3666.236	6.5819	321212.40	0.0018	0.003497
Al	27	3	He	6483.067	3.7935	182580.19	0.0006	0.0006432
Al	27	3	He	6332.85	3.7056	180133.22	0.0006	0.0006432
Al	27	3	He	6443.098	3.7701	183988.75	0.0006	0.0006432
K	39	3	He	10136.045	12.1967	587031.32	0.0012	0.3951
K	39	3	He	9904.111	11.9267	579772.10	0.0012	0.3951
K	39	3	He	9817.115	11.8254	577107.06	0.0012	0.3951
Ca	44	3	He	34171.765	2.3111	111232.90	0.0001	0.002715
Ca	44	3	He	33422.043	2.2604	109882.88	0.0001	0.002715
Ca	44	3	He	33227.148	2.2473	109672.16	0.0001	0.002715
Ti	47	3	He	62.173	0.0335	1610.14	0.0005	7.003E-05
Ti	47	3	He	67.687	0.0364	1770.16	0.0005	7.003E-05
Ti	47	3	He	57.498	0.0309	1510.12	0.0005	7.003E-05
V	51	3	He	8.394	0.2083	10027.49	0.0219	0.02486
V	51	3	He	8.166	0.2034	9885.41	0.0219	0.02486
V	51	3	He	8.495	0.2106	10275.70	0.0219	0.02486
Cr	52	3	He	9.288	0.3181	15308.66	0.0299	0.03997
Cr	52	3	He	9.32	0.319	15508.63	0.0299	0.03997
Cr	52	3	He	9.039	0.3106	15158.31	0.0299	0.03997
Mn	55	3	He	3405.332	43.7063	2103591.06	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	3356.356	43.0777	2094063.88	0.0128	0.002639
Mn	55	3	He	3406.012	43.715	2133393.41	0.0128	0.002639
Fe	57	3	He	38644.431	22.4535	1080691.16	0.0006	0.001429
Fe	57	3	He	37743.084	21.9298	1066037.48	0.0006	0.001429
Fe	57	3	He	37944.647	22.0469	1075941.55	0.0006	0.001429
Co	59	3	He	37.084	2.0893	100559.48	0.0563	0.002149
Co	59	3	He	36.628	2.0636	100316.72	0.0563	0.002149
Co	59	3	He	36.415	2.0517	100125.98	0.0563	0.002149
Ni	60	3	He	11.455	0.1012	8742.89	0.0086	0.002834
Ni	60	3	He	11.582	0.1022	8803.01	0.0086	0.002834
Ni	60	3	He	10.687	0.0946	8092.55	0.0086	0.002834
Cu	63	3	He	23.81	0.616	53239.11	0.0257	0.004757
Cu	63	3	He	24.348	0.6298	54223.79	0.0257	0.004757
Cu	63	3	He	24.223	0.6266	53620.73	0.0257	0.004757
Zn	66	3	He	448.167	1.3087	113112.19	0.0029	0.003818
Zn	66	3	He	442.141	1.2912	111167.92	0.0029	0.003818
Zn	66	3	He	456.745	1.3337	114131.16	0.0029	0.003818
As	75	3	He	18.899	0.0395	3416.43	0.002	0.0008061
As	75	3	He	18.236	0.0382	3286.40	0.002	0.0008061
As	75	3	He	18.042	0.0378	3232.38	0.002	0.0008061
Sr	88	3	He	260.533	2.3379	203445.08	0.009	0.0009645
Sr	88	3	He	261.088	2.3429	202561.01	0.009	0.0009645
Sr	88	3	He	268.038	2.4052	205747.01	0.009	0.0009645
Mo	98	3	He	3.558	0.0783	6811.88	0.0219	0.0002706
Mo	98	3	He	3.723	0.0819	7082.07	0.0219	0.0002706
Mo	98	3	He	3.785	0.0833	7122.04	0.0219	0.0002706
Ag	107	3	He	0.078	0.0043	370.02	0.0465	0.0006206
Ag	107	3	He	0.121	0.0062	540.04	0.0465	0.0006206
Ag	107	3	He	0.085	0.0046	390.02	0.0465	0.0006206
Cd	111	3	He	0.232	0.0012	108.00	0.0053	0
Cd	111	3	He	0.303	0.0016	140.00	0.0053	0
Cd	111	3	He	0.28	0.0015	128.00	0.0053	0
Sn	120	3	He	0.565	0.0254	2210.24	0.0158	0.01648
Sn	120	3	He	0.356	0.0221	1910.21	0.0158	0.01648
Sn	120	3	He	0.43	0.0233	1990.20	0.0158	0.01648
Sb	121	3	He	0.508	0.0078	680.05	0.0149	0.0002698
Sb	121	3	He	0.324	0.0051	440.02	0.0149	0.0002698
Sb	121	3	He	0.415	0.0064	550.03	0.0149	0.0002698
Ba	137	3	He	193.028	0.9266	80636.59	0.0048	0.0002317
Ba	137	3	He	191.885	0.9212	79641.22	0.0048	0.0002317
Ba	137	3	He	191.884	0.9211	78796.66	0.0048	0.0002317
Tl	205	3	He	0.06	0.0016	660.04	0.0247	0.0001339
Tl	205	3	He	0.065	0.0017	720.05	0.0247	0.0001339
Tl	205	3	He	0.088	0.0023	940.06	0.0247	0.0001339
Pb	208	3	He	11.002	0.3612	78866.11	0.0327	0.00107
Pb	208	3	He	10.862	0.3566	79369.90	0.0327	0.00107
Pb	208	3	He	11.129	0.3653	78243.34	0.0327	0.00107
U	238	3	He	0.927	0.0458	14018.01	0.0493	7.55E-05
U	238	3	He	0.977	0.0482	14588.66	0.0493	7.55E-05
U	238	3	He	0.987	0.0487	14919.09	0.0493	7.55E-05
Sc	45	1	No Gas			2535363.87		
Sc	45	1	No Gas			2516093.24		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2522473.56		
Ge	72	1	No Gas			1253285.22		
Ge	72	1	No Gas			1232559.20		
Ge	72	1	No Gas			1242901.54		
Sc	45	2	H2			182897.01		
Sc	45	2	H2			183577.17		
Sc	45	2	H2			183755.56		
Ge	72	2	H2			159885.42		
Ge	72	2	H2			160928.32		
Ge	72	2	H2			159127.54		
In	115	2	H2			385327.38		
In	115	2	H2			385693.51		
In	115	2	H2			381374.60		
Sc	45	3	He			48130.21		
Sc	45	3	He			48611.33		
Sc	45	3	He			48802.35		
Ge	72	3	He			86430.49		
Ge	72	3	He			86099.16		
Ge	72	3	He			85575.91		
In	115	3	He			87032.07		
In	115	3	He			86468.28		
In	115	3	He			85552.11		
Tb	159	3	He			409773.35		
Tb	159	3	He			415548.98		
Tb	159	3	He			408546.01		
Bi	209	3	He			306333.20		
Bi	209	3	He			302561.60		
Bi	209	3	He			306493.14		

Quantitation Report

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Sample Type	Sample
Comment	T20
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

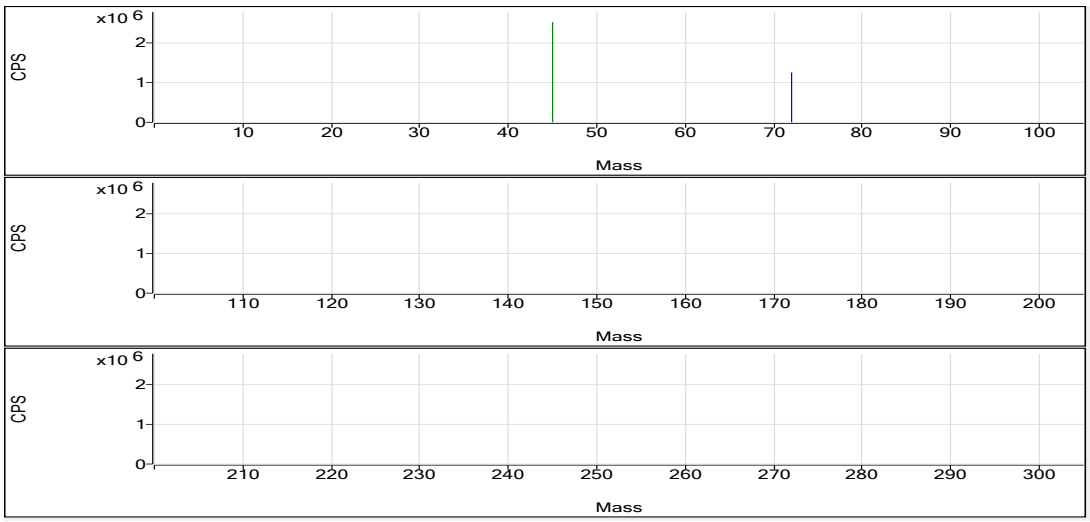
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.123	ppb	19.4	250.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.019	ppb	171.0	3.33	0.0000	Pulse	1.5000	3
Na	23	45	He	12936.325	ppb	1.5	2260948.14	46.6190	Analog	0.1000	3
Mg	24	45	He	8774.726	ppb	2.3	763705.35	15.7482	Pulse	0.1000	3
Al	27	45	He	357.975	ppb	1.4	10190.86	0.2101	Pulse	0.1000	3
K	39	45	He	592.455	ppb	3.8	52612.09	1.0849	Pulse	0.1000	3
Ca	44	45	He	21838.346	ppb	1.3	71683.33	1.4779	Pulse	0.1000	3
Ti	47	45	He	2.186	ppb	62.9	60.00	0.0012	Pulse	0.1000	3
V	51	45	He	0.540	ppb	13.3	1778.12	0.0367	Pulse	0.5000	3
Cr	52	45	He	0.858	ppb	11.2	3183.83	0.0657	Pulse	0.1000	3
Mn	55	45	He	1528.421	ppb	1.6	951451.18	19.6182	Pulse	0.1000	3
Fe	57	45	He	26098.929	ppb	1.8	735441.34	15.1647	Pulse	0.1000	3
Co	59	45	He	42.464	ppb	2.3	116004.67	2.3921	Pulse	0.1000	3
Ni	60	72	He	25.757	ppb	2.7	19697.45	0.2239	Pulse	0.1000	3
Cu	63	72	He	2.260	ppb	4.8	5521.26	0.0628	Pulse	0.1000	3
Zn	66	72	He	10.702	ppb	6.1	3077.10	0.0350	Pulse	0.1000	3
As	75	72	He	204.328	ppb	0.2	36901.42	0.4194	Pulse	0.5000	3
Sr	88	115	He	95.815	ppb	2.0	74794.39	0.8604	Pulse	0.1000	3
Mo	98	115	He	3.532	ppb	5.3	6755.19	0.0777	Pulse	0.1000	3
Ag	107	115	He	0.001	ppb	556.8	56.67	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.232	ppb	6.5	108.00	0.0012	Pulse	0.5000	3
Sn	120	115	He	-0.124	ppb	N/A	1263.44	0.0145	Pulse	0.1000	3
Sb	121	115	He	0.895	ppb	8.1	1180.09	0.0136	Pulse	0.1000	3
Ba	137	115	He	12.829	ppb	3.1	5374.58	0.0618	Pulse	0.1000	3
Tl	205	159	He	0.018	ppb	25.0	230.01	0.0006	Pulse	0.1000	3
Pb	208	159	He	3.059	ppb	1.3	40766.18	0.1012	Pulse	0.1000	3
U	238	209	He	0.084	ppb	5.9	1320.12	0.0042	Pulse	0.1000	3

ISTD Table:

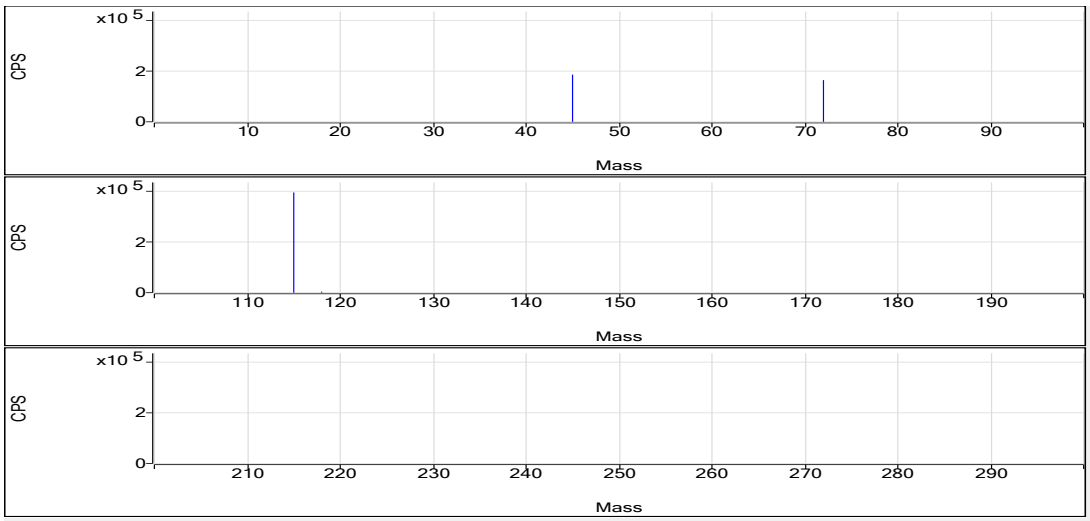
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2540438.76	0.9	105.9	Analog	0.1000	3
No Gas	Ge	72	1262832.58	1.3	109.5	Pulse	0.1000	3
H2	Sc	45	185291.53	1.8	99.1	Pulse	0.1000	3
H2	Ge	72	163661.04	1.3	100.0	Pulse	0.1000	3
H2	In	115	393339.12	0.4	101.1	Pulse	0.1000	3
He	Sc	45	48505.26	1.4	104.0	Pulse	0.1000	3
He	Ge	72	87976.79	0.6	108.4	Pulse	0.1000	3
He	In	115	86948.63	1.7	100.9	Pulse	0.1000	3
He	Tb	159	402832.49	0.3	101.1	Pulse	0.1000	3
He	Bi	209	313347.57	0.6	101.3	Pulse	0.1000	3

No Gas

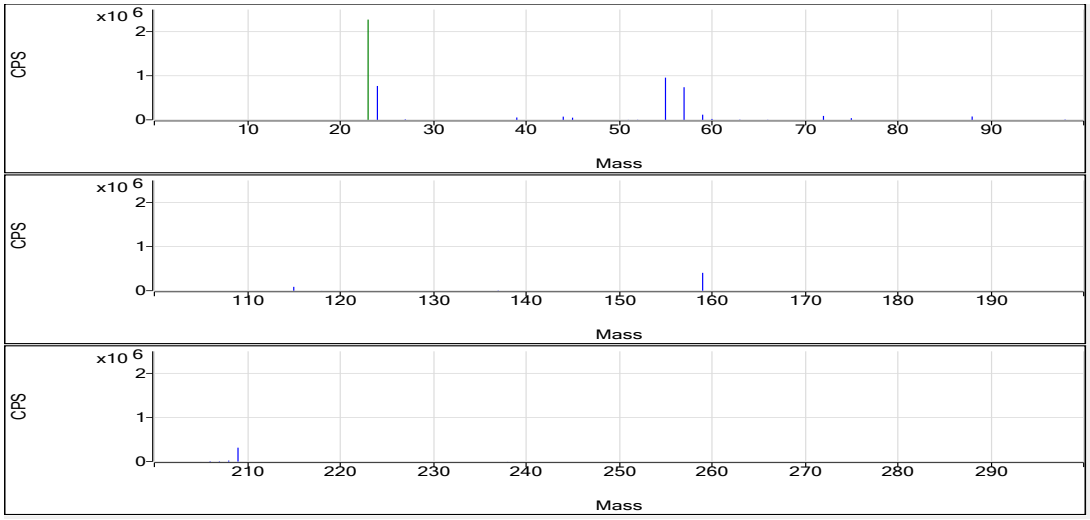


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.134	0.0001	270.00	0.0008	4.685E-06
Be	9	1	No Gas	0.095	0.0001	196.00	0.0008	4.685E-06
Be	9	1	No Gas	0.139	0.0001	284.00	0.0008	4.685E-06
Se	78	2	H2	0	0	2.00	0.0004	1.219E-05
Se	78	2	H2	0	0	2.00	0.0004	1.219E-05
Se	78	2	H2	0.058	0	6.00	0.0004	1.219E-05
Na	23	3	He	12822.28	46.2111	2262659.19	0.0036	0.3452
Na	23	3	He	13158.015	47.412	2261522.15	0.0036	0.3452
Na	23	3	He	12828.679	46.234	2258663.09	0.0036	0.3452
Mg	24	3	He	8623.629	15.4771	757812.10	0.0018	0.003497
Mg	24	3	He	8998.303	16.1493	770313.27	0.0018	0.003497
Mg	24	3	He	8702.246	15.6181	762990.69	0.0018	0.003497
Al	27	3	He	359.656	0.2111	10333.97	0.0006	0.0006432
Al	27	3	He	352.363	0.2068	9863.64	0.0006	0.0006432
Al	27	3	He	361.907	0.2124	10374.97	0.0006	0.0006432
K	39	3	He	591.718	1.084	53077.47	0.0012	0.3951
K	39	3	He	615.12	1.1113	53006.69	0.0012	0.3951
K	39	3	He	570.527	1.0593	51752.10	0.0012	0.3951
Ca	44	3	He	21979.61	1.4875	72832.29	0.0001	0.002715
Ca	44	3	He	22020.573	1.4902	71083.78	0.0001	0.002715
Ca	44	3	He	21514.855	1.4561	71133.93	0.0001	0.002715
Ti	47	3	He	1.391	0.0008	40.00	0.0005	7.003E-05
Ti	47	3	He	3.774	0.0021	100.00	0.0005	7.003E-05
Ti	47	3	He	1.394	0.0008	40.00	0.0005	7.003E-05
V	51	3	He	0.486	0.0355	1738.12	0.0219	0.02486
V	51	3	He	0.622	0.0385	1834.13	0.0219	0.02486
V	51	3	He	0.513	0.0361	1762.12	0.0219	0.02486
Cr	52	3	He	0.793	0.0637	3120.43	0.0299	0.03997
Cr	52	3	He	0.969	0.069	3290.60	0.0299	0.03997
Cr	52	3	He	0.812	0.0643	3140.45	0.0299	0.03997
Mn	55	3	He	1506.61	19.3383	946871.39	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1553.644	19.9419	951216.24	0.0128	0.002639
Mn	55	3	He	1525.008	19.5744	956265.92	0.0128	0.002639
Fe	57	3	He	25671.807	14.9165	730365.61	0.0006	0.001429
Fe	57	3	He	26616.811	15.4656	737696.63	0.0006	0.001429
Fe	57	3	He	26008.169	15.1119	738261.79	0.0006	0.001429
Co	59	3	He	41.973	2.3645	115772.68	0.0563	0.002149
Co	59	3	He	43.586	2.4553	117114.38	0.0563	0.002149
Co	59	3	He	41.833	2.3566	115126.96	0.0563	0.002149
Ni	60	3	He	25.222	0.2193	19423.77	0.0086	0.002834
Ni	60	3	He	25.519	0.2219	19483.66	0.0086	0.002834
Ni	60	3	He	26.532	0.2306	20184.92	0.0086	0.002834
Cu	63	3	He	2.155	0.0601	5321.19	0.0257	0.004757
Cu	63	3	He	2.251	0.0625	5491.23	0.0257	0.004757
Cu	63	3	He	2.374	0.0657	5751.36	0.0257	0.004757
Zn	66	3	He	10.441	0.0342	3030.44	0.0029	0.003818
Zn	66	3	He	11.44	0.0371	3260.49	0.0029	0.003818
Zn	66	3	He	10.224	0.0336	2940.38	0.0029	0.003818
As	75	3	He	203.974	0.4187	37083.84	0.002	0.0008061
As	75	3	He	204.864	0.4205	36931.57	0.002	0.0008061
As	75	3	He	204.145	0.4191	36688.85	0.002	0.0008061
Sr	88	3	He	96.383	0.8655	75008.76	0.009	0.0009645
Sr	88	3	He	93.654	0.841	74476.04	0.009	0.0009645
Sr	88	3	He	97.409	0.8747	74898.37	0.009	0.0009645
Mo	98	3	He	3.73	0.0821	7112.03	0.0219	0.0002706
Mo	98	3	He	3.357	0.0739	6541.79	0.0219	0.0002706
Mo	98	3	He	3.509	0.0772	6611.76	0.0219	0.0002706
Ag	107	3	He	0.004	0.0008	70.01	0.0465	0.0006206
Ag	107	3	He	-0.004	0.0005	40.00	0.0465	0.0006206
Ag	107	3	He	0.002	0.0007	60.00	0.0465	0.0006206
Cd	111	3	He	0.237	0.0013	110.00	0.0053	0
Cd	111	3	He	0.215	0.0012	102.00	0.0053	0
Cd	111	3	He	0.245	0.0013	112.00	0.0053	0
Sn	120	3	He	-0.101	0.0149	1290.11	0.0158	0.01648
Sn	120	3	He	-0.085	0.0151	1340.12	0.0158	0.01648
Sn	120	3	He	-0.185	0.0135	1160.10	0.0158	0.01648
Sb	121	3	He	0.968	0.0147	1270.10	0.0149	0.0002698
Sb	121	3	He	0.894	0.0136	1200.09	0.0149	0.0002698
Sb	121	3	He	0.823	0.0125	1070.07	0.0149	0.0002698
Ba	137	3	He	12.384	0.0597	5171.17	0.0048	0.0002317
Ba	137	3	He	13.155	0.0634	5611.34	0.0048	0.0002317
Ba	137	3	He	12.949	0.0624	5341.24	0.0048	0.0002317
Tl	205	3	He	0.015	0.0005	200.01	0.0247	0.0001339
Tl	205	3	He	0.016	0.0005	210.01	0.0247	0.0001339
Tl	205	3	He	0.023	0.0007	280.01	0.0247	0.0001339
Pb	208	3	He	3.05	0.1009	21718.51	0.0327	0.00107
Pb	208	3	He	3.026	0.1001	21468.16	0.0327	0.00107
Pb	208	3	He	3.102	0.1026	22018.92	0.0327	0.00107
U	238	3	He	0.084	0.0042	1320.12	0.0493	7.55E-05
U	238	3	He	0.089	0.0045	1390.13	0.0493	7.55E-05
U	238	3	He	0.079	0.004	1250.11	0.0493	7.55E-05
Sc	45	1	No Gas			2524600.27		
Sc	45	1	No Gas			2529904.34		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2566811.68		
Ge	72	1	No Gas			1256739.04		
Ge	72	1	No Gas			1250482.56		
Ge	72	1	No Gas			1281276.15		
Sc	45	2	H2			181836.70		
Sc	45	2	H2			185651.60		
Sc	45	2	H2			188386.29		
Ge	72	2	H2			161442.86		
Ge	72	2	H2			163829.09		
Ge	72	2	H2			165711.17		
In	115	2	H2			392312.57		
In	115	2	H2			395381.05		
In	115	2	H2			392323.74		
Sc	45	3	He			48963.56		
Sc	45	3	He			47699.34		
Sc	45	3	He			48852.89		
Ge	72	3	He			88564.24		
Ge	72	3	He			87818.45		
Ge	72	3	He			87547.67		
In	115	3	He			86670.89		
In	115	3	He			88561.72		
In	115	3	He			85633.55		
Tb	159	3	He			402377.53		
Tb	159	3	He			404122.81		
Tb	159	3	He			401997.14		
Bi	209	3	He			313909.49		
Bi	209	3	He			311403.88		
Bi	209	3	He			314729.35		

Quantitation Report

Data File Name	217SMPL.d
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Sample Name	410-136722-Q-6-A
Sample Type	Sample
Comment	T20
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

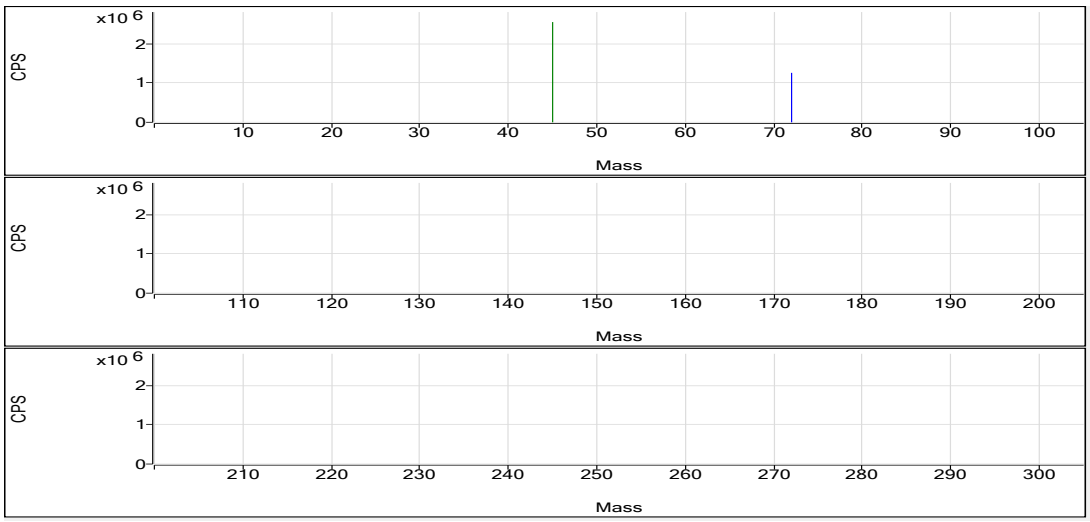
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.030	ppb	17.0	70.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.016	ppb	92.6	3.11	0.0000	Pulse	1.5000	3
Na	23	45	He	29436.156	ppb	1.5	5079765.86	105.6397	Analog	0.1000	3
Mg	24	45	He	14914.485	ppb	0.8	1287043.47	26.7649	Analog	0.1000	3
Al	27	45	He	393.543	ppb	3.8	11101.19	0.2309	Pulse	0.1000	3
K	39	45	He	2423.543	ppb	0.8	154684.48	3.2169	Pulse	0.1000	3
Ca	44	45	He	95680.957	ppb	0.7	310931.89	6.4661	Pulse	0.1000	3
Ti	47	45	He	26.212	ppb	13.1	680.04	0.0141	Pulse	0.1000	3
V	51	45	He	0.556	ppb	12.0	1780.12	0.0370	Pulse	0.5000	3
Cr	52	45	He	0.652	ppb	30.9	2860.37	0.0595	Pulse	0.1000	3
Mn	55	45	He	644.891	ppb	1.1	398094.85	8.2791	Pulse	0.1000	3
Fe	57	45	He	6676.527	ppb	1.3	186594.37	3.8804	Pulse	0.1000	3
Co	59	45	He	0.270	ppb	5.6	833.39	0.0173	Pulse	0.1000	3
Ni	60	72	He	1.176	ppb	7.9	1123.43	0.0129	Pulse	0.1000	3
Cu	63	72	He	0.744	ppb	3.7	2073.56	0.0239	Pulse	0.1000	3
Zn	66	72	He	5.307	ppb	6.9	1673.49	0.0193	Pulse	0.1000	3
As	75	72	He	1.864	ppb	6.5	402.01	0.0046	Pulse	0.5000	3
Sr	88	115	He	1130.473	ppb	0.5	891166.18	10.1411	Pulse	0.1000	3
Mo	98	115	He	0.610	ppb	10.7	1200.10	0.0137	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	N/A	53.33	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.011	ppb	42.7	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.111	ppb	N/A	1293.45	0.0147	Pulse	0.1000	3
Sb	121	115	He	0.227	ppb	19.9	320.02	0.0036	Pulse	0.1000	3
Ba	137	115	He	125.044	ppb	0.9	52755.40	0.6004	Pulse	0.1000	3
Tl	205	159	He	0.004	ppb	53.2	93.34	0.0002	Pulse	0.1000	3
Pb	208	159	He	0.291	ppb	1.0	4247.10	0.0106	Pulse	0.1000	3
U	238	209	He	0.394	ppb	0.3	6024.93	0.0195	Pulse	0.1000	3

ISTD Table:

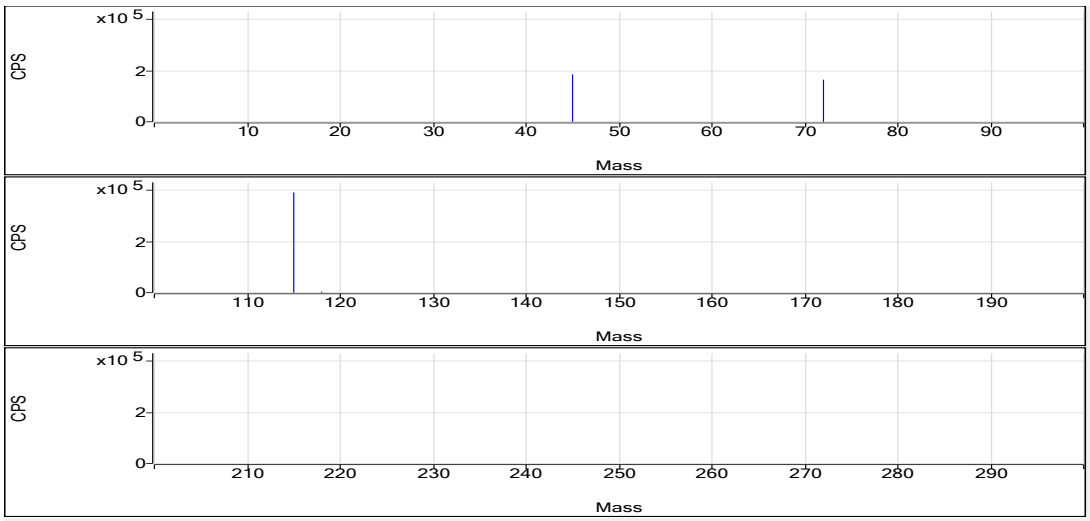
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2548556.78	1.0	106.2	Analog	0.1000	3
No Gas	Ge	72	1257546.59	0.4	109.0	Pulse	0.1000	3
H2	Sc	45	185533.54	1.6	99.2	Pulse	0.1000	3
H2	Ge	72	164765.19	0.7	100.6	Pulse	0.1000	3
H2	In	115	392038.87	0.6	100.8	Pulse	0.1000	3
He	Sc	45	48086.79	0.7	103.1	Pulse	0.1000	3
He	Ge	72	86903.36	1.6	107.0	Pulse	0.1000	3
He	In	115	87876.81	0.7	101.9	Pulse	0.1000	3
He	Tb	159	401256.69	0.3	100.7	Pulse	0.1000	3
He	Bi	209	309264.28	0.4	100.0	Pulse	0.1000	3

No Gas

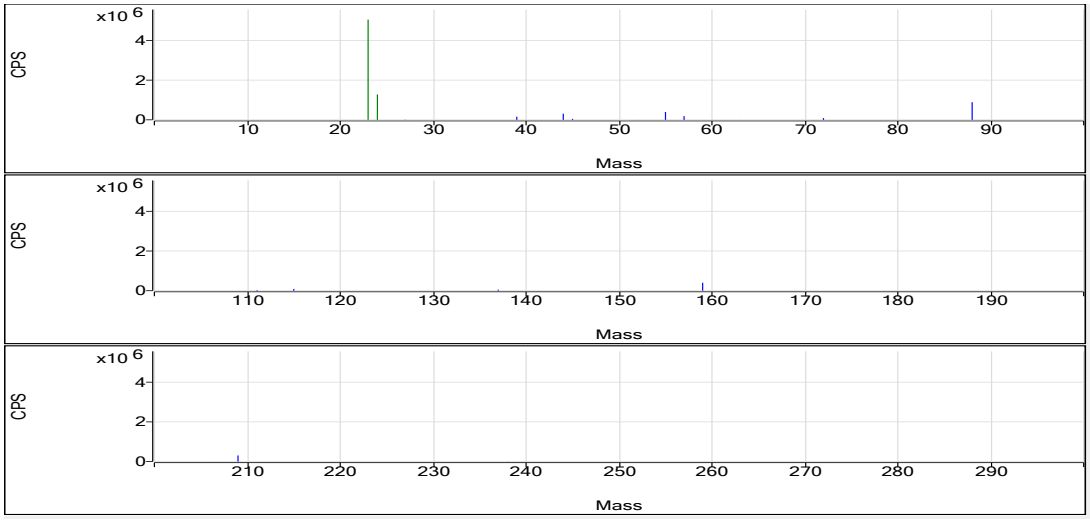


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.036	0	82.00	0.0008	4.685E-06
Be	9	1	No Gas	0.028	0	66.00	0.0008	4.685E-06
Be	9	1	No Gas	0.026	0	62.00	0.0008	4.685E-06
Se	78	2	H2	0.02	0	3.33	0.0004	1.219E-05
Se	78	2	H2	0.029	0	4.00	0.0004	1.219E-05
Se	78	2	H2	0	0	2.00	0.0004	1.219E-05
Na	23	3	He	29171.252	104.6922	5009410.86	0.0036	0.3452
Na	23	3	He	29932.574	107.4154	5150566.17	0.0036	0.3452
Na	23	3	He	29204.641	104.8116	5079320.55	0.0036	0.3452
Mg	24	3	He	15010.254	26.9367	1288894.28	0.0018	0.003497
Mg	24	3	He	14779.572	26.5228	1271767.56	0.0018	0.003497
Mg	24	3	He	14953.628	26.8351	1300468.57	0.0018	0.003497
Al	27	3	He	388.436	0.2279	10904.38	0.0006	0.0006432
Al	27	3	He	410.447	0.2408	11544.87	0.0006	0.0006432
Al	27	3	He	381.747	0.224	10854.33	0.0006	0.0006432
K	39	3	He	2423.877	3.2173	153942.12	0.0012	0.3951
K	39	3	He	2443.621	3.2402	155369.33	0.0012	0.3951
K	39	3	He	2403.131	3.1931	154742.00	0.0012	0.3951
Ca	44	3	He	95374.636	6.4455	308408.24	0.0001	0.002715
Ca	44	3	He	96420.117	6.5161	312445.66	0.0001	0.002715
Ca	44	3	He	95248.117	6.4369	311941.77	0.0001	0.002715
Ti	47	3	He	24.003	0.013	620.04	0.0005	7.003E-05
Ti	47	3	He	30.167	0.0163	780.05	0.0005	7.003E-05
Ti	47	3	He	24.466	0.0132	640.03	0.0005	7.003E-05
V	51	3	He	0.559	0.0371	1774.12	0.0219	0.02486
V	51	3	He	0.622	0.0385	1844.13	0.0219	0.02486
V	51	3	He	0.488	0.0355	1722.11	0.0219	0.02486
Cr	52	3	He	0.48	0.0543	2600.34	0.0299	0.03997
Cr	52	3	He	0.873	0.0661	3170.44	0.0299	0.03997
Cr	52	3	He	0.602	0.058	2810.34	0.0299	0.03997
Mn	55	3	He	649.797	8.3421	399158.63	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	648.021	8.3193	398907.92	0.0128	0.002639
Mn	55	3	He	636.854	8.1759	396218.00	0.0128	0.002639
Fe	57	3	He	6618.956	3.847	184074.06	0.0006	0.001429
Fe	57	3	He	6776.163	3.9383	188842.15	0.0006	0.001429
Fe	57	3	He	6634.463	3.856	186866.89	0.0006	0.001429
Co	59	3	He	0.285	0.0182	870.06	0.0563	0.002149
Co	59	3	He	0.255	0.0165	790.05	0.0563	0.002149
Co	59	3	He	0.27	0.0173	840.05	0.0563	0.002149
Ni	60	3	He	1.202	0.0132	1160.10	0.0086	0.002834
Ni	60	3	He	1.074	0.012	1050.08	0.0086	0.002834
Ni	60	3	He	1.253	0.0136	1160.10	0.0086	0.002834
Cu	63	3	He	0.725	0.0234	2060.23	0.0257	0.004757
Cu	63	3	He	0.776	0.0247	2150.25	0.0257	0.004757
Cu	63	3	He	0.732	0.0235	2010.21	0.0257	0.004757
Zn	66	3	He	4.959	0.0183	1610.14	0.0029	0.003818
Zn	66	3	He	5.271	0.0192	1670.16	0.0029	0.003818
Zn	66	3	He	5.689	0.0204	1740.16	0.0029	0.003818
As	75	3	He	1.975	0.0049	428.01	0.002	0.0008061
As	75	3	He	1.735	0.0044	380.01	0.002	0.0008061
As	75	3	He	1.882	0.0047	398.01	0.002	0.0008061
Sr	88	3	He	1124.129	10.0842	886289.83	0.009	0.0009645
Sr	88	3	He	1133.317	10.1666	899171.39	0.009	0.0009645
Sr	88	3	He	1133.973	10.1725	888037.33	0.009	0.0009645
Mo	98	3	He	0.543	0.0122	1070.08	0.0219	0.0002706
Mo	98	3	He	0.674	0.015	1330.12	0.0219	0.0002706
Mo	98	3	He	0.615	0.0137	1200.10	0.0219	0.0002706
Ag	107	3	He	0.001	0.0007	60.00	0.0465	0.0006206
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Cd	111	3	He	0.009	0	4.00	0.0053	0
Cd	111	3	He	0.017	0.0001	8.00	0.0053	0
Cd	111	3	He	0.009	0	4.00	0.0053	0
Sn	120	3	He	-0.164	0.0139	1220.10	0.0158	0.01648
Sn	120	3	He	-0.084	0.0152	1340.12	0.0158	0.01648
Sn	120	3	He	-0.086	0.0151	1320.12	0.0158	0.01648
Sb	121	3	He	0.181	0.003	260.02	0.0149	0.0002698
Sb	121	3	He	0.271	0.0043	380.02	0.0149	0.0002698
Sb	121	3	He	0.229	0.0037	320.02	0.0149	0.0002698
Ba	137	3	He	124.798	0.5992	52661.36	0.0048	0.0002317
Ba	137	3	He	124.016	0.5954	52661.69	0.0048	0.0002317
Ba	137	3	He	126.316	0.6065	52943.14	0.0048	0.0002317
Tl	205	3	He	0.005	0.0002	100.00	0.0247	0.0001339
Tl	205	3	He	0.002	0.0002	70.00	0.0247	0.0001339
Tl	205	3	He	0.006	0.0003	110.01	0.0247	0.0001339
Pb	208	3	He	0.291	0.0106	2230.26	0.0327	0.00107
Pb	208	3	He	0.293	0.0107	2220.28	0.0327	0.00107
Pb	208	3	He	0.288	0.0105	2360.31	0.0327	0.00107
U	238	3	He	0.395	0.0195	6041.56	0.0493	7.55E-05
U	238	3	He	0.393	0.0194	6031.64	0.0493	7.55E-05
U	238	3	He	0.394	0.0195	6001.58	0.0493	7.55E-05
Sc	45	1	No Gas			2575189.02		
Sc	45	1	No Gas			2545336.37		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2525144.96		
Ge	72	1	No Gas			1261505.53		
Ge	72	1	No Gas			1260014.82		
Ge	72	1	No Gas			1251119.43		
Sc	45	2	H2			182977.85		
Sc	45	2	H2			188759.92		
Sc	45	2	H2			184862.85		
Ge	72	2	H2			163344.58		
Ge	72	2	H2			165380.00		
Ge	72	2	H2			165570.99		
In	115	2	H2			390674.37		
In	115	2	H2			394935.46		
In	115	2	H2			390506.79		
Sc	45	3	He			47848.96		
Sc	45	3	He			47949.96		
Sc	45	3	He			48461.44		
Ge	72	3	He			88191.68		
Ge	72	3	He			87144.90		
Ge	72	3	He			85373.50		
In	115	3	He			87896.33		
In	115	3	He			88451.44		
In	115	3	He			87304.02		
Tb	159	3	He			400566.83		
Tb	159	3	He			402838.04		
Tb	159	3	He			400365.19		
Bi	209	3	He			309262.16		
Bi	209	3	He			310646.34		
Bi	209	3	He			307884.35		

Quantitation Report

Data File Name	218SMPL.d
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Sample Name	410-136722-Q-7-A
Sample Type	Sample
Comment	T20
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

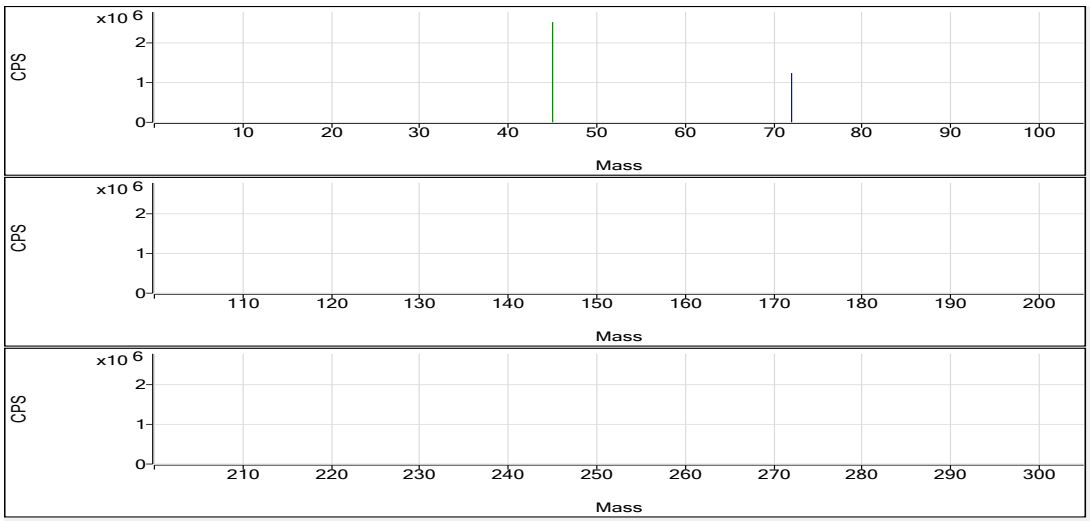
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.833	ppb	1.4	1614.77	0.0006	Pulse	0.5000	3
Se	78	72	H2	0.343	ppb	11.8	25.33	0.0002	Pulse	1.5000	3
Na	23	45	He	197483.215	ppb	1.1	33735898.66	706.7523	Analog	0.1000	3
Mg	24	45	He	3730.079	ppb	2.2	319598.77	6.6965	Pulse	0.1000	3
Al	27	45	He	6375.054	ppb	2.2	178029.33	3.7303	Pulse	0.1000	3
K	39	45	He	10301.971	ppb	3.0	591251.33	12.3899	Pulse	0.1000	3
Ca	44	45	He	35000.965	ppb	3.9	112953.21	2.3671	Pulse	0.1000	3
Ti	47	45	He	60.735	ppb	18.1	1563.51	0.0327	Pulse	0.1000	3
V	51	45	He	8.189	ppb	3.2	9729.30	0.2039	Pulse	0.5000	3
Cr	52	45	He	9.496	ppb	4.2	15475.46	0.3243	Pulse	0.1000	3
Mn	55	45	He	3506.699	ppb	2.2	2148084.76	45.0072	Analog	0.1000	3
Fe	57	45	He	38740.423	ppb	2.5	1074226.68	22.5093	Pulse	0.1000	3
Co	59	45	He	38.167	ppb	2.3	102623.32	2.1503	Pulse	0.1000	3
Ni	60	72	He	11.038	ppb	1.3	8519.44	0.0976	Pulse	0.1000	3
Cu	63	72	He	23.442	ppb	3.4	52944.86	0.6065	Pulse	0.1000	3
Zn	66	72	He	443.136	ppb	1.3	112972.16	1.2941	Pulse	0.1000	3
As	75	72	He	18.219	ppb	2.4	3329.07	0.0381	Pulse	0.5000	3
Sr	88	115	He	267.870	ppb	1.6	206651.49	2.4037	Pulse	0.1000	3
Mo	98	115	He	3.919	ppb	6.4	7408.90	0.0862	Pulse	0.1000	3
Ag	107	115	He	0.084	ppb	17.7	390.02	0.0045	Pulse	0.1000	3
Cd	111	115	He	0.308	ppb	7.3	141.33	0.0016	Pulse	0.5000	3
Sn	120	115	He	0.437	ppb	26.0	2010.21	0.0234	Pulse	0.1000	3
Sb	121	115	He	0.438	ppb	19.2	583.37	0.0068	Pulse	0.1000	3
Ba	137	115	He	197.830	ppb	1.0	81649.80	0.9497	Pulse	0.1000	3
Tl	205	159	He	0.063	ppb	12.7	700.04	0.0017	Pulse	0.1000	3
Pb	208	159	He	10.756	ppb	0.4	145980.33	0.3531	Pulse	0.1000	3
U	238	209	He	0.927	ppb	3.5	14051.42	0.0457	Pulse	0.1000	3

ISTD Table:

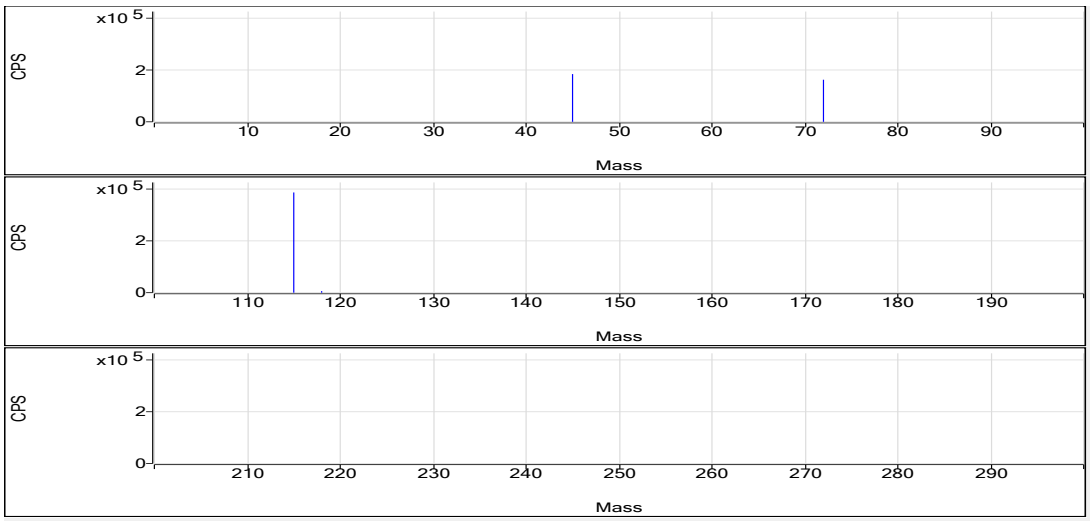
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2523178.14	0.9	105.2	Analog	0.1000	3
No Gas	Ge	72	1238767.40	0.4	107.4	Pulse	0.1000	3
H2	Sc	45	185178.85	1.4	99.0	Pulse	0.1000	3
H2	Ge	72	163261.13	1.4	99.7	Pulse	0.1000	3
H2	In	115	388808.65	0.7	99.9	Pulse	0.1000	3
He	Sc	45	47742.32	2.4	102.4	Pulse	0.1000	3
He	Ge	72	87306.38	0.8	107.5	Pulse	0.1000	3
He	In	115	85981.28	1.1	99.8	Pulse	0.1000	3
He	Tb	159	413441.41	1.0	103.7	Pulse	0.1000	3
He	Bi	209	307433.33	1.0	99.4	Pulse	0.1000	3

No Gas

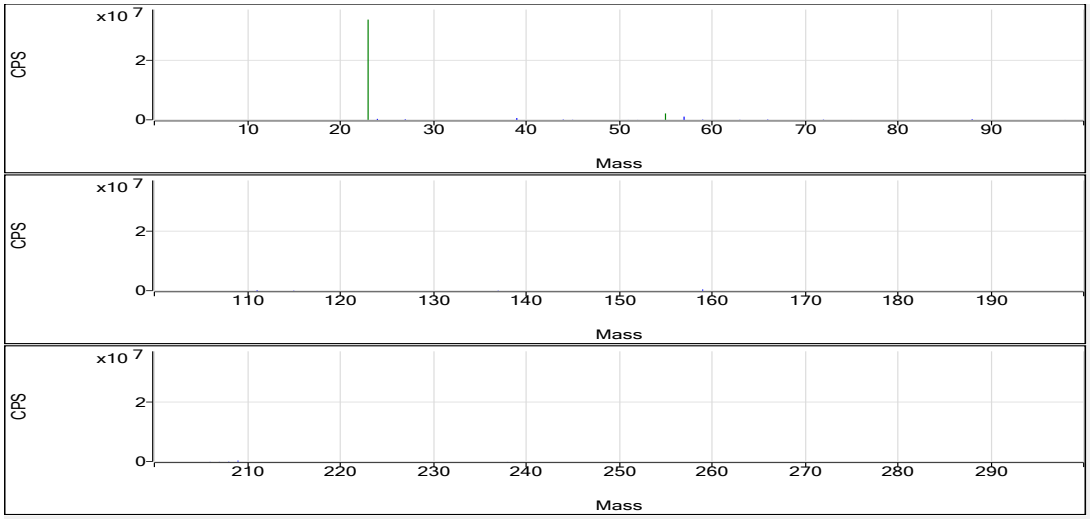


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.82	0.0006	1606.10	0.0008	4.685E-06
Be	9	1	No Gas	0.838	0.0006	1616.10	0.0008	4.685E-06
Be	9	1	No Gas	0.841	0.0006	1622.10	0.0008	4.685E-06
Se	78	2	H2	0.33	0.0001	24.67	0.0004	1.219E-05
Se	78	2	H2	0.311	0.0001	23.33	0.0004	1.219E-05
Se	78	2	H2	0.389	0.0002	28.00	0.0004	1.219E-05
Na	23	3	He	199937.606	715.5318	33340482.00	0.0036	0.3452
Na	23	3	He	195486.707	699.6107	34205904.49	0.0036	0.3452
Na	23	3	He	197025.332	705.1144	33661309.50	0.0036	0.3452
Mg	24	3	He	3822.597	6.8625	319759.31	0.0018	0.003497
Mg	24	3	He	3668.524	6.586	322008.28	0.0018	0.003497
Mg	24	3	He	3699.117	6.6409	317028.73	0.0018	0.003497
Al	27	3	He	6507.268	3.8076	177417.61	0.0006	0.0006432
Al	27	3	He	6228.337	3.6444	178186.64	0.0006	0.0006432
Al	27	3	He	6389.558	3.7388	178483.73	0.0006	0.0006432
K	39	3	He	10611.192	12.75	594089.37	0.0012	0.3951
K	39	3	He	10000.129	12.0385	588594.80	0.0012	0.3951
K	39	3	He	10294.591	12.3813	591069.83	0.0012	0.3951
Ca	44	3	He	36554.043	2.472	115184.28	0.0001	0.002715
Ca	44	3	He	34327.981	2.3216	113511.19	0.0001	0.002715
Ca	44	3	He	34120.871	2.3076	110164.17	0.0001	0.002715
Ti	47	3	He	57.429	0.0309	1440.11	0.0005	7.003E-05
Ti	47	3	He	73.016	0.0393	1920.30	0.0005	7.003E-05
Ti	47	3	He	51.76	0.0279	1330.11	0.0005	7.003E-05
V	51	3	He	8.491	0.2105	9807.37	0.0219	0.02486
V	51	3	He	8.052	0.2009	9821.36	0.0219	0.02486
V	51	3	He	8.023	0.2002	9559.18	0.0219	0.02486
Cr	52	3	He	9.947	0.3378	15739.19	0.0299	0.03997
Cr	52	3	He	9.348	0.3199	15638.87	0.0299	0.03997
Cr	52	3	He	9.193	0.3152	15048.32	0.0299	0.03997
Mn	55	3	He	3595.406	46.1456	2150173.87	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	3460.466	44.4138	2171514.97	0.0128	0.002639
Mn	55	3	He	3464.225	44.4621	2122565.44	0.0128	0.002639
Fe	57	3	He	39800.532	23.1252	1077526.47	0.0006	0.001429
Fe	57	3	He	37922.527	22.0341	1077306.70	0.0006	0.001429
Fe	57	3	He	38498.21	22.3685	1067846.86	0.0006	0.001429
Co	59	3	He	39.174	2.207	102834.98	0.0563	0.002149
Co	59	3	He	37.456	2.1103	103177.05	0.0563	0.002149
Co	59	3	He	37.872	2.1337	101857.94	0.0563	0.002149
Ni	60	3	He	11.159	0.0986	8612.91	0.0086	0.002834
Ni	60	3	He	10.88	0.0962	8332.64	0.0086	0.002834
Ni	60	3	He	11.075	0.0979	8612.78	0.0086	0.002834
Cu	63	3	He	23.543	0.6091	53198.85	0.0257	0.004757
Cu	63	3	He	24.182	0.6255	54172.96	0.0257	0.004757
Cu	63	3	He	22.6	0.5849	51462.76	0.0257	0.004757
Zn	66	3	He	441.564	1.2895	112619.35	0.0029	0.003818
Zn	66	3	He	449.436	1.3124	113656.73	0.0029	0.003818
Zn	66	3	He	438.407	1.2803	112640.41	0.0029	0.003818
As	75	3	He	18.442	0.0386	3370.42	0.002	0.0008061
As	75	3	He	18.5	0.0387	3352.41	0.002	0.0008061
As	75	3	He	17.716	0.0371	3264.39	0.002	0.0008061
Sr	88	3	He	263.193	2.3618	205544.74	0.009	0.0009645
Sr	88	3	He	268.45	2.4089	205921.05	0.009	0.0009645
Sr	88	3	He	271.966	2.4404	208488.67	0.009	0.0009645
Mo	98	3	He	3.709	0.0816	7102.07	0.0219	0.0002706
Mo	98	3	He	3.852	0.0847	7242.19	0.0219	0.0002706
Mo	98	3	He	4.196	0.0923	7882.45	0.0219	0.0002706
Ag	107	3	He	0.09	0.0048	420.02	0.0465	0.0006206
Ag	107	3	He	0.067	0.0037	320.02	0.0465	0.0006206
Ag	107	3	He	0.095	0.005	430.02	0.0465	0.0006206
Cd	111	3	He	0.284	0.0015	132.00	0.0053	0
Cd	111	3	He	0.311	0.0017	142.00	0.0053	0
Cd	111	3	He	0.328	0.0018	150.00	0.0053	0
Sn	120	3	He	0.499	0.0244	2120.23	0.0158	0.01648
Sn	120	3	He	0.505	0.0245	2090.22	0.0158	0.01648
Sn	120	3	He	0.306	0.0213	1820.19	0.0158	0.01648
Sb	121	3	He	0.531	0.0082	710.05	0.0149	0.0002698
Sb	121	3	He	0.368	0.0057	490.03	0.0149	0.0002698
Sb	121	3	He	0.415	0.0064	550.03	0.0149	0.0002698
Ba	137	3	He	195.753	0.9397	81783.87	0.0048	0.0002317
Ba	137	3	He	197.998	0.9505	81250.89	0.0048	0.0002317
Ba	137	3	He	199.739	0.9588	81914.63	0.0048	0.0002317
Tl	205	3	He	0.072	0.0019	800.05	0.0247	0.0001339
Tl	205	3	He	0.057	0.0015	630.04	0.0247	0.0001339
Tl	205	3	He	0.06	0.0016	670.04	0.0247	0.0001339
Pb	208	3	He	10.712	0.3517	79037.98	0.0327	0.00107
Pb	208	3	He	10.806	0.3547	77760.30	0.0327	0.00107
Pb	208	3	He	10.749	0.3529	78444.72	0.0327	0.00107
U	238	3	He	0.891	0.0439	13657.62	0.0493	7.55E-05
U	238	3	He	0.936	0.0462	14168.18	0.0493	7.55E-05
U	238	3	He	0.953	0.047	14328.47	0.0493	7.55E-05
Sc	45	1	No Gas			2549161.99		
Sc	45	1	No Gas			2509116.37		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2511256.06		
Ge	72	1	No Gas			1242001.93		
Ge	72	1	No Gas			1241856.70		
Ge	72	1	No Gas			1232443.58		
Sc	45	2	H2			187038.71		
Sc	45	2	H2			186189.26		
Sc	45	2	H2			182308.57		
Ge	72	2	H2			164598.18		
Ge	72	2	H2			164519.76		
Ge	72	2	H2			160665.46		
In	115	2	H2			388863.04		
In	115	2	H2			391410.46		
In	115	2	H2			386152.46		
Sc	45	3	He			46595.39		
Sc	45	3	He			48892.77		
Sc	45	3	He			47738.79		
Ge	72	3	He			87336.84		
Ge	72	3	He			86602.00		
Ge	72	3	He			87980.31		
In	115	3	He			87042.27		
In	115	3	He			85492.84		
In	115	3	He			85442.18		
Tb	159	3	He			417632.65		
Tb	159	3	He			409544.72		
Tb	159	3	He			413146.87		
Bi	209	3	He			310809.57		
Bi	209	3	He			306716.58		
Bi	209	3	He			304773.84		

Quantitation Report

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Acq Time	8/10/2023 6:09:22 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

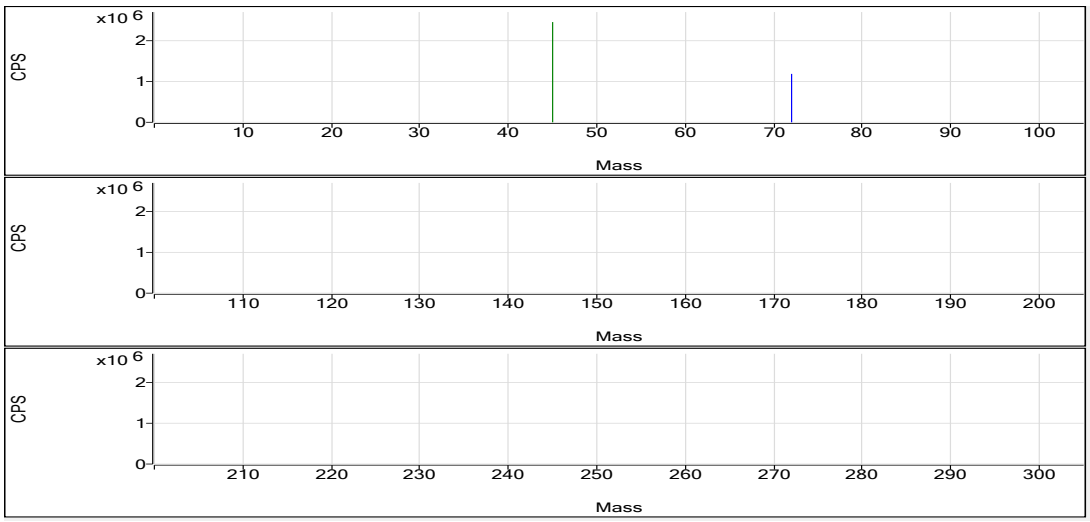
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.005	ppb	63.0	20.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.001	ppb	N/A	1.78	0.0000	Pulse	1.5000	3
Na	23	45	He	73.395	ppb	6.8	29259.84	0.6077	Pulse	0.1000	3
Mg	24	45	He	1.177	ppb	12.6	270.01	0.0056	Pulse	0.1000	3
Al	27	45	He	1.271	ppb	44.5	66.67	0.0014	Pulse	0.1000	3
K	39	45	He	-8.741	ppb	N/A	18535.61	0.3849	Pulse	0.1000	3
Ca	44	45	He	19.179	ppb	69.5	193.34	0.0040	Pulse	0.1000	3
Ti	47	45	He	0.384	ppb	56.5	13.33	0.0003	Pulse	0.1000	3
V	51	45	He	0.155	ppb	19.5	1360.74	0.0283	Pulse	0.5000	3
Cr	52	45	He	-0.061	ppb	N/A	1836.85	0.0381	Pulse	0.1000	3
Mn	55	45	He	0.581	ppb	22.5	486.69	0.0101	Pulse	0.1000	3
Fe	57	45	He	5.875	ppb	33.8	233.34	0.0048	Pulse	0.1000	3
Co	59	45	He	0.023	ppb	49.7	166.68	0.0035	Pulse	0.1000	3
Ni	60	72	He	-0.144	ppb	N/A	133.34	0.0016	Pulse	0.1000	3
Cu	63	72	He	0.039	ppb	37.5	480.03	0.0058	Pulse	0.1000	3
Zn	66	72	He	2.546	ppb	18.6	936.73	0.0112	Pulse	0.1000	3
As	75	72	He	0.035	ppb	146.5	73.33	0.0009	Pulse	0.5000	3
Sr	88	115	He	0.157	ppb	11.0	206.68	0.0024	Pulse	0.1000	3
Mo	98	115	He	0.009	ppb	123.0	40.00	0.0005	Pulse	0.1000	3
Ag	107	115	He	-0.003	ppb	N/A	43.33	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.004	ppb	99.3	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.051	ppb	373.0	1503.47	0.0173	Pulse	0.1000	3
Sb	121	115	He	0.000	ppb	N/A	23.33	0.0003	Pulse	0.1000	3
Ba	137	115	He	0.047	ppb	183.2	40.00	0.0005	Pulse	0.1000	3
Tl	205	159	He	0.005	ppb	36.8	100.00	0.0003	Pulse	0.1000	3
Pb	208	159	He	0.008	ppb	73.6	533.36	0.0013	Pulse	0.1000	3
U	238	209	He	0.002	ppb	26.8	60.00	0.0002	Pulse	0.1000	3

ISTD Table:

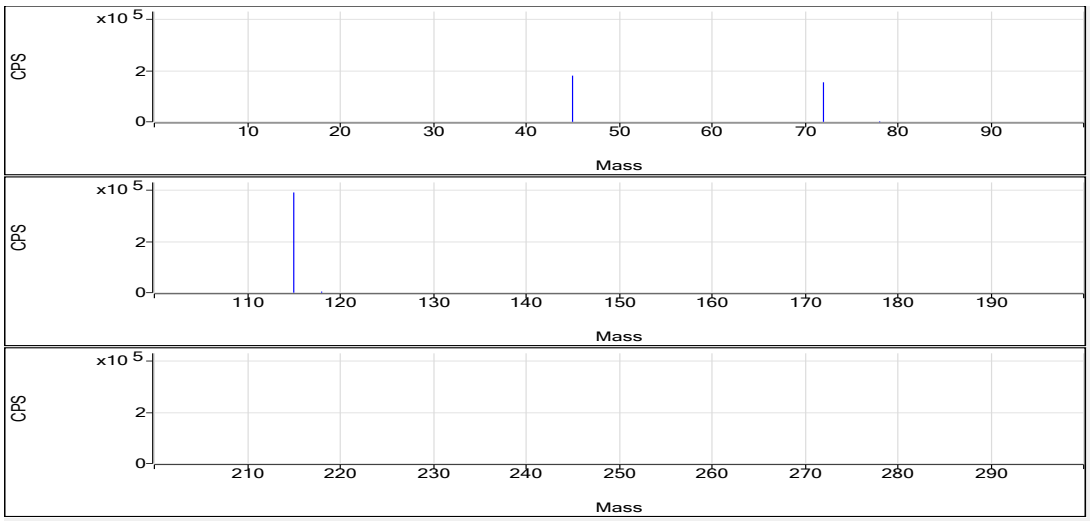
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2459409.44	0.4	102.5	Analog	0.1000	3
No Gas	Ge	72	1187791.86	0.5	103.0	Pulse	0.1000	3
H2	Sc	45	180637.85	0.8	96.6	Pulse	0.1000	3
H2	Ge	72	154538.38	2.0	94.4	Pulse	0.1000	3
H2	In	115	392026.57	0.5	100.8	Pulse	0.1000	3
He	Sc	45	48153.44	1.1	103.2	Pulse	0.1000	3
He	Ge	72	83466.85	1.0	102.8	Pulse	0.1000	3
He	In	115	87122.19	1.3	101.1	Pulse	0.1000	3
He	Tb	159	397303.34	0.5	99.7	Pulse	0.1000	3
He	Bi	209	309748.69	0.3	100.2	Pulse	0.1000	3

No Gas

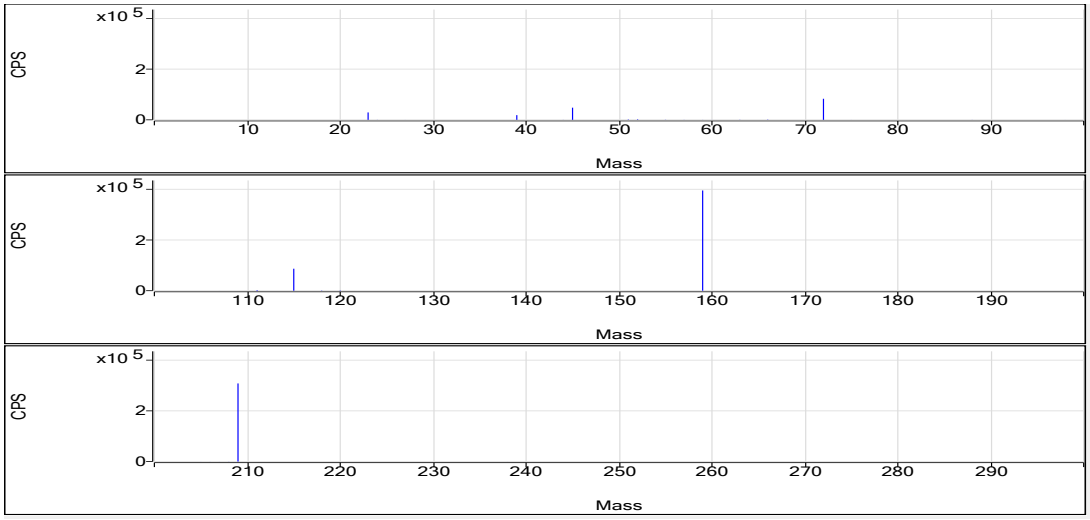


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.001	0	14.00	0.0008	4.685E-06
Be	9	1	No Gas	0.007	0	24.00	0.0008	4.685E-06
Be	9	1	No Gas	0.006	0	22.00	0.0008	4.685E-06
Se	78	2	H2	0.013	0	2.67	0.0004	1.219E-05
Se	78	2	H2	-0.019	0	0.67	0.0004	1.219E-05
Se	78	2	H2	0.002	0	2.00	0.0004	1.219E-05
Na	23	3	He	78.859	0.6272	29931.09	0.0036	0.3452
Na	23	3	He	72.225	0.6035	29410.19	0.0036	0.3452
Na	23	3	He	69.103	0.5923	28438.24	0.0036	0.3452
Mg	24	3	He	1.321	0.0059	280.01	0.0018	0.003497
Mg	24	3	He	1.025	0.0053	260.01	0.0018	0.003497
Mg	24	3	He	1.186	0.0056	270.01	0.0018	0.003497
Al	27	3	He	1.766	0.0017	80.00	0.0006	0.0006432
Al	27	3	He	0.654	0.001	50.00	0.0006	0.0006432
Al	27	3	He	1.393	0.0015	70.00	0.0006	0.0006432
K	39	3	He	-10.802	0.3825	18251.88	0.0012	0.3951
K	39	3	He	-2.808	0.3918	19093.00	0.0012	0.3951
K	39	3	He	-12.614	0.3804	18261.96	0.0012	0.3951
Ca	44	3	He	18.755	0.004	190.01	0.0001	0.002715
Ca	44	3	He	32.718	0.0049	240.01	0.0001	0.002715
Ca	44	3	He	6.064	0.0031	150.01	0.0001	0.002715
Ti	47	3	He	0.26	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	0.634	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	0.257	0.0002	10.00	0.0005	7.003E-05
V	51	3	He	0.174	0.0287	1368.07	0.0219	0.02486
V	51	3	He	0.121	0.0275	1340.07	0.0219	0.02486
V	51	3	He	0.172	0.0286	1374.08	0.0219	0.02486
Cr	52	3	He	-0.18	0.0346	1650.15	0.0299	0.03997
Cr	52	3	He	-0.122	0.0363	1770.19	0.0299	0.03997
Cr	52	3	He	0.119	0.0435	2090.22	0.0299	0.03997
Mn	55	3	He	0.464	0.0086	410.02	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.722	0.0119	580.03	0.0128	0.002639
Mn	55	3	He	0.557	0.0098	470.03	0.0128	0.002639
Fe	57	3	He	6.559	0.0052	250.01	0.0006	0.001429
Fe	57	3	He	7.431	0.0057	280.01	0.0006	0.001429
Fe	57	3	He	3.636	0.0035	170.01	0.0006	0.001429
Co	59	3	He	0.021	0.0034	160.01	0.0563	0.002149
Co	59	3	He	0.013	0.0029	140.01	0.0563	0.002149
Co	59	3	He	0.036	0.0042	200.01	0.0563	0.002149
Ni	60	3	He	-0.148	0.0016	130.01	0.0086	0.002834
Ni	60	3	He	-0.151	0.0015	130.00	0.0086	0.002834
Ni	60	3	He	-0.133	0.0017	140.01	0.0086	0.002834
Cu	63	3	He	0.044	0.0059	490.03	0.0257	0.004757
Cu	63	3	He	0.022	0.0053	450.02	0.0257	0.004757
Cu	63	3	He	0.05	0.006	500.03	0.0257	0.004757
Zn	66	3	He	2.485	0.0111	920.06	0.0029	0.003818
Zn	66	3	He	2.106	0.01	840.06	0.0029	0.003818
Zn	66	3	He	3.047	0.0127	1050.08	0.0029	0.003818
As	75	3	He	0.087	0.001	82.00	0.002	0.0008061
As	75	3	He	0.034	0.0009	74.00	0.002	0.0008061
As	75	3	He	-0.016	0.0008	64.00	0.002	0.0008061
Sr	88	3	He	0.17	0.0025	220.01	0.009	0.0009645
Sr	88	3	He	0.163	0.0024	210.01	0.009	0.0009645
Sr	88	3	He	0.137	0.0022	190.01	0.009	0.0009645
Mo	98	3	He	-0.002	0.0002	20.00	0.0219	0.0002706
Mo	98	3	He	0.019	0.0007	60.00	0.0219	0.0002706
Mo	98	3	He	0.009	0.0005	40.00	0.0219	0.0002706
Ag	107	3	He	-0.004	0.0005	40.00	0.0465	0.0006206
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Ag	107	3	He	-0.003	0.0005	40.00	0.0465	0.0006206
Cd	111	3	He	0.008	0	4.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Sn	120	3	He	-0.148	0.0141	1250.10	0.0158	0.01648
Sn	120	3	He	0.071	0.0176	1520.14	0.0158	0.01648
Sn	120	3	He	0.23	0.0201	1740.17	0.0158	0.01648
Sb	121	3	He	-0.003	0.0002	20.00	0.0149	0.0002698
Sb	121	3	He	0.021	0.0006	50.00	0.0149	0.0002698
Sb	121	3	He	-0.018	0	0.00	0.0149	0.0002698
Ba	137	3	He	0.07	0.0006	50.00	0.0048	0.0002317
Ba	137	3	He	0.121	0.0008	70.00	0.0048	0.0002317
Ba	137	3	He	-0.048	0	0.00	0.0048	0.0002317
Tl	205	3	He	0.004	0.0002	90.00	0.0247	0.0001339
Tl	205	3	He	0.004	0.0002	90.00	0.0247	0.0001339
Tl	205	3	He	0.007	0.0003	120.00	0.0247	0.0001339
Pb	208	3	He	0.003	0.0012	300.01	0.0327	0.00107
Pb	208	3	He	0.007	0.0013	240.01	0.0327	0.00107
Pb	208	3	He	0.015	0.0016	370.02	0.0327	0.00107
U	238	3	He	0.002	0.0002	60.00	0.0493	7.55E-05
U	238	3	He	0.002	0.0002	50.00	0.0493	7.55E-05
U	238	3	He	0.003	0.0002	70.00	0.0493	7.55E-05
Sc	45	1	No Gas			2469317.15		
Sc	45	1	No Gas			2457101.06		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2451810.12		
Ge	72	1	No Gas			1181892.40		
Ge	72	1	No Gas			1194808.42		
Ge	72	1	No Gas			1186674.75		
Sc	45	2	H2			181984.72		
Sc	45	2	H2			180778.86		
Sc	45	2	H2			179149.96		
Ge	72	2	H2			152719.06		
Ge	72	2	H2			158187.21		
Ge	72	2	H2			152708.86		
In	115	2	H2			394497.38		
In	115	2	H2			390526.75		
In	115	2	H2			391055.58		
Sc	45	3	He			47718.63		
Sc	45	3	He			48731.91		
Sc	45	3	He			48009.79		
Ge	72	3	He			83231.92		
Ge	72	3	He			84419.34		
Ge	72	3	He			82749.29		
In	115	3	He			88461.02		
In	115	3	He			86398.78		
In	115	3	He			86529.09		
Tb	159	3	He			395078.63		
Tb	159	3	He			399058.78		
Tb	159	3	He			397772.61		
Bi	209	3	He			309246.81		
Bi	209	3	He			309024.72		
Bi	209	3	He			310974.53		

Quantitation Report

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Sample Type	CCV
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

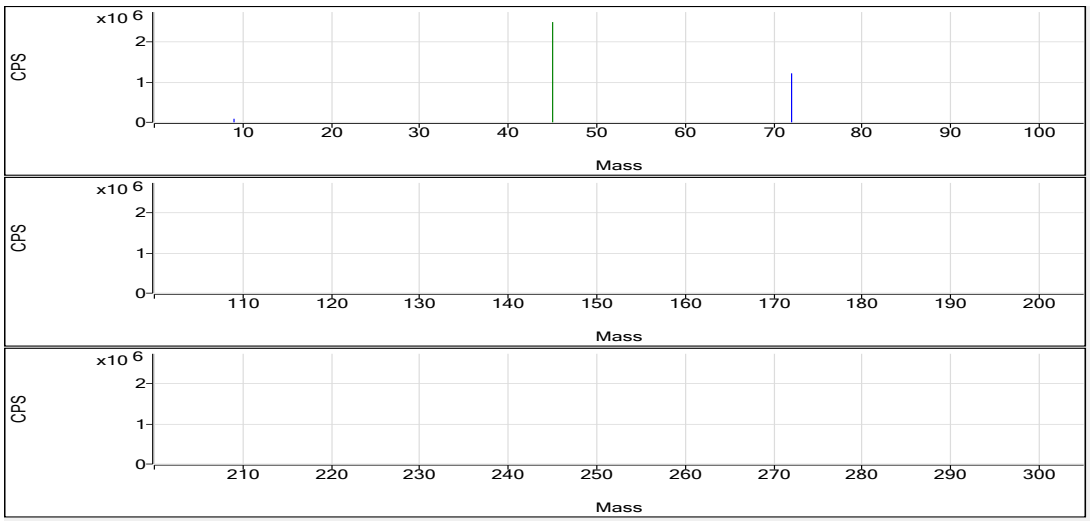
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	46.398	ppb	0.8	88187.63	0.0354	Pulse	0.5000	3
Se	78	72	H2	54.042	ppb	0.7	3523.77	0.0226	Pulse	1.5000	3
Na	23	45	He	4803.686	ppb	0.8	849046.11	17.5282	Pulse	0.1000	3
Mg	24	45	He	4927.706	ppb	1.1	428452.36	8.8454	Pulse	0.1000	3
Al	27	45	He	4827.891	ppb	1.0	136848.12	2.8251	Pulse	0.1000	3
K	39	45	He	5015.527	ppb	0.5	302028.49	6.2348	Pulse	0.1000	3
Ca	44	45	He	5060.347	ppb	2.9	16693.32	0.3446	Pulse	0.1000	3
Ti	47	45	He	5019.621	ppb	0.1	130567.29	2.6954	Pulse	0.1000	3
V	51	45	He	510.888	ppb	1.1	542142.89	11.1925	Pulse	0.5000	3
Cr	52	45	He	486.007	ppb	1.4	706758.59	14.5914	Pulse	0.1000	3
Mn	55	45	He	504.716	ppb	1.2	313880.47	6.4801	Pulse	0.1000	3
Fe	57	45	He	5059.430	ppb	1.3	142454.63	2.9409	Pulse	0.1000	3
Co	59	45	He	486.250	ppb	1.2	1325705.50	27.3694	Pulse	0.1000	3
Ni	60	72	He	513.493	ppb	0.9	373616.83	4.4102	Pulse	0.1000	3
Cu	63	72	He	487.245	ppb	0.6	1060048.73	12.5129	Pulse	0.1000	3
Zn	66	72	He	513.605	ppb	1.8	127008.09	1.4992	Pulse	0.1000	3
As	75	72	He	517.533	ppb	0.7	89897.93	1.0612	Pulse	0.5000	3
Sr	88	115	He	50.705	ppb	1.0	40087.57	0.4558	Pulse	0.1000	3
Mo	98	115	He	51.229	ppb	0.4	98819.60	1.1235	Pulse	0.1000	3
Ag	107	115	He	50.682	ppb	1.3	207276.41	2.3567	Pulse	0.1000	3
Cd	111	115	He	50.779	ppb	0.9	23881.07	0.2715	Pulse	0.5000	3
Sn	120	115	He	50.971	ppb	1.1	72275.62	0.8218	Pulse	0.1000	3
Sb	121	115	He	51.777	ppb	1.4	67665.39	0.7693	Pulse	0.1000	3
Ba	137	115	He	518.876	ppb	0.3	219050.54	2.4905	Pulse	0.1000	3
Tl	205	159	He	51.523	ppb	0.2	510762.39	1.2741	Pulse	0.1000	3
Pb	208	159	He	51.580	ppb	0.6	677193.68	1.6893	Pulse	0.1000	3
U	238	209	He	50.369	ppb	0.3	766699.00	2.4813	Pulse	0.1000	3

ISTD Table:

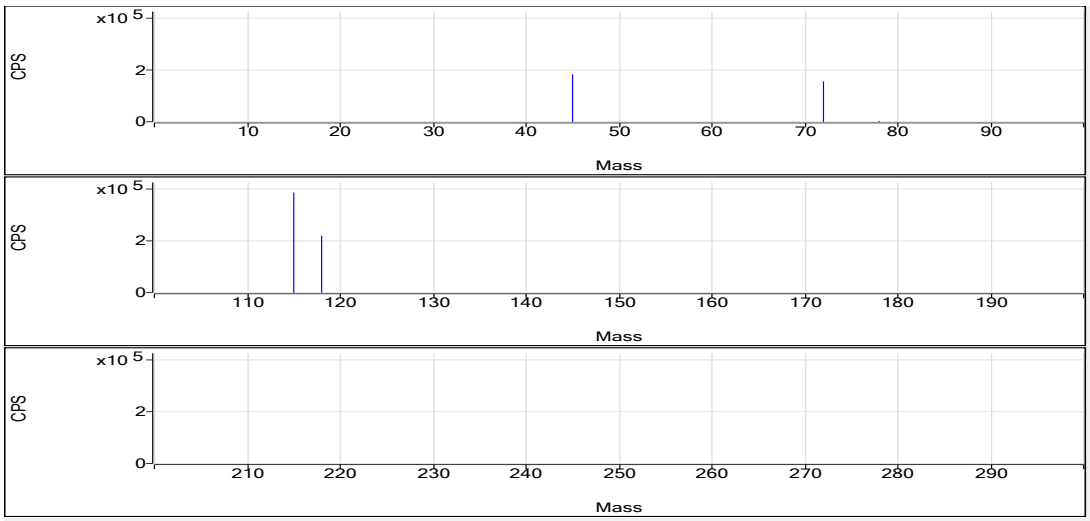
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2491496.99	1.0	103.9	Analog	0.1000	3
No Gas	Ge	72	1217297.56	0.5	105.5	Pulse	0.1000	3
H2	Sc	45	183451.62	1.1	98.1	Pulse	0.1000	3
H2	Ge	72	156256.67	0.7	95.4	Pulse	0.1000	3
H2	In	115	387442.77	1.4	99.6	Pulse	0.1000	3
He	Sc	45	48441.52	1.1	103.9	Pulse	0.1000	3
He	Ge	72	84717.25	0.3	104.3	Pulse	0.1000	3
He	In	115	87955.05	0.4	102.0	Pulse	0.1000	3
He	Tb	159	400880.61	0.1	100.6	Pulse	0.1000	3
He	Bi	209	308995.69	0.5	99.9	Pulse	0.1000	3

No Gas

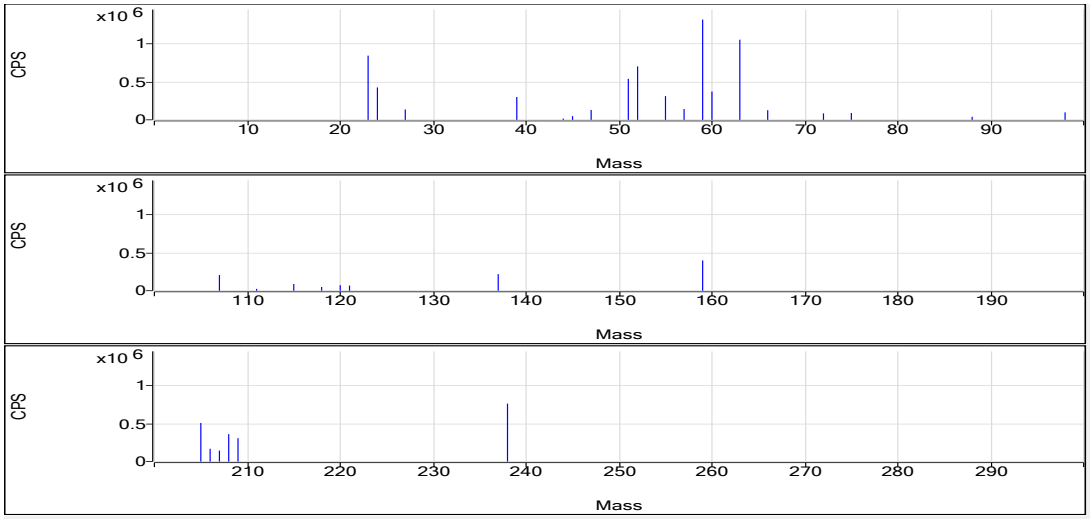


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	46.388	0.0354	87256.10	0.0008	4.685E-06
Be	9	1	No Gas	46.773	0.0357	88974.27	0.0008	4.685E-06
Be	9	1	No Gas	46.032	0.0351	88332.52	0.0008	4.685E-06
Se	78	2	H2	53.631	0.0224	3501.10	0.0004	1.219E-05
Se	78	2	H2	54.128	0.0226	3552.45	0.0004	1.219E-05
Se	78	2	H2	54.368	0.0227	3517.77	0.0004	1.219E-05
Na	23	3	He	4790.209	17.48	851498.11	0.0036	0.3452
Na	23	3	He	4846.27	17.6805	845994.83	0.0036	0.3452
Na	23	3	He	4774.579	17.4241	849645.38	0.0036	0.3452
Mg	24	3	He	4880.023	8.7598	426715.74	0.0018	0.003497
Mg	24	3	He	4988.27	8.9541	428442.96	0.0018	0.003497
Mg	24	3	He	4914.824	8.8223	430198.39	0.0018	0.003497
Al	27	3	He	4774.047	2.7936	136085.36	0.0006	0.0006432
Al	27	3	He	4860.952	2.8445	136105.08	0.0006	0.0006432
Al	27	3	He	4848.674	2.8373	138353.92	0.0006	0.0006432
K	39	3	He	5003.624	6.2209	303038.34	0.0012	0.3951
K	39	3	He	4998.281	6.2147	297367.24	0.0012	0.3951
K	39	3	He	5044.675	6.2687	305679.88	0.0012	0.3951
Ca	44	3	He	5037.849	0.343	16710.01	0.0001	0.002715
Ca	44	3	He	4928.187	0.3356	16059.25	0.0001	0.002715
Ca	44	3	He	5215.006	0.355	17310.71	0.0001	0.002715
Ti	47	3	He	5027.811	2.6997	131512.29	0.0005	7.003E-05
Ti	47	3	He	5016.872	2.6939	128899.27	0.0005	7.003E-05
Ti	47	3	He	5014.18	2.6924	131290.30	0.0005	7.003E-05
V	51	3	He	510.662	11.1875	544974.63	0.0219	0.02486
V	51	3	He	516.475	11.3146	541391.25	0.0219	0.02486
V	51	3	He	505.529	11.0753	540062.81	0.0219	0.02486
Cr	52	3	He	482.753	14.494	706041.01	0.0299	0.03997
Cr	52	3	He	493.874	14.8269	709454.21	0.0299	0.03997
Cr	52	3	He	481.394	14.4533	704780.54	0.0299	0.03997
Mn	55	3	He	499.276	6.4103	312263.18	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	511.552	6.5678	314264.68	0.0128	0.002639
Mn	55	3	He	503.319	6.4622	315113.55	0.0128	0.002639
Fe	57	3	He	5092.423	2.9601	144193.75	0.0006	0.001429
Fe	57	3	He	5100.556	2.9648	141863.03	0.0006	0.001429
Fe	57	3	He	4985.311	2.8978	141307.11	0.0006	0.001429
Co	59	3	He	482.649	27.1667	1323367.17	0.0563	0.002149
Co	59	3	He	492.962	27.7472	1327676.07	0.0563	0.002149
Co	59	3	He	483.14	27.1944	1326073.26	0.0563	0.002149
Ni	60	3	He	512.376	4.4006	371934.37	0.0086	0.002834
Ni	60	3	He	509.315	4.3744	371920.19	0.0086	0.002834
Ni	60	3	He	518.787	4.4557	376995.93	0.0086	0.002834
Cu	63	3	He	485.857	12.4772	1054554.75	0.0257	0.004757
Cu	63	3	He	485.219	12.4608	1059454.83	0.0257	0.004757
Cu	63	3	He	490.66	12.6005	1066136.62	0.0257	0.004757
Zn	66	3	He	524.071	1.5297	129288.80	0.0029	0.003818
Zn	66	3	He	508.11	1.4832	126109.16	0.0029	0.003818
Zn	66	3	He	508.632	1.4848	125626.32	0.0029	0.003818
As	75	3	He	521.929	1.0702	90449.16	0.002	0.0008061
As	75	3	He	515.091	1.0562	89797.61	0.002	0.0008061
As	75	3	He	515.58	1.0572	89447.02	0.002	0.0008061
Sr	88	3	He	50.889	0.4574	40308.10	0.009	0.0009645
Sr	88	3	He	50.151	0.4508	39776.61	0.009	0.0009645
Sr	88	3	He	51.076	0.4591	40178.01	0.009	0.0009645
Mo	98	3	He	51.372	1.1267	99279.82	0.0219	0.0002706
Mo	98	3	He	51.008	1.1187	98705.76	0.0219	0.0002706
Mo	98	3	He	51.306	1.1252	98473.21	0.0219	0.0002706
Ag	107	3	He	50.053	2.3274	205088.10	0.0465	0.0006206
Ag	107	3	He	50.593	2.3526	207574.27	0.0465	0.0006206
Ag	107	3	He	51.401	2.3901	209166.87	0.0465	0.0006206
Cd	111	3	He	50.327	0.2691	23712.09	0.0053	0
Cd	111	3	He	51.272	0.2741	24188.98	0.0053	0
Cd	111	3	He	50.739	0.2713	23742.14	0.0053	0
Sn	120	3	He	51.143	0.8245	72651.18	0.0158	0.01648
Sn	120	3	He	50.347	0.8119	71635.29	0.0158	0.01648
Sn	120	3	He	51.424	0.8289	72540.38	0.0158	0.01648
Sb	121	3	He	52.102	0.7742	68217.75	0.0149	0.0002698
Sb	121	3	He	50.922	0.7566	66761.07	0.0149	0.0002698
Sb	121	3	He	52.308	0.7772	68017.35	0.0149	0.0002698
Ba	137	3	He	520.358	2.4976	220084.33	0.0048	0.0002317
Ba	137	3	He	517.064	2.4818	218976.87	0.0048	0.0002317
Ba	137	3	He	519.205	2.4921	218090.41	0.0048	0.0002317
Tl	205	3	He	51.485	1.2732	509796.87	0.0247	0.0001339
Tl	205	3	He	51.656	1.2774	512440.50	0.0247	0.0001339
Tl	205	3	He	51.426	1.2717	510049.80	0.0247	0.0001339
Pb	208	3	He	51.315	1.6806	358113.63	0.0327	0.00107
Pb	208	3	He	51.512	1.687	362046.05	0.0327	0.00107
Pb	208	3	He	51.912	1.7001	366937.61	0.0327	0.00107
U	238	3	He	50.517	2.4886	766510.69	0.0493	7.55E-05
U	238	3	He	50.205	2.4732	762382.80	0.0493	7.55E-05
U	238	3	He	50.385	2.482	771203.50	0.0493	7.55E-05
Sc	45	1	No Gas			2465621.21		
Sc	45	1	No Gas			2493489.81		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2515379.96		
Ge	72	1	No Gas			1210964.59		
Ge	72	1	No Gas			1220528.81		
Ge	72	1	No Gas			1220399.28		
Sc	45	2	H2			182795.00		
Sc	45	2	H2			185713.06		
Sc	45	2	H2			181846.81		
Ge	72	2	H2			156438.82		
Ge	72	2	H2			157276.17		
Ge	72	2	H2			155055.02		
In	115	2	H2			384331.09		
In	115	2	H2			393623.71		
In	115	2	H2			384373.51		
Sc	45	3	He			48712.79		
Sc	45	3	He			47849.02		
Sc	45	3	He			48762.76		
Ge	72	3	He			84518.43		
Ge	72	3	He			85022.74		
Ge	72	3	He			84610.57		
In	115	3	He			88502.34		
In	115	3	He			88622.47		
In	115	3	He			87897.68		
Tb	159	3	He			400412.61		
Tb	159	3	He			401159.29		
Tb	159	3	He			401069.92		
Bi	209	3	He			308014.19		
Bi	209	3	He			308259.94		
Bi	209	3	He			310712.93		

Quantitation Report

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Sample Type	CCB
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Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

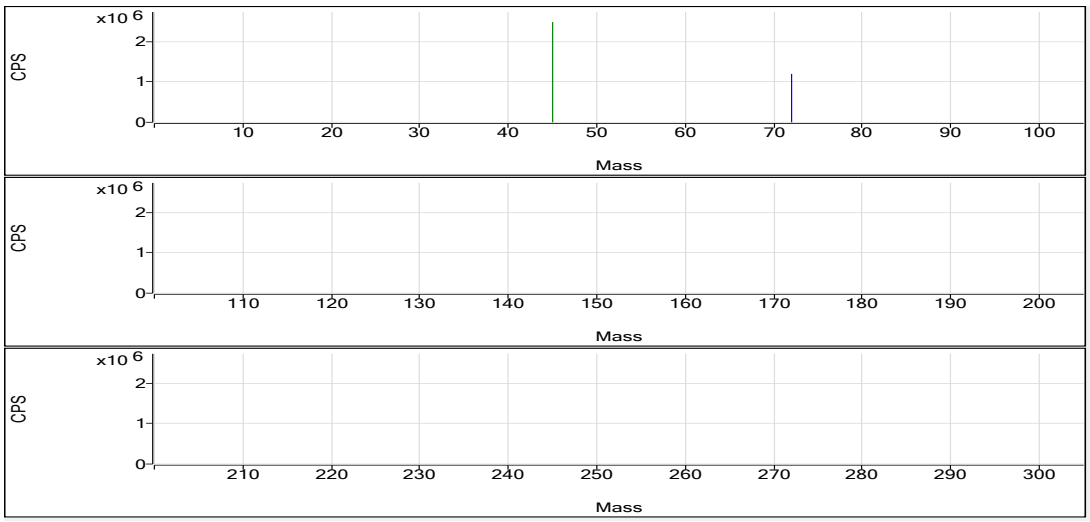
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.021	ppb	30.1	51.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.005	ppb	300.6	2.22	0.0000	Pulse	1.5000	3
Na	23	45	He	43.400	ppb	8.2	23752.90	0.5004	Pulse	0.1000	3
Mg	24	45	He	0.907	ppb	30.6	243.34	0.0051	Pulse	0.1000	3
Al	27	45	He	0.706	ppb	185.7	50.00	0.0011	Pulse	0.1000	3
K	39	45	He	0.954	ppb	919.2	18805.96	0.3962	Pulse	0.1000	3
Ca	44	45	He	5.643	ppb	237.5	146.67	0.0031	Pulse	0.1000	3
Ti	47	45	He	1.050	ppb	99.5	30.00	0.0006	Pulse	0.1000	3
V	51	45	He	0.204	ppb	8.2	1391.41	0.0293	Pulse	0.5000	3
Cr	52	45	He	0.078	ppb	125.2	2006.89	0.0423	Pulse	0.1000	3
Mn	55	45	He	0.331	ppb	12.1	326.68	0.0069	Pulse	0.1000	3
Fe	57	45	He	3.096	ppb	58.8	153.34	0.0032	Pulse	0.1000	3
Co	59	45	He	0.059	ppb	18.6	260.01	0.0055	Pulse	0.1000	3
Ni	60	72	He	0.021	ppb	304.1	250.01	0.0030	Pulse	0.1000	3
Cu	63	72	He	0.068	ppb	59.2	540.03	0.0065	Pulse	0.1000	3
Zn	66	72	He	2.056	ppb	13.6	813.38	0.0098	Pulse	0.1000	3
As	75	72	He	0.171	ppb	53.5	96.00	0.0012	Pulse	0.5000	3
Sr	88	115	He	0.003	ppb	1035.9	86.67	0.0010	Pulse	0.1000	3
Mo	98	115	He	0.052	ppb	25.2	123.34	0.0014	Pulse	0.1000	3
Ag	107	115	He	0.006	ppb	134.7	80.00	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.013	ppb	57.5	6.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.024	ppb	N/A	1406.79	0.0161	Pulse	0.1000	3
Sb	121	115	He	0.033	ppb	58.2	66.67	0.0008	Pulse	0.1000	3
Ba	137	115	He	0.007	ppb	375.1	23.33	0.0003	Pulse	0.1000	3
Tl	205	159	He	0.061	ppb	6.2	660.04	0.0016	Pulse	0.1000	3
Pb	208	159	He	0.016	ppb	38.0	646.70	0.0016	Pulse	0.1000	3
U	238	209	He	0.038	ppb	7.3	606.71	0.0020	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2473756.52	0.7	103.1	Analog	0.1000	3
No Gas	Ge	72	1194832.61	0.8	103.6	Pulse	0.1000	3
H2	Sc	45	183881.17	1.4	98.3	Pulse	0.1000	3
H2	Ge	72	154360.63	0.6	94.3	Pulse	0.1000	3
H2	In	115	389698.23	1.7	100.2	Pulse	0.1000	3
He	Sc	45	47461.53	1.1	101.8	Pulse	0.1000	3
He	Ge	72	82987.04	0.9	102.2	Pulse	0.1000	3
He	In	115	87359.71	0.5	101.3	Pulse	0.1000	3
He	Tb	159	401930.66	0.3	100.8	Pulse	0.1000	3
He	Bi	209	310519.81	0.7	100.4	Pulse	0.1000	3

No Gas



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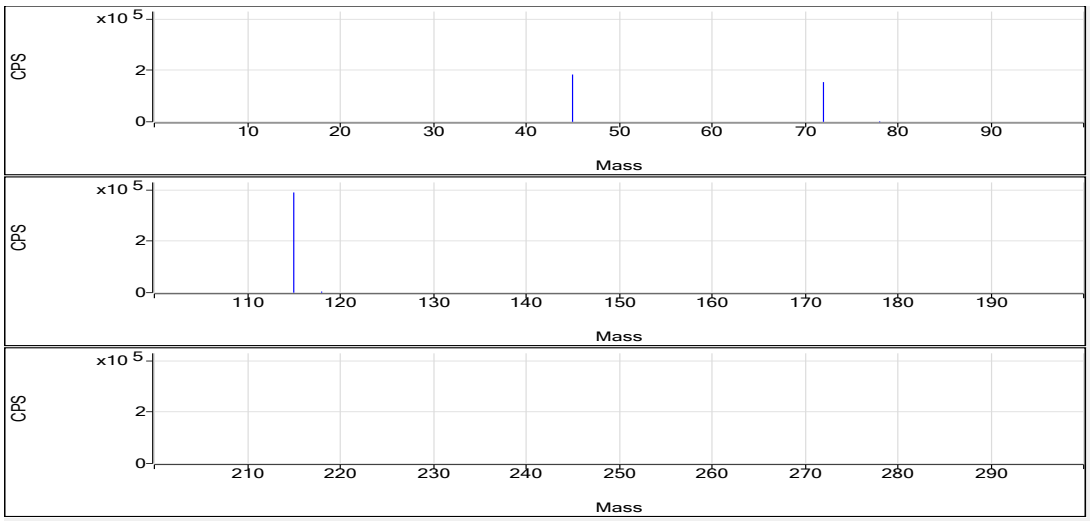
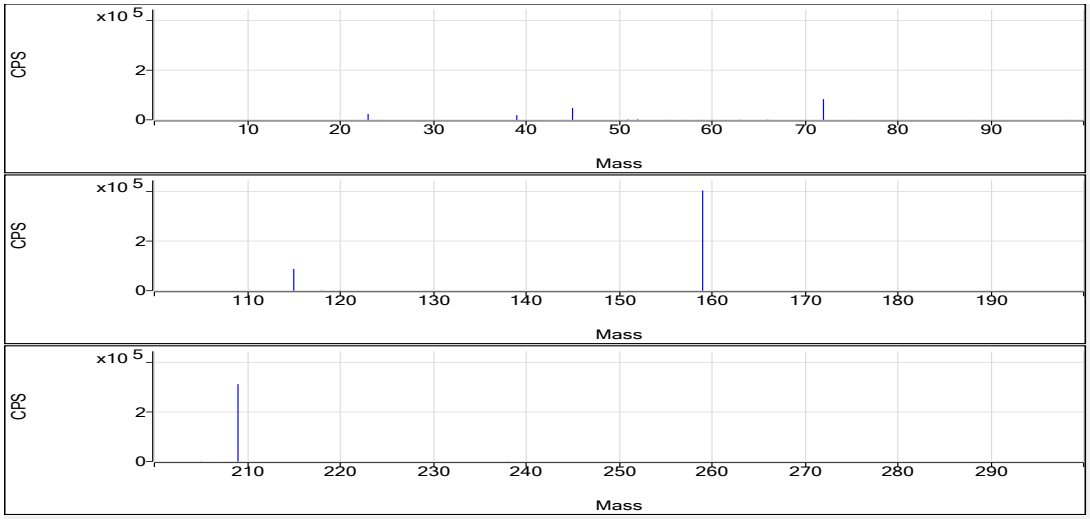


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.028	0	64.00	0.0008	4.685E-06
Be	9	1	No Gas	0.015	0	40.00	0.0008	4.685E-06
Be	9	1	No Gas	0.02	0	50.00	0.0008	4.685E-06
Se	78	2	H2	0.022	0	3.33	0.0004	1.219E-05
Se	78	2	H2	0.002	0	2.00	0.0004	1.219E-05
Se	78	2	H2	-0.009	0	1.33	0.0004	1.219E-05
Na	23	3	He	43.2	0.4997	23929.73	0.0036	0.3452
Na	23	3	He	47.052	0.5135	24450.66	0.0036	0.3452
Na	23	3	He	39.948	0.4881	22878.32	0.0036	0.3452
Mg	24	3	He	0.844	0.005	240.01	0.0018	0.003497
Mg	24	3	He	1.211	0.0057	270.01	0.0018	0.003497
Mg	24	3	He	0.667	0.0047	220.01	0.0018	0.003497
Al	27	3	He	1.042	0.0013	60.00	0.0006	0.0006432
Al	27	3	He	-0.741	0.0002	10.00	0.0006	0.0006432
Al	27	3	He	1.818	0.0017	80.00	0.0006	0.0006432
K	39	3	He	11.01	0.4079	19533.38	0.0012	0.3951
K	39	3	He	-3.067	0.3915	18642.58	0.0012	0.3951
K	39	3	He	-5.082	0.3891	18241.92	0.0012	0.3951
Ca	44	3	He	-9.279	0.0021	100.00	0.0001	0.002715
Ca	44	3	He	9.552	0.0034	160.01	0.0001	0.002715
Ca	44	3	He	16.656	0.0038	180.01	0.0001	0.002715
Ti	47	3	He	1.425	0.0008	40.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	1.856	0.0011	50.00	0.0005	7.003E-05
V	51	3	He	0.196	0.0292	1396.08	0.0219	0.02486
V	51	3	He	0.192	0.0291	1384.08	0.0219	0.02486
V	51	3	He	0.223	0.0297	1394.08	0.0219	0.02486
Cr	52	3	He	0.011	0.0403	1930.20	0.0299	0.03997
Cr	52	3	He	0.033	0.041	1950.22	0.0299	0.03997
Cr	52	3	He	0.19	0.0457	2140.24	0.0299	0.03997
Mn	55	3	He	0.348	0.0071	340.02	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.285	0.0063	300.01	0.0128	0.002639
Mn	55	3	He	0.36	0.0073	340.01	0.0128	0.002639
Fe	57	3	He	5.089	0.0044	210.01	0.0006	0.001429
Fe	57	3	He	1.517	0.0023	110.00	0.0006	0.001429
Fe	57	3	He	2.682	0.003	140.01	0.0006	0.001429
Co	59	3	He	0.051	0.005	240.01	0.0563	0.002149
Co	59	3	He	0.055	0.0053	250.01	0.0563	0.002149
Co	59	3	He	0.072	0.0062	290.01	0.0563	0.002149
Ni	60	3	He	0.095	0.0037	300.01	0.0086	0.002834
Ni	60	3	He	-0.008	0.0028	230.01	0.0086	0.002834
Ni	60	3	He	-0.024	0.0026	220.01	0.0086	0.002834
Cu	63	3	He	0.104	0.0074	610.04	0.0257	0.004757
Cu	63	3	He	0.077	0.0067	560.03	0.0257	0.004757
Cu	63	3	He	0.024	0.0054	450.03	0.0257	0.004757
Zn	66	3	He	2.074	0.0099	810.05	0.0029	0.003818
Zn	66	3	He	2.326	0.0106	880.06	0.0029	0.003818
Zn	66	3	He	1.767	0.009	750.04	0.0029	0.003818
As	75	3	He	0.129	0.0011	88.00	0.002	0.0008061
As	75	3	He	0.276	0.0014	114.00	0.002	0.0008061
As	75	3	He	0.108	0.001	86.00	0.002	0.0008061
Sr	88	3	He	0.033	0.0013	110.00	0.009	0.0009645
Sr	88	3	He	-0.031	0.0007	60.00	0.009	0.0009645
Sr	88	3	He	0.008	0.001	90.00	0.009	0.0009645
Mo	98	3	He	0.066	0.0017	150.01	0.0219	0.0002706
Mo	98	3	He	0.04	0.0011	100.00	0.0219	0.0002706
Mo	98	3	He	0.051	0.0014	120.00	0.0219	0.0002706
Ag	107	3	He	0.011	0.0011	100.00	0.0465	0.0006206
Ag	107	3	He	-0.004	0.0005	40.00	0.0465	0.0006206
Ag	107	3	He	0.011	0.0012	100.00	0.0465	0.0006206
Cd	111	3	He	0.017	0.0001	8.00	0.0053	0
Cd	111	3	He	0.017	0.0001	8.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Sn	120	3	He	0.056	0.0174	1520.14	0.0158	0.01648
Sn	120	3	He	-0.061	0.0155	1360.12	0.0158	0.01648
Sn	120	3	He	-0.066	0.0154	1340.12	0.0158	0.01648
Sb	121	3	He	0.013	0.0005	40.00	0.0149	0.0002698
Sb	121	3	He	0.051	0.001	90.00	0.0149	0.0002698
Sb	121	3	He	0.036	0.0008	70.00	0.0149	0.0002698
Ba	137	3	He	0.023	0.0003	30.00	0.0048	0.0002317
Ba	137	3	He	0.023	0.0003	30.00	0.0048	0.0002317
Ba	137	3	He	-0.024	0.0001	10.00	0.0048	0.0002317
Tl	205	3	He	0.058	0.0016	630.04	0.0247	0.0001339
Tl	205	3	He	0.06	0.0016	650.04	0.0247	0.0001339
Tl	205	3	He	0.065	0.0017	700.05	0.0247	0.0001339
Pb	208	3	He	0.014	0.0015	300.01	0.0327	0.00107
Pb	208	3	He	0.012	0.0015	390.02	0.0327	0.00107
Pb	208	3	He	0.024	0.0018	470.02	0.0327	0.00107
U	238	3	He	0.041	0.0021	640.04	0.0493	7.55E-05
U	238	3	He	0.035	0.0018	560.04	0.0493	7.55E-05
U	238	3	He	0.039	0.002	620.04	0.0493	7.55E-05
Sc	45	1	No Gas			2472429.49		
Sc	45	1	No Gas			2458073.71		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2490766.37		
Ge	72	1	No Gas			1195758.89		
Ge	72	1	No Gas			1184323.97		
Ge	72	1	No Gas			1204414.98		
Sc	45	2	H2			185512.03		
Sc	45	2	H2			185158.18		
Sc	45	2	H2			180973.30		
Ge	72	2	H2			154710.32		
Ge	72	2	H2			153366.87		
Ge	72	2	H2			155004.69		
In	115	2	H2			392034.53		
In	115	2	H2			382367.03		
In	115	2	H2			394693.12		
Sc	45	3	He			47889.37		
Sc	45	3	He			47618.83		
Sc	45	3	He			46876.40		
Ge	72	3	He			82185.63		
Ge	72	3	He			83101.42		
Ge	72	3	He			83674.07		
In	115	3	He			87555.08		
In	115	3	He			87716.67		
In	115	3	He			86830.94		
Tb	159	3	He			403251.95		
Tb	159	3	He			401262.85		
Tb	159	3	He			401277.18		
Bi	209	3	He			308506.91		
Bi	209	3	He			310142.98		
Bi	209	3	He			312909.55		

Quantitation Report

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Sample Name	410-136722-Q-13-A
Sample Type	Sample
Comment	T20
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

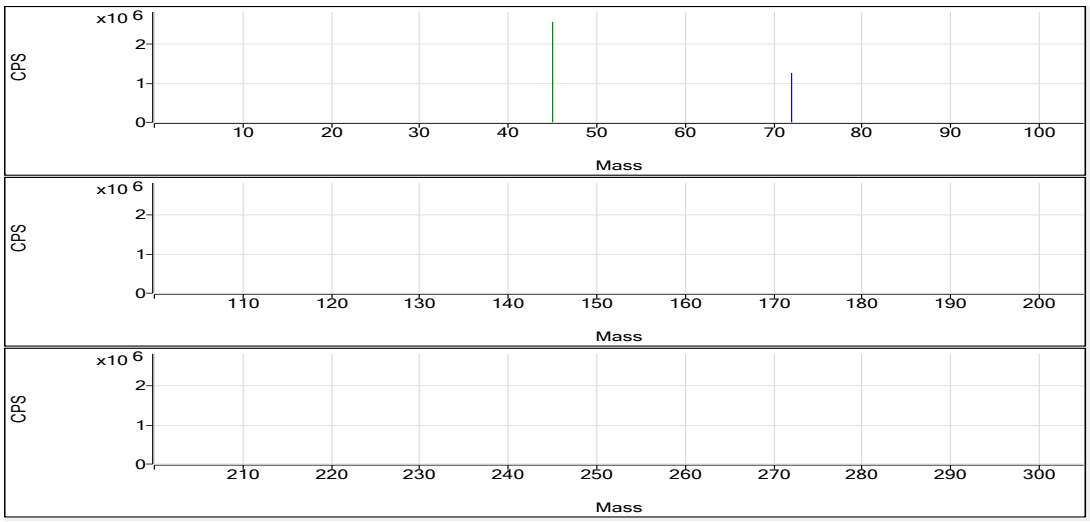
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.053	ppb	3.4	116.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.036	ppb	104.7	4.44	0.0000	Pulse	1.5000	3
Na	23	45	He	8315.718	ppb	3.1	1462019.82	30.0909	Analog	0.1000	3
Mg	24	45	He	15854.901	ppb	3.0	1382424.87	28.4523	Analog	0.1000	3
Al	27	45	He	1091.850	ppb	3.5	31067.31	0.6394	Pulse	0.1000	3
K	39	45	He	684.646	ppb	4.1	57929.26	1.1922	Pulse	0.1000	3
Ca	44	45	He	45101.877	ppb	2.2	148188.71	3.0494	Pulse	0.1000	3
Ti	47	45	He	9.900	ppb	47.2	263.35	0.0054	Pulse	0.1000	3
V	51	45	He	3.610	ppb	0.8	5044.24	0.1038	Pulse	0.5000	3
Cr	52	45	He	1.750	ppb	4.3	4490.83	0.0924	Pulse	0.1000	3
Mn	55	45	He	1447.603	ppb	1.6	903002.10	18.5810	Pulse	0.1000	3
Fe	57	45	He	87801.220	ppb	1.4	2479249.29	51.0131	Analog	0.1000	3
Co	59	45	He	1.514	ppb	7.8	4244.12	0.0874	Pulse	0.1000	3
Ni	60	72	He	4.244	ppb	7.9	3427.20	0.0393	Pulse	0.1000	3
Cu	63	72	He	1.585	ppb	5.6	3967.37	0.0454	Pulse	0.1000	3
Zn	66	72	He	9.268	ppb	7.8	2690.33	0.0308	Pulse	0.1000	3
As	75	72	He	15.755	ppb	1.5	2889.64	0.0331	Pulse	0.5000	3
Sr	88	115	He	213.965	ppb	0.5	166875.78	1.9202	Pulse	0.1000	3
Mo	98	115	He	1.587	ppb	8.0	3047.12	0.0351	Pulse	0.1000	3
Ag	107	115	He	0.004	ppb	248.6	70.00	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.013	ppb	33.4	6.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.060	ppb	227.3	1513.47	0.0174	Pulse	0.1000	3
Sb	121	115	He	0.367	ppb	22.4	496.70	0.0057	Pulse	0.1000	3
Ba	137	115	He	108.117	ppb	2.1	45111.66	0.5191	Pulse	0.1000	3
Tl	205	159	He	0.011	ppb	36.6	163.34	0.0004	Pulse	0.1000	3
Pb	208	159	He	0.424	ppb	6.9	5987.43	0.0149	Pulse	0.1000	3
U	238	209	He	0.195	ppb	3.5	3023.79	0.0097	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2561620.07	0.4	106.8	Analog	0.1000	3
No Gas	Ge	72	1262033.73	0.6	109.4	Pulse	0.1000	3
H2	Sc	45	184014.15	0.2	98.4	Pulse	0.1000	3
H2	Ge	72	164295.62	1.2	100.4	Pulse	0.1000	3
H2	In	115	392278.22	0.2	100.8	Pulse	0.1000	3
He	Sc	45	48608.62	2.2	104.2	Pulse	0.1000	3
He	Ge	72	87340.08	1.2	107.6	Pulse	0.1000	3
He	In	115	86909.46	1.2	100.8	Pulse	0.1000	3
He	Tb	159	400610.01	0.1	100.5	Pulse	0.1000	3
He	Bi	209	312420.39	0.9	101.0	Pulse	0.1000	3

No Gas



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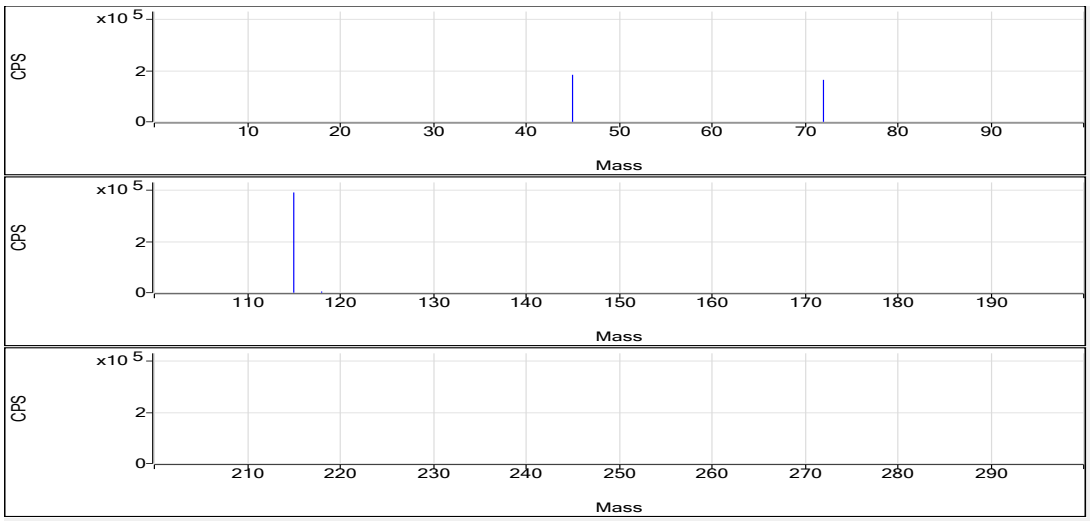
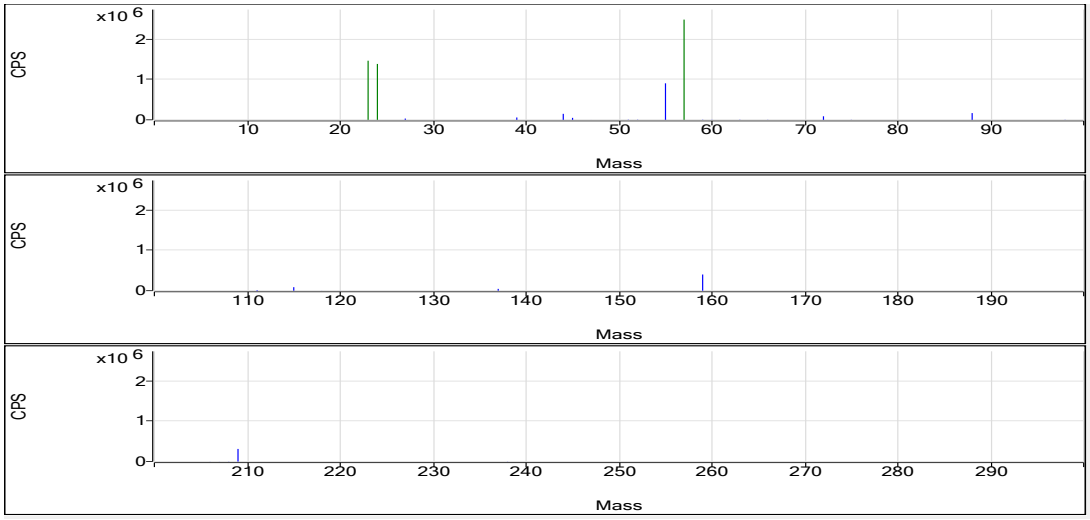


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.055	0	120.00	0.0008	4.685E-06
Be	9	1	No Gas	0.051	0	112.00	0.0008	4.685E-06
Be	9	1	No Gas	0.053	0	116.00	0.0008	4.685E-06
Se	78	2	H2	0.009	0	2.67	0.0004	1.219E-05
Se	78	2	H2	0.079	0	7.33	0.0004	1.219E-05
Se	78	2	H2	0.02	0	3.33	0.0004	1.219E-05
Na	23	3	He	8611.271	31.1481	1476047.01	0.0036	0.3452
Na	23	3	He	8121.694	29.3969	1449972.95	0.0036	0.3452
Na	23	3	He	8214.187	29.7277	1460039.51	0.0036	0.3452
Mg	24	3	He	16389.629	29.4118	1393765.76	0.0018	0.003497
Mg	24	3	He	15457.595	27.7394	1368220.29	0.0018	0.003497
Mg	24	3	He	15717.478	28.2057	1385288.57	0.0018	0.003497
Al	27	3	He	1127.697	0.6604	31294.35	0.0006	0.0006432
Al	27	3	He	1051.783	0.616	30382.30	0.0006	0.0006432
Al	27	3	He	1096.071	0.6419	31525.28	0.0006	0.0006432
K	39	3	He	716.737	1.2296	58267.48	0.0012	0.3951
K	39	3	He	668.465	1.1734	57875.82	0.0012	0.3951
K	39	3	He	668.736	1.1737	57644.49	0.0012	0.3951
Ca	44	3	He	46125.781	3.1186	147784.28	0.0001	0.002715
Ca	44	3	He	45053.934	3.0462	150250.72	0.0001	0.002715
Ca	44	3	He	44125.915	2.9835	146531.13	0.0001	0.002715
Ti	47	3	He	4.979	0.0027	130.01	0.0005	7.003E-05
Ti	47	3	He	10.442	0.0057	280.01	0.0005	7.003E-05
Ti	47	3	He	14.28	0.0077	380.02	0.0005	7.003E-05
V	51	3	He	3.638	0.1044	4946.88	0.0219	0.02486
V	51	3	He	3.581	0.1031	5086.91	0.0219	0.02486
V	51	3	He	3.612	0.1038	5098.93	0.0219	0.02486
Cr	52	3	He	1.746	0.0922	4370.81	0.0299	0.03997
Cr	52	3	He	1.828	0.0947	4670.87	0.0299	0.03997
Cr	52	3	He	1.678	0.0902	4430.81	0.0299	0.03997
Mn	55	3	He	1473.262	18.9103	896122.10	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1442.063	18.5099	912983.50	0.0128	0.002639
Mn	55	3	He	1427.483	18.3228	899900.69	0.0128	0.002639
Fe	57	3	He	89072.482	51.7517	2452412.31	0.0006	0.001429
Fe	57	3	He	87702.27	50.9556	2513340.28	0.0006	0.001429
Fe	57	3	He	86628.908	50.332	2471995.28	0.0006	0.001429
Co	59	3	He	1.619	0.0933	4420.83	0.0563	0.002149
Co	59	3	He	1.536	0.0886	4370.83	0.0563	0.002149
Co	59	3	He	1.387	0.0802	3940.70	0.0563	0.002149
Ni	60	3	He	4.534	0.0417	3600.57	0.0086	0.002834
Ni	60	3	He	3.877	0.0361	3190.47	0.0086	0.002834
Ni	60	3	He	4.323	0.0399	3490.55	0.0086	0.002834
Cu	63	3	He	1.685	0.048	4140.76	0.0257	0.004757
Cu	63	3	He	1.556	0.0447	3950.66	0.0257	0.004757
Cu	63	3	He	1.513	0.0436	3810.69	0.0257	0.004757
Zn	66	3	He	9.681	0.032	2760.35	0.0029	0.003818
Zn	66	3	He	9.69	0.032	2830.37	0.0029	0.003818
Zn	66	3	He	8.435	0.0284	2480.28	0.0029	0.003818
As	75	3	He	15.928	0.0334	2884.31	0.002	0.0008061
As	75	3	He	15.859	0.0333	2942.32	0.002	0.0008061
As	75	3	He	15.478	0.0325	2842.30	0.002	0.0008061
Sr	88	3	He	212.695	1.9088	168089.02	0.009	0.0009645
Sr	88	3	He	214.393	1.924	166372.22	0.009	0.0009645
Sr	88	3	He	214.805	1.9277	166166.09	0.009	0.0009645
Mo	98	3	He	1.599	0.0353	3110.47	0.0219	0.0002706
Mo	98	3	He	1.454	0.0322	2780.39	0.0219	0.0002706
Mo	98	3	He	1.707	0.0377	3250.50	0.0219	0.0002706
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Ag	107	3	He	0.004	0.0008	70.00	0.0465	0.0006206
Ag	107	3	He	0.014	0.0013	110.00	0.0465	0.0006206
Cd	111	3	He	0.013	0.0001	6.00	0.0053	0
Cd	111	3	He	0.017	0.0001	8.00	0.0053	0
Cd	111	3	He	0.009	0	4.00	0.0053	0
Sn	120	3	He	0.014	0.0167	1470.12	0.0158	0.01648
Sn	120	3	He	-0.047	0.0157	1360.12	0.0158	0.01648
Sn	120	3	He	0.213	0.0198	1710.17	0.0158	0.01648
Sb	121	3	He	0.295	0.0047	410.02	0.0149	0.0002698
Sb	121	3	He	0.457	0.0071	610.04	0.0149	0.0002698
Sb	121	3	He	0.349	0.0055	470.03	0.0149	0.0002698
Ba	137	3	He	106.084	0.5094	44854.40	0.0048	0.0002317
Ba	137	3	He	110.548	0.5308	45897.54	0.0048	0.0002317
Ba	137	3	He	107.72	0.5172	44583.05	0.0048	0.0002317
Tl	205	3	He	0.012	0.0004	170.01	0.0247	0.0001339
Tl	205	3	He	0.015	0.0005	200.01	0.0247	0.0001339
Tl	205	3	He	0.007	0.0003	120.01	0.0247	0.0001339
Pb	208	3	He	0.446	0.0157	3350.53	0.0327	0.00107
Pb	208	3	He	0.436	0.0153	3200.52	0.0327	0.00107
Pb	208	3	He	0.39	0.0138	3060.49	0.0327	0.00107
U	238	3	He	0.199	0.0099	3120.48	0.0493	7.55E-05
U	238	3	He	0.198	0.0098	3070.47	0.0493	7.55E-05
U	238	3	He	0.187	0.0093	2880.42	0.0493	7.55E-05
Sc	45	1	No Gas			2571804.34		
Sc	45	1	No Gas			2550186.52		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2562869.34		
Ge	72	1	No Gas			1269456.39		
Ge	72	1	No Gas			1263275.76		
Ge	72	1	No Gas			1253369.04		
Sc	45	2	H2			184292.01		
Sc	45	2	H2			184081.52		
Sc	45	2	H2			183668.92		
Ge	72	2	H2			166540.19		
Ge	72	2	H2			162728.35		
Ge	72	2	H2			163618.31		
In	115	2	H2			391603.78		
In	115	2	H2			393033.24		
In	115	2	H2			392197.65		
Sc	45	3	He			47388.03		
Sc	45	3	He			49324.08		
Sc	45	3	He			49113.76		
Ge	72	3	He			86250.45		
Ge	72	3	He			88363.03		
Ge	72	3	He			87406.77		
In	115	3	He			88068.25		
In	115	3	He			86478.64		
In	115	3	He			86206.21		
Tb	159	3	He			400567.53		
Tb	159	3	He			401211.09		
Tb	159	3	He			400051.40		
Bi	209	3	He			315356.50		
Bi	209	3	He			311774.12		
Bi	209	3	He			310130.56		

Quantitation Report

Data File Name	223SMPL.d
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Sample Type	Sample
Comment	T20
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

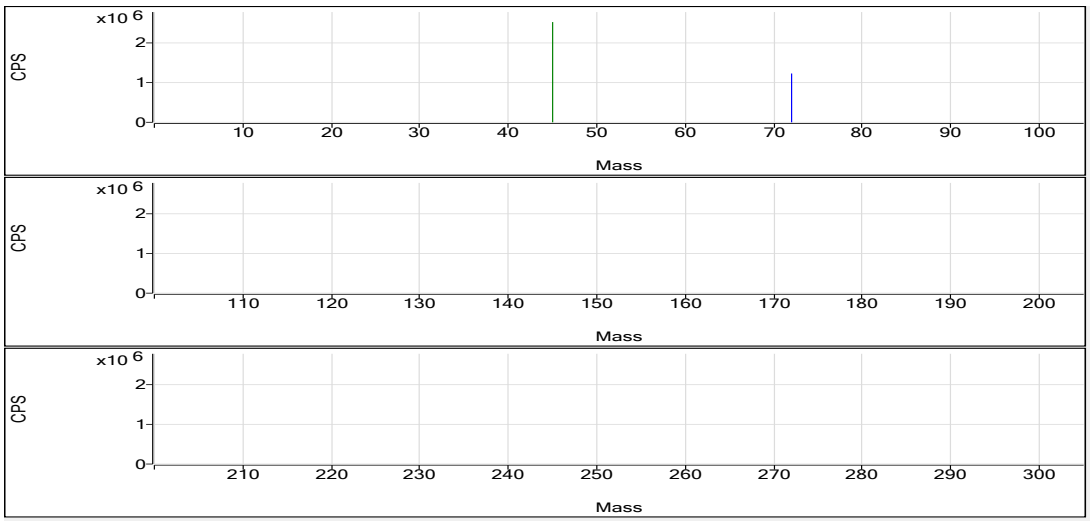
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.014	ppb	5.3	39.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.007	ppb	287.8	2.44	0.0000	Pulse	1.5000	3
Na	23	45	He	5948.681	ppb	3.0	1038647.38	21.6239	Mix	0.1000	3
Mg	24	45	He	48292.748	ppb	1.9	4160528.90	86.6562	Analog	0.1000	3
Al	27	45	He	7.913	ppb	20.7	253.35	0.0053	Pulse	0.1000	3
K	39	45	He	3583.321	ppb	0.8	219304.26	4.5672	Pulse	0.1000	3
Ca	44	45	He	135595.067	ppb	0.9	439947.27	9.1624	Pulse	0.1000	3
Ti	47	45	He	7.035	ppb	162.2	183.63	0.0038	Pulse	0.1000	3
V	51	45	He	0.007	ppb	201.9	1200.73	0.0250	Pulse	0.5000	3
Cr	52	45	He	0.447	ppb	42.1	2563.64	0.0534	Pulse	0.1000	3
Mn	55	45	He	403.717	ppb	0.6	248920.04	5.1839	Pulse	0.1000	3
Fe	57	45	He	2326.294	ppb	1.3	64966.54	1.3530	Pulse	0.1000	3
Co	59	45	He	5.677	ppb	3.7	15442.00	0.3217	Pulse	0.1000	3
Ni	60	72	He	17.117	ppb	0.4	13096.35	0.1498	Pulse	0.1000	3
Cu	63	72	He	0.539	ppb	5.2	1626.83	0.0186	Pulse	0.1000	3
Zn	66	72	He	7.632	ppb	5.4	2276.92	0.0260	Pulse	0.1000	3
As	75	72	He	2.598	ppb	7.0	536.01	0.0061	Pulse	0.5000	3
Sr	88	115	He	91.769	ppb	4.1	70288.45	0.8241	Pulse	0.1000	3
Mo	98	115	He	0.097	ppb	21.3	203.34	0.0024	Pulse	0.1000	3
Ag	107	115	He	0.031	ppb	6.9	176.68	0.0021	Pulse	0.1000	3
Cd	111	115	He	0.368	ppb	5.4	168.00	0.0020	Pulse	0.5000	3
Sn	120	115	He	0.063	ppb	101.0	1490.14	0.0175	Pulse	0.1000	3
Sb	121	115	He	0.045	ppb	64.8	80.00	0.0009	Pulse	0.1000	3
Ba	137	115	He	657.819	ppb	1.8	269364.33	3.1573	Pulse	0.1000	3
Tl	205	159	He	0.062	ppb	30.4	676.71	0.0017	Pulse	0.1000	3
Pb	208	159	He	0.115	ppb	2.8	1960.13	0.0048	Pulse	0.1000	3
U	238	209	He	1.096	ppb	1.4	16778.15	0.0541	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2523800.59	1.2	105.2	Analog	0.1000	3
No Gas	Ge	72	1228680.03	0.6	106.5	Pulse	0.1000	3
H2	Sc	45	182790.48	1.9	97.7	Pulse	0.1000	3
H2	Ge	72	161059.61	1.6	98.4	Pulse	0.1000	3
H2	In	115	390183.25	0.2	100.3	Pulse	0.1000	3
He	Sc	45	48020.03	1.4	103.0	Pulse	0.1000	3
He	Ge	72	87453.65	0.3	107.7	Pulse	0.1000	3
He	In	115	85329.62	1.8	99.0	Pulse	0.1000	3
He	Tb	159	404183.08	0.8	101.4	Pulse	0.1000	3
He	Bi	209	310333.26	0.8	100.3	Pulse	0.1000	3

No Gas



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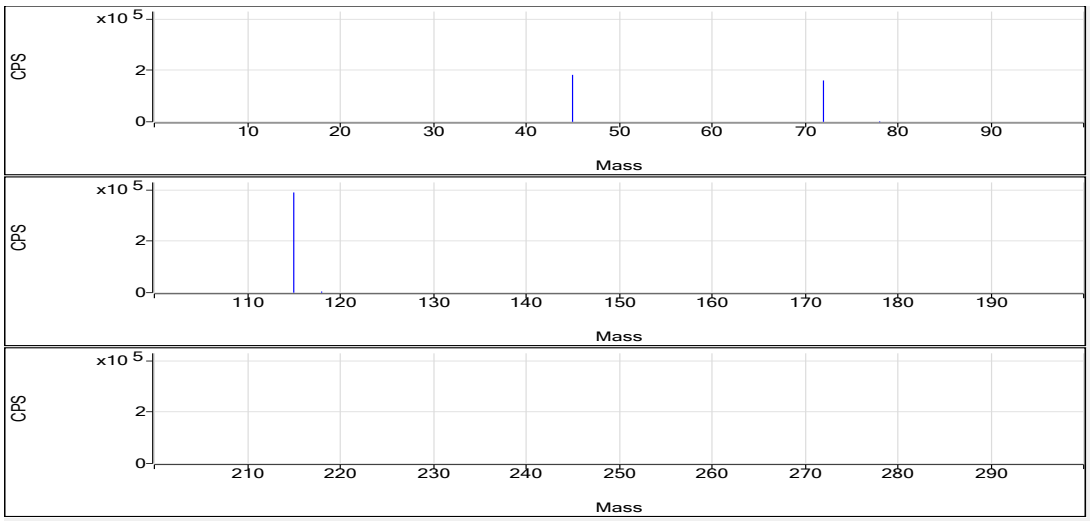
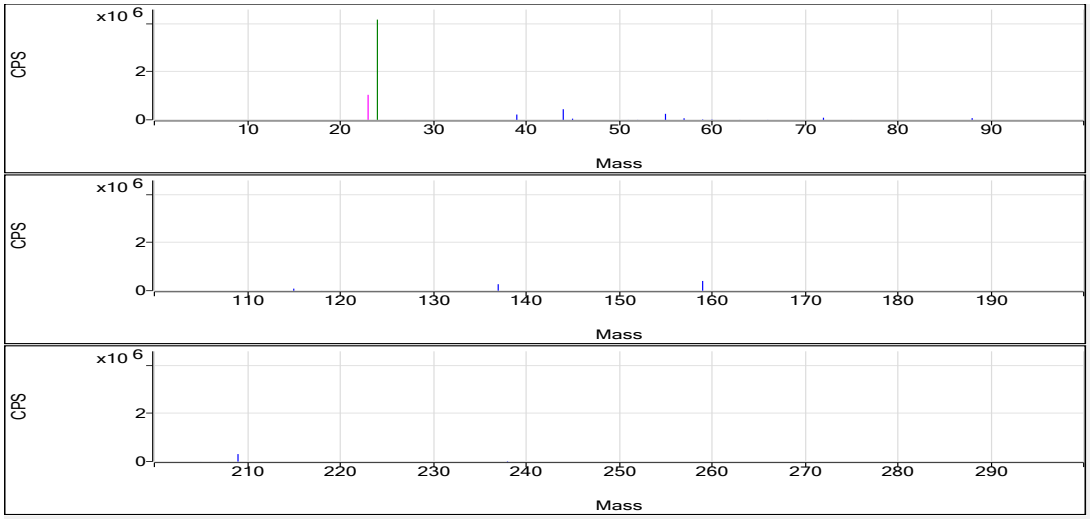


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.015	0	40.00	0.0008	4.685E-06
Be	9	1	No Gas	0.013	0	38.00	0.0008	4.685E-06
Be	9	1	No Gas	0.014	0	40.00	0.0008	4.685E-06
Se	78	2	H2	0.001	0	2.00	0.0004	1.219E-05
Se	78	2	H2	-0.009	0	1.33	0.0004	1.219E-05
Se	78	2	H2	0.029	0	4.00	0.0004	1.219E-05
Na	23	3	He	5888.128	21.4073	1017454.28	0.0036	0.3452
Na	23	3	He	6149.92	22.3437	1090203.89	0.0036	0.3452
Na	23	3	He	5807.995	21.1206	1008283.97	0.0036	0.3452
Mg	24	3	He	48698.652	87.3846	4153249.94	0.0018	0.003497
Mg	24	3	He	47253.115	84.7908	4137146.50	0.0018	0.003497
Mg	24	3	He	48926.476	87.7933	4191190.25	0.0018	0.003497
Al	27	3	He	6.094	0.0042	200.01	0.0006	0.0006432
Al	27	3	He	8.36	0.0055	270.02	0.0006	0.0006432
Al	27	3	He	9.284	0.0061	290.01	0.0006	0.0006432
K	39	3	He	3615.926	4.6052	218877.16	0.0012	0.3951
K	39	3	He	3555.836	4.5352	221284.31	0.0012	0.3951
K	39	3	He	3578.202	4.5613	217751.31	0.0012	0.3951
Ca	44	3	He	136950.727	9.254	439827.88	0.0001	0.002715
Ca	44	3	He	134499.431	9.0884	443445.23	0.0001	0.002715
Ca	44	3	He	135335.043	9.1449	436568.70	0.0001	0.002715
Ti	47	3	He	1.045	0.0006	30.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	20.19	0.0109	520.89	0.0005	7.003E-05
V	51	3	He	0.016	0.0252	1198.06	0.0219	0.02486
V	51	3	He	-0.009	0.0247	1204.06	0.0219	0.02486
V	51	3	He	0.012	0.0251	1200.06	0.0219	0.02486
Cr	52	3	He	0.232	0.0469	2230.24	0.0299	0.03997
Cr	52	3	He	0.527	0.0558	2720.33	0.0299	0.03997
Cr	52	3	He	0.582	0.0574	2740.35	0.0299	0.03997
Mn	55	3	He	403.511	5.1812	246256.32	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	401.308	5.153	251426.34	0.0128	0.002639
Mn	55	3	He	406.332	5.2175	249077.46	0.0128	0.002639
Fe	57	3	He	2360.074	1.3726	65238.00	0.0006	0.001429
Fe	57	3	He	2314.458	1.3461	65679.81	0.0006	0.001429
Fe	57	3	He	2304.349	1.3402	63981.82	0.0006	0.001429
Co	59	3	He	5.883	0.3333	15839.17	0.0563	0.002149
Co	59	3	He	5.463	0.3096	15108.27	0.0563	0.002149
Co	59	3	He	5.685	0.3221	15378.57	0.0563	0.002149
Ni	60	3	He	17.203	0.1505	13206.54	0.0086	0.002834
Ni	60	3	He	17.091	0.1495	13036.35	0.0086	0.002834
Ni	60	3	He	17.057	0.1492	13046.17	0.0086	0.002834
Cu	63	3	He	0.561	0.0191	1680.17	0.0257	0.004757
Cu	63	3	He	0.507	0.0178	1550.13	0.0257	0.004757
Cu	63	3	He	0.55	0.0189	1650.18	0.0257	0.004757
Zn	66	3	He	7.339	0.0252	2210.24	0.0029	0.003818
Zn	66	3	He	8.105	0.0274	2390.27	0.0029	0.003818
Zn	66	3	He	7.451	0.0255	2230.26	0.0029	0.003818
As	75	3	He	2.799	0.0065	574.02	0.002	0.0008061
As	75	3	He	2.551	0.006	526.01	0.002	0.0008061
As	75	3	He	2.443	0.0058	508.01	0.002	0.0008061
Sr	88	3	He	91.832	0.8247	70024.04	0.009	0.0009645
Sr	88	3	He	87.984	0.7902	68747.08	0.009	0.0009645
Sr	88	3	He	95.49	0.8575	72094.24	0.009	0.0009645
Mo	98	3	He	0.095	0.0024	200.01	0.0219	0.0002706
Mo	98	3	He	0.077	0.002	170.01	0.0219	0.0002706
Mo	98	3	He	0.118	0.0029	240.01	0.0219	0.0002706
Ag	107	3	He	0.03	0.002	170.01	0.0465	0.0006206
Ag	107	3	He	0.034	0.0022	190.01	0.0465	0.0006206
Ag	107	3	He	0.03	0.002	170.01	0.0465	0.0006206
Cd	111	3	He	0.37	0.002	168.00	0.0053	0
Cd	111	3	He	0.387	0.0021	180.00	0.0053	0
Cd	111	3	He	0.347	0.0019	156.00	0.0053	0
Sn	120	3	He	0.09	0.0179	1520.15	0.0158	0.01648
Sn	120	3	He	-0.01	0.0163	1420.12	0.0158	0.01648
Sn	120	3	He	0.109	0.0182	1530.14	0.0158	0.01648
Sb	121	3	He	0.053	0.0011	90.00	0.0149	0.0002698
Sb	121	3	He	0.013	0.0005	40.00	0.0149	0.0002698
Sb	121	3	He	0.07	0.0013	110.00	0.0149	0.0002698
Ba	137	3	He	653.502	3.1366	266330.00	0.0048	0.0002317
Ba	137	3	He	648.563	3.1129	270832.01	0.0048	0.0002317
Ba	137	3	He	671.393	3.2225	270930.97	0.0048	0.0002317
Tl	205	3	He	0.058	0.0016	630.04	0.0247	0.0001339
Tl	205	3	He	0.083	0.0022	890.06	0.0247	0.0001339
Tl	205	3	He	0.046	0.0013	510.03	0.0247	0.0001339
Pb	208	3	He	0.112	0.0047	1000.07	0.0327	0.00107
Pb	208	3	He	0.116	0.0049	1170.11	0.0327	0.00107
Pb	208	3	He	0.118	0.0049	1040.08	0.0327	0.00107
U	238	3	He	1.101	0.0543	16701.28	0.0493	7.55E-05
U	238	3	He	1.079	0.0532	16631.35	0.0493	7.55E-05
U	238	3	He	1.108	0.0547	17001.83	0.0493	7.55E-05
Sc	45	1	No Gas			2487511.37		
Sc	45	1	No Gas			2541290.27		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2542600.12		
Ge	72	1	No Gas			1219997.48		
Ge	72	1	No Gas			1235205.84		
Ge	72	1	No Gas			1230836.78		
Sc	45	2	H2			180771.34		
Sc	45	2	H2			180793.30		
Sc	45	2	H2			186806.81		
Ge	72	2	H2			159279.52		
Ge	72	2	H2			159846.65		
Ge	72	2	H2			164052.67		
In	115	2	H2			389662.14		
In	115	2	H2			390829.68		
In	115	2	H2			390057.92		
Sc	45	3	He			47528.42		
Sc	45	3	He			48792.40		
Sc	45	3	He			47739.27		
Ge	72	3	He			87759.06		
Ge	72	3	He			87184.88		
Ge	72	3	He			87417.01		
In	115	3	He			84919.82		
In	115	3	He			87011.42		
In	115	3	He			84084.14		
Tb	159	3	He			401540.19		
Tb	159	3	He			407608.74		
Tb	159	3	He			403400.31		
Bi	209	3	He			307546.52		
Bi	209	3	He			312398.82		
Bi	209	3	He			311054.45		

Quantitation Report

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Sample Type	Sample
Comment	T20
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

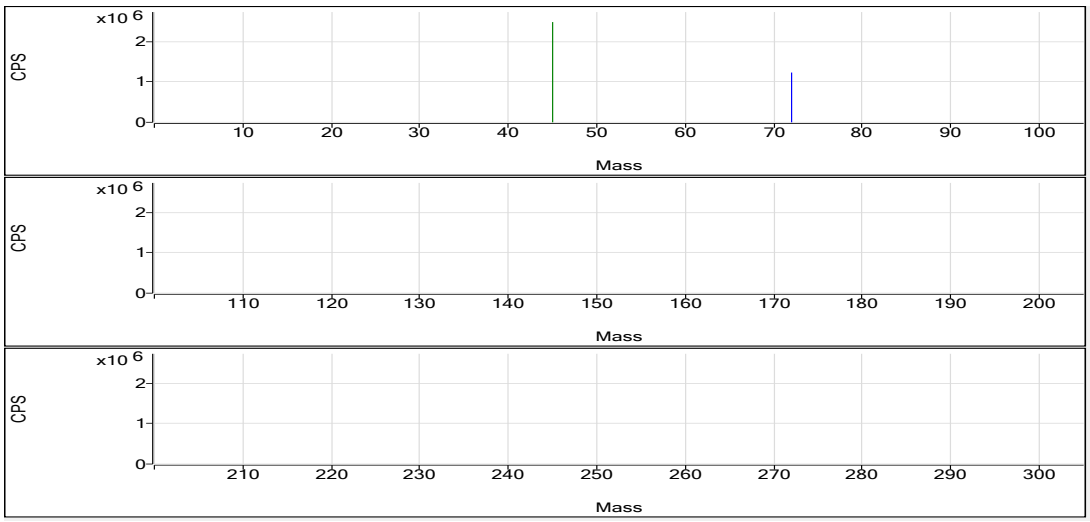
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.005	ppb	25.2	21.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.000	ppb	N/A	2.00	0.0000	Pulse	1.5000	3
Na	23	45	He	581.404	ppb	1.0	118120.02	2.4249	Pulse	0.1000	3
Mg	24	45	He	24795.323	ppb	2.9	2167006.74	44.4943	Analog	0.1000	3
Al	27	45	He	3.565	ppb	67.7	133.34	0.0027	Pulse	0.1000	3
K	39	45	He	1254.878	ppb	2.4	90409.10	1.8562	Pulse	0.1000	3
Ca	44	45	He	26208.185	ppb	2.5	86362.45	1.7731	Pulse	0.1000	3
Ti	47	45	He	0.126	ppb	175.9	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	0.109	ppb	61.1	1326.73	0.0272	Pulse	0.5000	3
Cr	52	45	He	0.029	ppb	235.1	1990.21	0.0408	Pulse	0.1000	3
Mn	55	45	He	0.888	ppb	12.1	683.38	0.0140	Pulse	0.1000	3
Fe	57	45	He	19.257	ppb	26.5	613.37	0.0126	Pulse	0.1000	3
Co	59	45	He	0.010	ppb	70.1	133.34	0.0027	Pulse	0.1000	3
Ni	60	72	He	0.067	ppb	90.3	300.02	0.0034	Pulse	0.1000	3
Cu	63	72	He	0.101	ppb	52.5	646.71	0.0073	Pulse	0.1000	3
Zn	66	72	He	2.016	ppb	11.5	853.39	0.0097	Pulse	0.1000	3
As	75	72	He	0.172	ppb	24.8	102.00	0.0012	Pulse	0.5000	3
Sr	88	115	He	47.854	ppb	1.0	37182.80	0.4302	Pulse	0.1000	3
Mo	98	115	He	2.428	ppb	3.8	4624.27	0.0535	Pulse	0.1000	3
Ag	107	115	He	-0.003	ppb	N/A	40.00	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.019	ppb	35.2	8.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.103	ppb	N/A	1283.44	0.0149	Pulse	0.1000	3
Sb	121	115	He	0.044	ppb	52.3	80.00	0.0009	Pulse	0.1000	3
Ba	137	115	He	122.224	ppb	1.6	50718.19	0.5868	Pulse	0.1000	3
Tl	205	159	He	0.007	ppb	44.8	123.34	0.0003	Pulse	0.1000	3
Pb	208	159	He	0.010	ppb	34.9	560.03	0.0014	Pulse	0.1000	3
U	238	209	He	0.342	ppb	6.4	5287.94	0.0169	Pulse	0.1000	3

ISTD Table:

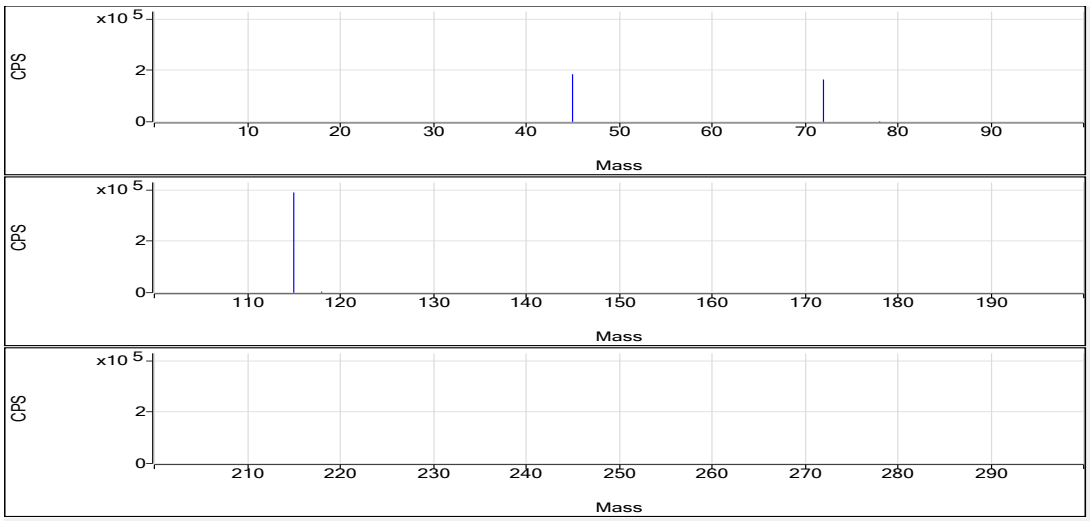
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2483746.32	1.3	103.5	Analog	0.1000	3
No Gas	Ge	72	1232968.47	1.7	106.9	Pulse	0.1000	3
H2	Sc	45	184825.24	1.2	98.8	Pulse	0.1000	3
H2	Ge	72	164406.80	1.1	100.4	Pulse	0.1000	3
H2	In	115	389373.57	1.0	100.1	Pulse	0.1000	3
He	Sc	45	48715.73	1.4	104.4	Pulse	0.1000	3
He	Ge	72	88061.43	0.9	108.5	Pulse	0.1000	3
He	In	115	86431.71	0.6	100.3	Pulse	0.1000	3
He	Tb	159	401972.72	0.6	100.8	Pulse	0.1000	3
He	Bi	209	312444.28	0.0	101.0	Pulse	0.1000	3

No Gas

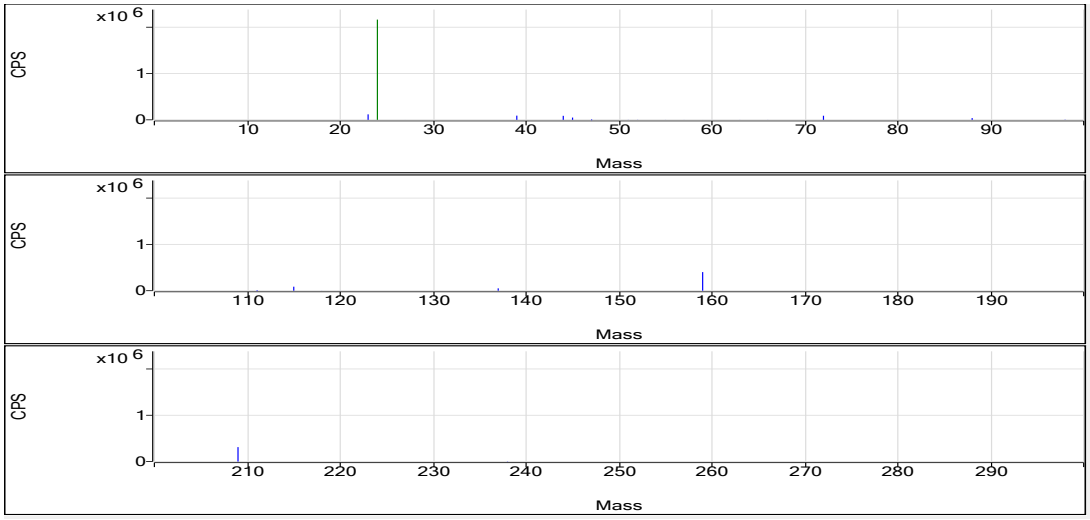


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.007	0	24.00	0.0008	4.685E-06
Be	9	1	No Gas	0.004	0	20.00	0.0008	4.685E-06
Be	9	1	No Gas	0.005	0	20.00	0.0008	4.685E-06
Se	78	2	H2	-0.01	0	1.33	0.0004	1.219E-05
Se	78	2	H2	0.01	0	2.67	0.0004	1.219E-05
Se	78	2	H2	0	0	2.00	0.0004	1.219E-05
Na	23	3	He	587.339	2.4461	117756.20	0.0036	0.3452
Na	23	3	He	581.189	2.4241	117646.76	0.0036	0.3452
Na	23	3	He	575.683	2.4044	118957.11	0.0036	0.3452
Mg	24	3	He	25514.904	45.7854	2204131.22	0.0018	0.003497
Mg	24	3	He	24778.938	44.4649	2157976.22	0.0018	0.003497
Mg	24	3	He	24092.125	43.2325	2138912.78	0.0018	0.003497
Al	27	3	He	3.872	0.0029	140.01	0.0006	0.0006432
Al	27	3	He	1.014	0.0012	60.00	0.0006	0.0006432
Al	27	3	He	5.811	0.004	200.01	0.0006	0.0006432
K	39	3	He	1286.23	1.8927	91113.38	0.0012	0.3951
K	39	3	He	1251.028	1.8517	89865.61	0.0012	0.3951
K	39	3	He	1227.376	1.8241	90248.30	0.0012	0.3951
Ca	44	3	He	26956.993	1.8237	87794.24	0.0001	0.002715
Ca	44	3	He	25938.305	1.7549	85168.90	0.0001	0.002715
Ca	44	3	He	25729.258	1.7408	86124.20	0.0001	0.002715
Ti	47	3	He	0.256	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	0.253	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	0.168	0.0285	1374.07	0.0219	0.02486
V	51	3	He	0.122	0.0275	1336.07	0.0219	0.02486
V	51	3	He	0.037	0.0257	1270.06	0.0219	0.02486
Cr	52	3	He	0.053	0.0415	2000.22	0.0299	0.03997
Cr	52	3	He	-0.048	0.0385	1870.21	0.0299	0.03997
Cr	52	3	He	0.083	0.0425	2100.21	0.0299	0.03997
Mn	55	3	He	0.911	0.0143	690.05	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.983	0.0152	740.05	0.0128	0.002639
Mn	55	3	He	0.771	0.0125	620.03	0.0128	0.002639
Fe	57	3	He	24.715	0.0158	760.05	0.0006	0.001429
Fe	57	3	He	18.467	0.0122	590.04	0.0006	0.001429
Fe	57	3	He	14.588	0.0099	490.02	0.0006	0.001429
Co	59	3	He	0.013	0.0029	140.00	0.0563	0.002149
Co	59	3	He	0.002	0.0023	110.00	0.0563	0.002149
Co	59	3	He	0.016	0.003	150.01	0.0563	0.002149
Ni	60	3	He	-0.003	0.0028	250.01	0.0086	0.002834
Ni	60	3	He	0.107	0.0038	330.02	0.0086	0.002834
Ni	60	3	He	0.097	0.0037	320.02	0.0086	0.002834
Cu	63	3	He	0.161	0.0089	790.05	0.0257	0.004757
Cu	63	3	He	0.063	0.0064	560.04	0.0257	0.004757
Cu	63	3	He	0.078	0.0068	590.03	0.0257	0.004757
Zn	66	3	He	2.281	0.0105	930.06	0.0029	0.003818
Zn	66	3	He	1.852	0.0092	810.05	0.0029	0.003818
Zn	66	3	He	1.915	0.0094	820.05	0.0029	0.003818
As	75	3	He	0.166	0.0011	102.00	0.002	0.0008061
As	75	3	He	0.217	0.0013	110.00	0.002	0.0008061
As	75	3	He	0.132	0.0011	94.00	0.002	0.0008061
Sr	88	3	He	47.3	0.4252	36928.79	0.009	0.0009645
Sr	88	3	He	48.25	0.4338	37560.52	0.009	0.0009645
Sr	88	3	He	48.013	0.4316	37059.10	0.009	0.0009645
Mo	98	3	He	2.362	0.0521	4520.88	0.0219	0.0002706
Mo	98	3	He	2.39	0.0527	4560.89	0.0219	0.0002706
Mo	98	3	He	2.533	0.0558	4791.05	0.0219	0.0002706
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Ag	107	3	He	-0.003	0.0005	40.00	0.0465	0.0006206
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Cd	111	3	He	0.013	0.0001	6.00	0.0053	0
Cd	111	3	He	0.026	0.0001	12.00	0.0053	0
Cd	111	3	He	0.017	0.0001	8.00	0.0053	0
Sn	120	3	He	-0.234	0.0128	1110.10	0.0158	0.01648
Sn	120	3	He	-0.056	0.0156	1350.10	0.0158	0.01648
Sn	120	3	He	-0.018	0.0162	1390.12	0.0158	0.01648
Sb	121	3	He	0.067	0.0013	110.00	0.0149	0.0002698
Sb	121	3	He	0.044	0.0009	80.00	0.0149	0.0002698
Sb	121	3	He	0.021	0.0006	50.00	0.0149	0.0002698
Ba	137	3	He	122.21	0.5868	50956.07	0.0048	0.0002317
Ba	137	3	He	120.291	0.5775	50011.76	0.0048	0.0002317
Ba	137	3	He	124.172	0.5962	51186.75	0.0048	0.0002317
Tl	205	3	He	0.004	0.0002	90.00	0.0247	0.0001339
Tl	205	3	He	0.008	0.0003	130.01	0.0247	0.0001339
Tl	205	3	He	0.01	0.0004	150.01	0.0247	0.0001339
Pb	208	3	He	0.011	0.0014	270.01	0.0327	0.00107
Pb	208	3	He	0.006	0.0013	220.01	0.0327	0.00107
Pb	208	3	He	0.012	0.0015	340.02	0.0327	0.00107
U	238	3	He	0.348	0.0172	5381.30	0.0493	7.55E-05
U	238	3	He	0.318	0.0157	4911.10	0.0493	7.55E-05
U	238	3	He	0.36	0.0178	5571.42	0.0493	7.55E-05
Sc	45	1	No Gas			2467955.43		
Sc	45	1	No Gas			2521111.84		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2462171.68		
Ge	72	1	No Gas			1231030.29		
Ge	72	1	No Gas			1254343.26		
Ge	72	1	No Gas			1213531.86		
Sc	45	2	H2			184789.96		
Sc	45	2	H2			182666.03		
Sc	45	2	H2			187019.72		
Ge	72	2	H2			164689.33		
Ge	72	2	H2			162505.61		
Ge	72	2	H2			166025.47		
In	115	2	H2			385326.24		
In	115	2	H2			390138.74		
In	115	2	H2			392655.74		
Sc	45	3	He			48140.43		
Sc	45	3	He			48532.14		
Sc	45	3	He			49474.62		
Ge	72	3	He			88926.75		
Ge	72	3	He			87960.77		
Ge	72	3	He			87296.78		
In	115	3	He			86850.94		
In	115	3	He			86599.19		
In	115	3	He			85865.60		
Tb	159	3	He			403698.51		
Tb	159	3	He			403022.34		
Tb	159	3	He			399197.30		
Bi	209	3	He			312400.44		
Bi	209	3	He			312398.43		
Bi	209	3	He			312533.98		

Quantitation Report

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Acq Time	8/10/2023 6:21:44 PM
Sample Name	410-136514-G-3-A
Sample Type	Sample
Comment	T20
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

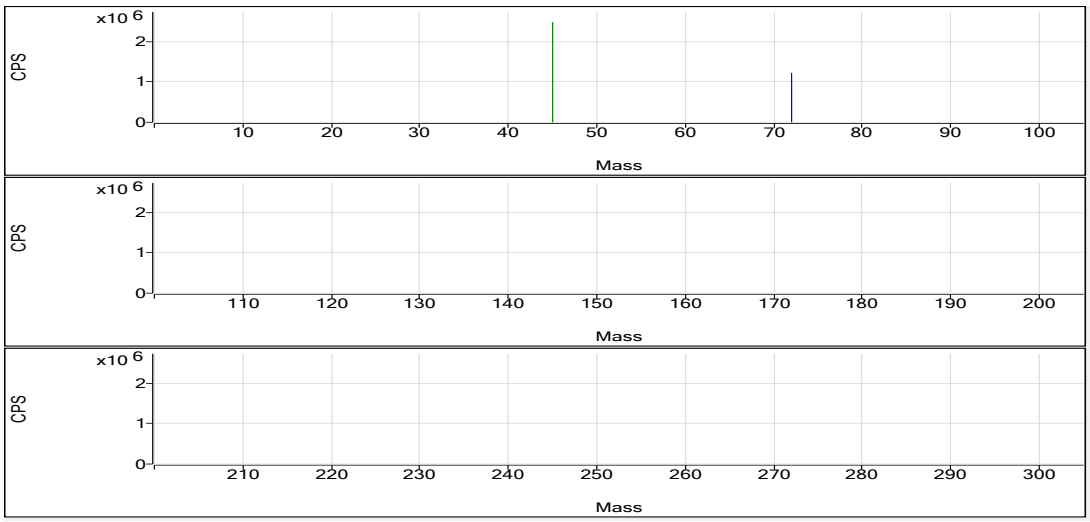
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.014	ppb	21.9	38.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.626	ppb	2.0	45.34	0.0003	Pulse	1.5000	3
Na	23	45	He	2931.342	ppb	2.3	517012.70	10.8307	Pulse	0.1000	3
Mg	24	45	He	28554.851	ppb	2.8	2445759.18	51.2401	Analog	0.1000	3
Al	27	45	He	48.335	ppb	16.9	1380.12	0.0289	Pulse	0.1000	3
K	39	45	He	1663.950	ppb	2.7	111339.05	2.3324	Pulse	0.1000	3
Ca	44	45	He	67008.988	ppb	1.8	216219.74	4.5293	Pulse	0.1000	3
Ti	47	45	He	0.648	ppb	58.7	20.00	0.0004	Pulse	0.1000	3
V	51	45	He	0.501	ppb	20.6	1708.78	0.0358	Pulse	0.5000	3
Cr	52	45	He	1.606	ppb	11.1	4200.78	0.0880	Pulse	0.1000	3
Mn	55	45	He	5.586	ppb	3.3	3550.56	0.0743	Pulse	0.1000	3
Fe	57	45	He	120.328	ppb	3.2	3407.20	0.0713	Pulse	0.1000	3
Co	59	45	He	0.298	ppb	11.5	903.39	0.0189	Pulse	0.1000	3
Ni	60	72	He	0.933	ppb	9.4	953.40	0.0108	Pulse	0.1000	3
Cu	63	72	He	0.701	ppb	8.0	2000.21	0.0228	Pulse	0.1000	3
Zn	66	72	He	3.168	ppb	11.7	1146.76	0.0130	Pulse	0.1000	3
As	75	72	He	0.091	ppb	131.0	87.33	0.0010	Pulse	0.5000	3
Sr	88	115	He	61.529	ppb	2.7	47721.32	0.5529	Pulse	0.1000	3
Mo	98	115	He	1.504	ppb	2.1	2870.39	0.0333	Pulse	0.1000	3
Ag	107	115	He	-0.002	ppb	N/A	46.67	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.009	ppb	51.6	4.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.014	ppb	N/A	1403.46	0.0163	Pulse	0.1000	3
Sb	121	115	He	0.013	ppb	179.6	40.00	0.0005	Pulse	0.1000	3
Ba	137	115	He	176.622	ppb	2.7	73185.69	0.8479	Pulse	0.1000	3
Tl	205	159	He	0.023	ppb	29.2	286.68	0.0007	Pulse	0.1000	3
Pb	208	159	He	0.210	ppb	5.9	3206.96	0.0080	Pulse	0.1000	3
U	238	209	He	0.460	ppb	5.2	7055.51	0.0228	Pulse	0.1000	3

ISTD Table:

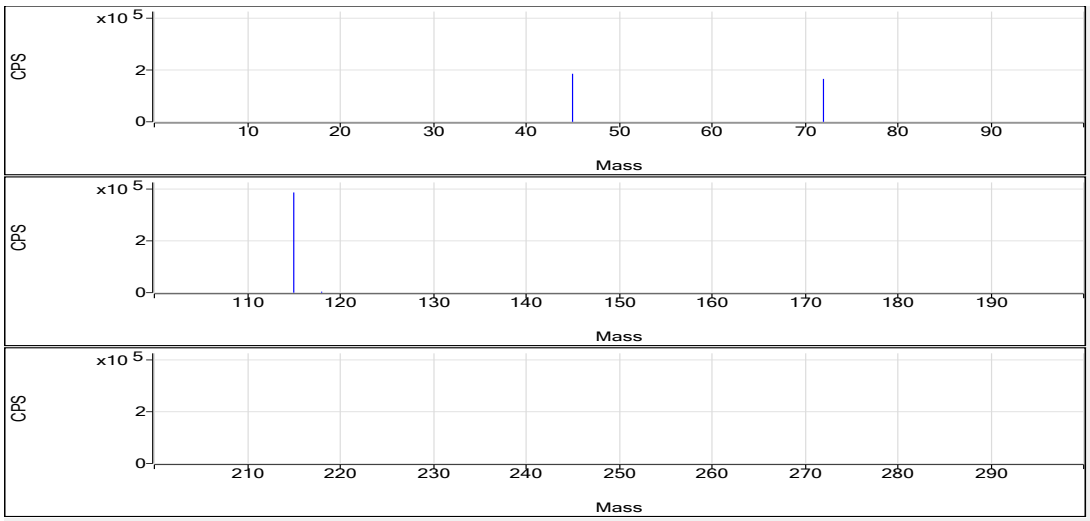
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2480551.84	0.7	103.4	Analog	0.1000	3
No Gas	Ge	72	1221501.49	0.2	105.9	Pulse	0.1000	3
H2	Sc	45	185642.07	1.1	99.3	Pulse	0.1000	3
H2	Ge	72	165836.59	1.2	101.3	Pulse	0.1000	3
H2	In	115	387207.82	0.6	99.5	Pulse	0.1000	3
He	Sc	45	47749.13	2.0	102.4	Pulse	0.1000	3
He	Ge	72	87892.92	0.8	108.3	Pulse	0.1000	3
He	In	115	86340.44	1.8	100.2	Pulse	0.1000	3
He	Tb	159	403198.64	0.7	101.2	Pulse	0.1000	3
He	Bi	209	309999.55	0.3	100.2	Pulse	0.1000	3

No Gas

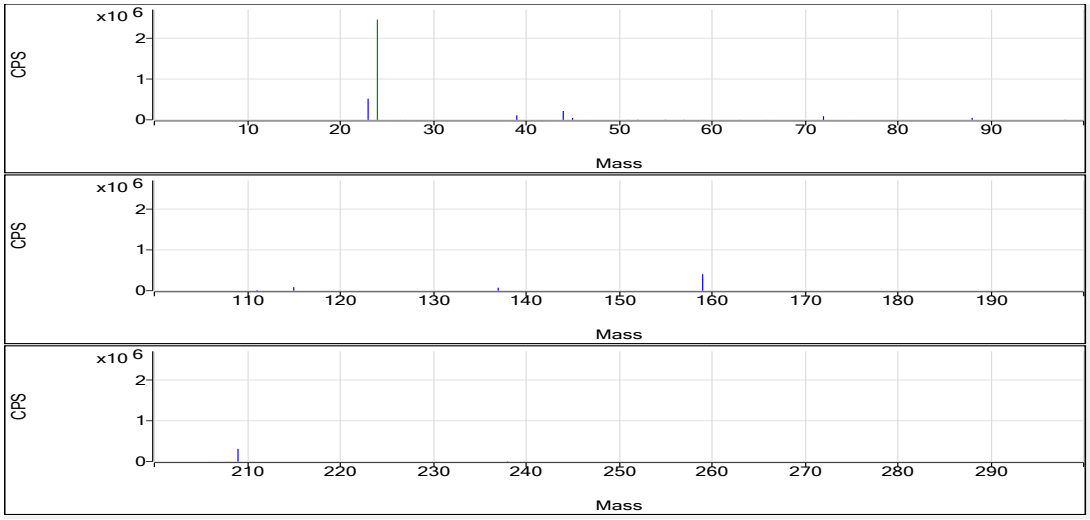


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.011	0	32.00	0.0008	4.685E-06
Be	9	1	No Gas	0.016	0	42.00	0.0008	4.685E-06
Be	9	1	No Gas	0.016	0	42.00	0.0008	4.685E-06
Se	78	2	H2	0.639	0.0003	46.67	0.0004	1.219E-05
Se	78	2	H2	0.614	0.0003	44.67	0.0004	1.219E-05
Se	78	2	H2	0.626	0.0003	44.67	0.0004	1.219E-05
Na	23	3	He	2988.713	11.0359	515996.75	0.0036	0.3452
Na	23	3	He	2858.839	10.5714	514317.18	0.0036	0.3452
Na	23	3	He	2946.473	10.8848	520724.17	0.0036	0.3452
Mg	24	3	He	29433.679	52.817	2469514.49	0.0018	0.003497
Mg	24	3	He	27852.695	49.9802	2431632.62	0.0018	0.003497
Mg	24	3	He	28378.179	50.9231	2436130.43	0.0018	0.003497
Al	27	3	He	46.795	0.028	1310.11	0.0006	0.0006432
Al	27	3	He	41.064	0.0247	1200.09	0.0006	0.0006432
Al	27	3	He	57.146	0.0341	1630.16	0.0006	0.0006432
K	39	3	He	1710.204	2.3863	111574.08	0.0012	0.3951
K	39	3	He	1620.026	2.2813	110989.93	0.0012	0.3951
K	39	3	He	1661.62	2.3297	111453.15	0.0012	0.3951
Ca	44	3	He	68258.704	4.6137	215719.39	0.0001	0.002715
Ca	44	3	He	65921.573	4.4558	216785.31	0.0001	0.002715
Ca	44	3	He	66846.687	4.5183	216154.53	0.0001	0.002715
Ti	47	3	He	0.666	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	1.018	0.0006	30.00	0.0005	7.003E-05
Ti	47	3	He	0.259	0.0002	10.00	0.0005	7.003E-05
V	51	3	He	0.61	0.0382	1786.12	0.0219	0.02486
V	51	3	He	0.405	0.0337	1640.10	0.0219	0.02486
V	51	3	He	0.488	0.0355	1700.11	0.0219	0.02486
Cr	52	3	He	1.773	0.0931	4350.82	0.0299	0.03997
Cr	52	3	He	1.418	0.0824	4010.70	0.0299	0.03997
Cr	52	3	He	1.626	0.0886	4240.82	0.0299	0.03997
Mn	55	3	He	5.378	0.0717	3350.49	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	5.721	0.0761	3700.64	0.0128	0.002639
Mn	55	3	He	5.659	0.0753	3600.55	0.0128	0.002639
Fe	57	3	He	119.409	0.0708	3310.53	0.0006	0.001429
Fe	57	3	He	124.568	0.0738	3590.58	0.0006	0.001429
Fe	57	3	He	117.007	0.0694	3320.48	0.0006	0.001429
Co	59	3	He	0.338	0.0212	990.07	0.0563	0.002149
Co	59	3	He	0.28	0.0179	870.06	0.0563	0.002149
Co	59	3	He	0.278	0.0178	850.05	0.0563	0.002149
Ni	60	3	He	0.999	0.0114	1010.07	0.0086	0.002834
Ni	60	3	He	0.966	0.0111	980.07	0.0086	0.002834
Ni	60	3	He	0.834	0.01	870.06	0.0086	0.002834
Cu	63	3	He	0.699	0.0227	2010.21	0.0257	0.004757
Cu	63	3	He	0.646	0.0213	1880.19	0.0257	0.004757
Cu	63	3	He	0.759	0.0242	2110.23	0.0257	0.004757
Zn	66	3	He	3.462	0.0139	1230.11	0.0029	0.003818
Zn	66	3	He	3.29	0.0134	1180.10	0.0029	0.003818
Zn	66	3	He	2.752	0.0118	1030.07	0.0029	0.003818
As	75	3	He	0.202	0.0012	108.00	0.002	0.0008061
As	75	3	He	0.105	0.001	90.00	0.002	0.0008061
As	75	3	He	-0.035	0.0007	64.00	0.002	0.0008061
Sr	88	3	He	62.102	0.558	48413.44	0.009	0.0009645
Sr	88	3	He	59.652	0.536	46988.85	0.009	0.0009645
Sr	88	3	He	62.833	0.5646	47761.68	0.009	0.0009645
Mo	98	3	He	1.486	0.0329	2850.38	0.0219	0.0002706
Mo	98	3	He	1.486	0.0329	2880.41	0.0219	0.0002706
Mo	98	3	He	1.54	0.034	2880.39	0.0219	0.0002706
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Ag	107	3	He	0.002	0.0007	60.00	0.0465	0.0006206
Cd	111	3	He	0.009	0	4.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.013	0.0001	6.00	0.0053	0
Sn	120	3	He	-0.051	0.0157	1360.12	0.0158	0.01648
Sn	120	3	He	-0.025	0.0161	1410.12	0.0158	0.01648
Sn	120	3	He	0.035	0.017	1440.13	0.0158	0.01648
Sb	121	3	He	0.013	0.0005	40.00	0.0149	0.0002698
Sb	121	3	He	0.036	0.0008	70.00	0.0149	0.0002698
Sb	121	3	He	-0.01	0.0001	10.00	0.0149	0.0002698
Ba	137	3	He	177.617	0.8527	73979.43	0.0048	0.0002317
Ba	137	3	He	171.354	0.8226	72110.54	0.0048	0.0002317
Ba	137	3	He	180.895	0.8684	73467.10	0.0048	0.0002317
Tl	205	3	He	0.025	0.0008	310.02	0.0247	0.0001339
Tl	205	3	He	0.016	0.0005	210.01	0.0247	0.0001339
Tl	205	3	He	0.029	0.0008	340.02	0.0247	0.0001339
Pb	208	3	He	0.197	0.0075	1620.17	0.0327	0.00107
Pb	208	3	He	0.214	0.0081	1910.21	0.0327	0.00107
Pb	208	3	He	0.221	0.0083	1900.22	0.0327	0.00107
U	238	3	He	0.477	0.0236	7312.31	0.0493	7.55E-05
U	238	3	He	0.433	0.0214	6611.92	0.0493	7.55E-05
U	238	3	He	0.472	0.0233	7242.30	0.0493	7.55E-05
Sc	45	1	No Gas			2493139.65		
Sc	45	1	No Gas			2488017.15		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2460498.71		
Ge	72	1	No Gas			1222133.11		
Ge	72	1	No Gas			1218882.17		
Ge	72	1	No Gas			1223489.20		
Sc	45	2	H2			184436.01		
Sc	45	2	H2			184498.83		
Sc	45	2	H2			187991.36		
Ge	72	2	H2			167400.06		
Ge	72	2	H2			166600.66		
Ge	72	2	H2			163509.06		
In	115	2	H2			388831.05		
In	115	2	H2			388027.49		
In	115	2	H2			384764.92		
Sc	45	3	He			46756.06		
Sc	45	3	He			48651.92		
Sc	45	3	He			47839.41		
Ge	72	3	He			88512.86		
Ge	72	3	He			88091.19		
Ge	72	3	He			87074.72		
In	115	3	He			86770.19		
In	115	3	He			87666.40		
In	115	3	He			84607.51		
Tb	159	3	He			406226.09		
Tb	159	3	He			401885.11		
Tb	159	3	He			401484.72		
Bi	209	3	He			310304.25		
Bi	209	3	He			309068.92		
Bi	209	3	He			310625.48		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

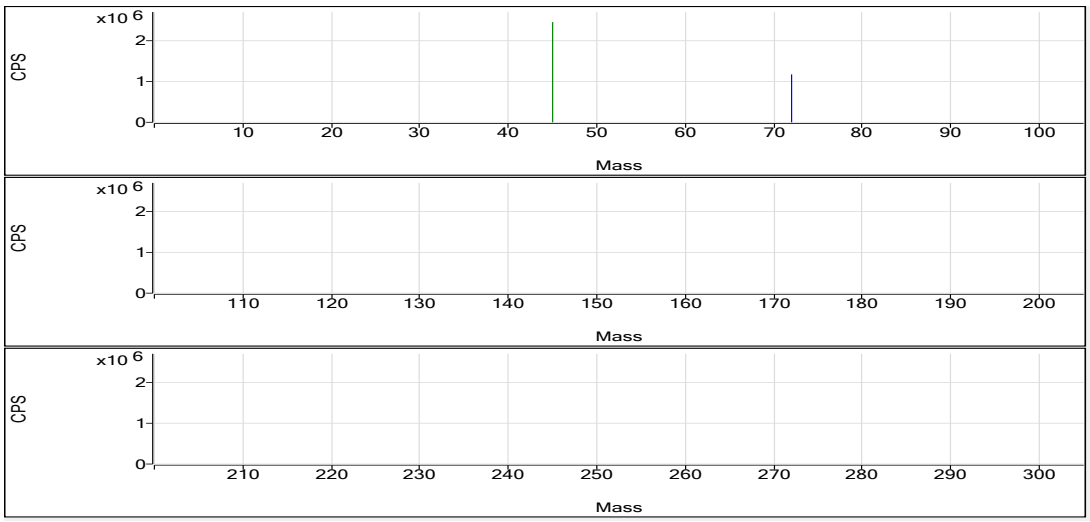
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.004	ppb	18.5	18.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.009	ppb	N/A	1.33	0.0000	Pulse	1.5000	3
Na	23	45	He	26.508	ppb	26.6	21389.26	0.4400	Pulse	0.1000	3
Mg	24	45	He	2.666	ppb	21.3	403.35	0.0083	Pulse	0.1000	3
Al	27	45	He	0.530	ppb	130.5	46.67	0.0010	Pulse	0.1000	3
K	39	45	He	-9.065	ppb	N/A	18702.43	0.3845	Pulse	0.1000	3
Ca	44	45	He	-1.798	ppb	N/A	126.67	0.0026	Pulse	0.1000	3
Ti	47	45	He	0.258	ppb	151.5	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	0.294	ppb	19.7	1522.09	0.0313	Pulse	0.5000	3
Cr	52	45	He	0.029	ppb	143.8	1986.87	0.0409	Pulse	0.1000	3
Mn	55	45	He	0.098	ppb	63.2	190.01	0.0039	Pulse	0.1000	3
Fe	57	45	He	2.366	ppb	66.2	136.67	0.0028	Pulse	0.1000	3
Co	59	45	He	-0.002	ppb	N/A	100.00	0.0021	Pulse	0.1000	3
Ni	60	72	He	-0.032	ppb	N/A	213.34	0.0026	Pulse	0.1000	3
Cu	63	72	He	0.027	ppb	146.7	453.36	0.0054	Pulse	0.1000	3
Zn	66	72	He	2.108	ppb	22.3	830.06	0.0100	Pulse	0.1000	3
As	75	72	He	0.071	ppb	258.6	79.33	0.0010	Pulse	0.5000	3
Sr	88	115	He	0.058	ppb	145.4	130.01	0.0015	Pulse	0.1000	3
Mo	98	115	He	0.014	ppb	37.4	50.00	0.0006	Pulse	0.1000	3
Ag	107	115	He	-0.001	ppb	N/A	50.00	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.001	ppb	173.2	0.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.069	ppb	14.1	1543.48	0.0176	Pulse	0.1000	3
Sb	121	115	He	-0.005	ppb	N/A	16.67	0.0002	Pulse	0.1000	3
Ba	137	115	He	0.054	ppb	24.5	43.33	0.0005	Pulse	0.1000	3
Tl	205	159	He	0.008	ppb	29.5	136.68	0.0003	Pulse	0.1000	3
Pb	208	159	He	0.005	ppb	76.9	486.68	0.0012	Pulse	0.1000	3
U	238	209	He	0.002	ppb	64.4	50.00	0.0002	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2443099.86	1.4	101.8	Analog	0.1000	3
No Gas	Ge	72	1167825.79	0.5	101.3	Pulse	0.1000	3
H2	Sc	45	183850.54	0.3	98.3	Pulse	0.1000	3
H2	Ge	72	155407.49	0.6	94.9	Pulse	0.1000	3
H2	In	115	389848.34	0.7	100.2	Pulse	0.1000	3
He	Sc	45	48652.22	2.1	104.3	Pulse	0.1000	3
He	Ge	72	83332.77	0.6	102.6	Pulse	0.1000	3
He	In	115	87857.00	0.4	101.9	Pulse	0.1000	3
He	Tb	159	398978.47	0.6	100.1	Pulse	0.1000	3
He	Bi	209	311050.44	0.9	100.6	Pulse	0.1000	3

No Gas



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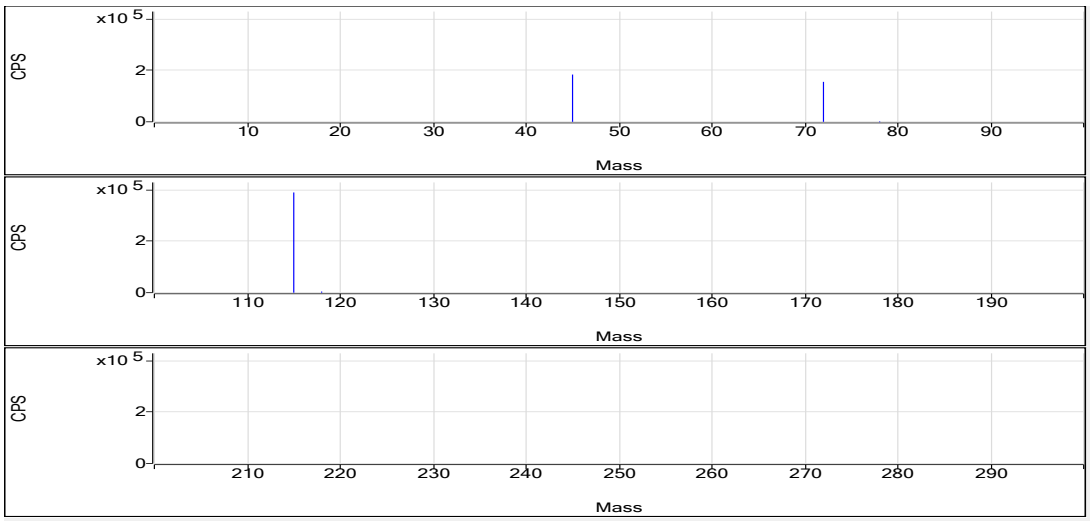
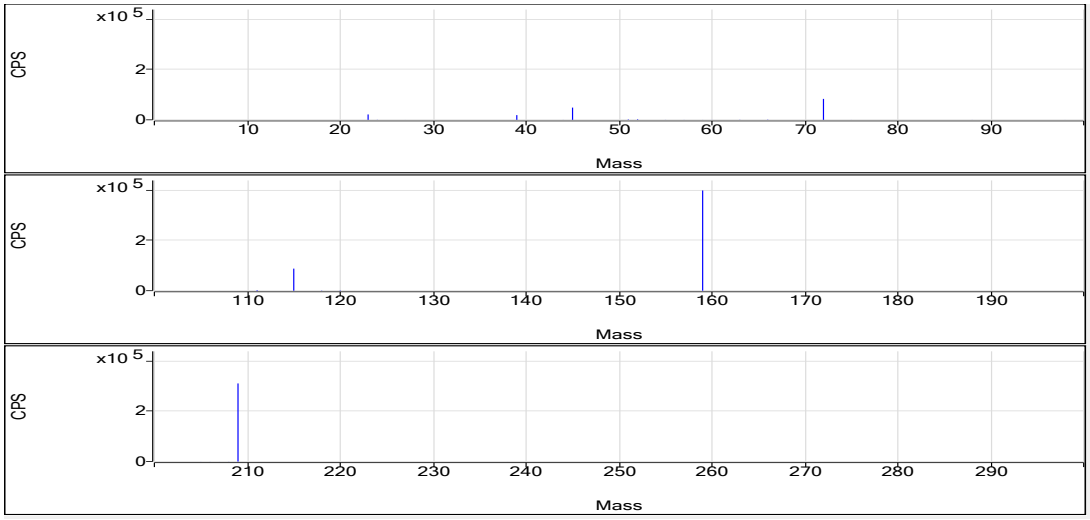


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.005	0	20.00	0.0008	4.685E-06
Be	9	1	No Gas	0.004	0	18.00	0.0008	4.685E-06
Be	9	1	No Gas	0.003	0	18.00	0.0008	4.685E-06
Se	78	2	H2	-0.009	0	1.33	0.0004	1.219E-05
Se	78	2	H2	-0.009	0	1.33	0.0004	1.219E-05
Se	78	2	H2	-0.009	0	1.33	0.0004	1.219E-05
Na	23	3	He	20.192	0.4174	20754.99	0.0036	0.3452
Na	23	3	He	34.128	0.4672	22277.29	0.0036	0.3452
Na	23	3	He	25.205	0.4353	21135.51	0.0036	0.3452
Mg	24	3	He	2.871	0.0086	430.02	0.0018	0.003497
Mg	24	3	He	2.026	0.0071	340.02	0.0018	0.003497
Mg	24	3	He	3.102	0.0091	440.02	0.0018	0.003497
Al	27	3	He	1.307	0.0014	70.00	0.0006	0.0006432
Al	27	3	He	-0.024	0.0006	30.00	0.0006	0.0006432
Al	27	3	He	0.309	0.0008	40.00	0.0006	0.0006432
K	39	3	He	-15.589	0.3769	18742.44	0.0012	0.3951
K	39	3	He	-3.309	0.3912	18652.57	0.0012	0.3951
K	39	3	He	-8.297	0.3854	18712.28	0.0012	0.3951
Ca	44	3	He	4.467	0.003	150.01	0.0001	0.002715
Ca	44	3	He	-18.457	0.0015	70.00	0.0001	0.002715
Ca	44	3	He	8.596	0.0033	160.01	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.651	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	0.253	0.0002	10.00	0.0005	7.003E-05
V	51	3	He	0.263	0.0306	1522.09	0.0219	0.02486
V	51	3	He	0.361	0.0328	1562.10	0.0219	0.02486
V	51	3	He	0.259	0.0305	1482.09	0.0219	0.02486
Cr	52	3	He	-0.018	0.0394	1960.19	0.0299	0.03997
Cr	52	3	He	0.045	0.0413	1970.20	0.0299	0.03997
Cr	52	3	He	0.062	0.0418	2030.23	0.0299	0.03997
Mn	55	3	He	0.092	0.0038	190.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.04	0.0031	150.01	0.0128	0.002639
Mn	55	3	He	0.164	0.0047	230.01	0.0128	0.002639
Fe	57	3	He	2.387	0.0028	140.00	0.0006	0.001429
Fe	57	3	He	0.79	0.0019	90.00	0.0006	0.001429
Fe	57	3	He	3.922	0.0037	180.01	0.0006	0.001429
Co	59	3	He	-0.006	0.0018	90.00	0.0563	0.002149
Co	59	3	He	0.01	0.0027	130.01	0.0563	0.002149
Co	59	3	He	-0.009	0.0016	80.00	0.0563	0.002149
Ni	60	3	He	-0.077	0.0022	180.01	0.0086	0.002834
Ni	60	3	He	0.006	0.0029	240.01	0.0086	0.002834
Ni	60	3	He	-0.024	0.0026	220.01	0.0086	0.002834
Cu	63	3	He	0.059	0.0063	520.03	0.0257	0.004757
Cu	63	3	He	-0.017	0.0043	360.02	0.0257	0.004757
Cu	63	3	He	0.038	0.0057	480.03	0.0257	0.004757
Zn	66	3	He	1.588	0.0084	700.05	0.0029	0.003818
Zn	66	3	He	2.238	0.0103	860.07	0.0029	0.003818
Zn	66	3	He	2.499	0.0111	930.07	0.0029	0.003818
As	75	3	He	-0.087	0.0006	52.00	0.002	0.0008061
As	75	3	He	0.029	0.0009	72.00	0.002	0.0008061
As	75	3	He	0.27	0.0014	114.00	0.002	0.0008061
Sr	88	3	He	0.07	0.0016	140.01	0.009	0.0009645
Sr	88	3	He	0.135	0.0022	190.01	0.009	0.0009645
Sr	88	3	He	-0.032	0.0007	60.00	0.009	0.0009645
Mo	98	3	He	0.014	0.0006	50.00	0.0219	0.0002706
Mo	98	3	He	0.009	0.0005	40.00	0.0219	0.0002706
Mo	98	3	He	0.019	0.0007	60.00	0.0219	0.0002706
Ag	107	3	He	0.001	0.0007	60.00	0.0465	0.0006206
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Ag	107	3	He	0.001	0.0007	60.00	0.0465	0.0006206
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Sn	120	3	He	0.058	0.0174	1530.14	0.0158	0.01648
Sn	120	3	He	0.072	0.0176	1540.15	0.0158	0.01648
Sn	120	3	He	0.077	0.0177	1560.15	0.0158	0.01648
Sb	121	3	He	-0.003	0.0002	20.00	0.0149	0.0002698
Sb	121	3	He	0.005	0.0003	30.00	0.0149	0.0002698
Sb	121	3	He	-0.018	0	0.00	0.0149	0.0002698
Ba	137	3	He	0.046	0.0005	40.00	0.0048	0.0002317
Ba	137	3	He	0.047	0.0005	40.00	0.0048	0.0002317
Ba	137	3	He	0.07	0.0006	50.00	0.0048	0.0002317
Tl	205	3	He	0.009	0.0003	140.01	0.0247	0.0001339
Tl	205	3	He	0.011	0.0004	160.01	0.0247	0.0001339
Tl	205	3	He	0.006	0.0003	110.01	0.0247	0.0001339
Pb	208	3	He	0.003	0.0012	300.01	0.0327	0.00107
Pb	208	3	He	0.009	0.0014	280.01	0.0327	0.00107
Pb	208	3	He	0.002	0.0011	240.01	0.0327	0.00107
U	238	3	He	0.002	0.0002	60.00	0.0493	7.55E-05
U	238	3	He	0	0.0001	30.00	0.0493	7.55E-05
U	238	3	He	0.002	0.0002	60.00	0.0493	7.55E-05
Sc	45	1	No Gas			2418780.28		
Sc	45	1	No Gas			2429660.59		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2480858.71		
Ge	72	1	No Gas			1171596.70		
Ge	72	1	No Gas			1161009.75		
Ge	72	1	No Gas			1170870.92		
Sc	45	2	H2			184558.42		
Sc	45	2	H2			183414.70		
Sc	45	2	H2			183578.49		
Ge	72	2	H2			156073.58		
Ge	72	2	H2			154306.56		
Ge	72	2	H2			155842.34		
In	115	2	H2			388349.21		
In	115	2	H2			393117.88		
In	115	2	H2			388077.92		
Sc	45	3	He			49725.87		
Sc	45	3	He			47678.75		
Sc	45	3	He			48552.05		
Ge	72	3	He			82930.31		
Ge	72	3	He			83232.25		
Ge	72	3	He			83835.74		
In	115	3	He			87968.15		
In	115	3	He			87444.67		
In	115	3	He			88179.02		
Tb	159	3	He			400792.81		
Tb	159	3	He			399841.95		
Tb	159	3	He			396300.66		
Bi	209	3	He			310448.30		
Bi	209	3	He			308471.26		
Bi	209	3	He			314231.77		

Quantitation Report

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Sample Type	CCV
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Auto Dilution	1.0000
Total Dilution	1.0000
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Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

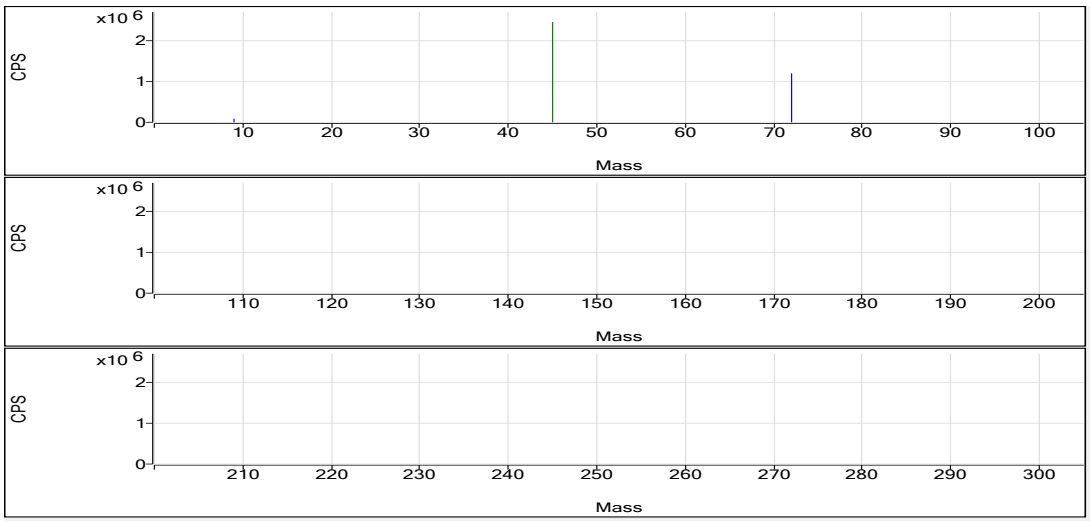
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	46.944	ppb	1.5	88396.27	0.0358	Pulse	0.5000	3
Se	78	72	H2	52.108	ppb	1.1	3453.09	0.0217	Pulse	1.5000	3
Na	23	45	He	4836.143	ppb	0.7	847249.44	17.6443	Pulse	0.1000	3
Mg	24	45	He	4988.275	ppb	1.0	429951.15	8.9541	Pulse	0.1000	3
Al	27	45	He	4867.441	ppb	1.9	136761.06	2.8483	Pulse	0.1000	3
K	39	45	He	5056.998	ppb	1.0	301699.25	6.2831	Pulse	0.1000	3
Ca	44	45	He	5161.660	ppb	3.1	16873.62	0.3514	Pulse	0.1000	3
Ti	47	45	He	5025.067	ppb	0.5	129574.21	2.6983	Pulse	0.1000	3
V	51	45	He	513.189	ppb	0.6	539860.38	11.2428	Pulse	0.5000	3
Cr	52	45	He	487.733	ppb	1.1	703117.72	14.6431	Pulse	0.1000	3
Mn	55	45	He	506.412	ppb	1.4	312196.69	6.5019	Pulse	0.1000	3
Fe	57	45	He	5054.591	ppb	0.6	141083.49	2.9381	Pulse	0.1000	3
Co	59	45	He	502.914	ppb	4.1	1359074.46	28.3073	Mix	0.1000	3
Ni	60	72	He	511.070	ppb	0.2	372682.58	4.3894	Pulse	0.1000	3
Cu	63	72	He	486.153	ppb	0.4	1060019.54	12.4848	Pulse	0.1000	3
Zn	66	72	He	514.598	ppb	1.3	127532.99	1.5021	Pulse	0.1000	3
As	75	72	He	519.195	ppb	1.2	90383.56	1.0646	Pulse	0.5000	3
Sr	88	115	He	50.631	ppb	2.1	39753.43	0.4551	Pulse	0.1000	3
Mo	98	115	He	51.497	ppb	1.1	98655.35	1.1294	Pulse	0.1000	3
Ag	107	115	He	50.851	ppb	0.5	206530.85	2.3645	Pulse	0.1000	3
Cd	111	115	He	50.897	ppb	1.5	23769.55	0.2721	Pulse	0.5000	3
Sn	120	115	He	51.430	ppb	1.0	72409.29	0.8290	Pulse	0.1000	3
Sb	121	115	He	51.773	ppb	1.8	67197.05	0.7693	Pulse	0.1000	3
Ba	137	115	He	521.675	ppb	1.2	218711.07	2.5039	Pulse	0.1000	3
Tl	205	159	He	51.417	ppb	1.3	508327.77	1.2715	Pulse	0.1000	3
Pb	208	159	He	51.583	ppb	1.8	675373.19	1.6894	Pulse	0.1000	3
U	238	209	He	50.215	ppb	1.2	766669.70	2.4736	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2468443.92	0.7	102.9	Analog	0.1000	3
No Gas	Ge	72	1204621.62	1.1	104.4	Pulse	0.1000	3
H2	Sc	45	184663.56	0.3	98.7	Pulse	0.1000	3
H2	Ge	72	158804.35	0.9	97.0	Pulse	0.1000	3
H2	In	115	393352.94	0.1	101.1	Pulse	0.1000	3
He	Sc	45	48020.13	0.8	103.0	Pulse	0.1000	3
He	Ge	72	84905.56	0.6	104.6	Pulse	0.1000	3
He	In	115	87347.26	0.5	101.3	Pulse	0.1000	3
He	Tb	159	399830.05	1.1	100.3	Pulse	0.1000	3
He	Bi	209	309948.58	0.6	100.2	Pulse	0.1000	3

No Gas



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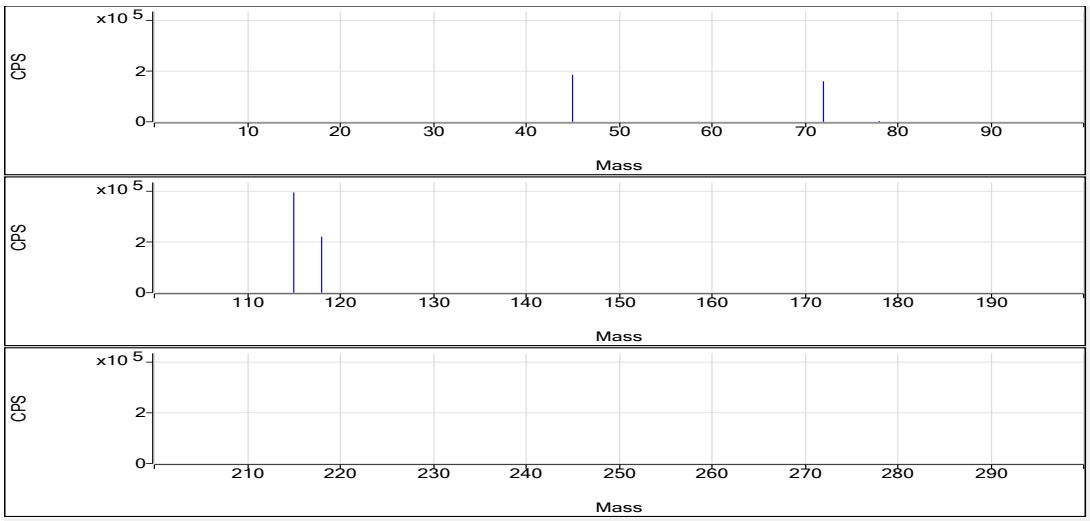
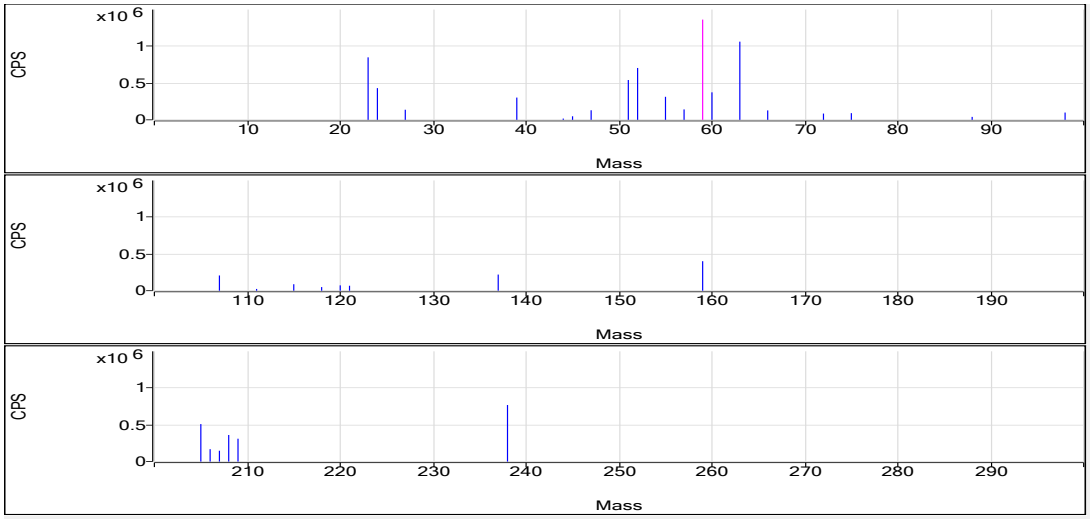


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	46.189	0.0352	87407.08	0.0008	4.685E-06
Be	9	1	No Gas	47.608	0.0363	88950.11	0.0008	4.685E-06
Be	9	1	No Gas	47.034	0.0359	88831.63	0.0008	4.685E-06
Se	78	2	H2	51.848	0.0216	3405.08	0.0004	1.219E-05
Se	78	2	H2	51.701	0.0216	3459.76	0.0004	1.219E-05
Se	78	2	H2	52.775	0.022	3494.43	0.0004	1.219E-05
Na	23	3	He	4864.517	17.7458	845746.24	0.0036	0.3452
Na	23	3	He	4801.428	17.5201	849050.77	0.0036	0.3452
Na	23	3	He	4842.484	17.667	846951.32	0.0036	0.3452
Mg	24	3	He	5029.616	9.0282	430277.45	0.0018	0.003497
Mg	24	3	He	4932.453	8.8539	429073.74	0.0018	0.003497
Mg	24	3	He	5002.756	8.9801	430502.26	0.0018	0.003497
Al	27	3	He	4909.629	2.8729	136921.84	0.0006	0.0006432
Al	27	3	He	4762.164	2.7867	135046.51	0.0006	0.0006432
Al	27	3	He	4930.53	2.8852	138314.82	0.0006	0.0006432
K	39	3	He	5110.697	6.3456	302424.45	0.0012	0.3951
K	39	3	He	5015.421	6.2347	302140.87	0.0012	0.3951
K	39	3	He	5044.876	6.2689	300532.44	0.0012	0.3951
Ca	44	3	He	5063.048	0.3447	16429.66	0.0001	0.002715
Ca	44	3	He	5073.407	0.3454	16740.22	0.0001	0.002715
Ca	44	3	He	5348.526	0.364	17450.97	0.0001	0.002715
Ti	47	3	He	5023.391	2.6974	128554.25	0.0005	7.003E-05
Ti	47	3	He	5053.064	2.7133	131491.04	0.0005	7.003E-05
Ti	47	3	He	4998.745	2.6841	128677.33	0.0005	7.003E-05
V	51	3	He	516.829	11.3223	539610.44	0.0219	0.02486
V	51	3	He	510.434	11.1825	541922.75	0.0219	0.02486
V	51	3	He	512.304	11.2234	538047.94	0.0219	0.02486
Cr	52	3	He	493.069	14.8028	705487.57	0.0299	0.03997
Cr	52	3	He	482.175	14.4767	701560.69	0.0299	0.03997
Cr	52	3	He	487.955	14.6497	702304.91	0.0299	0.03997
Mn	55	3	He	512.415	6.5789	313544.57	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	498.897	6.4054	310416.25	0.0128	0.002639
Mn	55	3	He	507.925	6.5213	312629.25	0.0128	0.002639
Fe	57	3	He	5071.576	2.948	140497.26	0.0006	0.001429
Fe	57	3	He	5019.863	2.9179	141406.99	0.0006	0.001429
Fe	57	3	He	5072.334	2.9484	141346.22	0.0006	0.001429
Co	59	3	He	526.588	29.6397	1412600.29	0.0563	0.002149
Co	59	3	He	490.554	27.6117	1338103.57	0.0563	0.002149
Co	59	3	He	491.6	27.6705	1326519.51	0.0563	0.002149
Ni	60	3	He	512.517	4.4018	371380.81	0.0086	0.002834
Ni	60	3	He	510.114	4.3812	374087.69	0.0086	0.002834
Ni	60	3	He	510.578	4.3852	372579.25	0.0086	0.002834
Cu	63	3	He	486.879	12.5035	1054909.28	0.0257	0.004757
Cu	63	3	He	484.034	12.4304	1061366.62	0.0257	0.004757
Cu	63	3	He	487.545	12.5206	1063782.72	0.0257	0.004757
Zn	66	3	He	519.741	1.5171	127997.06	0.0029	0.003818
Zn	66	3	He	506.729	1.4792	126302.26	0.0029	0.003818
Zn	66	3	He	517.324	1.5101	128299.64	0.0029	0.003818
As	75	3	He	525.915	1.0783	90978.59	0.002	0.0008061
As	75	3	He	514.355	1.0547	90050.93	0.002	0.0008061
As	75	3	He	517.313	1.0607	90121.15	0.002	0.0008061
Sr	88	3	He	51.814	0.4657	40679.32	0.009	0.0009645
Sr	88	3	He	49.803	0.4477	38894.42	0.009	0.0009645
Sr	88	3	He	50.274	0.4519	39686.55	0.009	0.0009645
Mo	98	3	He	51.242	1.1238	98161.87	0.0219	0.0002706
Mo	98	3	He	51.095	1.1206	97355.78	0.0219	0.0002706
Mo	98	3	He	52.154	1.1438	100448.41	0.0219	0.0002706
Ag	107	3	He	50.807	2.3625	206354.92	0.0465	0.0006206
Ag	107	3	He	51.138	2.3779	206586.50	0.0465	0.0006206
Ag	107	3	He	50.606	2.3532	206651.13	0.0465	0.0006206
Cd	111	3	He	50.854	0.2719	23750.21	0.0053	0
Cd	111	3	He	51.684	0.2763	24008.60	0.0053	0
Cd	111	3	He	50.153	0.2682	23549.85	0.0053	0
Sn	120	3	He	51.751	0.8341	72852.11	0.0158	0.01648
Sn	120	3	He	51.727	0.8337	72429.07	0.0158	0.01648
Sn	120	3	He	50.814	0.8193	71946.68	0.0158	0.01648
Sb	121	3	He	52.563	0.781	68218.47	0.0149	0.0002698
Sb	121	3	He	50.737	0.7539	65495.57	0.0149	0.0002698
Sb	121	3	He	52.019	0.7729	67877.10	0.0149	0.0002698
Ba	137	3	He	528.765	2.538	221678.98	0.0048	0.0002317
Ba	137	3	He	518.075	2.4866	216034.39	0.0048	0.0002317
Ba	137	3	He	518.185	2.4872	218419.84	0.0048	0.0002317
Tl	205	3	He	50.824	1.2568	507971.71	0.0247	0.0001339
Tl	205	3	He	52.113	1.2887	509429.02	0.0247	0.0001339
Tl	205	3	He	51.312	1.2689	507582.57	0.0247	0.0001339
Pb	208	3	He	50.565	1.6561	356131.44	0.0327	0.00107
Pb	208	3	He	52.416	1.7166	362756.40	0.0327	0.00107
Pb	208	3	He	51.768	1.6954	362370.58	0.0327	0.00107
U	238	3	He	49.917	2.459	765941.08	0.0493	7.55E-05
U	238	3	He	49.841	2.4552	761807.10	0.0493	7.55E-05
U	238	3	He	50.885	2.5067	772260.93	0.0493	7.55E-05
Sc	45	1	No Gas			2480560.43		
Sc	45	1	No Gas			2449086.84		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2475684.49		
Ge	72	1	No Gas			1215527.01		
Ge	72	1	No Gas			1208089.04		
Ge	72	1	No Gas			1190248.81		
Sc	45	2	H2			185316.40		
Sc	45	2	H2			184135.47		
Sc	45	2	H2			184538.81		
Ge	72	2	H2			157378.25		
Ge	72	2	H2			160361.05		
Ge	72	2	H2			158673.75		
In	115	2	H2			394006.17		
In	115	2	H2			393148.90		
In	115	2	H2			392903.74		
Sc	45	3	He			47659.02		
Sc	45	3	He			48461.52		
Sc	45	3	He			47939.84		
Ge	72	3	He			84369.34		
Ge	72	3	He			85384.50		
Ge	72	3	He			84962.83		
In	115	3	He			87726.56		
In	115	3	He			87253.61		
In	115	3	He			88209.00		
Tb	159	3	He			404167.53		
Tb	159	3	He			395304.76		
Tb	159	3	He			400017.85		
Bi	209	3	He			311484.84		
Bi	209	3	He			310280.33		
Bi	209	3	He			308080.58		

Quantitation Report

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Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
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Sample Name	CCB 4654618
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

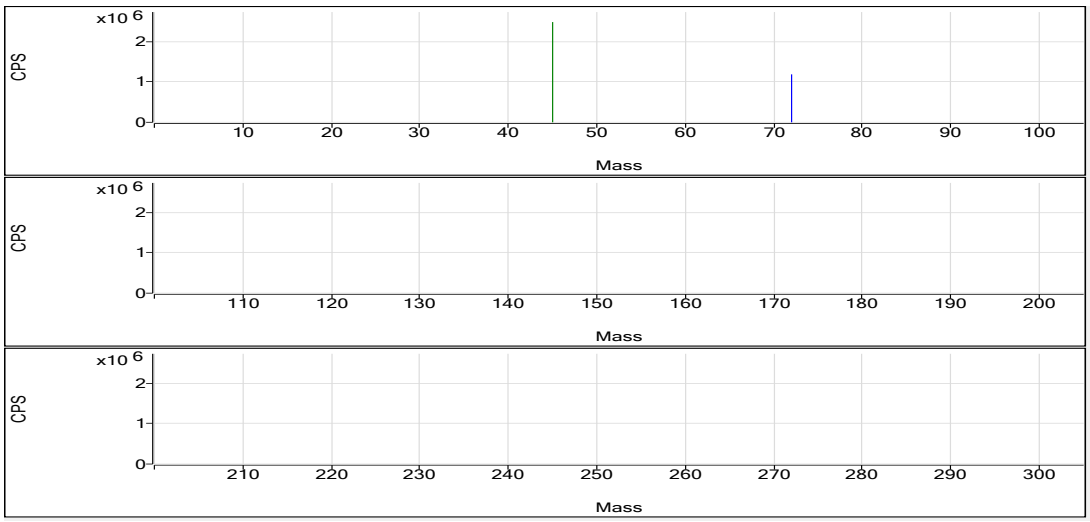
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.020	ppb	29.5	48.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.036	ppb	100.4	4.22	0.0000	Pulse	1.5000	3
Na	23	45	He	24.073	ppb	1.1	20791.93	0.4313	Pulse	0.1000	3
Mg	24	45	He	1.055	ppb	59.8	260.01	0.0054	Pulse	0.1000	3
Al	27	45	He	0.911	ppb	90.2	56.67	0.0012	Pulse	0.1000	3
K	39	45	He	-7.364	ppb	N/A	18632.37	0.3865	Pulse	0.1000	3
Ca	44	45	He	6.008	ppb	367.3	150.00	0.0031	Pulse	0.1000	3
Ti	47	45	He	1.160	ppb	39.2	33.33	0.0007	Pulse	0.1000	3
V	51	45	He	0.299	ppb	5.0	1513.42	0.0314	Pulse	0.5000	3
Cr	52	45	He	0.009	ppb	260.4	1940.21	0.0402	Pulse	0.1000	3
Mn	55	45	He	0.112	ppb	51.8	196.68	0.0041	Pulse	0.1000	3
Fe	57	45	He	1.948	ppb	57.4	123.34	0.0026	Pulse	0.1000	3
Co	59	45	He	0.042	ppb	29.1	216.68	0.0045	Pulse	0.1000	3
Ni	60	72	He	-0.020	ppb	N/A	220.01	0.0027	Pulse	0.1000	3
Cu	63	72	He	0.091	ppb	67.8	586.70	0.0071	Pulse	0.1000	3
Zn	66	72	He	2.375	ppb	1.8	886.73	0.0107	Pulse	0.1000	3
As	75	72	He	0.143	ppb	57.6	90.67	0.0011	Pulse	0.5000	3
Sr	88	115	He	0.000	ppb	N/A	83.33	0.0010	Pulse	0.1000	3
Mo	98	115	He	0.070	ppb	30.9	156.68	0.0018	Pulse	0.1000	3
Ag	107	115	He	0.001	ppb	570.0	60.00	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.006	ppb	173.2	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.059	ppb	59.6	1510.14	0.0174	Pulse	0.1000	3
Sb	121	115	He	0.008	ppb	251.8	33.33	0.0004	Pulse	0.1000	3
Ba	137	115	He	0.055	ppb	106.2	43.33	0.0005	Pulse	0.1000	3
Tl	205	159	He	0.057	ppb	20.0	616.71	0.0016	Pulse	0.1000	3
Pb	208	159	He	0.018	ppb	46.4	663.37	0.0017	Pulse	0.1000	3
U	238	209	He	0.040	ppb	10.5	626.71	0.0020	Pulse	0.1000	3

ISTD Table:

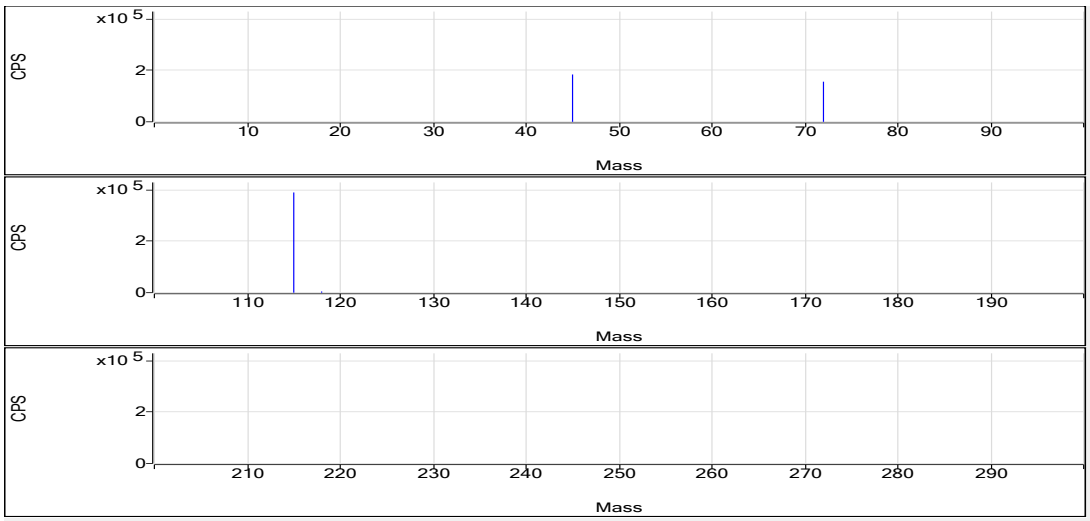
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2486651.16	1.4	103.7	Analog	0.1000	3
No Gas	Ge	72	1189558.76	0.3	103.1	Pulse	0.1000	3
H2	Sc	45	183806.96	0.9	98.3	Pulse	0.1000	3
H2	Ge	72	155788.59	0.4	95.2	Pulse	0.1000	3
H2	In	115	389151.31	1.1	100.0	Pulse	0.1000	3
He	Sc	45	48210.40	1.1	103.4	Pulse	0.1000	3
He	Ge	72	82612.40	0.6	101.7	Pulse	0.1000	3
He	In	115	86736.43	1.5	100.6	Pulse	0.1000	3
He	Tb	159	396921.28	0.5	99.6	Pulse	0.1000	3
He	Bi	209	308702.77	0.5	99.8	Pulse	0.1000	3

No Gas

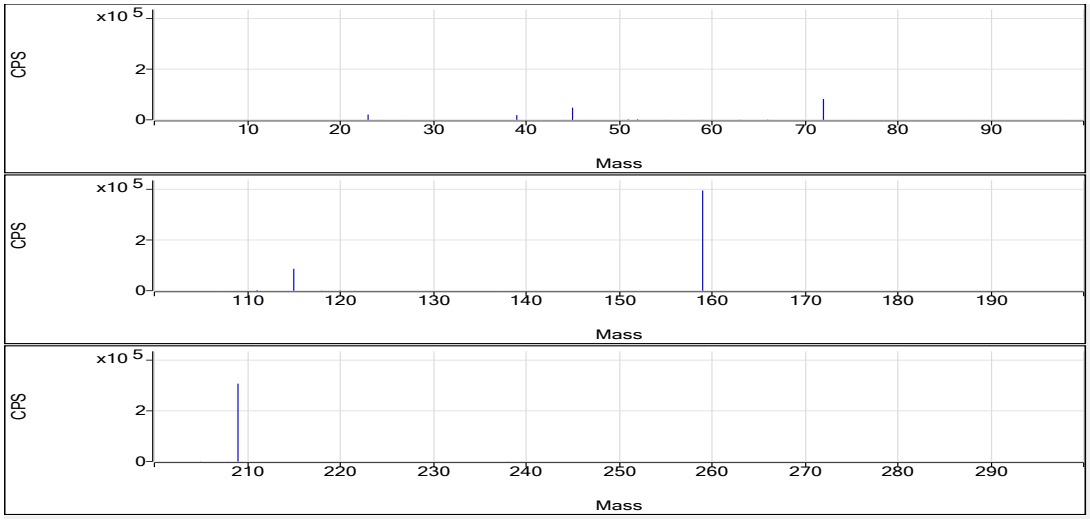


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.022	0	54.00	0.0008	4.685E-06
Be	9	1	No Gas	0.024	0	56.00	0.0008	4.685E-06
Be	9	1	No Gas	0.013	0	36.00	0.0008	4.685E-06
Se	78	2	H2	0.002	0	2.00	0.0004	1.219E-05
Se	78	2	H2	0.073	0	6.67	0.0004	1.219E-05
Se	78	2	H2	0.033	0	4.00	0.0004	1.219E-05
Na	23	3	He	24.339	0.4322	21045.61	0.0036	0.3452
Na	23	3	He	24.067	0.4312	20825.33	0.0036	0.3452
Na	23	3	He	23.812	0.4303	20504.86	0.0036	0.3452
Mg	24	3	He	0.913	0.0051	250.01	0.0018	0.003497
Mg	24	3	He	1.744	0.0066	320.02	0.0018	0.003497
Mg	24	3	He	0.507	0.0044	210.01	0.0018	0.003497
Al	27	3	He	1.358	0.0014	70.00	0.0006	0.0006432
Al	27	3	He	-0.038	0.0006	30.00	0.0006	0.0006432
Al	27	3	He	1.412	0.0015	70.00	0.0006	0.0006432
K	39	3	He	-7.477	0.3864	18812.58	0.0012	0.3951
K	39	3	He	-9.528	0.384	18542.32	0.0012	0.3951
K	39	3	He	-5.087	0.3891	18542.20	0.0012	0.3951
Ca	44	3	He	-3.708	0.0025	120.00	0.0001	0.002715
Ca	44	3	He	-9.536	0.0021	100.00	0.0001	0.002715
Ca	44	3	He	31.268	0.0048	230.01	0.0001	0.002715
Ti	47	3	He	0.635	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	1.412	0.0008	40.00	0.0005	7.003E-05
Ti	47	3	He	1.433	0.0008	40.00	0.0005	7.003E-05
V	51	3	He	0.304	0.0315	1534.09	0.0219	0.02486
V	51	3	He	0.31	0.0316	1528.09	0.0219	0.02486
V	51	3	He	0.282	0.031	1478.09	0.0219	0.02486
Cr	52	3	He	0.016	0.0405	1970.22	0.0299	0.03997
Cr	52	3	He	0.028	0.0408	1970.20	0.0299	0.03997
Cr	52	3	He	-0.017	0.0395	1880.20	0.0299	0.03997
Mn	55	3	He	0.178	0.0049	240.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.085	0.0037	180.01	0.0128	0.002639
Mn	55	3	He	0.072	0.0036	170.01	0.0128	0.002639
Fe	57	3	He	2.137	0.0027	130.01	0.0006	0.001429
Fe	57	3	He	0.749	0.0019	90.00	0.0006	0.001429
Fe	57	3	He	2.96	0.0031	150.01	0.0006	0.001429
Co	59	3	He	0.046	0.0047	230.01	0.0563	0.002149
Co	59	3	He	0.028	0.0037	180.01	0.0563	0.002149
Co	59	3	He	0.051	0.005	240.01	0.0563	0.002149
Ni	60	3	He	-0.077	0.0022	180.01	0.0086	0.002834
Ni	60	3	He	0.035	0.0031	260.01	0.0086	0.002834
Ni	60	3	He	-0.018	0.0027	220.01	0.0086	0.002834
Cu	63	3	He	0.162	0.0089	740.04	0.0257	0.004757
Cu	63	3	He	0.05	0.006	500.03	0.0257	0.004757
Cu	63	3	He	0.062	0.0063	520.03	0.0257	0.004757
Zn	66	3	He	2.333	0.0106	880.06	0.0029	0.003818
Zn	66	3	He	2.419	0.0109	900.06	0.0029	0.003818
Zn	66	3	He	2.373	0.0107	880.07	0.0029	0.003818
As	75	3	He	0.101	0.001	84.00	0.002	0.0008061
As	75	3	He	0.09	0.001	82.00	0.002	0.0008061
As	75	3	He	0.237	0.0013	106.00	0.002	0.0008061
Sr	88	3	He	0.035	0.0013	110.00	0.009	0.0009645
Sr	88	3	He	-0.032	0.0007	60.00	0.009	0.0009645
Sr	88	3	He	-0.004	0.0009	80.00	0.009	0.0009645
Mo	98	3	He	0.088	0.0022	190.01	0.0219	0.0002706
Mo	98	3	He	0.076	0.0019	170.01	0.0219	0.0002706
Mo	98	3	He	0.046	0.0013	110.01	0.0219	0.0002706
Ag	107	3	He	-0.008	0.0002	20.00	0.0465	0.0006206
Ag	107	3	He	0.006	0.0009	80.00	0.0465	0.0006206
Ag	107	3	He	0.007	0.0009	80.00	0.0465	0.0006206
Cd	111	3	He	0.017	0.0001	8.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Sn	120	3	He	0.097	0.018	1550.14	0.0158	0.01648
Sn	120	3	He	0.026	0.0169	1490.15	0.0158	0.01648
Sn	120	3	He	0.056	0.0174	1490.14	0.0158	0.01648
Sb	121	3	He	0.005	0.0003	30.00	0.0149	0.0002698
Sb	121	3	He	-0.011	0.0001	10.00	0.0149	0.0002698
Sb	121	3	He	0.029	0.0007	60.00	0.0149	0.0002698
Ba	137	3	He	0	0.0002	20.00	0.0048	0.0002317
Ba	137	3	He	0.117	0.0008	70.00	0.0048	0.0002317
Ba	137	3	He	0.049	0.0005	40.00	0.0048	0.0002317
Tl	205	3	He	0.048	0.0013	530.03	0.0247	0.0001339
Tl	205	3	He	0.053	0.0015	580.04	0.0247	0.0001339
Tl	205	3	He	0.07	0.0019	740.05	0.0247	0.0001339
Pb	208	3	He	0.027	0.002	420.02	0.0327	0.00107
Pb	208	3	He	0.01	0.0014	320.02	0.0327	0.00107
Pb	208	3	He	0.018	0.0016	390.02	0.0327	0.00107
U	238	3	He	0.044	0.0023	700.04	0.0493	7.55E-05
U	238	3	He	0.039	0.002	610.05	0.0493	7.55E-05
U	238	3	He	0.036	0.0019	570.03	0.0493	7.55E-05
Sc	45	1	No Gas			2525404.34		
Sc	45	1	No Gas			2460550.59		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2473998.56		
Ge	72	1	No Gas			1188593.89		
Ge	72	1	No Gas			1185965.06		
Ge	72	1	No Gas			1194117.33		
Sc	45	2	H2			183982.69		
Sc	45	2	H2			182158.42		
Sc	45	2	H2			185279.76		
Ge	72	2	H2			155792.97		
Ge	72	2	H2			156356.41		
Ge	72	2	H2			155216.39		
In	115	2	H2			393030.78		
In	115	2	H2			384428.47		
In	115	2	H2			389994.68		
Sc	45	3	He			48691.78		
Sc	45	3	He			48290.73		
Sc	45	3	He			47648.69		
Ge	72	3	He			82930.65		
Ge	72	3	He			82870.99		
Ge	72	3	He			82035.57		
In	115	3	He			86116.23		
In	115	3	He			88249.35		
In	115	3	He			85865.64		
Tb	159	3	He			397640.74		
Tb	159	3	He			398471.83		
Tb	159	3	He			394651.28		
Bi	209	3	He			310226.40		
Bi	209	3	He			308776.58		
Bi	209	3	He			307105.33		

Quantitation Report

Data File Name	229SMPL.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	8/10/2023 6:30:07 PM
Sample Name	MB 410-406254/1-A
Sample Type	Sample
Comment	A20 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

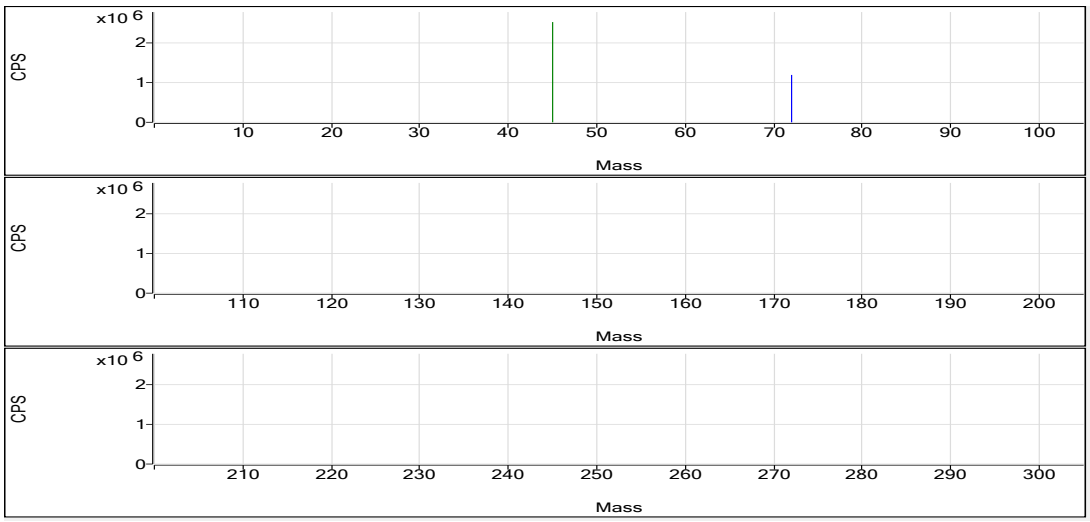
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.007	ppb	74.2	26.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.024	ppb	119.3	3.56	0.0000	Pulse	1.5000	3
Na	23	45	He	17.476	ppb	26.3	19803.85	0.4077	Pulse	0.1000	3
Mg	24	45	He	0.774	ppb	101.6	236.68	0.0049	Pulse	0.1000	3
Al	27	45	He	1.368	ppb	46.6	70.00	0.0014	Pulse	0.1000	3
K	39	45	He	-0.521	ppb	N/A	19166.45	0.3945	Pulse	0.1000	3
Ca	44	45	He	13.893	ppb	183.2	176.67	0.0037	Pulse	0.1000	3
Ti	47	45	He	0.249	ppb	151.8	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	0.021	ppb	255.6	1231.39	0.0253	Pulse	0.5000	3
Cr	52	45	He	-0.231	ppb	N/A	1606.81	0.0331	Pulse	0.1000	3
Mn	55	45	He	0.334	ppb	25.5	336.68	0.0069	Pulse	0.1000	3
Fe	57	45	He	2.625	ppb	36.6	143.34	0.0030	Pulse	0.1000	3
Co	59	45	He	0.013	ppb	96.6	140.01	0.0029	Pulse	0.1000	3
Ni	60	72	He	-0.021	ppb	N/A	220.01	0.0027	Pulse	0.1000	3
Cu	63	72	He	0.010	ppb	263.6	416.69	0.0050	Pulse	0.1000	3
Zn	66	72	He	2.041	ppb	0.8	810.05	0.0098	Pulse	0.1000	3
As	75	72	He	0.077	ppb	137.8	80.00	0.0010	Pulse	0.5000	3
Sr	88	115	He	0.004	ppb	1098.5	90.00	0.0010	Pulse	0.1000	3
Mo	98	115	He	0.008	ppb	58.8	40.00	0.0004	Pulse	0.1000	3
Ag	107	115	He	-0.004	ppb	N/A	36.67	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.004	ppb	99.2	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.284	ppb	N/A	1073.41	0.0120	Pulse	0.1000	3
Sb	121	115	He	0.002	ppb	1049.7	26.67	0.0003	Pulse	0.1000	3
Ba	137	115	He	0.021	ppb	186.5	30.00	0.0003	Pulse	0.1000	3
Tl	205	159	He	0.015	ppb	15.7	206.68	0.0005	Pulse	0.1000	3
Pb	208	159	He	0.009	ppb	77.1	546.69	0.0014	Pulse	0.1000	3
U	238	209	He	0.006	ppb	11.1	116.67	0.0004	Pulse	0.1000	3

ISTD Table:

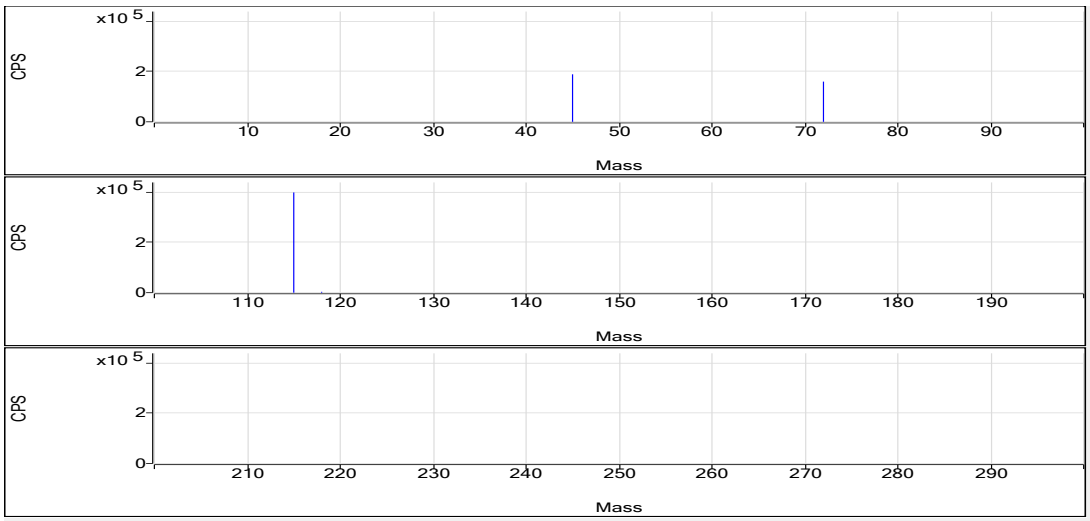
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2515868.45	1.0	104.9	Analog	0.1000	3
No Gas	Ge	72	1188953.44	0.3	103.1	Pulse	0.1000	3
H2	Sc	45	188582.25	0.5	100.8	Pulse	0.1000	3
H2	Ge	72	159573.02	1.3	97.5	Pulse	0.1000	3
H2	In	115	397870.44	1.4	102.3	Pulse	0.1000	3
He	Sc	45	48598.61	1.6	104.2	Pulse	0.1000	3
He	Ge	72	82984.43	0.5	102.2	Pulse	0.1000	3
He	In	115	89369.44	1.9	103.7	Pulse	0.1000	3
He	Tb	159	403443.60	0.6	101.2	Pulse	0.1000	3
He	Bi	209	315378.61	1.1	102.0	Pulse	0.1000	3

No Gas

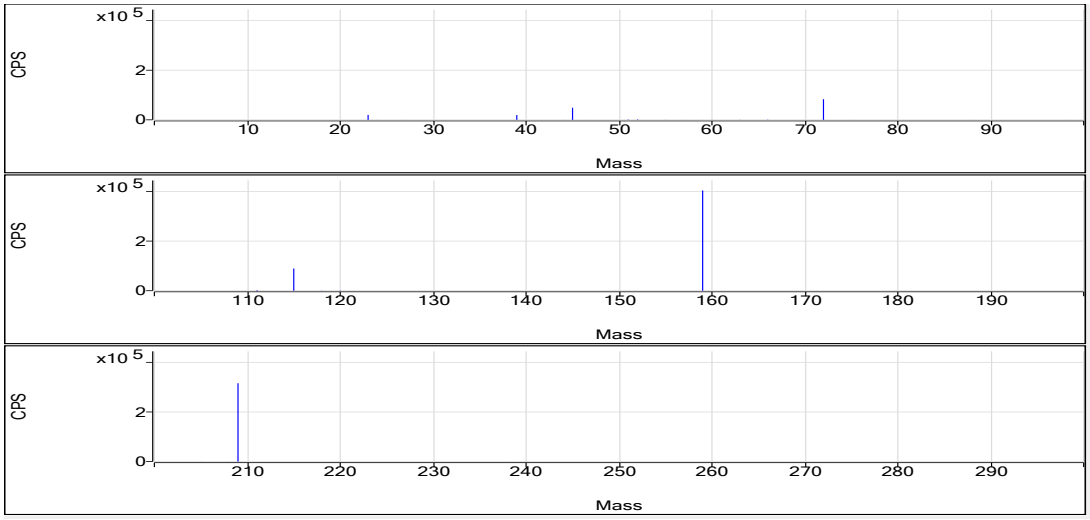


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.001	0	14.00	0.0008	4.685E-06
Be	9	1	No Gas	0.011	0	34.00	0.0008	4.685E-06
Be	9	1	No Gas	0.01	0	30.00	0.0008	4.685E-06
Se	78	2	H2	0.041	0	4.67	0.0004	1.219E-05
Se	78	2	H2	0.04	0	4.67	0.0004	1.219E-05
Se	78	2	H2	-0.009	0	1.33	0.0004	1.219E-05
Na	23	3	He	22.738	0.4265	20364.58	0.0036	0.3452
Na	23	3	He	14.219	0.396	19533.49	0.0036	0.3452
Na	23	3	He	15.471	0.4005	19513.48	0.0036	0.3452
Mg	24	3	He	1.67	0.0065	310.01	0.0018	0.003497
Mg	24	3	He	0.198	0.0039	190.01	0.0018	0.003497
Mg	24	3	He	0.453	0.0043	210.01	0.0018	0.003497
Al	27	3	He	1.764	0.0017	80.00	0.0006	0.0006432
Al	27	3	He	0.633	0.001	50.00	0.0006	0.0006432
Al	27	3	He	1.707	0.0016	80.00	0.0006	0.0006432
K	39	3	He	7.182	0.4034	19263.24	0.0012	0.3951
K	39	3	He	-4.234	0.3901	19243.26	0.0012	0.3951
K	39	3	He	-4.51	0.3898	18992.85	0.0012	0.3951
Ca	44	3	He	37.319	0.0052	250.01	0.0001	0.002715
Ca	44	3	He	-13.18	0.0018	90.00	0.0001	0.002715
Ca	44	3	He	17.54	0.0039	190.01	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.625	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	0.252	0.0002	10.00	0.0005	7.003E-05
V	51	3	He	0.03	0.0255	1218.06	0.0219	0.02486
V	51	3	He	0.072	0.0264	1304.07	0.0219	0.02486
V	51	3	He	-0.037	0.0241	1172.05	0.0219	0.02486
Cr	52	3	He	-0.251	0.0325	1550.14	0.0299	0.03997
Cr	52	3	He	-0.252	0.0324	1600.14	0.0299	0.03997
Cr	52	3	He	-0.19	0.0343	1670.15	0.0299	0.03997
Mn	55	3	He	0.349	0.0071	340.02	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.411	0.0079	390.02	0.0128	0.002639
Mn	55	3	He	0.242	0.0057	280.01	0.0128	0.002639
Fe	57	3	He	3.669	0.0036	170.01	0.0006	0.001429
Fe	57	3	He	2.426	0.0028	140.00	0.0006	0.001429
Fe	57	3	He	1.78	0.0025	120.00	0.0006	0.001429
Co	59	3	He	-0.001	0.0021	100.00	0.0563	0.002149
Co	59	3	He	0.023	0.0034	170.01	0.0563	0.002149
Co	59	3	He	0.017	0.0031	150.01	0.0563	0.002149
Ni	60	3	He	-0.091	0.0021	170.01	0.0086	0.002834
Ni	60	3	He	0.005	0.0029	240.01	0.0086	0.002834
Ni	60	3	He	0.022	0.003	250.01	0.0086	0.002834
Cu	63	3	He	-0.021	0.0042	350.02	0.0257	0.004757
Cu	63	3	He	0.029	0.0055	460.02	0.0257	0.004757
Cu	63	3	He	0.022	0.0053	440.02	0.0257	0.004757
Zn	66	3	He	2.047	0.0098	810.05	0.0029	0.003818
Zn	66	3	He	2.023	0.0097	810.05	0.0029	0.003818
Zn	66	3	He	2.054	0.0098	810.05	0.0029	0.003818
As	75	3	He	0.101	0.001	84.00	0.002	0.0008061
As	75	3	He	0.168	0.0012	96.00	0.002	0.0008061
As	75	3	He	-0.039	0.0007	60.00	0.002	0.0008061
Sr	88	3	He	-0.045	0.0006	50.00	0.009	0.0009645
Sr	88	3	He	0.051	0.0014	130.01	0.009	0.0009645
Sr	88	3	He	0.007	0.001	90.00	0.009	0.0009645
Mo	98	3	He	0.008	0.0004	40.00	0.0219	0.0002706
Mo	98	3	He	0.013	0.0005	50.00	0.0219	0.0002706
Mo	98	3	He	0.003	0.0003	30.00	0.0219	0.0002706
Ag	107	3	He	-0.004	0.0004	40.00	0.0465	0.0006206
Ag	107	3	He	-0.009	0.0002	20.00	0.0465	0.0006206
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.008	0	4.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Sn	120	3	He	-0.361	0.0108	960.07	0.0158	0.01648
Sn	120	3	He	-0.141	0.0143	1300.10	0.0158	0.01648
Sn	120	3	He	-0.351	0.0109	960.07	0.0158	0.01648
Sb	121	3	He	0.02	0.0006	50.00	0.0149	0.0002698
Sb	121	3	He	0.004	0.0003	30.00	0.0149	0.0002698
Sb	121	3	He	-0.018	0	0.00	0.0149	0.0002698
Ba	137	3	He	0.045	0.0004	40.00	0.0048	0.0002317
Ba	137	3	He	0.043	0.0004	40.00	0.0048	0.0002317
Ba	137	3	He	-0.025	0.0001	10.00	0.0048	0.0002317
Tl	205	3	He	0.018	0.0006	230.01	0.0247	0.0001339
Tl	205	3	He	0.013	0.0004	180.01	0.0247	0.0001339
Tl	205	3	He	0.016	0.0005	210.01	0.0247	0.0001339
Pb	208	3	He	0.01	0.0014	280.01	0.0327	0.00107
Pb	208	3	He	0.015	0.0015	360.02	0.0327	0.00107
Pb	208	3	He	0.001	0.0011	260.01	0.0327	0.00107
U	238	3	He	0.006	0.0003	110.00	0.0493	7.55E-05
U	238	3	He	0.007	0.0004	130.00	0.0493	7.55E-05
U	238	3	He	0.006	0.0004	110.01	0.0493	7.55E-05
Sc	45	1	No Gas			2518894.34		
Sc	45	1	No Gas			2539124.65		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2489586.37		
Ge	72	1	No Gas			1193606.15		
Ge	72	1	No Gas			1186712.64		
Ge	72	1	No Gas			1186541.54		
Sc	45	2	H2			187526.83		
Sc	45	2	H2			189339.02		
Sc	45	2	H2			188880.90		
Ge	72	2	H2			158511.39		
Ge	72	2	H2			161990.11		
Ge	72	2	H2			158217.56		
In	115	2	H2			402006.56		
In	115	2	H2			400209.95		
In	115	2	H2			391394.80		
Sc	45	3	He			47748.76		
Sc	45	3	He			49324.34		
Sc	45	3	He			48722.72		
Ge	72	3	He			82840.56		
Ge	72	3	He			83443.55		
Ge	72	3	He			82669.18		
In	115	3	He			89106.27		
In	115	3	He			91219.12		
In	115	3	He			87797.76		
Tb	159	3	He			405585.78		
Tb	159	3	He			401035.78		
Tb	159	3	He			403709.25		
Bi	209	3	He			314793.41		
Bi	209	3	He			318983.45		
Bi	209	3	He			312358.98		

Quantitation Report

Data File Name	230SMPL.d
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Acq Time	8/10/2023 6:32:09 PM
Sample Name	LCS 410-406254/2-A
Sample Type	Sample
Comment	A20 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

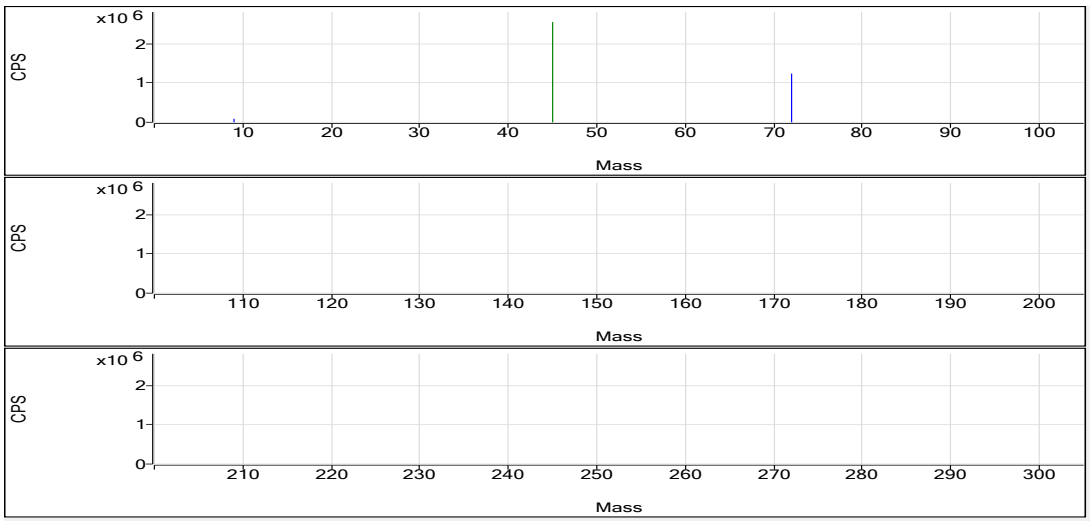
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	45.675	ppb	0.8	89099.14	0.0348	Pulse	0.5000	3
Se	78	72	H2	101.741	ppb	1.1	7011.72	0.0424	Pulse	1.5000	3
Na	23	45	He	4630.590	ppb	0.2	842845.87	16.9090	Pulse	0.1000	3
Mg	24	45	He	4801.283	ppb	0.5	429603.09	8.6185	Pulse	0.1000	3
Al	27	45	He	4772.331	ppb	1.0	139199.50	2.7926	Pulse	0.1000	3
K	39	45	He	4868.282	ppb	1.0	302233.61	6.0633	Pulse	0.1000	3
Ca	44	45	He	4934.388	ppb	1.4	16750.20	0.3360	Pulse	0.1000	3
Ti	47	45	He	482.187	ppb	2.1	12909.45	0.2590	Pulse	0.1000	3
V	51	45	He	492.954	ppb	0.7	538363.12	10.8004	Pulse	0.5000	3
Cr	52	45	He	467.967	ppb	0.7	700403.27	14.0513	Pulse	0.1000	3
Mn	55	45	He	482.315	ppb	0.3	308676.16	6.1926	Pulse	0.1000	3
Fe	57	45	He	4842.831	ppb	0.3	140320.19	2.8151	Pulse	0.1000	3
Co	59	45	He	471.958	ppb	0.6	1324155.71	26.5651	Pulse	0.1000	3
Ni	60	72	He	495.675	ppb	2.0	371158.85	4.2573	Pulse	0.1000	3
Cu	63	72	He	473.242	ppb	0.8	1059642.41	12.1534	Pulse	0.1000	3
Zn	66	72	He	500.095	ppb	1.0	127287.97	1.4599	Pulse	0.1000	3
As	75	72	He	503.818	ppb	1.2	90067.52	1.0331	Pulse	0.5000	3
Sr	88	115	He	51.084	ppb	0.5	40599.20	0.4592	Pulse	0.1000	3
Mo	98	115	He	49.072	ppb	1.0	95148.36	1.0762	Pulse	0.1000	3
Ag	107	115	He	49.746	ppb	0.8	204505.12	2.3132	Pulse	0.1000	3
Cd	111	115	He	50.681	ppb	0.3	23958.54	0.2710	Pulse	0.5000	3
Sn	120	115	He	98.969	ppb	1.2	139686.24	1.5801	Pulse	0.1000	3
Sb	121	115	He	96.806	ppb	1.3	127146.73	1.4382	Pulse	0.1000	3
Ba	137	115	He	511.366	ppb	1.4	216985.18	2.4544	Pulse	0.1000	3
Tl	205	159	He	100.598	ppb	0.2	1004919.59	2.4875	Pulse	0.1000	3
Pb	208	159	He	51.114	ppb	0.7	676271.48	1.6740	Pulse	0.1000	3
U	238	209	He	48.577	ppb	0.8	753772.04	2.3930	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2557171.99	1.0	106.6	Analog	0.1000	3
No Gas	Ge	72	1242477.79	0.9	107.7	Pulse	0.1000	3
H2	Sc	45	187640.36	0.2	100.3	Pulse	0.1000	3
H2	Ge	72	165197.18	0.4	100.9	Pulse	0.1000	3
H2	In	115	400928.95	0.2	103.0	Pulse	0.1000	3
He	Sc	45	49846.08	0.2	106.9	Pulse	0.1000	3
He	Ge	72	87195.35	1.5	107.4	Pulse	0.1000	3
He	In	115	88414.41	1.3	102.6	Pulse	0.1000	3
He	Tb	159	403980.72	0.0	101.3	Pulse	0.1000	3
He	Bi	209	315004.58	0.9	101.8	Pulse	0.1000	3

No Gas



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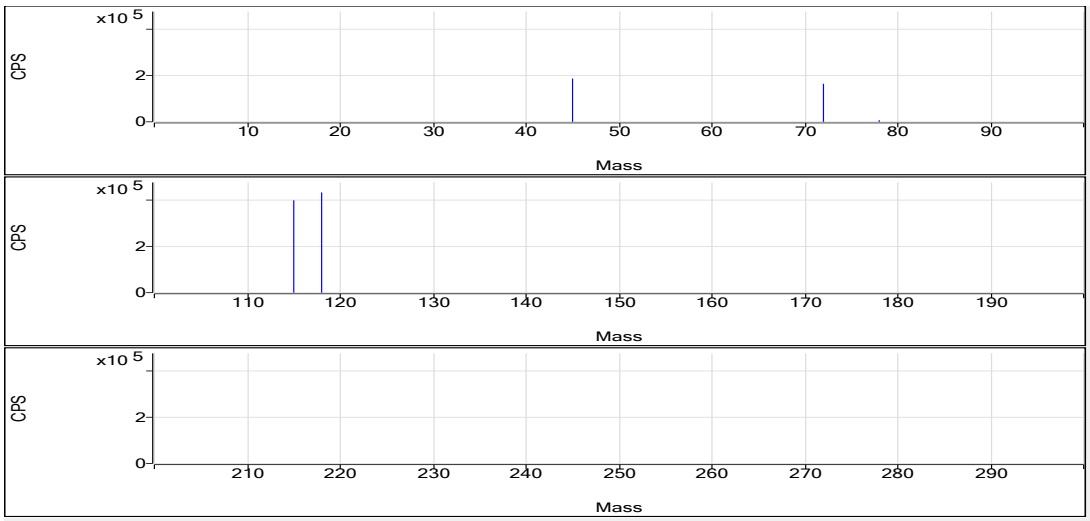
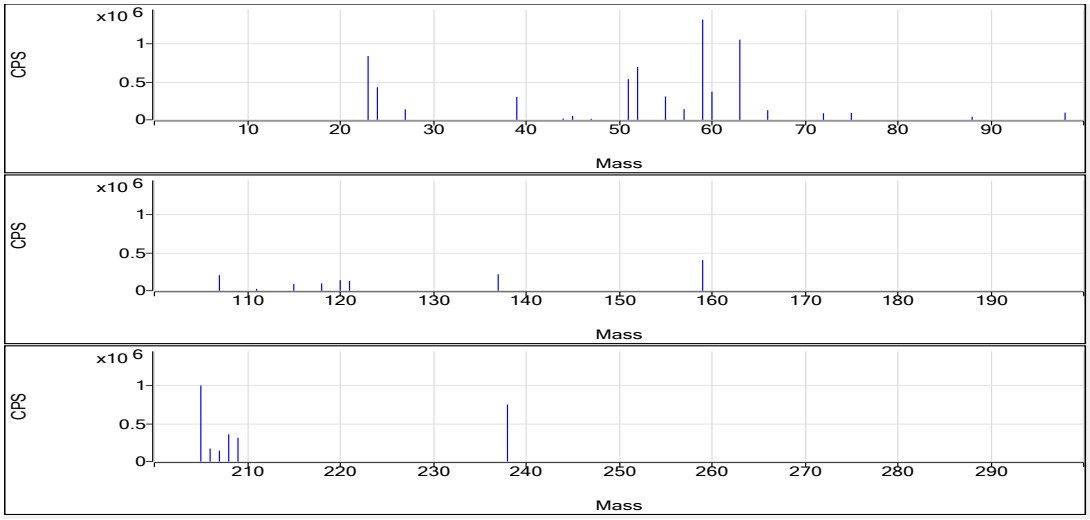


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	45.864	0.035	89203.96	0.0008	4.685E-06
Be	9	1	No Gas	45.244	0.0345	89260.07	0.0008	4.685E-06
Be	9	1	No Gas	45.917	0.035	88833.40	0.0008	4.685E-06
Se	78	2	H2	102.426	0.0427	7078.43	0.0004	1.219E-05
Se	78	2	H2	100.408	0.0419	6931.01	0.0004	1.219E-05
Se	78	2	H2	102.389	0.0427	7025.73	0.0004	1.219E-05
Na	23	3	He	4629.032	16.9034	843585.22	0.0036	0.3452
Na	23	3	He	4639.256	16.94	842522.17	0.0036	0.3452
Na	23	3	He	4623.481	16.8836	842430.22	0.0036	0.3452
Mg	24	3	He	4808.264	8.6311	430743.47	0.0018	0.003497
Mg	24	3	He	4776.074	8.5733	426399.21	0.0018	0.003497
Mg	24	3	He	4819.512	8.6513	431666.60	0.0018	0.003497
Al	27	3	He	4743.111	2.7755	138515.92	0.0006	0.0006432
Al	27	3	He	4828.461	2.8255	140526.14	0.0006	0.0006432
Al	27	3	He	4745.423	2.7769	138556.43	0.0006	0.0006432
K	39	3	He	4914.027	6.1166	305255.89	0.0012	0.3951
K	39	3	He	4870.628	6.0661	301699.84	0.0012	0.3951
K	39	3	He	4820.193	6.0073	299745.09	0.0012	0.3951
Ca	44	3	He	4854.105	0.3306	16499.92	0.0001	0.002715
Ca	44	3	He	4981.168	0.3392	16870.45	0.0001	0.002715
Ca	44	3	He	4967.893	0.3383	16880.24	0.0001	0.002715
Ti	47	3	He	492.327	0.2644	13196.40	0.0005	7.003E-05
Ti	47	3	He	471.904	0.2535	12605.91	0.0005	7.003E-05
Ti	47	3	He	482.331	0.2591	12926.03	0.0005	7.003E-05
V	51	3	He	496.192	10.8712	542540.56	0.0219	0.02486
V	51	3	He	489.726	10.7299	533656.50	0.0219	0.02486
V	51	3	He	492.944	10.8002	538892.31	0.0219	0.02486
Cr	52	3	He	471.623	14.1607	706705.85	0.0299	0.03997
Cr	52	3	He	465.985	13.9919	695895.69	0.0299	0.03997
Cr	52	3	He	466.294	14.0012	698608.27	0.0299	0.03997
Mn	55	3	He	482.469	6.1946	309147.79	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	483.583	6.2089	308802.89	0.0128	0.002639
Mn	55	3	He	480.892	6.1743	308077.79	0.0128	0.002639
Fe	57	3	He	4856.013	2.8227	140871.47	0.0006	0.001429
Fe	57	3	He	4842.993	2.8152	140013.97	0.0006	0.001429
Fe	57	3	He	4829.489	2.8073	140075.13	0.0006	0.001429
Co	59	3	He	469.197	26.4096	1318002.01	0.0563	0.002149
Co	59	3	He	474.472	26.7065	1328266.07	0.0563	0.002149
Co	59	3	He	472.207	26.579	1326199.04	0.0563	0.002149
Ni	60	3	He	490.694	4.2145	373041.17	0.0086	0.002834
Ni	60	3	He	506.928	4.3539	374336.13	0.0086	0.002834
Ni	60	3	He	489.401	4.2034	366099.25	0.0086	0.002834
Cu	63	3	He	469.564	12.059	1067374.36	0.0257	0.004757
Cu	63	3	He	476.653	12.2409	1052450.06	0.0257	0.004757
Cu	63	3	He	473.511	12.1603	1059102.80	0.0257	0.004757
Zn	66	3	He	498.009	1.4538	128682.69	0.0029	0.003818
Zn	66	3	He	505.562	1.4758	126887.86	0.0029	0.003818
Zn	66	3	He	496.715	1.4501	126293.36	0.0029	0.003818
As	75	3	He	497.148	1.0194	90229.80	0.002	0.0008061
As	75	3	He	509.397	1.0445	89803.23	0.002	0.0008061
As	75	3	He	504.909	1.0353	90169.54	0.002	0.0008061
Sr	88	3	He	51.335	0.4614	41341.31	0.009	0.0009645
Sr	88	3	He	51.041	0.4588	40097.71	0.009	0.0009645
Sr	88	3	He	50.876	0.4573	40358.58	0.009	0.0009645
Mo	98	3	He	48.516	1.0641	95333.03	0.0219	0.0002706
Mo	98	3	He	49.41	1.0837	94709.64	0.0219	0.0002706
Mo	98	3	He	49.29	1.081	95402.41	0.0219	0.0002706
Ag	107	3	He	49.335	2.2941	205532.61	0.0465	0.0006206
Ag	107	3	He	50.096	2.3294	203586.77	0.0465	0.0006206
Ag	107	3	He	49.808	2.3161	204395.97	0.0465	0.0006206
Cd	111	3	He	50.506	0.2701	24194.95	0.0053	0
Cd	111	3	He	50.682	0.271	23684.10	0.0053	0
Cd	111	3	He	50.854	0.2719	23996.58	0.0053	0
Sn	120	3	He	97.652	1.5592	139698.36	0.0158	0.01648
Sn	120	3	He	99.892	1.5946	139367.92	0.0158	0.01648
Sn	120	3	He	99.363	1.5863	139992.43	0.0158	0.01648
Sb	121	3	He	96.377	1.4318	128280.59	0.0149	0.0002698
Sb	121	3	He	98.247	1.4596	127564.13	0.0149	0.0002698
Sb	121	3	He	95.795	1.4231	125595.48	0.0149	0.0002698
Ba	137	3	He	505.408	2.4259	217340.97	0.0048	0.0002317
Ba	137	3	He	519.173	2.4919	217787.97	0.0048	0.0002317
Ba	137	3	He	509.517	2.4456	215826.60	0.0048	0.0002317
Tl	205	3	He	100.626	2.4882	1005669.28	0.0247	0.0001339
Tl	205	3	He	100.741	2.4911	1005835.06	0.0247	0.0001339
Tl	205	3	He	100.426	2.4833	1003254.44	0.0247	0.0001339
Pb	208	3	He	51.166	1.6757	358627.53	0.0327	0.00107
Pb	208	3	He	51.462	1.6854	362510.74	0.0327	0.00107
Pb	208	3	He	50.715	1.6609	357784.41	0.0327	0.00107
U	238	3	He	48.596	2.3939	748712.02	0.0493	7.55E-05
U	238	3	He	48.944	2.411	757395.22	0.0493	7.55E-05
U	238	3	He	48.191	2.3739	755208.89	0.0493	7.55E-05
Sc	45	1	No Gas			2549473.24		
Sc	45	1	No Gas			2586056.37		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2535986.37		
Ge	72	1	No Gas			1243111.54		
Ge	72	1	No Gas			1253009.04		
Ge	72	1	No Gas			1231312.79		
Sc	45	2	H2			187910.92		
Sc	45	2	H2			187818.45		
Sc	45	2	H2			187191.70		
Ge	72	2	H2			165652.24		
Ge	72	2	H2			165460.62		
Ge	72	2	H2			164478.69		
In	115	2	H2			401448.08		
In	115	2	H2			400058.70		
In	115	2	H2			401280.07		
Sc	45	3	He			49906.15		
Sc	45	3	He			49735.65		
Sc	45	3	He			49896.43		
Ge	72	3	He			88513.00		
Ge	72	3	He			85977.85		
Ge	72	3	He			87095.20		
In	115	3	He			90353.08		
In	115	3	He			88148.56		
In	115	3	He			89013.86		
Tb	159	3	He			404168.28		
Tb	159	3	He			403773.43		
Tb	159	3	He			404000.46		
Bi	209	3	He			312754.96		
Bi	209	3	He			314135.44		
Bi	209	3	He			318123.35		

Quantitation Report

Data File Name	231SMPL.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	8/10/2023 6:34:11 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

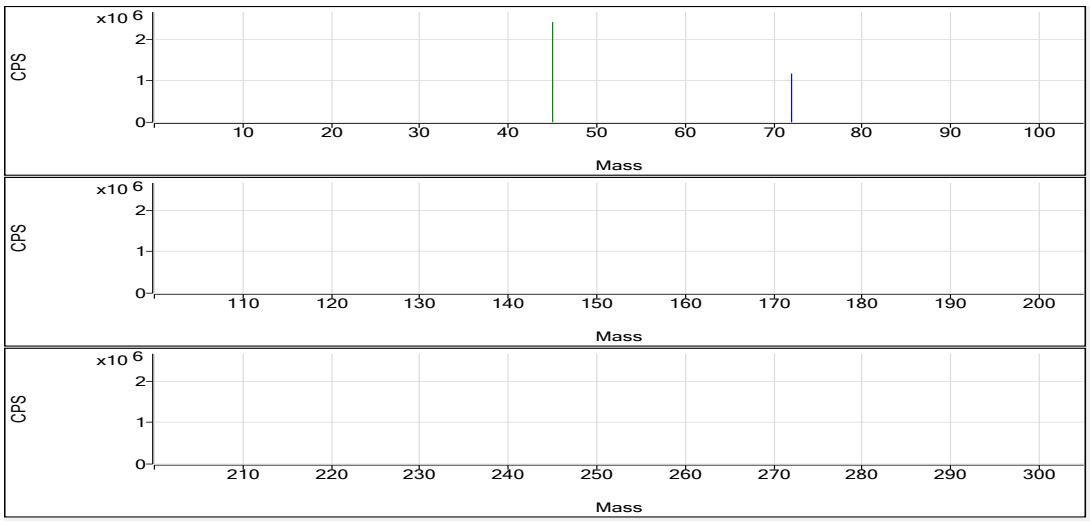
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.022	ppb	31.3	51.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.091	ppb	33.2	7.78	0.0001	Pulse	1.5000	3
Na	23	45	He	19.752	ppb	7.5	19606.93	0.4158	Pulse	0.1000	3
Mg	24	45	He	0.338	ppb	211.3	193.34	0.0041	Pulse	0.1000	3
Al	27	45	He	0.100	ppb	739.2	33.33	0.0007	Pulse	0.1000	3
K	39	45	He	-7.475	ppb	N/A	18218.58	0.3864	Pulse	0.1000	3
Ca	44	45	He	9.949	ppb	75.4	160.01	0.0034	Pulse	0.1000	3
Ti	47	45	He	0.138	ppb	336.6	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	0.320	ppb	34.0	1500.76	0.0318	Pulse	0.5000	3
Cr	52	45	He	-0.003	ppb	N/A	1880.19	0.0399	Pulse	0.1000	3
Mn	55	45	He	0.158	ppb	16.8	220.01	0.0047	Pulse	0.1000	3
Fe	57	45	He	1.555	ppb	69.4	110.00	0.0023	Pulse	0.1000	3
Co	59	45	He	0.078	ppb	46.7	306.68	0.0065	Pulse	0.1000	3
Ni	60	72	He	0.065	ppb	135.1	280.01	0.0034	Pulse	0.1000	3
Cu	63	72	He	0.066	ppb	33.1	533.36	0.0065	Pulse	0.1000	3
Zn	66	72	He	2.350	ppb	16.7	880.06	0.0107	Pulse	0.1000	3
As	75	72	He	0.367	ppb	25.9	128.67	0.0016	Pulse	0.5000	3
Sr	88	115	He	-0.010	ppb	N/A	76.67	0.0009	Pulse	0.1000	3
Mo	98	115	He	0.110	ppb	33.8	233.35	0.0027	Pulse	0.1000	3
Ag	107	115	He	0.004	ppb	61.8	70.00	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.006	ppb	43.6	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.119	ppb	31.8	1603.49	0.0184	Pulse	0.1000	3
Sb	121	115	He	0.419	ppb	8.9	566.70	0.0065	Pulse	0.1000	3
Ba	137	115	He	0.063	ppb	157.8	46.67	0.0005	Pulse	0.1000	3
Tl	205	159	He	0.233	ppb	4.5	2333.63	0.0059	Pulse	0.1000	3
Pb	208	159	He	0.015	ppb	27.5	620.02	0.0016	Pulse	0.1000	3
U	238	209	He	0.150	ppb	5.8	2310.29	0.0075	Pulse	0.1000	3

ISTD Table:

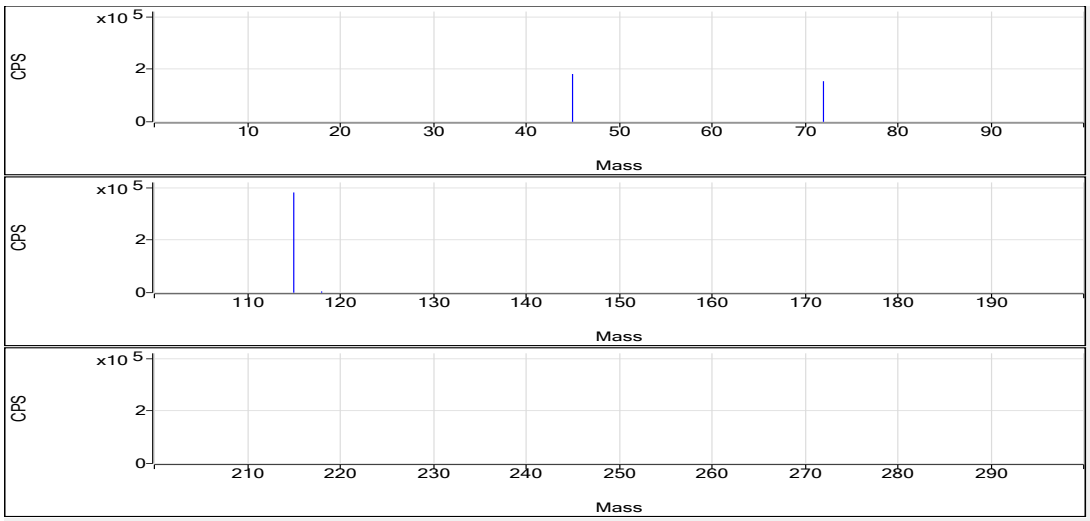
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2421382.52	0.5	100.9	Analog	0.1000	3
No Gas	Ge	72	1176084.78	0.6	102.0	Pulse	0.1000	3
H2	Sc	45	182449.52	1.0	97.6	Pulse	0.1000	3
H2	Ge	72	155020.05	1.1	94.7	Pulse	0.1000	3
H2	In	115	382494.53	0.5	98.3	Pulse	0.1000	3
He	Sc	45	47160.31	1.7	101.1	Pulse	0.1000	3
He	Ge	72	82538.08	0.1	101.7	Pulse	0.1000	3
He	In	115	87329.16	0.4	101.3	Pulse	0.1000	3
He	Tb	159	396607.56	0.4	99.5	Pulse	0.1000	3
He	Bi	209	308795.74	0.3	99.8	Pulse	0.1000	3

No Gas

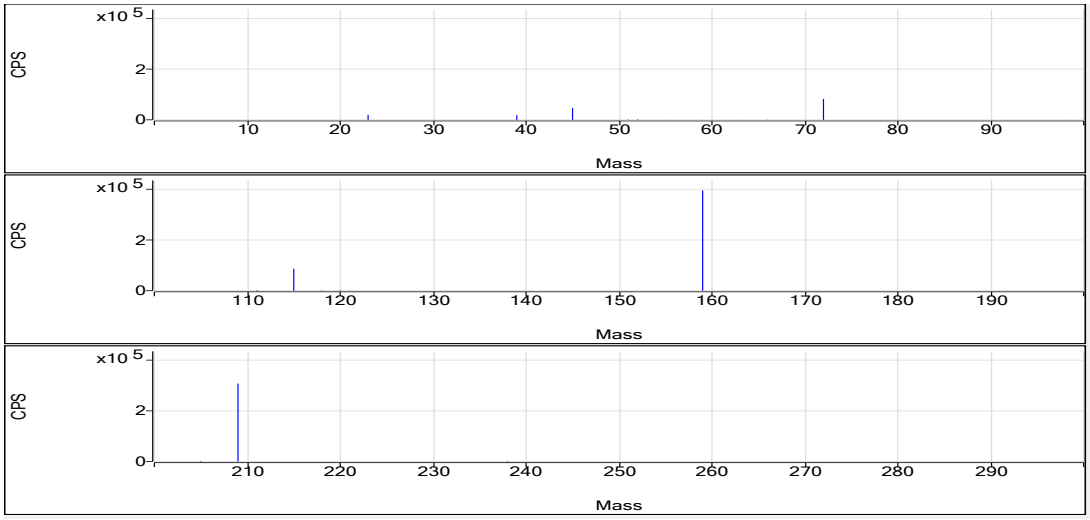


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.029	0	66.00	0.0008	4.685E-06
Be	9	1	No Gas	0.018	0	44.00	0.0008	4.685E-06
Be	9	1	No Gas	0.018	0	44.00	0.0008	4.685E-06
Se	78	2	H2	0.084	0	7.33	0.0004	1.219E-05
Se	78	2	H2	0.124	0.0001	10.00	0.0004	1.219E-05
Se	78	2	H2	0.065	0	6.00	0.0004	1.219E-05
Na	23	3	He	19.203	0.4138	19673.66	0.0036	0.3452
Na	23	3	He	18.623	0.4118	19653.52	0.0036	0.3452
Na	23	3	He	21.429	0.4218	19493.60	0.0036	0.3452
Mg	24	3	He	0.982	0.0053	250.01	0.0018	0.003497
Mg	24	3	He	-0.431	0.0027	130.01	0.0018	0.003497
Mg	24	3	He	0.463	0.0043	200.01	0.0018	0.003497
Al	27	3	He	0.339	0.0008	40.00	0.0006	0.0006432
Al	27	3	He	0.691	0.001	50.00	0.0006	0.0006432
Al	27	3	He	-0.73	0.0002	10.00	0.0006	0.0006432
K	39	3	He	5.46	0.4014	19083.02	0.0012	0.3951
K	39	3	He	-22.942	0.3684	17581.12	0.0012	0.3951
K	39	3	He	-4.943	0.3893	17991.59	0.0012	0.3951
Ca	44	3	He	12.75	0.0036	170.01	0.0001	0.002715
Ca	44	3	He	15.641	0.0038	180.01	0.0001	0.002715
Ca	44	3	He	1.455	0.0028	130.01	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.676	0.0004	20.00	0.0005	7.003E-05
V	51	3	He	0.3	0.0314	1494.09	0.0219	0.02486
V	51	3	He	0.222	0.0297	1418.08	0.0219	0.02486
V	51	3	He	0.437	0.0344	1590.10	0.0219	0.02486
Cr	52	3	He	0.028	0.0408	1940.20	0.0299	0.03997
Cr	52	3	He	-0.047	0.0386	1840.19	0.0299	0.03997
Cr	52	3	He	0.009	0.0403	1860.19	0.0299	0.03997
Mn	55	3	He	0.188	0.005	240.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.137	0.0044	210.01	0.0128	0.002639
Mn	55	3	He	0.148	0.0045	210.01	0.0128	0.002639
Fe	57	3	He	0.437	0.0017	80.00	0.0006	0.001429
Fe	57	3	He	2.59	0.0029	140.01	0.0006	0.001429
Fe	57	3	He	1.638	0.0024	110.00	0.0006	0.001429
Co	59	3	He	0.104	0.008	380.02	0.0563	0.002149
Co	59	3	He	0.036	0.0042	200.01	0.0563	0.002149
Co	59	3	He	0.093	0.0074	340.02	0.0563	0.002149
Ni	60	3	He	0.163	0.0042	350.02	0.0086	0.002834
Ni	60	3	He	-0.006	0.0028	230.01	0.0086	0.002834
Ni	60	3	He	0.037	0.0032	260.01	0.0086	0.002834
Cu	63	3	He	0.083	0.0069	570.03	0.0257	0.004757
Cu	63	3	He	0.074	0.0067	550.03	0.0257	0.004757
Cu	63	3	He	0.042	0.0058	480.03	0.0257	0.004757
Zn	66	3	He	2.555	0.0113	930.06	0.0029	0.003818
Zn	66	3	He	2.598	0.0114	940.06	0.0029	0.003818
Zn	66	3	He	1.899	0.0093	770.05	0.0029	0.003818
As	75	3	He	0.41	0.0016	136.00	0.002	0.0008061
As	75	3	He	0.434	0.0017	140.00	0.002	0.0008061
As	75	3	He	0.258	0.0013	110.00	0.002	0.0008061
Sr	88	3	He	-0.019	0.0008	70.00	0.009	0.0009645
Sr	88	3	He	-0.031	0.0007	60.00	0.009	0.0009645
Sr	88	3	He	0.02	0.0011	100.00	0.009	0.0009645
Mo	98	3	He	0.071	0.0018	160.01	0.0219	0.0002706
Mo	98	3	He	0.113	0.0028	240.01	0.0219	0.0002706
Mo	98	3	He	0.145	0.0034	300.02	0.0219	0.0002706
Ag	107	3	He	0.006	0.0009	80.00	0.0465	0.0006206
Ag	107	3	He	0.004	0.0008	70.00	0.0465	0.0006206
Ag	107	3	He	0.001	0.0007	60.00	0.0465	0.0006206
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.009	0	4.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Sn	120	3	He	0.104	0.0181	1590.15	0.0158	0.01648
Sn	120	3	He	0.091	0.0179	1560.16	0.0158	0.01648
Sn	120	3	He	0.163	0.019	1660.15	0.0158	0.01648
Sb	121	3	He	0.389	0.006	530.03	0.0149	0.0002698
Sb	121	3	He	0.407	0.0063	550.03	0.0149	0.0002698
Sb	121	3	He	0.461	0.0071	620.04	0.0149	0.0002698
Ba	137	3	He	0.094	0.0007	60.00	0.0048	0.0002317
Ba	137	3	He	0.143	0.0009	80.00	0.0048	0.0002317
Ba	137	3	He	-0.048	0	0.00	0.0048	0.0002317
Tl	205	3	He	0.222	0.0056	2220.29	0.0247	0.0001339
Tl	205	3	He	0.234	0.0059	2340.28	0.0247	0.0001339
Tl	205	3	He	0.242	0.0061	2440.32	0.0247	0.0001339
Pb	208	3	He	0.016	0.0016	430.02	0.0327	0.00107
Pb	208	3	He	0.011	0.0014	280.02	0.0327	0.00107
Pb	208	3	He	0.019	0.0017	440.02	0.0327	0.00107
U	238	3	He	0.16	0.008	2450.32	0.0493	7.55E-05
U	238	3	He	0.148	0.0074	2280.28	0.0493	7.55E-05
U	238	3	He	0.143	0.0071	2200.26	0.0493	7.55E-05
Sc	45	1	No Gas			2430464.50		
Sc	45	1	No Gas			2424771.53		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2408911.53		
Ge	72	1	No Gas			1181124.83		
Ge	72	1	No Gas			1179052.95		
Ge	72	1	No Gas			1168076.55		
Sc	45	2	H2			181133.98		
Sc	45	2	H2			184590.08		
Sc	45	2	H2			181624.49		
Ge	72	2	H2			155063.24		
Ge	72	2	H2			156651.64		
Ge	72	2	H2			153345.28		
In	115	2	H2			384271.09		
In	115	2	H2			382516.01		
In	115	2	H2			380696.48		
Sc	45	3	He			47538.33		
Sc	45	3	He			47728.73		
Sc	45	3	He			46213.87		
Ge	72	3	He			82617.90		
Ge	72	3	He			82598.90		
Ge	72	3	He			82397.45		
In	115	3	He			87747.71		
In	115	3	He			87084.18		
In	115	3	He			87182.82		
Tb	159	3	He			395558.39		
Tb	159	3	He			395684.33		
Tb	159	3	He			398579.95		
Bi	209	3	He			307933.75		
Bi	209	3	He			309661.79		
Bi	209	3	He			308791.68		

Quantitation Report

Data File Name	232_CCV.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	8/10/2023 6:36:14 PM
Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

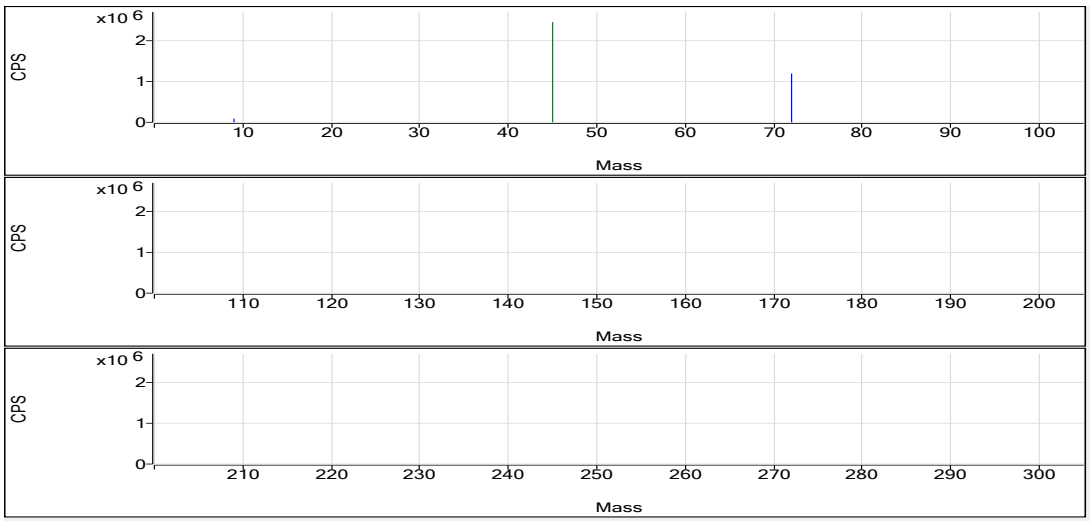
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	47.456	ppb	0.6	89038.66	0.0362	Pulse	0.5000	3
Se	78	72	H2	52.700	ppb	2.2	3470.21	0.0220	Pulse	1.5000	3
Na	23	45	He	4790.510	ppb	1.2	840196.99	17.4810	Pulse	0.1000	3
Mg	24	45	He	4953.989	ppb	0.9	427441.87	8.8925	Pulse	0.1000	3
Al	27	45	He	4850.035	ppb	1.7	136400.70	2.8381	Pulse	0.1000	3
K	39	45	He	5031.149	ppb	1.0	300539.53	6.2530	Pulse	0.1000	3
Ca	44	45	He	4976.071	ppb	4.3	16282.81	0.3389	Pulse	0.1000	3
Ti	47	45	He	4998.678	ppb	0.3	129015.89	2.6841	Pulse	0.1000	3
V	51	45	He	507.563	ppb	1.0	534454.33	11.1198	Pulse	0.5000	3
Cr	52	45	He	482.219	ppb	1.2	695853.92	14.4779	Pulse	0.1000	3
Mn	55	45	He	499.364	ppb	1.5	308147.29	6.4114	Pulse	0.1000	3
Fe	57	45	He	5051.936	ppb	1.1	141140.80	2.9366	Pulse	0.1000	3
Co	59	45	He	486.988	ppb	0.8	1317478.05	27.4109	Pulse	0.1000	3
Ni	60	72	He	510.543	ppb	1.1	371709.06	4.3849	Pulse	0.1000	3
Cu	63	72	He	482.621	ppb	0.9	1050650.66	12.3941	Pulse	0.1000	3
Zn	66	72	He	505.943	ppb	2.1	125196.00	1.4769	Pulse	0.1000	3
As	75	72	He	513.840	ppb	0.7	89313.58	1.0536	Pulse	0.5000	3
Sr	88	115	He	51.182	ppb	0.6	39716.61	0.4601	Pulse	0.1000	3
Mo	98	115	He	51.124	ppb	1.5	96779.53	1.1212	Pulse	0.1000	3
Ag	107	115	He	51.386	ppb	1.1	206247.53	2.3894	Pulse	0.1000	3
Cd	111	115	He	50.670	ppb	1.4	23384.94	0.2709	Pulse	0.5000	3
Sn	120	115	He	51.161	ppb	1.9	71186.58	0.8248	Pulse	0.1000	3
Sb	121	115	He	52.219	ppb	1.8	66968.96	0.7759	Pulse	0.1000	3
Ba	137	115	He	516.359	ppb	0.1	213950.58	2.4784	Pulse	0.1000	3
Tl	205	159	He	51.409	ppb	0.3	506441.87	1.2713	Pulse	0.1000	3
Pb	208	159	He	51.579	ppb	0.6	672932.60	1.6892	Pulse	0.1000	3
U	238	209	He	49.909	ppb	0.4	761442.72	2.4586	Pulse	0.1000	3

ISTD Table:

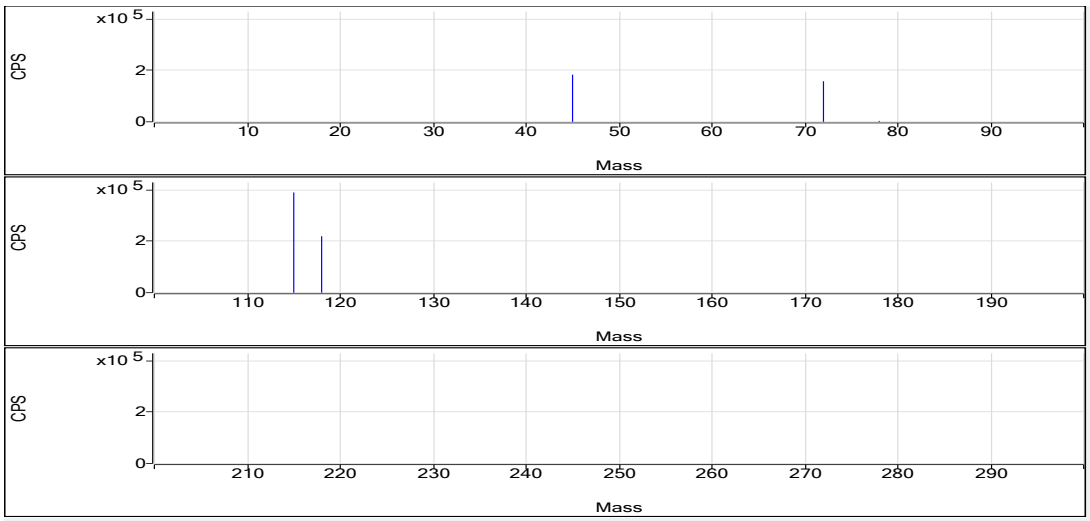
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2459491.58	1.4	102.5	Analog	0.1000	3
No Gas	Ge	72	1196923.58	0.2	103.8	Pulse	0.1000	3
H2	Sc	45	183158.46	1.3	97.9	Pulse	0.1000	3
H2	Ge	72	157816.68	1.5	96.4	Pulse	0.1000	3
H2	In	115	389726.95	0.3	100.2	Pulse	0.1000	3
He	Sc	45	48066.99	1.1	103.1	Pulse	0.1000	3
He	Ge	72	84771.26	0.3	104.4	Pulse	0.1000	3
He	In	115	86326.24	1.4	100.2	Pulse	0.1000	3
He	Tb	159	398370.07	0.3	99.9	Pulse	0.1000	3
He	Bi	209	309707.52	0.2	100.1	Pulse	0.1000	3

No Gas

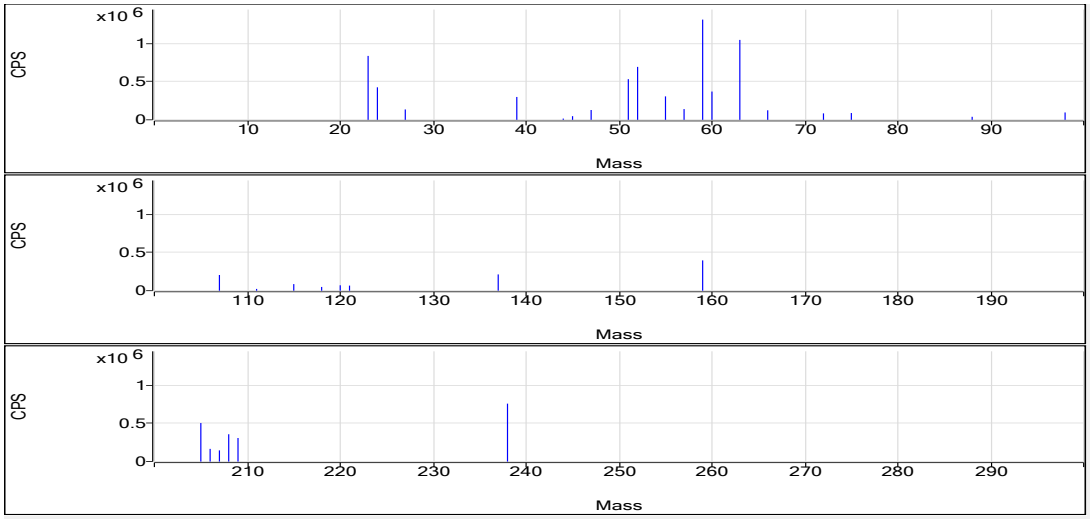


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	47.31	0.0361	90211.41	0.0008	4.685E-06
Be	9	1	No Gas	47.757	0.0364	88702.78	0.0008	4.685E-06
Be	9	1	No Gas	47.3	0.0361	88201.80	0.0008	4.685E-06
Se	78	2	H2	51.768	0.0216	3467.10	0.0004	1.219E-05
Se	78	2	H2	52.35	0.0218	3411.08	0.0004	1.219E-05
Se	78	2	H2	53.982	0.0225	3532.44	0.0004	1.219E-05
Na	23	3	He	4825.21	17.6052	846282.25	0.0036	0.3452
Na	23	3	He	4723.738	17.2422	838180.07	0.0036	0.3452
Na	23	3	He	4822.581	17.5958	836128.66	0.0036	0.3452
Mg	24	3	He	5004.49	8.9832	431821.48	0.0018	0.003497
Mg	24	3	He	4934.519	8.8576	430587.38	0.0018	0.003497
Mg	24	3	He	4922.957	8.8369	419916.75	0.0018	0.003497
Al	27	3	He	4871.588	2.8507	137033.02	0.0006	0.0006432
Al	27	3	He	4757.649	2.784	135337.80	0.0006	0.0006432
Al	27	3	He	4920.869	2.8795	136831.29	0.0006	0.0006432
K	39	3	He	5040.645	6.264	301112.20	0.0012	0.3951
K	39	3	He	4975.05	6.1876	300794.82	0.0012	0.3951
K	39	3	He	5077.752	6.3072	299711.56	0.0012	0.3951
Ca	44	3	He	5034.836	0.3428	16479.76	0.0001	0.002715
Ca	44	3	He	4740.435	0.3229	15698.82	0.0001	0.002715
Ca	44	3	He	5152.942	0.3508	16669.86	0.0001	0.002715
Ti	47	3	He	4983.208	2.6758	128625.90	0.0005	7.003E-05
Ti	47	3	He	5001.469	2.6856	130552.93	0.0005	7.003E-05
Ti	47	3	He	5011.358	2.6909	127868.85	0.0005	7.003E-05
V	51	3	He	507.98	11.1289	534966.88	0.0219	0.02486
V	51	3	He	502.351	11.0058	535017.56	0.0219	0.02486
V	51	3	He	512.358	11.2246	533378.56	0.0219	0.02486
Cr	52	3	He	478.969	14.3807	691279.68	0.0299	0.03997
Cr	52	3	He	478.588	14.3692	698519.60	0.0299	0.03997
Cr	52	3	He	489.099	14.6839	697762.49	0.0299	0.03997
Mn	55	3	He	494.896	6.3541	305440.84	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	495.221	6.3582	309088.04	0.0128	0.002639
Mn	55	3	He	507.974	6.5219	309912.98	0.0128	0.002639
Fe	57	3	He	5026.042	2.9215	140437.40	0.0006	0.001429
Fe	57	3	He	5014.65	2.9149	141699.23	0.0006	0.001429
Fe	57	3	He	5115.116	2.9733	141285.77	0.0006	0.001429
Co	59	3	He	487.804	27.4569	1319853.89	0.0563	0.002149
Co	59	3	He	482.505	27.1587	1320240.45	0.0563	0.002149
Co	59	3	He	490.654	27.6173	1312339.82	0.0563	0.002149
Ni	60	3	He	510.972	4.3886	373083.55	0.0086	0.002834
Ni	60	3	He	516.159	4.4331	374643.00	0.0086	0.002834
Ni	60	3	He	504.498	4.333	367400.62	0.0086	0.002834
Cu	63	3	He	480.318	12.335	1048630.84	0.0257	0.004757
Cu	63	3	He	487.844	12.5282	1058765.77	0.0257	0.004757
Cu	63	3	He	479.7	12.3192	1044555.38	0.0257	0.004757
Zn	66	3	He	495.175	1.4456	122891.95	0.0029	0.003818
Zn	66	3	He	516.782	1.5085	127482.98	0.0029	0.003818
Zn	66	3	He	505.873	1.4767	125213.07	0.0029	0.003818
As	75	3	He	510.114	1.046	88919.80	0.002	0.0008061
As	75	3	He	516.749	1.0596	89543.59	0.002	0.0008061
As	75	3	He	514.656	1.0553	89477.34	0.002	0.0008061
Sr	88	3	He	50.943	0.4579	39606.50	0.009	0.0009645
Sr	88	3	He	51.541	0.4633	40528.73	0.009	0.0009645
Sr	88	3	He	51.062	0.459	39014.61	0.009	0.0009645
Mo	98	3	He	50.829	1.1148	96420.60	0.0219	0.0002706
Mo	98	3	He	50.553	1.1087	96993.62	0.0219	0.0002706
Mo	98	3	He	51.991	1.1403	96924.36	0.0219	0.0002706
Ag	107	3	He	51.202	2.3809	205929.29	0.0465	0.0006206
Ag	107	3	He	50.948	2.369	207248.81	0.0465	0.0006206
Ag	107	3	He	52.008	2.4183	205564.49	0.0465	0.0006206
Cd	111	3	He	50.571	0.2704	23387.61	0.0053	0
Cd	111	3	He	50.025	0.2675	23399.62	0.0053	0
Cd	111	3	He	51.414	0.2749	23367.58	0.0053	0
Sn	120	3	He	50.512	0.8145	70449.55	0.0158	0.01648
Sn	120	3	He	50.672	0.817	71474.94	0.0158	0.01648
Sn	120	3	He	52.3	0.8427	71635.26	0.0158	0.01648
Sb	121	3	He	51.861	0.7706	66650.66	0.0149	0.0002698
Sb	121	3	He	51.522	0.7656	66972.43	0.0149	0.0002698
Sb	121	3	He	53.272	0.7915	67283.80	0.0149	0.0002698
Ba	137	3	He	516.016	2.4768	214224.80	0.0048	0.0002317
Ba	137	3	He	516.19	2.4776	216745.66	0.0048	0.0002317
Ba	137	3	He	516.873	2.4809	210881.29	0.0048	0.0002317
Tl	205	3	He	51.552	1.2748	507799.09	0.0247	0.0001339
Tl	205	3	He	51.297	1.2685	506680.46	0.0247	0.0001339
Tl	205	3	He	51.378	1.2705	504846.05	0.0247	0.0001339
Pb	208	3	He	51.583	1.6894	359849.92	0.0327	0.00107
Pb	208	3	He	51.281	1.6795	356338.24	0.0327	0.00107
Pb	208	3	He	51.873	1.6989	360919.64	0.0327	0.00107
U	238	3	He	50.124	2.4692	764692.25	0.0493	7.55E-05
U	238	3	He	49.706	2.4486	757056.00	0.0493	7.55E-05
U	238	3	He	49.897	2.458	762579.91	0.0493	7.55E-05
Sc	45	1	No Gas			2499494.03		
Sc	45	1	No Gas			2434666.21		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2444314.49		
Ge	72	1	No Gas			1197044.28		
Ge	72	1	No Gas			1199243.03		
Ge	72	1	No Gas			1194483.42		
Sc	45	2	H2			181725.54		
Sc	45	2	H2			181945.58		
Sc	45	2	H2			185804.26		
Ge	72	2	H2			160491.52		
Ge	72	2	H2			156145.69		
Ge	72	2	H2			156812.84		
In	115	2	H2			389146.21		
In	115	2	H2			388988.39		
In	115	2	H2			391046.24		
Sc	45	3	He			48070.09		
Sc	45	3	He			48612.13		
Sc	45	3	He			47518.74		
Ge	72	3	He			85012.37		
Ge	72	3	He			84510.35		
Ge	72	3	He			84791.07		
In	115	3	He			86871.24		
In	115	3	He			87867.65		
In	115	3	He			85392.24		
Tb	159	3	He			398331.09		
Tb	159	3	He			399428.78		
Tb	159	3	He			397350.35		
Bi	209	3	He			309693.53		
Bi	209	3	He			309182.77		
Bi	209	3	He			310246.26		

Quantitation Report

Data File Name	233_CCB.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
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Sample Name	CCB 4654618
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

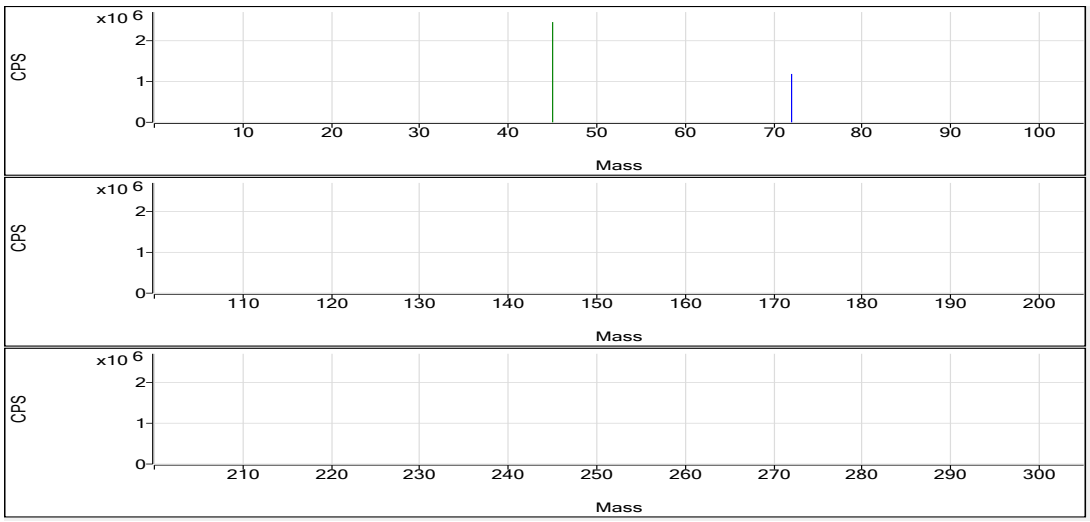
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.025	ppb	26.0	59.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.019	ppb	27.4	3.11	0.0000	Pulse	1.5000	3
Na	23	45	He	13.729	ppb	15.5	18939.31	0.3943	Pulse	0.1000	3
Mg	24	45	He	1.341	ppb	44.0	283.34	0.0059	Pulse	0.1000	3
Al	27	45	He	1.038	ppb	60.6	60.00	0.0013	Pulse	0.1000	3
K	39	45	He	-0.377	ppb	N/A	18956.16	0.3946	Pulse	0.1000	3
Ca	44	45	He	-0.157	ppb	N/A	130.00	0.0027	Pulse	0.1000	3
Ti	47	45	He	1.166	ppb	101.8	33.33	0.0007	Pulse	0.1000	3
V	51	45	He	0.334	ppb	19.9	1545.43	0.0322	Pulse	0.5000	3
Cr	52	45	He	0.065	ppb	81.0	2013.55	0.0419	Pulse	0.1000	3
Mn	55	45	He	0.276	ppb	13.5	296.68	0.0062	Pulse	0.1000	3
Fe	57	45	He	1.366	ppb	56.3	106.67	0.0022	Pulse	0.1000	3
Co	59	45	He	0.080	ppb	39.3	320.01	0.0067	Pulse	0.1000	3
Ni	60	72	He	0.064	ppb	122.4	280.01	0.0034	Pulse	0.1000	3
Cu	63	72	He	0.080	ppb	41.9	563.37	0.0068	Pulse	0.1000	3
Zn	66	72	He	1.937	ppb	5.8	783.38	0.0095	Pulse	0.1000	3
As	75	72	He	0.282	ppb	17.7	114.67	0.0014	Pulse	0.5000	3
Sr	88	115	He	-0.005	ppb	N/A	80.00	0.0009	Pulse	0.1000	3
Mo	98	115	He	0.060	ppb	48.9	136.67	0.0016	Pulse	0.1000	3
Ag	107	115	He	0.004	ppb	61.7	70.00	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.009	ppb	132.1	4.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.084	ppb	83.9	1540.14	0.0178	Pulse	0.1000	3
Sb	121	115	He	0.067	ppb	20.2	110.00	0.0013	Pulse	0.1000	3
Ba	137	115	He	0.040	ppb	34.5	36.67	0.0004	Pulse	0.1000	3
Tl	205	159	He	0.094	ppb	11.9	973.41	0.0024	Pulse	0.1000	3
Pb	208	159	He	0.010	ppb	69.6	556.69	0.0014	Pulse	0.1000	3
U	238	209	He	0.054	ppb	18.0	840.06	0.0027	Pulse	0.1000	3

ISTD Table:

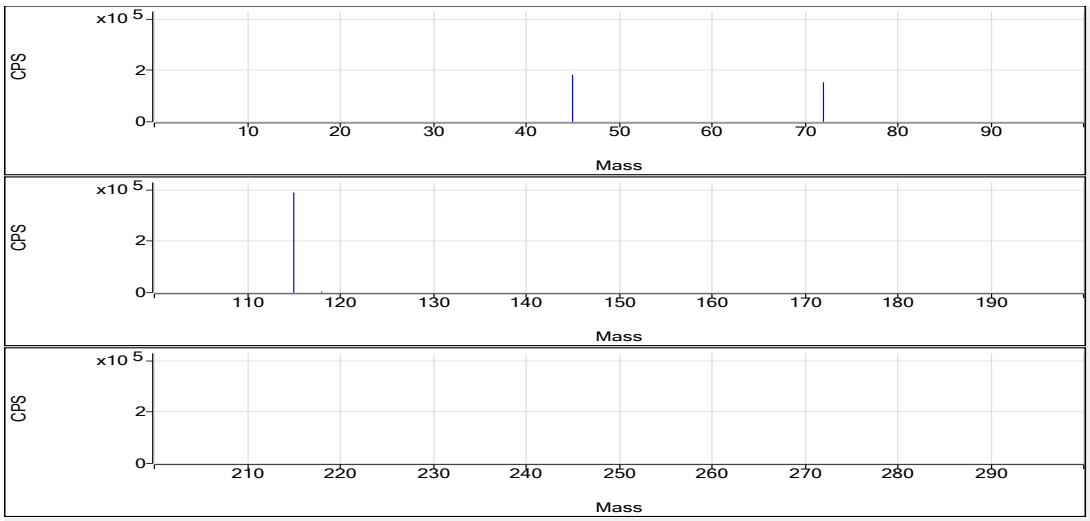
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2465482.88	0.7	102.8	Analog	0.1000	3
No Gas	Ge	72	1189262.85	0.9	103.1	Pulse	0.1000	3
H2	Sc	45	182793.99	1.8	97.7	Pulse	0.1000	3
H2	Ge	72	153965.68	2.0	94.0	Pulse	0.1000	3
H2	In	115	390328.82	0.3	100.3	Pulse	0.1000	3
He	Sc	45	48033.40	0.6	103.0	Pulse	0.1000	3
He	Ge	72	82847.16	0.9	102.0	Pulse	0.1000	3
He	In	115	86493.92	0.4	100.3	Pulse	0.1000	3
He	Tb	159	397168.65	1.0	99.6	Pulse	0.1000	3
He	Bi	209	309042.09	0.6	99.9	Pulse	0.1000	3

No Gas

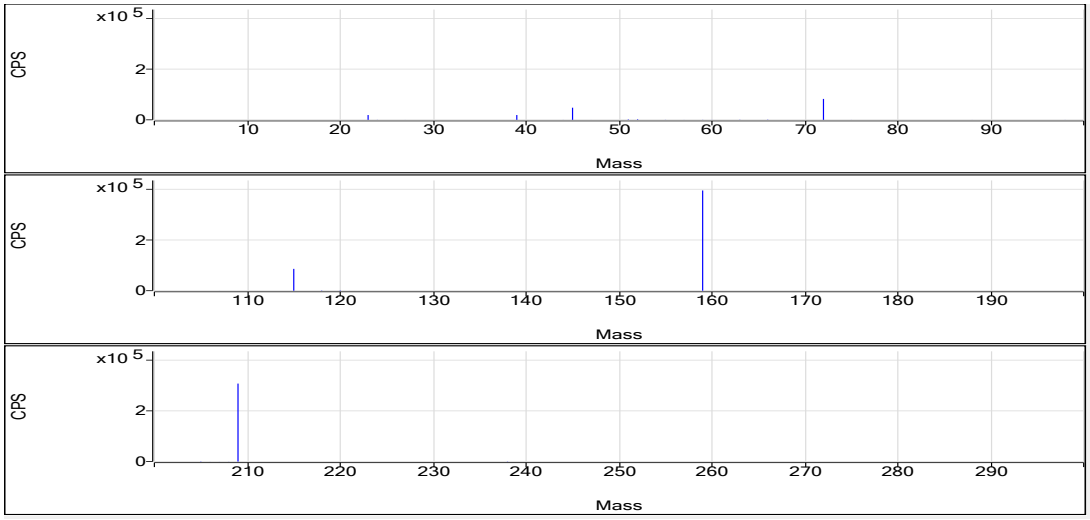


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.025	0	58.00	0.0008	4.685E-06
Be	9	1	No Gas	0.019	0	48.00	0.0008	4.685E-06
Be	9	1	No Gas	0.032	0	72.00	0.0008	4.685E-06
Se	78	2	H2	0.013	0	2.67	0.0004	1.219E-05
Se	78	2	H2	0.022	0	3.33	0.0004	1.219E-05
Se	78	2	H2	0.023	0	3.33	0.0004	1.219E-05
Na	23	3	He	16.157	0.403	19483.38	0.0036	0.3452
Na	23	3	He	12.223	0.3889	18662.27	0.0036	0.3452
Na	23	3	He	12.807	0.391	18672.28	0.0036	0.3452
Mg	24	3	He	1.048	0.0054	260.01	0.0018	0.003497
Mg	24	3	He	0.955	0.0052	250.01	0.0018	0.003497
Mg	24	3	He	2.019	0.0071	340.01	0.0018	0.003497
Al	27	3	He	0.668	0.001	50.00	0.0006	0.0006432
Al	27	3	He	0.681	0.001	50.00	0.0006	0.0006432
Al	27	3	He	1.764	0.0017	80.00	0.0006	0.0006432
K	39	3	He	2.33	0.3978	19233.25	0.0012	0.3951
K	39	3	He	2.215	0.3976	19082.92	0.0012	0.3951
K	39	3	He	-5.677	0.3885	18552.30	0.0012	0.3951
Ca	44	3	He	8.798	0.0033	160.01	0.0001	0.002715
Ca	44	3	He	-3.174	0.0025	120.00	0.0001	0.002715
Ca	44	3	He	-6.095	0.0023	110.00	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	2.198	0.0013	60.00	0.0005	7.003E-05
Ti	47	3	He	1.429	0.0008	40.00	0.0005	7.003E-05
V	51	3	He	0.358	0.0327	1580.10	0.0219	0.02486
V	51	3	He	0.386	0.0333	1598.10	0.0219	0.02486
V	51	3	He	0.259	0.0305	1458.09	0.0219	0.02486
Cr	52	3	He	0.06	0.0418	2020.22	0.0299	0.03997
Cr	52	3	He	0.12	0.0436	2090.23	0.0299	0.03997
Cr	52	3	He	0.015	0.0404	1930.19	0.0299	0.03997
Mn	55	3	He	0.294	0.0064	310.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.233	0.0056	270.01	0.0128	0.002639
Mn	55	3	He	0.3	0.0065	310.01	0.0128	0.002639
Fe	57	3	He	0.745	0.0019	90.00	0.0006	0.001429
Fe	57	3	He	1.127	0.0021	100.00	0.0006	0.001429
Fe	57	3	He	2.226	0.0027	130.01	0.0006	0.001429
Co	59	3	He	0.116	0.0087	420.02	0.0563	0.002149
Co	59	3	He	0.065	0.0058	280.01	0.0563	0.002149
Co	59	3	He	0.059	0.0054	260.01	0.0563	0.002149
Ni	60	3	He	0.082	0.0035	290.01	0.0086	0.002834
Ni	60	3	He	0.131	0.004	330.02	0.0086	0.002834
Ni	60	3	He	-0.022	0.0026	220.01	0.0086	0.002834
Cu	63	3	He	0.076	0.0067	550.03	0.0257	0.004757
Cu	63	3	He	0.048	0.006	500.03	0.0257	0.004757
Cu	63	3	He	0.115	0.0077	640.04	0.0257	0.004757
Zn	66	3	He	2.04	0.0098	800.05	0.0029	0.003818
Zn	66	3	He	1.818	0.0091	760.04	0.0029	0.003818
Zn	66	3	He	1.954	0.0095	790.04	0.0029	0.003818
As	75	3	He	0.226	0.0013	104.00	0.002	0.0008061
As	75	3	He	0.32	0.0015	122.00	0.002	0.0008061
As	75	3	He	0.3	0.0014	118.00	0.002	0.0008061
Sr	88	3	He	0.034	0.0013	110.00	0.009	0.0009645
Sr	88	3	He	-0.004	0.0009	80.00	0.009	0.0009645
Sr	88	3	He	-0.043	0.0006	50.00	0.009	0.0009645
Mo	98	3	He	0.045	0.0013	110.01	0.0219	0.0002706
Mo	98	3	He	0.04	0.0012	100.00	0.0219	0.0002706
Mo	98	3	He	0.093	0.0023	200.01	0.0219	0.0002706
Ag	107	3	He	0.004	0.0008	70.00	0.0465	0.0006206
Ag	107	3	He	0.002	0.0007	60.00	0.0465	0.0006206
Ag	107	3	He	0.007	0.0009	80.00	0.0465	0.0006206
Cd	111	3	He	0.022	0.0001	10.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Sn	120	3	He	0.101	0.0181	1570.16	0.0158	0.01648
Sn	120	3	He	0.144	0.0188	1620.14	0.0158	0.01648
Sn	120	3	He	0.007	0.0166	1430.12	0.0158	0.01648
Sb	121	3	He	0.059	0.0012	100.00	0.0149	0.0002698
Sb	121	3	He	0.083	0.0015	130.01	0.0149	0.0002698
Sb	121	3	He	0.06	0.0012	100.00	0.0149	0.0002698
Ba	137	3	He	0.048	0.0005	40.00	0.0048	0.0002317
Ba	137	3	He	0.024	0.0003	30.00	0.0048	0.0002317
Ba	137	3	He	0.048	0.0005	40.00	0.0048	0.0002317
Tl	205	3	He	0.101	0.0026	1060.08	0.0247	0.0001339
Tl	205	3	He	0.081	0.0021	840.07	0.0247	0.0001339
Tl	205	3	He	0.099	0.0026	1020.08	0.0247	0.0001339
Pb	208	3	He	0.007	0.0013	260.01	0.0327	0.00107
Pb	208	3	He	0.005	0.0012	330.02	0.0327	0.00107
Pb	208	3	He	0.018	0.0017	280.01	0.0327	0.00107
U	238	3	He	0.046	0.0024	730.05	0.0493	7.55E-05
U	238	3	He	0.05	0.0025	790.05	0.0493	7.55E-05
U	238	3	He	0.065	0.0033	1000.08	0.0493	7.55E-05
Sc	45	1	No Gas			2479289.65		
Sc	45	1	No Gas			2471288.24		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2445870.74		
Ge	72	1	No Gas			1199169.98		
Ge	72	1	No Gas			1178197.64		
Ge	72	1	No Gas			1190420.92		
Sc	45	2	H2			179204.70		
Sc	45	2	H2			185408.75		
Sc	45	2	H2			183768.51		
Ge	72	2	H2			151092.31		
Ge	72	2	H2			157225.83		
Ge	72	2	H2			153578.89		
In	115	2	H2			391637.96		
In	115	2	H2			389957.34		
In	115	2	H2			389391.17		
Sc	45	3	He			48351.48		
Sc	45	3	He			47989.76		
Sc	45	3	He			47758.96		
Ge	72	3	He			82005.80		
Ge	72	3	He			83423.70		
Ge	72	3	He			83111.99		
In	115	3	He			86860.45		
In	115	3	He			86377.88		
In	115	3	He			86267.86		
Tb	159	3	He			401511.87		
Tb	159	3	He			393966.09		
Tb	159	3	He			396028.00		
Bi	209	3	He			310045.76		
Bi	209	3	He			310216.52		
Bi	209	3	He			306863.98		

Quantitation Report

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Sample Type	Sample
Comment	A20 ICP
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

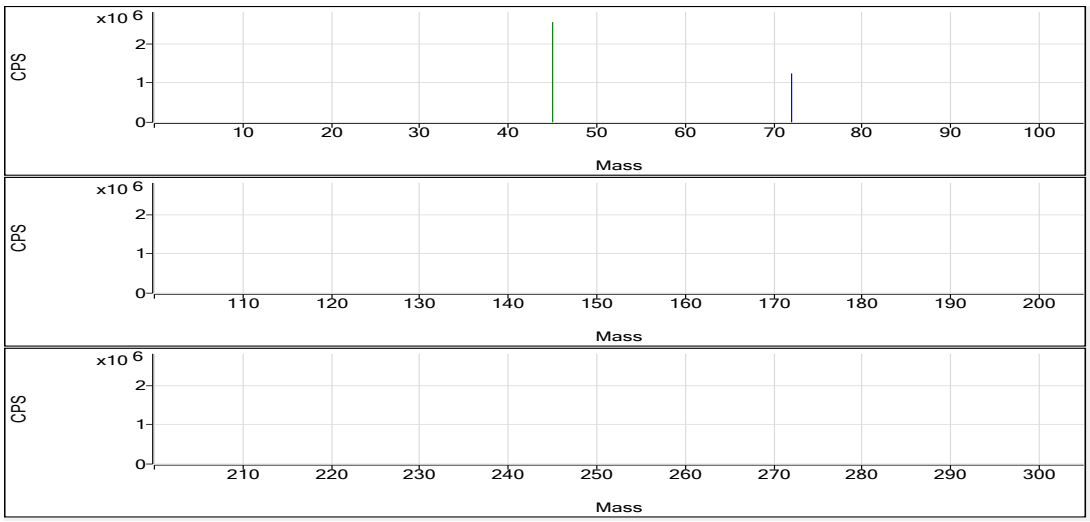
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.015	ppb	33.6	41.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.388	ppb	39.9	28.67	0.0002	Pulse	1.5000	3
Na	23	45	He	89923.495	ppb	3.7	15439669.77	322.0059	Analog	0.1000	3
Mg	24	45	He	21379.861	ppb	1.1	1840366.90	38.3659	Analog	0.1000	3
Al	27	45	He	7.356	ppb	21.9	236.68	0.0049	Pulse	0.1000	3
K	39	45	He	5914.379	ppb	2.8	349184.40	7.2813	Pulse	0.1000	3
Ca	44	45	He	48281.219	ppb	3.0	156527.49	3.2642	Pulse	0.1000	3
Ti	47	45	He	-0.130	ppb	N/A	0.00	0.0000	Pulse	0.1000	3
V	51	45	He	0.232	ppb	21.4	1435.41	0.0299	Pulse	0.5000	3
Cr	52	45	He	-0.245	ppb	N/A	1566.81	0.0326	Pulse	0.1000	3
Mn	55	45	He	2282.741	ppb	2.6	1405131.60	29.2991	Analog	0.1000	3
Fe	57	45	He	6.731	ppb	16.6	256.68	0.0053	Pulse	0.1000	3
Co	59	45	He	1.330	ppb	2.6	3693.93	0.0770	Pulse	0.1000	3
Ni	60	72	He	0.999	ppb	9.7	1006.74	0.0114	Pulse	0.1000	3
Cu	63	72	He	0.101	ppb	49.9	650.04	0.0074	Pulse	0.1000	3
Zn	66	72	He	8.533	ppb	3.2	2530.32	0.0287	Pulse	0.1000	3
As	75	72	He	0.156	ppb	34.8	99.33	0.0011	Pulse	0.5000	3
Sr	88	115	He	277.738	ppb	0.4	219735.34	2.4922	Pulse	0.1000	3
Mo	98	115	He	0.307	ppb	6.2	616.70	0.0070	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	794.3	56.67	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.031	ppb	54.8	14.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.198	ppb	N/A	1176.77	0.0133	Pulse	0.1000	3
Sb	121	115	He	0.122	ppb	23.8	183.34	0.0021	Pulse	0.1000	3
Ba	137	115	He	59.822	ppb	2.9	25337.36	0.2873	Pulse	0.1000	3
Tl	205	159	He	0.052	ppb	5.5	573.37	0.0014	Pulse	0.1000	3
Pb	208	159	He	0.012	ppb	87.2	583.36	0.0014	Pulse	0.1000	3
U	238	209	He	0.028	ppb	27.3	453.36	0.0015	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2545012.20	0.8	106.1	Analog	0.1000	3
No Gas	Ge	72	1241908.08	0.9	107.7	Pulse	0.1000	3
H2	Sc	45	187323.42	1.3	100.2	Pulse	0.1000	3
H2	Ge	72	164298.08	1.6	100.4	Pulse	0.1000	3
H2	In	115	392391.28	0.4	100.8	Pulse	0.1000	3
He	Sc	45	47976.71	2.5	102.9	Pulse	0.1000	3
He	Ge	72	88264.98	1.5	108.7	Pulse	0.1000	3
He	In	115	88166.97	0.8	102.3	Pulse	0.1000	3
He	Tb	159	402182.80	0.6	100.9	Pulse	0.1000	3
He	Bi	209	307672.08	0.3	99.5	Pulse	0.1000	3

No Gas



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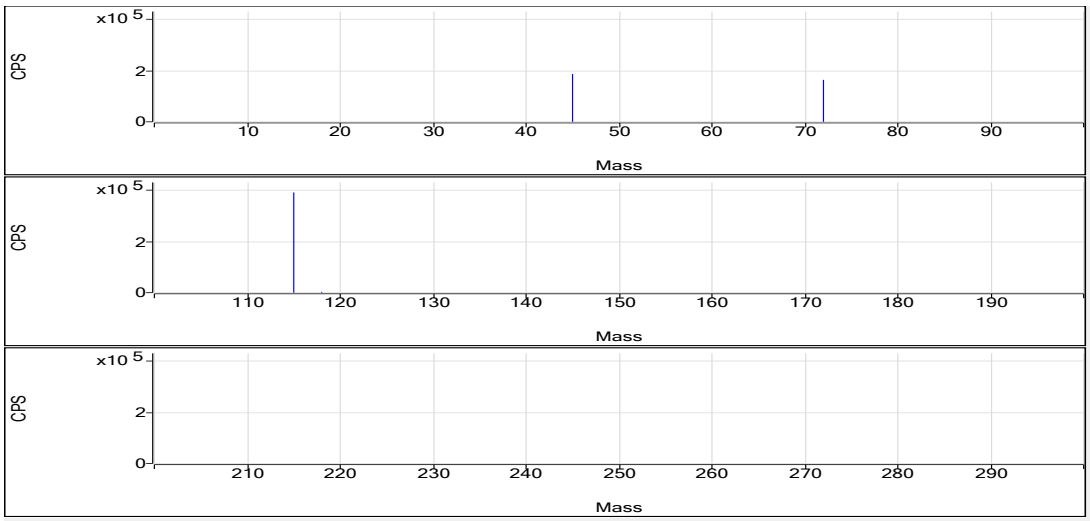
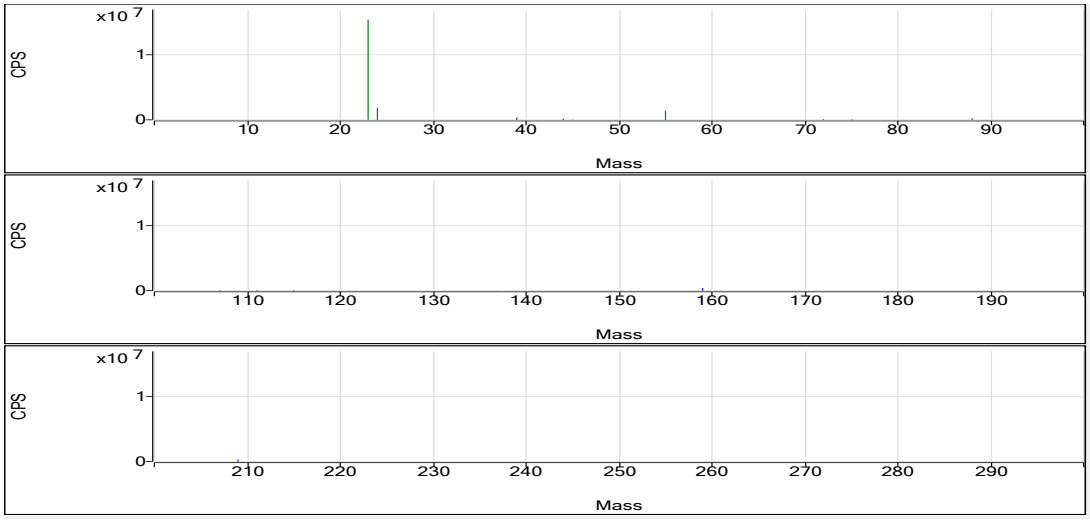


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.021	0	52.00	0.0008	4.685E-06
Be	9	1	No Gas	0.014	0	40.00	0.0008	4.685E-06
Be	9	1	No Gas	0.01	0	32.00	0.0008	4.685E-06
Se	78	2	H2	0.326	0.0001	24.00	0.0004	1.219E-05
Se	78	2	H2	0.274	0.0001	20.67	0.0004	1.219E-05
Se	78	2	H2	0.564	0.0002	41.33	0.0004	1.219E-05
Na	23	3	He	92462.419	331.0878	15692911.02	0.0036	0.3452
Na	23	3	He	91175.128	326.4831	15405798.52	0.0036	0.3452
Na	23	3	He	86132.938	308.4469	15220299.77	0.0036	0.3452
Mg	24	3	He	21591.612	38.7458	1836474.97	0.0018	0.003497
Mg	24	3	He	21421.553	38.4407	1813904.35	0.0018	0.003497
Mg	24	3	He	21126.419	37.9111	1870721.38	0.0018	0.003497
Al	27	3	He	7.195	0.0049	230.01	0.0006	0.0006432
Al	27	3	He	9.044	0.0059	280.01	0.0006	0.0006432
Al	27	3	He	5.829	0.0041	200.01	0.0006	0.0006432
K	39	3	He	5955.158	7.3288	347371.48	0.0012	0.3951
K	39	3	He	6056.871	7.4472	351414.02	0.0012	0.3951
K	39	3	He	5731.109	7.0679	348767.69	0.0012	0.3951
Ca	44	3	He	49117.123	3.3207	157393.26	0.0001	0.002715
Ca	44	3	He	49137.356	3.322	156757.39	0.0001	0.002715
Ca	44	3	He	46589.177	3.1499	155431.82	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	0.252	0.0304	1440.08	0.0219	0.02486
V	51	3	He	0.268	0.0307	1450.08	0.0219	0.02486
V	51	3	He	0.175	0.0287	1416.08	0.0219	0.02486
Cr	52	3	He	-0.229	0.0331	1570.14	0.0299	0.03997
Cr	52	3	He	-0.33	0.0301	1420.12	0.0299	0.03997
Cr	52	3	He	-0.178	0.0347	1710.16	0.0299	0.03997
Mn	55	3	He	2279.954	29.2633	1387022.17	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2343.845	30.0833	1419542.64	0.0128	0.002639
Mn	55	3	He	2224.425	28.5506	1408829.98	0.0128	0.002639
Fe	57	3	He	6.256	0.0051	240.01	0.0006	0.001429
Fe	57	3	He	5.931	0.0049	230.01	0.0006	0.001429
Fe	57	3	He	8.005	0.0061	300.01	0.0006	0.001429
Co	59	3	He	1.368	0.0791	3750.63	0.0563	0.002149
Co	59	3	He	1.299	0.0752	3550.55	0.0563	0.002149
Co	59	3	He	1.323	0.0766	3780.61	0.0563	0.002149
Ni	60	3	He	0.911	0.0107	940.06	0.0086	0.002834
Ni	60	3	He	0.984	0.0113	1010.07	0.0086	0.002834
Ni	60	3	He	1.103	0.0123	1070.08	0.0086	0.002834
Cu	63	3	He	0.049	0.006	530.03	0.0257	0.004757
Cu	63	3	He	0.15	0.0086	770.06	0.0257	0.004757
Cu	63	3	He	0.106	0.0075	650.04	0.0257	0.004757
Zn	66	3	He	8.266	0.0279	2460.32	0.0029	0.003818
Zn	66	3	He	8.813	0.0295	2640.34	0.0029	0.003818
Zn	66	3	He	8.521	0.0286	2490.30	0.0029	0.003818
As	75	3	He	0.093	0.001	88.00	0.002	0.0008061
As	75	3	He	0.184	0.0012	106.00	0.002	0.0008061
As	75	3	He	0.19	0.0012	104.00	0.002	0.0008061
Sr	88	3	He	276.984	2.4855	217205.02	0.009	0.0009645
Sr	88	3	He	278.968	2.5033	222079.90	0.009	0.0009645
Sr	88	3	He	277.263	2.488	219921.11	0.009	0.0009645
Mo	98	3	He	0.311	0.0071	620.04	0.0219	0.0002706
Mo	98	3	He	0.286	0.0065	580.03	0.0219	0.0002706
Mo	98	3	He	0.323	0.0074	650.03	0.0219	0.0002706
Ag	107	3	He	-0.004	0.0005	40.00	0.0465	0.0006206
Ag	107	3	He	0.004	0.0008	70.00	0.0465	0.0006206
Ag	107	3	He	0.001	0.0007	60.00	0.0465	0.0006206
Cd	111	3	He	0.034	0.0002	16.00	0.0053	0
Cd	111	3	He	0.046	0.0002	22.00	0.0053	0
Cd	111	3	He	0.013	0.0001	6.00	0.0053	0
Sn	120	3	He	-0.174	0.0137	1200.11	0.0158	0.01648
Sn	120	3	He	-0.265	0.0123	1090.08	0.0158	0.01648
Sn	120	3	He	-0.155	0.014	1240.12	0.0158	0.01648
Sb	121	3	He	0.136	0.0023	200.01	0.0149	0.0002698
Sb	121	3	He	0.141	0.0024	210.01	0.0149	0.0002698
Sb	121	3	He	0.088	0.0016	140.01	0.0149	0.0002698
Ba	137	3	He	58.038	0.2788	24362.30	0.0048	0.0002317
Ba	137	3	He	61.476	0.2953	26195.68	0.0048	0.0002317
Ba	137	3	He	59.952	0.288	25454.10	0.0048	0.0002317
Tl	205	3	He	0.05	0.0014	550.03	0.0247	0.0001339
Tl	205	3	He	0.052	0.0014	570.03	0.0247	0.0001339
Tl	205	3	He	0.055	0.0015	600.04	0.0247	0.0001339
Pb	208	3	He	0.022	0.0018	390.02	0.0327	0.00107
Pb	208	3	He	0.01	0.0014	290.01	0.0327	0.00107
Pb	208	3	He	0.002	0.0012	170.01	0.0327	0.00107
U	238	3	He	0.027	0.0014	430.02	0.0493	7.55E-05
U	238	3	He	0.022	0.0011	350.02	0.0493	7.55E-05
U	238	3	He	0.037	0.0019	580.04	0.0493	7.55E-05
Sc	45	1	No Gas			2551496.21		
Sc	45	1	No Gas			2561079.81		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2522460.59		
Ge	72	1	No Gas			1240971.47		
Ge	72	1	No Gas			1253657.56		
Ge	72	1	No Gas			1231095.22		
Sc	45	2	H2			185046.52		
Sc	45	2	H2			186978.57		
Sc	45	2	H2			189945.17		
Ge	72	2	H2			162150.77		
Ge	72	2	H2			163625.85		
Ge	72	2	H2			167117.61		
In	115	2	H2			391907.53		
In	115	2	H2			390936.67		
In	115	2	H2			394329.64		
Sc	45	3	He			47398.04		
Sc	45	3	He			47187.13		
Sc	45	3	He			49344.96		
Ge	72	3	He			88231.12		
Ge	72	3	He			89570.06		
Ge	72	3	He			86993.75		
In	115	3	He			87394.62		
In	115	3	He			88722.24		
In	115	3	He			88401.60		
Tb	159	3	He			404736.13		
Tb	159	3	He			401852.38		
Tb	159	3	He			399959.88		
Bi	209	3	He			308761.77		
Bi	209	3	He			307404.27		
Bi	209	3	He			306850.19		

Quantitation Report

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Sample Name	410-137860-B-1-B PDS
Sample Type	Sample
Comment	A20 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

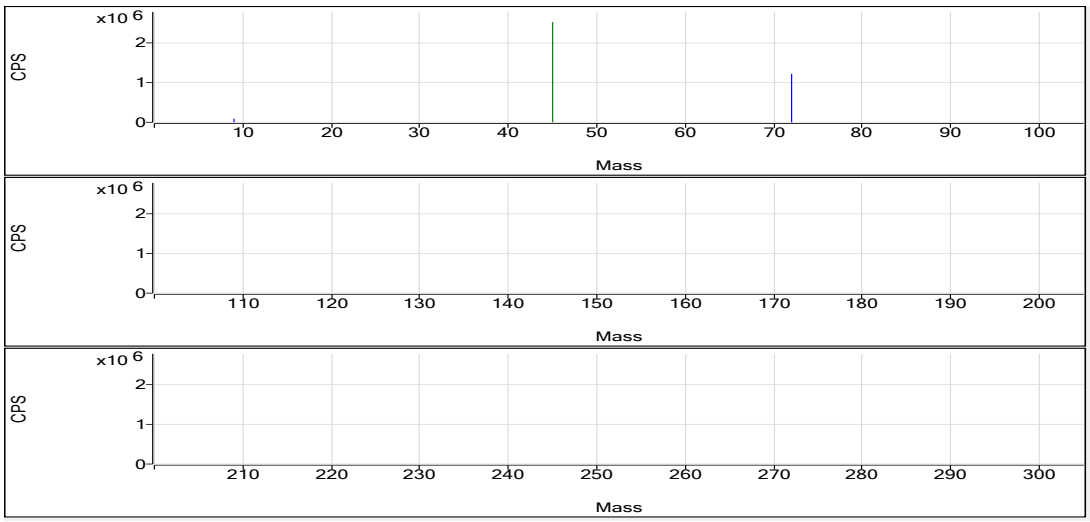
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	46.383	ppb	0.9	89508.21	0.0354	Pulse	0.5000	3
Se	78	72	H2	101.476	ppb	1.5	6911.23	0.0423	Pulse	1.5000	3
Na	23	45	He	88564.894	ppb	1.4	15757676.85	317.1461	Analog	0.1000	3
Mg	24	45	He	24840.961	ppb	2.2	2214665.02	44.5762	Analog	0.1000	3
Al	27	45	He	4721.045	ppb	2.3	137257.63	2.7626	Pulse	0.1000	3
K	39	45	He	10295.689	ppb	1.5	615247.88	12.3826	Pulse	0.1000	3
Ca	44	45	He	50393.232	ppb	1.3	169275.19	3.4069	Pulse	0.1000	3
Ti	47	45	He	483.450	ppb	3.3	12899.42	0.2597	Pulse	0.1000	3
V	51	45	He	490.667	ppb	1.5	534143.96	10.7504	Pulse	0.5000	3
Cr	52	45	He	457.361	ppb	1.2	682383.71	13.7337	Pulse	0.1000	3
Mn	55	45	He	2658.483	ppb	0.3	1695519.66	34.1213	Analog	0.1000	3
Fe	57	45	He	4761.856	ppb	1.0	137537.01	2.7680	Pulse	0.1000	3
Co	59	45	He	457.147	ppb	1.3	1278513.73	25.7314	Pulse	0.1000	3
Ni	60	72	He	480.541	ppb	2.2	358478.16	4.1274	Pulse	0.1000	3
Cu	63	72	He	458.691	ppb	1.7	1023165.66	11.7798	Pulse	0.1000	3
Zn	66	72	He	496.086	ppb	1.3	125801.34	1.4482	Pulse	0.1000	3
As	75	72	He	505.596	ppb	1.1	90052.90	1.0367	Pulse	0.5000	3
Sr	88	115	He	322.725	ppb	2.1	251055.58	2.8957	Pulse	0.1000	3
Mo	98	115	He	50.746	ppb	0.4	96507.31	1.1129	Pulse	0.1000	3
Ag	107	115	He	48.978	ppb	1.6	197460.70	2.2775	Pulse	0.1000	3
Cd	111	115	He	50.345	ppb	1.6	23339.53	0.2692	Pulse	0.5000	3
Sn	120	115	He	101.958	ppb	2.0	141086.21	1.6273	Pulse	0.1000	3
Sb	121	115	He	101.500	ppb	1.6	130736.24	1.5079	Pulse	0.1000	3
Ba	137	115	He	575.094	ppb	2.2	239323.61	2.7603	Pulse	0.1000	3
Tl	205	159	He	100.129	ppb	0.7	990476.42	2.4760	Pulse	0.1000	3
Pb	208	159	He	50.340	ppb	1.4	659502.41	1.6487	Pulse	0.1000	3
U	238	209	He	50.145	ppb	0.6	753044.89	2.4702	Pulse	0.1000	3

ISTD Table:

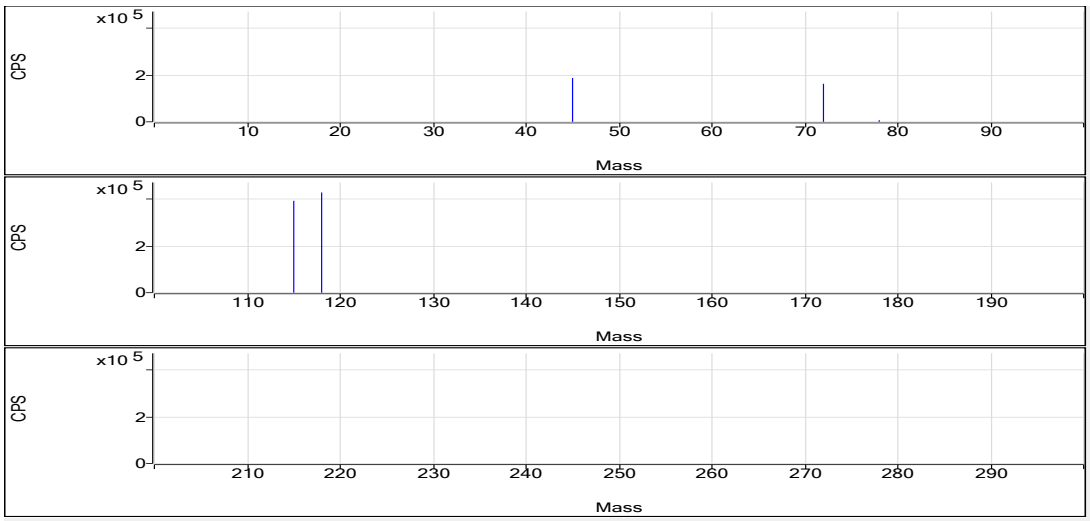
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2529558.50	0.9	105.5	Analog	0.1000	3
No Gas	Ge	72	1222093.55	1.2	106.0	Pulse	0.1000	3
H2	Sc	45	187942.02	0.4	100.5	Pulse	0.1000	3
H2	Ge	72	163254.20	0.1	99.7	Pulse	0.1000	3
H2	In	115	394368.99	0.3	101.4	Pulse	0.1000	3
He	Sc	45	49692.00	1.3	106.5	Pulse	0.1000	3
He	Ge	72	86876.65	2.0	107.0	Pulse	0.1000	3
He	In	115	86711.58	1.1	100.6	Pulse	0.1000	3
He	Tb	159	400046.26	0.7	100.4	Pulse	0.1000	3
He	Bi	209	304855.19	0.6	98.6	Pulse	0.1000	3

No Gas

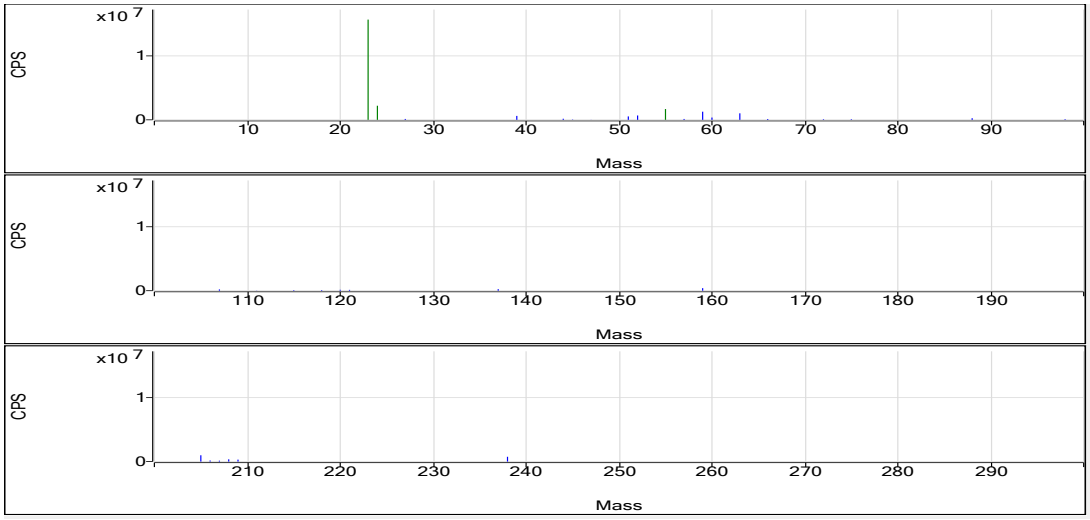


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	46.797	0.0357	90555.91	0.0008	4.685E-06
Be	9	1	No Gas	46.009	0.0351	89388.74	0.0008	4.685E-06
Be	9	1	No Gas	46.344	0.0354	88579.99	0.0008	4.685E-06
Se	78	2	H2	102.703	0.0428	6988.37	0.0004	1.219E-05
Se	78	2	H2	99.776	0.0416	6806.96	0.0004	1.219E-05
Se	78	2	H2	101.95	0.0425	6938.35	0.0004	1.219E-05
Na	23	3	He	87950.092	314.9469	15746141.02	0.0036	0.3452
Na	23	3	He	90024.428	322.3669	15780803.51	0.0036	0.3452
Na	23	3	He	87720.161	314.1245	15746086.02	0.0036	0.3452
Mg	24	3	He	24535.177	44.0275	2201206.53	0.0018	0.003497
Mg	24	3	He	25464.959	45.6958	2236944.34	0.0018	0.003497
Mg	24	3	He	24522.746	44.0052	2205844.19	0.0018	0.003497
Al	27	3	He	4616.92	2.7017	135074.77	0.0006	0.0006432
Al	27	3	He	4830.535	2.8267	138373.98	0.0006	0.0006432
Al	27	3	He	4715.679	2.7595	138324.15	0.0006	0.0006432
K	39	3	He	10161.186	12.226	611253.47	0.0012	0.3951
K	39	3	He	10461.665	12.5759	615625.15	0.0012	0.3951
K	39	3	He	10264.216	12.346	618865.03	0.0012	0.3951
Ca	44	3	He	50122.574	3.3886	169416.54	0.0001	0.002715
Ca	44	3	He	51148.609	3.4579	169274.35	0.0001	0.002715
Ca	44	3	He	49908.512	3.3741	169134.68	0.0001	0.002715
Ti	47	3	He	470.932	0.2529	12645.87	0.0005	7.003E-05
Ti	47	3	He	501.535	0.2694	13186.40	0.0005	7.003E-05
Ti	47	3	He	477.882	0.2567	12866.00	0.0005	7.003E-05
V	51	3	He	486.844	10.6669	533302.31	0.0219	0.02486
V	51	3	He	498.909	10.9306	535084.81	0.0219	0.02486
V	51	3	He	486.249	10.6539	534044.75	0.0219	0.02486
Cr	52	3	He	455.766	13.6859	684244.60	0.0299	0.03997
Cr	52	3	He	463.596	13.9204	681442.96	0.0299	0.03997
Cr	52	3	He	452.721	13.5948	681463.58	0.0299	0.03997
Mn	55	3	He	2661.333	34.1579	1707762.32	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2665.087	34.206	1674485.29	0.0128	0.002639
Mn	55	3	He	2649.028	33.9999	1704311.38	0.0128	0.002639
Fe	57	3	He	4748.947	2.7605	138015.60	0.0006	0.001429
Fe	57	3	He	4814.313	2.7985	136994.76	0.0006	0.001429
Fe	57	3	He	4722.308	2.745	137600.67	0.0006	0.001429
Co	59	3	He	451.801	25.4305	1271429.82	0.0563	0.002149
Co	59	3	He	463.743	26.1027	1277801.47	0.0563	0.002149
Co	59	3	He	455.897	25.6611	1286309.90	0.0563	0.002149
Ni	60	3	He	482.862	4.1473	355994.14	0.0086	0.002834
Ni	60	3	He	489.527	4.2045	361325.74	0.0086	0.002834
Ni	60	3	He	469.233	4.0303	358114.60	0.0086	0.002834
Cu	63	3	He	465.182	11.9465	1025454.67	0.0257	0.004757
Cu	63	3	He	461.109	11.8419	1017664.98	0.0257	0.004757
Cu	63	3	He	449.783	11.5512	1026377.33	0.0257	0.004757
Zn	66	3	He	494.564	1.4438	123931.89	0.0029	0.003818
Zn	66	3	He	503.295	1.4692	126261.12	0.0029	0.003818
Zn	66	3	He	490.399	1.4317	127211.02	0.0029	0.003818
As	75	3	He	508.698	1.0431	89533.76	0.002	0.0008061
As	75	3	He	508.744	1.0432	89646.27	0.002	0.0008061
As	75	3	He	499.347	1.0239	90978.66	0.002	0.0008061
Sr	88	3	He	315.261	2.8288	248329.76	0.009	0.0009645
Sr	88	3	He	324.755	2.914	252012.48	0.009	0.0009645
Sr	88	3	He	328.158	2.9445	252824.51	0.009	0.0009645
Mo	98	3	He	50.954	1.1175	98101.73	0.0219	0.0002706
Mo	98	3	He	50.638	1.1106	96047.72	0.0219	0.0002706
Mo	98	3	He	50.645	1.1107	95372.48	0.0219	0.0002706
Ag	107	3	He	48.152	2.2391	196558.90	0.0465	0.0006206
Ag	107	3	He	49.063	2.2814	197308.86	0.0465	0.0006206
Ag	107	3	He	49.72	2.312	198514.33	0.0465	0.0006206
Cd	111	3	He	49.707	0.2658	23331.49	0.0053	0
Cd	111	3	He	50.052	0.2676	23145.21	0.0053	0
Cd	111	3	He	51.278	0.2742	23541.88	0.0053	0
Sn	120	3	He	99.691	1.5915	139708.63	0.0158	0.01648
Sn	120	3	He	103.714	1.655	143133.56	0.0158	0.01648
Sn	120	3	He	102.468	1.6353	140416.45	0.0158	0.01648
Sb	121	3	He	99.694	1.4811	130017.30	0.0149	0.0002698
Sb	121	3	He	102.011	1.5155	131065.47	0.0149	0.0002698
Sb	121	3	He	102.796	1.5271	131125.94	0.0149	0.0002698
Ba	137	3	He	569.291	2.7324	239871.68	0.0048	0.0002317
Ba	137	3	He	566.406	2.7186	235117.48	0.0048	0.0002317
Ba	137	3	He	589.586	2.8299	242981.66	0.0048	0.0002317
Tl	205	3	He	100.367	2.4818	996717.09	0.0247	0.0001339
Tl	205	3	He	99.313	2.4558	986551.47	0.0247	0.0001339
Tl	205	3	He	100.707	2.4903	988160.69	0.0247	0.0001339
Pb	208	3	He	49.96	1.6363	349322.49	0.0327	0.00107
Pb	208	3	He	49.907	1.6345	351418.00	0.0327	0.00107
Pb	208	3	He	51.152	1.6753	353554.06	0.0327	0.00107
U	238	3	He	50.015	2.4638	755013.97	0.0493	7.55E-05
U	238	3	He	49.943	2.4603	751455.15	0.0493	7.55E-05
U	238	3	He	50.477	2.4866	752665.54	0.0493	7.55E-05
Sc	45	1	No Gas			2536544.02		
Sc	45	1	No Gas			2546724.02		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2505407.46		
Ge	72	1	No Gas			1226632.79		
Ge	72	1	No Gas			1234340.76		
Ge	72	1	No Gas			1205307.09		
Sc	45	2	H2			187434.45		
Sc	45	2	H2			187528.30		
Sc	45	2	H2			188863.30		
Ge	72	2	H2			163102.63		
Ge	72	2	H2			163528.02		
Ge	72	2	H2			163131.95		
In	115	2	H2			394069.84		
In	115	2	H2			395565.50		
In	115	2	H2			393471.63		
Sc	45	3	He			49996.17		
Sc	45	3	He			48952.92		
Sc	45	3	He			50126.90		
Ge	72	3	He			85837.47		
Ge	72	3	He			85937.57		
Ge	72	3	He			88854.90		
In	115	3	He			88531.82		
In	115	3	He			87233.54		
In	115	3	He			86608.66		
Tb	159	3	He			401604.21		
Tb	159	3	He			401724.88		
Tb	159	3	He			396809.68		
Bi	209	3	He			306439.12		
Bi	209	3	He			305434.16		
Bi	209	3	He			302692.28		

Quantitation Report

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Acq Time	8/10/2023 6:44:23 PM
Sample Name	410-137860-B-1-B SD@5
Sample Type	Sample
Comment	A20 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

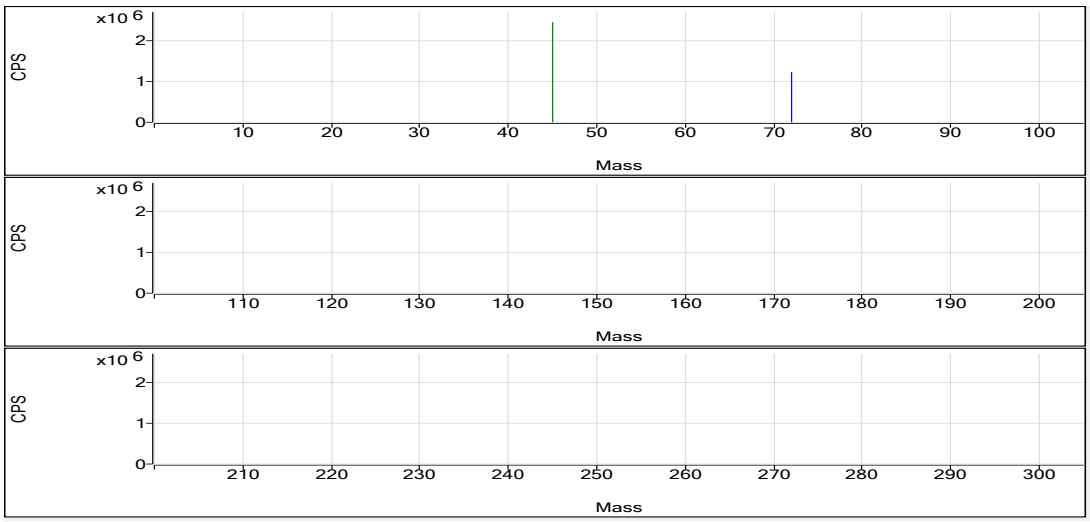
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.022	ppb	35.3	53.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.192	ppb	7.7	14.89	0.0001	Pulse	1.5000	3
Na	23	45	He	17975.703	ppb	2.0	3068740.06	64.6451	Analog	0.1000	3
Mg	24	45	He	4043.585	ppb	0.8	344610.46	7.2590	Pulse	0.1000	3
Al	27	45	He	3.347	ppb	65.1	123.34	0.0026	Pulse	0.1000	3
K	39	45	He	1180.913	ppb	1.4	84028.61	1.7700	Pulse	0.1000	3
Ca	44	45	He	9676.944	ppb	2.0	31160.51	0.6564	Pulse	0.1000	3
Ti	47	45	He	0.520	ppb	114.4	16.67	0.0003	Pulse	0.1000	3
V	51	45	He	0.295	ppb	12.9	1486.09	0.0313	Pulse	0.5000	3
Cr	52	45	He	0.046	ppb	182.5	1963.54	0.0413	Pulse	0.1000	3
Mn	55	45	He	433.952	ppb	2.2	264495.78	5.5719	Pulse	0.1000	3
Fe	57	45	He	4.073	ppb	31.8	180.01	0.0038	Pulse	0.1000	3
Co	59	45	He	0.335	ppb	11.9	996.74	0.0210	Pulse	0.1000	3
Ni	60	72	He	0.269	ppb	52.3	446.69	0.0051	Pulse	0.1000	3
Cu	63	72	He	0.160	ppb	34.0	770.05	0.0089	Pulse	0.1000	3
Zn	66	72	He	5.361	ppb	7.5	1690.16	0.0194	Pulse	0.1000	3
As	75	72	He	0.096	ppb	66.1	87.33	0.0010	Pulse	0.5000	3
Sr	88	115	He	53.853	ppb	0.5	41889.43	0.4840	Pulse	0.1000	3
Mo	98	115	He	0.232	ppb	1.1	463.36	0.0054	Pulse	0.1000	3
Ag	107	115	He	0.003	ppb	195.1	66.67	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.010	ppb	24.4	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.043	ppb	N/A	1366.78	0.0158	Pulse	0.1000	3
Sb	121	115	He	0.158	ppb	20.2	226.68	0.0026	Pulse	0.1000	3
Ba	137	115	He	11.881	ppb	3.5	4954.43	0.0573	Pulse	0.1000	3
Tl	205	159	He	0.205	ppb	6.9	2076.90	0.0052	Pulse	0.1000	3
Pb	208	159	He	0.026	ppb	23.9	763.37	0.0019	Pulse	0.1000	3
U	238	209	He	0.146	ppb	3.5	2253.62	0.0073	Pulse	0.1000	3

ISTD Table:

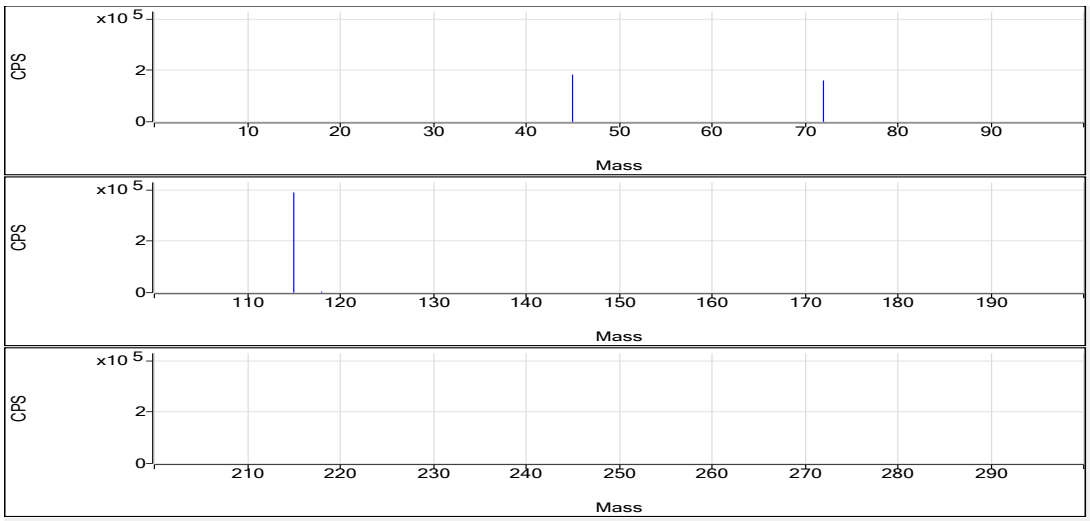
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2453837.52	1.1	102.3	Analog	0.1000	3
No Gas	Ge	72	1227376.00	0.3	106.4	Pulse	0.1000	3
H2	Sc	45	183599.04	1.0	98.2	Pulse	0.1000	3
H2	Ge	72	161014.90	0.3	98.4	Pulse	0.1000	3
H2	In	115	390288.88	0.9	100.3	Pulse	0.1000	3
He	Sc	45	47474.88	0.8	101.8	Pulse	0.1000	3
He	Ge	72	86994.30	0.8	107.1	Pulse	0.1000	3
He	In	115	86545.18	0.4	100.4	Pulse	0.1000	3
He	Tb	159	398416.21	0.6	100.0	Pulse	0.1000	3
He	Bi	209	309727.85	0.9	100.1	Pulse	0.1000	3

No Gas

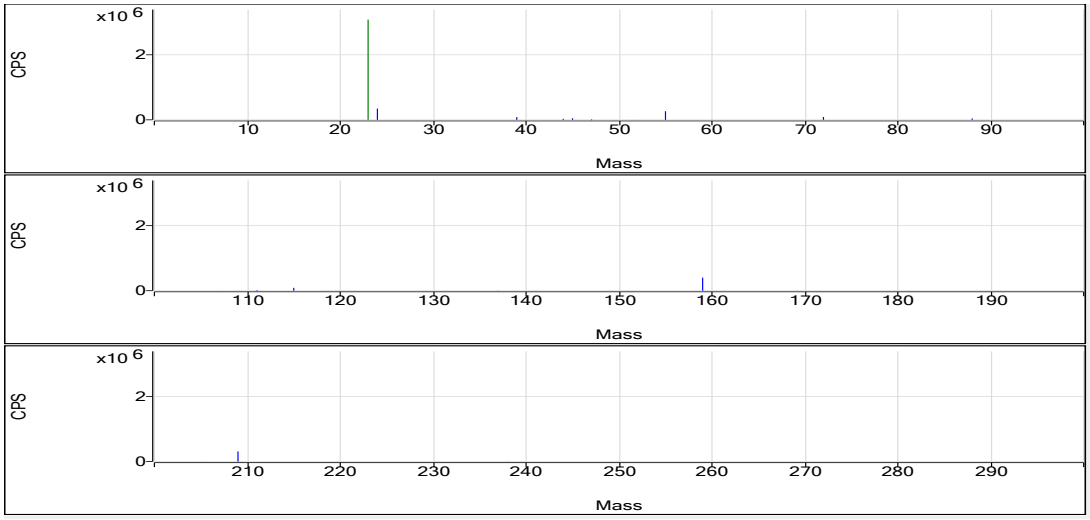


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.017	0	42.00	0.0008	4.685E-06
Be	9	1	No Gas	0.019	0	48.00	0.0008	4.685E-06
Be	9	1	No Gas	0.031	0	70.00	0.0008	4.685E-06
Se	78	2	H2	0.209	0.0001	16.00	0.0004	1.219E-05
Se	78	2	H2	0.189	0.0001	14.67	0.0004	1.219E-05
Se	78	2	H2	0.18	0.0001	14.00	0.0004	1.219E-05
Na	23	3	He	18380.942	66.0947	3111545.58	0.0036	0.3452
Na	23	3	He	17796.092	64.0027	3061207.77	0.0036	0.3452
Na	23	3	He	17750.077	63.8381	3033466.83	0.0036	0.3452
Mg	24	3	He	4076.017	7.3172	344471.67	0.0018	0.003497
Mg	24	3	He	4039.805	7.2522	346868.67	0.0018	0.003497
Mg	24	3	He	4014.935	7.2076	342491.05	0.0018	0.003497
Al	27	3	He	3.621	0.0028	130.01	0.0006	0.0006432
Al	27	3	He	1.045	0.0013	60.00	0.0006	0.0006432
Al	27	3	He	5.376	0.0038	180.01	0.0006	0.0006432
K	39	3	He	1198.718	1.7908	84304.04	0.0012	0.3951
K	39	3	He	1176.677	1.7651	84423.82	0.0012	0.3951
K	39	3	He	1167.342	1.7542	83357.98	0.0012	0.3951
Ca	44	3	He	9775.056	0.663	31213.93	0.0001	0.002715
Ca	44	3	He	9456.259	0.6415	30682.71	0.0001	0.002715
Ca	44	3	He	9799.516	0.6647	31584.89	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	1.038	0.0006	30.00	0.0005	7.003E-05
Ti	47	3	He	0.653	0.0004	20.00	0.0005	7.003E-05
V	51	3	He	0.312	0.0317	1492.09	0.0219	0.02486
V	51	3	He	0.32	0.0319	1524.09	0.0219	0.02486
V	51	3	He	0.251	0.0303	1442.08	0.0219	0.02486
Cr	52	3	He	-0.051	0.0385	1810.18	0.0299	0.03997
Cr	52	3	He	0.097	0.0429	2050.22	0.0299	0.03997
Cr	52	3	He	0.092	0.0427	2030.22	0.0299	0.03997
Mn	55	3	He	443.341	5.6924	267982.89	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	424.425	5.4497	260653.92	0.0128	0.002639
Mn	55	3	He	434.088	5.5737	264850.52	0.0128	0.002639
Fe	57	3	He	4.853	0.0042	200.01	0.0006	0.001429
Fe	57	3	He	2.579	0.0029	140.01	0.0006	0.001429
Fe	57	3	He	4.786	0.0042	200.01	0.0006	0.001429
Co	59	3	He	0.317	0.02	940.06	0.0563	0.002149
Co	59	3	He	0.307	0.0194	930.06	0.0563	0.002149
Co	59	3	He	0.381	0.0236	1120.09	0.0563	0.002149
Ni	60	3	He	0.368	0.006	520.03	0.0086	0.002834
Ni	60	3	He	0.108	0.0038	330.02	0.0086	0.002834
Ni	60	3	He	0.33	0.0057	490.03	0.0086	0.002834
Cu	63	3	He	0.219	0.0104	900.06	0.0257	0.004757
Cu	63	3	He	0.112	0.0076	670.04	0.0257	0.004757
Cu	63	3	He	0.148	0.0086	740.05	0.0257	0.004757
Zn	66	3	He	4.906	0.0181	1570.14	0.0029	0.003818
Zn	66	3	He	5.656	0.0203	1780.17	0.0029	0.003818
Zn	66	3	He	5.52	0.0199	1720.17	0.0029	0.003818
As	75	3	He	0.023	0.0009	74.00	0.002	0.0008061
As	75	3	He	0.129	0.0011	94.00	0.002	0.0008061
As	75	3	He	0.137	0.0011	94.00	0.002	0.0008061
Sr	88	3	He	53.684	0.4825	41581.88	0.009	0.0009645
Sr	88	3	He	54.148	0.4867	42253.89	0.009	0.0009645
Sr	88	3	He	53.726	0.4829	41832.53	0.009	0.0009645
Mo	98	3	He	0.231	0.0053	460.02	0.0219	0.0002706
Mo	98	3	He	0.235	0.0054	470.03	0.0219	0.0002706
Mo	98	3	He	0.23	0.0053	460.02	0.0219	0.0002706
Ag	107	3	He	0.009	0.001	90.00	0.0465	0.0006206
Ag	107	3	He	0.004	0.0008	70.00	0.0465	0.0006206
Ag	107	3	He	-0.003	0.0005	40.00	0.0465	0.0006206
Cd	111	3	He	0.009	0	4.00	0.0053	0
Cd	111	3	He	0.013	0.0001	6.00	0.0053	0
Cd	111	3	He	0.009	0	4.00	0.0053	0
Sn	120	3	He	-0.022	0.0161	1390.12	0.0158	0.01648
Sn	120	3	He	-0.066	0.0154	1340.11	0.0158	0.01648
Sn	120	3	He	-0.042	0.0158	1370.12	0.0158	0.01648
Sb	121	3	He	0.122	0.0021	180.01	0.0149	0.0002698
Sb	121	3	He	0.168	0.0028	240.01	0.0149	0.0002698
Sb	121	3	He	0.184	0.003	260.01	0.0149	0.0002698
Ba	137	3	He	12.116	0.0584	5031.12	0.0048	0.0002317
Ba	137	3	He	11.401	0.055	4771.00	0.0048	0.0002317
Ba	137	3	He	12.125	0.0584	5061.16	0.0048	0.0002317
Tl	205	3	He	0.193	0.0049	1950.23	0.0247	0.0001339
Tl	205	3	He	0.202	0.0051	2060.23	0.0247	0.0001339
Tl	205	3	He	0.221	0.0056	2220.25	0.0247	0.0001339
Pb	208	3	He	0.021	0.0018	400.02	0.0327	0.00107
Pb	208	3	He	0.033	0.0021	570.03	0.0327	0.00107
Pb	208	3	He	0.023	0.0018	330.02	0.0327	0.00107
U	238	3	He	0.141	0.007	2170.29	0.0493	7.55E-05
U	238	3	He	0.147	0.0073	2290.29	0.0493	7.55E-05
U	238	3	He	0.151	0.0075	2300.29	0.0493	7.55E-05
Sc	45	1	No Gas			2429647.62		
Sc	45	1	No Gas			2481844.34		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2450020.59		
Ge	72	1	No Gas			1223098.58		
Ge	72	1	No Gas			1229536.31		
Ge	72	1	No Gas			1229493.11		
Sc	45	2	H2			183930.31		
Sc	45	2	H2			185316.89		
Sc	45	2	H2			181549.92		
Ge	72	2	H2			161089.36		
Ge	72	2	H2			161462.31		
Ge	72	2	H2			160493.04		
In	115	2	H2			394408.20		
In	115	2	H2			389020.19		
In	115	2	H2			387438.24		
Sc	45	3	He			47077.09		
Sc	45	3	He			47829.39		
Sc	45	3	He			47518.16		
Ge	72	3	He			86743.38		
Ge	72	3	He			87758.34		
Ge	72	3	He			86481.17		
In	115	3	He			86187.53		
In	115	3	He			86830.98		
In	115	3	He			86639.35		
Tb	159	3	He			397170.66		
Tb	159	3	He			401146.56		
Tb	159	3	He			396931.40		
Bi	209	3	He			309859.84		
Bi	209	3	He			312333.47		
Bi	209	3	He			306990.23		

Quantitation Report

Data File Name	237SMPL.d
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Sample Type	Sample
Comment	A20 ICP
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

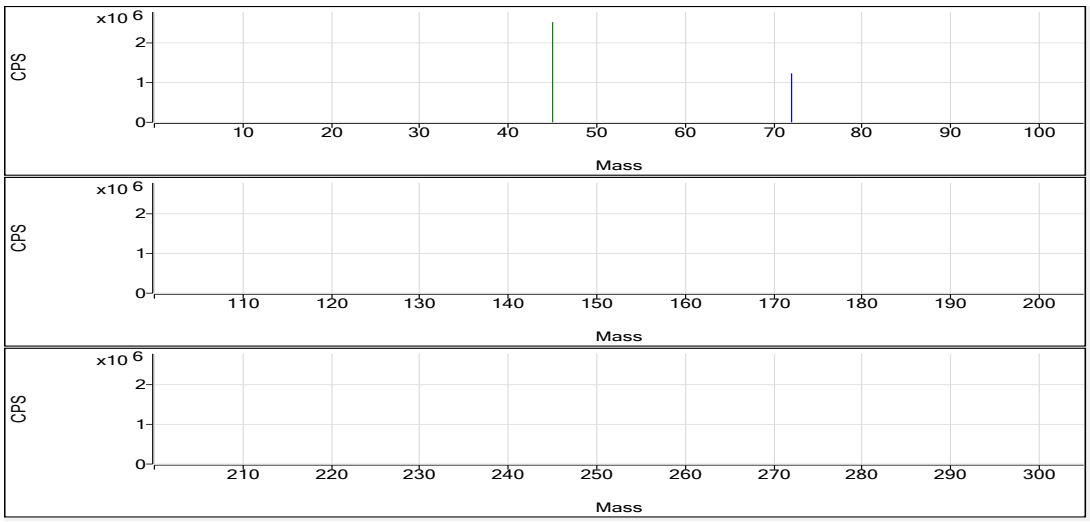
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.013	ppb	43.2	36.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.329	ppb	8.4	24.89	0.0001	Pulse	1.5000	3
Na	23	45	He	88960.679	ppb	1.6	15314631.44	318.5619	Analog	0.1000	3
Mg	24	45	He	21341.296	ppb	1.0	1841430.80	38.2967	Analog	0.1000	3
Al	27	45	He	6.117	ppb	26.2	203.34	0.0042	Pulse	0.1000	3
K	39	45	He	5885.593	ppb	0.7	348493.08	7.2478	Pulse	0.1000	3
Ca	44	45	He	48657.767	ppb	0.1	158165.87	3.2896	Pulse	0.1000	3
Ti	47	45	He	0.129	ppb	174.0	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	0.270	ppb	25.8	1480.09	0.0308	Pulse	0.5000	3
Cr	52	45	He	-0.199	ppb	N/A	1636.82	0.0340	Pulse	0.1000	3
Mn	55	45	He	2254.851	ppb	0.8	1391469.98	28.9411	Analog	0.1000	3
Fe	57	45	He	5.876	ppb	39.0	233.34	0.0048	Pulse	0.1000	3
Co	59	45	He	1.226	ppb	7.2	3420.52	0.0711	Pulse	0.1000	3
Ni	60	72	He	1.113	ppb	9.3	1083.41	0.0124	Pulse	0.1000	3
Cu	63	72	He	0.164	ppb	12.8	783.39	0.0090	Pulse	0.1000	3
Zn	66	72	He	9.182	ppb	14.0	2670.35	0.0306	Pulse	0.1000	3
As	75	72	He	0.139	ppb	82.4	95.33	0.0011	Pulse	0.5000	3
Sr	88	115	He	277.287	ppb	3.4	217640.23	2.4882	Pulse	0.1000	3
Mo	98	115	He	0.287	ppb	8.9	573.37	0.0066	Pulse	0.1000	3
Ag	107	115	He	-0.007	ppb	N/A	26.67	0.0003	Pulse	0.1000	3
Cd	111	115	He	0.044	ppb	16.9	20.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.169	ppb	N/A	1206.76	0.0138	Pulse	0.1000	3
Sb	121	115	He	0.095	ppb	35.7	146.67	0.0017	Pulse	0.1000	3
Ba	137	115	He	61.927	ppb	3.9	26012.13	0.2974	Pulse	0.1000	3
Tl	205	159	He	0.070	ppb	2.8	746.72	0.0019	Pulse	0.1000	3
Pb	208	159	He	0.009	ppb	104.1	550.02	0.0014	Pulse	0.1000	3
U	238	209	He	0.032	ppb	9.7	513.36	0.0017	Pulse	0.1000	3

ISTD Table:

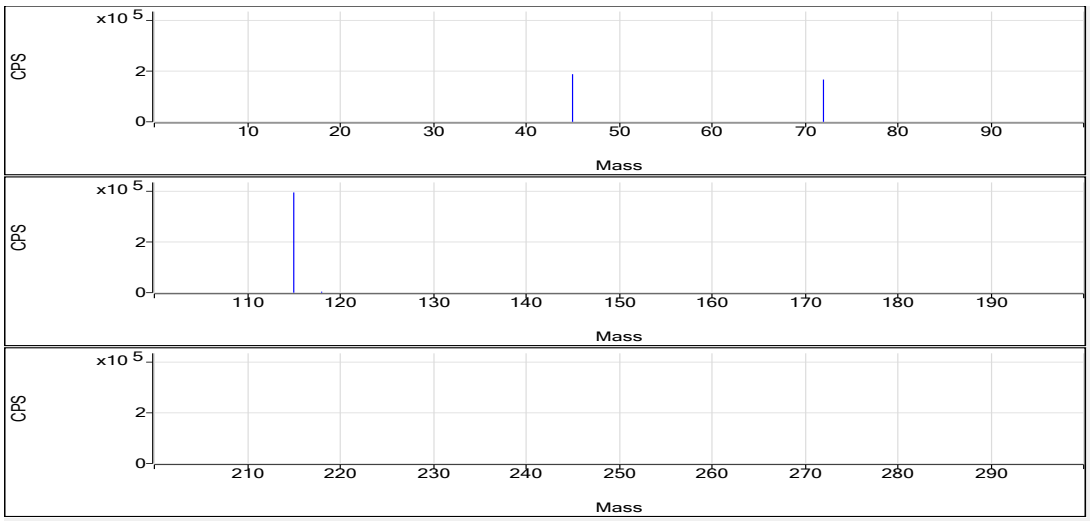
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2511251.78	0.4	104.7	Analog	0.1000	3
No Gas	Ge	72	1227074.43	0.2	106.4	Pulse	0.1000	3
H2	Sc	45	187683.66	0.2	100.4	Pulse	0.1000	3
H2	Ge	72	166528.33	1.3	101.7	Pulse	0.1000	3
H2	In	115	394908.50	0.5	101.5	Pulse	0.1000	3
He	Sc	45	48080.23	1.2	103.1	Pulse	0.1000	3
He	Ge	72	87454.37	1.1	107.7	Pulse	0.1000	3
He	In	115	87506.78	2.4	101.5	Pulse	0.1000	3
He	Tb	159	401176.88	0.7	100.6	Pulse	0.1000	3
He	Bi	209	306088.04	0.8	99.0	Pulse	0.1000	3

No Gas

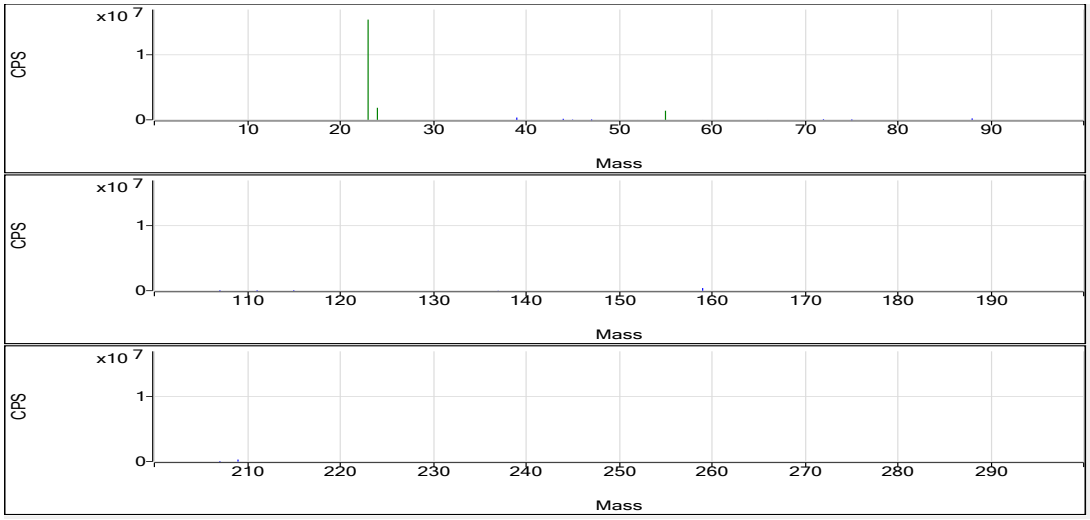


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.006	0	24.00	0.0008	4.685E-06
Be	9	1	No Gas	0.015	0	40.00	0.0008	4.685E-06
Be	9	1	No Gas	0.017	0	44.00	0.0008	4.685E-06
Se	78	2	H2	0.361	0.0002	27.33	0.0004	1.219E-05
Se	78	2	H2	0.314	0.0001	24.00	0.0004	1.219E-05
Se	78	2	H2	0.312	0.0001	23.33	0.0004	1.219E-05
Na	23	3	He	90584.656	324.3709	15397309.77	0.0036	0.3452
Na	23	3	He	88357.798	316.4053	15235014.77	0.0036	0.3452
Na	23	3	He	87939.582	314.9094	15311569.77	0.0036	0.3452
Mg	24	3	He	21213.974	38.0682	1807029.50	0.0018	0.003497
Mg	24	3	He	21230.632	38.0981	1834434.66	0.0018	0.003497
Mg	24	3	He	21579.28	38.7237	1882828.25	0.0018	0.003497
Al	27	3	He	4.302	0.0032	150.01	0.0006	0.0006432
Al	27	3	He	6.711	0.0046	220.01	0.0006	0.0006432
Al	27	3	He	7.338	0.0049	240.01	0.0006	0.0006432
K	39	3	He	5837.713	7.1921	341394.84	0.0012	0.3951
K	39	3	He	5913.762	7.2806	350563.94	0.0012	0.3951
K	39	3	He	5905.305	7.2708	353520.46	0.0012	0.3951
Ca	44	3	He	48694.639	3.2921	156271.58	0.0001	0.002715
Ca	44	3	He	48638.731	3.2884	158335.26	0.0001	0.002715
Ca	44	3	He	48639.931	3.2884	159890.78	0.0001	0.002715
Ti	47	3	He	0.262	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	0.256	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	0.218	0.0296	1406.08	0.0219	0.02486
V	51	3	He	0.244	0.0302	1454.08	0.0219	0.02486
V	51	3	He	0.349	0.0325	1580.10	0.0219	0.02486
Cr	52	3	He	-0.195	0.0341	1620.15	0.0299	0.03997
Cr	52	3	He	-0.392	0.0282	1360.11	0.0299	0.03997
Cr	52	3	He	-0.009	0.0397	1930.19	0.0299	0.03997
Mn	55	3	He	2268.15	29.1118	1381885.14	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2234.881	28.6848	1381183.42	0.0128	0.002639
Mn	55	3	He	2261.521	29.0267	1411341.39	0.0128	0.002639
Fe	57	3	He	3.343	0.0034	160.01	0.0006	0.001429
Fe	57	3	He	6.478	0.0052	250.01	0.0006	0.001429
Fe	57	3	He	7.807	0.006	290.01	0.0006	0.001429
Co	59	3	He	1.186	0.0689	3270.49	0.0563	0.002149
Co	59	3	He	1.327	0.0769	3700.60	0.0563	0.002149
Co	59	3	He	1.164	0.0677	3290.47	0.0563	0.002149
Ni	60	3	He	1.095	0.0122	1060.08	0.0086	0.002834
Ni	60	3	He	1.223	0.0133	1180.08	0.0086	0.002834
Ni	60	3	He	1.019	0.0116	1010.07	0.0086	0.002834
Cu	63	3	He	0.188	0.0096	830.05	0.0257	0.004757
Cu	63	3	He	0.149	0.0086	760.05	0.0257	0.004757
Cu	63	3	He	0.154	0.0087	760.06	0.0257	0.004757
Zn	66	3	He	10.662	0.0349	3020.43	0.0029	0.003818
Zn	66	3	He	8.509	0.0286	2530.30	0.0029	0.003818
Zn	66	3	He	8.376	0.0282	2460.32	0.0029	0.003818
As	75	3	He	0.226	0.0013	110.00	0.002	0.0008061
As	75	3	He	0.18	0.0012	104.00	0.002	0.0008061
As	75	3	He	0.009	0.0008	72.00	0.002	0.0008061
Sr	88	3	He	278.635	2.5003	214546.70	0.009	0.0009645
Sr	88	3	He	267.237	2.398	215379.51	0.009	0.0009645
Sr	88	3	He	285.989	2.5662	222994.47	0.009	0.0009645
Mo	98	3	He	0.285	0.0065	560.03	0.0219	0.0002706
Mo	98	3	He	0.262	0.006	540.03	0.0219	0.0002706
Mo	98	3	He	0.313	0.0071	620.04	0.0219	0.0002706
Ag	107	3	He	-0.011	0.0001	10.00	0.0465	0.0006206
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Ag	107	3	He	-0.003	0.0005	40.00	0.0465	0.0006206
Cd	111	3	He	0.052	0.0003	24.00	0.0053	0
Cd	111	3	He	0.037	0.0002	18.00	0.0053	0
Cd	111	3	He	0.043	0.0002	20.00	0.0053	0
Sn	120	3	He	-0.076	0.0153	1310.12	0.0158	0.01648
Sn	120	3	He	-0.19	0.0135	1210.09	0.0158	0.01648
Sn	120	3	He	-0.242	0.0127	1100.08	0.0158	0.01648
Sb	121	3	He	0.107	0.0019	160.01	0.0149	0.0002698
Sb	121	3	He	0.057	0.0011	100.00	0.0149	0.0002698
Sb	121	3	He	0.121	0.0021	180.01	0.0149	0.0002698
Ba	137	3	He	63.463	0.3048	26155.74	0.0048	0.0002317
Ba	137	3	He	59.12	0.284	25504.48	0.0048	0.0002317
Ba	137	3	He	63.198	0.3035	26376.16	0.0048	0.0002317
Tl	205	3	He	0.068	0.0018	720.05	0.0247	0.0001339
Tl	205	3	He	0.07	0.0019	750.04	0.0247	0.0001339
Tl	205	3	He	0.072	0.0019	770.06	0.0247	0.0001339
Pb	208	3	He	0.016	0.0016	420.02	0.0327	0.00107
Pb	208	3	He	0.013	0.0015	330.01	0.0327	0.00107
Pb	208	3	He	-0.002	0.001	210.01	0.0327	0.00107
U	238	3	He	0.032	0.0016	500.02	0.0493	7.55E-05
U	238	3	He	0.03	0.0015	470.02	0.0493	7.55E-05
U	238	3	He	0.036	0.0018	570.04	0.0493	7.55E-05
Sc	45	1	No Gas			2498612.15		
Sc	45	1	No Gas			2519140.74		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2516002.46		
Ge	72	1	No Gas			1224109.12		
Ge	72	1	No Gas			1229061.23		
Ge	72	1	No Gas			1228052.95		
Sc	45	2	H2			187261.91		
Sc	45	2	H2			188102.26		
Sc	45	2	H2			187686.81		
Ge	72	2	H2			167947.32		
Ge	72	2	H2			167514.51		
Ge	72	2	H2			164123.16		
In	115	2	H2			396859.64		
In	115	2	H2			393357.77		
In	115	2	H2			394508.08		
Sc	45	3	He			47468.22		
Sc	45	3	He			48150.31		
Sc	45	3	He			48622.15		
Ge	72	3	He			86643.12		
Ge	72	3	He			88493.67		
Ge	72	3	He			87226.32		
In	115	3	He			85814.32		
In	115	3	He			89819.71		
In	115	3	He			86901.61		
Tb	159	3	He			397991.09		
Tb	159	3	He			401634.37		
Tb	159	3	He			403905.19		
Bi	209	3	He			306505.99		
Bi	209	3	He			303513.32		
Bi	209	3	He			308244.82		

Quantitation Report

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Auto Dilution	1.0000
Total Dilution	1.0000
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Acq Mode	Spectrum
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Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

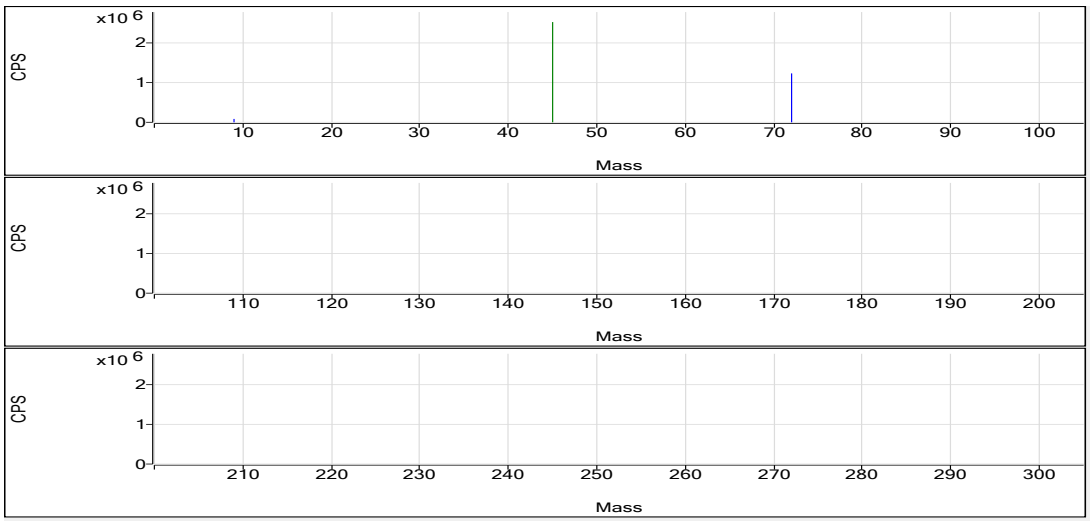
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	44.100	ppb	1.8	85230.72	0.0336	Pulse	0.5000	3
Se	78	72	H2	96.447	ppb	1.5	6692.01	0.0402	Pulse	1.5000	3
Na	23	45	He	92379.037	ppb	0.8	15979902.68	330.7895	Analog	0.1000	3
Mg	24	45	He	25514.047	ppb	1.4	2211763.61	45.7839	Analog	0.1000	3
Al	27	45	He	4688.607	ppb	1.2	132553.55	2.7436	Pulse	0.1000	3
K	39	45	He	10556.378	ppb	0.6	612861.97	12.6861	Pulse	0.1000	3
Ca	44	45	He	52401.403	ppb	0.7	171139.97	3.5425	Pulse	0.1000	3
Ti	47	45	He	484.557	ppb	0.6	12572.49	0.2603	Pulse	0.1000	3
V	51	45	He	491.584	ppb	0.8	520299.09	10.7705	Pulse	0.5000	3
Cr	52	45	He	459.269	ppb	1.3	666188.79	13.7908	Pulse	0.1000	3
Mn	55	45	He	2737.989	ppb	1.1	1697580.29	35.1417	Analog	0.1000	3
Fe	57	45	He	4719.997	ppb	1.0	132540.56	2.7437	Pulse	0.1000	3
Co	59	45	He	457.194	ppb	1.4	1243105.45	25.7341	Pulse	0.1000	3
Ni	60	72	He	458.890	ppb	1.8	348651.54	3.9416	Pulse	0.1000	3
Cu	63	72	He	439.658	ppb	1.4	998811.47	11.2913	Pulse	0.1000	3
Zn	66	72	He	470.843	ppb	1.2	121609.48	1.3747	Pulse	0.1000	3
As	75	72	He	485.517	ppb	1.2	88068.11	0.9956	Pulse	0.5000	3
Sr	88	115	He	329.396	ppb	1.5	257581.45	2.9556	Pulse	0.1000	3
Mo	98	115	He	48.052	ppb	3.0	91839.78	1.0539	Pulse	0.1000	3
Ag	107	115	He	46.969	ppb	1.1	190349.34	2.1841	Pulse	0.1000	3
Cd	111	115	He	48.945	ppb	1.4	22809.29	0.2617	Pulse	0.5000	3
Sn	120	115	He	98.317	ppb	1.5	136804.18	1.5697	Pulse	0.1000	3
Sb	121	115	He	99.042	ppb	0.7	128242.85	1.4714	Pulse	0.1000	3
Ba	137	115	He	562.622	ppb	0.8	235358.52	2.7004	Pulse	0.1000	3
Tl	205	159	He	96.969	ppb	0.3	961502.48	2.3978	Pulse	0.1000	3
Pb	208	159	He	48.255	ppb	0.4	633734.37	1.5804	Pulse	0.1000	3
U	238	209	He	48.221	ppb	0.3	729581.60	2.3755	Pulse	0.1000	3

ISTD Table:

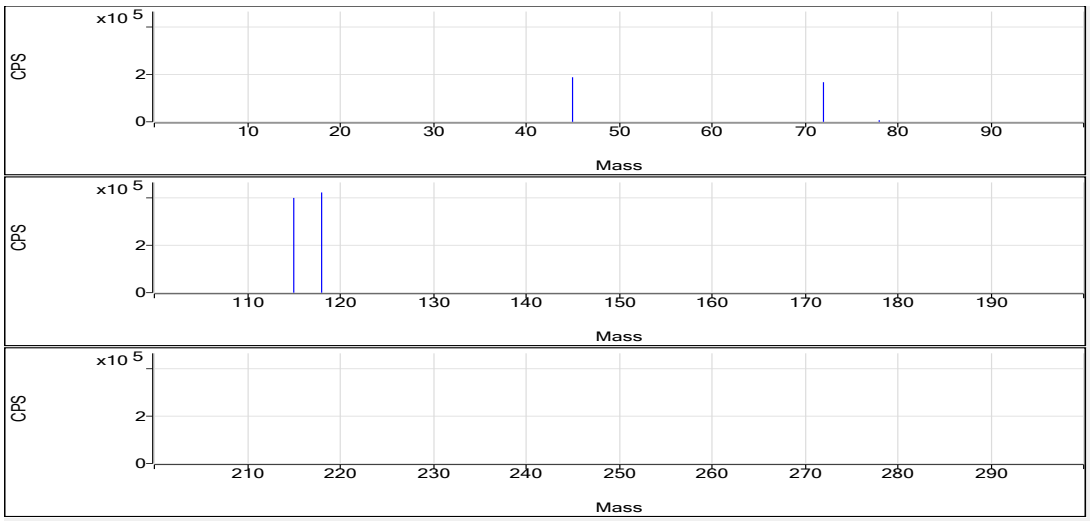
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2533747.20	1.5	105.6	Analog	0.1000	3
No Gas	Ge	72	1236229.49	0.4	107.2	Pulse	0.1000	3
H2	Sc	45	187114.95	0.3	100.1	Pulse	0.1000	3
H2	Ge	72	166315.68	0.2	101.6	Pulse	0.1000	3
H2	In	115	397850.07	1.1	102.3	Pulse	0.1000	3
He	Sc	45	48310.93	1.2	103.6	Pulse	0.1000	3
He	Ge	72	88470.47	1.5	109.0	Pulse	0.1000	3
He	In	115	87158.49	0.9	101.1	Pulse	0.1000	3
He	Tb	159	400989.11	0.3	100.6	Pulse	0.1000	3
He	Bi	209	307132.47	0.7	99.3	Pulse	0.1000	3

No Gas

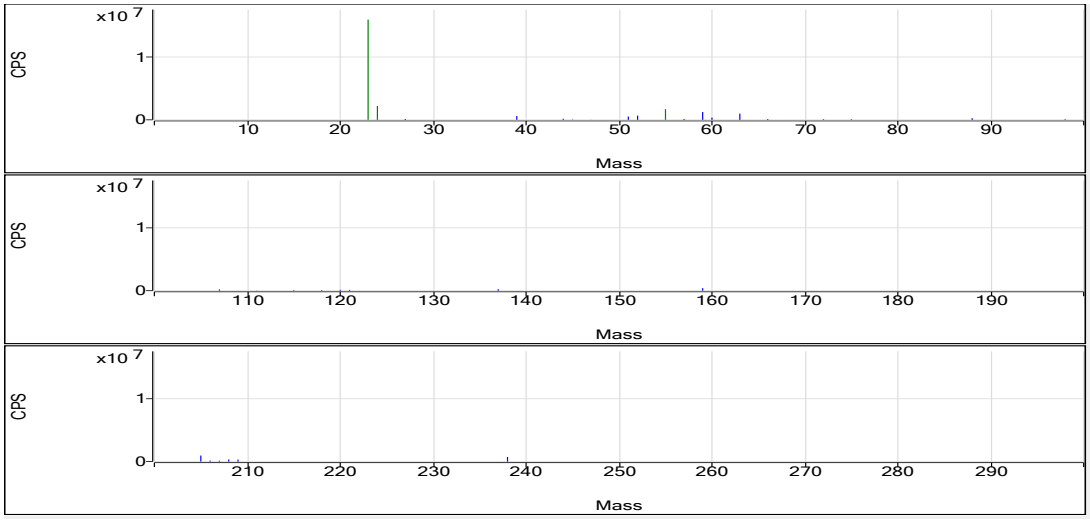


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	44.043	0.0336	84725.97	0.0008	4.685E-06
Be	9	1	No Gas	43.357	0.0331	85236.58	0.0008	4.685E-06
Be	9	1	No Gas	44.902	0.0343	85729.60	0.0008	4.685E-06
Se	78	2	H2	95.506	0.0398	6618.87	0.0004	1.219E-05
Se	78	2	H2	95.738	0.0399	6657.55	0.0004	1.219E-05
Se	78	2	H2	98.097	0.0409	6799.63	0.0004	1.219E-05
Na	23	3	He	91964.672	329.3073	16114059.76	0.0036	0.3452
Na	23	3	He	93255.619	333.9251	15947901.01	0.0036	0.3452
Na	23	3	He	91916.82	329.1361	15877747.26	0.0036	0.3452
Mg	24	3	He	25208.205	45.2351	2213499.81	0.0018	0.003497
Mg	24	3	He	25420.41	45.6159	2178565.91	0.0018	0.003497
Mg	24	3	He	25913.525	46.5007	2243225.12	0.0018	0.003497
Al	27	3	He	4738.784	2.773	135691.61	0.0006	0.0006432
Al	27	3	He	4700.445	2.7506	131364.11	0.0006	0.0006432
Al	27	3	He	4626.593	2.7074	130604.93	0.0006	0.0006432
K	39	3	He	10542.689	12.6702	619993.43	0.0012	0.3951
K	39	3	He	10628.647	12.7703	609894.91	0.0012	0.3951
K	39	3	He	10497.799	12.6179	608697.57	0.0012	0.3951
Ca	44	3	He	52461.261	3.5466	173545.17	0.0001	0.002715
Ca	44	3	He	52757.457	3.5666	170336.09	0.0001	0.002715
Ca	44	3	He	51985.492	3.5144	169538.65	0.0001	0.002715
Ti	47	3	He	481.166	0.2584	12645.88	0.0005	7.003E-05
Ti	47	3	He	485.974	0.261	12465.71	0.0005	7.003E-05
Ti	47	3	He	486.53	0.2613	12605.87	0.0005	7.003E-05
V	51	3	He	488.23	10.6972	523447.03	0.0219	0.02486
V	51	3	He	496.17	10.8707	519174.66	0.0219	0.02486
V	51	3	He	490.351	10.7435	518275.59	0.0219	0.02486
Cr	52	3	He	455.36	13.6738	669102.10	0.0299	0.03997
Cr	52	3	He	465.911	13.9897	668131.94	0.0299	0.03997
Cr	52	3	He	456.537	13.709	661332.33	0.0299	0.03997
Mn	55	3	He	2707.488	34.7502	1700438.72	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2764.829	35.4861	1694778.57	0.0128	0.002639
Mn	55	3	He	2741.65	35.1886	1697523.57	0.0128	0.002639
Fe	57	3	He	4663.595	2.7109	132654.71	0.0006	0.001429
Fe	57	3	He	4749.62	2.7609	131858.29	0.0006	0.001429
Fe	57	3	He	4746.777	2.7593	133108.67	0.0006	0.001429
Co	59	3	He	451.902	25.4363	1244677.48	0.0563	0.002149
Co	59	3	He	464.069	26.121	1247512.17	0.0563	0.002149
Co	59	3	He	455.609	25.6449	1237126.70	0.0563	0.002149
Ni	60	3	He	449.606	3.8619	346918.16	0.0086	0.002834
Ni	60	3	He	461.927	3.9676	350552.30	0.0086	0.002834
Ni	60	3	He	465.137	3.9952	348484.17	0.0086	0.002834
Cu	63	3	He	432.911	11.1181	998754.99	0.0257	0.004757
Cu	63	3	He	441.689	11.3434	1002225.06	0.0257	0.004757
Cu	63	3	He	444.374	11.4123	995454.36	0.0257	0.004757
Zn	66	3	He	464.842	1.3573	121925.16	0.0029	0.003818
Zn	66	3	He	472.29	1.3789	121834.28	0.0029	0.003818
Zn	66	3	He	475.396	1.388	121068.99	0.0029	0.003818
As	75	3	He	480.474	0.9852	88505.38	0.002	0.0008061
As	75	3	He	483.919	0.9923	87672.23	0.002	0.0008061
As	75	3	He	492.16	1.0092	88026.73	0.002	0.0008061
Sr	88	3	He	324.232	2.9093	255912.75	0.009	0.0009645
Sr	88	3	He	330.265	2.9634	258344.06	0.009	0.0009645
Sr	88	3	He	333.691	2.9941	258487.54	0.009	0.0009645
Mo	98	3	He	47.16	1.0343	90984.11	0.0219	0.0002706
Mo	98	3	He	47.27	1.0367	90381.01	0.0219	0.0002706
Mo	98	3	He	49.727	1.0906	94154.23	0.0219	0.0002706
Ag	107	3	He	46.606	2.1672	190637.48	0.0465	0.0006206
Ag	107	3	He	46.758	2.1743	189551.56	0.0465	0.0006206
Ag	107	3	He	47.543	2.2108	190858.98	0.0465	0.0006206
Cd	111	3	He	48.405	0.2588	22766.55	0.0053	0
Cd	111	3	He	49.726	0.2659	23179.23	0.0053	0
Cd	111	3	He	48.704	0.2604	22482.10	0.0053	0
Sn	120	3	He	96.994	1.5489	136244.89	0.0158	0.01648
Sn	120	3	He	97.996	1.5647	136407.70	0.0158	0.01648
Sn	120	3	He	99.959	1.5957	137759.96	0.0158	0.01648
Sb	121	3	He	98.61	1.465	128864.98	0.0149	0.0002698
Sb	121	3	He	99.842	1.4833	129309.52	0.0149	0.0002698
Sb	121	3	He	98.673	1.4659	126554.06	0.0149	0.0002698
Ba	137	3	He	557.843	2.6775	235526.09	0.0048	0.0002317
Ba	137	3	He	565.977	2.7165	236824.92	0.0048	0.0002317
Ba	137	3	He	564.046	2.7073	233724.55	0.0048	0.0002317
Tl	205	3	He	97.238	2.4045	967566.47	0.0247	0.0001339
Tl	205	3	He	96.908	2.3963	959979.67	0.0247	0.0001339
Tl	205	3	He	96.76	2.3926	956961.31	0.0247	0.0001339
Pb	208	3	He	48.103	1.5755	334710.00	0.0327	0.00107
Pb	208	3	He	48.491	1.5882	338131.99	0.0327	0.00107
Pb	208	3	He	48.171	1.5777	334217.81	0.0327	0.00107
U	238	3	He	48.191	2.3739	735201.47	0.0493	7.55E-05
U	238	3	He	48.403	2.3844	730492.25	0.0493	7.55E-05
U	238	3	He	48.071	2.3681	723051.08	0.0493	7.55E-05
Sc	45	1	No Gas			2521617.62		
Sc	45	1	No Gas			2576926.84		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2502697.15		
Ge	72	1	No Gas			1231248.89		
Ge	72	1	No Gas			1240866.15		
Ge	72	1	No Gas			1236573.42		
Sc	45	2	H2			186543.57		
Sc	45	2	H2			187720.80		
Sc	45	2	H2			187080.49		
Ge	72	2	H2			166116.83		
Ge	72	2	H2			166682.83		
Ge	72	2	H2			166147.38		
In	115	2	H2			401981.13		
In	115	2	H2			392942.38		
In	115	2	H2			398626.71		
Sc	45	3	He			48933.20		
Sc	45	3	He			47758.92		
Sc	45	3	He			48240.67		
Ge	72	3	He			89831.81		
Ge	72	3	He			88353.29		
Ge	72	3	He			87226.31		
In	115	3	He			88702.81		
In	115	3	He			87907.32		
In	115	3	He			87062.79		
Tb	159	3	He			402401.48		
Tb	159	3	He			400606.87		
Tb	159	3	He			399958.98		
Bi	209	3	He			309695.76		
Bi	209	3	He			306365.82		
Bi	209	3	He			305335.84		

Quantitation Report

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Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

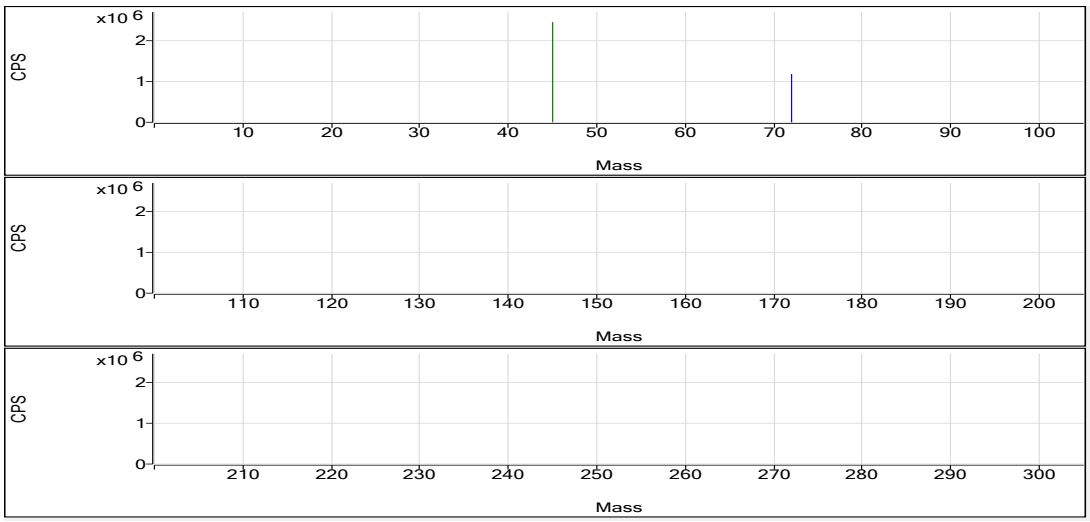
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.015	ppb	37.5	39.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.126	ppb	36.1	10.00	0.0001	Pulse	1.5000	3
Na	23	45	He	32.191	ppb	1.8	21967.03	0.4603	Pulse	0.1000	3
Mg	24	45	He	3.657	ppb	11.2	480.02	0.0101	Pulse	0.1000	3
Al	27	45	He	2.121	ppb	44.1	90.01	0.0019	Pulse	0.1000	3
K	39	45	He	-3.394	ppb	N/A	18665.81	0.3911	Pulse	0.1000	3
Ca	44	45	He	8.387	ppb	73.4	156.68	0.0033	Pulse	0.1000	3
Ti	47	45	He	0.130	ppb	173.7	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	0.364	ppb	13.3	1566.10	0.0328	Pulse	0.5000	3
Cr	52	45	He	-0.027	ppb	N/A	1870.19	0.0392	Pulse	0.1000	3
Mn	55	45	He	0.437	ppb	38.3	393.35	0.0082	Pulse	0.1000	3
Fe	57	45	He	1.019	ppb	175.5	96.67	0.0020	Pulse	0.1000	3
Co	59	45	He	0.090	ppb	9.4	343.35	0.0072	Pulse	0.1000	3
Ni	60	72	He	-0.046	ppb	N/A	203.34	0.0024	Pulse	0.1000	3
Cu	63	72	He	0.118	ppb	27.3	650.03	0.0078	Pulse	0.1000	3
Zn	66	72	He	2.392	ppb	10.2	900.06	0.0108	Pulse	0.1000	3
As	75	72	He	0.156	ppb	36.1	94.00	0.0011	Pulse	0.5000	3
Sr	88	115	He	0.022	ppb	59.8	100.00	0.0012	Pulse	0.1000	3
Mo	98	115	He	0.136	ppb	4.0	280.01	0.0033	Pulse	0.1000	3
Ag	107	115	He	-0.002	ppb	N/A	46.67	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.007	ppb	125.0	3.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.033	ppb	241.7	1463.46	0.0170	Pulse	0.1000	3
Sb	121	115	He	0.078	ppb	70.3	123.34	0.0014	Pulse	0.1000	3
Ba	137	115	He	0.049	ppb	99.9	40.00	0.0005	Pulse	0.1000	3
Tl	205	159	He	0.209	ppb	13.3	2096.91	0.0053	Pulse	0.1000	3
Pb	208	159	He	0.015	ppb	35.5	623.36	0.0016	Pulse	0.1000	3
U	238	209	He	0.141	ppb	9.1	2160.27	0.0070	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2465979.96	1.7	102.8	Analog	0.1000	3
No Gas	Ge	72	1187425.01	1.2	103.0	Pulse	0.1000	3
H2	Sc	45	179219.03	1.1	95.8	Pulse	0.1000	3
H2	Ge	72	154507.56	1.2	94.4	Pulse	0.1000	3
H2	In	115	386376.61	0.2	99.3	Pulse	0.1000	3
He	Sc	45	47722.41	0.7	102.3	Pulse	0.1000	3
He	Ge	72	83517.64	1.0	102.9	Pulse	0.1000	3
He	In	115	86054.96	0.2	99.8	Pulse	0.1000	3
He	Tb	159	395791.77	0.8	99.3	Pulse	0.1000	3
He	Bi	209	307378.78	0.8	99.4	Pulse	0.1000	3

No Gas



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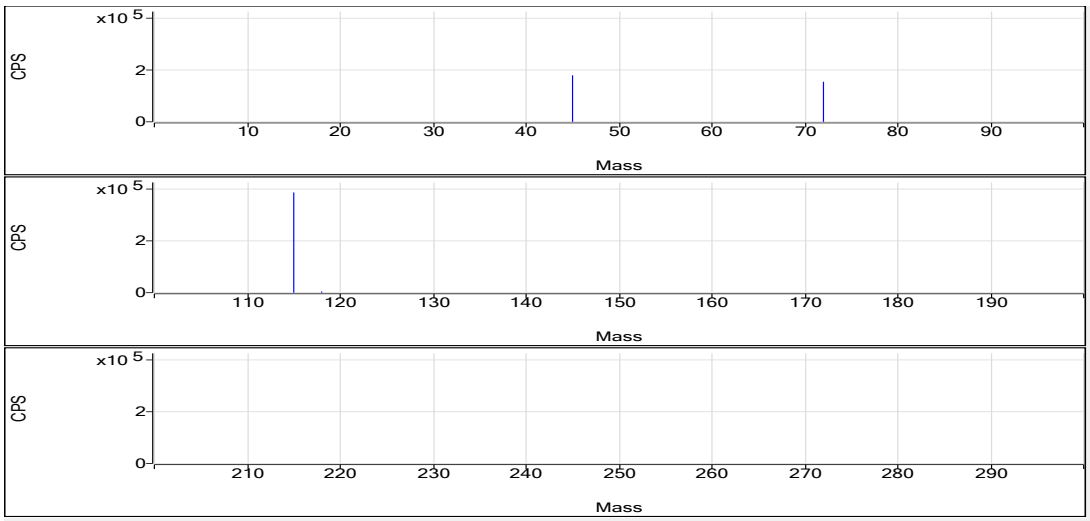
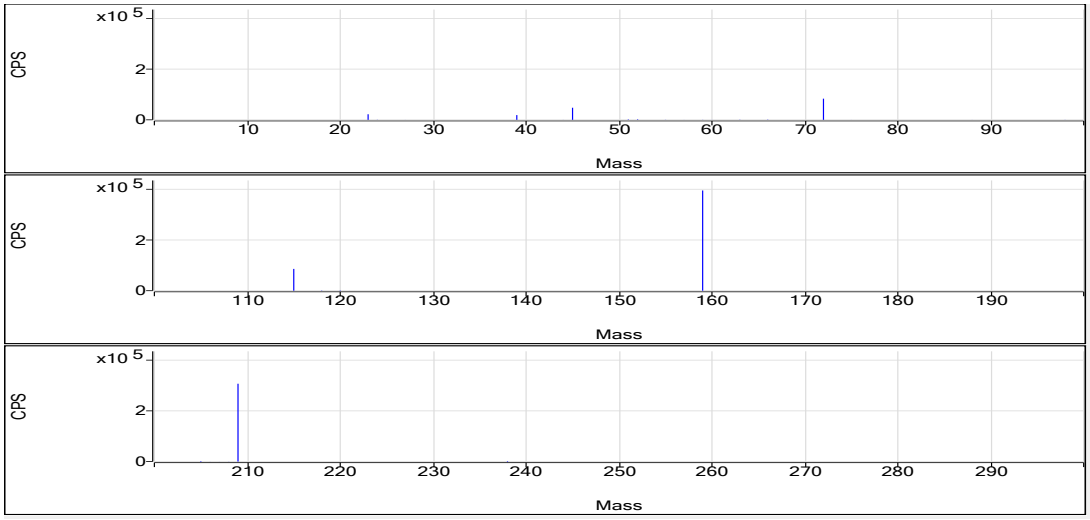


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.02	0	50.00	0.0008	4.685E-06
Be	9	1	No Gas	0.009	0	28.00	0.0008	4.685E-06
Be	9	1	No Gas	0.015	0	40.00	0.0008	4.685E-06
Se	78	2	H2	0.178	0.0001	13.33	0.0004	1.219E-05
Se	78	2	H2	0.107	0.0001	8.67	0.0004	1.219E-05
Se	78	2	H2	0.093	0.0001	8.00	0.0004	1.219E-05
Na	23	3	He	32.429	0.4612	22177.17	0.0036	0.3452
Na	23	3	He	32.599	0.4618	21886.84	0.0036	0.3452
Na	23	3	He	31.546	0.458	21837.09	0.0036	0.3452
Mg	24	3	He	3.382	0.0096	460.02	0.0018	0.003497
Mg	24	3	He	3.46	0.0097	460.02	0.0018	0.003497
Mg	24	3	He	4.13	0.0109	520.03	0.0018	0.003497
Al	27	3	He	2.455	0.0021	100.01	0.0006	0.0006432
Al	27	3	He	1.064	0.0013	60.00	0.0006	0.0006432
Al	27	3	He	2.844	0.0023	110.01	0.0006	0.0006432
K	39	3	He	0.612	0.3958	19033.08	0.0012	0.3951
K	39	3	He	-5.677	0.3885	18412.09	0.0012	0.3951
K	39	3	He	-5.118	0.3891	18552.27	0.0012	0.3951
Ca	44	3	He	15.221	0.0037	180.01	0.0001	0.002715
Ca	44	3	He	6.661	0.0032	150.01	0.0001	0.002715
Ca	44	3	He	3.28	0.0029	140.01	0.0001	0.002715
Ti	47	3	He	0.257	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	0.262	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	0.402	0.0336	1618.10	0.0219	0.02486
V	51	3	He	0.38	0.0332	1572.10	0.0219	0.02486
V	51	3	He	0.309	0.0316	1508.09	0.0219	0.02486
Cr	52	3	He	0.103	0.043	2070.22	0.0299	0.03997
Cr	52	3	He	-0.074	0.0378	1790.18	0.0299	0.03997
Cr	52	3	He	-0.109	0.0367	1750.16	0.0299	0.03997
Mn	55	3	He	0.41	0.0079	380.02	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.616	0.0105	500.03	0.0128	0.002639
Mn	55	3	He	0.285	0.0063	300.01	0.0128	0.002639
Fe	57	3	He	2.91	0.0031	150.01	0.0006	0.001429
Fe	57	3	He	-0.644	0.0011	50.00	0.0006	0.001429
Fe	57	3	He	0.79	0.0019	90.00	0.0006	0.001429
Co	59	3	He	0.099	0.0077	370.02	0.0563	0.002149
Co	59	3	He	0.082	0.0068	320.02	0.0563	0.002149
Co	59	3	He	0.089	0.0071	340.02	0.0563	0.002149
Ni	60	3	He	-0.082	0.0021	180.01	0.0086	0.002834
Ni	60	3	He	-0.009	0.0028	230.01	0.0086	0.002834
Ni	60	3	He	-0.048	0.0024	200.01	0.0086	0.002834
Cu	63	3	He	0.092	0.0071	600.03	0.0257	0.004757
Cu	63	3	He	0.108	0.0075	630.03	0.0257	0.004757
Cu	63	3	He	0.154	0.0087	720.04	0.0257	0.004757
Zn	66	3	He	2.15	0.0101	850.05	0.0029	0.003818
Zn	66	3	He	2.389	0.0108	900.06	0.0029	0.003818
Zn	66	3	He	2.637	0.0115	950.06	0.0029	0.003818
As	75	3	He	0.116	0.001	88.00	0.002	0.0008061
As	75	3	He	0.132	0.0011	90.00	0.002	0.0008061
As	75	3	He	0.221	0.0013	104.00	0.002	0.0008061
Sr	88	3	He	0.009	0.001	90.00	0.009	0.0009645
Sr	88	3	He	0.035	0.0013	110.00	0.009	0.0009645
Sr	88	3	He	0.022	0.0012	100.00	0.009	0.0009645
Mo	98	3	He	0.136	0.0032	280.01	0.0219	0.0002706
Mo	98	3	He	0.142	0.0034	290.01	0.0219	0.0002706
Mo	98	3	He	0.131	0.0031	270.02	0.0219	0.0002706
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Ag	107	3	He	0.002	0.0007	60.00	0.0465	0.0006206
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.017	0.0001	8.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Sn	120	3	He	0.103	0.0181	1560.14	0.0158	0.01648
Sn	120	3	He	-0.055	0.0156	1340.11	0.0158	0.01648
Sn	120	3	He	0.053	0.0173	1490.12	0.0158	0.01648
Sb	121	3	He	0.083	0.0015	130.01	0.0149	0.0002698
Sb	121	3	He	0.131	0.0022	190.01	0.0149	0.0002698
Sb	121	3	He	0.021	0.0006	50.00	0.0149	0.0002698
Ba	137	3	He	0	0.0002	20.00	0.0048	0.0002317
Ba	137	3	He	0.097	0.0007	60.00	0.0048	0.0002317
Ba	137	3	He	0.049	0.0005	40.00	0.0048	0.0002317
Tl	205	3	He	0.202	0.0051	2050.22	0.0247	0.0001339
Tl	205	3	He	0.24	0.0061	2380.31	0.0247	0.0001339
Tl	205	3	He	0.185	0.0047	1860.20	0.0247	0.0001339
Pb	208	3	He	0.012	0.0015	320.01	0.0327	0.00107
Pb	208	3	He	0.022	0.0018	430.02	0.0327	0.00107
Pb	208	3	He	0.013	0.0015	310.01	0.0327	0.00107
U	238	3	He	0.13	0.0065	2000.22	0.0493	7.55E-05
U	238	3	He	0.155	0.0077	2370.33	0.0493	7.55E-05
U	238	3	He	0.139	0.0069	2110.25	0.0493	7.55E-05
Sc	45	1	No Gas			2512124.96		
Sc	45	1	No Gas			2433680.59		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2452134.34		
Ge	72	1	No Gas			1204338.58		
Ge	72	1	No Gas			1178647.56		
Ge	72	1	No Gas			1179288.89		
Sc	45	2	H2			178240.00		
Sc	45	2	H2			178009.08		
Sc	45	2	H2			181408.02		
Ge	72	2	H2			154154.17		
Ge	72	2	H2			152840.59		
Ge	72	2	H2			156527.93		
In	115	2	H2			387099.64		
In	115	2	H2			385802.42		
In	115	2	H2			386227.77		
Sc	45	3	He			48090.17		
Sc	45	3	He			47397.99		
Sc	45	3	He			47679.07		
Ge	72	3	He			84358.94		
Ge	72	3	He			83545.00		
Ge	72	3	He			82648.99		
In	115	3	He			86187.28		
In	115	3	He			85905.79		
In	115	3	He			86096.06		
Tb	159	3	He			399428.08		
Tb	159	3	He			392973.55		
Tb	159	3	He			394973.67		
Bi	209	3	He			309654.29		
Bi	209	3	He			307553.34		
Bi	209	3	He			304928.71		

Quantitation Report

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Sample Type	CCV
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

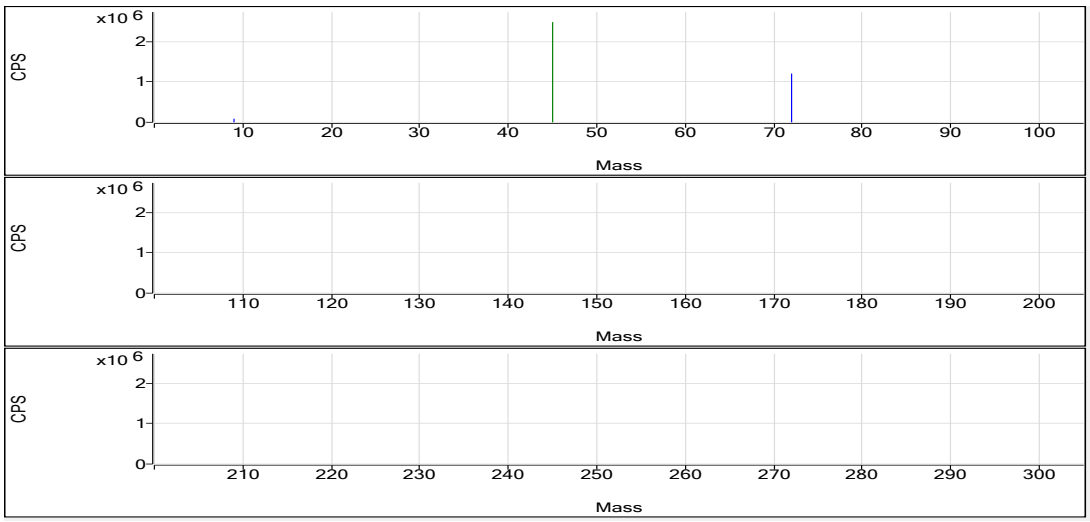
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	46.618	ppb	1.6	88130.11	0.0356	Pulse	0.5000	3
Se	78	72	H2	52.230	ppb	1.7	3467.31	0.0218	Pulse	1.5000	3
Na	23	45	He	4871.696	ppb	0.5	846420.69	17.7715	Pulse	0.1000	3
Mg	24	45	He	5036.469	ppb	0.4	430586.22	9.0405	Pulse	0.1000	3
Al	27	45	He	4997.519	ppb	0.2	139283.64	2.9244	Pulse	0.1000	3
K	39	45	He	5166.019	ppb	1.1	305309.59	6.4100	Pulse	0.1000	3
Ca	44	45	He	5257.406	ppb	3.6	17043.87	0.3579	Pulse	0.1000	3
Ti	47	45	He	5092.268	ppb	1.0	130236.44	2.7344	Pulse	0.1000	3
V	51	45	He	517.446	ppb	0.4	539903.59	11.3358	Pulse	0.5000	3
Cr	52	45	He	490.076	ppb	1.0	700750.36	14.7132	Pulse	0.1000	3
Mn	55	45	He	508.205	ppb	1.1	310763.00	6.5249	Pulse	0.1000	3
Fe	57	45	He	5094.072	ppb	1.5	141024.31	2.9610	Pulse	0.1000	3
Co	59	45	He	496.796	ppb	0.6	1331814.98	27.9630	Pulse	0.1000	3
Ni	60	72	He	513.762	ppb	1.6	371356.22	4.4125	Pulse	0.1000	3
Cu	63	72	He	490.937	ppb	2.0	1060978.63	12.6076	Pulse	0.1000	3
Zn	66	72	He	513.322	ppb	1.4	126107.50	1.4984	Pulse	0.1000	3
As	75	72	He	524.661	ppb	2.2	90527.19	1.0758	Pulse	0.5000	3
Sr	88	115	He	50.130	ppb	2.2	39405.74	0.4506	Pulse	0.1000	3
Mo	98	115	He	51.029	ppb	0.4	97867.48	1.1192	Pulse	0.1000	3
Ag	107	115	He	51.285	ppb	0.9	208532.35	2.3847	Pulse	0.1000	3
Cd	111	115	He	51.388	ppb	0.8	24027.30	0.2748	Pulse	0.5000	3
Sn	120	115	He	51.059	ppb	2.2	71983.94	0.8231	Pulse	0.1000	3
Sb	121	115	He	51.780	ppb	0.2	67280.70	0.7694	Pulse	0.1000	3
Ba	137	115	He	523.010	ppb	0.5	219521.27	2.5103	Pulse	0.1000	3
Tl	205	159	He	51.247	ppb	0.4	511903.40	1.2673	Pulse	0.1000	3
Pb	208	159	He	51.208	ppb	0.2	677438.87	1.6771	Pulse	0.1000	3
U	238	209	He	50.051	ppb	1.3	765312.85	2.4656	Pulse	0.1000	3

ISTD Table:

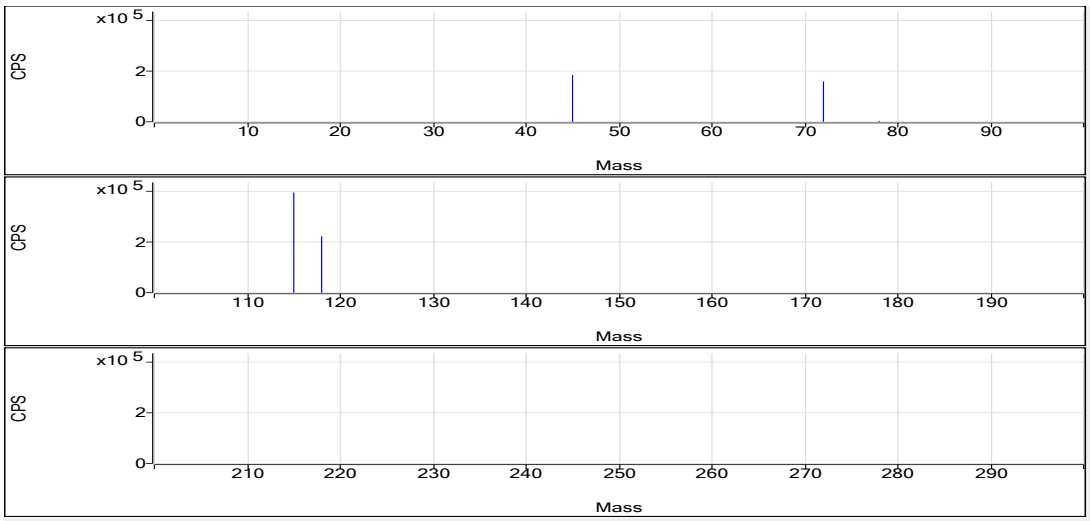
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2478403.45	1.3	103.3	Analog	0.1000	3
No Gas	Ge	72	1204967.09	1.2	104.5	Pulse	0.1000	3
H2	Sc	45	184736.42	0.8	98.8	Pulse	0.1000	3
H2	Ge	72	159103.81	1.2	97.2	Pulse	0.1000	3
H2	In	115	396016.98	0.4	101.8	Pulse	0.1000	3
He	Sc	45	47628.80	0.5	102.1	Pulse	0.1000	3
He	Ge	72	84177.44	2.1	103.7	Pulse	0.1000	3
He	In	115	87447.11	0.2	101.5	Pulse	0.1000	3
He	Tb	159	403938.68	0.5	101.3	Pulse	0.1000	3
He	Bi	209	310420.65	1.0	100.4	Pulse	0.1000	3

No Gas

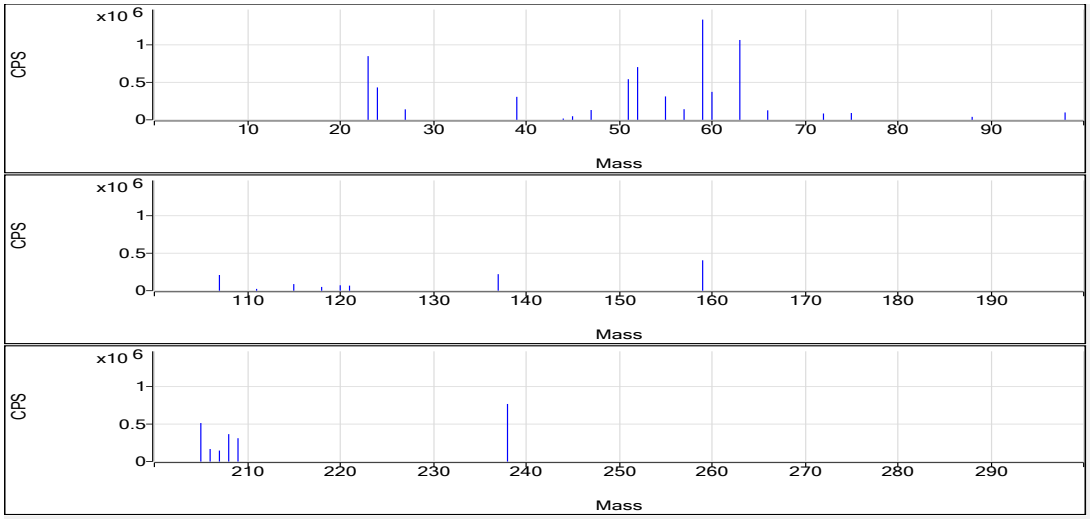


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	47.455	0.0362	88344.69	0.0008	4.685E-06
Be	9	1	No Gas	46.427	0.0354	88485.57	0.0008	4.685E-06
Be	9	1	No Gas	45.973	0.0351	87560.07	0.0008	4.685E-06
Se	78	2	H2	53.07	0.0221	3486.43	0.0004	1.219E-05
Se	78	2	H2	51.265	0.0214	3447.09	0.0004	1.219E-05
Se	78	2	H2	52.355	0.0218	3468.42	0.0004	1.219E-05
Na	23	3	He	4846.556	17.6815	846060.61	0.0036	0.3452
Na	23	3	He	4892.281	17.8451	845818.35	0.0036	0.3452
Na	23	3	He	4876.25	17.7877	847383.11	0.0036	0.3452
Mg	24	3	He	5013.782	8.9998	430641.91	0.0018	0.003497
Mg	24	3	He	5044.426	9.0548	429178.90	0.0018	0.003497
Mg	24	3	He	5051.199	9.067	431937.85	0.0018	0.003497
Al	27	3	He	4997.504	2.9244	139930.40	0.0006	0.0006432
Al	27	3	He	5005.853	2.9292	138839.70	0.0006	0.0006432
Al	27	3	He	4989.2	2.9195	139080.82	0.0006	0.0006432
K	39	3	He	5201.316	6.4511	308684.78	0.0012	0.3951
K	39	3	He	5100.85	6.3341	300223.61	0.0012	0.3951
K	39	3	He	5195.893	6.4448	307020.39	0.0012	0.3951
Ca	44	3	He	5079.906	0.3459	16549.98	0.0001	0.002715
Ca	44	3	He	5231.937	0.3561	16880.37	0.0001	0.002715
Ca	44	3	He	5460.376	0.3716	17701.25	0.0001	0.002715
Ti	47	3	He	5094.448	2.7355	130894.99	0.0005	7.003E-05
Ti	47	3	He	5042.773	2.7078	128343.01	0.0005	7.003E-05
Ti	47	3	He	5139.584	2.7598	131471.31	0.0005	7.003E-05
V	51	3	He	515.633	11.2962	540521.94	0.0219	0.02486
V	51	3	He	519.758	11.3864	539688.38	0.0219	0.02486
V	51	3	He	516.945	11.3249	539500.44	0.0219	0.02486
Cr	52	3	He	486.145	14.5955	698394.29	0.0299	0.03997
Cr	52	3	He	495.89	14.8873	705624.13	0.0299	0.03997
Cr	52	3	He	488.194	14.6569	698232.65	0.0299	0.03997
Mn	55	3	He	501.872	6.4436	308326.40	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	511.608	6.5686	311335.29	0.0128	0.002639
Mn	55	3	He	511.135	6.5625	312627.32	0.0128	0.002639
Fe	57	3	He	5036.523	2.9276	140085.68	0.0006	0.001429
Fe	57	3	He	5180.258	3.0111	142720.14	0.0006	0.001429
Fe	57	3	He	5065.437	2.9444	140267.12	0.0006	0.001429
Co	59	3	He	493.39	27.7713	1328854.67	0.0563	0.002149
Co	59	3	He	499.742	28.1288	1333243.26	0.0563	0.002149
Co	59	3	He	497.255	27.9888	1333347.01	0.0563	0.002149
Ni	60	3	He	511.683	4.3947	369536.21	0.0086	0.002834
Ni	60	3	He	507.037	4.3548	374593.24	0.0086	0.002834
Ni	60	3	He	522.566	4.4881	369939.21	0.0086	0.002834
Cu	63	3	He	488.688	12.5499	1055286.00	0.0257	0.004757
Cu	63	3	He	482.226	12.384	1065254.44	0.0257	0.004757
Cu	63	3	He	501.896	12.889	1062395.45	0.0257	0.004757
Zn	66	3	He	512.917	1.4972	125898.14	0.0029	0.003818
Zn	66	3	He	506.249	1.4778	127119.75	0.0029	0.003818
Zn	66	3	He	520.802	1.5202	125304.61	0.0029	0.003818
As	75	3	He	526.151	1.0788	90714.97	0.002	0.0008061
As	75	3	He	512.48	1.0508	90389.02	0.002	0.0008061
As	75	3	He	535.352	1.0977	90477.57	0.002	0.0008061
Sr	88	3	He	51.103	0.4593	40117.69	0.009	0.0009645
Sr	88	3	He	50.336	0.4525	39666.42	0.009	0.0009645
Sr	88	3	He	48.951	0.44	38433.12	0.009	0.0009645
Mo	98	3	He	50.786	1.1138	97276.77	0.0219	0.0002706
Mo	98	3	He	51.134	1.1214	98313.82	0.0219	0.0002706
Mo	98	3	He	51.168	1.1222	98011.86	0.0219	0.0002706
Ag	107	3	He	51.746	2.4061	210140.66	0.0465	0.0006206
Ag	107	3	He	50.864	2.3651	207342.67	0.0465	0.0006206
Ag	107	3	He	51.245	2.3828	208113.71	0.0465	0.0006206
Cd	111	3	He	51.43	0.275	24016.62	0.0053	0
Cd	111	3	He	50.971	0.2725	23892.40	0.0053	0
Cd	111	3	He	51.763	0.2768	24172.88	0.0053	0
Sn	120	3	He	50.437	0.8133	71032.03	0.0158	0.01648
Sn	120	3	He	52.37	0.8439	73977.80	0.0158	0.01648
Sn	120	3	He	50.37	0.8123	70942.00	0.0158	0.01648
Sb	121	3	He	51.64	0.7673	67012.47	0.0149	0.0002698
Sb	121	3	He	51.808	0.7698	67485.60	0.0149	0.0002698
Sb	121	3	He	51.893	0.7711	67344.04	0.0149	0.0002698
Ba	137	3	He	520.459	2.4981	218172.67	0.0048	0.0002317
Ba	137	3	He	523.402	2.5122	220237.28	0.0048	0.0002317
Ba	137	3	He	525.168	2.5207	220153.86	0.0048	0.0002317
Tl	205	3	He	51.392	1.2709	511051.28	0.0247	0.0001339
Tl	205	3	He	51.357	1.27	512699.17	0.0247	0.0001339
Tl	205	3	He	50.993	1.261	511959.76	0.0247	0.0001339
Pb	208	3	He	51.337	1.6813	365996.75	0.0327	0.00107
Pb	208	3	He	51.186	1.6764	362143.90	0.0327	0.00107
Pb	208	3	He	51.101	1.6736	364953.31	0.0327	0.00107
U	238	3	He	50.752	2.5001	770358.11	0.0493	7.55E-05
U	238	3	He	49.945	2.4604	761169.21	0.0493	7.55E-05
U	238	3	He	49.457	2.4363	764411.24	0.0493	7.55E-05
Sc	45	1	No Gas			2440307.31		
Sc	45	1	No Gas			2498313.87		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2496589.18		
Ge	72	1	No Gas			1187962.72		
Ge	72	1	No Gas			1214841.47		
Ge	72	1	No Gas			1212097.09		
Sc	45	2	H2			186248.75		
Sc	45	2	H2			183191.68		
Sc	45	2	H2			184768.83		
Ge	72	2	H2			157428.10		
Ge	72	2	H2			161130.08		
Ge	72	2	H2			158753.24		
In	115	2	H2			394467.06		
In	115	2	H2			397848.86		
In	115	2	H2			395735.03		
Sc	45	3	He			47849.97		
Sc	45	3	He			47397.83		
Sc	45	3	He			47638.59		
Ge	72	3	He			84087.14		
Ge	72	3	He			86018.42		
Ge	72	3	He			82426.77		
In	115	3	He			87726.18		
In	115	3	He			88059.31		
In	115	3	He			87726.42		
Tb	159	3	He			402126.67		
Tb	159	3	He			403694.88		
Tb	159	3	He			405994.49		
Bi	209	3	He			308130.05		
Bi	209	3	He			309372.85		
Bi	209	3	He			313759.04		

Quantitation Report

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Sample Type	CCB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

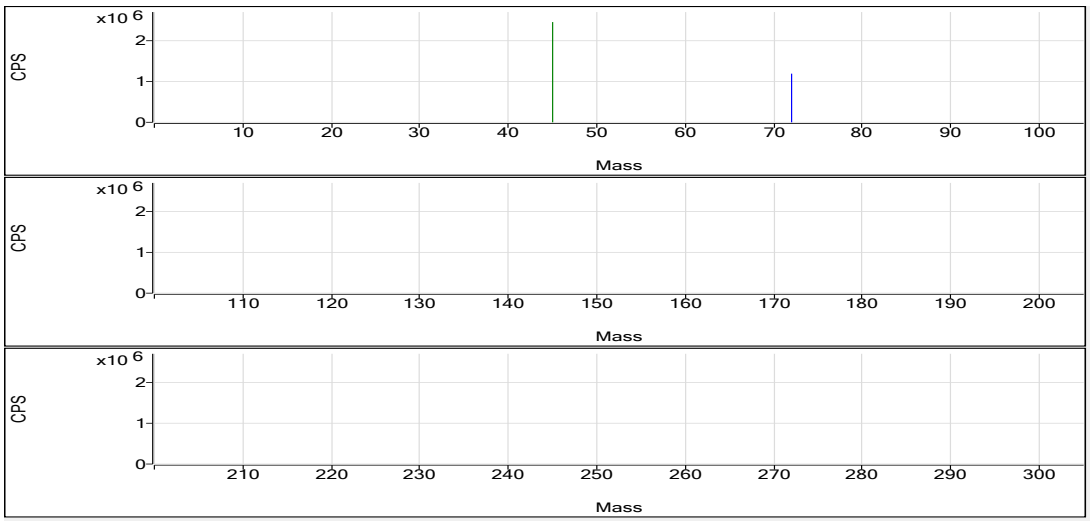
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.019	ppb	27.8	48.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.032	ppb	32.4	4.00	0.0000	Pulse	1.5000	3
Na	23	45	He	14.525	ppb	25.4	19122.93	0.3971	Pulse	0.1000	3
Mg	24	45	He	1.100	ppb	8.5	263.34	0.0055	Pulse	0.1000	3
Al	27	45	He	0.444	ppb	232.4	43.33	0.0009	Pulse	0.1000	3
K	39	45	He	-5.838	ppb	N/A	18692.49	0.3883	Pulse	0.1000	3
Ca	44	45	He	9.015	ppb	180.5	160.00	0.0033	Pulse	0.1000	3
Ti	47	45	He	1.799	ppb	64.2	50.00	0.0010	Pulse	0.1000	3
V	51	45	He	0.324	ppb	15.9	1538.09	0.0319	Pulse	0.5000	3
Cr	52	45	He	0.023	ppb	509.6	1956.86	0.0407	Pulse	0.1000	3
Mn	55	45	He	0.313	ppb	37.4	320.02	0.0067	Pulse	0.1000	3
Fe	57	45	He	1.814	ppb	159.0	120.00	0.0025	Pulse	0.1000	3
Co	59	45	He	0.086	ppb	29.9	336.68	0.0070	Pulse	0.1000	3
Ni	60	72	He	-0.017	ppb	N/A	223.35	0.0027	Pulse	0.1000	3
Cu	63	72	He	0.113	ppb	29.2	636.70	0.0077	Pulse	0.1000	3
Zn	66	72	He	2.201	ppb	9.7	850.06	0.0102	Pulse	0.1000	3
As	75	72	He	0.186	ppb	69.5	98.67	0.0012	Pulse	0.5000	3
Sr	88	115	He	-0.002	ppb	N/A	83.34	0.0010	Pulse	0.1000	3
Mo	98	115	He	0.055	ppb	32.8	130.01	0.0015	Pulse	0.1000	3
Ag	107	115	He	0.005	ppb	69.1	76.67	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.007	ppb	91.7	3.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.032	ppb	194.2	1493.47	0.0170	Pulse	0.1000	3
Sb	121	115	He	0.038	ppb	21.6	73.33	0.0008	Pulse	0.1000	3
Ba	137	115	He	0.039	ppb	126.7	36.67	0.0004	Pulse	0.1000	3
Tl	205	159	He	0.104	ppb	10.3	1073.42	0.0027	Pulse	0.1000	3
Pb	208	159	He	0.017	ppb	26.6	646.70	0.0016	Pulse	0.1000	3
U	238	209	He	0.053	ppb	5.2	830.06	0.0027	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2466905.07	1.3	102.8	Analog	0.1000	3
No Gas	Ge	72	1196845.24	0.6	103.8	Pulse	0.1000	3
H2	Sc	45	182145.59	0.5	97.4	Pulse	0.1000	3
H2	Ge	72	156879.45	0.6	95.8	Pulse	0.1000	3
H2	In	115	395146.47	1.1	101.6	Pulse	0.1000	3
He	Sc	45	48147.41	0.9	103.2	Pulse	0.1000	3
He	Ge	72	83148.65	0.9	102.4	Pulse	0.1000	3
He	In	115	87913.57	1.3	102.0	Pulse	0.1000	3
He	Tb	159	398370.32	0.4	99.9	Pulse	0.1000	3
He	Bi	209	310798.75	0.7	100.5	Pulse	0.1000	3

No Gas



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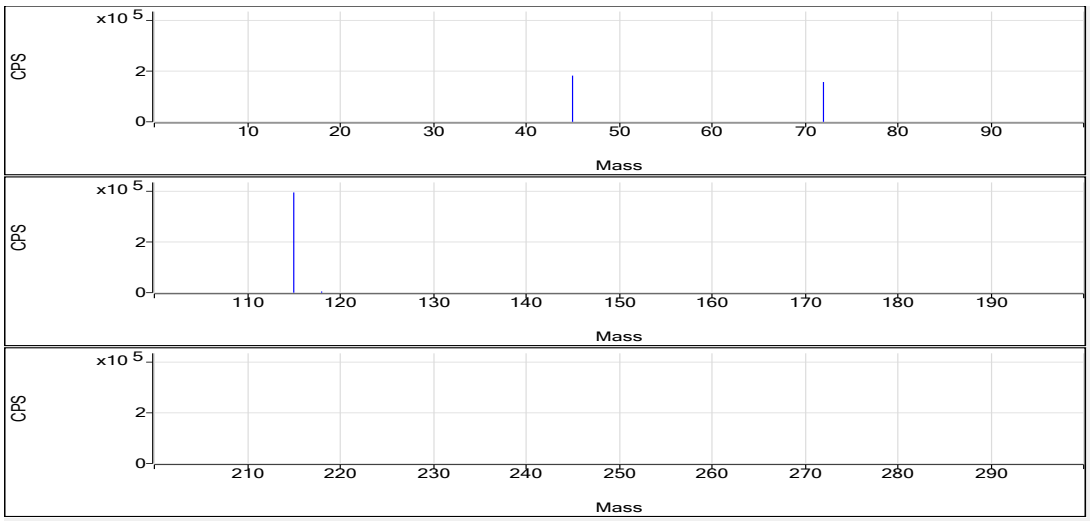
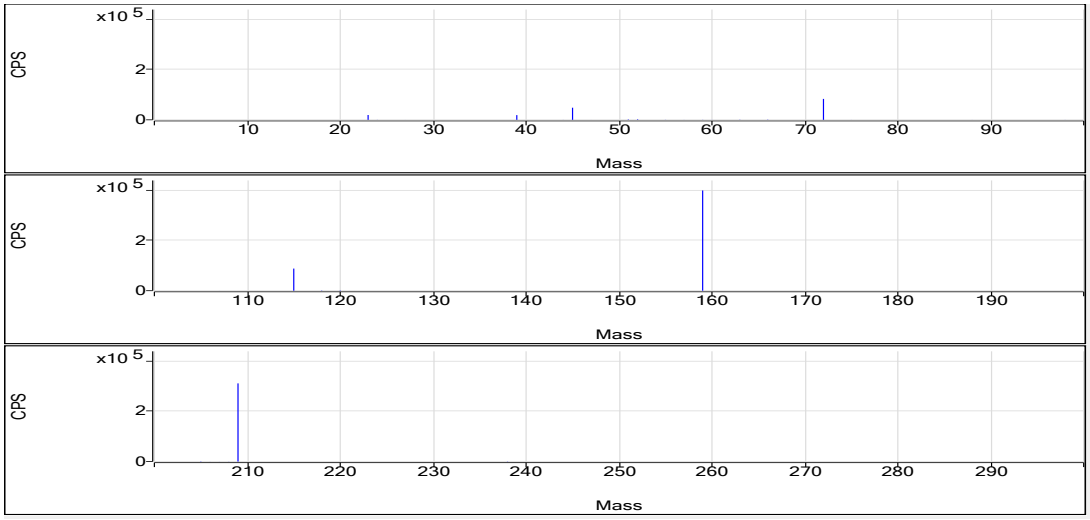


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.025	0	58.00	0.0008	4.685E-06
Be	9	1	No Gas	0.014	0	38.00	0.0008	4.685E-06
Be	9	1	No Gas	0.019	0	48.00	0.0008	4.685E-06
Se	78	2	H2	0.022	0	3.33	0.0004	1.219E-05
Se	78	2	H2	0.042	0	4.67	0.0004	1.219E-05
Se	78	2	H2	0.031	0	4.00	0.0004	1.219E-05
Na	23	3	He	17.671	0.4084	19683.76	0.0036	0.3452
Na	23	3	He	10.466	0.3826	18241.72	0.0036	0.3452
Na	23	3	He	15.437	0.4004	19443.31	0.0036	0.3452
Mg	24	3	He	1.057	0.0054	260.01	0.0018	0.003497
Mg	24	3	He	1.207	0.0057	270.01	0.0018	0.003497
Mg	24	3	He	1.035	0.0054	260.01	0.0018	0.003497
Al	27	3	He	1.028	0.0012	60.00	0.0006	0.0006432
Al	27	3	He	1.052	0.0013	60.00	0.0006	0.0006432
Al	27	3	He	-0.748	0.0002	10.00	0.0006	0.0006432
K	39	3	He	-9.093	0.3845	18532.24	0.0012	0.3951
K	39	3	He	0.297	0.3954	18852.81	0.0012	0.3951
K	39	3	He	-8.72	0.3849	18692.41	0.0012	0.3951
Ca	44	3	He	27.379	0.0046	220.01	0.0001	0.002715
Ca	44	3	He	3.277	0.0029	140.00	0.0001	0.002715
Ca	44	3	He	-3.611	0.0025	120.00	0.0001	0.002715
Ti	47	3	He	2.961	0.0017	80.00	0.0005	7.003E-05
Ti	47	3	He	0.651	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	1.787	0.001	50.00	0.0005	7.003E-05
V	51	3	He	0.383	0.0332	1602.10	0.0219	0.02486
V	51	3	He	0.288	0.0312	1486.08	0.0219	0.02486
V	51	3	He	0.3	0.0314	1526.09	0.0219	0.02486
Cr	52	3	He	0.134	0.044	2120.22	0.0299	0.03997
Cr	52	3	He	0.031	0.0409	1950.20	0.0299	0.03997
Cr	52	3	He	-0.097	0.0371	1800.16	0.0299	0.03997
Mn	55	3	He	0.36	0.0073	350.02	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.399	0.0078	370.02	0.0128	0.002639
Mn	55	3	He	0.179	0.0049	240.01	0.0128	0.002639
Fe	57	3	He	1.112	0.0021	100.00	0.0006	0.001429
Fe	57	3	He	-0.654	0.001	50.00	0.0006	0.001429
Fe	57	3	He	4.984	0.0043	210.01	0.0006	0.001429
Co	59	3	He	0.106	0.0081	390.02	0.0563	0.002149
Co	59	3	He	0.096	0.0076	360.02	0.0563	0.002149
Co	59	3	He	0.057	0.0054	260.01	0.0563	0.002149
Ni	60	3	He	0.038	0.0032	260.02	0.0086	0.002834
Ni	60	3	He	-0.121	0.0018	150.01	0.0086	0.002834
Ni	60	3	He	0.032	0.0031	260.01	0.0086	0.002834
Cu	63	3	He	0.151	0.0086	710.04	0.0257	0.004757
Cu	63	3	He	0.09	0.0071	590.03	0.0257	0.004757
Cu	63	3	He	0.099	0.0073	610.04	0.0257	0.004757
Zn	66	3	He	2.447	0.0109	900.06	0.0029	0.003818
Zn	66	3	He	2.099	0.0099	830.06	0.0029	0.003818
Zn	66	3	He	2.058	0.0098	820.06	0.0029	0.003818
As	75	3	He	0.2	0.0012	100.00	0.002	0.0008061
As	75	3	He	0.307	0.0014	120.00	0.002	0.0008061
As	75	3	He	0.05	0.0009	76.00	0.002	0.0008061
Sr	88	3	He	-0.032	0.0007	60.00	0.009	0.0009645
Sr	88	3	He	-0.007	0.0009	80.00	0.009	0.0009645
Sr	88	3	He	0.034	0.0013	110.01	0.009	0.0009645
Mo	98	3	He	0.06	0.0016	140.01	0.0219	0.0002706
Mo	98	3	He	0.07	0.0018	160.01	0.0219	0.0002706
Mo	98	3	He	0.035	0.001	90.00	0.0219	0.0002706
Ag	107	3	He	0.008	0.001	90.00	0.0465	0.0006206
Ag	107	3	He	0.001	0.0007	60.00	0.0465	0.0006206
Ag	107	3	He	0.007	0.0009	80.00	0.0465	0.0006206
Cd	111	3	He	0.008	0	4.00	0.0053	0
Cd	111	3	He	0.013	0.0001	6.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Sn	120	3	He	0.092	0.0179	1590.15	0.0158	0.01648
Sn	120	3	He	-0.033	0.0159	1410.12	0.0158	0.01648
Sn	120	3	He	0.038	0.0171	1480.13	0.0158	0.01648
Sb	121	3	He	0.043	0.0009	80.00	0.0149	0.0002698
Sb	121	3	He	0.043	0.0009	80.00	0.0149	0.0002698
Sb	121	3	He	0.028	0.0007	60.00	0.0149	0.0002698
Ba	137	3	He	-0.001	0.0002	20.00	0.0048	0.0002317
Ba	137	3	He	0.093	0.0007	60.00	0.0048	0.0002317
Ba	137	3	He	0.024	0.0003	30.00	0.0048	0.0002317
Tl	205	3	He	0.116	0.003	1200.10	0.0247	0.0001339
Tl	205	3	He	0.097	0.0025	1010.08	0.0247	0.0001339
Tl	205	3	He	0.097	0.0025	1010.07	0.0247	0.0001339
Pb	208	3	He	0.018	0.0017	390.02	0.0327	0.00107
Pb	208	3	He	0.02	0.0017	330.02	0.0327	0.00107
Pb	208	3	He	0.012	0.0015	330.02	0.0327	0.00107
U	238	3	He	0.05	0.0025	790.06	0.0493	7.55E-05
U	238	3	He	0.055	0.0028	870.06	0.0493	7.55E-05
U	238	3	He	0.053	0.0027	830.06	0.0493	7.55E-05
Sc	45	1	No Gas			2446039.34		
Sc	45	1	No Gas			2452043.56		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2502632.31		
Ge	72	1	No Gas			1191674.75		
Ge	72	1	No Gas			1193813.65		
Ge	72	1	No Gas			1205047.33		
Sc	45	2	H2			182807.18		
Sc	45	2	H2			181095.33		
Sc	45	2	H2			182534.26		
Ge	72	2	H2			156477.65		
Ge	72	2	H2			156164.85		
Ge	72	2	H2			157995.85		
In	115	2	H2			392192.85		
In	115	2	H2			393106.01		
In	115	2	H2			400140.54		
Sc	45	3	He			48200.86		
Sc	45	3	He			47678.83		
Sc	45	3	He			48562.55		
Ge	72	3	He			82246.25		
Ge	72	3	He			83595.11		
Ge	72	3	He			83604.59		
In	115	3	He			88692.34		
In	115	3	He			88421.38		
In	115	3	He			86651.48		
Tb	159	3	He			400221.87		
Tb	159	3	He			396988.31		
Tb	159	3	He			397900.78		
Bi	209	3	He			312523.28		
Bi	209	3	He			311453.49		
Bi	209	3	He			308419.49		

Quantitation Report

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Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	8/10/2023 6:56:55 PM
Sample Name	MB 410-402562/1-A
Sample Type	Sample
Comment	I3 ICP rr
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

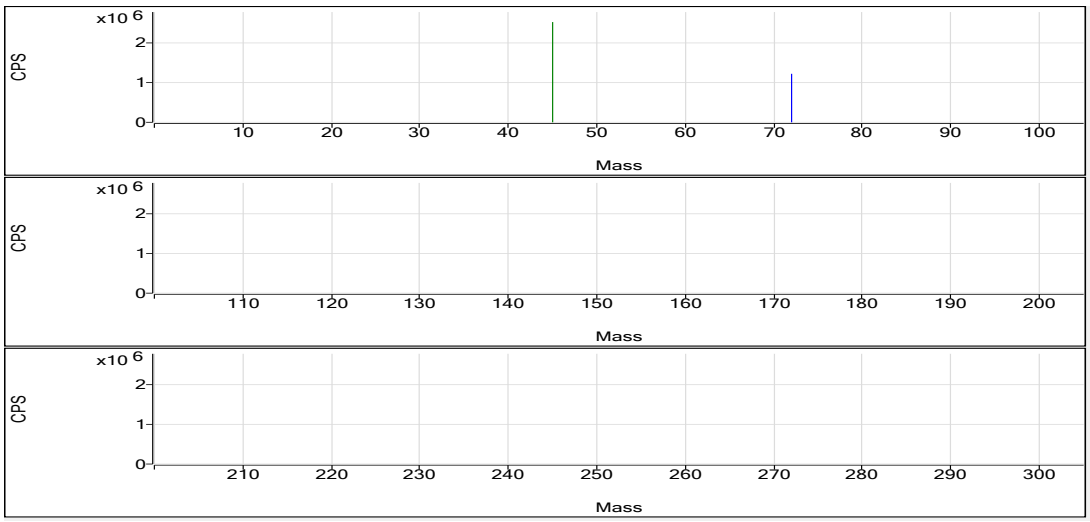
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.011	ppb	37.3	34.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.010	ppb	172.5	2.67	0.0000	Pulse	1.5000	3
Na	23	45	He	9.795	ppb	49.7	18632.25	0.3802	Pulse	0.1000	3
Mg	24	45	He	1.083	ppb	47.7	266.68	0.0054	Pulse	0.1000	3
Al	27	45	He	3.435	ppb	61.8	130.01	0.0027	Pulse	0.1000	3
K	39	45	He	10.087	ppb	85.5	19937.53	0.4068	Pulse	0.1000	3
Ca	44	45	He	16.213	ppb	48.1	186.68	0.0038	Pulse	0.1000	3
Ti	47	45	He	1.012	ppb	113.1	30.00	0.0006	Pulse	0.1000	3
V	51	45	He	0.077	ppb	106.3	1301.40	0.0266	Pulse	0.5000	3
Cr	52	45	He	-0.260	ppb	N/A	1576.81	0.0322	Pulse	0.1000	3
Mn	55	45	He	3.536	ppb	6.5	2353.61	0.0480	Pulse	0.1000	3
Fe	57	45	He	1.289	ppb	57.8	106.67	0.0022	Pulse	0.1000	3
Co	59	45	He	0.038	ppb	57.9	210.01	0.0043	Pulse	0.1000	3
Ni	60	72	He	0.000	ppb	N/A	243.34	0.0028	Pulse	0.1000	3
Cu	63	72	He	0.081	ppb	24.8	586.70	0.0068	Pulse	0.1000	3
Zn	66	72	He	1.594	ppb	13.5	726.71	0.0085	Pulse	0.1000	3
As	75	72	He	0.095	ppb	51.3	86.00	0.0010	Pulse	0.5000	3
Sr	88	115	He	-0.008	ppb	N/A	80.00	0.0009	Pulse	0.1000	3
Mo	98	115	He	0.027	ppb	62.1	76.67	0.0009	Pulse	0.1000	3
Ag	107	115	He	-0.001	ppb	N/A	50.00	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.003	ppb	86.6	1.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.158	ppb	N/A	1253.44	0.0140	Pulse	0.1000	3
Sb	121	115	He	0.009	ppb	231.1	36.67	0.0004	Pulse	0.1000	3
Ba	137	115	He	0.030	ppb	200.9	33.33	0.0004	Pulse	0.1000	3
Tl	205	159	He	0.029	ppb	20.6	343.35	0.0008	Pulse	0.1000	3
Pb	208	159	He	0.011	ppb	36.7	573.35	0.0014	Pulse	0.1000	3
U	238	209	He	0.015	ppb	23.4	253.34	0.0008	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2523986.53	1.4	105.2	Analog	0.1000	3
No Gas	Ge	72	1221125.16	0.8	105.9	Pulse	0.1000	3
H2	Sc	45	193067.10	0.5	103.2	Pulse	0.1000	3
H2	Ge	72	162809.03	1.0	99.4	Pulse	0.1000	3
H2	In	115	404340.52	0.4	103.9	Pulse	0.1000	3
He	Sc	45	49010.10	0.4	105.1	Pulse	0.1000	3
He	Ge	72	85907.66	0.8	105.8	Pulse	0.1000	3
He	In	115	89645.82	1.6	104.0	Pulse	0.1000	3
He	Tb	159	405038.31	0.3	101.6	Pulse	0.1000	3
He	Bi	209	317173.93	1.0	102.6	Pulse	0.1000	3

No Gas



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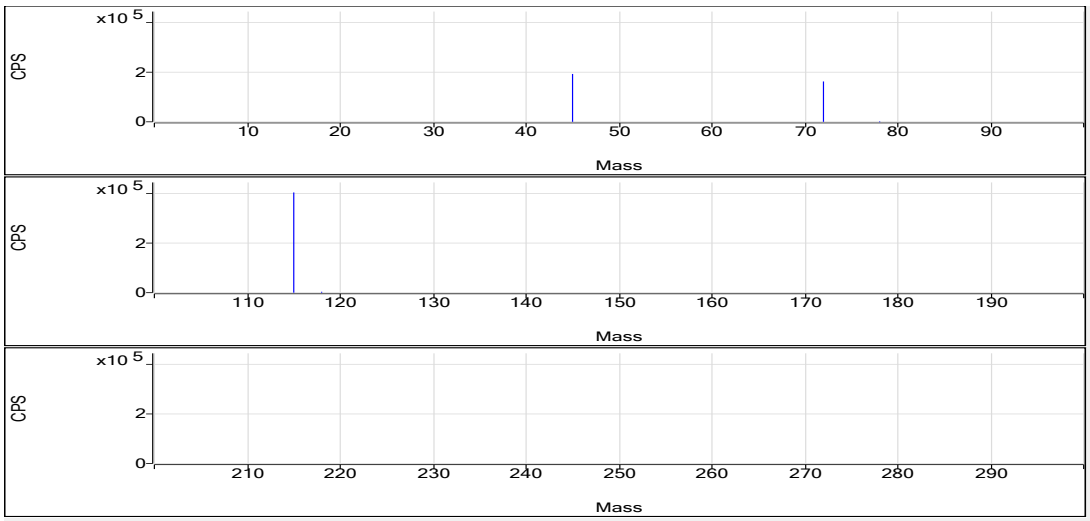
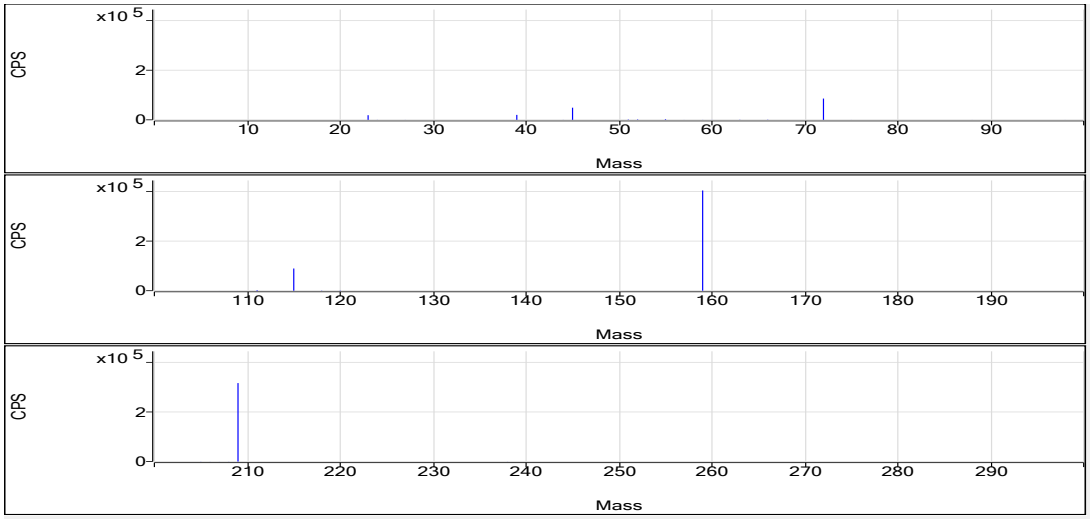


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.008	0	28.00	0.0008	4.685E-06
Be	9	1	No Gas	0.016	0	44.00	0.0008	4.685E-06
Be	9	1	No Gas	0.01	0	30.00	0.0008	4.685E-06
Se	78	2	H2	0.03	0	4.00	0.0004	1.219E-05
Se	78	2	H2	0	0	2.00	0.0004	1.219E-05
Se	78	2	H2	0	0	2.00	0.0004	1.219E-05
Na	23	3	He	14.174	0.3959	19323.01	0.0036	0.3452
Na	23	3	He	10.651	0.3833	18842.53	0.0036	0.3452
Na	23	3	He	4.559	0.3615	17731.20	0.0036	0.3452
Mg	24	3	He	0.791	0.0049	240.01	0.0018	0.003497
Mg	24	3	He	1.679	0.0065	320.01	0.0018	0.003497
Mg	24	3	He	0.778	0.0049	240.01	0.0018	0.003497
Al	27	3	He	4.504	0.0033	160.01	0.0006	0.0006432
Al	27	3	He	4.811	0.0035	170.01	0.0006	0.0006432
Al	27	3	He	0.991	0.0012	60.00	0.0006	0.0006432
K	39	3	He	9.854	0.4065	19844.26	0.0012	0.3951
K	39	3	He	1.582	0.3969	19513.64	0.0012	0.3951
K	39	3	He	18.826	0.417	20454.69	0.0012	0.3951
Ca	44	3	He	23.499	0.0043	210.01	0.0001	0.002715
Ca	44	3	He	7.989	0.0033	160.01	0.0001	0.002715
Ca	44	3	He	17.151	0.0039	190.01	0.0001	0.002715
Ti	47	3	He	2.159	0.0012	60.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	1.009	0.0006	30.00	0.0005	7.003E-05
V	51	3	He	0.148	0.0281	1372.07	0.0219	0.02486
V	51	3	He	0.096	0.027	1326.07	0.0219	0.02486
V	51	3	He	-0.013	0.0246	1206.06	0.0219	0.02486
Cr	52	3	He	-0.185	0.0344	1680.16	0.0299	0.03997
Cr	52	3	He	-0.418	0.0275	1350.10	0.0299	0.03997
Cr	52	3	He	-0.177	0.0347	1700.18	0.0299	0.03997
Mn	55	3	He	3.642	0.0494	2410.30	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	3.694	0.05	2460.30	0.0128	0.002639
Mn	55	3	He	3.273	0.0446	2190.24	0.0128	0.002639
Fe	57	3	He	2.125	0.0027	130.01	0.0006	0.001429
Fe	57	3	He	1.042	0.002	100.00	0.0006	0.001429
Fe	57	3	He	0.699	0.0018	90.00	0.0006	0.001429
Co	59	3	He	0.024	0.0035	170.01	0.0563	0.002149
Co	59	3	He	0.027	0.0037	180.01	0.0563	0.002149
Co	59	3	He	0.063	0.0057	280.02	0.0563	0.002149
Ni	60	3	He	0.012	0.0029	250.01	0.0086	0.002834
Ni	60	3	He	0.049	0.0033	280.01	0.0086	0.002834
Ni	60	3	He	-0.061	0.0023	200.01	0.0086	0.002834
Cu	63	3	He	0.098	0.0073	620.04	0.0257	0.004757
Cu	63	3	He	0.059	0.0063	540.03	0.0257	0.004757
Cu	63	3	He	0.085	0.0069	600.03	0.0257	0.004757
Zn	66	3	He	1.512	0.0082	700.04	0.0029	0.003818
Zn	66	3	He	1.839	0.0092	790.05	0.0029	0.003818
Zn	66	3	He	1.431	0.008	690.04	0.0029	0.003818
As	75	3	He	0.077	0.001	82.00	0.002	0.0008061
As	75	3	He	0.151	0.0011	96.00	0.002	0.0008061
As	75	3	He	0.058	0.0009	80.00	0.002	0.0008061
Sr	88	3	He	0.032	0.0012	110.00	0.009	0.0009645
Sr	88	3	He	-0.009	0.0009	80.00	0.009	0.0009645
Sr	88	3	He	-0.046	0.0006	50.00	0.009	0.0009645
Mo	98	3	He	0.039	0.0011	100.00	0.0219	0.0002706
Mo	98	3	He	0.033	0.001	90.01	0.0219	0.0002706
Mo	98	3	He	0.008	0.0004	40.00	0.0219	0.0002706
Ag	107	3	He	-0.004	0.0005	40.00	0.0465	0.0006206
Ag	107	3	He	-0.002	0.0005	50.00	0.0465	0.0006206
Ag	107	3	He	0.001	0.0007	60.00	0.0465	0.0006206
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Sn	120	3	He	-0.166	0.0139	1220.10	0.0158	0.01648
Sn	120	3	He	-0.11	0.0147	1340.11	0.0158	0.01648
Sn	120	3	He	-0.198	0.0133	1200.10	0.0158	0.01648
Sb	121	3	He	-0.003	0.0002	20.00	0.0149	0.0002698
Sb	121	3	He	-0.003	0.0002	20.00	0.0149	0.0002698
Sb	121	3	He	0.034	0.0008	70.00	0.0149	0.0002698
Ba	137	3	He	0.094	0.0007	60.00	0.0048	0.0002317
Ba	137	3	He	-0.025	0.0001	10.00	0.0048	0.0002317
Ba	137	3	He	0.021	0.0003	30.00	0.0048	0.0002317
Tl	205	3	He	0.036	0.001	410.02	0.0247	0.0001339
Tl	205	3	He	0.026	0.0008	320.02	0.0247	0.0001339
Tl	205	3	He	0.025	0.0007	300.02	0.0247	0.0001339
Pb	208	3	He	0.01	0.0014	310.01	0.0327	0.00107
Pb	208	3	He	0.007	0.0013	290.01	0.0327	0.00107
Pb	208	3	He	0.015	0.0016	310.01	0.0327	0.00107
U	238	3	He	0.014	0.0008	240.01	0.0493	7.55E-05
U	238	3	He	0.018	0.001	310.01	0.0493	7.55E-05
U	238	3	He	0.012	0.0007	210.01	0.0493	7.55E-05
Sc	45	1	No Gas			2516650.90		
Sc	45	1	No Gas			2561533.56		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2493775.12		
Ge	72	1	No Gas			1218044.12		
Ge	72	1	No Gas			1231908.97		
Ge	72	1	No Gas			1213422.40		
Sc	45	2	H2			192014.82		
Sc	45	2	H2			193249.94		
Sc	45	2	H2			193936.54		
Ge	72	2	H2			160886.67		
Ge	72	2	H2			163891.25		
Ge	72	2	H2			163649.18		
In	115	2	H2			406005.27		
In	115	2	H2			404562.77		
In	115	2	H2			402453.51		
Sc	45	3	He			48812.62		
Sc	45	3	He			49164.08		
Sc	45	3	He			49053.61		
Ge	72	3	He			85152.98		
Ge	72	3	He			86139.20		
Ge	72	3	He			86430.81		
In	115	3	He			88059.22		
In	115	3	He			90977.42		
In	115	3	He			89919.95		
Tb	159	3	He			403722.88		
Tb	159	3	He			405973.12		
Tb	159	3	He			405418.94		
Bi	209	3	He			316457.07		
Bi	209	3	He			314424.19		
Bi	209	3	He			320640.52		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

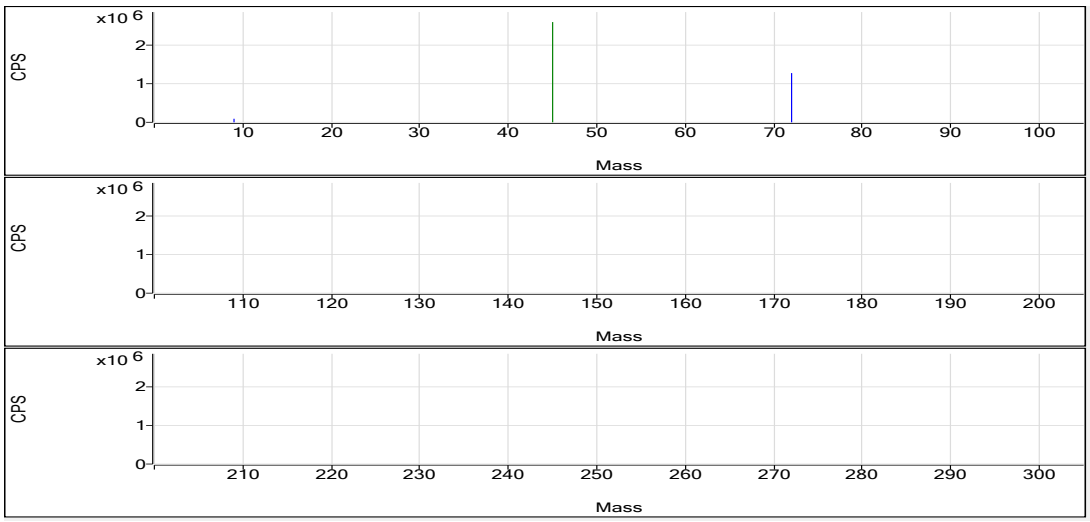
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	46.211	ppb	1.3	91063.42	0.0353	Pulse	0.5000	3
Se	78	72	H2	104.255	ppb	1.2	7264.30	0.0435	Pulse	1.5000	3
Na	23	45	He	4693.657	ppb	0.4	853846.34	17.1346	Pulse	0.1000	3
Mg	24	45	He	4898.467	ppb	1.2	438132.94	8.7929	Pulse	0.1000	3
Al	27	45	He	4867.579	ppb	0.8	141931.92	2.8483	Pulse	0.1000	3
K	39	45	He	4978.915	ppb	0.8	308557.19	6.1922	Pulse	0.1000	3
Ca	44	45	He	5328.670	ppb	1.7	18071.68	0.3627	Pulse	0.1000	3
Ti	47	45	He	503.249	ppb	2.4	13469.99	0.2703	Pulse	0.1000	3
V	51	45	He	506.720	ppb	1.3	553159.69	11.1013	Pulse	0.5000	3
Cr	52	45	He	480.669	ppb	1.1	719138.04	14.4316	Pulse	0.1000	3
Mn	55	45	He	503.692	ppb	1.4	322244.12	6.4670	Pulse	0.1000	3
Fe	57	45	He	5008.539	ppb	1.8	145057.68	2.9113	Pulse	0.1000	3
Co	59	45	He	493.084	ppb	2.8	1382809.61	27.7541	Mix	0.1000	3
Ni	60	72	He	509.654	ppb	0.6	383055.40	4.3773	Pulse	0.1000	3
Cu	63	72	He	482.147	ppb	0.5	1083549.25	12.3820	Pulse	0.1000	3
Zn	66	72	He	516.173	ppb	1.1	131851.13	1.5067	Pulse	0.1000	3
As	75	72	He	517.467	ppb	0.4	92851.32	1.0610	Pulse	0.5000	3
Sr	88	115	He	52.007	ppb	0.3	41678.95	0.4675	Pulse	0.1000	3
Mo	98	115	He	49.707	ppb	1.0	97195.77	1.0902	Pulse	0.1000	3
Ag	107	115	He	50.469	ppb	1.8	209223.83	2.3468	Pulse	0.1000	3
Cd	111	115	He	51.934	ppb	2.0	24757.26	0.2777	Pulse	0.5000	3
Sn	120	115	He	101.342	ppb	0.4	144221.31	1.6175	Pulse	0.1000	3
Sb	121	115	He	103.143	ppb	1.1	136615.94	1.5323	Pulse	0.1000	3
Ba	137	115	He	524.131	ppb	1.8	224285.29	2.5157	Pulse	0.1000	3
Tl	205	159	He	103.049	ppb	0.9	1038289.04	2.5482	Pulse	0.1000	3
Pb	208	159	He	51.634	ppb	0.8	689036.42	1.6910	Pulse	0.1000	3
U	238	209	He	49.810	ppb	0.4	778098.61	2.4537	Pulse	0.1000	3

ISTD Table:

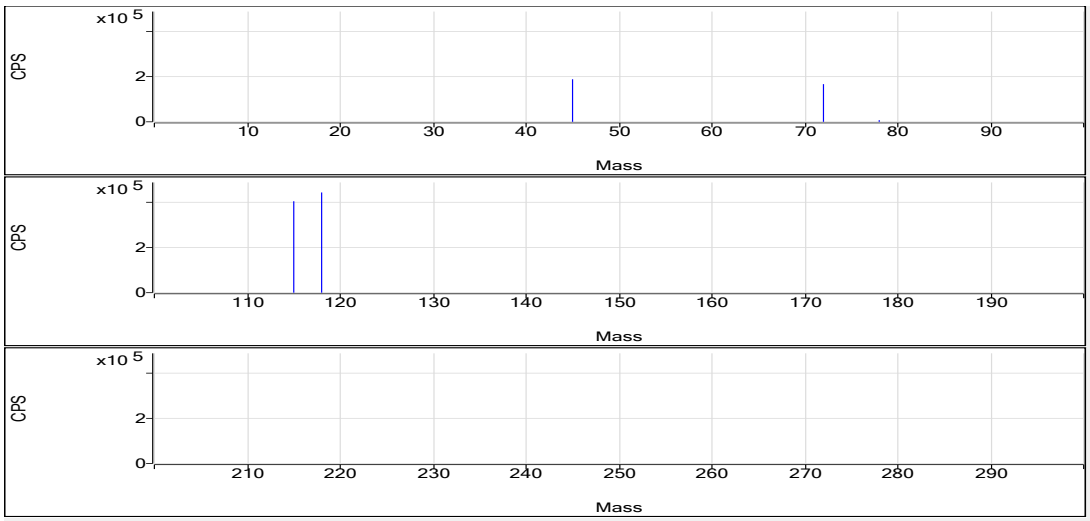
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2583134.28	0.7	107.7	Analog	0.1000	3
No Gas	Ge	72	1268184.33	0.8	110.0	Pulse	0.1000	3
H2	Sc	45	188713.19	0.2	100.9	Pulse	0.1000	3
H2	Ge	72	167037.00	1.5	102.0	Pulse	0.1000	3
H2	In	115	405447.56	0.4	104.2	Pulse	0.1000	3
He	Sc	45	49833.03	1.3	106.8	Pulse	0.1000	3
He	Ge	72	87510.44	0.3	107.8	Pulse	0.1000	3
He	In	115	89161.95	0.8	103.4	Pulse	0.1000	3
He	Tb	159	407472.93	0.4	102.2	Pulse	0.1000	3
He	Bi	209	317116.43	0.4	102.5	Pulse	0.1000	3

No Gas

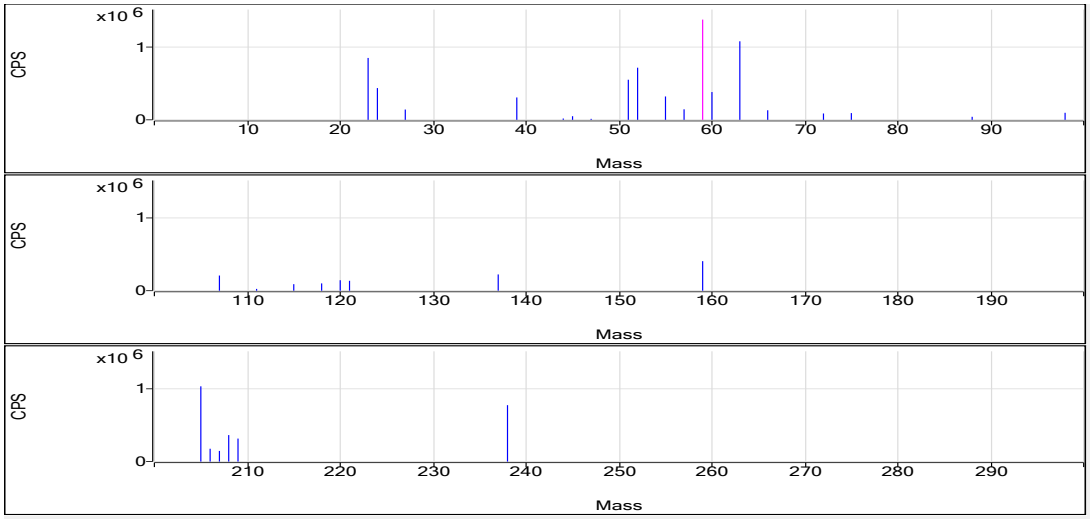


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	46.694	0.0356	92177.54	0.0008	4.685E-06
Be	9	1	No Gas	46.378	0.0354	90732.77	0.0008	4.685E-06
Be	9	1	No Gas	45.562	0.0348	90279.95	0.0008	4.685E-06
Se	78	2	H2	105.119	0.0439	7318.55	0.0004	1.219E-05
Se	78	2	H2	104.785	0.0437	7193.15	0.0004	1.219E-05
Se	78	2	H2	102.86	0.0429	7281.19	0.0004	1.219E-05
Na	23	3	He	4708.014	17.186	856657.80	0.0036	0.3452
Na	23	3	He	4671.889	17.0567	861168.66	0.0036	0.3452
Na	23	3	He	4701.067	17.1611	843712.57	0.0036	0.3452
Mg	24	3	He	4879.136	8.7582	436566.52	0.0018	0.003497
Mg	24	3	He	4851.481	8.7086	439684.80	0.0018	0.003497
Mg	24	3	He	4964.783	8.9119	438147.49	0.0018	0.003497
Al	27	3	He	4882.076	2.8568	142402.54	0.0006	0.0006432
Al	27	3	He	4822.048	2.8217	142463.81	0.0006	0.0006432
Al	27	3	He	4898.614	2.8665	140929.40	0.0006	0.0006432
K	39	3	He	4952.189	6.161	307105.21	0.0012	0.3951
K	39	3	He	4960.701	6.1709	311561.54	0.0012	0.3951
K	39	3	He	5023.856	6.2445	307004.82	0.0012	0.3951
Ca	44	3	He	5240.482	0.3567	17781.18	0.0001	0.002715
Ca	44	3	He	5320.17	0.3621	18282.01	0.0001	0.002715
Ca	44	3	He	5425.359	0.3692	18151.84	0.0001	0.002715
Ti	47	3	He	489.923	0.2631	13116.27	0.0005	7.003E-05
Ti	47	3	He	512.862	0.2755	13907.09	0.0005	7.003E-05
Ti	47	3	He	506.963	0.2723	13386.60	0.0005	7.003E-05
V	51	3	He	510.708	11.1885	557707.56	0.0219	0.02486
V	51	3	He	499.099	10.9347	552078.69	0.0219	0.02486
V	51	3	He	510.352	11.1807	549692.81	0.0219	0.02486
Cr	52	3	He	486.162	14.596	727558.74	0.0299	0.03997
Cr	52	3	He	475.557	14.2785	720898.97	0.0299	0.03997
Cr	52	3	He	480.289	14.4202	708956.40	0.0299	0.03997
Mn	55	3	He	497.26	6.3844	318240.17	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	502.779	6.4552	325915.44	0.0128	0.002639
Mn	55	3	He	511.036	6.5612	322576.75	0.0128	0.002639
Fe	57	3	He	5007.322	2.9106	145084.74	0.0006	0.001429
Fe	57	3	He	4917.805	2.8586	144327.81	0.0006	0.001429
Fe	57	3	He	5100.49	2.9648	145760.48	0.0006	0.001429
Co	59	3	He	482.839	27.1775	1354698.10	0.0563	0.002149
Co	59	3	He	487.928	27.4639	1386609.04	0.0563	0.002149
Co	59	3	He	508.485	28.6208	1407121.70	0.0563	0.002149
Ni	60	3	He	512.982	4.4058	384832.85	0.0086	0.002834
Ni	60	3	He	508.817	4.3701	383600.31	0.0086	0.002834
Ni	60	3	He	507.164	4.3559	380733.04	0.0086	0.002834
Cu	63	3	He	485.106	12.4579	1088153.97	0.0257	0.004757
Cu	63	3	He	481.16	12.3567	1084652.09	0.0257	0.004757
Cu	63	3	He	480.176	12.3314	1077841.70	0.0257	0.004757
Zn	66	3	He	521.861	1.5233	133052.35	0.0029	0.003818
Zn	66	3	He	510.988	1.4916	130932.30	0.0029	0.003818
Zn	66	3	He	515.671	1.5053	131568.73	0.0029	0.003818
As	75	3	He	518.788	1.0637	92913.06	0.002	0.0008061
As	75	3	He	518.591	1.0633	93337.83	0.002	0.0008061
As	75	3	He	515.024	1.056	92303.08	0.002	0.0008061
Sr	88	3	He	52.156	0.4688	41521.58	0.009	0.0009645
Sr	88	3	He	51.977	0.4672	41591.96	0.009	0.0009645
Sr	88	3	He	51.888	0.4664	41923.31	0.009	0.0009645
Mo	98	3	He	50.108	1.099	97337.05	0.0219	0.0002706
Mo	98	3	He	49.889	1.0942	97407.46	0.0219	0.0002706
Mo	98	3	He	49.123	1.0774	96842.80	0.0219	0.0002706
Ag	107	3	He	51.191	2.3803	210830.29	0.0465	0.0006206
Ag	107	3	He	50.751	2.3599	210088.96	0.0465	0.0006206
Ag	107	3	He	49.465	2.3001	206752.24	0.0465	0.0006206
Cd	111	3	He	51.889	0.2774	24573.61	0.0053	0
Cd	111	3	He	53.005	0.2834	25230.76	0.0053	0
Cd	111	3	He	50.907	0.2722	24467.41	0.0053	0
Sn	120	3	He	101.802	1.6248	143911.75	0.0158	0.01648
Sn	120	3	He	101.155	1.6146	143739.92	0.0158	0.01648
Sn	120	3	He	101.069	1.6132	145012.27	0.0158	0.01648
Sb	121	3	He	103.682	1.5403	136427.28	0.0149	0.0002698
Sb	121	3	He	103.956	1.5444	137488.45	0.0149	0.0002698
Sb	121	3	He	101.791	1.5122	135932.08	0.0149	0.0002698
Ba	137	3	He	531.782	2.5524	226072.30	0.0048	0.0002317
Ba	137	3	He	527.228	2.5306	225285.91	0.0048	0.0002317
Ba	137	3	He	513.383	2.4641	221497.65	0.0048	0.0002317
Tl	205	3	He	102.135	2.5256	1031910.45	0.0247	0.0001339
Tl	205	3	He	103.891	2.569	1041620.45	0.0247	0.0001339
Tl	205	3	He	103.122	2.55	1041336.23	0.0247	0.0001339
Pb	208	3	He	51.472	1.6857	366414.53	0.0327	0.00107
Pb	208	3	He	52.092	1.706	365048.98	0.0327	0.00107
Pb	208	3	He	51.338	1.6813	364506.28	0.0327	0.00107
U	238	3	He	50.008	2.4634	779187.57	0.0493	7.55E-05
U	238	3	He	49.785	2.4525	776044.60	0.0493	7.55E-05
U	238	3	He	49.636	2.4452	779063.66	0.0493	7.55E-05
Sc	45	1	No Gas			2587625.59		
Sc	45	1	No Gas			2564464.49		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2597312.77		
Ge	72	1	No Gas			1273144.75		
Ge	72	1	No Gas			1256313.34		
Ge	72	1	No Gas			1275094.90		
Sc	45	2	H2			188773.20		
Sc	45	2	H2			188232.93		
Sc	45	2	H2			189133.45		
Ge	72	2	H2			166884.96		
Ge	72	2	H2			164547.54		
Ge	72	2	H2			169678.49		
In	115	2	H2			403964.95		
In	115	2	H2			406935.97		
In	115	2	H2			405441.75		
Sc	45	3	He			49846.39		
Sc	45	3	He			50488.48		
Sc	45	3	He			49164.23		
Ge	72	3	He			87346.18		
Ge	72	3	He			87778.74		
Ge	72	3	He			87406.39		
In	115	3	He			89366.47		
In	115	3	He			89809.34		
In	115	3	He			90664.78		
Tb	159	3	He			408585.78		
Tb	159	3	He			405460.27		
Tb	159	3	He			408372.73		
Bi	209	3	He			316299.68		
Bi	209	3	He			316434.80		
Bi	209	3	He			318614.82		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

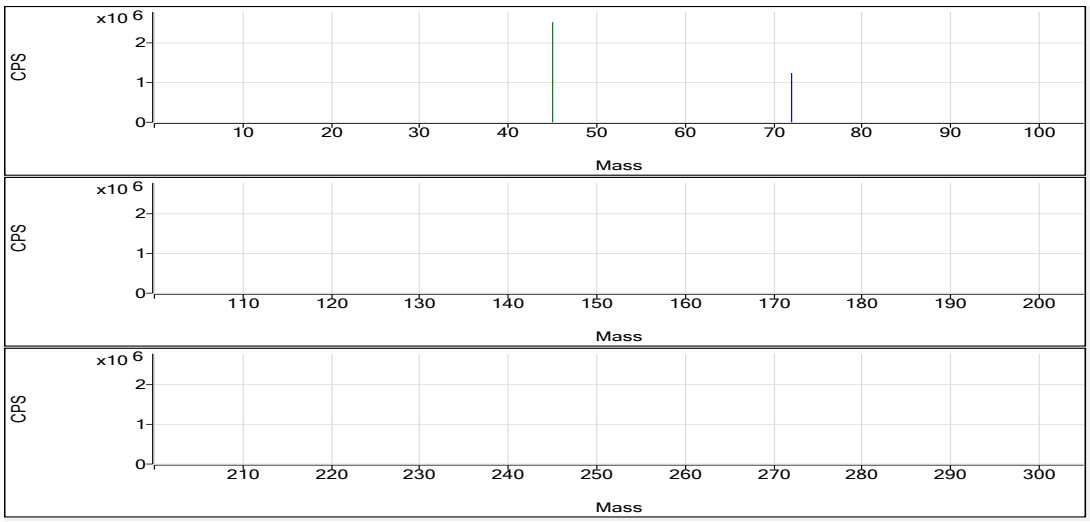
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.066	ppb	18.1	138.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.700	ppb	15.0	50.22	0.0003	Pulse	1.5000	3
Na	23	45	He	5033.853	ppb	2.3	878472.59	18.3515	Pulse	0.1000	3
Mg	24	45	He	11964.027	ppb	1.4	1028068.63	21.4708	Mix	0.1000	3
Al	27	45	He	85.104	ppb	5.1	2413.61	0.0504	Pulse	0.1000	3
K	39	45	He	3894.448	ppb	2.8	235956.62	4.9295	Pulse	0.1000	3
Ca	44	45	He	65590.381	ppb	2.3	212224.04	4.4335	Pulse	0.1000	3
Ti	47	45	He	4.782	ppb	18.1	126.67	0.0026	Pulse	0.1000	3
V	51	45	He	0.902	ppb	6.0	2134.17	0.0446	Pulse	0.5000	3
Cr	52	45	He	1.155	ppb	15.1	3567.24	0.0746	Pulse	0.1000	3
Mn	55	45	He	175.325	ppb	2.8	107827.45	2.2527	Pulse	0.1000	3
Fe	57	45	He	313.292	ppb	3.6	8779.60	0.1834	Pulse	0.1000	3
Co	59	45	He	0.300	ppb	3.5	910.06	0.0190	Pulse	0.1000	3
Ni	60	72	He	0.844	ppb	10.9	886.73	0.0101	Pulse	0.1000	3
Cu	63	72	He	14.135	ppb	2.4	32323.80	0.3676	Pulse	0.1000	3
Zn	66	72	He	139.122	ppb	2.3	35952.35	0.4089	Pulse	0.1000	3
As	75	72	He	0.735	ppb	13.1	203.33	0.0023	Pulse	0.5000	3
Sr	88	115	He	232.508	ppb	0.8	183924.57	2.0865	Pulse	0.1000	3
Mo	98	115	He	0.638	ppb	7.9	1256.78	0.0143	Pulse	0.1000	3
Ag	107	115	He	0.013	ppb	50.9	106.67	0.0012	Pulse	0.1000	3
Cd	111	115	He	0.307	ppb	12.7	144.67	0.0016	Pulse	0.5000	3
Sn	120	115	He	-0.157	ppb	N/A	1233.44	0.0140	Pulse	0.1000	3
Sb	121	115	He	0.053	ppb	60.2	93.34	0.0011	Pulse	0.1000	3
Ba	137	115	He	126.335	ppb	2.1	53461.58	0.6066	Pulse	0.1000	3
Tl	205	159	He	0.196	ppb	16.3	1990.23	0.0050	Pulse	0.1000	3
Pb	208	159	He	0.264	ppb	8.2	3887.03	0.0097	Pulse	0.1000	3
U	238	209	He	0.490	ppb	2.7	7619.16	0.0242	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2516339.65	1.2	104.9	Analog	0.1000	3
No Gas	Ge	72	1235884.54	0.8	107.2	Pulse	0.1000	3
H2	Sc	45	188692.50	1.0	100.9	Pulse	0.1000	3
H2	Ge	72	165327.61	1.0	101.0	Pulse	0.1000	3
H2	In	115	401357.44	0.7	103.2	Pulse	0.1000	3
He	Sc	45	47886.21	2.4	102.7	Pulse	0.1000	3
He	Ge	72	87940.00	1.0	108.3	Pulse	0.1000	3
He	In	115	88154.80	1.4	102.3	Pulse	0.1000	3
He	Tb	159	400093.30	0.1	100.4	Pulse	0.1000	3
He	Bi	209	314479.86	0.3	101.7	Pulse	0.1000	3

No Gas



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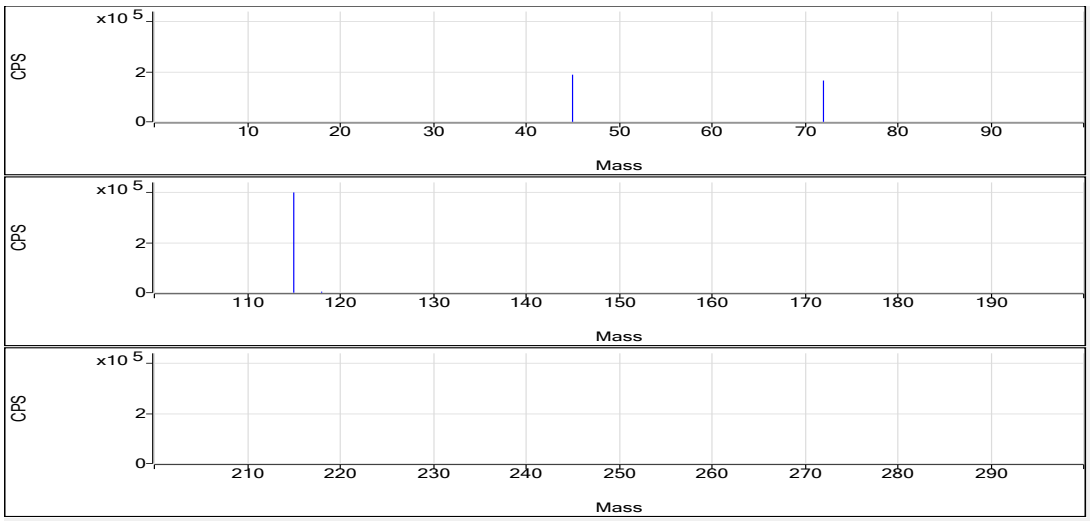
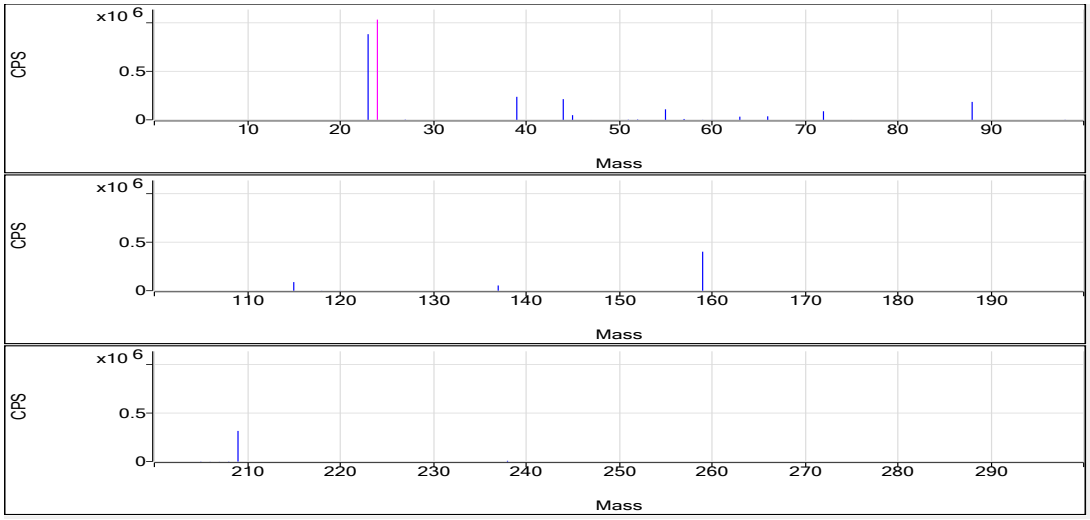


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.067	0.0001	138.00	0.0008	4.685E-06
Be	9	1	No Gas	0.077	0.0001	160.00	0.0008	4.685E-06
Be	9	1	No Gas	0.054	0	116.00	0.0008	4.685E-06
Se	78	2	H2	0.786	0.0003	56.00	0.0004	1.219E-05
Se	78	2	H2	0.73	0.0003	52.00	0.0004	1.219E-05
Se	78	2	H2	0.583	0.0003	42.67	0.0004	1.219E-05
Na	23	3	He	5037.144	18.3633	880885.46	0.0036	0.3452
Na	23	3	He	4918.469	17.9388	878871.16	0.0036	0.3452
Na	23	3	He	5145.946	18.7525	875661.16	0.0036	0.3452
Mg	24	3	He	11784.08	21.1479	1014465.61	0.0018	0.003497
Mg	24	3	He	12000.436	21.5361	1055117.02	0.0018	0.003497
Mg	24	3	He	12107.563	21.7284	1014623.27	0.0018	0.003497
Al	27	3	He	88.349	0.0523	2510.29	0.0006	0.0006432
Al	27	3	He	80.2	0.0476	2330.26	0.0006	0.0006432
Al	27	3	He	86.763	0.0514	2400.29	0.0006	0.0006432
K	39	3	He	3903.578	4.9401	236976.75	0.0012	0.3951
K	39	3	He	3780.281	4.7965	234996.60	0.0012	0.3951
K	39	3	He	3999.483	5.0518	235896.50	0.0012	0.3951
Ca	44	3	He	65274.327	4.4121	211649.27	0.0001	0.002715
Ca	44	3	He	64257.192	4.3434	212796.07	0.0001	0.002715
Ca	44	3	He	67239.623	4.5449	212226.79	0.0001	0.002715
Ti	47	3	He	4.917	0.0027	130.00	0.0005	7.003E-05
Ti	47	3	He	5.572	0.0031	150.01	0.0005	7.003E-05
Ti	47	3	He	3.858	0.0021	100.00	0.0005	7.003E-05
V	51	3	He	0.942	0.0454	2180.18	0.0219	0.02486
V	51	3	He	0.84	0.0432	2118.17	0.0219	0.02486
V	51	3	He	0.924	0.0451	2104.17	0.0219	0.02486
Cr	52	3	He	1.033	0.0709	3400.52	0.0299	0.03997
Cr	52	3	He	1.079	0.0723	3540.57	0.0299	0.03997
Cr	52	3	He	1.355	0.0805	3760.62	0.0299	0.03997
Mn	55	3	He	174.539	2.2427	107580.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	170.888	2.1958	107578.21	0.0128	0.002639
Mn	55	3	He	180.549	2.3198	108324.14	0.0128	0.002639
Fe	57	3	He	313.397	0.1835	8802.94	0.0006	0.001429
Fe	57	3	He	301.88	0.1768	8662.82	0.0006	0.001429
Fe	57	3	He	324.599	0.19	8873.03	0.0006	0.001429
Co	59	3	He	0.288	0.0183	880.06	0.0563	0.002149
Co	59	3	He	0.303	0.0192	940.06	0.0563	0.002149
Co	59	3	He	0.308	0.0195	910.07	0.0563	0.002149
Ni	60	3	He	0.901	0.0106	940.07	0.0086	0.002834
Ni	60	3	He	0.894	0.0105	920.06	0.0086	0.002834
Ni	60	3	He	0.738	0.0092	800.05	0.0086	0.002834
Cu	63	3	He	13.75	0.3577	31826.22	0.0257	0.004757
Cu	63	3	He	14.262	0.3709	32487.40	0.0257	0.004757
Cu	63	3	He	14.394	0.3743	32657.79	0.0257	0.004757
Zn	66	3	He	135.481	0.3983	35434.28	0.0029	0.003818
Zn	66	3	He	141.315	0.4153	36376.62	0.0029	0.003818
Zn	66	3	He	140.572	0.4131	36046.14	0.0029	0.003818
As	75	3	He	0.835	0.0025	224.00	0.002	0.0008061
As	75	3	He	0.643	0.0021	186.00	0.002	0.0008061
As	75	3	He	0.725	0.0023	200.00	0.002	0.0008061
Sr	88	3	He	233.395	2.0945	182270.19	0.009	0.0009645
Sr	88	3	He	230.308	2.0668	184872.50	0.009	0.0009645
Sr	88	3	He	233.822	2.0983	184631.01	0.009	0.0009645
Mo	98	3	He	0.685	0.0153	1330.12	0.0219	0.0002706
Mo	98	3	He	0.584	0.0131	1170.10	0.0219	0.0002706
Mo	98	3	He	0.646	0.0144	1270.11	0.0219	0.0002706
Ag	107	3	He	0.019	0.0015	130.01	0.0465	0.0006206
Ag	107	3	He	0.006	0.0009	80.00	0.0465	0.0006206
Ag	107	3	He	0.014	0.0013	110.01	0.0465	0.0006206
Cd	111	3	He	0.34	0.0018	158.00	0.0053	0
Cd	111	3	He	0.318	0.0017	152.00	0.0053	0
Cd	111	3	He	0.264	0.0014	124.00	0.0053	0
Sn	120	3	He	0.012	0.0167	1450.14	0.0158	0.01648
Sn	120	3	He	-0.137	0.0143	1280.10	0.0158	0.01648
Sn	120	3	He	-0.345	0.011	970.07	0.0158	0.01648
Sb	121	3	He	0.044	0.0009	80.00	0.0149	0.0002698
Sb	121	3	He	0.027	0.0007	60.00	0.0149	0.0002698
Sb	121	3	He	0.089	0.0016	140.01	0.0149	0.0002698
Ba	137	3	He	127.53	0.6123	53284.06	0.0048	0.0002317
Ba	137	3	He	123.23	0.5917	52923.02	0.0048	0.0002317
Ba	137	3	He	128.245	0.6157	54177.66	0.0048	0.0002317
Tl	205	3	He	0.232	0.0059	2350.30	0.0247	0.0001339
Tl	205	3	He	0.181	0.0046	1840.19	0.0247	0.0001339
Tl	205	3	He	0.174	0.0044	1780.19	0.0247	0.0001339
Pb	208	3	He	0.275	0.0101	2030.22	0.0327	0.00107
Pb	208	3	He	0.239	0.0089	1930.22	0.0327	0.00107
Pb	208	3	He	0.278	0.0102	2330.28	0.0327	0.00107
U	238	3	He	0.502	0.0248	7782.60	0.0493	7.55E-05
U	238	3	He	0.492	0.0243	7652.48	0.0493	7.55E-05
U	238	3	He	0.476	0.0235	7422.39	0.0493	7.55E-05
Sc	45	1	No Gas			2487342.78		
Sc	45	1	No Gas			2514096.21		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2547579.96		
Ge	72	1	No Gas			1224909.83		
Ge	72	1	No Gas			1241841.23		
Ge	72	1	No Gas			1240902.56		
Sc	45	2	H2			186510.15		
Sc	45	2	H2			189905.08		
Sc	45	2	H2			189662.26		
Ge	72	2	H2			164640.54		
Ge	72	2	H2			164165.04		
Ge	72	2	H2			167177.26		
In	115	2	H2			398806.36		
In	115	2	H2			404116.28		
In	115	2	H2			401149.68		
Sc	45	3	He			47969.97		
Sc	45	3	He			48992.85		
Sc	45	3	He			46695.80		
Ge	72	3	He			88966.94		
Ge	72	3	He			87597.22		
Ge	72	3	He			87255.85		
In	115	3	He			87031.60		
In	115	3	He			89457.40		
In	115	3	He			87997.54		
Tb	159	3	He			399756.56		
Tb	159	3	He			400193.51		
Tb	159	3	He			400329.84		
Bi	209	3	He			313552.83		
Bi	209	3	He			314567.10		
Bi	209	3	He			315319.66		

Quantitation Report

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Acq Time	8/10/2023 7:03:06 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

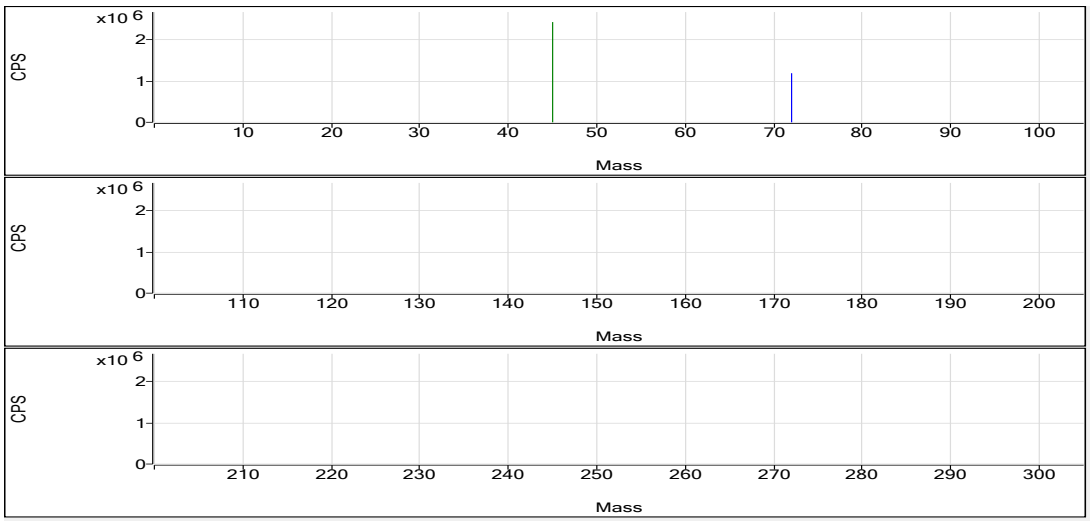
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.010	ppb	43.6	30.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.045	ppb	90.0	4.89	0.0000	Pulse	1.5000	3
Na	23	45	He	14.389	ppb	3.3	18906.01	0.3966	Pulse	0.1000	3
Mg	24	45	He	1.951	ppb	14.6	333.35	0.0070	Pulse	0.1000	3
Al	27	45	He	0.933	ppb	22.5	56.67	0.0012	Pulse	0.1000	3
K	39	45	He	-0.876	ppb	N/A	18779.34	0.3940	Pulse	0.1000	3
Ca	44	45	He	12.370	ppb	232.4	170.01	0.0036	Pulse	0.1000	3
Ti	47	45	He	0.130	ppb	347.0	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	0.358	ppb	4.4	1558.10	0.0327	Pulse	0.5000	3
Cr	52	45	He	-0.015	ppb	N/A	1883.53	0.0395	Pulse	0.1000	3
Mn	55	45	He	0.155	ppb	84.5	220.01	0.0046	Pulse	0.1000	3
Fe	57	45	He	2.363	ppb	38.2	133.34	0.0028	Pulse	0.1000	3
Co	59	45	He	0.056	ppb	15.9	253.34	0.0053	Pulse	0.1000	3
Ni	60	72	He	0.010	ppb	1086.1	240.01	0.0029	Pulse	0.1000	3
Cu	63	72	He	0.080	ppb	12.7	563.36	0.0068	Pulse	0.1000	3
Zn	66	72	He	2.309	ppb	11.9	870.06	0.0105	Pulse	0.1000	3
As	75	72	He	0.067	ppb	17.1	78.00	0.0009	Pulse	0.5000	3
Sr	88	115	He	-0.014	ppb	N/A	73.34	0.0008	Pulse	0.1000	3
Mo	98	115	He	0.042	ppb	37.5	103.34	0.0012	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	N/A	53.33	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.006	ppb	43.2	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.016	ppb	629.1	1460.12	0.0167	Pulse	0.1000	3
Sb	121	115	He	0.008	ppb	119.1	33.33	0.0004	Pulse	0.1000	3
Ba	137	115	He	0.031	ppb	221.6	33.33	0.0004	Pulse	0.1000	3
Tl	205	159	He	0.091	ppb	4.5	946.74	0.0024	Pulse	0.1000	3
Pb	208	159	He	0.010	ppb	42.4	550.03	0.0014	Pulse	0.1000	3
U	238	209	He	0.041	ppb	17.2	656.71	0.0021	Pulse	0.1000	3

ISTD Table:

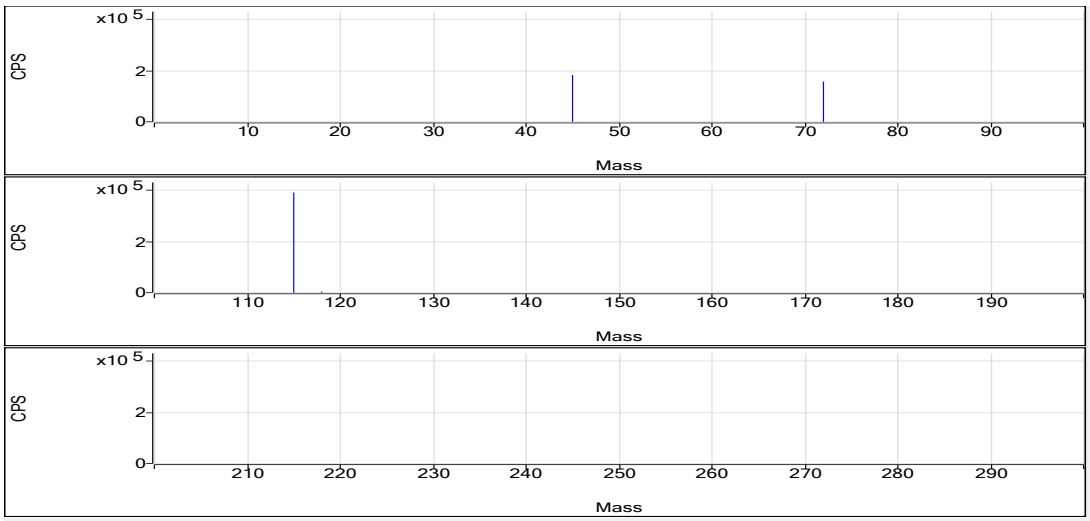
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2438967.36	0.7	101.7	Analog	0.1000	3
No Gas	Ge	72	1194331.05	0.7	103.6	Pulse	0.1000	3
H2	Sc	45	182711.67	1.1	97.7	Pulse	0.1000	3
H2	Ge	72	156884.10	2.0	95.8	Pulse	0.1000	3
H2	In	115	391490.96	0.9	100.6	Pulse	0.1000	3
He	Sc	45	47668.63	1.5	102.2	Pulse	0.1000	3
He	Ge	72	82611.81	1.8	101.7	Pulse	0.1000	3
He	In	115	87292.60	0.8	101.3	Pulse	0.1000	3
He	Tb	159	397795.15	0.2	99.8	Pulse	0.1000	3
He	Bi	209	310354.22	0.7	100.3	Pulse	0.1000	3

No Gas

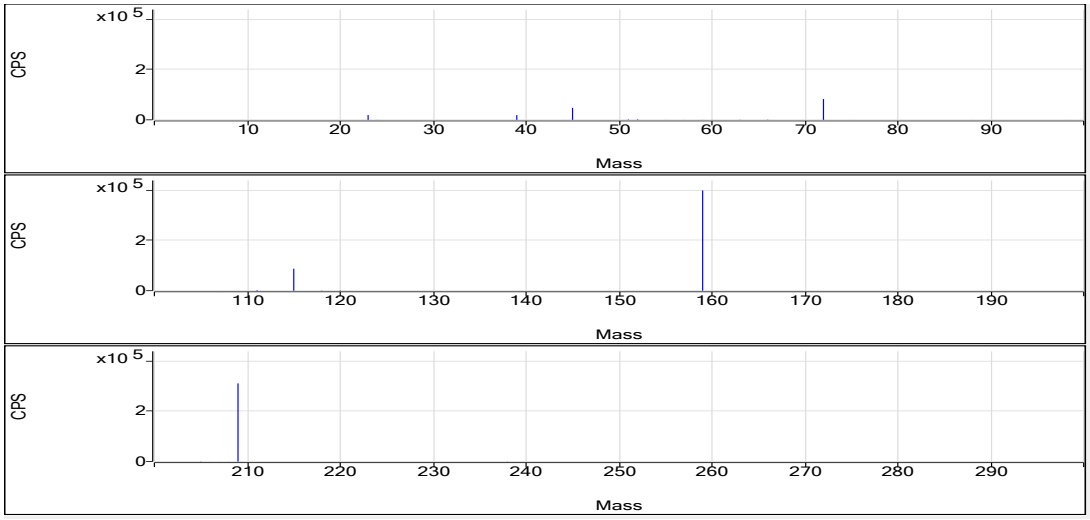


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.009	0	28.00	0.0008	4.685E-06
Be	9	1	No Gas	0.007	0	24.00	0.0008	4.685E-06
Be	9	1	No Gas	0.015	0	40.00	0.0008	4.685E-06
Se	78	2	H2	0.023	0	3.33	0.0004	1.219E-05
Se	78	2	H2	0.021	0	3.33	0.0004	1.219E-05
Se	78	2	H2	0.092	0.0001	8.00	0.0004	1.219E-05
Na	23	3	He	14.914	0.3985	18712.31	0.0036	0.3452
Na	23	3	He	13.971	0.3951	19113.05	0.0036	0.3452
Na	23	3	He	14.283	0.3962	18892.66	0.0036	0.3452
Mg	24	3	He	2.087	0.0072	340.01	0.0018	0.003497
Mg	24	3	He	1.623	0.0064	310.02	0.0018	0.003497
Mg	24	3	He	2.143	0.0073	350.02	0.0018	0.003497
Al	27	3	He	1.085	0.0013	60.00	0.0006	0.0006432
Al	27	3	He	1.021	0.0012	60.00	0.0006	0.0006432
Al	27	3	He	0.693	0.001	50.00	0.0006	0.0006432
K	39	3	He	3.142	0.3987	18722.60	0.0012	0.3951
K	39	3	He	-12.741	0.3802	18392.14	0.0012	0.3951
K	39	3	He	6.971	0.4032	19223.27	0.0012	0.3951
Ca	44	3	He	-2.356	0.0026	120.01	0.0001	0.002715
Ca	44	3	He	45.504	0.0058	280.01	0.0001	0.002715
Ca	44	3	He	-6.038	0.0023	110.00	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.651	0.0004	20.00	0.0005	7.003E-05
V	51	3	He	0.34	0.0323	1516.09	0.0219	0.02486
V	51	3	He	0.364	0.0328	1588.10	0.0219	0.02486
V	51	3	He	0.369	0.0329	1570.10	0.0219	0.02486
Cr	52	3	He	0.024	0.0407	1910.19	0.0299	0.03997
Cr	52	3	He	-0.099	0.037	1790.19	0.0299	0.03997
Cr	52	3	He	0.031	0.0409	1950.21	0.0299	0.03997
Mn	55	3	He	0.226	0.0055	260.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.004	0.0027	130.00	0.0128	0.002639
Mn	55	3	He	0.236	0.0057	270.01	0.0128	0.002639
Fe	57	3	He	3.406	0.0034	160.01	0.0006	0.001429
Fe	57	3	He	1.811	0.0025	120.00	0.0006	0.001429
Fe	57	3	He	1.873	0.0025	120.01	0.0006	0.001429
Co	59	3	He	0.049	0.0049	230.01	0.0563	0.002149
Co	59	3	He	0.054	0.0052	250.01	0.0563	0.002149
Co	59	3	He	0.066	0.0059	280.01	0.0563	0.002149
Ni	60	3	He	-0.109	0.0019	160.01	0.0086	0.002834
Ni	60	3	He	0.052	0.0033	270.01	0.0086	0.002834
Ni	60	3	He	0.086	0.0036	290.01	0.0086	0.002834
Cu	63	3	He	0.069	0.0065	550.03	0.0257	0.004757
Cu	63	3	He	0.089	0.007	580.03	0.0257	0.004757
Cu	63	3	He	0.083	0.0069	560.03	0.0257	0.004757
Zn	66	3	He	1.992	0.0096	810.05	0.0029	0.003818
Zn	66	3	He	2.483	0.011	910.06	0.0029	0.003818
Zn	66	3	He	2.453	0.011	890.06	0.0029	0.003818
As	75	3	He	0.059	0.0009	78.00	0.002	0.0008061
As	75	3	He	0.08	0.001	80.00	0.002	0.0008061
As	75	3	He	0.063	0.0009	76.00	0.002	0.0008061
Sr	88	3	He	-0.044	0.0006	50.00	0.009	0.0009645
Sr	88	3	He	-0.03	0.0007	60.00	0.009	0.0009645
Sr	88	3	He	0.032	0.0013	110.01	0.009	0.0009645
Mo	98	3	He	0.045	0.0013	110.00	0.0219	0.0002706
Mo	98	3	He	0.025	0.0008	70.00	0.0219	0.0002706
Mo	98	3	He	0.055	0.0015	130.01	0.0219	0.0002706
Ag	107	3	He	-0.004	0.0005	40.00	0.0465	0.0006206
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Ag	107	3	He	0.004	0.0008	70.00	0.0465	0.0006206
Cd	111	3	He	0.009	0	4.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Sn	120	3	He	0	0.0165	1440.12	0.0158	0.01648
Sn	120	3	He	0.127	0.0185	1600.14	0.0158	0.01648
Sn	120	3	He	-0.078	0.0152	1340.11	0.0158	0.01648
Sb	121	3	He	0.013	0.0005	40.00	0.0149	0.0002698
Sb	121	3	He	0.013	0.0005	40.00	0.0149	0.0002698
Sb	121	3	He	-0.003	0.0002	20.00	0.0149	0.0002698
Ba	137	3	He	0.071	0.0006	50.00	0.0048	0.0002317
Ba	137	3	He	-0.048	0	0.00	0.0048	0.0002317
Ba	137	3	He	0.07	0.0006	50.00	0.0048	0.0002317
Tl	205	3	He	0.09	0.0024	940.07	0.0247	0.0001339
Tl	205	3	He	0.095	0.0025	990.08	0.0247	0.0001339
Tl	205	3	He	0.087	0.0023	910.07	0.0247	0.0001339
Pb	208	3	He	0.012	0.0015	230.01	0.0327	0.00107
Pb	208	3	He	0.012	0.0015	290.02	0.0327	0.00107
Pb	208	3	He	0.005	0.0012	280.02	0.0327	0.00107
U	238	3	He	0.034	0.0017	540.04	0.0493	7.55E-05
U	238	3	He	0.043	0.0022	680.05	0.0493	7.55E-05
U	238	3	He	0.047	0.0024	750.05	0.0493	7.55E-05
Sc	45	1	No Gas			2459720.74		
Sc	45	1	No Gas			2426444.50		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2430736.84		
Ge	72	1	No Gas			1203653.97		
Ge	72	1	No Gas			1189487.09		
Ge	72	1	No Gas			1189852.09		
Sc	45	2	H2			180367.03		
Sc	45	2	H2			183392.83		
Sc	45	2	H2			184375.15		
Ge	72	2	H2			153396.42		
Ge	72	2	H2			159675.28		
Ge	72	2	H2			157580.59		
In	115	2	H2			392693.20		
In	115	2	H2			387688.47		
In	115	2	H2			394091.21		
Sc	45	3	He			46956.20		
Sc	45	3	He			48370.91		
Sc	45	3	He			47678.78		
Ge	72	3	He			84228.05		
Ge	72	3	He			82387.12		
Ge	72	3	He			81220.26		
In	115	3	He			87424.23		
In	115	3	He			86589.33		
In	115	3	He			87887.33		
Tb	159	3	He			396806.60		
Tb	159	3	He			398158.28		
Tb	159	3	He			398420.58		
Bi	209	3	He			312374.66		
Bi	209	3	He			308071.66		
Bi	209	3	He			310616.34		

Quantitation Report

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Sample Type	CCV
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

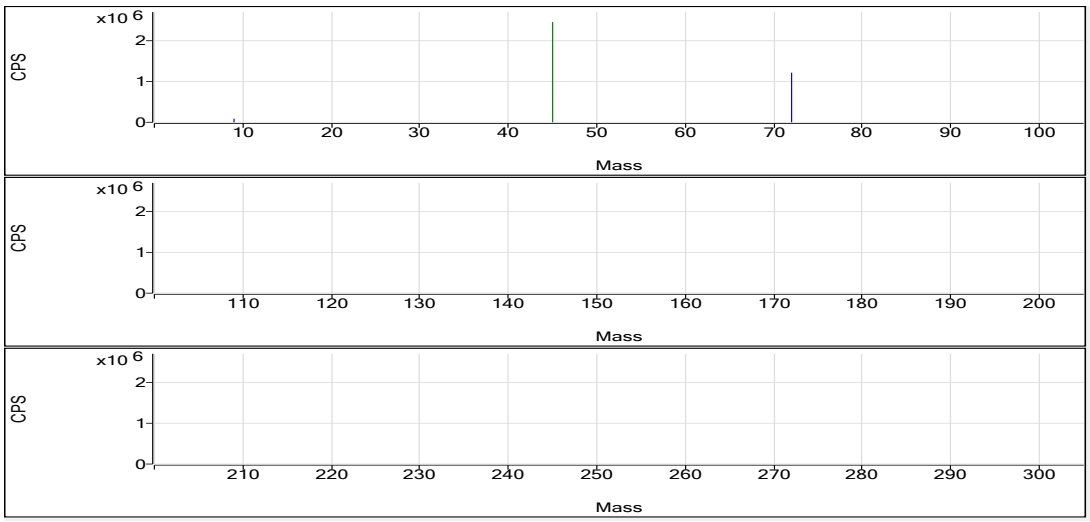
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	47.172	ppb	0.7	88819.50	0.0360	Pulse	0.5000	3
Se	78	72	H2	53.074	ppb	0.8	3481.32	0.0221	Pulse	1.5000	3
Na	23	45	He	4832.106	ppb	0.6	843077.38	17.6298	Pulse	0.1000	3
Mg	24	45	He	5012.862	ppb	1.1	430287.92	8.9982	Pulse	0.1000	3
Al	27	45	He	4939.018	ppb	1.5	138208.34	2.8901	Pulse	0.1000	3
K	39	45	He	5088.736	ppb	1.3	302224.21	6.3200	Pulse	0.1000	3
Ca	44	45	He	5238.052	ppb	4.5	17047.10	0.3566	Pulse	0.1000	3
Ti	47	45	He	5102.844	ppb	1.1	131026.66	2.7400	Pulse	0.1000	3
V	51	45	He	513.298	ppb	0.9	537743.79	11.2451	Pulse	0.5000	3
Cr	52	45	He	488.880	ppb	0.4	701924.96	14.6774	Pulse	0.1000	3
Mn	55	45	He	508.975	ppb	0.2	312505.52	6.5348	Pulse	0.1000	3
Fe	57	45	He	5111.029	ppb	0.7	142074.91	2.9709	Pulse	0.1000	3
Co	59	45	He	496.406	ppb	0.3	1336189.04	27.9410	Pulse	0.1000	3
Ni	60	72	He	513.379	ppb	1.9	372575.01	4.4092	Pulse	0.1000	3
Cu	63	72	He	488.490	ppb	1.5	1060039.33	12.5448	Pulse	0.1000	3
Zn	66	72	He	515.626	ppb	1.9	127179.33	1.5051	Pulse	0.1000	3
As	75	72	He	520.345	ppb	1.3	90156.83	1.0669	Pulse	0.5000	3
Sr	88	115	He	51.690	ppb	1.6	40659.45	0.4646	Pulse	0.1000	3
Mo	98	115	He	51.497	ppb	0.4	98833.76	1.1294	Pulse	0.1000	3
Ag	107	115	He	51.156	ppb	0.7	208160.37	2.3787	Pulse	0.1000	3
Cd	111	115	He	50.657	ppb	0.8	23702.76	0.2709	Pulse	0.5000	3
Sn	120	115	He	51.577	ppb	0.6	72748.00	0.8313	Pulse	0.1000	3
Sb	121	115	He	51.668	ppb	1.2	67183.46	0.7677	Pulse	0.1000	3
Ba	137	115	He	524.510	ppb	1.4	220306.76	2.5175	Pulse	0.1000	3
Tl	205	159	He	51.420	ppb	0.4	511248.46	1.2716	Pulse	0.1000	3
Pb	208	159	He	51.475	ppb	0.6	677798.46	1.6858	Pulse	0.1000	3
U	238	209	He	50.130	ppb	1.4	771861.86	2.4695	Pulse	0.1000	3

ISTD Table:

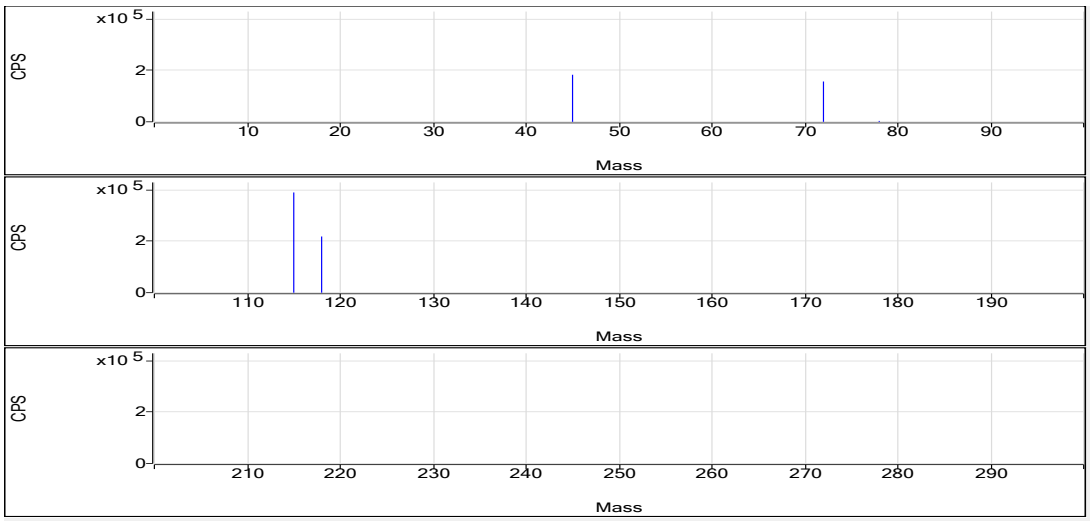
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2468197.57	1.1	102.9	Analog	0.1000	3
No Gas	Ge	72	1221952.64	0.4	106.0	Pulse	0.1000	3
H2	Sc	45	183487.67	0.4	98.1	Pulse	0.1000	3
H2	Ge	72	157190.25	0.3	96.0	Pulse	0.1000	3
H2	In	115	390793.14	1.1	100.4	Pulse	0.1000	3
He	Sc	45	47822.64	0.9	102.5	Pulse	0.1000	3
He	Ge	72	84509.62	1.1	104.1	Pulse	0.1000	3
He	In	115	87508.50	0.5	101.5	Pulse	0.1000	3
He	Tb	159	402061.67	0.4	100.9	Pulse	0.1000	3
He	Bi	209	312597.14	1.4	101.1	Pulse	0.1000	3

No Gas

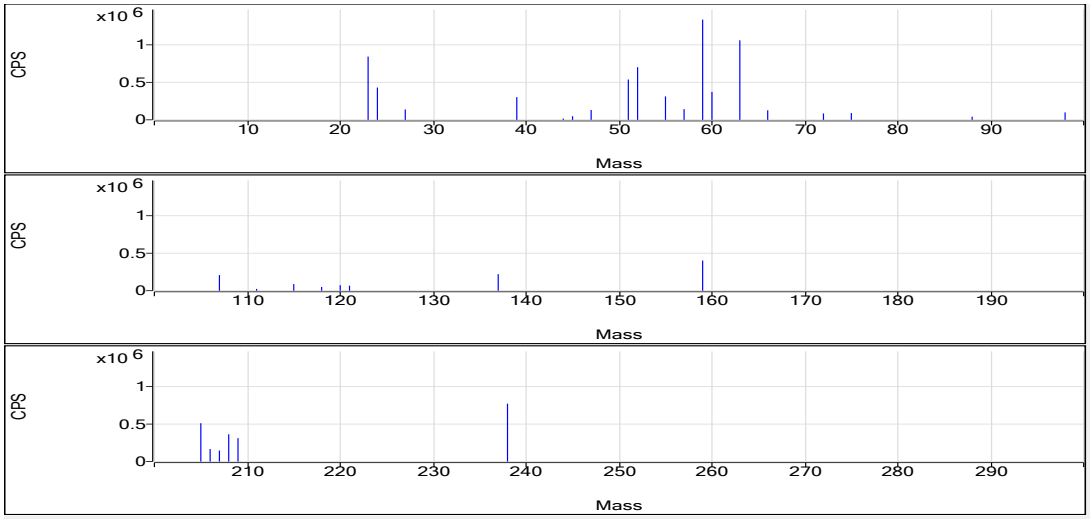


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	46.872	0.0358	88320.62	0.0008	4.685E-06
Be	9	1	No Gas	47.504	0.0362	88396.98	0.0008	4.685E-06
Be	9	1	No Gas	47.14	0.036	89740.91	0.0008	4.685E-06
Se	78	2	H2	53.224	0.0222	3483.76	0.0004	1.219E-05
Se	78	2	H2	53.407	0.0223	3497.10	0.0004	1.219E-05
Se	78	2	H2	52.59	0.0219	3463.09	0.0004	1.219E-05
Na	23	3	He	4833.32	17.6342	845731.00	0.0036	0.3452
Na	23	3	He	4803.64	17.528	844510.92	0.0036	0.3452
Na	23	3	He	4859.357	17.7273	838990.22	0.0036	0.3452
Mg	24	3	He	5012.292	8.9972	431501.63	0.0018	0.003497
Mg	24	3	He	4956.263	8.8966	428645.23	0.0018	0.003497
Mg	24	3	He	5070.032	9.1008	430716.91	0.0018	0.003497
Al	27	3	He	5001.583	2.9267	140365.88	0.0006	0.0006432
Al	27	3	He	4857.56	2.8425	136952.75	0.0006	0.0006432
Al	27	3	He	4957.912	2.9012	137306.38	0.0006	0.0006432
K	39	3	He	5126.467	6.3639	305213.39	0.0012	0.3951
K	39	3	He	5013.291	6.2322	300270.17	0.0012	0.3951
K	39	3	He	5126.449	6.3639	301189.06	0.0012	0.3951
Ca	44	3	He	5278.257	0.3593	17230.56	0.0001	0.002715
Ca	44	3	He	4983.222	0.3393	16349.67	0.0001	0.002715
Ca	44	3	He	5452.678	0.3711	17561.06	0.0001	0.002715
Ti	47	3	He	5080.904	2.7283	130846.51	0.0005	7.003E-05
Ti	47	3	He	5059.12	2.7166	130885.59	0.0005	7.003E-05
Ti	47	3	He	5168.507	2.7753	131347.89	0.0005	7.003E-05
V	51	3	He	513.052	11.2398	539056.44	0.0219	0.02486
V	51	3	He	508.873	11.1484	537137.88	0.0219	0.02486
V	51	3	He	517.969	11.3472	537037.06	0.0219	0.02486
Cr	52	3	He	490.468	14.7249	706204.29	0.0299	0.03997
Cr	52	3	He	489.196	14.6869	707622.33	0.0299	0.03997
Cr	52	3	He	486.977	14.6204	691948.27	0.0299	0.03997
Mn	55	3	He	508.651	6.5306	313206.21	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	508.04	6.5228	314270.56	0.0128	0.002639
Mn	55	3	He	510.236	6.5509	310039.80	0.0128	0.002639
Fe	57	3	He	5150.733	2.994	143589.45	0.0006	0.001429
Fe	57	3	He	5076.229	2.9507	142165.22	0.0006	0.001429
Fe	57	3	He	5106.125	2.968	140470.05	0.0006	0.001429
Co	59	3	He	496.664	27.9555	1340739.67	0.0563	0.002149
Co	59	3	He	494.625	27.8408	1341386.07	0.0563	0.002149
Co	59	3	He	497.931	28.0268	1326441.39	0.0563	0.002149
Ni	60	3	He	517.995	4.4489	372838.20	0.0086	0.002834
Ni	60	3	He	519.726	4.4637	375702.34	0.0086	0.002834
Ni	60	3	He	502.417	4.3151	369184.49	0.0086	0.002834
Cu	63	3	He	493.831	12.6819	1062813.50	0.0257	0.004757
Cu	63	3	He	491.648	12.6259	1062696.78	0.0257	0.004757
Cu	63	3	He	479.989	12.3266	1054607.72	0.0257	0.004757
Zn	66	3	He	523.247	1.5273	127996.88	0.0029	0.003818
Zn	66	3	He	519.338	1.5159	127592.90	0.0029	0.003818
Zn	66	3	He	504.292	1.4721	125948.21	0.0029	0.003818
As	75	3	He	525.179	1.0768	90243.99	0.002	0.0008061
As	75	3	He	523.311	1.073	90312.38	0.002	0.0008061
As	75	3	He	512.546	1.0509	89914.12	0.002	0.0008061
Sr	88	3	He	52.612	0.4729	41602.25	0.009	0.0009645
Sr	88	3	He	51.436	0.4623	40298.81	0.009	0.0009645
Sr	88	3	He	51.022	0.4586	40077.28	0.009	0.0009645
Mo	98	3	He	51.475	1.1289	99319.81	0.0219	0.0002706
Mo	98	3	He	51.693	1.1337	98818.24	0.0219	0.0002706
Mo	98	3	He	51.323	1.1256	98363.23	0.0219	0.0002706
Ag	107	3	He	51.478	2.3937	210587.22	0.0465	0.0006206
Ag	107	3	He	51.247	2.3829	207702.24	0.0465	0.0006206
Ag	107	3	He	50.743	2.3595	206191.66	0.0465	0.0006206
Cd	111	3	He	51.116	0.2733	24044.68	0.0053	0
Cd	111	3	He	50.587	0.2705	23575.87	0.0053	0
Cd	111	3	He	50.268	0.2688	23487.73	0.0053	0
Sn	120	3	He	51.618	0.832	73193.27	0.0158	0.01648
Sn	120	3	He	51.868	0.8359	72861.60	0.0158	0.01648
Sn	120	3	He	51.246	0.8261	72189.12	0.0158	0.01648
Sb	121	3	He	52.225	0.776	68269.01	0.0149	0.0002698
Sb	121	3	He	51.796	0.7696	67082.56	0.0149	0.0002698
Sb	121	3	He	50.983	0.7575	66198.81	0.0149	0.0002698
Ba	137	3	He	528.105	2.5348	222999.80	0.0048	0.0002317
Ba	137	3	He	529.509	2.5415	221525.90	0.0048	0.0002317
Ba	137	3	He	515.915	2.4763	216394.57	0.0048	0.0002317
Tl	205	3	He	51.641	1.277	514652.69	0.0247	0.0001339
Tl	205	3	He	51.365	1.2702	511591.20	0.0247	0.0001339
Tl	205	3	He	51.254	1.2675	507501.48	0.0247	0.0001339
Pb	208	3	He	51.186	1.6764	364099.37	0.0327	0.00107
Pb	208	3	He	51.466	1.6855	364228.63	0.0327	0.00107
Pb	208	3	He	51.772	1.6956	363576.01	0.0327	0.00107
U	238	3	He	49.655	2.446	775688.11	0.0493	7.55E-05
U	238	3	He	49.801	2.4533	765308.27	0.0493	7.55E-05
U	238	3	He	50.934	2.5091	774589.21	0.0493	7.55E-05
Sc	45	1	No Gas			2469952.62		
Sc	45	1	No Gas			2439205.12		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2495434.96		
Ge	72	1	No Gas			1217389.51		
Ge	72	1	No Gas			1221969.43		
Ge	72	1	No Gas			1226498.97		
Sc	45	2	H2			183222.42		
Sc	45	2	H2			184234.00		
Sc	45	2	H2			183006.60		
Ge	72	2	H2			156852.75		
Ge	72	2	H2			156914.58		
Ge	72	2	H2			157803.42		
In	115	2	H2			387492.65		
In	115	2	H2			389156.36		
In	115	2	H2			395730.42		
Sc	45	3	He			47959.75		
Sc	45	3	He			48180.64		
Sc	45	3	He			47327.54		
Ge	72	3	He			83805.36		
Ge	72	3	He			84168.05		
Ge	72	3	He			85555.45		
In	115	3	He			88370.61		
In	115	3	He			87565.26		
In	115	3	He			87778.04		
Tb	159	3	He			403008.90		
Tb	159	3	He			402766.48		
Tb	159	3	He			400409.64		
Bi	209	3	He			317118.69		
Bi	209	3	He			311956.28		
Bi	209	3	He			308716.46		

Quantitation Report

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Sample Type	CCB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

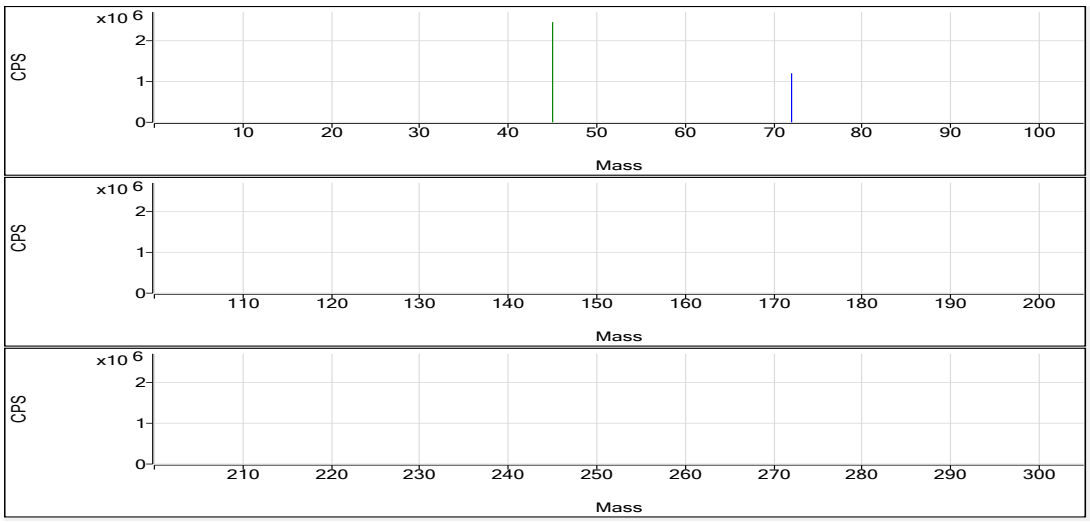
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.027	ppb	32.0	62.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.073	ppb	88.1	6.66	0.0000	Pulse	1.5000	3
Na	23	45	He	12.987	ppb	27.3	18712.31	0.3916	Pulse	0.1000	3
Mg	24	45	He	1.439	ppb	45.8	290.01	0.0061	Pulse	0.1000	3
Al	27	45	He	1.172	ppb	79.5	63.33	0.0013	Pulse	0.1000	3
K	39	45	He	8.429	ppb	105.5	19353.37	0.4049	Pulse	0.1000	3
Ca	44	45	He	3.183	ppb	20.6	140.01	0.0029	Pulse	0.1000	3
Ti	47	45	He	0.904	ppb	65.1	26.67	0.0006	Pulse	0.1000	3
V	51	45	He	0.360	ppb	5.1	1564.76	0.0327	Pulse	0.5000	3
Cr	52	45	He	-0.044	ppb	N/A	1846.85	0.0386	Pulse	0.1000	3
Mn	55	45	He	0.170	ppb	62.6	230.01	0.0048	Pulse	0.1000	3
Fe	57	45	He	1.975	ppb	92.5	123.34	0.0026	Pulse	0.1000	3
Co	59	45	He	0.108	ppb	31.1	393.35	0.0082	Pulse	0.1000	3
Ni	60	72	He	0.069	ppb	123.9	286.68	0.0034	Pulse	0.1000	3
Cu	63	72	He	0.085	ppb	33.6	580.04	0.0069	Pulse	0.1000	3
Zn	66	72	He	2.366	ppb	6.2	896.72	0.0107	Pulse	0.1000	3
As	75	72	He	0.135	ppb	49.9	90.67	0.0011	Pulse	0.5000	3
Sr	88	115	He	0.054	ppb	59.0	126.67	0.0015	Pulse	0.1000	3
Mo	98	115	He	0.064	ppb	28.5	146.67	0.0017	Pulse	0.1000	3
Ag	107	115	He	0.005	ppb	121.5	73.33	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.006	ppb	43.9	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.017	ppb	529.9	1460.13	0.0167	Pulse	0.1000	3
Sb	121	115	He	0.031	ppb	58.9	63.33	0.0007	Pulse	0.1000	3
Ba	137	115	He	0.072	ppb	121.5	50.00	0.0006	Pulse	0.1000	3
Tl	205	159	He	0.090	ppb	6.8	933.40	0.0024	Pulse	0.1000	3
Pb	208	159	He	0.015	ppb	49.4	623.36	0.0016	Pulse	0.1000	3
U	238	209	He	0.043	ppb	1.7	680.04	0.0022	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2456971.42	1.4	102.4	Analog	0.1000	3
No Gas	Ge	72	1201836.29	0.5	104.2	Pulse	0.1000	3
H2	Sc	45	182057.44	1.0	97.4	Pulse	0.1000	3
H2	Ge	72	156475.93	0.5	95.6	Pulse	0.1000	3
H2	In	115	390908.26	0.9	100.5	Pulse	0.1000	3
He	Sc	45	47792.74	1.5	102.5	Pulse	0.1000	3
He	Ge	72	83775.17	1.5	103.2	Pulse	0.1000	3
He	In	115	87229.14	0.9	101.2	Pulse	0.1000	3
He	Tb	159	397007.52	0.3	99.6	Pulse	0.1000	3
He	Bi	209	310880.70	0.7	100.5	Pulse	0.1000	3

No Gas



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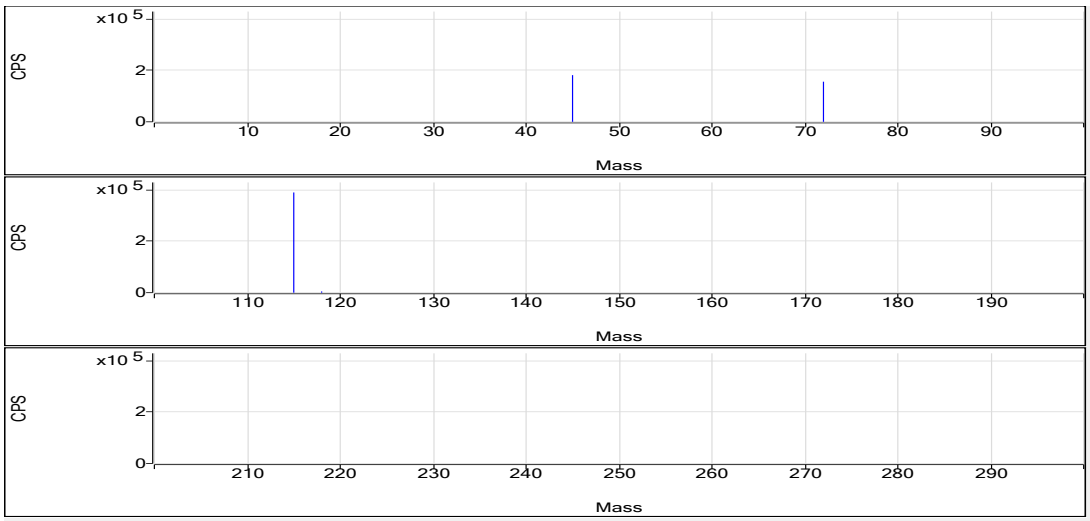
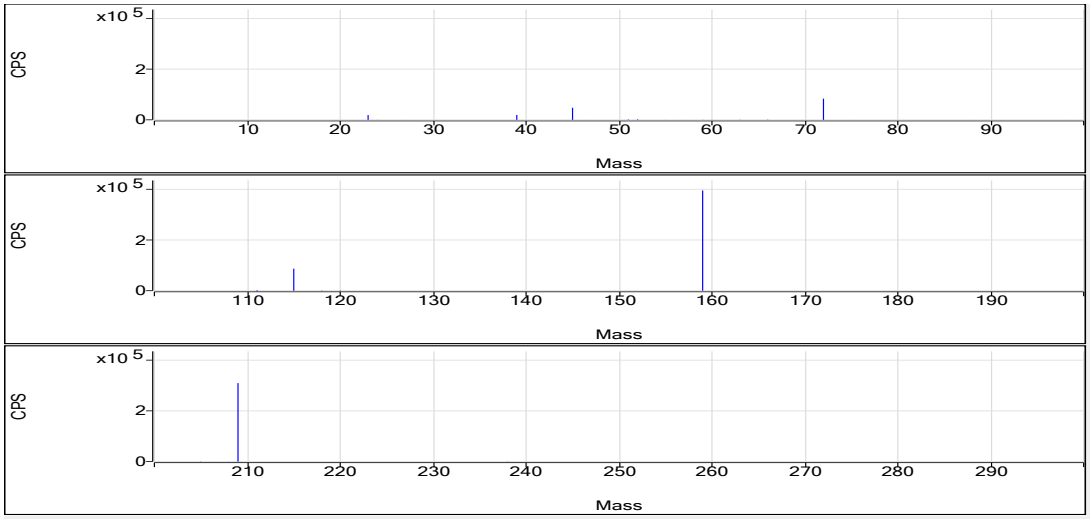


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.031	0	70.00	0.0008	4.685E-06
Be	9	1	No Gas	0.034	0	74.00	0.0008	4.685E-06
Be	9	1	No Gas	0.017	0	44.00	0.0008	4.685E-06
Se	78	2	H2	0.052	0	5.33	0.0004	1.219E-05
Se	78	2	H2	0.022	0	3.33	0.0004	1.219E-05
Se	78	2	H2	0.145	0.0001	11.33	0.0004	1.219E-05
Na	23	3	He	14.353	0.3965	18642.19	0.0036	0.3452
Na	23	3	He	8.955	0.3772	18271.76	0.0036	0.3452
Na	23	3	He	15.653	0.4011	19222.99	0.0036	0.3452
Mg	24	3	He	2.2	0.0074	350.02	0.0018	0.003497
Mg	24	3	He	1.043	0.0054	260.01	0.0018	0.003497
Mg	24	3	He	1.075	0.0054	260.01	0.0018	0.003497
Al	27	3	He	2.172	0.0019	90.00	0.0006	0.0006432
Al	27	3	He	1.018	0.0012	60.00	0.0006	0.0006432
Al	27	3	He	0.327	0.0008	40.00	0.0006	0.0006432
K	39	3	He	5.626	0.4016	18882.79	0.0012	0.3951
K	39	3	He	18.382	0.4165	20174.43	0.0012	0.3951
K	39	3	He	1.28	0.3966	19002.90	0.0012	0.3951
Ca	44	3	He	3.892	0.003	140.01	0.0001	0.002715
Ca	44	3	He	2.595	0.0029	140.01	0.0001	0.002715
Ca	44	3	He	3.061	0.0029	140.01	0.0001	0.002715
Ti	47	3	He	0.266	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	1.023	0.0006	30.00	0.0005	7.003E-05
Ti	47	3	He	1.424	0.0008	40.00	0.0005	7.003E-05
V	51	3	He	0.375	0.0331	1554.10	0.0219	0.02486
V	51	3	He	0.34	0.0323	1564.10	0.0219	0.02486
V	51	3	He	0.367	0.0329	1576.09	0.0219	0.02486
Cr	52	3	He	-0.042	0.0387	1820.18	0.0299	0.03997
Cr	52	3	He	-0.039	0.0388	1880.19	0.0299	0.03997
Cr	52	3	He	-0.052	0.0384	1840.17	0.0299	0.03997
Mn	55	3	He	0.258	0.006	280.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.052	0.0033	160.01	0.0128	0.002639
Mn	55	3	He	0.201	0.0052	250.01	0.0128	0.002639
Fe	57	3	He	0.469	0.0017	80.00	0.0006	0.001429
Fe	57	3	He	1.449	0.0023	110.00	0.0006	0.001429
Fe	57	3	He	4.006	0.0038	180.01	0.0006	0.001429
Co	59	3	He	0.128	0.0094	440.02	0.0563	0.002149
Co	59	3	He	0.127	0.0093	450.02	0.0563	0.002149
Co	59	3	He	0.069	0.0061	290.01	0.0563	0.002149
Ni	60	3	He	0.107	0.0038	310.01	0.0086	0.002834
Ni	60	3	He	-0.029	0.0026	220.01	0.0086	0.002834
Ni	60	3	He	0.13	0.0039	330.01	0.0086	0.002834
Cu	63	3	He	0.117	0.0078	640.04	0.0257	0.004757
Cu	63	3	He	0.062	0.0063	540.04	0.0257	0.004757
Cu	63	3	He	0.076	0.0067	560.03	0.0257	0.004757
Zn	66	3	He	2.474	0.011	910.06	0.0029	0.003818
Zn	66	3	He	2.2	0.0102	870.05	0.0029	0.003818
Zn	66	3	He	2.426	0.0109	910.06	0.0029	0.003818
As	75	3	He	0.068	0.0009	78.00	0.002	0.0008061
As	75	3	He	0.134	0.0011	92.00	0.002	0.0008061
As	75	3	He	0.202	0.0012	102.00	0.002	0.0008061
Sr	88	3	He	0.021	0.0012	100.00	0.009	0.0009645
Sr	88	3	He	0.085	0.0017	150.01	0.009	0.0009645
Sr	88	3	He	0.057	0.0015	130.01	0.009	0.0009645
Mo	98	3	He	0.046	0.0013	110.00	0.0219	0.0002706
Mo	98	3	He	0.082	0.0021	180.01	0.0219	0.0002706
Mo	98	3	He	0.065	0.0017	150.01	0.0219	0.0002706
Ag	107	3	He	0.002	0.0007	60.00	0.0465	0.0006206
Ag	107	3	He	0.011	0.0012	100.00	0.0465	0.0006206
Ag	107	3	He	0.001	0.0007	60.00	0.0465	0.0006206
Cd	111	3	He	0.009	0	4.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Sn	120	3	He	0.103	0.0181	1570.15	0.0158	0.01648
Sn	120	3	He	-0.074	0.0153	1330.11	0.0158	0.01648
Sn	120	3	He	0.021	0.0168	1480.13	0.0158	0.01648
Sb	121	3	He	0.052	0.001	90.00	0.0149	0.0002698
Sb	121	3	He	0.021	0.0006	50.00	0.0149	0.0002698
Sb	121	3	He	0.02	0.0006	50.00	0.0149	0.0002698
Ba	137	3	He	0.168	0.001	90.00	0.0048	0.0002317
Ba	137	3	He	0.048	0.0005	40.00	0.0048	0.0002317
Ba	137	3	He	-0.001	0.0002	20.00	0.0048	0.0002317
Tl	205	3	He	0.085	0.0022	890.06	0.0247	0.0001339
Tl	205	3	He	0.087	0.0023	910.07	0.0247	0.0001339
Tl	205	3	He	0.097	0.0025	1000.08	0.0247	0.0001339
Pb	208	3	He	0.007	0.0013	390.02	0.0327	0.00107
Pb	208	3	He	0.019	0.0017	360.02	0.0327	0.00107
Pb	208	3	He	0.021	0.0017	400.02	0.0327	0.00107
U	238	3	He	0.044	0.0022	690.04	0.0493	7.55E-05
U	238	3	He	0.042	0.0022	670.04	0.0493	7.55E-05
U	238	3	He	0.043	0.0022	680.05	0.0493	7.55E-05
Sc	45	1	No Gas			2494358.56		
Sc	45	1	No Gas			2424862.31		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2451693.40		
Ge	72	1	No Gas			1209090.84		
Ge	72	1	No Gas			1200162.33		
Ge	72	1	No Gas			1196255.69		
Sc	45	2	H2			181623.10		
Sc	45	2	H2			180569.10		
Sc	45	2	H2			183980.11		
Ge	72	2	H2			157358.72		
Ge	72	2	H2			156338.40		
Ge	72	2	H2			155730.68		
In	115	2	H2			395039.68		
In	115	2	H2			389346.79		
In	115	2	H2			388338.31		
Sc	45	3	He			47016.93		
Sc	45	3	He			48441.55		
Sc	45	3	He			47919.74		
Ge	72	3	He			82579.32		
Ge	72	3	He			85102.28		
Ge	72	3	He			83643.92		
In	115	3	He			86731.22		
In	115	3	He			86881.40		
In	115	3	He			88099.52		
Tb	159	3	He			396265.07		
Tb	159	3	He			398485.93		
Tb	159	3	He			396271.56		
Bi	209	3	He			309458.80		
Bi	209	3	He			309722.24		
Bi	209	3	He			313461.05		

Quantitation Report

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Sample Name	MB 410-402565/1-A
Sample Type	Sample
Comment	I9 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

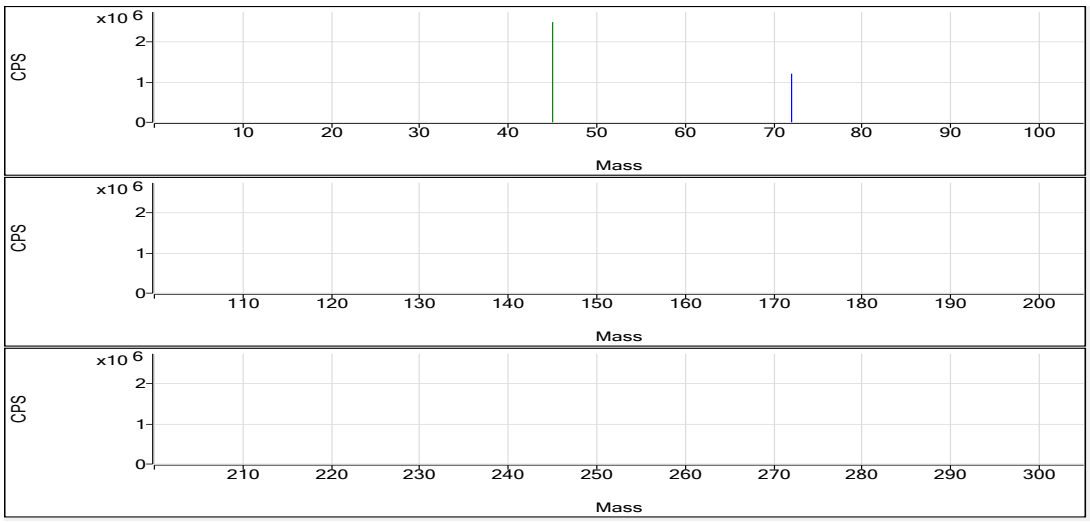
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.014	ppb	20.5	38.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.011	ppb	6.7	2.67	0.0000	Pulse	1.5000	3
Na	23	45	He	4.957	ppb	71.8	17881.35	0.3629	Pulse	0.1000	3
Mg	24	45	He	0.663	ppb	111.3	230.02	0.0047	Pulse	0.1000	3
Al	27	45	He	12.122	ppb	24.6	380.02	0.0077	Pulse	0.1000	3
K	39	45	He	-8.391	ppb	N/A	18992.92	0.3853	Pulse	0.1000	3
Ca	44	45	He	6.140	ppb	265.0	153.34	0.0031	Pulse	0.1000	3
Ti	47	45	He	0.125	ppb	177.1	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	0.036	ppb	85.5	1264.73	0.0257	Pulse	0.5000	3
Cr	52	45	He	-0.253	ppb	N/A	1596.82	0.0324	Pulse	0.1000	3
Mn	55	45	He	0.078	ppb	109.3	180.01	0.0036	Pulse	0.1000	3
Fe	57	45	He	0.681	ppb	46.5	90.00	0.0018	Pulse	0.1000	3
Co	59	45	He	0.033	ppb	12.0	196.68	0.0040	Pulse	0.1000	3
Ni	60	72	He	-0.094	ppb	N/A	170.01	0.0020	Pulse	0.1000	3
Cu	63	72	He	0.118	ppb	20.7	653.37	0.0078	Pulse	0.1000	3
Zn	66	72	He	1.874	ppb	20.6	776.72	0.0093	Pulse	0.1000	3
As	75	72	He	-0.060	ppb	N/A	57.33	0.0007	Pulse	0.5000	3
Sr	88	115	He	-0.011	ppb	N/A	76.67	0.0009	Pulse	0.1000	3
Mo	98	115	He	0.022	ppb	14.8	66.67	0.0008	Pulse	0.1000	3
Ag	107	115	He	-0.003	ppb	N/A	43.33	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.001	ppb	173.2	0.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.206	ppb	N/A	1173.42	0.0132	Pulse	0.1000	3
Sb	121	115	He	0.015	ppb	77.0	43.33	0.0005	Pulse	0.1000	3
Ba	137	115	He	0.038	ppb	93.7	36.67	0.0004	Pulse	0.1000	3
Tl	205	159	He	0.028	ppb	29.0	330.02	0.0008	Pulse	0.1000	3
Pb	208	159	He	0.010	ppb	37.0	556.69	0.0014	Pulse	0.1000	3
U	238	209	He	0.014	ppb	15.5	240.01	0.0008	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2503328.30	0.6	104.4	Analog	0.1000	3
No Gas	Ge	72	1213834.72	0.7	105.2	Pulse	0.1000	3
H2	Sc	45	188065.75	1.3	100.6	Pulse	0.1000	3
H2	Ge	72	160250.72	1.8	97.9	Pulse	0.1000	3
H2	In	115	399969.08	1.2	102.8	Pulse	0.1000	3
He	Sc	45	49307.50	2.9	105.7	Pulse	0.1000	3
He	Ge	72	83919.21	2.5	103.4	Pulse	0.1000	3
He	In	115	88707.17	0.9	102.9	Pulse	0.1000	3
He	Tb	159	402188.64	1.0	100.9	Pulse	0.1000	3
He	Bi	209	317147.22	0.7	102.5	Pulse	0.1000	3

No Gas



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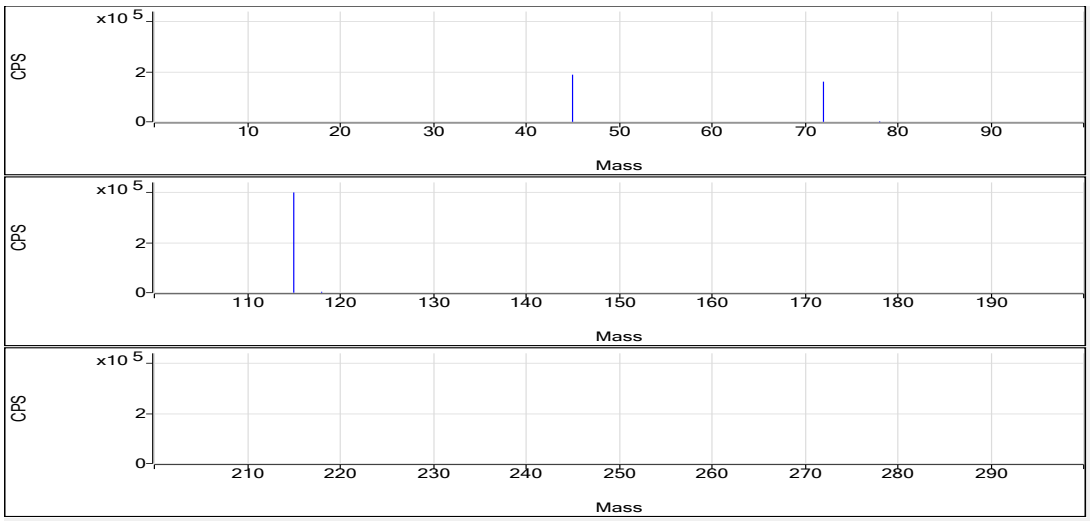
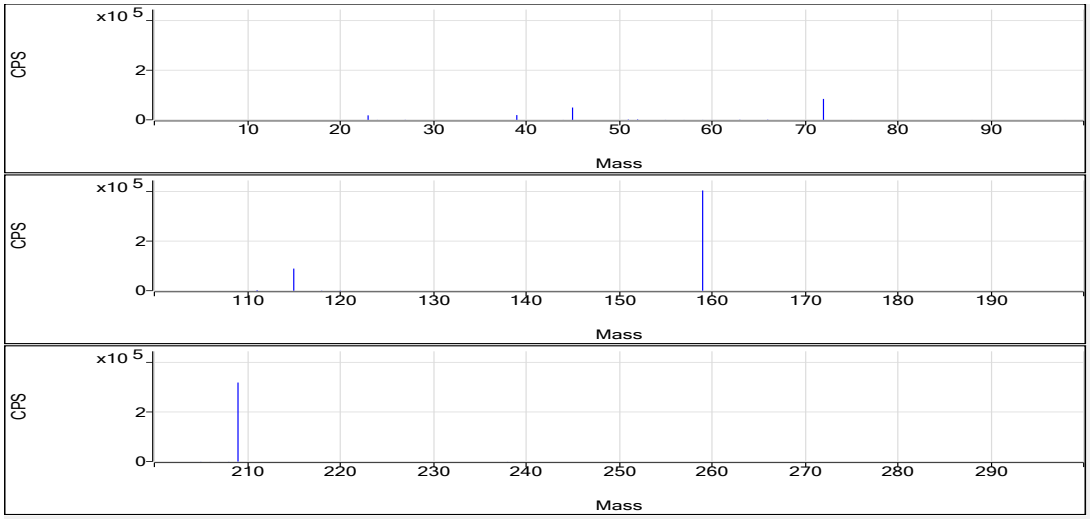


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.015	0	40.00	0.0008	4.685E-06
Be	9	1	No Gas	0.011	0	32.00	0.0008	4.685E-06
Be	9	1	No Gas	0.016	0	42.00	0.0008	4.685E-06
Se	78	2	H2	0.01	0	2.67	0.0004	1.219E-05
Se	78	2	H2	0.012	0	2.67	0.0004	1.219E-05
Se	78	2	H2	0.01	0	2.67	0.0004	1.219E-05
Na	23	3	He	5.463	0.3647	18021.47	0.0036	0.3452
Na	23	3	He	1.172	0.3494	17701.20	0.0036	0.3452
Na	23	3	He	8.235	0.3746	17921.37	0.0036	0.3452
Mg	24	3	He	1.097	0.0055	270.02	0.0018	0.003497
Mg	24	3	He	-0.189	0.0032	160.01	0.0018	0.003497
Mg	24	3	He	1.08	0.0054	260.02	0.0018	0.003497
Al	27	3	He	13.775	0.0087	430.02	0.0006	0.0006432
Al	27	3	He	8.684	0.0057	290.01	0.0006	0.0006432
Al	27	3	He	13.908	0.0088	420.02	0.0006	0.0006432
K	39	3	He	9.423	0.406	20064.24	0.0012	0.3951
K	39	3	He	-22.966	0.3683	18662.57	0.0012	0.3951
K	39	3	He	-11.629	0.3815	18251.95	0.0012	0.3951
Ca	44	3	He	-1.243	0.0026	130.01	0.0001	0.002715
Ca	44	3	He	-5.131	0.0024	120.00	0.0001	0.002715
Ca	44	3	He	24.795	0.0044	210.01	0.0001	0.002715
Ti	47	3	He	0.246	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.259	0.0002	10.00	0.0005	7.003E-05
V	51	3	He	0.062	0.0262	1296.07	0.0219	0.02486
V	51	3	He	0.002	0.0249	1262.06	0.0219	0.02486
V	51	3	He	0.045	0.0258	1236.06	0.0219	0.02486
Cr	52	3	He	-0.22	0.0334	1650.16	0.0299	0.03997
Cr	52	3	He	-0.287	0.0314	1590.15	0.0299	0.03997
Cr	52	3	He	-0.253	0.0324	1550.14	0.0299	0.03997
Mn	55	3	He	0.173	0.0049	240.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.056	0.0034	170.01	0.0128	0.002639
Mn	55	3	He	0.006	0.0027	130.00	0.0128	0.002639
Fe	57	3	He	0.327	0.0016	80.00	0.0006	0.001429
Fe	57	3	He	0.938	0.002	100.00	0.0006	0.001429
Fe	57	3	He	0.779	0.0019	90.00	0.0006	0.001429
Co	59	3	He	0.034	0.004	200.01	0.0563	0.002149
Co	59	3	He	0.028	0.0038	190.01	0.0563	0.002149
Co	59	3	He	0.036	0.0042	200.01	0.0563	0.002149
Ni	60	3	He	-0.124	0.0018	150.01	0.0086	0.002834
Ni	60	3	He	-0.071	0.0022	190.01	0.0086	0.002834
Ni	60	3	He	-0.087	0.0021	170.01	0.0086	0.002834
Cu	63	3	He	0.09	0.0071	600.03	0.0257	0.004757
Cu	63	3	He	0.134	0.0082	700.04	0.0257	0.004757
Cu	63	3	He	0.13	0.0081	660.04	0.0257	0.004757
Zn	66	3	He	1.601	0.0085	720.04	0.0029	0.003818
Zn	66	3	He	1.706	0.0088	750.05	0.0029	0.003818
Zn	66	3	He	2.314	0.0106	860.06	0.0029	0.003818
As	75	3	He	-0.129	0.0005	46.00	0.002	0.0008061
As	75	3	He	0.03	0.0009	74.00	0.002	0.0008061
As	75	3	He	-0.082	0.0006	52.00	0.002	0.0008061
Sr	88	3	He	-0.033	0.0007	60.00	0.009	0.0009645
Sr	88	3	He	-0.007	0.0009	80.00	0.009	0.0009645
Sr	88	3	He	0.006	0.001	90.00	0.009	0.0009645
Mo	98	3	He	0.018	0.0007	60.00	0.0219	0.0002706
Mo	98	3	He	0.024	0.0008	70.00	0.0219	0.0002706
Mo	98	3	He	0.024	0.0008	70.00	0.0219	0.0002706
Ag	107	3	He	-0.004	0.0004	40.00	0.0465	0.0006206
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Ag	107	3	He	0.001	0.0007	60.00	0.0465	0.0006206
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Sn	120	3	He	-0.209	0.0132	1180.09	0.0158	0.01648
Sn	120	3	He	-0.155	0.014	1240.10	0.0158	0.01648
Sn	120	3	He	-0.253	0.0125	1100.08	0.0158	0.01648
Sb	121	3	He	0.027	0.0007	60.00	0.0149	0.0002698
Sb	121	3	He	0.005	0.0003	30.00	0.0149	0.0002698
Sb	121	3	He	0.012	0.0005	40.00	0.0149	0.0002698
Ba	137	3	He	0.068	0.0006	50.00	0.0048	0.0002317
Ba	137	3	He	-0.001	0.0002	20.00	0.0048	0.0002317
Ba	137	3	He	0.046	0.0005	40.00	0.0048	0.0002317
Tl	205	3	He	0.032	0.0009	370.02	0.0247	0.0001339
Tl	205	3	He	0.019	0.0006	240.01	0.0247	0.0001339
Tl	205	3	He	0.033	0.001	380.02	0.0247	0.0001339
Pb	208	3	He	0.013	0.0015	300.01	0.0327	0.00107
Pb	208	3	He	0.01	0.0014	370.02	0.0327	0.00107
Pb	208	3	He	0.006	0.0013	310.01	0.0327	0.00107
U	238	3	He	0.015	0.0008	260.01	0.0493	7.55E-05
U	238	3	He	0.015	0.0008	260.02	0.0493	7.55E-05
U	238	3	He	0.011	0.0006	200.01	0.0493	7.55E-05
Sc	45	1	No Gas			2486240.59		
Sc	45	1	No Gas			2513564.49		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2510179.81		
Ge	72	1	No Gas			1222263.50		
Ge	72	1	No Gas			1213027.40		
Ge	72	1	No Gas			1206213.26		
Sc	45	2	H2			190380.93		
Sc	45	2	H2			185631.52		
Sc	45	2	H2			188184.80		
Ge	72	2	H2			162122.34		
Ge	72	2	H2			156975.13		
Ge	72	2	H2			161654.69		
In	115	2	H2			404783.08		
In	115	2	H2			400221.13		
In	115	2	H2			394903.04		
Sc	45	3	He			49414.68		
Sc	45	3	He			50668.57		
Sc	45	3	He			47839.25		
Ge	72	3	He			84921.38		
Ge	72	3	He			85364.69		
Ge	72	3	He			81471.56		
In	115	3	He			89598.52		
In	115	3	He			88370.86		
In	115	3	He			88169.52		
Tb	159	3	He			403718.98		
Tb	159	3	He			405296.95		
Tb	159	3	He			397549.99		
Bi	209	3	He			319357.91		
Bi	209	3	He			316974.04		
Bi	209	3	He			315109.70		

Quantitation Report

Data File Name	249SMPL.d
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Sample Type	Sample
Comment	I9 ICP
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

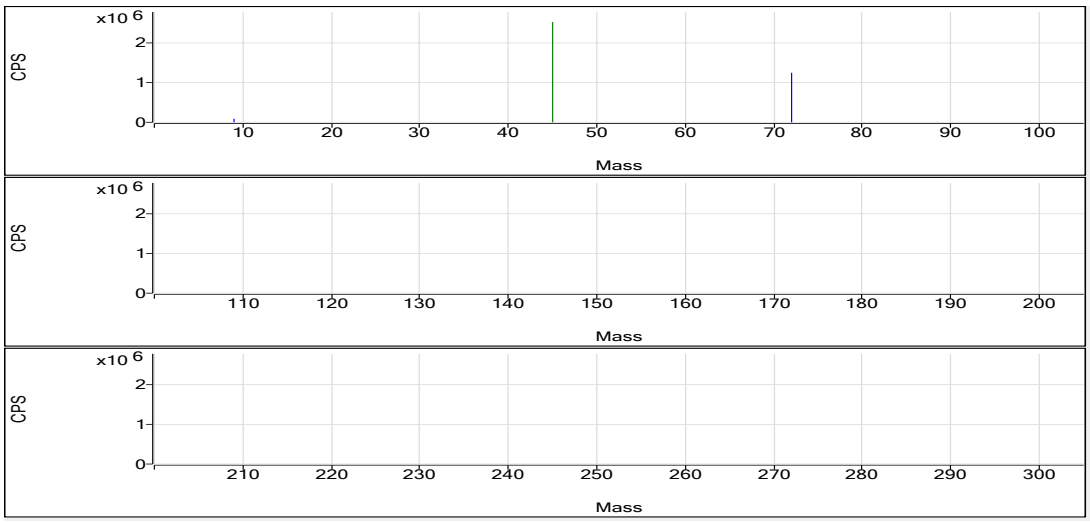
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	46.829	ppb	0.4	90375.98	0.0357	Pulse	0.5000	3
Se	78	72	H2	103.392	ppb	1.9	7115.78	0.0431	Pulse	1.5000	3
Na	23	45	He	4693.572	ppb	1.1	847821.99	17.1343	Pulse	0.1000	3
Mg	24	45	He	4873.693	ppb	1.4	432873.49	8.7485	Pulse	0.1000	3
Al	27	45	He	4883.328	ppb	0.5	141403.63	2.8576	Pulse	0.1000	3
K	39	45	He	4940.777	ppb	1.3	304196.00	6.1477	Pulse	0.1000	3
Ca	44	45	He	4957.949	ppb	4.7	16703.38	0.3376	Pulse	0.1000	3
Ti	47	45	He	502.390	ppb	2.5	13349.98	0.2698	Pulse	0.1000	3
V	51	45	He	501.347	ppb	1.2	543487.21	10.9839	Pulse	0.5000	3
Cr	52	45	He	475.755	ppb	1.5	706787.00	14.2844	Pulse	0.1000	3
Mn	55	45	He	499.994	ppb	0.9	317649.46	6.4195	Pulse	0.1000	3
Fe	57	45	He	4971.644	ppb	1.3	142992.98	2.8899	Pulse	0.1000	3
Co	59	45	He	480.525	ppb	1.4	1338288.11	27.0472	Pulse	0.1000	3
Ni	60	72	He	491.953	ppb	2.4	374743.46	4.2253	Pulse	0.1000	3
Cu	63	72	He	470.328	ppb	1.8	1071329.10	12.0786	Pulse	0.1000	3
Zn	66	72	He	498.286	ppb	1.2	129029.08	1.4546	Pulse	0.1000	3
As	75	72	He	501.140	ppb	1.7	91142.95	1.0276	Pulse	0.5000	3
Sr	88	115	He	50.715	ppb	1.9	40535.69	0.4559	Pulse	0.1000	3
Mo	98	115	He	49.499	ppb	1.7	96533.98	1.0856	Pulse	0.1000	3
Ag	107	115	He	49.858	ppb	1.1	206162.05	2.3184	Pulse	0.1000	3
Cd	111	115	He	51.110	ppb	0.7	24302.49	0.2733	Pulse	0.5000	3
Sn	120	115	He	101.820	ppb	0.6	144513.48	1.6251	Pulse	0.1000	3
Sb	121	115	He	103.120	ppb	0.7	136229.09	1.5320	Pulse	0.1000	3
Ba	137	115	He	517.316	ppb	1.0	220799.39	2.4830	Pulse	0.1000	3
Tl	205	159	He	102.262	ppb	0.3	1025311.37	2.5287	Pulse	0.1000	3
Pb	208	159	He	51.336	ppb	0.1	681708.49	1.6813	Pulse	0.1000	3
U	238	209	He	49.543	ppb	0.7	771546.06	2.4406	Pulse	0.1000	3

ISTD Table:

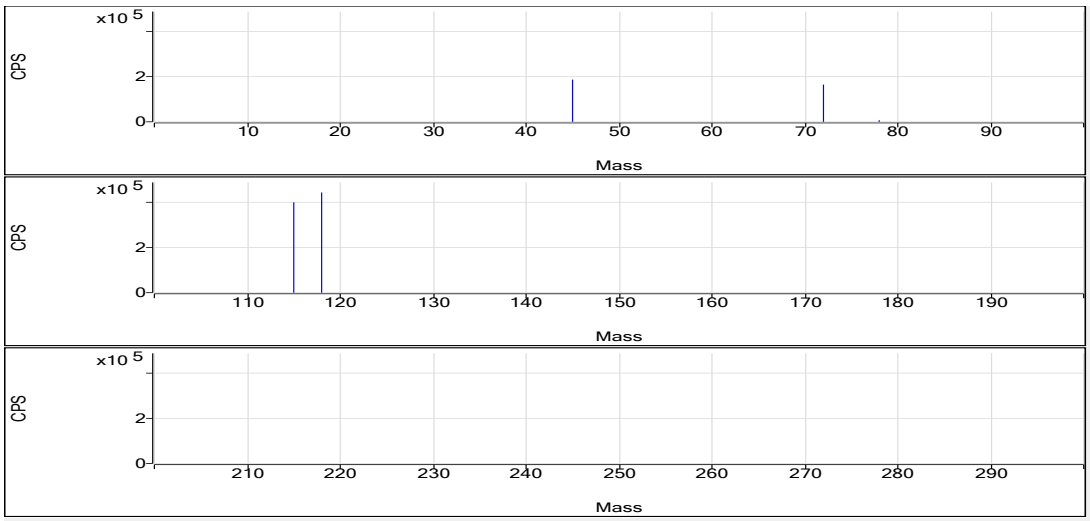
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2529696.84	0.9	105.5	Analog	0.1000	3
No Gas	Ge	72	1250326.23	0.3	108.4	Pulse	0.1000	3
H2	Sc	45	186875.98	0.5	99.9	Pulse	0.1000	3
H2	Ge	72	164993.33	1.6	100.8	Pulse	0.1000	3
H2	In	115	400280.59	0.8	102.9	Pulse	0.1000	3
He	Sc	45	49484.61	1.1	106.1	Pulse	0.1000	3
He	Ge	72	88714.53	1.8	109.3	Pulse	0.1000	3
He	In	115	88927.12	0.6	103.2	Pulse	0.1000	3
He	Tb	159	405466.56	0.2	101.7	Pulse	0.1000	3
He	Bi	209	316137.83	0.4	102.2	Pulse	0.1000	3

No Gas

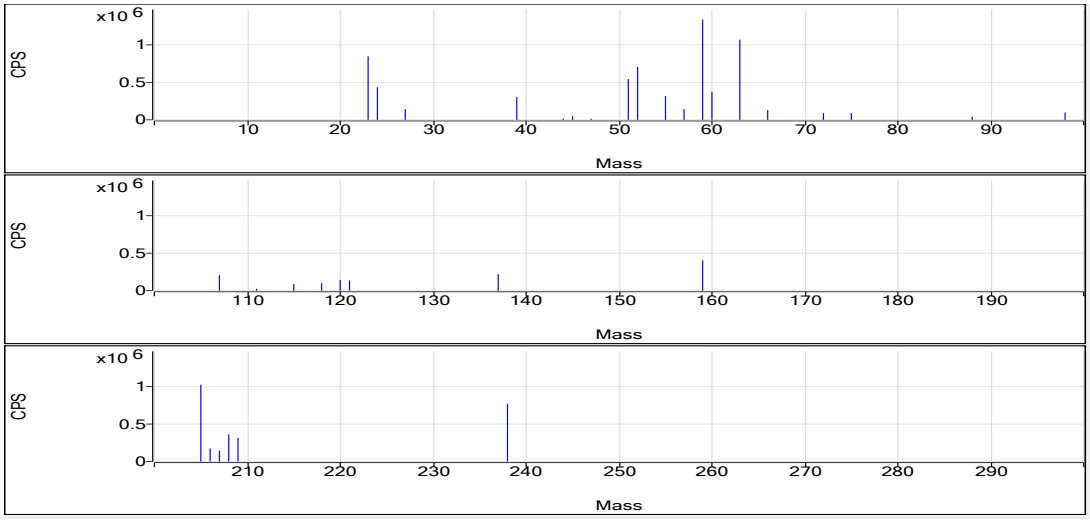


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	46.62	0.0356	89048.86	0.0008	4.685E-06
Be	9	1	No Gas	46.953	0.0358	91002.29	0.0008	4.685E-06
Be	9	1	No Gas	46.914	0.0358	91076.80	0.0008	4.685E-06
Se	78	2	H2	103.061	0.043	7203.15	0.0004	1.219E-05
Se	78	2	H2	105.498	0.044	7141.13	0.0004	1.219E-05
Se	78	2	H2	101.615	0.0424	7003.05	0.0004	1.219E-05
Na	23	3	He	4755.852	17.3571	849328.11	0.0036	0.3452
Na	23	3	He	4663.459	17.0266	843578.50	0.0036	0.3452
Na	23	3	He	4661.406	17.0192	850559.36	0.0036	0.3452
Mg	24	3	He	4945.86	8.878	434422.45	0.0018	0.003497
Mg	24	3	He	4858.729	8.7216	432110.97	0.0018	0.003497
Mg	24	3	He	4816.49	8.6458	432087.06	0.0018	0.003497
Al	27	3	He	4902.011	2.8685	140362.91	0.0006	0.0006432
Al	27	3	He	4857.479	2.8424	140827.99	0.0006	0.0006432
Al	27	3	He	4890.496	2.8618	143019.99	0.0006	0.0006432
K	39	3	He	4986.262	6.2007	303417.09	0.0012	0.3951
K	39	3	He	4966.499	6.1777	306072.61	0.0012	0.3951
K	39	3	He	4869.568	6.0648	303098.30	0.0012	0.3951
Ca	44	3	He	5078.657	0.3458	16920.33	0.0001	0.002715
Ca	44	3	He	5108.123	0.3478	17230.61	0.0001	0.002715
Ca	44	3	He	4687.067	0.3193	15959.21	0.0001	0.002715
Ti	47	3	He	515.081	0.2766	13536.86	0.0005	7.003E-05
Ti	47	3	He	501.942	0.2696	13356.66	0.0005	7.003E-05
Ti	47	3	He	490.145	0.2633	13156.42	0.0005	7.003E-05
V	51	3	He	507	11.1075	543517.81	0.0219	0.02486
V	51	3	He	502.403	11.007	545338.50	0.0219	0.02486
V	51	3	He	494.638	10.8372	541605.31	0.0219	0.02486
Cr	52	3	He	483.041	14.5026	709649.21	0.0299	0.03997
Cr	52	3	He	474.912	14.2592	706468.35	0.0299	0.03997
Cr	52	3	He	469.313	14.0915	704243.43	0.0299	0.03997
Mn	55	3	He	505.234	6.4868	317414.08	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	496.658	6.3767	315931.40	0.0128	0.002639
Mn	55	3	He	498.091	6.3951	319602.91	0.0128	0.002639
Fe	57	3	He	5046.439	2.9334	143537.34	0.0006	0.001429
Fe	57	3	He	4946.247	2.8752	142448.88	0.0006	0.001429
Fe	57	3	He	4922.245	2.8612	142992.73	0.0006	0.001429
Co	59	3	He	487.551	27.4427	1342842.95	0.0563	0.002149
Co	59	3	He	479.791	27.0059	1338002.64	0.0563	0.002149
Co	59	3	He	474.232	26.693	1334018.73	0.0563	0.002149
Ni	60	3	He	488.229	4.1934	374204.17	0.0086	0.002834
Ni	60	3	He	482.443	4.1437	372696.52	0.0086	0.002834
Ni	60	3	He	505.187	4.3389	377329.68	0.0086	0.002834
Cu	63	3	He	469.302	12.0522	1075505.61	0.0257	0.004757
Cu	63	3	He	462.608	11.8804	1068555.45	0.0257	0.004757
Cu	63	3	He	479.074	12.3031	1069926.23	0.0257	0.004757
Zn	66	3	He	494.849	1.4446	128914.19	0.0029	0.003818
Zn	66	3	He	494.581	1.4438	129863.54	0.0029	0.003818
Zn	66	3	He	505.43	1.4754	128309.52	0.0029	0.003818
As	75	3	He	498.02	1.0212	91127.38	0.002	0.0008061
As	75	3	He	494.668	1.0143	91230.38	0.002	0.0008061
As	75	3	He	510.732	1.0472	91071.10	0.002	0.0008061
Sr	88	3	He	50.668	0.4554	40599.34	0.009	0.0009645
Sr	88	3	He	51.687	0.4646	41010.63	0.009	0.0009645
Sr	88	3	He	49.789	0.4476	39997.11	0.009	0.0009645
Mo	98	3	He	49.643	1.0888	97054.70	0.0219	0.0002706
Mo	98	3	He	50.235	1.1017	97254.65	0.0219	0.0002706
Mo	98	3	He	48.619	1.0663	95292.58	0.0219	0.0002706
Ag	107	3	He	50.251	2.3366	208293.83	0.0465	0.0006206
Ag	107	3	He	50.108	2.33	205673.90	0.0465	0.0006206
Ag	107	3	He	49.216	2.2885	204518.43	0.0465	0.0006206
Cd	111	3	He	51.082	0.2731	24347.28	0.0053	0
Cd	111	3	He	50.778	0.2715	23966.55	0.0053	0
Cd	111	3	He	51.469	0.2752	24593.64	0.0053	0
Sn	120	3	He	102.262	1.6321	145487.35	0.0158	0.01648
Sn	120	3	He	102.055	1.6288	143779.13	0.0158	0.01648
Sn	120	3	He	101.144	1.6144	144273.96	0.0158	0.01648
Sb	121	3	He	103.316	1.5349	136821.25	0.0149	0.0002698
Sb	121	3	He	103.748	1.5413	136054.35	0.0149	0.0002698
Sb	121	3	He	102.296	1.5197	135811.68	0.0149	0.0002698
Ba	137	3	He	519.41	2.4931	222236.19	0.0048	0.0002317
Ba	137	3	He	521.01	2.5007	220747.03	0.0048	0.0002317
Ba	137	3	He	511.53	2.4552	219414.96	0.0048	0.0002317
Tl	205	3	He	102.03	2.523	1020576.63	0.0247	0.0001339
Tl	205	3	He	102.205	2.5273	1024700.06	0.0247	0.0001339
Tl	205	3	He	102.552	2.5359	1030657.41	0.0247	0.0001339
Pb	208	3	He	51.406	1.6836	364348.39	0.0327	0.00107
Pb	208	3	He	51.274	1.6793	365500.42	0.0327	0.00107
Pb	208	3	He	51.329	1.6811	360908.00	0.0327	0.00107
U	238	3	He	49.472	2.4371	771316.71	0.0493	7.55E-05
U	238	3	He	49.257	2.4265	769420.77	0.0493	7.55E-05
U	238	3	He	49.901	2.4582	773900.69	0.0493	7.55E-05
Sc	45	1	No Gas			2503760.59		
Sc	45	1	No Gas			2540590.12		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2544739.81		
Ge	72	1	No Gas			1245438.11		
Ge	72	1	No Gas			1253086.86		
Ge	72	1	No Gas			1252453.73		
Sc	45	2	H2			187553.77		
Sc	45	2	H2			185914.53		
Sc	45	2	H2			187159.63		
Ge	72	2	H2			167531.56		
Ge	72	2	H2			162253.42		
Ge	72	2	H2			165195.00		
In	115	2	H2			403713.78		
In	115	2	H2			398987.92		
In	115	2	H2			398140.07		
Sc	45	3	He			48932.68		
Sc	45	3	He			49544.80		
Sc	45	3	He			49976.35		
Ge	72	3	He			89236.96		
Ge	72	3	He			89942.73		
Ge	72	3	He			86963.89		
In	115	3	He			89920.84		
In	115	3	He			89064.35		
In	115	3	He			90142.20		
Tb	159	3	He			404516.56		
Tb	159	3	He			405453.12		
Tb	159	3	He			406429.99		
Bi	209	3	He			316494.64		
Bi	209	3	He			317096.83		
Bi	209	3	He			314822.01		

Quantitation Report

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Sample Type	Sample
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

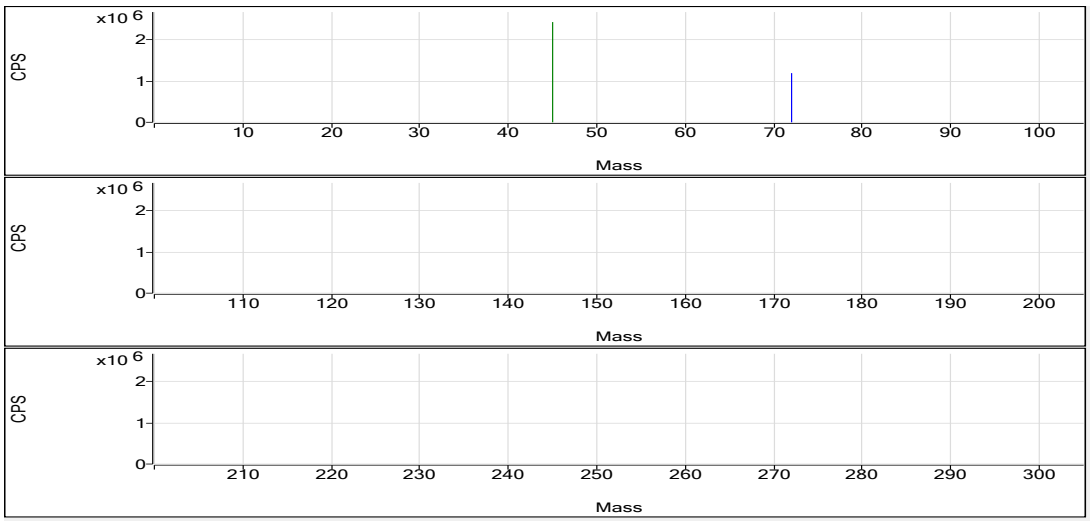
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.018	ppb	14.1	44.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.113	ppb	51.2	9.11	0.0001	Pulse	1.5000	3
Na	23	45	He	9.773	ppb	34.8	18128.32	0.3801	Pulse	0.1000	3
Mg	24	45	He	0.895	ppb	11.6	243.34	0.0051	Pulse	0.1000	3
Al	27	45	He	1.279	ppb	103.1	66.67	0.0014	Pulse	0.1000	3
K	39	45	He	-1.171	ppb	N/A	18775.97	0.3937	Pulse	0.1000	3
Ca	44	45	He	23.944	ppb	26.6	206.68	0.0043	Pulse	0.1000	3
Ti	47	45	He	0.262	ppb	149.1	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	0.290	ppb	20.5	1488.09	0.0312	Pulse	0.5000	3
Cr	52	45	He	0.019	ppb	180.8	1933.54	0.0405	Pulse	0.1000	3
Mn	55	45	He	0.159	ppb	52.2	223.34	0.0047	Pulse	0.1000	3
Fe	57	45	He	2.959	ppb	23.3	150.01	0.0031	Pulse	0.1000	3
Co	59	45	He	0.120	ppb	22.9	426.69	0.0089	Pulse	0.1000	3
Ni	60	72	He	0.088	ppb	31.3	293.34	0.0036	Pulse	0.1000	3
Cu	63	72	He	0.075	ppb	11.8	546.70	0.0067	Pulse	0.1000	3
Zn	66	72	He	1.896	ppb	1.5	763.38	0.0093	Pulse	0.1000	3
As	75	72	He	0.164	ppb	23.0	93.33	0.0011	Pulse	0.5000	3
Sr	88	115	He	-0.013	ppb	N/A	73.34	0.0008	Pulse	0.1000	3
Mo	98	115	He	0.126	ppb	17.8	263.35	0.0030	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	N/A	53.34	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.011	ppb	142.3	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.056	ppb	204.6	1506.80	0.0174	Pulse	0.1000	3
Sb	121	115	He	0.021	ppb	66.4	50.00	0.0006	Pulse	0.1000	3
Ba	137	115	He	0.056	ppb	22.9	43.33	0.0005	Pulse	0.1000	3
Tl	205	159	He	0.228	ppb	2.9	2300.29	0.0058	Pulse	0.1000	3
Pb	208	159	He	0.023	ppb	22.3	720.04	0.0018	Pulse	0.1000	3
U	238	209	He	0.118	ppb	7.7	1796.87	0.0059	Pulse	0.1000	3

ISTD Table:

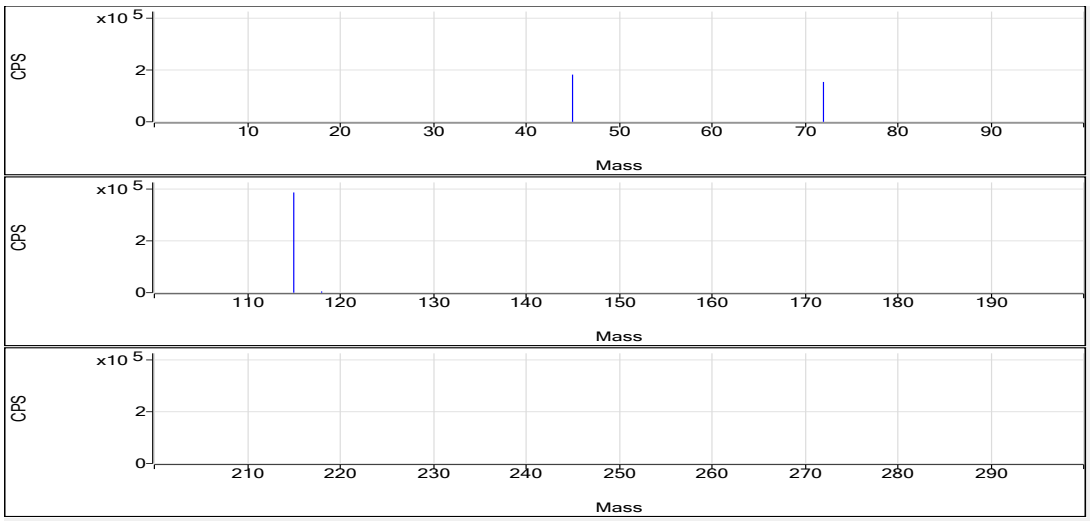
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2425571.27	1.5	101.1	Analog	0.1000	3
No Gas	Ge	72	1190032.46	1.4	103.2	Pulse	0.1000	3
H2	Sc	45	182091.04	0.8	97.4	Pulse	0.1000	3
H2	Ge	72	153790.30	1.4	93.9	Pulse	0.1000	3
H2	In	115	386660.92	0.6	99.4	Pulse	0.1000	3
He	Sc	45	47702.23	1.4	102.3	Pulse	0.1000	3
He	Ge	72	81737.18	1.4	100.7	Pulse	0.1000	3
He	In	115	86803.72	1.1	100.7	Pulse	0.1000	3
He	Tb	159	397802.05	0.9	99.8	Pulse	0.1000	3
He	Bi	209	305774.02	0.3	98.9	Pulse	0.1000	3

No Gas

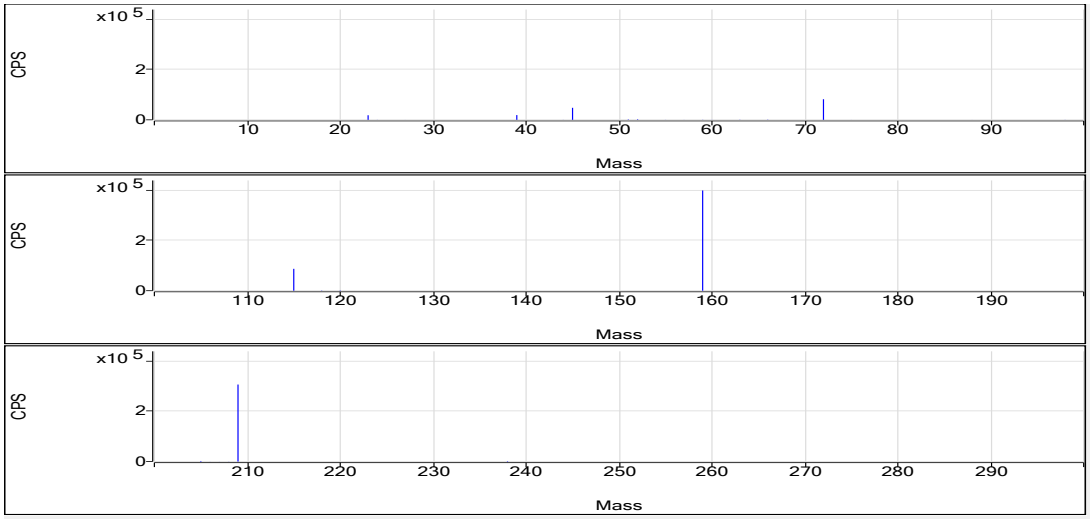


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.016	0	40.00	0.0008	4.685E-06
Be	9	1	No Gas	0.017	0	42.00	0.0008	4.685E-06
Be	9	1	No Gas	0.02	0	50.00	0.0008	4.685E-06
Se	78	2	H2	0.076	0	6.67	0.0004	1.219E-05
Se	78	2	H2	0.18	0.0001	13.33	0.0004	1.219E-05
Se	78	2	H2	0.083	0	7.33	0.0004	1.219E-05
Na	23	3	He	5.979	0.3665	17741.26	0.0036	0.3452
Na	23	3	He	12.567	0.3901	18592.18	0.0036	0.3452
Na	23	3	He	10.772	0.3837	18051.51	0.0036	0.3452
Mg	24	3	He	0.815	0.005	240.01	0.0018	0.003497
Mg	24	3	He	0.858	0.005	240.01	0.0018	0.003497
Mg	24	3	He	1.013	0.0053	250.01	0.0018	0.003497
Al	27	3	He	2.786	0.0023	110.01	0.0006	0.0006432
Al	27	3	He	0.335	0.0008	40.00	0.0006	0.0006432
Al	27	3	He	0.717	0.0011	50.00	0.0006	0.0006432
K	39	3	He	-6.906	0.387	18732.49	0.0012	0.3951
K	39	3	He	-7.681	0.3861	18402.16	0.0012	0.3951
K	39	3	He	11.075	0.408	19193.27	0.0012	0.3951
Ca	44	3	He	20.982	0.0041	200.01	0.0001	0.002715
Ca	44	3	He	31.253	0.0048	230.01	0.0001	0.002715
Ca	44	3	He	19.597	0.004	190.01	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.651	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	0.265	0.0002	10.00	0.0005	7.003E-05
V	51	3	He	0.222	0.0297	1438.08	0.0219	0.02486
V	51	3	He	0.331	0.0321	1530.09	0.0219	0.02486
V	51	3	He	0.317	0.0318	1496.09	0.0219	0.02486
Cr	52	3	He	0.011	0.0403	1950.20	0.0299	0.03997
Cr	52	3	He	-0.01	0.0397	1890.21	0.0299	0.03997
Cr	52	3	He	0.057	0.0417	1960.20	0.0299	0.03997
Mn	55	3	He	0.132	0.0043	210.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.252	0.0059	280.01	0.0128	0.002639
Mn	55	3	He	0.093	0.0038	180.01	0.0128	0.002639
Fe	57	3	He	2.164	0.0027	130.00	0.0006	0.001429
Fe	57	3	He	3.32	0.0034	160.01	0.0006	0.001429
Fe	57	3	He	3.395	0.0034	160.01	0.0006	0.001429
Co	59	3	He	0.149	0.0105	510.03	0.0563	0.002149
Co	59	3	He	0.118	0.0088	420.03	0.0563	0.002149
Co	59	3	He	0.094	0.0074	350.02	0.0563	0.002149
Ni	60	3	He	0.119	0.0039	320.01	0.0086	0.002834
Ni	60	3	He	0.074	0.0035	280.01	0.0086	0.002834
Ni	60	3	He	0.07	0.0034	280.01	0.0086	0.002834
Cu	63	3	He	0.073	0.0066	550.03	0.0257	0.004757
Cu	63	3	He	0.085	0.0069	560.03	0.0257	0.004757
Cu	63	3	He	0.068	0.0065	530.04	0.0257	0.004757
Zn	66	3	He	1.877	0.0093	770.04	0.0029	0.003818
Zn	66	3	He	1.882	0.0093	750.05	0.0029	0.003818
Zn	66	3	He	1.93	0.0094	770.05	0.0029	0.003818
As	75	3	He	0.207	0.0012	102.00	0.002	0.0008061
As	75	3	He	0.139	0.0011	88.00	0.002	0.0008061
As	75	3	He	0.145	0.0011	90.00	0.002	0.0008061
Sr	88	3	He	-0.057	0.0005	40.00	0.009	0.0009645
Sr	88	3	He	0.073	0.0016	140.01	0.009	0.0009645
Sr	88	3	He	-0.056	0.0005	40.00	0.009	0.0009645
Mo	98	3	He	0.107	0.0026	230.01	0.0219	0.0002706
Mo	98	3	He	0.151	0.0036	310.02	0.0219	0.0002706
Mo	98	3	He	0.12	0.0029	250.01	0.0219	0.0002706
Ag	107	3	He	0.004	0.0008	70.01	0.0465	0.0006206
Ag	107	3	He	-0.003	0.0005	40.00	0.0465	0.0006206
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.03	0.0002	14.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Sn	120	3	He	0.039	0.0171	1500.13	0.0158	0.01648
Sn	120	3	He	0.177	0.0193	1670.17	0.0158	0.01648
Sn	120	3	He	-0.049	0.0157	1350.11	0.0158	0.01648
Sb	121	3	He	0.005	0.0003	30.00	0.0149	0.0002698
Sb	121	3	He	0.028	0.0007	60.00	0.0149	0.0002698
Sb	121	3	He	0.029	0.0007	60.00	0.0149	0.0002698
Ba	137	3	He	0.07	0.0006	50.00	0.0048	0.0002317
Ba	137	3	He	0.048	0.0005	40.00	0.0048	0.0002317
Ba	137	3	He	0.049	0.0005	40.00	0.0048	0.0002317
Tl	205	3	He	0.224	0.0057	2230.27	0.0247	0.0001339
Tl	205	3	He	0.236	0.006	2390.32	0.0247	0.0001339
Tl	205	3	He	0.226	0.0057	2280.29	0.0247	0.0001339
Pb	208	3	He	0.027	0.002	420.02	0.0327	0.00107
Pb	208	3	He	0.024	0.0018	340.02	0.0327	0.00107
Pb	208	3	He	0.017	0.0016	350.02	0.0327	0.00107
U	238	3	He	0.108	0.0054	1640.16	0.0493	7.55E-05
U	238	3	He	0.12	0.006	1840.22	0.0493	7.55E-05
U	238	3	He	0.125	0.0062	1910.22	0.0493	7.55E-05
Sc	45	1	No Gas			2405877.00		
Sc	45	1	No Gas			2401960.59		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2468876.21		
Ge	72	1	No Gas			1186478.03		
Ge	72	1	No Gas			1175488.19		
Ge	72	1	No Gas			1208131.15		
Sc	45	2	H2			181733.38		
Sc	45	2	H2			180821.97		
Sc	45	2	H2			183717.77		
Ge	72	2	H2			152142.73		
Ge	72	2	H2			153053.85		
Ge	72	2	H2			156174.31		
In	115	2	H2			384490.81		
In	115	2	H2			389010.19		
In	115	2	H2			386481.75		
Sc	45	3	He			48401.15		
Sc	45	3	He			47658.73		
Sc	45	3	He			47046.82		
Ge	72	3	He			82940.49		
Ge	72	3	He			80677.17		
Ge	72	3	He			81593.88		
In	115	3	He			87816.89		
In	115	3	He			86651.03		
In	115	3	He			85965.78		
Tb	159	3	He			394002.30		
Tb	159	3	He			400600.78		
Tb	159	3	He			398803.08		
Bi	209	3	He			304860.60		
Bi	209	3	He			306234.37		
Bi	209	3	He			306227.10		

Quantitation Report

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Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

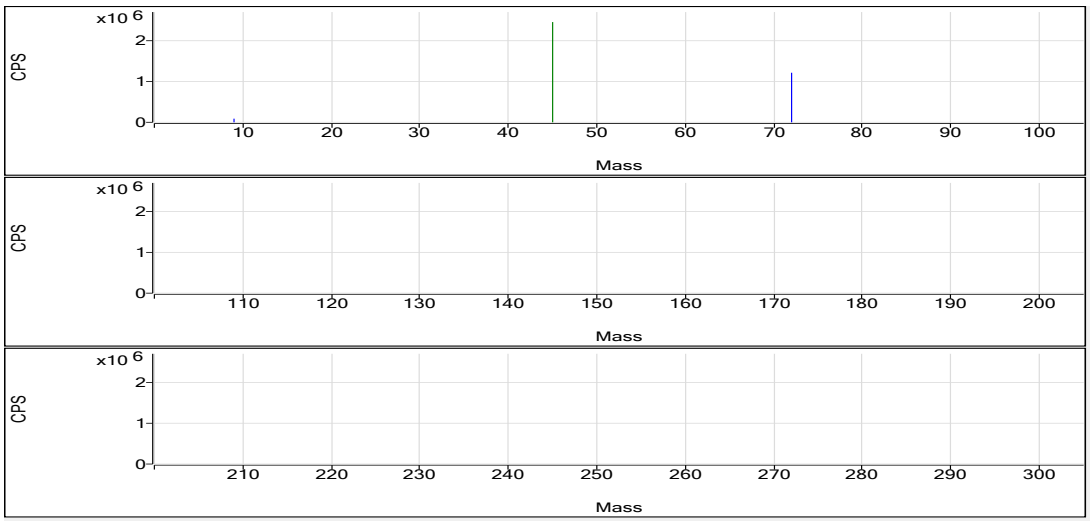
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	47.380	ppb	0.0	88942.71	0.0361	Pulse	0.5000	3
Se	78	72	H2	52.513	ppb	1.0	3479.76	0.0219	Pulse	1.5000	3
Na	23	45	He	4842.107	ppb	1.3	842045.33	17.6656	Pulse	0.1000	3
Mg	24	45	He	4974.747	ppb	1.5	425639.20	8.9298	Pulse	0.1000	3
Al	27	45	He	4860.349	ppb	0.7	135587.27	2.8441	Pulse	0.1000	3
K	39	45	He	5067.360	ppb	1.4	300063.60	6.2951	Pulse	0.1000	3
Ca	44	45	He	5224.684	ppb	0.8	16953.79	0.3557	Pulse	0.1000	3
Ti	47	45	He	5002.778	ppb	1.1	128061.32	2.6863	Pulse	0.1000	3
V	51	45	He	511.940	ppb	1.4	534588.56	11.2155	Pulse	0.5000	3
Cr	52	45	He	487.719	ppb	1.6	697931.11	14.6426	Pulse	0.1000	3
Mn	55	45	He	505.134	ppb	1.4	309132.07	6.4855	Pulse	0.1000	3
Fe	57	45	He	5065.662	ppb	1.2	140357.15	2.9445	Pulse	0.1000	3
Co	59	45	He	490.316	ppb	1.3	1315491.85	27.5983	Pulse	0.1000	3
Ni	60	72	He	520.526	ppb	2.7	370027.94	4.4706	Pulse	0.1000	3
Cu	63	72	He	493.720	ppb	2.6	1049460.69	12.6791	Pulse	0.1000	3
Zn	66	72	He	520.100	ppb	1.0	125698.14	1.5181	Pulse	0.1000	3
As	75	72	He	526.421	ppb	1.6	89354.58	1.0794	Pulse	0.5000	3
Sr	88	115	He	50.032	ppb	0.5	38974.59	0.4497	Pulse	0.1000	3
Mo	98	115	He	51.788	ppb	1.2	98423.63	1.1358	Pulse	0.1000	3
Ag	107	115	He	50.941	ppb	0.3	205276.10	2.3687	Pulse	0.1000	3
Cd	111	115	He	51.062	ppb	0.5	23660.70	0.2730	Pulse	0.5000	3
Sn	120	115	He	51.313	ppb	1.1	71682.53	0.8272	Pulse	0.1000	3
Sb	121	115	He	51.791	ppb	1.9	66684.07	0.7696	Pulse	0.1000	3
Ba	137	115	He	522.327	ppb	1.4	217250.27	2.5071	Pulse	0.1000	3
Tl	205	159	He	51.771	ppb	0.6	509748.67	1.2802	Pulse	0.1000	3
Pb	208	159	He	51.853	ppb	0.8	676148.59	1.6982	Pulse	0.1000	3
U	238	209	He	50.748	ppb	0.2	770628.24	2.4999	Pulse	0.1000	3

ISTD Table:

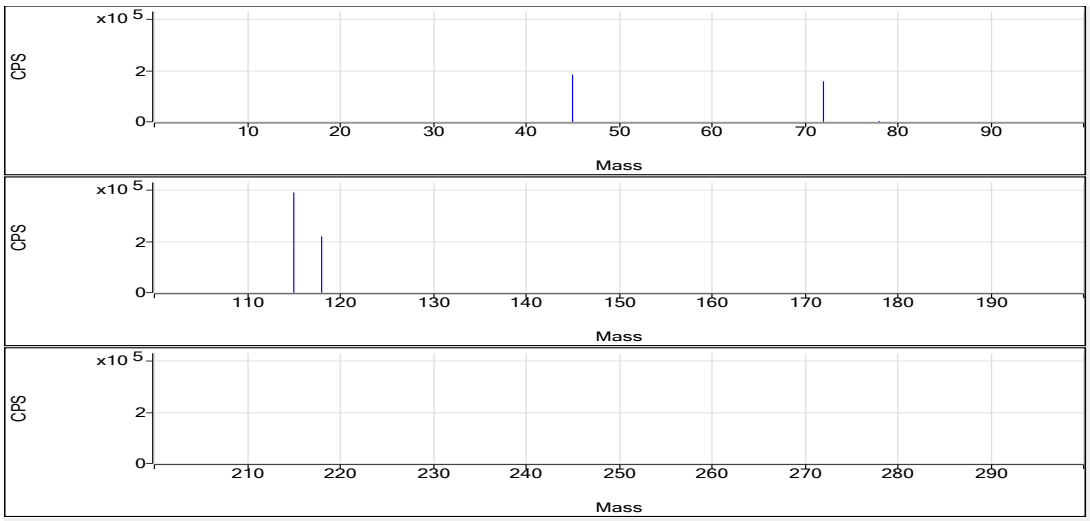
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2460688.97	0.2	102.6	Analog	0.1000	3
No Gas	Ge	72	1216832.95	0.4	105.5	Pulse	0.1000	3
H2	Sc	45	184703.36	2.1	98.8	Pulse	0.1000	3
H2	Ge	72	158797.29	0.5	97.0	Pulse	0.1000	3
H2	In	115	392666.89	1.1	100.9	Pulse	0.1000	3
He	Sc	45	47671.93	1.5	102.2	Pulse	0.1000	3
He	Ge	72	82800.05	2.1	102.0	Pulse	0.1000	3
He	In	115	86663.00	0.9	100.5	Pulse	0.1000	3
He	Tb	159	398171.32	0.6	99.9	Pulse	0.1000	3
He	Bi	209	308264.00	0.5	99.7	Pulse	0.1000	3

No Gas

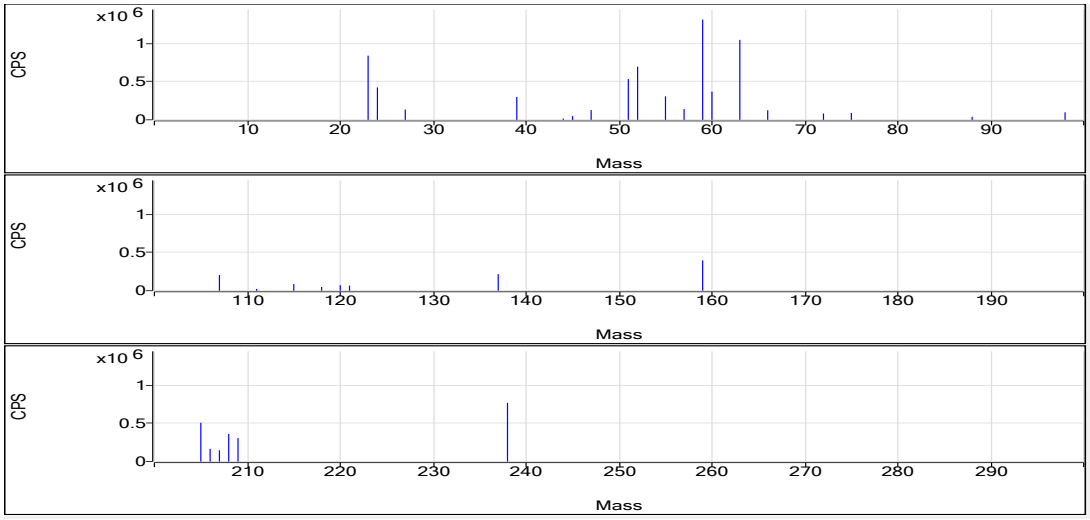


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	47.398	0.0362	88923.87	0.0008	4.685E-06
Be	9	1	No Gas	47.361	0.0361	89088.85	0.0008	4.685E-06
Be	9	1	No Gas	47.382	0.0361	88815.40	0.0008	4.685E-06
Se	78	2	H2	53.103	0.0222	3503.10	0.0004	1.219E-05
Se	78	2	H2	52.267	0.0218	3483.10	0.0004	1.219E-05
Se	78	2	H2	52.17	0.0218	3453.09	0.0004	1.219E-05
Na	23	3	He	4797.935	17.5076	844229.13	0.0036	0.3452
Na	23	3	He	4916.642	17.9322	840591.32	0.0036	0.3452
Na	23	3	He	4811.745	17.557	841315.53	0.0036	0.3452
Mg	24	3	He	4921.978	8.8351	426035.23	0.0018	0.003497
Mg	24	3	He	5057.86	9.0789	425583.82	0.0018	0.003497
Mg	24	3	He	4944.404	8.8753	425298.55	0.0018	0.003497
Al	27	3	He	4840.649	2.8326	136589.55	0.0006	0.0006432
Al	27	3	He	4841.176	2.8329	132795.03	0.0006	0.0006432
Al	27	3	He	4899.222	2.8669	137377.23	0.0006	0.0006432
K	39	3	He	5027.084	6.2482	301294.23	0.0012	0.3951
K	39	3	He	5147.981	6.389	299490.74	0.0012	0.3951
K	39	3	He	5027.016	6.2482	299405.84	0.0012	0.3951
Ca	44	3	He	5231.065	0.3561	17170.59	0.0001	0.002715
Ca	44	3	He	5262.188	0.3582	16790.32	0.0001	0.002715
Ca	44	3	He	5180.797	0.3527	16900.47	0.0001	0.002715
Ti	47	3	He	5048.704	2.711	130724.72	0.0005	7.003E-05
Ti	47	3	He	5016.763	2.6938	126275.36	0.0005	7.003E-05
Ti	47	3	He	4942.869	2.6541	127183.89	0.0005	7.003E-05
V	51	3	He	506.973	11.1069	535581.56	0.0219	0.02486
V	51	3	He	520.208	11.3962	534207.63	0.0219	0.02486
V	51	3	He	508.639	11.1433	533976.50	0.0219	0.02486
Cr	52	3	He	481.679	14.4618	697358.19	0.0299	0.03997
Cr	52	3	He	496.716	14.912	699015.07	0.0299	0.03997
Cr	52	3	He	484.763	14.5541	697420.07	0.0299	0.03997
Mn	55	3	He	500.055	6.4203	309590.58	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	513.15	6.5883	308835.33	0.0128	0.002639
Mn	55	3	He	502.195	6.4478	308970.29	0.0128	0.002639
Fe	57	3	He	5052.843	2.9371	141628.26	0.0006	0.001429
Fe	57	3	He	5133.045	2.9837	139863.06	0.0006	0.001429
Fe	57	3	He	5011.096	2.9128	139580.13	0.0006	0.001429
Co	59	3	He	486.449	27.3806	1320311.54	0.0563	0.002149
Co	59	3	He	497.916	28.026	1313748.57	0.0563	0.002149
Co	59	3	He	486.583	27.3882	1312415.45	0.0563	0.002149
Ni	60	3	He	527.555	4.5309	370556.32	0.0086	0.002834
Ni	60	3	He	529.759	4.5498	372424.14	0.0086	0.002834
Ni	60	3	He	504.264	4.331	367103.35	0.0086	0.002834
Cu	63	3	He	501.457	12.8777	1053188.19	0.0257	0.004757
Cu	63	3	He	500.572	12.855	1052237.48	0.0257	0.004757
Cu	63	3	He	479.131	12.3046	1042956.39	0.0257	0.004757
Zn	66	3	He	525.842	1.5349	125527.67	0.0029	0.003818
Zn	66	3	He	515.896	1.5059	123265.25	0.0029	0.003818
Zn	66	3	He	518.562	1.5137	128301.49	0.0029	0.003818
As	75	3	He	527.733	1.0821	88495.26	0.002	0.0008061
As	75	3	He	533.962	1.0948	89616.20	0.002	0.0008061
As	75	3	He	517.569	1.0612	89952.28	0.002	0.0008061
Sr	88	3	He	49.746	0.4472	39105.15	0.009	0.0009645
Sr	88	3	He	50.215	0.4514	38753.68	0.009	0.0009645
Sr	88	3	He	50.134	0.4507	39064.94	0.009	0.0009645
Mo	98	3	He	51.15	1.1218	98101.66	0.0219	0.0002706
Mo	98	3	He	52.411	1.1494	98685.55	0.0219	0.0002706
Mo	98	3	He	51.802	1.1361	98483.69	0.0219	0.0002706
Ag	107	3	He	50.764	2.3605	206424.53	0.0465	0.0006206
Ag	107	3	He	51.078	2.3751	203911.85	0.0465	0.0006206
Ag	107	3	He	50.981	2.3706	205491.91	0.0465	0.0006206
Cd	111	3	He	50.982	0.2726	23838.34	0.0053	0
Cd	111	3	He	51.357	0.2746	23575.87	0.0053	0
Cd	111	3	He	50.848	0.2719	23567.88	0.0053	0
Sn	120	3	He	50.851	0.8198	71695.25	0.0158	0.01648
Sn	120	3	He	51.119	0.8241	70751.13	0.0158	0.01648
Sn	120	3	He	51.97	0.8375	72601.22	0.0158	0.01648
Sb	121	3	He	50.977	0.7574	66238.55	0.0149	0.0002698
Sb	121	3	He	52.862	0.7854	67434.07	0.0149	0.0002698
Sb	121	3	He	51.536	0.7658	66379.60	0.0149	0.0002698
Ba	137	3	He	515.071	2.4722	216195.13	0.0048	0.0002317
Ba	137	3	He	529.716	2.5425	218286.87	0.0048	0.0002317
Ba	137	3	He	522.195	2.5064	217268.81	0.0048	0.0002317
Tl	205	3	He	51.473	1.2729	508870.23	0.0247	0.0001339
Tl	205	3	He	52.049	1.2871	508971.83	0.0247	0.0001339
Tl	205	3	He	51.791	1.2807	511403.94	0.0247	0.0001339
Pb	208	3	He	51.537	1.6879	361689.14	0.0327	0.00107
Pb	208	3	He	52.322	1.7136	363378.43	0.0327	0.00107
Pb	208	3	He	51.698	1.6931	360443.74	0.0327	0.00107
U	238	3	He	50.878	2.5063	771980.69	0.0493	7.55E-05
U	238	3	He	50.725	2.4988	766515.14	0.0493	7.55E-05
U	238	3	He	50.64	2.4946	773388.89	0.0493	7.55E-05
Sc	45	1	No Gas			2459253.87		
Sc	45	1	No Gas			2465737.93		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2457075.12		
Ge	72	1	No Gas			1214051.31		
Ge	72	1	No Gas			1214045.92		
Ge	72	1	No Gas			1222401.62		
Sc	45	2	H2			182806.62		
Sc	45	2	H2			189083.84		
Sc	45	2	H2			182219.63		
Ge	72	2	H2			158084.06		
Ge	72	2	H2			159694.38		
Ge	72	2	H2			158613.42		
In	115	2	H2			390952.46		
In	115	2	H2			397461.21		
In	115	2	H2			389586.99		
Sc	45	3	He			48220.70		
Sc	45	3	He			46876.01		
Sc	45	3	He			47919.08		
Ge	72	3	He			81783.96		
Ge	72	3	He			81854.42		
Ge	72	3	He			84761.76		
In	115	3	He			87836.70		
In	115	3	He			86237.16		
In	115	3	He			87073.12		
Tb	159	3	He			399779.56		
Tb	159	3	He			395433.47		
Tb	159	3	He			399300.93		
Bi	209	3	He			308014.25		
Bi	209	3	He			306752.48		
Bi	209	3	He			310025.27		

Quantitation Report

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Sample Type	CCB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

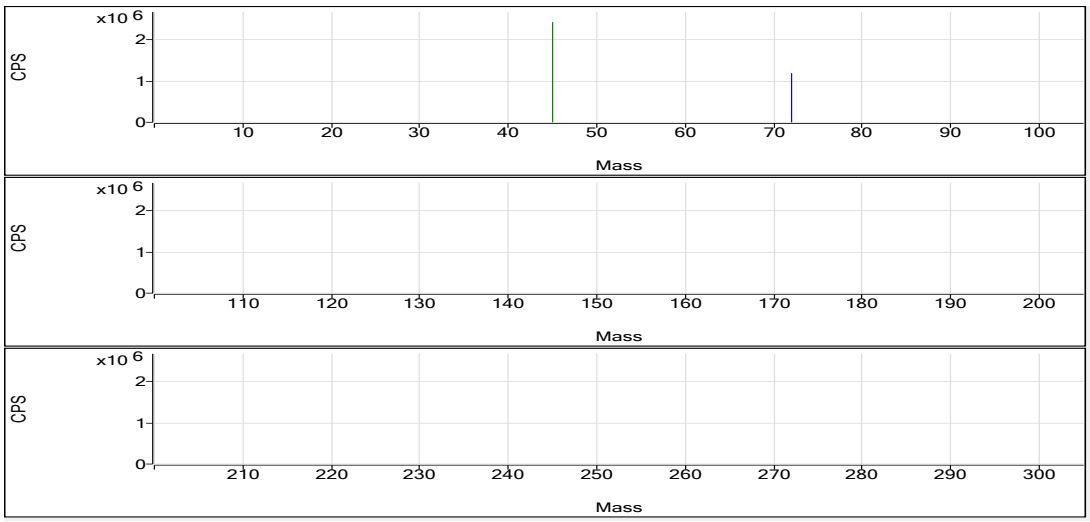
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.029	ppb	17.3	65.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.068	ppb	65.8	6.22	0.0000	Pulse	1.5000	3
Na	23	45	He	12.078	ppb	23.9	18325.25	0.3884	Pulse	0.1000	3
Mg	24	45	He	1.789	ppb	42.8	316.68	0.0067	Pulse	0.1000	3
Al	27	45	He	0.714	ppb	103.0	50.00	0.0011	Pulse	0.1000	3
K	39	45	He	-1.832	ppb	N/A	18538.95	0.3929	Pulse	0.1000	3
Ca	44	45	He	0.576	ppb	1063.1	130.01	0.0028	Pulse	0.1000	3
Ti	47	45	He	0.529	ppb	114.7	16.67	0.0004	Pulse	0.1000	3
V	51	45	He	0.321	ppb	24.8	1504.09	0.0319	Pulse	0.5000	3
Cr	52	45	He	0.095	ppb	64.1	2020.21	0.0428	Pulse	0.1000	3
Mn	55	45	He	0.191	ppb	32.1	240.01	0.0051	Pulse	0.1000	3
Fe	57	45	He	0.815	ppb	230.7	90.00	0.0019	Pulse	0.1000	3
Co	59	45	He	0.097	ppb	18.3	360.02	0.0076	Pulse	0.1000	3
Ni	60	72	He	0.106	ppb	67.8	306.68	0.0037	Pulse	0.1000	3
Cu	63	72	He	0.110	ppb	27.3	620.04	0.0076	Pulse	0.1000	3
Zn	66	72	He	1.939	ppb	14.1	773.38	0.0095	Pulse	0.1000	3
As	75	72	He	0.184	ppb	45.1	96.67	0.0012	Pulse	0.5000	3
Sr	88	115	He	0.023	ppb	155.0	100.00	0.0012	Pulse	0.1000	3
Mo	98	115	He	0.059	ppb	22.0	133.34	0.0016	Pulse	0.1000	3
Ag	107	115	He	0.003	ppb	152.2	63.33	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.006	ppb	43.8	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.087	ppb	34.2	1530.15	0.0179	Pulse	0.1000	3
Sb	121	115	He	0.018	ppb	65.0	46.67	0.0005	Pulse	0.1000	3
Ba	137	115	He	0.065	ppb	20.9	46.67	0.0005	Pulse	0.1000	3
Tl	205	159	He	0.106	ppb	6.4	1100.09	0.0028	Pulse	0.1000	3
Pb	208	159	He	0.013	ppb	39.4	596.70	0.0015	Pulse	0.1000	3
U	238	209	He	0.047	ppb	4.2	733.38	0.0024	Pulse	0.1000	3

ISTD Table:

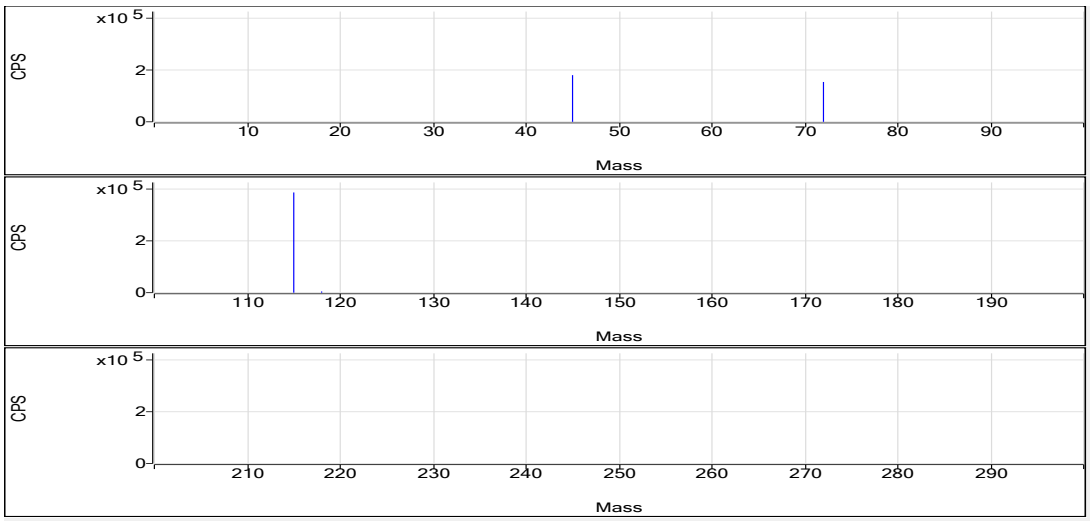
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2435863.61	0.7	101.5	Analog	0.1000	3
No Gas	Ge	72	1194637.32	0.6	103.6	Pulse	0.1000	3
H2	Sc	45	179640.17	0.8	96.1	Pulse	0.1000	3
H2	Ge	72	153328.69	1.4	93.7	Pulse	0.1000	3
H2	In	115	385764.27	0.5	99.1	Pulse	0.1000	3
He	Sc	45	47190.65	0.8	101.2	Pulse	0.1000	3
He	Ge	72	81790.90	1.6	100.7	Pulse	0.1000	3
He	In	115	85692.26	0.7	99.4	Pulse	0.1000	3
He	Tb	159	398315.76	0.3	99.9	Pulse	0.1000	3
He	Bi	209	306726.72	0.6	99.2	Pulse	0.1000	3

No Gas

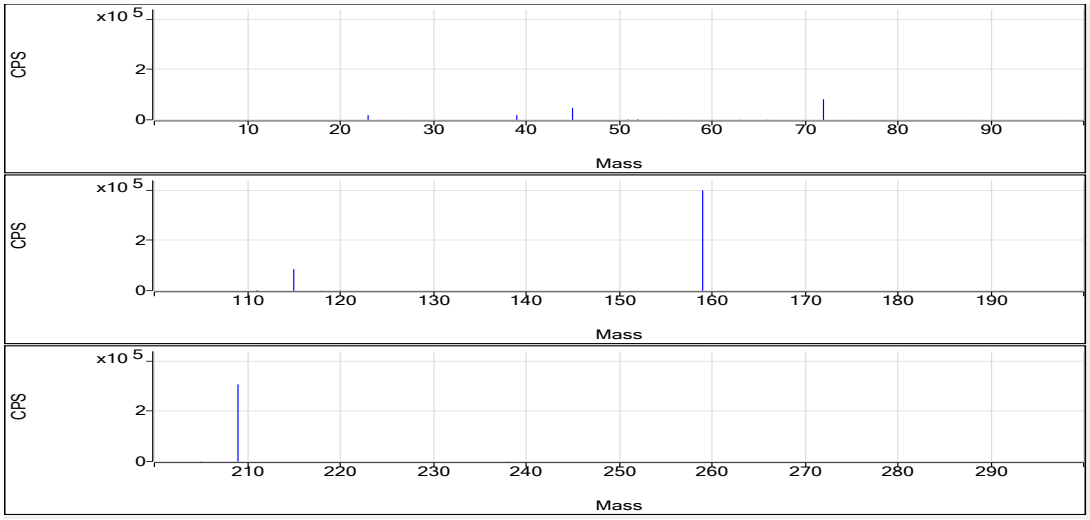


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.035	0	76.00	0.0008	4.685E-06
Be	9	1	No Gas	0.026	0	60.00	0.0008	4.685E-06
Be	9	1	No Gas	0.026	0	60.00	0.0008	4.685E-06
Se	78	2	H2	0.119	0.0001	9.33	0.0004	1.219E-05
Se	78	2	H2	0.054	0	5.33	0.0004	1.219E-05
Se	78	2	H2	0.033	0	4.00	0.0004	1.219E-05
Na	23	3	He	11.37	0.3858	18341.81	0.0036	0.3452
Na	23	3	He	9.615	0.3796	17921.40	0.0036	0.3452
Na	23	3	He	15.248	0.3997	18712.54	0.0036	0.3452
Mg	24	3	He	2.624	0.0082	390.02	0.0018	0.003497
Mg	24	3	He	1.12	0.0055	260.01	0.0018	0.003497
Mg	24	3	He	1.623	0.0064	300.01	0.0018	0.003497
Al	27	3	He	0.698	0.0011	50.00	0.0006	0.0006432
Al	27	3	He	-0.013	0.0006	30.00	0.0006	0.0006432
Al	27	3	He	1.456	0.0015	70.00	0.0006	0.0006432
K	39	3	He	-17.516	0.3747	17811.36	0.0012	0.3951
K	39	3	He	1.609	0.3969	18742.45	0.0012	0.3951
K	39	3	He	10.412	0.4072	19063.04	0.0012	0.3951
Ca	44	3	He	0.294	0.0027	130.01	0.0001	0.002715
Ca	44	3	He	6.84	0.0032	150.01	0.0001	0.002715
Ca	44	3	He	-5.405	0.0023	110.01	0.0001	0.002715
Ti	47	3	He	0.653	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	1.063	0.0006	30.00	0.0005	7.003E-05
V	51	3	He	0.235	0.03	1426.08	0.0219	0.02486
V	51	3	He	0.391	0.0334	1578.10	0.0219	0.02486
V	51	3	He	0.336	0.0322	1508.09	0.0219	0.02486
Cr	52	3	He	0.056	0.0417	1980.19	0.0299	0.03997
Cr	52	3	He	0.165	0.0449	2120.24	0.0299	0.03997
Cr	52	3	He	0.063	0.0419	1960.21	0.0299	0.03997
Mn	55	3	He	0.122	0.0042	200.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.24	0.0057	270.02	0.0128	0.002639
Mn	55	3	He	0.211	0.0053	250.01	0.0128	0.002639
Fe	57	3	He	1.886	0.0025	120.01	0.0006	0.001429
Fe	57	3	He	1.915	0.0025	120.00	0.0006	0.001429
Fe	57	3	He	-1.356	0.0006	30.00	0.0006	0.001429
Co	59	3	He	0.115	0.0086	410.02	0.0563	0.002149
Co	59	3	He	0.097	0.0076	360.02	0.0563	0.002149
Co	59	3	He	0.079	0.0066	310.01	0.0563	0.002149
Ni	60	3	He	0.068	0.0034	280.01	0.0086	0.002834
Ni	60	3	He	0.189	0.0045	370.02	0.0086	0.002834
Ni	60	3	He	0.061	0.0034	270.01	0.0086	0.002834
Cu	63	3	He	0.076	0.0067	550.03	0.0257	0.004757
Cu	63	3	He	0.134	0.0082	680.04	0.0257	0.004757
Cu	63	3	He	0.12	0.0078	630.04	0.0257	0.004757
Zn	66	3	He	2.126	0.01	820.05	0.0029	0.003818
Zn	66	3	He	1.625	0.0085	710.05	0.0029	0.003818
Zn	66	3	He	2.065	0.0098	790.05	0.0029	0.003818
As	75	3	He	0.238	0.0013	106.00	0.002	0.0008061
As	75	3	He	0.088	0.001	82.00	0.002	0.0008061
As	75	3	He	0.226	0.0013	102.00	0.002	0.0008061
Sr	88	3	He	0.036	0.0013	110.00	0.009	0.0009645
Sr	88	3	He	-0.017	0.0008	70.00	0.009	0.0009645
Sr	88	3	He	0.049	0.0014	120.01	0.009	0.0009645
Mo	98	3	He	0.046	0.0013	110.00	0.0219	0.0002706
Mo	98	3	He	0.072	0.0019	160.01	0.0219	0.0002706
Mo	98	3	He	0.057	0.0015	130.01	0.0219	0.0002706
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Ag	107	3	He	0.002	0.0007	60.00	0.0465	0.0006206
Ag	107	3	He	0.007	0.0009	80.00	0.0465	0.0006206
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.009	0	4.00	0.0053	0
Sn	120	3	He	0.121	0.0184	1570.15	0.0158	0.01648
Sn	120	3	He	0.063	0.0175	1510.14	0.0158	0.01648
Sn	120	3	He	0.078	0.0177	1510.15	0.0158	0.01648
Sb	121	3	He	0.005	0.0004	30.00	0.0149	0.0002698
Sb	121	3	He	0.021	0.0006	50.00	0.0149	0.0002698
Sb	121	3	He	0.029	0.0007	60.00	0.0149	0.0002698
Ba	137	3	He	0.074	0.0006	50.00	0.0048	0.0002317
Ba	137	3	He	0.072	0.0006	50.00	0.0048	0.0002317
Ba	137	3	He	0.049	0.0005	40.00	0.0048	0.0002317
Tl	205	3	He	0.109	0.0028	1130.09	0.0247	0.0001339
Tl	205	3	He	0.098	0.0026	1020.09	0.0247	0.0001339
Tl	205	3	He	0.111	0.0029	1150.10	0.0247	0.0001339
Pb	208	3	He	0.007	0.0013	310.01	0.0327	0.00107
Pb	208	3	He	0.017	0.0016	370.02	0.0327	0.00107
Pb	208	3	He	0.016	0.0016	330.02	0.0327	0.00107
U	238	3	He	0.048	0.0024	750.05	0.0493	7.55E-05
U	238	3	He	0.045	0.0023	700.05	0.0493	7.55E-05
U	238	3	He	0.048	0.0025	750.05	0.0493	7.55E-05
Sc	45	1	No Gas			2431527.93		
Sc	45	1	No Gas			2422009.34		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2454053.56		
Ge	72	1	No Gas			1200450.37		
Ge	72	1	No Gas			1186362.79		
Ge	72	1	No Gas			1197098.81		
Sc	45	2	H2			179029.94		
Sc	45	2	H2			181327.46		
Sc	45	2	H2			178563.12		
Ge	72	2	H2			150939.99		
Ge	72	2	H2			154021.78		
Ge	72	2	H2			155024.31		
In	115	2	H2			388188.59		
In	115	2	H2			384336.01		
In	115	2	H2			384768.20		
Sc	45	3	He			47538.45		
Sc	45	3	He			47217.29		
Sc	45	3	He			46816.20		
Ge	72	3	He			81945.84		
Ge	72	3	He			83050.92		
Ge	72	3	He			80375.95		
In	115	3	He			85411.76		
In	115	3	He			86427.82		
In	115	3	He			85261.08		
Tb	159	3	He			398672.38		
Tb	159	3	He			397063.86		
Tb	159	3	He			399211.05		
Bi	209	3	He			308457.14		
Bi	209	3	He			306937.85		
Bi	209	3	He			304785.17		

Quantitation Report

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Auto Dilution	1.0000
Total Dilution	1.0000
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Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

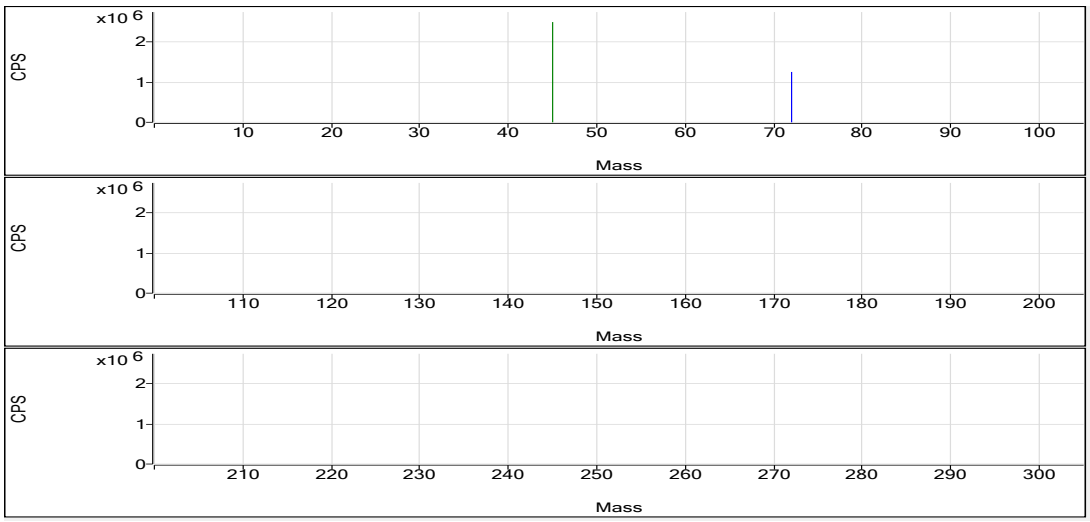
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.016	ppb	47.3	42.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.511	ppb	12.9	37.33	0.0002	Pulse	1.5000	3
Na	23	45	He	17592.734	ppb	1.8	3008264.85	63.2752	Analog	0.1000	3
Mg	24	45	He	11845.555	ppb	1.1	1010695.06	21.2582	Pulse	0.1000	3
Al	27	45	He	121.503	ppb	3.1	3410.53	0.0717	Pulse	0.1000	3
K	39	45	He	1329.431	ppb	2.0	92378.15	1.9430	Pulse	0.1000	3
Ca	44	45	He	46072.153	ppb	1.9	148093.27	3.1150	Pulse	0.1000	3
Ti	47	45	He	4.180	ppb	24.9	110.00	0.0023	Pulse	0.1000	3
V	51	45	He	1.046	ppb	5.6	2268.86	0.0477	Pulse	0.5000	3
Cr	52	45	He	0.686	ppb	4.6	2877.06	0.0605	Pulse	0.1000	3
Mn	55	45	He	16.826	ppb	4.9	10390.74	0.2186	Pulse	0.1000	3
Fe	57	45	He	490.524	ppb	2.6	13616.91	0.2864	Pulse	0.1000	3
Co	59	45	He	0.205	ppb	7.4	650.04	0.0137	Pulse	0.1000	3
Ni	60	72	He	0.504	ppb	22.6	623.37	0.0072	Pulse	0.1000	3
Cu	63	72	He	1.579	ppb	7.3	3937.35	0.0453	Pulse	0.1000	3
Zn	66	72	He	12.209	ppb	1.4	3423.84	0.0394	Pulse	0.1000	3
As	75	72	He	0.228	ppb	35.1	110.67	0.0013	Pulse	0.5000	3
Sr	88	115	He	108.615	ppb	0.8	85202.56	0.9752	Pulse	0.1000	3
Mo	98	115	He	0.339	ppb	7.1	673.37	0.0077	Pulse	0.1000	3
Ag	107	115	He	0.009	ppb	72.2	90.00	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.016	ppb	40.8	7.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.052	ppb	N/A	1366.79	0.0156	Pulse	0.1000	3
Sb	121	115	He	0.157	ppb	29.0	226.68	0.0026	Pulse	0.1000	3
Ba	137	115	He	144.553	ppb	0.8	60631.50	0.6940	Pulse	0.1000	3
Tl	205	159	He	0.038	ppb	17.0	430.02	0.0011	Pulse	0.1000	3
Pb	208	159	He	1.634	ppb	2.8	21691.13	0.0545	Pulse	0.1000	3
U	238	209	He	0.566	ppb	1.3	8759.98	0.0280	Pulse	0.1000	3

ISTD Table:

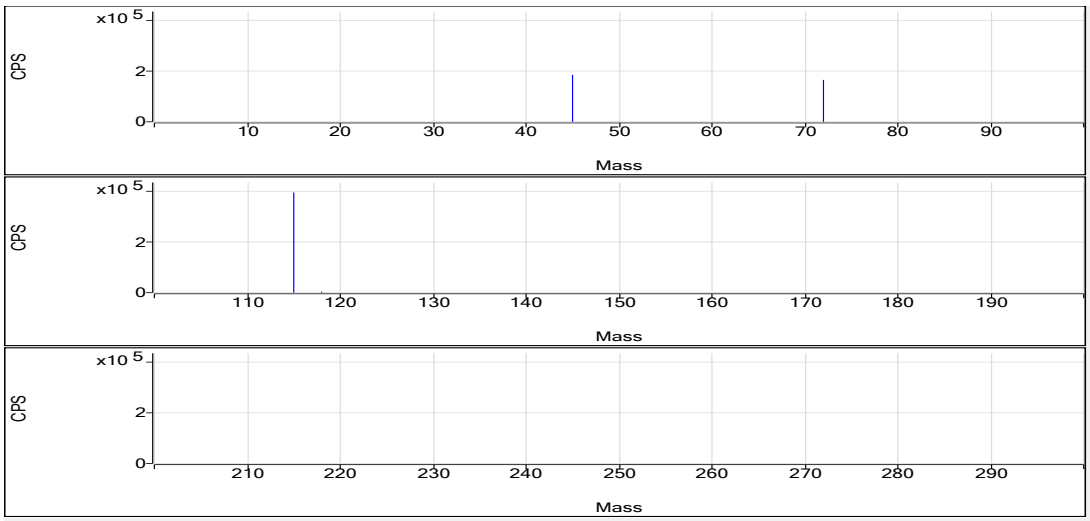
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2505874.34	1.1	104.5	Analog	0.1000	3
No Gas	Ge	72	1258744.41	0.9	109.1	Pulse	0.1000	3
H2	Sc	45	185506.05	1.3	99.2	Pulse	0.1000	3
H2	Ge	72	165653.82	0.6	101.2	Pulse	0.1000	3
H2	In	115	396069.77	1.1	101.8	Pulse	0.1000	3
He	Sc	45	47545.40	0.5	101.9	Pulse	0.1000	3
He	Ge	72	86964.58	1.2	107.1	Pulse	0.1000	3
He	In	115	87371.06	1.1	101.4	Pulse	0.1000	3
He	Tb	159	397750.78	0.9	99.8	Pulse	0.1000	3
He	Bi	209	313163.48	0.7	101.3	Pulse	0.1000	3

No Gas

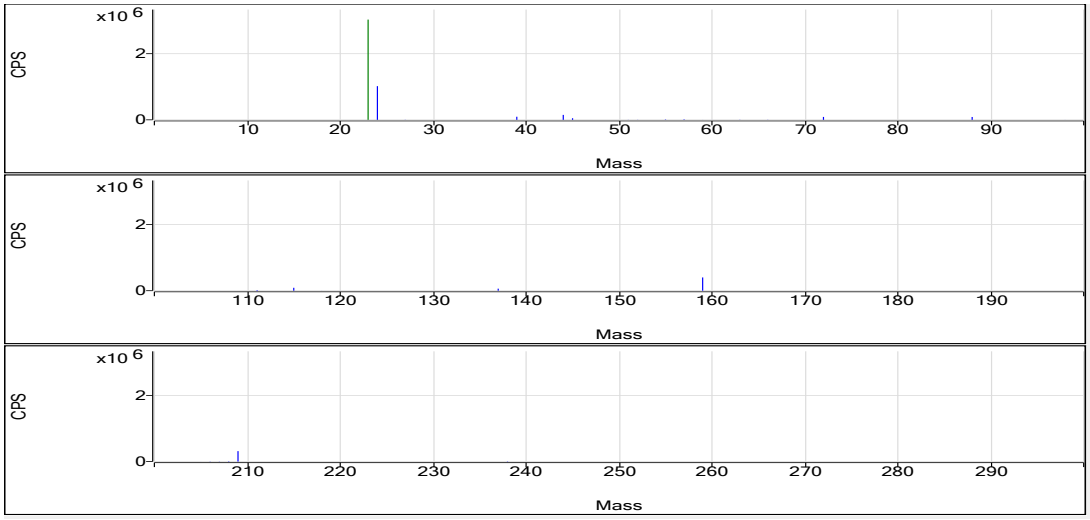


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.019	0	48.00	0.0008	4.685E-06
Be	9	1	No Gas	0.007	0	26.00	0.0008	4.685E-06
Be	9	1	No Gas	0.021	0	52.00	0.0008	4.685E-06
Se	78	2	H2	0.573	0.0003	41.33	0.0004	1.219E-05
Se	78	2	H2	0.52	0.0002	38.00	0.0004	1.219E-05
Se	78	2	H2	0.441	0.0002	32.67	0.0004	1.219E-05
Na	23	3	He	17945.705	64.5378	3049925.89	0.0036	0.3452
Na	23	3	He	17515.137	62.9977	3004301.83	0.0036	0.3452
Na	23	3	He	17317.36	62.2902	2970566.83	0.0036	0.3452
Mg	24	3	He	11986.402	21.511	1016564.13	0.0018	0.003497
Mg	24	3	He	11806.833	21.1888	1010472.72	0.0018	0.003497
Mg	24	3	He	11743.429	21.075	1005048.34	0.0018	0.003497
Al	27	3	He	118.641	0.0701	3310.52	0.0006	0.0006432
Al	27	3	He	120.067	0.0709	3380.51	0.0006	0.0006432
Al	27	3	He	125.803	0.0742	3540.55	0.0006	0.0006432
K	39	3	He	1332.861	1.947	92008.97	0.0012	0.3951
K	39	3	He	1353.998	1.9716	94022.02	0.0012	0.3951
K	39	3	He	1301.434	1.9104	91103.47	0.0012	0.3951
Ca	44	3	He	47056.579	3.1815	150350.09	0.0001	0.002715
Ca	44	3	He	45532.904	3.0785	146813.25	0.0001	0.002715
Ca	44	3	He	45626.977	3.0849	147116.46	0.0001	0.002715
Ti	47	3	He	4.599	0.0025	120.00	0.0005	7.003E-05
Ti	47	3	He	2.994	0.0017	80.00	0.0005	7.003E-05
Ti	47	3	He	4.947	0.0027	130.01	0.0005	7.003E-05
V	51	3	He	1.07	0.0482	2280.19	0.0219	0.02486
V	51	3	He	1.088	0.0487	2320.20	0.0219	0.02486
V	51	3	He	0.979	0.0463	2206.18	0.0219	0.02486
Cr	52	3	He	0.687	0.0605	2860.40	0.0299	0.03997
Cr	52	3	He	0.654	0.0596	2840.39	0.0299	0.03997
Cr	52	3	He	0.717	0.0614	2930.39	0.0299	0.03997
Mn	55	3	He	17.708	0.2299	10864.46	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	16.695	0.2169	10344.04	0.0128	0.002639
Mn	55	3	He	16.074	0.2089	9963.72	0.0128	0.002639
Fe	57	3	He	502.238	0.2932	13857.18	0.0006	0.001429
Fe	57	3	He	492.251	0.2874	13706.91	0.0006	0.001429
Fe	57	3	He	477.083	0.2786	13286.65	0.0006	0.001429
Co	59	3	He	0.187	0.0127	600.03	0.0563	0.002149
Co	59	3	He	0.211	0.0141	670.04	0.0563	0.002149
Co	59	3	He	0.215	0.0143	680.04	0.0563	0.002149
Ni	60	3	He	0.635	0.0083	730.04	0.0086	0.002834
Ni	60	3	He	0.453	0.0067	580.03	0.0086	0.002834
Ni	60	3	He	0.424	0.0065	560.03	0.0086	0.002834
Cu	63	3	He	1.459	0.0422	3720.62	0.0257	0.004757
Cu	63	3	He	1.689	0.0481	4150.75	0.0257	0.004757
Cu	63	3	He	1.589	0.0456	3940.69	0.0257	0.004757
Zn	66	3	He	12.368	0.0398	3510.52	0.0029	0.003818
Zn	66	3	He	12.031	0.0388	3350.49	0.0029	0.003818
Zn	66	3	He	12.23	0.0394	3410.51	0.0029	0.003818
As	75	3	He	0.171	0.0012	102.00	0.002	0.0008061
As	75	3	He	0.32	0.0015	126.00	0.002	0.0008061
As	75	3	He	0.193	0.0012	104.00	0.002	0.0008061
Sr	88	3	He	108.105	0.9707	85799.31	0.009	0.0009645
Sr	88	3	He	108.149	0.971	84602.55	0.009	0.0009645
Sr	88	3	He	109.59	0.984	85205.81	0.009	0.0009645
Mo	98	3	He	0.313	0.0071	630.04	0.0219	0.0002706
Mo	98	3	He	0.359	0.0081	710.04	0.0219	0.0002706
Mo	98	3	He	0.346	0.0079	680.04	0.0219	0.0002706
Ag	107	3	He	0.013	0.0012	110.00	0.0465	0.0006206
Ag	107	3	He	0.011	0.0011	100.00	0.0465	0.0006206
Ag	107	3	He	0.002	0.0007	60.00	0.0465	0.0006206
Cd	111	3	He	0.021	0.0001	10.00	0.0053	0
Cd	111	3	He	0.017	0.0001	8.00	0.0053	0
Cd	111	3	He	0.009	0	4.00	0.0053	0
Sn	120	3	He	-0.119	0.0146	1290.10	0.0158	0.01648
Sn	120	3	He	-0.026	0.0161	1400.12	0.0158	0.01648
Sn	120	3	He	-0.012	0.0163	1410.14	0.0158	0.01648
Sb	121	3	He	0.119	0.002	180.01	0.0149	0.0002698
Sb	121	3	He	0.144	0.0024	210.01	0.0149	0.0002698
Sb	121	3	He	0.207	0.0033	290.02	0.0149	0.0002698
Ba	137	3	He	143.449	0.6887	60875.97	0.0048	0.0002317
Ba	137	3	He	144.432	0.6934	60413.74	0.0048	0.0002317
Ba	137	3	He	145.779	0.6999	60604.78	0.0048	0.0002317
Tl	205	3	He	0.031	0.0009	360.02	0.0247	0.0001339
Tl	205	3	He	0.043	0.0012	480.03	0.0247	0.0001339
Tl	205	3	He	0.041	0.0011	450.02	0.0247	0.0001339
Pb	208	3	He	1.581	0.0528	11425.30	0.0327	0.00107
Pb	208	3	He	1.661	0.0554	11415.46	0.0327	0.00107
Pb	208	3	He	1.659	0.0554	11515.57	0.0327	0.00107
U	238	3	He	0.571	0.0282	8843.27	0.0493	7.55E-05
U	238	3	He	0.57	0.0282	8873.46	0.0493	7.55E-05
U	238	3	He	0.558	0.0276	8563.20	0.0493	7.55E-05
Sc	45	1	No Gas			2491959.49		
Sc	45	1	No Gas			2537659.34		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2488004.18		
Ge	72	1	No Gas			1257632.72		
Ge	72	1	No Gas			1270266.39		
Ge	72	1	No Gas			1248334.12		
Sc	45	2	H2			187990.37		
Sc	45	2	H2			183262.71		
Sc	45	2	H2			185265.08		
Ge	72	2	H2			164587.54		
Ge	72	2	H2			165965.90		
Ge	72	2	H2			166408.01		
In	115	2	H2			400805.97		
In	115	2	H2			391745.89		
In	115	2	H2			395657.46		
Sc	45	3	He			47257.96		
Sc	45	3	He			47689.10		
Sc	45	3	He			47689.15		
Ge	72	3	He			88142.01		
Ge	72	3	He			86249.80		
Ge	72	3	He			86501.93		
In	115	3	He			88401.27		
In	115	3	He			87133.51		
In	115	3	He			86599.86		
Tb	159	3	He			400579.33		
Tb	159	3	He			399145.97		
Tb	159	3	He			393527.03		
Bi	209	3	He			313832.18		
Bi	209	3	He			315021.40		
Bi	209	3	He			310636.87		

Quantitation Report

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Acq Time	8/10/2023 7:21:39 PM
Sample Name	630-67886-C-1-A DU
Sample Type	Sample
Comment	I9 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

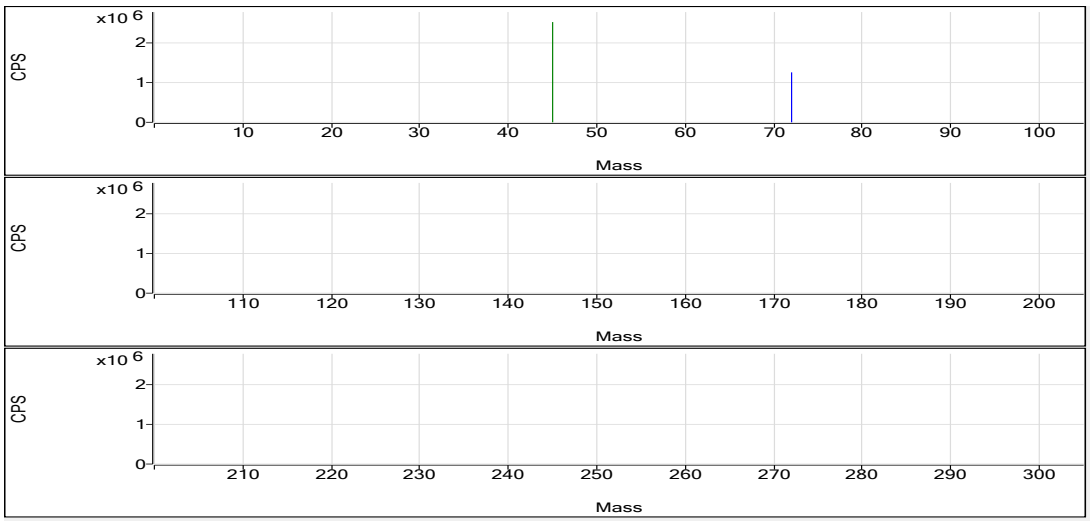
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.009	ppb	38.1	30.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.359	ppb	18.4	26.89	0.0002	Pulse	1.5000	3
Na	23	45	He	17385.570	ppb	2.1	2955230.06	62.5342	Analog	0.1000	3
Mg	24	45	He	11629.761	ppb	0.6	986469.18	20.8710	Pulse	0.1000	3
Al	27	45	He	111.746	ppb	0.3	3120.45	0.0660	Pulse	0.1000	3
K	39	45	He	1301.950	ppb	2.5	90308.28	1.9110	Pulse	0.1000	3
Ca	44	45	He	45565.982	ppb	2.6	145589.70	3.0808	Pulse	0.1000	3
Ti	47	45	He	4.740	ppb	25.1	123.34	0.0026	Pulse	0.1000	3
V	51	45	He	1.028	ppb	6.8	2236.85	0.0473	Pulse	0.5000	3
Cr	52	45	He	0.684	ppb	11.6	2857.05	0.0604	Pulse	0.1000	3
Mn	55	45	He	16.661	ppb	2.1	10233.95	0.2165	Pulse	0.1000	3
Fe	57	45	He	495.109	ppb	2.5	13666.97	0.2891	Pulse	0.1000	3
Co	59	45	He	0.170	ppb	16.5	553.36	0.0117	Pulse	0.1000	3
Ni	60	72	He	0.451	ppb	12.3	586.70	0.0067	Pulse	0.1000	3
Cu	63	72	He	1.651	ppb	4.2	4127.41	0.0471	Pulse	0.1000	3
Zn	66	72	He	11.779	ppb	9.1	3333.84	0.0381	Pulse	0.1000	3
As	75	72	He	0.295	ppb	42.3	123.33	0.0014	Pulse	0.5000	3
Sr	88	115	He	108.252	ppb	2.2	84042.95	0.9720	Pulse	0.1000	3
Mo	98	115	He	0.257	ppb	19.8	510.03	0.0059	Pulse	0.1000	3
Ag	107	115	He	-0.004	ppb	N/A	36.67	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.023	ppb	11.4	10.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.062	ppb	N/A	1340.11	0.0155	Pulse	0.1000	3
Sb	121	115	He	0.179	ppb	13.5	253.34	0.0029	Pulse	0.1000	3
Ba	137	115	He	142.588	ppb	1.7	59195.29	0.6846	Pulse	0.1000	3
Tl	205	159	He	0.019	ppb	27.6	240.01	0.0006	Pulse	0.1000	3
Pb	208	159	He	1.605	ppb	1.9	21437.68	0.0536	Pulse	0.1000	3
U	238	209	He	0.542	ppb	2.2	8389.68	0.0268	Pulse	0.1000	3

ISTD Table:

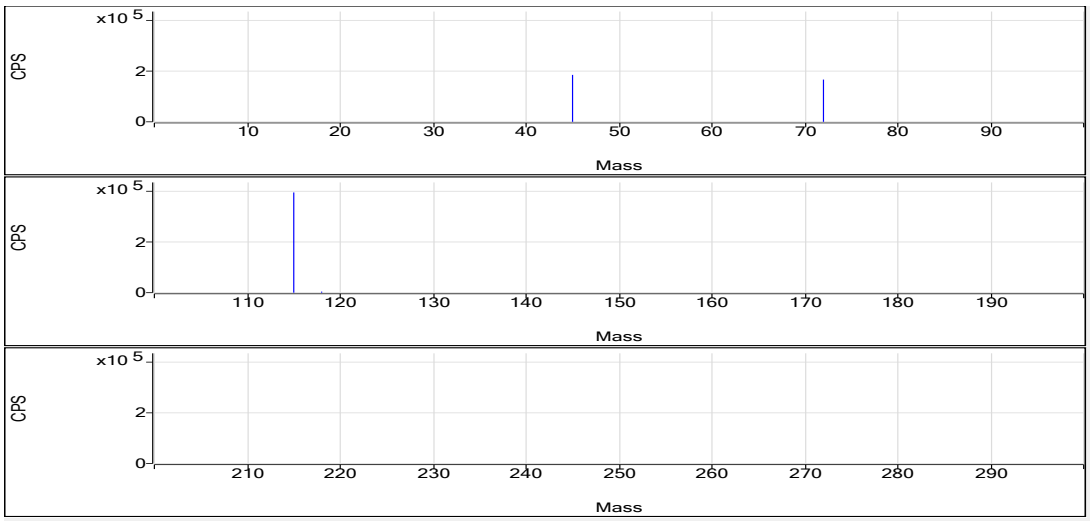
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2524142.20	1.1	105.2	Analog	0.1000	3
No Gas	Ge	72	1257494.96	1.1	109.0	Pulse	0.1000	3
H2	Sc	45	184424.83	0.7	98.6	Pulse	0.1000	3
H2	Ge	72	165981.80	0.8	101.4	Pulse	0.1000	3
H2	In	115	393934.46	0.7	101.2	Pulse	0.1000	3
He	Sc	45	47267.68	1.5	101.3	Pulse	0.1000	3
He	Ge	72	87554.01	1.7	107.8	Pulse	0.1000	3
He	In	115	86488.36	1.7	100.3	Pulse	0.1000	3
He	Tb	159	399858.18	0.2	100.3	Pulse	0.1000	3
He	Bi	209	313437.09	0.3	101.3	Pulse	0.1000	3

No Gas

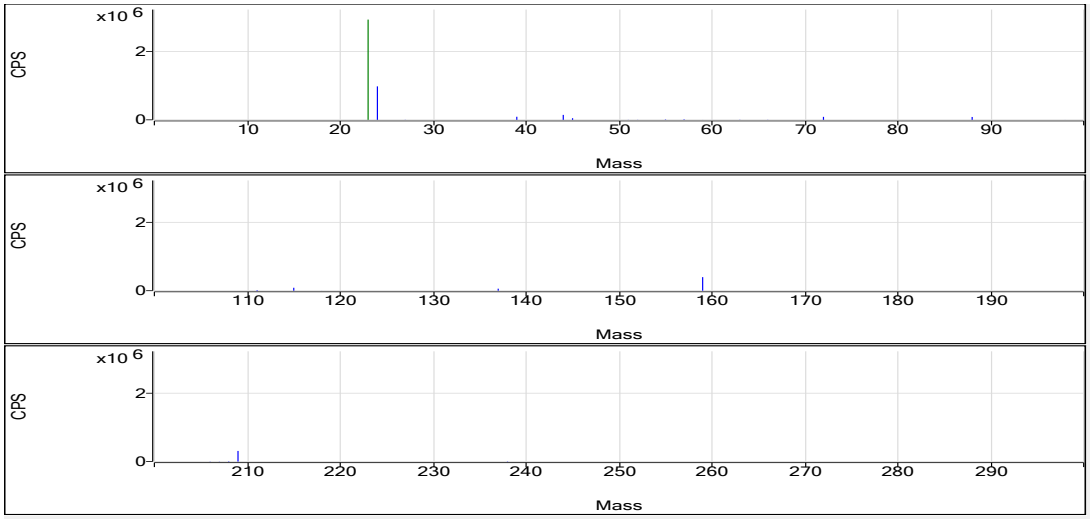


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.011	0	32.00	0.0008	4.685E-06
Be	9	1	No Gas	0.005	0	22.00	0.0008	4.685E-06
Be	9	1	No Gas	0.012	0	36.00	0.0008	4.685E-06
Se	78	2	H2	0.429	0.0002	32.00	0.0004	1.219E-05
Se	78	2	H2	0.298	0.0001	22.67	0.0004	1.219E-05
Se	78	2	H2	0.349	0.0002	26.00	0.0004	1.219E-05
Na	23	3	He	17715.905	63.7158	2963115.58	0.0036	0.3452
Na	23	3	He	17443.53	62.7415	2970048.08	0.0036	0.3452
Na	23	3	He	16997.275	61.1452	2932526.52	0.0036	0.3452
Mg	24	3	He	11707.417	21.0104	977091.16	0.0018	0.003497
Mg	24	3	He	11598.71	20.8153	985352.09	0.0018	0.003497
Mg	24	3	He	11583.156	20.7874	996964.28	0.0018	0.003497
Al	27	3	He	112.121	0.0662	3080.42	0.0006	0.0006432
Al	27	3	He	111.575	0.0659	3120.45	0.0006	0.0006432
Al	27	3	He	111.54	0.0659	3160.47	0.0006	0.0006432
K	39	3	He	1334.648	1.949	90640.12	0.0012	0.3951
K	39	3	He	1301.923	1.9109	90459.32	0.0012	0.3951
K	39	3	He	1269.28	1.8729	89825.41	0.0012	0.3951
Ca	44	3	He	46253.393	3.1272	145431.92	0.0001	0.002715
Ca	44	3	He	46228.297	3.1255	147955.58	0.0001	0.002715
Ca	44	3	He	44216.254	2.9896	143381.59	0.0001	0.002715
Ti	47	3	He	5.477	0.003	140.01	0.0005	7.003E-05
Ti	47	3	He	5.378	0.003	140.01	0.0005	7.003E-05
Ti	47	3	He	3.364	0.0019	90.00	0.0005	7.003E-05
V	51	3	He	1.086	0.0486	2260.19	0.0219	0.02486
V	51	3	He	1.049	0.0478	2262.19	0.0219	0.02486
V	51	3	He	0.95	0.0456	2188.18	0.0219	0.02486
Cr	52	3	He	0.633	0.0589	2740.34	0.0299	0.03997
Cr	52	3	He	0.775	0.0632	2990.41	0.0299	0.03997
Cr	52	3	He	0.643	0.0592	2840.39	0.0299	0.03997
Mn	55	3	He	16.254	0.2112	9823.61	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	16.854	0.2189	10364.11	0.0128	0.002639
Mn	55	3	He	16.876	0.2192	10514.12	0.0128	0.002639
Fe	57	3	He	481.141	0.281	13066.44	0.0006	0.001429
Fe	57	3	He	505.386	0.2951	13967.19	0.0006	0.001429
Fe	57	3	He	498.801	0.2912	13967.28	0.0006	0.001429
Co	59	3	He	0.203	0.0135	630.03	0.0563	0.002149
Co	59	3	He	0.153	0.0108	510.03	0.0563	0.002149
Co	59	3	He	0.154	0.0108	520.03	0.0563	0.002149
Ni	60	3	He	0.491	0.007	610.03	0.0086	0.002834
Ni	60	3	He	0.388	0.0062	550.03	0.0086	0.002834
Ni	60	3	He	0.475	0.0069	600.03	0.0086	0.002834
Cu	63	3	He	1.57	0.0451	3900.67	0.0257	0.004757
Cu	63	3	He	1.695	0.0483	4310.82	0.0257	0.004757
Cu	63	3	He	1.686	0.048	4170.74	0.0257	0.004757
Zn	66	3	He	12.378	0.0399	3450.52	0.0029	0.003818
Zn	66	3	He	10.538	0.0345	3080.46	0.0029	0.003818
Zn	66	3	He	12.421	0.04	3470.55	0.0029	0.003818
As	75	3	He	0.227	0.0013	110.00	0.002	0.0008061
As	75	3	He	0.219	0.0013	112.00	0.002	0.0008061
As	75	3	He	0.439	0.0017	148.00	0.002	0.0008061
Sr	88	3	He	109.06	0.9792	84210.85	0.009	0.0009645
Sr	88	3	He	105.577	0.948	83526.54	0.009	0.0009645
Sr	88	3	He	110.118	0.9887	84391.46	0.009	0.0009645
Mo	98	3	He	0.216	0.005	430.02	0.0219	0.0002706
Mo	98	3	He	0.241	0.0056	490.03	0.0219	0.0002706
Mo	98	3	He	0.314	0.0071	610.04	0.0219	0.0002706
Ag	107	3	He	-0.003	0.0005	40.00	0.0465	0.0006206
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Ag	107	3	He	-0.003	0.0005	40.00	0.0465	0.0006206
Cd	111	3	He	0.026	0.0001	12.00	0.0053	0
Cd	111	3	He	0.021	0.0001	10.00	0.0053	0
Cd	111	3	He	0.022	0.0001	10.00	0.0053	0
Sn	120	3	He	-0.057	0.0156	1340.11	0.0158	0.01648
Sn	120	3	He	-0.073	0.0153	1350.10	0.0158	0.01648
Sn	120	3	He	-0.056	0.0156	1330.11	0.0158	0.01648
Sb	121	3	He	0.178	0.0029	250.01	0.0149	0.0002698
Sb	121	3	He	0.203	0.0033	290.01	0.0149	0.0002698
Sb	121	3	He	0.155	0.0026	220.01	0.0149	0.0002698
Ba	137	3	He	143.893	0.6908	59409.75	0.0048	0.0002317
Ba	137	3	He	139.8	0.6712	59138.14	0.0048	0.0002317
Ba	137	3	He	144.069	0.6917	59037.97	0.0048	0.0002317
Tl	205	3	He	0.016	0.0005	210.01	0.0247	0.0001339
Tl	205	3	He	0.016	0.0005	210.01	0.0247	0.0001339
Tl	205	3	He	0.025	0.0007	300.02	0.0247	0.0001339
Pb	208	3	He	1.572	0.0525	11255.35	0.0327	0.00107
Pb	208	3	He	1.615	0.0539	11365.22	0.0327	0.00107
Pb	208	3	He	1.629	0.0544	11795.68	0.0327	0.00107
U	238	3	He	0.556	0.0275	8623.21	0.0493	7.55E-05
U	238	3	He	0.535	0.0264	8302.94	0.0493	7.55E-05
U	238	3	He	0.534	0.0264	8242.89	0.0493	7.55E-05
Sc	45	1	No Gas			2520748.87		
Sc	45	1	No Gas			2497094.96		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2554582.77		
Ge	72	1	No Gas			1255255.22		
Ge	72	1	No Gas			1244682.40		
Ge	72	1	No Gas			1272547.25		
Sc	45	2	H2			184733.71		
Sc	45	2	H2			185571.95		
Sc	45	2	H2			182968.84		
Ge	72	2	H2			167391.42		
Ge	72	2	H2			165902.60		
Ge	72	2	H2			164651.38		
In	115	2	H2			395202.46		
In	115	2	H2			395789.99		
In	115	2	H2			390810.93		
Sc	45	3	He			46505.18		
Sc	45	3	He			47337.84		
Sc	45	3	He			47960.01		
Ge	72	3	He			86571.54		
Ge	72	3	He			89287.81		
Ge	72	3	He			86802.67		
In	115	3	He			86004.91		
In	115	3	He			88118.72		
In	115	3	He			85362.27		
Tb	159	3	He			399610.54		
Tb	159	3	He			399244.99		
Tb	159	3	He			400719.02		
Bi	209	3	He			314096.26		
Bi	209	3	He			313961.07		
Bi	209	3	He			312253.94		

Quantitation Report

Data File Name	255SMPL.d
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Sample Type	Sample
Comment	I9 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

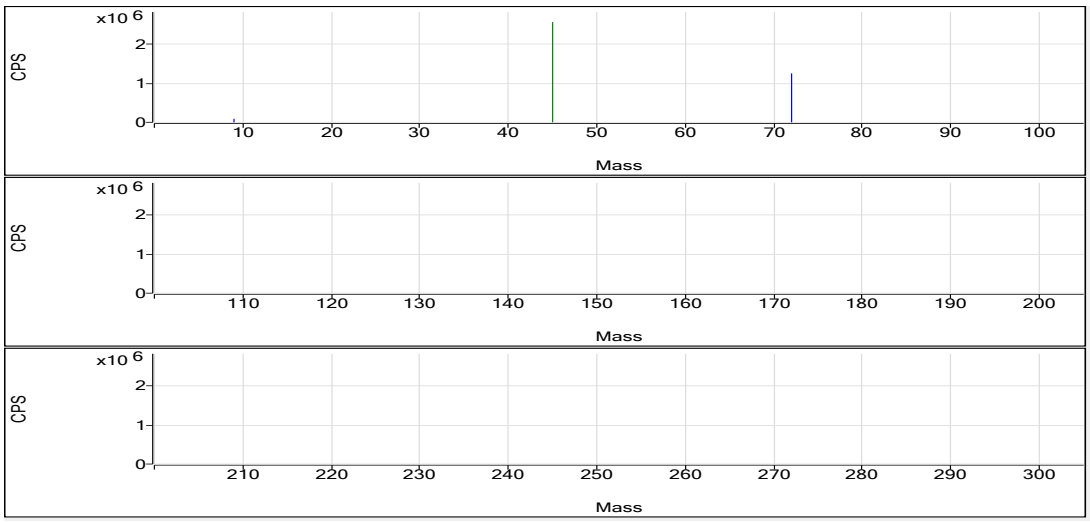
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	46.070	ppb	0.4	90074.71	0.0351	Pulse	0.5000	3
Se	78	72	H2	100.979	ppb	2.6	6813.19	0.0421	Pulse	1.5000	3
Na	23	45	He	21833.026	ppb	2.3	3781350.26	78.4430	Analog	0.1000	3
Mg	24	45	He	17065.135	ppb	1.4	1476322.17	30.6238	Analog	0.1000	3
Al	27	45	He	5073.808	ppb	1.8	143123.77	2.9690	Pulse	0.1000	3
K	39	45	He	6280.510	ppb	2.0	371551.60	7.7076	Pulse	0.1000	3
Ca	44	45	He	49759.522	ppb	1.2	162177.75	3.3641	Pulse	0.1000	3
Ti	47	45	He	512.951	ppb	2.6	13279.72	0.2755	Pulse	0.1000	3
V	51	45	He	507.673	ppb	2.0	536148.54	11.1222	Pulse	0.5000	3
Cr	52	45	He	478.431	ppb	2.9	692396.24	14.3646	Pulse	0.1000	3
Mn	55	45	He	514.685	ppb	2.0	318542.53	6.6080	Pulse	0.1000	3
Fe	57	45	He	5427.365	ppb	2.3	152068.22	3.1547	Pulse	0.1000	3
Co	59	45	He	475.694	ppb	1.5	1290764.67	26.7753	Pulse	0.1000	3
Ni	60	72	He	483.202	ppb	0.4	360709.67	4.1502	Pulse	0.1000	3
Cu	63	72	He	463.363	ppb	0.7	1034254.70	11.8998	Pulse	0.1000	3
Zn	66	72	He	503.621	ppb	0.1	127777.89	1.4702	Pulse	0.1000	3
As	75	72	He	504.225	ppb	0.6	89859.03	1.0339	Pulse	0.5000	3
Sr	88	115	He	157.139	ppb	1.6	123250.09	1.4105	Pulse	0.1000	3
Mo	98	115	He	49.961	ppb	1.9	95745.09	1.0957	Pulse	0.1000	3
Ag	107	115	He	49.778	ppb	2.2	202260.22	2.3147	Pulse	0.1000	3
Cd	111	115	He	50.854	ppb	2.0	23759.52	0.2719	Pulse	0.5000	3
Sn	120	115	He	103.381	ppb	3.0	144144.55	1.6498	Pulse	0.1000	3
Sb	121	115	He	102.814	ppb	2.7	133458.51	1.5274	Pulse	0.1000	3
Ba	137	115	He	653.510	ppb	1.4	274092.94	3.1366	Pulse	0.1000	3
Tl	205	159	He	102.709	ppb	0.3	1014253.03	2.5398	Pulse	0.1000	3
Pb	208	159	He	53.108	ppb	0.4	694588.24	1.7393	Pulse	0.1000	3
U	238	209	He	50.431	ppb	0.4	771917.96	2.4843	Pulse	0.1000	3

ISTD Table:

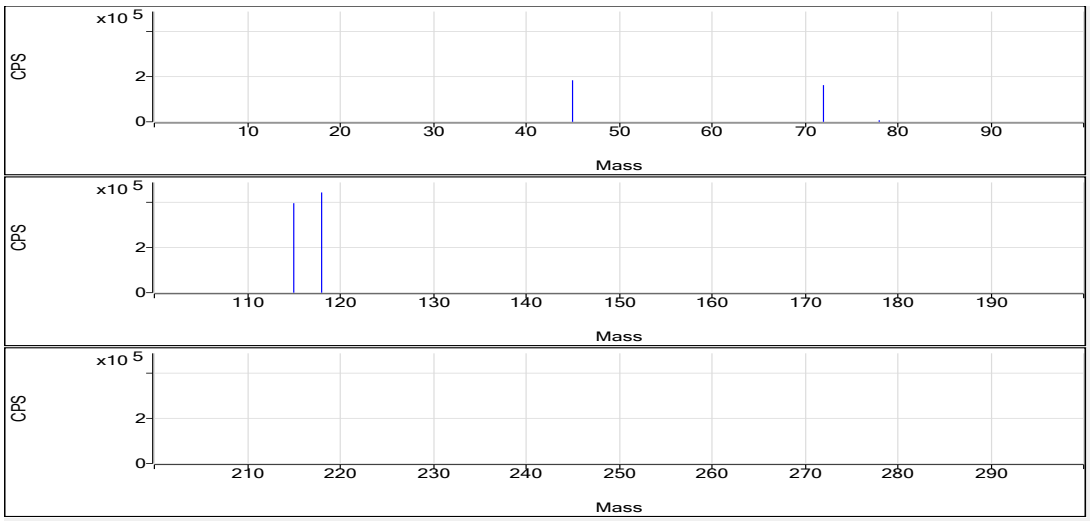
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2562890.95	0.6	106.8	Analog	0.1000	3
No Gas	Ge	72	1250836.62	0.1	108.5	Pulse	0.1000	3
H2	Sc	45	183198.10	0.3	98.0	Pulse	0.1000	3
H2	Ge	72	161760.40	1.2	98.8	Pulse	0.1000	3
H2	In	115	394592.88	0.5	101.4	Pulse	0.1000	3
He	Sc	45	48214.01	1.4	103.4	Pulse	0.1000	3
He	Ge	72	86913.75	0.3	107.0	Pulse	0.1000	3
He	In	115	87394.23	1.3	101.4	Pulse	0.1000	3
He	Tb	159	399351.39	0.4	100.2	Pulse	0.1000	3
He	Bi	209	310715.88	0.3	100.5	Pulse	0.1000	3

No Gas

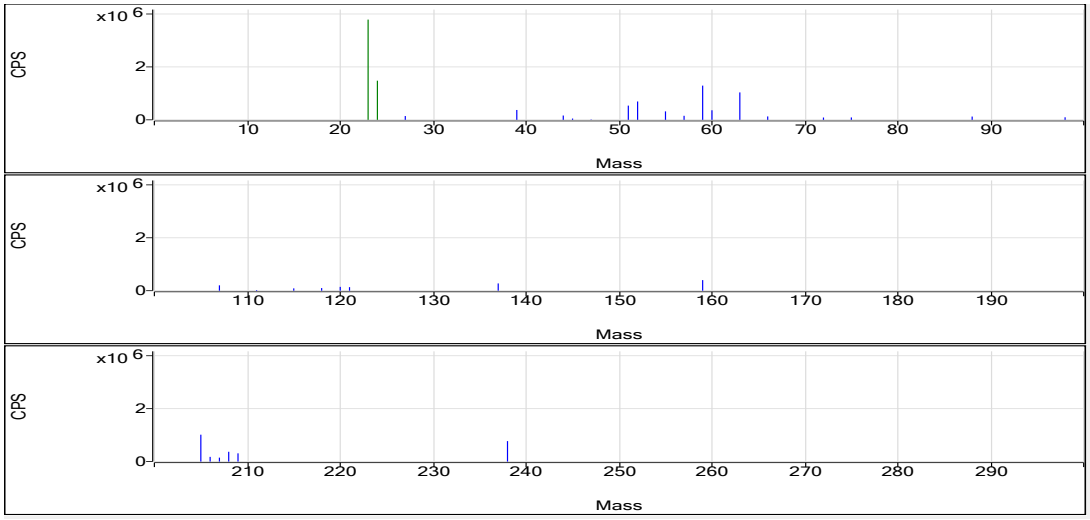


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	45.93	0.035	89937.86	0.0008	4.685E-06
Be	9	1	No Gas	45.975	0.0351	90318.30	0.0008	4.685E-06
Be	9	1	No Gas	46.305	0.0353	89967.98	0.0008	4.685E-06
Se	78	2	H2	103.743	0.0433	6916.35	0.0004	1.219E-05
Se	78	2	H2	98.567	0.0411	6726.92	0.0004	1.219E-05
Se	78	2	H2	100.629	0.042	6796.29	0.0004	1.219E-05
Na	23	3	He	21408.509	76.9244	3767227.76	0.0036	0.3452
Na	23	3	He	22400.765	80.4738	3837722.76	0.0036	0.3452
Na	23	3	He	21689.805	77.9307	3739100.26	0.0036	0.3452
Mg	24	3	He	16798.548	30.1455	1476318.26	0.0018	0.003497
Mg	24	3	He	17167.194	30.807	1469156.70	0.0018	0.003497
Mg	24	3	He	17229.663	30.9191	1483491.54	0.0018	0.003497
Al	27	3	He	4976.929	2.9123	142625.31	0.0006	0.0006432
Al	27	3	He	5157.659	3.0181	143928.26	0.0006	0.0006432
Al	27	3	He	5086.836	2.9766	142817.73	0.0006	0.0006432
K	39	3	He	6137.615	7.5413	369318.59	0.0012	0.3951
K	39	3	He	6361.652	7.8021	372075.46	0.0012	0.3951
K	39	3	He	6342.264	7.7795	373260.74	0.0012	0.3951
Ca	44	3	He	49094.24	3.3191	162547.78	0.0001	0.002715
Ca	44	3	He	50135.008	3.3894	161638.88	0.0001	0.002715
Ca	44	3	He	50049.318	3.3836	162346.59	0.0001	0.002715
Ti	47	3	He	497.521	0.2672	13086.28	0.0005	7.003E-05
Ti	47	3	He	521.079	0.2799	13346.40	0.0005	7.003E-05
Ti	47	3	He	520.252	0.2794	13406.47	0.0005	7.003E-05
V	51	3	He	496.951	10.8878	533209.19	0.0219	0.02486
V	51	3	He	516.474	11.3146	539581.56	0.0219	0.02486
V	51	3	He	509.594	11.1642	535654.88	0.0219	0.02486
Cr	52	3	He	464.585	13.95	683173.82	0.0299	0.03997
Cr	52	3	He	491.947	14.7692	704331.55	0.0299	0.03997
Cr	52	3	He	478.761	14.3744	689683.35	0.0299	0.03997
Mn	55	3	He	503.819	6.4686	316786.83	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	524.064	6.7284	320871.73	0.0128	0.002639
Mn	55	3	He	516.173	6.6271	317969.04	0.0128	0.002639
Fe	57	3	He	5296.86	3.0789	150781.08	0.0006	0.001429
Fe	57	3	He	5540.193	3.2202	153569.89	0.0006	0.001429
Fe	57	3	He	5445.042	3.1649	151853.70	0.0006	0.001429
Co	59	3	He	467.482	26.3131	1288633.34	0.0563	0.002149
Co	59	3	He	480.815	27.0635	1290634.82	0.0563	0.002149
Co	59	3	He	478.787	26.9494	1293025.84	0.0563	0.002149
Ni	60	3	He	484.353	4.1601	361320.78	0.0086	0.002834
Ni	60	3	He	481.113	4.1323	360193.20	0.0086	0.002834
Ni	60	3	He	484.14	4.1583	360615.03	0.0086	0.002834
Cu	63	3	He	459.788	11.808	1025569.75	0.0257	0.004757
Cu	63	3	He	464.35	11.9251	1039457.64	0.0257	0.004757
Cu	63	3	He	465.951	11.9662	1037736.70	0.0257	0.004757
Zn	66	3	He	503.073	1.4686	127551.11	0.0029	0.003818
Zn	66	3	He	503.906	1.471	128219.94	0.0029	0.003818
Zn	66	3	He	503.884	1.4709	127562.61	0.0029	0.003818
As	75	3	He	506.269	1.0381	90161.59	0.002	0.0008061
As	75	3	He	500.987	1.0273	89541.59	0.002	0.0008061
As	75	3	He	505.419	1.0363	89873.92	0.002	0.0008061
Sr	88	3	He	154.634	1.388	122930.28	0.009	0.0009645
Sr	88	3	He	157.177	1.4108	123214.13	0.009	0.0009645
Sr	88	3	He	159.605	1.4326	123605.85	0.009	0.0009645
Mo	98	3	He	48.918	1.0729	95019.95	0.0219	0.0002706
Mo	98	3	He	50.17	1.1003	96097.27	0.0219	0.0002706
Mo	98	3	He	50.794	1.114	96118.05	0.0219	0.0002706
Ag	107	3	He	48.57	2.2585	200026.42	0.0465	0.0006206
Ag	107	3	He	50.733	2.3591	206030.62	0.0465	0.0006206
Ag	107	3	He	50.03	2.3264	200723.61	0.0465	0.0006206
Cd	111	3	He	49.963	0.2671	23660.02	0.0053	0
Cd	111	3	He	50.667	0.2709	23660.03	0.0053	0
Cd	111	3	He	51.933	0.2777	23958.50	0.0053	0
Sn	120	3	He	99.859	1.5941	141184.94	0.0158	0.01648
Sn	120	3	He	104.832	1.6727	146084.83	0.0158	0.01648
Sn	120	3	He	105.45	1.6825	145163.89	0.0158	0.01648
Sb	121	3	He	100.949	1.4997	132822.78	0.0149	0.0002698
Sb	121	3	He	101.491	1.5078	131681.39	0.0149	0.0002698
Sb	121	3	He	106.001	1.5748	135871.37	0.0149	0.0002698
Ba	137	3	He	643.746	3.0898	273650.13	0.0048	0.0002317
Ba	137	3	He	655.803	3.1476	274901.46	0.0048	0.0002317
Ba	137	3	He	660.981	3.1725	273727.24	0.0048	0.0002317
Tl	205	3	He	102.735	2.5404	1010303.27	0.0247	0.0001339
Tl	205	3	He	102.96	2.546	1016817.09	0.0247	0.0001339
Tl	205	3	He	102.433	2.5329	1015638.73	0.0247	0.0001339
Pb	208	3	He	53.051	1.7374	364659.17	0.0327	0.00107
Pb	208	3	He	53.341	1.7469	374052.26	0.0327	0.00107
Pb	208	3	He	52.933	1.7336	368926.05	0.0327	0.00107
U	238	3	He	50.225	2.4741	767439.60	0.0493	7.55E-05
U	238	3	He	50.601	2.4927	777071.39	0.0493	7.55E-05
U	238	3	He	50.467	2.4861	771242.88	0.0493	7.55E-05
Sc	45	1	No Gas			2566759.81		
Sc	45	1	No Gas			2575098.24		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2546814.81		
Ge	72	1	No Gas			1250002.95		
Ge	72	1	No Gas			1252519.43		
Ge	72	1	No Gas			1249987.48		
Sc	45	2	H2			183099.12		
Sc	45	2	H2			182695.31		
Sc	45	2	H2			183799.86		
Ge	72	2	H2			159805.33		
Ge	72	2	H2			163587.12		
Ge	72	2	H2			161888.74		
In	115	2	H2			392311.28		
In	115	2	H2			395854.06		
In	115	2	H2			395613.31		
Sc	45	3	He			48973.09		
Sc	45	3	He			47689.10		
Sc	45	3	He			47979.84		
Ge	72	3	He			86853.78		
Ge	72	3	He			87165.30		
Ge	72	3	He			86722.17		
In	115	3	He			89335.74		
In	115	3	He			88118.85		
In	115	3	He			87041.53		
Tb	159	3	He			397695.07		
Tb	159	3	He			399383.59		
Tb	159	3	He			400975.50		
Bi	209	3	He			310184.00		
Bi	209	3	He			311741.19		
Bi	209	3	He			310222.44		

Quantitation Report

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Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

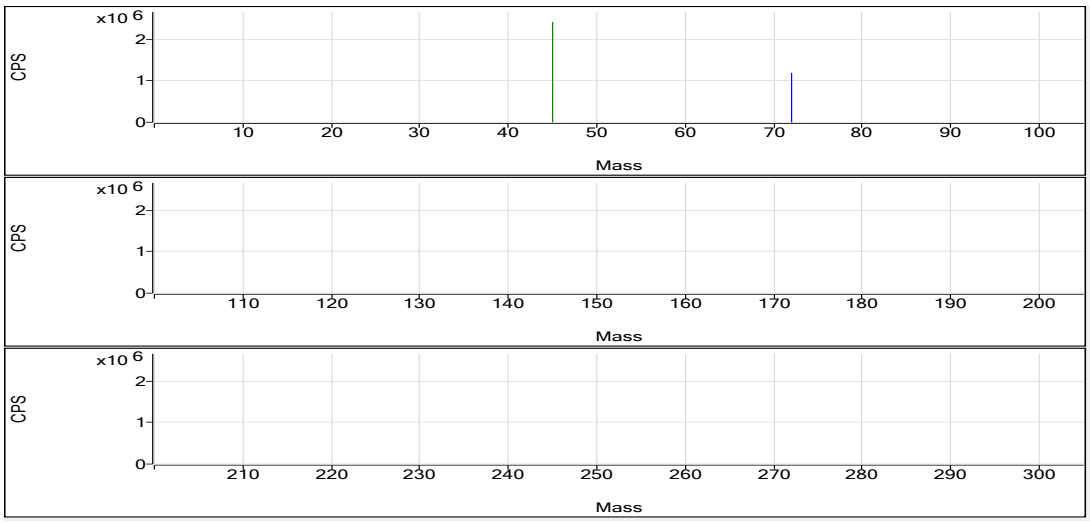
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.020	ppb	30.3	48.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.125	ppb	35.4	9.78	0.0001	Pulse	1.5000	3
Na	23	45	He	13.974	ppb	21.9	18502.09	0.3951	Pulse	0.1000	3
Mg	24	45	He	1.512	ppb	72.3	290.01	0.0062	Pulse	0.1000	3
Al	27	45	He	0.483	ppb	88.2	43.33	0.0009	Pulse	0.1000	3
K	39	45	He	5.744	ppb	110.6	18815.92	0.4018	Pulse	0.1000	3
Ca	44	45	He	6.344	ppb	287.0	146.67	0.0031	Pulse	0.1000	3
Ti	47	45	He	0.262	ppb	259.4	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	0.345	ppb	9.4	1518.09	0.0324	Pulse	0.5000	3
Cr	52	45	He	-0.026	ppb	N/A	1836.84	0.0392	Pulse	0.1000	3
Mn	55	45	He	0.184	ppb	73.5	233.35	0.0050	Pulse	0.1000	3
Fe	57	45	He	-0.127	ppb	N/A	63.33	0.0014	Pulse	0.1000	3
Co	59	45	He	0.074	ppb	26.4	296.68	0.0063	Pulse	0.1000	3
Ni	60	72	He	0.037	ppb	250.3	260.01	0.0032	Pulse	0.1000	3
Cu	63	72	He	0.105	ppb	40.8	616.71	0.0075	Pulse	0.1000	3
Zn	66	72	He	1.613	ppb	35.6	703.38	0.0085	Pulse	0.1000	3
As	75	72	He	0.162	ppb	55.4	94.00	0.0011	Pulse	0.5000	3
Sr	88	115	He	0.018	ppb	173.2	96.67	0.0011	Pulse	0.1000	3
Mo	98	115	He	0.108	ppb	45.4	226.67	0.0026	Pulse	0.1000	3
Ag	107	115	He	-0.001	ppb	N/A	50.00	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.003	ppb	86.6	1.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.109	ppb	112.6	1563.49	0.0182	Pulse	0.1000	3
Sb	121	115	He	0.035	ppb	96.6	66.67	0.0008	Pulse	0.1000	3
Ba	137	115	He	0.089	ppb	86.5	56.67	0.0007	Pulse	0.1000	3
Tl	205	159	He	0.213	ppb	8.3	2130.26	0.0054	Pulse	0.1000	3
Pb	208	159	He	0.015	ppb	21.5	623.36	0.0016	Pulse	0.1000	3
U	238	209	He	0.126	ppb	9.9	1940.22	0.0063	Pulse	0.1000	3

ISTD Table:

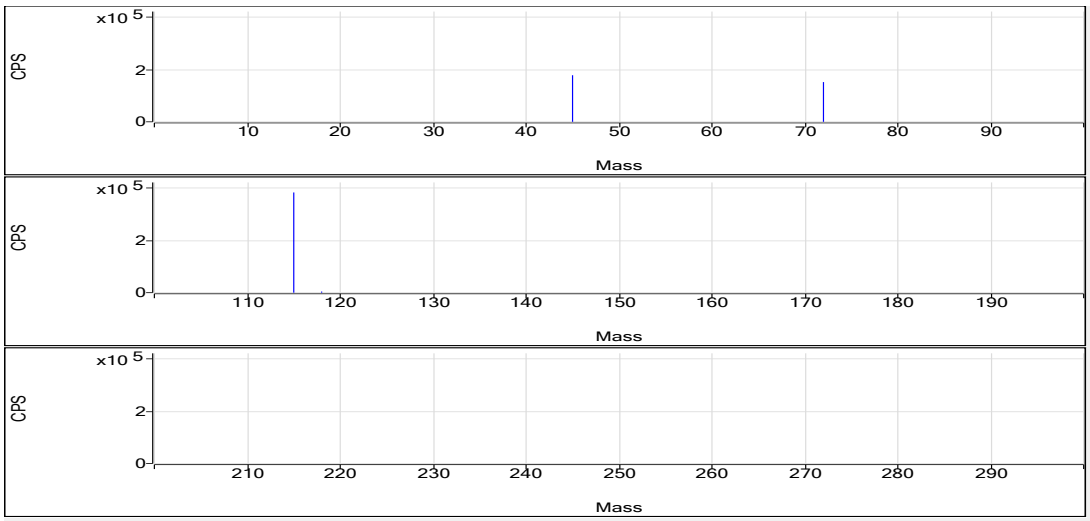
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2419640.43	1.3	100.9	Analog	0.1000	3
No Gas	Ge	72	1192456.88	1.0	103.4	Pulse	0.1000	3
H2	Sc	45	178216.09	1.3	95.3	Pulse	0.1000	3
H2	Ge	72	151977.98	1.6	92.8	Pulse	0.1000	3
H2	In	115	383427.13	0.7	98.5	Pulse	0.1000	3
He	Sc	45	46832.89	1.5	100.4	Pulse	0.1000	3
He	Ge	72	82846.99	2.6	102.0	Pulse	0.1000	3
He	In	115	85782.16	2.1	99.5	Pulse	0.1000	3
He	Tb	159	395370.24	0.4	99.2	Pulse	0.1000	3
He	Bi	209	308460.48	0.9	99.7	Pulse	0.1000	3

No Gas

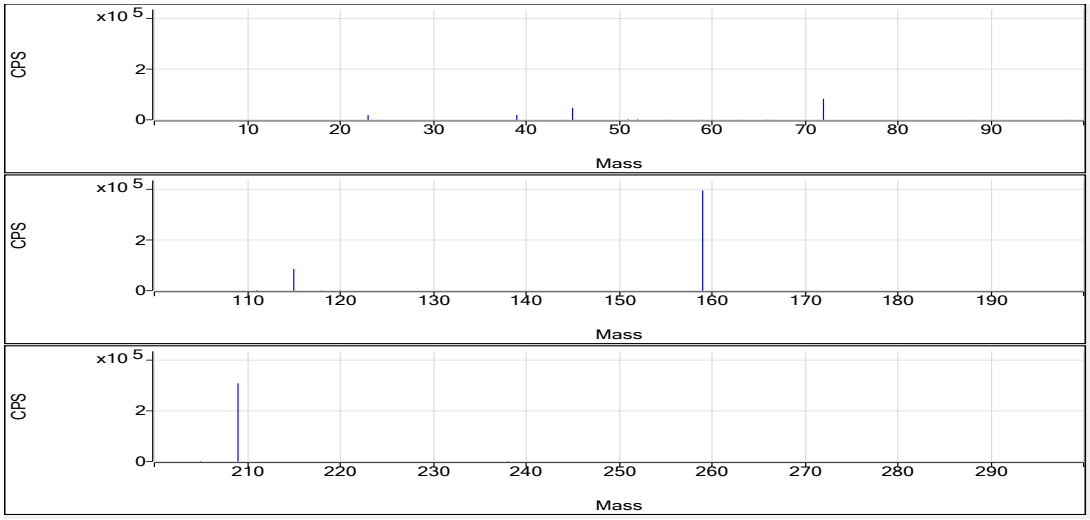


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.018	0	44.00	0.0008	4.685E-06
Be	9	1	No Gas	0.015	0	40.00	0.0008	4.685E-06
Be	9	1	No Gas	0.027	0	60.00	0.0008	4.685E-06
Se	78	2	H2	0.151	0.0001	11.33	0.0004	1.219E-05
Se	78	2	H2	0.074	0	6.67	0.0004	1.219E-05
Se	78	2	H2	0.151	0.0001	11.33	0.0004	1.219E-05
Na	23	3	He	13.581	0.3937	18682.38	0.0036	0.3452
Na	23	3	He	17.205	0.4067	18742.37	0.0036	0.3452
Na	23	3	He	11.135	0.385	18081.51	0.0036	0.3452
Mg	24	3	He	0.988	0.0053	250.01	0.0018	0.003497
Mg	24	3	He	2.768	0.0085	390.02	0.0018	0.003497
Mg	24	3	He	0.781	0.0049	230.01	0.0018	0.003497
Al	27	3	He	0.702	0.0011	50.00	0.0006	0.0006432
Al	27	3	He	0.755	0.0011	50.00	0.0006	0.0006432
Al	27	3	He	-0.008	0.0006	30.00	0.0006	0.0006432
K	39	3	He	11.37	0.4083	19373.45	0.0012	0.3951
K	39	3	He	7.006	0.4032	18582.15	0.0012	0.3951
K	39	3	He	-1.145	0.3937	18492.17	0.0012	0.3951
Ca	44	3	He	-5.872	0.0023	110.00	0.0001	0.002715
Ca	44	3	He	27.27	0.0046	210.01	0.0001	0.002715
Ca	44	3	He	-2.368	0.0026	120.00	0.0001	0.002715
Ti	47	3	He	1.047	0.0006	30.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	0.359	0.0327	1552.09	0.0219	0.02486
V	51	3	He	0.308	0.0316	1456.08	0.0219	0.02486
V	51	3	He	0.368	0.0329	1546.09	0.0219	0.02486
Cr	52	3	He	0.045	0.0413	1960.20	0.0299	0.03997
Cr	52	3	He	-0.146	0.0356	1640.14	0.0299	0.03997
Cr	52	3	He	0.023	0.0407	1910.19	0.0299	0.03997
Mn	55	3	He	0.139	0.0044	210.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.335	0.0069	320.02	0.0128	0.002639
Mn	55	3	He	0.076	0.0036	170.01	0.0128	0.002639
Fe	57	3	He	-0.283	0.0013	60.00	0.0006	0.001429
Fe	57	3	He	0.529	0.0017	80.00	0.0006	0.001429
Fe	57	3	He	-0.627	0.0011	50.00	0.0006	0.001429
Co	59	3	He	0.097	0.0076	360.02	0.0563	0.002149
Co	59	3	He	0.066	0.0059	270.01	0.0563	0.002149
Co	59	3	He	0.06	0.0055	260.01	0.0563	0.002149
Ni	60	3	He	-0.057	0.0023	200.01	0.0086	0.002834
Ni	60	3	He	0.128	0.0039	320.02	0.0086	0.002834
Ni	60	3	He	0.04	0.0032	260.01	0.0086	0.002834
Cu	63	3	He	0.057	0.0062	530.03	0.0257	0.004757
Cu	63	3	He	0.121	0.0079	640.05	0.0257	0.004757
Cu	63	3	He	0.138	0.0083	680.04	0.0257	0.004757
Zn	66	3	He	1.104	0.007	600.03	0.0029	0.003818
Zn	66	3	He	2.235	0.0103	840.06	0.0029	0.003818
Zn	66	3	He	1.5	0.0082	670.04	0.0029	0.003818
As	75	3	He	0.076	0.001	82.00	0.002	0.0008061
As	75	3	He	0.254	0.0013	108.00	0.002	0.0008061
As	75	3	He	0.155	0.0011	92.00	0.002	0.0008061
Sr	88	3	He	-0.016	0.0008	70.00	0.009	0.0009645
Sr	88	3	He	0.025	0.0012	100.00	0.009	0.0009645
Sr	88	3	He	0.045	0.0014	120.00	0.009	0.0009645
Mo	98	3	He	0.063	0.0016	140.00	0.0219	0.0002706
Mo	98	3	He	0.161	0.0038	320.01	0.0219	0.0002706
Mo	98	3	He	0.102	0.0025	220.01	0.0219	0.0002706
Ag	107	3	He	0.002	0.0007	60.00	0.0465	0.0006206
Ag	107	3	He	0.002	0.0007	60.00	0.0465	0.0006206
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Sn	120	3	He	0.013	0.0167	1420.12	0.0158	0.01648
Sn	120	3	He	0.067	0.0175	1480.16	0.0158	0.01648
Sn	120	3	He	0.248	0.0204	1790.19	0.0158	0.01648
Sb	121	3	He	0.045	0.0009	80.00	0.0149	0.0002698
Sb	121	3	He	0.062	0.0012	100.00	0.0149	0.0002698
Sb	121	3	He	-0.003	0.0002	20.00	0.0149	0.0002698
Ba	137	3	He	0.001	0.0002	20.00	0.0048	0.0002317
Ba	137	3	He	0.124	0.0008	70.00	0.0048	0.0002317
Ba	137	3	He	0.142	0.0009	80.00	0.0048	0.0002317
Tl	205	3	He	0.233	0.0059	2320.30	0.0247	0.0001339
Tl	205	3	He	0.2	0.0051	2000.23	0.0247	0.0001339
Tl	205	3	He	0.205	0.0052	2070.25	0.0247	0.0001339
Pb	208	3	He	0.015	0.0015	360.02	0.0327	0.00107
Pb	208	3	He	0.019	0.0017	410.02	0.0327	0.00107
Pb	208	3	He	0.013	0.0015	200.01	0.0327	0.00107
U	238	3	He	0.113	0.0056	1750.19	0.0493	7.55E-05
U	238	3	He	0.137	0.0068	2090.25	0.0493	7.55E-05
U	238	3	He	0.129	0.0064	1980.21	0.0493	7.55E-05
Sc	45	1	No Gas			2411310.59		
Sc	45	1	No Gas			2454105.43		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2393505.28		
Ge	72	1	No Gas			1188409.98		
Ge	72	1	No Gas			1205752.09		
Ge	72	1	No Gas			1183208.58		
Sc	45	2	H2			178442.11		
Sc	45	2	H2			180384.57		
Sc	45	2	H2			175821.60		
Ge	72	2	H2			150859.03		
Ge	72	2	H2			154730.31		
Ge	72	2	H2			150344.61		
In	115	2	H2			384099.80		
In	115	2	H2			385682.53		
In	115	2	H2			380499.06		
Sc	45	3	He			47448.48		
Sc	45	3	He			46083.90		
Sc	45	3	He			46966.29		
Ge	72	3	He			85324.33		
Ge	72	3	He			81361.22		
Ge	72	3	He			81855.42		
In	115	3	He			85130.59		
In	115	3	He			84445.80		
In	115	3	He			87796.84		
Tb	159	3	He			394324.45		
Tb	159	3	He			394737.03		
Tb	159	3	He			397049.25		
Bi	209	3	He			311034.23		
Bi	209	3	He			305752.93		
Bi	209	3	He			308594.27		

Quantitation Report

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Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

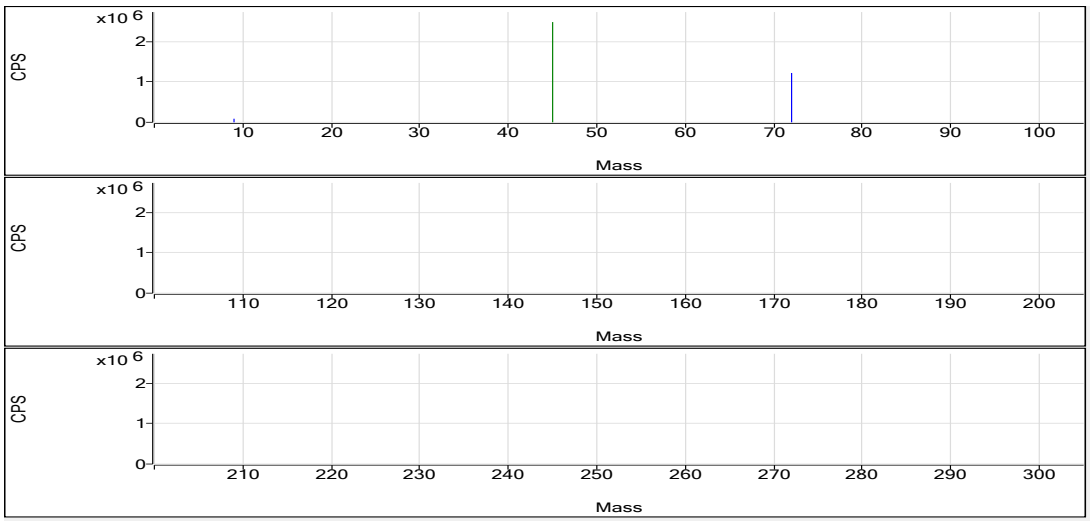
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	46.649	ppb	0.5	88196.38	0.0356	Pulse	0.5000	3
Se	78	72	H2	53.733	ppb	0.6	3469.09	0.0224	Pulse	1.5000	3
Na	23	45	He	4924.819	ppb	1.7	847669.31	17.9615	Pulse	0.1000	3
Mg	24	45	He	5086.950	ppb	1.6	430935.97	9.1311	Pulse	0.1000	3
Al	27	45	He	4976.113	ppb	0.9	137430.27	2.9118	Pulse	0.1000	3
K	39	45	He	5136.049	ppb	0.9	300890.36	6.3751	Pulse	0.1000	3
Ca	44	45	He	5158.517	ppb	2.1	16573.28	0.3512	Pulse	0.1000	3
Ti	47	45	He	5141.491	ppb	2.1	130286.93	2.7608	Pulse	0.1000	3
V	51	45	He	516.619	ppb	1.5	534139.75	11.3177	Pulse	0.5000	3
Cr	52	45	He	488.917	ppb	1.9	692723.30	14.6785	Pulse	0.1000	3
Mn	55	45	He	505.159	ppb	1.6	306106.04	6.4858	Pulse	0.1000	3
Fe	57	45	He	5065.592	ppb	1.7	138970.65	2.9445	Pulse	0.1000	3
Co	59	45	He	495.290	ppb	1.7	1315683.71	27.8782	Pulse	0.1000	3
Ni	60	72	He	510.036	ppb	1.4	367428.98	4.3806	Pulse	0.1000	3
Cu	63	72	He	486.802	ppb	1.6	1048568.71	12.5015	Pulse	0.1000	3
Zn	66	72	He	513.125	ppb	2.5	125622.69	1.4978	Pulse	0.1000	3
As	75	72	He	517.815	ppb	1.2	89056.73	1.0617	Pulse	0.5000	3
Sr	88	115	He	51.074	ppb	0.9	38964.45	0.4591	Pulse	0.1000	3
Mo	98	115	He	52.564	ppb	1.3	97842.75	1.1528	Pulse	0.1000	3
Ag	107	115	He	52.255	ppb	0.5	206234.40	2.4298	Pulse	0.1000	3
Cd	111	115	He	51.885	ppb	0.5	23547.19	0.2774	Pulse	0.5000	3
Sn	120	115	He	52.261	ppb	1.2	71474.45	0.8421	Pulse	0.1000	3
Sb	121	115	He	52.674	ppb	0.4	66429.88	0.7827	Pulse	0.1000	3
Ba	137	115	He	523.141	ppb	0.8	213126.40	2.5110	Pulse	0.1000	3
Tl	205	159	He	51.956	ppb	0.3	509244.97	1.2848	Pulse	0.1000	3
Pb	208	159	He	52.122	ppb	0.6	676583.32	1.7070	Pulse	0.1000	3
U	238	209	He	50.678	ppb	1.1	773033.79	2.4964	Pulse	0.1000	3

ISTD Table:

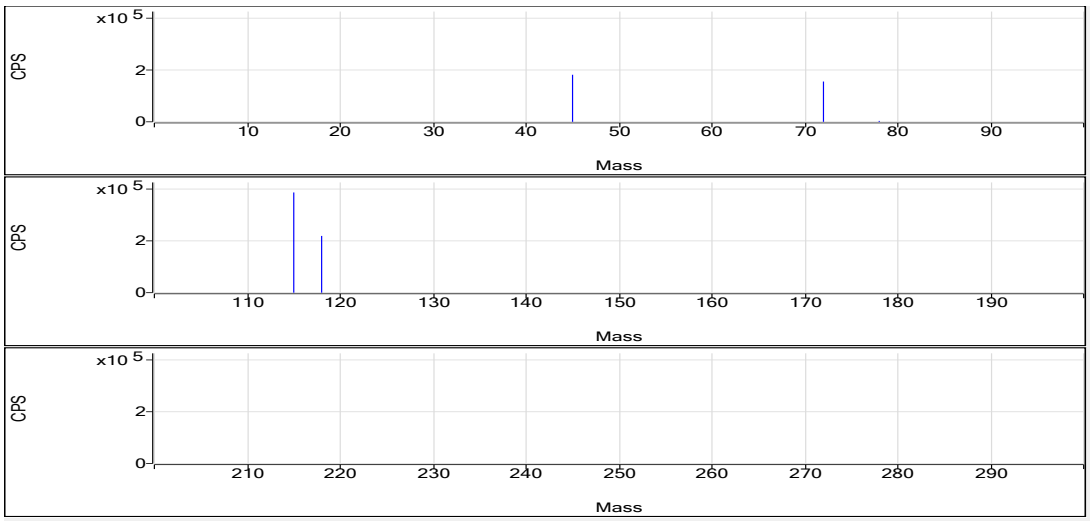
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2478334.34	1.1	103.3	Analog	0.1000	3
No Gas	Ge	72	1219397.22	0.9	105.7	Pulse	0.1000	3
H2	Sc	45	180706.73	0.7	96.6	Pulse	0.1000	3
H2	Ge	72	154717.61	0.7	94.5	Pulse	0.1000	3
H2	In	115	384922.31	0.6	98.9	Pulse	0.1000	3
He	Sc	45	47200.76	1.3	101.2	Pulse	0.1000	3
He	Ge	72	83889.60	1.7	103.3	Pulse	0.1000	3
He	In	115	84878.49	0.9	98.5	Pulse	0.1000	3
He	Tb	159	396356.84	0.5	99.4	Pulse	0.1000	3
He	Bi	209	309658.75	0.5	100.1	Pulse	0.1000	3

No Gas

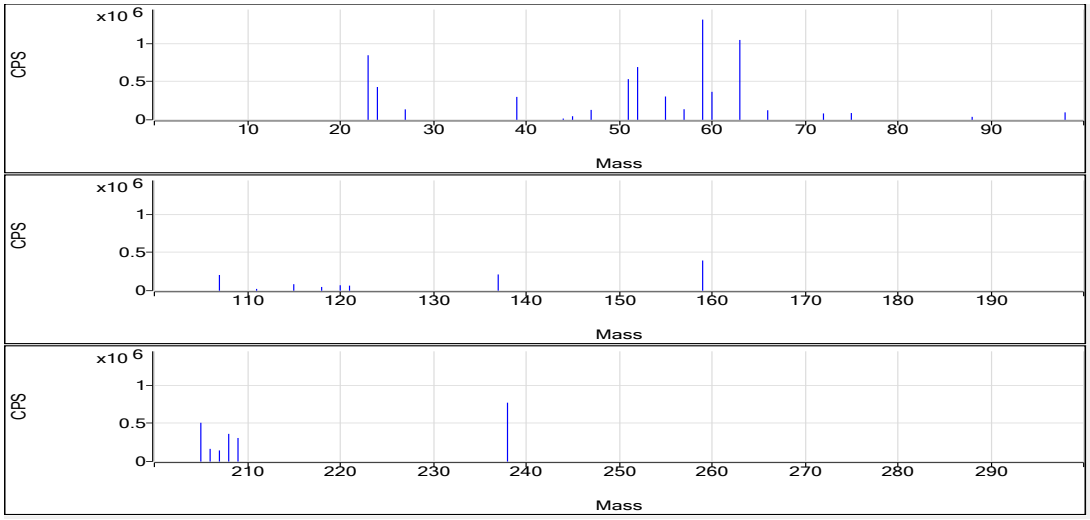


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	46.861	0.0357	87952.16	0.0008	4.685E-06
Be	9	1	No Gas	46.406	0.0354	88801.13	0.0008	4.685E-06
Be	9	1	No Gas	46.681	0.0356	87835.85	0.0008	4.685E-06
Se	78	2	H2	53.419	0.0223	3458.42	0.0004	1.219E-05
Se	78	2	H2	53.702	0.0224	3485.10	0.0004	1.219E-05
Se	78	2	H2	54.08	0.0226	3463.76	0.0004	1.219E-05
Na	23	3	He	5020.485	18.3037	851212.96	0.0036	0.3452
Na	23	3	He	4893.427	17.8492	845478.03	0.0036	0.3452
Na	23	3	He	4860.545	17.7316	846316.94	0.0036	0.3452
Mg	24	3	He	5180.905	9.2997	432483.16	0.0018	0.003497
Mg	24	3	He	5046.386	9.0583	429074.21	0.0018	0.003497
Mg	24	3	He	5033.559	9.0353	431250.54	0.0018	0.003497
Al	27	3	He	5027.089	2.9417	136802.20	0.0006	0.0006432
Al	27	3	He	4958.384	2.9015	137436.47	0.0006	0.0006432
Al	27	3	He	4942.866	2.8924	138052.14	0.0006	0.0006432
K	39	3	He	5187.374	6.4349	299253.49	0.0012	0.3951
K	39	3	He	5101.106	6.3344	300047.98	0.0012	0.3951
K	39	3	He	5119.668	6.356	303369.60	0.0012	0.3951
Ca	44	3	He	5253.445	0.3576	16629.97	0.0001	0.002715
Ca	44	3	He	5182.043	0.3528	16710.05	0.0001	0.002715
Ca	44	3	He	5040.065	0.3432	16379.82	0.0001	0.002715
Ti	47	3	He	5266.057	2.8277	131501.06	0.0005	7.003E-05
Ti	47	3	He	5097.154	2.737	129645.01	0.0005	7.003E-05
Ti	47	3	He	5061.264	2.7177	129714.71	0.0005	7.003E-05
V	51	3	He	525.389	11.5094	535246.63	0.0219	0.02486
V	51	3	He	511.947	11.2156	531259.25	0.0219	0.02486
V	51	3	He	512.522	11.2282	535913.38	0.0219	0.02486
Cr	52	3	He	499.687	15.001	697619.91	0.0299	0.03997
Cr	52	3	He	483.949	14.5298	688243.43	0.0299	0.03997
Cr	52	3	He	483.116	14.5048	692306.55	0.0299	0.03997
Mn	55	3	He	512.883	6.5849	306231.91	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	497.023	6.3814	302271.69	0.0128	0.002639
Mn	55	3	He	505.57	6.4911	309814.53	0.0128	0.002639
Fe	57	3	He	5142.978	2.9895	139024.53	0.0006	0.001429
Fe	57	3	He	4968.916	2.8883	136813.74	0.0006	0.001429
Fe	57	3	He	5084.881	2.9557	141073.69	0.0006	0.001429
Co	59	3	He	504.86	28.4169	1321526.39	0.0563	0.002149
Co	59	3	He	490.851	27.6284	1308697.09	0.0563	0.002149
Co	59	3	He	490.159	27.5894	1316827.64	0.0563	0.002149
Ni	60	3	He	515.096	4.424	368885.89	0.0086	0.002834
Ni	60	3	He	513.065	4.4065	364863.04	0.0086	0.002834
Ni	60	3	He	501.949	4.3111	368538.00	0.0086	0.002834
Cu	63	3	He	491.904	12.6325	1053336.23	0.0257	0.004757
Cu	63	3	He	490.504	12.5965	1042995.14	0.0257	0.004757
Cu	63	3	He	477.999	12.2755	1049374.75	0.0257	0.004757
Zn	66	3	He	524.112	1.5298	127562.43	0.0029	0.003818
Zn	66	3	He	516.267	1.507	124778.93	0.0029	0.003818
Zn	66	3	He	498.997	1.4567	124526.71	0.0029	0.003818
As	75	3	He	520.689	1.0676	89022.47	0.002	0.0008061
As	75	3	He	522.284	1.0709	88670.48	0.002	0.0008061
As	75	3	He	510.473	1.0467	89477.24	0.002	0.0008061
Sr	88	3	He	51.444	0.4624	38914.25	0.009	0.0009645
Sr	88	3	He	51.223	0.4604	39064.87	0.009	0.0009645
Sr	88	3	He	50.553	0.4544	38914.23	0.009	0.0009645
Mo	98	3	He	53.005	1.1625	97829.69	0.0219	0.0002706
Mo	98	3	He	52.937	1.161	98504.23	0.0219	0.0002706
Mo	98	3	He	51.751	1.135	97194.32	0.0219	0.0002706
Ag	107	3	He	52.22	2.4282	204346.58	0.0465	0.0006206
Ag	107	3	He	52.55	2.4435	207320.29	0.0465	0.0006206
Ag	107	3	He	51.994	2.4177	207036.34	0.0465	0.0006206
Cd	111	3	He	52.105	0.2786	23445.67	0.0053	0
Cd	111	3	He	51.567	0.2757	23393.62	0.0053	0
Cd	111	3	He	51.983	0.2779	23802.29	0.0053	0
Sn	120	3	He	52.973	0.8534	71816.17	0.0158	0.01648
Sn	120	3	He	51.829	0.8353	70871.15	0.0158	0.01648
Sn	120	3	He	51.98	0.8377	71736.02	0.0158	0.01648
Sb	121	3	He	52.941	0.7866	66198.77	0.0149	0.0002698
Sb	121	3	He	52.519	0.7804	66209.46	0.0149	0.0002698
Sb	121	3	He	52.563	0.781	66881.41	0.0149	0.0002698
Ba	137	3	He	525.846	2.5239	212404.10	0.0048	0.0002317
Ba	137	3	He	518.313	2.4878	211075.64	0.0048	0.0002317
Ba	137	3	He	525.265	2.5212	215899.45	0.0048	0.0002317
Tl	205	3	He	52.13	1.2891	509506.67	0.0247	0.0001339
Tl	205	3	He	51.934	1.2843	507765.62	0.0247	0.0001339
Tl	205	3	He	51.805	1.2811	510462.61	0.0247	0.0001339
Pb	208	3	He	52.461	1.7181	366394.72	0.0327	0.00107
Pb	208	3	He	51.84	1.6978	360855.58	0.0327	0.00107
Pb	208	3	He	52.065	1.7051	363889.25	0.0327	0.00107
U	238	3	He	51.172	2.5208	781725.77	0.0493	7.55E-05
U	238	3	He	50.1	2.468	767571.71	0.0493	7.55E-05
U	238	3	He	50.761	2.5005	769803.89	0.0493	7.55E-05
Sc	45	1	No Gas			2460213.56		
Sc	45	1	No Gas			2508312.31		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2466477.15		
Ge	72	1	No Gas			1208757.95		
Ge	72	1	No Gas			1231565.84		
Ge	72	1	No Gas			1217867.87		
Sc	45	2	H2			181977.30		
Sc	45	2	H2			179383.53		
Sc	45	2	H2			180759.37		
Ge	72	2	H2			155145.78		
Ge	72	2	H2			155519.37		
Ge	72	2	H2			153487.69		
In	115	2	H2			382168.78		
In	115	2	H2			386538.82		
In	115	2	H2			386059.33		
Sc	45	3	He			46505.02		
Sc	45	3	He			47367.87		
Sc	45	3	He			47729.40		
Ge	72	3	He			83383.35		
Ge	72	3	He			82800.21		
Ge	72	3	He			85485.23		
In	115	3	He			84536.87		
In	115	3	He			85230.67		
In	115	3	He			86016.19		
Tb	159	3	He			395236.13		
Tb	159	3	He			395375.38		
Tb	159	3	He			398459.02		
Bi	209	3	He			310108.65		
Bi	209	3	He			311013.28		
Bi	209	3	He			307854.33		

Quantitation Report

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Sample Type	CCB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

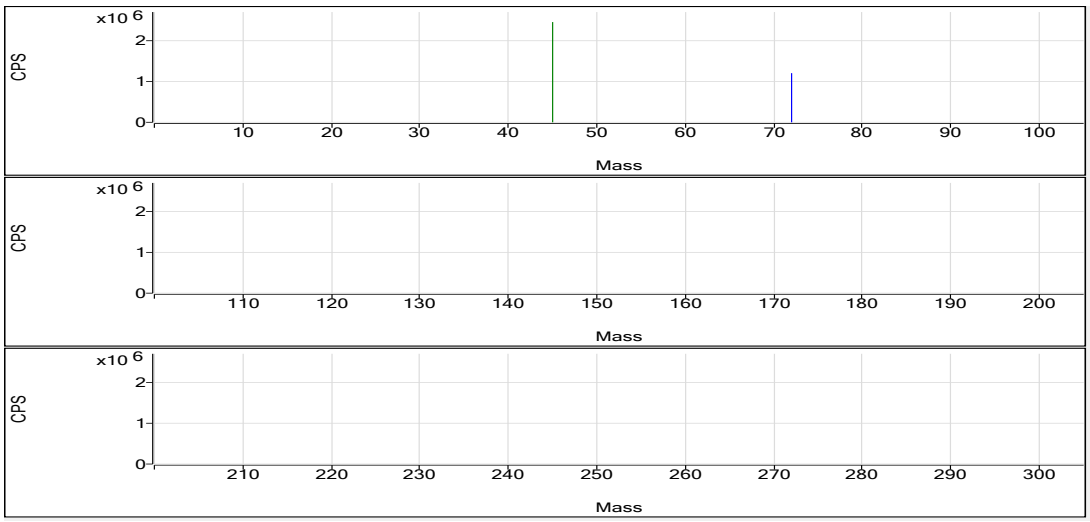
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.024	ppb	29.4	56.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.055	ppb	65.8	5.34	0.0000	Pulse	1.5000	3
Na	23	45	He	9.892	ppb	27.8	17921.32	0.3805	Pulse	0.1000	3
Mg	24	45	He	1.442	ppb	15.1	286.68	0.0061	Pulse	0.1000	3
Al	27	45	He	1.676	ppb	80.1	76.67	0.0016	Pulse	0.1000	3
K	39	45	He	-4.238	ppb	N/A	18382.16	0.3901	Pulse	0.1000	3
Ca	44	45	He	16.208	ppb	97.9	180.01	0.0038	Pulse	0.1000	3
Ti	47	45	He	0.537	ppb	156.5	16.67	0.0004	Pulse	0.1000	3
V	51	45	He	0.373	ppb	7.4	1556.09	0.0330	Pulse	0.5000	3
Cr	52	45	He	-0.107	ppb	N/A	1733.50	0.0368	Pulse	0.1000	3
Mn	55	45	He	0.136	ppb	39.2	206.68	0.0044	Pulse	0.1000	3
Fe	57	45	He	0.457	ppb	203.6	80.00	0.0017	Pulse	0.1000	3
Co	59	45	He	0.101	ppb	22.7	370.02	0.0078	Pulse	0.1000	3
Ni	60	72	He	0.001	ppb	5811.1	230.01	0.0028	Pulse	0.1000	3
Cu	63	72	He	0.122	ppb	23.1	636.70	0.0079	Pulse	0.1000	3
Zn	66	72	He	1.991	ppb	41.0	773.38	0.0096	Pulse	0.1000	3
As	75	72	He	0.070	ppb	76.0	76.67	0.0009	Pulse	0.5000	3
Sr	88	115	He	-0.035	ppb	N/A	56.67	0.0007	Pulse	0.1000	3
Mo	98	115	He	0.052	ppb	50.3	123.34	0.0014	Pulse	0.1000	3
Ag	107	115	He	0.009	ppb	80.8	90.00	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.009	ppb	100.7	4.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.057	ppb	94.7	1506.81	0.0174	Pulse	0.1000	3
Sb	121	115	He	0.036	ppb	93.5	70.00	0.0008	Pulse	0.1000	3
Ba	137	115	He	0.032	ppb	114.0	33.33	0.0004	Pulse	0.1000	3
Tl	205	159	He	0.097	ppb	10.6	993.41	0.0025	Pulse	0.1000	3
Pb	208	159	He	0.012	ppb	81.1	573.36	0.0015	Pulse	0.1000	3
U	238	209	He	0.054	ppb	11.9	830.06	0.0027	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2462171.68	1.0	102.6	Analog	0.1000	3
No Gas	Ge	72	1207274.72	0.6	104.7	Pulse	0.1000	3
H2	Sc	45	176273.16	0.2	94.3	Pulse	0.1000	3
H2	Ge	72	151586.63	0.7	92.6	Pulse	0.1000	3
H2	In	115	384030.58	1.1	98.7	Pulse	0.1000	3
He	Sc	45	47107.01	1.6	101.0	Pulse	0.1000	3
He	Ge	72	80721.75	2.2	99.4	Pulse	0.1000	3
He	In	115	86691.82	1.3	100.6	Pulse	0.1000	3
He	Tb	159	393439.66	0.7	98.7	Pulse	0.1000	3
He	Bi	209	305475.72	1.4	98.8	Pulse	0.1000	3

No Gas



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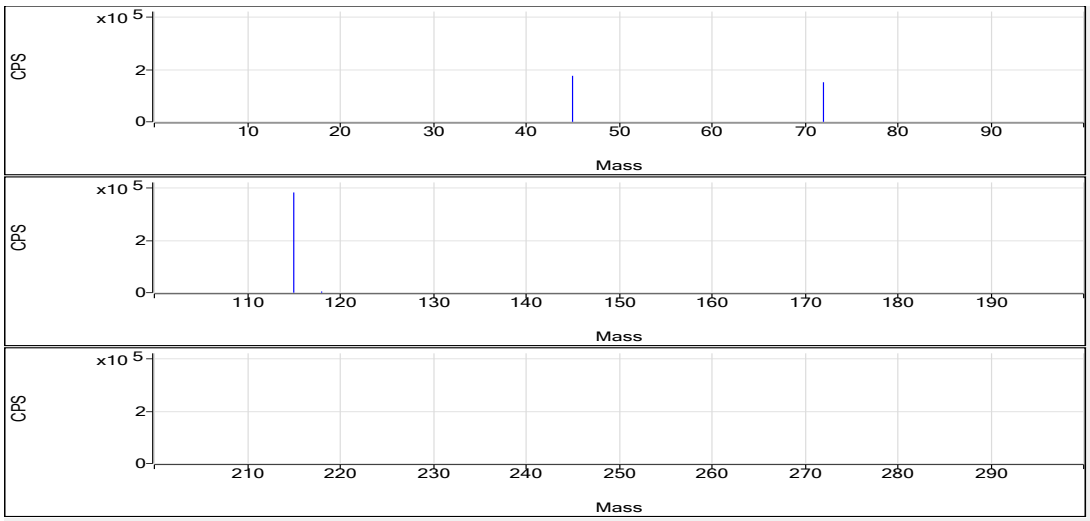
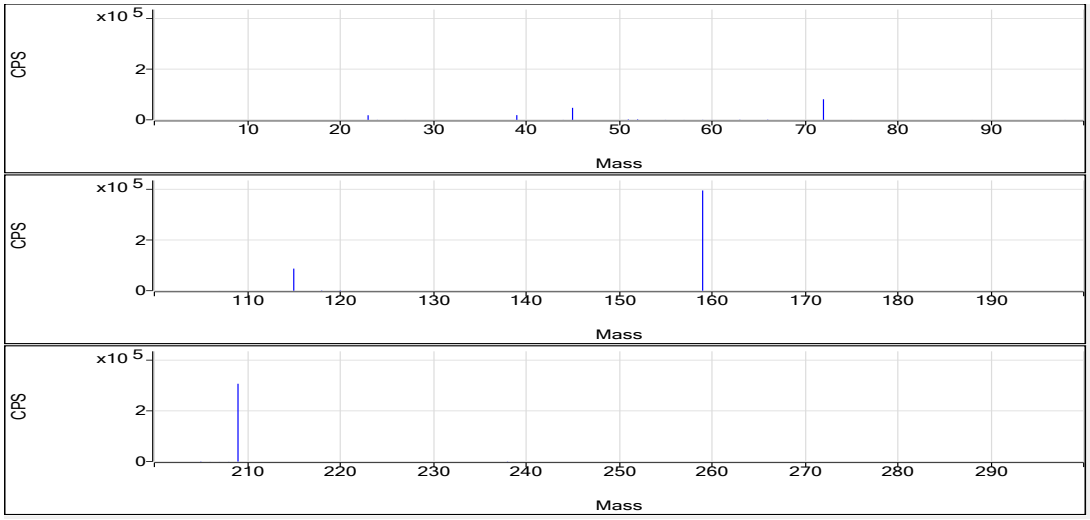


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.029	0	66.00	0.0008	4.685E-06
Be	9	1	No Gas	0.027	0	62.00	0.0008	4.685E-06
Be	9	1	No Gas	0.016	0	42.00	0.0008	4.685E-06
Se	78	2	H2	0.077	0	6.67	0.0004	1.219E-05
Se	78	2	H2	0.075	0	6.67	0.0004	1.219E-05
Se	78	2	H2	0.013	0	2.67	0.0004	1.219E-05
Na	23	3	He	8.509	0.3756	17821.24	0.0036	0.3452
Na	23	3	He	8.109	0.3742	17821.09	0.0036	0.3452
Na	23	3	He	13.058	0.3919	18121.63	0.0036	0.3452
Mg	24	3	He	1.692	0.0065	310.01	0.0018	0.003497
Mg	24	3	He	1.328	0.0059	280.01	0.0018	0.003497
Mg	24	3	He	1.305	0.0058	270.01	0.0018	0.003497
Al	27	3	He	0.702	0.0011	50.00	0.0006	0.0006432
Al	27	3	He	3.207	0.0025	120.01	0.0006	0.0006432
Al	27	3	He	1.118	0.0013	60.00	0.0006	0.0006432
K	39	3	He	-4.213	0.3902	18512.34	0.0012	0.3951
K	39	3	He	3.543	0.3992	19012.99	0.0012	0.3951
K	39	3	He	-12.043	0.381	17621.14	0.0012	0.3951
Ca	44	3	He	22.211	0.0042	200.01	0.0001	0.002715
Ca	44	3	He	28.19	0.0046	220.01	0.0001	0.002715
Ca	44	3	He	-1.777	0.0026	120.00	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.261	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	1.48	0.0009	40.00	0.0005	7.003E-05
V	51	3	He	0.369	0.0329	1562.09	0.0219	0.02486
V	51	3	He	0.403	0.0337	1604.10	0.0219	0.02486
V	51	3	He	0.348	0.0325	1502.09	0.0219	0.02486
Cr	52	3	He	-0.096	0.0371	1760.18	0.0299	0.03997
Cr	52	3	He	-0.052	0.0384	1830.17	0.0299	0.03997
Cr	52	3	He	-0.172	0.0348	1610.15	0.0299	0.03997
Mn	55	3	He	0.139	0.0044	210.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.187	0.005	240.01	0.0128	0.002639
Mn	55	3	He	0.081	0.0037	170.01	0.0128	0.002639
Fe	57	3	He	0.08	0.0015	70.00	0.0006	0.001429
Fe	57	3	He	1.516	0.0023	110.01	0.0006	0.001429
Fe	57	3	He	-0.226	0.0013	60.00	0.0006	0.001429
Co	59	3	He	0.123	0.0091	430.02	0.0563	0.002149
Co	59	3	He	0.104	0.008	380.02	0.0563	0.002149
Co	59	3	He	0.077	0.0065	300.01	0.0563	0.002149
Ni	60	3	He	0.018	0.003	240.01	0.0086	0.002834
Ni	60	3	He	0.05	0.0033	270.01	0.0086	0.002834
Ni	60	3	He	-0.065	0.0023	180.01	0.0086	0.002834
Cu	63	3	He	0.101	0.0073	590.03	0.0257	0.004757
Cu	63	3	He	0.112	0.0076	630.04	0.0257	0.004757
Cu	63	3	He	0.154	0.0087	690.04	0.0257	0.004757
Zn	66	3	He	2.067	0.0098	790.05	0.0029	0.003818
Zn	66	3	He	1.14	0.0071	590.03	0.0029	0.003818
Zn	66	3	He	2.767	0.0119	940.06	0.0029	0.003818
As	75	3	He	0.129	0.0011	86.00	0.002	0.0008061
As	75	3	He	0.055	0.0009	76.00	0.002	0.0008061
As	75	3	He	0.026	0.0009	68.00	0.002	0.0008061
Sr	88	3	He	-0.031	0.0007	60.00	0.009	0.0009645
Sr	88	3	He	-0.044	0.0006	50.00	0.009	0.0009645
Sr	88	3	He	-0.029	0.0007	60.00	0.009	0.0009645
Mo	98	3	He	0.082	0.0021	180.01	0.0219	0.0002706
Mo	98	3	He	0.045	0.0013	110.01	0.0219	0.0002706
Mo	98	3	He	0.03	0.0009	80.00	0.0219	0.0002706
Ag	107	3	He	0.016	0.0014	120.00	0.0465	0.0006206
Ag	107	3	He	0.009	0.001	90.00	0.0465	0.0006206
Ag	107	3	He	0.002	0.0007	60.00	0.0465	0.0006206
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0.009	0	4.00	0.0053	0
Cd	111	3	He	0.018	0.0001	8.00	0.0053	0
Sn	120	3	He	0.015	0.0167	1460.14	0.0158	0.01648
Sn	120	3	He	0.118	0.0183	1600.15	0.0158	0.01648
Sn	120	3	He	0.039	0.0171	1460.13	0.0158	0.01648
Sb	121	3	He	0.059	0.0011	100.00	0.0149	0.0002698
Sb	121	3	He	-0.003	0.0002	20.00	0.0149	0.0002698
Sb	121	3	He	0.053	0.0011	90.00	0.0149	0.0002698
Ba	137	3	He	0.023	0.0003	30.00	0.0048	0.0002317
Ba	137	3	He	0.071	0.0006	50.00	0.0048	0.0002317
Ba	137	3	He	0.001	0.0002	20.00	0.0048	0.0002317
Tl	205	3	He	0.085	0.0022	890.06	0.0247	0.0001339
Tl	205	3	He	0.105	0.0027	1070.09	0.0247	0.0001339
Tl	205	3	He	0.099	0.0026	1020.08	0.0247	0.0001339
Pb	208	3	He	0.01	0.0014	280.01	0.0327	0.00107
Pb	208	3	He	0.022	0.0018	350.02	0.0327	0.00107
Pb	208	3	He	0.003	0.0012	210.01	0.0327	0.00107
U	238	3	He	0.055	0.0028	840.06	0.0493	7.55E-05
U	238	3	He	0.047	0.0024	740.05	0.0493	7.55E-05
U	238	3	He	0.06	0.003	910.06	0.0493	7.55E-05
Sc	45	1	No Gas			2436157.62		
Sc	45	1	No Gas			2467190.28		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2483167.15		
Ge	72	1	No Gas			1203559.75		
Ge	72	1	No Gas			1202649.90		
Ge	72	1	No Gas			1215614.51		
Sc	45	2	H2			175783.43		
Sc	45	2	H2			176417.20		
Sc	45	2	H2			176618.85		
Ge	72	2	H2			151182.00		
Ge	72	2	H2			152789.25		
Ge	72	2	H2			150788.64		
In	115	2	H2			386754.45		
In	115	2	H2			378950.89		
In	115	2	H2			386386.40		
Sc	45	3	He			47447.97		
Sc	45	3	He			47628.77		
Sc	45	3	He			46244.29		
Ge	72	3	He			80316.31		
Ge	72	3	He			82688.83		
Ge	72	3	He			79160.12		
In	115	3	He			87404.94		
In	115	3	He			87243.54		
In	115	3	He			85452.48		
Tb	159	3	He			396244.45		
Tb	159	3	He			390390.27		
Tb	159	3	He			393684.25		
Bi	209	3	He			303962.30		
Bi	209	3	He			310191.11		
Bi	209	3	He			302273.75		

Quantitation Report

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Auto Dilution	1.0000
Total Dilution	1.0000
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Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

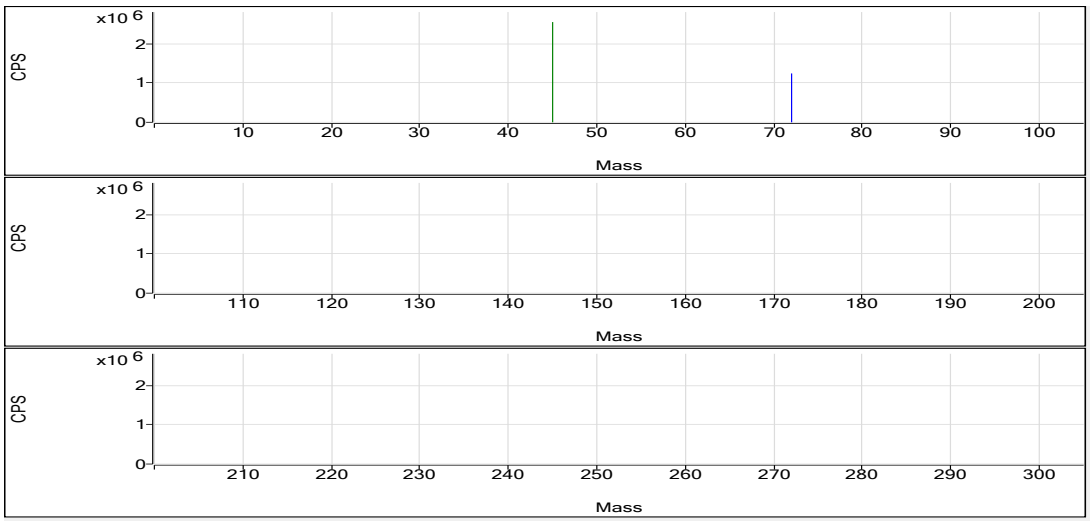
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.033	ppb	1.7	75.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.711	ppb	4.9	50.22	0.0003	Pulse	1.5000	3
Na	23	45	He	147308.458	ppb	1.4	25012847.13	527.2747	Analog	0.1000	3
Mg	24	45	He	8564.833	ppb	1.6	729179.88	15.3716	Pulse	0.1000	3
Al	27	45	He	259.575	ppb	4.6	7232.01	0.1525	Pulse	0.1000	3
K	39	45	He	28720.090	ppb	1.4	1605025.91	33.8346	Analog	0.1000	3
Ca	44	45	He	25937.908	ppb	1.9	83244.54	1.7549	Pulse	0.1000	3
Ti	47	45	He	3.661	ppb	15.5	96.67	0.0020	Pulse	0.1000	3
V	51	45	He	0.499	ppb	15.9	1697.44	0.0358	Pulse	0.5000	3
Cr	52	45	He	5.102	ppb	3.5	9143.23	0.1927	Pulse	0.1000	3
Mn	55	45	He	48.742	ppb	0.8	29804.69	0.6282	Pulse	0.1000	3
Fe	57	45	He	783.613	ppb	9.1	21650.19	0.4567	Pulse	0.1000	3
Co	59	45	He	0.696	ppb	9.3	1960.20	0.0413	Pulse	0.1000	3
Ni	60	72	He	13.385	ppb	2.5	10000.54	0.1177	Pulse	0.1000	3
Cu	63	72	He	65.736	ppb	1.6	143773.30	1.6923	Pulse	0.1000	3
Zn	66	72	He	233.521	ppb	2.2	58084.99	0.6837	Pulse	0.1000	3
As	75	72	He	1.005	ppb	17.6	243.33	0.0029	Pulse	0.5000	3
Sr	88	115	He	109.030	ppb	1.0	83761.23	0.9789	Pulse	0.1000	3
Mo	98	115	He	2.705	ppb	1.5	5097.76	0.0596	Pulse	0.1000	3
Ag	107	115	He	0.328	ppb	8.9	1356.78	0.0158	Pulse	0.1000	3
Cd	111	115	He	0.144	ppb	8.7	66.00	0.0008	Pulse	0.5000	3
Sn	120	115	He	24.181	ppb	0.8	34096.26	0.3985	Pulse	0.1000	3
Sb	121	115	He	0.951	ppb	14.4	1233.44	0.0144	Pulse	0.1000	3
Ba	137	115	He	44.874	ppb	4.0	18453.01	0.2156	Pulse	0.1000	3
Tl	205	159	He	0.038	ppb	11.5	430.02	0.0011	Pulse	0.1000	3
Pb	208	159	He	2.627	ppb	0.7	34525.85	0.0870	Pulse	0.1000	3
U	238	209	He	0.244	ppb	4.6	3770.70	0.0121	Pulse	0.1000	3

ISTD Table:

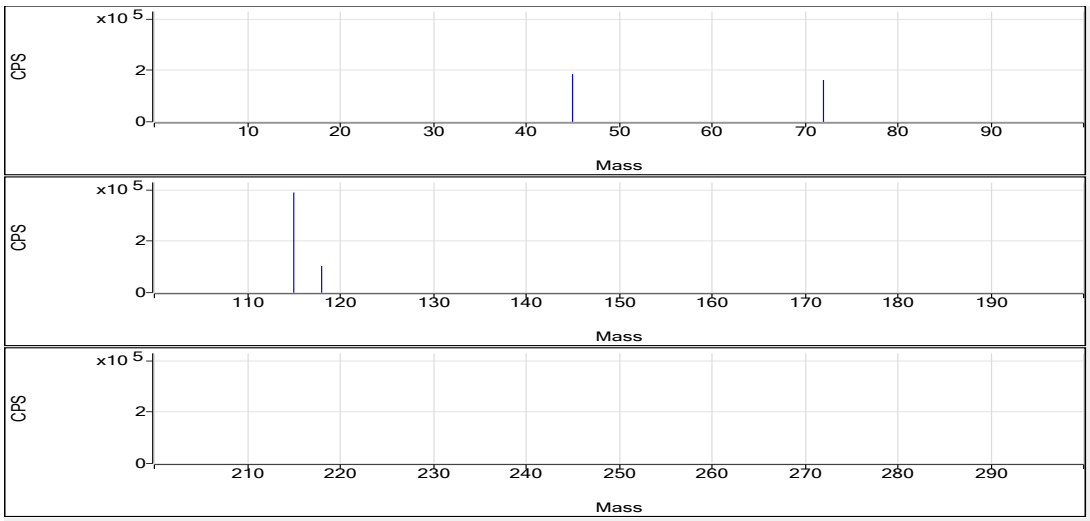
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2546066.94	0.8	106.1	Analog	0.1000	3
No Gas	Ge	72	1241197.77	0.3	107.6	Pulse	0.1000	3
H2	Sc	45	185244.03	1.2	99.1	Pulse	0.1000	3
H2	Ge	72	162556.15	1.9	99.3	Pulse	0.1000	3
H2	In	115	389512.04	0.7	100.1	Pulse	0.1000	3
He	Sc	45	47444.82	1.8	101.7	Pulse	0.1000	3
He	Ge	72	84962.38	0.9	104.6	Pulse	0.1000	3
He	In	115	85566.74	1.5	99.3	Pulse	0.1000	3
He	Tb	159	396681.16	0.6	99.5	Pulse	0.1000	3
He	Bi	209	311495.72	0.6	100.7	Pulse	0.1000	3

No Gas

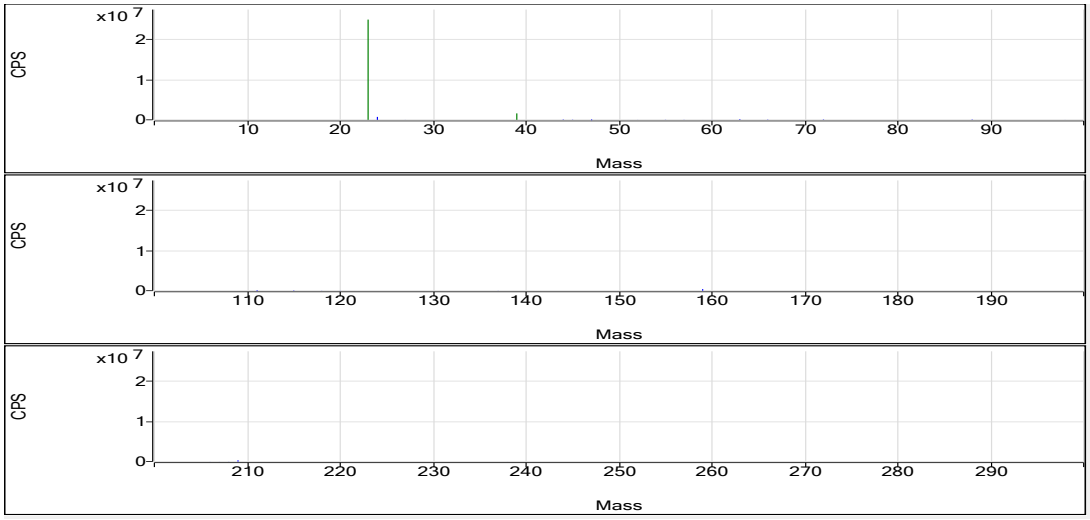


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.033	0	76.00	0.0008	4.685E-06
Be	9	1	No Gas	0.032	0	74.00	0.0008	4.685E-06
Be	9	1	No Gas	0.033	0	76.00	0.0008	4.685E-06
Se	78	2	H2	0.672	0.0003	46.67	0.0004	1.219E-05
Se	78	2	H2	0.739	0.0003	52.00	0.0004	1.219E-05
Se	78	2	H2	0.723	0.0003	52.00	0.0004	1.219E-05
Na	23	3	He	145905.014	522.2545	25230764.62	0.0036	0.3452
Na	23	3	He	146368.66	523.913	24821747.13	0.0036	0.3452
Na	23	3	He	149651.699	535.6566	24986029.63	0.0036	0.3452
Mg	24	3	He	8404.041	15.0831	728680.93	0.0018	0.003497
Mg	24	3	He	8653.74	15.5311	735826.00	0.0018	0.003497
Mg	24	3	He	8636.72	15.5006	723032.72	0.0018	0.003497
Al	27	3	He	250.882	0.1474	7121.93	0.0006	0.0006432
Al	27	3	He	254.765	0.1497	7091.94	0.0006	0.0006432
Al	27	3	He	273.08	0.1604	7482.16	0.0006	0.0006432
K	39	3	He	28344.709	33.3976	1613477.79	0.0012	0.3951
K	39	3	He	28686.922	33.796	1601174.35	0.0012	0.3951
K	39	3	He	29128.638	34.3103	1600425.60	0.0012	0.3951
Ca	44	3	He	25662.678	1.7363	83881.73	0.0001	0.002715
Ca	44	3	He	25656.751	1.7359	82241.72	0.0001	0.002715
Ca	44	3	He	26494.295	1.7925	83610.16	0.0001	0.002715
Ti	47	3	He	3.725	0.0021	100.00	0.0005	7.003E-05
Ti	47	3	He	4.194	0.0023	110.00	0.0005	7.003E-05
Ti	47	3	He	3.064	0.0017	80.00	0.0005	7.003E-05
V	51	3	He	0.516	0.0361	1746.12	0.0219	0.02486
V	51	3	He	0.568	0.0373	1766.12	0.0219	0.02486
V	51	3	He	0.412	0.0339	1580.09	0.0219	0.02486
Cr	52	3	He	4.979	0.189	9133.20	0.0299	0.03997
Cr	52	3	He	5.308	0.1989	9423.35	0.0299	0.03997
Cr	52	3	He	5.018	0.1902	8873.15	0.0299	0.03997
Mn	55	3	He	48.571	0.626	30242.40	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	49.202	0.6341	30041.68	0.0128	0.002639
Mn	55	3	He	48.454	0.6245	29129.98	0.0128	0.002639
Fe	57	3	He	748.773	0.4365	21085.88	0.0006	0.001429
Fe	57	3	He	736.662	0.4294	20345.01	0.0006	0.001429
Fe	57	3	He	865.405	0.5042	23519.69	0.0006	0.001429
Co	59	3	He	0.642	0.0383	1850.17	0.0563	0.002149
Co	59	3	He	0.768	0.0454	2150.25	0.0563	0.002149
Co	59	3	He	0.678	0.0403	1880.19	0.0563	0.002149
Ni	60	3	He	13.701	0.1204	10164.17	0.0086	0.002834
Ni	60	3	He	13.031	0.1147	9843.63	0.0086	0.002834
Ni	60	3	He	13.425	0.1181	9993.81	0.0086	0.002834
Cu	63	3	He	66.933	1.723	145419.13	0.0257	0.004757
Cu	63	3	He	65.342	1.6821	144390.67	0.0257	0.004757
Cu	63	3	He	64.935	1.6717	141510.10	0.0257	0.004757
Zn	66	3	He	235.481	0.6894	58188.93	0.0029	0.003818
Zn	66	3	He	227.616	0.6665	57214.70	0.0029	0.003818
Zn	66	3	He	237.466	0.6952	58851.34	0.0029	0.003818
As	75	3	He	1.191	0.0032	274.00	0.002	0.0008061
As	75	3	He	0.983	0.0028	242.00	0.002	0.0008061
As	75	3	He	0.84	0.0025	214.00	0.002	0.0008061
Sr	88	3	He	109.63	0.9843	85075.53	0.009	0.0009645
Sr	88	3	He	109.74	0.9853	82852.46	0.009	0.0009645
Sr	88	3	He	107.721	0.9672	83355.70	0.009	0.0009645
Mo	98	3	He	2.695	0.0594	5131.13	0.0219	0.0002706
Mo	98	3	He	2.749	0.0605	5091.08	0.0219	0.0002706
Mo	98	3	He	2.671	0.0588	5071.07	0.0219	0.0002706
Ag	107	3	He	0.36	0.0174	1500.14	0.0465	0.0006206
Ag	107	3	He	0.304	0.0147	1240.09	0.0465	0.0006206
Ag	107	3	He	0.319	0.0154	1330.11	0.0465	0.0006206
Cd	111	3	He	0.13	0.0007	60.00	0.0053	0
Cd	111	3	He	0.151	0.0008	68.00	0.0053	0
Cd	111	3	He	0.152	0.0008	70.00	0.0053	0
Sn	120	3	He	24.24	0.3994	34523.72	0.0158	0.01648
Sn	120	3	He	24.349	0.4012	33732.23	0.0158	0.01648
Sn	120	3	He	23.952	0.3949	34032.82	0.0158	0.01648
Sb	121	3	He	1.104	0.0167	1440.12	0.0149	0.0002698
Sb	121	3	He	0.839	0.0127	1070.08	0.0149	0.0002698
Sb	121	3	He	0.912	0.0138	1190.11	0.0149	0.0002698
Ba	137	3	He	44.534	0.214	18493.08	0.0048	0.0002317
Ba	137	3	He	43.295	0.208	17491.82	0.0048	0.0002317
Ba	137	3	He	46.792	0.2248	19374.14	0.0048	0.0002317
Tl	205	3	He	0.043	0.0012	480.03	0.0247	0.0001339
Tl	205	3	He	0.035	0.001	390.02	0.0247	0.0001339
Tl	205	3	He	0.037	0.0011	420.02	0.0247	0.0001339
Pb	208	3	He	2.605	0.0863	18463.50	0.0327	0.00107
Pb	208	3	He	2.636	0.0874	18864.18	0.0327	0.00107
Pb	208	3	He	2.639	0.0874	18393.47	0.0327	0.00107
U	238	3	He	0.246	0.0122	3820.73	0.0493	7.55E-05
U	238	3	He	0.254	0.0126	3930.75	0.0493	7.55E-05
U	238	3	He	0.232	0.0115	3560.62	0.0493	7.55E-05
Sc	45	1	No Gas			2569547.93		
Sc	45	1	No Gas			2536894.18		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2531758.71		
Ge	72	1	No Gas			1238585.76		
Ge	72	1	No Gas			1245877.33		
Ge	72	1	No Gas			1239130.22		
Sc	45	2	H2			182815.60		
Sc	45	2	H2			186919.61		
Sc	45	2	H2			185996.87		
Ge	72	2	H2			159582.34		
Ge	72	2	H2			162293.39		
Ge	72	2	H2			165792.71		
In	115	2	H2			386910.35		
In	115	2	H2			392598.98		
In	115	2	H2			389026.79		
Sc	45	3	He			48311.24		
Sc	45	3	He			47377.61		
Sc	45	3	He			46645.61		
Ge	72	3	He			84399.23		
Ge	72	3	He			85837.29		
Ge	72	3	He			84650.61		
In	115	3	He			86610.44		
In	115	3	He			84266.48		
In	115	3	He			86358.69		
Tb	159	3	He			399322.18		
Tb	159	3	He			394842.18		
Tb	159	3	He			395879.13		
Bi	209	3	He			313255.76		
Bi	209	3	He			311914.74		
Bi	209	3	He			309316.66		

Quantitation Report

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Sample Name	410-134023-B-6-C
Sample Type	Sample
Comment	I9 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

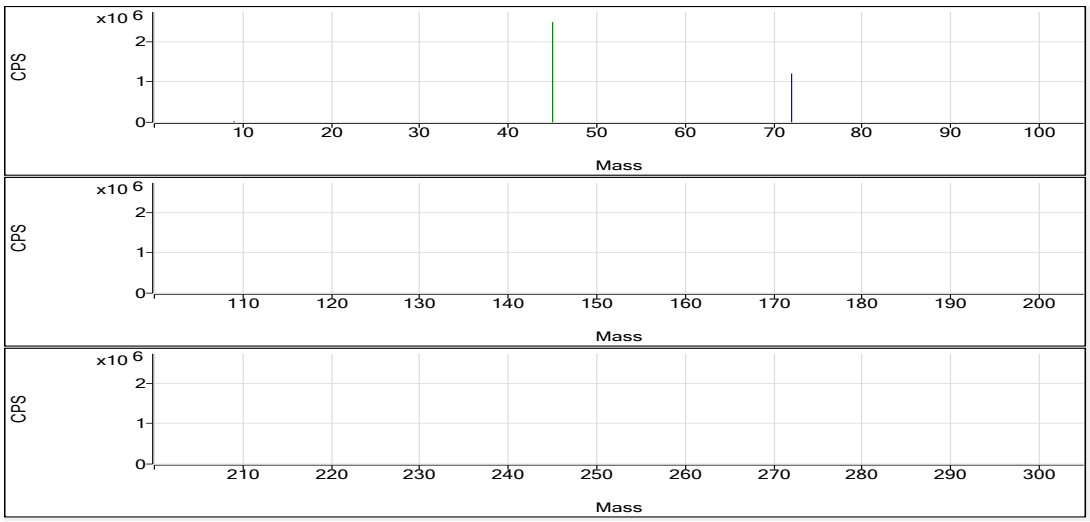
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	13.489	ppb	1.3	25534.44	0.0103	Pulse	0.5000	3
Se	78	72	H2	21.062	ppb	1.3	1384.51	0.0088	Pulse	1.5000	3
Na	23	45	He	22.146	ppb	21.7	20214.43	0.4244	Pulse	0.1000	3
Mg	24	45	He	1.246	ppb	50.6	273.35	0.0057	Pulse	0.1000	3
Al	27	45	He	169.111	ppb	4.8	4744.26	0.0996	Pulse	0.1000	3
K	39	45	He	-0.244	ppb	N/A	18812.77	0.3948	Pulse	0.1000	3
Ca	44	45	He	132.481	ppb	19.6	556.70	0.0117	Pulse	0.1000	3
Ti	47	45	He	0.388	ppb	55.4	13.33	0.0003	Pulse	0.1000	3
V	51	45	He	155.353	ppb	1.6	162978.89	3.4208	Pulse	0.5000	3
Cr	52	45	He	85.023	ppb	2.1	123183.90	2.5856	Pulse	0.1000	3
Mn	55	45	He	89.379	ppb	0.3	54784.69	1.1497	Pulse	0.1000	3
Fe	57	45	He	155.900	ppb	3.0	4384.14	0.0920	Pulse	0.1000	3
Co	59	45	He	74.408	ppb	1.7	199626.16	4.1900	Pulse	0.1000	3
Ni	60	72	He	148.475	ppb	1.1	107224.08	1.2772	Pulse	0.1000	3
Cu	63	72	He	59.514	ppb	0.3	128661.30	1.5325	Pulse	0.1000	3
Zn	66	72	He	69.806	ppb	4.0	17384.35	0.2071	Pulse	0.1000	3
As	75	72	He	48.953	ppb	1.1	8487.90	0.1011	Pulse	0.5000	3
Sr	88	115	He	36.854	ppb	2.0	28760.04	0.3315	Pulse	0.1000	3
Mo	98	115	He	30.729	ppb	2.1	58465.79	0.6740	Pulse	0.1000	3
Ag	107	115	He	54.753	ppb	1.3	220837.05	2.5459	Pulse	0.1000	3
Cd	111	115	He	86.406	ppb	0.7	40076.56	0.4620	Pulse	0.5000	3
Sn	120	115	He	-0.121	ppb	N/A	1263.45	0.0146	Pulse	0.1000	3
Sb	121	115	He	34.109	ppb	1.7	43974.00	0.5069	Pulse	0.1000	3
Ba	137	115	He	199.187	ppb	0.6	82943.83	0.9562	Pulse	0.1000	3
Tl	205	159	He	22.889	ppb	1.2	226431.04	0.5661	Pulse	0.1000	3
Pb	208	159	He	125.012	ppb	0.9	1636945.51	4.0927	Pulse	0.1000	3
U	238	209	He	0.011	ppb	25.8	196.68	0.0006	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2480789.60	0.8	103.4	Analog	0.1000	3
No Gas	Ge	72	1207861.10	0.2	104.7	Pulse	0.1000	3
H2	Sc	45	182974.47	0.5	97.8	Pulse	0.1000	3
H2	Ge	72	157374.96	1.5	96.1	Pulse	0.1000	3
H2	In	115	389849.54	0.7	100.2	Pulse	0.1000	3
He	Sc	45	47652.25	1.7	102.2	Pulse	0.1000	3
He	Ge	72	83952.75	0.4	103.4	Pulse	0.1000	3
He	In	115	86745.41	0.5	100.6	Pulse	0.1000	3
He	Tb	159	399999.81	1.2	100.3	Pulse	0.1000	3
He	Bi	209	315269.23	0.8	101.9	Pulse	0.1000	3

No Gas



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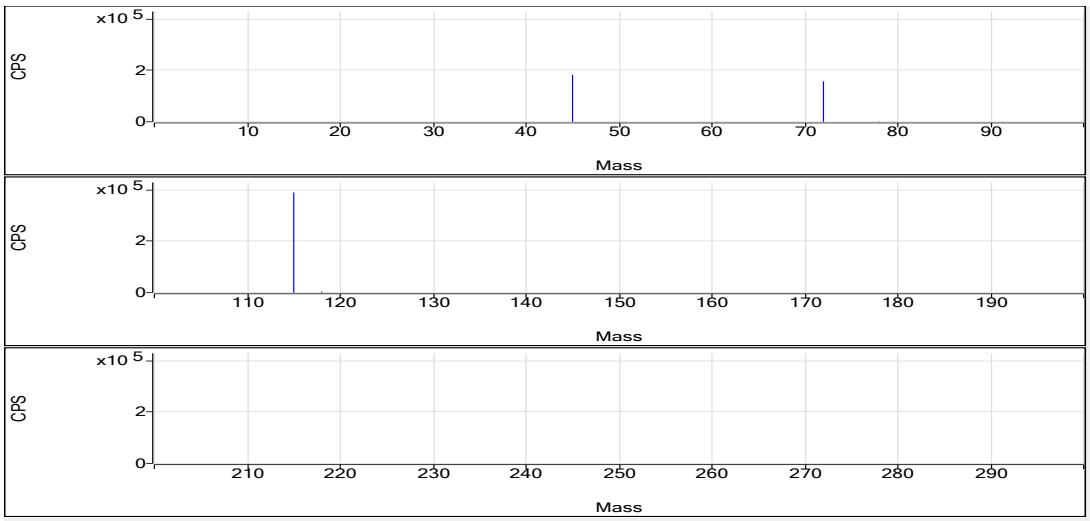
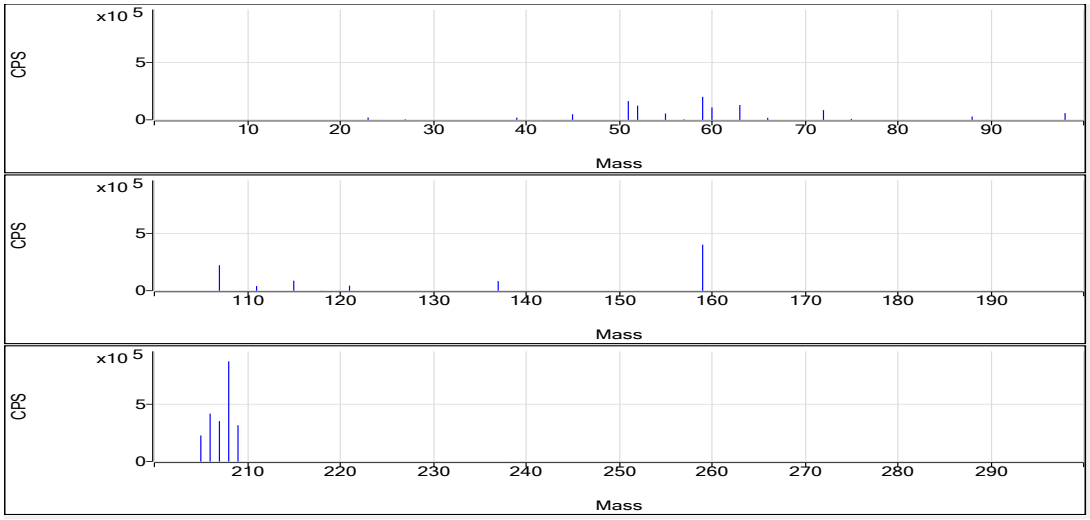


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	13.524	0.0103	25597.84	0.0008	4.685E-06
Be	9	1	No Gas	13.65	0.0104	25629.95	0.0008	4.685E-06
Be	9	1	No Gas	13.292	0.0101	25375.52	0.0008	4.685E-06
Se	78	2	H2	20.738	0.0087	1344.73	0.0004	1.219E-05
Se	78	2	H2	21.219	0.0089	1391.40	0.0004	1.219E-05
Se	78	2	H2	21.229	0.0089	1417.41	0.0004	1.219E-05
Na	23	3	He	26.664	0.4405	20805.38	0.0036	0.3452
Na	23	3	He	17.109	0.4064	19733.62	0.0036	0.3452
Na	23	3	He	22.665	0.4262	20104.28	0.0036	0.3452
Mg	24	3	He	0.529	0.0044	210.01	0.0018	0.003497
Mg	24	3	He	1.494	0.0062	300.01	0.0018	0.003497
Mg	24	3	He	1.714	0.0066	310.02	0.0018	0.003497
Al	27	3	He	178.454	0.105	4960.99	0.0006	0.0006432
Al	27	3	He	165.421	0.0974	4730.91	0.0006	0.0006432
Al	27	3	He	163.457	0.0963	4540.89	0.0006	0.0006432
K	39	3	He	4.818	0.4007	18922.87	0.0012	0.3951
K	39	3	He	0.496	0.3956	19213.23	0.0012	0.3951
K	39	3	He	-6.048	0.388	18302.20	0.0012	0.3951
Ca	44	3	He	110.272	0.0102	480.02	0.0001	0.002715
Ca	44	3	He	161.014	0.0136	660.04	0.0001	0.002715
Ca	44	3	He	126.158	0.0112	530.03	0.0001	0.002715
Ti	47	3	He	0.264	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	0.637	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	0.264	0.0002	10.00	0.0005	7.003E-05
V	51	3	He	156.036	3.4357	162258.08	0.0219	0.02486
V	51	3	He	152.551	3.3595	163144.03	0.0219	0.02486
V	51	3	He	157.473	3.4671	163534.56	0.0219	0.02486
Cr	52	3	He	86.585	2.6324	124320.81	0.0299	0.03997
Cr	52	3	He	83.017	2.5256	122646.12	0.0299	0.03997
Cr	52	3	He	85.467	2.5989	122584.76	0.0299	0.03997
Mn	55	3	He	89.403	1.15	54312.67	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	89.083	1.1459	55647.94	0.0128	0.002639
Mn	55	3	He	89.65	1.1532	54393.46	0.0128	0.002639
Fe	57	3	He	151.366	0.0894	4220.75	0.0006	0.001429
Fe	57	3	He	155.648	0.0919	4460.84	0.0006	0.001429
Fe	57	3	He	160.687	0.0948	4470.84	0.0006	0.001429
Co	59	3	He	74.969	4.2216	199373.34	0.0563	0.002149
Co	59	3	He	72.956	4.1083	199505.06	0.0563	0.002149
Co	59	3	He	75.3	4.2402	200000.08	0.0563	0.002149
Ni	60	3	He	148.487	1.2773	106814.97	0.0086	0.002834
Ni	60	3	He	146.824	1.263	106510.88	0.0086	0.002834
Ni	60	3	He	150.115	1.2913	108346.39	0.0086	0.002834
Cu	63	3	He	59.41	1.5299	127934.36	0.0257	0.004757
Cu	63	3	He	59.411	1.5299	129014.82	0.0257	0.004757
Cu	63	3	He	59.721	1.5379	129034.71	0.0257	0.004757
Zn	66	3	He	71.02	0.2106	17611.25	0.0029	0.003818
Zn	66	3	He	71.762	0.2128	17941.73	0.0029	0.003818
Zn	66	3	He	66.638	0.1978	16600.08	0.0029	0.003818
As	75	3	He	49.395	0.102	8530.58	0.002	0.0008061
As	75	3	He	49.119	0.1014	8554.62	0.002	0.0008061
As	75	3	He	48.344	0.0999	8378.50	0.002	0.0008061
Sr	88	3	He	36.836	0.3314	28900.45	0.009	0.0009645
Sr	88	3	He	37.59	0.3381	29331.39	0.009	0.0009645
Sr	88	3	He	36.135	0.3251	28048.29	0.009	0.0009645
Mo	98	3	He	30.313	0.6649	57990.33	0.0219	0.0002706
Mo	98	3	He	30.414	0.6671	57869.95	0.0219	0.0002706
Mo	98	3	He	31.459	0.69	59537.08	0.0219	0.0002706
Ag	107	3	He	54.032	2.5124	219117.99	0.0465	0.0006206
Ag	107	3	He	54.746	2.5456	220811.62	0.0465	0.0006206
Ag	107	3	He	55.481	2.5798	222581.54	0.0465	0.0006206
Cd	111	3	He	85.87	0.4591	40043.07	0.0053	0
Cd	111	3	He	87.037	0.4654	40368.08	0.0053	0
Cd	111	3	He	86.313	0.4615	39818.52	0.0053	0
Sn	120	3	He	-0.121	0.0146	1270.11	0.0158	0.01648
Sn	120	3	He	-0.065	0.0154	1340.12	0.0158	0.01648
Sn	120	3	He	-0.177	0.0137	1180.12	0.0158	0.01648
Sb	121	3	He	34.366	0.5107	44542.39	0.0149	0.0002698
Sb	121	3	He	34.499	0.5127	44472.39	0.0149	0.0002698
Sb	121	3	He	33.463	0.4973	42907.23	0.0149	0.0002698
Ba	137	3	He	198.249	0.9517	83000.96	0.0048	0.0002317
Ba	137	3	He	198.697	0.9538	82739.14	0.0048	0.0002317
Ba	137	3	He	200.614	0.963	83091.39	0.0048	0.0002317
Tl	205	3	He	23.206	0.5739	228369.68	0.0247	0.0001339
Tl	205	3	He	22.77	0.5631	228288.28	0.0247	0.0001339
Tl	205	3	He	22.691	0.5612	222635.15	0.0247	0.0001339
Pb	208	3	He	125.58	4.1113	867958.03	0.0327	0.00107
Pb	208	3	He	123.681	4.0491	874299.44	0.0327	0.00107
Pb	208	3	He	125.774	4.1176	867038.50	0.0327	0.00107
U	238	3	He	0.009	0.0005	170.01	0.0493	7.55E-05
U	238	3	He	0.009	0.0005	170.01	0.0493	7.55E-05
U	238	3	He	0.014	0.0008	250.01	0.0493	7.55E-05
Sc	45	1	No Gas			2480184.49		
Sc	45	1	No Gas			2460537.62		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2501646.68		
Ge	72	1	No Gas			1208599.12		
Ge	72	1	No Gas			1204729.59		
Ge	72	1	No Gas			1210254.59		
Sc	45	2	H2			182228.06		
Sc	45	2	H2			182674.27		
Sc	45	2	H2			184021.07		
Ge	72	2	H2			155255.11		
Ge	72	2	H2			157004.80		
Ge	72	2	H2			159864.98		
In	115	2	H2			387118.86		
In	115	2	H2			392677.57		
In	115	2	H2			389752.18		
Sc	45	3	He			47227.33		
Sc	45	3	He			48561.88		
Sc	45	3	He			47167.55		
Ge	72	3	He			83624.28		
Ge	72	3	He			84328.35		
Ge	72	3	He			83905.63		
In	115	3	He			87223.11		
In	115	3	He			86749.88		
In	115	3	He			86287.58		
Tb	159	3	He			397907.61		
Tb	159	3	He			405383.12		
Tb	159	3	He			396708.71		
Bi	209	3	He			313781.68		
Bi	209	3	He			313976.09		
Bi	209	3	He			318049.92		

Quantitation Report

Data File Name	261SMPL.d
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Sample Type	Sample
Comment	I9 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

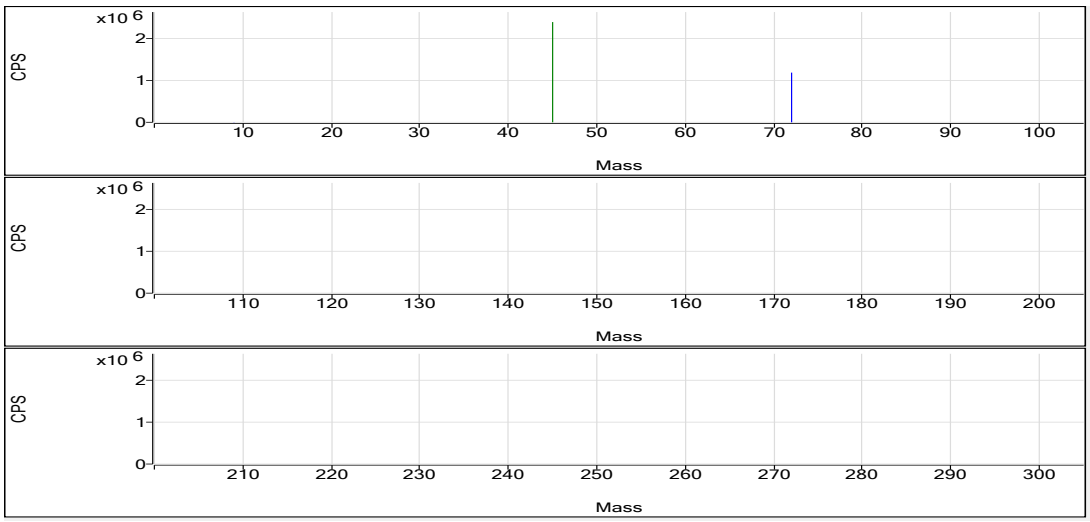
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	2.586	ppb	3.5	4743.45	0.0020	Pulse	0.5000	3
Se	78	72	H2	3.931	ppb	7.7	249.78	0.0017	Pulse	1.5000	3
Na	23	45	He	19.456	ppb	16.0	19396.58	0.4148	Pulse	0.1000	3
Mg	24	45	He	1.275	ppb	32.4	270.01	0.0058	Pulse	0.1000	3
Al	27	45	He	33.383	ppb	2.2	943.40	0.0202	Pulse	0.1000	3
K	39	45	He	7.880	ppb	187.1	18889.49	0.4042	Pulse	0.1000	3
Ca	44	45	He	35.668	ppb	27.4	240.01	0.0051	Pulse	0.1000	3
Ti	47	45	He	0.532	ppb	42.2	16.67	0.0004	Pulse	0.1000	3
V	51	45	He	28.815	ppb	2.4	30603.49	0.6547	Pulse	0.5000	3
Cr	52	45	He	15.872	ppb	1.2	24087.36	0.5152	Pulse	0.1000	3
Mn	55	45	He	17.269	ppb	5.7	10477.44	0.2243	Pulse	0.1000	3
Fe	57	45	He	28.928	ppb	10.6	853.39	0.0182	Pulse	0.1000	3
Co	59	45	He	13.905	ppb	0.5	36690.77	0.7847	Pulse	0.1000	3
Ni	60	72	He	28.399	ppb	5.0	20101.29	0.2466	Pulse	0.1000	3
Cu	63	72	He	11.202	ppb	5.0	23827.08	0.2923	Pulse	0.1000	3
Zn	66	72	He	15.702	ppb	7.6	4037.36	0.0495	Pulse	0.1000	3
As	75	72	He	9.370	ppb	2.5	1630.77	0.0200	Pulse	0.5000	3
Sr	88	115	He	7.040	ppb	4.3	5401.22	0.0641	Pulse	0.1000	3
Mo	98	115	He	5.952	ppb	2.8	11014.65	0.1308	Pulse	0.1000	3
Ag	107	115	He	10.417	ppb	0.3	40843.70	0.4849	Pulse	0.1000	3
Cd	111	115	He	16.119	ppb	0.7	7259.93	0.0862	Pulse	0.5000	3
Sn	120	115	He	0.012	ppb	685.8	1403.45	0.0167	Pulse	0.1000	3
Sb	121	115	He	6.388	ppb	0.7	8015.94	0.0952	Pulse	0.1000	3
Ba	137	115	He	36.101	ppb	3.1	14614.88	0.1735	Pulse	0.1000	3
Tl	205	159	He	4.414	ppb	2.0	42640.02	0.1093	Pulse	0.1000	3
Pb	208	159	He	23.435	ppb	0.9	299645.31	0.7681	Pulse	0.1000	3
U	238	209	He	0.010	ppb	18.4	176.68	0.0006	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2399509.60	1.1	100.0	Analog	0.1000	3
No Gas	Ge	72	1189342.06	0.4	103.1	Pulse	0.1000	3
H2	Sc	45	177589.25	0.6	95.0	Pulse	0.1000	3
H2	Ge	72	151189.29	0.6	92.3	Pulse	0.1000	3
H2	In	115	385229.87	0.2	99.0	Pulse	0.1000	3
He	Sc	45	46755.82	2.1	100.2	Pulse	0.1000	3
He	Ge	72	81528.86	0.8	100.4	Pulse	0.1000	3
He	In	115	84236.91	0.4	97.7	Pulse	0.1000	3
He	Tb	159	390127.12	0.8	97.9	Pulse	0.1000	3
He	Bi	209	306675.35	0.4	99.2	Pulse	0.1000	3

No Gas



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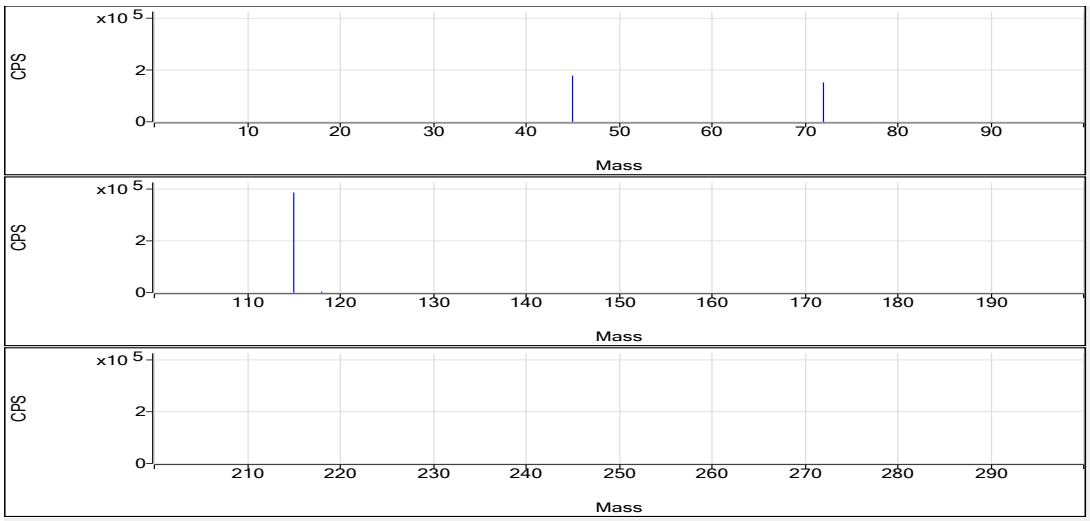
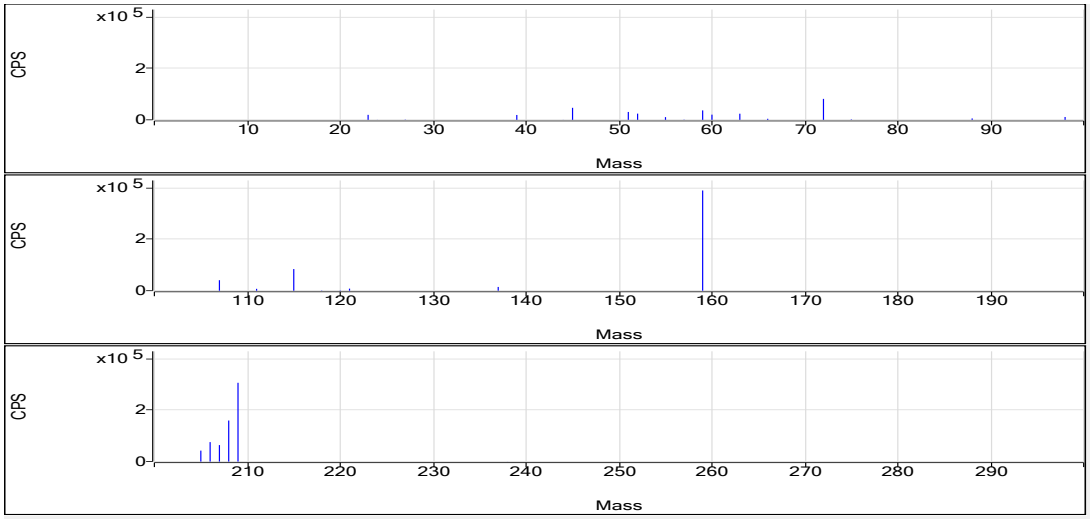


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	2.581	0.002	4740.78	0.0008	4.685E-06
Be	9	1	No Gas	2.68	0.002	4860.82	0.0008	4.685E-06
Be	9	1	No Gas	2.497	0.0019	4628.75	0.0008	4.685E-06
Se	78	2	H2	3.681	0.0015	232.67	0.0004	1.219E-05
Se	78	2	H2	4.265	0.0018	272.67	0.0004	1.219E-05
Se	78	2	H2	3.845	0.0016	244.00	0.0004	1.219E-05
Na	23	3	He	20.917	0.42	19413.30	0.0036	0.3452
Na	23	3	He	15.88	0.402	18552.09	0.0036	0.3452
Na	23	3	He	21.57	0.4223	20224.36	0.0036	0.3452
Mg	24	3	He	1.668	0.0065	300.01	0.0018	0.003497
Mg	24	3	He	1.312	0.0059	270.01	0.0018	0.003497
Mg	24	3	He	0.844	0.005	240.01	0.0018	0.003497
Al	27	3	He	32.553	0.0197	910.06	0.0006	0.0006432
Al	27	3	He	33.715	0.0204	940.06	0.0006	0.0006432
Al	27	3	He	33.882	0.0205	980.07	0.0006	0.0006432
K	39	3	He	17.497	0.4154	19203.31	0.0012	0.3951
K	39	3	He	15.242	0.4128	19052.96	0.0012	0.3951
K	39	3	He	-9.097	0.3845	18412.20	0.0012	0.3951
Ca	44	3	He	33.471	0.005	230.01	0.0001	0.002715
Ca	44	3	He	27.168	0.0046	210.01	0.0001	0.002715
Ca	44	3	He	46.365	0.0058	280.01	0.0001	0.002715
Ti	47	3	He	0.675	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	0.273	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	0.647	0.0004	20.00	0.0005	7.003E-05
V	51	3	He	29.056	0.66	30507.97	0.0219	0.02486
V	51	3	He	29.356	0.6666	30764.45	0.0219	0.02486
V	51	3	He	28.035	0.6377	30538.05	0.0219	0.02486
Cr	52	3	He	15.688	0.5097	23559.90	0.0299	0.03997
Cr	52	3	He	16.076	0.5213	24060.51	0.0299	0.03997
Cr	52	3	He	15.851	0.5146	24641.67	0.0299	0.03997
Mn	55	3	He	17.956	0.2331	10774.39	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	17.714	0.23	10614.16	0.0128	0.002639
Mn	55	3	He	16.136	0.2097	10043.76	0.0128	0.002639
Fe	57	3	He	25.47	0.0162	750.05	0.0006	0.001429
Fe	57	3	He	29.988	0.0189	870.07	0.0006	0.001429
Fe	57	3	He	31.328	0.0196	940.06	0.0006	0.001429
Co	59	3	He	13.844	0.7813	36115.86	0.0563	0.002149
Co	59	3	He	13.973	0.7886	36396.71	0.0563	0.002149
Co	59	3	He	13.897	0.7843	37559.75	0.0563	0.002149
Ni	60	3	He	29.906	0.2595	21136.10	0.0086	0.002834
Ni	60	3	He	28.224	0.2451	19824.30	0.0086	0.002834
Ni	60	3	He	27.068	0.2352	19343.48	0.0086	0.002834
Cu	63	3	He	11.333	0.2957	24080.86	0.0257	0.004757
Cu	63	3	He	11.687	0.3048	24651.76	0.0257	0.004757
Cu	63	3	He	10.588	0.2766	22748.62	0.0257	0.004757
Zn	66	3	He	15.054	0.0476	3880.62	0.0029	0.003818
Zn	66	3	He	17.077	0.0535	4330.81	0.0029	0.003818
Zn	66	3	He	14.975	0.0474	3900.65	0.0029	0.003818
As	75	3	He	9.316	0.0199	1620.10	0.002	0.0008061
As	75	3	He	9.624	0.0205	1660.11	0.002	0.0008061
As	75	3	He	9.172	0.0196	1612.10	0.002	0.0008061
Sr	88	3	He	6.913	0.063	5301.13	0.009	0.0009645
Sr	88	3	He	6.825	0.0622	5221.15	0.009	0.0009645
Sr	88	3	He	7.382	0.0672	5681.37	0.009	0.0009645
Mo	98	3	He	6.075	0.1335	11234.78	0.0219	0.0002706
Mo	98	3	He	6.019	0.1323	11104.76	0.0219	0.0002706
Mo	98	3	He	5.76	0.1266	10704.41	0.0219	0.0002706
Ag	107	3	He	10.4	0.4841	40749.97	0.0465	0.0006206
Ag	107	3	He	10.447	0.4863	40830.37	0.0465	0.0006206
Ag	107	3	He	10.403	0.4842	40950.75	0.0465	0.0006206
Cd	111	3	He	16.232	0.0868	7305.96	0.0053	0
Cd	111	3	He	16.126	0.0862	7239.91	0.0053	0
Cd	111	3	He	15.998	0.0855	7233.91	0.0053	0
Sn	120	3	He	0.093	0.0179	1510.13	0.0158	0.01648
Sn	120	3	He	0.013	0.0167	1400.12	0.0158	0.01648
Sn	120	3	He	-0.07	0.0154	1300.10	0.0158	0.01648
Sb	121	3	He	6.342	0.0945	7952.61	0.0149	0.0002698
Sb	121	3	He	6.431	0.0958	8042.62	0.0149	0.0002698
Sb	121	3	He	6.392	0.0952	8052.59	0.0149	0.0002698
Ba	137	3	He	34.922	0.1678	14127.72	0.0048	0.0002317
Ba	137	3	He	36.277	0.1743	14638.26	0.0048	0.0002317
Ba	137	3	He	37.103	0.1783	15078.67	0.0048	0.0002317
Tl	205	3	He	4.451	0.1102	43131.79	0.0247	0.0001339
Tl	205	3	He	4.314	0.1068	41285.49	0.0247	0.0001339
Tl	205	3	He	4.478	0.1109	43502.77	0.0247	0.0001339
Pb	208	3	He	23.486	0.7698	161739.45	0.0327	0.00107
Pb	208	3	He	23.625	0.7743	159472.19	0.0327	0.00107
Pb	208	3	He	23.195	0.7602	158094.68	0.0327	0.00107
U	238	3	He	0.009	0.0005	160.01	0.0493	7.55E-05
U	238	3	He	0.012	0.0007	210.01	0.0493	7.55E-05
U	238	3	He	0.009	0.0005	160.01	0.0493	7.55E-05
Sc	45	1	No Gas			2402518.25		
Sc	45	1	No Gas			2372211.68		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2423798.87		
Ge	72	1	No Gas			1192178.65		
Ge	72	1	No Gas			1184441.39		
Ge	72	1	No Gas			1191406.15		
Sc	45	2	H2			176823.47		
Sc	45	2	H2			177096.35		
Sc	45	2	H2			178847.93		
Ge	72	2	H2			150342.69		
Ge	72	2	H2			152233.64		
Ge	72	2	H2			150991.54		
In	115	2	H2			385560.19		
In	115	2	H2			385754.45		
In	115	2	H2			384374.96		
Sc	45	3	He			46224.23		
Sc	45	3	He			46153.98		
Sc	45	3	He			47889.24		
Ge	72	3	He			81441.62		
Ge	72	3	He			80888.55		
Ge	72	3	He			82256.40		
In	115	3	He			84184.29		
In	115	3	He			83973.32		
In	115	3	He			84576.98		
Tb	159	3	He			391443.86		
Tb	159	3	He			386560.50		
Tb	159	3	He			392376.99		
Bi	209	3	He			305210.17		
Bi	209	3	He			307718.98		
Bi	209	3	He			307096.91		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

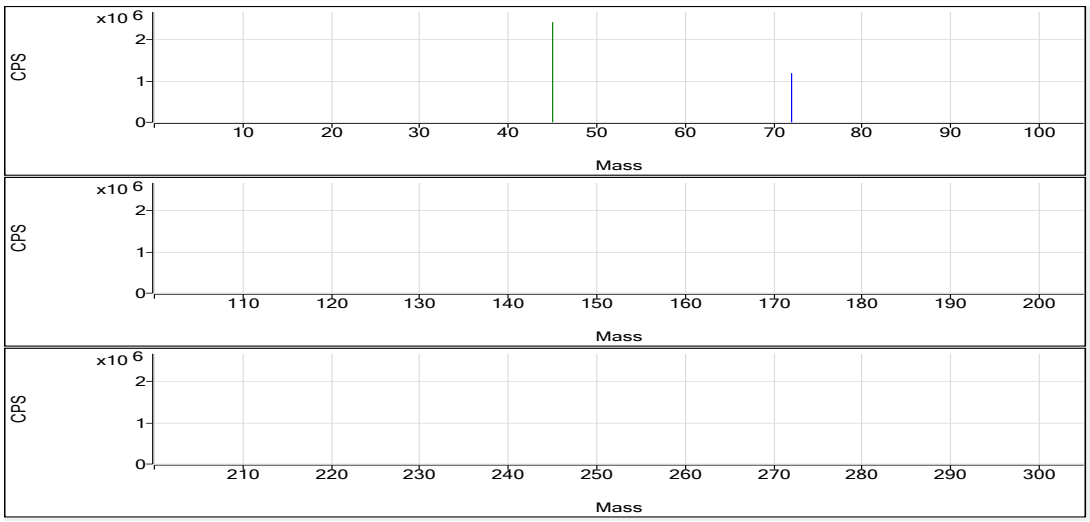
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.007	ppb	43.3	24.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.017	ppb	147.0	2.89	0.0000	Pulse	1.5000	3
Na	23	45	He	10.119	ppb	51.4	18004.77	0.3814	Pulse	0.1000	3
Mg	24	45	He	0.377	ppb	108.6	196.68	0.0042	Pulse	0.1000	3
Al	27	45	He	0.721	ppb	105.6	50.00	0.0011	Pulse	0.1000	3
K	39	45	He	5.295	ppb	218.4	18949.45	0.4012	Pulse	0.1000	3
Ca	44	45	He	15.171	ppb	105.1	176.68	0.0037	Pulse	0.1000	3
Ti	47	45	He	0.135	ppb	340.6	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	0.273	ppb	22.6	1455.42	0.0308	Pulse	0.5000	3
Cr	52	45	He	-0.070	ppb	N/A	1786.84	0.0379	Pulse	0.1000	3
Mn	55	45	He	0.075	ppb	102.6	170.01	0.0036	Pulse	0.1000	3
Fe	57	45	He	1.054	ppb	108.6	96.67	0.0020	Pulse	0.1000	3
Co	59	45	He	0.031	ppb	19.2	183.34	0.0039	Pulse	0.1000	3
Ni	60	72	He	0.007	ppb	1431.8	236.68	0.0029	Pulse	0.1000	3
Cu	63	72	He	0.042	ppb	38.6	476.69	0.0058	Pulse	0.1000	3
Zn	66	72	He	1.744	ppb	22.8	726.71	0.0089	Pulse	0.1000	3
As	75	72	He	0.001	ppb	11088.1	66.00	0.0008	Pulse	0.5000	3
Sr	88	115	He	-0.024	ppb	N/A	63.33	0.0007	Pulse	0.1000	3
Mo	98	115	He	0.038	ppb	49.2	93.33	0.0011	Pulse	0.1000	3
Ag	107	115	He	-0.001	ppb	N/A	50.00	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.012	ppb	44.2	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.122	ppb	222.1	1567.25	0.0184	Pulse	0.1000	3
Sb	121	115	He	0.013	ppb	101.1	40.00	0.0005	Pulse	0.1000	3
Ba	137	115	He	0.034	ppb	257.6	33.33	0.0004	Pulse	0.1000	3
Tl	205	159	He	0.059	ppb	19.9	623.37	0.0016	Pulse	0.1000	3
Pb	208	159	He	0.017	ppb	23.1	636.70	0.0016	Pulse	0.1000	3
U	238	209	He	0.004	ppb	1.4	80.00	0.0003	Pulse	0.1000	3

ISTD Table:

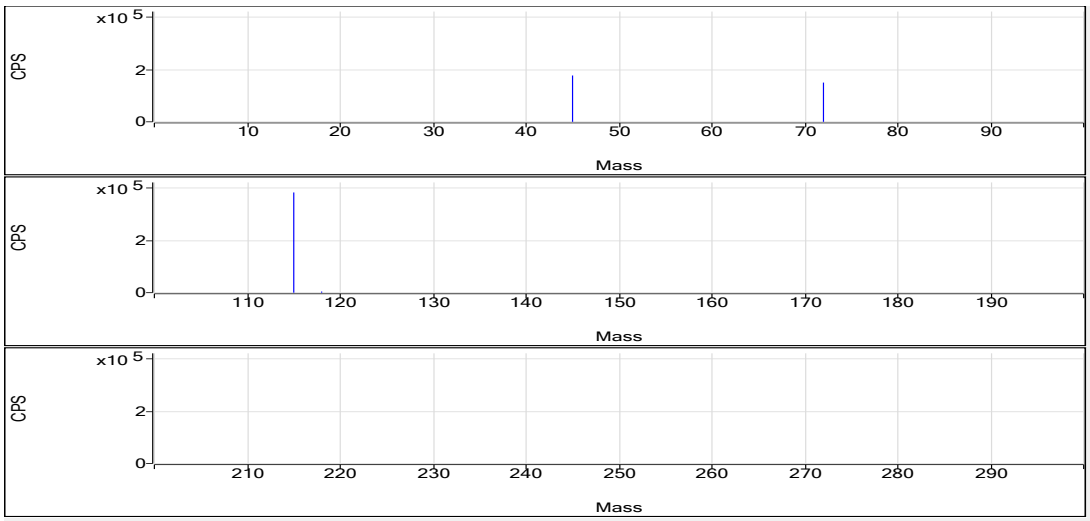
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2433131.68	0.9	101.4	Analog	0.1000	3
No Gas	Ge	72	1192009.22	0.5	103.4	Pulse	0.1000	3
H2	Sc	45	177018.93	1.2	94.7	Pulse	0.1000	3
H2	Ge	72	149886.56	1.0	91.6	Pulse	0.1000	3
H2	In	115	382960.02	0.4	98.4	Pulse	0.1000	3
He	Sc	45	47248.00	2.4	101.3	Pulse	0.1000	3
He	Ge	72	81706.96	0.7	100.6	Pulse	0.1000	3
He	In	115	85145.69	0.8	98.8	Pulse	0.1000	3
He	Tb	159	391632.43	1.2	98.3	Pulse	0.1000	3
He	Bi	209	305784.89	1.0	98.9	Pulse	0.1000	3

No Gas

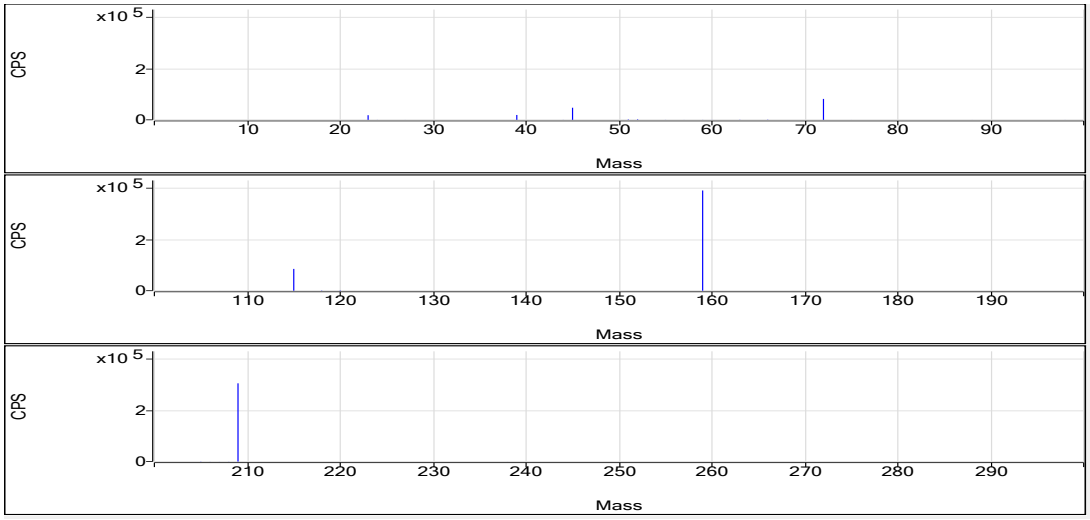


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.008	0	26.00	0.0008	4.685E-06
Be	9	1	No Gas	0.003	0	18.00	0.0008	4.685E-06
Be	9	1	No Gas	0.009	0	28.00	0.0008	4.685E-06
Se	78	2	H2	0.002	0	2.00	0.0004	1.219E-05
Se	78	2	H2	0.046	0	4.67	0.0004	1.219E-05
Se	78	2	H2	0.003	0	2.00	0.0004	1.219E-05
Na	23	3	He	12.217	0.3889	18041.45	0.0036	0.3452
Na	23	3	He	13.943	0.395	18482.09	0.0036	0.3452
Na	23	3	He	4.197	0.3602	17490.78	0.0036	0.3452
Mg	24	3	He	0.814	0.005	230.01	0.0018	0.003497
Mg	24	3	He	0.315	0.0041	190.01	0.0018	0.003497
Mg	24	3	He	0.002	0.0035	170.01	0.0018	0.003497
Al	27	3	He	1.479	0.0015	70.00	0.0006	0.0006432
Al	27	3	He	0.727	0.0011	50.00	0.0006	0.0006432
Al	27	3	He	-0.044	0.0006	30.00	0.0006	0.0006432
K	39	3	He	5.24	0.4012	18612.38	0.0012	0.3951
K	39	3	He	16.885	0.4147	19403.43	0.0012	0.3951
K	39	3	He	-6.24	0.3878	18832.54	0.0012	0.3951
Ca	44	3	He	1.292	0.0028	130.01	0.0001	0.002715
Ca	44	3	He	32.586	0.0049	230.01	0.0001	0.002715
Ca	44	3	He	11.634	0.0035	170.01	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.666	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	0.338	0.0322	1496.09	0.0219	0.02486
V	51	3	He	0.265	0.0307	1434.08	0.0219	0.02486
V	51	3	He	0.215	0.0296	1436.08	0.0219	0.02486
Cr	52	3	He	-0.054	0.0384	1780.16	0.0299	0.03997
Cr	52	3	He	0.079	0.0423	1980.21	0.0299	0.03997
Cr	52	3	He	-0.235	0.033	1600.14	0.0299	0.03997
Mn	55	3	He	0.013	0.0028	130.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.161	0.0047	220.01	0.0128	0.002639
Mn	55	3	He	0.051	0.0033	160.01	0.0128	0.002639
Fe	57	3	He	-0.233	0.0013	60.00	0.0006	0.001429
Fe	57	3	He	1.956	0.0026	120.01	0.0006	0.001429
Fe	57	3	He	1.44	0.0023	110.01	0.0006	0.001429
Co	59	3	He	0.035	0.0041	190.01	0.0563	0.002149
Co	59	3	He	0.034	0.0041	190.01	0.0563	0.002149
Co	59	3	He	0.024	0.0035	170.01	0.0563	0.002149
Ni	60	3	He	-0.043	0.0025	200.01	0.0086	0.002834
Ni	60	3	He	0.124	0.0039	320.01	0.0086	0.002834
Ni	60	3	He	-0.06	0.0023	190.01	0.0086	0.002834
Cu	63	3	He	0.055	0.0062	500.03	0.0257	0.004757
Cu	63	3	He	0.047	0.006	490.02	0.0257	0.004757
Cu	63	3	He	0.024	0.0054	440.02	0.0257	0.004757
Zn	66	3	He	1.95	0.0095	770.05	0.0029	0.003818
Zn	66	3	He	1.996	0.0096	790.05	0.0029	0.003818
Zn	66	3	He	1.287	0.0076	620.04	0.0029	0.003818
As	75	3	He	-0.068	0.0007	54.00	0.002	0.0008061
As	75	3	He	0.047	0.0009	74.00	0.002	0.0008061
As	75	3	He	0.023	0.0009	70.00	0.002	0.0008061
Sr	88	3	He	0.025	0.0012	100.00	0.009	0.0009645
Sr	88	3	He	-0.055	0.0005	40.00	0.009	0.0009645
Sr	88	3	He	-0.042	0.0006	50.00	0.009	0.0009645
Mo	98	3	He	0.02	0.0007	60.00	0.0219	0.0002706
Mo	98	3	He	0.036	0.0011	90.00	0.0219	0.0002706
Mo	98	3	He	0.057	0.0015	130.00	0.0219	0.0002706
Ag	107	3	He	-0.006	0.0004	30.00	0.0465	0.0006206
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Ag	107	3	He	0.004	0.0008	70.00	0.0465	0.0006206
Cd	111	3	He	0.018	0.0001	8.00	0.0053	0
Cd	111	3	He	0.009	0	4.00	0.0053	0
Cd	111	3	He	0.009	0	4.00	0.0053	0
Sn	120	3	He	0.045	0.0172	1450.13	0.0158	0.01648
Sn	120	3	He	-0.102	0.0149	1270.10	0.0158	0.01648
Sn	120	3	He	0.422	0.0231	1981.53	0.0158	0.01648
Sb	121	3	He	0.006	0.0004	30.00	0.0149	0.0002698
Sb	121	3	He	0.029	0.0007	60.00	0.0149	0.0002698
Sb	121	3	He	0.005	0.0004	30.00	0.0149	0.0002698
Ba	137	3	He	0.125	0.0008	70.00	0.0048	0.0002317
Ba	137	3	He	-0.048	0	0.00	0.0048	0.0002317
Ba	137	3	He	0.025	0.0004	30.00	0.0048	0.0002317
Tl	205	3	He	0.048	0.0013	520.03	0.0247	0.0001339
Tl	205	3	He	0.071	0.0019	740.05	0.0247	0.0001339
Tl	205	3	He	0.058	0.0016	610.04	0.0247	0.0001339
Pb	208	3	He	0.018	0.0017	340.02	0.0327	0.00107
Pb	208	3	He	0.013	0.0015	270.01	0.0327	0.00107
Pb	208	3	He	0.02	0.0017	380.02	0.0327	0.00107
U	238	3	He	0.004	0.0003	80.00	0.0493	7.55E-05
U	238	3	He	0.004	0.0003	80.00	0.0493	7.55E-05
U	238	3	He	0.004	0.0003	80.00	0.0493	7.55E-05
Sc	45	1	No Gas			2433097.15		
Sc	45	1	No Gas			2454157.31		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2412140.59		
Ge	72	1	No Gas			1198237.40		
Ge	72	1	No Gas			1190535.37		
Ge	72	1	No Gas			1187254.90		
Sc	45	2	H2			178290.56		
Sc	45	2	H2			174547.26		
Sc	45	2	H2			178218.96		
Ge	72	2	H2			151151.80		
Ge	72	2	H2			148323.43		
Ge	72	2	H2			150184.46		
In	115	2	H2			384694.41		
In	115	2	H2			382552.30		
In	115	2	H2			381633.35		
Sc	45	3	He			46395.59		
Sc	45	3	He			46786.06		
Sc	45	3	He			48562.36		
Ge	72	3	He			81090.07		
Ge	72	3	He			82056.01		
Ge	72	3	He			81974.80		
In	115	3	He			84395.98		
In	115	3	He			85441.92		
In	115	3	He			85623.11		
Tb	159	3	He			396461.09		
Tb	159	3	He			391252.92		
Tb	159	3	He			387183.28		
Bi	209	3	He			309378.26		
Bi	209	3	He			304352.89		
Bi	209	3	He			303623.53		

Quantitation Report

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Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	8/10/2023 7:40:10 PM
Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

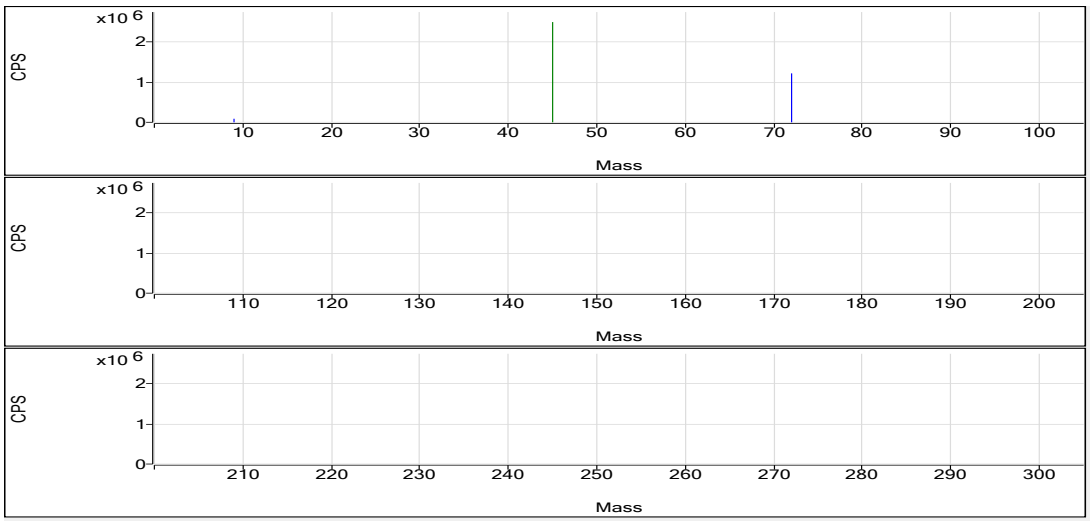
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	46.373	ppb	0.9	88248.75	0.0354	Pulse	0.5000	3
Se	78	72	H2	52.710	ppb	1.2	3370.63	0.0220	Pulse	1.5000	3
Na	23	45	He	4831.181	ppb	2.2	835605.07	17.6265	Pulse	0.1000	3
Mg	24	45	He	4968.867	ppb	1.9	422839.50	8.9192	Pulse	0.1000	3
Al	27	45	He	4869.934	ppb	2.4	135093.09	2.8497	Pulse	0.1000	3
K	39	45	He	5039.227	ppb	1.5	296909.79	6.2624	Pulse	0.1000	3
Ca	44	45	He	5216.157	ppb	1.7	16840.23	0.3551	Pulse	0.1000	3
Ti	47	45	He	4967.885	ppb	3.2	126436.49	2.6676	Pulse	0.1000	3
V	51	45	He	508.949	ppb	1.9	528591.29	11.1501	Pulse	0.5000	3
Cr	52	45	He	484.330	ppb	1.8	689364.13	14.5412	Pulse	0.1000	3
Mn	55	45	He	501.524	ppb	2.2	305243.90	6.4391	Pulse	0.1000	3
Fe	57	45	He	5033.050	ppb	2.0	138691.24	2.9256	Pulse	0.1000	3
Co	59	45	He	488.470	ppb	2.5	1303305.71	27.4944	Pulse	0.1000	3
Ni	60	72	He	512.128	ppb	0.7	365105.11	4.3985	Pulse	0.1000	3
Cu	63	72	He	487.296	ppb	0.3	1038776.50	12.5142	Pulse	0.1000	3
Zn	66	72	He	511.369	ppb	0.2	123907.85	1.4927	Pulse	0.1000	3
As	75	72	He	518.241	ppb	0.6	88204.78	1.0626	Pulse	0.5000	3
Sr	88	115	He	50.040	ppb	2.0	38606.88	0.4498	Pulse	0.1000	3
Mo	98	115	He	51.181	ppb	0.6	96349.36	1.1225	Pulse	0.1000	3
Ag	107	115	He	50.954	ppb	1.0	203366.18	2.3693	Pulse	0.1000	3
Cd	111	115	He	51.100	ppb	1.8	23451.00	0.2732	Pulse	0.5000	3
Sn	120	115	He	51.489	ppb	0.8	71236.49	0.8299	Pulse	0.1000	3
Sb	121	115	He	51.710	ppb	2.4	65951.03	0.7683	Pulse	0.1000	3
Ba	137	115	He	513.614	ppb	1.5	211598.82	2.4652	Pulse	0.1000	3
Tl	205	159	He	51.405	ppb	0.5	500052.27	1.2712	Pulse	0.1000	3
Pb	208	159	He	51.973	ppb	0.8	669561.77	1.7021	Pulse	0.1000	3
U	238	209	He	50.586	ppb	0.6	763015.01	2.4919	Pulse	0.1000	3

ISTD Table:

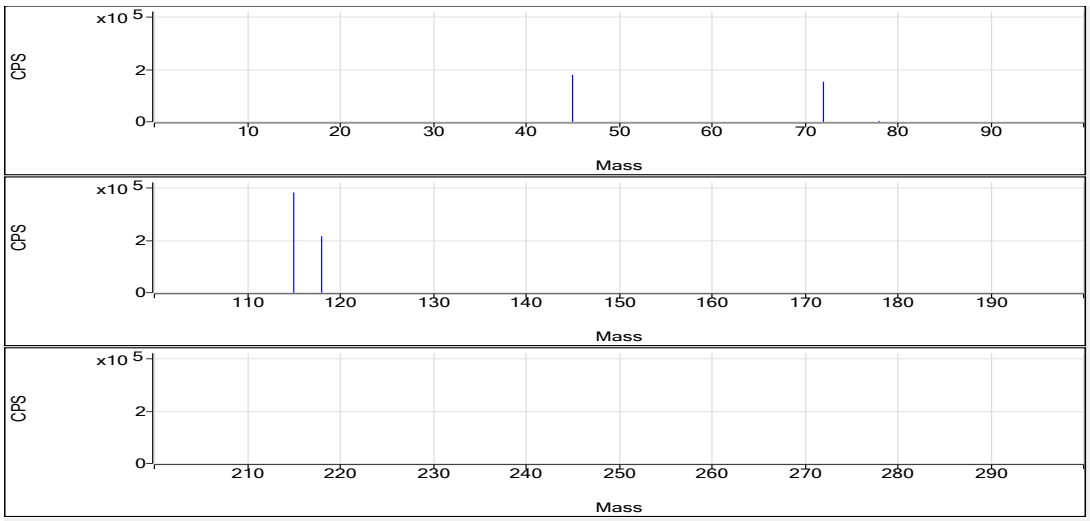
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2494548.82	0.7	104.0	Analog	0.1000	3
No Gas	Ge	72	1217678.00	1.0	105.6	Pulse	0.1000	3
H2	Sc	45	179478.57	0.9	96.0	Pulse	0.1000	3
H2	Ge	72	153240.95	1.2	93.6	Pulse	0.1000	3
H2	In	115	382921.14	0.5	98.4	Pulse	0.1000	3
He	Sc	45	47421.17	2.4	101.7	Pulse	0.1000	3
He	Ge	72	83007.56	0.3	102.2	Pulse	0.1000	3
He	In	115	85838.59	1.0	99.6	Pulse	0.1000	3
He	Tb	159	393371.74	0.7	98.7	Pulse	0.1000	3
He	Bi	209	306198.03	0.2	99.0	Pulse	0.1000	3

No Gas

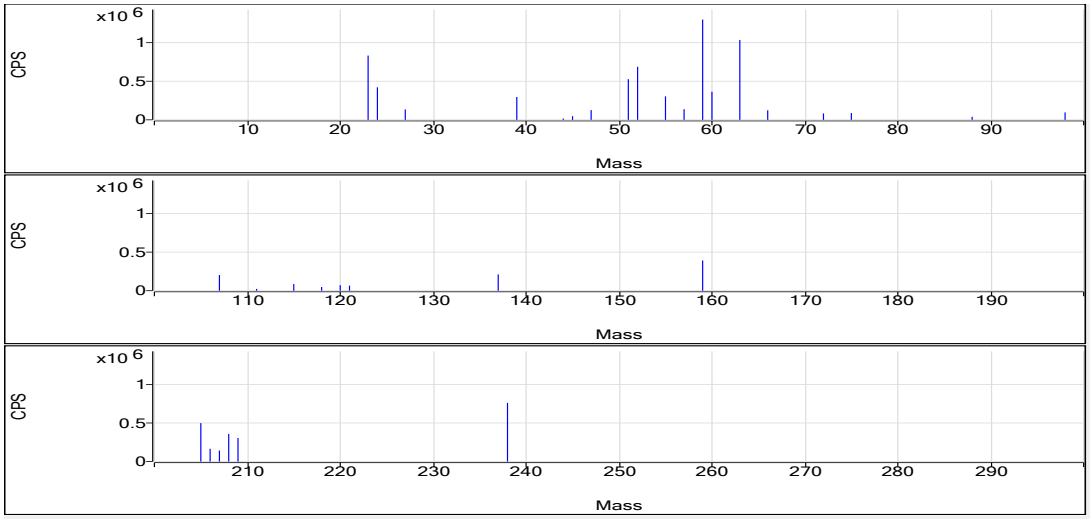


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	46.179	0.0352	88537.68	0.0008	4.685E-06
Be	9	1	No Gas	46.088	0.0352	87262.35	0.0008	4.685E-06
Be	9	1	No Gas	46.851	0.0357	88946.21	0.0008	4.685E-06
Se	78	2	H2	52.101	0.0217	3315.06	0.0004	1.219E-05
Se	78	2	H2	52.715	0.022	3417.75	0.0004	1.219E-05
Se	78	2	H2	53.315	0.0222	3379.07	0.0004	1.219E-05
Na	23	3	He	4714.982	17.2109	838550.38	0.0036	0.3452
Na	23	3	He	4925.441	17.9637	841163.89	0.0036	0.3452
Na	23	3	He	4853.12	17.705	827100.93	0.0036	0.3452
Mg	24	3	He	4863.467	8.7301	425349.99	0.0018	0.003497
Mg	24	3	He	5045.409	9.0566	424081.40	0.0018	0.003497
Mg	24	3	He	4997.723	8.971	419087.10	0.0018	0.003497
Al	27	3	He	4750.782	2.78	135448.24	0.0006	0.0006432
Al	27	3	He	4984.222	2.9166	136571.37	0.0006	0.0006432
Al	27	3	He	4874.799	2.8526	133259.67	0.0006	0.0006432
K	39	3	He	4959.54	6.1696	300595.48	0.0012	0.3951
K	39	3	He	5105.105	6.3391	296832.01	0.0012	0.3951
K	39	3	He	5053.036	6.2785	293301.89	0.0012	0.3951
Ca	44	3	He	5268.132	0.3586	17471.13	0.0001	0.002715
Ca	44	3	He	5112.744	0.3481	16299.60	0.0001	0.002715
Ca	44	3	He	5267.597	0.3586	16749.95	0.0001	0.002715
Ti	47	3	He	4787.301	2.5706	125245.39	0.0005	7.003E-05
Ti	47	3	He	5068.274	2.7215	127435.12	0.0005	7.003E-05
Ti	47	3	He	5048.081	2.7106	126628.95	0.0005	7.003E-05
V	51	3	He	497.866	10.9078	531451.19	0.0219	0.02486
V	51	3	He	514.053	11.2616	527334.63	0.0219	0.02486
V	51	3	He	514.928	11.2808	526988.06	0.0219	0.02486
Cr	52	3	He	474.394	14.2437	693981.55	0.0299	0.03997
Cr	52	3	He	488.243	14.6583	686386.40	0.0299	0.03997
Cr	52	3	He	490.353	14.7215	687724.44	0.0299	0.03997
Mn	55	3	He	488.801	6.2759	305772.91	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	505.796	6.494	304084.90	0.0128	0.002639
Mn	55	3	He	509.973	6.5476	305873.88	0.0128	0.002639
Fe	57	3	He	4918.811	2.8592	139306.88	0.0006	0.001429
Fe	57	3	He	5079.16	2.9524	138247.15	0.0006	0.001429
Fe	57	3	He	5101.179	2.9652	138519.70	0.0006	0.001429
Co	59	3	He	474.701	26.7194	1301826.70	0.0563	0.002149
Co	59	3	He	493.181	27.7595	1299861.15	0.0563	0.002149
Co	59	3	He	497.527	28.0041	1308229.28	0.0563	0.002149
Ni	60	3	He	508.363	4.3662	363537.53	0.0086	0.002834
Ni	60	3	He	513.03	4.4062	364881.36	0.0086	0.002834
Ni	60	3	He	514.99	4.4231	366896.44	0.0086	0.002834
Cu	63	3	He	489.111	12.5608	1045833.66	0.0257	0.004757
Cu	63	3	He	485.737	12.4741	1032983.89	0.0257	0.004757
Cu	63	3	He	487.039	12.5076	1037511.94	0.0257	0.004757
Zn	66	3	He	512.394	1.4957	124535.97	0.0029	0.003818
Zn	66	3	He	511.73	1.4938	123699.90	0.0029	0.003818
Zn	66	3	He	509.982	1.4887	123487.69	0.0029	0.003818
As	75	3	He	518.913	1.064	88589.89	0.002	0.0008061
As	75	3	He	521.213	1.0687	88499.32	0.002	0.0008061
As	75	3	He	514.597	1.0551	87525.13	0.002	0.0008061
Sr	88	3	He	51.13	0.4596	39054.88	0.009	0.0009645
Sr	88	3	He	49.242	0.4427	38392.84	0.009	0.0009645
Sr	88	3	He	49.749	0.4472	38372.92	0.009	0.0009645
Mo	98	3	He	51.391	1.1271	95775.85	0.0219	0.0002706
Mo	98	3	He	50.805	1.1143	96641.23	0.0219	0.0002706
Mo	98	3	He	51.348	1.1261	96630.99	0.0219	0.0002706
Ag	107	3	He	51.493	2.3944	203465.15	0.0465	0.0006206
Ag	107	3	He	50.5	2.3482	203666.64	0.0465	0.0006206
Ag	107	3	He	50.869	2.3654	202966.74	0.0465	0.0006206
Cd	111	3	He	52.148	0.2788	23694.05	0.0053	0
Cd	111	3	He	50.458	0.2698	23399.63	0.0053	0
Cd	111	3	He	50.696	0.2711	23259.33	0.0053	0
Sn	120	3	He	51.897	0.8364	71072.40	0.0158	0.01648
Sn	120	3	He	51.111	0.824	71464.32	0.0158	0.01648
Sn	120	3	He	51.458	0.8295	71172.76	0.0158	0.01648
Sb	121	3	He	52.732	0.7835	66580.75	0.0149	0.0002698
Sb	121	3	He	52.085	0.7739	67122.71	0.0149	0.0002698
Sb	121	3	He	50.314	0.7476	64149.64	0.0149	0.0002698
Ba	137	3	He	521.809	2.5046	212830.04	0.0048	0.0002317
Ba	137	3	He	511.883	2.4569	213094.33	0.0048	0.0002317
Ba	137	3	He	507.148	2.4342	208872.09	0.0048	0.0002317
Tl	205	3	He	51.345	1.2697	503269.06	0.0247	0.0001339
Tl	205	3	He	51.163	1.2652	494318.74	0.0247	0.0001339
Tl	205	3	He	51.707	1.2787	502569.02	0.0247	0.0001339
Pb	208	3	He	51.995	1.7028	362650.50	0.0327	0.00107
Pb	208	3	He	52.387	1.7157	359499.29	0.0327	0.00107
Pb	208	3	He	51.537	1.6879	355878.47	0.0327	0.00107
U	238	3	He	50.944	2.5096	767488.89	0.0493	7.55E-05
U	238	3	He	50.453	2.4854	760016.63	0.0493	7.55E-05
U	238	3	He	50.36	2.4808	761539.52	0.0493	7.55E-05
Sc	45	1	No Gas			2513188.40		
Sc	45	1	No Gas			2481896.21		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2488561.84		
Ge	72	1	No Gas			1229862.95		
Ge	72	1	No Gas			1204378.34		
Ge	72	1	No Gas			1218792.72		
Sc	45	2	H2			179626.46		
Sc	45	2	H2			181035.39		
Sc	45	2	H2			177773.86		
Ge	72	2	H2			152475.04		
Ge	72	2	H2			155367.60		
Ge	72	2	H2			151880.22		
In	115	2	H2			384961.87		
In	115	2	H2			381141.05		
In	115	2	H2			382660.50		
Sc	45	3	He			48722.11		
Sc	45	3	He			46825.75		
Sc	45	3	He			46715.65		
Ge	72	3	He			83261.99		
Ge	72	3	He			82810.02		
Ge	72	3	He			82950.66		
In	115	3	He			85361.54		
In	115	3	He			87112.83		
In	115	3	He			86176.11		
Tb	159	3	He			396368.43		
Tb	159	3	He			390704.72		
Tb	159	3	He			393042.06		
Bi	209	3	He			305826.87		
Bi	209	3	He			305795.05		
Bi	209	3	He			306972.18		

Quantitation Report

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Sample Type	CCB
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

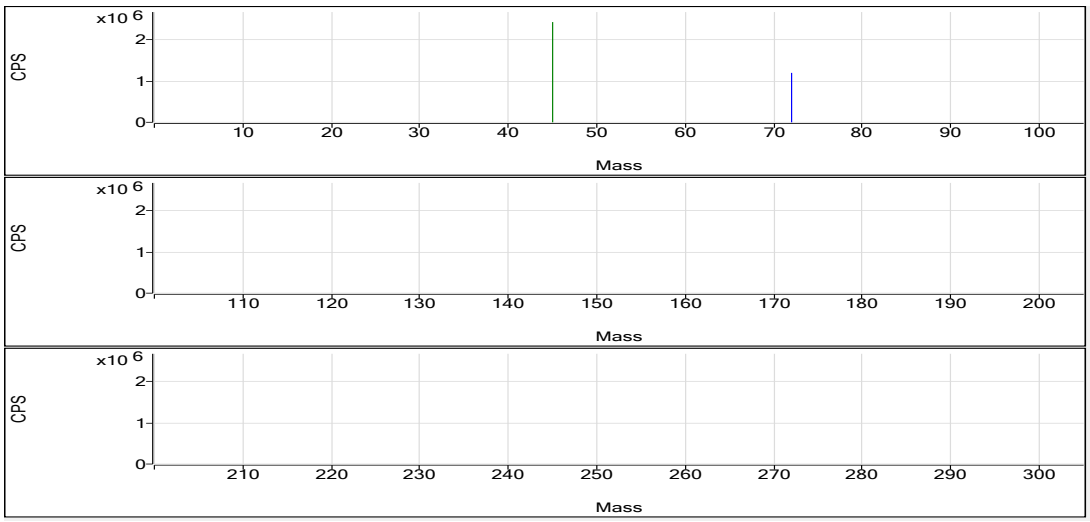
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.021	ppb	22.4	49.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.082	ppb	88.3	6.89	0.0000	Pulse	1.5000	3
Na	23	45	He	11.791	ppb	11.9	18104.94	0.3873	Pulse	0.1000	3
Mg	24	45	He	0.554	ppb	53.9	210.01	0.0045	Pulse	0.1000	3
Al	27	45	He	1.341	ppb	33.0	66.67	0.0014	Pulse	0.1000	3
K	39	45	He	3.493	ppb	68.3	18655.77	0.3991	Pulse	0.1000	3
Ca	44	45	He	14.620	ppb	137.4	173.34	0.0037	Pulse	0.1000	3
Ti	47	45	He	0.536	ppb	113.7	16.67	0.0004	Pulse	0.1000	3
V	51	45	He	0.321	ppb	7.4	1490.75	0.0319	Pulse	0.5000	3
Cr	52	45	He	-0.021	ppb	N/A	1840.17	0.0393	Pulse	0.1000	3
Mn	55	45	He	0.239	ppb	20.8	266.68	0.0057	Pulse	0.1000	3
Fe	57	45	He	0.736	ppb	79.9	86.67	0.0019	Pulse	0.1000	3
Co	59	45	He	0.078	ppb	70.0	306.68	0.0065	Pulse	0.1000	3
Ni	60	72	He	0.009	ppb	997.1	236.68	0.0029	Pulse	0.1000	3
Cu	63	72	He	0.079	ppb	32.2	550.03	0.0068	Pulse	0.1000	3
Zn	66	72	He	1.612	ppb	14.6	690.04	0.0085	Pulse	0.1000	3
As	75	72	He	0.072	ppb	110.0	77.33	0.0010	Pulse	0.5000	3
Sr	88	115	He	-0.015	ppb	N/A	70.00	0.0008	Pulse	0.1000	3
Mo	98	115	He	0.081	ppb	28.6	173.34	0.0021	Pulse	0.1000	3
Ag	107	115	He	0.002	ppb	354.8	60.00	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.012	ppb	57.9	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.012	ppb	336.3	1410.13	0.0167	Pulse	0.1000	3
Sb	121	115	He	0.024	ppb	77.2	53.33	0.0006	Pulse	0.1000	3
Ba	137	115	He	0.083	ppb	34.4	53.33	0.0006	Pulse	0.1000	3
Tl	205	159	He	0.083	ppb	5.3	850.07	0.0022	Pulse	0.1000	3
Pb	208	159	He	0.016	ppb	14.5	620.03	0.0016	Pulse	0.1000	3
U	238	209	He	0.046	ppb	8.1	706.72	0.0023	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2426859.39	0.7	101.2	Analog	0.1000	3
No Gas	Ge	72	1196896.02	0.4	103.8	Pulse	0.1000	3
H2	Sc	45	177243.44	1.1	94.8	Pulse	0.1000	3
H2	Ge	72	148670.69	2.0	90.8	Pulse	0.1000	3
H2	In	115	380744.19	1.0	97.9	Pulse	0.1000	3
He	Sc	45	46739.37	0.8	100.2	Pulse	0.1000	3
He	Ge	72	81100.50	0.8	99.9	Pulse	0.1000	3
He	In	115	84596.45	0.9	98.1	Pulse	0.1000	3
He	Tb	159	388526.95	0.8	97.5	Pulse	0.1000	3
He	Bi	209	304927.25	0.4	98.6	Pulse	0.1000	3

No Gas



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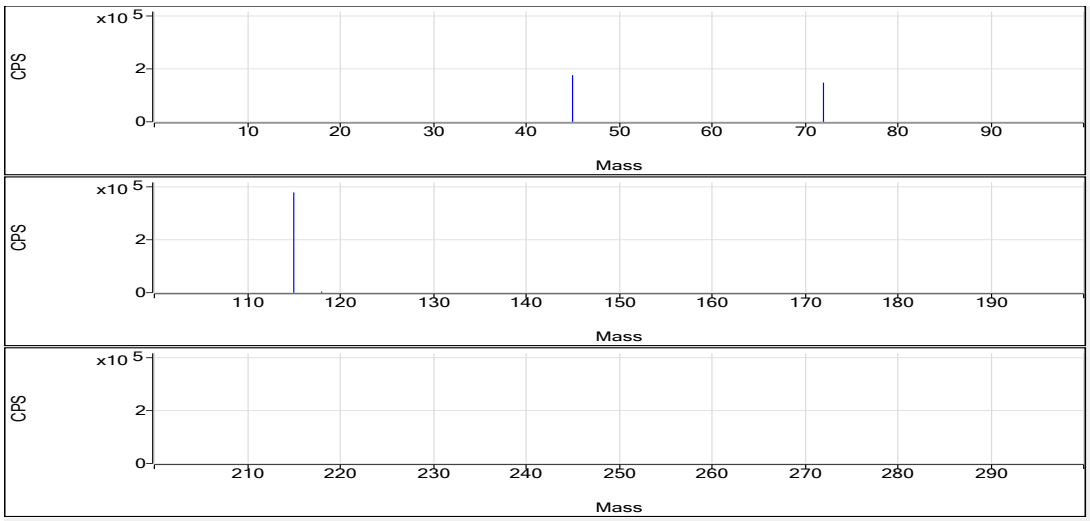
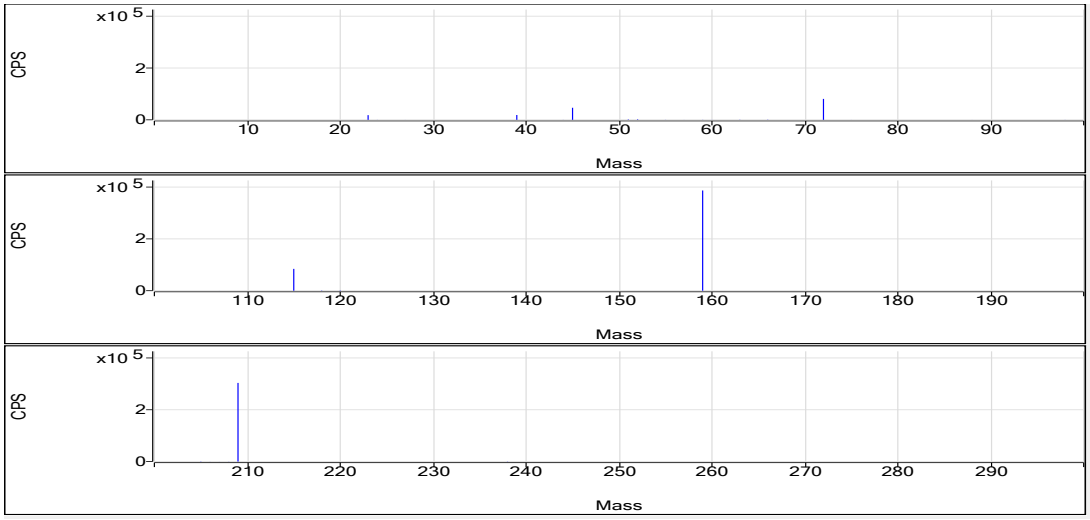


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.022	0	52.00	0.0008	4.685E-06
Be	9	1	No Gas	0.015	0	40.00	0.0008	4.685E-06
Be	9	1	No Gas	0.024	0	56.00	0.0008	4.685E-06
Se	78	2	H2	0.059	0	5.33	0.0004	1.219E-05
Se	78	2	H2	0.162	0.0001	12.00	0.0004	1.219E-05
Se	78	2	H2	0.024	0	3.33	0.0004	1.219E-05
Na	23	3	He	12.816	0.391	18281.80	0.0036	0.3452
Na	23	3	He	12.372	0.3894	18352.02	0.0036	0.3452
Na	23	3	He	10.186	0.3816	17680.99	0.0036	0.3452
Mg	24	3	He	0.316	0.0041	190.01	0.0018	0.003497
Mg	24	3	He	0.889	0.0051	240.01	0.0018	0.003497
Mg	24	3	He	0.457	0.0043	200.01	0.0018	0.003497
Al	27	3	He	1.094	0.0013	60.00	0.0006	0.0006432
Al	27	3	He	1.077	0.0013	60.00	0.0006	0.0006432
Al	27	3	He	1.852	0.0017	80.00	0.0006	0.0006432
K	39	3	He	5.524	0.4015	18772.55	0.0012	0.3951
K	39	3	He	4.088	0.3998	18842.71	0.0012	0.3951
K	39	3	He	0.868	0.3961	18352.05	0.0012	0.3951
Ca	44	3	He	29.466	0.0047	220.01	0.0001	0.002715
Ca	44	3	He	22.636	0.0042	200.01	0.0001	0.002715
Ca	44	3	He	-8.242	0.0022	100.00	0.0001	0.002715
Ti	47	3	He	1.065	0.0006	30.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.673	0.0004	20.00	0.0005	7.003E-05
V	51	3	He	0.334	0.0322	1504.09	0.0219	0.02486
V	51	3	He	0.336	0.0322	1518.09	0.0219	0.02486
V	51	3	He	0.294	0.0313	1450.08	0.0219	0.02486
Cr	52	3	He	-0.128	0.0361	1690.15	0.0299	0.03997
Cr	52	3	He	0.203	0.0461	2170.23	0.0299	0.03997
Cr	52	3	He	-0.138	0.0358	1660.14	0.0299	0.03997
Mn	55	3	He	0.294	0.0064	300.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.224	0.0055	260.01	0.0128	0.002639
Mn	55	3	He	0.198	0.0052	240.01	0.0128	0.002639
Fe	57	3	He	0.854	0.0019	90.00	0.0006	0.001429
Fe	57	3	He	0.097	0.0015	70.00	0.0006	0.001429
Fe	57	3	He	1.256	0.0022	100.00	0.0006	0.001429
Co	59	3	He	0.102	0.0079	370.02	0.0563	0.002149
Co	59	3	He	0.116	0.0087	410.02	0.0563	0.002149
Co	59	3	He	0.016	0.003	140.01	0.0563	0.002149
Ni	60	3	He	-0.098	0.002	160.01	0.0086	0.002834
Ni	60	3	He	0.057	0.0033	270.01	0.0086	0.002834
Ni	60	3	He	0.069	0.0034	280.01	0.0086	0.002834
Cu	63	3	He	0.072	0.0066	530.03	0.0257	0.004757
Cu	63	3	He	0.107	0.0075	610.04	0.0257	0.004757
Cu	63	3	He	0.058	0.0062	510.02	0.0257	0.004757
Zn	66	3	He	1.808	0.0091	730.04	0.0029	0.003818
Zn	66	3	He	1.352	0.0078	630.04	0.0029	0.003818
Zn	66	3	He	1.675	0.0087	710.04	0.0029	0.003818
As	75	3	He	0.08	0.001	78.00	0.002	0.0008061
As	75	3	He	0.147	0.0011	90.00	0.002	0.0008061
As	75	3	He	-0.011	0.0008	64.00	0.002	0.0008061
Sr	88	3	He	-0.042	0.0006	50.00	0.009	0.0009645
Sr	88	3	He	0.024	0.0012	100.00	0.009	0.0009645
Sr	88	3	He	-0.028	0.0007	60.00	0.009	0.0009645
Mo	98	3	He	0.073	0.0019	160.01	0.0219	0.0002706
Mo	98	3	He	0.063	0.0017	140.01	0.0219	0.0002706
Mo	98	3	He	0.107	0.0026	220.01	0.0219	0.0002706
Ag	107	3	He	0.004	0.0008	70.00	0.0465	0.0006206
Ag	107	3	He	0.007	0.0009	80.00	0.0465	0.0006206
Ag	107	3	He	-0.006	0.0004	30.00	0.0465	0.0006206
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.013	0.0001	6.00	0.0053	0
Cd	111	3	He	0.018	0.0001	8.00	0.0053	0
Sn	120	3	He	-0.033	0.0159	1360.11	0.0158	0.01648
Sn	120	3	He	0.048	0.0172	1460.13	0.0158	0.01648
Sn	120	3	He	0.023	0.0168	1410.14	0.0158	0.01648
Sb	121	3	He	0.013	0.0005	40.00	0.0149	0.0002698
Sb	121	3	He	0.014	0.0005	40.00	0.0149	0.0002698
Sb	121	3	He	0.046	0.001	80.00	0.0149	0.0002698
Ba	137	3	He	0.098	0.0007	60.00	0.0048	0.0002317
Ba	137	3	He	0.05	0.0005	40.00	0.0048	0.0002317
Ba	137	3	He	0.101	0.0007	60.00	0.0048	0.0002317
Tl	205	3	He	0.088	0.0023	900.07	0.0247	0.0001339
Tl	205	3	He	0.079	0.0021	810.07	0.0247	0.0001339
Tl	205	3	He	0.083	0.0022	840.06	0.0247	0.0001339
Pb	208	3	He	0.013	0.0015	330.02	0.0327	0.00107
Pb	208	3	He	0.018	0.0016	380.02	0.0327	0.00107
Pb	208	3	He	0.017	0.0016	370.02	0.0327	0.00107
U	238	3	He	0.048	0.0024	740.06	0.0493	7.55E-05
U	238	3	He	0.048	0.0024	740.05	0.0493	7.55E-05
U	238	3	He	0.041	0.0021	640.04	0.0493	7.55E-05
Sc	45	1	No Gas			2440774.18		
Sc	45	1	No Gas			2431955.90		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2407848.09		
Ge	72	1	No Gas			1193128.26		
Ge	72	1	No Gas			1202593.50		
Ge	72	1	No Gas			1194966.31		
Sc	45	2	H2			175894.35		
Sc	45	2	H2			176378.90		
Sc	45	2	H2			179457.07		
Ge	72	2	H2			145323.07		
Ge	72	2	H2			150161.64		
Ge	72	2	H2			150527.37		
In	115	2	H2			385116.36		
In	115	2	H2			377513.35		
In	115	2	H2			379602.85		
Sc	45	3	He			46756.25		
Sc	45	3	He			47127.31		
Sc	45	3	He			46334.54		
Ge	72	3	He			80386.51		
Ge	72	3	He			81252.66		
Ge	72	3	He			81662.33		
In	115	3	He			85292.24		
In	115	3	He			84738.93		
In	115	3	He			83781.82		
Tb	159	3	He			391176.91		
Tb	159	3	He			389014.80		
Tb	159	3	He			385389.13		
Bi	209	3	He			306291.03		
Bi	209	3	He			304703.39		
Bi	209	3	He			303787.32		

Quantitation Report

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Comment	F15 ICP
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

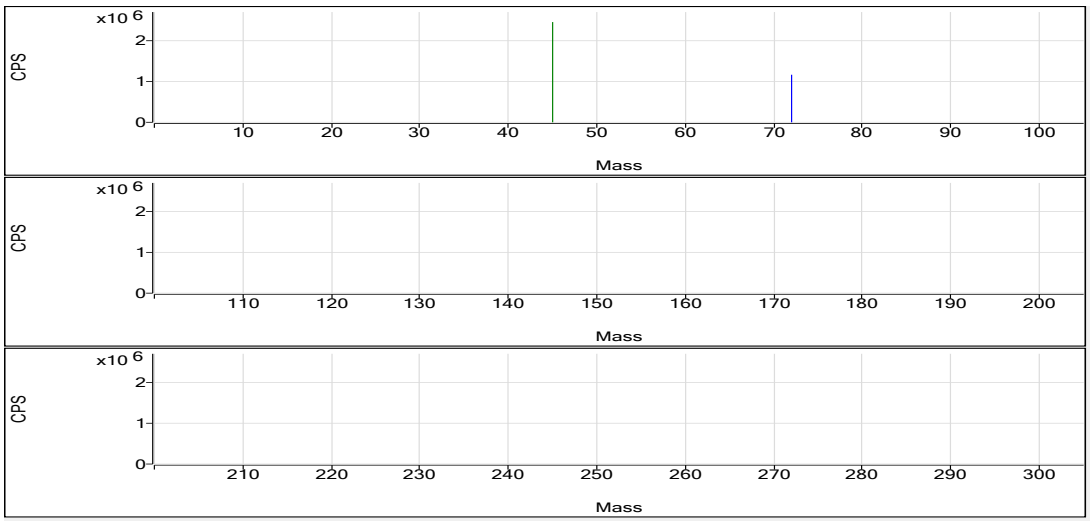
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.008	ppb	84.7	26.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.025	ppb	114.4	3.33	0.0000	Pulse	1.5000	3
Na	23	45	He	117408.336	ppb	0.7	19500067.21	420.3205	Analog	0.1000	3
Mg	24	45	He	6.894	ppb	15.5	736.71	0.0159	Pulse	0.1000	3
Al	27	45	He	2.468	ppb	68.4	96.67	0.0021	Pulse	0.1000	3
K	39	45	He	8.982	ppb	181.1	18809.40	0.4055	Pulse	0.1000	3
Ca	44	45	He	40.667	ppb	20.4	253.34	0.0055	Pulse	0.1000	3
Ti	47	45	He	0.535	ppb	154.5	16.67	0.0004	Pulse	0.1000	3
V	51	45	He	0.312	ppb	8.1	1470.08	0.0317	Pulse	0.5000	3
Cr	52	45	He	-0.098	ppb	N/A	1716.83	0.0370	Pulse	0.1000	3
Mn	55	45	He	0.265	ppb	39.3	280.02	0.0060	Pulse	0.1000	3
Fe	57	45	He	3.604	ppb	36.6	163.34	0.0035	Pulse	0.1000	3
Co	59	45	He	0.046	ppb	63.4	220.01	0.0047	Pulse	0.1000	3
Ni	60	72	He	0.113	ppb	156.0	296.68	0.0038	Pulse	0.1000	3
Cu	63	72	He	0.104	ppb	13.7	580.03	0.0074	Pulse	0.1000	3
Zn	66	72	He	2.296	ppb	9.8	820.05	0.0105	Pulse	0.1000	3
As	75	72	He	-0.011	ppb	N/A	61.33	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.130	ppb	71.9	180.01	0.0021	Pulse	0.1000	3
Mo	98	115	He	0.016	ppb	114.2	53.33	0.0006	Pulse	0.1000	3
Ag	107	115	He	0.011	ppb	74.4	96.67	0.0011	Pulse	0.1000	3
Cd	111	115	He	0.003	ppb	173.2	1.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.038	ppb	439.8	1443.46	0.0171	Pulse	0.1000	3
Sb	121	115	He	0.000	ppb	3428.6	23.33	0.0003	Pulse	0.1000	3
Ba	137	115	He	0.288	ppb	12.2	136.68	0.0016	Pulse	0.1000	3
Tl	205	159	He	0.014	ppb	25.4	190.01	0.0005	Pulse	0.1000	3
Pb	208	159	He	0.011	ppb	24.1	553.36	0.0014	Pulse	0.1000	3
U	238	209	He	0.006	ppb	19.0	110.00	0.0004	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2455908.03	1.8	102.4	Analog	0.1000	3
No Gas	Ge	72	1165349.46	1.3	101.0	Pulse	0.1000	3
H2	Sc	45	182106.44	1.6	97.4	Pulse	0.1000	3
H2	Ge	72	147732.91	1.2	90.2	Pulse	0.1000	3
H2	In	115	382054.12	0.5	98.2	Pulse	0.1000	3
He	Sc	45	46394.88	1.0	99.5	Pulse	0.1000	3
He	Ge	72	78082.99	0.8	96.2	Pulse	0.1000	3
He	In	115	84641.74	1.2	98.2	Pulse	0.1000	3
He	Tb	159	389500.88	0.5	97.7	Pulse	0.1000	3
He	Bi	209	303269.72	0.9	98.1	Pulse	0.1000	3

No Gas



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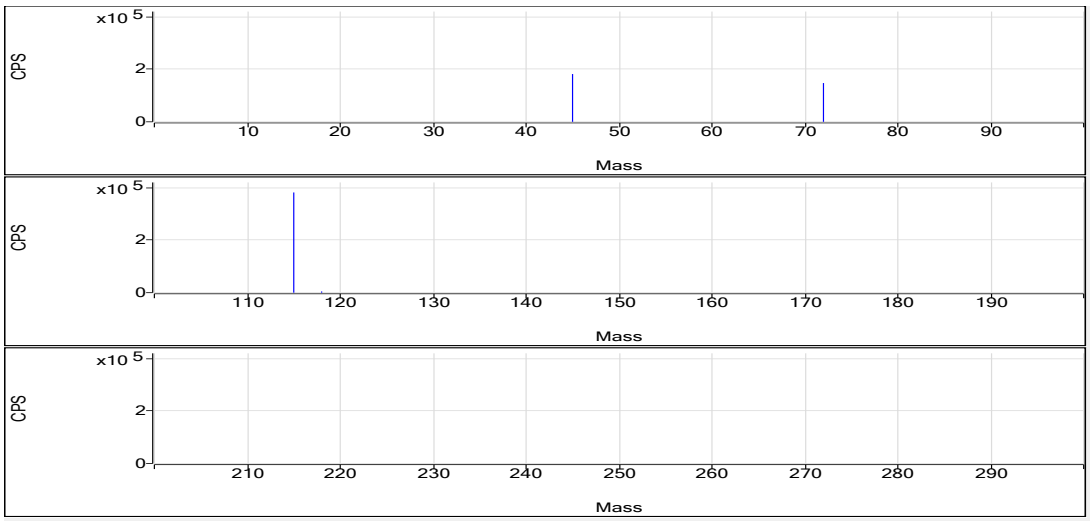
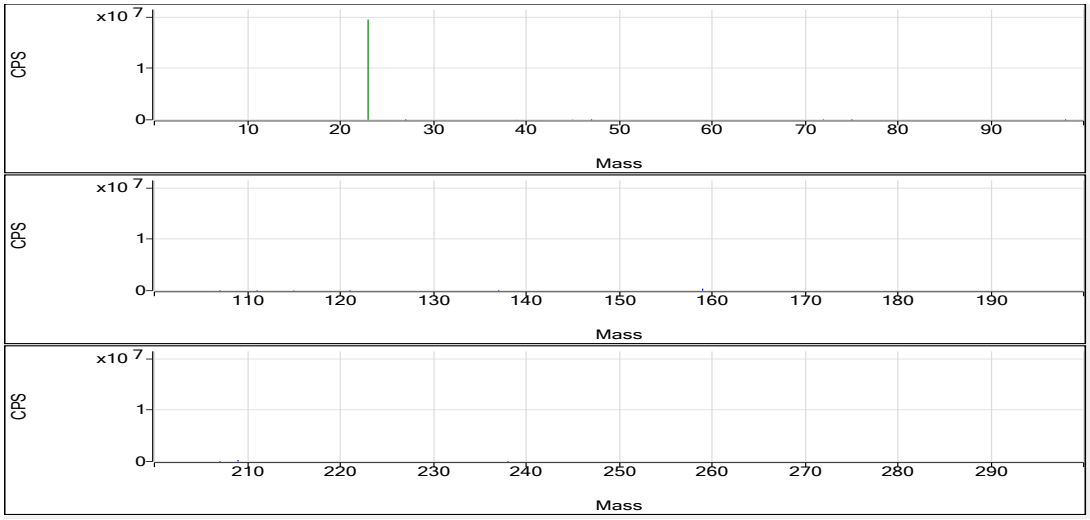


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0	0	12.00	0.0008	4.685E-06
Be	9	1	No Gas	0.012	0	34.00	0.0008	4.685E-06
Be	9	1	No Gas	0.011	0	32.00	0.0008	4.685E-06
Se	78	2	H2	0.046	0	4.67	0.0004	1.219E-05
Se	78	2	H2	-0.007	0	1.33	0.0004	1.219E-05
Se	78	2	H2	0.036	0	4.00	0.0004	1.219E-05
Na	23	3	He	117292.16	419.905	19666689.71	0.0036	0.3452
Na	23	3	He	118336.478	423.6405	19446638.46	0.0036	0.3452
Na	23	3	He	116596.37	417.4161	19386873.46	0.0036	0.3452
Mg	24	3	He	8.047	0.0179	840.05	0.0018	0.003497
Mg	24	3	He	5.943	0.0142	650.03	0.0018	0.003497
Mg	24	3	He	6.691	0.0155	720.04	0.0018	0.003497
Al	27	3	He	2.55	0.0021	100.00	0.0006	0.0006432
Al	27	3	He	4.114	0.003	140.00	0.0006	0.0006432
Al	27	3	He	0.741	0.0011	50.00	0.0006	0.0006432
K	39	3	He	2.551	0.398	18642.46	0.0012	0.3951
K	39	3	He	27.482	0.4271	19603.83	0.0012	0.3951
K	39	3	He	-3.087	0.3915	18181.90	0.0012	0.3951
Ca	44	3	He	32.508	0.0049	230.01	0.0001	0.002715
Ca	44	3	He	40.435	0.0054	250.01	0.0001	0.002715
Ca	44	3	He	49.057	0.006	280.01	0.0001	0.002715
Ti	47	3	He	1.46	0.0009	40.00	0.0005	7.003E-05
Ti	47	3	He	0.275	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	0.287	0.0311	1458.08	0.0219	0.02486
V	51	3	He	0.338	0.0322	1480.08	0.0219	0.02486
V	51	3	He	0.312	0.0317	1472.08	0.0219	0.02486
Cr	52	3	He	-0.258	0.0322	1510.12	0.0299	0.03997
Cr	52	3	He	0.033	0.041	1880.19	0.0299	0.03997
Cr	52	3	He	-0.069	0.0379	1760.17	0.0299	0.03997
Mn	55	3	He	0.26	0.006	280.02	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.372	0.0074	340.02	0.0128	0.002639
Mn	55	3	He	0.164	0.0047	220.01	0.0128	0.002639
Fe	57	3	He	2.319	0.0028	130.01	0.0006	0.001429
Fe	57	3	He	3.541	0.0035	160.01	0.0006	0.001429
Fe	57	3	He	4.953	0.0043	200.01	0.0006	0.001429
Co	59	3	He	0.079	0.0066	310.02	0.0563	0.002149
Co	59	3	He	0.031	0.0039	180.01	0.0563	0.002149
Co	59	3	He	0.027	0.0037	170.01	0.0563	0.002149
Ni	60	3	He	0.028	0.0031	240.01	0.0086	0.002834
Ni	60	3	He	-0.004	0.0028	220.01	0.0086	0.002834
Ni	60	3	He	0.317	0.0056	430.02	0.0086	0.002834
Cu	63	3	He	0.089	0.007	550.03	0.0257	0.004757
Cu	63	3	He	0.117	0.0078	610.04	0.0257	0.004757
Cu	63	3	He	0.106	0.0075	580.03	0.0257	0.004757
Zn	66	3	He	2.555	0.0113	880.06	0.0029	0.003818
Zn	66	3	He	2.184	0.0102	800.05	0.0029	0.003818
Zn	66	3	He	2.148	0.0101	780.05	0.0029	0.003818
As	75	3	He	0.006	0.0008	64.00	0.002	0.0008061
As	75	3	He	0.103	0.001	80.00	0.002	0.0008061
As	75	3	He	-0.141	0.0005	40.00	0.002	0.0008061
Sr	88	3	He	0.023	0.0012	100.00	0.009	0.0009645
Sr	88	3	He	0.195	0.0027	230.01	0.009	0.0009645
Sr	88	3	He	0.173	0.0025	210.01	0.009	0.0009645
Mo	98	3	He	0.036	0.0011	90.00	0.0219	0.0002706
Mo	98	3	He	-0.002	0.0002	20.00	0.0219	0.0002706
Mo	98	3	He	0.015	0.0006	50.00	0.0219	0.0002706
Ag	107	3	He	0.002	0.0007	60.00	0.0465	0.0006206
Ag	107	3	He	0.015	0.0013	110.00	0.0465	0.0006206
Ag	107	3	He	0.018	0.0014	120.00	0.0465	0.0006206
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0.009	0	4.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Sn	120	3	He	-0.051	0.0157	1340.11	0.0158	0.01648
Sn	120	3	He	-0.065	0.0155	1310.11	0.0158	0.01648
Sn	120	3	He	0.229	0.0201	1680.17	0.0158	0.01648
Sb	121	3	He	-0.002	0.0002	20.00	0.0149	0.0002698
Sb	121	3	He	0.014	0.0005	40.00	0.0149	0.0002698
Sb	121	3	He	-0.01	0.0001	10.00	0.0149	0.0002698
Ba	137	3	He	0.293	0.0016	140.01	0.0048	0.0002317
Ba	137	3	He	0.32	0.0018	150.01	0.0048	0.0002317
Ba	137	3	He	0.251	0.0014	120.01	0.0048	0.0002317
Tl	205	3	He	0.017	0.0005	210.01	0.0247	0.0001339
Tl	205	3	He	0.016	0.0005	210.01	0.0247	0.0001339
Tl	205	3	He	0.01	0.0004	150.01	0.0247	0.0001339
Pb	208	3	He	0.008	0.0013	200.01	0.0327	0.00107
Pb	208	3	He	0.01	0.0014	270.01	0.0327	0.00107
Pb	208	3	He	0.013	0.0015	280.01	0.0327	0.00107
U	238	3	He	0.005	0.0003	100.00	0.0493	7.55E-05
U	238	3	He	0.005	0.0003	100.00	0.0493	7.55E-05
U	238	3	He	0.007	0.0004	130.00	0.0493	7.55E-05
Sc	45	1	No Gas			2468681.68		
Sc	45	1	No Gas			2406564.18		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2492478.24		
Ge	72	1	No Gas			1172720.37		
Ge	72	1	No Gas			1147774.98		
Ge	72	1	No Gas			1175553.03		
Sc	45	2	H2			183990.95		
Sc	45	2	H2			178826.34		
Sc	45	2	H2			183502.03		
Ge	72	2	H2			149384.10		
Ge	72	2	H2			145917.80		
Ge	72	2	H2			147896.83		
In	115	2	H2			381830.54		
In	115	2	H2			380263.39		
In	115	2	H2			384068.43		
Sc	45	3	He			46836.05		
Sc	45	3	He			45903.63		
Sc	45	3	He			46444.96		
Ge	72	3	He			78183.67		
Ge	72	3	He			78615.85		
Ge	72	3	He			77449.46		
In	115	3	He			85553.68		
In	115	3	He			84798.32		
In	115	3	He			83600.84		
Tb	159	3	He			387074.45		
Tb	159	3	He			390830.89		
Tb	159	3	He			390597.30		
Bi	209	3	He			300290.82		
Bi	209	3	He			303810.07		
Bi	209	3	He			305708.28		

Quantitation Report

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Acq Time	8/10/2023 7:49:01 PM
Sample Name	LCS 410-403332/2-A
Sample Type	Sample
Comment	F15 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

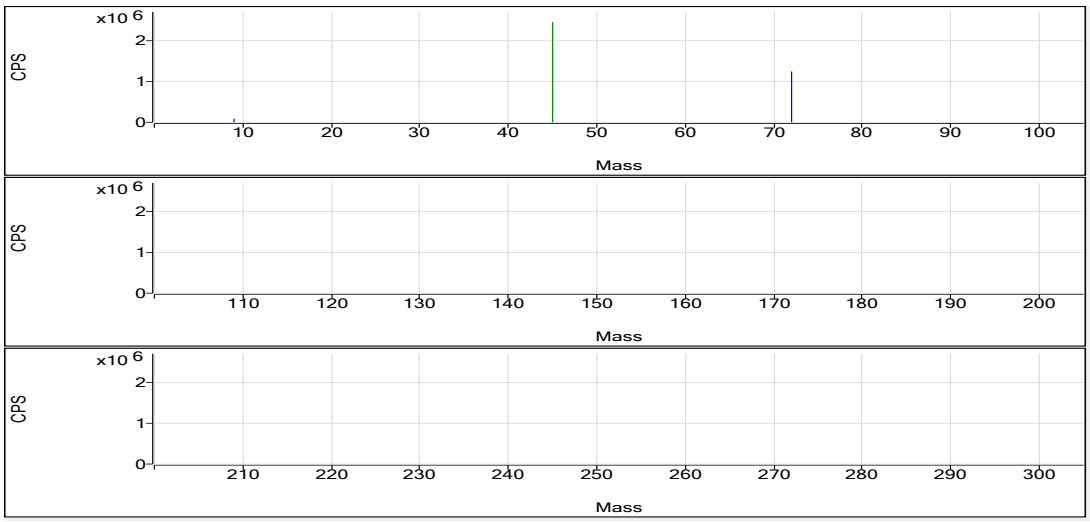
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	48.288	ppb	0.4	90946.77	0.0368	Pulse	0.5000	3
Se	78	72	H2	103.945	ppb	1.3	6799.39	0.0434	Pulse	1.5000	3
Na	23	45	He	121891.535	ppb	2.2	20565485.94	436.3572	Analog	0.1000	3
Mg	24	45	He	4963.965	ppb	2.2	419954.41	8.9104	Pulse	0.1000	3
Al	27	45	He	4954.568	ppb	1.8	136656.29	2.8992	Pulse	0.1000	3
K	39	45	He	4985.971	ppb	2.4	292219.25	6.2004	Pulse	0.1000	3
Ca	44	45	He	5138.172	ppb	1.1	16489.80	0.3498	Pulse	0.1000	3
Ti	47	45	He	508.586	ppb	4.6	12869.47	0.2732	Pulse	0.1000	3
V	51	45	He	510.399	ppb	2.5	526975.02	11.1818	Pulse	0.5000	3
Cr	52	45	He	480.351	ppb	2.3	679710.77	14.4220	Pulse	0.1000	3
Mn	55	45	He	494.291	ppb	1.8	299124.91	6.3463	Pulse	0.1000	3
Fe	57	45	He	4943.005	ppb	2.4	135416.85	2.8733	Pulse	0.1000	3
Co	59	45	He	484.032	ppb	2.3	1284057.77	27.2446	Pulse	0.1000	3
Ni	60	72	He	494.763	ppb	0.8	359092.86	4.2495	Pulse	0.1000	3
Cu	63	72	He	478.620	ppb	0.6	1038722.67	12.2914	Pulse	0.1000	3
Zn	66	72	He	507.897	ppb	0.3	125290.46	1.4826	Pulse	0.1000	3
As	75	72	He	504.442	ppb	0.6	87405.29	1.0343	Pulse	0.5000	3
Sr	88	115	He	50.686	ppb	1.7	38633.60	0.4556	Pulse	0.1000	3
Mo	98	115	He	50.678	ppb	2.9	94228.19	1.1115	Pulse	0.1000	3
Ag	107	115	He	50.340	ppb	3.2	198441.49	2.3408	Pulse	0.1000	3
Cd	111	115	He	51.105	ppb	2.3	23167.88	0.2733	Pulse	0.5000	3
Sn	120	115	He	101.109	ppb	2.4	136832.19	1.6139	Pulse	0.1000	3
Sb	121	115	He	102.617	ppb	2.0	129259.87	1.5245	Pulse	0.1000	3
Ba	137	115	He	516.359	ppb	2.4	210126.43	2.4784	Pulse	0.1000	3
Tl	205	159	He	103.722	ppb	0.7	997252.36	2.5648	Pulse	0.1000	3
Pb	208	159	He	52.086	ppb	1.2	663243.12	1.7058	Pulse	0.1000	3
U	238	209	He	51.202	ppb	0.2	763445.82	2.5223	Pulse	0.1000	3

ISTD Table:

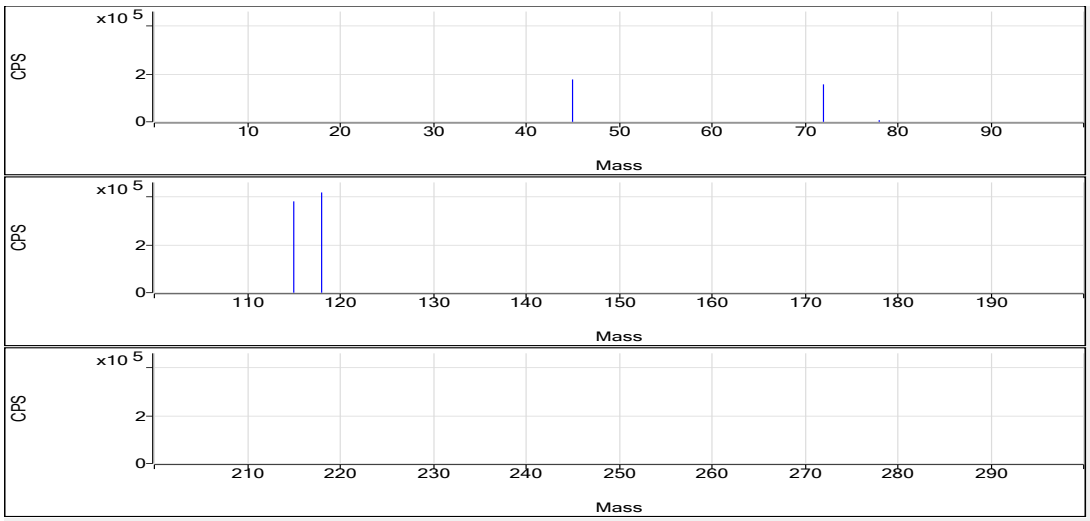
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2468841.63	0.2	102.9	Analog	0.1000	3
No Gas	Ge	72	1252136.46	0.1	108.6	Pulse	0.1000	3
H2	Sc	45	177367.10	0.7	94.8	Pulse	0.1000	3
H2	Ge	72	156799.30	0.2	95.8	Pulse	0.1000	3
H2	In	115	382324.99	0.7	98.3	Pulse	0.1000	3
He	Sc	45	47147.26	2.5	101.1	Pulse	0.1000	3
He	Ge	72	84505.88	0.8	104.1	Pulse	0.1000	3
He	In	115	84819.34	2.7	98.4	Pulse	0.1000	3
He	Tb	159	388836.47	0.9	97.5	Pulse	0.1000	3
He	Bi	209	302678.48	0.7	97.9	Pulse	0.1000	3

No Gas

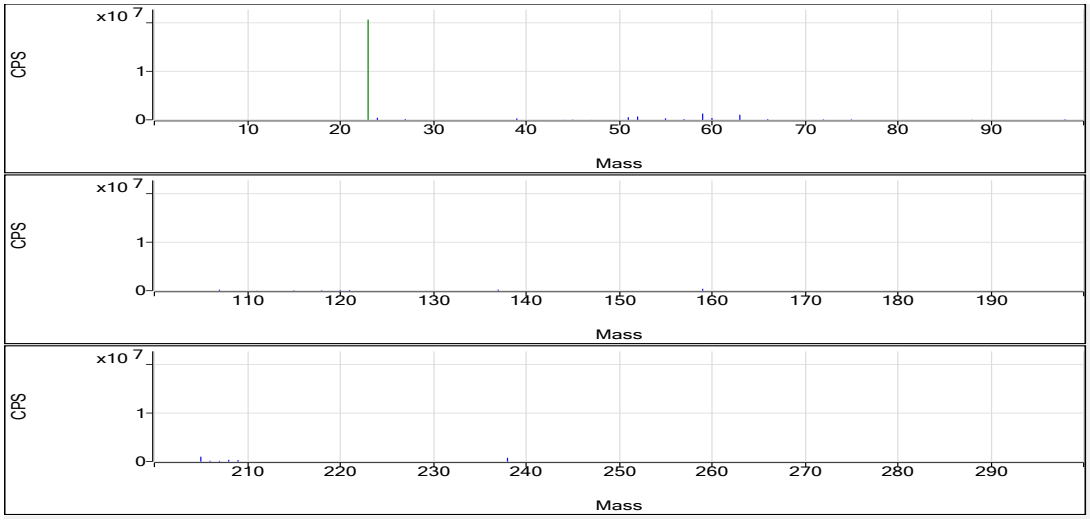


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	48.247	0.0368	91036.68	0.0008	4.685E-06
Be	9	1	No Gas	48.514	0.037	91189.72	0.0008	4.685E-06
Be	9	1	No Gas	48.102	0.0367	90613.92	0.0008	4.685E-06
Se	78	2	H2	102.431	0.0427	6713.58	0.0004	1.219E-05
Se	78	2	H2	104.612	0.0436	6824.29	0.0004	1.219E-05
Se	78	2	H2	104.792	0.0437	6860.31	0.0004	1.219E-05
Na	23	3	He	119276.177	427.0019	20645989.69	0.0036	0.3452
Na	23	3	He	121705.687	435.6924	20515398.44	0.0036	0.3452
Na	23	3	He	124692.74	446.3772	20535069.69	0.0036	0.3452
Mg	24	3	He	4840.19	8.6884	420091.17	0.0018	0.003497
Mg	24	3	He	5002.472	8.9795	422818.74	0.0018	0.003497
Mg	24	3	He	5049.232	9.0634	416953.31	0.0018	0.003497
Al	27	3	He	4852.214	2.8394	137285.90	0.0006	0.0006432
Al	27	3	He	5011.435	2.9325	138082.64	0.0006	0.0006432
Al	27	3	He	5000.054	2.9258	134600.32	0.0006	0.0006432
K	39	3	He	4856.559	6.0497	292508.73	0.0012	0.3951
K	39	3	He	5002.36	6.2194	292854.41	0.0012	0.3951
K	39	3	He	5098.995	6.332	291294.61	0.0012	0.3951
Ca	44	3	He	5072.773	0.3454	16699.99	0.0001	0.002715
Ca	44	3	He	5169.169	0.3519	16569.98	0.0001	0.002715
Ca	44	3	He	5172.575	0.3521	16199.44	0.0001	0.002715
Ti	47	3	He	491.201	0.2638	12755.97	0.0005	7.003E-05
Ti	47	3	He	499.646	0.2684	12635.98	0.0005	7.003E-05
Ti	47	3	He	534.912	0.2873	13216.47	0.0005	7.003E-05
V	51	3	He	496.095	10.8691	525532.25	0.0219	0.02486
V	51	3	He	514.245	11.2658	530473.00	0.0219	0.02486
V	51	3	He	520.856	11.4103	524919.81	0.0219	0.02486
Cr	52	3	He	471.498	14.157	684504.83	0.0299	0.03997
Cr	52	3	He	476.559	14.3085	673742.96	0.0299	0.03997
Cr	52	3	He	492.995	14.8006	680884.52	0.0299	0.03997
Mn	55	3	He	484.211	6.2169	300595.56	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	497.503	6.3875	300768.94	0.0128	0.002639
Mn	55	3	He	501.16	6.4345	296010.23	0.0128	0.002639
Fe	57	3	He	4805.301	2.7933	135057.27	0.0006	0.001429
Fe	57	3	He	5003.346	2.9083	136944.08	0.0006	0.001429
Fe	57	3	He	5020.368	2.9182	134249.21	0.0006	0.001429
Co	59	3	He	471.322	26.5292	1282717.01	0.0563	0.002149
Co	59	3	He	489.425	27.5481	1297153.81	0.0563	0.002149
Co	59	3	He	491.35	27.6564	1272302.48	0.0563	0.002149
Ni	60	3	He	498.559	4.282	360924.84	0.0086	0.002834
Ni	60	3	He	490.649	4.2141	359144.29	0.0086	0.002834
Ni	60	3	He	495.081	4.2522	357209.45	0.0086	0.002834
Cu	63	3	He	479.947	12.3255	1038892.17	0.0257	0.004757
Cu	63	3	He	480.561	12.3413	1051766.31	0.0257	0.004757
Cu	63	3	He	475.352	12.2076	1025509.52	0.0257	0.004757
Zn	66	3	He	509.471	1.4872	125353.41	0.0029	0.003818
Zn	66	3	He	507.852	1.4825	126342.78	0.0029	0.003818
Zn	66	3	He	506.368	1.4782	124175.19	0.0029	0.003818
As	75	3	He	504.656	1.0348	87219.60	0.002	0.0008061
As	75	3	He	501.29	1.0279	87599.76	0.002	0.0008061
As	75	3	He	507.379	1.0404	87396.50	0.002	0.0008061
Sr	88	3	He	49.731	0.447	39064.81	0.009	0.0009645
Sr	88	3	He	51.293	0.4611	38733.75	0.009	0.0009645
Sr	88	3	He	51.033	0.4587	38102.23	0.009	0.0009645
Mo	98	3	He	49.033	1.0754	93972.57	0.0219	0.0002706
Mo	98	3	He	51.756	1.1351	95362.32	0.0219	0.0002706
Mo	98	3	He	51.244	1.1239	93349.67	0.0219	0.0002706
Ag	107	3	He	48.525	2.2564	197173.96	0.0465	0.0006206
Ag	107	3	He	51.663	2.4023	201819.33	0.0465	0.0006206
Ag	107	3	He	50.833	2.3637	196331.19	0.0465	0.0006206
Cd	111	3	He	49.772	0.2661	23255.38	0.0053	0
Cd	111	3	He	51.677	0.2763	23213.28	0.0053	0
Cd	111	3	He	51.867	0.2773	23034.99	0.0053	0
Sn	120	3	He	98.334	1.57	137196.41	0.0158	0.01648
Sn	120	3	He	102.711	1.6392	137710.62	0.0158	0.01648
Sn	120	3	He	102.283	1.6324	135589.55	0.0158	0.01648
Sb	121	3	He	100.3	1.4901	130209.65	0.0149	0.0002698
Sb	121	3	He	103.437	1.5367	129098.64	0.0149	0.0002698
Sb	121	3	He	104.113	1.5467	128471.33	0.0149	0.0002698
Ba	137	3	He	501.831	2.4087	210482.63	0.0048	0.0002317
Ba	137	3	He	522.746	2.5091	210791.40	0.0048	0.0002317
Ba	137	3	He	524.5	2.5175	209105.25	0.0048	0.0002317
Tl	205	3	He	103.811	2.567	991142.49	0.0247	0.0001339
Tl	205	3	He	102.945	2.5456	999879.52	0.0247	0.0001339
Tl	205	3	He	104.41	2.5818	1000735.06	0.0247	0.0001339
Pb	208	3	He	52.44	1.7174	354985.11	0.0327	0.00107
Pb	208	3	He	51.379	1.6827	352823.08	0.0327	0.00107
Pb	208	3	He	52.439	1.7174	353429.76	0.0327	0.00107
U	238	3	He	51.086	2.5166	756582.88	0.0493	7.55E-05
U	238	3	He	51.249	2.5246	769009.29	0.0493	7.55E-05
U	238	3	He	51.271	2.5257	764745.30	0.0493	7.55E-05
Sc	45	1	No Gas			2473363.24		
Sc	45	1	No Gas			2463870.43		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2469291.21		
Ge	72	1	No Gas			1254117.09		
Ge	72	1	No Gas			1251372.40		
Ge	72	1	No Gas			1250919.90		
Sc	45	2	H2			175985.27		
Sc	45	2	H2			178210.29		
Sc	45	2	H2			177905.74		
Ge	72	2	H2			157106.26		
Ge	72	2	H2			156367.95		
Ge	72	2	H2			156923.69		
In	115	2	H2			383543.86		
In	115	2	H2			384140.23		
In	115	2	H2			379290.89		
Sc	45	3	He			48351.05		
Sc	45	3	He			47086.89		
Sc	45	3	He			46003.85		
Ge	72	3	He			84288.02		
Ge	72	3	He			85223.46		
Ge	72	3	He			84006.15		
In	115	3	He			88129.19		
In	115	3	He			84739.25		
In	115	3	He			83782.55		
Tb	159	3	He			386108.24		
Tb	159	3	He			392790.66		
Tb	159	3	He			387610.50		
Bi	209	3	He			300640.27		
Bi	209	3	He			304608.39		
Bi	209	3	He			302786.77		

Quantitation Report

Data File Name	267SMPL.d
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Acq Time	8/10/2023 7:51:05 PM
Sample Name	LCSD 410-403332/3-A
Sample Type	Sample
Comment	F15 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

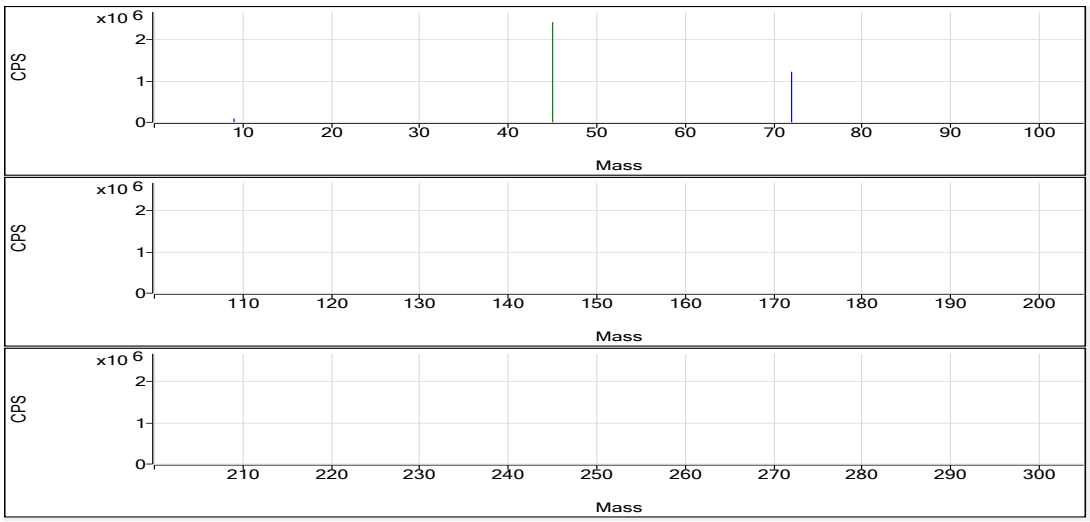
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	49.701	ppb	0.1	92503.44	0.0379	Pulse	0.5000	3
Se	78	72	H2	106.190	ppb	1.7	6821.85	0.0443	Pulse	1.5000	3
Na	23	45	He	118553.979	ppb	1.9	19789254.70	424.4186	Analog	0.1000	3
Mg	24	45	He	5103.746	ppb	1.1	427204.96	9.1613	Pulse	0.1000	3
Al	27	45	He	5059.800	ppb	3.2	138036.02	2.9608	Pulse	0.1000	3
K	39	45	He	5074.974	ppb	2.3	293922.33	6.3040	Pulse	0.1000	3
Ca	44	45	He	5193.343	ppb	4.5	16486.51	0.3535	Pulse	0.1000	3
Ti	47	45	He	515.430	ppb	5.2	12902.80	0.2768	Pulse	0.1000	3
V	51	45	He	520.897	ppb	1.9	532065.21	11.4112	Pulse	0.5000	3
Cr	52	45	He	491.502	ppb	2.0	688015.67	14.7559	Pulse	0.1000	3
Mn	55	45	He	509.554	ppb	0.5	305102.93	6.5422	Pulse	0.1000	3
Fe	57	45	He	5076.638	ppb	1.9	137591.03	2.9509	Pulse	0.1000	3
Co	59	45	He	496.784	ppb	2.0	1303776.39	27.9623	Pulse	0.1000	3
Ni	60	72	He	506.383	ppb	0.2	361862.05	4.3492	Pulse	0.1000	3
Cu	63	72	He	495.920	ppb	0.4	1059628.57	12.7355	Pulse	0.1000	3
Zn	66	72	He	518.796	ppb	1.1	125996.69	1.5144	Pulse	0.1000	3
As	75	72	He	517.349	ppb	0.1	88259.78	1.0608	Pulse	0.5000	3
Sr	88	115	He	51.897	ppb	2.9	38723.74	0.4665	Pulse	0.1000	3
Mo	98	115	He	52.924	ppb	1.8	96359.71	1.1607	Pulse	0.1000	3
Ag	107	115	He	52.025	ppb	0.6	200836.51	2.4191	Pulse	0.1000	3
Cd	111	115	He	53.257	ppb	2.2	23640.00	0.2848	Pulse	0.5000	3
Sn	120	115	He	105.695	ppb	1.5	139996.13	1.6863	Pulse	0.1000	3
Sb	121	115	He	106.626	ppb	0.9	131507.35	1.5840	Pulse	0.1000	3
Ba	137	115	He	536.903	ppb	1.7	213939.95	2.5770	Pulse	0.1000	3
Tl	205	159	He	105.998	ppb	1.0	1015389.12	2.6211	Pulse	0.1000	3
Pb	208	159	He	53.219	ppb	1.1	675188.53	1.7429	Pulse	0.1000	3
U	238	209	He	52.992	ppb	0.6	782443.74	2.6105	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2439684.96	0.4	101.7	Analog	0.1000	3
No Gas	Ge	72	1230390.71	0.6	106.7	Pulse	0.1000	3
H2	Sc	45	176198.85	1.0	94.2	Pulse	0.1000	3
H2	Ge	72	153994.78	1.3	94.1	Pulse	0.1000	3
H2	In	115	378516.66	1.0	97.3	Pulse	0.1000	3
He	Sc	45	46638.96	2.1	100.0	Pulse	0.1000	3
He	Ge	72	83202.19	0.1	102.5	Pulse	0.1000	3
He	In	115	83022.52	0.5	96.3	Pulse	0.1000	3
He	Tb	159	387413.50	0.8	97.2	Pulse	0.1000	3
He	Bi	209	299738.04	0.5	96.9	Pulse	0.1000	3

No Gas



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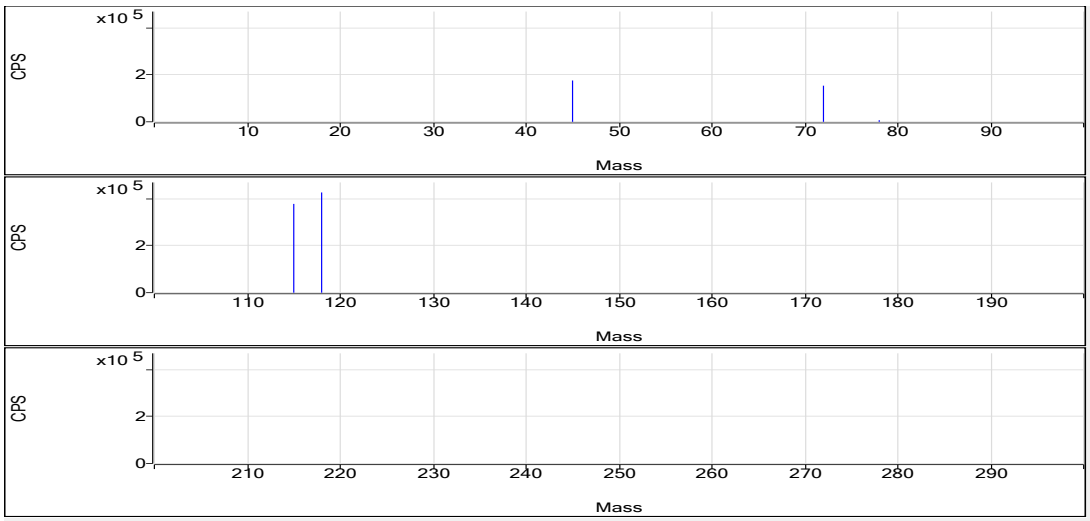
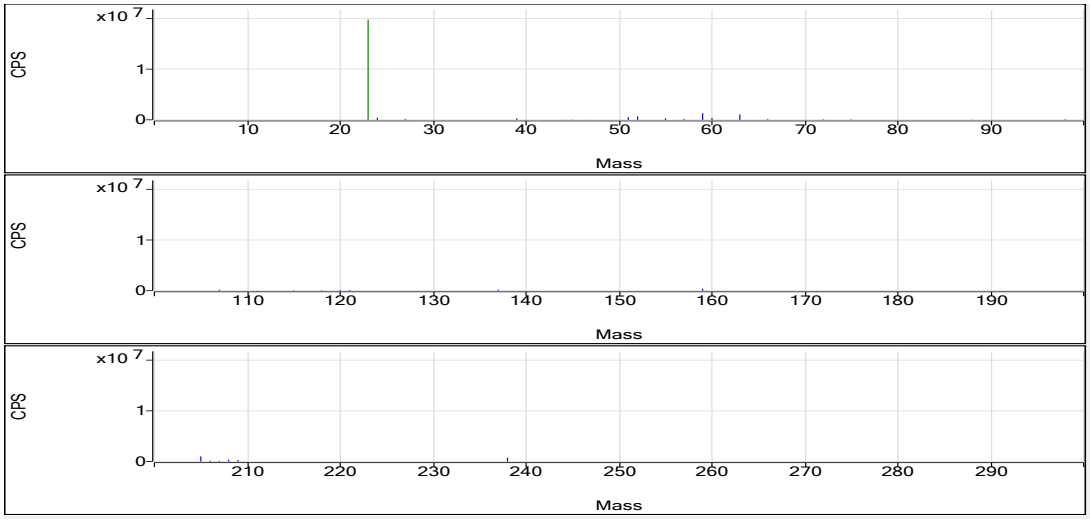


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	49.686	0.0379	92102.95	0.0008	4.685E-06
Be	9	1	No Gas	49.745	0.0379	92584.17	0.0008	4.685E-06
Be	9	1	No Gas	49.674	0.0379	92823.21	0.0008	4.685E-06
Se	78	2	H2	108.004	0.0451	6872.32	0.0004	1.219E-05
Se	78	2	H2	106.138	0.0443	6917.01	0.0004	1.219E-05
Se	78	2	H2	104.429	0.0436	6676.23	0.0004	1.219E-05
Na	23	3	He	115964.968	415.1575	19810902.20	0.0036	0.3452
Na	23	3	He	119549.211	427.9785	19838808.45	0.0036	0.3452
Na	23	3	He	120147.758	430.1196	19718053.46	0.0036	0.3452
Mg	24	3	He	5040.465	9.0477	431747.85	0.0018	0.003497
Mg	24	3	He	5118.031	9.1869	425855.46	0.0018	0.003497
Mg	24	3	He	5152.741	9.2492	424011.56	0.0018	0.003497
Al	27	3	He	4930.183	2.885	137667.98	0.0006	0.0006432
Al	27	3	He	5006.521	2.9296	135802.18	0.0006	0.0006432
Al	27	3	He	5242.697	3.0678	140637.90	0.0006	0.0006432
K	39	3	He	4943.567	6.151	293519.25	0.0012	0.3951
K	39	3	He	5106.762	6.341	293935.27	0.0012	0.3951
K	39	3	He	5174.593	6.42	294312.48	0.0012	0.3951
Ca	44	3	He	5211.992	0.3548	16930.46	0.0001	0.002715
Ca	44	3	He	4950.885	0.3372	15628.79	0.0001	0.002715
Ca	44	3	He	5417.152	0.3687	16900.27	0.0001	0.002715
Ti	47	3	He	485.21	0.2606	12435.72	0.0005	7.003E-05
Ti	47	3	He	536.089	0.2879	13346.55	0.0005	7.003E-05
Ti	47	3	He	524.992	0.282	12926.13	0.0005	7.003E-05
V	51	3	He	509.66	11.1656	532811.69	0.0219	0.02486
V	51	3	He	523.71	11.4727	531814.94	0.0219	0.02486
V	51	3	He	529.321	11.5954	531569.00	0.0219	0.02486
Cr	52	3	He	481.288	14.4501	689544.13	0.0299	0.03997
Cr	52	3	He	492.805	14.7949	685814.05	0.0299	0.03997
Cr	52	3	He	500.413	15.0227	688688.82	0.0299	0.03997
Mn	55	3	He	506.793	6.5068	310496.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	511.37	6.5655	304341.66	0.0128	0.002639
Mn	55	3	He	510.499	6.5543	300471.13	0.0128	0.002639
Fe	57	3	He	4972.014	2.8901	137913.81	0.0006	0.001429
Fe	57	3	He	5094.093	2.961	137258.52	0.0006	0.001429
Fe	57	3	He	5163.806	3.0016	137600.75	0.0006	0.001429
Co	59	3	He	485.983	27.3544	1305324.75	0.0563	0.002149
Co	59	3	He	499.429	28.1112	1303084.90	0.0563	0.002149
Co	59	3	He	504.938	28.4212	1302919.51	0.0563	0.002149
Ni	60	3	He	505.893	4.345	361816.17	0.0086	0.002834
Ni	60	3	He	505.737	4.3436	361618.59	0.0086	0.002834
Ni	60	3	He	507.52	4.359	362151.40	0.0086	0.002834
Cu	63	3	He	497.538	12.7771	1063974.12	0.0257	0.004757
Cu	63	3	He	496.303	12.7454	1061084.12	0.0257	0.004757
Cu	63	3	He	493.918	12.6842	1053827.48	0.0257	0.004757
Zn	66	3	He	520.741	1.52	126574.96	0.0029	0.003818
Zn	66	3	He	512.249	1.4953	124486.50	0.0029	0.003818
Zn	66	3	He	523.397	1.5277	126928.62	0.0029	0.003818
As	75	3	He	517.717	1.0615	88396.62	0.002	0.0008061
As	75	3	He	517.722	1.0616	88376.61	0.002	0.0008061
As	75	3	He	516.607	1.0593	88006.13	0.002	0.0008061
Sr	88	3	He	53.641	0.4821	39806.96	0.009	0.0009645
Sr	88	3	He	51.151	0.4598	38242.52	0.009	0.0009645
Sr	88	3	He	50.897	0.4575	38121.74	0.009	0.0009645
Mo	98	3	He	54.003	1.1844	97789.09	0.0219	0.0002706
Mo	98	3	He	52.156	1.1439	95141.32	0.0219	0.0002706
Mo	98	3	He	52.614	1.1539	96148.73	0.0219	0.0002706
Ag	107	3	He	52.343	2.4339	200959.31	0.0465	0.0006206
Ag	107	3	He	51.947	2.4155	200907.83	0.0465	0.0006206
Ag	107	3	He	51.785	2.4079	200642.40	0.0465	0.0006206
Cd	111	3	He	54.459	0.2912	24042.67	0.0053	0
Cd	111	3	He	53.246	0.2847	23680.07	0.0053	0
Cd	111	3	He	52.066	0.2784	23197.25	0.0053	0
Sn	120	3	He	107.096	1.7085	141062.61	0.0158	0.01648
Sn	120	3	He	105.983	1.6909	140638.04	0.0158	0.01648
Sn	120	3	He	104.005	1.6596	138287.74	0.0158	0.01648
Sb	121	3	He	107.567	1.598	131943.48	0.0149	0.0002698
Sb	121	3	He	105.727	1.5707	130641.89	0.0149	0.0002698
Sb	121	3	He	106.583	1.5834	131936.68	0.0149	0.0002698
Ba	137	3	He	544.527	2.6136	215797.83	0.0048	0.0002317
Ba	137	3	He	539.759	2.5907	215483.26	0.0048	0.0002317
Ba	137	3	He	526.423	2.5267	210538.77	0.0048	0.0002317
Tl	205	3	He	105.67	2.613	1015071.39	0.0247	0.0001339
Tl	205	3	He	107.202	2.6508	1017861.78	0.0247	0.0001339
Tl	205	3	He	105.122	2.5994	1013234.20	0.0247	0.0001339
Pb	208	3	He	53.143	1.7404	359653.35	0.0327	0.00107
Pb	208	3	He	53.856	1.7638	363692.96	0.0327	0.00107
Pb	208	3	He	52.659	1.7246	357004.25	0.0327	0.00107
U	238	3	He	52.668	2.5945	781695.61	0.0493	7.55E-05
U	238	3	He	53.264	2.6239	783901.24	0.0493	7.55E-05
U	238	3	He	53.045	2.6131	781734.36	0.0493	7.55E-05
Sc	45	1	No Gas			2429881.06		
Sc	45	1	No Gas			2439697.93		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2449475.90		
Ge	72	1	No Gas			1224121.08		
Ge	72	1	No Gas			1239126.23		
Ge	72	1	No Gas			1227924.83		
Sc	45	2	H2			175052.15		
Sc	45	2	H2			178329.94		
Sc	45	2	H2			175214.45		
Ge	72	2	H2			152524.99		
Ge	72	2	H2			156215.23		
Ge	72	2	H2			153244.12		
In	115	2	H2			378804.84		
In	115	2	H2			382219.80		
In	115	2	H2			374525.35		
Sc	45	3	He			47719.00		
Sc	45	3	He			46354.68		
Sc	45	3	He			45843.19		
Ge	72	3	He			83272.07		
Ge	72	3	He			83252.33		
Ge	72	3	He			83082.18		
In	115	3	He			83329.35		
In	115	3	He			83923.16		
In	115	3	He			84064.47		
Tb	159	3	He			388472.65		
Tb	159	3	He			383975.81		
Tb	159	3	He			389792.03		
Bi	209	3	He			301292.50		
Bi	209	3	He			298757.28		
Bi	209	3	He			299164.33		

Quantitation Report

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Sample Type	Sample
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

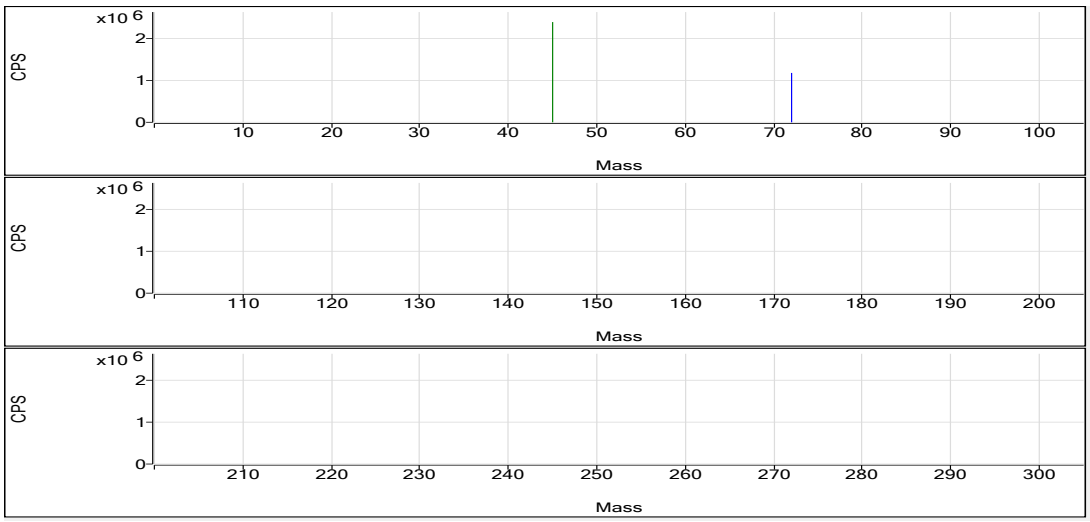
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.026	ppb	20.7	58.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.104	ppb	30.0	8.22	0.0001	Pulse	1.5000	3
Na	23	45	He	38.609	ppb	5.5	21960.30	0.4833	Pulse	0.1000	3
Mg	24	45	He	1.155	ppb	40.5	253.34	0.0056	Pulse	0.1000	3
Al	27	45	He	1.288	ppb	74.9	63.33	0.0014	Pulse	0.1000	3
K	39	45	He	4.505	ppb	25.7	18191.78	0.4003	Pulse	0.1000	3
Ca	44	45	He	6.593	ppb	253.9	143.34	0.0032	Pulse	0.1000	3
Ti	47	45	He	0.142	ppb	165.9	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	0.393	ppb	28.8	1520.09	0.0335	Pulse	0.5000	3
Cr	52	45	He	-0.046	ppb	N/A	1753.50	0.0386	Pulse	0.1000	3
Mn	55	45	He	0.274	ppb	41.8	280.01	0.0062	Pulse	0.1000	3
Fe	57	45	He	2.080	ppb	64.2	120.01	0.0026	Pulse	0.1000	3
Co	59	45	He	0.109	ppb	9.2	376.69	0.0083	Pulse	0.1000	3
Ni	60	72	He	0.039	ppb	273.2	253.35	0.0032	Pulse	0.1000	3
Cu	63	72	He	0.086	ppb	37.6	556.70	0.0070	Pulse	0.1000	3
Zn	66	72	He	1.869	ppb	18.7	740.05	0.0093	Pulse	0.1000	3
As	75	72	He	0.225	ppb	46.2	101.33	0.0013	Pulse	0.5000	3
Sr	88	115	He	-0.032	ppb	N/A	56.67	0.0007	Pulse	0.1000	3
Mo	98	115	He	0.062	ppb	9.6	136.68	0.0016	Pulse	0.1000	3
Ag	107	115	He	0.005	ppb	293.9	70.00	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.013	ppb	67.9	6.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.010	ppb	N/A	1370.12	0.0163	Pulse	0.1000	3
Sb	121	115	He	0.030	ppb	47.6	60.00	0.0007	Pulse	0.1000	3
Ba	137	115	He	0.126	ppb	54.6	70.00	0.0008	Pulse	0.1000	3
Tl	205	159	He	0.165	ppb	12.8	1620.16	0.0042	Pulse	0.1000	3
Pb	208	159	He	0.015	ppb	57.8	603.37	0.0016	Pulse	0.1000	3
U	238	209	He	0.057	ppb	0.8	863.40	0.0029	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2398702.57	1.2	100.0	Analog	0.1000	3
No Gas	Ge	72	1181536.99	0.6	102.4	Pulse	0.1000	3
H2	Sc	45	173719.92	0.3	92.9	Pulse	0.1000	3
H2	Ge	72	148356.83	0.2	90.6	Pulse	0.1000	3
H2	In	115	374396.72	0.1	96.2	Pulse	0.1000	3
He	Sc	45	45444.93	0.8	97.4	Pulse	0.1000	3
He	Ge	72	79937.00	0.5	98.5	Pulse	0.1000	3
He	In	115	83862.29	1.5	97.3	Pulse	0.1000	3
He	Tb	159	384137.60	0.3	96.4	Pulse	0.1000	3
He	Bi	209	301074.94	0.5	97.3	Pulse	0.1000	3

No Gas



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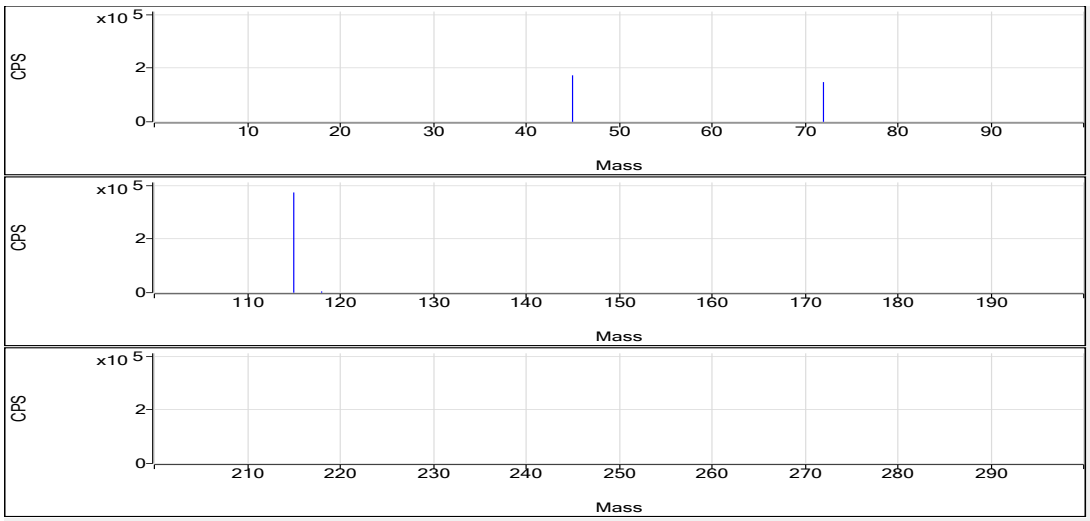
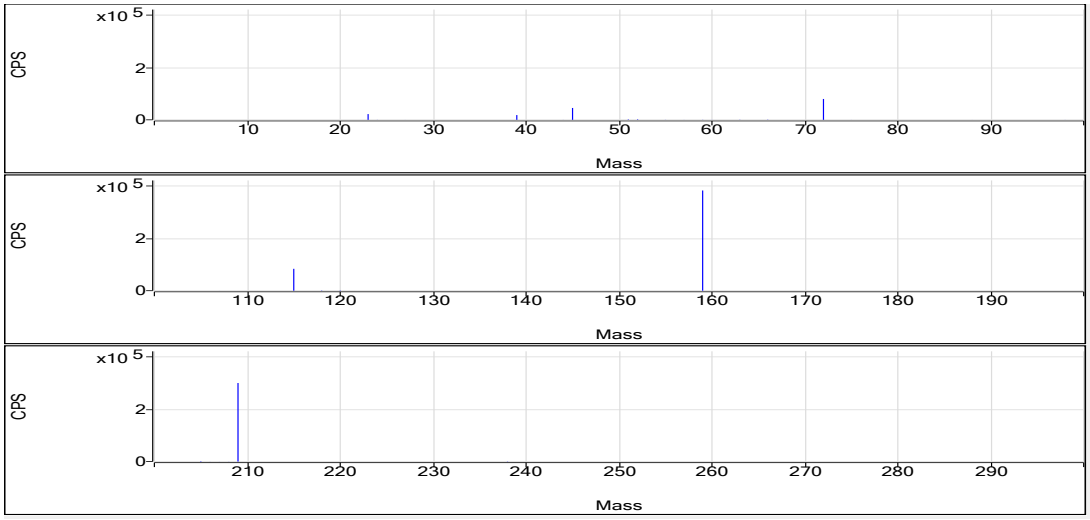


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.025	0	56.00	0.0008	4.685E-06
Be	9	1	No Gas	0.031	0	68.00	0.0008	4.685E-06
Be	9	1	No Gas	0.021	0	50.00	0.0008	4.685E-06
Se	78	2	H2	0.068	0	6.00	0.0004	1.219E-05
Se	78	2	H2	0.121	0.0001	9.33	0.0004	1.219E-05
Se	78	2	H2	0.122	0.0001	9.33	0.0004	1.219E-05
Na	23	3	He	40.945	0.4916	22197.20	0.0036	0.3452
Na	23	3	He	38.114	0.4815	21817.03	0.0036	0.3452
Na	23	3	He	36.769	0.4767	21866.68	0.0036	0.3452
Mg	24	3	He	0.89	0.0051	230.01	0.0018	0.003497
Mg	24	3	He	0.88	0.0051	230.01	0.0018	0.003497
Mg	24	3	He	1.696	0.0065	300.01	0.0018	0.003497
Al	27	3	He	2.308	0.002	90.00	0.0006	0.0006432
Al	27	3	He	1.164	0.0013	60.00	0.0006	0.0006432
Al	27	3	He	0.391	0.0009	40.00	0.0006	0.0006432
K	39	3	He	5.214	0.4011	18111.77	0.0012	0.3951
K	39	3	He	5.133	0.401	18171.69	0.0012	0.3951
K	39	3	He	3.167	0.3988	18291.89	0.0012	0.3951
Ca	44	3	He	22.107	0.0042	190.01	0.0001	0.002715
Ca	44	3	He	8.819	0.0033	150.01	0.0001	0.002715
Ca	44	3	He	-11.147	0.002	90.00	0.0001	0.002715
Ti	47	3	He	0.282	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.276	0.0002	10.00	0.0005	7.003E-05
V	51	3	He	0.486	0.0355	1602.10	0.0219	0.02486
V	51	3	He	0.428	0.0342	1550.09	0.0219	0.02486
V	51	3	He	0.267	0.0307	1408.08	0.0219	0.02486
Cr	52	3	He	-0.003	0.0399	1800.18	0.0299	0.03997
Cr	52	3	He	-0.038	0.0388	1760.16	0.0299	0.03997
Cr	52	3	He	-0.097	0.0371	1700.16	0.0299	0.03997
Mn	55	3	He	0.209	0.0053	240.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.207	0.0053	240.01	0.0128	0.002639
Mn	55	3	He	0.406	0.0078	360.02	0.0128	0.002639
Fe	57	3	He	0.59	0.0018	80.00	0.0006	0.001429
Fe	57	3	He	2.479	0.0029	130.01	0.0006	0.001429
Fe	57	3	He	3.169	0.0033	150.01	0.0006	0.001429
Co	59	3	He	0.119	0.0089	400.02	0.0563	0.002149
Co	59	3	He	0.099	0.0077	350.02	0.0563	0.002149
Co	59	3	He	0.109	0.0083	380.02	0.0563	0.002149
Ni	60	3	He	0.077	0.0035	280.01	0.0086	0.002834
Ni	60	3	He	0.12	0.0039	310.02	0.0086	0.002834
Ni	60	3	He	-0.081	0.0021	170.01	0.0086	0.002834
Cu	63	3	He	0.121	0.0079	630.05	0.0257	0.004757
Cu	63	3	He	0.058	0.0062	500.03	0.0257	0.004757
Cu	63	3	He	0.079	0.0068	540.03	0.0257	0.004757
Zn	66	3	He	1.476	0.0081	650.04	0.0029	0.003818
Zn	66	3	He	1.985	0.0096	770.05	0.0029	0.003818
Zn	66	3	He	2.146	0.0101	800.05	0.0029	0.003818
As	75	3	He	0.326	0.0015	118.00	0.002	0.0008061
As	75	3	He	0.118	0.001	84.00	0.002	0.0008061
As	75	3	He	0.233	0.0013	102.00	0.002	0.0008061
Sr	88	3	He	-0.026	0.0007	60.00	0.009	0.0009645
Sr	88	3	He	0.011	0.0011	90.00	0.009	0.0009645
Sr	88	3	He	-0.081	0.0002	20.00	0.009	0.0009645
Mo	98	3	He	0.06	0.0016	130.01	0.0219	0.0002706
Mo	98	3	He	0.069	0.0018	150.01	0.0219	0.0002706
Mo	98	3	He	0.058	0.0015	130.01	0.0219	0.0002706
Ag	107	3	He	0.021	0.0016	130.00	0.0465	0.0006206
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Ag	107	3	He	-0.006	0.0004	30.00	0.0465	0.0006206
Cd	111	3	He	0.023	0.0001	10.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.013	0.0001	6.00	0.0053	0
Sn	120	3	He	-0.113	0.0147	1210.09	0.0158	0.01648
Sn	120	3	He	0.015	0.0167	1410.12	0.0158	0.01648
Sn	120	3	He	0.069	0.0176	1490.16	0.0158	0.01648
Sb	121	3	He	0.039	0.0008	70.00	0.0149	0.0002698
Sb	121	3	He	0.038	0.0008	70.00	0.0149	0.0002698
Sb	121	3	He	0.014	0.0005	40.00	0.0149	0.0002698
Ba	137	3	He	0.205	0.0012	100.01	0.0048	0.0002317
Ba	137	3	He	0.1	0.0007	60.00	0.0048	0.0002317
Ba	137	3	He	0.075	0.0006	50.00	0.0048	0.0002317
Tl	205	3	He	0.185	0.0047	1800.18	0.0247	0.0001339
Tl	205	3	He	0.143	0.0037	1410.14	0.0247	0.0001339
Tl	205	3	He	0.168	0.0043	1650.17	0.0247	0.0001339
Pb	208	3	He	0.026	0.0019	380.02	0.0327	0.00107
Pb	208	3	He	0.01	0.0014	300.02	0.0327	0.00107
Pb	208	3	He	0.01	0.0014	220.01	0.0327	0.00107
U	238	3	He	0.057	0.0029	870.06	0.0493	7.55E-05
U	238	3	He	0.057	0.0029	870.06	0.0493	7.55E-05
U	238	3	He	0.056	0.0028	850.07	0.0493	7.55E-05
Sc	45	1	No Gas			2381937.78		
Sc	45	1	No Gas			2381250.43		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2432919.49		
Ge	72	1	No Gas			1176385.92		
Ge	72	1	No Gas			1190084.36		
Ge	72	1	No Gas			1178140.69		
Sc	45	2	H2			174150.58		
Sc	45	2	H2			173068.57		
Sc	45	2	H2			173940.62		
Ge	72	2	H2			148422.37		
Ge	72	2	H2			148647.56		
Ge	72	2	H2			148000.57		
In	115	2	H2			374430.93		
In	115	2	H2			374728.78		
In	115	2	H2			374030.46		
Sc	45	3	He			45151.02		
Sc	45	3	He			45311.07		
Sc	45	3	He			45872.69		
Ge	72	3	He			80094.53		
Ge	72	3	He			80225.25		
Ge	72	3	He			79491.23		
In	115	3	He			82414.86		
In	115	3	He			84366.17		
In	115	3	He			84829.94		
Tb	159	3	He			383173.94		
Tb	159	3	He			385482.14		
Tb	159	3	He			383756.71		
Bi	209	3	He			302274.51		
Bi	209	3	He			301681.73		
Bi	209	3	He			299268.59		

Quantitation Report

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Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

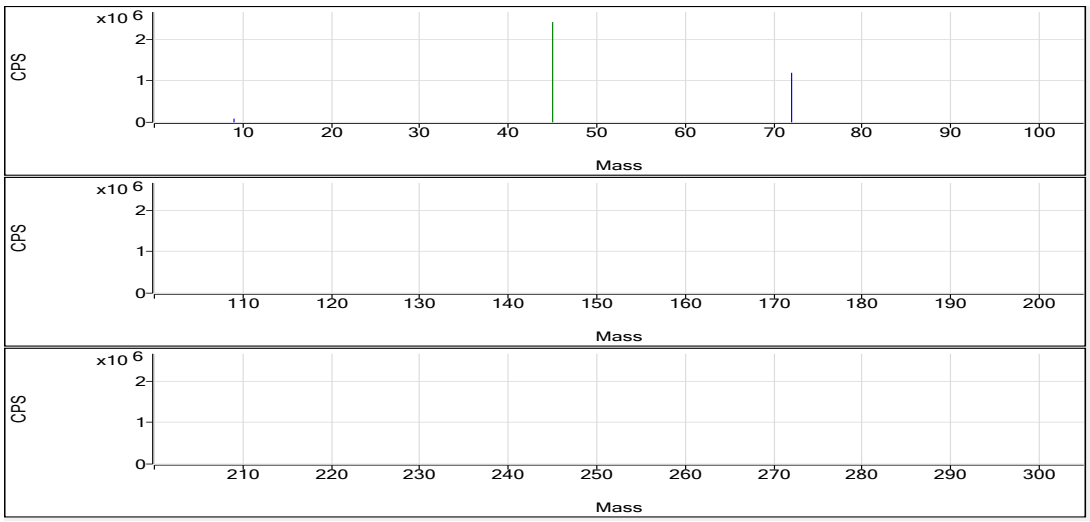
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	47.931	ppb	0.7	88607.46	0.0366	Pulse	0.5000	3
Se	78	72	H2	53.464	ppb	2.9	3339.51	0.0223	Pulse	1.5000	3
Na	23	45	He	4940.582	ppb	1.7	830449.26	18.0179	Pulse	0.1000	3
Mg	24	45	He	5081.692	ppb	1.5	420421.69	9.1217	Pulse	0.1000	3
Al	27	45	He	4977.818	ppb	2.4	134244.01	2.9128	Pulse	0.1000	3
K	39	45	He	5085.050	ppb	2.6	291070.94	6.3157	Pulse	0.1000	3
Ca	44	45	He	5117.338	ppb	5.1	16052.72	0.3484	Pulse	0.1000	3
Ti	47	45	He	5004.014	ppb	1.2	123847.91	2.6870	Pulse	0.1000	3
V	51	45	He	512.406	ppb	1.1	517417.01	11.2256	Pulse	0.5000	3
Cr	52	45	He	488.922	ppb	1.8	676528.58	14.6786	Pulse	0.1000	3
Mn	55	45	He	507.609	ppb	0.8	300402.82	6.5172	Pulse	0.1000	3
Fe	57	45	He	5088.236	ppb	0.7	136329.37	2.9576	Pulse	0.1000	3
Co	59	45	He	496.004	ppb	1.0	1286831.67	27.9184	Pulse	0.1000	3
Ni	60	72	He	518.717	ppb	1.8	361000.72	4.4551	Pulse	0.1000	3
Cu	63	72	He	494.038	ppb	1.8	1028065.01	12.6873	Pulse	0.1000	3
Zn	66	72	He	517.854	ppb	1.1	122495.97	1.5116	Pulse	0.1000	3
As	75	72	He	517.620	ppb	1.4	86004.84	1.0613	Pulse	0.5000	3
Sr	88	115	He	51.256	ppb	5.0	37988.56	0.4607	Pulse	0.1000	3
Mo	98	115	He	53.069	ppb	1.8	96000.56	1.1639	Pulse	0.1000	3
Ag	107	115	He	51.976	ppb	2.2	199337.76	2.4168	Pulse	0.1000	3
Cd	111	115	He	52.690	ppb	3.0	23234.68	0.2817	Pulse	0.5000	3
Sn	120	115	He	51.929	ppb	1.9	69028.85	0.8369	Pulse	0.1000	3
Sb	121	115	He	53.079	ppb	1.3	65056.58	0.7887	Pulse	0.1000	3
Ba	137	115	He	530.878	ppb	2.9	210147.75	2.5481	Pulse	0.1000	3
Tl	205	159	He	51.934	ppb	0.4	501432.21	1.2843	Pulse	0.1000	3
Pb	208	159	He	52.119	ppb	0.8	666437.34	1.7069	Pulse	0.1000	3
U	238	209	He	51.154	ppb	0.4	763406.99	2.5199	Pulse	0.1000	3

ISTD Table:

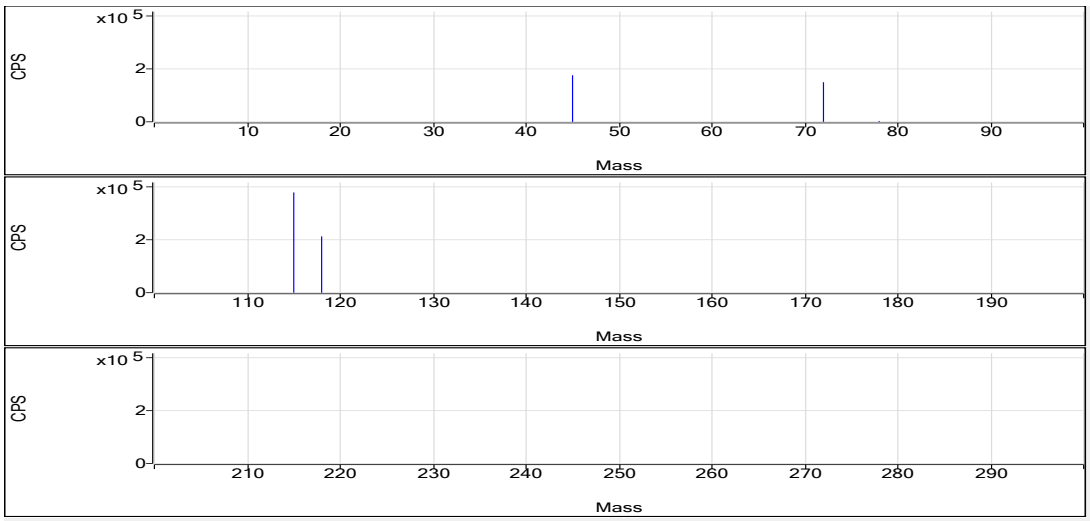
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2423327.78	1.0	101.0	Analog	0.1000	3
No Gas	Ge	72	1197271.28	0.9	103.8	Pulse	0.1000	3
H2	Sc	45	176191.30	0.3	94.2	Pulse	0.1000	3
H2	Ge	72	149699.38	0.7	91.4	Pulse	0.1000	3
H2	In	115	379121.40	0.8	97.4	Pulse	0.1000	3
He	Sc	45	46096.88	1.4	98.8	Pulse	0.1000	3
He	Ge	72	81043.22	1.2	99.8	Pulse	0.1000	3
He	In	115	82500.40	1.8	95.7	Pulse	0.1000	3
He	Tb	159	390438.41	0.1	98.0	Pulse	0.1000	3
He	Bi	209	302951.47	0.1	98.0	Pulse	0.1000	3

No Gas

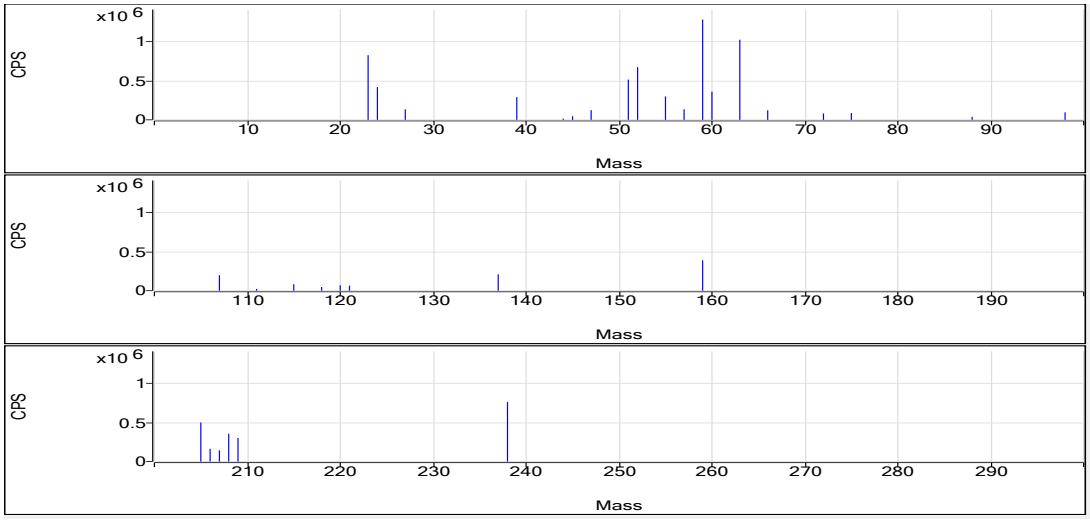


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	47.864	0.0365	89300.17	0.0008	4.685E-06
Be	9	1	No Gas	48.271	0.0368	88227.87	0.0008	4.685E-06
Be	9	1	No Gas	47.658	0.0364	88294.35	0.0008	4.685E-06
Se	78	2	H2	53.105	0.0222	3339.73	0.0004	1.219E-05
Se	78	2	H2	55.187	0.023	3421.75	0.0004	1.219E-05
Se	78	2	H2	52.101	0.0217	3257.04	0.0004	1.219E-05
Na	23	3	He	5030.913	18.341	836015.85	0.0036	0.3452
Na	23	3	He	4926.948	17.9691	824652.49	0.0036	0.3452
Na	23	3	He	4863.885	17.7435	830679.44	0.0036	0.3452
Mg	24	3	He	5147.844	9.2404	421193.94	0.0018	0.003497
Mg	24	3	He	5101.311	9.1569	420235.66	0.0018	0.003497
Mg	24	3	He	4995.921	8.9678	419835.46	0.0018	0.003497
Al	27	3	He	5050.535	2.9554	134711.77	0.0006	0.0006432
Al	27	3	He	5040.759	2.9497	135368.36	0.0006	0.0006432
Al	27	3	He	4842.162	2.8335	132651.89	0.0006	0.0006432
K	39	3	He	5201.246	6.451	294049.21	0.0012	0.3951
K	39	3	He	5109.118	6.3437	291132.59	0.0012	0.3951
K	39	3	He	4944.786	6.1524	288031.03	0.0012	0.3951
Ca	44	3	He	5347.65	0.364	16589.92	0.0001	0.002715
Ca	44	3	He	5169.06	0.3519	16149.45	0.0001	0.002715
Ca	44	3	He	4835.303	0.3293	15418.78	0.0001	0.002715
Ti	47	3	He	5031.015	2.7015	123137.94	0.0005	7.003E-05
Ti	47	3	He	5046.877	2.71	124368.92	0.0005	7.003E-05
Ti	47	3	He	4934.15	2.6495	124036.86	0.0005	7.003E-05
V	51	3	He	515.805	11.2999	515072.41	0.0219	0.02486
V	51	3	He	515.234	11.2875	518013.34	0.0219	0.02486
V	51	3	He	506.178	11.0895	519165.28	0.0219	0.02486
Cr	52	3	He	495.76	14.8834	678411.79	0.0299	0.03997
Cr	52	3	He	491.852	14.7664	677670.30	0.0299	0.03997
Cr	52	3	He	479.154	14.3862	673503.66	0.0299	0.03997
Mn	55	3	He	512.14	6.5754	299717.94	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	506.83	6.5072	298635.05	0.0128	0.002639
Mn	55	3	He	503.856	6.4691	302855.48	0.0128	0.002639
Fe	57	3	He	5115.654	2.9736	135541.13	0.0006	0.001429
Fe	57	3	He	5101.476	2.9653	136087.82	0.0006	0.001429
Fe	57	3	He	5047.577	2.934	137359.17	0.0006	0.001429
Co	59	3	He	499.988	28.1426	1282792.87	0.0563	0.002149
Co	59	3	He	497.527	28.0041	1285188.57	0.0563	0.002149
Co	59	3	He	490.496	27.6084	1292513.57	0.0563	0.002149
Ni	60	3	He	519.977	4.4659	362092.06	0.0086	0.002834
Ni	60	3	He	508.839	4.3703	358387.49	0.0086	0.002834
Ni	60	3	He	527.336	4.529	362522.61	0.0086	0.002834
Cu	63	3	He	494.966	12.7111	1030611.55	0.0257	0.004757
Cu	63	3	He	484.565	12.444	1020484.05	0.0257	0.004757
Cu	63	3	He	502.584	12.9066	1033099.44	0.0257	0.004757
Zn	66	3	He	515.242	1.504	121944.32	0.0029	0.003818
Zn	66	3	He	514.059	1.5006	123054.56	0.0029	0.003818
Zn	66	3	He	524.263	1.5303	122489.03	0.0029	0.003818
As	75	3	He	515.205	1.0564	85652.09	0.002	0.0008061
As	75	3	He	511.633	1.0491	86030.19	0.002	0.0008061
As	75	3	He	526.024	1.0786	86332.25	0.002	0.0008061
Sr	88	3	He	53.33	0.4793	39175.22	0.009	0.0009645
Sr	88	3	He	48.419	0.4353	36638.15	0.009	0.0009645
Sr	88	3	He	52.019	0.4676	38152.30	0.009	0.0009645
Mo	98	3	He	53.668	1.177	96197.60	0.0219	0.0002706
Mo	98	3	He	51.953	1.1394	95907.24	0.0219	0.0002706
Mo	98	3	He	53.586	1.1752	95896.83	0.0219	0.0002706
Ag	107	3	He	52.801	2.4552	200663.36	0.0465	0.0006206
Ag	107	3	He	50.669	2.3561	198320.09	0.0465	0.0006206
Ag	107	3	He	52.456	2.4391	199029.82	0.0465	0.0006206
Cd	111	3	He	53.665	0.2869	23451.77	0.0053	0
Cd	111	3	He	50.852	0.2719	22886.76	0.0053	0
Cd	111	3	He	53.554	0.2863	23365.51	0.0053	0
Sn	120	3	He	52.147	0.8403	68679.89	0.0158	0.01648
Sn	120	3	He	50.861	0.82	69022.46	0.0158	0.01648
Sn	120	3	He	52.779	0.8503	69384.21	0.0158	0.01648
Sb	121	3	He	53.66	0.7973	65164.07	0.0149	0.0002698
Sb	121	3	He	52.302	0.7771	65414.43	0.0149	0.0002698
Sb	121	3	He	53.274	0.7916	64591.24	0.0149	0.0002698
Ba	137	3	He	535.822	2.5718	210193.90	0.0048	0.0002317
Ba	137	3	He	513.392	2.4642	207417.11	0.0048	0.0002317
Ba	137	3	He	543.421	2.6083	212832.24	0.0048	0.0002317
Tl	205	3	He	51.668	1.2777	498457.69	0.0247	0.0001339
Tl	205	3	He	52.039	1.2869	502320.85	0.0247	0.0001339
Tl	205	3	He	52.096	1.2883	503518.08	0.0247	0.0001339
Pb	208	3	He	52.481	1.7188	361276.83	0.0327	0.00107
Pb	208	3	He	52.209	1.7098	357054.99	0.0327	0.00107
Pb	208	3	He	51.667	1.6921	354312.18	0.0327	0.00107
U	238	3	He	50.975	2.5111	761093.19	0.0493	7.55E-05
U	238	3	He	51.102	2.5174	763490.38	0.0493	7.55E-05
U	238	3	He	51.385	2.5313	765637.41	0.0493	7.55E-05
Sc	45	1	No Gas			2445611.37		
Sc	45	1	No Gas			2395865.59		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2428506.37		
Ge	72	1	No Gas			1209228.89		
Ge	72	1	No Gas			1186841.23		
Ge	72	1	No Gas			1195743.73		
Sc	45	2	H2			175822.20		
Sc	45	2	H2			176868.63		
Sc	45	2	H2			175883.08		
Ge	72	2	H2			150706.79		
Ge	72	2	H2			148585.10		
Ge	72	2	H2			149806.24		
In	115	2	H2			375872.26		
In	115	2	H2			381234.53		
In	115	2	H2			380257.42		
Sc	45	3	He			45581.85		
Sc	45	3	He			45892.83		
Sc	45	3	He			46815.95		
Ge	72	3	He			81079.81		
Ge	72	3	He			82005.79		
Ge	72	3	He			80044.06		
In	115	3	He			82112.49		
In	115	3	He			84537.30		
In	115	3	He			81973.07		
Tb	159	3	He			390126.05		
Tb	159	3	He			390346.40		
Tb	159	3	He			390842.77		
Bi	209	3	He			303093.59		
Bi	209	3	He			303291.13		
Bi	209	3	He			302469.68		

Quantitation Report

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Sample Type	CCB
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

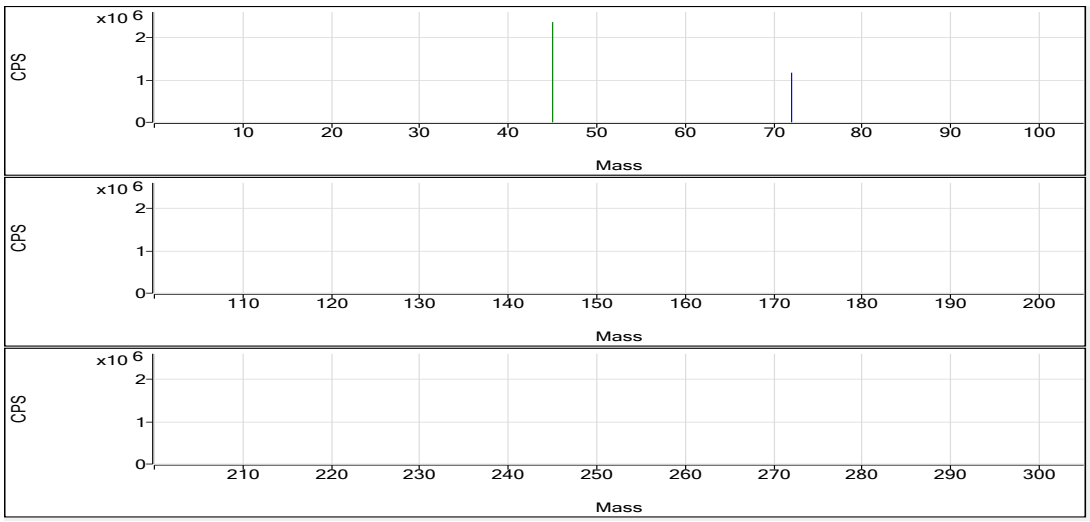
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.018	ppb	0.7	44.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.076	ppb	64.6	6.44	0.0000	Pulse	1.5000	3
Na	23	45	He	15.918	ppb	38.0	18391.90	0.4021	Pulse	0.1000	3
Mg	24	45	He	0.688	ppb	37.4	216.68	0.0047	Pulse	0.1000	3
Al	27	45	He	1.499	ppb	104.9	70.00	0.0015	Pulse	0.1000	3
K	39	45	He	0.365	ppb	1897.6	18101.72	0.3955	Pulse	0.1000	3
Ca	44	45	He	-2.586	ppb	N/A	116.67	0.0025	Pulse	0.1000	3
Ti	47	45	He	1.489	ppb	52.8	40.00	0.0009	Pulse	0.1000	3
V	51	45	He	0.367	ppb	8.5	1505.42	0.0329	Pulse	0.5000	3
Cr	52	45	He	0.022	ppb	226.4	1860.18	0.0406	Pulse	0.1000	3
Mn	55	45	He	0.169	ppb	34.0	220.01	0.0048	Pulse	0.1000	3
Fe	57	45	He	0.690	ppb	211.5	83.34	0.0018	Pulse	0.1000	3
Co	59	45	He	0.102	ppb	25.7	360.02	0.0079	Pulse	0.1000	3
Ni	60	72	He	0.021	ppb	291.3	240.01	0.0030	Pulse	0.1000	3
Cu	63	72	He	0.082	ppb	29.4	546.70	0.0069	Pulse	0.1000	3
Zn	66	72	He	1.663	ppb	16.2	690.04	0.0087	Pulse	0.1000	3
As	75	72	He	0.177	ppb	52.8	93.33	0.0012	Pulse	0.5000	3
Sr	88	115	He	-0.036	ppb	N/A	53.33	0.0006	Pulse	0.1000	3
Mo	98	115	He	0.053	ppb	17.4	120.00	0.0014	Pulse	0.1000	3
Ag	107	115	He	0.001	ppb	434.0	56.67	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.004	ppb	99.8	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.027	ppb	517.2	1413.46	0.0169	Pulse	0.1000	3
Sb	121	115	He	0.060	ppb	15.4	96.67	0.0012	Pulse	0.1000	3
Ba	137	115	He	0.101	ppb	64.8	60.00	0.0007	Pulse	0.1000	3
Tl	205	159	He	0.105	ppb	1.8	1060.09	0.0027	Pulse	0.1000	3
Pb	208	159	He	0.014	ppb	24.6	593.36	0.0015	Pulse	0.1000	3
U	238	209	He	0.044	ppb	18.6	680.05	0.0022	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2374221.74	0.5	99.0	Analog	0.1000	3
No Gas	Ge	72	1175344.38	0.6	101.9	Pulse	0.1000	3
H2	Sc	45	175736.98	1.3	94.0	Pulse	0.1000	3
H2	Ge	72	146804.50	0.6	89.7	Pulse	0.1000	3
H2	In	115	377147.15	0.7	96.9	Pulse	0.1000	3
He	Sc	45	45766.24	1.6	98.1	Pulse	0.1000	3
He	Ge	72	79735.97	1.0	98.2	Pulse	0.1000	3
He	In	115	83570.75	0.4	97.0	Pulse	0.1000	3
He	Tb	159	389408.08	0.5	97.7	Pulse	0.1000	3
He	Bi	209	303134.12	1.2	98.0	Pulse	0.1000	3

No Gas



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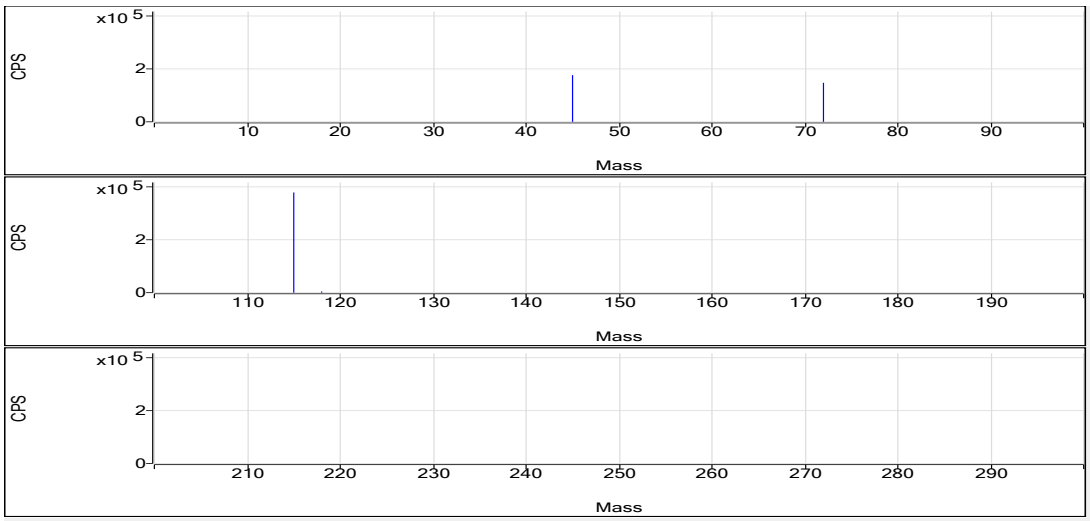
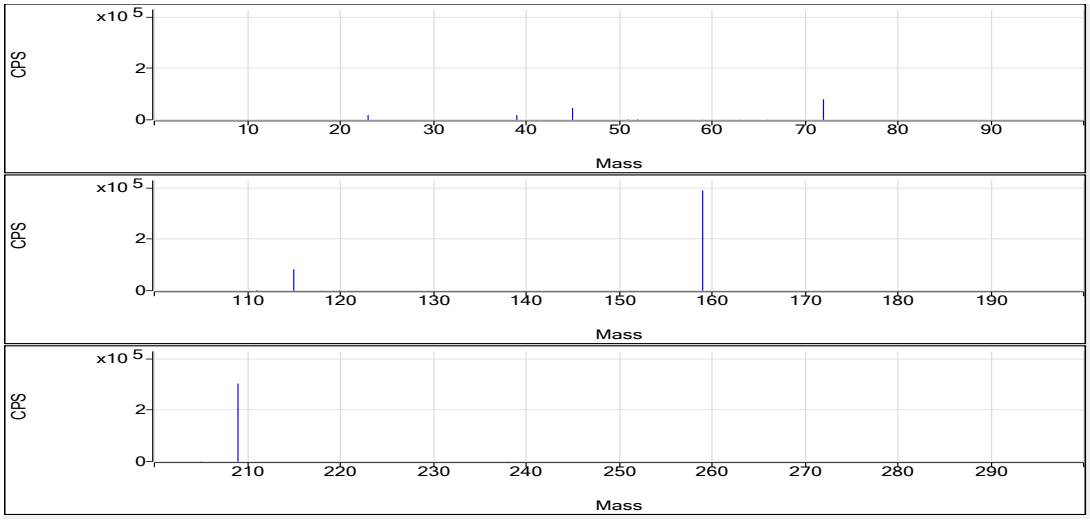


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.018	0	44.00	0.0008	4.685E-06
Be	9	1	No Gas	0.018	0	44.00	0.0008	4.685E-06
Be	9	1	No Gas	0.018	0	44.00	0.0008	4.685E-06
Se	78	2	H2	0.025	0	3.33	0.0004	1.219E-05
Se	78	2	H2	0.123	0.0001	9.33	0.0004	1.219E-05
Se	78	2	H2	0.08	0	6.67	0.0004	1.219E-05
Na	23	3	He	8.942	0.3771	17580.79	0.0036	0.3452
Na	23	3	He	19.523	0.415	18762.32	0.0036	0.3452
Na	23	3	He	19.289	0.4142	18832.59	0.0036	0.3452
Mg	24	3	He	0.801	0.0049	230.01	0.0018	0.003497
Mg	24	3	He	0.393	0.0042	190.01	0.0018	0.003497
Mg	24	3	He	0.87	0.0051	230.01	0.0018	0.003497
Al	27	3	He	3.301	0.0026	120.01	0.0006	0.0006432
Al	27	3	He	0.791	0.0011	50.00	0.0006	0.0006432
Al	27	3	He	0.404	0.0009	40.00	0.0006	0.0006432
K	39	3	He	4.722	0.4006	18672.41	0.0012	0.3951
K	39	3	He	3.994	0.3997	18071.67	0.0012	0.3951
K	39	3	He	-7.621	0.3862	17561.08	0.0012	0.3951
Ca	44	3	He	13.799	0.0036	170.01	0.0001	0.002715
Ca	44	3	He	-0.899	0.0027	120.00	0.0001	0.002715
Ca	44	3	He	-20.658	0.0013	60.00	0.0001	0.002715
Ti	47	3	He	2.267	0.0013	60.00	0.0005	7.003E-05
Ti	47	3	He	0.693	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	1.508	0.0009	40.00	0.0005	7.003E-05
V	51	3	He	0.356	0.0327	1522.09	0.0219	0.02486
V	51	3	He	0.403	0.0337	1522.09	0.0219	0.02486
V	51	3	He	0.343	0.0324	1472.09	0.0219	0.02486
Cr	52	3	He	0.041	0.0412	1920.21	0.0299	0.03997
Cr	52	3	He	0.061	0.0418	1890.18	0.0299	0.03997
Cr	52	3	He	-0.035	0.0389	1770.15	0.0299	0.03997
Mn	55	3	He	0.196	0.0051	240.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.208	0.0053	240.01	0.0128	0.002639
Mn	55	3	He	0.103	0.004	180.01	0.0128	0.002639
Fe	57	3	He	-0.982	0.0009	40.00	0.0006	0.001429
Fe	57	3	He	1.348	0.0022	100.00	0.0006	0.001429
Fe	57	3	He	1.705	0.0024	110.01	0.0006	0.001429
Co	59	3	He	0.08	0.0067	310.01	0.0563	0.002149
Co	59	3	He	0.131	0.0095	430.02	0.0563	0.002149
Co	59	3	He	0.095	0.0075	340.02	0.0563	0.002149
Ni	60	3	He	0.08	0.0035	280.01	0.0086	0.002834
Ni	60	3	He	-0.041	0.0025	200.01	0.0086	0.002834
Ni	60	3	He	0.024	0.003	240.01	0.0086	0.002834
Cu	63	3	He	0.104	0.0074	590.03	0.0257	0.004757
Cu	63	3	He	0.085	0.0069	560.03	0.0257	0.004757
Cu	63	3	He	0.056	0.0062	490.03	0.0257	0.004757
Zn	66	3	He	1.713	0.0088	700.04	0.0029	0.003818
Zn	66	3	He	1.372	0.0078	630.04	0.0029	0.003818
Zn	66	3	He	1.904	0.0094	740.04	0.0029	0.003818
As	75	3	He	0.196	0.0012	96.00	0.002	0.0008061
As	75	3	He	0.26	0.0013	108.00	0.002	0.0008061
As	75	3	He	0.076	0.001	76.00	0.002	0.0008061
Sr	88	3	He	-0.094	0.0001	10.00	0.009	0.0009645
Sr	88	3	He	-0.014	0.0008	70.00	0.009	0.0009645
Sr	88	3	He	-0.001	0.001	80.00	0.009	0.0009645
Mo	98	3	He	0.058	0.0016	130.00	0.0219	0.0002706
Mo	98	3	He	0.042	0.0012	100.00	0.0219	0.0002706
Mo	98	3	He	0.058	0.0016	130.01	0.0219	0.0002706
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Ag	107	3	He	0.007	0.001	80.00	0.0465	0.0006206
Ag	107	3	He	-0.003	0.0005	40.00	0.0465	0.0006206
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.009	0	4.00	0.0053	0
Sn	120	3	He	0.045	0.0172	1440.14	0.0158	0.01648
Sn	120	3	He	-0.122	0.0145	1210.10	0.0158	0.01648
Sn	120	3	He	0.159	0.019	1590.15	0.0158	0.01648
Sb	121	3	He	0.054	0.0011	90.00	0.0149	0.0002698
Sb	121	3	He	0.055	0.0011	90.00	0.0149	0.0002698
Sb	121	3	He	0.07	0.0013	110.01	0.0149	0.0002698
Ba	137	3	He	0.176	0.0011	90.01	0.0048	0.0002317
Ba	137	3	He	0.077	0.0006	50.00	0.0048	0.0002317
Ba	137	3	He	0.051	0.0005	40.00	0.0048	0.0002317
Tl	205	3	He	0.105	0.0027	1070.09	0.0247	0.0001339
Tl	205	3	He	0.106	0.0028	1070.09	0.0247	0.0001339
Tl	205	3	He	0.103	0.0027	1040.08	0.0247	0.0001339
Pb	208	3	He	0.01	0.0014	250.01	0.0327	0.00107
Pb	208	3	He	0.017	0.0016	310.02	0.0327	0.00107
Pb	208	3	He	0.014	0.0015	370.02	0.0327	0.00107
U	238	3	He	0.053	0.0027	830.07	0.0493	7.55E-05
U	238	3	He	0.039	0.002	610.04	0.0493	7.55E-05
U	238	3	He	0.039	0.002	600.03	0.0493	7.55E-05
Sc	45	1	No Gas			2374584.81		
Sc	45	1	No Gas			2362070.59		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2386009.81		
Ge	72	1	No Gas			1180405.84		
Ge	72	1	No Gas			1178150.76		
Ge	72	1	No Gas			1167476.55		
Sc	45	2	H2			176935.68		
Sc	45	2	H2			177207.11		
Sc	45	2	H2			173068.14		
Ge	72	2	H2			147524.67		
Ge	72	2	H2			147040.43		
Ge	72	2	H2			145848.41		
In	115	2	H2			376881.17		
In	115	2	H2			380066.17		
In	115	2	H2			374494.10		
Sc	45	3	He			46615.30		
Sc	45	3	He			45211.12		
Sc	45	3	He			45472.29		
Ge	72	3	He			79511.54		
Ge	72	3	He			80637.78		
Ge	72	3	He			79058.59		
In	115	3	He			83792.20		
In	115	3	He			83218.92		
In	115	3	He			83722.97		
Tb	159	3	He			391564.92		
Tb	159	3	He			387421.99		
Tb	159	3	He			389237.34		
Bi	209	3	He			306836.91		
Bi	209	3	He			303277.73		
Bi	209	3	He			299287.71		

Quantitation Report

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Sample Type	Sample
Comment	F15 ICP
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

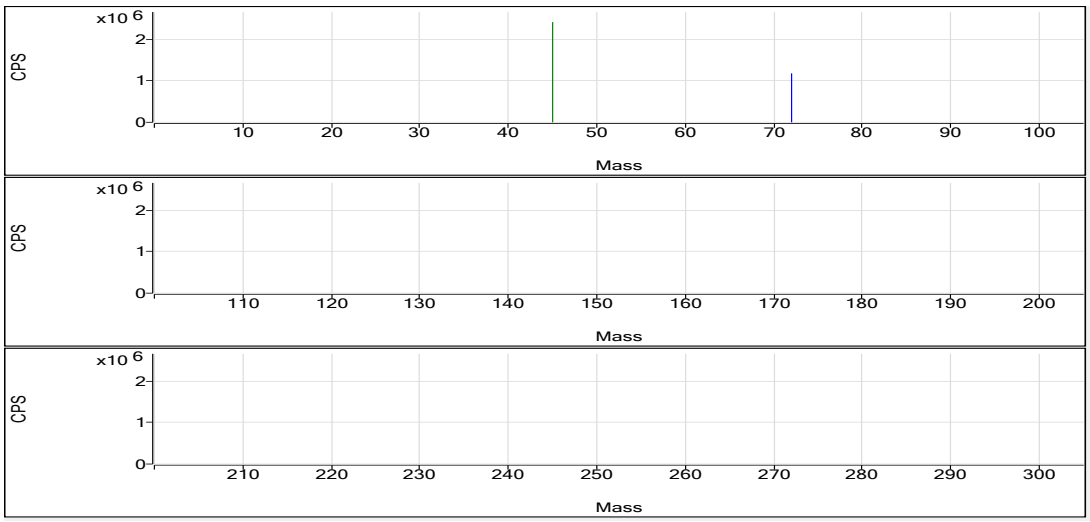
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.028	ppb	33.9	62.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.032	ppb	37.7	3.78	0.0000	Pulse	1.5000	3
Na	23	45	He	30205.268	ppb	1.7	5108389.93	108.3909	Analog	0.1000	3
Mg	24	45	He	6.570	ppb	21.7	720.04	0.0153	Pulse	0.1000	3
Al	27	45	He	7.712	ppb	17.3	243.34	0.0052	Pulse	0.1000	3
K	39	45	He	3.386	ppb	138.0	18806.00	0.3990	Pulse	0.1000	3
Ca	44	45	He	44.727	ppb	51.9	270.01	0.0057	Pulse	0.1000	3
Ti	47	45	He	0.135	ppb	170.2	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	0.280	ppb	11.9	1460.75	0.0310	Pulse	0.5000	3
Cr	52	45	He	0.090	ppb	44.4	2010.22	0.0427	Pulse	0.1000	3
Mn	55	45	He	0.175	ppb	52.7	230.01	0.0049	Pulse	0.1000	3
Fe	57	45	He	3.519	ppb	45.5	163.34	0.0035	Pulse	0.1000	3
Co	59	45	He	0.708	ppb	6.2	1980.20	0.0420	Pulse	0.1000	3
Ni	60	72	He	2.230	ppb	13.4	1753.50	0.0220	Pulse	0.1000	3
Cu	63	72	He	2.892	ppb	3.1	6301.61	0.0790	Pulse	0.1000	3
Zn	66	72	He	3.957	ppb	10.6	1223.43	0.0153	Pulse	0.1000	3
As	75	72	He	0.006	ppb	1807.4	65.33	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.227	ppb	57.8	250.01	0.0030	Pulse	0.1000	3
Mo	98	115	He	0.095	ppb	9.6	196.68	0.0024	Pulse	0.1000	3
Ag	107	115	He	0.008	ppb	45.8	83.33	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.016	ppb	58.0	7.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.024	ppb	N/A	1346.78	0.0161	Pulse	0.1000	3
Sb	121	115	He	0.266	ppb	13.9	353.35	0.0042	Pulse	0.1000	3
Ba	137	115	He	0.998	ppb	1.3	420.02	0.0050	Pulse	0.1000	3
Tl	205	159	He	0.039	ppb	14.9	423.36	0.0011	Pulse	0.1000	3
Pb	208	159	He	0.553	ppb	4.2	7444.46	0.0192	Pulse	0.1000	3
U	238	209	He	0.010	ppb	20.0	170.01	0.0006	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2423012.20	0.8	101.0	Analog	0.1000	3
No Gas	Ge	72	1183646.29	0.9	102.6	Pulse	0.1000	3
H2	Sc	45	178727.90	2.4	95.6	Pulse	0.1000	3
H2	Ge	72	148037.13	2.5	90.4	Pulse	0.1000	3
H2	In	115	377118.07	0.9	96.9	Pulse	0.1000	3
He	Sc	45	47137.15	1.5	101.1	Pulse	0.1000	3
He	Ge	72	79768.97	0.6	98.2	Pulse	0.1000	3
He	In	115	83606.72	1.2	97.0	Pulse	0.1000	3
He	Tb	159	388572.05	1.0	97.5	Pulse	0.1000	3
He	Bi	209	305801.89	0.4	98.9	Pulse	0.1000	3

No Gas



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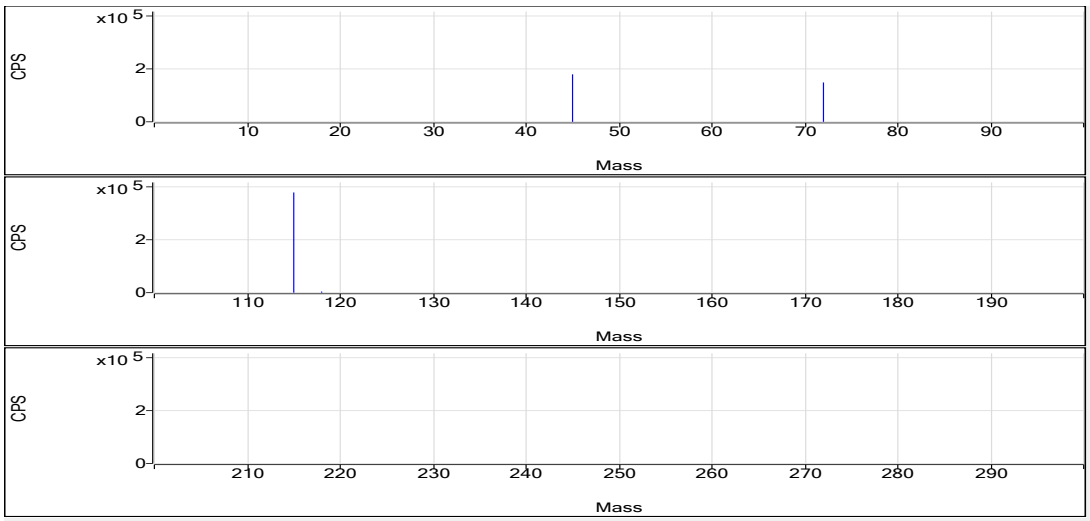
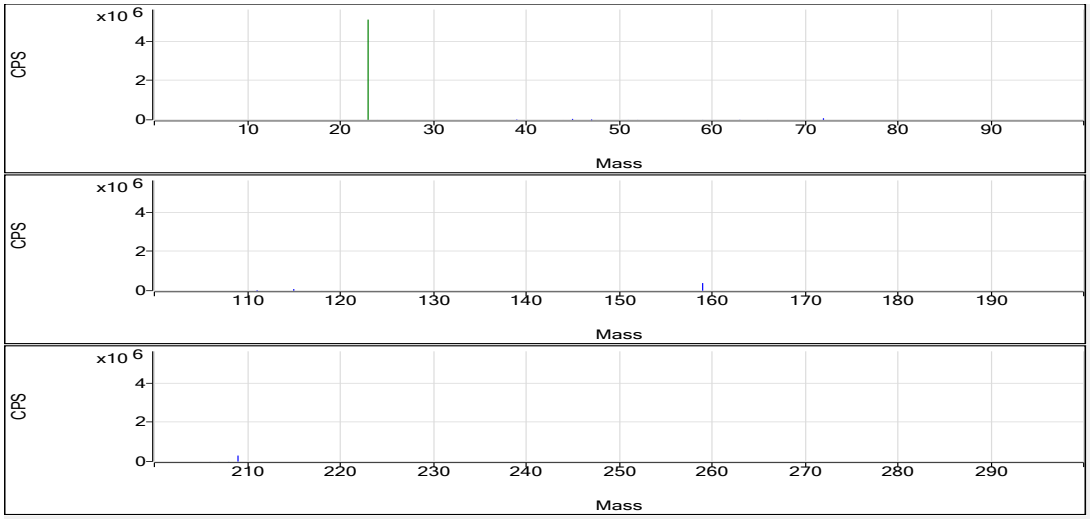


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.039	0	82.00	0.0008	4.685E-06
Be	9	1	No Gas	0.021	0	50.00	0.0008	4.685E-06
Be	9	1	No Gas	0.024	0	56.00	0.0008	4.685E-06
Se	78	2	H2	0.046	0	4.67	0.0004	1.219E-05
Se	78	2	H2	0.024	0	3.33	0.0004	1.219E-05
Se	78	2	H2	0.026	0	3.33	0.0004	1.219E-05
Na	23	3	He	30701.979	110.1676	5129945.24	0.0036	0.3452
Na	23	3	He	29658.598	106.4354	5098241.49	0.0036	0.3452
Na	23	3	He	30255.229	108.5696	5096983.05	0.0036	0.3452
Mg	24	3	He	8.105	0.018	840.05	0.0018	0.003497
Mg	24	3	He	6.312	0.0148	710.04	0.0018	0.003497
Mg	24	3	He	5.293	0.013	610.03	0.0018	0.003497
Al	27	3	He	6.977	0.0047	220.01	0.0006	0.0006432
Al	27	3	He	9.249	0.0061	290.01	0.0006	0.0006432
Al	27	3	He	6.911	0.0047	220.01	0.0006	0.0006432
K	39	3	He	4.728	0.4006	18652.55	0.0012	0.3951
K	39	3	He	-1.81	0.393	18822.68	0.0012	0.3951
K	39	3	He	7.239	0.4035	18942.78	0.0012	0.3951
Ca	44	3	He	39.29	0.0054	250.01	0.0001	0.002715
Ca	44	3	He	24.713	0.0044	210.01	0.0001	0.002715
Ca	44	3	He	70.179	0.0075	350.02	0.0001	0.002715
Ti	47	3	He	0.27	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.266	0.0002	10.00	0.0005	7.003E-05
V	51	3	He	0.258	0.0305	1420.08	0.0219	0.02486
V	51	3	He	0.265	0.0306	1468.08	0.0219	0.02486
V	51	3	He	0.318	0.0318	1494.09	0.0219	0.02486
Cr	52	3	He	0.135	0.044	2050.22	0.0299	0.03997
Cr	52	3	He	0.067	0.042	2010.21	0.0299	0.03997
Cr	52	3	He	0.067	0.042	1970.22	0.0299	0.03997
Mn	55	3	He	0.28	0.0062	290.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.103	0.004	190.01	0.0128	0.002639
Mn	55	3	He	0.143	0.0045	210.01	0.0128	0.002639
Fe	57	3	He	5.303	0.0045	210.01	0.0006	0.001429
Fe	57	3	He	2.212	0.0027	130.01	0.0006	0.001429
Fe	57	3	He	3.041	0.0032	150.01	0.0006	0.001429
Co	59	3	He	0.74	0.0438	2040.21	0.0563	0.002149
Co	59	3	He	0.726	0.043	2060.22	0.0563	0.002149
Co	59	3	He	0.658	0.0392	1840.18	0.0563	0.002149
Ni	60	3	He	2.132	0.0211	1690.16	0.0086	0.002834
Ni	60	3	He	2.565	0.0249	1990.21	0.0086	0.002834
Ni	60	3	He	1.993	0.0199	1580.14	0.0086	0.002834
Cu	63	3	He	2.942	0.0803	6421.68	0.0257	0.004757
Cu	63	3	He	2.943	0.0803	6431.64	0.0257	0.004757
Cu	63	3	He	2.79	0.0764	6051.52	0.0257	0.004757
Zn	66	3	He	3.499	0.014	1120.09	0.0029	0.003818
Zn	66	3	He	4.05	0.0156	1250.10	0.0029	0.003818
Zn	66	3	He	4.324	0.0164	1300.11	0.0029	0.003818
As	75	3	He	-0.125	0.0006	44.00	0.002	0.0008061
As	75	3	He	0.094	0.001	80.00	0.002	0.0008061
As	75	3	He	0.05	0.0009	72.00	0.002	0.0008061
Sr	88	3	He	0.238	0.0031	260.01	0.009	0.0009645
Sr	88	3	He	0.352	0.0041	340.02	0.009	0.0009645
Sr	88	3	He	0.091	0.0018	150.01	0.009	0.0009645
Mo	98	3	He	0.086	0.0021	180.01	0.0219	0.0002706
Mo	98	3	He	0.104	0.0025	210.01	0.0219	0.0002706
Mo	98	3	He	0.096	0.0024	200.01	0.0219	0.0002706
Ag	107	3	He	0.007	0.001	80.00	0.0465	0.0006206
Ag	107	3	He	0.005	0.0008	70.00	0.0465	0.0006206
Ag	107	3	He	0.012	0.0012	100.00	0.0465	0.0006206
Cd	111	3	He	0.009	0	4.00	0.0053	0
Cd	111	3	He	0.027	0.0001	12.00	0.0053	0
Cd	111	3	He	0.013	0.0001	6.00	0.0053	0
Sn	120	3	He	-0.001	0.0165	1380.12	0.0158	0.01648
Sn	120	3	He	-0.092	0.015	1240.10	0.0158	0.01648
Sn	120	3	He	0.022	0.0168	1420.12	0.0158	0.01648
Sb	121	3	He	0.247	0.0039	330.01	0.0149	0.0002698
Sb	121	3	He	0.243	0.0039	320.02	0.0149	0.0002698
Sb	121	3	He	0.309	0.0049	410.02	0.0149	0.0002698
Ba	137	3	He	0.995	0.005	420.02	0.0048	0.0002317
Ba	137	3	He	0.987	0.005	410.02	0.0048	0.0002317
Ba	137	3	He	1.013	0.0051	430.02	0.0048	0.0002317
Tl	205	3	He	0.034	0.001	380.02	0.0247	0.0001339
Tl	205	3	He	0.045	0.0012	480.03	0.0247	0.0001339
Tl	205	3	He	0.037	0.0011	410.02	0.0247	0.0001339
Pb	208	3	He	0.579	0.02	4410.88	0.0327	0.00107
Pb	208	3	He	0.539	0.0187	3750.69	0.0327	0.00107
Pb	208	3	He	0.54	0.0187	4050.78	0.0327	0.00107
U	238	3	He	0.008	0.0005	140.01	0.0493	7.55E-05
U	238	3	He	0.01	0.0006	170.01	0.0493	7.55E-05
U	238	3	He	0.012	0.0007	200.01	0.0493	7.55E-05
Sc	45	1	No Gas			2405150.75		
Sc	45	1	No Gas			2419350.90		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2444534.96		
Ge	72	1	No Gas			1171235.22		
Ge	72	1	No Gas			1186877.33		
Ge	72	1	No Gas			1192826.31		
Sc	45	2	H2			181188.30		
Sc	45	2	H2			181268.77		
Sc	45	2	H2			173726.62		
Ge	72	2	H2			149444.07		
Ge	72	2	H2			150859.68		
Ge	72	2	H2			143807.65		
In	115	2	H2			380827.92		
In	115	2	H2			376701.09		
In	115	2	H2			373825.19		
Sc	45	3	He			46564.90		
Sc	45	3	He			47899.86		
Sc	45	3	He			46946.69		
Ge	72	3	He			79983.15		
Ge	72	3	He			80084.23		
Ge	72	3	He			79239.54		
In	115	3	He			83872.73		
In	115	3	He			82524.15		
In	115	3	He			84446.53		
Tb	159	3	He			391045.50		
Tb	159	3	He			384292.46		
Tb	159	3	He			390378.20		
Bi	209	3	He			304947.59		
Bi	209	3	He			305424.84		
Bi	209	3	He			307033.24		

Quantitation Report

Data File Name	272SMPL.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	8/10/2023 8:01:20 PM
Sample Name	410-135157-C-5-F DU
Sample Type	Sample
Comment	F15 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

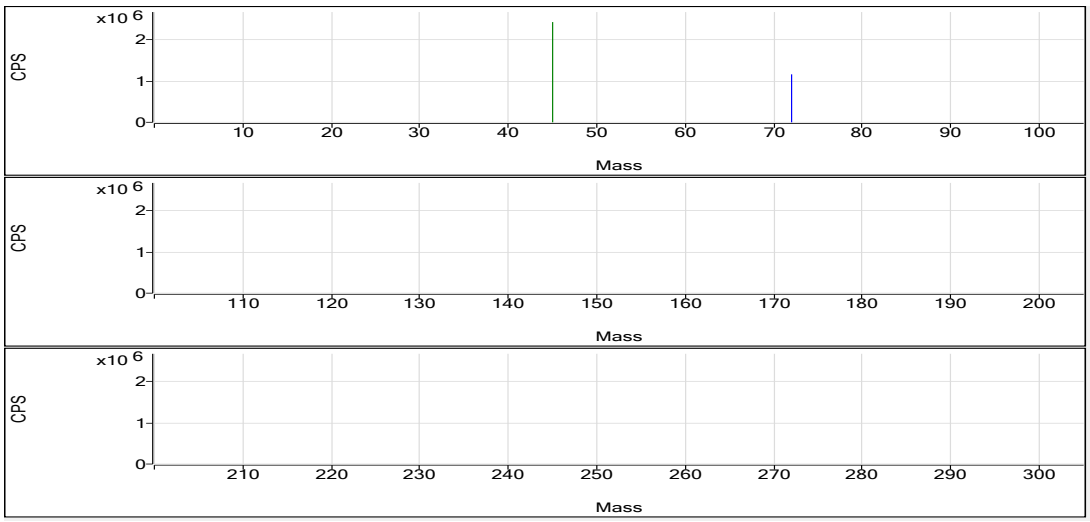
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.022	ppb	8.8	52.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.025	ppb	75.1	3.33	0.0000	Pulse	1.5000	3
Na	23	45	He	38432.343	ppb	1.4	6417641.99	137.8195	Analog	0.1000	3
Mg	24	45	He	9.009	ppb	8.7	916.73	0.0197	Pulse	0.1000	3
Al	27	45	He	8.287	ppb	31.7	256.68	0.0055	Pulse	0.1000	3
K	39	45	He	27.012	ppb	23.8	19867.32	0.4265	Pulse	0.1000	3
Ca	44	45	He	89.200	ppb	22.2	406.68	0.0087	Pulse	0.1000	3
Ti	47	45	He	0.135	ppb	340.0	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	0.295	ppb	3.4	1458.75	0.0313	Pulse	0.5000	3
Cr	52	45	He	0.126	ppb	184.1	2033.56	0.0438	Pulse	0.1000	3
Mn	55	45	He	0.237	ppb	45.4	263.34	0.0057	Pulse	0.1000	3
Fe	57	45	He	6.534	ppb	2.0	243.34	0.0052	Pulse	0.1000	3
Co	59	45	He	0.971	ppb	7.2	2643.67	0.0568	Pulse	0.1000	3
Ni	60	72	He	2.951	ppb	4.9	2243.58	0.0282	Pulse	0.1000	3
Cu	63	72	He	3.766	ppb	1.1	8085.84	0.1014	Pulse	0.1000	3
Zn	66	72	He	8.883	ppb	3.1	2366.95	0.0297	Pulse	0.1000	3
As	75	72	He	0.007	ppb	441.1	65.33	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.294	ppb	39.4	300.02	0.0036	Pulse	0.1000	3
Mo	98	115	He	0.079	ppb	36.7	166.67	0.0020	Pulse	0.1000	3
Ag	107	115	He	0.017	ppb	46.0	116.67	0.0014	Pulse	0.1000	3
Cd	111	115	He	0.014	ppb	100.8	6.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.166	ppb	26.7	1596.81	0.0191	Pulse	0.1000	3
Sb	121	115	He	0.361	ppb	15.2	470.02	0.0056	Pulse	0.1000	3
Ba	137	115	He	2.716	ppb	5.0	1110.08	0.0133	Pulse	0.1000	3
Tl	205	159	He	0.020	ppb	23.8	243.34	0.0006	Pulse	0.1000	3
Pb	208	159	He	0.687	ppb	1.1	9104.89	0.0235	Pulse	0.1000	3
U	238	209	He	0.006	ppb	9.9	120.00	0.0004	Pulse	0.1000	3

ISTD Table:

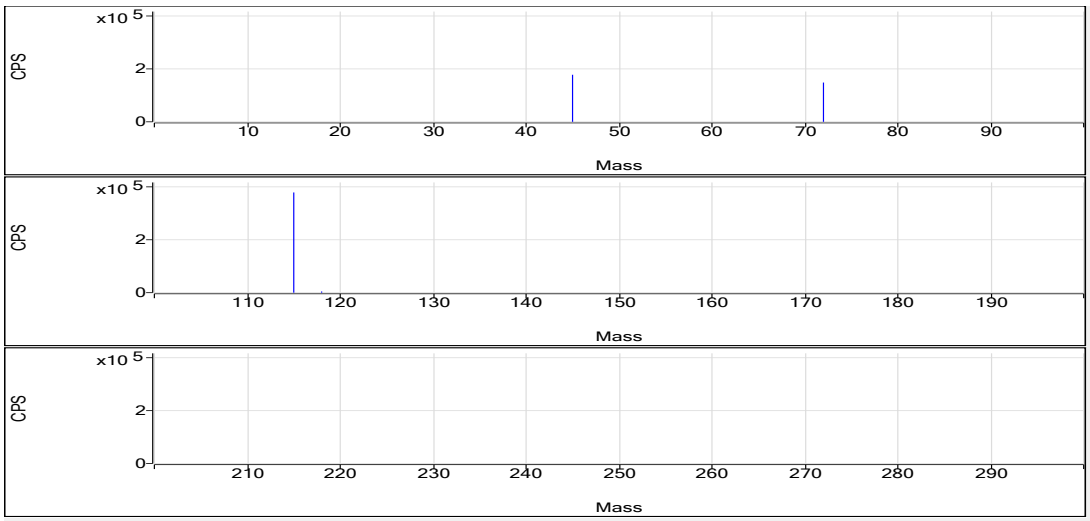
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2437545.17	0.4	101.6	Analog	0.1000	3
No Gas	Ge	72	1166547.07	1.2	101.1	Pulse	0.1000	3
H2	Sc	45	177340.06	0.6	94.8	Pulse	0.1000	3
H2	Ge	72	147993.08	0.5	90.4	Pulse	0.1000	3
H2	In	115	377739.18	1.0	97.1	Pulse	0.1000	3
He	Sc	45	46575.23	2.3	99.9	Pulse	0.1000	3
He	Ge	72	79718.86	2.1	98.2	Pulse	0.1000	3
He	In	115	83620.40	1.5	97.0	Pulse	0.1000	3
He	Tb	159	386644.41	1.0	97.0	Pulse	0.1000	3
He	Bi	209	307924.14	0.6	99.6	Pulse	0.1000	3

No Gas

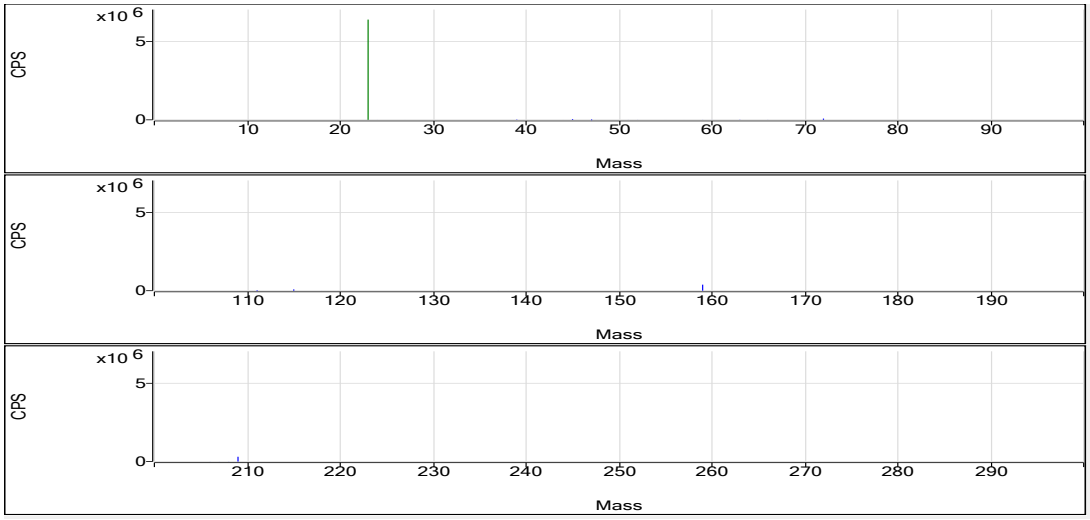


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.023	0	54.00	0.0008	4.685E-06
Be	9	1	No Gas	0.02	0	48.00	0.0008	4.685E-06
Be	9	1	No Gas	0.023	0	54.00	0.0008	4.685E-06
Se	78	2	H2	0.003	0	2.00	0.0004	1.219E-05
Se	78	2	H2	0.036	0	4.00	0.0004	1.219E-05
Se	78	2	H2	0.035	0	4.00	0.0004	1.219E-05
Na	23	3	He	38066.57	136.5111	6497708.03	0.0036	0.3452
Na	23	3	He	38180.711	136.9194	6394890.53	0.0036	0.3452
Na	23	3	He	39049.747	140.028	6360327.41	0.0036	0.3452
Mg	24	3	He	9.878	0.0212	1010.07	0.0018	0.003497
Mg	24	3	He	8.791	0.0193	900.06	0.0018	0.003497
Mg	24	3	He	8.358	0.0185	840.06	0.0018	0.003497
Al	27	3	He	9.315	0.0061	290.01	0.0006	0.0006432
Al	27	3	He	10.246	0.0066	310.02	0.0006	0.0006432
Al	27	3	He	5.298	0.0037	170.01	0.0006	0.0006432
K	39	3	He	25.443	0.4247	20214.59	0.0012	0.3951
K	39	3	He	34.073	0.4347	20304.67	0.0012	0.3951
K	39	3	He	21.519	0.4201	19082.70	0.0012	0.3951
Ca	44	3	He	93.549	0.009	430.02	0.0001	0.002715
Ca	44	3	He	67.576	0.0073	340.01	0.0001	0.002715
Ca	44	3	He	106.475	0.0099	450.02	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.667	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	0.291	0.0312	1486.08	0.0219	0.02486
V	51	3	He	0.289	0.0312	1456.08	0.0219	0.02486
V	51	3	He	0.307	0.0316	1434.08	0.0219	0.02486
Cr	52	3	He	0.019	0.0406	1930.20	0.0299	0.03997
Cr	52	3	He	-0.033	0.039	1820.18	0.0299	0.03997
Cr	52	3	He	0.393	0.0517	2350.29	0.0299	0.03997
Mn	55	3	He	0.171	0.0048	230.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.178	0.0049	230.01	0.0128	0.002639
Mn	55	3	He	0.361	0.0073	330.01	0.0128	0.002639
Fe	57	3	He	6.581	0.0053	250.01	0.0006	0.001429
Fe	57	3	He	6.386	0.0051	240.01	0.0006	0.001429
Fe	57	3	He	6.636	0.0053	240.01	0.0006	0.001429
Co	59	3	He	0.903	0.0529	2520.31	0.0563	0.002149
Co	59	3	He	0.97	0.0567	2650.34	0.0563	0.002149
Co	59	3	He	1.042	0.0608	2760.36	0.0563	0.002149
Ni	60	3	He	2.794	0.0268	2190.25	0.0086	0.002834
Ni	60	3	He	2.976	0.0284	2240.23	0.0086	0.002834
Ni	60	3	He	3.082	0.0293	2300.25	0.0086	0.002834
Cu	63	3	He	3.779	0.1018	8312.65	0.0257	0.004757
Cu	63	3	He	3.798	0.1023	8072.52	0.0257	0.004757
Cu	63	3	He	3.719	0.1002	7872.35	0.0257	0.004757
Zn	66	3	He	9.161	0.0305	2490.29	0.0029	0.003818
Zn	66	3	He	8.87	0.0296	2340.29	0.0029	0.003818
Zn	66	3	He	8.617	0.0289	2270.26	0.0029	0.003818
As	75	3	He	-0.011	0.0008	64.00	0.002	0.0008061
As	75	3	He	-0.01	0.0008	62.00	0.002	0.0008061
As	75	3	He	0.042	0.0009	70.00	0.002	0.0008061
Sr	88	3	He	0.196	0.0027	230.01	0.009	0.0009645
Sr	88	3	He	0.264	0.0033	280.01	0.009	0.0009645
Sr	88	3	He	0.421	0.0047	390.03	0.009	0.0009645
Mo	98	3	He	0.085	0.0021	180.01	0.0219	0.0002706
Mo	98	3	He	0.047	0.0013	110.00	0.0219	0.0002706
Mo	98	3	He	0.104	0.0026	210.01	0.0219	0.0002706
Ag	107	3	He	0.025	0.0018	150.01	0.0465	0.0006206
Ag	107	3	He	0.01	0.0011	90.00	0.0465	0.0006206
Ag	107	3	He	0.015	0.0013	110.00	0.0465	0.0006206
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0.013	0.0001	6.00	0.0053	0
Cd	111	3	He	0.027	0.0001	12.00	0.0053	0
Sn	120	3	He	0.163	0.019	1610.15	0.0158	0.01648
Sn	120	3	He	0.124	0.0184	1550.13	0.0158	0.01648
Sn	120	3	He	0.212	0.0198	1630.15	0.0158	0.01648
Sb	121	3	He	0.324	0.0051	430.02	0.0149	0.0002698
Sb	121	3	He	0.334	0.0052	440.02	0.0149	0.0002698
Sb	121	3	He	0.424	0.0066	540.03	0.0149	0.0002698
Ba	137	3	He	2.811	0.0137	1160.09	0.0048	0.0002317
Ba	137	3	He	2.776	0.0136	1140.09	0.0048	0.0002317
Ba	137	3	He	2.562	0.0125	1030.07	0.0048	0.0002317
Tl	205	3	He	0.023	0.0007	270.01	0.0247	0.0001339
Tl	205	3	He	0.015	0.0005	190.01	0.0247	0.0001339
Tl	205	3	He	0.023	0.0007	270.01	0.0247	0.0001339
Pb	208	3	He	0.679	0.0233	5041.16	0.0327	0.00107
Pb	208	3	He	0.694	0.0238	4771.03	0.0327	0.00107
Pb	208	3	He	0.687	0.0235	4560.96	0.0327	0.00107
U	238	3	He	0.006	0.0004	120.00	0.0493	7.55E-05
U	238	3	He	0.007	0.0004	130.01	0.0493	7.55E-05
U	238	3	He	0.006	0.0004	110.00	0.0493	7.55E-05
Sc	45	1	No Gas			2442602.78		
Sc	45	1	No Gas			2442421.21		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2427611.53		
Ge	72	1	No Gas			1174718.19		
Ge	72	1	No Gas			1174654.28		
Ge	72	1	No Gas			1150268.73		
Sc	45	2	H2			177632.03		
Sc	45	2	H2			176225.80		
Sc	45	2	H2			178162.34		
Ge	72	2	H2			147485.46		
Ge	72	2	H2			147746.25		
Ge	72	2	H2			148747.52		
In	115	2	H2			382134.33		
In	115	2	H2			375726.21		
In	115	2	H2			375356.99		
Sc	45	3	He			47598.37		
Sc	45	3	He			46705.50		
Sc	45	3	He			45421.82		
Ge	72	3	He			81672.89		
Ge	72	3	He			78948.27		
Ge	72	3	He			78535.41		
In	115	3	He			84546.52		
In	115	3	He			84114.41		
In	115	3	He			82222.82		
Tb	159	3	He			391041.56		
Tb	159	3	He			385369.21		
Tb	159	3	He			383522.46		
Bi	209	3	He			309642.81		
Bi	209	3	He			308385.66		
Bi	209	3	He			305743.96		

Quantitation Report

Data File Name	273SMPL.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	8/10/2023 8:03:22 PM
Sample Name	410-135157-C-5-G MS @100
Sample Type	Sample
Comment	F15 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

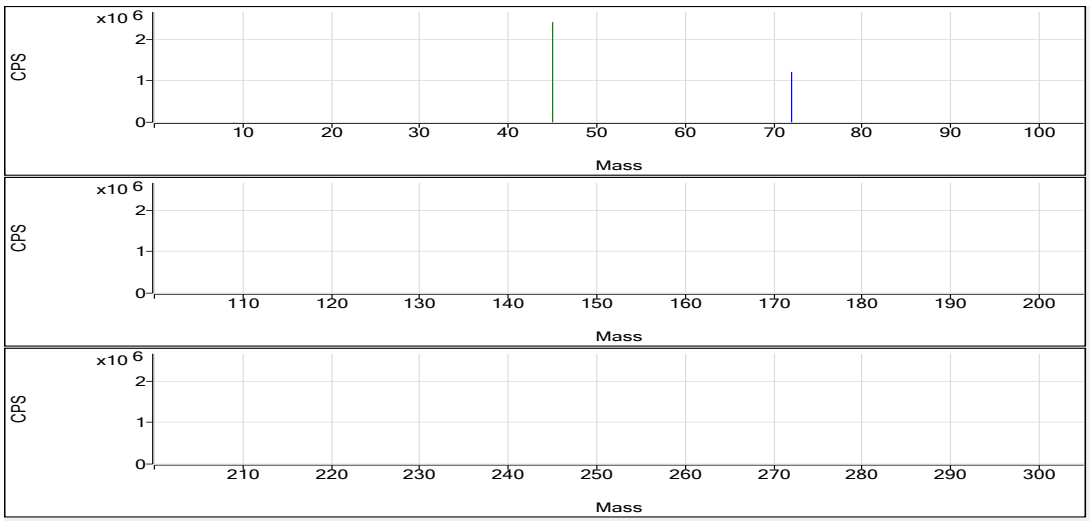
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	3.976	ppb	0.9	7326.50	0.0030	Pulse	0.5000	3
Se	78	72	H2	0.902	ppb	5.9	60.44	0.0004	Pulse	1.5000	3
Na	23	45	He	349.632	ppb	1.1	75094.16	1.5958	Pulse	0.1000	3
Mg	24	45	He	39.983	ppb	5.9	3540.57	0.0752	Pulse	0.1000	3
Al	27	45	He	10.282	ppb	14.3	313.35	0.0067	Pulse	0.1000	3
K	39	45	He	38.351	ppb	13.1	20691.92	0.4397	Pulse	0.1000	3
Ca	44	45	He	46.849	ppb	27.1	276.68	0.0059	Pulse	0.1000	3
Ti	47	45	He	9.896	ppb	19.7	253.35	0.0054	Pulse	0.1000	3
V	51	45	He	4.487	ppb	0.6	5785.18	0.1229	Pulse	0.5000	3
Cr	52	45	He	4.108	ppb	1.7	7668.97	0.1630	Pulse	0.1000	3
Mn	55	45	He	4.238	ppb	3.2	2683.69	0.0570	Pulse	0.1000	3
Fe	57	45	He	6.929	ppb	49.0	256.68	0.0055	Pulse	0.1000	3
Co	59	45	He	4.151	ppb	4.0	11094.59	0.2358	Pulse	0.1000	3
Ni	60	72	He	4.481	ppb	3.8	3410.52	0.0413	Pulse	0.1000	3
Cu	63	72	He	4.362	ppb	4.7	9643.54	0.1167	Pulse	0.1000	3
Zn	66	72	He	6.703	ppb	5.0	1926.86	0.0233	Pulse	0.1000	3
As	75	72	He	4.481	ppb	3.4	824.70	0.0100	Pulse	0.5000	3
Sr	88	115	He	4.691	ppb	8.0	3617.26	0.0430	Pulse	0.1000	3
Mo	98	115	He	8.781	ppb	2.4	16213.20	0.1928	Pulse	0.1000	3
Ag	107	115	He	4.456	ppb	1.6	17471.51	0.2077	Pulse	0.1000	3
Cd	111	115	He	0.903	ppb	1.7	406.01	0.0048	Pulse	0.5000	3
Sn	120	115	He	43.270	ppb	1.4	58869.41	0.7001	Pulse	0.1000	3
Sb	121	115	He	4.284	ppb	4.7	5371.23	0.0639	Pulse	0.1000	3
Ba	137	115	He	87.219	ppb	0.5	35219.65	0.4188	Pulse	0.1000	3
Tl	205	159	He	4.301	ppb	0.5	41539.97	0.1065	Pulse	0.1000	3
Pb	208	159	He	4.338	ppb	1.2	55801.43	0.1430	Pulse	0.1000	3
U	238	209	He	0.004	ppb	63.2	80.00	0.0003	Pulse	0.1000	3

ISTD Table:

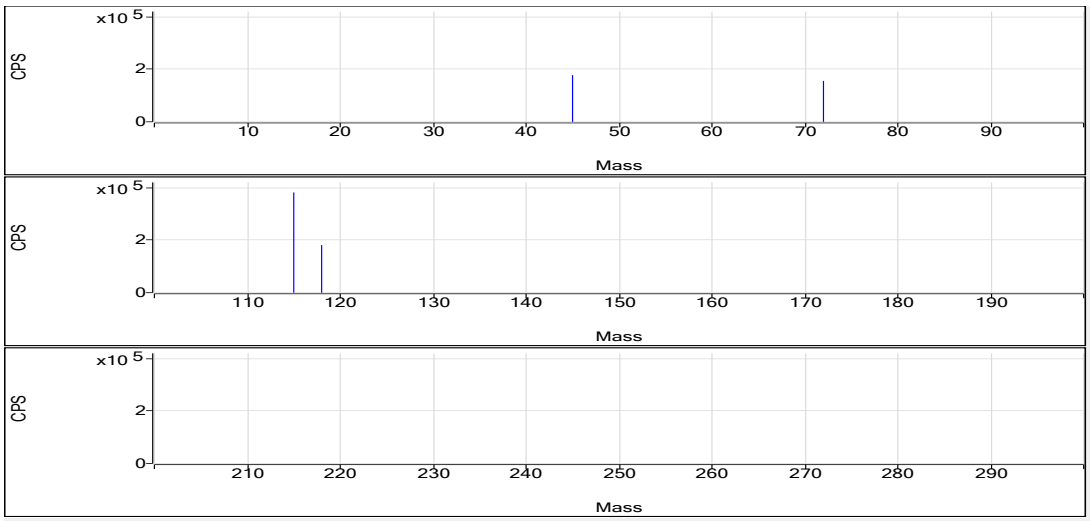
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2412231.32	0.3	100.6	Analog	0.1000	3
No Gas	Ge	72	1212888.45	1.0	105.2	Pulse	0.1000	3
H2	Sc	45	177438.68	1.2	94.9	Pulse	0.1000	3
H2	Ge	72	155612.52	1.0	95.1	Pulse	0.1000	3
H2	In	115	381164.37	0.3	98.0	Pulse	0.1000	3
He	Sc	45	47057.02	0.0	100.9	Pulse	0.1000	3
He	Ge	72	82598.63	1.0	101.7	Pulse	0.1000	3
He	In	115	84092.56	1.2	97.6	Pulse	0.1000	3
He	Tb	159	390094.19	0.3	97.9	Pulse	0.1000	3
He	Bi	209	302391.23	0.6	97.8	Pulse	0.1000	3

No Gas

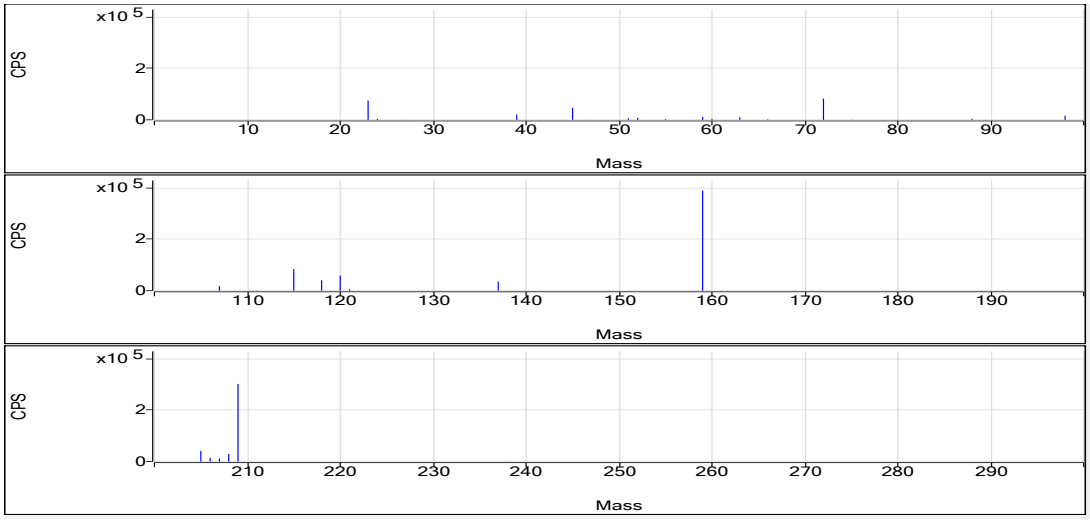


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	3.934	0.003	7227.78	0.0008	4.685E-06
Be	9	1	No Gas	3.999	0.0031	7365.85	0.0008	4.685E-06
Be	9	1	No Gas	3.994	0.0031	7385.87	0.0008	4.685E-06
Se	78	2	H2	0.915	0.0004	61.33	0.0004	1.219E-05
Se	78	2	H2	0.843	0.0004	56.00	0.0004	1.219E-05
Se	78	2	H2	0.947	0.0004	64.00	0.0004	1.219E-05
Na	23	3	He	353.461	1.6095	75754.90	0.0036	0.3452
Na	23	3	He	345.824	1.5822	74437.39	0.0036	0.3452
Na	23	3	He	349.612	1.5957	75090.19	0.0036	0.3452
Mg	24	3	He	42.698	0.0801	3770.62	0.0018	0.003497
Mg	24	3	He	38.926	0.0733	3450.54	0.0018	0.003497
Mg	24	3	He	38.325	0.0723	3400.55	0.0018	0.003497
Al	27	3	He	11.612	0.0074	350.03	0.0006	0.0006432
Al	27	3	He	8.71	0.0057	270.01	0.0006	0.0006432
Al	27	3	He	10.525	0.0068	320.01	0.0006	0.0006432
K	39	3	He	41.075	0.4429	20845.62	0.0012	0.3951
K	39	3	He	41.415	0.4433	20855.37	0.0012	0.3951
K	39	3	He	32.565	0.433	20374.77	0.0012	0.3951
Ca	44	3	He	54.168	0.0064	300.01	0.0001	0.002715
Ca	44	3	He	54.211	0.0064	300.02	0.0001	0.002715
Ca	44	3	He	32.167	0.0049	230.01	0.0001	0.002715
Ti	47	3	He	8.971	0.0049	230.01	0.0005	7.003E-05
Ti	47	3	He	8.579	0.0047	220.01	0.0005	7.003E-05
Ti	47	3	He	12.139	0.0066	310.02	0.0005	7.003E-05
V	51	3	He	4.482	0.1228	5781.17	0.0219	0.02486
V	51	3	He	4.461	0.1224	5757.17	0.0219	0.02486
V	51	3	He	4.518	0.1236	5817.19	0.0219	0.02486
Cr	52	3	He	4.187	0.1653	7782.32	0.0299	0.03997
Cr	52	3	He	4.055	0.1614	7592.26	0.0299	0.03997
Cr	52	3	He	4.082	0.1622	7632.32	0.0299	0.03997
Mn	55	3	He	4.314	0.058	2730.34	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	4.316	0.058	2730.41	0.0128	0.002639
Mn	55	3	He	4.084	0.055	2590.32	0.0128	0.002639
Fe	57	3	He	9.244	0.0068	320.02	0.0006	0.001429
Fe	57	3	He	3.029	0.0032	150.01	0.0006	0.001429
Fe	57	3	He	8.514	0.0064	300.01	0.0006	0.001429
Co	59	3	He	4.071	0.2313	10884.48	0.0563	0.002149
Co	59	3	He	4.042	0.2296	10804.37	0.0563	0.002149
Co	59	3	He	4.34	0.2464	11594.93	0.0563	0.002149
Ni	60	3	He	4.33	0.04	3340.47	0.0086	0.002834
Ni	60	3	He	4.447	0.041	3370.50	0.0086	0.002834
Ni	60	3	He	4.667	0.0429	3520.58	0.0086	0.002834
Cu	63	3	He	4.444	0.1188	9923.69	0.0257	0.004757
Cu	63	3	He	4.129	0.1108	9103.23	0.0257	0.004757
Cu	63	3	He	4.515	0.1206	9903.70	0.0257	0.004757
Zn	66	3	He	6.339	0.0223	1860.19	0.0029	0.003818
Zn	66	3	He	7.005	0.0242	1990.21	0.0029	0.003818
Zn	66	3	He	6.765	0.0235	1930.18	0.0029	0.003818
As	75	3	He	4.329	0.0097	808.03	0.002	0.0008061
As	75	3	He	4.476	0.01	820.03	0.002	0.0008061
As	75	3	He	4.637	0.0103	846.03	0.002	0.0008061
Sr	88	3	He	5.079	0.0465	3870.68	0.009	0.0009645
Sr	88	3	He	4.329	0.0398	3390.55	0.009	0.0009645
Sr	88	3	He	4.665	0.0428	3590.56	0.009	0.0009645
Mo	98	3	He	8.934	0.1962	16320.07	0.0219	0.0002706
Mo	98	3	He	8.868	0.1947	16590.28	0.0219	0.0002706
Mo	98	3	He	8.541	0.1875	15729.26	0.0219	0.0002706
Ag	107	3	He	4.374	0.204	16970.99	0.0465	0.0006206
Ag	107	3	He	4.478	0.2088	17791.93	0.0465	0.0006206
Ag	107	3	He	4.514	0.2105	17651.60	0.0465	0.0006206
Cd	111	3	He	0.904	0.0048	402.01	0.0053	0
Cd	111	3	He	0.918	0.0049	418.01	0.0053	0
Cd	111	3	He	0.888	0.0047	398.01	0.0053	0
Sn	120	3	He	43.083	0.6971	58001.92	0.0158	0.01648
Sn	120	3	He	42.768	0.6922	58976.49	0.0158	0.01648
Sn	120	3	He	43.96	0.711	59629.81	0.0158	0.01648
Sb	121	3	He	4.474	0.0667	5551.34	0.0149	0.0002698
Sb	121	3	He	4.076	0.0608	5181.11	0.0149	0.0002698
Sb	121	3	He	4.302	0.0642	5381.24	0.0149	0.0002698
Ba	137	3	He	87.668	0.421	35026.11	0.0048	0.0002317
Ba	137	3	He	87.195	0.4187	35677.28	0.0048	0.0002317
Ba	137	3	He	86.795	0.4168	34955.56	0.0048	0.0002317
Tl	205	3	He	4.278	0.1059	41255.55	0.0247	0.0001339
Tl	205	3	He	4.308	0.1067	41737.30	0.0247	0.0001339
Tl	205	3	He	4.317	0.1069	41627.05	0.0247	0.0001339
Pb	208	3	He	4.375	0.1443	29343.95	0.0327	0.00107
Pb	208	3	He	4.277	0.1411	29283.16	0.0327	0.00107
Pb	208	3	He	4.362	0.1438	29624.47	0.0327	0.00107
U	238	3	He	0.007	0.0004	120.01	0.0493	7.55E-05
U	238	3	He	0.003	0.0002	70.00	0.0493	7.55E-05
U	238	3	He	0.002	0.0002	50.00	0.0493	7.55E-05
Sc	45	1	No Gas			2404891.37		
Sc	45	1	No Gas			2411129.03		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2420673.56		
Ge	72	1	No Gas			1204288.89		
Ge	72	1	No Gas			1227060.84		
Ge	72	1	No Gas			1207315.61		
Sc	45	2	H2			175912.75		
Sc	45	2	H2			176581.21		
Sc	45	2	H2			179822.07		
Ge	72	2	H2			155749.97		
Ge	72	2	H2			153952.44		
Ge	72	2	H2			157135.14		
In	115	2	H2			380937.88		
In	115	2	H2			380304.49		
In	115	2	H2			382250.74		
Sc	45	3	He			47067.19		
Sc	45	3	He			47047.12		
Sc	45	3	He			47056.75		
Ge	72	3	He			83513.87		
Ge	72	3	He			82195.83		
Ge	72	3	He			82086.20		
In	115	3	He			83510.59		
In	115	3	He			85522.96		
In	115	3	He			84184.32		
Tb	159	3	He			389498.78		
Tb	159	3	He			391286.32		
Tb	159	3	He			389497.46		
Bi	209	3	He			302255.87		
Bi	209	3	He			300717.94		
Bi	209	3	He			304199.88		

Quantitation Report

Data File Name	274SMPL.d
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\23H10A00.b
Acq Time	8/10/2023 8:05:24 PM
Sample Name	410-135157-C-5-H MSD @100
Sample Type	Sample
Comment	F15 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

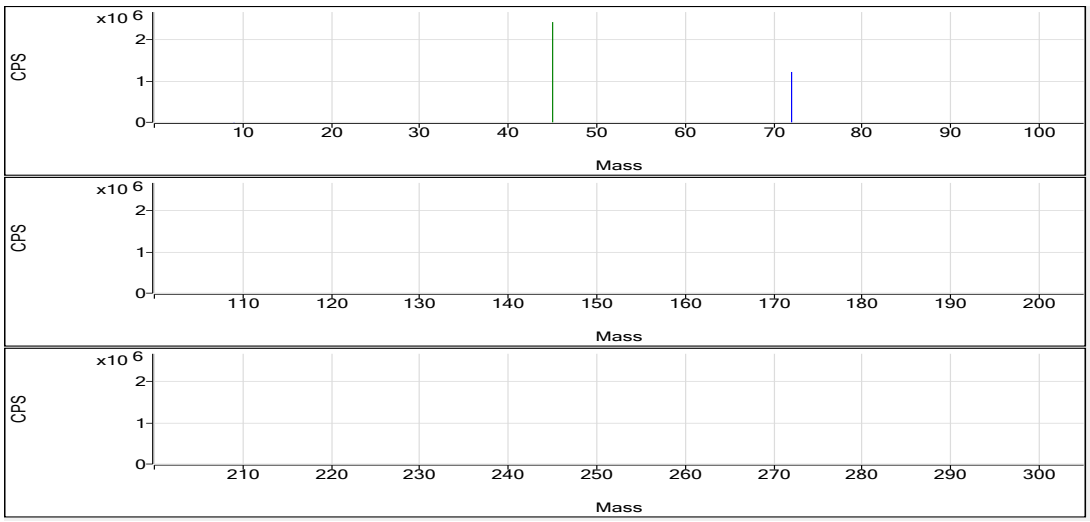
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	3.259	ppb	2.3	6055.25	0.0025	Pulse	0.5000	3
Se	78	72	H2	0.760	ppb	7.7	50.67	0.0003	Pulse	1.5000	3
Na	23	45	He	295.243	ppb	2.5	64233.72	1.4013	Pulse	0.1000	3
Mg	24	45	He	36.801	ppb	1.8	3187.14	0.0695	Pulse	0.1000	3
Al	27	45	He	7.611	ppb	23.4	233.35	0.0051	Pulse	0.1000	3
K	39	45	He	49.285	ppb	13.6	20742.01	0.4525	Pulse	0.1000	3
Ca	44	45	He	63.041	ppb	26.9	320.02	0.0070	Pulse	0.1000	3
Ti	47	45	He	5.428	ppb	34.0	136.67	0.0030	Pulse	0.1000	3
V	51	45	He	3.849	ppb	2.2	4996.89	0.1090	Pulse	0.5000	3
Cr	52	45	He	3.439	ppb	4.1	6551.70	0.1429	Pulse	0.1000	3
Mn	55	45	He	3.864	ppb	3.2	2393.60	0.0522	Pulse	0.1000	3
Fe	57	45	He	4.805	ppb	37.6	193.34	0.0042	Pulse	0.1000	3
Co	59	45	He	3.431	ppb	4.1	8949.71	0.1952	Pulse	0.1000	3
Ni	60	72	He	3.843	ppb	2.4	2987.08	0.0358	Pulse	0.1000	3
Cu	63	72	He	3.546	ppb	5.4	7985.82	0.0958	Pulse	0.1000	3
Zn	66	72	He	5.829	ppb	7.7	1733.49	0.0208	Pulse	0.1000	3
As	75	72	He	3.564	ppb	4.2	676.02	0.0081	Pulse	0.5000	3
Sr	88	115	He	3.546	ppb	5.2	2787.05	0.0328	Pulse	0.1000	3
Mo	98	115	He	7.144	ppb	0.9	13346.79	0.1569	Pulse	0.1000	3
Ag	107	115	He	3.583	ppb	2.0	14217.69	0.1672	Pulse	0.1000	3
Cd	111	115	He	0.730	ppb	9.9	332.01	0.0039	Pulse	0.5000	3
Sn	120	115	He	35.875	ppb	3.1	49602.94	0.5833	Pulse	0.1000	3
Sb	121	115	He	3.723	ppb	5.7	4724.30	0.0556	Pulse	0.1000	3
Ba	137	115	He	72.099	ppb	1.9	29455.66	0.3463	Pulse	0.1000	3
Tl	205	159	He	3.581	ppb	3.3	34539.79	0.0887	Pulse	0.1000	3
Pb	208	159	He	3.602	ppb	1.6	46320.27	0.1190	Pulse	0.1000	3
U	238	209	He	0.004	ppb	87.9	76.67	0.0003	Pulse	0.1000	3

ISTD Table:

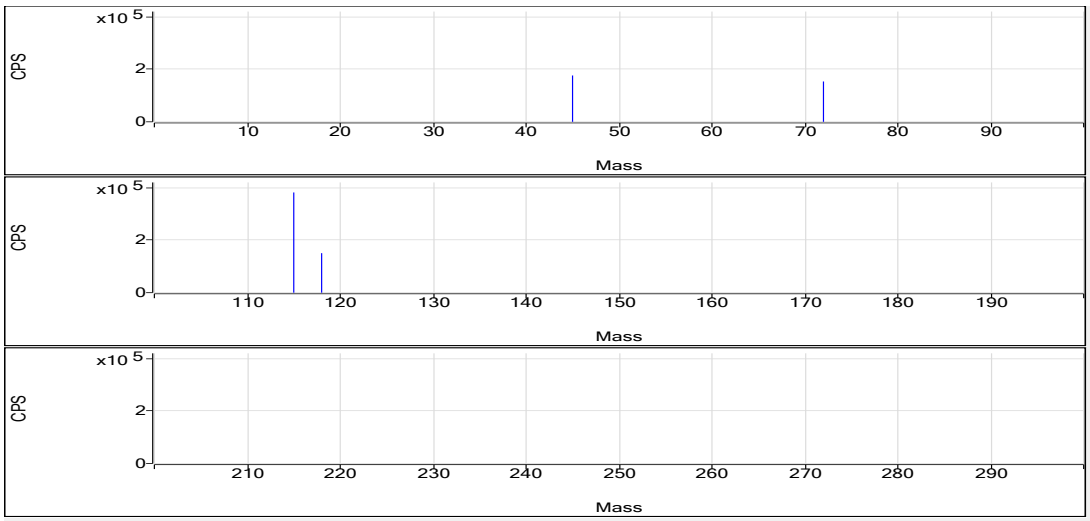
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2431653.30	2.1	101.4	Analog	0.1000	3
No Gas	Ge	72	1220991.18	0.8	105.9	Pulse	0.1000	3
H2	Sc	45	176821.46	0.6	94.6	Pulse	0.1000	3
H2	Ge	72	153905.33	0.5	94.0	Pulse	0.1000	3
H2	In	115	382414.69	1.2	98.3	Pulse	0.1000	3
He	Sc	45	45839.59	1.0	98.3	Pulse	0.1000	3
He	Ge	72	83376.24	1.3	102.7	Pulse	0.1000	3
He	In	115	85060.25	2.0	98.7	Pulse	0.1000	3
He	Tb	159	389377.96	1.0	97.7	Pulse	0.1000	3
He	Bi	209	303606.89	0.6	98.2	Pulse	0.1000	3

No Gas

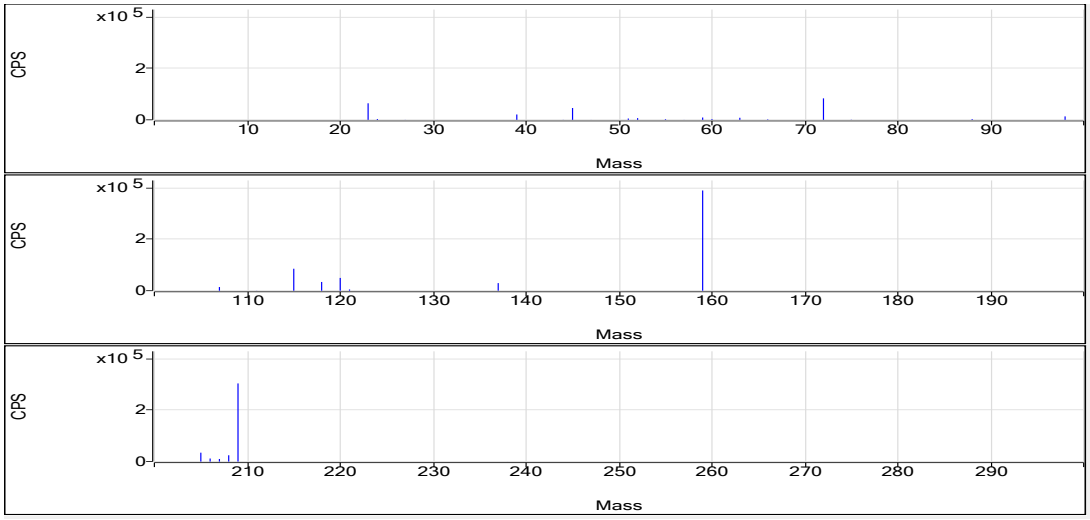


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	3.336	0.0025	6045.25	0.0008	4.685E-06
Be	9	1	No Gas	3.184	0.0024	5989.22	0.0008	4.685E-06
Be	9	1	No Gas	3.258	0.0025	6131.28	0.0008	4.685E-06
Se	78	2	H2	0.782	0.0003	52.00	0.0004	1.219E-05
Se	78	2	H2	0.805	0.0003	53.33	0.0004	1.219E-05
Se	78	2	H2	0.694	0.0003	46.67	0.0004	1.219E-05
Na	23	3	He	297.736	1.4102	63939.08	0.0036	0.3452
Na	23	3	He	286.811	1.3711	62964.86	0.0036	0.3452
Na	23	3	He	301.183	1.4225	65797.21	0.0036	0.3452
Mg	24	3	He	37.267	0.0704	3190.48	0.0018	0.003497
Mg	24	3	He	36.042	0.0682	3130.44	0.0018	0.003497
Mg	24	3	He	37.095	0.0701	3240.50	0.0018	0.003497
Al	27	3	He	8.703	0.0057	260.01	0.0006	0.0006432
Al	27	3	He	8.579	0.0057	260.02	0.0006	0.0006432
Al	27	3	He	5.553	0.0039	180.01	0.0006	0.0006432
K	39	3	He	45.503	0.448	20314.98	0.0012	0.3951
K	39	3	He	45.302	0.4478	20564.91	0.0012	0.3951
K	39	3	He	57.052	0.4615	21346.14	0.0012	0.3951
Ca	44	3	He	44.7	0.0057	260.01	0.0001	0.002715
Ca	44	3	He	66.192	0.0072	330.02	0.0001	0.002715
Ca	44	3	He	78.232	0.008	370.02	0.0001	0.002715
Ti	47	3	He	5.62	0.0031	140.01	0.0005	7.003E-05
Ti	47	3	He	7.17	0.0039	180.01	0.0005	7.003E-05
Ti	47	3	He	3.493	0.0019	90.00	0.0005	7.003E-05
V	51	3	He	3.789	0.1077	4882.84	0.0219	0.02486
V	51	3	He	3.946	0.1111	5102.92	0.0219	0.02486
V	51	3	He	3.813	0.1082	5004.90	0.0219	0.02486
Cr	52	3	He	3.579	0.1471	6671.76	0.0299	0.03997
Cr	52	3	He	3.299	0.1387	6371.57	0.0299	0.03997
Cr	52	3	He	3.439	0.1429	6611.76	0.0299	0.03997
Mn	55	3	He	4.005	0.054	2450.26	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	3.799	0.0514	2360.28	0.0128	0.002639
Mn	55	3	He	3.787	0.0512	2370.27	0.0128	0.002639
Fe	57	3	He	6.272	0.0051	230.01	0.0006	0.001429
Fe	57	3	He	2.788	0.003	140.01	0.0006	0.001429
Fe	57	3	He	5.356	0.0045	210.01	0.0006	0.001429
Co	59	3	He	3.372	0.1919	8702.87	0.0563	0.002149
Co	59	3	He	3.592	0.2043	9383.34	0.0563	0.002149
Co	59	3	He	3.328	0.1895	8762.92	0.0563	0.002149
Ni	60	3	He	3.773	0.0352	2910.38	0.0086	0.002834
Ni	60	3	He	3.807	0.0355	2940.41	0.0086	0.002834
Ni	60	3	He	3.95	0.0367	3110.46	0.0086	0.002834
Cu	63	3	He	3.752	0.1011	8352.71	0.0257	0.004757
Cu	63	3	He	3.372	0.0913	7562.28	0.0257	0.004757
Cu	63	3	He	3.515	0.095	8042.48	0.0257	0.004757
Zn	66	3	He	5.38	0.0195	1610.16	0.0029	0.003818
Zn	66	3	He	6.279	0.0221	1830.17	0.0029	0.003818
Zn	66	3	He	5.829	0.0208	1760.15	0.0029	0.003818
As	75	3	He	3.693	0.0084	692.02	0.002	0.0008061
As	75	3	He	3.402	0.0078	644.02	0.002	0.0008061
As	75	3	He	3.596	0.0082	692.02	0.002	0.0008061
Sr	88	3	He	3.436	0.0318	2670.36	0.009	0.0009645
Sr	88	3	He	3.443	0.0318	2770.37	0.009	0.0009645
Sr	88	3	He	3.76	0.0347	2920.41	0.009	0.0009645
Mo	98	3	He	7.093	0.1558	13086.48	0.0219	0.0002706
Mo	98	3	He	7.121	0.1564	13607.10	0.0219	0.0002706
Mo	98	3	He	7.219	0.1585	13346.78	0.0219	0.0002706
Ag	107	3	He	3.61	0.1684	14147.60	0.0465	0.0006206
Ag	107	3	He	3.502	0.1634	14217.69	0.0465	0.0006206
Ag	107	3	He	3.638	0.1697	14287.77	0.0465	0.0006206
Cd	111	3	He	0.802	0.0043	360.01	0.0053	0
Cd	111	3	He	0.731	0.0039	340.01	0.0053	0
Cd	111	3	He	0.658	0.0035	296.00	0.0053	0
Sn	120	3	He	35.219	0.5729	48123.98	0.0158	0.01648
Sn	120	3	He	35.227	0.573	49850.61	0.0158	0.01648
Sn	120	3	He	37.179	0.6039	50834.23	0.0158	0.01648
Sb	121	3	He	3.958	0.0591	4961.12	0.0149	0.0002698
Sb	121	3	He	3.542	0.0529	4600.87	0.0149	0.0002698
Sb	121	3	He	3.669	0.0548	4610.90	0.0149	0.0002698
Ba	137	3	He	70.57	0.3389	28470.36	0.0048	0.0002317
Ba	137	3	He	72.653	0.3489	30354.19	0.0048	0.0002317
Ba	137	3	He	73.073	0.3509	29542.44	0.0048	0.0002317
Tl	205	3	He	3.478	0.0861	33343.40	0.0247	0.0001339
Tl	205	3	He	3.708	0.0918	36150.63	0.0247	0.0001339
Tl	205	3	He	3.558	0.0881	34125.34	0.0247	0.0001339
Pb	208	3	He	3.666	0.1211	24523.67	0.0327	0.00107
Pb	208	3	He	3.585	0.1184	24383.39	0.0327	0.00107
Pb	208	3	He	3.555	0.1174	24564.07	0.0327	0.00107
U	238	3	He	0.001	0.0001	40.00	0.0493	7.55E-05
U	238	3	He	0.007	0.0004	130.01	0.0493	7.55E-05
U	238	3	He	0.002	0.0002	60.00	0.0493	7.55E-05
Sc	45	1	No Gas			2371420.59		
Sc	45	1	No Gas			2460900.74		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2462638.56		
Ge	72	1	No Gas			1210524.51		
Ge	72	1	No Gas			1229145.06		
Ge	72	1	No Gas			1223303.97		
Sc	45	2	H2			177917.83		
Sc	45	2	H2			176005.06		
Sc	45	2	H2			176541.50		
Ge	72	2	H2			153599.06		
Ge	72	2	H2			153345.65		
Ge	72	2	H2			154771.27		
In	115	2	H2			382988.86		
In	115	2	H2			377437.14		
In	115	2	H2			386818.08		
Sc	45	3	He			45341.25		
Sc	45	3	He			45923.01		
Sc	45	3	He			46254.50		
Ge	72	3	He			82648.51		
Ge	72	3	He			82809.92		
Ge	72	3	He			84670.29		
In	115	3	He			84264.93		
In	115	3	He			87263.36		
In	115	3	He			84446.24		
Tb	159	3	He			387132.69		
Tb	159	3	He			393704.33		
Tb	159	3	He			387296.87		
Bi	209	3	He			301660.72		
Bi	209	3	He			303846.89		
Bi	209	3	He			305313.06		

Quantitation Report

Data File Name	275SMPL.d
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Sample Type	Sample
Comment	F15 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

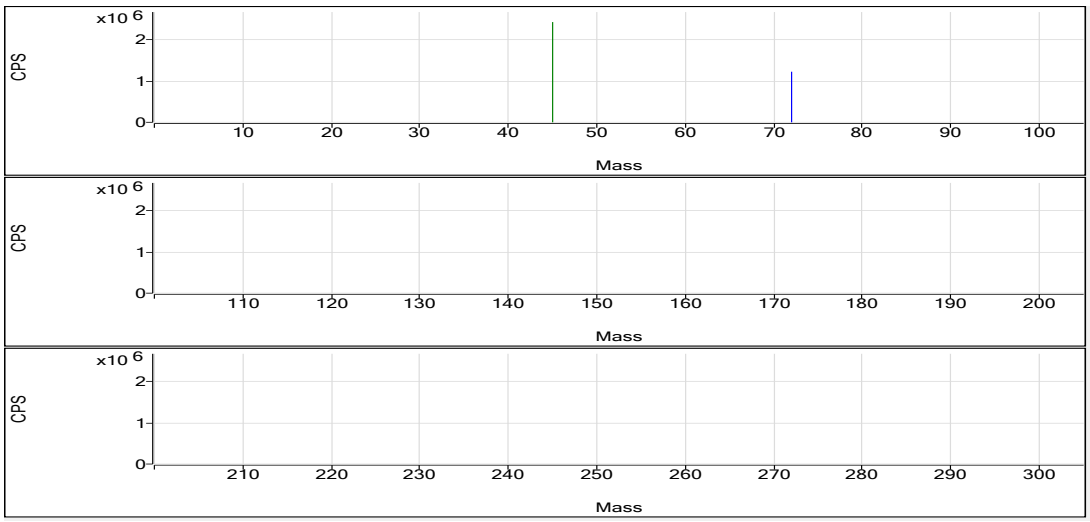
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.010	ppb	19.9	30.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.008	ppb	78.7	2.45	0.0000	Pulse	1.5000	3
Na	23	45	He	157.756	ppb	1.9	42522.04	0.9095	Pulse	0.1000	3
Mg	24	45	He	3.459	ppb	18.7	453.35	0.0097	Pulse	0.1000	3
Al	27	45	He	1.578	ppb	33.8	73.33	0.0016	Pulse	0.1000	3
K	39	45	He	10.561	ppb	99.8	19046.32	0.4074	Pulse	0.1000	3
Ca	44	45	He	2.044	ppb	481.7	133.34	0.0029	Pulse	0.1000	3
Ti	47	45	He	0.270	ppb	147.9	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	0.274	ppb	17.1	1442.75	0.0308	Pulse	0.5000	3
Cr	52	45	He	-0.151	ppb	N/A	1656.82	0.0354	Pulse	0.1000	3
Mn	55	45	He	0.183	ppb	12.7	233.34	0.0050	Pulse	0.1000	3
Fe	57	45	He	1.078	ppb	256.3	96.67	0.0021	Pulse	0.1000	3
Co	59	45	He	0.141	ppb	32.8	473.36	0.0101	Pulse	0.1000	3
Ni	60	72	He	0.167	ppb	52.7	356.68	0.0043	Pulse	0.1000	3
Cu	63	72	He	0.114	ppb	7.7	643.38	0.0077	Pulse	0.1000	3
Zn	66	72	He	1.682	ppb	23.3	730.04	0.0087	Pulse	0.1000	3
As	75	72	He	-0.028	ppb	N/A	62.67	0.0007	Pulse	0.5000	3
Sr	88	115	He	0.029	ppb	126.5	103.34	0.0012	Pulse	0.1000	3
Mo	98	115	He	0.026	ppb	96.7	70.00	0.0008	Pulse	0.1000	3
Ag	107	115	He	-0.001	ppb	N/A	46.67	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.004	ppb	99.4	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.102	ppb	56.5	1530.14	0.0181	Pulse	0.1000	3
Sb	121	115	He	0.003	ppb	383.9	26.67	0.0003	Pulse	0.1000	3
Ba	137	115	He	0.000	ppb	20376.2	20.00	0.0002	Pulse	0.1000	3
Tl	205	159	He	0.026	ppb	7.7	300.01	0.0008	Pulse	0.1000	3
Pb	208	159	He	0.016	ppb	31.8	626.70	0.0016	Pulse	0.1000	3
U	238	209	He	0.002	ppb	98.5	50.00	0.0002	Pulse	0.1000	3

ISTD Table:

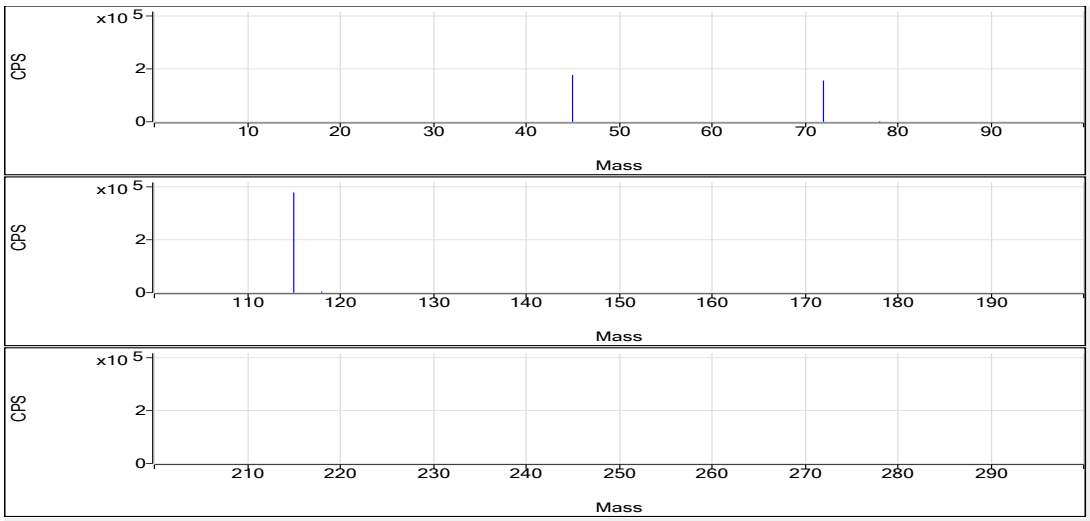
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2432599.96	1.1	101.4	Analog	0.1000	3
No Gas	Ge	72	1227684.96	0.6	106.4	Pulse	0.1000	3
H2	Sc	45	177537.02	1.1	94.9	Pulse	0.1000	3
H2	Ge	72	156307.96	2.1	95.5	Pulse	0.1000	3
H2	In	115	379650.83	1.2	97.6	Pulse	0.1000	3
He	Sc	45	46759.33	1.2	100.3	Pulse	0.1000	3
He	Ge	72	83684.71	1.4	103.1	Pulse	0.1000	3
He	In	115	84505.73	3.1	98.0	Pulse	0.1000	3
He	Tb	159	389648.75	0.5	97.8	Pulse	0.1000	3
He	Bi	209	306343.91	0.6	99.0	Pulse	0.1000	3

No Gas

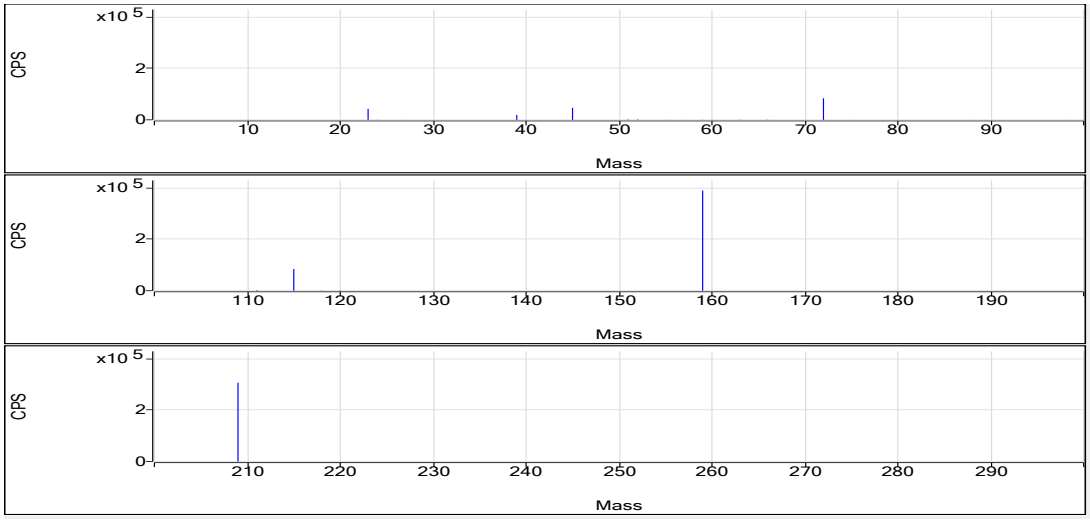


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.01	0	30.00	0.0008	4.685E-06
Be	9	1	No Gas	0.008	0	26.00	0.0008	4.685E-06
Be	9	1	No Gas	0.012	0	34.00	0.0008	4.685E-06
Se	78	2	H2	0.001	0	2.00	0.0004	1.219E-05
Se	78	2	H2	0.013	0	2.67	0.0004	1.219E-05
Se	78	2	H2	0.012	0	2.67	0.0004	1.219E-05
Na	23	3	He	159.222	0.9147	42712.68	0.0036	0.3452
Na	23	3	He	154.265	0.897	42451.76	0.0036	0.3452
Na	23	3	He	159.781	0.9167	42401.67	0.0036	0.3452
Mg	24	3	He	3.183	0.0092	430.02	0.0018	0.003497
Mg	24	3	He	2.997	0.0089	420.02	0.0018	0.003497
Mg	24	3	He	4.196	0.011	510.02	0.0018	0.003497
Al	27	3	He	1.097	0.0013	60.00	0.0006	0.0006432
Al	27	3	He	2.151	0.0019	90.00	0.0006	0.0006432
Al	27	3	He	1.487	0.0015	70.00	0.0006	0.0006432
K	39	3	He	-0.103	0.3949	18442.26	0.0012	0.3951
K	39	3	He	10.808	0.4077	19293.21	0.0012	0.3951
K	39	3	He	20.979	0.4195	19403.48	0.0012	0.3951
Ca	44	3	He	-8.489	0.0021	100.00	0.0001	0.002715
Ca	44	3	He	3.602	0.003	140.01	0.0001	0.002715
Ca	44	3	He	11.019	0.0035	160.01	0.0001	0.002715
Ti	47	3	He	0.667	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	0.272	0.0002	10.00	0.0005	7.003E-05
V	51	3	He	0.266	0.0307	1432.08	0.0219	0.02486
V	51	3	He	0.324	0.0319	1512.09	0.0219	0.02486
V	51	3	He	0.231	0.0299	1384.08	0.0219	0.02486
Cr	52	3	He	-0.183	0.0345	1610.15	0.0299	0.03997
Cr	52	3	He	-0.171	0.0349	1650.14	0.0299	0.03997
Cr	52	3	He	-0.1	0.037	1710.16	0.0299	0.03997
Mn	55	3	He	0.195	0.0051	240.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.157	0.0046	220.01	0.0128	0.002639
Mn	55	3	He	0.199	0.0052	240.01	0.0128	0.002639
Fe	57	3	He	0.49	0.0017	80.00	0.0006	0.001429
Fe	57	3	He	4.087	0.0038	180.01	0.0006	0.001429
Fe	57	3	He	-1.343	0.0006	30.00	0.0006	0.001429
Co	59	3	He	0.16	0.0111	520.03	0.0563	0.002149
Co	59	3	He	0.176	0.012	570.03	0.0563	0.002149
Co	59	3	He	0.089	0.0071	330.01	0.0563	0.002149
Ni	60	3	He	0.081	0.0035	300.01	0.0086	0.002834
Ni	60	3	He	0.257	0.005	420.02	0.0086	0.002834
Ni	60	3	He	0.163	0.0042	350.02	0.0086	0.002834
Cu	63	3	He	0.122	0.0079	670.05	0.0257	0.004757
Cu	63	3	He	0.104	0.0074	620.04	0.0257	0.004757
Cu	63	3	He	0.116	0.0077	640.04	0.0257	0.004757
Zn	66	3	He	2.043	0.0098	830.05	0.0029	0.003818
Zn	66	3	He	1.738	0.0089	740.05	0.0029	0.003818
Zn	66	3	He	1.264	0.0075	620.03	0.0029	0.003818
As	75	3	He	-0.095	0.0006	52.00	0.002	0.0008061
As	75	3	He	0.075	0.001	80.00	0.002	0.0008061
As	75	3	He	-0.063	0.0007	56.00	0.002	0.0008061
Sr	88	3	He	0.021	0.0012	100.01	0.009	0.0009645
Sr	88	3	He	-0.003	0.0009	80.00	0.009	0.0009645
Sr	88	3	He	0.07	0.0016	130.00	0.009	0.0009645
Mo	98	3	He	0.009	0.0005	40.00	0.0219	0.0002706
Mo	98	3	He	0.014	0.0006	50.00	0.0219	0.0002706
Mo	98	3	He	0.055	0.0015	120.00	0.0219	0.0002706
Ag	107	3	He	-0.006	0.0003	30.00	0.0465	0.0006206
Ag	107	3	He	-0.006	0.0004	30.00	0.0465	0.0006206
Ag	107	3	He	0.008	0.001	80.00	0.0465	0.0006206
Cd	111	3	He	0.009	0	4.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Sn	120	3	He	0.169	0.0191	1660.16	0.0158	0.01648
Sn	120	3	He	0.064	0.0175	1490.14	0.0158	0.01648
Sn	120	3	He	0.075	0.0177	1440.12	0.0158	0.01648
Sb	121	3	He	-0.01	0.0001	10.00	0.0149	0.0002698
Sb	121	3	He	0.006	0.0004	30.00	0.0149	0.0002698
Sb	121	3	He	0.015	0.0005	40.00	0.0149	0.0002698
Ba	137	3	He	0.024	0.0003	30.00	0.0048	0.0002317
Ba	137	3	He	0.025	0.0004	30.00	0.0048	0.0002317
Ba	137	3	He	-0.048	0	0.00	0.0048	0.0002317
Tl	205	3	He	0.026	0.0008	300.01	0.0247	0.0001339
Tl	205	3	He	0.024	0.0007	280.01	0.0247	0.0001339
Tl	205	3	He	0.028	0.0008	320.02	0.0247	0.0001339
Pb	208	3	He	0.018	0.0017	270.02	0.0327	0.00107
Pb	208	3	He	0.01	0.0014	340.02	0.0327	0.00107
Pb	208	3	He	0.02	0.0017	410.02	0.0327	0.00107
U	238	3	He	0.002	0.0002	60.00	0.0493	7.55E-05
U	238	3	He	0	0.0001	20.00	0.0493	7.55E-05
U	238	3	He	0.003	0.0002	70.00	0.0493	7.55E-05
Sc	45	1	No Gas			2442213.71		
Sc	45	1	No Gas			2403127.62		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2452458.56		
Ge	72	1	No Gas			1229256.70		
Ge	72	1	No Gas			1220017.95		
Ge	72	1	No Gas			1233780.22		
Sc	45	2	H2			177918.83		
Sc	45	2	H2			175450.62		
Sc	45	2	H2			179241.62		
Ge	72	2	H2			159775.08		
Ge	72	2	H2			153356.09		
Ge	72	2	H2			155792.70		
In	115	2	H2			382762.61		
In	115	2	H2			374538.08		
In	115	2	H2			381651.79		
Sc	45	3	He			46695.63		
Sc	45	3	He			47327.80		
Sc	45	3	He			46254.55		
Ge	72	3	He			85002.25		
Ge	72	3	He			83352.86		
Ge	72	3	He			82699.02		
In	115	3	He			86720.83		
In	115	3	He			85240.76		
In	115	3	He			81579.61		
Tb	159	3	He			388270.70		
Tb	159	3	He			389038.55		
Tb	159	3	He			391636.99		
Bi	209	3	He			304251.73		
Bi	209	3	He			307551.48		
Bi	209	3	He			307228.53		

Quantitation Report

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Auto Dilution	1.0000
Total Dilution	1.0000
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Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

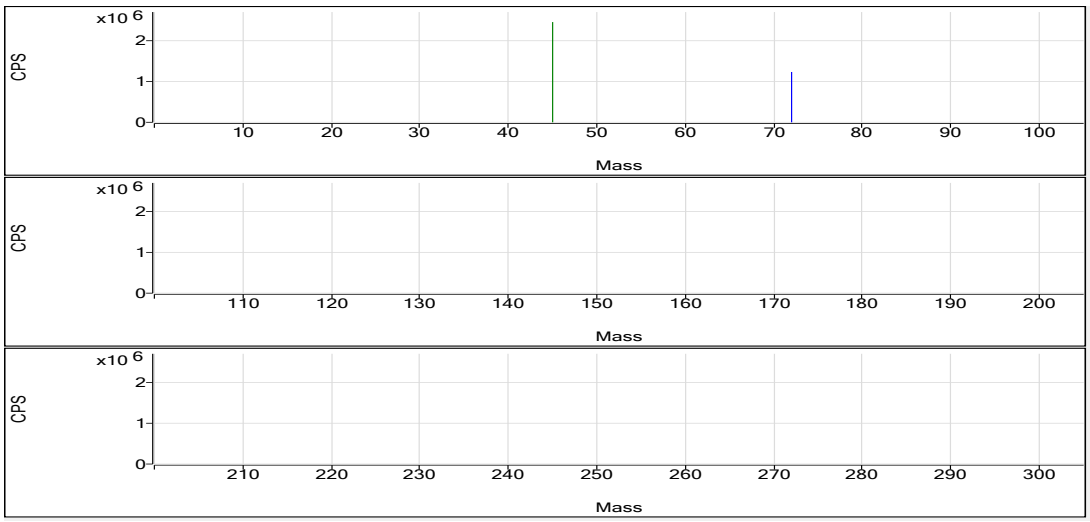
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.009	ppb	60.8	29.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.015	ppb	140.3	2.89	0.0000	Pulse	1.5000	3
Na	23	45	He	151.641	ppb	0.6	41452.28	0.8876	Pulse	0.1000	3
Mg	24	45	He	2.424	ppb	18.2	366.69	0.0078	Pulse	0.1000	3
Al	27	45	He	2.080	ppb	52.8	86.67	0.0019	Pulse	0.1000	3
K	39	45	He	8.043	ppb	90.6	18886.15	0.4044	Pulse	0.1000	3
Ca	44	45	He	24.119	ppb	71.6	203.34	0.0043	Pulse	0.1000	3
Ti	47	45	He	0.404	ppb	152.9	13.33	0.0003	Pulse	0.1000	3
V	51	45	He	0.274	ppb	18.9	1440.75	0.0309	Pulse	0.5000	3
Cr	52	45	He	3.623	ppb	4.1	6931.91	0.1484	Pulse	0.1000	3
Mn	55	45	He	0.405	ppb	20.6	366.68	0.0078	Pulse	0.1000	3
Fe	57	45	He	28.543	ppb	16.1	840.05	0.0180	Pulse	0.1000	3
Co	59	45	He	0.092	ppb	30.6	343.35	0.0073	Pulse	0.1000	3
Ni	60	72	He	0.234	ppb	14.9	406.69	0.0048	Pulse	0.1000	3
Cu	63	72	He	0.099	ppb	27.3	613.37	0.0073	Pulse	0.1000	3
Zn	66	72	He	1.474	ppb	31.1	680.04	0.0081	Pulse	0.1000	3
As	75	72	He	0.067	ppb	31.4	79.33	0.0009	Pulse	0.5000	3
Sr	88	115	He	0.023	ppb	60.1	100.00	0.0012	Pulse	0.1000	3
Mo	98	115	He	0.034	ppb	39.3	86.67	0.0010	Pulse	0.1000	3
Ag	107	115	He	-0.007	ppb	N/A	23.33	0.0003	Pulse	0.1000	3
Cd	111	115	He	0.001	ppb	173.2	0.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.034	ppb	N/A	1360.13	0.0159	Pulse	0.1000	3
Sb	121	115	He	0.000	ppb	1674.8	23.33	0.0003	Pulse	0.1000	3
Ba	137	115	He	0.009	ppb	324.7	23.33	0.0003	Pulse	0.1000	3
Tl	205	159	He	0.010	ppb	20.7	150.01	0.0004	Pulse	0.1000	3
Pb	208	159	He	0.011	ppb	67.4	556.69	0.0014	Pulse	0.1000	3
U	238	209	He	0.002	ppb	54.4	60.00	0.0002	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2457589.60	0.8	102.5	Analog	0.1000	3
No Gas	Ge	72	1233769.43	0.3	107.0	Pulse	0.1000	3
H2	Sc	45	178810.55	1.5	95.6	Pulse	0.1000	3
H2	Ge	72	155943.21	0.9	95.3	Pulse	0.1000	3
H2	In	115	385201.52	1.1	99.0	Pulse	0.1000	3
He	Sc	45	46702.29	1.4	100.1	Pulse	0.1000	3
He	Ge	72	83976.67	1.8	103.4	Pulse	0.1000	3
He	In	115	85277.04	0.9	98.9	Pulse	0.1000	3
He	Tb	159	389011.94	0.2	97.6	Pulse	0.1000	3
He	Bi	209	306328.03	0.6	99.0	Pulse	0.1000	3

No Gas



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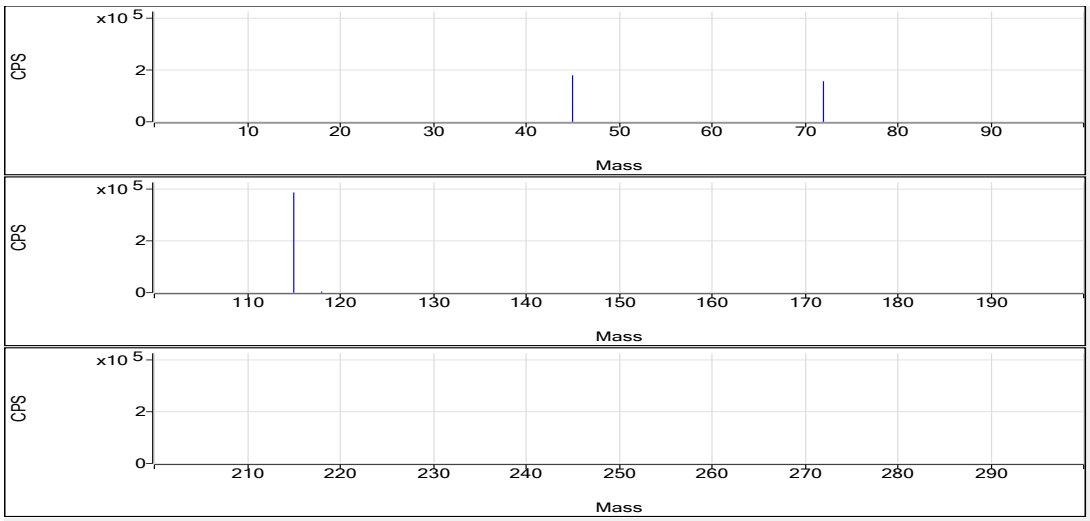
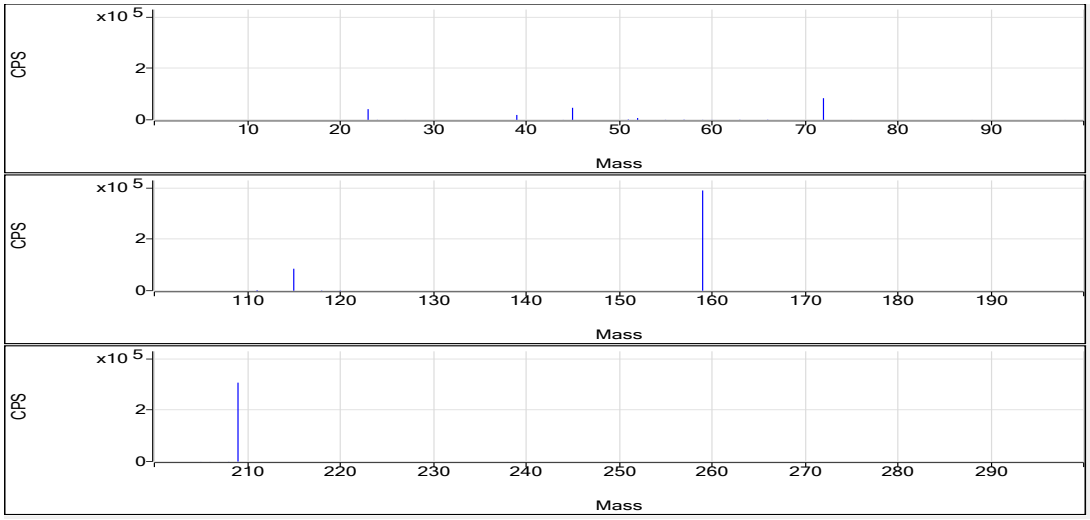


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.015	0	40.00	0.0008	4.685E-06
Be	9	1	No Gas	0.004	0	18.00	0.0008	4.685E-06
Be	9	1	No Gas	0.01	0	30.00	0.0008	4.685E-06
Se	78	2	H2	0.032	0	4.00	0.0004	1.219E-05
Se	78	2	H2	-0.009	0	1.33	0.0004	1.219E-05
Se	78	2	H2	0.022	0	3.33	0.0004	1.219E-05
Na	23	3	He	150.606	0.8839	41158.17	0.0036	0.3452
Na	23	3	He	152.361	0.8902	41058.02	0.0036	0.3452
Na	23	3	He	151.956	0.8887	42140.66	0.0036	0.3452
Mg	24	3	He	2.719	0.0084	390.02	0.0018	0.003497
Mg	24	3	He	1.918	0.0069	320.02	0.0018	0.003497
Mg	24	3	He	2.635	0.0082	390.02	0.0018	0.003497
Al	27	3	He	1.47	0.0015	70.00	0.0006	0.0006432
Al	27	3	He	3.348	0.0026	120.00	0.0006	0.0006432
Al	27	3	He	1.424	0.0015	70.00	0.0006	0.0006432
K	39	3	He	1.404	0.3967	18472.40	0.0012	0.3951
K	39	3	He	15.845	0.4135	19073.03	0.0012	0.3951
K	39	3	He	6.881	0.4031	19113.01	0.0012	0.3951
Ca	44	3	He	29.752	0.0047	220.01	0.0001	0.002715
Ca	44	3	He	4.745	0.003	140.01	0.0001	0.002715
Ca	44	3	He	37.861	0.0053	250.01	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	1.081	0.0007	30.00	0.0005	7.003E-05
Ti	47	3	He	0.262	0.0002	10.00	0.0005	7.003E-05
V	51	3	He	0.33	0.0321	1494.09	0.0219	0.02486
V	51	3	He	0.263	0.0306	1412.08	0.0219	0.02486
V	51	3	He	0.229	0.0299	1416.08	0.0219	0.02486
Cr	52	3	He	3.788	0.1534	7142.03	0.0299	0.03997
Cr	52	3	He	3.576	0.147	6781.82	0.0299	0.03997
Cr	52	3	He	3.505	0.1449	6871.89	0.0299	0.03997
Mn	55	3	He	0.414	0.0079	370.02	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.318	0.0067	310.01	0.0128	0.002639
Mn	55	3	He	0.485	0.0089	420.02	0.0128	0.002639
Fe	57	3	He	30.44	0.0191	890.05	0.0006	0.001429
Fe	57	3	He	31.874	0.0199	920.06	0.0006	0.001429
Fe	57	3	He	23.314	0.015	710.04	0.0006	0.001429
Co	59	3	He	0.122	0.009	420.02	0.0563	0.002149
Co	59	3	He	0.066	0.0059	270.01	0.0563	0.002149
Co	59	3	He	0.089	0.0072	340.01	0.0563	0.002149
Ni	60	3	He	0.258	0.005	430.02	0.0086	0.002834
Ni	60	3	He	0.194	0.0045	370.02	0.0086	0.002834
Ni	60	3	He	0.249	0.005	420.02	0.0086	0.002834
Cu	63	3	He	0.112	0.0076	650.04	0.0257	0.004757
Cu	63	3	He	0.118	0.0078	640.04	0.0257	0.004757
Cu	63	3	He	0.068	0.0065	550.03	0.0257	0.004757
Zn	66	3	He	0.947	0.0066	560.03	0.0029	0.003818
Zn	66	3	He	1.779	0.009	740.05	0.0029	0.003818
Zn	66	3	He	1.696	0.0088	740.05	0.0029	0.003818
As	75	3	He	0.088	0.001	84.00	0.002	0.0008061
As	75	3	He	0.046	0.0009	74.00	0.002	0.0008061
As	75	3	He	0.069	0.0009	80.00	0.002	0.0008061
Sr	88	3	He	0.01	0.0011	90.00	0.009	0.0009645
Sr	88	3	He	0.022	0.0012	100.00	0.009	0.0009645
Sr	88	3	He	0.038	0.0013	110.00	0.009	0.0009645
Mo	98	3	He	0.02	0.0007	60.00	0.0219	0.0002706
Mo	98	3	He	0.046	0.0013	110.00	0.0219	0.0002706
Mo	98	3	He	0.036	0.0011	90.00	0.0219	0.0002706
Ag	107	3	He	0.002	0.0007	60.00	0.0465	0.0006206
Ag	107	3	He	-0.011	0.0001	10.00	0.0465	0.0006206
Ag	107	3	He	-0.013	0	0.00	0.0465	0.0006206
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Sn	120	3	He	0.127	0.0185	1580.16	0.0158	0.01648
Sn	120	3	He	-0.055	0.0156	1340.12	0.0158	0.01648
Sn	120	3	He	-0.173	0.0137	1160.10	0.0158	0.01648
Sb	121	3	He	-0.002	0.0002	20.00	0.0149	0.0002698
Sb	121	3	He	-0.002	0.0002	20.00	0.0149	0.0002698
Sb	121	3	He	0.006	0.0004	30.00	0.0149	0.0002698
Ba	137	3	He	0.025	0.0004	30.00	0.0048	0.0002317
Ba	137	3	He	0.025	0.0003	30.00	0.0048	0.0002317
Ba	137	3	He	-0.024	0.0001	10.00	0.0048	0.0002317
Tl	205	3	He	0.008	0.0003	130.00	0.0247	0.0001339
Tl	205	3	He	0.012	0.0004	170.01	0.0247	0.0001339
Tl	205	3	He	0.01	0.0004	150.01	0.0247	0.0001339
Pb	208	3	He	0.014	0.0015	360.02	0.0327	0.00107
Pb	208	3	He	0.017	0.0016	380.02	0.0327	0.00107
Pb	208	3	He	0.003	0.0012	270.01	0.0327	0.00107
U	238	3	He	0.001	0.0001	40.00	0.0493	7.55E-05
U	238	3	He	0.004	0.0003	80.00	0.0493	7.55E-05
U	238	3	He	0.002	0.0002	60.00	0.0493	7.55E-05
Sc	45	1	No Gas			2475282.46		
Sc	45	1	No Gas			2436429.96		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2461056.37		
Ge	72	1	No Gas			1232741.86		
Ge	72	1	No Gas			1238099.90		
Ge	72	1	No Gas			1230466.54		
Sc	45	2	H2			181042.85		
Sc	45	2	H2			175740.31		
Sc	45	2	H2			179648.49		
Ge	72	2	H2			157368.86		
Ge	72	2	H2			155832.61		
Ge	72	2	H2			154628.16		
In	115	2	H2			389072.65		
In	115	2	H2			385842.10		
In	115	2	H2			380689.80		
Sc	45	3	He			46565.05		
Sc	45	3	He			46124.17		
Sc	45	3	He			47417.65		
Ge	72	3	He			85163.61		
Ge	72	3	He			82256.34		
Ge	72	3	He			84510.05		
In	115	3	He			85523.11		
In	115	3	He			85905.76		
In	115	3	He			84426.35		
Tb	159	3	He			389653.67		
Tb	159	3	He			388454.02		
Tb	159	3	He			388928.12		
Bi	209	3	He			305138.67		
Bi	209	3	He			305284.98		
Bi	209	3	He			308560.43		

Quantitation Report

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Sample Type	Sample
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

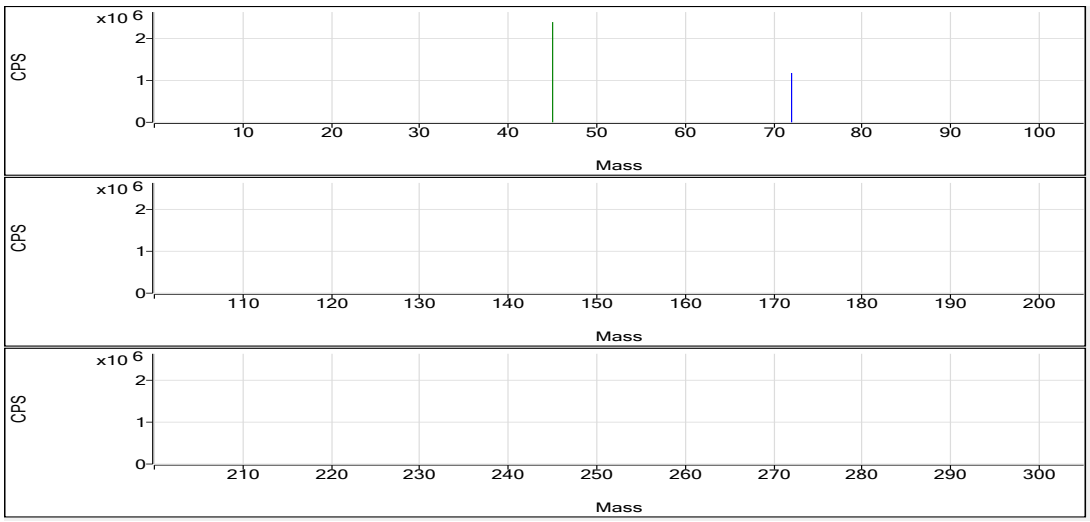
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.007	ppb	31.4	23.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.006	ppb	352.3	2.22	0.0000	Pulse	1.5000	3
Na	23	45	He	12.978	ppb	40.7	18567.26	0.3916	Pulse	0.1000	3
Mg	24	45	He	0.442	ppb	213.7	203.34	0.0043	Pulse	0.1000	3
Al	27	45	He	0.583	ppb	71.8	46.67	0.0010	Pulse	0.1000	3
K	39	45	He	3.880	ppb	124.5	18946.09	0.3996	Pulse	0.1000	3
Ca	44	45	He	-1.696	ppb	N/A	123.34	0.0026	Pulse	0.1000	3
Ti	47	45	He	-0.130	ppb	N/A	0.00	0.0000	Pulse	0.1000	3
V	51	45	He	0.258	ppb	15.6	1446.08	0.0305	Pulse	0.5000	3
Cr	52	45	He	-0.098	ppb	N/A	1756.83	0.0370	Pulse	0.1000	3
Mn	55	45	He	0.112	ppb	74.9	193.34	0.0041	Pulse	0.1000	3
Fe	57	45	He	1.776	ppb	65.7	116.67	0.0025	Pulse	0.1000	3
Co	59	45	He	0.034	ppb	111.9	193.34	0.0041	Pulse	0.1000	3
Ni	60	72	He	-0.045	ppb	N/A	200.01	0.0024	Pulse	0.1000	3
Cu	63	72	He	0.034	ppb	21.2	460.02	0.0056	Pulse	0.1000	3
Zn	66	72	He	1.536	ppb	12.9	676.71	0.0083	Pulse	0.1000	3
As	75	72	He	0.057	ppb	51.8	75.33	0.0009	Pulse	0.5000	3
Sr	88	115	He	0.005	ppb	1650.1	86.67	0.0010	Pulse	0.1000	3
Mo	98	115	He	0.018	ppb	47.1	56.67	0.0007	Pulse	0.1000	3
Ag	107	115	He	-0.006	ppb	N/A	30.00	0.0003	Pulse	0.1000	3
Cd	111	115	He	0.004	ppb	1.1	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.019	ppb	67.5	1436.80	0.0168	Pulse	0.1000	3
Sb	121	115	He	-0.008	ppb	N/A	13.33	0.0002	Pulse	0.1000	3
Ba	137	115	He	-0.008	ppb	N/A	16.67	0.0002	Pulse	0.1000	3
Tl	205	159	He	0.012	ppb	51.3	170.01	0.0004	Pulse	0.1000	3
Pb	208	159	He	0.013	ppb	44.3	586.70	0.0015	Pulse	0.1000	3
U	238	209	He	0.003	ppb	29.3	73.33	0.0002	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2397871.27	1.8	100.0	Analog	0.1000	3
No Gas	Ge	72	1179659.38	0.8	102.3	Pulse	0.1000	3
H2	Sc	45	177731.43	1.4	95.0	Pulse	0.1000	3
H2	Ge	72	149964.41	1.5	91.6	Pulse	0.1000	3
H2	In	115	381076.53	0.8	97.9	Pulse	0.1000	3
He	Sc	45	47414.80	0.1	101.7	Pulse	0.1000	3
He	Ge	72	81649.87	0.5	100.6	Pulse	0.1000	3
He	In	115	85612.72	1.1	99.3	Pulse	0.1000	3
He	Tb	159	388414.41	0.6	97.4	Pulse	0.1000	3
He	Bi	209	302581.82	0.8	97.8	Pulse	0.1000	3

No Gas



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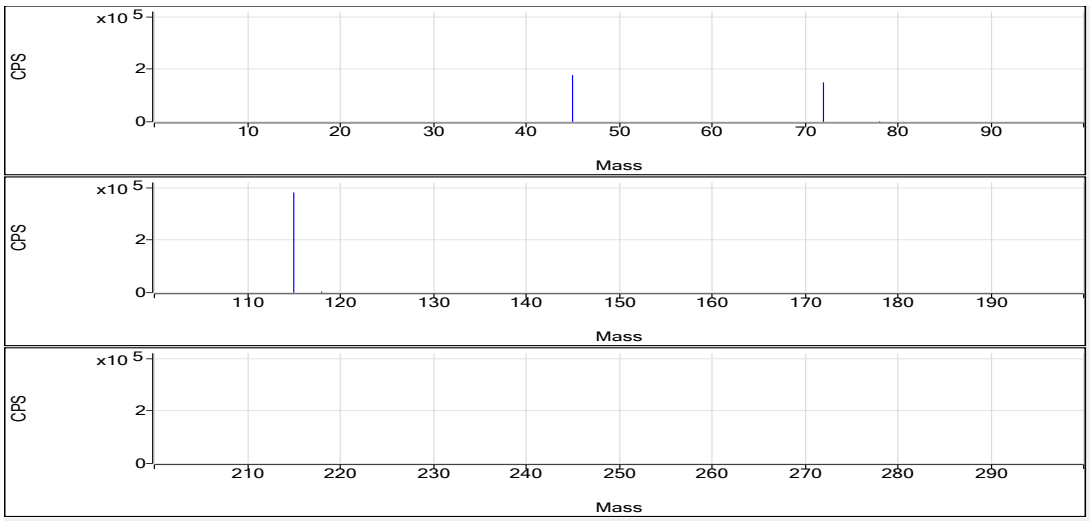
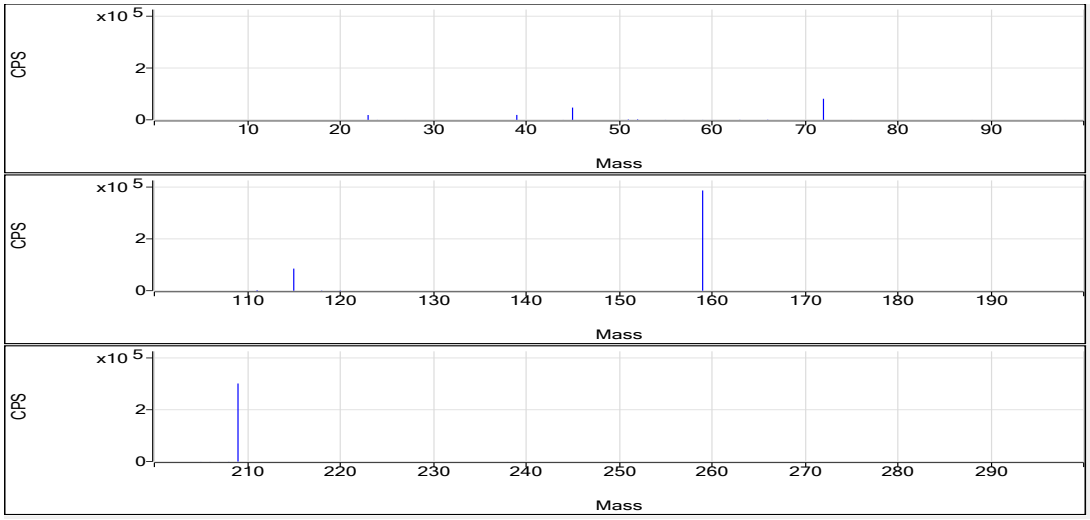


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.009	0	28.00	0.0008	4.685E-06
Be	9	1	No Gas	0.005	0	20.00	0.0008	4.685E-06
Be	9	1	No Gas	0.006	0	22.00	0.0008	4.685E-06
Se	78	2	H2	0.014	0	2.67	0.0004	1.219E-05
Se	78	2	H2	-0.018	0	0.67	0.0004	1.219E-05
Se	78	2	H2	0.023	0	3.33	0.0004	1.219E-05
Na	23	3	He	8.634	0.376	17831.23	0.0036	0.3452
Na	23	3	He	18.849	0.4126	19588.86	0.0036	0.3452
Na	23	3	He	11.45	0.3861	18281.70	0.0036	0.3452
Mg	24	3	He	1.342	0.0059	280.01	0.0018	0.003497
Mg	24	3	He	-0.54	0.0025	120.00	0.0018	0.003497
Mg	24	3	He	0.523	0.0044	210.01	0.0018	0.003497
Al	27	3	He	0.342	0.0008	40.00	0.0006	0.0006432
Al	27	3	He	0.341	0.0008	40.00	0.0006	0.0006432
Al	27	3	He	1.067	0.0013	60.00	0.0006	0.0006432
K	39	3	He	-1.465	0.3934	18652.44	0.0012	0.3951
K	39	3	He	5.167	0.4011	19042.85	0.0012	0.3951
K	39	3	He	7.936	0.4043	19142.99	0.0012	0.3951
Ca	44	3	He	3.519	0.003	140.01	0.0001	0.002715
Ca	44	3	He	9.699	0.0034	160.01	0.0001	0.002715
Ca	44	3	He	-18.305	0.0015	70.00	0.0001	0.002715
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	0.283	0.031	1472.08	0.0219	0.02486
V	51	3	He	0.279	0.031	1470.08	0.0219	0.02486
V	51	3	He	0.211	0.0295	1396.08	0.0219	0.02486
Cr	52	3	He	-0.06	0.0382	1810.18	0.0299	0.03997
Cr	52	3	He	-0.005	0.0398	1890.18	0.0299	0.03997
Cr	52	3	He	-0.227	0.0332	1570.14	0.0299	0.03997
Mn	55	3	He	0.041	0.0032	150.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.205	0.0053	250.01	0.0128	0.002639
Mn	55	3	He	0.091	0.0038	180.01	0.0128	0.002639
Fe	57	3	He	0.445	0.0017	80.00	0.0006	0.001429
Fe	57	3	He	2.616	0.0029	140.01	0.0006	0.001429
Fe	57	3	He	2.267	0.0027	130.01	0.0006	0.001429
Co	59	3	He	0.018	0.0032	150.01	0.0563	0.002149
Co	59	3	He	0.007	0.0025	120.00	0.0563	0.002149
Co	59	3	He	0.078	0.0065	310.02	0.0563	0.002149
Ni	60	3	He	0.012	0.0029	240.01	0.0086	0.002834
Ni	60	3	He	-0.187	0.0012	100.00	0.0086	0.002834
Ni	60	3	He	0.039	0.0032	260.01	0.0086	0.002834
Cu	63	3	He	0.039	0.0058	470.02	0.0257	0.004757
Cu	63	3	He	0.026	0.0054	440.02	0.0257	0.004757
Cu	63	3	He	0.038	0.0057	470.02	0.0257	0.004757
Zn	66	3	He	1.338	0.0077	630.04	0.0029	0.003818
Zn	66	3	He	1.734	0.0089	720.04	0.0029	0.003818
Zn	66	3	He	1.535	0.0083	680.04	0.0029	0.003818
As	75	3	He	0.073	0.001	78.00	0.002	0.0008061
As	75	3	He	0.075	0.001	78.00	0.002	0.0008061
As	75	3	He	0.023	0.0009	70.00	0.002	0.0008061
Sr	88	3	He	-0.042	0.0006	50.00	0.009	0.0009645
Sr	88	3	He	0.099	0.0019	160.01	0.009	0.0009645
Sr	88	3	He	-0.043	0.0006	50.00	0.009	0.0009645
Mo	98	3	He	0.025	0.0008	70.00	0.0219	0.0002706
Mo	98	3	He	0.009	0.0005	40.00	0.0219	0.0002706
Mo	98	3	He	0.019	0.0007	60.00	0.0219	0.0002706
Ag	107	3	He	-0.008	0.0002	20.00	0.0465	0.0006206
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Ag	107	3	He	-0.008	0.0002	20.00	0.0465	0.0006206
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Sn	120	3	He	0.021	0.0168	1420.12	0.0158	0.01648
Sn	120	3	He	0.006	0.0166	1430.14	0.0158	0.01648
Sn	120	3	He	0.032	0.017	1460.14	0.0158	0.01648
Sb	121	3	He	0.006	0.0004	30.00	0.0149	0.0002698
Sb	121	3	He	-0.018	0	0.00	0.0149	0.0002698
Sb	121	3	He	-0.01	0.0001	10.00	0.0149	0.0002698
Ba	137	3	He	-0.024	0.0001	10.00	0.0048	0.0002317
Ba	137	3	He	-0.024	0.0001	10.00	0.0048	0.0002317
Ba	137	3	He	0.024	0.0003	30.00	0.0048	0.0002317
Tl	205	3	He	0.005	0.0003	100.00	0.0247	0.0001339
Tl	205	3	He	0.017	0.0005	210.01	0.0247	0.0001339
Tl	205	3	He	0.015	0.0005	200.01	0.0247	0.0001339
Pb	208	3	He	0.019	0.0017	350.01	0.0327	0.00107
Pb	208	3	He	0.008	0.0013	260.02	0.0327	0.00107
Pb	208	3	He	0.013	0.0015	310.02	0.0327	0.00107
U	238	3	He	0.003	0.0002	70.00	0.0493	7.55E-05
U	238	3	He	0.002	0.0002	60.00	0.0493	7.55E-05
U	238	3	He	0.004	0.0003	90.00	0.0493	7.55E-05
Sc	45	1	No Gas			2434303.09		
Sc	45	1	No Gas			2350178.71		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2409132.00		
Ge	72	1	No Gas			1189498.19		
Ge	72	1	No Gas			1172312.56		
Ge	72	1	No Gas			1177167.40		
Sc	45	2	H2			175680.06		
Sc	45	2	H2			177026.83		
Sc	45	2	H2			180487.40		
Ge	72	2	H2			148172.56		
Ge	72	2	H2			149202.10		
Ge	72	2	H2			152518.56		
In	115	2	H2			377816.56		
In	115	2	H2			381829.10		
In	115	2	H2			383583.94		
Sc	45	3	He			47418.12		
Sc	45	3	He			47478.58		
Sc	45	3	He			47347.71		
Ge	72	3	He			81693.20		
Ge	72	3	He			81200.92		
Ge	72	3	He			82055.48		
In	115	3	He			84516.60		
In	115	3	He			86338.41		
In	115	3	He			86005.07		
Tb	159	3	He			386690.50		
Tb	159	3	He			387269.88		
Tb	159	3	He			391282.85		
Bi	209	3	He			300526.15		
Bi	209	3	He			302143.02		
Bi	209	3	He			305076.30		

Quantitation Report

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Sample Type	CCV
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

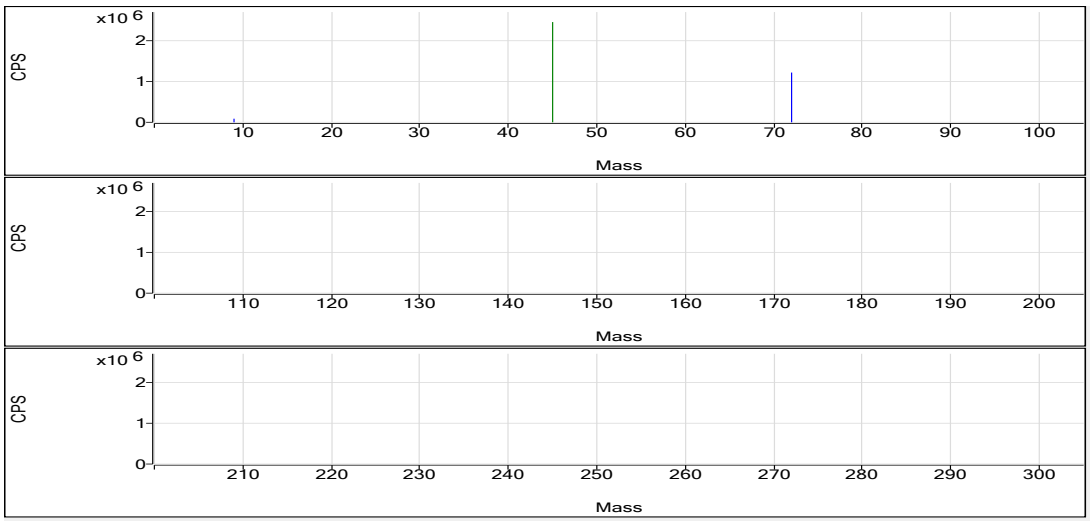
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	46.906	ppb	0.8	87569.52	0.0358	Pulse	0.5000	3
Se	78	72	H2	53.132	ppb	2.5	3385.74	0.0222	Pulse	1.5000	3
Na	23	45	He	4911.019	ppb	0.6	827120.12	17.9121	Pulse	0.1000	3
Mg	24	45	He	5072.705	ppb	0.9	420463.67	9.1056	Pulse	0.1000	3
Al	27	45	He	4921.858	ppb	0.6	132992.48	2.8801	Pulse	0.1000	3
K	39	45	He	5149.936	ppb	1.0	295124.55	6.3913	Pulse	0.1000	3
Ca	44	45	He	5134.125	ppb	3.2	16139.41	0.3495	Pulse	0.1000	3
Ti	47	45	He	5102.872	ppb	0.9	126530.84	2.7401	Pulse	0.1000	3
V	51	45	He	517.561	ppb	0.5	523563.05	11.3383	Pulse	0.5000	3
Cr	52	45	He	492.503	ppb	1.0	682746.16	14.7859	Pulse	0.1000	3
Mn	55	45	He	510.316	ppb	0.3	302548.96	6.5520	Pulse	0.1000	3
Fe	57	45	He	5099.355	ppb	0.7	136871.27	2.9641	Pulse	0.1000	3
Co	59	45	He	497.502	ppb	0.7	1293062.69	28.0027	Pulse	0.1000	3
Ni	60	72	He	515.482	ppb	0.8	362879.50	4.4273	Pulse	0.1000	3
Cu	63	72	He	493.026	ppb	0.9	1037760.24	12.6613	Pulse	0.1000	3
Zn	66	72	He	514.126	ppb	0.2	123014.06	1.5008	Pulse	0.1000	3
As	75	72	He	521.074	ppb	1.1	87570.18	1.0684	Pulse	0.5000	3
Sr	88	115	He	49.464	ppb	1.6	37938.35	0.4447	Pulse	0.1000	3
Mo	98	115	He	51.144	ppb	0.9	95698.51	1.1217	Pulse	0.1000	3
Ag	107	115	He	50.724	ppb	0.6	201233.06	2.3586	Pulse	0.1000	3
Cd	111	115	He	50.761	ppb	0.6	23156.55	0.2714	Pulse	0.5000	3
Sn	120	115	He	50.863	ppb	1.1	69963.71	0.8200	Pulse	0.1000	3
Sb	121	115	He	51.014	ppb	0.6	64671.35	0.7580	Pulse	0.1000	3
Ba	137	115	He	515.332	ppb	0.8	211030.59	2.4735	Pulse	0.1000	3
Tl	205	159	He	51.305	ppb	0.9	499166.19	1.2687	Pulse	0.1000	3
Pb	208	159	He	51.167	ppb	0.4	659319.92	1.6758	Pulse	0.1000	3
U	238	209	He	50.467	ppb	0.3	756537.54	2.4861	Pulse	0.1000	3

ISTD Table:

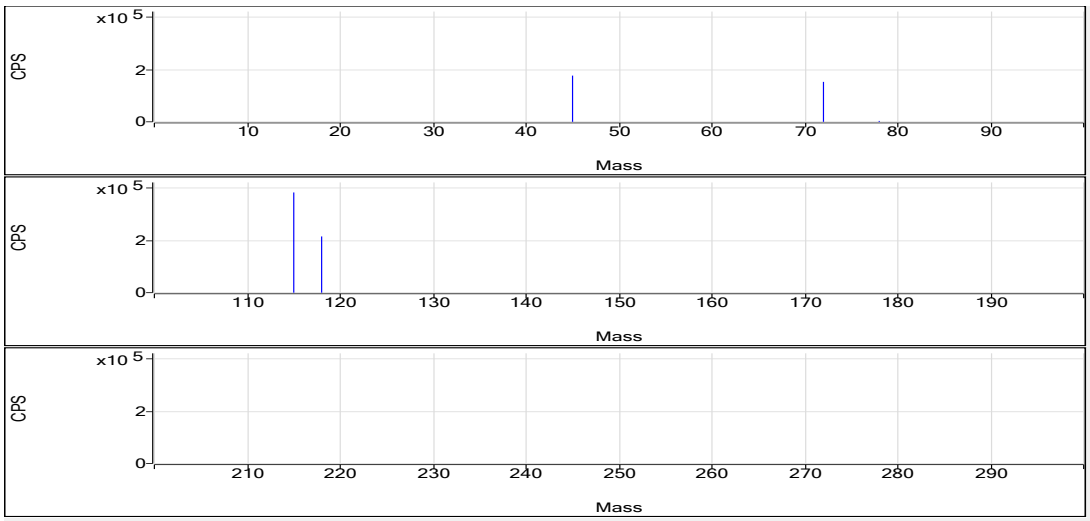
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2447197.72	0.1	102.0	Analog	0.1000	3
No Gas	Ge	72	1214479.96	1.1	105.3	Pulse	0.1000	3
H2	Sc	45	176678.54	1.3	94.5	Pulse	0.1000	3
H2	Ge	72	152718.83	0.7	93.3	Pulse	0.1000	3
H2	In	115	383251.38	0.7	98.5	Pulse	0.1000	3
He	Sc	45	46177.11	0.5	99.0	Pulse	0.1000	3
He	Ge	72	81968.45	1.0	101.0	Pulse	0.1000	3
He	In	115	85318.52	0.4	99.0	Pulse	0.1000	3
He	Tb	159	393447.01	0.2	98.7	Pulse	0.1000	3
He	Bi	209	304315.48	0.8	98.4	Pulse	0.1000	3

No Gas

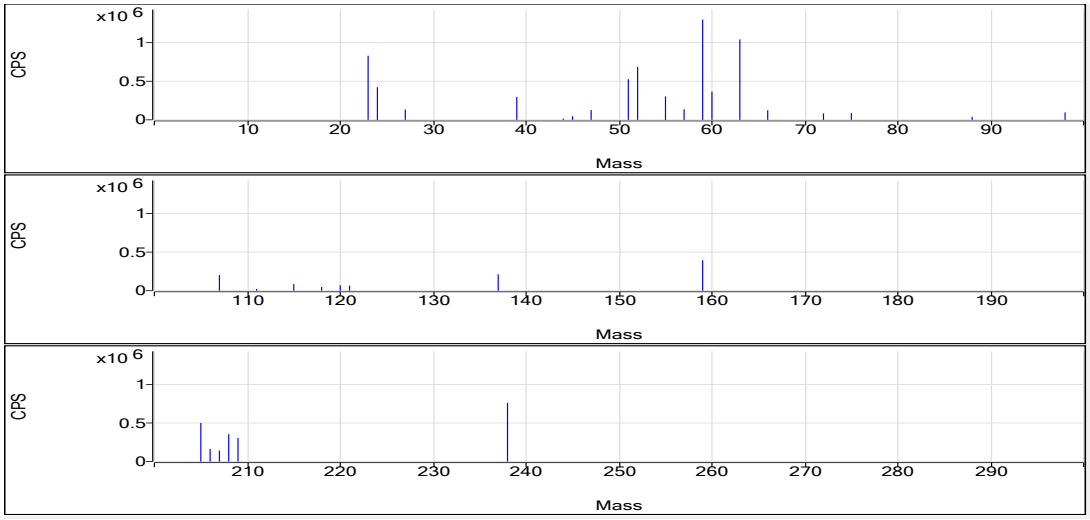


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	46.703	0.0356	87308.74	0.0008	4.685E-06
Be	9	1	No Gas	46.666	0.0356	87129.50	0.0008	4.685E-06
Be	9	1	No Gas	47.349	0.0361	88270.32	0.0008	4.685E-06
Se	78	2	H2	52.985	0.0221	3364.40	0.0004	1.219E-05
Se	78	2	H2	51.906	0.0217	3335.06	0.0004	1.219E-05
Se	78	2	H2	54.507	0.0227	3457.76	0.0004	1.219E-05
Na	23	3	He	4932.054	17.9874	831804.91	0.0036	0.3452
Na	23	3	He	4876.714	17.7894	824623.03	0.0036	0.3452
Na	23	3	He	4924.288	17.9596	824932.41	0.0036	0.3452
Mg	24	3	He	5113.396	9.1786	424452.77	0.0018	0.003497
Mg	24	3	He	5023.425	9.0171	417987.06	0.0018	0.003497
Mg	24	3	He	5081.293	9.121	418951.17	0.0018	0.003497
Al	27	3	He	4921.898	2.8801	133188.10	0.0006	0.0006432
Al	27	3	He	4894.11	2.8639	132753.83	0.0006	0.0006432
Al	27	3	He	4949.567	2.8963	133035.52	0.0006	0.0006432
K	39	3	He	5179.515	6.4257	297149.78	0.0012	0.3951
K	39	3	He	5091.527	6.3233	293113.34	0.0012	0.3951
K	39	3	He	5178.766	6.4248	295110.52	0.0012	0.3951
Ca	44	3	He	4966.037	0.3382	15638.76	0.0001	0.002715
Ca	44	3	He	5142.73	0.3501	16229.54	0.0001	0.002715
Ca	44	3	He	5293.607	0.3603	16549.94	0.0001	0.002715
Ti	47	3	He	5091.425	2.7339	126426.37	0.0005	7.003E-05
Ti	47	3	He	5153.021	2.767	128262.62	0.0005	7.003E-05
Ti	47	3	He	5064.169	2.7193	124903.53	0.0005	7.003E-05
V	51	3	He	517.175	11.3299	523937.16	0.0219	0.02486
V	51	3	He	515.196	11.2866	523188.69	0.0219	0.02486
V	51	3	He	520.313	11.3985	523563.31	0.0219	0.02486
Cr	52	3	He	491.444	14.7542	682290.07	0.0299	0.03997
Cr	52	3	He	488	14.651	679144.91	0.0299	0.03997
Cr	52	3	He	498.064	14.9524	686803.51	0.0299	0.03997
Mn	55	3	He	508.412	6.5275	301858.63	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	510.644	6.5562	303909.98	0.0128	0.002639
Mn	55	3	He	511.891	6.5722	301878.26	0.0128	0.002639
Fe	57	3	He	5112.348	2.9717	137420.85	0.0006	0.001429
Fe	57	3	He	5057.679	2.9399	136277.99	0.0006	0.001429
Fe	57	3	He	5128.037	2.9808	136914.97	0.0006	0.001429
Co	59	3	He	499.074	28.0912	1299044.28	0.0563	0.002149
Co	59	3	He	493.679	27.7876	1288084.59	0.0563	0.002149
Co	59	3	He	499.753	28.1294	1292059.20	0.0563	0.002149
Ni	60	3	He	518.858	4.4563	363195.85	0.0086	0.002834
Ni	60	3	He	516.658	4.4374	361614.60	0.0086	0.002834
Ni	60	3	He	510.929	4.3882	363828.04	0.0086	0.002834
Cu	63	3	He	494.589	12.7014	1035190.69	0.0257	0.004757
Cu	63	3	He	496.698	12.7555	1039482.56	0.0257	0.004757
Cu	63	3	He	487.791	12.5269	1038607.48	0.0257	0.004757
Zn	66	3	He	513.031	1.4976	122055.16	0.0029	0.003818
Zn	66	3	He	515.519	1.5048	122631.27	0.0029	0.003818
Zn	66	3	He	513.826	1.4999	124355.75	0.0029	0.003818
As	75	3	He	525.124	1.0767	87754.79	0.002	0.0008061
As	75	3	He	523.569	1.0735	87484.89	0.002	0.0008061
As	75	3	He	514.528	1.055	87470.87	0.002	0.0008061
Sr	88	3	He	49.787	0.4475	38262.65	0.009	0.0009645
Sr	88	3	He	48.581	0.4367	37109.35	0.009	0.0009645
Sr	88	3	He	50.025	0.4497	38443.06	0.009	0.0009645
Mo	98	3	He	51.423	1.1278	96420.56	0.0219	0.0002706
Mo	98	3	He	51.367	1.1266	95724.66	0.0219	0.0002706
Mo	98	3	He	50.641	1.1107	94950.32	0.0219	0.0002706
Ag	107	3	He	50.412	2.3441	200410.29	0.0465	0.0006206
Ag	107	3	He	50.98	2.3705	201425.88	0.0465	0.0006206
Ag	107	3	He	50.78	2.3612	201863.02	0.0465	0.0006206
Cd	111	3	He	50.868	0.272	23253.36	0.0053	0
Cd	111	3	He	51.001	0.2727	23171.27	0.0053	0
Cd	111	3	He	50.415	0.2696	23045.02	0.0053	0
Sn	120	3	He	51.078	0.8234	70399.27	0.0158	0.01648
Sn	120	3	He	51.271	0.8265	70228.15	0.0158	0.01648
Sn	120	3	He	50.239	0.8102	69263.71	0.0158	0.01648
Sb	121	3	He	50.679	0.753	64379.77	0.0149	0.0002698
Sb	121	3	He	51.175	0.7604	64611.00	0.0149	0.0002698
Sb	121	3	He	51.188	0.7606	65023.29	0.0149	0.0002698
Ba	137	3	He	510.96	2.4525	209674.76	0.0048	0.0002317
Ba	137	3	He	519.353	2.4928	211813.67	0.0048	0.0002317
Ba	137	3	He	515.684	2.4752	211603.34	0.0048	0.0002317
Tl	205	3	He	51.645	1.2771	501358.04	0.0247	0.0001339
Tl	205	3	He	50.751	1.255	494543.86	0.0247	0.0001339
Tl	205	3	He	51.519	1.274	501596.67	0.0247	0.0001339
Pb	208	3	He	51.066	1.6724	352559.37	0.0327	0.00107
Pb	208	3	He	51.055	1.6721	352164.80	0.0327	0.00107
Pb	208	3	He	51.38	1.6827	354407.34	0.0327	0.00107
U	238	3	He	50.572	2.4913	760189.21	0.0493	7.55E-05
U	238	3	He	50.53	2.4892	750737.18	0.0493	7.55E-05
U	238	3	He	50.297	2.4777	758686.24	0.0493	7.55E-05
Sc	45	1	No Gas			2450474.34		
Sc	45	1	No Gas			2447426.84		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2443691.99		
Ge	72	1	No Gas			1217548.11		
Ge	72	1	No Gas			1200286.86		
Ge	72	1	No Gas			1225604.90		
Sc	45	2	H2			174011.11		
Sc	45	2	H2			178481.74		
Sc	45	2	H2			177542.77		
Ge	72	2	H2			152163.67		
Ge	72	2	H2			153970.76		
Ge	72	2	H2			152022.05		
In	115	2	H2			386053.16		
In	115	2	H2			380866.44		
In	115	2	H2			382834.53		
Sc	45	3	He			46243.86		
Sc	45	3	He			46354.73		
Sc	45	3	He			45932.73		
Ge	72	3	He			81502.22		
Ge	72	3	He			81492.80		
Ge	72	3	He			82910.34		
In	115	3	He			85864.17		
In	115	3	He			85343.16		
In	115	3	He			85864.62		
Tb	159	3	He			392568.94		
Tb	159	3	He			394055.93		
Tb	159	3	He			393716.17		
Bi	209	3	He			305141.28		
Bi	209	3	He			301601.13		
Bi	209	3	He			306204.02		

Quantitation Report

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Sample Type	CCB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

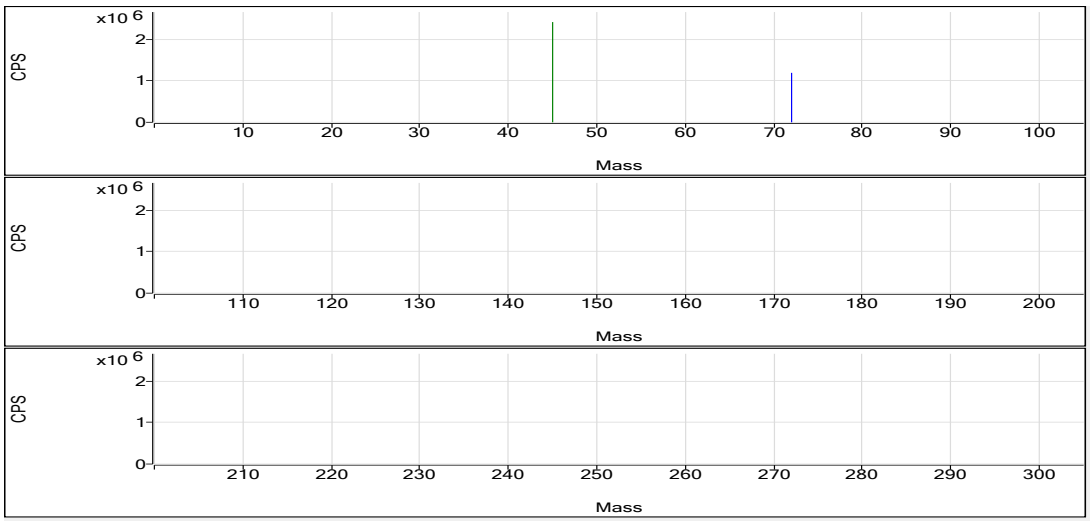
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.017	ppb	21.6	42.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.055	ppb	18.2	5.33	0.0000	Pulse	1.5000	3
Na	23	45	He	15.193	ppb	4.6	18231.73	0.3995	Pulse	0.1000	3
Mg	24	45	He	0.330	ppb	216.1	186.67	0.0041	Pulse	0.1000	3
Al	27	45	He	0.523	ppb	82.6	43.33	0.0009	Pulse	0.1000	3
K	39	45	He	18.763	ppb	15.6	19026.23	0.4169	Pulse	0.1000	3
Ca	44	45	He	16.041	ppb	31.2	173.34	0.0038	Pulse	0.1000	3
Ti	47	45	He	0.822	ppb	28.8	23.33	0.0005	Pulse	0.1000	3
V	51	45	He	0.316	ppb	3.7	1450.08	0.0318	Pulse	0.5000	3
Cr	52	45	He	0.056	ppb	258.4	1900.19	0.0416	Pulse	0.1000	3
Mn	55	45	He	0.182	ppb	55.3	226.68	0.0050	Pulse	0.1000	3
Fe	57	45	He	1.940	ppb	62.3	116.67	0.0026	Pulse	0.1000	3
Co	59	45	He	0.092	ppb	6.7	333.35	0.0073	Pulse	0.1000	3
Ni	60	72	He	0.039	ppb	226.8	256.68	0.0032	Pulse	0.1000	3
Cu	63	72	He	0.066	ppb	51.0	523.36	0.0065	Pulse	0.1000	3
Zn	66	72	He	1.725	ppb	3.5	716.71	0.0088	Pulse	0.1000	3
As	75	72	He	0.136	ppb	78.1	88.00	0.0011	Pulse	0.5000	3
Sr	88	115	He	0.007	ppb	410.4	86.67	0.0010	Pulse	0.1000	3
Mo	98	115	He	0.069	ppb	28.9	150.01	0.0018	Pulse	0.1000	3
Ag	107	115	He	0.004	ppb	109.9	66.67	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.010	ppb	108.3	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.092	ppb	163.7	1516.82	0.0179	Pulse	0.1000	3
Sb	121	115	He	0.008	ppb	147.7	33.33	0.0004	Pulse	0.1000	3
Ba	137	115	He	0.076	ppb	119.8	50.00	0.0006	Pulse	0.1000	3
Tl	205	159	He	0.073	ppb	16.6	756.72	0.0019	Pulse	0.1000	3
Pb	208	159	He	0.016	ppb	84.2	630.03	0.0016	Pulse	0.1000	3
U	238	209	He	0.035	ppb	4.8	546.70	0.0018	Pulse	0.1000	3

ISTD Table:

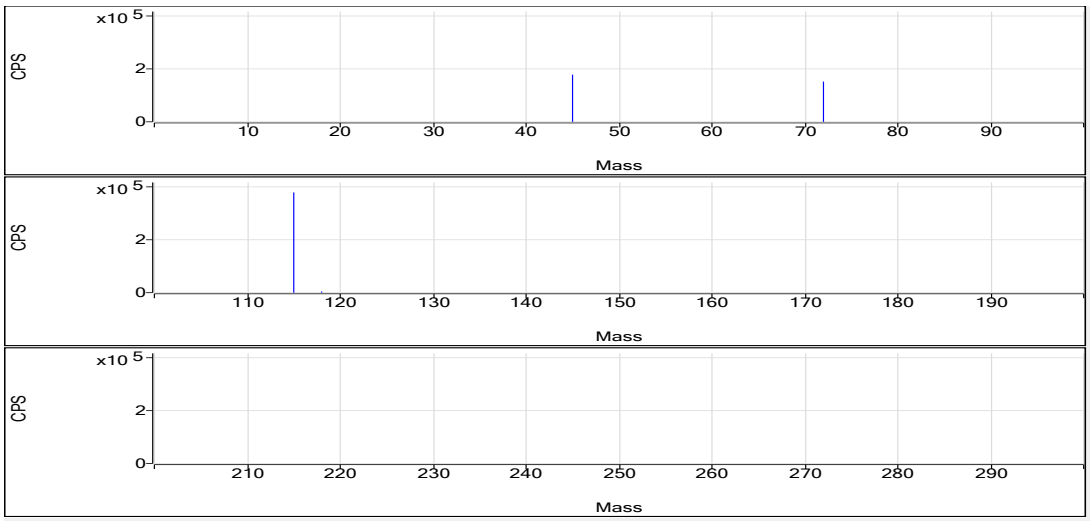
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2423911.32	1.0	101.0	Analog	0.1000	3
No Gas	Ge	72	1196174.18	0.2	103.7	Pulse	0.1000	3
H2	Sc	45	178608.85	1.2	95.5	Pulse	0.1000	3
H2	Ge	72	152213.37	0.9	93.0	Pulse	0.1000	3
H2	In	115	379490.81	1.2	97.5	Pulse	0.1000	3
He	Sc	45	45635.92	0.1	97.8	Pulse	0.1000	3
He	Ge	72	81069.52	0.2	99.8	Pulse	0.1000	3
He	In	115	84598.87	1.1	98.1	Pulse	0.1000	3
He	Tb	159	392689.01	0.8	98.5	Pulse	0.1000	3
He	Bi	209	304416.24	0.8	98.4	Pulse	0.1000	3

No Gas

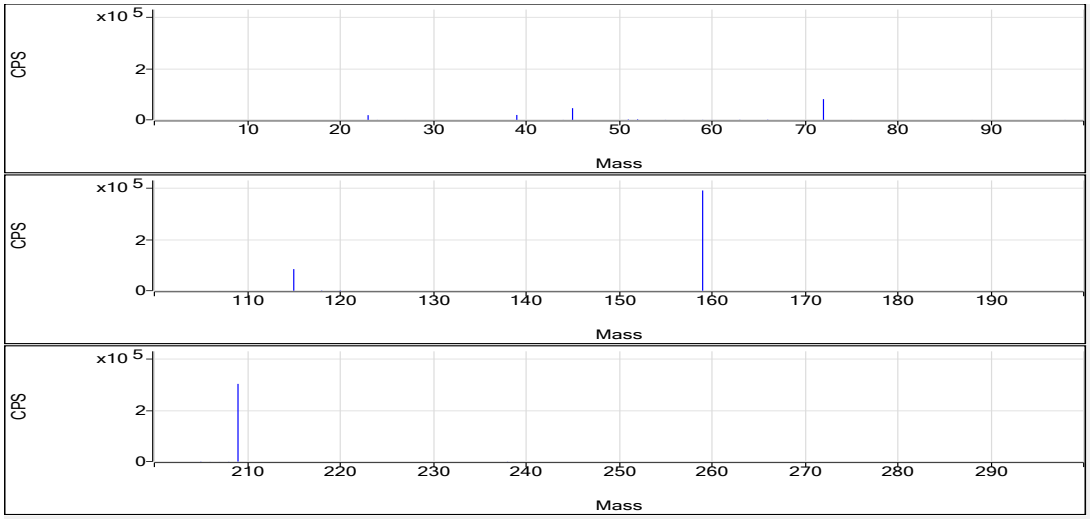


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.021	0	50.00	0.0008	4.685E-06
Be	9	1	No Gas	0.014	0	38.00	0.0008	4.685E-06
Be	9	1	No Gas	0.015	0	40.00	0.0008	4.685E-06
Se	78	2	H2	0.064	0	6.00	0.0004	1.219E-05
Se	78	2	H2	0.055	0	5.33	0.0004	1.219E-05
Se	78	2	H2	0.044	0	4.67	0.0004	1.219E-05
Na	23	3	He	15.937	0.4022	18331.83	0.0036	0.3452
Na	23	3	He	14.551	0.3972	18121.70	0.0036	0.3452
Na	23	3	He	15.091	0.3991	18241.67	0.0036	0.3452
Mg	24	3	He	-0.482	0.0026	120.00	0.0018	0.003497
Mg	24	3	He	0.861	0.005	230.01	0.0018	0.003497
Mg	24	3	He	0.612	0.0046	210.01	0.0018	0.003497
Al	27	3	He	0.775	0.0011	50.00	0.0006	0.0006432
Al	27	3	He	0.024	0.0007	30.00	0.0006	0.0006432
Al	27	3	He	0.771	0.0011	50.00	0.0006	0.0006432
K	39	3	He	20.062	0.4184	19072.86	0.0012	0.3951
K	39	3	He	15.413	0.413	18842.73	0.0012	0.3951
K	39	3	He	20.814	0.4193	19163.09	0.0012	0.3951
Ca	44	3	He	21.517	0.0042	190.01	0.0001	0.002715
Ca	44	3	He	11.729	0.0035	160.01	0.0001	0.002715
Ca	44	3	He	14.877	0.0037	170.01	0.0001	0.002715
Ti	47	3	He	1.095	0.0007	30.00	0.0005	7.003E-05
Ti	47	3	He	0.686	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	0.685	0.0004	20.00	0.0005	7.003E-05
V	51	3	He	0.328	0.032	1460.08	0.0219	0.02486
V	51	3	He	0.305	0.0315	1438.08	0.0219	0.02486
V	51	3	He	0.316	0.0318	1452.08	0.0219	0.02486
Cr	52	3	He	0.109	0.0432	1970.21	0.0299	0.03997
Cr	52	3	He	0.166	0.0449	2050.20	0.0299	0.03997
Cr	52	3	He	-0.107	0.0368	1680.17	0.0299	0.03997
Mn	55	3	He	0.222	0.0055	250.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.256	0.0059	270.01	0.0128	0.002639
Mn	55	3	He	0.067	0.0035	160.01	0.0128	0.002639
Fe	57	3	He	0.562	0.0018	80.00	0.0006	0.001429
Fe	57	3	He	2.446	0.0028	130.01	0.0006	0.001429
Fe	57	3	He	2.814	0.0031	140.01	0.0006	0.001429
Co	59	3	He	0.098	0.0077	350.02	0.0563	0.002149
Co	59	3	He	0.09	0.0072	330.02	0.0563	0.002149
Co	59	3	He	0.086	0.007	320.01	0.0563	0.002149
Ni	60	3	He	-0.057	0.0023	190.01	0.0086	0.002834
Ni	60	3	He	0.057	0.0033	270.01	0.0086	0.002834
Ni	60	3	He	0.116	0.0038	310.01	0.0086	0.002834
Cu	63	3	He	0.098	0.0073	590.03	0.0257	0.004757
Cu	63	3	He	0.069	0.0065	530.03	0.0257	0.004757
Cu	63	3	He	0.031	0.0056	450.02	0.0257	0.004757
Zn	66	3	He	1.657	0.0086	700.05	0.0029	0.003818
Zn	66	3	He	1.776	0.009	730.05	0.0029	0.003818
Zn	66	3	He	1.743	0.0089	720.04	0.0029	0.003818
As	75	3	He	0.173	0.0012	94.00	0.002	0.0008061
As	75	3	He	0.219	0.0013	102.00	0.002	0.0008061
As	75	3	He	0.016	0.0008	68.00	0.002	0.0008061
Sr	88	3	He	-0.016	0.0008	70.00	0.009	0.0009645
Sr	88	3	He	0.037	0.0013	110.00	0.009	0.0009645
Sr	88	3	He	-0.001	0.001	80.00	0.009	0.0009645
Mo	98	3	He	0.073	0.0019	160.01	0.0219	0.0002706
Mo	98	3	He	0.047	0.0013	110.01	0.0219	0.0002706
Mo	98	3	He	0.086	0.0022	180.01	0.0219	0.0002706
Ag	107	3	He	0.004	0.0008	70.00	0.0465	0.0006206
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Ag	107	3	He	0.007	0.001	80.00	0.0465	0.0006206
Cd	111	3	He	0.009	0	4.00	0.0053	0
Cd	111	3	He	0.022	0.0001	10.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Sn	120	3	He	-0.037	0.0159	1360.14	0.0158	0.01648
Sn	120	3	He	0.259	0.0206	1740.17	0.0158	0.01648
Sn	120	3	He	0.055	0.0173	1450.14	0.0158	0.01648
Sb	121	3	He	-0.002	0.0002	20.00	0.0149	0.0002698
Sb	121	3	He	0.006	0.0004	30.00	0.0149	0.0002698
Sb	121	3	He	0.022	0.0006	50.00	0.0149	0.0002698
Ba	137	3	He	0	0.0002	20.00	0.0048	0.0002317
Ba	137	3	He	0.05	0.0005	40.00	0.0048	0.0002317
Ba	137	3	He	0.176	0.0011	90.00	0.0048	0.0002317
Tl	205	3	He	0.059	0.0016	630.04	0.0247	0.0001339
Tl	205	3	He	0.076	0.002	780.05	0.0247	0.0001339
Tl	205	3	He	0.083	0.0022	860.06	0.0247	0.0001339
Pb	208	3	He	0.016	0.0016	430.02	0.0327	0.00107
Pb	208	3	He	0.003	0.0012	280.01	0.0327	0.00107
Pb	208	3	He	0.03	0.0021	460.03	0.0327	0.00107
U	238	3	He	0.034	0.0017	530.03	0.0493	7.55E-05
U	238	3	He	0.034	0.0018	530.03	0.0493	7.55E-05
U	238	3	He	0.037	0.0019	580.04	0.0493	7.55E-05
Sc	45	1	No Gas			2401960.59		
Sc	45	1	No Gas			2419986.21		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2449787.15		
Ge	72	1	No Gas			1199392.25		
Ge	72	1	No Gas			1194593.42		
Ge	72	1	No Gas			1194536.86		
Sc	45	2	H2			180972.75		
Sc	45	2	H2			177097.73		
Sc	45	2	H2			177756.07		
Ge	72	2	H2			153728.87		
Ge	72	2	H2			150889.20		
Ge	72	2	H2			152022.05		
In	115	2	H2			384232.57		
In	115	2	H2			375332.73		
In	115	2	H2			378907.14		
Sc	45	3	He			45582.54		
Sc	45	3	He			45622.71		
Sc	45	3	He			45702.52		
Ge	72	3	He			80998.91		
Ge	72	3	He			81230.34		
Ge	72	3	He			80979.31		
In	115	3	He			85562.40		
In	115	3	He			84626.79		
In	115	3	He			83631.23		
Tb	159	3	He			394104.49		
Tb	159	3	He			389287.34		
Tb	159	3	He			394675.19		
Bi	209	3	He			304376.28		
Bi	209	3	He			301968.24		
Bi	209	3	He			306904.21		

Quantitation Report

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Acq Time	8/10/2023 8:17:45 PM
Sample Name	410-136532-C-2-C
Sample Type	Sample
Comment	F15 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

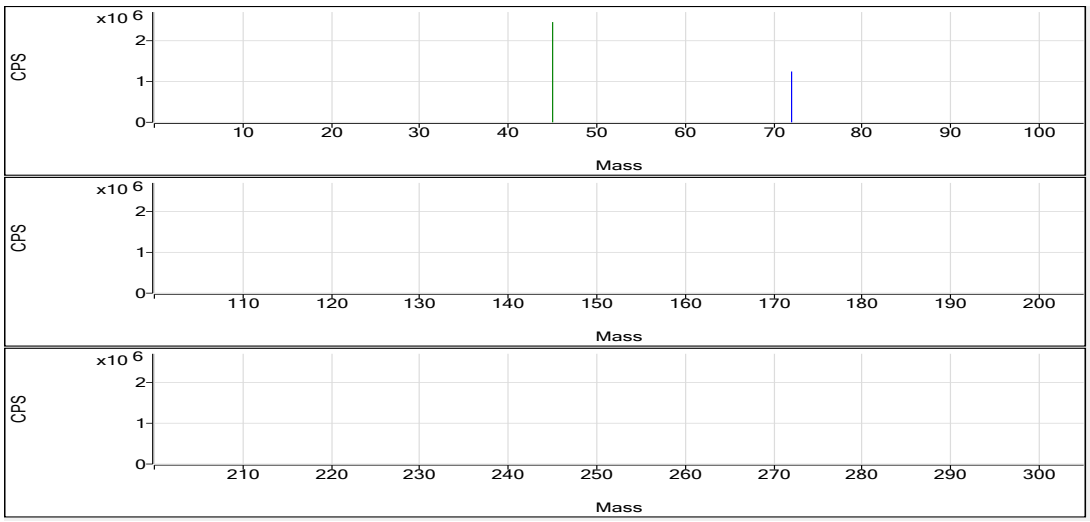
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.009	ppb	79.1	28.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.032	ppb	169.8	4.00	0.0000	Pulse	1.5000	3
Na	23	45	He	4276.181	ppb	3.5	722917.72	15.6413	Pulse	0.1000	3
Mg	24	45	He	1545.366	ppb	3.2	128327.80	2.7764	Pulse	0.1000	3
Al	27	45	He	2.945	ppb	59.4	110.01	0.0024	Pulse	0.1000	3
K	39	45	He	449.367	ppb	1.8	42462.45	0.9183	Pulse	0.1000	3
Ca	44	45	He	9801.847	ppb	2.4	30736.25	0.6648	Pulse	0.1000	3
Ti	47	45	He	0.943	ppb	24.4	26.67	0.0006	Pulse	0.1000	3
V	51	45	He	0.270	ppb	11.9	1422.74	0.0308	Pulse	0.5000	3
Cr	52	45	He	-0.071	ppb	N/A	1746.83	0.0378	Pulse	0.1000	3
Mn	55	45	He	18.540	ppb	4.7	11121.39	0.2406	Pulse	0.1000	3
Fe	57	45	He	3.380	ppb	87.2	156.67	0.0034	Pulse	0.1000	3
Co	59	45	He	0.267	ppb	19.5	793.38	0.0172	Pulse	0.1000	3
Ni	60	72	He	0.365	ppb	25.6	500.03	0.0060	Pulse	0.1000	3
Cu	63	72	He	0.525	ppb	10.2	1530.13	0.0182	Pulse	0.1000	3
Zn	66	72	He	1.642	ppb	28.2	720.04	0.0086	Pulse	0.1000	3
As	75	72	He	0.172	ppb	32.9	97.33	0.0012	Pulse	0.5000	3
Sr	88	115	He	52.960	ppb	1.0	40936.90	0.4760	Pulse	0.1000	3
Mo	98	115	He	0.970	ppb	5.1	1853.52	0.0215	Pulse	0.1000	3
Ag	107	115	He	-0.002	ppb	N/A	46.67	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.003	ppb	173.2	1.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.178	ppb	53.6	1660.17	0.0193	Pulse	0.1000	3
Sb	121	115	He	0.055	ppb	81.5	93.34	0.0011	Pulse	0.1000	3
Ba	137	115	He	12.264	ppb	3.1	5081.11	0.0591	Pulse	0.1000	3
Tl	205	159	He	0.023	ppb	5.5	276.68	0.0007	Pulse	0.1000	3
Pb	208	159	He	0.027	ppb	36.7	760.04	0.0019	Pulse	0.1000	3
U	238	209	He	0.061	ppb	18.0	936.74	0.0031	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2446869.29	0.3	102.0	Analog	0.1000	3
No Gas	Ge	72	1240344.67	0.6	107.5	Pulse	0.1000	3
H2	Sc	45	179043.92	0.4	95.7	Pulse	0.1000	3
H2	Ge	72	157950.41	0.5	96.5	Pulse	0.1000	3
H2	In	115	381564.92	0.7	98.1	Pulse	0.1000	3
He	Sc	45	46250.81	3.1	99.2	Pulse	0.1000	3
He	Ge	72	83879.13	1.6	103.3	Pulse	0.1000	3
He	In	115	86006.88	1.0	99.8	Pulse	0.1000	3
He	Tb	159	391951.90	0.4	98.3	Pulse	0.1000	3
He	Bi	209	305390.50	0.9	98.7	Pulse	0.1000	3

No Gas



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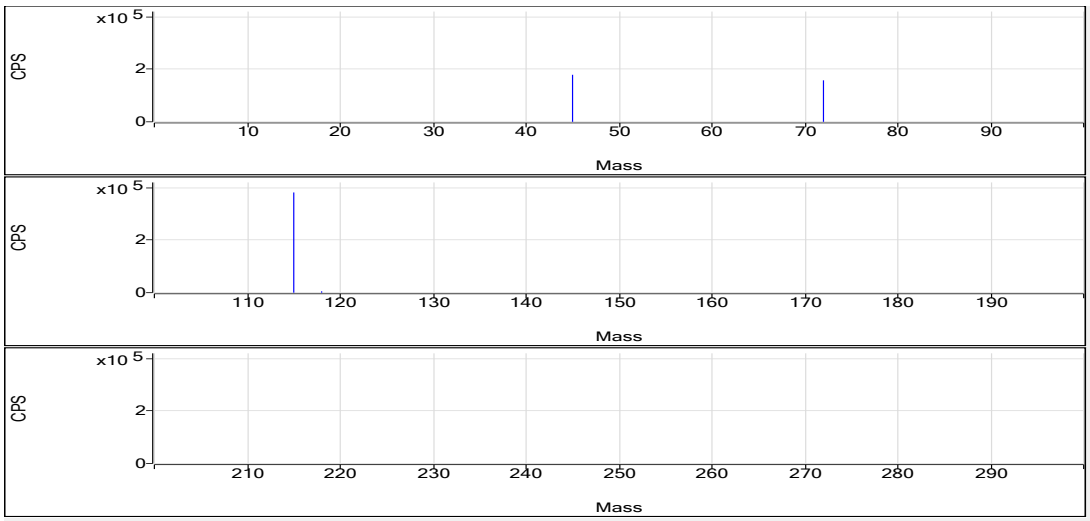
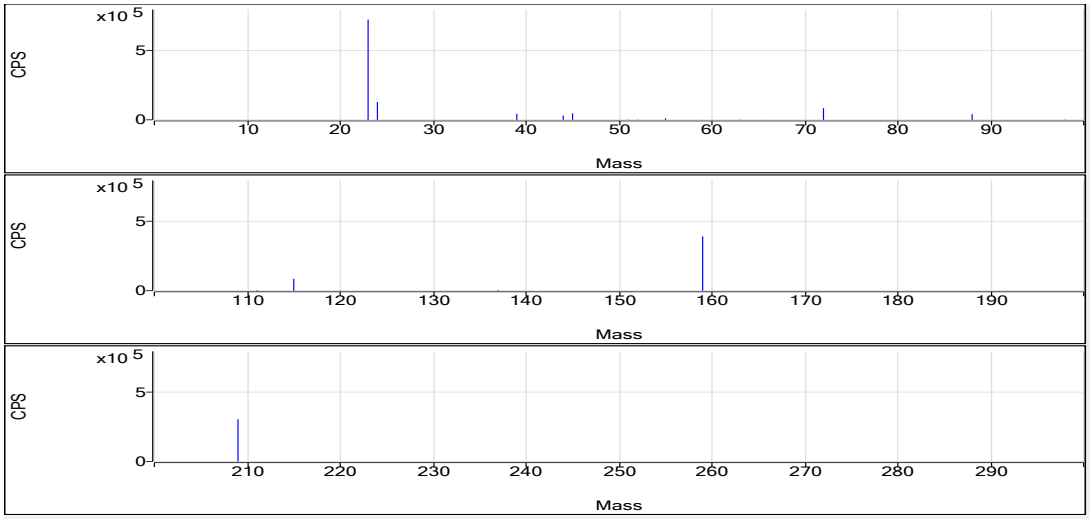


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.008	0	26.00	0.0008	4.685E-06
Be	9	1	No Gas	0.002	0	16.00	0.0008	4.685E-06
Be	9	1	No Gas	0.016	0	42.00	0.0008	4.685E-06
Se	78	2	H2	-0.029	0	0.00	0.0004	1.219E-05
Se	78	2	H2	0.072	0	6.67	0.0004	1.219E-05
Se	78	2	H2	0.052	0	5.33	0.0004	1.219E-05
Na	23	3	He	4117.03	15.072	720422.49	0.0036	0.3452
Na	23	3	He	4299.159	15.7235	722390.77	0.0036	0.3452
Na	23	3	He	4412.355	16.1284	725939.91	0.0036	0.3452
Mg	24	3	He	1495.657	2.6872	128444.35	0.0018	0.003497
Mg	24	3	He	1546.871	2.7791	127680.73	0.0018	0.003497
Mg	24	3	He	1593.569	2.8629	128858.31	0.0018	0.003497
Al	27	3	He	4.623	0.0033	160.01	0.0006	0.0006432
Al	27	3	He	1.133	0.0013	60.00	0.0006	0.0006432
Al	27	3	He	3.078	0.0024	110.01	0.0006	0.0006432
K	39	3	He	441.866	0.9095	43475.05	0.0012	0.3951
K	39	3	He	448.111	0.9168	42121.66	0.0012	0.3951
K	39	3	He	458.123	0.9285	41790.63	0.0012	0.3951
Ca	44	3	He	9533.717	0.6467	30913.19	0.0001	0.002715
Ca	44	3	He	9959.12	0.6755	31033.57	0.0001	0.002715
Ca	44	3	He	9912.705	0.6723	30261.98	0.0001	0.002715
Ti	47	3	He	1.038	0.0006	30.00	0.0005	7.003E-05
Ti	47	3	He	0.68	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	1.111	0.0007	30.00	0.0005	7.003E-05
V	51	3	He	0.264	0.0306	1464.08	0.0219	0.02486
V	51	3	He	0.304	0.0315	1448.08	0.0219	0.02486
V	51	3	He	0.241	0.0301	1356.07	0.0219	0.02486
Cr	52	3	He	-0.252	0.0324	1550.13	0.0299	0.03997
Cr	52	3	He	0.134	0.044	2020.21	0.0299	0.03997
Cr	52	3	He	-0.096	0.0371	1670.16	0.0299	0.03997
Mn	55	3	He	18.288	0.2373	11344.89	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	17.83	0.2315	10634.31	0.0128	0.002639
Mn	55	3	He	19.503	0.2529	11384.96	0.0128	0.002639
Fe	57	3	He	4.023	0.0038	180.01	0.0006	0.001429
Fe	57	3	He	0.163	0.0015	70.00	0.0006	0.001429
Fe	57	3	He	5.954	0.0049	220.01	0.0006	0.001429
Co	59	3	He	0.27	0.0174	830.05	0.0563	0.002149
Co	59	3	He	0.213	0.0141	650.04	0.0563	0.002149
Co	59	3	He	0.317	0.02	900.06	0.0563	0.002149
Ni	60	3	He	0.462	0.0068	560.03	0.0086	0.002834
Ni	60	3	He	0.276	0.0052	440.02	0.0086	0.002834
Ni	60	3	He	0.357	0.0059	500.03	0.0086	0.002834
Cu	63	3	He	0.548	0.0188	1550.13	0.0257	0.004757
Cu	63	3	He	0.464	0.0167	1410.13	0.0257	0.004757
Cu	63	3	He	0.564	0.0192	1630.14	0.0257	0.004757
Zn	66	3	He	2.152	0.0101	830.05	0.0029	0.003818
Zn	66	3	He	1.247	0.0074	630.04	0.0029	0.003818
Zn	66	3	He	1.526	0.0083	700.04	0.0029	0.003818
As	75	3	He	0.116	0.001	86.00	0.002	0.0008061
As	75	3	He	0.23	0.0013	108.00	0.002	0.0008061
As	75	3	He	0.171	0.0012	98.00	0.002	0.0008061
Sr	88	3	He	53.136	0.4776	40839.91	0.009	0.0009645
Sr	88	3	He	53.398	0.4799	41030.70	0.009	0.0009645
Sr	88	3	He	52.346	0.4705	40940.10	0.009	0.0009645
Mo	98	3	He	0.953	0.0212	1810.18	0.0219	0.0002706
Mo	98	3	He	0.932	0.0207	1770.18	0.0219	0.0002706
Mo	98	3	He	1.026	0.0228	1980.21	0.0219	0.0002706
Ag	107	3	He	-0.008	0.0002	20.00	0.0465	0.0006206
Ag	107	3	He	0.007	0.0009	80.00	0.0465	0.0006206
Ag	107	3	He	-0.003	0.0005	40.00	0.0465	0.0006206
Cd	111	3	He	0.009	0	4.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0	0	0.00	0.0053	0
Sn	120	3	He	0.179	0.0193	1650.15	0.0158	0.01648
Sn	120	3	He	0.083	0.0178	1520.15	0.0158	0.01648
Sn	120	3	He	0.274	0.0208	1810.20	0.0158	0.01648
Sb	121	3	He	0.092	0.0016	140.01	0.0149	0.0002698
Sb	121	3	He	0.068	0.0013	110.00	0.0149	0.0002698
Sb	121	3	He	0.005	0.0003	30.00	0.0149	0.0002698
Ba	137	3	He	12.552	0.0605	5171.16	0.0048	0.0002317
Ba	137	3	He	12.408	0.0598	5111.08	0.0048	0.0002317
Ba	137	3	He	11.831	0.057	4961.09	0.0048	0.0002317
Tl	205	3	He	0.025	0.0007	290.01	0.0247	0.0001339
Tl	205	3	He	0.022	0.0007	270.01	0.0247	0.0001339
Tl	205	3	He	0.022	0.0007	270.01	0.0247	0.0001339
Pb	208	3	He	0.019	0.0017	370.02	0.0327	0.00107
Pb	208	3	He	0.038	0.0023	540.03	0.0327	0.00107
Pb	208	3	He	0.023	0.0018	340.02	0.0327	0.00107
U	238	3	He	0.055	0.0028	860.06	0.0493	7.55E-05
U	238	3	He	0.073	0.0037	1120.10	0.0493	7.55E-05
U	238	3	He	0.054	0.0027	830.07	0.0493	7.55E-05
Sc	45	1	No Gas			2439438.56		
Sc	45	1	No Gas			2449670.43		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2451498.87		
Ge	72	1	No Gas			1233773.11		
Ge	72	1	No Gas			1249094.04		
Ge	72	1	No Gas			1238166.86		
Sc	45	2	H2			179192.20		
Sc	45	2	H2			178320.51		
Sc	45	2	H2			179619.06		
Ge	72	2	H2			158813.86		
Ge	72	2	H2			157205.12		
Ge	72	2	H2			157832.26		
In	115	2	H2			384634.64		
In	115	2	H2			379433.63		
In	115	2	H2			380626.48		
Sc	45	3	He			47798.80		
Sc	45	3	He			45943.50		
Sc	45	3	He			45010.13		
Ge	72	3	He			82316.76		
Ge	72	3	He			84569.67		
Ge	72	3	He			84750.96		
In	115	3	He			85521.98		
In	115	3	He			85503.16		
In	115	3	He			87022.34		
Tb	159	3	He			390599.21		
Tb	159	3	He			391668.63		
Tb	159	3	He			393587.85		
Bi	209	3	He			308595.17		
Bi	209	3	He			303623.45		
Bi	209	3	He			303952.87		

Quantitation Report

Data File Name	281SMPL.d
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Sample Type	Sample
Comment	F15 ICP
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

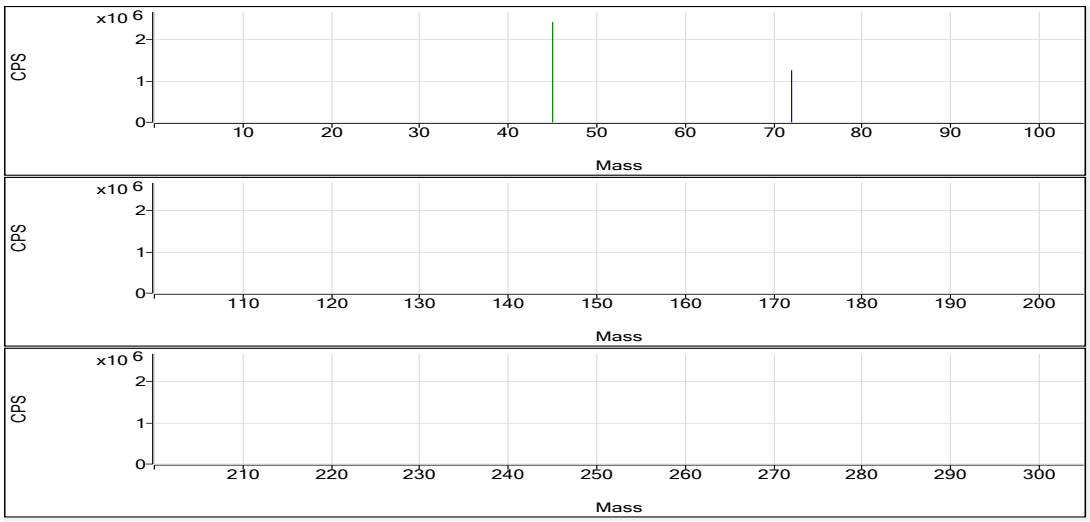
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.012	ppb	22.7	34.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.014	ppb	41.9	2.89	0.0000	Pulse	1.5000	3
Na	23	45	He	1185.404	ppb	2.9	214085.58	4.5854	Pulse	0.1000	3
Mg	24	45	He	377.482	ppb	1.3	31798.36	0.6808	Pulse	0.1000	3
Al	27	45	He	65.011	ppb	1.8	1806.84	0.0387	Pulse	0.1000	3
K	39	45	He	135.487	ppb	11.2	25806.82	0.5528	Pulse	0.1000	3
Ca	44	45	He	1282.142	ppb	5.6	4170.73	0.0893	Pulse	0.1000	3
Ti	47	45	He	2.263	ppb	18.4	60.00	0.0013	Pulse	0.1000	3
V	51	45	He	0.423	ppb	8.4	1593.43	0.0341	Pulse	0.5000	3
Cr	52	45	He	0.045	ppb	58.2	1930.19	0.0413	Pulse	0.1000	3
Mn	55	45	He	41.082	ppb	5.3	24728.59	0.5299	Pulse	0.1000	3
Fe	57	45	He	347.393	ppb	3.1	9490.07	0.2033	Pulse	0.1000	3
Co	59	45	He	0.900	ppb	7.1	2463.64	0.0528	Pulse	0.1000	3
Ni	60	72	He	0.910	ppb	24.6	910.06	0.0106	Pulse	0.1000	3
Cu	63	72	He	0.256	ppb	1.8	970.06	0.0113	Pulse	0.1000	3
Zn	66	72	He	1.966	ppb	6.0	816.72	0.0095	Pulse	0.1000	3
As	75	72	He	0.162	ppb	65.7	97.33	0.0011	Pulse	0.5000	3
Sr	88	115	He	9.627	ppb	2.7	7475.59	0.0873	Pulse	0.1000	3
Mo	98	115	He	0.089	ppb	15.8	190.01	0.0022	Pulse	0.1000	3
Ag	107	115	He	-0.002	ppb	N/A	46.67	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.003	ppb	86.6	1.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.175	ppb	55.4	1646.82	0.0192	Pulse	0.1000	3
Sb	121	115	He	0.000	ppb	7029.5	23.33	0.0003	Pulse	0.1000	3
Ba	137	115	He	4.917	ppb	1.0	2040.21	0.0238	Pulse	0.1000	3
Tl	205	159	He	0.014	ppb	34.5	190.01	0.0005	Pulse	0.1000	3
Pb	208	159	He	0.052	ppb	25.8	1080.06	0.0028	Pulse	0.1000	3
U	238	209	He	0.011	ppb	41.1	193.34	0.0006	Pulse	0.1000	3

ISTD Table:

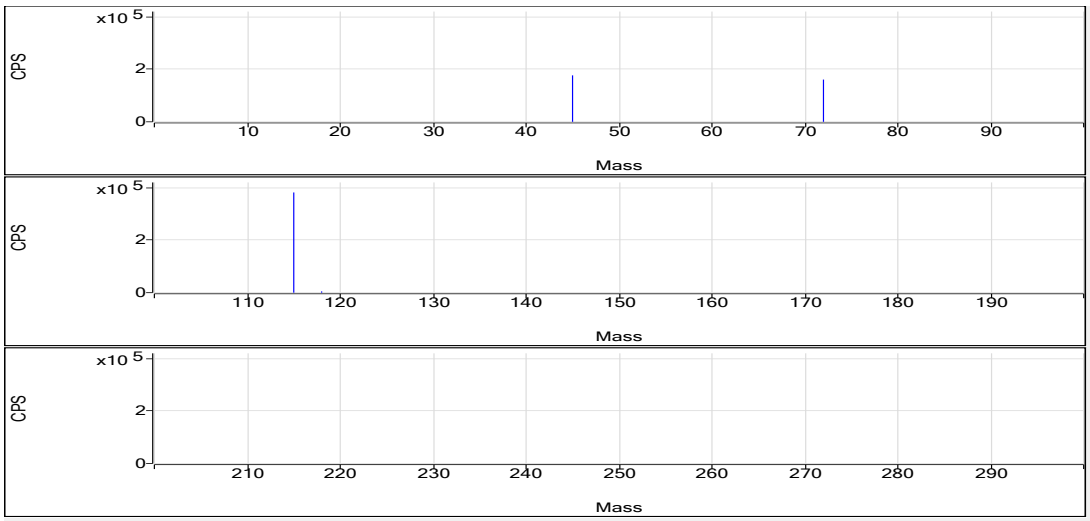
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2436702.26	0.6	101.6	Analog	0.1000	3
No Gas	Ge	72	1265405.06	0.2	109.7	Pulse	0.1000	3
H2	Sc	45	177184.91	0.9	94.7	Pulse	0.1000	3
H2	Ge	72	161069.41	0.3	98.4	Pulse	0.1000	3
H2	In	115	382222.14	0.8	98.2	Pulse	0.1000	3
He	Sc	45	46719.26	3.8	100.2	Pulse	0.1000	3
He	Ge	72	85599.31	0.8	105.4	Pulse	0.1000	3
He	In	115	85611.26	0.3	99.3	Pulse	0.1000	3
He	Tb	159	391864.08	1.0	98.3	Pulse	0.1000	3
He	Bi	209	305710.77	0.2	98.8	Pulse	0.1000	3

No Gas

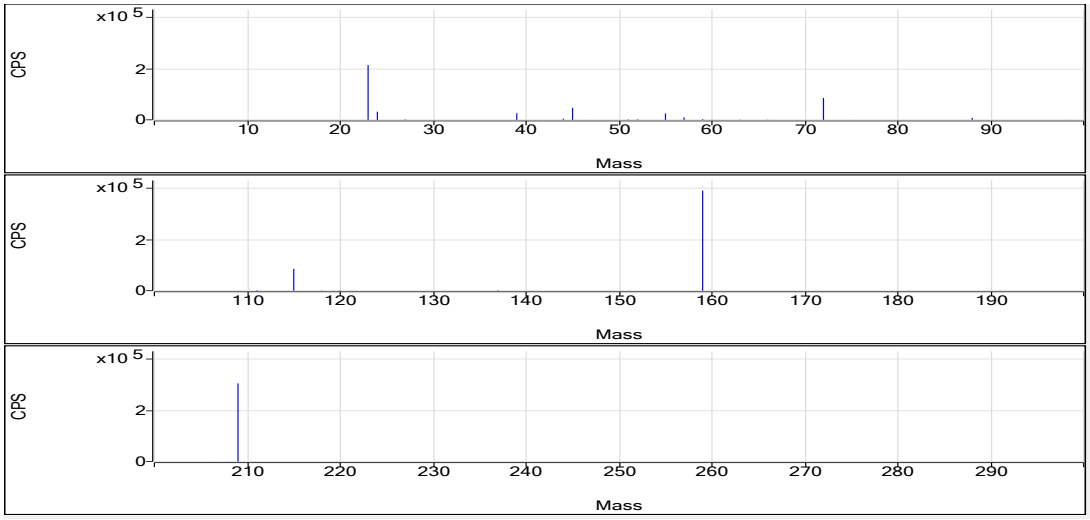


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.009	0	28.00	0.0008	4.685E-06
Be	9	1	No Gas	0.014	0	38.00	0.0008	4.685E-06
Be	9	1	No Gas	0.013	0	36.00	0.0008	4.685E-06
Se	78	2	H2	0.011	0	2.67	0.0004	1.219E-05
Se	78	2	H2	0.02	0	3.33	0.0004	1.219E-05
Se	78	2	H2	0.01	0	2.67	0.0004	1.219E-05
Na	23	3	He	1204.517	4.6538	212781.87	0.0036	0.3452
Na	23	3	He	1146.369	4.4458	216699.86	0.0036	0.3452
Na	23	3	He	1205.328	4.6567	212775.00	0.0036	0.3452
Mg	24	3	He	382.059	0.689	31504.27	0.0018	0.003497
Mg	24	3	He	372.476	0.6718	32747.32	0.0018	0.003497
Mg	24	3	He	377.91	0.6816	31143.50	0.0018	0.003497
Al	27	3	He	63.956	0.0381	1740.19	0.0006	0.0006432
Al	27	3	He	64.834	0.0386	1880.17	0.0006	0.0006432
Al	27	3	He	66.243	0.0394	1800.17	0.0006	0.0006432
K	39	3	He	142.193	0.5606	25633.16	0.0012	0.3951
K	39	3	He	118.181	0.5327	25963.77	0.0012	0.3951
K	39	3	He	146.087	0.5652	25823.54	0.0012	0.3951
Ca	44	3	He	1365.213	0.0949	4340.78	0.0001	0.002715
Ca	44	3	He	1244.71	0.0868	4230.76	0.0001	0.002715
Ca	44	3	He	1236.503	0.0862	3940.66	0.0001	0.002715
Ti	47	3	He	2.721	0.0015	70.00	0.0005	7.003E-05
Ti	47	3	He	2.162	0.0012	60.00	0.0005	7.003E-05
Ti	47	3	He	1.908	0.0011	50.00	0.0005	7.003E-05
V	51	3	He	0.463	0.035	1600.10	0.0219	0.02486
V	51	3	He	0.396	0.0335	1634.11	0.0219	0.02486
V	51	3	He	0.41	0.0338	1546.09	0.0219	0.02486
Cr	52	3	He	0.06	0.0418	1910.19	0.0299	0.03997
Cr	52	3	He	0.015	0.0404	1970.19	0.0299	0.03997
Cr	52	3	He	0.061	0.0418	1910.20	0.0299	0.03997
Mn	55	3	He	40.883	0.5273	24110.78	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	39.026	0.5035	24541.64	0.0128	0.002639
Mn	55	3	He	43.336	0.5588	25533.35	0.0128	0.002639
Fe	57	3	He	346.625	0.2028	9273.18	0.0006	0.001429
Fe	57	3	He	337.011	0.1972	9613.51	0.0006	0.001429
Fe	57	3	He	358.544	0.2097	9583.52	0.0006	0.001429
Co	59	3	He	0.863	0.0507	2320.29	0.0563	0.002149
Co	59	3	He	0.862	0.0507	2470.30	0.0563	0.002149
Co	59	3	He	0.973	0.0569	2600.34	0.0563	0.002149
Ni	60	3	He	1.112	0.0124	1050.07	0.0086	0.002834
Ni	60	3	He	0.67	0.0086	740.05	0.0086	0.002834
Ni	60	3	He	0.947	0.011	940.06	0.0086	0.002834
Cu	63	3	He	0.251	0.0112	950.06	0.0257	0.004757
Cu	63	3	He	0.257	0.0114	980.07	0.0257	0.004757
Cu	63	3	He	0.26	0.0114	980.06	0.0257	0.004757
Zn	66	3	He	2.089	0.0099	840.06	0.0029	0.003818
Zn	66	3	He	1.955	0.0095	820.05	0.0029	0.003818
Zn	66	3	He	1.854	0.0092	790.06	0.0029	0.003818
As	75	3	He	0.262	0.0013	114.00	0.002	0.0008061
As	75	3	He	0.173	0.0012	100.00	0.002	0.0008061
As	75	3	He	0.051	0.0009	78.00	0.002	0.0008061
Sr	88	3	He	9.59	0.087	7452.23	0.009	0.0009645
Sr	88	3	He	9.906	0.0898	7712.39	0.009	0.0009645
Sr	88	3	He	9.385	0.0851	7262.15	0.009	0.0009645
Mo	98	3	He	0.073	0.0019	160.01	0.0219	0.0002706
Mo	98	3	He	0.099	0.0024	210.01	0.0219	0.0002706
Mo	98	3	He	0.095	0.0023	200.01	0.0219	0.0002706
Ag	107	3	He	-0.008	0.0002	20.00	0.0465	0.0006206
Ag	107	3	He	0.007	0.0009	80.00	0.0465	0.0006206
Ag	107	3	He	-0.003	0.0005	40.00	0.0465	0.0006206
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Sn	120	3	He	0.228	0.0201	1720.17	0.0158	0.01648
Sn	120	3	He	0.233	0.0201	1730.17	0.0158	0.01648
Sn	120	3	He	0.063	0.0175	1490.12	0.0158	0.01648
Sb	121	3	He	-0.01	0.0001	10.00	0.0149	0.0002698
Sb	121	3	He	0.013	0.0005	40.00	0.0149	0.0002698
Sb	121	3	He	-0.002	0.0002	20.00	0.0149	0.0002698
Ba	137	3	He	4.938	0.0239	2050.21	0.0048	0.0002317
Ba	137	3	He	4.951	0.024	2060.21	0.0048	0.0002317
Ba	137	3	He	4.862	0.0236	2010.22	0.0048	0.0002317
Tl	205	3	He	0.02	0.0006	240.01	0.0247	0.0001339
Tl	205	3	He	0.013	0.0005	180.01	0.0247	0.0001339
Tl	205	3	He	0.01	0.0004	150.01	0.0247	0.0001339
Pb	208	3	He	0.041	0.0024	460.03	0.0327	0.00107
Pb	208	3	He	0.067	0.0032	590.04	0.0327	0.00107
Pb	208	3	He	0.047	0.0026	560.04	0.0327	0.00107
U	238	3	He	0.006	0.0004	120.00	0.0493	7.55E-05
U	238	3	He	0.016	0.0008	260.01	0.0493	7.55E-05
U	238	3	He	0.012	0.0007	200.02	0.0493	7.55E-05
Sc	45	1	No Gas			2419597.31		
Sc	45	1	No Gas			2442265.59		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2448243.87		
Ge	72	1	No Gas			1262387.56		
Ge	72	1	No Gas			1265588.65		
Ge	72	1	No Gas			1268238.97		
Sc	45	2	H2			175742.15		
Sc	45	2	H2			178918.98		
Sc	45	2	H2			176893.61		
Ge	72	2	H2			161079.97		
Ge	72	2	H2			160654.54		
Ge	72	2	H2			161473.72		
In	115	2	H2			385718.12		
In	115	2	H2			380787.85		
In	115	2	H2			380160.46		
Sc	45	3	He			45722.42		
Sc	45	3	He			48742.87		
Sc	45	3	He			45692.48		
Ge	72	3	He			84841.82		
Ge	72	3	He			86228.91		
Ge	72	3	He			85727.19		
In	115	3	He			85683.43		
In	115	3	He			85875.57		
In	115	3	He			85301.15		
Tb	159	3	He			388568.35		
Tb	159	3	He			391098.86		
Tb	159	3	He			395925.03		
Bi	209	3	He			305377.09		
Bi	209	3	He			306521.34		
Bi	209	3	He			305233.88		

Quantitation Report

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Sample Type	Sample
Comment	F15 ICP
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

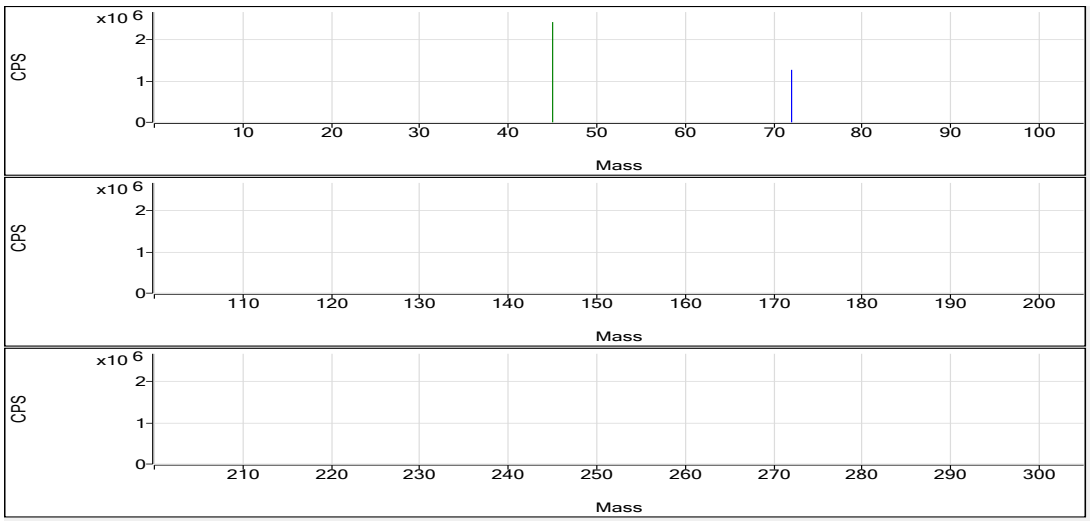
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.015	ppb	45.9	38.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.021	ppb	85.8	3.34	0.0000	Pulse	1.5000	3
Na	23	45	He	1672.939	ppb	1.3	297833.92	6.3293	Pulse	0.1000	3
Mg	24	45	He	736.527	ppb	0.8	62352.02	1.3251	Pulse	0.1000	3
Al	27	45	He	53.158	ppb	6.1	1493.47	0.0317	Pulse	0.1000	3
K	39	45	He	226.706	ppb	4.2	31010.22	0.6590	Pulse	0.1000	3
Ca	44	45	He	1732.521	ppb	5.8	5634.65	0.1198	Pulse	0.1000	3
Ti	47	45	He	0.925	ppb	49.6	26.67	0.0006	Pulse	0.1000	3
V	51	45	He	0.486	ppb	16.7	1669.44	0.0355	Pulse	0.5000	3
Cr	52	45	He	0.151	ppb	23.4	2093.56	0.0445	Pulse	0.1000	3
Mn	55	45	He	31.770	ppb	1.4	19310.17	0.4104	Pulse	0.1000	3
Fe	57	45	He	303.191	ppb	3.3	8356.01	0.1776	Pulse	0.1000	3
Co	59	45	He	0.833	ppb	5.3	2306.93	0.0490	Pulse	0.1000	3
Ni	60	72	He	0.883	ppb	17.7	896.73	0.0104	Pulse	0.1000	3
Cu	63	72	He	0.334	ppb	32.1	1146.76	0.0133	Pulse	0.1000	3
Zn	66	72	He	2.188	ppb	2.6	876.73	0.0102	Pulse	0.1000	3
As	75	72	He	0.362	ppb	34.5	133.33	0.0015	Pulse	0.5000	3
Sr	88	115	He	12.543	ppb	3.5	9733.66	0.1135	Pulse	0.1000	3
Mo	98	115	He	0.076	ppb	14.0	166.68	0.0019	Pulse	0.1000	3
Ag	107	115	He	-0.003	ppb	N/A	40.00	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.004	ppb	98.1	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.038	ppb	N/A	1360.12	0.0159	Pulse	0.1000	3
Sb	121	115	He	0.005	ppb	148.0	30.00	0.0004	Pulse	0.1000	3
Ba	137	115	He	5.448	ppb	5.4	2263.61	0.0264	Pulse	0.1000	3
Tl	205	159	He	0.013	ppb	33.1	176.68	0.0005	Pulse	0.1000	3
Pb	208	159	He	0.069	ppb	15.4	1293.41	0.0033	Pulse	0.1000	3
U	238	209	He	0.018	ppb	22.4	300.01	0.0010	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2424274.39	1.0	101.1	Analog	0.1000	3
No Gas	Ge	72	1268894.46	0.6	110.0	Pulse	0.1000	3
H2	Sc	45	177450.86	0.9	94.9	Pulse	0.1000	3
H2	Ge	72	161035.56	0.9	98.4	Pulse	0.1000	3
H2	In	115	379330.55	0.4	97.5	Pulse	0.1000	3
He	Sc	45	47056.89	0.5	100.9	Pulse	0.1000	3
He	Ge	72	86048.55	1.3	106.0	Pulse	0.1000	3
He	In	115	85790.43	3.0	99.5	Pulse	0.1000	3
He	Tb	159	390427.42	0.9	97.9	Pulse	0.1000	3
He	Bi	209	306572.59	1.6	99.1	Pulse	0.1000	3

No Gas



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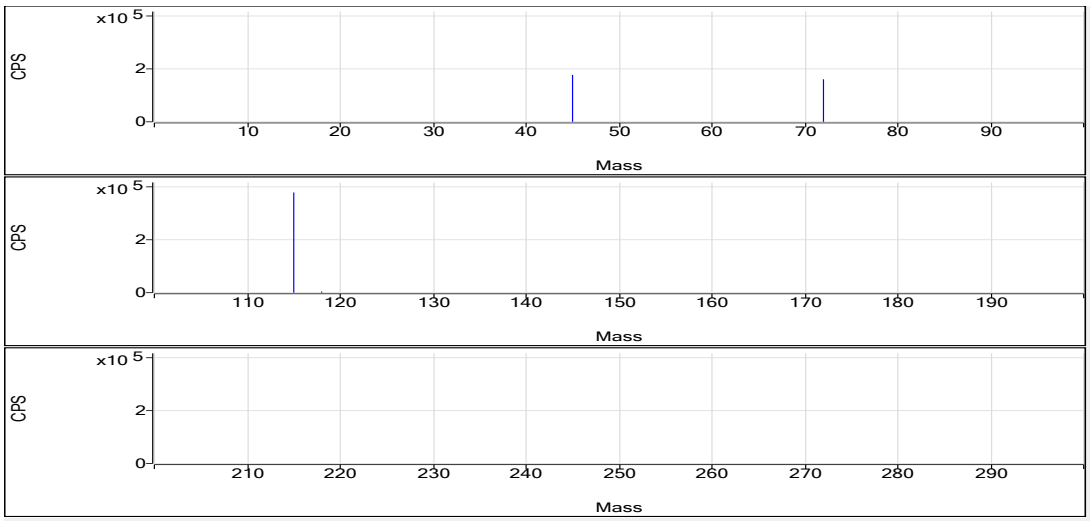
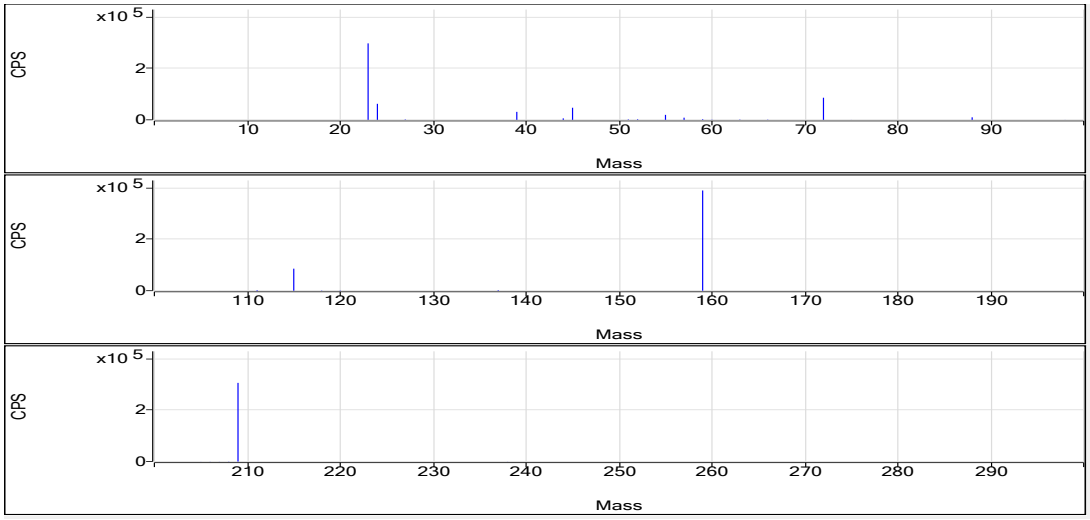


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.013	0	36.00	0.0008	4.685E-06
Be	9	1	No Gas	0.009	0	28.00	0.0008	4.685E-06
Be	9	1	No Gas	0.022	0	52.00	0.0008	4.685E-06
Se	78	2	H2	0.011	0	2.67	0.0004	1.219E-05
Se	78	2	H2	0.041	0	4.67	0.0004	1.219E-05
Se	78	2	H2	0.01	0	2.67	0.0004	1.219E-05
Na	23	3	He	1697.741	6.4181	300981.05	0.0036	0.3452
Na	23	3	He	1655.962	6.2686	294479.51	0.0036	0.3452
Na	23	3	He	1665.116	6.3014	298041.19	0.0036	0.3452
Mg	24	3	He	743.462	1.3375	62723.70	0.0018	0.003497
Mg	24	3	He	734.79	1.3219	62100.81	0.0018	0.003497
Mg	24	3	He	731.329	1.3157	62231.56	0.0018	0.003497
Al	27	3	He	54.307	0.0324	1520.13	0.0006	0.0006432
Al	27	3	He	55.668	0.0332	1560.14	0.0006	0.0006432
Al	27	3	He	49.5	0.0296	1400.13	0.0006	0.0006432
K	39	3	He	236.024	0.6699	31414.45	0.0012	0.3951
K	39	3	He	227.156	0.6596	30983.56	0.0012	0.3951
K	39	3	He	216.938	0.6477	30632.64	0.0012	0.3951
Ca	44	3	He	1844.802	0.1273	5971.49	0.0001	0.002715
Ca	44	3	He	1649.232	0.1141	5361.17	0.0001	0.002715
Ca	44	3	He	1703.527	0.1178	5571.29	0.0001	0.002715
Ti	47	3	He	0.664	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	1.455	0.0009	40.00	0.0005	7.003E-05
Ti	47	3	He	0.657	0.0004	20.00	0.0005	7.003E-05
V	51	3	He	0.58	0.0375	1760.12	0.0219	0.02486
V	51	3	He	0.438	0.0344	1618.10	0.0219	0.02486
V	51	3	He	0.439	0.0345	1630.10	0.0219	0.02486
Cr	52	3	He	0.139	0.0441	2070.22	0.0299	0.03997
Cr	52	3	He	0.123	0.0436	2050.20	0.0299	0.03997
Cr	52	3	He	0.19	0.0457	2160.25	0.0299	0.03997
Mn	55	3	He	32.001	0.4133	19383.47	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	32.062	0.4141	19453.77	0.0128	0.002639
Mn	55	3	He	31.249	0.4037	19093.28	0.0128	0.002639
Fe	57	3	He	314.387	0.1841	8632.83	0.0006	0.001429
Fe	57	3	He	294.777	0.1727	8112.49	0.0006	0.001429
Fe	57	3	He	300.408	0.176	8322.70	0.0006	0.001429
Co	59	3	He	0.852	0.0501	2350.27	0.0563	0.002149
Co	59	3	He	0.783	0.0462	2170.24	0.0563	0.002149
Co	59	3	He	0.863	0.0507	2400.27	0.0563	0.002149
Ni	60	3	He	0.886	0.0104	910.07	0.0086	0.002834
Ni	60	3	He	1.039	0.0117	1010.07	0.0086	0.002834
Ni	60	3	He	0.726	0.0091	770.04	0.0086	0.002834
Cu	63	3	He	0.355	0.0139	1210.09	0.0257	0.004757
Cu	63	3	He	0.218	0.0104	890.06	0.0257	0.004757
Cu	63	3	He	0.429	0.0158	1340.12	0.0257	0.004757
Zn	66	3	He	2.234	0.0103	900.07	0.0029	0.003818
Zn	66	3	He	2.204	0.0102	880.06	0.0029	0.003818
Zn	66	3	He	2.124	0.01	850.06	0.0029	0.003818
As	75	3	He	0.48	0.0018	156.00	0.002	0.0008061
As	75	3	He	0.231	0.0013	110.00	0.002	0.0008061
As	75	3	He	0.376	0.0016	134.00	0.002	0.0008061
Sr	88	3	He	12.044	0.109	9353.38	0.009	0.0009645
Sr	88	3	He	12.697	0.1149	10143.94	0.009	0.0009645
Sr	88	3	He	12.89	0.1166	9703.65	0.009	0.0009645
Mo	98	3	He	0.078	0.002	170.01	0.0219	0.0002706
Mo	98	3	He	0.065	0.0017	150.01	0.0219	0.0002706
Mo	98	3	He	0.086	0.0022	180.01	0.0219	0.0002706
Ag	107	3	He	-0.008	0.0002	20.00	0.0465	0.0006206
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Ag	107	3	He	0	0.0006	50.00	0.0465	0.0006206
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0.008	0	4.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Sn	120	3	He	-0.091	0.015	1290.10	0.0158	0.01648
Sn	120	3	He	-0.082	0.0152	1340.12	0.0158	0.01648
Sn	120	3	He	0.06	0.0174	1450.13	0.0158	0.01648
Sb	121	3	He	0.013	0.0005	40.00	0.0149	0.0002698
Sb	121	3	He	-0.003	0.0002	20.00	0.0149	0.0002698
Sb	121	3	He	0.006	0.0004	30.00	0.0149	0.0002698
Ba	137	3	He	5.78	0.028	2400.31	0.0048	0.0002317
Ba	137	3	He	5.355	0.0259	2290.27	0.0048	0.0002317
Ba	137	3	He	5.209	0.0252	2100.25	0.0048	0.0002317
Tl	205	3	He	0.017	0.0006	220.01	0.0247	0.0001339
Tl	205	3	He	0.009	0.0004	140.01	0.0247	0.0001339
Tl	205	3	He	0.012	0.0004	170.01	0.0247	0.0001339
Pb	208	3	He	0.076	0.0035	700.05	0.0327	0.00107
Pb	208	3	He	0.056	0.0029	580.03	0.0327	0.00107
Pb	208	3	He	0.074	0.0035	740.05	0.0327	0.00107
U	238	3	He	0.023	0.0012	370.02	0.0493	7.55E-05
U	238	3	He	0.015	0.0008	250.01	0.0493	7.55E-05
U	238	3	He	0.017	0.0009	280.01	0.0493	7.55E-05
Sc	45	1	No Gas			2417146.21		
Sc	45	1	No Gas			2450876.37		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2404800.59		
Ge	72	1	No Gas			1260069.98		
Ge	72	1	No Gas			1273212.17		
Ge	72	1	No Gas			1273401.23		
Sc	45	2	H2			179232.09		
Sc	45	2	H2			176985.66		
Sc	45	2	H2			176134.82		
Ge	72	2	H2			160825.15		
Ge	72	2	H2			159744.85		
Ge	72	2	H2			162536.67		
In	115	2	H2			380503.51		
In	115	2	H2			379625.07		
In	115	2	H2			377863.08		
Sc	45	3	He			46895.95		
Sc	45	3	He			46976.81		
Sc	45	3	He			47297.92		
Ge	72	3	He			87185.23		
Ge	72	3	He			85979.08		
Ge	72	3	He			84981.34		
In	115	3	He			85824.84		
In	115	3	He			88330.57		
In	115	3	He			83239.74		
Tb	159	3	He			389473.24		
Tb	159	3	He			394356.83		
Tb	159	3	He			387452.18		
Bi	209	3	He			308285.03		
Bi	209	3	He			310457.16		
Bi	209	3	He			300975.58		

Quantitation Report

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Sample Type	Sample
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

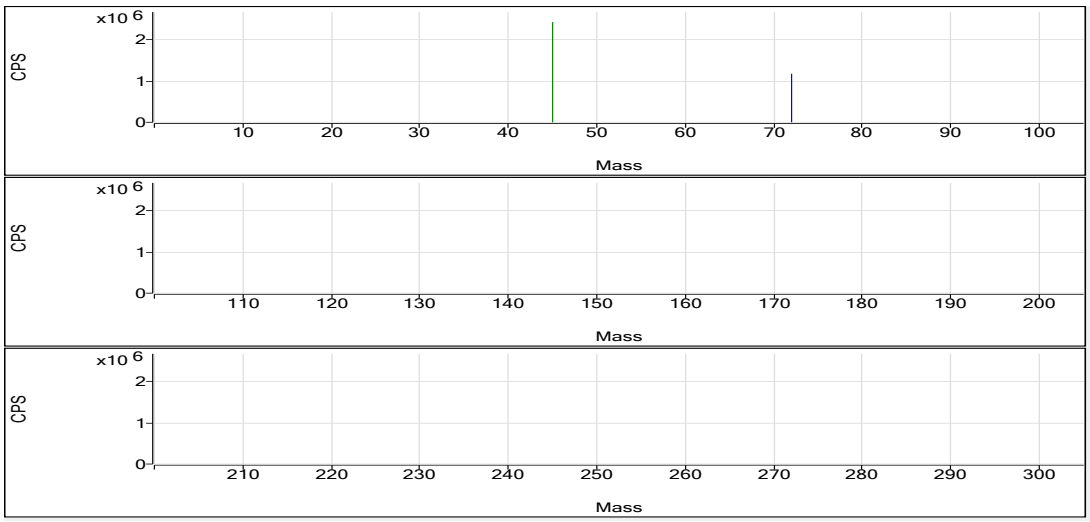
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.008	ppb	39.2	26.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.002	ppb	747.5	2.00	0.0000	Pulse	1.5000	3
Na	23	45	He	8.279	ppb	33.1	17400.72	0.3748	Pulse	0.1000	3
Mg	24	45	He	0.939	ppb	53.0	240.01	0.0052	Pulse	0.1000	3
Al	27	45	He	0.503	ppb	174.4	43.33	0.0009	Pulse	0.1000	3
K	39	45	He	4.606	ppb	240.1	18589.01	0.4004	Pulse	0.1000	3
Ca	44	45	He	-8.399	ppb	N/A	100.00	0.0021	Pulse	0.1000	3
Ti	47	45	He	0.005	ppb	4466.4	3.33	0.0001	Pulse	0.1000	3
V	51	45	He	0.288	ppb	8.2	1446.75	0.0312	Pulse	0.5000	3
Cr	52	45	He	-0.127	ppb	N/A	1680.16	0.0362	Pulse	0.1000	3
Mn	55	45	He	0.135	ppb	66.7	203.34	0.0044	Pulse	0.1000	3
Fe	57	45	He	1.864	ppb	10.1	116.67	0.0025	Pulse	0.1000	3
Co	59	45	He	0.023	ppb	37.0	160.01	0.0034	Pulse	0.1000	3
Ni	60	72	He	-0.007	ppb	N/A	223.34	0.0028	Pulse	0.1000	3
Cu	63	72	He	0.018	ppb	31.0	420.02	0.0052	Pulse	0.1000	3
Zn	66	72	He	1.570	ppb	13.0	676.71	0.0084	Pulse	0.1000	3
As	75	72	He	0.083	ppb	39.5	78.67	0.0010	Pulse	0.5000	3
Sr	88	115	He	-0.015	ppb	N/A	70.00	0.0008	Pulse	0.1000	3
Mo	98	115	He	0.018	ppb	133.4	56.67	0.0007	Pulse	0.1000	3
Ag	107	115	He	-0.009	ppb	N/A	16.67	0.0002	Pulse	0.1000	3
Cd	111	115	He	0.003	ppb	86.6	1.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.027	ppb	428.8	1433.46	0.0169	Pulse	0.1000	3
Sb	121	115	He	0.003	ppb	152.3	26.67	0.0003	Pulse	0.1000	3
Ba	137	115	He	0.042	ppb	35.5	36.67	0.0004	Pulse	0.1000	3
Tl	205	159	He	0.012	ppb	45.7	170.01	0.0004	Pulse	0.1000	3
Pb	208	159	He	0.006	ppb	90.8	486.69	0.0013	Pulse	0.1000	3
U	238	209	He	0.003	ppb	81.3	66.67	0.0002	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2433602.88	1.5	101.5	Analog	0.1000	3
No Gas	Ge	72	1179240.94	0.3	102.2	Pulse	0.1000	3
H2	Sc	45	180195.17	0.3	96.4	Pulse	0.1000	3
H2	Ge	72	152356.18	2.1	93.1	Pulse	0.1000	3
H2	In	115	380111.91	0.4	97.7	Pulse	0.1000	3
He	Sc	45	46448.28	2.6	99.6	Pulse	0.1000	3
He	Ge	72	80593.55	1.7	99.3	Pulse	0.1000	3
He	In	115	84806.63	0.9	98.4	Pulse	0.1000	3
He	Tb	159	388174.37	0.6	97.4	Pulse	0.1000	3
He	Bi	209	304740.85	1.2	98.5	Pulse	0.1000	3

No Gas



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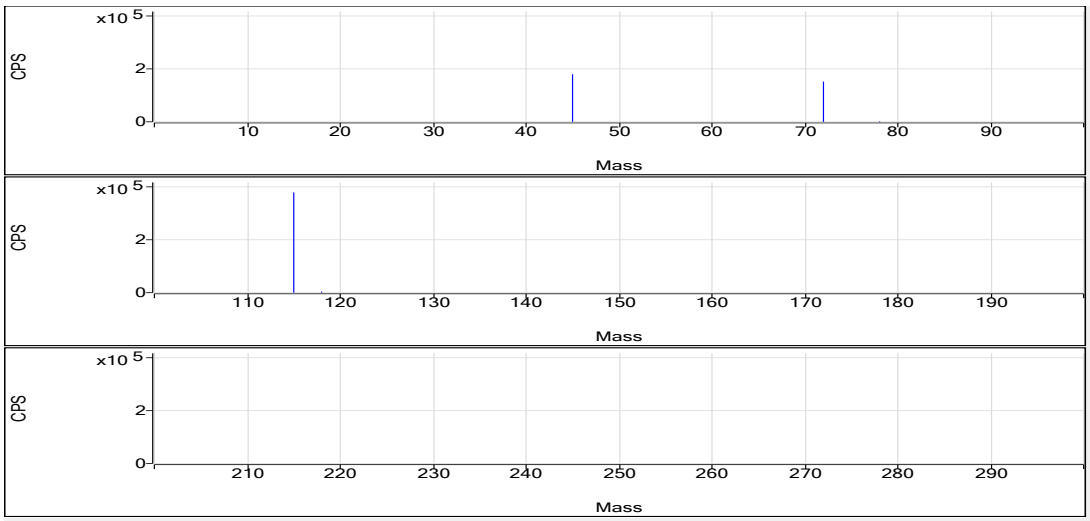
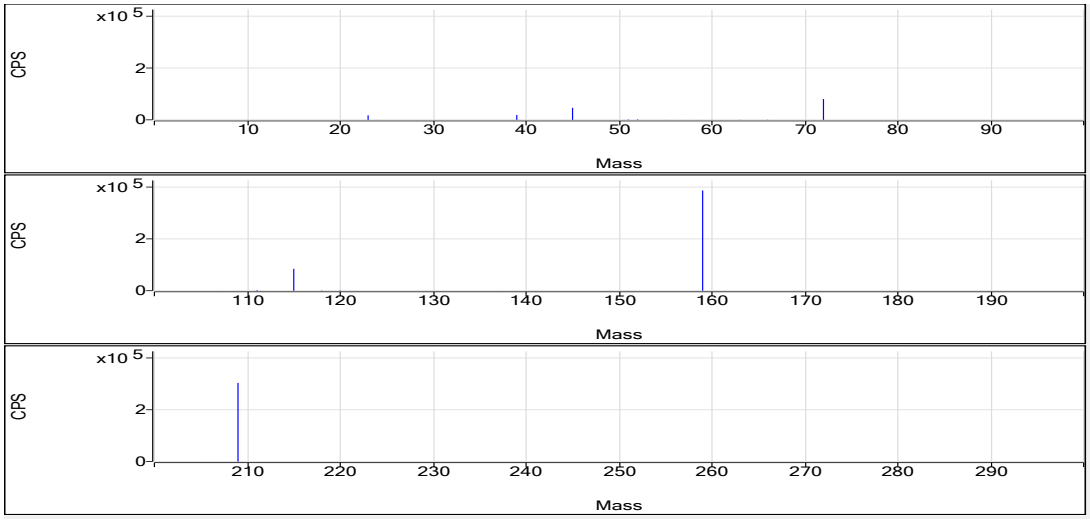


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.01	0	30.00	0.0008	4.685E-06
Be	9	1	No Gas	0.005	0	20.00	0.0008	4.685E-06
Be	9	1	No Gas	0.01	0	30.00	0.0008	4.685E-06
Se	78	2	H2	0.014	0	2.67	0.0004	1.219E-05
Se	78	2	H2	0.013	0	2.67	0.0004	1.219E-05
Se	78	2	H2	-0.019	0	0.67	0.0004	1.219E-05
Na	23	3	He	10.993	0.3845	17590.99	0.0036	0.3452
Na	23	3	He	5.507	0.3649	17450.85	0.0036	0.3452
Na	23	3	He	8.338	0.375	17160.31	0.0036	0.3452
Mg	24	3	He	1.34	0.0059	270.01	0.0018	0.003497
Mg	24	3	He	0.382	0.0042	200.01	0.0018	0.003497
Mg	24	3	He	1.096	0.0055	250.01	0.0018	0.003497
Al	27	3	He	1.516	0.0015	70.00	0.0006	0.0006432
Al	27	3	He	-0.027	0.0006	30.00	0.0006	0.0006432
Al	27	3	He	0.021	0.0007	30.00	0.0006	0.0006432
K	39	3	He	11.586	0.4086	18692.51	0.0012	0.3951
K	39	3	He	-8.148	0.3856	18442.01	0.0012	0.3951
K	39	3	He	10.381	0.4072	18632.52	0.0012	0.3951
Ca	44	3	He	-20.777	0.0013	60.00	0.0001	0.002715
Ca	44	3	He	-3.05	0.0025	120.00	0.0001	0.002715
Ca	44	3	He	-1.37	0.0026	120.01	0.0001	0.002715
Ti	47	3	He	0.277	0.0002	10.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
Ti	47	3	He	-0.13	0	0.00	0.0005	7.003E-05
V	51	3	He	0.314	0.0317	1452.08	0.0219	0.02486
V	51	3	He	0.278	0.0309	1480.09	0.0219	0.02486
V	51	3	He	0.27	0.0308	1408.08	0.0219	0.02486
Cr	52	3	He	-0.145	0.0356	1630.15	0.0299	0.03997
Cr	52	3	He	-0.155	0.0353	1690.15	0.0299	0.03997
Cr	52	3	He	-0.08	0.0376	1720.19	0.0299	0.03997
Mn	55	3	He	0.033	0.0031	140.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.169	0.0048	230.01	0.0128	0.002639
Mn	55	3	He	0.203	0.0052	240.01	0.0128	0.002639
Fe	57	3	He	2.055	0.0026	120.00	0.0006	0.001429
Fe	57	3	He	1.859	0.0025	120.00	0.0006	0.001429
Fe	57	3	He	1.678	0.0024	110.01	0.0006	0.001429
Co	59	3	He	0.016	0.0031	140.00	0.0563	0.002149
Co	59	3	He	0.032	0.004	190.01	0.0563	0.002149
Co	59	3	He	0.02	0.0033	150.01	0.0563	0.002149
Ni	60	3	He	-0.017	0.0027	220.01	0.0086	0.002834
Ni	60	3	He	0.016	0.003	240.01	0.0086	0.002834
Ni	60	3	He	-0.021	0.0027	210.01	0.0086	0.002834
Cu	63	3	He	0.019	0.0052	430.02	0.0257	0.004757
Cu	63	3	He	0.022	0.0053	430.02	0.0257	0.004757
Cu	63	3	He	0.012	0.0051	400.02	0.0257	0.004757
Zn	66	3	He	1.708	0.0088	720.04	0.0029	0.003818
Zn	66	3	He	1.667	0.0087	700.05	0.0029	0.003818
Zn	66	3	He	1.336	0.0077	610.03	0.0029	0.003818
As	75	3	He	0.047	0.0009	74.00	0.002	0.0008061
As	75	3	He	0.09	0.001	80.00	0.002	0.0008061
As	75	3	He	0.112	0.001	82.00	0.002	0.0008061
Sr	88	3	He	-0.042	0.0006	50.00	0.009	0.0009645
Sr	88	3	He	-0.002	0.0009	80.00	0.009	0.0009645
Sr	88	3	He	-0.001	0.001	80.00	0.009	0.0009645
Mo	98	3	He	-0.007	0.0001	10.00	0.0219	0.0002706
Mo	98	3	He	0.041	0.0012	100.00	0.0219	0.0002706
Mo	98	3	He	0.02	0.0007	60.00	0.0219	0.0002706
Ag	107	3	He	-0.008	0.0002	20.00	0.0465	0.0006206
Ag	107	3	He	-0.008	0.0002	20.00	0.0465	0.0006206
Ag	107	3	He	-0.011	0.0001	10.00	0.0465	0.0006206
Cd	111	3	He	0	0	0.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Cd	111	3	He	0.004	0	2.00	0.0053	0
Sn	120	3	He	0.066	0.0175	1500.14	0.0158	0.01648
Sn	120	3	He	0.115	0.0183	1550.13	0.0158	0.01648
Sn	120	3	He	-0.102	0.0149	1250.10	0.0158	0.01648
Sb	121	3	He	0.005	0.0004	30.00	0.0149	0.0002698
Sb	121	3	He	-0.002	0.0002	20.00	0.0149	0.0002698
Sb	121	3	He	0.006	0.0004	30.00	0.0149	0.0002698
Ba	137	3	He	0.025	0.0004	30.00	0.0048	0.0002317
Ba	137	3	He	0.05	0.0005	40.00	0.0048	0.0002317
Ba	137	3	He	0.051	0.0005	40.00	0.0048	0.0002317
Tl	205	3	He	0.01	0.0004	150.01	0.0247	0.0001339
Tl	205	3	He	0.008	0.0003	130.01	0.0247	0.0001339
Tl	205	3	He	0.019	0.0006	230.01	0.0247	0.0001339
Pb	208	3	He	0.009	0.0014	220.01	0.0327	0.00107
Pb	208	3	He	0.008	0.0013	270.01	0.0327	0.00107
Pb	208	3	He	0	0.0011	190.01	0.0327	0.00107
U	238	3	He	0.003	0.0002	70.00	0.0493	7.55E-05
U	238	3	He	0	0.0001	30.00	0.0493	7.55E-05
U	238	3	He	0.005	0.0003	100.00	0.0493	7.55E-05
Sc	45	1	No Gas			2447984.49		
Sc	45	1	No Gas			2460239.49		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2392584.65		
Ge	72	1	No Gas			1180886.15		
Ge	72	1	No Gas			1181848.73		
Ge	72	1	No Gas			1174987.95		
Sc	45	2	H2			180639.68		
Sc	45	2	H2			179517.89		
Sc	45	2	H2			180427.93		
Ge	72	2	H2			148859.48		
Ge	72	2	H2			153305.45		
Ge	72	2	H2			154903.62		
In	115	2	H2			379176.52		
In	115	2	H2			381698.82		
In	115	2	H2			379460.38		
Sc	45	3	He			45752.59		
Sc	45	3	He			47829.30		
Sc	45	3	He			45762.96		
Ge	72	3	He			81914.11		
Ge	72	3	He			80717.30		
Ge	72	3	He			79149.25		
In	115	3	He			85612.73		
In	115	3	He			84728.06		
In	115	3	He			84104.13		
Tb	159	3	He			387724.60		
Tb	159	3	He			390882.10		
Tb	159	3	He			385916.40		
Bi	209	3	He			308914.66		
Bi	209	3	He			303771.34		
Bi	209	3	He			301536.54		

Quantitation Report

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Sample Type	CCV
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

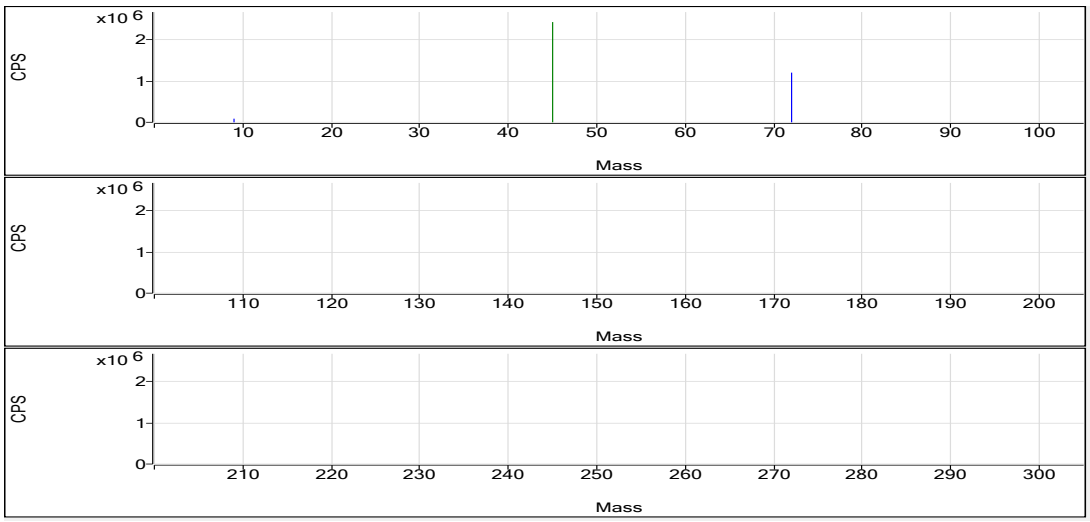
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	47.230	ppb	1.0	87495.08	0.0360	Pulse	0.5000	3
Se	78	72	H2	50.932	ppb	2.8	3307.95	0.0213	Pulse	1.5000	3
Na	23	45	He	4831.167	ppb	2.3	821673.27	17.6265	Pulse	0.1000	3
Mg	24	45	He	4979.305	ppb	3.0	416593.94	8.9380	Pulse	0.1000	3
Al	27	45	He	4958.952	ppb	2.3	135270.69	2.9018	Pulse	0.1000	3
K	39	45	He	5078.136	ppb	3.4	293988.26	6.3077	Pulse	0.1000	3
Ca	44	45	He	5127.840	ppb	1.1	16282.92	0.3491	Pulse	0.1000	3
Ti	47	45	He	4995.705	ppb	2.7	125041.90	2.6825	Pulse	0.1000	3
V	51	45	He	509.810	ppb	2.8	520598.23	11.1689	Pulse	0.5000	3
Cr	52	45	He	483.389	ppb	2.8	676465.59	14.5130	Pulse	0.1000	3
Mn	55	45	He	500.993	ppb	2.8	299821.53	6.4323	Pulse	0.1000	3
Fe	57	45	He	5053.963	ppb	2.8	136938.93	2.9377	Pulse	0.1000	3
Co	59	45	He	489.511	ppb	2.6	1284336.18	27.5530	Pulse	0.1000	3
Ni	60	72	He	511.865	ppb	0.5	358314.73	4.3962	Pulse	0.1000	3
Cu	63	72	He	491.397	ppb	0.7	1028519.78	12.6195	Pulse	0.1000	3
Zn	66	72	He	513.883	ppb	1.0	122257.15	1.5000	Pulse	0.1000	3
As	75	72	He	523.730	ppb	0.3	87525.32	1.0739	Pulse	0.5000	3
Sr	88	115	He	50.653	ppb	1.2	38373.00	0.4553	Pulse	0.1000	3
Mo	98	115	He	52.143	ppb	1.8	96369.33	1.1436	Pulse	0.1000	3
Ag	107	115	He	51.202	ppb	1.1	200640.89	2.3809	Pulse	0.1000	3
Cd	111	115	He	51.550	ppb	2.1	23227.32	0.2756	Pulse	0.5000	3
Sn	120	115	He	51.393	ppb	0.7	69813.47	0.8284	Pulse	0.1000	3
Sb	121	115	He	52.689	ppb	3.1	65977.94	0.7829	Pulse	0.1000	3
Ba	137	115	He	522.806	ppb	1.5	211465.20	2.5094	Pulse	0.1000	3
Tl	205	159	He	51.128	ppb	0.7	499320.07	1.2643	Pulse	0.1000	3
Pb	208	159	He	51.129	ppb	0.7	661301.94	1.6745	Pulse	0.1000	3
U	238	209	He	50.485	ppb	0.6	755817.73	2.4870	Pulse	0.1000	3

ISTD Table:

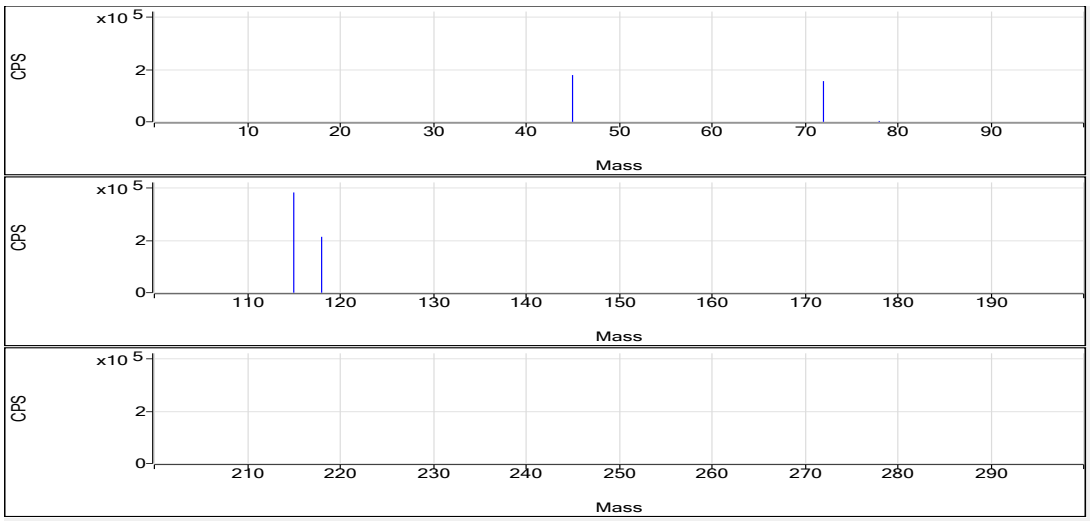
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2428311.84	0.7	101.2	Analog	0.1000	3
No Gas	Ge	72	1203293.13	0.6	104.3	Pulse	0.1000	3
H2	Sc	45	178767.27	0.8	95.6	Pulse	0.1000	3
H2	Ge	72	155654.02	1.3	95.1	Pulse	0.1000	3
H2	In	115	383249.91	1.0	98.5	Pulse	0.1000	3
He	Sc	45	46635.60	2.8	100.0	Pulse	0.1000	3
He	Ge	72	81505.98	0.8	100.4	Pulse	0.1000	3
He	In	115	84275.85	0.7	97.8	Pulse	0.1000	3
He	Tb	159	394932.61	0.5	99.1	Pulse	0.1000	3
He	Bi	209	303915.88	0.5	98.3	Pulse	0.1000	3

No Gas

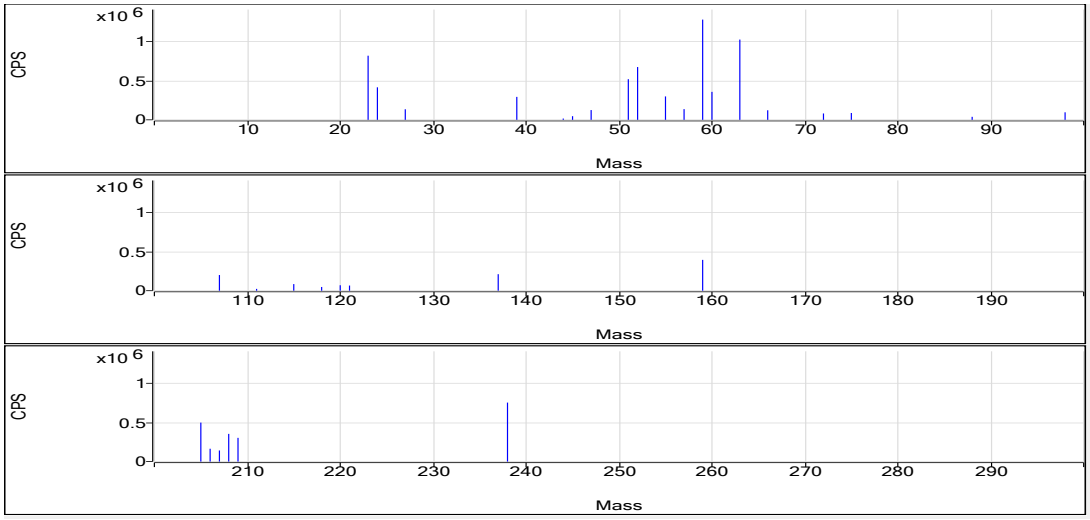


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	47.379	0.0361	87181.90	0.0008	4.685E-06
Be	9	1	No Gas	47.616	0.0363	88831.45	0.0008	4.685E-06
Be	9	1	No Gas	46.694	0.0356	86471.88	0.0008	4.685E-06
Se	78	2	H2	52.292	0.0218	3350.40	0.0004	1.219E-05
Se	78	2	H2	51.014	0.0213	3356.40	0.0004	1.219E-05
Se	78	2	H2	49.491	0.0207	3217.04	0.0004	1.219E-05
Na	23	3	He	4792.847	17.4894	822472.02	0.0036	0.3452
Na	23	3	He	4957.402	18.078	816781.47	0.0036	0.3452
Na	23	3	He	4743.253	17.312	825766.32	0.0036	0.3452
Mg	24	3	He	4937.642	8.8632	416809.29	0.0018	0.003497
Mg	24	3	He	5145.674	9.2365	417312.96	0.0018	0.003497
Mg	24	3	He	4854.599	8.7142	415659.56	0.0018	0.003497
Al	27	3	He	4894.276	2.864	134683.31	0.0006	0.0006432
Al	27	3	He	5091.547	2.9794	134610.85	0.0006	0.0006432
Al	27	3	He	4891.033	2.8621	136517.92	0.0006	0.0006432
K	39	3	He	5015.138	6.2343	293180.80	0.0012	0.3951
K	39	3	He	5272.954	6.5345	295234.86	0.0012	0.3951
K	39	3	He	4946.315	6.1542	293549.12	0.0012	0.3951
Ca	44	3	He	5188.406	0.3532	16609.97	0.0001	0.002715
Ca	44	3	He	5077.312	0.3457	15618.90	0.0001	0.002715
Ca	44	3	He	5117.803	0.3484	16619.89	0.0001	0.002715
Ti	47	3	He	4906.835	2.6348	123905.95	0.0005	7.003E-05
Ti	47	3	He	5149.296	2.765	124924.24	0.0005	7.003E-05
Ti	47	3	He	4930.984	2.6478	126295.50	0.0005	7.003E-05
V	51	3	He	506.462	11.0957	521795.97	0.0219	0.02486
V	51	3	He	525.421	11.5101	520037.81	0.0219	0.02486
V	51	3	He	497.549	10.9009	519960.91	0.0219	0.02486
Cr	52	3	He	479.195	14.3874	676595.15	0.0299	0.03997
Cr	52	3	He	498.689	14.9711	676406.86	0.0299	0.03997
Cr	52	3	He	472.283	14.1805	676394.76	0.0299	0.03997
Mn	55	3	He	496.344	6.3727	299685.80	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	516.524	6.6316	299623.30	0.0128	0.002639
Mn	55	3	He	490.113	6.2927	300155.48	0.0128	0.002639
Fe	57	3	He	4949.203	2.8769	135290.20	0.0006	0.001429
Fe	57	3	He	5213.381	3.0304	136914.16	0.0006	0.001429
Fe	57	3	He	4999.304	2.906	138612.43	0.0006	0.001429
Co	59	3	He	484.923	27.2947	1283586.07	0.0563	0.002149
Co	59	3	He	503.727	28.3531	1281016.70	0.0563	0.002149
Co	59	3	He	479.884	27.0111	1288405.76	0.0563	0.002149
Ni	60	3	He	514.479	4.4187	360001.36	0.0086	0.002834
Ni	60	3	He	511.932	4.3968	355433.67	0.0086	0.002834
Ni	60	3	He	509.185	4.3732	359509.17	0.0086	0.002834
Cu	63	3	He	492.54	12.6488	1030529.91	0.0257	0.004757
Cu	63	3	He	494.32	12.6945	1026207.02	0.0257	0.004757
Cu	63	3	He	487.332	12.5151	1028822.41	0.0257	0.004757
Zn	66	3	He	517.64	1.511	123103.96	0.0029	0.003818
Zn	66	3	He	516.181	1.5067	121802.99	0.0029	0.003818
Zn	66	3	He	507.828	1.4824	121864.50	0.0029	0.003818
As	75	3	He	525.471	1.0774	87780.77	0.002	0.0008061
As	75	3	He	523.496	1.0734	86770.82	0.002	0.0008061
As	75	3	He	522.222	1.0708	88024.37	0.002	0.0008061
Sr	88	3	He	51.117	0.4595	38633.72	0.009	0.0009645
Sr	88	3	He	49.94	0.4489	37610.87	0.009	0.0009645
Sr	88	3	He	50.901	0.4575	38874.40	0.009	0.0009645
Mo	98	3	He	51.768	1.1354	95463.48	0.0219	0.0002706
Mo	98	3	He	53.198	1.1667	97748.75	0.0219	0.0002706
Mo	98	3	He	51.462	1.1287	95895.77	0.0219	0.0002706
Ag	107	3	He	50.959	2.3695	199234.41	0.0465	0.0006206
Ag	107	3	He	51.852	2.4111	202003.77	0.0465	0.0006206
Ag	107	3	He	50.796	2.362	200684.49	0.0465	0.0006206
Cd	111	3	He	52.387	0.2801	23551.83	0.0053	0
Cd	111	3	He	51.917	0.2776	23257.36	0.0053	0
Cd	111	3	He	50.348	0.2692	22872.78	0.0053	0
Sn	120	3	He	51.386	0.8283	69646.00	0.0158	0.01648
Sn	120	3	He	51.764	0.8343	69897.12	0.0158	0.01648
Sn	120	3	He	51.029	0.8227	69897.30	0.0158	0.01648
Sb	121	3	He	54.548	0.8105	68148.44	0.0149	0.0002698
Sb	121	3	He	51.361	0.7632	63937.88	0.0149	0.0002698
Sb	121	3	He	52.158	0.775	65847.49	0.0149	0.0002698
Ba	137	3	He	529.662	2.5423	213757.38	0.0048	0.0002317
Ba	137	3	He	524.362	2.5168	210862.42	0.0048	0.0002317
Ba	137	3	He	514.393	2.469	209775.80	0.0048	0.0002317
Tl	205	3	He	50.792	1.256	498053.82	0.0247	0.0001339
Tl	205	3	He	51.083	1.2632	499966.36	0.0247	0.0001339
Tl	205	3	He	51.509	1.2738	499940.03	0.0247	0.0001339
Pb	208	3	He	50.771	1.6628	353782.85	0.0327	0.00107
Pb	208	3	He	51.105	1.6737	353822.77	0.0327	0.00107
Pb	208	3	He	51.51	1.687	356760.58	0.0327	0.00107
U	238	3	He	50.633	2.4942	756768.82	0.0493	7.55E-05
U	238	3	He	50.156	2.4708	754947.65	0.0493	7.55E-05
U	238	3	He	50.667	2.4959	755736.71	0.0493	7.55E-05
Sc	45	1	No Gas			2412036.84		
Sc	45	1	No Gas			2445429.81		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2427468.87		
Ge	72	1	No Gas			1199659.83		
Ge	72	1	No Gas			1210937.17		
Ge	72	1	No Gas			1199282.40		
Sc	45	2	H2			179061.21		
Sc	45	2	H2			180043.65		
Sc	45	2	H2			177196.95		
Ge	72	2	H2			153536.13		
Ge	72	2	H2			157662.73		
Ge	72	2	H2			155763.19		
In	115	2	H2			383404.80		
In	115	2	H2			386937.46		
In	115	2	H2			379407.46		
Sc	45	3	He			47026.87		
Sc	45	3	He			45180.89		
Sc	45	3	He			47699.05		
Ge	72	3	He			81472.64		
Ge	72	3	He			80838.79		
Ge	72	3	He			82206.52		
In	115	3	He			84445.73		
In	115	3	He			84154.45		
In	115	3	He			85341.43		
Tb	159	3	He			396525.93		
Tb	159	3	He			395780.74		
Tb	159	3	He			392491.17		
Bi	209	3	He			303408.30		
Bi	209	3	He			305551.66		
Bi	209	3	He			302787.67		

Quantitation Report

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Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins22323
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/10/2023 10:06:19 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

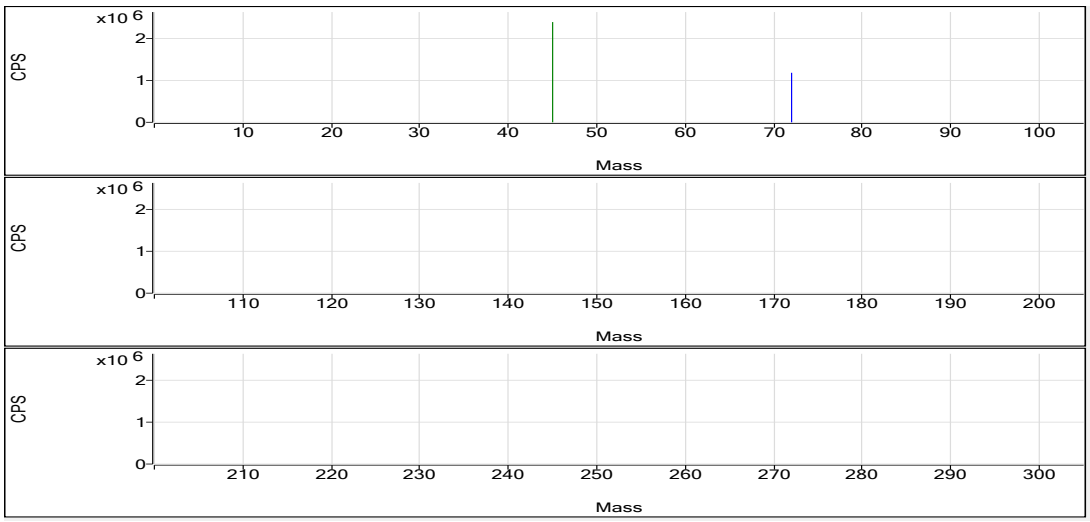
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.018	ppb	24.4	44.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.063	ppb	19.4	5.78	0.0000	Pulse	1.5000	3
Na	23	45	He	11.006	ppb	26.5	18018.11	0.3845	Pulse	0.1000	3
Mg	24	45	He	1.229	ppb	61.9	266.68	0.0057	Pulse	0.1000	3
Al	27	45	He	0.364	ppb	201.8	40.00	0.0009	Pulse	0.1000	3
K	39	45	He	-0.315	ppb	N/A	18488.93	0.3947	Pulse	0.1000	3
Ca	44	45	He	3.238	ppb	594.9	136.67	0.0029	Pulse	0.1000	3
Ti	47	45	He	1.443	ppb	92.4	40.00	0.0008	Pulse	0.1000	3
V	51	45	He	0.221	ppb	17.3	1391.41	0.0297	Pulse	0.5000	3
Cr	52	45	He	-0.116	ppb	N/A	1710.16	0.0365	Pulse	0.1000	3
Mn	55	45	He	0.161	ppb	40.2	220.01	0.0047	Pulse	0.1000	3
Fe	57	45	He	0.831	ppb	144.2	90.00	0.0019	Pulse	0.1000	3
Co	59	45	He	0.078	ppb	26.7	306.68	0.0066	Pulse	0.1000	3
Ni	60	72	He	0.017	ppb	315.3	240.01	0.0030	Pulse	0.1000	3
Cu	63	72	He	0.113	ppb	58.7	616.70	0.0077	Pulse	0.1000	3
Zn	66	72	He	1.729	ppb	19.8	713.38	0.0089	Pulse	0.1000	3
As	75	72	He	0.160	ppb	3.9	91.33	0.0011	Pulse	0.5000	3
Sr	88	115	He	-0.033	ppb	N/A	56.67	0.0007	Pulse	0.1000	3
Mo	98	115	He	0.053	ppb	32.8	120.01	0.0014	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	3003.9	53.33	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.013	ppb	1.7	6.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.096	ppb	152.8	1520.15	0.0180	Pulse	0.1000	3
Sb	121	115	He	0.040	ppb	74.4	73.33	0.0009	Pulse	0.1000	3
Ba	137	115	He	0.066	ppb	91.2	46.67	0.0005	Pulse	0.1000	3
Tl	205	159	He	0.073	ppb	7.7	753.38	0.0019	Pulse	0.1000	3
Pb	208	159	He	0.013	ppb	69.6	586.69	0.0015	Pulse	0.1000	3
U	238	209	He	0.040	ppb	2.5	620.04	0.0020	Pulse	0.1000	3

ISTD Table:

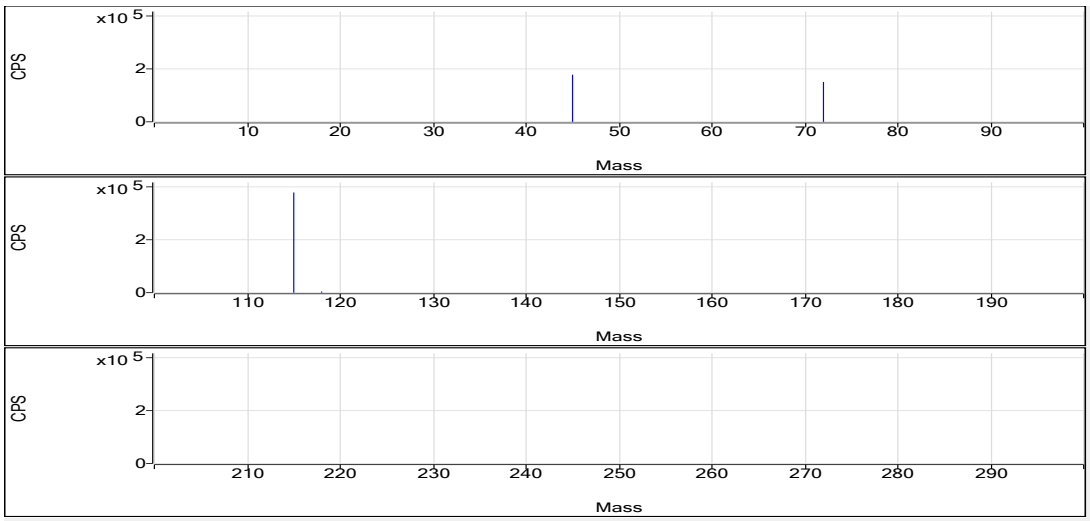
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2394093.20	0.6	99.8	Analog	0.1000	3
No Gas	Ge	72	1182831.75	0.5	102.6	Pulse	0.1000	3
H2	Sc	45	178294.84	0.8	95.3	Pulse	0.1000	3
H2	Ge	72	150947.46	0.3	92.2	Pulse	0.1000	3
H2	In	115	379276.52	0.5	97.5	Pulse	0.1000	3
He	Sc	45	46873.11	2.2	100.5	Pulse	0.1000	3
He	Ge	72	80600.60	0.4	99.3	Pulse	0.1000	3
He	In	115	84643.81	1.7	98.2	Pulse	0.1000	3
He	Tb	159	388456.15	0.2	97.5	Pulse	0.1000	3
He	Bi	209	305040.08	0.7	98.6	Pulse	0.1000	3

No Gas

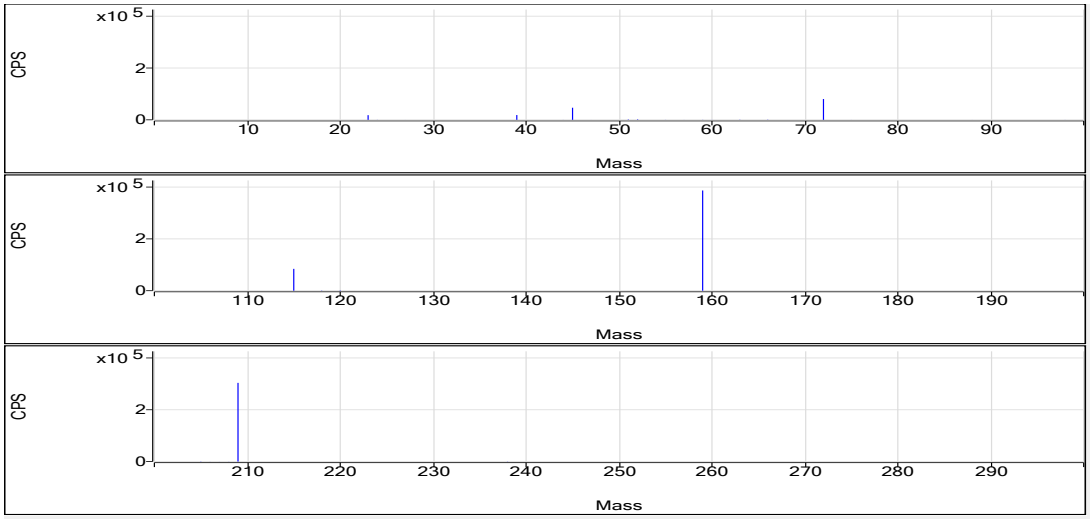


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.018	0	44.00	0.0008	4.685E-06
Be	9	1	No Gas	0.014	0	36.00	0.0008	4.685E-06
Be	9	1	No Gas	0.022	0	52.00	0.0008	4.685E-06
Se	78	2	H2	0.076	0	6.67	0.0004	1.219E-05
Se	78	2	H2	0.056	0	5.33	0.0004	1.219E-05
Se	78	2	H2	0.055	0	5.33	0.0004	1.219E-05
Na	23	3	He	12.633	0.3903	17871.18	0.0036	0.3452
Na	23	3	He	12.743	0.3907	18351.88	0.0036	0.3452
Na	23	3	He	7.642	0.3725	17831.26	0.0036	0.3452
Mg	24	3	He	1.46	0.0061	280.01	0.0018	0.003497
Mg	24	3	He	1.849	0.0068	320.02	0.0018	0.003497
Mg	24	3	He	0.38	0.0042	200.01	0.0018	0.003497
Al	27	3	He	0.394	0.0009	40.00	0.0006	0.0006432
Al	27	3	He	1.084	0.0013	60.00	0.0006	0.0006432
Al	27	3	He	-0.385	0.0004	20.00	0.0006	0.0006432
K	39	3	He	22.062	0.4208	19263.26	0.0012	0.3951
K	39	3	He	-18.178	0.3739	17561.00	0.0012	0.3951
K	39	3	He	-4.83	0.3894	18642.53	0.0012	0.3951
Ca	44	3	He	18.014	0.0039	180.01	0.0001	0.002715
Ca	44	3	He	10.243	0.0034	160.01	0.0001	0.002715
Ca	44	3	He	-18.544	0.0015	70.00	0.0001	0.002715
Ti	47	3	He	0.683	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	0.663	0.0004	20.00	0.0005	7.003E-05
Ti	47	3	He	2.982	0.0017	80.00	0.0005	7.003E-05
V	51	3	He	0.264	0.0306	1402.08	0.0219	0.02486
V	51	3	He	0.189	0.029	1362.07	0.0219	0.02486
V	51	3	He	0.21	0.0295	1410.08	0.0219	0.02486
Cr	52	3	He	-0.066	0.038	1740.17	0.0299	0.03997
Cr	52	3	He	-0.154	0.0353	1660.15	0.0299	0.03997
Cr	52	3	He	-0.128	0.0361	1730.16	0.0299	0.03997
Mn	55	3	He	0.186	0.005	230.01	0.0128	0.002639

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.209	0.0053	250.01	0.0128	0.002639
Mn	55	3	He	0.087	0.0038	180.01	0.0128	0.002639
Fe	57	3	He	0.172	0.0015	70.00	0.0006	0.001429
Fe	57	3	He	0.106	0.0015	70.00	0.0006	0.001429
Fe	57	3	He	2.215	0.0027	130.01	0.0006	0.001429
Co	59	3	He	0.086	0.007	320.02	0.0563	0.002149
Co	59	3	He	0.094	0.0075	350.02	0.0563	0.002149
Co	59	3	He	0.055	0.0052	250.01	0.0563	0.002149
Ni	60	3	He	-0.028	0.0026	210.01	0.0086	0.002834
Ni	60	3	He	0.076	0.0035	280.01	0.0086	0.002834
Ni	60	3	He	0.003	0.0029	230.01	0.0086	0.002834
Cu	63	3	He	0.046	0.0059	480.02	0.0257	0.004757
Cu	63	3	He	0.115	0.0077	620.04	0.0257	0.004757
Cu	63	3	He	0.178	0.0093	750.04	0.0257	0.004757
Zn	66	3	He	1.742	0.0089	720.05	0.0029	0.003818
Zn	66	3	He	2.065	0.0098	790.05	0.0029	0.003818
Zn	66	3	He	1.38	0.0078	630.03	0.0029	0.003818
As	75	3	He	0.161	0.0011	92.00	0.002	0.0008061
As	75	3	He	0.165	0.0011	92.00	0.002	0.0008061
As	75	3	He	0.153	0.0011	90.00	0.002	0.0008061
Sr	88	3	He	-0.017	0.0008	70.00	0.009	0.0009645
Sr	88	3	He	-0.054	0.0005	40.00	0.009	0.0009645
Sr	88	3	He	-0.028	0.0007	60.00	0.009	0.0009645
Mo	98	3	He	0.035	0.001	90.00	0.0219	0.0002706
Mo	98	3	He	0.07	0.0018	150.01	0.0219	0.0002706
Mo	98	3	He	0.053	0.0014	120.01	0.0219	0.0002706
Ag	107	3	He	-0.008	0.0002	20.00	0.0465	0.0006206
Ag	107	3	He	0.01	0.0011	90.00	0.0465	0.0006206
Ag	107	3	He	-0.001	0.0006	50.00	0.0465	0.0006206
Cd	111	3	He	0.013	0.0001	6.00	0.0053	0
Cd	111	3	He	0.013	0.0001	6.00	0.0053	0
Cd	111	3	He	0.013	0.0001	6.00	0.0053	0
Sn	120	3	He	-0.051	0.0157	1350.12	0.0158	0.01648
Sn	120	3	He	0.241	0.0203	1690.16	0.0158	0.01648
Sn	120	3	He	0.097	0.018	1520.16	0.0158	0.01648
Sb	121	3	He	0.052	0.001	90.00	0.0149	0.0002698
Sb	121	3	He	0.006	0.0004	30.00	0.0149	0.0002698
Sb	121	3	He	0.062	0.0012	100.00	0.0149	0.0002698
Ba	137	3	He	0.121	0.0008	70.00	0.0048	0.0002317
Ba	137	3	He	0.002	0.0002	20.00	0.0048	0.0002317
Ba	137	3	He	0.075	0.0006	50.00	0.0048	0.0002317
Tl	205	3	He	0.079	0.0021	810.06	0.0247	0.0001339
Tl	205	3	He	0.073	0.0019	750.04	0.0247	0.0001339
Tl	205	3	He	0.068	0.0018	700.05	0.0247	0.0001339
Pb	208	3	He	0.003	0.0012	220.01	0.0327	0.00107
Pb	208	3	He	0.019	0.0017	280.01	0.0327	0.00107
Pb	208	3	He	0.019	0.0017	380.02	0.0327	0.00107
U	238	3	He	0.041	0.0021	640.04	0.0493	7.55E-05
U	238	3	He	0.039	0.002	610.04	0.0493	7.55E-05
U	238	3	He	0.039	0.002	610.03	0.0493	7.55E-05
Sc	45	1	No Gas			2410104.50		
Sc	45	1	No Gas			2383844.03		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2388331.06		
Ge	72	1	No Gas			1187855.53		
Ge	72	1	No Gas			1183501.39		
Ge	72	1	No Gas			1177138.34		
Sc	45	2	H2			178505.90		
Sc	45	2	H2			179596.44		
Sc	45	2	H2			176782.17		
Ge	72	2	H2			151264.19		
Ge	72	2	H2			150414.34		
Ge	72	2	H2			151163.85		
In	115	2	H2			379379.84		
In	115	2	H2			380990.62		
In	115	2	H2			377459.10		
Sc	45	3	He			45782.68		
Sc	45	3	He			46966.96		
Sc	45	3	He			47869.69		
Ge	72	3	He			81009.72		
Ge	72	3	He			80376.01		
Ge	72	3	He			80416.07		
In	115	3	He			86196.95		
In	115	3	He			83358.74		
In	115	3	He			84396.19		
Tb	159	3	He			388973.00		
Tb	159	3	He			388973.31		
Tb	159	3	He			387422.14		
Bi	209	3	He			306714.47		
Bi	209	3	He			302694.12		
Bi	209	3	He			305711.64		

EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL (ELLE), Mercury RAW Data Report

Please note that this is RAW data as received from the instrument, which does not account for weights, volumes, and dilution factors.

Seq ID	Sample ID	µ Abs.	R% / Conc.	%RE	Std Conc	Units	Type	SLOPE	INTERCEPT	CORR COEFF	Curve Type	INSTR.	Date	Ele
3	blank - 1	-44	NA		0	ppb	Std	0.0003708	0.0079599	0.9999610	-	Instrument 07	8/4/2023 8:07	Hg
4	0.2 std - 1	534	103.0%	2.99%	0.2	ppb	Std	0.0003708	0.0079599	0.9999610	-	Instrument 07	8/4/2023 8:09	Hg
5	0.5 std - 1	1288	97.1%	-2.88%	0.5	ppb	Std	0.0003708	0.0079599	0.9999610	-	Instrument 07	8/4/2023 8:11	Hg
6	1.0 std - 1	2678	100.1%	0.11%	1	ppb	Std	0.0003708	0.0079599	0.9999610	-	Instrument 07	8/4/2023 8:13	Hg
7	2.5 std - 1	6801	101.2%	1.20%	2.5	ppb	Std	0.0003708	0.0079599	0.9999610	-	Instrument 07	8/4/2023 8:15	Hg
8	5.0 std - 1	13423	99.7%	-0.29%	5	ppb	Std	0.0003708	0.0079599	0.9999610	-	Instrument 07	8/4/2023 8:17	Hg
9	ICV - 1	6587	98.0% 2.4507		-	ppb	CK STND	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 8:19	Hg
10	ICB - 1	-54	-0.0121		-	ppb	CK STND	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 8:21	Hg
11	CRA - 1	435	84.6% 0.1693		-	ppb	CK STND	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 8:23	Hg
12	CCV - 1	2842	106.2% 1.0619		-	ppb	CK STND	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 8:26	Hg
13	CCB - 1	-105	-0.031		-	ppb	CK STND	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 8:28	Hg
14	MB 410-403451/1-A - 1	-32	-0.0039		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 8:30	Hg
15	LCS 410-403451/2-A - 1	2592	0.9692		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 8:32	Hg
16	410-136715-I-8-A - 1	-2	0.0072		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 8:34	Hg
17	410-136715-L-8-A DU - 1	16	0.0139		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 8:36	Hg
18	410-136715-J-8-A MS - 1	2827	1.0563		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 8:38	Hg
19	410-136715-K-8-A MSD - 1	2866	1.0708		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 8:40	Hg
20	410-136715-I-7-A - 1	-10	0.0043		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 8:42	Hg
21	410-136715-I-3-A - 1	-8	0.005		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 8:44	Hg
22	410-136715-i-14-a - 1	11	0.012		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 8:46	Hg
23	410-136693-I-10-A - 1	52	0.0272		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 8:48	Hg
24	CCV - 1	2725	101.8% 1.0185		-	ppb	CK STND	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 8:50	Hg
25	CCB - 1	23	0.0165		-	ppb	CK STND	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 8:52	Hg
26	410-136715-I-4-A - 1	58	0.0295		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 8:54	Hg
27	410-136715-i-12-a - 1	-2	0.0072		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 8:56	Hg
28	410-136685-H-9-A - 1	21	0.0157		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 8:58	Hg
29	410-136715-I-10-A - 1	87	0.0402		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 9:00	Hg
30	410-136736-I-2-A - 1	58	0.0295		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 9:02	Hg
31	410-136715-I-2-A - 1	71	0.0343		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 9:04	Hg
32	410-136736-I-3-A - 1	81	0.038		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 9:06	Hg
33	410-136715-I-11-A - 1	15	0.0135		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 9:08	Hg
34	410-136715-i-15-a - 1	23	0.0165		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 9:10	Hg
35	410-136715-I-5-A - 1	1	0.0083		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 9:12	Hg
36	CCV - 1	2829	105.7% 1.0571		-	ppb	CK STND	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 9:14	Hg
37	CCB - 1	7	0.0106		-	ppb	CK STND	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 9:16	Hg
38	410-136736-I-4-A - 1	20	0.0154		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 9:18	Hg
39	410-136736-I-1-A - 1	16	0.0139		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 9:20	Hg
40	410-136715-i-13-a - 1	108	0.048		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 9:22	Hg
41	410-136715-I-6-A - 1	44	0.0243		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 9:24	Hg
42	410-136736-I-5-A - 1	5	0.0098		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 9:26	Hg

43	MB 410-403849/1-A - 1	21	0.0157		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 9:28	Hg
44	LCS 410-403849/2-A - 1	2684	1.0033		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 9:31	Hg
45	410-136864-L-4-A - 1	55	0.0284		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 9:33	Hg
46	410-136864-D-4-A DU - 1	109	0.0484		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 9:35	Hg
47	410-136864-L-4-B MS - 1	2613	0.977		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 9:37	Hg
48	CCV - 1	2710	101.3% 1.0129		-	ppb	CK STND	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 9:39	Hg
49	CCB - 1	-9	0.0046		-	ppb	CK STND	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 9:41	Hg
50	410-136864-K-4-C MSD - 1	2380	0.8906		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 9:43	Hg
51	410-136514-H-2-A - 1	88	0.0406		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 9:45	Hg
52	410-136514-H-3-A - 1	112	0.0495		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 9:47	Hg
53	410-136914-T-2-A - 1	43	0.0239		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 9:49	Hg
54	410-136914-T-3-A - 1	94	0.0428		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 9:51	Hg
55	410-136914-T-1-A - 1	88	0.0406		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 9:53	Hg
56	410-136914-T-8-A - 1	118	0.0517		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 9:55	Hg
57	410-136914-T-4-A - 1	122	0.0532		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 9:57	Hg
58	410-136914-T-5-A - 1	178	0.074		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 9:59	Hg
59	410-136914-T-6-A - 1	119	0.0521		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 10:01	Hg
60	CCV - 1	2754	102.9% 1.0292		-	ppb	CK STND	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 10:03	Hg
61	CCB - 1	19	0.015		-	ppb	CK STND	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 10:05	Hg
62	410-136514-H-4-A - 1	135	0.058		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 10:07	Hg
63	410-136514-H-1-A - 1	110	0.0488		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 10:09	Hg
64	410-136864-Q-3-A - 1	171	0.0714		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 10:11	Hg
65	410-136848-V-4-A - 1	69	0.0335		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 10:13	Hg
66	410-136848-X-8-A - 1	-8	0.005		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 10:15	Hg
67	410-136848-X-7-A - 1	59	0.0298		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 10:17	Hg
68	410-136848-Y-11-A - 1	87	0.0402		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 10:19	Hg
69	410-136848-X-10-A - 1	70	0.0339		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 10:21	Hg
70	410-136848-X-3-A - 1	80	0.0376		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 10:24	Hg
71	410-136848-V-5-A - 1	65	0.0321		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 10:26	Hg
72	CCV - 1	2750	102.8% 1.0278		-	ppb	CK STND	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 10:28	Hg
73	CCB - 1	-74	-0.0195		-	ppb	CK STND	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 10:30	Hg
74	MB 410-403850/1-A - 1	-22	-0.0002		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 10:32	Hg
75	LCS 410-403850/2-A - 1	2568	0.9603		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 10:34	Hg
76	410-136815-AI-1-B - 1	65	0.0321		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 10:36	Hg
77	410-136815-AJ-1-A DU - 1	211	0.0862		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 10:38	Hg
78	410-136815-AI-1-C MS - 1	2542	0.9506		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 10:40	Hg
79	410-136815-AF-1-A MSD - 1	2458	0.9195		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 10:42	Hg
80	410-136709-L-27-A - 1	134	0.0577		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 10:44	Hg
81	410-136736-I-6-A - 1	106	0.0473		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 10:46	Hg
82	410-136709-I-26-a - 1	99	0.0447		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 10:48	Hg
83	410-136877-M-2-A - 1	127	0.0551		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 10:50	Hg
85	CCV - 1	2844	106.3% 1.0626		-	ppb	CK STND	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 10:58	Hg
86	CCB - 1	18	0.0146		-	ppb	CK STND	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 11:00	Hg

87	410-136837-J-2-A - 1	172	0.0717		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 11:02	Hg
88	410-136837-I-4-A - 1	891	0.3384		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 11:04	Hg
89	410-136837-J-3-A - 1	-19	0.0009		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 11:06	Hg
90	410-136848-Z-3-A - 1	222	0.0903		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 11:08	Hg
91	410-136848-Z-2-A - 1	173	0.0721		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 11:10	Hg
92	410-136848-AD-5-A - 1	44	0.0243		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 11:12	Hg
93	410-136848-AA-6-A - 1	72	0.0347		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 11:14	Hg
94	410-136848-Z-9-A - 1	164	0.0688		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 11:16	Hg
95	410-136848-X-4-A - 1	182	0.0755		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 11:18	Hg
96	410-136848-Z-7-A - 1	215	0.0877		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 11:20	Hg
97	CCV - 1	2887	107.9% 1.0786		-	ppb	CK STND	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 11:22	Hg
98	CCB - 1	-17	0.0017		-	ppb	CK STND	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 11:24	Hg
99	410-136848-Y-1-A - 1	209	0.0855		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 11:26	Hg
100	410-136848-AA-11-A - 1	182	0.0755		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 11:28	Hg
101	410-136848-Z-10-A - 1	61	0.0306		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 11:30	Hg
102	410-136815-AI-7-A - 1	21	0.0157		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 11:32	Hg
103	410-136822-T-4-A - 1	156	0.0658		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 11:34	Hg
104	lot check 4656037 - 1	26	0.0176		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 11:36	Hg
105	lot check 4656062 - 1	-20	0.0005		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 11:38	Hg
106	lot check 4656105 - 1	37	0.0217		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 11:40	Hg
107	lot check 4556133 - 1	9	0.0113		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 11:42	Hg
108	MB 410-403851/1-A - 1	175	0.0729		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 11:44	Hg
109	CCV - 1	2913	108.8% 1.0882		-	ppb	CK STND	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 11:47	Hg
110	CCB - 1	36	0.0213		-	ppb	CK STND	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 11:49	Hg
111	LCS 410-403851/2-A - 1	2649	0.9903		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 11:51	Hg
112	410-136839-V-2-A - 1	79	0.0373		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 11:53	Hg
113	410-136839-H-2-A DU - 1	-8	0.005		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 11:55	Hg
114	410-136839-V-2-B MS - 1	2611	0.9762		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 11:57	Hg
115	410-136839-V-2-C MSD - 1	2619	0.9792		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 11:59	Hg
116	630-68172-K-13-A - 1	49	0.0261		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 12:01	Hg
117	630-68175-N-7-A - 1	89	0.041		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 12:03	Hg
118	410-136839-V-1-A - 1	62	0.031		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 12:05	Hg
119	410-136864-L-2-A - 1	192	0.0792		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 12:07	Hg
120	410-136864-L-6-A - 1	641	0.2457		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 12:09	Hg
121	CCV - 1	2749	102.7% 1.0274		-	ppb	CK STND	-	-	-	Linear	Instrument 07	8/4/2023 12:11	Hg
122	CCB - 1	21	0.0157		-	ppb	CK STND	-	-	-	Linear	Instrument 07	8/4/2023 12:13	Hg
123	410-136839-V-4-A - 1	235	0.0951		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 12:15	Hg
124	410-136839-V-3-A - 1	306	0.1214		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 12:17	Hg
125	410-136864-N-1-A - 1	144	0.0614		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 12:19	Hg
126	410-136864-L-5-A - 1	130	0.0562		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 12:21	Hg
127	410-136514-H-5-A - 1	83	0.0387		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 12:23	Hg
128	410-136848-X-9-A - 1	81	0.038		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 12:25	Hg
129	410-136848-Y-6-A - 1	162	0.068		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 12:27	Hg

130	410-136815-AI-5-A - 1	163	0.0684		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 12:29	Hg
131	410-136815-AI-9-A - 1	167	0.0699		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 12:31	Hg
132	410-136848-X-2-A - 1	114	0.0502		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 12:33	Hg
133	CCV - 1	2923	109.2% 1.0919		-	ppb	CK STND	-	-	-	Linear	Instrument 07	8/4/2023 12:35	Hg
134	CCB - 1	39	0.0224		-	ppb	CK STND	-	-	-	Linear	Instrument 07	8/4/2023 12:37	Hg
135	410-136815-AI-2-A - 1	82	0.0384		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 12:39	Hg
136	410-136822-U-1-A - 1	212	0.0866		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 12:41	Hg
137	410-136822-U-3-A - 1	103	0.0462		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 12:44	Hg
138	410-136848-W-1-A - 1	88	0.0406		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 12:46	Hg
139	MB 410-404451/1-A - 1	175	0.0729		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 12:48	Hg
140	LCS 410-404451/2-A - 1	2770	1.0352		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 12:50	Hg
141	410-136992-V-1-A - 1	188	0.0777		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 12:52	Hg
142	410-136992-B-1-A DU - 1	238	0.0962		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 12:54	Hg
143	410-136992-V-1-B MS - 1	2610	0.9758		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 12:56	Hg
144	410-136992-V-1-C MSD - 1	2549	0.9532		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 12:58	Hg
145	CCV - 1	2863	107.0% 1.0697		-	ppb	CK STND	-	-	-	Linear	Instrument 07	8/4/2023 13:00	Hg
146	CCB - 1	-32	-0.0039		-	ppb	CK STND	-	-	-	Linear	Instrument 07	8/4/2023 13:02	Hg
147	410-136992-V-7-A - 1	327	0.1292		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 13:04	Hg
148	410-136992-V-6-A - 1	67	0.0328		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 13:06	Hg
149	410-136992-V-5-A - 1	151	0.064		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 13:08	Hg
150	410-136992-V-2-A - 1	163	0.0684		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 13:10	Hg
151	410-136992-V-4-A - 1	185	0.0766		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 13:12	Hg
152	410-136992-V-3-A - 1	91	0.0417		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 13:14	Hg
153	410-137071-M-2-A - 1	57	0.0291		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 13:16	Hg
154	410-136848-Z-8-A - 1	48	0.0258		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 13:18	Hg
155	630-68172-K-14-A - 1	112	0.0495		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 13:20	Hg
156	630-68175-K-8-A - 1	153	0.0647		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 13:22	Hg
162	CCV - 1	2833	105.9% 1.0585		-	ppb	CK STND	-	-	-	Linear	Instrument 07	8/4/2023 13:34	Hg
163	CCB - 1	13	0.0128		-	ppb	CK STND	-	-	-	Linear	Instrument 07	8/4/2023 13:36	Hg
164	410-136815-AM-11-A - 1	101	0.0454		-	ppb	SMPL	0.0003708	0.0079599	0.9999610	Linear	Instrument 07	8/4/2023 13:38	Hg
165	CRA - 1	612	117.5% 0.2349		-	ppb	CK STND	-	-	-	Linear	Instrument 07	8/4/2023 13:41	Hg
166	CCV - 1	2834	105.9% 1.0589		-	ppb	CK STND	-	-	-	Linear	Instrument 07	8/4/2023 13:43	Hg
167	CCB - 1	-114	-0.0343		-	ppb	CK STND	-	-	-	Linear	Instrument 07	8/4/2023 13:45	Hg

Shipping and Receiving Documents

CHAIN OF CUSTODY RECORD

410-136514-01 Chain of Custody

nvironmental (ELLE), 2425 New Holland Pike, Lancaster, PA, 17605-2425/ Barb Weyandt, Manager/ (717) 656-2300 x1576

Consultant:	TRC Engineers Inc (formerly Draper Aden Assoc)	Sample Site:	RFAAP, Radford, Virginia
Attn:	Janet C. Frazier	Location:	HWMU16
Address:	2200 South Main Street Suite 1 Blacksburg, Virginia 24060	Event:	3Q 2023 Annual GW Monitoring Event
Phone:	(540) 552-0444	DAA JN:	547076
Fax:	(540) 552-0291	Lab JN:	

Project Specific (PS) QC: YES as indicated — Sample Collection for Project Complete? YES

WP-12.75Y-02X-70-7513-5028

Carrier: " - " - " - 7578-4238

Tracking Number:

Box 1: Matrix
SW Surface Water; GW Groundwater; L Leachate; S Soil; T Trip Blank; E Equipment Blank; P Product; O Other

Box 2: Preservative
A HCL; B HNO_3; C H_2SO_4; D $Na_2S_2O_3$; E NaOH; F ZnAc; G Other (Specify); H None

Box 3: Filtered/Unfiltered
F Filtered; U Unfiltered

Box 4: Sample Type
G Grab; C Composite

Box 5: Sample Container Type
P Plastic; AG Amber Glass; V VOA; CG Clear Glass

Invoice
Copy to Consultant: YES
Bill: CLIENT OTHER
Preserved and shipped on ice: YES

Sample ID	Date: 2023	Time	Box 1: Matrix	Number of Bottles	8260D/5030C 25 ml purge volume	8260C/5030C 25 ml purge Dimethylether only CAS NO 115-10-6 permit	8260D/5030C 5 ml purge volume for 2-propanol ONLY	8270d/3510C (Semivolatiles)	Additional Aliquot 8260D/5030C 25 ml purge volume	ICP/MS 6020B/3005A (Metals-Total)	7470A (Mercury-Total)	9012B (Cyanide)	
					G; U; <2; A	G; U; <2; A	G; U; A	G; U; H	G; U; <2; A	G; U; <2; B	G; U; <3; B	G; U; >12; E	
					3-40mL VOA	3-40mL VOA	3-40mL VOA	2-250mL AG	2-40mL VOA	1-500 mL P		1-500 mL P	
16C1	7/27	1245	GW	12	X	X	X	X	X	X	X	X	Additional VOA Aliquot if dilution is required.
16MW8	7/27	1005	GW	10	X	X	X	X		X	X	X	
16MW9	7/27	1125	GW	12	X	X	X	X	X	X	X	X	Additional VOA aliquot if dilution is required.
16WC1A	7/27	0955	GW	30	X	X	X	X		X	X	X	USE FOR QC
16WDUP	7/27	1020	GW	10	X	X	X	X		X	X	X	
16WC1B	7/26	1205	GW	10	X	X	X	X		X	X	X	
16-2	7/26	0930 1115	GW	6	X	X		X		X	X		
16-3	7/26	~~0930~~	GW	6	X	X		X		X	X		Sample time is 1115
16-5	7/26	0745	GW	6	X	X		X		X	X		
16WC2B	7/26	0840	GW	6	X	X		X		X	X		
16SPRING	7/26	0800	GW	6	X	X		X		X	X		
Trip Blank 1	7/26	—	T	2	X	X	X						one trip blank required per day per permit. Delete if not required.
Trip Blank 2	7/26	—	T	2	X	X	X						
Trip Blank 3			T	2	X	X	X						

GENERAL NOTES:

1. **Report results to detection limit, with J flags, for italicized wells.**
2. **Report results at or greater than QL for non-italicized wells.**
3. **VELAP accreditation required.**
4. **FULL/Comprehensive Deliverable with EDD and ERIS EDD.**
5. **For 2- propanol report to QL 100 ug/l and DL of 50 ug/l.**
6. See Atached target analytes. Report to these Permit Specified QLs and DLs. Per ELLE - A single 25 ml purge volume analysis will be performed where requested

However, lab to report 8260D for all 25 ml purge requested analytes except for Dimethylether to be reported as 8260C (VELAP), 2-propanol to be analyzed via 5 ml purge as noted.

* Barb – report preliminary results. JLF 7/25/23

Clients Special Instructions:

Received by lab in Good Condition ____ Yes ____ No Custody Seal Intact ____ Yes ____ No Temperature upon arrival ____ Received on Ice ____ Yes ____ No

Describe problems, if any:

mr/tr 0.9/0.9 mr/tr 1.8/1.8

Sampler Name (Print): Ken Coddington	Date: 7/26/23	#1 Relinquished by (Signature):	Date: 7/27/23	#2 Relinquished by (Signature):	Date:	Sample Storage
Sampler Signature:	Time: 0700	Company Name: DAA/TRC	Time: 1700	Company Name:	Time:	Time Requested:
Sampler Name (Print): Alexa Prater	Date: 7/26/23	#1 Received by (Signature):	Date:	#2 Received by (Signature):	Date: 7/28/23	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time: 0700	Company Name:	Time:	Company Name: ELLE	Time: 0925	AEH

PQSC 1/17 08/15/2023

JVR 7/25/23

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ANALYTICAL METHOD: 8260D/5030C
TYPE METHOD: GCMS
CLASS: VOLATILE

THIS APPLIES TO WELLS 16-2, 16-3, 16-5, 16WC2B, 16SPRING ✓

1.	Carbon tetrachloride		56-23-5	1
2.	chloromethane ; (Methyl chloride)		74-87-3	1
3.	2-butanone (methyl ethyl ketone - MEK)		78-93-3	10
4.	1,1-dichloroethane		75-34-3	1
5.	Dichlorodifluoromethane		75-71-8	1
6.	Ethylbenzene		100-41-4	1
7.	Tetrachloroethene		127-18-4	1
8.	Toluene (methyl benzene)		108-88-3	1
9.	1,1,1-trichloroethane (methyl chloroform)		71-55-6	1
10.	Trichloroethene		79-01-6	1
11.	Trichlorofluoromethane (CFC-11)		75-69-4	1
12.	Xylenes (total)		1330-20-7	3
13	Chloroethane		75-00-3	1
14	Diethyl ether	60-29-7		12.5-report to 10 ug/l due to rounding issues
15	Dimethyl ether	115-10-6		12.5- report to 10 due to rounding issues
16	Methylene chloride		75-09-2	1
17	1,1,2-Trichloro-1,2,2-Trifluoroethane		76-13-1	1
18	Benzene		71-43-2	1
19	1,1-Dichloroethene		75-35-4	1
20	Tetrahydrofuran			25
21	Vinyl chloride			1

Notes
13-16 added 10/03. JCF
Revised 10/31/03 JCF
17 added 0704. Revised 7/28/2004
10/2008 JCF
18 added 04 2011. JCF
19 added 04 2014. KPO, location 16-1 removed 2014
20 added 04 2016 JCF
21 added 8-2020 JCF

Current as of 2021 Permit Mod. JCF 9-13-2021

QC JVR 7/25/23

Report to at or above the QL for these wells and analytes. JCF 9-13-2021 ✓

25 ml purge volume

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ANALYTICAL METHOD: 8270D/3510C
TYPE METHOD: GCMS
CLASS: SEMIVOLATILE

THIS APPLIES TO WELLS 16-2, 16-3, 16-5, 16WC2B, 16SPRING ✓

No.	PARAMETER	CAS RN	Required LOQ (µg/l)
1.	2,4-dinitrotoluene	121-14-2	10
2.	2,6-dinitrotoluene	606-20-2	10
3.	Diethylphthate		5

Report to at or above the QL.
10/13- diethylphthate added 10/13.

Current as of 2021 Permit Mod. JCF 9-13-2021

Report to at or above the QL for these wells and analytes. JCF 9-13-2021 ✓

JCF 7/25/23

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ANALYTICAL METHOD: SEE BELOW
TYPE METHOD: SEE BELOW
CLASS: TOTAL

Method SW 846-6020B/3005A (ICP/MS)

THIS APPLIES TO WELLS 16-2, 16-3,16-5, 16WC2B, 16SPRING

No.	PARAMETER	CAS RN	Required QL/ LOQ (µg/l)
1.	Arsenic	7440-38-2	10
2.	Barium	7440-39-3	10
3.	Beryllium	7440-41-7	1
4.	Cadmium	7440-43-9	1
5.	Chromium	7440-47-3	5
6.	Cobalt	7440-48-4	5
7.	Copper	7440-50-8	5
8.	Lead	7440-92-1	3
9.	Nickel	7440-02-0	10
10.	Vanadium	7440-62-2	10
11.	Zinc	7440-66-6	30

Report to at or above the QL.

Updated 4/8/2013 jcf
Zinc QL updated 10 2016 – JCF
Current as of 2021 Permit Mod. JCF 9-13-2021

OK JCF 7/23/25

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ANALYTICAL METHOD: 7470A

THIS APPLIES TO ALL WELLS AND QC

	Method SW 7470A/CVAA	CAS#	Required LOQ
1	Mercury	7439-97-6	2 / 0.2 ug/l

Report to permit DL (0.2 ug/l) for 16C1, 16MW8, 16MW9, 16WC1A, 16WDUP, 16WC1B, QC. (Appendix IX wells)-jcf 9-13-2021 JCF 7/25/23

Report to at or above QL for remaining wells. jcf 9-13-2021 JCF 7/25/23

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ANALYTICAL METHOD: 9012B
TYPE METHOD: CLO
CLASS: CYANIDE

THIS APPLIES TO 16C1, 16MW8, 16MW9,16WC1A, 16WDUP, 16WC1B AND QC

No.	PARAMETER	CAS RN	Required LOQ/DL (µg/l)
1	Cyanide	57-12-5	20 / 5

These are Appendix IX wells.
Report estimated results.

Current as of 2021 Permit Mod. JCF 9-13-2021

OK JCF 7/25/23

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ANALYTICAL METHOD: 8260D/ 5030C
GCMS/ Volatile

✓

THIS APPLIES TO WELLS 16C1, 16MW8, 16MW9,16WC1A, 16WDUP, 16WC1B & QC

SEE attached list. Report only analytes.

For these wells and analytes, report to permit MDL with J flag.

* Note- 8260C/5030C 25 ml purge Dimethylether only CAS N0 115-10-6 permit limits are QL: 12.5 ug/l and MDL: 1.11 ug/l- However, please report to 10 ug/l due to rounding issues (instead of 12.5 ug/l) JVR 7-19-23

≠ For 2-propanol report to QL 100 ug/l and DL at 50 ug/l. (5ml purge) JVR 7/25/23

JCF 7-19-23

* pok addition of Chloro methane + chloroethane (page 4/8 / page 13/17) JVR 7/25/23

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ANALYTICAL METHOD: 8270E/ GCMS/ Semivolatile
THIS APPLIES TO WELLS 16C1, 16MW8, 16MW9,16WC1A, 16WDUP, 16WC1B & QC

SEE attached list. Report only analytes.

Report diethylphthalate to 5 ug/l to be consistent with routine semiannual limit. JCF 7-19-23

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INORGANICS

THIS APPLIES TO WELLS 16C1, 16MW8, 16MW9,16WC1A, 16WDUP, 16WC1B & QC

Report to QL, DL listed below and provide estimated results ("J"). ✓

6020B SW 7/25/23

HWMU 16

Analyte	Method Ref	LOQ/QL	LOD/ MDL	CAS#	Units
ANTIMONY	6020A	2	0.6	7440-36-0	UG/L
ARSENIC	6020A	10	2	7440-38-2	UG/L
BARIUM	6020A	10	1.3	7440-39-3	UG/L
BERYLLIUM	6020A	1	0.3	7440-41-7	UG/L
CADMIUM	6020A	1	0.2	7440-43-9	UG/L
CHROMIUM	6020A	5	1	7440-47-3	UG/L
COBALT	6020A	5	1	7440-48-4	UG/L
COPPER	6020A	5	1.7	7440-50-8	UG/L
LEAD	6020A	3	1	7439-92-1	UG/L
NICKEL	6020A	10	2	7440-02-0	UG/L
SELENIUM	6020A	10	3	7782-49-2	UG/L
SILVER	6020A	2	0.3	7440-22-4	UG/L
THALLIUM	6020A	1	0.2	7440-28-0	UG/L
VANADIUM	6020A	10	2.5	7440-62-2	UG/L
ZINC	6020A	30	7.3	7440-66-6	UG/L

15 analytes

These are Appendix IX wells. Report to permit MDL with estimated results. ✓

Rev 2021 Class 1 Permit Mod -JCF

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7-25-2023

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Barb

- See notes on COC
- report the analytes on attached list in yellow highlight. note isosafrole + Pronamide no longer w/ ELE as lab could not meet Permit MDL. Report to Permit MDL.
- report preliminary data so we can confirm project QL/dL is met.

HAZARDOUS WASTE MANAGEMENT
POST-CLOSURE CARE PERMIT

ATTACHMENT 1

APPENDIX I

ANNUAL GROUNDWATER SAMPLING CONSTITUENT LIST

(APPENDIX IX 40 CFR PART 264)

APPENDIX IX METHOD/DETECTION LIMITS

Analyte	CAS Number	METHOD	PQL (ug/l)	MDL (ug/1)
1,1,1,2-Tetrachloroethane	630-20-6	8260	1	0.3
1,1,1 -Trichloroethane	71-55-6	8260	1	0.3
1,1,2,2-Tetrachloroethane	79-34-5	8260	1	0.3
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	8260	1	0.4
1,1,2-Trichloroethane	79-00-5	8260	1	0.3
1,1 -Dichloroethane	75-34-3	8260	1	0.3
1,1 -Dichloroethene	75-35-4	8260	1	0.3
1,2,3-Trichloropropane	96-18-4	8260	1	0.3
1,2,4,5-Tetrachlorobenzene	95-94-3	8270	10	2
1,2,4-Trichlorobenzene	120-82-1	8260	1	0.6
1,2,4-Trichlorobenzene (dup-8260)	120-82-1	8270	10	0.43
1,2-dibromo-3-chloropropane	96-12-8	8260	1	0.4
1,2-dibromoethane	106-93-4	8260	1	0.3
1,2-Dichlorobenzene	95-50-1	8260	1	0.4
1,2-Dichlorobenzene (dup 8260)	95-50-1	8270	10	0.48
1,2-Dichloroethane	107-06-2	8260	1	0.3
1,2-Dichloropropane	78-87-5	8260	1	0.4
1,3-Dichlorobenzene	541-73-1	8260	1	0.4
1,3-Dichlorobenzene (dup 8260)	541-73-1	8270	10	0.52
1,3-Dichloropropane	142-28-9	8260	1	0.4
1,3-Dinitrobenzene	99-65-0	8270	10	2.3
1,4-Dichlorobenzene	106-46-7	8260	1	0.4
1,4-Dichlorobenzene (dup 8260)	106-46-7	8270	10	0.37
1,4-Dioxane	123-91-1	8260	200	45.48
1,4-Napthoquinone	130-15-4	8270	10	3.0
1 -Naphthylamine	134-32-7	8270	10	3.0
2,3,4,6-Tetrachlorophenol	58-90-2	8270	10	1.8
2,4,5-Trichlorophenol	95-95-4	8270	10	2.0
2,4,6-Trichlorophenol	88-06-2	8270	10	1.8
2,4-Dichlorophenol	120-83-2	8270	10	1.59
2,4-Dimethylphenol	105-67-9	8270	10	3.0

Analyte	CAS Number	METHOD	PQL (ug/l)	MDL (ug/l)
2,4-Dinitrophenol	51-28-5	8270	10	6.2
2,4-Dinitrotoluene	121-14-2	8270	10	2.1
2,6-Dichlorophenol	87-65-0	8270	10	1.4
2,6-Dinitrotoluene	606-20-2	8270	10	2.1
2-Acetylaminofluorene	53-96-3	8270	10	3.0
2-Butanone	78-93-3	8260	10	1.7
2-Chloronaphthalene	91-58-7	8270	10	0.5
2-Chlorophenol	95-57-8	8270	10	1.0
2-Hexanone	591-78-6	8260	10	2.0
2-Methylnaphthalene	91-57-6	8270	10	0.29
2-Naphthylamine	91-59-8	8270	10	7.0
2-Nitroaniline	88-74-4	8270	10	1.0
2-Nitrophenol	88-75-5	8270	10	1.27
2-Picoline	109-06-8	8270	10	1.0
2-Propanol - 5 ml purge	67-63-0	8260	100	50
3,3 '-Dichlorobenzidine	91-94-1	8270	10	3.0
3,3 '-Dimethylbenzidine	119-93-7	8270	10	3.3
3-Methylcholanthrene	56-49-5	8270	10	1.0
3-Nitroaniline	99-09-2	8270	10	2.0
4,6-Dinitro-2-methylphenol	534-52-1	8270	10	3.0
4-Aminobiphenyl	92-67-1	8270	10	3.0
4-Bromophenyl phenyl ether	101-55-3	8270	10	0.56
4-Chloro-3-methylphenol	59-50-7	8270	10	1.0
4-Chloroaniline	106-47-8	8270	10	3.3
4-Chlorophenyl phenyl ether	7005-72-3	8270	10	0.6
4-Methyl-2-pentanone	108-10-1	8260	10	2.0
4-Nitroaniline	106-44-5	8270	10	1.5
4-Nitrophenol	100-01-6	8270	10	3.0
4-Nitroquinoline-1 -oxide	100-02-7	8270	50	5
5-Nitro-o-toluidine	56-57-5	8270	10	2.0
7,12-Dimethylbenz(a)anthracene	99-55-8	8270	10	1.8
a,a-Dimethylphenethylamine	57-97-6	8270	50	5
Acenaphthene	122-09-8	8270	10	0.35

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Analyte	CAS Number	METHOD	PQL(ug/l)	MDL(ug/l)
Acenaphthylene	208-96-8	8270	10	0.48
Acetone	67-64-1	8260	10	2.0
Acetonitrile	75-05-8	8260	100	31.67
Acetophenone	98-86-2	8270	10	1.0
Acrolein	107-02-8	8260	10	3.4
Acrylonitrile	107-13-1	8260	10	1.1
Allyl chloride/ (3-Chloropropene)	107-05-1	8260	10	1.0
Aniline	62-53-3	8270	10	1.1
Anthracene	120-12-7	8270	10	0.52
Antimony	7440-36-0	6020 /6010	2	0.6
Aramite	140-57-8	8270	10	3.7
Arsenic	7440-38-2	6020/ 6010	10	2
Barium	7440-39-3	6020/ 6010	10	1.3
Benzene	71-43-2	8260	1	0.3
Benzo(a)anthracene	56-55-3	8270	10	0.45
Benzo(a)pyrene	50-32-8	8270	10	1.5
Benzo(b)fluoranthene	205-99-2	8270	10	1.2
Benzo(g,h,i)perylene	191-24-2	8270	10	0.42
Benzo(k)fluoranthene	207-08-9	8270	10	1.6
Benzyl alcohol	100-51-6	8270	10	3.0
Beryllium	7440-41-7	6020/ 6010	1	0.3
Bis(2-chlorethoxy)methane	111-91-1	8270	1	0.5
Bis(2-chloroethyl)ether	111-44-4	8270	1	0.5
Bis(2-chloroisopropyl)ether	108-60-1	8270	10	0.6
Bis(2-ethylhexyl)phthalate	117-81-7	8270	10	2.0
Bromodichloromethane	75-27-4	8260	1	0.3
Bromoform	75-25-2	8260	1	0.4
Bromomethane	74-83-9	8260	1	0.542
Butyl benzyl phthalate	85-68-7	8270	10	0.7
Cadmium	7440-43-9	6020/6010	1	0.2
Carbon disulfide	75-15-0	8260	10	0.4
Chloroethane (required as compliance well not App IX		8260	1	
Chloromethane (required as compliance well not App IX		8260	1	
Carbon tetrachloride	56-23-5	8260	1	0.3
Chlorobenzilate	510-15-6	8270	10	3.0

Analyte	CAS Number	METHOD	PQL(ug/l)	MDL(ug/l)
Chloroform	67-66-3	8260	1	0.3
Chloroprene/ (2-Chloro-1,3-butadiene	126-99-8	8260	10	0.46
Chromium	7440-47-3	6020/6010	5	1.0
Chrysene	218-01-9	8270	10	0.31
Cobalt	7440-48-4	6020/6010	5	1.0
Copper	7440-50-8	6020/6010	5	1.7
Cyanide	57-12-5	9010	20	5
Diallate	2303-16-4	8270	10	3.0
Dibenzo(a,h)anthracene	53-70-3	8270	10	0.38
Dibenzofuran	132-64-9	8270	10	0.6
Dibromochloromethane	124-48-1	8260	1	0.4
Dibromomethane/ (methylene bromide)	74-95-3	8260	1	0.3
Dichlorodifluoromethane	75-71-8	8260	1	0.4
Diethyl ether/ (ethyl ether)	60-29-7	8260	12.5	1.11
Diethyl phthalate	84-66-2	8270	10	2.0
Dimethoate	60-51-5	8270	10	3.0
Dimethyl ether (8260C)	115-10-6	8260	12.5	1.11
Dimethyl phthalate – GEL 1/0.3	131-11-3	8270	10	0.5
Di-n-butyl phthalate	84-74-2	8270	10	1.8
Di-n-octyl phthalate-GEL 1/0.3	117-84-0	8270	10	0.8
Diphenylamine (as n-nitrosodiphenylamine	86-30-6	8270	10	0.58
Disulfoton	298-04-4	8270	10	3.0
Ethyl methacrylate	97-63-2	8260	10	0.81
Ethyl methacrylate (DUP	97-63-2	8270	10	0.2
Ethyl methanesulfonate	62-50-0	8270	10	1.1
Ethylbenzene	100-41-4	8260	1	0.3
Famphur	52-85-7	8270	10	5.0
Fluoranthene	206-44-0	8270	10	0.42
Fluorene	86-73-7	8270	10	0.38

Analyte	CAS Number	METHOD	PQL (ug/I)	MDL (ug/I)
Heaxachloroethane	67-72-1	8260/8270	10	0.4
Hexachlorobenzene	118-74-1	8270	10	0.87
Hexachlorobutadiene	87-68-3	8260	1	0.4
Hexachlorocyclopentadiene	77-47-4	8270	10	3.0
Hexachlorophene – GEL 500/167	70-30-4	8270	500	185
Hexachloropropene	1888-71-7	8270	10	2
Indeno(1 ,2,3-cd)pyrene	193-39-5	8270	10	0.15
Iodomethane/ (methyl iodide)	74-88-4	8260	10	0.58
Isobutyl alcohol	78-83-1	8260	200	11.6
Isodrin	465-73-6	8270	10	1.1
Isophorone	78-59-1	8270	10	0.5
Isosafrole (Pace WC -)	120-58-1	8270	10	1.6
Kepone	143-50-0	8270	50	25
Lead	7439-92-1	6020/6010	3	1.0
m,p-Cresol	106-44-5	8270	20	2.47
m,p-Xylene	179601-23-1	8260	2	0.4
Mercury	7439-97-6	7470	2	0.2
Methacrylonitrile	126-98-7	8260	100	9.75
Methapyrilene	91-80-5	8270	10	3.0
Methyl methacrylate	80-62-6	8260	10	3.58
Methyl methanesulfonate	66-27-3	8270	10	1.0
Methyl parathion	298-00-0	8270	10	3.2
Methylene chloride	75-09-2	8260	1	0.7
Naphthalene	91-20-3	8260	1	0.4
Nickel	7440-02-0	6020/6010	10	2.0
Nitrobenzene	98-95-3	8270	10	0.6
N-Nitrosodiethylamine	55-18-5	8270	10	3.0
N-Nitrosodimethylamine	62-75-9	8270	10	2.0
N-Nitroso-di-n-butylamine	924-16-3	8270	10	3.0
N-Nitrosodi-n-propylamine	621-64-7	8270	10	0.5
N-Nitrosodiphenylamine (as diphenylamine)	86-30-6	8270	10	0.58
n-Nitrosomethylethylamine	10595-95-6	8270	10	1.0

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Analyte	CAS Number	METHOD	PQL(ug /I)	MDL (ug/1)
N-Nitrosomorpholine	59-89-2	8270	10	3.0
N-Nitrosopiperidine	100-75-4	8270	10	1.1
N-Nitrosopyrrolidine	930-55-2	8270	10	0.5
o,o,o-Triethylphosphorothioate	126-68-1	8270	10	2.6
o,o-Diethyl-o-2-pyrazinyl phosphorothioate/ (Thionazin)	297-97-2	8270	10	2.4
o-Cresol/ (2-methylphenol)	95-48-7	8270	10	0.96
o-Toluidine	95-53-4	8270	10	4.0
o-Xylene	95-47-6	8260	1	0.4
Parathion/ (Ethyl parathion)	56-38-2	8270	10	3.0
p-Dimethylaminoazobenzene	60-11-7	8270	10	3.0
Pentachlorobenzene	608-93-5	8270	10	1.6
Pentachloroethane	76-01-7	8260	10	1.7
Pentachloroethane (DUP)	76-01-7	8270	10	2.7
Pentachloronitrobenzene (PACE W.Columbia – 10/1)	82-68-8	8270	10	1.0
Pentachlorophenol	87-86-5	8270	10	3.0
Phenacetin	62-44-2	8270	10	1.4
Phenanthrene	85-01-8	8270	10	0.52
Phenol	108-95-2	8270	10	0.77
Phorate	298-02-2	8270	10	2.5
p-Phenylenediamine	106-50-3	8270	150	26.4
Pronamide (pace WC)	23950-58-5	8270	10	1.5
Propionitrile	107-12-0	8260	100	10.22
Pyrene	129-00-0	8270	10	0.41
Pyridine	110-86-1	8270	10	2.0
Safrole	94-59-7	8270	10	2.2
Selenium	7782-49-2	6020/6010	10	3.0
Silver	7440-22-4	6020/6010	2	0.3
Styrene	100-42-5	8260	1	0.3
Sulfotep	3689-24-5	8270	10	2.4
sym-Trinitrobenzene/ (1,3,5-trinitrobenzene)	99-35-4	8270	10	3.0
Tetrachloroethene	127-18-4	8260	1	0.3
Tetrahydrofuran	109-99-9	8260	25	2
Thallium	7440-28-0	6020/6010	1	0.2
Toluene	108-88-3	8260	1	0.3

Analyte	CAS Number	METHOD	PQL (ug/l)	MDL (ug/l)
trans-1,2-Dichloroethene	156-60-5	8260	1	0.3
trans-1,3-Dichloropropene	10061-02-6	8260	1	0.4
trans-1,4-Dichloro-2-butene	110-57-6	8260	10	1.5
Trichloroethene	79-01-6	8260	1	0.3
Trichlorofluoromethane	75-69-4	8260	1	0.4
Vanadium	7440-62-2	6020/6010	10	2.5
Vinyl acetate	108-05-4	8260	10	3.29
Vinyl chloride	75-01-4	8260	1	0.2
Xylenes, Total	1330-20-7	8260	3	0.4
Zinc	7440-66-6	6020/6010	30	7.3

Notes:
ug/l = micrograms per liter
PQL = Practical Quantitation Limit
MDL = Method Detection Limit
CAS = Chemical Abstracts Service Registry Number

Purple – GEL
Yellow – ELLE
Blue – Eurofins Test America- Canton
Pace – West Columbia – moved Isofrole and pronamide from ELLE to Paces WC

VOCs – ELLE and ETA
SVOCs – ELLE, TA, GEL, PACE WC….Final 7-25-23 JCF

JCF 7/25/23

Login Sample Receipt Checklist

Client: TRC, Engineers, Inc.

Job Number: 410-136514-1

Login Number: 136514

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 1

Creator: McCaskey, Jonathan

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable (</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	True	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	True	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Janet Frazier
TRC, Engineers, Inc.
2200 South Main Street
Suite A
Blacksburg VA 24060

Generated 8/11/2023 6:58 PM

JOB DESCRIPTION

RFAAP, Radford HWMU16

JOB NUMBER

410-136864-2

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster PA 17601

See page two for job notes and contact information.

myEOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization

Barb Weyandt

Generated
8/11/2023 6:58 PM

Authorized for release by
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Designee for
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Eurofins Lancaster Laboratories Environment Testing, LLC

Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.
· QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
· Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
· Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job Narrative
410-136864-2

Receipt
The samples were received on 7/28/2023 9:25 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.9°C and 1.8°C

Receipt Exceptions
A trip blank was received in the cooler/package, but not entered with this job. The Trip blank logged in and reported with job number 410-136514.

GC/MS VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Detection Summary

Client: TRC, Engineers, Inc.
Job ID: 410-136864-2
Project/Site: RFAAP, Radford HWMU16

Client Sample ID: 16C1 — Lab Sample ID: 410-136864-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Dimethyl ether	7.7	J	10	1.1	ug/L	1		EPA 8260C	Total/NA

Client Sample ID: 16MW8 — Lab Sample ID: 410-136864-2

No Detections.

Client Sample ID: 16MW9 — Lab Sample ID: 410-136864-3

No Detections.

Client Sample ID: 16WC1A — Lab Sample ID: 410-136864-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Dimethyl ether	1.1	J	10	1.1	ug/L	1		EPA 8260C	Total/NA

Client Sample ID: 16WDUP — Lab Sample ID: 410-136864-5

No Detections.

Client Sample ID: 16WC1B — Lab Sample ID: 410-136864-6

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: 16C1
Lab Sample ID: 410-136864-1

Date Collected: 07/27/23 12:45
Matrix: Water
Date Received: 07/28/23 09:25

Method: SW846 EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethyl ether	**7.7**	**J**	10	1.1	ug/L			08/09/23 02:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*		*08/09/23 02:41*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*08/09/23 02:41*	*1*
4-Bromofluorobenzene (Surr)	*90*		*80 - 120*		*08/09/23 02:41*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*08/09/23 02:41*	*1*

Client Sample ID: 16MW8
Lab Sample ID: 410-136864-2

Date Collected: 07/26/23 10:05
Matrix: Water
Date Received: 07/28/23 09:25

Method: SW846 EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethyl ether	ND		10	1.1	ug/L			08/09/23 00:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*		*08/09/23 00:51*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*08/09/23 00:51*	*1*
4-Bromofluorobenzene (Surr)	*90*		*80 - 120*		*08/09/23 00:51*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*08/09/23 00:51*	*1*

Client Sample ID: 16MW9
Lab Sample ID: 410-136864-3

Date Collected: 07/27/23 11:25
Matrix: Water
Date Received: 07/28/23 09:25

Method: SW846 EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethyl ether	ND		10	1.1	ug/L			08/09/23 01:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 120*		*08/09/23 01:56*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*08/09/23 01:56*	*1*
4-Bromofluorobenzene (Surr)	*90*		*80 - 120*		*08/09/23 01:56*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*08/09/23 01:56*	*1*

Client Sample ID: 16WC1A
Lab Sample ID: 410-136864-4

Date Collected: 07/27/23 09:55
Matrix: Water
Date Received: 07/28/23 09:25

Method: SW846 EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethyl ether	**1.1**	**J**	10	1.1	ug/L			08/08/23 22:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*80 - 120*		*08/08/23 22:39*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*08/08/23 22:39*	*1*
4-Bromofluorobenzene (Surr)	*89*		*80 - 120*		*08/08/23 22:39*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*08/08/23 22:39*	*1*

Client Sample ID: 16WDUP
Lab Sample ID: 410-136864-5

Date Collected: 07/27/23 10:20
Matrix: Water
Date Received: 07/28/23 09:25

Method: SW846 EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethyl ether	ND		10	1.1	ug/L			08/09/23 01:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 120*		*08/09/23 01:12*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*08/09/23 01:12*	*1*
4-Bromofluorobenzene (Surr)	*83*		*80 - 120*		*08/09/23 01:12*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*08/09/23 01:12*	*1*

Client Sample ID: 16WC1B
Lab Sample ID: 410-136864-6

Date Collected: 07/26/23 12:05
Matrix: Water
Date Received: 07/28/23 09:25

Method: SW846 EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethyl ether	ND		10	1.1	ug/L			08/09/23 01:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 120*		*08/09/23 01:34*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*08/09/23 01:34*	*1*
4-Bromofluorobenzene (Surr)	*89*		*80 - 120*		*08/09/23 01:34*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*08/09/23 01:34*	*1*

Default Detection Limits

Client: TRC, Engineers, Inc.
Job ID: 410-136864-2
Project/Site: RFAAP, Radford HWMU16

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	RL	MDL	Units
Dimethyl ether	10	1.1	ug/L

Surrogate Summary

Client: TRC, Engineers, Inc.
Job ID: 410-136864-2
Project/Site: RFAAP, Radford HWMU16

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Matrix: Water
Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	DBFM	BFB	TOL
Lab Sample ID	Client Sample ID	(80-120)	(80-120)	(80-120)	(80-120)
410-136864-1	16C1	102	103	90	96
410-136864-2	16MW8	102	102	90	96
410-136864-3	16MW9	103	103	90	99
410-136864-4	16WC1A	104	103	89	95
410-136864-4 MS	16WC1A	106	103	97	100
410-136864-4 MS	16WC1A	100	100	90	95
410-136864-4 MSD	16WC1A	101	103	97	99
410-136864-4 MSD	16WC1A	102	102	90	96
410-136864-5	16WDUP	103	103	83	96
410-136864-6	16WC1B	103	103	89	95
LCS 410-405906/5	Lab Control Sample	105	103	99	101
LCS 410-405906/6	Lab Control Sample	99	102	90	97
MB 410-405906/8	Method Blank	104	103	89	98

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
DBFM = Dibromofluoromethane (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 410-405906/8
Matrix: Water
Analysis Batch: 405906

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethyl ether	ND		10	1.1	ug/L			08/08/23 20:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*80 - 120*		*08/08/23 20:27*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*08/08/23 20:27*	*1*
4-Bromofluorobenzene (Surr)	*89*		*80 - 120*		*08/08/23 20:27*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*08/08/23 20:27*	*1*

Lab Sample ID: LCS 410-405906/5
Matrix: Water
Analysis Batch: 405906

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*
Dibromofluoromethane (Surr)	*103*		*80 - 120*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*
Toluene-d8 (Surr)	*101*		*80 - 120*

Lab Sample ID: LCS 410-405906/6
Matrix: Water
Analysis Batch: 405906

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Dimethyl ether			5.00	5.11	J	ug/L		102	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 120*
Dibromofluoromethane (Surr)	*102*		*80 - 120*
4-Bromofluorobenzene (Surr)	*90*		*80 - 120*
Toluene-d8 (Surr)	*97*		*80 - 120*

Lab Sample ID: 410-136864-4 MS
Matrix: Water
Analysis Batch: 405906

Client Sample ID: 16WC1A
Prep Type: Total/NA

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*106*		*80 - 120*
Dibromofluoromethane (Surr)	*103*		*80 - 120*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*

Lab Sample ID: 410-136864-4 MS
Matrix: Water
Analysis Batch: 405906

Client Sample ID: 16WC1A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Dimethyl ether	1.1	J	4.65	5.72	J	ug/L		100	70 - 130		

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 410-136864-4 MS
Matrix: Water
Analysis Batch: 405906

Client Sample ID: 16WC1A
Prep Type: Total/NA

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	100		80 - 120
4-Bromofluorobenzene (Surr)	90		80 - 120
Toluene-d8 (Surr)	95		80 - 120

Lab Sample ID: 410-136864-4 MSD
Matrix: Water
Analysis Batch: 405906

Client Sample ID: 16WC1A
Prep Type: Total/NA

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	103		80 - 120
4-Bromofluorobenzene (Surr)	97		80 - 120
Toluene-d8 (Surr)	99		80 - 120

Lab Sample ID: 410-136864-4 MSD
Matrix: Water
Analysis Batch: 405906

Client Sample ID: 16WC1A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dimethyl ether	1.1	J	4.65	5.49	J	ug/L		95	70 - 130	4	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	102		80 - 120
4-Bromofluorobenzene (Surr)	90		80 - 120
Toluene-d8 (Surr)	96		80 - 120

GC/MS VOA

Analysis Batch: 405906

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136864-1	16C1	Total/NA	Water	EPA 8260C	
410-136864-2	16MW8	Total/NA	Water	EPA 8260C	
410-136864-3	16MW9	Total/NA	Water	EPA 8260C	
410-136864-4	16WC1A	Total/NA	Water	EPA 8260C	
410-136864-5	16WDUP	Total/NA	Water	EPA 8260C	
410-136864-6	16WC1B	Total/NA	Water	EPA 8260C	
MB 410-405906/8	Method Blank	Total/NA	Water	EPA 8260C	
LCS 410-405906/5	Lab Control Sample	Total/NA	Water	EPA 8260C	
LCS 410-405906/6	Lab Control Sample	Total/NA	Water	EPA 8260C	
410-136864-4 MS	16WC1A	Total/NA	Water	EPA 8260C	
410-136864-4 MS	16WC1A	Total/NA	Water	EPA 8260C	
410-136864-4 MSD	16WC1A	Total/NA	Water	EPA 8260C	
410-136864-4 MSD	16WC1A	Total/NA	Water	EPA 8260C	

Client Sample ID: 16C1
Lab Sample ID: 410-136864-1

Date Collected: 07/27/23 12:45
Matrix: Water
Date Received: 07/28/23 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 8260C		1	405906	JS6E	ELLE	08/09/23 02:41

Client Sample ID: 16MW8
Lab Sample ID: 410-136864-2

Date Collected: 07/26/23 10:05
Matrix: Water
Date Received: 07/28/23 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 8260C		1	405906	JS6E	ELLE	08/09/23 00:51

Client Sample ID: 16MW9
Lab Sample ID: 410-136864-3

Date Collected: 07/27/23 11:25
Matrix: Water
Date Received: 07/28/23 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 8260C		1	405906	JS6E	ELLE	08/09/23 01:56

Client Sample ID: 16WC1A
Lab Sample ID: 410-136864-4

Date Collected: 07/27/23 09:55
Matrix: Water
Date Received: 07/28/23 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 8260C		1	405906	JS6E	ELLE	08/08/23 22:39

Client Sample ID: 16WDUP
Lab Sample ID: 410-136864-5

Date Collected: 07/27/23 10:20
Matrix: Water
Date Received: 07/28/23 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 8260C		1	405906	JS6E	ELLE	08/09/23 01:12

Client Sample ID: 16WC1B
Lab Sample ID: 410-136864-6

Date Collected: 07/26/23 12:05
Matrix: Water
Date Received: 07/28/23 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 8260C		1	405906	JS6E	ELLE	08/09/23 01:34

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: TRC, Engineers, Inc.
Job ID: 410-136864-2
Project/Site: RFAAP, Radford HWMU16

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Virginia	NELAP	460182	06-14-25

Method Summary

Client: TRC, Engineers, Inc. Job ID: 410-136864-2
Project/Site: RFAAP, Radford HWMU16

Method	Method Description	Protocol	Laboratory
EPA 8260C	Volatile Organic Compounds (GC/MS)	SW846	ELLE
5030C	Purge and Trap	SW846	ELLE

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: TRC, Engineers, Inc.
Job ID: 410-136864-2
Project/Site: RFAAP, Radford HWMU16

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-136864-1	16C1	Water	07/27/23 12:45	07/28/23 09:25
410-136864-2	16MW8	Water	07/26/23 10:05	07/28/23 09:25
410-136864-3	16MW9	Water	07/27/23 11:25	07/28/23 09:25
410-136864-4	16WC1A	Water	07/27/23 09:55	07/28/23 09:25
410-136864-5	16WDUP	Water	07/27/23 10:20	07/28/23 09:25
410-136864-6	16WC1B	Water	07/26/23 12:05	07/28/23 09:25

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136864-2

SDG No.:

Instrument ID: 10193 Analysis Batch Number: 395211

Lab Sample ID: IC 410-395211/3 Client Sample ID:

Date Analyzed: 07/10/23 15:50 Lab File ID: CL10X02.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chlorodifluoromethane	1.70	Incomplete Integration	DVW2	07/11/23 08:09
Acetonitrile	3.36	Incomplete Integration	DVW2	07/11/23 08:11
Vinyl acetate	4.51	Incomplete Integration	DVW2	07/11/23 08:11
Ethyl acetate	5.48	Incomplete Integration	DVW2	07/11/23 08:11
2-Chloroethyl vinyl ether	8.60	Incomplete Integration	DVW2	07/11/23 08:11
cis-1,4-Dichloro-2-butene	11.72	Peak assignment corrected	DVW2	07/11/23 08:08
Cyclohexanone	11.72	Incomplete Integration	DVW2	07/11/23 08:12

Lab Sample ID: IC 410-395211/4 Client Sample ID:

Date Analyzed: 07/10/23 16:12 Lab File ID: CL10X03.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetonitrile	3.35	Incomplete Integration	DVW2	07/11/23 08:13
Vinyl acetate	4.50	Incomplete Integration	DVW2	07/11/23 08:13
Ethyl acetate	5.51	Incomplete Integration	DVW2	07/11/23 08:13
cis-1,4-Dichloro-2-butene	11.64	Incomplete Integration	DVW2	07/11/23 08:13

Lab Sample ID: IC 410-395211/5 Client Sample ID:

Date Analyzed: 07/10/23 16:34 Lab File ID: CL10X04.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetonitrile	3.36	Incomplete Integration	DVW2	07/11/23 08:15
Ethyl acetate	5.42	Incomplete Integration	DVW2	07/11/23 08:15
cis-1,4-Dichloro-2-butene	11.64	Incomplete Integration	DVW2	07/11/23 08:15

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136864-2

SDG No.:

Instrument ID: 10193 Analysis Batch Number: 395211

Lab Sample ID: IC 410-395211/6 Client Sample ID:

Date Analyzed: 07/10/23 16:56 Lab File ID: CL10X05.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetonitrile	3.34	Incomplete Integration	DVW2	07/11/23 08:16
Vinyl acetate	4.47	Incomplete Integration	DVW2	07/11/23 08:16
cis-1,4-Dichloro-2-butene	11.63	Incomplete Integration	DVW2	07/11/23 08:16

Lab Sample ID: IC 410-395211/7 Client Sample ID:

Date Analyzed: 07/10/23 17:18 Lab File ID: CL10X06.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetonitrile	3.36	Incomplete Integration	DVW2	07/11/23 08:17
Vinyl acetate	4.46	Incomplete Integration	DVW2	07/11/23 08:17
Ethyl acetate	5.39	Baseline	UKEK	07/11/23 20:33
cis-1,4-Dichloro-2-butene	11.63	Incomplete Integration	DVW2	07/11/23 08:17

Lab Sample ID: IC 410-395211/8 Client Sample ID:

Date Analyzed: 07/10/23 17:40 Lab File ID: CL10X07.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetonitrile	3.32	Incomplete Integration	DVW2	07/11/23 08:09
Vinyl acetate	4.45	Incomplete Integration	DVW2	07/11/23 08:09
Ethyl acetate	5.38	Incomplete Integration	DVW2	07/11/23 08:09
2-Chloroethyl vinyl ether	8.54	Incomplete Integration	DVW2	07/11/23 08:10
cis-1,4-Dichloro-2-butene	11.63	Incomplete Integration	DVW2	07/11/23 08:10

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136864-2

SDG No.:

Instrument ID: 10193 Analysis Batch Number: 395211

Lab Sample ID: IC 410-395211/9 Client Sample ID:

Date Analyzed: 07/10/23 18:02 Lab File ID: CL10X08.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetonitrile	3.32	Incomplete Integration	DVW2	07/11/23 08:18
Vinyl acetate	4.43	Incomplete Integration	DVW2	07/11/23 08:18
Ethyl acetate	5.37	Incomplete Integration	DVW2	07/11/23 08:18
2-Chloroethyl vinyl ether	8.54	Incomplete Integration	DVW2	07/11/23 08:18
cis-1,4-Dichloro-2-butene	11.63	Incomplete Integration	DVW2	07/11/23 08:18

Lab Sample ID: ICV 410-395211/11 Client Sample ID:

Date Analyzed: 07/10/23 18:45 Lab File ID: CL10X10.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetonitrile	3.32	Incomplete Integration	DVW2	07/11/23 08:20
Vinyl acetate	4.43	Peak assignment corrected	DVW2	07/11/23 08:07
Ethyl acetate	5.39	Incomplete Integration	DVW2	07/11/23 08:20
2-Chloroethyl vinyl ether	8.54	Peak assignment corrected	DVW2	07/11/23 08:07
cis-1,4-Dichloro-2-butene	11.63	Peak assignment corrected	DVW2	07/11/23 08:08

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136864-2

SDG No.:

Instrument ID: 10193 Analysis Batch Number: 395211

Lab Sample ID: IC 410-395211/13 Client Sample ID:

Date Analyzed: 07/10/23 19:29 Lab File ID: CL10X12.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.70	Incomplete Integration	DVW2	07/11/23 08:26
1,3-Butadiene	1.95	Incomplete Integration	DVW2	07/11/23 08:26
Bromomethane	2.22	Incomplete Integration	DVW2	07/11/23 08:26
Freon 123a	2.80	Incomplete Integration	DVW2	07/11/23 08:26
Ethyl bromide	3.15	Incomplete Integration	DVW2	07/11/23 08:26
Carbon disulfide	3.21	Incomplete Integration	DVW2	07/11/23 08:27
Methyl acetate	3.34	Incomplete Integration	DVW2	07/11/23 08:27
Methylene Chloride	3.50	Incomplete Integration	DVW2	07/11/23 08:27
t-Butyl alcohol-d10 (IS)	3.55	Incomplete Integration	DVW2	07/11/23 08:45
1,1-Dichloroethane	4.45	Incomplete Integration	DVW2	07/11/23 08:28
2-Chloro-1,3-butadiene	4.57	Incomplete Integration	DVW2	07/11/23 08:28
Ethyl t-butyl ether	5.08	Incomplete Integration	DVW2	07/11/23 08:28
2,2-Dichloropropane	5.33	Incomplete Integration	DVW2	07/11/23 08:28
2-Butanone	5.40	Incomplete Integration	DVW2	07/11/23 08:28
Propionitrile	5.56	Incomplete Integration	DVW2	07/11/23 08:28
Tetrahydrofuran	5.72	Incomplete Integration	DVW2	07/11/23 08:28
1,1,1-Trichloroethane	6.05	Incomplete Integration	DVW2	07/11/23 08:28
Trichloroethene	7.45	Incomplete Integration	DVW2	07/11/23 08:30
Methyl methacrylate	7.93	Incomplete Integration	DVW2	07/11/23 08:30
1,4-Dioxane	7.96	Incomplete Integration	DVW2	07/11/23 08:30
2-Nitropropane	8.43	Incomplete Integration	DVW2	07/11/23 08:30
1-Bromo-2-chloroethane	8.56	Incomplete Integration	DVW2	07/11/23 08:30
trans-1,3-Dichloropropene	9.49	Incomplete Integration	DVW2	07/11/23 08:31
Ethyl methacrylate	9.56	Incomplete Integration	DVW2	07/11/23 08:31
2-Hexanone	9.96	Incomplete Integration	DVW2	07/11/23 08:31
Ethylbenzene	10.79	Incomplete Integration	DVW2	07/11/23 08:39
1,1,2,2-Tetrachloroethane	11.85	Baseline	UKEK	07/11/23 20:34
trans-1,4-Dichloro-2-butene	11.88	Baseline	UKEK	07/11/23 20:35

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136864-2

SDG No.:

Instrument ID: 10193 Analysis Batch Number: 395211

Lab Sample ID: IC 410-395211/14 Client Sample ID:

Date Analyzed: 07/10/23 19:51 Lab File ID: CL10X13.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.68	Incomplete Integration	DVW2	07/11/23 08:39
1,3-Butadiene	1.93	Incomplete Integration	DVW2	07/11/23 08:39
Methyl acetate	3.34	Incomplete Integration	DVW2	07/11/23 08:40
t-Butyl alcohol-d10 (IS)	3.55	Incomplete Integration	DVW2	07/11/23 08:45
t-Butyl alcohol	3.65	Incomplete Integration	DVW2	07/11/23 08:41
2-Chloro-1,3-butadiene	4.56	Incomplete Integration	DVW2	07/11/23 08:41
2,2-Dichloropropane	5.32	Incomplete Integration	DVW2	07/11/23 08:41
Propionitrile	5.54	Incomplete Integration	DVW2	07/11/23 08:41
Tetrahydrofuran	5.71	Incomplete Integration	DVW2	07/11/23 08:41
Trichloroethene	7.45	Incomplete Integration	DVW2	07/11/23 08:42
n-Butanol	7.60	Incomplete Integration	DVW2	07/11/23 08:42
Methylcyclohexane	7.74	Incomplete Integration	DVW2	07/11/23 08:42
1,4-Dioxane	8.02	Incomplete Integration	DVW2	07/11/23 08:42
1-Chlorohexane	10.69	Incomplete Integration	DVW2	07/11/23 08:43

Lab Sample ID: IC 410-395211/15 Client Sample ID:

Date Analyzed: 07/10/23 20:13 Lab File ID: CL10X14.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.68	Incomplete Integration	DVW2	07/11/23 08:44
Chloromethane	1.84	Incomplete Integration	DVW2	07/11/23 08:44
Methyl acetate	3.33	Incomplete Integration	DVW2	07/11/23 08:45
n-Butanol	7.53	Incomplete Integration	DVW2	07/11/23 08:46
1,4-Dioxane	7.91	Incomplete Integration	DVW2	07/11/23 08:46

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136864-2

SDG No.:

Instrument ID: 10193 Analysis Batch Number: 395211

Lab Sample ID: IC 410-395211/16 Client Sample ID:

Date Analyzed: 07/10/23 20:35 Lab File ID: CL10X15.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.68	Incomplete Integration	DVW2	07/11/23 08:48
Isobutyl alcohol	6.53	Incomplete Integration	DVW2	07/11/23 08:48
n-Butanol	7.46	Incomplete Integration	DVW2	07/11/23 08:49
1,4-Dioxane	7.91	Incomplete Integration	DVW2	07/11/23 08:49

Lab Sample ID: IC 410-395211/17 Client Sample ID:

Date Analyzed: 07/10/23 20:57 Lab File ID: CL10X16.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.67	Incomplete Integration	DVW2	07/11/23 08:50
t-Butyl alcohol	3.65	Split Peak	UKEK	07/11/23 19:43

Lab Sample ID: ICIS 410-395211/18 Client Sample ID:

Date Analyzed: 07/10/23 21:18 Lab File ID: CL10X17.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.68	Incomplete Integration	DVW2	07/11/23 08:21
t-Butyl alcohol-d10 (IS)	3.55	Baseline	UKEK	07/11/23 20:39
Acrylonitrile	3.79	Incomplete Integration	DVW2	07/11/23 08:22
1,4-Dioxane	7.89	Incomplete Integration	DVW2	07/11/23 08:22
Ethylbenzene	10.79	Incomplete Integration	DVW2	07/11/23 08:37
m&p-Xylene	10.91	Incomplete Integration	DVW2	07/11/23 08:25

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136864-2

SDG No.:

Instrument ID: 10193 Analysis Batch Number: 395211

Lab Sample ID: IC 410-395211/19 Client Sample ID:

Date Analyzed: 07/10/23 21:40 Lab File ID: CL10X18.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.68	Incomplete Integration	DVW2	07/11/23 08:51
Methyl acetate	3.32	Incomplete Integration	DVW2	07/11/23 08:51
t-Butyl alcohol-d10 (IS)	3.55	Baseline	UKEK	07/11/23 20:40
1,4-Dioxane	7.88	Incomplete Integration	DVW2	07/11/23 08:52

Lab Sample ID: ICV 410-395211/21 Client Sample ID:

Date Analyzed: 07/10/23 22:24 Lab File ID: CL10X20.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.69	Baseline	UKEK	07/11/23 20:42
Methyl acetate	3.33	Incomplete Integration	DVW2	07/11/23 08:54
n-Butanol	7.45	Incomplete Integration	DVW2	07/11/23 08:54
1,4-Dioxane	7.92	Incomplete Integration	DVW2	07/11/23 08:54

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136864-2

SDG No.:

Instrument ID: 10193 Analysis Batch Number: 405906

Lab Sample ID: CCVIS 410-405906/3 Client Sample ID:

Date Analyzed: 08/08/23 18:38 Lab File ID: CG08X02.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.68	Missed Peak	JS6E	08/08/23 19:00

Lab Sample ID: CCV 410-405906/4 Client Sample ID:

Date Analyzed: 08/08/23 19:00 Lab File ID: CG08X03.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetonitrile	3.32	Incomplete Integration	JS6E	08/08/23 19:29

Lab Sample ID: 410-136864-5 Client Sample ID: 16WDUP

Date Analyzed: 08/09/23 01:12 Lab File ID: CG08X20.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dimethyl ether		Invalid Compound ID	innoonk	08/09/23 13:36

Lab Sample ID: 410-136864-6 Client Sample ID: 16WC1B

Date Analyzed: 08/09/23 01:34 Lab File ID: CG08X21.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dimethyl ether		Invalid Compound ID	innoonk	08/09/23 13:36

Lab Sample ID: 410-136864-3 Client Sample ID: 16MW9

Date Analyzed: 08/09/23 01:56 Lab File ID: CG08X22.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dimethyl ether		Invalid Compound ID	innoonk	08/09/23 13:36

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136864-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
MSV_CCV_CYC_00006	07/23/23	01/23/23	50/50 MeOH/Water, Lot EB679	200 mL	MSV_VCYC_STK_00009	9.615 mL	Cyclohexanone	6249.75 ug/mL
.MSV_VCYC_STK_00009	07/23/23	01/23/23	50/50 MeOH/Water, Lot EB679	10 mL	MSV_CYC_00008	1.3 g	Cyclohexanone	130000 ug/mL
..MSV_CYC_00008	06/30/25	Chem Service, Lot 13529800			(Purchased Reagent)		Cyclohexanone	1 g/g
MSV_CCV_V5ACE_00026	08/08/23	07/09/23	Methanol, Lot EG095	10 mL	MSV_AcetatesV_00057	1 mL	Acetonitrile	5000 ug/mL
							Ethyl acetate	1000 ug/mL
							Vinyl acetate	1000 ug/mL
.MSV_AcetatesV_00057	11/30/24	Restek, Lot A0197847			(Purchased Reagent)		Acetonitrile	50000 ug/mL
							Ethyl acetate	10000 ug/mL
							Vinyl acetate	10000 ug/mL
MSV_DME_00048	08/09/23	Restek, Lot A0190883			(Purchased Reagent)		Dimethyl ether	1000 ug/mL
MSV_DME_00053	09/06/23	Restek, Lot A0190883			(Purchased Reagent)		Dimethyl ether	1000 ug/mL
MSV_HP25_ISO_00008	10/10/23	04/10/23	Methanol, Lot EG095	10 mL	MSV_Cus826_IS_00555	1 mL	1,4-Dichlorobenzene-d4	250 ug/mL
							Chlorobenzene-d5 (IS)	250 ug/mL
							Fluorobenzene (IS)	250 ug/mL
							t-Butyl alcohol-d10 (IS)	1250 ug/mL
.MSV_Cus826_IS_00555	04/30/25	Restek, Lot A0184225			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL
							Chlorobenzene-d5 (IS)	2500 ug/mL
							Fluorobenzene (IS)	2500 ug/mL
							t-Butyl alcohol-d10 (IS)	12500 ug/mL
MSV_HP25_ISSS_00073	12/21/23	06/21/23	Methanol, Lot EG095	10 mL	MSV_8260_SS_00940	1 mL	1,2-Dichloroethane-d4 (Surr)	250 ug/mL
							4-Bromofluorobenzene (Surr)	250 ug/mL
							Dibromofluoromethane (Surr)	250 ug/mL
							Toluene-d8 (Surr)	250 ug/mL
					MSV_Cus826_IS_00578	1 mL	1,4-Dichlorobenzene-d4	250 ug/mL
							Chlorobenzene-d5 (IS)	250 ug/mL
							Fluorobenzene (IS)	250 ug/mL
							t-Butyl alcohol-d10 (IS)	1250 ug/mL
.MSV_8260_SS_00940	12/21/23	Restek, Lot A0195060			(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
.MSV_Cus826_IS_00578	12/21/23	Restek, Lot A0197488			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL
							Chlorobenzene-d5 (IS)	2500 ug/mL
							Fluorobenzene (IS)	2500 ug/mL
							t-Butyl alcohol-d10 (IS)	12500 ug/mL
MSV_HP25_ISSS_00074	01/25/24	07/25/23	Methanol, Lot EG095	10 mL	MSV_Cus826_IS_00595	1 mL	1,4-Dichlorobenzene-d4	250 ug/mL
							Chlorobenzene-d5 (IS)	250 ug/mL
							Fluorobenzene (IS)	250 ug/mL
							t-Butyl alcohol-d10 (IS)	1250 ug/mL
.MSV_Cus826_IS_00595	04/30/26	Restek, Lot A0197488			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL
							Chlorobenzene-d5 (IS)	2500 ug/mL
							Fluorobenzene (IS)	2500 ug/mL
							t-Butyl alcohol-d10 (IS)	12500 ug/mL
MSV_HP25_ISSS_00074	01/25/24	07/25/23	Methanol, Lot EG095	10 mL	MSV_8260_SS_00974	1 mL	1,2-Dichloroethane-d4 (Surr)	250 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136864-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Bromofluorobenzene (Surr)	250 ug/mL
							Dibromofluoromethane (Surr)	250 ug/mL
							Toluene-d8 (Surr)	250 ug/mL
.MSV_8260_SS_00974	02/29/28		Restek, Lot A0195060		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
MSV_LL_#1_826_00084	07/30/23	07/09/23	Methanol, Lot EG095	1 mL	MSV_CCV_VOC#1_00134	50 uL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromoform	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chlorobromomethane	50 ug/mL
							Chlorodibromomethane	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromomethane	50 ug/mL
							Dichlorobromomethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Ethylene Dibromide	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	100 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136864-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,2,3-Trimethylbenzene	50 ug/mL
							1,3,5-Trichlorobenzene	50 ug/mL
							1,4-Dioxane	2500 ug/mL
							1-Chlorohexane	50 ug/mL
							2-Chloro-1,3-butadiene	50 ug/mL
							2-Methyl-2-propanol	1000 ug/mL
							2-Nitropropane	250 ug/mL
							3-Chloro-1-propene	50 ug/mL
							Acrylonitrile	125 ug/mL
							Benzyl chloride	50 ug/mL
							Carbon disulfide	50 ug/mL
							Cyclohexane	50 ug/mL
							Ethyl methacrylate	50 ug/mL
							Hexane	50 ug/mL
							Iodomethane	50 ug/mL
							Isobutyl alcohol	2500 ug/mL
							Isopropyl ether	50 ug/mL
							Methacrylonitrile	500 ug/mL
							Methyl acetate	50 ug/mL
							Methyl methacrylate	50 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylcyclohexane	50 ug/mL
							n-Butanol	4375 ug/mL
							n-Heptane	50 ug/mL
							Propionitrile	1000 ug/mL
							Tert-amyl methyl ether	50 ug/mL
							Tert-butyl ethyl ether	50 ug/mL
							Tetrahydrofuran	250 ug/mL
							trans-1,4-Dichloro-2-butene	500 ug/mL
					MSV_CCV_VOC#3_00133	200 uL	Acrolein	2500.08 ug/mL
							2-Butanone (MEK)	500 ug/mL
							2-Hexanone	500 ug/mL
							4-Methyl-2-pentanone (MIBK)	500 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136864-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acetone	500 ug/mL
					MSV_V_VOA2_00196	150 uL	1,4-Dioxane	2500 ug/mL
							2-Methyl-2-propanol	1000 ug/mL
							Isobutyl alcohol	2500 ug/mL
							Methacrylonitrile	500 ug/mL
							n-Butanol	4375 ug/mL
							Propionitrile	1000 ug/mL
							trans-1,4-Dichloro-2-butene	500 ug/mL
.MSV_CCV_VOC#1_00134	08/08/23	07/09/23	Methanol, Lot EG095	5 mL	MSV_MegaMIX#1_00133	1 mL	1,1,1,2-Tetrachloroethane	1000 ug/mL
							1,1,1-Trichloroethane	1000 ug/mL
							1,1,2,2-Tetrachloroethane	1000 ug/mL
							1,1,2-Trichloroethane	1000 ug/mL
							1,1-Dichloroethane	1000 ug/mL
							1,1-Dichloroethene	1000 ug/mL
							1,1-Dichloropropene	1000 ug/mL
							1,2,3-Trichlorobenzene	1000 ug/mL
							1,2,3-Trichloropropane	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2,4-Trimethylbenzene	1000 ug/mL
							1,2-Dibromo-3-Chloropropane	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Dichloroethane	1000 ug/mL
							1,2-Dichloropropane	1000 ug/mL
							1,3,5-Trimethylbenzene	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dichloropropane	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							2,2-Dichloropropane	1000 ug/mL
							2-Chlorotoluene	1000 ug/mL
							4-Chlorotoluene	1000 ug/mL
							4-Isopropyltoluene	1000 ug/mL
							Benzene	1000 ug/mL
							Bromobenzene	1000 ug/mL
							Bromoform	1000 ug/mL
							Carbon tetrachloride	1000 ug/mL
							Chlorobenzene	1000 ug/mL
							Chlorobromomethane	1000 ug/mL
							Chlorodibromomethane	1000 ug/mL
							Chloroform	1000 ug/mL
							cis-1,2-Dichloroethene	1000 ug/mL
							cis-1,3-Dichloropropene	1000 ug/mL
							Dibromomethane	1000 ug/mL
							Dichlorobromomethane	1000 ug/mL
							Ethylbenzene	1000 ug/mL
							Ethylene Dibromide	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Isopropylbenzene	1000 ug/mL
							m-Xylene & p-Xylene	2000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136864-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Methylene Chloride	1000 ug/mL
							n-Butylbenzene	1000 ug/mL
							N-Propylbenzene	1000 ug/mL
							Naphthalene	1000 ug/mL
							o-Xylene	1000 ug/mL
							sec-Butylbenzene	1000 ug/mL
							Styrene	1000 ug/mL
							tert-Butylbenzene	1000 ug/mL
							Tetrachloroethene	1000 ug/mL
							Toluene	1000 ug/mL
							trans-1,2-Dichloroethene	1000 ug/mL
							trans-1,3-Dichloropropene	1000 ug/mL
							Trichloroethene	1000 ug/mL
					MSV_MegaMix#2_00141	1 mL	1,1,2-Trichloro-1,2,2-trifluoroethane	1000 ug/mL
							1,2,3-Trimethylbenzene	1000 ug/mL
							1,3,5-Trichlorobenzene	1000 ug/mL
							1,4-Dioxane	12500 ug/mL
							1-Chlorohexane	1000 ug/mL
							2-Chloro-1,3-butadiene	1000 ug/mL
							2-Methyl-2-propanol	5000 ug/mL
							2-Nitropropane	5000 ug/mL
							3-Chloro-1-propene	1000 ug/mL
							Acrylonitrile	2500 ug/mL
							Benzyl chloride	1000 ug/mL
							Carbon disulfide	1000 ug/mL
							Cyclohexane	1000 ug/mL
							Ethyl methacrylate	1000 ug/mL
							Hexane	1000 ug/mL
							Iodomethane	1000 ug/mL
							Isobutyl alcohol	12500 ug/mL
							Isopropyl ether	1000 ug/mL
							Methacrylonitrile	2500 ug/mL
							Methyl acetate	1000 ug/mL
							Methyl methacrylate	1000 ug/mL
							Methyl tert-butyl ether	1000 ug/mL
							Methylcyclohexane	1000 ug/mL
							n-Butanol	12500 ug/mL
							n-Heptane	1000 ug/mL
							Propionitrile	5000 ug/mL
							Tert-amyl methyl ether	1000 ug/mL
							Tert-butyl ethyl ether	1000 ug/mL
							Tetrahydrofuran	5000 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
..MSV_MegaMIX#1_00133	08/08/23		Restek, Lot A0184527		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	5000 ug/mL
							1,1,1-Trichloroethane	5000 ug/mL
							1,1,2,2-Tetrachloroethane	5000 ug/mL
							1,1,2-Trichloroethane	5000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136864-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,1-Dichloroethane	5000 ug/mL
							1,1-Dichloroethene	5000 ug/mL
							1,1-Dichloropropene	5000 ug/mL
							1,2,3-Trichlorobenzene	5000 ug/mL
							1,2,3-Trichloropropane	5000 ug/mL
							1,2,4-Trichlorobenzene	5000 ug/mL
							1,2,4-Trimethylbenzene	5000 ug/mL
							1,2-Dibromo-3-Chloropropane	5000 ug/mL
							1,2-Dichlorobenzene	5000 ug/mL
							1,2-Dichloroethane	5000 ug/mL
							1,2-Dichloropropane	5000 ug/mL
							1,3,5-Trimethylbenzene	5000 ug/mL
							1,3-Dichlorobenzene	5000 ug/mL
							1,3-Dichloropropane	5000 ug/mL
							1,4-Dichlorobenzene	5000 ug/mL
							2,2-Dichloropropane	5000 ug/mL
							2-Chlorotoluene	5000 ug/mL
							4-Chlorotoluene	5000 ug/mL
							4-Isopropyltoluene	5000 ug/mL
							Benzene	5000 ug/mL
							Bromobenzene	5000 ug/mL
							Bromoform	5000 ug/mL
							Carbon tetrachloride	5000 ug/mL
							Chlorobenzene	5000 ug/mL
							Chlorobromomethane	5000 ug/mL
							Chlorodibromomethane	5000 ug/mL
							Chloroform	5000 ug/mL
							cis-1,2-Dichloroethene	5000 ug/mL
							cis-1,3-Dichloropropene	5000 ug/mL
							Dibromomethane	5000 ug/mL
							Dichlorobromomethane	5000 ug/mL
							Ethylbenzene	5000 ug/mL
							Ethylene Dibromide	5000 ug/mL
							Hexachlorobutadiene	5000 ug/mL
							Isopropylbenzene	5000 ug/mL
							m-Xylene & p-Xylene	10000 ug/mL
							Methylene Chloride	5000 ug/mL
							n-Butylbenzene	5000 ug/mL
							N-Propylbenzene	5000 ug/mL
							Naphthalene	5000 ug/mL
							o-Xylene	5000 ug/mL
							sec-Butylbenzene	5000 ug/mL
							Styrene	5000 ug/mL
							tert-Butylbenzene	5000 ug/mL
							Tetrachloroethene	5000 ug/mL
							Toluene	5000 ug/mL
							trans-1,2-Dichloroethene	5000 ug/mL
							trans-1,3-Dichloropropene	5000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136864-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Trichloroethene	5000 ug/mL
..MSV_MegaMix#2_00141	08/08/23		Restek, Lot A0197578		(Purchased Reagent)		1,1,2-Trichloro-1,2,2-trifluoroethane	5000 ug/mL
							1,2,3-Trimethylbenzene	5000 ug/mL
							1,3,5-Trichlorobenzene	5000 ug/mL
							1,4-Dioxane	62500 ug/mL
							1-Chlorohexane	5000 ug/mL
							2-Chloro-1,3-butadiene	5000 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							2-Nitropropane	25000 ug/mL
							3-Chloro-1-propene	5000 ug/mL
							Acrylonitrile	12500 ug/mL
							Benzyl chloride	5000 ug/mL
							Carbon disulfide	5000 ug/mL
							Cyclohexane	5000 ug/mL
							Ethyl methacrylate	5000 ug/mL
							Hexane	5000 ug/mL
							Iodomethane	5000 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropyl ether	5000 ug/mL
							Methacrylonitrile	12500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl methacrylate	5000 ug/mL
							Methyl tert-butyl ether	5000 ug/mL
							Methylcyclohexane	5000 ug/mL
							n-Butanol	62500 ug/mL
							n-Heptane	5000 ug/mL
							Propionitrile	25000 ug/mL
							Tert-amyl methyl ether	5000 ug/mL
							Tert-butyl ethyl ether	5000 ug/mL
							Tetrahydrofuran	25000 ug/mL
							trans-1,4-Dichloro-2-butene	12500 ug/mL
.MSV_CCV_VOC#3_00133	07/30/23	07/09/23	Methanol, Lot EG095	5 mL	MSV_CCV_ACR_00011	0.5 mL	Acrolein	12500.4 ug/mL
					MSV_V_Ketones_00128	1 mL	2-Butanone (MEK)	2500 ug/mL
							2-Hexanone	2500 ug/mL
							4-Methyl-2-pentanone (MIBK)	2500 ug/mL
							Acetone	2500 ug/mL
..MSV_CCV_ACR_00011	07/30/23	05/31/23	Methanol, Lot EG095	10 mL	MSV_VACR_STK_00033	9.259 mL	Acrolein	125004 ug/mL
...MSV_VACR_STK_00033	07/30/23	05/31/23	Methanol, Lot EG095	10 mL	MSV_ACROLEIN_00026	1.4564 g	Acrolein	135008 ug/mL
....MSV_ACROLEIN_00026	11/30/23		Chem Service, Lot 13910600		(Purchased Reagent)		Acrolein	0.927 g/g
..MSV_V_Ketones_00128	06/30/25		Restek, Lot A0186508		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MSV_V_VOA2_00196	08/08/23	07/09/23	Methanol, Lot EG095	5 mL	MSV_V#2B_00325	1 mL	1,4-Dioxane	12500 ug/mL
							2-Methyl-2-propanol	5000 ug/mL
							Isobutyl alcohol	12500 ug/mL
							Methacrylonitrile	2500 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136864-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							n-Butanol	25000 ug/mL
							Propionitrile	5000 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
..MSV_V#2B_00325	05/31/25	Restek, Lot A0197599			(Purchased Reagent)		1,4-Dioxane	62500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Methacrylonitrile	12500 ug/mL
							n-Butanol	125000 ug/mL
							Propionitrile	25000 ug/mL
							trans-1,4-Dichloro-2-butene	12500 ug/mL
MSV_LL_#2_826_00095	07/18/23	07/09/23	Methanol, Lot EG095	1 mL	CCV_ETBR_00005	50 uL	Ethyl bromide	49.9548 ug/mL
					MSV_BCE_00058	25 uL	1-Bromo-2-chloroethane	50 ug/mL
					MSV_CCV_EE_00005	50 uL	Ethyl ether	50.0068 ug/mL
					MSV_V_PentaCL_00034	10 uL	Pentachloroethane	50 ug/mL
.CCV_ETBR_00005	11/15/23	05/16/23	Methanol, Lot EG095	10 mL	MSV_VETBR_STK_00014	0.228 mL	Ethyl bromide	999.096 ug/mL
..MSV_VETBR_STK_00014	11/15/23	05/16/23	Methanol, Lot EG095	10 mL	MSV_EtBr_00007	0.4382 g	Ethyl bromide	43820 ug/mL
...MSV_EtBr_00007	06/30/25	Chem Service, Lot 13345600			(Purchased Reagent)		Ethyl bromide	1 g/g
.MSV_BCE_00058	08/08/23	Restek, Lot A0177627			(Purchased Reagent)		1-Bromo-2-chloroethane	2000 ug/mL
.MSV_CCV_EE_00005	11/10/23	05/10/23	Methanol, Lot EG095	50 mL	MSV_EE_MISCSK_00012	1.686 mL	Ethyl ether	1000.14 ug/mL
..MSV_EE_MISCSK_00012	11/10/23	05/10/23	Methanol, Lot EG095	10 mL	MSV_EE_Neat_00009	0.2966 g	Ethyl ether	29660 ug/mL
...MSV_EE_Neat_00009	05/30/27	Chem Service, Lot 14084700			(Purchased Reagent)		Ethyl ether	1 g/g
.MSV_V_PentaCL_00034	07/18/23	Restek, Lot A0184174			(Purchased Reagent)		Pentachloroethane	5000 ug/mL
MSV_LL_GAS826_00159	07/16/23	07/09/23	Methanol, Lot EG095	1 mL	MSV_CCV_GASES_00513	25 uL	1,2-Dichloro-1,1,2-trifluoroethane	50 ug/mL
							Bromomethane	50 ug/mL
							Butadiene	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Dichlorofluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
.MSV_CCV_GASES_00513	07/16/23	Restek, Lot A0197586			(Purchased Reagent)		1,2-Dichloro-1,1,2-trifluoroethane	2000 ug/mL
							Bromomethane	2000 ug/mL
							Butadiene	2000 ug/mL
							Chloroethane	2000 ug/mL
							Chloromethane	2000 ug/mL
							Dichlorodifluoromethane	2000 ug/mL
							Dichlorofluoromethane	2000 ug/mL
							Trichlorofluoromethane	2000 ug/mL
							Vinyl chloride	2000 ug/mL
MSV_Q_QDME_00033	08/09/23	07/10/23	Methanol, Lot EG095	1 mL	MSV_DME_00048	100 uL	Dimethyl ether	100 ug/mL
.MSV_DME_00048	08/09/23	Restek, Lot A0190883			(Purchased Reagent)		Dimethyl ether	1000 ug/mL
MSV_Q_QDME_00034	09/06/23	08/07/23	Methanol, Lot EG095	1 mL	MSV_DME_00053	100 uL	Dimethyl ether	100 ug/mL
.MSV_DME_00053	09/06/23	Restek, Lot A0190883			(Purchased Reagent)		Dimethyl ether	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136864-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
MSV_V_BFB_00012							1,2-Dichloroethene, Total	
							1,3-Dichloropropene, Total	
							Tentatively Identified Compound	
							Xylenes, Total	
					MSV_VBFB_STK_00010	0.096 mL	BFB	49.7971 ug/mL
.MSV_VBFB_STK_00010	12/13/23	06/13/23	Methanol, Lot EG095	10 mL	MSV_4BFB_NEAT_00010	1.2968 g	BFB	129680 ug/mL
..MSV_4BFB_NEAT_00010	05/31/25	Chem Service, Lot 13775500			(Purchased Reagent)		BFB	1 g/g
MSV_V_SMRV4_00060	07/25/23	06/26/23	Methanol, Lot EG095	1 mL	MSV_CCV_2CEVE_00126	200 uL	2-Chloroethyl vinyl ether	200 ug/mL
					MSV_CCV_LKB_00007	400 uL	cis-1,4-Dichloro-2-butene	399.99 ug/mL
					MSV_V_SMFreon_00028	100 uL	Chlorodifluoromethane	200 ug/mL
.MSV_CCV_2CEVE_00126	07/25/23	06/25/23	Methanol, Lot EG095	5 mL	MSV_V_2CLEVE_00132	1 mL	2-Chloroethyl vinyl ether	1000 ug/mL
..MSV_V_2CLEVE_00132	04/30/25	Restek, Lot A0184487			(Purchased Reagent)		2-Chloroethyl vinyl ether	5000 ug/mL
.MSV_CCV_LKB_00007	12/26/23	06/26/23	Methanol, Lot EG095	50 mL	MSV_Vc14d_STK_00009	1.411 mL	cis-1,4-Dichloro-2-butene	999.976 ug/mL
..MSV_Vc14d_STK_00009	12/26/23	06/26/23	Methanol, Lot EG095	10 mL	MSV_c14dcb_Nt_00004	0.373 g	cis-1,4-Dichloro-2-butene	35435 ug/mL
...MSV_c14dcb_Nt_00004	08/16/27	Aldrich, Lot SHBH4584V			(Purchased Reagent)		cis-1,4-Dichloro-2-butene	0.95 g/g
.MSV_V_SMFreon_00028	07/26/23	Restek, Lot A0184508			(Purchased Reagent)		Chlorodifluoromethane	2000 ug/mL

Reagent

MSV_BCE_00058

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30469 **Lot No.:** A0177627

Description : 1-Bromo-2-chloroethane Standard

1-Bromo-2-Chloroethane Std, 2000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2026 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1-Bromo-2-chloroethane	2,001.3 µg/mL	+/- 11.8868	µg/mL	Gravimetric
	CAS # 107-04-0 (Lot BCCC1146)		+/- 112.2344	µg/mL	Unstressed
	Purity 99%		+/- 114.8594	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

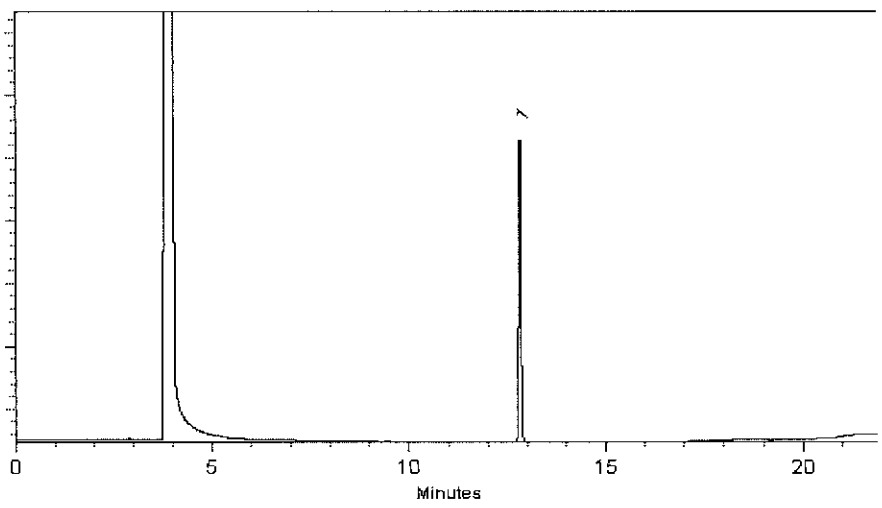
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cathleen Soltis - Mix Technician

Date Mixed: 20-Oct-2021 **Balance:** B251644995

Alexis Shelow - Operations Tech I

Date Passed: 22-Oct-2021

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Reagent

MSV_c14dcb_Nt_00004

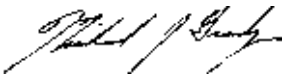
SIGMA-ALDRICH®
sigma-aldrich.com
3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:
cis-1,4-Dichloro-2-butene - 95%

Product Number:	**195707**
Batch Number:	**SHBH4584V**
Brand:	ALDRICH
CAS Number:	1476-11-5
MDL Number:	MFCD00062950
Formula:	C4H6Cl2
Formula Weight:	125.00 g/mol
Storage Temperature:	Store at 2 - 8 °C
Quality Release Date:	30 AUG 2016

Test	Specification	Result
Appearance (Color)	Colorless to Light Yellow	Very Faint Yellow
Appearance (Form)	Liquid	Liquid
Infrared Spectrum	Conforms to Structure	Conforms
Purity (GC)	≥ 94.5 %	98.0 %



Michael Grady, Manager
Quality Control
Sheboygan Falls, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Reagent

MSV_CYC_00008

660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Cyclohexanone

CATALOG NUMBER	N-11531-1G
LOT NUMBER	13529800
DATE CERTIFIED	06/20/22
EXPIRATION DATE	06/30/27
CAS NUMBER	108-94-1
MOLECULAR FORMULA	C6H10O
MOLECULAR WEIGHT	98.16
STORAGE	Store at room temperature (20 - 25 °C).
HANDLING	See Safety Data Sheet
INTENDED USE	For laboratory use only.

Analytical Test	Value
% PURITY (GC/FID)	99.5
FT-IR SPECTROSCOPY	CONFORMS TO STRUCTURE
PHYSICAL APPEARANCE	COLORLESS LIQUID
GC/MS SPECTRA ID	MATCHES NIST

Chem Service, Inc. is accredited to ISO 17034:2016, ISO/IEC 17025:2017 and certified to ISO 9001:2015.

PJLA Testing

PJLA Reference Material Producer

660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

Chem Service, Inc. guarantees the purity to be +/- 0.5% deviation prior to the expiration date shown on the label and exclusive of any customer contamination.

Certified By:

Kristin R Jones

Chem Service, Inc. is accredited to ISO 17034:2016, ISO/IEC 17025:2017 and certified to ISO 9001:2015.

PJLA Testing

PJLA Reference Material Producer

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1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

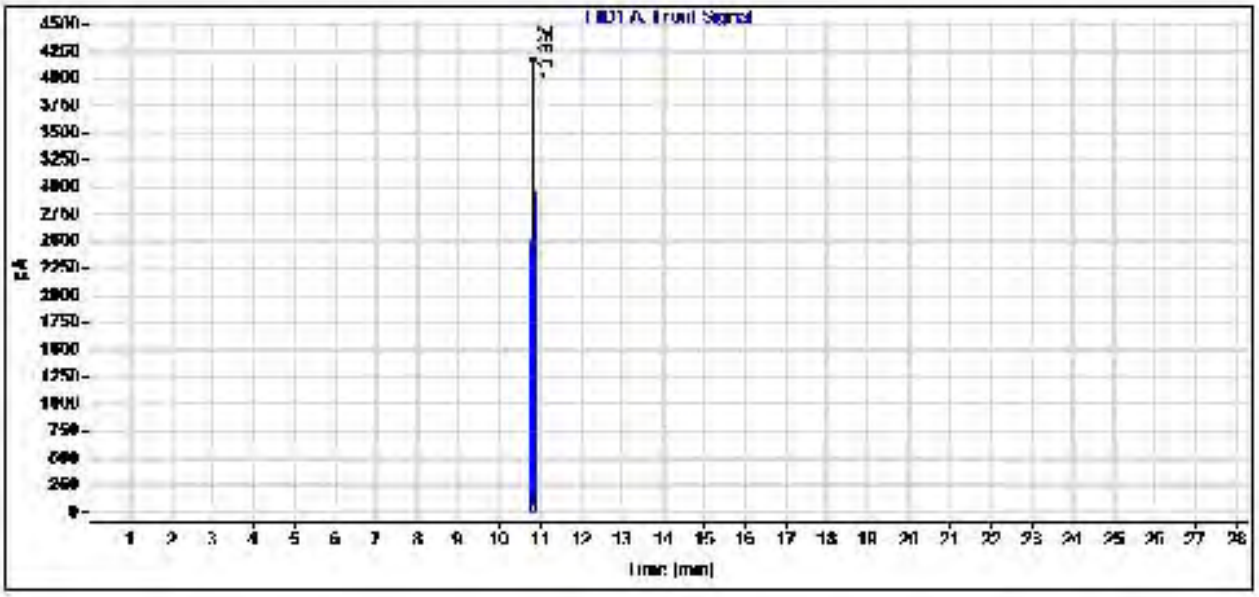
CERTIFICATE OF ANALYSIS

Gas Chromatography / Flame Ionization Detector (GC/FID)

Data file: C:\CHEM32\1\DATA\2022 DATA\0622\FID010695.D

Sample name: N-11531

Instrument:	GC 1	**Sample type:**	Sample
Injection date:	6/17/2022 1:49:46 PM	**Location:**	Vial 51
Acq. method:	SCREEN NEAT-FRANNY.M	**Injection volume:**	1.0uL
Column name:	DB-624 (30m x 0.53mm x 3.0um)		



Signal: FID1 A, Front Signal

RT [min]	Type	Width [min]	Area	Height	Area%
10.835	BB	0.0350	9220.0693	4132.2539	100.0000
		Sum	9220.0693		

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PJLA Testing
PJLA Reference Material Producer

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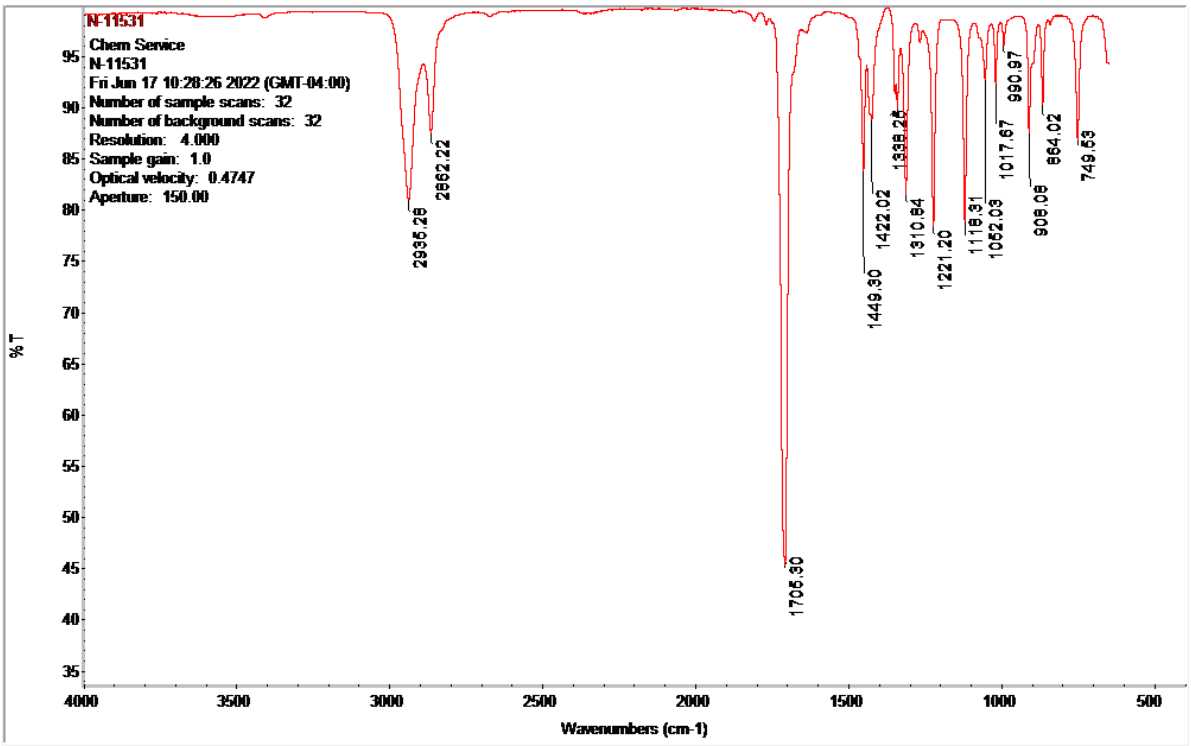
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

Catalog Number: N-11531-1G
Description: Cyclohexanone
Lot Number: 13529800
Expiration Date: 06/30/27



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PJLA Testing
PJLA Reference Material Producer

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CERTIFICATE OF ANALYSIS

Analysis Method:

Catalog Number: N-11531-1G
Description: Cyclohexanone
Lot Number: 13529800
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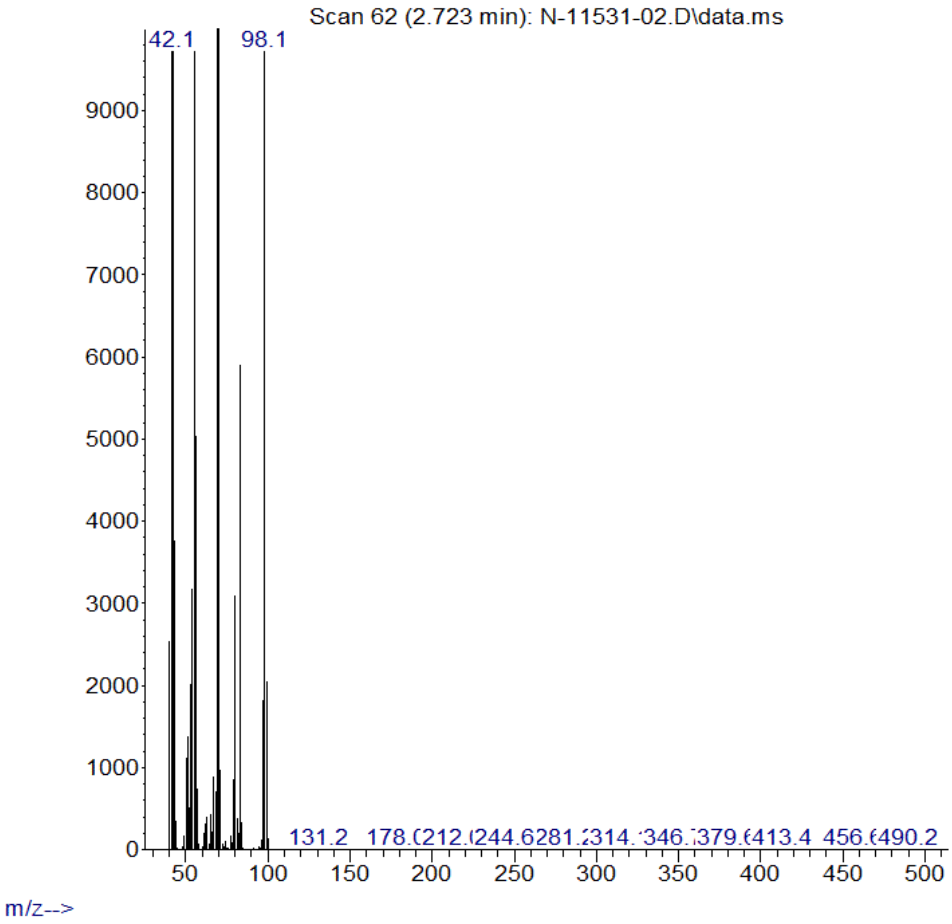

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CERTIFICATE OF ANALYSIS

Analysis Method:

Catalog Number: N-11531-1G
Description: Cyclohexanone
Lot Number: 13529800
Expiration Date: 06/30/27

ChemService Area Percent Report

```
 Data Path : D:\MassHunter\GCMS\1\data\2022\0622\
 Data File : N-11531-02.D
 Acq On    : 17 Jun 2022  12:40
 Operator  :
 Sample    : N-11531
 Misc      :
 ALS Vial  : 16   Sample Multiplier: 1

 Integration Parameters: autoint1.e
 Integrator: ChemStation

 Method    : D:\MassHunter\GCMS\1\methods\SCREEN NO SD.M
 Title     :

 Signal     : TIC: N-11531-02.D\data.ms
```

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	2.723	58	62	80	BV 2	106211218	1767870280	100.00%	100.000%

Sum of corrected areas: 1767870280

SCREEN NO SD.M Fri Jun 17 13:13:05 2022

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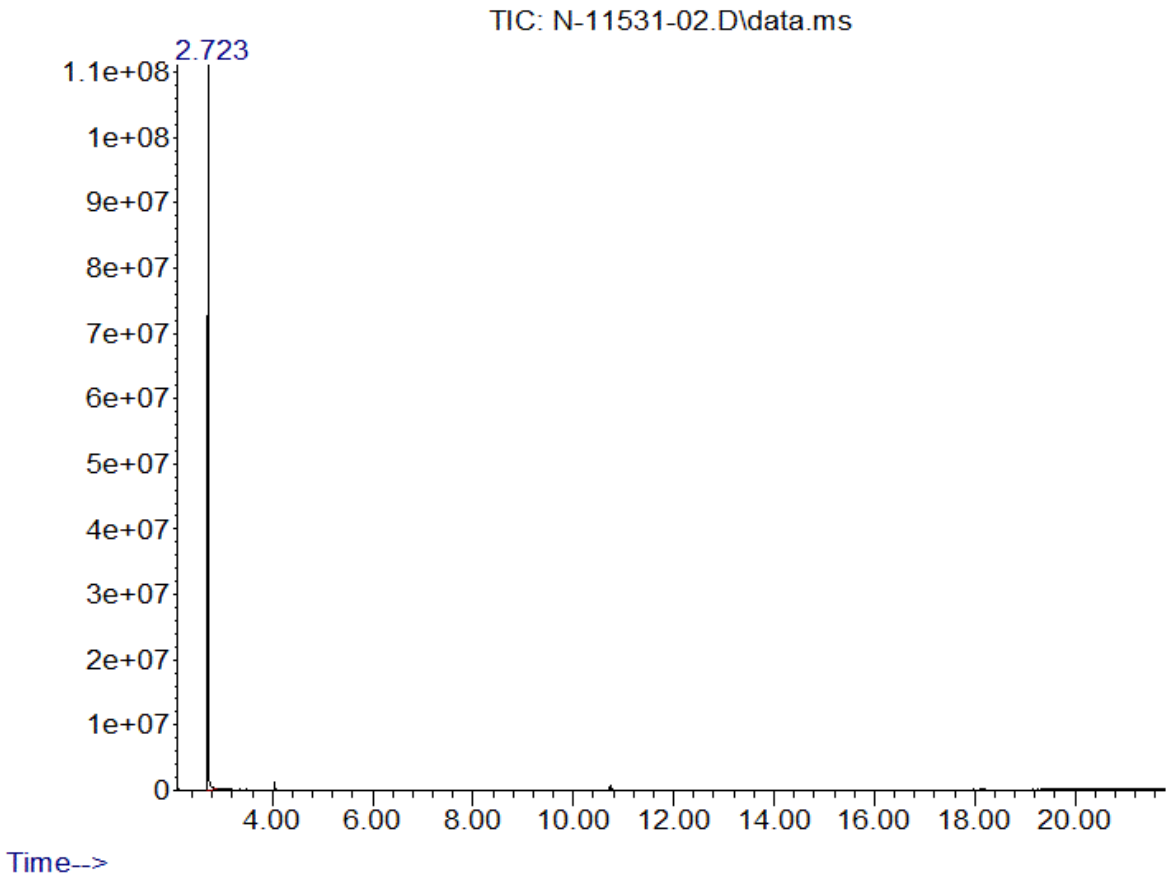
CERTIFICATE OF ANALYSIS

Analysis Method:

Catalog Number: N-11531-1G
Description: Cyclohexanone
Lot Number: 13529800
Expiration Date: 06/30/27



Chem Service, Inc. is accredited to ISO 17034:2016, ISO/IEC 17025:2017 and certified to ISO 9001:2015.
PJLA Testing
PJLA Reference Material Producer

Reagent

MSV_V_PentaCL_00034

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 577491 **Lot No.:** A0184174

Description : Custom Pentachloroethane Standard

Custom Pentachloroethane Standard 5,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2025 **Storage:** 0°C or colder

Ship: Ambient

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Pentachloroethane	5,022.0 µg/mL	+/- 29.4719 µg/mL	Gravimetric
	CAS # 76-01-7 (Lot 10518800)		+/- 281.6071 µg/mL	Unstressed
	Purity 99%		+/- 288.1950 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

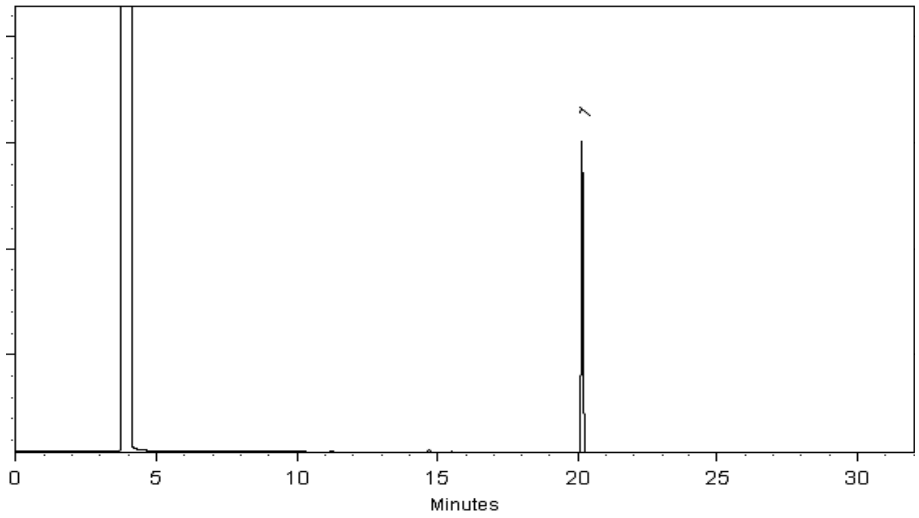
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Nick Yaw - Operations Tech I

Date Mixed: 15-Apr-2022 **Balance:** B707717271

Christie Mills - Operations Technician II

Date Passed: 20-Apr-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Reagent

MSV_V_SMFreon_00028

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 577490 **Lot No.:** A0184508

Description : Custom SM Freons Standard

Custom SM Freons Standard 2,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2025 **Storage:** 0°C or colder

Ship: Ambient

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Chlorotrifluoroethylene	2,000.6 µg/mL	+/- 37.3988 µg/mL	Gravimetric
	CAS # 79-38-9 (Lot 202600)		+/- 117.6695 µg/mL	Unstressed
	Purity 99%		+/- 120.1742 µg/mL	Stressed
2	Chlorodifluoromethane (CFC-22)	2,004.5 µg/mL	+/- 79.7514 µg/mL	Gravimetric
	CAS # 75-45-6 (Lot Q162-44)		+/- 137.3187 µg/mL	Unstressed
	Purity 99%		+/- 139.4793 µg/mL	Stressed
3	2-Chloro-1,1,1-trifluoroethane (HCFC-133a)	2,000.3 µg/mL	+/- 53.9352 µg/mL	Gravimetric
	CAS # 75-88-7 (Lot Q157-146)		+/- 123.9040 µg/mL	Unstressed
	Purity 99%		+/- 126.2843 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

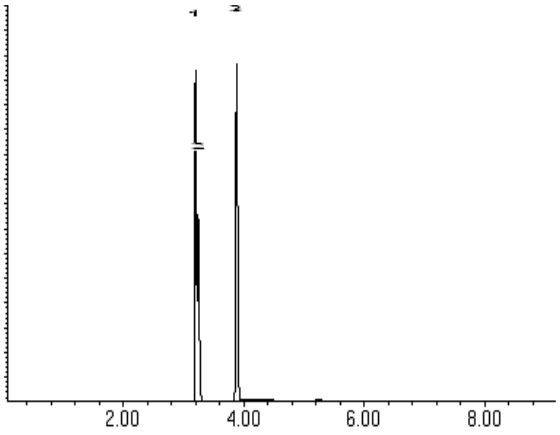
Carrier Gas:
helium-constant flow 2.0 mL/min.

Temp. Program:
40°C (hold 6 min.) to 100°C
@ 6°C/min.

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cathleen Soltis - Mix Technician

Date Mixed: 25-Apr-2022 **Balance:** B707717271

Christie Mills - Operations Technician II

Date Passed: 02-May-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
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Manufacturing Notes:

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Method 8260C Low Level

Volatile Organic Compounds (GC/MS) by Method 8260C Low Level

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories En Job No.: 410-136864-2

SDG No.:

Matrix: Water Level: Low

GC Column (1): R-624SilMS 3 ID: 0.25 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
16C1	410-136864-1	103	102	96	90
16MW8	410-136864-2	102	102	96	90
16MW9	410-136864-3	103	103	99	90
16WC1A	410-136864-4	103	104	95	89
16WDUP	410-136864-5	103	103	96	83
16WC1B	410-136864-6	103	103	95	89
	MB 410-405906/8	103	104	98	89
	LCS 410-405906/5	103	105	101	99
	LCS 410-405906/6	102	99	97	90
16WC1A MS	410-136864-4 MS	103	106	100	97
16WC1A MS	410-136864-4 MS	100	100	95	90
16WC1A MSD	410-136864-4 MSD	103	101	99	97
16WC1A MSD	410-136864-4 MSD	102	102	96	90

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	80-120
DCA = 1,2-Dichloroethane-d4 (Surr)	80-120
TOL = Toluene-d8 (Surr)	80-120
BFB = 4-Bromofluorobenzene (Surr)	80-120

Column to be used to flag recovery values

FORM II EPA 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-2

SDG No.:

Matrix: Water Level: Low Lab File ID: CG08X05.D

Lab ID: LCS 410-405906/6 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Dimethyl ether	5.00	5.11 J	102	70-130	

Column to be used to flag recovery and RPD values

FORM III EPA 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-2

SDG No.:

Matrix: Water Level: Low Lab File ID: CG08X16.D

Lab ID: 410-136864-4 MS Client ID: 16WC1A MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Dimethyl ether	4.65	1.1 J	5.72 J	100	70-130	

Column to be used to flag recovery and RPD values

FORM III EPA 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-2

SDG No.:

Matrix: Water Level: Low Lab File ID: CG08X17.D

Lab ID: 410-136864-4 MSD Client ID: 16WC1A MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Dimethyl ether	4.65	5.49 J	95	4	30	70-130	

Column to be used to flag recovery and RPD values

FORM III EPA 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-2

SDG No.:

Lab File ID: CG08X07.D Lab Sample ID: MB 410-405906/8

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: 10193 Date Analyzed: 08/08/2023 20:27

GC Column: R-624SilMS 30m ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 410-405906/5	CG08X04.D	08/08/2023 19:22
	LCS 410-405906/6	CG08X05.D	08/08/2023 19:44
16WC1A	410-136864-4	CG08X13.D	08/08/2023 22:39
16WC1A MS	410-136864-4 MS	CG08X14.D	08/08/2023 23:01
16WC1A MSD	410-136864-4 MSD	CG08X15.D	08/08/2023 23:23
16WC1A MS	410-136864-4 MS	CG08X16.D	08/08/2023 23:45
16WC1A MSD	410-136864-4 MSD	CG08X17.D	08/09/2023 00:07
16MW8	410-136864-2	CG08X19.D	08/09/2023 00:51
16WDUP	410-136864-5	CG08X20.D	08/09/2023 01:12
16WC1B	410-136864-6	CG08X21.D	08/09/2023 01:34
16MW9	410-136864-3	CG08X22.D	08/09/2023 01:56
16C1	410-136864-1	CG08X24.D	08/09/2023 02:41

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-2

SDG No.:

Lab File ID: CL10T04.D BFB Injection Date: 07/10/2023

Instrument ID: 10193 BFB Injection Time: 15:13

Analysis Batch No.: 395211

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	16.2	
75	30.0 - 60.0 % of mass 95	44.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.2	
173	Less than 2.0 % of mass 174	1.0	(1.1) 1
174	Greater than 50% of mass 95	89.4	
175	5.0 - 9.0 % of mass 174	6.1	(6.9) 1
176	95.0 - 101.0 % of mass 174	86.3	(96.6) 1
177	5.0 - 9.0 % of mass 176	6.1	(7.1) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 410-395211/3	CL10X02.D	07/10/2023	15:50
	IC 410-395211/4	CL10X03.D	07/10/2023	16:12
	IC 410-395211/5	CL10X04.D	07/10/2023	16:34
	IC 410-395211/6	CL10X05.D	07/10/2023	16:56
	IC 410-395211/7	CL10X06.D	07/10/2023	17:18
	IC 410-395211/8	CL10X07.D	07/10/2023	17:40
	IC 410-395211/9	CL10X08.D	07/10/2023	18:02
	ICV 410-395211/11	CL10X10.D	07/10/2023	18:45
	IC 410-395211/13	CL10X12.D	07/10/2023	19:29
	IC 410-395211/14	CL10X13.D	07/10/2023	19:51
	IC 410-395211/15	CL10X14.D	07/10/2023	20:13
	IC 410-395211/16	CL10X15.D	07/10/2023	20:35
	IC 410-395211/17	CL10X16.D	07/10/2023	20:57
	ICIS 410-395211/18	CL10X17.D	07/10/2023	21:18
	IC 410-395211/19	CL10X18.D	07/10/2023	21:40
	ICV 410-395211/21	CL10X20.D	07/10/2023	22:24

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-2

SDG No.:

Lab File ID: CG08T01.D BFB Injection Date: 08/08/2023

Instrument ID: 10193 BFB Injection Time: 18:03

Analysis Batch No.: 405906

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	15.4	
75	30.0 - 60.0 % of mass 95	42.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.5	
173	Less than 2.0 % of mass 174	0.9	(0.9) 1
174	Greater than 50% of mass 95	91.9	
175	5.0 - 9.0 % of mass 174	6.8	(7.4) 1
176	95.0 - 101.0 % of mass 174	91.9	(99.9) 1
177	5.0 - 9.0 % of mass 176	4.8	(5.2) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 410-405906/3	CG08X02.D	08/08/2023	18:38
	CCV 410-405906/4	CG08X03.D	08/08/2023	19:00
	LCS 410-405906/5	CG08X04.D	08/08/2023	19:22
	LCS 410-405906/6	CG08X05.D	08/08/2023	19:44
	MB 410-405906/8	CG08X07.D	08/08/2023	20:27
16WC1A	410-136864-4	CG08X13.D	08/08/2023	22:39
16WC1A MS	410-136864-4 MS	CG08X14.D	08/08/2023	23:01
16WC1A MSD	410-136864-4 MSD	CG08X15.D	08/08/2023	23:23
16WC1A MS	410-136864-4 MS	CG08X16.D	08/08/2023	23:45
16WC1A MSD	410-136864-4 MSD	CG08X17.D	08/09/2023	0:07
16MW8	410-136864-2	CG08X19.D	08/09/2023	0:51
16WDUP	410-136864-5	CG08X20.D	08/09/2023	1:12
16WC1B	410-136864-6	CG08X21.D	08/09/2023	1:34
16MW9	410-136864-3	CG08X22.D	08/09/2023	1:56
16C1	410-136864-1	CG08X24.D	08/09/2023	2:41

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-2

SDG No.:

Sample No.: ICIS 410-395211/18 Date Analyzed: 07/10/2023 21:18

Instrument ID: 10193 GC Column: R-624SilMS 30m ID: 0.25(mm)

Lab File ID (Standard): CL10X17.D Heated Purge: (Y/N) N

Calibration ID: 51835

		TBAd10		FB		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		168052	3.55	2510713	6.95	1990861	10.66
UPPER LIMIT		336104	4.05	5021426	7.45	3981722	11.16
LOWER LIMIT		84026	3.05	1255357	6.45	995431	10.16
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 410-395211/11		163935	3.54	2440146	6.95	1953617	10.66
ICV 410-395211/21		170270	3.56	2617359	6.95	2032145	10.66
CCVIS 410-405906/3		287628	3.54	4285906	6.93	3345755	10.65

TBAd10 = t-Butyl alcohol-d10 (IS)
FB = Fluorobenzene (IS)
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-2

SDG No.:

Sample No.: ICIS 410-395211/18 Date Analyzed: 07/10/2023 21:18

Instrument ID: 10193 GC Column: R-624SilMS 30m ID: 0.25(mm)

Lab File ID (Standard): CL10X17.D Heated Purge: (Y/N) N

Calibration ID: 51835

		DCBd4					
		AREA #	RT #	#	RT #	#	RT #
INITIAL CALIBRATION MID-POINT		1214109	12.62				
UPPER LIMIT		2428218	13.12				
LOWER LIMIT		607055	12.12				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 410-395211/11		1131305	12.63				
ICV 410-395211/21		1221694	12.63				
CCVIS 410-405906/3		2022217	12.62				

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-2

SDG No.:

Sample No.: CCVIS 410-405906/3 Date Analyzed: 08/08/2023 18:38

Instrument ID: 10193 GC Column: R-624SilMS 30m ID: 0.25(mm)

Lab File ID (Standard): CG08X02.D Heated Purge: (Y/N) N

Calibration ID: 51835

		TBAd10		FB		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		287628	3.54	4285906	6.93	3345755	10.65
UPPER LIMIT		575256	4.04	8571812	7.43	6691510	11.15
LOWER LIMIT		143814	3.04	2142953	6.43	1672878	10.15
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 410-405906/5		297302	3.53	4137704	6.93	3206275	10.65
MB 410-405906/8		291677	3.53	3808276	6.94	2935252	10.65
410-136864-4	16WC1A	278187	3.54	3816511	6.94	2990804	10.66
410-136864-4 MS	16WC1A MS	280647	3.53	4035088	6.93	3126956	10.65
410-136864-4 MSD	16WC1A MSD	288709	3.53	4081051	6.93	3185504	10.65
410-136864-4 MS	16WC1A MS	269840	3.53	3930075	6.93	3058566	10.65
410-136864-4 MSD	16WC1A MSD	289987	3.54	3896733	6.93	3040955	10.65
410-136864-2	16MW8	270376	3.53	3772145	6.94	2947068	10.66
410-136864-5	16WDUP	254967	3.53	3798128	6.93	2994118	10.65
410-136864-6	16WC1B	260177	3.54	3771859	6.94	2997194	10.66
410-136864-3	16MW9	253693	3.53	3803984	6.93	2880847	10.66
410-136864-1	16C1	254174	3.53	3760695	6.93	2919864	10.66

TBAd10 = t-Butyl alcohol-d10 (IS)
TBAd10 = t-Butyl alcohol-d10 (IS)
FB = Fluorobenzene (IS)
FB = Fluorobenzene (IS)
Area Limit = 50%-200% of internal standard area
CBZd5 = Chlorobenzene-d5 (IS)
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-2

SDG No.:

Sample No.: CCVIS 410-405906/3 Date Analyzed: 08/08/2023 18:38

Instrument ID: 10193 GC Column: R-624SilMS 30m ID: 0.25(mm)

Lab File ID (Standard): CG08X02.D Heated Purge: (Y/N) N

Calibration ID: 51835

		DCBd4					
		AREA #	RT #	#	RT #	#	RT #
12/24 HOUR STD		2022217	12.62				
UPPER LIMIT		4044434	13.12				
LOWER LIMIT		1011109	12.12				
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 410-405906/5		1960785	12.62				
MB 410-405906/8		1616490	12.63				
410-136864-4	16WC1A	1576674	12.63				
410-136864-4 MS	16WC1A MS	1906091	12.62				
410-136864-4 MSD	16WC1A MSD	1923821	12.62				
410-136864-4 MS	16WC1A MS	1608332	12.63				
410-136864-4 MSD	16WC1A MSD	1612741	12.63				
410-136864-2	16MW8	1566123	12.63				
410-136864-5	16WDUP	1611879	12.63				
410-136864-6	16WC1B	1606982	12.63				
410-136864-3	16MW9	1552944	12.63				
410-136864-1	16C1	1474657	12.63				

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136864-2

SDG No.:

Client Sample ID: 16C1
Lab Sample ID: 410-136864-1

Matrix: Water
Lab File ID: CG08X24.D

Analysis Method: EPA 8260C
Date Collected: 07/27/2023 12:45

Sample wt/vol: 25(mL)
Date Analyzed: 08/09/2023 02:41

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 405906
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
115-10-6	Dimethyl ether	7.7	J	10	1.1

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		80-120
1868-53-7	Dibromofluoromethane (Surr)	103		80-120
460-00-4	4-Bromofluorobenzene (Surr)	90		80-120
2037-26-5	Toluene-d8 (Surr)	96		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X24.D
Lims ID: 410-136864-B-1
Client ID: 16C1
Sample Type: Client
Inject. Date: 09-Aug-2023 02:41:30 ALS Bottle#: 24 Worklist Smp#: 25
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090928-025
Operator ID: gaw91131 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 09-Aug-2023 14:59:19 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1657

First Level Reviewer: innoonk Date: 09-Aug-2023 14:59:19

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
	2 Dichlorodifluoromethane	85		1.684				ND	
	4 Dimethyl ether	45	1.721	1.739	-0.018	96	976654	7.65	
	5 Chloromethane	50		1.849				ND	7
	6 Vinyl chloride	62	1.928	1.940	-0.012	36	9654	0.0863	
	9 Bromomethane	94		2.209				ND	7
	10 Chloroethane	64	2.264	2.270	-0.006	99	222614	3.38	
	12 Trichlorofluoromethane	101		2.532				ND	U
	14 Ethyl ether	59	2.690	2.696	-0.006	89	2591322	36.0	E
	18 1,1-Dichloroethene	96	2.940	2.946	-0.006	96	16742	0.2046	
	20 Acetone	43	2.995	2.989	0.006	28	6210	0.5147	
	21 1,1,2-Trichloro-1,2,2-trifluoroe	101		3.001				ND	7
	22 Iodomethane	142		3.111				ND	
	25 Carbon disulfide	76		3.196				ND	7
	27 Acetonitrile	41		3.318				ND	
	29 3-Chloro-1-propene	41		3.336				ND	7
	30 Methylene Chloride	84	3.489	3.489	0.000	90	56712	0.5546	
*	31 t-Butyl alcohol-d10 (IS)	65	3.526	3.544	-0.018	97	254174	50.0	
	33 Acrylonitrile	53		3.800				ND	
	35 trans-1,2-Dichloroethene	96		3.824				ND	7
	37 1,1-Dichloroethane	63	4.434	4.434	0.000	95	905030	5.20	
	38 Vinyl acetate	43		4.446				ND	7
	40 2-Chloro-1,3-butadiene	53		4.550				ND	
	42 2-Butanone (MEK)	43		5.281				ND	U
	45 Propionitrile	54		5.391				ND	
	47 Methacrylonitrile	67		5.586				ND	
	49 Tetrahydrofuran	71	5.678	5.659	0.019	87	112144	16.2	
	50 Chloroform	83		5.799				ND	
	53 1,1,1-Trichloroethane	97	6.013	6.025	-0.012	47	35708	0.2461	
$	54 Dibromofluoromethane (Surr)	113	6.025	6.025	0.000	94	902569	10.3	
	56 Carbon tetrachloride	117		6.238				ND	
	58 Isobutyl alcohol	41		6.476				ND	U
$	59 1,2-Dichloroethane-d4 (Surr)	102	6.488	6.482	0.006	99	189476	10.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
60 Benzene	78	6.513	6.507	0.006	94	138473	0.3335	
61 1,2-Dichloroethane	62		6.592				ND	7
* 65 Fluorobenzene (IS)	96	6.933	6.933	0.000	99	3760695	10.0	
68 Trichloroethene	95		7.427				ND	
70 1,2-Dichloropropane	63		7.769				ND	7
72 Dibromomethane	93		7.884				ND	
74 1,4-Dioxane	88		7.890				ND	7
73 Methyl methacrylate	69		7.890				ND	7
76 Dichlorobromomethane	83		8.134				ND	
82 4-Methyl-2-pentanone (MIBK)	43		8.915				ND	7
$ 83 Toluene-d8 (Surr)	98	9.049	9.043	0.006	93	3690083	9.62	
84 Toluene	92		9.134				ND	7
85 trans-1,3-Dichloropropene	75		9.451				ND	7
86 Ethyl methacrylate	69		9.536				ND	7
87 1,1,2-Trichloroethane	97		9.671				ND	
88 Tetrachloroethene	166	9.768	9.750	0.018	95	15775	0.1199	
89 1,3-Dichloropropane	76		9.841				ND	7
106 2-Hexanone	43		9.921				ND	7
108 Chlorodibromomethane	129		10.073				ND	
110 Ethylene Dibromide	107		10.183				ND	
* 111 Chlorobenzene-d5 (IS)	117	10.658	10.652	0.006	83	2919864	10.0	
114 1,1,1,2-Tetrachloroethane	131		10.774				ND	
115 Ethylbenzene	91		10.780				ND	
116 m-Xylene & p-Xylene	106		10.902				ND	
S 117 Xylenes, Total	106		11.245				ND	7
118 o-Xylene	106		11.250				ND	7
119 Styrene	104		11.268				ND	7
120 Bromoform	173		11.426				ND	7
$ 124 4-Bromofluorobenzene (Surr)	95	11.719	11.713	0.006	96	1228537	8.95	
126 1,1,2,2-Tetrachloroethane	83		11.829				ND	
128 1,2,3-Trichloropropane	110		11.871				ND	
134 Pentachloroethane	167		12.329				ND	
137 1,3-Dichlorobenzene	146		12.566				ND	7
* 139 1,4-Dichlorobenzene-d4	152	12.627	12.621	0.006	93	1474657	10.0	
140 1,4-Dichlorobenzene	146		12.640				ND	7
144 1,2-Dichlorobenzene	146		12.902				ND	7
148 1,2-Dibromo-3-Chloropropane	155		13.469				ND	7
150 1,2,4-Trichlorobenzene	180		14.023				ND	
151 Hexachlorobutadiene	225		14.103				ND	
152 Naphthalene	128		14.200				ND	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

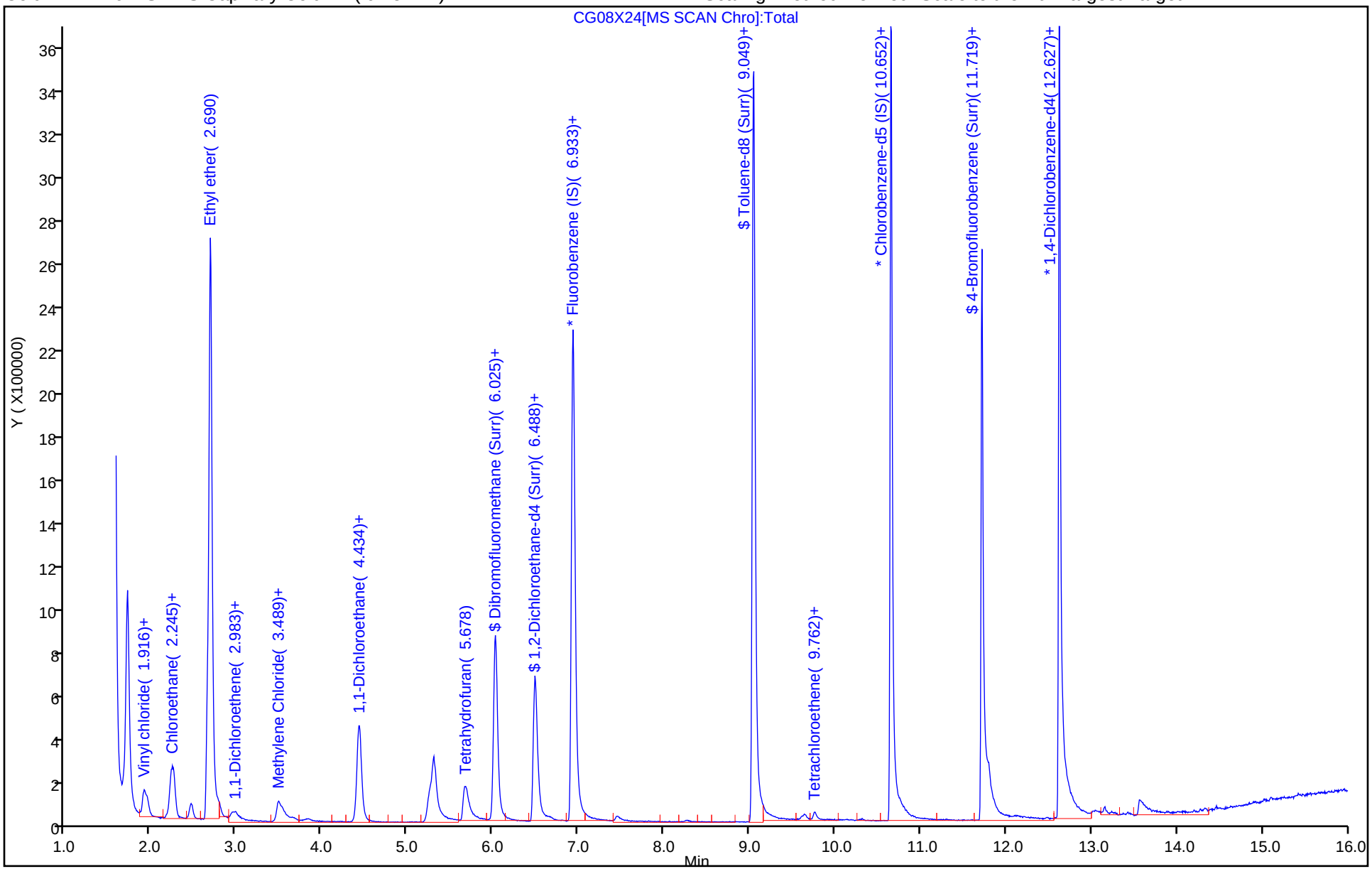
MSV_HP25_ISSS_00074 Amount Added: 1.00 Units: uL Run Reagent

Report Date: 09-Aug-2023 14:59:19 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X24.D				
Injection Date:	09-Aug-2023 02:41:30	Instrument ID:	10193	Operator ID:	gaw91131
Lims ID:	410-136864-B-1	Lab Sample ID:	410-136864-1	Worklist Smp#:	25
Client ID:	16C1				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X24.D
Lims ID: 410-136864-B-1
Client ID: 16C1
Sample Type: Client
Inject. Date: 09-Aug-2023 02:41:30 ALS Bottle#: 24 Worklist Smp#: 25
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090928-025
Operator ID: gaw91131 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 09-Aug-2023 14:59:19 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1657

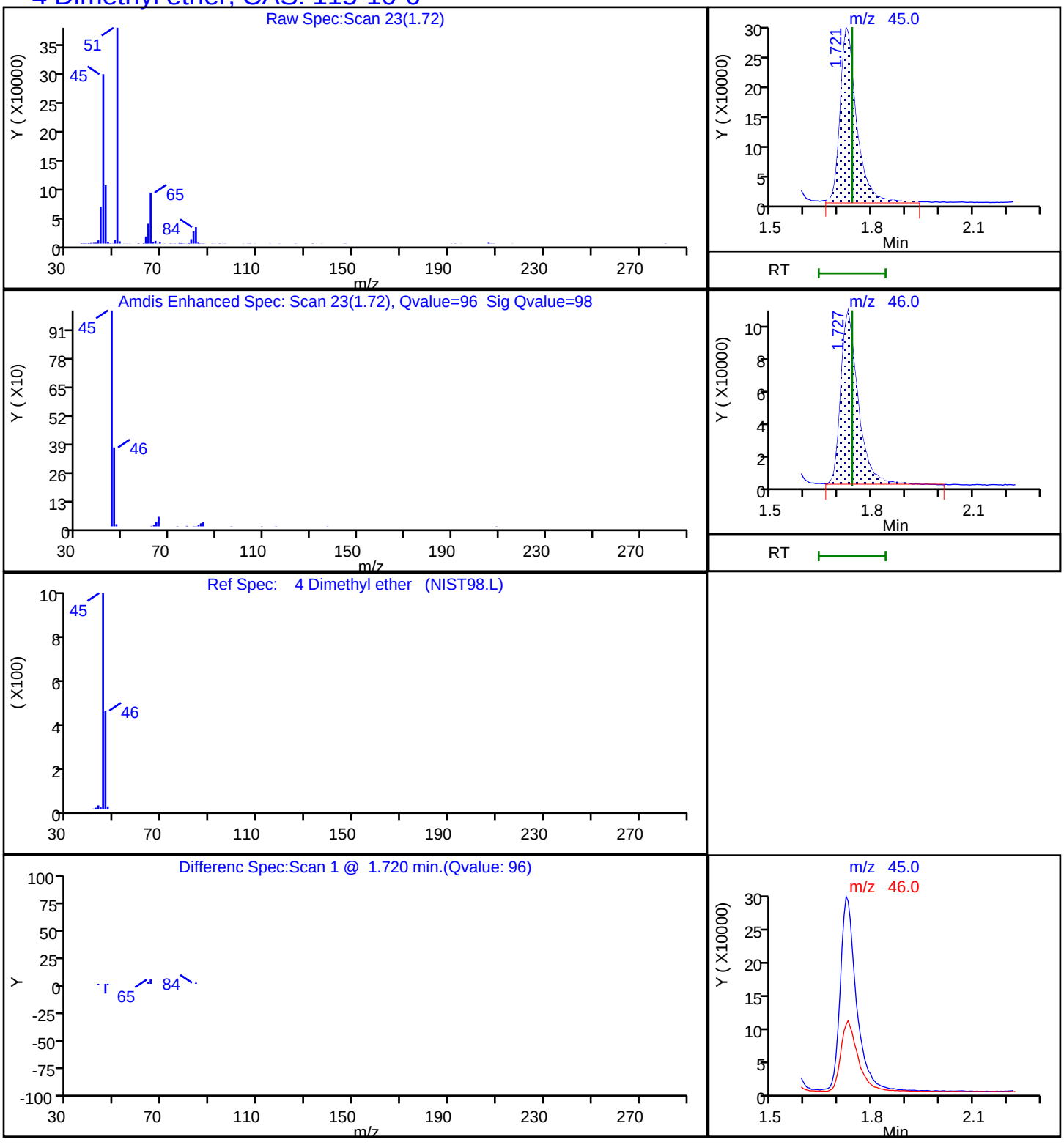
First Level Reviewer: innoonk Date: 09-Aug-2023 14:59:19

Compound	Amount Added	Amount Recovered	% Rec.
$ 54 Dibromofluoromethane (Surr)	10.0	10.3	102.66
$ 59 1,2-Dichloroethane-d4 (Surr)	10.0	10.2	101.92
$ 83 Toluene-d8 (Surr)	10.0	9.62	96.19
$ 124 4-Bromofluorobenzene (Surr)	10.0	8.95	89.51

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X24.D				
Injection Date:	09-Aug-2023 02:41:30	Instrument ID:	10193		
Lims ID:	410-136864-B-1	Lab Sample ID:	410-136864-1		
Client ID:	16C1				
Operator ID:	gaw91131	ALS Bottle#:	24	Worklist Smp#:	25
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

4 Dimethyl ether, CAS: 115-10-6



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136864-2

SDG No.:

Client Sample ID: 16MW8
Lab Sample ID: 410-136864-2

Matrix: Water
Lab File ID: CG08X19.D

Analysis Method: EPA 8260C
Date Collected: 07/26/2023 10:05

Sample wt/vol: 25(mL)
Date Analyzed: 08/09/2023 00:51

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 405906
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
115-10-6	Dimethyl ether	ND		10	1.1

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		80-120
1868-53-7	Dibromofluoromethane (Surr)	102		80-120
460-00-4	4-Bromofluorobenzene (Surr)	90		80-120
2037-26-5	Toluene-d8 (Surr)	96		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X19.D
Lims ID: 410-136864-B-2
Client ID: 16MW8
Sample Type: Client
Inject. Date: 09-Aug-2023 00:51:30 ALS Bottle#: 19 Worklist Smp#: 20
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090928-020
Operator ID: gaw91131 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 09-Aug-2023 12:16:17 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1657

First Level Reviewer: innoonk Date: 09-Aug-2023 12:16:17

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
	2 Dichlorodifluoromethane	85		1.684				ND	
	4 Dimethyl ether	45	1.721	1.739	-0.018	69	36877	0.2881	
	5 Chloromethane	50		1.849				ND	7
	6 Vinyl chloride	62		1.940				ND	7
	9 Bromomethane	94		2.209				ND	7
	10 Chloroethane	64	2.270	2.270	0.000	38	5453	0.0826	
	12 Trichlorofluoromethane	101		2.532				ND	7
	14 Ethyl ether	59	2.696	2.696	0.000	89	692559	9.59	
	18 1,1-Dichloroethene	96		2.946				ND	7
	20 Acetone	43	3.007	2.989	0.018	61	11921	0.9287	
	21 1,1,2-Trichloro-1,2,2-trifluoroe	101		3.001				ND	
	22 Iodomethane	142		3.111				ND	
	25 Carbon disulfide	76		3.196				ND	7
	27 Acetonitrile	41		3.318				ND	7
	29 3-Chloro-1-propene	41		3.336				ND	
	30 Methylene Chloride	84	3.501	3.489	0.012	36	5283	0.0515	M
*	31 t-Butyl alcohol-d10 (IS)	65	3.526	3.544	-0.018	97	270376	50.0	
	33 Acrylonitrile	53		3.800				ND	7
	35 trans-1,2-Dichloroethene	96		3.824				ND	
	37 1,1-Dichloroethane	63	4.434	4.434	0.000	96	30783	0.1762	
	38 Vinyl acetate	43		4.446				ND	7
	40 2-Chloro-1,3-butadiene	53		4.550				ND	
	42 2-Butanone (MEK)	43		5.281				ND	7
	45 Propionitrile	54		5.391				ND	
	47 Methacrylonitrile	67		5.586				ND	
	49 Tetrahydrofuran	71	5.708	5.659	0.049	95	10366	1.40	
	50 Chloroform	83		5.799				ND	7
	53 1,1,1-Trichloroethane	97		6.025				ND	
$	54 Dibromofluoromethane (Surr)	113	6.031	6.025	0.006	94	903020	10.2	
	56 Carbon tetrachloride	117		6.238				ND	
	58 Isobutyl alcohol	41		6.476				ND	
$	59 1,2-Dichloroethane-d4 (Surr)	102	6.488	6.482	0.006	99	189378	10.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
60 Benzene	78	6.519	6.507	0.012	93	21385	0.0514	
61 1,2-Dichloroethane	62		6.592				ND	7
* 65 Fluorobenzene (IS)	96	6.940	6.933	0.007	99	3772145	10.0	
68 Trichloroethene	95		7.427				ND	
70 1,2-Dichloropropane	63		7.769				ND	7
72 Dibromomethane	93		7.884				ND	
74 1,4-Dioxane	88		7.890				ND	
73 Methyl methacrylate	69		7.890				ND	
76 Dichlorobromomethane	83		8.134				ND	
82 4-Methyl-2-pentanone (MIBK)	43		8.915				ND	7
$ 83 Toluene-d8 (Surr)	98	9.049	9.043	0.006	93	3731019	9.64	
84 Toluene	92		9.134				ND	7
85 trans-1,3-Dichloropropene	75		9.451				ND	7
86 Ethyl methacrylate	69		9.536				ND	7
87 1,1,2-Trichloroethane	97		9.671				ND	
88 Tetrachloroethene	166	9.762	9.750	0.012	90	4234	0.0319	
89 1,3-Dichloropropane	76		9.841				ND	7
106 2-Hexanone	43		9.921				ND	7
108 Chlorodibromomethane	129		10.073				ND	
110 Ethylene Dibromide	107		10.183				ND	
* 111 Chlorobenzene-d5 (IS)	117	10.658	10.652	0.006	83	2947068	10.0	
114 1,1,1,2-Tetrachloroethane	131		10.774				ND	
115 Ethylbenzene	91		10.780				ND	
116 m-Xylene & p-Xylene	106		10.902				ND	7
S 117 Xylenes, Total	106		11.245				ND	7
118 o-Xylene	106		11.250				ND	7
119 Styrene	104		11.268				ND	7
120 Bromoform	173		11.426				ND	7
$ 124 4-Bromofluorobenzene (Surr)	95	11.719	11.713	0.006	96	1242076	8.97	
126 1,1,2,2-Tetrachloroethane	83		11.829				ND	
128 1,2,3-Trichloropropane	110		11.871				ND	
134 Pentachloroethane	167		12.329				ND	
137 1,3-Dichlorobenzene	146		12.566				ND	7
* 139 1,4-Dichlorobenzene-d4	152	12.627	12.621	0.006	93	1566123	10.0	
140 1,4-Dichlorobenzene	146		12.640				ND	7
144 1,2-Dichlorobenzene	146		12.902				ND	
148 1,2-Dibromo-3-Chloropropane	155		13.469				ND	
150 1,2,4-Trichlorobenzene	180		14.023				ND	
151 Hexachlorobutadiene	225		14.103				ND	
152 Naphthalene	128		14.200				ND	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

Reagents:

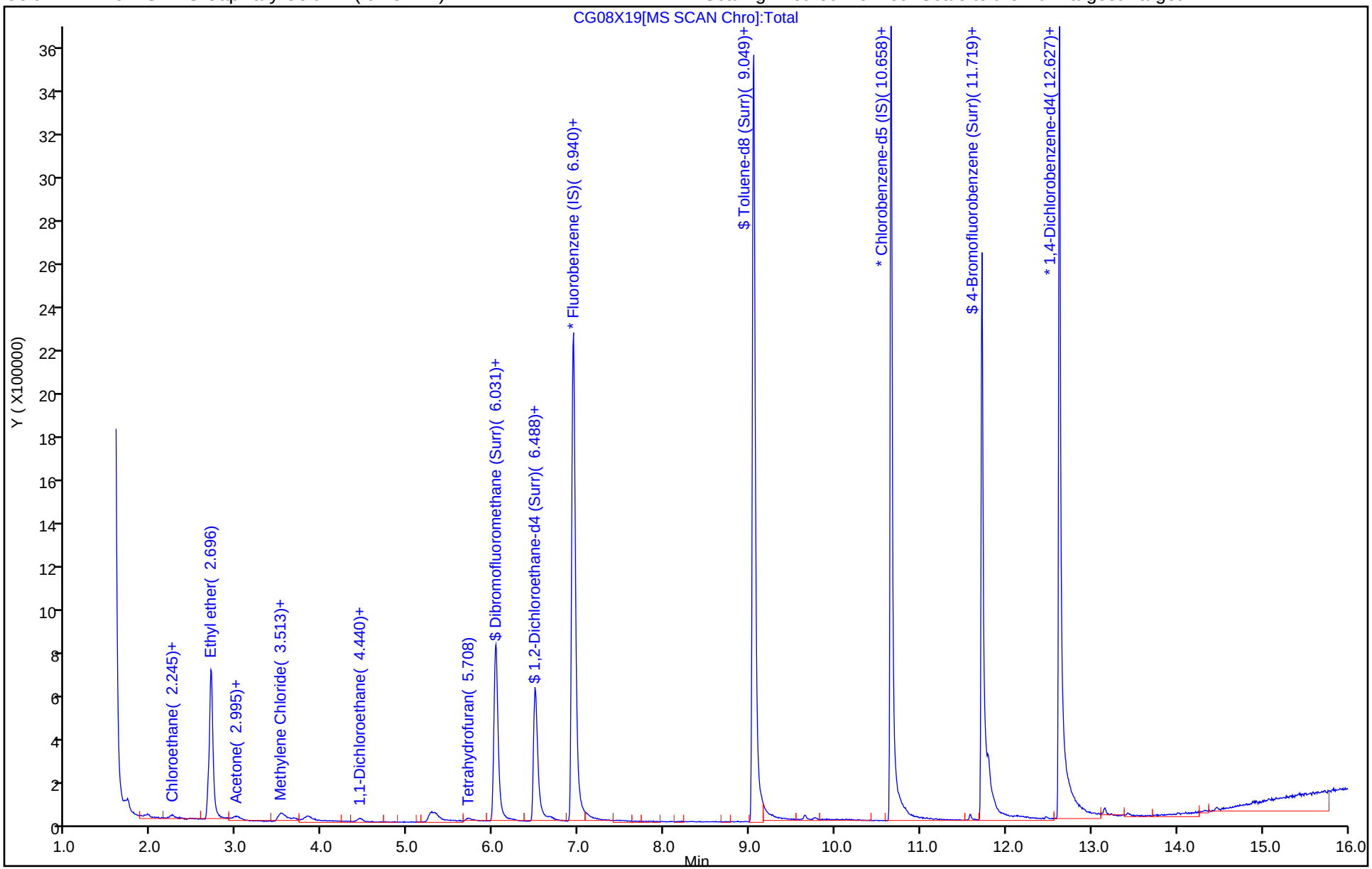
MSV_HP25_ISSS_00074 Amount Added: 1.00 Units: uL Run Reagent

Report Date: 09-Aug-2023 12:16:18 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X19.D				
Injection Date:	09-Aug-2023 00:51:30	Instrument ID:	10193	Operator ID:	gaw91131
Lims ID:	410-136864-B-2	Lab Sample ID:	410-136864-2	Worklist Smp#:	20
Client ID:	16MW8				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X19.D
Lims ID: 410-136864-B-2
Client ID: 16MW8
Sample Type: Client
Inject. Date: 09-Aug-2023 00:51:30 ALS Bottle#: 19 Worklist Smp#: 20
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090928-020
Operator ID: gaw91131 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 09-Aug-2023 12:16:17 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1657

First Level Reviewer: innoonk Date: 09-Aug-2023 12:16:17

Compound	Amount Added	Amount Recovered	% Rec.
$ 54 Dibromofluoromethane (Surr)	10.0	10.2	102.39
$ 59 1,2-Dichloroethane-d4 (Surr)	10.0	10.2	101.56
$ 83 Toluene-d8 (Surr)	10.0	9.64	96.36
$ 124 4-Bromofluorobenzene (Surr)	10.0	8.97	89.66

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136864-2

SDG No.:

Client Sample ID: 16MW9
Lab Sample ID: 410-136864-3

Matrix: Water
Lab File ID: CG08X22.D

Analysis Method: EPA 8260C
Date Collected: 07/27/2023 11:25

Sample wt/vol: 25(mL)
Date Analyzed: 08/09/2023 01:56

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 405906
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
115-10-6	Dimethyl ether	ND		10	1.1

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		80-120
1868-53-7	Dibromofluoromethane (Surr)	103		80-120
460-00-4	4-Bromofluorobenzene (Surr)	90		80-120
2037-26-5	Toluene-d8 (Surr)	99		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X22.D
Lims ID: 410-136864-B-3
Client ID: 16MW9
Sample Type: Client
Inject. Date: 09-Aug-2023 01:56:30 ALS Bottle#: 22 Worklist Smp#: 23
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090928-023
Operator ID: gaw91131 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 09-Aug-2023 13:38:42 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1657

First Level Reviewer: innoonk Date: 09-Aug-2023 13:36:27

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85		1.684				ND	
4 Dimethyl ether	45		1.739				ND	U
5 Chloromethane	50		1.849				ND	7
6 Vinyl chloride	62	1.941	1.940	0.001	46	12470	0.1102	
9 Bromomethane	94		2.209				ND	7
10 Chloroethane	64	2.258	2.270	-0.012	99	127945	1.92	
12 Trichlorofluoromethane	101		2.532				ND	7
14 Ethyl ether	59	2.690	2.696	-0.006	90	4825500	66.3	E
18 1,1-Dichloroethene	96	2.946	2.946	0.000	95	13834	0.1672	
20 Acetone	43	2.971	2.989	-0.018	33	7419	0.6160	
21 1,1,2-Trichloro-1,2,2-trifluoroe	101		3.001				ND	
22 Iodomethane	142		3.111				ND	
25 Carbon disulfide	76		3.196				ND	7
27 Acetonitrile	41		3.318				ND	
29 3-Chloro-1-propene	41		3.336				ND	
30 Methylene Chloride	84	3.483	3.489	-0.006	75	9057	0.0876	M
* 31 t-Butyl alcohol-d10 (IS)	65	3.526	3.544	-0.018	97	253693	50.0	
33 Acrylonitrile	53		3.800				ND	7
35 trans-1,2-Dichloroethene	96	3.837	3.824	0.012	56	3397	0.0338	
37 1,1-Dichloroethane	63	4.434	4.434	0.000	96	899325	5.10	
38 Vinyl acetate	43		4.446				ND	U
40 2-Chloro-1,3-butadiene	53		4.550				ND	
42 2-Butanone (MEK)	43		5.281				ND	U
45 Propionitrile	54		5.391				ND	
47 Methacrylonitrile	67		5.586				ND	
49 Tetrahydrofuran	71		5.659				ND	
50 Chloroform	83		5.799				ND	
53 1,1,1-Trichloroethane	97		6.025				ND	
$ 54 Dibromofluoromethane (Surr)	113	6.025	6.025	0.000	94	912008	10.3	
56 Carbon tetrachloride	117		6.238				ND	
58 Isobutyl alcohol	41		6.476				ND	
$ 59 1,2-Dichloroethane-d4 (Surr)	102	6.482	6.482	0.000	99	193706	10.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
60 Benzene	78	6.507	6.507	0.000	95	164728	0.3923	
61 1,2-Dichloroethane	62		6.592				ND	7
* 65 Fluorobenzene (IS)	96	6.933	6.933	0.000	99	3803984	10.0	
68 Trichloroethene	95	7.464	7.427	0.037	48	4836	0.0449	Ma
70 1,2-Dichloropropane	63		7.769				ND	7
72 Dibromomethane	93		7.884				ND	
74 1,4-Dioxane	88		7.890				ND	7
73 Methyl methacrylate	69		7.890				ND	
76 Dichlorobromomethane	83		8.134				ND	
82 4-Methyl-2-pentanone (MIBK)	43		8.915				ND	7
$ 83 Toluene-d8 (Surr)	98	9.043	9.043	0.000	93	3736362	9.87	
84 Toluene	92		9.134				ND	7
85 trans-1,3-Dichloropropene	75		9.451				ND	7
86 Ethyl methacrylate	69		9.536				ND	7
87 1,1,2-Trichloroethane	97		9.671				ND	
88 Tetrachloroethene	166	9.768	9.750	0.018	93	7307	0.0563	
89 1,3-Dichloropropane	76		9.841				ND	
106 2-Hexanone	43		9.921				ND	7
108 Chlorodibromomethane	129		10.073				ND	
110 Ethylene Dibromide	107		10.183				ND	
* 111 Chlorobenzene-d5 (IS)	117	10.658	10.652	0.006	83	2880847	10.0	
114 1,1,1,2-Tetrachloroethane	131		10.774				ND	
115 Ethylbenzene	91		10.780				ND	
116 m-Xylene & p-Xylene	106		10.902				ND	7
S 117 Xylenes, Total	106		11.245				ND	7
118 o-Xylene	106		11.250				ND	7
119 Styrene	104		11.268				ND	
120 Bromoform	173		11.426				ND	7
$ 124 4-Bromofluorobenzene (Surr)	95	11.719	11.713	0.006	97	1221934	9.02	
126 1,1,2,2-Tetrachloroethane	83		11.829				ND	
128 1,2,3-Trichloropropane	110		11.871				ND	
134 Pentachloroethane	167		12.329				ND	
137 1,3-Dichlorobenzene	146		12.566				ND	7
* 139 1,4-Dichlorobenzene-d4	152	12.627	12.621	0.006	92	1552944	10.0	
140 1,4-Dichlorobenzene	146		12.640				ND	7
144 1,2-Dichlorobenzene	146		12.902				ND	
148 1,2-Dibromo-3-Chloropropane	155		13.469				ND	
150 1,2,4-Trichlorobenzene	180		14.023				ND	
151 Hexachlorobutadiene	225		14.103				ND	
152 Naphthalene	128		14.200				ND	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

7 - Failed Limit of Detection

Review Flags
M - Manually Integrated
U - Marked Undetected
a - User Assigned ID

Reagents:

MSV_HP25_ISSS_00074 Amount Added: 1.00 Units: uL Run Reagent

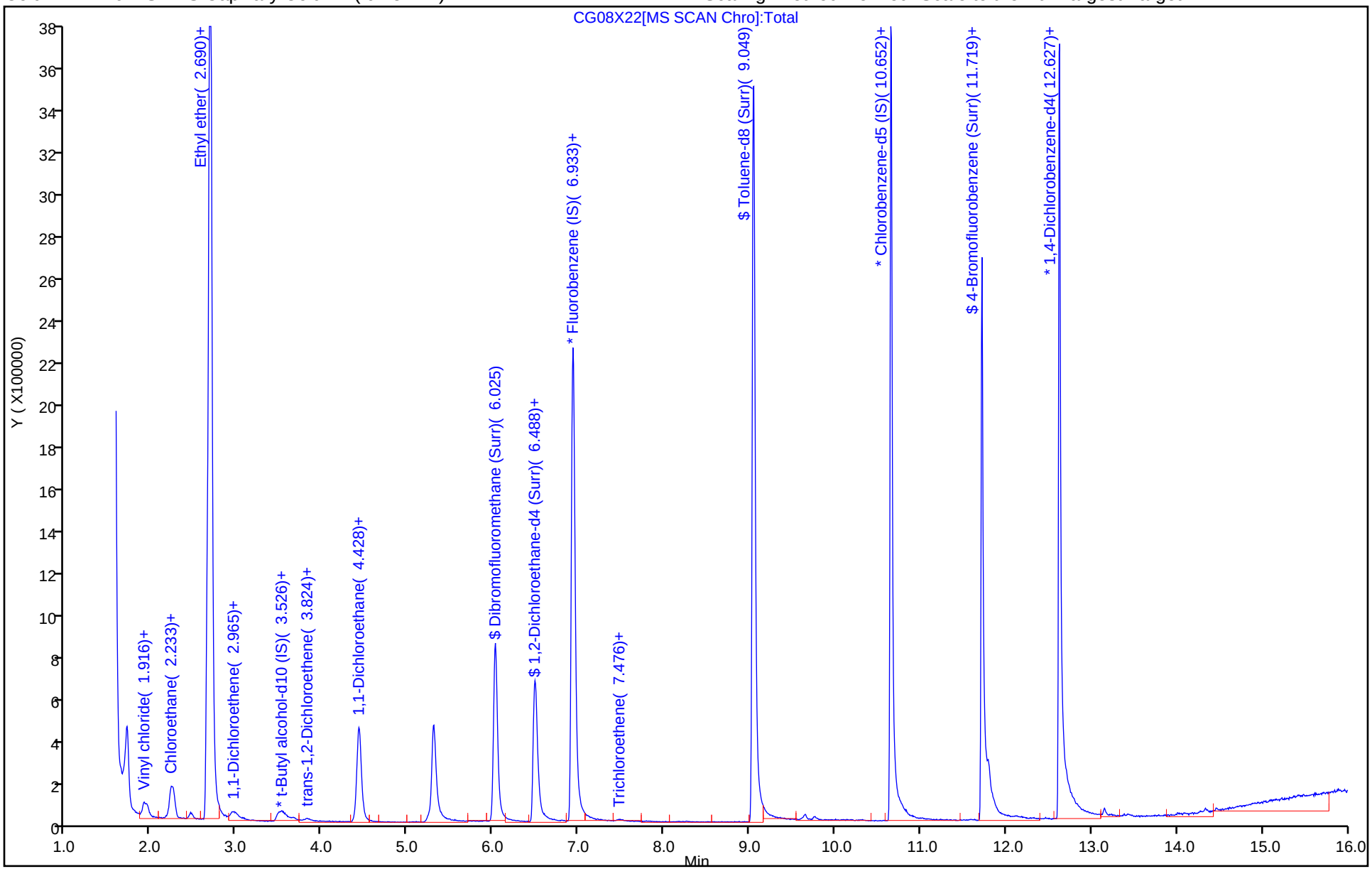
Report Date: 09-Aug-2023 13:38:43 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X22.D

Injection Date:	09-Aug-2023 01:56:30	Instrument ID:	10193	Operator ID:	gaw91131
Lims ID:	410-136864-B-3	Lab Sample ID:	410-136864-3	Worklist Smp#:	23
Client ID:	16MW9				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X22.D				
Lims ID:	410-136864-B-3				
Client ID:	16MW9				
Sample Type:	Client				
Inject. Date:	09-Aug-2023 01:56:30	ALS Bottle#:	22	Worklist Smp#:	23
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0090928-023				
Operator ID:	gaw91131	Instrument ID:	10193		
Method:	\\chromfs\Lancaster\ChromData\10193\20230808-90928.b\MSV_10193_25mL.m				
Limit Group:	MSV - 8260C_D				
Last Update:	09-Aug-2023 13:38:42	Calib Date:	10-Jul-2023 21:40:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1657				

First Level Reviewer: innoonk Date: 09-Aug-2023 13:36:27

Compound	Amount Added	Amount Recovered	% Rec.
$ 54 Dibromofluoromethane (Surr)	10.0	10.3	102.55
$ 59 1,2-Dichloroethane-d4 (Surr)	10.0	10.3	103.01
$ 83 Toluene-d8 (Surr)	10.0	9.87	98.71
$ 124 4-Bromofluorobenzene (Surr)	10.0	9.02	90.23

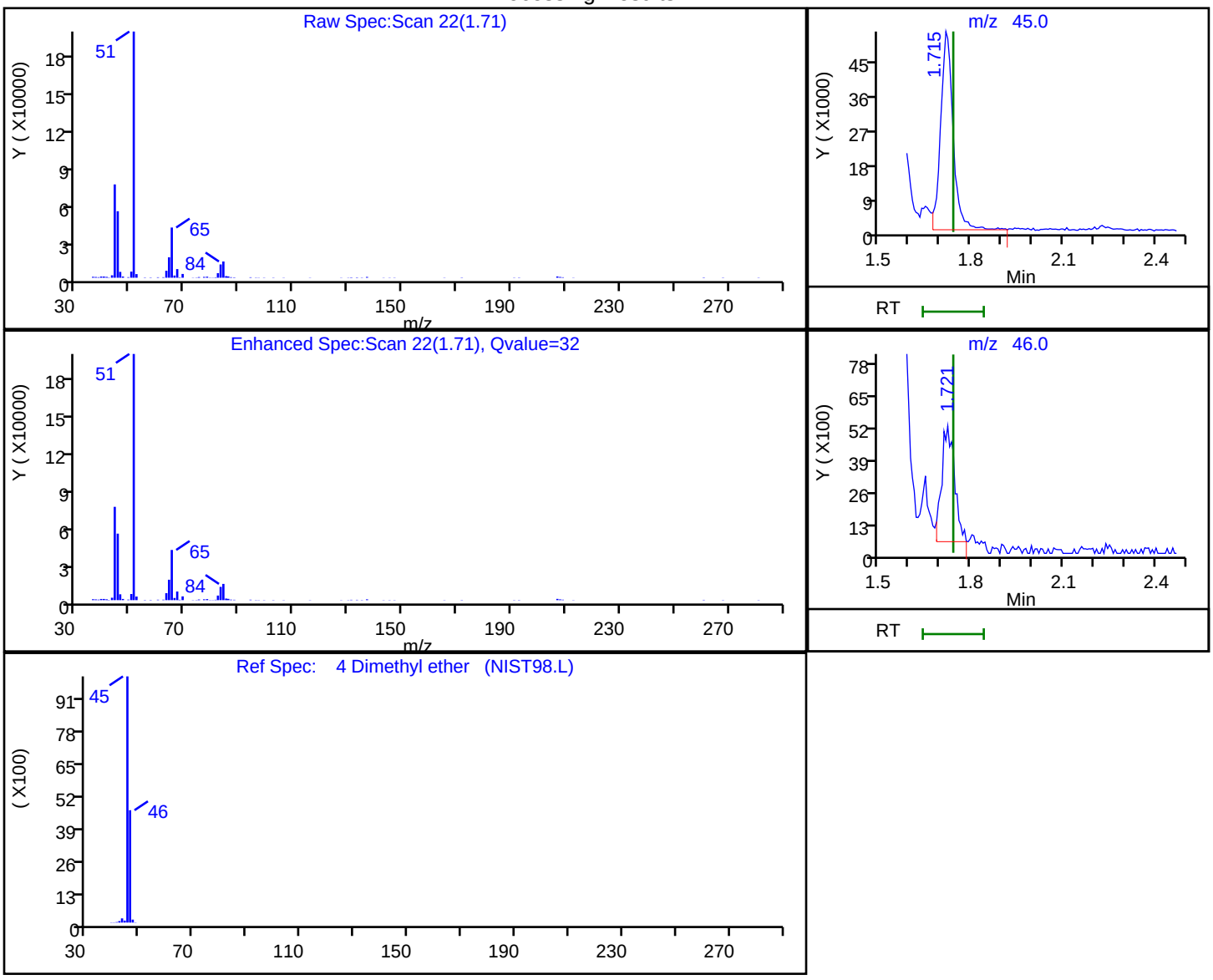
User Disabled Compound Report

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X22.D				
Injection Date:	09-Aug-2023 01:56:30	Instrument ID:	10193		
Lims ID:	410-136864-B-3	Lab Sample ID:	410-136864-3		
Client ID:	16MW9				
Operator ID:	gaw91131	ALS Bottle#:	22	Worklist Smp#:	23
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

4 Dimethyl ether, CAS: 115-10-6

Processing Results



RT	Mass	Response	Amount
1.71	45.00	148376	1.149502
1.72	46.00	13854	

Reviewer: innoonk, 09-Aug-2023 13:36:25 07:00:00 (UTC)

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136864-2

SDG No.:

Client Sample ID: 16WC1A
Lab Sample ID: 410-136864-4

Matrix: Water
Lab File ID: CG08X13.D

Analysis Method: EPA 8260C
Date Collected: 07/27/2023 09:55

Sample wt/vol: 25(mL)
Date Analyzed: 08/08/2023 22:39

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 405906
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
115-10-6	Dimethyl ether	1.1	J	10	1.1

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	104		80-120
1868-53-7	Dibromofluoromethane (Surr)	103		80-120
460-00-4	4-Bromofluorobenzene (Surr)	89		80-120
2037-26-5	Toluene-d8 (Surr)	95		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X13.D
Lims ID: 410-136864-B-4
Client ID: 16WC1A
Sample Type: Client
Inject. Date: 08-Aug-2023 22:39:30 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090928-014
Operator ID: gaw91131 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 09-Aug-2023 10:57:43 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1657

First Level Reviewer: innoonk Date: 09-Aug-2023 10:57:43

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
	1 Chlorotrifluoroethene	116		1.648				ND	
	2 Dichlorodifluoromethane	85	1.696	1.684	0.012	38	11251	0.1199	Ma
	3 Chlorodifluoromethane	51	1.709	1.697	0.013	97	909970	10.1	
	4 Dimethyl ether	45	1.721	1.739	-0.018	89	137919	1.06	
	5 Chloromethane	50		1.849				ND	
	6 Vinyl chloride	62	1.952	1.940	0.012	93	25853	0.2278	
	7 Butadiene	39		1.940				ND	7
	8 2-Chloro-1,1,1-Trifluoroethane	118		2.007				ND	
	9 Bromomethane	94		2.209				ND	7
	10 Chloroethane	64	2.269	2.270	-0.001	100	148314	2.22	
	11 Dichlorofluoromethane	67	2.471	2.471	0.000	97	70600	0.3895	
	13 Pentane	43	2.526	2.526	0.000	36	1440	0.0111	
	12 Trichlorofluoromethane	101		2.532				ND	7
	14 Ethyl ether	59	2.696	2.696	0.000	89	1627831	22.3	
	16 1,2-Dichloro-1,1,2-trifluoroetha	67	2.788	2.794	-0.006	15	4985	0.0496	
T	15 Vinyl bromide TIC	106	2.861	2.830	0.031	1	221	0.000579	
	17 Acrolein	56		2.843				ND	7
	18 1,1-Dichloroethene	96	2.964	2.946	0.018	91	17478	0.2105	
	20 Acetone	43		2.989				ND	7
	21 1,1,2-Trichloro-1,2,2-trifluoroe	101		3.001				ND	
T	19 Ethanol TIC	45	3.099	3.099	0.000	23	442	0.001158	
	22 Iodomethane	142		3.111				ND	
	23 Ethyl bromide	108		3.129				ND	7
	24 Isopropyl alcohol	45		3.147				ND	U
	25 Carbon disulfide	76		3.196				ND	7
T	167 Isopropyl alcohol TIC	45	3.245	3.276	-0.031	38	453	0.001187	
	27 Acetonitrile	41		3.318				ND	
	26 Methyl acetate	43		3.324				ND	7
	29 3-Chloro-1-propene	41		3.336				ND	
T	28 Acetonitrile TIC	41	3.483	3.477	0.006	11	428	0.001121	
	30 Methylene Chloride	84	3.477	3.489	-0.012	59	7992	0.0770	M
*	31 t-Butyl alcohol-d10 (IS)	65	3.544	3.544	0.000	97	278187	50.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
32 2-Methyl-2-propanol	59	3.641	3.635	0.006	84	27168	4.65	
33 Acrylonitrile	53		3.800				ND	7
34 Methyl tert-butyl ether	73	3.830	3.824	0.006	88	14940	0.0559	
35 trans-1,2-Dichloroethene	96	3.855	3.824	0.031	86	4834	0.0480	
36 Hexane	57		4.196				ND	7
37 1,1-Dichloroethane	63	4.434	4.434	0.000	96	733920	4.15	
38 Vinyl acetate	43		4.446				ND	U
39 Isopropyl ether	45		4.507				ND	7
40 2-Chloro-1,3-butadiene	53		4.550				ND	
41 Tert-butyl ethyl ether	59		5.068				ND	7
42 2-Butanone (MEK)	43		5.281				ND	7
43 cis-1,2-Dichloroethene	96	5.312	5.299	0.013	79	348088	3.22	
44 2,2-Dichloropropane	77		5.312				ND	7
46 Ethyl acetate	43	5.446	5.379	0.067	1	969	0.3219	
45 Propionitrile	54		5.391				ND	7
47 Methacrylonitrile	67		5.586				ND	
48 Chlorobromomethane	128		5.641				ND	
49 Tetrahydrofuran	71	5.702	5.659	0.043	85	12298	1.62	a
50 Chloroform	83		5.799				ND	
51 Methyl acrylate	55		6.013				ND	
53 1,1,1-Trichloroethane	97		6.025				ND	
$ 54 Dibromofluoromethane (Surr)	113	6.031	6.025	0.006	94	915375	10.3	
55 Cyclohexane	56		6.122				ND	7
S 52 1,2-Dichloroethene, Total	100				0		3.27	
56 Carbon tetrachloride	117		6.238				ND	
57 1,1-Dichloropropene	75		6.244				ND	7
58 Isobutyl alcohol	41		6.476				ND	U
$ 59 1,2-Dichloroethane-d4 (Surr)	102	6.494	6.482	0.012	99	195697	10.4	
60 Benzene	78	6.519	6.507	0.012	94	154506	0.3667	
61 1,2-Dichloroethane	62		6.592				ND	7
63 Isopropyl acetate	43	6.647	6.647	0.000	4	369	0.003270	
64 Tert-amyl methyl ether	73		6.726				ND	
62 1-Chlorobutane	56	6.702	6.781	-0.079	18	68	NC	
* 65 Fluorobenzene (IS)	96	6.939	6.933	0.006	100	3816511	10.0	
66 n-Heptane	43		6.952				ND	7
67 n-Butanol	56	7.409	7.409	0.000	16	301	49.5	
68 Trichloroethene	95	7.451	7.427	0.024	91	20033	0.1852	Ma
69 Methylcyclohexane	83		7.732				ND	7
70 1,2-Dichloropropane	63		7.769				ND	7
71 2-ethoxy-2-methyl butane	87		7.799				ND	
72 Dibromomethane	93		7.884				ND	
74 1,4-Dioxane	88		7.890				ND	
73 Methyl methacrylate	69		7.890				ND	
75 n-Propyl acetate	61	7.994	7.994	0.000	1	59	0.2409	
76 Dichlorobromomethane	83		8.134				ND	7
77 2-Nitropropane	41		8.421				ND	7
78 1-Bromo-2-chloroethane	63		8.531				ND	7
79 2-Chloroethyl vinyl ether	63		8.543				ND	U
80 cis-1,3-Dichloropropene	75		8.713				ND	7
82 4-Methyl-2-pentanone (MIBK)	43		8.915				ND	7
$ 83 Toluene-d8 (Surr)	98	9.049	9.043	0.006	93	3730767	9.49	
81 Chloroacetonitrile	75	9.055	9.067	-0.012	36	1557	NC	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
84 Toluene	92		9.134				ND	7
85 trans-1,3-Dichloropropene	75		9.451				ND	7
86 Ethyl methacrylate	69		9.536				ND	7
87 1,1,2-Trichloroethane	97		9.671				ND	
88 Tetrachloroethene	166	9.756	9.750	0.006	94	17254	0.1280	M
89 1,3-Dichloropropane	76		9.841				ND	
106 2-Hexanone	43		9.921				ND	U
T 95 Vinyl acetate (TIC)	43	9.933	10.000	-0.067	13	591	0.001549	
T 98 Epichlorohydrin TIC	57	10.012	10.000	0.012	1	448	0.001174	
T 93 Monochloroacetic acid TIC	50		10.000				ND	
T 101 Ethylene oxide TIC	43		10.000				ND	
T 97 Decamethylcyclopentasiloxane TIC	73	9.994	10.000	-0.006	1	618	0.001619	
T 92 3-Chloro-1,2-propanediol TIC	43		10.000				ND	
T 94 2,3-Dibromo-1-propanol TIC	57		10.000				ND	
T 96 Nitrobenzene TIC	77	9.920	10.000	-0.080	1	600	0.001572	
T 100 2-Bromo-3-chloropropene TIC	75	10.134	10.000	0.134	1	547	0.001433	
T 102 Methyl acrylate TIC	55	9.573	10.000	-0.427	1	405	0.001061	
T 90 2-Bromoethanol TIC	45	10.128	10.000	0.128	1	486	0.001273	
T 91 Octamethylcyclotetrasiloxane TIC	281	11.804	10.000	1.804	86	52546	0.1377	
T 99 2,3-Dibromopropene TIC	119	9.768	10.000	-0.232	1	500	0.001310	
T 103 2-Chloroethanol TIC	44	10.128	10.000	0.128	1	840	0.002201	
T 104 Epibromohydrin TIC	57		10.000				ND	
T 105 Chloroacetaldehyde TIC	50	10.652	10.000	0.652	34	61788	0.1619	
S 107 1,3-Dichloropropene, Total	100		10.060				ND	7
109 n-Butyl acetate	43		10.073				ND	
108 Chlorodibromomethane	129		10.073				ND	
110 Ethylene Dibromide	107		10.183				ND	
* 111 Chlorobenzene-d5 (IS)	117	10.658	10.652	0.006	83	2990804	10.0	
112 1-Chlorohexane	91		10.676				ND	7
113 Chlorobenzene	112		10.683				ND	7
114 1,1,1,2-Tetrachloroethane	131		10.774				ND	
115 Ethylbenzene	91		10.780				ND	
116 m-Xylene & p-Xylene	106		10.902				ND	7
S 117 Xylenes, Total	106		11.245				ND	7
118 o-Xylene	106		11.250				ND	7
119 Styrene	104		11.268				ND	7
120 Bromoform	173		11.426				ND	7
121 Isopropylbenzene	105		11.567				ND	7
122 cis-1,4-Dichloro-2-butene	88		11.627				ND	
123 Cyclohexanone	55		11.646				ND	U
$ 124 4-Bromofluorobenzene (Surr)	95	11.719	11.713	0.006	96	1258123	8.95	
125 Bromobenzene	156		11.829				ND	
126 1,1,2,2-Tetrachloroethane	83		11.829				ND	
127 trans-1,4-Dichloro-2-butene	53		11.859				ND	
128 1,2,3-Trichloropropane	110		11.871				ND	
129 N-Propylbenzene	91		11.908				ND	
130 2-Chlorotoluene	126		11.981				ND	7
131 1,3,5-Trimethylbenzene	105		12.054				ND	
132 4-Chlorotoluene	126		12.079				ND	7
133 tert-Butylbenzene	134		12.298				ND	7
134 Pentachloroethane	167		12.329				ND	
135 1,2,4-Trimethylbenzene	105		12.347				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
136 sec-Butylbenzene	105		12.469				ND	7
137 1,3-Dichlorobenzene	146		12.566				ND	7
138 4-Isopropyltoluene	119		12.579				ND	7
* 139 1,4-Dichlorobenzene-d4	152	12.627	12.621	0.006	93	1576674	10.0	
140 1,4-Dichlorobenzene	146		12.640				ND	7
141 1,2,3-Trimethylbenzene	120		12.652				ND	7
142 Benzyl chloride	126		12.725				ND	7
145 p-Diethylbenzene	119	12.889	12.859	0.030	1	315	0.001043	
143 n-Butylbenzene	92		12.877				ND	
144 1,2-Dichlorobenzene	146		12.902				ND	
T 146 Hexachloroethane TIC	117	13.444	13.444	0.000	1	326	0.000854	
147 Hexachloroethane	117		13.444				ND	
148 1,2-Dibromo-3-Chloropropane	155		13.469				ND	U
149 1,3,5-Trichlorobenzene	180		13.591				ND	
150 1,2,4-Trichlorobenzene	180		14.023				ND	
151 Hexachlorobutadiene	225		14.103				ND	
152 Naphthalene	128		14.200				ND	
153 1,2,3-Trichlorobenzene	180		14.346				ND	
154 2-Methylnaphthalene	142		14.950				ND	
155 Dodecane	57		0.000				ND	
156 1,1-Dichloro-1-fluoroethane	1		0.000				ND	
157 tert-Butyl Formate	1		0.000				ND	
158 2-Bromo-1-chloropropane	1		0.000				ND	
159 1-Chloropropane	1		0.000				ND	
160 1,1-Dichloroacetone	1		0.000				ND	
161 Methylal	1		0.000				ND	
162 Propene oxide	1		0.000				ND	
163 t-Amyl alcohol	1		0.000				ND	
164 Ethanol	45		0.000				ND	
165 n-Decane	57		0.000				ND	
166 1-Bromo-3-Chloropropane	1		0.000				ND	

QC Flag Legend

Processing Flags
- NC - Not Calibrated
- 7 - Failed Limit of Detection

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Reagents:

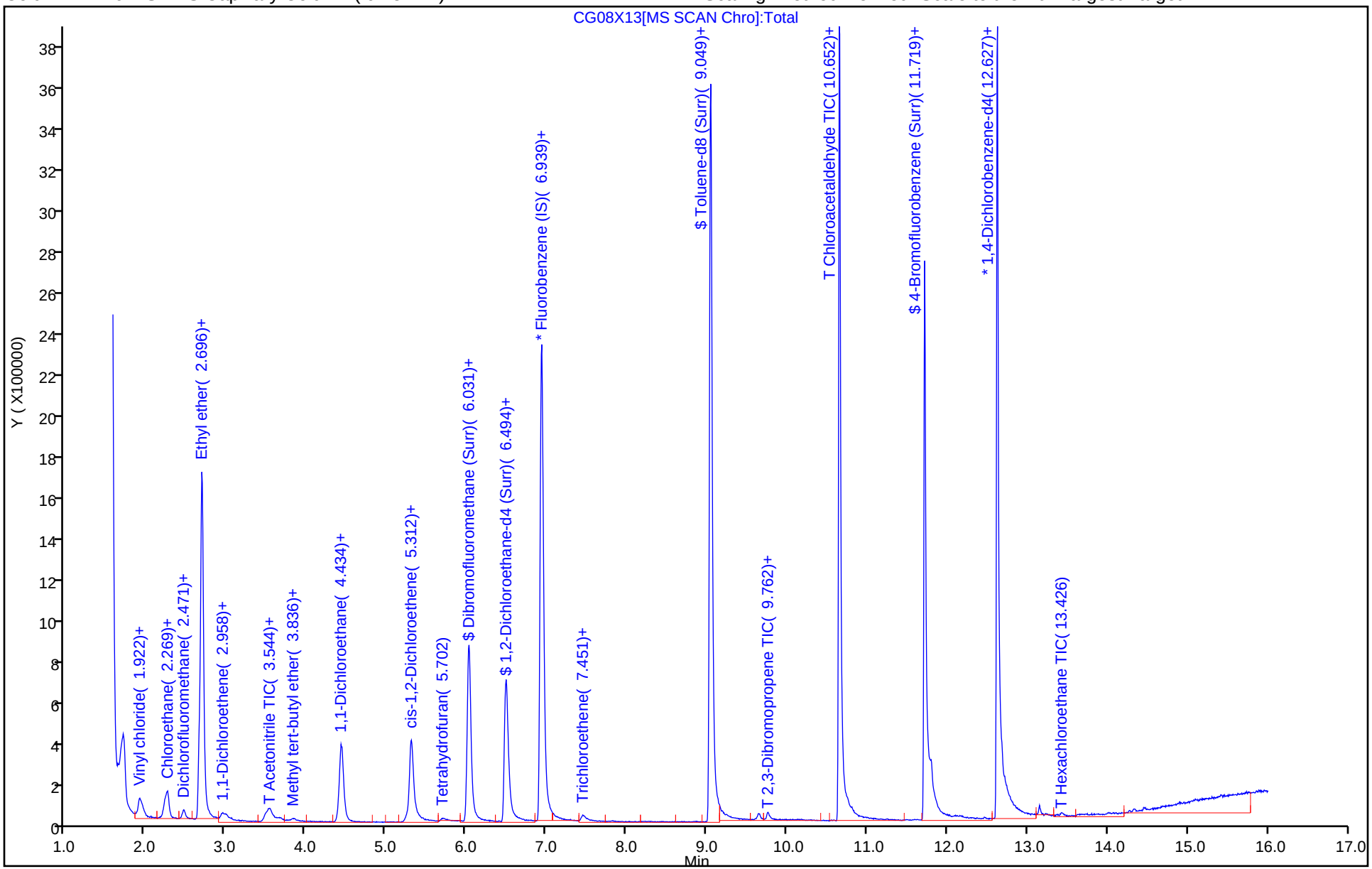
MSV_HP25_ISSS_00074 Amount Added: 1.00 Units: uL Run Reagent

Report Date: 09-Aug-2023 10:57:44 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X13.D				
Injection Date:	08-Aug-2023 22:39:30	Instrument ID:	10193	Operator ID:	gaw91131
Lims ID:	410-136864-B-4	Lab Sample ID:	410-136864-4	Worklist Smp#:	14
Client ID:	16WC1A				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X13.D
Lims ID: 410-136864-B-4
Client ID: 16WC1A
Sample Type: Client
Inject. Date: 08-Aug-2023 22:39:30 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090928-014
Operator ID: gaw91131 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 09-Aug-2023 10:57:43 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1657

First Level Reviewer: innoonk Date: 09-Aug-2023 10:57:43

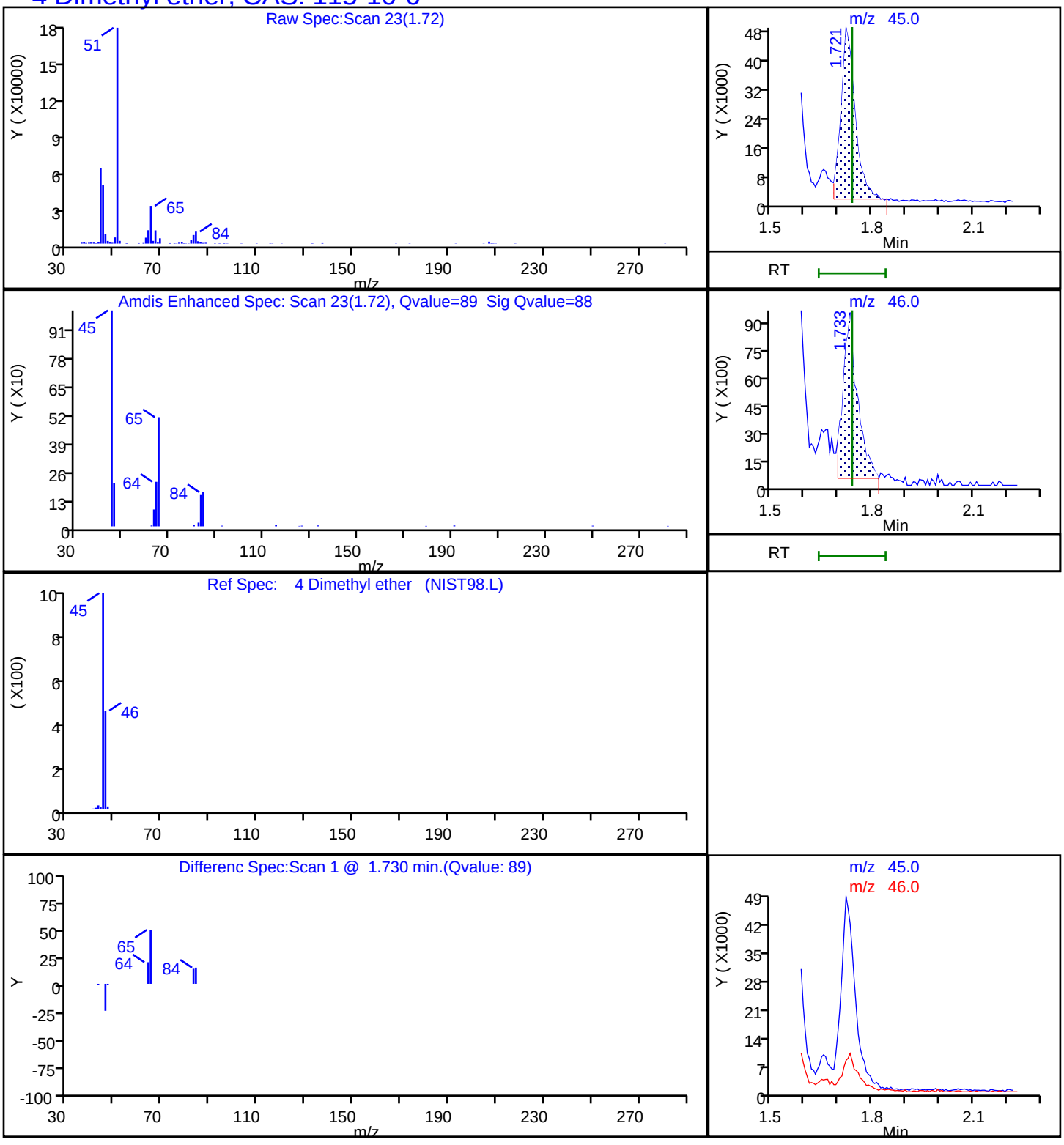
Compound	Amount Added	Amount Recovered	% Rec.
$ 54 Dibromofluoromethane (Surr)	10.0	10.3	102.59
$ 59 1,2-Dichloroethane-d4 (Surr)	10.0	10.4	103.72
$ 83 Toluene-d8 (Surr)	10.0	9.49	94.94
$ 124 4-Bromofluorobenzene (Surr)	10.0	8.95	89.49

Report Date: 09-Aug-2023 10:57:44 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X13.D				
Injection Date:	08-Aug-2023 22:39:30	Instrument ID:	10193		
Lims ID:	410-136864-B-4	Lab Sample ID:	410-136864-4		
Client ID:	16WC1A				
Operator ID:	gaw91131	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

4 Dimethyl ether, CAS: 115-10-6



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-2

SDG No.:

Client Sample ID: 16WDUP Lab Sample ID: 410-136864-5

Matrix: Water Lab File ID: CG08X20.D

Analysis Method: EPA 8260C Date Collected: 07/27/2023 10:20

Sample wt/vol: 25(mL) Date Analyzed: 08/09/2023 01:12

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL) Heated Purge: (Y/N) N pH:

% Moisture: % Solids: Level: (low/med) Low

Analysis Batch No.: 405906 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
115-10-6	Dimethyl ether	ND		10	1.1

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		80-120
1868-53-7	Dibromofluoromethane (Surr)	103		80-120
460-00-4	4-Bromofluorobenzene (Surr)	83		80-120
2037-26-5	Toluene-d8 (Surr)	96		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X20.D
Lims ID: 410-136864-B-5
Client ID: 16WDUP
Sample Type: Client
Inject. Date: 09-Aug-2023 01:12:30 ALS Bottle#: 20 Worklist Smp#: 21
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090928-021
Operator ID: gaw91131 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 09-Aug-2023 13:36:44 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1657

First Level Reviewer: innoonk Date: 09-Aug-2023 13:34:57

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85		1.684				ND	MU
4 Dimethyl ether	45		1.739				ND	U
5 Chloromethane	50		1.849				ND	7
6 Vinyl chloride	62	1.928	1.940	-0.012	97	23084	0.2044	
9 Bromomethane	94		2.209				ND	7
10 Chloroethane	64	2.263	2.270	-0.007	98	138882	2.09	
12 Trichlorofluoromethane	101		2.532				ND	
14 Ethyl ether	59	2.690	2.696	-0.006	90	1536227	21.1	
18 1,1-Dichloroethene	96	2.940	2.946	-0.006	93	15530	0.1880	
20 Acetone	43		2.989				ND	7
21 1,1,2-Trichloro-1,2,2-trifluoroe	101		3.001				ND	
22 Iodomethane	142		3.111				ND	
25 Carbon disulfide	76		3.196				ND	7
27 Acetonitrile	41		3.318				ND	
29 3-Chloro-1-propene	41		3.336				ND	7
30 Methylene Chloride	84	3.483	3.489	-0.006	41	6227	0.0603	M
* 31 t-Butyl alcohol-d10 (IS)	65	3.532	3.544	-0.012	96	254967	50.0	
33 Acrylonitrile	53		3.800				ND	
35 trans-1,2-Dichloroethene	96	3.836	3.824	0.012	92	6320	0.0630	
37 1,1-Dichloroethane	63	4.434	4.434	0.000	96	684148	3.89	
38 Vinyl acetate	43		4.446				ND	7
40 2-Chloro-1,3-butadiene	53		4.550				ND	
42 2-Butanone (MEK)	43		5.281				ND	7
45 Propionitrile	54		5.391				ND	
47 Methacrylonitrile	67		5.586				ND	7
49 Tetrahydrofuran	71	5.702	5.659	0.043	91	11147	1.60	a
50 Chloroform	83		5.799				ND	
53 1,1,1-Trichloroethane	97		6.025				ND	7
$ 54 Dibromofluoromethane (Surr)	113	6.025	6.025	0.000	94	916367	10.3	
56 Carbon tetrachloride	117		6.238				ND	
58 Isobutyl alcohol	41		6.476				ND	
$ 59 1,2-Dichloroethane-d4 (Surr)	102	6.488	6.482	0.006	99	193128	10.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
60 Benzene	78	6.507	6.507	0.000	95	139657	0.3331	
61 1,2-Dichloroethane	62		6.592				ND	7
* 65 Fluorobenzene (IS)	96	6.933	6.933	0.000	99	3798128	10.0	
68 Trichloroethene	95	7.445	7.427	0.018	93	14640	0.1360	a
70 1,2-Dichloropropane	63		7.769				ND	7
72 Dibromomethane	93		7.884				ND	
74 1,4-Dioxane	88		7.890				ND	
73 Methyl methacrylate	69		7.890				ND	7
76 Dichlorobromomethane	83		8.134				ND	7
82 4-Methyl-2-pentanone (MIBK)	43		8.915				ND	7
$ 83 Toluene-d8 (Surr)	98	9.043	9.043	0.000	93	3793263	9.64	
84 Toluene	92		9.134				ND	7
85 trans-1,3-Dichloropropene	75		9.451				ND	7
86 Ethyl methacrylate	69		9.536				ND	7
87 1,1,2-Trichloroethane	97		9.671				ND	
88 Tetrachloroethene	166	9.762	9.750	0.012	95	12568	0.0931	
89 1,3-Dichloropropane	76		9.841				ND	
106 2-Hexanone	43		9.921				ND	7
108 Chlorodibromomethane	129		10.073				ND	
110 Ethylene Dibromide	107		10.183				ND	
* 111 Chlorobenzene-d5 (IS)	117	10.652	10.652	0.000	83	2994118	10.0	
114 1,1,1,2-Tetrachloroethane	131		10.774				ND	
115 Ethylbenzene	91		10.780				ND	
116 m-Xylene & p-Xylene	106		10.902				ND	
S 117 Xylenes, Total	106		11.245				ND	7
118 o-Xylene	106		11.250				ND	7
119 Styrene	104		11.268				ND	
120 Bromoform	173		11.426				ND	7
$ 124 4-Bromofluorobenzene (Surr)	95	11.719	11.713	0.006	96	1173430	8.34	
126 1,1,2,2-Tetrachloroethane	83		11.829				ND	
128 1,2,3-Trichloropropane	110		11.871				ND	
134 Pentachloroethane	167		12.329				ND	
137 1,3-Dichlorobenzene	146		12.566				ND	
* 139 1,4-Dichlorobenzene-d4	152	12.627	12.621	0.006	93	1611879	10.0	
140 1,4-Dichlorobenzene	146		12.640				ND	
144 1,2-Dichlorobenzene	146		12.902				ND	
148 1,2-Dibromo-3-Chloropropane	155		13.469				ND	
150 1,2,4-Trichlorobenzene	180		14.023				ND	
151 Hexachlorobutadiene	225		14.103				ND	
152 Naphthalene	128		14.200				ND	

QC Flag Legend

Processing Flags
- 7 - Failed Limit of Detection

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Reagents:

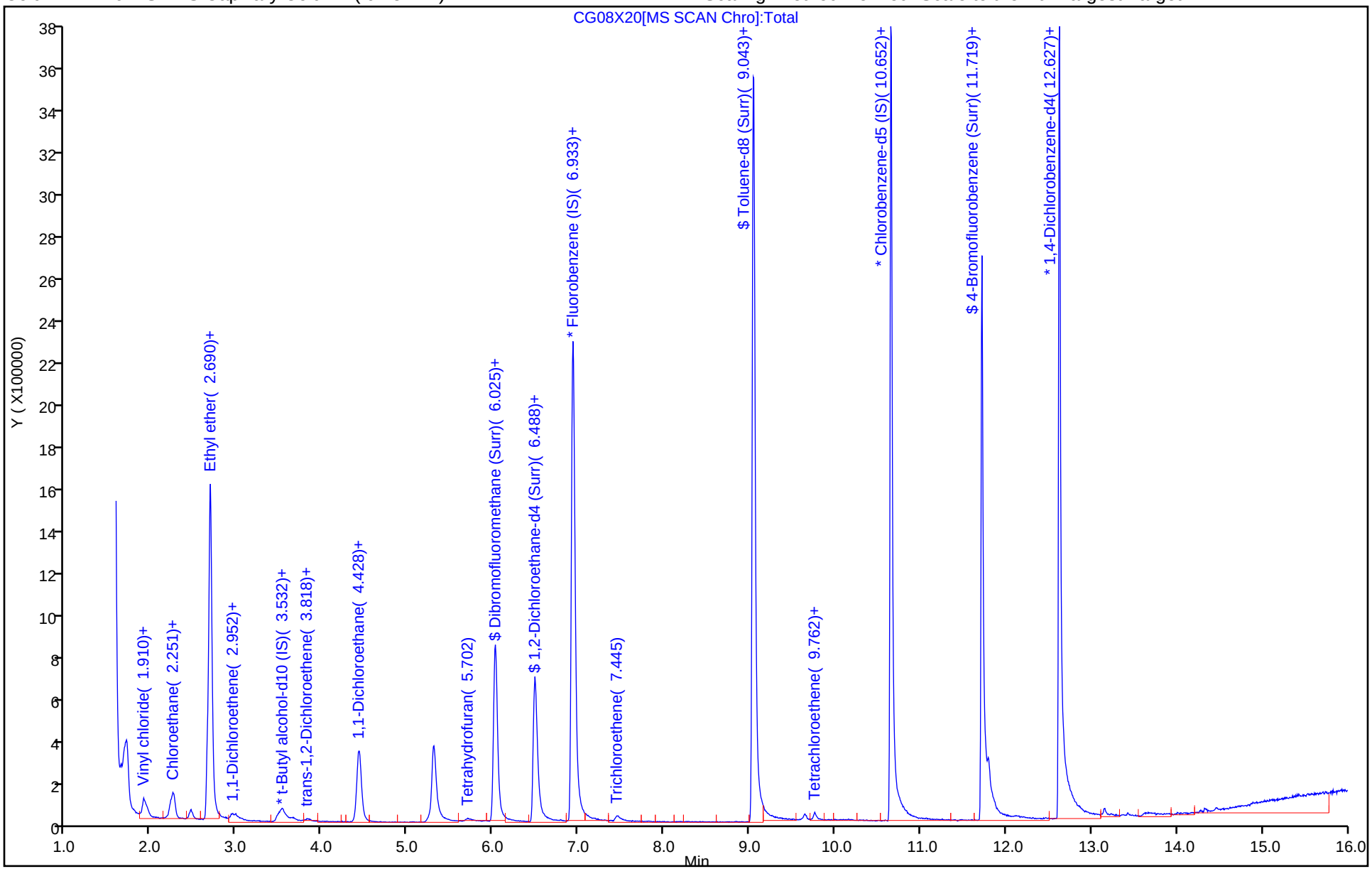
MSV_HP25_ISSS_00074 Amount Added: 1.00 Units: uL Run Reagent

Report Date: 09-Aug-2023 13:36:44 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X20.D				
Injection Date:	09-Aug-2023 01:12:30	Instrument ID:	10193	Operator ID:	gaw91131
Lims ID:	410-136864-B-5	Lab Sample ID:	410-136864-5	Worklist Smp#:	21
Client ID:	16WDUP				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X20.D				
Lims ID:	410-136864-B-5				
Client ID:	16WDUP				
Sample Type:	Client				
Inject. Date:	09-Aug-2023 01:12:30	ALS Bottle#:	20	Worklist Smp#:	21
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0090928-021				
Operator ID:	gaw91131	Instrument ID:	10193		
Method:	\\chromfs\Lancaster\ChromData\10193\20230808-90928.b\MSV_10193_25mL.m				
Limit Group:	MSV - 8260C_D				
Last Update:	09-Aug-2023 13:36:44	Calib Date:	10-Jul-2023 21:40:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1657				

First Level Reviewer: innoonk Date: 09-Aug-2023 13:34:57

Compound	Amount Added	Amount Recovered	% Rec.
$ 54 Dibromofluoromethane (Surr)	10.0	10.3	103.20
$ 59 1,2-Dichloroethane-d4 (Surr)	10.0	10.3	102.86
$ 83 Toluene-d8 (Surr)	10.0	9.64	96.42
$ 124 4-Bromofluorobenzene (Surr)	10.0	8.34	83.37

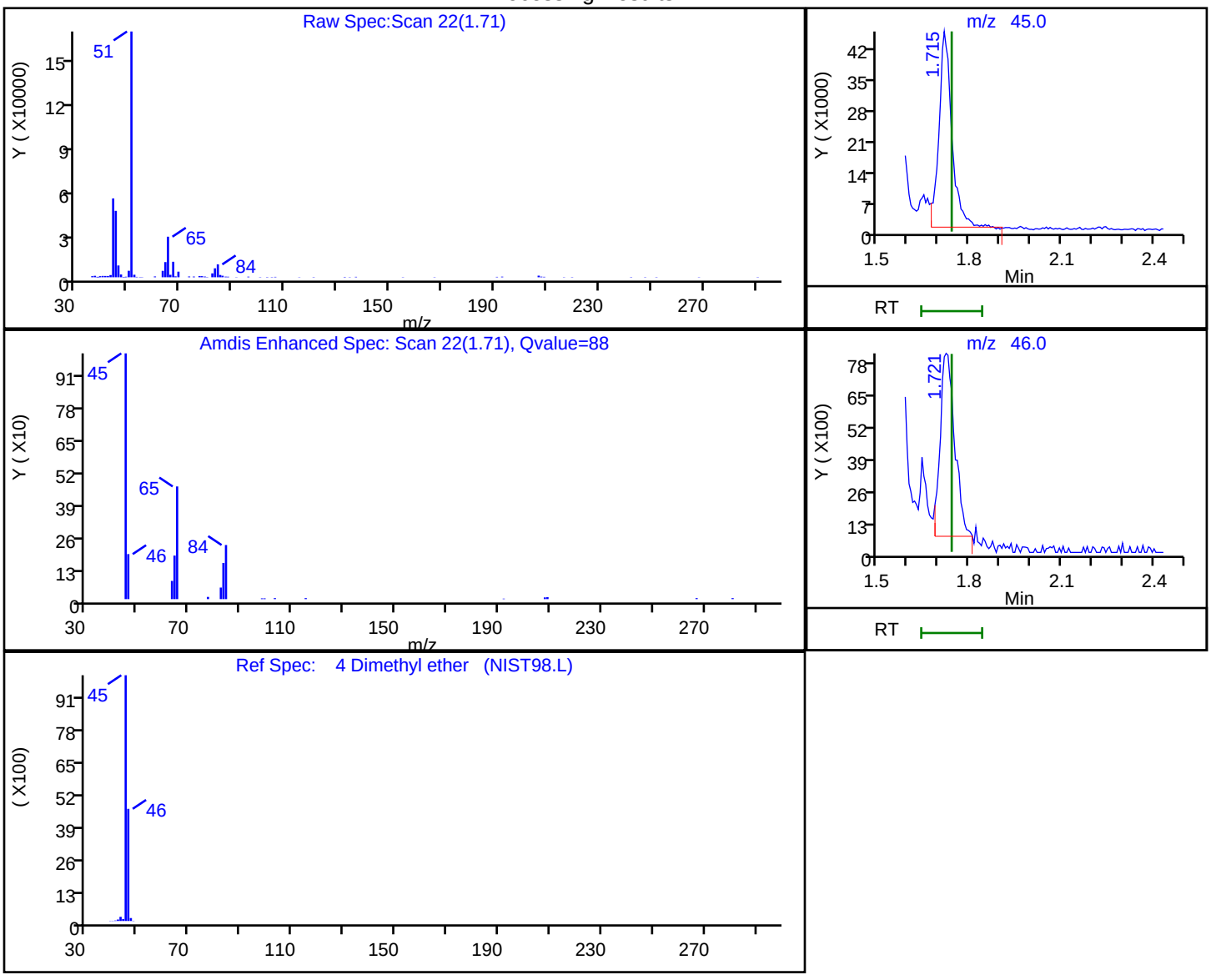
User Disabled Compound Report

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X20.D				
Injection Date:	09-Aug-2023 01:12:30	Instrument ID:	10193		
Lims ID:	410-136864-B-5	Lab Sample ID:	410-136864-5		
Client ID:	16WDUP				
Operator ID:	gaw91131	ALS Bottle#:	20	Worklist Smp#:	21
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

4 Dimethyl ether, CAS: 115-10-6

Processing Results



RT	Mass	Response	Amount
1.71	45.00	133515	1.035965
1.72	46.00	24577	

Reviewer: innoonk, 09-Aug-2023 13:36:38 07:00:00 (UTC)

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136864-2

SDG No.:

Client Sample ID: 16WC1B
Lab Sample ID: 410-136864-6

Matrix: Water
Lab File ID: CG08X21.D

Analysis Method: EPA 8260C
Date Collected: 07/26/2023 12:05

Sample wt/vol: 25(mL)
Date Analyzed: 08/09/2023 01:34

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 405906
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
115-10-6	Dimethyl ether	ND		10	1.1

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		80-120
1868-53-7	Dibromofluoromethane (Surr)	103		80-120
460-00-4	4-Bromofluorobenzene (Surr)	89		80-120
2037-26-5	Toluene-d8 (Surr)	95		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X21.D
Lims ID: 410-136864-B-6
Client ID: 16WC1B
Sample Type: Client
Inject. Date: 09-Aug-2023 01:34:30 ALS Bottle#: 21 Worklist Smp#: 22
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090928-022
Operator ID: gaw91131 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 09-Aug-2023 13:36:34 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1657

First Level Reviewer: innoonk Date: 09-Aug-2023 13:36:07

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
	2 Dichlorodifluoromethane	85		1.684				ND	
	4 Dimethyl ether	45		1.739				ND	U
	5 Chloromethane	50		1.849				ND	7
	6 Vinyl chloride	62		1.940				ND	7
	9 Bromomethane	94		2.209				ND	7
	10 Chloroethane	64		2.270				ND	7
	12 Trichlorofluoromethane	101		2.532				ND	
	14 Ethyl ether	59	2.715	2.696	0.019	91	21901	0.3034	
	18 1,1-Dichloroethene	96		2.946				ND	7
	20 Acetone	43	3.001	2.989	0.012	64	10937	0.8855	
	21 1,1,2-Trichloro-1,2,2-trifluoroe	101		3.001				ND	
	22 Iodomethane	142		3.111				ND	7
	25 Carbon disulfide	76		3.196				ND	7
	27 Acetonitrile	41		3.318				ND	7
	29 3-Chloro-1-propene	41		3.336				ND	7
	30 Methylene Chloride	84		3.489				ND	7
*	31 t-Butyl alcohol-d10 (IS)	65	3.538	3.544	-0.006	98	260177	50.0	
	33 Acrylonitrile	53		3.800				ND	
	35 trans-1,2-Dichloroethene	96		3.824				ND	
	37 1,1-Dichloroethane	63	4.440	4.434	0.006	8	5970	0.0342	
	38 Vinyl acetate	43		4.446				ND	7
	40 2-Chloro-1,3-butadiene	53		4.550				ND	
	42 2-Butanone (MEK)	43		5.281				ND	7
	45 Propionitrile	54		5.391				ND	
	47 Methacrylonitrile	67		5.586				ND	
	49 Tetrahydrofuran	71		5.659				ND	
	50 Chloroform	83		5.799				ND	
	53 1,1,1-Trichloroethane	97		6.025				ND	
$	54 Dibromofluoromethane (Surr)	113	6.031	6.025	0.006	94	910947	10.3	
	56 Carbon tetrachloride	117		6.238				ND	
	58 Isobutyl alcohol	41		6.476				ND	U
$	59 1,2-Dichloroethane-d4 (Surr)	102	6.500	6.482	0.018	99	191298	10.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
60 Benzene	78		6.507				ND	7
61 1,2-Dichloroethane	62		6.592				ND	7
* 65 Fluorobenzene (IS)	96	6.939	6.933	0.006	99	3771859	10.0	
68 Trichloroethene	95		7.427				ND	7
70 1,2-Dichloropropane	63		7.769				ND	
72 Dibromomethane	93		7.884				ND	
74 1,4-Dioxane	88		7.890				ND	
73 Methyl methacrylate	69		7.890				ND	7
76 Dichlorobromomethane	83		8.134				ND	
82 4-Methyl-2-pentanone (MIBK)	43		8.915				ND	7
$ 83 Toluene-d8 (Surr)	98	9.049	9.043	0.006	93	3753252	9.53	
84 Toluene	92	9.146	9.134	0.012	96	7391	0.0263	
85 trans-1,3-Dichloropropene	75		9.451				ND	7
86 Ethyl methacrylate	69		9.536				ND	7
87 1,1,2-Trichloroethane	97		9.671				ND	
88 Tetrachloroethene	166		9.750				ND	7
89 1,3-Dichloropropane	76		9.841				ND	7
106 2-Hexanone	43		9.921				ND	7
108 Chlorodibromomethane	129		10.073				ND	
110 Ethylene Dibromide	107		10.183				ND	
* 111 Chlorobenzene-d5 (IS)	117	10.658	10.652	0.006	83	2997194	10.0	
114 1,1,1,2-Tetrachloroethane	131		10.774				ND	7
115 Ethylbenzene	91		10.780				ND	7
116 m-Xylene & p-Xylene	106		10.902				ND	7
S 117 Xylenes, Total	106		11.245				ND	7
118 o-Xylene	106		11.250				ND	7
119 Styrene	104		11.268				ND	7
120 Bromoform	173		11.426				ND	7
$ 124 4-Bromofluorobenzene (Surr)	95	11.719	11.713	0.006	96	1250112	8.87	
126 1,1,2,2-Tetrachloroethane	83		11.829				ND	
128 1,2,3-Trichloropropane	110		11.871				ND	
134 Pentachloroethane	167		12.329				ND	
137 1,3-Dichlorobenzene	146		12.566				ND	7
* 139 1,4-Dichlorobenzene-d4	152	12.627	12.621	0.006	93	1606982	10.0	
140 1,4-Dichlorobenzene	146		12.640				ND	7
144 1,2-Dichlorobenzene	146		12.902				ND	
148 1,2-Dibromo-3-Chloropropane	155		13.469				ND	
150 1,2,4-Trichlorobenzene	180		14.023				ND	
151 Hexachlorobutadiene	225		14.103				ND	
152 Naphthalene	128		14.200				ND	7

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

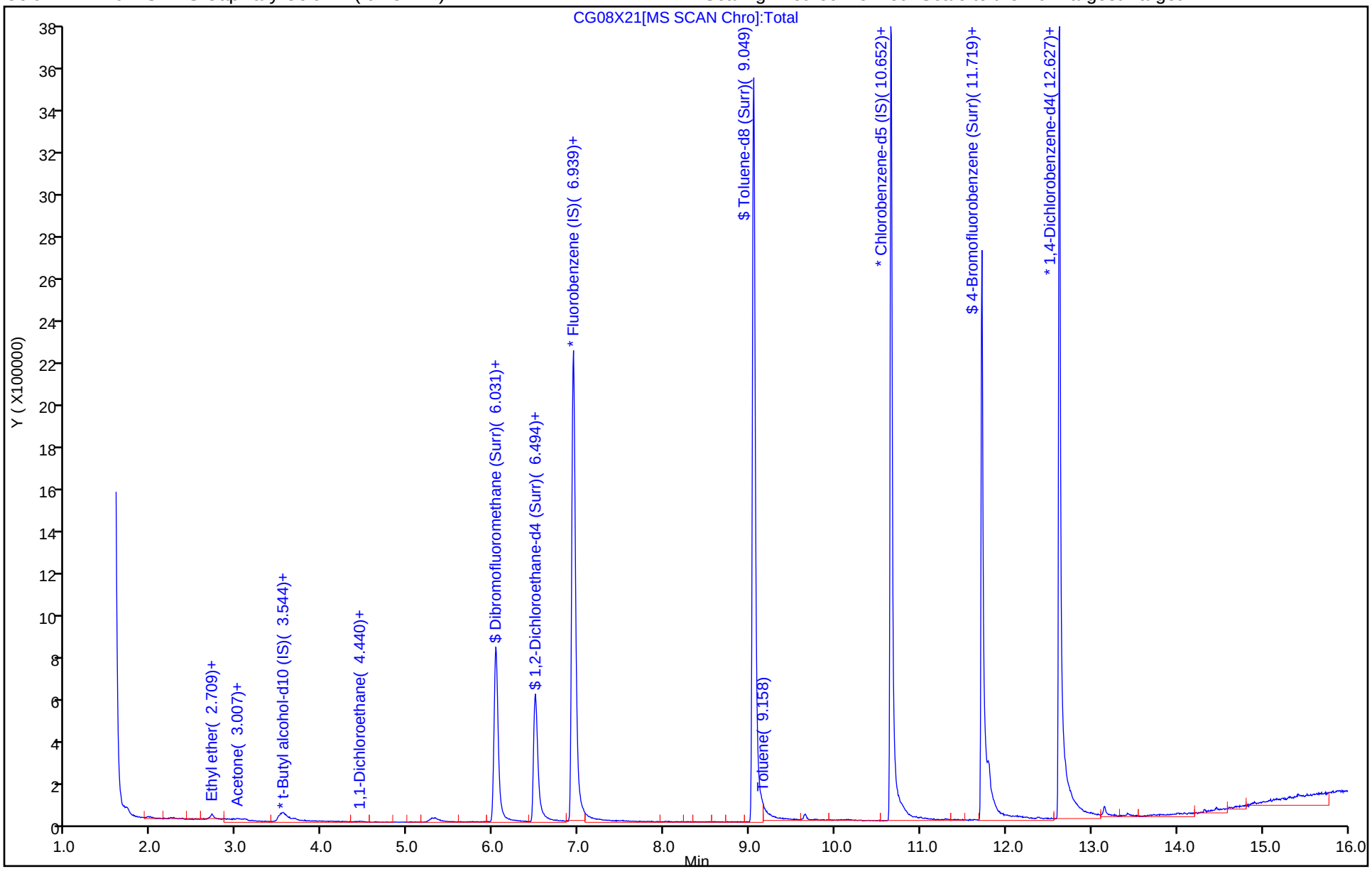
MSV_HP25_ISSS_00074 Amount Added: 1.00 Units: uL Run Reagent

Report Date: 09-Aug-2023 13:36:34 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X21.D				
Injection Date:	09-Aug-2023 01:34:30	Instrument ID:	10193	Operator ID:	gaw91131
Lims ID:	410-136864-B-6	Lab Sample ID:	410-136864-6	Worklist Smp#:	22
Client ID:	16WC1B				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	21
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X21.D				
Lims ID:	410-136864-B-6				
Client ID:	16WC1B				
Sample Type:	Client				
Inject. Date:	09-Aug-2023 01:34:30	ALS Bottle#:	21	Worklist Smp#:	22
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0090928-022				
Operator ID:	gaw91131	Instrument ID:	10193		
Method:	\\chromfs\Lancaster\ChromData\10193\20230808-90928.b\MSV_10193_25mL.m				
Limit Group:	MSV - 8260C_D				
Last Update:	09-Aug-2023 13:36:34	Calib Date:	10-Jul-2023 21:40:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1657				

First Level Reviewer: innoonk Date: 09-Aug-2023 13:36:07

Compound	Amount Added	Amount Recovered	% Rec.
$ 54 Dibromofluoromethane (Surr)	10.0	10.3	103.30
$ 59 1,2-Dichloroethane-d4 (Surr)	10.0	10.3	102.59
$ 83 Toluene-d8 (Surr)	10.0	9.53	95.31
$ 124 4-Bromofluorobenzene (Surr)	10.0	8.87	88.73

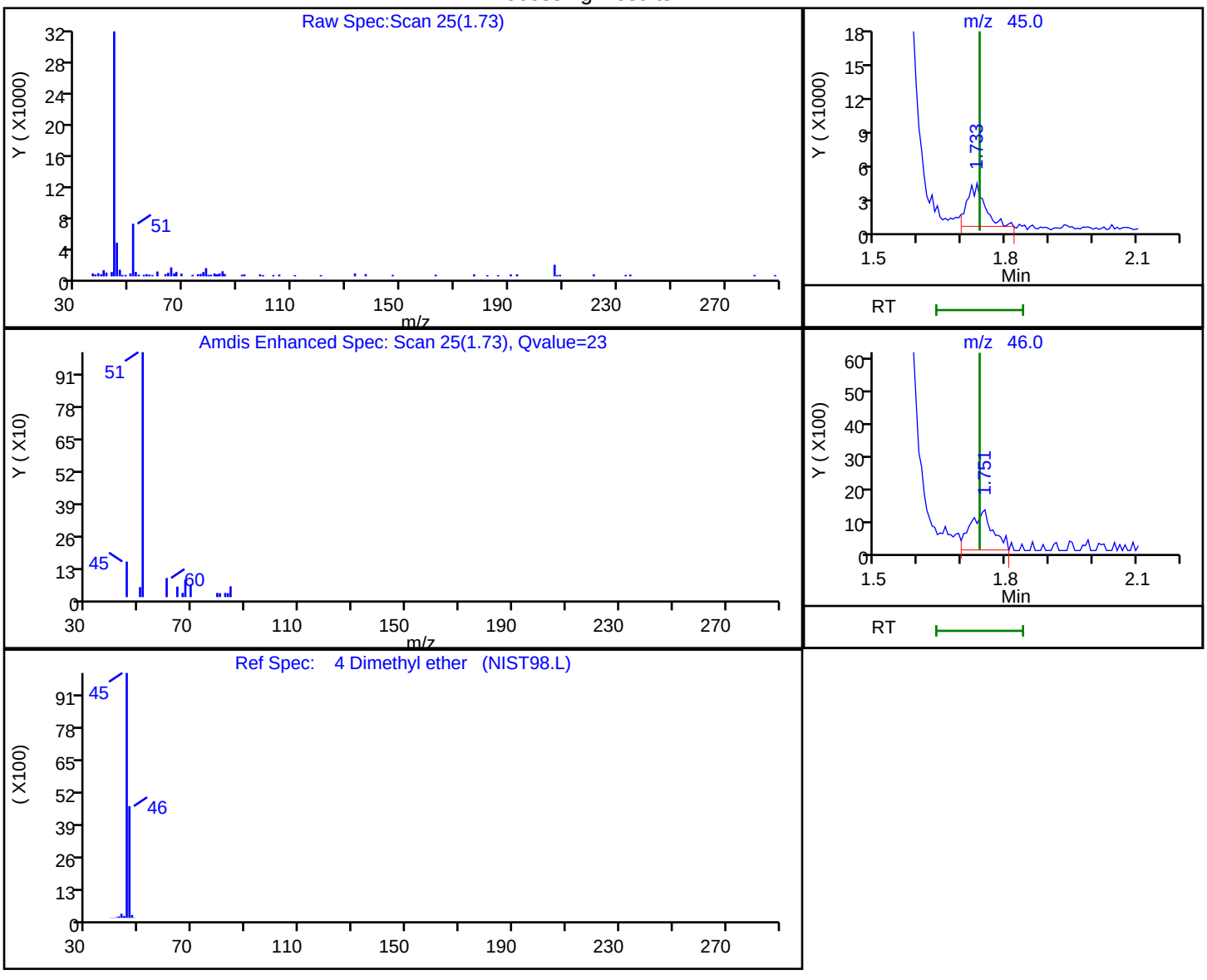
User Disabled Compound Report

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X21.D				
Injection Date:	09-Aug-2023 01:34:30	Instrument ID:	10193		
Lims ID:	410-136864-B-6	Lab Sample ID:	410-136864-6		
Client ID:	16WC1B				
Operator ID:	gaw91131	ALS Bottle#:	21	Worklist Smp#:	22
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

4 Dimethyl ether, CAS: 115-10-6

Processing Results



RT	Mass	Response	Amount
1.73	45.00	11252	0.087914
1.75	46.00	4615	

Reviewer: innoonk, 09-Aug-2023 13:36:31 07:00:00 (UTC)

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-2 Analy Batch No.: 395211

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 15:50 Calibration End Date: 07/10/2023 18:02 Calibration ID: 51832

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-395211/3	CL10X02.D
Level 2	IC 410-395211/4	CL10X03.D
Level 3	IC 410-395211/5	CL10X04.D
Level 4	IC 410-395211/6	CL10X05.D
Level 5	IC 410-395211/7	CL10X06.D
Level 6	IC 410-395211/8	CL10X07.D
Level 7	IC 410-395211/9	CL10X08.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Chlorodifluoromethane	0.2665 0.2234	0.2269 0.2572	0.2143	0.2291	0.2344	Ave		0.2360				8.0		20.0			
Dimethyl ether	0.3914 0.3402	0.2900 0.3406	0.3197	0.3424	0.3509	Ave		0.3393				9.1		20.0			
Acetonitrile	+++++ 0.0138	0.0172 0.0139	0.0147	0.0142	0.0139	Ave		0.0146				9.0		20.0			
Vinyl acetate	0.3107 0.3748	0.3087 0.3765	0.2551	0.3165	0.3366	Ave		0.3256				13.0		20.0			
Ethyl acetate	+++++ 0.1429	0.1086 0.1444	0.0758	0.0967	0.1269	Lin1	-0.044	0.1439							0.9950		0.9900
2-Chloroethyl vinyl ether	+++++ 0.1060	0.0721 0.1209	0.0811	0.0810	0.1032	Ave		0.0941				20.0		20.0			
cis-1,4-Dichloro-2-butene	+++++ 0.0994	0.0541 0.1099	0.0641	0.0732	0.0912	Lin1	-0.080	0.1075							0.9960		0.9900
Cyclohexanone	+++++ 0.4992	0.2954 0.5867	0.3938	0.4162	0.4988	Lin2	-6.256	0.5284							0.9920		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136864-2 Analy Batch No.: 395211

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 15:50 Calibration End Date: 07/10/2023 18:02 Calibration ID: 51832

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-395211/3	CL10X02.D
Level 2	IC 410-395211/4	CL10X03.D
Level 3	IC 410-395211/5	CL10X04.D
Level 4	IC 410-395211/6	CL10X05.D
Level 5	IC 410-395211/7	CL10X06.D
Level 6	IC 410-395211/8	CL10X07.D
Level 7	IC 410-395211/9	CL10X08.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Chlorodifluoromethane	FB	Ave	13791 553436	28432 1610422	54042	114741	289903	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Dimethyl ether	FB	Ave	20255 843017	36338 2132785	80626	171508	433934	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Acetonitrile	FB	Ave	+++++ 170772	10770 434651	18506	35452	86044	+++++ 50.0	2.50 125	5.00	10.0	25.0
Vinyl acetate	FB	Ave	16079 928699	38676 2357192	64342	158532	416325	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethyl acetate	FB	Lin1	+++++ 354124	13609 904142	19124	48415	156946	+++++ 10.0	0.500 25.0	1.00	2.00	5.00
2-Chloroethyl vinyl ether	FB	Ave	+++++ 262749	9029 757238	20460	40570	127613	+++++ 10.0	0.500 25.0	1.00	2.00	5.00
cis-1,4-Dichloro-2-butene	CBZd 5	Lin1	+++++ 386829	10743 1095177	25354	57720	177095	+++++ 20.0	1.000 50.0	2.00	4.00	10.00
Cyclohexanone	TBAd 10	Lin2	+++++ 887459	24830 2469223	63315	132145	389481	+++++ 500	25.0 1250	50.0	100.0	250

Curve Type Legend

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136864-2 Analy Batch No.: 395211

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 15:50 Calibration End Date: 07/10/2023 18:02 Calibration ID: 51832

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-395211/3	CL10X02.D
Level 2	IC 410-395211/4	CL10X03.D
Level 3	IC 410-395211/5	CL10X04.D
Level 4	IC 410-395211/6	CL10X05.D
Level 5	IC 410-395211/7	CL10X06.D
Level 6	IC 410-395211/8	CL10X07.D
Level 7	IC 410-395211/9	CL10X08.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Chlorodifluoromethane	12.9 9.0	-3.8	-9.2	-2.9	-0.7	-5.3	50 30	30	30	30	30	30
Dimethyl ether	15.3 0.4	-14.5	-5.8	0.9	3.4	0.3	50 30	30	30	30	30	30
Acetonitrile	+++++ -4.9	17.7	0.5	-3.0	-4.7	-5.6	 30	50	30	30	30	30
Vinyl acetate	-4.6 15.6	-5.2	-21.6	-2.8	3.4	15.1	50 30	30	30	30	30	30
Ethyl acetate	+++++ 1.6	36.3	-16.9	-17.6	-5.7	2.4	 30	50	30	30	30	30
2-Chloroethyl vinyl ether	+++++ 28.6	-23.4	-13.8	-13.9	9.7	12.7	 30	50	30	30	30	30
cis-1,4-Dichloro-2-butene	+++++ 3.8	24.4	-3.3	-13.4	-7.7	-3.8	 30	50	30	30	30	30
Cyclohexanone	+++++ 12.0	3.3	-1.8	-9.4	-0.9	-3.2	 30	50	30	30	30	30

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X02.D
Lims ID: IC STD.2 Sm
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 10-Jul-2023 15:50:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0088548-003
Misc. Info.: IC STD.2 SM
Operator ID: knk41612 Instrument ID: 10193
Sublist: chrom-MSV_10193_25mL*sub43

Method: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 11-Jul-2023 21:37:43 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1649

First Level Reviewer: DVW2 Date: 11-Jul-2023 08:09:20

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Chlorotrifluoroethene	116	1.654	1.648	0.006	74	4873	0.2000	0.1837	M
3 Chlorodifluoromethane	51	1.697	1.697	0.001	29	13791	0.2000	0.2259	M
4 Dimethyl ether	45	1.727	1.739	-0.012	100	20255	0.2000	0.2307	
8 2-Chloro-1,1,1-Trifluoroethane	118	1.995	2.007	-0.012	34	12964	0.2000	0.1917	
27 Acetonitrile	41	3.355	3.318	0.037	66	5851	1.00	1.55	M
* 31 t-Butyl alcohol-d10 (IS)	65	3.532	3.550	-0.018	96	177872	50.0	50.0	
38 Vinyl acetate	43	4.513	4.446	0.067	74	16079	0.2000	0.1909	M
46 Ethyl acetate	43	5.482	5.379	0.103	25	6549	0.2000	0.4801	M
63 Isopropyl acetate	43	6.671	6.647	0.024	84	12481	0.2000	0.1631	
* 65 Fluorobenzene (IS)	96	6.946	6.946	0.000	99	2587638	10.0	10.0	
75 n-Propyl acetate	61	8.128	7.994	0.134	37	1230	0.2000	0.2990	M
79 2-Chloroethyl vinyl ether	63	8.598	8.543	0.055	11	3132	0.2000	0.1287	M
109 n-Butyl acetate	43	10.122	10.073	0.049	68	8969	0.2000	0.4584	M
* 111 Chlorobenzene-d5 (IS)	117	10.658	10.658	0.000	84	2005695	10.0	10.0	
122 cis-1,4-Dichloro-2-butene	88	11.719	11.627	0.092	40	39821	0.4000	2.59	a
123 Cyclohexanone	55	11.719	11.646	0.073	36	7250	10.0	15.7	M
* 139 1,4-Dichlorobenzene-d4	152	12.627	12.621	0.006	93	1194414	10.0	10.0	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

MSV_CCV_V5ACE_00026	Amount Added:	0.20	Units: uL
MSV_V_SMRV4_00060	Amount Added:	1.00	Units: uL
MSV_CCV_CYC_00006	Amount Added:	1.60	Units: uL
MSV_HP25_ISO_00008	Amount Added:	1.00	Units: uL
MSV_DME_00048	Amount Added:	0.20	Units: uL

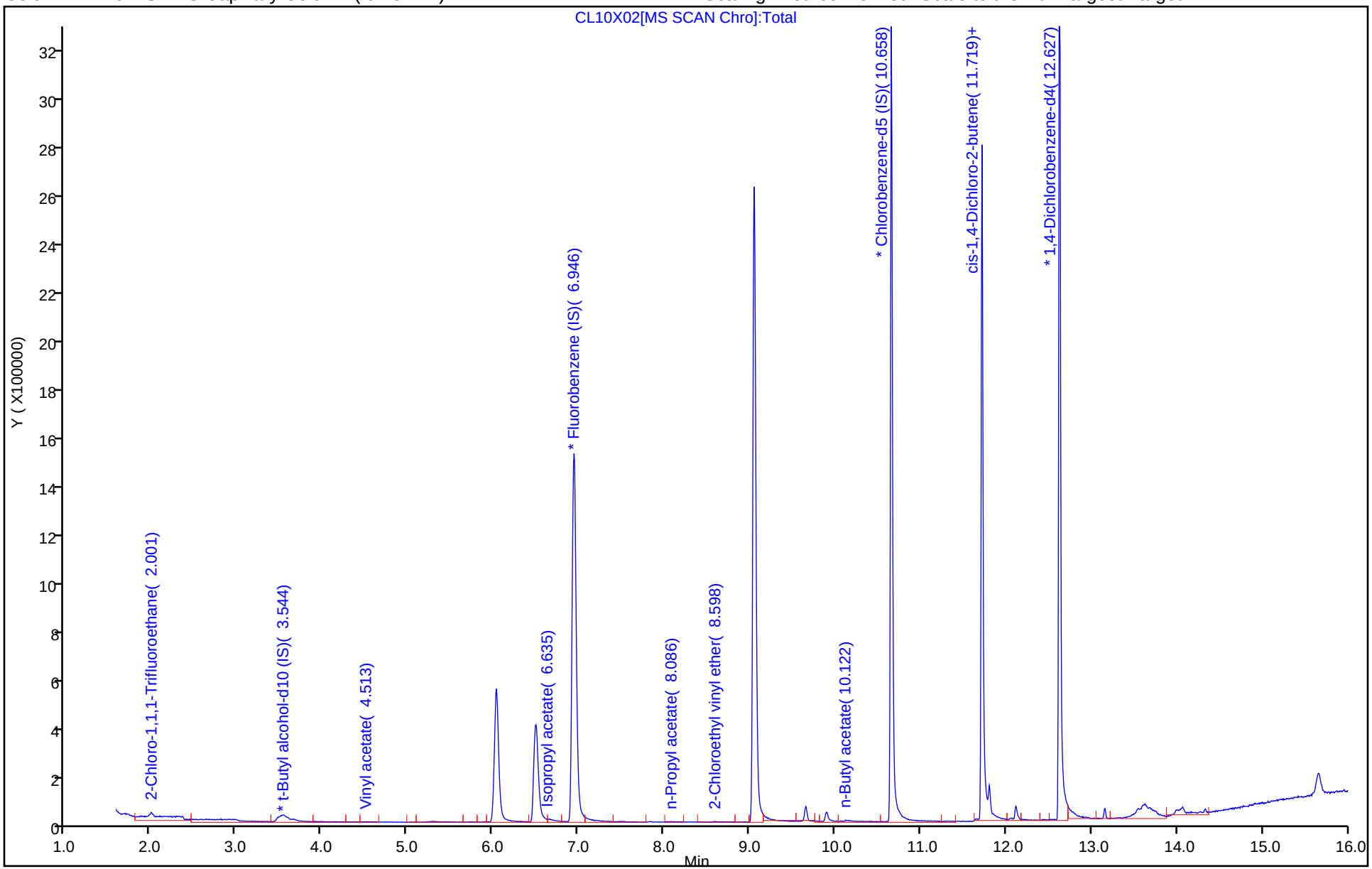
Report Date: 11-Jul-2023 21:37:44 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X02.D

Injection Date:	10-Jul-2023 15:50:30	Instrument ID:	10193	Operator ID:	knk41612
Lims ID:	IC STD.2 Sm			Worklist Smp#:	3
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

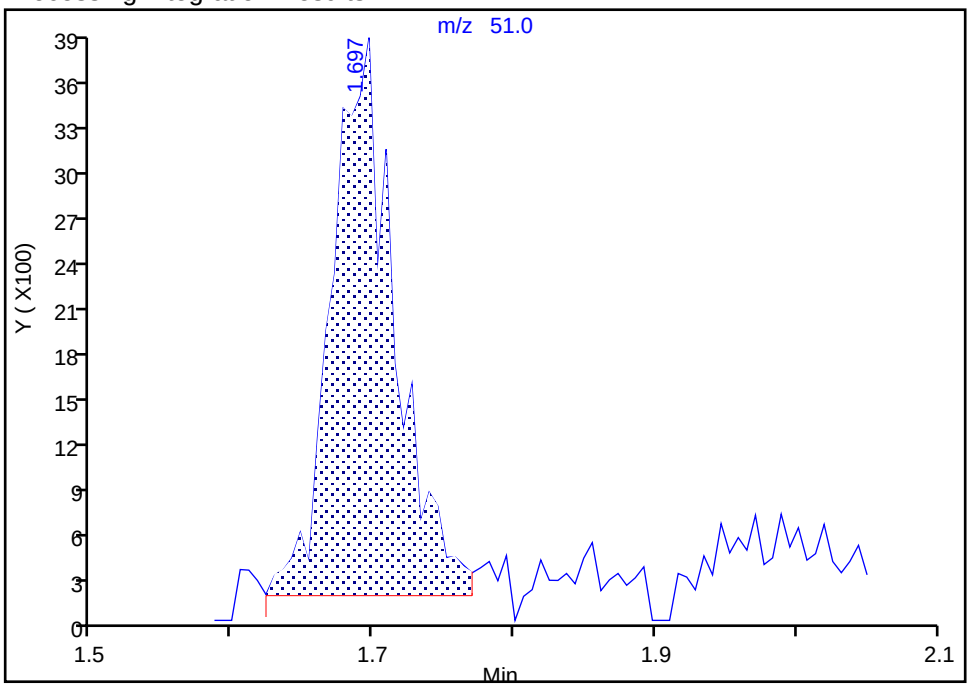
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X02.D				
Injection Date:	10-Jul-2023 15:50:30	Instrument ID:	10193		
Lims ID:	IC STD.2 Sm				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	2	Worklist Smp#:	3
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

3 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

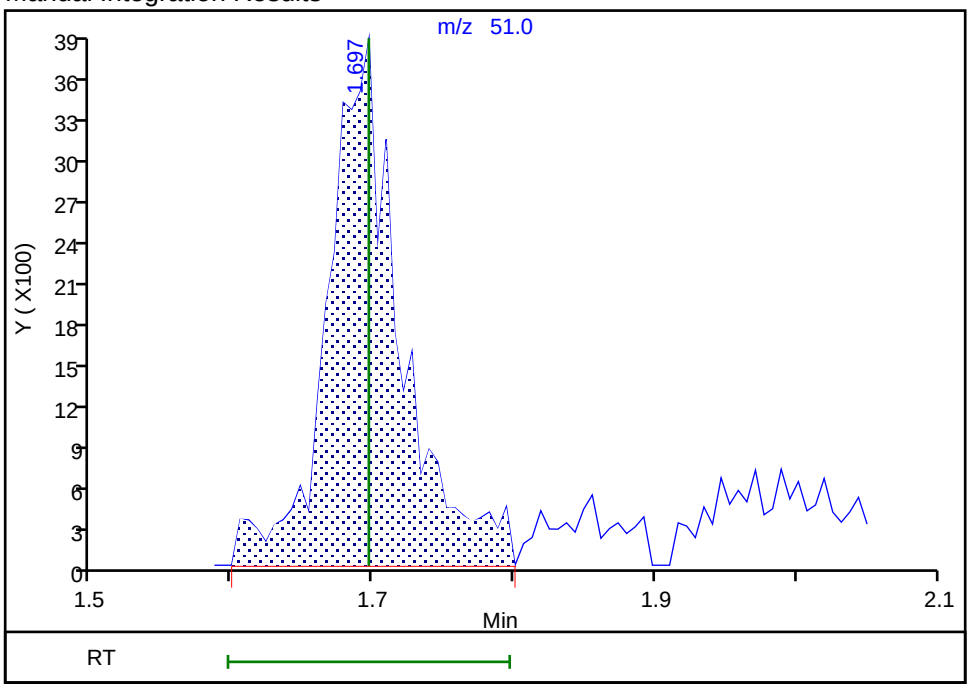
Processing Integration Results

RT: 1.70
Area: 11364
Amount: 0.191553
Amount Units: ug/l



Manual Integration Results

RT: 1.70
Area: 13791
Amount: 0.225863
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:09:13 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

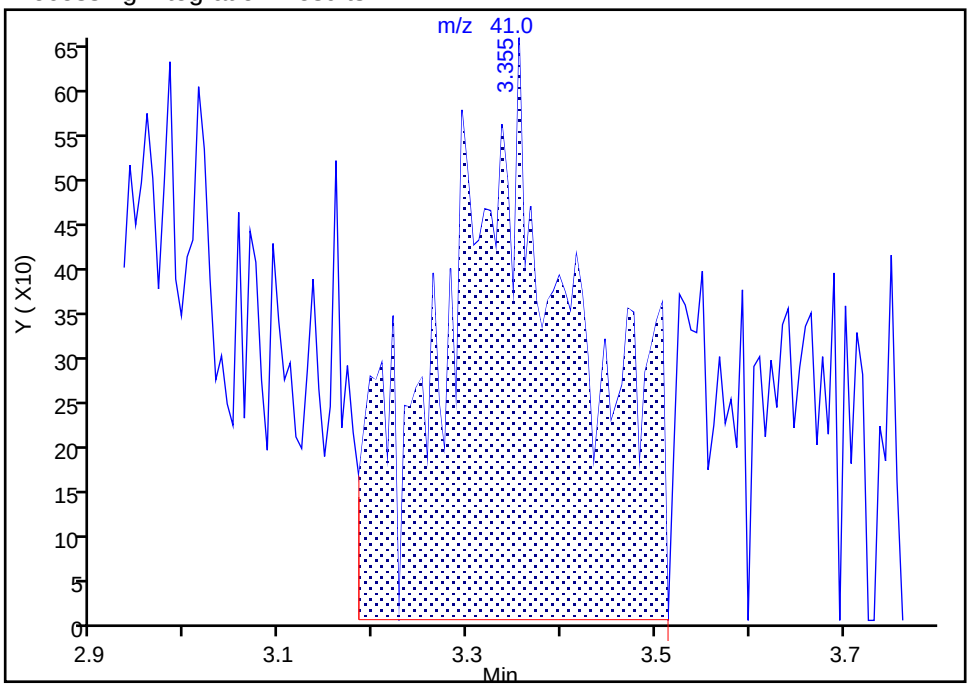
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X02.D				
Injection Date:	10-Jul-2023 15:50:30	Instrument ID:	10193		
Lims ID:	IC STD.2 Sm				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	2	Worklist Smp#:	3
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

27 Acetonitrile, CAS: 75-05-8

Signal: 1

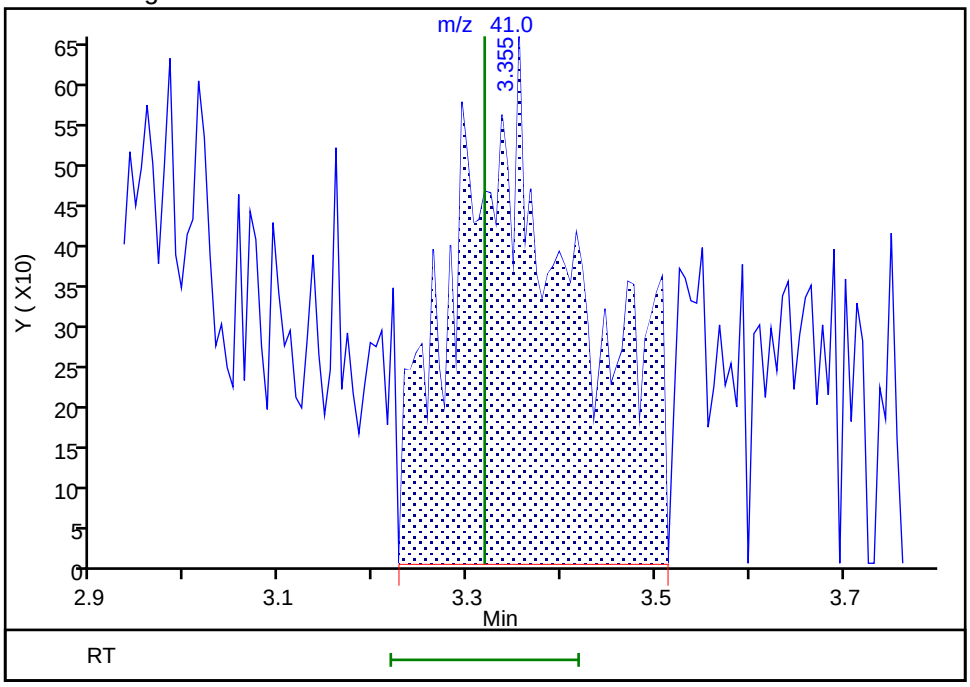
Processing Integration Results

RT: 3.35
Area: 6484
Amount: 1.624092
Amount Units: ug/l



Manual Integration Results

RT: 3.35
Area: 5851
Amount: 1.548604
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:11:17 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

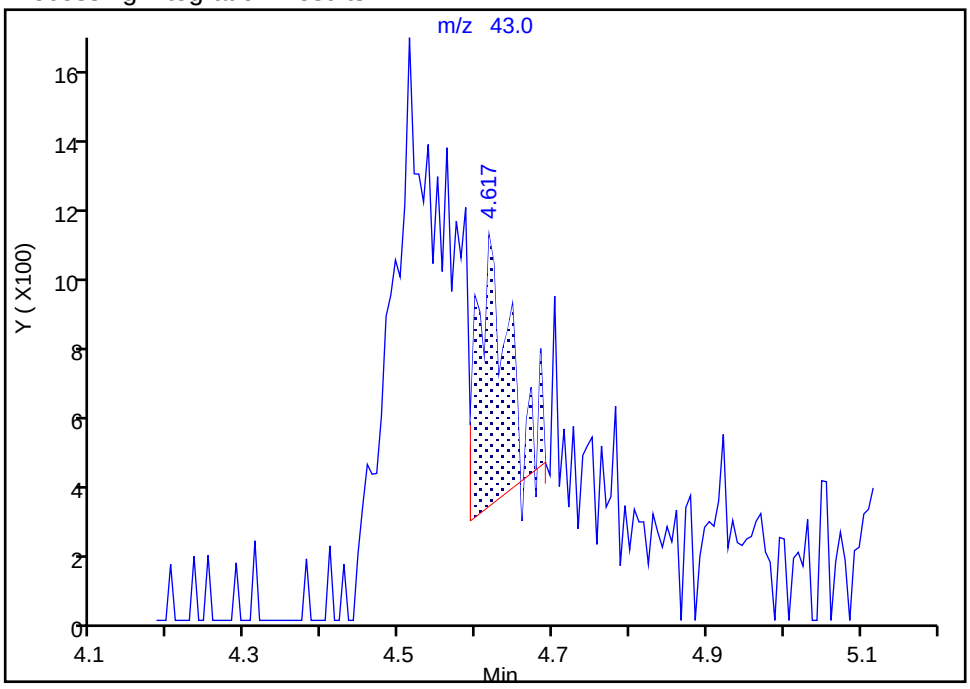
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X02.D				
Injection Date:	10-Jul-2023 15:50:30	Instrument ID:	10193		
Lims ID:	IC STD.2 Sm				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	2	Worklist Smp#:	3
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

38 Vinyl acetate, CAS: 108-05-4

Signal: 1

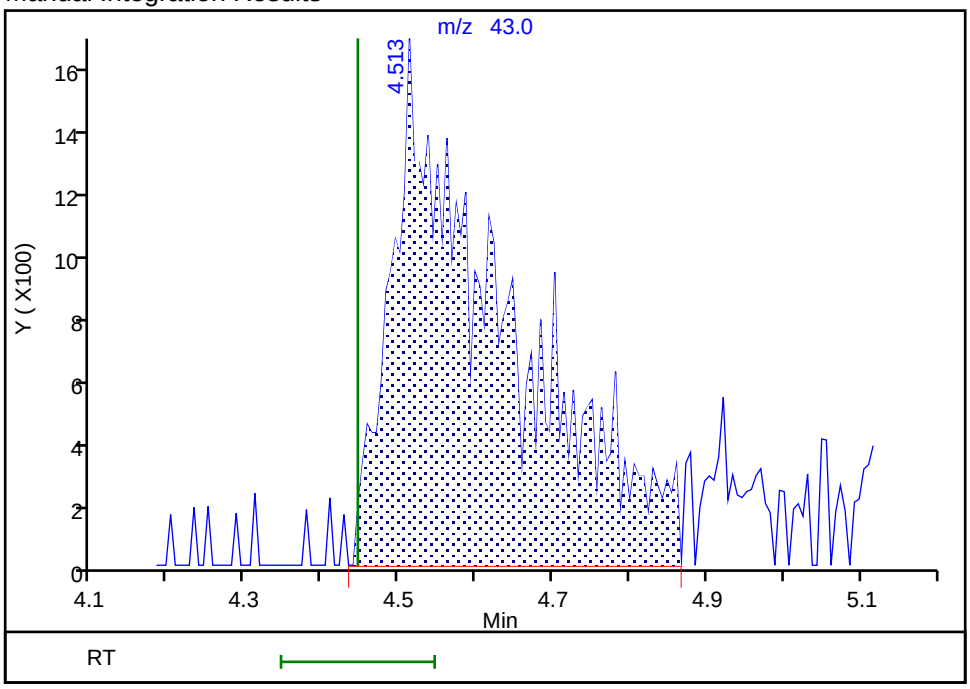
Processing Integration Results

RT: 4.62
Area: 2089
Amount: 0.028119
Amount Units: ug/l



Manual Integration Results

RT: 4.51
Area: 16079
Amount: 0.190862
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:11:24 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

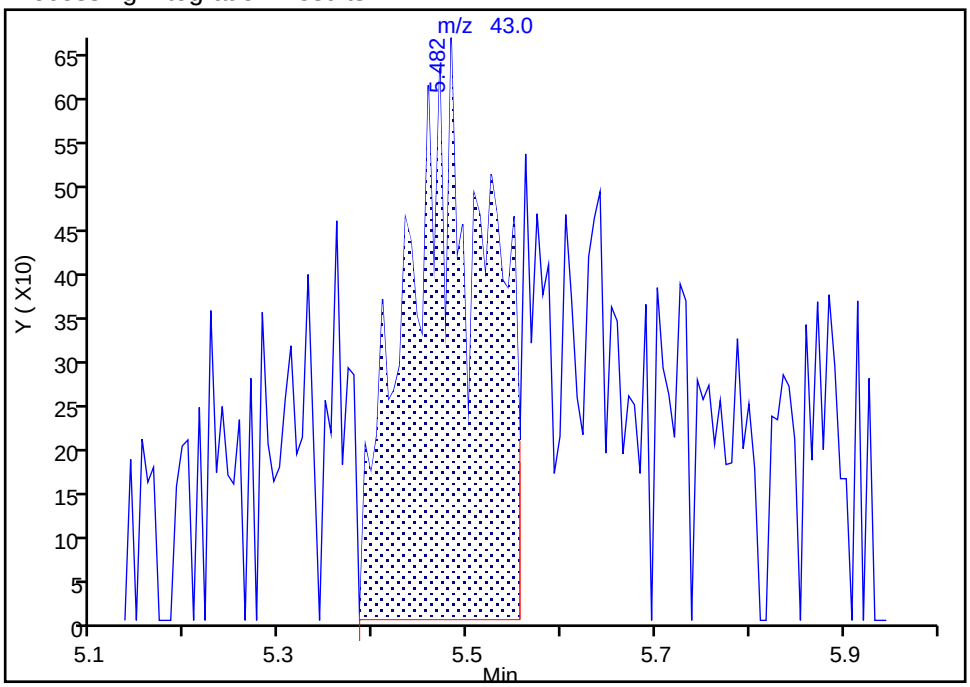
Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X02.D
Injection Date: 10-Jul-2023 15:50:30 Instrument ID: 10193
Lims ID: IC STD.2 Sm
Client ID:
Operator ID: knk41612 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

46 Ethyl acetate, CAS: 141-78-6

Signal: 1

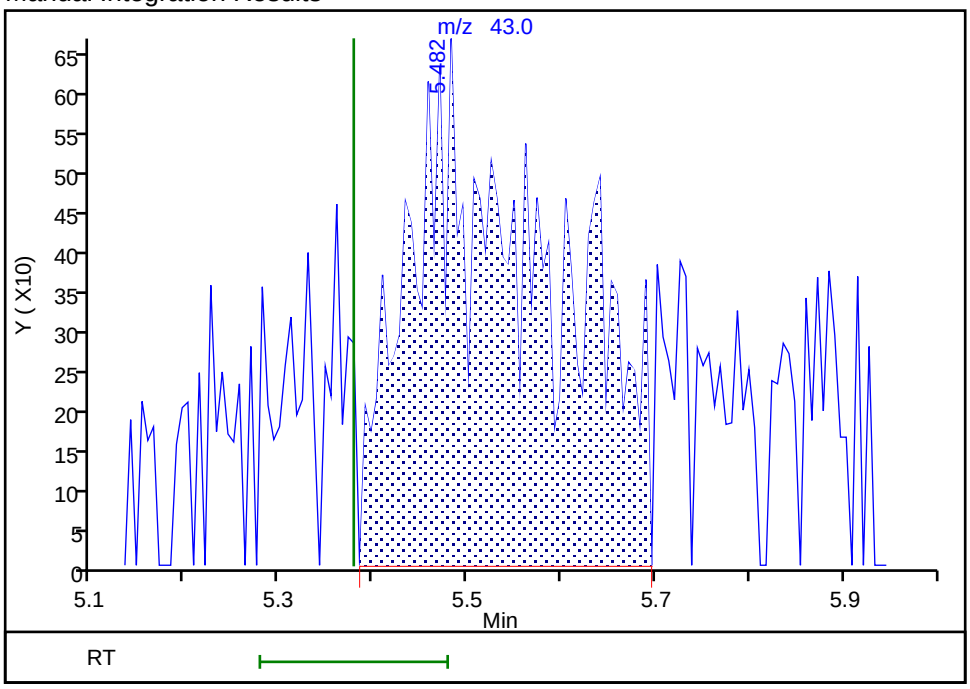
Processing Integration Results

RT: 5.48
Area: 3912
Amount: 0.157096
Amount Units: ug/l



Manual Integration Results

RT: 5.48
Area: 6549
Amount: 0.480078
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:11:32 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

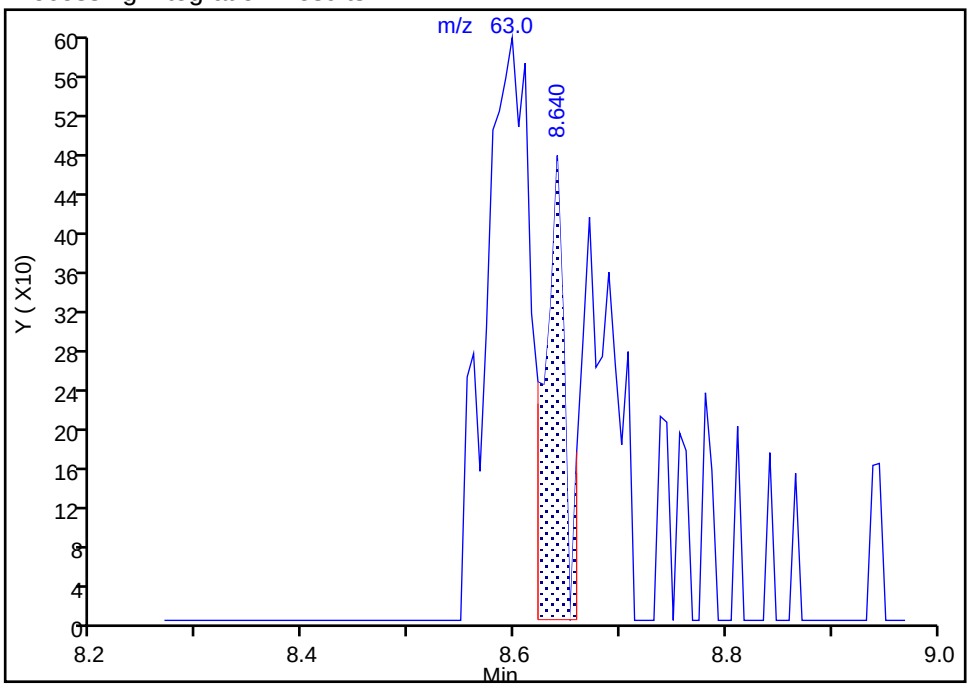
Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X02.D
Injection Date: 10-Jul-2023 15:50:30 Instrument ID: 10193
Lims ID: IC STD.2 Sm
Client ID:
Operator ID: knk41612 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

79 2-Chloroethyl vinyl ether, CAS: 110-75-8

Signal: 1

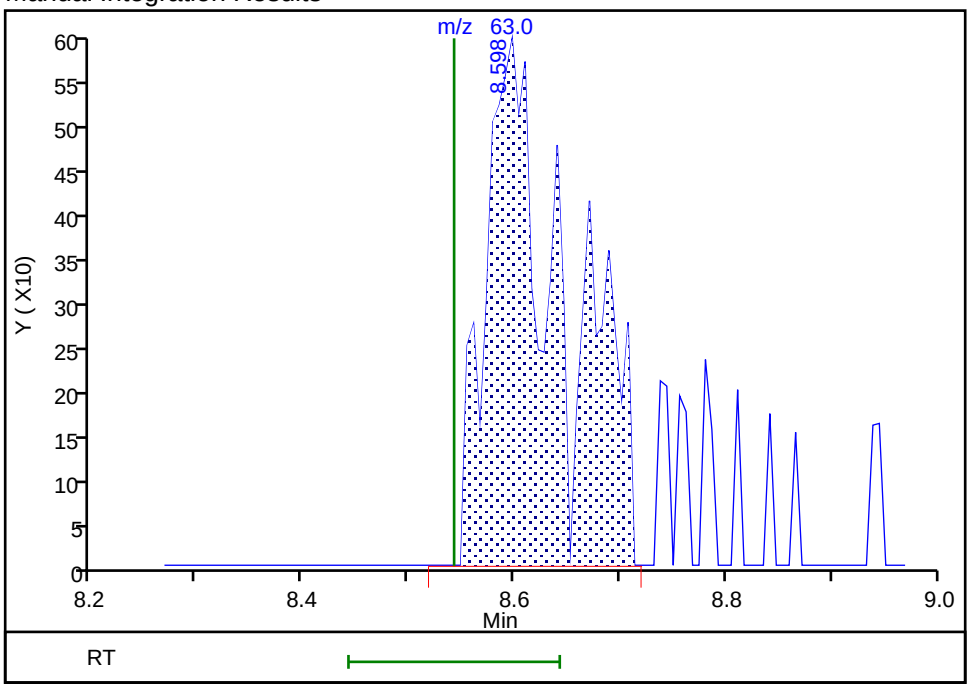
Processing Integration Results

RT: 8.64
Area: 639
Amount: 0.119613
Amount Units: ug/l



Manual Integration Results

RT: 8.60
Area: 3132
Amount: 0.128680
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:11:43 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

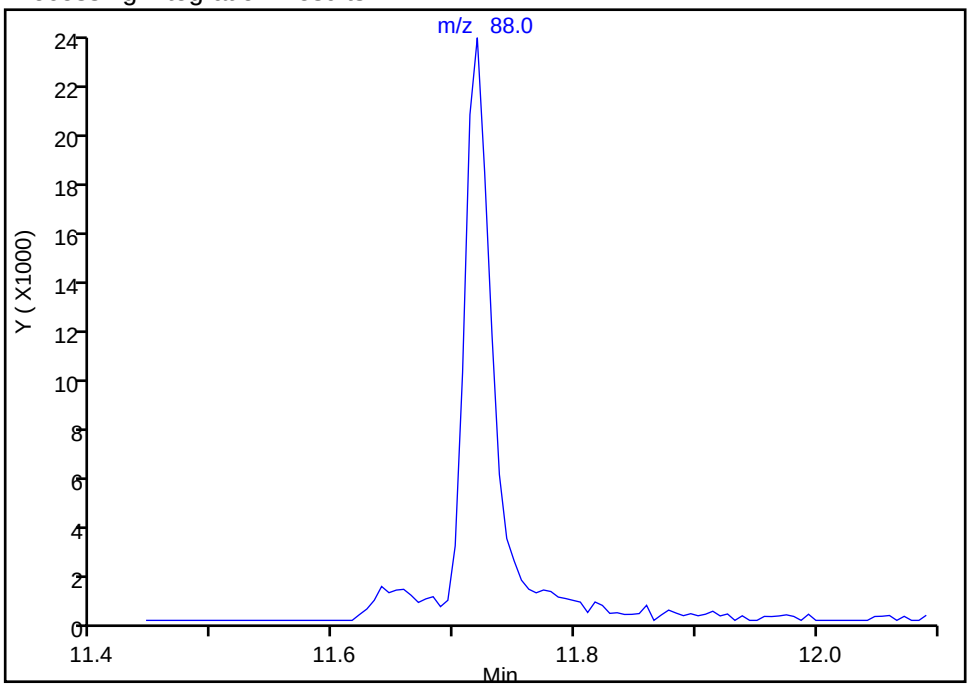
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X02.D				
Injection Date:	10-Jul-2023 15:50:30	Instrument ID:	10193		
Lims ID:	IC STD.2 Sm				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	2	Worklist Smp#:	3
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

122 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

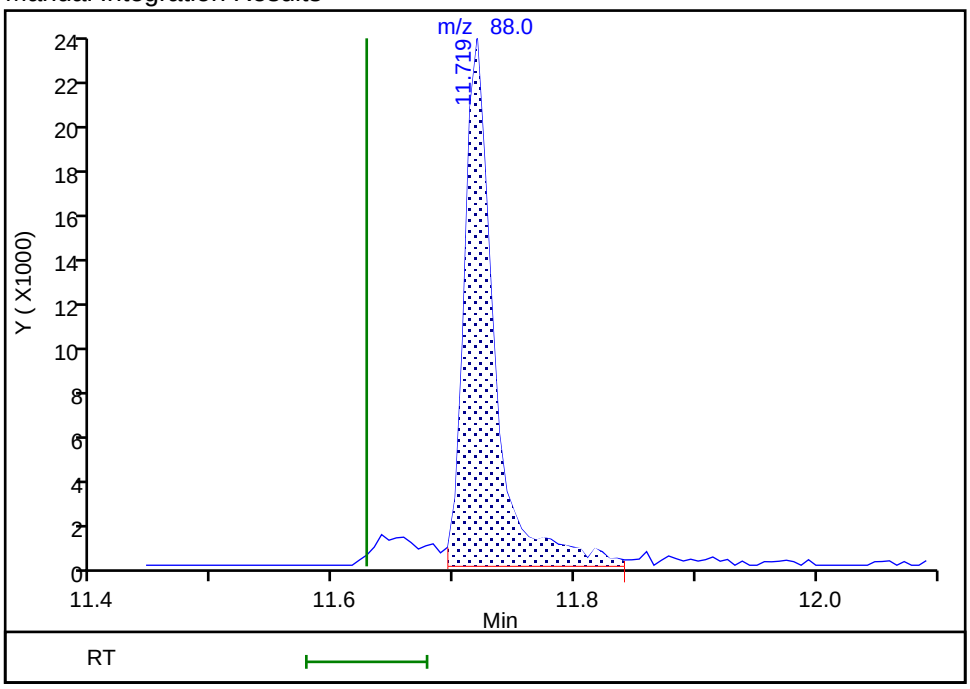
Not Detected
Expected RT: 11.63

Processing Integration Results



Manual Integration Results

RT: 11.72
Area: 39821
Amount: 2.588198
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:08:38 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

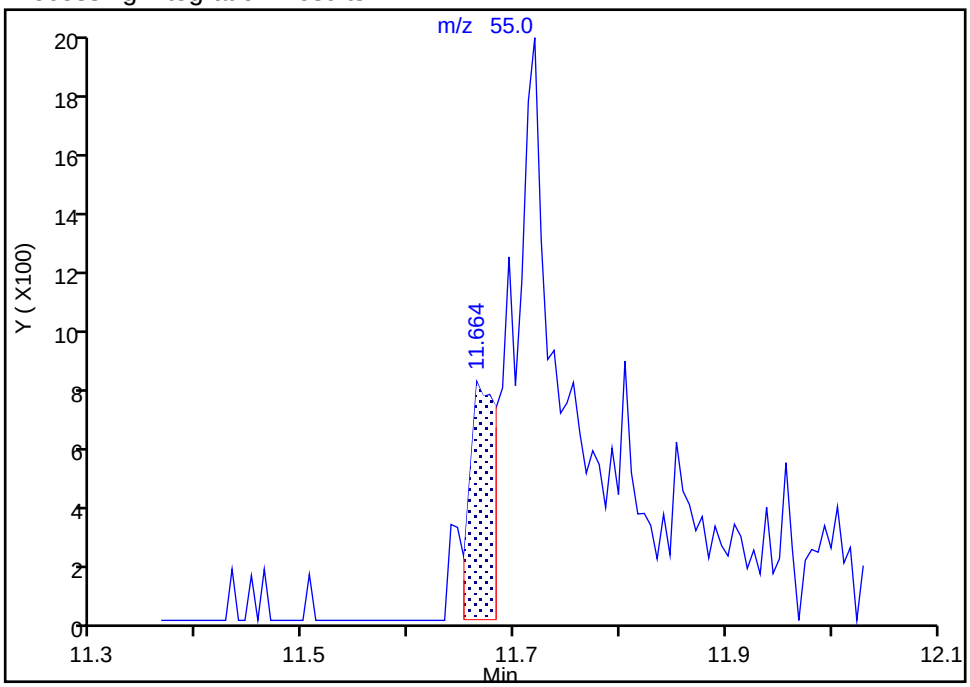
Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X02.D
Injection Date: 10-Jul-2023 15:50:30 Instrument ID: 10193
Lims ID: IC STD.2 Sm
Client ID:
Operator ID: knk41612 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

123 Cyclohexanone, CAS: 108-94-1

Signal: 1

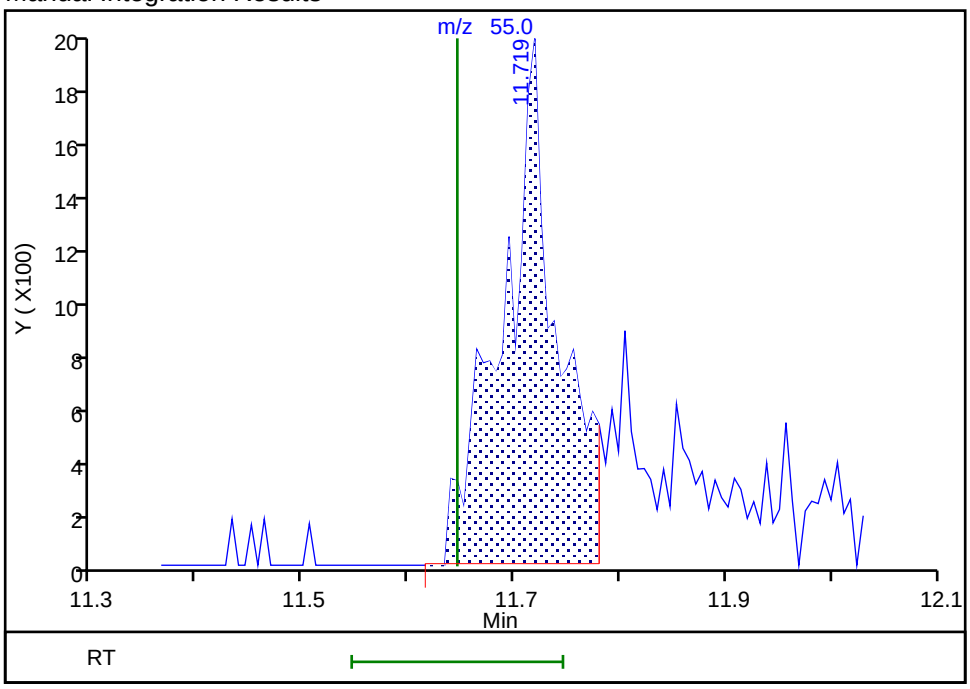
Processing Integration Results

RT: 11.66
Area: 1398
Amount: 1.007899
Amount Units: ug/l



Manual Integration Results

RT: 11.72
Area: 7250
Amount: 15.696128
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:12:28 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X03.D
Lims ID: IC STD.5 Sm
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 10-Jul-2023 16:12:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0088548-004
Misc. Info.: IC STD.5 SM
Operator ID: knk41612 Instrument ID: 10193
Sublist: chrom-MSV_10193_25mL*sub43

Method: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 11-Jul-2023 21:37:45 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1649

First Level Reviewer: DVW2 Date: 11-Jul-2023 08:14:04

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Chlorotrifluoroethene	116	1.660	1.648	0.012	90	11711	0.5000	0.4559	M
3 Chlorodifluoromethane	51	1.690	1.697	-0.006	97	28432	0.5000	0.4808	
4 Dimethyl ether	45	1.733	1.739	-0.006	100	36338	0.5000	0.4273	
8 2-Chloro-1,1,1-Trifluoroethane	118	2.001	2.007	-0.006	33	30787	0.5000	0.4700	
27 Acetonitrile	41	3.349	3.318	0.031	19	10770	2.50	2.94	M
* 31 t-Butyl alcohol-d10 (IS)	65	3.532	3.550	-0.018	95	168136	50.0	50.0	
38 Vinyl acetate	43	4.501	4.446	0.055	93	38676	0.5000	0.4740	M
46 Ethyl acetate	43	5.507	5.379	0.128	40	13609	0.5000	0.6816	M
63 Isopropyl acetate	43	6.653	6.647	0.006	97	33109	0.5000	0.4468	
* 65 Fluorobenzene (IS)	96	6.946	6.946	0.000	99	2506109	10.0	10.0	
75 n-Propyl acetate	61	8.061	7.994	0.067	98	5254	0.5000	0.5038	M
79 2-Chloroethyl vinyl ether	63	8.592	8.543	0.049	93	9029	0.5000	0.3830	
109 n-Butyl acetate	43	10.103	10.073	0.030	98	26991	0.5000	0.6762	
* 111 Chlorobenzene-d5 (IS)	117	10.658	10.658	0.000	84	1987307	10.0	10.0	
122 cis-1,4-Dichloro-2-butene	88	11.640	11.627	0.013	94	10743	1.00	1.24	a
123 Cyclohexanone	55	11.664	11.646	0.018	90	24830	25.0	25.8	
* 139 1,4-Dichlorobenzene-d4	152	12.627	12.621	0.006	93	1144085	10.0	10.0	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

MSV_CCV_V5ACE_00026	Amount Added:	0.50	Units: uL
MSV_CCV_CYC_00006	Amount Added:	4.00	Units: uL
MSV_V_SMRV4_00060	Amount Added:	2.50	Units: uL
MSV_HP25_ISO_00008	Amount Added:	1.00	Units: uL
MSV_DME_00048	Amount Added:	0.50	Units: uL

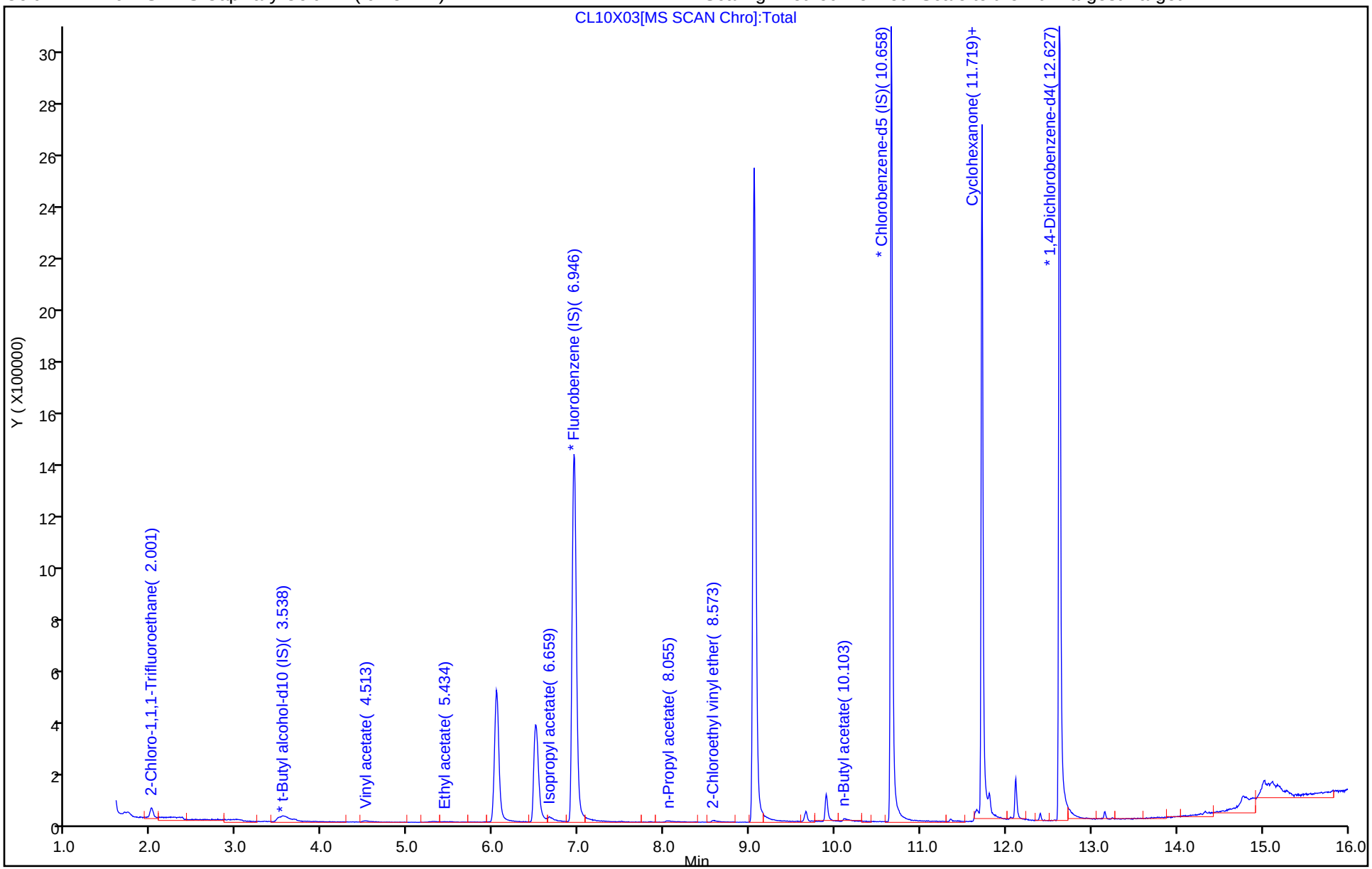
Report Date: 11-Jul-2023 21:37:45 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X03.D

Injection Date:	10-Jul-2023 16:12:30	Instrument ID:	10193	Operator ID:	knk41612
Lims ID:	IC STD.5 Sm			Worklist Smp#:	4
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

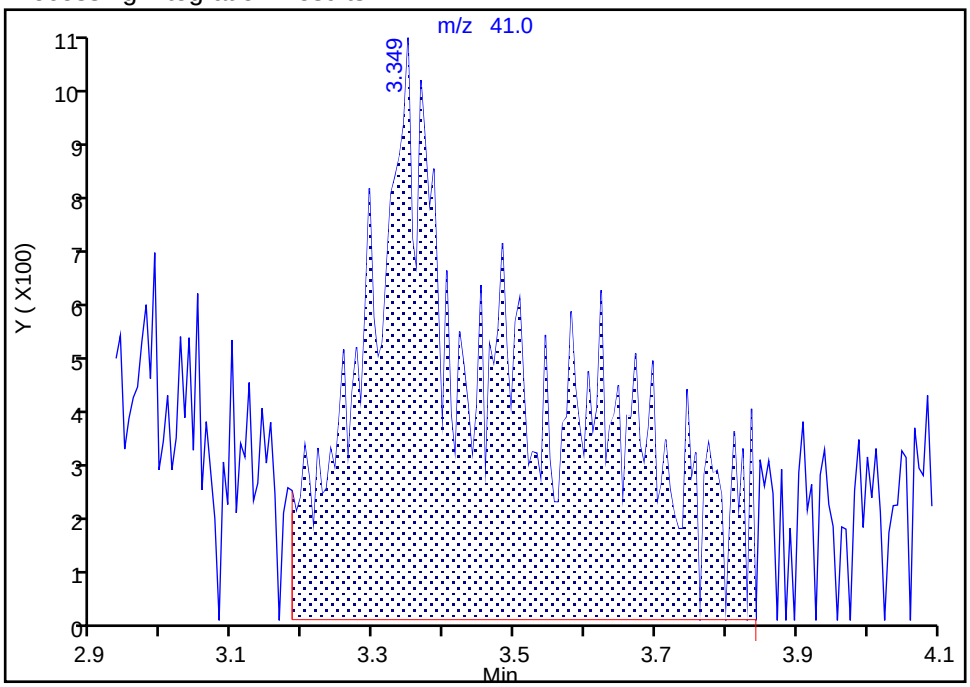
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X03.D				
Injection Date:	10-Jul-2023 16:12:30	Instrument ID:	10193		
Lims ID:	IC STD.5 Sm				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	3	Worklist Smp#:	4
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

27 Acetonitrile, CAS: 75-05-8

Signal: 1

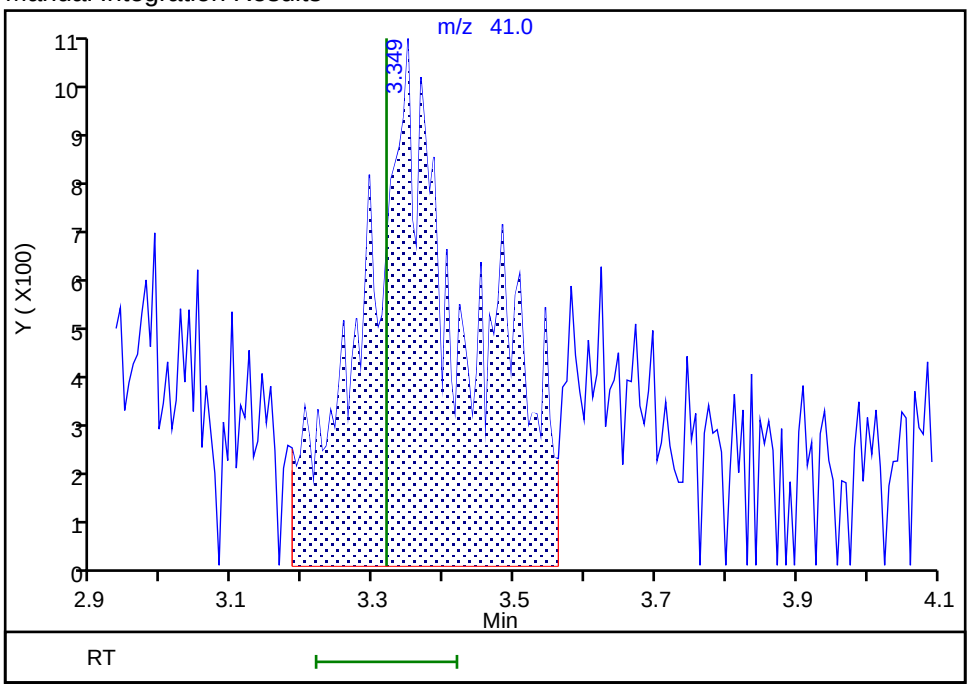
Processing Integration Results

RT: 3.35
Area: 15702
Amount: 4.155048
Amount Units: ug/l



Manual Integration Results

RT: 3.35
Area: 10770
Amount: 2.943267
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:13:01 -04:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

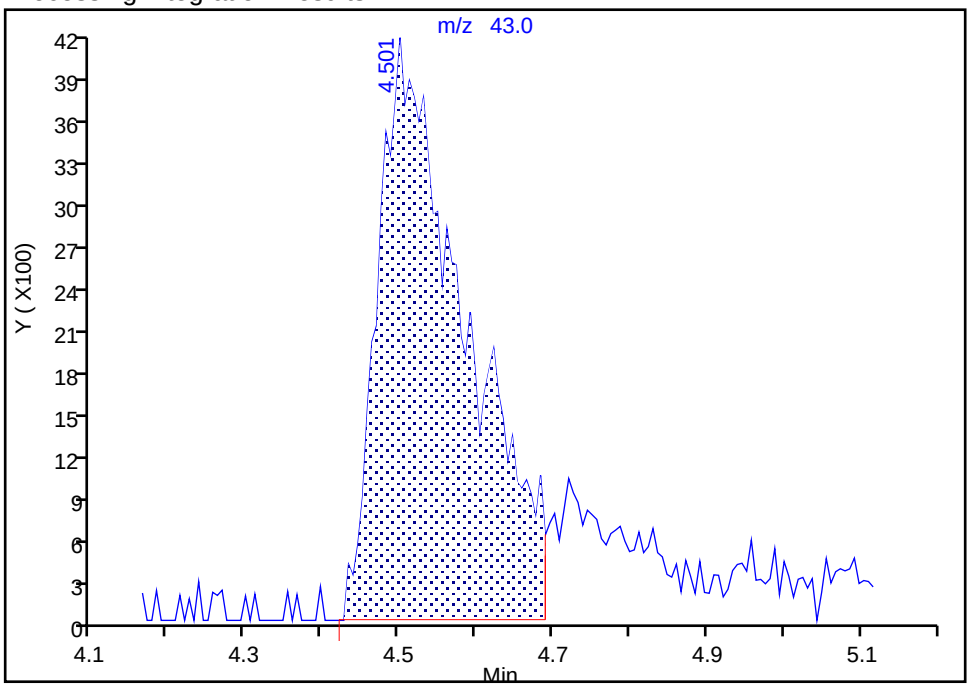
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X03.D				
Injection Date:	10-Jul-2023 16:12:30	Instrument ID:	10193		
Lims ID:	IC STD.5 Sm				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	3	Worklist Smp#:	4
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

38 Vinyl acetate, CAS: 108-05-4

Signal: 1

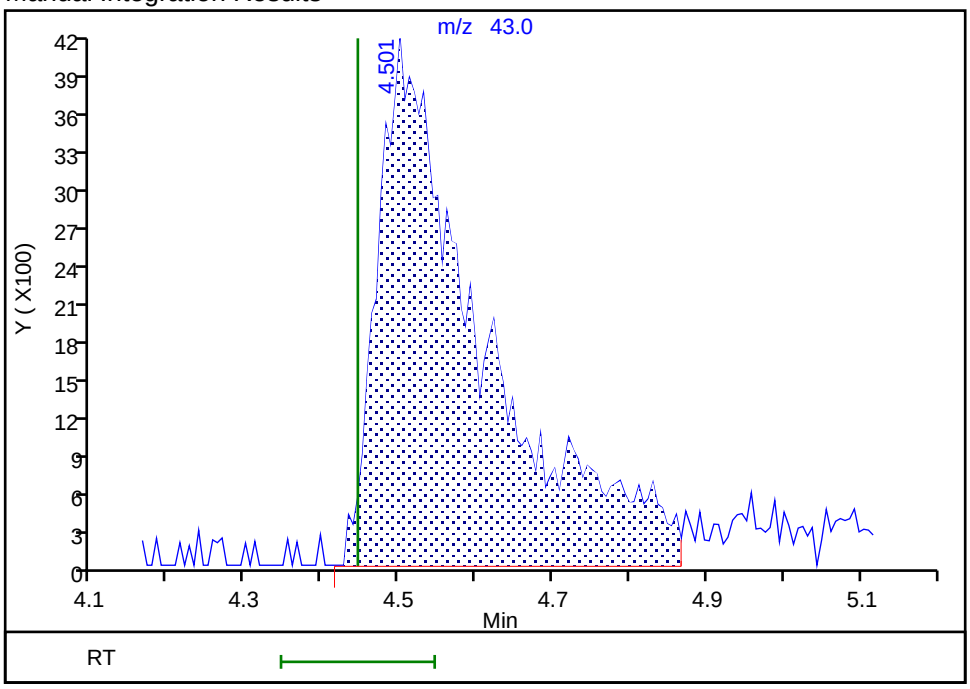
Processing Integration Results

RT: 4.50
Area: 32313
Amount: 0.395858
Amount Units: ug/l



Manual Integration Results

RT: 4.50
Area: 38676
Amount: 0.474030
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:13:17 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

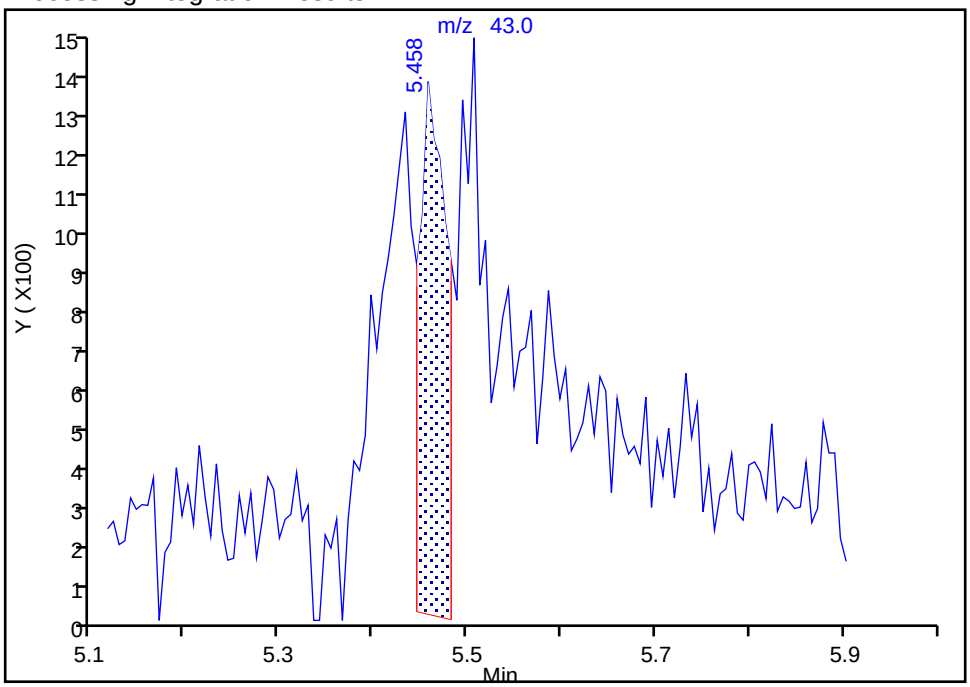
Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X03.D
Injection Date: 10-Jul-2023 16:12:30 Instrument ID: 10193
Lims ID: IC STD.5 Sm
Client ID:
Operator ID: knk41612 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

46 Ethyl acetate, CAS: 141-78-6

Signal: 1

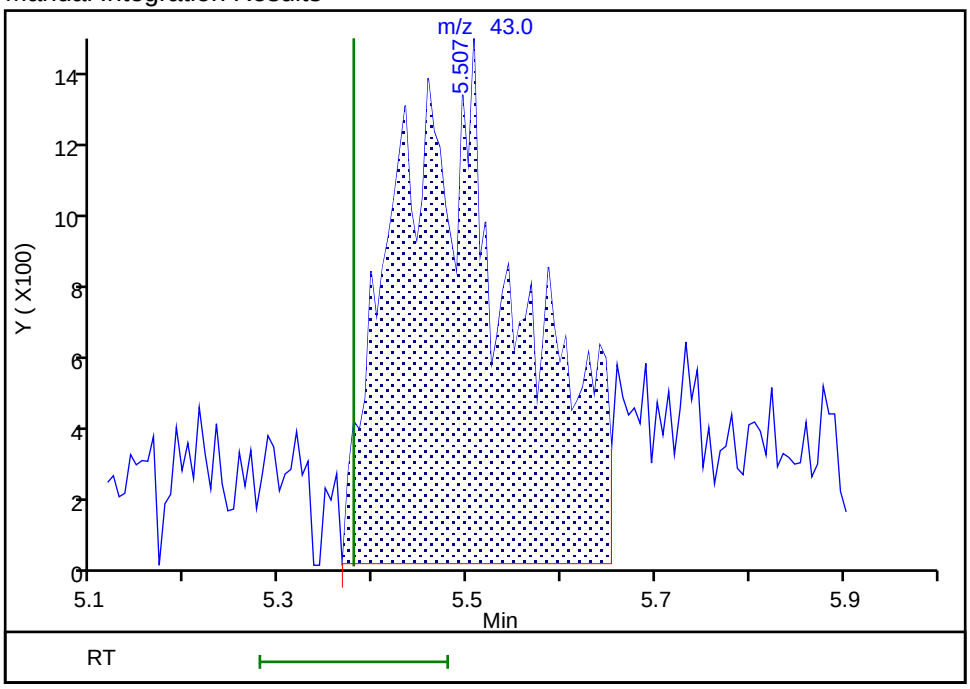
Processing Integration Results

RT: 5.46
Area: 2794
Amount: 0.107703
Amount Units: ug/l



Manual Integration Results

RT: 5.51
Area: 13609
Amount: 0.681557
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:13:33 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

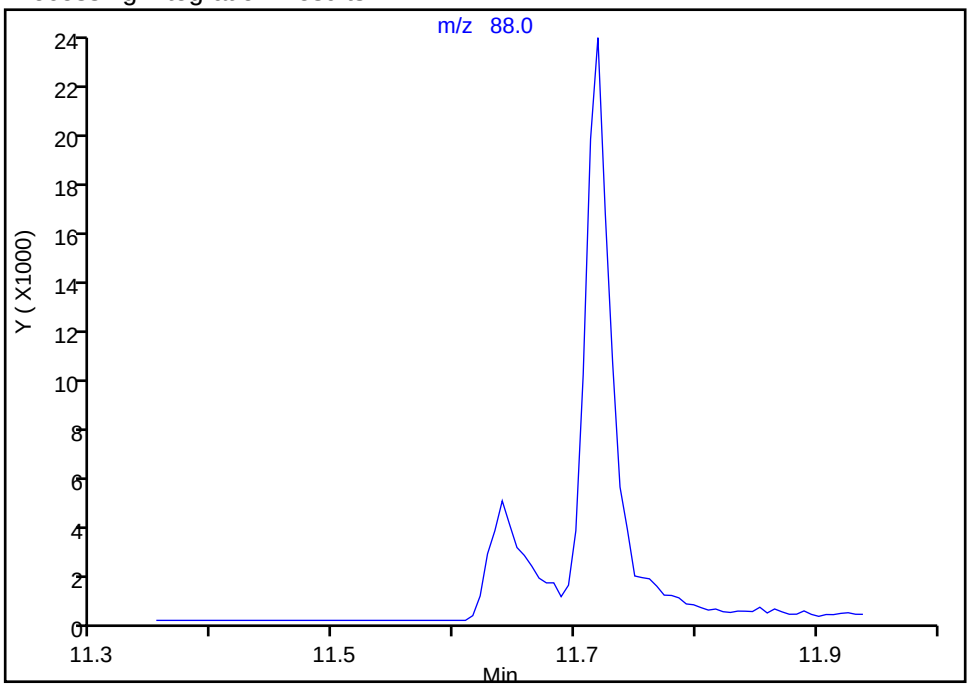
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X03.D				
Injection Date:	10-Jul-2023 16:12:30	Instrument ID:	10193		
Lims ID:	IC STD.5 Sm				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	3	Worklist Smp#:	4
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

122 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

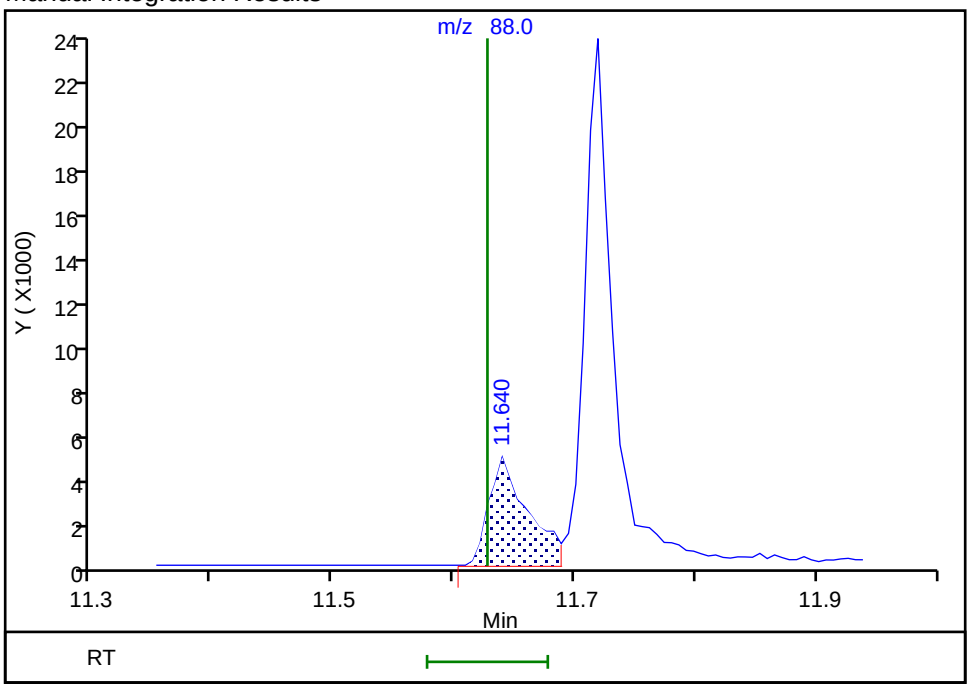
Not Detected
Expected RT: 11.63

Processing Integration Results



Manual Integration Results

RT: 11.64
Area: 10743
Amount: 1.243893
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:13:54 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X04.D
Lims ID: IC STD1 Sm
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 10-Jul-2023 16:34:30 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0088548-005
Misc. Info.: IC STD1 SM
Operator ID: knk41612 Instrument ID: 10193
Sublist: chrom-MSV_10193_25mL*sub43

Method: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 11-Jul-2023 21:37:47 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1649

First Level Reviewer: DVW2 Date: 11-Jul-2023 08:15:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Chlorotrifluoroethene	116	1.648	1.648	0.000	92	24460	1.00	0.9462	M
3 Chlorodifluoromethane	51	1.697	1.697	0.001	97	54042	1.00	0.9081	
4 Dimethyl ether	45	1.739	1.739	0.000	100	80626	1.00	0.9421	
8 2-Chloro-1,1,1-Trifluoroethane	118	2.008	2.007	0.001	34	61489	1.00	0.9327	M
27 Acetonitrile	41	3.361	3.318	0.043	24	18506	5.00	5.03	M
* 31 t-Butyl alcohol-d10 (IS)	65	3.550	3.550	0.000	97	160800	50.0	50.0	
38 Vinyl acetate	43	4.501	4.446	0.055	97	64342	1.00	0.7836	
46 Ethyl acetate	43	5.415	5.379	0.036	69	19124	1.00	0.8311	M
63 Isopropyl acetate	43	6.665	6.647	0.018	98	60694	1.00	0.8139	
* 65 Fluorobenzene (IS)	96	6.946	6.946	0.000	99	2522019	10.0	10.0	
75 n-Propyl acetate	61	8.037	7.994	0.043	99	10169	1.00	0.7483	
79 2-Chloroethyl vinyl ether	63	8.567	8.543	0.024	92	20460	1.00	0.8625	
109 n-Butyl acetate	43	10.097	10.073	0.024	98	38114	1.00	0.8125	
* 111 Chlorobenzene-d5 (IS)	117	10.658	10.658	0.000	84	1976880	10.0	10.0	
122 cis-1,4-Dichloro-2-butene	88	11.640	11.627	0.013	98	25354	2.00	1.93	a
123 Cyclohexanone	55	11.664	11.646	0.018	89	63315	50.0	49.1	
* 139 1,4-Dichlorobenzene-d4	152	12.627	12.621	0.006	93	1147765	10.0	10.0	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

MSV_CCV_V5ACE_00026	Amount Added:	0.50	Units: uL
MSV_CCV_CYC_00006	Amount Added:	4.00	Units: uL
MSV_V_SMRV4_00060	Amount Added:	2.50	Units: uL
MSV_HP25_ISO_00008	Amount Added:	1.00	Units: uL
MSV_DME_00048	Amount Added:	0.50	Units: uL

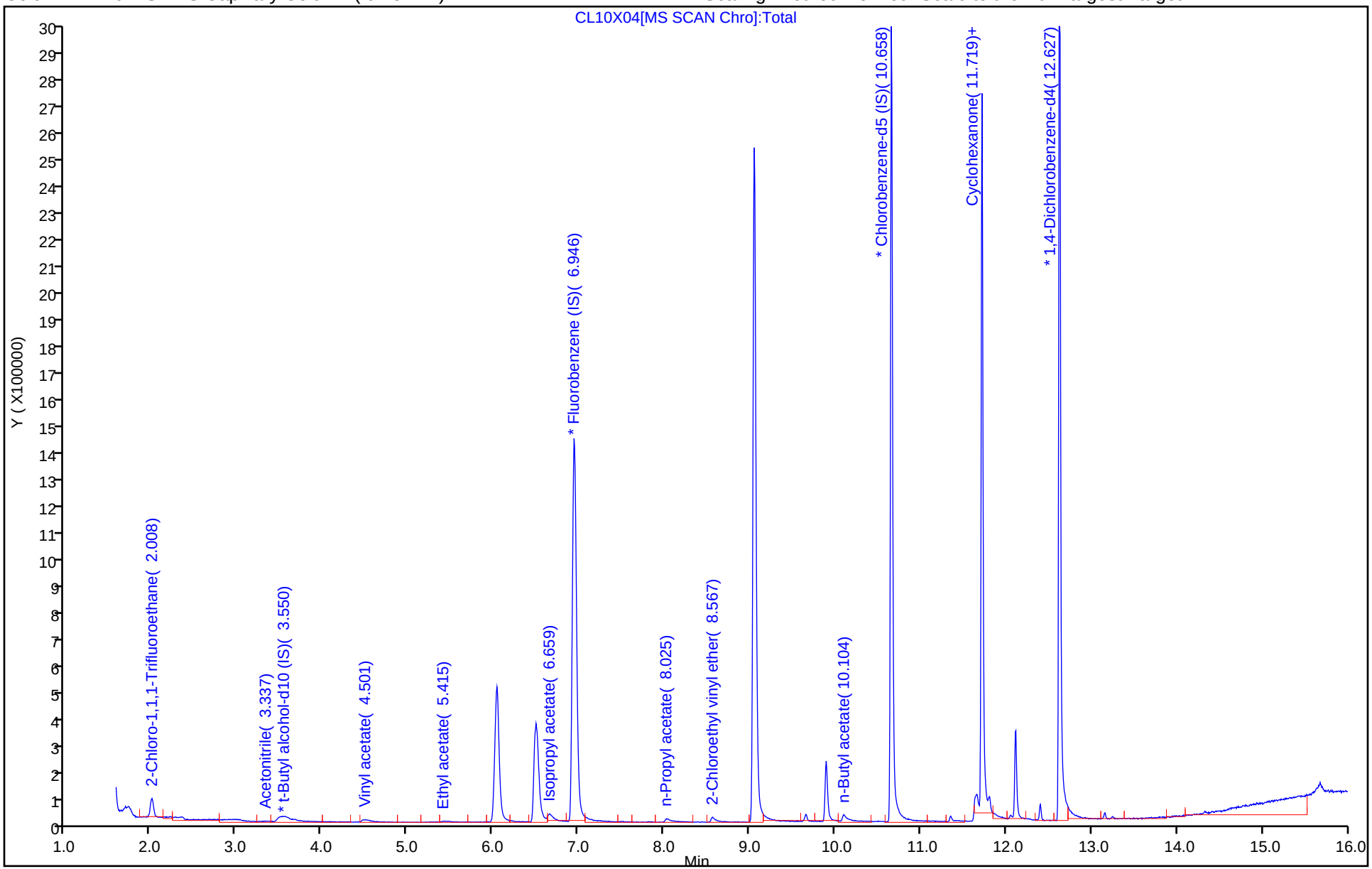
Report Date: 11-Jul-2023 21:37:47 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X04.D

Injection Date:	10-Jul-2023 16:34:30	Instrument ID:	10193	Operator ID:	knk41612
Lims ID:	IC STD1 Sm			Worklist Smp#:	5
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

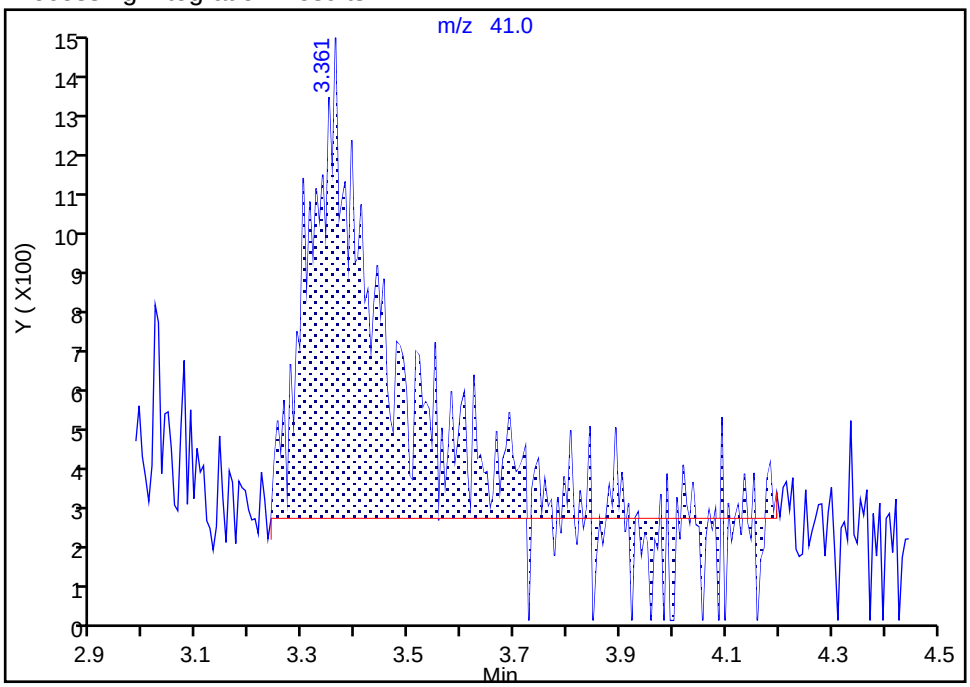
Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X04.D
Injection Date: 10-Jul-2023 16:34:30 Instrument ID: 10193
Lims ID: IC STD1 Sm
Client ID:
Operator ID: knk41612 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

27 Acetonitrile, CAS: 75-05-8

Signal: 1

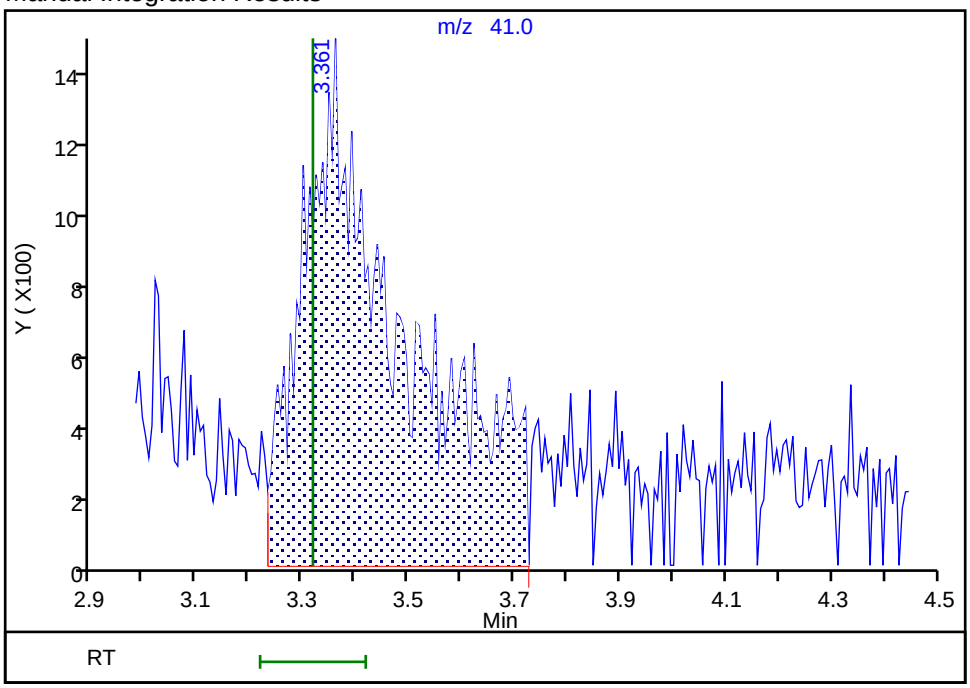
Processing Integration Results

RT: 3.36
Area: 10686
Amount: 3.036321
Amount Units: ug/l



Manual Integration Results

RT: 3.36
Area: 18506
Amount: 5.025486
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:15:08 -04:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

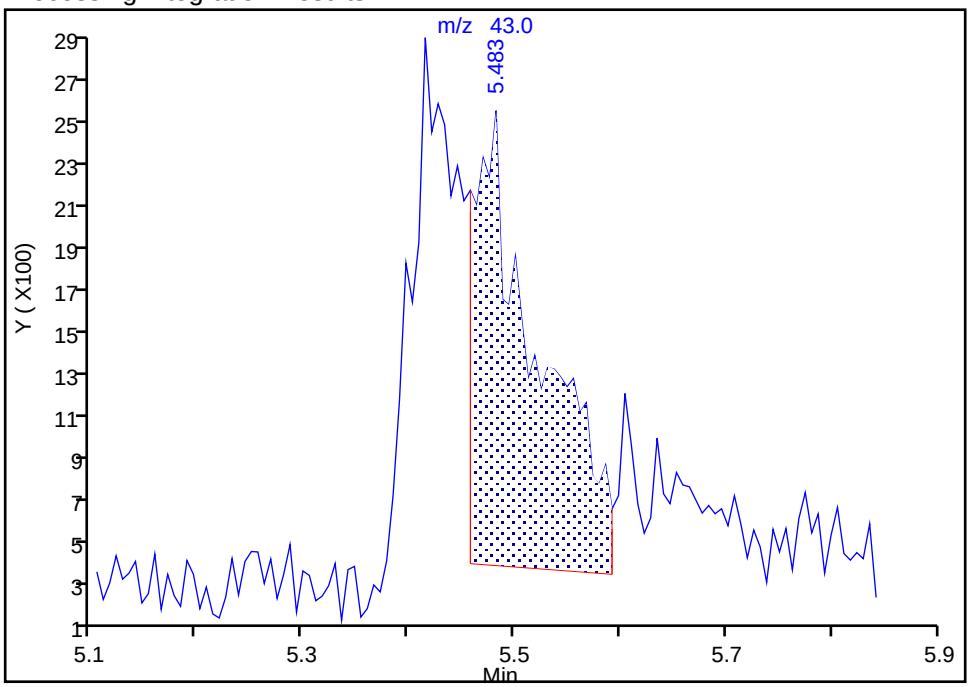
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X04.D				
Injection Date:	10-Jul-2023 16:34:30	Instrument ID:	10193		
Lims ID:	IC STD1 Sm				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	4	Worklist Smp#:	5
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

46 Ethyl acetate, CAS: 141-78-6

Signal: 1

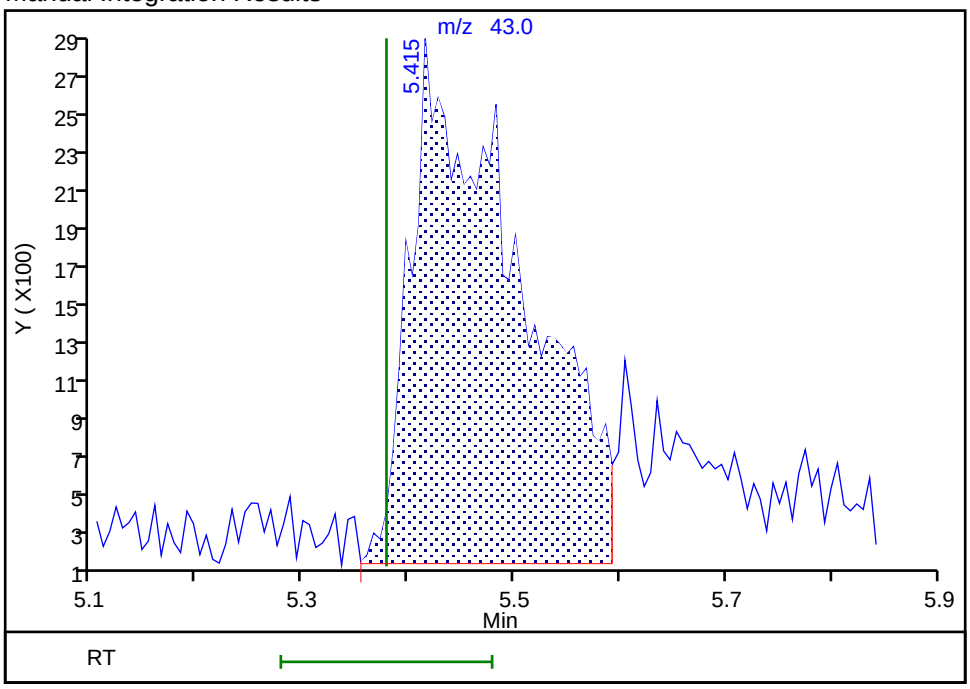
Processing Integration Results

RT: 5.48
Area: 8994
Amount: 0.307846
Amount Units: ug/l



Manual Integration Results

RT: 5.42
Area: 19124
Amount: 0.831130
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:15:25 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

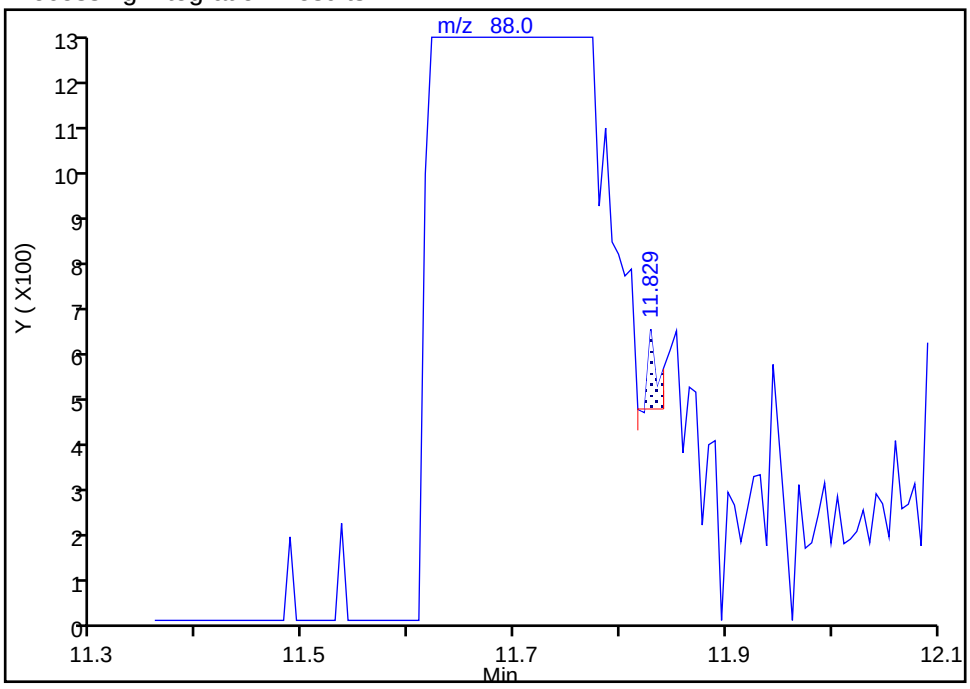
Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X04.D
Injection Date: 10-Jul-2023 16:34:30 Instrument ID: 10193
Lims ID: IC STD1 Sm
Client ID:
Operator ID: knk41612 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

122 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

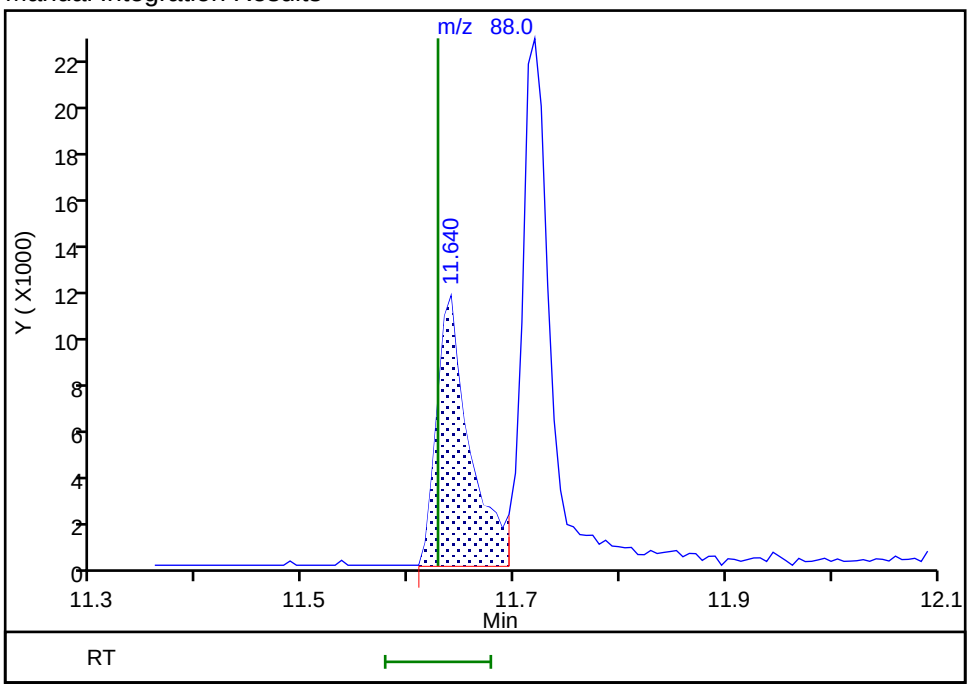
Processing Integration Results

RT: 11.83
Area: 112
Amount: 0.005865
Amount Units: ug/l



Manual Integration Results

RT: 11.64
Area: 25354
Amount: 1.934224
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:15:36 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X05.D
Lims ID: IC STD2 Sm
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 10-Jul-2023 16:56:30 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0088548-006
Misc. Info.: IC STD2 SM
Operator ID: knk41612 Instrument ID: 10193
Sublist: chrom-MSV_10193_25mL*sub43

Method: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 11-Jul-2023 21:37:49 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1649

First Level Reviewer: DVW2 Date: 11-Jul-2023 08:16:51

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Chlorotrifluoroethene	116	1.642	1.648	-0.006	93	50807	2.00	1.98	M
3 Chlorodifluoromethane	51	1.697	1.697	0.001	97	114741	2.00	1.94	
4 Dimethyl ether	45	1.745	1.739	0.006	99	171508	2.00	2.02	
8 2-Chloro-1,1,1-Trifluoroethane	118	2.008	2.007	0.000	34	133824	2.00	2.04	a
27 Acetonitrile	41	3.343	3.318	0.025	95	35452	10.0	9.70	M
* 31 t-Butyl alcohol-d10 (IS)	65	3.562	3.550	0.012	85	158768	50.0	50.0	
38 Vinyl acetate	43	4.470	4.446	0.024	97	158532	2.00	1.94	a
46 Ethyl acetate	43	5.415	5.379	0.036	99	48415	2.00	1.65	
63 Isopropyl acetate	43	6.653	6.647	0.006	98	148450	2.00	2.00	
* 65 Fluorobenzene (IS)	96	6.952	6.946	0.006	99	2504156	10.0	10.0	
75 n-Propyl acetate	61	8.019	7.994	0.025	98	25947	2.00	1.55	a
79 2-Chloroethyl vinyl ether	63	8.561	8.543	0.018	92	40570	2.00	1.72	
109 n-Butyl acetate	43	10.091	10.073	0.018	98	112554	2.00	1.72	
* 111 Chlorobenzene-d5 (IS)	117	10.658	10.658	0.000	84	1971475	10.0	10.0	
122 cis-1,4-Dichloro-2-butene	88	11.634	11.627	0.007	95	57720	4.00	3.47	a
123 Cyclohexanone	55	11.658	11.646	0.012	91	132145	100.0	90.6	
* 139 1,4-Dichlorobenzene-d4	152	12.627	12.621	0.006	93	1132550	10.0	10.0	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

MSV_CCV_V5ACE_00026	Amount Added:	1.00	Units: uL
MSV_CCV_CYC_00006	Amount Added:	8.00	Units: uL
MSV_V_SMRV4_00060	Amount Added:	5.00	Units: uL
MSV_HP25_ISO_00008	Amount Added:	1.00	Units: uL
MSV_DME_00048	Amount Added:	1.00	Units: uL

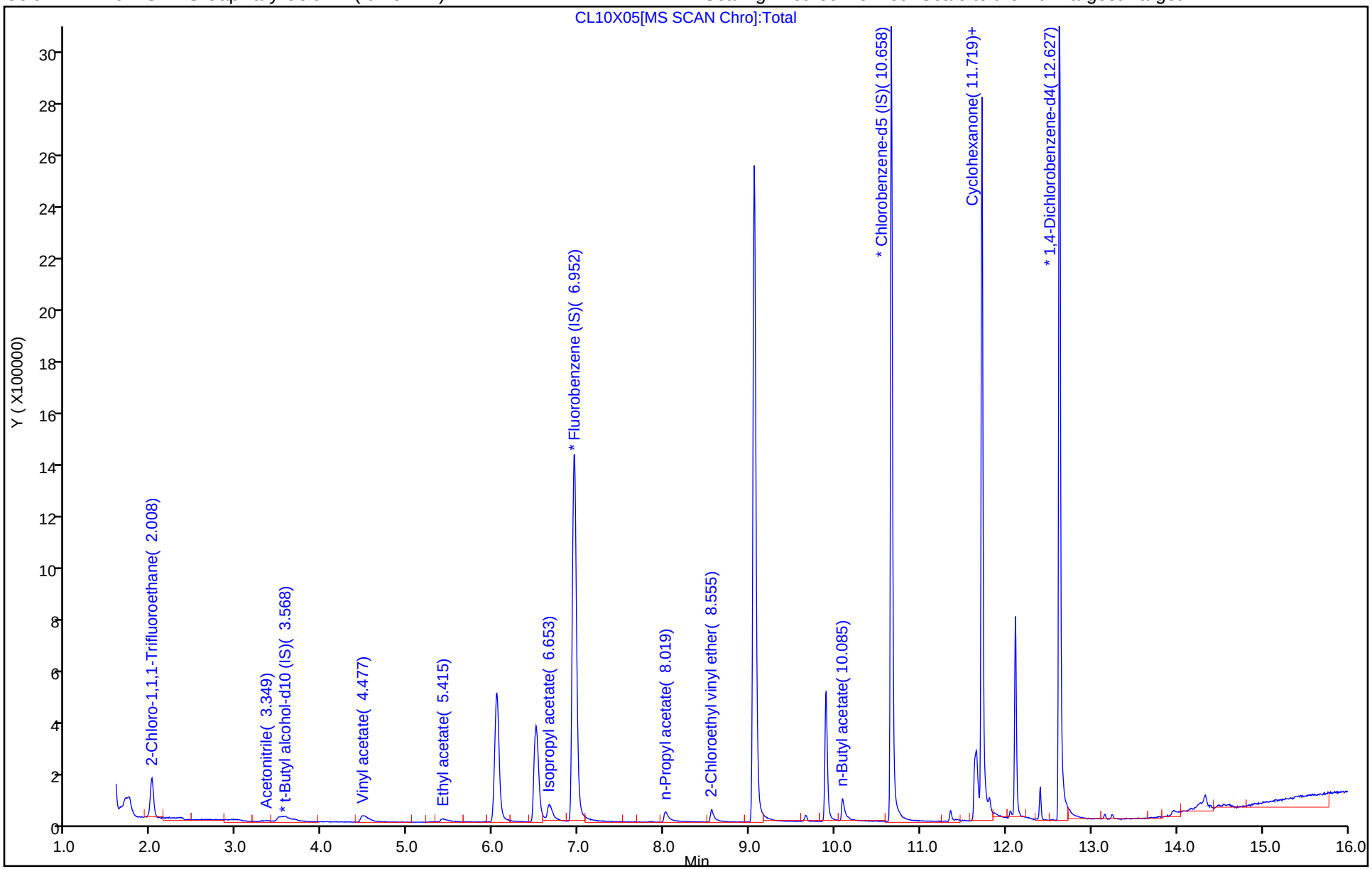
Report Date: 11-Jul-2023 21:37:49 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X05.D

Injection Date:	10-Jul-2023 16:56:30	Instrument ID:	10193	Operator ID:	knk41612
Lims ID:	IC STD2 Sm			Worklist Smp#:	6
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

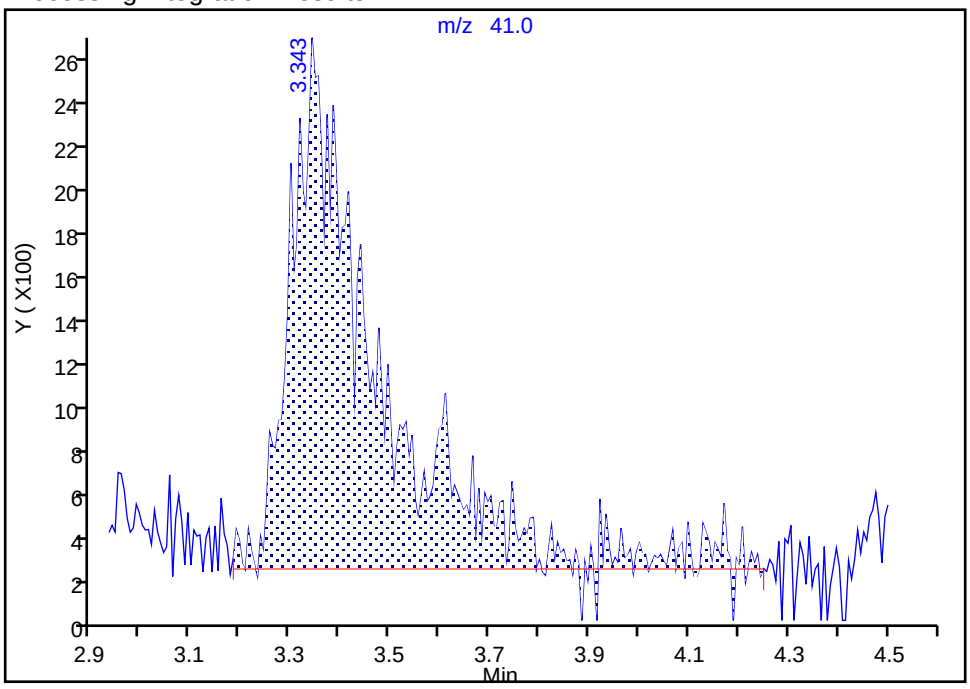
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X05.D				
Injection Date:	10-Jul-2023 16:56:30	Instrument ID:	10193		
Lims ID:	IC STD2 Sm				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	5	Worklist Smp#:	6
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

27 Acetonitrile, CAS: 75-05-8

Signal: 1

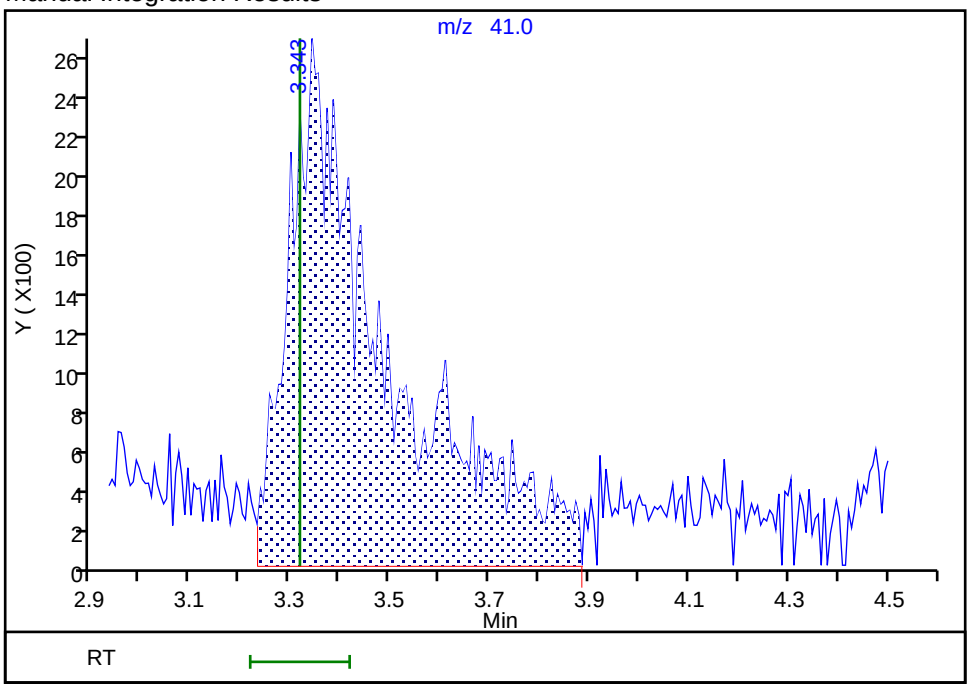
Processing Integration Results

RT: 3.34
Area: 27668
Amount: 7.445020
Amount Units: ug/l



Manual Integration Results

RT: 3.34
Area: 35452
Amount: 9.696013
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:16:29 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

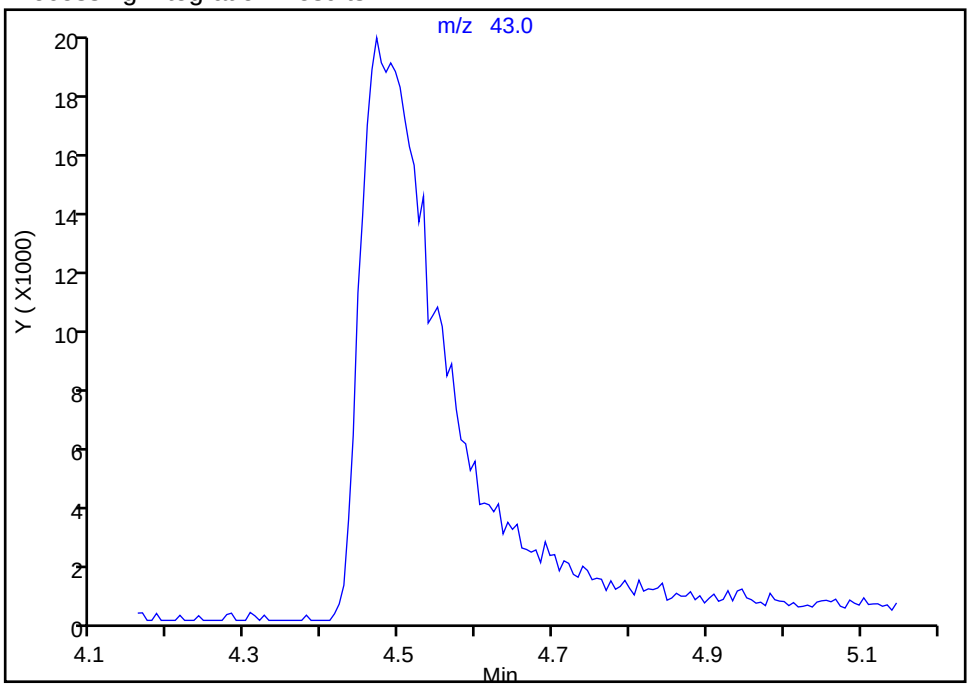
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X05.D				
Injection Date:	10-Jul-2023 16:56:30	Instrument ID:	10193		
Lims ID:	IC STD2 Sm				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	5	Worklist Smp#:	6
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

38 Vinyl acetate, CAS: 108-05-4

Signal: 1

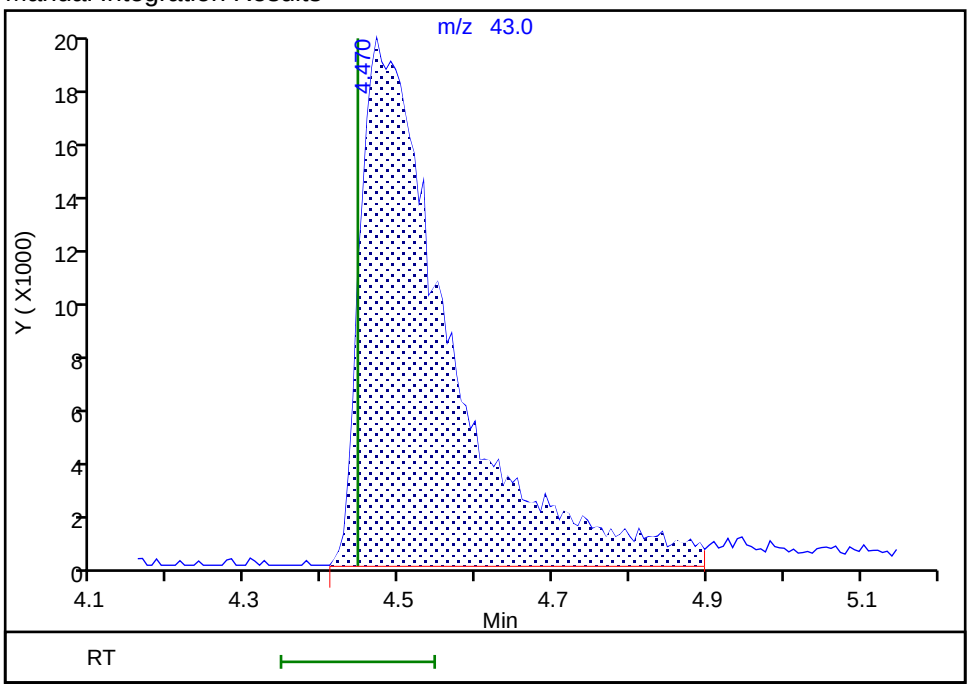
Not Detected
Expected RT: 4.45

Processing Integration Results



Manual Integration Results

RT: 4.47
Area: 158532
Amount: 1.944552
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:16:33 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

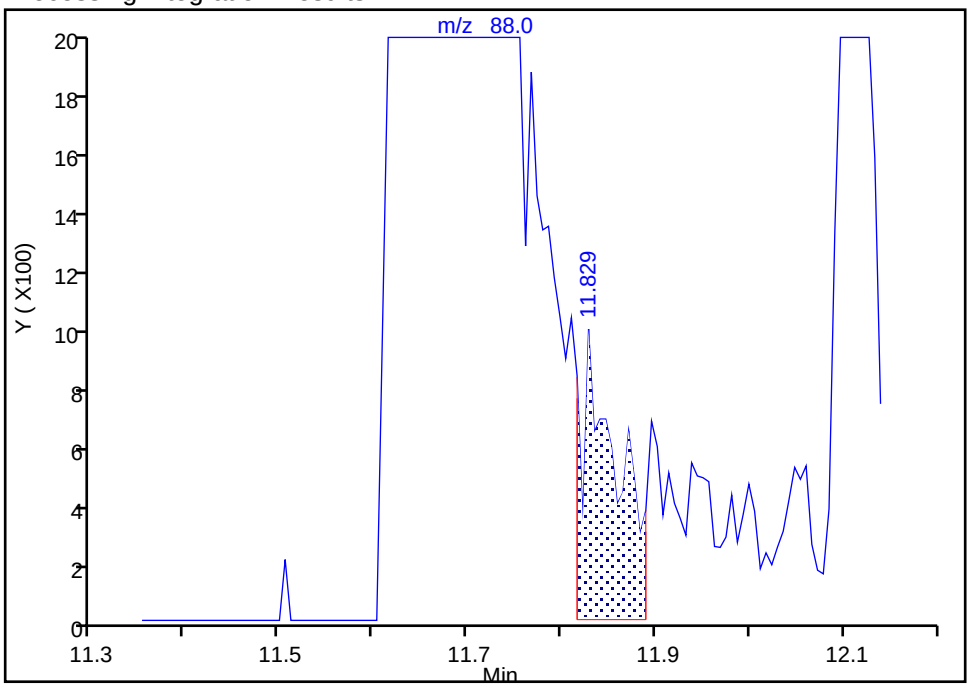
Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X05.D
Injection Date: 10-Jul-2023 16:56:30 Instrument ID: 10193
Lims ID: IC STD2 Sm
Client ID:
Operator ID: knk41612 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

122 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

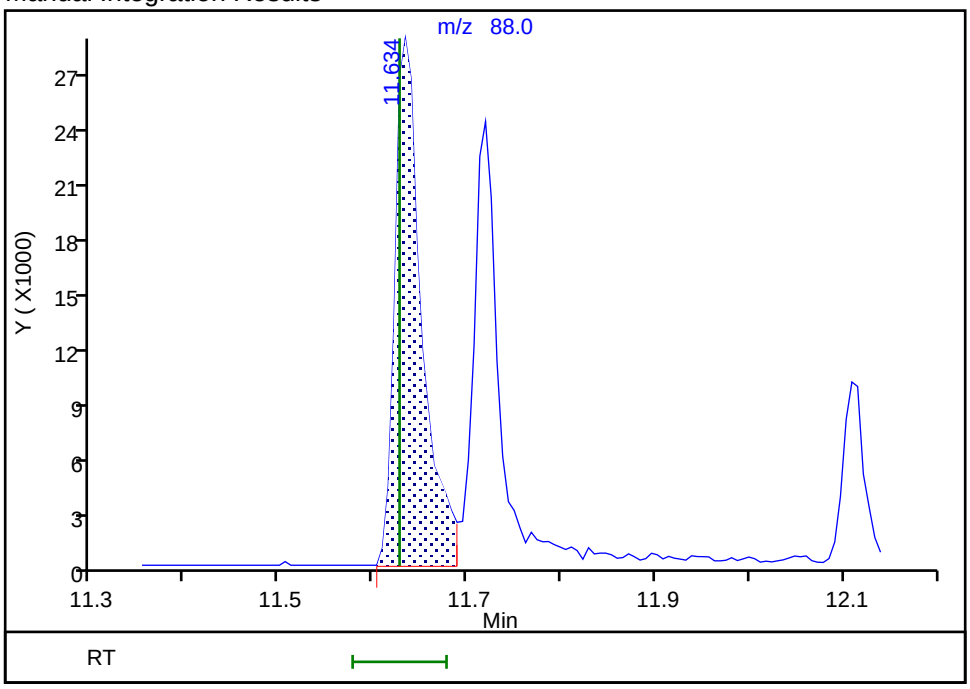
Processing Integration Results

RT: 11.83
Area: 2612
Amount: 0.125317
Amount Units: ug/l



Manual Integration Results

RT: 11.63
Area: 57720
Amount: 3.465002
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:16:45 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X06.D
Lims ID: IC STD5 Sm
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 10-Jul-2023 17:18:30 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0088548-007
Misc. Info.: IC STD5 SM
Operator ID: knk41612 Instrument ID: 10193
Sublist: chrom-MSV_10193_25mL*sub43

Method: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 11-Jul-2023 21:37:50 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1649

First Level Reviewer: DVW2 Date: 11-Jul-2023 08:17:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Chlorotrifluoroethene	116	1.648	1.648	0.000	90	131589	5.00	5.19	M
3 Chlorodifluoromethane	51	1.696	1.697	0.000	97	289903	5.00	4.97	
4 Dimethyl ether	45	1.739	1.739	0.000	100	433934	5.00	5.17	
8 2-Chloro-1,1,1-Trifluoroethane	118	2.013	2.007	0.006	44	331522	5.00	5.13	
27 Acetonitrile	41	3.355	3.318	0.037	97	86044	25.0	23.8	M
* 31 t-Butyl alcohol-d10 (IS)	65	3.562	3.550	0.012	95	156174	50.0	50.0	
38 Vinyl acetate	43	4.464	4.446	0.018	97	416325	5.00	5.17	a
46 Ethyl acetate	43	5.385	5.379	0.006	99	156946	5.00	4.71	Ma
63 Isopropyl acetate	43	6.647	6.647	0.000	98	417380	5.00	5.71	a
* 65 Fluorobenzene (IS)	96	6.951	6.946	0.005	99	2473404	10.0	10.0	
75 n-Propyl acetate	61	8.000	7.994	0.006	99	87973	5.00	4.73	
79 2-Chloroethyl vinyl ether	63	8.549	8.543	0.006	90	127613	5.00	5.49	
109 n-Butyl acetate	43	10.079	10.073	0.006	99	363054	5.00	4.82	
* 111 Chlorobenzene-d5 (IS)	117	10.658	10.658	0.000	84	1941842	10.0	10.0	
122 cis-1,4-Dichloro-2-butene	88	11.634	11.627	0.007	96	177095	10.0	9.23	a
123 Cyclohexanone	55	11.652	11.646	0.006	91	389481	250.0	247.8	
* 139 1,4-Dichlorobenzene-d4	152	12.627	12.621	0.006	93	1130040	10.0	10.0	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

MSV_CCV_V5ACE_00026	Amount Added:	1.00	Units: uL
MSV_CCV_CYC_00006	Amount Added:	8.00	Units: uL
MSV_V_SMRV4_00060	Amount Added:	5.00	Units: uL
MSV_HP25_ISO_00008	Amount Added:	1.00	Units: uL
MSV_DME_00048	Amount Added:	1.00	Units: uL

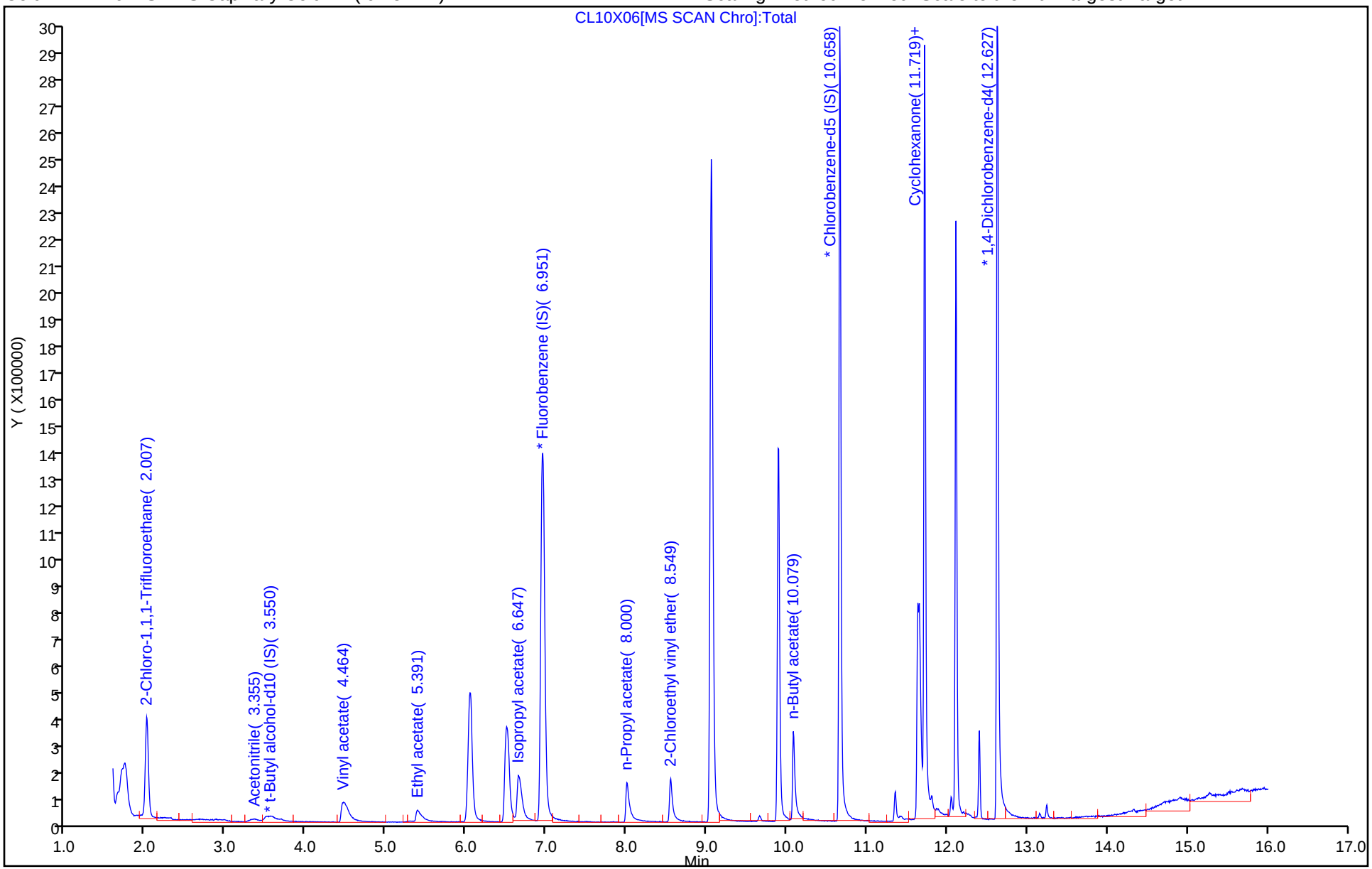
Report Date: 11-Jul-2023 21:37:51 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X06.D

Injection Date:	10-Jul-2023 17:18:30	Instrument ID:	10193	Operator ID:	knk41612
Lims ID:	IC STD5 Sm			Worklist Smp#:	7
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

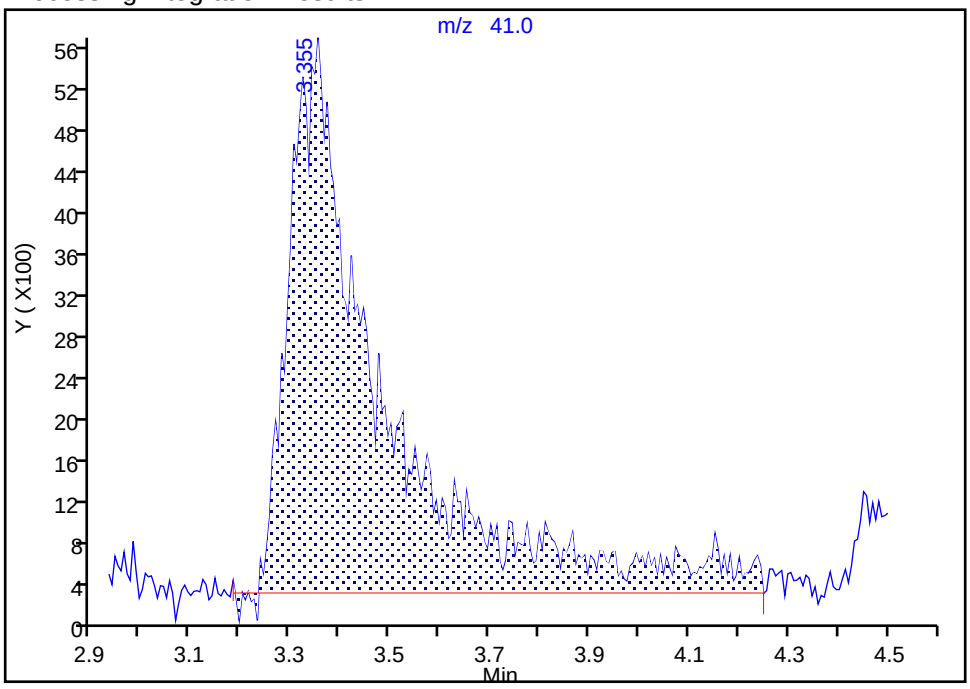
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X06.D				
Injection Date:	10-Jul-2023 17:18:30	Instrument ID:	10193		
Lims ID:	IC STD5 Sm				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	6	Worklist Smp#:	7
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

27 Acetonitrile, CAS: 75-05-8

Signal: 1

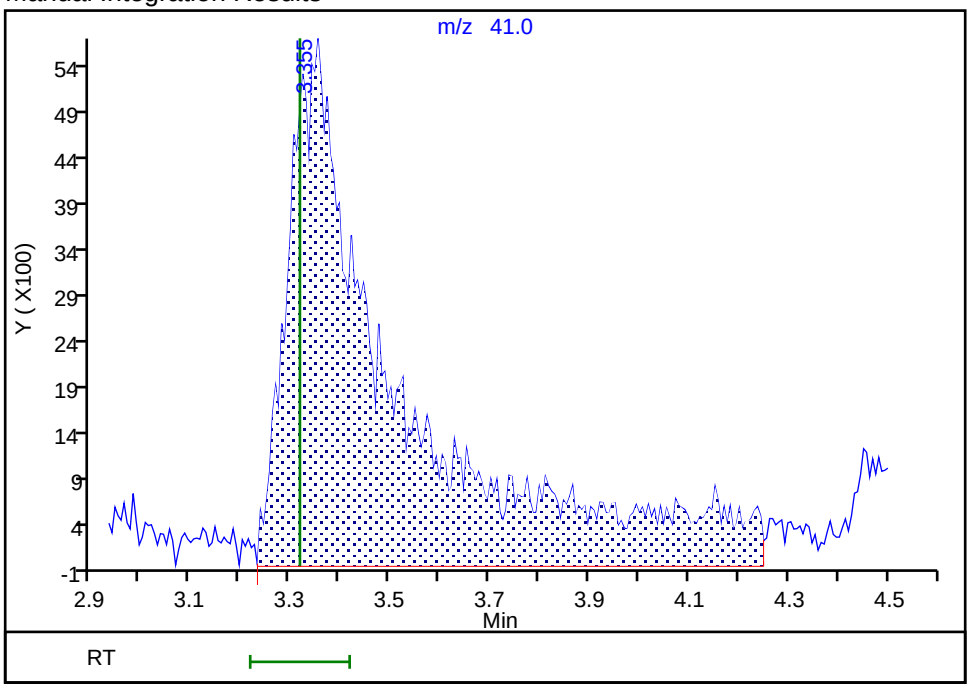
Processing Integration Results

RT: 3.35
Area: 69575
Amount: 18.403618
Amount Units: ug/l



Manual Integration Results

RT: 3.35
Area: 86044
Amount: 23.825355
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:17:19 -04:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

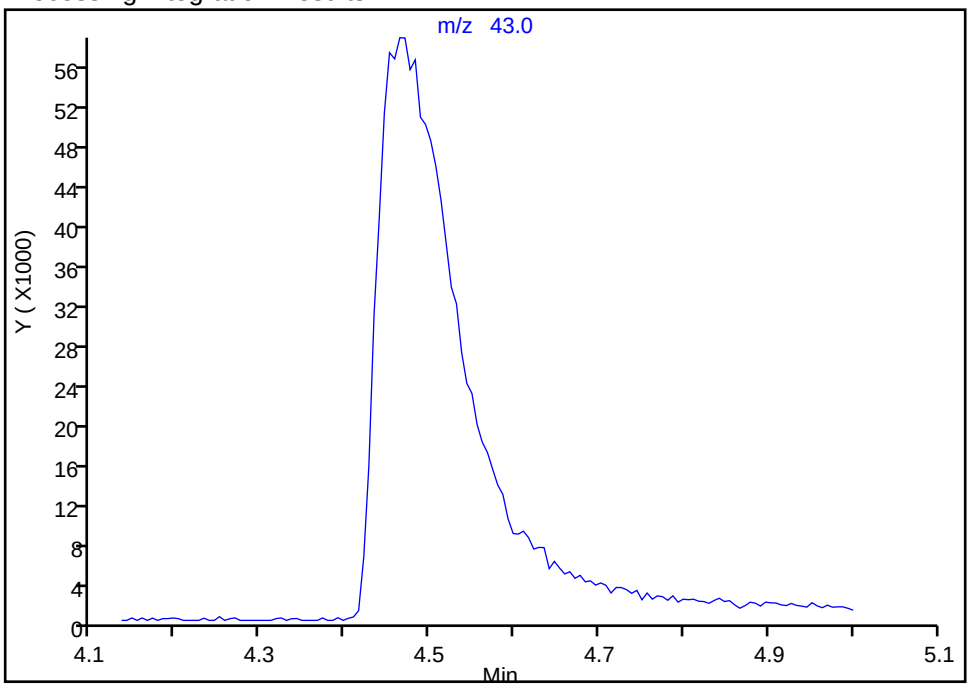
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X06.D				
Injection Date:	10-Jul-2023 17:18:30	Instrument ID:	10193		
Lims ID:	IC STD5 Sm				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	6	Worklist Smp#:	7
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

38 Vinyl acetate, CAS: 108-05-4

Signal: 1

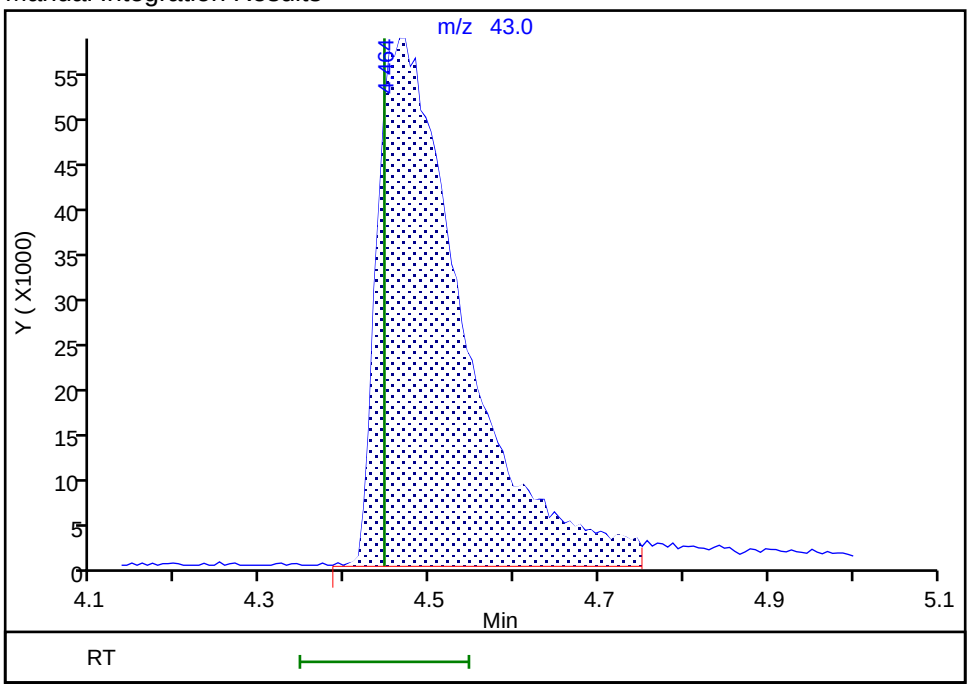
Not Detected
Expected RT: 4.45

Processing Integration Results



Manual Integration Results

RT: 4.46
Area: 416325
Amount: 5.170129
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:17:24 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

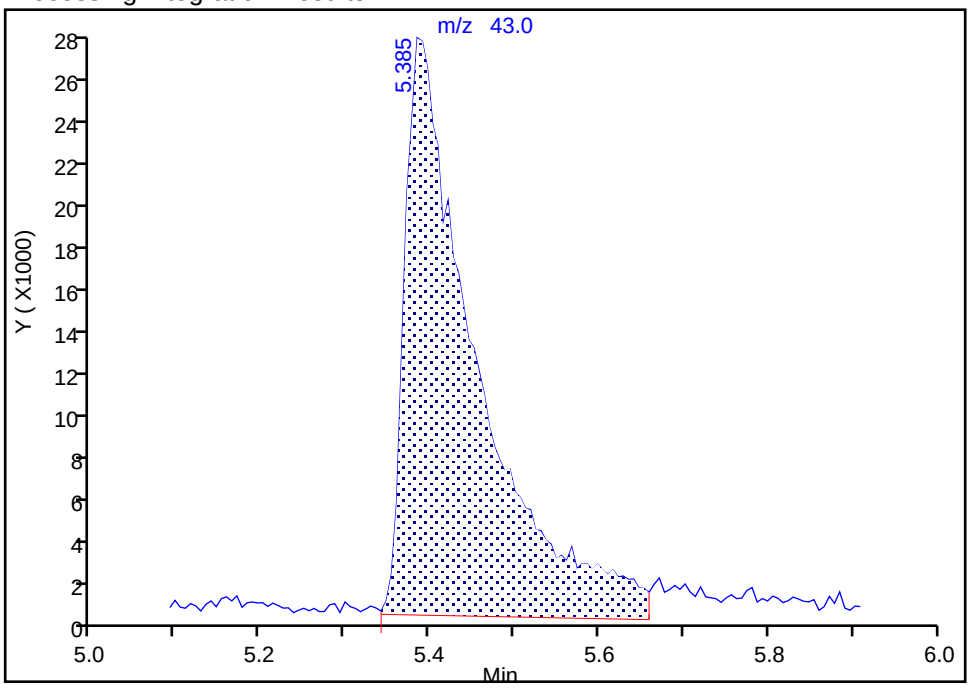
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X06.D				
Injection Date:	10-Jul-2023 17:18:30	Instrument ID:	10193		
Lims ID:	IC STD5 Sm				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	6	Worklist Smp#:	7
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

46 Ethyl acetate, CAS: 141-78-6

Signal: 1

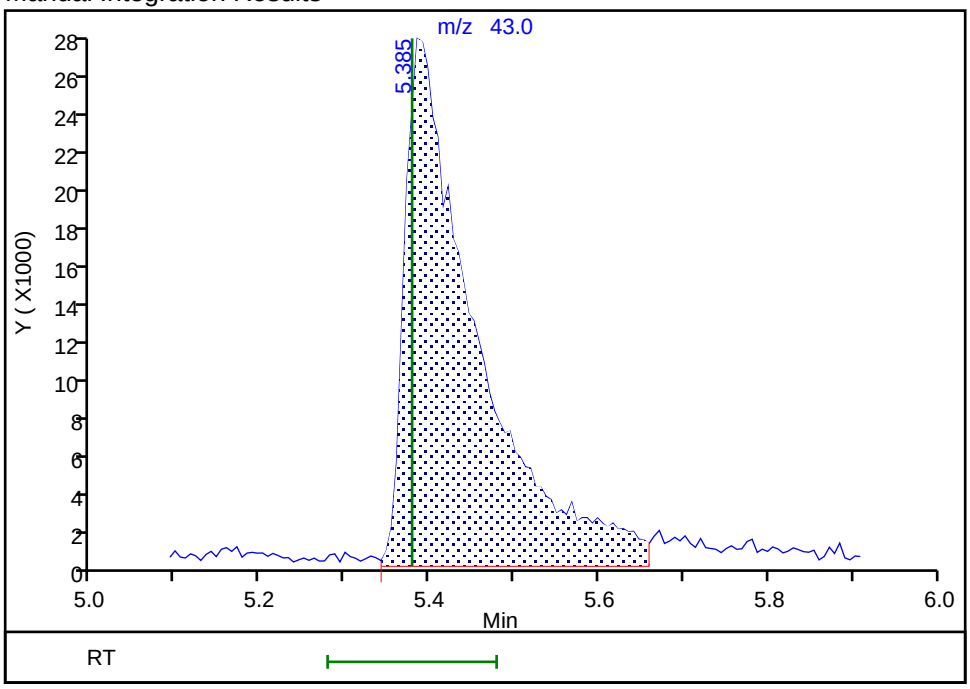
Processing Integration Results

RT: 5.38
Area: 158255
Amount: 4.746007
Amount Units: ug/l



Manual Integration Results

RT: 5.38
Area: 156946
Amount: 4.713505
Amount Units: ug/l



Reviewer: UKEK, 11-Jul-2023 20:33:55 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

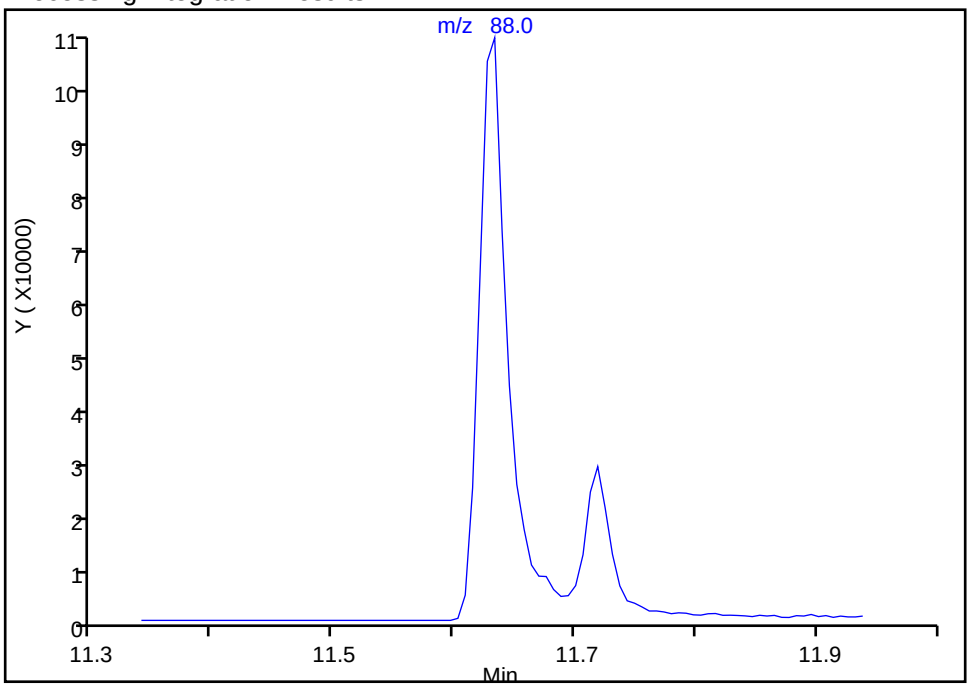
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X06.D				
Injection Date:	10-Jul-2023 17:18:30	Instrument ID:	10193		
Lims ID:	IC STD5 Sm				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	6	Worklist Smp#:	7
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

122 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

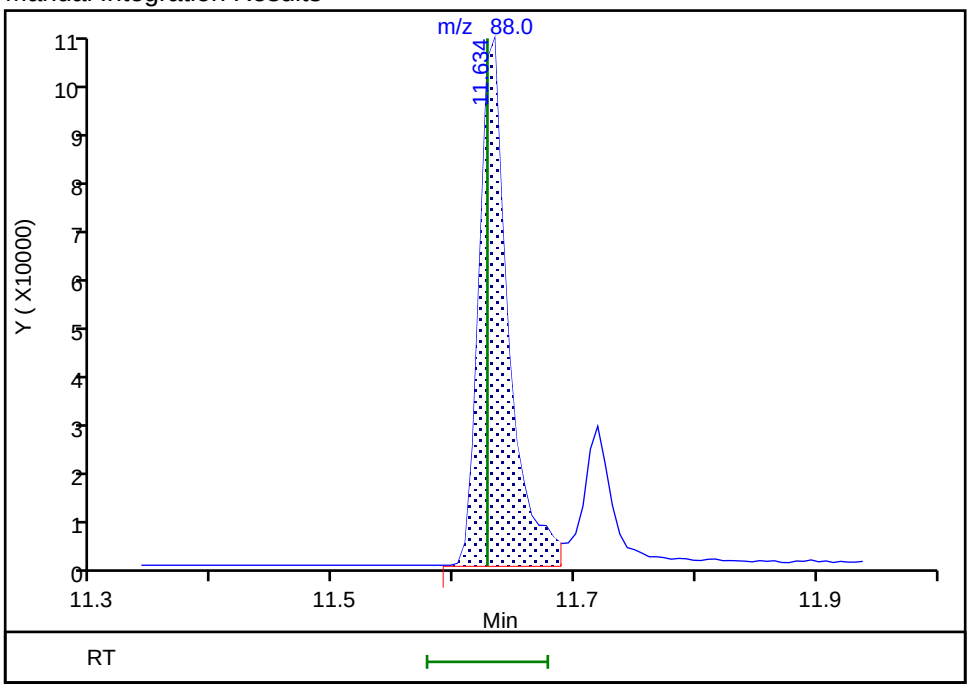
Not Detected
Expected RT: 11.63

Processing Integration Results



Manual Integration Results

RT: 11.63
Area: 177095
Amount: 9.226426
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:17:35 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X07.D
Lims ID: IC STD10 Sm
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 10-Jul-2023 17:40:30 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0088548-008
Misc. Info.: IC STD10 SM
Operator ID: knk41612 Instrument ID: 10193
Sublist: chrom-MSV_10193_25mL*sub43

Method: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 11-Jul-2023 21:37:52 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1649

First Level Reviewer: DVW2 Date: 11-Jul-2023 08:10:26

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Chlorotrifluoroethene	116	1.648	1.648	0.000	92	258415	10.0	10.2	M
3 Chlorodifluoromethane	51	1.697	1.697	0.000	97	553436	10.0	9.47	
4 Dimethyl ether	45	1.739	1.739	0.000	99	843017	10.0	10.0	
8 2-Chloro-1,1,1-Trifluoroethane	118	2.007	2.007	0.000	33	640750	10.0	9.89	
27 Acetonitrile	41	3.318	3.318	0.000	97	170772	50.0	47.2	M
* 31 t-Butyl alcohol-d10 (IS)	65	3.538	3.538	0.000	96	177770	50.0	50.0	
38 Vinyl acetate	43	4.446	4.446	0.000	97	928699	10.0	11.5	a
46 Ethyl acetate	43	5.379	5.379	0.000	99	354124	10.0	10.2	a
63 Isopropyl acetate	43	6.647	6.647	0.000	98	831763	10.0	11.4	a
* 65 Fluorobenzene (IS)	96	6.952	6.952	0.000	99	2477645	10.0	10.0	
75 n-Propyl acetate	61	7.994	7.994	0.000	98	189601	10.0	9.91	a
79 2-Chloroethyl vinyl ether	63	8.543	8.543	0.000	91	262749	10.0	11.3	a
109 n-Butyl acetate	43	10.073	10.073	0.000	99	775538	10.0	9.89	
* 111 Chlorobenzene-d5 (IS)	117	10.658	10.658	0.000	84	1944939	10.0	10.0	
122 cis-1,4-Dichloro-2-butene	88	11.627	11.627	0.000	96	386829	20.0	19.2	a
123 Cyclohexanone	55	11.646	11.646	0.000	91	887459	500.0	484.2	
* 139 1,4-Dichlorobenzene-d4	152	12.627	12.627	0.000	93	1123298	10.0	10.0	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

MSV_CCV_V5ACE_00026	Amount Added:	1.00	Units: uL
MSV_CCV_CYC_00006	Amount Added:	8.00	Units: uL
MSV_V_SMRV4_00060	Amount Added:	5.00	Units: uL
MSV_HP25_ISO_00008	Amount Added:	1.00	Units: uL
MSV_DME_00048	Amount Added:	1.00	Units: uL

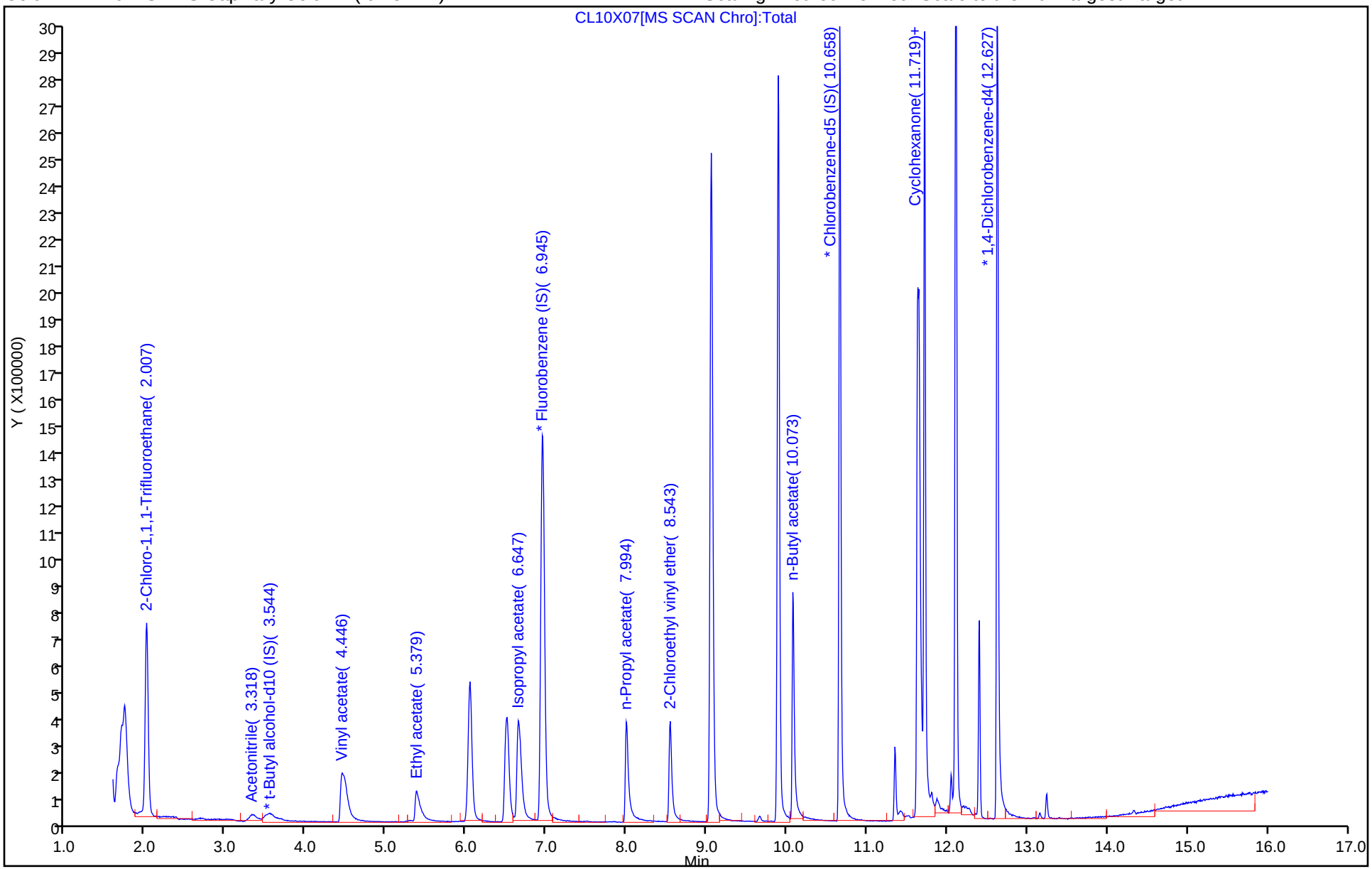
Report Date: 11-Jul-2023 21:37:53 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X07.D

Injection Date:	10-Jul-2023 17:40:30	Instrument ID:	10193	Operator ID:	knk41612
Lims ID:	IC STD10 Sm			Worklist Smp#:	8
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

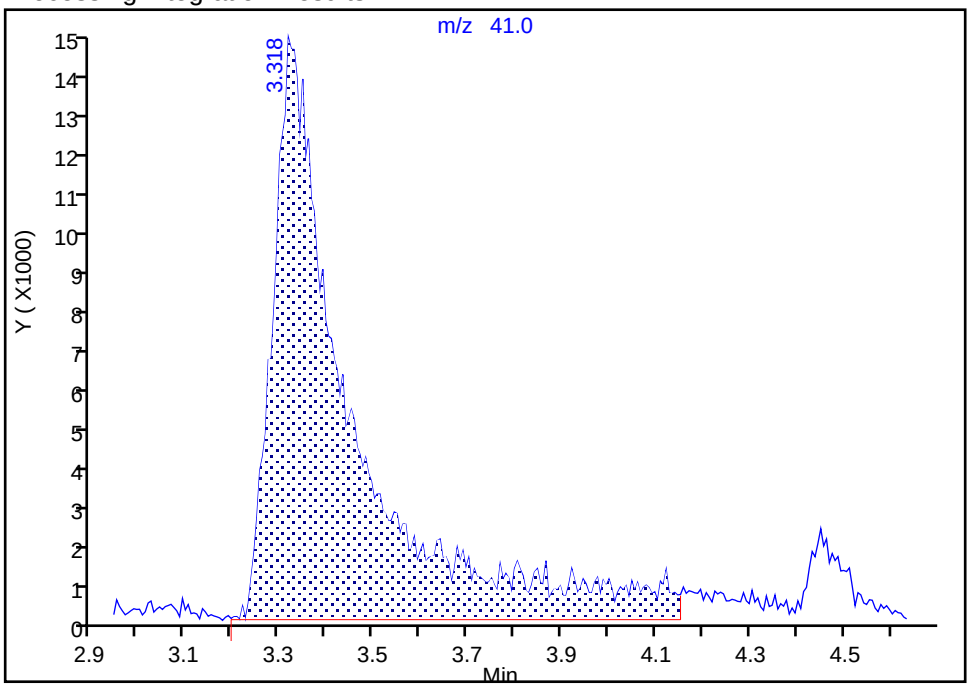
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X07.D				
Injection Date:	10-Jul-2023 17:40:30	Instrument ID:	10193		
Lims ID:	IC STD10 Sm				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	7	Worklist Smp#:	8
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

27 Acetonitrile, CAS: 75-05-8

Signal: 1

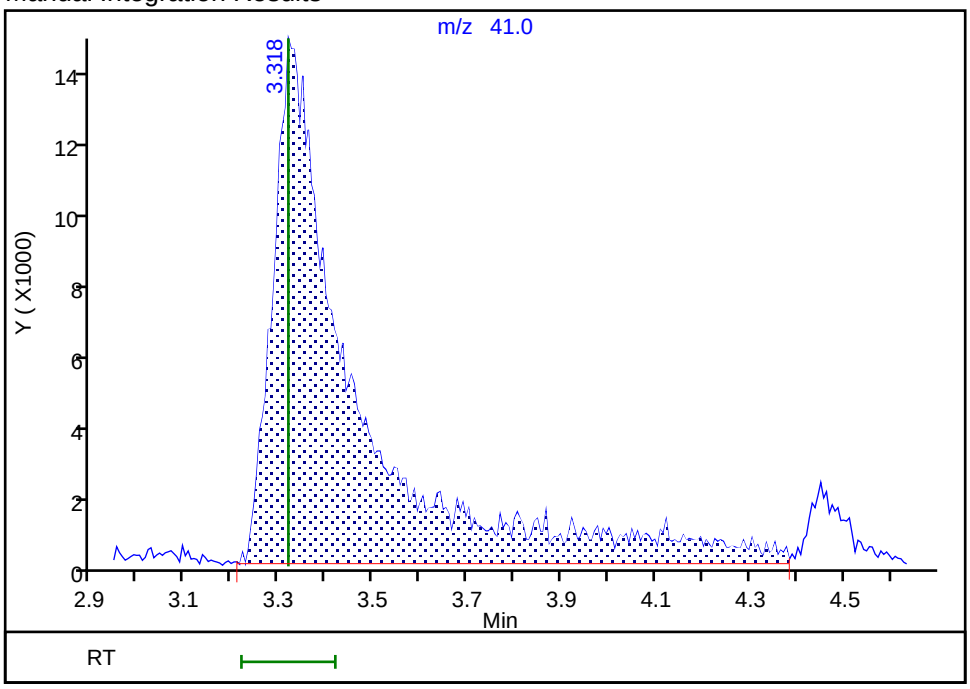
Processing Integration Results

RT: 3.32
Area: 162141
Amount: 42.690917
Amount Units: ug/l



Manual Integration Results

RT: 3.32
Area: 170772
Amount: 47.205373
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:09:49 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

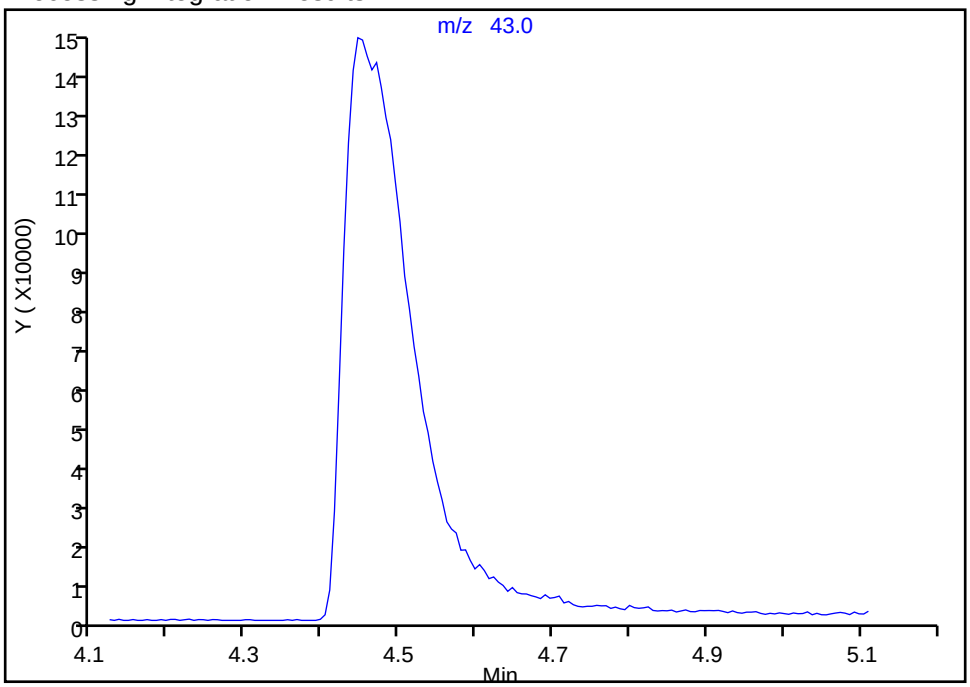
Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X07.D
Injection Date: 10-Jul-2023 17:40:30 Instrument ID: 10193
Lims ID: IC STD10 Sm
Client ID:
Operator ID: knk41612 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

38 Vinyl acetate, CAS: 108-05-4

Signal: 1

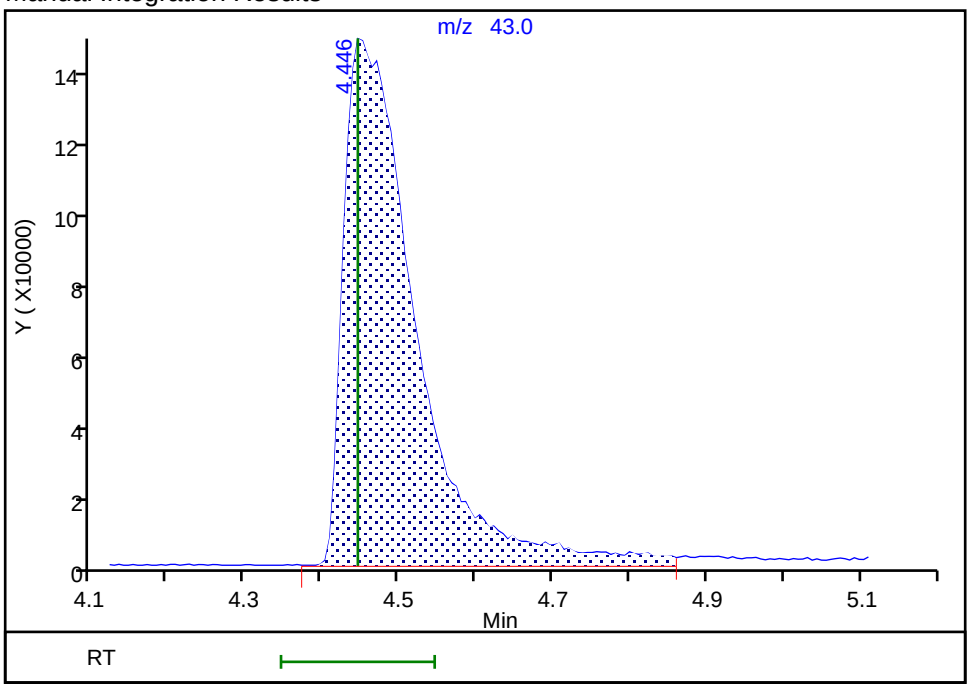
Not Detected
Expected RT: 4.45

Processing Integration Results



Manual Integration Results

RT: 4.45
Area: 928699
Amount: 11.513301
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:09:54 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

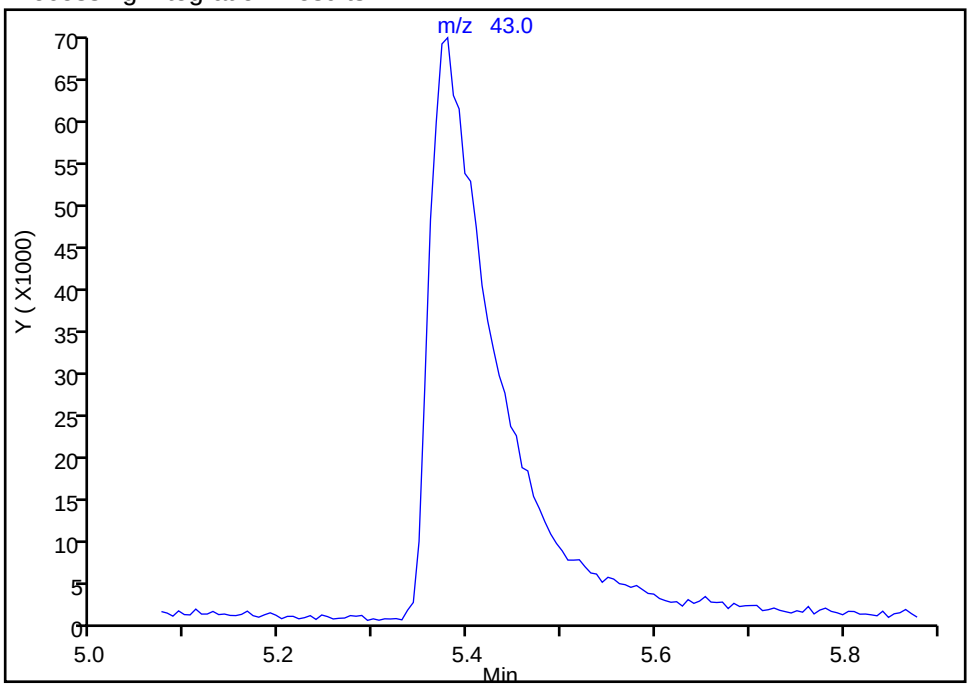
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X07.D				
Injection Date:	10-Jul-2023 17:40:30	Instrument ID:	10193		
Lims ID:	IC STD10 Sm				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	7	Worklist Smp#:	8
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

46 Ethyl acetate, CAS: 141-78-6

Signal: 1

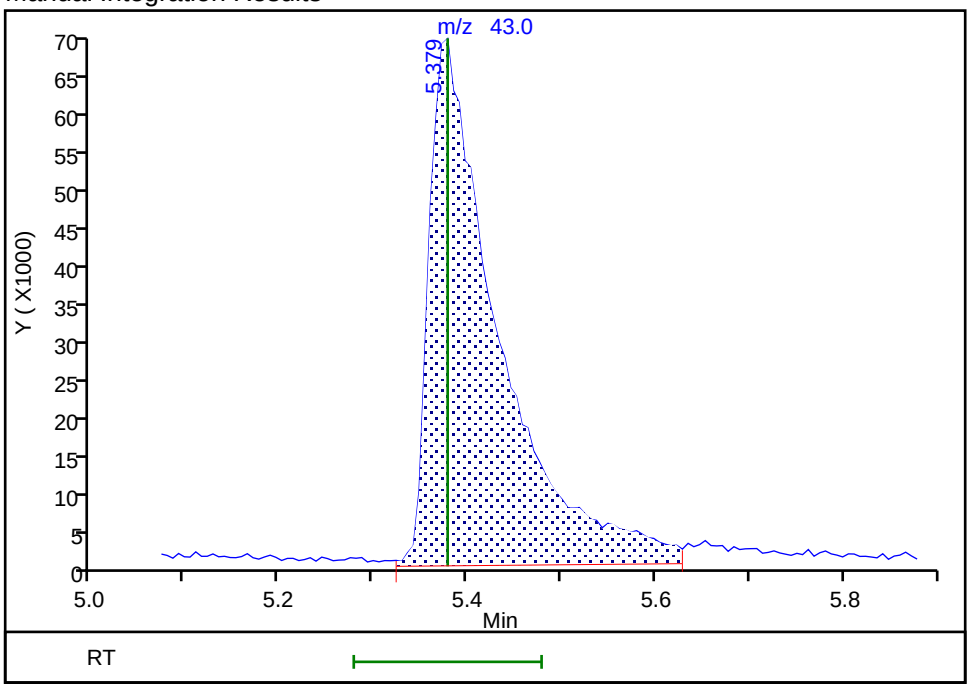
Not Detected
Expected RT: 5.38

Processing Integration Results



Manual Integration Results

RT: 5.38
Area: 354124
Amount: 10.236062
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:09:56 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

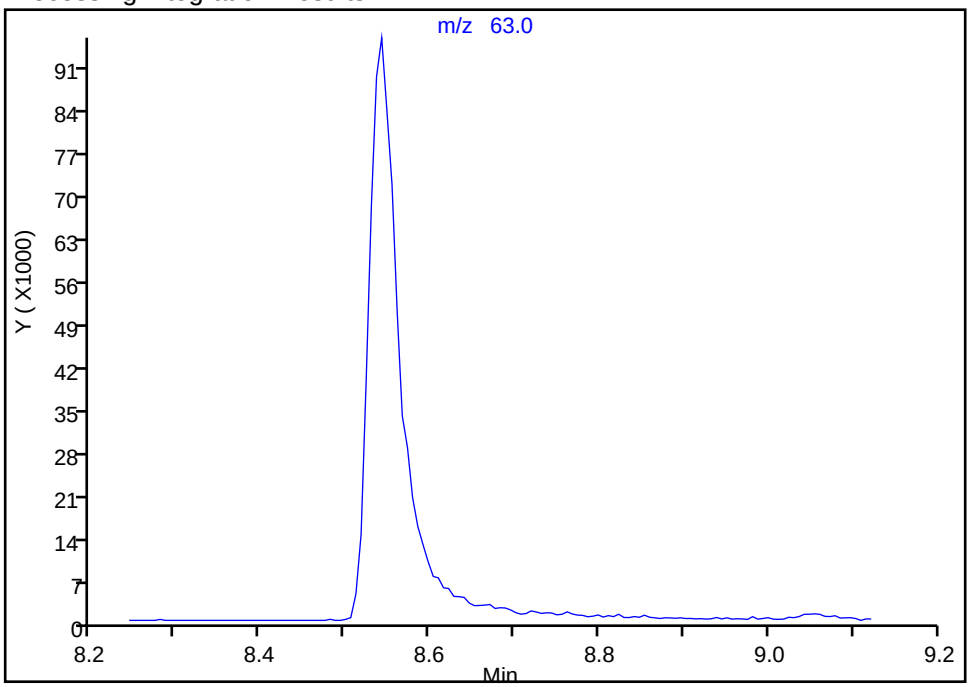
Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X07.D
Injection Date: 10-Jul-2023 17:40:30 Instrument ID: 10193
Lims ID: IC STD10 Sm
Client ID:
Operator ID: knk41612 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

79 2-Chloroethyl vinyl ether, CAS: 110-75-8

Signal: 1

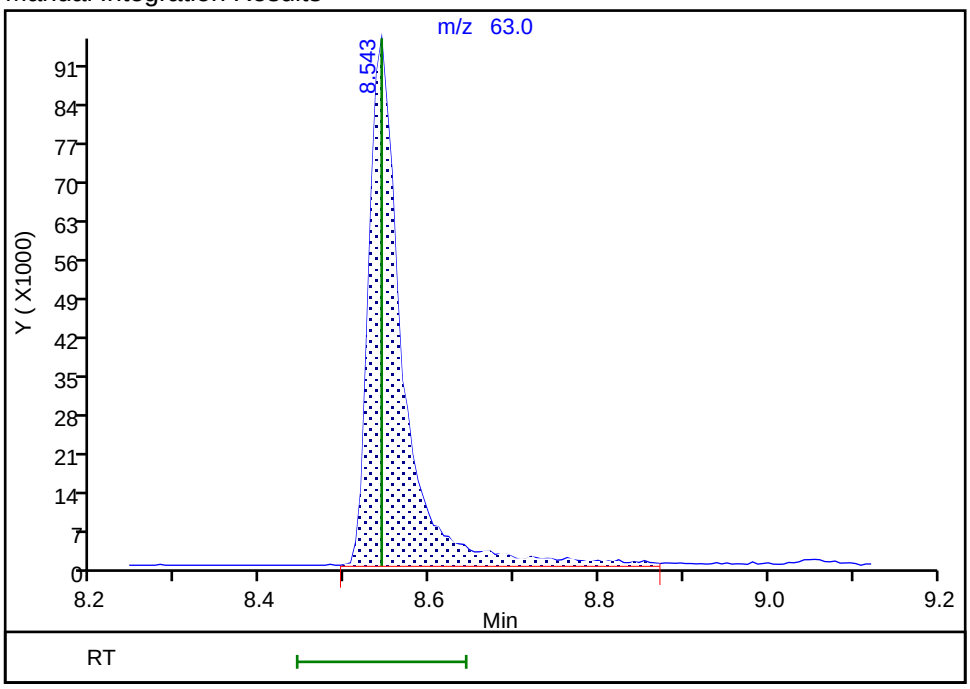
Not Detected
Expected RT: 8.54

Processing Integration Results



Manual Integration Results

RT: 8.54
Area: 262749
Amount: 11.274434
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:10:06 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

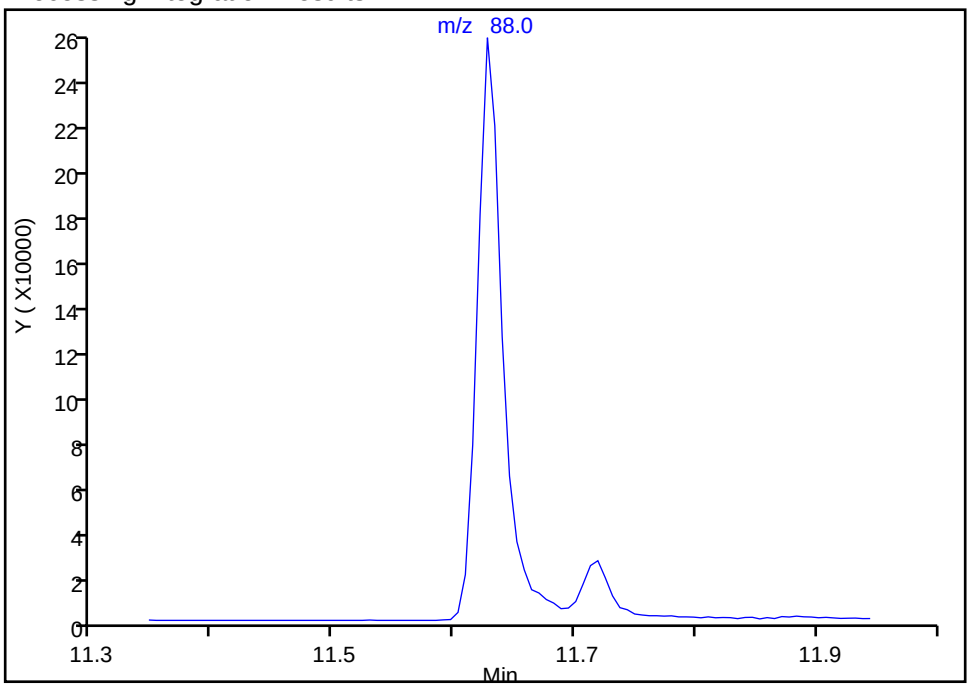
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X07.D				
Injection Date:	10-Jul-2023 17:40:30	Instrument ID:	10193		
Lims ID:	IC STD10 Sm				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	7	Worklist Smp#:	8
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

122 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

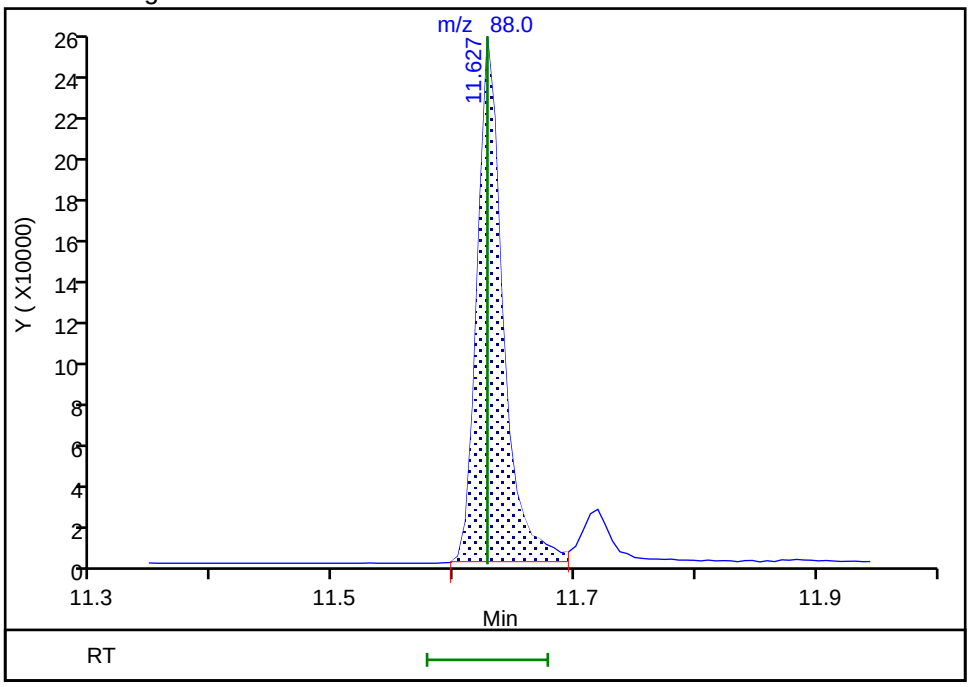
Not Detected
Expected RT: 11.63

Processing Integration Results



Manual Integration Results

RT: 11.63
Area: 386829
Amount: 19.246318
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:10:23 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X08.D
Lims ID: IC STD25 Sm
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 10-Jul-2023 18:02:30 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0088548-009
Misc. Info.: IC STD25 SM
Operator ID: knk41612 Instrument ID: 10193
Sublist: chrom-MSV_10193_25mL*sub43

Method: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 11-Jul-2023 21:37:54 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1649

First Level Reviewer: DVW2 Date: 11-Jul-2023 08:18:52

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Chlorotrifluoroethene	116	1.648	1.648	0.000	91	756153	25.0	29.5	M
3 Chlorodifluoromethane	51	1.696	1.697	0.000	97	1610422	25.0	27.3	
4 Dimethyl ether	45	1.739	1.739	0.000	99	2132785	25.0	25.1	
8 2-Chloro-1,1,1-Trifluoroethane	118	2.007	2.007	0.000	33	1853041	25.0	28.3	
27 Acetonitrile	41	3.324	3.318	0.006	99	434651	125.0	118.9	M
* 31 t-Butyl alcohol-d10 (IS)	65	3.550	3.538	0.012	96	168367	50.0	50.0	
38 Vinyl acetate	43	4.434	4.446	-0.012	97	2357192	25.0	28.9	a
46 Ethyl acetate	43	5.366	5.379	-0.013	99	904142	25.0	25.4	a
63 Isopropyl acetate	43	6.641	6.647	-0.006	98	2216821	25.0	29.9	a
* 65 Fluorobenzene (IS)	96	6.945	6.952	-0.007	99	2504505	10.0	10.0	
75 n-Propyl acetate	61	7.988	7.994	-0.006	98	510049	25.0	26.0	a
79 2-Chloroethyl vinyl ether	63	8.537	8.543	-0.006	91	757238	25.0	32.1	a
109 n-Butyl acetate	43	10.073	10.073	0.000	99	2102408	25.0	25.6	
* 111 Chlorobenzene-d5 (IS)	117	10.658	10.658	0.000	84	1992506	10.0	10.0	
122 cis-1,4-Dichloro-2-butene	88	11.627	11.627	0.000	96	1095177	50.0	51.9	a
123 Cyclohexanone	55	11.646	11.646	0.000	91	2469223	1250.0	1399.6	
* 139 1,4-Dichlorobenzene-d4	152	12.627	12.627	0.000	93	1180497	10.0	10.0	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

MSV_CCV_V5ACE_00026	Amount Added:	2.50	Units: uL
MSV_CCV_CYC_00006	Amount Added:	20.00	Units: uL
MSV_V_SMRV4_00060	Amount Added:	12.50	Units: uL
MSV_HP25_ISO_00008	Amount Added:	1.00	Units: uL
MSV_DME_00048	Amount Added:	2.50	Units: uL

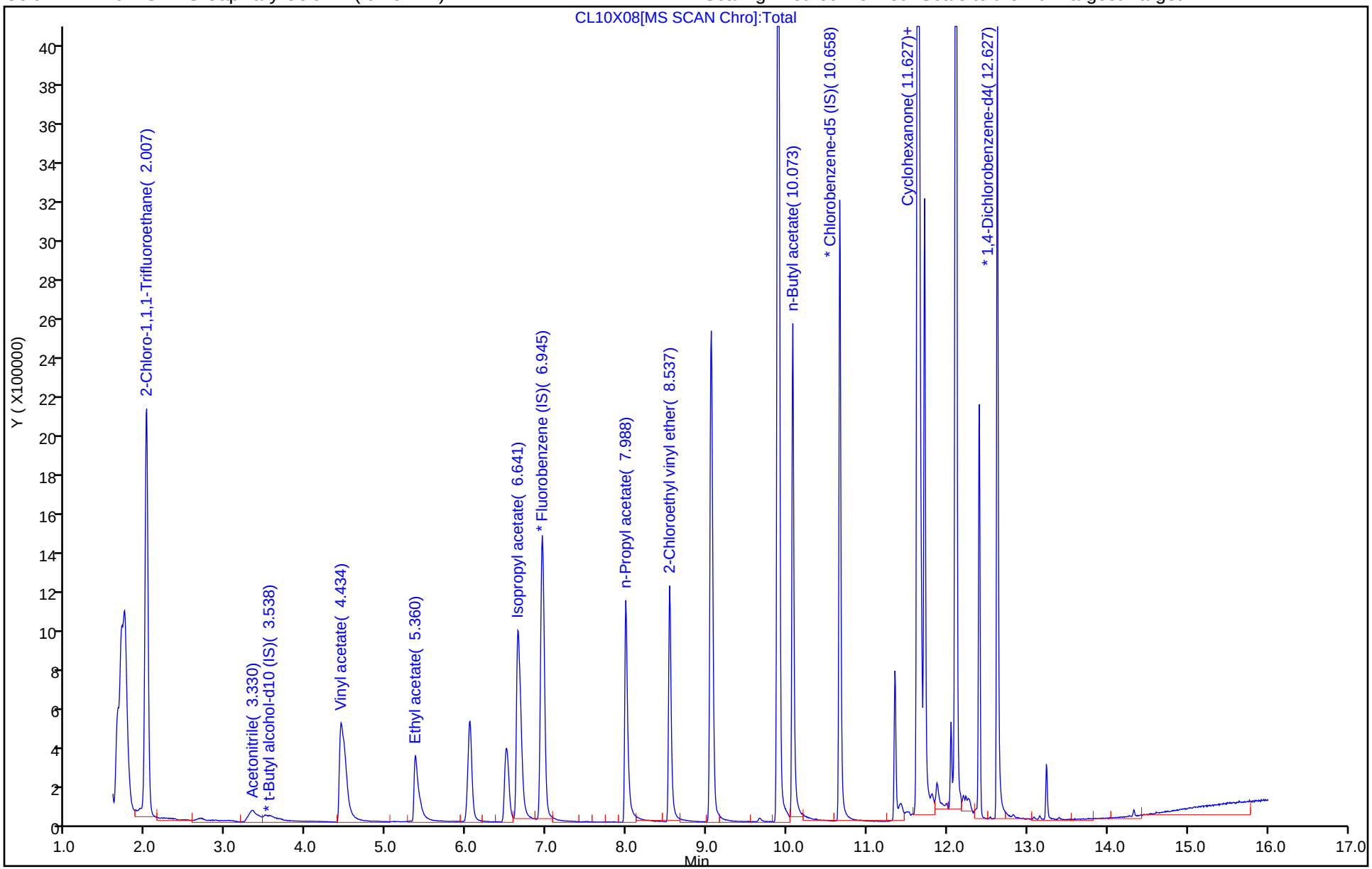
Report Date: 11-Jul-2023 21:37:54 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X08.D

Injection Date:	10-Jul-2023 18:02:30	Instrument ID:	10193	Operator ID:	knk41612
Lims ID:	IC STD25 Sm			Worklist Smp#:	9
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

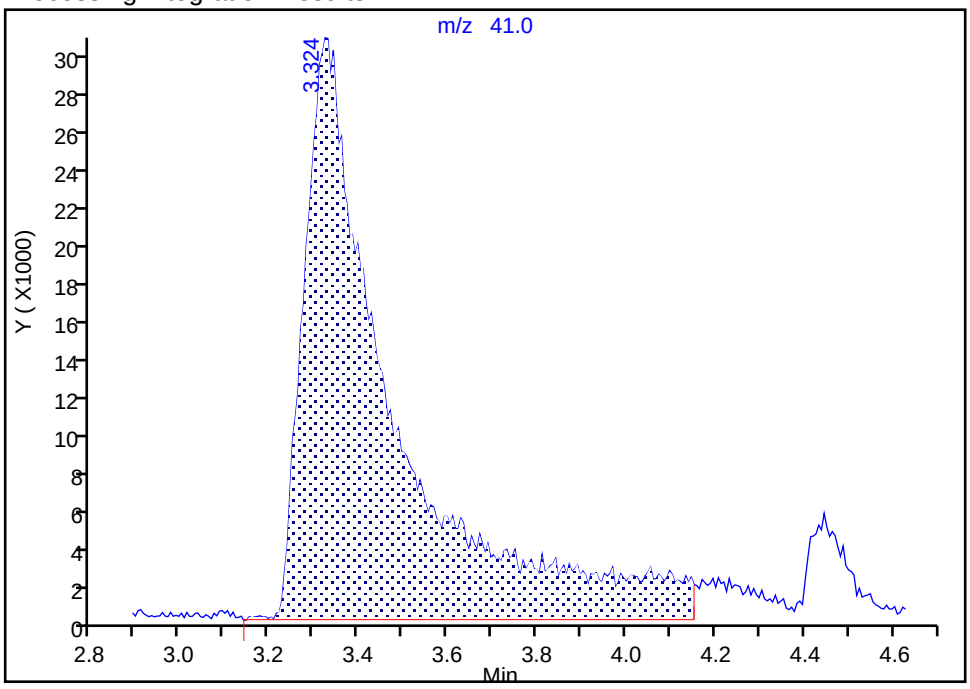
Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X08.D
Injection Date: 10-Jul-2023 18:02:30 Instrument ID: 10193
Lims ID: IC STD25 Sm
Client ID:
Operator ID: knk41612 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

27 Acetonitrile, CAS: 75-05-8

Signal: 1

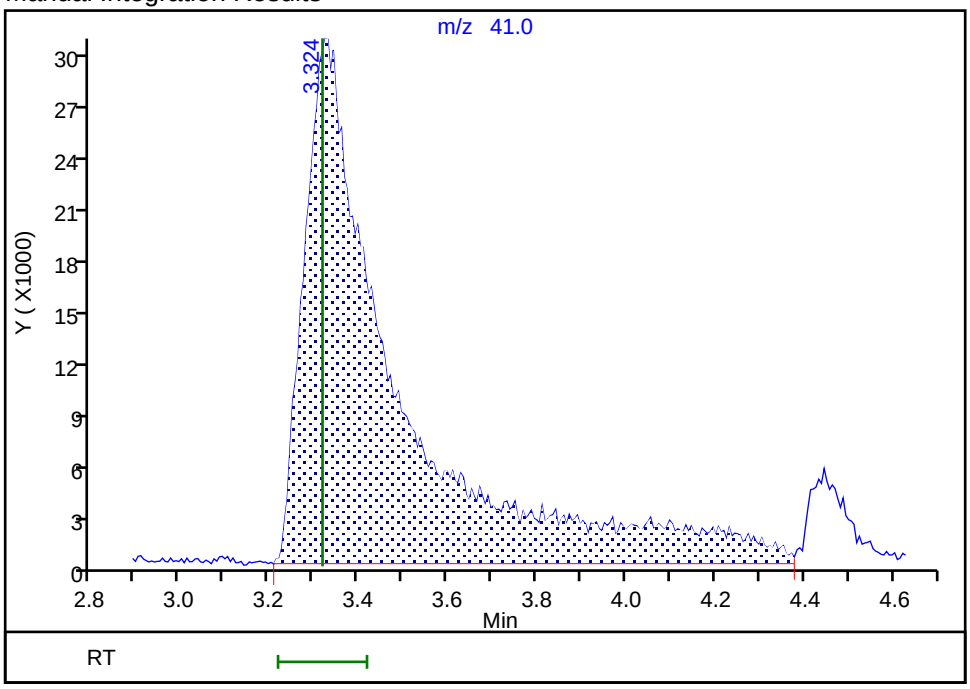
Processing Integration Results

RT: 3.32
Area: 417048
Amount: 106.2994
Amount Units: ug/l



Manual Integration Results

RT: 3.32
Area: 434651
Amount: 118.8592
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:18:30 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

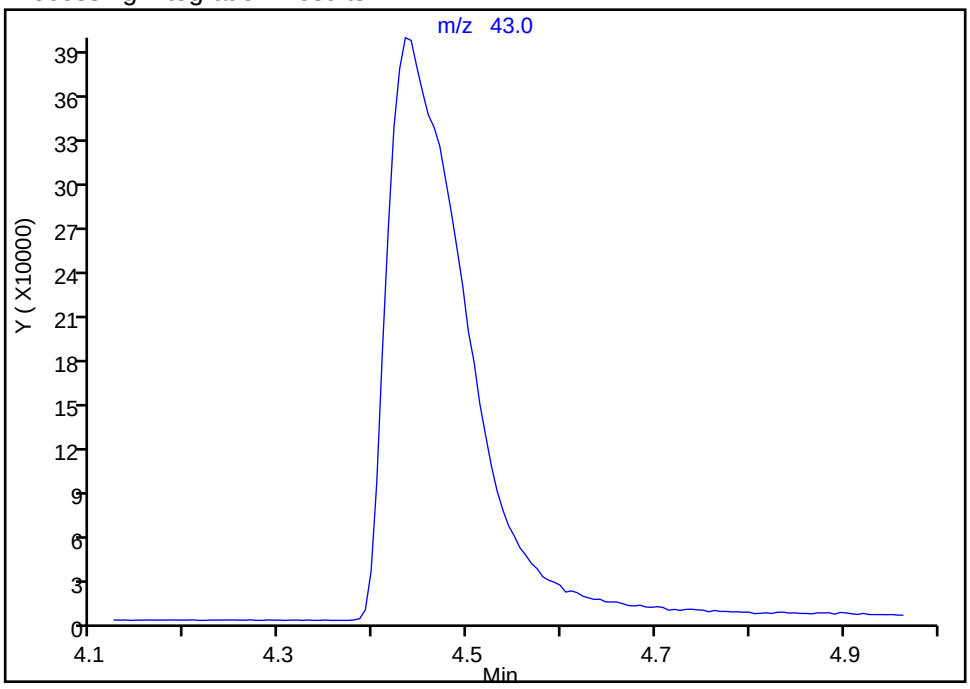
Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X08.D
Injection Date: 10-Jul-2023 18:02:30 Instrument ID: 10193
Lims ID: IC STD25 Sm
Client ID:
Operator ID: knk41612 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

38 Vinyl acetate, CAS: 108-05-4

Signal: 1

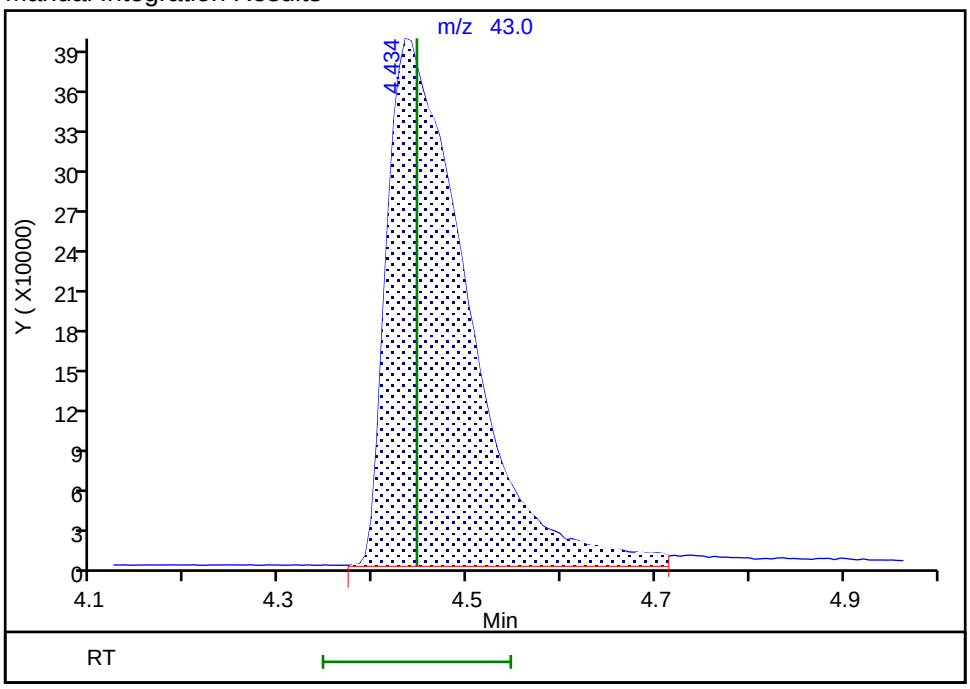
Not Detected
Expected RT: 4.45

Processing Integration Results



Manual Integration Results

RT: 4.43
Area: 2357192
Amount: 28.909262
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:18:36 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

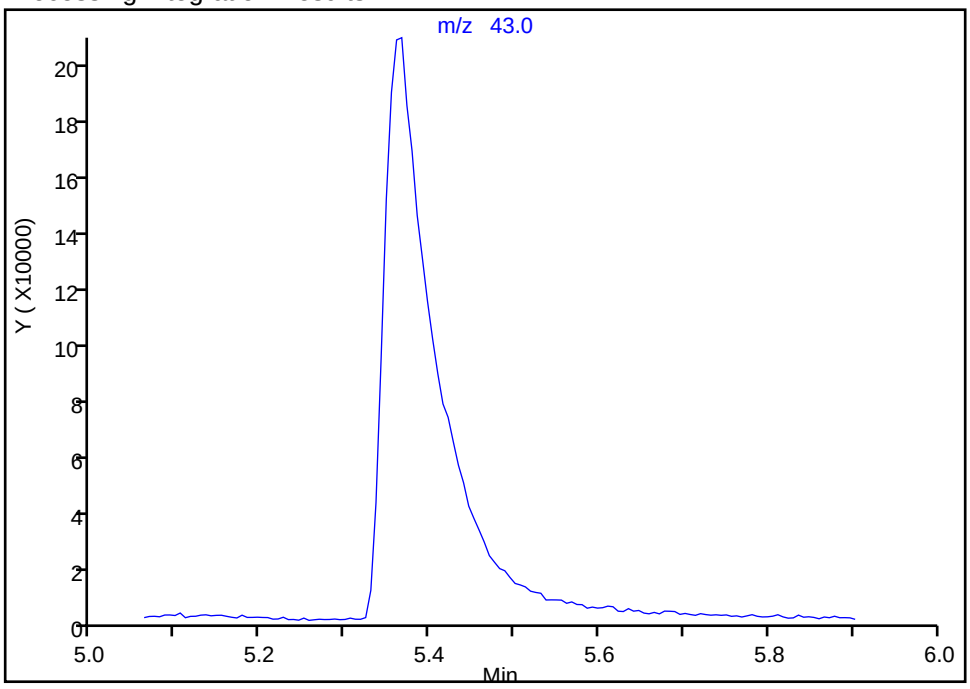
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X08.D				
Injection Date:	10-Jul-2023 18:02:30	Instrument ID:	10193		
Lims ID:	IC STD25 Sm				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	8	Worklist Smp#:	9
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

46 Ethyl acetate, CAS: 141-78-6

Signal: 1

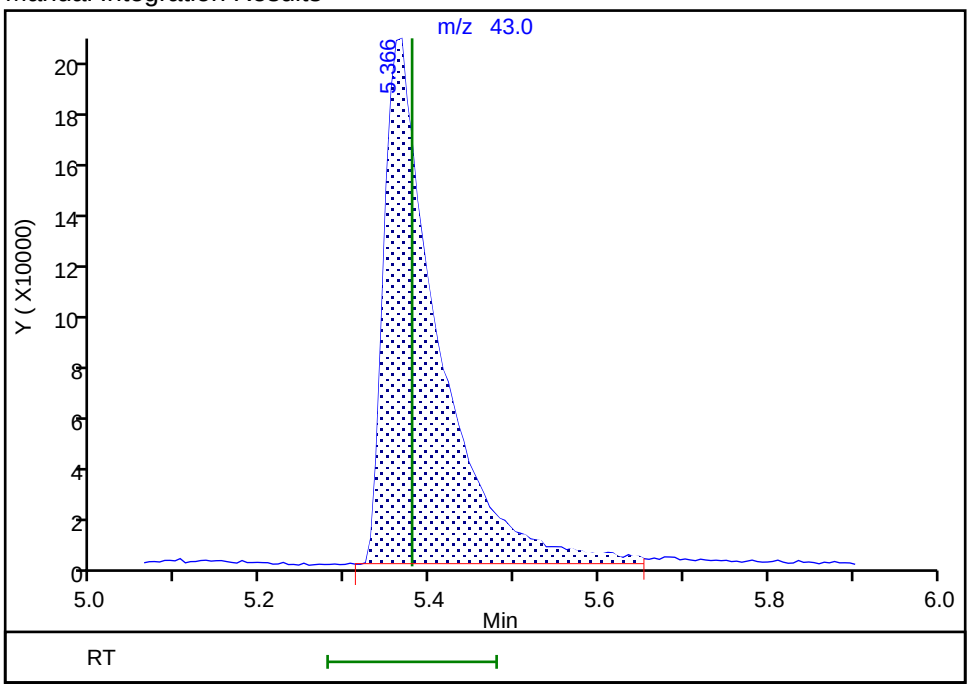
Not Detected
Expected RT: 5.38

Processing Integration Results



Manual Integration Results

RT: 5.37
Area: 904142
Amount: 25.390052
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:18:38 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

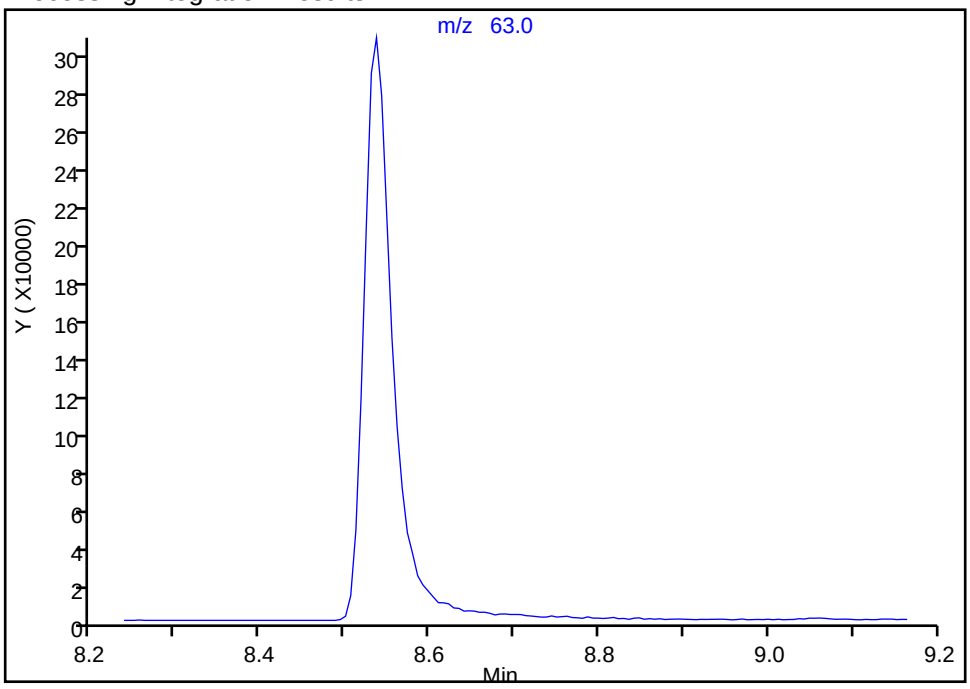
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X08.D				
Injection Date:	10-Jul-2023 18:02:30	Instrument ID:	10193		
Lims ID:	IC STD25 Sm				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	8	Worklist Smp#:	9
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

79 2-Chloroethyl vinyl ether, CAS: 110-75-8

Signal: 1

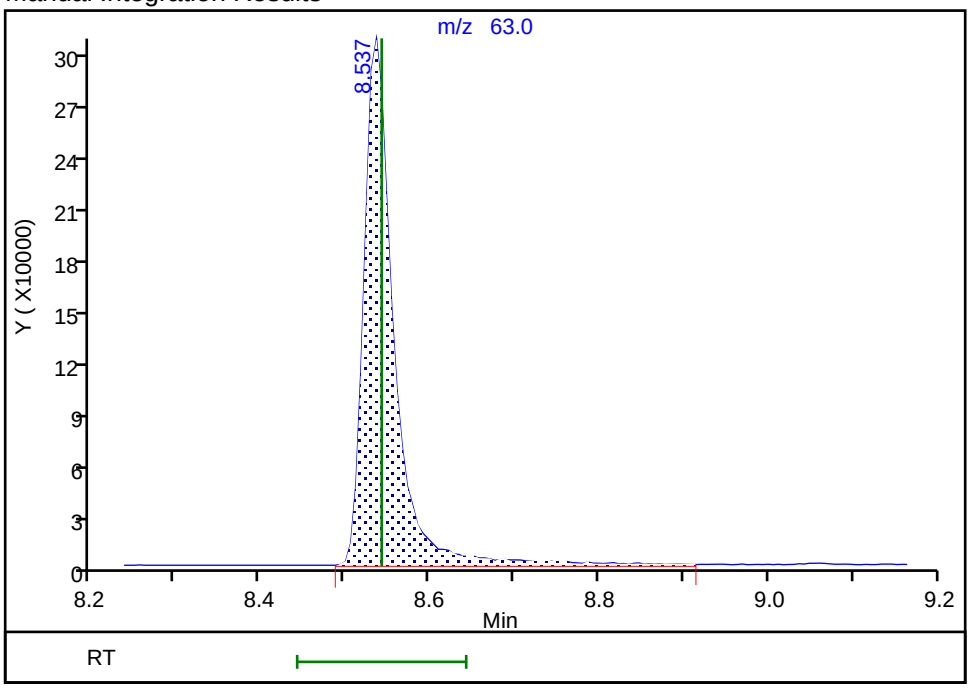
Not Detected
Expected RT: 8.54

Processing Integration Results



Manual Integration Results

RT: 8.54
Area: 757238
Amount: 32.144248
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:18:45 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

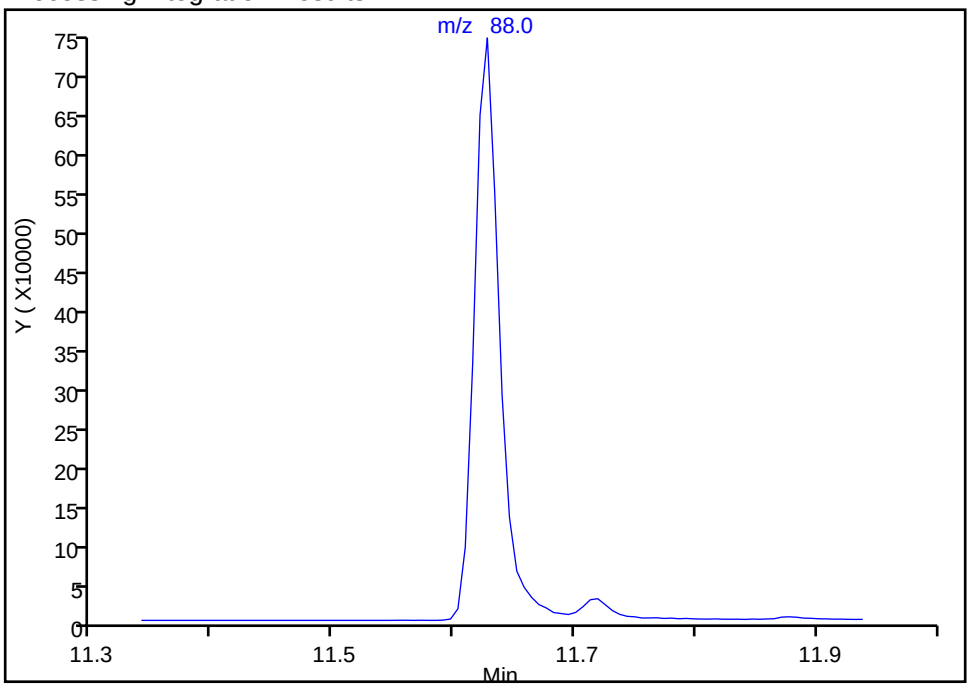
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X08.D				
Injection Date:	10-Jul-2023 18:02:30	Instrument ID:	10193		
Lims ID:	IC STD25 Sm				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	8	Worklist Smp#:	9
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

122 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

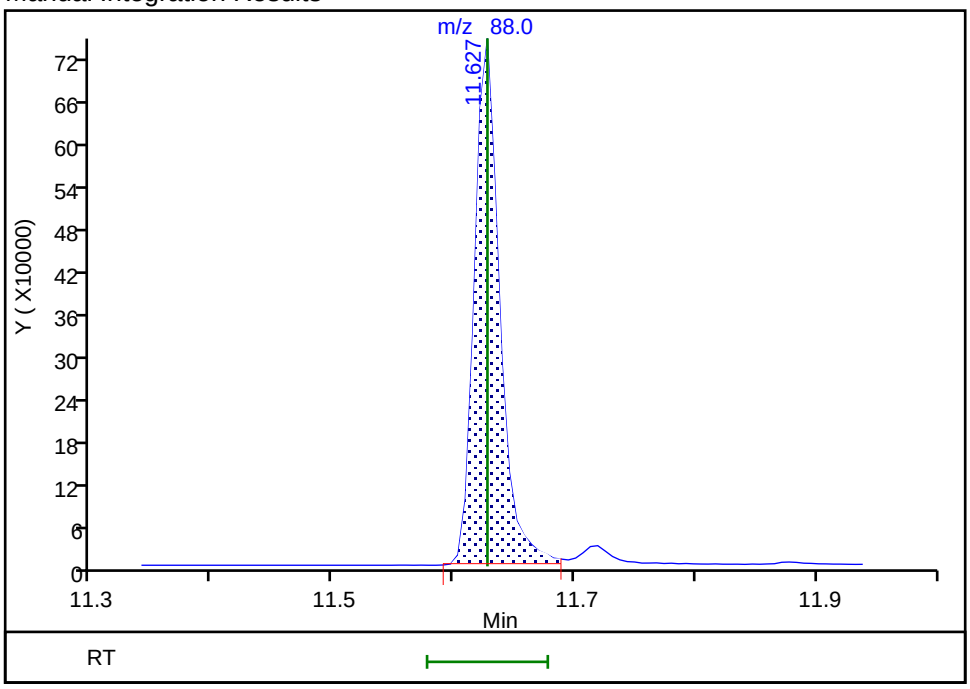
Not Detected
Expected RT: 11.63

Processing Integration Results



Manual Integration Results

RT: 11.63
Area: 1095177
Amount: 51.882023
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:18:48 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Calibration / Chlorodifluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

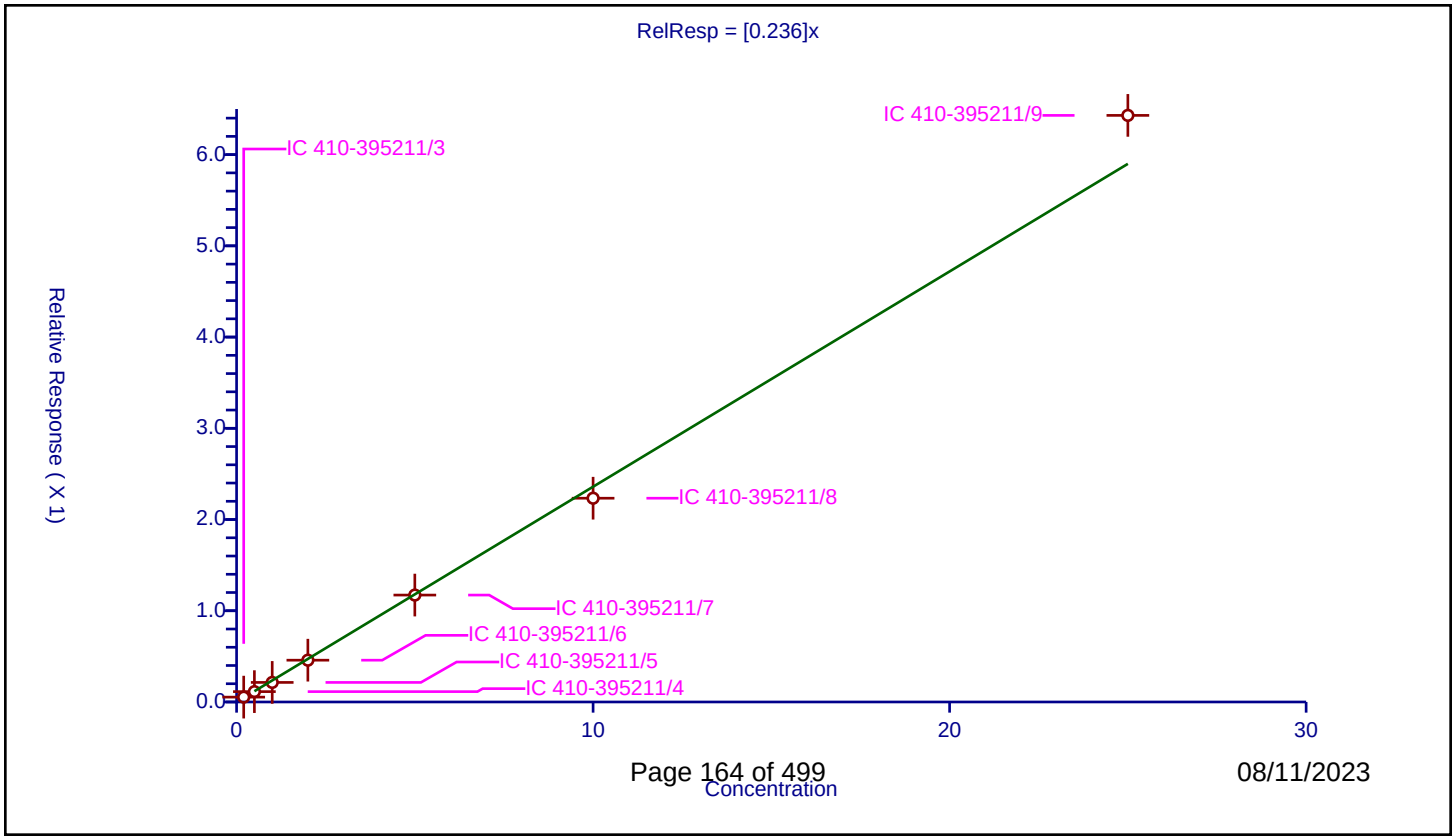
Curve Coefficients

Intercept:	0
Slope:	0.236

Error Coefficients

Standard Error:	707000
Relative Standard Error:	8.0
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/3	0.2	0.053296	10.0	2587638.0	0.266479	Y
2	IC 410-395211/4	0.5	0.113451	10.0	2506109.0	0.226902	Y
3	IC 410-395211/5	1.0	0.214281	10.0	2522019.0	0.214281	Y
4	IC 410-395211/6	2.0	0.458202	10.0	2504156.0	0.229101	Y
5	IC 410-395211/7	5.0	1.172081	10.0	2473404.0	0.234416	Y
6	IC 410-395211/8	10.0	2.233718	10.0	2477645.0	0.223372	Y
7	IC 410-395211/9	25.0	6.430101	10.0	2504505.0	0.257204	Y



Calibration / Dimethyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

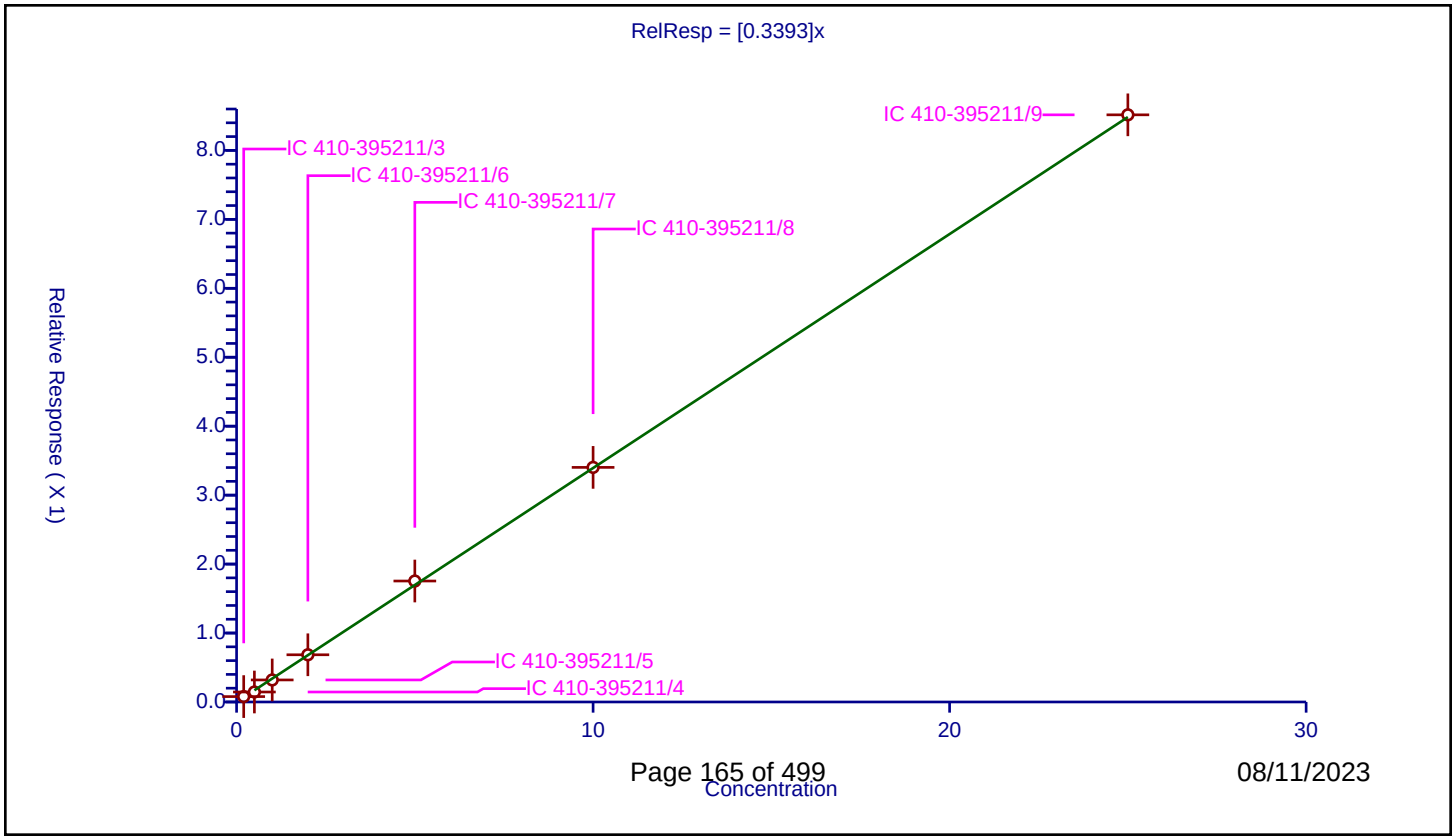
Curve Coefficients

Intercept:	0
Slope:	0.3393

Error Coefficients

Standard Error:	956000
Relative Standard Error:	9.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/3	0.2	0.078276	10.0	2587638.0	0.39138	Y
2	IC 410-395211/4	0.5	0.144998	10.0	2506109.0	0.289995	Y
3	IC 410-395211/5	1.0	0.319688	10.0	2522019.0	0.319688	Y
4	IC 410-395211/6	2.0	0.684893	10.0	2504156.0	0.342447	Y
5	IC 410-395211/7	5.0	1.7544	10.0	2473404.0	0.35088	Y
6	IC 410-395211/8	10.0	3.402493	10.0	2477645.0	0.340249	Y
7	IC 410-395211/9	25.0	8.515795	10.0	2504505.0	0.340632	Y



Calibration / Acetonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

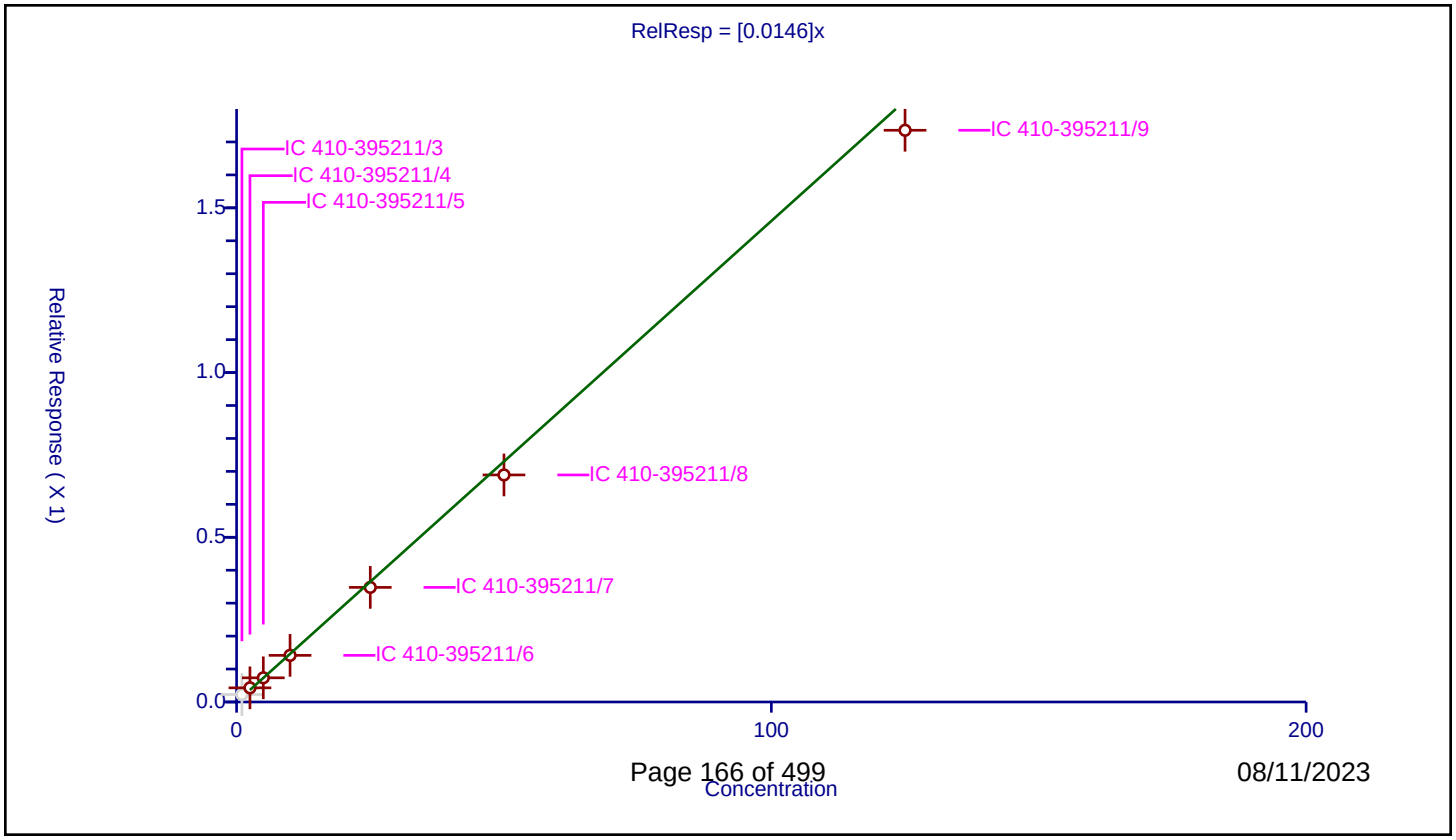
Curve Coefficients

Intercept:	0
Slope:	0.0146

Error Coefficients

Standard Error:	213000
Relative Standard Error:	9.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/3	1.0	0.022611	10.0	2587638.0	0.022611	N
2	IC 410-395211/4	2.5	0.042975	10.0	2506109.0	0.01719	Y
3	IC 410-395211/5	5.0	0.073378	10.0	2522019.0	0.014676	Y
4	IC 410-395211/6	10.0	0.141573	10.0	2504156.0	0.014157	Y
5	IC 410-395211/7	25.0	0.347877	10.0	2473404.0	0.013915	Y
6	IC 410-395211/8	50.0	0.689251	10.0	2477645.0	0.013785	Y
7	IC 410-395211/9	125.0	1.735477	10.0	2504505.0	0.013884	Y



Calibration / Vinyl acetate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

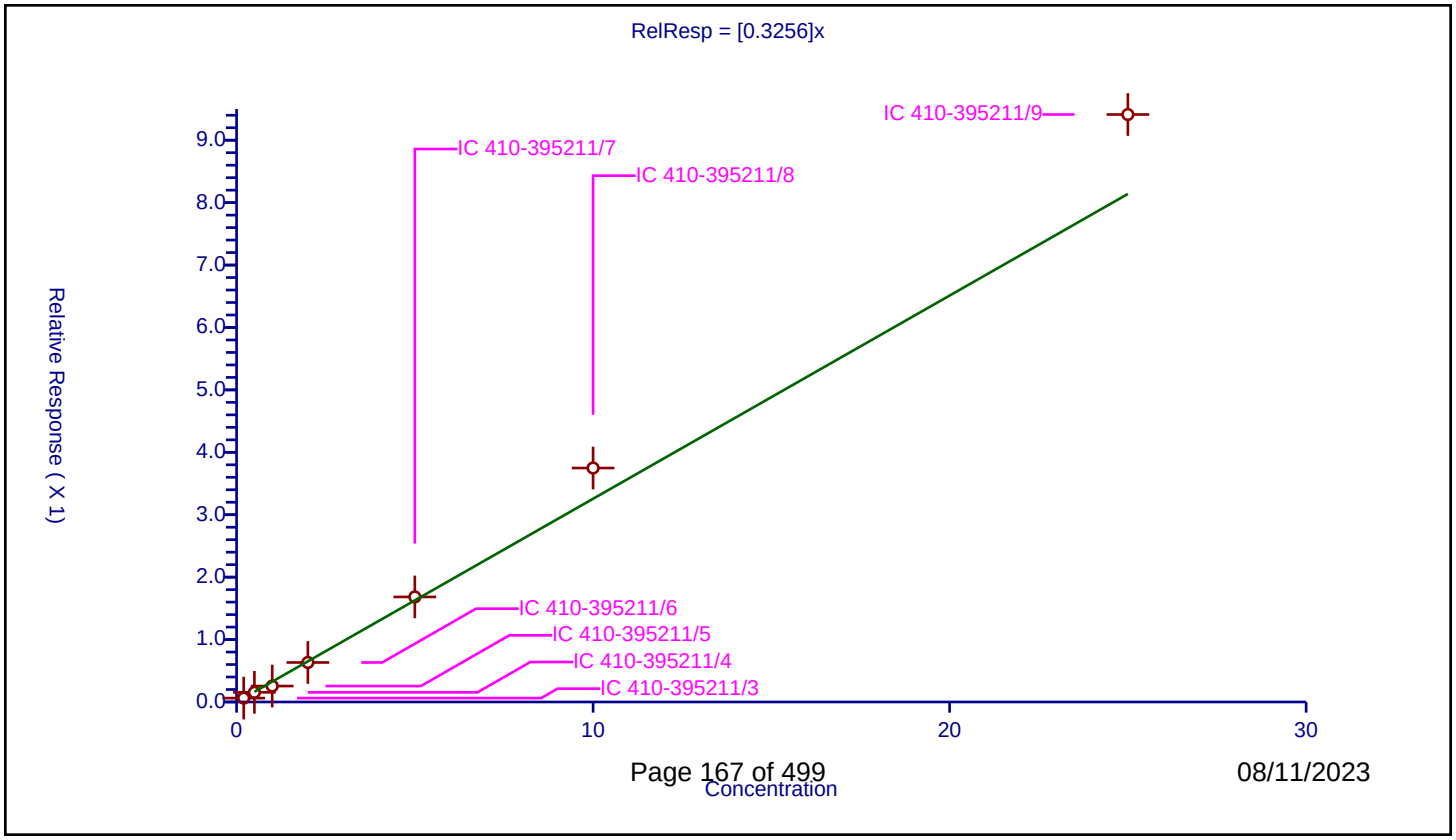
Curve Coefficients

Intercept:	0
Slope:	0.3256

Error Coefficients

Standard Error:	1050000
Relative Standard Error:	13.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.979

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/3	0.2	0.062138	10.0	2587638.0	0.310689	Y
2	IC 410-395211/4	0.5	0.154327	10.0	2506109.0	0.308654	Y
3	IC 410-395211/5	1.0	0.255121	10.0	2522019.0	0.255121	Y
4	IC 410-395211/6	2.0	0.633076	10.0	2504156.0	0.316538	Y
5	IC 410-395211/7	5.0	1.683207	10.0	2473404.0	0.336641	Y
6	IC 410-395211/8	10.0	3.748313	10.0	2477645.0	0.374831	Y
7	IC 410-395211/9	25.0	9.411808	10.0	2504505.0	0.376472	Y



Calibration / Ethyl acetate

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

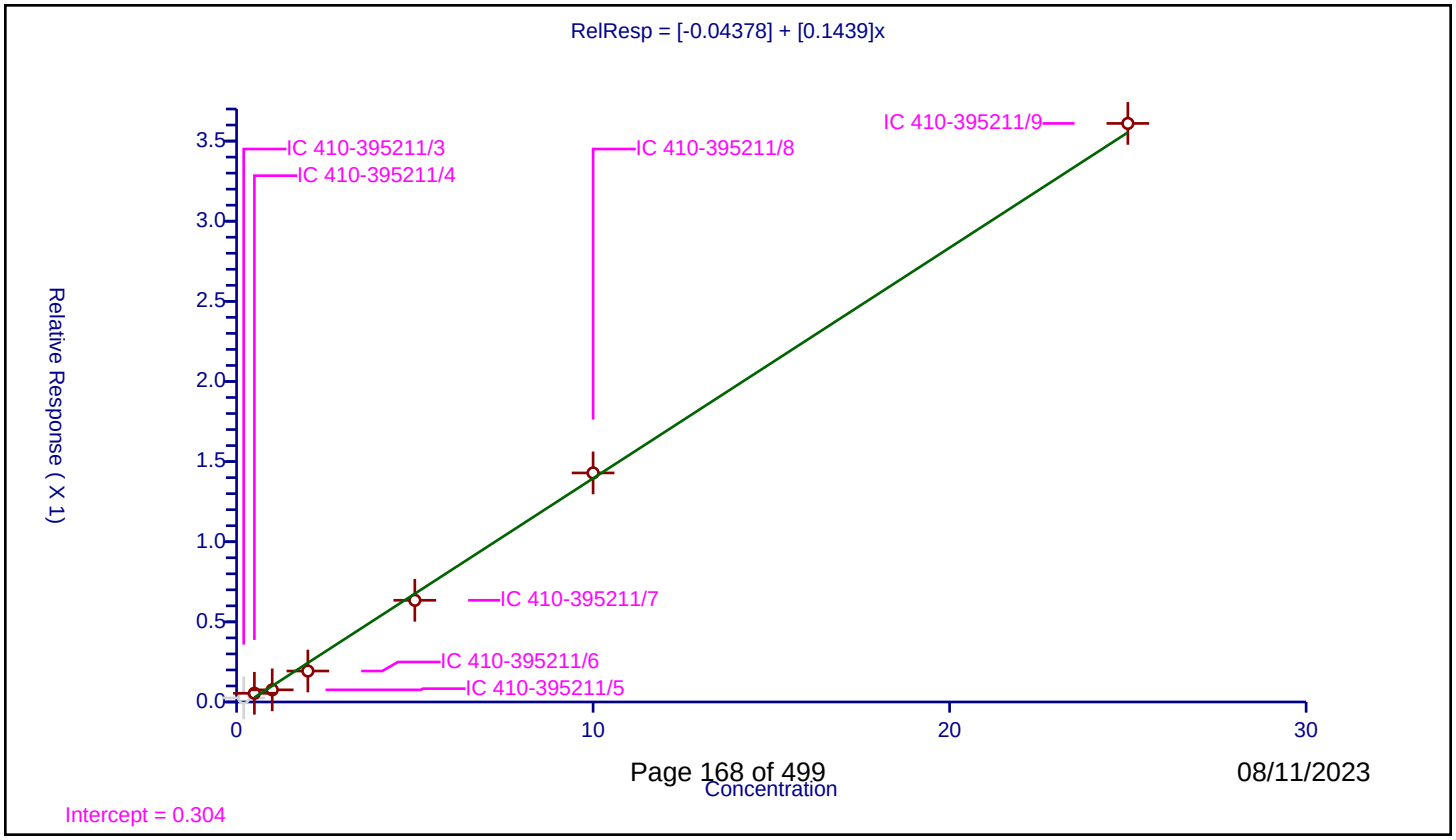
Curve Coefficients

Intercept:	-0.04378
Slope:	0.1439

Error Coefficients

Standard Error:	493000
Relative Standard Error:	22.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/3	0.2	0.025309	10.0	2587638.0	0.126544	N
2	IC 410-395211/4	0.5	0.054303	10.0	2506109.0	0.108607	Y
3	IC 410-395211/5	1.0	0.075828	10.0	2522019.0	0.075828	Y
4	IC 410-395211/6	2.0	0.193339	10.0	2504156.0	0.096669	Y
5	IC 410-395211/7	5.0	0.634534	10.0	2473404.0	0.126907	Y
6	IC 410-395211/8	10.0	1.429277	10.0	2477645.0	0.142928	Y
7	IC 410-395211/9	25.0	3.610063	10.0	2504505.0	0.144403	Y



Calibration / 2-Chloroethyl vinyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

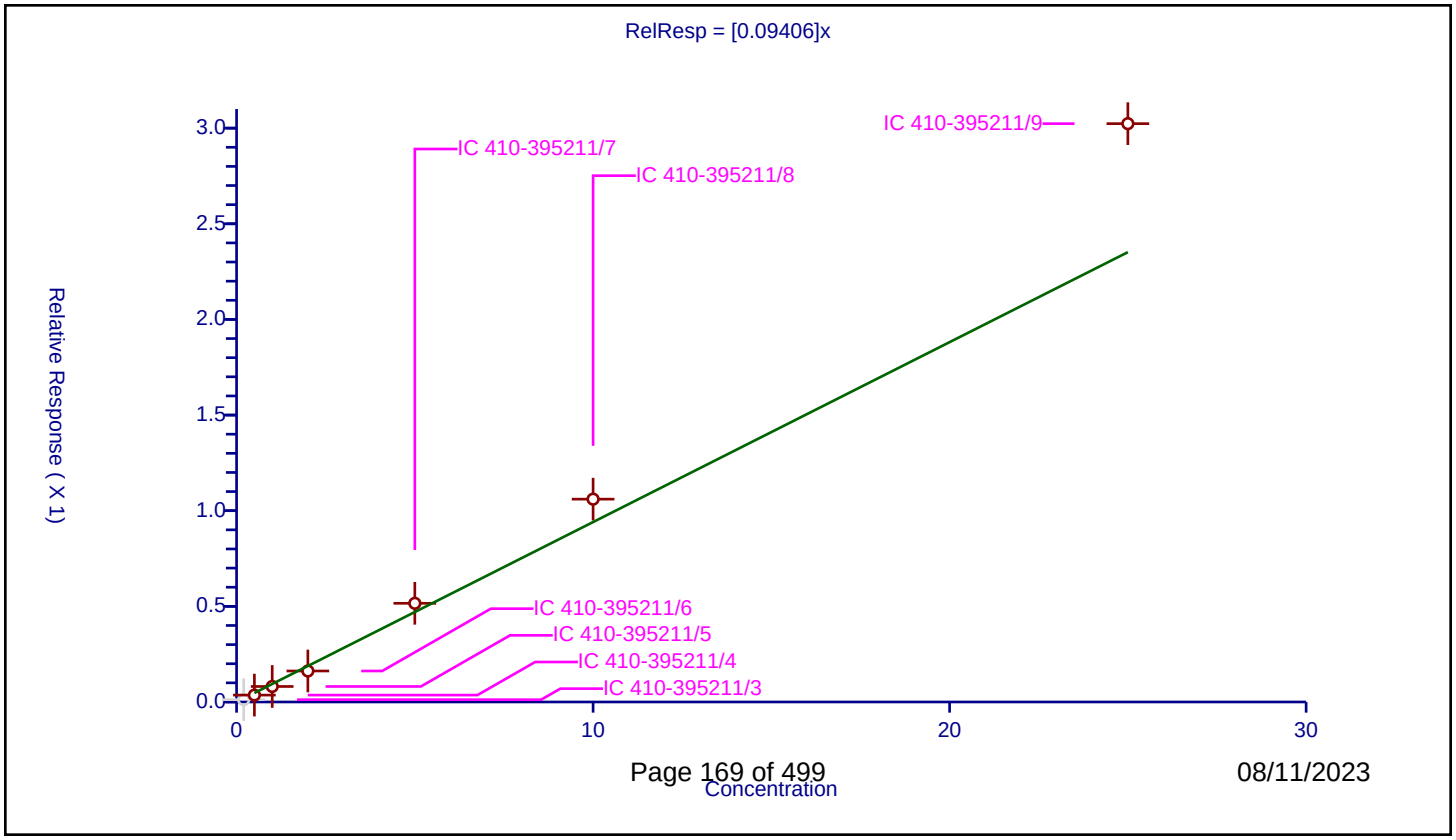
Curve Coefficients

Intercept:	0
Slope:	0.09406

Error Coefficients

Standard Error:	364000
Relative Standard Error:	20.0
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.953

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/3	0.2	0.012104	10.0	2587638.0	0.060519	N
2	IC 410-395211/4	0.5	0.036028	10.0	2506109.0	0.072056	Y
3	IC 410-395211/5	1.0	0.081125	10.0	2522019.0	0.081125	Y
4	IC 410-395211/6	2.0	0.162011	10.0	2504156.0	0.081005	Y
5	IC 410-395211/7	5.0	0.515941	10.0	2473404.0	0.103188	Y
6	IC 410-395211/8	10.0	1.060479	10.0	2477645.0	0.106048	Y
7	IC 410-395211/9	25.0	3.023504	10.0	2504505.0	0.12094	Y



Calibration / cis-1,4-Dichloro-2-butene

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

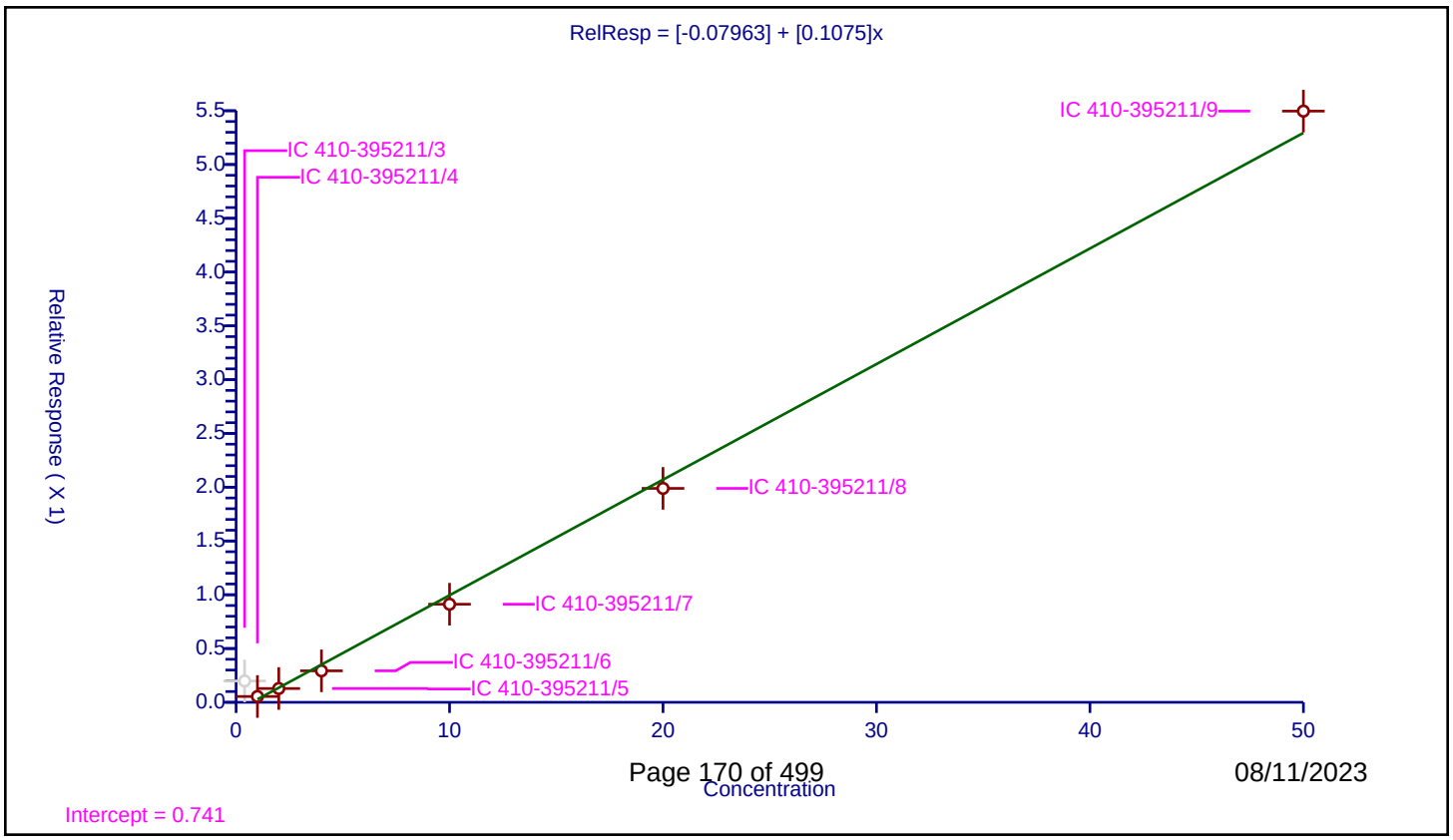
Curve Coefficients

Intercept:	-0.07963
Slope:	0.1075

Error Coefficients

Standard Error:	588000
Relative Standard Error:	14.8
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/3	0.39999	0.19854	10.0	2005695.0	0.496361	N
2	IC 410-395211/4	0.999976	0.054058	10.0	1987307.0	0.054059	Y
3	IC 410-395211/5	1.999951	0.128253	10.0	1976880.0	0.064128	Y
4	IC 410-395211/6	3.999903	0.292776	10.0	1971475.0	0.073196	Y
5	IC 410-395211/7	9.999757	0.911995	10.0	1941842.0	0.091202	Y
6	IC 410-395211/8	19.999514	1.9889	10.0	1944939.0	0.099447	Y
7	IC 410-395211/9	49.998785	5.49648	10.0	1992506.0	0.109932	Y



08/11/2023

Calibration / Cyclohexanone

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

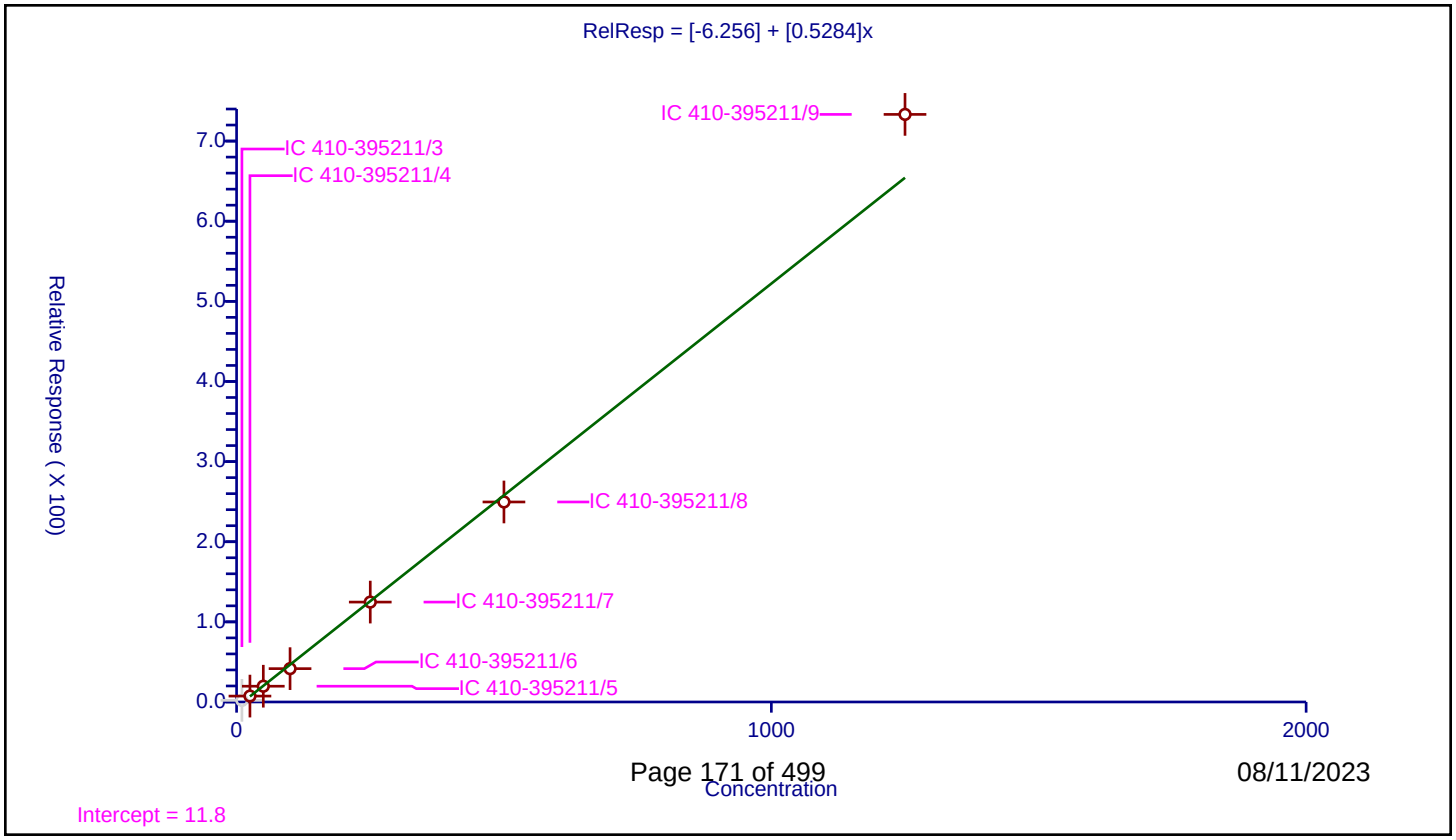
Curve Coefficients

Intercept:	-6.256
Slope:	0.5284

Error Coefficients

Standard Error:	1330000
Relative Standard Error:	8.0
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/3	9.9996	2.037982	50.0	177872.0	0.203806	N
2	IC 410-395211/4	24.999	7.383904	50.0	168136.0	0.295368	Y
3	IC 410-395211/5	49.998	19.6875	50.0	160800.0	0.393766	Y
4	IC 410-395211/6	99.996	41.615754	50.0	158768.0	0.416174	Y
5	IC 410-395211/7	249.99	124.694571	50.0	156174.0	0.498798	Y
6	IC 410-395211/8	499.98	249.608764	50.0	177770.0	0.499237	Y
7	IC 410-395211/9	1249.95	733.285917	50.0	168367.0	0.586652	Y



FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-2 Analy Batch No.: 395211

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 19:29 Calibration End Date: 07/10/2023 21:40 Calibration ID: 51835

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-395211/13	CL10X12.D
Level 2	IC 410-395211/14	CL10X13.D
Level 3	IC 410-395211/15	CL10X14.D
Level 4	IC 410-395211/16	CL10X15.D
Level 5	IC 410-395211/17	CL10X16.D
Level 6	ICIS 410-395211/18	CL10X17.D
Level 7	IC 410-395211/19	CL10X18.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2448 0.2624	0.1806 0.2527	0.2713	0.2652	0.2445	Ave		0.2459			0.1000	12.4		20.0			
Chloromethane	0.3325 0.3108	0.3202 0.2997	0.3037	0.3141	0.2993	Ave		0.3115			0.1000	3.9		20.0			
Vinyl chloride	0.2944 0.3029	0.2875 0.2895	0.3085	0.3006	0.2982	Ave		0.2974			0.1000	2.5		20.0			
1,3-Butadiene	0.2867 0.2996	0.2386 0.3002	0.3128	0.2893	0.2891	Ave		0.2881				8.2		20.0			
Bromomethane	0.2462 0.2321	0.2340 0.2194	0.2348	0.2368	0.2242	Ave		0.2325			0.1000	3.7		20.0			
Chloroethane	0.1763 0.1715	0.1788 0.1698	0.1835	0.1747	0.1703	Ave		0.1750			0.1000	2.9		20.0			
Dichlorofluoromethane	0.4805 0.4734	0.4798 0.4597	0.4863	0.4808	0.4636	Ave		0.4749			0.1000	2.1		20.0			
Trichlorofluoromethane	0.3089 0.3587	0.2708 0.3474	0.3659	0.3629	0.3364	Ave		0.3359			0.1000	10.4		20.0			
Ethyl ether	0.1887 0.1947	0.1886 0.1921	0.1850	0.1950	0.1955	Ave		0.1914				2.1		20.0			
Freon 123a	0.2839 0.2660	0.2558 0.2613	0.2690	0.2564	0.2523	Ave		0.2635				4.1		20.0			
Acrolein	1.9735 1.8110	1.8391 1.9535	1.7457	1.8910	1.8331	Ave		1.8639				4.3		20.0			
1,1-Dichloroethene	0.2375 0.2134	0.2165 0.2242	0.2205	0.1988	0.2118	Ave		0.2175			0.1000	5.5		20.0			
Acetone	3.2649 1.9936	2.5418 2.0612	2.3432	2.3068	2.1041	Ave		2.3737			0.1000	18.4		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-2 Analy Batch No.: 395211

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 19:29 Calibration End Date: 07/10/2023 21:40 Calibration ID: 51835

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Freon 113	0.2052 0.2187	0.1942 0.2287	0.2301	0.2098	0.2155	Ave		0.2146			0.1000	6.0		20.0			
Methyl iodide	0.4624 0.4736	0.4754 0.4853	0.4608	0.4413	0.4709	Ave		0.4671				3.0		20.0			
Ethyl bromide	0.2048 0.2147	0.2212 0.2141	0.2023	0.2089	0.2198	Ave		0.2123				3.4		20.0			
Carbon disulfide	0.7610 0.7894	0.7413 0.8202	0.7739	0.7261	0.7743	Ave		0.7694			0.1000	4.0		20.0			
Methyl acetate	8.5889 6.8617	6.9828 7.3888	7.6671	7.5121	7.3865	Ave		7.4840			0.1000	7.5		20.0			
Allyl chloride	0.3443 0.4019	0.3869 0.4145	0.3882	0.3595	0.3896	Ave		0.3836				6.3		20.0			
Methylene Chloride	0.2946 0.2655	0.2880 0.2648	0.2644	0.2600	0.2662	Ave		0.2719			0.1000	5.0		20.0			
t-Butyl alcohol	1.3477 0.8965	1.2251 0.9232	1.0500	0.9563	0.9499	Ave		1.0498				16.4		20.0			
Acrylonitrile	3.1809 3.3156	3.5538 3.3650	3.0563	3.6786	3.2244	Ave		3.3392				6.5		20.0			
Methyl tertiary butyl ether	0.6913 0.7050	0.7173 0.7043	0.6826	0.6891	0.7085	Ave		0.6997			0.1000	1.8		20.0			
trans-1,2-Dichloroethene	0.2653 0.2731	0.2630 0.2744	0.2587	0.2479	0.2658	Ave		0.2640			0.1000	3.4		20.0			
n-Hexane	0.3041 0.3437	0.3256 0.3714	0.3491	0.3163	0.3463	Ave		0.3367				6.8		20.0			
1,1-Dichloroethane	0.4361 0.4785	0.4787 0.4857	0.4509	0.4418	0.4702	Ave		0.4631			0.2000	4.3		20.0			
di-Isopropyl ether	0.8137 0.9053	0.8818 0.9216	0.8611	0.8331	0.8900	Ave		0.8724				4.4		20.0			
2-Chloro-1,3-butadiene	0.3364 0.3757	0.3367 0.3987	0.3468	0.3253	0.3614	Ave		0.3544				7.3		20.0			
Ethyl t-butyl ether	0.7463 0.8432	0.8154 0.8499	0.7848	0.7850	0.8246	Ave		0.8070				4.6		20.0			
2-Butanone	4.3469 4.8545	4.2905 4.9730	4.4837	4.6718	4.8448	Ave		4.6379			0.1000	5.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-2 Analy Batch No.: 395211

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 19:29 Calibration End Date: 07/10/2023 21:40 Calibration ID: 51835

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
cis-1,2-Dichloroethene	0.2528 0.2969	0.2855 0.3058	0.2832	0.2654	0.2928	Ave		0.2832			0.1000	6.5		20.0			
2,2-Dichloropropane	0.4017 0.3702	0.3708 0.3806	0.3632	0.3400	0.3623	Ave		0.3698				5.1		20.0			
Propionitrile	0.6758 1.1032	1.0778 1.2580	0.9659	1.0129	1.1677	Ave		1.0373				17.9		20.0			
Methacrylonitrile	4.3167 5.2186	4.4559 5.3838	5.0816	4.7158	5.1933	Ave		4.9094				8.4		20.0			
Bromochloromethane	0.1243 0.1398	0.1420 0.1393	0.1375	0.1322	0.1371	Ave		0.1360				4.4		20.0			
Tetrahydrofuran	1.1543 1.4370	1.2485 1.4613	1.3746	1.4385	1.4381	Ave		1.3646				8.6		20.0			
Chloroform	0.4715 0.4637	0.4595 0.4700	0.4517	0.4372	0.4545	Ave		0.4583			0.2000	2.6		20.0			
1,1,1-Trichloroethane	0.3767 0.3945	0.3890 0.4074	0.3863	0.3595	0.3870	Ave		0.3858			0.1000	3.9		20.0			
Cyclohexane	0.4001 0.4494	0.4094 0.4833	0.4422	0.4076	0.4407	Ave		0.4332			0.1000	6.8		20.0			
Carbon tetrachloride	0.3219 0.3510	0.3205 0.3656	0.3313	0.3095	0.3402	Ave		0.3343			0.1000	5.8		20.0			
1,1-Dichloropropene	0.3498 0.3609	0.3357 0.3757	0.3334	0.3184	0.3466	Ave		0.3458				5.5		20.0			
Isobutyl alcohol	+++++ 0.2960	0.1278 0.3146	0.2226	0.2541	0.2913	Lin	-6.378	0.3182							1.0000		0.9900
Benzene	1.0633 1.1358	1.1104 1.1638	1.0984	1.0410	1.1152	Ave		1.1040			0.5000	3.8		20.0			
1,2-Dichloroethane	0.2931 0.2735	0.2941 0.2840	0.2711	0.2808	0.2748	Ave		0.2816			0.1000	3.3		20.0			
t-Amyl methyl ether	0.7213 0.7828	0.7393 0.7916	0.7337	0.7378	0.7705	Ave		0.7539				3.6		20.0			
n-Heptane	0.3463 0.3871	0.3354 0.4099	0.3617	0.3316	0.3768	Ave		0.3641				7.9		20.0			
Trichloroethene	0.2702 0.2925	0.2826 0.3015	0.2830	0.2669	0.2872	Ave		0.2834			0.2000	4.3		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-2 Analy Batch No.: 395211

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 19:29 Calibration End Date: 07/10/2023 21:40 Calibration ID: 51835

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
n-Butanol	+++++ 0.2740	0.0390 0.3007	0.1034	0.1772	0.2523	Lin1	-14.76	0.2990							0.9970		0.9900
Methylcyclohexane	0.4146 0.4827	0.4152 0.5192	0.4691	0.4416	0.4747	Ave		0.4596			0.1000	8.3		20.0			
1,2-Dichloropropane	0.2753 0.2969	0.2929 0.3075	0.2869	0.2858	0.2919	Ave		0.2910			0.1000	3.4		20.0			
Dibromomethane	0.1329 0.1392	0.1316 0.1381	0.1376	0.1292	0.1387	Ave		0.1353				3.0		20.0			
Methyl methacrylate	7.8802 10.558	8.3688 11.632	8.8913	9.4477	10.322	Ave		9.5858				13.8		20.0			
1,4-Dioxane	+++++ 0.0822	0.0767 0.0710	0.0826	0.0872	0.0839	Ave		0.0806			0.0050	7.2		20.0			
Bromodichloromethane	0.3099 0.3531	0.3357 0.3603	0.3299	0.3222	0.3429	Ave		0.3363			0.2000	5.2		20.0			
2-Nitropropane	2.4465 2.7218	2.2658 2.8725	2.6073	2.6082	2.7250	Ave		2.6067				7.7		20.0			
1-Bromo-2-chloroethane	0.2856 0.3076	0.2820 0.3034	0.2780	0.3026	0.3055	Ave		0.2950				4.3		20.0			
cis-1,3-Dichloropropene	0.3110 0.4682	0.3878 0.4713	0.4147	0.4076	0.4487	Ave		0.4156			0.2000	13.4		20.0			
4-Methyl-2-pentanone	10.627 14.222	11.665 14.883	13.111	13.473	14.390	Ave		13.196			0.1000	11.7		20.0			
Toluene	0.9002 0.9563	0.9684 0.9932	0.9255	0.8807	0.9344	Ave		0.9370			0.4000	4.2		20.0			
trans-1,3-Dichloropropene	0.3531 0.4976	0.3949 0.5135	0.4187	0.4109	0.4759	Ave		0.4378			0.1000	13.5		20.0			
Ethyl methacrylate	0.2405 0.4086	0.3070 0.4321	0.3200	0.3409	0.3918	Ave		0.3487				19.1		20.0			
1,1,2-Trichloroethane	0.2719 0.2772	0.2883 0.2795	0.2787	0.2721	0.2766	Ave		0.2777			0.1000	2.0		20.0			
Tetrachloroethene	0.4246 0.4586	0.4709 0.4769	0.4478	0.4228	0.4532	Ave		0.4507			0.2000	4.6		20.0			
1,3-Dichloropropane	0.3807 0.4676	0.4423 0.4746	0.4381	0.4439	0.4659	Ave		0.4447				7.1		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-2 Analy Batch No.: 395211

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 19:29 Calibration End Date: 07/10/2023 21:40 Calibration ID: 51835

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
2-Hexanone	+++++ 10.193	6.4408 10.921	7.6381	8.9693	9.8027	Ave		8.9941			0.1000	18.7		20.0			
Dibromochloromethane	0.2981 0.3569	0.3375 0.3687	0.3404	0.3321	0.3490	Ave		0.3404				6.6		20.0			
1,2-Dibromoethane	0.2046 0.2705	0.2450 0.2747	0.2355	0.2503	0.2618	Ave		0.2489			0.1000	9.7		20.0			
1-Chlorohexane	0.5455 0.5125	0.4918 0.5470	0.4984	0.4541	0.5049	Ave		0.5077				6.3		20.0			
Chlorobenzene	1.1256 1.1598	1.1276 1.1960	1.1142	1.0728	1.1440	Ave		1.1343			0.5000	3.4		20.0			
1,1,1,2-Tetrachloroethane	0.3475 0.3976	0.3636 0.4122	0.3716	0.3628	0.3913	Ave		0.3781				6.1		20.0			
Ethylbenzene	1.5872 1.8870	1.8122 1.9700	1.7902	1.6945	1.8468	Ave		1.7983			0.1000	7.0		20.0			
m&p-Xylene	0.6543 0.7617	0.6937 0.7961	0.7075	0.6858	0.7497	Ave		0.7213			0.1000	6.9		20.0			
o-Xylene	0.6699 0.7613	0.7267 0.7873	0.7018	0.6790	0.7392	Ave		0.7236			0.3000	5.9		20.0			
Styrene	0.8553 1.2686	1.0213 1.3306	1.0741	1.0978	1.2230	Ave		1.1244			0.3000	14.5		20.0			
Bromoform	0.1882 0.2350	0.2067 0.2390	0.2137	0.2087	0.2243	Ave		0.2165			0.1000	8.2		20.0			
Isopropylbenzene	1.6264 1.9274	1.8465 1.9697	1.7979	1.7173	1.8782	Ave		1.8234			0.1000	6.6		20.0			
Bromobenzene	0.7361 0.8590	0.8322 0.8663	0.8088	0.7937	0.8623	Ave		0.8226				5.7		20.0			
1,1,2,2-Tetrachloroethane	0.5335 0.6106	0.5980 0.6117	0.5922	0.5818	0.6196	Ave		0.5925			0.3000	4.9		20.0			
trans-1,4-Dichloro-2-butene	0.0883 0.1496	0.1183 0.1537	0.1210	0.1324	0.1470	Ave		0.1300				17.7		20.0			
1,2,3-Trichloropropane	0.1470 0.1550	0.1520 0.1557	0.1486	0.1458	0.1602	Ave		0.1521				3.4		20.0			
N-Propylbenzene	3.4795 3.8213	3.5725 3.7487	3.4819	3.3173	3.7804	Ave		3.6002				5.2		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-2 Analy Batch No.: 395211

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 19:29 Calibration End Date: 07/10/2023 21:40 Calibration ID: 51835

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
2-Chlorotoluene	0.7189 0.8192	0.7622 0.8306	0.7941	0.7488	0.8160	Ave		0.7843				5.3		20.0			
1,3,5-Trimethylbenzene	2.5130 2.8225	2.6496 2.8693	2.5557	2.5002	2.7833	Ave		2.6705				5.8		20.0			
4-Chlorotoluene	0.7019 0.8554	0.7305 0.8721	0.8067	0.7716	0.8350	Ave		0.7962				8.1		20.0			
tert-Butylbenzene	0.5655 0.6541	0.6328 0.6772	0.6124	0.5908	0.6549	Ave		0.6268				6.3		20.0			
Pentachloroethane	0.3904 0.5411	0.4781 0.5492	0.4761	0.4974	0.5454	Ave		0.4968				11.4		20.0			
1,2,4-Trimethylbenzene	2.4278 2.9661	2.6162 3.0200	2.6470	2.6212	2.8979	Ave		2.7423				8.0		20.0			
sec-Butylbenzene	3.2217 3.6003	3.2736 3.6291	3.3403	3.1746	3.5605	Ave		3.4000				5.6		20.0			
1,3-Dichlorobenzene	1.4994 1.7304	1.5903 1.7764	1.5669	1.5622	1.7118	Ave		1.6339			0.6000	6.4		20.0			
p-Isopropyltoluene	2.5756 3.2612	2.9186 3.2989	2.9701	2.8433	3.2238	Ave		3.0131				8.8		20.0			
1,4-Dichlorobenzene	1.6626 1.7072	1.6711 1.7480	1.6718	1.6118	1.7042	Ave		1.6824			0.5000	2.5		20.0			
1,2,3-Trimethylbenzene	1.2517 1.3689	1.2566 1.4142	1.2528	1.2530	1.3857	Ave		1.3119				5.6		20.0			
Benzyl chloride	+++++ 0.2675	0.1788 0.2782	0.2086	0.2227	0.2591	Ave		0.2358				16.4		20.0			
n-Butylbenzene	1.1783 1.5626	1.3178 1.6233	1.3326	1.3475	1.5369	Ave		1.4141				11.4		20.0			
1,2-Dichlorobenzene	1.3562 1.6401	1.5181 1.6588	1.5373	1.4729	1.6107	Ave		1.5420			0.4000	6.9		20.0			
1,2-Dibromo-3-Chloropropane	0.0533 0.0883	0.0605 0.0893	0.0656	0.0782	0.0875	Ave		0.0747			0.0500	19.8		20.0			
1,3,5-Trichlorobenzene	1.1056 1.3651	1.2487 1.3694	1.2191	1.1957	1.3596	Ave		1.2662				8.1		20.0			
1,2,4-Trichlorobenzene	0.6988 1.1158	0.8886 1.1146	0.9329	0.9159	1.0482	Ave		0.9593			0.2000	15.5		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-2 Analy Batch No.: 395211

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 19:29 Calibration End Date: 07/10/2023 21:40 Calibration ID: 51835

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Hexachlorobutadiene	0.4996 0.5641	0.5365 0.5741	0.5387	0.5007	0.5590	Ave		0.5390				5.5		20.0			
Naphthalene	+++++ 1.8126	1.2692 1.7999	1.3239	1.4687	1.7277	Ave		1.5670				15.6		20.0			
1,2,3-Trichlorobenzene	0.5167 0.8841	0.6128 0.8642	0.6820	0.7157	0.8128	Ave		0.7269				18.7		20.0			
Dibromofluoromethane (Surr)	0.2344 0.2338	0.2353 0.2318	0.2319	0.2350	0.2345	Ave		0.2338				0.6		20.0			
1,2-Dichloroethane-d4 (Surr)	0.0511 0.0475	0.0498 0.0477	0.0494	0.0499	0.0506	Ave		0.0494				2.8		20.0			
Toluene-d8 (Surr)	1.3191 1.3018	1.3195 1.3244	1.3184	1.3120	1.3020	Ave		1.3139				0.7		20.0			
4-Bromofluorobenzene (Surr)	0.4589 0.4766	0.4681 0.4778	0.4686	0.4693	0.4714	Ave		0.4701				1.3		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136864-2 Analy Batch No.: 395211

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 19:29 Calibration End Date: 07/10/2023 21:40 Calibration ID: 51835

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-395211/13	CL10X12.D
Level 2	IC 410-395211/14	CL10X13.D
Level 3	IC 410-395211/15	CL10X14.D
Level 4	IC 410-395211/16	CL10X15.D
Level 5	IC 410-395211/17	CL10X16.D
Level 6	ICIS 410-395211/18	CL10X17.D
Level 7	IC 410-395211/19	CL10X18.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	11821 658785	22298 1677755	66700	130813	302610	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Chloromethane	FB	Ave	16054 780425	39540 1989504	74670	154893	370453	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Vinyl chloride	FB	Ave	14215 760607	35508 1921780	75846	148245	369078	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3-Butadiene	FB	Ave	13844 752244	29471 1992815	76904	142678	357835	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromomethane	FB	Ave	11889 582711	28892 1456503	57728	116765	277506	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Chloroethane	FB	Ave	8514 430518	22076 1127399	45126	86174	210795	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Dichlorofluoromethane	FB	Ave	23201 1188628	59252 3051651	119579	237128	573749	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Trichlorofluoromethane	FB	Ave	14916 900669	33437 2306108	89976	178987	416336	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethyl ether	FB	Ave	9113 488994	23296 1275360	45496	96175	241946	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Freon 123a	FB	Ave	13705 667816	31592 1734729	66138	126477	312193	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Acrolein	TBAd 10	Ave	63076 3043605	162482 8304871	282347	622742	1532831	10.0 500	25.0 1250	50.0	100	250
1,1-Dichloroethene	FB	Ave	11468 535704	26740 1488376	54226	98047	262109	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Acetone	TBAd 10	Ave	20869	44911	75795	151932	351875	2.00	5.00	10.0	20.0	50.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136864-2 Analy Batch No.: 395211

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 19:29 Calibration End Date: 07/10/2023 21:40 Calibration ID: 51835

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
			670067	1752462				100	250			
Freon 113	FB	Ave	9907 549168	23979 1518257	56573	103495	266636	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methyl iodide	FB	Ave	22324 1189155	58709 3221996	113310	217665	582776	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethyl bromide	FB	Ave	9881 538553	27291 1420040	49690	102958	271787	0.200 9.99	0.500 25.0	0.999	2.00	5.00
Carbon disulfide	FB	Ave	36742 1981894	91539 5445163	190278	358109	958221	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methyl acetate	TBAd 10	Ave	5490 230624	12338 628207	24801	49477	123525	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Allyl chloride	FB	Ave	16623 1009099	47777 2752062	95453	177309	482187	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methylene Chloride	FB	Ave	14224 666555	35568 1757899	65001	128206	329457	0.200 10.0	0.500 25.0	1.00	2.00	5.00
t-Butyl alcohol	TBAd 10	Ave	17229 602660	43294 1569784	67927	125966	317696	4.00 200	10.0 500	20.0	40.0	100
Acrylonitrile	TBAd 10	Ave	5083 278600	15698 715235	24716	60571	134803	0.500 25.0	1.25 62.5	2.50	5.00	12.5
Methyl tertiary butyl ether	FB	Ave	33374 1770056	88578 4676022	167827	339859	876866	0.200 10.0	0.500 25.0	1.00	2.00	5.00
trans-1,2-Dichloroethene	FB	Ave	12811 685758	32481 1821481	63602	122282	328931	0.200 10.0	0.500 25.0	1.00	2.00	5.00
n-Hexane	FB	Ave	14683 862976	40210 2465849	85835	156003	428626	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1-Dichloroethane	FB	Ave	21055 1201309	59118 3224585	110868	217910	581919	0.200 10.0	0.500 25.0	1.00	2.00	5.00
di-Isopropyl ether	FB	Ave	39288 2272827	108900 6118603	211714	410883	1101483	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Chloro-1,3-butadiene	FB	Ave	16240 943188	41584 2646828	85268	160443	447291	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethyl t-butyl ether	FB	Ave	36032 2117027	100691 5642481	192959	387157	1020502	0.200 10.0	0.500 25.0	1.00	2.00	5.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136864-2 Analy Batch No.: 395211

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 19:29 Calibration End Date: 07/10/2023 21:40 Calibration ID: 51835

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
2-Butanone	TBAd 10	Ave	27785 1631605	75809 4228096	145034	307697	810200	2.00 100	5.00 250	10.0	20.0	50.0
cis-1,2-Dichloroethene	FB	Ave	12203 745504	35258 2030075	69642	130877	362337	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2,2-Dichloropropane	FB	Ave	19395 929524	45793 2527014	89305	167697	448320	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Propionitrile	TBAd 10	Ave	8640 741560	38088 2139112	62487	133423	390538	4.00 200	10.0 500	20.0	40.0	100
Methacrylonitrile	TBAd 10	Ave	27592 1754007	78731 4577349	164374	310593	868473	2.00 100	5.00 250	10.0	20.0	50.0
Bromochloromethane	FB	Ave	6001 351013	17539 924552	33818	65221	169726	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Tetrahydrofuran	TBAd 10	Ave	3689 241496	11030 621197	22233	47371	120244	1.00 50.0	2.50 125	5.00	10.0	25.0
Chloroform	FB	Ave	22763 1164324	56744 3120160	111067	215645	562498	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,1-Trichloroethane	FB	Ave	18185 990464	48038 2704708	94975	177286	478983	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Cyclohexane	FB	Ave	19318 1128392	50561 3208600	108733	201009	545351	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Carbon tetrachloride	FB	Ave	15543 881185	39575 2427242	81461	152638	421019	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1-Dichloropropene	FB	Ave	16888 906015	41451 2494003	81971	157047	428997	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Isobutyl alcohol	TBAd 10	Lin	+++++ 497465	11292 1337202	36009	83688	243540	+++++ 500	25.0 1250	50.0	100	250
Benzene	FB	Ave	51338 2851658	137128 7726211	270063	513413	1380101	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dichloroethane	FB	Ave	14153 686799	36323 1885153	66663	138485	340102	0.200 10.0	0.500 25.0	1.00	2.00	5.00
t-Amyl methyl ether	FB	Ave	34827	91298	180408	363871	953593	0.200	0.500	1.00	2.00	5.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136864-2 Analy Batch No.: 395211

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 19:29 Calibration End Date: 07/10/2023 21:40 Calibration ID: 51835

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
			1965435	5255245				10.0	25.0			
n-Heptane	FB	Ave	16720 971821	41417 2721424	88923	163522	466301	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Trichloroethene	FB	Ave	13043 734500	34902 2001612	69577	131625	355409	0.200 10.0	0.500 25.0	1.00	2.00	5.00
n-Butanol	TBAd 10	Lin1	+++++ 805828	6030 2236914	29274	102118	369243	+++++ 875	43.8 2188	87.5	175	438
Methylcyclohexane	FB	Ave	20017 1211867	51270 3447065	115334	217814	587502	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dichloropropane	FB	Ave	13293 745462	36176 2041344	70545	140956	361296	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Dibromomethane	FB	Ave	6418 349503	16257 916525	33838	63721	171668	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methyl methacrylate	TBAd 10	Ave	5037 354852	14787 988980	28761	62225	172622	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,4-Dioxane	TBAd 10	Ave	+++++ 138169	6777 302035	13360	28725	70163	+++++ 500	25.0 1250	50.0	100	250
Bromodichloromethane	FB	Ave	14960 886523	41451 2392101	81123	158910	424379	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Nitropropane	TBAd 10	Ave	7819 457411	20017 1221117	42170	85892	227853	1.00 50.0	2.50 125	5.00	10.0	25.0
1-Bromo-2-chloroethane	FB	Ave	13791 772215	34825 2014153	68353	149262	378125	0.200 10.0	0.500 25.0	1.00	2.00	5.00
cis-1,3-Dichloropropene	FB	Ave	15014 1175478	47895 3128637	101962	201016	555330	0.200 10.0	0.500 25.0	1.00	2.00	5.00
4-Methyl-2-pentanone	TBAd 10	Ave	67927 4779944	206105 12653718	424094	887372	2406513	2.00 100	5.00 250	10.0	20.0	50.0
Toluene	CBZd 5	Ave	33741 1903875	93376 5167343	178853	343209	913320	0.200 10.0	0.500 25.0	1.00	2.00	5.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136864-2 Analy Batch No.: 395211

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 19:29 Calibration End Date: 07/10/2023 21:40 Calibration ID: 51835

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
trans-1,3-Dichloropropene	CBZd 5	Ave	13236 990727	38075 2671634	80917	160124	465136	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethyl methacrylate	CBZd 5	Ave	9013 813455	29604 2247899	61847	132868	382912	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,2-Trichloroethane	CBZd 5	Ave	10190 551790	27798 1454086	53864	106032	270361	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Tetrachloroethene	CBZd 5	Ave	15916 913085	45407 2481115	86534	164773	442984	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3-Dichloropropane	CBZd 5	Ave	14268 930970	42646 2468894	84655	173001	455385	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Hexanone	TBAd 10	Ave	+++++ 3425778	113803 9285508	247071	590741	1639299	+++++ 100	5.00 250	10.0	20.0	50.0
Dibromochloromethane	CBZd 5	Ave	11174 710622	32544 1918104	65784	129436	341079	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dibromoethane	CBZd 5	Ave	7667 538447	23619 1429329	45500	97526	255939	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1-Chlorohexane	CBZd 5	Ave	20445 1020383	47421 2845729	96320	176964	493503	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Chlorobenzene	CBZd 5	Ave	42190 2309084	108725 6222003	215314	418067	1118156	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,1,2-Tetrachloroethane	CBZd 5	Ave	13023 791480	35062 2144493	71811	141383	382509	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethylbenzene	CBZd 5	Ave	59492 3756735	174733 10248995	345945	660352	1805085	0.200 10.0	0.500 25.0	1.00	2.00	5.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136864-2 Analy Batch No.: 395211

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 19:29 Calibration End Date: 07/10/2023 21:40 Calibration ID: 51835

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
m&p-Xylene	CBZd 5	Ave	49049 3032843	133774 8283558	273431	534517	1465581	0.400 20.0	1.00 50.0	2.00	4.00	10.0
o-Xylene	CBZd 5	Ave	25108 1515690	70066 4095695	135623	264614	722471	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Styrene	CBZd 5	Ave	32058 2525581	98475 6922505	207571	427822	1195356	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromoform	CBZd 5	Ave	7055 467869	19931 1243518	41289	81349	219242	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Isopropylbenzene	CBZd 5	Ave	60960 3837170	178043 10247430	347437	669252	1835799	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromobenzene	DCBd 4	Ave	16465 1042948	48327 2757895	95117	188542	504869	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	11933 741339	34730 1947529	69638	138193	362746	0.200 10.0	0.500 25.0	1.00	2.00	5.00
trans-1,4-Dichloro-2-butene	DCBd 4	Ave	19758 1816127	68695 4892765	142291	314499	860918	2.00 100	5.00 250	10.0	20.0	50.0
1,2,3-Trichloropropane	DCBd 4	Ave	3288 188210	8828 495643	17478	34639	93804	0.200 10.0	0.500 25.0	1.00	2.00	5.00
N-Propylbenzene	DCBd 4	Ave	77828 4639491	207468 11934156	409467	788008	2213293	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Chlorotoluene	DCBd 4	Ave	16081 994645	44266 2644132	93392	177872	477751	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3,5-Trimethylbenzene	DCBd 4	Ave	56210 3426834	153872 9134558	300547	593907	1629513	0.200 10.0	0.500 25.0	1.00	2.00	5.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136864-2 Analy Batch No.: 395211

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 19:29 Calibration End Date: 07/10/2023 21:40 Calibration ID: 51835

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
4-Chlorotoluene	DCBd 4	Ave	15700 1038587	42421 2776349	94866	183284	488843	0.200 10.0	0.500 25.0	1.00	2.00	5.00
tert-Butylbenzene	DCBd 4	Ave	12650 794125	36751 2155920	72018	140340	383394	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Pentachloroethane	DCBd 4	Ave	8733 656909	27762 1748479	55991	118146	319319	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,4-Trimethylbenzene	DCBd 4	Ave	54305 3601162	151932 9614423	311294	622633	1696596	0.200 10.0	0.500 25.0	1.00	2.00	5.00
sec-Butylbenzene	DCBd 4	Ave	72062 4371114	190109 11553473	392818	754102	2084526	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3-Dichlorobenzene	DCBd 4	Ave	33538 2100857	92355 5655092	184273	371086	1002205	0.200 10.0	0.500 25.0	1.00	2.00	5.00
p-Isopropyltoluene	DCBd 4	Ave	57610 3959393	169494 10502301	349290	675394	1887390	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,4-Dichlorobenzene	DCBd 4	Ave	37188 2072743	97044 5564704	196607	382865	997771	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,3-Trimethylbenzene	DCBd 4	Ave	27998 1662034	72977 4502274	147335	297647	811253	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Benzyl chloride	DCBd 4	Ave	+++++ 324829	10383 885654	24527	52911	151722	+++++ 10.0	0.500 25.0	1.00	2.00	5.00
n-Butylbenzene	DCBd 4	Ave	26355 1897152	76531 5167753	156711	320079	899820	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dichlorobenzene	DCBd 4	Ave	30335 1991258	88158 5280700	180788	349881	943028	0.200 10.0	0.500 25.0	1.00	2.00	5.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136864-2 Analy Batch No.: 395211

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 19:29 Calibration End Date: 07/10/2023 21:40 Calibration ID: 51835

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	1193 107198	3516 284292	7710	18580	51208	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3,5-Trichlorobenzene	DCBd 4	Ave	24730 1657411	72517 4359430	143363	284029	795965	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,4-Trichlorobenzene	DCBd 4	Ave	15630 1354713	51601 3548476	109715	217554	613674	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Hexachlorobutadiene	DCBd 4	Ave	11175 684876	31154 1827727	63348	118944	327298	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Naphthalene	DCBd 4	Ave	+++++ 2200653	73709 5729904	155697	348868	1011522	+++++ 10.0	0.500 25.0	1.00	2.00	5.00
1,2,3-Trichlorobenzene	DCBd 4	Ave	11558 1073428	35588 2751180	80201	170003	475874	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Dibromofluoromethane (Surr)	FB	Ave	565787 587053	581092 615441	570123	579440	580358	10.0 10.0	10.0 10.0	10.0	10.0	10.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	123369 119348	123072 126553	121568	123074	125165	10.0 10.0	10.0 10.0	10.0	10.0	10.0
Toluene-d8 (Surr)	CBZd 5	Ave	2472076 2591778	2544562 2755994	2547837	2556434	2545267	10.0 10.0	10.0 10.0	10.0	10.0	10.0
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	859932 948762	902694 994283	905538	914439	921478	10.0 10.0	10.0 10.0	10.0	10.0	10.0

Curve Type Legend
Ave = Average ISTD
Lin = Linear ISTD
Lin1 = Linear 1/conc ISTD

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136864-2 Analy Batch No.: 395211

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 19:29 Calibration End Date: 07/10/2023 21:40 Calibration ID: 51835

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-395211/13	CL10X12.D
Level 2	IC 410-395211/14	CL10X13.D
Level 3	IC 410-395211/15	CL10X14.D
Level 4	IC 410-395211/16	CL10X15.D
Level 5	IC 410-395211/17	CL10X16.D
Level 6	ICIS 410-395211/18	CL10X17.D
Level 7	IC 410-395211/19	CL10X18.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Dichlorodifluoromethane	-0.4 2.8	-26.6	10.3	7.8	-0.6	6.7	50 30	30	30	30	30	30
Chloromethane	6.8 -3.8	2.8	-2.5	0.8	-3.9	-0.2	50 30	30	30	30	30	30
Vinyl chloride	-1.0 -2.7	-3.3	3.7	1.1	0.3	1.9	50 30	30	30	30	30	30
1,3-Butadiene	-0.5 4.2	-17.2	8.6	0.4	0.4	4.0	50 30	30	30	30	30	30
Bromomethane	5.9 -5.6	0.6	1.0	1.8	-3.6	-0.2	50 30	30	30	30	30	30
Chloroethane	0.8 -3.0	2.2	4.9	-0.2	-2.7	-2.0	50 30	30	30	30	30	30
Dichlorofluoromethane	1.2 -3.2	1.0	2.4	1.2	-2.4	-0.3	50 30	30	30	30	30	30
Trichlorofluoromethane	-8.0 3.4	-19.4	9.0	8.1	0.2	6.8	50 30	30	30	30	30	30
Ethyl ether	-1.4 0.4	-1.4	-3.3	1.9	2.1	1.8	50 30	30	30	30	30	30
Freon 123a	7.7 -0.8	-2.9	2.1	-2.7	-4.3	0.9	50 30	30	30	30	30	30
Acrolein	5.9 4.8	-1.3	-6.3	1.5	-1.6	-2.8	50 30	30	30	30	30	30
1,1-Dichloroethene	9.2 3.1	-0.5	1.4	-8.6	-2.6	-1.9	50 30	30	30	30	30	30
Acetone	37.5 -13.2	7.1	-1.3	-2.8	-11.4	-16.0	50 30	30	30	30	30	30
Freon 113	-4.4 6.6	-9.5	7.2	-2.2	0.4	1.9	50 30	30	30	30	30	30

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136864-2 Analy Batch No.: 395211

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 19:29 Calibration End Date: 07/10/2023 21:40 Calibration ID: 51835

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Methyl iodide	-1.0 3.9	1.8	-1.3	-5.5	0.8	1.4	50 30	30	30	30	30	30
Ethyl bromide	-3.5 0.9	4.2	-4.7	-1.6	3.6	1.1	50 30	30	30	30	30	30
Carbon disulfide	-1.1 6.6	-3.7	0.6	-5.6	0.6	2.6	50 30	30	30	30	30	30
Methyl acetate	14.8 -1.3	-6.7	2.4	0.4	-1.3	-8.3	50 30	30	30	30	30	30
Allyl chloride	-10.2 8.1	0.9	1.2	-6.3	1.6	4.8	50 30	30	30	30	30	30
Methylene Chloride	8.3 -2.6	5.9	-2.8	-4.4	-2.1	-2.4	50 30	30	30	30	30	30
t-Butyl alcohol	28.4 -12.1	16.7	0.0	-8.9	-9.5	-14.6	50 30	30	30	30	30	30
Acrylonitrile	-4.7 0.8	6.4	-8.5	10.2	-3.4	-0.7	50 30	30	30	30	30	30
Methyl tertiary butyl ether	-1.2 0.7	2.5	-2.5	-1.5	1.3	0.8	50 30	30	30	30	30	30
trans-1,2-Dichloroethene	0.5 3.9	-0.4	-2.0	-6.1	0.7	3.4	50 30	30	30	30	30	30
n-Hexane	-9.7 10.3	-3.3	3.7	-6.0	2.9	2.1	50 30	30	30	30	30	30
1,1-Dichloroethane	-5.8 4.9	3.4	-2.6	-4.6	1.5	3.3	50 30	30	30	30	30	30
di-Isopropyl ether	-6.7 5.6	1.1	-1.3	-4.5	2.0	3.8	50 30	30	30	30	30	30
2-Chloro-1,3-butadiene	-5.1 12.5	-5.0	-2.2	-8.2	2.0	6.0	50 30	30	30	30	30	30
Ethyl t-butyl ether	-7.5 5.3	1.0	-2.8	-2.7	2.2	4.5	50 30	30	30	30	30	30
2-Butanone	-6.3 7.2	-7.5	-3.3	0.7	4.5	4.7	50 30	30	30	30	30	30
cis-1,2-Dichloroethene	-10.7 8.0	0.8	0.0	-6.3	3.4	4.8	50 30	30	30	30	30	30
2,2-Dichloropropane	8.6 2.9	0.3	-1.8	-8.1	-2.1	0.1	50 30	30	30	30	30	30
Propionitrile	-34.8 21.3	3.9	-6.9	-2.4	12.6	6.3	50 30	30	30	30	30	30

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136864-2 Analy Batch No.: 395211

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 19:29 Calibration End Date: 07/10/2023 21:40 Calibration ID: 51835

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Methacrylonitrile	-12.1 9.7	-9.2	3.5	-3.9	5.8	6.3	50 30	30	30	30	30	30
Bromochloromethane	-8.6 2.4	4.4	1.1	-2.8	0.8	2.8	50 30	30	30	30	30	30
Tetrahydrofuran	-15.4 7.1	-8.5	0.7	5.4	5.4	5.3	50 30	30	30	30	30	30
Chloroform	2.9 2.5	0.3	-1.4	-4.6	-0.8	1.2	50 30	30	30	30	30	30
1,1,1-Trichloroethane	-2.4 5.6	0.8	0.1	-6.8	0.3	2.3	50 30	30	30	30	30	30
Cyclohexane	-7.6 11.6	-5.5	2.1	-5.9	1.7	3.7	50 30	30	30	30	30	30
Carbon tetrachloride	-3.7 9.4	-4.1	-0.9	-7.4	1.8	5.0	50 30	30	30	30	30	30
1,1-Dichloropropene	1.2 8.6	-2.9	-3.6	-7.9	0.3	4.4	50 30	30	30	30	30	30
Isobutyl alcohol	+++++ 0.5	20.4	10.1	-0.1	-0.4	-3.0	 30	50	30	30	30	30
Benzene	-3.7 5.4	0.6	-0.5	-5.7	1.0	2.9	50 30	30	30	30	30	30
1,2-Dichloroethane	4.1 0.8	4.4	-3.7	-0.3	-2.4	-2.9	50 30	30	30	30	30	30
t-Amyl methyl ether	-4.3 5.0	-1.9	-2.7	-2.1	2.2	3.8	50 30	30	30	30	30	30
n-Heptane	-4.9 12.6	-7.9	-0.7	-8.9	3.5	6.3	50 30	30	30	30	30	30
Trichloroethene	-4.7 6.4	-0.3	-0.2	-5.8	1.3	3.2	50 30	30	30	30	30	30
n-Butanol	+++++ 2.8	25.8	-9.0	-12.5	-4.3	-2.7	 30	50	30	30	30	30
Methylcyclohexane	-9.8 13.0	-9.7	2.1	-3.9	3.3	5.0	50 30	30	30	30	30	30
1,2-Dichloropropane	-5.4 5.6	0.7	-1.4	-1.8	0.3	2.0	50 30	30	30	30	30	30
Dibromomethane	-1.8 2.0	-2.7	1.7	-4.5	2.5	2.9	50 30	30	30	30	30	30
Methyl methacrylate	-17.8 21.3	-12.7	-7.2	-1.4	7.7	10.1	50 30	30	30	30	30	30

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136864-2 Analy Batch No.: 395211

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 19:29 Calibration End Date: 07/10/2023 21:40 Calibration ID: 51835

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
1,4-Dioxane	+++++ -11.9	-4.8	2.5	8.2	4.1	2.0	30	50	30	30	30	30
Bromodichloromethane	-7.9 7.1	-0.2	-1.9	-4.2	2.0	5.0	50 30	30	30	30	30	30
2-Nitropropane	-6.1 10.2	-13.1	0.0	0.1	4.5	4.4	50 30	30	30	30	30	30
1-Bromo-2-chloroethane	-3.2 2.9	-4.4	-5.8	2.6	3.6	4.3	50 30	30	30	30	30	30
cis-1,3-Dichloropropene	-25.2 13.4	-6.7	-0.2	-1.9	8.0	12.7	50 30	30	30	30	30	30
4-Methyl-2-pentanone	-19.5 12.8	-11.6	-0.6	2.1	9.1	7.8	50 30	30	30	30	30	30
Toluene	-3.9 6.0	3.4	-1.2	-6.0	-0.3	2.1	50 30	30	30	30	30	30
trans-1,3-Dichloropropene	-19.3 17.3	-9.8	-4.4	-6.1	8.7	13.7	50 30	30	30	30	30	30
Ethyl methacrylate	-31.0 23.9	-12.0	-8.2	-2.2	12.3	17.2	50 30	30	30	30	30	30
1,1,2-Trichloroethane	-2.1 0.6	3.8	0.4	-2.0	-0.4	-0.2	50 30	30	30	30	30	30
Tetrachloroethene	-5.8 5.8	4.5	-0.6	-6.2	0.6	1.8	50 30	30	30	30	30	30
1,3-Dichloropropane	-14.4 6.7	-0.5	-1.5	-0.2	4.8	5.1	50 30	30	30	30	30	30
2-Hexanone	+++++ 21.4	-28.4	-15.1	-0.3	9.0	13.3	30	50	30	30	30	30
Dibromochloromethane	-12.4 8.3	-0.8	0.0	-2.4	2.5	4.9	50 30	30	30	30	30	30
1,2-Dibromoethane	-17.8 10.4	-1.6	-5.4	0.5	5.2	8.7	50 30	30	30	30	30	30
1-Chlorohexane	7.4 7.7	-3.1	-1.8	-10.6	-0.6	0.9	50 30	30	30	30	30	30
Chlorobenzene	-0.8 5.4	-0.6	-1.8	-5.4	0.9	2.3	50 30	30	30	30	30	30
1,1,1,2-Tetrachloroethane	-8.1 9.0	-3.8	-1.7	-4.0	3.5	5.2	50 30	30	30	30	30	30
Ethylbenzene	-11.7 9.6	0.8	-0.4	-5.8	2.7	4.9	50 30	30	30	30	30	30

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136864-2 Analy Batch No.: 395211

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 19:29 Calibration End Date: 07/10/2023 21:40 Calibration ID: 51835

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
m&p-Xylene	-9.3 10.4	-3.8	-1.9	-4.9	3.9	5.6	50 30	30	30	30	30	30
o-Xylene	-7.4 8.8	0.4	-3.0	-6.2	2.2	5.2	50 30	30	30	30	30	30
Styrene	-23.9 18.3	-9.2	-4.5	-2.4	8.8	12.8	50 30	30	30	30	30	30
Bromoform	-13.1 10.4	-4.5	-1.3	-3.6	3.6	8.5	50 30	30	30	30	30	30
Isopropylbenzene	-10.8 8.0	1.3	-1.4	-5.8	3.0	5.7	50 30	30	30	30	30	30
Bromobenzene	-10.5 5.3	1.2	-1.7	-3.5	4.8	4.4	50 30	30	30	30	30	30
1,1,2,2-Tetrachloroethane	-10.0 3.3	0.9	-0.1	-1.8	4.6	3.1	50 30	30	30	30	30	30
trans-1,4-Dichloro-2-butene	-32.1 18.2	-9.0	-7.0	1.8	13.1	15.0	50 30	30	30	30	30	30
1,2,3-Trichloropropane	-3.3 2.4	0.0	-2.3	-4.1	5.4	1.9	50 30	30	30	30	30	30
N-Propylbenzene	-3.4 4.1	-0.8	-3.3	-7.9	5.0	6.1	50 30	30	30	30	30	30
2-Chlorotoluene	-8.3 5.9	-2.8	1.3	-4.5	4.0	4.5	50 30	30	30	30	30	30
1,3,5-Trimethylbenzene	-5.9 7.4	-0.8	-4.3	-6.4	4.2	5.7	50 30	30	30	30	30	30
4-Chlorotoluene	-11.8 9.5	-8.3	1.3	-3.1	4.9	7.4	50 30	30	30	30	30	30
tert-Butylbenzene	-9.8 8.0	1.0	-2.3	-5.7	4.5	4.3	50 30	30	30	30	30	30
Pentachloroethane	-21.4 10.6	-3.8	-4.2	0.1	9.8	8.9	50 30	30	30	30	30	30
1,2,4-Trimethylbenzene	-11.5 10.1	-4.6	-3.5	-4.4	5.7	8.2	50 30	30	30	30	30	30
sec-Butylbenzene	-5.2 6.7	-3.7	-1.8	-6.6	4.7	5.9	50 30	30	30	30	30	30
1,3-Dichlorobenzene	-8.2 8.7	-2.7	-4.1	-4.4	4.8	5.9	50 30	30	30	30	30	30
p-Isopropyltoluene	-14.5 9.5	-3.1	-1.4	-5.6	7.0	8.2	50 30	30	30	30	30	30

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136864-2 Analy Batch No.: 395211

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 19:29 Calibration End Date: 07/10/2023 21:40 Calibration ID: 51835

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
1,4-Dichlorobenzene	-1.2 3.9	-0.7	-0.6	-4.2	1.3	1.5	50 30	30	30	30	30	30
1,2,3-Trimethylbenzene	-4.6 7.8	-4.2	-4.5	-4.5	5.6	4.4	50 30	30	30	30	30	30
Benzyl chloride	+++++ 18.0	-24.2	-11.6	-5.5	9.9	13.4	 30	50	30	30	30	30
n-Butylbenzene	-16.7 14.8	-6.8	-5.8	-4.7	8.7	10.5	50 30	30	30	30	30	30
1,2-Dichlorobenzene	-12.1 7.6	-1.6	-0.3	-4.5	4.5	6.4	50 30	30	30	30	30	30
1,2-Dibromo-3-Chloropropane	-28.6 19.6	-18.9	-12.2	4.7	17.1	18.2	50 30	30	30	30	30	30
1,3,5-Trichlorobenzene	-12.7 8.2	-1.4	-3.7	-5.6	7.4	7.8	50 30	30	30	30	30	30
1,2,4-Trichlorobenzene	-27.2 16.2	-7.4	-2.7	-4.5	9.3	16.3	50 30	30	30	30	30	30
Hexachlorobutadiene	-7.3 6.5	-0.5	-0.1	-7.1	3.7	4.7	50 30	30	30	30	30	30
Naphthalene	+++++ 14.9	-19.0	-15.5	-6.3	10.3	15.7	 30	50	30	30	30	30
1,2,3-Trichlorobenzene	-28.9 18.9	-15.7	-6.2	-1.5	11.8	21.6	50 30	30	30	30	30	30
Dibromofluoromethane (Surr)	0.2 -0.9	0.6	-0.8	0.5	0.3	0.0	50 30	30	30	30	30	30
1,2-Dichloroethane-d4 (Surr)	3.4 -3.6	0.8	0.0	1.0	2.3	-3.8	50 30	30	30	30	30	30
Toluene-d8 (Surr)	0.4 0.8	0.4	0.3	-0.1	-0.9	-0.9	50 30	30	30	30	30	30
4-Bromofluorobenzene (Surr)	-2.4 1.6	-0.4	-0.3	-0.2	0.3	1.4	50 30	30	30	30	30	30

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X12.D
Lims ID: IC std1 0.2
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 10-Jul-2023 19:29:30 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0088548-013
Misc. Info.: IC STD1 0.2
Operator ID: knk41612 Instrument ID: 10193
Sublist: chrom-MSV_10193_25mL*sub1

Method: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 11-Jul-2023 21:37:56 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1649

First Level Reviewer: DVW2 Date: 11-Jul-2023 08:35:14

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.696	1.684	0.012	32	11821	0.2000	0.1991	M
5 Chloromethane	50	1.843	1.849	-0.006	98	16054	0.2000	0.2135	
6 Vinyl chloride	62	1.946	1.934	0.012	81	14215	0.2000	0.1980	
7 Butadiene	39	1.946	1.940	0.006	90	13844	0.2000	0.1991	M
9 Bromomethane	94	2.215	2.209	0.006	87	11889	0.2000	0.2118	M
10 Chloroethane	64	2.276	2.270	0.006	98	8514	0.2000	0.2015	
11 Dichlorofluoromethane	67	2.483	2.471	0.012	97	23201	0.2000	0.2024	
13 Pentane	43	2.538	2.526	0.012	95	15170	0.2000	0.1856	
12 Trichlorofluoromethane	101	2.538	2.532	0.006	54	14916	0.2000	0.1840	
14 Ethyl ether	59	2.715	2.702	0.013	83	9113	0.2000	0.1973	
16 1,2-Dichloro-1,1,2-trifluoroetha	67	2.800	2.788	0.012	41	13705	0.2000	0.2154	M
17 Acrolein	56	2.867	2.843	0.024	98	63076	10.0	10.6	
18 1,1-Dichloroethene	96	2.964	2.952	0.012	95	11468	0.2000	0.2184	
20 Acetone	43	2.995	2.977	0.018	99	20869	2.00	2.75	
21 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.001	3.001	0.000	87	9907	0.2000	0.1912	
22 Iodomethane	142	3.117	3.117	0.000	98	22324	0.2000	0.1980	
24 Isopropyl alcohol	45	3.141	3.117	0.024	46	13158	4.00	4.85	M
23 Ethyl bromide	108	3.147	3.135	0.012	94	9881	0.1998	0.1928	M
25 Carbon disulfide	76	3.214	3.202	0.012	97	36742	0.2000	0.1978	M
26 Methyl acetate	43	3.342	3.324	0.018	26	5490	0.2000	0.2295	M
29 3-Chloro-1-propene	41	3.355	3.336	0.019	88	16623	0.2000	0.1795	
30 Methylene Chloride	84	3.501	3.495	0.006	91	14224	0.2000	0.2167	M
* 31 t-Butyl alcohol-d10 (IS)	65	3.550	3.538	0.012	94	159799	50.0	50.0	M
32 2-Methyl-2-propanol	59	3.684	3.653	0.031	57	17229	4.00	5.14	
33 Acrylonitrile	53	3.836	3.788	0.048	25	5083	0.5000	0.4763	
35 trans-1,2-Dichloroethene	96	3.855	3.830	0.025	98	12811	0.2000	0.2010	
34 Methyl tert-butyl ether	73	3.824	3.830	-0.006	86	33374	0.2000	0.1976	
36 Hexane	57	4.214	4.208	0.006	93	14683	0.2000	0.1807	
37 1,1-Dichloroethane	63	4.446	4.446	0.000	95	21055	0.2000	0.1883	M
39 Isopropyl ether	45	4.531	4.513	0.018	98	39288	0.2000	0.1866	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
40 2-Chloro-1,3-butadiene	53	4.574	4.562	0.012	89	16240	0.2000	0.1898	M
41 Tert-butyl ethyl ether	59	5.080	5.074	0.006	99	36032	0.2000	0.1850	M
42 2-Butanone (MEK)	43	5.397	5.281	0.116	20	27785	2.00	1.87	a
43 cis-1,2-Dichloroethene	96	5.330	5.312	0.018	83	12203	0.2000	0.1785	
44 2,2-Dichloropropane	77	5.330	5.324	0.006	62	19395	0.2000	0.2172	M
45 Propionitrile	54	5.562	5.385	0.177	48	8640	4.00	2.61	M
47 Methacrylonitrile	67	5.653	5.592	0.061	83	27592	2.00	1.76	
49 Tetrahydrofuran	71	5.720	5.653	0.067	21	3689	1.00	0.8459	M
48 Chlorobromomethane	128	5.671	5.653	0.018	91	6001	0.2000	0.1827	
50 Chloroform	83	5.824	5.818	0.006	91	22763	0.2000	0.2057	
53 1,1,1-Trichloroethane	97	6.049	6.037	0.012	28	18185	0.2000	0.1953	M
$ 54 Dibromofluoromethane (Surr)	113	6.043	6.037	0.006	94	565787	10.0	10.0	
55 Cyclohexane	56	6.128	6.123	0.006	89	19318	0.2000	0.1847	
S 52 1,2-Dichloroethene, Total	100				0			0.3795	
56 Carbon tetrachloride	117	6.250	6.244	0.006	81	15543	0.2000	0.1926	
57 1,1-Dichloropropene	75	6.263	6.257	0.006	96	16888	0.2000	0.2023	
58 Isobutyl alcohol	41	6.500	6.482	0.018	14	1381	10.0	21.4	
$ 59 1,2-Dichloroethane-d4 (Surr)	102	6.500	6.507	-0.007	99	123369	10.0	10.3	
60 Benzene	78	6.525	6.525	0.000	92	51338	0.2000	0.1926	
61 1,2-Dichloroethane	62	6.610	6.598	0.012	94	14153	0.2000	0.2082	
64 Tert-amyl methyl ether	73	6.732	6.738	-0.006	99	34827	0.2000	0.1914	
* 65 Fluorobenzene (IS)	96	6.952	6.952	0.000	99	2414017	10.0	10.0	
66 n-Heptane	43	6.964	6.964	0.000	36	16720	0.2000	0.1902	
67 n-Butanol	56		7.409				ND	ND	
68 Trichloroethene	95	7.451	7.439	0.012	95	13043	0.2000	0.1906	a
69 Methylcyclohexane	83	7.738	7.738	0.000	86	20017	0.2000	0.1804	
70 1,2-Dichloropropane	63	7.775	7.775	-0.001	81	13293	0.2000	0.1892	
71 2-ethoxy-2-methyl butane	87	7.817	7.811	0.006	91	19468	0.2000	0.1784	
72 Dibromomethane	93	7.903	7.890	0.013	90	6418	0.2000	0.1964	
74 1,4-Dioxane	88	7.957	7.890	0.067	1	1206	10.0	4.68	M
73 Methyl methacrylate	69	7.927	7.897	0.030	38	5037	0.2000	0.1644	M
76 Dichlorobromomethane	83	8.152	8.140	0.012	97	14960	0.2000	0.1843	
77 2-Nitropropane	41	8.433	8.427	0.006	96	7819	1.00	0.9385	M
78 1-Bromo-2-chloroethane	63	8.555	8.531	0.024	97	13791	0.2000	0.1937	M
80 cis-1,3-Dichloropropene	75	8.744	8.720	0.024	95	15014	0.2000	0.1496	
82 4-Methyl-2-pentanone (MIBK)	43	8.939	8.927	0.012	97	67927	2.00	1.61	
$ 83 Toluene-d8 (Surr)	98	9.055	9.055	0.000	93	2472076	10.0	10.0	
84 Toluene	92	9.152	9.140	0.012	97	33741	0.2000	0.1922	
85 trans-1,3-Dichloropropene	75	9.494	9.457	0.037	91	13236	0.2000	0.1613	M
86 Ethyl methacrylate	69	9.561	9.543	0.018	90	9013	0.2000	0.1379	M
87 1,1,2-Trichloroethane	97	9.683	9.677	0.006	90	10190	0.2000	0.1958	
88 Tetrachloroethene	166	9.762	9.756	0.006	94	15916	0.2000	0.1884	
89 1,3-Dichloropropane	76	9.872	9.847	0.025	90	14268	0.2000	0.1712	
106 2-Hexanone	43	9.963	9.927	0.036	93	31916	2.00	1.11	M
S 107 1,3-Dichloropropene, Total	100				0			0.3110	
108 Chlorodibromomethane	129	10.091	10.079	0.012	90	11174	0.2000	0.1752	
110 Ethylene Dibromide	107	10.207	10.189	0.018	99	7667	0.2000	0.1644	
* 111 Chlorobenzene-d5 (IS)	117	10.658	10.658	0.000	84	1874080	10.0	10.0	
113 Chlorobenzene	112	10.689	10.683	0.006	96	42190	0.2000	0.1985	
112 1-Chlorohexane	91	10.689	10.683	0.006	58	20445	0.2000	0.2149	
114 1,1,1,2-Tetrachloroethane	131	10.780	10.780	0.000	88	13023	0.2000	0.1838	
115 Ethylbenzene	91	10.792	10.786	0.006	98	59492	0.2000	0.1765	a

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
116 m-Xylene & p-Xylene	106	10.914	10.908	0.006	97	49049	0.4000	0.3629	
S 117 Xylenes, Total	106				0			0.5480	
118 o-Xylene	106	11.262	11.256	0.006	96	25108	0.2000	0.1852	
119 Styrene	104	11.292	11.274	0.018	92	32058	0.2000	0.1521	
120 Bromoform	173	11.438	11.426	0.012	96	7055	0.2000	0.1739	
121 Isopropylbenzene	105	11.573	11.573	0.000	95	60960	0.2000	0.1784	
$ 124 4-Bromofluorobenzene (Surr)	95	11.719	11.719	0.000	96	859932	10.0	9.76	
125 Bromobenzene	156	11.841	11.829	0.012	86	16465	0.2000	0.1790	
126 1,1,2,2-Tetrachloroethane	83	11.847	11.835	0.012	74	11933	0.2000	0.1801	M
127 trans-1,4-Dichloro-2-butene	53	11.883	11.859	0.024	82	19758	2.00	1.36	M
128 1,2,3-Trichloropropane	110	11.890	11.877	0.013	77	3288	0.2000	0.1933	
129 N-Propylbenzene	91	11.920	11.914	0.006	99	77828	0.2000	0.1933	
130 2-Chlorotoluene	126	11.993	11.987	0.006	98	16081	0.2000	0.1833	
131 1,3,5-Trimethylbenzene	105	12.060	12.060	0.000	94	56210	0.2000	0.1882	
132 4-Chlorotoluene	126	12.097	12.085	0.012	96	15700	0.2000	0.1763	
133 tert-Butylbenzene	134	12.304	12.304	0.000	93	12650	0.2000	0.1804	
134 Pentachloroethane	167	12.335	12.329	0.006	79	8733	0.2000	0.1572	
135 1,2,4-Trimethylbenzene	105	12.359	12.347	0.012	95	54305	0.2000	0.1771	
136 sec-Butylbenzene	105	12.475	12.469	0.006	93	72062	0.2000	0.1895	
137 1,3-Dichlorobenzene	146	12.578	12.566	0.012	96	33538	0.2000	0.1835	
138 4-Isopropyltoluene	119	12.585	12.585	0.000	97	57610	0.2000	0.1710	
* 139 1,4-Dichlorobenzene-d4	152	12.627	12.627	0.000	93	1118395	10.0	10.0	
140 1,4-Dichlorobenzene	146	12.646	12.640	0.006	91	37188	0.2000	0.1976	
141 1,2,3-Trimethylbenzene	120	12.664	12.658	0.006	94	27998	0.2000	0.1908	
142 Benzyl chloride	126	12.749	12.725	0.024	96	2594	0.2000	0.0983	
145 p-Diethylbenzene	119	12.871	12.865	0.006	93	36554	0.2000	0.1706	M
143 n-Butylbenzene	92	12.889	12.883	0.006	97	26355	0.2000	0.1666	
144 1,2-Dichlorobenzene	146	12.920	12.908	0.012	99	30335	0.2000	0.1759	
148 1,2-Dibromo-3-Chloropropane	155	13.487	13.469	0.018	1	1193	0.2000	0.1428	
149 1,3,5-Trichlorobenzene	180	13.609	13.591	0.018	98	24730	0.2000	0.1746	
150 1,2,4-Trichlorobenzene	180	14.042	14.023	0.019	88	15630	0.2000	0.1457	
151 Hexachlorobutadiene	225	14.109	14.103	0.006	94	11175	0.2000	0.1854	
152 Naphthalene	128	14.224	14.200	0.024	95	22074	0.2000	0.1260	
153 1,2,3-Trichlorobenzene	180	14.365	14.347	0.019	96	11558	0.2000	0.1422	
154 2-Methylnaphthalene	142	15.011	14.944	0.067	1	3310	0.2000	0.0803	M

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_LL_#1_826_00084	Amount Added:	2.00	Units: uL	
MSV_LL_#2_826_00095	Amount Added:	2.00	Units: uL	
MSV_LL_GAS826_00159	Amount Added:	2.00	Units: uL	
MSV_HP25_ISSS_00073	Amount Added:	1.00	Units: uL	Run Reagent

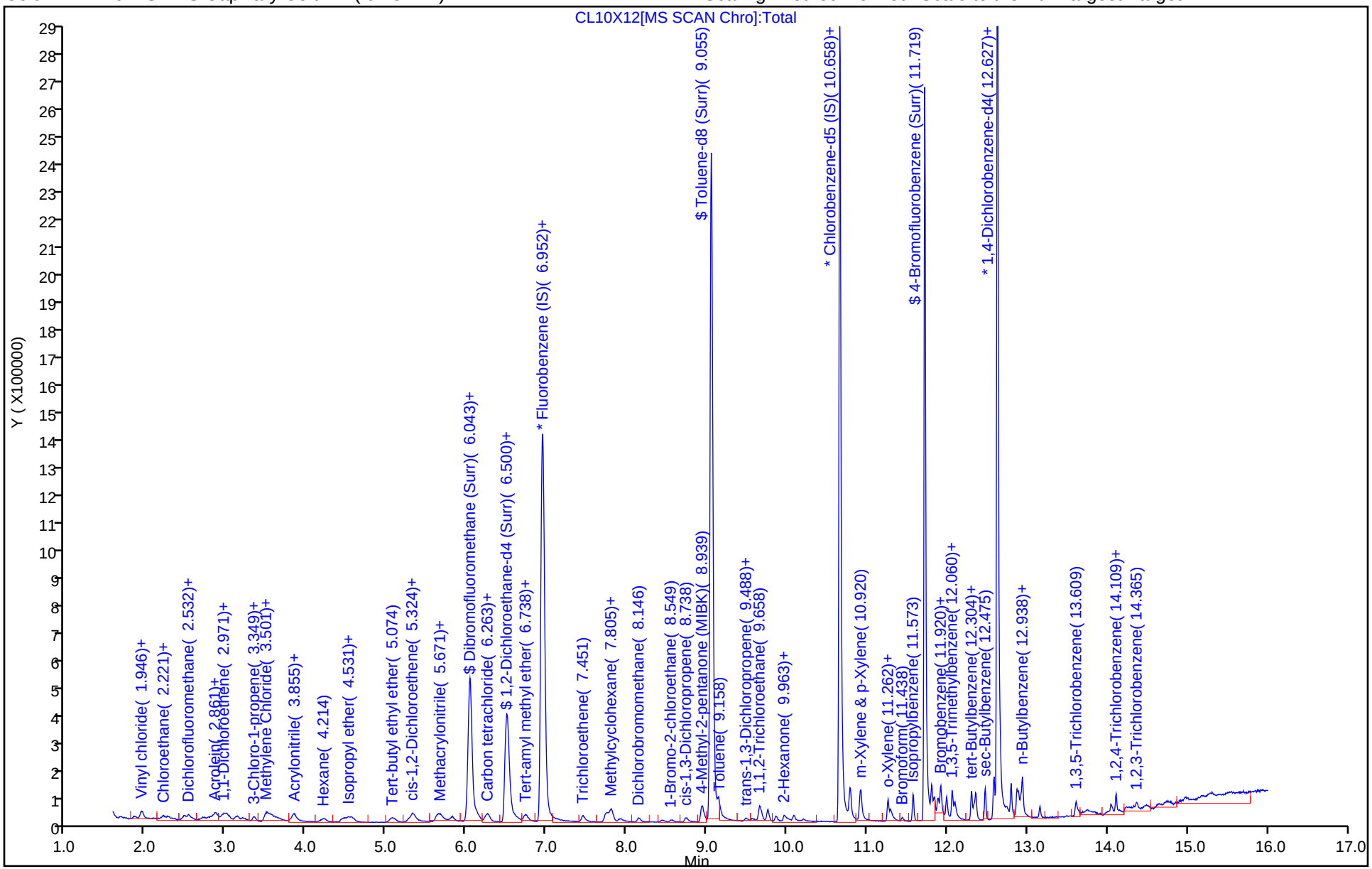
Report Date: 11-Jul-2023 21:37:57 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X12.D

Injection Date:	10-Jul-2023 19:29:30	Instrument ID:	10193	Operator ID:	knk41612
Lims ID:	IC std1 0.2			Worklist Smp#:	13
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

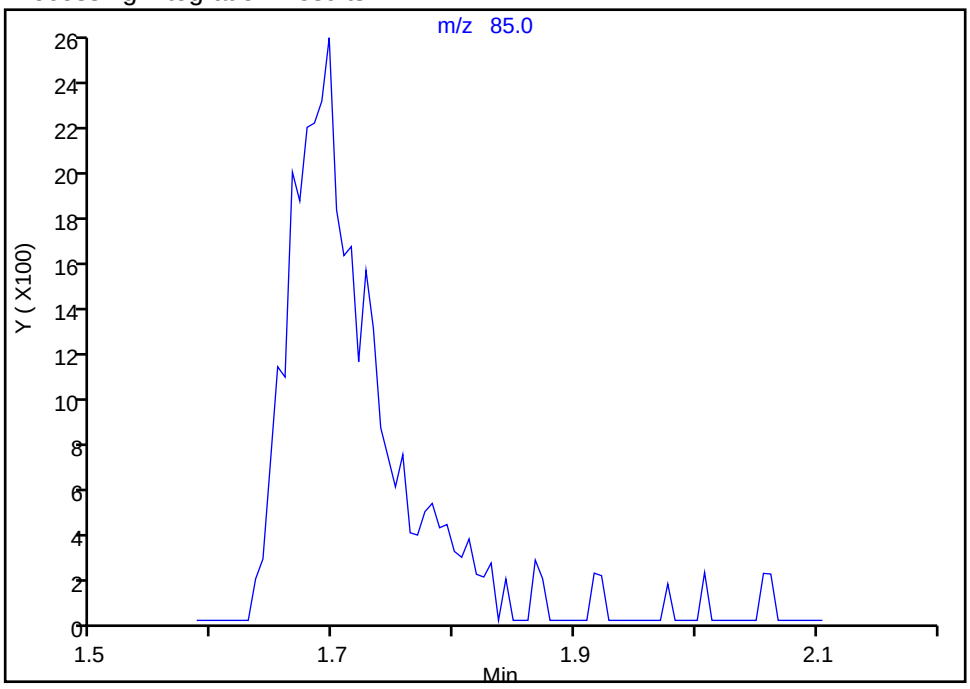
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X12.D				
Injection Date:	10-Jul-2023 19:29:30	Instrument ID:	10193		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

2 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

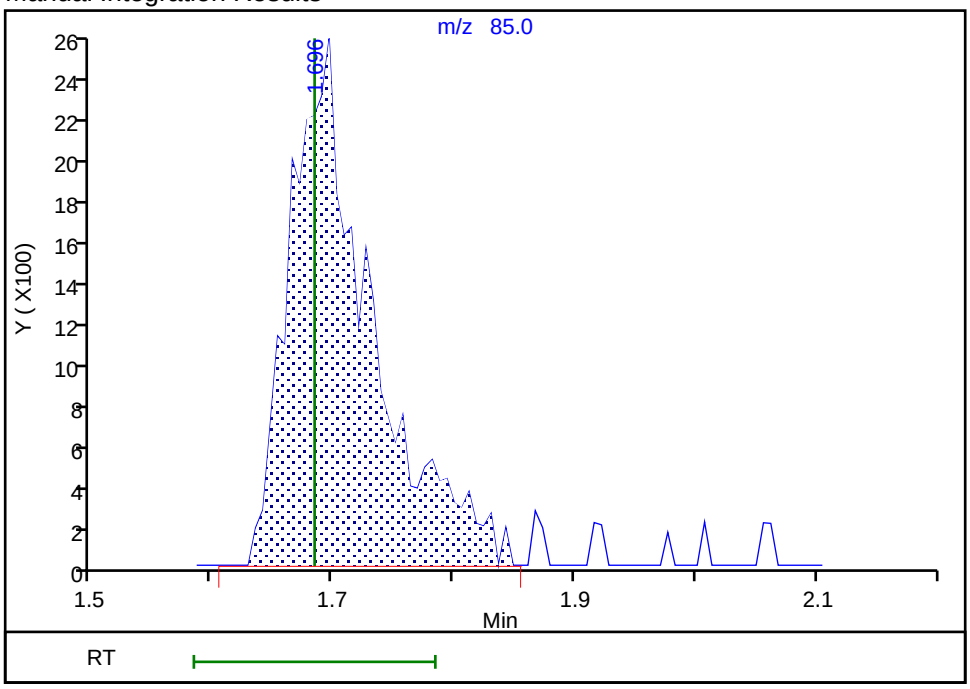
Not Detected
Expected RT: 1.68

Processing Integration Results



Manual Integration Results

RT: 1.70
Area: 11821
Amount: 0.199111
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:26:00 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

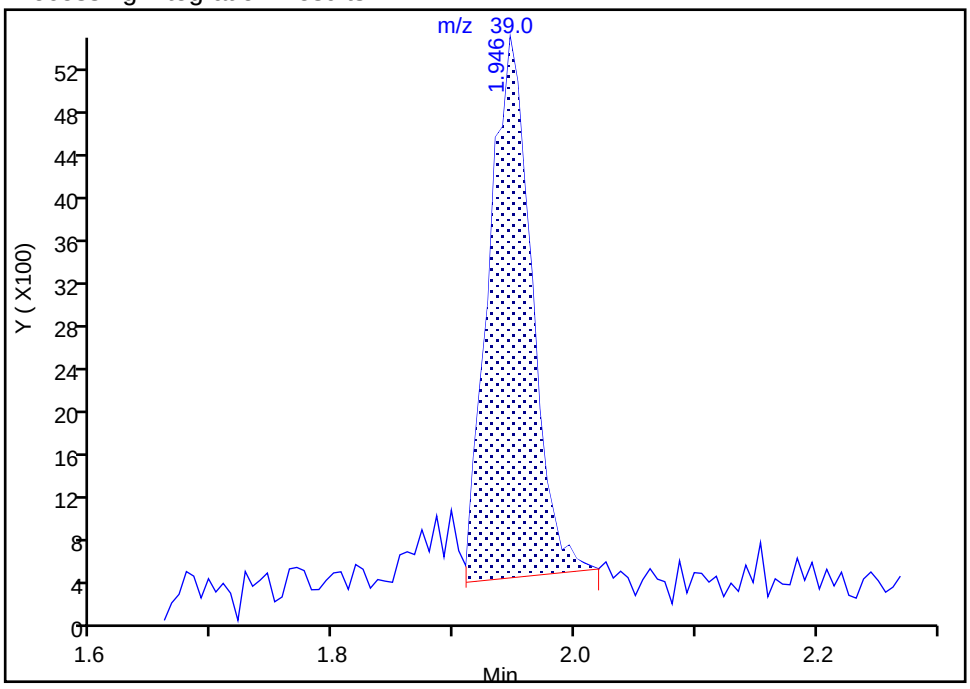
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X12.D				
Injection Date:	10-Jul-2023 19:29:30	Instrument ID:	10193		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

7 Butadiene, CAS: 106-99-0

Signal: 1

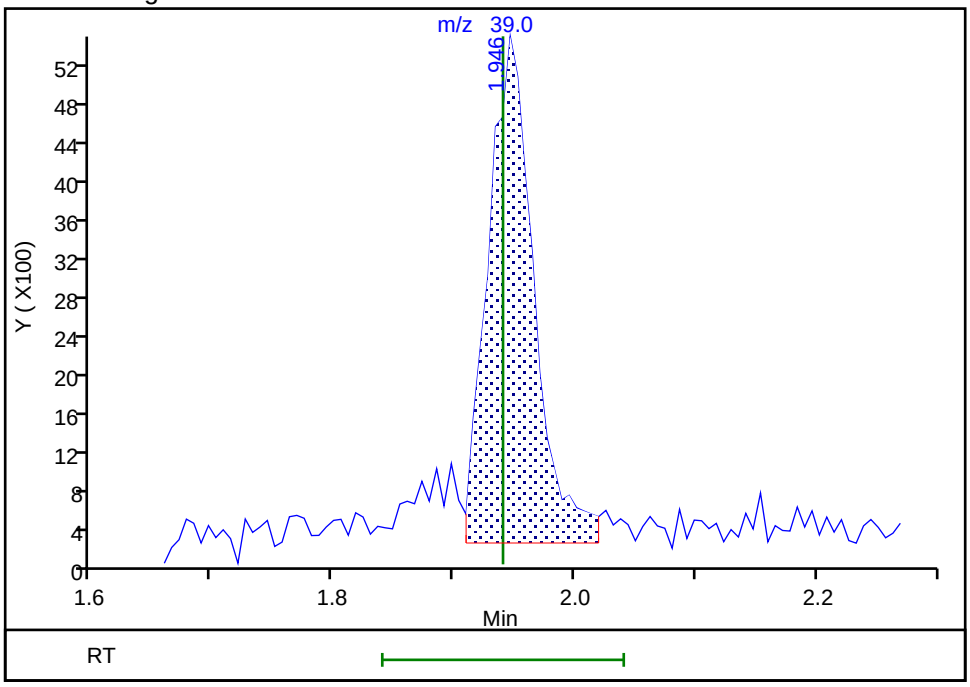
Processing Integration Results

RT: 1.95
Area: 12492
Amount: 0.182830
Amount Units: ug/l



Manual Integration Results

RT: 1.95
Area: 13844
Amount: 0.199088
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:26:11 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

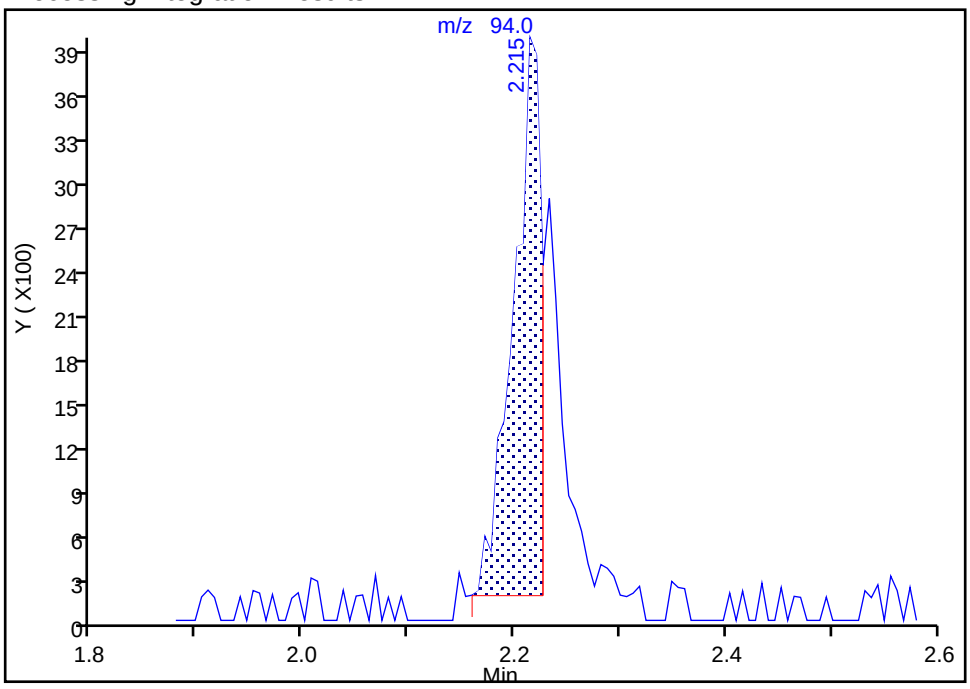
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X12.D				
Injection Date:	10-Jul-2023 19:29:30	Instrument ID:	10193		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

9 Bromomethane, CAS: 74-83-9

Signal: 1

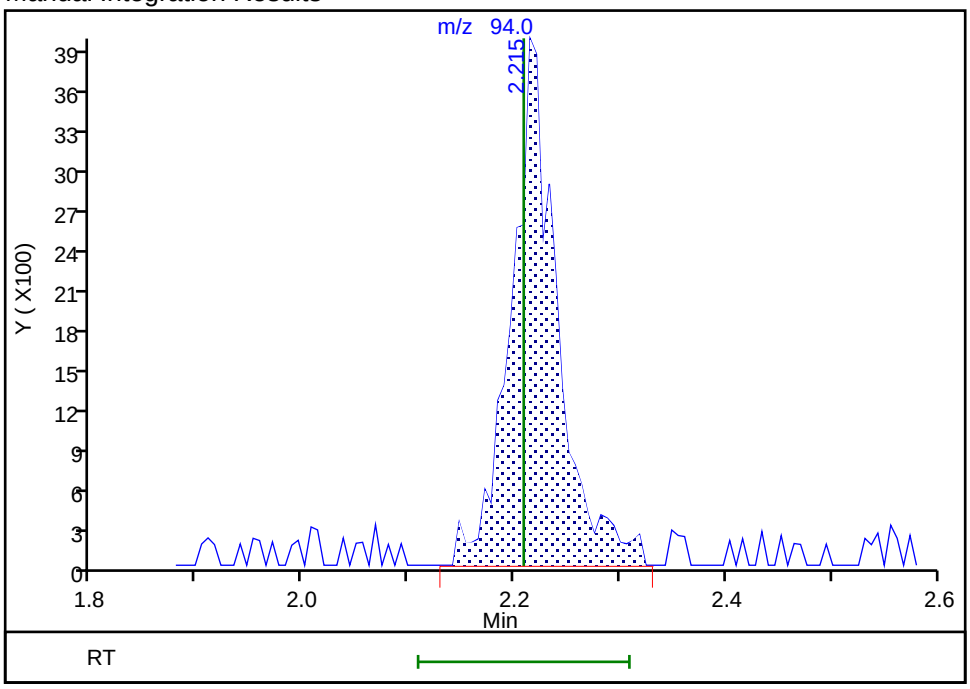
Processing Integration Results

RT: 2.21
Area: 6951
Amount: 0.132155
Amount Units: ug/l



Manual Integration Results

RT: 2.21
Area: 11889
Amount: 0.211833
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:26:18 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

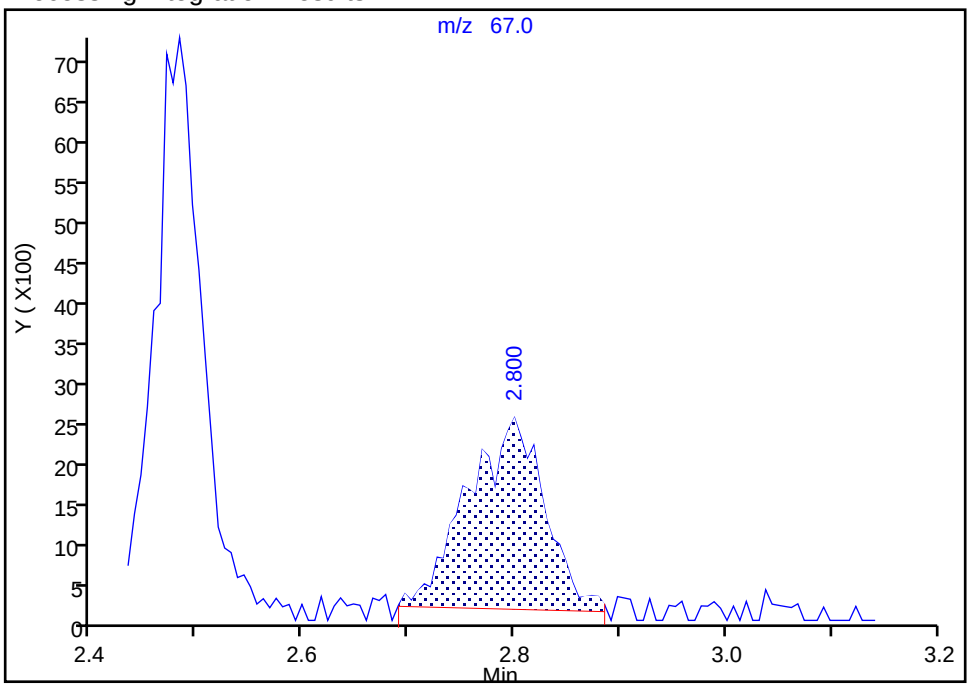
Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X12.D
Injection Date: 10-Jul-2023 19:29:30 Instrument ID: 10193
Lims ID: IC std1 0.2
Client ID:
Operator ID: knk41612 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

16 1,2-Dichloro-1,1,2-trifluoroetha, CAS: 354-23-4

Signal: 1

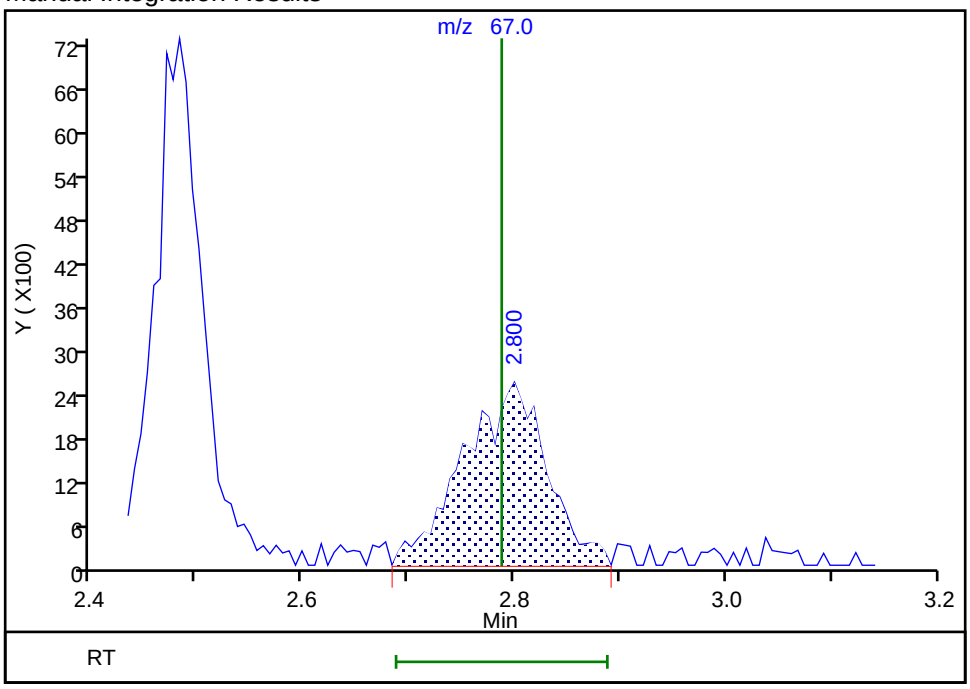
Processing Integration Results

RT: 2.80
Area: 11954
Amount: 0.191680
Amount Units: ug/l



Manual Integration Results

RT: 2.80
Area: 13705
Amount: 0.215436
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:26:38 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

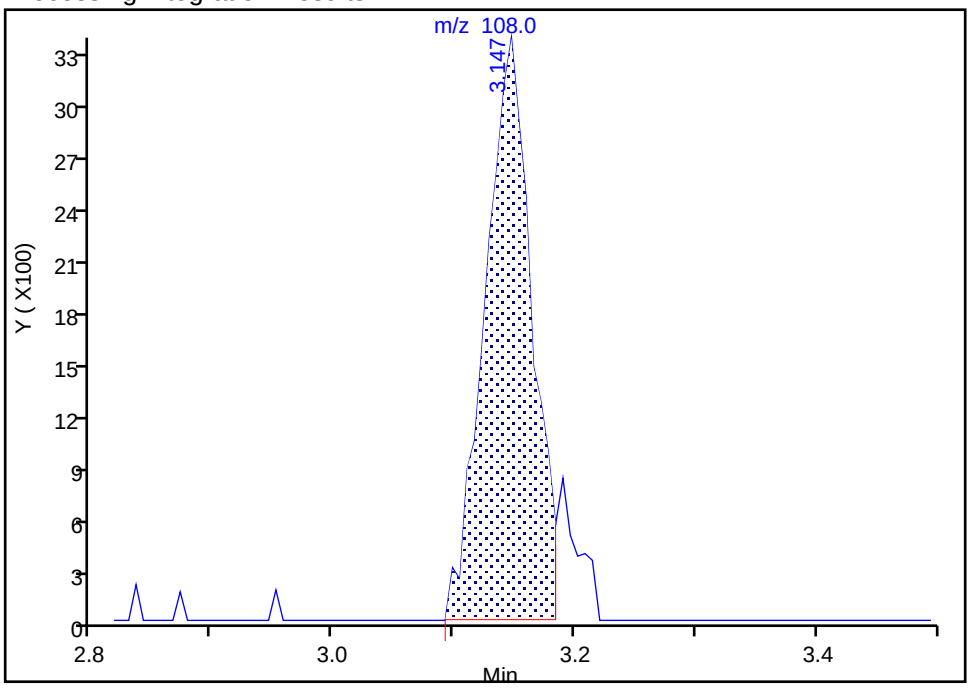
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X12.D				
Injection Date:	10-Jul-2023 19:29:30	Instrument ID:	10193		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

23 Ethyl bromide, CAS: 74-96-4

Signal: 1

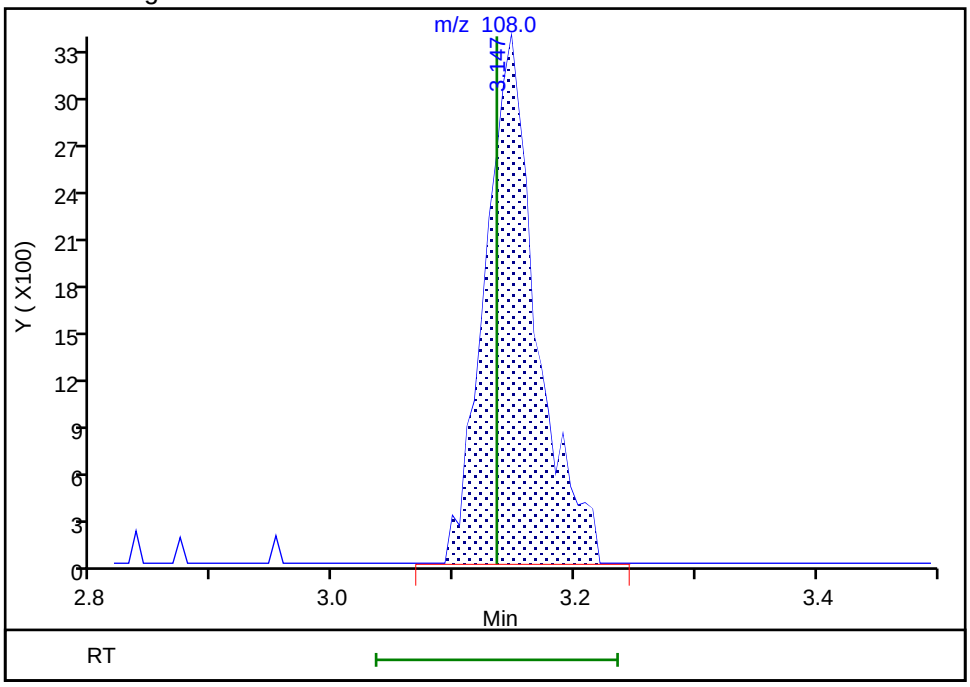
Processing Integration Results

RT: 3.15
Area: 9005
Amount: 0.177912
Amount Units: ug/l



Manual Integration Results

RT: 3.15
Area: 9881
Amount: 0.192833
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:26:52 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

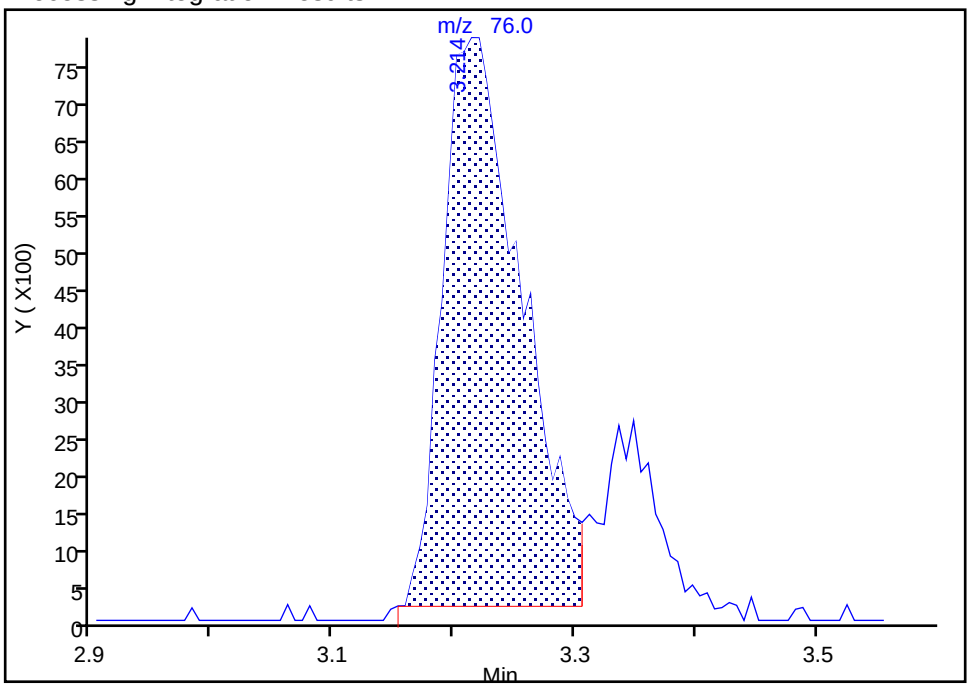
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X12.D				
Injection Date:	10-Jul-2023 19:29:30	Instrument ID:	10193		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

25 Carbon disulfide, CAS: 75-15-0

Signal: 1

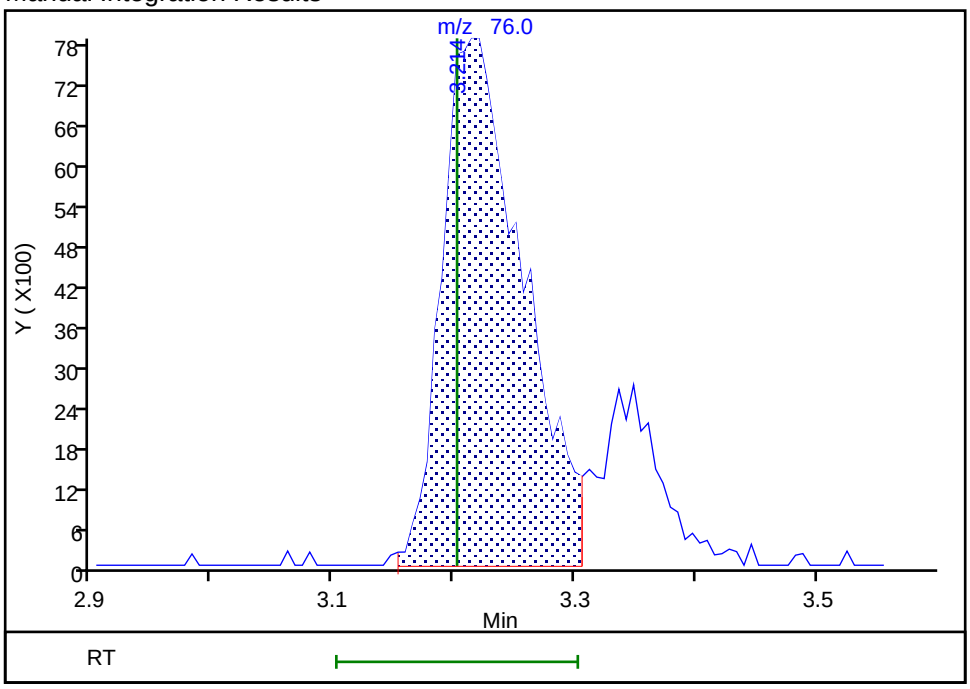
Processing Integration Results

RT: 3.21
Area: 34906
Amount: 0.189261
Amount Units: ug/l



Manual Integration Results

RT: 3.21
Area: 36742
Amount: 0.197809
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:27:01 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

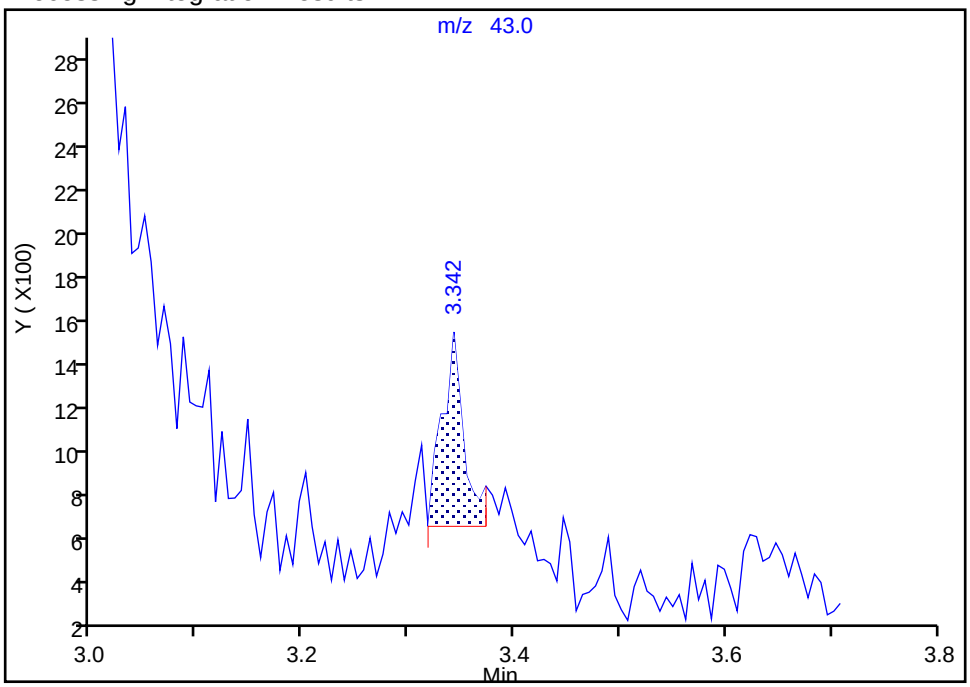
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X12.D				
Injection Date:	10-Jul-2023 19:29:30	Instrument ID:	10193		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

26 Methyl acetate, CAS: 79-20-9

Signal: 1

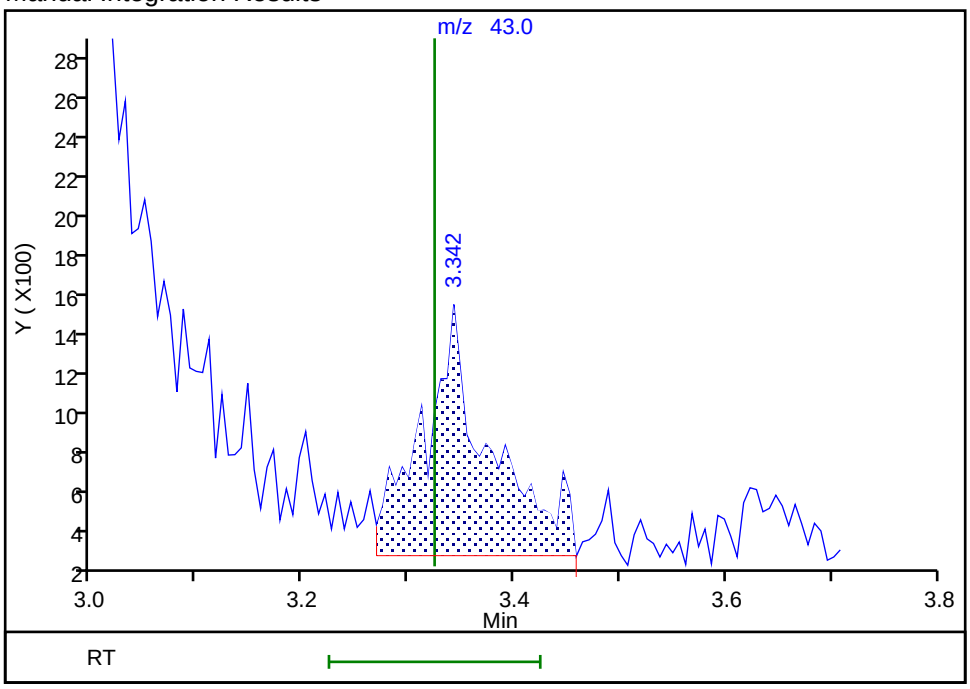
Processing Integration Results

RT: 3.34
Area: 1261
Amount: 0.056192
Amount Units: ug/l



Manual Integration Results

RT: 3.34
Area: 5490
Amount: 0.229527
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:27:19 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

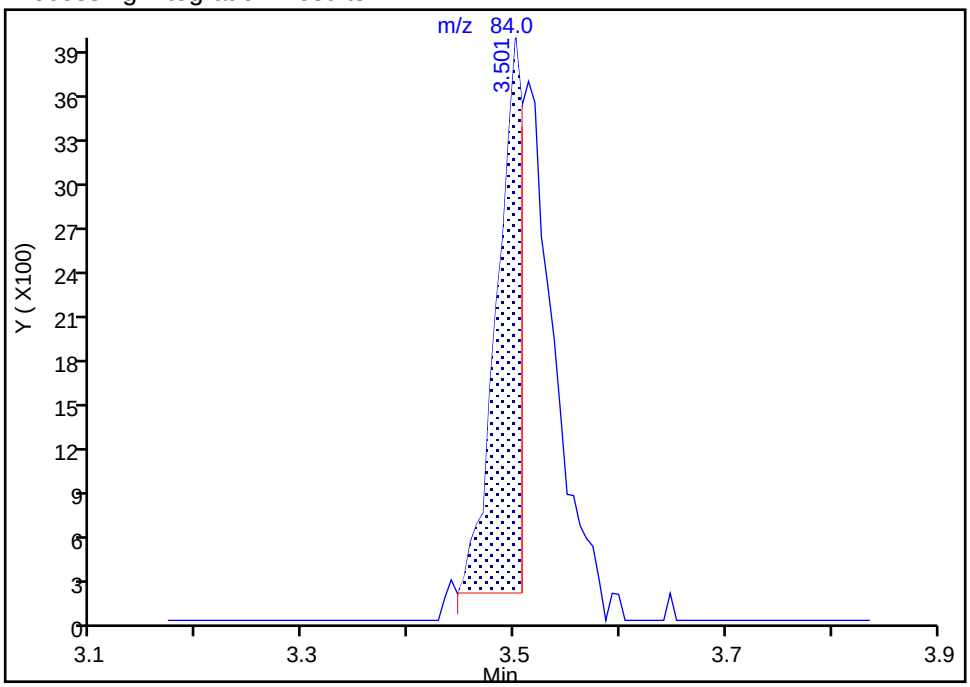
Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X12.D
Injection Date: 10-Jul-2023 19:29:30 Instrument ID: 10193
Lims ID: IC std1 0.2
Client ID:
Operator ID: knk41612 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

30 Methylene Chloride, CAS: 75-09-2

Signal: 1

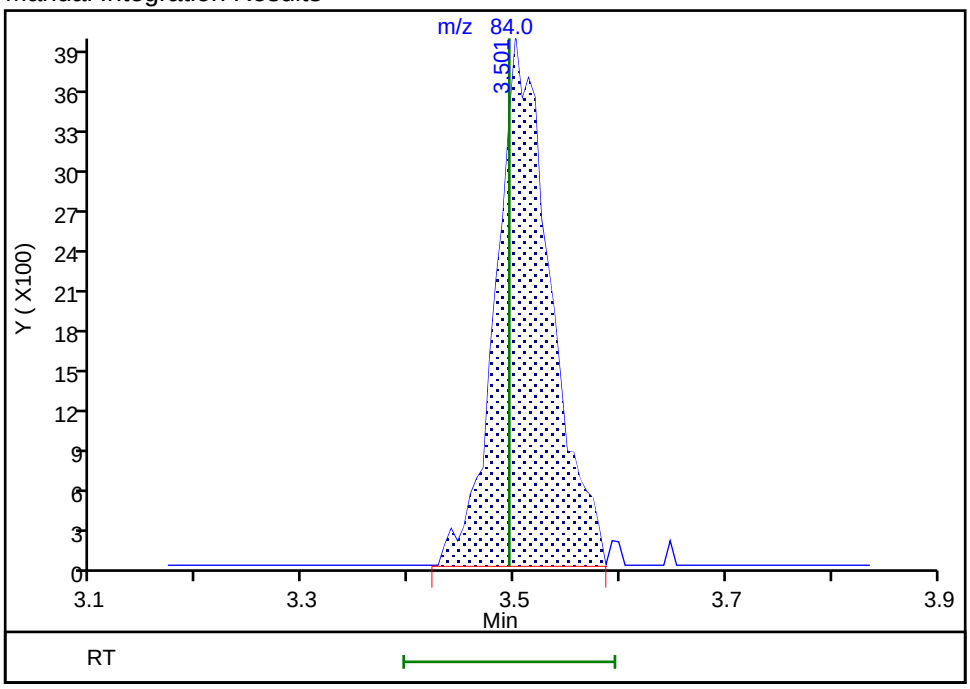
Processing Integration Results

RT: 3.50
Area: 6400
Amount: 0.113330
Amount Units: ug/l



Manual Integration Results

RT: 3.50
Area: 14224
Amount: 0.216692
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:27:26 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

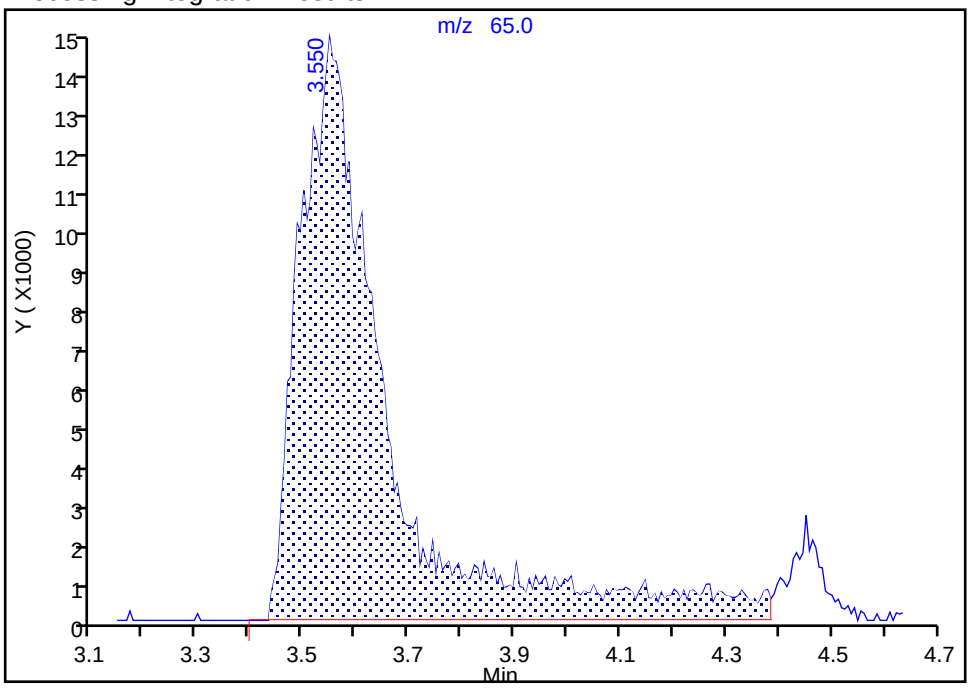
Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X12.D
Injection Date: 10-Jul-2023 19:29:30 Instrument ID: 10193
Lims ID: IC std1 0.2
Client ID:
Operator ID: knk41612 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 31 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

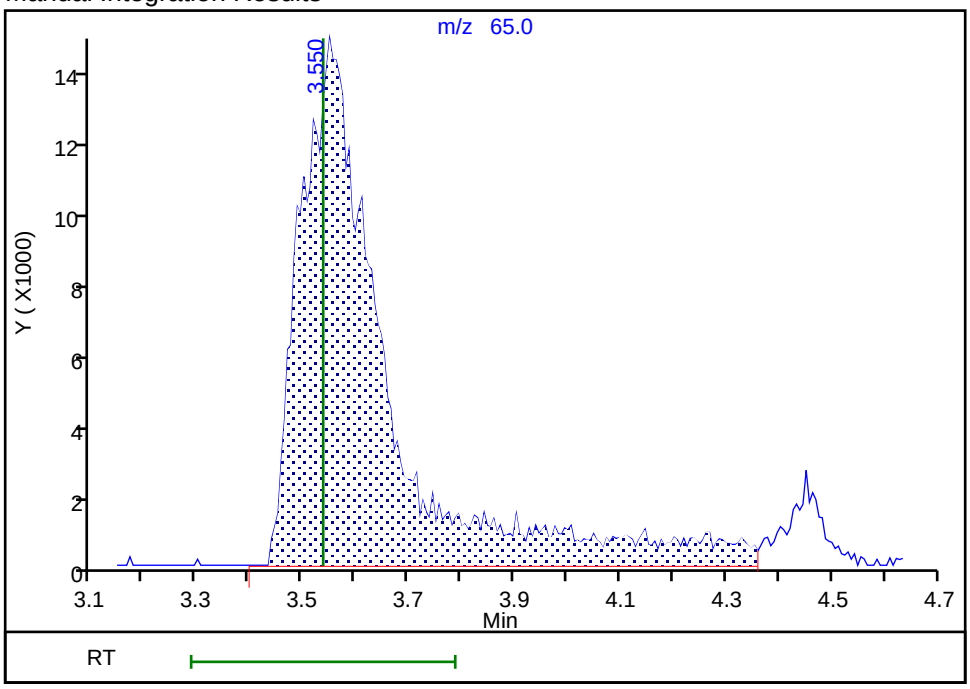
Processing Integration Results

RT: 3.55
Area: 160734
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 3.55
Area: 159799
Amount: 50.000000
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:45:46 -04:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

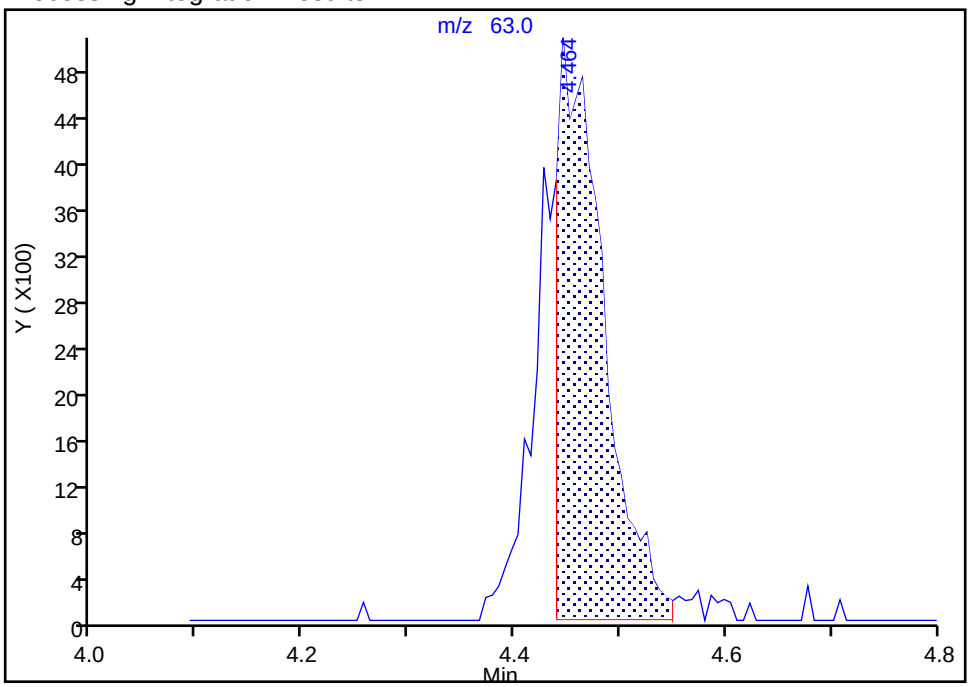
Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X12.D
Injection Date: 10-Jul-2023 19:29:30 Instrument ID: 10193
Lims ID: IC std1 0.2
Client ID:
Operator ID: knk41612 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

37 1,1-Dichloroethane, CAS: 75-34-3

Signal: 1

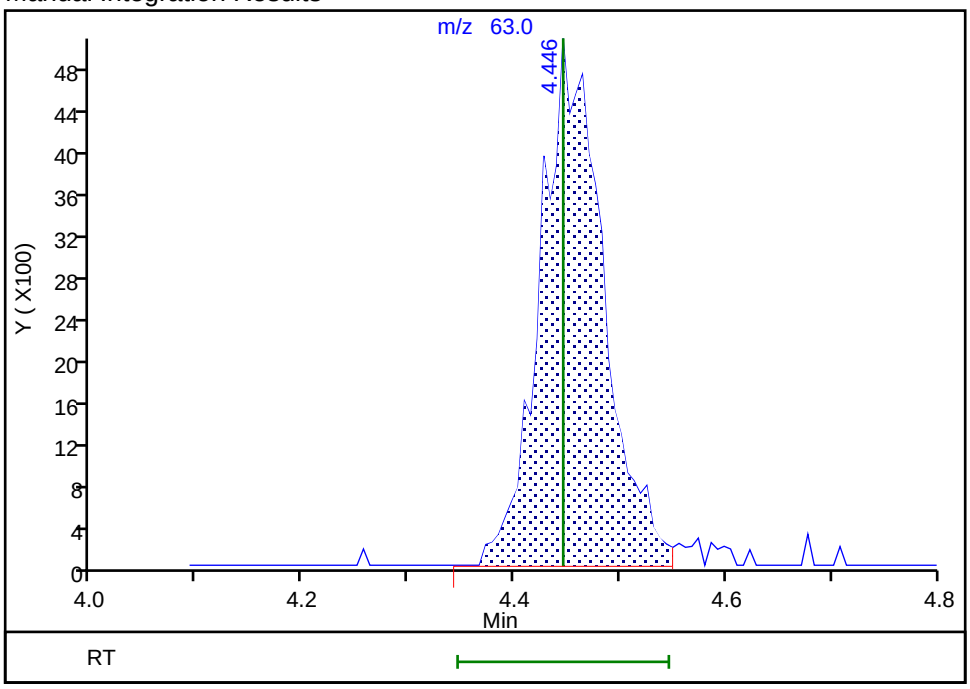
Processing Integration Results

RT: 4.46
Area: 15497
Amount: 0.143714
Amount Units: ug/l



Manual Integration Results

RT: 4.45
Area: 21055
Amount: 0.188324
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:28:05 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

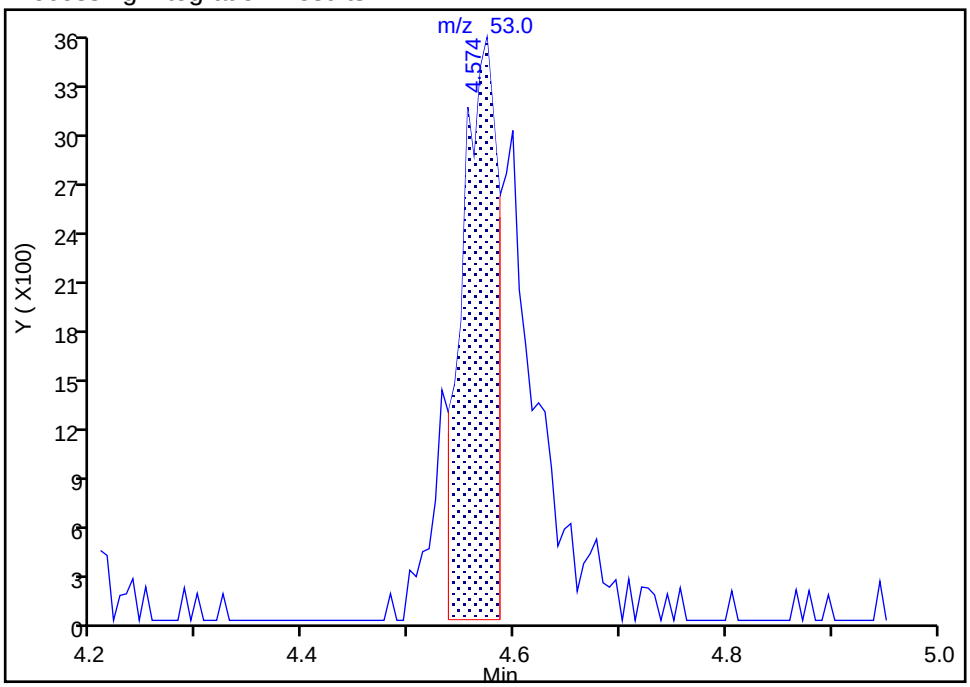
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X12.D				
Injection Date:	10-Jul-2023 19:29:30	Instrument ID:	10193		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

40 2-Chloro-1,3-butadiene, CAS: 126-99-8

Signal: 1

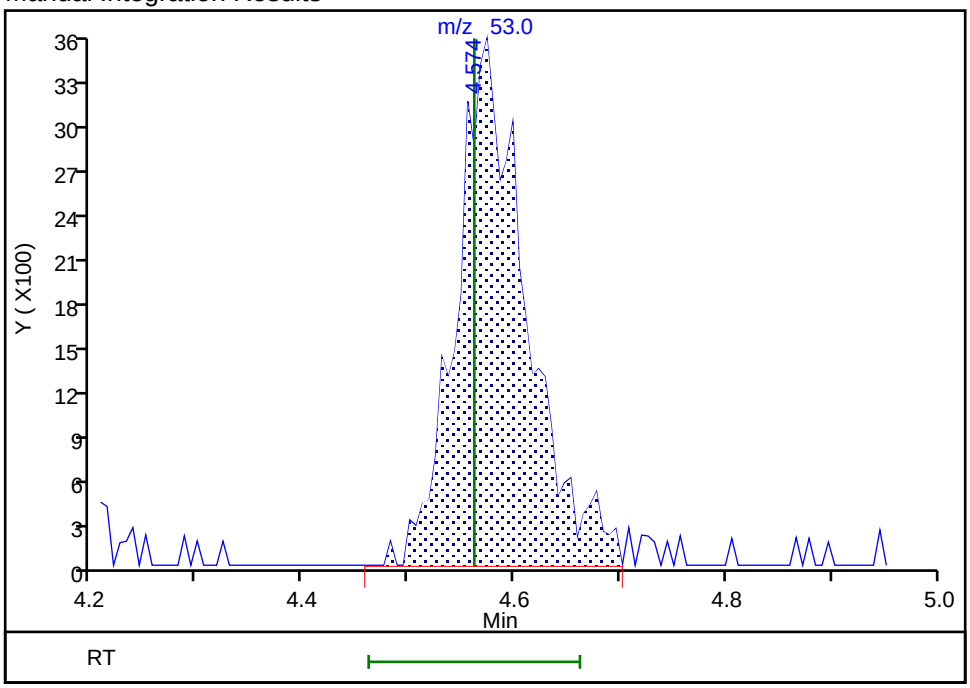
Processing Integration Results

RT: 4.57
Area: 8376
Amount: 0.205766
Amount Units: ug/l



Manual Integration Results

RT: 4.57
Area: 16240
Amount: 0.189810
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:28:11 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

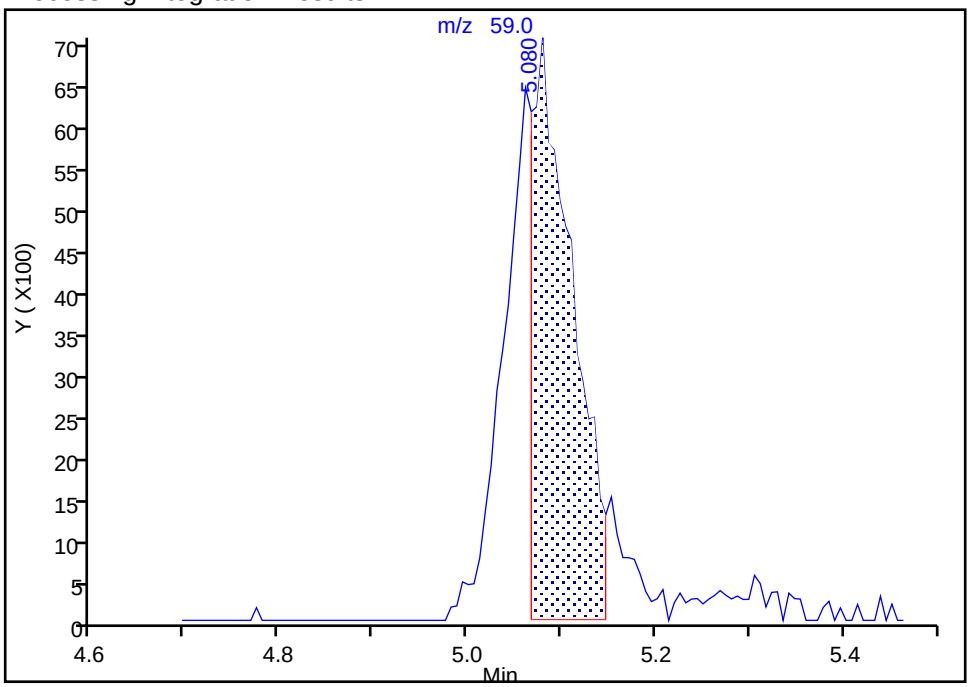
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X12.D				
Injection Date:	10-Jul-2023 19:29:30	Instrument ID:	10193		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

41 Tert-butyl ethyl ether, CAS: 637-92-3

Signal: 1

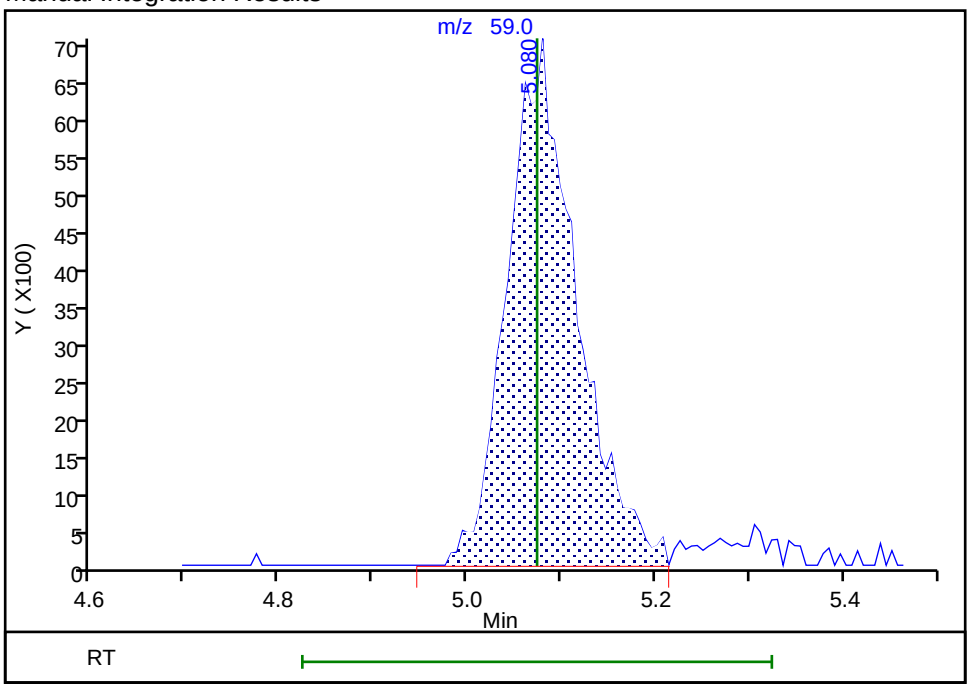
Processing Integration Results

RT: 5.08
Area: 21764
Amount: 0.117882
Amount Units: ug/l



Manual Integration Results

RT: 5.08
Area: 36032
Amount: 0.184953
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:28:16 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

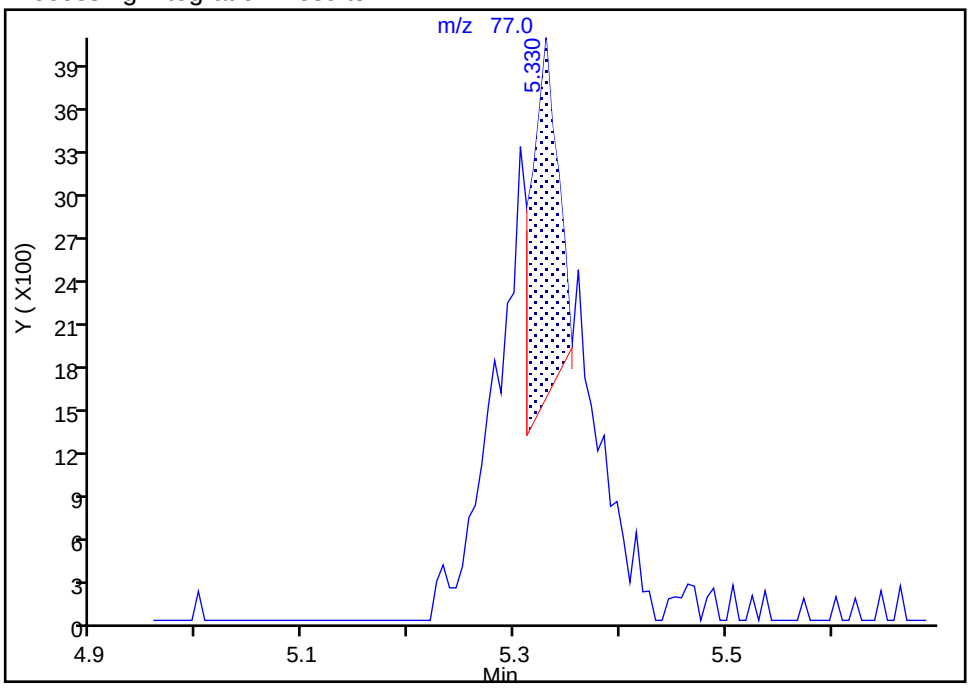
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X12.D				
Injection Date:	10-Jul-2023 19:29:30	Instrument ID:	10193		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

44 2,2-Dichloropropane, CAS: 594-20-7

Signal: 1

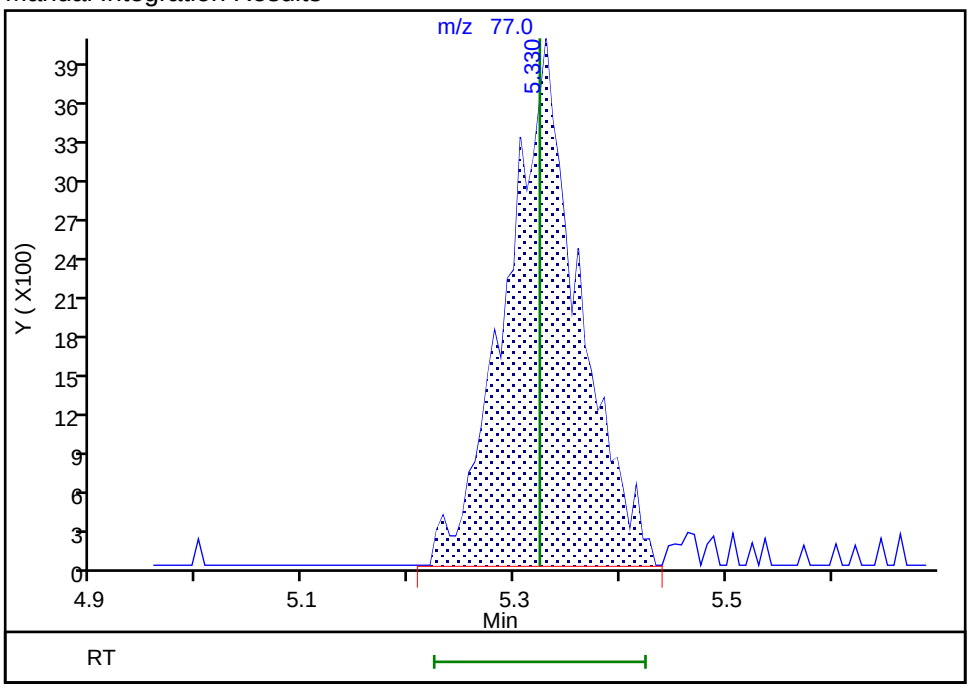
Processing Integration Results

RT: 5.33
Area: 4350
Amount: 0.261793
Amount Units: ug/l



Manual Integration Results

RT: 5.33
Area: 19395
Amount: 0.217237
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:28:26 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

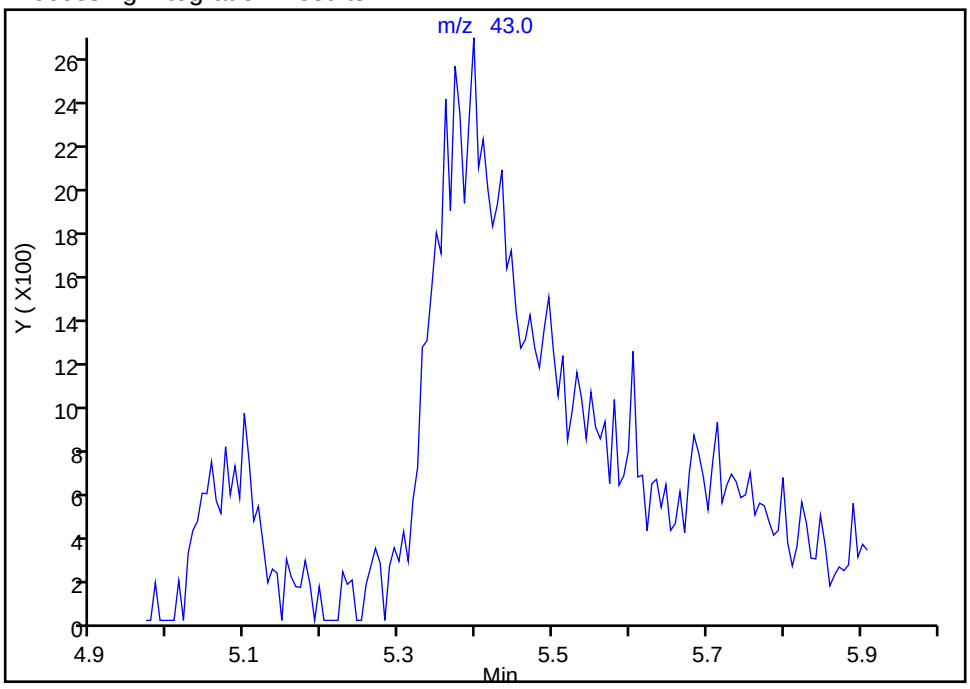
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X12.D				
Injection Date:	10-Jul-2023 19:29:30	Instrument ID:	10193		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

42 2-Butanone (MEK), CAS: 78-93-3

Signal: 1

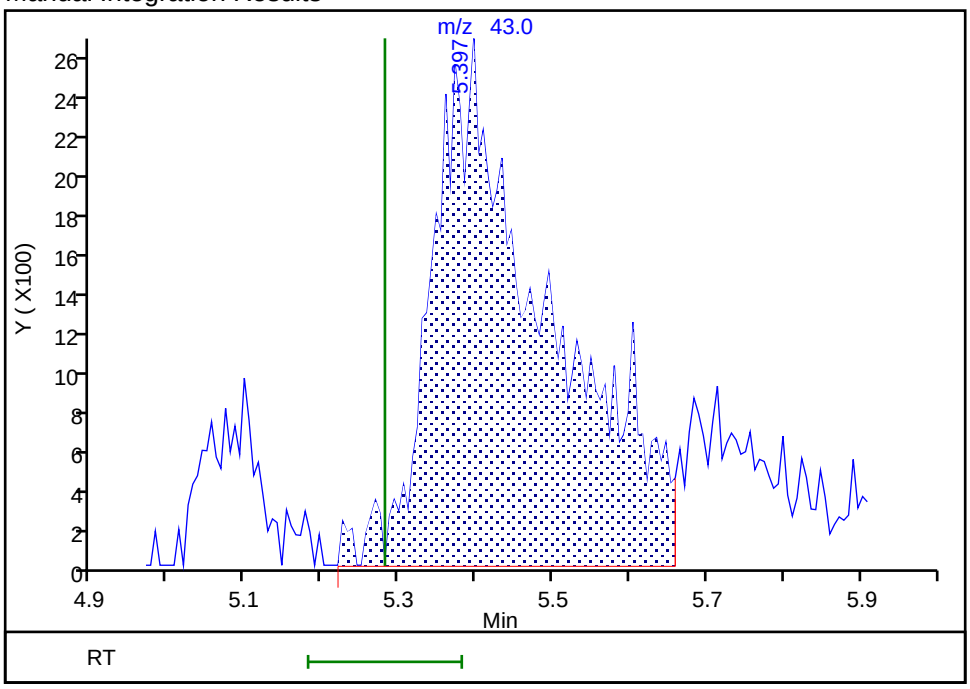
Not Detected
Expected RT: 5.28

Processing Integration Results



Manual Integration Results

RT: 5.40
Area: 27785
Amount: 1.874511
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:28:19 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

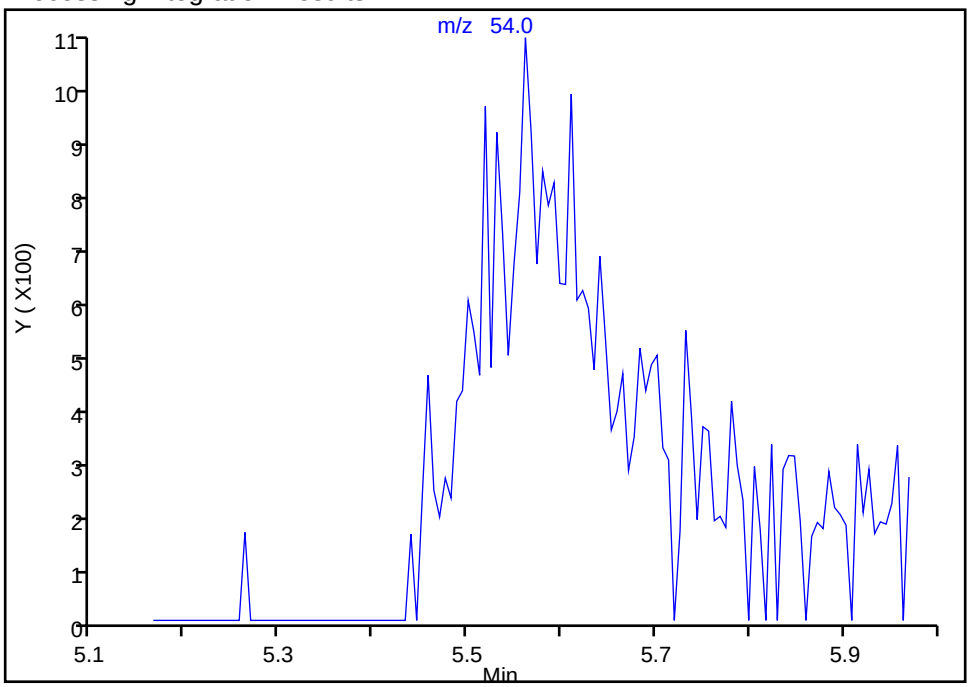
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X12.D				
Injection Date:	10-Jul-2023 19:29:30	Instrument ID:	10193		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

45 Propionitrile, CAS: 107-12-0

Signal: 1

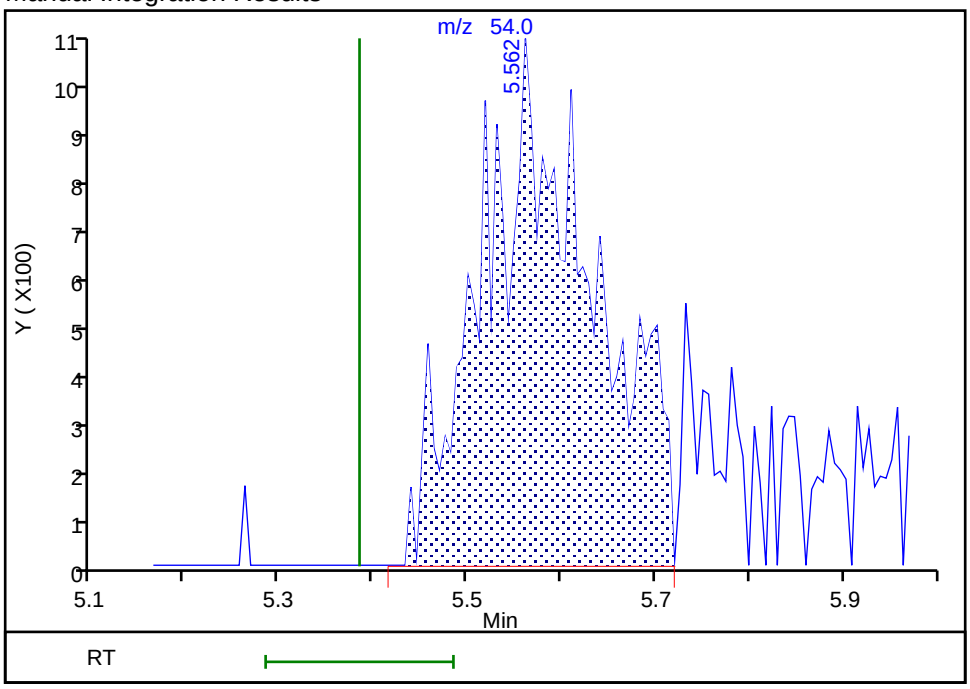
Not Detected
Expected RT: 5.38

Processing Integration Results



Manual Integration Results

RT: 5.56
Area: 8640
Amount: 2.606132
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:28:31 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

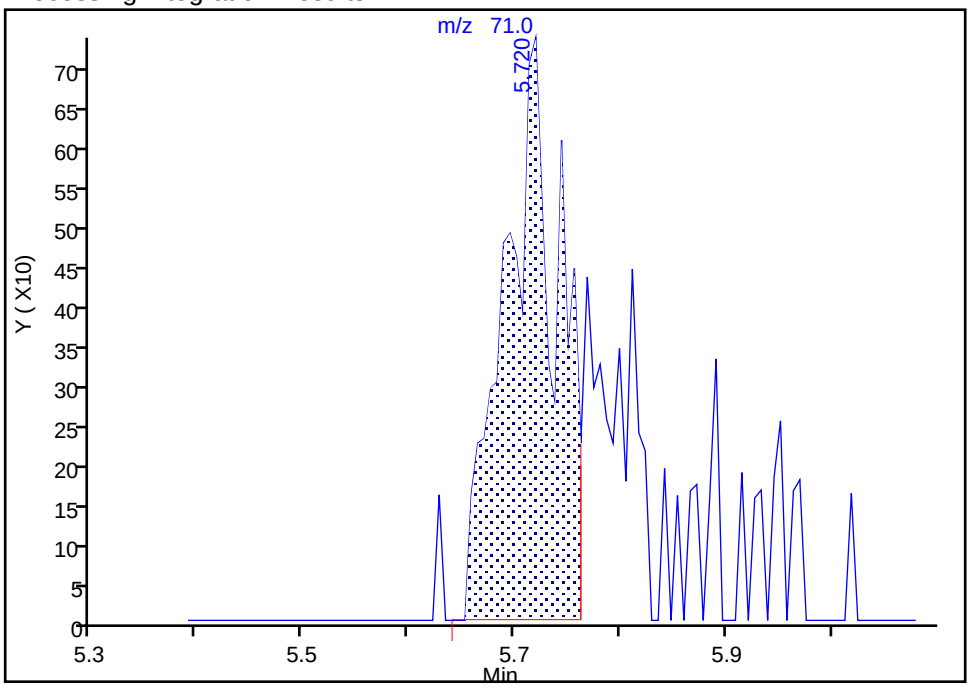
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X12.D				
Injection Date:	10-Jul-2023 19:29:30	Instrument ID:	10193		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

49 Tetrahydrofuran, CAS: 109-99-9

Signal: 1

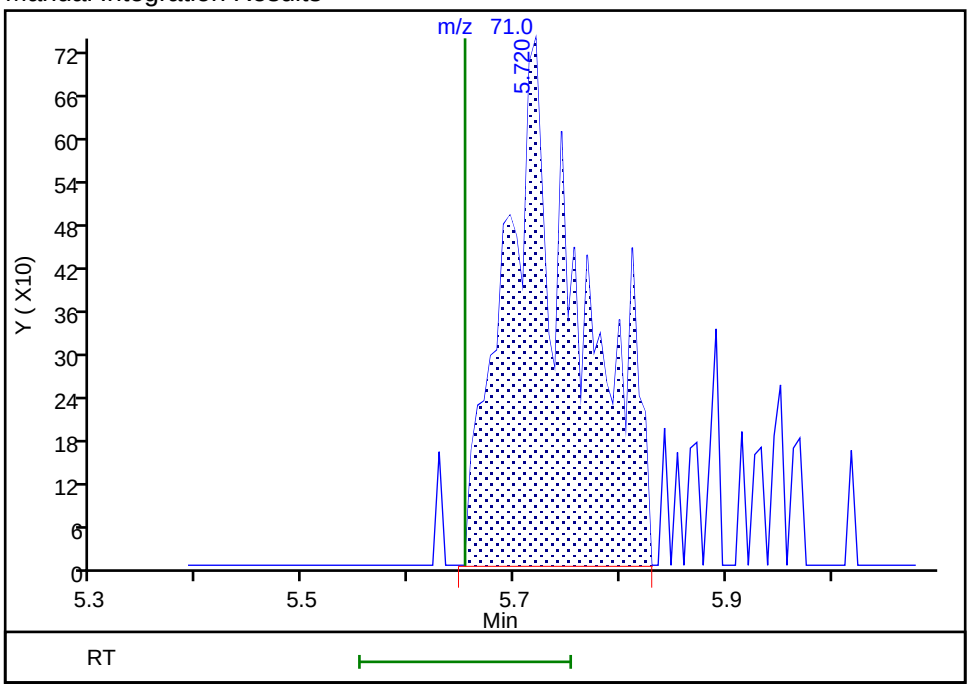
Processing Integration Results

RT: 5.72
Area: 2616
Amount: 0.562222
Amount Units: ug/l



Manual Integration Results

RT: 5.72
Area: 3689
Amount: 0.845856
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:28:38 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

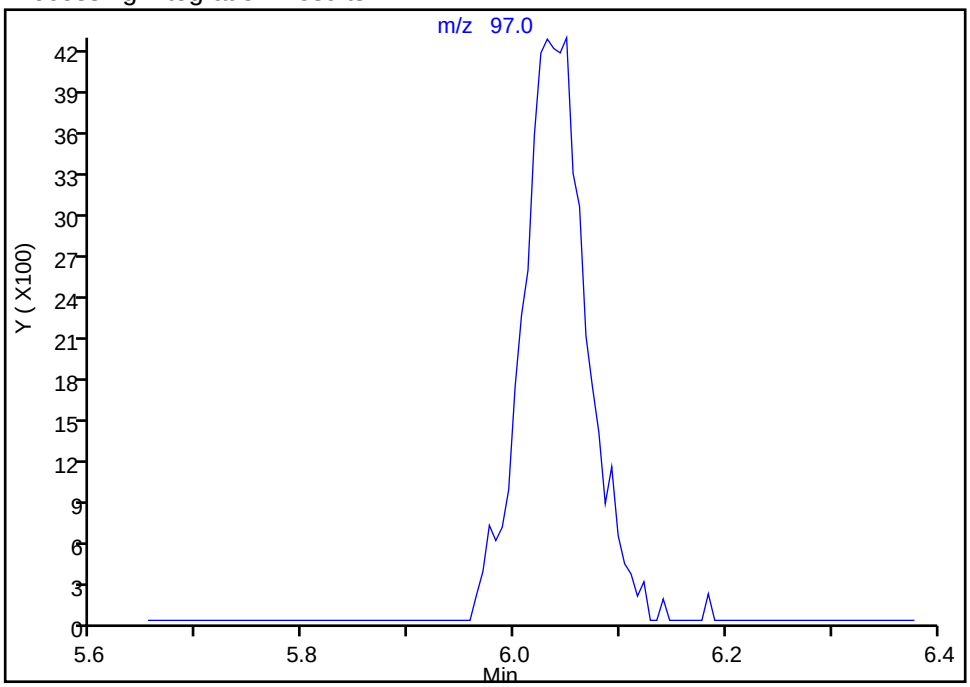
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X12.D				
Injection Date:	10-Jul-2023 19:29:30	Instrument ID:	10193		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

53 1,1,1-Trichloroethane, CAS: 71-55-6

Signal: 1

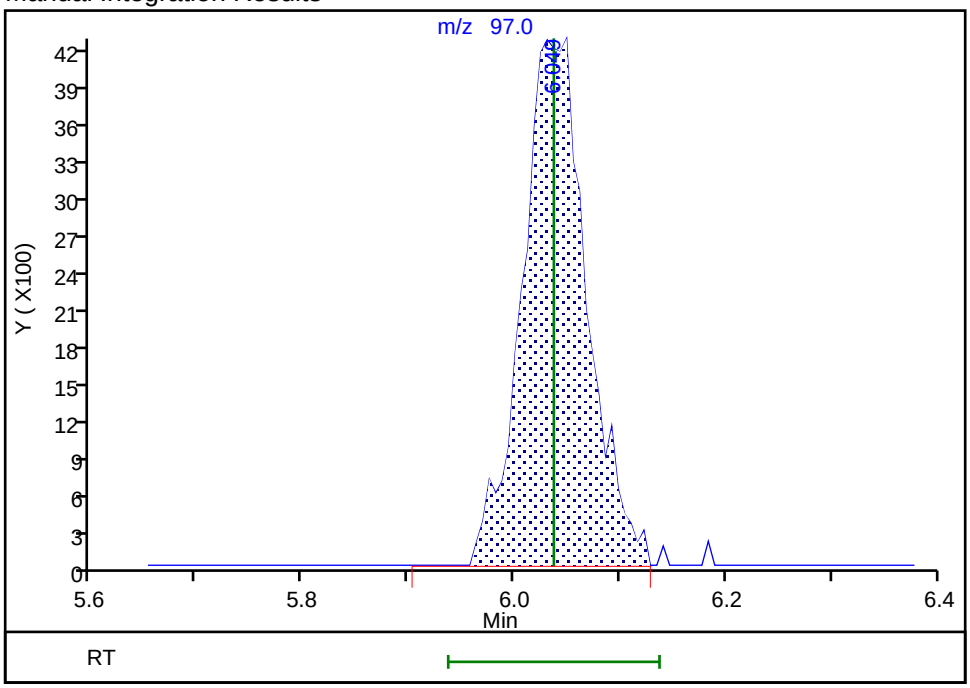
Not Detected
Expected RT: 6.04

Processing Integration Results



Manual Integration Results

RT: 6.05
Area: 18185
Amount: 0.195279
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:28:45 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

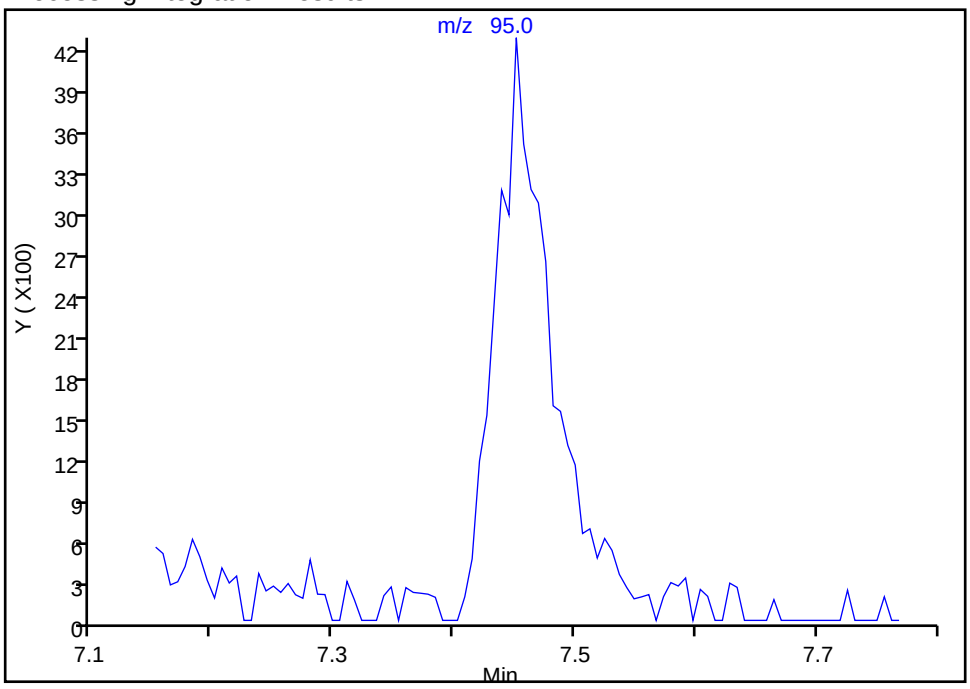
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X12.D				
Injection Date:	10-Jul-2023 19:29:30	Instrument ID:	10193		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

68 Trichloroethene, CAS: 79-01-6

Signal: 1

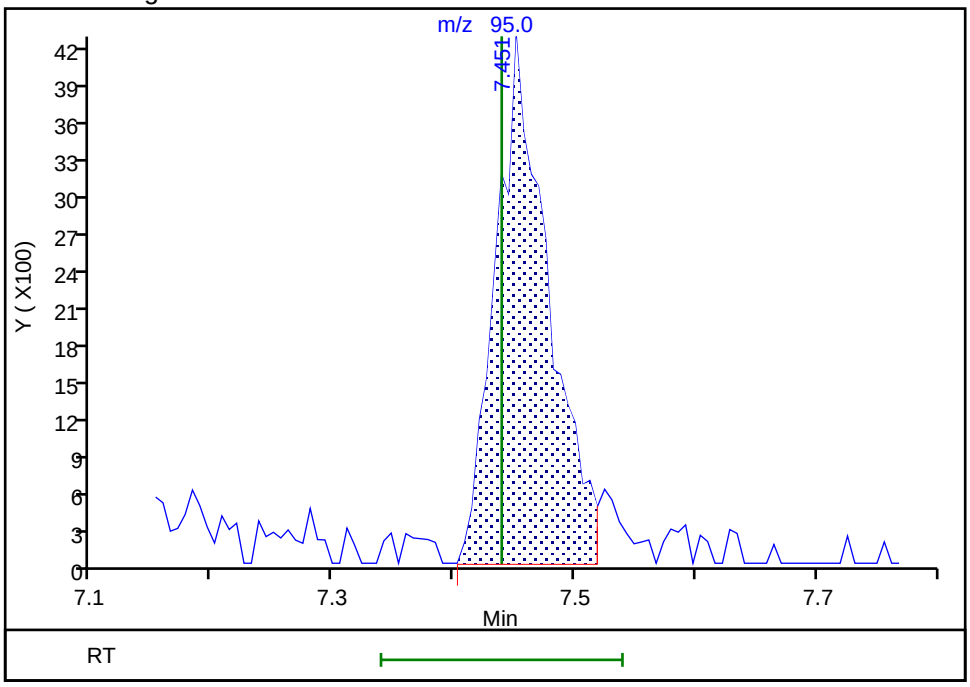
Not Detected
Expected RT: 7.44

Processing Integration Results



Manual Integration Results

RT: 7.45
Area: 13043
Amount: 0.190644
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:30:08 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

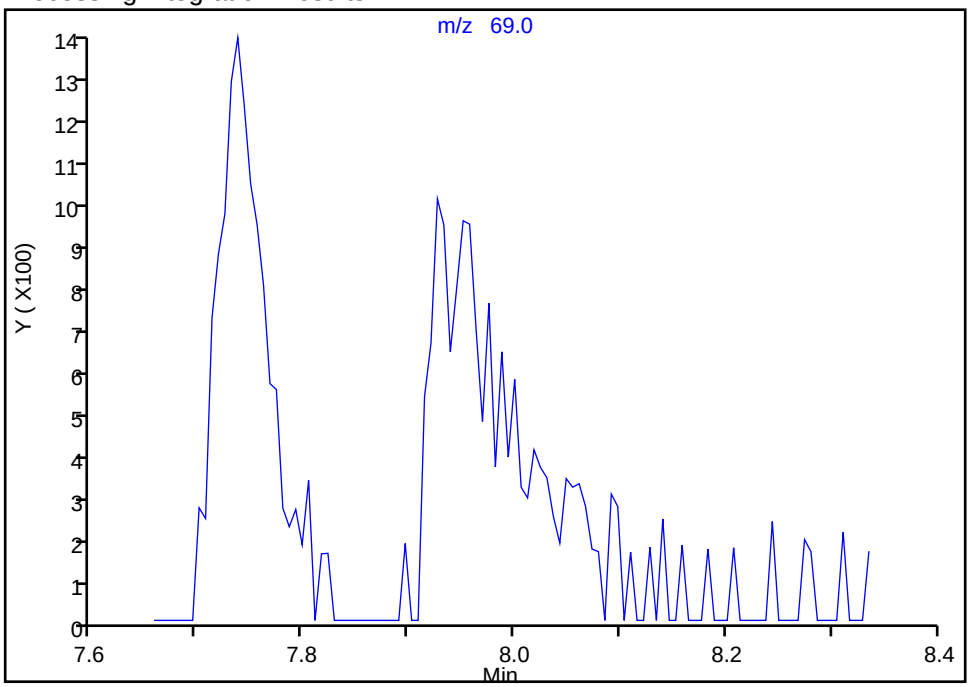
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X12.D				
Injection Date:	10-Jul-2023 19:29:30	Instrument ID:	10193		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

73 Methyl methacrylate, CAS: 80-62-6

Signal: 1

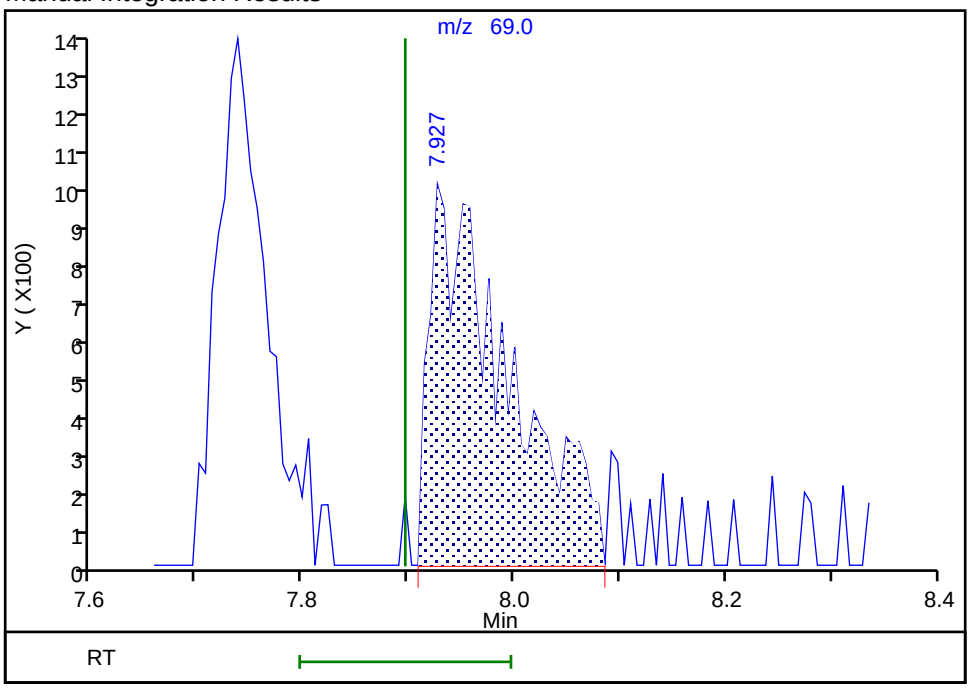
Not Detected
Expected RT: 7.90

Processing Integration Results



Manual Integration Results

RT: 7.93
Area: 5037
Amount: 0.164415
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:30:24 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

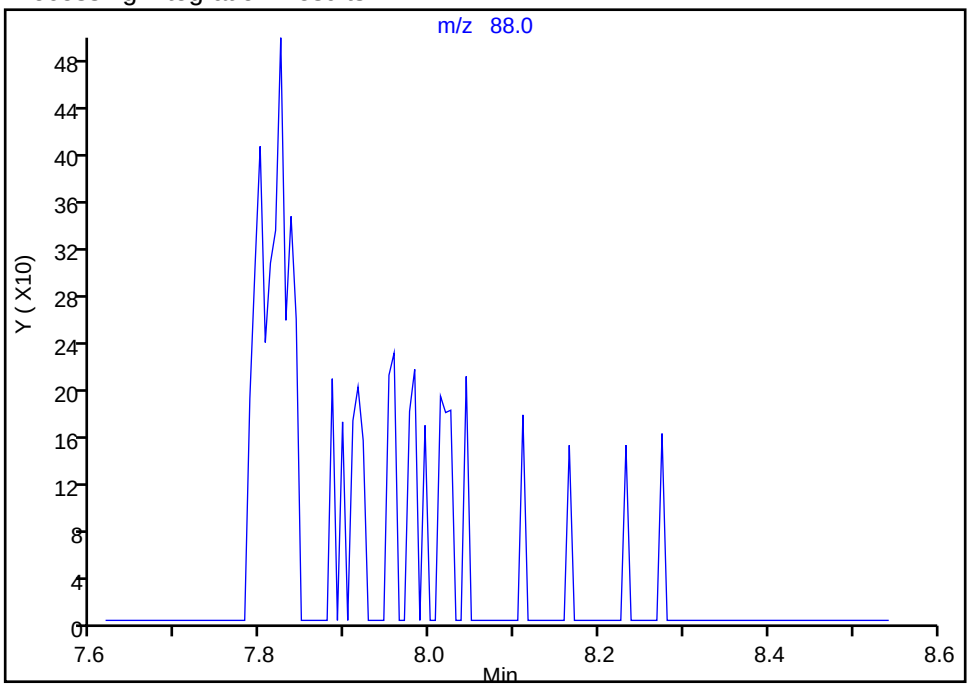
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X12.D				
Injection Date:	10-Jul-2023 19:29:30	Instrument ID:	10193		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

74 1,4-Dioxane, CAS: 123-91-1

Signal: 1

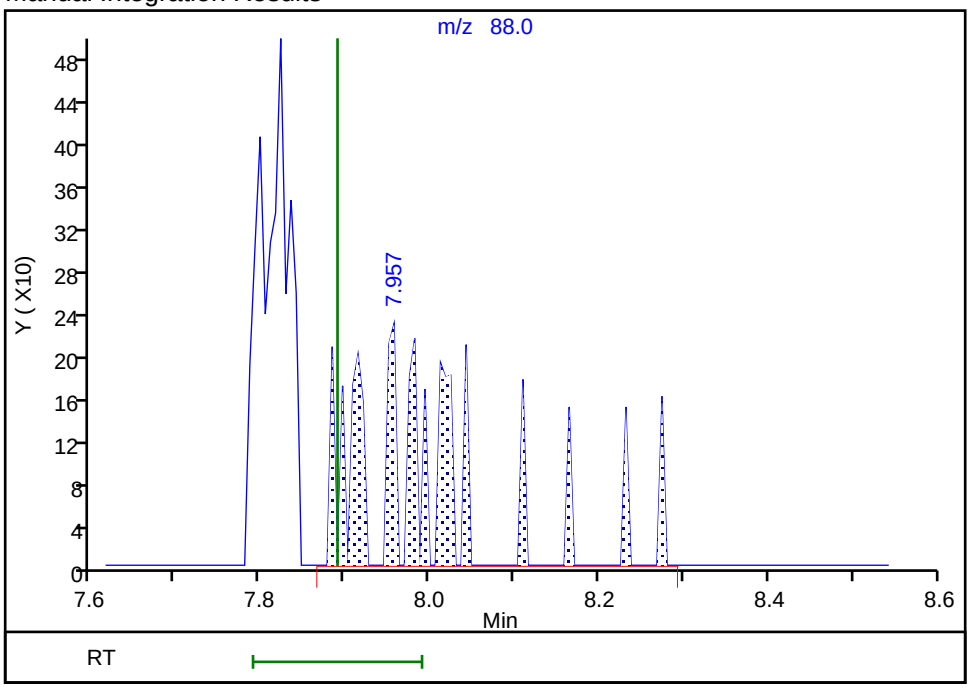
Not Detected
Expected RT: 7.89

Processing Integration Results



Manual Integration Results

RT: 7.96
Area: 1206
Amount: 4.680591
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:30:16 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

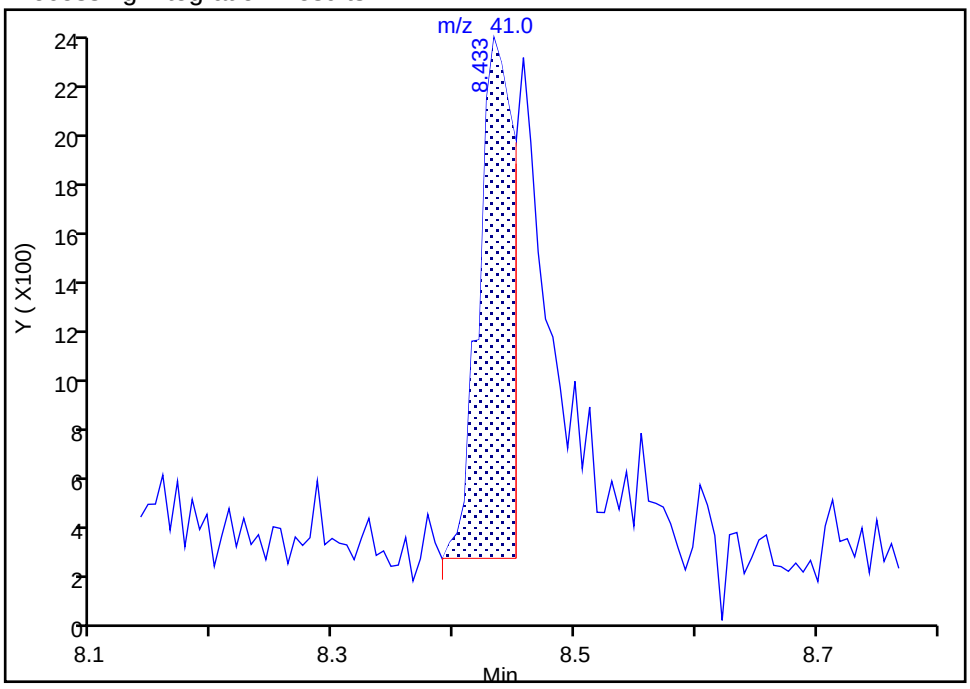
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X12.D				
Injection Date:	10-Jul-2023 19:29:30	Instrument ID:	10193		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

77 2-Nitropropane, CAS: 79-46-9

Signal: 1

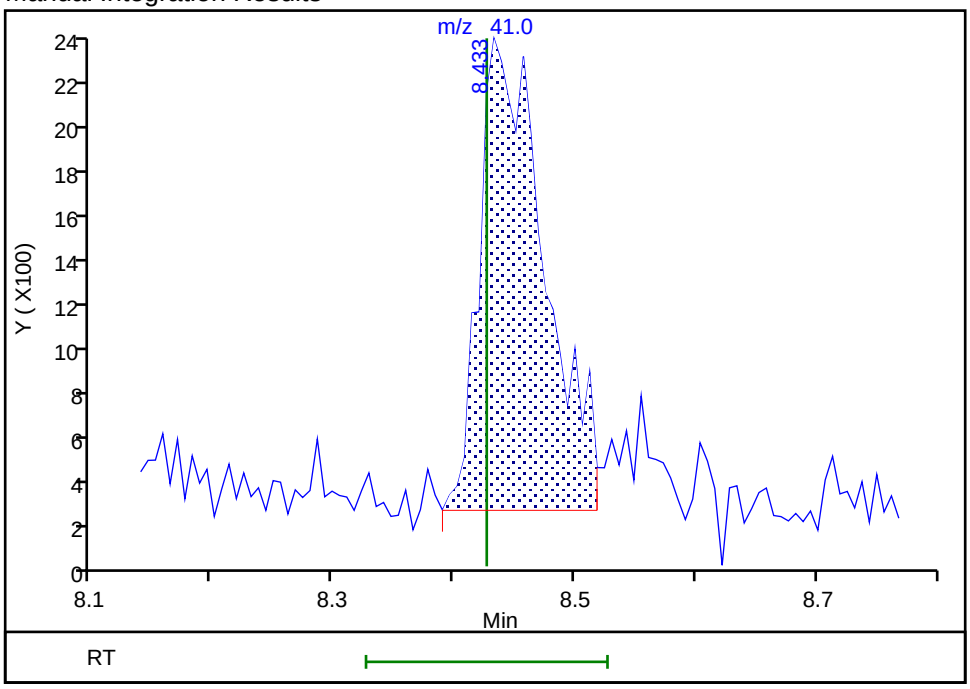
Processing Integration Results

RT: 8.43
Area: 4242
Amount: 0.998506
Amount Units: ug/l



Manual Integration Results

RT: 8.43
Area: 7819
Amount: 0.938533
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:30:42 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

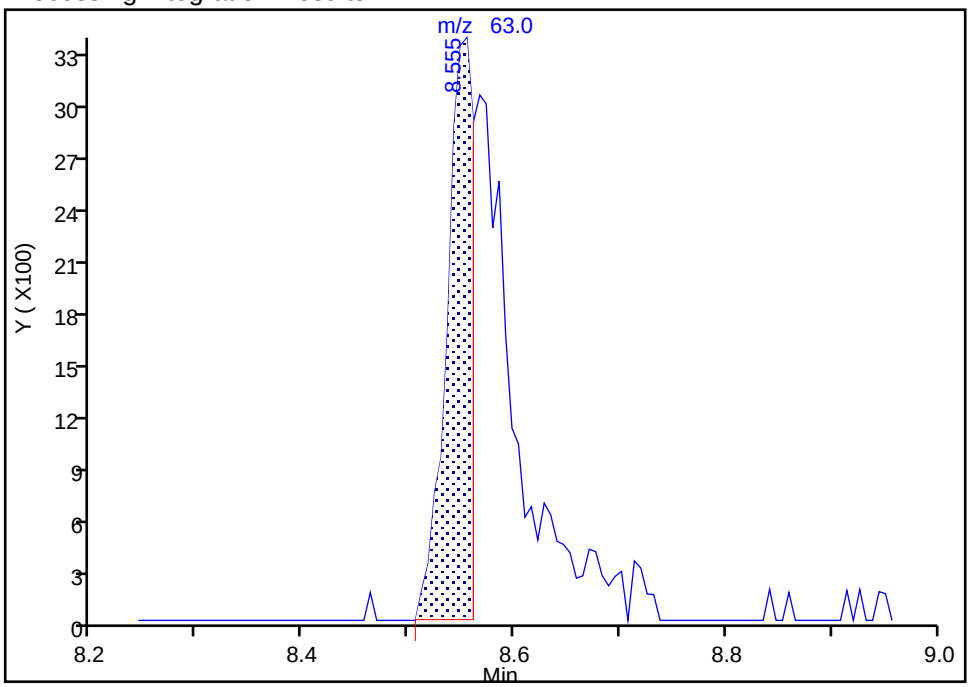
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X12.D				
Injection Date:	10-Jul-2023 19:29:30	Instrument ID:	10193		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

78 1-Bromo-2-chloroethane, CAS: 107-04-0

Signal: 1

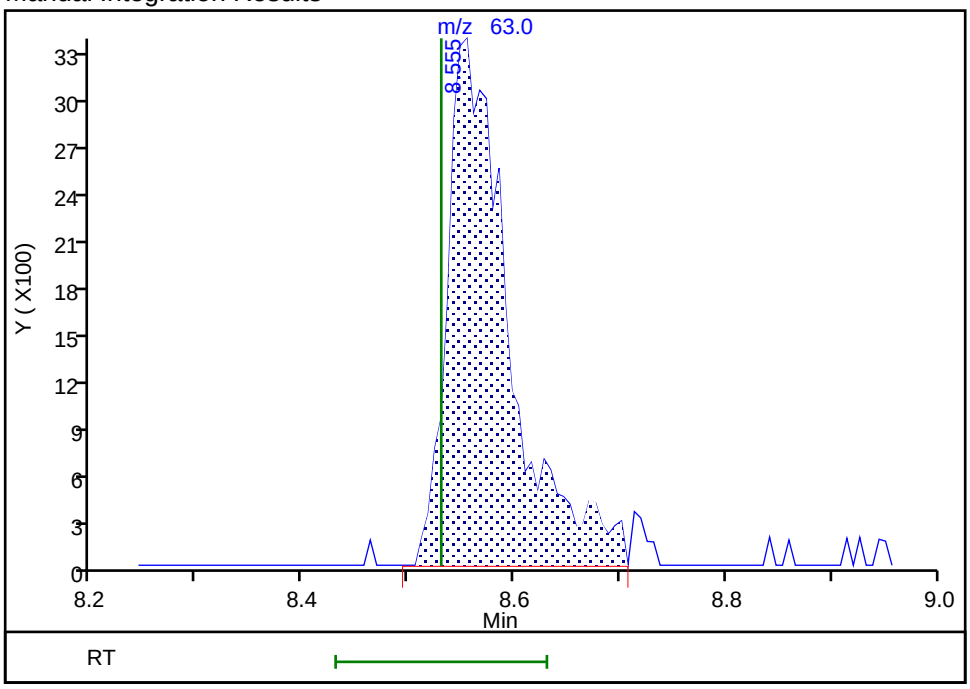
Processing Integration Results

RT: 8.55
Area: 5994
Amount: 0.115134
Amount Units: ug/l



Manual Integration Results

RT: 8.55
Area: 13791
Amount: 0.193678
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:30:48 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

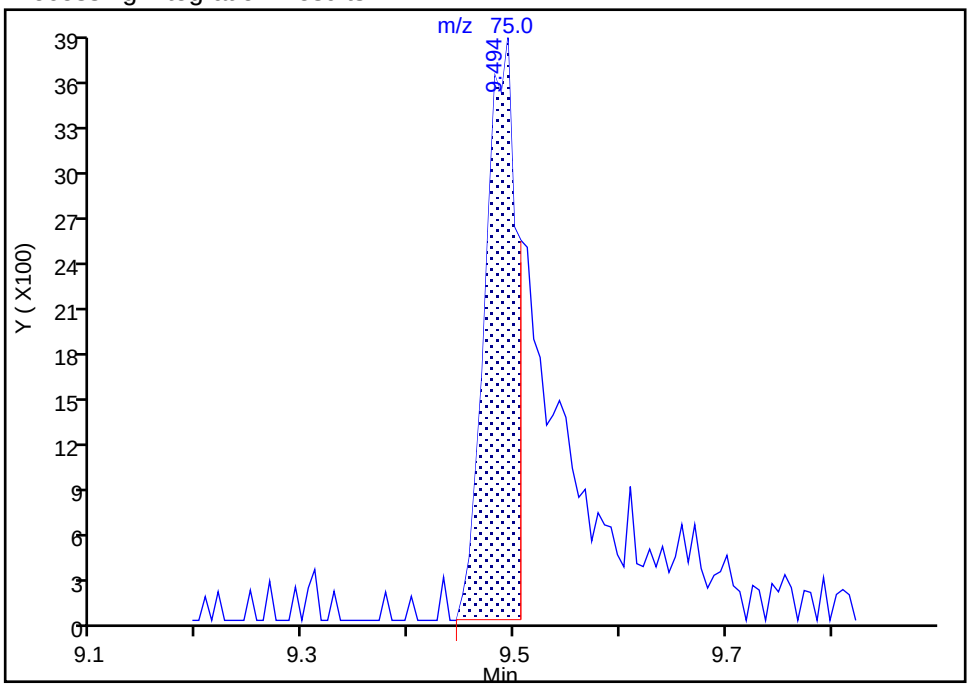
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X12.D				
Injection Date:	10-Jul-2023 19:29:30	Instrument ID:	10193		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

85 trans-1,3-Dichloropropene, CAS: 10061-02-6

Signal: 1

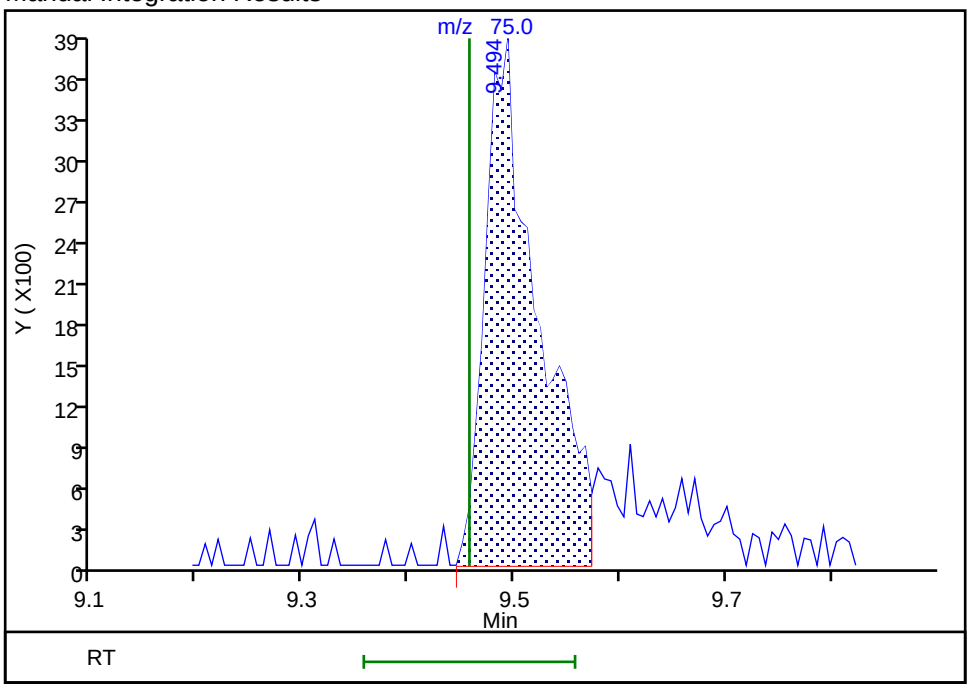
Processing Integration Results

RT: 9.49
Area: 7925
Amount: 0.199928
Amount Units: ug/l



Manual Integration Results

RT: 9.49
Area: 13236
Amount: 0.161318
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:31:12 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

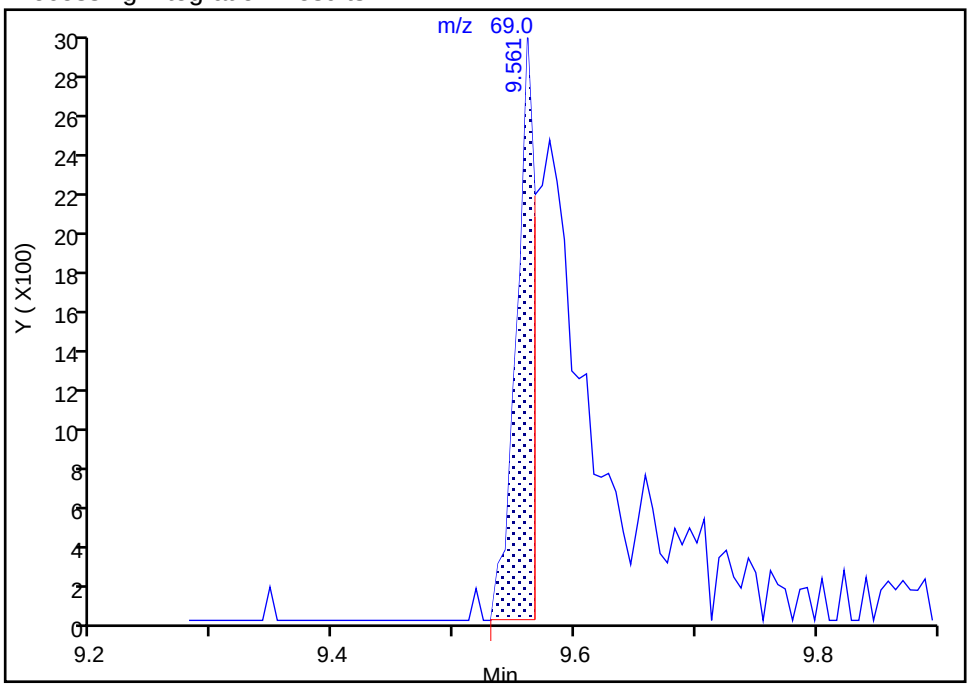
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X12.D				
Injection Date:	10-Jul-2023 19:29:30	Instrument ID:	10193		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

86 Ethyl methacrylate, CAS: 97-63-2

Signal: 1

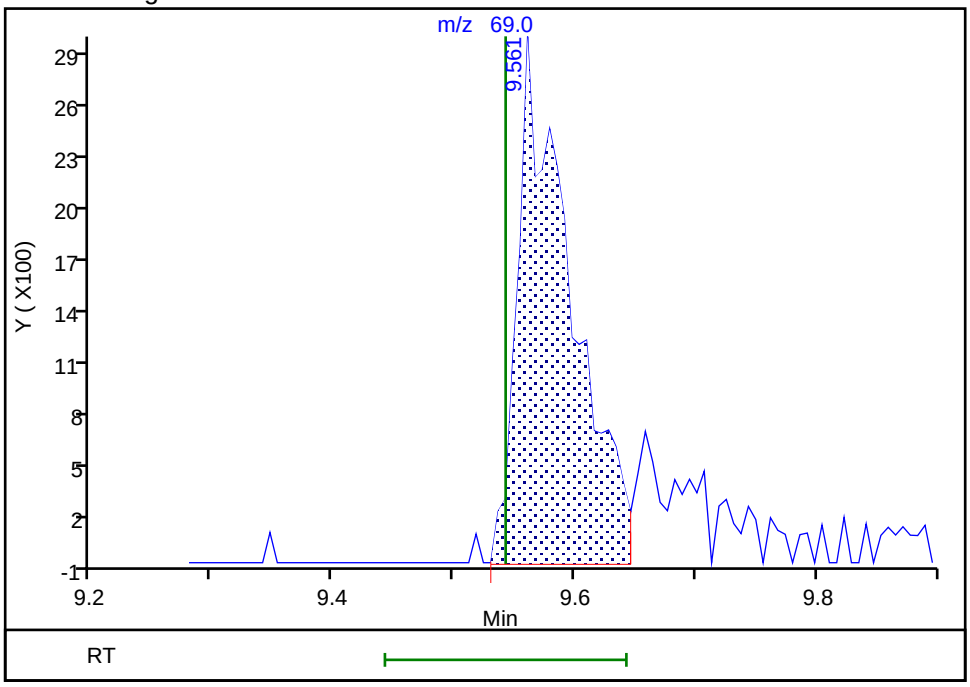
Processing Integration Results

RT: 9.56
Area: 3145
Amount: 0.198343
Amount Units: ug/l



Manual Integration Results

RT: 9.56
Area: 9013
Amount: 0.137920
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:31:30 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

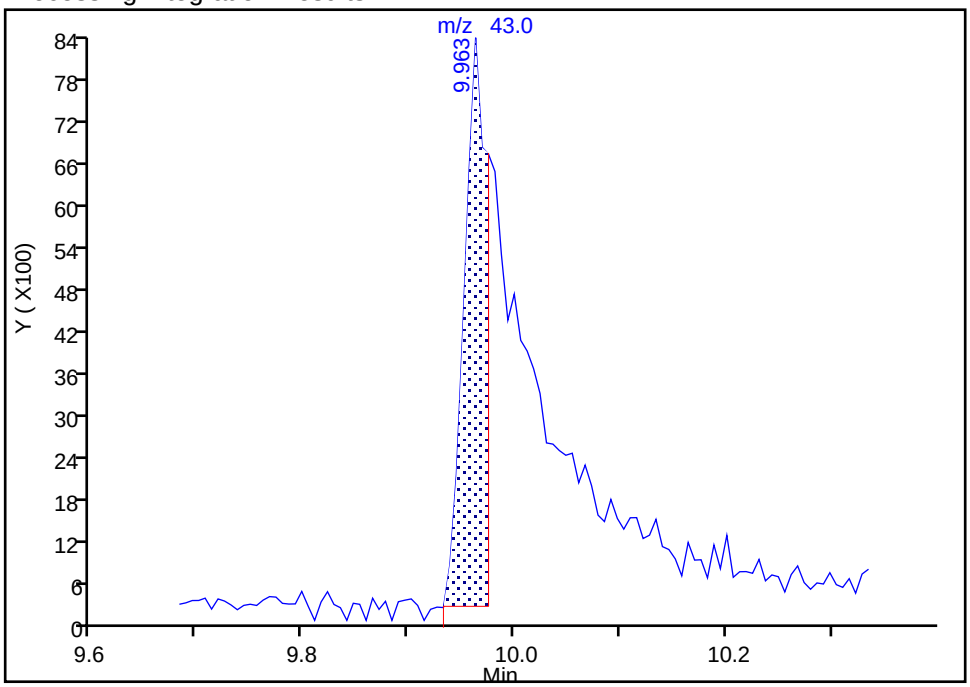
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X12.D				
Injection Date:	10-Jul-2023 19:29:30	Instrument ID:	10193		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

106 2-Hexanone, CAS: 591-78-6

Signal: 1

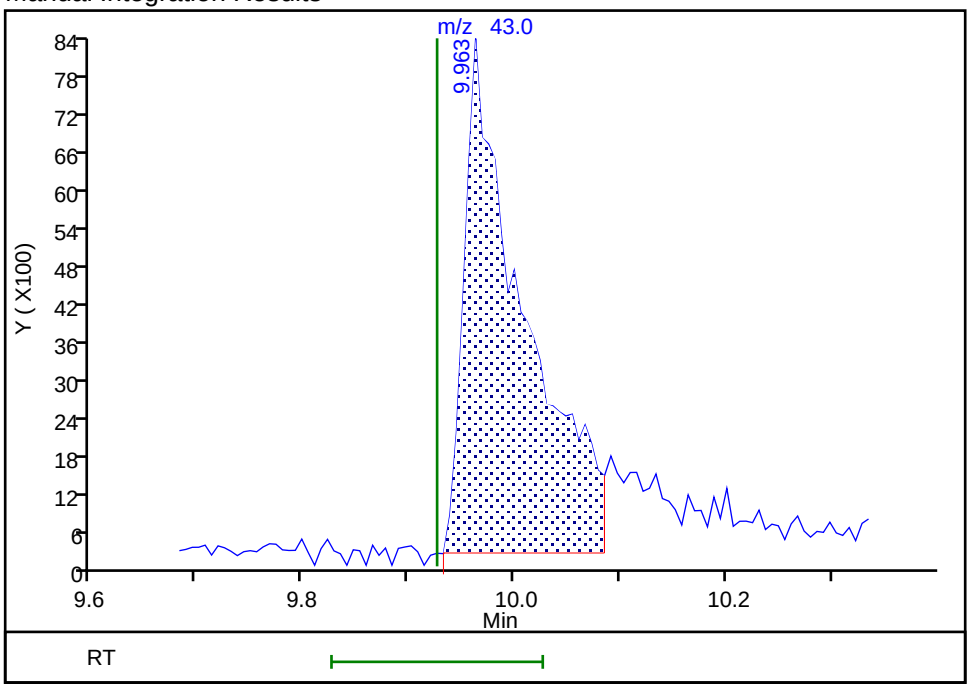
Processing Integration Results

RT: 9.96
Area: 12407
Amount: 2.074775
Amount Units: ug/l



Manual Integration Results

RT: 9.96
Area: 31916
Amount: 1.110312
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:31:56 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

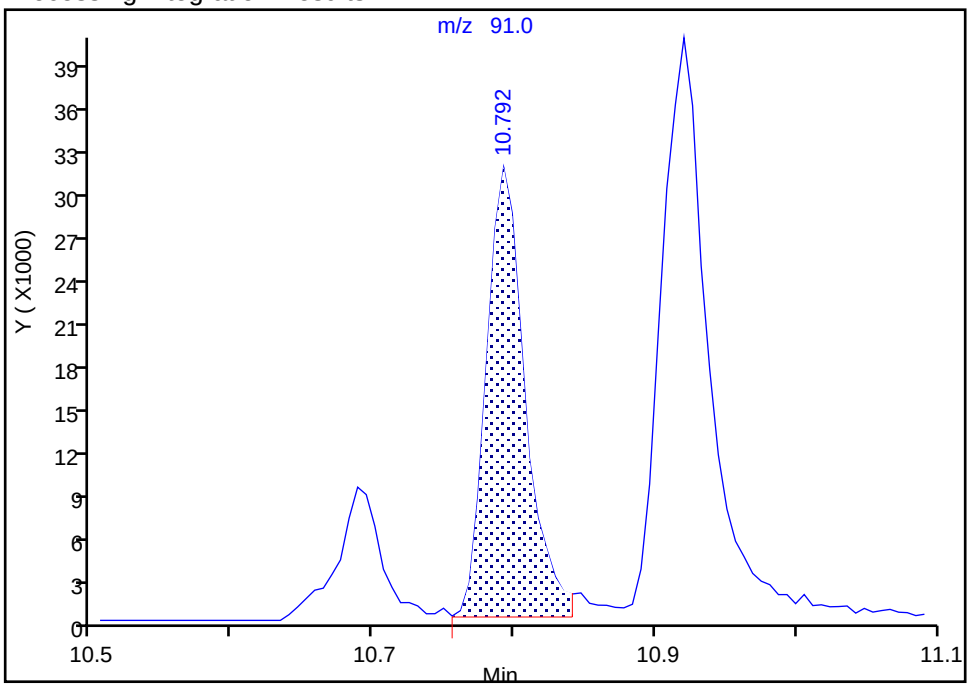
Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X12.D
Injection Date: 10-Jul-2023 19:29:30 Instrument ID: 10193
Lims ID: IC std1 0.2
Client ID:
Operator ID: knk41612 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

115 Ethylbenzene, CAS: 100-41-4

Signal: 1

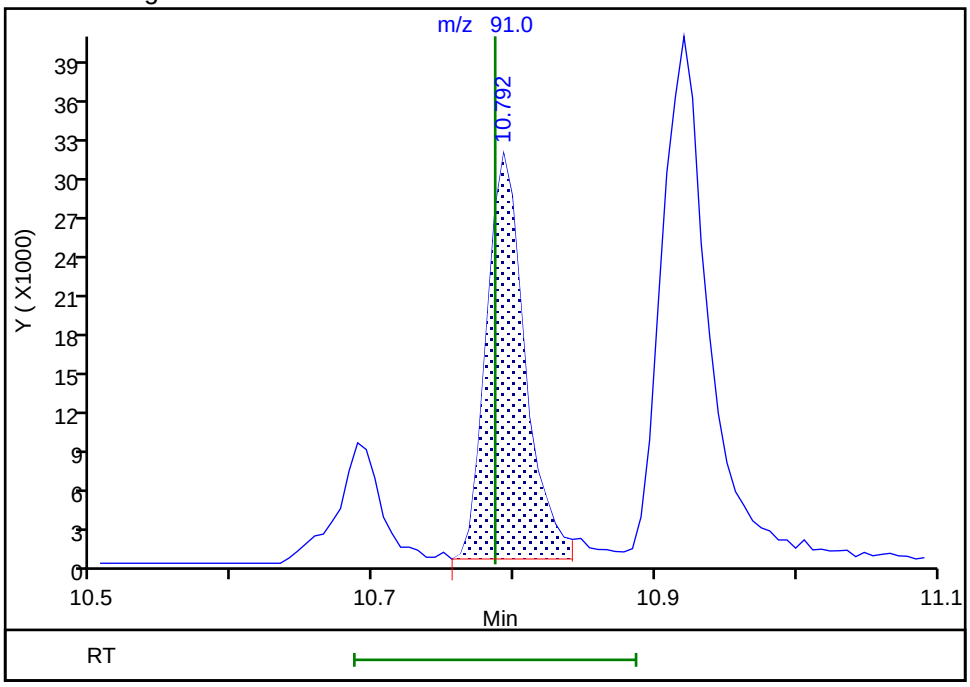
Processing Integration Results

RT: 10.79
Area: 59492
Amount: 0.162867
Amount Units: ug/l



Manual Integration Results

RT: 10.79
Area: 59492
Amount: 0.176529
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:39:21 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

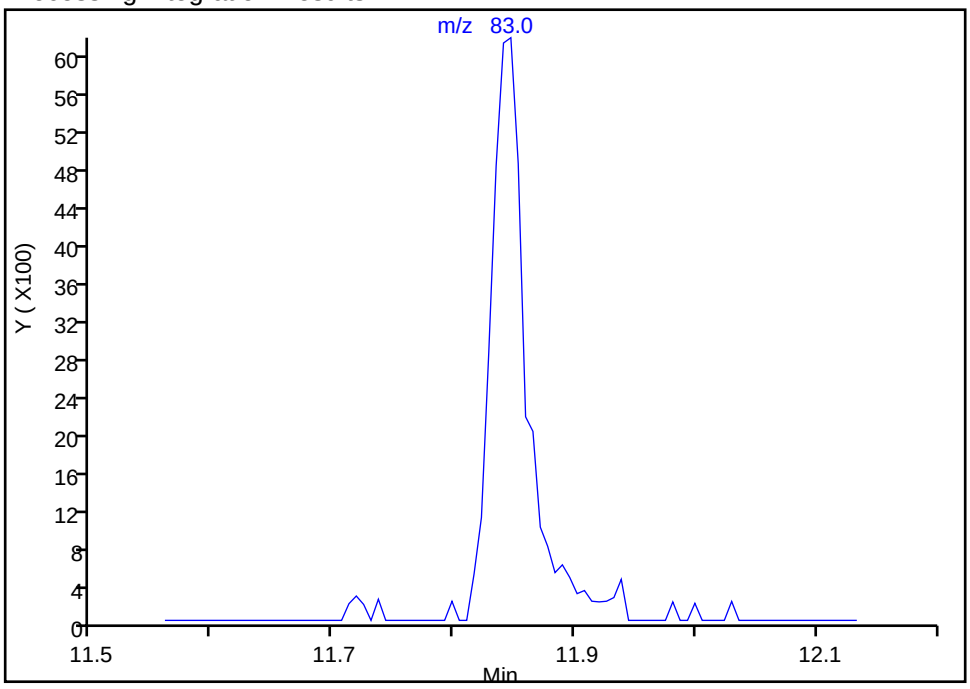
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X12.D				
Injection Date:	10-Jul-2023 19:29:30	Instrument ID:	10193		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

126 1,1,2,2-Tetrachloroethane, CAS: 79-34-5

Signal: 1

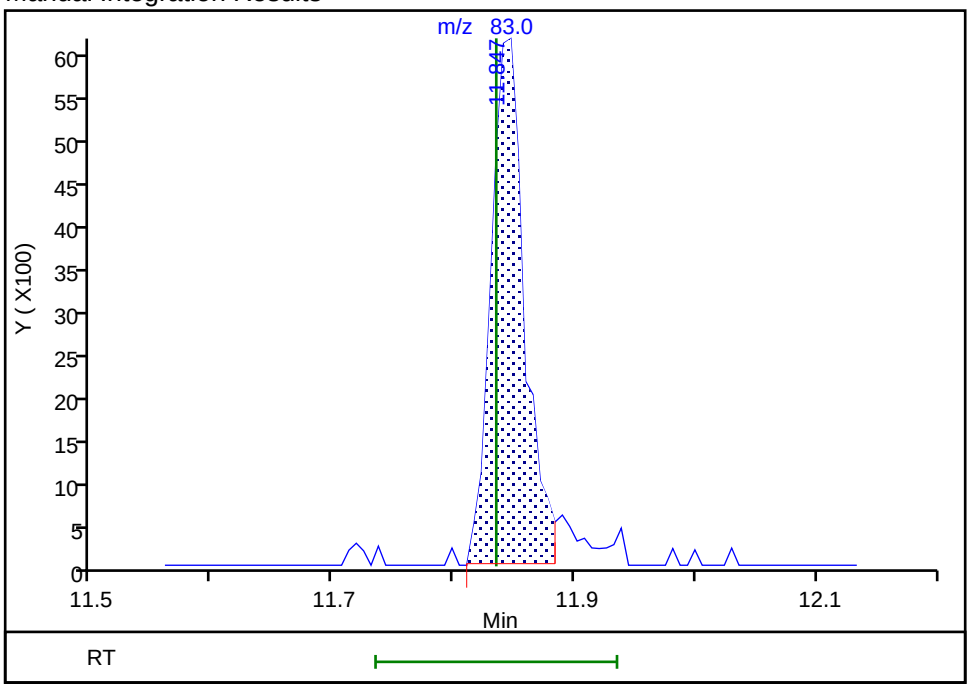
Not Detected
Expected RT: 11.83

Processing Integration Results



Manual Integration Results

RT: 11.85
Area: 11933
Amount: 0.180085
Amount Units: ug/l



Reviewer: UKEK, 11-Jul-2023 20:34:43 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

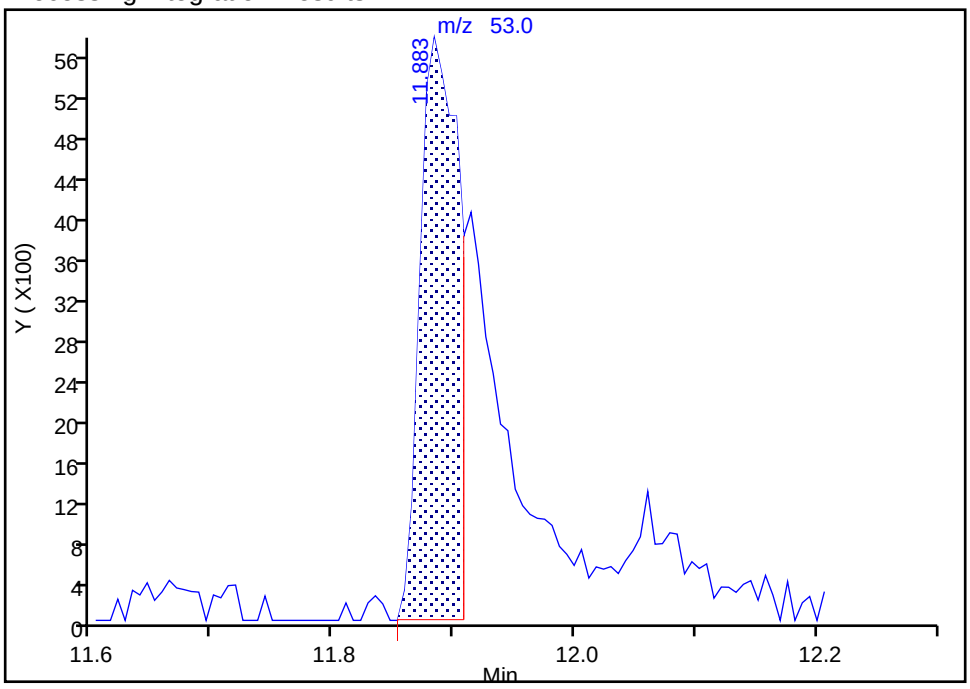
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X12.D				
Injection Date:	10-Jul-2023 19:29:30	Instrument ID:	10193		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

127 trans-1,4-Dichloro-2-butene, CAS: 110-57-6

Signal: 1

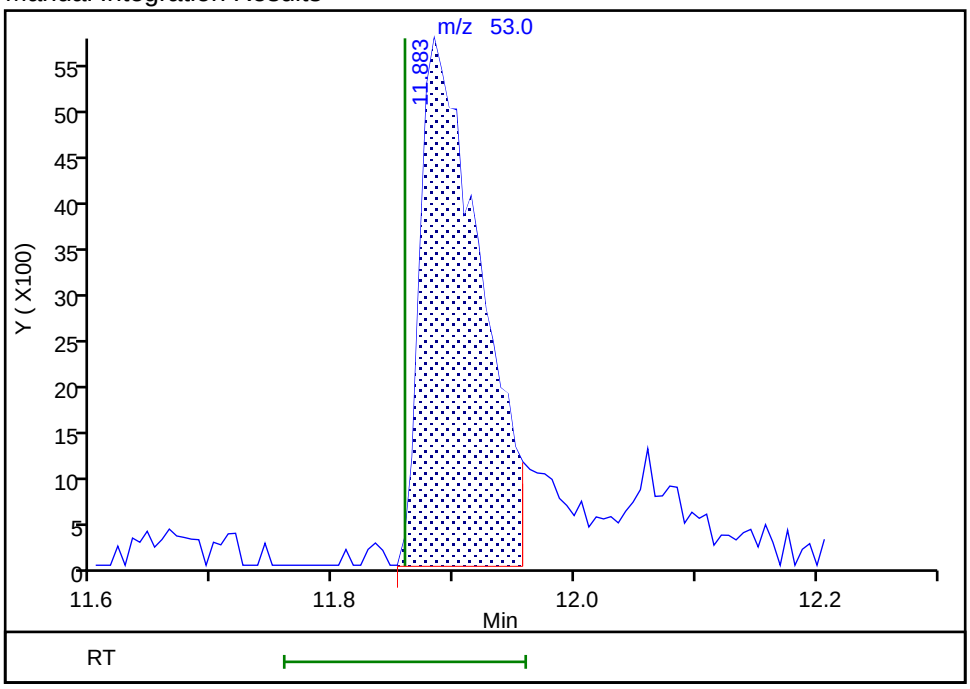
Processing Integration Results

RT: 11.88
Area: 12797
Amount: 2.845741
Amount Units: ug/l



Manual Integration Results

RT: 11.88
Area: 19758
Amount: 1.358446
Amount Units: ug/l



Reviewer: UKEK, 11-Jul-2023 20:35:21 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X13.D
Lims ID: IC std2 0.5
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 10-Jul-2023 19:51:30 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0088548-014
Misc. Info.: IC STD2 0.5
Operator ID: knk41612 Instrument ID: 10193
Sublist: chrom-MSV_10193_25mL*sub1

Method: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 11-Jul-2023 21:38:02 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1649

First Level Reviewer: DVW2 Date: 11-Jul-2023 08:40:31

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.678	1.684	-0.006	52	22298	0.5000	0.3671	M
5 Chloromethane	50	1.837	1.849	-0.012	99	39540	0.5000	0.5140	
6 Vinyl chloride	62	1.928	1.934	-0.006	97	35508	0.5000	0.4834	
7 Butadiene	39	1.934	1.940	-0.006	90	29471	0.5000	0.4142	M
9 Bromomethane	94	2.203	2.209	-0.006	89	28892	0.5000	0.5031	
10 Chloroethane	64	2.264	2.270	-0.006	99	22076	0.5000	0.5108	
11 Dichlorofluoromethane	67	2.471	2.471	0.000	97	59252	0.5000	0.5052	
13 Pentane	43	2.526	2.526	0.000	95	43930	0.5000	0.5252	
12 Trichlorofluoromethane	101	2.532	2.532	0.000	49	33437	0.5000	0.4031	
14 Ethyl ether	59	2.709	2.702	0.007	92	23296	0.5001	0.4929	
16 1,2-Dichloro-1,1,2-trifluoroetha	67	2.794	2.788	0.006	96	31592	0.5000	0.4854	
17 Acrolein	56	2.855	2.843	0.012	100	162482	25.0	24.7	
18 1,1-Dichloroethene	96	2.952	2.952	0.000	97	26740	0.5000	0.4977	
20 Acetone	43	3.013	2.977	0.036	93	44911	5.00	5.35	
21 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.001	3.001	0.000	87	23979	0.5000	0.4524	
22 Iodomethane	142	3.111	3.117	-0.006	97	58709	0.5000	0.5089	
24 Isopropyl alcohol	45	3.111	3.117	-0.006	51	21501	10.0	8.69	
23 Ethyl bromide	108	3.135	3.135	0.000	97	27291	0.4995	0.5206	
25 Carbon disulfide	76	3.196	3.202	-0.006	99	91539	0.5000	0.4817	
26 Methyl acetate	43	3.343	3.324	0.019	27	12338	0.5000	0.4665	M
29 3-Chloro-1-propene	41	3.337	3.336	0.001	92	47777	0.5000	0.5043	
30 Methylene Chloride	84	3.495	3.495	0.000	90	35568	0.5000	0.5296	
* 31 t-Butyl alcohol-d10 (IS)	65	3.550	3.538	0.012	96	176691	50.0	50.0	M
32 2-Methyl-2-propanol	59	3.647	3.653	-0.006	34	43294	10.0	11.7	M
33 Acrylonitrile	53	3.843	3.788	0.055	23	15698	1.25	1.33	
35 trans-1,2-Dichloroethene	96	3.843	3.830	0.013	98	32481	0.5000	0.4981	
34 Methyl tert-butyl ether	73	3.824	3.830	-0.006	90	88578	0.5000	0.5125	
36 Hexane	57	4.208	4.208	0.000	93	40210	0.5000	0.4836	
37 1,1-Dichloroethane	63	4.446	4.446	0.000	96	59118	0.5000	0.5168	
39 Isopropyl ether	45	4.519	4.513	0.006	96	108900	0.5000	0.5054	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
40 2-Chloro-1,3-butadiene	53	4.556	4.562	-0.006	90	41584	0.5000	0.4750	M
41 Tert-butyl ethyl ether	59	5.074	5.074	0.000	98	100691	0.5000	0.5052	
42 2-Butanone (MEK)	43	5.330	5.281	0.049	99	75809	5.00	4.63	
43 cis-1,2-Dichloroethene	96	5.318	5.312	0.006	81	35258	0.5000	0.5041	
44 2,2-Dichloropropane	77	5.318	5.324	-0.006	75	45793	0.5000	0.5013	M
45 Propionitrile	54	5.537	5.385	0.152	33	38088	10.0	10.4	a
47 Methacrylonitrile	67	5.617	5.592	0.025	91	78731	5.00	4.54	
49 Tetrahydrofuran	71	5.714	5.653	0.061	56	11030	2.50	2.29	M
48 Chlorobromomethane	128	5.653	5.653	0.000	89	17539	0.5000	0.5220	
50 Chloroform	83	5.818	5.818	0.000	92	56744	0.5000	0.5013	
53 1,1,1-Trichloroethane	97	6.043	6.037	0.006	39	48038	0.5000	0.5042	
$ 54 Dibromofluoromethane (Surr)	113	6.037	6.037	0.000	94	581092	10.0	10.1	
55 Cyclohexane	56	6.123	6.123	0.001	91	50561	0.5000	0.4725	
S 52 1,2-Dichloroethene, Total	100				0			1.00	
56 Carbon tetrachloride	117	6.238	6.244	-0.006	97	39575	0.5000	0.4793	
57 1,1-Dichloropropene	75	6.263	6.257	0.006	95	41451	0.5000	0.4854	
58 Isobutyl alcohol	41	6.555	6.482	0.073	34	11292	25.0	30.1	
$ 59 1,2-Dichloroethane-d4 (Surr)	102	6.507	6.507	0.000	99	123072	10.0	10.1	
60 Benzene	78	6.519	6.525	-0.006	94	137128	0.5000	0.5029	
61 1,2-Dichloroethane	62	6.610	6.598	0.012	95	36323	0.5000	0.5222	
64 Tert-amyl methyl ether	73	6.738	6.738	0.000	98	91298	0.5000	0.4903	
* 65 Fluorobenzene (IS)	96	6.946	6.952	-0.006	99	2469842	10.0	10.0	
66 n-Heptane	43	6.964	6.964	0.000	93	41417	0.5000	0.4606	
67 n-Butanol	56	7.598	7.409	0.189	91	6030	43.8	55.0	Ma
68 Trichloroethene	95	7.445	7.439	0.006	96	34902	0.5000	0.4986	a
69 Methylcyclohexane	83	7.738	7.738	0.000	83	51270	0.5000	0.4517	M
70 1,2-Dichloropropane	63	7.775	7.775	0.000	97	36176	0.5000	0.5033	
71 2-ethoxy-2-methyl butane	87	7.805	7.811	-0.006	94	54534	0.5000	0.4884	
72 Dibromomethane	93	7.909	7.890	0.019	95	16257	0.5000	0.4864	
74 1,4-Dioxane	88	8.019	7.890	0.129	32	6777	25.0	23.8	M
73 Methyl methacrylate	69	7.927	7.897	0.030	91	14787	0.5000	0.4365	
76 Dichlorobromomethane	83	8.140	8.140	0.000	99	41451	0.5000	0.4991	
77 2-Nitropropane	41	8.433	8.427	0.006	96	20017	2.50	2.17	
78 1-Bromo-2-chloroethane	63	8.549	8.531	0.018	98	34825	0.5000	0.4780	
80 cis-1,3-Dichloropropene	75	8.726	8.720	0.006	97	47895	0.5000	0.4666	
82 4-Methyl-2-pentanone (MIBK)	43	8.933	8.927	0.006	97	206105	5.00	4.42	
$ 83 Toluene-d8 (Surr)	98	9.055	9.055	0.000	93	2544562	10.0	10.0	
84 Toluene	92	9.140	9.140	0.000	99	93376	0.5000	0.5168	
85 trans-1,3-Dichloropropene	75	9.476	9.457	0.019	92	38075	0.5000	0.4510	
86 Ethyl methacrylate	69	9.561	9.543	0.018	90	29604	0.5000	0.4402	
87 1,1,2-Trichloroethane	97	9.677	9.677	0.000	91	27798	0.5000	0.5190	
88 Tetrachloroethene	166	9.756	9.756	0.000	96	45407	0.5000	0.5224	
89 1,3-Dichloropropane	76	9.860	9.847	0.013	90	42646	0.5000	0.4973	
106 2-Hexanone	43	9.951	9.927	0.024	96	113803	5.00	3.58	
S 107 1,3-Dichloropropene, Total	100				0			0.9176	
108 Chlorodibromomethane	129	10.085	10.079	0.006	90	32544	0.5000	0.4958	
110 Ethylene Dibromide	107	10.195	10.189	0.006	100	23619	0.5000	0.4921	
* 111 Chlorobenzene-d5 (IS)	117	10.658	10.658	0.000	84	1928405	10.0	10.0	
113 Chlorobenzene	112	10.689	10.683	0.006	95	108725	0.5000	0.4971	
112 1-Chlorohexane	91	10.689	10.683	0.006	61	47421	0.5000	0.4843	a
114 1,1,1,2-Tetrachloroethane	131	10.780	10.780	0.000	94	35062	0.5000	0.4809	
115 Ethylbenzene	91	10.792	10.786	0.006	98	174733	0.5000	0.5039	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
116 m-Xylene & p-Xylene	106	10.914	10.908	0.006	97	133774	1.00	0.9618	
S 117 Xylenes, Total	106				0			1.46	
118 o-Xylene	106	11.256	11.256	0.000	96	70066	0.5000	0.5021	
119 Styrene	104	11.286	11.274	0.012	95	98475	0.5000	0.4542	
120 Bromoform	173	11.439	11.426	0.013	98	19931	0.5000	0.4773	
121 Isopropylbenzene	105	11.573	11.573	0.000	94	178043	0.5000	0.5064	
$ 124 4-Bromofluorobenzene (Surr)	95	11.719	11.719	0.000	96	902694	10.0	9.96	
125 Bromobenzene	156	11.835	11.829	0.006	94	48327	0.5000	0.5058	
126 1,1,2,2-Tetrachloroethane	83	11.841	11.835	0.006	90	34730	0.5000	0.5047	
127 trans-1,4-Dichloro-2-butene	53	11.871	11.859	0.012	89	68695	5.00	4.55	
128 1,2,3-Trichloropropane	110	11.884	11.877	0.007	76	8828	0.5000	0.4999	
129 N-Propylbenzene	91	11.914	11.914	0.000	99	207468	0.5000	0.4962	
130 2-Chlorotoluene	126	11.987	11.987	0.000	98	44266	0.5000	0.4860	
131 1,3,5-Trimethylbenzene	105	12.060	12.060	0.000	94	153872	0.5000	0.4961	
132 4-Chlorotoluene	126	12.091	12.085	0.006	97	42421	0.5000	0.4587	
133 tert-Butylbenzene	134	12.304	12.304	0.000	92	36751	0.5000	0.5048	
134 Pentachloroethane	167	12.329	12.329	0.000	88	27762	0.5000	0.4811	
135 1,2,4-Trimethylbenzene	105	12.353	12.347	0.006	96	151932	0.5000	0.4770	
136 sec-Butylbenzene	105	12.475	12.469	0.006	93	190109	0.5000	0.4814	
137 1,3-Dichlorobenzene	146	12.573	12.566	0.007	98	92355	0.5000	0.4867	
138 4-Isopropyltoluene	119	12.585	12.585	0.000	97	169494	0.5000	0.4843	
* 139 1,4-Dichlorobenzene-d4	152	12.627	12.627	0.000	93	1161459	10.0	10.0	
140 1,4-Dichlorobenzene	146	12.646	12.640	0.006	97	97044	0.5000	0.4966	
141 1,2,3-Trimethylbenzene	120	12.658	12.658	0.000	97	72977	0.5000	0.4790	
142 Benzyl chloride	126	12.737	12.725	0.012	97	10383	0.5000	0.3791	
145 p-Diethylbenzene	119	12.865	12.865	0.000	94	109301	0.5000	0.4913	M
143 n-Butylbenzene	92	12.890	12.883	0.007	96	76531	0.5000	0.4660	
144 1,2-Dichlorobenzene	146	12.914	12.908	0.006	99	88158	0.5000	0.4922	
148 1,2-Dibromo-3-Chloropropane	155	13.481	13.469	0.012	90	3516	0.5000	0.4054	
149 1,3,5-Trichlorobenzene	180	13.603	13.591	0.012	97	72517	0.5000	0.4931	
150 1,2,4-Trichlorobenzene	180	14.036	14.023	0.013	91	51601	0.5000	0.4632	
151 Hexachlorobutadiene	225	14.109	14.103	0.006	95	31154	0.5000	0.4977	
152 Naphthalene	128	14.219	14.200	0.019	96	73709	0.5000	0.4050	
153 1,2,3-Trichlorobenzene	180	14.359	14.347	0.013	95	35588	0.5000	0.4215	
154 2-Methylnaphthalene	142	14.987	14.944	0.043	84	8577	0.5000	0.2003	M

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_LL_#1_826_00084	Amount Added:	2.00	Units: uL	
MSV_LL_#2_826_00095	Amount Added:	2.00	Units: uL	
MSV_LL_GAS826_00159	Amount Added:	2.00	Units: uL	
MSV_HP25_ISSS_00073	Amount Added:	1.00	Units: uL	Run Reagent

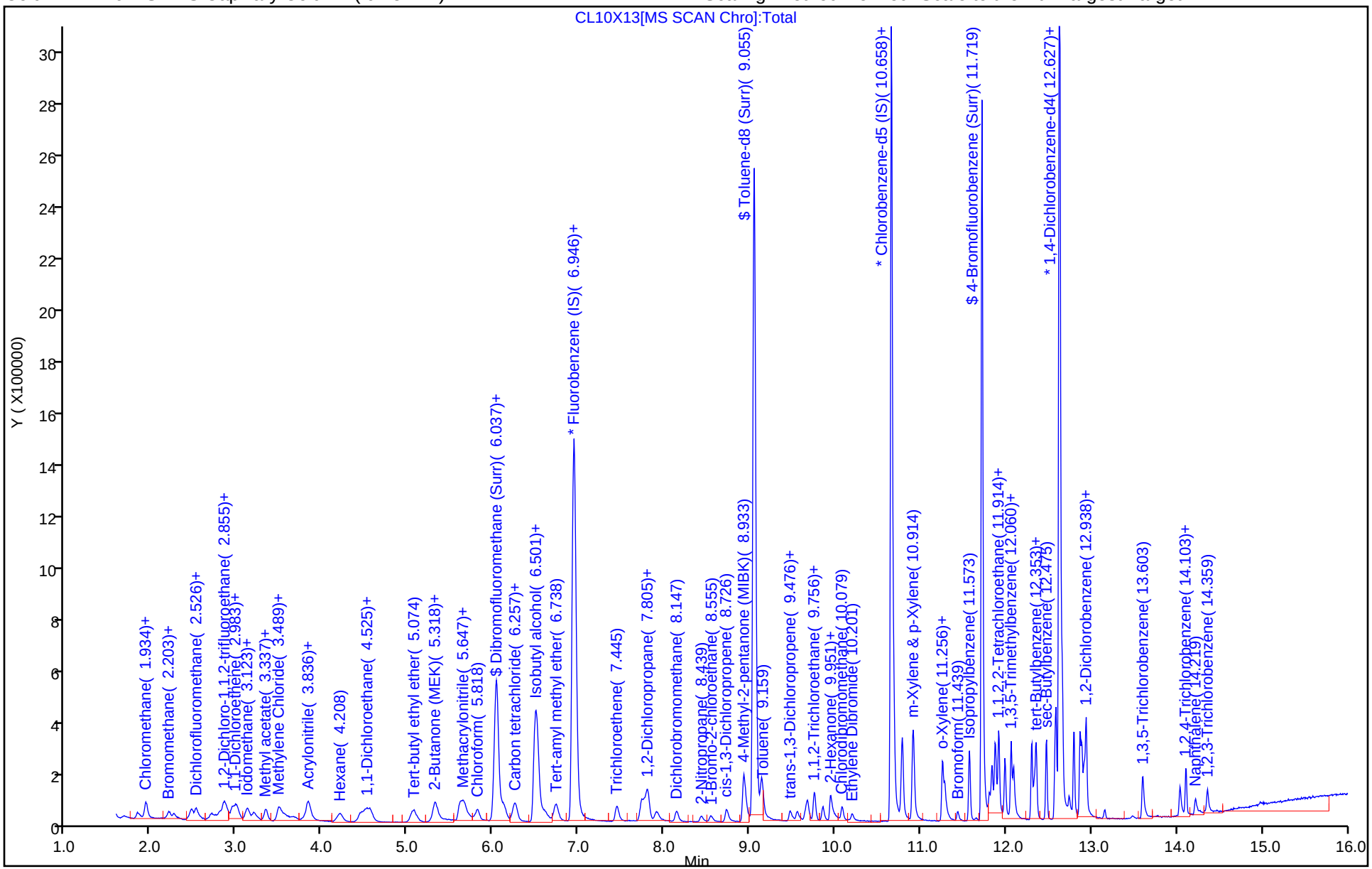
Report Date: 11-Jul-2023 21:38:03 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X13.D

Injection Date:	10-Jul-2023 19:51:30	Instrument ID:	10193	Operator ID:	knk41612
Lims ID:	IC std2 0.5			Worklist Smp#:	14
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

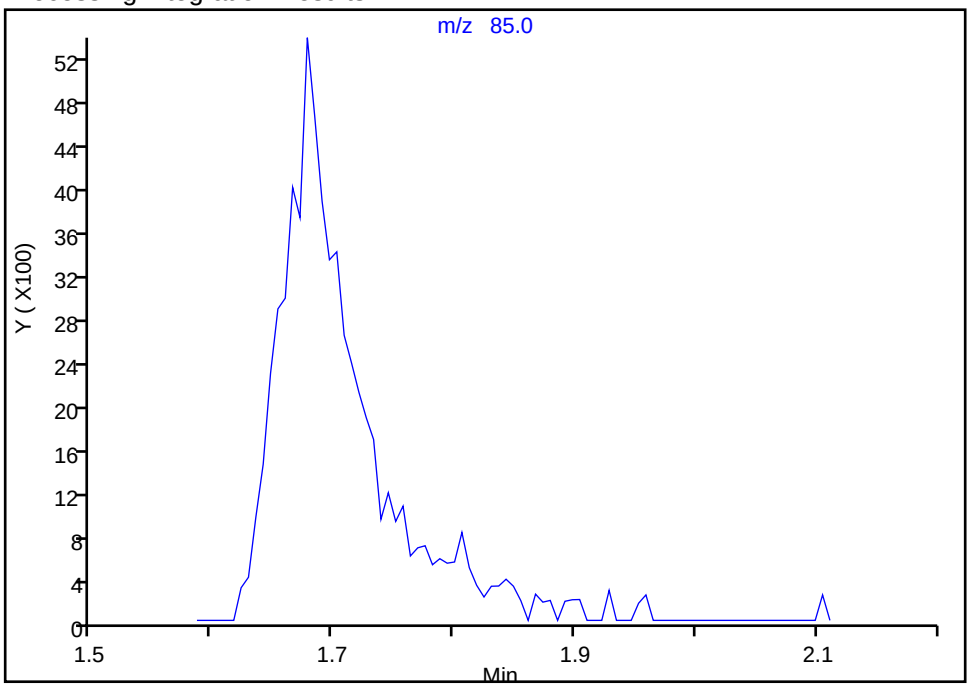
Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X13.D
Injection Date: 10-Jul-2023 19:51:30 Instrument ID: 10193
Lims ID: IC std2 0.5
Client ID:
Operator ID: knk41612 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

2 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

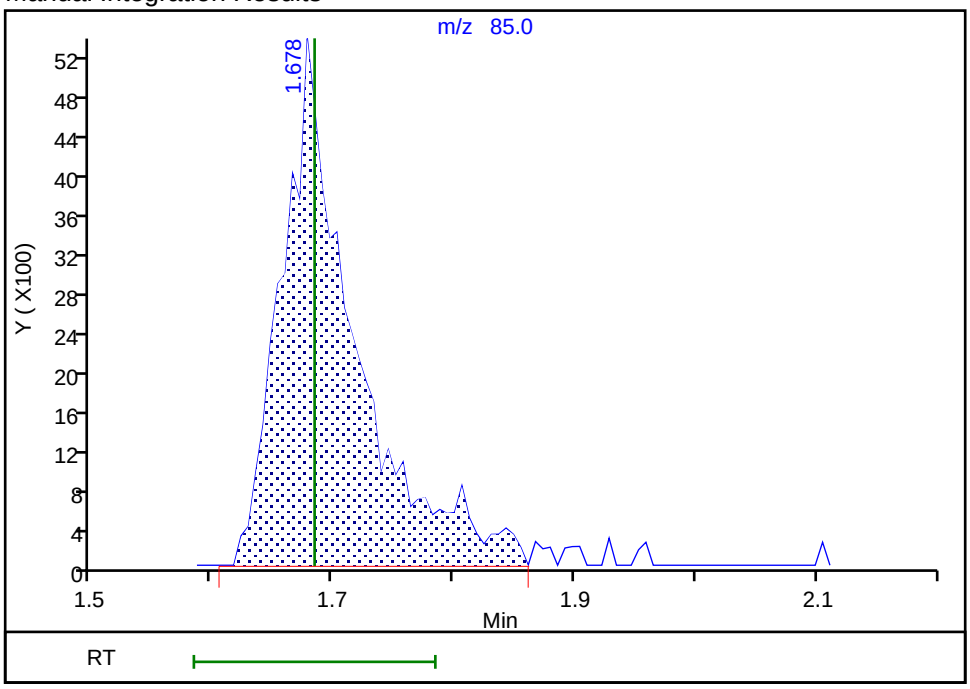
Not Detected
Expected RT: 1.68

Processing Integration Results



Manual Integration Results

RT: 1.68
Area: 22298
Amount: 0.367095
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:39:45 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

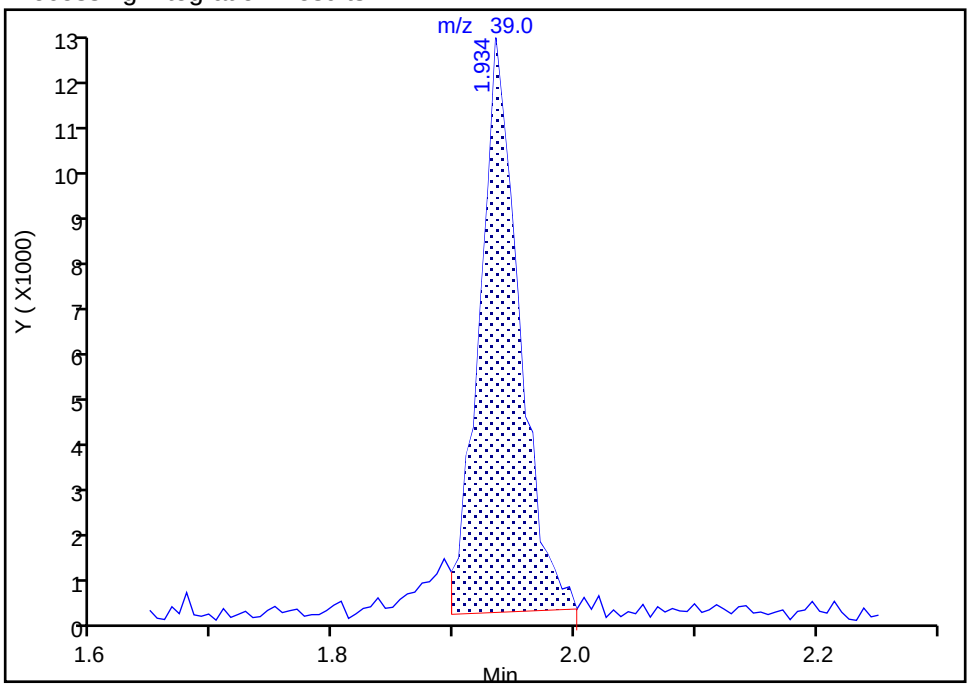
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X13.D				
Injection Date:	10-Jul-2023 19:51:30	Instrument ID:	10193		
Lims ID:	IC std2 0.5				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

7 Butadiene, CAS: 106-99-0

Signal: 1

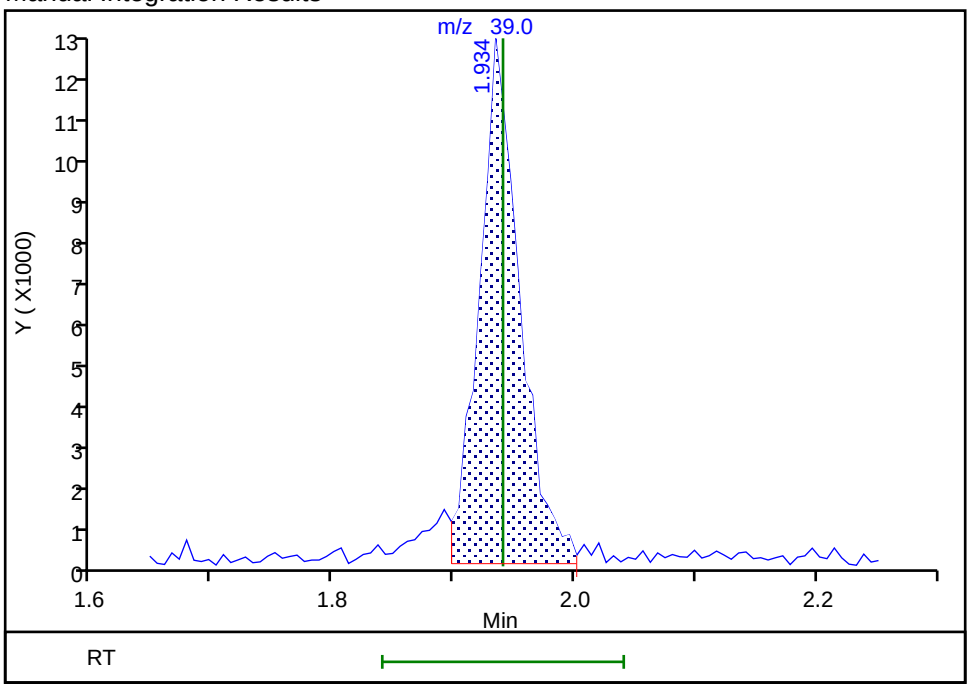
Processing Integration Results

RT: 1.93
Area: 28592
Amount: 0.403307
Amount Units: ug/l



Manual Integration Results

RT: 1.93
Area: 29471
Amount: 0.414238
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:39:54 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

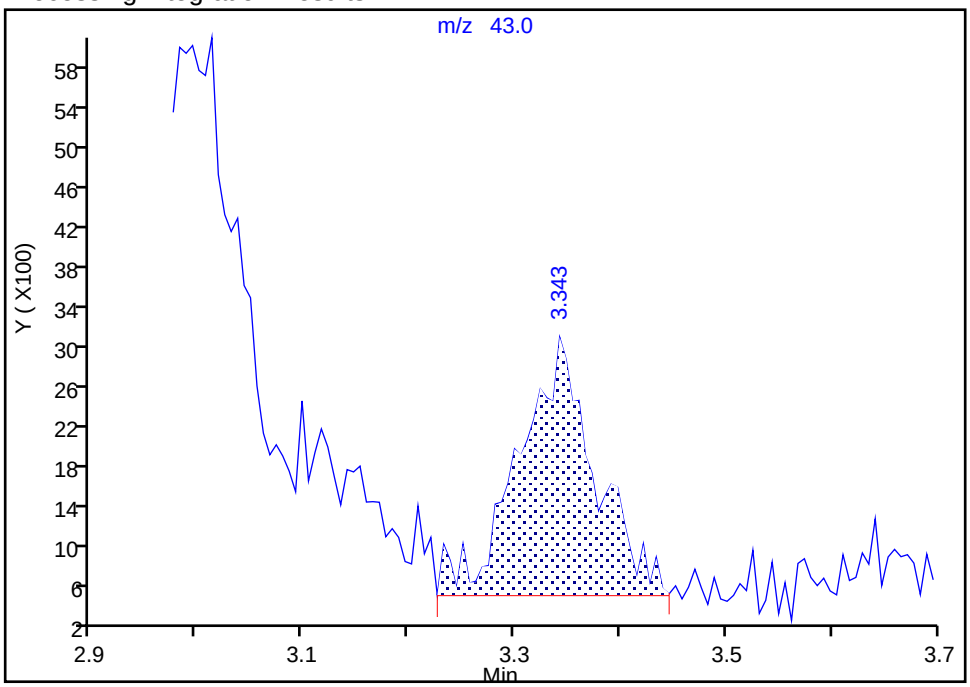
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X13.D				
Injection Date:	10-Jul-2023 19:51:30	Instrument ID:	10193		
Lims ID:	IC std2 0.5				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

26 Methyl acetate, CAS: 79-20-9

Signal: 1

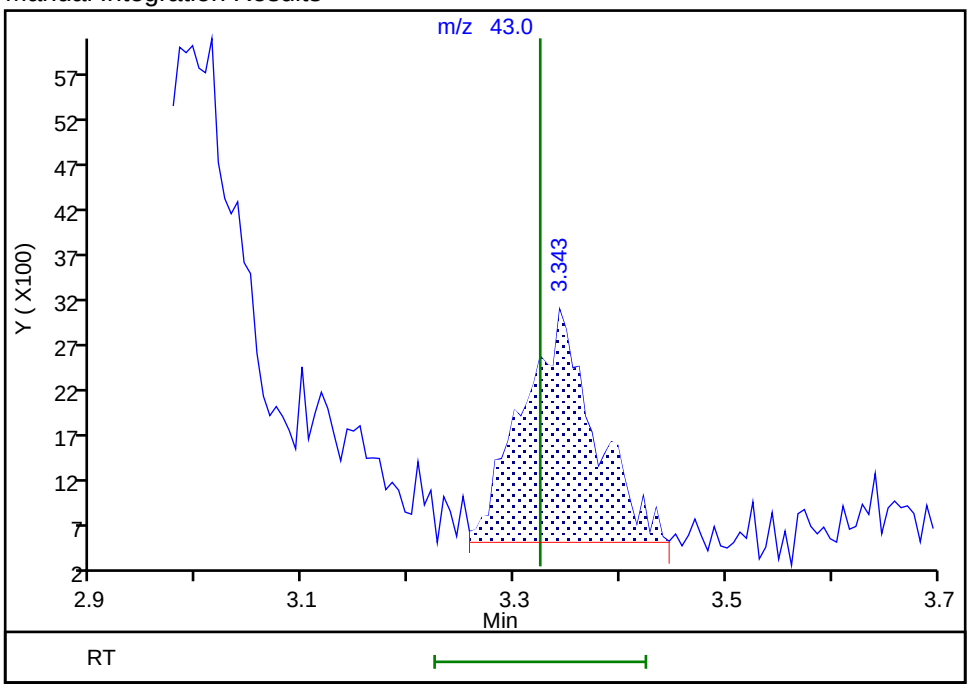
Processing Integration Results

RT: 3.34
Area: 12862
Amount: 0.462281
Amount Units: ug/l



Manual Integration Results

RT: 3.34
Area: 12338
Amount: 0.466516
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:40:13 -04:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

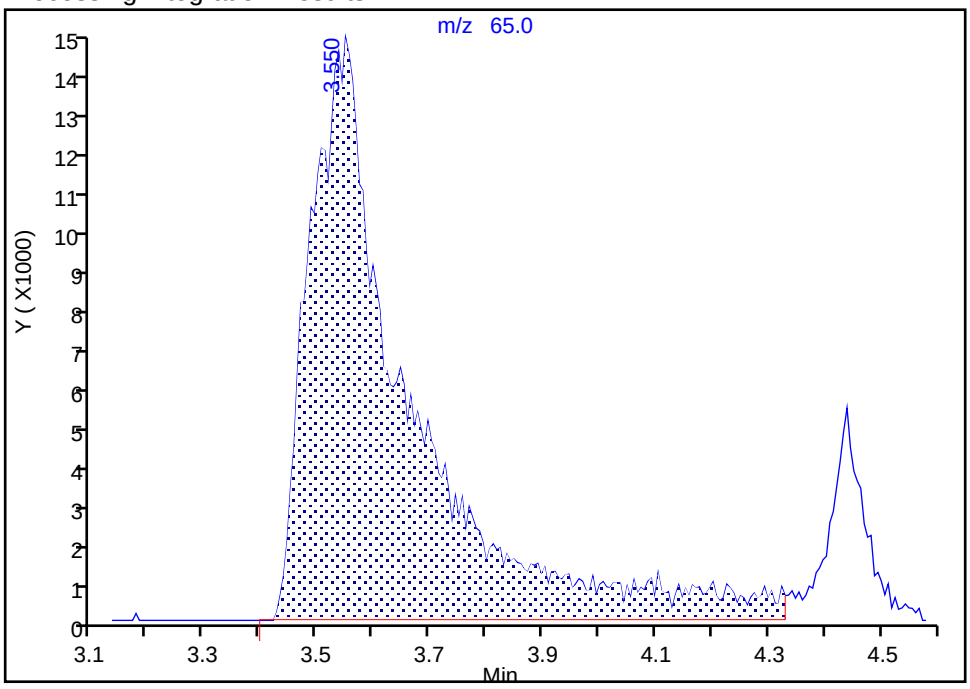
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X13.D				
Injection Date:	10-Jul-2023 19:51:30	Instrument ID:	10193		
Lims ID:	IC std2 0.5				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

* 31 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

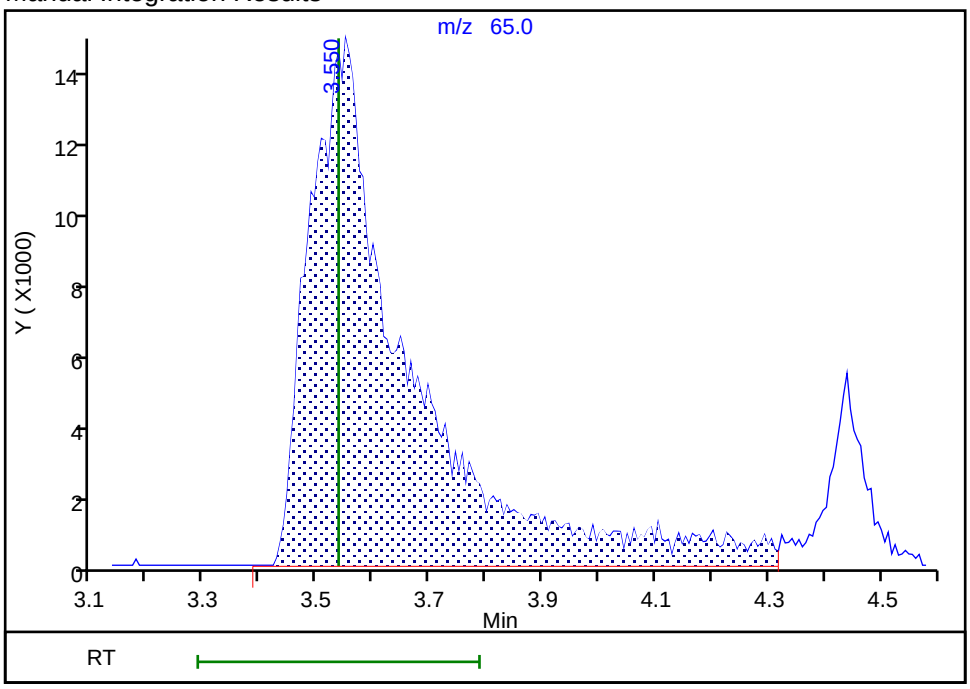
Processing Integration Results

RT: 3.55
Area: 177221
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 3.55
Area: 176691
Amount: 50.000000
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:45:34 -04:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

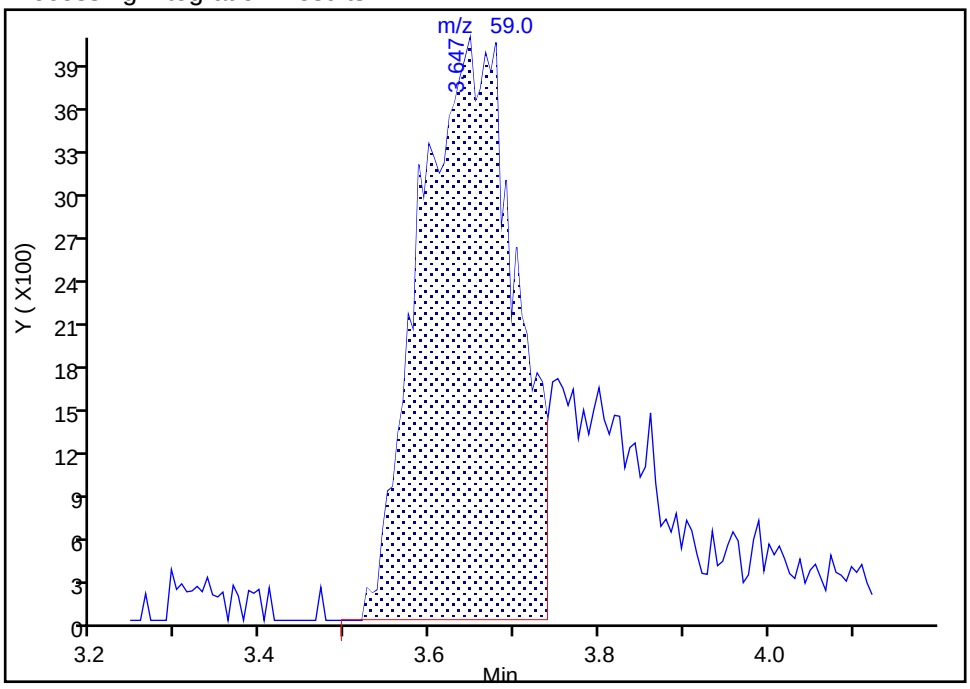
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X13.D				
Injection Date:	10-Jul-2023 19:51:30	Instrument ID:	10193		
Lims ID:	IC std2 0.5				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

32 2-Methyl-2-propanol, CAS: 75-65-0

Signal: 1

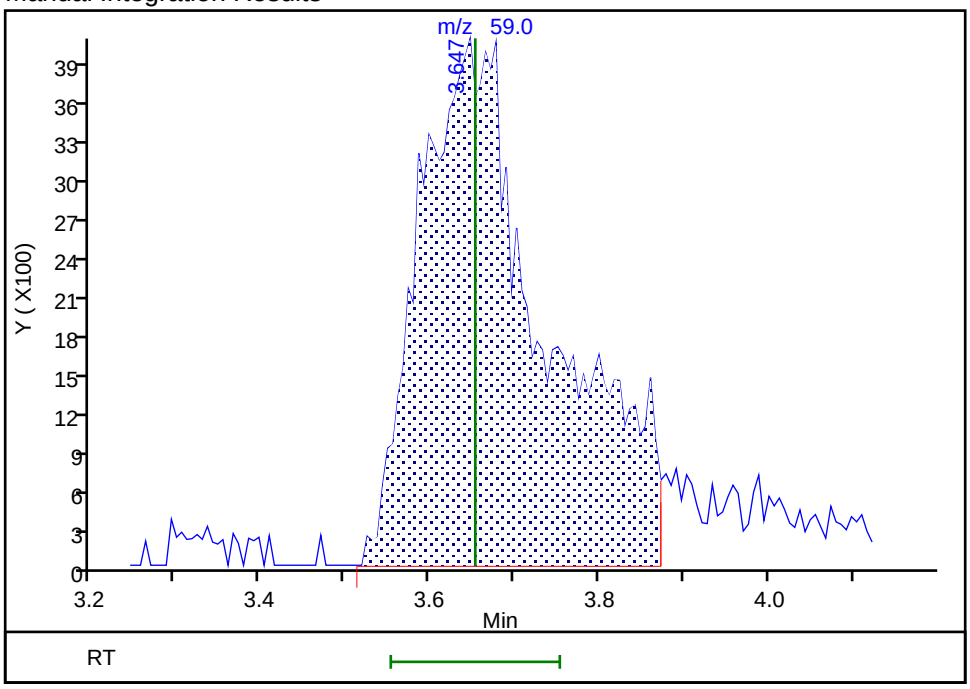
Processing Integration Results

RT: 3.65
Area: 32448
Amount: 7.907292
Amount Units: ug/l



Manual Integration Results

RT: 3.65
Area: 43294
Amount: 11.670048
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:41:01 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

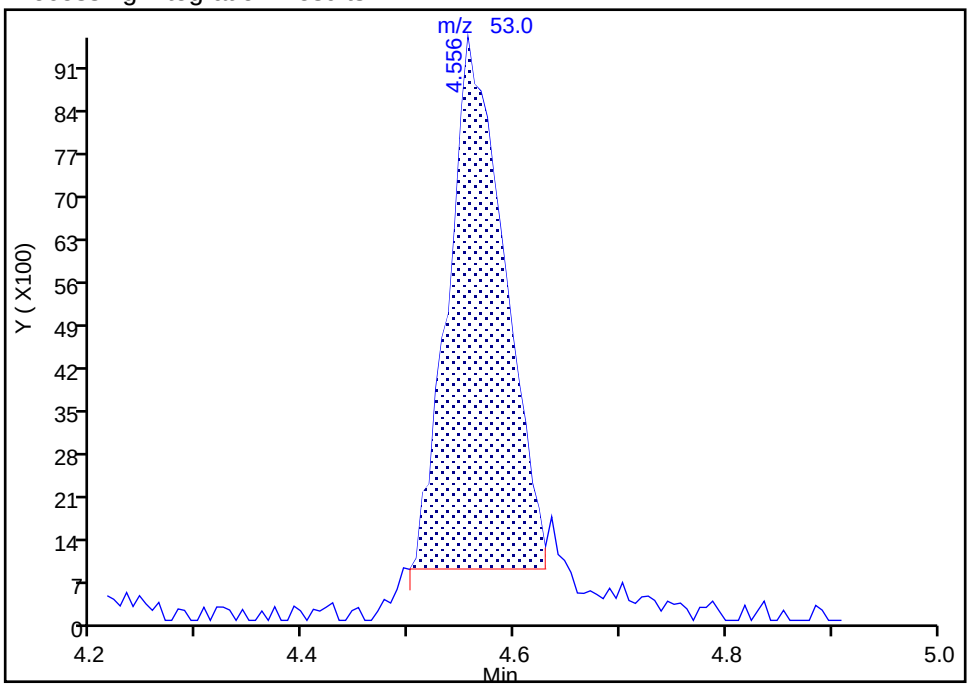
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X13.D				
Injection Date:	10-Jul-2023 19:51:30	Instrument ID:	10193		
Lims ID:	IC std2 0.5				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

40 2-Chloro-1,3-butadiene, CAS: 126-99-8

Signal: 1

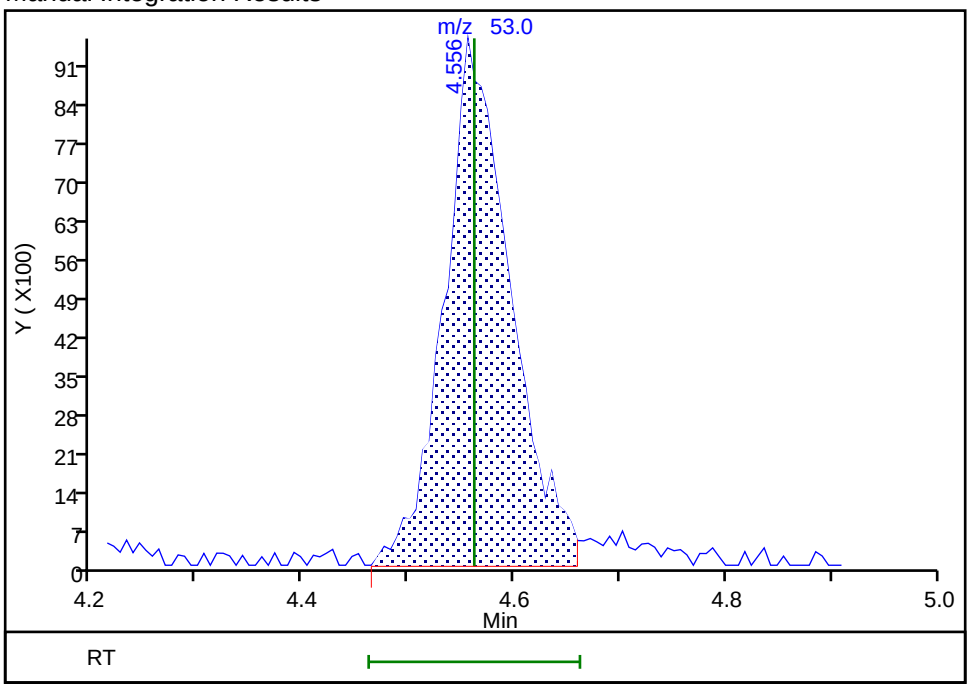
Processing Integration Results

RT: 4.56
Area: 32225
Amount: 0.379726
Amount Units: ug/l



Manual Integration Results

RT: 4.56
Area: 41584
Amount: 0.475041
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:41:23 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

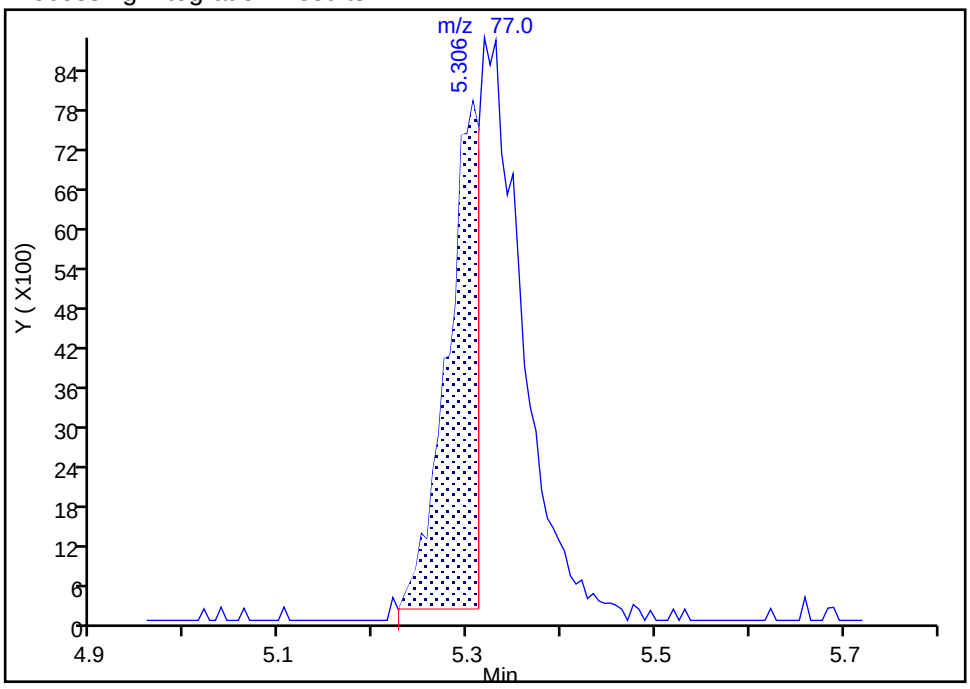
Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X13.D
Injection Date: 10-Jul-2023 19:51:30 Instrument ID: 10193
Lims ID: IC std2 0.5
Client ID:
Operator ID: knk41612 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

44 2,2-Dichloropropane, CAS: 594-20-7

Signal: 1

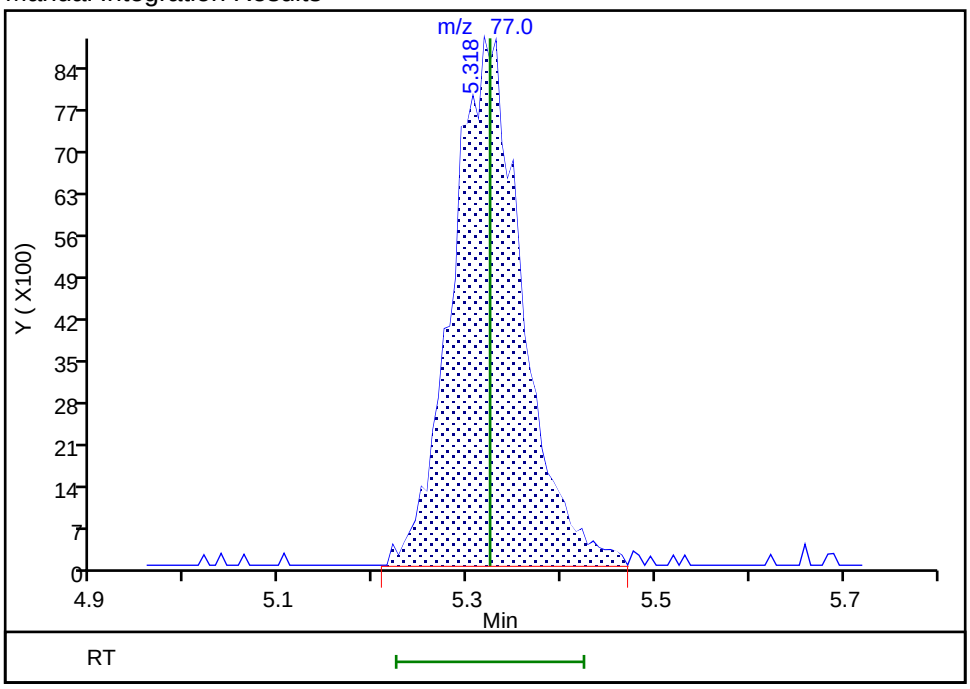
Processing Integration Results

RT: 5.31
Area: 18263
Amount: 0.218773
Amount Units: ug/l



Manual Integration Results

RT: 5.32
Area: 45793
Amount: 0.501320
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:41:32 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

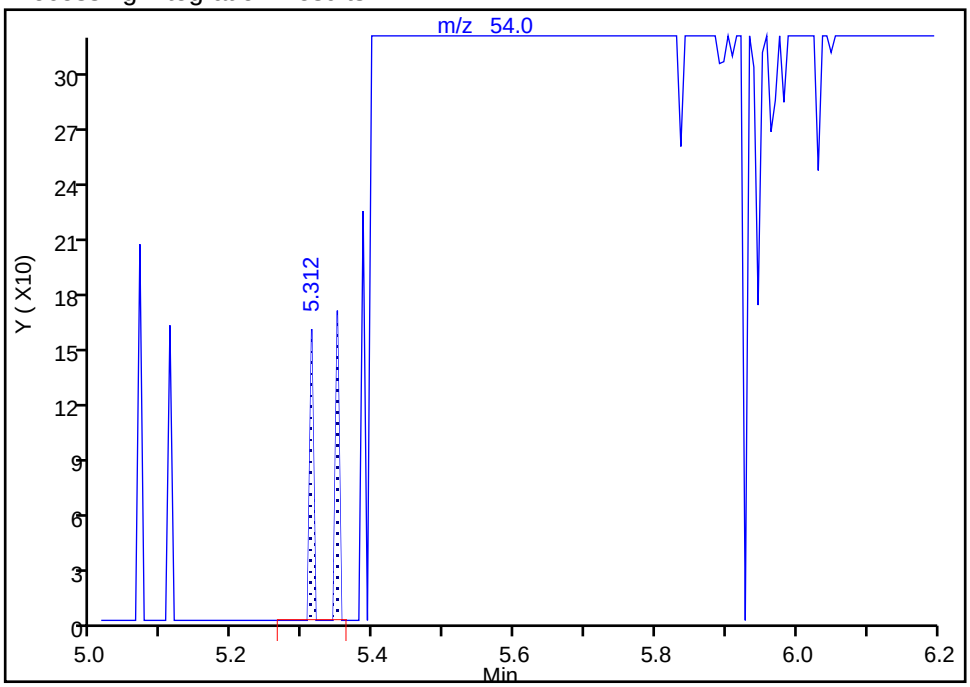
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X13.D				
Injection Date:	10-Jul-2023 19:51:30	Instrument ID:	10193		
Lims ID:	IC std2 0.5				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

45 Propionitrile, CAS: 107-12-0

Signal: 1

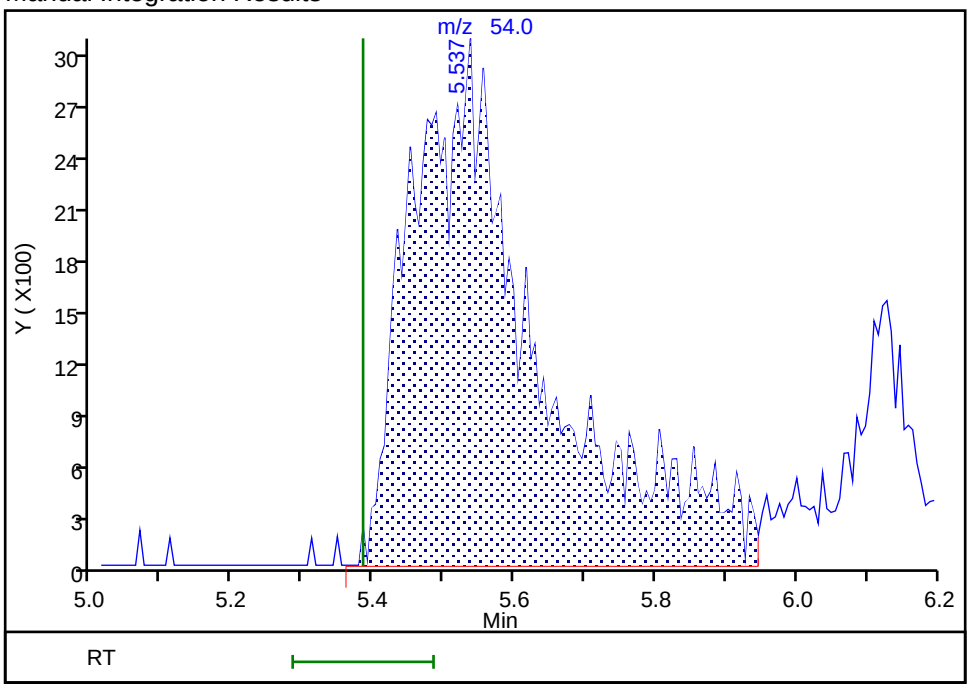
Processing Integration Results

RT: 5.31
Area: 119
Amount: 0.033122
Amount Units: ug/l



Manual Integration Results

RT: 5.54
Area: 38088
Amount: 10.390357
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:41:35 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

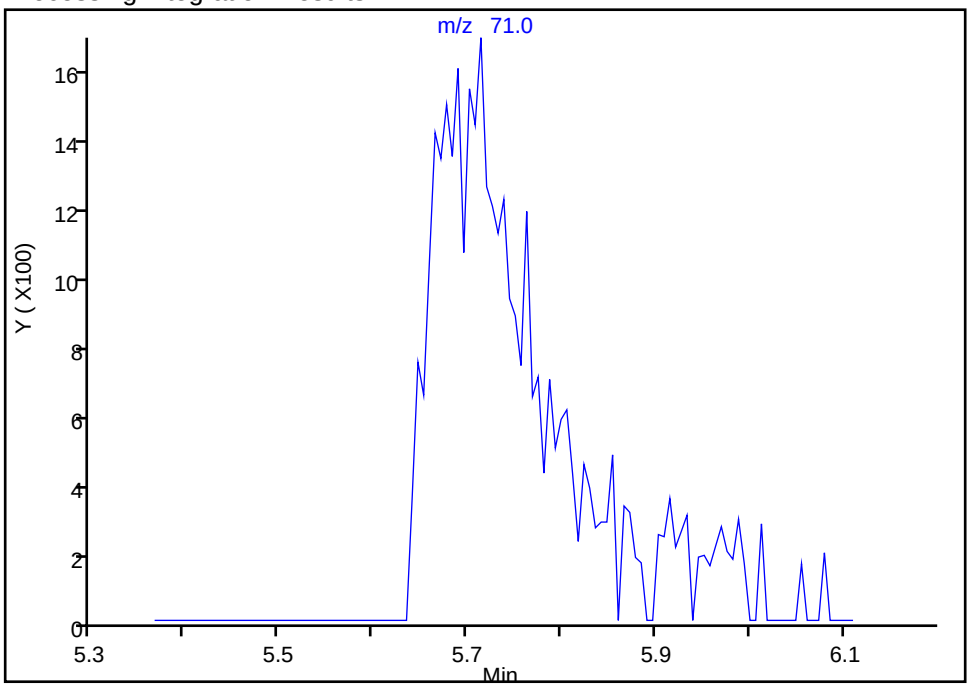
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X13.D				
Injection Date:	10-Jul-2023 19:51:30	Instrument ID:	10193		
Lims ID:	IC std2 0.5				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

49 Tetrahydrofuran, CAS: 109-99-9

Signal: 1

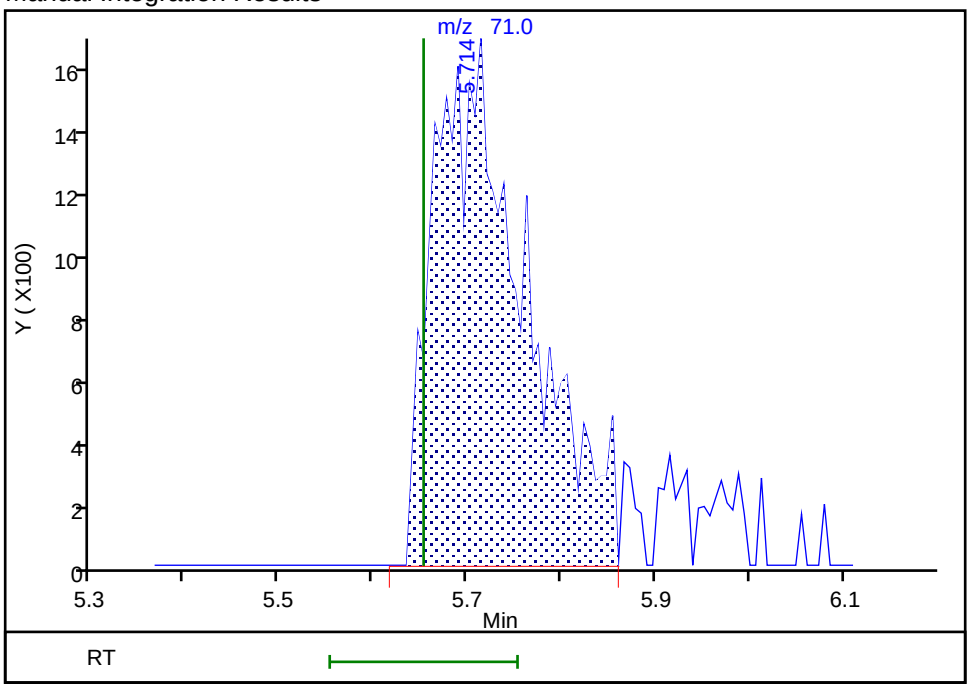
Not Detected
Expected RT: 5.65

Processing Integration Results



Manual Integration Results

RT: 5.71
Area: 11030
Amount: 2.287299
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:41:45 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

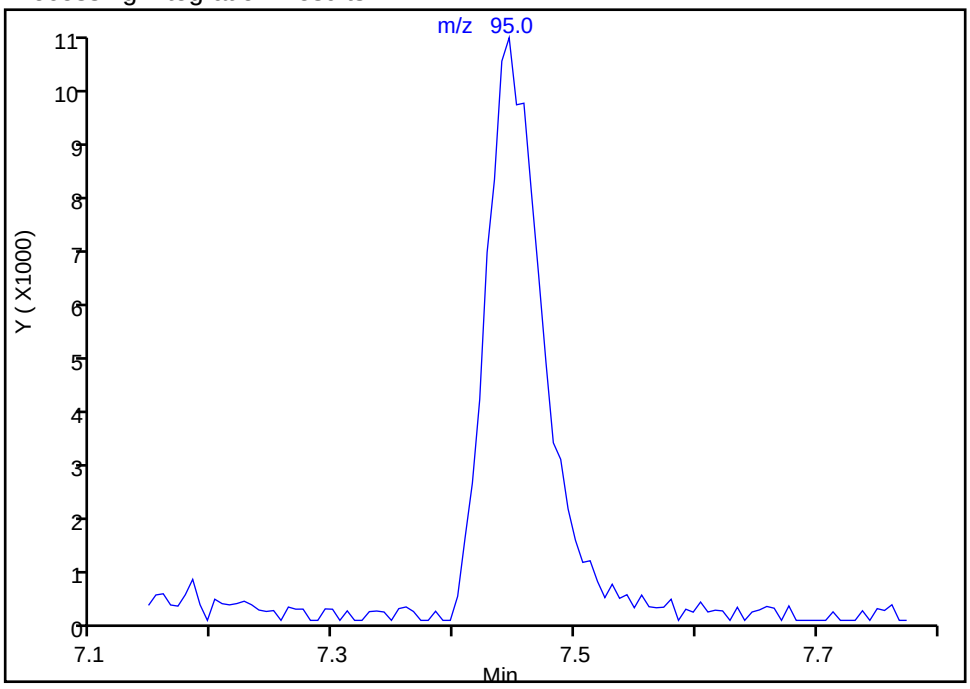
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X13.D				
Injection Date:	10-Jul-2023 19:51:30	Instrument ID:	10193		
Lims ID:	IC std2 0.5				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

68 Trichloroethene, CAS: 79-01-6

Signal: 1

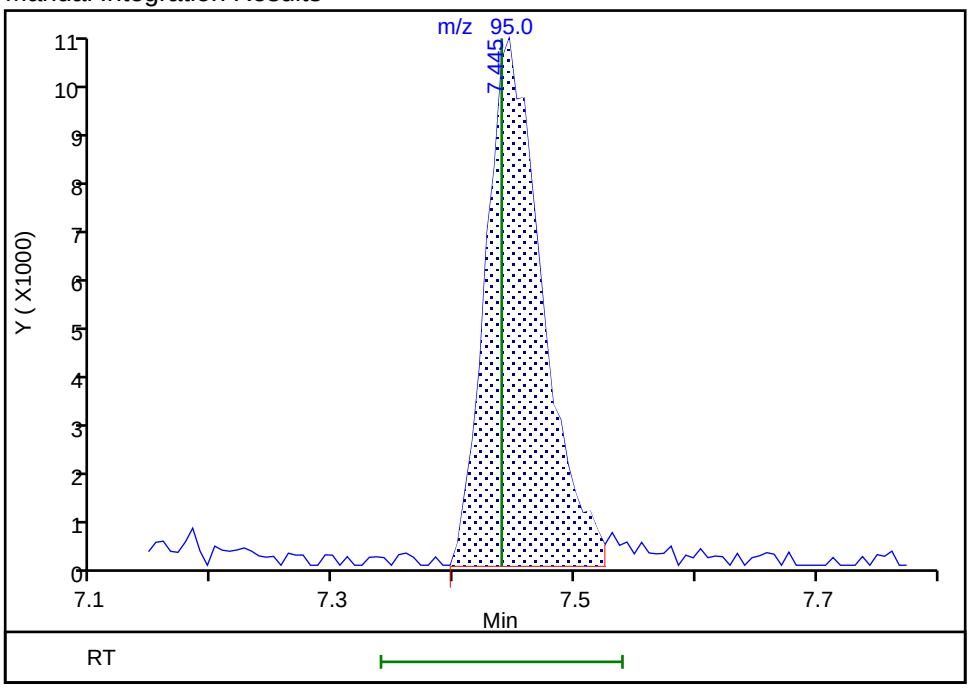
Not Detected
Expected RT: 7.44

Processing Integration Results



Manual Integration Results

RT: 7.45
Area: 34902
Amount: 0.498618
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:42:27 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

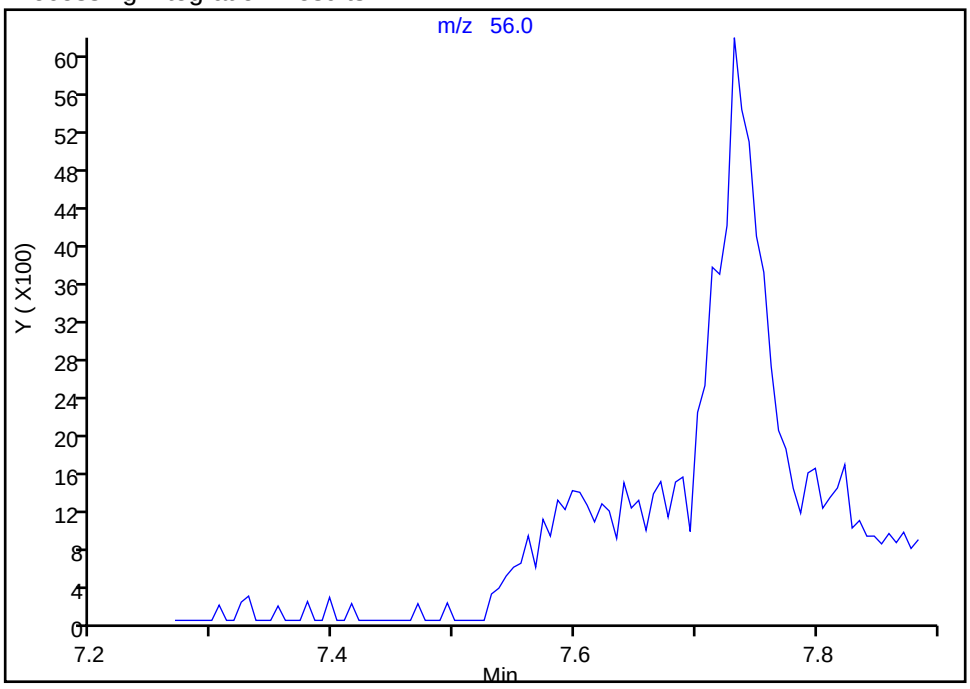
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X13.D				
Injection Date:	10-Jul-2023 19:51:30	Instrument ID:	10193		
Lims ID:	IC std2 0.5				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

67 n-Butanol, CAS: 71-36-3

Signal: 1

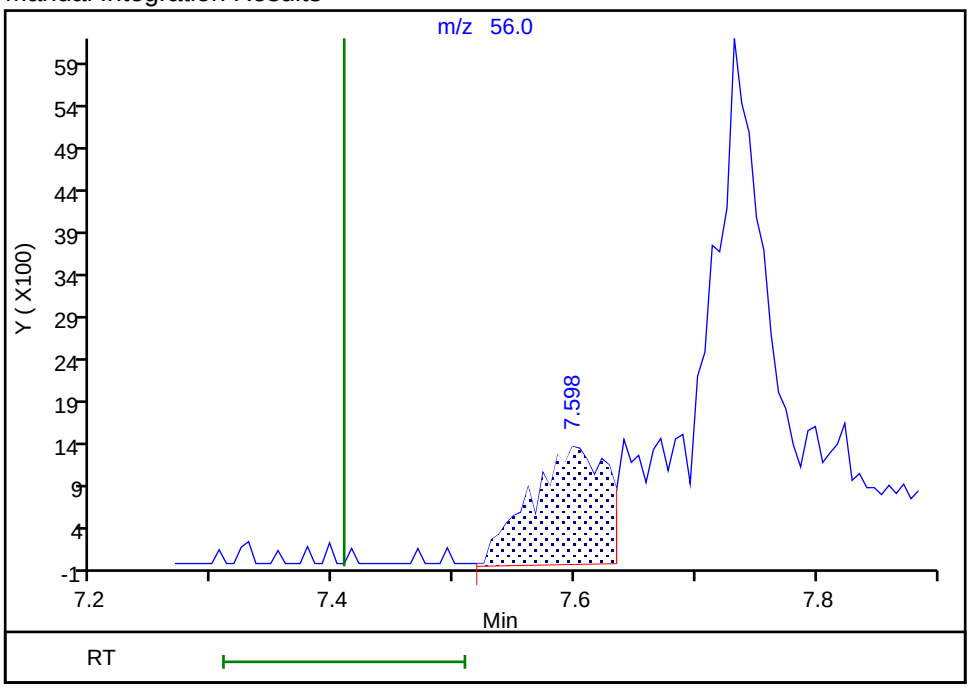
Not Detected
Expected RT: 7.41

Processing Integration Results



Manual Integration Results

RT: 7.60
Area: 6030
Amount: 55.049542
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:42:20 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

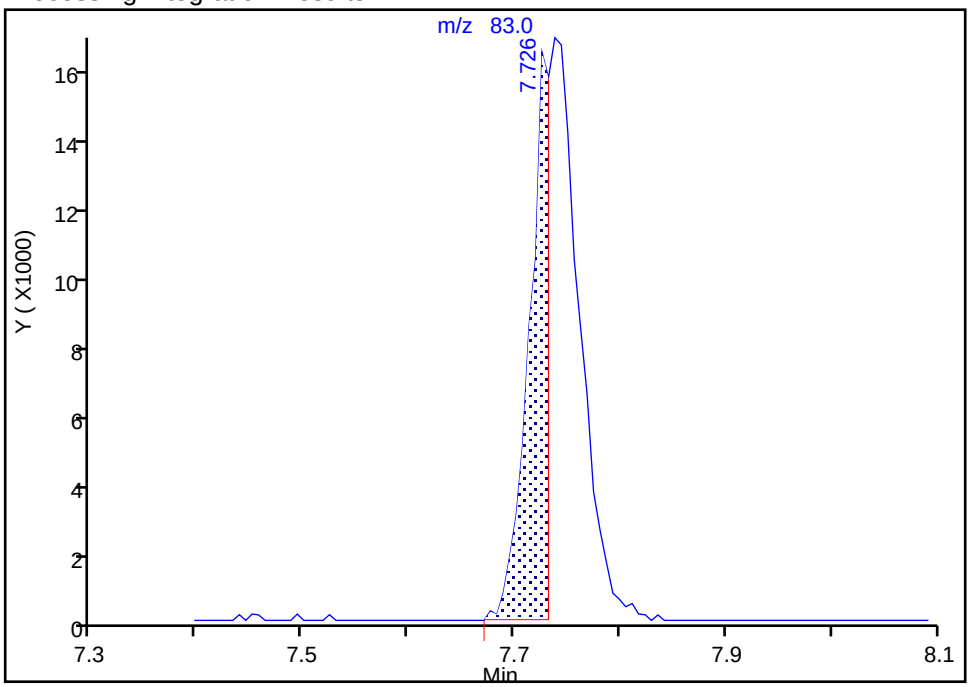
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X13.D				
Injection Date:	10-Jul-2023 19:51:30	Instrument ID:	10193		
Lims ID:	IC std2 0.5				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

69 Methylcyclohexane, CAS: 108-87-2

Signal: 1

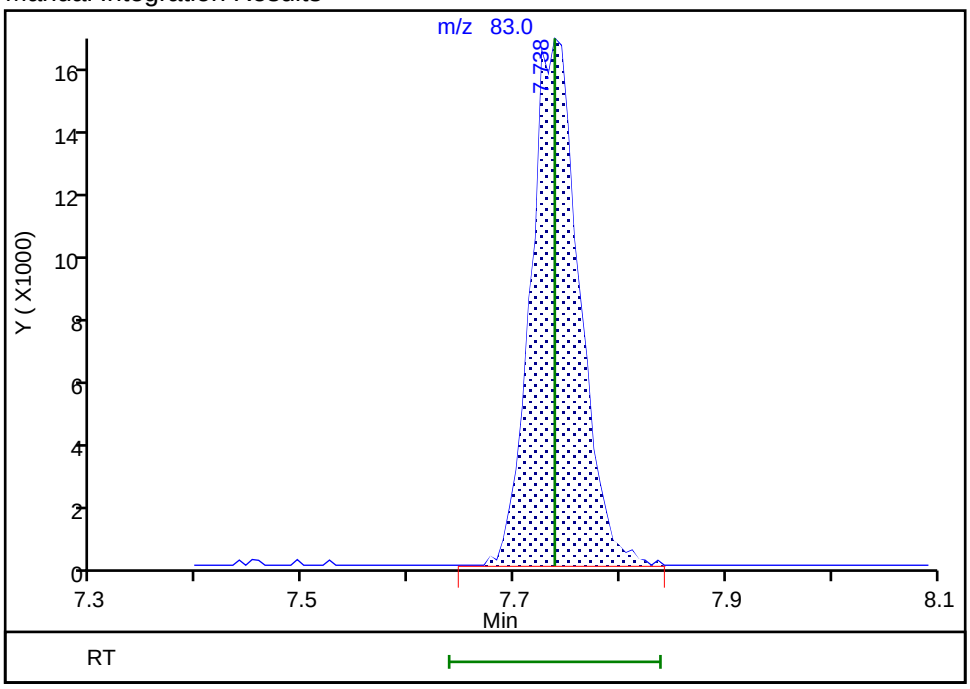
Processing Integration Results

RT: 7.73
Area: 21872
Amount: 0.208085
Amount Units: ug/l



Manual Integration Results

RT: 7.74
Area: 51270
Amount: 0.451676
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:42:34 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

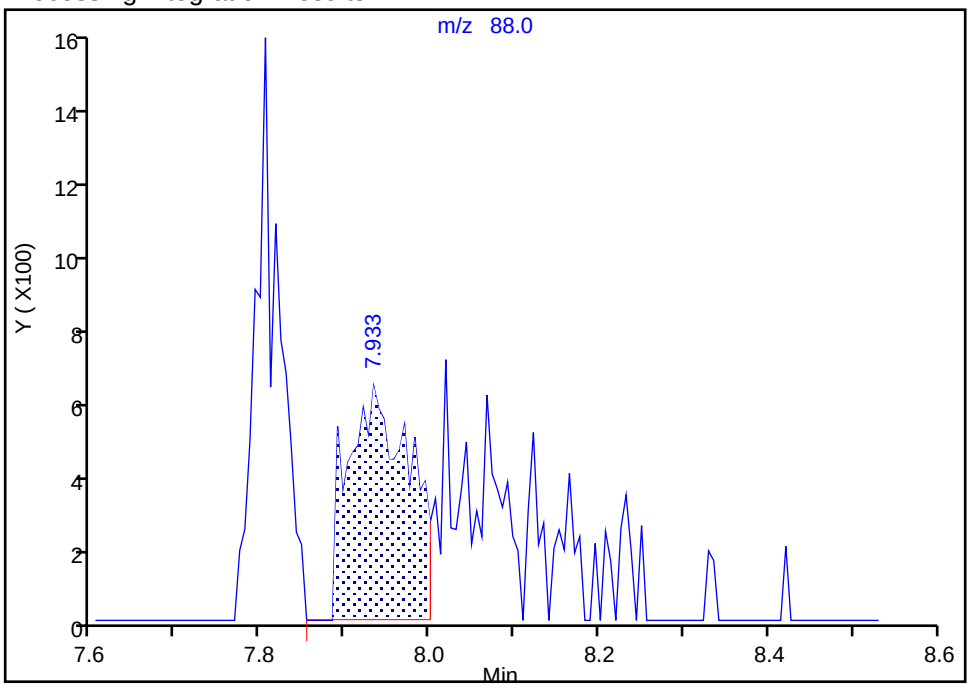
Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X13.D
Injection Date: 10-Jul-2023 19:51:30 Instrument ID: 10193
Lims ID: IC std2 0.5
Client ID:
Operator ID: knk41612 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

74 1,4-Dioxane, CAS: 123-91-1

Signal: 1

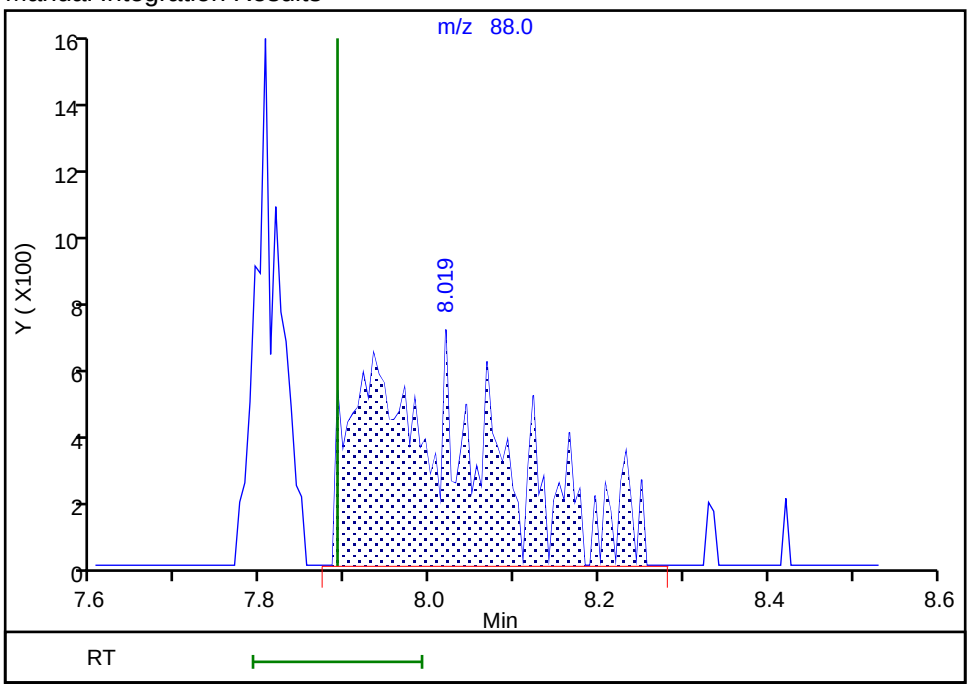
Processing Integration Results

RT: 7.93
Area: 3147
Amount: 11.599670
Amount Units: ug/l



Manual Integration Results

RT: 8.02
Area: 6777
Amount: 23.787591
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:42:40 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

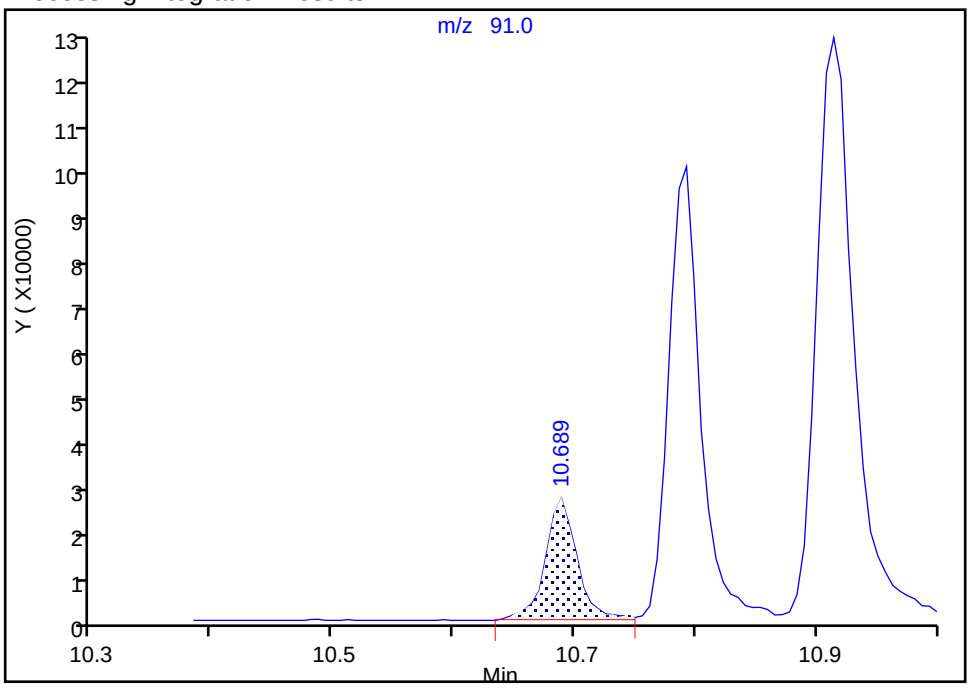
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X13.D				
Injection Date:	10-Jul-2023 19:51:30	Instrument ID:	10193		
Lims ID:	IC std2 0.5				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

112 1-Chlorohexane, CAS: 544-10-5

Signal: 1

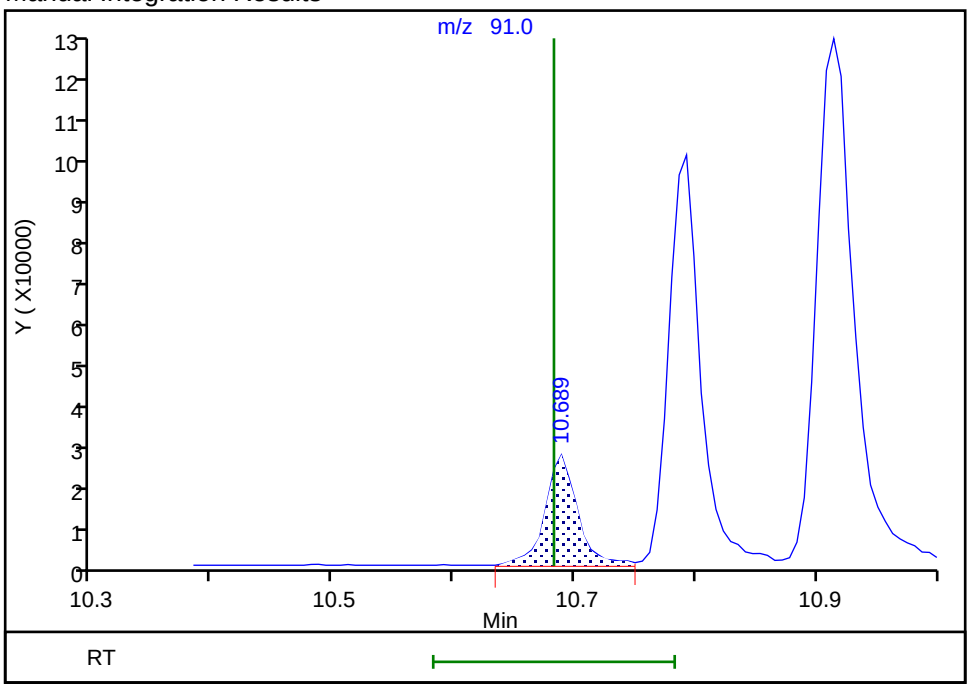
Processing Integration Results

RT: 10.69
Area: 47421
Amount: 0.484310
Amount Units: ug/l



Manual Integration Results

RT: 10.69
Area: 47421
Amount: 0.484310
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:43:14 -04:00:00 (UTC)

Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X14.D
Lims ID: IC std3 1
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 10-Jul-2023 20:13:30 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0088548-015
Misc. Info.: IC STD3 1
Operator ID: knk41612 Instrument ID: 10193
Sublist: chrom-MSV_10193_25mL*sub1

Method: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 11-Jul-2023 21:38:07 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1649

First Level Reviewer: DVW2 Date: 11-Jul-2023 08:45:24

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.678	1.684	-0.006	100	66700	1.00	1.10	M
5 Chloromethane	50	1.843	1.849	-0.006	99	74670	1.00	0.9750	M
6 Vinyl chloride	62	1.928	1.934	-0.006	70	75846	1.00	1.04	
7 Butadiene	39	1.934	1.940	-0.006	91	76904	1.00	1.09	
9 Bromomethane	94	2.209	2.209	0.000	90	57728	1.00	1.01	
10 Chloroethane	64	2.264	2.270	-0.006	99	45126	1.00	1.05	
11 Dichlorofluoromethane	67	2.459	2.471	-0.012	97	119579	1.00	1.02	
13 Pentane	43	2.520	2.526	-0.006	96	85241	1.00	1.02	
12 Trichlorofluoromethane	101	2.532	2.532	0.000	96	89976	1.00	1.09	
14 Ethyl ether	59	2.696	2.702	-0.006	91	45496	1.00	0.9669	
16 1,2-Dichloro-1,1,2-trifluoroetha	67	2.782	2.788	-0.006	90	66138	1.00	1.02	
17 Acrolein	56	2.849	2.843	0.006	99	282347	50.0	46.8	
18 1,1-Dichloroethene	96	2.952	2.952	0.000	95	54226	1.00	1.01	
20 Acetone	43	3.007	2.977	0.030	81	75795	10.0	9.87	
21 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.001	3.001	0.000	89	56573	1.00	1.07	
22 Iodomethane	142	3.105	3.117	-0.012	97	113310	1.00	0.9866	
24 Isopropyl alcohol	45	3.099	3.117	-0.018	34	35308	20.0	18.1	
23 Ethyl bromide	108	3.129	3.135	-0.006	95	49690	1.00	0.9521	
25 Carbon disulfide	76	3.196	3.202	-0.006	100	190278	1.00	1.01	
26 Methyl acetate	43	3.330	3.324	0.006	24	24801	1.00	1.02	M
29 3-Chloro-1-propene	41	3.336	3.336	0.000	94	95453	1.00	1.01	
30 Methylene Chloride	84	3.489	3.495	-0.006	91	65001	1.00	0.9722	
* 31 t-Butyl alcohol-d10 (IS)	65	3.550	3.538	0.012	92	161736	50.0	50.0	
32 2-Methyl-2-propanol	59	3.635	3.653	-0.018	94	67927	20.0	20.0	
33 Acrylonitrile	53	3.818	3.788	0.030	29	24716	2.50	2.29	
35 trans-1,2-Dichloroethene	96	3.830	3.830	0.000	99	63602	1.00	0.9797	
34 Methyl tert-butyl ether	73	3.824	3.830	-0.006	91	167827	1.00	0.9755	
36 Hexane	57	4.202	4.208	-0.006	92	85835	1.00	1.04	
37 1,1-Dichloroethane	63	4.440	4.446	-0.006	95	110868	1.00	0.9736	
39 Isopropyl ether	45	4.507	4.513	-0.006	94	211714	1.00	0.9870	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
40 2-Chloro-1,3-butadiene	53	4.556	4.562	-0.006	88	85268	1.00	0.9785	
41 Tert-butyl ethyl ether	59	5.062	5.074	-0.012	98	192959	1.00	0.9724	
42 2-Butanone (MEK)	43	5.306	5.281	0.025	97	145034	10.0	9.67	
43 cis-1,2-Dichloroethene	96	5.312	5.312	0.000	81	69642	1.00	1.00	
44 2,2-Dichloropropane	77	5.318	5.324	-0.006	73	89305	1.00	0.9821	
45 Propionitrile	54	5.434	5.385	0.049	92	62487	20.0	18.6	
47 Methacrylonitrile	67	5.610	5.592	0.018	91	164374	10.0	10.4	
49 Tetrahydrofuran	71	5.684	5.653	0.031	82	22233	5.00	5.04	
48 Chlorobromomethane	128	5.653	5.653	0.000	90	33818	1.00	1.01	
50 Chloroform	83	5.812	5.818	-0.006	93	111067	1.00	0.9856	
53 1,1,1-Trichloroethane	97	6.025	6.037	-0.012	43	94975	1.00	1.00	
$ 54 Dibromofluoromethane (Surr)	113	6.037	6.037	0.000	94	570123	10.0	9.92	
55 Cyclohexane	56	6.129	6.123	0.007	90	108733	1.00	1.02	
S 52 1,2-Dichloroethene, Total	100				0			1.98	
56 Carbon tetrachloride	117	6.238	6.244	-0.006	96	81461	1.00	0.99	
57 1,1-Dichloropropene	75	6.257	6.257	0.000	95	81971	1.00	0.9642	
58 Isobutyl alcohol	41	6.519	6.482	0.037	36	36009	50.0	55.0	
$ 59 1,2-Dichloroethane-d4 (Surr)	102	6.501	6.507	-0.007	99	121568	10.0	10.0	
60 Benzene	78	6.525	6.525	0.000	93	270063	1.00	0.99	
61 1,2-Dichloroethane	62	6.598	6.598	0.000	96	66663	1.00	0.9626	
64 Tert-amyl methyl ether	73	6.732	6.738	-0.006	99	180408	1.00	0.9733	
* 65 Fluorobenzene (IS)	96	6.946	6.952	-0.006	99	2458760	10.0	10.0	
66 n-Heptane	43	6.958	6.964	-0.006	39	88923	1.00	0.99	
67 n-Butanol	56	7.531	7.409	0.122	89	29274	87.5	79.6	M
68 Trichloroethene	95	7.439	7.439	0.000	95	69577	1.00	1.00	
69 Methylcyclohexane	83	7.738	7.738	0.000	88	115334	1.00	1.02	
70 1,2-Dichloropropane	63	7.775	7.775	0.000	98	70545	1.00	0.9858	
71 2-ethoxy-2-methyl butane	87	7.811	7.811	0.000	94	108892	1.00	0.9796	
72 Dibromomethane	93	7.903	7.890	0.013	93	33838	1.00	1.02	
74 1,4-Dioxane	88	7.909	7.890	0.019	46	13360	50.0	51.2	M
73 Methyl methacrylate	69	7.915	7.897	0.018	92	28761	1.00	0.9276	
76 Dichlorobromomethane	83	8.147	8.140	0.007	99	81123	1.00	0.9811	
77 2-Nitropropane	41	8.427	8.427	0.000	98	42170	5.00	5.00	
78 1-Bromo-2-chloroethane	63	8.543	8.531	0.012	98	68353	1.00	0.9425	
80 cis-1,3-Dichloropropene	75	8.726	8.720	0.006	97	101962	1.00	1.00	
82 4-Methyl-2-pentanone (MIBK)	43	8.933	8.927	0.006	97	424094	10.0	9.94	
$ 83 Toluene-d8 (Surr)	98	9.055	9.055	0.000	93	2547837	10.0	10.0	
84 Toluene	92	9.140	9.140	0.000	98	178853	1.00	0.9878	
85 trans-1,3-Dichloropropene	75	9.469	9.457	0.012	91	80917	1.00	0.9564	
86 Ethyl methacrylate	69	9.549	9.543	0.006	89	61847	1.00	0.9178	
87 1,1,2-Trichloroethane	97	9.677	9.677	0.000	89	53864	1.00	1.00	
88 Tetrachloroethene	166	9.762	9.756	0.006	96	86534	1.00	0.99	
89 1,3-Dichloropropane	76	9.854	9.847	0.007	89	84655	1.00	0.9850	
106 2-Hexanone	43	9.939	9.927	0.012	96	247071	10.0	8.49	
S 107 1,3-Dichloropropene, Total	100				0			1.95	
108 Chlorodibromomethane	129	10.079	10.079	0.000	90	65784	1.00	1.00	
110 Ethylene Dibromide	107	10.195	10.189	0.006	100	45500	1.00	0.9460	
* 111 Chlorobenzene-d5 (IS)	117	10.658	10.658	0.000	85	1932452	10.0	10.0	
113 Chlorobenzene	112	10.689	10.683	0.006	96	215314	1.00	0.9823	
112 1-Chlorohexane	91	10.689	10.683	0.006	91	96320	1.00	0.9817	
114 1,1,1,2-Tetrachloroethane	131	10.780	10.780	0.000	95	71811	1.00	0.9829	
115 Ethylbenzene	91	10.786	10.786	0.000	97	345945	1.00	1.00	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
116 m-Xylene & p-Xylene	106	10.914	10.908	0.006	97	273431	2.00	1.96	
S 117 Xylenes, Total	106				0			2.93	
118 o-Xylene	106	11.256	11.256	0.000	96	135623	1.00	0.9699	
119 Styrene	104	11.280	11.274	0.006	94	207571	1.00	0.9553	
120 Bromoform	173	11.432	11.426	0.006	97	41289	1.00	0.9868	
121 Isopropylbenzene	105	11.573	11.573	0.000	95	347437	1.00	0.9860	
$ 124 4-Bromofluorobenzene (Surr)	95	11.719	11.719	0.000	96	905538	10.0	9.97	
125 Bromobenzene	156	11.835	11.829	0.006	95	95117	1.00	0.9832	
126 1,1,2,2-Tetrachloroethane	83	11.835	11.835	0.000	91	69638	1.00	1.00	
127 trans-1,4-Dichloro-2-butene	53	11.865	11.859	0.006	91	142291	10.0	9.30	
128 1,2,3-Trichloropropane	110	11.878	11.877	0.001	75	17478	1.00	0.9774	
129 N-Propylbenzene	91	11.914	11.914	0.000	99	409467	1.00	0.9671	
130 2-Chlorotoluene	126	11.987	11.987	0.000	98	93392	1.00	1.01	
131 1,3,5-Trimethylbenzene	105	12.060	12.060	0.000	94	300547	1.00	0.9570	
132 4-Chlorotoluene	126	12.091	12.085	0.006	96	94866	1.00	1.01	
133 tert-Butylbenzene	134	12.304	12.304	0.000	93	72018	1.00	0.9770	
134 Pentachloroethane	167	12.329	12.329	0.000	91	55991	1.00	0.9583	
135 1,2,4-Trimethylbenzene	105	12.353	12.347	0.006	96	311294	1.00	0.9653	
136 sec-Butylbenzene	105	12.475	12.469	0.006	93	392818	1.00	0.9824	
137 1,3-Dichlorobenzene	146	12.572	12.566	0.006	98	184273	1.00	0.9590	
138 4-Isopropyltoluene	119	12.585	12.585	0.000	97	349290	1.00	0.9858	
* 139 1,4-Dichlorobenzene-d4	152	12.627	12.627	0.000	92	1176004	10.0	10.0	
140 1,4-Dichlorobenzene	146	12.646	12.640	0.006	96	196607	1.00	0.99	
141 1,2,3-Trimethylbenzene	120	12.658	12.658	0.000	96	147335	1.00	0.9550	
142 Benzyl chloride	126	12.737	12.725	0.012	97	24527	1.00	0.8844	
145 p-Diethylbenzene	119	12.865	12.865	0.000	94	219067	1.00	0.9725	M
143 n-Butylbenzene	92	12.883	12.883	0.000	97	156711	1.00	0.9423	
144 1,2-Dichlorobenzene	146	12.914	12.908	0.006	99	180788	1.00	1.00	
148 1,2-Dibromo-3-Chloropropane	155	13.481	13.469	0.012	88	7710	1.00	0.8780	
149 1,3,5-Trichlorobenzene	180	13.597	13.591	0.006	97	143363	1.00	0.9628	
150 1,2,4-Trichlorobenzene	180	14.030	14.023	0.007	93	109715	1.00	0.9726	
151 Hexachlorobutadiene	225	14.109	14.103	0.006	94	63348	1.00	1.00	
152 Naphthalene	128	14.212	14.200	0.012	96	155697	1.00	0.8449	
153 1,2,3-Trichlorobenzene	180	14.353	14.347	0.007	96	80201	1.00	0.9382	
154 2-Methylnaphthalene	142	14.968	14.944	0.024	94	27858	1.00	0.6425	M

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

MSV_LL_#1_826_00084	Amount Added:	2.00	Units: uL	
MSV_LL_#2_826_00095	Amount Added:	2.00	Units: uL	
MSV_LL_GAS826_00159	Amount Added:	2.00	Units: uL	
MSV_HP25_ISSS_00073	Amount Added:	1.00	Units: uL	Run Reagent

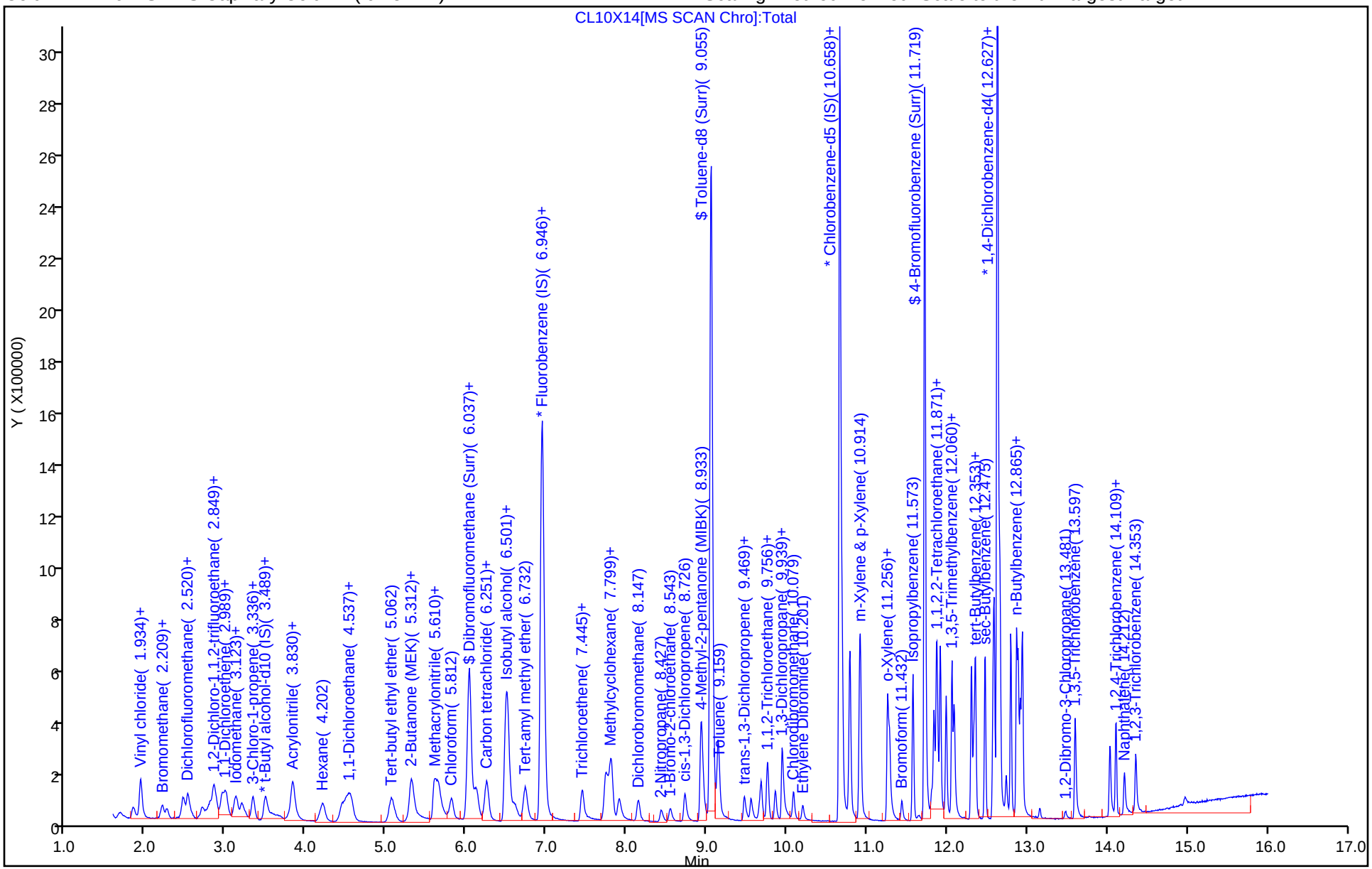
Report Date: 11-Jul-2023 21:38:08 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X14.D

Injection Date:	10-Jul-2023 20:13:30	Instrument ID:	10193	Operator ID:	knk41612
Lims ID:	IC std3 1			Worklist Smp#:	15
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

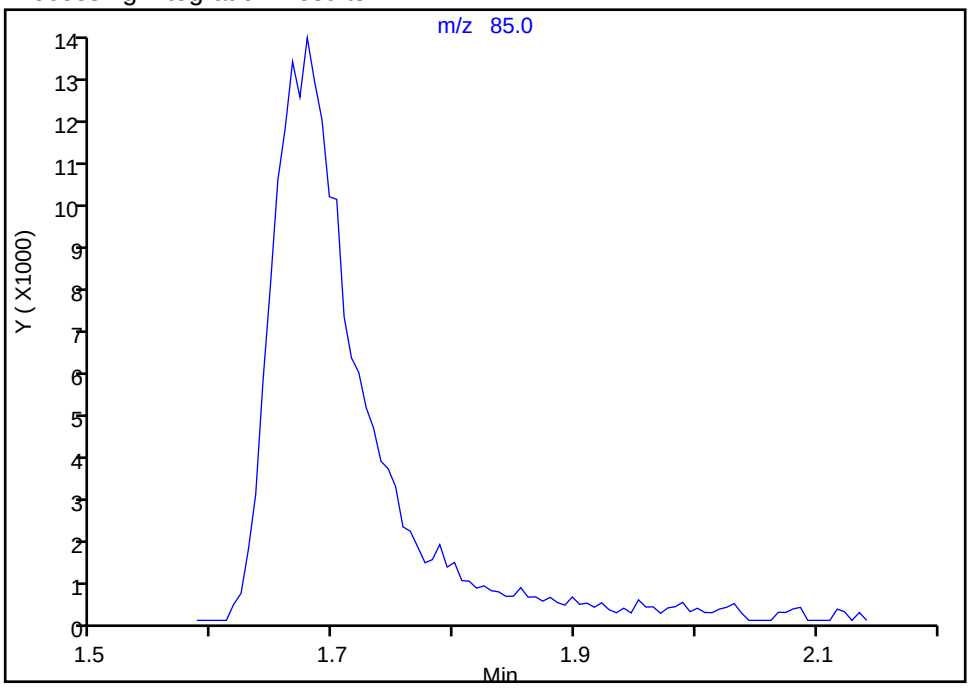
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X14.D				
Injection Date:	10-Jul-2023 20:13:30	Instrument ID:	10193		
Lims ID:	IC std3 1				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

2 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

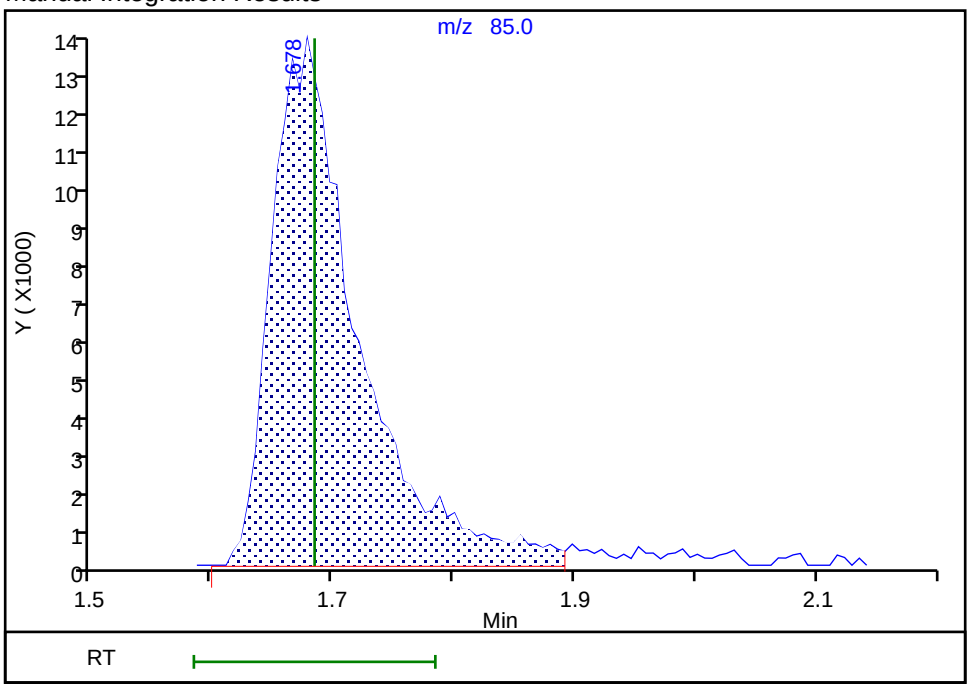
Not Detected
Expected RT: 1.68

Processing Integration Results



Manual Integration Results

RT: 1.68
Area: 66700
Amount: 1.103039
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:44:32 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

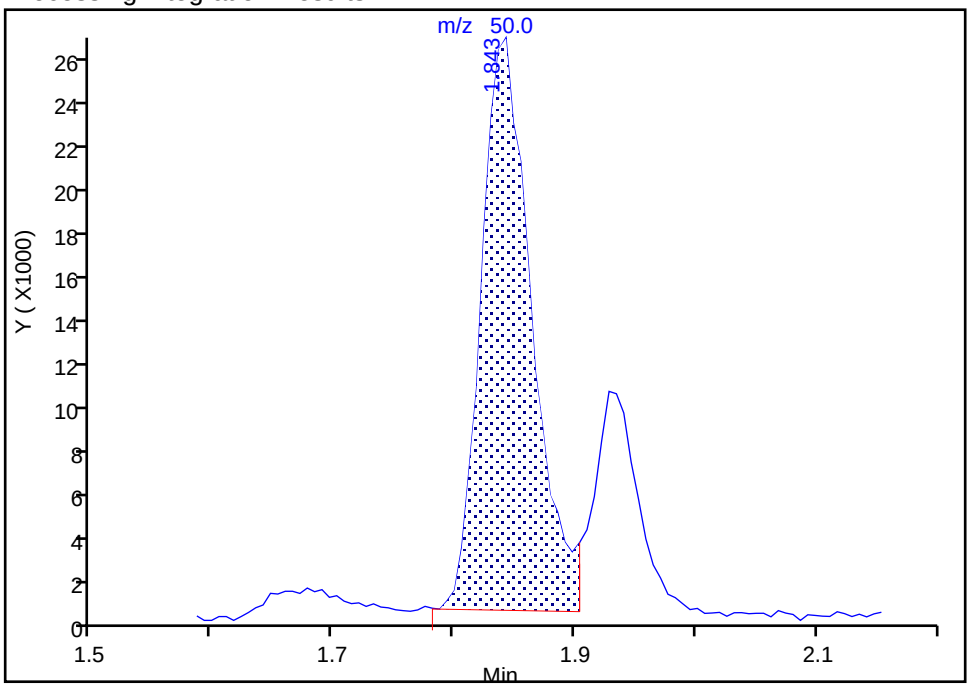
Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X14.D
Injection Date: 10-Jul-2023 20:13:30 Instrument ID: 10193
Lims ID: IC std3 1
Client ID:
Operator ID: knk41612 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

5 Chloromethane, CAS: 74-87-3

Signal: 1

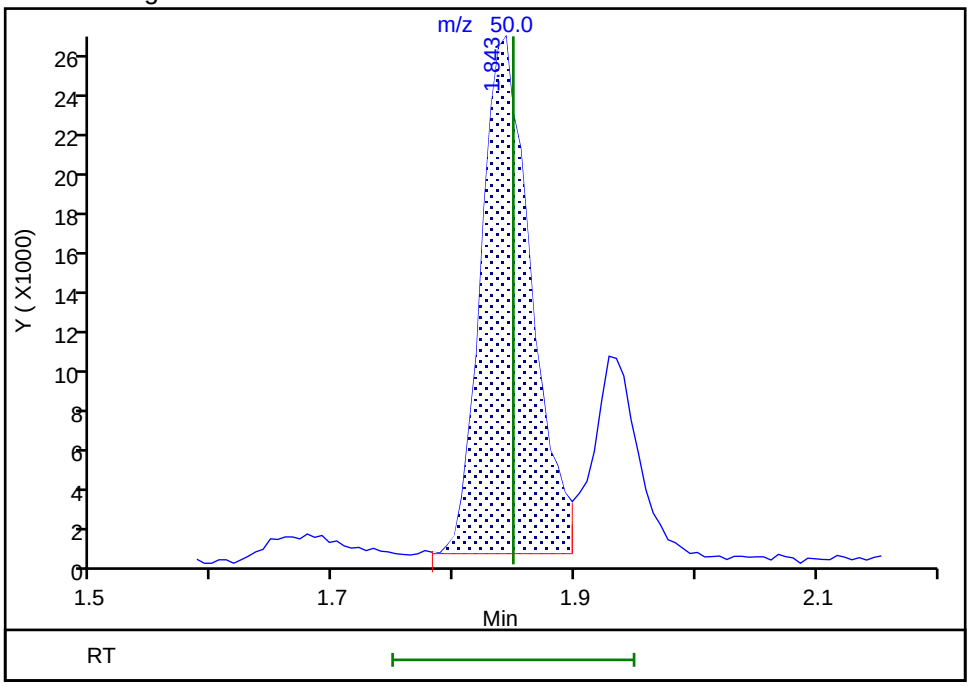
Processing Integration Results

RT: 1.84
Area: 75903
Amount: 0.988842
Amount Units: ug/l



Manual Integration Results

RT: 1.84
Area: 74670
Amount: 0.975016
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:44:46 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

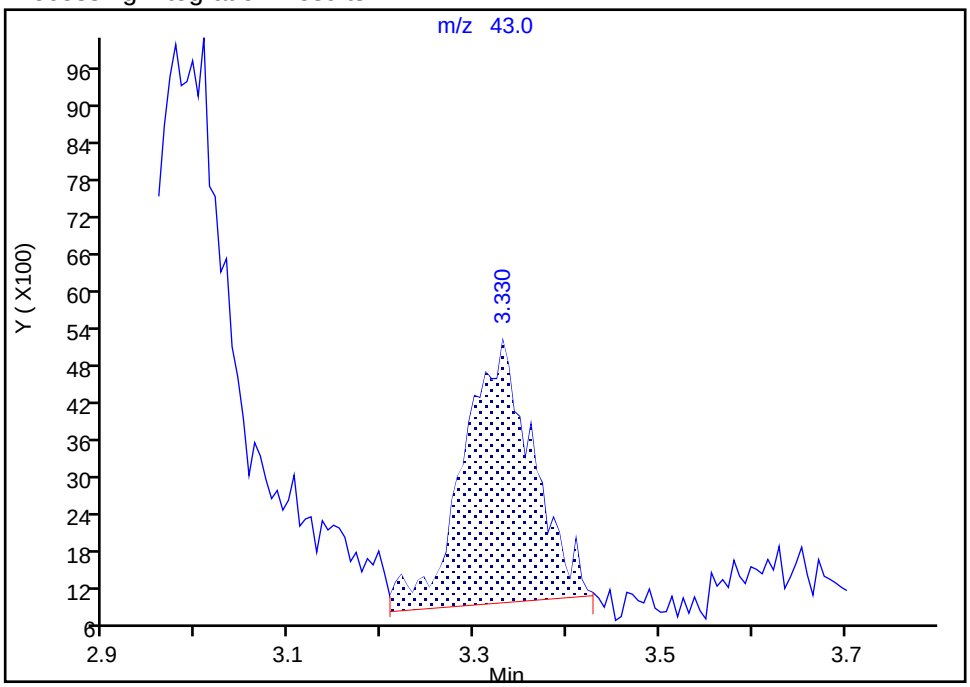
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X14.D				
Injection Date:	10-Jul-2023 20:13:30	Instrument ID:	10193		
Lims ID:	IC std3 1				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

26 Methyl acetate, CAS: 79-20-9

Signal: 1

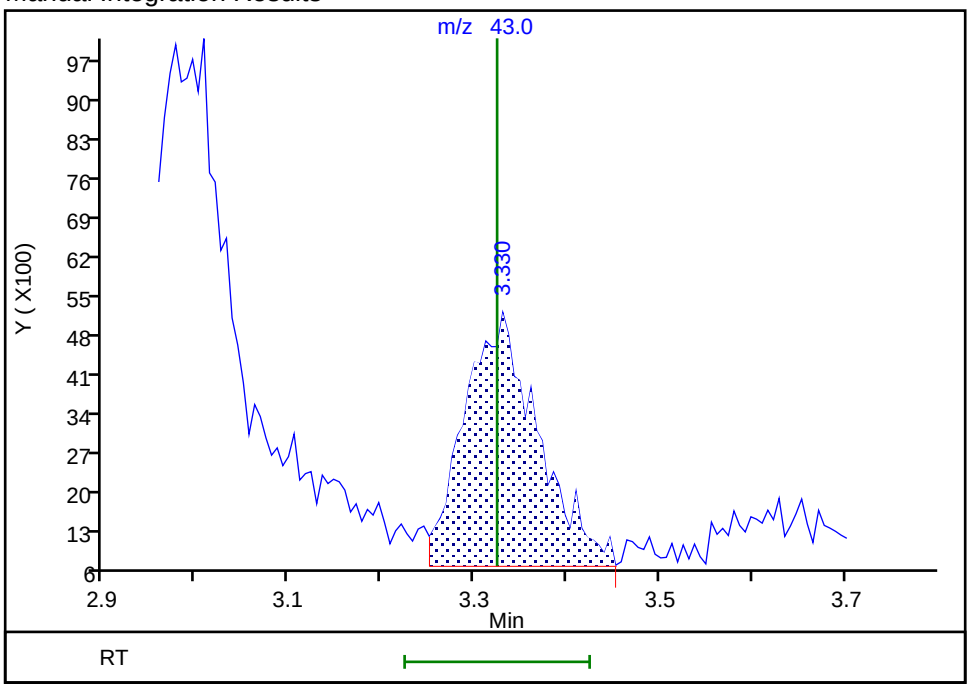
Processing Integration Results

RT: 3.33
Area: 22339
Amount: 0.897905
Amount Units: ug/l



Manual Integration Results

RT: 3.33
Area: 24801
Amount: 1.024469
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:45:16 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

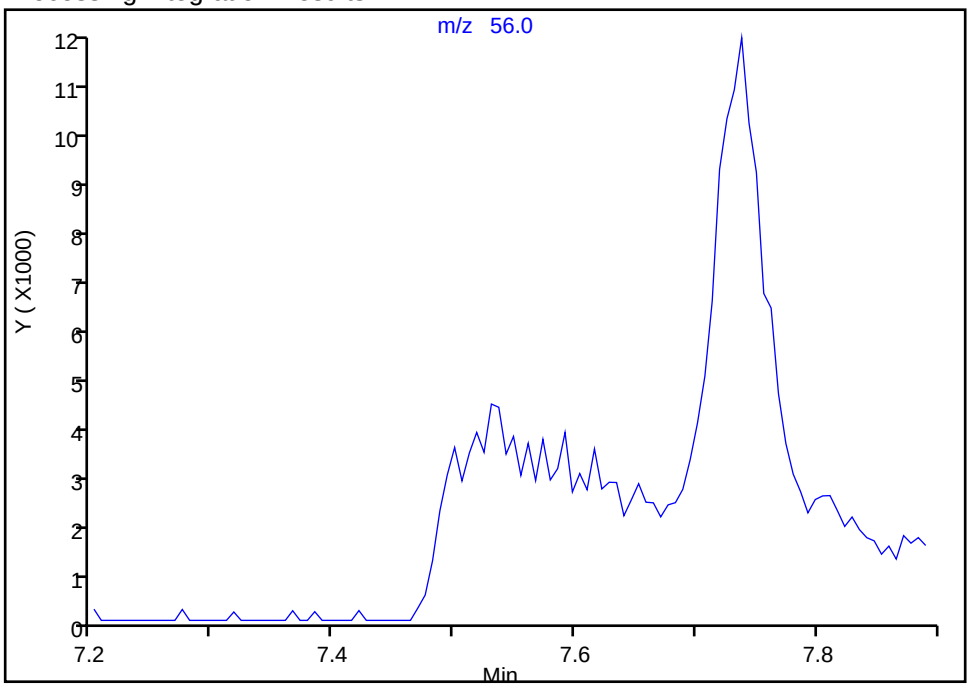
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X14.D				
Injection Date:	10-Jul-2023 20:13:30	Instrument ID:	10193		
Lims ID:	IC std3 1				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

67 n-Butanol, CAS: 71-36-3

Signal: 1

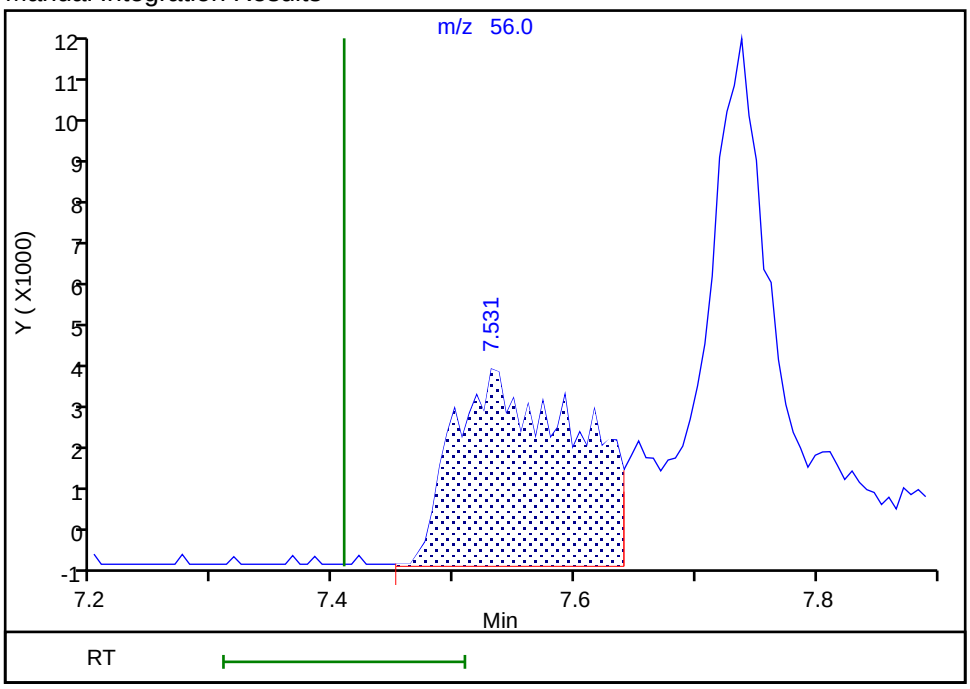
Not Detected
Expected RT: 7.41

Processing Integration Results



Manual Integration Results

RT: 7.53
Area: 29274
Amount: 79.607068
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:46:31 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

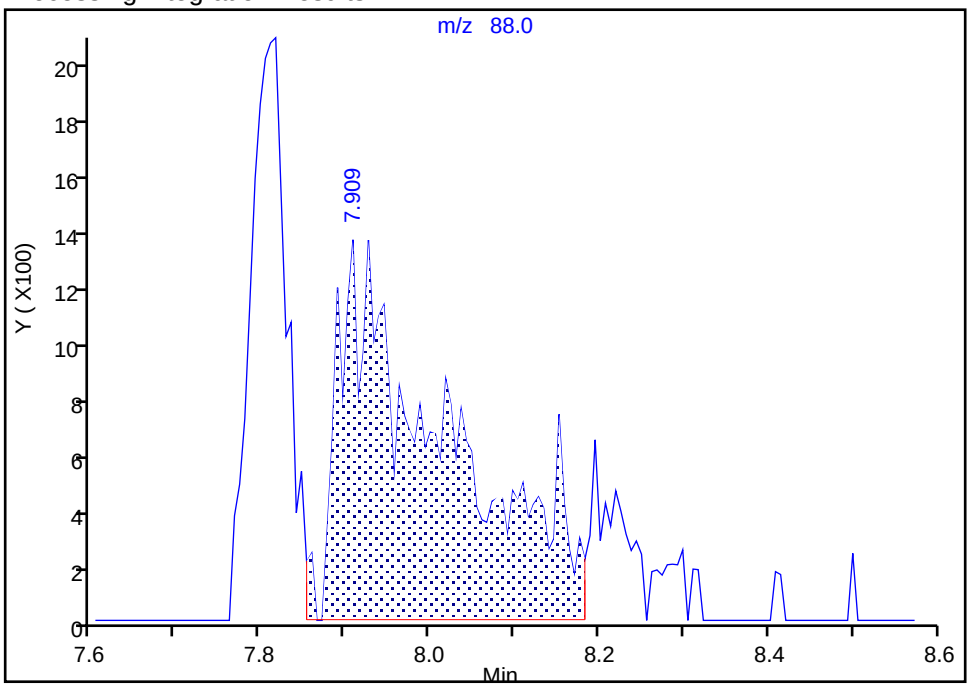
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X14.D				
Injection Date:	10-Jul-2023 20:13:30	Instrument ID:	10193		
Lims ID:	IC std3 1				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

74 1,4-Dioxane, CAS: 123-91-1

Signal: 1

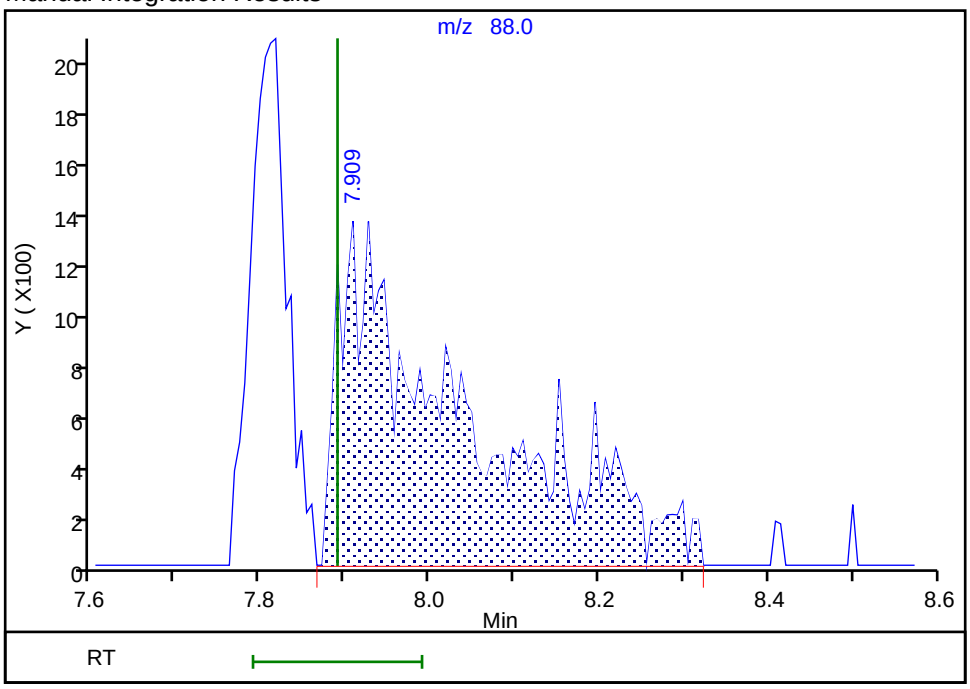
Processing Integration Results

RT: 7.91
Area: 11502
Amount: 47.785082
Amount Units: ug/l



Manual Integration Results

RT: 7.91
Area: 13360
Amount: 51.230331
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:46:47 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X15.D
Lims ID: IC std4 2
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 10-Jul-2023 20:35:30 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0088548-016
Misc. Info.: IC STD4 2
Operator ID: knk41612 Instrument ID: 10193
Sublist: chrom-MSV_10193_25mL*sub1

Method: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 11-Jul-2023 21:38:12 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1649

First Level Reviewer: DVW2 Date: 11-Jul-2023 08:49:55

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.684	1.684	0.000	87	130813	2.00	2.16	M
5 Chloromethane	50	1.843	1.849	-0.006	99	154893	2.00	2.02	
6 Vinyl chloride	62	1.940	1.934	0.006	70	148245	2.00	2.02	
7 Butadiene	39	1.946	1.940	0.006	91	142678	2.00	2.01	
9 Bromomethane	94	2.215	2.209	0.006	89	116765	2.00	2.04	
10 Chloroethane	64	2.270	2.270	0.000	99	86174	2.00	2.00	
11 Dichlorofluoromethane	67	2.477	2.471	0.006	97	237128	2.00	2.02	
13 Pentane	43	2.532	2.526	0.006	96	154303	2.00	1.85	
12 Trichlorofluoromethane	101	2.532	2.532	0.000	93	178987	2.00	2.16	
14 Ethyl ether	59	2.708	2.702	0.006	90	96175	2.00	2.04	
16 1,2-Dichloro-1,1,2-trifluoroetha	67	2.794	2.788	0.006	92	126477	2.00	1.95	
17 Acrolein	56	2.855	2.843	0.012	100	622742	100.0	101.5	
18 1,1-Dichloroethene	96	2.964	2.952	0.012	97	98047	2.00	1.83	
20 Acetone	43	2.989	2.977	0.012	97	151932	20.0	19.4	
21 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.007	3.001	0.006	88	103495	2.00	1.96	
22 Iodomethane	142	3.123	3.117	0.006	98	217665	2.00	1.89	
24 Isopropyl alcohol	45	3.105	3.117	-0.012	40	70115	40.0	38.4	
23 Ethyl bromide	108	3.141	3.135	0.006	98	102958	2.00	1.97	
25 Carbon disulfide	76	3.208	3.202	0.006	99	358109	2.00	1.89	
26 Methyl acetate	43	3.336	3.324	0.012	34	49477	2.00	2.01	
29 3-Chloro-1-propene	41	3.342	3.336	0.006	94	177309	2.00	1.87	
30 Methylene Chloride	84	3.501	3.495	0.006	90	128206	2.00	1.91	
* 31 t-Butyl alcohol-d10 (IS)	65	3.568	3.538	0.030	94	164657	50.0	50.0	
32 2-Methyl-2-propanol	59	3.659	3.653	0.006	98	125966	40.0	36.4	
33 Acrylonitrile	53	3.800	3.788	0.012	92	60571	5.00	5.51	
35 trans-1,2-Dichloroethene	96	3.836	3.830	0.006	99	122282	2.00	1.88	
34 Methyl tert-butyl ether	73	3.836	3.830	0.006	94	339859	2.00	1.97	
36 Hexane	57	4.208	4.208	0.000	91	156003	2.00	1.88	
37 1,1-Dichloroethane	63	4.446	4.446	0.000	96	217910	2.00	1.91	
39 Isopropyl ether	45	4.519	4.513	0.006	94	410883	2.00	1.91	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
40 2-Chloro-1,3-butadiene	53	4.562	4.562	0.000	90	160443	2.00	1.84	
41 Tert-butyl ethyl ether	59	5.074	5.074	0.000	97	387157	2.00	1.95	
42 2-Butanone (MEK)	43	5.299	5.281	0.018	99	307697	20.0	20.1	
43 cis-1,2-Dichloroethene	96	5.324	5.312	0.012	81	130877	2.00	1.87	
44 2,2-Dichloropropane	77	5.324	5.324	0.000	63	167697	2.00	1.84	
45 Propionitrile	54	5.446	5.385	0.061	97	133423	40.0	39.1	
47 Methacrylonitrile	67	5.592	5.592	0.000	91	310593	20.0	19.2	
49 Tetrahydrofuran	71	5.677	5.653	0.024	68	47371	10.0	10.5	
48 Chlorobromomethane	128	5.653	5.653	0.000	91	65221	2.00	1.94	
50 Chloroform	83	5.818	5.818	0.000	93	215645	2.00	1.91	
53 1,1,1-Trichloroethane	97	6.031	6.037	-0.006	98	177286	2.00	1.86	
$ 54 Dibromofluoromethane (Surr)	113	6.043	6.037	0.006	94	579440	10.0	10.1	
55 Cyclohexane	56	6.122	6.123	0.000	91	201009	2.00	1.88	
S 52 1,2-Dichloroethene, Total	100				0			3.75	
56 Carbon tetrachloride	117	6.250	6.244	0.006	96	152638	2.00	1.85	
57 1,1-Dichloropropene	75	6.263	6.257	0.006	98	157047	2.00	1.84	
58 Isobutyl alcohol	41	6.525	6.482	0.043	38	83688	100.0	99.9	a
$ 59 1,2-Dichloroethane-d4 (Surr)	102	6.494	6.507	-0.013	99	123074	10.0	10.1	
60 Benzene	78	6.525	6.525	0.000	96	513413	2.00	1.89	
61 1,2-Dichloroethane	62	6.610	6.598	0.012	97	138485	2.00	1.99	
64 Tert-amyl methyl ether	73	6.738	6.738	0.000	99	363871	2.00	1.96	
* 65 Fluorobenzene (IS)	96	6.945	6.952	-0.007	99	2465964	10.0	10.0	
66 n-Heptane	43	6.970	6.964	0.006	93	163522	2.00	1.82	
67 n-Butanol	56	7.464	7.409	0.055	22	102118	175.0	153.0	M
68 Trichloroethene	95	7.439	7.439	0.000	96	131625	2.00	1.88	
69 Methylcyclohexane	83	7.744	7.738	0.006	89	217814	2.00	1.92	
70 1,2-Dichloropropane	63	7.775	7.775	0.000	92	140956	2.00	1.96	
71 2-ethoxy-2-methyl butane	87	7.811	7.811	0.000	94	217047	2.00	1.95	
72 Dibromomethane	93	7.903	7.890	0.013	93	63721	2.00	1.91	
74 1,4-Dioxane	88	7.909	7.890	0.019	32	28725	100.0	108.2	M
73 Methyl methacrylate	69	7.903	7.897	0.006	90	62225	2.00	1.97	
76 Dichlorobromomethane	83	8.146	8.140	0.006	100	158910	2.00	1.92	
77 2-Nitropropane	41	8.433	8.427	0.006	99	85892	10.0	10.0	
78 1-Bromo-2-chloroethane	63	8.543	8.531	0.012	98	149262	2.00	2.05	
80 cis-1,3-Dichloropropene	75	8.726	8.720	0.006	97	201016	2.00	1.96	
82 4-Methyl-2-pentanone (MIBK)	43	8.927	8.927	0.000	96	887372	20.0	20.4	
$ 83 Toluene-d8 (Surr)	98	9.055	9.055	0.000	93	2556434	10.0	9.99	
84 Toluene	92	9.146	9.140	0.006	99	343209	2.00	1.88	
85 trans-1,3-Dichloropropene	75	9.463	9.457	0.006	91	160124	2.00	1.88	
86 Ethyl methacrylate	69	9.549	9.543	0.006	90	132868	2.00	1.96	
87 1,1,2-Trichloroethane	97	9.677	9.677	0.000	90	106032	2.00	1.96	
88 Tetrachloroethene	166	9.756	9.756	0.000	96	164773	2.00	1.88	
89 1,3-Dichloropropane	76	9.853	9.847	0.006	90	173001	2.00	2.00	
106 2-Hexanone	43	9.933	9.927	0.006	97	590741	20.0	19.9	
S 107 1,3-Dichloropropene, Total	100				0			3.84	
108 Chlorodibromomethane	129	10.079	10.079	0.000	90	129436	2.00	1.95	
110 Ethylene Dibromide	107	10.195	10.189	0.006	98	97526	2.00	2.01	
* 111 Chlorobenzene-d5 (IS)	117	10.658	10.658	0.000	84	1948504	10.0	10.0	
113 Chlorobenzene	112	10.689	10.683	0.006	96	418067	2.00	1.89	
112 1-Chlorohexane	91	10.689	10.683	0.006	64	176964	2.00	1.79	
114 1,1,1,2-Tetrachloroethane	131	10.780	10.780	0.000	96	141383	2.00	1.92	
115 Ethylbenzene	91	10.786	10.786	0.000	98	660352	2.00	1.88	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
116 m-Xylene & p-Xylene	106	10.914	10.908	0.006	97	534517	4.00	3.80	
S 117 Xylenes, Total	106				0			5.68	
118 o-Xylene	106	11.256	11.256	0.000	96	264614	2.00	1.88	
119 Styrene	104	11.274	11.274	0.000	95	427822	2.00	1.95	
120 Bromoform	173	11.432	11.426	0.006	98	81349	2.00	1.93	
121 Isopropylbenzene	105	11.573	11.573	0.000	95	669252	2.00	1.88	
$ 124 4-Bromofluorobenzene (Surr)	95	11.719	11.719	0.000	96	914439	10.0	9.98	
125 Bromobenzene	156	11.835	11.829	0.006	94	188542	2.00	1.93	
126 1,1,2,2-Tetrachloroethane	83	11.835	11.835	0.000	92	138193	2.00	1.96	
127 trans-1,4-Dichloro-2-butene	53	11.865	11.859	0.006	91	314499	20.0	20.4	
128 1,2,3-Trichloropropane	110	11.877	11.877	0.000	76	34639	2.00	1.92	
129 N-Propylbenzene	91	11.914	11.914	0.000	98	788008	2.00	1.84	
130 2-Chlorotoluene	126	11.987	11.987	0.000	98	177872	2.00	1.91	
131 1,3,5-Trimethylbenzene	105	12.060	12.060	0.000	94	593907	2.00	1.87	
132 4-Chlorotoluene	126	12.085	12.085	0.000	97	183284	2.00	1.94	
133 tert-Butylbenzene	134	12.304	12.304	0.000	92	140340	2.00	1.89	
134 Pentachloroethane	167	12.335	12.329	0.006	88	118146	2.00	2.00	
135 1,2,4-Trimethylbenzene	105	12.353	12.347	0.006	96	622633	2.00	1.91	
136 sec-Butylbenzene	105	12.475	12.469	0.006	93	754102	2.00	1.87	
137 1,3-Dichlorobenzene	146	12.572	12.566	0.006	98	371086	2.00	1.91	
138 4-Isopropyltoluene	119	12.585	12.585	0.000	97	675394	2.00	1.89	
* 139 1,4-Dichlorobenzene-d4	152	12.627	12.627	0.000	93	1187709	10.0	10.0	
140 1,4-Dichlorobenzene	146	12.646	12.640	0.006	96	382865	2.00	1.92	
141 1,2,3-Trimethylbenzene	120	12.658	12.658	0.000	98	297647	2.00	1.91	
142 Benzyl chloride	126	12.731	12.725	0.006	98	52911	2.00	1.89	
145 p-Diethylbenzene	119	12.865	12.865	0.000	95	430838	2.00	1.89	M
143 n-Butylbenzene	92	12.883	12.883	0.000	98	320079	2.00	1.91	
144 1,2-Dichlorobenzene	146	12.908	12.908	0.000	99	349881	2.00	1.91	
148 1,2-Dibromo-3-Chloropropane	155	13.475	13.469	0.006	89	18580	2.00	2.09	
149 1,3,5-Trichlorobenzene	180	13.597	13.591	0.006	98	284029	2.00	1.89	
150 1,2,4-Trichlorobenzene	180	14.029	14.023	0.006	94	217554	2.00	1.91	
151 Hexachlorobutadiene	225	14.109	14.103	0.006	95	118944	2.00	1.86	
152 Naphthalene	128	14.206	14.200	0.006	96	348868	2.00	1.87	
153 1,2,3-Trichlorobenzene	180	14.353	14.347	0.006	96	170003	2.00	1.97	
154 2-Methylnaphthalene	142	14.956	14.944	0.012	92	65373	2.00	1.49	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_LL_#1_826_00084	Amount Added:	2.00	Units: uL	
MSV_LL_#2_826_00095	Amount Added:	2.00	Units: uL	
MSV_LL_GAS826_00159	Amount Added:	2.00	Units: uL	
MSV_HP25_ISSS_00073	Amount Added:	1.00	Units: uL	Run Reagent

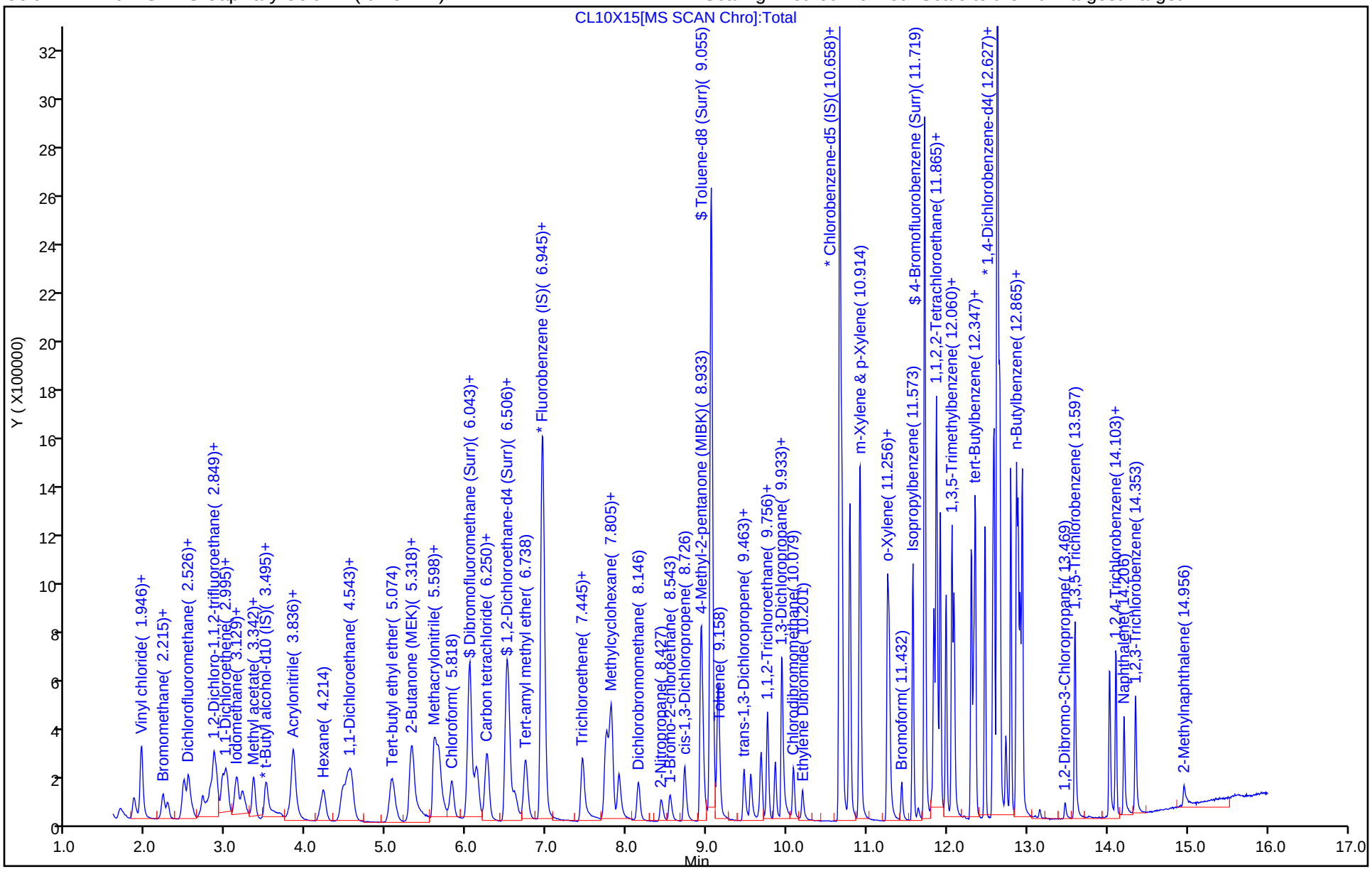
Report Date: 11-Jul-2023 21:38:12 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X15.D

Injection Date:	10-Jul-2023 20:35:30	Instrument ID:	10193	Operator ID:	knk41612
Lims ID:	IC std4 2			Worklist Smp#:	16
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

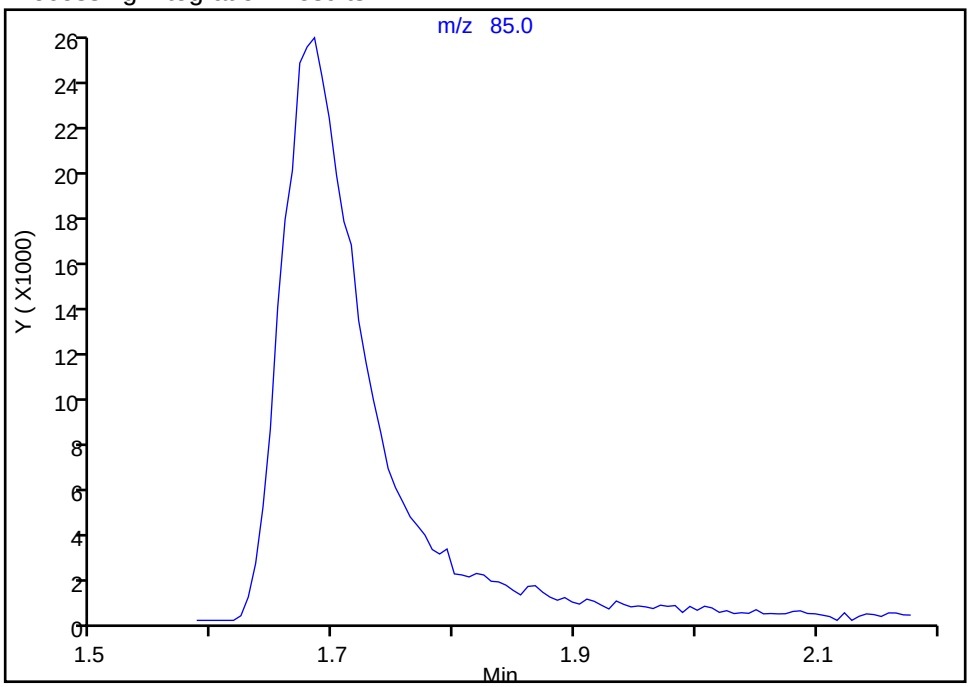
Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X15.D
Injection Date: 10-Jul-2023 20:35:30 Instrument ID: 10193
Lims ID: IC std4 2
Client ID:
Operator ID: knk41612 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

2 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

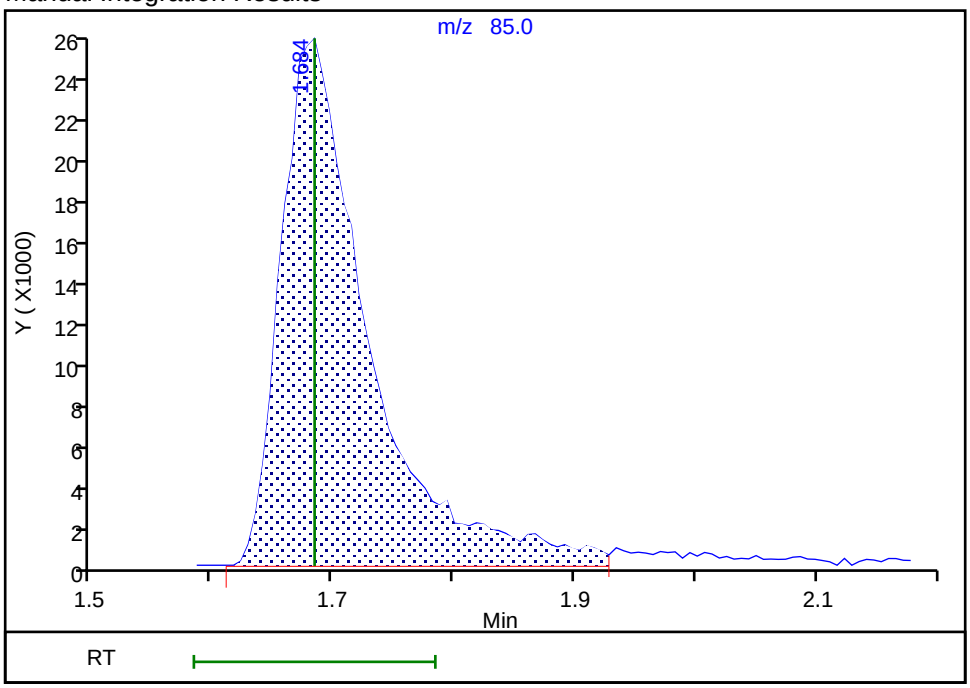
Not Detected
Expected RT: 1.68

Processing Integration Results



Manual Integration Results

RT: 1.68
Area: 130813
Amount: 2.156976
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:48:24 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

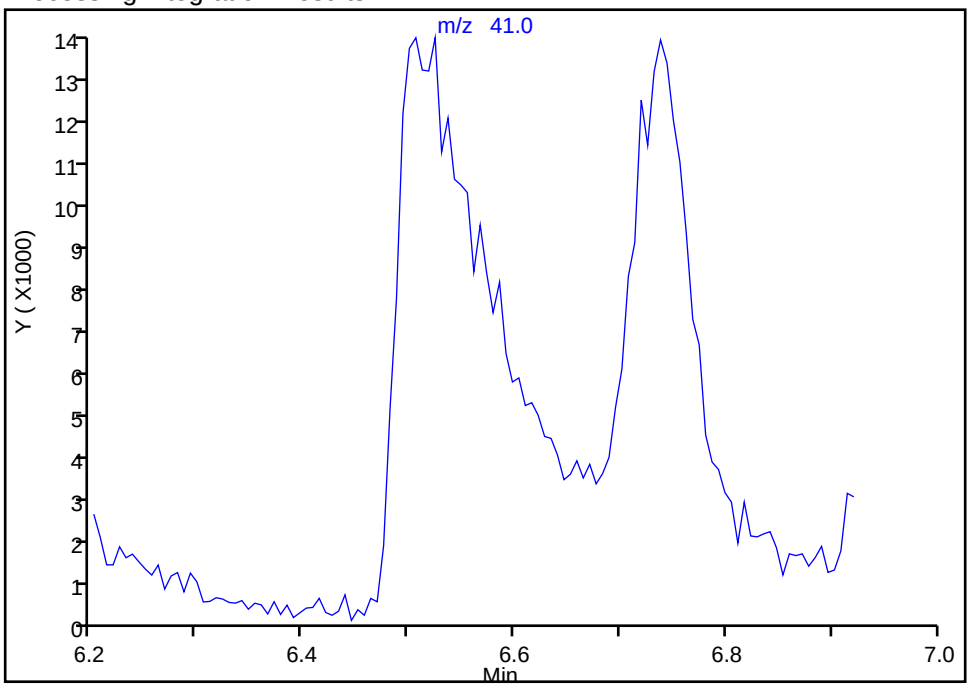
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X15.D				
Injection Date:	10-Jul-2023 20:35:30	Instrument ID:	10193		
Lims ID:	IC std4 2				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	15	Worklist Smp#:	16
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

58 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

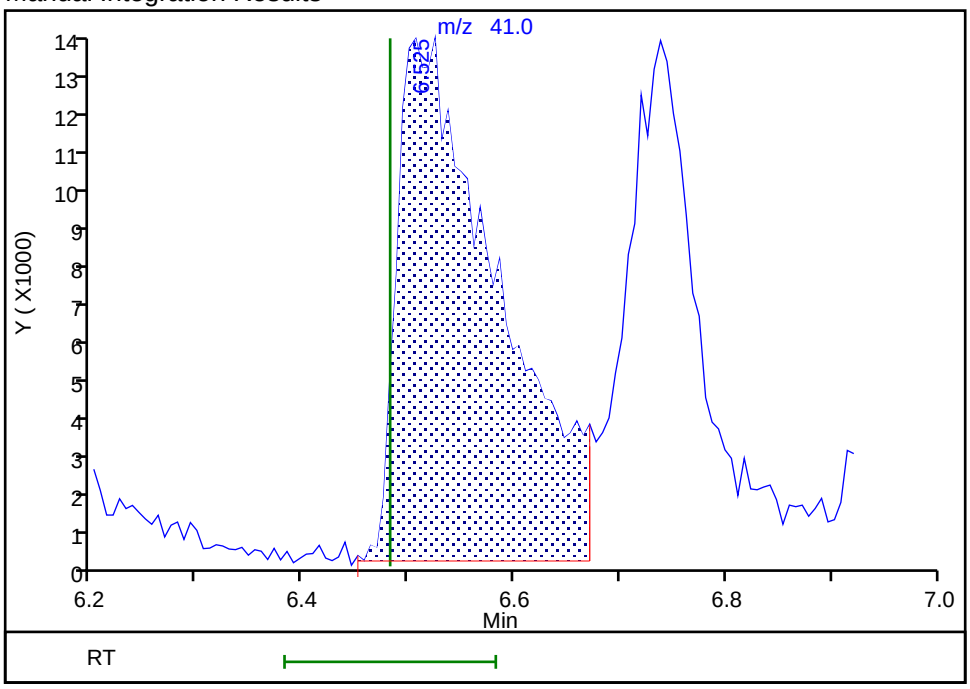
Not Detected
Expected RT: 6.48

Processing Integration Results



Manual Integration Results

RT: 6.52
Area: 83688
Amount: 99.916549
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:48:44 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

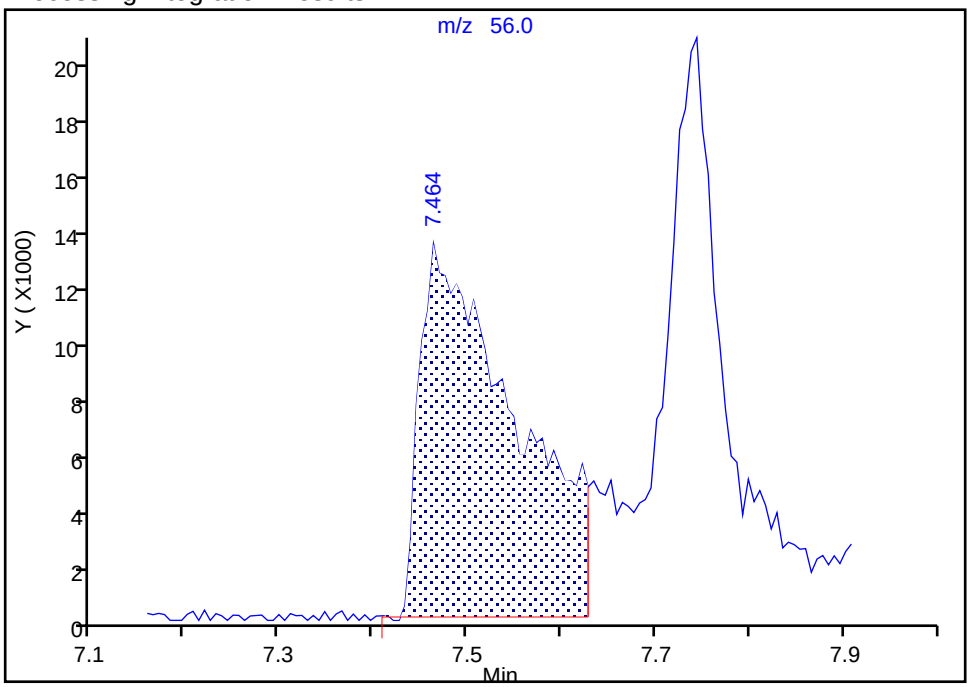
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X15.D				
Injection Date:	10-Jul-2023 20:35:30	Instrument ID:	10193		
Lims ID:	IC std4 2				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	15	Worklist Smp#:	16
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

67 n-Butanol, CAS: 71-36-3

Signal: 1

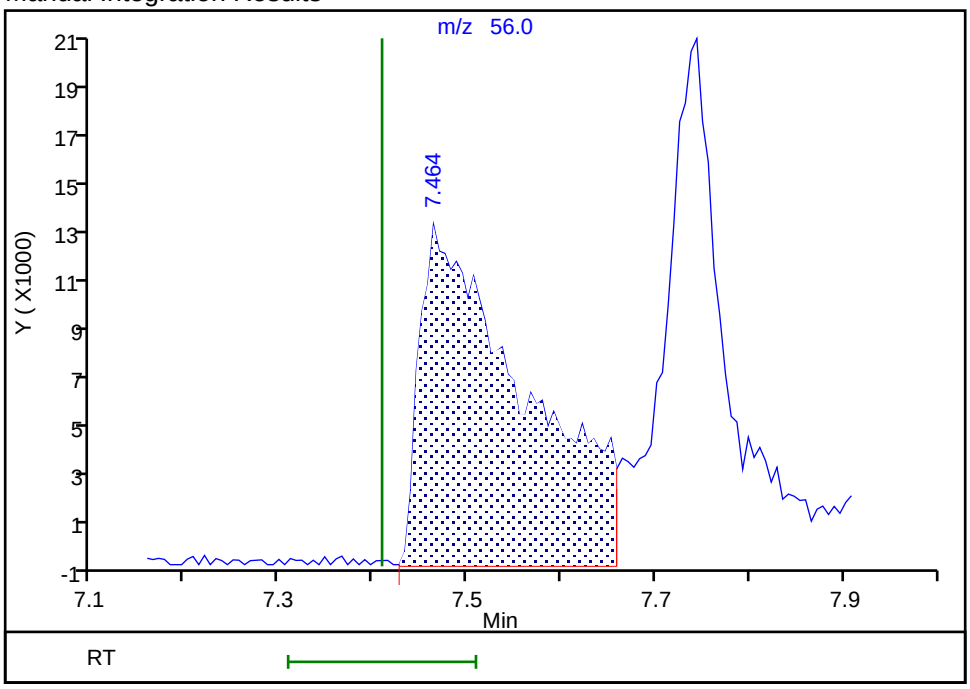
Processing Integration Results

RT: 7.46
Area: 91598
Amount: 141.2200
Amount Units: ug/l



Manual Integration Results

RT: 7.46
Area: 102118
Amount: 153.0412
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:49:09 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

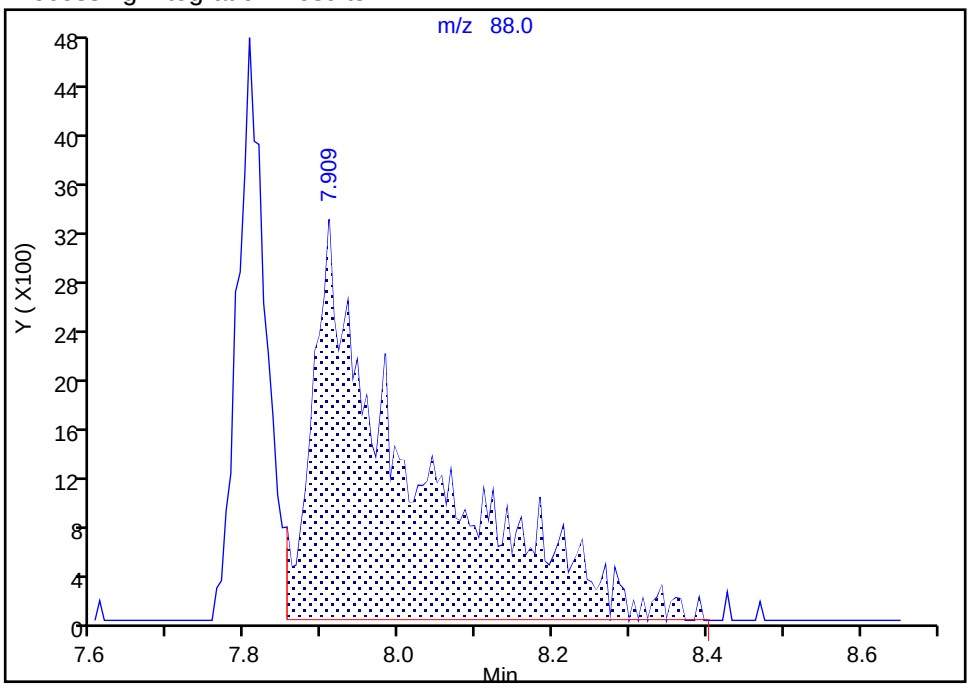
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X15.D				
Injection Date:	10-Jul-2023 20:35:30	Instrument ID:	10193		
Lims ID:	IC std4 2				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	15	Worklist Smp#:	16
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

74 1,4-Dioxane, CAS: 123-91-1

Signal: 1

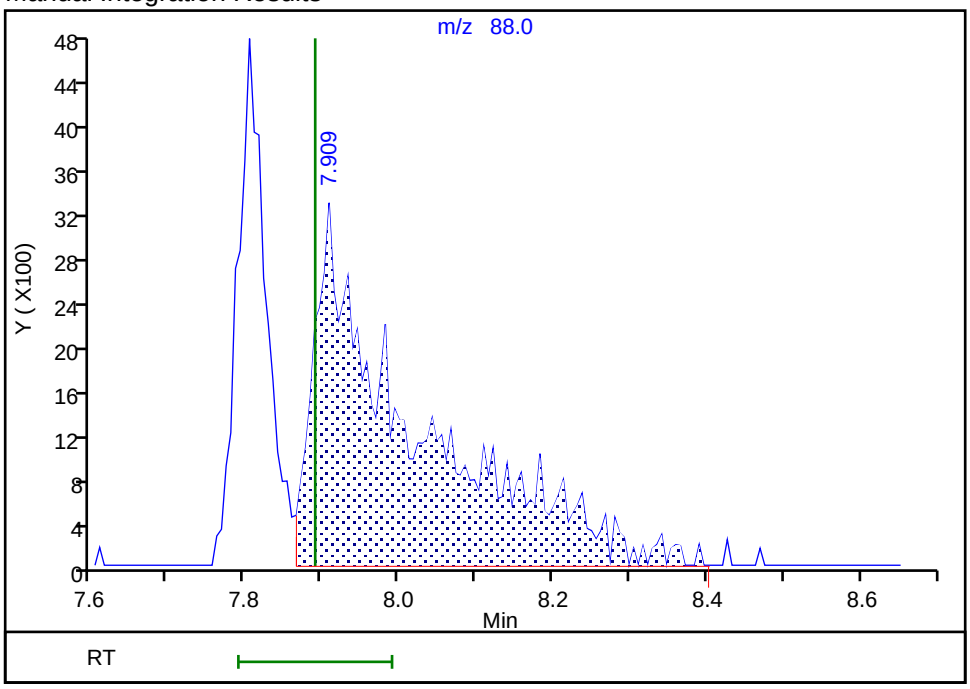
Processing Integration Results

RT: 7.91
Area: 29166
Amount: 116.4524
Amount Units: ug/l



Manual Integration Results

RT: 7.91
Area: 28725
Amount: 108.1950
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:49:21 -04:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X16.D
Lims ID: IC std5 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 10-Jul-2023 20:57:30 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0088548-017
Misc. Info.: IC STD5 5
Operator ID: knk41612 Instrument ID: 10193
Sublist: chrom-MSV_10193_25mL*sub1

Method: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 11-Jul-2023 21:38:17 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1649

First Level Reviewer: DVW2 Date: 11-Jul-2023 08:51:08

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.672	1.684	-0.012	88	302610	5.00	4.97	M
5 Chloromethane	50	1.843	1.849	-0.006	99	370453	5.00	4.81	
6 Vinyl chloride	62	1.928	1.934	-0.006	71	369078	5.00	5.01	
7 Butadiene	39	1.934	1.940	-0.006	91	357835	5.00	5.02	
9 Bromomethane	94	2.203	2.209	-0.006	91	277506	5.00	4.82	
10 Chloroethane	64	2.264	2.270	-0.006	99	210795	5.00	4.87	
11 Dichlorofluoromethane	67	2.465	2.471	-0.006	97	573749	5.00	4.88	
13 Pentane	43	2.520	2.526	-0.006	96	421812	5.00	5.03	
12 Trichlorofluoromethane	101	2.532	2.532	0.000	49	416336	5.00	5.01	
14 Ethyl ether	59	2.696	2.702	-0.006	90	241946	5.00	5.11	
16 1,2-Dichloro-1,1,2-trifluoroetha	67	2.788	2.788	0.000	94	312193	5.00	4.79	
17 Acrolein	56	2.843	2.843	0.000	100	1532831	250.0	245.9	
18 1,1-Dichloroethene	96	2.946	2.952	-0.006	97	262109	5.00	4.87	
20 Acetone	43	2.983	2.977	0.006	98	351875	50.0	44.3	
21 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.001	3.001	0.000	89	266636	5.00	5.02	
22 Iodomethane	142	3.111	3.117	-0.006	97	582776	5.00	5.04	
24 Isopropyl alcohol	45	3.111	3.117	-0.006	35	198243	100.0	112.5	
23 Ethyl bromide	108	3.135	3.135	0.000	97	271787	5.00	5.17	
25 Carbon disulfide	76	3.202	3.202	0.000	99	958221	5.00	5.03	
26 Methyl acetate	43	3.324	3.324	0.000	36	123525	5.00	4.93	
29 3-Chloro-1-propene	41	3.337	3.336	0.001	93	482187	5.00	5.08	
30 Methylene Chloride	84	3.489	3.495	-0.006	91	329457	5.00	4.90	
* 31 t-Butyl alcohol-d10 (IS)	65	3.550	3.538	0.012	95	167230	50.0	50.0	
32 2-Methyl-2-propanol	59	3.648	3.653	-0.005	99	317696	100.0	90.5	M
33 Acrylonitrile	53	3.794	3.788	0.006	53	134803	12.5	12.1	
35 trans-1,2-Dichloroethene	96	3.830	3.830	0.000	100	328931	5.00	5.03	
34 Methyl tert-butyl ether	73	3.830	3.830	0.000	93	876866	5.00	5.06	
36 Hexane	57	4.208	4.208	0.000	91	428626	5.00	5.14	
37 1,1-Dichloroethane	63	4.440	4.446	-0.006	96	581919	5.00	5.08	
39 Isopropyl ether	45	4.513	4.513	0.000	94	1101483	5.00	5.10	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
40 2-Chloro-1,3-butadiene	53	4.556	4.562	-0.006	90	447291	5.00	5.10	
41 Tert-butyl ethyl ether	59	5.068	5.074	-0.006	97	1020502	5.00	5.11	
42 2-Butanone (MEK)	43	5.281	5.281	0.000	100	810200	50.0	52.2	
43 cis-1,2-Dichloroethene	96	5.312	5.312	0.000	81	362337	5.00	5.17	
44 2,2-Dichloropropane	77	5.318	5.324	-0.006	83	448320	5.00	4.90	
45 Propionitrile	54	5.385	5.385	0.000	99	390538	100.0	112.6	
47 Methacrylonitrile	67	5.592	5.592	0.000	91	868473	50.0	52.9	
49 Tetrahydrofuran	71	5.653	5.653	0.000	63	120244	25.0	26.3	
48 Chlorobromomethane	128	5.641	5.653	-0.012	91	169726	5.00	5.04	
50 Chloroform	83	5.812	5.818	-0.006	93	562498	5.00	4.96	
53 1,1,1-Trichloroethane	97	6.031	6.037	-0.006	98	478983	5.00	5.02	
$ 54 Dibromofluoromethane (Surr)	113	6.031	6.037	-0.006	94	580358	10.0	10.0	
55 Cyclohexane	56	6.123	6.123	0.001	91	545351	5.00	5.09	
S 52 1,2-Dichloroethene, Total	100				0			10.2	
56 Carbon tetrachloride	117	6.245	6.244	0.001	96	421019	5.00	5.09	
57 1,1-Dichloropropene	75	6.251	6.257	-0.006	98	428997	5.00	5.01	
58 Isobutyl alcohol	41	6.488	6.482	0.006	93	243540	250.0	248.9	
$ 59 1,2-Dichloroethane-d4 (Surr)	102	6.488	6.507	-0.019	98	125165	10.0	10.2	
60 Benzene	78	6.519	6.525	-0.006	96	1380101	5.00	5.05	
61 1,2-Dichloroethane	62	6.604	6.598	0.006	97	340102	5.00	4.88	
64 Tert-amyl methyl ether	73	6.732	6.738	-0.006	99	953593	5.00	5.11	
* 65 Fluorobenzene (IS)	96	6.946	6.952	-0.006	98	2475137	10.0	10.0	
66 n-Heptane	43	6.964	6.964	0.000	92	466301	5.00	5.17	
67 n-Butanol	56	7.427	7.409	0.018	92	369243	437.5	418.5	
68 Trichloroethene	95	7.439	7.439	0.000	97	355409	5.00	5.07	
69 Methylcyclohexane	83	7.738	7.738	0.000	90	587502	5.00	5.16	
70 1,2-Dichloropropane	63	7.775	7.775	0.000	96	361296	5.00	5.02	
71 2-ethoxy-2-methyl butane	87	7.805	7.811	-0.006	93	579334	5.00	5.18	
72 Dibromomethane	93	7.891	7.890	0.001	93	171668	5.00	5.12	
74 1,4-Dioxane	88	7.897	7.890	0.007	34	70163	250.0	260.2	
73 Methyl methacrylate	69	7.897	7.897	0.000	93	172622	5.00	5.38	
76 Dichlorobromomethane	83	8.147	8.140	0.007	100	424379	5.00	5.10	
77 2-Nitropropane	41	8.427	8.427	0.000	98	227853	25.0	26.1	
78 1-Bromo-2-chloroethane	63	8.537	8.531	0.006	98	378125	5.00	5.18	
80 cis-1,3-Dichloropropene	75	8.720	8.720	0.000	97	555330	5.00	5.40	
82 4-Methyl-2-pentanone (MIBK)	43	8.927	8.927	0.000	96	2406513	50.0	54.5	
$ 83 Toluene-d8 (Surr)	98	9.055	9.055	0.000	93	2545267	10.0	9.91	
84 Toluene	92	9.140	9.140	0.000	98	913320	5.00	4.99	
85 trans-1,3-Dichloropropene	75	9.457	9.457	0.000	91	465136	5.00	5.43	
86 Ethyl methacrylate	69	9.543	9.543	0.000	90	382912	5.00	5.62	
87 1,1,2-Trichloroethane	97	9.671	9.677	-0.006	89	270361	5.00	4.98	
88 Tetrachloroethene	166	9.756	9.756	0.000	97	442984	5.00	5.03	
89 1,3-Dichloropropane	76	9.848	9.847	0.001	89	455385	5.00	5.24	
106 2-Hexanone	43	9.933	9.927	0.006	96	1639299	50.0	54.5	
S 107 1,3-Dichloropropene, Total	100				0			10.8	
108 Chlorodibromomethane	129	10.079	10.079	0.000	90	341079	5.00	5.13	
110 Ethylene Dibromide	107	10.189	10.189	0.000	99	255939	5.00	5.26	
* 111 Chlorobenzene-d5 (IS)	117	10.658	10.658	0.000	83	1954853	10.0	10.0	
113 Chlorobenzene	112	10.683	10.683	0.000	97	1118156	5.00	5.04	
112 1-Chlorohexane	91	10.683	10.683	0.000	96	493503	5.00	4.97	
114 1,1,1,2-Tetrachloroethane	131	10.780	10.780	0.000	96	382509	5.00	5.18	
115 Ethylbenzene	91	10.786	10.786	0.000	98	1805085	5.00	5.13	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
116 m-Xylene & p-Xylene	106	10.908	10.908	0.000	97	1465581	10.0	10.4	
S 117 Xylenes, Total	106				0			15.5	
118 o-Xylene	106	11.256	11.256	0.000	96	722471	5.00	5.11	
119 Styrene	104	11.274	11.274	0.000	95	1195356	5.00	5.44	
120 Bromoform	173	11.433	11.426	0.007	99	219242	5.00	5.18	
121 Isopropylbenzene	105	11.573	11.573	0.000	95	1835799	5.00	5.15	
$ 124 4-Bromofluorobenzene (Surr)	95	11.719	11.719	0.000	97	921478	10.0	10.0	
125 Bromobenzene	156	11.829	11.829	0.000	94	504869	5.00	5.24	
126 1,1,2,2-Tetrachloroethane	83	11.835	11.835	0.000	93	362746	5.00	5.23	
127 trans-1,4-Dichloro-2-butene	53	11.859	11.859	0.000	90	860918	50.0	56.5	
128 1,2,3-Trichloropropane	110	11.878	11.877	0.001	77	93804	5.00	5.27	
129 N-Propylbenzene	91	11.914	11.914	0.000	98	2213293	5.00	5.25	
130 2-Chlorotoluene	126	11.987	11.987	0.000	98	477751	5.00	5.20	
131 1,3,5-Trimethylbenzene	105	12.061	12.060	0.001	94	1629513	5.00	5.21	
132 4-Chlorotoluene	126	12.085	12.085	0.000	96	488843	5.00	5.24	
133 tert-Butylbenzene	134	12.304	12.304	0.000	92	383394	5.00	5.22	
134 Pentachloroethane	167	12.329	12.329	0.000	91	319319	5.00	5.49	
135 1,2,4-Trimethylbenzene	105	12.347	12.347	0.000	97	1696596	5.00	5.28	
136 sec-Butylbenzene	105	12.469	12.469	0.000	94	2084526	5.00	5.24	
137 1,3-Dichlorobenzene	146	12.567	12.566	0.001	98	1002205	5.00	5.24	
138 4-Isopropyltoluene	119	12.585	12.585	0.000	97	1887390	5.00	5.35	
* 139 1,4-Dichlorobenzene-d4	152	12.627	12.627	0.000	92	1170924	10.0	10.0	
140 1,4-Dichlorobenzene	146	12.646	12.640	0.006	96	997771	5.00	5.06	
141 1,2,3-Trimethylbenzene	120	12.658	12.658	0.000	98	811253	5.00	5.28	
142 Benzyl chloride	126	12.731	12.725	0.006	98	151722	5.00	5.49	
145 p-Diethylbenzene	119	12.865	12.865	0.000	94	1192272	5.00	5.32	M
143 n-Butylbenzene	92	12.884	12.883	0.001	97	899820	5.00	5.43	
144 1,2-Dichlorobenzene	146	12.908	12.908	0.000	99	943028	5.00	5.22	
148 1,2-Dibromo-3-Chloropropane	155	13.469	13.469	0.000	90	51208	5.00	5.86	
149 1,3,5-Trichlorobenzene	180	13.591	13.591	0.000	97	795965	5.00	5.37	
150 1,2,4-Trichlorobenzene	180	14.024	14.023	0.001	94	613674	5.00	5.46	
151 Hexachlorobutadiene	225	14.109	14.103	0.006	96	327298	5.00	5.19	
152 Naphthalene	128	14.200	14.200	0.000	96	1011522	5.00	5.51	
153 1,2,3-Trichlorobenzene	180	14.347	14.347	0.001	96	475874	5.00	5.59	
154 2-Methylnaphthalene	142	14.950	14.944	0.006	92	227150	5.00	5.26	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

MSV_LL_#1_826_00084	Amount Added:	5.00	Units: uL	
MSV_LL_#2_826_00095	Amount Added:	5.00	Units: uL	
MSV_LL_GAS826_00159	Amount Added:	5.00	Units: uL	
MSV_HP25_ISSS_00073	Amount Added:	1.00	Units: uL	Run Reagent

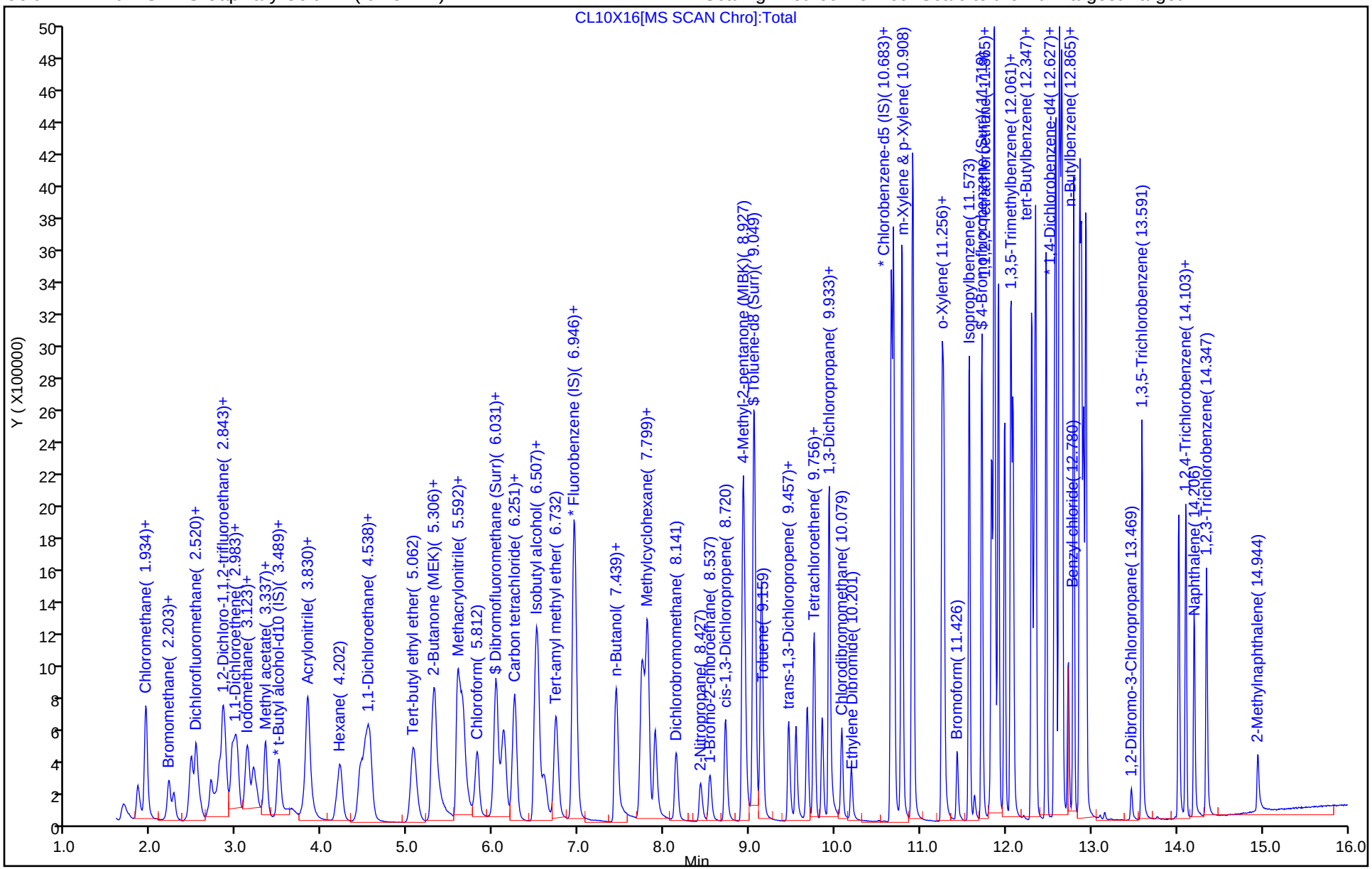
Report Date: 11-Jul-2023 21:38:17 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X16.D

Injection Date:	10-Jul-2023 20:57:30	Instrument ID:	10193	Operator ID:	knk41612
Lims ID:	IC std5 5			Worklist Smp#:	17
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

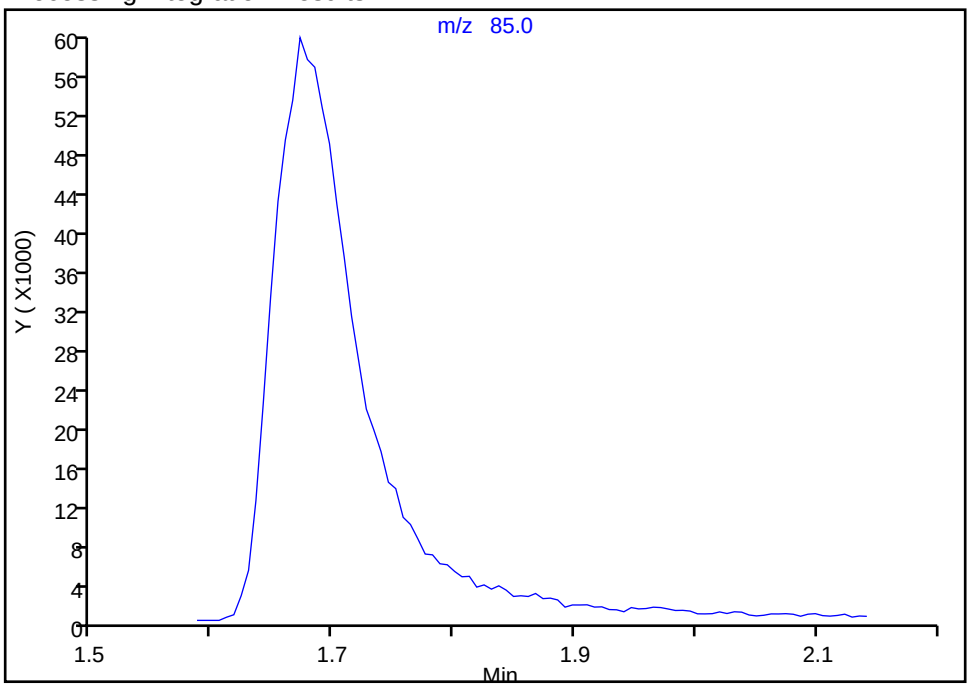
Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X16.D
Injection Date: 10-Jul-2023 20:57:30 Instrument ID: 10193
Lims ID: IC std5 5
Client ID:
Operator ID: knk41612 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

2 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

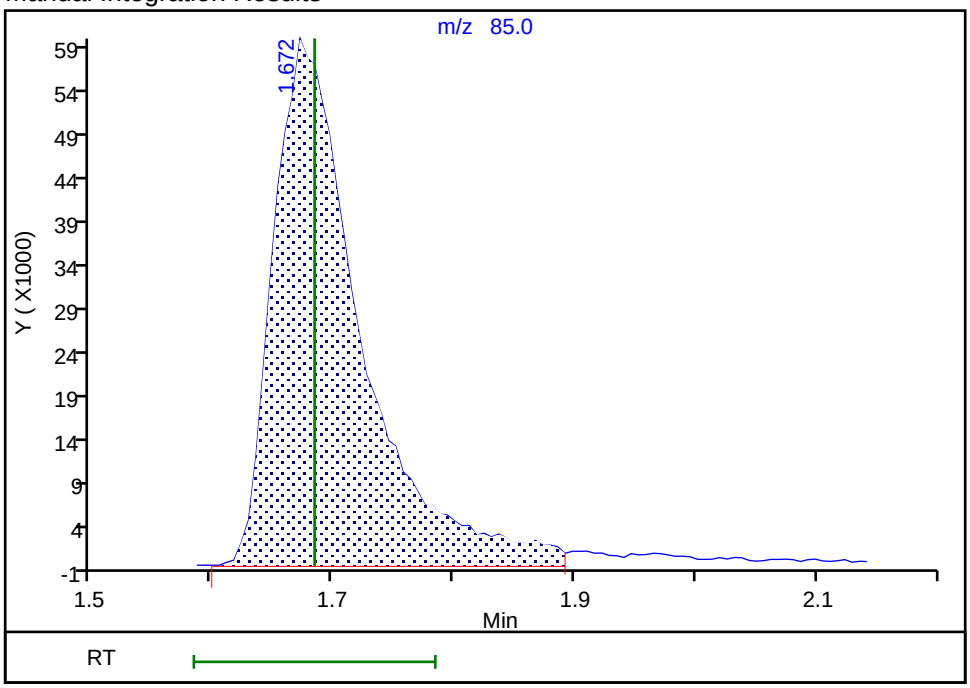
Not Detected
Expected RT: 1.68

Processing Integration Results



Manual Integration Results

RT: 1.67
Area: 302610
Amount: 4.971246
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:50:11 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

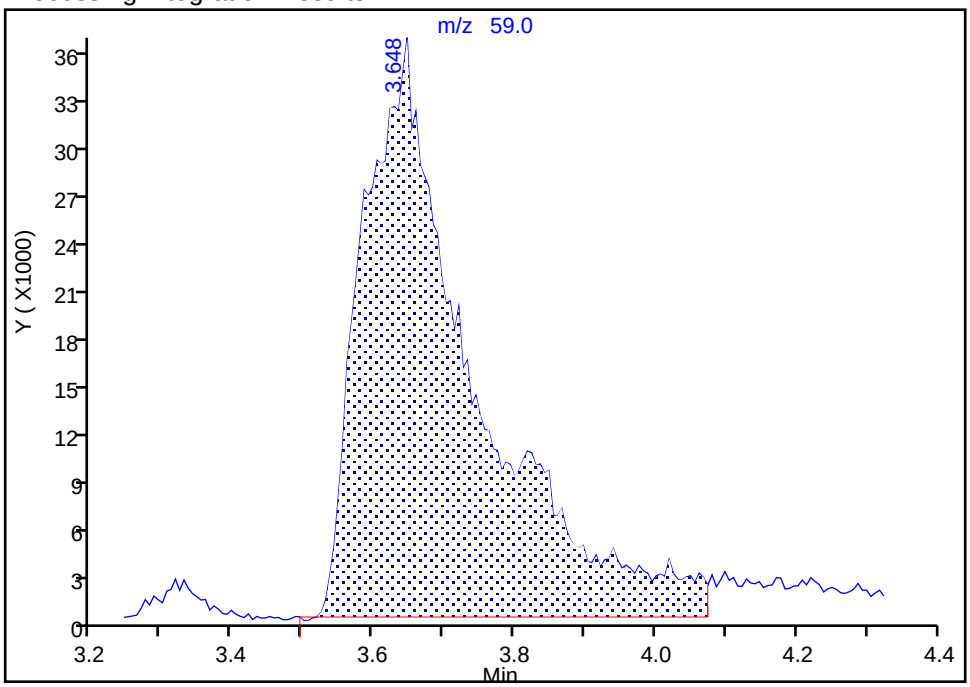
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X16.D				
Injection Date:	10-Jul-2023 20:57:30	Instrument ID:	10193		
Lims ID:	IC std5 5				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	16	Worklist Smp#:	17
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

32 2-Methyl-2-propanol, CAS: 75-65-0

Signal: 1

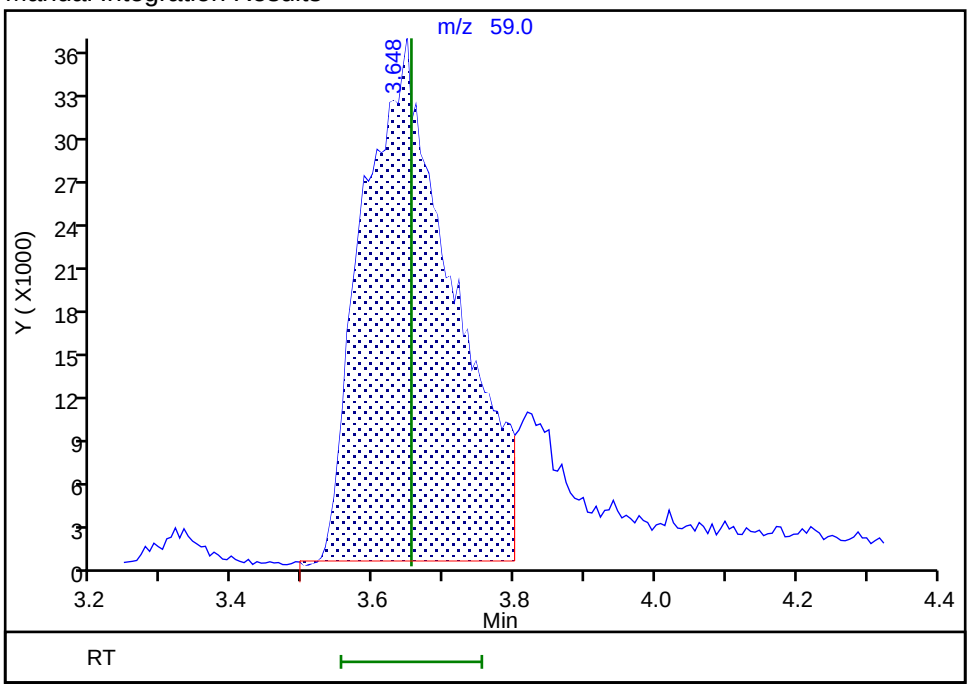
Processing Integration Results

RT: 3.65
Area: 391543
Amount: 108.3468
Amount Units: ug/l



Manual Integration Results

RT: 3.65
Area: 317696
Amount: 90.480900
Amount Units: ug/l



Reviewer: UKEK, 11-Jul-2023 19:43:00 -04:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X17.D
Lims ID: ICIS 10
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 10-Jul-2023 21:18:30 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0088548-018
Misc. Info.: ICIS 10
Operator ID: knk41612 Instrument ID: 10193
Sublist: chrom-MSV_10193_25mL*sub1

Method: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 11-Jul-2023 21:38:21 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1649

First Level Reviewer: DVW2 Date: 11-Jul-2023 08:25:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.684	1.684	0.000	99	658785	10.0	10.7	Ma
5 Chloromethane	50	1.849	1.849	0.000	99	780425	10.0	9.98	
6 Vinyl chloride	62	1.934	1.934	0.000	98	760607	10.0	10.2	
7 Butadiene	39	1.940	1.940	0.000	90	752244	10.0	10.4	
9 Bromomethane	94	2.209	2.209	0.000	90	582711	10.0	9.98	
10 Chloroethane	64	2.270	2.270	0.000	100	430518	10.0	9.80	
11 Dichlorofluoromethane	67	2.471	2.471	0.000	97	1188628	10.0	9.97	
13 Pentane	43	2.526	2.526	0.000	96	839061	10.0	9.87	
12 Trichlorofluoromethane	101	2.532	2.532	0.000	98	900669	10.0	10.7	
14 Ethyl ether	59	2.702	2.702	0.000	91	488994	10.0	10.2	
16 1,2-Dichloro-1,1,2-trifluoroetha	67	2.788	2.788	0.000	90	667816	10.0	10.1	
17 Acrolein	56	2.843	2.843	0.000	100	3043605	500.0	485.8	
18 1,1-Dichloroethene	96	2.952	2.952	0.000	97	535704	10.0	9.81	
20 Acetone	43	2.977	2.977	0.000	98	670067	100.0	84.0	
21 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.001	3.001	0.000	89	549168	10.0	10.2	
22 Iodomethane	142	3.117	3.117	0.000	97	1189155	10.0	10.1	
24 Isopropyl alcohol	45	3.117	3.117	0.000	35	317521	200.0	181.2	
23 Ethyl bromide	108	3.135	3.135	0.000	98	538553	10.0	10.1	
25 Carbon disulfide	76	3.202	3.202	0.000	99	1981894	10.0	10.3	
26 Methyl acetate	43	3.324	3.324	0.000	36	230624	10.0	9.17	
29 3-Chloro-1-propene	41	3.336	3.336	0.000	93	1009099	10.0	10.5	
30 Methylene Chloride	84	3.495	3.495	0.000	92	666555	10.0	9.76	
* 31 t-Butyl alcohol-d10 (IS)	65	3.550	3.550	0.000	35	168052	50.0	50.0	M
32 2-Methyl-2-propanol	59	3.653	3.653	0.000	99	602660	200.0	170.8	
33 Acrylonitrile	53	3.788	3.788	0.000	100	278600	25.0	24.8	M
35 trans-1,2-Dichloroethene	96	3.830	3.830	0.000	100	685758	10.0	10.3	
34 Methyl tert-butyl ether	73	3.830	3.830	0.000	93	1770056	10.0	10.1	
36 Hexane	57	4.208	4.208	0.000	92	862976	10.0	10.2	
37 1,1-Dichloroethane	63	4.446	4.446	0.000	96	1201309	10.0	10.3	
39 Isopropyl ether	45	4.513	4.513	0.000	94	2272827	10.0	10.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
40 2-Chloro-1,3-butadiene	53	4.562	4.562	0.000	89	943188	10.0	10.6	
41 Tert-butyl ethyl ether	59	5.074	5.074	0.000	98	2117027	10.0	10.4	
42 2-Butanone (MEK)	43	5.281	5.281	0.000	100	1631605	100.0	104.7	
43 cis-1,2-Dichloroethene	96	5.312	5.312	0.000	81	745504	10.0	10.5	
44 2,2-Dichloropropane	77	5.324	5.324	0.000	86	929524	10.0	10.0	
45 Propionitrile	54	5.385	5.385	0.000	99	741560	200.0	212.7	
47 Methacrylonitrile	67	5.592	5.592	0.000	91	1754007	100.0	106.3	
49 Tetrahydrofuran	71	5.653	5.653	0.000	77	241496	50.0	52.7	
48 Chlorobromomethane	128	5.653	5.653	0.000	93	351013	10.0	10.3	
50 Chloroform	83	5.818	5.818	0.000	93	1164324	10.0	10.1	
53 1,1,1-Trichloroethane	97	6.037	6.037	0.000	98	990464	10.0	10.2	
$ 54 Dibromofluoromethane (Surr)	113	6.037	6.037	0.000	93	587053	10.0	10.0	
55 Cyclohexane	56	6.123	6.123	0.000	91	1128392	10.0	10.4	
56 Carbon tetrachloride	117	6.244	6.244	0.000	95	881185	10.0	10.5	
57 1,1-Dichloropropene	75	6.257	6.257	0.000	99	906015	10.0	10.4	
58 Isobutyl alcohol	41	6.482	6.482	0.000	94	497465	500.0	485.2	
$ 59 1,2-Dichloroethane-d4 (Surr)	102	6.507	6.507	0.000	99	119348	10.0	9.62	
60 Benzene	78	6.525	6.525	0.000	97	2851658	10.0	10.3	
61 1,2-Dichloroethane	62	6.598	6.598	0.000	97	686799	10.0	9.71	
64 Tert-amyl methyl ether	73	6.738	6.738	0.000	99	1965435	10.0	10.4	
* 65 Fluorobenzene (IS)	96	6.946	6.946	0.000	97	2510713	10.0	10.0	
66 n-Heptane	43	6.964	6.964	0.000	90	971821	10.0	10.6	
67 n-Butanol	56	7.409	7.409	0.000	88	805828	875.0	851.1	
68 Trichloroethene	95	7.439	7.439	0.000	96	734500	10.0	10.3	
69 Methylcyclohexane	83	7.738	7.738	0.000	92	1211867	10.0	10.5	
70 1,2-Dichloropropane	63	7.775	7.775	0.000	96	745462	10.0	10.2	
71 2-ethoxy-2-methyl butane	87	7.811	7.811	0.000	94	1201346	10.0	10.6	
72 Dibromomethane	93	7.890	7.890	0.000	93	349503	10.0	10.3	
74 1,4-Dioxane	88	7.890	7.890	0.000	31	138169	500.0	509.9	M
73 Methyl methacrylate	69	7.897	7.897	0.000	92	354852	10.0	11.0	
76 Dichlorobromomethane	83	8.140	8.140	0.000	100	886523	10.0	10.5	
77 2-Nitropropane	41	8.427	8.427	0.000	98	457411	50.0	52.2	
78 1-Bromo-2-chloroethane	63	8.531	8.531	0.000	98	772215	10.0	10.4	
80 cis-1,3-Dichloropropene	75	8.720	8.720	0.000	97	1175478	10.0	11.3	
82 4-Methyl-2-pentanone (MIBK)	43	8.927	8.927	0.000	96	4779944	100.0	107.8	
$ 83 Toluene-d8 (Surr)	98	9.055	9.055	0.000	93	2591778	10.0	9.91	
84 Toluene	92	9.140	9.140	0.000	98	1903875	10.0	10.2	
85 trans-1,3-Dichloropropene	75	9.457	9.457	0.000	91	990727	10.0	11.4	
86 Ethyl methacrylate	69	9.543	9.543	0.000	90	813455	10.0	11.7	
87 1,1,2-Trichloroethane	97	9.677	9.677	0.000	90	551790	10.0	9.98	
88 Tetrachloroethene	166	9.756	9.756	0.000	97	913085	10.0	10.2	
89 1,3-Dichloropropane	76	9.847	9.847	0.000	89	930970	10.0	10.5	
106 2-Hexanone	43	9.927	9.927	0.000	96	3425778	100.0	113.3	
108 Chlorodibromomethane	129	10.079	10.079	0.000	90	710622	10.0	10.5	
110 Ethylene Dibromide	107	10.189	10.189	0.000	98	538447	10.0	10.9	
* 111 Chlorobenzene-d5 (IS)	117	10.658	10.658	0.000	83	1990861	10.0	10.0	
113 Chlorobenzene	112	10.683	10.683	0.000	97	2309084	10.0	10.2	
112 1-Chlorohexane	91	10.683	10.683	0.000	96	1020383	10.0	10.1	
114 1,1,1,2-Tetrachloroethane	131	10.780	10.780	0.000	98	791480	10.0	10.5	
115 Ethylbenzene	91	10.786	10.786	0.000	97	3756735	10.0	10.5	a
116 m-Xylene & p-Xylene	106	10.908	10.908	0.000	96	3032843	20.0	21.1	a
118 o-Xylene	106	11.256	11.256	0.000	96	1515690	10.0	10.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
119 Styrene	104	11.274	11.274	0.000	95	2525581	10.0	11.3	
120 Bromoform	173	11.426	11.426	0.000	98	467869	10.0	10.9	
121 Isopropylbenzene	105	11.573	11.573	0.000	95	3837170	10.0	10.6	
$ 124 4-Bromofluorobenzene (Surr)	95	11.719	11.719	0.000	97	948762	10.0	10.1	
125 Bromobenzene	156	11.829	11.829	0.000	90	1042948	10.0	10.4	
126 1,1,2,2-Tetrachloroethane	83	11.835	11.835	0.000	92	741339	10.0	10.3	
127 trans-1,4-Dichloro-2-butene	53	11.859	11.859	0.000	90	1816127	100.0	115.0	
128 1,2,3-Trichloropropane	110	11.877	11.877	0.000	83	188210	10.0	10.2	
129 N-Propylbenzene	91	11.914	11.914	0.000	98	4639491	10.0	10.6	
130 2-Chlorotoluene	126	11.987	11.987	0.000	98	994645	10.0	10.4	
131 1,3,5-Trimethylbenzene	105	12.060	12.060	0.000	94	3426834	10.0	10.6	
132 4-Chlorotoluene	126	12.085	12.085	0.000	96	1038587	10.0	10.7	
133 tert-Butylbenzene	134	12.304	12.304	0.000	93	794125	10.0	10.4	
134 Pentachloroethane	167	12.329	12.329	0.000	94	656909	10.0	10.9	
135 1,2,4-Trimethylbenzene	105	12.347	12.347	0.000	96	3601162	10.0	10.8	
136 sec-Butylbenzene	105	12.469	12.469	0.000	93	4371114	10.0	10.6	
137 1,3-Dichlorobenzene	146	12.566	12.566	0.000	98	2100857	10.0	10.6	
138 4-Isopropyltoluene	119	12.585	12.585	0.000	97	3959393	10.0	10.8	
* 139 1,4-Dichlorobenzene-d4	152	12.621	12.621	0.000	93	1214109	10.0	10.0	
140 1,4-Dichlorobenzene	146	12.640	12.640	0.000	96	2072743	10.0	10.1	
141 1,2,3-Trimethylbenzene	120	12.658	12.658	0.000	98	1662034	10.0	10.4	
142 Benzyl chloride	126	12.725	12.725	0.000	98	324829	10.0	11.3	
145 p-Diethylbenzene	119	12.865	12.865	0.000	94	2507150	10.0	10.8	M
143 n-Butylbenzene	92	12.883	12.883	0.000	96	1897152	10.0	11.0	
144 1,2-Dichlorobenzene	146	12.908	12.908	0.000	99	1991258	10.0	10.6	
148 1,2-Dibromo-3-Chloropropane	155	13.469	13.469	0.000	91	107198	10.0	11.8	
149 1,3,5-Trichlorobenzene	180	13.591	13.591	0.000	98	1657411	10.0	10.8	
150 1,2,4-Trichlorobenzene	180	14.023	14.023	0.000	94	1354713	10.0	11.6	
151 Hexachlorobutadiene	225	14.103	14.103	0.000	96	684876	10.0	10.5	
152 Naphthalene	128	14.200	14.200	0.000	96	2200653	10.0	11.6	
153 1,2,3-Trichlorobenzene	180	14.347	14.347	0.000	96	1073428	10.0	12.2	
154 2-Methylnaphthalene	142	14.944	14.944	0.000	92	862945	10.0	19.3	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_LL_#1_826_00084	Amount Added: 10.00	Units: uL	
MSV_LL_#2_826_00095	Amount Added: 10.00	Units: uL	
MSV_LL_GAS826_00159	Amount Added: 10.00	Units: uL	
MSV_HP25_ISSS_00073	Amount Added: 1.00	Units: uL	Run Reagent

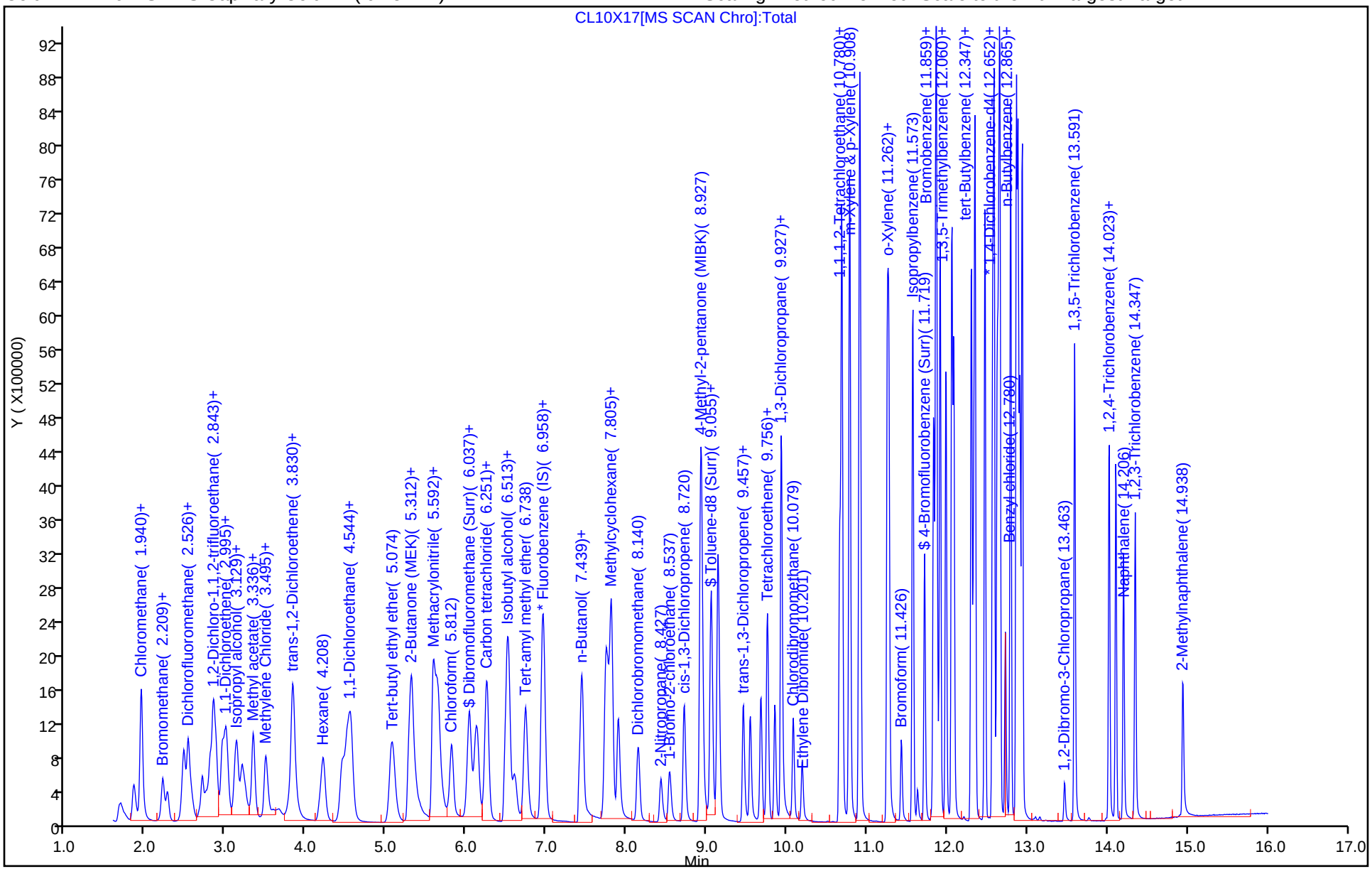
Report Date: 11-Jul-2023 21:38:22 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X17.D

Injection Date:	10-Jul-2023 21:18:30	Instrument ID:	10193	Operator ID:	knk41612
Lims ID:	ICIS 10			Worklist Smp#:	18
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

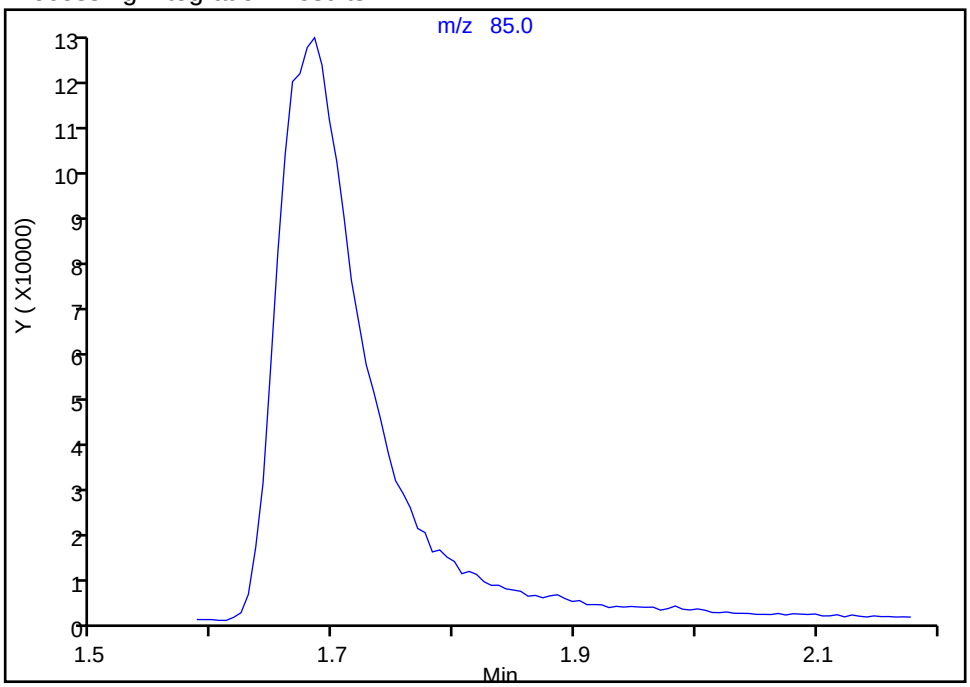
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X17.D				
Injection Date:	10-Jul-2023 21:18:30	Instrument ID:	10193		
Lims ID:	ICIS 10				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

2 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

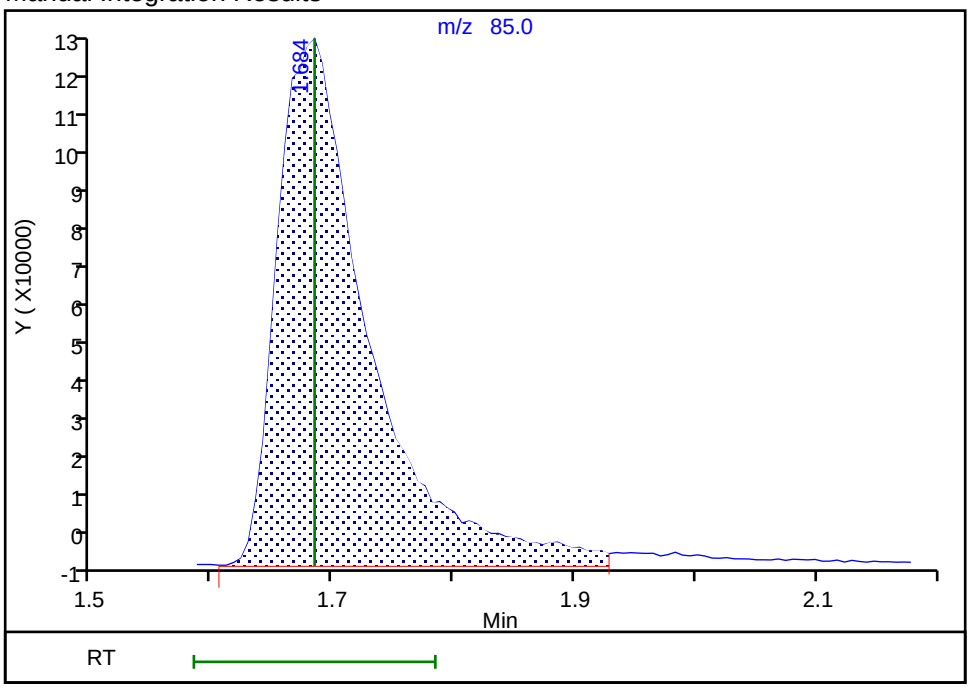
Not Detected
Expected RT: 1.68

Processing Integration Results



Manual Integration Results

RT: 1.68
Area: 658785
Amount: 10.669101
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:21:43 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

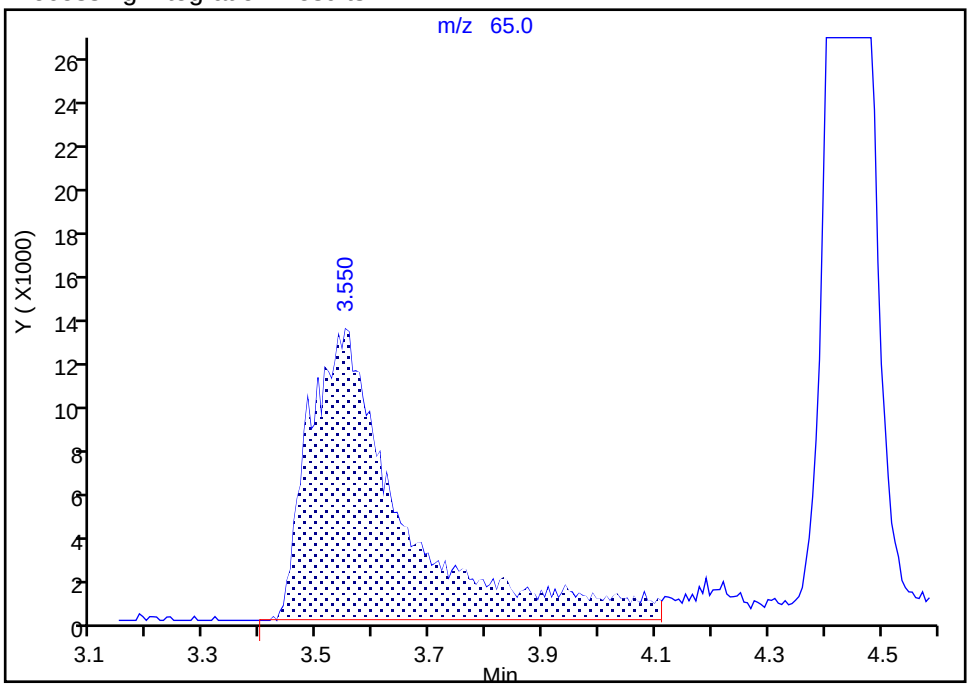
Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X17.D
Injection Date: 10-Jul-2023 21:18:30 Instrument ID: 10193
Lims ID: ICIS 10
Client ID:
Operator ID: knk41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 31 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

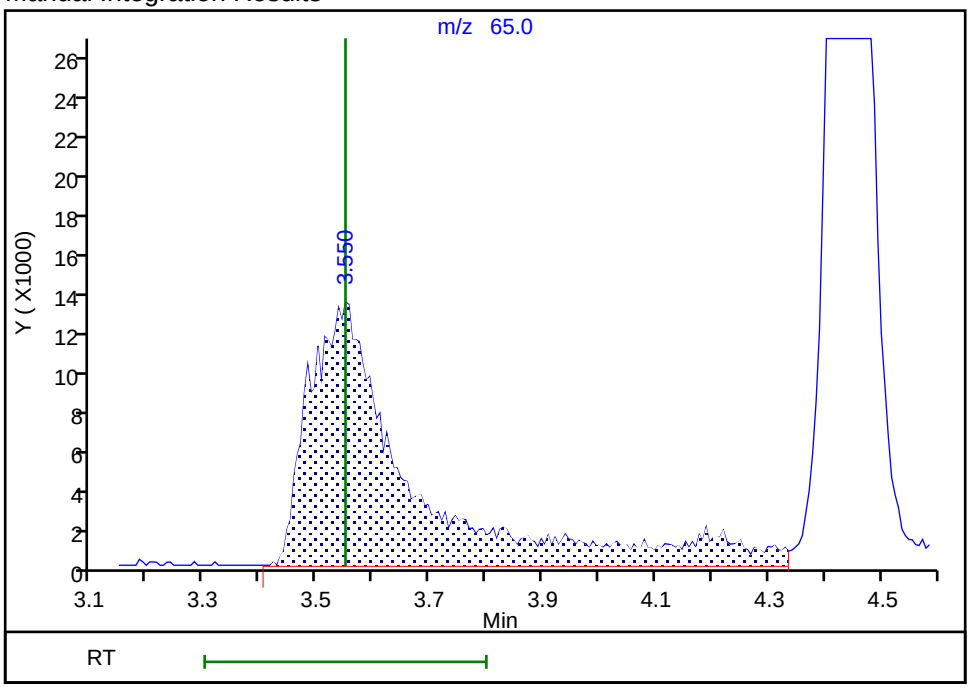
Processing Integration Results

RT: 3.55
Area: 153850
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 3.55
Area: 168052
Amount: 50.000000
Amount Units: ug/l



Reviewer: UKEK, 11-Jul-2023 20:39:26 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

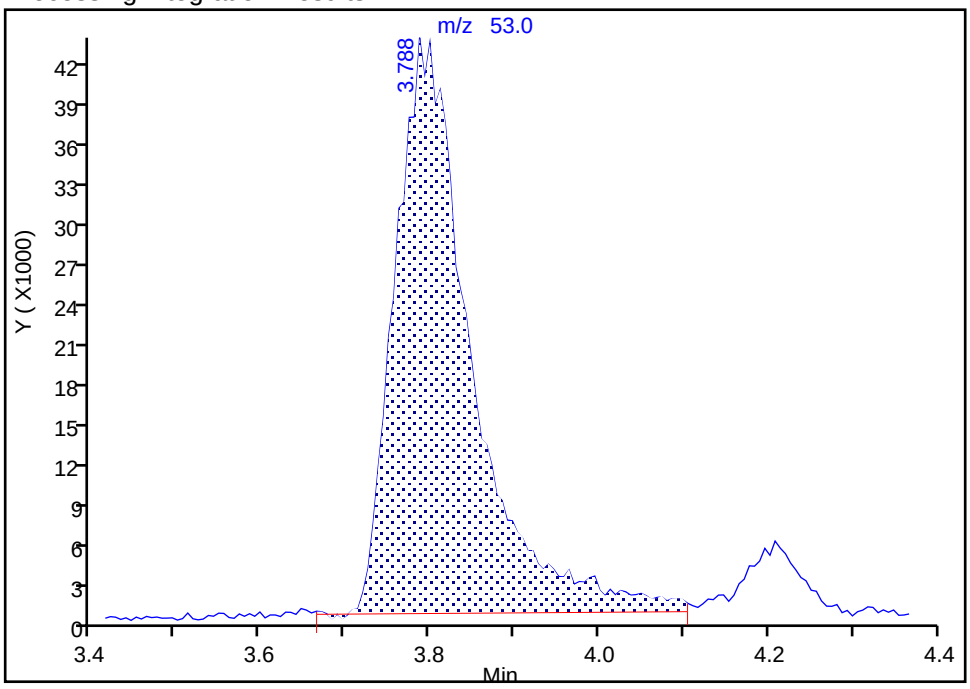
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X17.D				
Injection Date:	10-Jul-2023 21:18:30	Instrument ID:	10193		
Lims ID:	ICIS 10				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

33 Acrylonitrile, CAS: 107-13-1

Signal: 1

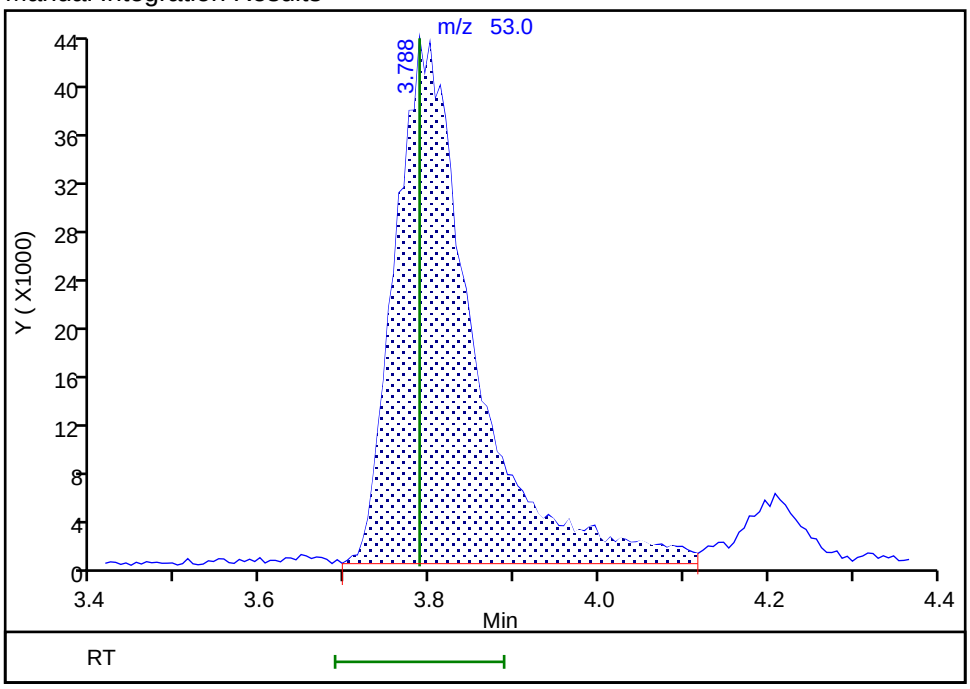
Processing Integration Results

RT: 3.79
Area: 267743
Amount: 23.558002
Amount Units: ug/l



Manual Integration Results

RT: 3.79
Area: 278600
Amount: 24.823427
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:22:22 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

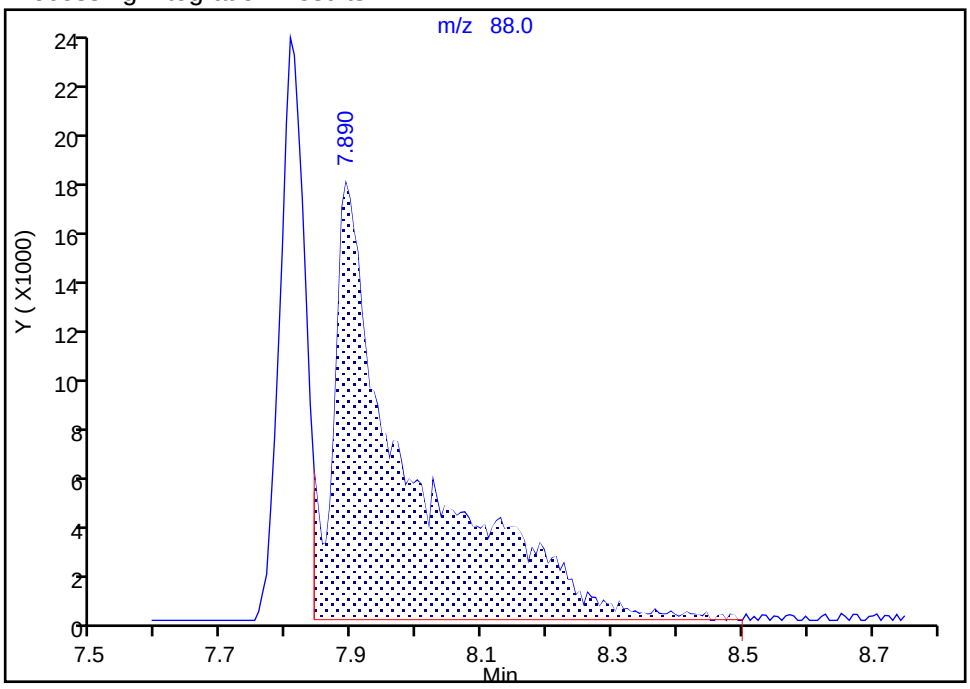
Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X17.D
Injection Date: 10-Jul-2023 21:18:30 Instrument ID: 10193
Lims ID: ICIS 10
Client ID:
Operator ID: knk41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

74 1,4-Dioxane, CAS: 123-91-1

Signal: 1

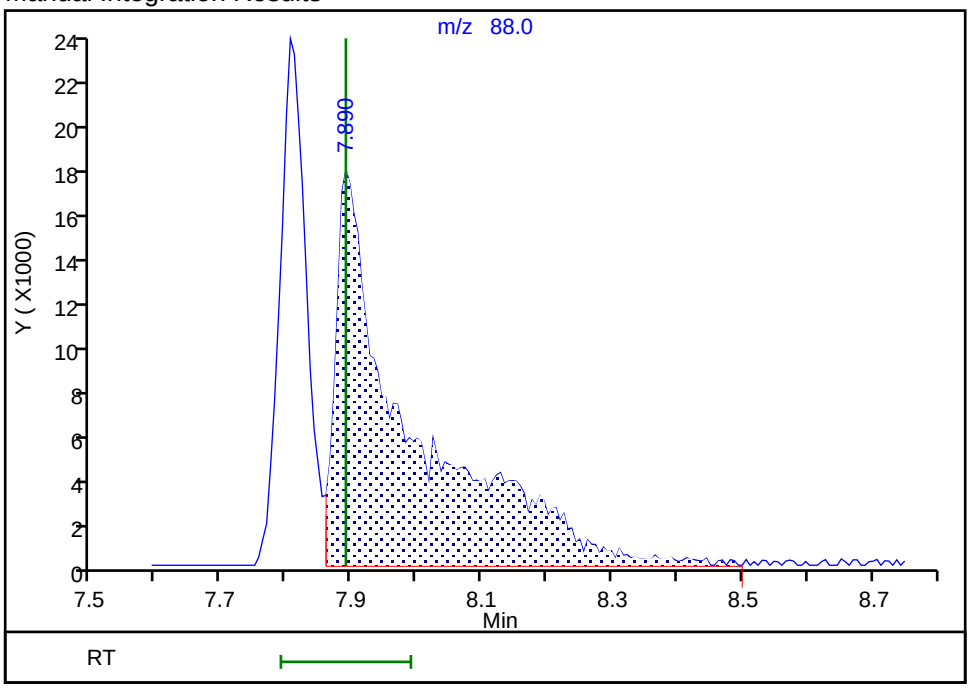
Processing Integration Results

RT: 7.89
Area: 143099
Amount: 571.1032
Amount Units: ug/l



Manual Integration Results

RT: 7.89
Area: 138169
Amount: 509.9109
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:22:45 -04:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

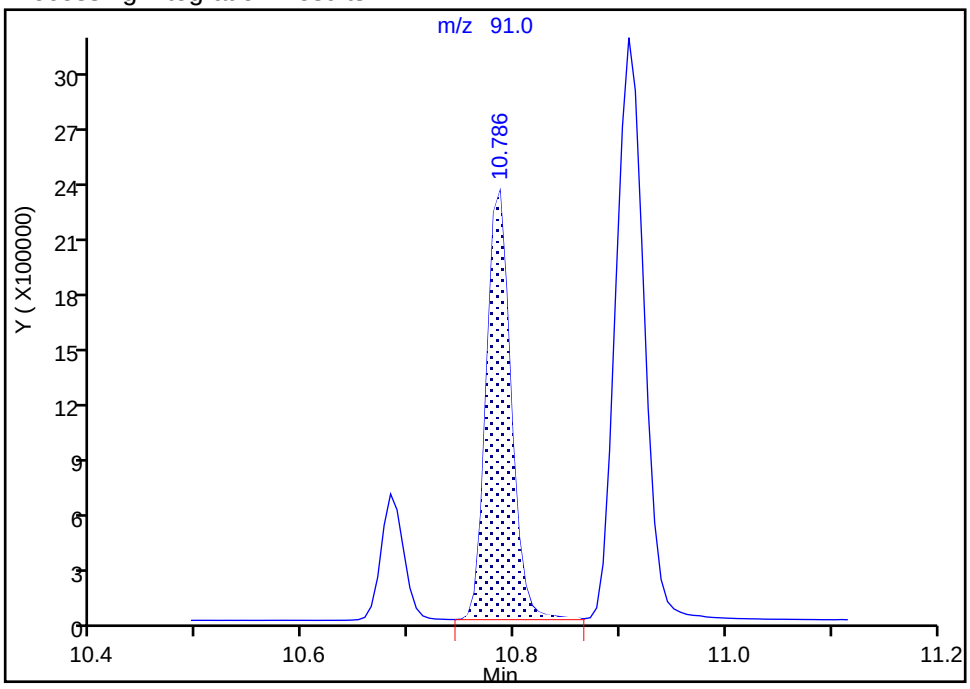
Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X17.D
Injection Date: 10-Jul-2023 21:18:30 Instrument ID: 10193
Lims ID: ICIS 10
Client ID:
Operator ID: knk41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

115 Ethylbenzene, CAS: 100-41-4

Signal: 1

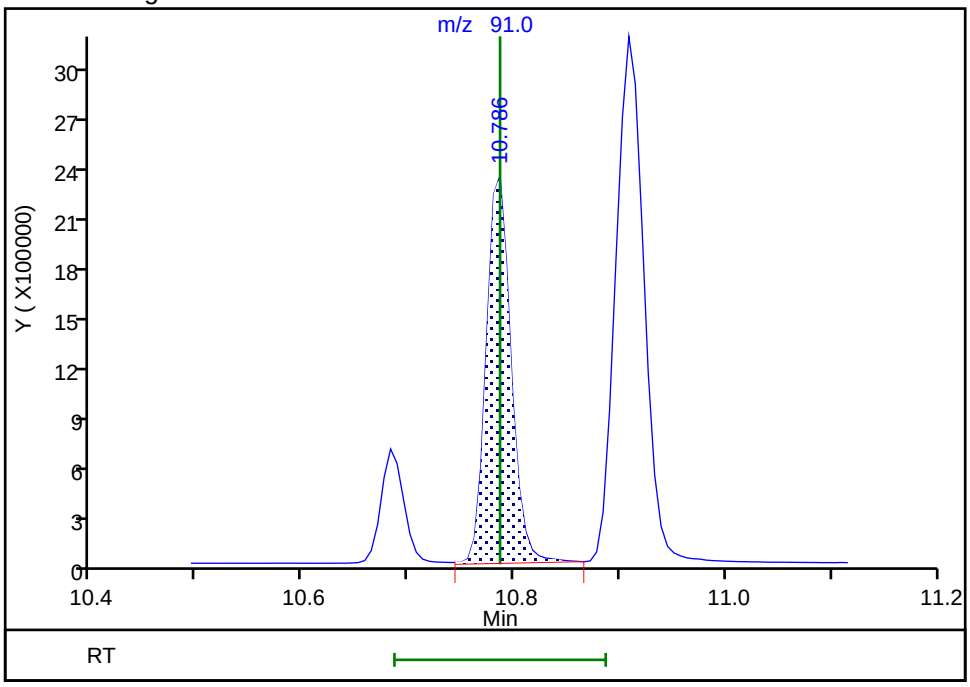
Processing Integration Results

RT: 10.79
Area: 3756735
Amount: 10.493354
Amount Units: ug/l



Manual Integration Results

RT: 10.79
Area: 3756735
Amount: 10.493354
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:37:02 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

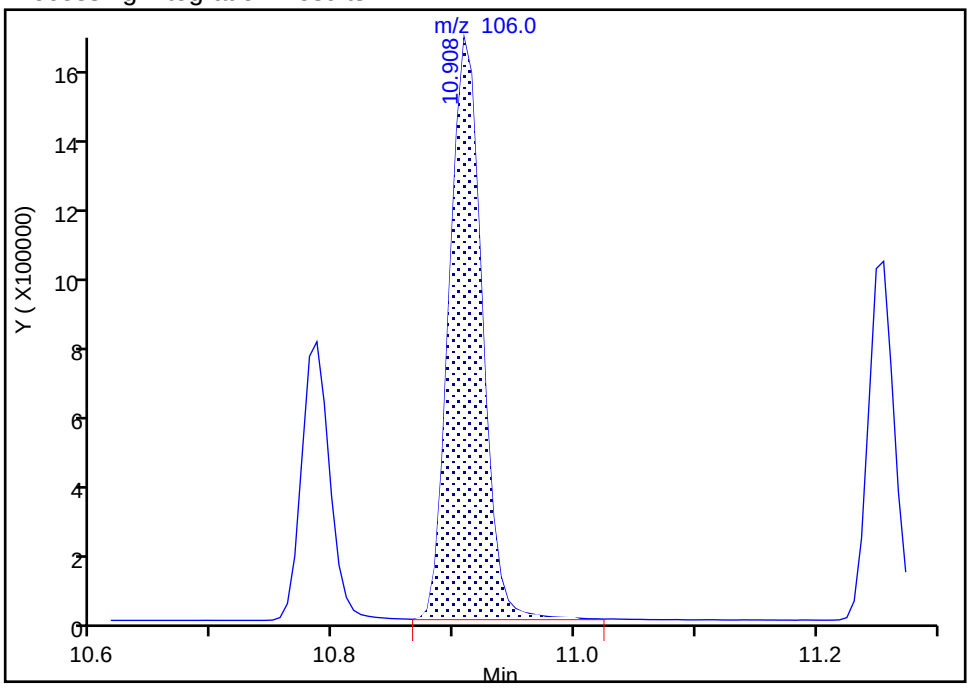
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X17.D				
Injection Date:	10-Jul-2023 21:18:30	Instrument ID:	10193		
Lims ID:	ICIS 10				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

116 m-Xylene & p-Xylene, CAS: 179601-23-1

Signal: 1

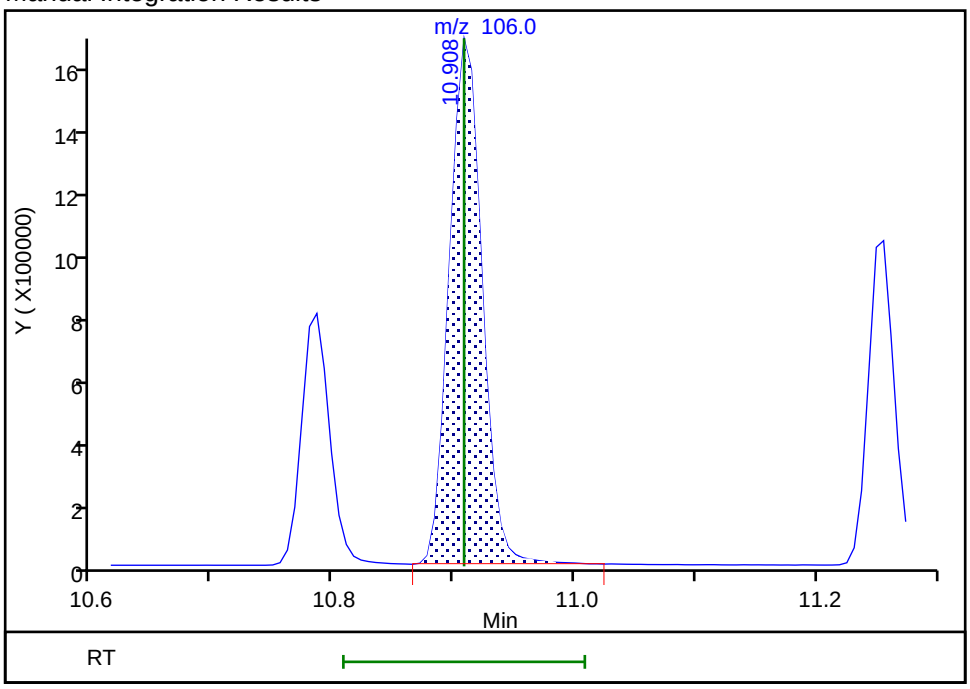
Processing Integration Results

RT: 10.91
Area: 3032843
Amount: 21.121203
Amount Units: ug/l



Manual Integration Results

RT: 10.91
Area: 3032843
Amount: 21.121203
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:25:08 -04:00:00 (UTC)

Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D
Lims ID: IC std7 25
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 10-Jul-2023 21:40:30 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0088548-019
Misc. Info.: IC STD7 25
Operator ID: knk41612 Instrument ID: 10193
Sublist: chrom-MSV_10193_25mL*sub1

Method: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 11-Jul-2023 21:38:26 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1649

First Level Reviewer: DVW2 Date: 11-Jul-2023 08:53:12

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.678	1.684	-0.006	89	1677755	25.0	25.7	M
5 Chloromethane	50	1.849	1.849	0.000	99	1989504	25.0	24.1	
6 Vinyl chloride	62	1.934	1.934	0.000	98	1921780	25.0	24.3	
7 Butadiene	39	1.940	1.940	0.000	91	1992815	25.0	26.1	
9 Bromomethane	94	2.209	2.209	0.000	90	1456503	25.0	23.6	
10 Chloroethane	64	2.263	2.270	-0.007	100	1127399	25.0	24.3	
11 Dichlorofluoromethane	67	2.471	2.471	0.000	97	3051651	25.0	24.2	
13 Pentane	43	2.526	2.526	0.000	96	2430253	25.0	27.0	
12 Trichlorofluoromethane	101	2.532	2.532	0.000	98	2306108	25.0	25.9	
14 Ethyl ether	59	2.702	2.702	0.000	91	1275360	25.0	25.1	
16 1,2-Dichloro-1,1,2-trifluoroetha	67	2.794	2.788	0.006	90	1734729	25.0	24.8	
17 Acrolein	56	2.843	2.843	0.000	100	8304871	1250.0	1310.2	
18 1,1-Dichloroethene	96	2.958	2.952	0.006	97	1488376	25.0	25.8	
20 Acetone	43	2.983	2.977	0.006	100	1752462	250.0	217.1	
21 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.007	3.001	0.006	89	1518257	25.0	26.6	
22 Iodomethane	142	3.123	3.117	0.006	97	3221996	25.0	26.0	
24 Isopropyl alcohol	45	3.117	3.117	0.000	75	894507	500.0	510.2	
23 Ethyl bromide	108	3.135	3.135	0.000	98	1420040	25.0	25.2	
25 Carbon disulfide	76	3.202	3.202	0.000	99	5445163	25.0	26.6	
26 Methyl acetate	43	3.324	3.324	0.000	24	628207	25.0	24.7	M
29 3-Chloro-1-propene	41	3.336	3.336	0.000	93	2752062	25.0	27.0	
30 Methylene Chloride	84	3.495	3.495	0.000	91	1757899	25.0	24.3	
* 31 t-Butyl alcohol-d10 (IS)	65	3.550	3.550	0.000	36	170043	50.0	50.0	M
32 2-Methyl-2-propanol	59	3.647	3.653	-0.006	100	1569784	500.0	439.7	
33 Acrylonitrile	53	3.781	3.788	-0.007	99	715235	62.5	63.0	
35 trans-1,2-Dichloroethene	96	3.830	3.830	0.000	100	1821481	25.0	26.0	
34 Methyl tert-butyl ether	73	3.830	3.830	0.000	95	4676022	25.0	25.2	
36 Hexane	57	4.208	4.208	0.000	92	2465849	25.0	27.6	
37 1,1-Dichloroethane	63	4.440	4.446	-0.006	96	3224585	25.0	26.2	
39 Isopropyl ether	45	4.513	4.513	0.000	95	6118603	25.0	26.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
40 2-Chloro-1,3-butadiene	53	4.556	4.562	-0.006	89	2646828	25.0	28.1	
41 Tert-butyl ethyl ether	59	5.074	5.074	0.000	98	5642481	25.0	26.3	
42 2-Butanone (MEK)	43	5.281	5.281	0.000	100	4228096	250.0	268.1	
43 cis-1,2-Dichloroethene	96	5.312	5.312	0.000	81	2030075	25.0	27.0	
44 2,2-Dichloropropane	77	5.324	5.324	0.000	87	2527014	25.0	25.7	
45 Propionitrile	54	5.373	5.385	-0.012	99	2139112	500.0	606.4	
47 Methacrylonitrile	67	5.592	5.592	0.000	92	4577349	250.0	274.2	
49 Tetrahydrofuran	71	5.659	5.653	0.006	90	621197	125.0	133.9	
48 Chlorobromomethane	128	5.653	5.653	0.000	93	924552	25.0	25.6	
50 Chloroform	83	5.812	5.818	-0.006	93	3120160	25.0	25.6	
53 1,1,1-Trichloroethane	97	6.037	6.037	0.000	98	2704708	25.0	26.4	
$ 54 Dibromofluoromethane (Surr)	113	6.037	6.037	0.000	95	615441	10.0	9.91	
55 Cyclohexane	56	6.129	6.123	0.007	91	3208600	25.0	27.9	
S 52 1,2-Dichloroethene, Total	100				0			53.0	
56 Carbon tetrachloride	117	6.244	6.244	0.000	96	2427242	25.0	27.3	
57 1,1-Dichloropropene	75	6.257	6.257	0.000	97	2494003	25.0	27.2	
58 Isobutyl alcohol	41	6.476	6.482	-0.006	95	1337202	1250.0	1255.8	
$ 59 1,2-Dichloroethane-d4 (Surr)	102	6.500	6.507	-0.007	98	126553	10.0	9.64	
60 Benzene	78	6.519	6.525	-0.006	96	7726211	25.0	26.4	
61 1,2-Dichloroethane	62	6.604	6.598	0.006	97	1885153	25.0	25.2	
64 Tert-amyl methyl ether	73	6.738	6.738	0.000	99	5255245	25.0	26.3	
* 65 Fluorobenzene (IS)	96	6.946	6.946	0.000	96	2655574	10.0	10.0	
66 n-Heptane	43	6.964	6.964	0.000	92	2721424	25.0	28.1	
67 n-Butanol	56	7.397	7.409	-0.012	88	2236914	2187.5	2248.9	
68 Trichloroethene	95	7.439	7.439	0.000	96	2001612	25.0	26.6	
69 Methylcyclohexane	83	7.738	7.738	0.000	90	3447065	25.0	28.2	
70 1,2-Dichloropropane	63	7.775	7.775	0.000	95	2041344	25.0	26.4	
71 2-ethoxy-2-methyl butane	87	7.811	7.811	0.000	94	3254859	25.0	27.1	
72 Dibromomethane	93	7.897	7.890	0.007	94	916525	25.0	25.5	
74 1,4-Dioxane	88	7.884	7.890	-0.006	33	302035	1250.0	1101.6	M
73 Methyl methacrylate	69	7.897	7.897	0.000	91	988980	25.0	30.3	
76 Dichlorobromomethane	83	8.140	8.140	0.000	99	2392101	25.0	26.8	
77 2-Nitropropane	41	8.427	8.427	0.000	97	1221117	125.0	137.7	
78 1-Bromo-2-chloroethane	63	8.537	8.531	0.006	98	2014153	25.0	25.7	
80 cis-1,3-Dichloropropene	75	8.720	8.720	0.000	97	3128637	25.0	28.3	
82 4-Methyl-2-pentanone (MIBK)	43	8.927	8.927	0.000	96	12653718	250.0	282.0	
$ 83 Toluene-d8 (Surr)	98	9.055	9.055	0.000	93	2755994	10.0	10.1	
84 Toluene	92	9.140	9.140	0.000	98	5167343	25.0	26.5	
85 trans-1,3-Dichloropropene	75	9.451	9.457	-0.006	91	2671634	25.0	29.3	
86 Ethyl methacrylate	69	9.543	9.543	0.000	90	2247899	25.0	31.0	
87 1,1,2-Trichloroethane	97	9.677	9.677	0.000	89	1454086	25.0	25.2	
88 Tetrachloroethene	166	9.756	9.756	0.000	97	2481115	25.0	26.5	
89 1,3-Dichloropropane	76	9.847	9.847	0.000	90	2468894	25.0	26.7	
106 2-Hexanone	43	9.927	9.927	0.000	96	9285508	250.0	303.6	
S 107 1,3-Dichloropropene, Total	100				0			57.7	
108 Chlorodibromomethane	129	10.079	10.079	0.000	90	1918104	25.0	27.1	
110 Ethylene Dibromide	107	10.189	10.189	0.000	99	1429329	25.0	27.6	
* 111 Chlorobenzene-d5 (IS)	117	10.658	10.658	0.000	83	2081007	10.0	10.0	
113 Chlorobenzene	112	10.689	10.683	0.006	96	6222003	25.0	26.4	
112 1-Chlorohexane	91	10.683	10.683	0.000	67	2845729	25.0	26.9	
114 1,1,1,2-Tetrachloroethane	131	10.780	10.780	0.000	97	2144493	25.0	27.3	
115 Ethylbenzene	91	10.786	10.786	0.000	98	10248995	25.0	27.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
116 m-Xylene & p-Xylene	106	10.908	10.908	0.000	97	8283558	50.0	55.2	
S 117 Xylenes, Total	106				0			82.4	
118 o-Xylene	106	11.256	11.256	0.000	95	4095695	25.0	27.2	
119 Styrene	104	11.274	11.274	0.000	95	6922505	25.0	29.6	
120 Bromoform	173	11.426	11.426	0.000	98	1243518	25.0	27.6	
121 Isopropylbenzene	105	11.573	11.573	0.000	95	10247430	25.0	27.0	
$ 124 4-Bromofluorobenzene (Surr)	95	11.719	11.719	0.000	97	994283	10.0	10.2	
125 Bromobenzene	156	11.829	11.829	0.000	91	2757895	25.0	26.3	
126 1,1,2,2-Tetrachloroethane	83	11.835	11.835	0.000	92	1947529	25.0	25.8	
127 trans-1,4-Dichloro-2-butene	53	11.859	11.859	0.000	89	4892765	250.0	295.4	
128 1,2,3-Trichloropropane	110	11.877	11.877	0.000	79	495643	25.0	25.6	
129 N-Propylbenzene	91	11.914	11.914	0.000	98	11934156	25.0	26.0	e
130 2-Chlorotoluene	126	11.987	11.987	0.000	98	2644132	25.0	26.5	
131 1,3,5-Trimethylbenzene	105	12.060	12.060	0.000	94	9134558	25.0	26.9	
132 4-Chlorotoluene	126	12.085	12.085	0.000	96	2776349	25.0	27.4	
133 tert-Butylbenzene	134	12.304	12.304	0.000	93	2155920	25.0	27.0	
134 Pentachloroethane	167	12.329	12.329	0.000	93	1748479	25.0	27.6	
135 1,2,4-Trimethylbenzene	105	12.347	12.347	0.000	96	9614423	25.0	27.5	
136 sec-Butylbenzene	105	12.469	12.469	0.000	96	11553473	25.0	26.7	e
137 1,3-Dichlorobenzene	146	12.566	12.566	0.000	98	5655092	25.0	27.2	
138 4-Isopropyltoluene	119	12.585	12.585	0.000	97	10502301	25.0	27.4	e
* 139 1,4-Dichlorobenzene-d4	152	12.627	12.621	0.006	90	1273416	10.0	10.0	
140 1,4-Dichlorobenzene	146	12.640	12.640	0.000	96	5564704	25.0	26.0	
141 1,2,3-Trimethylbenzene	120	12.658	12.658	0.000	98	4502274	25.0	27.0	
142 Benzyl chloride	126	12.725	12.725	0.000	98	885654	25.0	29.5	
145 p-Diethylbenzene	119	12.865	12.865	0.000	93	6730556	25.0	27.6	
143 n-Butylbenzene	92	12.883	12.883	0.000	97	5167753	25.0	28.7	
144 1,2-Dichlorobenzene	146	12.908	12.908	0.000	99	5280700	25.0	26.9	
148 1,2-Dibromo-3-Chloropropane	155	13.463	13.469	-0.006	90	284292	25.0	29.9	
149 1,3,5-Trichlorobenzene	180	13.591	13.591	0.000	98	4359430	25.0	27.0	
150 1,2,4-Trichlorobenzene	180	14.017	14.023	-0.006	94	3548476	25.0	29.0	
151 Hexachlorobutadiene	225	14.109	14.103	0.006	96	1827727	25.0	26.6	
152 Naphthalene	128	14.200	14.200	0.000	96	5729904	25.0	28.7	
153 1,2,3-Trichlorobenzene	180	14.347	14.347	0.000	96	2751180	25.0	29.7	
154 2-Methylnaphthalene	142	14.938	14.944	-0.006	93	2146389	25.0	45.7	

QC Flag Legend

Processing Flags

e - Potential Peak Saturated

Review Flags

M - Manually Integrated

Reagents:

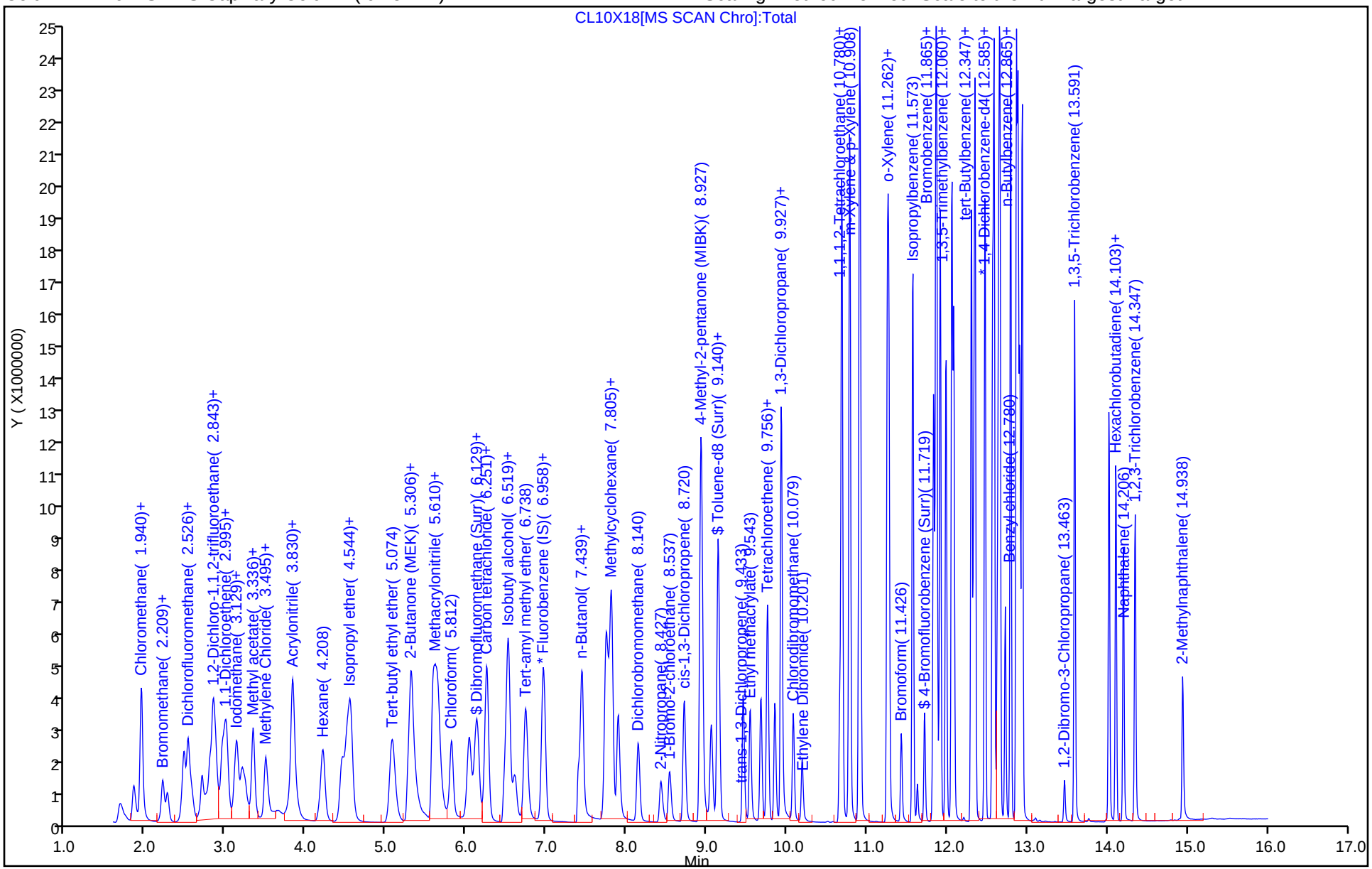
MSV_LL_#1_826_00084	Amount Added: 25.00	Units: uL	
MSV_LL_#2_826_00095	Amount Added: 25.00	Units: uL	
MSV_LL_GAS826_00159	Amount Added: 25.00	Units: uL	
MSV_HP25_ISSS_00073	Amount Added: 1.00	Units: uL	Run Reagent

Report Date: 11-Jul-2023 21:38:27 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D				
Injection Date:	10-Jul-2023 21:40:30	Instrument ID:	10193	Operator ID:	knk41612
Lims ID:	IC std7 25			Worklist Smp#:	19
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

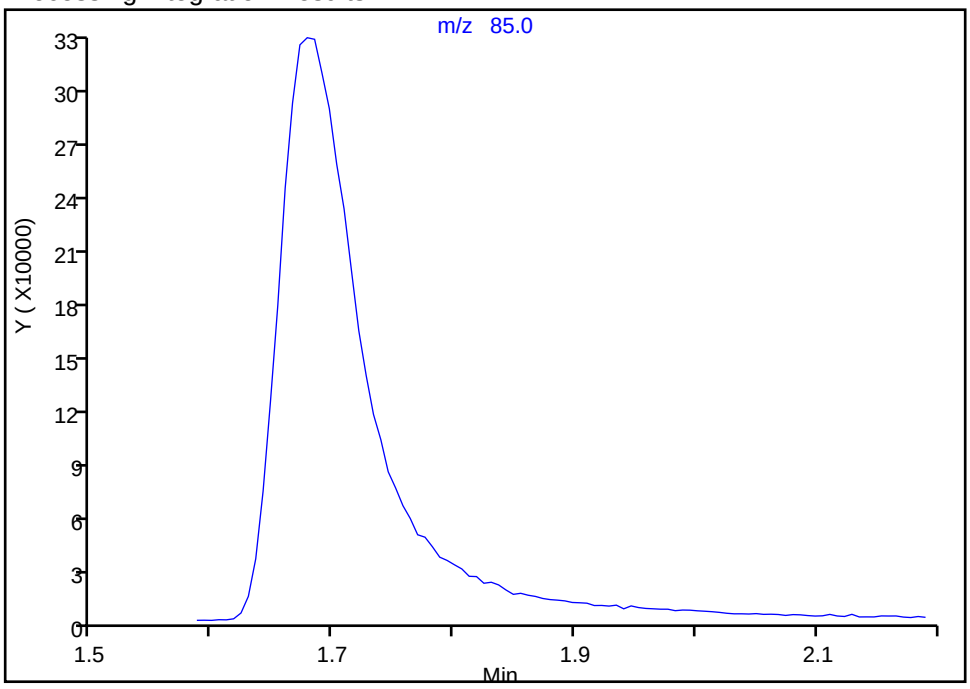
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D				
Injection Date:	10-Jul-2023 21:40:30	Instrument ID:	10193		
Lims ID:	IC std7 25				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

2 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

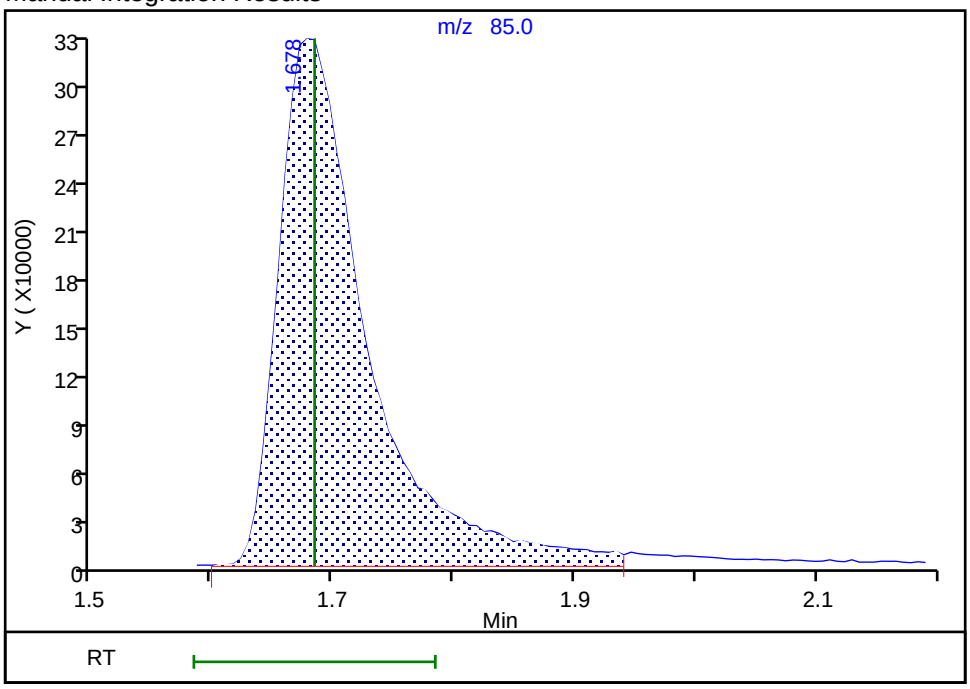
Not Detected
Expected RT: 1.68

Processing Integration Results



Manual Integration Results

RT: 1.68
Area: 1677755
Amount: 25.689245
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:51:32 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

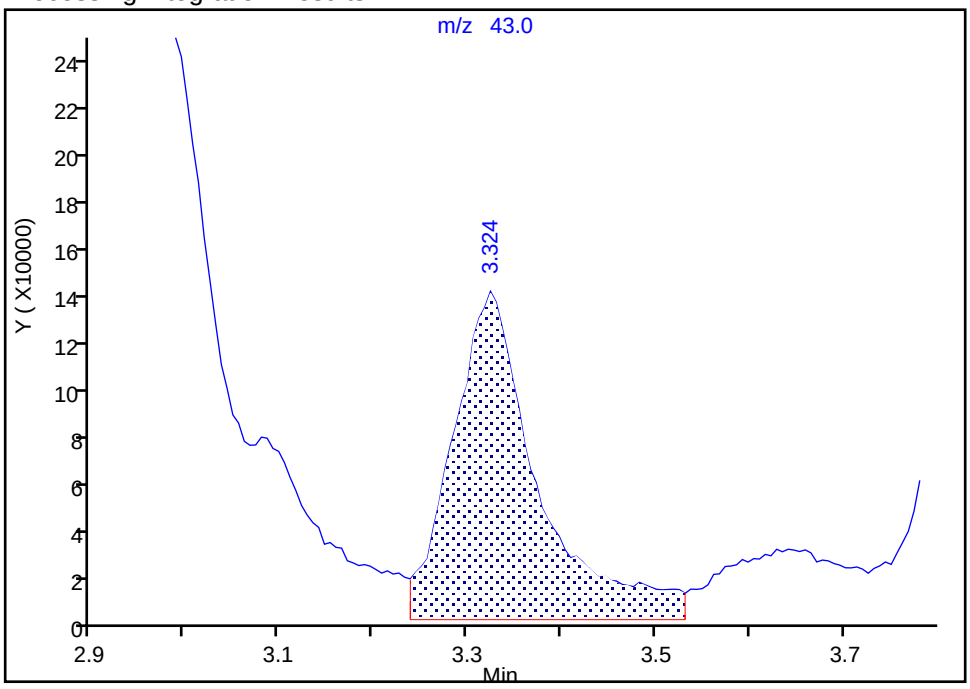
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D				
Injection Date:	10-Jul-2023 21:40:30	Instrument ID:	10193		
Lims ID:	IC std7 25				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

26 Methyl acetate, CAS: 79-20-9

Signal: 1

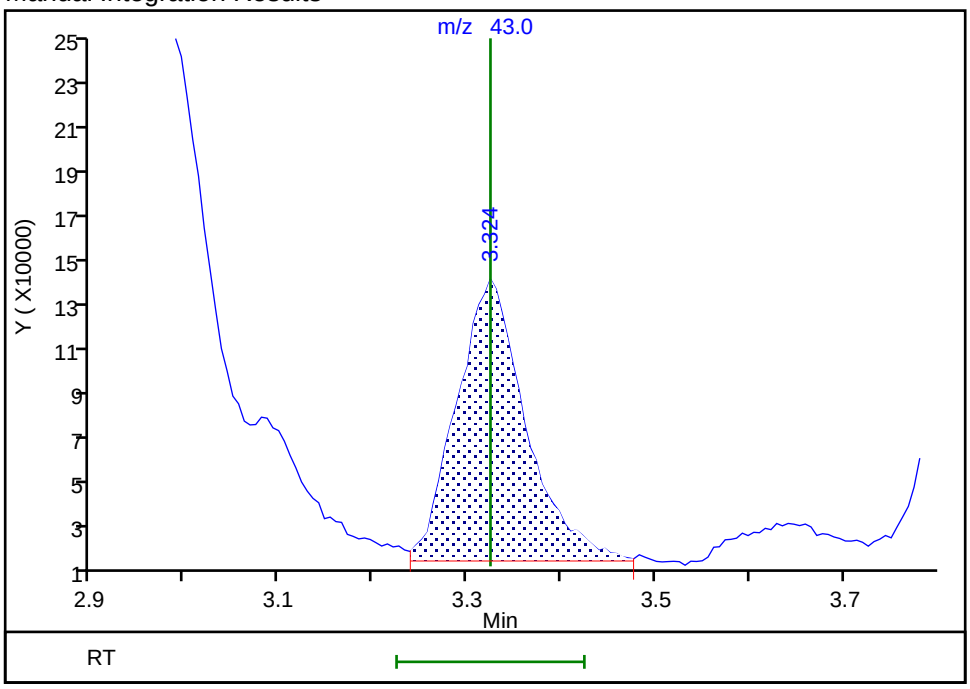
RT: 3.32
Area: 850058
Amount: 34.441155
Amount Units: ug/l

Processing Integration Results



Manual Integration Results

RT: 3.32
Area: 628207
Amount: 24.681992
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:51:58 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

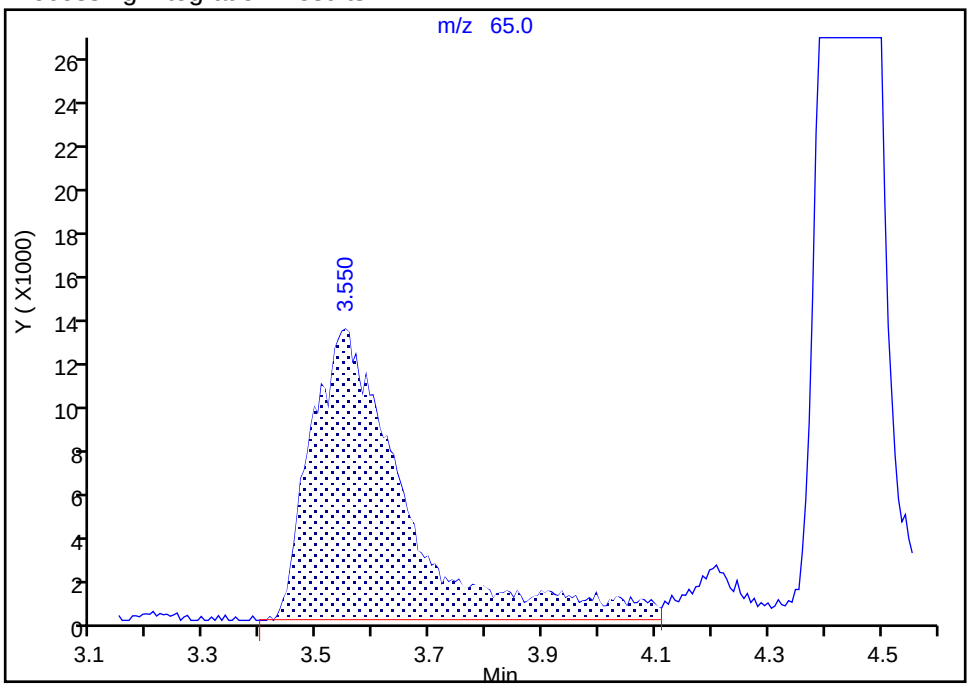
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D				
Injection Date:	10-Jul-2023 21:40:30	Instrument ID:	10193		
Lims ID:	IC std7 25				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

* 31 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

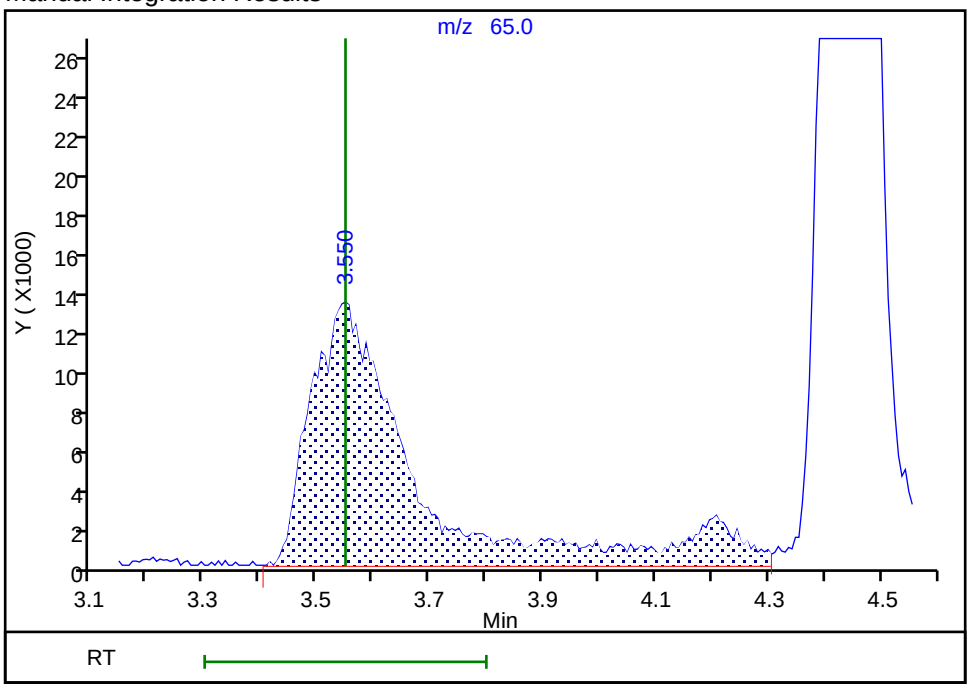
Processing Integration Results

RT: 3.55
Area: 154317
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 3.55
Area: 170043
Amount: 50.000000
Amount Units: ug/l



Reviewer: UKEK, 11-Jul-2023 20:40:54 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

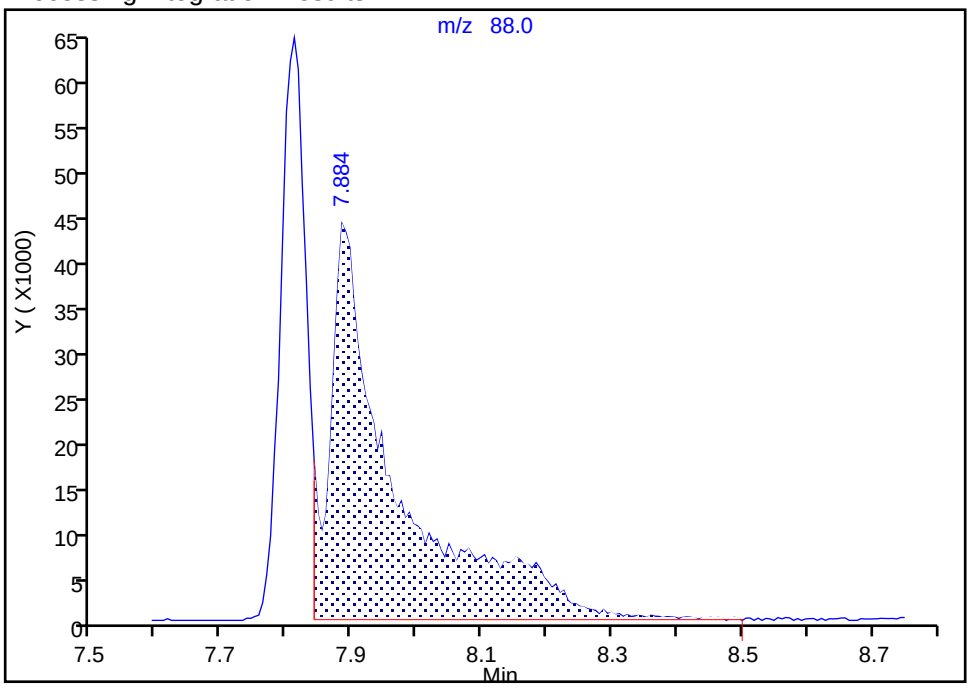
Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D
Injection Date: 10-Jul-2023 21:40:30 Instrument ID: 10193
Lims ID: IC std7 25
Client ID:
Operator ID: knk41612 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

74 1,4-Dioxane, CAS: 123-91-1

Signal: 1

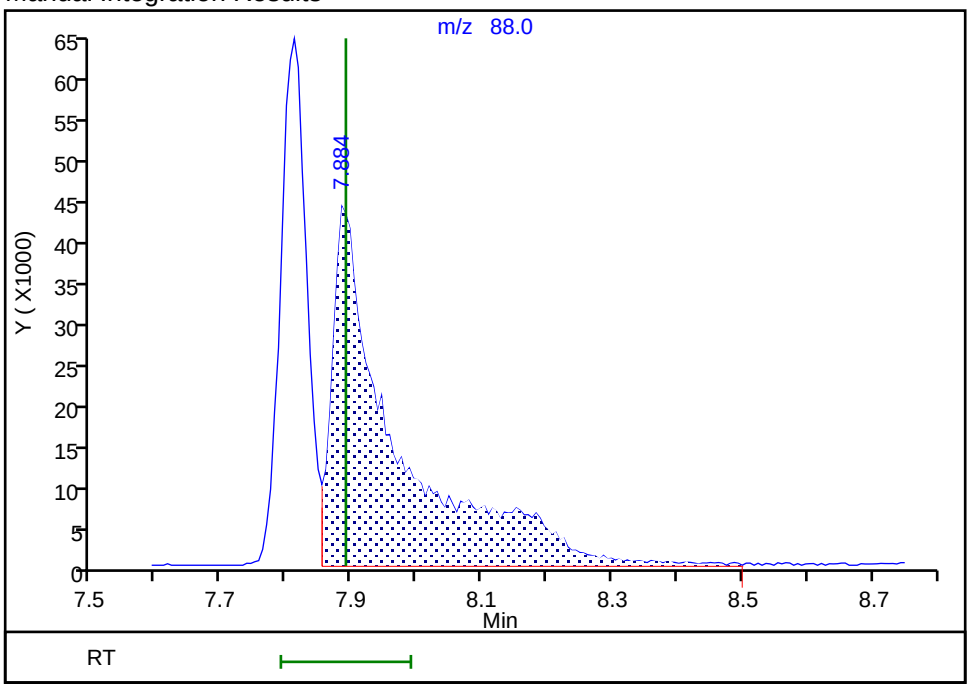
Processing Integration Results

RT: 7.88
Area: 312781
Amount: 1228.3445
Amount Units: ug/l



Manual Integration Results

RT: 7.88
Area: 302035
Amount: 1101.6050
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:52:47 -04:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Calibration / Dichlorodifluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

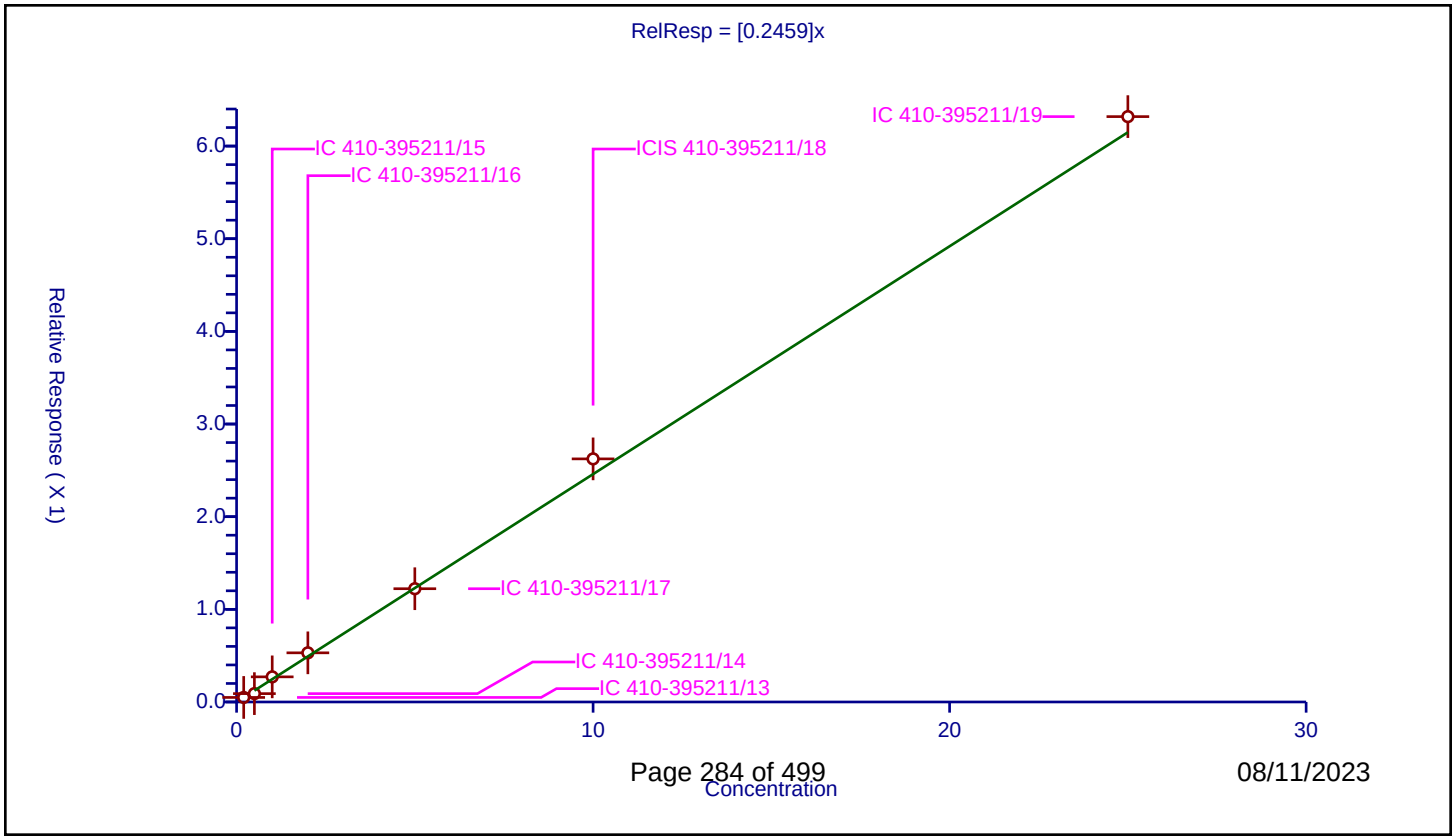
Curve Coefficients

Intercept:	0
Slope:	0.2459

Error Coefficients

Standard Error:	749000
Relative Standard Error:	12.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.980

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.048968	10.0	2414017.0	0.244841	Y
2	IC 410-395211/14	0.5	0.090281	10.0	2469842.0	0.180562	Y
3	IC 410-395211/15	1.0	0.271275	10.0	2458760.0	0.271275	Y
4	IC 410-395211/16	2.0	0.530474	10.0	2465964.0	0.265237	Y
5	IC 410-395211/17	5.0	1.222599	10.0	2475137.0	0.24452	Y
6	ICIS 410-395211/18	10.0	2.623896	10.0	2510713.0	0.26239	Y
7	IC 410-395211/19	25.0	6.317862	10.0	2655574.0	0.252714	Y



Calibration / Chloromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

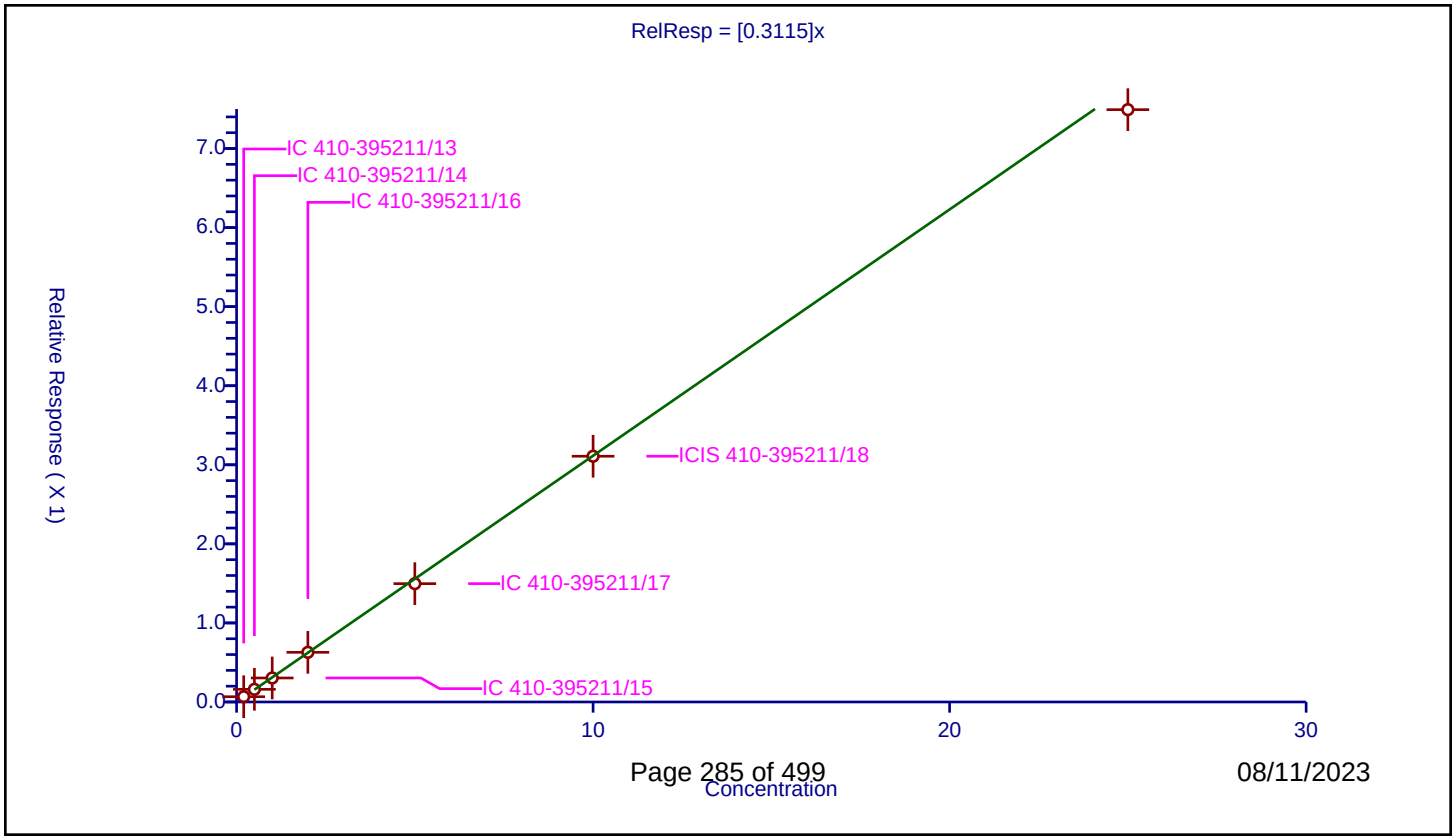
Curve Coefficients

Intercept:	0
Slope:	0.3115

Error Coefficients

Standard Error:	888000
Relative Standard Error:	3.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.066503	10.0	2414017.0	0.332516	Y
2	IC 410-395211/14	0.5	0.160091	10.0	2469842.0	0.320182	Y
3	IC 410-395211/15	1.0	0.30369	10.0	2458760.0	0.30369	Y
4	IC 410-395211/16	2.0	0.628124	10.0	2465964.0	0.314062	Y
5	IC 410-395211/17	5.0	1.496697	10.0	2475137.0	0.299339	Y
6	ICIS 410-395211/18	10.0	3.10838	10.0	2510713.0	0.310838	Y
7	IC 410-395211/19	25.0	7.491804	10.0	2655574.0	0.299672	Y



Calibration / Vinyl chloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

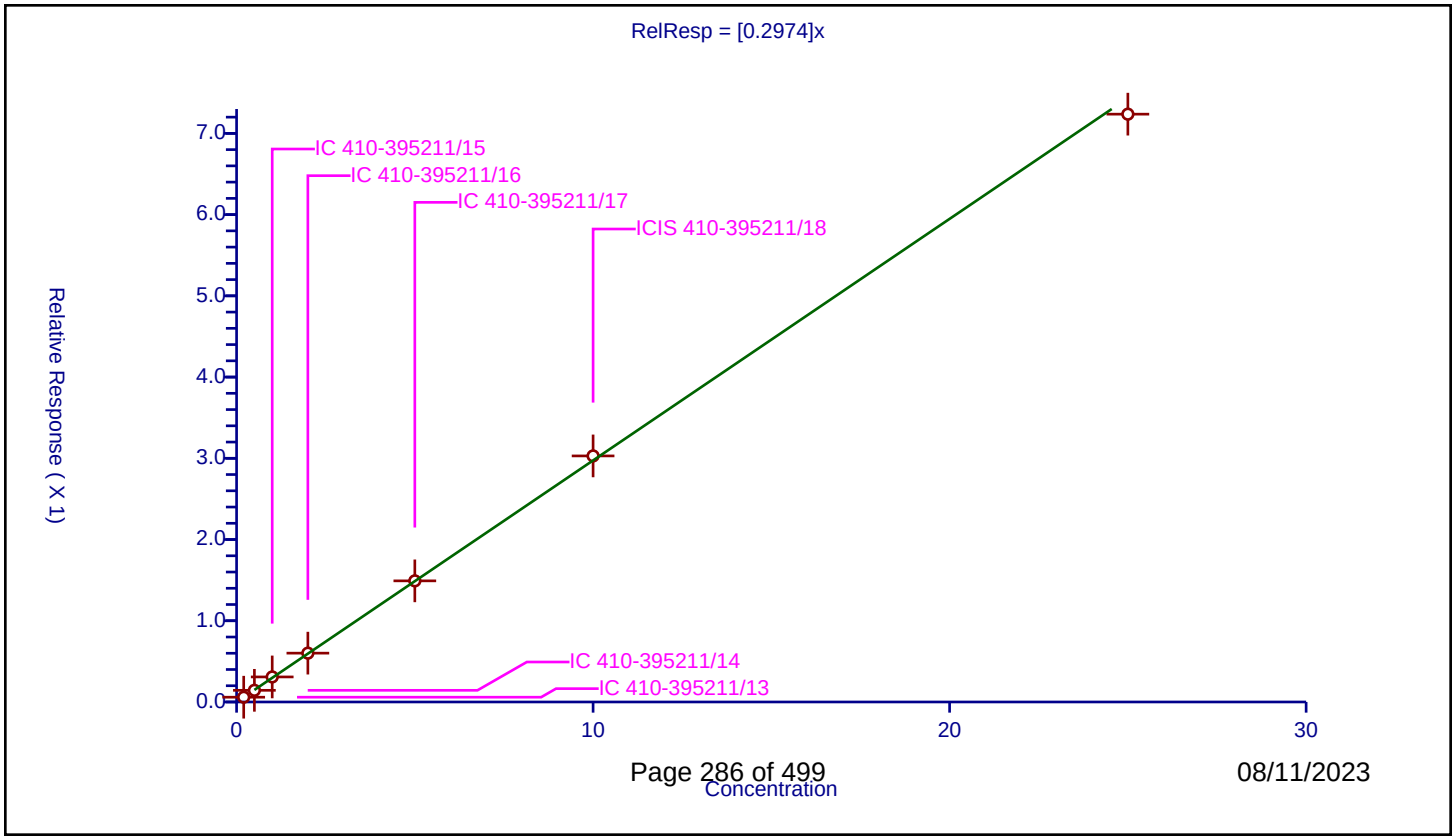
Curve Coefficients

Intercept:	0
Slope:	0.2974

Error Coefficients

Standard Error:	860000
Relative Standard Error:	2.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.058885	10.0	2414017.0	0.294426	Y
2	IC 410-395211/14	0.5	0.143766	10.0	2469842.0	0.287533	Y
3	IC 410-395211/15	1.0	0.308473	10.0	2458760.0	0.308473	Y
4	IC 410-395211/16	2.0	0.601164	10.0	2465964.0	0.300582	Y
5	IC 410-395211/17	5.0	1.491142	10.0	2475137.0	0.298228	Y
6	ICIS 410-395211/18	10.0	3.029446	10.0	2510713.0	0.302945	Y
7	IC 410-395211/19	25.0	7.236778	10.0	2655574.0	0.289471	Y



Calibration / Butadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

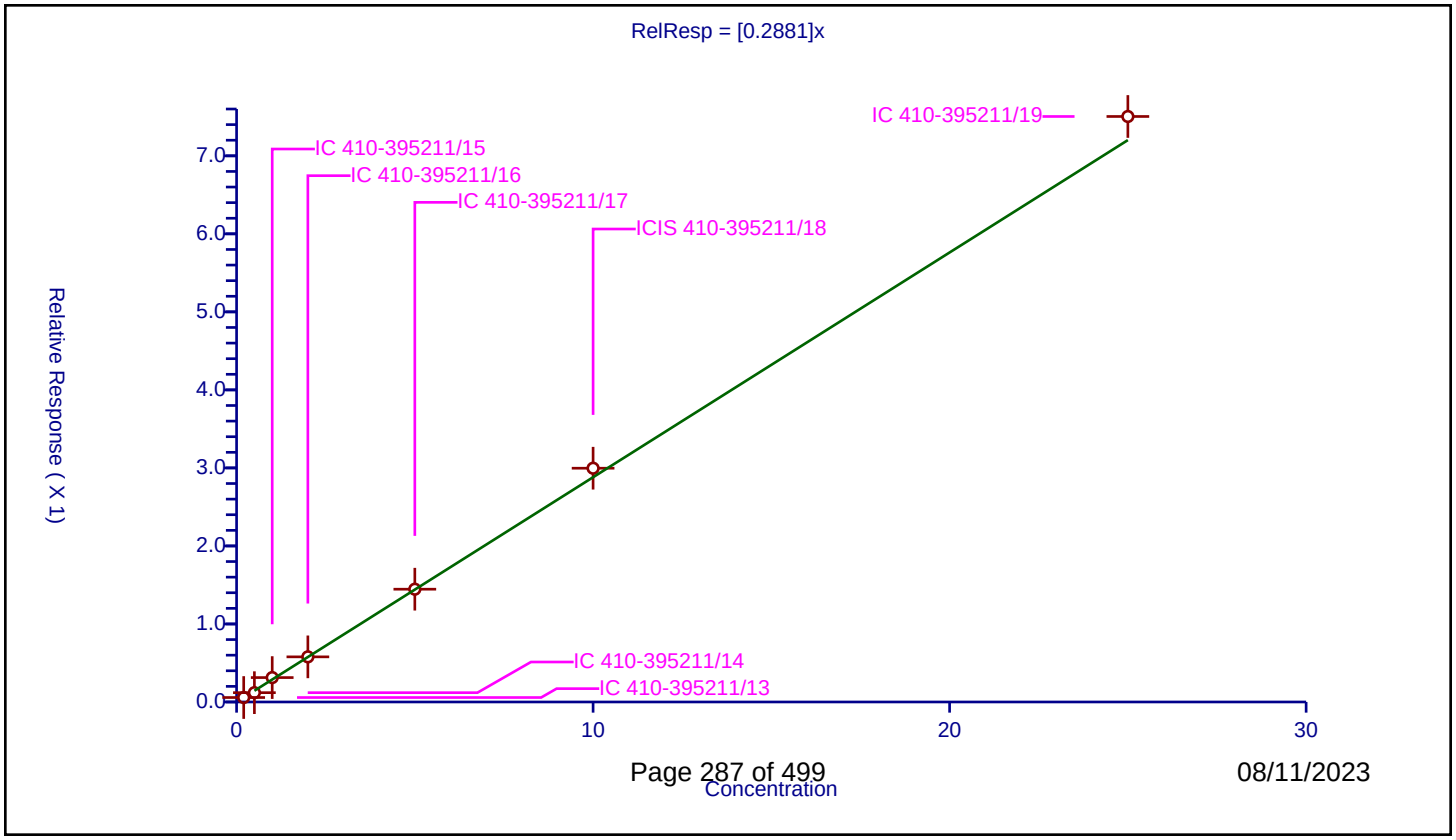
Curve Coefficients

Intercept:	0
Slope:	0.2881

Error Coefficients

Standard Error:	884000
Relative Standard Error:	8.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.057348	10.0	2414017.0	0.286742	Y
2	IC 410-395211/14	0.5	0.119323	10.0	2469842.0	0.238647	Y
3	IC 410-395211/15	1.0	0.312776	10.0	2458760.0	0.312776	Y
4	IC 410-395211/16	2.0	0.578589	10.0	2465964.0	0.289295	Y
5	IC 410-395211/17	5.0	1.445718	10.0	2475137.0	0.289144	Y
6	ICIS 410-395211/18	10.0	2.996137	10.0	2510713.0	0.299614	Y
7	IC 410-395211/19	25.0	7.504272	10.0	2655574.0	0.300171	Y



Calibration / Bromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

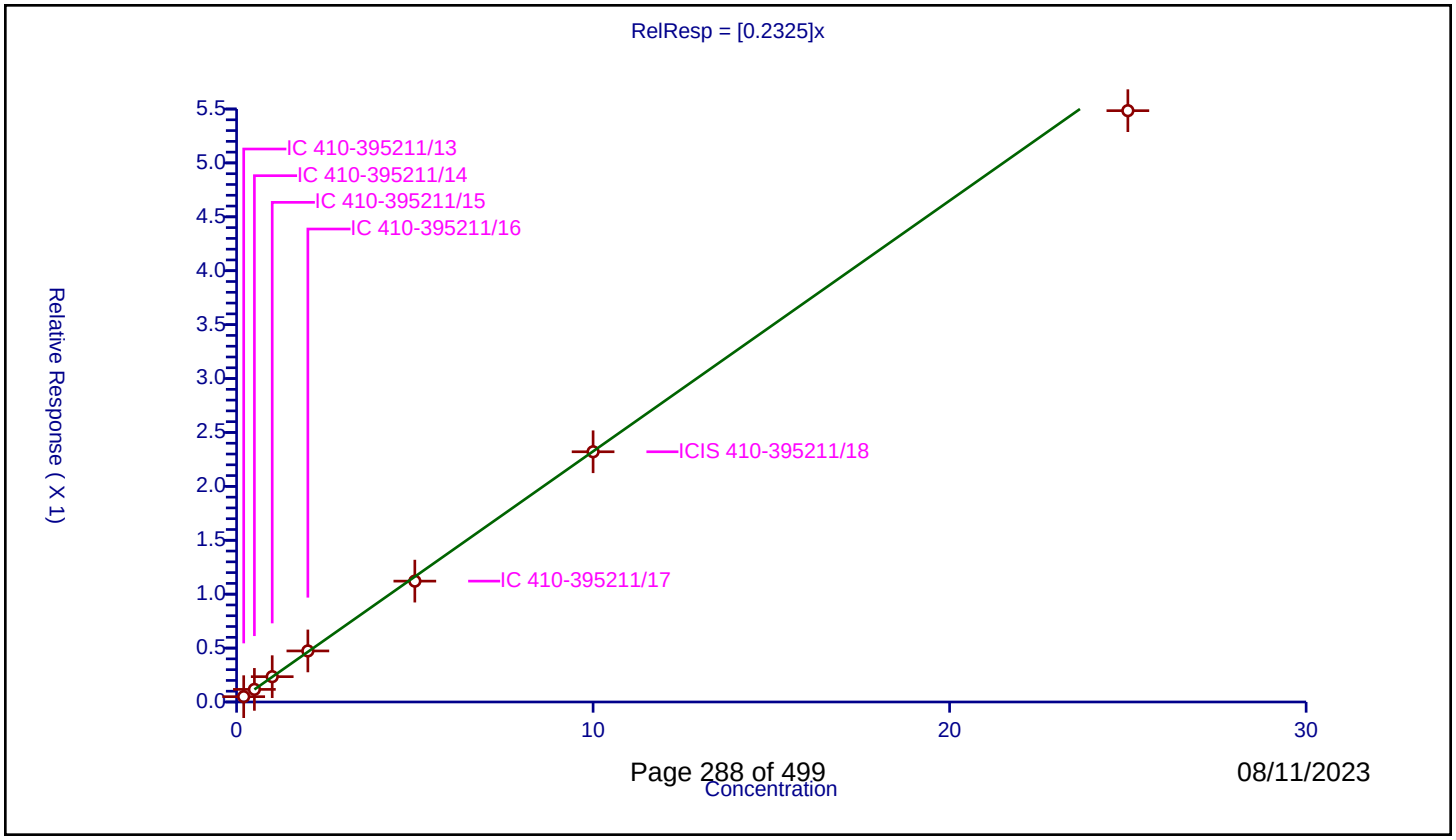
Curve Coefficients

Intercept:	0
Slope:	0.2325

Error Coefficients

Standard Error:	653000
Relative Standard Error:	3.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.04925	10.0	2414017.0	0.246249	Y
2	IC 410-395211/14	0.5	0.116979	10.0	2469842.0	0.233958	Y
3	IC 410-395211/15	1.0	0.234785	10.0	2458760.0	0.234785	Y
4	IC 410-395211/16	2.0	0.473507	10.0	2465964.0	0.236753	Y
5	IC 410-395211/17	5.0	1.121174	10.0	2475137.0	0.224235	Y
6	ICIS 410-395211/18	10.0	2.320898	10.0	2510713.0	0.23209	Y
7	IC 410-395211/19	25.0	5.484701	10.0	2655574.0	0.219388	Y



Calibration / Chloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

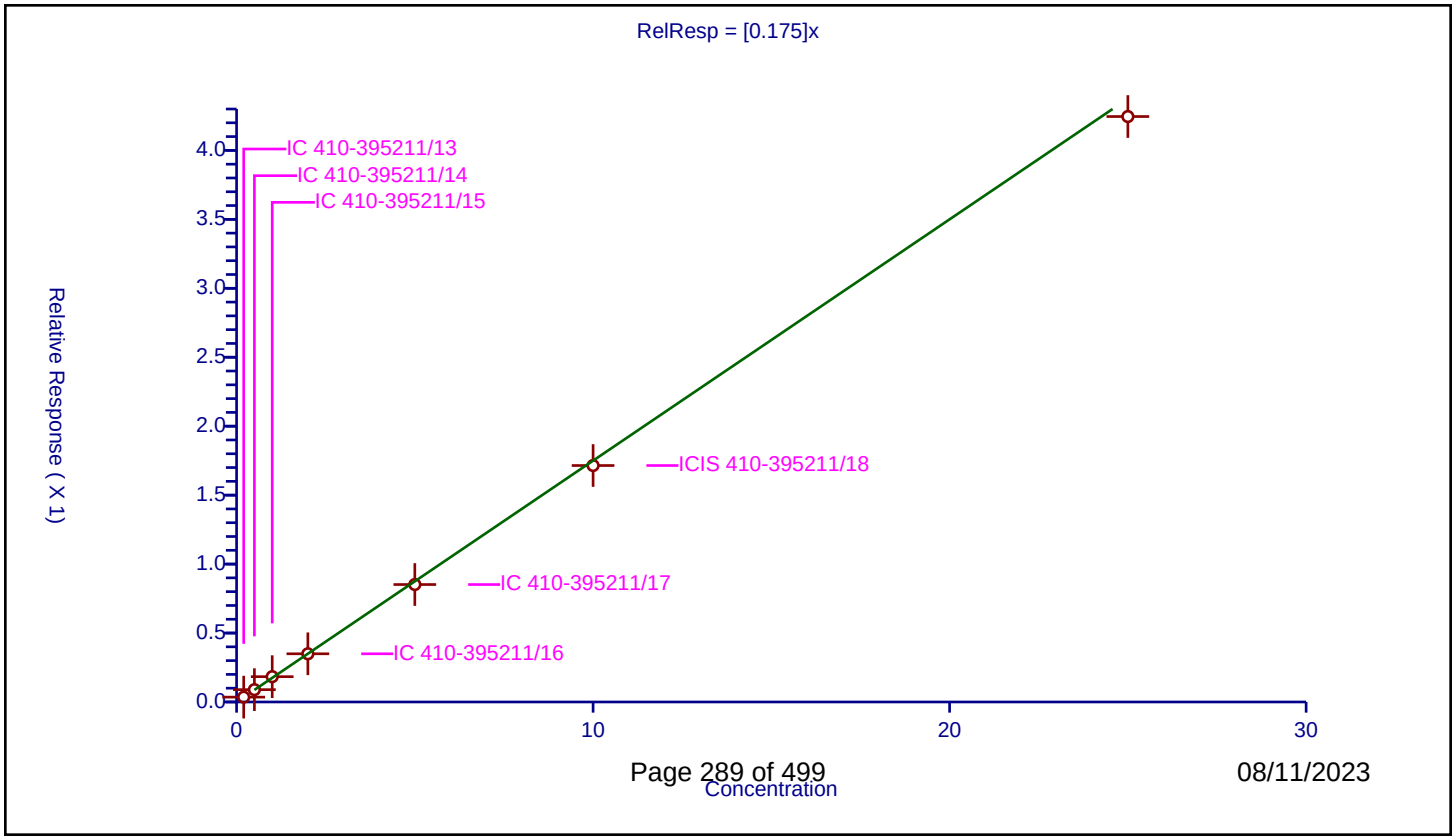
Curve Coefficients

Intercept:	0
Slope:	0.175

Error Coefficients

Standard Error:	502000
Relative Standard Error:	2.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.035269	10.0	2414017.0	0.176345	Y
2	IC 410-395211/14	0.5	0.089382	10.0	2469842.0	0.178764	Y
3	IC 410-395211/15	1.0	0.183532	10.0	2458760.0	0.183532	Y
4	IC 410-395211/16	2.0	0.349454	10.0	2465964.0	0.174727	Y
5	IC 410-395211/17	5.0	0.85165	10.0	2475137.0	0.17033	Y
6	ICIS 410-395211/18	10.0	1.714724	10.0	2510713.0	0.171472	Y
7	IC 410-395211/19	25.0	4.245406	10.0	2655574.0	0.169816	Y



08/11/2023

Calibration / Dichlorofluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

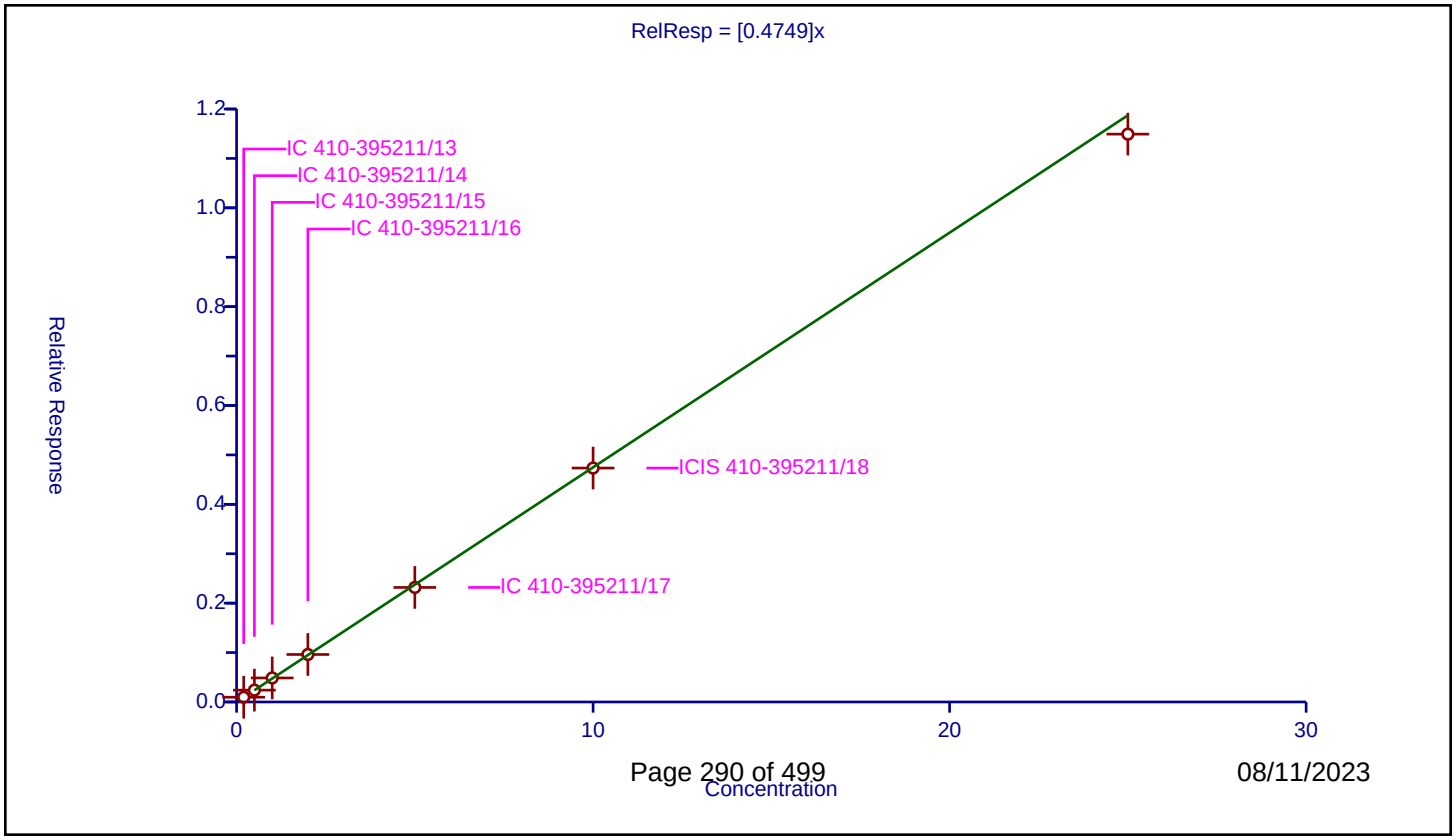
Curve Coefficients

Intercept:	0
Slope:	0.4749

Error Coefficients

Standard Error:	1360000
Relative Standard Error:	2.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.09611	10.0	2414017.0	0.480548	Y
2	IC 410-395211/14	0.5	0.239902	10.0	2469842.0	0.479804	Y
3	IC 410-395211/15	1.0	0.486339	10.0	2458760.0	0.486339	Y
4	IC 410-395211/16	2.0	0.961604	10.0	2465964.0	0.480802	Y
5	IC 410-395211/17	5.0	2.318049	10.0	2475137.0	0.46361	Y
6	ICIS 410-395211/18	10.0	4.734225	10.0	2510713.0	0.473422	Y
7	IC 410-395211/19	25.0	11.491493	10.0	2655574.0	0.45966	Y



08/11/2023

Calibration / Trichlorofluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

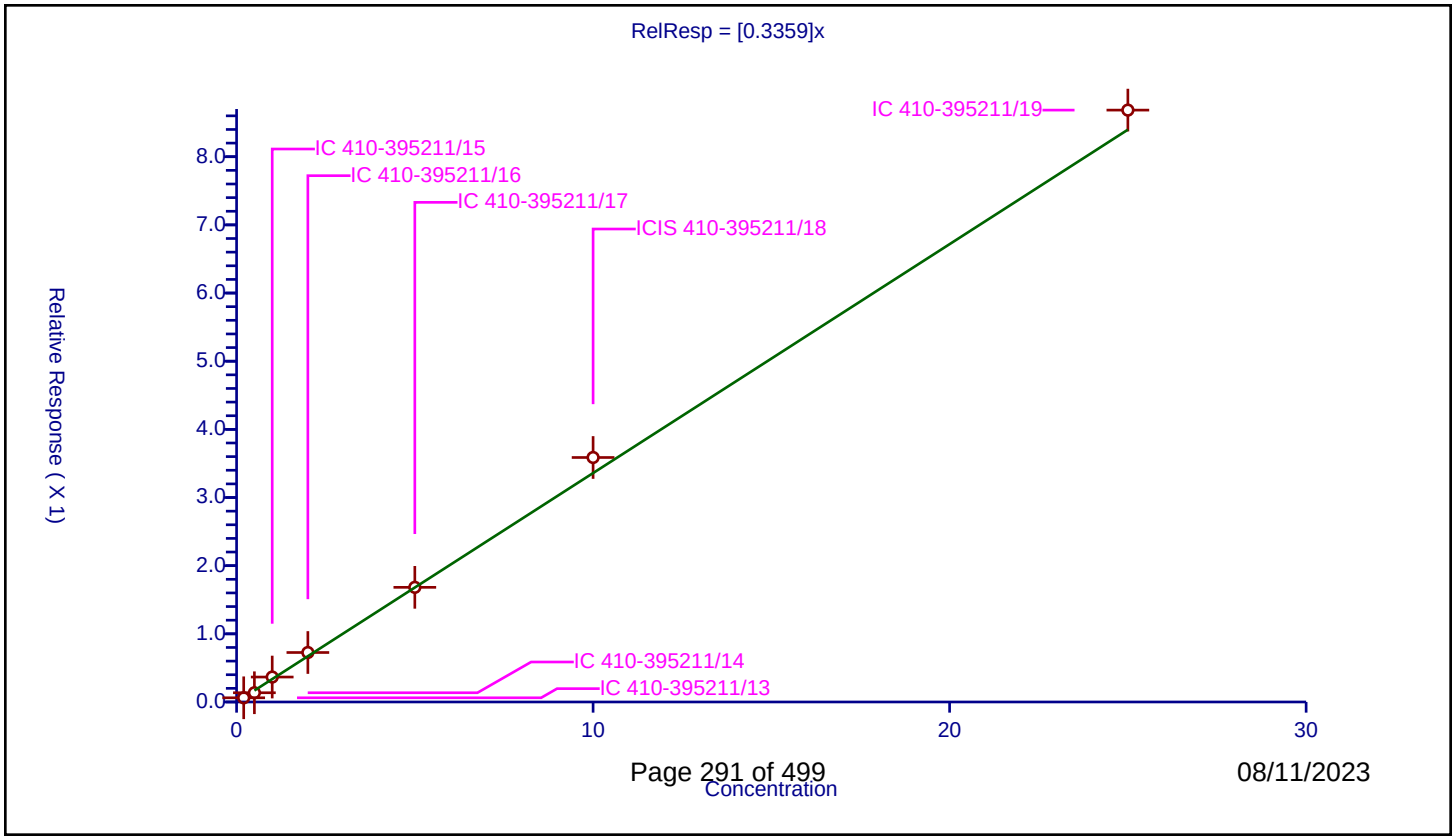
Curve Coefficients

Intercept:	0
Slope:	0.3359

Error Coefficients

Standard Error:	1030000
Relative Standard Error:	10.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.061789	10.0	2414017.0	0.308946	Y
2	IC 410-395211/14	0.5	0.135381	10.0	2469842.0	0.270762	Y
3	IC 410-395211/15	1.0	0.365941	10.0	2458760.0	0.365941	Y
4	IC 410-395211/16	2.0	0.72583	10.0	2465964.0	0.362915	Y
5	IC 410-395211/17	5.0	1.682073	10.0	2475137.0	0.336415	Y
6	ICIS 410-395211/18	10.0	3.587304	10.0	2510713.0	0.35873	Y
7	IC 410-395211/19	25.0	8.684028	10.0	2655574.0	0.347361	Y



Calibration / Ethyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

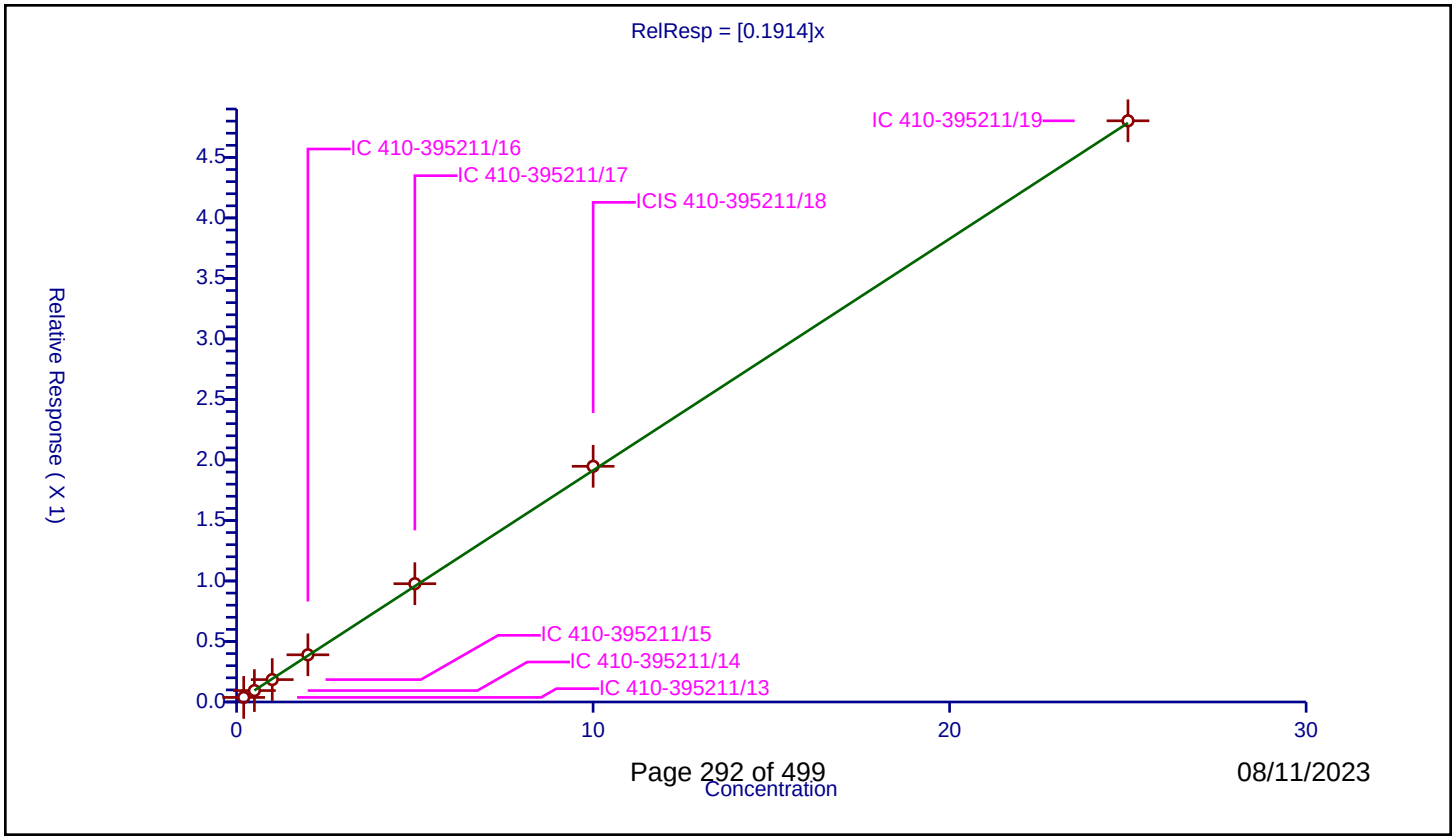
Curve Coefficients

Intercept:	0
Slope:	0.1914

Error Coefficients

Standard Error:	568000
Relative Standard Error:	2.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.200027	0.03775	10.0	2414017.0	0.188726	Y
2	IC 410-395211/14	0.500068	0.094322	10.0	2469842.0	0.188618	Y
3	IC 410-395211/15	1.000135	0.185036	10.0	2458760.0	0.185011	Y
4	IC 410-395211/16	2.00027	0.39001	10.0	2465964.0	0.194979	Y
5	IC 410-395211/17	5.000676	0.977505	10.0	2475137.0	0.195475	Y
6	ICIS 410-395211/18	10.001352	1.94763	10.0	2510713.0	0.194737	Y
7	IC 410-395211/19	25.00338	4.802578	10.0	2655574.0	0.192077	Y



Calibration / 1,2-Dichloro-1,1,2-trifluoroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

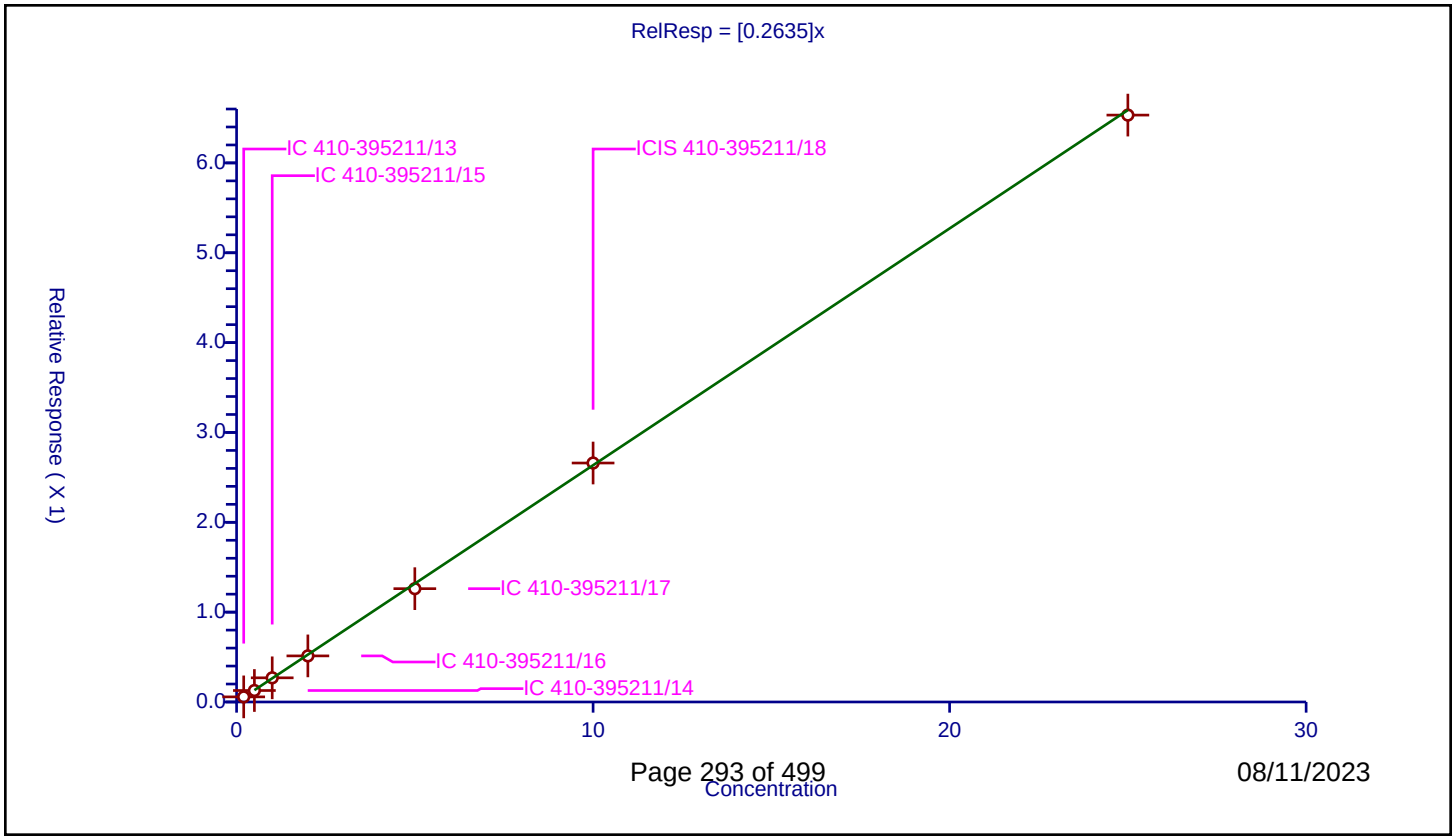
Curve Coefficients

Intercept:	0
Slope:	0.2635

Error Coefficients

Standard Error:	772000
Relative Standard Error:	4.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.056773	10.0	2414017.0	0.283863	Y
2	IC 410-395211/14	0.5	0.127911	10.0	2469842.0	0.255822	Y
3	IC 410-395211/15	1.0	0.268989	10.0	2458760.0	0.268989	Y
4	IC 410-395211/16	2.0	0.512891	10.0	2465964.0	0.256445	Y
5	IC 410-395211/17	5.0	1.261316	10.0	2475137.0	0.252263	Y
6	ICIS 410-395211/18	10.0	2.659866	10.0	2510713.0	0.265987	Y
7	IC 410-395211/19	25.0	6.532407	10.0	2655574.0	0.261296	Y



Calibration / Acrolein

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

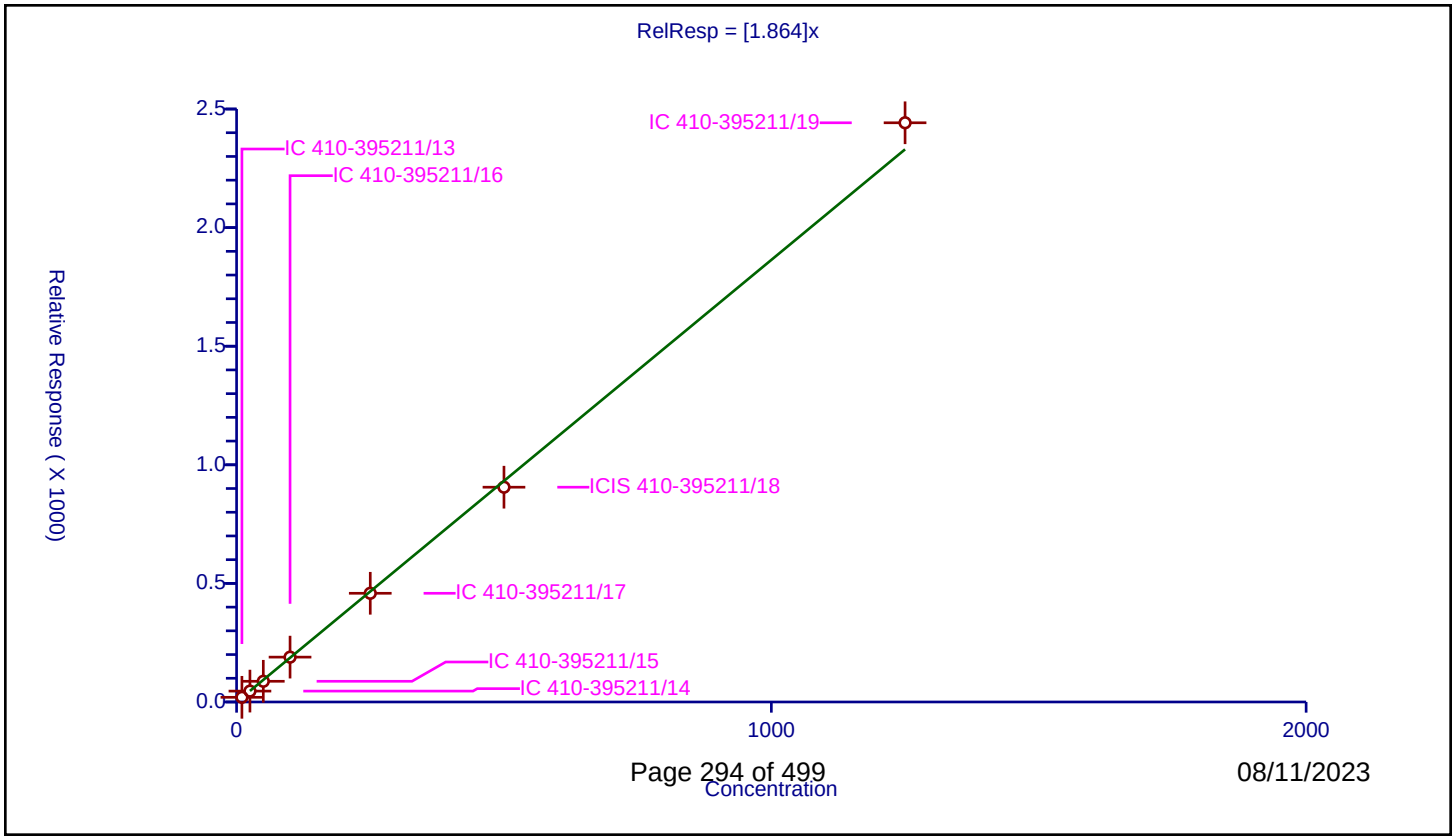
Curve Coefficients

Intercept:	0
Slope:	1.864

Error Coefficients

Standard Error:	3680000
Relative Standard Error:	4.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	10.000333	19.736043	50.0	159799.0	1.973539	Y
2	IC 410-395211/14	25.000833	45.979139	50.0	176691.0	1.839104	Y
3	IC 410-395211/15	50.001667	87.28638	50.0	161736.0	1.745669	Y
4	IC 410-395211/16	100.003333	189.102802	50.0	164657.0	1.890965	Y
5	IC 410-395211/17	250.008333	458.300245	50.0	167230.0	1.83314	Y
6	ICIS 410-395211/18	500.016666	905.554531	50.0	168052.0	1.811049	Y
7	IC 410-395211/19	1250.041665	2441.991437	50.0	170043.0	1.953528	Y



Calibration / 1,1-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

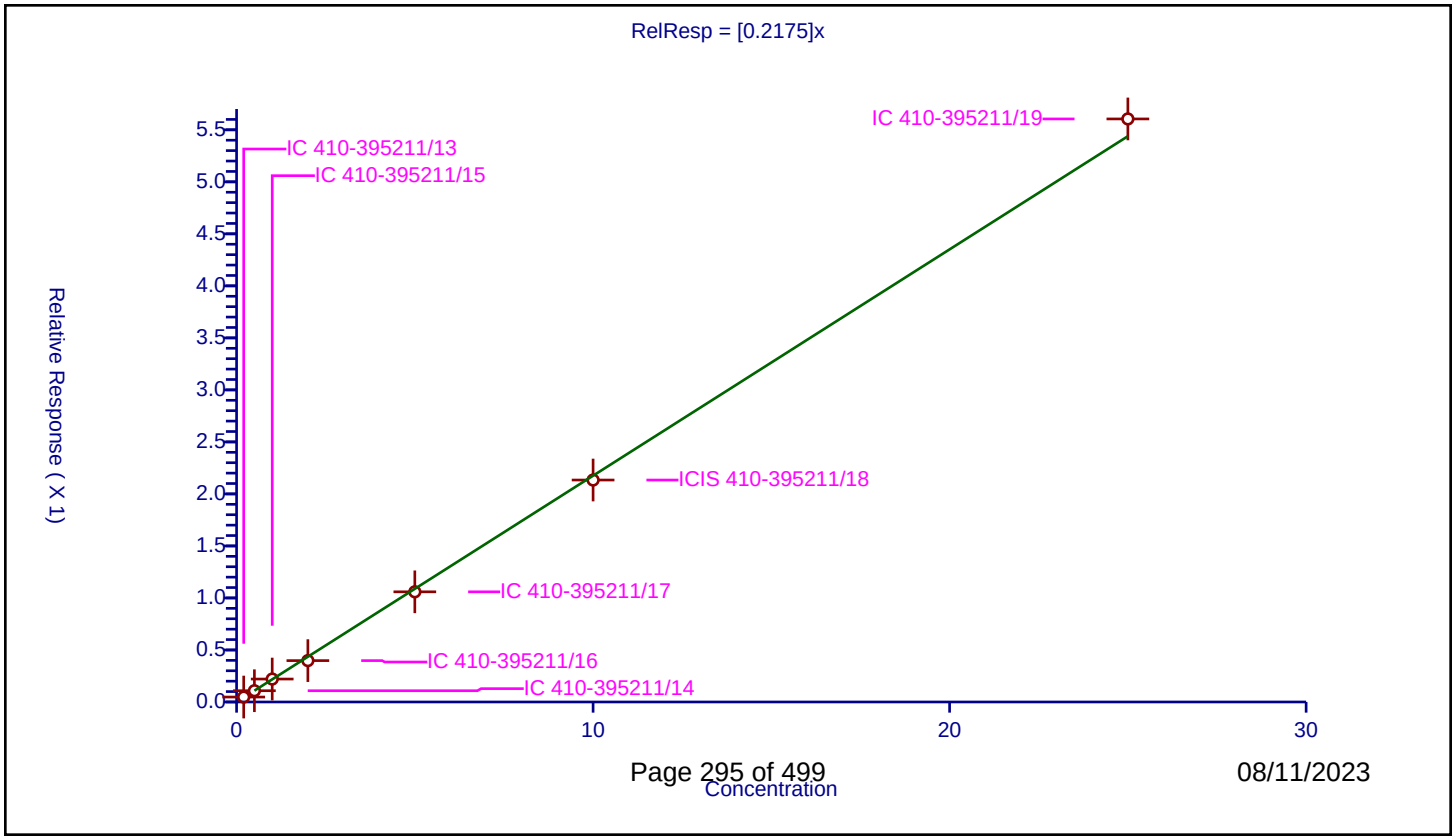
Curve Coefficients

Intercept:	0
Slope:	0.2175

Error Coefficients

Standard Error:	656000
Relative Standard Error:	5.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.047506	10.0	2414017.0	0.237529	Y
2	IC 410-395211/14	0.5	0.108266	10.0	2469842.0	0.216532	Y
3	IC 410-395211/15	1.0	0.220542	10.0	2458760.0	0.220542	Y
4	IC 410-395211/16	2.0	0.397601	10.0	2465964.0	0.198801	Y
5	IC 410-395211/17	5.0	1.058968	10.0	2475137.0	0.211794	Y
6	ICIS 410-395211/18	10.0	2.133673	10.0	2510713.0	0.213367	Y
7	IC 410-395211/19	25.0	5.604724	10.0	2655574.0	0.224189	Y



Calibration / Acetone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

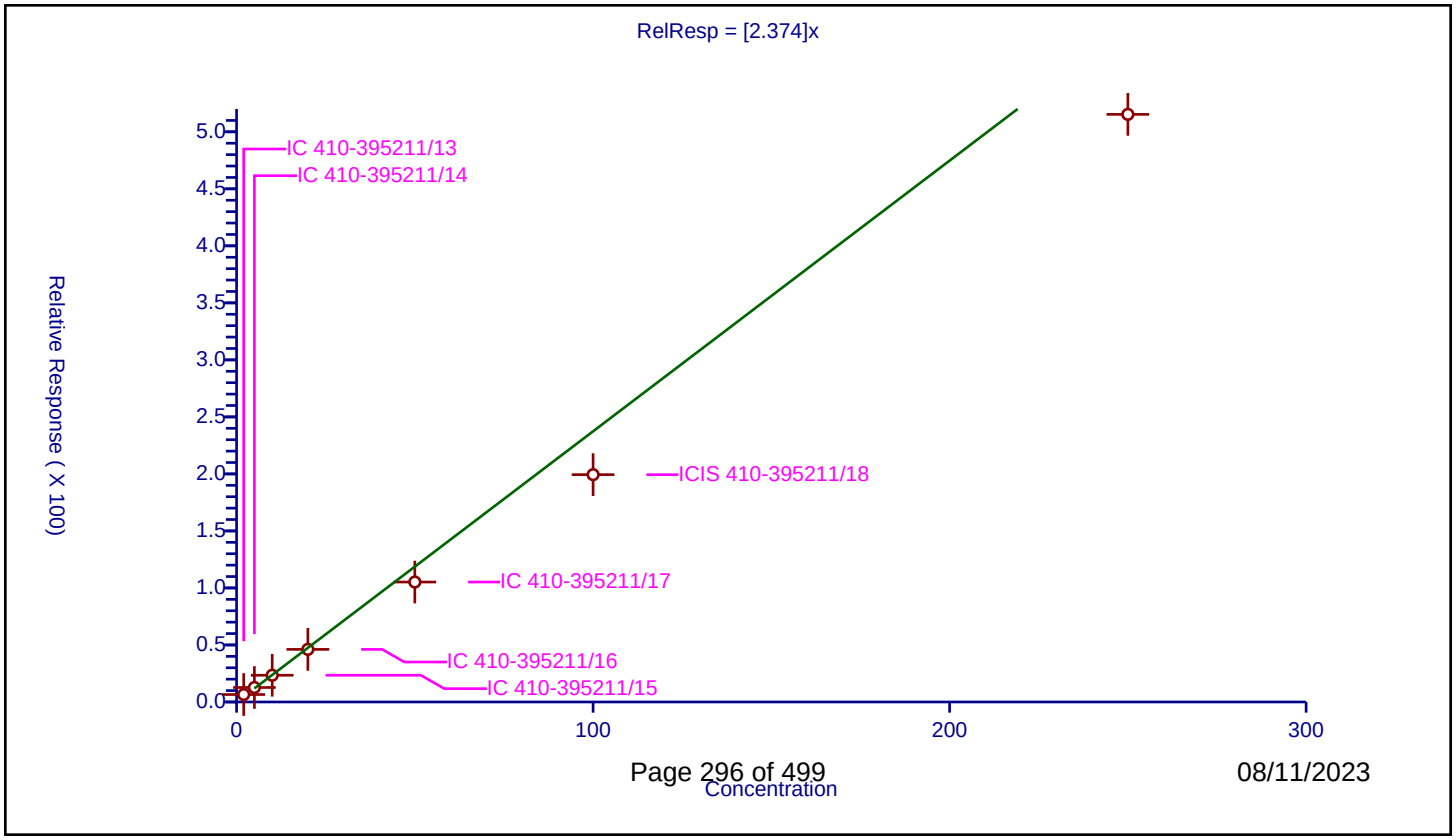
Curve Coefficients

Intercept:	0
Slope:	2.374

Error Coefficients

Standard Error:	782000
Relative Standard Error:	18.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.940

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	2.0	6.529766	50.0	159799.0	3.264883	Y
2	IC 410-395211/14	5.0	12.70891	50.0	176691.0	2.541782	Y
3	IC 410-395211/15	10.0	23.431704	50.0	161736.0	2.34317	Y
4	IC 410-395211/16	20.0	46.135907	50.0	164657.0	2.306795	Y
5	IC 410-395211/17	50.0	105.206901	50.0	167230.0	2.104138	Y
6	ICIS 410-395211/18	100.0	199.362995	50.0	168052.0	1.99363	Y
7	IC 410-395211/19	250.0	515.299659	50.0	170043.0	2.061199	Y



Calibration / 1,1,2-Trichloro-1,2,2-trifluoroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

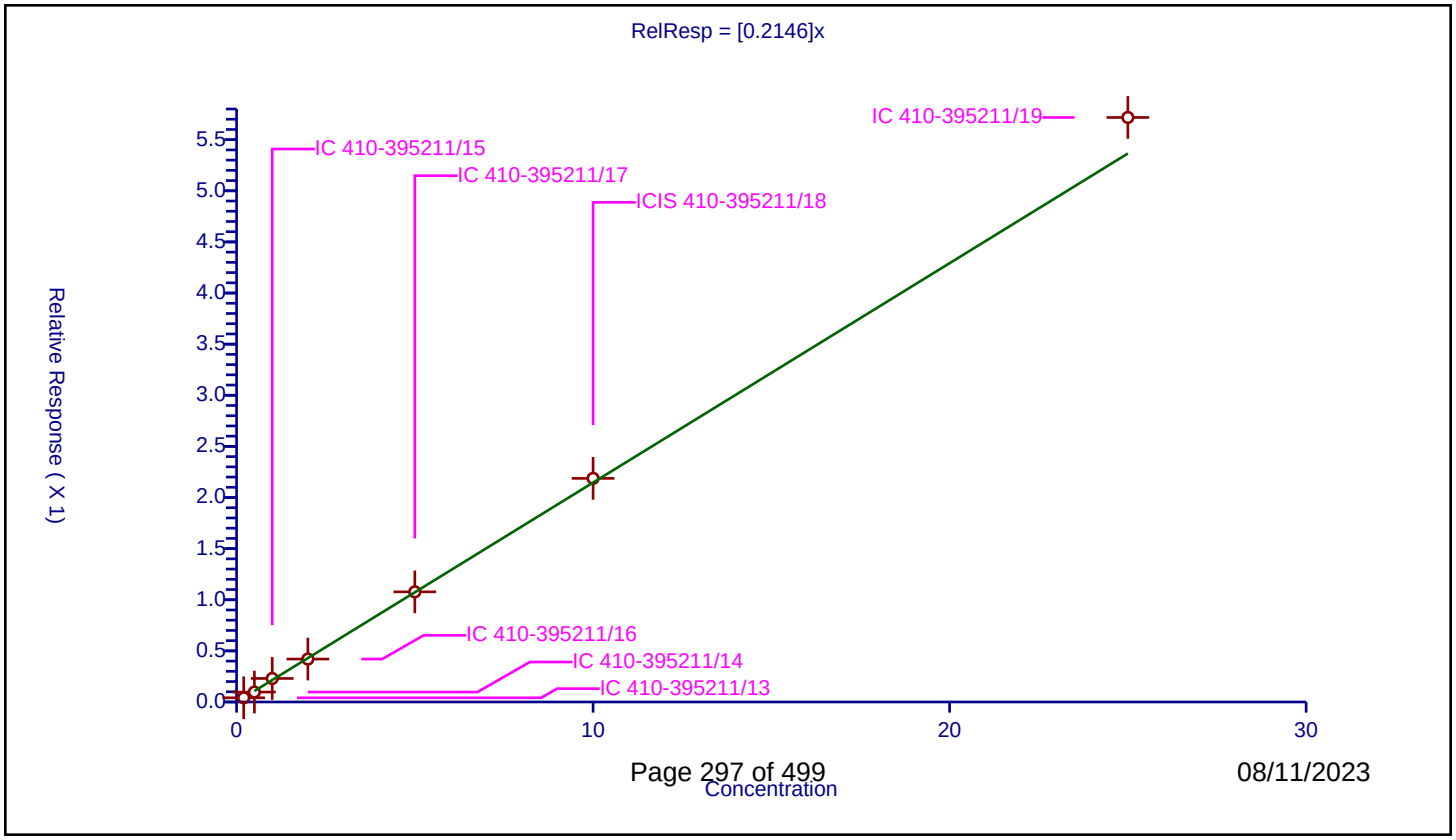
Curve Coefficients

Intercept:	0
Slope:	0.2146

Error Coefficients

Standard Error:	670000
Relative Standard Error:	6.0
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.041039	10.0	2414017.0	0.205197	Y
2	IC 410-395211/14	0.5	0.097087	10.0	2469842.0	0.194174	Y
3	IC 410-395211/15	1.0	0.230088	10.0	2458760.0	0.230088	Y
4	IC 410-395211/16	2.0	0.419694	10.0	2465964.0	0.209847	Y
5	IC 410-395211/17	5.0	1.077258	10.0	2475137.0	0.215452	Y
6	ICIS 410-395211/18	10.0	2.187299	10.0	2510713.0	0.21873	Y
7	IC 410-395211/19	25.0	5.717246	10.0	2655574.0	0.22869	Y



Calibration / Iodomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

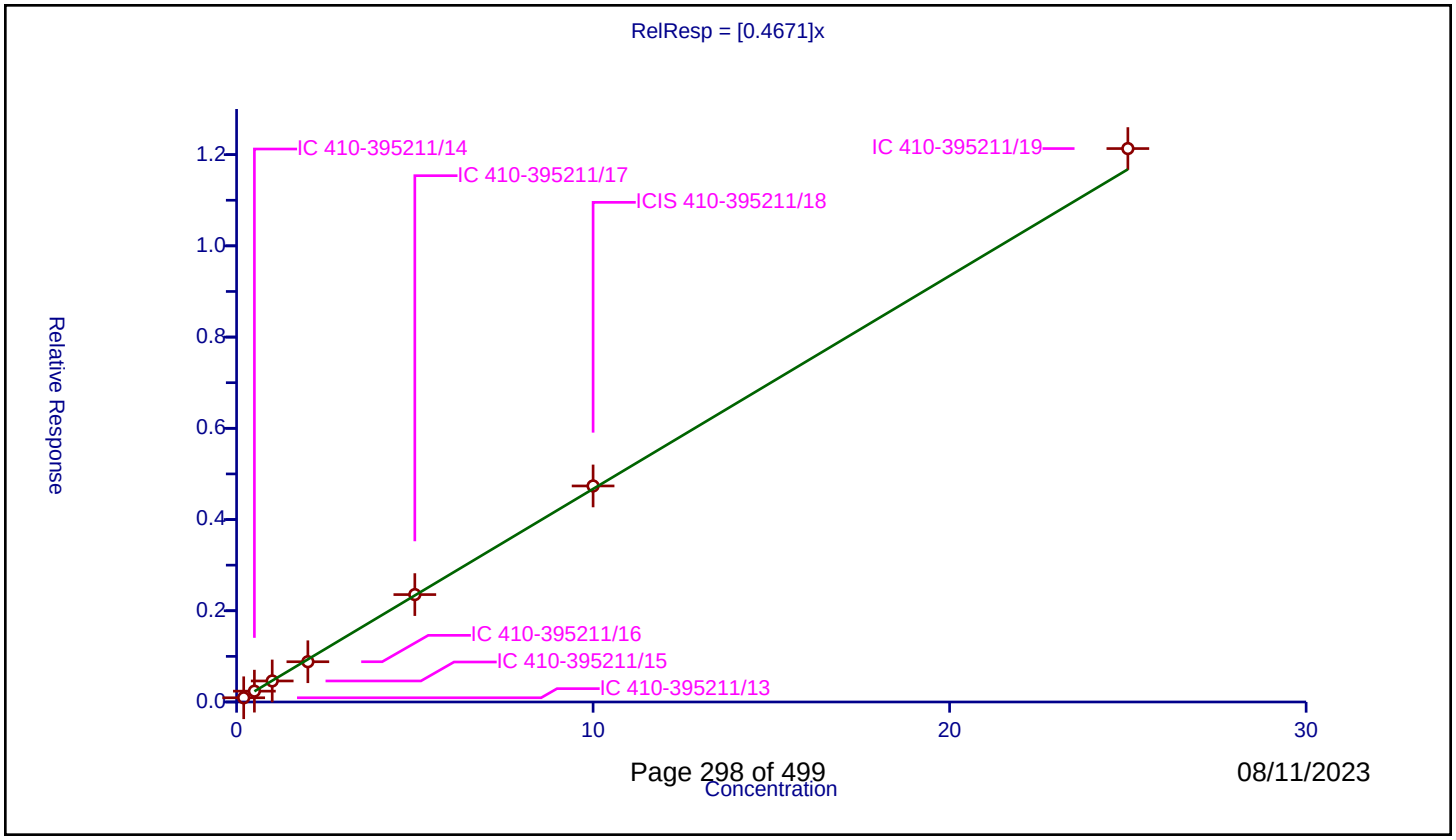
Curve Coefficients

Intercept:	0
Slope:	0.4671

Error Coefficients

Standard Error:	1430000
Relative Standard Error:	3.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.092477	10.0	2414017.0	0.462383	Y
2	IC 410-395211/14	0.5	0.237703	10.0	2469842.0	0.475407	Y
3	IC 410-395211/15	1.0	0.460842	10.0	2458760.0	0.460842	Y
4	IC 410-395211/16	2.0	0.882677	10.0	2465964.0	0.441339	Y
5	IC 410-395211/17	5.0	2.35452	10.0	2475137.0	0.470904	Y
6	ICIS 410-395211/18	10.0	4.736324	10.0	2510713.0	0.473632	Y
7	IC 410-395211/19	25.0	12.132955	10.0	2655574.0	0.485318	Y



08/11/2023

Calibration / Ethyl bromide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

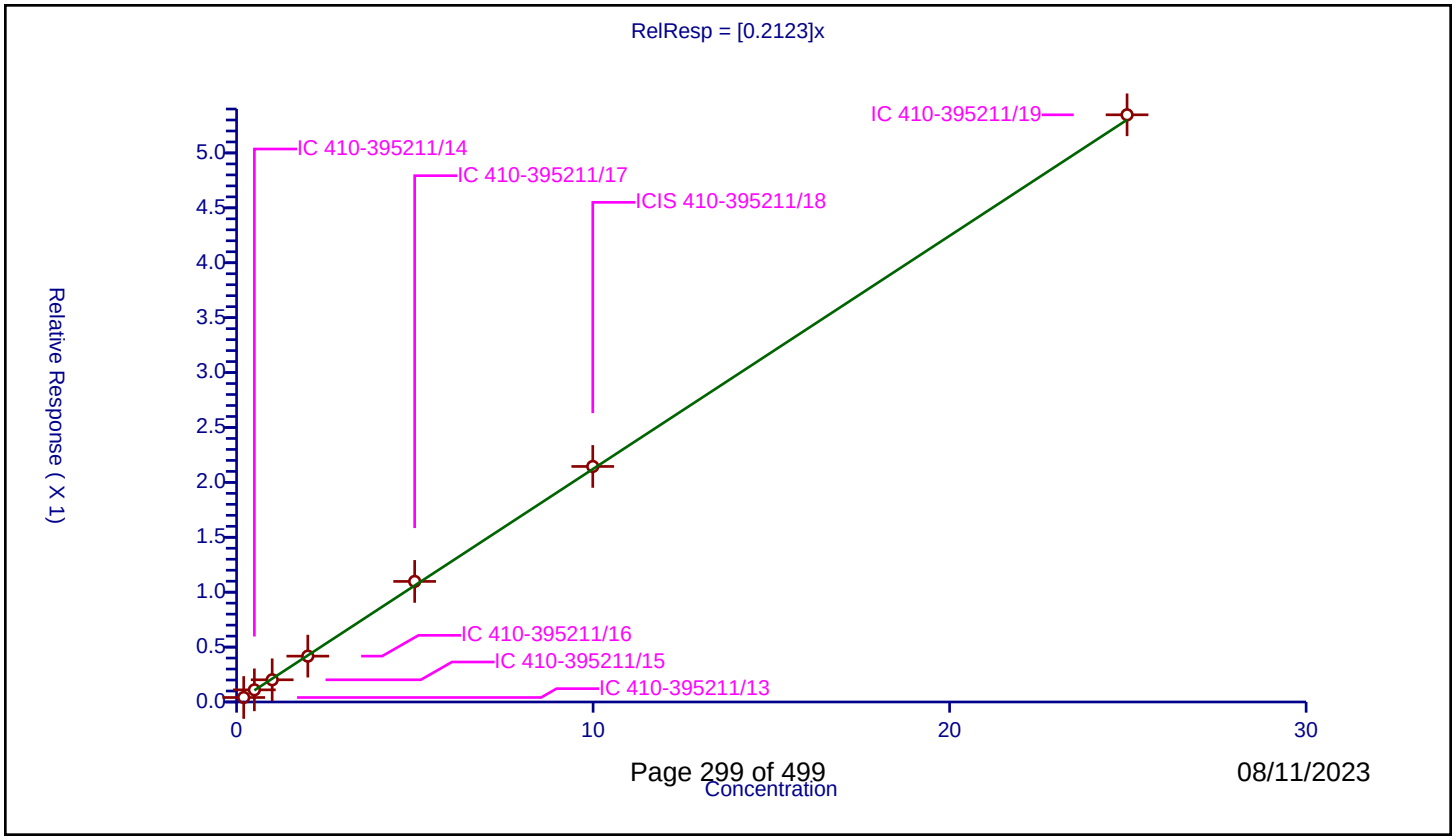
Curve Coefficients

Intercept:	0
Slope:	0.2123

Error Coefficients

Standard Error:	632000
Relative Standard Error:	3.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.199819	0.040932	10.0	2414017.0	0.204844	Y
2	IC 410-395211/14	0.499548	0.110497	10.0	2469842.0	0.221194	Y
3	IC 410-395211/15	0.999096	0.202094	10.0	2458760.0	0.202277	Y
4	IC 410-395211/16	1.998192	0.417516	10.0	2465964.0	0.208947	Y
5	IC 410-395211/17	4.99548	1.098069	10.0	2475137.0	0.219812	Y
6	ICIS 410-395211/18	9.99096	2.14502	10.0	2510713.0	0.214696	Y
7	IC 410-395211/19	24.9774	5.347394	10.0	2655574.0	0.214089	Y



Calibration / Carbon disulfide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

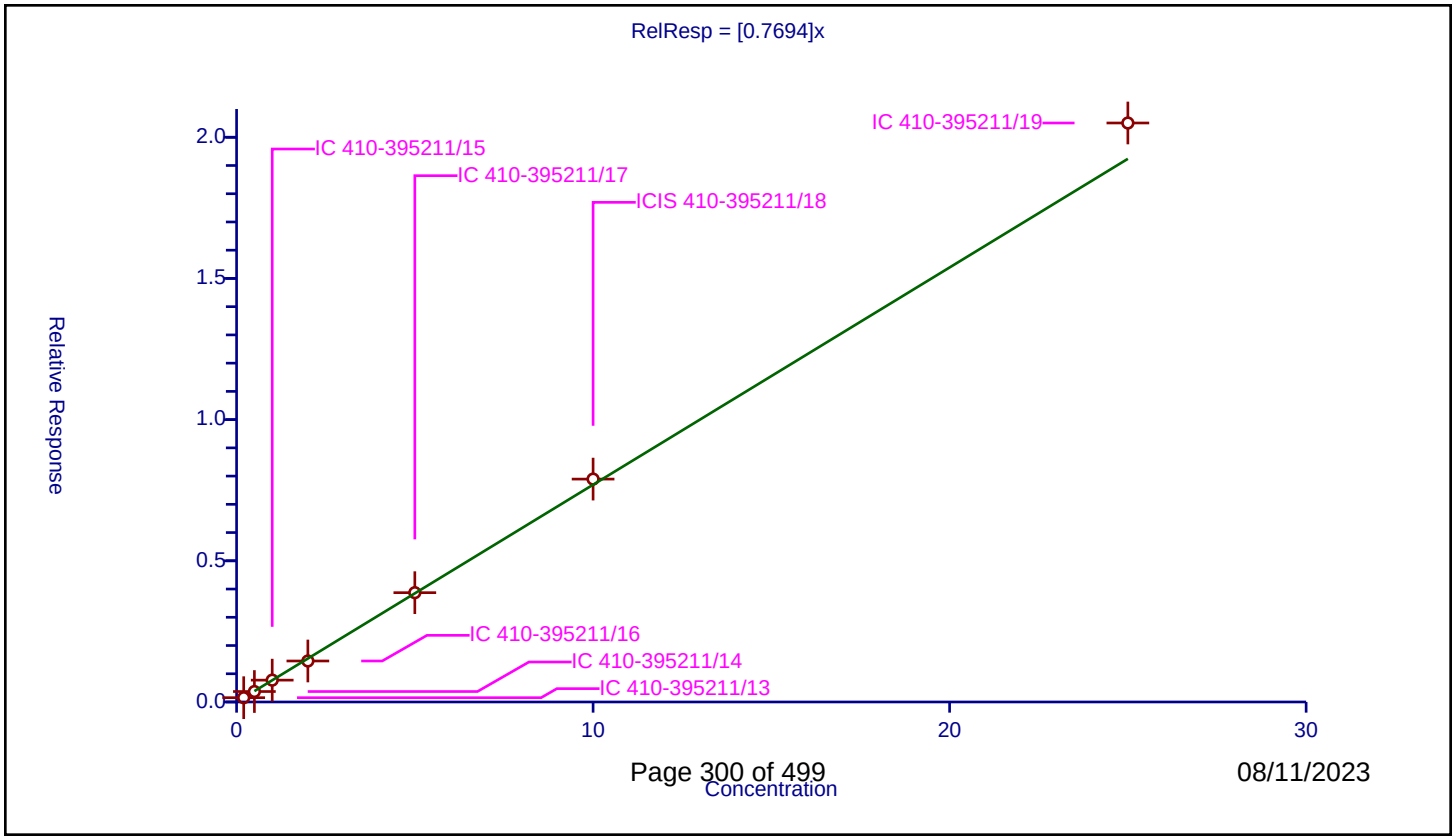
Curve Coefficients

Intercept:	0
Slope:	0.7694

Error Coefficients

Standard Error:	2400000
Relative Standard Error:	4.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.152203	10.0	2414017.0	0.761014	Y
2	IC 410-395211/14	0.5	0.370627	10.0	2469842.0	0.741254	Y
3	IC 410-395211/15	1.0	0.773878	10.0	2458760.0	0.773878	Y
4	IC 410-395211/16	2.0	1.452207	10.0	2465964.0	0.726103	Y
5	IC 410-395211/17	5.0	3.871386	10.0	2475137.0	0.774277	Y
6	ICIS 410-395211/18	10.0	7.89375	10.0	2510713.0	0.789375	Y
7	IC 410-395211/19	25.0	20.504655	10.0	2655574.0	0.820186	Y



Calibration / Methyl acetate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

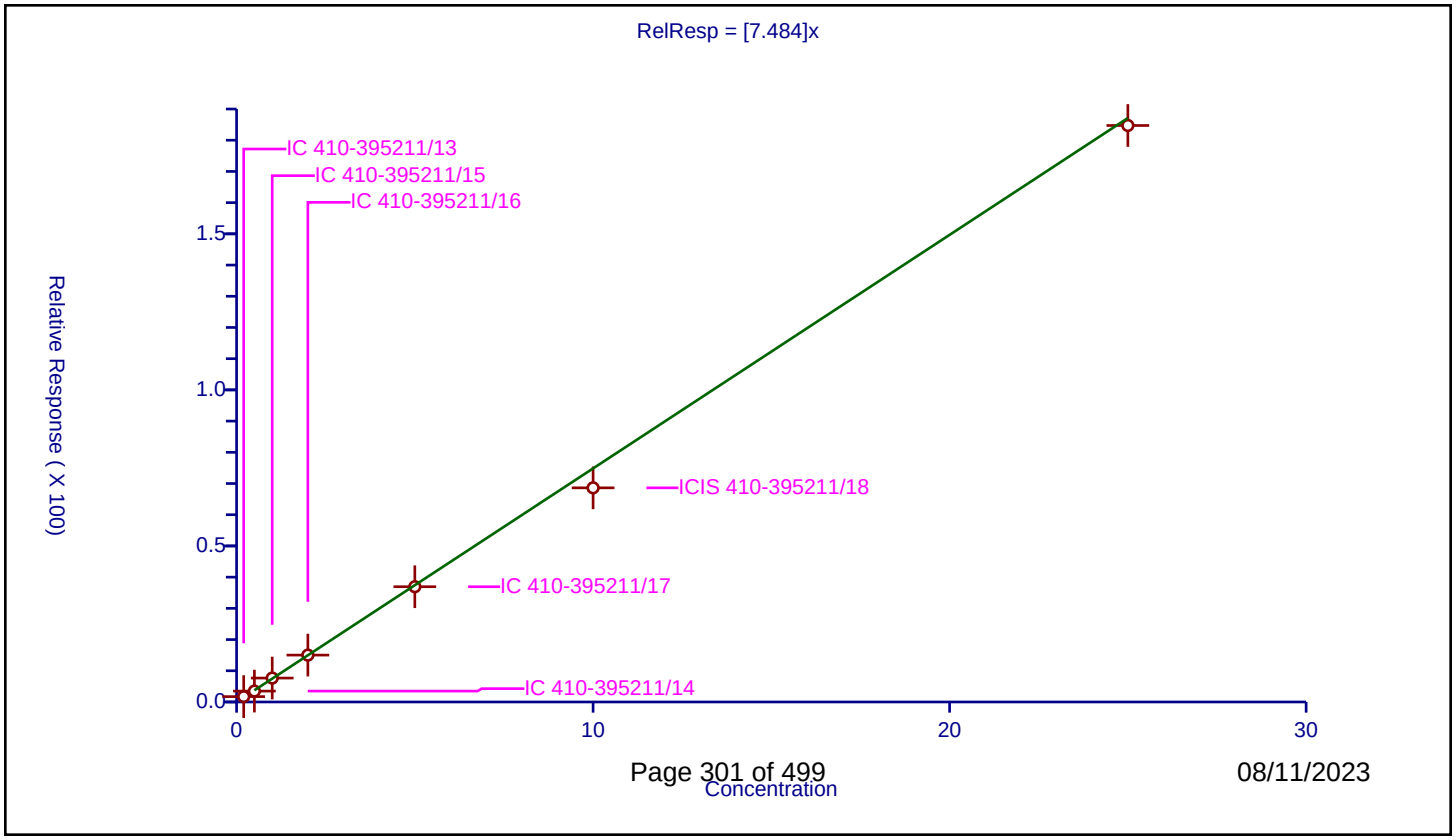
Curve Coefficients

Intercept:	0
Slope:	7.484

Error Coefficients

Standard Error:	279000
Relative Standard Error:	7.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	1.717783	50.0	159799.0	8.588915	Y
2	IC 410-395211/14	0.5	3.491406	50.0	176691.0	6.982812	Y
3	IC 410-395211/15	1.0	7.667124	50.0	161736.0	7.667124	Y
4	IC 410-395211/16	2.0	15.024263	50.0	164657.0	7.512131	Y
5	IC 410-395211/17	5.0	36.932668	50.0	167230.0	7.386534	Y
6	ICIS 410-395211/18	10.0	68.616857	50.0	168052.0	6.861686	Y
7	IC 410-395211/19	25.0	184.720041	50.0	170043.0	7.388802	Y



Calibration / 3-Chloro-1-propene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

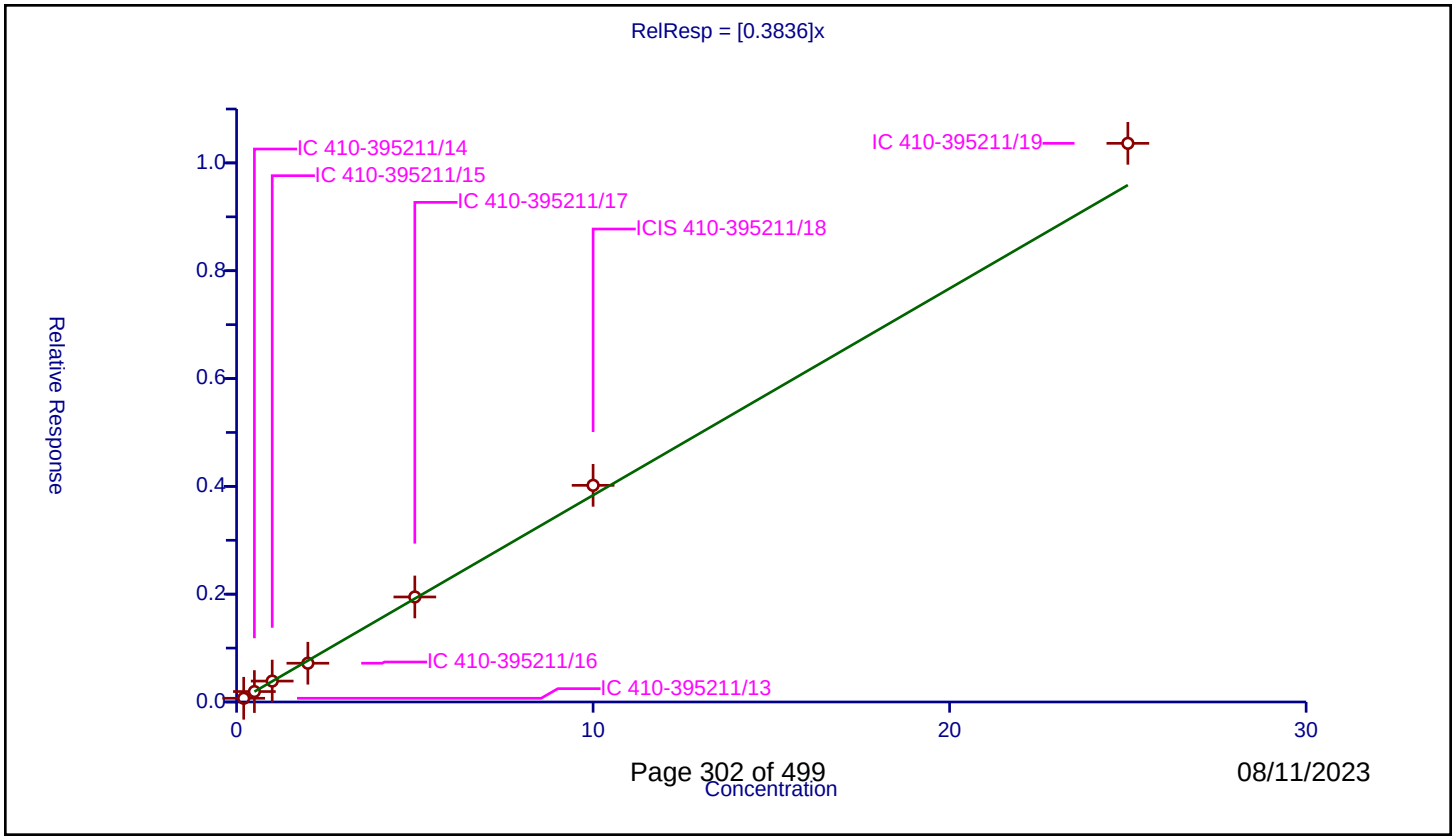
Curve Coefficients

Intercept:	0
Slope:	0.3836

Error Coefficients

Standard Error:	1220000
Relative Standard Error:	6.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.06886	10.0	2414017.0	0.344302	Y
2	IC 410-395211/14	0.5	0.193442	10.0	2469842.0	0.386883	Y
3	IC 410-395211/15	1.0	0.388216	10.0	2458760.0	0.388216	Y
4	IC 410-395211/16	2.0	0.719025	10.0	2465964.0	0.359513	Y
5	IC 410-395211/17	5.0	1.948122	10.0	2475137.0	0.389624	Y
6	ICIS 410-395211/18	10.0	4.019173	10.0	2510713.0	0.401917	Y
7	IC 410-395211/19	25.0	10.363341	10.0	2655574.0	0.414534	Y



Calibration / Methylene Chloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

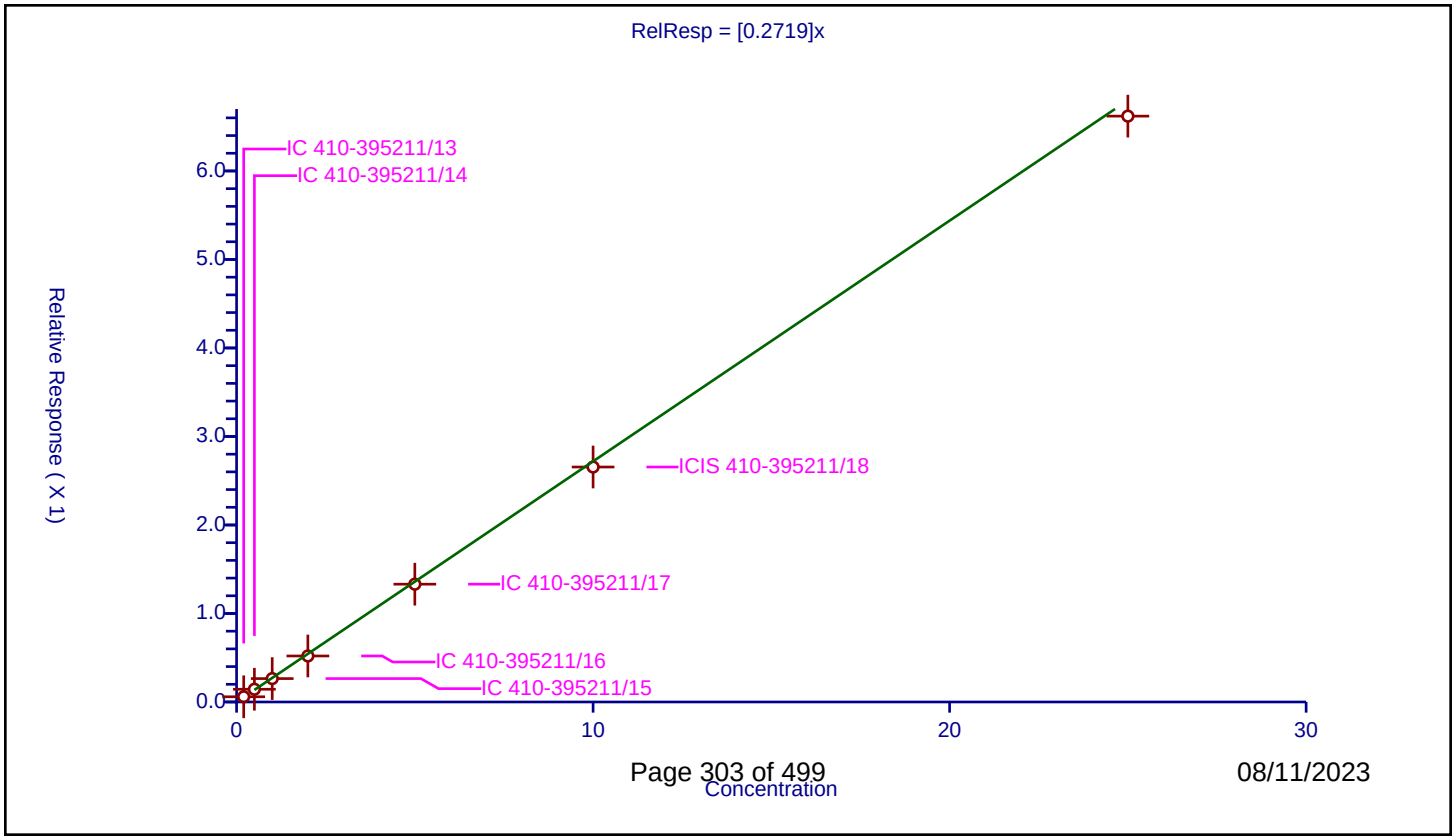
Curve Coefficients

Intercept:	0
Slope:	0.2719

Error Coefficients

Standard Error:	782000
Relative Standard Error:	5.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.058923	10.0	2414017.0	0.294613	Y
2	IC 410-395211/14	0.5	0.144009	10.0	2469842.0	0.288018	Y
3	IC 410-395211/15	1.0	0.264365	10.0	2458760.0	0.264365	Y
4	IC 410-395211/16	2.0	0.519902	10.0	2465964.0	0.259951	Y
5	IC 410-395211/17	5.0	1.331066	10.0	2475137.0	0.266213	Y
6	ICIS 410-395211/18	10.0	2.654843	10.0	2510713.0	0.265484	Y
7	IC 410-395211/19	25.0	6.619657	10.0	2655574.0	0.264786	Y



Calibration / 2-Methyl-2-propanol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

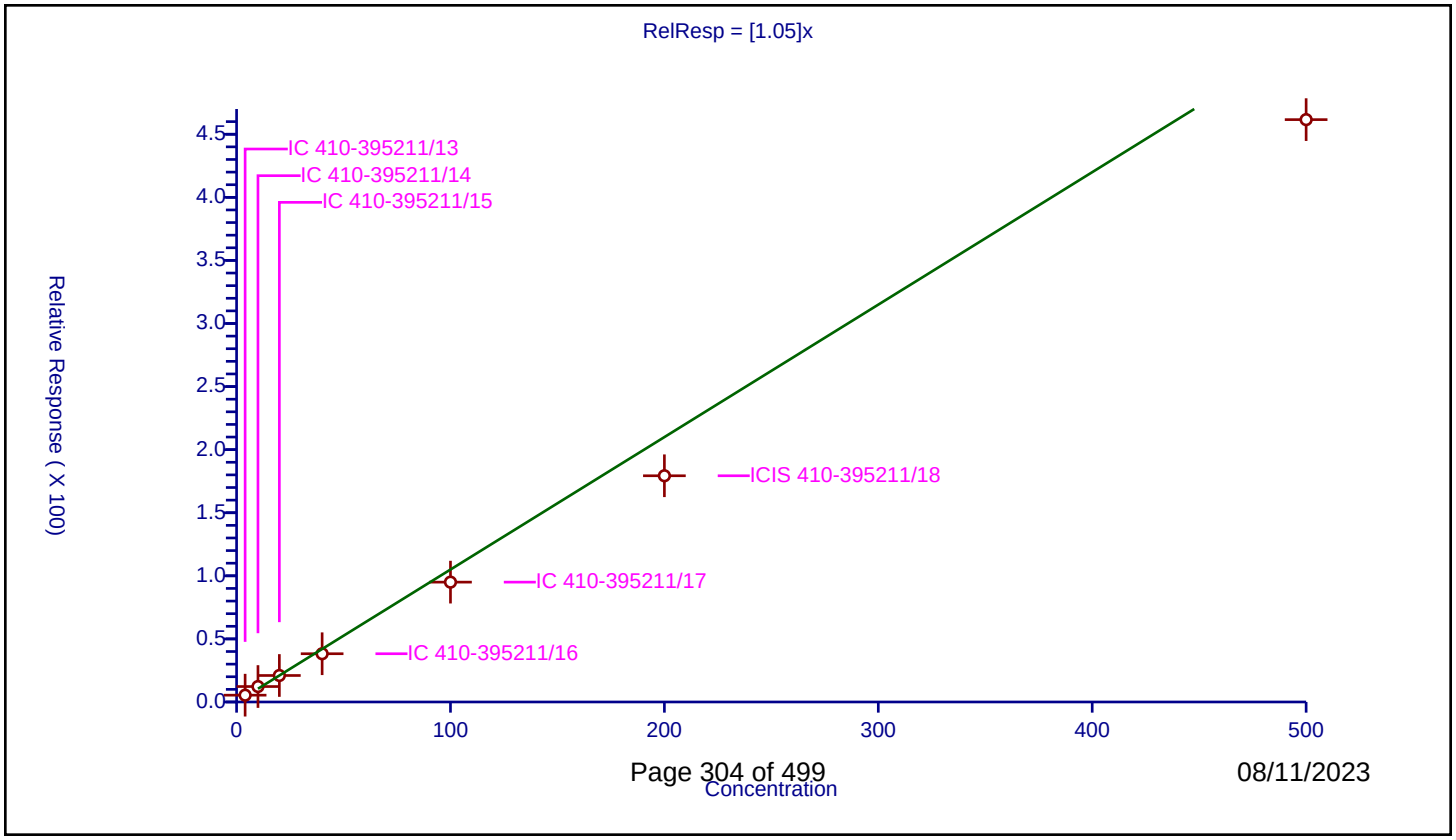
Curve Coefficients

Intercept:	0
Slope:	1.05

Error Coefficients

Standard Error:	701000
Relative Standard Error:	16.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.954

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	4.0	5.390835	50.0	159799.0	1.347709	Y
2	IC 410-395211/14	10.0	12.251331	50.0	176691.0	1.225133	Y
3	IC 410-395211/15	20.0	20.999345	50.0	161736.0	1.049967	Y
4	IC 410-395211/16	40.0	38.251031	50.0	164657.0	0.956276	Y
5	IC 410-395211/17	100.0	94.987741	50.0	167230.0	0.949877	Y
6	ICIS 410-395211/18	200.0	179.307595	50.0	168052.0	0.896538	Y
7	IC 410-395211/19	500.0	461.584423	50.0	170043.0	0.923169	Y



Calibration / Acrylonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

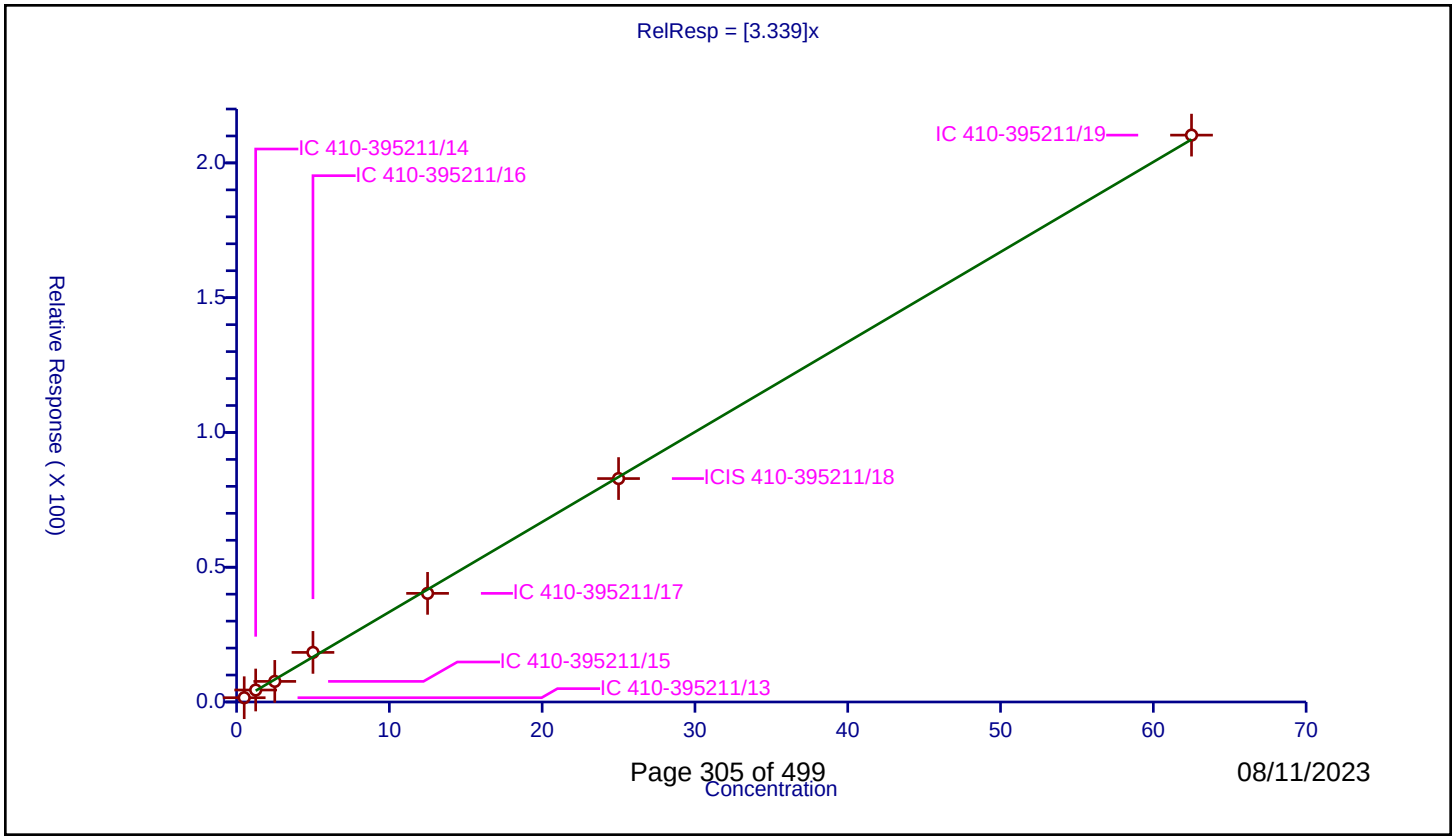
Curve Coefficients

Intercept:	0
Slope:	3.339

Error Coefficients

Standard Error:	319000
Relative Standard Error:	6.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.5	1.590435	50.0	159799.0	3.180871	Y
2	IC 410-395211/14	1.25	4.442218	50.0	176691.0	3.553775	Y
3	IC 410-395211/15	2.5	7.640847	50.0	161736.0	3.056339	Y
4	IC 410-395211/16	5.0	18.393084	50.0	164657.0	3.678617	Y
5	IC 410-395211/17	12.5	40.30467	50.0	167230.0	3.224374	Y
6	ICIS 410-395211/18	25.0	82.89101	50.0	168052.0	3.31564	Y
7	IC 410-395211/19	62.5	210.310039	50.0	170043.0	3.364961	Y



Calibration / Methyl tert-butyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

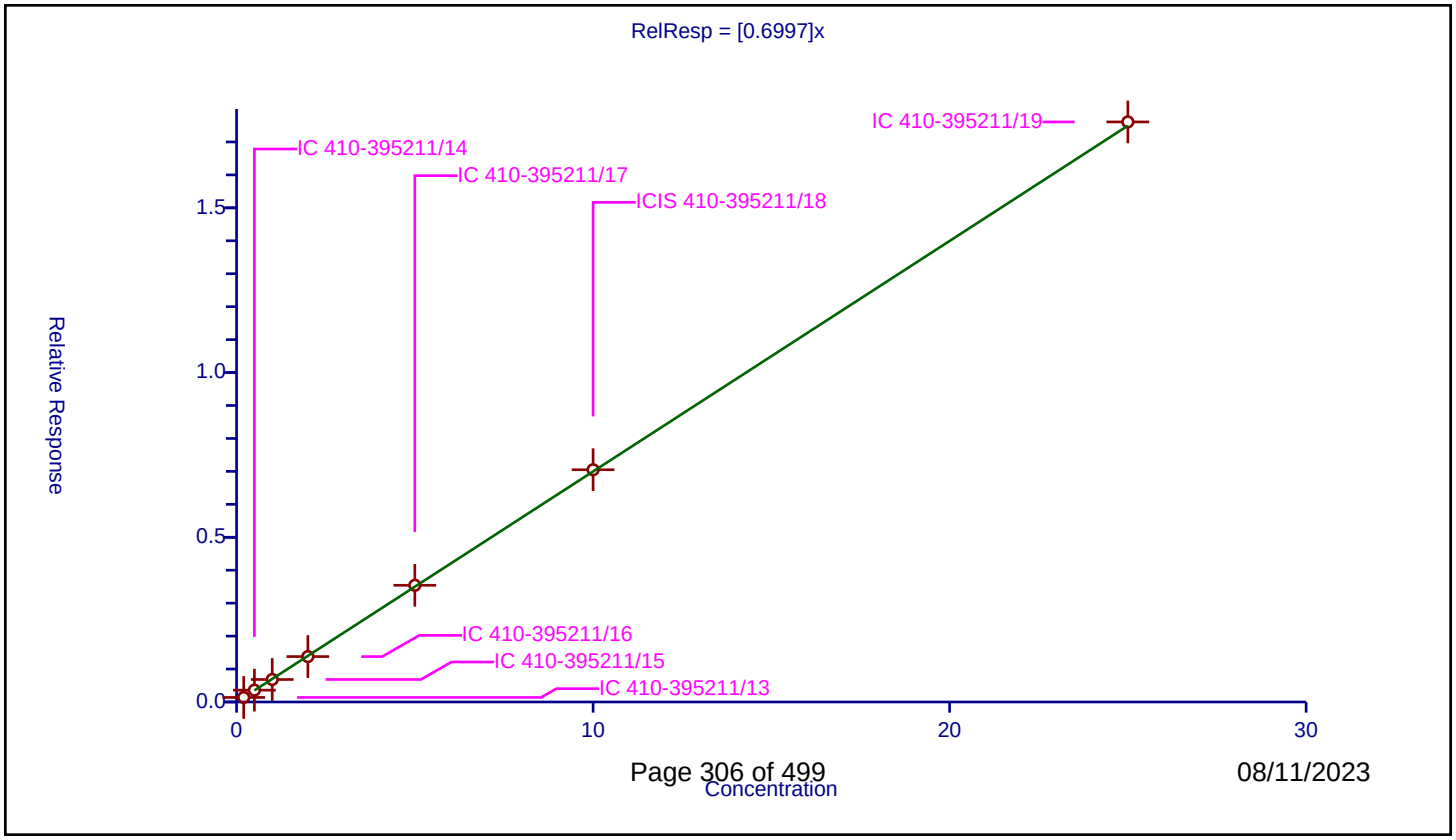
Curve Coefficients

Intercept:	0
Slope:	0.6997

Error Coefficients

Standard Error:	2080000
Relative Standard Error:	1.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.138251	10.0	2414017.0	0.691254	Y
2	IC 410-395211/14	0.5	0.358638	10.0	2469842.0	0.717277	Y
3	IC 410-395211/15	1.0	0.682568	10.0	2458760.0	0.682568	Y
4	IC 410-395211/16	2.0	1.378199	10.0	2465964.0	0.6891	Y
5	IC 410-395211/17	5.0	3.542697	10.0	2475137.0	0.708539	Y
6	ICIS 410-395211/18	10.0	7.050013	10.0	2510713.0	0.705001	Y
7	IC 410-395211/19	25.0	17.608329	10.0	2655574.0	0.704333	Y



Calibration / trans-1,2-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

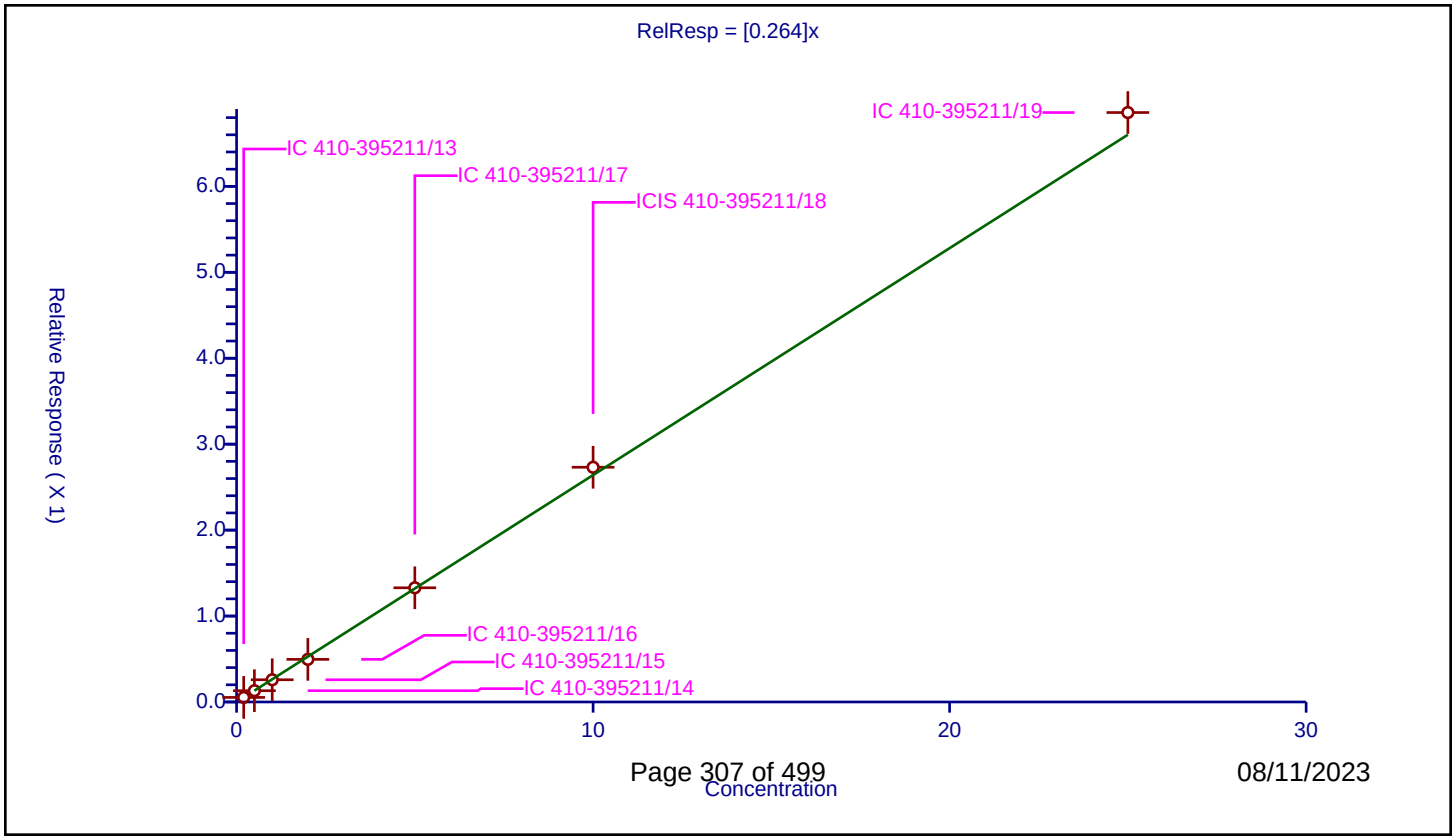
Curve Coefficients

Intercept:	0
Slope:	0.264

Error Coefficients

Standard Error:	808000
Relative Standard Error:	3.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.053069	10.0	2414017.0	0.265346	Y
2	IC 410-395211/14	0.5	0.13151	10.0	2469842.0	0.263021	Y
3	IC 410-395211/15	1.0	0.258675	10.0	2458760.0	0.258675	Y
4	IC 410-395211/16	2.0	0.495879	10.0	2465964.0	0.24794	Y
5	IC 410-395211/17	5.0	1.328941	10.0	2475137.0	0.265788	Y
6	ICIS 410-395211/18	10.0	2.731328	10.0	2510713.0	0.273133	Y
7	IC 410-395211/19	25.0	6.859086	10.0	2655574.0	0.274363	Y



08/11/2023

Calibration / Hexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

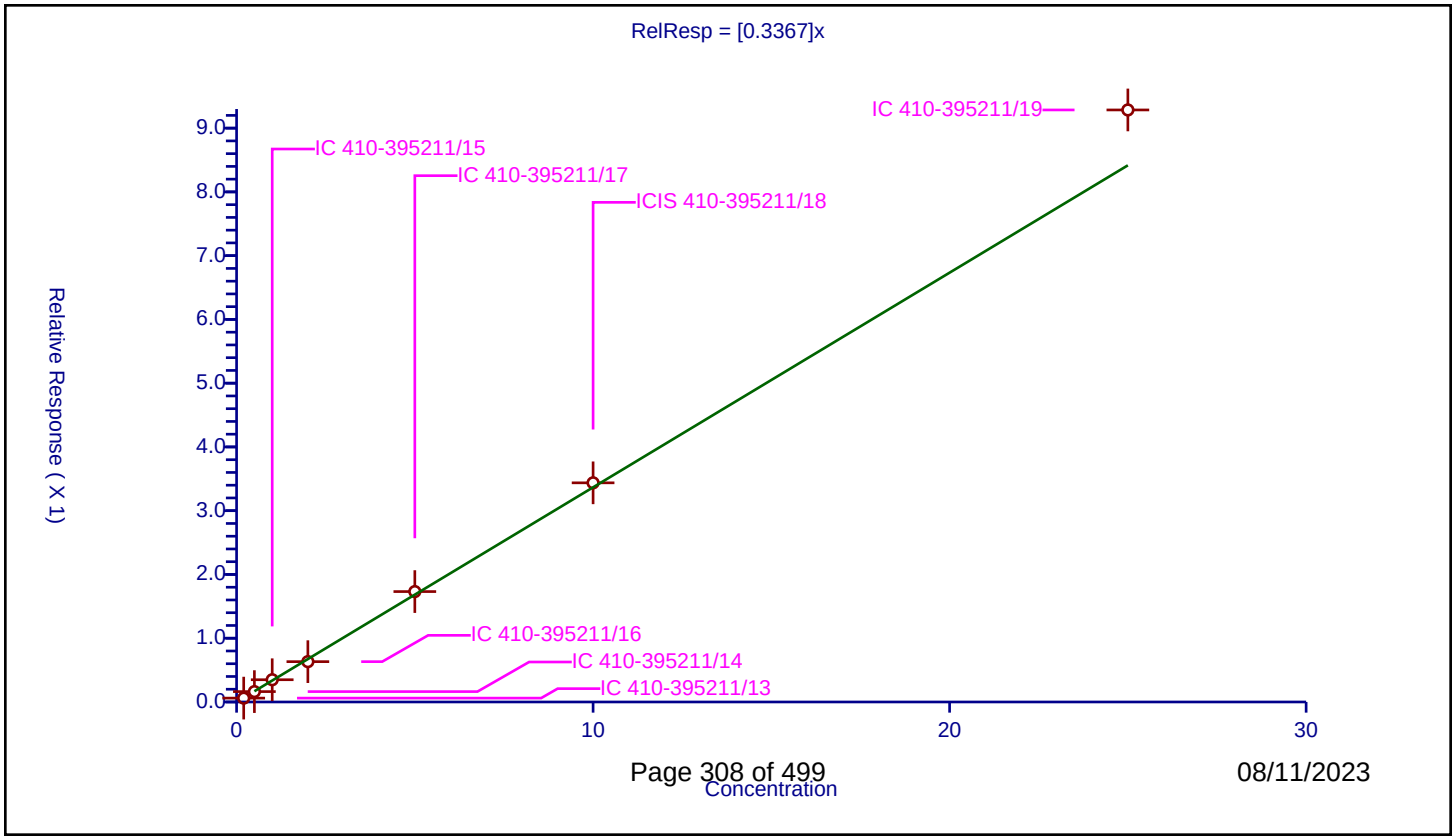
Curve Coefficients

Intercept:	0
Slope:	0.3367

Error Coefficients

Standard Error:	1080000
Relative Standard Error:	6.8
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.060824	10.0	2414017.0	0.30412	Y
2	IC 410-395211/14	0.5	0.162804	10.0	2469842.0	0.325608	Y
3	IC 410-395211/15	1.0	0.349099	10.0	2458760.0	0.349099	Y
4	IC 410-395211/16	2.0	0.632625	10.0	2465964.0	0.316312	Y
5	IC 410-395211/17	5.0	1.731726	10.0	2475137.0	0.346345	Y
6	ICIS 410-395211/18	10.0	3.437175	10.0	2510713.0	0.343718	Y
7	IC 410-395211/19	25.0	9.285559	10.0	2655574.0	0.371422	Y



Calibration / 1,1-Dichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

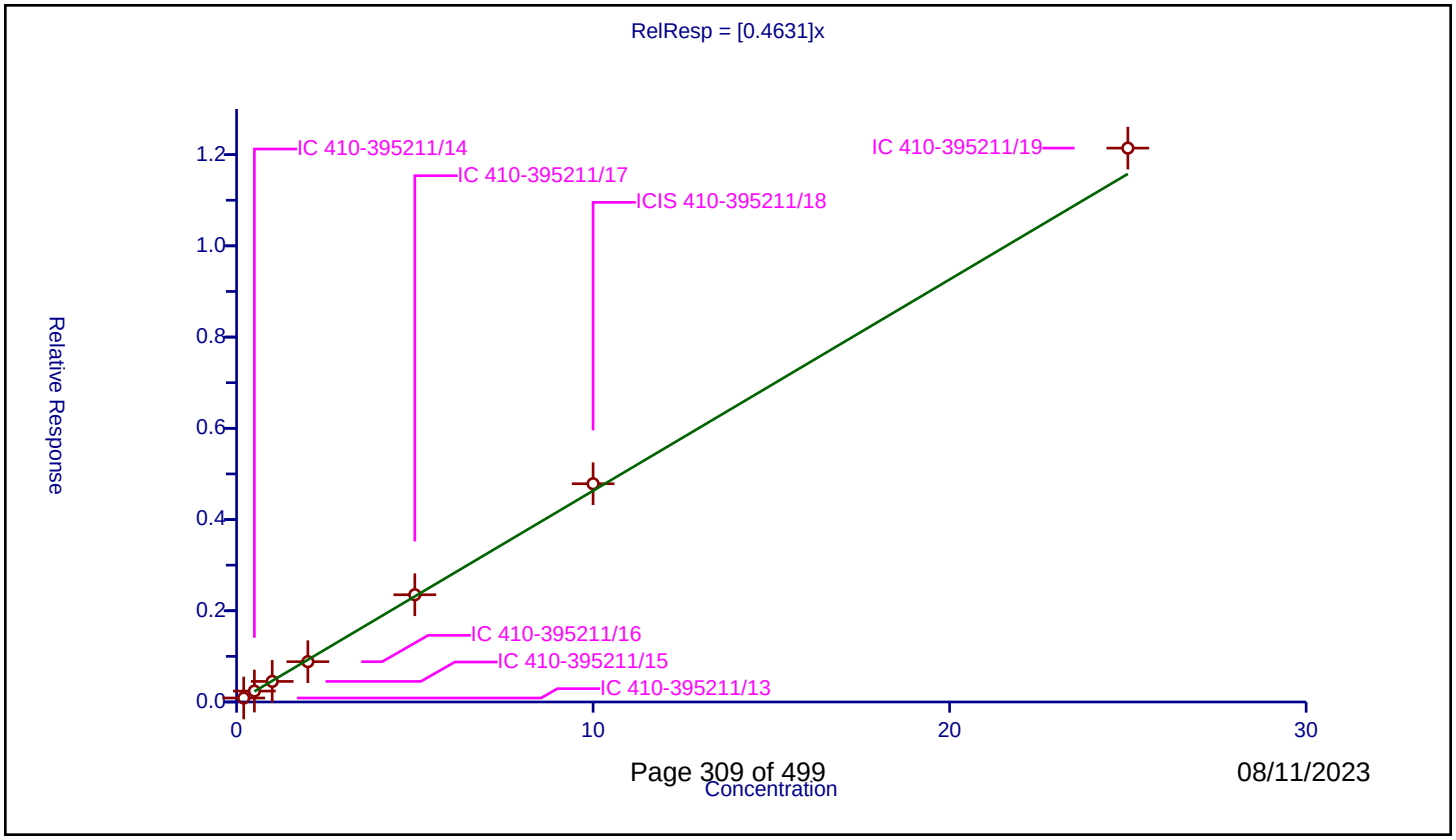
Curve Coefficients

Intercept:	0
Slope:	0.4631

Error Coefficients

Standard Error:	1430000
Relative Standard Error:	4.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.08722	10.0	2414017.0	0.436099	Y
2	IC 410-395211/14	0.5	0.239359	10.0	2469842.0	0.478719	Y
3	IC 410-395211/15	1.0	0.45091	10.0	2458760.0	0.45091	Y
4	IC 410-395211/16	2.0	0.883671	10.0	2465964.0	0.441835	Y
5	IC 410-395211/17	5.0	2.351058	10.0	2475137.0	0.470212	Y
6	ICIS 410-395211/18	10.0	4.784732	10.0	2510713.0	0.478473	Y
7	IC 410-395211/19	25.0	12.142704	10.0	2655574.0	0.485708	Y



Calibration / Isopropyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

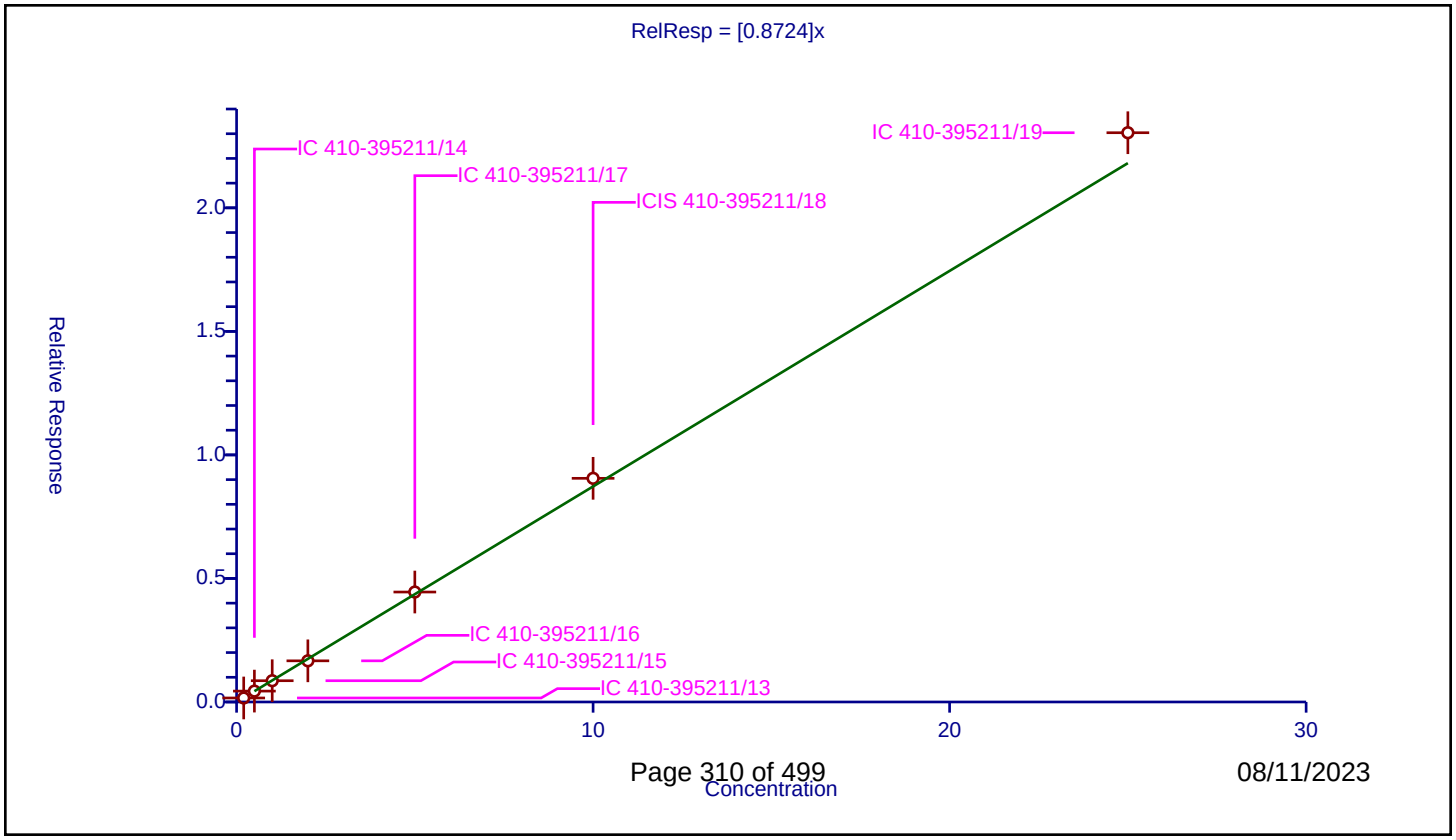
Curve Coefficients

Intercept:	0
Slope:	0.8724

Error Coefficients

Standard Error:	2710000
Relative Standard Error:	4.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.162749	10.0	2414017.0	0.813747	Y
2	IC 410-395211/14	0.5	0.440919	10.0	2469842.0	0.881838	Y
3	IC 410-395211/15	1.0	0.86106	10.0	2458760.0	0.86106	Y
4	IC 410-395211/16	2.0	1.666217	10.0	2465964.0	0.833108	Y
5	IC 410-395211/17	5.0	4.45019	10.0	2475137.0	0.890038	Y
6	ICIS 410-395211/18	10.0	9.052516	10.0	2510713.0	0.905252	Y
7	IC 410-395211/19	25.0	23.040604	10.0	2655574.0	0.921624	Y



Calibration / 2-Chloro-1,3-butadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

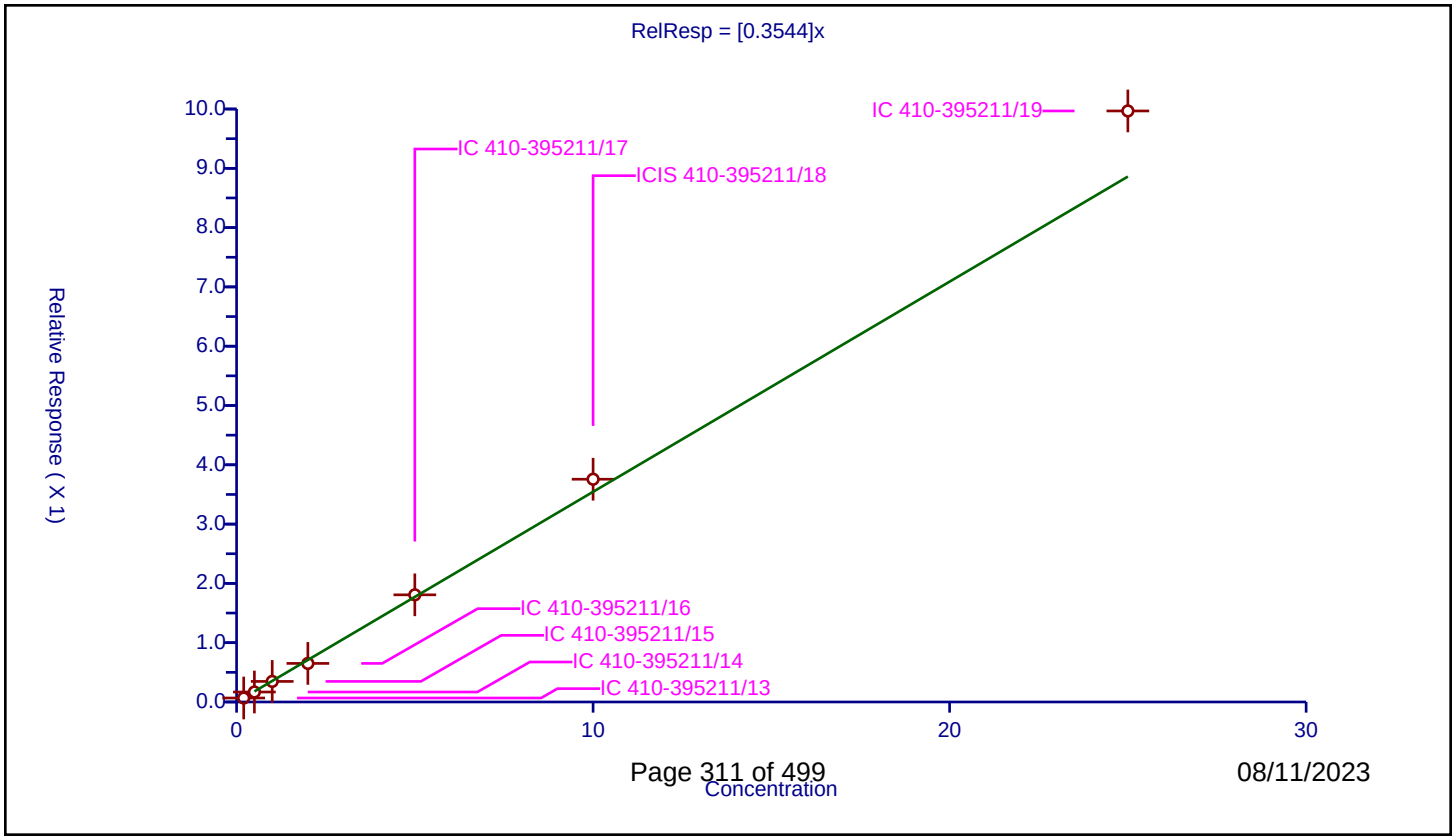
Curve Coefficients

Intercept:	0
Slope:	0.3544

Error Coefficients

Standard Error:	1160000
Relative Standard Error:	7.3
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.067274	10.0	2414017.0	0.336369	Y
2	IC 410-395211/14	0.5	0.168367	10.0	2469842.0	0.336734	Y
3	IC 410-395211/15	1.0	0.346793	10.0	2458760.0	0.346793	Y
4	IC 410-395211/16	2.0	0.65063	10.0	2465964.0	0.325315	Y
5	IC 410-395211/17	5.0	1.807136	10.0	2475137.0	0.361427	Y
6	ICIS 410-395211/18	10.0	3.756654	10.0	2510713.0	0.375665	Y
7	IC 410-395211/19	25.0	9.967066	10.0	2655574.0	0.398683	Y



Calibration / Tert-butyl ethyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

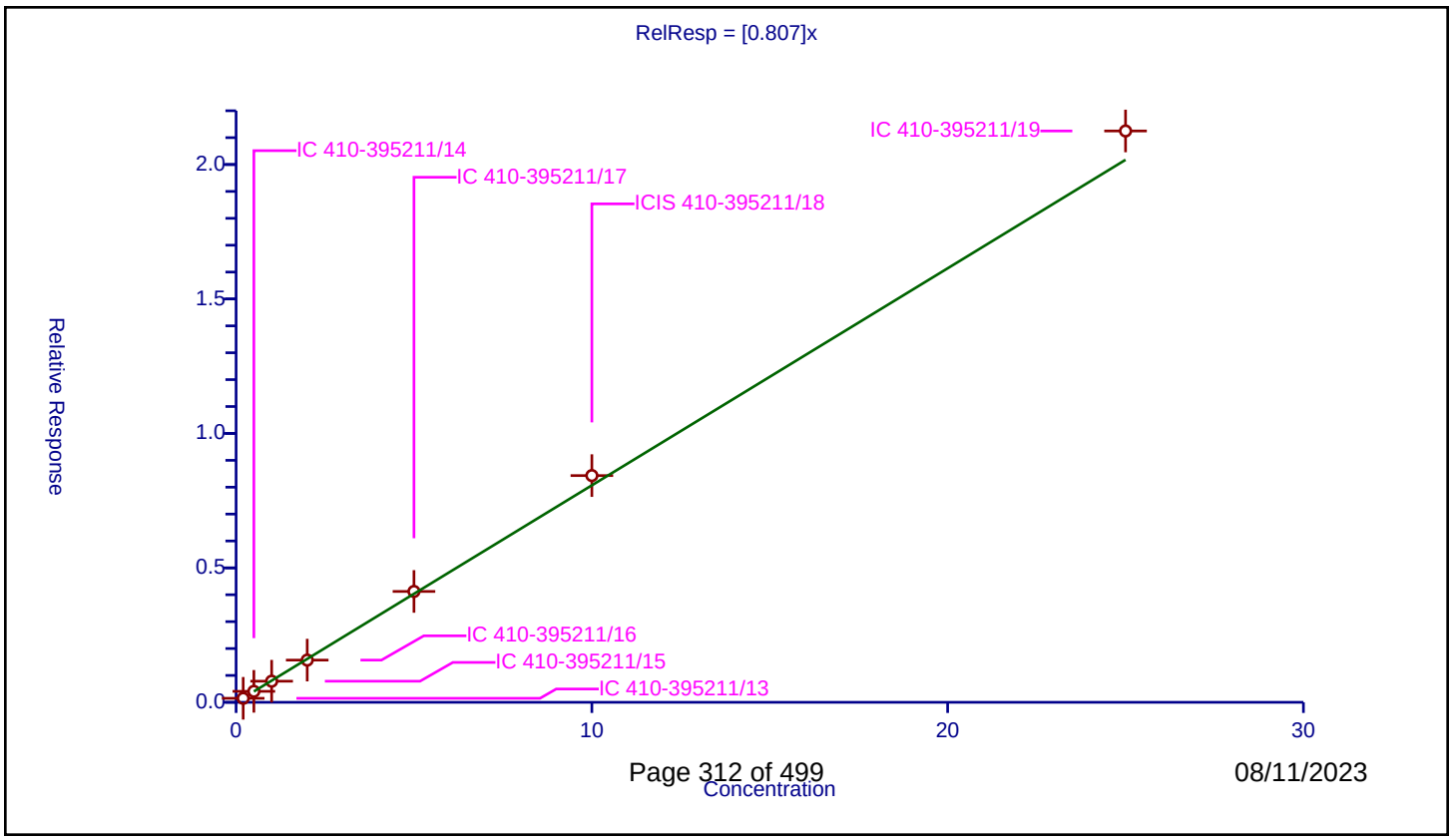
Curve Coefficients

Intercept:	0
Slope:	0.807

Error Coefficients

Standard Error:	2500000
Relative Standard Error:	4.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.149262	10.0	2414017.0	0.746308	Y
2	IC 410-395211/14	0.5	0.407682	10.0	2469842.0	0.815364	Y
3	IC 410-395211/15	1.0	0.784782	10.0	2458760.0	0.784782	Y
4	IC 410-395211/16	2.0	1.570003	10.0	2465964.0	0.785001	Y
5	IC 410-395211/17	5.0	4.123012	10.0	2475137.0	0.824602	Y
6	ICIS 410-395211/18	10.0	8.431975	10.0	2510713.0	0.843198	Y
7	IC 410-395211/19	25.0	21.247689	10.0	2655574.0	0.849908	Y



Calibration / 2-Butanone (MEK)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

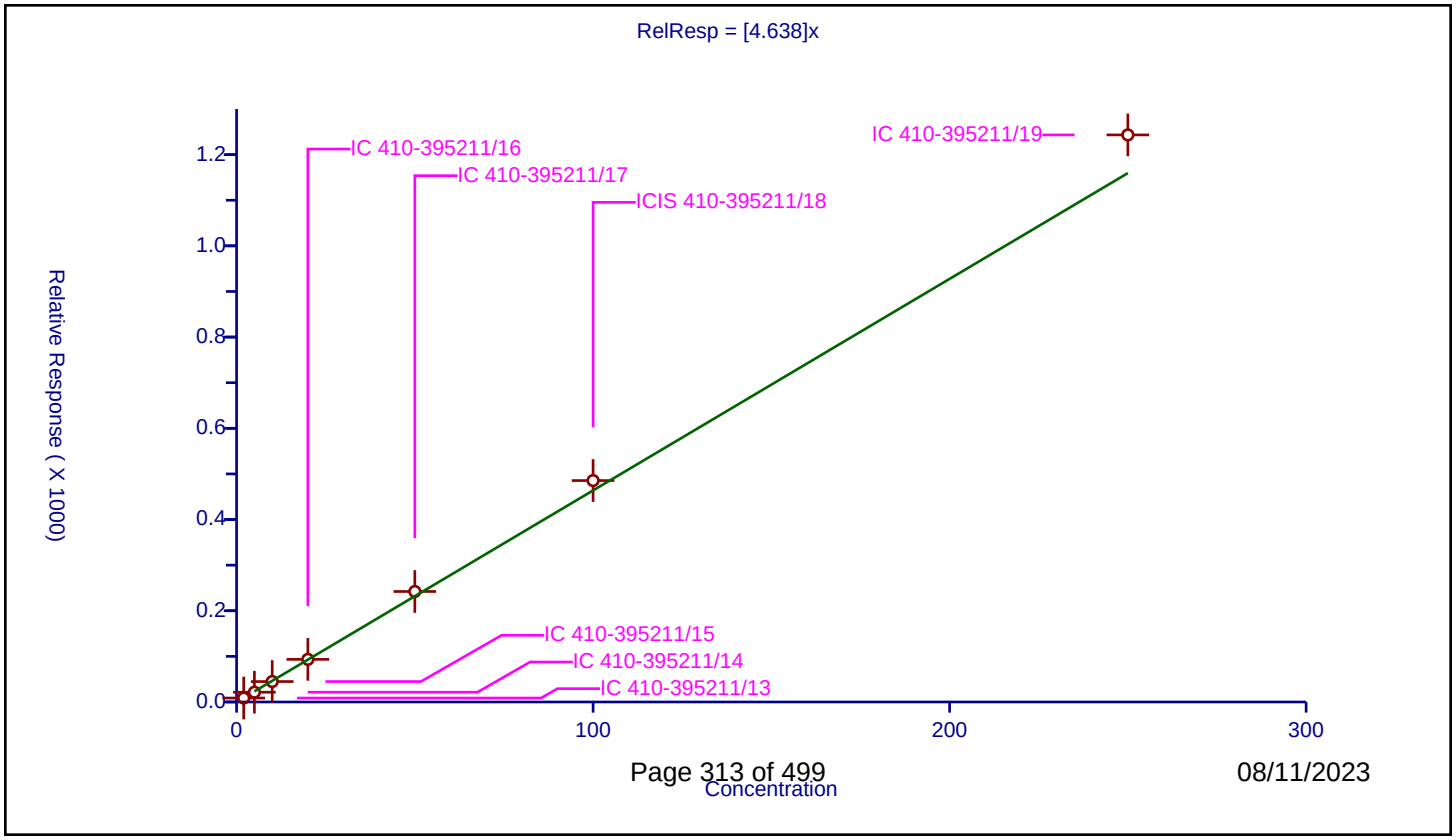
Curve Coefficients

Intercept:	0
Slope:	4.638

Error Coefficients

Standard Error:	1880000
Relative Standard Error:	5.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	2.0	8.693734	50.0	159799.0	4.346867	Y
2	IC 410-395211/14	5.0	21.452423	50.0	176691.0	4.290485	Y
3	IC 410-395211/15	10.0	44.836647	50.0	161736.0	4.483665	Y
4	IC 410-395211/16	20.0	93.435748	50.0	164657.0	4.671787	Y
5	IC 410-395211/17	50.0	242.241225	50.0	167230.0	4.844824	Y
6	ICIS 410-395211/18	100.0	485.446469	50.0	168052.0	4.854465	Y
7	IC 410-395211/19	250.0	1243.24318	50.0	170043.0	4.972973	Y



Calibration / cis-1,2-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

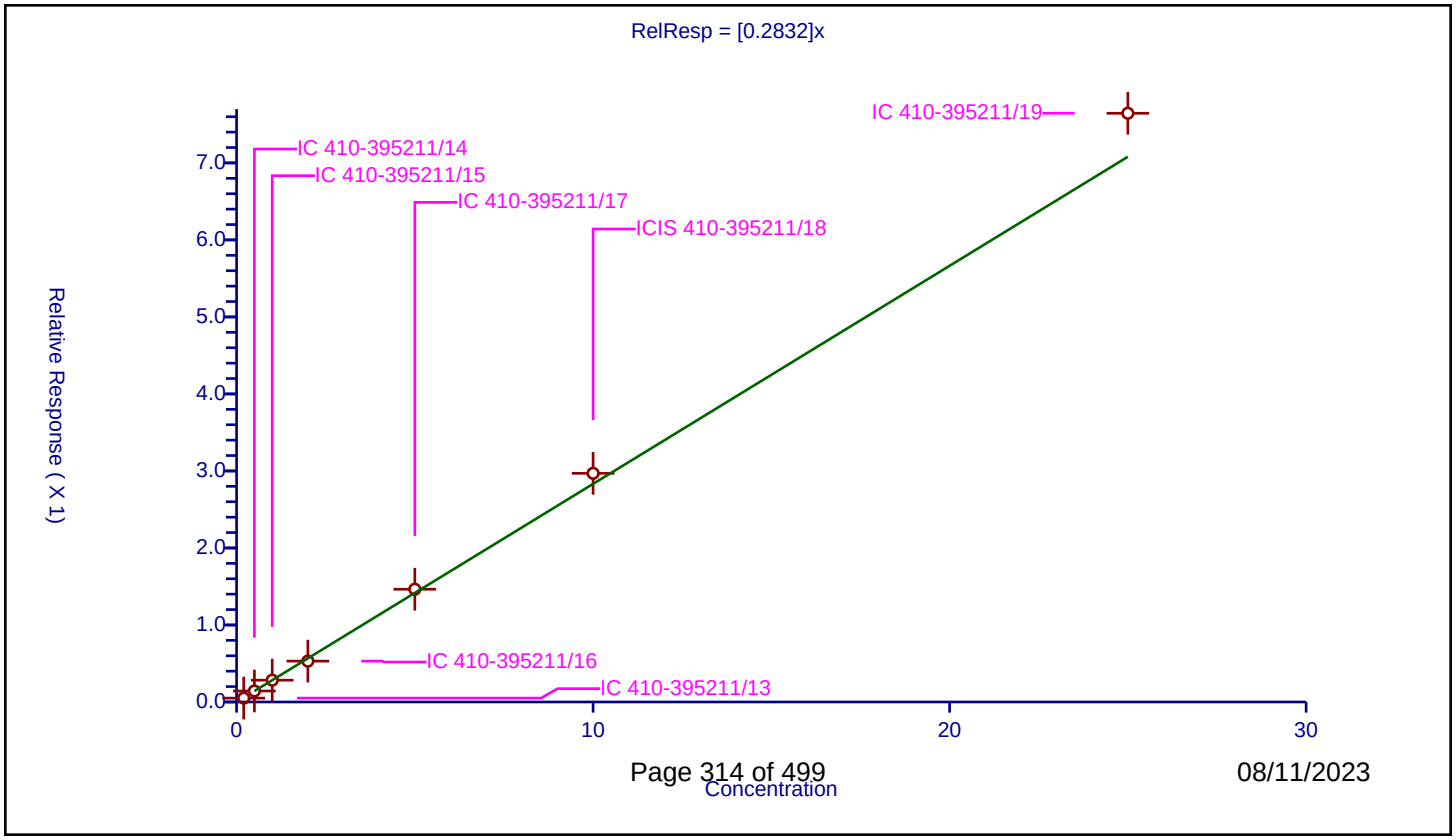
Curve Coefficients

Intercept:	0
Slope:	0.2832

Error Coefficients

Standard Error:	897000
Relative Standard Error:	6.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.050551	10.0	2414017.0	0.252753	Y
2	IC 410-395211/14	0.5	0.142754	10.0	2469842.0	0.285508	Y
3	IC 410-395211/15	1.0	0.28324	10.0	2458760.0	0.28324	Y
4	IC 410-395211/16	2.0	0.530734	10.0	2465964.0	0.265367	Y
5	IC 410-395211/17	5.0	1.463907	10.0	2475137.0	0.292781	Y
6	ICIS 410-395211/18	10.0	2.969292	10.0	2510713.0	0.296929	Y
7	IC 410-395211/19	25.0	7.644581	10.0	2655574.0	0.305783	Y



Calibration / 2,2-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

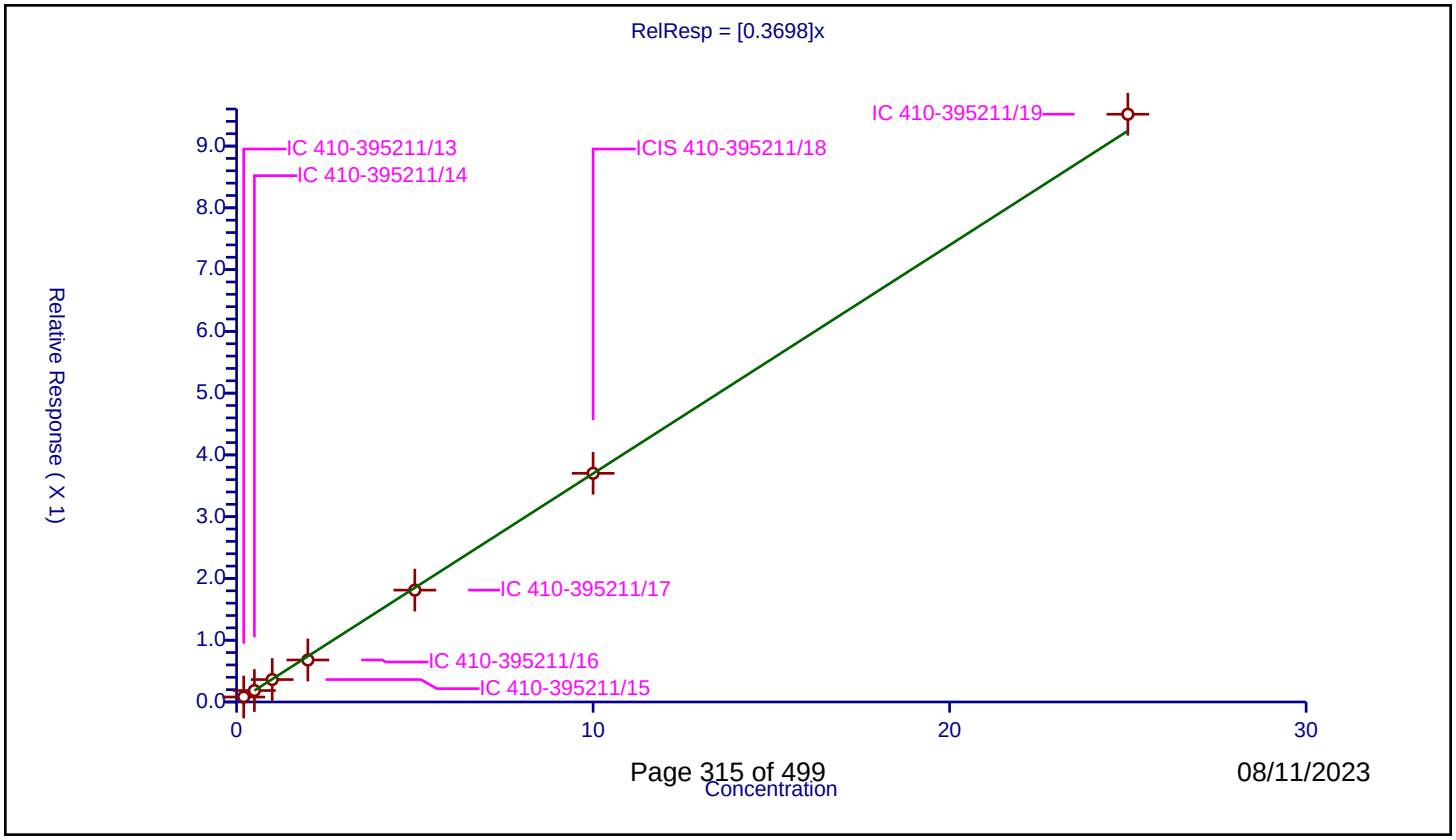
Curve Coefficients

Intercept:	0
Slope:	0.3698

Error Coefficients

Standard Error:	1120000
Relative Standard Error:	5.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.080343	10.0	2414017.0	0.401716	Y
2	IC 410-395211/14	0.5	0.185409	10.0	2469842.0	0.370817	Y
3	IC 410-395211/15	1.0	0.363212	10.0	2458760.0	0.363212	Y
4	IC 410-395211/16	2.0	0.680046	10.0	2465964.0	0.340023	Y
5	IC 410-395211/17	5.0	1.811294	10.0	2475137.0	0.362259	Y
6	ICIS 410-395211/18	10.0	3.702231	10.0	2510713.0	0.370223	Y
7	IC 410-395211/19	25.0	9.515886	10.0	2655574.0	0.380635	Y



Calibration / Propionitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

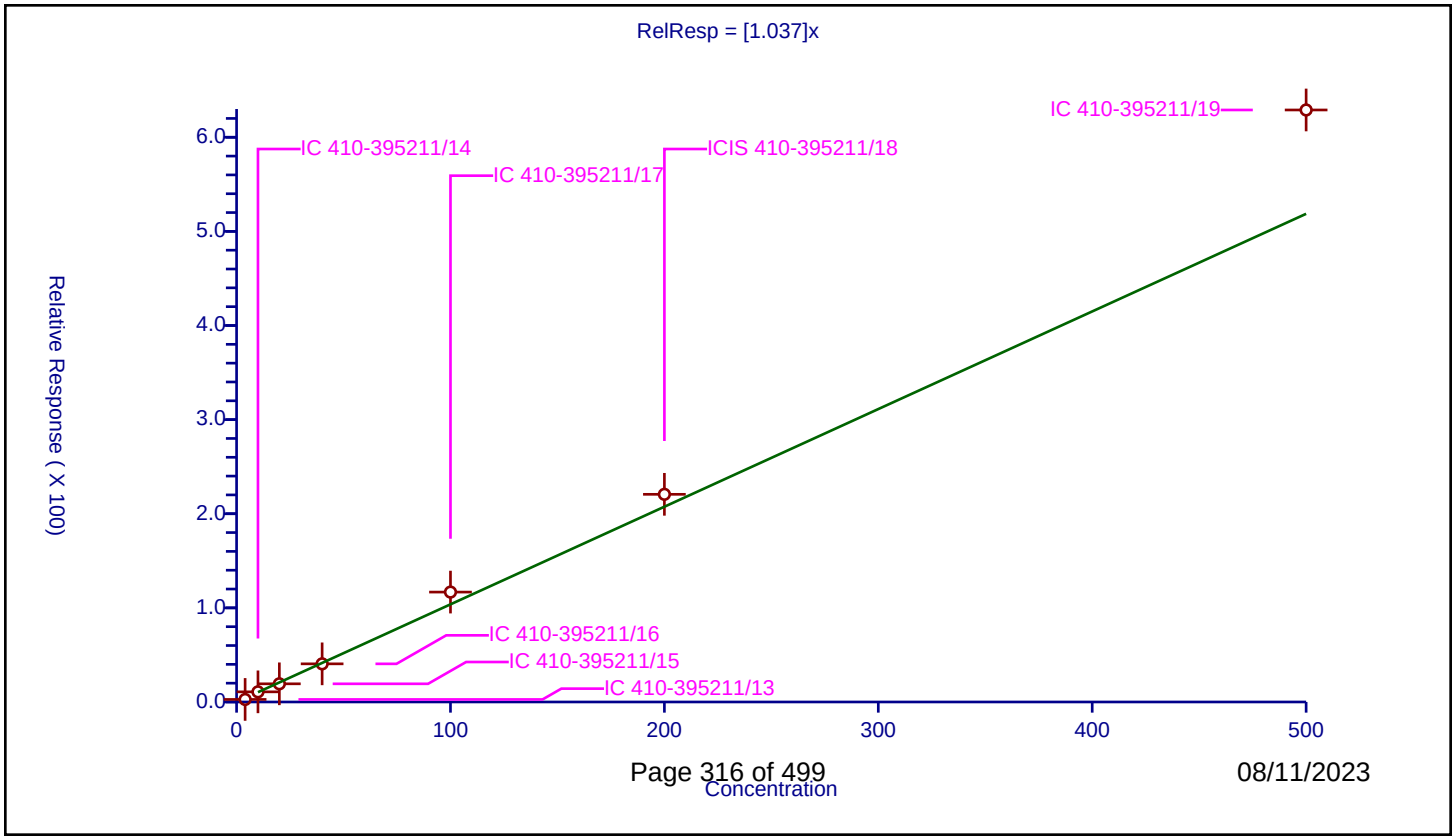
Curve Coefficients

Intercept:	0
Slope:	1.037

Error Coefficients

Standard Error:	940000
Relative Standard Error:	17.9
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.965

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	4.0	2.703396	50.0	159799.0	0.675849	Y
2	IC 410-395211/14	10.0	10.778138	50.0	176691.0	1.077814	Y
3	IC 410-395211/15	20.0	19.317592	50.0	161736.0	0.96588	Y
4	IC 410-395211/16	40.0	40.515435	50.0	164657.0	1.012886	Y
5	IC 410-395211/17	100.0	116.766728	50.0	167230.0	1.167667	Y
6	ICIS 410-395211/18	200.0	220.634089	50.0	168052.0	1.10317	Y
7	IC 410-395211/19	500.0	628.99149	50.0	170043.0	1.257983	Y



Calibration / Methacrylonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

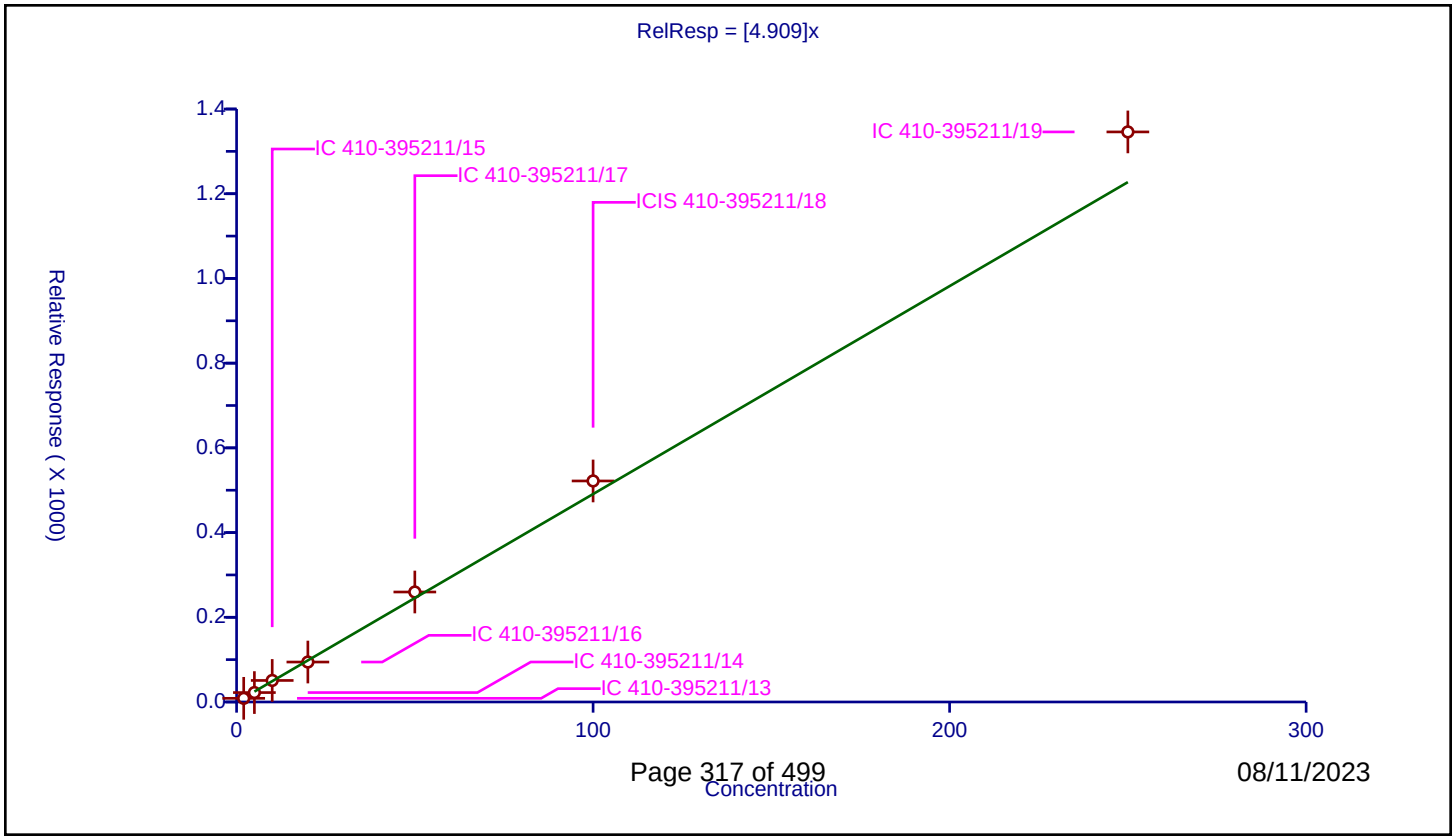
Curve Coefficients

Intercept:	0
Slope:	4.909

Error Coefficients

Standard Error:	2040000
Relative Standard Error:	8.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	2.0	8.633346	50.0	159799.0	4.316673	Y
2	IC 410-395211/14	5.0	22.27929	50.0	176691.0	4.455858	Y
3	IC 410-395211/15	10.0	50.815527	50.0	161736.0	5.081553	Y
4	IC 410-395211/16	20.0	94.315152	50.0	164657.0	4.715758	Y
5	IC 410-395211/17	50.0	259.664235	50.0	167230.0	5.193285	Y
6	ICIS 410-395211/18	100.0	521.864363	50.0	168052.0	5.218644	Y
7	IC 410-395211/19	250.0	1345.938674	50.0	170043.0	5.383755	Y



Calibration / Chlorobromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

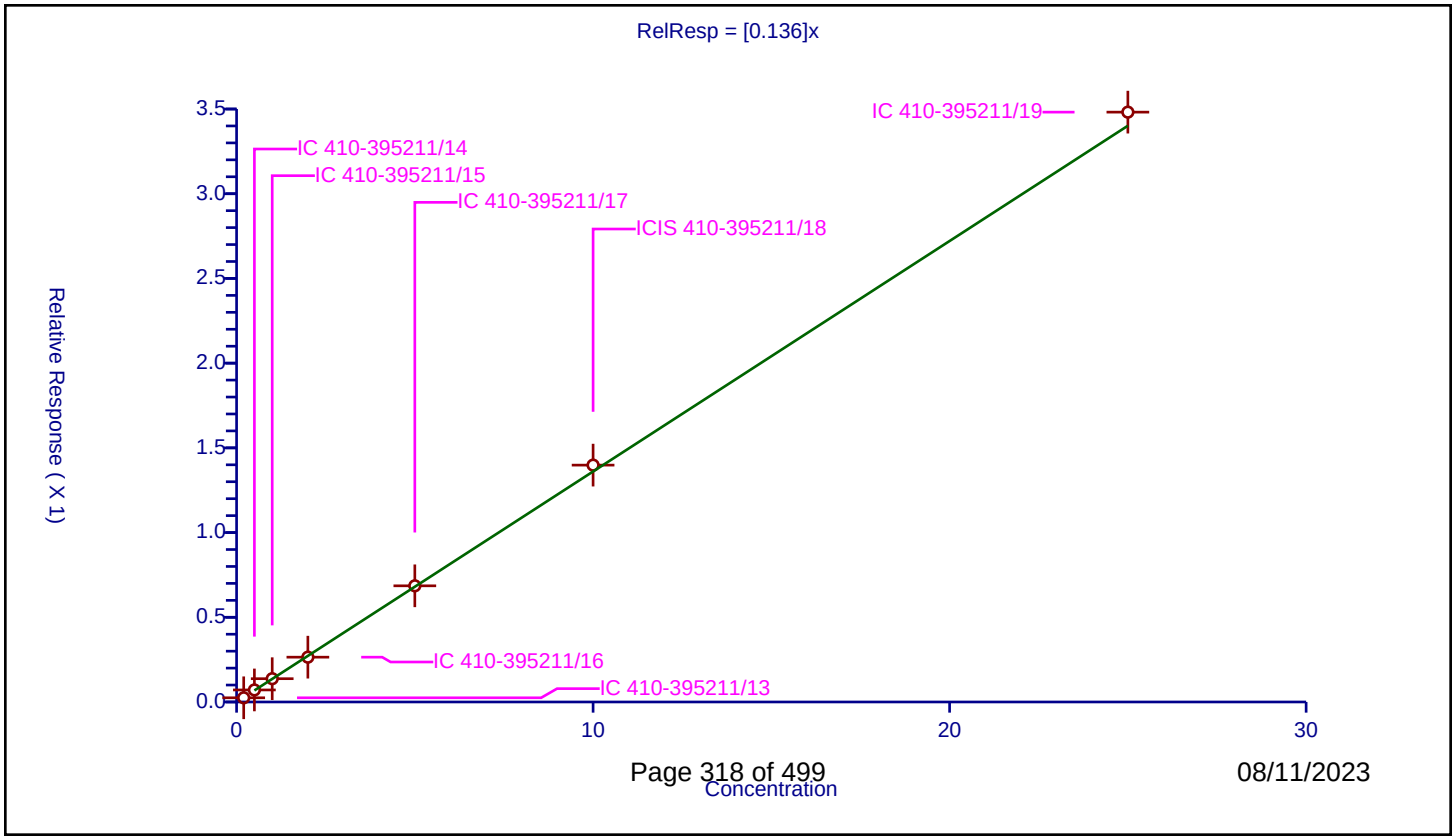
Curve Coefficients

Intercept:	0
Slope:	0.136

Error Coefficients

Standard Error:	411000
Relative Standard Error:	4.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.024859	10.0	2414017.0	0.124295	Y
2	IC 410-395211/14	0.5	0.071013	10.0	2469842.0	0.142025	Y
3	IC 410-395211/15	1.0	0.137541	10.0	2458760.0	0.137541	Y
4	IC 410-395211/16	2.0	0.264485	10.0	2465964.0	0.132242	Y
5	IC 410-395211/17	5.0	0.685724	10.0	2475137.0	0.137145	Y
6	ICIS 410-395211/18	10.0	1.398061	10.0	2510713.0	0.139806	Y
7	IC 410-395211/19	25.0	3.481552	10.0	2655574.0	0.139262	Y



Calibration / Tetrahydrofuran

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

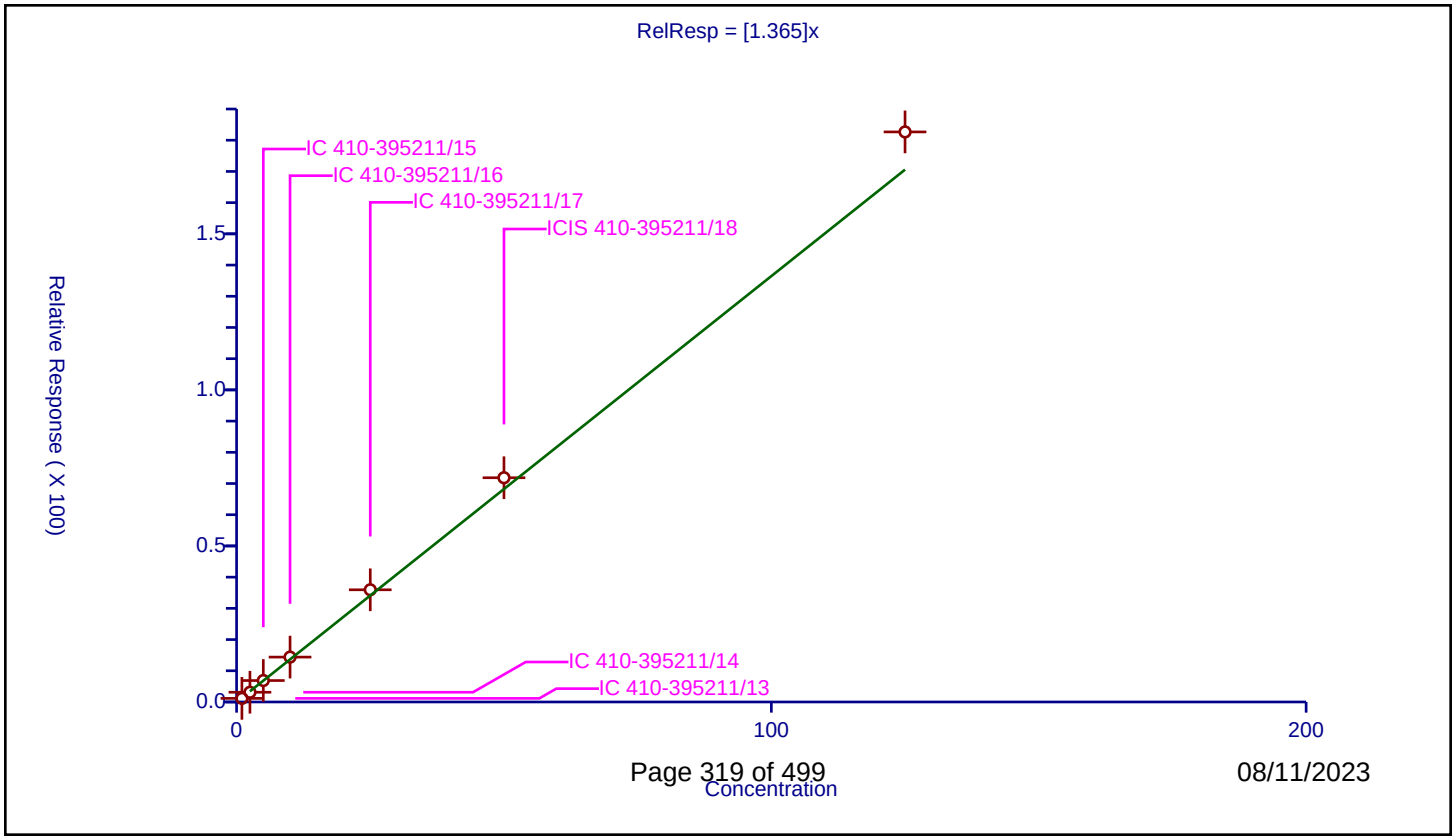
Curve Coefficients

Intercept:	0
Slope:	1.365

Error Coefficients

Standard Error:	277000
Relative Standard Error:	8.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	1.0	1.154263	50.0	159799.0	1.154263	Y
2	IC 410-395211/14	2.5	3.121268	50.0	176691.0	1.248507	Y
3	IC 410-395211/15	5.0	6.873238	50.0	161736.0	1.374648	Y
4	IC 410-395211/16	10.0	14.384751	50.0	164657.0	1.438475	Y
5	IC 410-395211/17	25.0	35.951683	50.0	167230.0	1.438067	Y
6	ICIS 410-395211/18	50.0	71.85157	50.0	168052.0	1.437031	Y
7	IC 410-395211/19	125.0	182.658798	50.0	170043.0	1.46127	Y



Calibration / Chloroform

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

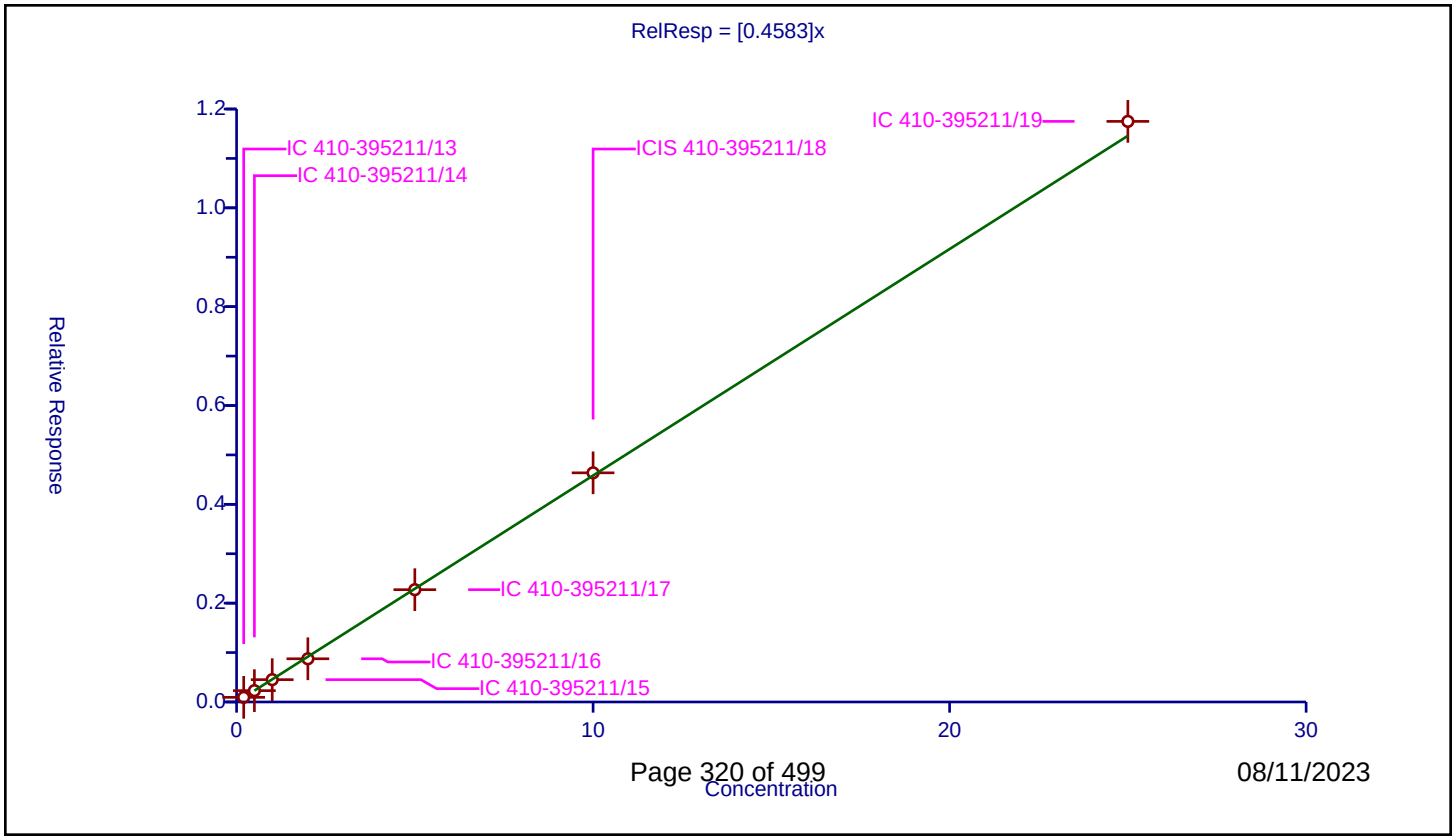
Curve Coefficients

Intercept:	0
Slope:	0.4583

Error Coefficients

Standard Error:	1380000
Relative Standard Error:	2.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.094295	10.0	2414017.0	0.471476	Y
2	IC 410-395211/14	0.5	0.229747	10.0	2469842.0	0.459495	Y
3	IC 410-395211/15	1.0	0.45172	10.0	2458760.0	0.45172	Y
4	IC 410-395211/16	2.0	0.874486	10.0	2465964.0	0.437243	Y
5	IC 410-395211/17	5.0	2.272593	10.0	2475137.0	0.454519	Y
6	ICIS 410-395211/18	10.0	4.637424	10.0	2510713.0	0.463742	Y
7	IC 410-395211/19	25.0	11.749475	10.0	2655574.0	0.469979	Y



Calibration / 1,1,1-Trichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

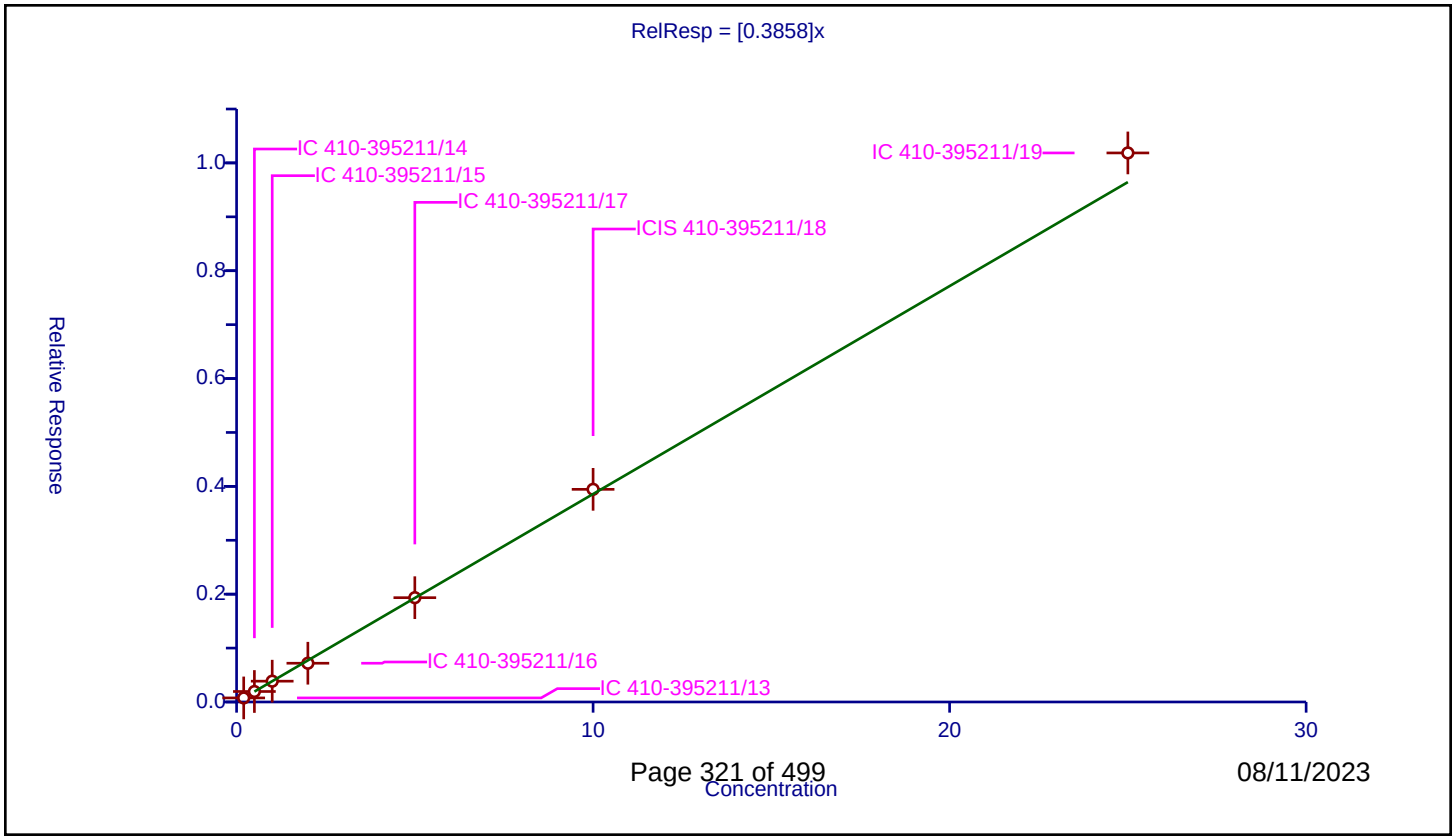
Curve Coefficients

Intercept:	0
Slope:	0.3858

Error Coefficients

Standard Error:	1200000
Relative Standard Error:	3.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.075331	10.0	2414017.0	0.376654	Y
2	IC 410-395211/14	0.5	0.194498	10.0	2469842.0	0.388997	Y
3	IC 410-395211/15	1.0	0.386272	10.0	2458760.0	0.386272	Y
4	IC 410-395211/16	2.0	0.718932	10.0	2465964.0	0.359466	Y
5	IC 410-395211/17	5.0	1.935178	10.0	2475137.0	0.387036	Y
6	ICIS 410-395211/18	10.0	3.944951	10.0	2510713.0	0.394495	Y
7	IC 410-395211/19	25.0	10.185022	10.0	2655574.0	0.407401	Y



Calibration / Dibromofluoromethane (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

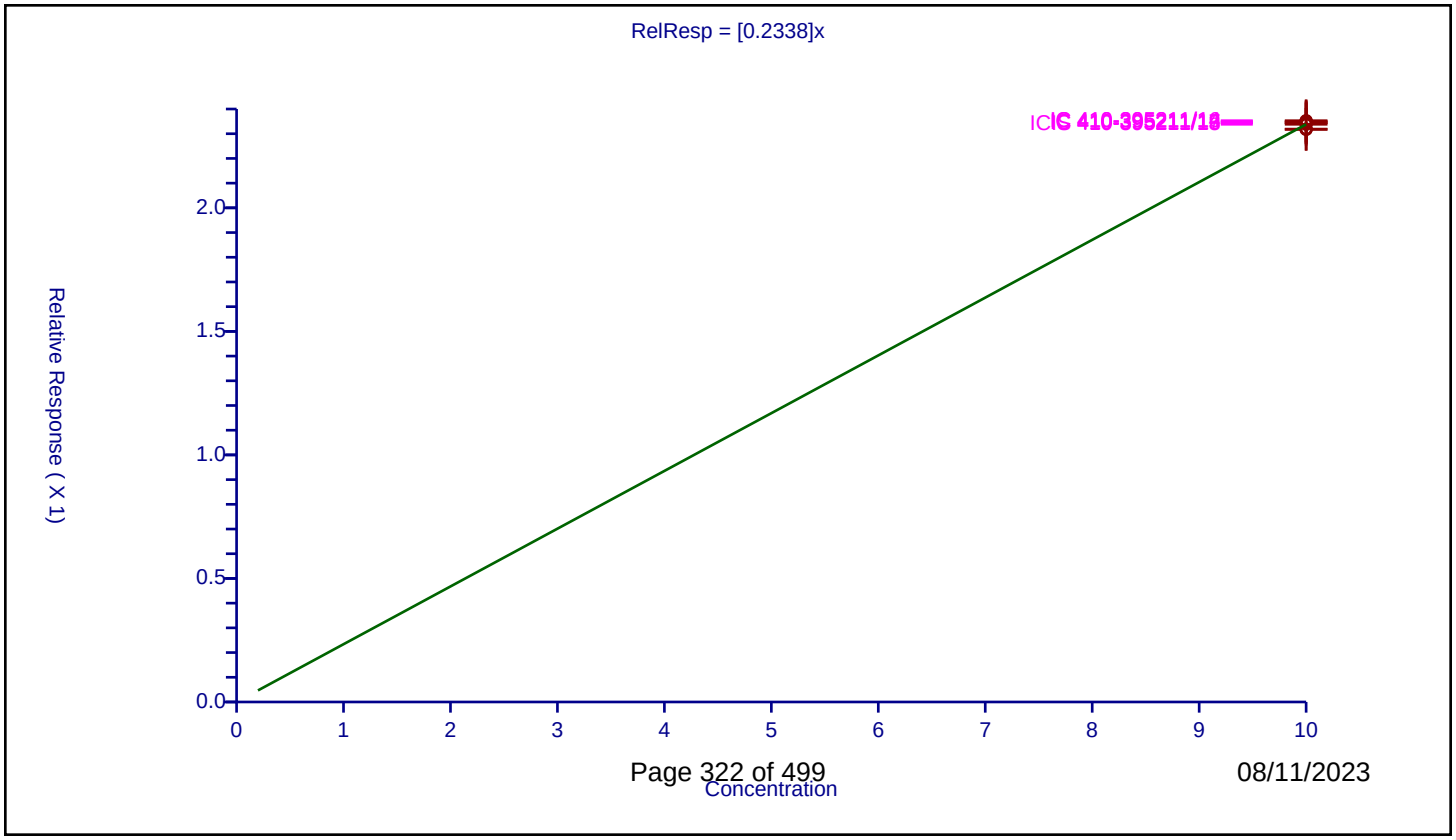
Curve Coefficients

Intercept:	0
Slope:	0.2338

Error Coefficients

Standard Error:	630000
Relative Standard Error:	0.6
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	10.0	2.343757	10.0	2414017.0	0.234376	Y
2	IC 410-395211/14	10.0	2.35275	10.0	2469842.0	0.235275	Y
3	IC 410-395211/15	10.0	2.318742	10.0	2458760.0	0.231874	Y
4	IC 410-395211/16	10.0	2.34975	10.0	2465964.0	0.234975	Y
5	IC 410-395211/17	10.0	2.344751	10.0	2475137.0	0.234475	Y
6	ICIS 410-395211/18	10.0	2.338192	10.0	2510713.0	0.233819	Y
7	IC 410-395211/19	10.0	2.317544	10.0	2655574.0	0.231754	Y



Calibration / Cyclohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

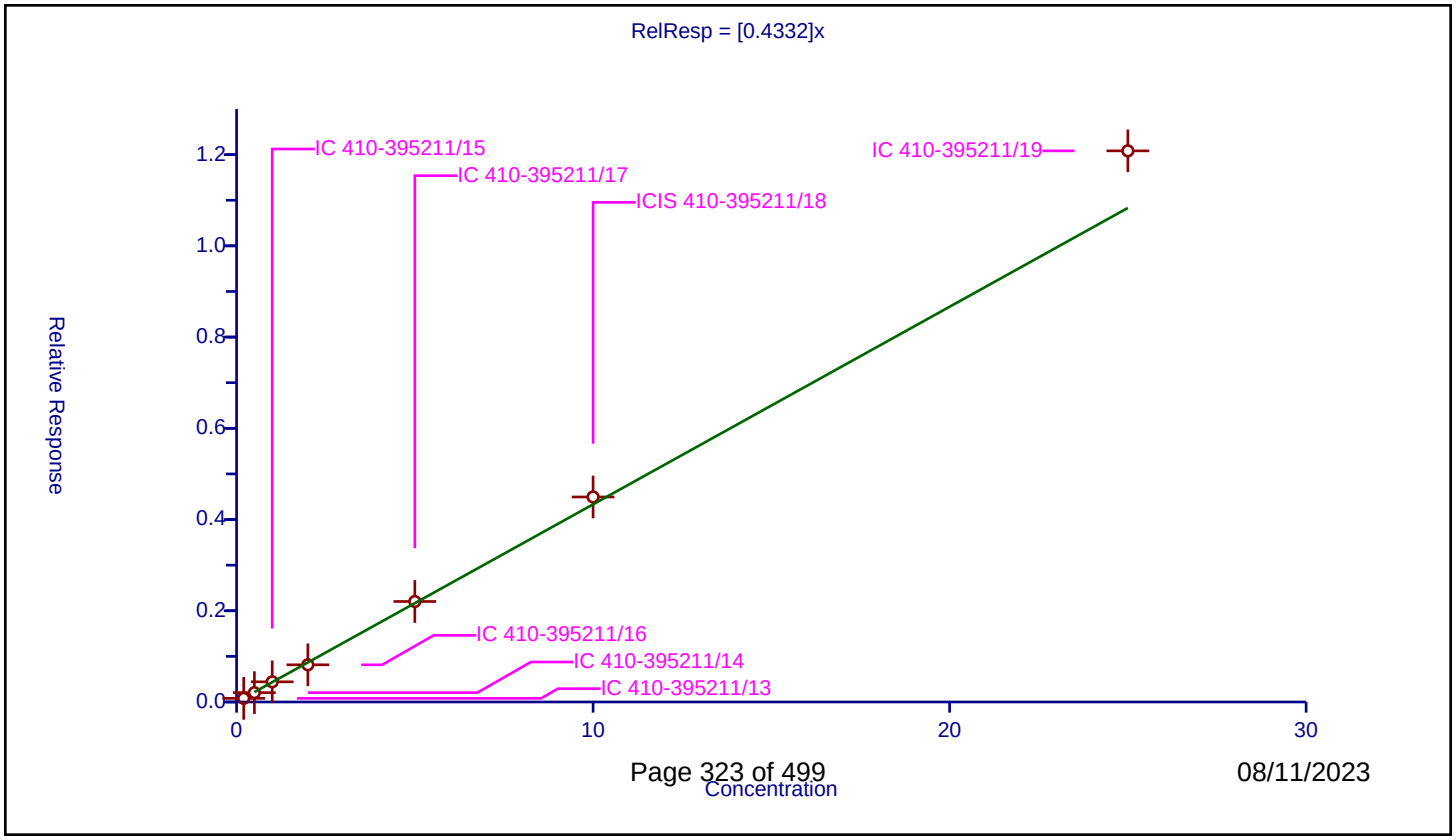
Curve Coefficients

Intercept:	0
Slope:	0.4332

Error Coefficients

Standard Error:	1410000
Relative Standard Error:	6.8
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.080024	10.0	2414017.0	0.400121	Y
2	IC 410-395211/14	0.5	0.204713	10.0	2469842.0	0.409427	Y
3	IC 410-395211/15	1.0	0.442227	10.0	2458760.0	0.442227	Y
4	IC 410-395211/16	2.0	0.815134	10.0	2465964.0	0.407567	Y
5	IC 410-395211/17	5.0	2.203316	10.0	2475137.0	0.440663	Y
6	ICIS 410-395211/18	10.0	4.494309	10.0	2510713.0	0.449431	Y
7	IC 410-395211/19	25.0	12.08251	10.0	2655574.0	0.4833	Y



Calibration / Carbon tetrachloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

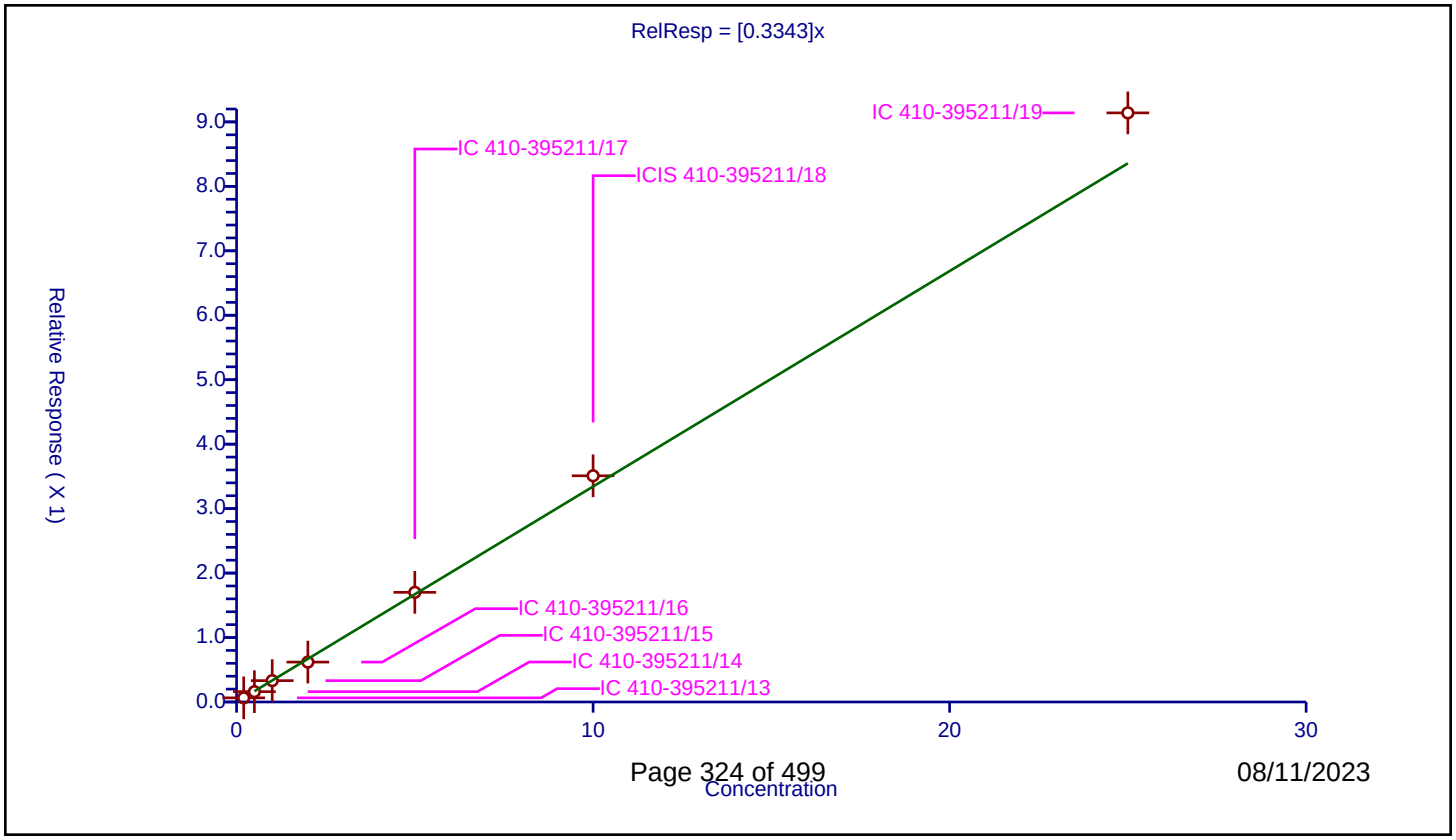
Curve Coefficients

Intercept:	0
Slope:	0.3343

Error Coefficients

Standard Error:	1070000
Relative Standard Error:	5.8
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.064386	10.0	2414017.0	0.321932	Y
2	IC 410-395211/14	0.5	0.160233	10.0	2469842.0	0.320466	Y
3	IC 410-395211/15	1.0	0.331309	10.0	2458760.0	0.331309	Y
4	IC 410-395211/16	2.0	0.618979	10.0	2465964.0	0.30949	Y
5	IC 410-395211/17	5.0	1.700993	10.0	2475137.0	0.340199	Y
6	ICIS 410-395211/18	10.0	3.5097	10.0	2510713.0	0.35097	Y
7	IC 410-395211/19	25.0	9.140178	10.0	2655574.0	0.365607	Y



Calibration / 1,1-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

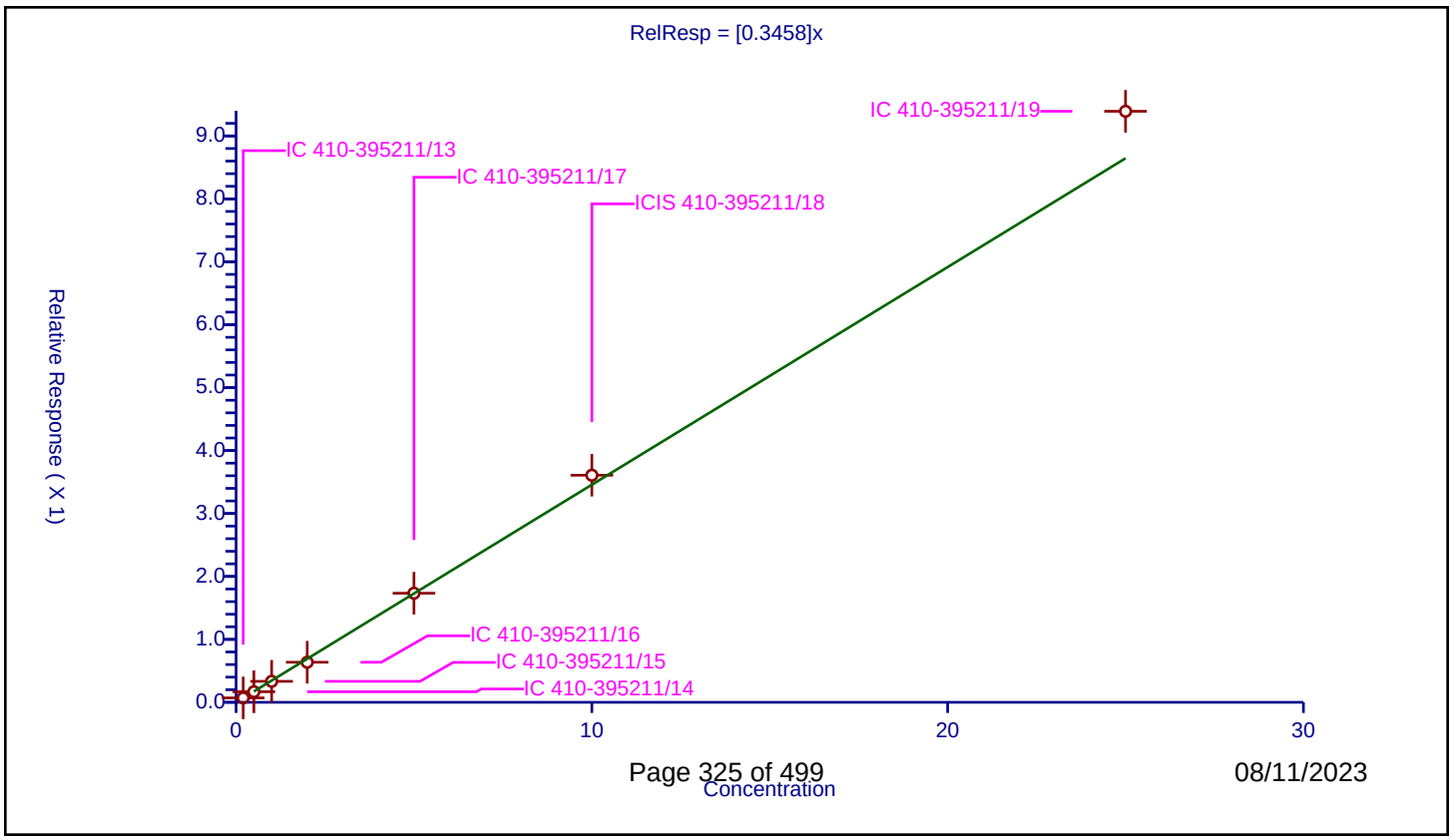
Curve Coefficients

Intercept:	0
Slope:	0.3458

Error Coefficients

Standard Error:	1100000
Relative Standard Error:	5.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.069958	10.0	2414017.0	0.34979	Y
2	IC 410-395211/14	0.5	0.167829	10.0	2469842.0	0.335657	Y
3	IC 410-395211/15	1.0	0.333383	10.0	2458760.0	0.333383	Y
4	IC 410-395211/16	2.0	0.636858	10.0	2465964.0	0.318429	Y
5	IC 410-395211/17	5.0	1.733225	10.0	2475137.0	0.346645	Y
6	ICIS 410-395211/18	10.0	3.608596	10.0	2510713.0	0.36086	Y
7	IC 410-395211/19	25.0	9.391578	10.0	2655574.0	0.375663	Y



Calibration / Isobutyl alcohol

Curve Type:	Linear
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

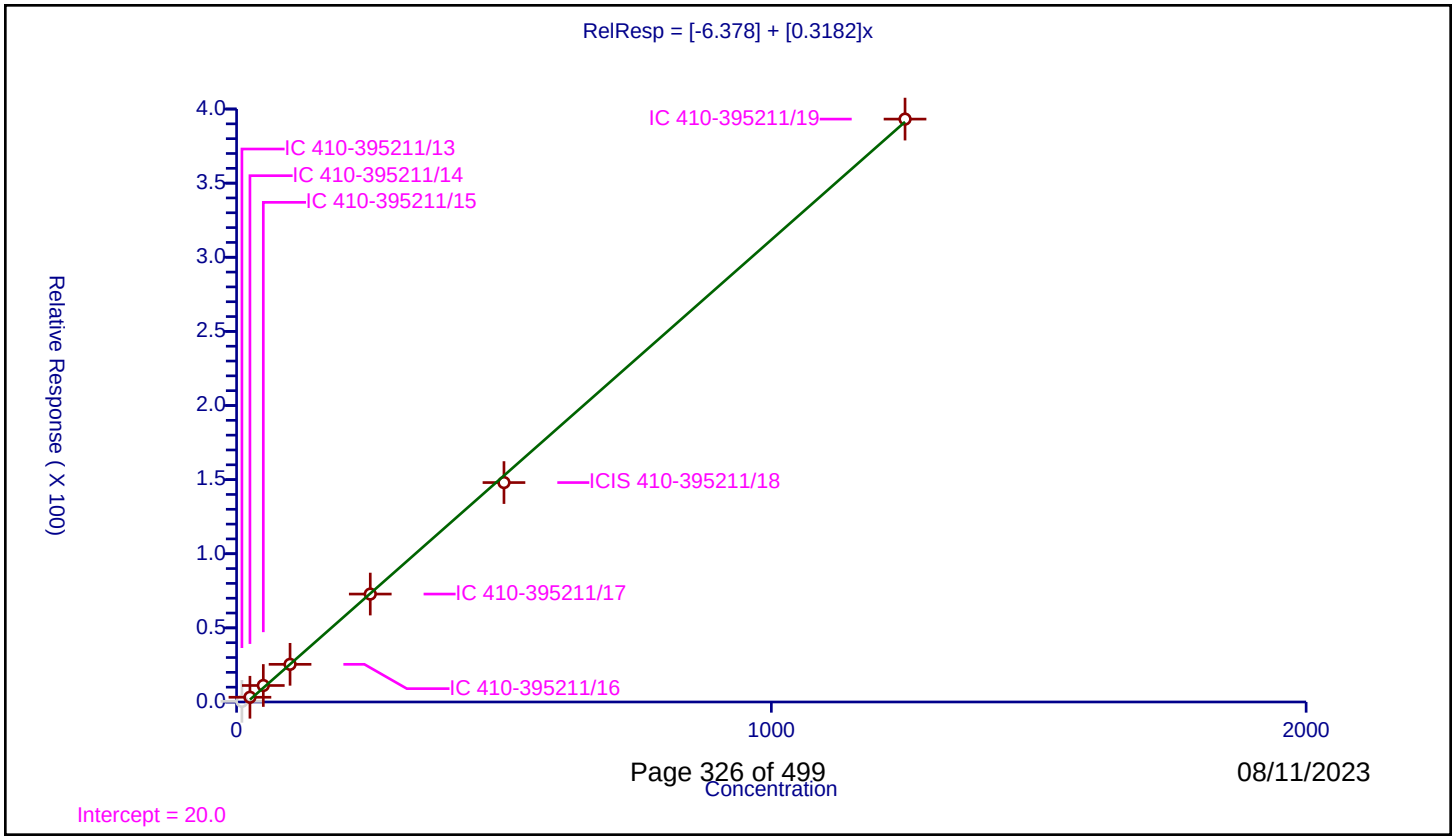
Curve Coefficients

Intercept:	-6.378
Slope:	0.3182

Error Coefficients

Standard Error:	725000
Relative Standard Error:	11.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	10.0	0.432105	50.0	159799.0	0.043211	N
2	IC 410-395211/14	25.0	3.195409	50.0	176691.0	0.127816	Y
3	IC 410-395211/15	50.0	11.13203	50.0	161736.0	0.222641	Y
4	IC 410-395211/16	100.0	25.412828	50.0	164657.0	0.254128	Y
5	IC 410-395211/17	250.0	72.815882	50.0	167230.0	0.291264	Y
6	ICIS 410-395211/18	500.0	148.009247	50.0	168052.0	0.296018	Y
7	IC 410-395211/19	1250.0	393.195251	50.0	170043.0	0.314556	Y



Calibration / 1,2-Dichloroethane-d4 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

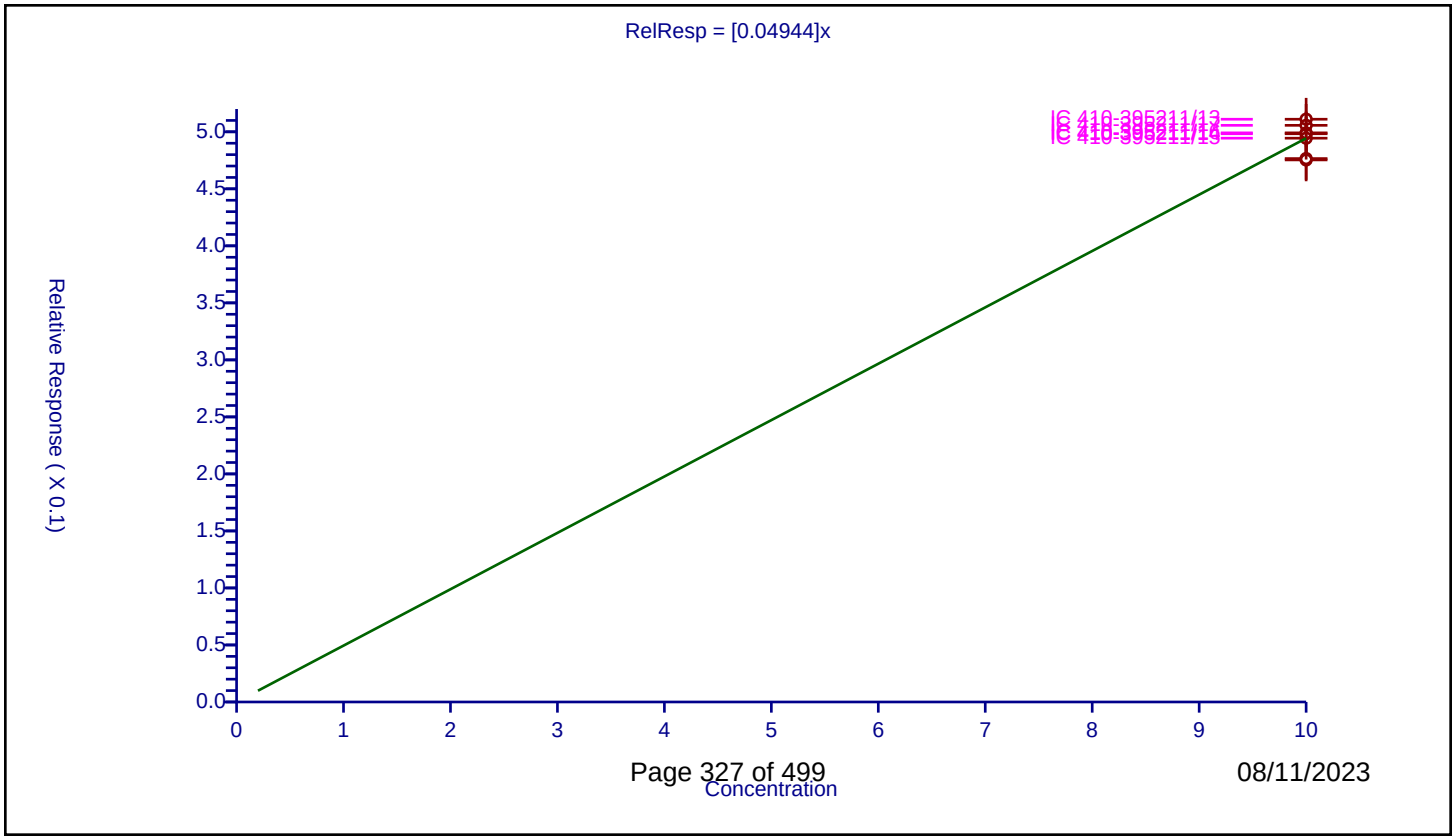
Curve Coefficients

Intercept:	0
Slope:	0.04944

Error Coefficients

Standard Error:	133000
Relative Standard Error:	2.8
Correlation Coefficient:	0.00000000000000000000
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	10.0	0.511053	10.0	2414017.0	0.051105	Y
2	IC 410-395211/14	10.0	0.498299	10.0	2469842.0	0.04983	Y
3	IC 410-395211/15	10.0	0.494428	10.0	2458760.0	0.049443	Y
4	IC 410-395211/16	10.0	0.499091	10.0	2465964.0	0.049909	Y
5	IC 410-395211/17	10.0	0.505689	10.0	2475137.0	0.050569	Y
6	ICIS 410-395211/18	10.0	0.475355	10.0	2510713.0	0.047536	Y
7	IC 410-395211/19	10.0	0.476556	10.0	2655574.0	0.047656	Y



Calibration / Benzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

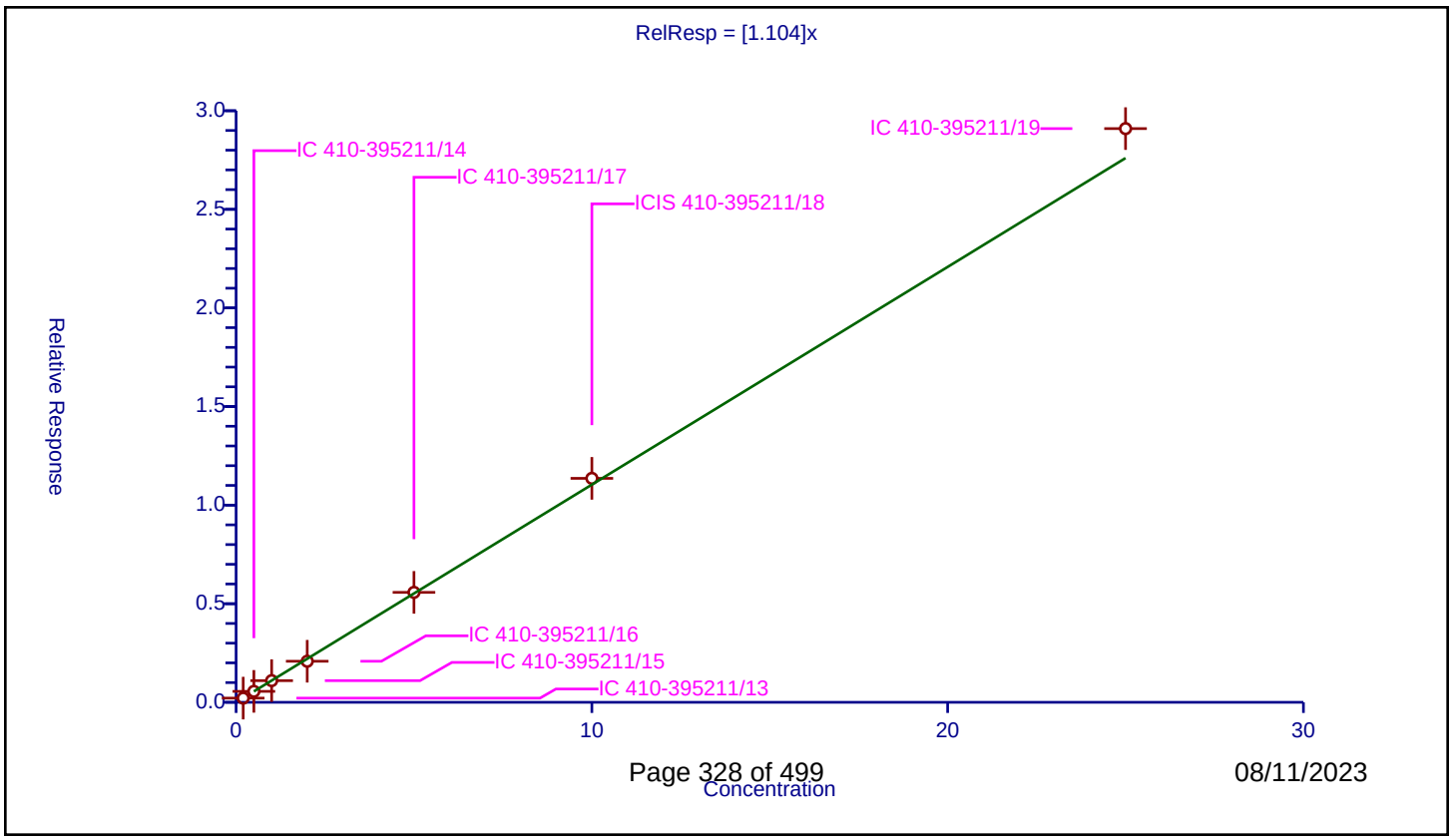
Curve Coefficients

Intercept:	0
Slope:	1.104

Error Coefficients

Standard Error:	3420000
Relative Standard Error:	3.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.212666	10.0	2414017.0	1.063331	Y
2	IC 410-395211/14	0.5	0.55521	10.0	2469842.0	1.110419	Y
3	IC 410-395211/15	1.0	1.098371	10.0	2458760.0	1.098371	Y
4	IC 410-395211/16	2.0	2.081997	10.0	2465964.0	1.040999	Y
5	IC 410-395211/17	5.0	5.575857	10.0	2475137.0	1.115171	Y
6	ICIS 410-395211/18	10.0	11.357961	10.0	2510713.0	1.135796	Y
7	IC 410-395211/19	25.0	29.094316	10.0	2655574.0	1.163773	Y



Calibration / 1,2-Dichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

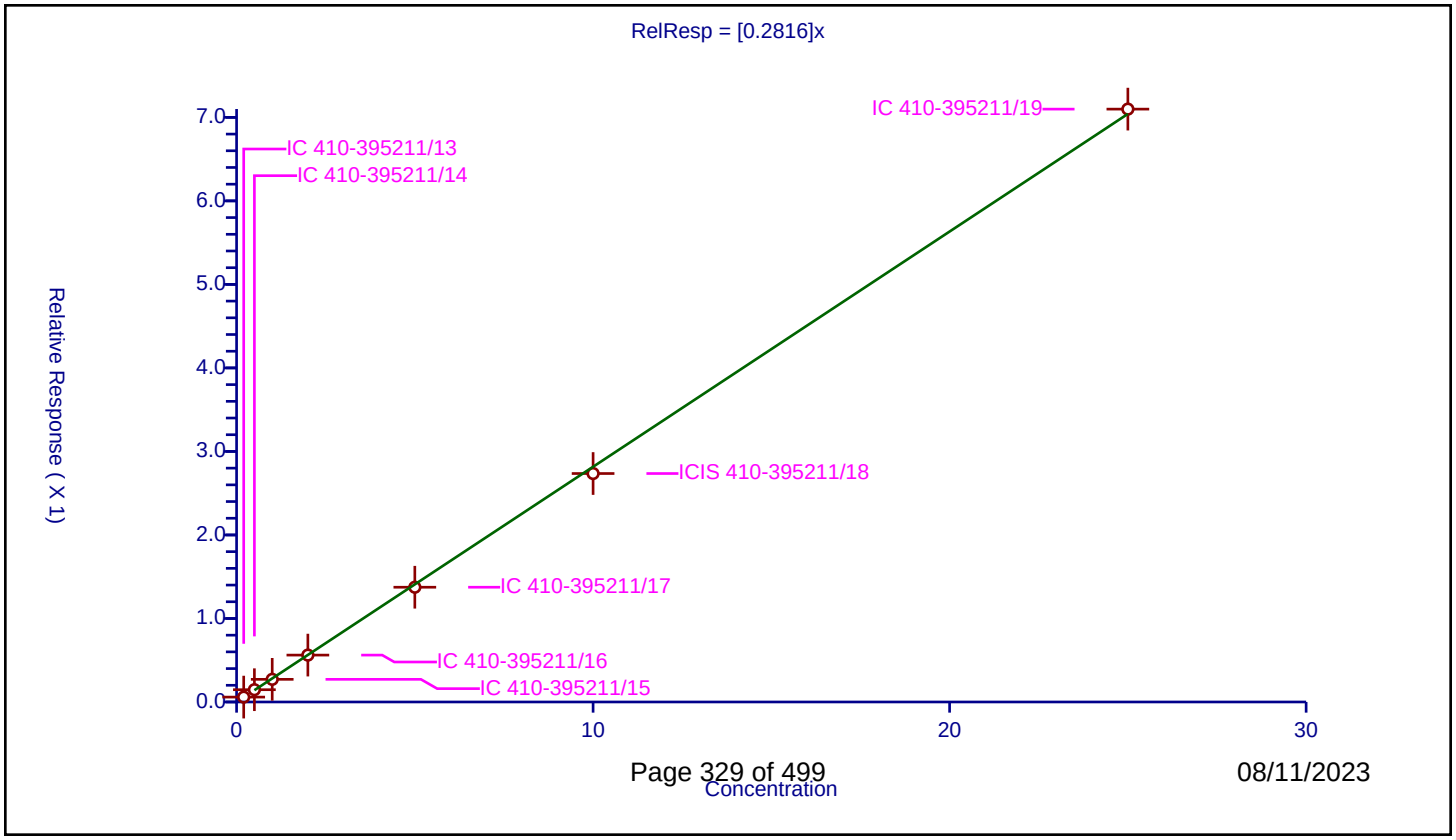
Curve Coefficients

Intercept:	0
Slope:	0.2816

Error Coefficients

Standard Error:	833000
Relative Standard Error:	3.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.058628	10.0	2414017.0	0.293142	Y
2	IC 410-395211/14	0.5	0.147066	10.0	2469842.0	0.294132	Y
3	IC 410-395211/15	1.0	0.271124	10.0	2458760.0	0.271124	Y
4	IC 410-395211/16	2.0	0.561586	10.0	2465964.0	0.280793	Y
5	IC 410-395211/17	5.0	1.374073	10.0	2475137.0	0.274815	Y
6	ICIS 410-395211/18	10.0	2.735474	10.0	2510713.0	0.273547	Y
7	IC 410-395211/19	25.0	7.098853	10.0	2655574.0	0.283954	Y



Calibration / Tert-amyl methyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

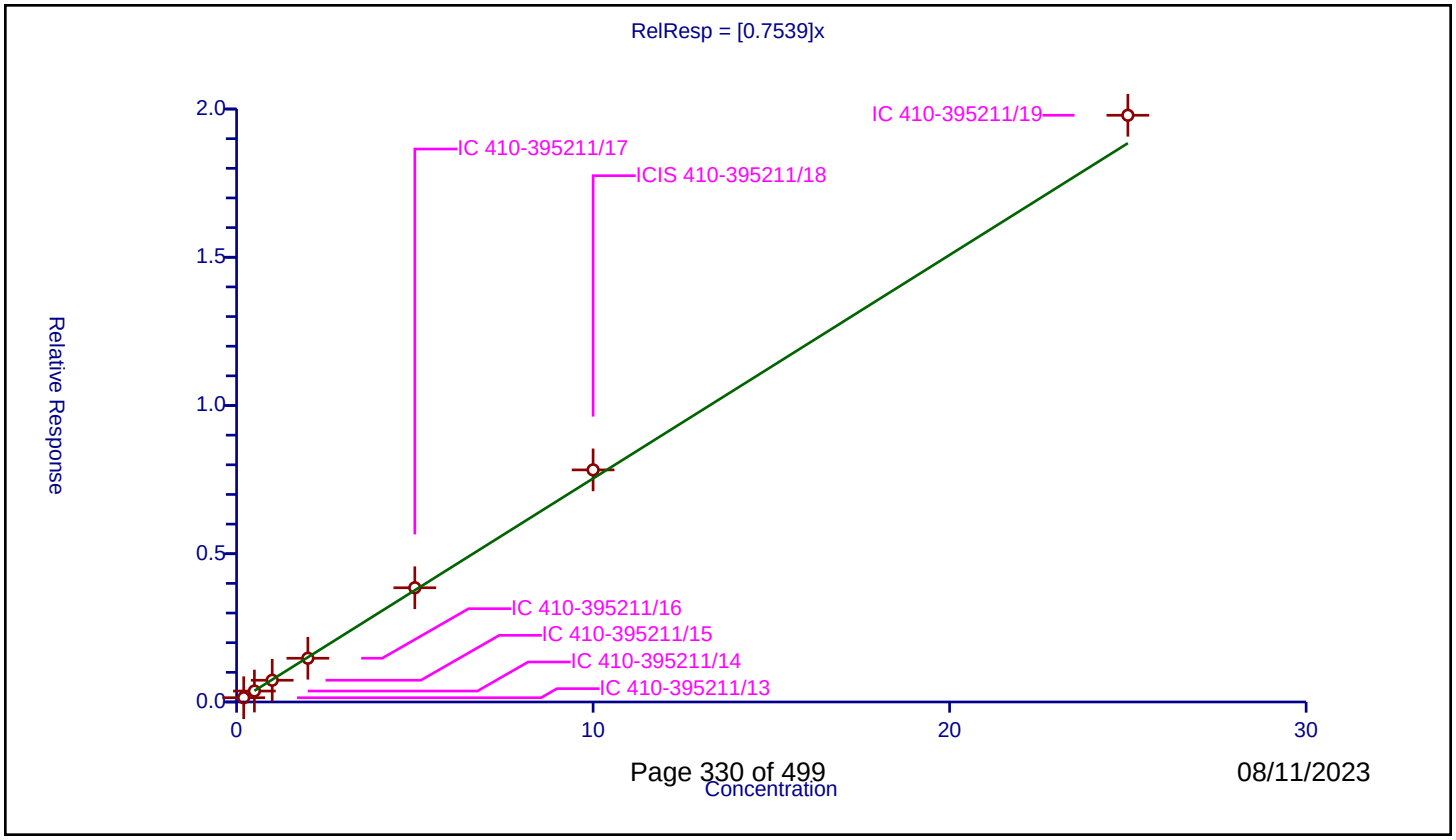
Curve Coefficients

Intercept:	0
Slope:	0.7539

Error Coefficients

Standard Error:	2330000
Relative Standard Error:	3.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.14427	10.0	2414017.0	0.72135	Y
2	IC 410-395211/14	0.5	0.369651	10.0	2469842.0	0.739302	Y
3	IC 410-395211/15	1.0	0.733736	10.0	2458760.0	0.733736	Y
4	IC 410-395211/16	2.0	1.475573	10.0	2465964.0	0.737787	Y
5	IC 410-395211/17	5.0	3.852688	10.0	2475137.0	0.770538	Y
6	ICIS 410-395211/18	10.0	7.828195	10.0	2510713.0	0.782819	Y
7	IC 410-395211/19	25.0	19.789488	10.0	2655574.0	0.79158	Y



Calibration / n-Heptane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

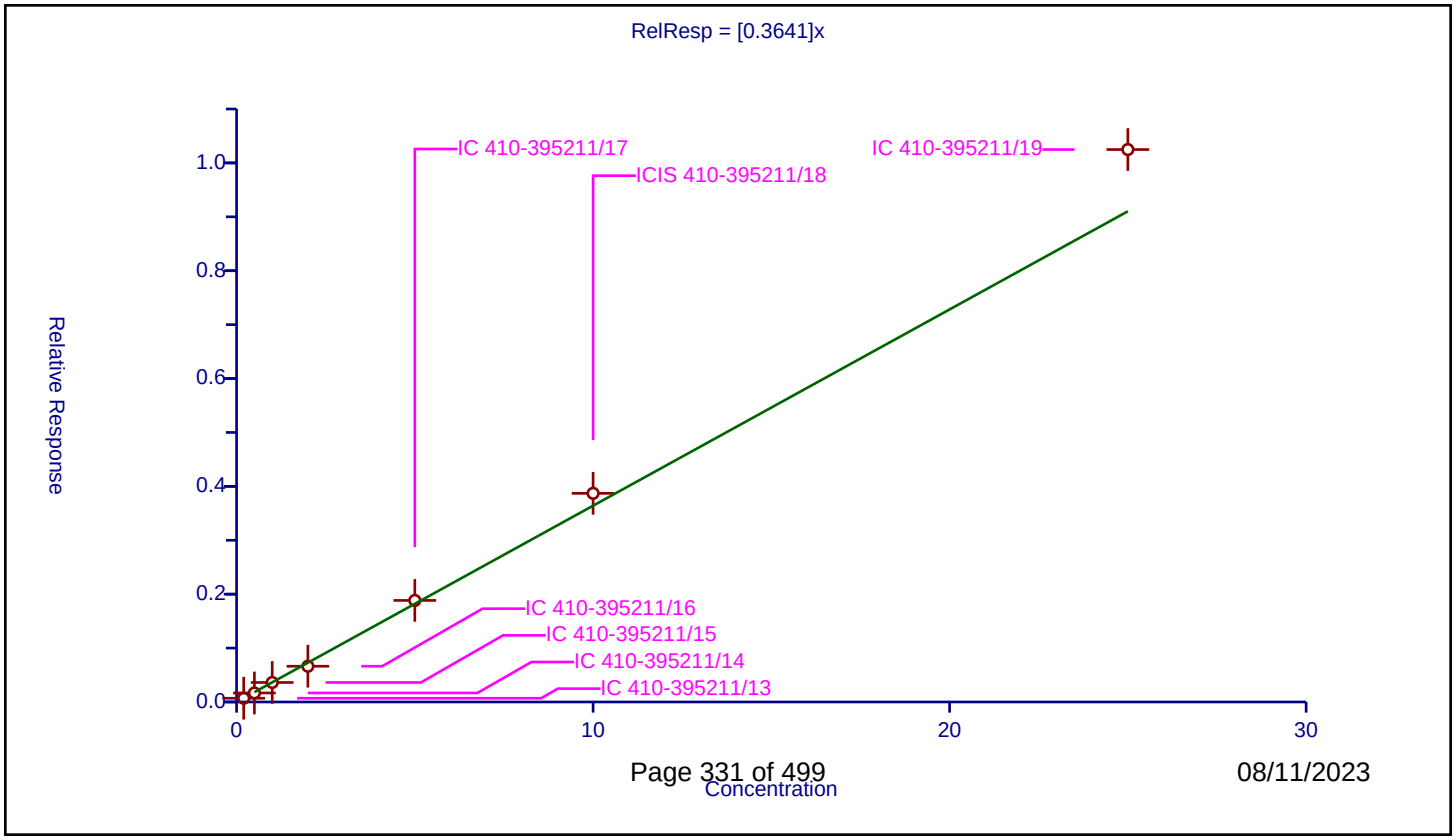
Curve Coefficients

Intercept:	0
Slope:	0.3641

Error Coefficients

Standard Error:	1200000
Relative Standard Error:	7.9
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.069262	10.0	2414017.0	0.346311	Y
2	IC 410-395211/14	0.5	0.167691	10.0	2469842.0	0.335382	Y
3	IC 410-395211/15	1.0	0.361658	10.0	2458760.0	0.361658	Y
4	IC 410-395211/16	2.0	0.663116	10.0	2465964.0	0.331558	Y
5	IC 410-395211/17	5.0	1.88394	10.0	2475137.0	0.376788	Y
6	ICIS 410-395211/18	10.0	3.870697	10.0	2510713.0	0.38707	Y
7	IC 410-395211/19	25.0	10.247969	10.0	2655574.0	0.409919	Y



Calibration / n-Butanol

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

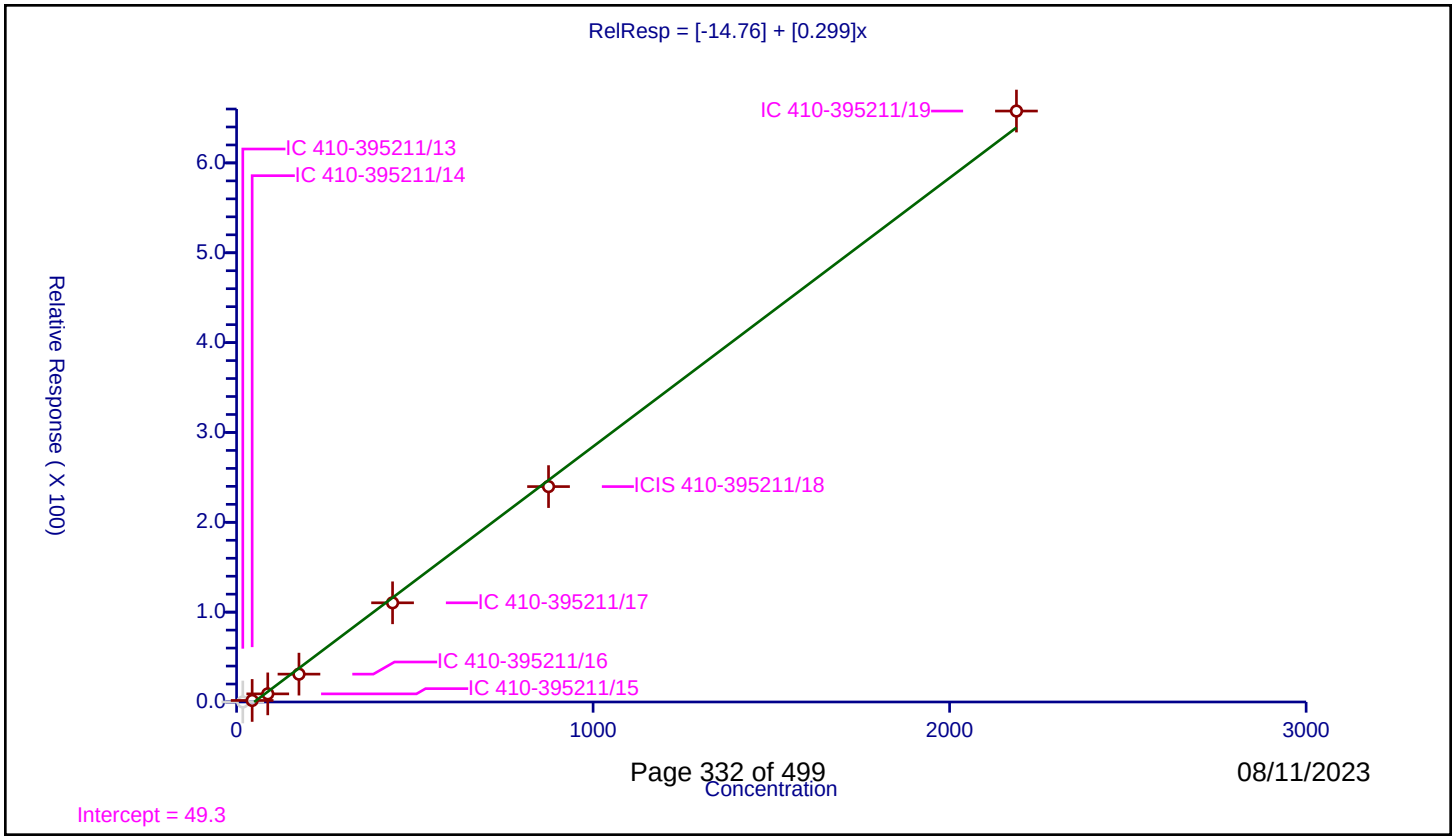
Curve Coefficients

Intercept:	-14.76
Slope:	0.299

Error Coefficients

Standard Error:	1200000
Relative Standard Error:	15.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	17.5	0.0	50.0	159799.0	0.0	N
2	IC 410-395211/14	43.75	1.706369	50.0	176691.0	0.039003	Y
3	IC 410-395211/15	87.5	9.049933	50.0	161736.0	0.103428	Y
4	IC 410-395211/16	175.0	31.00931	50.0	164657.0	0.177196	Y
5	IC 410-395211/17	437.5	110.399749	50.0	167230.0	0.252342	Y
6	ICIS 410-395211/18	875.0	239.755552	50.0	168052.0	0.274006	Y
7	IC 410-395211/19	2187.5	657.74951	50.0	170043.0	0.300685	Y



Calibration / Trichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

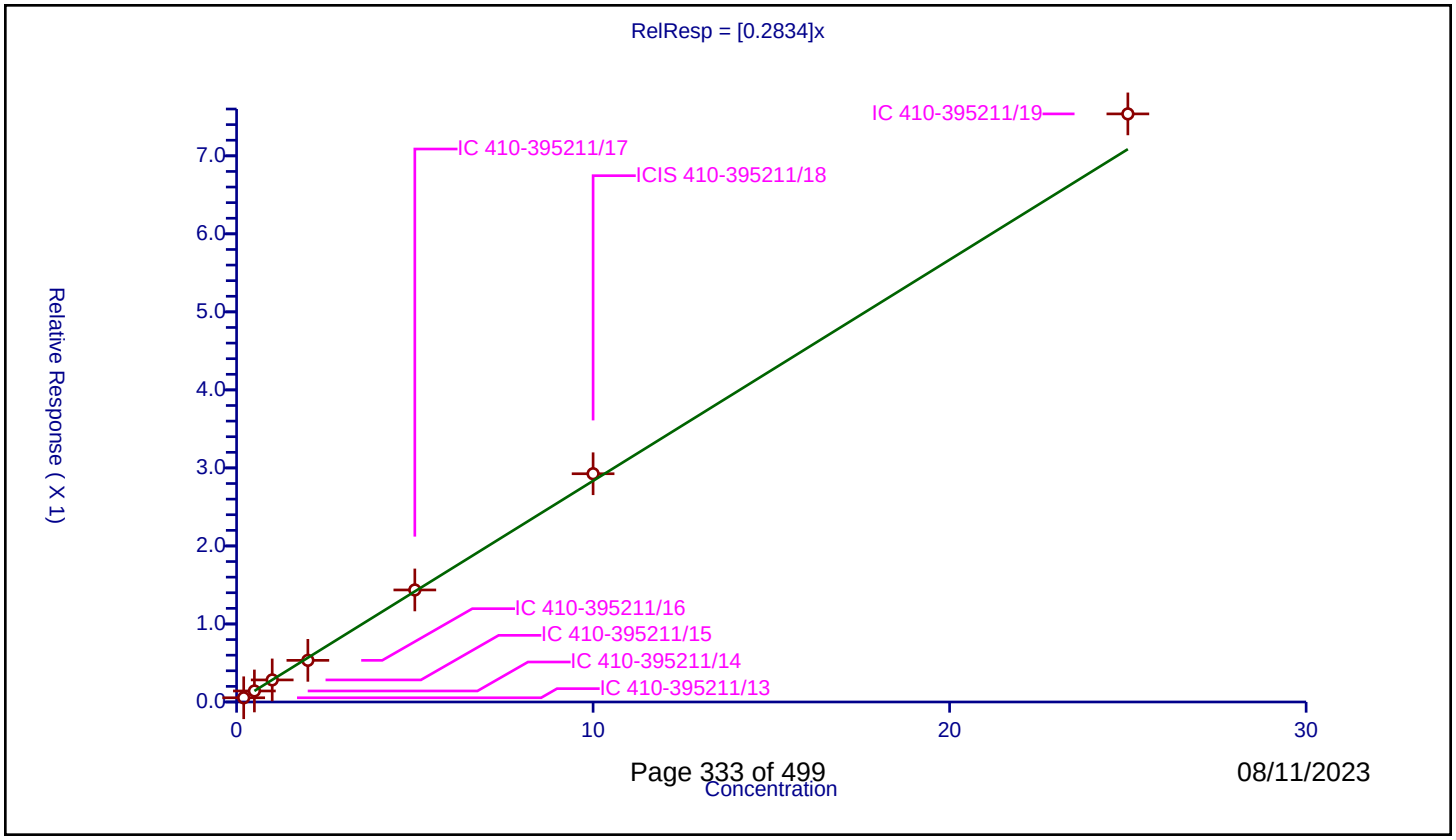
Curve Coefficients

Intercept:	0
Slope:	0.2834

Error Coefficients

Standard Error:	885000
Relative Standard Error:	4.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.05403	10.0	2414017.0	0.270151	Y
2	IC 410-395211/14	0.5	0.141313	10.0	2469842.0	0.282625	Y
3	IC 410-395211/15	1.0	0.282976	10.0	2458760.0	0.282976	Y
4	IC 410-395211/16	2.0	0.533767	10.0	2465964.0	0.266883	Y
5	IC 410-395211/17	5.0	1.435916	10.0	2475137.0	0.287183	Y
6	ICIS 410-395211/18	10.0	2.925464	10.0	2510713.0	0.292546	Y
7	IC 410-395211/19	25.0	7.537399	10.0	2655574.0	0.301496	Y



Calibration / Methylcyclohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

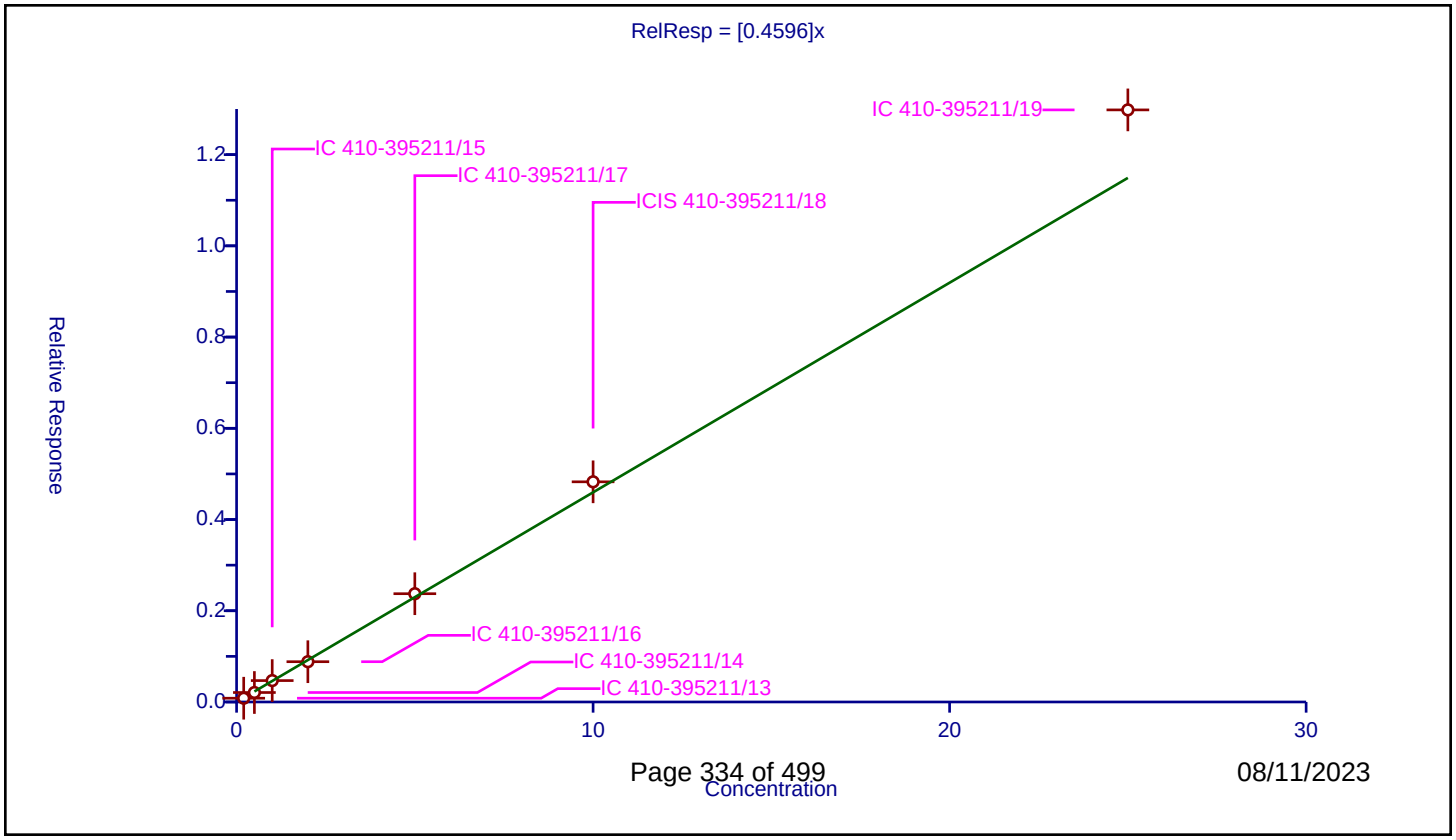
Curve Coefficients

Intercept:	0
Slope:	0.4596

Error Coefficients

Standard Error:	1510000
Relative Standard Error:	8.3
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.08292	10.0	2414017.0	0.414599	Y
2	IC 410-395211/14	0.5	0.207584	10.0	2469842.0	0.415168	Y
3	IC 410-395211/15	1.0	0.469074	10.0	2458760.0	0.469074	Y
4	IC 410-395211/16	2.0	0.883281	10.0	2465964.0	0.441641	Y
5	IC 410-395211/17	5.0	2.373614	10.0	2475137.0	0.474723	Y
6	ICIS 410-395211/18	10.0	4.826784	10.0	2510713.0	0.482678	Y
7	IC 410-395211/19	25.0	12.980489	10.0	2655574.0	0.51922	Y



Calibration / 1,2-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

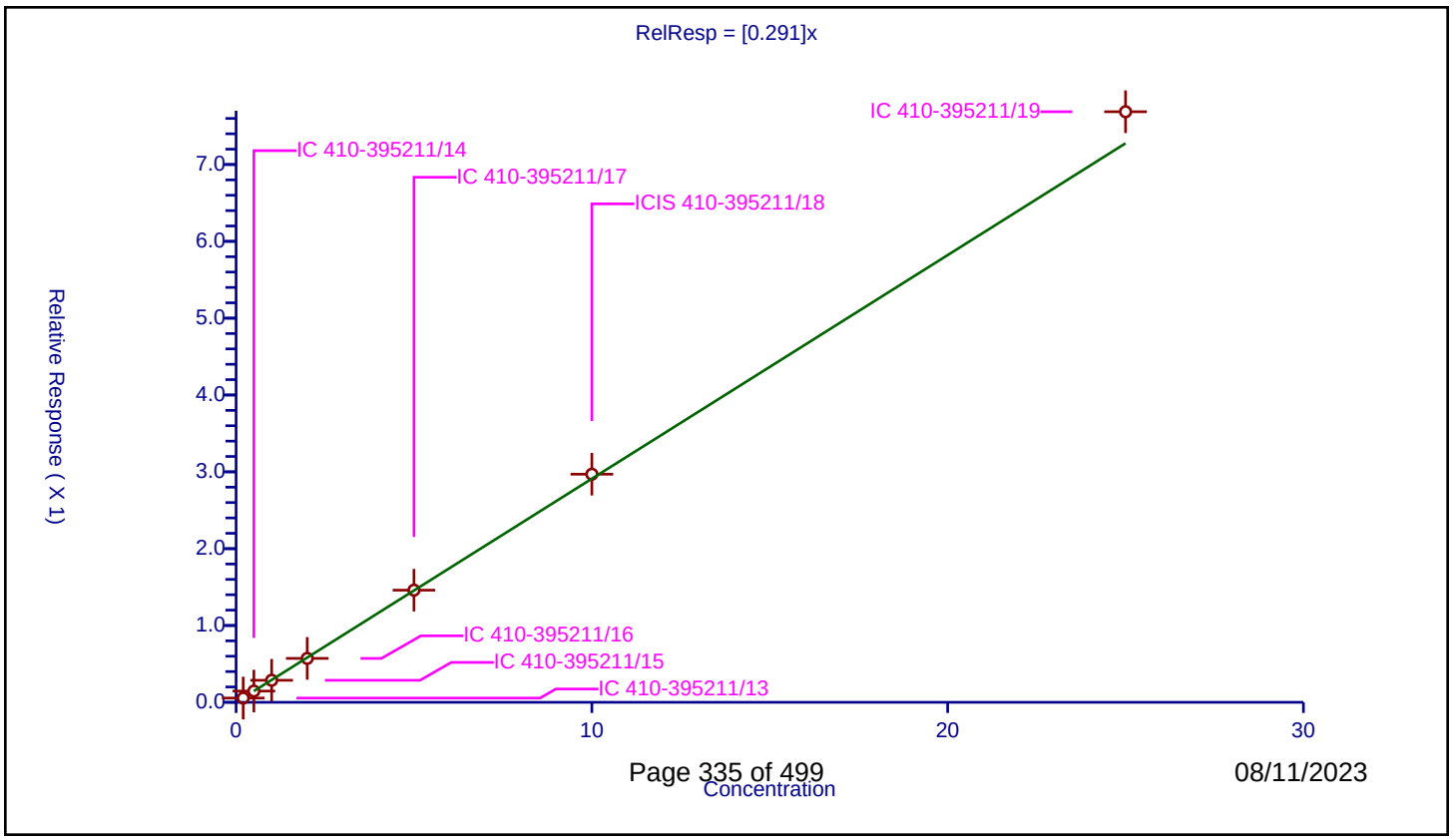
Curve Coefficients

Intercept:	0
Slope:	0.291

Error Coefficients

Standard Error:	902000
Relative Standard Error:	3.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.055066	10.0	2414017.0	0.275329	Y
2	IC 410-395211/14	0.5	0.146471	10.0	2469842.0	0.292942	Y
3	IC 410-395211/15	1.0	0.286913	10.0	2458760.0	0.286913	Y
4	IC 410-395211/16	2.0	0.571606	10.0	2465964.0	0.285803	Y
5	IC 410-395211/17	5.0	1.459701	10.0	2475137.0	0.29194	Y
6	ICIS 410-395211/18	10.0	2.969125	10.0	2510713.0	0.296912	Y
7	IC 410-395211/19	25.0	7.687016	10.0	2655574.0	0.307481	Y



Calibration / 1,4-Dioxane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

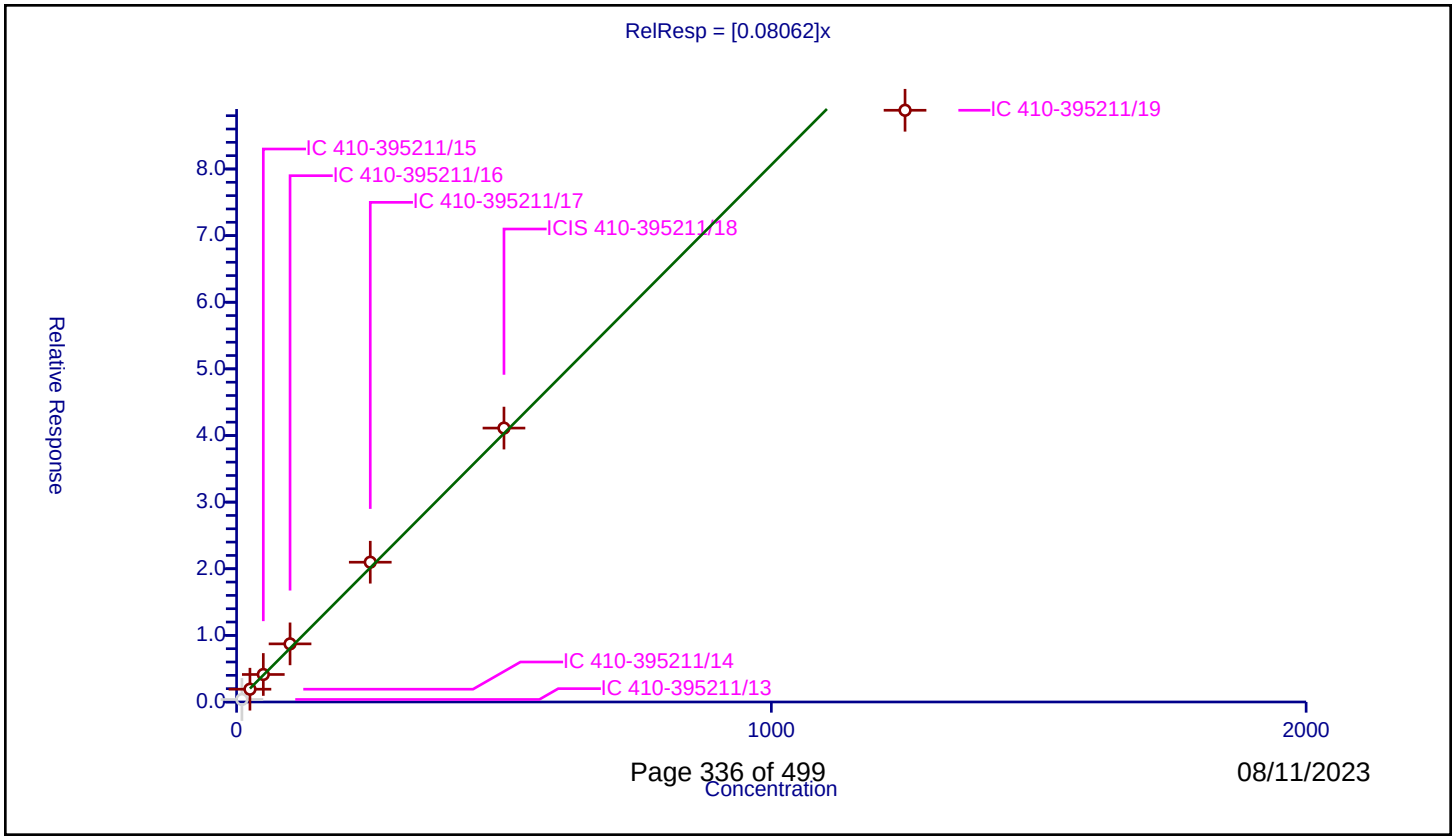
Curve Coefficients

Intercept:	0
Slope:	0.08062

Error Coefficients

Standard Error:	152000
Relative Standard Error:	7.2
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	10.0	0.377349	50.0	159799.0	0.037735	N
2	IC 410-395211/14	25.0	1.917755	50.0	176691.0	0.07671	Y
3	IC 410-395211/15	50.0	4.130187	50.0	161736.0	0.082604	Y
4	IC 410-395211/16	100.0	8.722678	50.0	164657.0	0.087227	Y
5	IC 410-395211/17	250.0	20.977994	50.0	167230.0	0.083912	Y
6	ICIS 410-395211/18	500.0	41.109002	50.0	168052.0	0.082218	Y
7	IC 410-395211/19	1250.0	88.811359	50.0	170043.0	0.071049	Y



Calibration / Dibromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

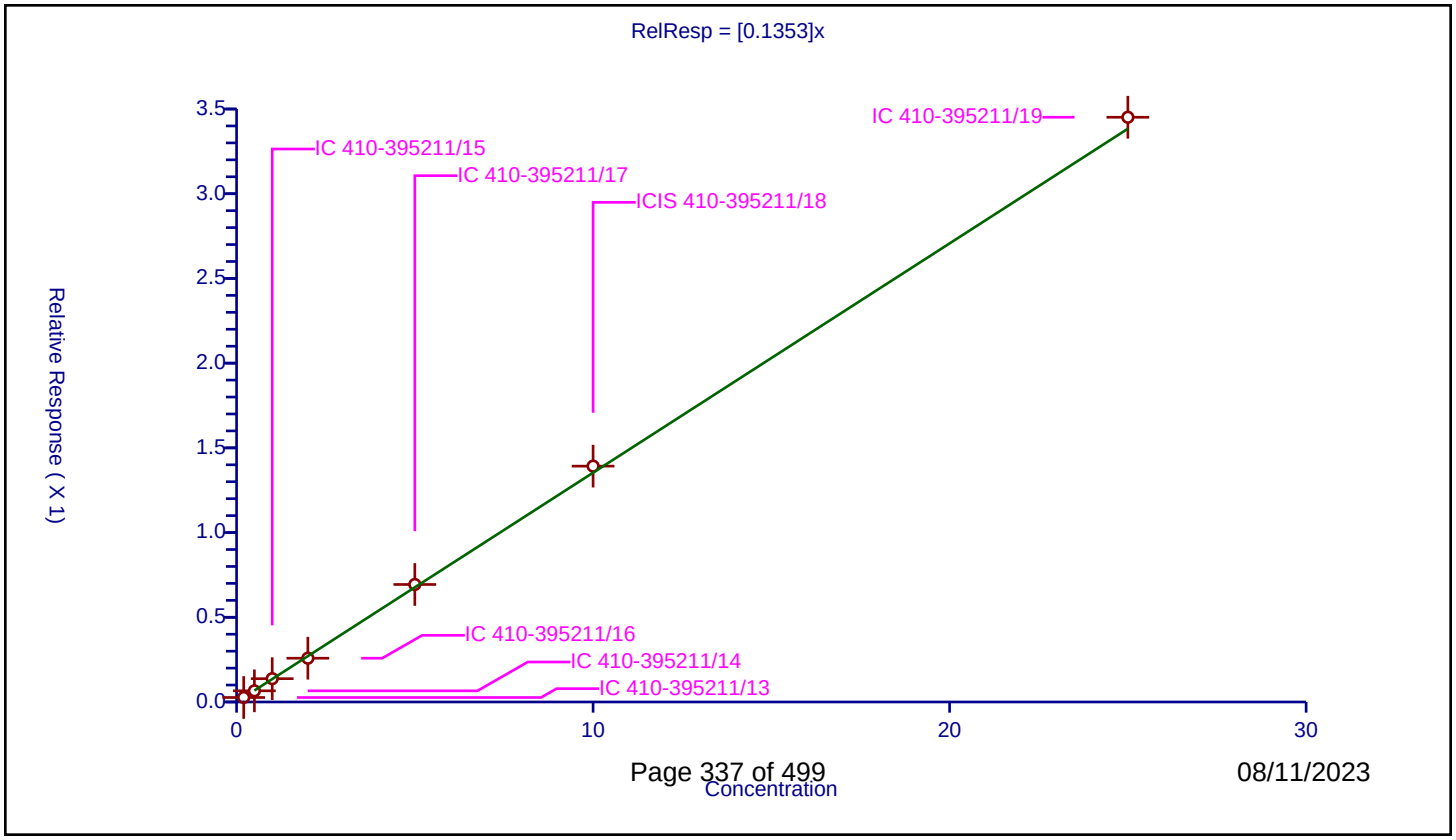
Curve Coefficients

Intercept:	0
Slope:	0.1353

Error Coefficients

Standard Error:	408000
Relative Standard Error:	3.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.026586	10.0	2414017.0	0.132932	Y
2	IC 410-395211/14	0.5	0.065822	10.0	2469842.0	0.131644	Y
3	IC 410-395211/15	1.0	0.137622	10.0	2458760.0	0.137622	Y
4	IC 410-395211/16	2.0	0.258402	10.0	2465964.0	0.129201	Y
5	IC 410-395211/17	5.0	0.69357	10.0	2475137.0	0.138714	Y
6	ICIS 410-395211/18	10.0	1.392047	10.0	2510713.0	0.139205	Y
7	IC 410-395211/19	25.0	3.451325	10.0	2655574.0	0.138053	Y



Calibration / Methyl methacrylate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

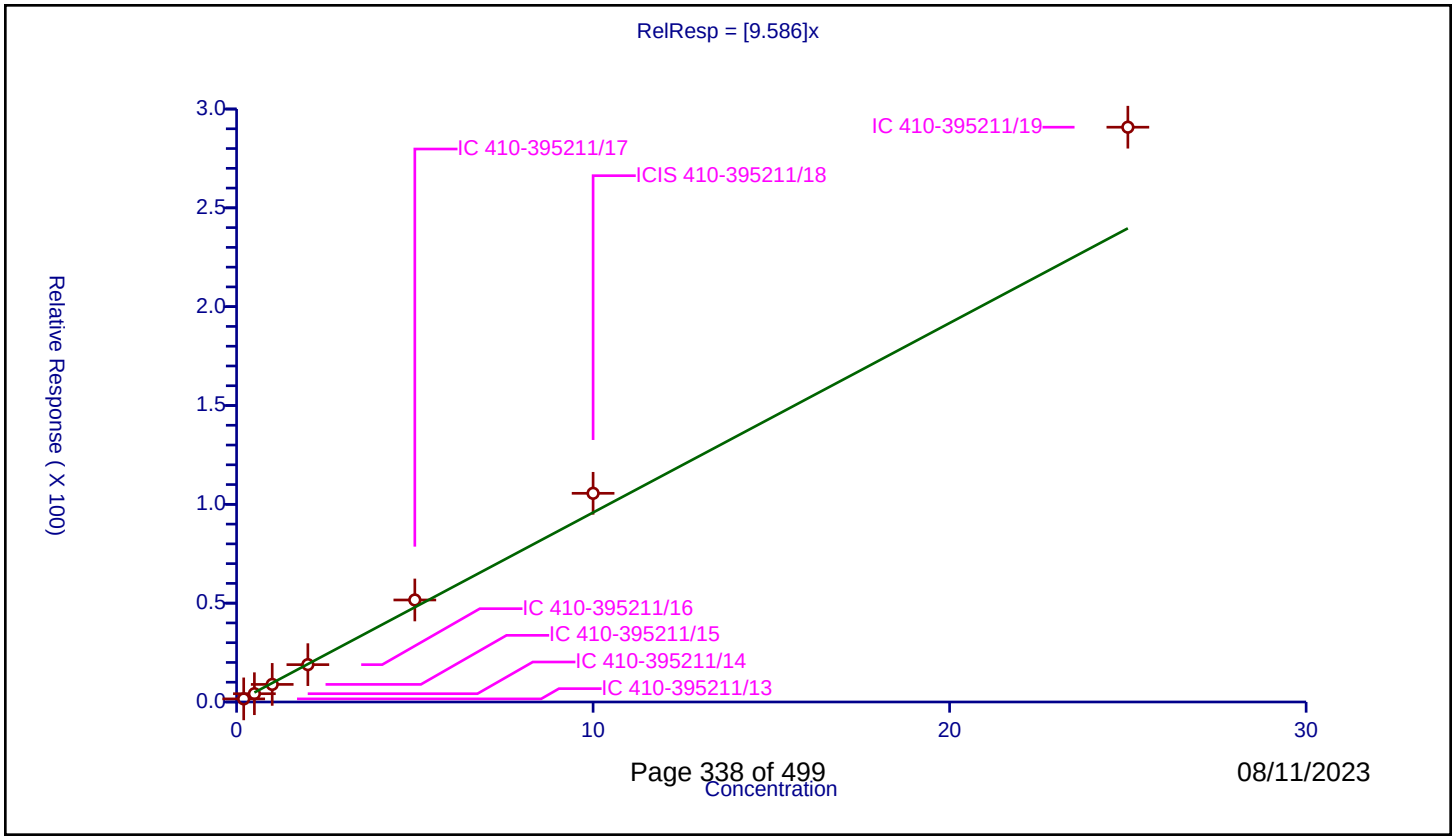
Curve Coefficients

Intercept:	0
Slope:	9.586

Error Coefficients

Standard Error:	436000
Relative Standard Error:	13.8
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.978

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	1.576042	50.0	159799.0	7.880212	Y
2	IC 410-395211/14	0.5	4.184424	50.0	176691.0	8.368847	Y
3	IC 410-395211/15	1.0	8.891341	50.0	161736.0	8.891341	Y
4	IC 410-395211/16	2.0	18.89534	50.0	164657.0	9.44767	Y
5	IC 410-395211/17	5.0	51.612151	50.0	167230.0	10.32243	Y
6	ICIS 410-395211/18	10.0	105.578035	50.0	168052.0	10.557804	Y
7	IC 410-395211/19	25.0	290.802915	50.0	170043.0	11.632117	Y



Calibration / Dichlorobromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

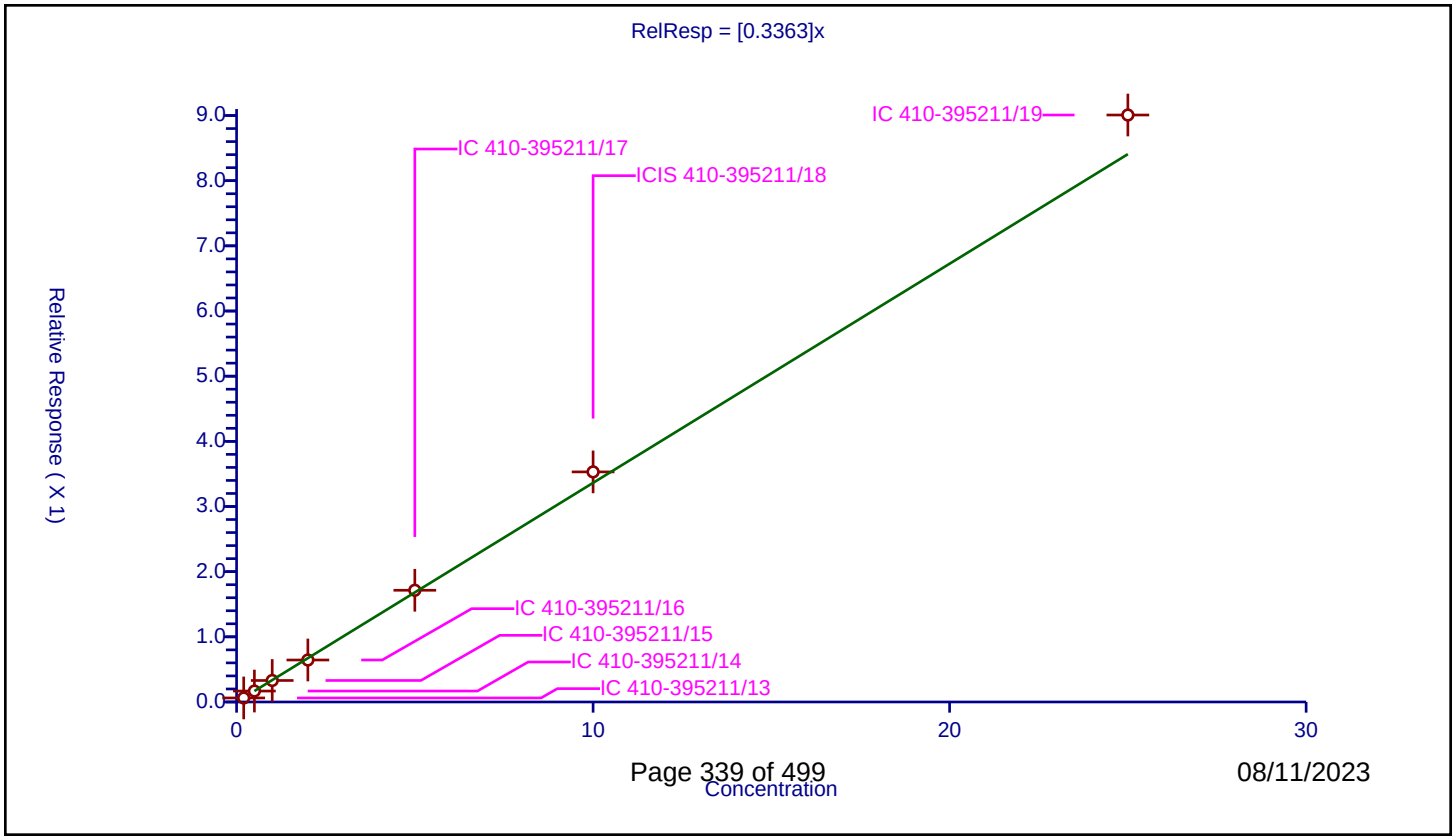
Curve Coefficients

Intercept:	0
Slope:	0.3363

Error Coefficients

Standard Error:	1060000
Relative Standard Error:	5.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.061971	10.0	2414017.0	0.309857	Y
2	IC 410-395211/14	0.5	0.167829	10.0	2469842.0	0.335657	Y
3	IC 410-395211/15	1.0	0.329935	10.0	2458760.0	0.329935	Y
4	IC 410-395211/16	2.0	0.644413	10.0	2465964.0	0.322207	Y
5	IC 410-395211/17	5.0	1.714568	10.0	2475137.0	0.342914	Y
6	ICIS 410-395211/18	10.0	3.530961	10.0	2510713.0	0.353096	Y
7	IC 410-395211/19	25.0	9.007849	10.0	2655574.0	0.360314	Y



Calibration / 2-Nitropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

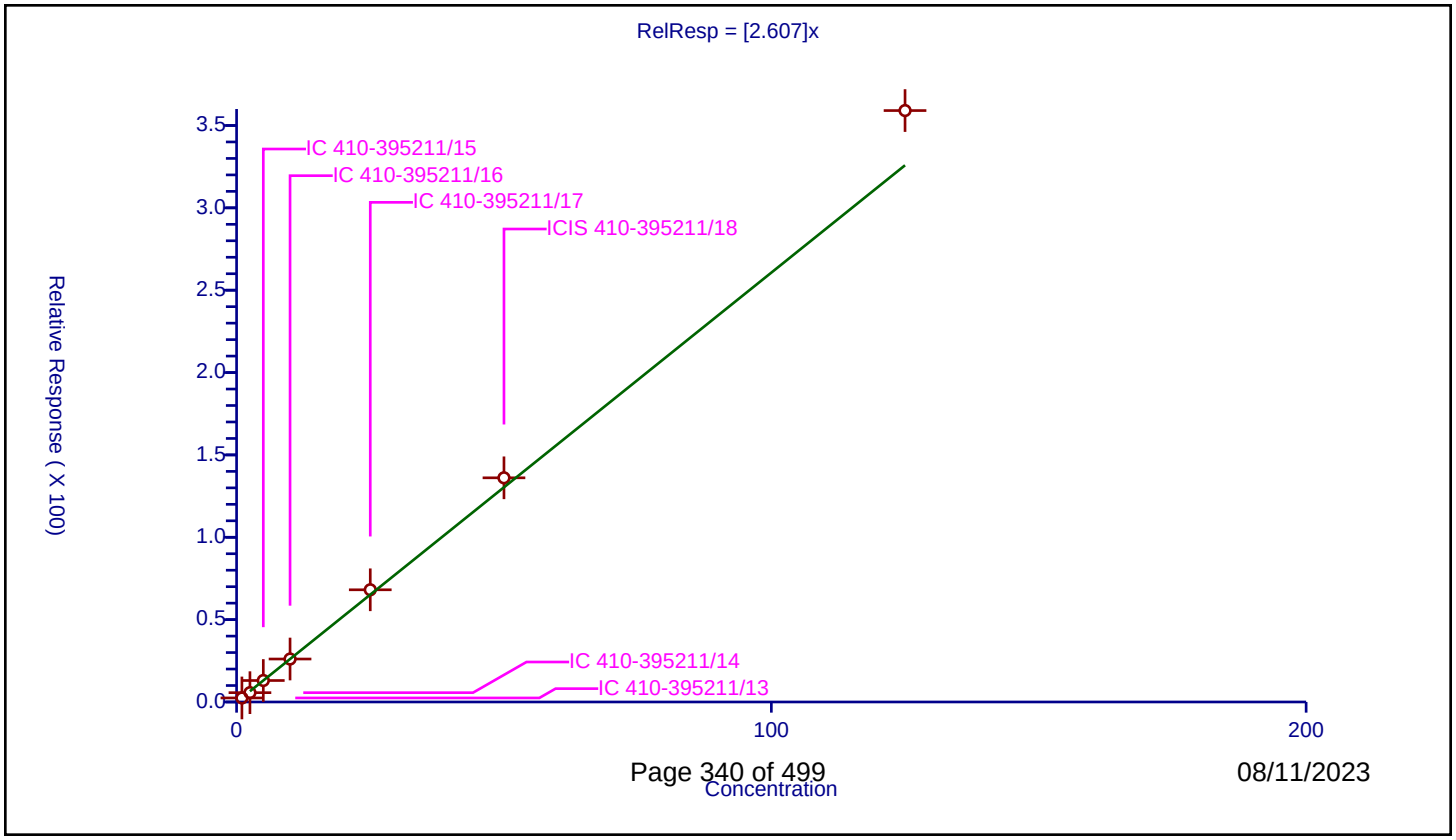
Curve Coefficients

Intercept:	0
Slope:	2.607

Error Coefficients

Standard Error:	542000
Relative Standard Error:	7.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	1.0	2.446511	50.0	159799.0	2.446511	Y
2	IC 410-395211/14	2.5	5.664408	50.0	176691.0	2.265763	Y
3	IC 410-395211/15	5.0	13.036677	50.0	161736.0	2.607335	Y
4	IC 410-395211/16	10.0	26.082098	50.0	164657.0	2.60821	Y
5	IC 410-395211/17	25.0	68.125635	50.0	167230.0	2.725025	Y
6	ICIS 410-395211/18	50.0	136.092102	50.0	168052.0	2.721842	Y
7	IC 410-395211/19	125.0	359.061237	50.0	170043.0	2.87249	Y



Calibration / 1-Bromo-2-chloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

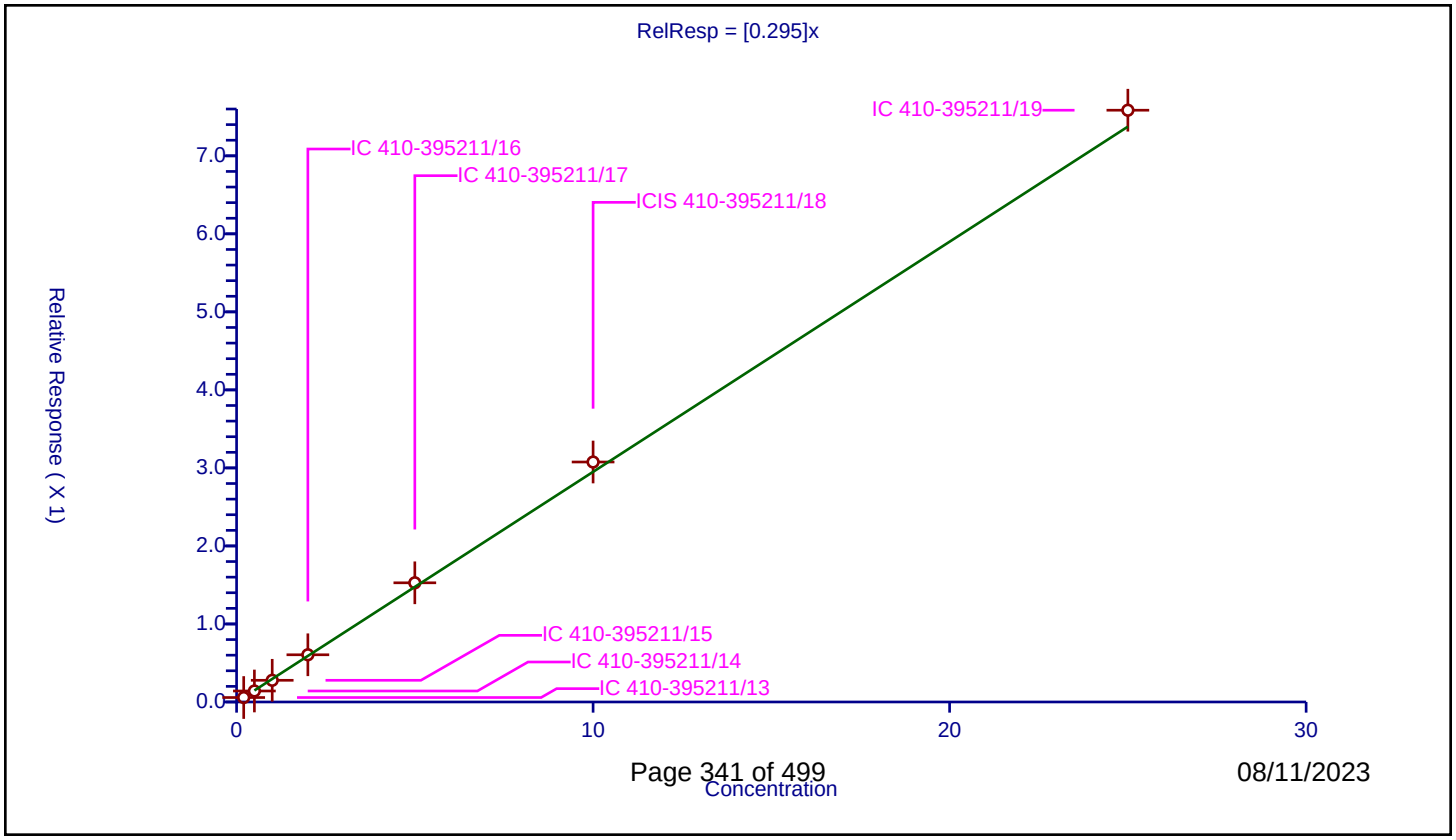
Curve Coefficients

Intercept:	0
Slope:	0.295

Error Coefficients

Standard Error:	897000
Relative Standard Error:	4.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.057129	10.0	2414017.0	0.285644	Y
2	IC 410-395211/14	0.5	0.141001	10.0	2469842.0	0.282002	Y
3	IC 410-395211/15	1.0	0.277998	10.0	2458760.0	0.277998	Y
4	IC 410-395211/16	2.0	0.605289	10.0	2465964.0	0.302644	Y
5	IC 410-395211/17	5.0	1.527693	10.0	2475137.0	0.305539	Y
6	ICIS 410-395211/18	10.0	3.07568	10.0	2510713.0	0.307568	Y
7	IC 410-395211/19	25.0	7.584624	10.0	2655574.0	0.303385	Y



08/11/2023

Calibration / cis-1,3-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

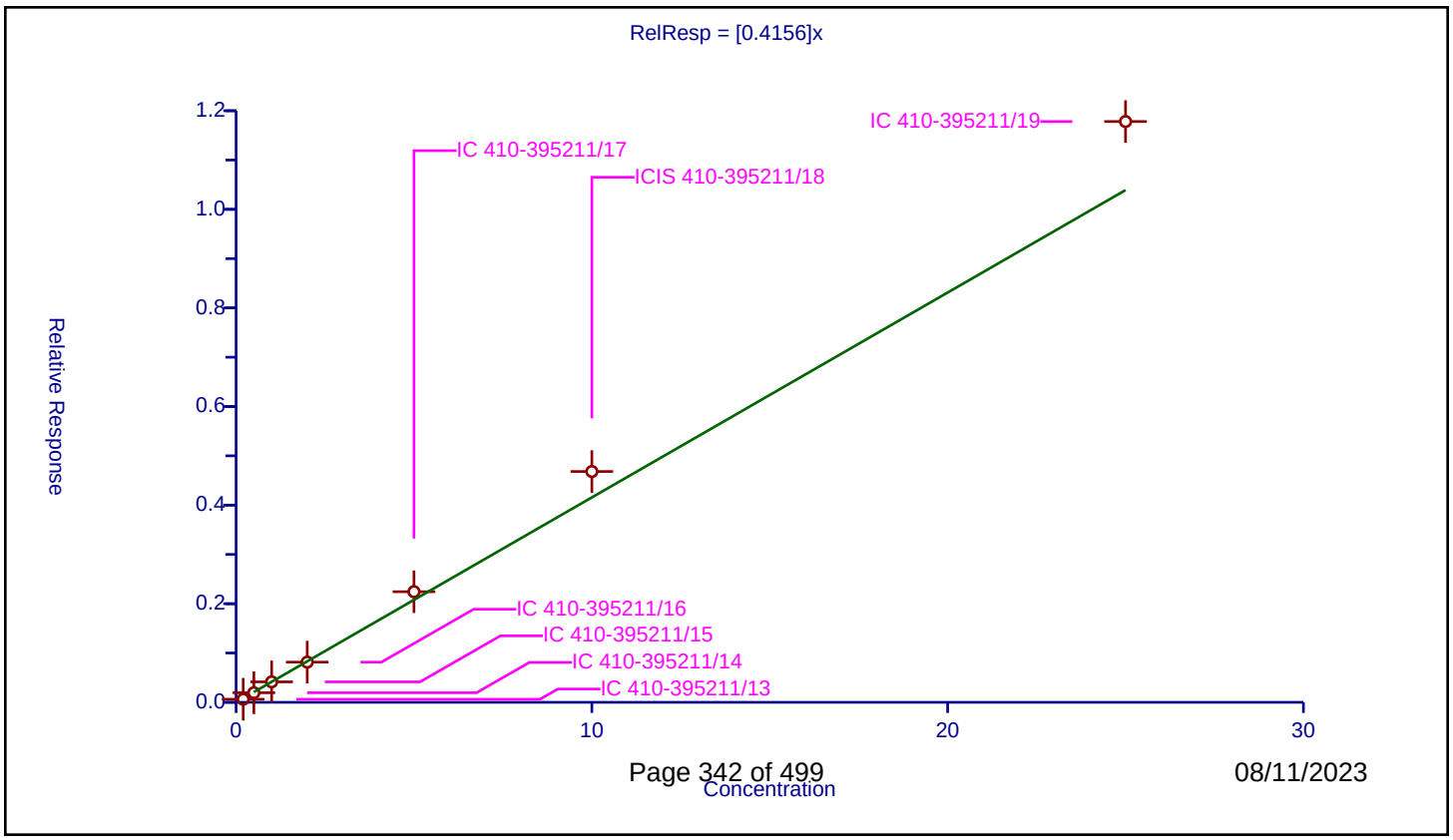
Curve Coefficients

Intercept:	0
Slope:	0.4156

Error Coefficients

Standard Error:	1390000
Relative Standard Error:	13.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.979

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.062195	10.0	2414017.0	0.310975	Y
2	IC 410-395211/14	0.5	0.193919	10.0	2469842.0	0.387839	Y
3	IC 410-395211/15	1.0	0.414689	10.0	2458760.0	0.414689	Y
4	IC 410-395211/16	2.0	0.815162	10.0	2465964.0	0.407581	Y
5	IC 410-395211/17	5.0	2.243633	10.0	2475137.0	0.448727	Y
6	ICIS 410-395211/18	10.0	4.681849	10.0	2510713.0	0.468185	Y
7	IC 410-395211/19	25.0	11.781396	10.0	2655574.0	0.471256	Y



Calibration / 4-Methyl-2-pentanone (MIBK)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

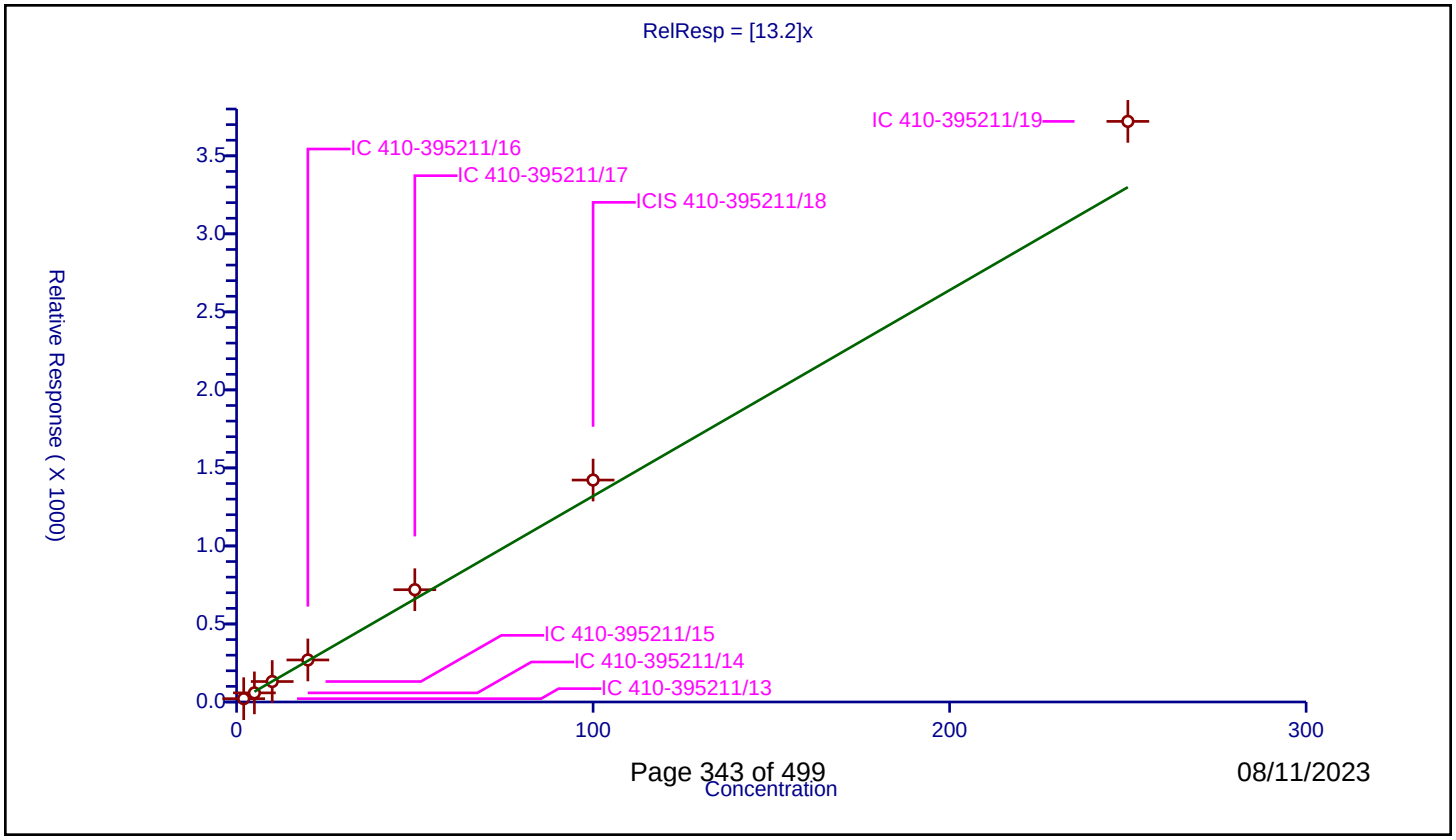
Curve Coefficients

Intercept:	0
Slope:	13.2

Error Coefficients

Standard Error:	5620000
Relative Standard Error:	11.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	2.0	21.253888	50.0	159799.0	10.626944	Y
2	IC 410-395211/14	5.0	58.323571	50.0	176691.0	11.664714	Y
3	IC 410-395211/15	10.0	131.106866	50.0	161736.0	13.110687	Y
4	IC 410-395211/16	20.0	269.460758	50.0	164657.0	13.473038	Y
5	IC 410-395211/17	50.0	719.521916	50.0	167230.0	14.390438	Y
6	ICIS 410-395211/18	100.0	1422.162188	50.0	168052.0	14.221622	Y
7	IC 410-395211/19	250.0	3720.740636	50.0	170043.0	14.882963	Y



Calibration / Toluene-d8 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

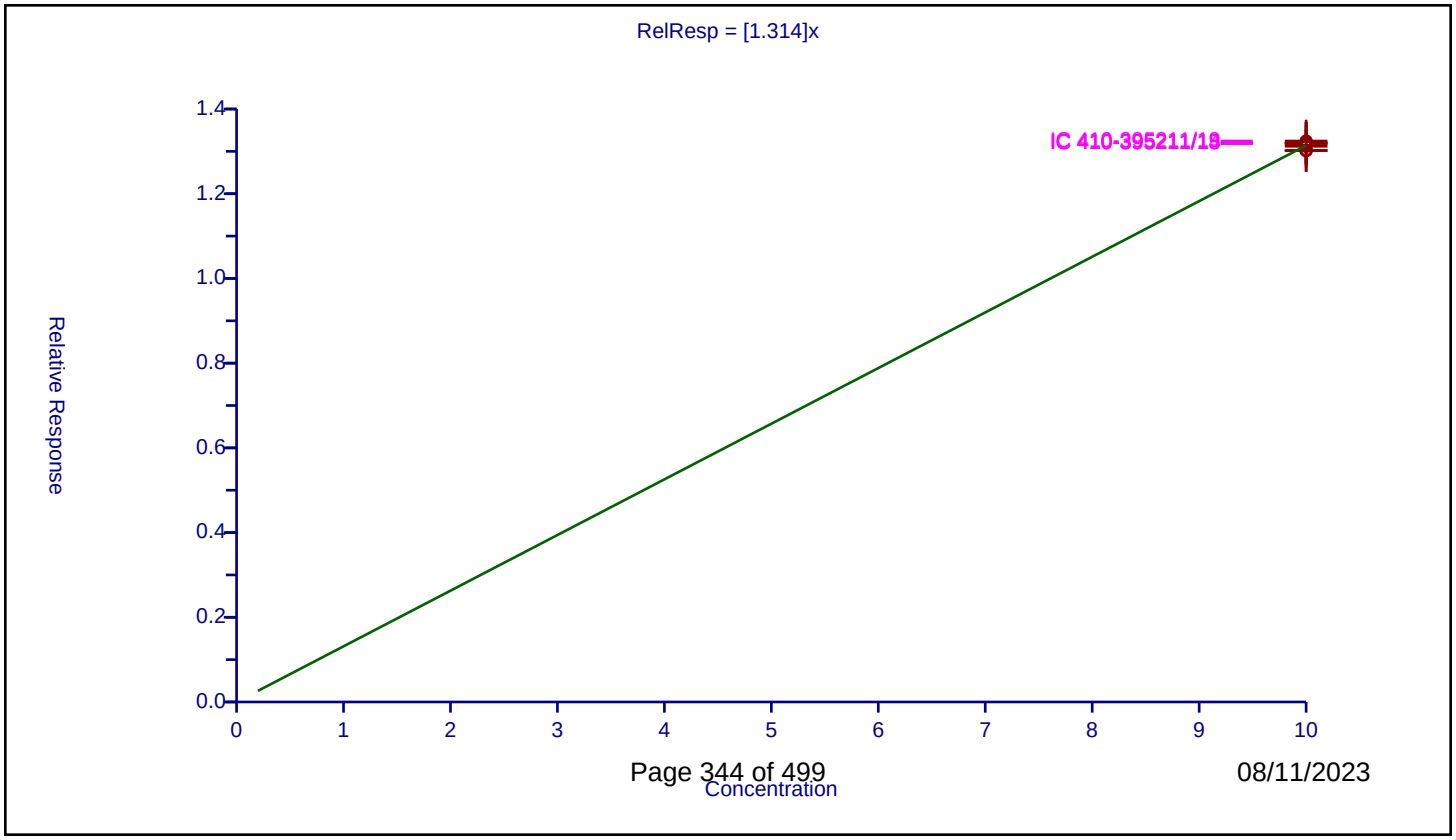
Curve Coefficients

Intercept:	0
Slope:	1.314

Error Coefficients

Standard Error:	2780000
Relative Standard Error:	0.7
Correlation Coefficient:	0.00000000000000000000
Coefficient of Determination (Adjusted):	0.000000000000000111

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	10.0	13.190878	10.0	1874080.0	1.319088	Y
2	IC 410-395211/14	10.0	13.195164	10.0	1928405.0	1.319516	Y
3	IC 410-395211/15	10.0	13.184478	10.0	1932452.0	1.318448	Y
4	IC 410-395211/16	10.0	13.119983	10.0	1948504.0	1.311998	Y
5	IC 410-395211/17	10.0	13.020248	10.0	1954853.0	1.302025	Y
6	ICIS 410-395211/18	10.0	13.018377	10.0	1990861.0	1.301838	Y
7	IC 410-395211/19	10.0	13.243559	10.0	2081007.0	1.324356	Y



Calibration / Toluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

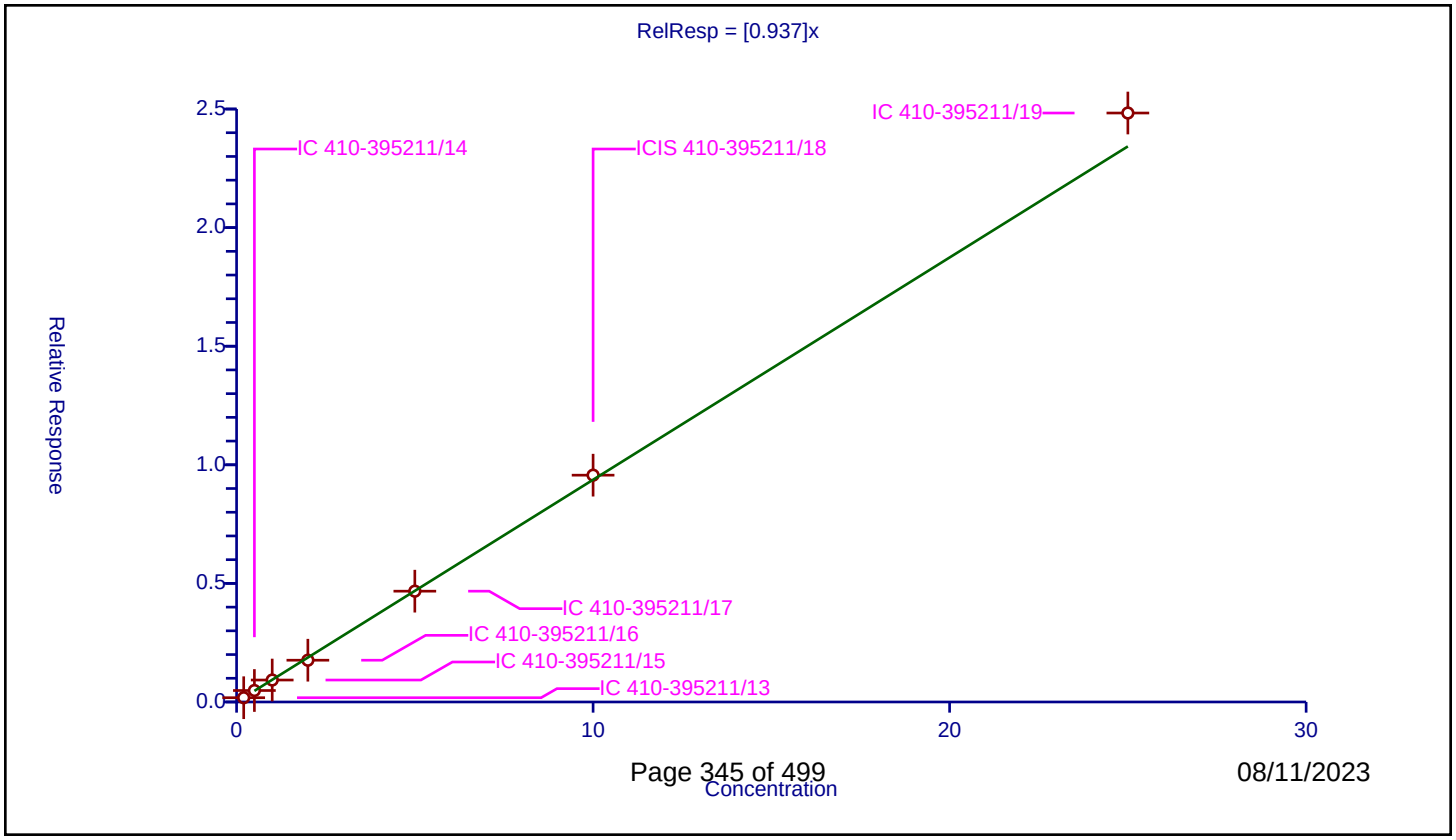
Curve Coefficients

Intercept:	0
Slope:	0.937

Error Coefficients

Standard Error:	2280000
Relative Standard Error:	4.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.18004	10.0	1874080.0	0.900202	Y
2	IC 410-395211/14	0.5	0.484214	10.0	1928405.0	0.968427	Y
3	IC 410-395211/15	1.0	0.925524	10.0	1932452.0	0.925524	Y
4	IC 410-395211/16	2.0	1.761397	10.0	1948504.0	0.880699	Y
5	IC 410-395211/17	5.0	4.672065	10.0	1954853.0	0.934413	Y
6	ICIS 410-395211/18	10.0	9.563073	10.0	1990861.0	0.956307	Y
7	IC 410-395211/19	25.0	24.830974	10.0	2081007.0	0.993239	Y



Calibration / trans-1,3-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

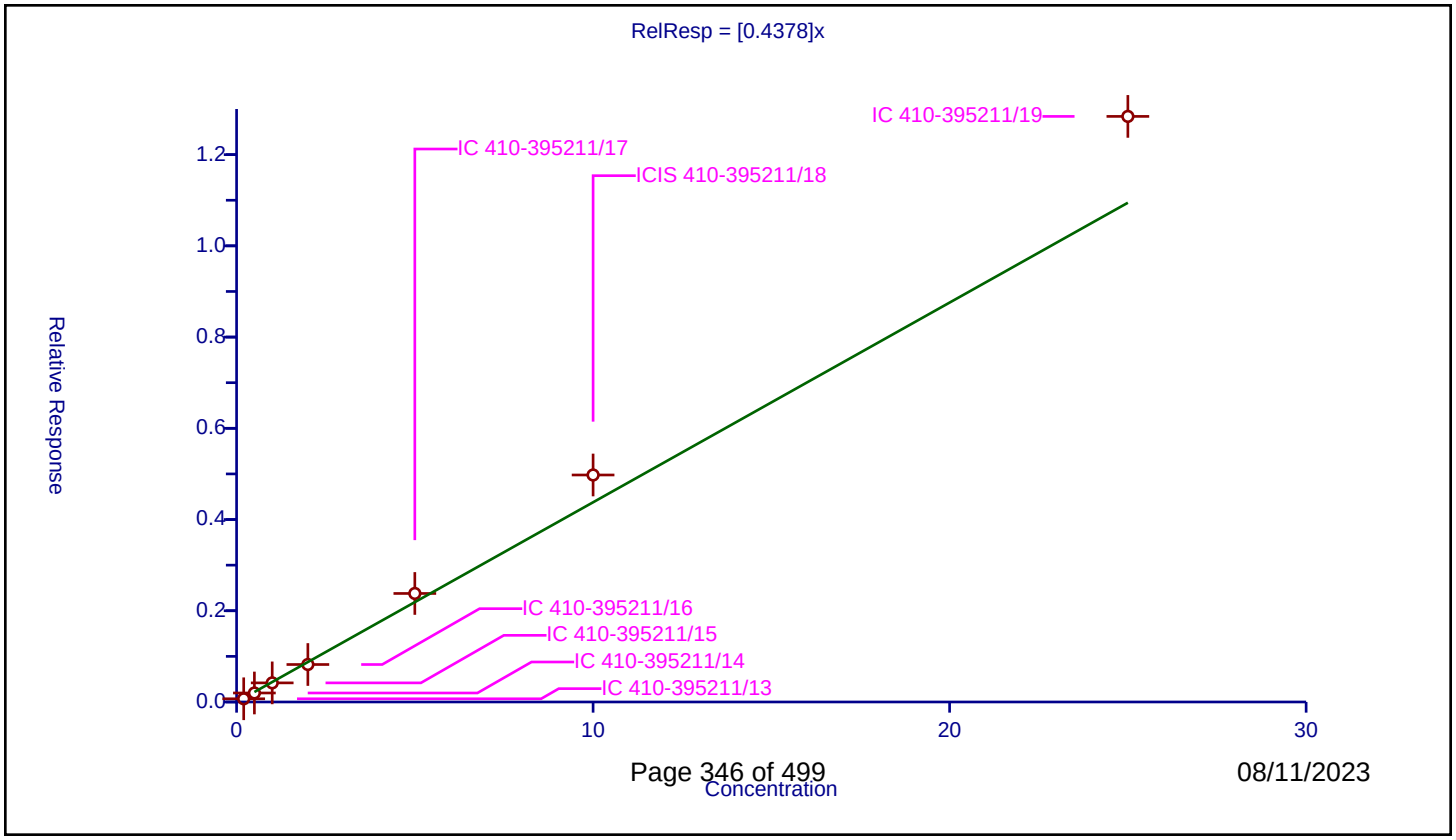
Curve Coefficients

Intercept:	0
Slope:	0.4378

Error Coefficients

Standard Error:	1180000
Relative Standard Error:	13.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.979

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.070627	10.0	1874080.0	0.353133	Y
2	IC 410-395211/14	0.5	0.197443	10.0	1928405.0	0.394886	Y
3	IC 410-395211/15	1.0	0.418727	10.0	1932452.0	0.418727	Y
4	IC 410-395211/16	2.0	0.821779	10.0	1948504.0	0.41089	Y
5	IC 410-395211/17	5.0	2.379391	10.0	1954853.0	0.475878	Y
6	ICIS 410-395211/18	10.0	4.976375	10.0	1990861.0	0.497637	Y
7	IC 410-395211/19	25.0	12.838179	10.0	2081007.0	0.513527	Y



Calibration / Ethyl methacrylate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

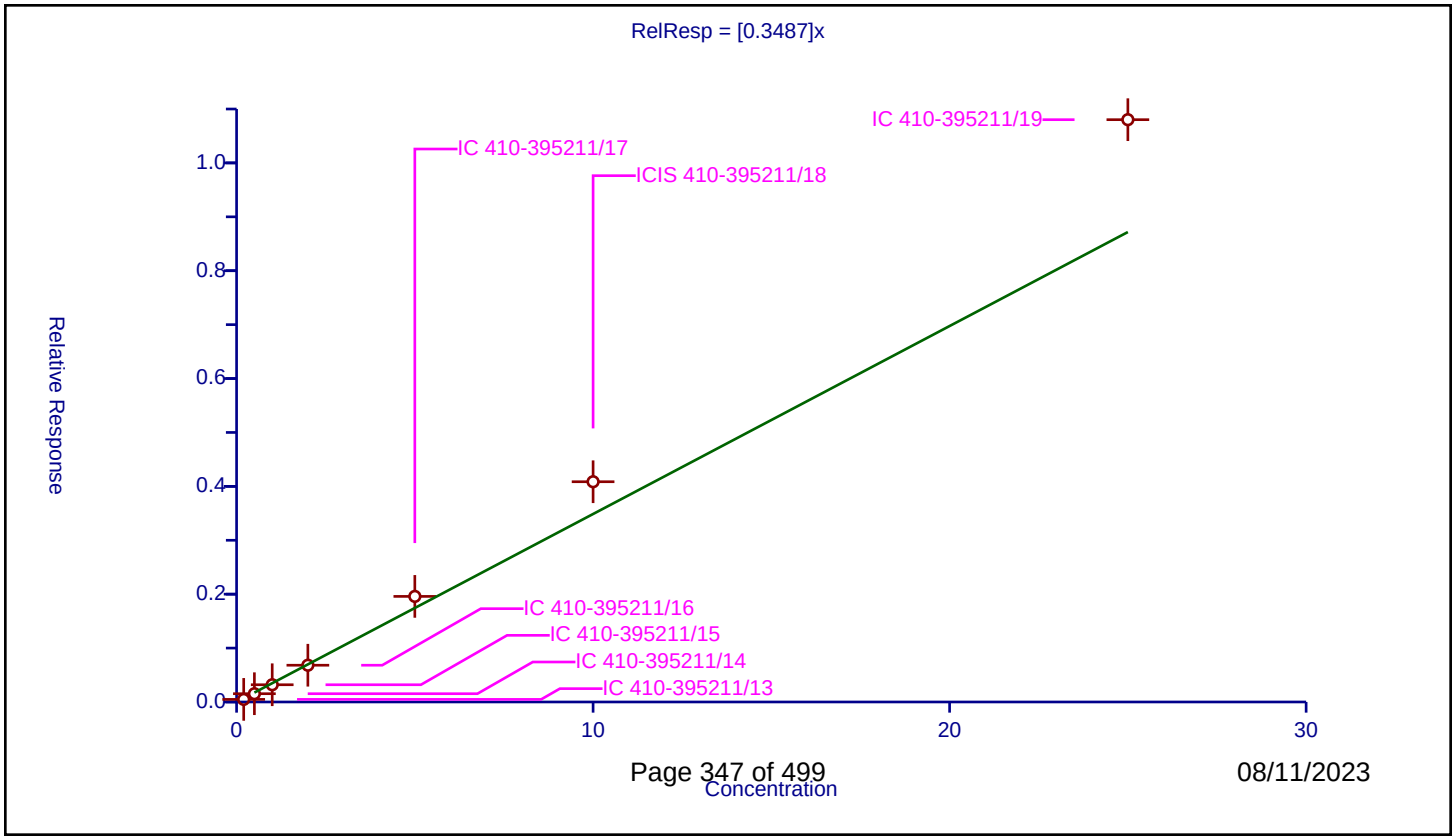
Curve Coefficients

Intercept:	0
Slope:	0.3487

Error Coefficients

Standard Error:	990000
Relative Standard Error:	19.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.961

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.048093	10.0	1874080.0	0.240465	Y
2	IC 410-395211/14	0.5	0.153515	10.0	1928405.0	0.307031	Y
3	IC 410-395211/15	1.0	0.320044	10.0	1932452.0	0.320044	Y
4	IC 410-395211/16	2.0	0.681897	10.0	1948504.0	0.340949	Y
5	IC 410-395211/17	5.0	1.958776	10.0	1954853.0	0.391755	Y
6	ICIS 410-395211/18	10.0	4.085946	10.0	1990861.0	0.408595	Y
7	IC 410-395211/19	25.0	10.801977	10.0	2081007.0	0.432079	Y



Calibration / 1,1,2-Trichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

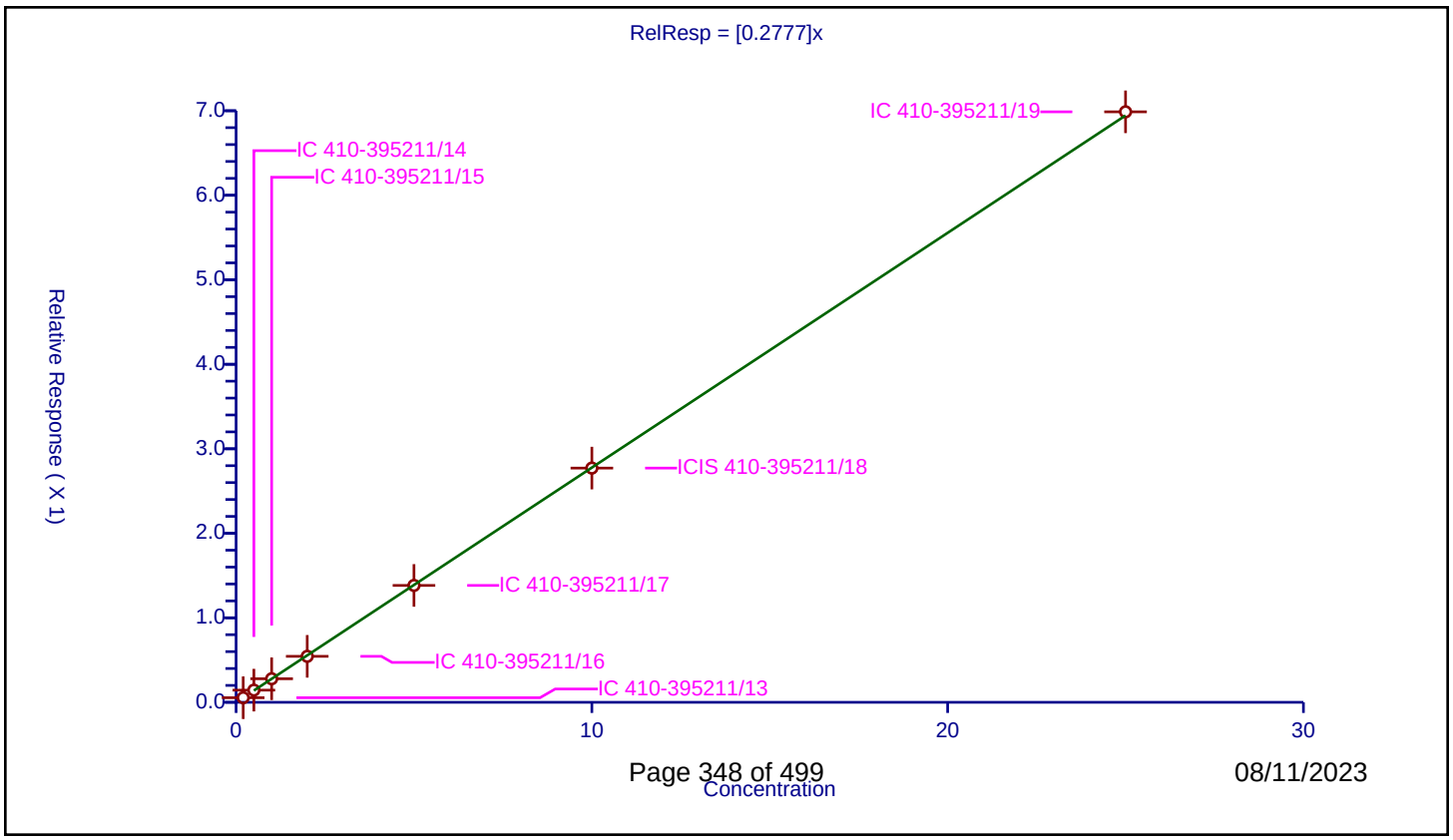
Curve Coefficients

Intercept:	0
Slope:	0.2777

Error Coefficients

Standard Error:	646000
Relative Standard Error:	2.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.054373	10.0	1874080.0	0.271867	Y
2	IC 410-395211/14	0.5	0.14415	10.0	1928405.0	0.2883	Y
3	IC 410-395211/15	1.0	0.278734	10.0	1932452.0	0.278734	Y
4	IC 410-395211/16	2.0	0.544171	10.0	1948504.0	0.272086	Y
5	IC 410-395211/17	5.0	1.383025	10.0	1954853.0	0.276605	Y
6	ICIS 410-395211/18	10.0	2.771615	10.0	1990861.0	0.277161	Y
7	IC 410-395211/19	25.0	6.987415	10.0	2081007.0	0.279497	Y



Calibration / Tetrachloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

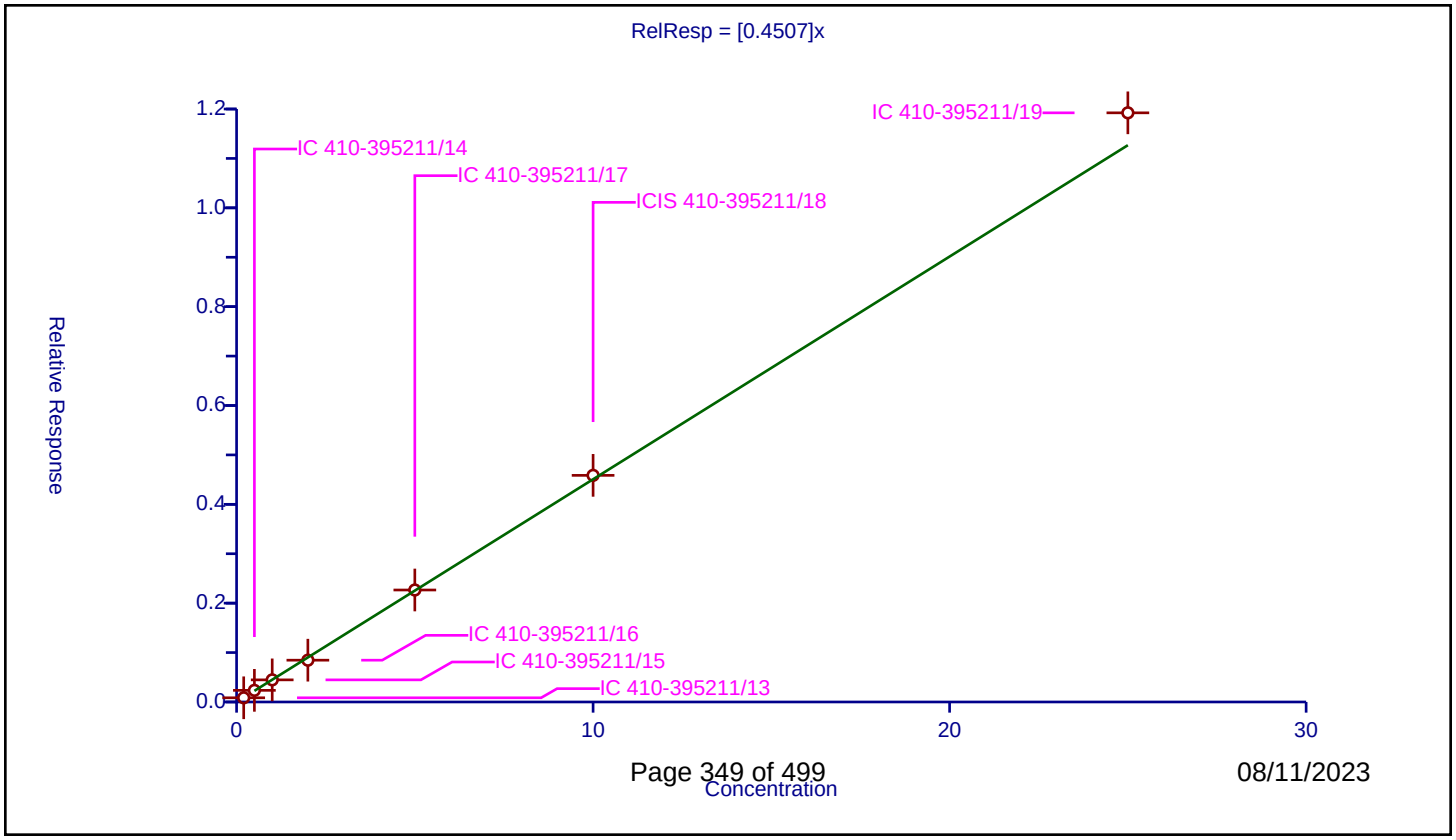
Curve Coefficients

Intercept:	0
Slope:	0.4507

Error Coefficients

Standard Error:	1100000
Relative Standard Error:	4.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.084927	10.0	1874080.0	0.424635	Y
2	IC 410-395211/14	0.5	0.235464	10.0	1928405.0	0.470928	Y
3	IC 410-395211/15	1.0	0.447794	10.0	1932452.0	0.447794	Y
4	IC 410-395211/16	2.0	0.845639	10.0	1948504.0	0.422819	Y
5	IC 410-395211/17	5.0	2.266073	10.0	1954853.0	0.453215	Y
6	ICIS 410-395211/18	10.0	4.586382	10.0	1990861.0	0.458638	Y
7	IC 410-395211/19	25.0	11.922665	10.0	2081007.0	0.476907	Y



Calibration / 1,3-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

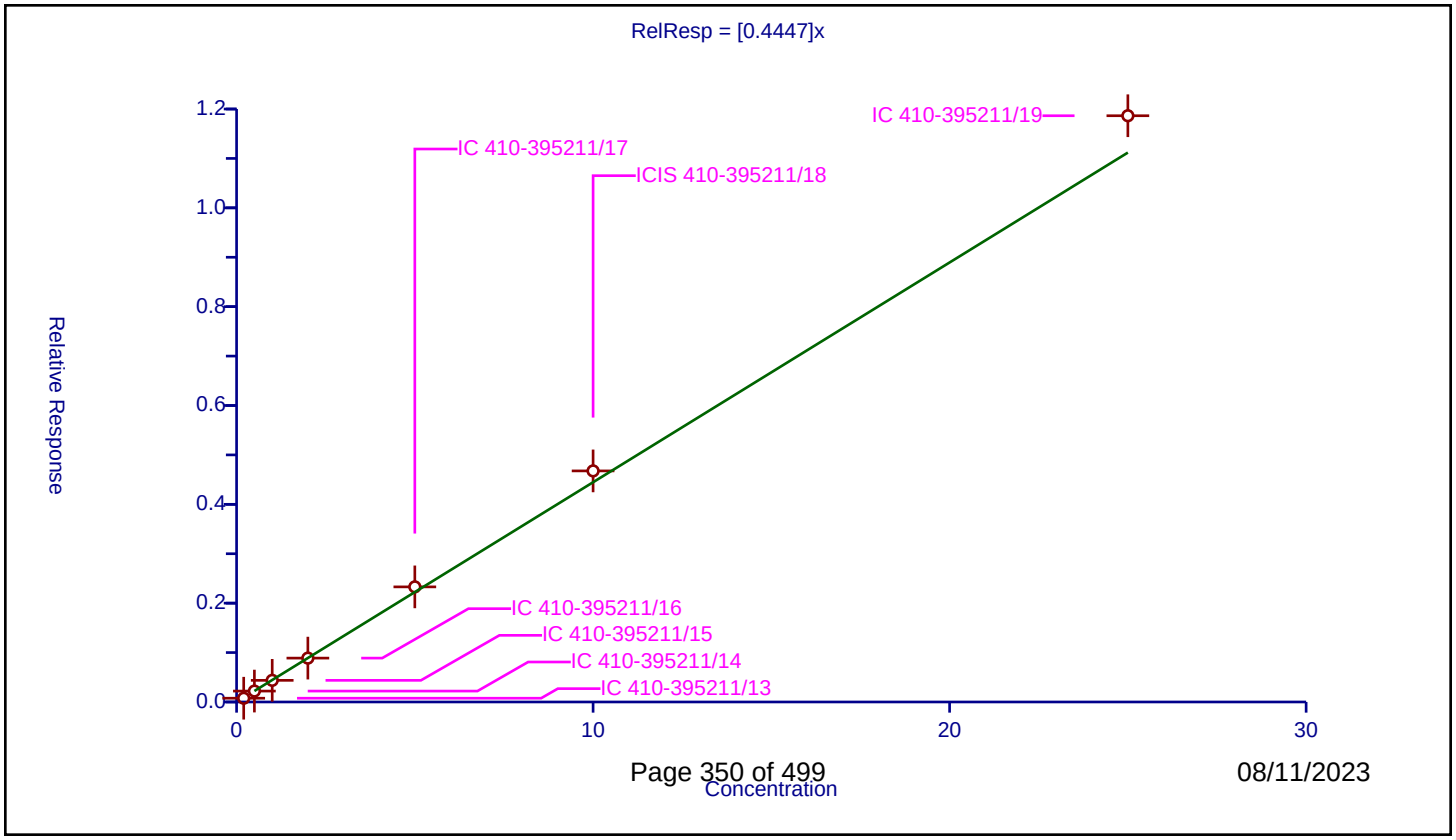
Curve Coefficients

Intercept:	0
Slope:	0.4447

Error Coefficients

Standard Error:	1100000
Relative Standard Error:	7.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.076133	10.0	1874080.0	0.380667	Y
2	IC 410-395211/14	0.5	0.221146	10.0	1928405.0	0.442293	Y
3	IC 410-395211/15	1.0	0.43807	10.0	1932452.0	0.43807	Y
4	IC 410-395211/16	2.0	0.887866	10.0	1948504.0	0.443933	Y
5	IC 410-395211/17	5.0	2.32951	10.0	1954853.0	0.465902	Y
6	ICIS 410-395211/18	10.0	4.676218	10.0	1990861.0	0.467622	Y
7	IC 410-395211/19	25.0	11.863939	10.0	2081007.0	0.474558	Y



Calibration / 2-Hexanone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

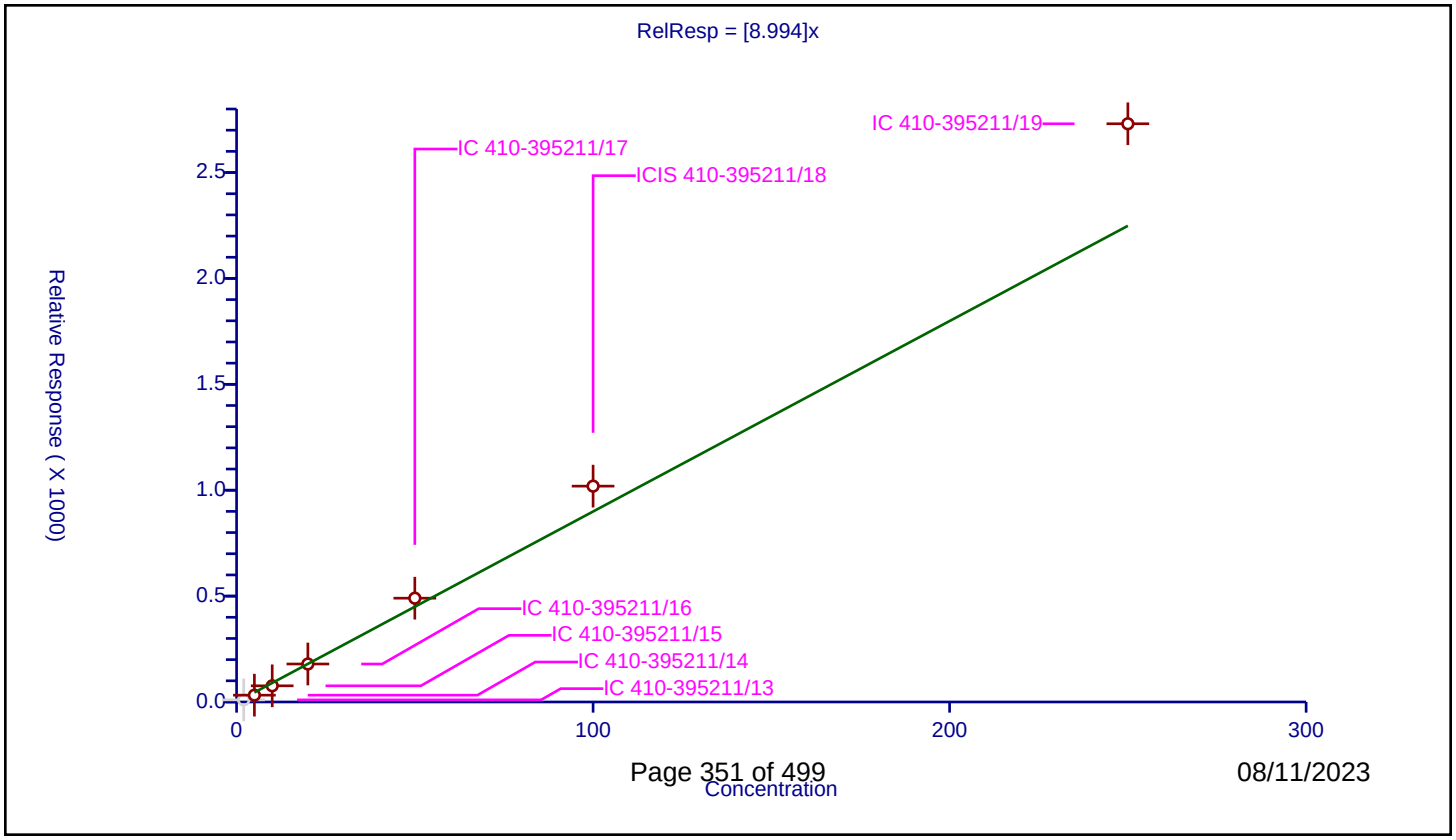
Curve Coefficients

Intercept:	0
Slope:	8.994

Error Coefficients

Standard Error:	4490000
Relative Standard Error:	18.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.959

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	2.0	9.986295	50.0	159799.0	4.993148	N
2	IC 410-395211/14	5.0	32.203961	50.0	176691.0	6.440792	Y
3	IC 410-395211/15	10.0	76.380954	50.0	161736.0	7.638095	Y
4	IC 410-395211/16	20.0	179.385328	50.0	164657.0	8.969266	Y
5	IC 410-395211/17	50.0	490.13305	50.0	167230.0	9.802661	Y
6	ICIS 410-395211/18	100.0	1019.2613	50.0	168052.0	10.192613	Y
7	IC 410-395211/19	250.0	2730.341149	50.0	170043.0	10.921365	Y



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Calibration / Chlorodibromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

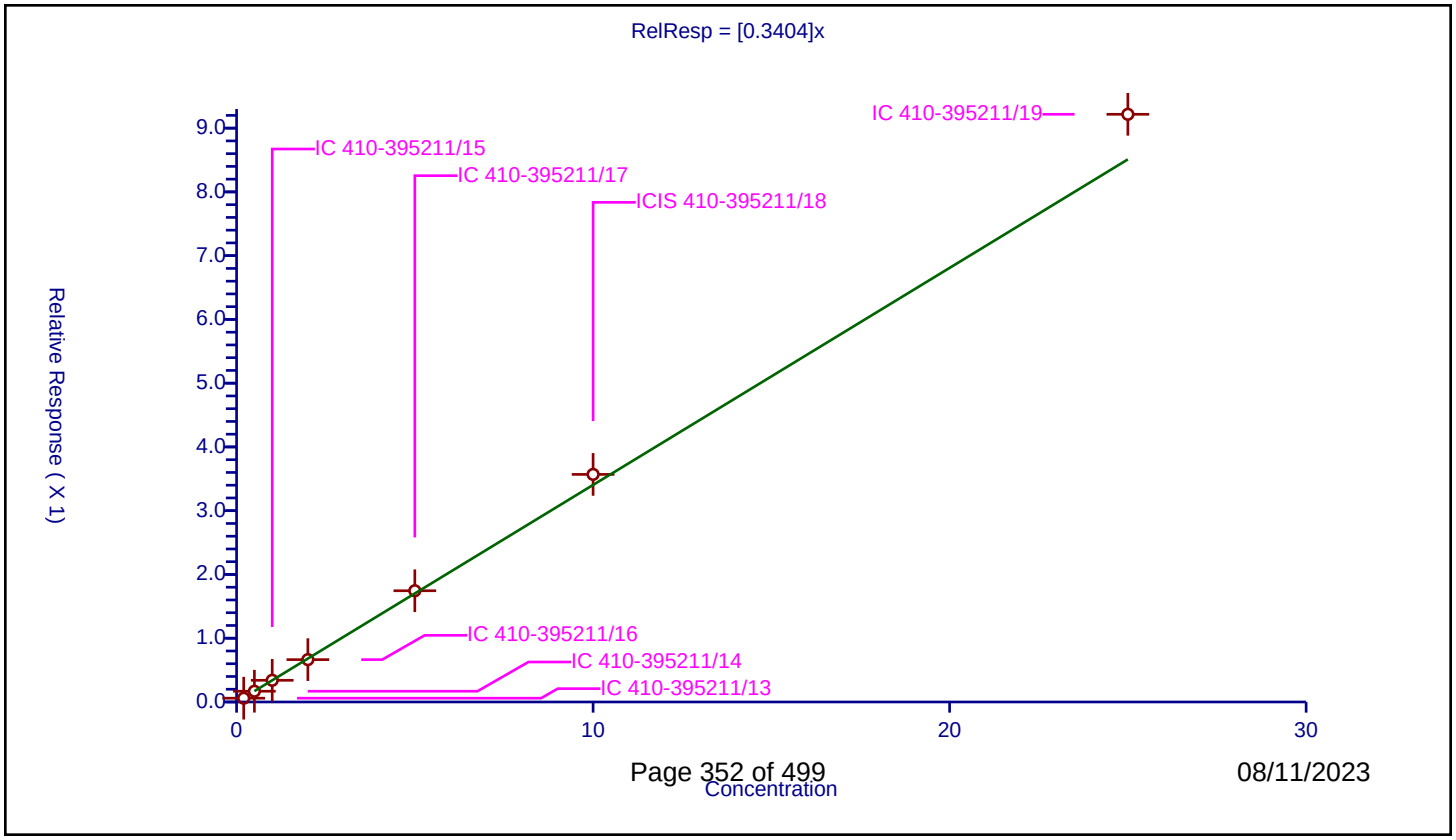
Curve Coefficients

Intercept:	0
Slope:	0.3404

Error Coefficients

Standard Error:	849000
Relative Standard Error:	6.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.059624	10.0	1874080.0	0.29812	Y
2	IC 410-395211/14	0.5	0.168761	10.0	1928405.0	0.337522	Y
3	IC 410-395211/15	1.0	0.340417	10.0	1932452.0	0.340417	Y
4	IC 410-395211/16	2.0	0.664284	10.0	1948504.0	0.332142	Y
5	IC 410-395211/17	5.0	1.744781	10.0	1954853.0	0.348956	Y
6	ICIS 410-395211/18	10.0	3.56942	10.0	1990861.0	0.356942	Y
7	IC 410-395211/19	25.0	9.217191	10.0	2081007.0	0.368688	Y



Calibration / Ethylene Dibromide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

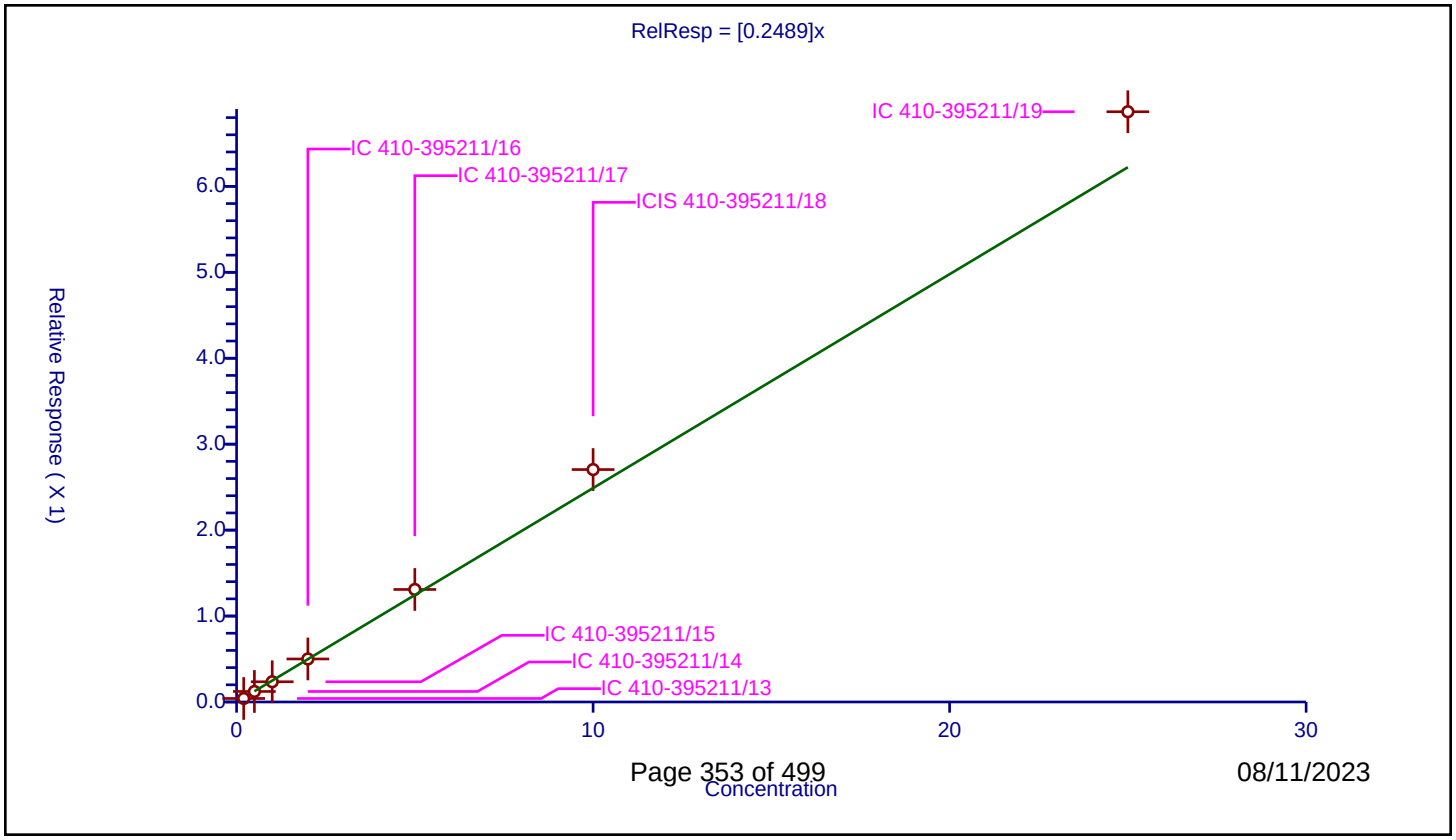
Curve Coefficients

Intercept:	0
Slope:	0.2489

Error Coefficients

Standard Error:	634000
Relative Standard Error:	9.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.040911	10.0	1874080.0	0.204554	Y
2	IC 410-395211/14	0.5	0.122479	10.0	1928405.0	0.244959	Y
3	IC 410-395211/15	1.0	0.235452	10.0	1932452.0	0.235452	Y
4	IC 410-395211/16	2.0	0.500517	10.0	1948504.0	0.250259	Y
5	IC 410-395211/17	5.0	1.309249	10.0	1954853.0	0.26185	Y
6	ICIS 410-395211/18	10.0	2.704594	10.0	1990861.0	0.270459	Y
7	IC 410-395211/19	25.0	6.868449	10.0	2081007.0	0.274738	Y



Calibration / 1-Chlorohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

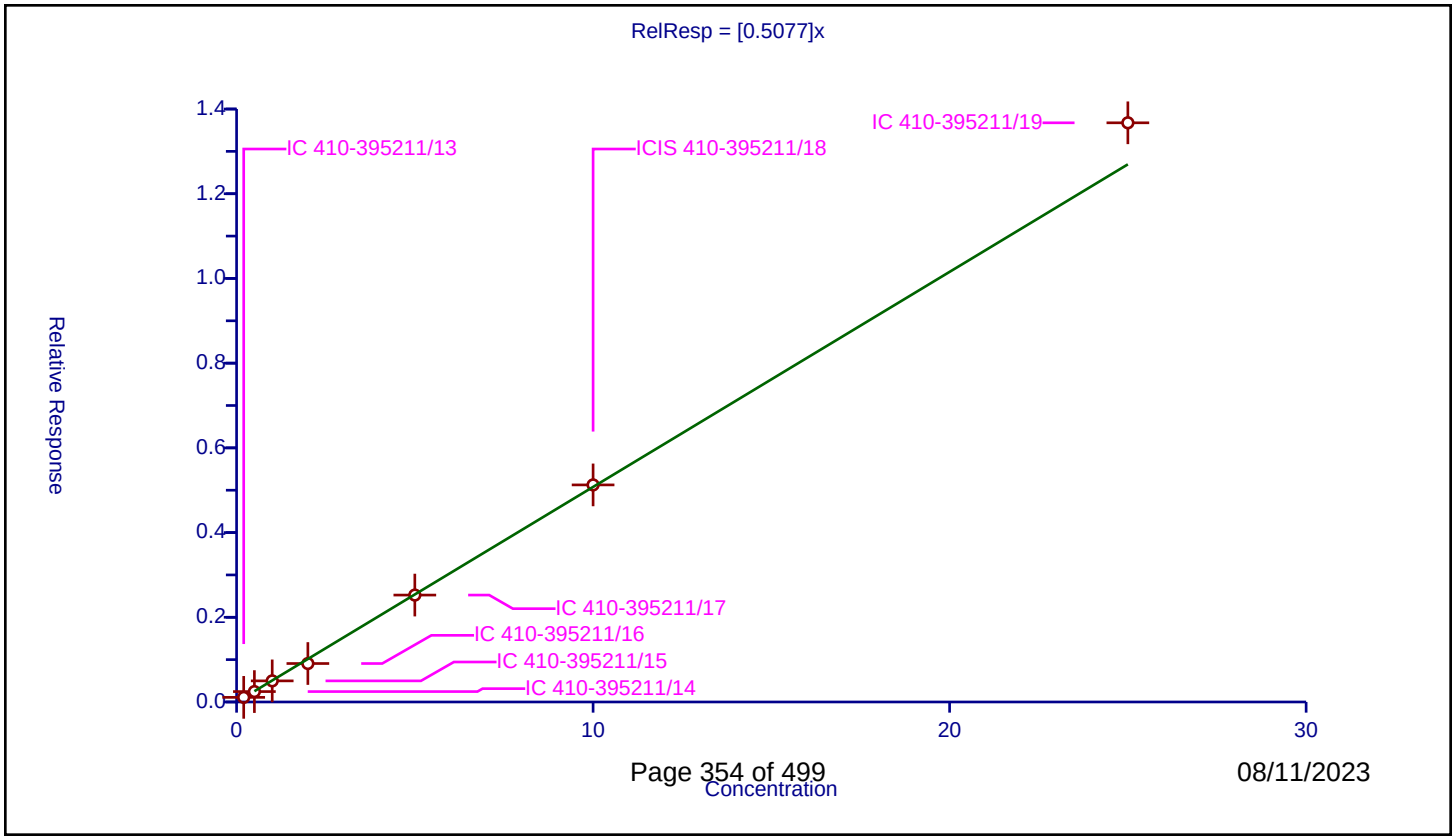
Curve Coefficients

Intercept:	0
Slope:	0.5077

Error Coefficients

Standard Error:	1250000
Relative Standard Error:	6.3
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.109094	10.0	1874080.0	0.545468	Y
2	IC 410-395211/14	0.5	0.245908	10.0	1928405.0	0.491816	Y
3	IC 410-395211/15	1.0	0.498434	10.0	1932452.0	0.498434	Y
4	IC 410-395211/16	2.0	0.908204	10.0	1948504.0	0.454102	Y
5	IC 410-395211/17	5.0	2.524502	10.0	1954853.0	0.5049	Y
6	ICIS 410-395211/18	10.0	5.125335	10.0	1990861.0	0.512534	Y
7	IC 410-395211/19	25.0	13.674769	10.0	2081007.0	0.546991	Y



Calibration / Chlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

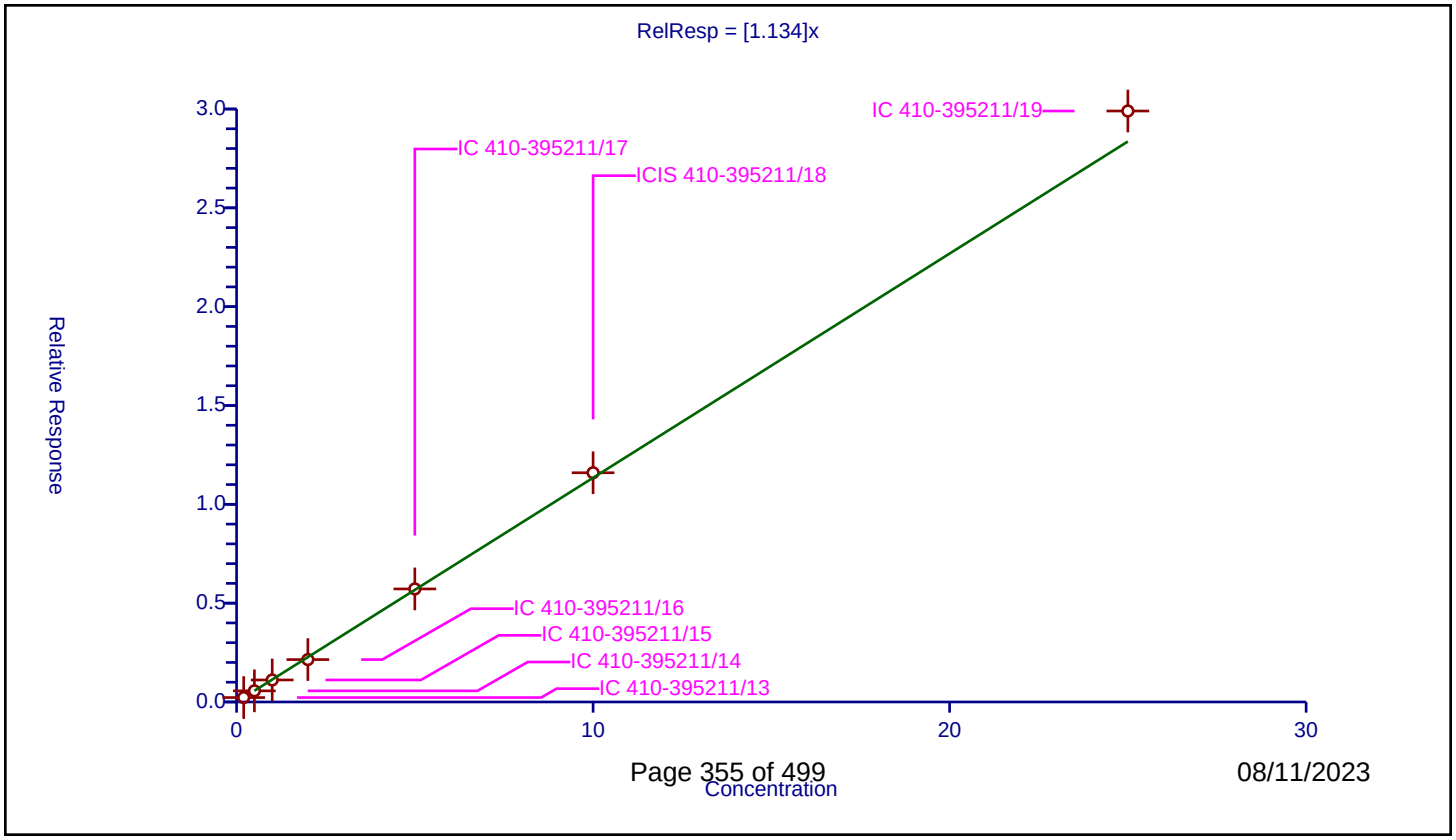
Curve Coefficients

Intercept:	0
Slope:	1.134

Error Coefficients

Standard Error:	2750000
Relative Standard Error:	3.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.225124	10.0	1874080.0	1.125619	Y
2	IC 410-395211/14	0.5	0.563808	10.0	1928405.0	1.127616	Y
3	IC 410-395211/15	1.0	1.114201	10.0	1932452.0	1.114201	Y
4	IC 410-395211/16	2.0	2.145579	10.0	1948504.0	1.07279	Y
5	IC 410-395211/17	5.0	5.719898	10.0	1954853.0	1.14398	Y
6	ICIS 410-395211/18	10.0	11.598419	10.0	1990861.0	1.159842	Y
7	IC 410-395211/19	25.0	29.899001	10.0	2081007.0	1.19596	Y



Calibration / 1,1,1,2-Tetrachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

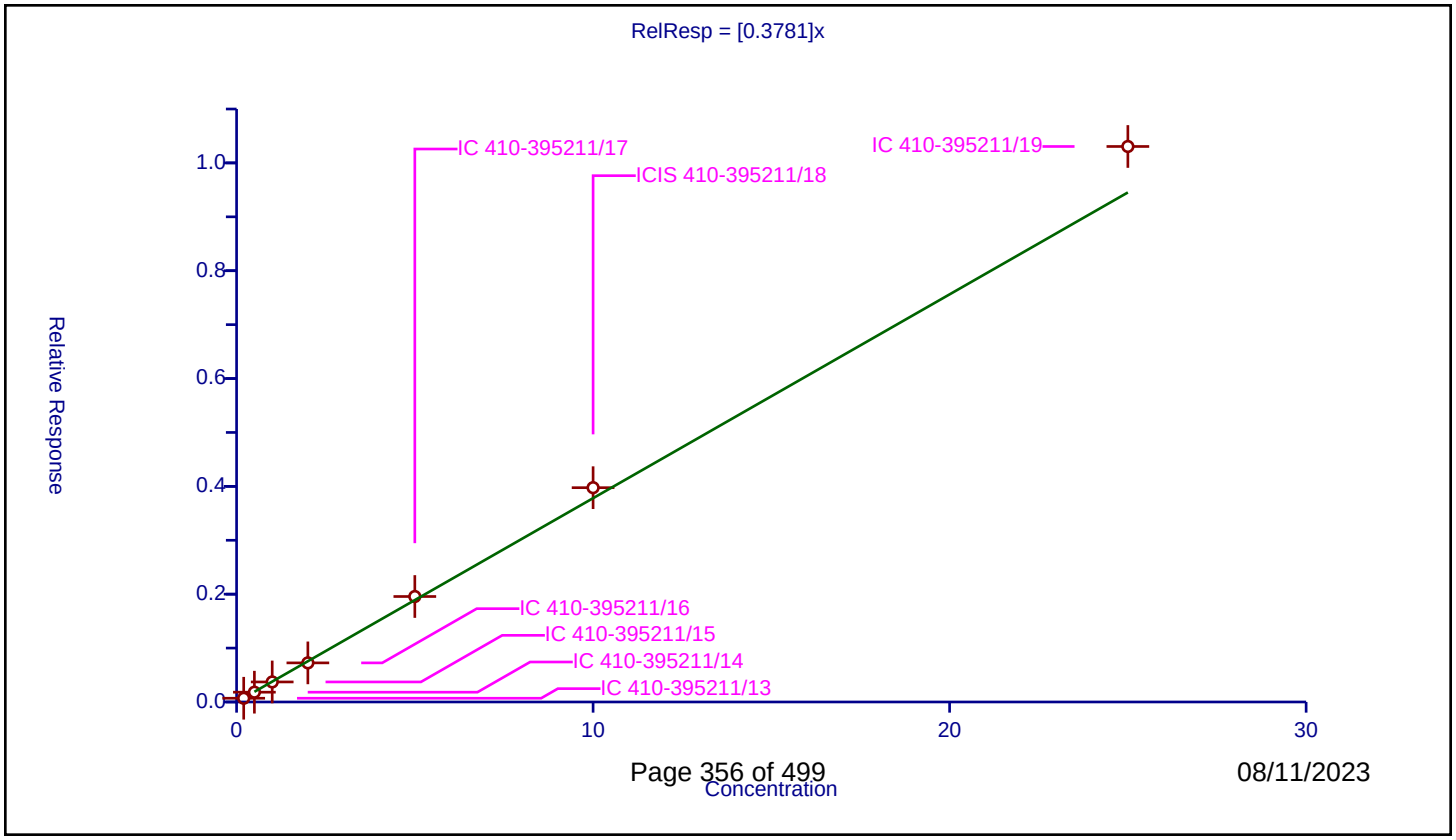
Curve Coefficients

Intercept:	0
Slope:	0.3781

Error Coefficients

Standard Error:	949000
Relative Standard Error:	6.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.06949	10.0	1874080.0	0.34745	Y
2	IC 410-395211/14	0.5	0.181819	10.0	1928405.0	0.363637	Y
3	IC 410-395211/15	1.0	0.371606	10.0	1932452.0	0.371606	Y
4	IC 410-395211/16	2.0	0.725598	10.0	1948504.0	0.362799	Y
5	IC 410-395211/17	5.0	1.956715	10.0	1954853.0	0.391343	Y
6	ICIS 410-395211/18	10.0	3.975566	10.0	1990861.0	0.397557	Y
7	IC 410-395211/19	25.0	10.305073	10.0	2081007.0	0.412203	Y



Calibration / Ethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

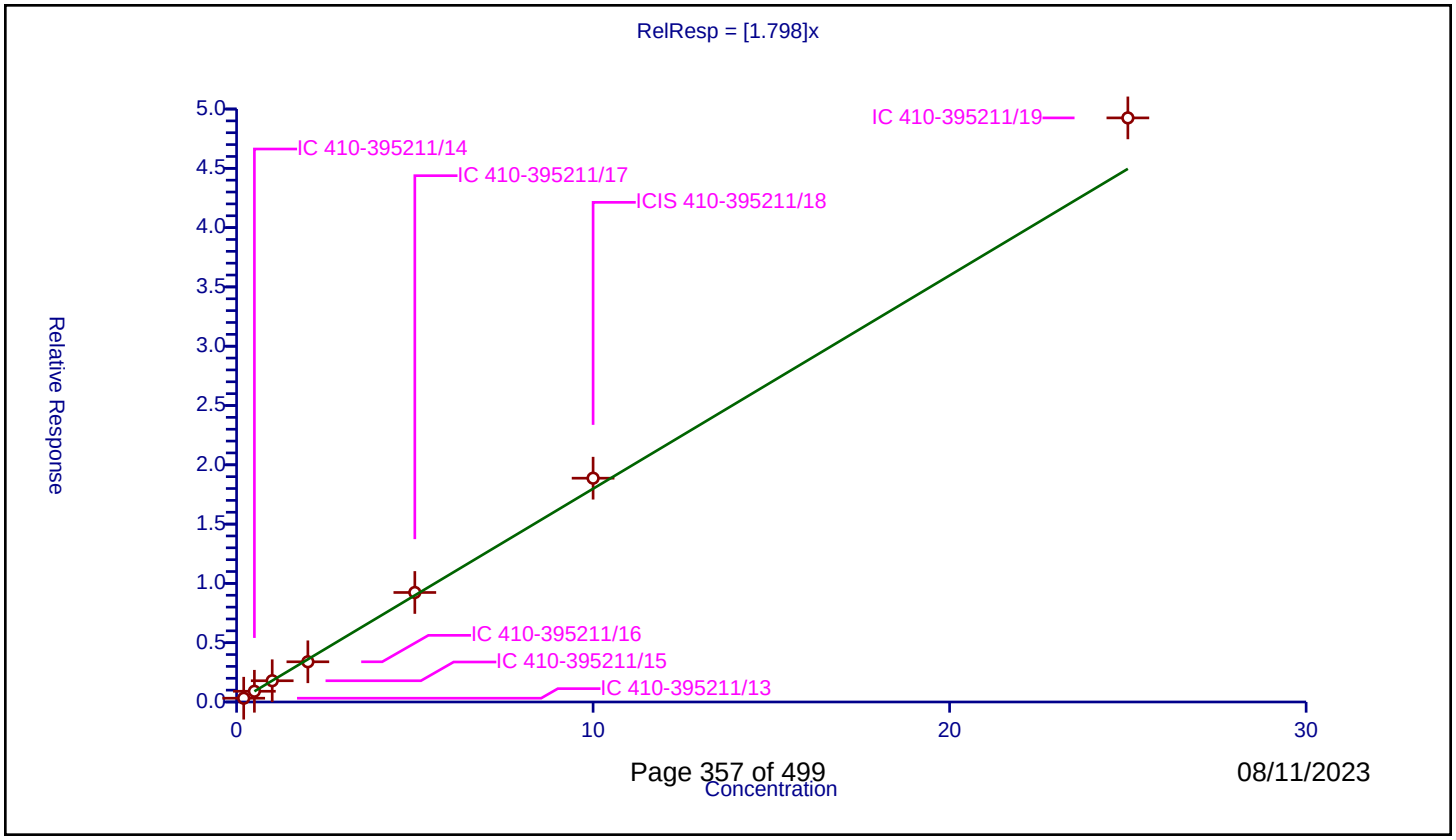
Curve Coefficients

Intercept:	0
Slope:	1.798

Error Coefficients

Standard Error:	4530000
Relative Standard Error:	7.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.317446	10.0	1874080.0	1.587232	Y
2	IC 410-395211/14	0.5	0.906101	10.0	1928405.0	1.812202	Y
3	IC 410-395211/15	1.0	1.790187	10.0	1932452.0	1.790187	Y
4	IC 410-395211/16	2.0	3.38902	10.0	1948504.0	1.69451	Y
5	IC 410-395211/17	5.0	9.233866	10.0	1954853.0	1.846773	Y
6	ICIS 410-395211/18	10.0	18.869901	10.0	1990861.0	1.88699	Y
7	IC 410-395211/19	25.0	49.250171	10.0	2081007.0	1.970007	Y



Calibration / m-Xylene & p-Xylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

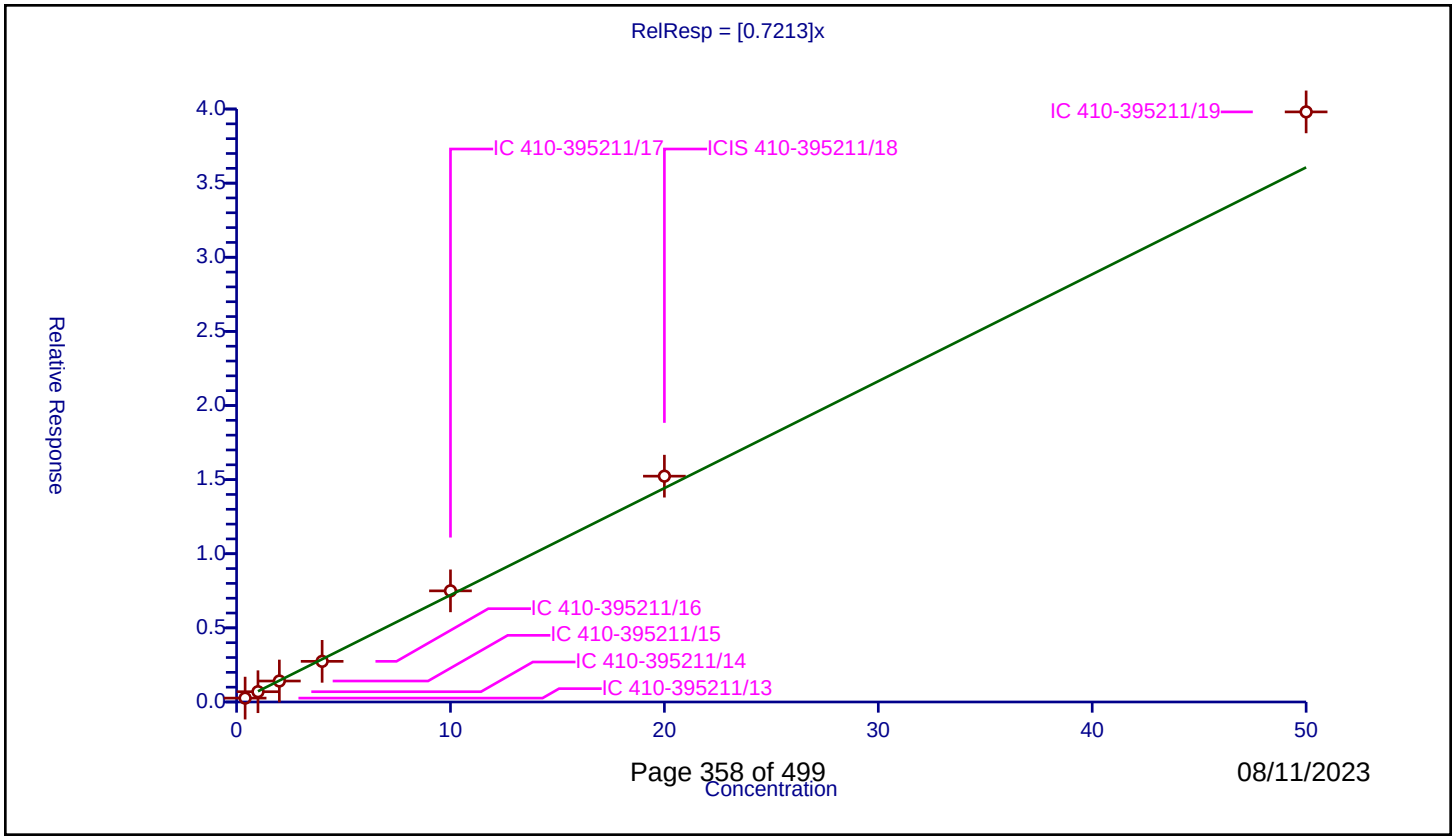
Curve Coefficients

Intercept:	0
Slope:	0.7213

Error Coefficients

Standard Error:	3660000
Relative Standard Error:	6.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.4	0.261723	10.0	1874080.0	0.654308	Y
2	IC 410-395211/14	1.0	0.693703	10.0	1928405.0	0.693703	Y
3	IC 410-395211/15	2.0	1.414943	10.0	1932452.0	0.707472	Y
4	IC 410-395211/16	4.0	2.743217	10.0	1948504.0	0.685804	Y
5	IC 410-395211/17	10.0	7.497142	10.0	1954853.0	0.749714	Y
6	ICIS 410-395211/18	20.0	15.233826	10.0	1990861.0	0.761691	Y
7	IC 410-395211/19	50.0	39.805527	10.0	2081007.0	0.796111	Y



08/11/2023

Calibration / o-Xylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

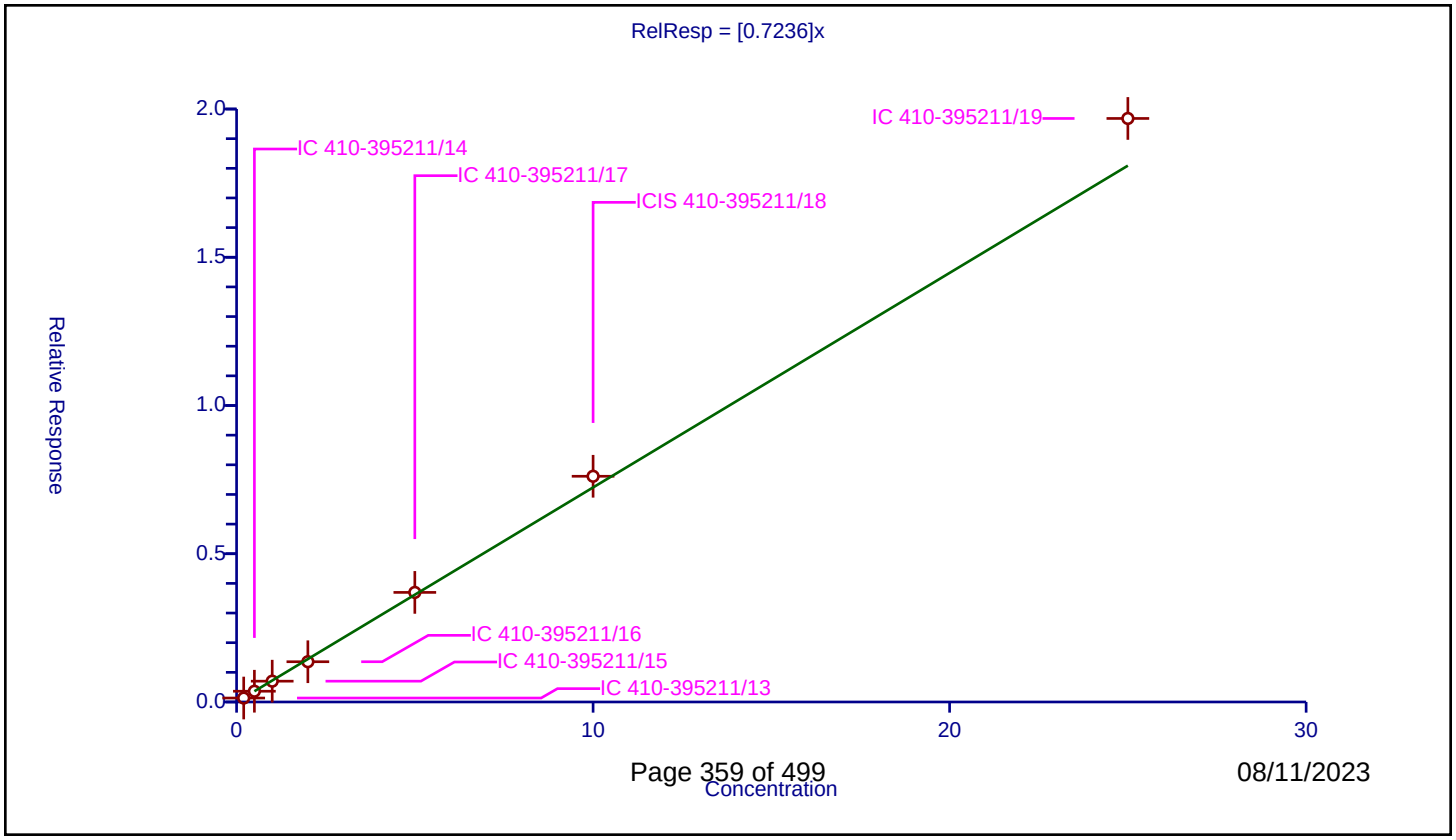
Curve Coefficients

Intercept:	0
Slope:	0.7236

Error Coefficients

Standard Error:	1810000
Relative Standard Error:	5.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.133975	10.0	1874080.0	0.669875	Y
2	IC 410-395211/14	0.5	0.363337	10.0	1928405.0	0.726673	Y
3	IC 410-395211/15	1.0	0.701818	10.0	1932452.0	0.701818	Y
4	IC 410-395211/16	2.0	1.358037	10.0	1948504.0	0.679018	Y
5	IC 410-395211/17	5.0	3.695782	10.0	1954853.0	0.739156	Y
6	ICIS 410-395211/18	10.0	7.613239	10.0	1990861.0	0.761324	Y
7	IC 410-395211/19	25.0	19.681313	10.0	2081007.0	0.787253	Y



08/11/2023

Calibration / Styrene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

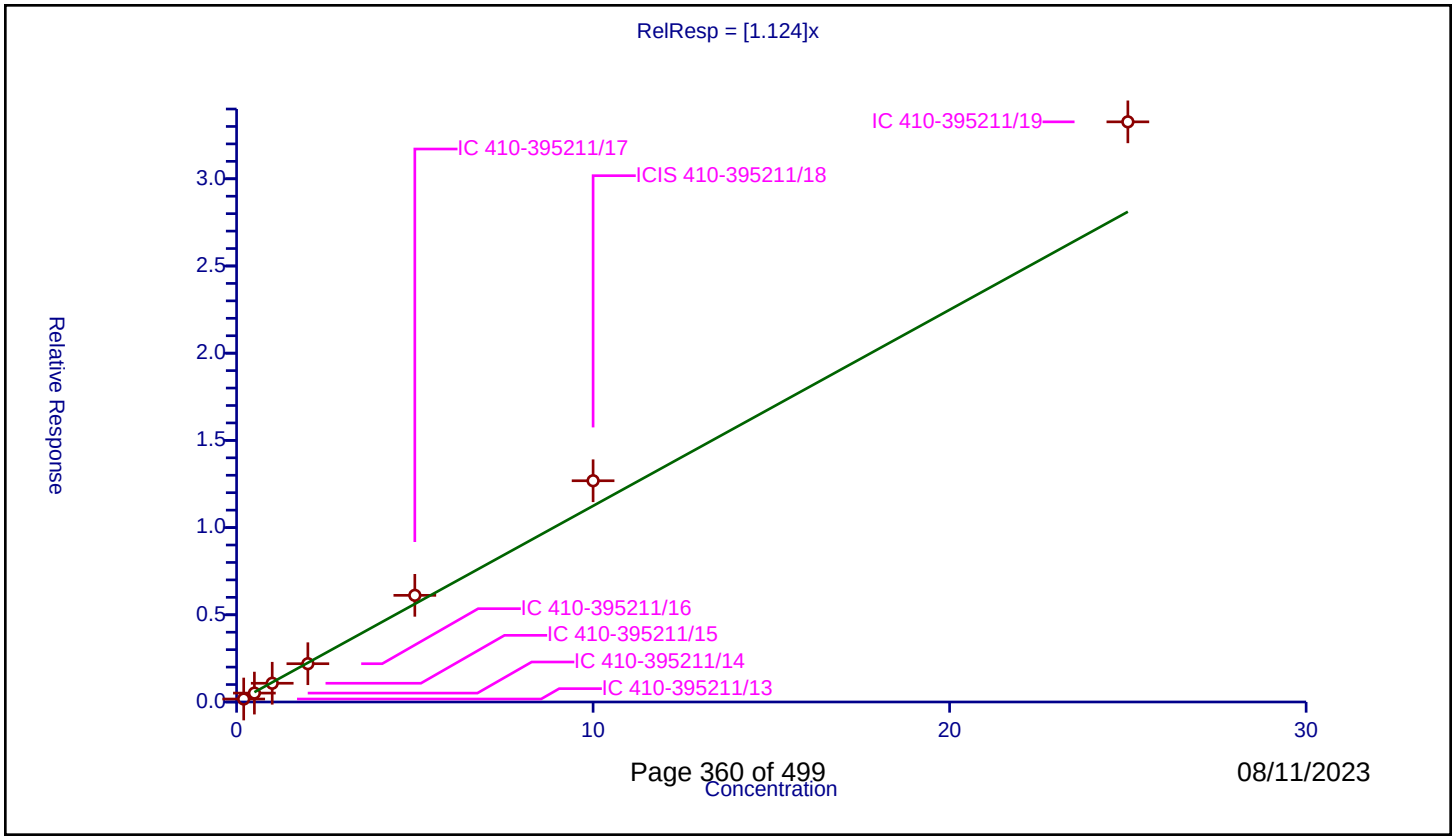
Curve Coefficients

Intercept:	0
Slope:	1.124

Error Coefficients

Standard Error:	3050000
Relative Standard Error:	14.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.976

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.17106	10.0	1874080.0	0.8553	Y
2	IC 410-395211/14	0.5	0.510655	10.0	1928405.0	1.02131	Y
3	IC 410-395211/15	1.0	1.074133	10.0	1932452.0	1.074133	Y
4	IC 410-395211/16	2.0	2.195643	10.0	1948504.0	1.097822	Y
5	IC 410-395211/17	5.0	6.114813	10.0	1954853.0	1.222963	Y
6	ICIS 410-395211/18	10.0	12.685873	10.0	1990861.0	1.268587	Y
7	IC 410-395211/19	25.0	33.265169	10.0	2081007.0	1.330607	Y



Calibration / Bromoform

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

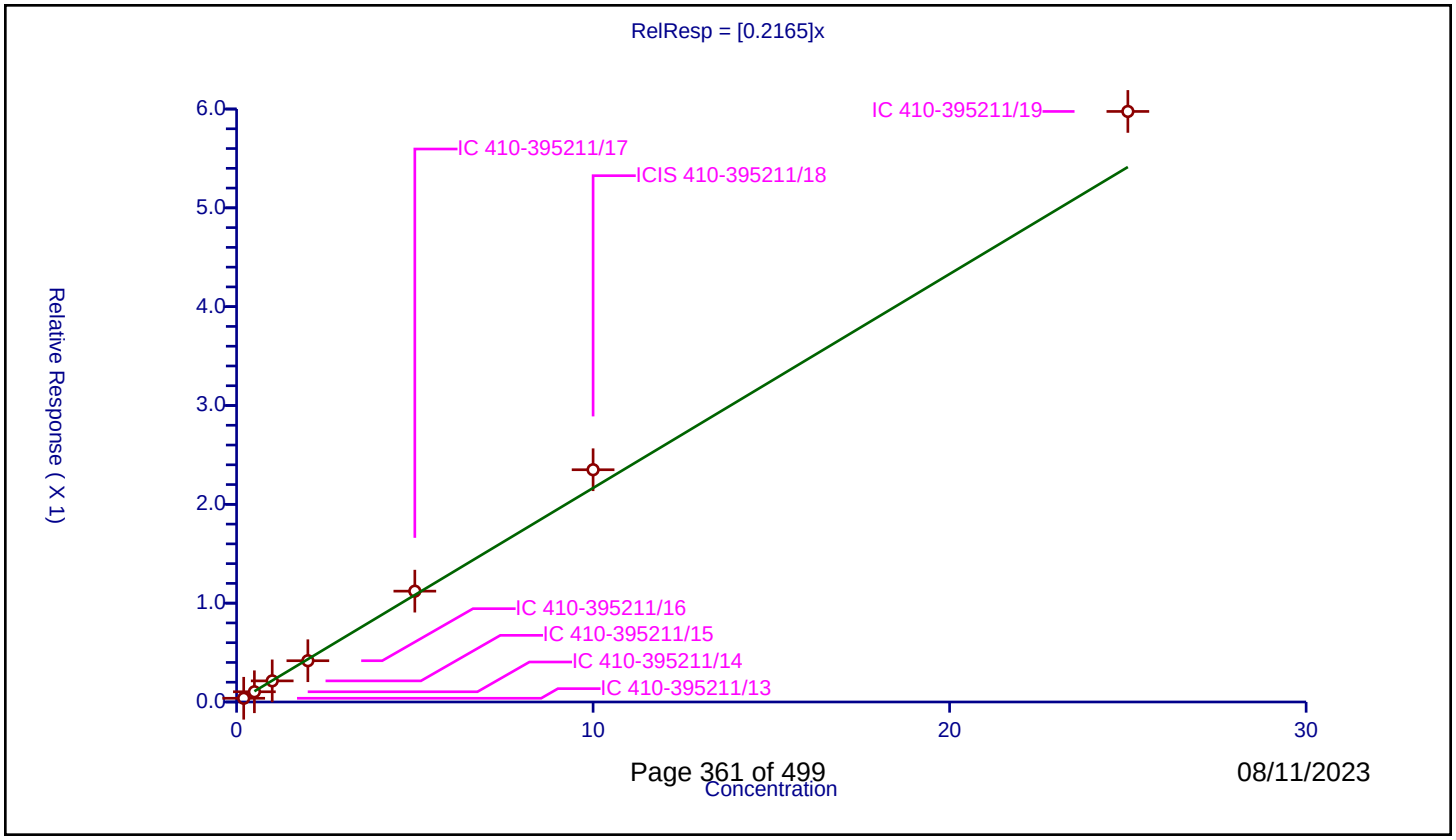
Curve Coefficients

Intercept:	0
Slope:	0.2165

Error Coefficients

Standard Error:	551000
Relative Standard Error:	8.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.037645	10.0	1874080.0	0.188226	Y
2	IC 410-395211/14	0.5	0.103355	10.0	1928405.0	0.20671	Y
3	IC 410-395211/15	1.0	0.213661	10.0	1932452.0	0.213661	Y
4	IC 410-395211/16	2.0	0.417495	10.0	1948504.0	0.208747	Y
5	IC 410-395211/17	5.0	1.121527	10.0	1954853.0	0.224305	Y
6	ICIS 410-395211/18	10.0	2.350084	10.0	1990861.0	0.235008	Y
7	IC 410-395211/19	25.0	5.975559	10.0	2081007.0	0.239022	Y



Calibration / Isopropylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

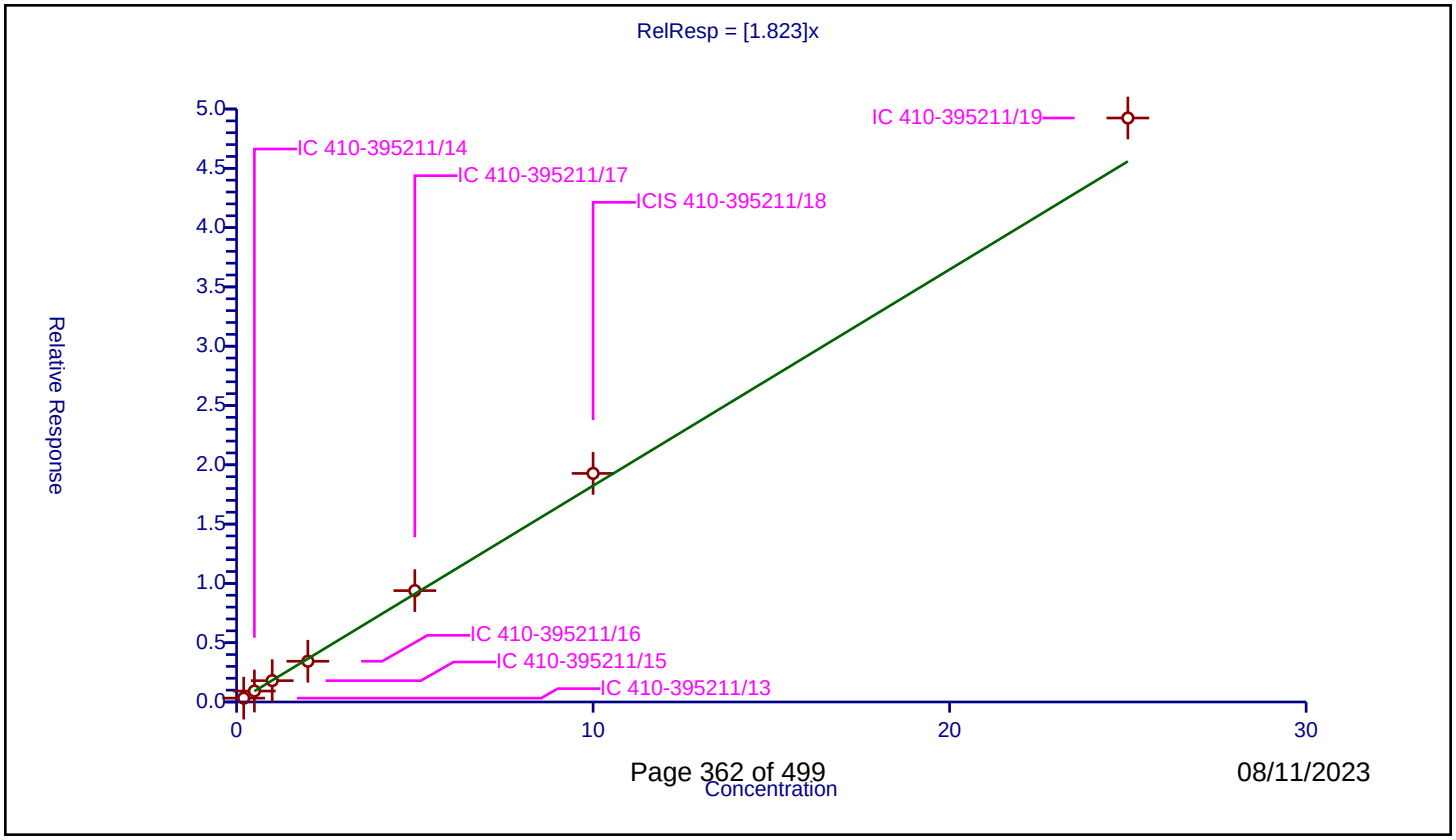
Curve Coefficients

Intercept:	0
Slope:	1.823

Error Coefficients

Standard Error:	4540000
Relative Standard Error:	6.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.32528	10.0	1874080.0	1.626398	Y
2	IC 410-395211/14	0.5	0.923266	10.0	1928405.0	1.846531	Y
3	IC 410-395211/15	1.0	1.797908	10.0	1932452.0	1.797908	Y
4	IC 410-395211/16	2.0	3.434697	10.0	1948504.0	1.717348	Y
5	IC 410-395211/17	5.0	9.390982	10.0	1954853.0	1.878196	Y
6	ICIS 410-395211/18	10.0	19.273922	10.0	1990861.0	1.927392	Y
7	IC 410-395211/19	25.0	49.24265	10.0	2081007.0	1.969706	Y



Calibration / 4-Bromofluorobenzene (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

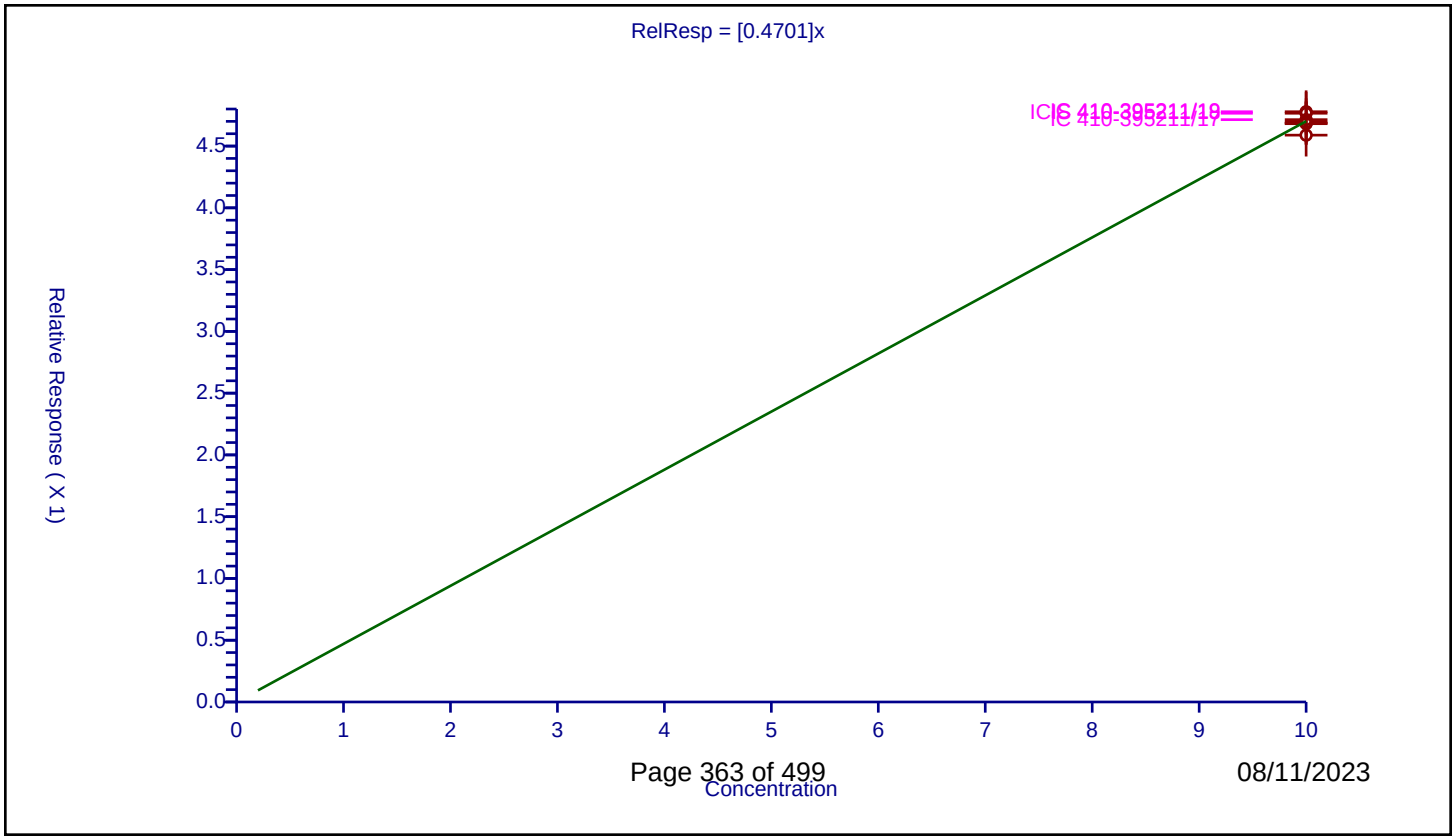
Curve Coefficients

Intercept:	0
Slope:	0.4701

Error Coefficients

Standard Error:	996000
Relative Standard Error:	1.3
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	10.0	4.588555	10.0	1874080.0	0.458856	Y
2	IC 410-395211/14	10.0	4.68104	10.0	1928405.0	0.468104	Y
3	IC 410-395211/15	10.0	4.685953	10.0	1932452.0	0.468595	Y
4	IC 410-395211/16	10.0	4.693031	10.0	1948504.0	0.469303	Y
5	IC 410-395211/17	10.0	4.713797	10.0	1954853.0	0.47138	Y
6	ICIS 410-395211/18	10.0	4.765586	10.0	1990861.0	0.476559	Y
7	IC 410-395211/19	10.0	4.777894	10.0	2081007.0	0.477789	Y



Calibration / Bromobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

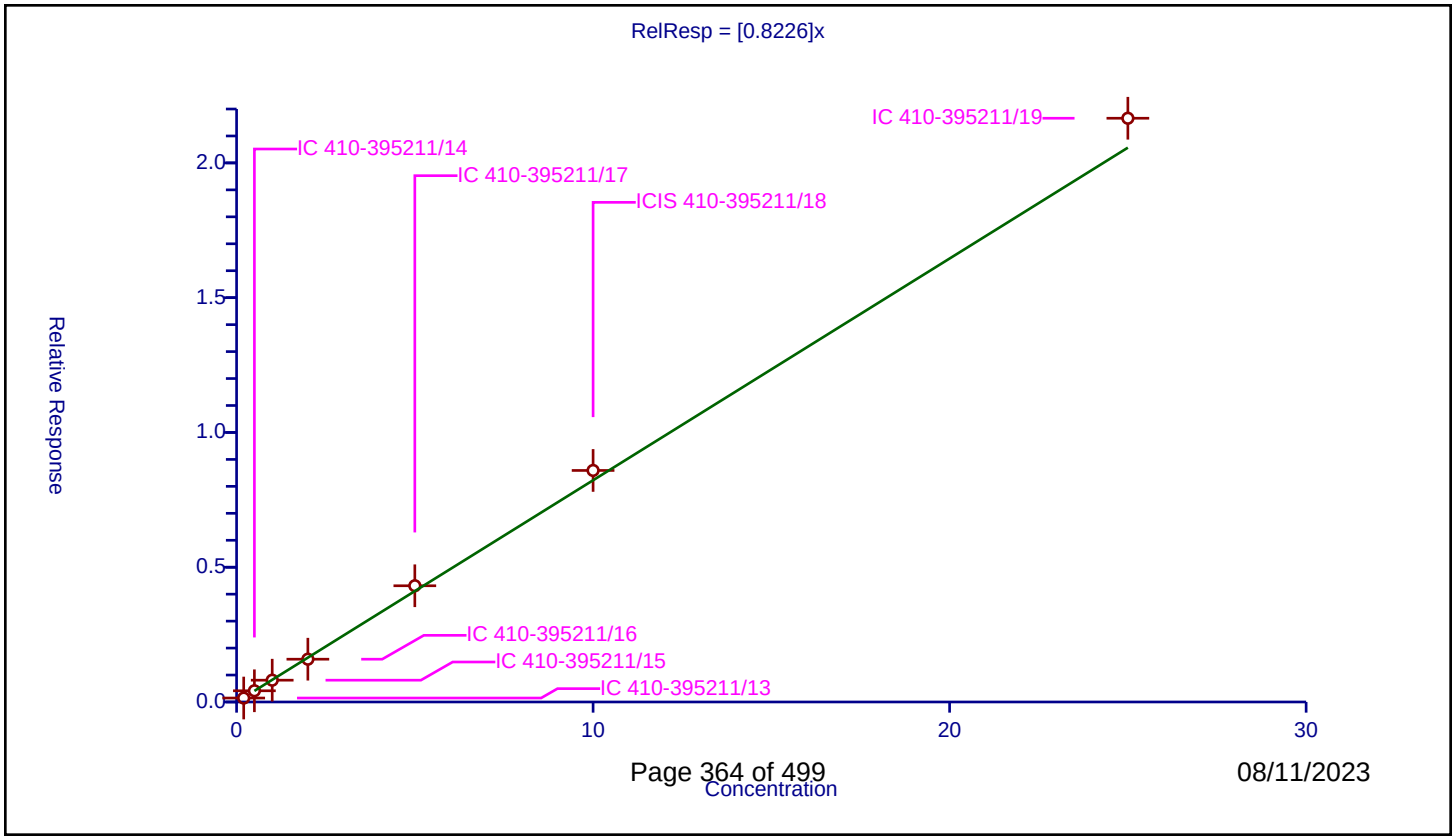
Curve Coefficients

Intercept:	0
Slope:	0.8226

Error Coefficients

Standard Error:	1220000
Relative Standard Error:	5.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.14722	10.0	1118395.0	0.736099	Y
2	IC 410-395211/14	0.5	0.416089	10.0	1161459.0	0.832177	Y
3	IC 410-395211/15	1.0	0.808815	10.0	1176004.0	0.808815	Y
4	IC 410-395211/16	2.0	1.587443	10.0	1187709.0	0.793721	Y
5	IC 410-395211/17	5.0	4.311715	10.0	1170924.0	0.862343	Y
6	ICIS 410-395211/18	10.0	8.590234	10.0	1214109.0	0.859023	Y
7	IC 410-395211/19	25.0	21.657455	10.0	1273416.0	0.866298	Y



Calibration / 1,1,2,2-Tetrachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

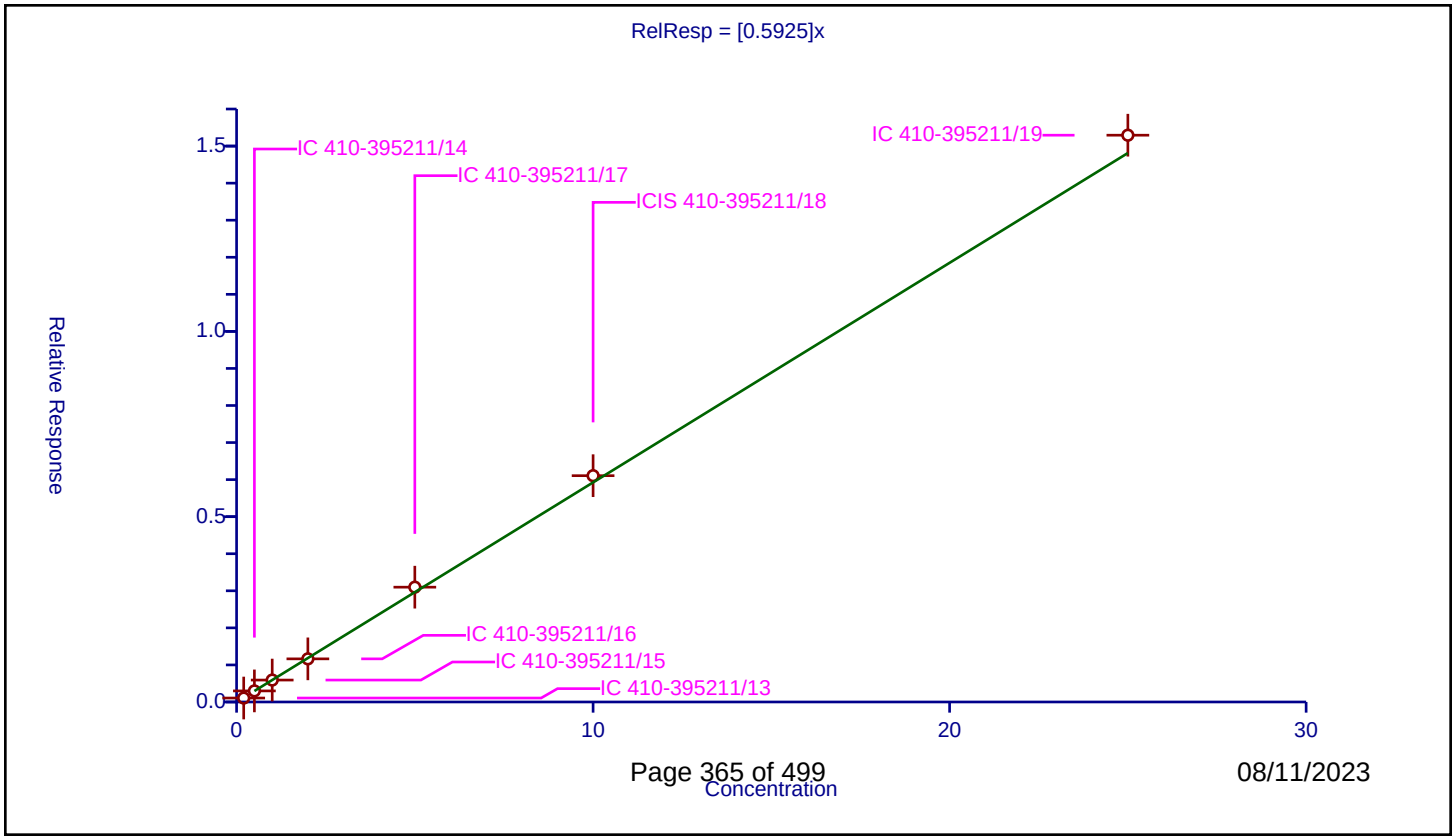
Curve Coefficients

Intercept:	0
Slope:	0.5925

Error Coefficients

Standard Error:	866000
Relative Standard Error:	4.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.106698	10.0	1118395.0	0.533488	Y
2	IC 410-395211/14	0.5	0.29902	10.0	1161459.0	0.598041	Y
3	IC 410-395211/15	1.0	0.592158	10.0	1176004.0	0.592158	Y
4	IC 410-395211/16	2.0	1.163526	10.0	1187709.0	0.581763	Y
5	IC 410-395211/17	5.0	3.097947	10.0	1170924.0	0.619589	Y
6	ICIS 410-395211/18	10.0	6.106033	10.0	1214109.0	0.610603	Y
7	IC 410-395211/19	25.0	15.293737	10.0	1273416.0	0.611749	Y



Calibration / trans-1,4-Dichloro-2-butene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

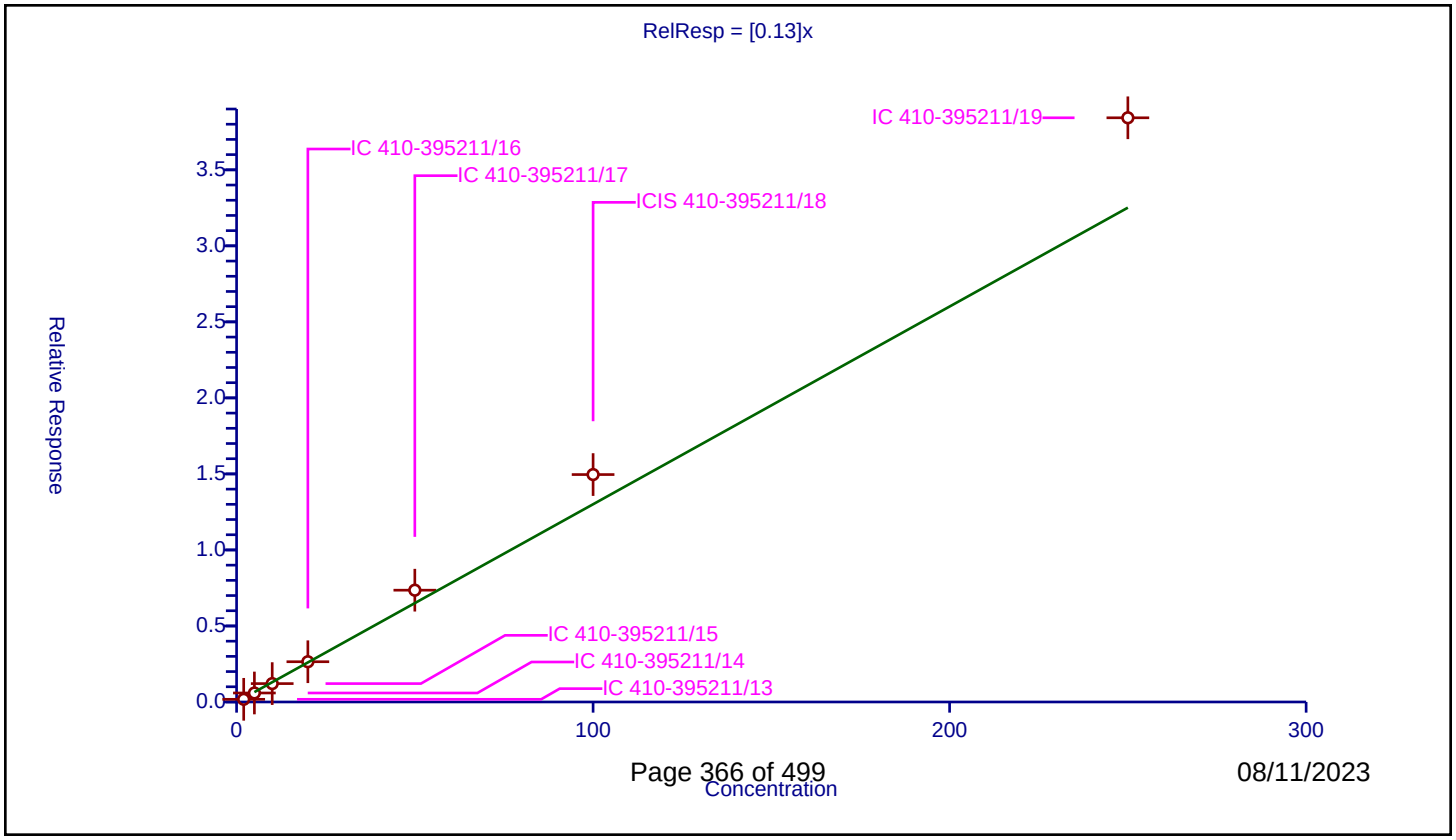
Curve Coefficients

Intercept:	0
Slope:	0.13

Error Coefficients

Standard Error:	2160000
Relative Standard Error:	17.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.966

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	2.0	0.176664	10.0	1118395.0	0.088332	Y
2	IC 410-395211/14	5.0	0.591454	10.0	1161459.0	0.118291	Y
3	IC 410-395211/15	10.0	1.209953	10.0	1176004.0	0.120995	Y
4	IC 410-395211/16	20.0	2.647947	10.0	1187709.0	0.132397	Y
5	IC 410-395211/17	50.0	7.352467	10.0	1170924.0	0.147049	Y
6	ICIS 410-395211/18	100.0	14.958517	10.0	1214109.0	0.149585	Y
7	IC 410-395211/19	250.0	38.422362	10.0	1273416.0	0.153689	Y



Calibration / 1,2,3-Trichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

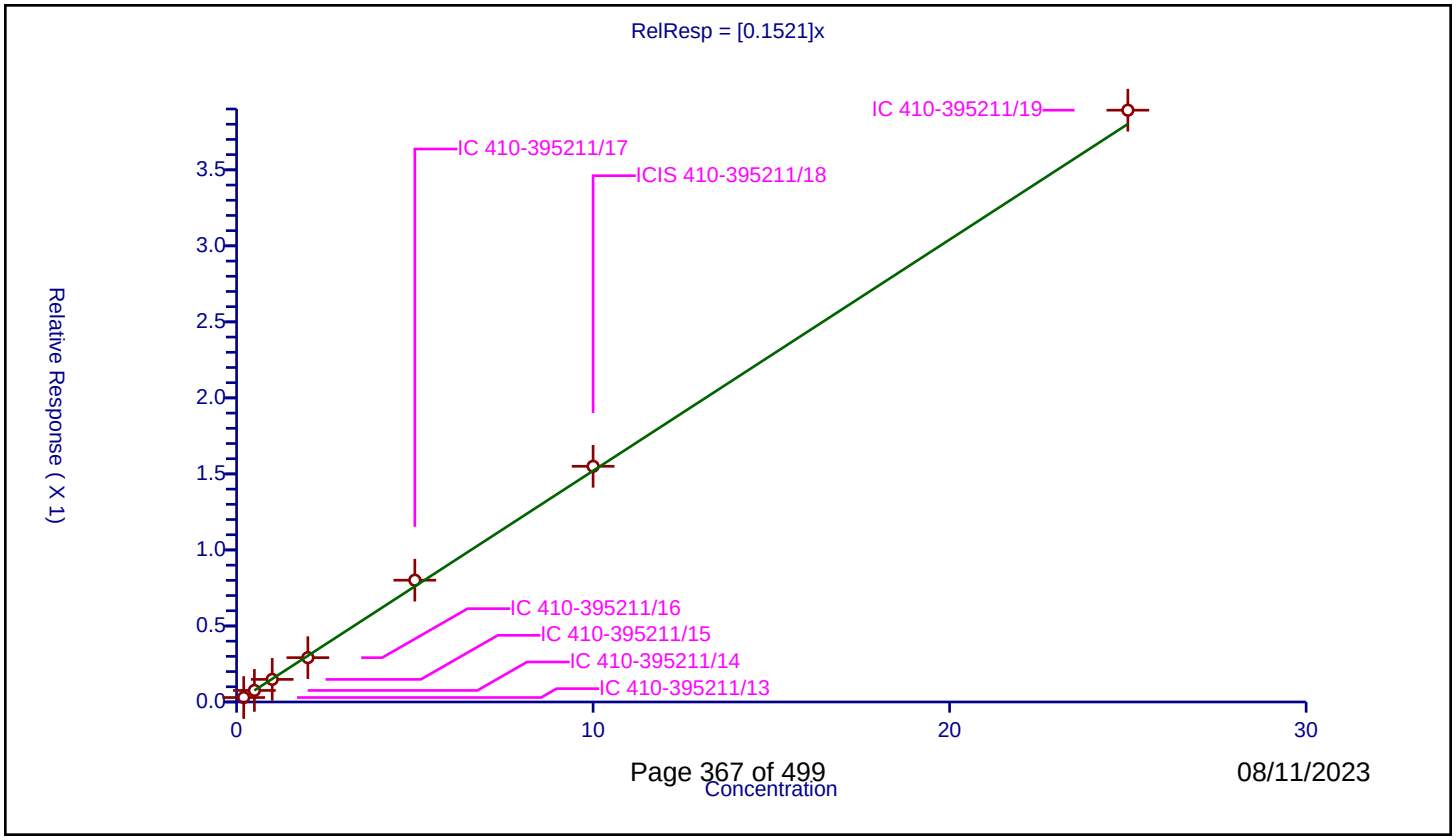
Curve Coefficients

Intercept:	0
Slope:	0.1521

Error Coefficients

Standard Error:	220000
Relative Standard Error:	3.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.029399	10.0	1118395.0	0.146996	Y
2	IC 410-395211/14	0.5	0.076008	10.0	1161459.0	0.152016	Y
3	IC 410-395211/15	1.0	0.148622	10.0	1176004.0	0.148622	Y
4	IC 410-395211/16	2.0	0.291646	10.0	1187709.0	0.145823	Y
5	IC 410-395211/17	5.0	0.801111	10.0	1170924.0	0.160222	Y
6	ICIS 410-395211/18	10.0	1.55019	10.0	1214109.0	0.155019	Y
7	IC 410-395211/19	25.0	3.892232	10.0	1273416.0	0.155689	Y



Calibration / N-Propylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

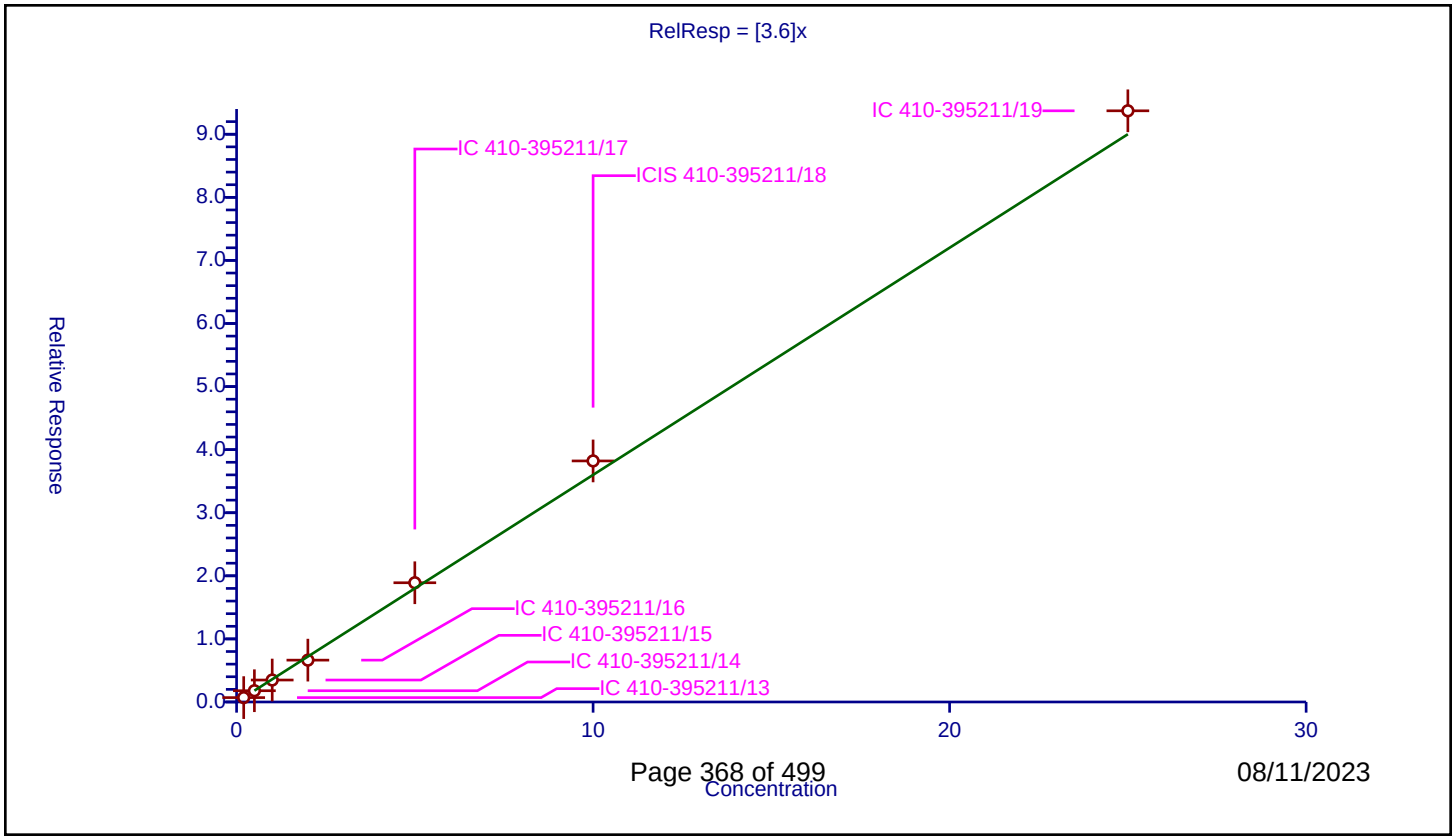
Curve Coefficients

Intercept:	0
Slope:	3.6

Error Coefficients

Standard Error:	5320000
Relative Standard Error:	5.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.69589	10.0	1118395.0	3.47945	Y
2	IC 410-395211/14	0.5	1.786271	10.0	1161459.0	3.572541	Y
3	IC 410-395211/15	1.0	3.48185	10.0	1176004.0	3.48185	Y
4	IC 410-395211/16	2.0	6.634689	10.0	1187709.0	3.317345	Y
5	IC 410-395211/17	5.0	18.902106	10.0	1170924.0	3.780421	Y
6	ICIS 410-395211/18	10.0	38.213134	10.0	1214109.0	3.821313	Y
7	IC 410-395211/19	25.0	93.717654	10.0	1273416.0	3.748706	Y



Calibration / 2-Chlorotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

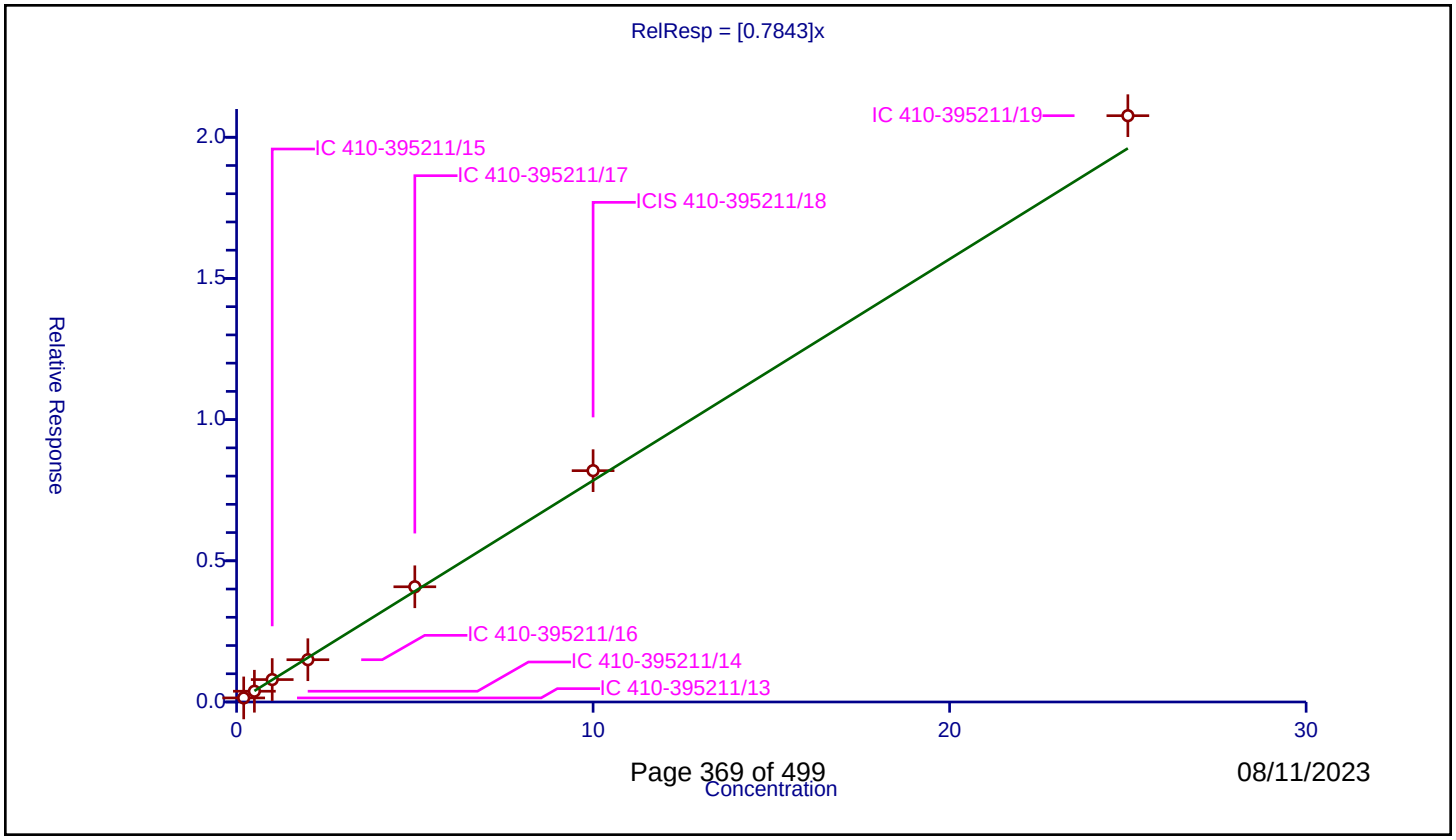
Curve Coefficients

Intercept:	0
Slope:	0.7843

Error Coefficients

Standard Error:	1170000
Relative Standard Error:	5.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.143786	10.0	1118395.0	0.718932	Y
2	IC 410-395211/14	0.5	0.381124	10.0	1161459.0	0.762248	Y
3	IC 410-395211/15	1.0	0.794147	10.0	1176004.0	0.794147	Y
4	IC 410-395211/16	2.0	1.497606	10.0	1187709.0	0.748803	Y
5	IC 410-395211/17	5.0	4.08012	10.0	1170924.0	0.816024	Y
6	ICIS 410-395211/18	10.0	8.192386	10.0	1214109.0	0.819239	Y
7	IC 410-395211/19	25.0	20.764087	10.0	1273416.0	0.830563	Y



Calibration / 1,3,5-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

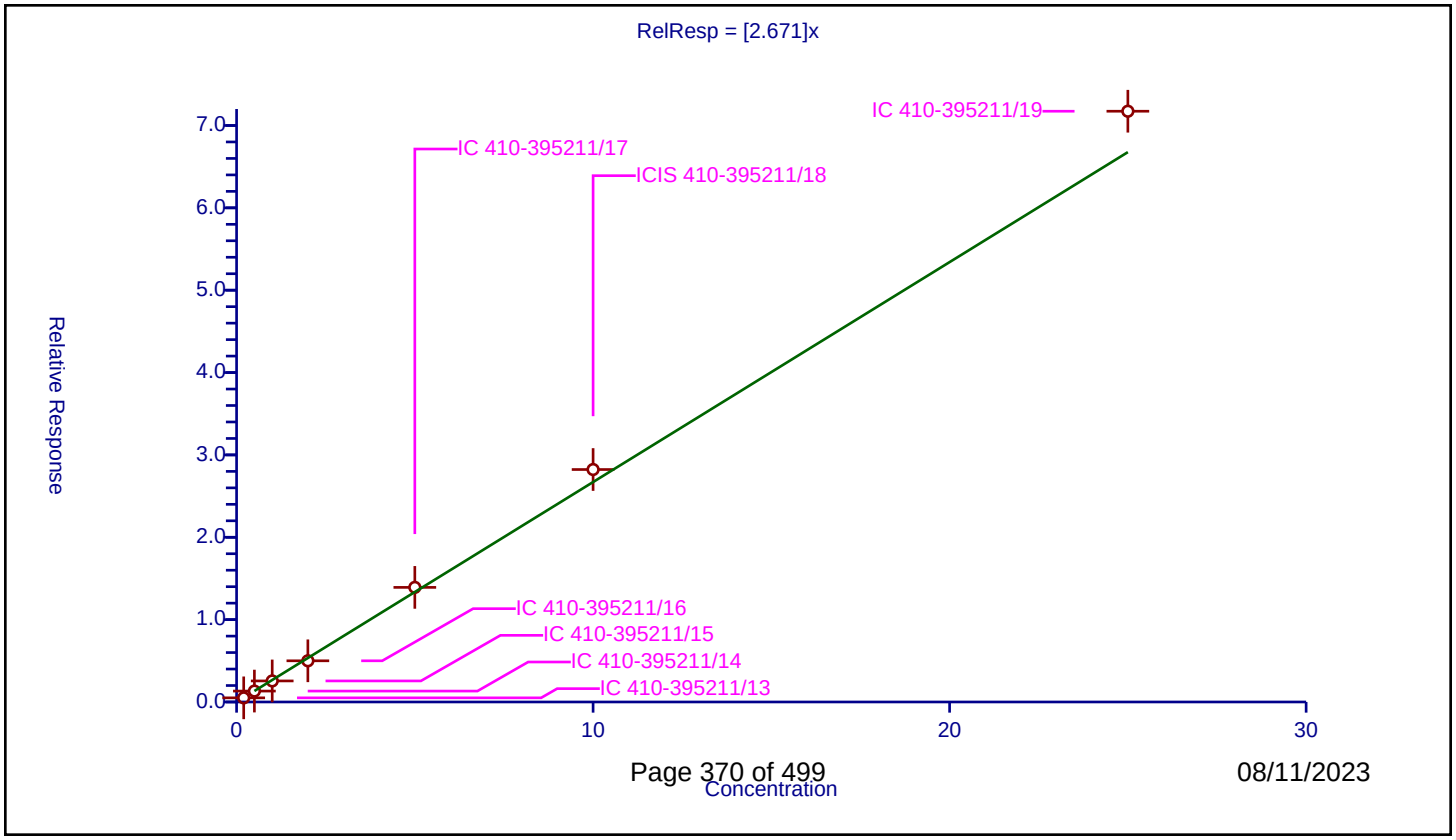
Curve Coefficients

Intercept:	0
Slope:	2.671

Error Coefficients

Standard Error:	4050000
Relative Standard Error:	5.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.502595	10.0	1118395.0	2.512976	Y
2	IC 410-395211/14	0.5	1.324816	10.0	1161459.0	2.649633	Y
3	IC 410-395211/15	1.0	2.555663	10.0	1176004.0	2.555663	Y
4	IC 410-395211/16	2.0	5.000442	10.0	1187709.0	2.500221	Y
5	IC 410-395211/17	5.0	13.916471	10.0	1170924.0	2.783294	Y
6	ICIS 410-395211/18	10.0	28.225093	10.0	1214109.0	2.822509	Y
7	IC 410-395211/19	25.0	71.732709	10.0	1273416.0	2.869308	Y



Calibration / 4-Chlorotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

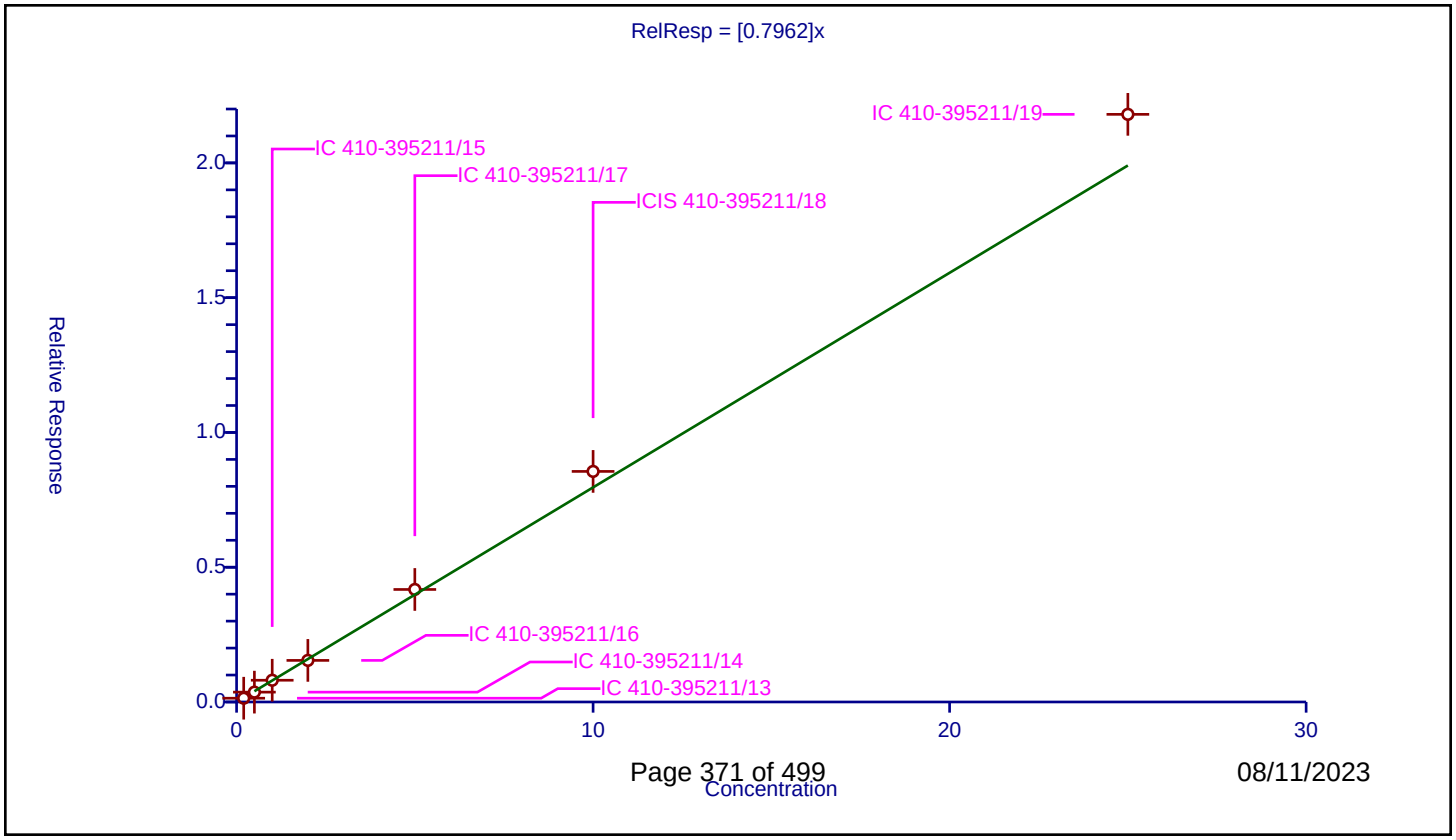
Curve Coefficients

Intercept:	0
Slope:	0.7962

Error Coefficients

Standard Error:	1230000
Relative Standard Error:	8.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.14038	10.0	1118395.0	0.701899	Y
2	IC 410-395211/14	0.5	0.365239	10.0	1161459.0	0.730478	Y
3	IC 410-395211/15	1.0	0.806681	10.0	1176004.0	0.806681	Y
4	IC 410-395211/16	2.0	1.543173	10.0	1187709.0	0.771586	Y
5	IC 410-395211/17	5.0	4.174848	10.0	1170924.0	0.83497	Y
6	ICIS 410-395211/18	10.0	8.554314	10.0	1214109.0	0.855431	Y
7	IC 410-395211/19	25.0	21.802373	10.0	1273416.0	0.872095	Y



Calibration / tert-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

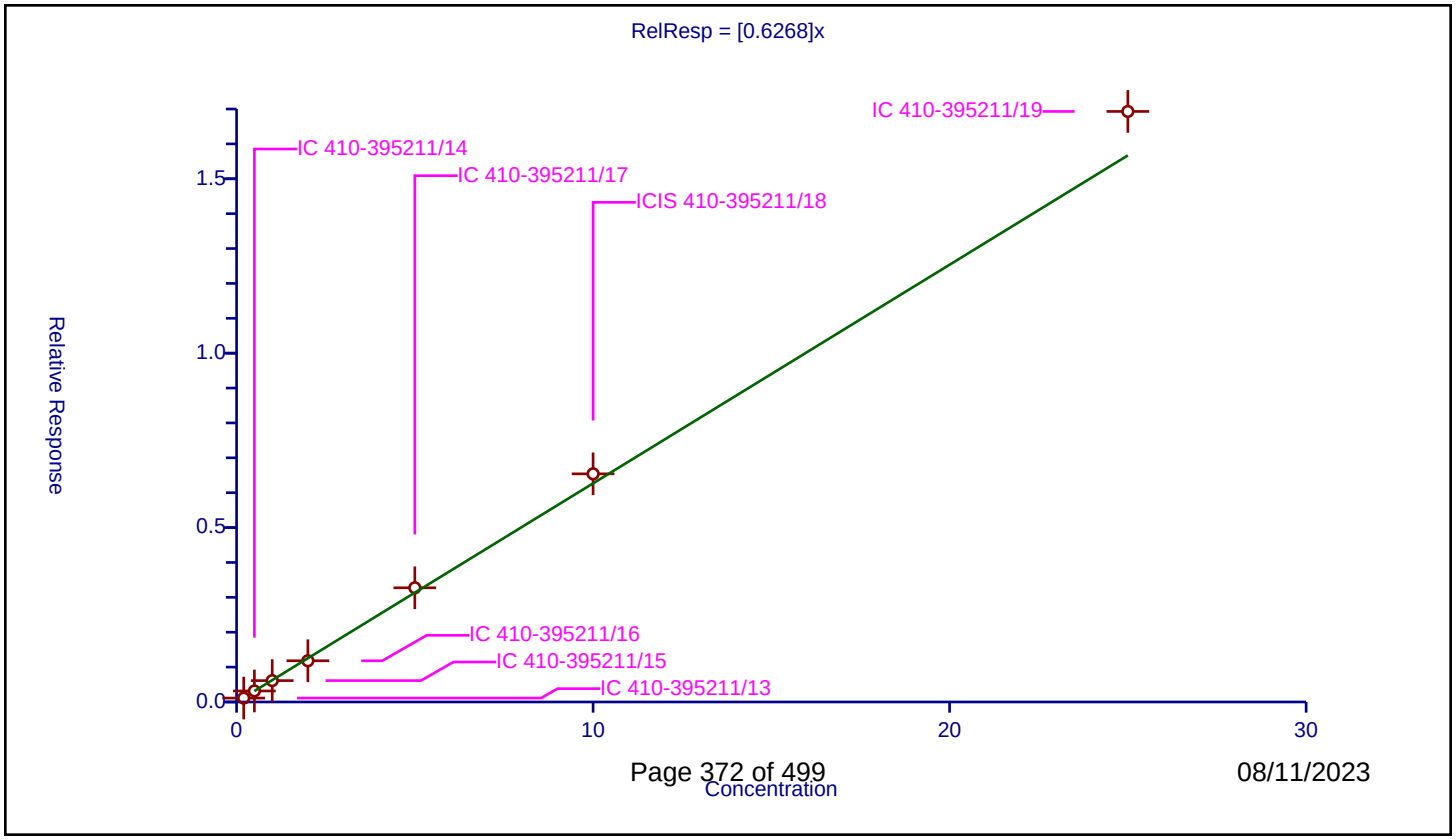
Curve Coefficients

Intercept:	0
Slope:	0.6268

Error Coefficients

Standard Error:	953000
Relative Standard Error:	6.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.113109	10.0	1118395.0	0.565543	Y
2	IC 410-395211/14	0.5	0.316421	10.0	1161459.0	0.632842	Y
3	IC 410-395211/15	1.0	0.612396	10.0	1176004.0	0.612396	Y
4	IC 410-395211/16	2.0	1.181603	10.0	1187709.0	0.590801	Y
5	IC 410-395211/17	5.0	3.274286	10.0	1170924.0	0.654857	Y
6	ICIS 410-395211/18	10.0	6.540805	10.0	1214109.0	0.65408	Y
7	IC 410-395211/19	25.0	16.93021	10.0	1273416.0	0.677208	Y



Calibration / Pentachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

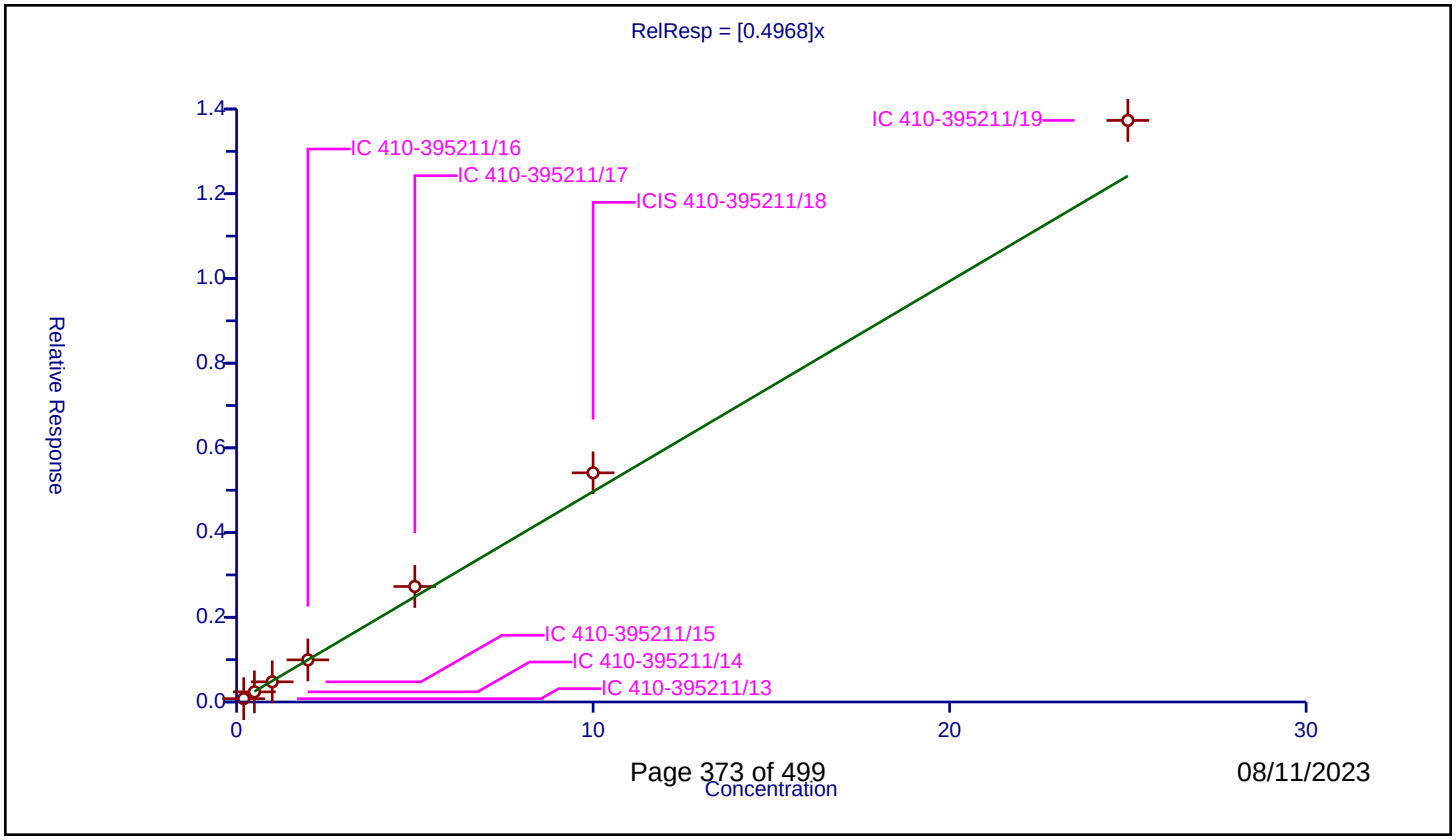
Curve Coefficients

Intercept:	0
Slope:	0.4968

Error Coefficients

Standard Error:	776000
Relative Standard Error:	11.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.078085	10.0	1118395.0	0.390426	Y
2	IC 410-395211/14	0.5	0.239027	10.0	1161459.0	0.478054	Y
3	IC 410-395211/15	1.0	0.476112	10.0	1176004.0	0.476112	Y
4	IC 410-395211/16	2.0	0.994739	10.0	1187709.0	0.497369	Y
5	IC 410-395211/17	5.0	2.727069	10.0	1170924.0	0.545414	Y
6	ICIS 410-395211/18	10.0	5.410626	10.0	1214109.0	0.541063	Y
7	IC 410-395211/19	25.0	13.730619	10.0	1273416.0	0.549225	Y



Calibration / 1,2,4-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

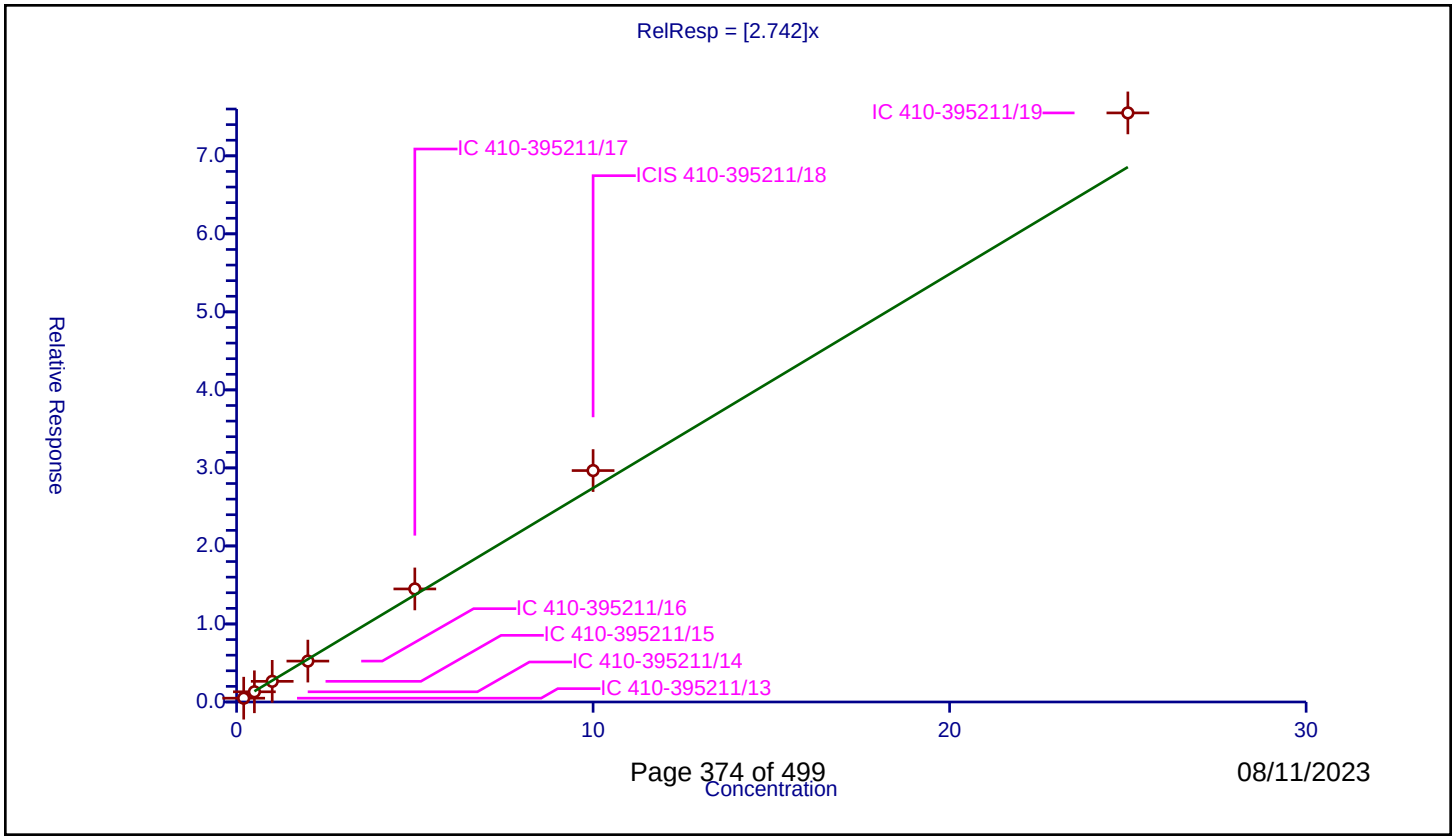
Curve Coefficients

Intercept:	0
Slope:	2.742

Error Coefficients

Standard Error:	4260000
Relative Standard Error:	8.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.485562	10.0	1118395.0	2.427809	Y
2	IC 410-395211/14	0.5	1.308113	10.0	1161459.0	2.616227	Y
3	IC 410-395211/15	1.0	2.647049	10.0	1176004.0	2.647049	Y
4	IC 410-395211/16	2.0	5.242303	10.0	1187709.0	2.621151	Y
5	IC 410-395211/17	5.0	14.489378	10.0	1170924.0	2.897876	Y
6	ICIS 410-395211/18	10.0	29.660945	10.0	1214109.0	2.966094	Y
7	IC 410-395211/19	25.0	75.501038	10.0	1273416.0	3.020042	Y



Calibration / sec-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

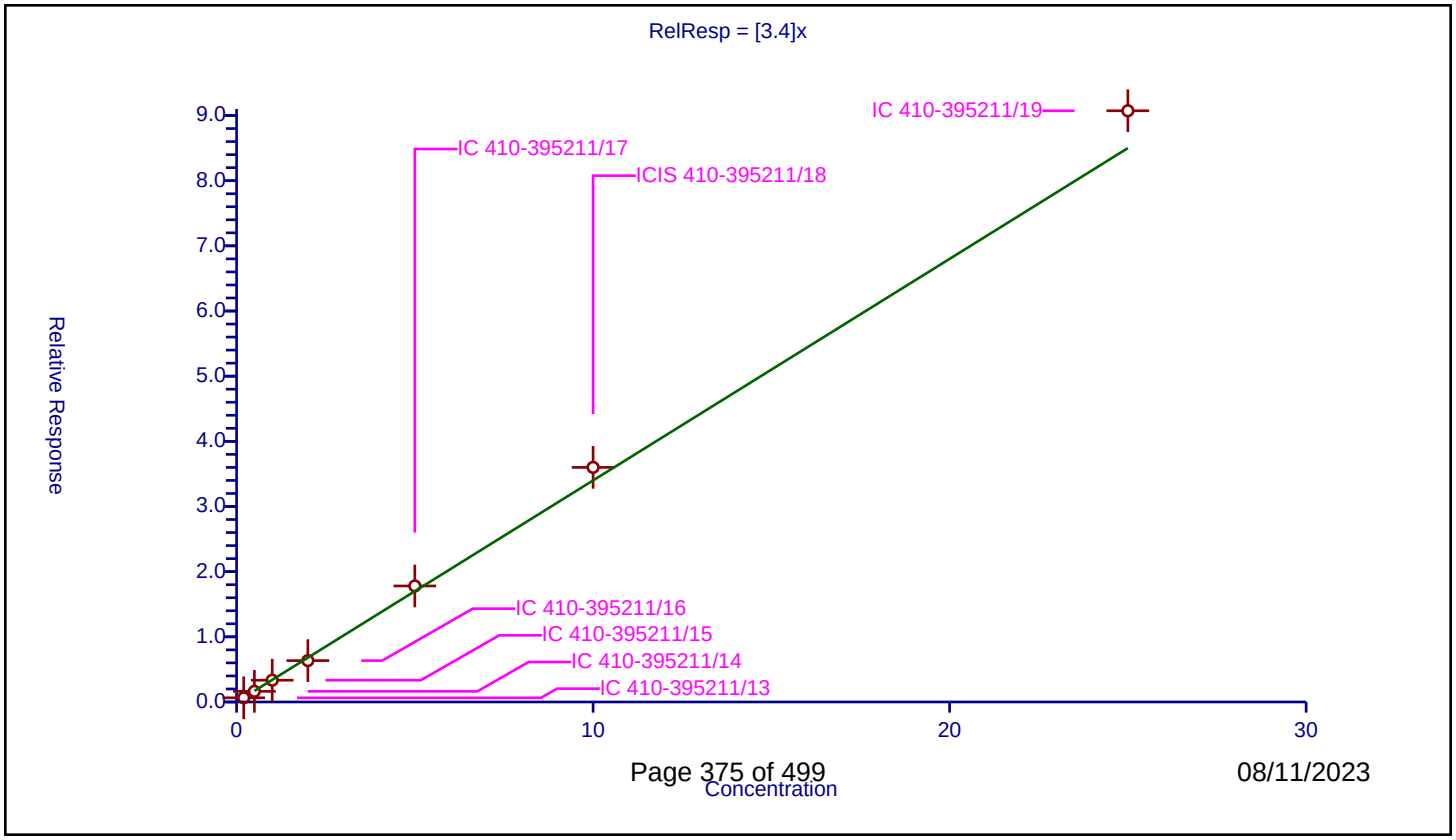
Curve Coefficients

Intercept:	0
Slope:	3.4

Error Coefficients

Standard Error:	5130000
Relative Standard Error:	5.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.644334	10.0	1118395.0	3.22167	Y
2	IC 410-395211/14	0.5	1.636812	10.0	1161459.0	3.273624	Y
3	IC 410-395211/15	1.0	3.340278	10.0	1176004.0	3.340278	Y
4	IC 410-395211/16	2.0	6.349215	10.0	1187709.0	3.174608	Y
5	IC 410-395211/17	5.0	17.802402	10.0	1170924.0	3.56048	Y
6	ICIS 410-395211/18	10.0	36.002649	10.0	1214109.0	3.600265	Y
7	IC 410-395211/19	25.0	90.728191	10.0	1273416.0	3.629128	Y



08/11/2023

Calibration / 1,3-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

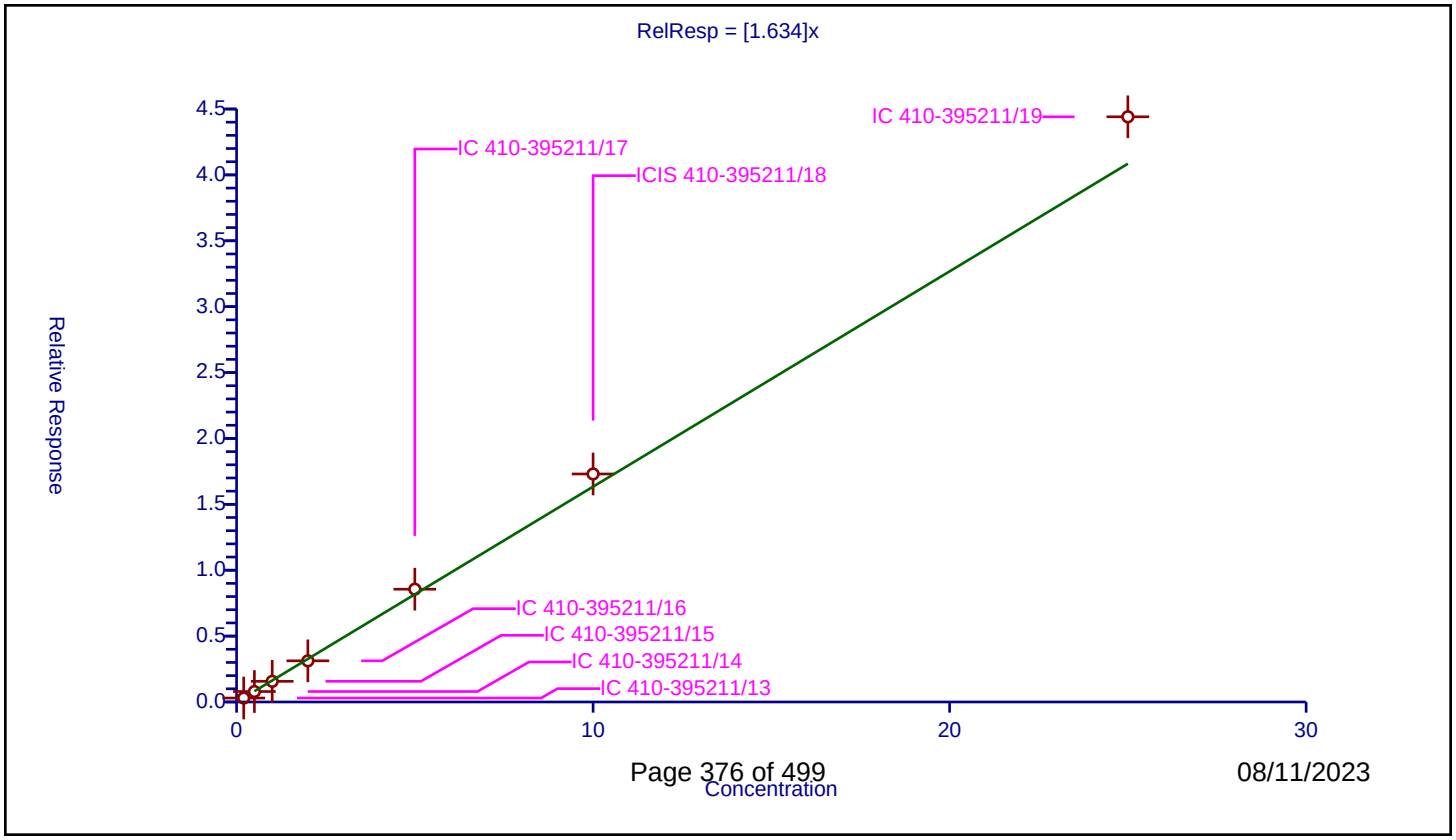
Curve Coefficients

Intercept:	0
Slope:	1.634

Error Coefficients

Standard Error:	2500000
Relative Standard Error:	6.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.299876	10.0	1118395.0	1.499381	Y
2	IC 410-395211/14	0.5	0.795164	10.0	1161459.0	1.590327	Y
3	IC 410-395211/15	1.0	1.566942	10.0	1176004.0	1.566942	Y
4	IC 410-395211/16	2.0	3.124385	10.0	1187709.0	1.562192	Y
5	IC 410-395211/17	5.0	8.559095	10.0	1170924.0	1.711819	Y
6	ICIS 410-395211/18	10.0	17.303693	10.0	1214109.0	1.730369	Y
7	IC 410-395211/19	25.0	44.408834	10.0	1273416.0	1.776353	Y



Calibration / 4-Isopropyltoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

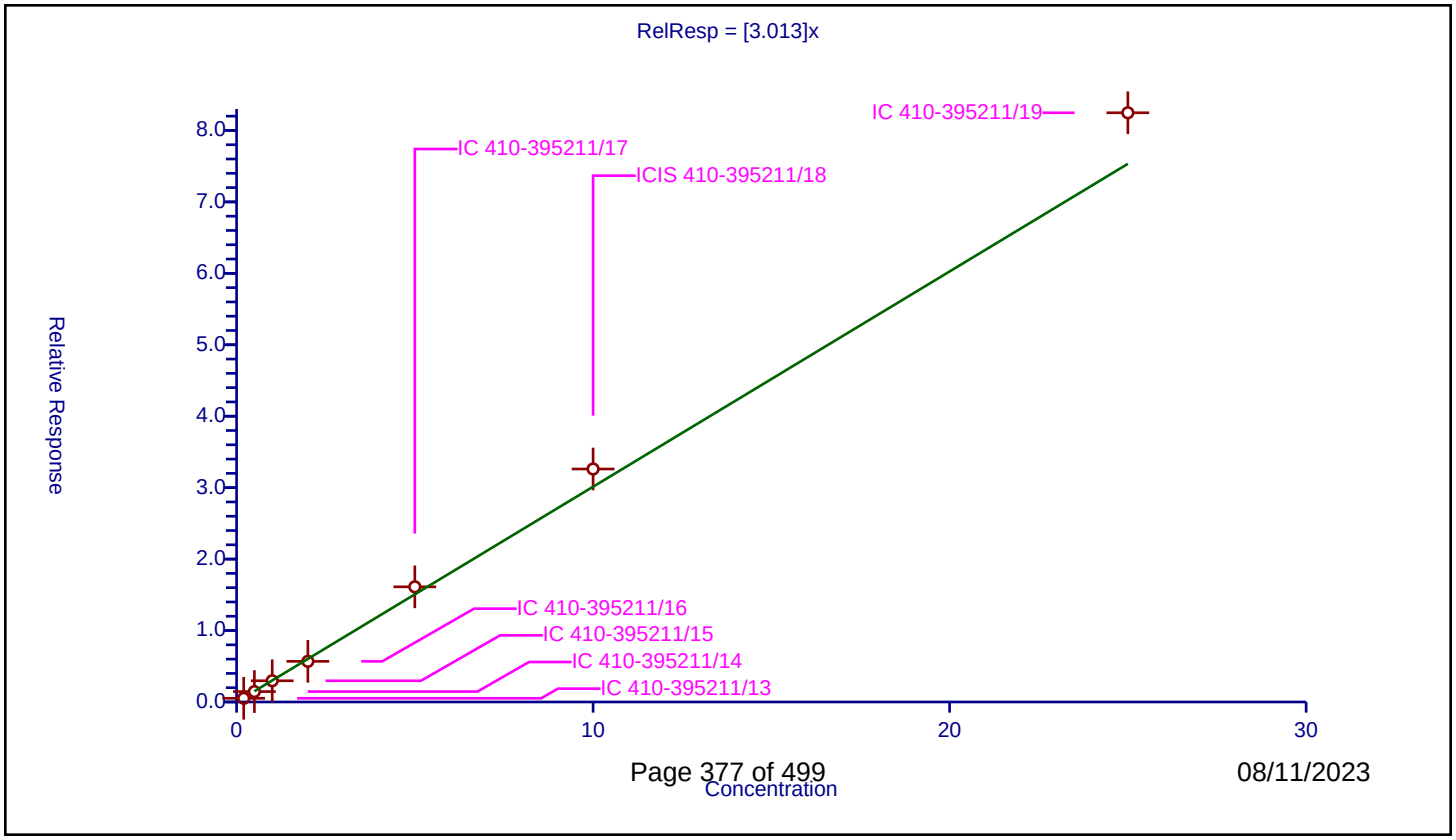
Curve Coefficients

Intercept:	0
Slope:	3.013

Error Coefficients

Standard Error:	4660000
Relative Standard Error:	8.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.515113	10.0	1118395.0	2.575566	Y
2	IC 410-395211/14	0.5	1.45932	10.0	1161459.0	2.918639	Y
3	IC 410-395211/15	1.0	2.970143	10.0	1176004.0	2.970143	Y
4	IC 410-395211/16	2.0	5.686528	10.0	1187709.0	2.843264	Y
5	IC 410-395211/17	5.0	16.118809	10.0	1170924.0	3.223762	Y
6	ICIS 410-395211/18	10.0	32.611512	10.0	1214109.0	3.261151	Y
7	IC 410-395211/19	25.0	82.473449	10.0	1273416.0	3.298938	Y



Calibration / 1,4-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

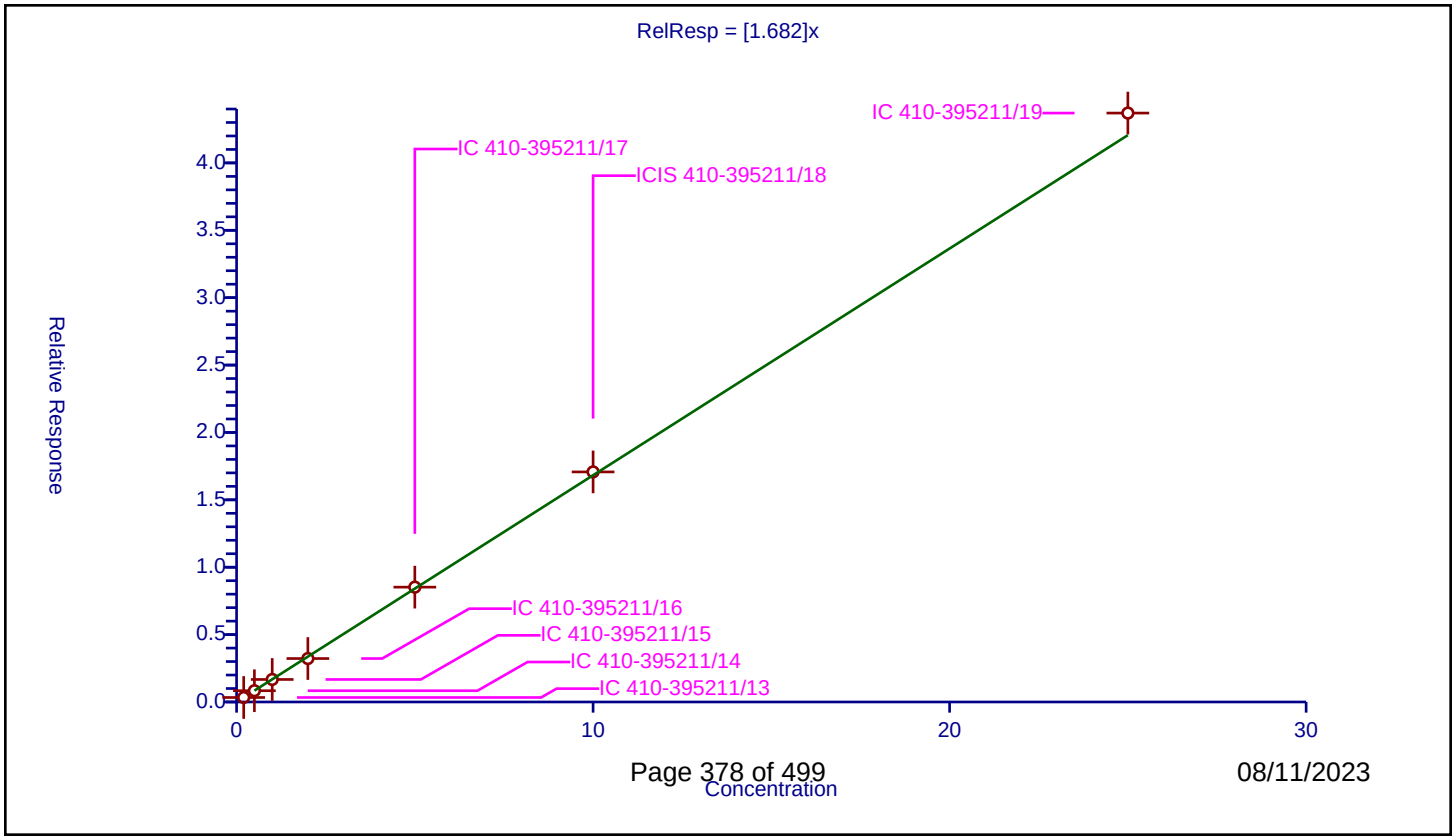
Curve Coefficients

Intercept:	0
Slope:	1.682

Error Coefficients

Standard Error:	2460000
Relative Standard Error:	2.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.332512	10.0	1118395.0	1.662561	Y
2	IC 410-395211/14	0.5	0.835535	10.0	1161459.0	1.671071	Y
3	IC 410-395211/15	1.0	1.671823	10.0	1176004.0	1.671823	Y
4	IC 410-395211/16	2.0	3.223559	10.0	1187709.0	1.611779	Y
5	IC 410-395211/17	5.0	8.521228	10.0	1170924.0	1.704246	Y
6	ICIS 410-395211/18	10.0	17.072133	10.0	1214109.0	1.707213	Y
7	IC 410-395211/19	25.0	43.699027	10.0	1273416.0	1.747961	Y



Calibration / 1,2,3-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

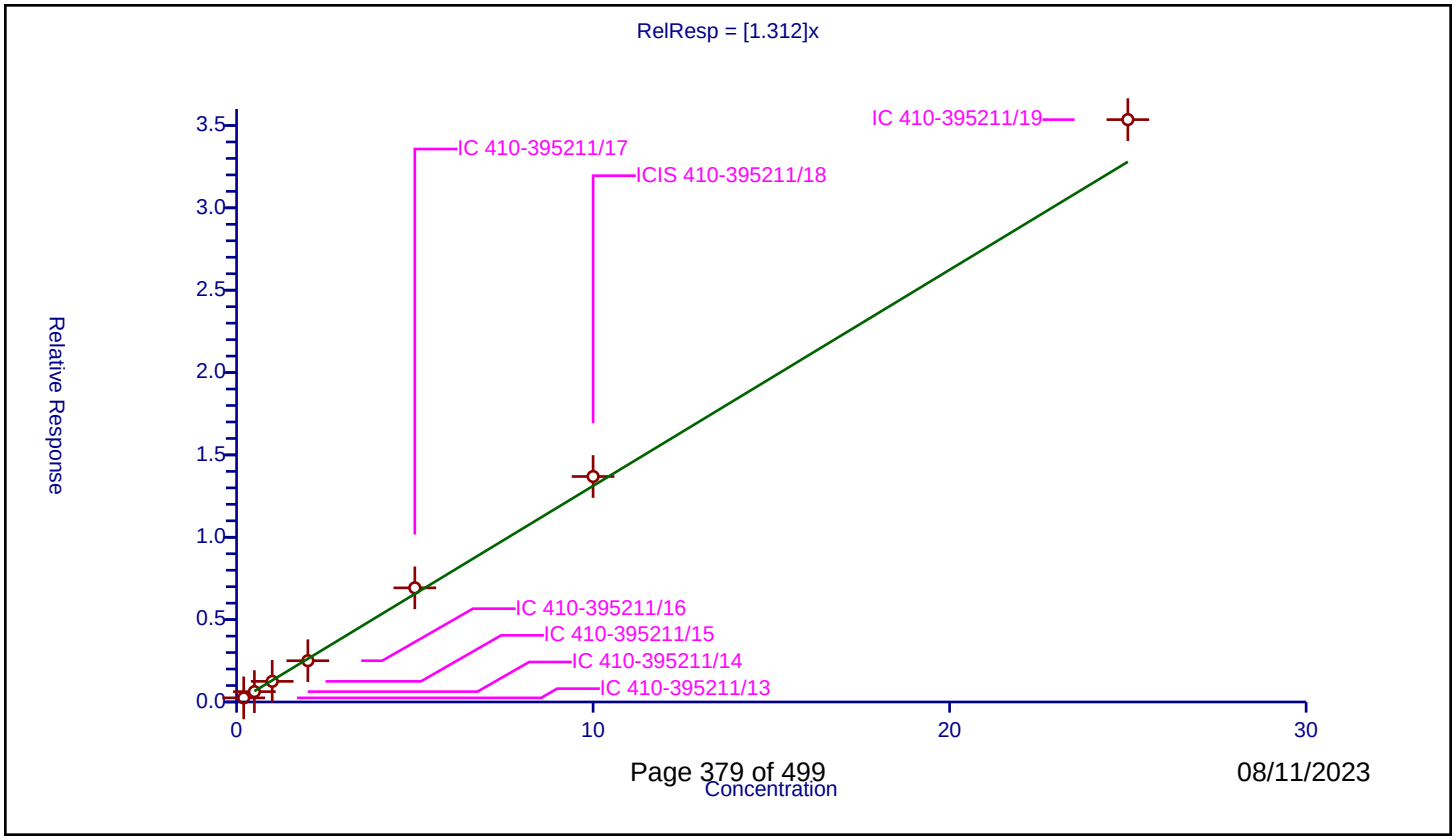
Curve Coefficients

Intercept:	0
Slope:	1.312

Error Coefficients

Standard Error:	1990000
Relative Standard Error:	5.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.250341	10.0	1118395.0	1.251704	Y
2	IC 410-395211/14	0.5	0.628322	10.0	1161459.0	1.256644	Y
3	IC 410-395211/15	1.0	1.252844	10.0	1176004.0	1.252844	Y
4	IC 410-395211/16	2.0	2.50606	10.0	1187709.0	1.25303	Y
5	IC 410-395211/17	5.0	6.928315	10.0	1170924.0	1.385663	Y
6	ICIS 410-395211/18	10.0	13.689331	10.0	1214109.0	1.368933	Y
7	IC 410-395211/19	25.0	35.355877	10.0	1273416.0	1.414235	Y



Calibration / Benzyl chloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

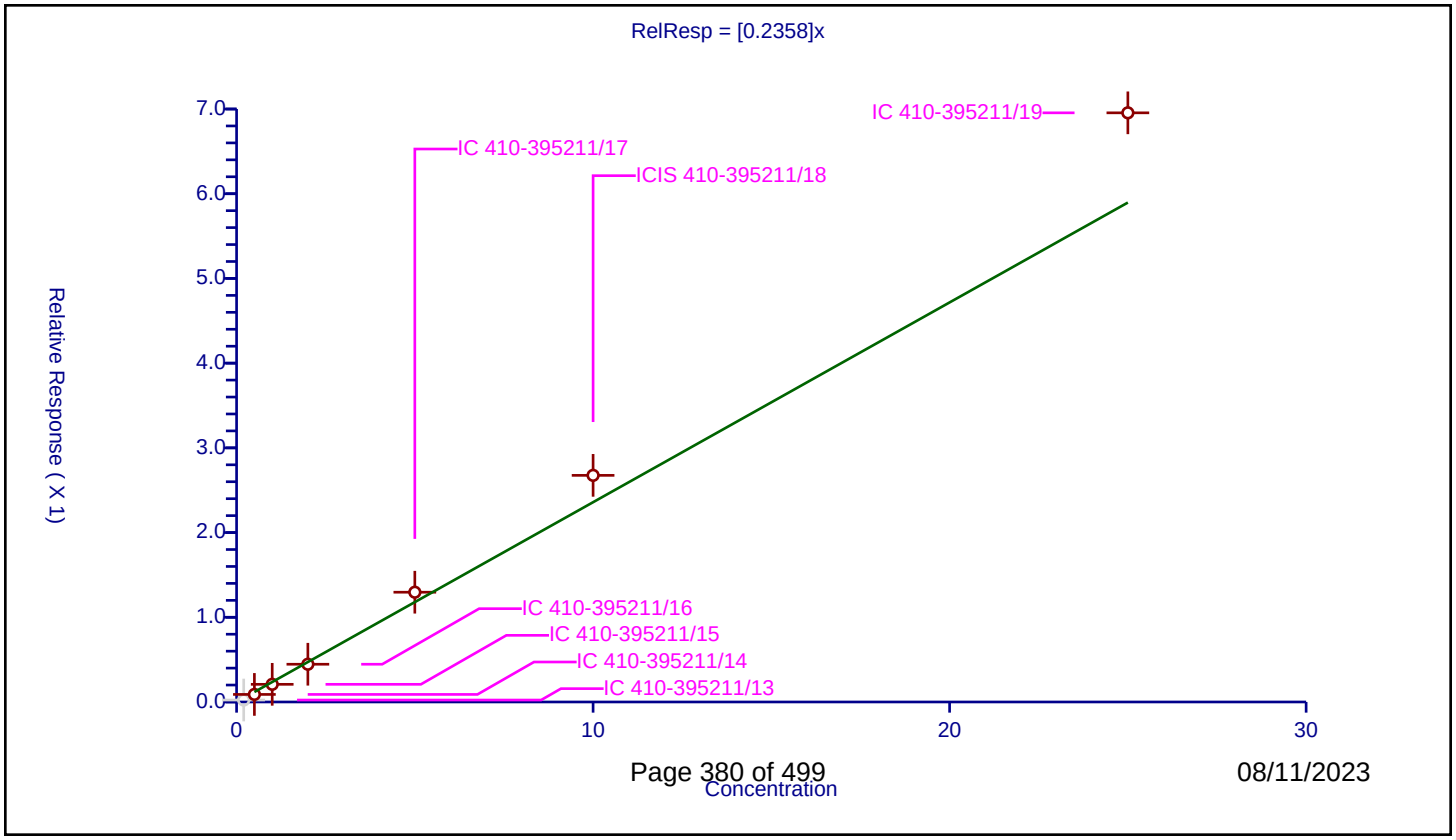
Curve Coefficients

Intercept:	0
Slope:	0.2358

Error Coefficients

Standard Error:	428000
Relative Standard Error:	16.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.967

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.023194	10.0	1118395.0	0.11597	N
2	IC 410-395211/14	0.5	0.089396	10.0	1161459.0	0.178792	Y
3	IC 410-395211/15	1.0	0.208562	10.0	1176004.0	0.208562	Y
4	IC 410-395211/16	2.0	0.445488	10.0	1187709.0	0.222744	Y
5	IC 410-395211/17	5.0	1.295746	10.0	1170924.0	0.259149	Y
6	ICIS 410-395211/18	10.0	2.675452	10.0	1214109.0	0.267545	Y
7	IC 410-395211/19	25.0	6.954946	10.0	1273416.0	0.278198	Y



Calibration / n-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

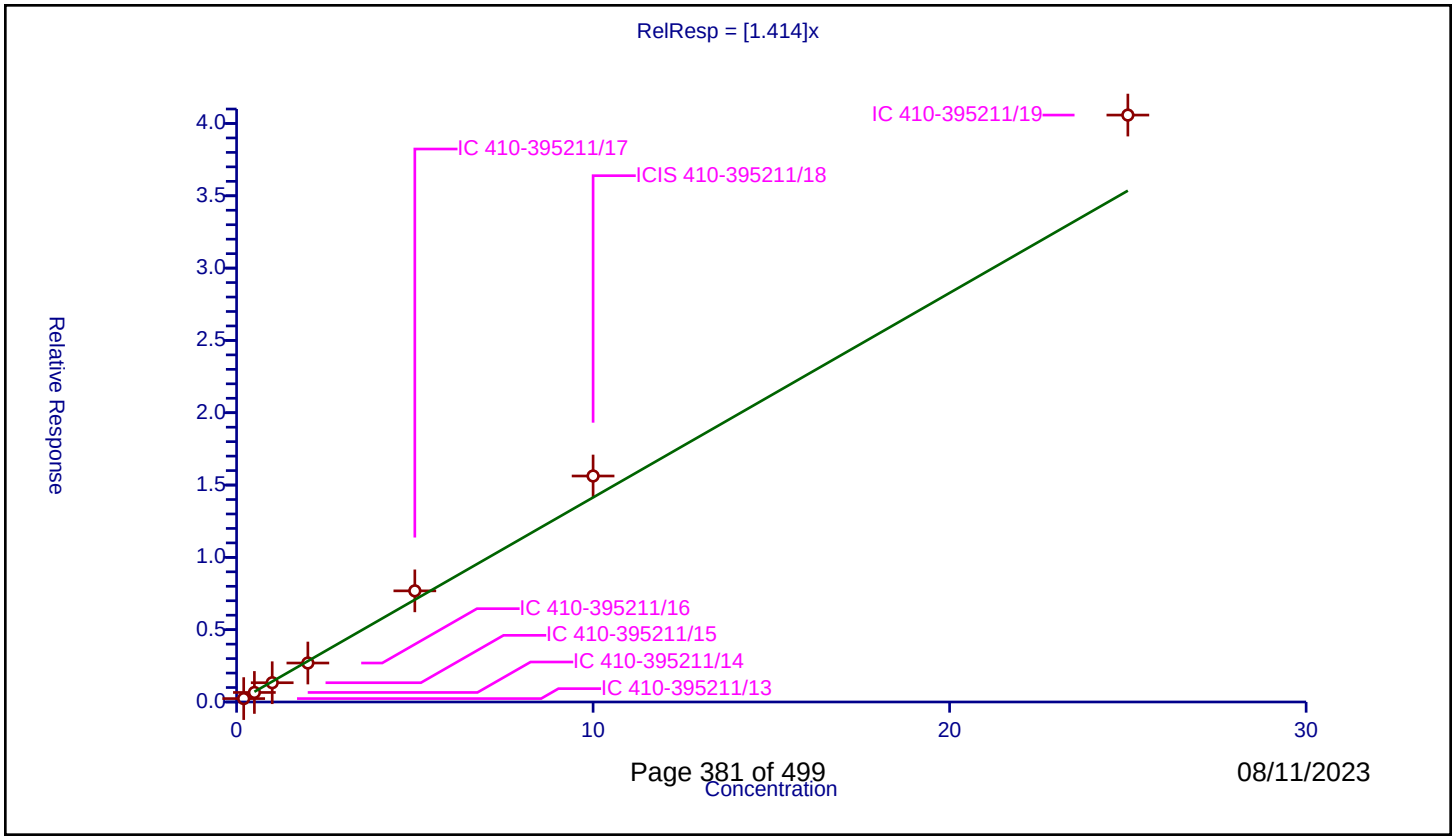
Curve Coefficients

Intercept:	0
Slope:	1.414

Error Coefficients

Standard Error:	2280000
Relative Standard Error:	11.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.23565	10.0	1118395.0	1.178251	Y
2	IC 410-395211/14	0.5	0.658921	10.0	1161459.0	1.317842	Y
3	IC 410-395211/15	1.0	1.332572	10.0	1176004.0	1.332572	Y
4	IC 410-395211/16	2.0	2.694928	10.0	1187709.0	1.347464	Y
5	IC 410-395211/17	5.0	7.6847	10.0	1170924.0	1.53694	Y
6	ICIS 410-395211/18	10.0	15.625879	10.0	1214109.0	1.562588	Y
7	IC 410-395211/19	25.0	40.581813	10.0	1273416.0	1.623273	Y



Calibration / 1,2-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

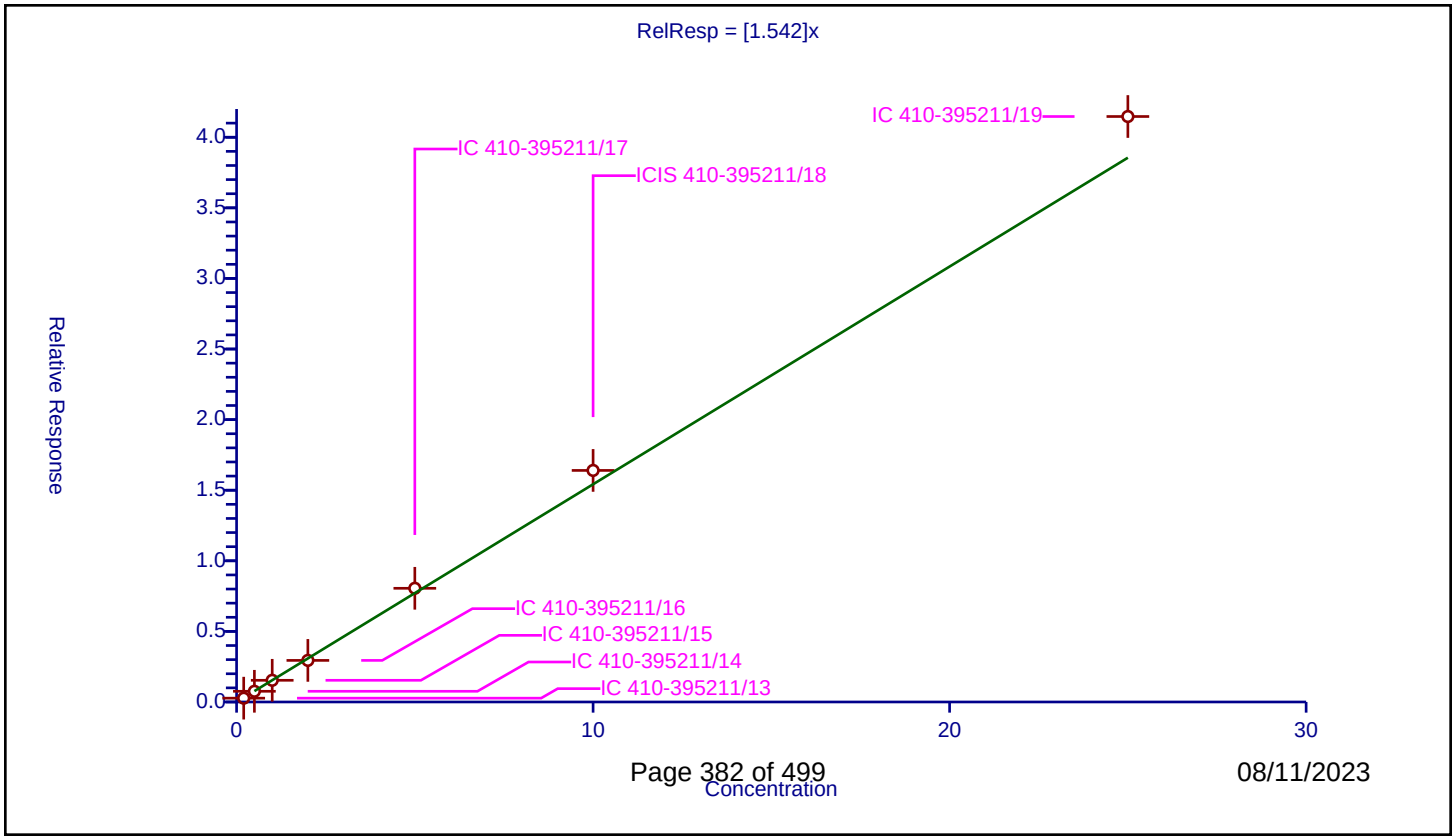
Curve Coefficients

Intercept:	0
Slope:	1.542

Error Coefficients

Standard Error:	2340000
Relative Standard Error:	6.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.271237	10.0	1118395.0	1.356185	Y
2	IC 410-395211/14	0.5	0.759028	10.0	1161459.0	1.518056	Y
3	IC 410-395211/15	1.0	1.537308	10.0	1176004.0	1.537308	Y
4	IC 410-395211/16	2.0	2.945848	10.0	1187709.0	1.472924	Y
5	IC 410-395211/17	5.0	8.053708	10.0	1170924.0	1.610742	Y
6	ICIS 410-395211/18	10.0	16.400982	10.0	1214109.0	1.640098	Y
7	IC 410-395211/19	25.0	41.468774	10.0	1273416.0	1.658751	Y



Calibration / 1,2-Dibromo-3-Chloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

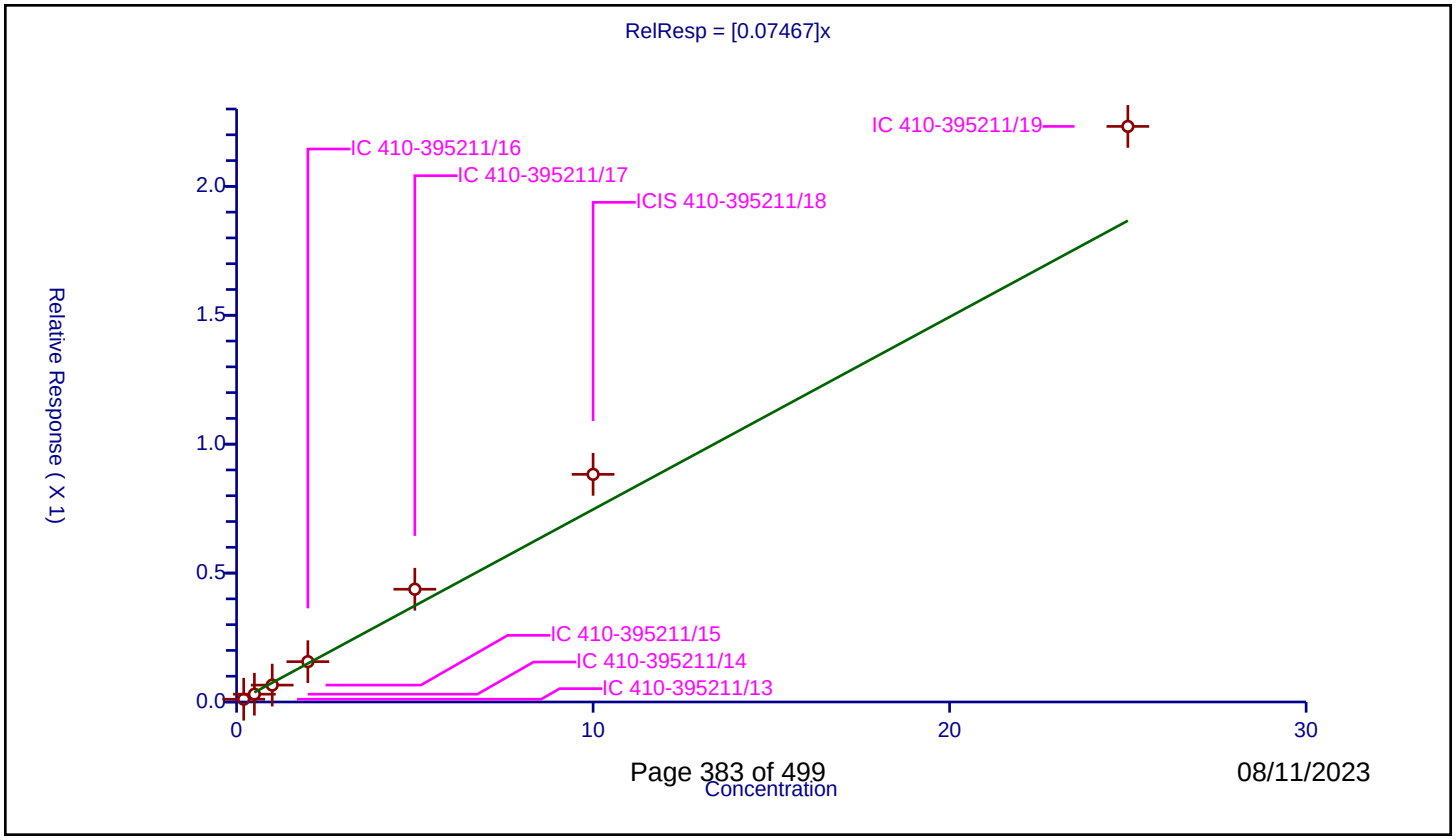
Curve Coefficients

Intercept:	0
Slope:	0.07467

Error Coefficients

Standard Error:	126000
Relative Standard Error:	19.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.958

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.010667	10.0	1118395.0	0.053335	Y
2	IC 410-395211/14	0.5	0.030272	10.0	1161459.0	0.060545	Y
3	IC 410-395211/15	1.0	0.065561	10.0	1176004.0	0.065561	Y
4	IC 410-395211/16	2.0	0.156436	10.0	1187709.0	0.078218	Y
5	IC 410-395211/17	5.0	0.43733	10.0	1170924.0	0.087466	Y
6	ICIS 410-395211/18	10.0	0.882936	10.0	1214109.0	0.088294	Y
7	IC 410-395211/19	25.0	2.232515	10.0	1273416.0	0.089301	Y



Calibration / 1,3,5-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

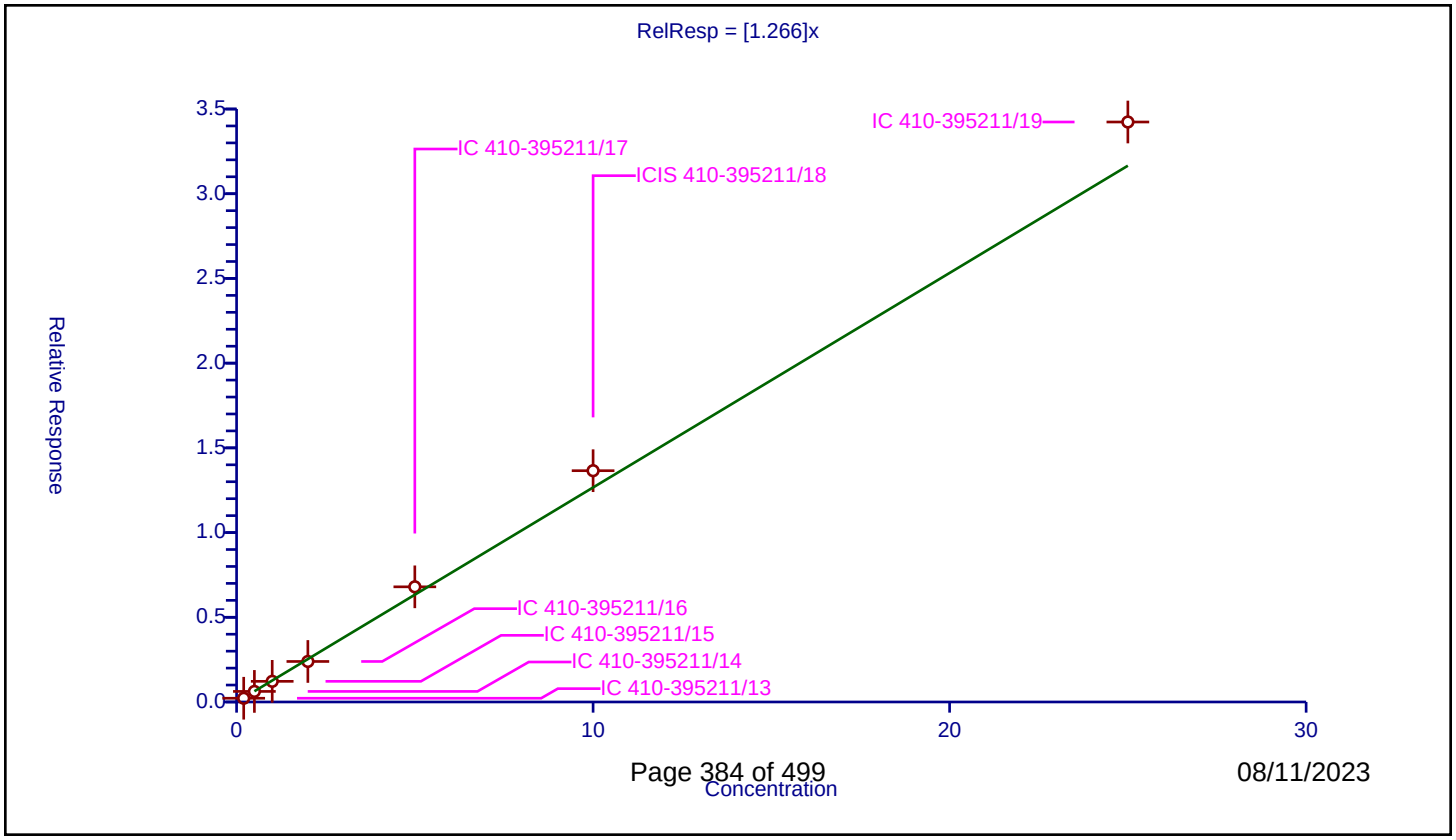
Curve Coefficients

Intercept:	0
Slope:	1.266

Error Coefficients

Standard Error:	1940000
Relative Standard Error:	8.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.22112	10.0	1118395.0	1.105602	Y
2	IC 410-395211/14	0.5	0.624361	10.0	1161459.0	1.248723	Y
3	IC 410-395211/15	1.0	1.219069	10.0	1176004.0	1.219069	Y
4	IC 410-395211/16	2.0	2.391402	10.0	1187709.0	1.195701	Y
5	IC 410-395211/17	5.0	6.797751	10.0	1170924.0	1.35955	Y
6	ICIS 410-395211/18	10.0	13.651254	10.0	1214109.0	1.365125	Y
7	IC 410-395211/19	25.0	34.234139	10.0	1273416.0	1.369366	Y



Calibration / 1,2,4-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

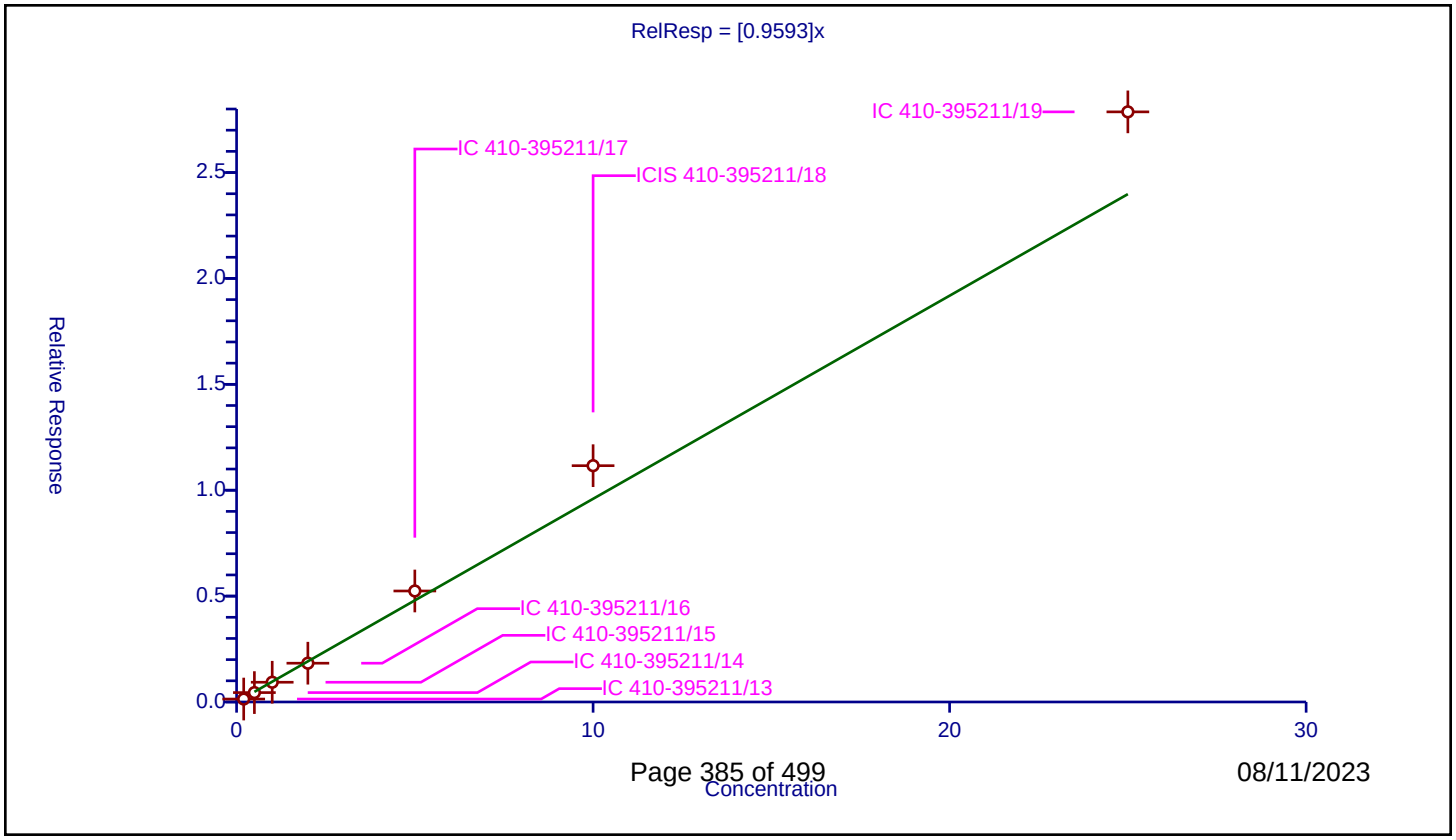
Curve Coefficients

Intercept:	0
Slope:	0.9593

Error Coefficients

Standard Error:	1570000
Relative Standard Error:	15.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.973

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.139754	10.0	1118395.0	0.698769	Y
2	IC 410-395211/14	0.5	0.444277	10.0	1161459.0	0.888555	Y
3	IC 410-395211/15	1.0	0.932948	10.0	1176004.0	0.932948	Y
4	IC 410-395211/16	2.0	1.831711	10.0	1187709.0	0.915856	Y
5	IC 410-395211/17	5.0	5.240938	10.0	1170924.0	1.048188	Y
6	ICIS 410-395211/18	10.0	11.158084	10.0	1214109.0	1.115808	Y
7	IC 410-395211/19	25.0	27.865803	10.0	1273416.0	1.114632	Y



Calibration / Hexachlorobutadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

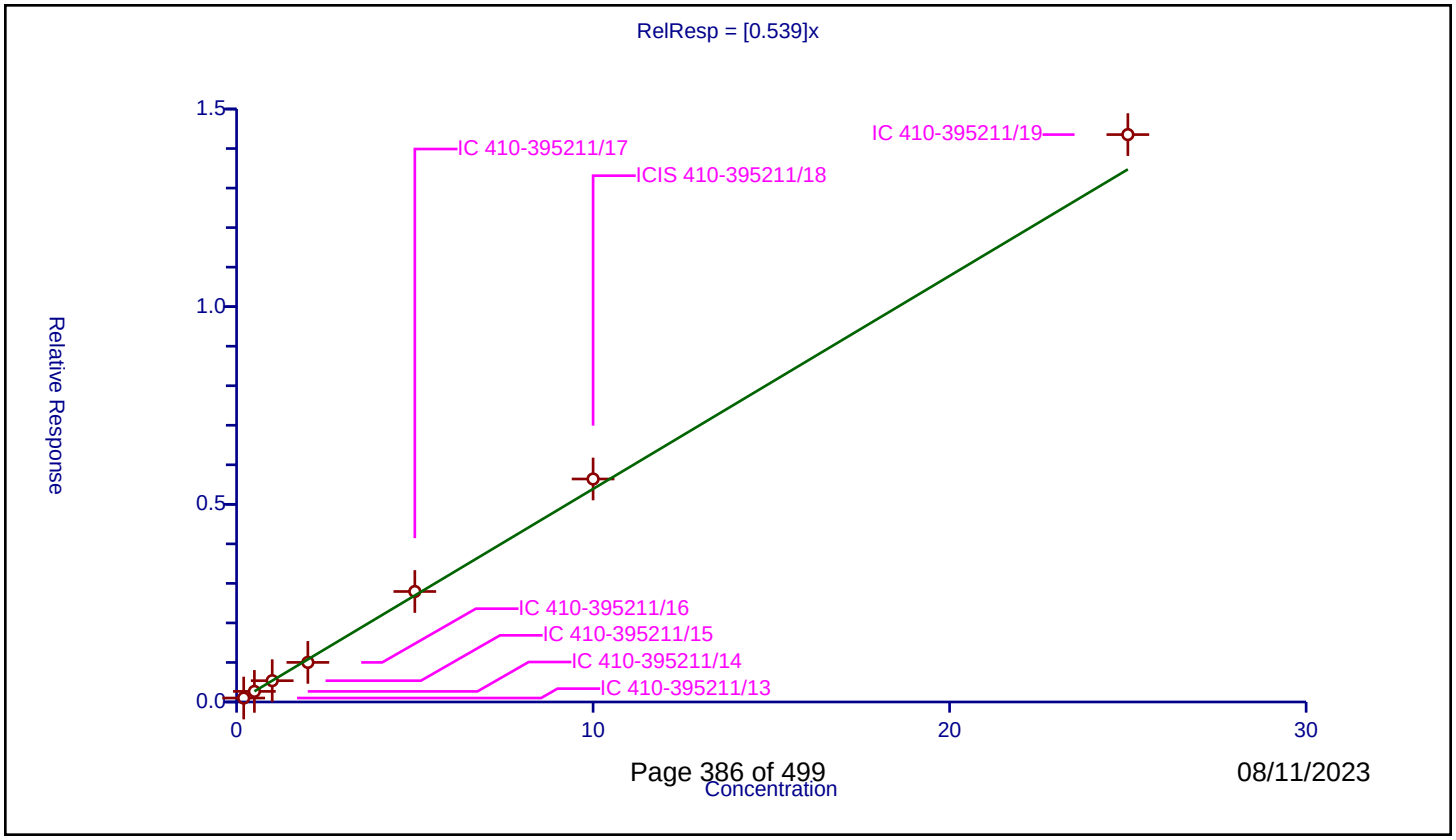
Curve Coefficients

Intercept:	0
Slope:	0.539

Error Coefficients

Standard Error:	810000
Relative Standard Error:	5.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.09992	10.0	1118395.0	0.4996	Y
2	IC 410-395211/14	0.5	0.268232	10.0	1161459.0	0.536463	Y
3	IC 410-395211/15	1.0	0.538672	10.0	1176004.0	0.538672	Y
4	IC 410-395211/16	2.0	1.001457	10.0	1187709.0	0.500729	Y
5	IC 410-395211/17	5.0	2.795211	10.0	1170924.0	0.559042	Y
6	ICIS 410-395211/18	10.0	5.640976	10.0	1214109.0	0.564098	Y
7	IC 410-395211/19	25.0	14.352945	10.0	1273416.0	0.574118	Y



Calibration / Naphthalene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

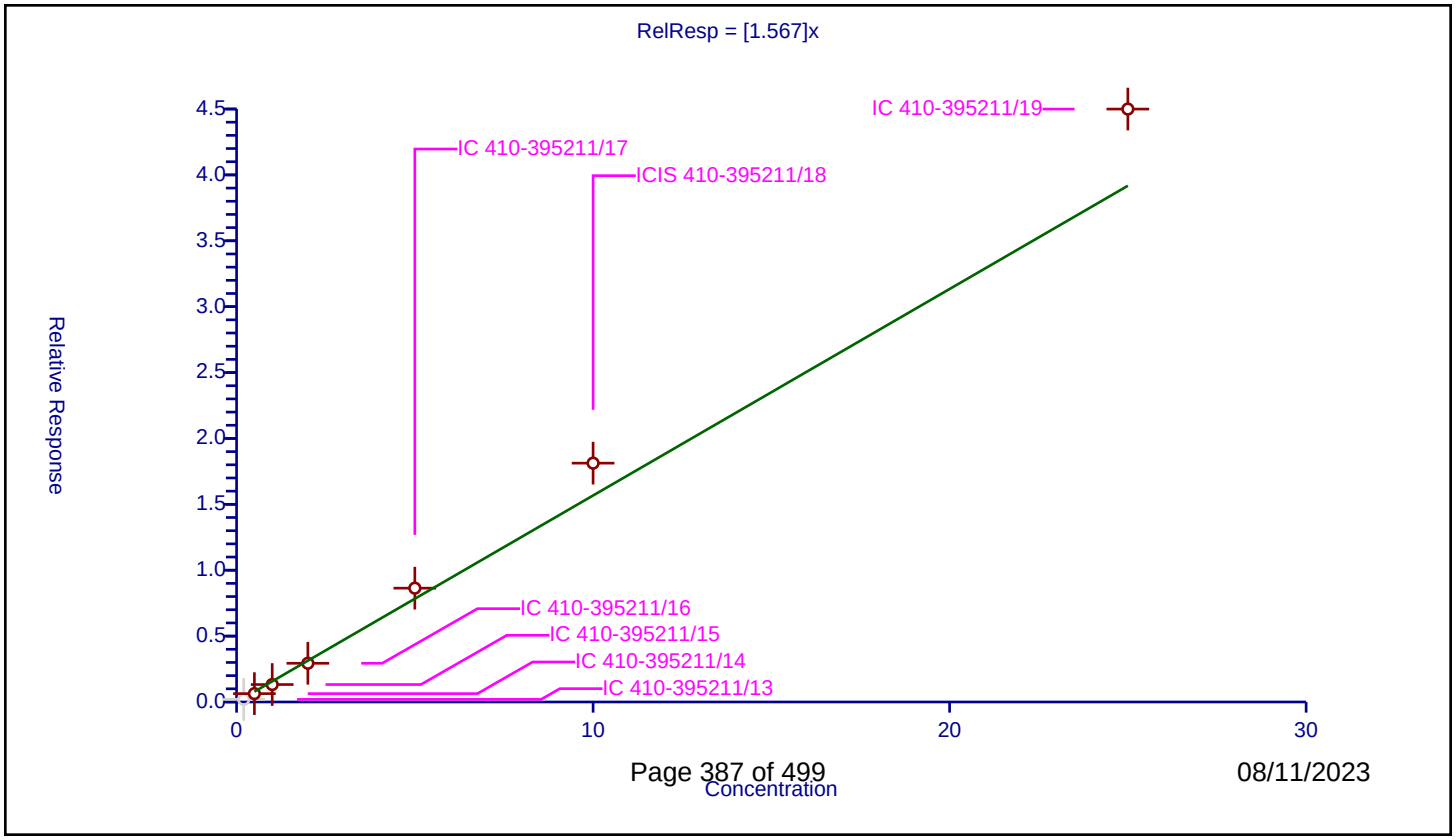
Curve Coefficients

Intercept:	0
Slope:	1.567

Error Coefficients

Standard Error:	2790000
Relative Standard Error:	15.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.970

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.197372	10.0	1118395.0	0.986861	N
2	IC 410-395211/14	0.5	0.634624	10.0	1161459.0	1.269248	Y
3	IC 410-395211/15	1.0	1.32395	10.0	1176004.0	1.32395	Y
4	IC 410-395211/16	2.0	2.937319	10.0	1187709.0	1.468659	Y
5	IC 410-395211/17	5.0	8.638665	10.0	1170924.0	1.727733	Y
6	ICIS 410-395211/18	10.0	18.125663	10.0	1214109.0	1.812566	Y
7	IC 410-395211/19	25.0	44.996325	10.0	1273416.0	1.799853	Y



Calibration / 1,2,3-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

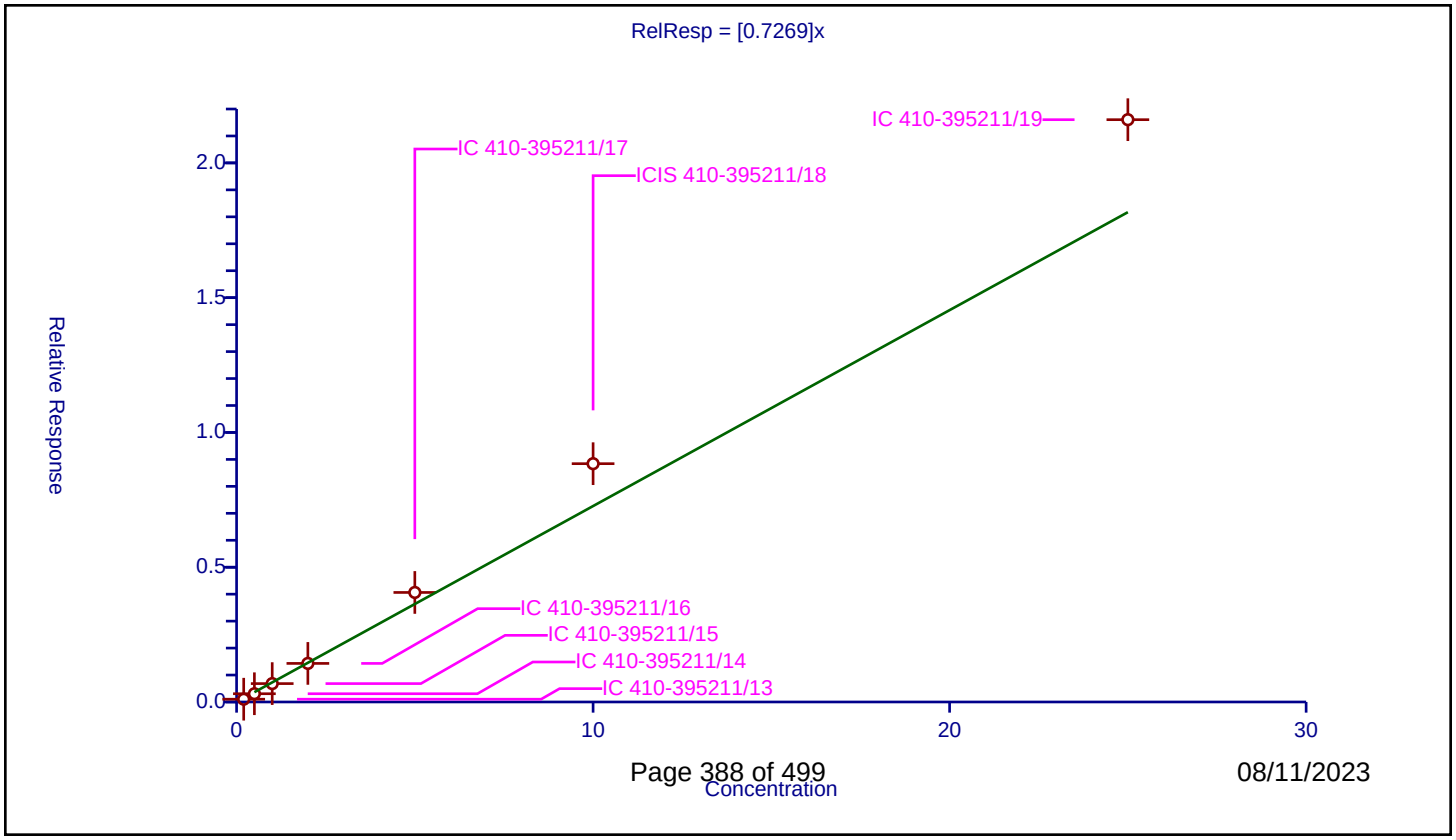
Curve Coefficients

Intercept:	0
Slope:	0.7269

Error Coefficients

Standard Error:	1220000
Relative Standard Error:	18.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.962

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-395211/13	0.2	0.103345	10.0	1118395.0	0.516723	Y
2	IC 410-395211/14	0.5	0.306408	10.0	1161459.0	0.612815	Y
3	IC 410-395211/15	1.0	0.681979	10.0	1176004.0	0.681979	Y
4	IC 410-395211/16	2.0	1.431352	10.0	1187709.0	0.715676	Y
5	IC 410-395211/17	5.0	4.06409	10.0	1170924.0	0.812818	Y
6	ICIS 410-395211/18	10.0	8.841282	10.0	1214109.0	0.884128	Y
7	IC 410-395211/19	25.0	21.604723	10.0	1273416.0	0.864189	Y



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136864-2

SDG No.:

Lab Sample ID: ICV 410-395211/11 Calibration Date: 07/10/2023 18:45

Instrument ID: 10193 Calib Start Date: 07/10/2023 15:50

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 07/10/2023 18:02

Lab File ID: CL10X10.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.2360	0.3152		6.68	5.00	33.6*	30.0
Dimethyl ether	Ave	0.3393	0.3226		4.75	5.00	-4.9	30.0
Acetonitrile	Ave	0.0146	0.0130		16.7	18.8	-10.8	30.0
Vinyl acetate	Ave	0.3256	0.3622		13.9	12.5	11.2	30.0
Ethyl acetate	Lin1		0.1018		2.07	2.50	-17.1	30.0
2-Chloroethyl vinyl ether	Ave	0.0941	0.1041		5.53	5.00	10.7	30.0
cis-1,4-Dichloro-2-butene	Lin1		0.0895		11.1	12.5	-10.8	30.0
Cyclohexanone	Lin2		0.2644		74.4	125	-40.5*	30.0

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X10.D
Lims ID: ICV Sm
Client ID:
Sample Type: ICV
Inject. Date: 10-Jul-2023 18:45:30 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0088548-011
Misc. Info.: ICV SM
Operator ID: knk41612 Instrument ID: 10193
Sublist:

Method: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 11-Jul-2023 21:38:50 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1649

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Chlorotrifluoroethene	116	1.642	1.648	-0.006	91	197795	5.00	7.91	M
3 Chlorodifluoromethane	51	1.684	1.697	-0.012	97	384585	5.00	6.68	
4 Dimethyl ether	45	1.727	1.739	-0.012	100	393602	5.00	4.75	
8 2-Chloro-1,1,1-Trifluoroethane	118	1.995	2.007	-0.012	35	393885	5.00	6.18	
27 Acetonitrile	41	3.324	3.318	0.006	31	59579	18.8	16.7	M
* 31 t-Butyl alcohol-d10 (IS)	65	3.538	3.550	-0.012	97	163935	50.0	50.0	
38 Vinyl acetate	43	4.428	4.446	-0.018	97	1104664	12.5	13.9	a
46 Ethyl acetate	43	5.385	5.379	0.006	98	62121	2.50	2.07	Ma
63 Isopropyl acetate	43	6.653	6.647	0.006	98	174201	2.50	2.41	a
* 65 Fluorobenzene (IS)	96	6.946	6.946	0.000	99	2440146	10.0	10.0	
75 n-Propyl acetate	61	8.006	7.994	0.012	99	37142	2.50	2.16	
79 2-Chloroethyl vinyl ether	63	8.543	8.543	0.000	91	127032	5.00	5.53	a
109 n-Butyl acetate	43	10.085	10.073	0.012	99	144708	2.50	2.12	
* 111 Chlorobenzene-d5 (IS)	117	10.658	10.658	0.000	84	1953617	10.0	10.0	
122 cis-1,4-Dichloro-2-butene	88	11.634	11.627	0.007	94	218459	12.5	11.1	a
123 Cyclohexanone	55	11.658	11.646	0.012	89	108381	125.0	74.4	
* 139 1,4-Dichlorobenzene-d4	152	12.627	12.621	0.006	93	1131305	10.0	10.0	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

MSV_LCS_V5ACE_00027	Amount Added:	6.25	Units: uL
MSV_LCS_CYC_00004	Amount Added:	12.50	Units: uL
MSV_LCS_LKB_00008	Amount Added:	25.00	Units: uL
MSV_LCS_2CEVE_00123	Amount Added:	12.50	Units: uL
MSV_LCS_SMFre_00051	Amount Added:	12.50	Units: uL
MSV_Q_QDME_00033	Amount Added:	5.00	Units: uL
MSV_HP25_ISO_00008	Amount Added:	1.00	Units: uL

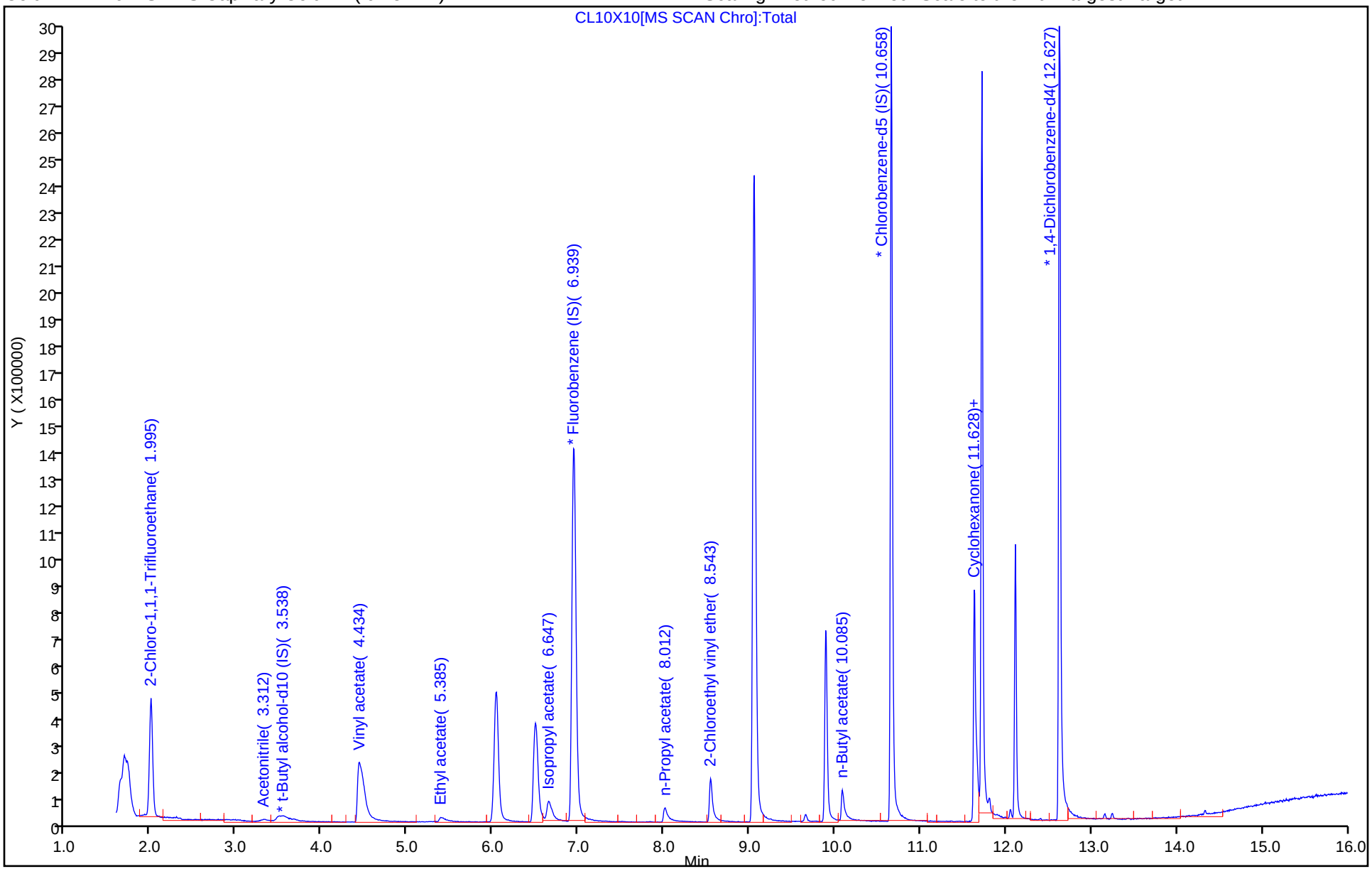
Report Date: 11-Jul-2023 21:38:50 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X10.D

Injection Date:	10-Jul-2023 18:45:30	Instrument ID:	10193	Operator ID:	knk41612
Lims ID:	ICV Sm			Worklist Smp#:	11
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

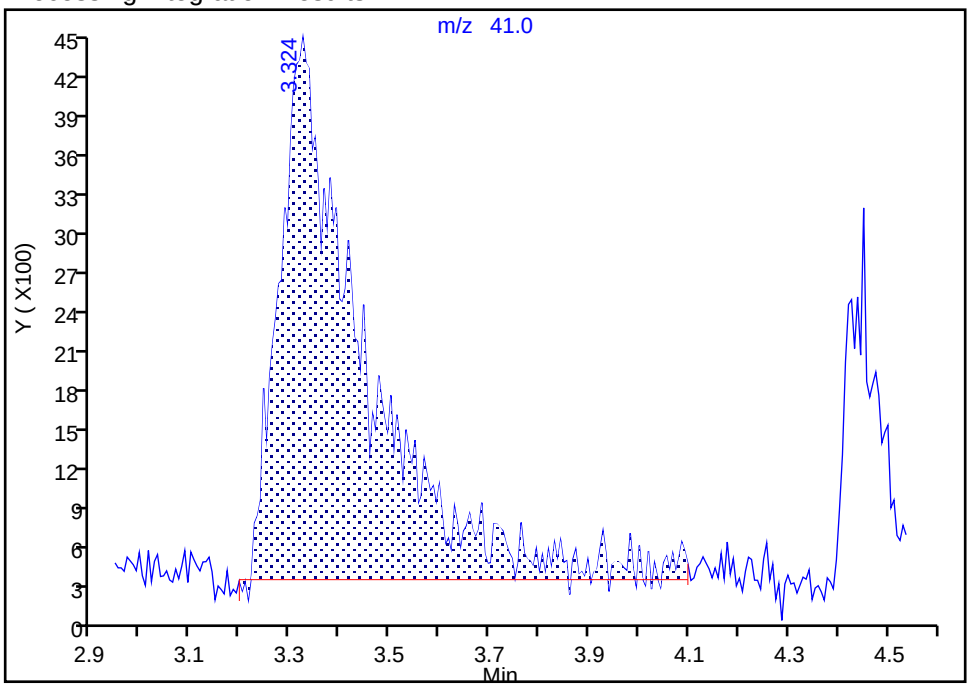
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X10.D				
Injection Date:	10-Jul-2023 18:45:30	Instrument ID:	10193		
Lims ID:	ICV Sm				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	10	Worklist Smp#:	11
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

27 Acetonitrile, CAS: 75-05-8

Signal: 1

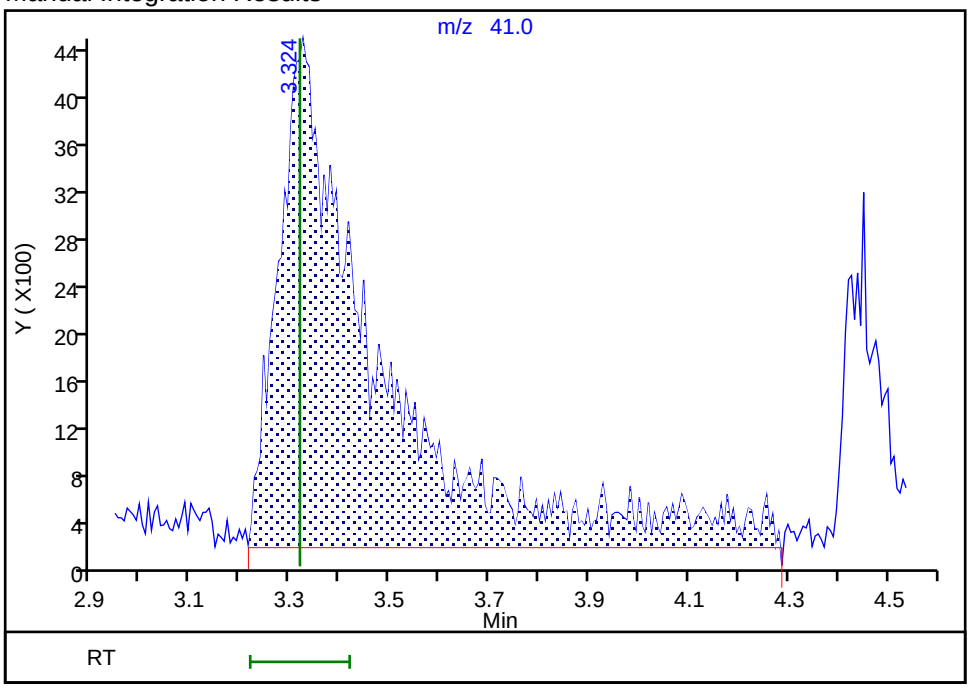
Processing Integration Results

RT: 3.32
Area: 48491
Amount: 12.620907
Amount Units: ug/l



Manual Integration Results

RT: 3.32
Area: 59579
Amount: 16.722117
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:20:05 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

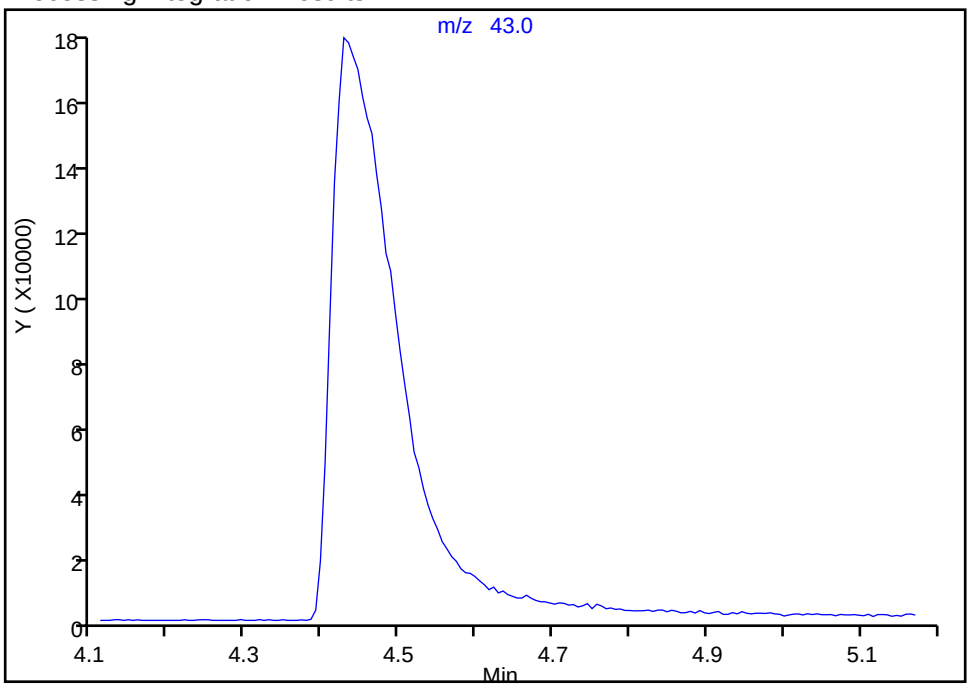
Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X10.D
Injection Date: 10-Jul-2023 18:45:30 Instrument ID: 10193
Lims ID: ICV Sm
Client ID:
Operator ID: knk41612 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

38 Vinyl acetate, CAS: 108-05-4

Signal: 1

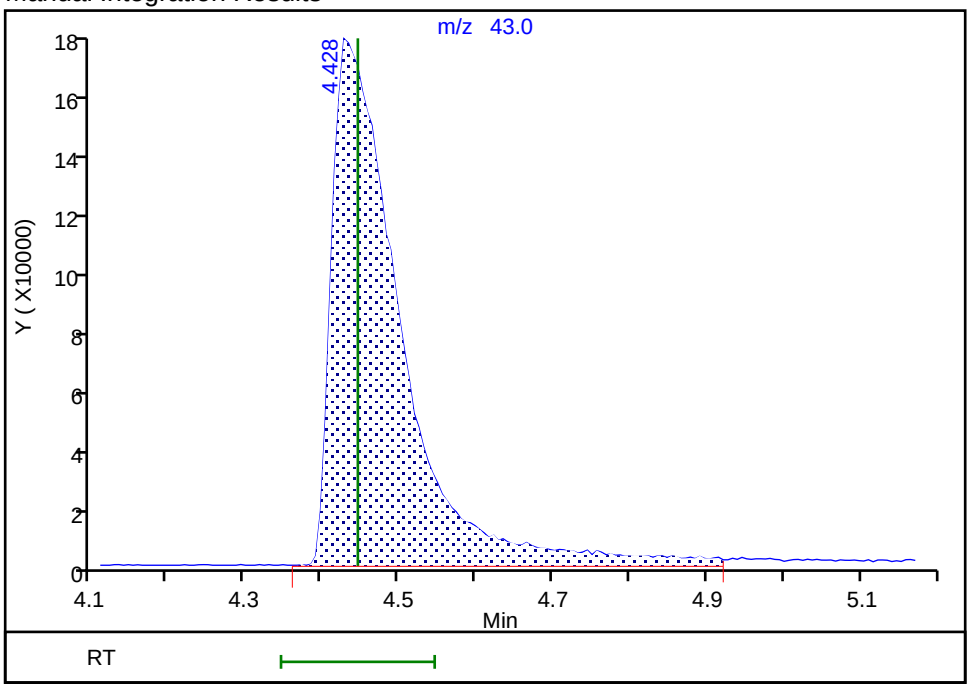
Not Detected
Expected RT: 4.45

Processing Integration Results



Manual Integration Results

RT: 4.43
Area: 1104664
Amount: 13.905235
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:07:43 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

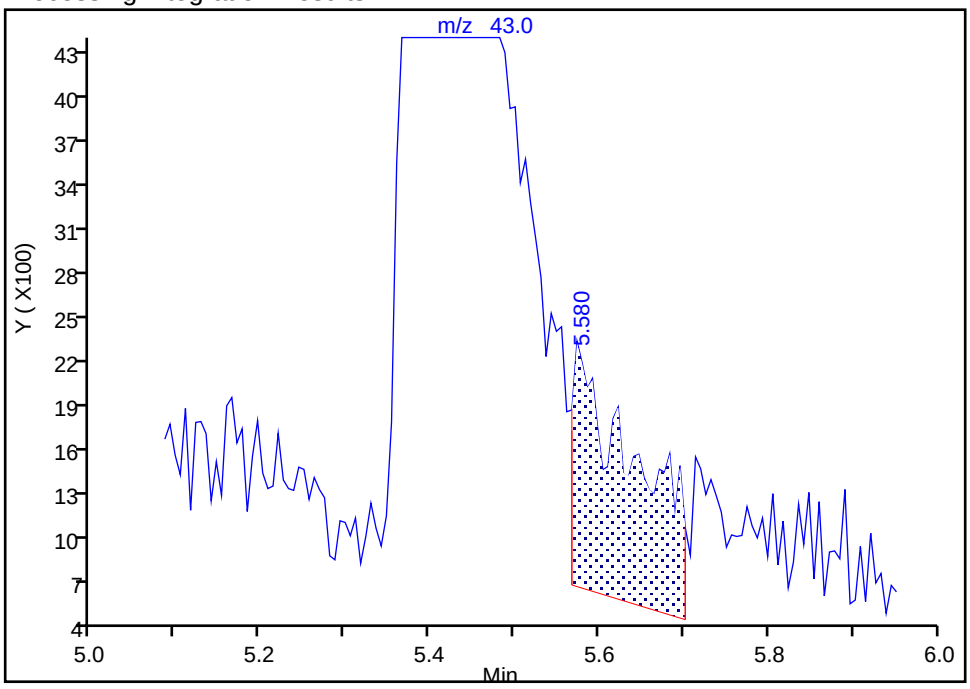
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X10.D				
Injection Date:	10-Jul-2023 18:45:30	Instrument ID:	10193		
Lims ID:	ICV Sm				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	10	Worklist Smp#:	11
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

46 Ethyl acetate, CAS: 141-78-6

Signal: 1

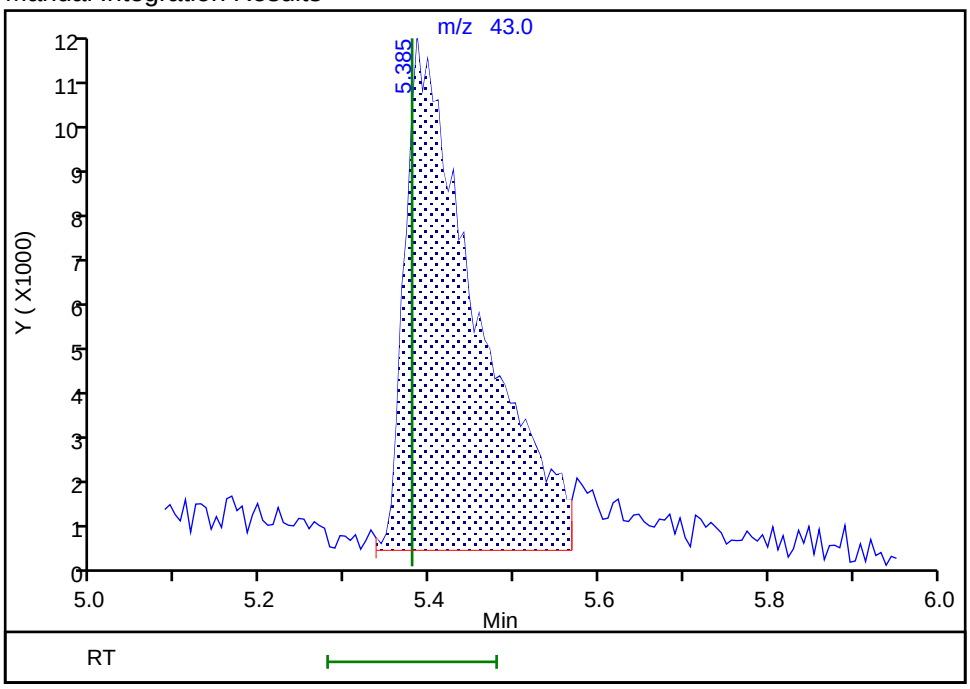
Processing Integration Results

RT: 5.58
Area: 8651
Amount: 0.301563
Amount Units: ug/l



Manual Integration Results

RT: 5.38
Area: 62121
Amount: 2.073246
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:20:44 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

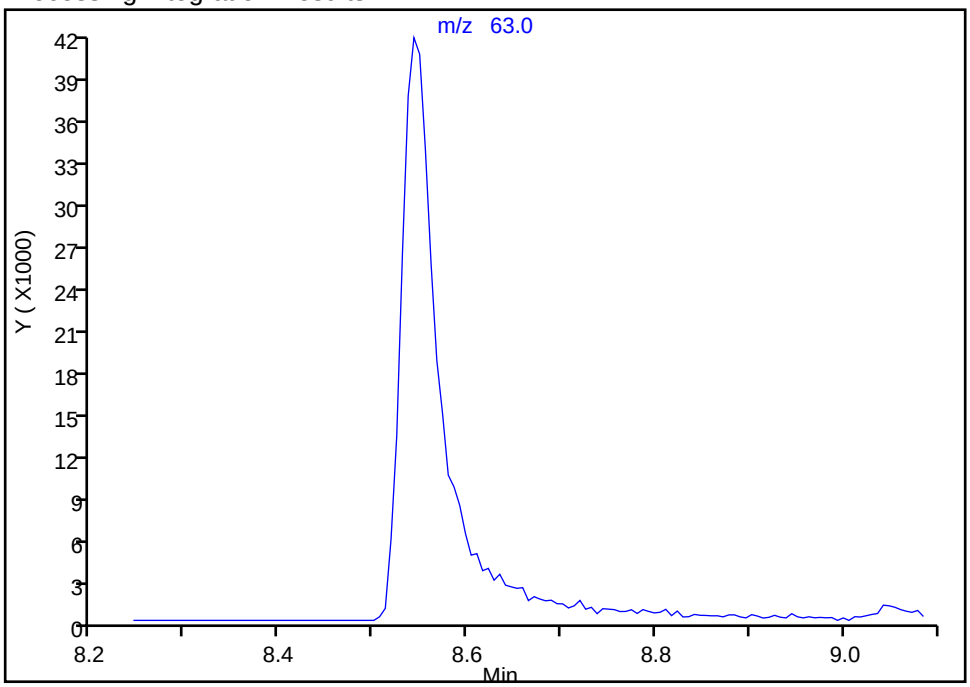
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X10.D				
Injection Date:	10-Jul-2023 18:45:30	Instrument ID:	10193		
Lims ID:	ICV Sm				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	10	Worklist Smp#:	11
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

79 2-Chloroethyl vinyl ether, CAS: 110-75-8

Signal: 1

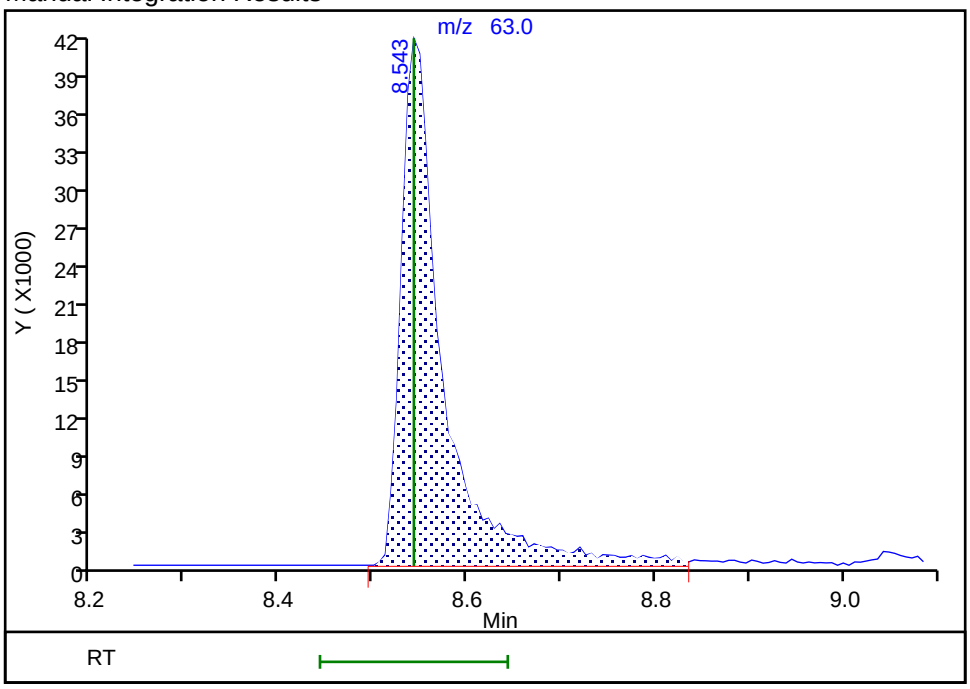
Not Detected
Expected RT: 8.54

Processing Integration Results



RT: 8.54
Area: 127032
Amount: 5.534649
Amount Units: ug/l

Manual Integration Results



Reviewer: DVW2, 11-Jul-2023 08:07:47 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

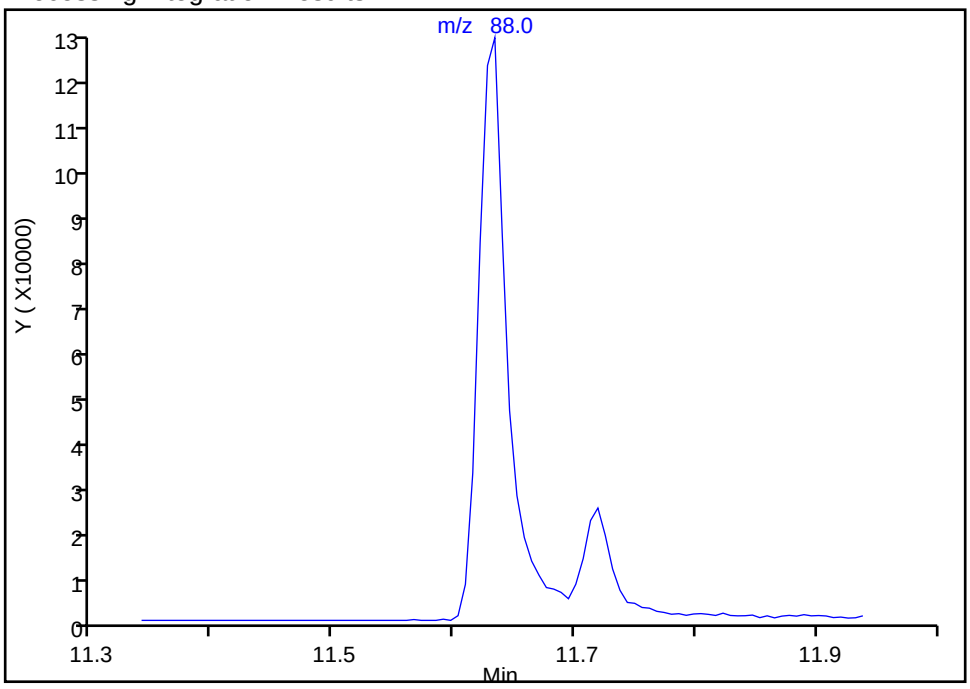
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X10.D				
Injection Date:	10-Jul-2023 18:45:30	Instrument ID:	10193		
Lims ID:	ICV Sm				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	10	Worklist Smp#:	11
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

122 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

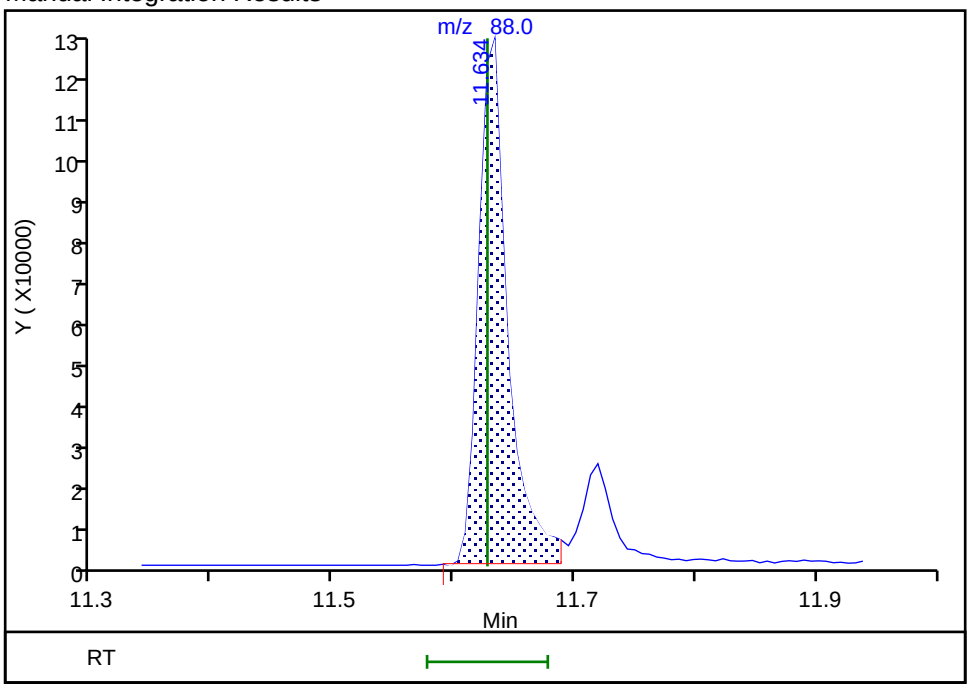
Not Detected
Expected RT: 11.63

Processing Integration Results



Manual Integration Results

RT: 11.63
Area: 218459
Amount: 11.145292
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:08:05 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136864-2

SDG No.:

Lab Sample ID: ICV 410-395211/21 Calibration Date: 07/10/2023 22:24

Instrument ID: 10193 Calib Start Date: 07/10/2023 19:29

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 07/10/2023 21:40

Lab File ID: CL10X20.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2459	0.2530	0.1000	5.14	5.00	2.9	30.0
Chloromethane	Ave	0.3115	0.3060	0.1000	4.91	5.00	-1.8	30.0
Vinyl chloride	Ave	0.2974	0.3081	0.1000	5.18	5.00	3.6	30.0
1,3-Butadiene	Ave	0.2881	0.2748		4.77	5.00	-4.6	30.0
Bromomethane	Ave	0.2325	0.2273	0.1000	4.89	5.00	-2.2	30.0
Chloroethane	Ave	0.1750	0.1800	0.1000	5.14	5.00	2.9	30.0
Dichlorofluoromethane	Ave	0.4749	0.4379		4.61	5.00	-7.8	30.0
Trichlorofluoromethane	Ave	0.3359	0.3560	0.1000	5.30	5.00	6.0	30.0
Ethyl ether	Ave	0.1914	0.1837		4.80	5.01	-4.0	30.0
Freon 123a	Ave	0.2635	0.2733		5.18	5.00	3.7	30.0
Acrolein	Ave	1.864	1.728		34.8	37.5	-7.3	30.0
1,1-Dichloroethene	Ave	0.2175	0.2334	0.1000	5.37	5.00	7.3	30.0
Acetone	Ave	2.374	1.974	0.1000	52.0	62.5	-16.8	30.0
Freon 113	Ave	0.2146	0.2293	0.1000	5.34	5.00	6.8	30.0
Methyl iodide	Ave	0.4671	0.4663		4.99	5.00	-0.2	30.0
Ethyl bromide	Ave	0.2123	0.2204		5.25	5.06	3.8	30.0
Carbon disulfide	Ave	0.7694	0.8015	0.1000	5.21	5.00	4.2	30.0
Methyl acetate	Ave	7.484	6.804	0.1000	4.55	5.00	-9.1	30.0
Allyl chloride	Ave	0.3836	0.4118		5.37	5.00	7.4	30.0
Methylene Chloride	Ave	0.2719	0.2714	0.1000	4.99	5.00	-0.2	30.0
t-Butyl alcohol	Ave	1.050	0.9154		43.6	50.0	-12.8	30.0
Acrylonitrile	Ave	3.339	3.356		25.1	25.0	0.5	30.0
Methyl tertiary butyl ether	Ave	0.6997	0.6915	0.1000	4.94	5.00	-1.2	30.0
trans-1,2-Dichloroethene	Ave	0.2640	0.2765	0.1000	5.24	5.00	4.7	30.0
n-Hexane	Ave	0.3367	0.3592		5.33	5.00	6.7	30.0
1,1-Dichloroethane	Ave	0.4631	0.4815	0.2000	5.20	5.00	4.0	30.0
di-Isopropyl ether	Ave	0.8724	0.8914		5.11	5.00	2.2	30.0
2-Chloro-1,3-butadiene	Ave	0.3544	0.3890		5.49	5.00	9.7	30.0
Ethyl t-butyl ether	Ave	0.8070	0.8382		5.19	5.00	3.9	30.0
2-Butanone	Ave	4.638	4.968	0.1000	66.9	62.5	7.1	30.0
cis-1,2-Dichloroethene	Ave	0.2832	0.3138	0.1000	5.54	5.00	10.8	30.0
2,2-Dichloropropane	Ave	0.3698	0.3935		5.32	5.00	6.4	30.0
Propionitrile	Ave	1.037	1.155		41.7	37.5	11.3	30.0
Methacrylonitrile	Ave	4.909	5.101		39.0	37.5	3.9	30.0
Bromochloromethane	Ave	0.1360	0.1383		5.08	5.00	1.6	30.0
Tetrahydrofuran	Ave	1.365	1.399		25.6	25.0	2.5	30.0
Chloroform	Ave	0.4583	0.4618	0.2000	5.04	5.00	0.8	30.0
1,1,1-Trichloroethane	Ave	0.3858	0.4129	0.1000	5.35	5.00	7.0	30.0
Cyclohexane	Ave	0.4332	0.4827	0.1000	5.57	5.00	11.4	30.0
Carbon tetrachloride	Ave	0.3343	0.3615	0.1000	5.41	5.00	8.1	30.0
1,1-Dichloropropene	Ave	0.3458	0.3771		5.45	5.00	9.1	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136864-2

SDG No.:

Lab Sample ID: ICV 410-395211/21 Calibration Date: 07/10/2023 22:24

Instrument ID: 10193 Calib Start Date: 07/10/2023 19:29

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 07/10/2023 21:40

Lab File ID: CL10X20.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Isobutyl alcohol	Lin		0.2480		117	125	-6.0	30.0
Benzene	Ave	1.104	1.160	0.5000	5.25	5.00	5.1	30.0
1,2-Dichloroethane	Ave	0.2816	0.2708	0.1000	4.81	5.00	-3.8	30.0
t-Amyl methyl ether	Ave	0.7539	0.7806		5.18	5.00	3.5	30.0
n-Heptane	Ave	0.3641	0.3740		5.14	5.00	2.7	30.0
Trichloroethene	Ave	0.2834	0.2888	0.2000	5.09	5.00	1.9	30.0
n-Butanol	Lin1		0.1966		214	250	-14.5	30.0
Methylcyclohexane	Ave	0.4596	0.5059	0.1000	5.50	5.00	10.1	30.0
1,2-Dichloropropane	Ave	0.2910	0.2990	0.1000	5.14	5.00	2.7	30.0
Dibromomethane	Ave	0.1353	0.1389		5.13	5.00	2.6	30.0
Methyl methacrylate	Ave	9.586	9.940		5.18	5.00	3.7	30.0
1,4-Dioxane	Ave	0.0806	0.0819	0.0050	127	125	1.6	30.0
Bromodichloromethane	Ave	0.3363	0.3420	0.2000	5.09	5.00	1.7	30.0
2-Nitropropane	Ave	2.607	2.365		4.54	5.00	-9.3	30.0
1-Bromo-2-chloroethane	Ave	0.2950	0.3020		5.12	5.00	2.4	30.0
cis-1,3-Dichloropropene	Ave	0.4156	0.4376	0.2000	5.26	5.00	5.3	30.0
4-Methyl-2-pentanone	Ave	13.20	14.11	0.1000	66.8	62.5	6.9	30.0
Toluene	Ave	0.9370	0.9874	0.4000	5.27	5.00	5.4	30.0
trans-1,3-Dichloropropene	Ave	0.4378	0.4759	0.1000	5.43	5.00	8.7	30.0
Ethyl methacrylate	Ave	0.3487	0.3700		5.31	5.00	6.1	30.0
1,1,2-Trichloroethane	Ave	0.2777	0.2772	0.1000	4.99	5.00	-0.2	30.0
Tetrachloroethene	Ave	0.4507	0.4676	0.2000	5.19	5.00	3.8	30.0
1,3-Dichloropropane	Ave	0.4447	0.4657		5.24	5.00	4.7	30.0
2-Hexanone	Ave	8.994	10.08	0.1000	70.0	62.5	12.1	30.0
Dibromochloromethane	Ave	0.3404	0.3436		5.05	5.00	0.9	30.0
1,2-Dibromoethane	Ave	0.2489	0.2614	0.1000	5.25	5.00	5.0	30.0
1-Chlorohexane	Ave	0.5077	0.5228		5.15	5.00	3.0	30.0
Chlorobenzene	Ave	1.134	1.150	0.5000	5.07	5.00	1.4	30.0
1,1,1,2-Tetrachloroethane	Ave	0.3781	0.3990		5.28	5.00	5.5	30.0
Ethylbenzene	Ave	1.798	1.907	0.1000	5.30	5.00	6.1	30.0
m&p-Xylene	Ave	0.7213	0.7720	0.1000	10.7	10.0	7.0	30.0
o-Xylene	Ave	0.7236	0.7649	0.3000	5.29	5.00	5.7	30.0
Styrene	Ave	1.124	1.246	0.3000	5.54	5.00	10.8	30.0
Bromoform	Ave	0.2165	0.2089	0.1000	4.82	5.00	-3.5	30.0
Isopropylbenzene	Ave	1.823	1.972	0.1000	5.41	5.00	8.2	30.0
1,1,2,2-Tetrachloroethane	Ave	0.5925	0.5984	0.3000	5.05	5.00	1.0	30.0
Bromobenzene	Ave	0.8226	0.8496		5.16	5.00	3.3	30.0
trans-1,4-Dichloro-2-butene	Ave	0.1300	0.1389		26.7	25.0	6.8	30.0
1,2,3-Trichloropropane	Ave	0.1521	0.1555		5.11	5.00	2.3	30.0
N-Propylbenzene	Ave	3.600	3.811		5.29	5.00	5.8	30.0
2-Chlorotoluene	Ave	0.7843	0.8189		5.22	5.00	4.4	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136864-2

SDG No.:

Lab Sample ID: ICV 410-395211/21 Calibration Date: 07/10/2023 22:24

Instrument ID: 10193 Calib Start Date: 07/10/2023 19:29

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 07/10/2023 21:40

Lab File ID: CL10X20.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,3,5-Trimethylbenzene	Ave	2.671	2.784		5.21	5.00	4.3	30.0
4-Chlorotoluene	Ave	0.7962	0.8487		5.33	5.00	6.6	30.0
tert-Butylbenzene	Ave	0.6268	0.6621		5.28	5.00	5.6	30.0
Pentachloroethane	Ave	0.4968	0.5205		5.24	5.00	4.8	30.0
1,2,4-Trimethylbenzene	Ave	2.742	2.903		5.29	5.00	5.9	30.0
sec-Butylbenzene	Ave	3.400	3.669		5.40	5.00	7.9	30.0
1,3-Dichlorobenzene	Ave	1.634	1.651	0.6000	5.05	5.00	1.1	30.0
p-Isopropyltoluene	Ave	3.013	3.241		5.38	5.00	7.6	30.0
1,4-Dichlorobenzene	Ave	1.682	1.730	0.5000	5.14	5.00	2.8	30.0
1,2,3-Trimethylbenzene	Ave	1.312	1.313		5.00	5.00	0.0	30.0
Benzyl chloride	Ave	0.2358	0.2229		4.73	5.00	-5.5	30.0
n-Butylbenzene	Ave	1.414	1.512		5.35	5.00	6.9	30.0
1,2-Dichlorobenzene	Ave	1.542	1.540	0.4000	4.99	5.00	-0.2	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.0747	0.0742	0.0500	4.97	5.00	-0.6	30.0
1,3,5-Trichlorobenzene	Ave	1.266	1.267		5.00	5.00	0.1	30.0
1,2,4-Trichlorobenzene	Ave	0.9593	1.033	0.2000	5.38	5.00	7.7	30.0
Hexachlorobutadiene	Ave	0.5390	0.5626		5.22	5.00	4.4	30.0
Naphthalene	Ave	1.567	1.635		5.22	5.00	4.3	30.0
1,2,3-Trichlorobenzene	Ave	0.7269	0.7892		5.43	5.00	8.6	30.0
Dibromofluoromethane (Surr)	Ave	0.2338	0.2301		9.84	10.0	-1.6	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.0494	0.0499		10.1	10.0	0.9	30.0
Toluene-d8 (Surr)	Ave	1.314	1.317		10.0	10.0	0.2	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4701	0.4714		10.0	10.0	0.3	30.0

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X20.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 10-Jul-2023 22:24:30 ALS Bottle#: 20 Worklist Smp#: 21
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0088548-021
Misc. Info.: ICV
Operator ID: knk41612 Instrument ID: 10193
Sublist:

Method: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 11-Jul-2023 21:38:50 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1649

First Level Reviewer: DVW2 Date: 11-Jul-2023 08:55:12

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.691	1.684	0.007	99	331068	5.00	5.14	M
5 Chloromethane	50	1.849	1.849	0.000	99	400451	5.00	4.91	
6 Vinyl chloride	62	1.941	1.934	0.007	98	403185	5.00	5.18	
7 Butadiene	39	1.947	1.940	0.007	91	359677	5.00	4.77	
9 Bromomethane	94	2.215	2.209	0.006	90	297496	5.00	4.89	
10 Chloroethane	64	2.270	2.270	0.000	100	235546	5.00	5.14	
11 Dichlorofluoromethane	67	2.477	2.471	0.006	97	573092	5.00	4.61	
13 Pentane	43	2.532	2.526	0.006	97	465100	5.00	5.25	
12 Trichlorofluoromethane	101	2.544	2.532	0.012	97	465905	5.00	5.30	
14 Ethyl ether	59	2.703	2.702	0.001	91	240593	5.01	4.80	
16 1,2-Dichloro-1,1,2-trifluoroetha	67	2.800	2.788	0.012	91	357616	5.00	5.18	
17 Acrolein	56	2.855	2.843	0.012	99	220592	37.5	34.8	
18 1,1-Dichloroethene	96	2.959	2.952	0.007	97	305481	5.00	5.37	
20 Acetone	43	2.989	2.977	0.012	100	420153	62.5	52.0	
21 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.007	3.001	0.006	89	300061	5.00	5.34	
22 Iodomethane	142	3.123	3.117	0.006	97	610218	5.00	4.99	
24 Isopropyl alcohol	45	3.105	3.117	-0.012	50	71009	37.5	37.5	
23 Ethyl bromide	108	3.142	3.135	0.007	98	291834	5.06	5.25	
25 Carbon disulfide	76	3.215	3.202	0.013	99	1048934	5.00	5.21	
26 Methyl acetate	43	3.331	3.324	0.006	24	115851	5.00	4.55	M
29 3-Chloro-1-propene	41	3.343	3.336	0.007	93	538941	5.00	5.37	
30 Methylene Chloride	84	3.501	3.495	0.006	92	355215	5.00	4.99	
* 31 t-Butyl alcohol-d10 (IS)	65	3.556	3.550	0.006	73	170270	50.0	50.0	
32 2-Methyl-2-propanol	59	3.660	3.653	0.007	97	155870	50.0	43.6	
33 Acrylonitrile	53	3.800	3.788	0.012	99	285671	25.0	25.1	
35 trans-1,2-Dichloroethene	96	3.837	3.830	0.006	100	361856	5.00	5.24	
34 Methyl tert-butyl ether	73	3.837	3.830	0.006	94	905015	5.00	4.94	
36 Hexane	57	4.214	4.208	0.006	92	470081	5.00	5.33	
37 1,1-Dichloroethane	63	4.446	4.446	0.000	96	630102	5.00	5.20	
39 Isopropyl ether	45	4.513	4.513	0.000	95	1166541	5.00	5.11	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
40 2-Chloro-1,3-butadiene	53	4.568	4.562	0.006	90	509026	5.00	5.49	
41 Tert-butyl ethyl ether	59	5.074	5.074	0.000	98	1096984	5.00	5.19	
42 2-Butanone (MEK)	43	5.287	5.281	0.006	100	1057286	62.5	66.9	
43 cis-1,2-Dichloroethene	96	5.318	5.312	0.006	80	410703	5.00	5.54	
44 2,2-Dichloropropane	77	5.324	5.324	0.000	65	514967	5.00	5.32	
45 Propionitrile	54	5.434	5.385	0.049	97	147444	37.5	41.7	
47 Methacrylonitrile	67	5.592	5.592	0.000	92	651422	37.5	39.0	
49 Tetrahydrofuran	71	5.659	5.653	0.006	72	119119	25.0	25.6	
48 Chlorobromomethane	128	5.653	5.653	0.000	92	180961	5.00	5.08	
50 Chloroform	83	5.818	5.818	0.000	93	604371	5.00	5.04	
53 1,1,1-Trichloroethane	97	6.031	6.037	-0.006	82	540310	5.00	5.35	
$ 54 Dibromofluoromethane (Surr)	113	6.037	6.037	0.000	94	602255	10.0	9.84	
55 Cyclohexane	56	6.129	6.123	0.007	90	631750	5.00	5.57	
56 Carbon tetrachloride	117	6.251	6.244	0.007	96	473028	5.00	5.41	
57 1,1-Dichloropropene	75	6.257	6.257	0.000	97	493513	5.00	5.45	
58 Isobutyl alcohol	41	6.513	6.482	0.031	40	105570	125.0	117.5	
$ 59 1,2-Dichloroethane-d4 (Surr)	102	6.501	6.507	-0.006	99	130547	10.0	10.1	
60 Benzene	78	6.519	6.525	-0.006	96	1517750	5.00	5.25	
61 1,2-Dichloroethane	62	6.604	6.598	0.006	97	354412	5.00	4.81	
64 Tert-amyl methyl ether	73	6.738	6.738	0.000	99	1021544	5.00	5.18	
* 65 Fluorobenzene (IS)	96	6.946	6.946	0.000	99	2617359	10.0	10.0	
66 n-Heptane	43	6.970	6.964	0.006	92	489458	5.00	5.14	
67 n-Butanol	56	7.452	7.409	0.043	28	167387	250.0	213.7	Ma
68 Trichloroethene	95	7.439	7.439	0.000	96	377889	5.00	5.09	
69 Methylcyclohexane	83	7.738	7.738	0.000	90	662015	5.00	5.50	
70 1,2-Dichloropropane	63	7.775	7.775	0.000	96	391251	5.00	5.14	
71 2-ethoxy-2-methyl butane	87	7.811	7.811	0.000	93	583222	5.00	4.93	
72 Dibromomethane	93	7.897	7.890	0.007	93	181796	5.00	5.13	
74 1,4-Dioxane	88	7.915	7.890	0.025	32	34870	125.0	127.0	M
73 Methyl methacrylate	69	7.903	7.897	0.006	93	169247	5.00	5.18	
76 Dichlorobromomethane	83	8.147	8.140	0.007	99	447621	5.00	5.09	
77 2-Nitropropane	41	8.433	8.427	0.006	98	40274	5.00	4.54	
78 1-Bromo-2-chloroethane	63	8.537	8.531	0.006	98	395286	5.00	5.12	
80 cis-1,3-Dichloropropene	75	8.720	8.720	0.000	97	572653	5.00	5.26	
82 4-Methyl-2-pentanone (MIBK)	43	8.927	8.927	0.000	96	3002518	62.5	66.8	
$ 83 Toluene-d8 (Surr)	98	9.055	9.055	0.000	93	2676279	10.0	10.0	
84 Toluene	92	9.140	9.140	0.000	98	1003259	5.00	5.27	
85 trans-1,3-Dichloropropene	75	9.457	9.457	0.000	91	483542	5.00	5.43	
86 Ethyl methacrylate	69	9.543	9.543	0.000	90	375964	5.00	5.31	
87 1,1,2-Trichloroethane	97	9.677	9.677	0.000	89	281622	5.00	4.99	
88 Tetrachloroethene	166	9.756	9.756	0.000	97	475146	5.00	5.19	
89 1,3-Dichloropropane	76	9.854	9.847	0.007	90	473165	5.00	5.24	
106 2-Hexanone	43	9.933	9.927	0.006	96	2145522	62.5	70.0	
108 Chlorodibromomethane	129	10.079	10.079	0.000	90	349116	5.00	5.05	
110 Ethylene Dibromide	107	10.195	10.189	0.006	99	265593	5.00	5.25	
* 111 Chlorobenzene-d5 (IS)	117	10.658	10.658	0.000	83	2032145	10.0	10.0	
113 Chlorobenzene	112	10.689	10.683	0.006	98	1168512	5.00	5.07	
112 1-Chlorohexane	91	10.683	10.683	0.000	96	531176	5.00	5.15	
114 1,1,1,2-Tetrachloroethane	131	10.780	10.780	0.000	97	405428	5.00	5.28	
115 Ethylbenzene	91	10.786	10.786	0.000	98	1937810	5.00	5.30	
116 m-Xylene & p-Xylene	106	10.908	10.908	0.000	97	1568906	10.0	10.7	
118 o-Xylene	106	11.256	11.256	0.000	96	777201	5.00	5.29	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
119 Styrene	104	11.274	11.274	0.000	95	1266166	5.00	5.54	
120 Bromoform	173	11.433	11.426	0.007	98	212284	5.00	4.82	
121 Isopropylbenzene	105	11.573	11.573	0.000	95	2004088	5.00	5.41	
$ 124 4-Bromofluorobenzene (Surr)	95	11.719	11.719	0.000	97	957893	10.0	10.0	
125 Bromobenzene	156	11.835	11.829	0.006	93	518985	5.00	5.16	
126 1,1,2,2-Tetrachloroethane	83	11.835	11.835	0.000	92	365535	5.00	5.05	
127 trans-1,4-Dichloro-2-butene	53	11.865	11.859	0.006	88	424156	25.0	26.7	
128 1,2,3-Trichloropropane	110	11.878	11.877	0.001	79	95014	5.00	5.11	
129 N-Propylbenzene	91	11.914	11.914	0.000	98	2327736	5.00	5.29	
130 2-Chlorotoluene	126	11.987	11.987	0.000	98	500219	5.00	5.22	
131 1,3,5-Trimethylbenzene	105	12.061	12.060	0.000	94	1700796	5.00	5.21	
132 4-Chlorotoluene	126	12.085	12.085	0.000	96	518455	5.00	5.33	
133 tert-Butylbenzene	134	12.304	12.304	0.000	93	404469	5.00	5.28	
134 Pentachloroethane	167	12.335	12.329	0.006	85	317928	5.00	5.24	
135 1,2,4-Trimethylbenzene	105	12.347	12.347	0.000	97	1773465	5.00	5.29	
136 sec-Butylbenzene	105	12.469	12.469	0.000	94	2241378	5.00	5.40	
137 1,3-Dichlorobenzene	146	12.567	12.566	0.000	98	1008743	5.00	5.05	
138 4-Isopropyltoluene	119	12.585	12.585	0.000	97	1979800	5.00	5.38	
* 139 1,4-Dichlorobenzene-d4	152	12.627	12.621	0.006	92	1221694	10.0	10.0	
140 1,4-Dichlorobenzene	146	12.646	12.640	0.006	96	1056698	5.00	5.14	
141 1,2,3-Trimethylbenzene	120	12.658	12.658	0.000	98	802092	5.00	5.00	
142 Benzyl chloride	126	12.731	12.725	0.006	98	136140	5.00	4.73	
145 p-Diethylbenzene	119	12.938	12.865	0.073	87	981939	5.00	4.20	
143 n-Butylbenzene	92	12.884	12.883	0.001	97	923497	5.00	5.35	
144 1,2-Dichlorobenzene	146	12.908	12.908	0.000	99	940417	5.00	4.99	
148 1,2-Dibromo-3-Chloropropane	155	13.469	13.469	0.000	90	45346	5.00	4.97	
149 1,3,5-Trichlorobenzene	180	13.591	13.591	0.000	98	774189	5.00	5.00	
150 1,2,4-Trichlorobenzene	180	14.024	14.023	0.001	94	630940	5.00	5.38	
151 Hexachlorobutadiene	225	14.109	14.103	0.006	96	343634	5.00	5.22	
152 Naphthalene	128	14.206	14.200	0.006	96	998684	5.00	5.22	
153 1,2,3-Trichlorobenzene	180	14.347	14.347	0.001	96	482061	5.00	5.43	
154 2-Methylnaphthalene	142	14.950	14.944	0.006	92	252146	5.00	5.60	M

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_LCS_VOC#1_00118	Amount Added:	12.50	Units: uL	
MSV_QC_Gas826_00149	Amount Added:	12.50	Units: uL	
MSV_LCS_EE_00007	Amount Added:	12.50	Units: uL	
LCS_ETBR_00006	Amount Added:	12.50	Units: uL	
MSV_LCS_ACROL_00121	Amount Added:	12.50	Units: uL	
MSV_LCS_Penta_00030	Amount Added:	12.50	Units: uL	
MSV_HP25_ISSS_00073	Amount Added:	1.00	Units: uL	Run Reagent

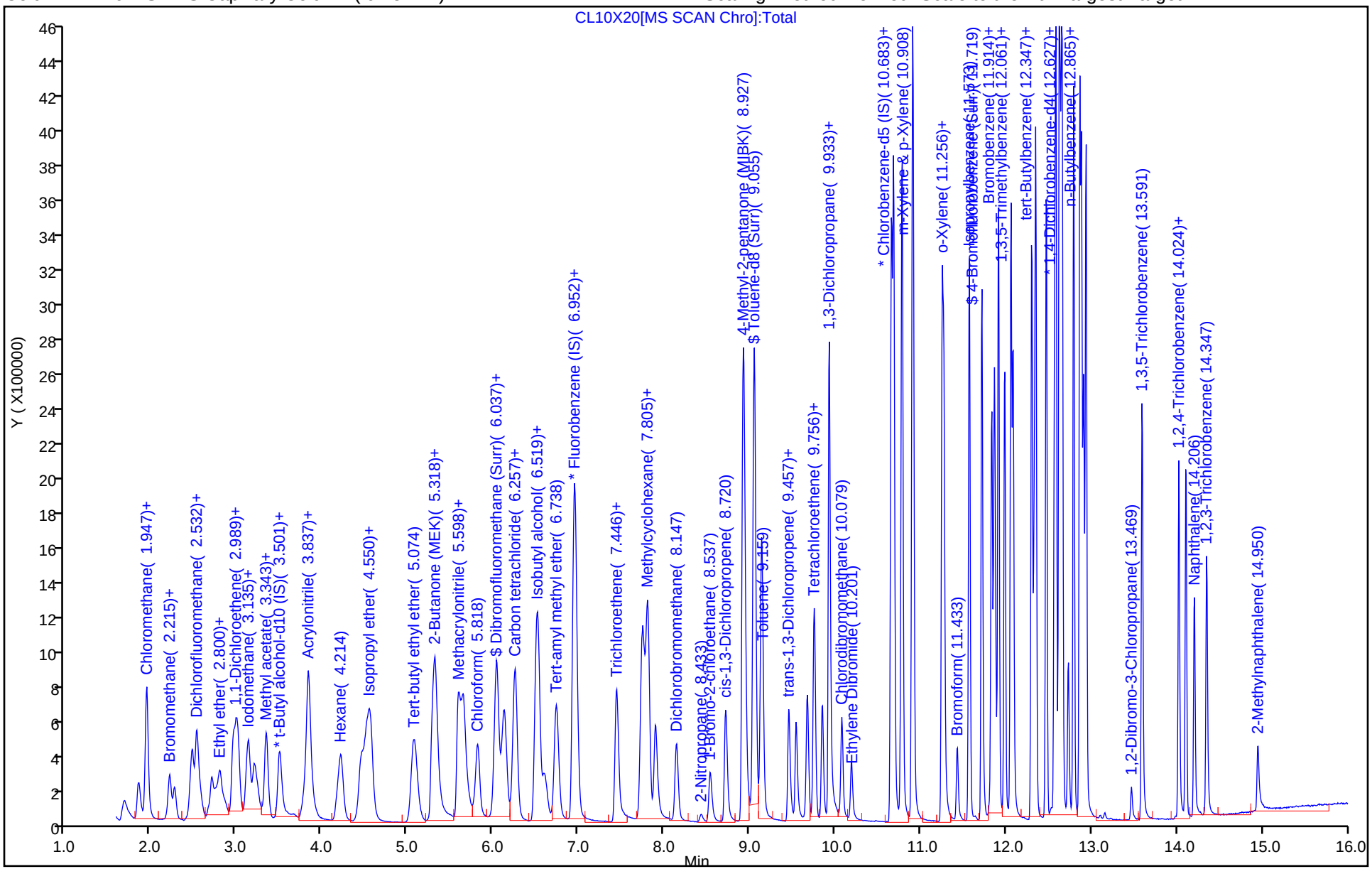
Report Date: 11-Jul-2023 21:38:53 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X20.D

Injection Date:	10-Jul-2023 22:24:30	Instrument ID:	10193	Operator ID:	knk41612
Lims ID:	ICV			Worklist Smp#:	21
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

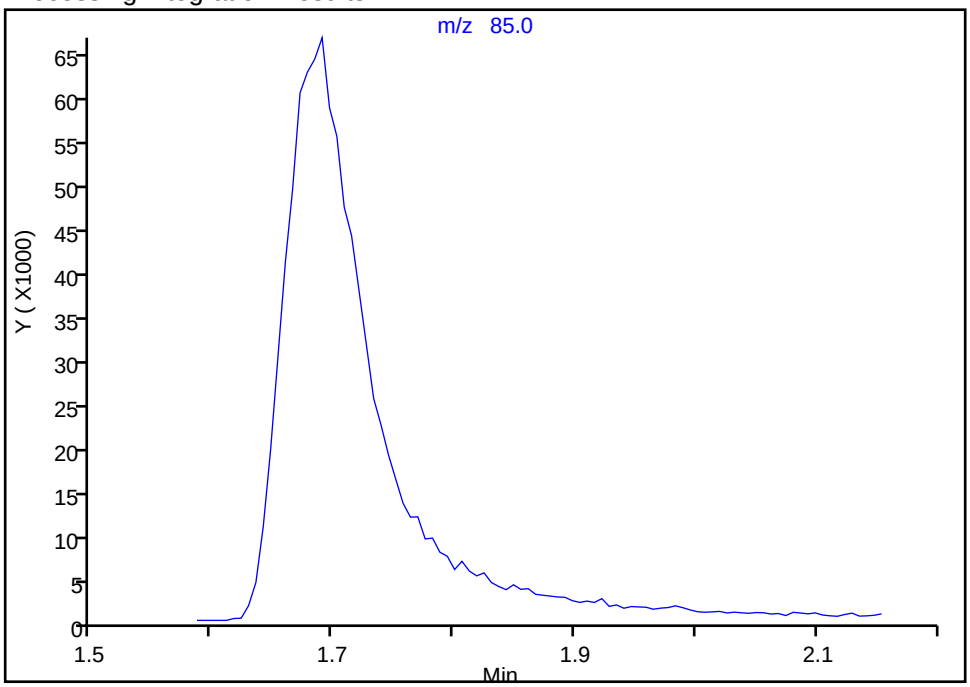
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X20.D				
Injection Date:	10-Jul-2023 22:24:30	Instrument ID:	10193		
Lims ID:	ICV				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	20	Worklist Smp#:	21
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

2 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

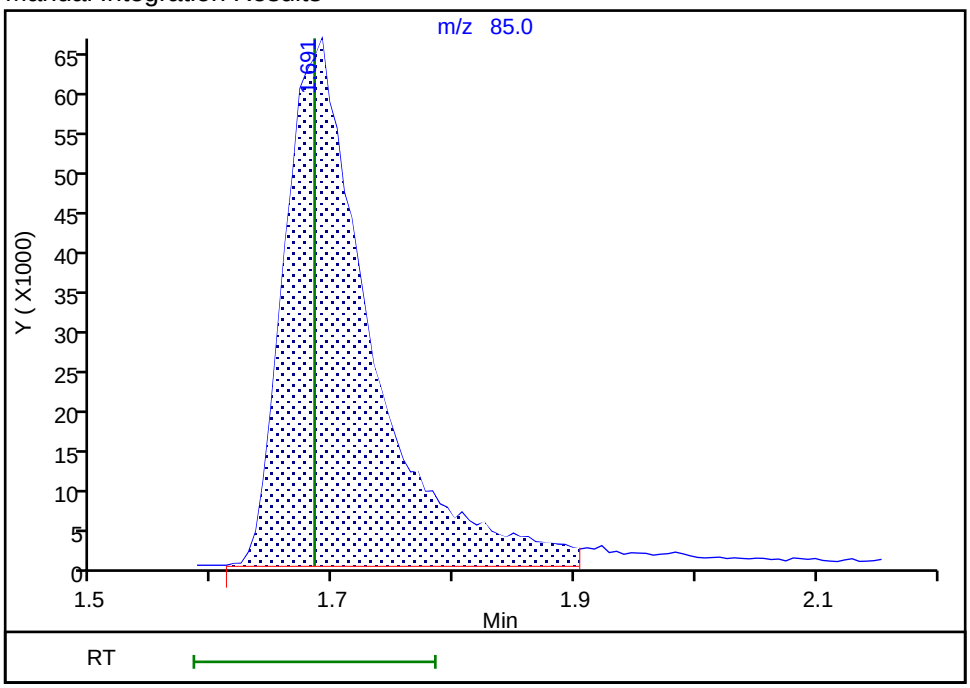
Not Detected
Expected RT: 1.68

Processing Integration Results



Manual Integration Results

RT: 1.69
Area: 331068
Amount: 5.143220
Amount Units: ug/l



Reviewer: UKEK, 11-Jul-2023 20:42:02 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

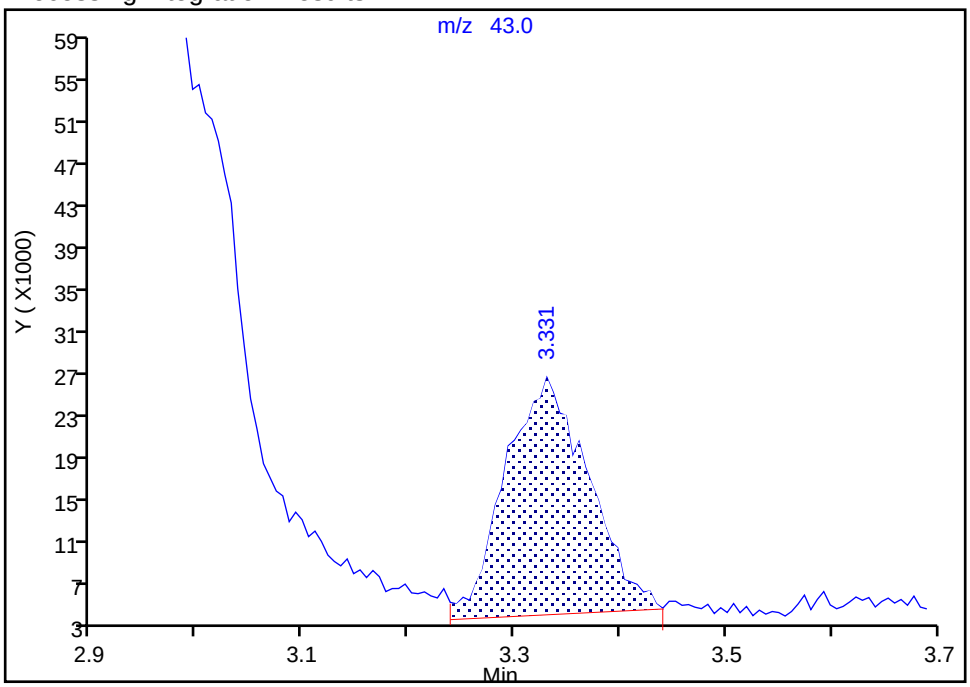
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X20.D				
Injection Date:	10-Jul-2023 22:24:30	Instrument ID:	10193		
Lims ID:	ICV				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	20	Worklist Smp#:	21
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

26 Methyl acetate, CAS: 79-20-9

Signal: 1

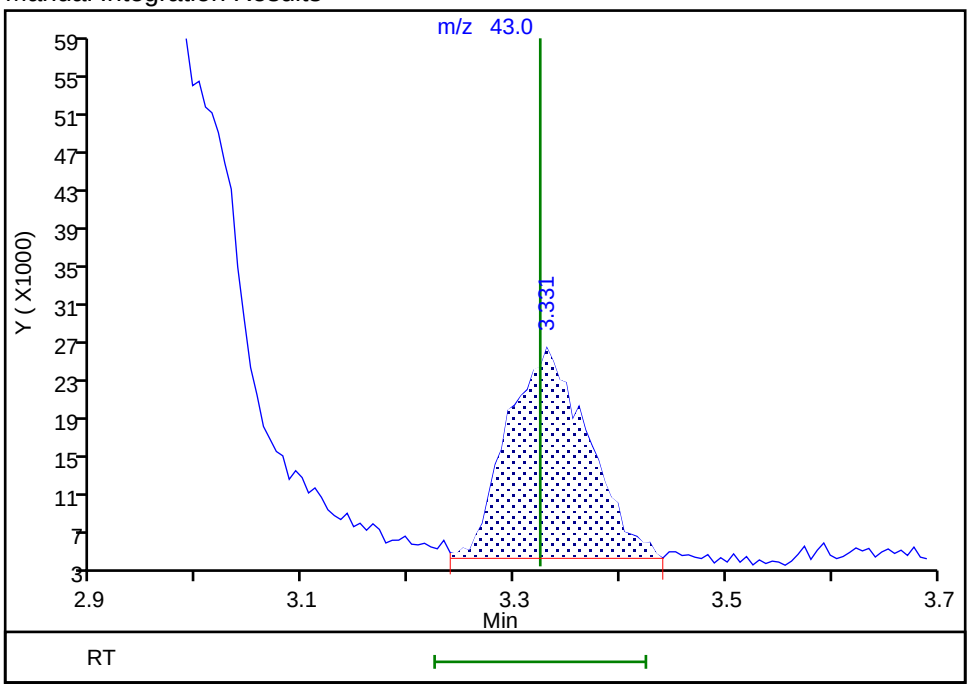
Processing Integration Results

RT: 3.33
Area: 122927
Amount: 4.827623
Amount Units: ug/l



Manual Integration Results

RT: 3.33
Area: 115851
Amount: 4.545669
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:54:00 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

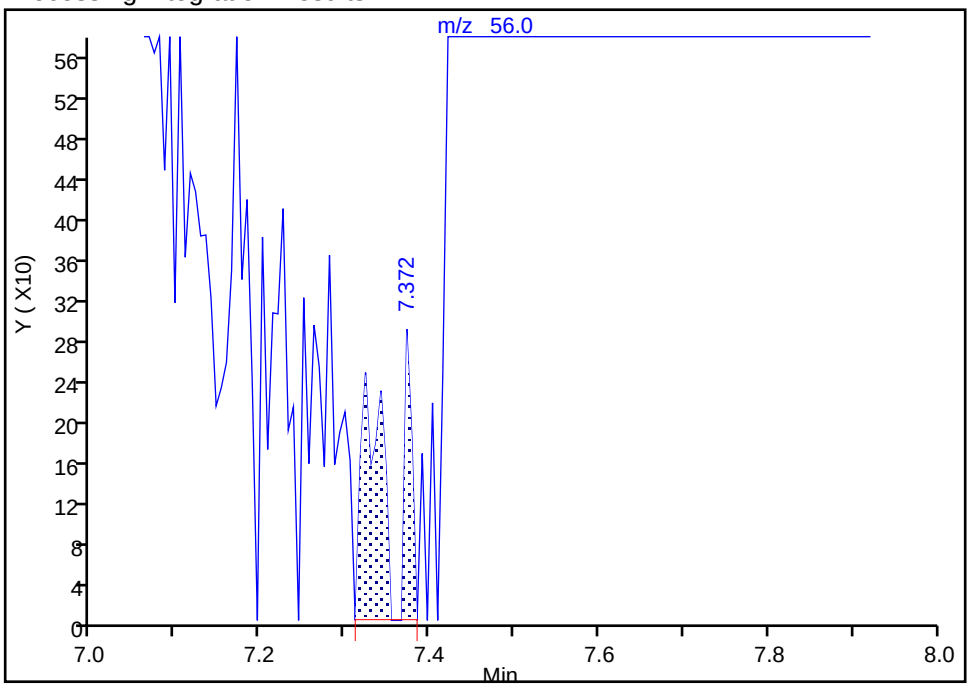
Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X20.D
Injection Date: 10-Jul-2023 22:24:30 Instrument ID: 10193
Lims ID: ICV
Client ID:
Operator ID: knk41612 ALS Bottle#: 20 Worklist Smp#: 21
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

67 n-Butanol, CAS: 71-36-3

Signal: 1

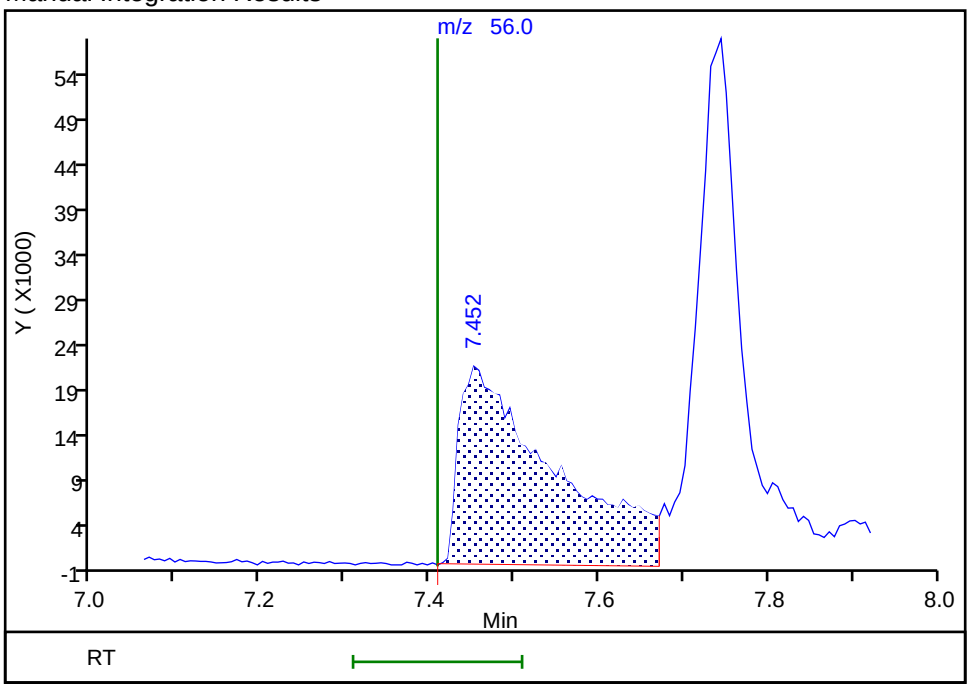
Processing Integration Results

RT: 7.37
Area: 578
Amount: 49.869523
Amount Units: ug/l



Manual Integration Results

RT: 7.45
Area: 167387
Amount: 213.7166
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:54:31 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

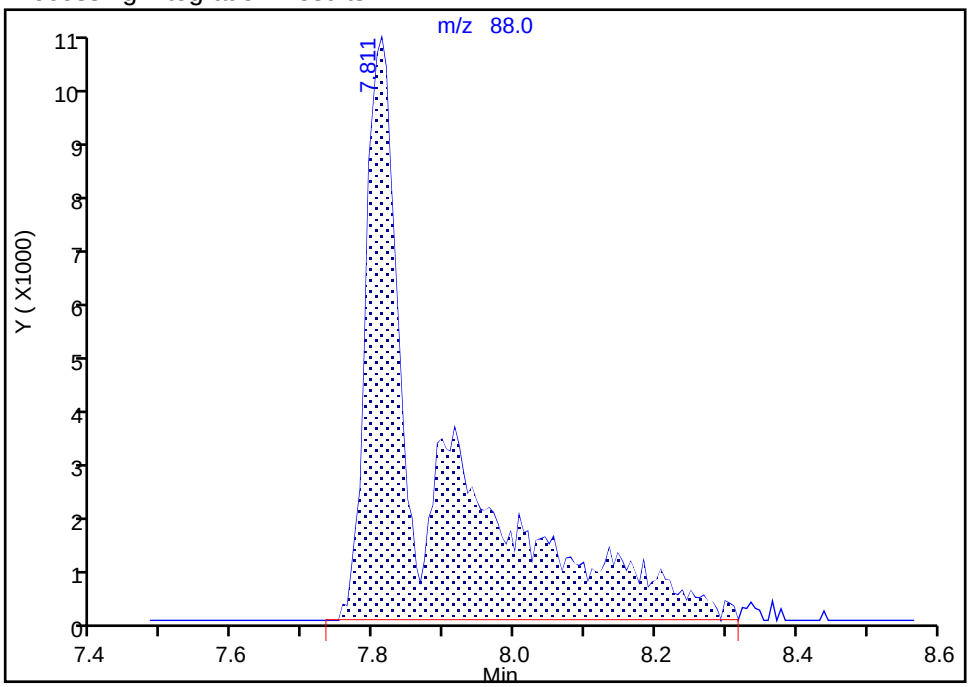
Data File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X20.D				
Injection Date:	10-Jul-2023 22:24:30	Instrument ID:	10193		
Lims ID:	ICV				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	20	Worklist Smp#:	21
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

74 1,4-Dioxane, CAS: 123-91-1

Signal: 1

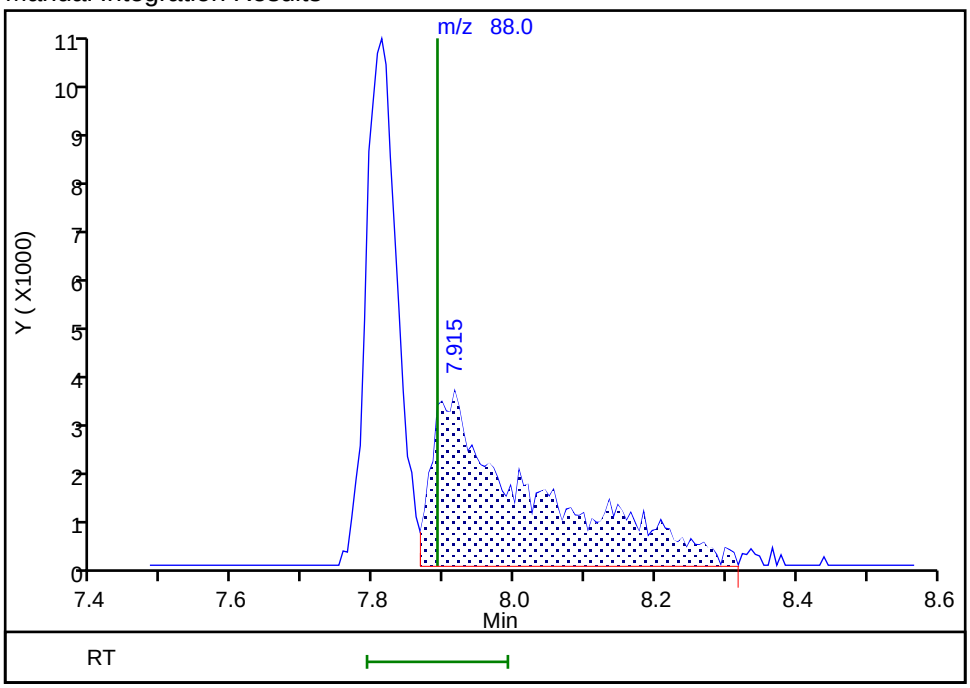
Processing Integration Results

RT: 7.81
Area: 67318
Amount: 265.6396
Amount Units: ug/l



Manual Integration Results

RT: 7.91
Area: 34870
Amount: 127.0110
Amount Units: ug/l



Reviewer: DVW2, 11-Jul-2023 08:54:43 -04:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136864-2

SDG No.:

Lab Sample ID: CCVIS 410-405906/3 Calibration Date: 08/08/2023 18:38

Instrument ID: 10193 Calib Start Date: 07/10/2023 19:29

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 07/10/2023 21:40

Lab File ID: CG08X02.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2459	0.2455	0.1000	9.98	10.0	-0.2	20.0
Chloromethane	Ave	0.3115	0.2827	0.1000	9.08	10.0	-9.2	20.0
1,3-Butadiene	Ave	0.2881	0.2654		9.21	10.0	-7.9	20.0
Vinyl chloride	Ave	0.2974	0.2801	0.1000	9.42	10.0	-5.8	20.0
Bromomethane	Ave	0.2325	0.2076	0.1000	8.93	10.0	-10.7	20.0
Chloroethane	Ave	0.1750	0.1598	0.1000	9.13	10.0	-8.7	20.0
Dichlorofluoromethane	Ave	0.4749	0.4196		8.84	10.0	-11.6	20.0
Trichlorofluoromethane	Ave	0.3359	0.3279	0.1000	9.76	10.0	-2.4	20.0
Ethyl ether	Ave	0.1914	0.1765		9.22	10.0	-7.8	20.0
Freon 123a	Ave	0.2635	0.2510		9.53	10.0	-4.7	20.0
Acrolein	Ave	1.864	1.673		449	500	-10.3	20.0
1,1-Dichloroethene	Ave	0.2175	0.2038	0.1000	9.37	10.0	-6.3	20.0
Acetone	Ave	2.374	2.341	0.1000	98.6	100	-1.4	20.0
Freon 113	Ave	0.2146	0.1924	0.1000	8.97	10.0	-10.3	20.0
Methyl iodide	Ave	0.4671	0.4634		9.92	10.0	-0.8	20.0
Ethyl bromide	Ave	0.2123	0.2029		9.55	9.99	-4.4	20.0
Carbon disulfide	Ave	0.7694	0.7468	0.1000	9.71	10.0	-2.9	20.0
Methyl acetate	Ave	7.484	8.862	0.1000	11.8	10.0	18.4	20.0
Allyl chloride	Ave	0.3836	0.3708		9.67	10.0	-3.3	20.0
Methylene Chloride	Ave	0.2719	0.2572	0.1000	9.46	10.0	-5.4	20.0
t-Butyl alcohol	Ave	1.050	0.9570		182	200	-8.8	20.0
Acrylonitrile	Ave	3.339	3.631		27.2	25.0	8.7	20.0
Methyl tertiary butyl ether	Ave	0.6997	0.6439	0.1000	9.20	10.0	-8.0	20.0
trans-1,2-Dichloroethene	Ave	0.2640	0.2608	0.1000	9.88	10.0	-1.2	20.0
n-Hexane	Ave	0.3367	0.3327		9.88	10.0	-1.2	20.0
1,1-Dichloroethane	Ave	0.4631	0.4510	0.2000	9.74	10.0	-2.6	20.0
di-Isopropyl ether	Ave	0.8724	0.7993		9.16	10.0	-8.4	20.0
2-Chloro-1,3-butadiene	Ave	0.3544	0.3433		9.69	10.0	-3.1	20.0
Ethyl t-butyl ether	Ave	0.8070	0.7315		9.06	10.0	-9.4	20.0
2-Butanone	Ave	4.638	5.122	0.1000	110	100	10.4	20.0
cis-1,2-Dichloroethene	Ave	0.2832	0.2883	0.1000	10.2	10.0	1.8	20.0
2,2-Dichloropropane	Ave	0.3698	0.3598		9.73	10.0	-2.7	20.0
Propionitrile	Ave	1.037	1.364		263	200	31.5*	20.0
Methacrylonitrile	Ave	4.909	5.476		112	100	11.5	20.0
Bromochloromethane	Ave	0.1360	0.1413		10.4	10.0	3.9	20.0
Tetrahydrofuran	Ave	1.365	1.589		58.2	50.0	16.4	20.0
Chloroform	Ave	0.4583	0.4400	0.2000	9.60	10.0	-4.0	20.0
1,1,1-Trichloroethane	Ave	0.3858	0.3689	0.1000	9.56	10.0	-4.4	20.0
Cyclohexane	Ave	0.4332	0.4150	0.1000	9.58	10.0	-4.2	20.0
Carbon tetrachloride	Ave	0.3343	0.3347	0.1000	10.0	10.0	0.1	20.0
1,1-Dichloropropene	Ave	0.3458	0.3380		9.77	10.0	-2.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136864-2

SDG No.:

Lab Sample ID: CCVIS 410-405906/3 Calibration Date: 08/08/2023 18:38

Instrument ID: 10193 Calib Start Date: 07/10/2023 19:29

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 07/10/2023 21:40

Lab File ID: CG08X02.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Isobutyl alcohol	Lin		0.3090		506	500	1.1	20.0
Benzene	Ave	1.104	1.085	0.5000	9.83	10.0	-1.7	20.0
1,2-Dichloroethane	Ave	0.2816	0.2675	0.1000	9.50	10.0	-5.0	20.0
t-Amyl methyl ether	Ave	0.7539	0.7229		9.59	10.0	-4.1	20.0
n-Heptane	Ave	0.3641	0.3553		9.76	10.0	-2.4	20.0
n-Butanol	Lin1		0.2589		807	875	-7.8	20.0
Trichloroethene	Ave	0.2834	0.2771	0.2000	9.78	10.0	-2.2	20.0
Methylcyclohexane	Ave	0.4596	0.4660	0.1000	10.1	10.0	1.4	20.0
1,2-Dichloropropane	Ave	0.2910	0.2882	0.1000	9.90	10.0	-1.0	20.0
Dibromomethane	Ave	0.1353	0.1382		10.2	10.0	2.1	20.0
1,4-Dioxane	Ave	0.0806	0.0752	0.0050	467	500	-6.7	20.0
Methyl methacrylate	Ave	9.586	9.543		9.96	10.0	-0.4	20.0
Bromodichloromethane	Ave	0.3363	0.3314	0.2000	9.85	10.0	-1.5	20.0
2-Nitropropane	Ave	2.607	2.769		53.1	50.0	6.2	20.0
1-Bromo-2-chloroethane	Ave	0.2950	0.3008		10.2	10.0	2.0	20.0
cis-1,3-Dichloropropene	Ave	0.4156	0.4251	0.2000	10.2	10.0	2.3	20.0
4-Methyl-2-pentanone	Ave	13.20	13.53	0.1000	102	100	2.5	20.0
Toluene	Ave	0.9370	0.9065	0.4000	9.67	10.0	-3.3	20.0
trans-1,3-Dichloropropene	Ave	0.4378	0.4547	0.1000	10.4	10.0	3.9	20.0
Ethyl methacrylate	Ave	0.3487	0.3721		10.7	10.0	6.7	20.0
1,1,2-Trichloroethane	Ave	0.2777	0.2692	0.1000	9.69	10.0	-3.1	20.0
Tetrachloroethene	Ave	0.4507	0.4407	0.2000	9.78	10.0	-2.2	20.0
1,3-Dichloropropane	Ave	0.4447	0.4425		9.95	10.0	-0.5	20.0
2-Hexanone	Ave	8.994	9.541	0.1000	106	100	6.1	20.0
Dibromochloromethane	Ave	0.3404	0.3536		10.4	10.0	3.9	20.0
1,2-Dibromoethane	Ave	0.2489	0.2612	0.1000	10.5	10.0	5.0	20.0
1-Chlorohexane	Ave	0.5077	0.4946		9.74	10.0	-2.6	20.0
Chlorobenzene	Ave	1.134	1.106	0.5000	9.75	10.0	-2.5	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3781	0.3846		10.2	10.0	1.7	20.0
Ethylbenzene	Ave	1.798	1.742	0.1000	9.69	10.0	-3.1	20.0
m&p-Xylene	Ave	0.7213	0.7269	0.1000	20.2	20.0	0.8	20.0
o-Xylene	Ave	0.7236	0.7143	0.3000	9.87	10.0	-1.3	20.0
Styrene	Ave	1.124	1.170	0.3000	10.4	10.0	4.0	20.0
Bromoform	Ave	0.2165	0.2283	0.1000	10.5	10.0	5.4	20.0
Isopropylbenzene	Ave	1.823	1.783	0.1000	9.78	10.0	-2.2	20.0
1,1,2,2-Tetrachloroethane	Ave	0.5925	0.6040	0.3000	10.2	10.0	1.9	20.0
Bromobenzene	Ave	0.8226	0.8131		9.88	10.0	-1.2	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1300	0.1364		105	100	4.8	20.0
1,2,3-Trichloropropane	Ave	0.1521	0.1541		10.1	10.0	1.3	20.0
N-Propylbenzene	Ave	3.600	3.531		9.81	10.0	-1.9	20.0
2-Chlorotoluene	Ave	0.7843	0.7972		10.2	10.0	1.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136864-2

SDG No.:

Lab Sample ID: CCVIS 410-405906/3 Calibration Date: 08/08/2023 18:38

Instrument ID: 10193 Calib Start Date: 07/10/2023 19:29

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 07/10/2023 21:40

Lab File ID: CG08X02.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,3,5-Trimethylbenzene	Ave	2.671	2.619		9.81	10.0	-1.9	20.0
4-Chlorotoluene	Ave	0.7962	0.8356		10.5	10.0	5.0	20.0
tert-Butylbenzene	Ave	0.6268	0.6312		10.1	10.0	0.7	20.0
Pentachloroethane	Ave	0.4968	0.5287		10.6	10.0	6.4	20.0
1,2,4-Trimethylbenzene	Ave	2.742	2.746		10.0	10.0	0.1	20.0
sec-Butylbenzene	Ave	3.400	3.419		10.1	10.0	0.6	20.0
1,3-Dichlorobenzene	Ave	1.634	1.627	0.6000	9.96	10.0	-0.4	20.0
p-Isopropyltoluene	Ave	3.013	3.071		10.2	10.0	1.9	20.0
1,4-Dichlorobenzene	Ave	1.682	1.608	0.5000	9.56	10.0	-4.4	20.0
1,2,3-Trimethylbenzene	Ave	1.312	1.330		10.1	10.0	1.4	20.0
Benzyl chloride	Ave	0.2358	0.2725		11.6	10.0	15.5	20.0
n-Butylbenzene	Ave	1.414	1.456		10.3	10.0	2.9	20.0
1,2-Dichlorobenzene	Ave	1.542	1.554	0.4000	10.1	10.0	0.8	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0747	0.0851	0.0500	11.4	10.0	13.9	20.0
1,3,5-Trichlorobenzene	Ave	1.266	1.259		9.94	10.0	-0.6	20.0
1,2,4-Trichlorobenzene	Ave	0.9593	0.9429	0.2000	9.83	10.0	-1.7	20.0
Hexachlorobutadiene	Ave	0.5390	0.5040		9.35	10.0	-6.5	20.0
Naphthalene	Ave	1.567	1.584		10.1	10.0	1.1	20.0
1,2,3-Trichlorobenzene	Ave	0.7269	0.7624		10.5	10.0	4.9	20.0
Dibromofluoromethane (Surr)	Ave	0.2338	0.2366		10.1	10.0	1.2	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.0494	0.0483		9.78	10.0	-2.2	20.0
Toluene-d8 (Surr)	Ave	1.314	1.308		9.95	10.0	-0.5	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4701	0.4637		9.86	10.0	-1.4	20.0

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X02.D
Lims ID: CCVIS VSTD10
Client ID:
Sample Type: CCVIS
Inject. Date: 08-Aug-2023 18:38:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090928-003
Misc. Info.: CCVIS
Operator ID: gaw91131 Instrument ID: 10193
Sublist: chrom-MSV_10193_25mL*sub1

Method: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 08-Aug-2023 21:10:21 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1656

First Level Reviewer: JS6E Date: 08-Aug-2023 19:03:36

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.684	1.684	0.000	99	1052298	10.0	9.98	M
5 Chloromethane	50	1.849	1.849	0.000	99	1211674	10.0	9.08	
6 Vinyl chloride	62	1.940	1.940	0.000	98	1200489	10.0	9.42	
7 Butadiene	39	1.940	1.940	0.000	90	1137368	10.0	9.21	
9 Bromomethane	94	2.209	2.209	0.000	89	889729	10.0	8.93	
10 Chloroethane	64	2.270	2.270	0.000	100	684961	10.0	9.13	
11 Dichlorofluoromethane	67	2.471	2.471	0.000	97	1798572	10.0	8.84	
13 Pentane	43	2.526	2.526	0.000	97	1276599	10.0	8.80	
12 Trichlorofluoromethane	101	2.532	2.532	0.000	96	1405481	10.0	9.76	
14 Ethyl ether	59	2.696	2.696	0.000	90	756643	10.0	9.22	
16 1,2-Dichloro-1,1,2-trifluoroetha	67	2.794	2.794	0.000	90	1075814	10.0	9.53	
17 Acrolein	56	2.843	2.843	0.000	100	4810884	500.0	448.7	
18 1,1-Dichloroethene	96	2.946	2.946	0.000	96	873529	10.0	9.37	
20 Acetone	43	2.989	2.989	0.000	100	1346413	100.0	98.6	
21 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.001	3.001	0.000	88	824811	10.0	8.97	
22 Iodomethane	142	3.111	3.111	0.000	96	1986130	10.0	9.92	
23 Ethyl bromide	108	3.129	3.129	0.000	98	869012	10.0	9.55	
24 Isopropyl alcohol	45	3.147	3.147	0.000	97	585118	200.0	195.4	
25 Carbon disulfide	76	3.196	3.196	0.000	99	3200515	10.0	9.71	
26 Methyl acetate	43	3.324	3.324	0.000	38	509816	10.0	11.8	
29 3-Chloro-1-propene	41	3.336	3.336	0.000	95	1589372	10.0	9.67	
30 Methylene Chloride	84	3.489	3.489	0.000	90	1102354	10.0	9.46	
* 31 t-Butyl alcohol-d10 (IS)	65	3.544	3.544	0.000	96	287628	50.0	50.0	
32 2-Methyl-2-propanol	59	3.635	3.635	0.000	99	1101001	200.0	182.3	
33 Acrylonitrile	53	3.800	3.800	0.000	99	522242	25.0	27.2	
34 Methyl tert-butyl ether	73	3.824	3.824	0.000	95	2759784	10.0	9.20	
35 trans-1,2-Dichloroethene	96	3.824	3.824	0.000	99	1117750	10.0	9.88	
36 Hexane	57	4.196	4.196	0.000	92	1425962	10.0	9.88	
37 1,1-Dichloroethane	63	4.434	4.434	0.000	96	1932778	10.0	9.74	
39 Isopropyl ether	45	4.507	4.507	0.000	94	3425843	10.0	9.16	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
40 2-Chloro-1,3-butadiene	53	4.550	4.550	0.000	89	1471501	10.0	9.69	
41 Tert-butyl ethyl ether	59	5.068	5.068	0.000	97	3135224	10.0	9.06	
42 2-Butanone (MEK)	43	5.281	5.281	0.000	99	2946646	100.0	110.4	
43 cis-1,2-Dichloroethene	96	5.299	5.299	0.000	79	1235654	10.0	10.2	
44 2,2-Dichloropropane	77	5.312	5.312	0.000	64	1541963	10.0	9.73	
45 Propionitrile	54	5.391	5.391	0.000	99	1569042	200.0	262.9	
47 Methacrylonitrile	67	5.586	5.586	0.000	90	3149964	100.0	111.5	
48 Chlorobromomethane	128	5.641	5.641	0.000	90	605528	10.0	10.4	
49 Tetrahydrofuran	71	5.659	5.659	0.000	78	456988	50.0	58.2	
50 Chloroform	83	5.799	5.799	0.000	93	1886010	10.0	9.60	
53 1,1,1-Trichloroethane	97	6.025	6.025	0.000	98	1581140	10.0	9.56	
$ 54 Dibromofluoromethane (Surr)	113	6.025	6.025	0.000	88	1014223	10.0	10.1	
55 Cyclohexane	56	6.122	6.122	0.000	89	1778803	10.0	9.58	
56 Carbon tetrachloride	117	6.238	6.238	0.000	96	1434670	10.0	10.0	
57 1,1-Dichloropropene	75	6.244	6.244	0.000	96	1448440	10.0	9.77	
58 Isobutyl alcohol	41	6.476	6.476	0.000	93	888885	500.0	505.7	
$ 59 1,2-Dichloroethane-d4 (Surr)	102	6.482	6.482	0.000	99	207177	10.0	9.78	
60 Benzene	78	6.507	6.507	0.000	97	4649106	10.0	9.83	
61 1,2-Dichloroethane	62	6.592	6.592	0.000	97	1146671	10.0	9.50	
64 Tert-amyl methyl ether	73	6.726	6.726	0.000	99	3098485	10.0	9.59	
* 65 Fluorobenzene (IS)	96	6.933	6.933	0.000	98	4285906	10.0	10.0	
66 n-Heptane	43	6.952	6.952	0.000	89	1522905	10.0	9.76	
67 n-Butanol	56	7.409	7.409	0.000	90	1303202	875.0	806.9	
68 Trichloroethene	95	7.427	7.427	0.000	96	1187540	10.0	9.78	
69 Methylcyclohexane	83	7.732	7.732	0.000	89	1997089	10.0	10.1	
70 1,2-Dichloropropane	63	7.769	7.769	0.000	96	1235408	10.0	9.90	
71 2-ethoxy-2-methyl butane	87	7.799	7.799	0.000	94	1852093	10.0	9.56	
72 Dibromomethane	93	7.884	7.884	0.000	94	592517	10.0	10.2	
74 1,4-Dioxane	88	7.890	7.890	0.000	36	216431	500.0	466.7	
73 Methyl methacrylate	69	7.890	7.890	0.000	91	548986	10.0	9.96	
76 Dichlorobromomethane	83	8.134	8.134	0.000	100	1420248	10.0	9.85	
77 2-Nitropropane	41	8.421	8.421	0.000	98	796522	50.0	53.1	
78 1-Bromo-2-chloroethane	63	8.531	8.531	0.000	98	1289126	10.0	10.2	
80 cis-1,3-Dichloropropene	75	8.713	8.713	0.000	98	1822072	10.0	10.2	
82 4-Methyl-2-pentanone (MIBK)	43	8.915	8.915	0.000	96	7780522	100.0	102.5	
$ 83 Toluene-d8 (Surr)	98	9.043	9.043	0.000	93	4376170	10.0	9.95	
84 Toluene	92	9.134	9.134	0.000	98	3032842	10.0	9.67	
85 trans-1,3-Dichloropropene	75	9.451	9.451	0.000	91	1521228	10.0	10.4	
86 Ethyl methacrylate	69	9.536	9.536	0.000	89	1245122	10.0	10.7	
87 1,1,2-Trichloroethane	97	9.671	9.671	0.000	89	900533	10.0	9.69	
88 Tetrachloroethene	166	9.750	9.750	0.000	97	1474315	10.0	9.78	
89 1,3-Dichloropropane	76	9.841	9.841	0.000	88	1480594	10.0	9.95	
106 2-Hexanone	43	9.921	9.921	0.000	95	5488422	100.0	106.1	
108 Chlorodibromomethane	129	10.073	10.073	0.000	90	1182983	10.0	10.4	
110 Ethylene Dibromide	107	10.183	10.183	0.000	99	874006	10.0	10.5	
* 111 Chlorobenzene-d5 (IS)	117	10.652	10.652	0.000	82	3345755	10.0	10.0	
112 1-Chlorohexane	91	10.676	10.676	0.000	97	1654943	10.0	9.74	
113 Chlorobenzene	112	10.683	10.683	0.000	97	3699584	10.0	9.75	
114 1,1,1,2-Tetrachloroethane	131	10.774	10.774	0.000	97	1286757	10.0	10.2	
115 Ethylbenzene	91	10.780	10.780	0.000	97	5827783	10.0	9.69	
116 m-Xylene & p-Xylene	106	10.902	10.902	0.000	97	4863934	20.0	20.2	
118 o-Xylene	106	11.250	11.250	0.000	95	2390007	10.0	9.87	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
119 Styrene	104	11.268	11.268	0.000	95	3913863	10.0	10.4	
120 Bromoform	173	11.426	11.426	0.000	99	763860	10.0	10.5	
121 Isopropylbenzene	105	11.567	11.567	0.000	95	5963994	10.0	9.78	
$ 124 4-Bromofluorobenzene (Surr)	95	11.713	11.713	0.000	96	1551359	10.0	9.86	
125 Bromobenzene	156	11.829	11.829	0.000	93	1644322	10.0	9.88	
126 1,1,2,2-Tetrachloroethane	83	11.829	11.829	0.000	89	1221391	10.0	10.2	
127 trans-1,4-Dichloro-2-butene	53	11.859	11.859	0.000	89	2757348	100.0	104.8	
128 1,2,3-Trichloropropane	110	11.871	11.871	0.000	78	311638	10.0	10.1	
129 N-Propylbenzene	91	11.908	11.908	0.000	98	7140528	10.0	9.81	
130 2-Chlorotoluene	126	11.981	11.981	0.000	98	1612099	10.0	10.2	
131 1,3,5-Trimethylbenzene	105	12.054	12.054	0.000	94	5296128	10.0	9.81	
132 4-Chlorotoluene	126	12.079	12.079	0.000	96	1689771	10.0	10.5	
133 tert-Butylbenzene	134	12.298	12.298	0.000	92	1276427	10.0	10.1	
134 Pentachloroethane	167	12.329	12.329	0.000	95	1069049	10.0	10.6	
135 1,2,4-Trimethylbenzene	105	12.347	12.347	0.000	96	5552432	10.0	10.0	
136 sec-Butylbenzene	105	12.469	12.469	0.000	93	6913389	10.0	10.1	
137 1,3-Dichlorobenzene	146	12.566	12.566	0.000	98	3289526	10.0	9.96	
138 4-Isopropyltoluene	119	12.579	12.579	0.000	97	6211206	10.0	10.2	
* 139 1,4-Dichlorobenzene-d4	152	12.621	12.621	0.000	92	2022217	10.0	10.0	
140 1,4-Dichlorobenzene	146	12.640	12.640	0.000	96	3252293	10.0	9.56	
141 1,2,3-Trimethylbenzene	120	12.652	12.652	0.000	98	2688820	10.0	10.1	
142 Benzyl chloride	126	12.725	12.725	0.000	97	551044	10.0	11.6	
145 p-Diethylbenzene	119	12.859	12.859	0.000	95	3921290	10.0	10.1	
143 n-Butylbenzene	92	12.877	12.877	0.000	96	2943911	10.0	10.3	
144 1,2-Dichlorobenzene	146	12.902	12.902	0.000	99	3142966	10.0	10.1	
148 1,2-Dibromo-3-Chloropropane	155	13.469	13.469	0.000	91	172013	10.0	11.4	
149 1,3,5-Trichlorobenzene	180	13.591	13.591	0.000	97	2545584	10.0	9.94	
150 1,2,4-Trichlorobenzene	180	14.023	14.023	0.000	94	1906748	10.0	9.83	
151 Hexachlorobutadiene	225	14.103	14.103	0.000	96	1019256	10.0	9.35	
152 Naphthalene	128	14.200	14.200	0.000	96	3203708	10.0	10.1	
153 1,2,3-Trichlorobenzene	180	14.346	14.346	0.000	96	1541685	10.0	10.5	
154 2-Methylnaphthalene	142	14.950	14.950	0.000	93	872413	10.0	11.7	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

MSV_LL_#1_826_00088	Amount Added: 20.00	Units: uL	
MSV_LL_#2_826_00098	Amount Added: 20.00	Units: uL	
MSV_LL_GAS826_00163	Amount Added: 20.00	Units: uL	
MSV_HP25_ISSS_00074	Amount Added: 1.00	Units: uL	Run Reagent

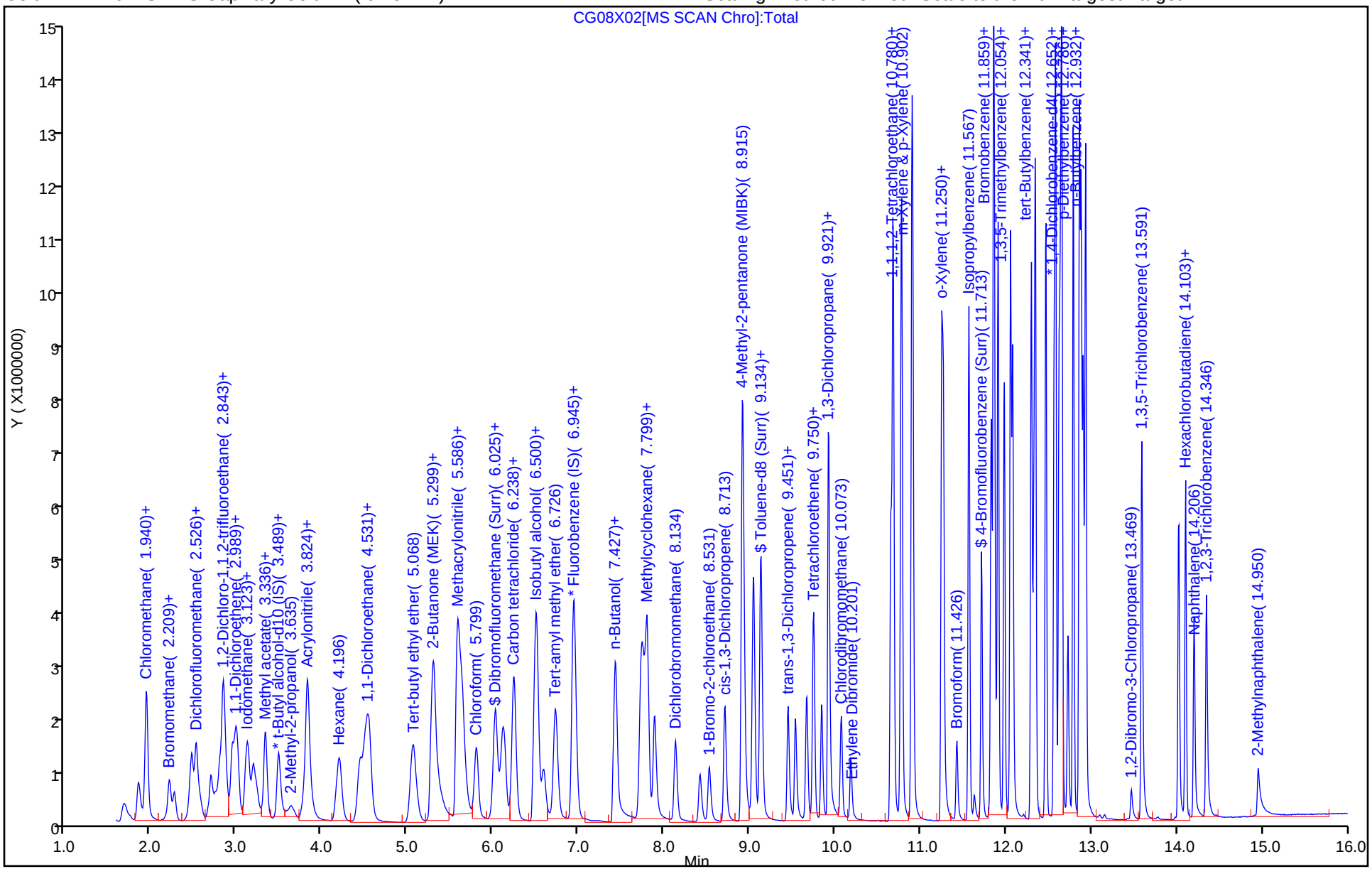
Report Date: 08-Aug-2023 21:10:21 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X02.D

Injection Date:	08-Aug-2023 18:38:30	Instrument ID:	10193	Operator ID:	gaw91131
Lims ID:	CCVIS VSTD10			Worklist Smp#:	3
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

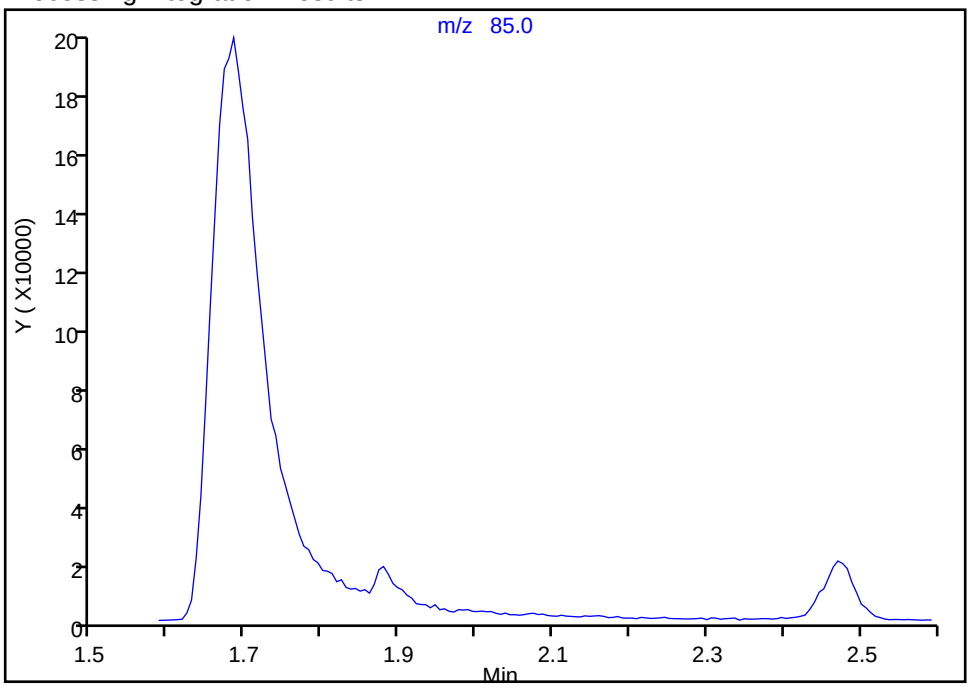
Data File:	\\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X02.D				
Injection Date:	08-Aug-2023 18:38:30	Instrument ID:	10193		
Lims ID:	CCVIS VSTD10				
Client ID:					
Operator ID:	gaw91131	ALS Bottle#:	2	Worklist Smp#:	3
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

2 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

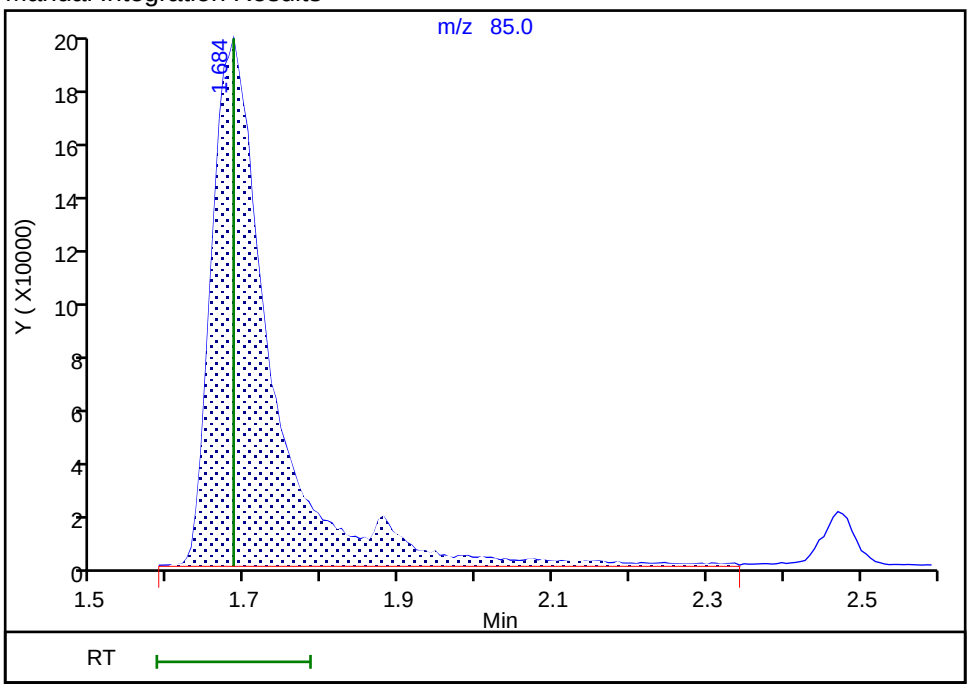
Not Detected
Expected RT: 1.68

Processing Integration Results



Manual Integration Results

RT: 1.68
Area: 1052298
Amount: 9.983373
Amount Units: ug/l



Reviewer: JS6E, 08-Aug-2023 19:00:10 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Missed Peak

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136864-2

SDG No.:

Lab Sample ID: CCV 410-405906/4 Calibration Date: 08/08/2023 19:00

Instrument ID: 10193 Calib Start Date: 07/10/2023 15:50

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 07/10/2023 18:02

Lab File ID: CG08X03.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dimethyl ether	Ave	0.3393	0.3492		10.3	10.0	2.9	20.0
Acetonitrile	Ave	0.0146	0.0160		54.9	50.0	9.7	20.0
Vinyl acetate	Ave	0.3256	0.3868		11.9	10.0	18.8	20.0
Ethyl acetate	Lin1		0.1518		10.8	10.0	8.5	20.0

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X03.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 08-Aug-2023 19:00:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090928-004
Misc. Info.: CCV
Operator ID: gaw91131 Instrument ID: 10193
Sublist: chrom-MSV_10193_25mL*sub45

Method: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 08-Aug-2023 21:10:26 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1656

First Level Reviewer: JS6E Date: 08-Aug-2023 19:30:21

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
4 Dimethyl ether	45	1.733	1.739	-0.006	99	1394022	10.0	10.3	
27 Acetonitrile	41	3.324	3.318	0.006	98	319758	50.0	54.9	M
* 31 t-Butyl alcohol-d10 (IS)	65	3.538	3.544	-0.006	97	259411	50.0	50.0	
38 Vinyl acetate	43	4.452	4.446	0.006	97	1544401	10.0	11.9	
46 Ethyl acetate	43	5.379	5.379	0.000	99	605861	10.0	10.8	
$ 54 Dibromofluoromethane (Surr)	113	6.031	6.025	0.006	94	944232	10.0	10.1	
$ 59 1,2-Dichloroethane-d4 (Surr)	102	6.488	6.482	0.006	99	202732	10.0	10.3	
63 Isopropyl acetate	43	6.641	6.647	-0.006	98	1402593	10.0	11.9	
* 65 Fluorobenzene (IS)	96	6.933	6.933	0.000	99	3992365	10.0	10.0	
75 n-Propyl acetate	61	7.994	7.994	0.000	98	292786	10.0	9.50	
$ 83 Toluene-d8 (Surr)	98	9.049	9.043	0.006	93	3963879	10.0	9.79	
109 n-Butyl acetate	43	10.073	10.073	0.000	99	1030945	10.0	8.35	
* 111 Chlorobenzene-d5 (IS)	117	10.652	10.652	0.000	83	3082005	10.0	10.0	
$ 124 4-Bromofluorobenzene (Surr)	95	11.719	11.713	0.006	96	1326899	10.0	9.16	
* 139 1,4-Dichlorobenzene-d4	152	12.627	12.621	0.006	93	1676772	10.0	10.0	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

MSV_CCV_V5ACE_00027	Amount Added:	1.00	Units: uL	
MSV_DME_00053	Amount Added:	1.00	Units: uL	
MSV_HP25_ISSS_00074	Amount Added:	1.00	Units: uL	Run Reagent

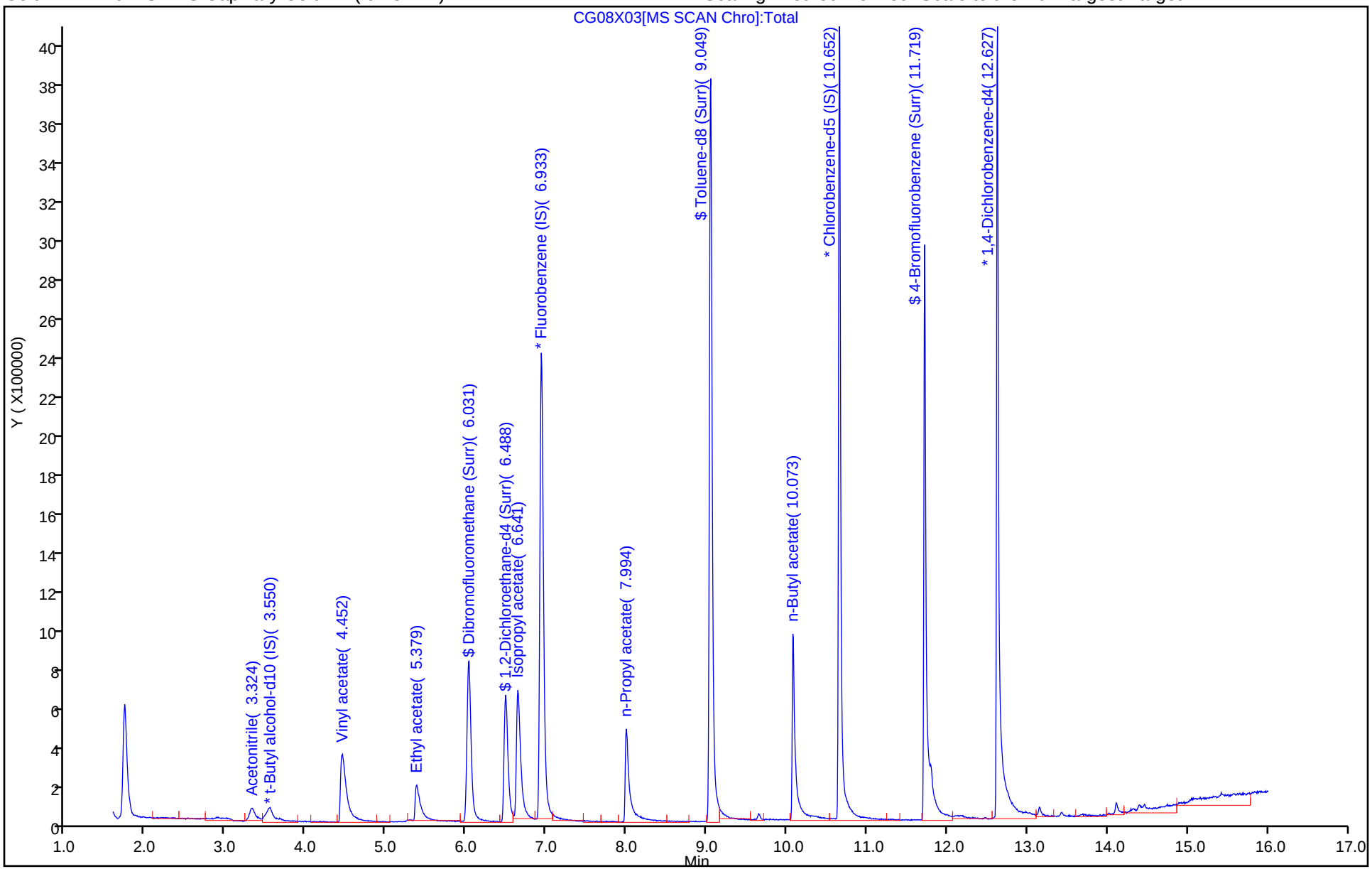
Report Date: 08-Aug-2023 21:10:26 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X03.D

Injection Date:	08-Aug-2023 19:00:30	Instrument ID:	10193	Operator ID:	gaw91131
Lims ID:	CCV			Worklist Smp#:	4
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

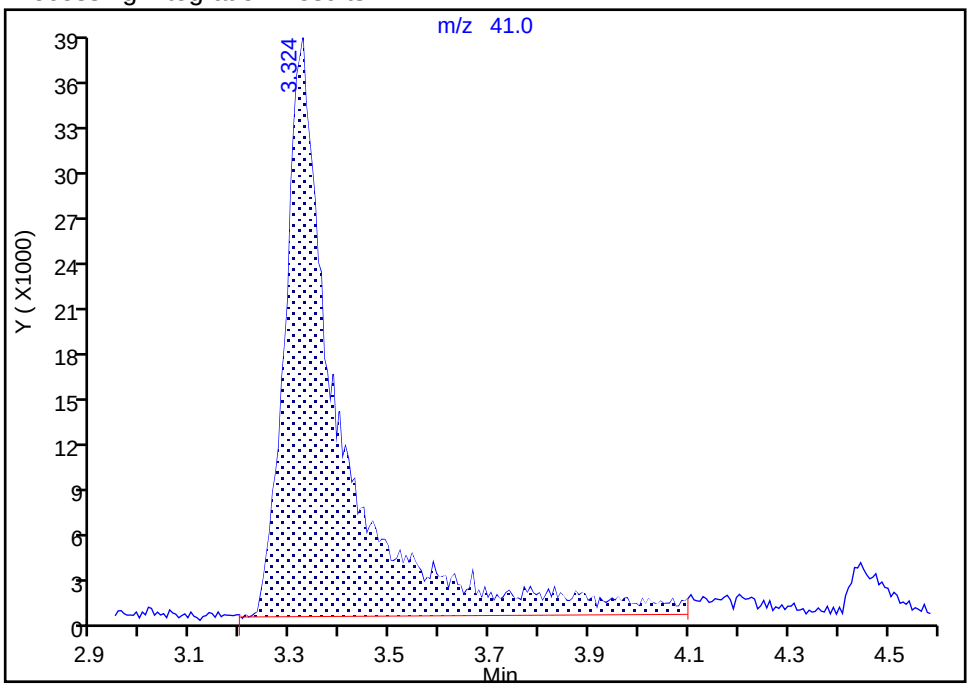
Data File:	\\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X03.D				
Injection Date:	08-Aug-2023 19:00:30	Instrument ID:	10193		
Lims ID:	CCV				
Client ID:					
Operator ID:	gaw91131	ALS Bottle#:	3	Worklist Smp#:	4
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

27 Acetonitrile, CAS: 75-05-8

Signal: 1

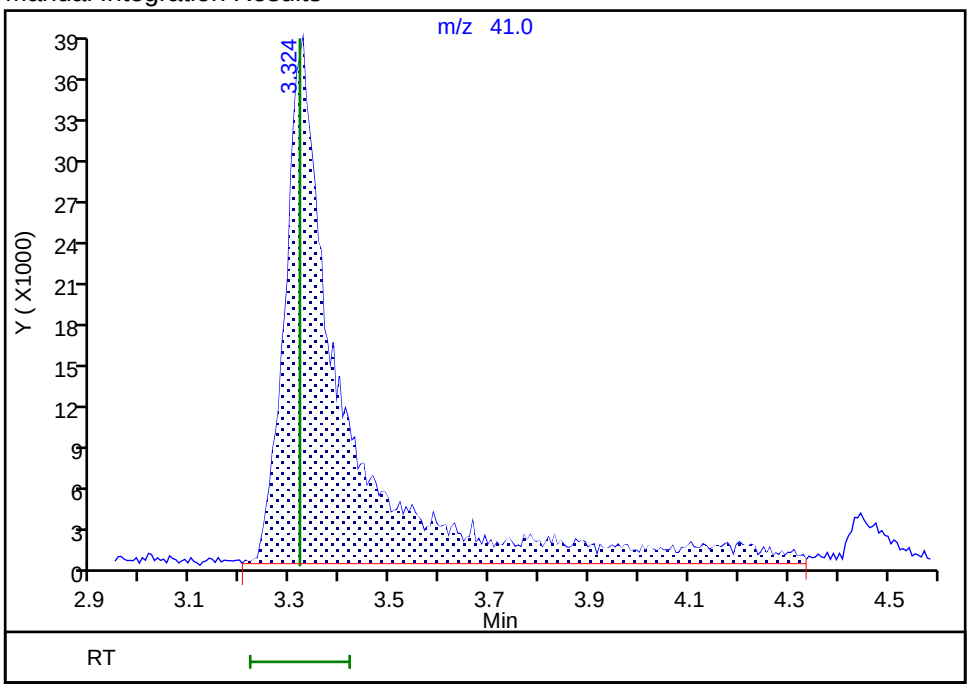
Processing Integration Results

RT: 3.32
Area: 293640
Amount: 50.373117
Amount Units: ug/l



Manual Integration Results

RT: 3.32
Area: 319758
Amount: 54.853586
Amount Units: ug/l



Reviewer: JS6E, 08-Aug-2023 19:29:53 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136864-2

SDG No.:

Lab Sample ID: CCV 410-405906/4 Calibration Date: 08/08/2023 19:00

Instrument ID: 10193 Calib Start Date: 07/10/2023 19:29

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 07/10/2023 21:40

Lab File ID: CG08X03.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2338	0.2365		10.1	10.0	1.2	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.0494	0.0508		10.3	10.0	2.7	20.0
Toluene-d8 (Surr)	Ave	1.314	1.286		9.79	10.0	-2.1	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4701	0.4305		9.16	10.0	-8.4	20.0

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X03.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 08-Aug-2023 19:00:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090928-004
Misc. Info.: CCV
Operator ID: gaw91131 Instrument ID: 10193
Sublist: chrom-MSV_10193_25mL*sub45

Method: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 08-Aug-2023 21:10:26 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1656

First Level Reviewer: JS6E Date: 08-Aug-2023 19:30:21

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
4 Dimethyl ether	45	1.733	1.739	-0.006	99	1394022	10.0	10.3	
27 Acetonitrile	41	3.324	3.318	0.006	98	319758	50.0	54.9	M
* 31 t-Butyl alcohol-d10 (IS)	65	3.538	3.544	-0.006	97	259411	50.0	50.0	
38 Vinyl acetate	43	4.452	4.446	0.006	97	1544401	10.0	11.9	
46 Ethyl acetate	43	5.379	5.379	0.000	99	605861	10.0	10.8	
$ 54 Dibromofluoromethane (Surr)	113	6.031	6.025	0.006	94	944232	10.0	10.1	
$ 59 1,2-Dichloroethane-d4 (Surr)	102	6.488	6.482	0.006	99	202732	10.0	10.3	
63 Isopropyl acetate	43	6.641	6.647	-0.006	98	1402593	10.0	11.9	
* 65 Fluorobenzene (IS)	96	6.933	6.933	0.000	99	3992365	10.0	10.0	
75 n-Propyl acetate	61	7.994	7.994	0.000	98	292786	10.0	9.50	
$ 83 Toluene-d8 (Surr)	98	9.049	9.043	0.006	93	3963879	10.0	9.79	
109 n-Butyl acetate	43	10.073	10.073	0.000	99	1030945	10.0	8.35	
* 111 Chlorobenzene-d5 (IS)	117	10.652	10.652	0.000	83	3082005	10.0	10.0	
$ 124 4-Bromofluorobenzene (Surr)	95	11.719	11.713	0.006	96	1326899	10.0	9.16	
* 139 1,4-Dichlorobenzene-d4	152	12.627	12.621	0.006	93	1676772	10.0	10.0	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

MSV_CCV_V5ACE_00027	Amount Added:	1.00	Units: uL	
MSV_DME_00053	Amount Added:	1.00	Units: uL	
MSV_HP25_ISSS_00074	Amount Added:	1.00	Units: uL	Run Reagent

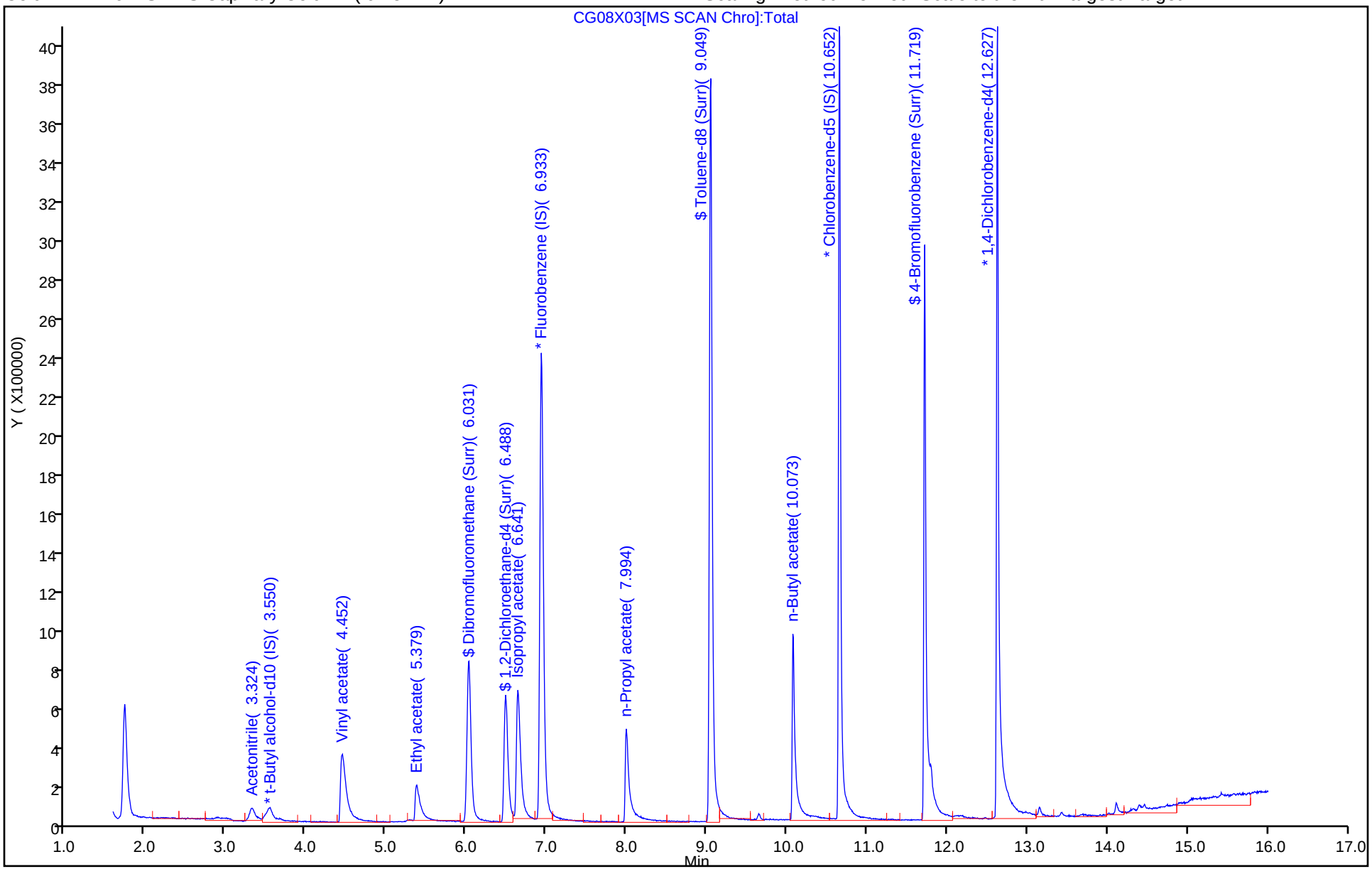
Report Date: 08-Aug-2023 21:10:26 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X03.D

Injection Date:	08-Aug-2023 19:00:30	Instrument ID:	10193	Operator ID:	gaw91131
Lims ID:	CCV			Worklist Smp#:	4
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10T04.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 10-Jul-2023 15:13:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 410-0088548-001
Misc. Info.: BFB
Operator ID: knk41612 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 11-Jul-2023 11:20:08 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1613

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 168 BFB	95	4.818	4.818	0.000	90	175125	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

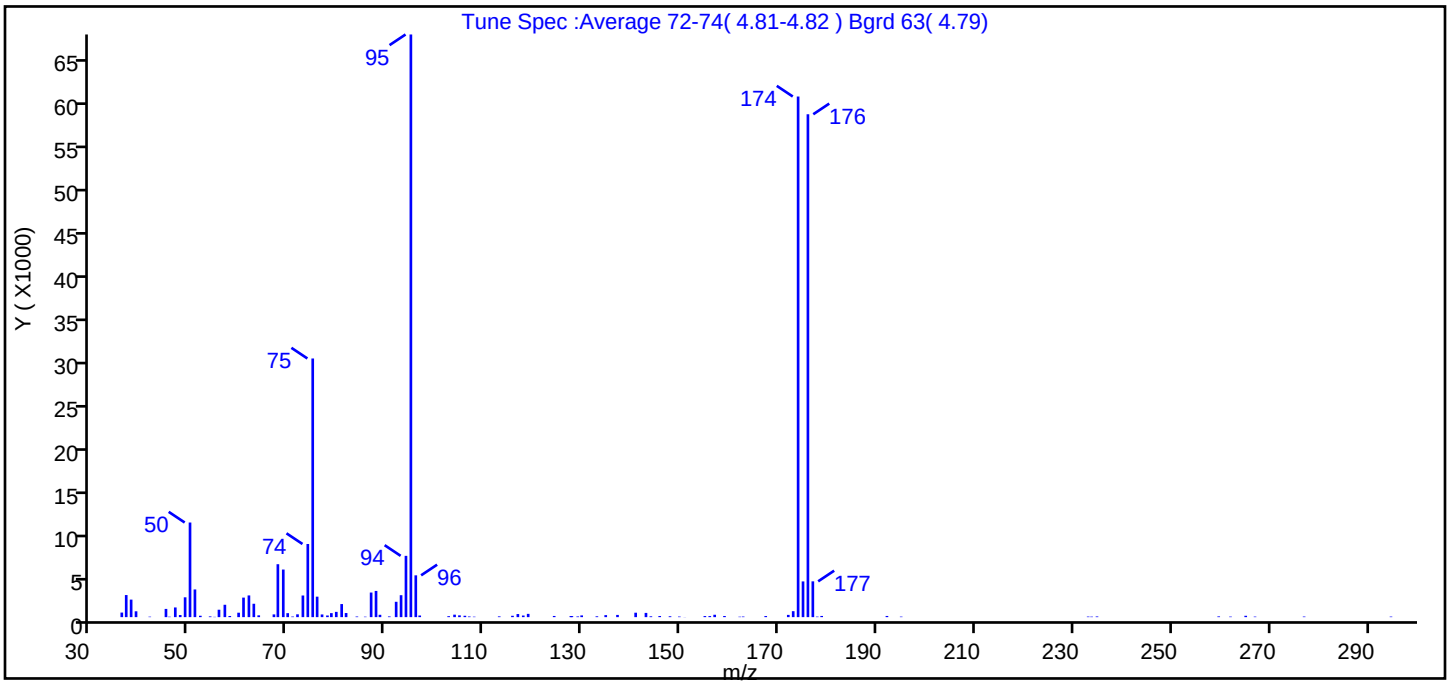
MSV_V_BFB_00012 Amount Added: 1.00 Units: uL

MS Tune Report

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10T04.D
Injection Date: 10-Jul-2023 15:13:30 Instrument ID: 10193
Lims ID: BFB
Client ID:
Operator ID: knk41612 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Tune Method: BFB Method 8260

$ 168 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	16.2
75	30 to 60% of m/z 95	44.4
96	5 to 9% of m/z 95	7.2
173	Less than 2% of m/z 174	1.0 (1.1)
174	50 to 120% of m/z 95	89.4
175	5 to 9% of m/z 174	6.1 (6.9)
176	Greater than 95% but less than 101% of m/z 174	86.3 (96.6)
177	5 to 9% of m/z 176	6.1 (7.1)

Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10T04.D\MSV_10193_25mL.rslt\spectra.d
Injection Date: 10-Jul-2023 15:13:30
Spectrum: Tune Spec :Average 72-74(4.81-4.82) Bgrd 63(4.79)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 103

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	531	70.00	462	104.00	287	156.00	122
37.00	2561	71.00	70	105.00	207	157.00	277
38.00	2033	72.00	327	106.00	160	159.00	131
39.00	679	73.00	2509	107.00	76	162.00	51
42.00	55	74.00	8480	108.00	53	163.00	69
45.00	954	75.00	29984	113.00	89	167.00	128
46.00	50	76.00	2374	116.00	158	172.00	262
47.00	1123	77.00	312	117.00	359	173.00	692
48.00	243	78.00	191	118.00	187	174.00	60352
49.00	2299	79.00	466	119.00	381	175.00	4142
50.00	10970	80.00	611	124.00	136	176.00	58296
51.00	3210	81.00	1517	128.00	128	177.00	4150
52.00	162	82.00	477	128.00	121	178.00	62
54.00	85	84.00	74	129.00	80	179.00	139
55.00	32	86.00	53	130.00	200	192.00	136
56.00	860	87.00	2852	133.00	98	195.00	61
57.00	1434	88.00	3038	135.00	233	233.00	67
58.00	134	89.00	272	137.00	258	234.00	59
60.00	514	91.00	82	141.00	514	235.00	80
61.00	2265	92.00	1780	143.00	491	260.00	86
62.00	2517	93.00	2544	144.00	96	262.00	63
63.00	1552	94.00	7106	146.00	130	265.00	158
64.00	209	95.00	67544	148.00	101	267.00	63
67.00	319	96.00	4847	150.00	68	277.00	69
68.00	6136	97.00	190	151.00	13	295.00	65
69.00	5519	103.00	110	155.00	126		

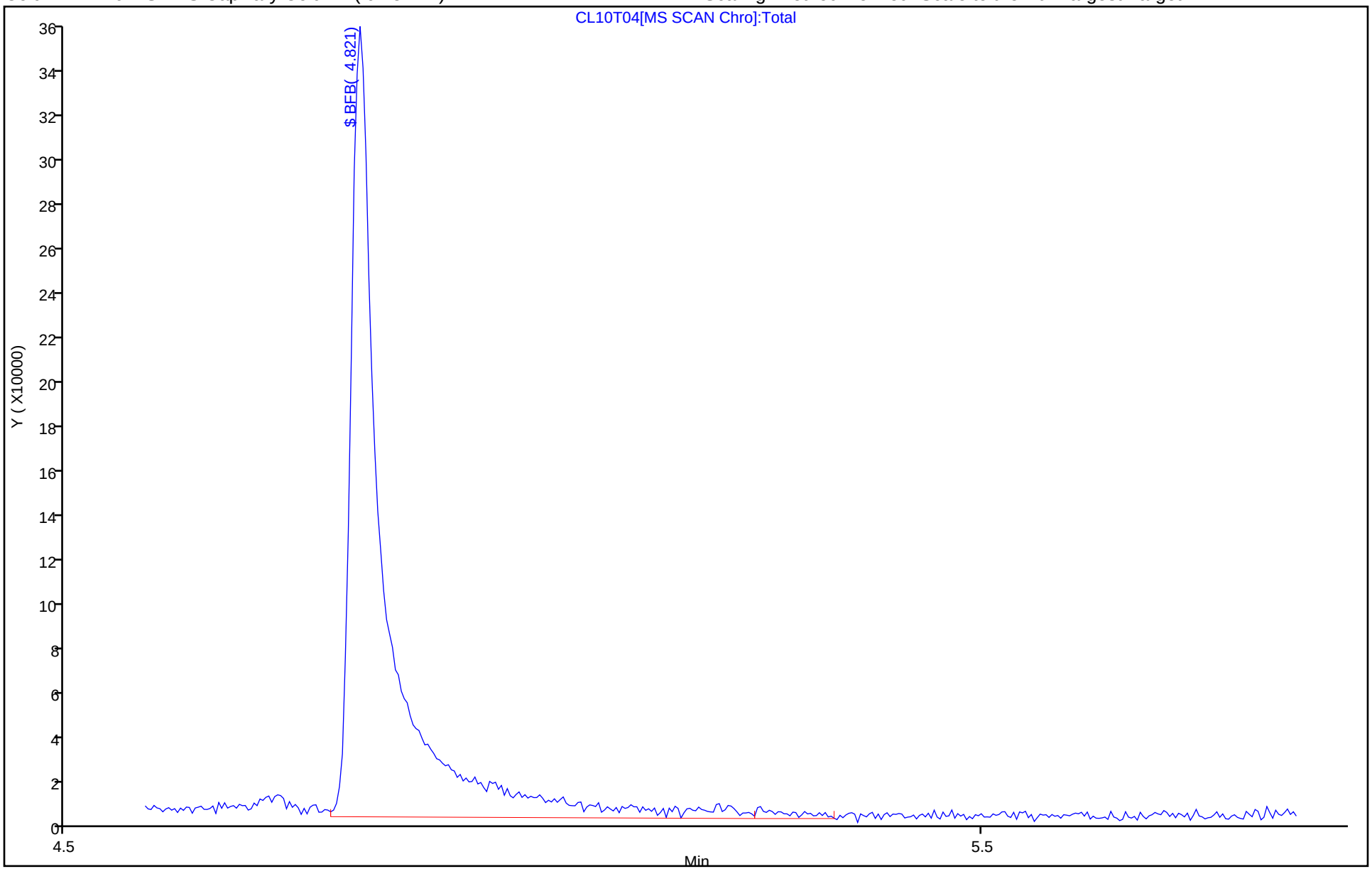
Report Date: 11-Jul-2023 11:20:09 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10T04.D

Injection Date:	10-Jul-2023 15:13:30	Instrument ID:	10193	Operator ID:	knk41612
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08T01.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 08-Aug-2023 18:03:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 410-0090928-001
Misc. Info.: BFB
Operator ID: gaw91131 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 08-Aug-2023 21:10:58 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1656

First Level Reviewer: JS6E Date: 08-Aug-2023 18:11:56

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 168 BFB	95	4.841	4.841	0.000	94	341408	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

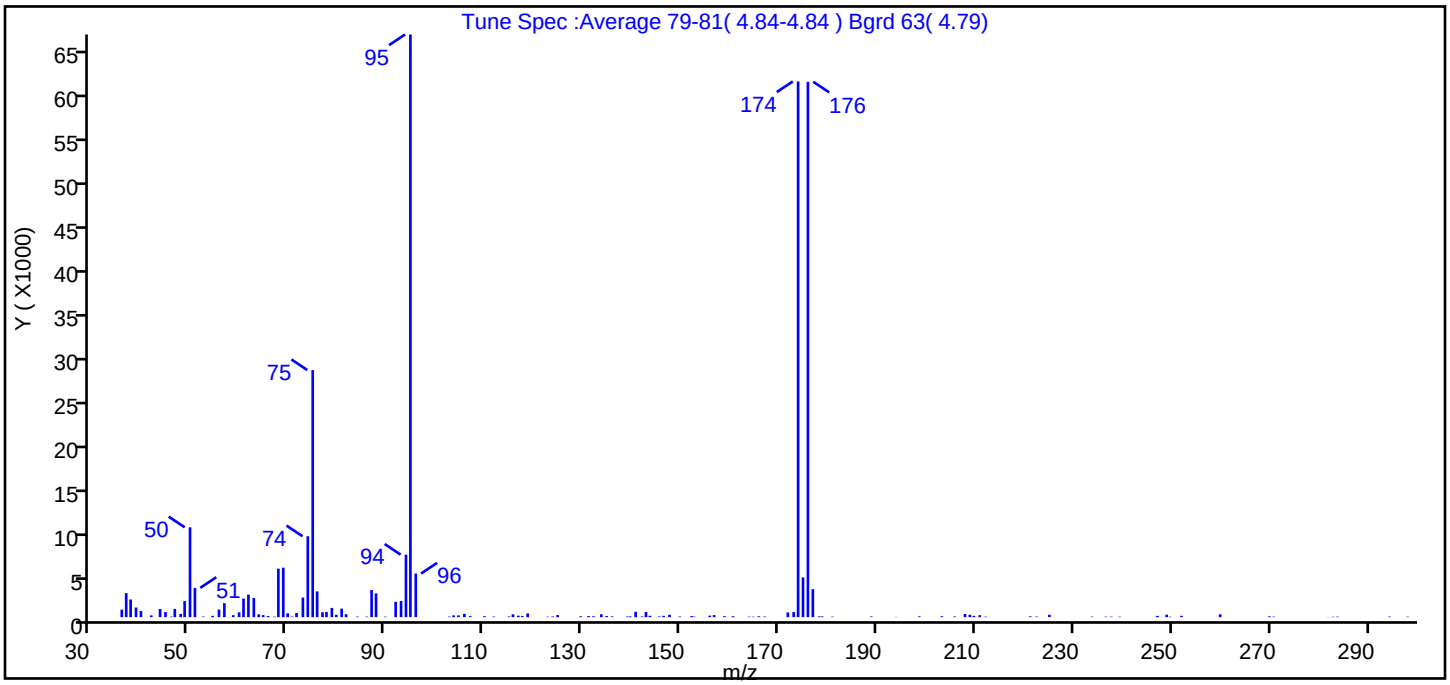
MSV_V_BFB_00012 Amount Added: 1.00 Units: uL

MS Tune Report

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08T01.D
Injection Date: 08-Aug-2023 18:03:30 Instrument ID: 10193
Lims ID: BFB
Client ID:
Operator ID: gaw91131 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Tune Method: BFB Method 8260

$ 168 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	15.4
75	30 to 60% of m/z 95	42.4
96	5 to 9% of m/z 95	7.5
173	Less than 2% of m/z 174	0.9 (0.9)
174	50 to 120% of m/z 95	91.9
175	5 to 9% of m/z 174	6.8 (7.4)
176	Greater than 95% but less than 101% of m/z 174	91.9 (99.9)
177	5 to 9% of m/z 176	4.8 (5.2)

Data File: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08T01.D\MSV_10193_25mL.rslt\spectra.d
Injection Date: 08-Aug-2023 18:03:30
Spectrum: Tune Spec :Average 79-81(4.84-4.84) Bgrd 63(4.79)
Base Peak: 94.90
Minimum % Base Peak: 0
Number of Points: 135

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	858	74.00	9281	130.00	103	177.00	3210
37.00	2755	75.00	28336	131.00	128	178.00	84
38.00	2024	76.00	2955	132.00	102	179.00	83
39.00	1104	77.00	555	134.00	329	181.00	57
40.00	702	78.00	599	135.00	125	189.00	76
42.00	203	79.00	1057	136.00	86	194.00	26
44.00	939	80.00	280	139.00	76	199.00	89
45.00	586	81.00	976	140.00	84	203.00	102
46.00	58	82.00	333	141.00	616	206.00	78
47.00	947	84.00	66	142.00	78	208.00	364
48.00	368	86.00	61	143.00	593	209.00	275
49.00	1838	87.00	3111	144.00	153	210.00	144
50.00	10305	88.00	2723	146.00	76	211.00	225
51.00	3356	90.00	62	146.00	153	212.00	56
53.00	65	92.00	1763	147.00	10	221.00	95
55.00	152	93.00	1857	148.00	280	222.00	65
56.00	872	94.00	7166	150.00	73	225.00	271
57.00	1605	95.00	66832	152.00	122	234.00	61
58.00	10	96.00	5002	153.00	64	237.00	59
59.00	229	103.00	61	155.00	15	238.00	55
60.00	552	104.00	202	156.00	170	239.00	55
61.00	2135	105.00	202	157.00	235	247.00	144
62.00	2585	106.00	380	159.00	115	249.00	280
63.00	2199	107.00	113	161.00	88	250.00	51
64.00	317	110.00	115	161.00	53	252.00	162
65.00	234	112.00	70	164.00	55	260.00	324
66.00	128	115.00	78	165.00	54	270.00	98
67.00	59	116.00	330	166.00	97	271.00	57
68.00	5555	117.00	169	167.00	71	282.00	19
69.00	5674	118.00	121	172.00	540	283.00	47
70.00	443	119.00	424	173.00	581	284.00	63
71.00	69	123.00	50	174.00	61448	294.00	68
72.00	477	124.00	78	175.00	4561	298.00	53

Report Date: 08-Aug-2023 21:10:58 Chrom Revision: 2.3 01-Aug-2023 10:44:40
Data File: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08T01.D\MSV_10193_25mL.rslt\spectra.d
Injection Date: 08-Aug-2023 18:03:30
Spectrum: Tune Spec :Average 79-81(4.84-4.84) Bgrd 63(4.79)
Base Peak: 94.90
Minimum % Base Peak: 0
Number of Points: 135

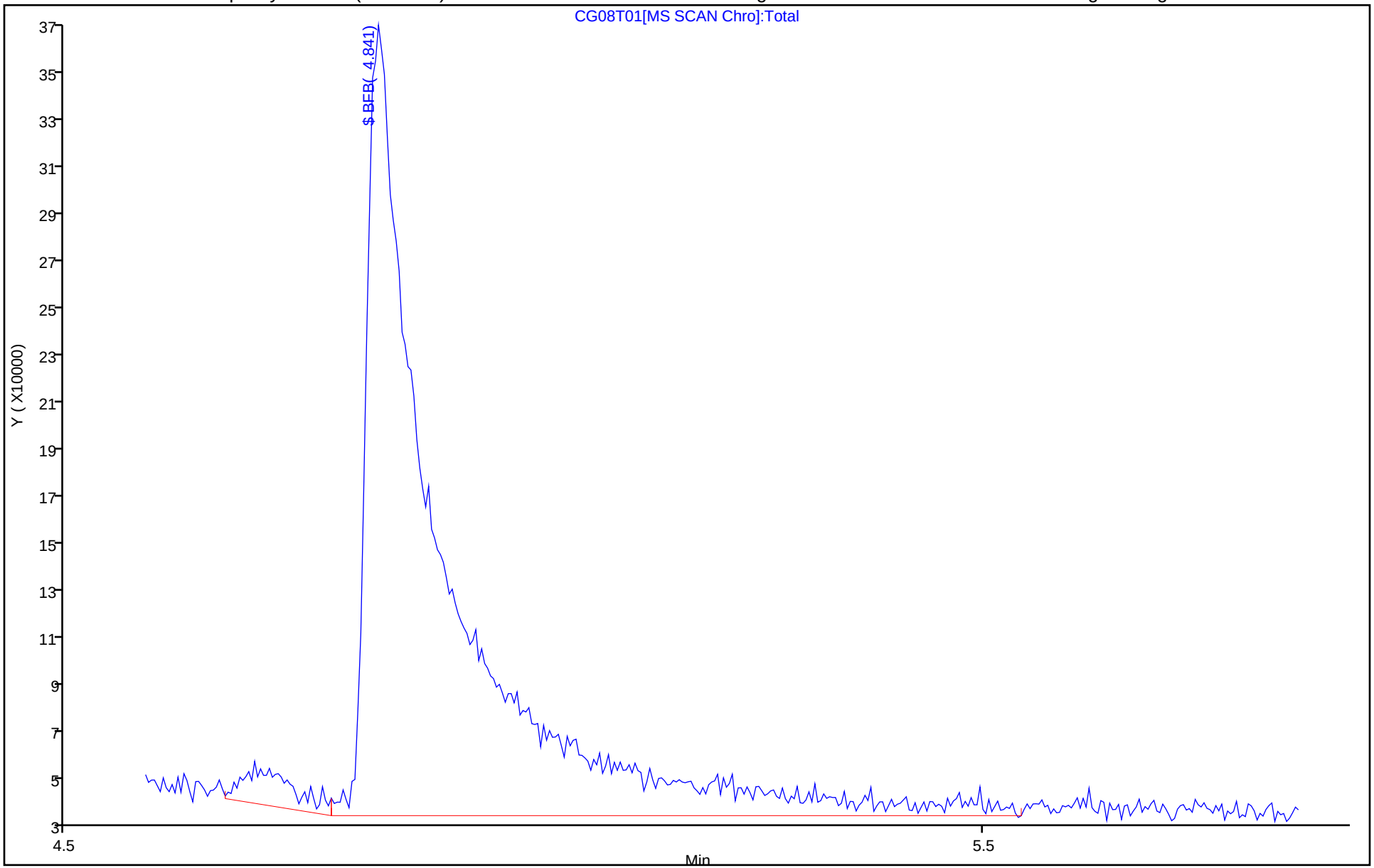
m/z	Y	m/z	Y	m/z	Y	m/z	Y
73.00	2240	125.00	240	176.00	61408		

Report Date: 08-Aug-2023 21:10:58 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08T01.D				
Injection Date:	08-Aug-2023 18:03:30	Instrument ID:	10193	Operator ID:	gaw91131
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136864-2

SDG No.:

Client Sample ID:
Lab Sample ID: MB 410-405906/8

Matrix: Water
Lab File ID: CG08X07.D

Analysis Method: EPA 8260C
Date Collected:

Sample wt/vol: 25(mL)
Date Analyzed: 08/08/2023 20:27

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 405906
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
115-10-6	Dimethyl ether	ND		10	1.1

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	104		80-120
1868-53-7	Dibromofluoromethane (Surr)	103		80-120
460-00-4	4-Bromofluorobenzene (Surr)	89		80-120
2037-26-5	Toluene-d8 (Surr)	98		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X07.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 08-Aug-2023 20:27:30 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090928-008
Misc. Info.: MB
Operator ID: gaw91131 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 09-Aug-2023 10:49:36 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1657

First Level Reviewer: innoonk Date: 09-Aug-2023 10:49:36

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Chlorotrifluoroethene	116		1.648					ND	
2 Dichlorodifluoromethane	85		1.684					ND	
3 Chlorodifluoromethane	51		1.697					ND	7
4 Dimethyl ether	45		1.739					ND	7
5 Chloromethane	50		1.849					ND	7
6 Vinyl chloride	62		1.940					ND	
7 Butadiene	39		1.940					ND	7
8 2-Chloro-1,1,1-Trifluoroethane	118		2.007					ND	U
9 Bromomethane	94		2.209					ND	7
10 Chloroethane	64		2.270					ND	7
11 Dichlorofluoromethane	67		2.471					ND	7
13 Pentane	43		2.526					ND	U
12 Trichlorofluoromethane	101		2.532					ND	7
14 Ethyl ether	59		2.696					ND	7
16 1,2-Dichloro-1,1,2-trifluoroetha	67		2.794					ND	7
17 Acrolein	56		2.843					ND	7
18 1,1-Dichloroethene	96		2.946					ND	7
20 Acetone	43	3.013	2.989	0.024	56	13213		0.9542	
21 1,1,2-Trichloro-1,2,2-trifluoroe	101		3.001					ND	
22 Iodomethane	142		3.111					ND	
23 Ethyl bromide	108		3.129					ND	
24 Isopropyl alcohol	45	3.166	3.147	0.019	80	27672		6.08	
25 Carbon disulfide	76		3.196					ND	7
27 Acetonitrile	41		3.318					ND	
26 Methyl acetate	43		3.324					ND	7
29 3-Chloro-1-propene	41		3.336					ND	
30 Methylene Chloride	84		3.489					ND	
* 31 t-Butyl alcohol-d10 (IS)	65	3.532	3.544	-0.012	96	291677	50.0	50.0	
32 2-Methyl-2-propanol	59	3.623	3.635	-0.012	29	4925		0.8042	
33 Acrylonitrile	53		3.800					ND	7
34 Methyl tert-butyl ether	73		3.824					ND	7

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 trans-1,2-Dichloroethene	96		3.824					ND	
36 Hexane	57		4.196					ND	
37 1,1-Dichloroethane	63		4.434					ND	
38 Vinyl acetate	43		4.446					ND	7
39 Isopropyl ether	45		4.507					ND	7
40 2-Chloro-1,3-butadiene	53		4.550					ND	
41 Tert-butyl ethyl ether	59		5.068					ND	7
42 2-Butanone (MEK)	43		5.281					ND	7
43 cis-1,2-Dichloroethene	96		5.299					ND	
44 2,2-Dichloropropane	77		5.312					ND	7
46 Ethyl acetate	43		5.379					ND	U
45 Propionitrile	54		5.391					ND	
47 Methacrylonitrile	67		5.586					ND	7
48 Chlorobromomethane	128		5.641					ND	
49 Tetrahydrofuran	71		5.659					ND	
50 Chloroform	83		5.799					ND	
51 Methyl acrylate	55		6.013					ND	
53 1,1,1-Trichloroethane	97		6.025					ND	
$ 54 Dibromofluoromethane (Surr)	113	6.031	6.025	0.006	94	918525	10.0	10.3	
55 Cyclohexane	56		6.122					ND	7
S 52 1,2-Dichloroethene, Total	100		6.155					ND	7
56 Carbon tetrachloride	117		6.238					ND	
57 1,1-Dichloropropene	75		6.244					ND	7
58 Isobutyl alcohol	41		6.476					ND	U
$ 59 1,2-Dichloroethane-d4 (Surr)	102	6.494	6.482	0.012	99	195890	10.0	10.4	
60 Benzene	78		6.507					ND	7
61 1,2-Dichloroethane	62		6.592					ND	7
63 Isopropyl acetate	43		6.647					ND	U
64 Tert-amyl methyl ether	73		6.726					ND	
62 1-Chlorobutane	56	6.933	6.781	0.152	26	10557		NC	
* 65 Fluorobenzene (IS)	96	6.939	6.933	0.006	99	3808276	10.0	10.0	
66 n-Heptane	43		6.952					ND	7
67 n-Butanol	56		7.409					ND	U
68 Trichloroethene	95		7.427					ND	
69 Methylcyclohexane	83		7.732					ND	
70 1,2-Dichloropropane	63		7.769					ND	7
71 2-ethoxy-2-methyl butane	87		7.799					ND	
72 Dibromomethane	93		7.884					ND	7
74 1,4-Dioxane	88		7.890					ND	
73 Methyl methacrylate	69		7.890					ND	7
75 n-Propyl acetate	61		7.994					ND	U
76 Dichlorobromomethane	83		8.134					ND	
77 2-Nitropropane	41		8.421					ND	7
78 1-Bromo-2-chloroethane	63		8.531					ND	7
79 2-Chloroethyl vinyl ether	63		8.543					ND	7
80 cis-1,3-Dichloropropene	75		8.713					ND	7
82 4-Methyl-2-pentanone (MIBK)	43		8.915					ND	7
$ 83 Toluene-d8 (Surr)	98	9.049	9.043	0.006	93	3786033	10.0	9.82	
81 Chloroacetonitrile	75	9.055	9.067	-0.012	31	401		NC	
84 Toluene	92		9.134					ND	7
85 trans-1,3-Dichloropropene	75		9.451					ND	7
86 Ethyl methacrylate	69		9.536					ND	7

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
87 1,1,2-Trichloroethane	97		9.671					ND	
88 Tetrachloroethene	166		9.750					ND	
89 1,3-Dichloropropane	76		9.841					ND	7
106 2-Hexanone	43		9.921					ND	7
S 107 1,3-Dichloropropene, Total	100		10.060					ND	7
109 n-Butyl acetate	43		10.073					ND	
108 Chlorodibromomethane	129		10.073					ND	
110 Ethylene Dibromide	107		10.183					ND	
* 111 Chlorobenzene-d5 (IS)	117	10.652	10.652	0.000	83	2935252	10.0	10.0	
112 1-Chlorohexane	91		10.676					ND	7
113 Chlorobenzene	112		10.683					ND	
114 1,1,1,2-Tetrachloroethane	131		10.774					ND	
115 Ethylbenzene	91		10.780					ND	
116 m-Xylene & p-Xylene	106		10.902					ND	
S 117 Xylenes, Total	106		11.245					ND	7
118 o-Xylene	106		11.250					ND	
119 Styrene	104		11.268					ND	
120 Bromoform	173		11.426					ND	7
121 Isopropylbenzene	105		11.567					ND	
122 cis-1,4-Dichloro-2-butene	88		11.627					ND	U
123 Cyclohexanone	55		11.646					ND	U
$ 124 4-Bromofluorobenzene (Surr)	95	11.719	11.713	0.006	97	1223924	10.0	8.87	
125 Bromobenzene	156		11.829					ND	
126 1,1,2,2-Tetrachloroethane	83		11.829					ND	
127 trans-1,4-Dichloro-2-butene	53		11.859					ND	
128 1,2,3-Trichloropropane	110		11.871					ND	
129 N-Propylbenzene	91		11.908					ND	
130 2-Chlorotoluene	126		11.981					ND	7
131 1,3,5-Trimethylbenzene	105		12.054					ND	
132 4-Chlorotoluene	126		12.079					ND	7
133 tert-Butylbenzene	134		12.298					ND	7
134 Pentachloroethane	167		12.329					ND	
135 1,2,4-Trimethylbenzene	105		12.347					ND	7
136 sec-Butylbenzene	105		12.469					ND	7
137 1,3-Dichlorobenzene	146		12.566					ND	7
138 4-Isopropyltoluene	119		12.579					ND	7
* 139 1,4-Dichlorobenzene-d4	152	12.627	12.621	0.006	93	1616490	10.0	10.0	
140 1,4-Dichlorobenzene	146		12.640					ND	7
141 1,2,3-Trimethylbenzene	120		12.652					ND	7
142 Benzyl chloride	126		12.725					ND	7
145 p-Diethylbenzene	119		12.859					ND	U
143 n-Butylbenzene	92		12.877					ND	
144 1,2-Dichlorobenzene	146		12.902					ND	
147 Hexachloroethane	117		13.444					ND	
148 1,2-Dibromo-3-Chloropropane	155		13.469					ND	
149 1,3,5-Trichlorobenzene	180		13.591					ND	
150 1,2,4-Trichlorobenzene	180		14.023					ND	
151 Hexachlorobutadiene	225		14.103					ND	
152 Naphthalene	128		14.200					ND	
153 1,2,3-Trichlorobenzene	180		14.346					ND	7
154 2-Methylnaphthalene	142		14.950					ND	
155 Dodecane	57		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
156 1,1-Dichloro-1-fluoroethane	1		0.000					ND	
157 tert-Butyl Formate	1		0.000					ND	
158 2-Bromo-1-chloropropane	1		0.000					ND	
159 1-Chloropropane	1		0.000					ND	
160 1,1-Dichloroacetone	1		0.000					ND	
161 Methylal	1		0.000					ND	
162 Propene oxide	1		0.000					ND	
163 t-Amyl alcohol	1		0.000					ND	
164 Ethanol	45		0.000					ND	
165 n-Decane	57		0.000					ND	
166 1-Bromo-3-Chloropropane	1		0.000					ND	

QC Flag Legend

Processing Flags
- NC - Not Calibrated
- 7 - Failed Limit of Detection

Review Flags
- U - Marked Undetected

Reagents:

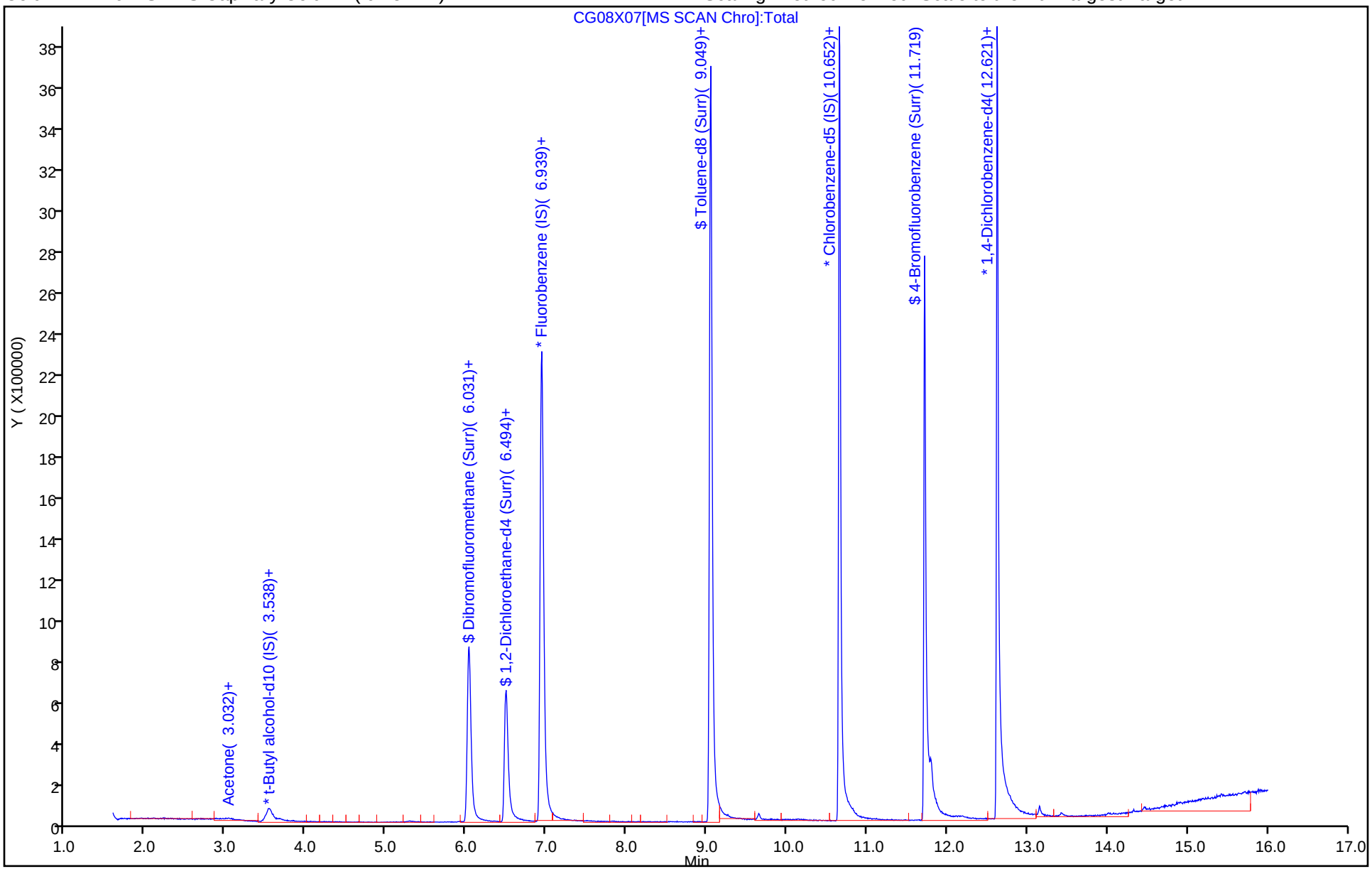
MSV_HP25_ISSS_00074 Amount Added: 1.00 Units: uL Run Reagent

Report Date: 09-Aug-2023 10:49:36 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X07.D				
Injection Date:	08-Aug-2023 20:27:30	Instrument ID:	10193	Operator ID:	gaw91131
Lims ID:	MB			Worklist Smp#:	8
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X07.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 08-Aug-2023 20:27:30 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090928-008
Misc. Info.: MB
Operator ID: gaw91131 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 09-Aug-2023 10:49:36 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1657

First Level Reviewer: innoonk Date: 09-Aug-2023 10:49:36

Compound	Amount Added	Amount Recovered	% Rec.
$ 54 Dibromofluoromethane (Surr)	10.0	10.3	103.16
$ 59 1,2-Dichloroethane-d4 (Surr)	10.0	10.4	104.05
$ 83 Toluene-d8 (Surr)	10.0	9.82	98.17
$ 124 4-Bromofluorobenzene (Surr)	10.0	8.87	88.70

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136864-2

SDG No.:

Client Sample ID:
Lab Sample ID: LCS 410-405906/5

Matrix: Water
Lab File ID: CG08X04.D

Analysis Method: EPA 8260C
Date Collected:

Sample wt/vol: 25(mL)
Date Analyzed: 08/08/2023 19:22

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 405906
Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	105		80-120
1868-53-7	Dibromofluoromethane (Surr)	103		80-120
460-00-4	4-Bromofluorobenzene (Surr)	99		80-120
2037-26-5	Toluene-d8 (Surr)	101		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X04.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 08-Aug-2023 19:22:30 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090928-005
Misc. Info.: LCS
Operator ID: gaw91131 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 08-Aug-2023 21:10:26 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1656

First Level Reviewer: JS6E Date: 08-Aug-2023 19:51:31

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.684	1.684	0.000	99	510221	5.00	5.01	M
5 Chloromethane	50	1.843	1.849	-0.006	99	574116	5.00	4.45	
6 Vinyl chloride	62	1.934	1.940	-0.006	75	586451	5.00	4.77	
7 Butadiene	39	1.940	1.940	0.000	90	490691	5.00	4.12	
9 Bromomethane	94	2.209	2.209	0.000	89	457675	5.00	4.76	
10 Chloroethane	64	2.270	2.270	0.000	100	355245	5.00	4.91	
11 Dichlorofluoromethane	67	2.471	2.471	0.000	97	844992	5.00	4.30	
13 Pentane	43	2.526	2.526	0.000	96	609829	5.00	4.35	
12 Trichlorofluoromethane	101	2.532	2.532	0.000	96	682928	5.00	4.91	
14 Ethyl ether	59	2.696	2.696	0.000	90	359762	5.01	4.54	
16 1,2-Dichloro-1,1,2-trifluoroetha	67	2.794	2.794	0.000	93	527073	5.00	4.83	
18 1,1-Dichloroethene	96	2.952	2.946	0.006	95	445851	5.00	4.95	
20 Acetone	43	2.983	2.989	-0.006	100	849831	62.5	60.2	
21 1,1,2-Trichloro-1,2,2-trifluoroe	101	2.995	3.001	-0.006	86	419794	5.00	4.73	
22 Iodomethane	142	3.105	3.111	-0.006	96	945949	5.00	4.89	
24 Isopropyl alcohol	45	3.141	3.147	-0.006	37	130832	37.5	39.8	
25 Carbon disulfide	76	3.196	3.196	0.000	99	1577155	5.00	4.95	
26 Methyl acetate	43	3.324	3.324	0.000	40	222719	5.00	5.00	
29 3-Chloro-1-propene	41	3.337	3.336	0.001	94	775579	5.00	4.89	
30 Methylene Chloride	84	3.489	3.489	0.000	91	551165	5.00	4.90	
* 31 t-Butyl alcohol-d10 (IS)	65	3.526	3.544	-0.018	97	297302	50.0	50.0	
32 2-Methyl-2-propanol	59	3.635	3.635	0.000	100	305497	50.0	48.9	
33 Acrylonitrile	53	3.794	3.800	-0.006	99	542000	25.0	27.3	
34 Methyl tert-butyl ether	73	3.818	3.824	-0.006	94	1359860	5.00	4.70	
35 trans-1,2-Dichloroethene	96	3.830	3.824	0.006	99	549687	5.00	5.03	
36 Hexane	57	4.202	4.196	0.006	92	660439	5.00	4.74	
37 1,1-Dichloroethane	63	4.434	4.434	0.000	96	949465	5.00	4.95	
39 Isopropyl ether	45	4.501	4.507	-0.006	95	1650865	5.00	4.57	
40 2-Chloro-1,3-butadiene	53	4.550	4.550	0.000	89	696220	5.00	4.75	
41 Tert-butyl ethyl ether	59	5.056	5.068	-0.012	97	1571785	5.00	4.71	
42 2-Butanone (MEK)	43	5.287	5.281	0.006	100	1781586	62.5	64.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
43 cis-1,2-Dichloroethene	96	5.300	5.299	0.001	78	628623	5.00	5.36	
44 2,2-Dichloropropane	77	5.300	5.312	-0.012	56	813964	5.00	5.32	M
45 Propionitrile	54	5.428	5.391	0.037	98	255149	37.5	41.4	
47 Methacrylonitrile	67	5.592	5.586	0.006	91	1095390	37.5	37.5	
48 Chlorobromomethane	128	5.641	5.641	0.000	89	307679	5.00	5.47	
49 Tetrahydrofuran	71	5.665	5.659	0.006	79	207803	25.0	25.6	
50 Chloroform	83	5.806	5.799	0.007	93	938965	5.00	4.95	
53 1,1,1-Trichloroethane	97	6.025	6.025	0.000	72	807561	5.00	5.06	
$ 54 Dibromofluoromethane (Surr)	113	6.025	6.025	0.000	94	993577	10.0	10.3	
55 Cyclohexane	56	6.123	6.122	0.001	89	859245	5.00	4.79	
56 Carbon tetrachloride	117	6.238	6.238	0.000	93	715524	5.00	5.17	
57 1,1-Dichloropropene	75	6.244	6.244	0.000	97	726608	5.00	5.08	
58 Isobutyl alcohol	41	6.519	6.476	0.043	86	189272	125.0	120.1	
$ 59 1,2-Dichloroethane-d4 (Surr)	102	6.488	6.482	0.006	99	214109	10.0	10.5	
60 Benzene	78	6.507	6.507	0.000	97	2321621	5.00	5.08	
61 1,2-Dichloroethane	62	6.592	6.592	0.000	97	552933	5.00	4.74	
64 Tert-amyl methyl ether	73	6.726	6.726	0.000	99	1524670	5.00	4.89	
* 65 Fluorobenzene (IS)	96	6.933	6.933	0.000	99	4137704	10.0	10.0	
66 n-Heptane	43	6.952	6.952	0.000	91	710744	5.00	4.72	
67 n-Butanol	56	7.464	7.409	0.055	91	244605	250.0	186.9	
68 Trichloroethene	95	7.433	7.427	0.006	96	570141	5.00	4.86	
69 Methylcyclohexane	83	7.732	7.732	0.000	90	938468	5.00	4.94	
70 1,2-Dichloropropane	63	7.762	7.769	-0.006	96	607586	5.00	5.05	
71 2-ethoxy-2-methyl butane	87	7.799	7.799	0.000	94	895494	5.00	4.79	
72 Dibromomethane	93	7.884	7.884	0.000	94	292208	5.00	5.22	
74 1,4-Dioxane	88	7.897	7.890	0.007	31	56641	125.0	118.2	
73 Methyl methacrylate	69	7.903	7.890	0.013	92	253298	5.00	4.44	
76 Dichlorobromomethane	83	8.134	8.134	0.000	100	693823	5.00	4.99	
77 2-Nitropropane	41	8.427	8.421	0.006	99	66676	5.00	4.30	
78 1-Bromo-2-chloroethane	63	8.531	8.531	0.000	98	624985	5.00	5.12	
80 cis-1,3-Dichloropropene	75	8.714	8.713	0.001	98	840515	5.00	4.89	
82 4-Methyl-2-pentanone (MIBK)	43	8.915	8.915	0.000	96	4622620	62.5	58.9	
$ 83 Toluene-d8 (Surr)	98	9.043	9.043	0.000	93	4249380	10.0	10.1	
84 Toluene	92	9.134	9.134	0.000	98	1505125	5.00	5.01	
85 trans-1,3-Dichloropropene	75	9.457	9.451	0.006	90	720173	5.00	5.13	
86 Ethyl methacrylate	69	9.543	9.536	0.007	89	537915	5.00	4.81	
87 1,1,2-Trichloroethane	97	9.671	9.671	0.000	89	453519	5.00	5.09	
88 Tetrachloroethene	166	9.750	9.750	0.000	96	720302	5.00	4.98	
89 1,3-Dichloropropane	76	9.847	9.841	0.006	89	735329	5.00	5.16	
106 2-Hexanone	43	9.927	9.921	0.006	96	3119826	62.5	58.3	
108 Chlorodibromomethane	129	10.073	10.073	0.000	89	563369	5.00	5.16	
110 Ethylene Dibromide	107	10.189	10.183	0.006	99	419309	5.00	5.25	
* 111 Chlorobenzene-d5 (IS)	117	10.652	10.652	0.000	82	3206275	10.0	10.0	
112 1-Chlorohexane	91	10.677	10.676	0.001	96	804974	5.00	4.94	
113 Chlorobenzene	112	10.683	10.683	0.000	98	1798417	5.00	4.95	
114 1,1,1,2-Tetrachloroethane	131	10.774	10.774	0.000	96	651548	5.00	5.37	
115 Ethylbenzene	91	10.780	10.780	0.000	97	2854419	5.00	4.95	
116 m-Xylene & p-Xylene	106	10.908	10.902	0.006	97	2432801	10.0	10.5	
118 o-Xylene	106	11.250	11.250	0.000	96	1164864	5.00	5.02	
119 Styrene	104	11.268	11.268	0.000	94	1894547	5.00	5.26	
120 Bromoform	173	11.426	11.426	0.000	98	351604	5.00	5.06	
121 Isopropylbenzene	105	11.567	11.567	0.000	95	2982614	5.00	5.10	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 124 4-Bromofluorobenzene (Surr)	95	11.713	11.713	0.000	96	1486407	10.0	9.86	
125 Bromobenzene	156	11.829	11.829	0.000	95	802290	5.00	4.97	
126 1,1,2,2-Tetrachloroethane	83	11.829	11.829	0.000	92	594240	5.00	5.12	
127 trans-1,4-Dichloro-2-butene	53	11.859	11.859	0.000	84	597004	25.0	23.4	
128 1,2,3-Trichloropropane	110	11.871	11.871	0.000	78	153932	5.00	5.16	
129 N-Propylbenzene	91	11.908	11.908	0.000	98	3453133	5.00	4.89	
130 2-Chlorotoluene	126	11.981	11.981	0.000	98	782771	5.00	5.09	
131 1,3,5-Trimethylbenzene	105	12.054	12.054	0.000	94	2549051	5.00	4.87	
132 4-Chlorotoluene	126	12.079	12.079	0.000	96	803217	5.00	5.15	
133 tert-Butylbenzene	134	12.298	12.298	0.000	92	616844	5.00	5.02	
134 Pentachloroethane	167	12.329	12.329	0.000	92	508042	5.00	5.22	
135 1,2,4-Trimethylbenzene	105	12.347	12.347	0.000	96	2652484	5.00	4.93	
136 sec-Butylbenzene	105	12.469	12.469	0.000	93	3352897	5.00	5.03	
137 1,3-Dichlorobenzene	146	12.566	12.566	0.000	98	1544851	5.00	4.82	
138 4-Isopropyltoluene	119	12.579	12.579	0.000	97	3010912	5.00	5.10	
* 139 1,4-Dichlorobenzene-d4	152	12.621	12.621	0.000	92	1960785	10.0	10.0	
140 1,4-Dichlorobenzene	146	12.640	12.640	0.000	96	1632421	5.00	4.95	
141 1,2,3-Trimethylbenzene	120	12.652	12.652	0.000	98	1263390	5.00	4.91	
142 Benzyl chloride	126	12.731	12.725	0.006	97	230998	5.00	5.00	
145 p-Diethylbenzene	119	12.859	12.859	0.000	95	1855174	5.00	4.94	
143 n-Butylbenzene	92	12.877	12.877	0.000	97	1388378	5.00	5.01	
144 1,2-Dichlorobenzene	146	12.908	12.902	0.006	99	1482203	5.00	4.90	
148 1,2-Dibromo-3-Chloropropane	155	13.475	13.469	0.006	92	74857	5.00	5.11	
149 1,3,5-Trichlorobenzene	180	13.591	13.591	0.000	97	1169622	5.00	4.71	
150 1,2,4-Trichlorobenzene	180	14.023	14.023	0.000	93	888220	5.00	4.72	
151 Hexachlorobutadiene	225	14.103	14.103	0.000	96	513868	5.00	4.86	
152 Naphthalene	128	14.206	14.200	0.006	96	1391724	5.00	4.53	
153 1,2,3-Trichlorobenzene	180	14.353	14.346	0.007	96	715569	5.00	5.02	
154 2-Methylnaphthalene	142	14.974	14.950	0.024	93	229111	5.00	3.17	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

MSV_LCS_EE_00007	Amount Added: 12.50	Units: uL	
MSV_LCS_Penta_00031	Amount Added: 12.50	Units: uL	
MSV_LCS_VOC#1_00124	Amount Added: 12.50	Units: uL	
MSV_QC_Gas826_00154	Amount Added: 12.50	Units: uL	
MSV_HP25_ISSS_00074	Amount Added: 1.00	Units: uL	Run Reagent

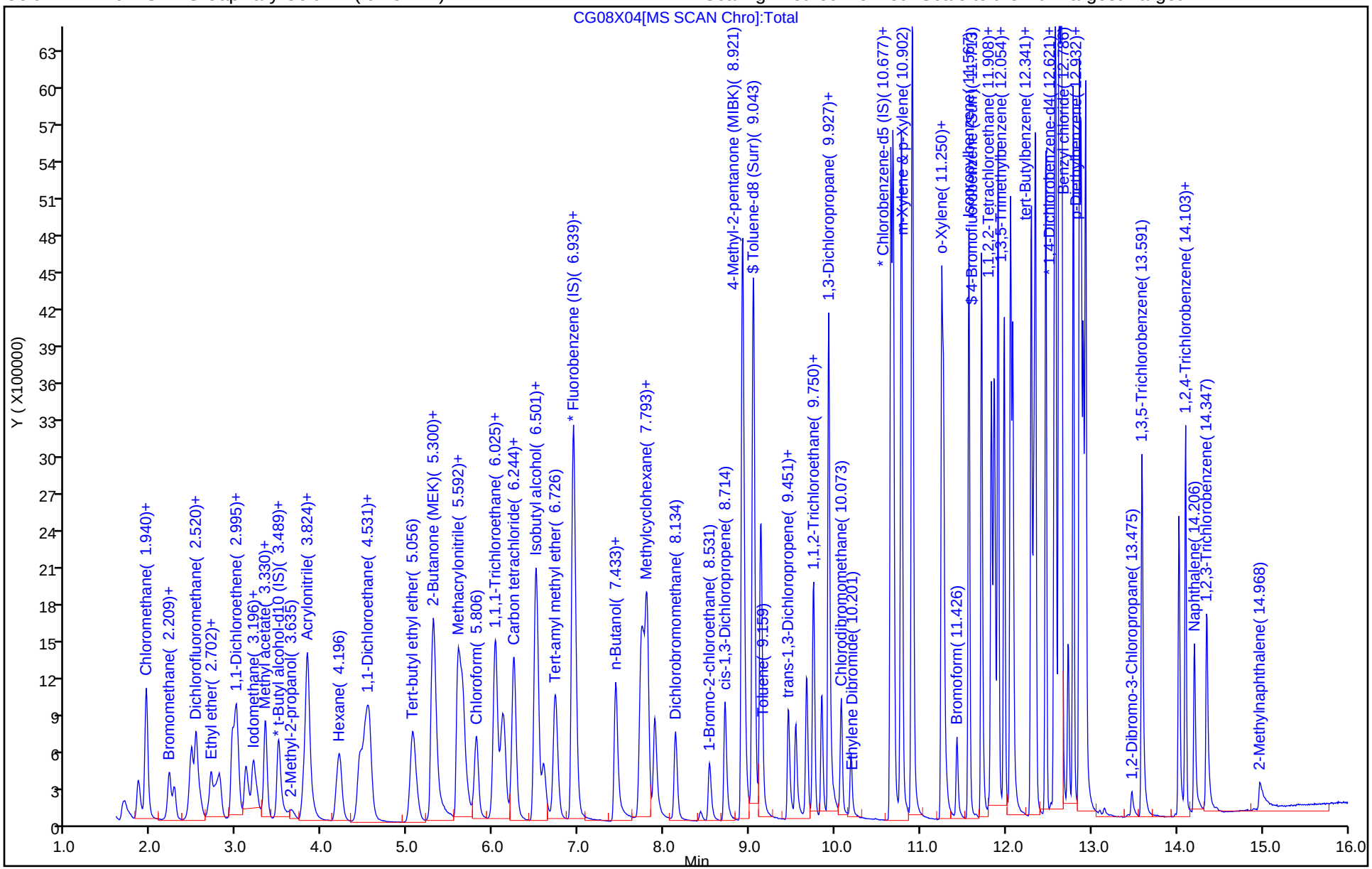
Report Date: 08-Aug-2023 21:10:29 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X04.D

Injection Date:	08-Aug-2023 19:22:30	Instrument ID:	10193	Operator ID:	gaw91131
Lims ID:	LCS			Worklist Smp#:	5
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X04.D				
Lims ID:	LCS				
Client ID:					
Sample Type:	LCS				
Inject. Date:	08-Aug-2023 19:22:30	ALS Bottle#:	4	Worklist Smp#:	5
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0090928-005				
Misc. Info.:	LCS				
Operator ID:	gaw91131	Instrument ID:	10193		
Method:	\\chromfs\Lancaster\ChromData\10193\20230808-90928.b\MSV_10193_25mL.m				
Limit Group:	MSV - 8260C_D				
Last Update:	08-Aug-2023 21:10:26	Calib Date:	10-Jul-2023 21:40:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1656				

First Level Reviewer: JS6E Date: 08-Aug-2023 19:51:31

Compound	Amount Added	Amount Recovered	% Rec.
$ 54 Dibromofluoromethane (Surr)	10.0	10.3	102.71
$ 59 1,2-Dichloroethane-d4 (Surr)	10.0	10.5	104.67
$ 83 Toluene-d8 (Surr)	10.0	10.1	100.87
$ 124 4-Bromofluorobenzene (Surr)	10.0	9.86	98.62

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136864-2

SDG No.:

Client Sample ID:
Lab Sample ID: LCS 410-405906/6

Matrix: Water
Lab File ID: CG08X05.D

Analysis Method: EPA 8260C
Date Collected:

Sample wt/vol: 25(mL)
Date Analyzed: 08/08/2023 19:44

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 405906
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
115-10-6	Dimethyl ether	5.11	J	10	1.1

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		80-120
1868-53-7	Dibromofluoromethane (Surr)	102		80-120
460-00-4	4-Bromofluorobenzene (Surr)	90		80-120
2037-26-5	Toluene-d8 (Surr)	97		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X05.D
Lims ID: LCS SM
Client ID:
Sample Type: LCS
Inject. Date: 08-Aug-2023 19:44:30 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090928-006
Misc. Info.: LCS SM
Operator ID: gaw91131 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 08-Aug-2023 21:10:26 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1656

First Level Reviewer: JS6E Date: 08-Aug-2023 20:15:47

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
4 Dimethyl ether	45	1.721	1.739	-0.018	100	666226	5.00	5.11	
27 Acetonitrile	41	3.300	3.318	-0.018	98	114764	18.8	20.5	M
* 31 t-Butyl alcohol-d10 (IS)	65	3.525	3.544	-0.019	97	247366	50.0	50.0	
38 Vinyl acetate	43	4.446	4.446	0.000	97	1798344	12.5	14.4	
46 Ethyl acetate	43	5.403	5.379	0.024	98	75860	2.50	1.68	
$ 54 Dibromofluoromethane (Surr)	113	6.025	6.025	0.000	94	919364	10.0	10.2	
$ 59 1,2-Dichloroethane-d4 (Surr)	102	6.488	6.482	0.006	99	187175	10.0	9.86	
63 Isopropyl acetate	43	6.647	6.647	0.000	98	277194	2.50	2.44	
* 65 Fluorobenzene (IS)	96	6.933	6.933	0.000	99	3838621	10.0	10.0	
75 n-Propyl acetate	61	8.037	7.994	0.043	97	46393	2.50	1.77	
$ 83 Toluene-d8 (Surr)	98	9.043	9.043	0.000	92	3829809	10.0	9.70	
109 n-Butyl acetate	43	10.103	10.073	0.030	98	118992	2.50	1.30	
* 111 Chlorobenzene-d5 (IS)	117	10.652	10.652	0.000	83	3006172	10.0	10.0	
$ 124 4-Bromofluorobenzene (Surr)	95	11.719	11.713	0.006	96	1269992	10.0	8.99	
* 139 1,4-Dichlorobenzene-d4	152	12.627	12.621	0.006	93	1650467	10.0	10.0	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

MSV_LCS_V5ACE_00028	Amount Added:	6.25	Units: uL	
MSV_Q_QDME_00034	Amount Added:	5.00	Units: uL	
MSV_HP25_ISSS_00074	Amount Added:	1.00	Units: uL	Run Reagent

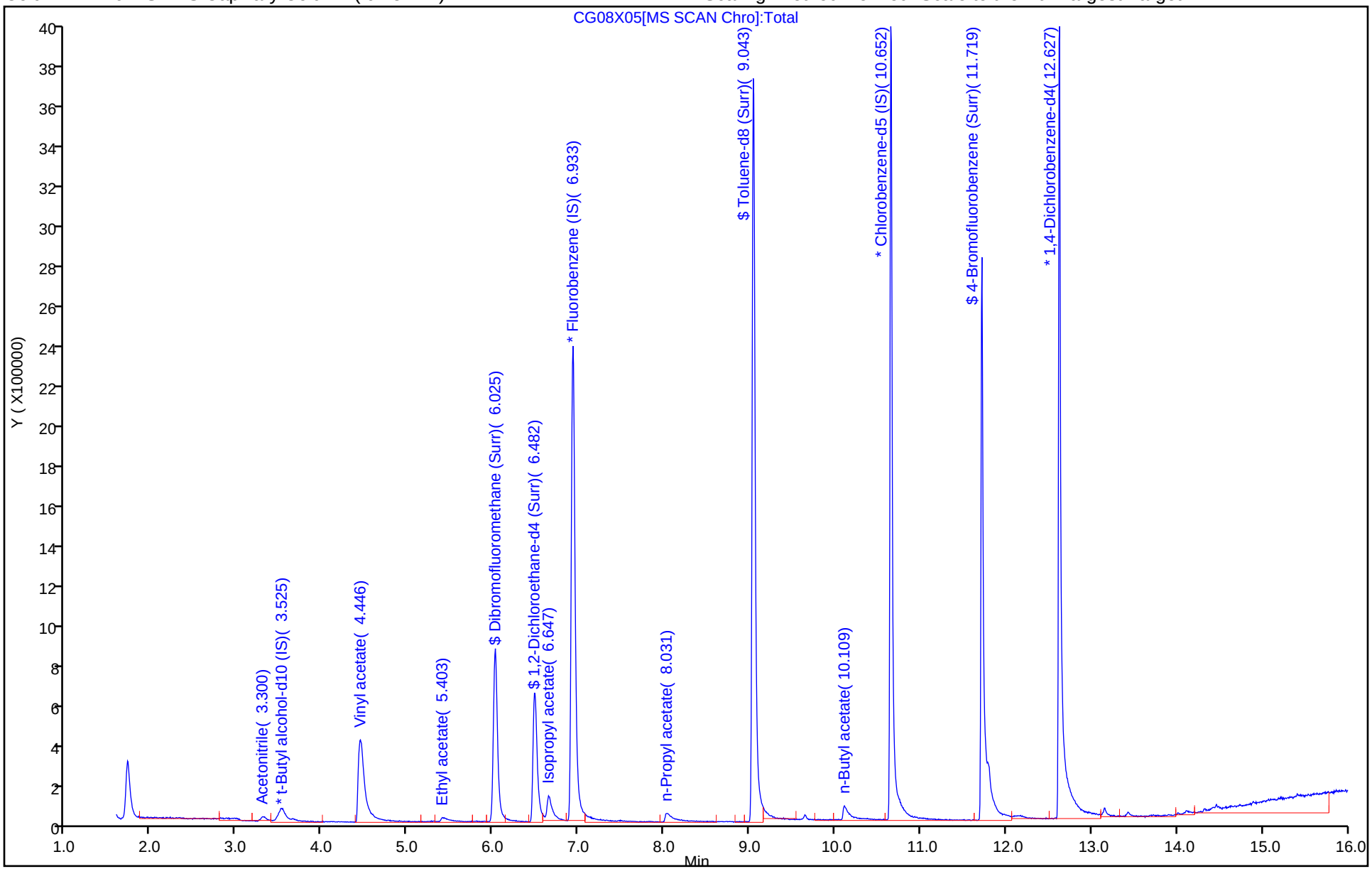
Report Date: 08-Aug-2023 21:10:45 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X05.D

Injection Date:	08-Aug-2023 19:44:30	Instrument ID:	10193	Operator ID:	gaw91131
Lims ID:	LCS SM			Worklist Smp#:	6
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X05.D
Lims ID: LCS SM
Client ID:
Sample Type: LCS
Inject. Date: 08-Aug-2023 19:44:30 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090928-006
Misc. Info.: LCS SM
Operator ID: gaw91131 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 08-Aug-2023 21:10:26 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1656

First Level Reviewer: JS6E Date: 08-Aug-2023 20:15:47

Compound	Amount Added	Amount Recovered	% Rec.
$ 54 Dibromofluoromethane (Surr)	10.0	10.2	102.44
$ 59 1,2-Dichloroethane-d4 (Surr)	10.0	9.86	98.64
$ 83 Toluene-d8 (Surr)	10.0	9.70	96.96
$ 124 4-Bromofluorobenzene (Surr)	10.0	8.99	89.87

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-2

SDG No.:

Client Sample ID: 16WC1A MS Lab Sample ID: 410-136864-4 MS

Matrix: Water Lab File ID: CG08X14.D

Analysis Method: EPA 8260C Date Collected: 07/27/2023 09:55

Sample wt/vol: 25(mL) Date Analyzed: 08/08/2023 23:01

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL) Heated Purge: (Y/N) N pH:

% Moisture: % Solids: Level: (low/med) Low

Analysis Batch No.: 405906 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	106		80-120
1868-53-7	Dibromofluoromethane (Surr)	103		80-120
460-00-4	4-Bromofluorobenzene (Surr)	97		80-120
2037-26-5	Toluene-d8 (Surr)	100		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X14.D
Lims ID: 410-136864-C-4 MS
Client ID: 16WC1A
Sample Type: MS
Inject. Date: 08-Aug-2023 23:01:30 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090928-015
Operator ID: gaw91131 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 09-Aug-2023 10:58:47 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1657

First Level Reviewer: innoonk Date: 09-Aug-2023 10:58:47

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.684	1.684	0.000	70	592308	5.00	5.97	M
5 Chloromethane	50	1.849	1.849	0.000	99	657813	5.00	5.23	
6 Vinyl chloride	62	1.934	1.940	-0.006	98	705814	5.00	5.88	
7 Butadiene	39	1.940	1.940	0.000	89	660354	5.00	5.68	
9 Bromomethane	94	2.209	2.209	0.000	90	489954	5.00	5.22	
10 Chloroethane	64	2.270	2.270	0.000	100	533104	5.00	7.55	
11 Dichlorofluoromethane	67	2.471	2.471	0.000	97	1005080	5.00	5.25	
13 Pentane	43	2.520	2.526	-0.006	95	684540	5.00	5.01	
12 Trichlorofluoromethane	101	2.526	2.532	-0.006	97	815570	5.00	6.02	
14 Ethyl ether	59	2.690	2.696	-0.006	90	2013944	5.01	26.1	E
16 1,2-Dichloro-1,1,2-trifluoroetha	67	2.788	2.794	-0.006	89	610934	5.00	5.75	
18 1,1-Dichloroethene	96	2.946	2.946	0.000	95	501578	5.00	5.71	
20 Acetone	43	2.983	2.989	-0.006	100	836966	62.6	62.8	
21 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.001	3.001	0.000	88	515801	5.00	5.96	
22 Iodomethane	142	3.105	3.111	-0.006	96	1008708	5.00	5.35	
24 Isopropyl alcohol	45	3.148	3.147	0.001	38	115724	37.5	37.1	
25 Carbon disulfide	76	3.190	3.196	-0.006	99	1637472	5.00	5.27	
26 Methyl acetate	43	3.324	3.324	0.000	37	224511	5.00	5.34	
29 3-Chloro-1-propene	41	3.330	3.336	-0.006	94	832289	5.00	5.38	
30 Methylene Chloride	84	3.483	3.489	-0.006	90	596162	5.00	5.43	
* 31 t-Butyl alcohol-d10 (IS)	65	3.532	3.544	-0.012	97	280647	50.0	50.0	
32 2-Methyl-2-propanol	59	3.629	3.635	-0.006	99	319949	50.0	54.3	
33 Acrylonitrile	53	3.788	3.800	-0.012	99	542802	25.0	29.0	
34 Methyl tert-butyl ether	73	3.818	3.824	-0.006	92	1411307	5.00	5.00	
35 trans-1,2-Dichloroethene	96	3.824	3.824	0.000	99	609737	5.00	5.72	
36 Hexane	57	4.196	4.196	0.000	91	796027	5.00	5.86	
37 1,1-Dichloroethane	63	4.434	4.434	0.000	96	1790778	5.00	9.58	
39 Isopropyl ether	45	4.501	4.507	-0.006	94	1761380	5.00	5.00	
40 2-Chloro-1,3-butadiene	53	4.550	4.550	0.000	88	789995	5.00	5.52	
41 Tert-butyl ethyl ether	59	5.056	5.068	-0.012	97	1642048	5.00	5.04	
42 2-Butanone (MEK)	43	5.281	5.281	0.000	99	1813112	62.6	69.6	
43 cis-1,2-Dichloroethene	96	5.300	5.299	0.001	81	1064111	5.00	9.31	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
44 2,2-Dichloropropane	77	5.306	5.312	-0.006	85	916742	5.00	6.14	M
45 Propionitrile	54	5.409	5.391	0.018	92	263109	37.5	45.2	
47 Methacrylonitrile	67	5.586	5.586	0.000	90	1152521	37.5	41.8	
48 Chlorobromomethane	128	5.635	5.641	-0.006	89	324801	5.00	5.92	
49 Tetrahydrofuran	71	5.665	5.659	0.006	78	230335	25.0	30.1	
50 Chloroform	83	5.799	5.799	0.000	93	1018007	5.00	5.50	
53 1,1,1-Trichloroethane	97	6.019	6.025	-0.006	79	897998	5.00	5.77	
$ 54 Dibromofluoromethane (Surr)	113	6.025	6.025	0.000	94	968279	10.0	10.3	
55 Cyclohexane	56	6.116	6.122	-0.006	89	1034216	5.00	5.92	
56 Carbon tetrachloride	117	6.232	6.238	-0.006	96	807923	5.00	5.99	
57 1,1-Dichloropropene	75	6.244	6.244	0.000	98	823467	5.00	5.90	
58 Isobutyl alcohol	41	6.501	6.476	0.025	35	194246	125.1	128.8	
$ 59 1,2-Dichloroethane-d4 (Surr)	102	6.488	6.482	0.006	99	211766	10.0	10.6	
60 Benzene	78	6.507	6.507	0.000	97	2714483	5.00	6.09	
61 1,2-Dichloroethane	62	6.592	6.592	0.000	97	572660	5.00	5.04	
64 Tert-amyl methyl ether	73	6.726	6.726	0.000	99	1588264	5.00	5.22	
* 65 Fluorobenzene (IS)	96	6.933	6.933	0.000	98	4035088	10.0	10.0	
66 n-Heptane	43	6.958	6.952	0.006	87	893108	5.00	6.08	
67 n-Butanol	56	7.385	7.409	-0.025	64	754	250.2	49.8	
68 Trichloroethene	95	7.433	7.427	0.006	96	663104	5.00	5.80	
69 Methylcyclohexane	83	7.732	7.732	0.000	88	1169134	5.00	6.30	
70 1,2-Dichloropropane	63	7.762	7.769	-0.006	95	655564	5.00	5.58	
71 2-ethoxy-2-methyl butane	87	7.799	7.799	0.000	94	942368	5.00	5.17	
72 Dibromomethane	93	7.884	7.884	0.000	94	302581	5.00	5.54	
74 1,4-Dioxane	88	7.891	7.890	0.000	32	60601	125.1	133.9	
73 Methyl methacrylate	69	7.897	7.890	0.007	91	269375	5.00	5.01	
76 Dichlorobromomethane	83	8.134	8.134	0.000	100	735421	5.00	5.42	
77 2-Nitropropane	41	8.433	8.421	0.012	97	71374	5.00	4.88	
78 1-Bromo-2-chloroethane	63	8.531	8.531	0.000	98	667088	5.00	5.60	
80 cis-1,3-Dichloropropene	75	8.714	8.713	0.001	98	907156	5.00	5.41	
82 4-Methyl-2-pentanone (MIBK)	43	8.915	8.915	0.000	95	4849118	62.6	65.5	
$ 83 Toluene-d8 (Surr)	98	9.043	9.043	0.000	93	4093396	10.0	9.96	
84 Toluene	92	9.128	9.134	-0.006	99	1668027	5.00	5.69	
85 trans-1,3-Dichloropropene	75	9.451	9.451	0.000	90	735836	5.00	5.37	
86 Ethyl methacrylate	69	9.543	9.536	0.007	89	567735	5.00	5.21	
87 1,1,2-Trichloroethane	97	9.665	9.671	-0.006	89	461547	5.00	5.31	
88 Tetrachloroethene	166	9.750	9.750	0.000	96	833254	5.00	5.91	
89 1,3-Dichloropropane	76	9.841	9.841	0.000	88	778377	5.00	5.60	
106 2-Hexanone	43	9.927	9.921	0.006	95	3191294	62.6	63.2	
108 Chlorodibromomethane	129	10.073	10.073	0.000	90	578932	5.00	5.44	
110 Ethylene Dibromide	107	10.189	10.183	0.006	98	444741	5.00	5.71	
* 111 Chlorobenzene-d5 (IS)	117	10.652	10.652	0.000	82	3126956	10.0	10.0	
112 1-Chlorohexane	91	10.677	10.676	0.001	97	918938	5.00	5.79	
113 Chlorobenzene	112	10.683	10.683	0.000	98	1985175	5.00	5.60	
114 1,1,1,2-Tetrachloroethane	131	10.774	10.774	0.000	96	691892	5.00	5.85	
115 Ethylbenzene	91	10.780	10.780	0.000	97	3168531	5.00	5.63	
116 m-Xylene & p-Xylene	106	10.902	10.902	0.000	97	2628833	10.0	11.7	
118 o-Xylene	106	11.250	11.250	0.000	96	1280201	5.00	5.66	
119 Styrene	104	11.268	11.268	0.000	95	2061309	5.00	5.86	
120 Bromoform	173	11.426	11.426	0.000	98	352708	5.00	5.21	
121 Isopropylbenzene	105	11.567	11.567	0.000	95	3294538	5.00	5.78	
$ 124 4-Bromofluorobenzene (Surr)	95	11.713	11.713	0.000	97	1429754	10.0	9.73	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
125 Bromobenzene	156	11.829	11.829	0.000	93	872193	5.00	5.56	
126 1,1,2,2-Tetrachloroethane	83	11.829	11.829	0.000	94	609207	5.00	5.39	
127 trans-1,4-Dichloro-2-butene	53	11.859	11.859	0.000	87	517759	25.0	20.9	
128 1,2,3-Trichloropropane	110	11.871	11.871	0.000	78	156111	5.00	5.39	
129 N-Propylbenzene	91	11.908	11.908	0.000	98	3829576	5.00	5.58	
130 2-Chlorotoluene	126	11.981	11.981	0.000	98	865563	5.00	5.79	
131 1,3,5-Trimethylbenzene	105	12.054	12.054	0.000	94	2814837	5.00	5.53	
132 4-Chlorotoluene	126	12.079	12.079	0.000	96	858418	5.00	5.66	
133 tert-Butylbenzene	134	12.298	12.298	0.000	92	690196	5.00	5.78	
134 Pentachloroethane	167	12.329	12.329	0.000	90	545753	5.00	5.76	
135 1,2,4-Trimethylbenzene	105	12.347	12.347	0.000	96	2900162	5.00	5.55	
136 sec-Butylbenzene	105	12.469	12.469	0.000	93	3787248	5.00	5.84	
137 1,3-Dichlorobenzene	146	12.566	12.566	0.000	97	1675909	5.00	5.38	
138 4-Isopropyltoluene	119	12.579	12.579	0.000	98	3317235	5.00	5.78	
* 139 1,4-Dichlorobenzene-d4	152	12.621	12.621	0.000	92	1906091	10.0	10.0	
140 1,4-Dichlorobenzene	146	12.640	12.640	0.000	96	1755334	5.00	5.47	
141 1,2,3-Trimethylbenzene	120	12.652	12.652	0.000	98	1339018	5.00	5.35	
142 Benzyl chloride	126	12.725	12.725	0.000	97	242215	5.00	5.39	
145 p-Diethylbenzene	119	12.859	12.859	0.000	95	2048128	5.00	5.61	
143 n-Butylbenzene	92	12.877	12.877	0.000	97	1534932	5.00	5.69	
144 1,2-Dichlorobenzene	146	12.908	12.902	0.006	100	1584295	5.00	5.39	
148 1,2-Dibromo-3-Chloropropane	155	13.469	13.469	0.000	90	72946	5.00	5.12	
149 1,3,5-Trichlorobenzene	180	13.591	13.591	0.000	97	1269076	5.00	5.26	
150 1,2,4-Trichlorobenzene	180	14.023	14.023	0.000	94	969831	5.00	5.30	
151 Hexachlorobutadiene	225	14.103	14.103	0.000	96	578680	5.00	5.63	
152 Naphthalene	128	14.206	14.200	0.006	96	1490429	5.00	4.99	
153 1,2,3-Trichlorobenzene	180	14.347	14.346	0.001	96	769750	5.00	5.56	
154 2-Methylnaphthalene	142	14.968	14.950	0.018	91	269567	5.00	3.84	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Review Flags

M - Manually Integrated

Reagents:

MSV_LCS_VOC#1_00124	Amount Added:	5.38	Units: uL	
MSV_QC_Gas826_00154	Amount Added:	5.38	Units: uL	
MSV_LCS_EE_00007	Amount Added:	5.38	Units: uL	
MSV_LCS_Penta_00031	Amount Added:	5.38	Units: uL	
MSV_HP25_ISSS_00074	Amount Added:	1.00	Units: uL	Run Reagent

Report Date: 09-Aug-2023 10:58:47 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X14.D

Injection Date: 08-Aug-2023 23:01:30 Instrument ID: 10193 Operator ID: gaw91131

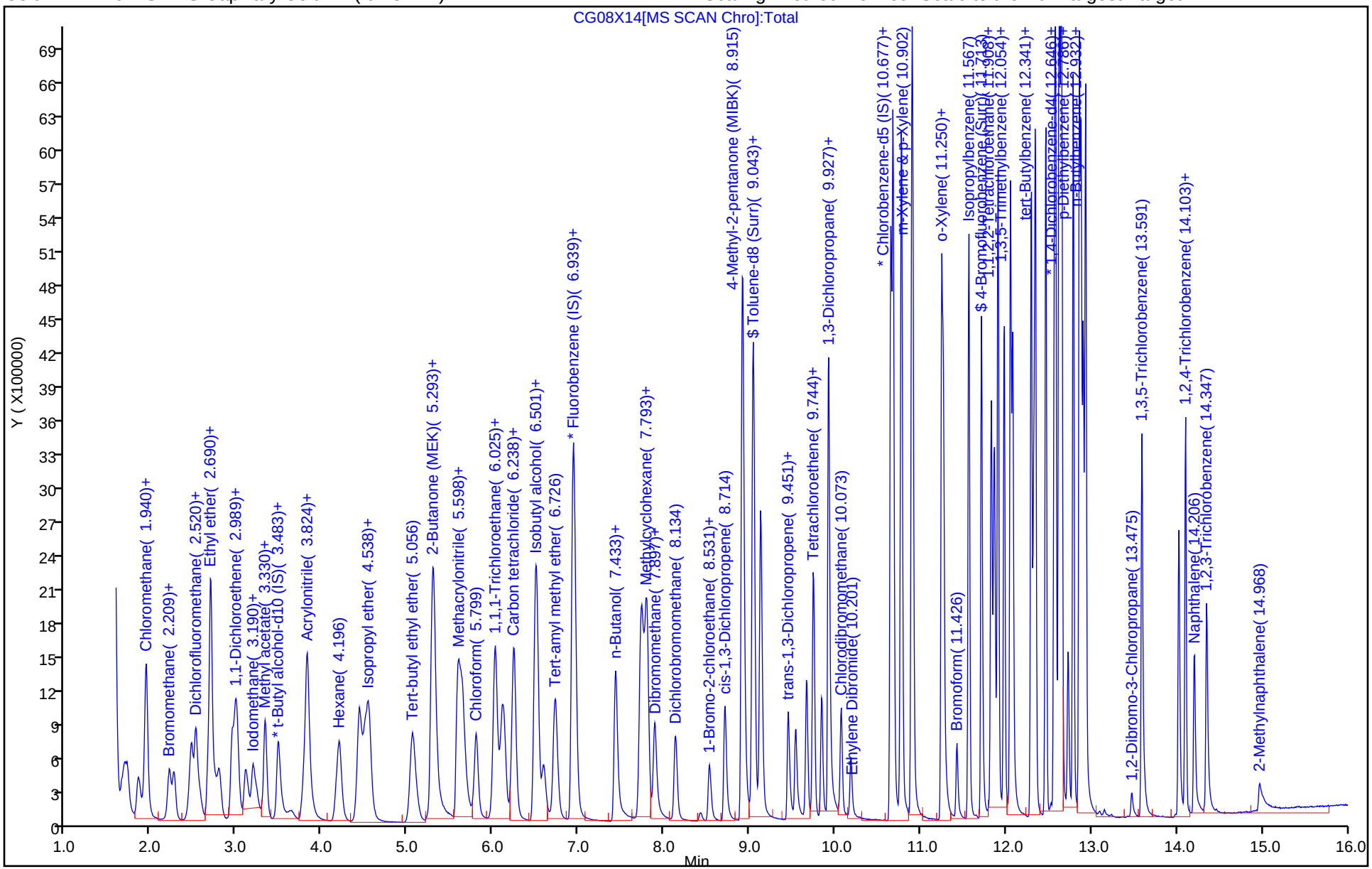
Lims ID: 410-136864-C-4 MS Worklist Smp#: 15

Client ID: 16WC1A

Purge Vol: 25.000 mL Dil. Factor: 1.0000 ALS Bottle#: 14

Method: MSV_10193_25mL Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X14.D				
Lims ID:	410-136864-C-4 MS				
Client ID:	16WC1A				
Sample Type:	MS				
Inject. Date:	08-Aug-2023 23:01:30	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0090928-015				
Operator ID:	gaw91131	Instrument ID:	10193		
Method:	\\chromfs\Lancaster\ChromData\10193\20230808-90928.b\MSV_10193_25mL.m				
Limit Group:	MSV - 8260C_D				
Last Update:	09-Aug-2023 10:58:47	Calib Date:	10-Jul-2023 21:40:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1657				

First Level Reviewer: innoonk Date: 09-Aug-2023 10:58:47

Compound	Amount Added	Amount Recovered	% Rec.
$ 54 Dibromofluoromethane (Surr)	10.0	10.3	102.64
$ 59 1,2-Dichloroethane-d4 (Surr)	10.0	10.6	106.16
$ 83 Toluene-d8 (Surr)	10.0	9.96	99.63
$ 124 4-Bromofluorobenzene (Surr)	10.0	9.73	97.27

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136864-2

SDG No.:

Client Sample ID: 16WC1A MS
Lab Sample ID: 410-136864-4 MS

Matrix: Water
Lab File ID: CG08X16.D

Analysis Method: EPA 8260C
Date Collected: 07/27/2023 09:55

Sample wt/vol: 25(mL)
Date Analyzed: 08/08/2023 23:45

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 405906
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
115-10-6	Dimethyl ether	5.72	J	10	1.1

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		80-120
1868-53-7	Dibromofluoromethane (Surr)	100		80-120
460-00-4	4-Bromofluorobenzene (Surr)	90		80-120
2037-26-5	Toluene-d8 (Surr)	95		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X16.D
Lims ID: 410-136864-D-4 MS
Client ID: 16WC1A
Sample Type: MS
Inject. Date: 08-Aug-2023 23:45:30 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090928-017
Operator ID: gaw91131 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 08-Aug-2023 22:47:13 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1657

First Level Reviewer: innoonk Date: 09-Aug-2023 12:00:59

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
4 Dimethyl ether	45	1.715	1.739	-0.024	100	763156	4.65	5.72	
27 Acetonitrile	41	3.306	3.318	-0.012	99	85558	18.8	14.9	
* 31 t-Butyl alcohol-d10 (IS)	65	3.526	3.544	-0.018	97	269840	50.0	50.0	
38 Vinyl acetate	43	4.440	4.446	-0.006	97	1850454	12.5	14.5	
46 Ethyl acetate	43	5.409	5.379	0.030	97	79695	2.50	1.71	
$ 54 Dibromofluoromethane (Surr)	113	6.025	6.025	0.000	94	922817	10.0	10.0	
$ 59 1,2-Dichloroethane-d4 (Surr)	102	6.488	6.482	0.006	99	194157	10.0	10.0	
63 Isopropyl acetate	43	6.653	6.647	0.006	99	289099	2.50	2.49	
* 65 Fluorobenzene (IS)	96	6.933	6.933	0.000	99	3930075	10.0	10.0	
75 n-Propyl acetate	61	8.037	7.994	0.043	98	41271	2.50	1.57	
$ 83 Toluene-d8 (Surr)	98	9.043	9.043	0.000	93	3830128	10.0	9.53	
109 n-Butyl acetate	43	10.110	10.073	0.037	98	140161	2.50	1.45	
* 111 Chlorobenzene-d5 (IS)	117	10.652	10.652	0.000	83	3058566	10.0	10.0	
$ 124 4-Bromofluorobenzene (Surr)	95	11.719	11.713	0.006	97	1295307	10.0	9.01	
* 139 1,4-Dichlorobenzene-d4	152	12.627	12.621	0.006	93	1608332	10.0	10.0	

QC Flag Legend

Processing Flags

Reagents:

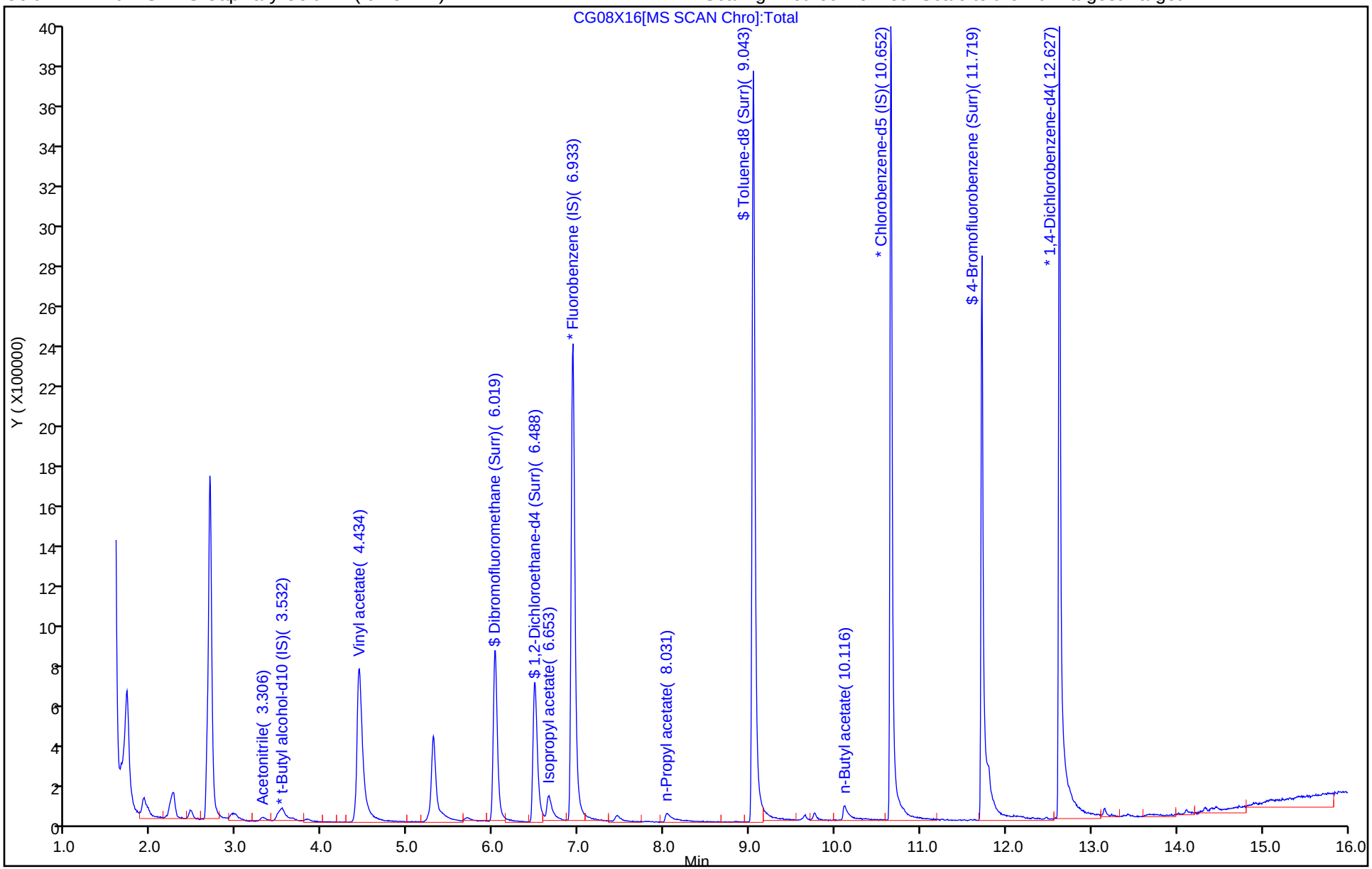
MSV_LCS_V5ACE_00028	Amount Added:	2.69	Units: uL	
MSV_Q_QDME_00034	Amount Added:	2.00	Units: uL	
MSV_HP25_ISSS_00074	Amount Added:	1.00	Units: uL	Run Reagent

Report Date: 09-Aug-2023 12:01:00 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X16.D				
Injection Date:	08-Aug-2023 23:45:30	Instrument ID:	10193	Operator ID:	gaw91131
Lims ID:	410-136864-D-4 MS			Worklist Smp#:	17
Client ID:	16WC1A				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X16.D
Lims ID: 410-136864-D-4 MS
Client ID: 16WC1A
Sample Type: MS
Inject. Date: 08-Aug-2023 23:45:30 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090928-017
Operator ID: gaw91131 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 08-Aug-2023 22:47:13 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1657

First Level Reviewer: innoonk Date: 09-Aug-2023 12:00:59

Compound	Amount Added	Amount Recovered	% Rec.
$ 54 Dibromofluoromethane (Surr)	10.0	10.0	100.43
$ 59 1,2-Dichloroethane-d4 (Surr)	10.0	10.0	99.93
$ 83 Toluene-d8 (Surr)	10.0	9.53	95.31
$ 124 4-Bromofluorobenzene (Surr)	10.0	9.01	90.09

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136864-2

SDG No.:

Client Sample ID: 16WC1A MSD
Lab Sample ID: 410-136864-4 MSD

Matrix: Water
Lab File ID: CG08X15.D

Analysis Method: EPA 8260C
Date Collected: 07/27/2023 09:55

Sample wt/vol: 25(mL)
Date Analyzed: 08/08/2023 23:23

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 405906
Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		80-120
1868-53-7	Dibromofluoromethane (Surr)	103		80-120
460-00-4	4-Bromofluorobenzene (Surr)	97		80-120
2037-26-5	Toluene-d8 (Surr)	99		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X15.D
Lims ID: 410-136864-E-4 MSD
Client ID: 16WC1A
Sample Type: MSD
Inject. Date: 08-Aug-2023 23:23:30 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090928-016
Operator ID: gaw91131 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 09-Aug-2023 10:59:41 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1657

First Level Reviewer: innoonk Date: 09-Aug-2023 10:59:41

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.672	1.684	-0.012	73	579835	5.00	5.78	M
5 Chloromethane	50	1.837	1.849	-0.012	98	663699	5.00	5.22	
6 Vinyl chloride	62	1.928	1.940	-0.012	97	693213	5.00	5.71	
7 Butadiene	39	1.934	1.940	-0.006	89	672191	5.00	5.72	
9 Bromomethane	94	2.196	2.209	-0.013	90	496872	5.00	5.24	
10 Chloroethane	64	2.263	2.270	-0.007	99	533880	5.00	7.48	
11 Dichlorofluoromethane	67	2.465	2.471	-0.006	97	985233	5.00	5.08	
13 Pentane	43	2.513	2.526	-0.013	97	694770	5.00	5.03	
12 Trichlorofluoromethane	101	2.519	2.532	-0.013	96	808534	5.00	5.90	
14 Ethyl ether	59	2.690	2.696	-0.006	90	2062021	5.01	26.4	E
16 1,2-Dichloro-1,1,2-trifluoroetha	67	2.782	2.794	-0.012	90	602444	5.00	5.60	
18 1,1-Dichloroethene	96	2.946	2.946	0.000	96	502462	5.00	5.66	
20 Acetone	43	2.977	2.989	-0.012	100	805645	62.6	58.8	
21 1,1,2-Trichloro-1,2,2-trifluoroe	101	2.989	3.001	-0.012	87	508062	5.00	5.80	
22 Iodomethane	142	3.099	3.111	-0.012	96	994491	5.00	5.22	
24 Isopropyl alcohol	45	3.141	3.147	-0.006	38	117746	37.5	36.6	
25 Carbon disulfide	76	3.184	3.196	-0.012	99	1631440	5.00	5.20	
26 Methyl acetate	43	3.318	3.324	-0.006	37	229210	5.00	5.30	
29 3-Chloro-1-propene	41	3.324	3.336	-0.012	94	844511	5.00	5.39	
30 Methylene Chloride	84	3.483	3.489	-0.006	91	591482	5.00	5.33	
* 31 t-Butyl alcohol-d10 (IS)	65	3.525	3.544	-0.019	96	288709	50.0	50.0	
32 2-Methyl-2-propanol	59	3.635	3.635	0.000	100	315671	50.0	52.1	
33 Acrylonitrile	53	3.781	3.800	-0.019	99	540667	25.0	28.0	
34 Methyl tert-butyl ether	73	3.812	3.824	-0.012	90	1414051	5.00	4.95	
35 trans-1,2-Dichloroethene	96	3.824	3.824	0.000	100	611311	5.00	5.67	
36 Hexane	57	4.190	4.196	-0.006	92	823522	5.00	5.99	
37 1,1-Dichloroethane	63	4.428	4.434	-0.006	96	1805456	5.00	9.55	
39 Isopropyl ether	45	4.501	4.507	-0.006	94	1792956	5.00	5.04	
40 2-Chloro-1,3-butadiene	53	4.537	4.550	-0.013	92	800850	5.00	5.54	
41 Tert-butyl ethyl ether	59	5.049	5.068	-0.019	97	1654334	5.00	5.02	
42 2-Butanone (MEK)	43	5.275	5.281	-0.006	100	1793130	62.6	67.0	
43 cis-1,2-Dichloroethene	96	5.293	5.299	-0.006	78	1076709	5.00	9.32	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
44 2,2-Dichloropropane	77	5.299	5.312	-0.013	59	909290	5.00	6.02	
45 Propionitrile	54	5.397	5.391	0.006	98	255794	37.5	42.7	
47 Methacrylonitrile	67	5.586	5.586	0.000	90	1132897	37.5	40.0	
48 Chlorobromomethane	128	5.635	5.641	-0.006	90	322994	5.00	5.82	
49 Tetrahydrofuran	71	5.665	5.659	0.006	78	240338	25.0	30.5	
50 Chloroform	83	5.799	5.799	0.000	92	1015723	5.00	5.43	
53 1,1,1-Trichloroethane	97	6.019	6.025	-0.006	77	898757	5.00	5.71	
$ 54 Dibromofluoromethane (Surr)	113	6.019	6.025	-0.006	94	987104	10.0	10.3	
55 Cyclohexane	56	6.110	6.122	-0.012	90	1037102	5.00	5.87	
56 Carbon tetrachloride	117	6.232	6.238	-0.006	96	822197	5.00	6.03	
57 1,1-Dichloropropene	75	6.238	6.244	-0.006	98	825741	5.00	5.85	
58 Isobutyl alcohol	41	6.500	6.476	0.024	57	193508	125.1	125.4	
$ 59 1,2-Dichloroethane-d4 (Surr)	102	6.482	6.482	0.000	99	204053	10.0	10.1	
60 Benzene	78	6.500	6.507	-0.007	96	2672604	5.00	5.93	
61 1,2-Dichloroethane	62	6.592	6.592	0.000	97	574496	5.00	5.00	
64 Tert-amyl methyl ether	73	6.726	6.726	0.000	99	1594397	5.00	5.18	
* 65 Fluorobenzene (IS)	96	6.933	6.933	0.000	98	4081051	10.0	10.0	
66 n-Heptane	43	6.951	6.952	-0.001	87	899671	5.00	6.05	
67 n-Butanol	56	7.451	7.409	0.042	88	259043	250.2	199.4	
68 Trichloroethene	95	7.427	7.427	0.000	95	652114	5.00	5.64	
69 Methylcyclohexane	83	7.726	7.732	-0.006	88	1166860	5.00	6.22	
70 1,2-Dichloropropane	63	7.762	7.769	-0.006	94	652575	5.00	5.49	
71 2-ethoxy-2-methyl butane	87	7.799	7.799	0.000	94	944457	5.00	5.12	
72 Dibromomethane	93	7.884	7.884	0.000	93	309801	5.00	5.61	
74 1,4-Dioxane	88	7.909	7.890	0.019	34	61842	125.1	132.8	
73 Methyl methacrylate	69	7.896	7.890	0.006	91	256653	5.00	4.64	
76 Dichlorobromomethane	83	8.128	8.134	-0.006	100	740773	5.00	5.40	
77 2-Nitropropane	41	8.427	8.421	0.006	99	70404	5.00	4.68	
78 1-Bromo-2-chloroethane	63	8.524	8.531	-0.007	98	644980	5.00	5.36	
80 cis-1,3-Dichloropropene	75	8.707	8.713	-0.006	98	909199	5.00	5.36	
82 4-Methyl-2-pentanone (MIBK)	43	8.914	8.915	-0.001	96	4722298	62.6	62.0	
$ 83 Toluene-d8 (Surr)	98	9.043	9.043	-0.001	93	4157770	10.0	9.93	
84 Toluene	92	9.128	9.134	-0.006	98	1650189	5.00	5.53	
85 trans-1,3-Dichloropropene	75	9.451	9.451	0.000	90	736116	5.00	5.28	
86 Ethyl methacrylate	69	9.536	9.536	0.000	89	560462	5.00	5.05	
87 1,1,2-Trichloroethane	97	9.664	9.671	-0.007	89	475005	5.00	5.37	
88 Tetrachloroethene	166	9.750	9.750	0.000	97	823437	5.00	5.74	
89 1,3-Dichloropropane	76	9.841	9.841	0.000	89	774140	5.00	5.46	
106 2-Hexanone	43	9.920	9.921	-0.001	96	3192963	62.6	61.5	
108 Chlorodibromomethane	129	10.073	10.073	0.000	89	576454	5.00	5.32	
110 Ethylene Dibromide	107	10.189	10.183	0.006	98	440107	5.00	5.55	
* 111 Chlorobenzene-d5 (IS)	117	10.652	10.652	0.000	82	3185504	10.0	10.0	
112 1-Chlorohexane	91	10.676	10.676	0.000	68	922461	5.00	5.70	
113 Chlorobenzene	112	10.682	10.683	-0.001	96	1986954	5.00	5.50	
114 1,1,1,2-Tetrachloroethane	131	10.768	10.774	-0.006	96	689069	5.00	5.72	
115 Ethylbenzene	91	10.780	10.780	0.000	97	3187561	5.00	5.56	
116 m-Xylene & p-Xylene	106	10.902	10.902	0.000	97	2601626	10.0	11.3	
118 o-Xylene	106	11.249	11.250	-0.001	95	1273547	5.00	5.53	
119 Styrene	104	11.268	11.268	0.000	95	2056809	5.00	5.74	
120 Bromoform	173	11.426	11.426	0.000	98	344434	5.00	4.99	
121 Isopropylbenzene	105	11.566	11.567	-0.001	95	3313712	5.00	5.71	
$ 124 4-Bromofluorobenzene (Surr)	95	11.713	11.713	0.000	95	1452751	10.0	9.70	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
125 Bromobenzene	156	11.829	11.829	0.000	93	860319	5.00	5.44	
126 1,1,2,2-Tetrachloroethane	83	11.829	11.829	0.000	94	609995	5.00	5.35	
127 trans-1,4-Dichloro-2-butene	53	11.859	11.859	0.000	88	521130	25.0	20.8	
128 1,2,3-Trichloropropane	110	11.871	11.871	0.000	78	159049	5.00	5.44	
129 N-Propylbenzene	91	11.908	11.908	0.000	98	3828270	5.00	5.53	
130 2-Chlorotoluene	126	11.981	11.981	0.000	98	857691	5.00	5.68	
131 1,3,5-Trimethylbenzene	105	12.054	12.054	0.000	94	2814316	5.00	5.48	
132 4-Chlorotoluene	126	12.078	12.079	-0.001	96	874945	5.00	5.71	
133 tert-Butylbenzene	134	12.298	12.298	0.000	92	683791	5.00	5.67	
134 Pentachloroethane	167	12.322	12.329	-0.007	91	535010	5.00	5.60	
135 1,2,4-Trimethylbenzene	105	12.347	12.347	0.000	96	2885413	5.00	5.47	
136 sec-Butylbenzene	105	12.469	12.469	0.000	93	3774646	5.00	5.77	
137 1,3-Dichlorobenzene	146	12.566	12.566	0.000	97	1672504	5.00	5.32	
138 4-Isopropyltoluene	119	12.578	12.579	-0.001	97	3333475	5.00	5.75	
* 139 1,4-Dichlorobenzene-d4	152	12.621	12.621	0.000	92	1923821	10.0	10.0	
140 1,4-Dichlorobenzene	146	12.639	12.640	-0.001	96	1748755	5.00	5.40	
141 1,2,3-Trimethylbenzene	120	12.652	12.652	0.000	98	1359642	5.00	5.39	
142 Benzyl chloride	126	12.725	12.725	0.000	97	238140	5.00	5.25	
145 p-Diethylbenzene	119	12.859	12.859	0.000	94	2058331	5.00	5.59	
143 n-Butylbenzene	92	12.877	12.877	0.000	97	1540870	5.00	5.66	
144 1,2-Dichlorobenzene	146	12.902	12.902	0.000	99	1589591	5.00	5.36	
148 1,2-Dibromo-3-Chloropropane	155	13.468	13.469	-0.001	92	75877	5.00	5.28	
149 1,3,5-Trichlorobenzene	180	13.590	13.591	-0.001	97	1282849	5.00	5.27	
150 1,2,4-Trichlorobenzene	180	14.023	14.023	0.000	94	972771	5.00	5.27	
151 Hexachlorobutadiene	225	14.102	14.103	-0.001	96	579621	5.00	5.59	
152 Naphthalene	128	14.206	14.200	0.006	96	1519043	5.00	5.04	
153 1,2,3-Trichlorobenzene	180	14.346	14.346	0.000	95	769415	5.00	5.50	
154 2-Methylnaphthalene	142	14.962	14.950	0.012	93	361895	5.00	5.10	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Review Flags

M - Manually Integrated

Reagents:

MSV_LCS_VOC#1_00124	Amount Added:	5.38	Units: uL	
MSV_QC_Gas826_00154	Amount Added:	5.38	Units: uL	
MSV_LCS_EE_00007	Amount Added:	5.38	Units: uL	
MSV_LCS_Penta_00031	Amount Added:	5.38	Units: uL	
MSV_HP25_ISSS_00074	Amount Added:	1.00	Units: uL	Run Reagent

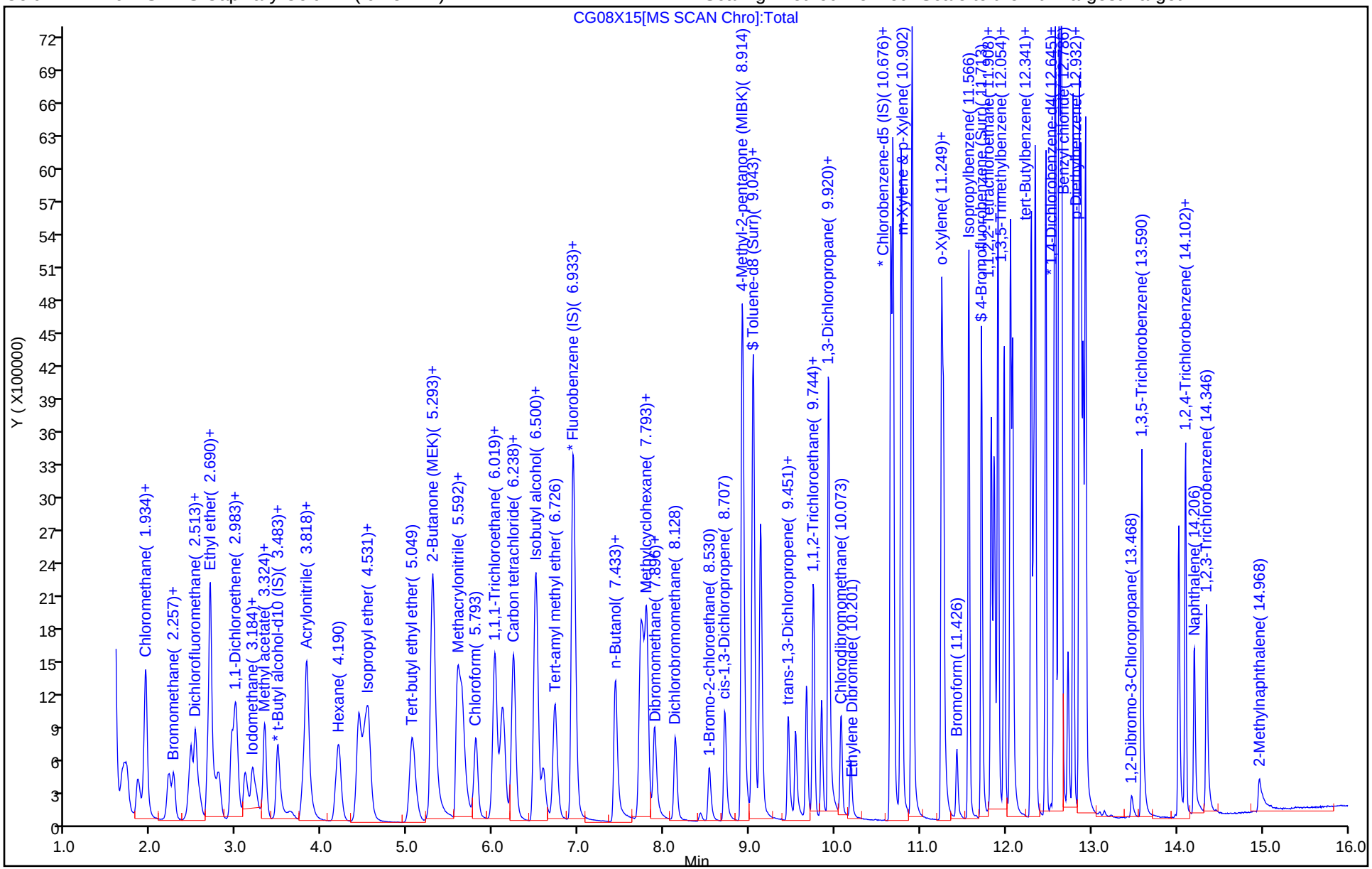
Report Date: 09-Aug-2023 10:59:42 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X15.D

Injection Date:	08-Aug-2023 23:23:30	Instrument ID:	10193	Operator ID:	gaw91131
Lims ID:	410-136864-E-4 MSD			Worklist Smp#:	16
Client ID:	16WC1A				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X15.D				
Lims ID:	410-136864-E-4 MSD				
Client ID:	16WC1A				
Sample Type:	MSD				
Inject. Date:	08-Aug-2023 23:23:30	ALS Bottle#:	15	Worklist Smp#:	16
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0090928-016				
Operator ID:	gaw91131	Instrument ID:	10193		
Method:	\\chromfs\Lancaster\ChromData\10193\20230808-90928.b\MSV_10193_25mL.m				
Limit Group:	MSV - 8260C_D				
Last Update:	09-Aug-2023 10:59:41	Calib Date:	10-Jul-2023 21:40:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1657				

First Level Reviewer: innoonk Date: 09-Aug-2023 10:59:41

Compound	Amount Added	Amount Recovered	% Rec.
$ 54 Dibromofluoromethane (Surr)	10.0	10.3	103.46
$ 59 1,2-Dichloroethane-d4 (Surr)	10.0	10.1	101.14
$ 83 Toluene-d8 (Surr)	10.0	9.93	99.34
$ 124 4-Bromofluorobenzene (Surr)	10.0	9.70	97.01

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136864-2

SDG No.:

Client Sample ID: 16WC1A MSD
Lab Sample ID: 410-136864-4 MSD

Matrix: Water
Lab File ID: CG08X17.D

Analysis Method: EPA 8260C
Date Collected: 07/27/2023 09:55

Sample wt/vol: 25(mL)
Date Analyzed: 08/09/2023 00:07

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 405906
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
115-10-6	Dimethyl ether	5.49	J	10	1.1

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		80-120
1868-53-7	Dibromofluoromethane (Surr)	102		80-120
460-00-4	4-Bromofluorobenzene (Surr)	90		80-120
2037-26-5	Toluene-d8 (Surr)	96		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X17.D
Lims ID: 410-136864-D-4 MSD
Client ID: 16WC1A
Sample Type: MSD
Inject. Date: 09-Aug-2023 00:07:30 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090928-018
Operator ID: gaw91131 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20230808-90928.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 08-Aug-2023 22:47:13 Calib Date: 10-Jul-2023 21:40:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1657

First Level Reviewer: innoonk Date: 09-Aug-2023 12:01:11

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
4 Dimethyl ether	45	1.727	1.739	-0.012	100	725804	4.65	5.49	
27 Acetonitrile	41	3.306	3.318	-0.012	100	108519	18.8	19.1	
* 31 t-Butyl alcohol-d10 (IS)	65	3.544	3.544	0.000	96	289987	50.0	50.0	
38 Vinyl acetate	43	4.452	4.446	0.006	97	1830661	12.5	14.4	
46 Ethyl acetate	43	5.409	5.379	0.030	92	89737	2.50	1.90	
$ 54 Dibromofluoromethane (Surr)	113	6.025	6.025	0.000	94	932149	10.0	10.2	
$ 59 1,2-Dichloroethane-d4 (Surr)	102	6.495	6.482	0.012	99	196712	10.0	10.2	
63 Isopropyl acetate	43	6.659	6.647	0.012	99	269721	2.50	2.34	
* 65 Fluorobenzene (IS)	96	6.933	6.933	0.000	99	3896733	10.0	10.0	
75 n-Propyl acetate	61	8.037	7.994	0.043	98	48198	2.50	1.80	
$ 83 Toluene-d8 (Surr)	98	9.049	9.043	0.006	93	3839669	10.0	9.61	
109 n-Butyl acetate	43	10.110	10.073	0.037	97	116919	2.50	1.27	
* 111 Chlorobenzene-d5 (IS)	117	10.652	10.652	0.000	83	3040955	10.0	10.0	
$ 124 4-Bromofluorobenzene (Surr)	95	11.719	11.713	0.006	96	1283996	10.0	8.98	
* 139 1,4-Dichlorobenzene-d4	152	12.627	12.621	0.006	93	1612741	10.0	10.0	

QC Flag Legend
Processing Flags

Reagents:

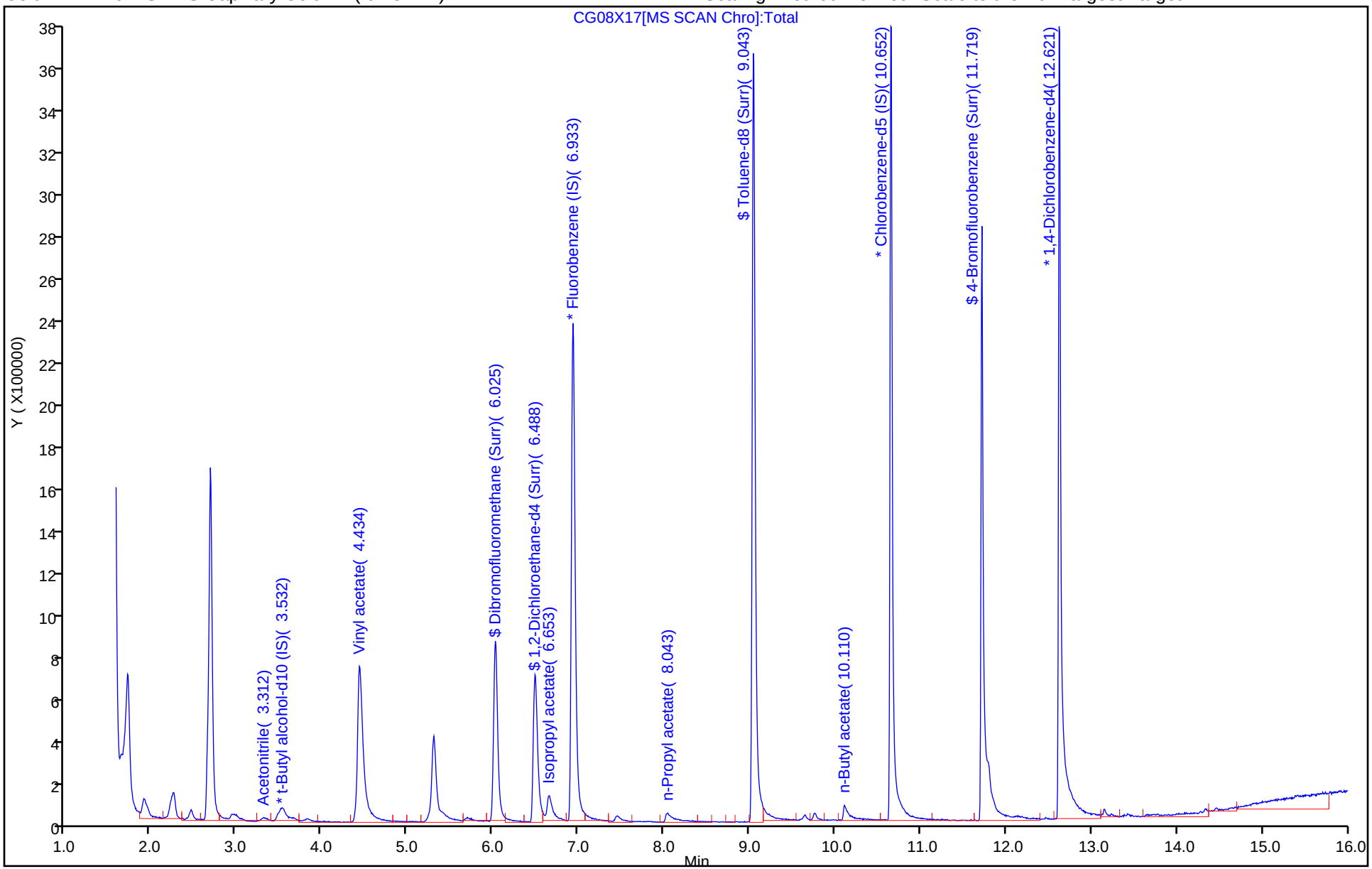
MSV_LCS_V5ACE_00028	Amount Added:	2.69	Units: uL	
MSV_Q_QDME_00034	Amount Added:	2.00	Units: uL	
MSV_HP25_ISSS_00074	Amount Added:	1.00	Units: uL	Run Reagent

Report Date: 09-Aug-2023 12:01:11 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X17.D				
Injection Date:	09-Aug-2023 00:07:30	Instrument ID:	10193	Operator ID:	gaw91131
Lims ID:	410-136864-D-4 MSD			Worklist Smp#:	18
Client ID:	16WC1A				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\10193\20230808-90928.b\CG08X17.D				
Lims ID:	410-136864-D-4 MSD				
Client ID:	16WC1A				
Sample Type:	MSD				
Inject. Date:	09-Aug-2023 00:07:30	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0090928-018				
Operator ID:	gaw91131	Instrument ID:	10193		
Method:	\\chromfs\Lancaster\ChromData\10193\20230808-90928.b\MSV_10193_25mL.m				
Limit Group:	MSV - 8260C_D				
Last Update:	08-Aug-2023 22:47:13	Calib Date:	10-Jul-2023 21:40:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10193\20230710-88548.b\CL10X18.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1657				

First Level Reviewer: innoonk Date: 09-Aug-2023 12:01:11

Compound	Amount Added	Amount Recovered	% Rec.
$ 54 Dibromofluoromethane (Surr)	10.0	10.2	102.32
$ 59 1,2-Dichloroethane-d4 (Surr)	10.0	10.2	102.12
$ 83 Toluene-d8 (Surr)	10.0	9.61	96.10
$ 124 4-Bromofluorobenzene (Surr)	10.0	8.98	89.82

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136864-2

SDG No.:

Instrument ID: 10193 Start Date: 07/10/2023 15:13

Analysis Batch Number: 395211 End Date: 07/10/2023 22:24

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 410-395211/1		07/10/2023 15:13	1	CL10T04.D	R-624SilMS 30m 0.25(mm)
IC 410-395211/3		07/10/2023 15:50	1	CL10X02.D	R-624SilMS 30m 0.25(mm)
IC 410-395211/4		07/10/2023 16:12	1	CL10X03.D	R-624SilMS 30m 0.25(mm)
IC 410-395211/5		07/10/2023 16:34	1	CL10X04.D	R-624SilMS 30m 0.25(mm)
IC 410-395211/6		07/10/2023 16:56	1	CL10X05.D	R-624SilMS 30m 0.25(mm)
IC 410-395211/7		07/10/2023 17:18	1	CL10X06.D	R-624SilMS 30m 0.25(mm)
IC 410-395211/8		07/10/2023 17:40	1	CL10X07.D	R-624SilMS 30m 0.25(mm)
IC 410-395211/9		07/10/2023 18:02	1	CL10X08.D	R-624SilMS 30m 0.25(mm)
ICV 410-395211/11		07/10/2023 18:45	1	CL10X10.D	R-624SilMS 30m 0.25(mm)
IC 410-395211/13		07/10/2023 19:29	1	CL10X12.D	R-624SilMS 30m 0.25(mm)
IC 410-395211/14		07/10/2023 19:51	1	CL10X13.D	R-624SilMS 30m 0.25(mm)
IC 410-395211/15		07/10/2023 20:13	1	CL10X14.D	R-624SilMS 30m 0.25(mm)
IC 410-395211/16		07/10/2023 20:35	1	CL10X15.D	R-624SilMS 30m 0.25(mm)
IC 410-395211/17		07/10/2023 20:57	1	CL10X16.D	R-624SilMS 30m 0.25(mm)
ICIS 410-395211/18		07/10/2023 21:18	1	CL10X17.D	R-624SilMS 30m 0.25(mm)
IC 410-395211/19		07/10/2023 21:40	1	CL10X18.D	R-624SilMS 30m 0.25(mm)
ICV 410-395211/21		07/10/2023 22:24	1	CL10X20.D	R-624SilMS 30m 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136864-2

SDG No.:

Instrument ID: 10193 Start Date: 08/08/2023 18:03

Analysis Batch Number: 405906 End Date: 08/09/2023 03:25

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 410-405906/1		08/08/2023 18:03	1	CG08T01.D	R-624SilMS 30m 0.25(mm)
CCVIS 410-405906/3		08/08/2023 18:38	1	CG08X02.D	R-624SilMS 30m 0.25(mm)
CCV 410-405906/4		08/08/2023 19:00	1	CG08X03.D	R-624SilMS 30m 0.25(mm)
LCS 410-405906/5		08/08/2023 19:22	1	CG08X04.D	R-624SilMS 30m 0.25(mm)
LCS 410-405906/6		08/08/2023 19:44	1	CG08X05.D	R-624SilMS 30m 0.25(mm)
ZZZZZ		08/08/2023 20:06	1		R-624SilMS 30m 0.25(mm)
MB 410-405906/8		08/08/2023 20:27	1	CG08X07.D	R-624SilMS 30m 0.25(mm)
410-136864-4	16WC1A	08/08/2023 22:39	1	CG08X13.D	R-624SilMS 30m 0.25(mm)
410-136864-4 MS	16WC1A MS	08/08/2023 23:01	1	CG08X14.D	R-624SilMS 30m 0.25(mm)
410-136864-4 MSD	16WC1A MSD	08/08/2023 23:23	1	CG08X15.D	R-624SilMS 30m 0.25(mm)
410-136864-4 MS	16WC1A MS	08/08/2023 23:45	1	CG08X16.D	R-624SilMS 30m 0.25(mm)
410-136864-4 MSD	16WC1A MSD	08/09/2023 00:07	1	CG08X17.D	R-624SilMS 30m 0.25(mm)
410-136864-2	16MW8	08/09/2023 00:51	1	CG08X19.D	R-624SilMS 30m 0.25(mm)
410-136864-5	16WDUP	08/09/2023 01:12	1	CG08X20.D	R-624SilMS 30m 0.25(mm)
410-136864-6	16WC1B	08/09/2023 01:34	1	CG08X21.D	R-624SilMS 30m 0.25(mm)
410-136864-3	16MW9	08/09/2023 01:56	1	CG08X22.D	R-624SilMS 30m 0.25(mm)
ZZZZZ		08/09/2023 02:19	2.5		R-624SilMS 30m 0.25(mm)
410-136864-1	16C1	08/09/2023 02:41	1	CG08X24.D	R-624SilMS 30m 0.25(mm)
ZZZZZ		08/09/2023 03:03	4		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/09/2023 03:25	200		R-624SilMS 30m 0.25(mm)

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136864-2

SDG No.:

Batch Number: 395211 | Batch Start Date: 07/10/23 15:13 | Batch Analyst: Kephart, Kayla

Batch Method: EPA 8260C | Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Lot#Vial	LCS_ETBR 00006	MSV_CCV_CYC 00006	MSV_CCV_V5ACE 00026
BFB 410-395211/1		EPA 8260C		1 uL	1 uL				
IC 410-395211/3		EPA 8260C		25 mL	25 mL	2705		1.6 uL	0.2 uL
IC 410-395211/4		EPA 8260C		25 mL	25 mL	2705		4 uL	0.5 uL
IC 410-395211/5		EPA 8260C		25 mL	25 mL	2705		4 uL	0.5 uL
IC 410-395211/6		EPA 8260C		25 mL	25 mL	2705		8 uL	1 uL
IC 410-395211/7		EPA 8260C		25 mL	25 mL	2705		8 uL	1 uL
IC 410-395211/8		EPA 8260C		25 mL	25 mL	2705		8 uL	1 uL
IC 410-395211/9		EPA 8260C		25 mL	25 mL	2705		20 uL	2.5 uL
ICV 410-395211/11		EPA 8260C		25 mL	25 mL	2705			
IC 410-395211/13		EPA 8260C		25 mL	25 mL	2705			
IC 410-395211/14		EPA 8260C		25 mL	25 mL	2705			
IC 410-395211/15		EPA 8260C		25 mL	25 mL	2705			
IC 410-395211/16		EPA 8260C		25 mL	25 mL	2705			
IC 410-395211/17		EPA 8260C		25 mL	25 mL	2705			
ICIS 410-395211/18		EPA 8260C		25 mL	25 mL	2705			
IC 410-395211/19		EPA 8260C		25 mL	25 mL	2705			
ICV 410-395211/21		EPA 8260C		25 mL	25 mL	2705	12.5 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_DME 00048	MSV_HP25_ISO 00008	MSV_HP25_ISSS 00073	MSV_LCS_2CEVE 00123	MSV_LCS_ACROL 00121	MSV_LCS_CYC 00004
BFB 410-395211/1		EPA 8260C							
IC 410-395211/3		EPA 8260C		0.2 uL	1 uL				
IC 410-395211/4		EPA 8260C		0.5 uL	1 uL				
IC 410-395211/5		EPA 8260C		0.5 uL	1 uL				
IC 410-395211/6		EPA 8260C		1 uL	1 uL				
IC 410-395211/7		EPA 8260C		1 uL	1 uL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-136864-2

SDG No.:

Batch Number: 395211 Batch Start Date: 07/10/23 15:13 Batch Analyst: Kephart, Kayla

Batch Method: EPA 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_DME 00048	MSV_HP25_ISO 00008	MSV_HP25_ISSS 00073	MSV_LCS_2CEVE 00123	MSV_LCS_ACROL 00121	MSV_LCS_CYC 00004
IC 410-395211/8		EPA 8260C		1 uL	1 uL				
IC 410-395211/9		EPA 8260C		2.5 uL	1 uL				
ICV 410-395211/11		EPA 8260C			1 uL		12.5 uL		12.5 uL
IC 410-395211/13		EPA 8260C				1 uL			
IC 410-395211/14		EPA 8260C				1 uL			
IC 410-395211/15		EPA 8260C				1 uL			
IC 410-395211/16		EPA 8260C				1 uL			
IC 410-395211/17		EPA 8260C				1 uL			
ICIS 410-395211/18		EPA 8260C				1 uL			
IC 410-395211/19		EPA 8260C				1 uL			
ICV 410-395211/21		EPA 8260C				1 uL		12.5 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_LCS_EE 00007	MSV_LCS_LKB 00008	MSV_LCS_Penta 00030	MSV_LCS_SMFre 00051	MSV_LCS_V5ACE 00027	MSV_LCS_VOC#1 00118
BFB 410-395211/1		EPA 8260C							
IC 410-395211/3		EPA 8260C							
IC 410-395211/4		EPA 8260C							
IC 410-395211/5		EPA 8260C							
IC 410-395211/6		EPA 8260C							
IC 410-395211/7		EPA 8260C							
IC 410-395211/8		EPA 8260C							
IC 410-395211/9		EPA 8260C							
ICV 410-395211/11		EPA 8260C			25 uL		12.5 uL	6.25 uL	
IC 410-395211/13		EPA 8260C							
IC 410-395211/14		EPA 8260C							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-136864-2

SDG No.:

Batch Number: 395211 Batch Start Date: 07/10/23 15:13 Batch Analyst: Kephart, Kayla

Batch Method: EPA 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_LCS_EE 00007	MSV_LCS_LKB 00008	MSV_LCS_Penta 00030	MSV_LCS_SMFre 00051	MSV_LCS_V5ACE 00027	MSV_LCS_VOC#1 00118
IC 410-395211/15		EPA 8260C							
IC 410-395211/16		EPA 8260C							
IC 410-395211/17		EPA 8260C							
ICIS 410-395211/18		EPA 8260C							
IC 410-395211/19		EPA 8260C							
ICV 410-395211/21		EPA 8260C		12.5 uL		12.5 uL			12.5 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_LL_#1_826 00084	MSV_LL_#2_826 00095	MSV_LL_GAS826 00159	MSV_Q_QDME 00033	MSV_QC_Gas826 00149	MSV_V_BFB 00012
BFB 410-395211/1		EPA 8260C							1 uL
IC 410-395211/3		EPA 8260C							
IC 410-395211/4		EPA 8260C							
IC 410-395211/5		EPA 8260C							
IC 410-395211/6		EPA 8260C							
IC 410-395211/7		EPA 8260C							
IC 410-395211/8		EPA 8260C							
IC 410-395211/9		EPA 8260C							
ICV 410-395211/11		EPA 8260C					5 uL		
IC 410-395211/13		EPA 8260C		2 uL	2 uL	2 uL			
IC 410-395211/14		EPA 8260C		2 uL	2 uL	2 uL			
IC 410-395211/15		EPA 8260C		2 uL	2 uL	2 uL			
IC 410-395211/16		EPA 8260C		2 uL	2 uL	2 uL			
IC 410-395211/17		EPA 8260C		5 uL	5 uL	5 uL			
ICIS 410-395211/18		EPA 8260C		10 uL	10 uL	10 uL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136864-2

SDG No.:

Batch Number: 395211 | Batch Start Date: 07/10/23 15:13 | Batch Analyst: Kephart, Kayla

Batch Method: EPA 8260C | Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_LL_#1_826 00084	MSV_LL_#2_826 00095	MSV_LL_GAS826 00159	MSV_Q_QDME 00033	MSV_QC_Gas826 00149	MSV_V_BFB 00012
IC 410-395211/19		EPA 8260C		25 uL	25 uL	25 uL			
ICV 410-395211/21		EPA 8260C						12.5 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_V_SMRV4 00060					
BFB 410-395211/1		EPA 8260C							
IC 410-395211/3		EPA 8260C		1 uL					
IC 410-395211/4		EPA 8260C		2.5 uL					
IC 410-395211/5		EPA 8260C		2.5 uL					
IC 410-395211/6		EPA 8260C		5 uL					
IC 410-395211/7		EPA 8260C		5 uL					
IC 410-395211/8		EPA 8260C		5 uL					
IC 410-395211/9		EPA 8260C		12.5 uL					
ICV 410-395211/11		EPA 8260C							
IC 410-395211/13		EPA 8260C							
IC 410-395211/14		EPA 8260C							
IC 410-395211/15		EPA 8260C							
IC 410-395211/16		EPA 8260C							
IC 410-395211/17		EPA 8260C							
ICIS 410-395211/18		EPA 8260C							
IC 410-395211/19		EPA 8260C							
ICV 410-395211/21		EPA 8260C							

Batch Notes	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136864-2

SDG No.:

Batch Number: 395211 | Batch Start Date: 07/10/23 15:13 | Batch Analyst: Kephart, Kayla

Batch Method: EPA 8260C | Batch End Date:

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136864-2

SDG No.:

Batch Number: 405906 | Batch Start Date: 08/08/23 18:03 | Batch Analyst: Walmer, Gavin

Batch Method: EPA 8260C | Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	ResidualChloCheck	Headspace	Lot#Vial
BFB 410-405906/1		EPA 8260C		1 uL	1 uL				
CCVIS 410-405906/3		EPA 8260C		25 mL	25 mL				2705
CCV 410-405906/4		EPA 8260C		25 mL	25 mL				2705
LCS 410-405906/5		EPA 8260C		25 mL	25 mL				2705
LCS 410-405906/6		EPA 8260C		25 mL	25 mL				2705
MB 410-405906/8		EPA 8260C		25 mL	25 mL				2705
410-136864-B-4	16WC1A	EPA 8260C	T	25 mL	25 mL	<2 SU	N	N	
410-136864-C-4 MS	16WC1A	EPA 8260C	T	25 mL	25 mL	<2 SU	N	N	
410-136864-E-4 MSD	16WC1A	EPA 8260C	T	25 mL	25 mL	<2 SU	N	N	
410-136864-D-4 MS	16WC1A	EPA 8260C	T	25 mL	25 mL	<2 SU	N	N	
410-136864-D-4 MSD	16WC1A	EPA 8260C	T	25 mL	25 mL	<2 SU	N	N	
410-136864-B-2	16MW8	EPA 8260C	T	25 mL	25 mL	<2 SU	N	N	
410-136864-B-5	16WDUP	EPA 8260C	T	25 mL	25 mL	<2 SU	N	N	
410-136864-B-6	16WC1B	EPA 8260C	T	25 mL	25 mL	<2 SU	N	N	
410-136864-B-3	16MW9	EPA 8260C	T	25 mL	25 mL	<2 SU	N	N	
410-136864-B-1	16C1	EPA 8260C	T	25 mL	25 mL	<2 SU	N	N	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_CCV_V5ACE 00027	MSV_DME 00053	MSV_HP25_ISSS 00074	MSV_LCS_EE 00007	MSV_LCS_Penta 00031	MSV_LCS_V5ACE 00028
BFB 410-405906/1		EPA 8260C							
CCVIS 410-405906/3		EPA 8260C				1 uL			
CCV 410-405906/4		EPA 8260C		1 uL	1 uL	1 uL			
LCS 410-405906/5		EPA 8260C				1 uL	12.5 uL	12.5 uL	
LCS 410-405906/6		EPA 8260C				1 uL			6.25 uL

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-136864-2

SDG No.:

Batch Number: 405906 Batch Start Date: 08/08/23 18:03 Batch Analyst: Walmer, Gavin

Batch Method: EPA 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_CCV_V5ACE 00027	MSV_DME 00053	MSV_HP25_ISSS 00074	MSV_LCS_EE 00007	MSV_LCS_Penta 00031	MSV_LCS_V5ACE 00028
MB 410-405906/8		EPA 8260C				1 uL			
410-136864-B-4	16WC1A	EPA 8260C	T			1 uL			
410-136864-C-4 MS	16WC1A	EPA 8260C	T			1 uL	5.38 uL	5.38 uL	
410-136864-E-4 MSD	16WC1A	EPA 8260C	T			1 uL	5.38 uL	5.38 uL	
410-136864-D-4 MS	16WC1A	EPA 8260C	T			1 uL			2.69 uL
410-136864-D-4 MSD	16WC1A	EPA 8260C	T			1 uL			2.69 uL
410-136864-B-2	16MW8	EPA 8260C	T			1 uL			
410-136864-B-5	16WDUP	EPA 8260C	T			1 uL			
410-136864-B-6	16WC1B	EPA 8260C	T			1 uL			
410-136864-B-3	16MW9	EPA 8260C	T			1 uL			
410-136864-B-1	16C1	EPA 8260C	T			1 uL			

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_LCS_VOC#1 00124	MSV_LL_#1_826 00088	MSV_LL_#2_826 00098	MSV_LL_GAS826 00163	MSV_Q_QDME 00034	MSV_QC_Gas826 00154
BFB 410-405906/1		EPA 8260C							
CCVIS 410-405906/3		EPA 8260C			20 uL	20 uL	20 uL		
CCV 410-405906/4		EPA 8260C							
LCS 410-405906/5		EPA 8260C		12.5 uL					12.5 uL
LCS 410-405906/6		EPA 8260C						5 uL	
MB 410-405906/8		EPA 8260C							
410-136864-B-4	16WC1A	EPA 8260C	T						
410-136864-C-4 MS	16WC1A	EPA 8260C	T	5.38 uL					5.38 uL
410-136864-E-4 MSD	16WC1A	EPA 8260C	T	5.38 uL					5.38 uL
410-136864-D-4 MS	16WC1A	EPA 8260C	T					2 uL	
410-136864-D-4 MSD	16WC1A	EPA 8260C	T					2 uL	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136864-2

SDG No.:

Batch Number: 405906 | Batch Start Date: 08/08/23 18:03 | Batch Analyst: Walmer, Gavin

Batch Method: EPA 8260C | Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_LCS_VOC#1 00124	MSV_LL_#1_826 00088	MSV_LL_#2_826 00098	MSV_LL_GAS826 00163	MSV_Q_QDME 00034	MSV_QC_Gas826 00154
410-136864-B-2	16MW8	EPA 8260C	T						
410-136864-B-5	16WDUP	EPA 8260C	T						
410-136864-B-6	16WC1B	EPA 8260C	T						
410-136864-B-3	16MW9	EPA 8260C	T						
410-136864-B-1	16C1	EPA 8260C	T						

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_V_BFB 00012					
BFB 410-405906/1		EPA 8260C		1 uL					
CCVIS 410-405906/3		EPA 8260C							
CCV 410-405906/4		EPA 8260C							
LCS 410-405906/5		EPA 8260C							
LCS 410-405906/6		EPA 8260C							
MB 410-405906/8		EPA 8260C							
410-136864-B-4	16WC1A	EPA 8260C	T						
410-136864-C-4 MS	16WC1A	EPA 8260C	T						
410-136864-E-4 MSD	16WC1A	EPA 8260C	T						
410-136864-D-4 MS	16WC1A	EPA 8260C	T						
410-136864-D-4 MSD	16WC1A	EPA 8260C	T						
410-136864-B-2	16MW8	EPA 8260C	T						
410-136864-B-5	16WDUP	EPA 8260C	T						
410-136864-B-6	16WC1B	EPA 8260C	T						
410-136864-B-3	16MW9	EPA 8260C	T						
410-136864-B-1	16C1	EPA 8260C	T						

Batch Notes	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136864-2

SDG No.:

Batch Number: 405906 | Batch Start Date: 08/08/23 18:03 | Batch Analyst: Walmer, Gavin

Batch Method: EPA 8260C | Batch End Date:

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Shipping and Receiving Documents

CHAIN OF CUSTODY RECORD

410-136864-01 Chain of Custody

Environmental (ELLE), 2425 New Holland Pike, Lancaster, PA, 17605-2425/ Barb Weyandt, Manager/ (717) 656-2300 x1576

Consultant:	TRC Engineers Inc (formerly Draper Aden Assoc)	Sample Site:	RFAAP, Radford, Virginia
Attn:	Janet C. Frazier	Location:	HWMU16
Address:	2200 South Main Street Suite 1 Blacksburg, Virginia 24060	Event:	3Q 2023 Annual GW Monitoring Event
Phone:	(540) 552-0444	DAA JN:	547076
Fax:	(540) 552-0291	Lab JN:	

Project Specific (PS) QC: YES as indicated — YES
Sample Collection for Project Complete? — YES
WB-12.75Y-02X-70-7513-5028
" - " - " - 11 7578-4238
Carrier:
Tracking Number:

Box 1: Matrix
SW Surface Water; GW Groundwater; L Leachate; S Soil; T Trip Blank; E Equipment Blank; P Product; O Other

Box 2: Preservative
A HCL; B HNO_3; C H_2SO_4; D $Na_2S_2O_3$; E NaOH; F ZnAc; G Other (Specify); H None

Box 3: Filtered/Unfiltered
F Filtered; U Unfiltered

Box 4: Sample Type
G Grab; C Composite

Box 5: Sample Container Type
P Plastic; AG Amber Glass; V VOA; CG Clear Glass

Invoice
Copy to Consultant: YES
Bill: CLIENT OTHER
Preserved and shipped on ice: YES

Box 4 - Sample Type	G	G	G	G	G	G	G
Box 3 - Filtered/Unfiltered	U	U	U	U	U	U	U
Required pH of Sample	<2	<2		<2	<2	<2	>12
Box 2 - Preservative	A	A	H	A	B	B	E
Box 5 - Sample Container Type	3-40mL VOA	3-40mL VOA	2-250mL AG	2-40mL VOA	1-500 mL P		1-500 mL P

Sample ID	Date: 2023	Time	Box 1: Matrix	Number of Bottles	8260D/5030C 25 ml purge volume	8250C/5030C 25 ml purge Dimethylether only CAS NO 115-10-6 permit	8260D/5030C 5 ml purge volume for 2-propanol ONLY	8270d/3510C (Semivolatiles)	Additional Aliquot 8260D/5030C 25 ml purge volume	ICP/MS 6020B/3005A (Metals-Total)	7470A (Mercury-Total)	9012B (Cyanide)	
16C1	7/27	1245	GW	12	X	X	X	X	X	X	X	X	Additional VOA Aliquot if dilution is required.
16MW8	7/21	1005	GW	10	X	X	X	X		X	X	X	
16MW9	7/27	1125	GW	12	X	X	X	X	X	X	X	X	Additional VOA aliquot if dilution is required.
16WC1A	7/27	0955	GW	30	X	X	X	X		X	X	X	USE FOR QC
16WDUP	7/27	1020	GW	10	X	X	X	X		X	X	X	
16WC1B	7/26	1205	GW	10	X	X	X	X		X	X	X	
16-2	7/26	0930	GW	6	X	X		X		X	X		
16-3	7/26	~~0930~~ 1115	GW	6	X	X		X		X	X		sample time is 1115
16-5	7/26	0745	GW	6	X	X		X		X	X		
16WC2B	7/26	0840	GW	6	X	X		X		X	X		
16SPRING	7/26	0800	GW	6	X	X		X		X	X		
Trip Blank 1	7/26	—	T	2	X	X	X						one trip blank required per day per permit. Delete if not required.
Trip Blank 2	7/26	—	T	2	X	X	X						
Trip Blank 3	—	—	T	2	X	X	X						

GENERAL NOTES:
1. Report results to detection limit, with J flags, for italicized wells.
2. Report results at or greater than QL for non-italicized wells.
3. VELAP accreditation required.
4. FULL/Comprehensive Deliverable with EDD and ERIS EDD.
5. For 2- propanol report to QL 100 ug/l and DL of 50 ug/l.
6. See Atached target analytes. Report to these Permit Specified QLs and DLs. Per ELLE - A single 25 ml purge volume analysis will be performed where requested
However, lab to report 8260D for all 25 ml purge requested analytes except for Dimethylether to be reported as 8260C (VELAP), 2-propanol to be analyzed via 5 ml purge as noted.

* Barb—report preliminary results. JJF 7/25/23

Clients Special Instructions:

Received by lab in Good Condition ____ Yes ____ No Custody Seal Intact ____ Yes ____ No Temperature upon arrival ____ Received on Ice ____ Yes ____ No
Describe problems, if any:

0.9/0.9 1.8/1.8

Sampler Name (Print): Ken Coddington	Date: 7/26/23	#1 Relinquished by (Signature):	Date: 7/27/23	#2 Relinquished by (Signature):	Date:	Sample Storage
Sampler Signature:	Time: 0700	Company Name: DAA/TRC	Time: 1700	Company Name:	Time:	Time Requested:
Sampler Name (Print): Alexa Prater	Date: 7/26/23	#1 Received by (Signature):	Date:	#2 Received by (Signature):	Date: 7/28/23	30 DYS ORG/8 MTHS INORG
Sampler Signature:	Time: 0700	Company Name:	Time:	Company Name: ELLET	Time: 0925	AEH

08/11/2023

410-136864-02 Chain of Custody

JCF 7/25/23

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ANALYTICAL METHOD: 8260D/5030C
TYPE METHOD: GCMS
CLASS: VOLATILE

THIS APPLIES TO WELLS 16-2, 16-3, 16-5, 16WC2B, 16SPRING ✓

1.	Carbon tetrachloride	56-23-5	1
2.	chloromethane ; (Methyl chloride)	74-87-3	1
3.	2-butanone (methyl ethyl ketone - MEK)	78-93-3	10
4.	1,1-dichloroethane	75-34-3	1
5.	Dichlorodifluoromethane	75-71-8	1
6.	Ethylbenzene	100-41-4	1
7.	Tetrachloroethene	127-18-4	1
8.	Toluene (methyl benzene)	108-88-3	1
9.	1,1,1-trichloroethane (methyl chloroform)	71-55-6	1
10.	Trichloroethene	79-01-6	1
11.	Trichlorofluoromethane (CFC-11)	75-69-4	1
12.	Xylenes (total)	1330-20-7	3
13	Chloroethane	75-00-3	1
14	Diethyl ether	60-29-7	12.5-report to 10 ug/l due to rounding issues
15	Dimethyl ether	115-10-6	12.5- report to 10 due to rounding issues
16	Methylene chloride	75-09-2	1
17	1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1
18	Benzene	71-43-2	1
19	1,1-Dichloroethene	75-35-4	1
20	Tetrahydrofuran		25
21	Vinyl chloride		1

Notes
13-16 added 10/03. JCF
Revised 10/31/03 JCF
17 added 0704. Revised 7/28/2004
10/2008 JCF
18 added 04 2011. JCF
19 added 04 2014. KPO, location 16-1 removed 2014
20 added 04 2016 JCF
21 added 8-2020 JCF

Current as of 2021 Permit Mod. JCF 9-13-2021

OK JCF 7/25/23

Report to at or above the QL for these wells and analytes. JCF 9-13-2021 ✓

25 ml purge volume

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ANALYTICAL METHOD: 8270D/3510C
TYPE METHOD: GCMS
CLASS: SEMIVOLATILE

THIS APPLIES TO WELLS 16-2, 16-3, 16-5, 16WC2B, 16SPRING ✓

No.	PARAMETER	CAS RN	Required LOQ (µg/l)
1.	2,4-dinitrotoluene	121-14-2	10
2.	2,6-dinitrotoluene	606-20-2	10
3.	Diethylphthate		5

Report to at or above the QL.
10/13- diethylphthate added 10/13.

Current as of 2021 Permit Mod. JCF 9-13-2021

Report to at or above the QL for these wells and analytes. JCF 9-13-2021 ✓

JCF 7/25/23

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ANALYTICAL METHOD: SEE BELOW
TYPE METHOD: SEE BELOW
CLASS: TOTAL

Method SW 846-6020B/3005A (ICP/MS)

THIS APPLIES TO WELLS 16-2, 16-3,16-5, 16WC2B, 16SPRING

No.	PARAMETER	CAS RN	Required QL/ LOQ (µg/l)
1.	Arsenic	7440-38-2	10
2.	Barium	7440-39-3	10
3.	Beryllium	7440-41-7	1
4.	Cadmium	7440-43-9	1
5.	Chromium	7440-47-3	5
6.	Cobalt	7440-48-4	5
7.	Copper	7440-50-8	5
8.	Lead	7440-92-1	3
9.	Nickel	7440-02-0	10
10.	Vanadium	7440-62-2	10
11.	Zinc	7440-66-6	30

Report to at or above the QL.

Updated 4/8/2013 jcf
Zinc QL updated 10 2016 – JCF
Current as of 2021 Permit Mod. JCF 9-13-2021

OK JCF 7/23/25

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ANALYTICAL METHOD: 7470A

THIS APPLIES TO ALL WELLS AND QC

	Method SW 7470A/CVAA	CAS#	Required LOQ
1	Mercury	7439-97-6	2 / 0.2 ug/l

Report to permit DL (0.2 ug/l) for 16C1, 16MW8, 16MW9, 16WC1A, 16WDUP, 16WC1B, QC. (Appendix IX wells)-jcf 9-13-2021 JCF 7/25/23

Report to at or above QL for remaining wells. jcf 9-13-2021 JCF 7/25/23

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ANALYTICAL METHOD: 9012B
TYPE METHOD: CLO
CLASS: CYANIDE

THIS APPLIES TO 16C1, 16MW8, 16MW9,16WC1A, 16WDUP, 16WC1B AND QC

No.	PARAMETER	CAS RN	Required LOQ/DL (µg/l)
1	Cyanide	57-12-5	20 / 5

These are Appendix IX wells. Report estimated results.

Current as of 2021 Permit Mod. JCF 9-13-2021

OK JCF 7/25/23

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ANALYTICAL METHOD: 8260D/ 5030C
GCMS/ Volatile

THIS APPLIES TO WELLS 16C1, 16MW8, 16MW9,16WC1A, 16WDUP, 16WC1B & QC

SEE attached list. Report only analytes.

For these wells and analytes, report to permit MDL with J flag.

* Note- 8260C/5030C 25 ml purge Dimethylether only CAS N0 115-10-6 permit limits are QL: 12.5 ug/l and MDL: 1.11 ug/l- However, please report to 10 ug/l due to rounding issues. (instead of 12.5 ug/l) JVR 7-19-23

\# For 2-propanol report to QL 100 ug/l and DL at 50 ug/l. (5ml purge) JVR 7/25/23

JCF 7-19-23

* nok addition of Chloro methane + chloroethane (page 4/8 / page 13/17) JVR 7/25/23

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ANALYTICAL METHOD: 8270E/ GCMS/ Semivolatile
THIS APPLIES TO WELLS 16C1, 16MW8, 16MW9,16WC1A, 16WDUP, 16WC1B & QC

SEE attached list. Report only analytes.

Report diethylphthalate to 5 ug/l to be consistent with routine semiannual limit. JCF 7-19-23

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INORGANICS

THIS APPLIES TO WELLS 16C1, 16MW8, 16MW9,16WC1A, 16WDUP, 16WC1B & QC

Report to QL, DL listed below and provide estimated results ("J"). ✓

6020B JVR 7/25/23

HWMU 16

Analyte	Method Ref	LOQ/QL	LOD/ MDL	CAS#	Units
ANTIMONY	6020A	2	0.6	7440-36-0	UG/L
ARSENIC	6020A	10	2	7440-38-2	UG/L
BARIUM	6020A	10	1.3	7440-39-3	UG/L
BERYLLIUM	6020A	1	0.3	7440-41-7	UG/L
CADMIUM	6020A	1	0.2	7440-43-9	UG/L
CHROMIUM	6020A	5	1	7440-47-3	UG/L
COBALT	6020A	5	1	7440-48-4	UG/L
COPPER	6020A	5	1.7	7440-50-8	UG/L
LEAD	6020A	3	1	7439-92-1	UG/L
NICKEL	6020A	10	2	7440-02-0	UG/L
SELENIUM	6020A	10	3	7782-49-2	UG/L
SILVER	6020A	2	0.3	7440-22-4	UG/L
THALLIUM	6020A	1	0.2	7440-28-0	UG/L
VANADIUM	6020A	10	2.5	7440-62-2	UG/L
ZINC	6020A	30	7.3	7440-66-6	UG/L

15 analytes

These are Appendix IX wells. Report to permit MDL with estimated results. ✓

Rev 2021 Class 1 Permit Mod -JCF

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7-25-2023

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Barb

- See notes on COC
- report the analytes on attached list in Yellow highlight. note isofrole + Pronamide no longer w/ ELE as lab could not meet Permit MDL. Report to Permit MDL.
- report preliminary data so we can confirm project QL/dL is met.

HAZARDOUS WASTE MANAGEMENT
POST-CLOSURE CARE PERMIT

ATTACHMENT 1

APPENDIX I

ANNUAL GROUNDWATER SAMPLING CONSTITUENT LIST

(APPENDIX IX 40 CFR PART 264)

APPENDIX IX METHOD/DETECTION LIMITS

Analyte	CAS Number	METHOD	PQL (ug/l)	MDL (ug/1)
1,1,1,2-Tetrachloroethane	630-20-6	8260	1	0.3
1,1,1 -Trichloroethane	71-55-6	8260	1	0.3
1,1,2,2-Tetrachloroethane	79-34-5	8260	1	0.3
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	8260	1	0.4
1,1,2-Trichloroethane	79-00-5	8260	1	0.3
1,1 -Dichloroethane	75-34-3	8260	1	0.3
1,1 -Dichloroethene	75-35-4	8260	1	0.3
1,2,3-Trichloropropane	96-18-4	8260	1	0.3
1,2,4,5-Tetrachlorobenzene	95-94-3	8270	10	2
1,2,4-Trichlorobenzene	120-82-1	8260	1	0.6
1,2,4-Trichlorobenzene (dup-8260)	120-82-1	8270	10	0.43
1,2-dibromo-3-chloropropane	96-12-8	8260	1	0.4
1,2-dibromoethane	106-93-4	8260	1	0.3
1,2-Dichlorobenzene	95-50-1	8260	1	0.4
1,2-Dichlorobenzene (dup 8260)	95-50-1	8270	10	0.48
1,2-Dichloroethane	107-06-2	8260	1	0.3
1,2-Dichloropropane	78-87-5	8260	1	0.4
1,3-Dichlorobenzene	541-73-1	8260	1	0.4
1,3-Dichlorobenzene (dup 8260)	541-73-1	8270	10	0.52
1,3-Dichloropropane	142-28-9	8260	1	0.4
1,3-Dinitrobenzene	99-65-0	8270	10	2.3
1,4-Dichlorobenzene	106-46-7	8260	1	0.4
1,4-Dichlorobenzene (dup 8260)	106-46-7	8270	10	0.37
1,4-Dioxane	123-91-1	8260	200	45.48
1,4-Napthoquinone	130-15-4	8270	10	3.0
1 -Naphthylamine	134-32-7	8270	10	3.0
2,3,4,6-Tetrachlorophenol	58-90-2	8270	10	1.8
2,4,5-Trichlorophenol	95-95-4	8270	10	2.0
2,4,6-Trichlorophenol	88-06-2	8270	10	1.8
2,4-Dichlorophenol	120-83-2	8270	10	1.59
2,4-Dimethylphenol	105-67-9	8270	10	3.0

Analyte	CAS Number	METHOD	PQL (ug/l)	MDL (ug/l)
2,4-Dinitrophenol	51-28-5	8270	10	6.2
2,4-Dinitrotoluene	121-14-2	8270	10	2.1
2,6-Dichlorophenol	87-65-0	8270	10	1.4
2,6-Dinitrotoluene	606-20-2	8270	10	2.1
2-Acetylaminofluorene	53-96-3	8270	10	3.0
2-Butanone	78-93-3	8260	10	1.7
2-Chloronaphthalene	91-58-7	8270	10	0.5
2-Chlorophenol	95-57-8	8270	10	1.0
2-Hexanone	591-78-6	8260	10	2.0
2-Methylnaphthalene	91-57-6	8270	10	0.29
2-Naphthylamine	91-59-8	8270	10	7.0
2-Nitroaniline	88-74-4	8270	10	1.0
2-Nitrophenol	88-75-5	8270	10	1.27
2-Picoline	109-06-8	8270	10	1.0
2-Propanol - 5 ml purge	67-63-0	8260	100	50
3,3 `-Dichlorobenzidine	91-94-1	8270	10	3.0
3,3 `-Dimethylbenzidine	119-93-7	8270	10	3.3
3-Methylcholanthrene	56-49-5	8270	10	1.0
3-Nitroaniline	99-09-2	8270	10	2.0
4,6-Dinitro-2-methylphenol	534-52-1	8270	10	3.0
4-Aminobiphenyl	92-67-1	8270	10	3.0
4-Bromophenyl phenyl ether	101-55-3	8270	10	0.56
4-Chloro-3-methylphenol	59-50-7	8270	10	1.0
4-Chloroaniline	106-47-8	8270	10	3.3
4-Chlorophenyl phenyl ether	7005-72-3	8270	10	0.6
4-Methyl-2-pentanone	108-10-1	8260	10	2.0
4-Nitroaniline	106-44-5	8270	10	1.5
4-Nitrophenol	100-01-6	8270	10	3.0
4-Nitroquinoline-1 -oxide	100-02-7	8270	50	5
5-Nitro-o-toluidine	56-57-5	8270	10	2.0
7,12-Dimethylbenz(a)anthracene	99-55-8	8270	10	1.8
a,a-Dimethylphenethylamine	57-97-6	8270	50	5
Acenaphthene	122-09-8	8270	10	0.35

Analyte	CAS Number	METHOD	PQL(ug/l)	MDL(ug/l)
Acenaphthylene	208-96-8	8270	10	0.48
Acetone	67-64-1	8260	10	2.0
Acetonitrile	75-05-8	8260	100	31.67
Acetophenone	98-86-2	8270	10	1.0
Acrolein	107-02-8	8260	10	3.4
Acrylonitrile	107-13-1	8260	10	1.1
Allyl chloride/ (3-Chloropropene)	107-05-1	8260	10	1.0
Aniline	62-53-3	8270	10	1.1
Anthracene	120-12-7	8270	10	0.52
Antimony	7440-36-0	6020 /6010	2	0.6
Aramite	140-57-8	8270	10	3.7
Arsenic	7440-38-2	6020/ 6010	10	2
Barium	7440-39-3	6020/ 6010	10	1.3
Benzene	71-43-2	8260	1	0.3
Benzo(a)anthracene	56-55-3	8270	10	0.45
Benzo(a)pyrene	50-32-8	8270	10	1.5
Benzo(b)fluoranthene	205-99-2	8270	10	1.2
Benzo(g,h,i)perylene	191-24-2	8270	10	0.42
Benzo(k)fluoranthene	207-08-9	8270	10	1.6
Benzyl alcohol	100-51-6	8270	10	3.0
Beryllium	7440-41-7	6020/ 6010	1	0.3
Bis(2-chlorethoxy)methane	111-91-1	8270	1	0.5
Bis(2-chloroethyl)ether	111-44-4	8270	1	0.5
Bis(2-chloroisopropyl)ether	108-60-1	8270	10	0.6
Bis(2-ethylhexyl)phthalate	117-81-7	8270	10	2.0
Bromodichloromethane	75-27-4	8260	1	0.3
Bromoform	75-25-2	8260	1	0.4
Bromomethane	74-83-9	8260	1	0.542
Butyl benzyl phthalate	85-68-7	8270	10	0.7
Cadmium	7440-43-9	6020/6010	1	0.2
Carbon disulfide	75-15-0	8260	10	0.4
Chloroethane (required as compliance well not App IX		8260	1	
Chloromethane (required as compliance well not App IX		8260	1	
Carbon tetrachloride	56-23-5	8260	1	0.3
Chlorobenzilate	510-15-6	8270	10	3.0

Analyte	CAS Number	METHOD	PQL(ug/l)	MDL(ug/l)
Chloroform	67-66-3	8260	1	0.3
Chloroprene/ (2-Chloro-1,3-butadiene	126-99-8	8260	10	0.46
Chromium	7440-47-3	6020/6010	5	1.0
Chrysene	218-01-9	8270	10	0.31
Cobalt	7440-48-4	6020/6010	5	1.0
Copper	7440-50-8	6020/6010	5	1.7
Cyanide	57-12-5	9010	20	5
Diallate	2303-16-4	8270	10	3.0
Dibenzo(a,h)anthracene	53-70-3	8270	10	0.38
Dibenzofuran	132-64-9	8270	10	0.6
Dibromochloromethane	124-48-1	8260	1	0.4
Dibromomethane/ (methylene bromide)	74-95-3	8260	1	0.3
Dichlorodifluoromethane	75-71-8	8260	1	0.4
Diethyl ether/ (ethyl ether)	60-29-7	8260	12.5	1.11
Diethyl phthalate	84-66-2	8270	10	2.0
Dimethoate	60-51-5	8270	10	3.0
Dimethyl ether (8260C)	115-10-6	8260	12.5	1.11
Dimethyl phthalate – GEL 1/0.3	131-11-3	8270	10	0.5
Di-n-butyl phthalate	84-74-2	8270	10	1.8
Di-n-octyl phthalate-GEL 1/0.3	117-84-0	8270	10	0.8
Diphenylamine (as n-nitrosodiphenylamine	86-30-6	8270	10	0.58
Disulfoton	298-04-4	8270	10	3.0
Ethyl methacrylate	97-63-2	8260	10	0.81
Ethyl methacrylate (DUP	97-63-2	8270	10	0.2
Ethyl methanesulfonate	62-50-0	8270	10	1.1
Ethylbenzene	100-41-4	8260	1	0.3
Famphur	52-85-7	8270	10	5.0
Fluoranthene	206-44-0	8270	10	0.42
Fluorene	86-73-7	8270	10	0.38

Analyte	CAS Number	METHOD	PQL (ug/I)	MDL (ug/I)
Heaxachloroethane	67-72-1	8260/8270	10	0.4
Hexachlorobenzene	118-74-1	8270	10	0.87
Hexachlorobutadiene	87-68-3	8260	1	0.4
Hexachlorocyclopentadiene	77-47-4	8270	10	3.0
Hexachlorophene – GEL 500/167	70-30-4	8270	500	185
Hexachloropropene	1888-71-7	8270	10	2
Indeno(1 ,2,3-cd)pyrene	193-39-5	8270	10	0.15
Iodomethane/ (methyl iodide)	74-88-4	8260	10	0.58
Isobutyl alcohol	78-83-1	8260	200	11.6
Isodrin	465-73-6	8270	10	1.1
Isophorone	78-59-1	8270	10	0.5
Isosafrole (Pace WC -)	120-58-1	8270	10	1.6
Kepone	143-50-0	8270	50	25
Lead	7439-92-1	6020/6010	3	1.0
m,p-Cresol	106-44-5	8270	20	2.47
m,p-Xylene	179601-23-1	8260	2	0.4
Mercury	7439-97-6	7470	2	0.2
Methacrylonitrile	126-98-7	8260	100	9.75
Methapyrilene	91-80-5	8270	10	3.0
Methyl methacrylate	80-62-6	8260	10	3.58
Methyl methanesulfonate	66-27-3	8270	10	1.0
Methyl parathion	298-00-0	8270	10	3.2
Methylene chloride	75-09-2	8260	1	0.7
Naphthalene	91-20-3	8260	1	0.4
Nickel	7440-02-0	6020/6010	10	2.0
Nitrobenzene	98-95-3	8270	10	0.6
N-Nitrosodiethylamine	55-18-5	8270	10	3.0
N-Nitrosodimethylamine	62-75-9	8270	10	2.0
N-Nitroso-di-n-butylamine	924-16-3	8270	10	3.0
N-Nitrosodi-n-propylamine	621-64-7	8270	10	0.5
N-Nitrosodiphenylamine (as diphenylamine)	86-30-6	8270	10	0.58
n-Nitrosomethylethylamine	10595-95-6	8270	10	1.0

Analyte	CAS Number	METHOD	PQL(ug /I)	MDL (ug/1)
N-Nitrosomorpholine	59-89-2	8270	10	3.0
N-Nitrosopiperidine	100-75-4	8270	10	1.1
N-Nitrosopyrrolidine	930-55-2	8270	10	0.5
o,o,o-Triethylphosphorothioate	126-68-1	8270	10	2.6
o,o-Diethyl-o-2-pyrazinyl phosphorothioate/ (Thionazin)	297-97-2	8270	10	2.4
o-Cresol/ (2-methylphenol)	95-48-7	8270	10	0.96
o-Toluidine	95-53-4	8270	10	4.0
o-Xylene	95-47-6	8260	1	0.4
Parathion/ (Ethyl parathion)	56-38-2	8270	10	3.0
p-Dimethylaminoazobenzene	60-11-7	8270	10	3.0
Pentachlorobenzene	608-93-5	8270	10	1.6
Pentachloroethane	76-01-7	8260	10	1.7
Pentachloroethane (DUP)	76-01-7	8270	10	2.7
Pentachloronitrobenzene (PACE W.Columbia – 10/1)	82-68-8	8270	10	1.0
Pentachlorophenol	87-86-5	8270	10	3.0
Phenacetin	62-44-2	8270	10	1.4
Phenanthrene	85-01-8	8270	10	0.52
Phenol	108-95-2	8270	10	0.77
Phorate	298-02-2	8270	10	2.5
p-Phenylenediamine	106-50-3	8270	150	26.4
Pronamide (pace WC)	23950-58-5	8270	10	1.5
Propionitrile	107-12-0	8260	100	10.22
Pyrene	129-00-0	8270	10	0.41
Pyridine	110-86-1	8270	10	2.0
Safrole	94-59-7	8270	10	2.2
Selenium	7782-49-2	6020/6010	10	3.0
Silver	7440-22-4	6020/6010	2	0.3
Styrene	100-42-5	8260	1	0.3
Sulfotep	3689-24-5	8270	10	2.4
sym-Trinitrobenzene (1,3.5-trinitrobenzene)	99-35-4	8270	10	3.0
Tetrachloroethene	127-18-4	8260	1	0.3
Tetrahydrofuran	109-99-9	8260	25	2
Thallium	7440-28-0	6020/6010	1	0.2
Toluene	108-88-3	8260	1	0.3

Analyte	CAS Number	METHOD	PQL (ug/l)	MDL (ug/l)
trans-1,2-Dichloroethene	156-60-5	8260	1	0.3
trans-1,3-Dichloropropene	10061-02-6	8260	1	0.4
trans-1,4-Dichloro-2-butene	110-57-6	8260	10	1.5
Trichloroethene	79-01-6	8260	1	0.3
Trichlorofluoromethane	75-69-4	8260	1	0.4
Vanadium	7440-62-2	6020/6010	10	2.5
Vinyl acetate	108-05-4	8260	10	3.29
Vinyl chloride	75-01-4	8260	1	0.2
Xylenes, Total	1330-20-7	8260	3	0.4
Zinc	7440-66-6	6020/6010	30	7.3

Notes:
ug/l = micrograms per liter
PQL = Practical Quantitation Limit
MDL = Method Detection Limit
CAS = Chemical Abstracts Service Registry Number

Purple – GEL
Yellow – ELLE
Blue – Eurofins Test America- Canton
Pace – West Columbia – moved Isofrole and pronamide from ELLE to Paces WC

VOCs – ELLE and ETA
SVOCs – ELLE, TA, GEL, PACE WC….Final 7-25-23 JCF

Login Sample Receipt Checklist

Client: TRC, Engineers, Inc.

Job Number: 410-136864-2

Login Number: 136864

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 1

Creator: Hess, Anna

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable (</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	True	

Sample Preservation Checks (performed by the laboratory)

Question	Answer	Comment
Did the sample containers checked meet expected preservation conditions?	False	Refer to Job Narrative for details.

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Janet Frazier
TRC, Engineers, Inc.
2200 South Main Street
Suite A
Blacksburg VA 24060

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JOB DESCRIPTION

RFAAP, Radford HWMU16

JOB NUMBER

410-136514-2

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster PA 17601

See page two for job notes and contact information.

myEOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization

Barb Weyandt

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8/15/2023 2:42 PM

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Designee for
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Eurofins Lancaster Laboratories Environment Testing, LLC

Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.
· QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
· Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
· Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job Narrative
410-136514-2

Receipt
The samples were received on 7/28/2023 9:25 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.9°C and 1.8°C

Receipt Exceptions
The container count for the following sample did not match what was listed on the Chain-of-Custody (COC): Trip Blank 2 (410-136514-7). The laboratory received 6 total containers, while the COC lists 2 total containers.

The container count for the following sample did not match what was listed on the Chain-of-Custody (COC): Trip Blank 1 (410-136514-6). The laboratory received 3 total containers, while the COC lists 2 total containers.

GC/MS VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Detection Summary

Client: TRC, Engineers, Inc.
Job ID: 410-136514-2
Project/Site: RFAAP, Radford HWMU16

Client Sample ID: 16-2 — Lab Sample ID: 410-136514-1

No Detections.

Client Sample ID: 16-3 — Lab Sample ID: 410-136514-2

No Detections.

Client Sample ID: 16-5 — Lab Sample ID: 410-136514-3

No Detections.

Client Sample ID: 16WC2B — Lab Sample ID: 410-136514-4

No Detections.

Client Sample ID: 16SPRING — Lab Sample ID: 410-136514-5

No Detections.

Client Sample ID: Trip Blank 1 — Lab Sample ID: 410-136514-6

No Detections.

Client Sample ID: Trip Blank 2 — Lab Sample ID: 410-136514-7

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: 16-2
Lab Sample ID: 410-136514-1

Date Collected: 07/26/23 09:30
Matrix: Water
Date Received: 07/28/23 09:25

Method: SW846 EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethyl ether	ND		10		ug/L			08/03/23 18:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*80 - 120*		*08/03/23 18:37*	*1*
Dibromofluoromethane (Surr)	*110*		*80 - 120*		*08/03/23 18:37*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*08/03/23 18:37*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*08/03/23 18:37*	*1*

Client Sample ID: 16-3
Lab Sample ID: 410-136514-2

Date Collected: 07/26/23 11:15
Matrix: Water
Date Received: 07/28/23 09:25

Method: SW846 EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethyl ether	ND		10		ug/L			08/03/23 18:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*80 - 120*		*08/03/23 18:58*	*1*
Dibromofluoromethane (Surr)	*108*		*80 - 120*		*08/03/23 18:58*	*1*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*08/03/23 18:58*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*08/03/23 18:58*	*1*

Client Sample ID: 16-5
Lab Sample ID: 410-136514-3

Date Collected: 07/26/23 07:45
Matrix: Water
Date Received: 07/28/23 09:25

Method: SW846 EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethyl ether	ND		10		ug/L			08/03/23 19:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*80 - 120*		*08/03/23 19:19*	*1*
Dibromofluoromethane (Surr)	*109*		*80 - 120*		*08/03/23 19:19*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*08/03/23 19:19*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*08/03/23 19:19*	*1*

Client Sample ID: 16WC2B
Lab Sample ID: 410-136514-4

Date Collected: 07/26/23 08:40
Matrix: Water
Date Received: 07/28/23 09:25

Method: SW846 EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethyl ether	ND		10		ug/L			08/03/23 19:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*80 - 120*		*08/03/23 19:40*	*1*
Dibromofluoromethane (Surr)	*110*		*80 - 120*		*08/03/23 19:40*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*08/03/23 19:40*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*08/03/23 19:40*	*1*

Client Sample ID: 16SPRING
Lab Sample ID: 410-136514-5

Date Collected: 07/26/23 08:00
Matrix: Water
Date Received: 07/28/23 09:25

Method: SW846 EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethyl ether	ND		10		ug/L			08/03/23 20:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*80 - 120*		*08/03/23 20:01*	*1*
Dibromofluoromethane (Surr)	*110*		*80 - 120*		*08/03/23 20:01*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*08/03/23 20:01*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*08/03/23 20:01*	*1*

Client Sample ID: Trip Blank 1
Lab Sample ID: 410-136514-6

Date Collected: 07/26/23 00:00
Matrix: Water
Date Received: 07/28/23 09:25

Method: SW846 EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethyl ether	ND		10		ug/L			08/03/23 14:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*80 - 120*		*08/03/23 14:45*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 120*		*08/03/23 14:45*	*1*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*08/03/23 14:45*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*08/03/23 14:45*	*1*

Client Sample ID: Trip Blank 2
Lab Sample ID: 410-136514-7

Date Collected: 07/26/23 00:00
Matrix: Water
Date Received: 07/28/23 09:25

Method: SW846 EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethyl ether	ND		10		ug/L			08/03/23 15:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*80 - 120*		*08/03/23 15:06*	*1*
Dibromofluoromethane (Surr)	*108*		*80 - 120*		*08/03/23 15:06*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*08/03/23 15:06*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*08/03/23 15:06*	*1*

Default Detection Limits

Client: TRC, Engineers, Inc.
Job ID: 410-136514-2
Project/Site: RFAAP, Radford HWMU16

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	RL	MDL	Units
Dimethyl ether	10	1.1	ug/L

Surrogate Summary

Client: TRC, Engineers, Inc.
Job ID: 410-136514-2
Project/Site: RFAAP, Radford HWMU16

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Matrix: Water
Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	DBFM	BFB	TOL
Lab Sample ID	Client Sample ID	(80-120)	(80-120)	(80-120)	(80-120)
410-136514-1	16-2	110	110	94	95
410-136514-2	16-3	109	108	95	95
410-136514-3	16-5	109	109	94	96
410-136514-4	16WC2B	110	110	94	96
410-136514-5	16SPRING	109	110	94	95
410-136514-6	Trip Blank 1	107	107	95	96
410-136514-7	Trip Blank 2	108	108	96	96
LCS 410-404020/7	Lab Control Sample	107	105	96	95
LCSD 410-404020/8	Lab Control Sample Dup	106	104	96	95
MB 410-404020/11	Method Blank	109	106	95	94

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
DBFM = Dibromofluoromethane (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 410-404020/11
Matrix: Water
Analysis Batch: 404020

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethyl ether	ND		10		ug/L			08/03/23 14:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*80 - 120*		*08/03/23 14:25*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*		*08/03/23 14:25*	*1*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*08/03/23 14:25*	*1*
Toluene-d8 (Surr)	*94*		*80 - 120*		*08/03/23 14:25*	*1*

Lab Sample ID: LCS 410-404020/7
Matrix: Water
Analysis Batch: 404020

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Dimethyl ether			5.00	4.66	J	ug/L		93	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*107*		*80 - 120*
Dibromofluoromethane (Surr)	*105*		*80 - 120*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*
Toluene-d8 (Surr)	*95*		*80 - 120*

Lab Sample ID: LCSD 410-404020/8
Matrix: Water
Analysis Batch: 404020

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dimethyl ether			5.00	4.45	J	ug/L		89	70 - 130	4	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*106*		*80 - 120*
Dibromofluoromethane (Surr)	*104*		*80 - 120*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*
Toluene-d8 (Surr)	*95*		*80 - 120*

GC/MS VOA

Analysis Batch: 404020

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136514-1	16-2	Total/NA	Water	EPA 8260C	
410-136514-2	16-3	Total/NA	Water	EPA 8260C	
410-136514-3	16-5	Total/NA	Water	EPA 8260C	
410-136514-4	16WC2B	Total/NA	Water	EPA 8260C	
410-136514-5	16SPRING	Total/NA	Water	EPA 8260C	
410-136514-6	Trip Blank 1	Total/NA	Water	EPA 8260C	
410-136514-7	Trip Blank 2	Total/NA	Water	EPA 8260C	
MB 410-404020/11	Method Blank	Total/NA	Water	EPA 8260C	
LCS 410-404020/7	Lab Control Sample	Total/NA	Water	EPA 8260C	
LCSD 410-404020/8	Lab Control Sample Dup	Total/NA	Water	EPA 8260C	

Client Sample ID: 16-2
Lab Sample ID: 410-136514-1
Date Collected: 07/26/23 09:30
Matrix: Water
Date Received: 07/28/23 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 8260C		1	404020	DVW2	ELLE	08/03/23 18:37

Client Sample ID: 16-3
Lab Sample ID: 410-136514-2
Date Collected: 07/26/23 11:15
Matrix: Water
Date Received: 07/28/23 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 8260C		1	404020	DVW2	ELLE	08/03/23 18:58

Client Sample ID: 16-5
Lab Sample ID: 410-136514-3
Date Collected: 07/26/23 07:45
Matrix: Water
Date Received: 07/28/23 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 8260C		1	404020	DVW2	ELLE	08/03/23 19:19

Client Sample ID: 16WC2B
Lab Sample ID: 410-136514-4
Date Collected: 07/26/23 08:40
Matrix: Water
Date Received: 07/28/23 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 8260C		1	404020	DVW2	ELLE	08/03/23 19:40

Client Sample ID: 16SPRING
Lab Sample ID: 410-136514-5
Date Collected: 07/26/23 08:00
Matrix: Water
Date Received: 07/28/23 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 8260C		1	404020	DVW2	ELLE	08/03/23 20:01

Client Sample ID: Trip Blank 1
Lab Sample ID: 410-136514-6
Date Collected: 07/26/23 00:00
Matrix: Water
Date Received: 07/28/23 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 8260C		1	404020	DVW2	ELLE	08/03/23 14:45

Client Sample ID: Trip Blank 2
Lab Sample ID: 410-136514-7
Date Collected: 07/26/23 00:00
Matrix: Water
Date Received: 07/28/23 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 8260C		1	404020	DVW2	ELLE	08/03/23 15:06

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: TRC, Engineers, Inc. Job ID: 410-136514-2
Project/Site: RFAAP, Radford HWMU16

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Virginia	NELAP	460182	06-14-25

Method Summary

Client: TRC, Engineers, Inc. Job ID: 410-136514-2
Project/Site: RFAAP, Radford HWMU16

Method	Method Description	Protocol	Laboratory
EPA 8260C	Volatile Organic Compounds (GC/MS)	SW846	ELLE
5030C	Purge and Trap	SW846	ELLE

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: TRC, Engineers, Inc.
Job ID: 410-136514-2
Project/Site: RFAAP, Radford HWMU16

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-136514-1	16-2	Water	07/26/23 09:30	07/28/23 09:25
410-136514-2	16-3	Water	07/26/23 11:15	07/28/23 09:25
410-136514-3	16-5	Water	07/26/23 07:45	07/28/23 09:25
410-136514-4	16WC2B	Water	07/26/23 08:40	07/28/23 09:25
410-136514-5	16SPRING	Water	07/26/23 08:00	07/28/23 09:25
410-136514-6	Trip Blank 1	Water	07/26/23 00:00	07/28/23 09:25
410-136514-7	Trip Blank 2	Water	07/26/23 00:00	07/28/23 09:25

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136514-2

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 355532

Lab Sample ID: IC 410-355532/12 Client Sample ID:

Date Analyzed: 03/21/23 04:01 Lab File ID: IM21X11.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methyl acetate	3.87	Incomplete Integration	K4WN	03/21/23 15:38
1,4-Dioxane	8.53	Incomplete Integration	K4WN	03/21/23 15:38

Lab Sample ID: ICIS 410-355532/13 Client Sample ID:

Date Analyzed: 03/21/23 04:22 Lab File ID: IM21X12.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.90	Incomplete Integration	K4WN	03/21/23 15:43
Methyl acetate	3.88	Incomplete Integration	K4WN	03/21/23 15:43

Lab Sample ID: IC 410-355532/14 Client Sample ID:

Date Analyzed: 03/21/23 04:42 Lab File ID: IM21X13.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.49	Incomplete Integration	K4WN	03/21/23 16:13
Methyl acetate	3.89	Incomplete Integration	K4WN	03/21/23 15:46
t-Butyl alcohol-d10 (IS)	4.14	Incomplete Integration	K4WN	03/21/23 16:12
t-Butyl alcohol	4.27	Incomplete Integration	K4WN	03/21/23 15:47
Acrylonitrile	4.43	Incomplete Integration	K4WN	03/21/23 15:47
1,2-Dichloroethane	7.24	Incomplete Integration	K4WN	03/21/23 15:48
1,4-Dioxane	8.53	Incomplete Integration	K4WN	03/21/23 15:48

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136514-2

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 355532

Lab Sample ID: IC 410-355532/15 Client Sample ID:

Date Analyzed: 03/21/23 05:02 Lab File ID: IM21X14.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.48	Incomplete Integration	K4WN	03/21/23 15:49
t-Butyl alcohol-d10 (IS)	4.14	Incomplete Integration	K4WN	03/21/23 16:08

Lab Sample ID: IC 410-355532/16 Client Sample ID:

Date Analyzed: 03/21/23 05:22 Lab File ID: IM21X15.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.50	Incomplete Integration	K4WN	03/21/23 15:52
Methyl acetate	3.89	Incomplete Integration	K4WN	03/21/23 15:52
trans-1,4-Dichloro-2-butene	12.19	Incomplete Integration	K4WN	03/21/23 16:27

Lab Sample ID: IC 410-355532/17 Client Sample ID:

Date Analyzed: 03/21/23 05:42 Lab File ID: IM21X16.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methyl acetate	3.89	Incomplete Integration	K4WN	03/21/23 15:54
Acrylonitrile	4.46	Incomplete Integration	K4WN	03/21/23 15:55
t-Amyl methyl ether	7.37	Incomplete Integration	K4WN	03/21/23 15:55
n-Butanol	7.99	Incomplete Integration	K4WN	03/21/23 16:07
1,4-Dioxane	8.52	Incomplete Integration	K4WN	03/21/23 15:56

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136514-2

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 355532

Lab Sample ID: IC 410-355532/18 Client Sample ID:

Date Analyzed: 03/21/23 06:02 Lab File ID: IM21X17.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.50	Incomplete Integration	K4WN	03/21/23 16:02
Methyl acetate	3.94	Incomplete Integration	K4WN	03/21/23 15:57
t-Butyl alcohol	4.25	Incomplete Integration	K4WN	03/21/23 15:57
Propionitrile	6.08	Incomplete Integration	K4WN	03/21/23 15:57
n-Butanol	8.17	Incomplete Integration	K4WN	03/21/23 15:57
Methyl methacrylate	8.48	Incomplete Integration	K4WN	03/21/23 15:58
Dibromomethane	8.49	Incomplete Integration	K4WN	03/21/23 15:58
1,4-Dioxane	8.56	Incomplete Integration	K4WN	03/21/23 15:58

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136514-2

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 388102

Lab Sample ID: IC 410-388102/3 Client Sample ID:

Date Analyzed: 06/19/23 14:49 Lab File ID: IU19X02.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dimethyl ether	1.92	Incomplete Integration	DVW2	06/21/23 08:18
Acetonitrile	3.82	Incomplete Integration	DVW2	06/21/23 08:19
t-Butyl alcohol-d10 (IS)	3.94	Incomplete Integration	DVW2	06/21/23 08:19
Vinyl acetate	5.06	Incomplete Integration	DVW2	06/21/23 08:19
Ethyl acetate	5.95	Incomplete Integration	DVW2	06/21/23 08:20
cis-1,4-Dichloro-2-butene	11.91	Incomplete Integration	DVW2	06/21/23 08:32

Lab Sample ID: IC 410-388102/4 Client Sample ID:

Date Analyzed: 06/19/23 15:10 Lab File ID: IU19X03.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetonitrile	3.77	Incomplete Integration	DVW2	06/21/23 16:08
t-Butyl alcohol-d10 (IS)	3.96	Incomplete Integration	DVW2	06/21/23 16:08

Lab Sample ID: IC 410-388102/5 Client Sample ID:

Date Analyzed: 06/19/23 15:31 Lab File ID: IU19X04.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetonitrile	3.78	Incomplete Integration	DVW2	06/21/23 14:56
cis-1,4-Dichloro-2-butene	11.91	Incomplete Integration	DVW2	06/21/23 08:32

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136514-2

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 388102

Lab Sample ID: IC 410-388102/6 Client Sample ID:

Date Analyzed: 06/19/23 15:52 Lab File ID: IU19X05.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetonitrile	3.83	Incomplete Integration	DVW2	06/21/23 14:55
Vinyl acetate	5.01	Incomplete Integration	DVW2	06/21/23 08:25
Ethyl acetate	5.90	Incomplete Integration	DVW2	06/21/23 08:25
cis-1,4-Dichloro-2-butene	11.91	Incomplete Integration	DVW2	06/21/23 08:32

Lab Sample ID: IC 410-388102/7 Client Sample ID:

Date Analyzed: 06/19/23 16:13 Lab File ID: IU19X06.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetonitrile	3.81	Incomplete Integration	DVW2	06/21/23 14:55
t-Butyl alcohol-d10 (IS)	4.05	Incomplete Integration	DVW2	06/21/23 08:26

Lab Sample ID: IC 410-388102/8 Client Sample ID:

Date Analyzed: 06/19/23 16:34 Lab File ID: IU19X07.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetonitrile	3.79	Incomplete Integration	DVW2	06/21/23 14:54
t-Butyl alcohol-d10 (IS)	4.03	Incomplete Integration	DVW2	06/21/23 08:14

Lab Sample ID: IC 410-388102/9 Client Sample ID:

Date Analyzed: 06/19/23 16:55 Lab File ID: IU19X08.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetonitrile	3.75	Incomplete Integration	DVW2	06/21/23 14:54
t-Butyl alcohol-d10 (IS)	4.00	Incomplete Integration	DVW2	06/21/23 08:27
cis-1,4-Dichloro-2-butene	11.90	Incomplete Integration	DVW2	06/21/23 08:32

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136514-2

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 388102

Lab Sample ID: ICV 410-388102/11 Client Sample ID:

Date Analyzed: 06/19/23 17:37 Lab File ID: IU19X10.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chlorodifluoromethane	1.87	Incomplete Integration	DVW2	06/21/23 08:27
Acetonitrile	3.75	Incomplete Integration	DVW2	06/21/23 14:58
cis-1,4-Dichloro-2-butene	11.90	Incomplete Integration	DVW2	06/21/23 08:32

Lab Sample ID: IC 410-388102/13 Client Sample ID:

Date Analyzed: 06/19/23 18:19 Lab File ID: IU19X12.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.85	Incomplete Integration	DVW2	06/21/23 07:45
1,3-Butadiene	2.14	Incomplete Integration	DVW2	06/21/23 07:45
Dichlorofluoromethane	2.75	Incomplete Integration	DVW2	06/21/23 07:46
Acetone	3.38	Incomplete Integration	DVW2	06/21/23 07:47
Methyl acetate	3.77	Incomplete Integration	DVW2	06/21/23 07:47
Allyl chloride	3.78	Incomplete Integration	DVW2	06/21/23 07:48
t-Butyl alcohol-d10 (IS)	3.96	Incomplete Integration	DVW2	06/21/23 07:48
t-Butyl alcohol	4.08	Incomplete Integration	DVW2	06/21/23 07:48
n-Butanol	8.01	Incomplete Integration	DVW2	06/21/23 07:48
2-Nitropropane	8.89	Incomplete Integration	DVW2	06/21/23 07:49
1,4-Dioxane		Invalid Compound ID	DVW2	06/21/23 07:49
1-Chlorohexane	11.01	Peak assignment corrected	DVW2	06/22/23 07:47
Ethylbenzene	11.10	Incomplete Integration	DVW2	06/21/23 15:33
N-Propylbenzene	12.19	Incomplete Integration	DVW2	06/21/23 07:50
2-Chlorotoluene	12.27	Incomplete Integration	DVW2	06/21/23 15:33

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136514-2

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 388102

Lab Sample ID: IC 410-388102/14 Client Sample ID:

Date Analyzed: 06/19/23 18:40 Lab File ID: IU19X13.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.86	Incomplete Integration	DVW2	06/21/23 07:51
1,3-Butadiene	2.15	Incomplete Integration	DVW2	06/21/23 07:52
Dichlorofluoromethane	2.76	Incomplete Integration	DVW2	06/21/23 07:52
Acetone	3.37	Incomplete Integration	DVW2	06/21/23 07:52
Methyl acetate	3.77	Incomplete Integration	DVW2	06/21/23 07:52
t-Butyl alcohol-d10 (IS)	3.98	Incomplete Integration	DVW2	06/21/23 07:53
Isobutyl alcohol	6.95	Incomplete Integration	DVW2	06/21/23 07:53
1-Chlorohexane	11.01	Peak assignment corrected	DVW2	06/22/23 07:47
Ethylbenzene	11.10	Incomplete Integration	DVW2	06/21/23 15:33
2-Chlorotoluene	12.26	Incomplete Integration	DVW2	06/21/23 15:34

Lab Sample ID: IC 410-388102/15 Client Sample ID:

Date Analyzed: 06/19/23 19:01 Lab File ID: IU19X14.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.85	Incomplete Integration	DVW2	06/21/23 07:54
1,3-Butadiene	2.15	Incomplete Integration	DVW2	06/21/23 07:54
Acetone	3.37	Incomplete Integration	DVW2	06/21/23 07:55
Methyl acetate	3.77	Incomplete Integration	DVW2	06/21/23 07:55
t-Butyl alcohol-d10 (IS)	3.98	Incomplete Integration	DVW2	06/21/23 07:55
1-Chlorohexane	11.00	Peak assignment corrected	DVW2	06/22/23 07:47
Ethylbenzene	11.10	Incomplete Integration	DVW2	06/21/23 15:34
2-Chlorotoluene	12.26	Incomplete Integration	DVW2	06/21/23 15:34

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136514-2

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 388102

Lab Sample ID: IC 410-388102/16 Client Sample ID:

Date Analyzed: 06/19/23 19:22 Lab File ID: IU19X15.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methyl acetate	3.76	Incomplete Integration	DVW2	06/21/23 08:04
t-Butyl alcohol-d10 (IS)	3.97	Incomplete Integration	DVW2	06/21/23 08:04
1,4-Dioxane	8.37	Incomplete Integration	DVW2	06/21/23 08:04
1-Chlorohexane	11.00	Peak assignment corrected	DVW2	06/22/23 07:47
Ethylbenzene	11.10	Incomplete Integration	DVW2	06/21/23 15:35
2-Chlorotoluene	12.26	Incomplete Integration	DVW2	06/21/23 15:35

Lab Sample ID: IC 410-388102/17 Client Sample ID:

Date Analyzed: 06/19/23 19:42 Lab File ID: IU19X16.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methyl acetate	3.76	Incomplete Integration	DVW2	06/21/23 08:06
t-Butyl alcohol-d10 (IS)	3.98	Incomplete Integration	DVW2	06/21/23 08:06
1,4-Dioxane	8.36	Incomplete Integration	DVW2	06/21/23 08:06
1-Chlorohexane	11.00	Peak assignment corrected	DVW2	06/22/23 07:48
Ethylbenzene	11.10	Incomplete Integration	DVW2	06/21/23 15:38
2-Chlorotoluene	12.26	Incomplete Integration	DVW2	06/21/23 15:38

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136514-2

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 388102

Lab Sample ID: ICIS 410-388102/18 Client Sample ID:

Date Analyzed: 06/19/23 20:03 Lab File ID: IU19X17.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloromethane	2.05	Incomplete Integration	DVW2	06/21/23 07:36
1,3-Butadiene	2.16	Incomplete Integration	DVW2	06/21/23 08:07
1,1-Dichloroethene	3.34	Incomplete Integration	DVW2	06/21/23 07:36
Acetone	3.36	Incomplete Integration	DVW2	06/21/23 07:36
Freon 113	3.39	Incomplete Integration	DVW2	06/21/23 07:36
Methyl iodide	3.53	Incomplete Integration	DVW2	06/21/23 07:37
Ethyl bromide	3.55	Incomplete Integration	DVW2	06/21/23 07:37
Carbon disulfide	3.63	Incomplete Integration	DVW2	06/21/23 07:37
Methyl acetate	3.76	Incomplete Integration	DVW2	06/21/23 07:37
Allyl chloride	3.78	Incomplete Integration	DVW2	06/21/23 07:37
Methylene Chloride	3.96	Incomplete Integration	DVW2	06/21/23 07:37
t-Butyl alcohol-d10 (IS)	3.98	Incomplete Integration	DVW2	06/21/23 07:35
t-Butyl alcohol	4.09	Incomplete Integration	DVW2	06/21/23 07:37
Acrylonitrile	4.28	Incomplete Integration	DVW2	06/21/23 07:37
Methyl tertiary butyl ether	4.34	Incomplete Integration	DVW2	06/21/23 07:38
trans-1,2-Dichloroethene	4.36	Incomplete Integration	DVW2	06/21/23 07:38
n-Hexane	4.78	Incomplete Integration	DVW2	06/21/23 07:38
1,1-Dichloroethane	5.01	Incomplete Integration	DVW2	06/21/23 07:38
di-Isopropyl ether	5.07	Incomplete Integration	DVW2	06/21/23 07:38
2-Chloro-1,3-butadiene	5.12	Incomplete Integration	DVW2	06/21/23 07:38
Ethyl t-butyl ether	5.62	Incomplete Integration	DVW2	06/21/23 07:38
2-Butanone	5.81	Incomplete Integration	DVW2	06/21/23 07:38
cis-1,2-Dichloroethene	5.85	Incomplete Integration	DVW2	06/21/23 07:38
2,2-Dichloropropane	5.87	Incomplete Integration	DVW2	06/21/23 07:38
Propionitrile	5.89	Incomplete Integration	DVW2	06/21/23 07:38
Methacrylonitrile	6.11	Incomplete Integration	DVW2	06/21/23 07:38
Bromochloromethane	6.19	Incomplete Integration	DVW2	06/21/23 07:38
Tetrahydrofuran	6.20	Incomplete Integration	DVW2	06/21/23 07:38
Chloroform	6.34	Incomplete Integration	DVW2	06/21/23 07:38
Dibromofluoromethane (Surr)	6.56	Peak assignment corrected	DVW2	06/21/23 07:35

EPA 8260C

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136514-2

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 388102

Lab Sample ID: ICIS 410-388102/18 Client Sample ID:

Date Analyzed: 06/19/23 20:03 Lab File ID: IU19X17.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,1,1-Trichloroethane	6.57	Incomplete Integration	DVW2	06/21/23 07:38
Cyclohexane	6.67	Incomplete Integration	DVW2	06/21/23 07:38
1,1-Dichloropropene	6.78	Incomplete Integration	DVW2	06/21/23 07:39
Carbon tetrachloride	6.78	Incomplete Integration	DVW2	06/21/23 07:39
Isobutyl alcohol	6.94	Incomplete Integration	DVW2	06/21/23 07:39
1,2-Dichloroethane-d4 (Surr)	7.01	Peak assignment corrected	DVW2	06/21/23 07:35
Benzene	7.04	Incomplete Integration	DVW2	06/21/23 07:39
1,2-Dichloroethane	7.12	Incomplete Integration	DVW2	06/21/23 07:39
t-Amyl methyl ether	7.24	Incomplete Integration	DVW2	06/21/23 07:39
Fluorobenzene (IS)	7.45	Peak assignment corrected	DVW2	06/21/23 07:35
n-Heptane	7.47	Incomplete Integration	DVW2	06/21/23 07:39
n-Butanol	7.84	Incomplete Integration	DVW2	06/21/23 07:39
Trichloroethene	7.93	Incomplete Integration	DVW2	06/21/23 07:39
Methylcyclohexane	8.24	Incomplete Integration	DVW2	06/21/23 07:39
1,2-Dichloropropane	8.27	Incomplete Integration	DVW2	06/21/23 07:39
Methyl methacrylate	8.35	Incomplete Integration	DVW2	06/21/23 07:39
1,4-Dioxane	8.37	Incomplete Integration	DVW2	06/21/23 07:40
Dibromomethane	8.38	Incomplete Integration	DVW2	06/21/23 07:40
Bromodichloromethane	8.62	Incomplete Integration	DVW2	06/21/23 07:40
1-Bromo-2-chloroethane	9.01	Incomplete Integration	DVW2	06/21/23 07:40
Toluene-d8 (Surr)	9.50	Incomplete Integration	DVW2	06/21/23 07:35
1-Chlorohexane	11.00	Peak assignment corrected	DVW2	06/22/23 07:48
Ethylbenzene	11.10	Incomplete Integration	DVW2	06/21/23 15:39
4-Bromofluorobenzene (Surr)	12.00	Incomplete Integration	DVW2	06/21/23 07:35
2-Chlorotoluene	12.26	Incomplete Integration	DVW2	06/21/23 15:39
4-Chlorotoluene	12.35	Incomplete Integration	DVW2	06/21/23 07:40
1,2,4-Trimethylbenzene	12.61	Incomplete Integration	DVW2	06/21/23 07:41
Benzyl chloride	12.98	Incomplete Integration	DVW2	06/21/23 07:41
Naphthalene	14.43	Incomplete Integration	DVW2	06/21/23 07:41

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136514-2

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 388102

Lab Sample ID: IC 410-388102/19 Client Sample ID:

Date Analyzed: 06/19/23 20:25 Lab File ID: IU19X18.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3-Butadiene	2.15	Incomplete Integration	DVW2	06/21/23 08:08
Methyl acetate	3.75	Incomplete Integration	DVW2	06/21/23 08:09
t-Butyl alcohol-d10 (IS)	3.98	Incomplete Integration	DVW2	06/21/23 08:09
1,4-Dioxane	8.37	Incomplete Integration	DVW2	06/21/23 08:09
1-Chlorohexane	11.00	Peak assignment corrected	DVW2	06/22/23 07:48
Ethylbenzene	11.10	Incomplete Integration	DVW2	06/21/23 15:39
2-Chlorotoluene	12.26	Incomplete Integration	DVW2	06/21/23 15:39
4-Chlorotoluene	12.35	Incomplete Integration	DVW2	06/21/23 08:09

Lab Sample ID: ICV 410-388102/21 Client Sample ID:

Date Analyzed: 06/19/23 21:07 Lab File ID: IU19X20.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3-Butadiene	2.15	Incomplete Integration	DVW2	06/21/23 08:10
Methyl acetate	3.76	Incomplete Integration	DVW2	06/21/23 08:11
t-Butyl alcohol-d10 (IS)	3.96	Incomplete Integration	DVW2	06/21/23 08:11
1,4-Dioxane	8.37	Incomplete Integration	DVW2	06/21/23 08:11
1-Chlorohexane	11.00	Peak assignment corrected	DVW2	06/22/23 07:49
Ethylbenzene	11.10	Incomplete Integration	DVW2	06/21/23 15:40
2-Chlorotoluene	12.26	Incomplete Integration	DVW2	06/21/23 15:40

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136514-2

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 404020

Lab Sample ID: CCVIS 410-404020/3 Client Sample ID:

Date Analyzed: 08/03/23 11:36 Lab File ID: IG03X02.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methyl acetate	3.78	Incomplete Integration	DVW2	08/03/23 12:03
t-Butyl alcohol-d10 (IS)	3.98	Incomplete Integration	DVW2	08/03/23 12:03
1,4-Dioxane	8.37	Incomplete Integration	DVW2	08/03/23 12:04

Lab Sample ID: MB 410-404020/11 Client Sample ID:

Date Analyzed: 08/03/23 14:25 Lab File ID: IG03X10.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dimethyl ether		Invalid Compound ID	DVW2	08/03/23 14:48

Lab Sample ID: 410-136514-4 Client Sample ID: 16WC2B

Date Analyzed: 08/03/23 19:40 Lab File ID: IG03X25.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dimethyl ether		Invalid Compound ID	kaewrungr ueangp	08/04/23 11:08

Lab Sample ID: 410-136514-5 Client Sample ID: 16SPRING

Date Analyzed: 08/03/23 20:01 Lab File ID: IG03X26.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dimethyl ether		Invalid Compound ID	kaewrungr ueangp	08/04/23 11:08

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
MSV_CCV_CYC_00005	06/23/23	01/23/23	50/50 MeOH/Water, Lot EB679	200 mL	MSV_VCYC_STK_00009	9.615 mL	Cyclohexanone	6249.75 ug/mL
.MSV_VCYC_STK_00009	07/23/23	01/23/23	50/50 MeOH/Water, Lot EB679	10 mL	MSV_CYC_00008	1.3 g	Cyclohexanone	130000 ug/mL
..MSV_CYC_00008	06/30/25	Chem Service, Lot 13529800			(Purchased Reagent)		Cyclohexanone	1 g/g
MSV_CCV_V5ACE_00025	07/07/23	06/08/23	Methanol, Lot EG095	10 mL	MSV_AcetatesV_00029	1 mL	Acetonitrile	5000 ug/mL
							Ethyl acetate	1000 ug/mL
							Vinyl acetate	1000 ug/mL
.MSV_AcetatesV_00029	10/31/23	Restek, Lot A0184542			(Purchased Reagent)		Acetonitrile	50000 ug/mL
							Ethyl acetate	10000 ug/mL
							Vinyl acetate	10000 ug/mL
MSV_DME_00046	06/24/23	Restek, Lot A0190883			(Purchased Reagent)		Dimethyl ether	1000 ug/mL
MSV_DME_00048	08/09/23	Restek, Lot A0190883			(Purchased Reagent)		Dimethyl ether	1000 ug/mL
MSV_LL_#1_826_00068	03/25/23	02/27/23	Methanol, Lot EB679	1 mL	MSV_CCV_VOC#1_00112	50 uL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromoform	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chlorobromomethane	50 ug/mL
							Chlorodibromomethane	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dibromomethane	50 ug/mL
							Dichlorobromomethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Ethylene Dibromide	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	100 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,2,3-Trimethylbenzene	50 ug/mL
							1,3,5-Trichlorobenzene	50 ug/mL
							1,4-Dioxane	2500 ug/mL
							1-Chlorohexane	50 ug/mL
							2-Chloro-1,3-butadiene	50 ug/mL
							2-Methyl-2-propanol	1000 ug/mL
							2-Nitropropane	250 ug/mL
							3-Chloro-1-propene	50 ug/mL
							Acrylonitrile	125 ug/mL
							Benzyl chloride	50 ug/mL
							Carbon disulfide	50 ug/mL
							Cyclohexane	50 ug/mL
							Ethyl methacrylate	50 ug/mL
							Hexane	50 ug/mL
							Iodomethane	50 ug/mL
							Isobutyl alcohol	2500 ug/mL
							Isopropyl ether	50 ug/mL
							Methacrylonitrile	500 ug/mL
							Methyl acetate	50 ug/mL
							Methyl methacrylate	50 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylcyclohexane	50 ug/mL
							n-Butanol	4375 ug/mL
							n-Heptane	50 ug/mL
							Propionitrile	1000 ug/mL
							Tert-amyl methyl ether	50 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Tert-butyl ethyl ether	50 ug/mL
							Tetrahydrofuran	250 ug/mL
							trans-1,4-Dichloro-2-butene	500 ug/mL
					MSV_CCV_VOC#3_00113	200 uL	Acrolein	2499.84 ug/mL
							2-Butanone (MEK)	500 ug/mL
							2-Hexanone	500 ug/mL
							4-Methyl-2-pentanone (MIBK)	500 ug/mL
							Acetone	500 ug/mL
					MSV_V_VOA2_00182	150 uL	1,4-Dioxane	2500 ug/mL
							2-Methyl-2-propanol	1000 ug/mL
							Isobutyl alcohol	2500 ug/mL
							Methacrylonitrile	500 ug/mL
							n-Butanol	4375 ug/mL
							Propionitrile	1000 ug/mL
							trans-1,4-Dichloro-2-butene	500 ug/mL
.MSV_CCV_VOC#1_00112	03/25/23	02/23/23	Methanol, Lot EB679	5 mL	MSV_MegaMIX#1_00113	1 mL	1,1,1,2-Tetrachloroethane	1000 ug/mL
							1,1,1-Trichloroethane	1000 ug/mL
							1,1,2,2-Tetrachloroethane	1000 ug/mL
							1,1,2-Trichloroethane	1000 ug/mL
							1,1-Dichloroethane	1000 ug/mL
							1,1-Dichloroethene	1000 ug/mL
							1,1-Dichloropropene	1000 ug/mL
							1,2,3-Trichlorobenzene	1000 ug/mL
							1,2,3-Trichloropropane	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2,4-Trimethylbenzene	1000 ug/mL
							1,2-Dibromo-3-Chloropropane	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Dichloroethane	1000 ug/mL
							1,2-Dichloropropane	1000 ug/mL
							1,3,5-Trimethylbenzene	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dichloropropane	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							2,2-Dichloropropane	1000 ug/mL
							2-Chlorotoluene	1000 ug/mL
							4-Chlorotoluene	1000 ug/mL
							4-Isopropyltoluene	1000 ug/mL
							Benzene	1000 ug/mL
							Bromobenzene	1000 ug/mL
							Bromoform	1000 ug/mL
							Carbon tetrachloride	1000 ug/mL
							Chlorobenzene	1000 ug/mL
							Chlorobromomethane	1000 ug/mL
							Chlorodibromomethane	1000 ug/mL
							Chloroform	1000 ug/mL
							cis-1,2-Dichloroethene	1000 ug/mL
							cis-1,3-Dichloropropene	1000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dibromomethane	1000 ug/mL
							Dichlorobromomethane	1000 ug/mL
							Ethylbenzene	1000 ug/mL
							Ethylene Dibromide	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Isopropylbenzene	1000 ug/mL
							m-Xylene & p-Xylene	2000 ug/mL
							Methylene Chloride	1000 ug/mL
							n-Butylbenzene	1000 ug/mL
							N-Propylbenzene	1000 ug/mL
							Naphthalene	1000 ug/mL
							o-Xylene	1000 ug/mL
							sec-Butylbenzene	1000 ug/mL
							Styrene	1000 ug/mL
							tert-Butylbenzene	1000 ug/mL
							Tetrachloroethene	1000 ug/mL
							Toluene	1000 ug/mL
							trans-1,2-Dichloroethene	1000 ug/mL
							trans-1,3-Dichloropropene	1000 ug/mL
							Trichloroethene	1000 ug/mL
					MSV_MegaMix#2_00109	1 mL	1,1,2-Trichloro-1,2,2-trifluoroethane	1000 ug/mL
							1,2,3-Trimethylbenzene	1000 ug/mL
							1,3,5-Trichlorobenzene	1000 ug/mL
							1,4-Dioxane	12500 ug/mL
							1-Chlorohexane	1000 ug/mL
							2-Chloro-1,3-butadiene	1000 ug/mL
							2-Methyl-2-propanol	5000 ug/mL
							2-Nitropropane	5000 ug/mL
							3-Chloro-1-propene	1000 ug/mL
							Acrylonitrile	2500 ug/mL
							Benzyl chloride	1000 ug/mL
							Carbon disulfide	1000 ug/mL
							Cyclohexane	1000 ug/mL
							Ethyl methacrylate	1000 ug/mL
							Hexane	1000 ug/mL
							Iodomethane	1000 ug/mL
							Isobutyl alcohol	12500 ug/mL
							Isopropyl ether	1000 ug/mL
							Methacrylonitrile	2500 ug/mL
							Methyl acetate	1000 ug/mL
							Methyl methacrylate	1000 ug/mL
							Methyl tert-butyl ether	1000 ug/mL
							Methylcyclohexane	1000 ug/mL
							n-Butanol	12500 ug/mL
							n-Heptane	1000 ug/mL
							Propionitrile	5000 ug/mL
							Tert-amyl methyl ether	1000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Tert-butyl ethyl ether	1000 ug/mL
							Tetrahydrofuran	5000 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
..MSV_MegaMIX#1_00113	03/25/23		Restek, Lot A0184527		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	5000 ug/mL
							1,1,1-Trichloroethane	5000 ug/mL
							1,1,2,2-Tetrachloroethane	5000 ug/mL
							1,1,2-Trichloroethane	5000 ug/mL
							1,1-Dichloroethane	5000 ug/mL
							1,1-Dichloroethene	5000 ug/mL
							1,1-Dichloropropene	5000 ug/mL
							1,2,3-Trichlorobenzene	5000 ug/mL
							1,2,3-Trichloropropane	5000 ug/mL
							1,2,4-Trichlorobenzene	5000 ug/mL
							1,2,4-Trimethylbenzene	5000 ug/mL
							1,2-Dibromo-3-Chloropropane	5000 ug/mL
							1,2-Dichlorobenzene	5000 ug/mL
							1,2-Dichloroethane	5000 ug/mL
							1,2-Dichloropropane	5000 ug/mL
							1,3,5-Trimethylbenzene	5000 ug/mL
							1,3-Dichlorobenzene	5000 ug/mL
							1,3-Dichloropropane	5000 ug/mL
							1,4-Dichlorobenzene	5000 ug/mL
							2,2-Dichloropropane	5000 ug/mL
							2-Chlorotoluene	5000 ug/mL
							4-Chlorotoluene	5000 ug/mL
							4-Isopropyltoluene	5000 ug/mL
							Benzene	5000 ug/mL
							Bromobenzene	5000 ug/mL
							Bromoform	5000 ug/mL
							Carbon tetrachloride	5000 ug/mL
							Chlorobenzene	5000 ug/mL
							Chlorobromomethane	5000 ug/mL
							Chlorodibromomethane	5000 ug/mL
							Chloroform	5000 ug/mL
							cis-1,2-Dichloroethene	5000 ug/mL
							cis-1,3-Dichloropropene	5000 ug/mL
							Dibromomethane	5000 ug/mL
							Dichlorobromomethane	5000 ug/mL
							Ethylbenzene	5000 ug/mL
							Ethylene Dibromide	5000 ug/mL
							Hexachlorobutadiene	5000 ug/mL
							Isopropylbenzene	5000 ug/mL
							m-Xylene & p-Xylene	10000 ug/mL
							Methylene Chloride	5000 ug/mL
							n-Butylbenzene	5000 ug/mL
							N-Propylbenzene	5000 ug/mL
							Naphthalene	5000 ug/mL
							o-Xylene	5000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							sec-Butylbenzene	5000 ug/mL
							Styrene	5000 ug/mL
							tert-Butylbenzene	5000 ug/mL
							Tetrachloroethene	5000 ug/mL
							Toluene	5000 ug/mL
							trans-1,2-Dichloroethene	5000 ug/mL
							trans-1,3-Dichloropropene	5000 ug/mL
							Trichloroethene	5000 ug/mL
..MSV_MegaMix#2_00109	03/25/23	Restek, Lot A0186885			(Purchased Reagent)		1,1,2-Trichloro-1,2,2-trifluoroethane	5000 ug/mL
							1,2,3-Trimethylbenzene	5000 ug/mL
							1,3,5-Trichlorobenzene	5000 ug/mL
							1,4-Dioxane	62500 ug/mL
							1-Chlorohexane	5000 ug/mL
							2-Chloro-1,3-butadiene	5000 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							2-Nitropropane	25000 ug/mL
							3-Chloro-1-propene	5000 ug/mL
							Acrylonitrile	12500 ug/mL
							Benzyl chloride	5000 ug/mL
							Carbon disulfide	5000 ug/mL
							Cyclohexane	5000 ug/mL
							Ethyl methacrylate	5000 ug/mL
							Hexane	5000 ug/mL
							Iodomethane	5000 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropyl ether	5000 ug/mL
							Methacrylonitrile	12500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl methacrylate	5000 ug/mL
							Methyl tert-butyl ether	5000 ug/mL
							Methylcyclohexane	5000 ug/mL
							n-Butanol	62500 ug/mL
							n-Heptane	5000 ug/mL
							Propionitrile	25000 ug/mL
							Tert-amyl methyl ether	5000 ug/mL
							Tert-butyl ethyl ether	5000 ug/mL
							Tetrahydrofuran	25000 ug/mL
							trans-1,4-Dichloro-2-butene	12500 ug/mL
.MSV_CCV_VOC#3_00113	03/25/23	02/23/23	Methanol, Lot EB679	5 mL	MSV_CCV_ACR_00009	0.5 mL	Acrolein	12499.2 ug/mL
					MSV_V_Ketones_00101	1 mL	2-Butanone (MEK)	2500 ug/mL
							2-Hexanone	2500 ug/mL
							4-Methyl-2-pentanone (MIBK)	2500 ug/mL
							Acetone	2500 ug/mL
..MSV_CCV_ACR_00009	04/10/23	02/09/23	Methanol, Lot EB679	10 mL	MSV_VACR_STK_00031	9.205 mL	Acrolein	124992 ug/mL
...MSV_VACR_STK_00031	04/10/23	02/09/23	Methanol, Lot EB679	10 mL	MSV_ACROLEIN_00024	1.4648 g	Acrolein	135787 ug/mL
....MSV_ACROLEIN_00024	11/30/23	Chem Service, Lot 13910600			(Purchased Reagent)		Acrolein	0.927 g/g
..MSV_V_Ketones_00101	01/31/25	Restek, Lot A0180742			(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MSV_V_VOA2_00182	03/25/23	02/23/23	Methanol, Lot EB679	5 mL	MSV_V#2B_00310	1 mL	1,4-Dioxane	12500 ug/mL
							2-Methyl-2-propanol	5000 ug/mL
							Isobutyl alcohol	12500 ug/mL
							Methacrylonitrile	2500 ug/mL
							n-Butanol	25000 ug/mL
							Propionitrile	5000 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
..MSV_V#2B_00310	04/30/24		Restek, Lot A0184378		(Purchased Reagent)		1,4-Dioxane	62500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Methacrylonitrile	12500 ug/mL
							n-Butanol	125000 ug/mL
							Propionitrile	25000 ug/mL
							trans-1,4-Dichloro-2-butene	12500 ug/mL
MSV_LL_#1_826_00081	07/11/23	06/18/23	Methanol, Lot EG095	1 mL	MSV_CCV_VOC#1_00130	50 uL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromoform	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chlorobromomethane	50 ug/mL
							Chlorodibromomethane	50 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromomethane	50 ug/mL
							Dichlorobromomethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Ethylene Dibromide	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	100 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,2,3-Trimethylbenzene	50 ug/mL
							1,3,5-Trichlorobenzene	50 ug/mL
							1,4-Dioxane	2500 ug/mL
							1-Chlorohexane	50 ug/mL
							2-Chloro-1,3-butadiene	50 ug/mL
							2-Methyl-2-propanol	1000 ug/mL
							2-Nitropropane	250 ug/mL
							3-Chloro-1-propene	50 ug/mL
							Acrylonitrile	125 ug/mL
							Benzyl chloride	50 ug/mL
							Carbon disulfide	50 ug/mL
							Cyclohexane	50 ug/mL
							Ethyl methacrylate	50 ug/mL
							Hexane	50 ug/mL
							Iodomethane	50 ug/mL
							Isobutyl alcohol	2500 ug/mL
							Isopropyl ether	50 ug/mL
							Methacrylonitrile	500 ug/mL
							Methyl acetate	50 ug/mL
							Methyl methacrylate	50 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylcyclohexane	50 ug/mL
							n-Butanol	4375 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							n-Heptane	50 ug/mL
							Propionitrile	1000 ug/mL
							Tert-amyl methyl ether	50 ug/mL
							Tert-butyl ethyl ether	50 ug/mL
							Tetrahydrofuran	250 ug/mL
							trans-1,4-Dichloro-2-butene	500 ug/mL
					MSV_CCV_VOC#3_00130	200 uL	Acrolein	2500.08 ug/mL
							2-Butanone (MEK)	500 ug/mL
							2-Hexanone	500 ug/mL
							4-Methyl-2-pentanone (MIBK)	500 ug/mL
							Acetone	500 ug/mL
					MSV_V_VOA2_00194	150 uL	1,4-Dioxane	2500 ug/mL
							2-Methyl-2-propanol	1000 ug/mL
							Isobutyl alcohol	2500 ug/mL
							Methacrylonitrile	500 ug/mL
							n-Butanol	4375 ug/mL
							Propionitrile	1000 ug/mL
							trans-1,4-Dichloro-2-butene	500 ug/mL
.MSV_CCV_VOC#1_00130	07/18/23	06/18/23	Methanol, Lot EG095	5 mL	MSV_MegaMIX#1_00130	1 mL	1,1,1,2-Tetrachloroethane	1000 ug/mL
							1,1,1-Trichloroethane	1000 ug/mL
							1,1,2,2-Tetrachloroethane	1000 ug/mL
							1,1,2-Trichloroethane	1000 ug/mL
							1,1-Dichloroethane	1000 ug/mL
							1,1-Dichloroethene	1000 ug/mL
							1,1-Dichloropropene	1000 ug/mL
							1,2,3-Trichlorobenzene	1000 ug/mL
							1,2,3-Trichloropropane	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2,4-Trimethylbenzene	1000 ug/mL
							1,2-Dibromo-3-Chloropropane	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Dichloroethane	1000 ug/mL
							1,2-Dichloropropane	1000 ug/mL
							1,3,5-Trimethylbenzene	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dichloropropane	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							2,2-Dichloropropane	1000 ug/mL
							2-Chlorotoluene	1000 ug/mL
							4-Chlorotoluene	1000 ug/mL
							4-Isopropyltoluene	1000 ug/mL
							Benzene	1000 ug/mL
							Bromobenzene	1000 ug/mL
							Bromoform	1000 ug/mL
							Carbon tetrachloride	1000 ug/mL
							Chlorobenzene	1000 ug/mL
							Chlorobromomethane	1000 ug/mL
							Chlorodibromomethane	1000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chloroform	1000 ug/mL
							cis-1,2-Dichloroethene	1000 ug/mL
							cis-1,3-Dichloropropene	1000 ug/mL
							Dibromomethane	1000 ug/mL
							Dichlorobromomethane	1000 ug/mL
							Ethylbenzene	1000 ug/mL
							Ethylene Dibromide	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Isopropylbenzene	1000 ug/mL
							m-Xylene & p-Xylene	2000 ug/mL
							Methylene Chloride	1000 ug/mL
							n-Butylbenzene	1000 ug/mL
							N-Propylbenzene	1000 ug/mL
							Naphthalene	1000 ug/mL
							o-Xylene	1000 ug/mL
							sec-Butylbenzene	1000 ug/mL
							Styrene	1000 ug/mL
							tert-Butylbenzene	1000 ug/mL
							Tetrachloroethene	1000 ug/mL
							Toluene	1000 ug/mL
							trans-1,2-Dichloroethene	1000 ug/mL
							trans-1,3-Dichloropropene	1000 ug/mL
							Trichloroethene	1000 ug/mL
					MSV_MegaMix#2_00125	1 mL	1,1,2-Trichloro-1,2,2-trifluoroethane	1000 ug/mL
							1,2,3-Trimethylbenzene	1000 ug/mL
							1,3,5-Trichlorobenzene	1000 ug/mL
							1,4-Dioxane	12500 ug/mL
							1-Chlorohexane	1000 ug/mL
							2-Chloro-1,3-butadiene	1000 ug/mL
							2-Methyl-2-propanol	5000 ug/mL
							2-Nitropropane	5000 ug/mL
							3-Chloro-1-propene	1000 ug/mL
							Acrylonitrile	2500 ug/mL
							Benzyl chloride	1000 ug/mL
							Carbon disulfide	1000 ug/mL
							Cyclohexane	1000 ug/mL
							Ethyl methacrylate	1000 ug/mL
							Hexane	1000 ug/mL
							Iodomethane	1000 ug/mL
							Isobutyl alcohol	12500 ug/mL
							Isopropyl ether	1000 ug/mL
							Methacrylonitrile	2500 ug/mL
							Methyl acetate	1000 ug/mL
							Methyl methacrylate	1000 ug/mL
							Methyl tert-butyl ether	1000 ug/mL
							Methylcyclohexane	1000 ug/mL
							n-Butanol	12500 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							n-Heptane	1000 ug/mL
							Propionitrile	5000 ug/mL
							Tert-amyl methyl ether	1000 ug/mL
							Tert-butyl ethyl ether	1000 ug/mL
							Tetrahydrofuran	5000 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
..MSV_MegaMIX#1_00130	07/18/23		Restek, Lot A0184527		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	5000 ug/mL
							1,1,1-Trichloroethane	5000 ug/mL
							1,1,2,2-Tetrachloroethane	5000 ug/mL
							1,1,2-Trichloroethane	5000 ug/mL
							1,1-Dichloroethane	5000 ug/mL
							1,1-Dichloroethene	5000 ug/mL
							1,1-Dichloropropene	5000 ug/mL
							1,2,3-Trichlorobenzene	5000 ug/mL
							1,2,3-Trichloropropane	5000 ug/mL
							1,2,4-Trichlorobenzene	5000 ug/mL
							1,2,4-Trimethylbenzene	5000 ug/mL
							1,2-Dibromo-3-Chloropropane	5000 ug/mL
							1,2-Dichlorobenzene	5000 ug/mL
							1,2-Dichloroethane	5000 ug/mL
							1,2-Dichloropropane	5000 ug/mL
							1,3,5-Trimethylbenzene	5000 ug/mL
							1,3-Dichlorobenzene	5000 ug/mL
							1,3-Dichloropropane	5000 ug/mL
							1,4-Dichlorobenzene	5000 ug/mL
							2,2-Dichloropropane	5000 ug/mL
							2-Chlorotoluene	5000 ug/mL
							4-Chlorotoluene	5000 ug/mL
							4-Isopropyltoluene	5000 ug/mL
							Benzene	5000 ug/mL
							Bromobenzene	5000 ug/mL
							Bromoform	5000 ug/mL
							Carbon tetrachloride	5000 ug/mL
							Chlorobenzene	5000 ug/mL
							Chlorobromomethane	5000 ug/mL
							Chlorodibromomethane	5000 ug/mL
							Chloroform	5000 ug/mL
							cis-1,2-Dichloroethene	5000 ug/mL
							cis-1,3-Dichloropropene	5000 ug/mL
							Dibromomethane	5000 ug/mL
							Dichlorobromomethane	5000 ug/mL
							Ethylbenzene	5000 ug/mL
							Ethylene Dibromide	5000 ug/mL
							Hexachlorobutadiene	5000 ug/mL
							Isopropylbenzene	5000 ug/mL
							m-Xylene & p-Xylene	10000 ug/mL
							Methylene Chloride	5000 ug/mL
							n-Butylbenzene	5000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Propylbenzene	5000 ug/mL
							Naphthalene	5000 ug/mL
							o-Xylene	5000 ug/mL
							sec-Butylbenzene	5000 ug/mL
							Styrene	5000 ug/mL
							tert-Butylbenzene	5000 ug/mL
							Tetrachloroethene	5000 ug/mL
							Toluene	5000 ug/mL
							trans-1,2-Dichloroethene	5000 ug/mL
							trans-1,3-Dichloropropene	5000 ug/mL
							Trichloroethene	5000 ug/mL
..MSV_MegaMix#2_00125	07/18/23		Restek, Lot A0186885		(Purchased Reagent)		1,1,2-Trichloro-1,2,2-trifluoroethane	5000 ug/mL
							1,2,3-Trimethylbenzene	5000 ug/mL
							1,3,5-Trichlorobenzene	5000 ug/mL
							1,4-Dioxane	62500 ug/mL
							1-Chlorohexane	5000 ug/mL
							2-Chloro-1,3-butadiene	5000 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							2-Nitropropane	25000 ug/mL
							3-Chloro-1-propene	5000 ug/mL
							Acrylonitrile	12500 ug/mL
							Benzyl chloride	5000 ug/mL
							Carbon disulfide	5000 ug/mL
							Cyclohexane	5000 ug/mL
							Ethyl methacrylate	5000 ug/mL
							Hexane	5000 ug/mL
							Iodomethane	5000 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropyl ether	5000 ug/mL
							Methacrylonitrile	12500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl methacrylate	5000 ug/mL
							Methyl tert-butyl ether	5000 ug/mL
							Methylcyclohexane	5000 ug/mL
							n-Butanol	62500 ug/mL
							n-Heptane	5000 ug/mL
							Propionitrile	25000 ug/mL
							Tert-amyl methyl ether	5000 ug/mL
							Tert-butyl ethyl ether	5000 ug/mL
							Tetrahydrofuran	25000 ug/mL
							trans-1,4-Dichloro-2-butene	12500 ug/mL
.MSV_CCV_VOC#3_00130	07/18/23	06/18/23	Methanol, Lot EG095	5 mL	MSV_CCV_ACR_00011	0.5 mL	Acrolein	12500.4 ug/mL
					MSV_V_Ketones_00125	1 mL	2-Butanone (MEK)	2500 ug/mL
							2-Hexanone	2500 ug/mL
							4-Methyl-2-pentanone (MIBK)	2500 ug/mL
							Acetone	2500 ug/mL
..MSV_CCV_ACR_00011	07/30/23	05/31/23	Methanol, Lot EG095	10 mL	MSV_VACR_STK_00033	9.259 mL	Acrolein	125004 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...MSV_VACR_STK_00033	07/30/23	05/31/23	Methanol, Lot EG095	10 mL	MSV_ACROLEIN_00026	1.4564 g	Acrolein	135008 ug/mL
....MSV_ACROLEIN_00026	11/30/23		Chem Service, Lot 13910600		(Purchased Reagent)		Acrolein	0.927 g/g
..MSV_V_Ketones_00125	01/31/25		Restek, Lot A0186508		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MSV_V_VOA2_00194	07/11/23	06/11/23	Methanol, Lot EG095	5 mL	MSV_V#2B_00323	1 mL	1,4-Dioxane	12500 ug/mL
							2-Methyl-2-propanol	5000 ug/mL
							Isobutyl alcohol	12500 ug/mL
							Methacrylonitrile	2500 ug/mL
							n-Butanol	25000 ug/mL
							Propionitrile	5000 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
..MSV_V#2B_00323	05/31/25		Restek, Lot A0197599		(Purchased Reagent)		1,4-Dioxane	62500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Methacrylonitrile	12500 ug/mL
							n-Butanol	125000 ug/mL
							Propionitrile	25000 ug/mL
							trans-1,4-Dichloro-2-butene	12500 ug/mL
MSV_LL_#2_826_00077	03/29/23	03/20/23	Methanol, Lot EB679	1 mL	CCV_ETBR_00004	50 uL	Ethyl bromide	50.0992 ug/mL
					MSV_BCE_00053	25 uL	1-Bromo-2-chloroethane	50 ug/mL
					MSV_CCV_EE_00004	50 uL	Ethyl ether	49.9996 ug/mL
					MSV_V_PentaCL_00030	10 uL	Pentachloroethane	50 ug/mL
.CCV_ETBR_00004	05/31/23	12/04/22	Methanol, Lot EB679	10 mL	MSV_VETBR_STK_00013	0.206 mL	Ethyl bromide	1001.98 ug/mL
..MSV_VETBR_STK_00013	05/31/23	12/04/22	Methanol, Lot EB679	10 mL	MSV_EtBr_00006	0.4864 g	Ethyl bromide	48640 ug/mL
...MSV_EtBr_00006	05/31/23		Chem Service, Lot 12929600		(Purchased Reagent)		Ethyl bromide	1 g/g
.MSV_BCE_00053	03/29/23		Restek, Lot A0177627		(Purchased Reagent)		1-Bromo-2-chloroethane	2000 ug/mL
.MSV_CCV_EE_00004	05/17/23	11/17/22	Methanol, Lot EB679	50 mL	MSV_EE_MISCSK_00011	1.067 mL	Ethyl ether	999.992 ug/mL
..MSV_EE_MISCSK_00011	05/17/23	11/17/22	Methanol, Lot EB679	10 mL	MSV_EE_Neat_00008	0.4686 g	Ethyl ether	46860 ug/mL
...MSV_EE_Neat_00008	12/31/25		Chem Service, Lot 1326900		(Purchased Reagent)		Ethyl ether	1 g/g
.MSV_V_PentaCL_00030	04/01/23		Restek, Lot A0184174		(Purchased Reagent)		Pentachloroethane	5000 ug/mL
MSV_LL_#2_826_00093	07/18/23	06/18/23	Methanol, Lot EG095	1 mL	CCV_ETBR_00005	50 uL	Ethyl bromide	49.9548 ug/mL
					MSV_BCE_00057	25 uL	1-Bromo-2-chloroethane	50 ug/mL
					MSV_CCV_EE_00005	50 uL	Ethyl ether	50.0068 ug/mL
					MSV_V_PentaCL_00034	10 uL	Pentachloroethane	50 ug/mL
.CCV_ETBR_00005	11/15/23	05/16/23	Methanol, Lot EG095	10 mL	MSV_VETBR_STK_00014	0.228 mL	Ethyl bromide	999.096 ug/mL
..MSV_VETBR_STK_00014	11/15/23	05/16/23	Methanol, Lot EG095	10 mL	MSV_EtBr_00007	0.4382 g	Ethyl bromide	43820 ug/mL
...MSV_EtBr_00007	06/30/25		Chem Service, Lot 13345600		(Purchased Reagent)		Ethyl bromide	1 g/g
.MSV_BCE_00057	07/18/23		Restek, Lot A0177627		(Purchased Reagent)		1-Bromo-2-chloroethane	2000 ug/mL
.MSV_CCV_EE_00005	11/10/23	05/10/23	Methanol, Lot EG095	50 mL	MSV_EE_MISCSK_00012	1.686 mL	Ethyl ether	1000.14 ug/mL
..MSV_EE_MISCSK_00012	11/10/23	05/10/23	Methanol, Lot EG095	10 mL	MSV_EE_Neat_00009	0.2966 g	Ethyl ether	29660 ug/mL
...MSV_EE_Neat_00009	05/30/27		Chem Service, Lot 14084700		(Purchased Reagent)		Ethyl ether	1 g/g
.MSV_V_PentaCL_00034	07/18/23		Restek, Lot A0184174		(Purchased Reagent)		Pentachloroethane	5000 ug/mL
MSV_LL_GAS826_00141	03/27/23	03/20/23	Methanol, Lot EB679	1 mL	MSV_CCV_GASES_00421	25 uL	1,2-Dichloro-1,1,2-trifluoroethane	50 ug/mL
							Bromomethane	50 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Butadiene	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Dichlorofluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
.MSV_CCV_GASES_00421	03/27/23		Restek, Lot A0184815		(Purchased Reagent)		1,2-Dichloro-1,1,2-trifluoroethane	2000 ug/mL
							Bromomethane	2000 ug/mL
							Butadiene	2000 ug/mL
							Chloroethane	2000 ug/mL
							Chloromethane	2000 ug/mL
							Dichlorodifluoromethane	2000 ug/mL
							Dichlorofluoromethane	2000 ug/mL
							Trichlorofluoromethane	2000 ug/mL
							Vinyl chloride	2000 ug/mL
MSV_LL_GAS826_00156	06/25/23	06/18/23	Methanol, Lot EG095	1 mL	MSV_CCV_GASES_00496	25 uL	1,2-Dichloro-1,1,2-trifluoroethane	50 ug/mL
							Bromomethane	50 ug/mL
							Butadiene	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Dichlorofluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
.MSV_CCV_GASES_00496	06/25/23		Restek, Lot A0197586		(Purchased Reagent)		1,2-Dichloro-1,1,2-trifluoroethane	2000 ug/mL
							Bromomethane	2000 ug/mL
							Butadiene	2000 ug/mL
							Chloroethane	2000 ug/mL
							Chloromethane	2000 ug/mL
							Dichlorodifluoromethane	2000 ug/mL
							Dichlorofluoromethane	2000 ug/mL
							Trichlorofluoromethane	2000 ug/mL
							Vinyl chloride	2000 ug/mL
MSV_LLcentISO_00006	10/05/23	04/05/23	Methanol, Lot EB679	50 mL	MSV_Cus826_IS_00552	1 mL	1,4-Dichlorobenzene-d4	50 ug/mL
							Chlorobenzene-d5 (IS)	50 ug/mL
							Fluorobenzene (IS)	50 ug/mL
							t-Butyl alcohol-d10 (IS)	250 ug/mL
.MSV_Cus826_IS_00552	04/30/25		Restek, Lot A0184225		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL
							Chlorobenzene-d5 (IS)	2500 ug/mL
							Fluorobenzene (IS)	2500 ug/mL
							t-Butyl alcohol-d10 (IS)	12500 ug/mL
MSV_LLcentISS_00006	04/27/23	10/27/22	Methanol, Lot EB679	50 mL	MSV_8260_SS_00779	1 mL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
					MSV_Cus826_IS_00505	1 mL	1,4-Dichlorobenzene-d4	50 ug/mL
							Chlorobenzene-d5 (IS)	50 ug/mL
							Fluorobenzene (IS)	50 ug/mL
							t-Butyl alcohol-d10 (IS)	250 ug/mL
.MSV_8260_SS_00779	03/31/25		Restek, Lot A0183565		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
.MSV_Cus826_IS_00505	04/30/25		Restek, Lot A0184225		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL
							Chlorobenzene-d5 (IS)	2500 ug/mL
							Fluorobenzene (IS)	2500 ug/mL
							t-Butyl alcohol-d10 (IS)	12500 ug/mL
MSV_LLcentISS_00007	10/05/23	04/05/23	Methanol, Lot EG095	50 mL	MSV_8260_SS_00879	1 mL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
					MSV_Cus826_IS_00552	1 mL	1,4-Dichlorobenzene-d4	50 ug/mL
							Chlorobenzene-d5 (IS)	50 ug/mL
							Fluorobenzene (IS)	50 ug/mL
							t-Butyl alcohol-d10 (IS)	250 ug/mL
.MSV_8260_SS_00879	03/31/25		Restek, Lot A0183565		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
.MSV_Cus826_IS_00552	04/30/25		Restek, Lot A0184225		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL
							Chlorobenzene-d5 (IS)	2500 ug/mL
							Fluorobenzene (IS)	2500 ug/mL
							t-Butyl alcohol-d10 (IS)	12500 ug/mL
MSV_LLcentISS_00009	01/06/24	07/06/23	Methanol, Lot EG095	50 mL	MSV_Cus826_IS_00582	1 mL	1,4-Dichlorobenzene-d4	50 ug/mL
							Chlorobenzene-d5 (IS)	50 ug/mL
							Fluorobenzene (IS)	50 ug/mL
							t-Butyl alcohol-d10 (IS)	250 ug/mL
.MSV_Cus826_IS_00582	04/30/26		Restek, Lot A0197488		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL
							Chlorobenzene-d5 (IS)	2500 ug/mL
							Fluorobenzene (IS)	2500 ug/mL
							t-Butyl alcohol-d10 (IS)	12500 ug/mL
MSV_LLcentISS_00009	01/06/24	07/06/23	Methanol, Lot EG095	50 mL	MSV_8260_SS_00953	1 mL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
.MSV_8260_SS_00953	02/29/28		Restek, Lot A0195060		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
MSV_Q_QDME_00032	06/23/23	05/24/23	Methanol, Lot EB679	1 mL	MSV_DME_00046	100 uL	Dimethyl ether	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MSV_DME_00046	06/24/23	Restek, Lot A0190883			(Purchased Reagent)		Dimethyl ether	1000 ug/mL
MSV_Q_QDME_00033	08/09/23	07/10/23	Methanol, Lot EG095	1 mL	MSV_DME_00048	100 uL	Dimethyl ether	100 ug/mL
.MSV_DME_00048	08/09/23	Restek, Lot A0190883			(Purchased Reagent)		Dimethyl ether	1000 ug/mL
MSV_V_BFB_00012							1,2-Dichloroethene, Total	
							1,3-Dichloropropene, Total	
							Tentatively Identified Compound	
							Xylenes, Total	
					MSV_VBFB_STK_00010	0.096 mL	BFB	49.7971 ug/mL
.MSV_VBFB_STK_00010	12/13/23	06/13/23	Methanol, Lot EG095	10 mL	MSV_4BFB_NEAT_00010	1.2968 g	BFB	129680 ug/mL
..MSV_4BFB_NEAT_00010	05/31/25	Chem Service, Lot 13775500			(Purchased Reagent)		BFB	1 g/g
MSV_V_SMRV4_00059	06/19/23	06/12/23	Methanol, Lot EG095	1 mL	MSV_CCV_2CEVE_00124	200 uL	2-Chloroethyl vinyl ether	200 ug/mL
					MSV_CCV_LKB_00005	400 uL	cis-1,4-Dichloro-2-butene	400.029 ug/mL
					MSV_V_SMFreon_00047	100 uL	Chlorodifluoromethane	200 ug/mL
.MSV_CCV_2CEVE_00124	07/11/23	06/11/23	Methanol, Lot EG095	5 mL	MSV_V_2CLEVE_00130	1 mL	2-Chloroethyl vinyl ether	1000 ug/mL
..MSV_V_2CLEVE_00130	04/30/25	Restek, Lot A0184487			(Purchased Reagent)		2-Chloroethyl vinyl ether	5000 ug/mL
.MSV_CCV_LKB_00005	06/19/23	02/08/23	Methanol, Lot EB679	50 mL	MSV_Vc14d_STK_00008	0.946 mL	cis-1,4-Dichloro-2-butene	1000.07 ug/mL
..MSV_Vc14d_STK_00008	06/19/23	02/08/23	Methanol, Lot EB679	10 mL	MSV_c14dcb_Nt_00004	0.5564 g	cis-1,4-Dichloro-2-butene	52858 ug/mL
...MSV_c14dcb_Nt_00004	08/16/27	Aldrich, Lot SHBH4584V			(Purchased Reagent)		cis-1,4-Dichloro-2-butene	0.95 g/g
.MSV_V_SMFreon_00047	06/29/23	Restek, Lot A0184508			(Purchased Reagent)		Chlorodifluoromethane	2000 ug/mL

Reagent

MSV_8260_SS_00779

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 55671 **Lot No.:** A0183565

Description : 8260A Surrogate Mix

8260A Surrogate Mix 2,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2025 **Storage:** 0°C or colder

Ship: Ambient

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dibromofluoromethane **CAS #** 1868-53-7 (Lot 012021) **Purity** 99%	2,500.5 µg/mL	+/- 14.5381 µg/mL +/- 140.2006 µg/mL +/- 143.4811 µg/mL	Gravimetric Unstressed Stressed
2	1,2-Dichloroethane-d4 **CAS #** 17060-07-0 (Lot PR-32845) **Purity** 99%	2,500.5 µg/mL	+/- 14.5381 µg/mL +/- 140.2006 µg/mL +/- 143.4811 µg/mL	Gravimetric Unstressed Stressed
3	Toluene-d8 **CAS #** 2037-26-5 (Lot PR-31958) **Purity** 99%	2,500.5 µg/mL	+/- 14.5381 µg/mL +/- 140.2006 µg/mL +/- 143.4811 µg/mL	Gravimetric Unstressed Stressed
4	1-Bromo-4-fluorobenzene (BFB) **CAS #** 460-00-4 (Lot 20401KO) **Purity** 99%	2,502.0 µg/mL	+/- 14.5468 µg/mL +/- 140.2847 µg/mL +/- 143.5671 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

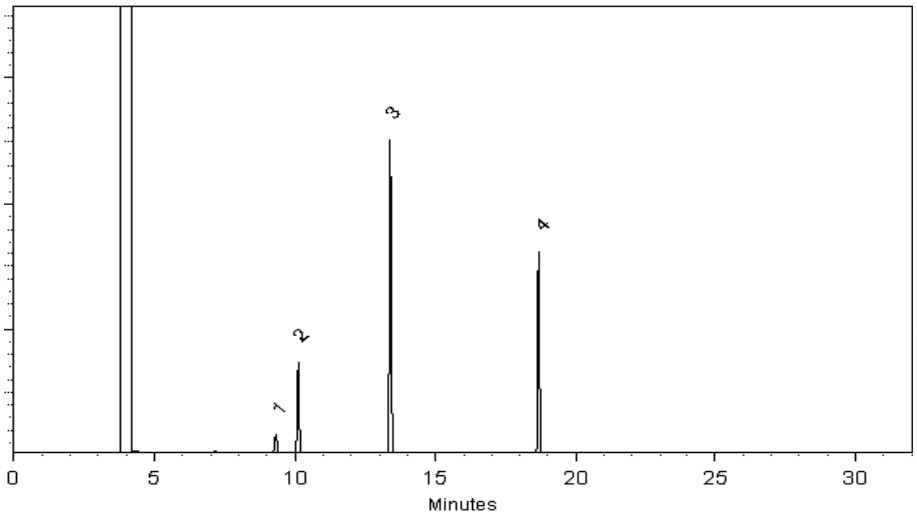
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Russ Bookhamer - Operations Technician I

Date Mixed: 31-Mar-2022 **Balance:** 1127510105

Fang-Yun Lo - QC Analyst

Date Passed: 04-Apr-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Reagent

MSV_AcetatesV_00029

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 577489 **Lot No.:** A0184542

Description : Custom Acetates Standard

Custom Acetates Standard 10,000-50,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2023 **Storage:** -20°C or colder

Ship: On Ice

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetonitrile	50,150.0 µg/mL	+/- 293.6393 µg/mL	Gravimetric
	CAS # 75-05-8 (Lot SHBH6233)		+/- 2,481.0559 µg/mL	Unstressed
	Purity 99%		+/- 2,542.7375 µg/mL	Stressed
2	Vinyl acetate	10,064.0 µg/mL	+/- 59.0612 µg/mL	Gravimetric
	CAS # 108-05-4 (Lot RD210830)		+/- 497.9092 µg/mL	Unstressed
	Purity 99%		+/- 510.2869 µg/mL	Stressed
3	Ethyl acetate	10,082.2 µg/mL	+/- 59.1682 µg/mL	Gravimetric
	CAS # 141-78-6 (Lot SHBN3179)		+/- 498.8116 µg/mL	Unstressed
	Purity 98%		+/- 511.2118 µg/mL	Stressed
4	Isopropyl acetate	10,082.0 µg/mL	+/- 59.1668 µg/mL	Gravimetric
	CAS # 108-21-4 (Lot BCBZ4645)		+/- 498.7997 µg/mL	Unstressed
	Purity 99%		+/- 511.1996 µg/mL	Stressed
5	Propyl acetate	10,062.0 µg/mL	+/- 59.0495 µg/mL	Gravimetric
	CAS # 109-60-4 (Lot TFFKL)		+/- 497.8102 µg/mL	Unstressed
	Purity 99%		+/- 510.1855 µg/mL	Stressed
6	Butyl acetate	10,070.0 µg/mL	+/- 59.0964 µg/mL	Gravimetric
	CAS # 123-86-4 (Lot SHBN3806)		+/- 498.2060 µg/mL	Unstressed
	Purity 99%		+/- 510.5911 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:
Vinyl acetate is a volatile organic ester included in the target lists of several US EPA and other methods . Under acidic conditions, esters react with alcohols to form new esters (transesterification). Methanol-based mixes containing halogenated compounds are slightly acidic, so it is important to minimize exposure of vinyl acetate to mixes of halogenated compounds in methanol. For this reason, we offer vinyl acetate in individual solution, and suggest that it be introduced into the working level calibration solution immediately before use. This will minimize problems and ensure more consistent results.

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

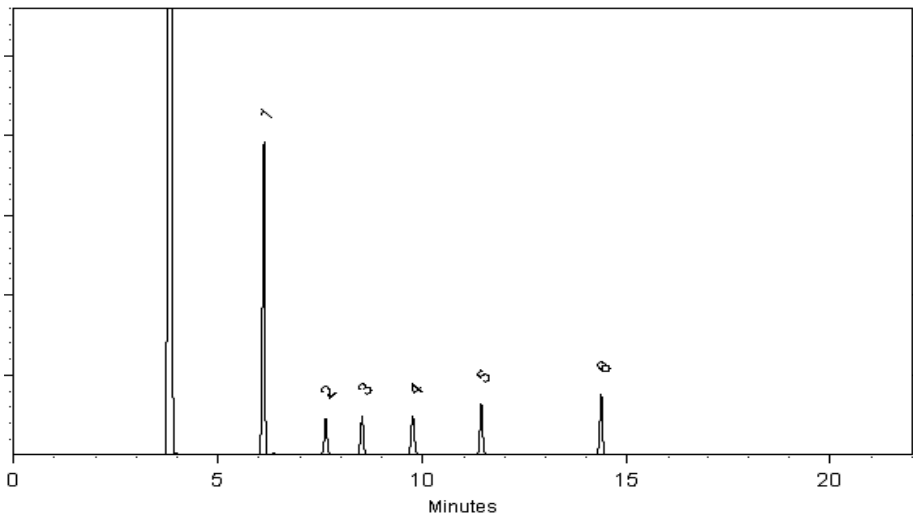
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 26-Apr-2022 **Balance:** B707717271

Fang-Yun Lo - QC Analyst

Date Passed: 05-May-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Reagent

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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30469 **Lot No.:** A0177627

Description : 1-Bromo-2-chloroethane Standard

1-Bromo-2-Chloroethane Std, 2000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2026 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1-Bromo-2-chloroethane	2,001.3 µg/mL	+/- 11.8868	µg/mL	Gravimetric
	CAS # 107-04-0 (Lot BCCC1146)		+/- 112.2344	µg/mL	Unstressed
	Purity 99%		+/- 114.8594	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

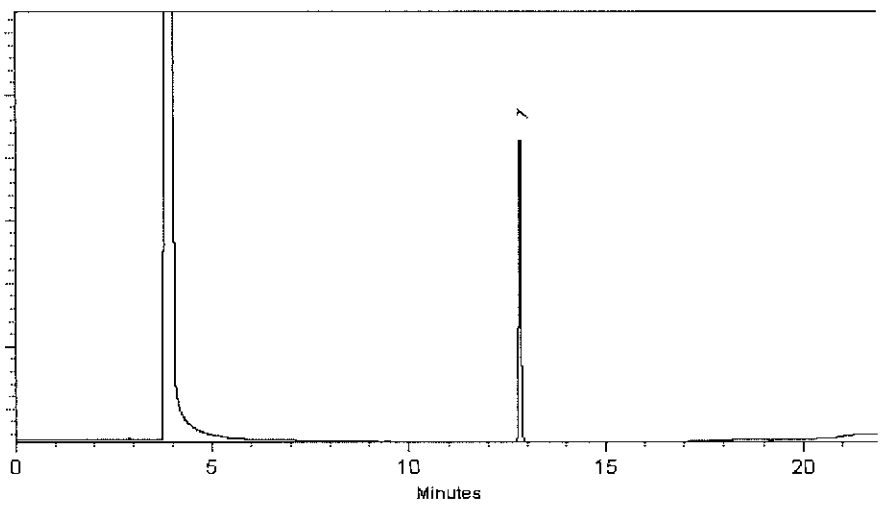
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cathleen Soltis - Mix Technician

Date Mixed: 20-Oct-2021 **Balance:** B251644995

Alexis Shelow - Operations Tech I

Date Passed: 22-Oct-2021

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Reagent

MSV_BCE_00057

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Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30469 **Lot No.:** A0177627

Description : 1-Bromo-2-chloroethane Standard

1-Bromo-2-Chloroethane Std, 2000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2026 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L., K=2)		
1	1-Bromo-2-chloroethane	2,001.3 µg/mL	+/- 11.8868	µg/mL	Gravimetric
	CAS # 107-04-0 (Lot BCCC1146)		+/- 112.2344	µg/mL	Unstressed
	Purity 99%		+/- 114.8594	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

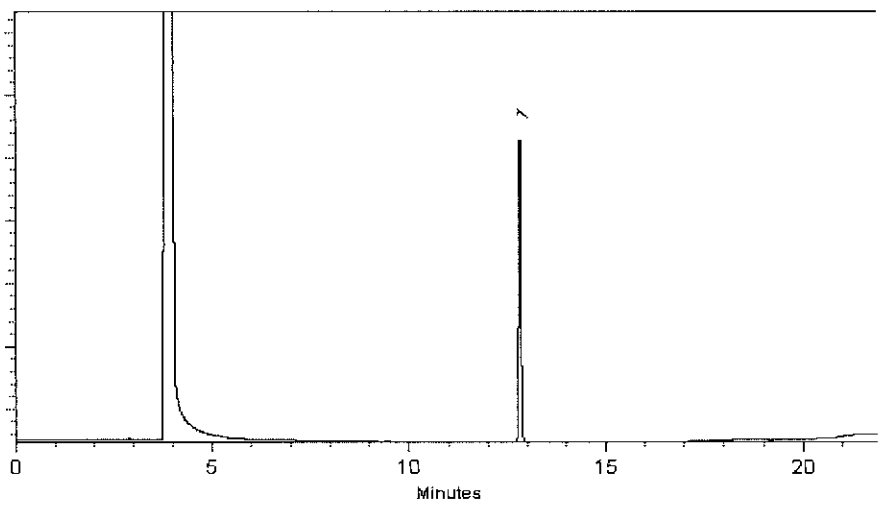
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cathleen Soltis - Mix Technician

Date Mixed: 20-Oct-2021 **Balance:** B251644995

Alexis Shelow - Operations Tech I

Date Passed: 22-Oct-2021

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
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k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

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0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

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Reagent

MSV_c14dcb_Nt_00004

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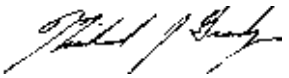
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:
cis-1,4-Dichloro-2-butene - 95%

Product Number:	**195707**
Batch Number:	**SHBH4584V**
Brand:	ALDRICH
CAS Number:	1476-11-5
MDL Number:	MFCD00062950
Formula:	C4H6Cl2
Formula Weight:	125.00 g/mol
Storage Temperature:	Store at 2 - 8 °C
Quality Release Date:	30 AUG 2016

Test	Specification	Result
Appearance (Color)	Colorless to Light Yellow	Very Faint Yellow
Appearance (Form)	Liquid	Liquid
Infrared Spectrum	Conforms to Structure	Conforms
Purity (GC)	≥ 94.5 %	98.0 %



Michael Grady, Manager
Quality Control
Sheboygan Falls, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Reagent

MSV_CYC_00008

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info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Cyclohexanone

CATALOG NUMBER	N-11531-1G
LOT NUMBER	13529800
DATE CERTIFIED	06/20/22
EXPIRATION DATE	06/30/27
CAS NUMBER	108-94-1
MOLECULAR FORMULA	C6H10O
MOLECULAR WEIGHT	98.16
STORAGE	Store at room temperature (20 - 25 °C).
HANDLING	See Safety Data Sheet
INTENDED USE	For laboratory use only.

Analytical Test	Value
% PURITY (GC/FID)	99.5
FT-IR SPECTROSCOPY	CONFORMS TO STRUCTURE
PHYSICAL APPEARANCE	COLORLESS LIQUID
GC/MS SPECTRA ID	MATCHES NIST

Chem Service, Inc. is accredited to ISO 17034:2016, ISO/IEC 17025:2017 and certified to ISO 9001:2015.

PJLA Testing

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Certified By:

Kristin R Jones

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CERTIFICATE OF ANALYSIS

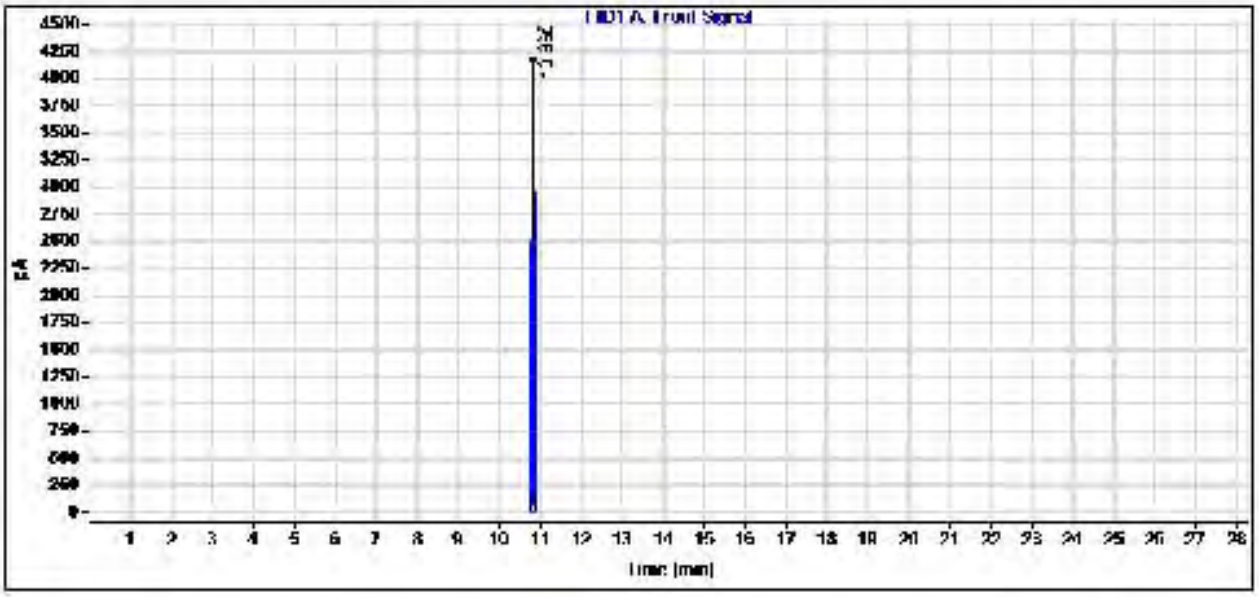
Gas Chromatography / Flame Ionization Detector (GC/FID)

Data file: C:\CHEM32\1\DATA\2022 DATA\0622\FID010695.D

Sample name: N-11531

Instrument: GC 1
Injection date: 6/17/2022 1:49:46 PM
Acq. method: SCREEN NEAT-FRANNY.M
Column name: DB-624 (30m x 0.53mm x 3.0um)

Sample type: Sample
Location: Vial 51
Injection volume: 1.0uL



Signal: FID1 A, Front Signal

RT [min]	Type	Width [min]	Area	Height	Area%
10.835	BB	0.0350	9220.0693	4132.2539	100.0000
		Sum	9220.0693		

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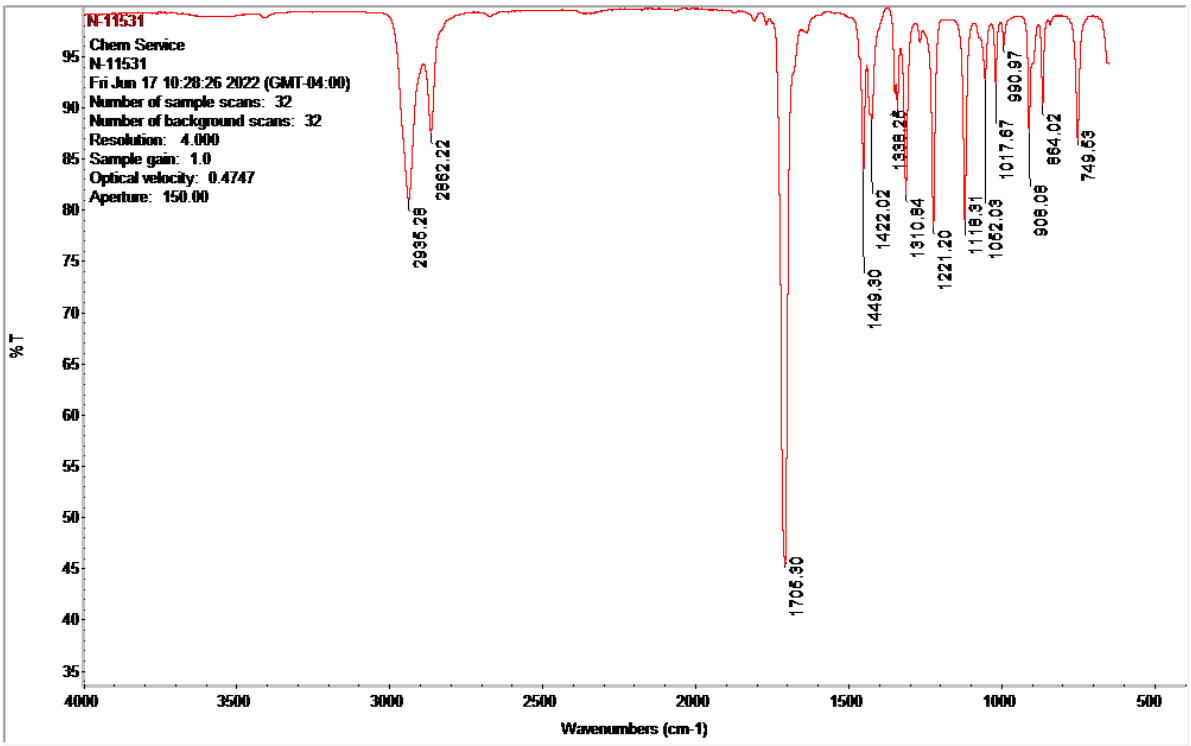
CERTIFICATE OF ANALYSIS

Analysis Method:

Catalog Number: N-11531-1G
Description: Cyclohexanone
Lot Number: 13529800
Expiration Date: 06/30/27



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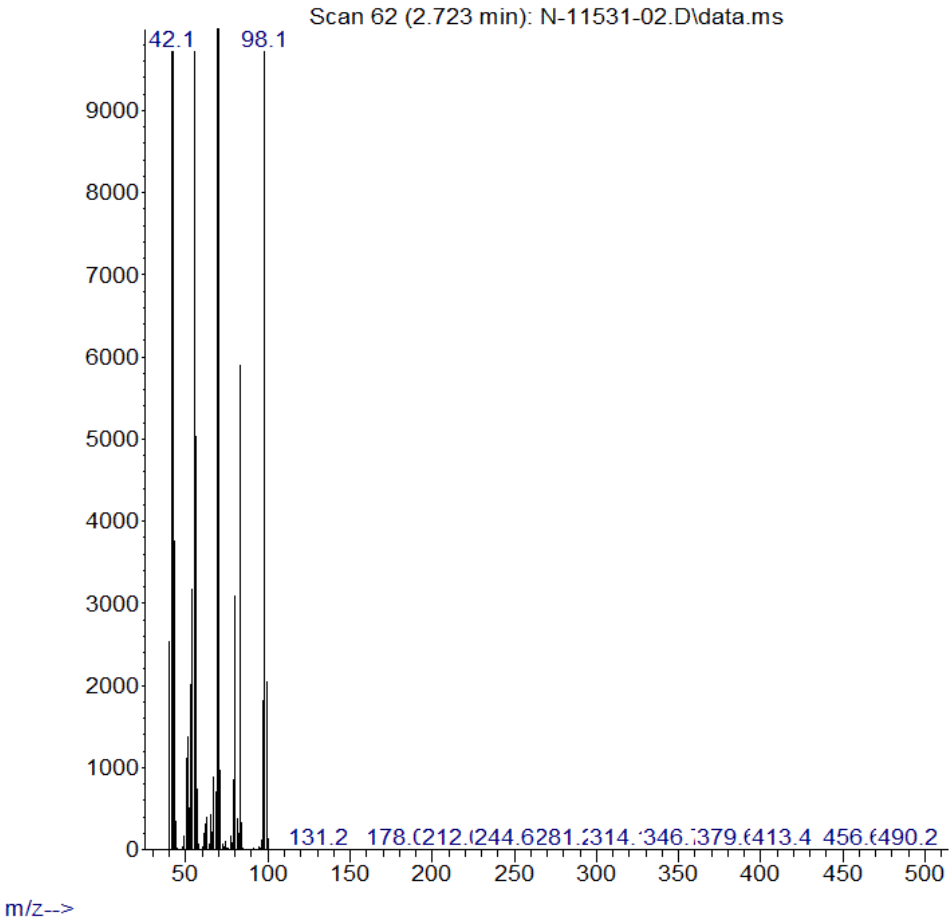
CERTIFICATE OF ANALYSIS

Analysis Method:

Catalog Number: N-11531-1G
Description: Cyclohexanone
Lot Number: 13529800
Expiration Date: 06/30/27



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CERTIFICATE OF ANALYSIS

Analysis Method:

Catalog Number: N-11531-1G
Description: Cyclohexanone
Lot Number: 13529800
Expiration Date: 06/30/27

ChemService Area Percent Report

```
 Data Path : D:\MassHunter\GCMS\1\data\2022\0622\
 Data File : N-11531-02.D
 Acq On    : 17 Jun 2022  12:40
 Operator  :
 Sample    : N-11531
 Misc      :
 ALS Vial  : 16   Sample Multiplier: 1

 Integration Parameters: autoint1.e
 Integrator: ChemStation

 Method    : D:\MassHunter\GCMS\1\methods\SCREEN NO SD.M
 Title     :

 Signal     : TIC: N-11531-02.D\data.ms
```

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	2.723	58	62	80	BV 2	106211218	1767870280	100.00%	100.000%

Sum of corrected areas: 1767870280

SCREEN NO SD.M Fri Jun 17 13:13:05 2022

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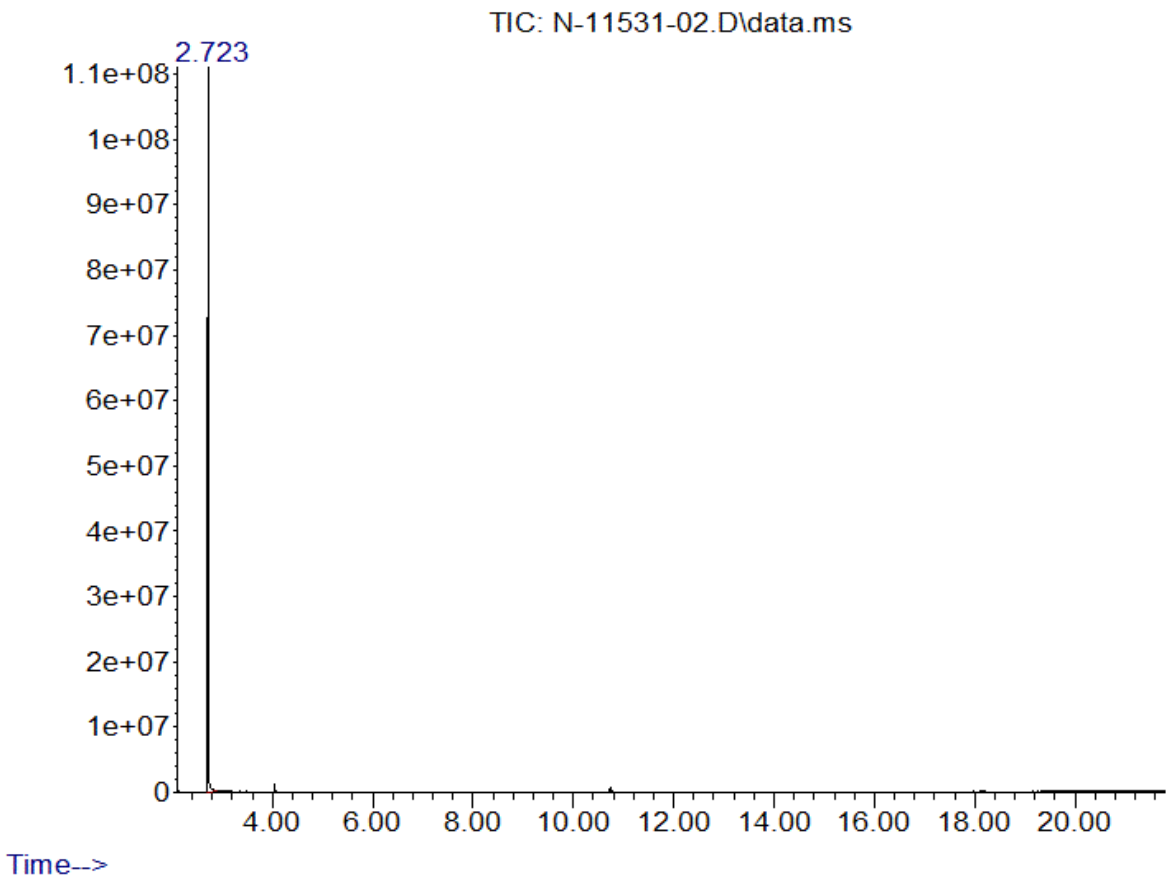
CERTIFICATE OF ANALYSIS

Analysis Method:

Catalog Number:	N-11531-1G
Description:	Cyclohexanone
Lot Number:	13529800
Expiration Date:	06/30/27



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Reagent

MSV_EtBr_00006

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info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Ethyl bromide

CATALOG NUMBER	N-11888-1G
LOT NUMBER	12929600
DATE CERTIFIED	05/27/20
EXPIRATION DATE	05/31/23
CAS NUMBER	74-96-4
MOLECULAR FORMULA	C2H5Br
MOLECULAR WEIGHT	108.97
STORAGE	Store at room temperature (20 - 25 °C).
HANDLING	See Safety Data Sheet
INTENDED USE	For laboratory use only.

Analytical Test	Value
% PURITY (GC/FID)	99.5

Chem Service, Inc. guarantees the purity to be +/- 0.5% deviation prior to the expiration date shown on the label and exclusive of any customer contamination.

Certified By:

Mary Beth O'Donnell

Mary Beth O'Donnell
CSM/TC

Chem Service, Inc. is accredited to ISO 17034:2016, ISO/IEC 17025:2017 and certified to ISO 9001:2015.

PJLA Testing

PJLA Reference Material Producer

COA Form
Revision 3 (3/2015)

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CERTIFICATE OF ANALYSIS

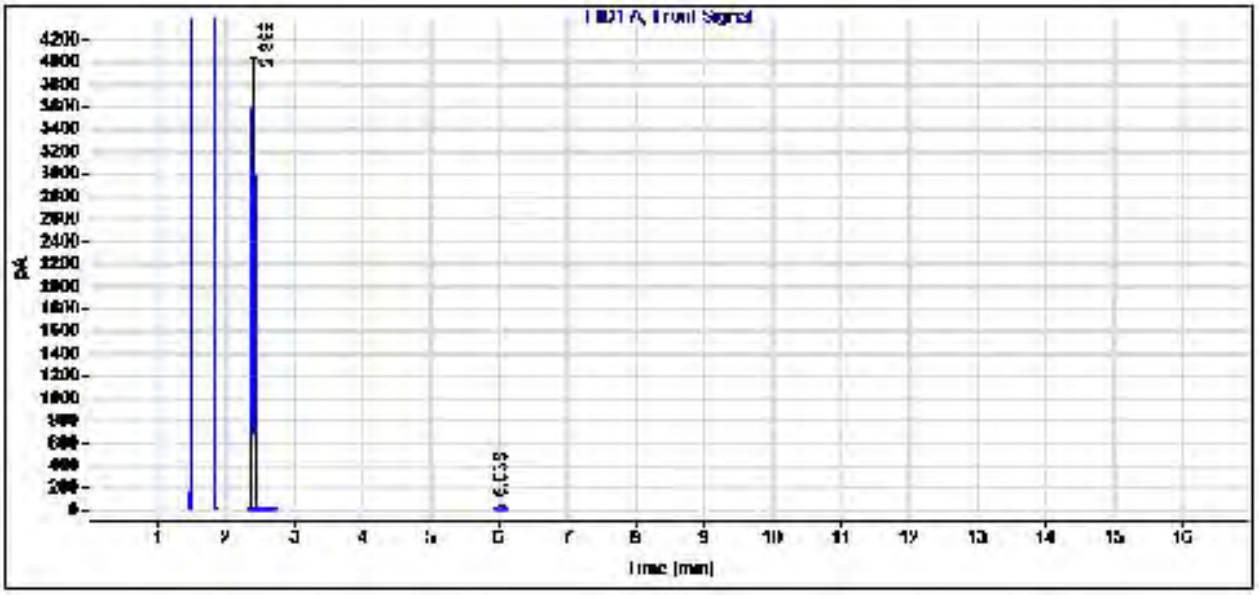
Gas Chromatography / Flame Ionization Detector (GC/FID)

Data file: C:\CHEM32\1\DATA\2020 DATA\0520\FID042273.D

Sample name: Bromoethane

Instrument: GC 1
Injection date: 5/27/2020 10:27:10 AM
Acq. method: MIX1.M
Column name: DB-624 (30m x 0.53mm x 3.0um)

Sample type: Sample
Location: Vial 31
Injection volume: 1.0uL



Signal: FID1 A, Front Signal

RT [min]	Type	Width [min]	Area	Height	Area%
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6.036	BB	0.0336	13.5242	6.1630	0.1725
		Sum	7841.6877		

Chem Service, Inc. is accredited to ISO 17034:2016, ISO/IEC 17025:2017 and certified to ISO 9001:2015.
PJLA Testing
PJLA Reference Material Producer

Reagent

MSV_MegaMix#2_00109

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Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 577487 **Lot No.:** A0186885

Description : Custom VOC MegaMix® #2 Standard

Custom VOC MegaMix® #2 Standard 5000-62500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2025 **Storage:** 0°C or colder

Ship: Ambient

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	n-Pentane (C5)	5,031.0 µg/mL	+/- 35.9016 µg/mL	Gravimetric
	CAS # 109-66-0 (Lot SHBN6009)		+/- 249.7418 µg/mL	Unstressed
	Purity 99%		+/- 255.9092 µg/mL	Stressed
2	2-Propanol (isopropanol)	25,031.0 µg/mL	+/- 146.5620 µg/mL	Gravimetric
	CAS # 67-63-0 (Lot SHBN6065)		+/- 1,238.3511 µg/mL	Unstressed
	Purity 99%		+/- 1,269.1379 µg/mL	Stressed
3	1,1,2-Trichlorotrifluoroethane (CFC-113)	5,009.5 µg/mL	+/- 35.7482 µg/mL	Gravimetric
	CAS # 76-13-1 (Lot 00016133)		+/- 248.6745 µg/mL	Unstressed
	Purity 99%		+/- 254.8156 µg/mL	Stressed
4	tert-Butanol (TBA)	25,112.0 µg/mL	+/- 147.0363 µg/mL	Gravimetric
	CAS # 75-65-0 (Lot 101619K21F-1)		+/- 1,242.3584 µg/mL	Unstressed
	Purity 99%		+/- 1,273.2448 µg/mL	Stressed
5	Methyl acetate	5,011.0 µg/mL	+/- 35.7589 µg/mL	Gravimetric
	CAS # 79-20-9 (Lot SHBM1320)		+/- 248.7490 µg/mL	Unstressed
	Purity 99%		+/- 254.8919 µg/mL	Stressed
6	Iodomethane (methyl iodide)	5,012.0 µg/mL	+/- 35.7660 µg/mL	Gravimetric
	CAS # 74-88-4 (Lot RD220125)		+/- 248.7986 µg/mL	Unstressed
	Purity 99%		+/- 254.9428 µg/mL	Stressed
7	Allyl chloride (3-chloropropene)	5,021.7 µg/mL	+/- 35.8350 µg/mL	Gravimetric
	CAS # 107-05-1 (Lot RP220405A)		+/- 249.2785 µg/mL	Unstressed
	Purity 99%		+/- 255.4345 µg/mL	Stressed

8	Carbon disulfide		5,017.2	µg/mL	+/-	35.8029	µg/mL	Gravimetric
	CAS # 75-15-0	(Lot N28F701)			+/-	249.0551	µg/mL	Unstressed
	Purity 99%				+/-	255.2056	µg/mL	Stressed
9	Acrylonitrile		12,534.0	µg/mL	+/-	73.3893	µg/mL	Gravimetric
	CAS # 107-13-1	(Lot SHBK4954)			+/-	620.0908	µg/mL	Unstressed
	Purity 99%				+/-	635.5069	µg/mL	Stressed
10	Methyl-tert-butyl ether (MTBE)		5,014.5	µg/mL	+/-	35.7839	µg/mL	Gravimetric
	CAS # 1634-04-4	(Lot SHBN6497)			+/-	248.9227	µg/mL	Unstressed
	Purity 99%				+/-	255.0699	µg/mL	Stressed
11	n-Hexane (C6)		5,014.7	µg/mL	+/-	35.7850	µg/mL	Gravimetric
	CAS # 110-54-3	(Lot STBG6381)			+/-	248.9310	µg/mL	Unstressed
	Purity 99%				+/-	255.0784	µg/mL	Stressed
12	Diisopropyl ether (DIPE)		5,021.0	µg/mL	+/-	35.8302	µg/mL	Gravimetric
	CAS # 108-20-3	(Lot STBK3450)			+/-	249.2454	µg/mL	Unstressed
	Purity 99%				+/-	255.4006	µg/mL	Stressed
13	Chloroprene (2-chloro-1,3-butadiene)		5,026.3	µg/mL	+/-	35.8683	µg/mL	Gravimetric
	CAS # 126-99-8	(Lot 220304JEAN)			+/-	249.5101	µg/mL	Unstressed
	Purity 99%				+/-	255.6718	µg/mL	Stressed
14	Ethyl-tert-butyl ether (ETBE)		5,009.2	µg/mL	+/-	35.7458	µg/mL	Gravimetric
	CAS # 637-92-3	(Lot MKCN9957)			+/-	248.6580	µg/mL	Unstressed
	Purity 99%				+/-	254.7986	µg/mL	Stressed
15	Propionitrile		25,070.0	µg/mL	+/-	146.7904	µg/mL	Gravimetric
	CAS # 107-12-0	(Lot BCCF4167)			+/-	1,240.2806	µg/mL	Unstressed
	Purity 99%				+/-	1,271.1153	µg/mL	Stressed
16	Methacrylonitrile		12,539.0	µg/mL	+/-	73.4186	µg/mL	Gravimetric
	CAS # 126-98-7	(Lot 1012014)			+/-	620.3382	µg/mL	Unstressed
	Purity 99%				+/-	635.7604	µg/mL	Stressed
17	Isobutanol (2-Methyl-1-propanol)		62,525.0	µg/mL	+/-	366.0976	µg/mL	Gravimetric
	CAS # 78-83-1	(Lot SHBM4836)			+/-	3,093.2805	µg/mL	Unstressed
	Purity 99%				+/-	3,170.1827	µg/mL	Stressed
18	Tetrahydrofuran		25,065.0	µg/mL	+/-	146.7611	µg/mL	Gravimetric
	CAS # 109-99-9	(Lot SHBP0039)			+/-	1,240.0332	µg/mL	Unstressed
	Purity 99%				+/-	1,270.8617	µg/mL	Stressed
19	Cyclohexane		5,008.5	µg/mL	+/-	35.7410	µg/mL	Gravimetric
	CAS # 110-82-7	(Lot EA003-US)			+/-	248.6249	µg/mL	Unstressed
	Purity 99%				+/-	254.7647	µg/mL	Stressed
20	1-Butanol		62,524.0	µg/mL	+/-	366.0918	µg/mL	Gravimetric
	CAS # 71-36-3	(Lot SHBN6854)			+/-	3,093.2311	µg/mL	Unstressed
	Purity 99%				+/-	3,170.1320	µg/mL	Stressed
21	tert-Amyl methyl ether (TAME)		5,009.2	µg/mL	+/-	35.7458	µg/mL	Gravimetric
	CAS # 994-05-8	(Lot HMBG7745V)			+/-	248.6580	µg/mL	Unstressed
	Purity 99%				+/-	254.7986	µg/mL	Stressed
22	n-Heptane (C7)		5,016.7	µg/mL	+/-	35.7993	µg/mL	Gravimetric
	CAS # 142-82-5	(Lot SGBL9221)			+/-	249.0303	µg/mL	Unstressed
	Purity 99%				+/-	255.1801	µg/mL	Stressed
23	tert-Amyl ethyl ether (TAEE)		5,010.8	µg/mL	+/-	35.7577	µg/mL	Gravimetric
	CAS # 919-94-8	(Lot 76U3A)			+/-	248.7407	µg/mL	Unstressed
	Purity 99%				+/-	254.8834	µg/mL	Stressed

24	Methylcyclohexane		5,022.3	µg/mL	+/-	35.8398	µg/mL	Gravimetric
	CAS # 108-87-2	(Lot SHBL0078)			+/-	249.3116	µg/mL	Unstressed
	Purity 99%				+/-	255.4684	µg/mL	Stressed
25	Methyl methacrylate		5,011.5	µg/mL	+/-	35.7625	µg/mL	Gravimetric
	CAS # 80-62-6	(Lot MKCQ2755)			+/-	248.7738	µg/mL	Unstressed
	Purity 99%				+/-	254.9173	µg/mL	Stressed
26	1,4-Dioxane		62,598.0	µg/mL	+/-	366.5251	µg/mL	Gravimetric
	CAS # 123-91-1	(Lot SHBN5929)			+/-	3,096.8920	µg/mL	Unstressed
	Purity 99%				+/-	3,173.8840	µg/mL	Stressed
27	2-Nitropropane		25,086.1	µg/mL	+/-	146.8849	µg/mL	Gravimetric
	CAS # 79-46-9	(Lot BCCB9352)			+/-	1,241.0791	µg/mL	Unstressed
	Purity 97%				+/-	1,271.9336	µg/mL	Stressed
28	Ethyl methacrylate		5,017.7	µg/mL	+/-	35.8065	µg/mL	Gravimetric
	CAS # 97-63-2	(Lot MKCL0907)			+/-	249.0799	µg/mL	Unstressed
	Purity 99%				+/-	255.2310	µg/mL	Stressed
29	1-Chlorohexane		5,022.3	µg/mL	+/-	35.8398	µg/mL	Gravimetric
	CAS # 544-10-5	(Lot BCBS3368V)			+/-	249.3117	µg/mL	Unstressed
	Purity 98%				+/-	255.4685	µg/mL	Stressed
30	trans-1,4-dichloro-2-butene		12,586.6	µg/mL	+/-	73.6970	µg/mL	Gravimetric
	CAS # 110-57-6	(Lot RD220405A)			+/-	622.6906	µg/mL	Unstressed
	Purity 95%				+/-	638.1714	µg/mL	Stressed
31	1,2,3-Trimethylbenzene		5,012.4	µg/mL	+/-	35.7687	µg/mL	Gravimetric
	CAS # 526-73-8	(Lot 8776.10-36)			+/-	248.8172	µg/mL	Unstressed
	Purity 98%				+/-	254.9617	µg/mL	Stressed
32	1,3-Diethylbenzene		5,012.0	µg/mL	+/-	35.7664	µg/mL	Gravimetric
	CAS # 141-93-5	(Lot BCBT8967)			+/-	248.8009	µg/mL	Unstressed
	Purity 98%				+/-	254.9451	µg/mL	Stressed
33	Benzyl chloride		5,020.8	µg/mL	+/-	35.8291	µg/mL	Gravimetric
	CAS # 100-44-7	(Lot SHBH2102V)			+/-	249.2371	µg/mL	Unstressed
	Purity 99%				+/-	255.3921	µg/mL	Stressed
34	1,4-Diethylbenzene		5,011.7	µg/mL	+/-	35.7636	µg/mL	Gravimetric
	CAS # 105-05-5	(Lot 1135.72-1)			+/-	248.7821	µg/mL	Unstressed
	Purity 99%				+/-	254.9258	µg/mL	Stressed
35	1,2-Diethylbenzene		5,011.3	µg/mL	+/-	35.7613	µg/mL	Gravimetric
	CAS # 135-01-3	(Lot ECH2970181)			+/-	248.7655	µg/mL	Unstressed
	Purity 99%				+/-	254.9088	µg/mL	Stressed
36	1,3,5-Trichlorobenzene		5,013.2	µg/mL	+/-	35.7743	µg/mL	Gravimetric
	CAS # 108-70-3	(Lot 11319AS)			+/-	248.8565	µg/mL	Unstressed
	Purity 99%				+/-	255.0021	µg/mL	Stressed
37	2-Methylnaphthalene		5,013.1	µg/mL	+/-	35.7740	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBK0259)			+/-	248.8542	µg/mL	Unstressed
	Purity 96%				+/-	254.9997	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

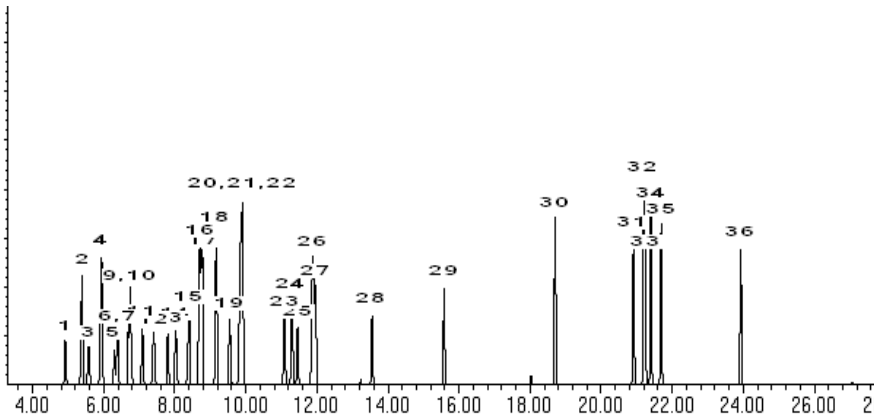
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Miranda Kline - Operations Technician I

Date Mixed: 30-Jun-2022 **Balance:** B707717271

Christie Mills - Operations Tech II - ARM QC

Date Passed: 07-Jul-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Reagent

MSV_V_Ketones_00101

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569721 **Lot No.:** A0180742

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500µg/mL, P&T Methanol/Water (90:10), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2025 **Storage:** 0°C or colder

Ship: Ambient

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetone	12,524.0 µg/mL	+/- 73.3308 µg/mL	Gravimetric
	CAS # 67-64-1 (Lot MKCP0755)		+/- 755.6782 µg/mL	Unstressed
	Purity 99%		+/- 757.4721 µg/mL	Stressed
2	2-Butanone (MEK)	12,529.5 µg/mL	+/- 73.3630 µg/mL	Gravimetric
	CAS # 78-93-3 (Lot SHBN2844)		+/- 756.0101 µg/mL	Unstressed
	Purity 99%		+/- 757.8048 µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)	12,541.5 µg/mL	+/- 73.4332 µg/mL	Gravimetric
	CAS # 108-10-1 (Lot SHBN3601)		+/- 756.7342 µg/mL	Unstressed
	Purity 99%		+/- 758.5305 µg/mL	Stressed
4	2-Hexanone	12,548.0 µg/mL	+/- 73.4713 µg/mL	Gravimetric
	CAS # 591-78-6 (Lot MKCL1599)		+/- 757.1264 µg/mL	Unstressed
	Purity 99%		+/- 758.9237 µg/mL	Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

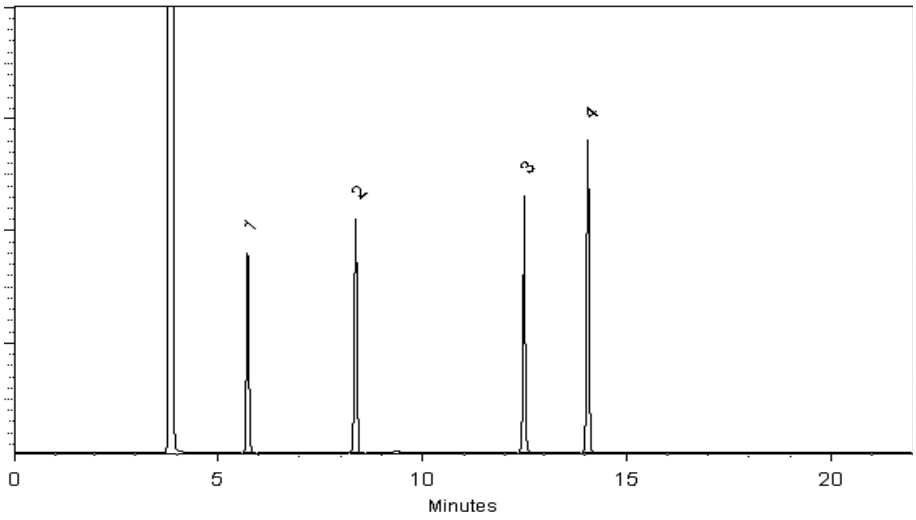
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Penelope Riglin - Operations Tech I

Date Mixed: 18-Jan-2022 **Balance:** B707717271

Marlina Cowan - Operations Tech I

Date Passed: 20-Jan-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Reagent

MSV_V_PentaCL_00030

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Bellefonte, PA 16823-8812
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Fax: (814)353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 577491 **Lot No.:** A0184174

Description : Custom Pentachloroethane Standard

Custom Pentachloroethane Standard 5,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2025 **Storage:** 0°C or colder

Ship: Ambient

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Pentachloroethane	5,022.0 µg/mL	+/- 29.4719 µg/mL	Gravimetric
	CAS # 76-01-7 (Lot 10518800)		+/- 281.6071 µg/mL	Unstressed
	Purity 99%		+/- 288.1950 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

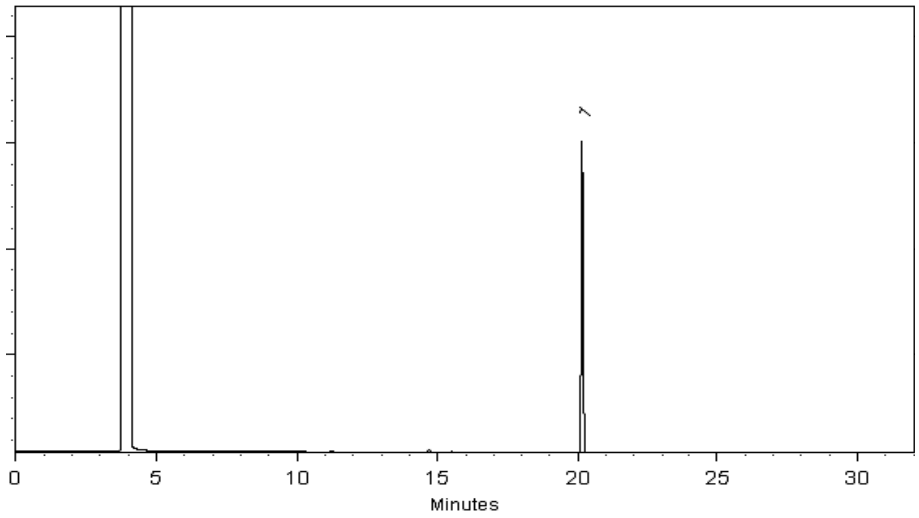
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Nick Yaw - Operations Tech I

Date Mixed: 15-Apr-2022 **Balance:** B707717271

Christie Mills - Operations Technician II

Date Passed: 20-Apr-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Reagent

MSV_V_PentaCL_00034

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Fax: (814)353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 577491 **Lot No.:** A0184174

Description : Custom Pentachloroethane Standard

Custom Pentachloroethane Standard 5,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2025 **Storage:** 0°C or colder

Ship: Ambient

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Pentachloroethane	5,022.0 µg/mL	+/- 29.4719 µg/mL	Gravimetric
	CAS # 76-01-7 (Lot 10518800)		+/- 281.6071 µg/mL	Unstressed
	Purity 99%		+/- 288.1950 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

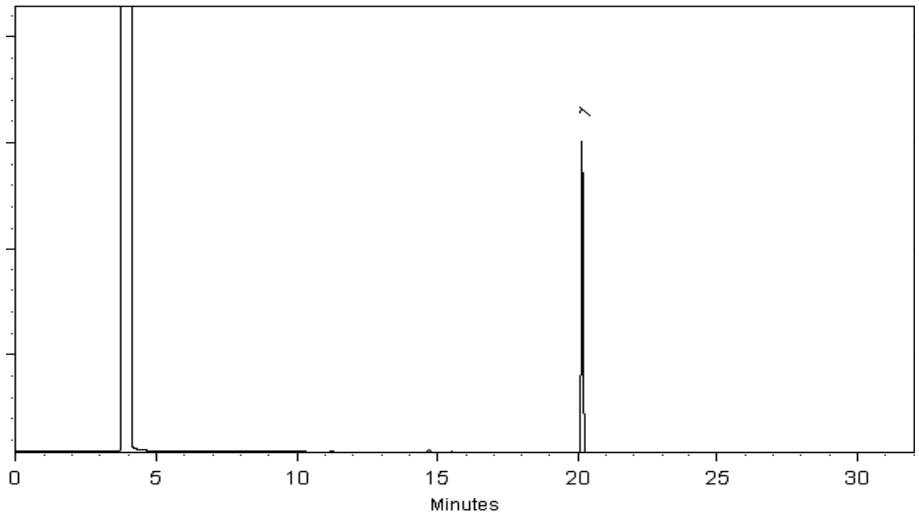
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Nick Yaw - Operations Tech I

Date Mixed: 15-Apr-2022 **Balance:** B707717271

Christie Mills - Operations Technician II

Date Passed: 20-Apr-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Method 8260C Low Level

Volatile Organic Compounds (GC/MS) by Method 8260C Low Level

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories En Job No.: 410-136514-2

SDG No.:

Matrix: Water Level: Low

GC Column (1): R-624SilMS 3 ID: 0.25 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
16-2	410-136514-1	110	110	95	94
16-3	410-136514-2	108	109	95	95
16-5	410-136514-3	109	109	96	94
16WC2B	410-136514-4	110	110	96	94
16SPRING	410-136514-5	110	109	95	94
Trip Blank 1	410-136514-6	107	107	96	95
Trip Blank 2	410-136514-7	108	108	96	96
	MB 410-404020/11	106	109	94	95
	LCS 410-404020/7	105	107	95	96
	LCSD 410-404020/8	104	106	95	96

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	80-120
DCA = 1,2-Dichloroethane-d4 (Surr)	80-120
TOL = Toluene-d8 (Surr)	80-120
BFB = 4-Bromofluorobenzene (Surr)	80-120

Column to be used to flag recovery values

FORM II EPA 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-2

SDG No.:

Matrix: Water Level: Low Lab File ID: IG03X06.D

Lab ID: LCS 410-404020/7 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Dimethyl ether	5.00	4.66 J	93	70-130	

Column to be used to flag recovery and RPD values

FORM III EPA 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-2

SDG No.:

Matrix: Water Level: Low Lab File ID: IG03X07.D

Lab ID: LCSD 410-404020/8 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Dimethyl ether	5.00	4.45 J	89	4	30	70-130	

Column to be used to flag recovery and RPD values

FORM III EPA 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-2

SDG No.:

Lab File ID: IG03X10.D Lab Sample ID: MB 410-404020/11

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: 19930 Date Analyzed: 08/03/2023 14:25

GC Column: R-624SilMS 30m ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
Trip Blank 1	410-136514-6	IG03X11.D	08/03/2023 14:45
Trip Blank 2	410-136514-7	IG03X12.D	08/03/2023 15:06
16-2	410-136514-1	IG03X22.D	08/03/2023 18:37
16-3	410-136514-2	IG03X23.D	08/03/2023 18:58
16-5	410-136514-3	IG03X24.D	08/03/2023 19:19
16WC2B	410-136514-4	IG03X25.D	08/03/2023 19:40
16SPRING	410-136514-5	IG03X26.D	08/03/2023 20:01

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-2

SDG No.:

Lab File ID: BFB Injection Date:

Instrument ID: BFB Injection Time:

Lab File ID: DFTPP Injection Date:

Instrument ID: DFTPP Injection Time:

Analysis Batch No.:

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE

NOTE: All ion abundances shall be normalized to m/z 95, the nominal base peak, even though the ion abundance of m/z 174 may be up to 120% that of m/z 95. Criteria based on EPA method 524.4.

NOTE: All ion abundances MUST be normalized to m/z 198, the nominal base peak, even though the ion abundance of m/z 442 may exceed that of m/z 198.

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 410-355532/12	IM21X11.D	03/21/2023	4:01
	ICIS 410-355532/13	IM21X12.D	03/21/2023	4:22
	IC 410-355532/14	IM21X13.D	03/21/2023	4:42
	IC 410-355532/15	IM21X14.D	03/21/2023	5:02
	IC 410-355532/16	IM21X15.D	03/21/2023	5:22
	IC 410-355532/17	IM21X16.D	03/21/2023	5:42
	IC 410-355532/18	IM21X17.D	03/21/2023	6:02

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-2

SDG No.:

Lab File ID: IU19T01.D BFB Injection Date: 06/19/2023

Instrument ID: 19930 BFB Injection Time: 14:12

Analysis Batch No.: 388102

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	15.2	
75	30.0 - 60.0 % of mass 95	45.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	Greater than 50% of mass 95	94.5	
175	5.0 - 9.0 % of mass 174	7.2	(7.6) 1
176	95.0 - 101.0 % of mass 174	93.5	(98.9) 1
177	5.0 - 9.0 % of mass 176	6.1	(6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 410-388102/3	IU19X02.D	06/19/2023	14:49
	IC 410-388102/4	IU19X03.D	06/19/2023	15:10
	IC 410-388102/5	IU19X04.D	06/19/2023	15:31
	IC 410-388102/6	IU19X05.D	06/19/2023	15:52
	IC 410-388102/7	IU19X06.D	06/19/2023	16:13
	IC 410-388102/8	IU19X07.D	06/19/2023	16:34
	IC 410-388102/9	IU19X08.D	06/19/2023	16:55
	ICV 410-388102/11	IU19X10.D	06/19/2023	17:37
	IC 410-388102/13	IU19X12.D	06/19/2023	18:19
	IC 410-388102/14	IU19X13.D	06/19/2023	18:40
	IC 410-388102/15	IU19X14.D	06/19/2023	19:01
	IC 410-388102/16	IU19X15.D	06/19/2023	19:22
	IC 410-388102/17	IU19X16.D	06/19/2023	19:42
	ICIS 410-388102/18	IU19X17.D	06/19/2023	20:03
	IC 410-388102/19	IU19X18.D	06/19/2023	20:25
	ICV 410-388102/21	IU19X20.D	06/19/2023	21:07

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-2

SDG No.:

Lab File ID: IG03T01.D BFB Injection Date: 08/03/2023

Instrument ID: 19930 BFB Injection Time: 11:02

Analysis Batch No.: 404020

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	16.0	
75	30.0 - 60.0 % of mass 95	45.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.3	
173	Less than 2.0 % of mass 174	0.9	(0.9) 1
174	Greater than 50% of mass 95	95.4	
175	5.0 - 9.0 % of mass 174	7.2	(7.5) 1
176	95.0 - 101.0 % of mass 174	92.5	(97.0) 1
177	5.0 - 9.0 % of mass 176	5.9	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 410-404020/3	IG03X02.D	08/03/2023	11:36
	CCV 410-404020/4	IG03X03.D	08/03/2023	11:57
	LCS 410-404020/7	IG03X06.D	08/03/2023	13:00
	LCSD 410-404020/8	IG03X07.D	08/03/2023	13:21
	MB 410-404020/11	IG03X10.D	08/03/2023	14:25
Trip Blank 1	410-136514-6	IG03X11.D	08/03/2023	14:45
Trip Blank 2	410-136514-7	IG03X12.D	08/03/2023	15:06
16-2	410-136514-1	IG03X22.D	08/03/2023	18:37
16-3	410-136514-2	IG03X23.D	08/03/2023	18:58
16-5	410-136514-3	IG03X24.D	08/03/2023	19:19
16WC2B	410-136514-4	IG03X25.D	08/03/2023	19:40
16SPRING	410-136514-5	IG03X26.D	08/03/2023	20:01

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-2

SDG No.:

Sample No.: ICIS 410-388102/18 Date Analyzed: 06/19/2023 20:03

Instrument ID: 19930 GC Column: R-624SilMS 30m ID: 0.25(mm)

Lab File ID (Standard): IU19X17.D Heated Purge: (Y/N) N

Calibration ID: 51353

		TBAd10		FB		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		130775	3.98	1807671	7.45	1439976	10.99
UPPER LIMIT		261550	4.48	3615342	7.95	2879952	11.49
LOWER LIMIT		65388	3.48	903836	6.95	719988	10.49
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 410-388102/21		143904	3.96	1909555	7.45	1501017	10.99
CCVIS 410-404020/3		152302	3.98	1871286	7.46	1594473	10.98

TBAd10 = t-Butyl alcohol-d10 (IS)
FB = Fluorobenzene (IS)
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-2

SDG No.:

Sample No.: ICIS 410-388102/18 Date Analyzed: 06/19/2023 20:03

Instrument ID: 19930 GC Column: R-624SilMS 30m ID: 0.25(mm)

Lab File ID (Standard): IU19X17.D Heated Purge: (Y/N) N

Calibration ID: 51353

		DCBd4					
		AREA #	RT #	#	RT #	#	RT #
INITIAL CALIBRATION MID-POINT		884528	12.88				
UPPER LIMIT		1769056	13.38				
LOWER LIMIT		442264	12.38				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 410-388102/21		914425	12.88				
CCVIS 410-404020/3		1007139	12.87				

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-2

SDG No.:

Sample No.: CCVIS 410-404020/3 Date Analyzed: 08/03/2023 11:36

Instrument ID: 19930 GC Column: R-624SilMS 30m ID: 0.25(mm)

Lab File ID (Standard): IG03X02.D Heated Purge: (Y/N) N

Calibration ID: 51353

		TBAd10		FB		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		152302	3.98	1871286	7.46	1594473	10.98
UPPER LIMIT		304604	4.48	3742572	7.96	3188946	11.48
LOWER LIMIT		76151	3.48	935643	6.96	797237	10.48
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 410-404020/11		140260	3.98	1806795	7.46	1540201	10.98
410-136514-6	Trip Blank 1	130157	3.98	1668121	7.46	1423787	10.98
410-136514-7	Trip Blank 2	128289	3.98	1603214	7.46	1362113	10.98
410-136514-1	16-2	124333	3.98	1585512	7.46	1356033	10.98
410-136514-2	16-3	129465	3.97	1633993	7.46	1382238	10.98
410-136514-3	16-5	129487	3.99	1582283	7.46	1348275	10.98
410-136514-4	16WC2B	139131	4.00	1709988	7.46	1470334	10.98
410-136514-5	16SPRING	127364	4.01	1572352	7.46	1356073	10.98

TBAd10 = t-Butyl alcohol-d10 (IS)
TBAd10 = t-Butyl alcohol-d10 (IS)
FB = Fluorobenzene (IS)
CBZd5 = Chlorobenzene-d5 (IS)
Area Limit = 50%-200% of internal standard area
CBZd5 = Chlorobenzene-d5 (IS)
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-2

SDG No.:

Sample No.: CCVIS 410-404020/3 Date Analyzed: 08/03/2023 11:36

Instrument ID: 19930 GC Column: R-624SilMS 30m ID: 0.25(mm)

Lab File ID (Standard): IG03X02.D Heated Purge: (Y/N) N

Calibration ID: 51353

		DCBd4					
		AREA #	RT #	#	RT #	#	RT #
12/24 HOUR STD		1007139	12.87				
UPPER LIMIT		2014278	13.37				
LOWER LIMIT		503570	12.37				
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 410-404020/11		913863	12.88				
410-136514-6	Trip Blank 1	848038	12.88				
410-136514-7	Trip Blank 2	813779	12.88				
410-136514-1	16-2	799420	12.88				
410-136514-2	16-3	815461	12.88				
410-136514-3	16-5	802305	12.88				
410-136514-4	16WC2B	865697	12.88				
410-136514-5	16SPRING	795269	12.88				

DCBd4 = 1,4-Dichlorobenzene-d4
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-2

SDG No.:

Client Sample ID: 16-2 Lab Sample ID: 410-136514-1

Matrix: Water Lab File ID: IG03X22.D

Analysis Method: EPA 8260C Date Collected: 07/26/2023 09:30

Sample wt/vol: 25(mL) Date Analyzed: 08/03/2023 18:37

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL) Heated Purge: (Y/N) N pH:

% Moisture: % Solids: Level: (low/med) Low

Analysis Batch No.: 404020 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
115-10-6	Dimethyl ether	ND		10	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	110		80-120
1868-53-7	Dibromofluoromethane (Surr)	110		80-120
460-00-4	4-Bromofluorobenzene (Surr)	94		80-120
2037-26-5	Toluene-d8 (Surr)	95		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X22.D
Lims ID: 410-136514-A-1
Client ID: 16-2
Sample Type: Client
Inject. Date: 03-Aug-2023 18:37:30 ALS Bottle#: 22 Worklist Smp#: 23
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090530-023
Operator ID: knk41612 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 04-Aug-2023 11:12:41 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1672

First Level Reviewer: kaewrungrueangp Date: 04-Aug-2023 11:06:16

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
	1 Dichlorodifluoromethane	85		1.867				ND	
	3 Dimethyl ether	45		1.922				ND	
	4 Chloromethane	50		2.056				ND	
	5 Vinyl chloride	62		2.160				ND	
	8 Chloroethane	64		2.556				ND	
	10 Trichlorofluoromethane	101		2.843				ND	
	11 Ethyl ether	59		3.062				ND	
	15 1,1-Dichloroethene	96		3.349				ND	
	17 1,1,2-Trichloro-1,2,2-trifluoroe	101		3.398				ND	
	25 Methylene Chloride	84		3.977				ND	
*	26 t-Butyl alcohol-d10 (IS)	65	3.983	3.983	0.000	26	124333	50.0	
	32 1,1-Dichloroethane	63	5.031	5.031	0.000	90	5358	0.0661	
	38 2-Butanone (MEK)	43		5.830				ND	
	47 Tetrahydrofuran	71		6.214				ND	
$	49 Dibromofluoromethane (Surr)	113	6.567	6.568	-0.001	94	446563	11.0	
	50 1,1,1-Trichloroethane	97		6.580				ND	
	54 Carbon tetrachloride	117		6.793				ND	
$	56 1,2-Dichloroethane-d4 (Surr)	102	7.025	7.025	0.000	62	88731	11.0	
	57 Benzene	78		7.055				ND	
*	61 Fluorobenzene (IS)	96	7.458	7.458	0.000	99	1585512	10.0	
	64 Trichloroethene	95		7.939				ND	
$	78 Toluene-d8 (Surr)	98	9.494	9.494	0.000	93	1659756	9.52	
	79 Toluene	92		9.573				ND	
	100 1,1,2-Trichloroethane	97		10.049				ND	
	101 Tetrachloroethene	166		10.140				ND	
*	107 Chlorobenzene-d5 (IS)	117	10.981	10.981	0.000	84	1356033	10.0	
	112 Ethylbenzene	91		11.097				ND	
	113 m-Xylene & p-Xylene	106		11.213				ND	
S	110 Xylenes, Total	106		11.245				ND	7
	114 o-Xylene	106		11.542				ND	
$	120 4-Bromofluorobenzene (Surr)	95	11.993	11.987	0.006	95	616631	9.39	
*	135 1,4-Dichlorobenzene-d4	152	12.877	12.871	0.006	93	799420	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

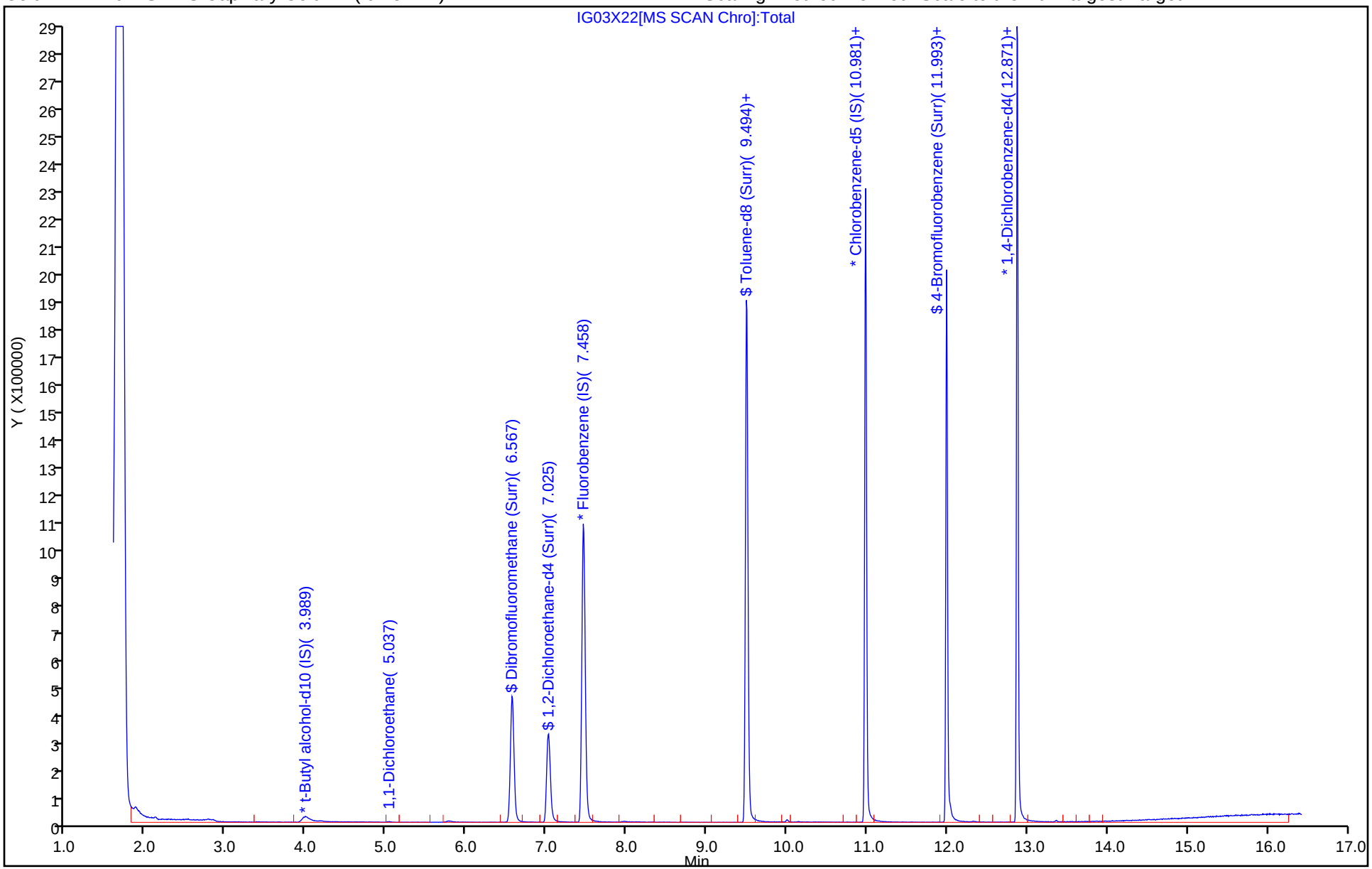
MSV_LLcentISS_00009 Amount Added: 5.00 Units: uL Run Reagent

Report Date: 10-Aug-2023 16:32:51 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X22.D				
Injection Date:	03-Aug-2023 18:37:30	Instrument ID:	19930	Operator ID:	knk41612
Lims ID:	410-136514-A-1	Lab Sample ID:	410-136514-1	Worklist Smp#:	23
Client ID:	16-2				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X22.D
Lims ID: 410-136514-A-1
Client ID: 16-2
Sample Type: Client
Inject. Date: 03-Aug-2023 18:37:30 ALS Bottle#: 22 Worklist Smp#: 23
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090530-023
Operator ID: knk41612 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 04-Aug-2023 11:12:41 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1672

First Level Reviewer: kaewrungrueangp Date: 04-Aug-2023 11:06:16

Compound	Amount Added	Amount Recovered	% Rec.
$ 49 Dibromofluoromethane (Surr)	10.0	11.0	109.65
$ 56 1,2-Dichloroethane-d4 (Surr)	10.0	11.0	109.89
$ 78 Toluene-d8 (Surr)	10.0	9.52	95.20
$ 120 4-Bromofluorobenzene (Surr)	10.0	9.39	93.87

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136514-2

SDG No.:

Client Sample ID: 16-3
Lab Sample ID: 410-136514-2

Matrix: Water
Lab File ID: IG03X23.D

Analysis Method: EPA 8260C
Date Collected: 07/26/2023 11:15

Sample wt/vol: 25(mL)
Date Analyzed: 08/03/2023 18:58

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 404020
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
115-10-6	Dimethyl ether	ND		10	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	109		80-120
1868-53-7	Dibromofluoromethane (Surr)	108		80-120
460-00-4	4-Bromofluorobenzene (Surr)	95		80-120
2037-26-5	Toluene-d8 (Surr)	95		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X23.D
Lims ID: 410-136514-A-2
Client ID: 16-3
Sample Type: Client
Inject. Date: 03-Aug-2023 18:58:30 ALS Bottle#: 23 Worklist Smp#: 24
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090530-024
Operator ID: knk41612 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 04-Aug-2023 11:12:41 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1672

First Level Reviewer: kaewrungrueangp Date: 04-Aug-2023 11:07:07

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.843	1.867	-0.024	98	12713	0.1943	
3 Dimethyl ether	45		1.922				ND	
4 Chloromethane	50		2.056				ND	7
5 Vinyl chloride	62		2.160				ND	
8 Chloroethane	64		2.556				ND	
10 Trichlorofluoromethane	101	2.831	2.843	-0.012	1	3355	0.0414	
11 Ethyl ether	59	3.050	3.062	-0.012	20	847	0.0253	
15 1,1-Dichloroethene	96		3.349				ND	
17 1,1,2-Trichloro-1,2,2-trifluoroe	101		3.398				ND	
25 Methylene Chloride	84		3.977				ND	
* 26 t-Butyl alcohol-d10 (IS)	65	3.971	3.983	-0.012	27	129465	50.0	
32 1,1-Dichloroethane	63		5.031				ND	
38 2-Butanone (MEK)	43		5.830				ND	U
47 Tetrahydrofuran	71		6.214				ND	
$ 49 Dibromofluoromethane (Surr)	113	6.568	6.568	0.000	94	455299	10.8	
50 1,1,1-Trichloroethane	97		6.580				ND	
54 Carbon tetrachloride	117		6.793				ND	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.019	7.025	-0.006	62	90700	10.9	
57 Benzene	78		7.055				ND	
* 61 Fluorobenzene (IS)	96	7.458	7.458	0.000	99	1633993	10.0	
64 Trichloroethene	95		7.939				ND	
$ 78 Toluene-d8 (Surr)	98	9.494	9.494	0.000	93	1696576	9.55	
79 Toluene	92		9.573				ND	
100 1,1,2-Trichloroethane	97		10.049				ND	
101 Tetrachloroethene	166		10.140				ND	
* 107 Chlorobenzene-d5 (IS)	117	10.981	10.981	0.000	84	1382238	10.0	
112 Ethylbenzene	91		11.097				ND	
113 m-Xylene & p-Xylene	106		11.213				ND	
S 110 Xylenes, Total	106		11.245				ND	7
114 o-Xylene	106		11.542				ND	
$ 120 4-Bromofluorobenzene (Surr)	95	11.993	11.987	0.006	95	635784	9.49	
* 135 1,4-Dichlorobenzene-d4	152	12.877	12.871	0.006	93	815461	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

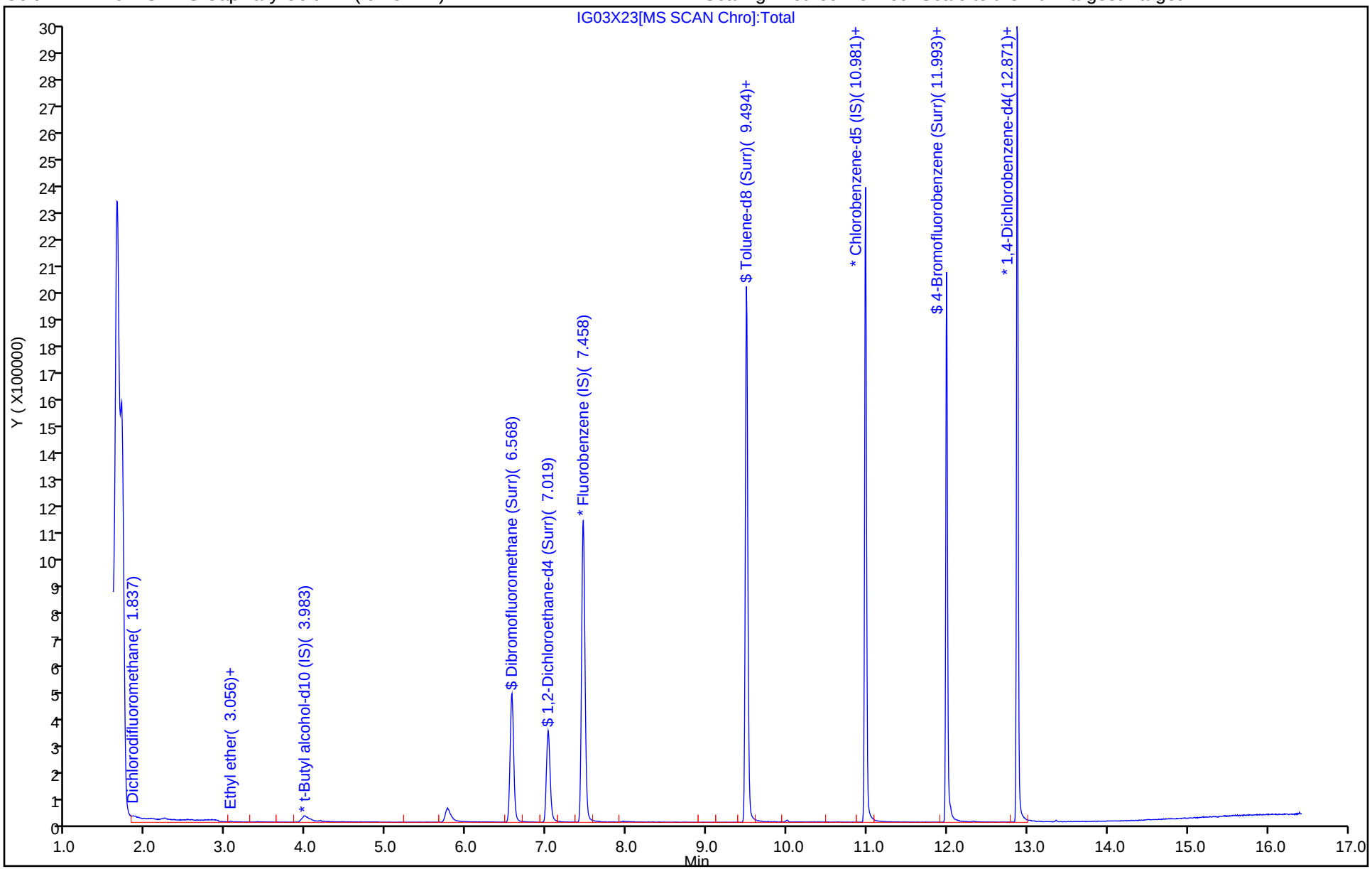
MSV_LLcentISS_00009	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 10-Aug-2023 16:32:52 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X23.D				
Injection Date:	03-Aug-2023 18:58:30	Instrument ID:	19930	Operator ID:	knk41612
Lims ID:	410-136514-A-2	Lab Sample ID:	410-136514-2	Worklist Smp#:	24
Client ID:	16-3				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X23.D
Lims ID: 410-136514-A-2
Client ID: 16-3
Sample Type: Client
Inject. Date: 03-Aug-2023 18:58:30 ALS Bottle#: 23 Worklist Smp#: 24
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090530-024
Operator ID: knk41612 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 04-Aug-2023 11:12:41 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1672

First Level Reviewer: kaewrungrueangp Date: 04-Aug-2023 11:07:07

Compound	Amount Added	Amount Recovered	% Rec.
$ 49 Dibromofluoromethane (Surr)	10.0	10.8	108.48
$ 56 1,2-Dichloroethane-d4 (Surr)	10.0	10.9	108.99
$ 78 Toluene-d8 (Surr)	10.0	9.55	95.47
$ 120 4-Bromofluorobenzene (Surr)	10.0	9.49	94.95

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136514-2

SDG No.:

Client Sample ID: 16-5
Lab Sample ID: 410-136514-3

Matrix: Water
Lab File ID: IG03X24.D

Analysis Method: EPA 8260C
Date Collected: 07/26/2023 07:45

Sample wt/vol: 25(mL)
Date Analyzed: 08/03/2023 19:19

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 404020
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
115-10-6	Dimethyl ether	ND		10	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	109		80-120
1868-53-7	Dibromofluoromethane (Surr)	109		80-120
460-00-4	4-Bromofluorobenzene (Surr)	94		80-120
2037-26-5	Toluene-d8 (Surr)	96		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X24.D
Lims ID: 410-136514-A-3
Client ID: 16-5
Sample Type: Client
Inject. Date: 03-Aug-2023 19:19:30 ALS Bottle#: 24 Worklist Smp#: 25
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090530-025
Operator ID: knk41612 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 04-Aug-2023 11:12:41 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1672

First Level Reviewer: kaewrungrueangp Date: 04-Aug-2023 11:07:55

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85		1.867				ND	
3 Dimethyl ether	45		1.922				ND	
4 Chloromethane	50		2.056				ND	7
5 Vinyl chloride	62		2.160				ND	
8 Chloroethane	64		2.556				ND	
10 Trichlorofluoromethane	101		2.843				ND	7
11 Ethyl ether	59		3.062				ND	
15 1,1-Dichloroethene	96		3.349				ND	
17 1,1,2-Trichloro-1,2,2-trifluoroe	101		3.398				ND	
25 Methylene Chloride	84		3.977				ND	
* 26 t-Butyl alcohol-d10 (IS)	65	3.989	3.983	0.006	26	129487	50.0	
32 1,1-Dichloroethane	63	5.049	5.031	0.018	1	3412	0.0422	Ma
38 2-Butanone (MEK)	43		5.830				ND	7
47 Tetrahydrofuran	71		6.214				ND	
$ 49 Dibromofluoromethane (Surr)	113	6.567	6.568	-0.001	94	441947	10.9	
50 1,1,1-Trichloroethane	97		6.580				ND	
54 Carbon tetrachloride	117		6.793				ND	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.019	7.025	-0.006	67	87552	10.9	
57 Benzene	78	7.055	7.055	0.000	92	11386	0.0609	
* 61 Fluorobenzene (IS)	96	7.458	7.458	0.000	99	1582283	10.0	
64 Trichloroethene	95		7.939				ND	
$ 78 Toluene-d8 (Surr)	98	9.494	9.494	0.000	93	1663055	9.59	
79 Toluene	92	9.579	9.573	0.006	99	19632	0.1436	
100 1,1,2-Trichloroethane	97		10.049				ND	
101 Tetrachloroethene	166		10.140				ND	
* 107 Chlorobenzene-d5 (IS)	117	10.981	10.981	0.000	84	1348275	10.0	
112 Ethylbenzene	91		11.097				ND	7
113 m-Xylene & p-Xylene	106	11.219	11.213	0.006	90	4356	0.0404	
S 110 Xylenes, Total	106		11.245				ND	7
114 o-Xylene	106		11.542				ND	
$ 120 4-Bromofluorobenzene (Surr)	95	11.993	11.987	0.006	96	616288	9.44	
* 135 1,4-Dichlorobenzene-d4	152	12.877	12.871	0.006	93	802305	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

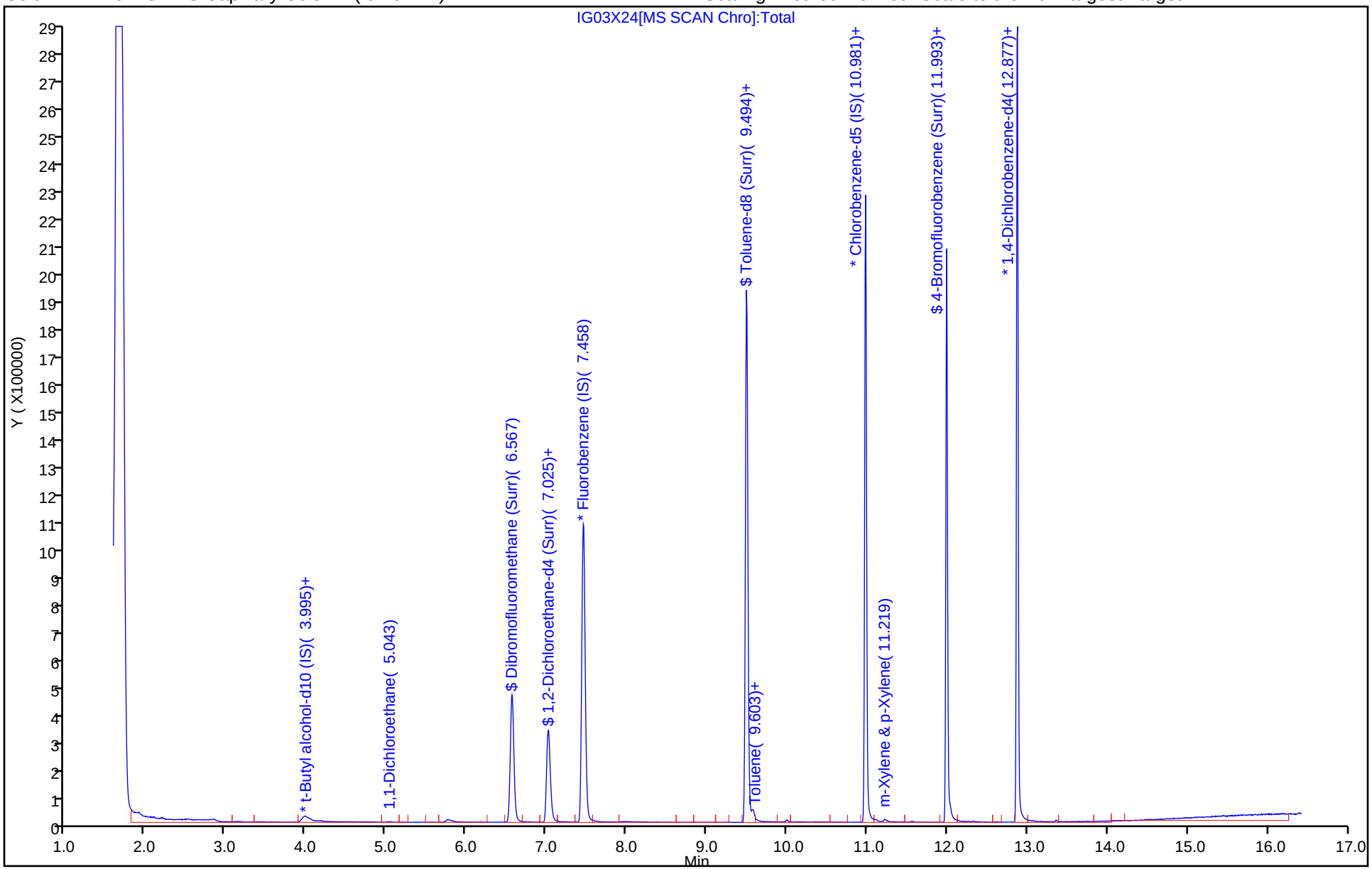
MSV_LLcentISS_00009 Amount Added: 5.00 Units: uL Run Reagent

Report Date: 10-Aug-2023 16:32:53 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X24.D				
Injection Date:	03-Aug-2023 19:19:30	Instrument ID:	19930	Operator ID:	knk41612
Lims ID:	410-136514-A-3	Lab Sample ID:	410-136514-3	Worklist Smp#:	25
Client ID:	16-5				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X24.D
Lims ID: 410-136514-A-3
Client ID: 16-5
Sample Type: Client
Inject. Date: 03-Aug-2023 19:19:30 ALS Bottle#: 24 Worklist Smp#: 25
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090530-025
Operator ID: knk41612 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 04-Aug-2023 11:12:41 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1672

First Level Reviewer: kaewrungrueangp Date: 04-Aug-2023 11:07:55

Compound	Amount Added	Amount Recovered	% Rec.
$ 49 Dibromofluoromethane (Surr)	10.0	10.9	108.74
$ 56 1,2-Dichloroethane-d4 (Surr)	10.0	10.9	108.65
$ 78 Toluene-d8 (Surr)	10.0	9.59	95.94
$ 120 4-Bromofluorobenzene (Surr)	10.0	9.44	94.35

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136514-2

SDG No.:

Client Sample ID: 16WC2B
Lab Sample ID: 410-136514-4

Matrix: Water
Lab File ID: IG03X25.D

Analysis Method: EPA 8260C
Date Collected: 07/26/2023 08:40

Sample wt/vol: 25(mL)
Date Analyzed: 08/03/2023 19:40

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 404020
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
115-10-6	Dimethyl ether	ND		10	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	110		80-120
1868-53-7	Dibromofluoromethane (Surr)	110		80-120
460-00-4	4-Bromofluorobenzene (Surr)	94		80-120
2037-26-5	Toluene-d8 (Surr)	96		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X25.D
Lims ID: 410-136514-A-4
Client ID: 16WC2B
Sample Type: Client
Inject. Date: 03-Aug-2023 19:40:30 ALS Bottle#: 25 Worklist Smp#: 26
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090530-026
Operator ID: knk41612 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 04-Aug-2023 11:12:41 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1672

First Level Reviewer: kaewrungrueangp Date: 04-Aug-2023 11:08:17

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85		1.867				ND	
3 Dimethyl ether	45		1.922				ND	U
4 Chloromethane	50		2.056				ND	
5 Vinyl chloride	62		2.160				ND	
8 Chloroethane	64		2.556				ND	
10 Trichlorofluoromethane	101		2.843				ND	
11 Ethyl ether	59		3.062				ND	7
15 1,1-Dichloroethene	96		3.349				ND	
17 1,1,2-Trichloro-1,2,2-trifluoroe	101		3.398				ND	
25 Methylene Chloride	84		3.977				ND	
* 26 t-Butyl alcohol-d10 (IS)	65	4.001	3.983	0.018	26	139131	50.0	
32 1,1-Dichloroethane	63		5.031				ND	
38 2-Butanone (MEK)	43		5.830				ND	7
47 Tetrahydrofuran	71		6.214				ND	
$ 49 Dibromofluoromethane (Surr)	113	6.568	6.568	0.000	94	481179	11.0	
50 1,1,1-Trichloroethane	97	6.586	6.580	0.006	36	14676	0.1740	
54 Carbon tetrachloride	117		6.793				ND	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.019	7.025	-0.006	62	95621	11.0	
57 Benzene	78		7.055				ND	
* 61 Fluorobenzene (IS)	96	7.458	7.458	0.000	99	1709988	10.0	
64 Trichloroethene	95		7.939				ND	
$ 78 Toluene-d8 (Surr)	98	9.494	9.494	0.000	93	1805321	9.55	
79 Toluene	92		9.573				ND	
100 1,1,2-Trichloroethane	97		10.049				ND	
101 Tetrachloroethene	166		10.140				ND	
* 107 Chlorobenzene-d5 (IS)	117	10.981	10.981	0.000	84	1470334	10.0	
112 Ethylbenzene	91		11.097				ND	
113 m-Xylene & p-Xylene	106		11.213				ND	
S 110 Xylenes, Total	106		11.245				ND	7
114 o-Xylene	106		11.542				ND	
$ 120 4-Bromofluorobenzene (Surr)	95	11.993	11.987	0.006	95	670149	9.41	
* 135 1,4-Dichlorobenzene-d4	152	12.877	12.871	0.006	93	865697	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

MSV_LLcentISS_00009 Amount Added: 5.00 Units: uL Run Reagent

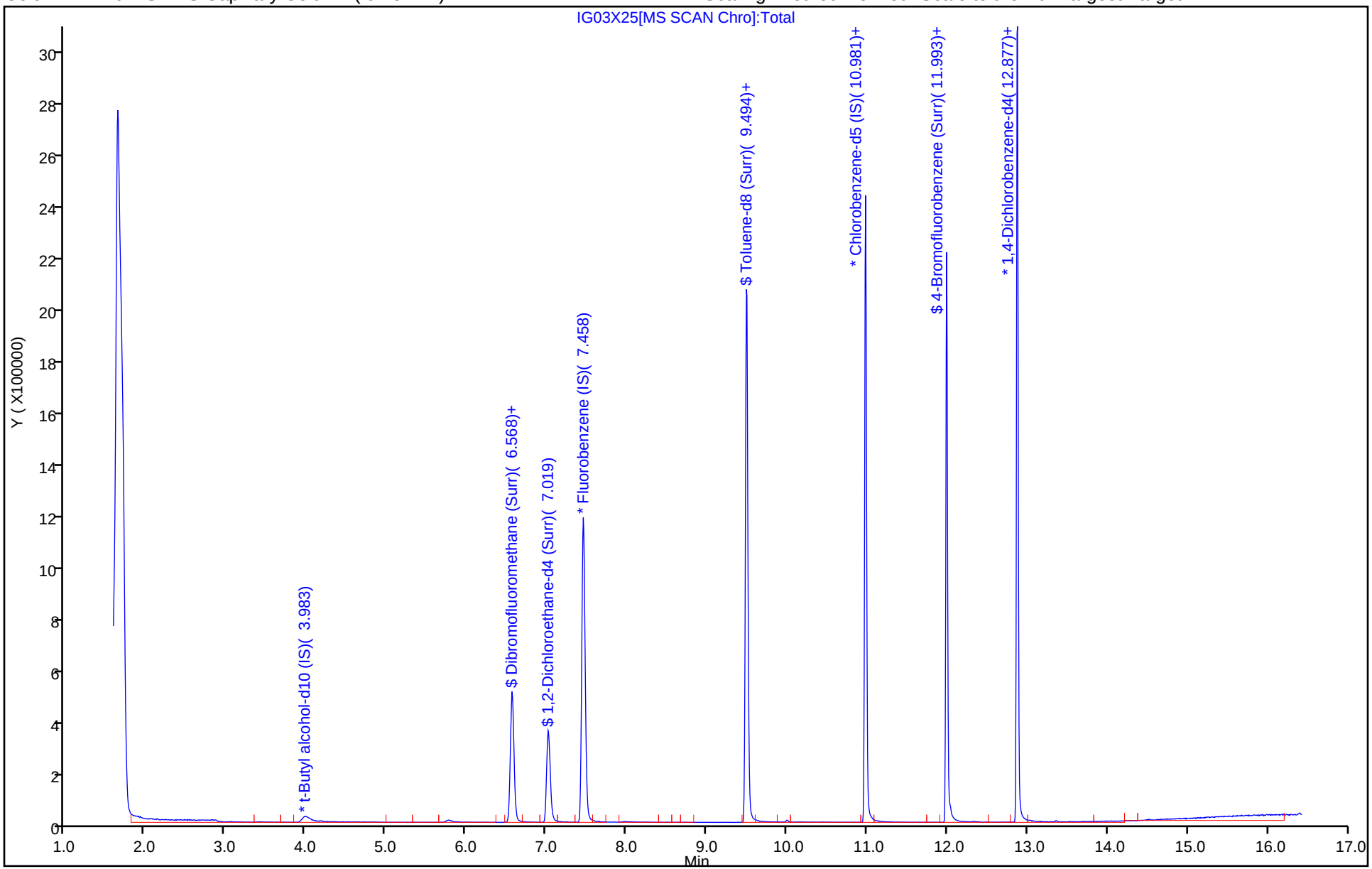
Report Date: 10-Aug-2023 16:32:55 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X25.D

Injection Date:	03-Aug-2023 19:40:30	Instrument ID:	19930	Operator ID:	knk41612
Lims ID:	410-136514-A-4	Lab Sample ID:	410-136514-4	Worklist Smp#:	26
Client ID:	16WC2B				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X25.D
Lims ID: 410-136514-A-4
Client ID: 16WC2B
Sample Type: Client
Inject. Date: 03-Aug-2023 19:40:30 ALS Bottle#: 25 Worklist Smp#: 26
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090530-026
Operator ID: knk41612 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 04-Aug-2023 11:12:41 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1672

First Level Reviewer: kaewrungrueangp Date: 04-Aug-2023 11:08:17

Compound	Amount Added	Amount Recovered	% Rec.
$ 49 Dibromofluoromethane (Surr)	10.0	11.0	109.55
$ 56 1,2-Dichloroethane-d4 (Surr)	10.0	11.0	109.80
$ 78 Toluene-d8 (Surr)	10.0	9.55	95.50
$ 120 4-Bromofluorobenzene (Surr)	10.0	9.41	94.08

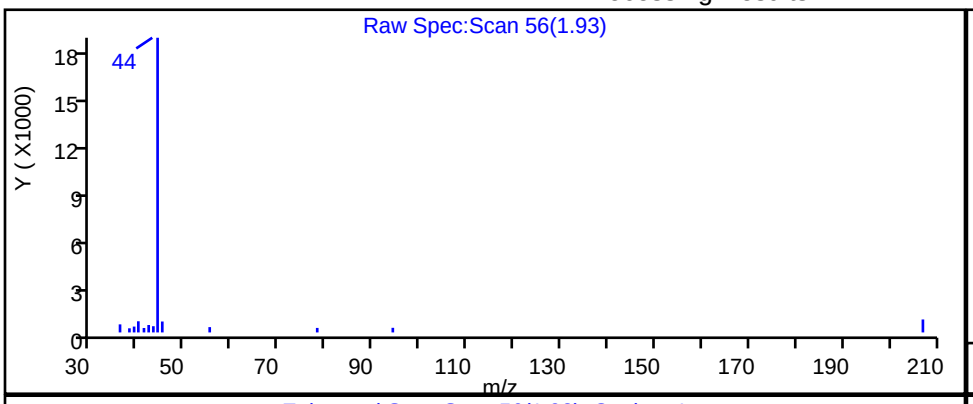
User Disabled Compound Report

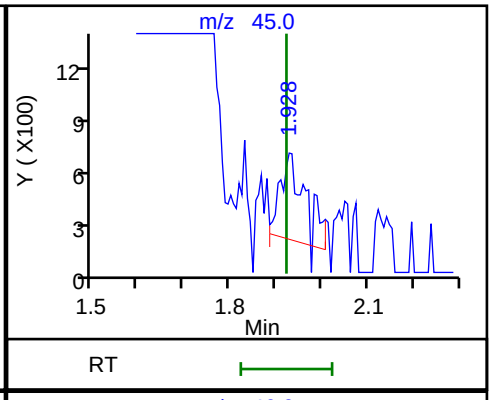
Eurofins Lancaster Laboratories Environment Testing, LLC

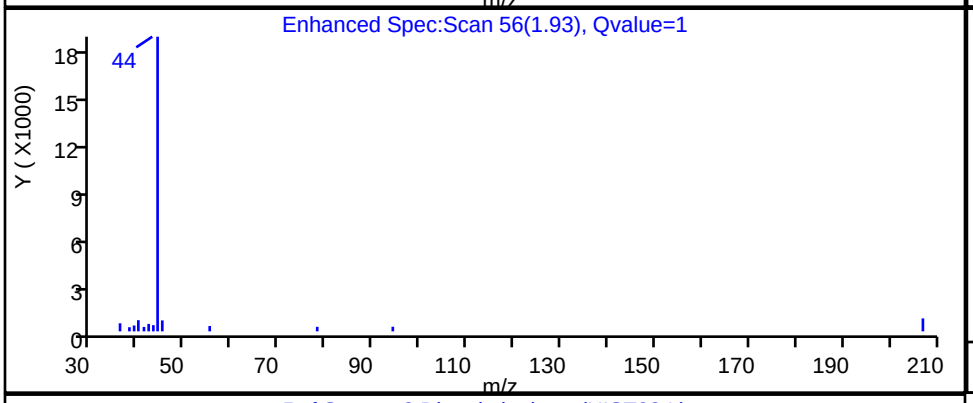
Data File:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X25.D				
Injection Date:	03-Aug-2023 19:40:30	Instrument ID:	19930		
Lims ID:	410-136514-A-4	Lab Sample ID:	410-136514-4		
Client ID:	16WC2B				
Operator ID:	knk41612	ALS Bottle#:	25	Worklist Smp#:	26
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

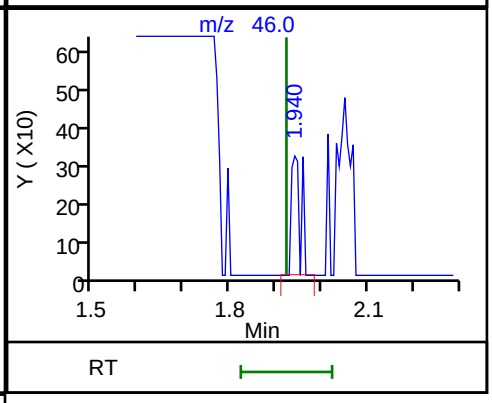
3 Dimethyl ether, CAS: 115-10-6

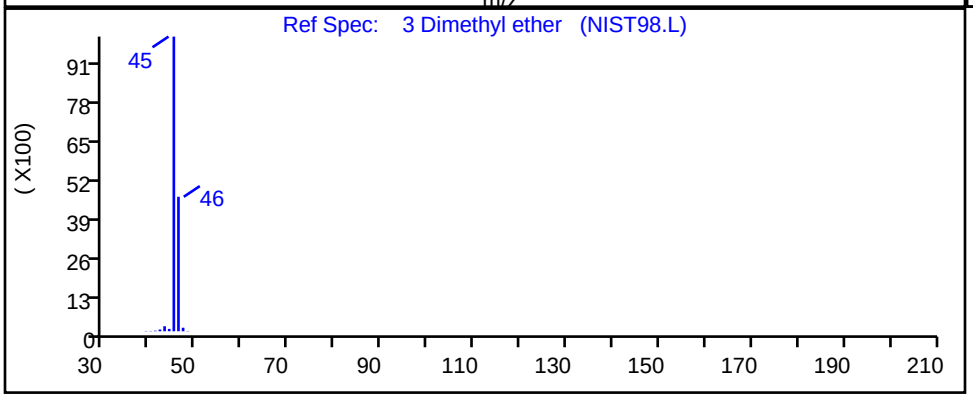
Processing Results











RT	Mass	Response	Amount
1.93	45.00	1924	0.033301
1.94	46.00	450	

Reviewer: kaewrungrueangp, 04-Aug-2023 11:08:05 07:00:00 (UTC)

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136514-2

SDG No.:

Client Sample ID: 16SPRING
Lab Sample ID: 410-136514-5

Matrix: Water
Lab File ID: IG03X26.D

Analysis Method: EPA 8260C
Date Collected: 07/26/2023 08:00

Sample wt/vol: 25(mL)
Date Analyzed: 08/03/2023 20:01

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 404020
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
115-10-6	Dimethyl ether	ND		10	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	109		80-120
1868-53-7	Dibromofluoromethane (Surr)	110		80-120
460-00-4	4-Bromofluorobenzene (Surr)	94		80-120
2037-26-5	Toluene-d8 (Surr)	95		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X26.D
Lims ID: 410-136514-A-5
Client ID: 16SPRING
Sample Type: Client
Inject. Date: 03-Aug-2023 20:01:30 ALS Bottle#: 26 Worklist Smp#: 27
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090530-027
Operator ID: knk41612 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 04-Aug-2023 11:12:41 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1672

First Level Reviewer: kaewrungrueangp Date: 04-Aug-2023 11:08:48

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85		1.867				ND	
3 Dimethyl ether	45		1.922				ND	U
4 Chloromethane	50		2.056				ND	7
5 Vinyl chloride	62		2.160				ND	
8 Chloroethane	64		2.556				ND	
10 Trichlorofluoromethane	101		2.843				ND	7
11 Ethyl ether	59	3.050	3.062	-0.012	90	7406	0.2303	
15 1,1-Dichloroethene	96		3.349				ND	
17 1,1,2-Trichloro-1,2,2-trifluoroe	101		3.398				ND	
25 Methylene Chloride	84		3.977				ND	
* 26 t-Butyl alcohol-d10 (IS)	65	4.007	3.983	0.024	22	127364	50.0	
32 1,1-Dichloroethane	63	5.031	5.031	0.000	96	25566	0.3180	
38 2-Butanone (MEK)	43		5.830				ND	
47 Tetrahydrofuran	71		6.214				ND	
$ 49 Dibromofluoromethane (Surr)	113	6.561	6.568	-0.007	94	442402	11.0	
50 1,1,1-Trichloroethane	97		6.580				ND	
54 Carbon tetrachloride	117		6.793				ND	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.019	7.025	-0.006	62	87263	10.9	
57 Benzene	78		7.055				ND	
* 61 Fluorobenzene (IS)	96	7.458	7.458	0.000	99	1572352	10.0	
64 Trichloroethene	95		7.939				ND	
$ 78 Toluene-d8 (Surr)	98	9.494	9.494	0.000	93	1650125	9.46	
79 Toluene	92		9.573				ND	7
100 1,1,2-Trichloroethane	97		10.049				ND	
101 Tetrachloroethene	166		10.140				ND	7
* 107 Chlorobenzene-d5 (IS)	117	10.981	10.981	0.000	84	1356073	10.0	
112 Ethylbenzene	91		11.097				ND	
113 m-Xylene & p-Xylene	106		11.213				ND	
S 110 Xylenes, Total	106		11.245				ND	7
114 o-Xylene	106		11.542				ND	
$ 120 4-Bromofluorobenzene (Surr)	95	11.993	11.987	0.006	96	616758	9.39	
* 135 1,4-Dichlorobenzene-d4	152	12.877	12.871	0.006	93	795269	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

MSV_LLcentISS_00009	Amount Added:	5.00	Units: uL	Run Reagent

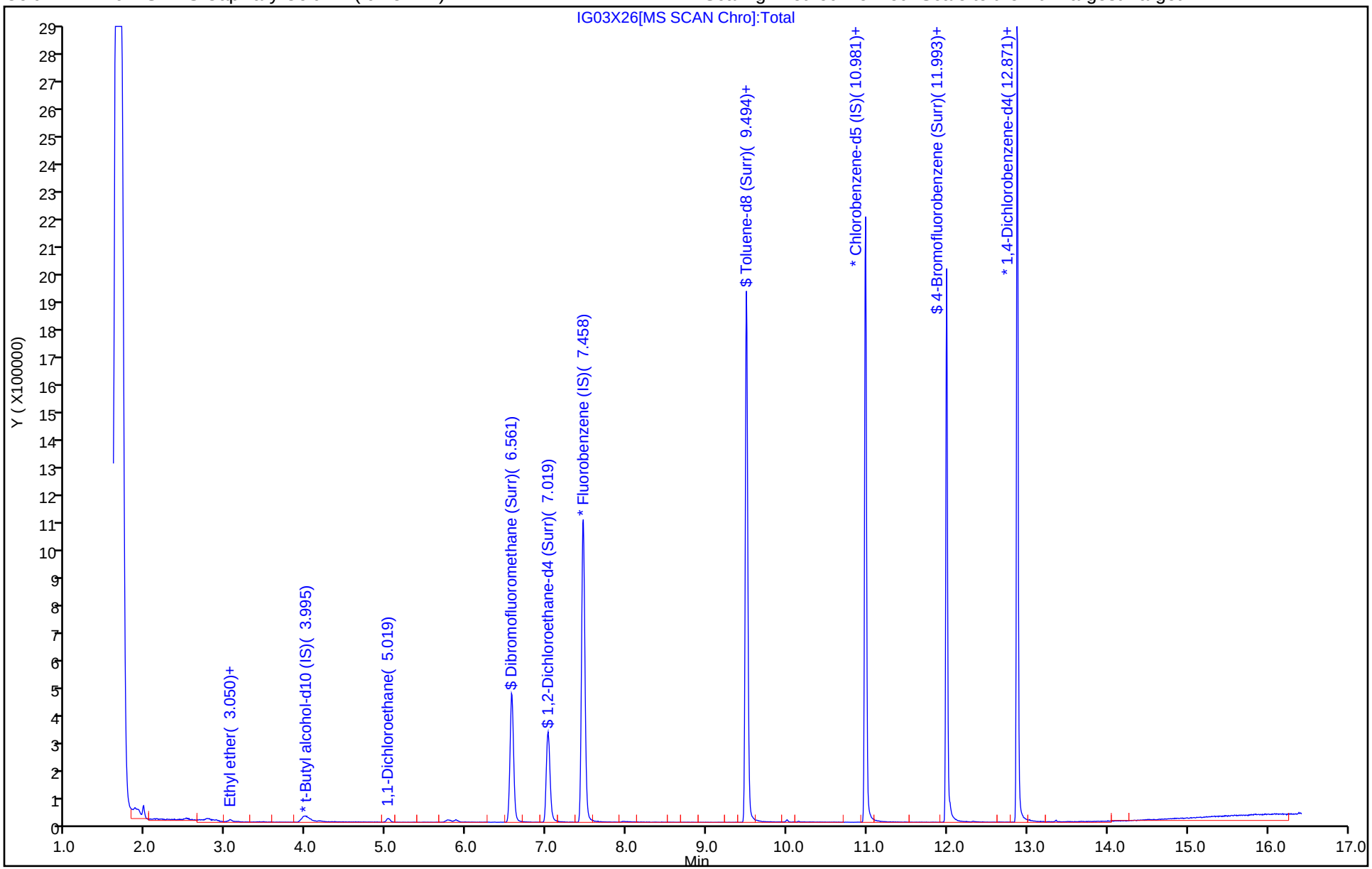
Report Date: 10-Aug-2023 16:32:56 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X26.D

Injection Date:	03-Aug-2023 20:01:30	Instrument ID:	19930	Operator ID:	knk41612
Lims ID:	410-136514-A-5	Lab Sample ID:	410-136514-5	Worklist Smp#:	27
Client ID:	16SPRING				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X26.D				
Lims ID:	410-136514-A-5				
Client ID:	16SPRING				
Sample Type:	Client				
Inject. Date:	03-Aug-2023 20:01:30	ALS Bottle#:	26	Worklist Smp#:	27
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0090530-027				
Operator ID:	knk41612	Instrument ID:	19930		
Method:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m				
Limit Group:	MSV - 8260C_D				
Last Update:	04-Aug-2023 11:12:41	Calib Date:	19-Jun-2023 20:25:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1672				

First Level Reviewer: kaewrungrueangp Date: 04-Aug-2023 11:08:48

Compound	Amount Added	Amount Recovered	% Rec.
$ 49 Dibromofluoromethane (Surr)	10.0	11.0	109.54
$ 56 1,2-Dichloroethane-d4 (Surr)	10.0	10.9	108.97
$ 78 Toluene-d8 (Surr)	10.0	9.46	94.65
$ 120 4-Bromofluorobenzene (Surr)	10.0	9.39	93.88

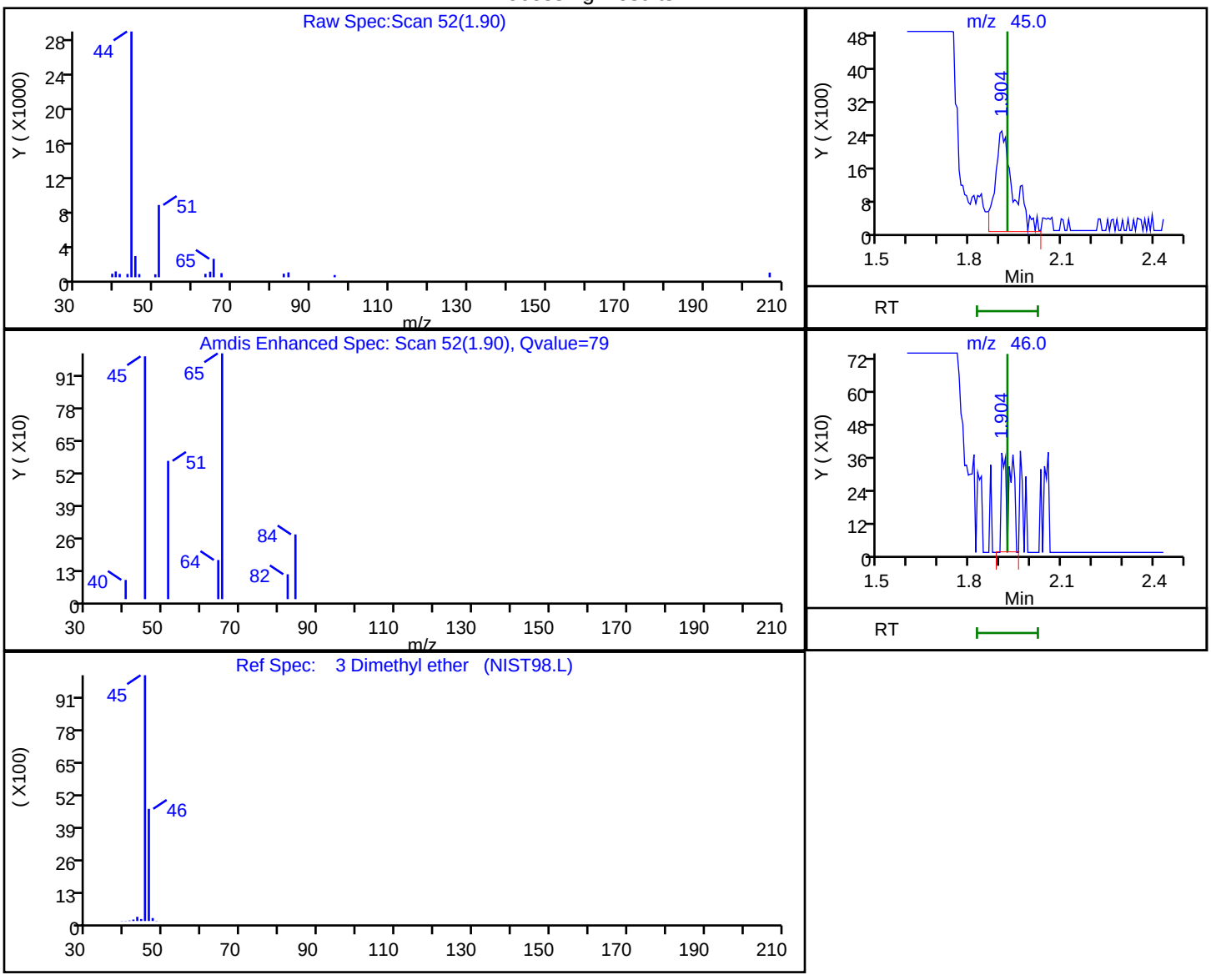
User Disabled Compound Report

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X26.D				
Injection Date:	03-Aug-2023 20:01:30	Instrument ID:	19930		
Lims ID:	410-136514-A-5	Lab Sample ID:	410-136514-5		
Client ID:	16SPRING				
Operator ID:	knk41612	ALS Bottle#:	26	Worklist Smp#:	27
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

3 Dimethyl ether, CAS: 115-10-6

Processing Results



RT	Mass	Response	Amount
1.90	45.00	9812	0.184696
1.90	46.00	817	

Reviewer: kaewrungrueangp, 04-Aug-2023 11:08:30 07:00:00 (UTC)

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136514-2

SDG No.:

Client Sample ID: Trip Blank 1
Lab Sample ID: 410-136514-6

Matrix: Water
Lab File ID: IG03X11.D

Analysis Method: EPA 8260C
Date Collected: 07/26/2023 00:00

Sample wt/vol: 25(mL)
Date Analyzed: 08/03/2023 14:45

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 404020
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
115-10-6	Dimethyl ether	ND		10	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	107		80-120
1868-53-7	Dibromofluoromethane (Surr)	107		80-120
460-00-4	4-Bromofluorobenzene (Surr)	95		80-120
2037-26-5	Toluene-d8 (Surr)	96		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X11.D
Lims ID: 410-136514-A-6
Client ID: Trip Blank 1
Sample Type: Client
Inject. Date: 03-Aug-2023 14:45:30 ALS Bottle#: 11 Worklist Smp#: 12
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090530-012
Operator ID: knk41612 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 04-Aug-2023 11:12:41 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1672

First Level Reviewer: JS6E Date: 10-Aug-2023 16:21:41

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85		1.867				ND	
3 Dimethyl ether	45		1.922				ND	
4 Chloromethane	50		2.056				ND	
5 Vinyl chloride	62		2.160				ND	
8 Chloroethane	64		2.556				ND	
10 Trichlorofluoromethane	101		2.843				ND	
11 Ethyl ether	59		3.062				ND	
15 1,1-Dichloroethene	96		3.349				ND	
17 1,1,2-Trichloro-1,2,2-trifluoroe	101		3.398				ND	
25 Methylene Chloride	84		3.977				ND	
* 26 t-Butyl alcohol-d10 (IS)	65	3.977	3.983	-0.006	24	130157	50.0	
32 1,1-Dichloroethane	63		5.031				ND	
38 2-Butanone (MEK)	43		5.830				ND	7
47 Tetrahydrofuran	71		6.214				ND	
$ 49 Dibromofluoromethane (Surr)	113	6.568	6.568	0.000	94	458418	10.7	
50 1,1,1-Trichloroethane	97		6.580				ND	
54 Carbon tetrachloride	117		6.793				ND	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.019	7.025	-0.006	62	90498	10.7	
57 Benzene	78		7.055				ND	
* 61 Fluorobenzene (IS)	96	7.458	7.458	0.000	99	1668121	10.0	
64 Trichloroethene	95		7.939				ND	
$ 78 Toluene-d8 (Surr)	98	9.494	9.494	0.000	93	1753310	9.58	
79 Toluene	92		9.573				ND	
100 1,1,2-Trichloroethane	97		10.049				ND	
101 Tetrachloroethene	166		10.140				ND	
* 107 Chlorobenzene-d5 (IS)	117	10.981	10.981	0.000	84	1423787	10.0	
112 Ethylbenzene	91		11.097				ND	
113 m-Xylene & p-Xylene	106		11.213				ND	
S 110 Xylenes, Total	106		11.245				ND	7
114 o-Xylene	106		11.542				ND	
$ 120 4-Bromofluorobenzene (Surr)	95	11.993	11.987	0.006	96	652619	9.46	
* 135 1,4-Dichlorobenzene-d4	152	12.877	12.871	0.006	93	848038	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

MSV_LLcentISS_00009 Amount Added: 5.00 Units: uL Run Reagent

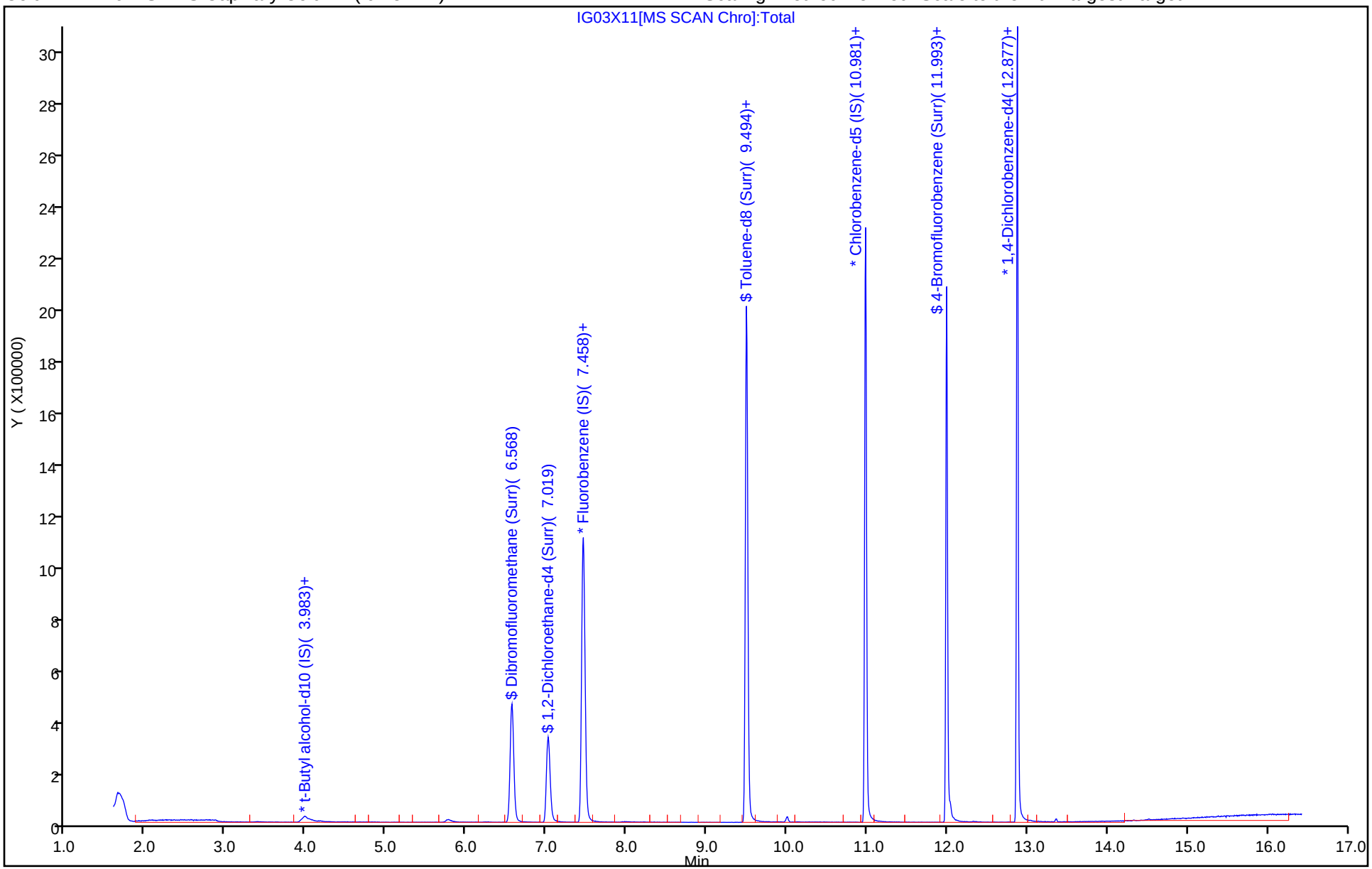
Report Date: 10-Aug-2023 16:32:57 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X11.D

Injection Date:	03-Aug-2023 14:45:30	Instrument ID:	19930	Operator ID:	knk41612
Lims ID:	410-136514-A-6	Lab Sample ID:	410-136514-6	Worklist Smp#:	12
Client ID:	Trip Blank 1				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X11.D				
Lims ID:	410-136514-A-6				
Client ID:	Trip Blank 1				
Sample Type:	Client				
Inject. Date:	03-Aug-2023 14:45:30	ALS Bottle#:	11	Worklist Smp#:	12
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0090530-012				
Operator ID:	knk41612	Instrument ID:	19930		
Method:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m				
Limit Group:	MSV - 8260C_D				
Last Update:	04-Aug-2023 11:12:41	Calib Date:	19-Jun-2023 20:25:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1672				

First Level Reviewer: JS6E Date: 10-Aug-2023 16:21:41

Compound	Amount Added	Amount Recovered	% Rec.
$ 49 Dibromofluoromethane (Surr)	10.0	10.7	106.99
$ 56 1,2-Dichloroethane-d4 (Surr)	10.0	10.7	106.52
$ 78 Toluene-d8 (Surr)	10.0	9.58	95.78
$ 120 4-Bromofluorobenzene (Surr)	10.0	9.46	94.62

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-2

SDG No.:

Client Sample ID: Trip Blank 2 Lab Sample ID: 410-136514-7

Matrix: Water Lab File ID: IG03X12.D

Analysis Method: EPA 8260C Date Collected: 07/26/2023 00:00

Sample wt/vol: 25(mL) Date Analyzed: 08/03/2023 15:06

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL) Heated Purge: (Y/N) N pH:

% Moisture: % Solids: Level: (low/med) Low

Analysis Batch No.: 404020 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
115-10-6	Dimethyl ether	ND		10	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	108		80-120
1868-53-7	Dibromofluoromethane (Surr)	108		80-120
460-00-4	4-Bromofluorobenzene (Surr)	96		80-120
2037-26-5	Toluene-d8 (Surr)	96		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X12.D
Lims ID: 410-136514-A-7
Client ID: Trip Blank 2
Sample Type: Client
Inject. Date: 03-Aug-2023 15:06:30 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090530-013
Operator ID: knk41612 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 04-Aug-2023 11:12:41 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1672

First Level Reviewer: kaewrungrueangp Date: 04-Aug-2023 10:56:35

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85		1.867				ND	
3 Dimethyl ether	45		1.922				ND	
4 Chloromethane	50		2.056				ND	
5 Vinyl chloride	62		2.160				ND	
8 Chloroethane	64		2.556				ND	
10 Trichlorofluoromethane	101		2.843				ND	
11 Ethyl ether	59		3.062				ND	
15 1,1-Dichloroethene	96		3.349				ND	
17 1,1,2-Trichloro-1,2,2-trifluoroe	101		3.398				ND	
25 Methylene Chloride	84		3.977				ND	
* 26 t-Butyl alcohol-d10 (IS)	65	3.983	3.983	0.000	27	128289	50.0	
32 1,1-Dichloroethane	63		5.031				ND	
38 2-Butanone (MEK)	43		5.830				ND	
47 Tetrahydrofuran	71		6.214				ND	
$ 49 Dibromofluoromethane (Surr)	113	6.568	6.568	0.000	94	445632	10.8	
50 1,1,1-Trichloroethane	97		6.580				ND	
54 Carbon tetrachloride	117		6.793				ND	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.019	7.025	-0.006	62	88487	10.8	
57 Benzene	78		7.055				ND	
* 61 Fluorobenzene (IS)	96	7.458	7.458	0.000	99	1603214	10.0	
64 Trichloroethene	95		7.939				ND	
$ 78 Toluene-d8 (Surr)	98	9.494	9.494	0.000	93	1676450	9.57	
79 Toluene	92		9.573				ND	7
100 1,1,2-Trichloroethane	97		10.049				ND	
101 Tetrachloroethene	166		10.140				ND	
* 107 Chlorobenzene-d5 (IS)	117	10.981	10.981	0.000	84	1362113	10.0	
112 Ethylbenzene	91		11.097				ND	
113 m-Xylene & p-Xylene	106		11.213				ND	
S 110 Xylenes, Total	106		11.245				ND	7
114 o-Xylene	106		11.542				ND	
$ 120 4-Bromofluorobenzene (Surr)	95	11.993	11.987	0.006	96	632177	9.58	
* 135 1,4-Dichlorobenzene-d4	152	12.877	12.871	0.006	93	813779	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

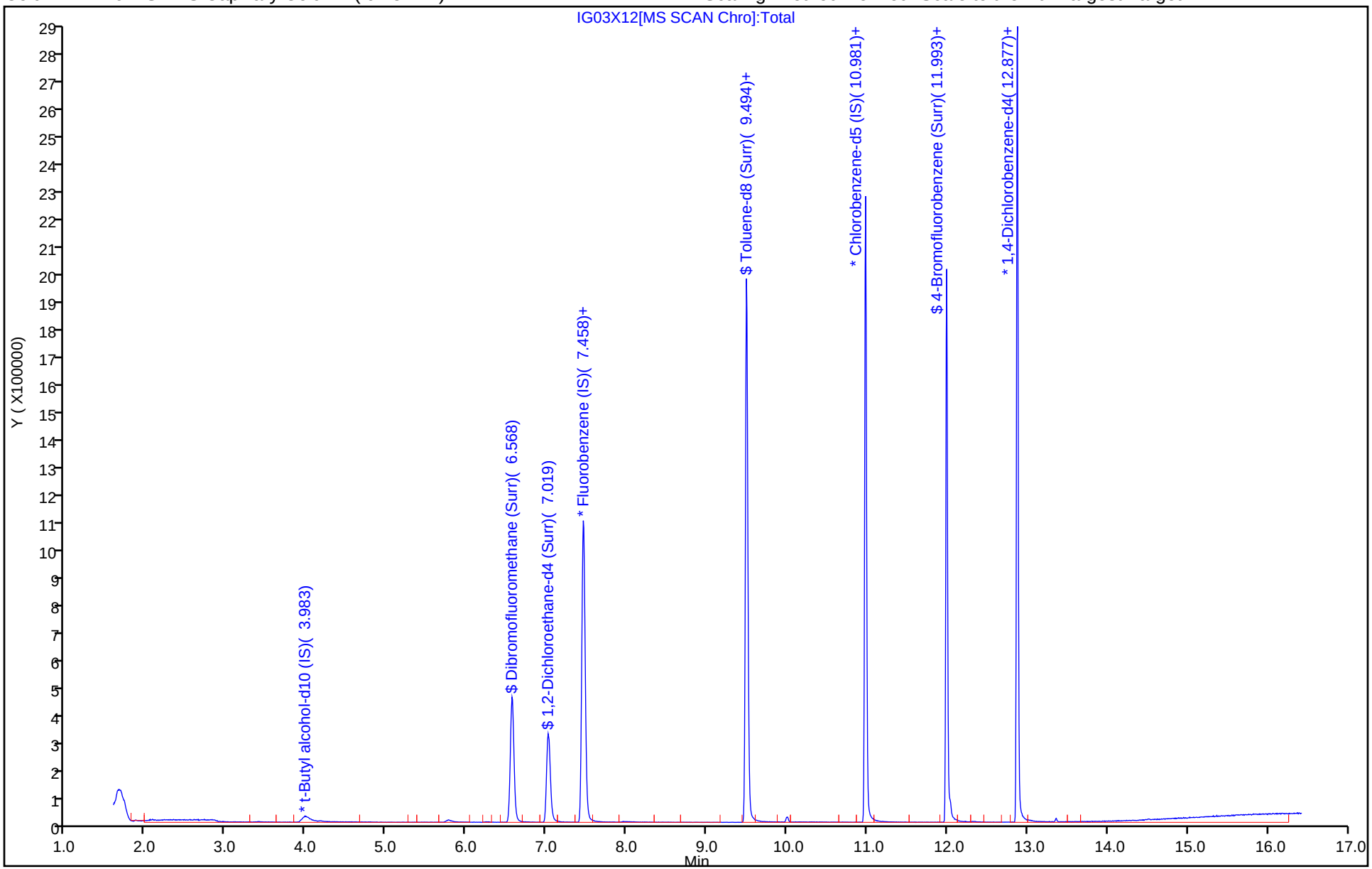
MSV_LLcentISS_00009 Amount Added: 5.00 Units: uL Run Reagent

Report Date: 10-Aug-2023 16:32:58 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X12.D				
Injection Date:	03-Aug-2023 15:06:30	Instrument ID:	19930	Operator ID:	knk41612
Lims ID:	410-136514-A-7	Lab Sample ID:	410-136514-7	Worklist Smp#:	13
Client ID:	Trip Blank 2				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X12.D
Lims ID: 410-136514-A-7
Client ID: Trip Blank 2
Sample Type: Client
Inject. Date: 03-Aug-2023 15:06:30 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090530-013
Operator ID: knk41612 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 04-Aug-2023 11:12:41 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1672

First Level Reviewer: kaewrungrueangp Date: 04-Aug-2023 10:56:35

Compound	Amount Added	Amount Recovered	% Rec.
$ 49 Dibromofluoromethane (Surr)	10.0	10.8	108.22
$ 56 1,2-Dichloroethane-d4 (Surr)	10.0	10.8	108.37
$ 78 Toluene-d8 (Surr)	10.0	9.57	95.73
$ 120 4-Bromofluorobenzene (Surr)	10.0	9.58	95.80

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-2 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-355532/18	IM21X17.D
Level 2	IC 410-355532/17	IM21X16.D
Level 3	IC 410-355532/16	IM21X15.D
Level 4	IC 410-355532/15	IM21X14.D
Level 5	IC 410-355532/14	IM21X13.D
Level 6	ICIS 410-355532/13	IM21X12.D
Level 7	IC 410-355532/12	IM21X11.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.3742 0.3872	0.3590 0.3636	0.3691	0.3743	0.3813	Ave		0.3727			0.1000	2.6		20.0			
Chloromethane	0.4537 0.3947	0.4158 0.3730	0.3984	0.4074	0.3852	Ave		0.4040			0.1000	6.4		20.0			
Vinyl chloride	0.4078 0.3908	0.4000 0.3761	0.3949	0.3955	0.3926	Ave		0.3940			0.1000	2.5		20.0			
1,3-Butadiene	0.4168 0.3469	0.3668 0.3386	0.3631	0.3483	0.3426	Ave		0.3604				7.5		20.0			
Bromomethane	0.3175 0.3121	0.3035 0.3028	0.2953	0.3074	0.3006	Ave		0.3056			0.1000	2.4		20.0			
Chloroethane	0.2424 0.2427	0.2401 0.2331	0.2410	0.2404	0.2366	Ave		0.2395			0.1000	1.4		20.0			
Dichlorofluoromethane	0.7096 0.6274	0.6531 0.6073	0.6341	0.6340	0.6241	Ave		0.6414			0.1000	5.2		20.0			
Trichlorofluoromethane	0.6581 0.6748	0.6337 0.5991	0.6275	0.6423	0.6188	Ave		0.6363			0.1000	3.9		20.0			
Ethyl ether	0.2067 0.2116	0.2049 0.2005	0.2078	0.2177	0.2098	Ave		0.2084				2.6		20.0			
Freon 123a	0.3821 0.3549	0.3624 0.3377	0.3529	0.3518	0.3480	Ave		0.3557				3.9		20.0			
Acrolein	2.6184 2.8314	2.4280 2.3185	2.5959	2.9681	2.8117	Ave		2.6531				8.7		20.0			
1,1-Dichloroethene	0.2622 0.2585	0.2710 0.2550	0.2522	0.2522	0.2521	Ave		0.2576			0.1000	2.7		20.0			
Freon 113	0.2851 0.3044	0.2908 0.3001	0.2870	0.2917	0.2934	Ave		0.2932			0.1000	2.4		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-2 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Acetone	4.3800 2.9678	3.4912 2.3199	3.1587	3.0631	3.0532	Ave		3.2048			0.1000	19.5		20.0			
Methyl iodide	0.5550 0.5646	0.5841 0.5528	0.5491	0.5457	0.5597	Ave		0.5587				2.3		20.0			
Ethyl bromide	0.2369 0.2436	0.2448 0.2365	0.2406	0.2382	0.2421	Ave		0.2404				1.4		20.0			
Carbon disulfide	0.7358 0.7307	0.7512 0.7196	0.7000	0.7062	0.7130	Ave		0.7224			0.1000	2.5		20.0			
Methyl acetate	15.851 11.037	9.9295 9.1897	10.713	12.507	11.075	Ave		11.472			0.1000	19.1		20.0			
Allyl chloride	0.4541 0.4319	0.4617 0.4250	0.4117	0.4227	0.4293	Ave		0.4338				4.1		20.0			
Methylene Chloride	0.2732 0.2767	0.2815 0.2675	0.2742	0.2717	0.2714	Ave		0.2737			0.1000	1.6		20.0			
t-Butyl alcohol	1.1005 1.1014	1.2970 0.7890	0.8152	1.0301	1.1608	Ave		1.0420				17.6		20.0			
Acrylonitrile	2.9523 4.3592	3.7461 3.5509	3.8075	4.5309	4.3317	Ave		3.8969				14.2		20.0			
Methyl tertiary butyl ether	0.6635 0.6739	0.6756 0.6367	0.6696	0.6475	0.6697	Ave		0.6624			0.1000	2.2		20.0			
trans-1,2-Dichloroethene	0.3047 0.2856	0.3033 0.2822	0.2885	0.2801	0.2847	Ave		0.2899			0.1000	3.4		20.0			
n-Hexane	0.3378 0.4091	0.3801 0.3995	0.3758	0.3832	0.3927	Ave		0.3826				6.0		20.0			
1,1-Dichloroethane	0.5216 0.5312	0.5232 0.5217	0.5218	0.5313	0.5305	Ave		0.5259			0.2000	0.9		20.0			
di-Isopropyl ether	0.8385 0.8951	0.9014 0.8646	0.8847	0.8738	0.8890	Ave		0.8781				2.4		20.0			
2-Chloro-1,3-butadiene	0.4224 0.4570	0.4511 0.4560	0.4413	0.4368	0.4536	Ave		0.4455				2.8		20.0			
Ethyl t-butyl ether	0.5960 0.6231	0.5872 0.5846	0.6388	0.6057	0.6279	Ave		0.6090				3.5		20.0			
2-Butanone	5.9059 6.4445	5.2245 5.1587	5.7914	6.6337	6.2640	Ave		5.9175			0.1000	9.7		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-2 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
cis-1,2-Dichloroethene	0.3059 0.3193	0.3245 0.3165	0.3197	0.3122	0.3197	Ave		0.3168			0.1000	1.9		20.0			
2,2-Dichloropropane	0.4770 0.4839	0.4884 0.4784	0.4684	0.4760	0.4757	Ave		0.4783				1.3		20.0			
Propionitrile	1.0485 1.5953	1.2906 1.3190	1.4222	1.4613	1.4707	Ave		1.3725				12.8		20.0			
Methacrylonitrile	5.9896 7.0400	5.0783 5.6999	6.0083	7.6633	6.6359	Ave		6.3022				13.8		20.0			
Bromochloromethane	0.1366 0.1521	0.1556 0.1491	0.1460	0.1429	0.1504	Ave		0.1475				4.3		20.0			
Tetrahydrofuran	1.7624 1.9655	1.6796 1.5337	1.8593	1.9874	1.9265	Ave		1.8163				9.2		20.0			
Chloroform	0.5233 0.5464	0.5609 0.5422	0.5379	0.5319	0.5395	Ave		0.5403			0.2000	2.2		20.0			
1,1,1-Trichloroethane	0.4975 0.5193	0.5168 0.5180	0.4986	0.5103	0.5122	Ave		0.5104			0.1000	1.8		20.0			
Cyclohexane	0.4781 0.5045	0.4883 0.4962	0.4723	0.4731	0.4860	Ave		0.4855			0.1000	2.5		20.0			
1,1-Dichloropropene	0.3798 0.4080	0.4033 0.4065	0.3923	0.3925	0.3972	Ave		0.3971				2.5		20.0			
Carbon tetrachloride	0.4367 0.4961	0.4687 0.4964	0.4569	0.4694	0.4829	Ave		0.4724			0.1000	4.6		20.0			
Isobutyl alcohol	0.3905 0.4131	0.4437 0.2860	0.3248	0.3479	0.4062	Ave		0.3732				14.9		20.0			
Benzene	1.1391 1.1616	1.1885 1.1530	1.1542	1.1611	1.1599	Ave		1.1596			0.5000	1.3		20.0			
1,2-Dichloroethane	0.3750 0.3566	0.3619 0.3436	0.3527	0.3460	0.3537	Ave		0.3556			0.1000	3.0		20.0			
t-Amyl methyl ether	0.4676 0.4820	0.4353 0.4496	0.4992	0.4758	0.4807	Ave		0.4700				4.6		20.0			
n-Heptane	0.4147 0.4254	0.3923 0.4188	0.3612	0.3824	0.3970	Ave		0.3988				5.7		20.0			
n-Butanol	+++++ 0.3322	0.2439 0.1981	0.2544	0.2791	0.3125	Ave		0.2700				18.0		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-2 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Trichloroethene	0.3190 0.3267	0.3413 0.3277	0.3198	0.3279	0.3261	Ave		0.3269			0.2000	2.2		20.0			
Methylcyclohexane	0.5115 0.5661	0.5429 0.5589	0.5085	0.5390	0.5425	Ave		0.5385			0.1000	4.0		20.0			
1,2-Dichloropropane	0.2697 0.3000	0.2927 0.2982	0.2915	0.2948	0.2984	Ave		0.2922			0.1000	3.6		20.0			
Methyl methacrylate	+++++ 14.430	9.6187 12.351	10.612	16.265	13.394	Ave		12.778				19.2		20.0			
Dibromomethane	0.1390 0.1545	0.1487 0.1527	0.1494	0.1504	0.1518	Ave		0.1495				3.4		20.0			
1,4-Dioxane	0.0362 0.0983	0.0820 0.0351	0.1162	0.1235	0.0963	Ave		0.0840			0.0050	42.5	*	20.0			
Bromodichloromethane	0.3626 0.4031	0.3843 0.4018	0.3748	0.3864	0.3981	Ave		0.3873			0.2000	3.9		20.0			
2-Nitropropane	4.6170 5.0861	3.9973 4.2066	4.0833	5.2811	4.6680	Ave		4.5628				10.9		20.0			
1-Bromo-2-chloroethane	0.2685 0.2844	0.2780 0.2743	0.2655	0.2795	0.2792	Ave		0.2756				2.4		20.0			
cis-1,3-Dichloropropene	0.4123 0.4766	0.4217 0.4746	0.4380	0.4457	0.4626	Ave		0.4474			0.2000	5.6		20.0			
4-Methyl-2-pentanone	16.094 19.899	14.370 16.228	16.343	21.310	18.549	Ave		17.542			0.1000	14.0		20.0			
Toluene	0.9707 1.0049	1.0089 0.9911	1.0027	0.9897	0.9797	Ave		0.9925			0.4000	1.4		20.0			
trans-1,3-Dichloropropene	0.4559 0.5177	0.4548 0.5107	0.4683	0.4701	0.4970	Ave		0.4821			0.1000	5.4		20.0			
Ethyl methacrylate	0.3524 0.3959	0.3795 0.3879	0.3601	0.3558	0.3872	Ave		0.3741				4.7		20.0			
1,1,2-Trichloroethane	0.2616 0.2760	0.2790 0.2650	0.2777	0.2716	0.2694	Ave		0.2715			0.1000	2.4		20.0			
Tetrachloroethene	0.5058 0.5435	0.5531 0.5451	0.5283	0.5302	0.5390	Ave		0.5350			0.2000	2.9		20.0			
1,3-Dichloropropane	0.4336 0.4541	0.4597 0.4412	0.4483	0.4421	0.4535	Ave		0.4475				2.0		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-2 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
2-Hexanone	10.866 13.871	9.8482 11.453	11.786	14.829	12.963	Ave		12.231			0.1000	14.3		20.0			
Dibromochloromethane	0.3506 0.4008	0.3614 0.3941	0.3557	0.3662	0.3881	Ave		0.3738				5.4		20.0			
1,2-Dibromoethane	0.2461 0.2732	0.2645 0.2635	0.2694	0.2589	0.2663	Ave		0.2631			0.1000	3.3		20.0			
1-Chlorohexane	0.6049 0.5756	0.5970 0.5825	0.5466	0.5423	0.5529	Ave		0.5717				4.4		20.0			
Chlorobenzene	1.0915 1.1685	1.1750 1.1595	1.1165	1.1224	1.1521	Ave		1.1408			0.5000	2.7		20.0			
1,1,1,2-Tetrachloroethane	0.3809 0.4387	0.4089 0.4439	0.4172	0.4167	0.4296	Ave		0.4194				5.0		20.0			
Ethylbenzene	1.8582 1.9580	1.9855 1.9732	1.9037	1.8961	1.9541	Ave		1.9327			0.1000	2.4		20.0			
m&p-Xylene	0.7029 0.7841	0.7678 0.8029	0.7713	0.7716	0.7906	Ave		0.7702			0.1000	4.2		20.0			
o-Xylene	0.6986 0.7648	0.7570 0.7900	0.7509	0.7436	0.7660	Ave		0.7530			0.3000	3.7		20.0			
Styrene	1.0358 1.2547	1.1366 1.2857	1.1067	1.1310	1.2251	Ave		1.1680			0.3000	7.7		20.0			
Bromoform	0.2239 0.2670	0.2258 0.2701	0.2309	0.2308	0.2565	Ave		0.2436			0.1000	8.3		20.0			
Isopropylbenzene	1.8424 2.0548	1.9453 2.0698	1.9279	1.9814	2.0144	Ave		1.9766			0.1000	4.0		20.0			
1,1,2,2-Tetrachloroethane	0.5337 0.5688	0.5683 0.5434	0.5508	0.5326	0.5603	Ave		0.5511			0.3000	2.8		20.0			
Bromobenzene	0.8286 0.8392	0.8065 0.8401	0.7951	0.8063	0.8443	Ave		0.8229				2.4		20.0			
trans-1,4-Dichloro-2-butene	6.0532 7.9394	5.1540 7.1108	6.2135	8.5058	7.2718	Ave		6.8926				16.8		20.0			
1,2,3-Trichloropropane	0.1528 0.1622	0.1589 0.1519	0.1538	0.1499	0.1608	Ave		0.1558				3.1		20.0			
N-Propylbenzene	3.2196 3.8451	3.6651 3.7105	3.4752	3.5852	3.7831	Ave		3.6120				5.9		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-2 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
2-Chlorotoluene	0.7175 0.8098	0.7730 0.8039	0.7607	0.7882	0.8048	Ave		0.7797				4.2		20.0			
1,3,5-Trimethylbenzene	2.4425 2.8356	2.6843 2.8058	2.6692	2.7035	2.8035	Ave		2.7064				4.9		20.0			
4-Chlorotoluene	0.7006 0.8141	0.7692 0.8214	0.7536	0.7758	0.8120	Ave		0.7781				5.5		20.0			
tert-Butylbenzene	0.6361 0.6988	0.6626 0.6998	0.6388	0.6686	0.6893	Ave		0.6706				4.0		20.0			
Pentachloroethane	0.4408 0.5749	0.4800 0.5709	0.4933	0.5314	0.5490	Ave		0.5200				9.7		20.0			
1,2,4-Trimethylbenzene	2.5182 2.9387	2.7372 2.9121	2.6895	2.7700	2.8920	Ave		2.7797				5.4		20.0			
sec-Butylbenzene	3.1388 3.6833	3.3444 3.5836	3.3044	3.4844	3.5476	Ave		3.4409				5.5		20.0			
1,3-Dichlorobenzene	1.4540 1.6475	1.4870 1.6607	1.4810	1.5081	1.5849	Ave		1.5462			0.6000	5.4		20.0			
p-Isopropyltoluene	2.7864 3.3035	2.9475 3.3133	2.9537	3.0237	3.1911	Ave		3.0742				6.5		20.0			
1,4-Dichlorobenzene	1.4570 1.5725	1.5024 1.5748	1.4495	1.4874	1.5370	Ave		1.5115			0.5000	3.4		20.0			
1,2,3-Trimethylbenzene	1.2765 1.3128	1.2992 1.3243	1.2159	1.2708	1.2980	Ave		1.2853				2.8		20.0			
Benzyl chloride	0.1647 0.2482	0.1937 0.2491	0.2091	0.2164	0.2402	Ave		0.2173				14.4		20.0			
n-Butylbenzene	1.1609 1.5078	1.2278 1.5676	1.2443	1.3104	1.4343	Ave		1.3504				11.4		20.0			
1,2-Dichlorobenzene	1.3729 1.5462	1.4815 1.5399	1.3893	1.4417	1.5031	Ave		1.4678			0.4000	4.7		20.0			
1,2-Dibromo-3-Chloropropane	0.0773 0.0980	0.0946 0.0925	0.0919	0.0846	0.0944	Ave		0.0905			0.0500	7.9		20.0			
1,3,5-Trichlorobenzene	1.0452 1.2547	1.1112 1.2929	1.1236	1.1498	1.2210	Ave		1.1712				7.5		20.0			
1,2,4-Trichlorobenzene	0.8287 1.0329	0.8846 1.0282	0.8933	0.9354	0.9900	Ave		0.9419			0.2000	8.3		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-2 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Hexachlorobutadiene	0.5583 0.5615	0.5356 0.5713	0.5082	0.5185	0.5306	Ave		0.5406				4.4		20.0			
Naphthalene	1.7363 1.8567	1.6832 1.6717	1.7860	1.7149	1.8248	Ave		1.7534				4.0		20.0			
1,2,3-Trichlorobenzene	0.8100 0.9170	0.8102 0.8691	0.8453	0.8472	0.8877	Ave		0.8552				4.6		20.0			
Dibromofluoromethane (Surr)	0.2625 0.2665	0.2665 0.2630	0.2682	0.2628	0.2650	Ave		0.2649				0.8		20.0			
1,2-Dichloroethane-d4 (Surr)	0.0499 0.0496	0.0513 0.0483	0.0514	0.0509	0.0504	Ave		0.0503				2.2		20.0			
Toluene-d8 (Surr)	1.2952 1.2832	1.3032 1.2717	1.2875	1.2862	1.2844	Ave		1.2874				0.8		20.0			
4-Bromofluorobenzene (Surr)	0.4684 0.4714	0.4719 0.4761	0.4685	0.4638	0.4648	Ave		0.4693				0.9		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-355532/18	IM21X17.D
Level 2	IC 410-355532/17	IM21X16.D
Level 3	IC 410-355532/16	IM21X15.D
Level 4	IC 410-355532/15	IM21X14.D
Level 5	IC 410-355532/14	IM21X13.D
Level 6	ICIS 410-355532/13	IM21X12.D
Level 7	IC 410-355532/12	IM21X11.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	17110 922225	41469 2189447	86495	175844	455174	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Chloromethane	FB	Ave	20747 940151	48039 2246458	93366	191397	459776	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Vinyl chloride	FB	Ave	18650 930903	46214 2265037	92540	185810	468573	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3-Butadiene	FB	Ave	19058 826233	42370 2039072	85079	163666	408978	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromomethane	FB	Ave	14521 743346	35058 1823508	69186	144456	358762	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Chloroethane	FB	Ave	11084 577982	27735 1403631	56481	112973	282374	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Dichlorofluoromethane	FB	Ave	32448 1494327	75447 3657101	148598	297881	745004	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Trichlorofluoromethane	FB	Ave	30095 1607262	73208 3607774	147043	301784	738690	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethyl ether	FB	Ave	9452 503956	23667 1207355	48693	102296	250383	0.200 10.00	0.500 25.0	1.000	2.00	5.00
Freon 123a	FB	Ave	17475 845381	41867 2033587	82703	165285	415383	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Acrolein	TBAd 10	Ave	66213 3424553	186326 8179515	347847	579612	1760321	10.00 500	25.0 1250	50.0	100.0	250
1,1-Dichloroethene	FB	Ave	11991 615600	31308 1535483	59105	118520	300931	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Freon 113	FB	Ave	13036 725110	33597 1807499	67263	137039	350208	0.200 10.0	0.500 25.0	1.00	2.00	5.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Acetone	TBAd10	Ave	22153 717958	53587 1636994	84658	119641	382327	2.00 100	5.00 250	10.0	20.0	50.0
Methyl iodide	FB	Ave	25378 1344711	67478 3329342	128674	256394	668087	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethyl bromide	FB	Ave	10854 581386	28335 1427207	56502	112150	289573	0.200 10.0	0.501 25.0	1.00	2.00	5.01
Carbon disulfide	FB	Ave	33647 1740418	86787 4333479	164019	331819	851050	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methyl acetate	TBAd10	Ave	8017 266996	15241 648459	28713	48849	138687	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Allyl chloride	FB	Ave	20765 1028696	53339 2559531	96478	198621	512382	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methylene Chloride	FB	Ave	12493 659101	32518 1610741	64247	127652	323924	0.200 10.0	0.500 25.0	1.00	2.00	5.00
t-Butyl alcohol	TBAd10	Ave	11132 532907	39817 1113473	43696	80472	290719	4.00 200	10.0 500	20.0	40.0	100
Acrylonitrile	TBAd10	Ave	3733 263633	14375 626404	25512	44242	135604	0.500 25.0	1.25 62.5	2.50	5.00	12.5
Methyl tertiary butyl ether	FB	Ave	30341 1605079	78046 3834437	156908	304226	799391	0.200 10.0	0.500 25.0	1.00	2.00	5.00
trans-1,2-Dichloroethene	FB	Ave	13932 680341	35040 1699518	67605	131610	339868	0.200 10.0	0.500 25.0	1.00	2.00	5.00
n-Hexane	FB	Ave	15447 974283	43907 2406168	88054	180035	468791	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1-Dichloroethane	FB	Ave	23853 1265159	60447 3141696	122273	249646	633253	0.200 10.0	0.500 25.0	1.00	2.00	5.00
di-Isopropyl ether	FB	Ave	38342 2131812	104135 5206924	207307	410537	1061122	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Chloro-1,3-butadiene	FB	Ave	19317 1088422	52111 2745997	103414	205252	541494	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethyl t-butyl ether	FB	Ave	27255 1484132	67835 3520601	149693	284598	749516	0.200 10.0	0.500 25.0	1.00	2.00	5.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
2-Butanone	TBAd 10	Ave	29871 1559003	80192 3640194	155219	259100	784382	2.00 100	5.00 250	10.0	20.0	50.0
cis-1,2-Dichloroethene	FB	Ave	13988 760484	37492 1905843	74915	146693	381596	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2,2-Dichloropropane	FB	Ave	21814 1152650	56427 2881260	109766	223631	567765	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Propionitrile	TBAd 10	Ave	10606 771867	39618 1861462	76235	114151	368330	4.00 200	10.0 500	20.0	40.0	100
Methacrylonitrile	TBAd 10	Ave	30294 1703050	77948 4022032	161032	299318	830959	2.00 100	5.00 250	10.0	20.0	50.0
Bromochloromethane	FB	Ave	6246 362331	17972 897716	34201	67134	179484	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Tetrahydrofuran	TBAd 10	Ave	4457 237735	12890 541115	24916	38813	120622	1.00 50.0	2.50 125	5.00	10.0	25.0
Chloroform	FB	Ave	23932 1301472	64800 3265115	126047	249917	643977	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,1-Trichloroethane	FB	Ave	22751 1236794	59704 3119313	116847	239759	611388	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Cyclohexane	FB	Ave	21863 1201687	56413 2988278	110675	222305	580173	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1-Dichloropropene	FB	Ave	17369 971752	46595 2448000	91929	184421	474125	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Carbon tetrachloride	FB	Ave	19970 1181687	54150 2989237	107065	220533	576461	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Isobutyl alcohol	TBAd 10	Ave	9875 499620	34050 1009122	43526	67949	254297	10.0 500	25.0 1250	50.0	100	250
Benzene	FB	Ave	52092 2766730	137309 6943624	270461	545546	1384537	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dichloroethane	FB	Ave	17147 849419	41807 2069077	82648	162578	422172	0.200 10.0	0.500 25.0	1.00	2.00	5.00
t-Amyl methyl ether	FB	Ave	21381	50293	116974	223543	573757	0.200	0.500	1.00	2.00	5.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
			1148066	2707902				10.0	25.0			
n-Heptane	FB	Ave	18966 1013268	45320 2521926	84633	179673	473866	0.200 10.0	0.500 25.0	1.00	2.00	5.00
n-Butanol	TBAd 10	Ave	+++++ 703258	32752 1223254	59654	95379	342450	+++++ 875	43.8 2188	87.5	175	438
Trichloroethene	FB	Ave	14586 778206	39424 1973657	74939	154058	389301	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methylcyclohexane	FB	Ave	23390 1348244	62717 3365809	119159	253260	647571	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dichloropropane	FB	Ave	12331 714552	33813 1795772	68300	138522	356169	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methyl methacrylate	TBAd 10	Ave	+++++ 349068	14764 871510	28442	63530	167724	+++++ 10.0	0.500 25.0	1.00	2.00	5.00
Dibromomethane	FB	Ave	6355 368087	17182 919481	35015	70654	181241	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,4-Dioxane	TBAd 10	Ave	915 118927	6296 123866	15576	24121	60319	10.0 500	25.0 1250	50.0	100	250
Bromodichloromethane	FB	Ave	16582 960002	44403 2419702	87831	181572	475184	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Nitropropane	TBAd 10	Ave	11676 615199	30678 1484170	54719	103136	292267	1.00 50.0	2.50 125	5.00	10.0	25.0
1-Bromo-2-chloroethane	FB	Ave	12280 677411	32122 1652054	62211	131348	333228	0.200 10.0	0.500 25.0	1.00	2.00	5.00
cis-1,3-Dichloropropene	FB	Ave	18856 1135243	48720 2858052	102636	209411	552133	0.200 10.0	0.500 25.0	1.00	2.00	5.00
4-Methyl-2-pentanone	TBAd 10	Ave	81398 4813730	220574 11451372	438008	832319	2322697	2.00 100	5.00 250	10.0	20.0	50.0
Toluene	CBZd 5	Ave	34373 1895806	89746 4797042	182395	365184	923872	0.200 10.0	0.500 25.0	1.00	2.00	5.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
trans-1,3-Dichloropropene	CBZd 5	Ave	16145 976681	40458 2471995	85183	173460	468676	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethyl methacrylate	CBZd 5	Ave	12480 746956	33758 1877330	65507	131292	365161	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,2-Trichloroethane	CBZd 5	Ave	9264 520789	24817 1282563	50506	100211	253999	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Tetrachloroethene	CBZd 5	Ave	17910 1025277	49201 2638237	96104	195634	508265	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3-Dichloropropane	CBZd 5	Ave	15353 856612	40890 2135286	81544	163140	427645	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Hexanone	TBAd 10	Ave	54958 3355456	151162 8081494	315875	579187	1623206	2.00 100	5.00 250	10.0	20.0	50.0
Dibromochloromethane	CBZd 5	Ave	12415 756162	32144 1907545	64701	135111	365950	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dibromoethane	CBZd 5	Ave	8713 515479	23525 1275224	48995	95514	251158	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1-Chlorohexane	CBZd 5	Ave	21421 1085890	53107 2819454	99428	200092	521339	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Chlorobenzene	CBZd 5	Ave	38651 2204397	104524 5612245	203081	414157	1086370	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,1,2-Tetrachloroethane	CBZd 5	Ave	13488 827659	36378 2148564	75882	153746	405063	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethylbenzene	CBZd 5	Ave	65799 3694009	176617 9550470	346280	699641	1842666	0.200 10.0	0.500 25.0	1.00	2.00	5.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
m&p-Xylene	CBZd 5	Ave	49779 2958705	136602 7772437	280576	569407	1490951	0.400 20.0	1.00 50.0	2.00	4.00	10.0
o-Xylene	CBZd 5	Ave	24739 1442929	67339 3823654	136591	274369	722330	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Styrene	CBZd 5	Ave	36677 2367152	101109 6222891	201308	417331	1155265	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromoform	CBZd 5	Ave	7927 503660	20086 1307321	41999	85160	241884	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Isopropylbenzene	CBZd 5	Ave	65240 3876560	173040 10017939	350685	731109	1899553	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	11706 665065	31254 1684823	62163	120006	325780	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromobenzene	DCBd 4	Ave	18174 981240	44356 2604838	89737	181668	490923	0.200 10.0	0.500 25.0	1.00	2.00	5.00
trans-1,4-Dichloro-2-butene	TBAd 10	Ave	30616 1920626	79110 5017664	166532	332224	910577	2.00 100	5.00 250	10.0	20.0	50.0
1,2,3-Trichloropropane	DCBd 4	Ave	3351 189700	8741 471063	17353	33764	93500	0.200 10.0	0.500 25.0	1.00	2.00	5.00
N-Propylbenzene	DCBd 4	Ave	70616 4495847	201563 11504700	392220	807760	2199783	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Chlorotoluene	DCBd 4	Ave	15738 946897	42512 2492610	85856	177588	467982	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3,5-Trimethylbenzene	DCBd 4	Ave	53572 3315484	147622 8699547	301256	609124	1630191	0.200 10.0	0.500 25.0	1.00	2.00	5.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
4-Chlorotoluene	DCBd 4	Ave	15367 951822	42302 2546778	85059	174789	472147	0.200 10.0	0.500 25.0	1.00	2.00	5.00
tert-Butylbenzene	DCBd 4	Ave	13951 817068	36437 2169810	72093	150650	400832	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Pentachloroethane	DCBd 4	Ave	9669 672224	26396 1770213	55674	119732	319216	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,4-Trimethylbenzene	DCBd 4	Ave	55233 3435975	150530 9029284	303547	624102	1681631	0.200 10.0	0.500 25.0	1.00	2.00	5.00
sec-Butylbenzene	DCBd 4	Ave	68845 4306580	183924 11111339	372950	785059	2062828	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3-Dichlorobenzene	DCBd 4	Ave	31892 1926286	81779 5148991	167155	339776	921590	0.200 10.0	0.500 25.0	1.00	2.00	5.00
p-Isopropyltoluene	DCBd 4	Ave	61116 3862618	162097 10273099	333364	681258	1855523	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,4-Dichlorobenzene	DCBd 4	Ave	31956 1838618	82622 4882929	163590	335121	893710	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,3-Trimethylbenzene	DCBd 4	Ave	27998 1534921	71447 4105948	137229	286323	754758	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Benzyl chloride	DCBd 4	Ave	3612 290235	10655 772337	23595	48767	139656	0.200 10.0	0.500 25.0	1.00	2.00	5.00
n-Butylbenzene	DCBd 4	Ave	25462 1762970	67525 4860363	140431	295236	833984	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dichlorobenzene	DCBd 4	Ave	30112 1807906	81474 4774475	156806	324822	874011	0.200 10.0	0.500 25.0	1.00	2.00	5.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	1695 114580	5204 286713	10369	19053	54876	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3,5-Trichlorobenzene	DCBd 4	Ave	22925 1467042	61109 4008610	126816	259052	709964	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,4-Trichlorobenzene	DCBd 4	Ave	18177 1207739	48648 3188084	100826	210756	575676	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Hexachlorobutadiene	DCBd 4	Ave	12245 656545	29455 1771421	57361	116814	308531	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Naphthalene	DCBd 4	Ave	38082 2170950	92567 5183365	201570	386386	1061065	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,3-Trichlorobenzene	DCBd 4	Ave	17765 1072140	44557 2694710	95399	190876	516164	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Dibromofluoromethane (Surr)	FB	Ave	600251 634684	615761 633661	628564	617342	632686	10.0 10.0	10.0 10.0	10.0	10.0	10.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	114034 118206	118620 116302	120346	119524	120327	10.0 10.0	10.0 10.0	10.0	10.0	10.0
Toluene-d8 (Surr)	CBZd 5	Ave	2293084 2420949	2318546 2462175	2341910	2373030	2422302	10.0 10.0	10.0 10.0	10.0	10.0	10.0
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	829348 889396	839517 921757	852245	855599	876575	10.0 10.0	10.0 10.0	10.0	10.0	10.0

Curve Type Legend
Ave = Average ISTD

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-355532/18	IM21X17.D
Level 2	IC 410-355532/17	IM21X16.D
Level 3	IC 410-355532/16	IM21X15.D
Level 4	IC 410-355532/15	IM21X14.D
Level 5	IC 410-355532/14	IM21X13.D
Level 6	ICIS 410-355532/13	IM21X12.D
Level 7	IC 410-355532/12	IM21X11.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Dichlorodifluoromethane	0.4 -2.4	-3.7	-0.9	0.4	2.3	3.9	50 30	30	30	30	30	30
Chloromethane	12.3 -7.7	2.9	-1.4	0.8	-4.7	-2.3	50 30	30	30	30	30	30
Vinyl chloride	3.5 -4.5	1.5	0.2	0.4	-0.4	-0.8	50 30	30	30	30	30	30
1,3-Butadiene	15.6 -6.1	1.8	0.7	-3.4	-4.9	-3.8	50 30	30	30	30	30	30
Bromomethane	3.9 -0.9	-0.7	-3.4	0.6	-1.6	2.1	50 30	30	30	30	30	30
Chloroethane	1.2 -2.7	0.3	0.7	0.4	-1.2	1.3	50 30	30	30	30	30	30
Dichlorofluoromethane	10.6 -5.3	1.8	-1.1	-1.2	-2.7	-2.2	50 30	30	30	30	30	30
Trichlorofluoromethane	3.4 -5.9	-0.4	-1.4	0.9	-2.7	6.0	50 30	30	30	30	30	30
Ethyl ether	-0.8 -3.8	-1.7	-0.3	4.5	0.6	1.5	50 30	30	30	30	30	30
Freon 123a	7.4 -5.1	1.9	-0.8	-1.1	-2.2	-0.2	50 30	30	30	30	30	30
Acrolein	-1.3 -12.6	-8.5	-2.2	11.9	6.0	6.7	50 30	30	30	30	30	30
1,1-Dichloroethene	1.8 -1.0	5.2	-2.1	-2.1	-2.1	0.3	50 30	30	30	30	30	30
Freon 113	-2.8 2.4	-0.8	-2.1	-0.5	0.1	3.8	50 30	30	30	30	30	30
Acetone	36.7 -27.6	8.9	-1.4	-4.4	-4.7	-7.4	50 30	30	30	30	30	30

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Methyl iodide	-0.7 -1.1	4.5	-1.7	-2.3	0.2	1.1	50 30	30	30	30	30	30
Ethyl bromide	-1.5 -1.6	1.8	0.1	-0.9	0.7	1.3	50 30	30	30	30	30	30
Carbon disulfide	1.9 -0.4	4.0	-3.1	-2.2	-1.3	1.2	50 30	30	30	30	30	30
Methyl acetate	38.2 -19.9	-13.4	-6.6	9.0	-3.5	-3.8	50 30	30	30	30	30	30
Allyl chloride	4.7 -2.0	6.4	-5.1	-2.5	-1.0	-0.4	50 30	30	30	30	30	30
Methylene Chloride	-0.2 -2.3	2.8	0.2	-0.7	-0.9	1.1	50 30	30	30	30	30	30
t-Butyl alcohol	5.6 -24.3	24.5	-21.8	-1.1	11.4	5.7	50 30	30	30	30	30	30
Acrylonitrile	-24.2 -8.9	-3.9	-2.3	16.3	11.2	11.9	50 30	30	30	30	30	30
Methyl tertiary butyl ether	0.2 -3.9	2.0	1.1	-2.2	1.1	1.7	50 30	30	30	30	30	30
trans-1,2-Dichloroethene	5.1 -2.6	4.6	-0.5	-3.4	-1.8	-1.5	50 30	30	30	30	30	30
n-Hexane	-11.7 4.4	-0.7	-1.8	0.2	2.7	6.9	50 30	30	30	30	30	30
1,1-Dichloroethane	-0.8 -0.8	-0.5	-0.8	1.0	0.9	1.0	50 30	30	30	30	30	30
di-Isopropyl ether	-4.5 -1.5	2.6	0.7	-0.5	1.2	1.9	50 30	30	30	30	30	30
2-Chloro-1,3-butadiene	-5.2 2.4	1.3	-0.9	-1.9	1.8	2.6	50 30	30	30	30	30	30
Ethyl t-butyl ether	-2.1 -4.0	-3.6	4.9	-0.5	3.1	2.3	50 30	30	30	30	30	30
2-Butanone	-0.2 -12.8	-11.7	-2.1	12.1	5.9	8.9	50 30	30	30	30	30	30
cis-1,2-Dichloroethene	-3.5 -0.1	2.4	0.9	-1.5	0.9	0.8	50 30	30	30	30	30	30
2,2-Dichloropropane	-0.3 0.0	2.1	-2.1	-0.5	-0.5	1.2	50 30	30	30	30	30	30
Propionitrile	-23.6 -3.9	-6.0	3.6	6.5	7.2	16.2	50 30	30	30	30	30	30

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Methacrylonitrile	-5.0 -9.6	-19.4	-4.7	21.6	5.3	11.7	50 30	30	30	30	30	30
Bromochloromethane	-7.4 1.1	5.5	-1.1	-3.1	1.9	3.1	50 30	30	30	30	30	30
Tetrahydrofuran	-3.0 -15.6	-7.5	2.4	9.4	6.1	8.2	50 30	30	30	30	30	30
Chloroform	-3.1 0.3	3.8	-0.4	-1.6	-0.1	1.1	50 30	30	30	30	30	30
1,1,1-Trichloroethane	-2.5 1.5	1.3	-2.3	0.0	0.4	1.7	50 30	30	30	30	30	30
Cyclohexane	-1.5 2.2	0.6	-2.7	-2.6	0.1	3.9	50 30	30	30	30	30	30
1,1-Dichloropropene	-4.3 2.4	1.6	-1.2	-1.2	0.0	2.7	50 30	30	30	30	30	30
Carbon tetrachloride	-7.6 5.1	-0.8	-3.3	-0.7	2.2	5.0	50 30	30	30	30	30	30
Isobutyl alcohol	4.6 -23.4	18.9	-13.0	-6.8	8.8	10.7	50 30	30	30	30	30	30
Benzene	-1.8 -0.6	2.5	-0.5	0.1	0.0	0.2	50 30	30	30	30	30	30
1,2-Dichloroethane	5.4 -3.4	1.8	-0.8	-2.7	-0.5	0.3	50 30	30	30	30	30	30
t-Amyl methyl ether	-0.5 -4.3	-7.4	6.2	1.2	2.3	2.6	50 30	30	30	30	30	30
n-Heptane	4.0 5.0	-1.6	-9.4	-4.1	-0.5	6.7	50 30	30	30	30	30	30
n-Butanol	+++++ -26.6	-9.7	-5.8	3.3	15.7	23.0	30	50	30	30	30	30
Trichloroethene	-2.4 0.2	4.4	-2.2	0.3	-0.2	-0.1	50 30	30	30	30	30	30
Methylcyclohexane	-5.0 3.8	0.8	-5.6	0.1	0.7	5.1	50 30	30	30	30	30	30
1,2-Dichloropropane	-7.7 2.1	0.2	-0.2	0.9	2.1	2.7	50 30	30	30	30	30	30
Methyl methacrylate	+++++ -3.3	-24.7	-17.0	27.3	4.8	12.9	30	50	30	30	30	30
Dibromomethane	-7.0 2.1	-0.5	-0.1	0.6	1.6	3.4	50 30	30	30	30	30	30

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
1,4-Dioxane	-56.9 * -58.2 *	-2.3	38.4 *	47.1 *	14.7	17.1	50 30	30	30	30	30	30
Bromodichloromethane	-6.4 3.7	-0.8	-3.2	-0.2	2.8	4.1	50 30	30	30	30	30	30
2-Nitropropane	1.2 -7.8	-12.4	-10.5	15.7	2.3	11.5	50 30	30	30	30	30	30
1-Bromo-2-chloroethane	-2.6 -0.5	0.9	-3.7	1.4	1.3	3.2	50 30	30	30	30	30	30
cis-1,3-Dichloropropene	-7.8 6.1	-5.7	-2.1	-0.4	3.4	6.5	50 30	30	30	30	30	30
4-Methyl-2-pentanone	-8.3 -7.5	-18.1	-6.8	21.5	5.7	13.4	50 30	30	30	30	30	30
Toluene	-2.2 -0.1	1.6	1.0	-0.3	-1.3	1.2	50 30	30	30	30	30	30
trans-1,3-Dichloropropene	-5.4 5.9	-5.7	-2.9	-2.5	3.1	7.4	50 30	30	30	30	30	30
Ethyl methacrylate	-5.8 3.7	1.4	-3.7	-4.9	3.5	5.8	50 30	30	30	30	30	30
1,1,2-Trichloroethane	-3.6 -2.4	2.8	2.3	0.0	-0.8	1.7	50 30	30	30	30	30	30
Tetrachloroethene	-5.5 1.9	3.4	-1.2	-0.9	0.7	1.6	50 30	30	30	30	30	30
1,3-Dichloropropane	-3.1 -1.4	2.7	0.2	-1.2	1.3	1.5	50 30	30	30	30	30	30
2-Hexanone	-11.2 -6.4	-19.5	-3.6	21.2	6.0	13.4	50 30	30	30	30	30	30
Dibromochloromethane	-6.2 5.4	-3.3	-4.8	-2.1	3.8	7.2	50 30	30	30	30	30	30
1,2-Dibromoethane	-6.5 0.1	0.5	2.4	-1.6	1.2	3.8	50 30	30	30	30	30	30
1-Chlorohexane	5.8 1.9	4.4	-4.4	-5.1	-3.3	0.7	50 30	30	30	30	30	30
Chlorobenzene	-4.3 1.6	3.0	-2.1	-1.6	1.0	2.4	50 30	30	30	30	30	30
1,1,1,2-Tetrachloroethane	-9.2 5.8	-2.5	-0.5	-0.7	2.4	4.6	50 30	30	30	30	30	30
Ethylbenzene	-3.9 2.1	2.7	-1.5	-1.9	1.1	1.3	50 30	30	30	30	30	30

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
m&p-Xylene	-8.7 4.3	-0.3	0.1	0.2	2.6	1.8	50 30	30	30	30	30	30
o-Xylene	-7.2 4.9	0.5	-0.3	-1.3	1.7	1.6	50 30	30	30	30	30	30
Styrene	-11.3 10.1	-2.7	-5.2	-3.2	4.9	7.4	50 30	30	30	30	30	30
Bromoform	-8.1 10.9	-7.3	-5.2	-5.2	5.3	9.6	50 30	30	30	30	30	30
Isopropylbenzene	-6.8 4.7	-1.6	-2.5	0.2	1.9	4.0	50 30	30	30	30	30	30
1,1,2,2-Tetrachloroethane	-3.2 -1.4	3.1	-0.1	-3.4	1.7	3.2	50 30	30	30	30	30	30
Bromobenzene	0.7 2.1	-2.0	-3.4	-2.0	2.6	2.0	50 30	30	30	30	30	30
trans-1,4-Dichloro-2-butene	-12.2 3.2	-25.2	-9.9	23.4	5.5	15.2	50 30	30	30	30	30	30
1,2,3-Trichloropropane	-1.9 -2.5	2.0	-1.3	-3.8	3.2	4.2	50 30	30	30	30	30	30
N-Propylbenzene	-10.9 2.7	1.5	-3.8	-0.7	4.7	6.5	50 30	30	30	30	30	30
2-Chlorotoluene	-8.0 3.1	-0.9	-2.4	1.1	3.2	3.9	50 30	30	30	30	30	30
1,3,5-Trimethylbenzene	-9.7 3.7	-0.8	-1.4	-0.1	3.6	4.8	50 30	30	30	30	30	30
4-Chlorotoluene	-10.0 5.6	-1.1	-3.1	-0.3	4.4	4.6	50 30	30	30	30	30	30
tert-Butylbenzene	-5.1 4.4	-1.2	-4.7	-0.3	2.8	4.2	50 30	30	30	30	30	30
Pentachloroethane	-15.2 9.8	-7.7	-5.1	2.2	5.6	10.6	50 30	30	30	30	30	30
1,2,4-Trimethylbenzene	-9.4 4.8	-1.5	-3.2	-0.3	4.0	5.7	50 30	30	30	30	30	30
sec-Butylbenzene	-8.8 4.1	-2.8	-4.0	1.3	3.1	7.0	50 30	30	30	30	30	30
1,3-Dichlorobenzene	-6.0 7.4	-3.8	-4.2	-2.5	2.5	6.6	50 30	30	30	30	30	30
p-Isopropyltoluene	-9.4 7.8	-4.1	-3.9	-1.6	3.8	7.5	50 30	30	30	30	30	30

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2 Analy Batch No.: 355532

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/21/2023 04:01 Calibration End Date: 03/21/2023 06:02 Calibration ID: 48558

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
1,4-Dichlorobenzene	-3.6 4.2	-0.6	-4.1	-1.6	1.7	4.0	50 30	30	30	30	30	30
1,2,3-Trimethylbenzene	-0.7 3.0	1.1	-5.4	-1.1	1.0	2.1	50 30	30	30	30	30	30
Benzyl chloride	-24.2 14.6	-10.9	-3.8	-0.4	10.5	14.2	50 30	30	30	30	30	30
n-Butylbenzene	-14.0 16.1	-9.1	-7.9	-3.0	6.2	11.7	50 30	30	30	30	30	30
1,2-Dichlorobenzene	-6.5 4.9	0.9	-5.3	-1.8	2.4	5.3	50 30	30	30	30	30	30
1,2-Dibromo-3-Chloropropane	-14.6 2.2	4.6	1.6	-6.5	4.3	8.3	50 30	30	30	30	30	30
1,3,5-Trichlorobenzene	-10.8 10.4	-5.1	-4.1	-1.8	4.3	7.1	50 30	30	30	30	30	30
1,2,4-Trichlorobenzene	-12.0 9.2	-6.1	-5.2	-0.7	5.1	9.7	50 30	30	30	30	30	30
Hexachlorobutadiene	3.3 5.7	-0.9	-6.0	-4.1	-1.8	3.9	50 30	30	30	30	30	30
Naphthalene	-1.0 -4.7	-4.0	1.9	-2.2	4.1	5.9	50 30	30	30	30	30	30
1,2,3-Trichlorobenzene	-5.3 1.6	-5.3	-1.2	-0.9	3.8	7.2	50 30	30	30	30	30	30
Dibromofluoromethane (Surr)	-0.9 -0.7	0.6	1.2	-0.8	0.0	0.6	50 30	30	30	30	30	30
1,2-Dichloroethane-d4 (Surr)	-0.8 -3.9	2.2	2.2	1.2	0.3	-1.2	50 30	30	30	30	30	30
Toluene-d8 (Surr)	0.6 -1.2	1.2	0.0	-0.1	-0.2	-0.3	50 30	30	30	30	30	30
4-Bromofluorobenzene (Surr)	-0.2 1.5	0.6	-0.2	-1.2	-1.0	0.5	50 30	30	30	30	30	30

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X11.D
Lims ID: IC std7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 21-Mar-2023 04:01:30 ALS Bottle#: 11 Worklist Smp#: 12
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0079468-012
Operator ID: mec29284 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 21-Mar-2023 17:37:31 Calib Date: 21-Mar-2023 06:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1651

First Level Reviewer: K4WN Date: 21-Mar-2023 15:42:30

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.898	1.898	0.000	99	2189447	25.0	24.4	
4 Chloromethane	50	2.099	2.087	0.012	99	2246458	25.0	23.1	
5 Vinyl chloride	62	2.209	2.203	0.006	98	2265037	25.0	23.9	
6 Butadiene	39	2.215	2.209	0.006	95	2039072	25.0	23.5	
7 Bromomethane	94	2.532	2.526	0.006	92	1823508	25.0	24.8	
8 Chloroethane	64	2.611	2.599	0.012	99	1403631	25.0	24.3	
9 Dichlorofluoromethane	67	2.843	2.837	0.006	98	3657101	25.0	23.7	
10 Trichlorofluoromethane	101	2.910	2.898	0.012	98	3607774	25.0	23.5	
11 Ethyl ether	59	3.141	3.135	0.006	92	1207355	25.0	24.0	
13 1,2-Dichloro-1,1,2-trifluoroetha	67	3.233	3.227	0.006	89	2033587	25.0	23.7	
14 Acrolein	56	3.300	3.306	-0.006	99	8179515	1249.9	1092.3	
15 1,1-Dichloroethene	96	3.446	3.434	0.012	98	1535483	25.0	24.7	
17 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.489	3.477	0.012	91	1807499	25.0	25.6	
16 Acetone	43	3.470	3.477	-0.007	98	1636994	250.0	181.0	
18 Iodomethane	142	3.635	3.629	0.006	100	3329342	25.0	24.7	
19 Ethyl bromide	108	3.659	3.660	-0.001	100	1427207	25.0	24.6	
20 Carbon disulfide	76	3.745	3.733	0.012	100	4333479	25.0	24.9	
23 Methyl acetate	43	3.873	3.879	-0.006	97	648459	25.0	20.0	M
24 3-Chloro-1-propene	41	3.903	3.897	0.006	88	2559531	25.0	24.5	
25 Methylene Chloride	84	4.086	4.086	0.000	93	1610741	25.0	24.4	
* 26 t-Butyl alcohol-d10 (IS)	65	4.147	4.166	-0.019	99	141127	50.0	50.0	
27 2-Methyl-2-propanol	59	4.239	4.263	-0.024	99	1113473	500.0	378.6	
28 Acrylonitrile	53	4.415	4.416	-0.001	96	626404	62.5	56.9	
29 Methyl tert-butyl ether	73	4.482	4.477	0.005	97	3834437	25.0	24.0	
30 trans-1,2-Dichloroethene	96	4.495	4.495	0.000	98	1699518	25.0	24.3	
31 Hexane	57	4.921	4.915	0.006	95	2406168	25.0	26.1	
32 1,1-Dichloroethane	63	5.153	5.147	0.006	96	3141696	25.0	24.8	
35 Isopropyl ether	45	5.220	5.214	0.006	91	5206924	25.0	24.6	
36 2-Chloro-1,3-butadiene	53	5.263	5.263	0.000	94	2745997	25.0	25.6	
37 Tert-butyl ethyl ether	59	5.751	5.751	0.000	97	3520601	25.0	24.0	
38 2-Butanone (MEK)	43	5.952	5.958	-0.006	100	3640194	250.0	217.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
39 cis-1,2-Dichloroethene	96	5.988	5.982	0.006	83	1905843	25.0	25.0	
40 2,2-Dichloropropane	77	6.007	5.995	0.012	88	2881260	25.0	25.0	
43 Propionitrile	54	6.049	6.056	-0.007	98	1861462	500.0	480.5	
S 41 1,2-Dichloroethene, Total	100				0			49.3	
45 Methacrylonitrile	67	6.257	6.244	0.013	93	4022032	250.0	226.1	
46 Chlorobromomethane	128	6.324	6.318	0.006	90	897716	25.0	25.3	
47 Tetrahydrofuran	71	6.336	6.330	0.006	79	541115	125.0	105.5	
48 Chloroform	83	6.470	6.464	0.006	94	3265115	25.0	25.1	
$ 49 Dibromofluoromethane (Surr)	113	6.683	6.677	0.006	94	633661	10.0	9.93	
50 1,1,1-Trichloroethane	97	6.695	6.690	0.005	99	3119313	25.0	25.4	
51 Cyclohexane	56	6.799	6.793	0.006	92	2988278	25.0	25.6	
53 1,1-Dichloropropene	75	6.909	6.903	0.006	92	2448000	25.0	25.6	
54 Carbon tetrachloride	117	6.909	6.909	0.000	95	2989237	25.0	26.3	
55 Isobutyl alcohol	41	7.080	7.092	-0.012	94	1009122	1250.0	958.1	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.141	7.135	0.005	76	116302	10.0	9.61	
57 Benzene	78	7.171	7.165	0.006	97	6943624	25.0	24.9	
58 1,2-Dichloroethane	62	7.238	7.238	0.000	97	2069077	25.0	24.2	
60 Tert-amyl methyl ether	73	7.366	7.354	0.012	98	2707902	25.0	23.9	
* 61 Fluorobenzene (IS)	96	7.573	7.567	0.006	99	2408929	10.0	10.0	
62 n-Heptane	43	7.586	7.580	0.006	90	2521926	25.0	26.2	
63 n-Butanol	56	7.982	7.976	0.006	91	1223254	2187.5	1604.9	
64 Trichloroethene	95	8.055	8.049	0.006	96	1973657	25.0	25.1	
65 Methylcyclohexane	83	8.360	8.360	0.000	91	3365809	25.0	25.9	
66 1,2-Dichloropropane	63	8.384	8.378	0.006	90	1795772	25.0	25.5	
67 Methyl methacrylate	69	8.470	8.464	0.006	89	871510	25.0	24.2	
69 Dibromomethane	93	8.494	8.488	0.006	92	919481	25.0	25.5	
68 1,4-Dioxane	88	8.530	8.537	-0.007	79	123866	1250.0	522.7	M
71 Dichlorobromomethane	83	8.726	8.726	0.000	98	2419702	25.0	25.9	
72 2-Nitropropane	41	8.994	8.994	0.000	100	1484170	125.0	115.2	
75 1-Bromo-2-chloroethane	63	9.122	9.122	0.000	99	1652054	25.0	24.9	
76 cis-1,3-Dichloropropene	75	9.280	9.280	0.000	94	2858052	25.0	26.5	
77 4-Methyl-2-pentanone (MIBK)	43	9.457	9.451	0.006	97	11451372	250.0	231.3	
$ 78 Toluene-d8 (Surr)	98	9.591	9.591	0.000	94	2462175	10.0	9.88	
79 Toluene	92	9.671	9.671	-0.001	98	4797042	25.0	25.0	
97 trans-1,3-Dichloropropene	75	9.933	9.933	0.000	96	2471995	25.0	26.5	
99 Ethyl methacrylate	69	9.994	9.994	0.000	89	1877330	25.0	25.9	
S 98 1,3-Dichloropropene, Total	100				0			53.0	
100 1,1,2-Trichloroethane	97	10.134	10.134	0.000	92	1282563	25.0	24.4	
101 Tetrachloroethene	166	10.231	10.225	0.006	98	2638237	25.0	25.5	
102 1,3-Dichloropropane	76	10.298	10.299	-0.001	92	2135286	25.0	24.6	
103 2-Hexanone	43	10.353	10.353	0.000	97	8081494	250.0	234.1	
105 Chlorodibromomethane	129	10.518	10.518	0.000	90	1907545	25.0	26.4	
106 Ethylene Dibromide	107	10.628	10.628	0.000	98	1275224	25.0	25.0	
* 107 Chlorobenzene-d5 (IS)	117	11.060	11.061	-0.001	86	1936058	10.0	10.0	
108 1-Chlorohexane	91	11.073	11.073	0.000	97	2819454	25.0	25.5	
109 Chlorobenzene	112	11.091	11.091	0.000	96	5612245	25.0	25.4	
111 1,1,1,2-Tetrachloroethane	131	11.170	11.170	0.000	95	2148564	25.0	26.5	
112 Ethylbenzene	91	11.176	11.176	0.000	98	9550470	25.0	25.5	
S 110 Xylenes, Total	106				0			78.4	
113 m-Xylene & p-Xylene	106	11.292	11.292	0.000	93	7772437	50.0	52.1	
114 o-Xylene	106	11.621	11.621	0.000	96	3823654	25.0	26.2	
115 Styrene	104	11.634	11.634	0.000	95	6222891	25.0	27.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
116 Bromoform	173	11.792	11.792	0.000	97	1307321	25.0	27.7	
117 Isopropylbenzene	105	11.920	11.920	0.000	96	10017939	25.0	26.2	
$ 120 4-Bromofluorobenzene (Surr)	95	12.066	12.067	-0.001	96	921757	10.0	10.1	
121 1,1,2,2-Tetrachloroethane	83	12.164	12.164	0.000	94	1684823	25.0	24.6	
122 Bromobenzene	156	12.182	12.182	0.000	98	2604838	25.0	25.5	
123 trans-1,4-Dichloro-2-butene	53	12.188	12.188	0.000	95	5017664	250.0	257.9	
124 1,2,3-Trichloropropane	110	12.213	12.213	0.000	83	471063	25.0	24.4	
125 N-Propylbenzene	91	12.249	12.249	0.000	98	11504700	25.0	25.7	
126 2-Chlorotoluene	126	12.329	12.329	0.000	97	2492610	25.0	25.8	
127 1,3,5-Trimethylbenzene	105	12.389	12.384	0.005	95	8699547	25.0	25.9	
128 4-Chlorotoluene	126	12.420	12.420	0.000	97	2546778	25.0	26.4	
129 tert-Butylbenzene	134	12.627	12.627	0.000	93	2169810	25.0	26.1	
130 Pentachloroethane	167	12.664	12.664	0.000	92	1770213	25.0	27.4	
131 1,2,4-Trimethylbenzene	105	12.670	12.670	0.000	97	9029284	25.0	26.2	
132 sec-Butylbenzene	105	12.792	12.792	0.000	95	11111339	25.0	26.0	
133 1,3-Dichlorobenzene	146	12.889	12.890	-0.001	99	5148991	25.0	26.9	
134 4-Isopropyltoluene	119	12.902	12.902	0.000	96	10273099	25.0	26.9	
* 135 1,4-Dichlorobenzene-d4	152	12.950	12.944	0.006	92	1240232	10.0	10.0	
136 1,4-Dichlorobenzene	146	12.963	12.963	0.000	94	4882929	25.0	26.0	
137 1,2,3-Trimethylbenzene	120	12.975	12.975	0.000	98	4105948	25.0	25.8	
138 Benzyl chloride	126	13.042	13.042	0.000	99	772337	25.0	28.7	
139 n-Butylbenzene	92	13.194	13.188	0.006	98	4860363	25.0	29.0	
140 1,2-Dichlorobenzene	146	13.225	13.225	0.000	98	4774475	25.0	26.2	
142 1,2-Dibromo-3-Chloropropane	155	13.767	13.767	0.000	88	286713	25.0	25.6	
143 1,3,5-Trichlorobenzene	180	13.895	13.889	0.006	98	4008610	25.0	27.6	
144 1,2,4-Trichlorobenzene	180	14.316	14.316	0.000	94	3188084	25.0	27.3	
145 Hexachlorobutadiene	225	14.395	14.395	0.000	96	1771421	25.0	26.4	
146 Naphthalene	128	14.493	14.493	0.000	97	5183365	25.0	23.8	
147 1,2,3-Trichlorobenzene	180	14.633	14.639	-0.006	95	2694710	25.0	25.4	
155 2-Methylnaphthalene	142		0.000				ND	ND	
156 p-Diethylbenzene	1		0.000				ND	ND	
161 Pentane	43		0.000				ND	ND	
150 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
165 Isopropyl alcohol	45		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MSV_LL_#1_826_00068	Amount Added:	25.00	Units: uL	
MSV_LL_#2_826_00077	Amount Added:	25.00	Units: uL	
MSV_LL_GAS826_00141	Amount Added:	25.00	Units: uL	
MSV_LLcentISS_00006	Amount Added:	5.00	Units: uL	Run Reagent

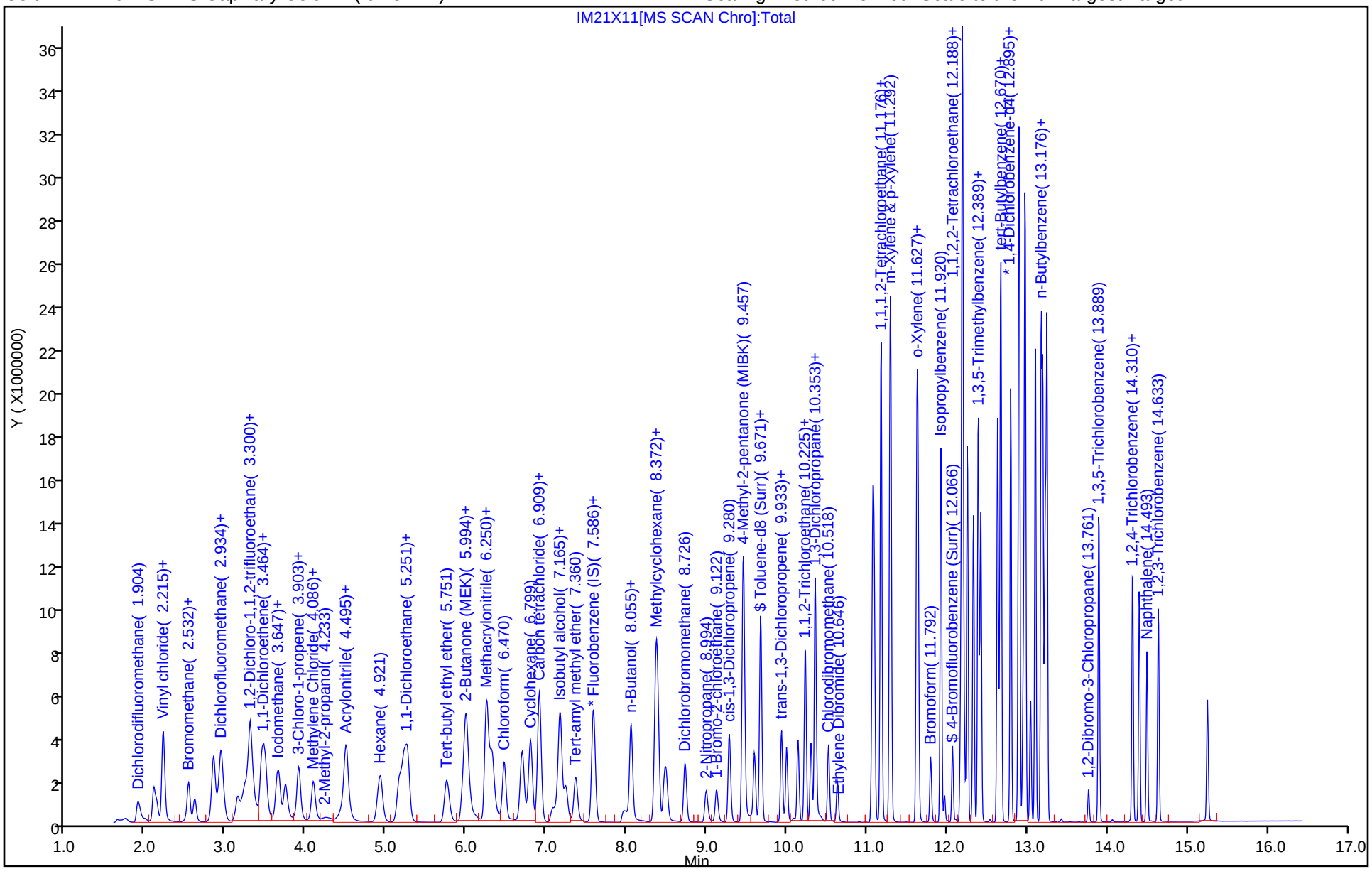
Report Date: 21-Mar-2023 17:37:32 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X11.D

Injection Date:	21-Mar-2023 04:01:30	Instrument ID:	19930	Operator ID:	mec29284
Lims ID:	IC std7			Worklist Smp#:	12
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

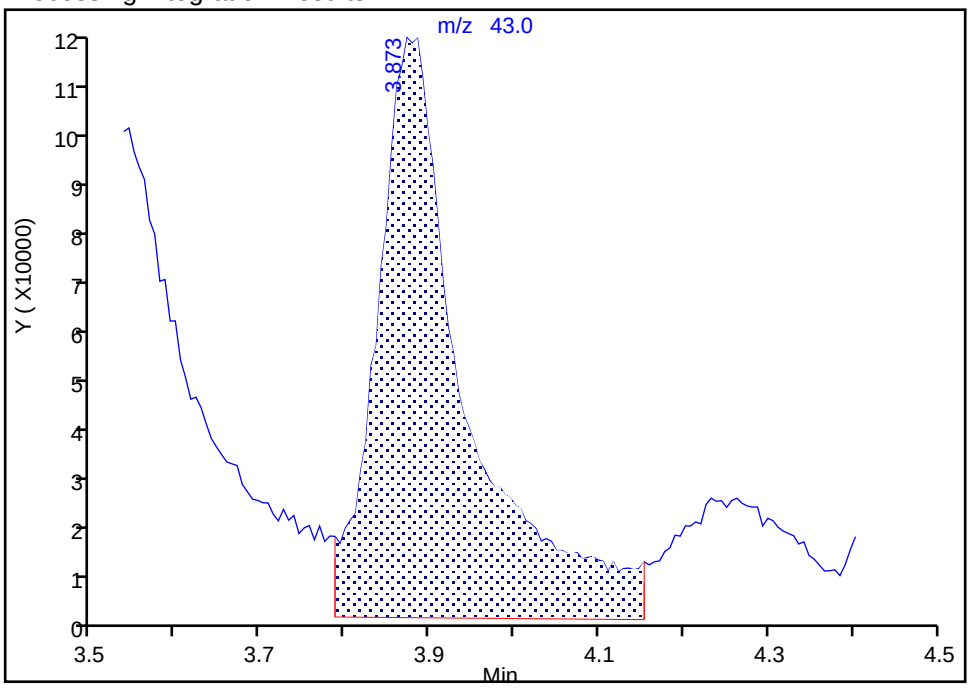
Data File:	\\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X11.D				
Injection Date:	21-Mar-2023 04:01:30	Instrument ID:	19930		
Lims ID:	IC std7				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	11	Worklist Smp#:	12
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

23 Methyl acetate, CAS: 79-20-9

Signal: 1

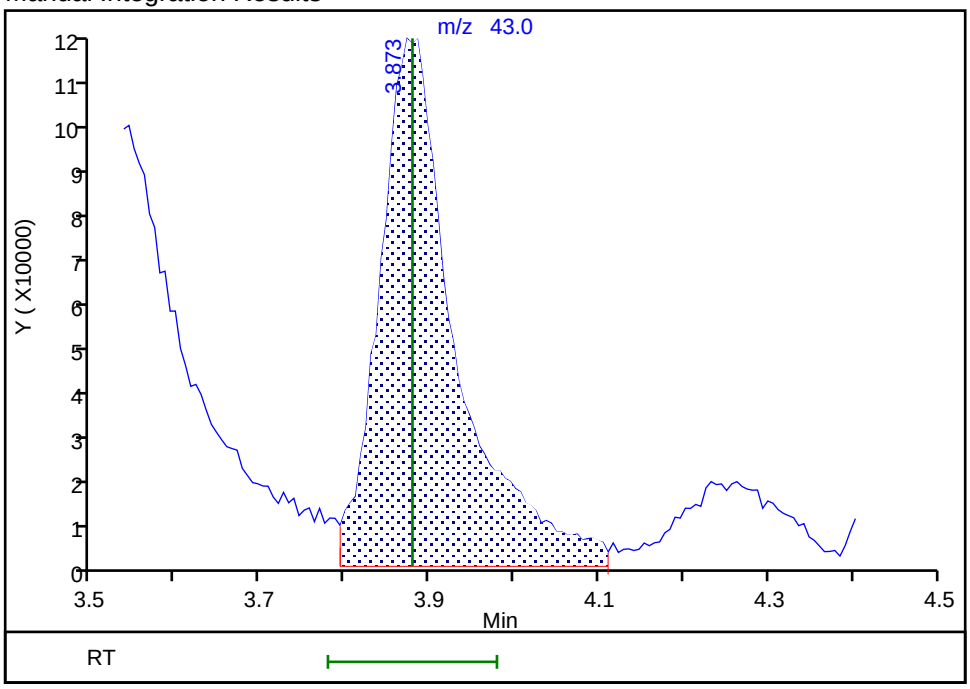
Processing Integration Results

RT: 3.87
Area: 799736
Amount: 26.116895
Amount Units: ug/l



Manual Integration Results

RT: 3.87
Area: 648459
Amount: 20.026891
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:38:01
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

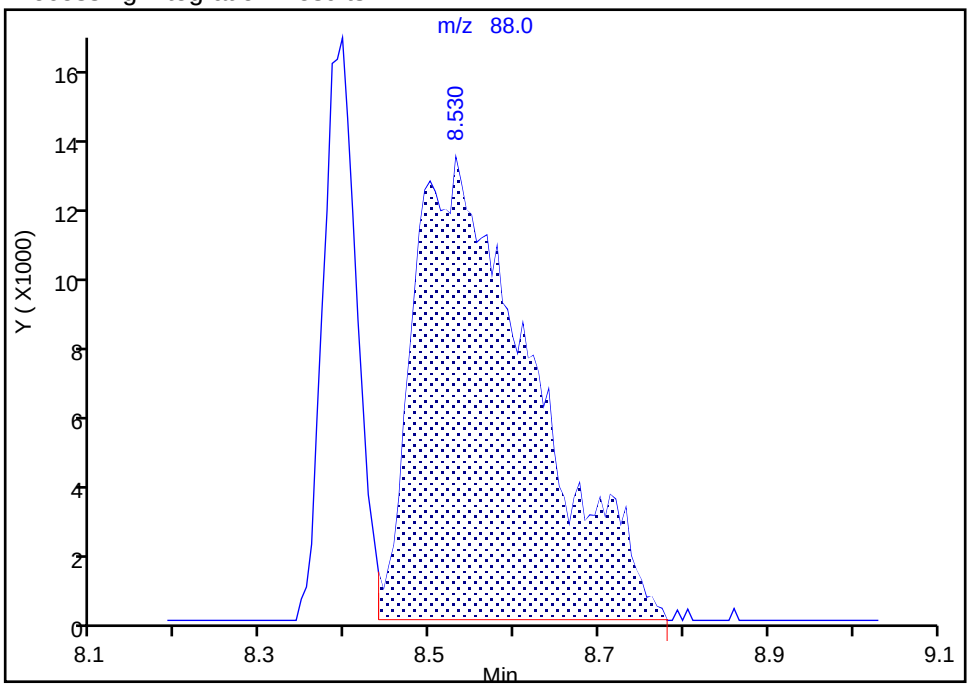
Data File:	\\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X11.D				
Injection Date:	21-Mar-2023 04:01:30	Instrument ID:	19930		
Lims ID:	IC std7				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	11	Worklist Smp#:	12
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

68 1,4-Dioxane, CAS: 123-91-1

Signal: 1

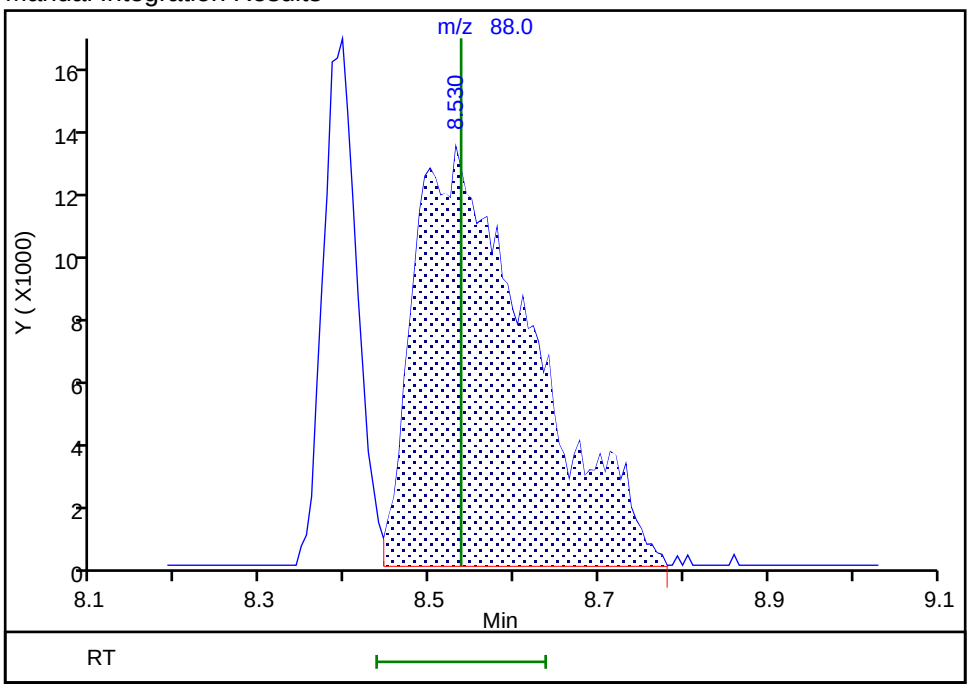
Processing Integration Results

RT: 8.53
Area: 124347
Amount: 571.6595
Amount Units: ug/l



Manual Integration Results

RT: 8.53
Area: 123866
Amount: 522.6727
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:38:58
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X12.D
Lims ID: ICIS - LG
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 21-Mar-2023 04:22:30 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0079468-013
Operator ID: mec29284 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 21-Mar-2023 17:37:37 Calib Date: 21-Mar-2023 06:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1651

First Level Reviewer: DVW2 Date: 21-Mar-2023 10:27:28

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.898	1.898	0.000	99	922225	10.0	10.4	M
4 Chloromethane	50	2.087	2.087	0.000	99	940151	10.0	9.77	
5 Vinyl chloride	62	2.203	2.203	0.000	98	930903	10.0	9.92	
6 Butadiene	39	2.209	2.209	0.000	95	826233	10.0	9.62	
7 Bromomethane	94	2.526	2.526	0.000	92	743346	10.0	10.2	
8 Chloroethane	64	2.599	2.599	0.000	99	577982	10.0	10.1	
9 Dichlorofluoromethane	67	2.837	2.837	0.000	97	1494327	10.0	9.78	
10 Trichlorofluoromethane	101	2.898	2.898	0.000	98	1607262	10.0	10.6	
11 Ethyl ether	59	3.135	3.135	0.000	93	503956	10.0	10.2	
13 1,2-Dichloro-1,1,2-trifluoroetha	67	3.227	3.227	0.000	90	845381	10.0	9.98	
14 Acrolein	56	3.306	3.306	0.000	96	3424553	500.0	533.6	
15 1,1-Dichloroethene	96	3.434	3.434	0.000	98	615600	10.0	10.0	
17 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.477	3.477	0.000	90	725110	10.0	10.4	
16 Acetone	43	3.477	3.477	0.000	68	717958	100.0	92.6	
18 Iodomethane	142	3.629	3.629	0.000	100	1344711	10.0	10.1	
19 Ethyl bromide	108	3.660	3.660	0.000	99	581386	10.0	10.2	
20 Carbon disulfide	76	3.733	3.733	0.000	100	1740418	10.0	10.1	
23 Methyl acetate	43	3.879	3.879	0.000	97	266996	10.0	9.62	M
24 3-Chloro-1-propene	41	3.897	3.897	0.000	87	1028696	10.0	9.96	
25 Methylene Chloride	84	4.086	4.086	0.000	93	659101	10.0	10.1	
* 26 t-Butyl alcohol-d10 (IS)	65	4.135	4.135	0.000	99	120956	50.0	50.0	
27 2-Methyl-2-propanol	59	4.263	4.263	0.000	99	532907	200.0	211.4	
28 Acrylonitrile	53	4.416	4.416	0.000	98	263633	25.0	28.0	
29 Methyl tert-butyl ether	73	4.477	4.477	0.000	95	1605079	10.0	10.2	
30 trans-1,2-Dichloroethene	96	4.495	4.495	0.000	98	680341	10.0	9.85	
31 Hexane	57	4.915	4.915	0.000	95	974283	10.0	10.7	
32 1,1-Dichloroethane	63	5.147	5.147	0.000	96	1265159	10.0	10.1	
35 Isopropyl ether	45	5.214	5.214	0.000	91	2131812	10.0	10.2	
36 2-Chloro-1,3-butadiene	53	5.263	5.263	0.000	93	1088422	10.0	10.3	
37 Tert-butyl ethyl ether	59	5.751	5.751	0.000	97	1484132	10.0	10.2	
38 2-Butanone (MEK)	43	5.958	5.958	0.000	100	1559003	100.0	108.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
39 cis-1,2-Dichloroethene	96	5.982	5.982	0.000	83	760484	10.0	10.1	
40 2,2-Dichloropropane	77	5.995	5.995	0.000	89	1152650	10.0	10.1	
43 Propionitrile	54	6.056	6.056	0.000	98	771867	200.0	232.5	
45 Methacrylonitrile	67	6.244	6.244	0.000	92	1703050	100.0	111.7	
46 Chlorobromomethane	128	6.318	6.318	0.000	90	362331	10.0	10.3	
47 Tetrahydrofuran	71	6.330	6.330	0.000	79	237735	50.0	54.1	
48 Chloroform	83	6.464	6.464	0.000	95	1301472	10.0	10.1	
$ 49 Dibromofluoromethane (Surr)	113	6.677	6.677	0.000	94	634684	10.0	10.1	
50 1,1,1-Trichloroethane	97	6.690	6.690	0.000	98	1236794	10.0	10.2	
51 Cyclohexane	56	6.793	6.793	0.000	92	1201687	10.0	10.4	
53 1,1-Dichloropropene	75	6.903	6.903	0.000	91	971752	10.0	10.3	
54 Carbon tetrachloride	117	6.909	6.909	0.000	95	1181687	10.0	10.5	
55 Isobutyl alcohol	41	7.092	7.092	0.000	90	499620	500.0	553.5	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.135	7.135	0.000	89	118206	10.0	9.88	
57 Benzene	78	7.165	7.165	0.000	98	2766730	10.0	10.0	
58 1,2-Dichloroethane	62	7.238	7.238	0.000	97	849419	10.0	10.0	
60 Tert-amyl methyl ether	73	7.354	7.354	0.000	98	1148066	10.0	10.3	
* 61 Fluorobenzene (IS)	96	7.567	7.567	0.000	99	2381761	10.0	10.0	
62 n-Heptane	43	7.580	7.580	0.000	92	1013268	10.0	10.7	
63 n-Butanol	56	7.976	7.976	0.000	90	703258	875.0	1076.6	
64 Trichloroethene	95	8.049	8.049	0.000	96	778206	10.0	10.0	
65 Methylcyclohexane	83	8.360	8.360	0.000	91	1348244	10.0	10.5	
66 1,2-Dichloropropane	63	8.378	8.378	0.000	90	714552	10.0	10.3	
67 Methyl methacrylate	69	8.464	8.464	0.000	89	349068	10.0	11.3	
69 Dibromomethane	93	8.488	8.488	0.000	92	368087	10.0	10.3	
68 1,4-Dioxane	88	8.537	8.537	0.000	84	118927	500.0	585.5	
71 Dichlorobromomethane	83	8.726	8.726	0.000	98	960002	10.0	10.4	
72 2-Nitropropane	41	8.994	8.994	0.000	99	615199	50.0	55.7	
75 1-Bromo-2-chloroethane	63	9.122	9.122	0.000	99	677411	10.0	10.3	
76 cis-1,3-Dichloropropene	75	9.280	9.280	0.000	93	1135243	10.0	10.7	
77 4-Methyl-2-pentanone (MIBK)	43	9.451	9.451	0.000	98	4813730	100.0	113.4	
$ 78 Toluene-d8 (Surr)	98	9.591	9.591	0.000	94	2420949	10.0	9.97	
79 Toluene	92	9.671	9.671	0.000	98	1895806	10.0	10.1	
97 trans-1,3-Dichloropropene	75	9.933	9.933	0.000	95	976681	10.0	10.7	
99 Ethyl methacrylate	69	9.994	9.994	0.000	89	746956	10.0	10.6	
100 1,1,2-Trichloroethane	97	10.134	10.134	0.000	92	520789	10.0	10.2	
101 Tetrachloroethene	166	10.225	10.225	0.000	98	1025277	10.0	10.2	
102 1,3-Dichloropropane	76	10.299	10.299	0.000	92	856612	10.0	10.1	
103 2-Hexanone	43	10.353	10.353	0.000	98	3355456	100.0	113.4	
105 Chlorodibromomethane	129	10.518	10.518	0.000	89	756162	10.0	10.7	
106 Ethylene Dibromide	107	10.628	10.628	0.000	98	515479	10.0	10.4	
* 107 Chlorobenzene-d5 (IS)	117	11.061	11.061	0.000	86	1886594	10.0	10.0	
108 1-Chlorohexane	91	11.073	11.073	0.000	97	1085890	10.0	10.1	
109 Chlorobenzene	112	11.091	11.091	0.000	96	2204397	10.0	10.2	
111 1,1,1,2-Tetrachloroethane	131	11.170	11.170	0.000	95	827659	10.0	10.5	
112 Ethylbenzene	91	11.176	11.176	0.000	98	3694009	10.0	10.1	
113 m-Xylene & p-Xylene	106	11.292	11.292	0.000	94	2958705	20.0	20.4	
114 o-Xylene	106	11.621	11.621	0.000	97	1442929	10.0	10.2	
115 Styrene	104	11.634	11.634	0.000	95	2367152	10.0	10.7	
116 Bromoform	173	11.792	11.792	0.000	97	503660	10.0	11.0	
117 Isopropylbenzene	105	11.920	11.920	0.000	96	3876560	10.0	10.4	
$ 120 4-Bromofluorobenzene (Surr)	95	12.067	12.067	0.000	96	889396	10.0	10.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
121 1,1,2,2-Tetrachloroethane	83	12.164	12.164	0.000	94	665065	10.0	10.3	
122 Bromobenzene	156	12.182	12.182	0.000	98	981240	10.0	10.2	
123 trans-1,4-Dichloro-2-butene	53	12.188	12.188	0.000	93	1920626	100.0	115.2	
124 1,2,3-Trichloropropane	110	12.213	12.213	0.000	84	189700	10.0	10.4	
125 N-Propylbenzene	91	12.249	12.249	0.000	99	4495847	10.0	10.6	
126 2-Chlorotoluene	126	12.329	12.329	0.000	97	946897	10.0	10.4	
127 1,3,5-Trimethylbenzene	105	12.384	12.384	0.000	94	3315484	10.0	10.5	
128 4-Chlorotoluene	126	12.420	12.420	0.000	97	951822	10.0	10.5	
129 tert-Butylbenzene	134	12.627	12.627	0.000	94	817068	10.0	10.4	
130 Pentachloroethane	167	12.664	12.664	0.000	92	672224	10.0	11.1	
131 1,2,4-Trimethylbenzene	105	12.670	12.670	0.000	97	3435975	10.0	10.6	
132 sec-Butylbenzene	105	12.792	12.792	0.000	94	4306580	10.0	10.7	
133 1,3-Dichlorobenzene	146	12.890	12.890	0.000	99	1926286	10.0	10.7	
134 4-Isopropyltoluene	119	12.902	12.902	0.000	97	3862618	10.0	10.7	
* 135 1,4-Dichlorobenzene-d4	152	12.944	12.944	0.000	94	1169233	10.0	10.0	
136 1,4-Dichlorobenzene	146	12.963	12.963	0.000	94	1838618	10.0	10.4	
137 1,2,3-Trimethylbenzene	120	12.975	12.975	0.000	98	1534921	10.0	10.2	
138 Benzyl chloride	126	13.042	13.042	0.000	99	290235	10.0	11.4	
139 n-Butylbenzene	92	13.188	13.188	0.000	95	1762970	10.0	11.2	
140 1,2-Dichlorobenzene	146	13.225	13.225	0.000	99	1807906	10.0	10.5	
142 1,2-Dibromo-3-Chloropropane	155	13.767	13.767	0.000	87	114580	10.0	10.8	
143 1,3,5-Trichlorobenzene	180	13.889	13.889	0.000	98	1467042	10.0	10.7	
144 1,2,4-Trichlorobenzene	180	14.316	14.316	0.000	94	1207739	10.0	11.0	
145 Hexachlorobutadiene	225	14.395	14.395	0.000	96	656545	10.0	10.4	
146 Naphthalene	128	14.493	14.493	0.000	97	2170950	10.0	10.6	
147 1,2,3-Trichlorobenzene	180	14.639	14.639	0.000	95	1072140	10.0	10.7	
155 2-Methylnaphthalene	142		0.000				ND	ND	
156 p-Diethylbenzene	1		0.000				ND	ND	
161 Pentane	43		0.000				ND	ND	
150 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
165 Isopropyl alcohol	45		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MSV_LL_#1_826_00068	Amount Added: 10.00	Units: uL	
MSV_LL_#2_826_00077	Amount Added: 10.00	Units: uL	
MSV_LL_GAS826_00141	Amount Added: 10.00	Units: uL	
MSV_LLcentISS_00006	Amount Added: 5.00	Units: uL	Run Reagent

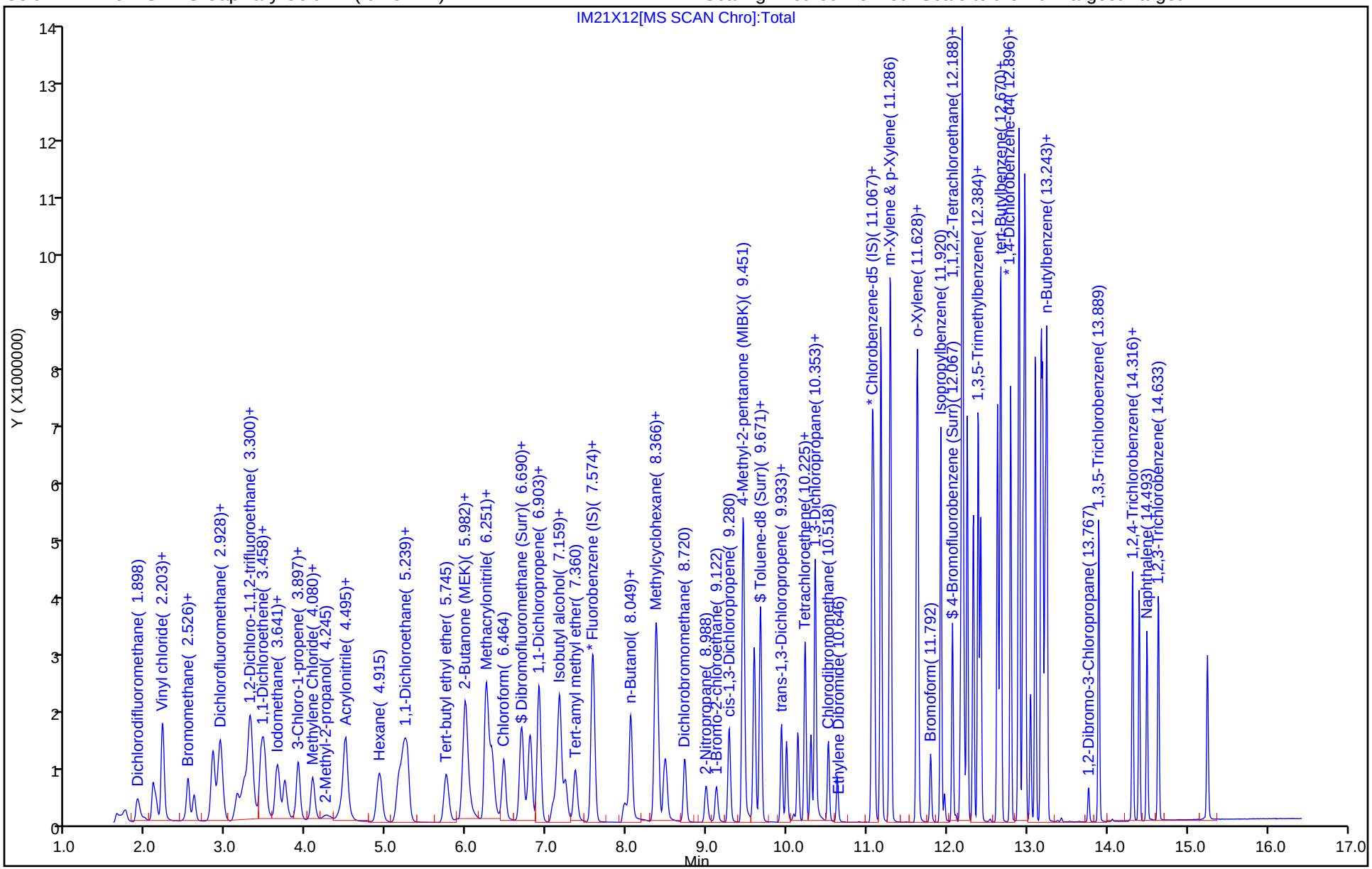
Report Date: 21-Mar-2023 17:37:38 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X12.D

Injection Date:	21-Mar-2023 04:22:30	Instrument ID:	19930	Operator ID:	mec29284
Lims ID:	ICIS - LG			Worklist Smp#:	13
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

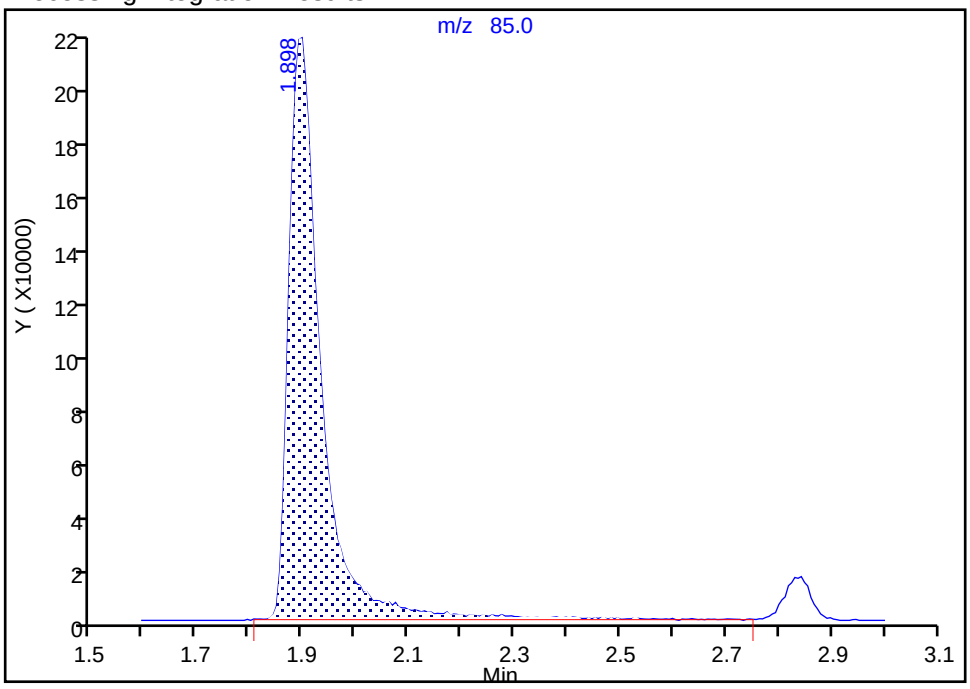
Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X12.D
Injection Date: 21-Mar-2023 04:22:30 Instrument ID: 19930
Lims ID: ICIS - LG
Client ID:
Operator ID: mec29284 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

1 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

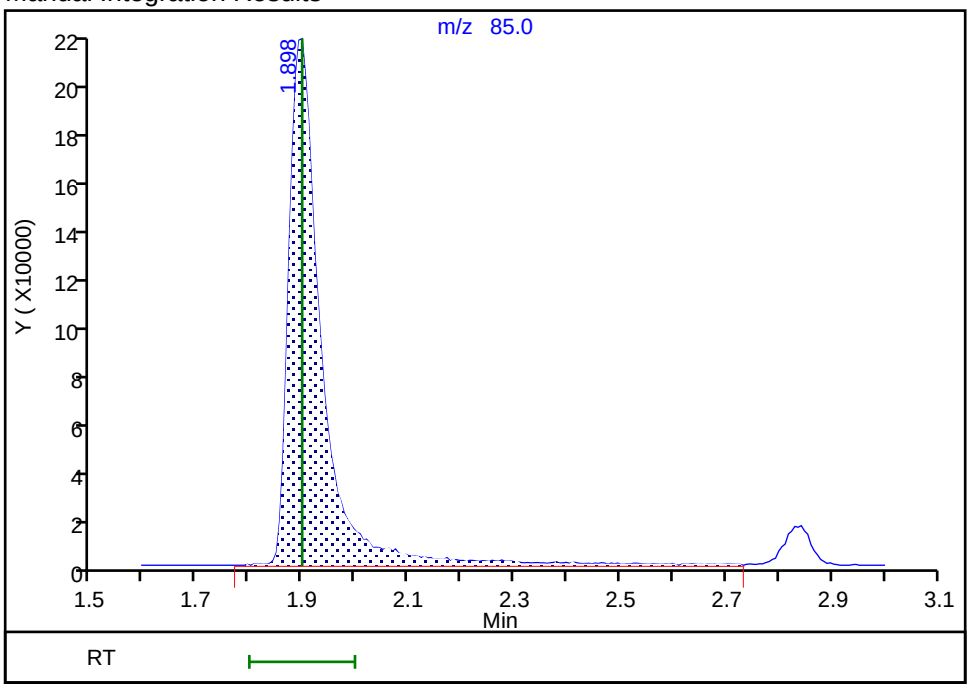
Processing Integration Results

RT: 1.90
Area: 899819
Amount: 10.174710
Amount Units: ug/l



Manual Integration Results

RT: 1.90
Area: 922225
Amount: 10.390459
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:43:07
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

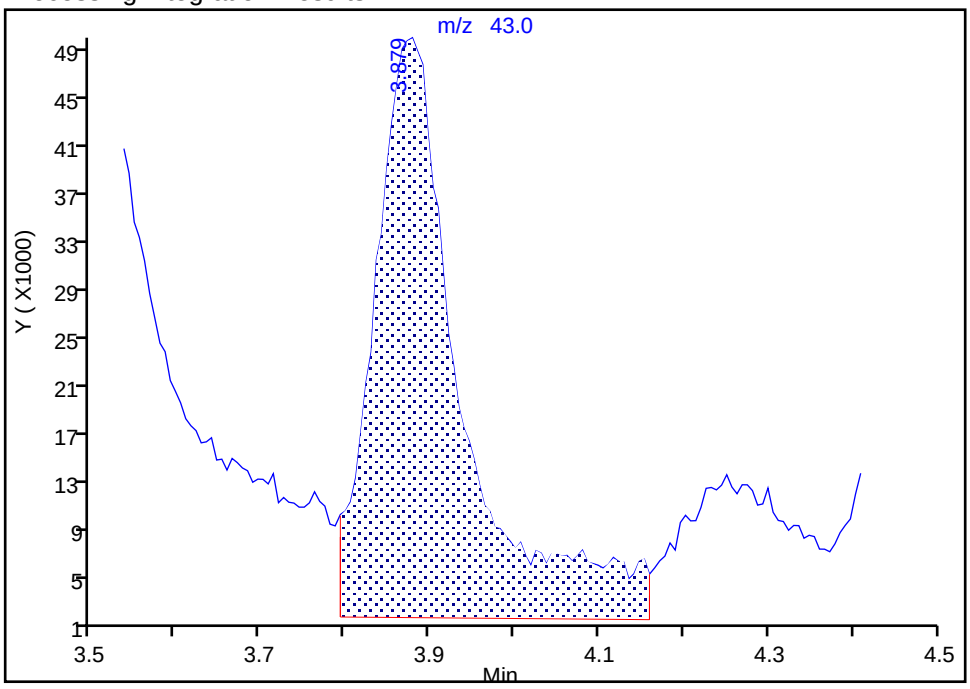
Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X12.D
Injection Date: 21-Mar-2023 04:22:30 Instrument ID: 19930
Lims ID: ICIS - LG
Client ID:
Operator ID: mec29284 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

23 Methyl acetate, CAS: 79-20-9

Signal: 1

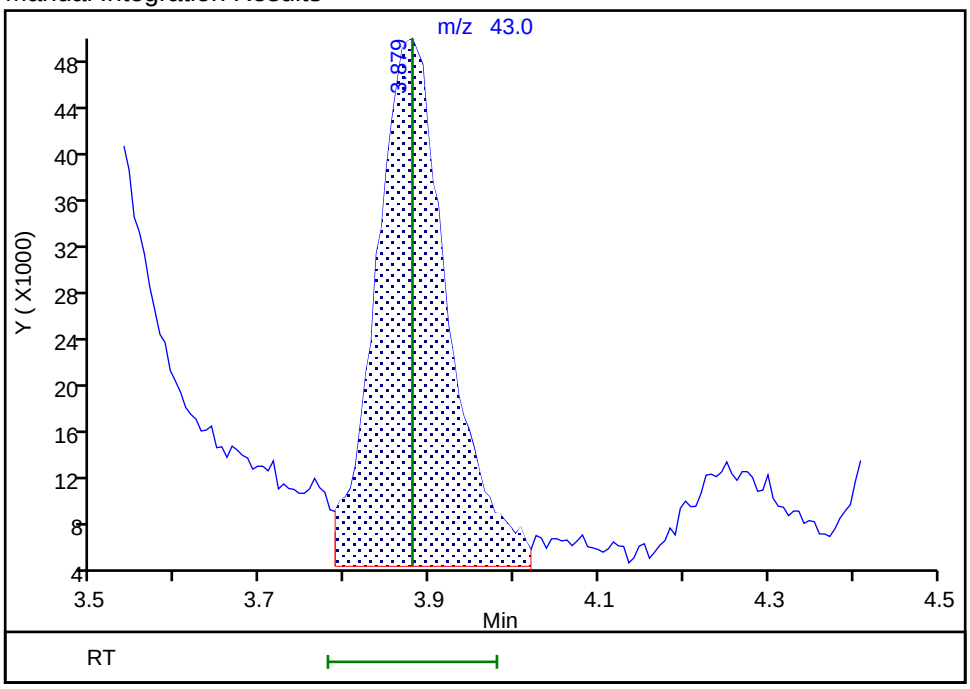
Processing Integration Results

RT: 3.88
Area: 348419
Amount: 12.708697
Amount Units: ug/l



Manual Integration Results

RT: 3.88
Area: 266996
Amount: 9.620961
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:43:58
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X13.D
Lims ID: IC std5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 21-Mar-2023 04:42:30 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0079468-014
Operator ID: mec29284 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 21-Mar-2023 17:37:43 Calib Date: 21-Mar-2023 06:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1651

First Level Reviewer: K4WN Date: 21-Mar-2023 15:49:07

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.898	1.898	0.000	99	455174	5.00	5.12	
4 Chloromethane	50	2.093	2.087	0.006	99	459776	5.00	4.77	
5 Vinyl chloride	62	2.209	2.203	0.006	98	468573	5.00	4.98	
6 Butadiene	39	2.215	2.209	0.006	95	408978	5.00	4.75	
7 Bromomethane	94	2.532	2.526	0.006	92	358762	5.00	4.92	
8 Chloroethane	64	2.605	2.599	0.006	99	282374	5.00	4.94	
9 Dichlorofluoromethane	67	2.843	2.837	0.006	97	745004	5.00	4.87	
10 Trichlorofluoromethane	101	2.904	2.898	0.006	96	738690	5.00	4.86	
11 Ethyl ether	59	3.148	3.135	0.013	91	250383	5.00	5.03	
13 1,2-Dichloro-1,1,2-trifluoroetha	67	3.227	3.227	0.000	88	415383	5.00	4.89	
14 Acrolein	56	3.312	3.306	0.006	95	1760321	250.0	264.9	
15 1,1-Dichloroethene	96	3.440	3.434	0.006	98	300931	5.00	4.89	
17 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.483	3.477	0.006	90	350208	5.00	5.00	
16 Acetone	43	3.489	3.477	0.012	71	382327	50.0	47.6	M
18 Iodomethane	142	3.641	3.629	0.012	99	668087	5.00	5.01	
19 Ethyl bromide	108	3.666	3.660	0.006	99	289573	5.01	5.05	
20 Carbon disulfide	76	3.739	3.733	0.006	100	851050	5.00	4.94	
23 Methyl acetate	43	3.885	3.879	0.006	97	138687	5.00	4.83	M
24 3-Chloro-1-propene	41	3.910	3.897	0.013	88	512382	5.00	4.95	
25 Methylene Chloride	84	4.086	4.086	0.000	93	323924	5.00	4.96	
* 26 t-Butyl alcohol-d10 (IS)	65	4.135	4.135	0.000	98	125221	50.0	50.0	M
27 2-Methyl-2-propanol	59	4.269	4.263	0.006	98	290719	100.0	111.4	M
28 Acrylonitrile	53	4.428	4.416	0.012	96	135604	12.5	13.9	M
29 Methyl tert-butyl ether	73	4.495	4.477	0.018	95	799391	5.00	5.06	
30 trans-1,2-Dichloroethene	96	4.501	4.495	0.006	99	339868	5.00	4.91	
31 Hexane	57	4.922	4.915	0.007	95	468791	5.00	5.13	
32 1,1-Dichloroethane	63	5.159	5.147	0.012	96	633253	5.00	5.04	
35 Isopropyl ether	45	5.214	5.214	0.000	95	1061122	5.00	5.06	
36 2-Chloro-1,3-butadiene	53	5.269	5.263	0.006	93	541494	5.00	5.09	
37 Tert-butyl ethyl ether	59	5.751	5.751	0.000	97	749516	5.00	5.15	
38 2-Butanone (MEK)	43	5.964	5.958	0.006	100	784382	50.0	52.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
39 cis-1,2-Dichloroethene	96	5.989	5.982	0.006	83	381596	5.00	5.05	
40 2,2-Dichloropropane	77	5.995	5.995	0.000	89	567765	5.00	4.97	
43 Propionitrile	54	6.062	6.056	0.006	98	368330	100.0	107.2	
S 41 1,2-Dichloroethene, Total	100				0			9.96	
45 Methacrylonitrile	67	6.251	6.244	0.007	91	830959	50.0	52.6	
46 Chlorobromomethane	128	6.324	6.318	0.006	91	179484	5.00	5.10	
47 Tetrahydrofuran	71	6.336	6.330	0.006	79	120622	25.0	26.5	
48 Chloroform	83	6.470	6.464	0.006	95	643977	5.00	4.99	
$ 49 Dibromofluoromethane (Surr)	113	6.683	6.677	0.006	94	632686	10.0	10.0	
50 1,1,1-Trichloroethane	97	6.696	6.690	0.006	98	611388	5.00	5.02	
51 Cyclohexane	56	6.799	6.793	0.006	92	580173	5.00	5.01	
53 1,1-Dichloropropene	75	6.909	6.903	0.006	91	474125	5.00	5.00	
54 Carbon tetrachloride	117	6.909	6.909	0.000	95	576461	5.00	5.11	
55 Isobutyl alcohol	41	7.098	7.092	0.006	94	254297	250.0	272.1	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.135	7.135	0.000	91	120327	10.0	10.0	
57 Benzene	78	7.171	7.165	0.006	98	1384537	5.00	5.00	
58 1,2-Dichloroethane	62	7.238	7.238	0.000	97	422172	5.00	4.97	M
60 Tert-amyl methyl ether	73	7.366	7.354	0.012	97	573757	5.00	5.11	
* 61 Fluorobenzene (IS)	96	7.574	7.567	0.007	99	2387313	10.0	10.0	
62 n-Heptane	43	7.592	7.580	0.012	91	473866	5.00	4.98	
63 n-Butanol	56	7.988	7.976	0.012	93	342450	437.5	506.4	
64 Trichloroethene	95	8.055	8.049	0.006	96	389301	5.00	4.99	
65 Methylcyclohexane	83	8.360	8.360	0.000	91	647571	5.00	5.04	
66 1,2-Dichloropropane	63	8.384	8.378	0.006	92	356169	5.00	5.11	
67 Methyl methacrylate	69	8.470	8.464	0.006	88	167724	5.00	5.24	
69 Dibromomethane	93	8.494	8.488	0.006	93	181241	5.00	5.08	
68 1,4-Dioxane	88	8.531	8.537	-0.006	83	60319	250.0	286.9	M
71 Dichlorobromomethane	83	8.726	8.726	0.000	98	475184	5.00	5.14	
72 2-Nitropropane	41	8.994	8.994	0.000	100	292267	25.0	25.6	
75 1-Bromo-2-chloroethane	63	9.122	9.122	0.000	99	333228	5.00	5.06	
76 cis-1,3-Dichloropropene	75	9.281	9.280	0.001	94	552133	5.00	5.17	
77 4-Methyl-2-pentanone (MIBK)	43	9.457	9.451	0.006	98	2322697	50.0	52.9	
$ 78 Toluene-d8 (Surr)	98	9.591	9.591	0.000	94	2422302	10.0	9.98	
79 Toluene	92	9.671	9.671	0.000	97	923872	5.00	4.94	
97 trans-1,3-Dichloropropene	75	9.933	9.933	0.000	96	468676	5.00	5.15	
99 Ethyl methacrylate	69	9.994	9.994	0.000	89	365161	5.00	5.18	
S 98 1,3-Dichloropropene, Total	100				0			10.3	
100 1,1,2-Trichloroethane	97	10.140	10.134	0.006	93	253999	5.00	4.96	
101 Tetrachloroethene	166	10.225	10.225	0.000	98	508265	5.00	5.04	
102 1,3-Dichloropropane	76	10.299	10.299	0.000	93	427645	5.00	5.07	
103 2-Hexanone	43	10.354	10.353	0.001	98	1623206	50.0	53.0	
105 Chlorodibromomethane	129	10.518	10.518	0.000	89	365950	5.00	5.19	
106 Ethylene Dibromide	107	10.628	10.628	0.000	98	251158	5.00	5.06	
* 107 Chlorobenzene-d5 (IS)	117	11.061	11.061	0.000	86	1885942	10.0	10.0	
108 1-Chlorohexane	91	11.073	11.073	0.000	97	521339	5.00	4.84	
109 Chlorobenzene	112	11.091	11.091	0.000	95	1086370	5.00	5.05	
111 1,1,1,2-Tetrachloroethane	131	11.170	11.170	0.000	95	405063	5.00	5.12	
112 Ethylbenzene	91	11.177	11.176	0.001	98	1842666	5.00	5.06	
S 110 Xylenes, Total	106				0			15.4	
113 m-Xylene & p-Xylene	106	11.292	11.292	0.000	94	1490951	10.0	10.3	
114 o-Xylene	106	11.622	11.621	0.001	96	722330	5.00	5.09	
115 Styrene	104	11.634	11.634	0.000	95	1155265	5.00	5.24	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
116 Bromoform	173	11.792	11.792	0.000	97	241884	5.00	5.27	
117 Isopropylbenzene	105	11.920	11.920	0.000	96	1899553	5.00	5.10	
$ 120 4-Bromofluorobenzene (Surr)	95	12.067	12.067	0.000	96	876575	10.0	9.90	
121 1,1,2,2-Tetrachloroethane	83	12.164	12.164	0.000	94	325780	5.00	5.08	
122 Bromobenzene	156	12.182	12.182	0.000	97	490923	5.00	5.13	
123 trans-1,4-Dichloro-2-butene	53	12.189	12.188	0.000	93	910577	50.0	52.8	
124 1,2,3-Trichloropropane	110	12.213	12.213	0.000	84	93500	5.00	5.16	
125 N-Propylbenzene	91	12.249	12.249	0.000	99	2199783	5.00	5.24	
126 2-Chlorotoluene	126	12.329	12.329	0.000	97	467982	5.00	5.16	
127 1,3,5-Trimethylbenzene	105	12.390	12.384	0.006	94	1630191	5.00	5.18	
128 4-Chlorotoluene	126	12.420	12.420	0.000	97	472147	5.00	5.22	
129 tert-Butylbenzene	134	12.627	12.627	0.000	93	400832	5.00	5.14	
130 Pentachloroethane	167	12.664	12.664	0.000	92	319216	5.00	5.28	
131 1,2,4-Trimethylbenzene	105	12.670	12.670	0.000	97	1681631	5.00	5.20	
132 sec-Butylbenzene	105	12.792	12.792	0.000	94	2062828	5.00	5.15	
133 1,3-Dichlorobenzene	146	12.890	12.890	0.000	99	921590	5.00	5.13	
134 4-Isopropyltoluene	119	12.902	12.902	0.000	98	1855523	5.00	5.19	
* 135 1,4-Dichlorobenzene-d4	152	12.944	12.944	0.000	94	1162953	10.0	10.0	
136 1,4-Dichlorobenzene	146	12.963	12.963	0.000	95	893710	5.00	5.08	
137 1,2,3-Trimethylbenzene	120	12.975	12.975	0.000	98	754758	5.00	5.05	
138 Benzyl chloride	126	13.042	13.042	0.000	99	139656	5.00	5.53	
139 n-Butylbenzene	92	13.194	13.188	0.006	97	833984	5.00	5.31	
140 1,2-Dichlorobenzene	146	13.225	13.225	0.000	98	874011	5.00	5.12	
142 1,2-Dibromo-3-Chloropropane	155	13.767	13.767	0.000	90	54876	5.00	5.22	
143 1,3,5-Trichlorobenzene	180	13.895	13.889	0.006	97	709964	5.00	5.21	
144 1,2,4-Trichlorobenzene	180	14.316	14.316	0.000	93	575676	5.00	5.26	
145 Hexachlorobutadiene	225	14.401	14.395	0.006	96	308531	5.00	4.91	
146 Naphthalene	128	14.493	14.493	0.000	97	1061065	5.00	5.20	
147 1,2,3-Trichlorobenzene	180	14.639	14.639	0.000	95	516164	5.00	5.19	
155 2-Methylnaphthalene	142		0.000				ND	ND	
156 p-Diethylbenzene	1		0.000				ND	ND	
161 Pentane	43		0.000				ND	ND	
150 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
165 Isopropyl alcohol	45		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MSV_LL_#1_826_00068	Amount Added:	5.00	Units: uL	
MSV_LL_#2_826_00077	Amount Added:	5.00	Units: uL	
MSV_LL_GAS826_00141	Amount Added:	5.00	Units: uL	
MSV_LLcentISS_00006	Amount Added:	5.00	Units: uL	Run Reagent

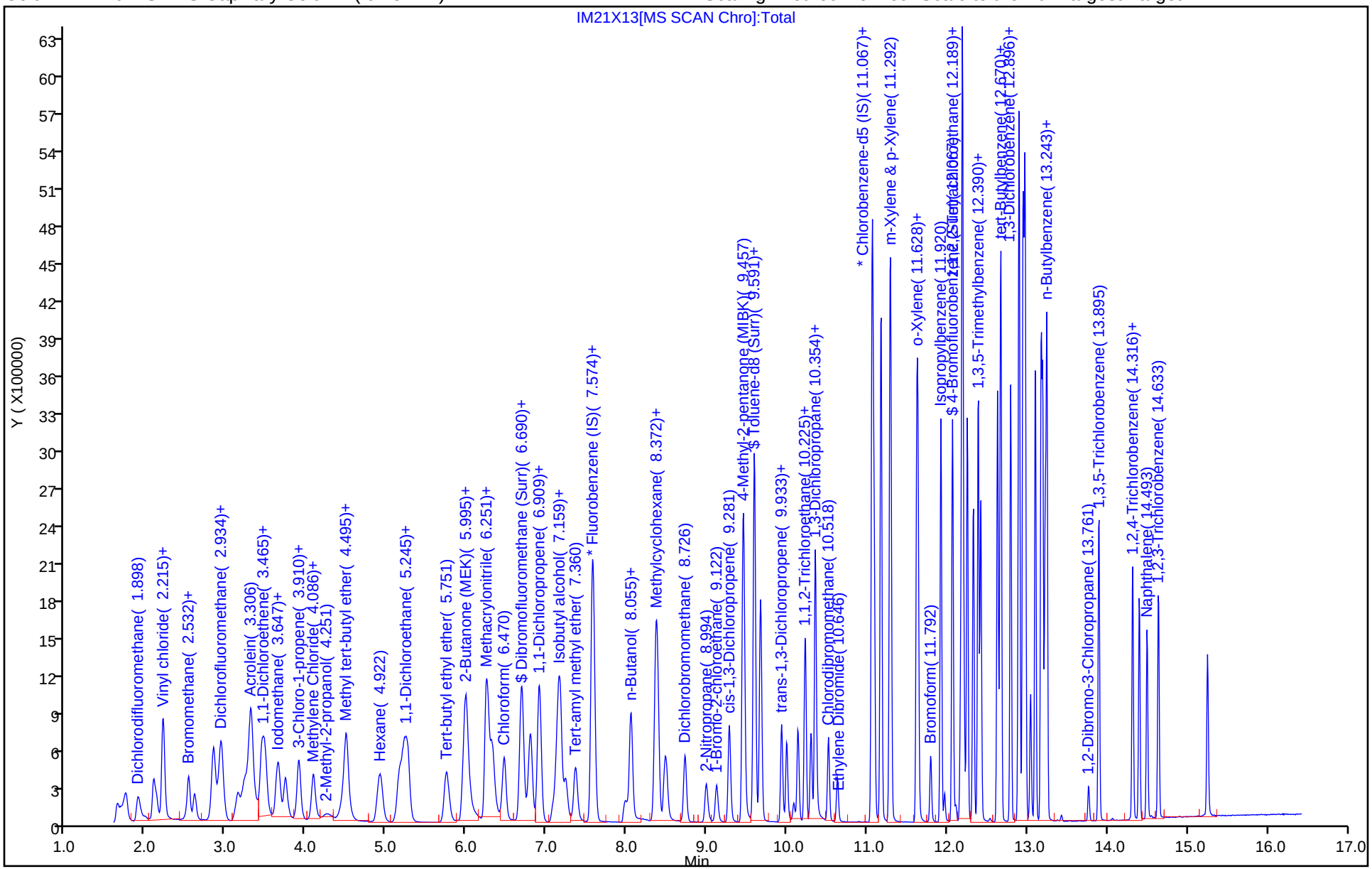
Report Date: 21-Mar-2023 17:37:43 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X13.D

Injection Date:	21-Mar-2023 04:42:30	Instrument ID:	19930	Operator ID:	mec29284
Lims ID:	IC std5			Worklist Smp#:	14
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

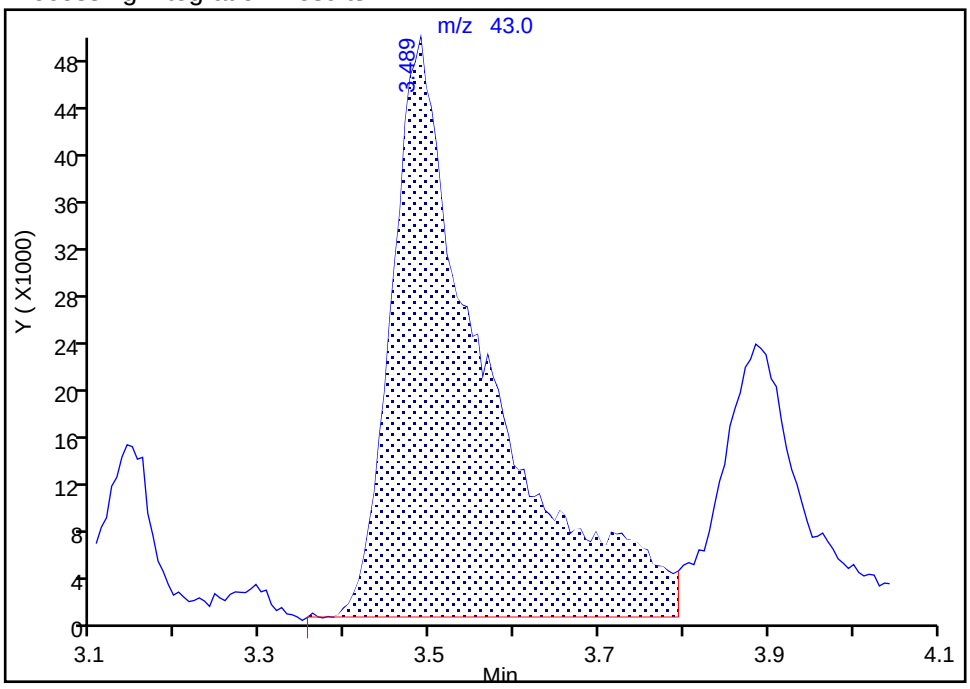
Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X13.D
Injection Date: 21-Mar-2023 04:42:30 Instrument ID: 19930
Lims ID: IC std5
Client ID:
Operator ID: mec29284 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

16 Acetone, CAS: 67-64-1

Signal: 1

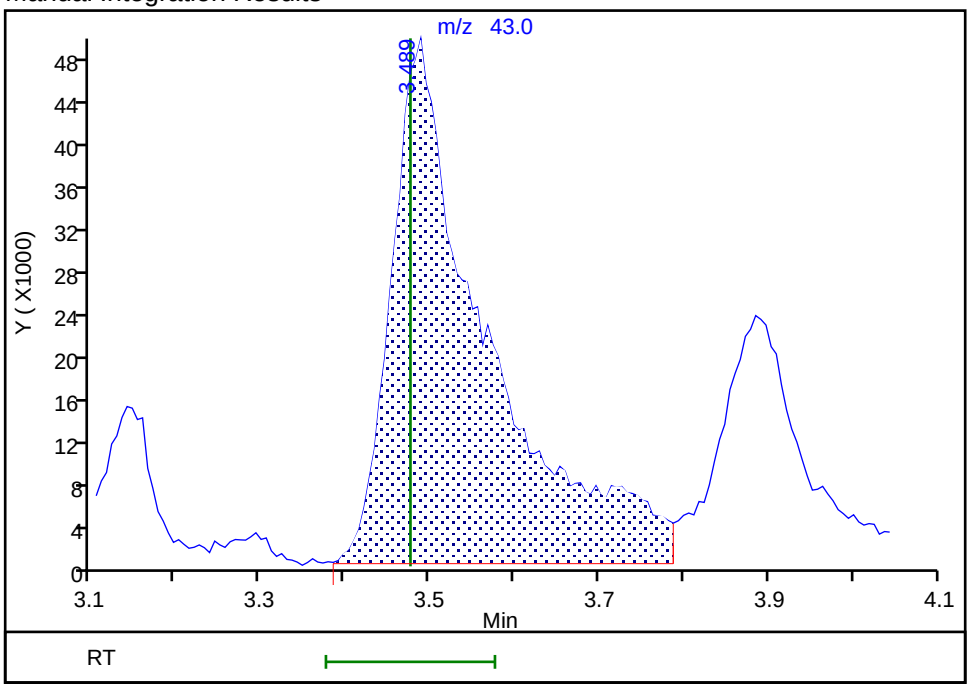
Processing Integration Results

RT: 3.49
Area: 383015
Amount: 47.708398
Amount Units: ug/l



Manual Integration Results

RT: 3.49
Area: 382327
Amount: 47.634364
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 16:13:05
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

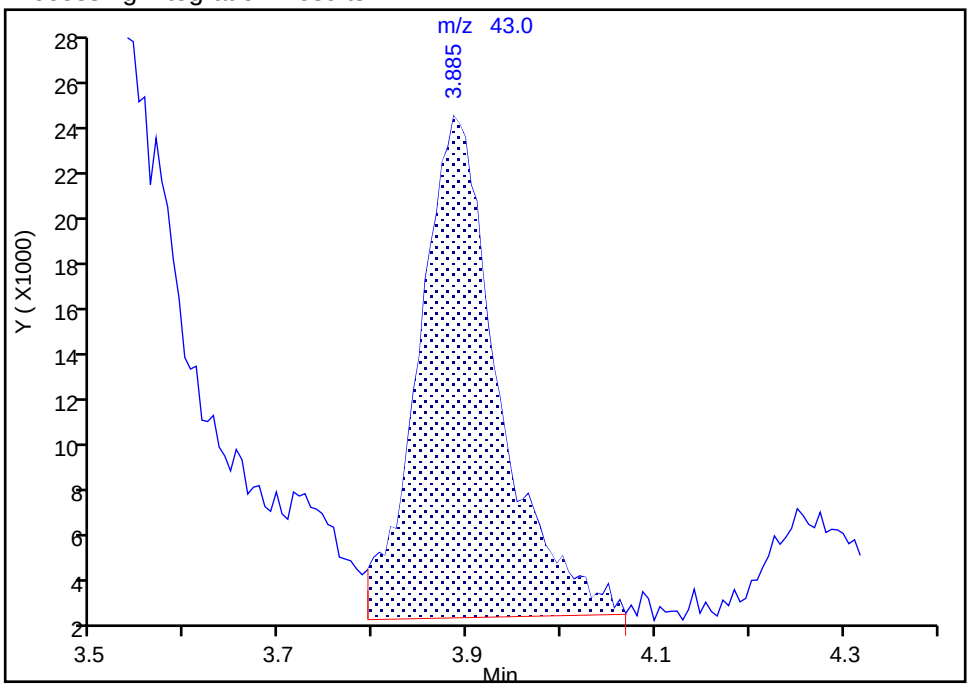
Data File:	\\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X13.D				
Injection Date:	21-Mar-2023 04:42:30	Instrument ID:	19930		
Lims ID:	IC std5				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

23 Methyl acetate, CAS: 79-20-9

Signal: 1

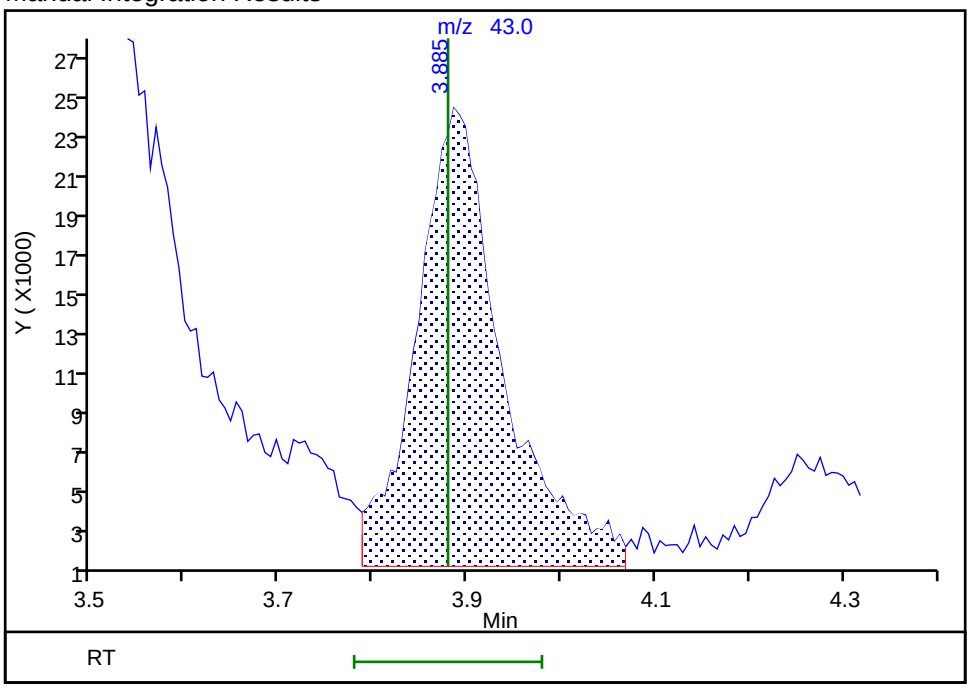
Processing Integration Results

RT: 3.89
Area: 125000
Amount: 4.378117
Amount Units: ug/l



Manual Integration Results

RT: 3.89
Area: 138687
Amount: 4.827249
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:46:36

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

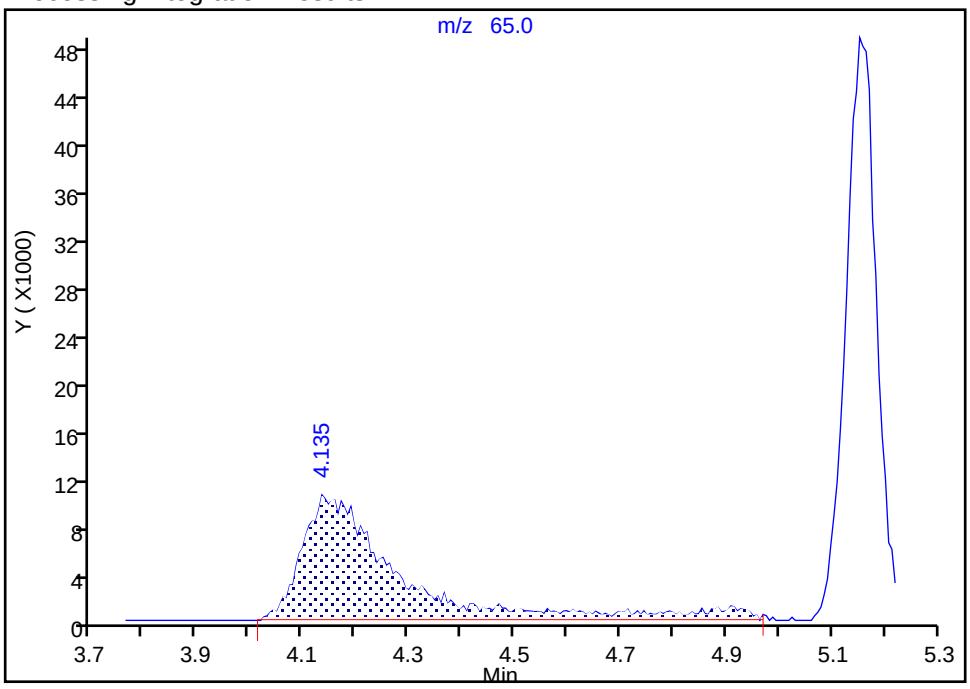
Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X13.D
Injection Date: 21-Mar-2023 04:42:30 Instrument ID: 19930
Lims ID: IC std5
Client ID:
Operator ID: mec29284 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 26 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

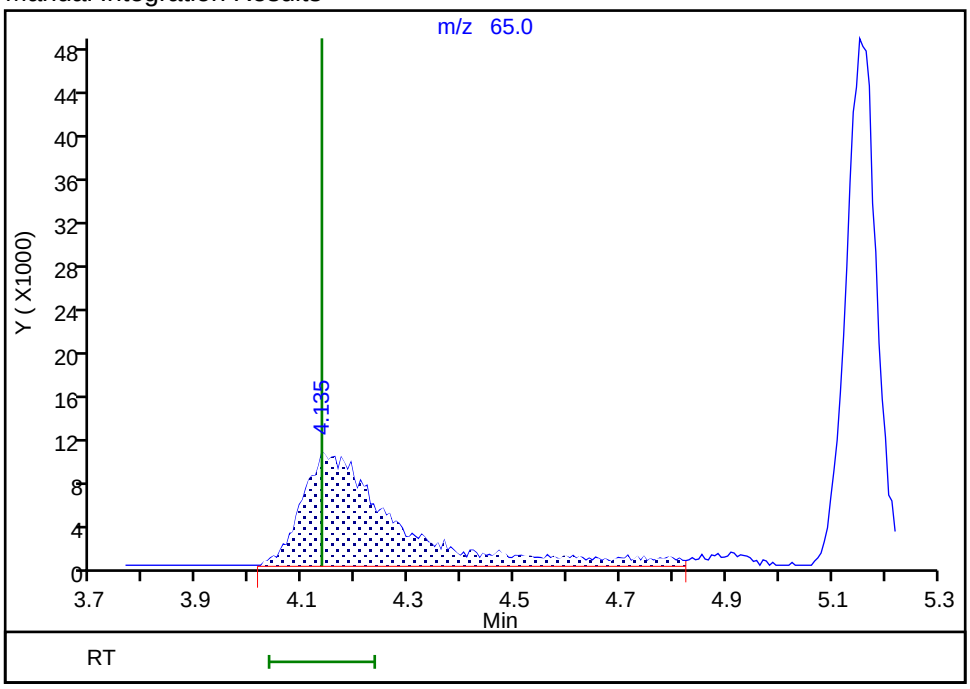
Processing Integration Results

RT: 4.14
Area: 131546
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 4.14
Area: 125221
Amount: 50.000000
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 16:12:32
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

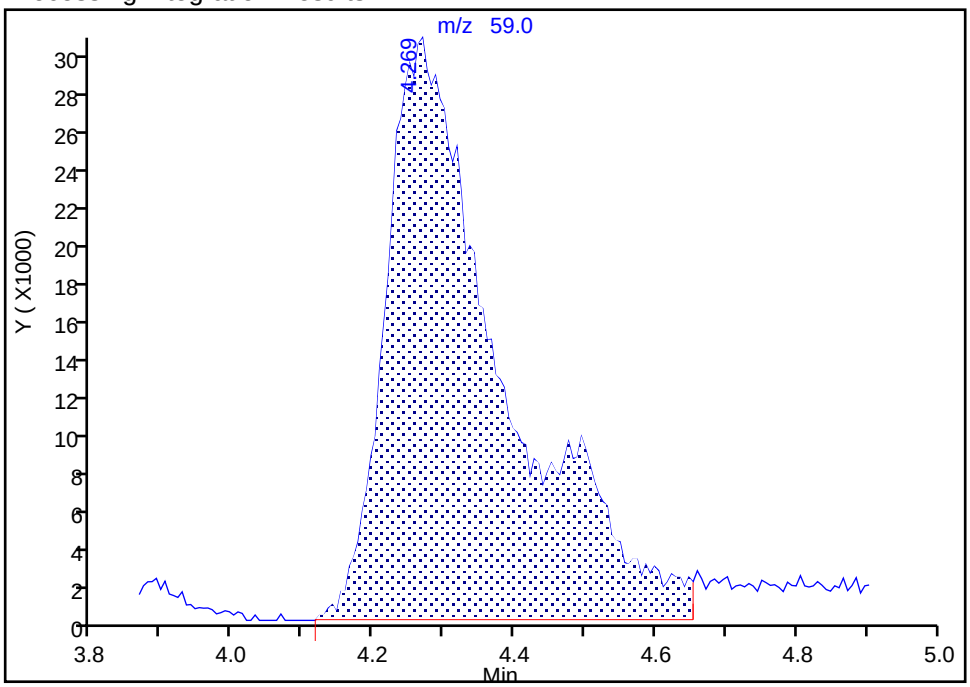
Data File:	\\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X13.D				
Injection Date:	21-Mar-2023 04:42:30	Instrument ID:	19930		
Lims ID:	IC std5				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

27 2-Methyl-2-propanol, CAS: 75-65-0

Signal: 1

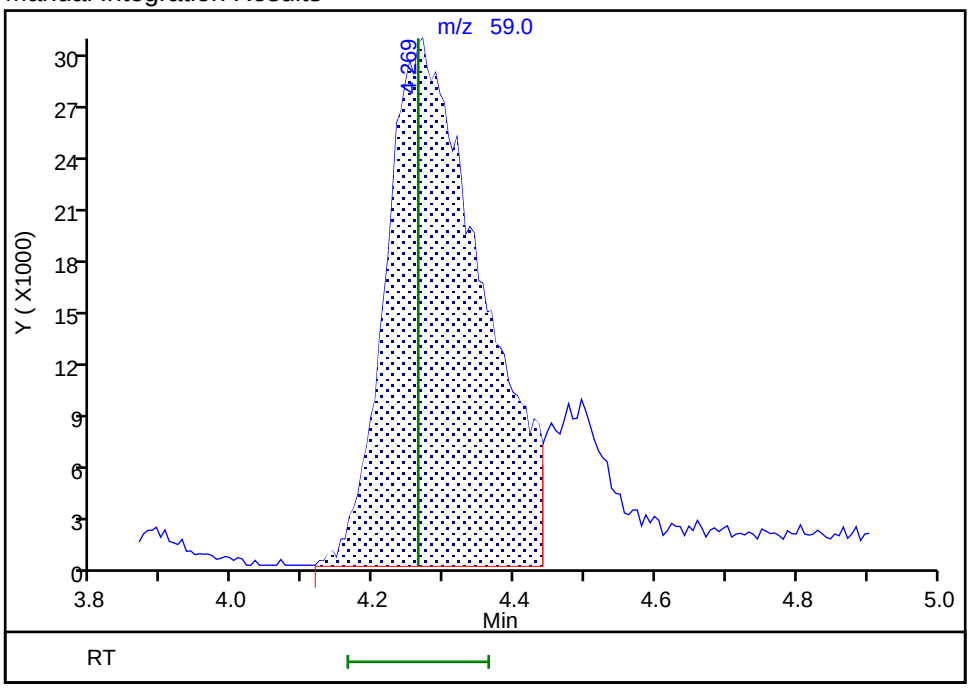
Processing Integration Results

RT: 4.27
Area: 354974
Amount: 115.2823
Amount Units: ug/l



Manual Integration Results

RT: 4.27
Area: 290719
Amount: 111.4019
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:47:03
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

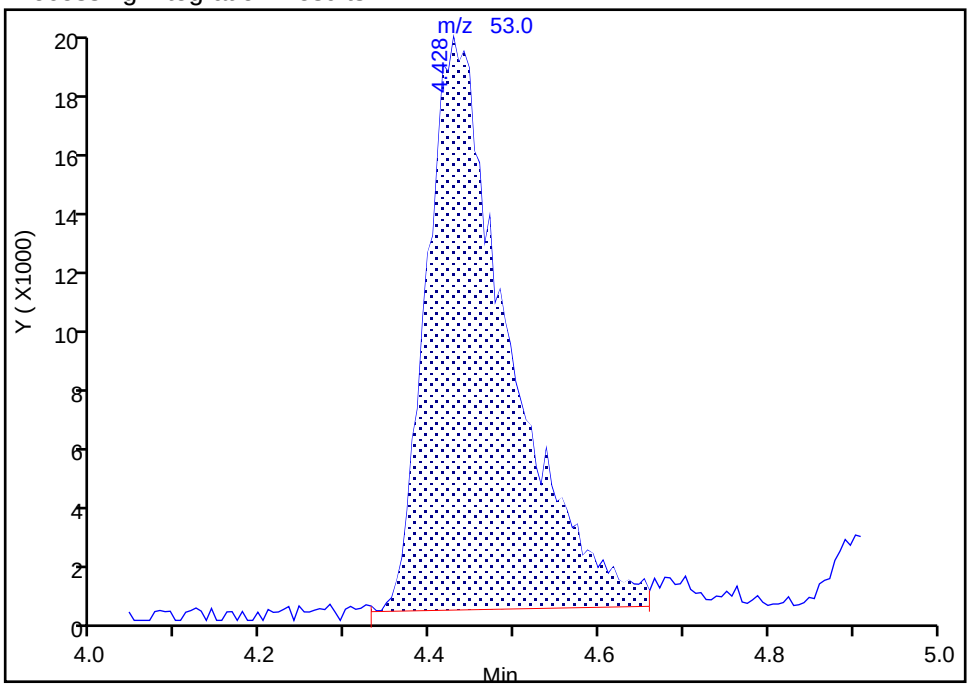
Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X13.D
Injection Date: 21-Mar-2023 04:42:30 Instrument ID: 19930
Lims ID: IC std5
Client ID:
Operator ID: mec29284 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

28 Acrylonitrile, CAS: 107-13-1

Signal: 1

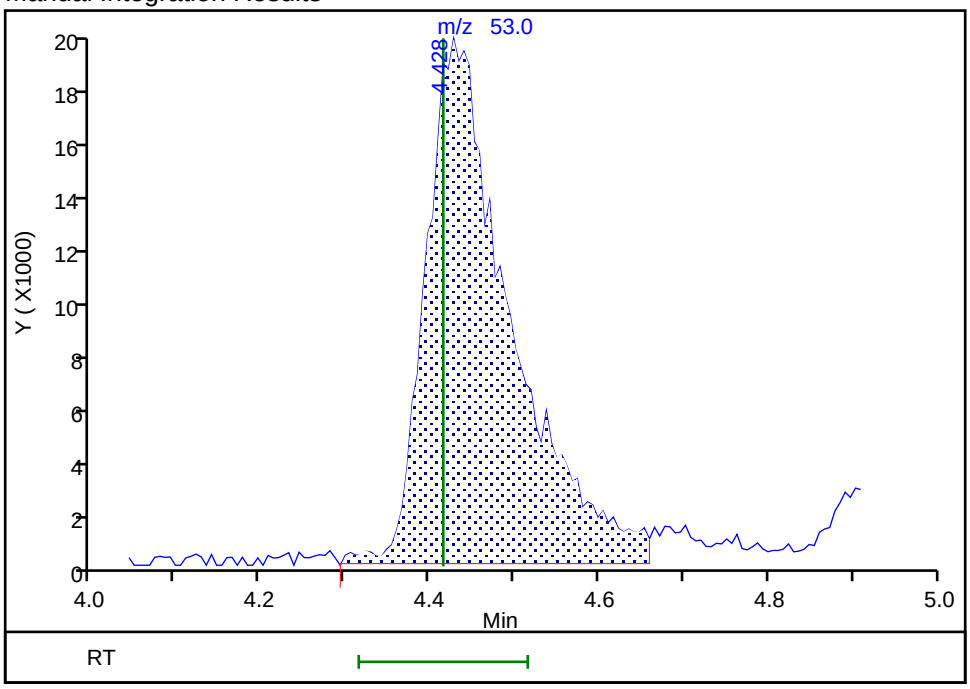
Processing Integration Results

RT: 4.43
Area: 127691
Amount: 13.253608
Amount Units: ug/l



Manual Integration Results

RT: 4.43
Area: 135604
Amount: 13.894510
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:47:31
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

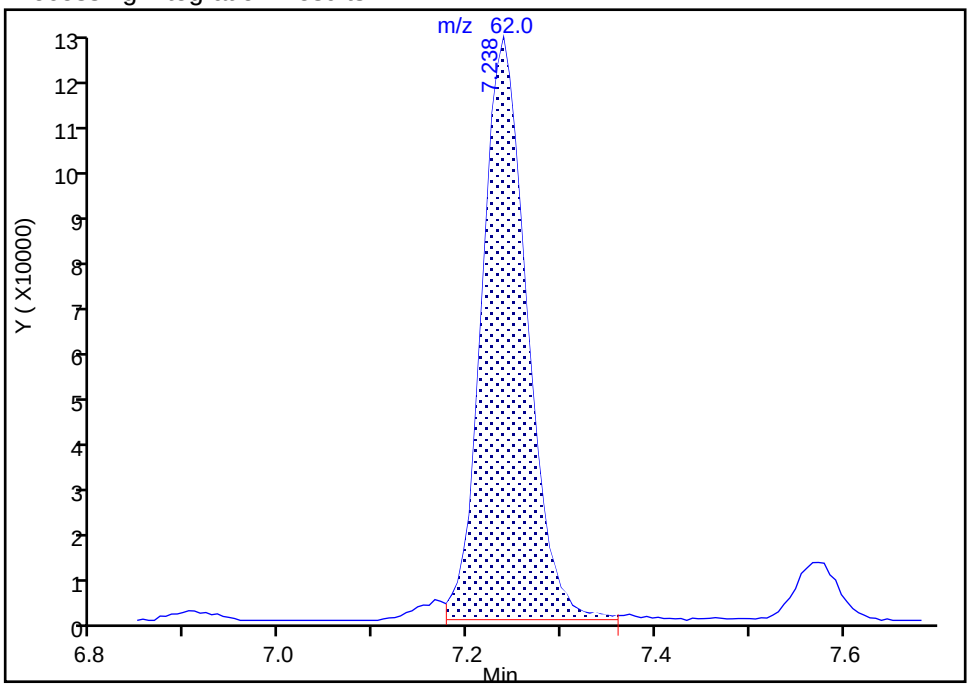
Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X13.D
Injection Date: 21-Mar-2023 04:42:30 Instrument ID: 19930
Lims ID: IC std5
Client ID:
Operator ID: mec29284 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

58 1,2-Dichloroethane, CAS: 107-06-2

Signal: 1

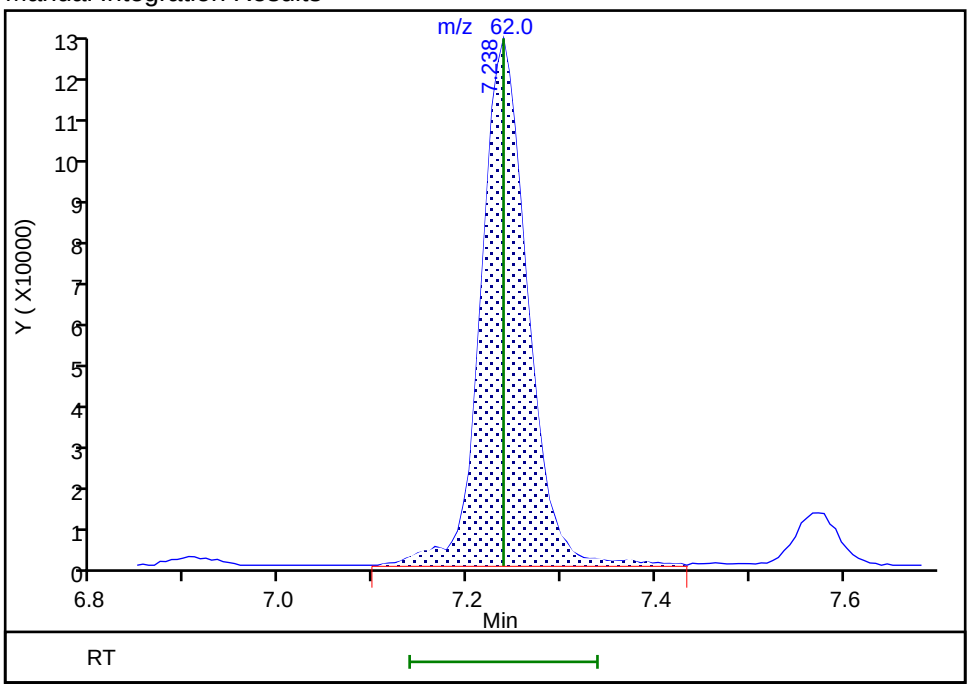
Processing Integration Results

RT: 7.24
Area: 410847
Amount: 4.857627
Amount Units: ug/l



Manual Integration Results

RT: 7.24
Area: 422172
Amount: 4.972504
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:48:07
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

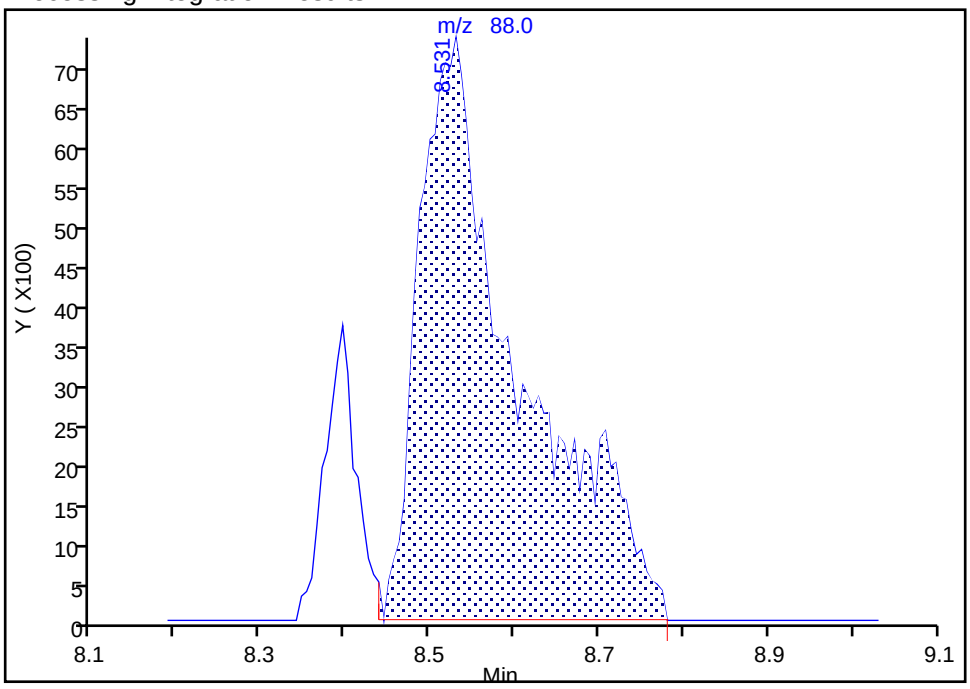
Data File:	\\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X13.D				
Injection Date:	21-Mar-2023 04:42:30	Instrument ID:	19930		
Lims ID:	IC std5				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

68 1,4-Dioxane, CAS: 123-91-1

Signal: 1

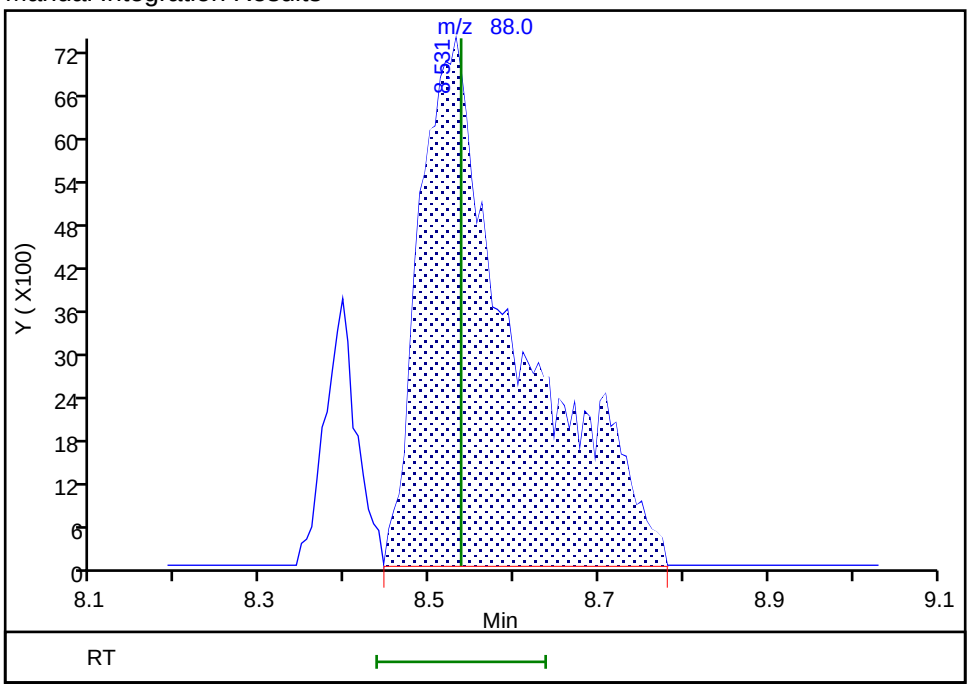
Processing Integration Results

RT: 8.53
Area: 60497
Amount: 304.3985
Amount Units: ug/l



Manual Integration Results

RT: 8.53
Area: 60319
Amount: 286.8566
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:48:23
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X14.D
Lims ID: IC std4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 21-Mar-2023 05:02:30 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0079468-015
Operator ID: mec29284 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 21-Mar-2023 17:37:49 Calib Date: 21-Mar-2023 06:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1651

First Level Reviewer: K4WN Date: 21-Mar-2023 15:51:22

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.898	1.898	0.000	99	175844	2.00	2.01	
4 Chloromethane	50	2.087	2.087	0.000	99	191397	2.00	2.02	
5 Vinyl chloride	62	2.202	2.203	-0.001	98	185810	2.00	2.01	
6 Butadiene	39	2.209	2.209	0.000	95	163666	2.00	1.93	
7 Bromomethane	94	2.526	2.526	0.000	93	144456	2.00	2.01	
8 Chloroethane	64	2.605	2.599	0.006	99	112973	2.00	2.01	
9 Dichlorofluoromethane	67	2.843	2.837	0.006	97	297881	2.00	1.98	
10 Trichlorofluoromethane	101	2.904	2.898	0.006	98	301784	2.00	2.02	
11 Ethyl ether	59	3.141	3.135	0.006	91	102296	2.00	2.09	
13 1,2-Dichloro-1,1,2-trifluoroetha	67	3.221	3.227	-0.006	89	165285	2.00	1.98	
14 Acrolein	56	3.312	3.306	0.006	94	579612	100.0	111.9	
15 1,1-Dichloroethene	96	3.440	3.434	0.006	98	118520	2.00	1.96	
17 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.471	3.477	-0.006	92	137039	2.00	1.99	
16 Acetone	43	3.483	3.477	0.006	57	119641	20.0	19.1	M
18 Iodomethane	142	3.629	3.629	0.000	99	256394	2.00	1.95	
19 Ethyl bromide	108	3.653	3.660	-0.007	97	112150	2.00	1.99	
20 Carbon disulfide	76	3.739	3.733	0.006	100	331819	2.00	1.96	
23 Methyl acetate	43	3.891	3.879	0.012	34	48849	2.00	2.18	
24 3-Chloro-1-propene	41	3.903	3.897	0.006	87	198621	2.00	1.95	
25 Methylene Chloride	84	4.080	4.086	-0.006	92	127652	2.00	1.99	
* 26 t-Butyl alcohol-d10 (IS)	65	4.135	4.135	0.000	99	97646	50.0	50.0	M
27 2-Methyl-2-propanol	59	4.251	4.263	-0.012	98	80472	40.0	39.5	
28 Acrylonitrile	53	4.422	4.416	0.006	97	44242	5.00	5.81	
29 Methyl tert-butyl ether	73	4.483	4.477	0.006	97	304226	2.00	1.96	
30 trans-1,2-Dichloroethene	96	4.501	4.495	0.006	98	131610	2.00	1.93	
31 Hexane	57	4.915	4.915	0.000	95	180035	2.00	2.00	
32 1,1-Dichloroethane	63	5.153	5.147	0.006	96	249646	2.00	2.02	
35 Isopropyl ether	45	5.214	5.214	0.000	92	410537	2.00	1.99	
36 2-Chloro-1,3-butadiene	53	5.269	5.263	0.006	93	205252	2.00	1.96	
37 Tert-butyl ethyl ether	59	5.744	5.751	-0.007	97	284598	2.00	1.99	
38 2-Butanone (MEK)	43	5.958	5.958	0.000	100	259100	20.0	22.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
39 cis-1,2-Dichloroethene	96	5.988	5.982	0.006	83	146693	2.00	1.97	
40 2,2-Dichloropropane	77	6.007	5.995	0.012	88	223631	2.00	1.99	
43 Propionitrile	54	6.061	6.056	0.005	98	114151	40.0	42.6	
S 41 1,2-Dichloroethene, Total	100				0			3.90	
45 Methacrylonitrile	67	6.250	6.244	0.006	93	299318	20.0	24.3	
46 Chlorobromomethane	128	6.318	6.318	0.000	87	67134	2.00	1.94	
47 Tetrahydrofuran	71	6.342	6.330	0.012	89	38813	10.0	10.9	
48 Chloroform	83	6.470	6.464	0.006	94	249917	2.00	1.97	
$ 49 Dibromofluoromethane (Surr)	113	6.683	6.677	0.006	93	617342	10.0	9.92	
50 1,1,1-Trichloroethane	97	6.689	6.690	-0.001	98	239759	2.00	2.00	
51 Cyclohexane	56	6.793	6.793	0.000	92	222305	2.00	1.95	
53 1,1-Dichloropropene	75	6.909	6.903	0.006	93	184421	2.00	1.98	
54 Carbon tetrachloride	117	6.903	6.909	-0.006	95	220533	2.00	1.99	
55 Isobutyl alcohol	41	7.092	7.092	0.000	91	67949	100.0	93.2	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.128	7.135	-0.007	70	119524	10.0	10.1	
57 Benzene	78	7.165	7.165	0.000	96	545546	2.00	2.00	
58 1,2-Dichloroethane	62	7.238	7.238	0.000	97	162578	2.00	1.95	
60 Tert-amyl methyl ether	73	7.366	7.354	0.012	98	223543	2.00	2.02	
* 61 Fluorobenzene (IS)	96	7.567	7.567	0.000	98	2349279	10.0	10.0	
62 n-Heptane	43	7.586	7.580	0.006	92	179673	2.00	1.92	
63 n-Butanol	56	7.988	7.976	0.012	88	95379	175.0	180.9	
64 Trichloroethene	95	8.049	8.049	0.000	96	154058	2.00	2.01	
65 Methylcyclohexane	83	8.360	8.360	0.000	91	253260	2.00	2.00	
66 1,2-Dichloropropane	63	8.384	8.378	0.006	92	138522	2.00	2.02	
67 Methyl methacrylate	69	8.476	8.464	0.012	90	63530	2.00	2.55	
69 Dibromomethane	93	8.494	8.488	0.006	92	70654	2.00	2.01	
68 1,4-Dioxane	88	8.512	8.537	-0.025	33	24121	100.0	147.1	
71 Dichlorobromomethane	83	8.726	8.726	0.000	98	181572	2.00	2.00	
72 2-Nitropropane	41	8.994	8.994	0.000	100	103136	10.0	11.6	
75 1-Bromo-2-chloroethane	63	9.122	9.122	0.000	99	131348	2.00	2.03	
76 cis-1,3-Dichloropropene	75	9.280	9.280	0.000	94	209411	2.00	1.99	
77 4-Methyl-2-pentanone (MIBK)	43	9.451	9.451	0.000	98	832319	20.0	24.3	
$ 78 Toluene-d8 (Surr)	98	9.591	9.591	0.000	94	2373030	10.0	10.0	
79 Toluene	92	9.671	9.671	0.000	98	365184	2.00	1.99	
97 trans-1,3-Dichloropropene	75	9.933	9.933	0.000	96	173460	2.00	1.95	
99 Ethyl methacrylate	69	10.000	9.994	0.006	89	131292	2.00	1.90	
S 98 1,3-Dichloropropene, Total	100				0			3.94	
100 1,1,2-Trichloroethane	97	10.140	10.134	0.006	91	100211	2.00	2.00	
101 Tetrachloroethene	166	10.225	10.225	0.000	97	195634	2.00	1.98	
102 1,3-Dichloropropane	76	10.298	10.299	-0.001	93	163140	2.00	1.98	
103 2-Hexanone	43	10.353	10.353	0.000	98	579187	20.0	24.2	
105 Chlorodibromomethane	129	10.518	10.518	0.000	89	135111	2.00	1.96	
106 Ethylene Dibromide	107	10.628	10.628	0.000	98	95514	2.00	1.97	
* 107 Chlorobenzene-d5 (IS)	117	11.061	11.061	-0.001	87	1844928	10.0	10.0	
108 1-Chlorohexane	91	11.073	11.073	0.000	97	200092	2.00	1.90	
109 Chlorobenzene	112	11.085	11.091	-0.006	96	414157	2.00	1.97	
111 1,1,1,2-Tetrachloroethane	131	11.170	11.170	0.000	94	153746	2.00	1.99	
112 Ethylbenzene	91	11.176	11.176	0.000	98	699641	2.00	1.96	
S 110 Xylenes, Total	106				0			5.98	
113 m-Xylene & p-Xylene	106	11.292	11.292	0.000	93	569407	4.00	4.01	
114 o-Xylene	106	11.621	11.621	0.000	96	274369	2.00	1.97	
115 Styrene	104	11.640	11.634	0.006	95	417331	2.00	1.94	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
116 Bromoform	173	11.792	11.792	0.000	97	85160	2.00	1.90	
117 Isopropylbenzene	105	11.920	11.920	0.000	96	731109	2.00	2.00	
$ 120 4-Bromofluorobenzene (Surr)	95	12.066	12.067	-0.001	96	855599	10.0	9.88	
121 1,1,2,2-Tetrachloroethane	83	12.164	12.164	0.000	94	120006	2.00	1.93	
122 Bromobenzene	156	12.182	12.182	0.000	96	181668	2.00	1.96	
123 trans-1,4-Dichloro-2-butene	53	12.194	12.188	0.006	93	332224	20.0	24.7	
124 1,2,3-Trichloropropane	110	12.213	12.213	0.000	83	33764	2.00	1.92	
125 N-Propylbenzene	91	12.249	12.249	0.000	99	807760	2.00	1.99	
126 2-Chlorotoluene	126	12.329	12.329	0.000	97	177588	2.00	2.02	
127 1,3,5-Trimethylbenzene	105	12.390	12.384	0.006	94	609124	2.00	2.00	
128 4-Chlorotoluene	126	12.420	12.420	0.000	97	174789	2.00	1.99	
129 tert-Butylbenzene	134	12.627	12.627	0.000	93	150650	2.00	1.99	
130 Pentachloroethane	167	12.664	12.664	0.000	92	119732	2.00	2.04	
131 1,2,4-Trimethylbenzene	105	12.670	12.670	0.000	97	624102	2.00	1.99	
132 sec-Butylbenzene	105	12.792	12.792	0.000	94	785059	2.00	2.03	
133 1,3-Dichlorobenzene	146	12.889	12.890	-0.001	99	339776	2.00	1.95	
134 4-Isopropyltoluene	119	12.902	12.902	0.000	97	681258	2.00	1.97	
* 135 1,4-Dichlorobenzene-d4	152	12.950	12.944	0.006	94	1126529	10.0	10.0	
136 1,4-Dichlorobenzene	146	12.963	12.963	0.000	96	335121	2.00	1.97	
137 1,2,3-Trimethylbenzene	120	12.975	12.975	0.000	97	286323	2.00	1.98	
138 Benzyl chloride	126	13.042	13.042	0.000	99	48767	2.00	1.99	
139 n-Butylbenzene	92	13.194	13.188	0.006	97	295236	2.00	1.94	
140 1,2-Dichlorobenzene	146	13.225	13.225	0.000	98	324822	2.00	1.96	
142 1,2-Dibromo-3-Chloropropane	155	13.767	13.767	0.000	87	19053	2.00	1.87	
143 1,3,5-Trichlorobenzene	180	13.895	13.889	0.006	97	259052	2.00	1.96	
144 1,2,4-Trichlorobenzene	180	14.316	14.316	0.000	94	210756	2.00	1.99	
145 Hexachlorobutadiene	225	14.395	14.395	0.000	96	116814	2.00	1.92	
146 Naphthalene	128	14.493	14.493	0.000	97	386386	2.00	1.96	
147 1,2,3-Trichlorobenzene	180	14.639	14.639	0.000	95	190876	2.00	1.98	
155 2-Methylnaphthalene	142		0.000				ND	ND	
156 p-Diethylbenzene	1		0.000				ND	ND	
161 Pentane	43		0.000				ND	ND	
150 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
165 Isopropyl alcohol	45		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MSV_LL_#1_826_00068	Amount Added:	2.00	Units: uL	
MSV_LL_#2_826_00077	Amount Added:	2.00	Units: uL	
MSV_LL_GAS826_00141	Amount Added:	2.00	Units: uL	
MSV_LLcentISS_00006	Amount Added:	5.00	Units: uL	Run Reagent

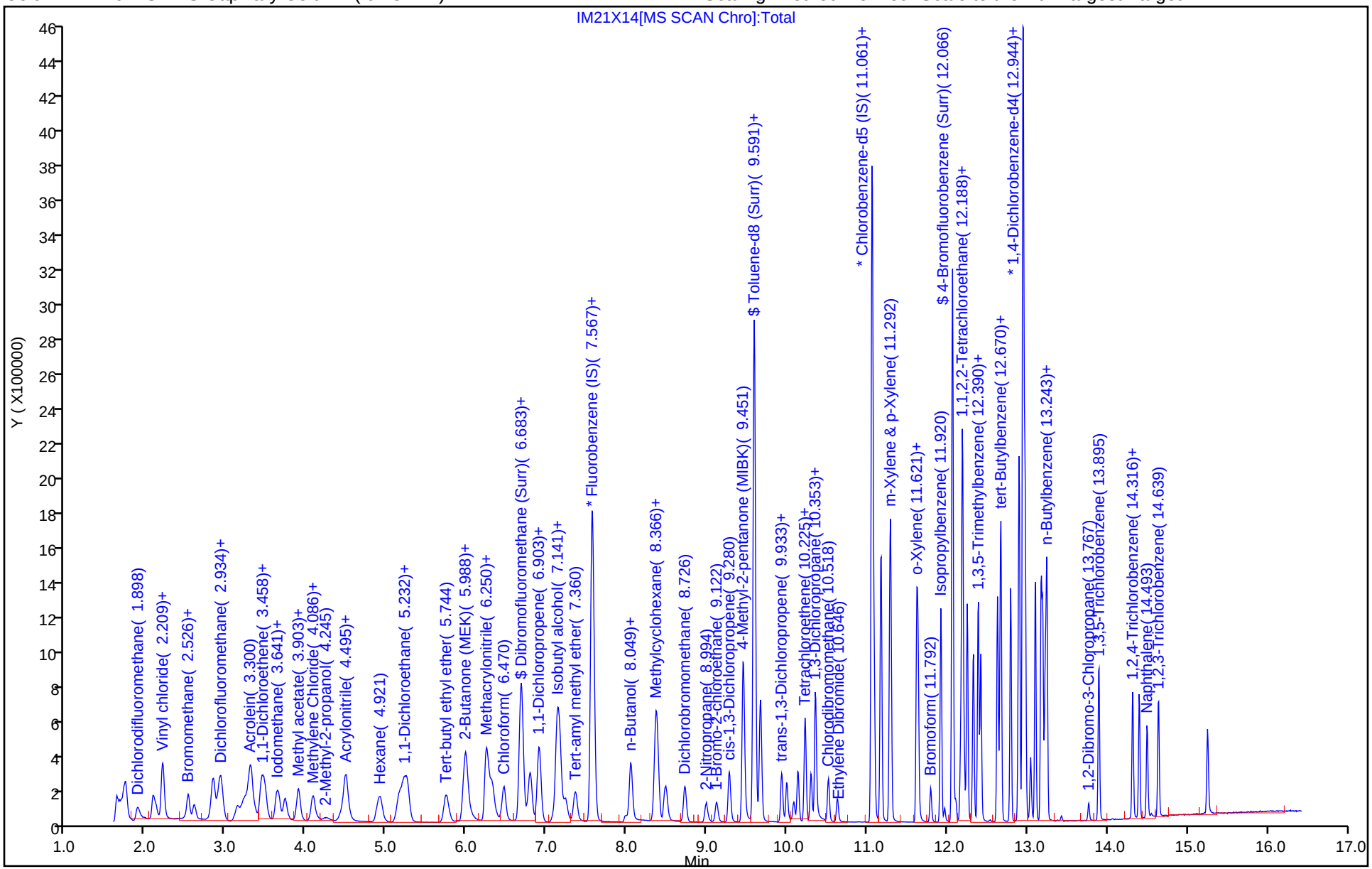
Report Date: 21-Mar-2023 17:37:50 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X14.D

Injection Date:	21-Mar-2023 05:02:30	Instrument ID:	19930	Operator ID:	mec29284
Lims ID:	IC std4			Worklist Smp#:	15
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

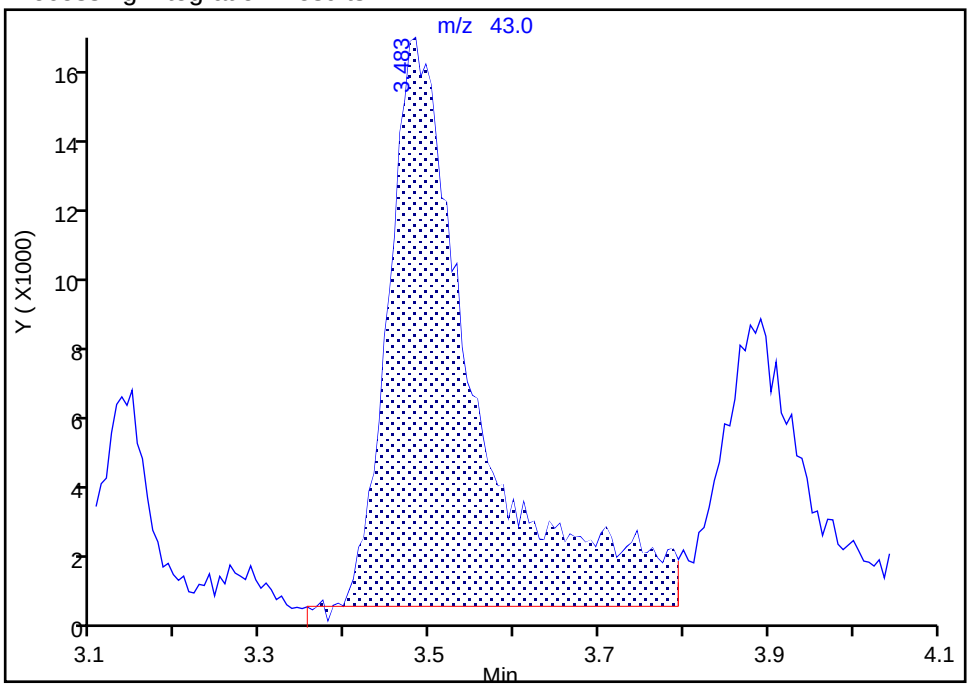
Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X14.D
Injection Date: 21-Mar-2023 05:02:30 Instrument ID: 19930
Lims ID: IC std4
Client ID:
Operator ID: mec29284 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

16 Acetone, CAS: 67-64-1

Signal: 1

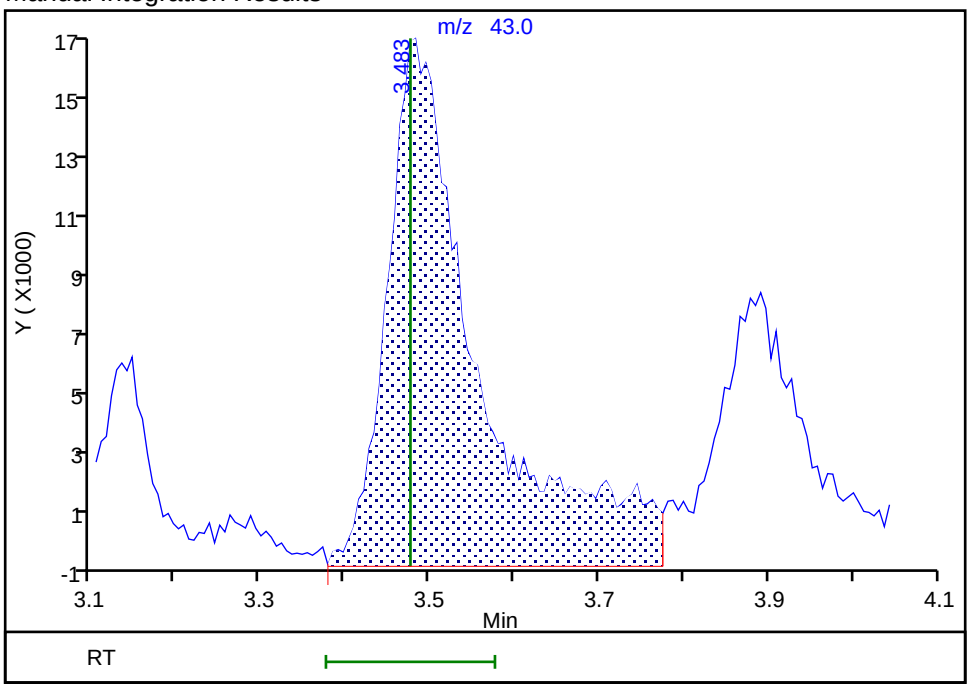
Processing Integration Results

RT: 3.48
Area: 112128
Amount: 19.939760
Amount Units: ug/l



Manual Integration Results

RT: 3.48
Area: 119641
Amount: 19.115609
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:49:46
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

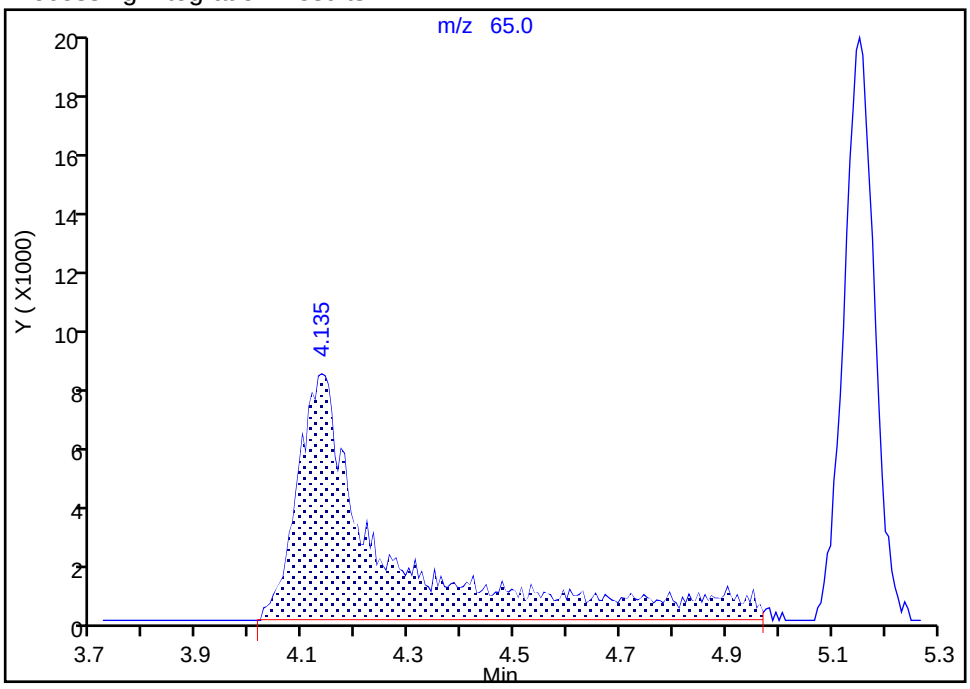
Data File:	\\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X14.D				
Injection Date:	21-Mar-2023 05:02:30	Instrument ID:	19930		
Lims ID:	IC std4				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

* 26 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

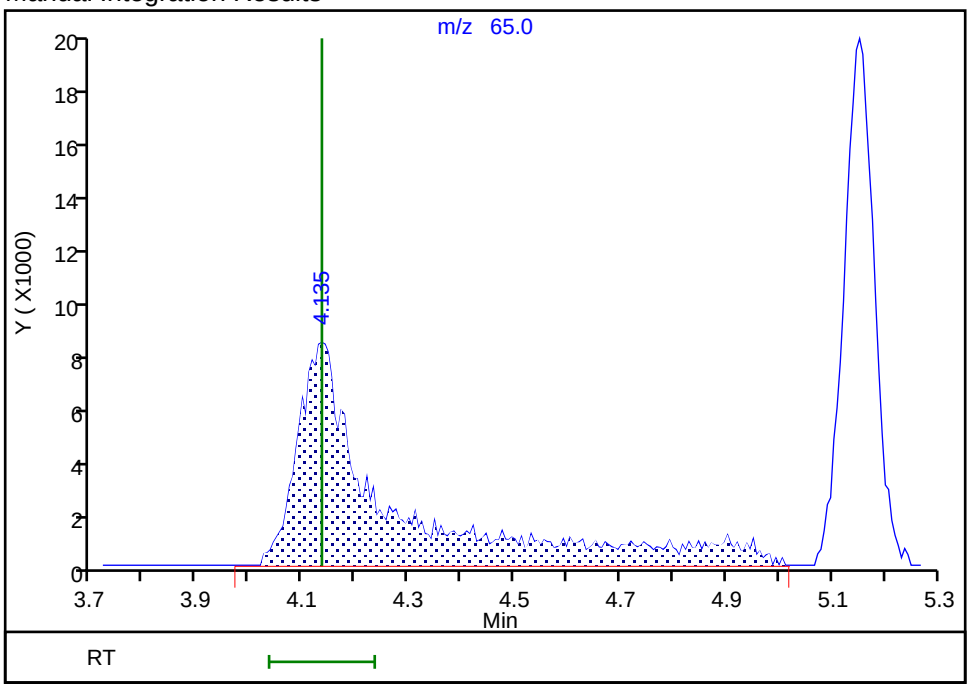
Processing Integration Results

RT: 4.14
Area: 97150
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 4.14
Area: 97646
Amount: 50.000000
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 16:08:28
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X15.D
Lims ID: IC std3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 21-Mar-2023 05:22:30 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0079468-016
Operator ID: mec29284 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 21-Mar-2023 17:37:54 Calib Date: 21-Mar-2023 06:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1651

First Level Reviewer: K4WN Date: 21-Mar-2023 15:54:07

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.898	1.898	0.000	99	86495	1.00	0.99	
4 Chloromethane	50	2.093	2.087	0.006	99	93366	1.00	0.9862	
5 Vinyl chloride	62	2.209	2.203	0.006	98	92540	1.00	1.00	
6 Butadiene	39	2.215	2.209	0.006	95	85079	1.00	1.01	
7 Bromomethane	94	2.532	2.526	0.006	92	69186	1.00	0.9662	
8 Chloroethane	64	2.611	2.599	0.012	99	56481	1.00	1.01	
9 Dichlorofluoromethane	67	2.843	2.837	0.006	97	148598	1.00	0.9887	
10 Trichlorofluoromethane	101	2.897	2.898	-0.001	96	147043	1.00	0.9861	
11 Ethyl ether	59	3.135	3.135	0.000	93	48693	1.00	1.00	
13 1,2-Dichloro-1,1,2-trifluoroetha	67	3.233	3.227	0.006	90	82703	1.00	0.99	
14 Acrolein	56	3.318	3.306	0.012	94	347847	50.0	48.9	
15 1,1-Dichloroethene	96	3.440	3.434	0.006	98	59105	1.00	0.9791	
17 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.483	3.477	0.006	91	67263	1.00	0.9789	
16 Acetone	43	3.495	3.477	0.018	56	84658	10.0	9.86	M
18 Iodomethane	142	3.635	3.629	0.006	100	128674	1.00	0.9828	
19 Ethyl bromide	108	3.659	3.660	-0.001	99	56502	1.00	1.00	
20 Carbon disulfide	76	3.739	3.733	0.006	100	164019	1.00	0.9690	
23 Methyl acetate	43	3.891	3.879	0.012	26	28713	1.00	0.9339	M
24 3-Chloro-1-propene	41	3.909	3.897	0.012	88	96478	1.00	0.9492	
25 Methylene Chloride	84	4.092	4.086	0.006	93	64247	1.00	1.00	
* 26 t-Butyl alcohol-d10 (IS)	65	4.178	4.135	0.043	98	134008	50.0	50.0	
27 2-Methyl-2-propanol	59	4.257	4.263	-0.006	82	43696	20.0	15.6	
28 Acrylonitrile	53	4.440	4.416	0.024	98	25512	2.50	2.44	
29 Methyl tert-butyl ether	73	4.482	4.477	0.005	98	156908	1.00	1.01	
30 trans-1,2-Dichloroethene	96	4.501	4.495	0.006	98	67605	1.00	1.00	
31 Hexane	57	4.921	4.915	0.006	94	88054	1.00	0.9822	
32 1,1-Dichloroethane	63	5.159	5.147	0.012	96	122273	1.00	0.99	
35 Isopropyl ether	45	5.220	5.214	0.006	93	207307	1.00	1.01	
36 2-Chloro-1,3-butadiene	53	5.269	5.263	0.006	93	103414	1.00	0.99	
37 Tert-butyl ethyl ether	59	5.744	5.751	-0.007	97	149693	1.00	1.05	
38 2-Butanone (MEK)	43	5.970	5.958	0.012	96	155219	10.0	9.79	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
39 cis-1,2-Dichloroethene	96	5.994	5.982	0.012	82	74915	1.00	1.01	
40 2,2-Dichloropropane	77	6.007	5.995	0.012	78	109766	1.00	0.9794	
43 Propionitrile	54	6.068	6.056	0.012	97	76235	20.0	20.7	
S 41 1,2-Dichloroethene, Total	100				0			2.00	
45 Methacrylonitrile	67	6.250	6.244	0.006	91	161032	10.0	9.53	
46 Chlorobromomethane	128	6.324	6.318	0.006	88	34201	1.00	0.9895	
47 Tetrahydrofuran	71	6.342	6.330	0.012	78	24916	5.00	5.12	
48 Chloroform	83	6.470	6.464	0.006	95	126047	1.00	1.00	
$ 49 Dibromofluoromethane (Surr)	113	6.683	6.677	0.006	94	628564	10.0	10.1	
50 1,1,1-Trichloroethane	97	6.702	6.690	0.012	97	116847	1.00	0.9770	
51 Cyclohexane	56	6.799	6.793	0.006	91	110675	1.00	0.9728	
53 1,1-Dichloropropene	75	6.909	6.903	0.006	91	91929	1.00	0.9880	
54 Carbon tetrachloride	117	6.909	6.909	0.000	95	107065	1.00	0.9671	
55 Isobutyl alcohol	41	7.104	7.092	0.012	36	43526	50.0	43.5	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.128	7.135	-0.007	67	120346	10.0	10.2	
57 Benzene	78	7.165	7.165	0.000	96	270461	1.00	1.00	
58 1,2-Dichloroethane	62	7.238	7.238	0.000	97	82648	1.00	0.99	
60 Tert-amyl methyl ether	73	7.360	7.354	0.006	97	116974	1.00	1.06	
* 61 Fluorobenzene (IS)	96	7.567	7.567	0.000	98	2343275	10.0	10.0	
62 n-Heptane	43	7.586	7.580	0.006	39	84633	1.00	0.9056	
63 n-Butanol	56	8.018	7.976	0.042	79	59654	87.5	82.4	
64 Trichloroethene	95	8.049	8.049	0.000	95	74939	1.00	0.9782	
65 Methylcyclohexane	83	8.360	8.360	0.000	91	119159	1.00	0.9444	
66 1,2-Dichloropropane	63	8.378	8.378	0.000	89	68300	1.00	1.00	
67 Methyl methacrylate	69	8.482	8.464	0.018	88	28442	1.00	0.8305	
69 Dibromomethane	93	8.494	8.488	0.006	92	35015	1.00	1.00	
68 1,4-Dioxane	88	8.634	8.537	0.097	41	15576	50.0	69.2	
71 Dichlorobromomethane	83	8.726	8.726	0.000	97	87831	1.00	0.9678	
72 2-Nitropropane	41	9.000	8.994	0.006	99	54719	5.00	4.47	
75 1-Bromo-2-chloroethane	63	9.116	9.122	-0.006	99	62211	1.00	0.9631	
76 cis-1,3-Dichloropropene	75	9.280	9.280	0.000	94	102636	1.00	0.9791	
77 4-Methyl-2-pentanone (MIBK)	43	9.457	9.451	0.006	98	438008	10.0	9.32	
$ 78 Toluene-d8 (Surr)	98	9.591	9.591	0.000	94	2341910	10.0	10.0	
79 Toluene	92	9.671	9.671	-0.001	98	182395	1.00	1.01	
97 trans-1,3-Dichloropropene	75	9.933	9.933	0.000	95	85183	1.00	0.9714	
99 Ethyl methacrylate	69	10.000	9.994	0.006	89	65507	1.00	0.9626	
S 98 1,3-Dichloropropene, Total	100				0			1.95	
100 1,1,2-Trichloroethane	97	10.140	10.134	0.006	91	50506	1.00	1.02	
101 Tetrachloroethene	166	10.225	10.225	0.000	98	96104	1.00	0.9876	
102 1,3-Dichloropropane	76	10.305	10.299	0.006	91	81544	1.00	1.00	
103 2-Hexanone	43	10.359	10.353	0.006	98	315875	10.0	9.64	
105 Chlorodibromomethane	129	10.518	10.518	0.000	91	64701	1.00	0.9515	
106 Ethylene Dibromide	107	10.628	10.628	0.000	97	48995	1.00	1.02	
* 107 Chlorobenzene-d5 (IS)	117	11.060	11.061	-0.001	86	1818962	10.0	10.0	
108 1-Chlorohexane	91	11.073	11.073	0.000	96	99428	1.00	0.9562	
109 Chlorobenzene	112	11.091	11.091	0.000	96	203081	1.00	0.9787	
111 1,1,1,2-Tetrachloroethane	131	11.170	11.170	0.000	93	75882	1.00	0.99	
112 Ethylbenzene	91	11.176	11.176	0.000	99	346280	1.00	0.9850	
S 110 Xylenes, Total	106				0			3.00	
113 m-Xylene & p-Xylene	106	11.292	11.292	0.000	93	280576	2.00	2.00	
114 o-Xylene	106	11.621	11.621	0.000	96	136591	1.00	1.00	
115 Styrene	104	11.640	11.634	0.006	95	201308	1.00	0.9476	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
116 Bromoform	173	11.792	11.792	0.000	96	41999	1.00	0.9480	
117 Isopropylbenzene	105	11.920	11.920	0.000	96	350685	1.00	0.9754	
$ 120 4-Bromofluorobenzene (Surr)	95	12.066	12.067	-0.001	96	852245	10.0	9.98	
121 1,1,2,2-Tetrachloroethane	83	12.164	12.164	0.000	96	62163	1.00	1.00	
122 Bromobenzene	156	12.182	12.182	0.000	92	89737	1.00	0.9662	
123 trans-1,4-Dichloro-2-butene	53	12.194	12.188	0.006	95	166532	10.0	9.01	M
124 1,2,3-Trichloropropane	110	12.213	12.213	0.000	82	17353	1.00	0.9871	
125 N-Propylbenzene	91	12.249	12.249	0.000	99	392220	1.00	0.9621	
126 2-Chlorotoluene	126	12.329	12.329	0.000	97	85856	1.00	0.9756	
127 1,3,5-Trimethylbenzene	105	12.389	12.384	0.005	95	301256	1.00	0.9863	
128 4-Chlorotoluene	126	12.420	12.420	0.000	98	85059	1.00	0.9686	
129 tert-Butylbenzene	134	12.627	12.627	0.000	93	72093	1.00	0.9526	
130 Pentachloroethane	167	12.658	12.664	-0.006	80	55674	1.00	0.9485	
131 1,2,4-Trimethylbenzene	105	12.670	12.670	0.000	97	303547	1.00	0.9676	
132 sec-Butylbenzene	105	12.792	12.792	0.000	94	372950	1.00	0.9603	
133 1,3-Dichlorobenzene	146	12.895	12.890	0.005	99	167155	1.00	0.9579	
134 4-Isopropyltoluene	119	12.902	12.902	0.000	97	333364	1.00	0.9608	
* 135 1,4-Dichlorobenzene-d4	152	12.944	12.944	0.000	94	1128630	10.0	10.0	
136 1,4-Dichlorobenzene	146	12.963	12.963	0.000	96	163590	1.00	0.9590	
137 1,2,3-Trimethylbenzene	120	12.975	12.975	0.000	98	137229	1.00	0.9460	
138 Benzyl chloride	126	13.042	13.042	0.000	99	23595	1.00	0.9619	
139 n-Butylbenzene	92	13.188	13.188	0.000	97	140431	1.00	0.9214	
140 1,2-Dichlorobenzene	146	13.225	13.225	0.000	98	156806	1.00	0.9466	
142 1,2-Dibromo-3-Chloropropane	155	13.767	13.767	0.000	85	10369	1.00	1.02	
143 1,3,5-Trichlorobenzene	180	13.895	13.889	0.006	98	126816	1.00	0.9594	
144 1,2,4-Trichlorobenzene	180	14.316	14.316	0.000	93	100826	1.00	0.9485	
145 Hexachlorobutadiene	225	14.395	14.395	0.000	96	57361	1.00	0.9402	
146 Naphthalene	128	14.499	14.493	0.006	97	201570	1.00	1.02	
147 1,2,3-Trichlorobenzene	180	14.639	14.639	0.000	96	95399	1.00	0.9884	
155 2-Methylnaphthalene	142		0.000				ND	ND	
156 p-Diethylbenzene	1		0.000				ND	ND	
161 Pentane	43		0.000				ND	ND	
150 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
165 Isopropyl alcohol	45		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MSV_LL_#1_826_00068	Amount Added:	2.00	Units: uL	
MSV_LL_#2_826_00077	Amount Added:	2.00	Units: uL	
MSV_LL_GAS826_00141	Amount Added:	2.00	Units: uL	
MSV_LLcentISS_00006	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 21-Mar-2023 17:37:55 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X15.D

Injection Date: 21-Mar-2023 05:22:30 Instrument ID: 19930 Operator ID: mec29284

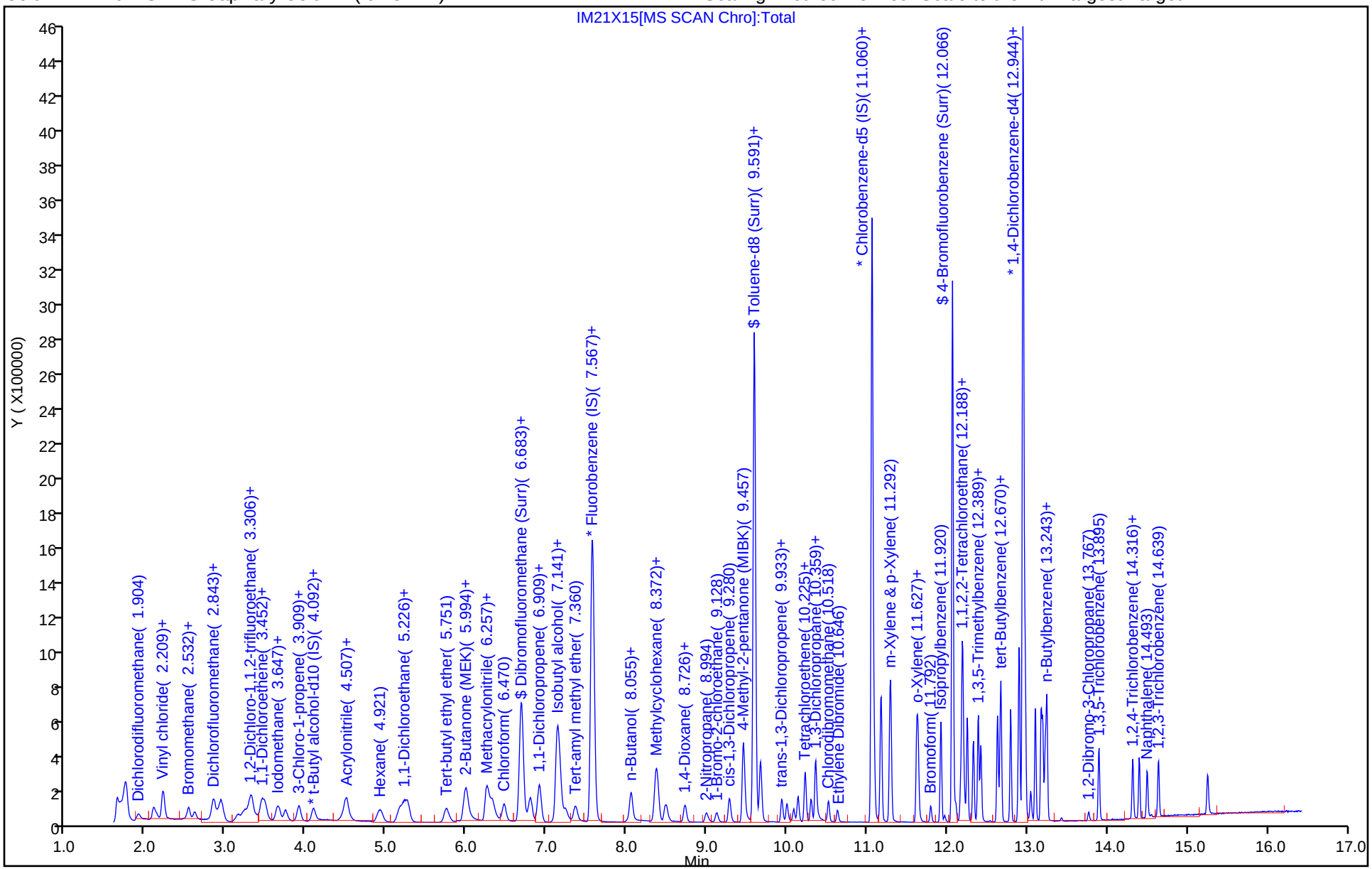
Lims ID: IC std3 Worklist Smp#: 16

Client ID:

Purge Vol: 25.000 mL Dil. Factor: 1.0000 ALS Bottle#: 15

Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

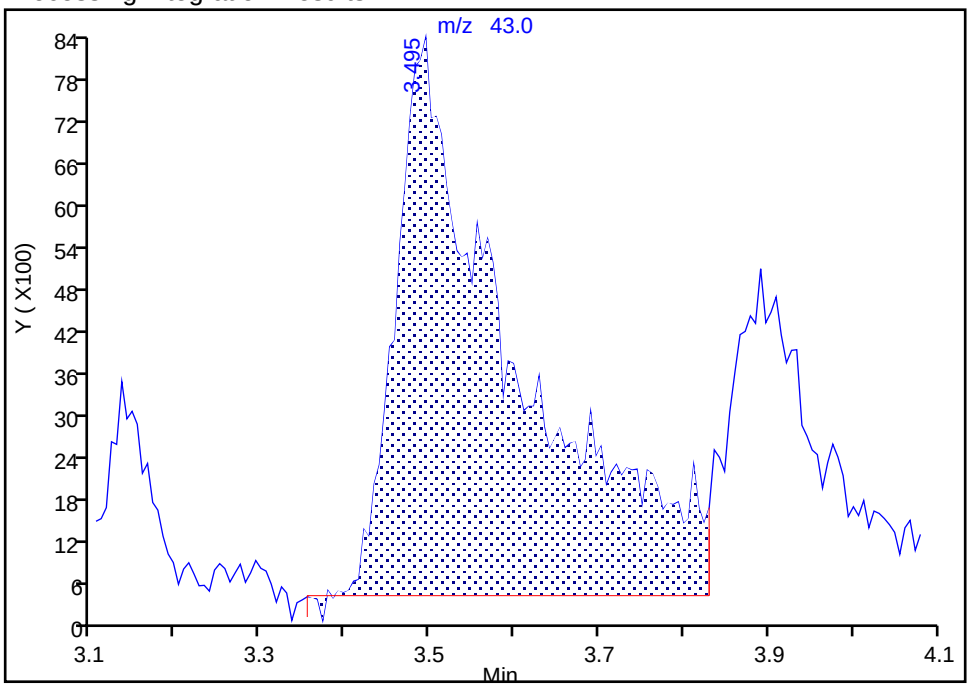
Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X15.D
Injection Date: 21-Mar-2023 05:22:30 Instrument ID: 19930
Lims ID: IC std3
Client ID:
Operator ID: mec29284 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

16 Acetone, CAS: 67-64-1

Signal: 1

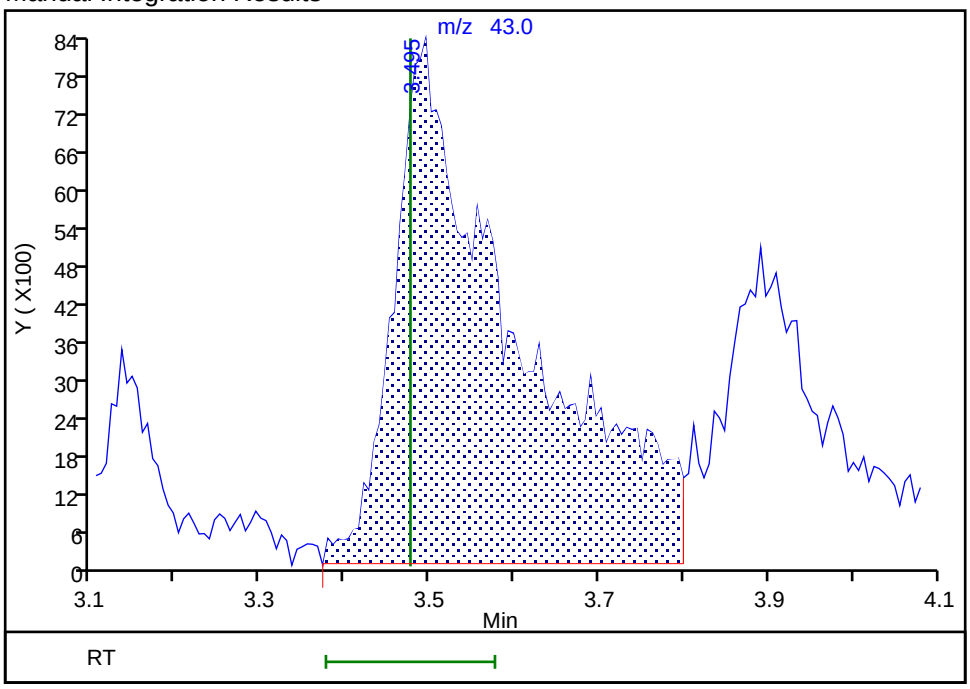
Processing Integration Results

RT: 3.49
Area: 78570
Amount: 8.960887
Amount Units: ug/l



Manual Integration Results

RT: 3.49
Area: 84658
Amount: 9.855981
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:52:06
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

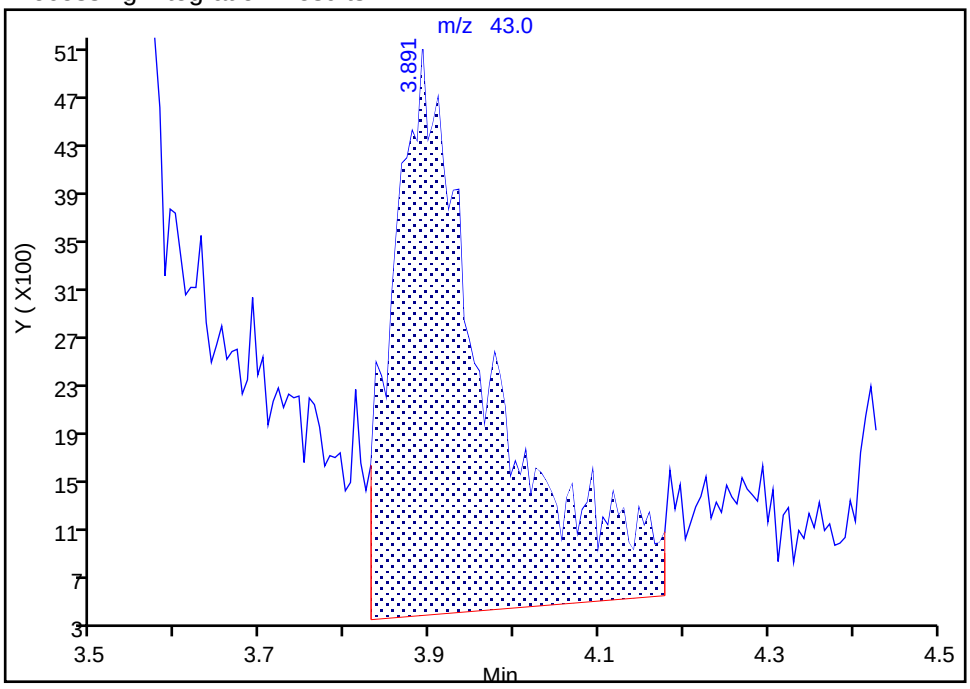
Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X15.D
Injection Date: 21-Mar-2023 05:22:30 Instrument ID: 19930
Lims ID: IC std3
Client ID:
Operator ID: mec29284 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

23 Methyl acetate, CAS: 79-20-9

Signal: 1

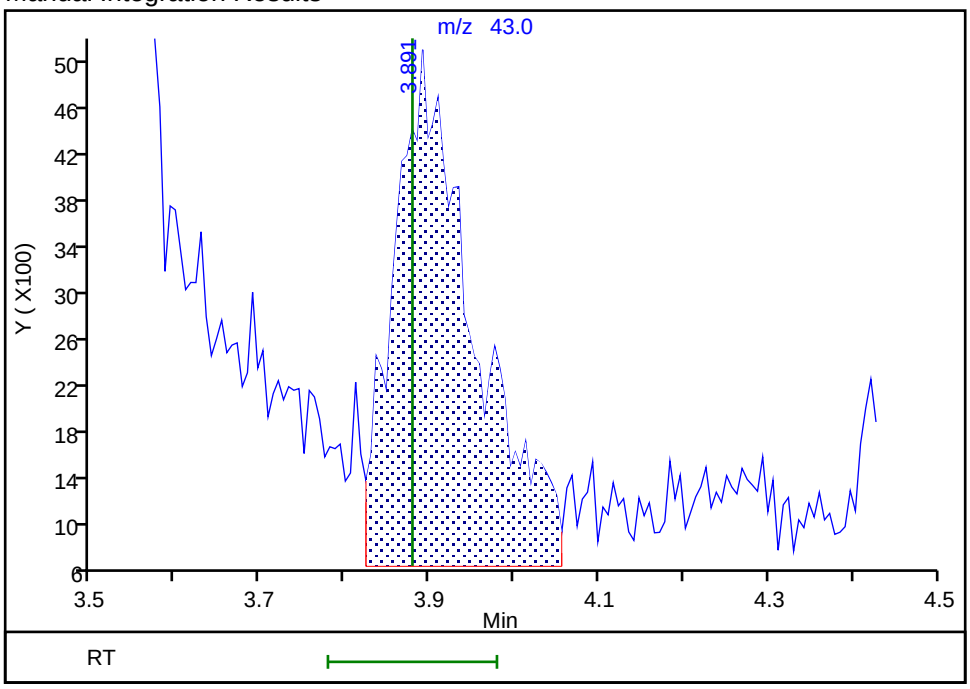
Processing Integration Results

RT: 3.89
Area: 37538
Amount: 1.249303
Amount Units: ug/l



Manual Integration Results

RT: 3.89
Area: 28713
Amount: 0.933875
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:52:27
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

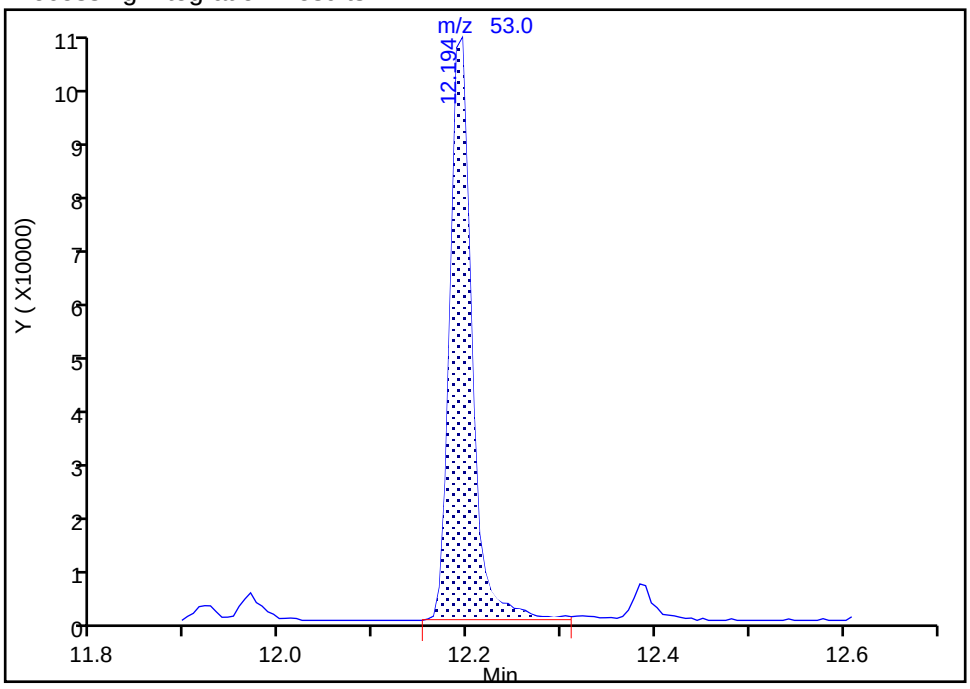
Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X15.D
Injection Date: 21-Mar-2023 05:22:30 Instrument ID: 19930
Lims ID: IC std3
Client ID:
Operator ID: mec29284 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

123 trans-1,4-Dichloro-2-butene, CAS: 110-57-6

Signal: 1

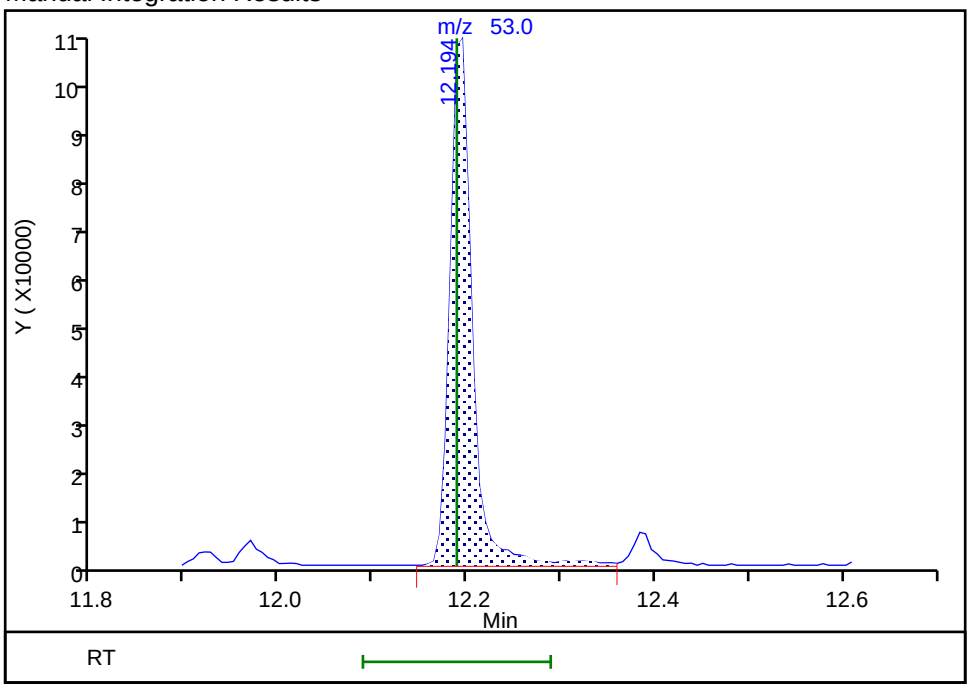
Processing Integration Results

RT: 12.19
Area: 164852
Amount: 8.864562
Amount Units: ug/l



Manual Integration Results

RT: 12.19
Area: 166532
Amount: 9.014690
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 16:27:01
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X16.D
Lims ID: IC std2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 21-Mar-2023 05:42:30 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0079468-017
Operator ID: mec29284 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 21-Mar-2023 17:38:00 Calib Date: 21-Mar-2023 06:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1651

First Level Reviewer: K4WN Date: 21-Mar-2023 15:56:39

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.910	1.898	0.012	99	41469	0.5000	0.4816	
4 Chloromethane	50	2.093	2.087	0.006	99	48039	0.5000	0.5146	
5 Vinyl chloride	62	2.209	2.203	0.006	97	46214	0.5000	0.5077	
6 Butadiene	39	2.221	2.209	0.012	97	42370	0.5000	0.5088	
7 Bromomethane	94	2.532	2.526	0.006	90	35058	0.5000	0.4965	
8 Chloroethane	64	2.611	2.599	0.012	99	27735	0.5000	0.5013	
9 Dichlorofluoromethane	67	2.849	2.837	0.012	96	75447	0.5000	0.5091	
10 Trichlorofluoromethane	101	2.910	2.898	0.012	97	73208	0.5000	0.4979	
11 Ethyl ether	59	3.147	3.135	0.012	92	23667	0.5000	0.4915	
13 1,2-Dichloro-1,1,2-trifluoroetha	67	3.233	3.227	0.006	88	41867	0.5000	0.5094	
14 Acrolein	56	3.318	3.306	0.012	94	186326	25.0	22.9	
15 1,1-Dichloroethene	96	3.452	3.434	0.018	98	31308	0.5000	0.5260	
17 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.489	3.477	0.012	91	33597	0.5000	0.4959	
16 Acetone	43	3.483	3.477	0.006	85	53587	5.00	5.45	
18 Iodomethane	142	3.635	3.629	0.006	99	67478	0.5000	0.5227	
19 Ethyl bromide	108	3.666	3.660	0.006	81	28335	0.5010	0.5101	
20 Carbon disulfide	76	3.745	3.733	0.012	100	86787	0.5000	0.5200	
23 Methyl acetate	43	3.885	3.879	0.006	23	15241	0.5000	0.4328	M
24 3-Chloro-1-propene	41	3.916	3.897	0.019	88	53339	0.5000	0.5322	
25 Methylene Chloride	84	4.092	4.086	0.006	96	32518	0.5000	0.5142	
* 26 t-Butyl alcohol-d10 (IS)	65	4.117	4.135	-0.018	94	153492	50.0	50.0	
27 2-Methyl-2-propanol	59	4.233	4.263	-0.030	98	39817	10.0	12.4	
28 Acrylonitrile	53	4.464	4.416	0.048	60	14375	1.25	1.20	M
29 Methyl tert-butyl ether	73	4.483	4.477	0.006	95	78046	0.5000	0.5100	
30 trans-1,2-Dichloroethene	96	4.495	4.495	0.000	98	35040	0.5000	0.5232	
31 Hexane	57	4.921	4.915	0.006	95	43907	0.5000	0.4967	
32 1,1-Dichloroethane	63	5.159	5.147	0.012	95	60447	0.5000	0.4975	
35 Isopropyl ether	45	5.220	5.214	0.006	91	104135	0.5000	0.5132	
36 2-Chloro-1,3-butadiene	53	5.269	5.263	0.006	93	52111	0.5000	0.5063	
37 Tert-butyl ethyl ether	59	5.751	5.751	0.000	96	67835	0.5000	0.4820	
38 2-Butanone (MEK)	43	5.964	5.958	0.006	98	80192	5.00	4.41	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
39 cis-1,2-Dichloroethene	96	6.001	5.982	0.019	83	37492	0.5000	0.5122	
40 2,2-Dichloropropane	77	6.001	5.995	0.006	72	56427	0.5000	0.5106	
43 Propionitrile	54	6.068	6.056	0.012	91	39618	10.0	9.40	
S 41 1,2-Dichloroethene, Total	100				0			1.04	
45 Methacrylonitrile	67	6.250	6.244	0.006	90	77948	5.00	4.03	
46 Chlorobromomethane	128	6.330	6.318	0.012	91	17972	0.5000	0.5273	
47 Tetrahydrofuran	71	6.348	6.330	0.018	79	12890	2.50	2.31	
48 Chloroform	83	6.470	6.464	0.006	95	64800	0.5000	0.5191	
$ 49 Dibromofluoromethane (Surr)	113	6.683	6.677	0.006	94	615761	10.0	10.1	
50 1,1,1-Trichloroethane	97	6.702	6.690	0.012	97	59704	0.5000	0.5063	
51 Cyclohexane	56	6.799	6.793	0.006	91	56413	0.5000	0.5029	
53 1,1-Dichloropropene	75	6.909	6.903	0.006	90	46595	0.5000	0.5078	
54 Carbon tetrachloride	117	6.909	6.909	0.000	95	54150	0.5000	0.4961	
55 Isobutyl alcohol	41	7.067	7.092	-0.025	83	34050	25.0	29.7	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.128	7.135	-0.007	83	118620	10.0	10.2	
57 Benzene	78	7.165	7.165	0.000	96	137309	0.5000	0.5125	
58 1,2-Dichloroethane	62	7.232	7.238	-0.006	96	41807	0.5000	0.5088	
60 Tert-amyl methyl ether	73	7.366	7.354	0.012	98	50293	0.5000	0.4631	a
* 61 Fluorobenzene (IS)	96	7.567	7.567	0.000	99	2310552	10.0	10.0	
62 n-Heptane	43	7.586	7.580	0.006	37	45320	0.5000	0.4918	
63 n-Butanol	56	7.988	7.976	0.012	95	32752	43.8	39.5	M
64 Trichloroethene	95	8.055	8.049	0.006	96	39424	0.5000	0.5219	
65 Methylcyclohexane	83	8.360	8.360	0.000	90	62717	0.5000	0.5041	
66 1,2-Dichloropropane	63	8.372	8.378	-0.006	89	33813	0.5000	0.5009	
67 Methyl methacrylate	69	8.482	8.464	0.018	88	14764	0.5000	0.3764	
69 Dibromomethane	93	8.494	8.488	0.006	89	17182	0.5000	0.4974	
68 1,4-Dioxane	88	8.518	8.537	-0.019	33	6296	25.0	24.4	M
71 Dichlorobromomethane	83	8.726	8.726	0.000	98	44403	0.5000	0.4962	
72 2-Nitropropane	41	8.994	8.994	0.000	96	30678	2.50	2.19	
75 1-Bromo-2-chloroethane	63	9.128	9.122	0.006	98	32122	0.5000	0.5044	
76 cis-1,3-Dichloropropene	75	9.280	9.280	0.000	93	48720	0.5000	0.4713	
77 4-Methyl-2-pentanone (MIBK)	43	9.457	9.451	0.006	98	220574	5.00	4.10	
$ 78 Toluene-d8 (Surr)	98	9.591	9.591	0.000	94	2318546	10.0	10.1	
79 Toluene	92	9.671	9.671	0.000	98	89746	0.5000	0.5082	
97 trans-1,3-Dichloropropene	75	9.939	9.933	0.006	95	40458	0.5000	0.4717	
99 Ethyl methacrylate	69	10.000	9.994	0.006	88	33758	0.5000	0.5072	
S 98 1,3-Dichloropropene, Total	100				0			0.9431	
100 1,1,2-Trichloroethane	97	10.140	10.134	0.006	94	24817	0.5000	0.5139	
101 Tetrachloroethene	166	10.231	10.225	0.006	98	49201	0.5000	0.5169	
102 1,3-Dichloropropane	76	10.305	10.299	0.006	91	40890	0.5000	0.5136	
103 2-Hexanone	43	10.359	10.353	0.006	98	151162	5.00	4.03	
105 Chlorodibromomethane	129	10.518	10.518	0.000	89	32144	0.5000	0.4833	
106 Ethylene Dibromide	107	10.634	10.628	0.006	99	23525	0.5000	0.5026	
* 107 Chlorobenzene-d5 (IS)	117	11.061	11.061	0.000	86	1779098	10.0	10.0	
108 1-Chlorohexane	91	11.073	11.073	0.000	95	53107	0.5000	0.5221	
109 Chlorobenzene	112	11.091	11.091	0.000	97	104524	0.5000	0.5150	
111 1,1,1,2-Tetrachloroethane	131	11.170	11.170	0.000	92	36378	0.5000	0.4875	
112 Ethylbenzene	91	11.176	11.176	0.000	98	176617	0.5000	0.5137	
S 110 Xylenes, Total	106				0			1.50	
113 m-Xylene & p-Xylene	106	11.292	11.292	0.000	93	136602	1.00	1.00	
114 o-Xylene	106	11.621	11.621	0.000	96	67339	0.5000	0.5027	
115 Styrene	104	11.640	11.634	0.006	95	101109	0.5000	0.4866	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
116 Bromoform	173	11.798	11.792	0.006	96	20086	0.5000	0.4635	
117 Isopropylbenzene	105	11.920	11.920	0.000	96	173040	0.5000	0.4921	
$ 120 4-Bromofluorobenzene (Surr)	95	12.066	12.067	-0.001	96	839517	10.0	10.1	
121 1,1,2,2-Tetrachloroethane	83	12.164	12.164	0.000	95	31254	0.5000	0.5156	
122 Bromobenzene	156	12.182	12.182	0.000	91	44356	0.5000	0.4901	
123 trans-1,4-Dichloro-2-butene	53	12.194	12.188	0.006	94	79110	5.00	3.74	
124 1,2,3-Trichloropropane	110	12.213	12.213	0.000	83	8741	0.5000	0.5102	
125 N-Propylbenzene	91	12.249	12.249	0.000	99	201563	0.5000	0.5074	
126 2-Chlorotoluene	126	12.329	12.329	0.000	97	42512	0.5000	0.4957	
127 1,3,5-Trimethylbenzene	105	12.390	12.384	0.006	94	147622	0.5000	0.4959	
128 4-Chlorotoluene	126	12.420	12.420	0.000	97	42302	0.5000	0.4943	
129 tert-Butylbenzene	134	12.627	12.627	0.000	93	36437	0.5000	0.4940	
130 Pentachloroethane	167	12.664	12.664	0.000	76	26396	0.5000	0.4615	
131 1,2,4-Trimethylbenzene	105	12.670	12.670	0.000	97	150530	0.5000	0.4924	
132 sec-Butylbenzene	105	12.792	12.792	0.000	94	183924	0.5000	0.4860	
133 1,3-Dichlorobenzene	146	12.896	12.890	0.006	97	81779	0.5000	0.4809	
134 4-Isopropyltoluene	119	12.902	12.902	0.000	97	162097	0.5000	0.4794	
* 135 1,4-Dichlorobenzene-d4	152	12.944	12.944	0.000	94	1099896	10.0	10.0	
136 1,4-Dichlorobenzene	146	12.963	12.963	0.000	95	82622	0.5000	0.4970	
137 1,2,3-Trimethylbenzene	120	12.975	12.975	0.000	97	71447	0.5000	0.5054	
138 Benzyl chloride	126	13.042	13.042	0.000	99	10655	0.5000	0.4457	
139 n-Butylbenzene	92	13.194	13.188	0.006	97	67525	0.5000	0.4546	
140 1,2-Dichlorobenzene	146	13.225	13.225	0.000	98	81474	0.5000	0.5047	
142 1,2-Dibromo-3-Chloropropane	155	13.767	13.767	0.000	84	5204	0.5000	0.5231	
143 1,3,5-Trichlorobenzene	180	13.895	13.889	0.006	97	61109	0.5000	0.4744	
144 1,2,4-Trichlorobenzene	180	14.316	14.316	0.000	93	48648	0.5000	0.4696	
145 Hexachlorobutadiene	225	14.395	14.395	0.000	96	29455	0.5000	0.4954	
146 Naphthalene	128	14.499	14.493	0.006	96	92567	0.5000	0.4800	
147 1,2,3-Trichlorobenzene	180	14.639	14.639	0.000	95	44557	0.5000	0.4737	
155 2-Methylnaphthalene	142		0.000				ND	ND	
156 p-Diethylbenzene	1		0.000				ND	ND	
161 Pentane	43		0.000				ND	ND	
150 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
165 Isopropyl alcohol	45		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_LL_#1_826_00068	Amount Added:	2.00	Units: uL	
MSV_LL_#2_826_00077	Amount Added:	2.00	Units: uL	
MSV_LL_GAS826_00141	Amount Added:	2.00	Units: uL	
MSV_LLcentISS_00006	Amount Added:	5.00	Units: uL	Run Reagent

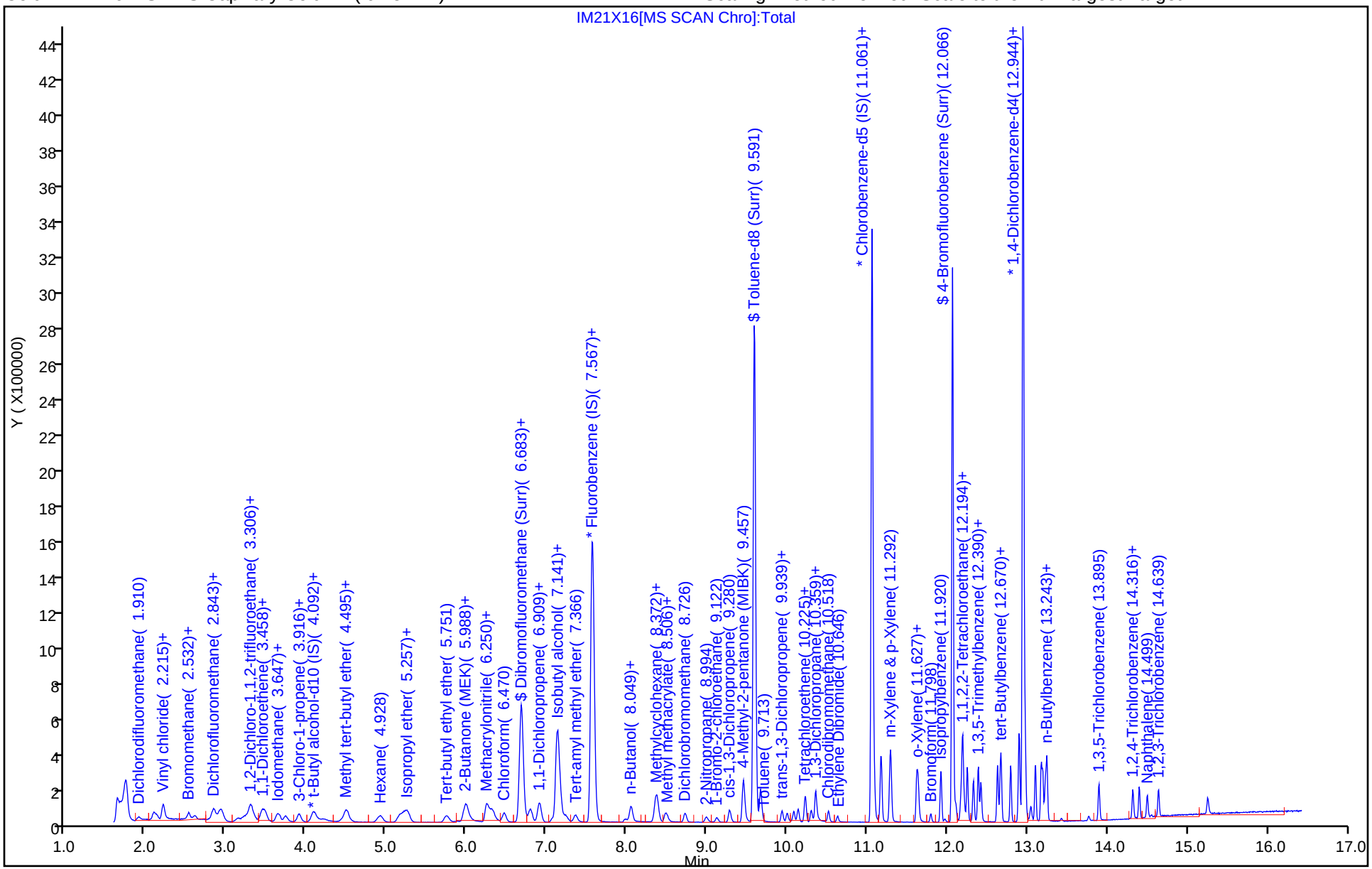
Report Date: 21-Mar-2023 17:38:01 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X16.D

Injection Date:	21-Mar-2023 05:42:30	Instrument ID:	19930	Operator ID:	mec29284
Lims ID:	IC std2			Worklist Smp#:	17
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

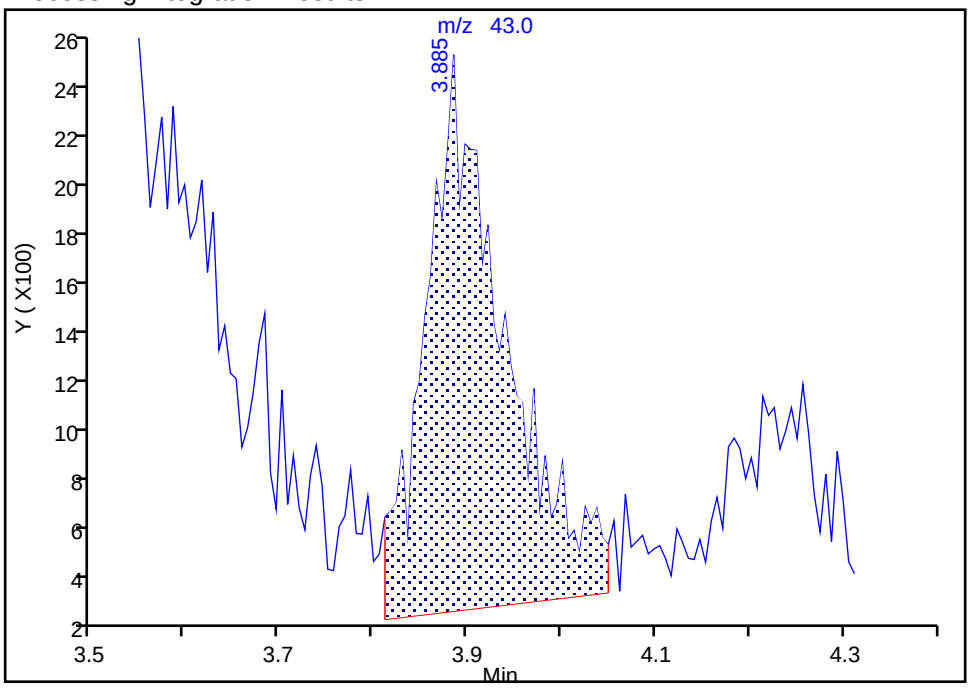
Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X16.D
Injection Date: 21-Mar-2023 05:42:30 Instrument ID: 19930
Lims ID: IC std2
Client ID:
Operator ID: mec29284 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

23 Methyl acetate, CAS: 79-20-9

Signal: 1

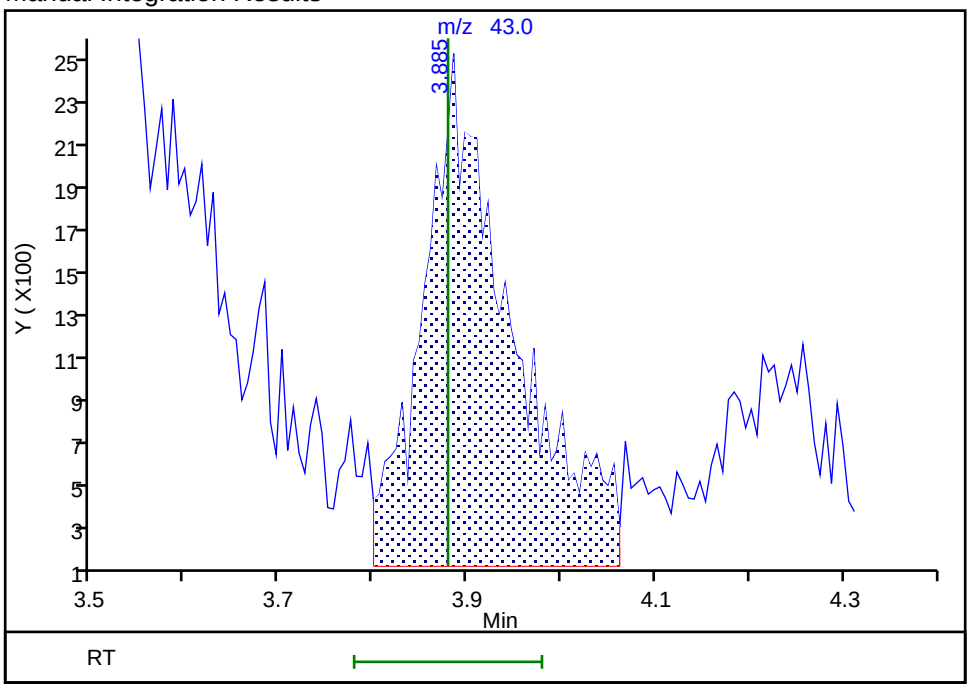
Processing Integration Results

RT: 3.89
Area: 13116
Amount: 0.397794
Amount Units: ug/l



Manual Integration Results

RT: 3.89
Area: 15241
Amount: 0.432782
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:54:48
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

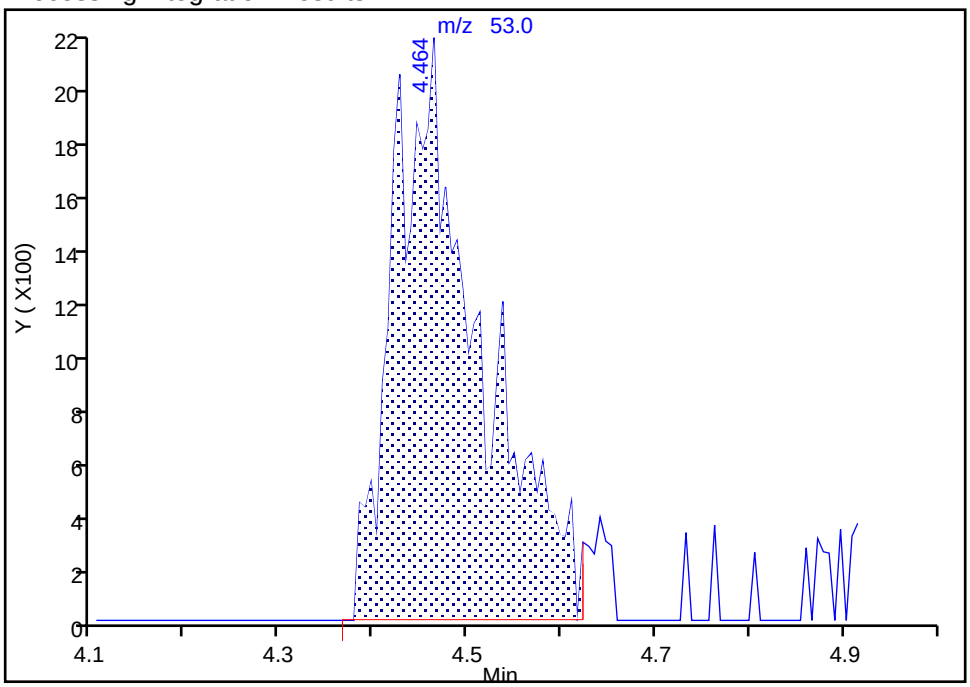
Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X16.D
Injection Date: 21-Mar-2023 05:42:30 Instrument ID: 19930
Lims ID: IC std2
Client ID:
Operator ID: mec29284 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

28 Acrylonitrile, CAS: 107-13-1

Signal: 1

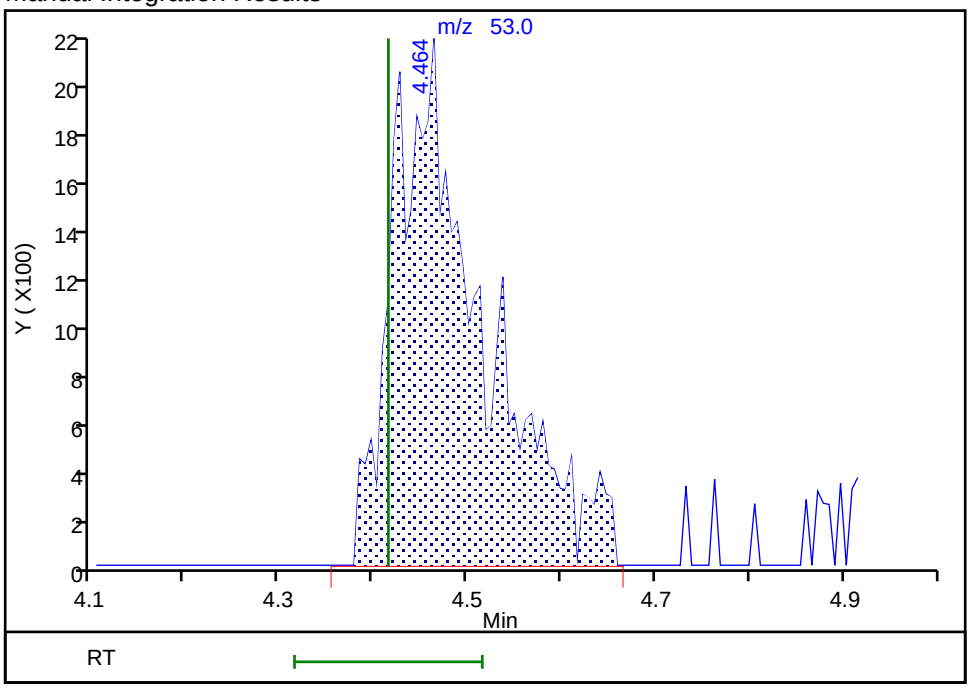
Processing Integration Results

RT: 4.46
Area: 13828
Amount: 1.145690
Amount Units: ug/l



Manual Integration Results

RT: 4.46
Area: 14375
Amount: 1.201628
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:55:01
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

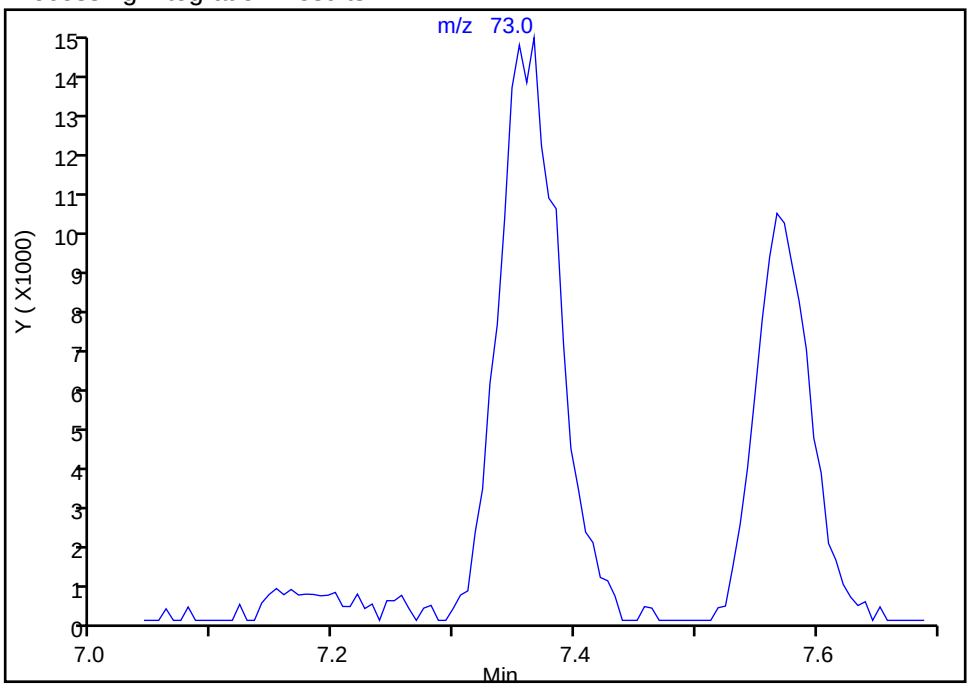
Data File:	\\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X16.D				
Injection Date:	21-Mar-2023 05:42:30	Instrument ID:	19930		
Lims ID:	IC std2				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	16	Worklist Smp#:	17
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

60 Tert-amyl methyl ether, CAS: 994-05-8

Signal: 1

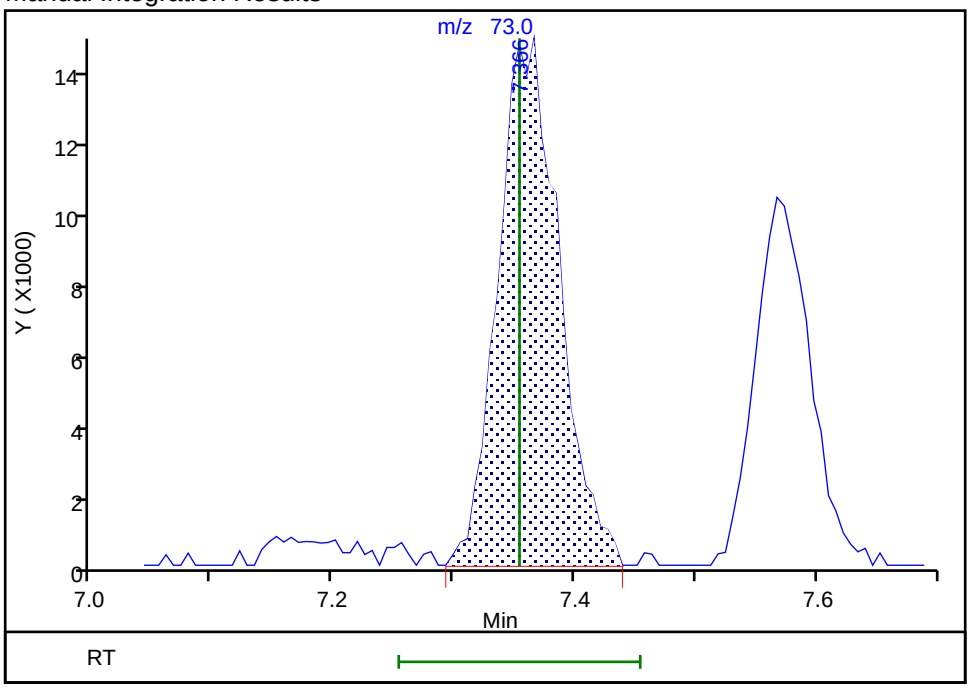
Not Detected
Expected RT: 7.35

Processing Integration Results



Manual Integration Results

RT: 7.37
Area: 50293
Amount: 0.463094
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:55:33
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

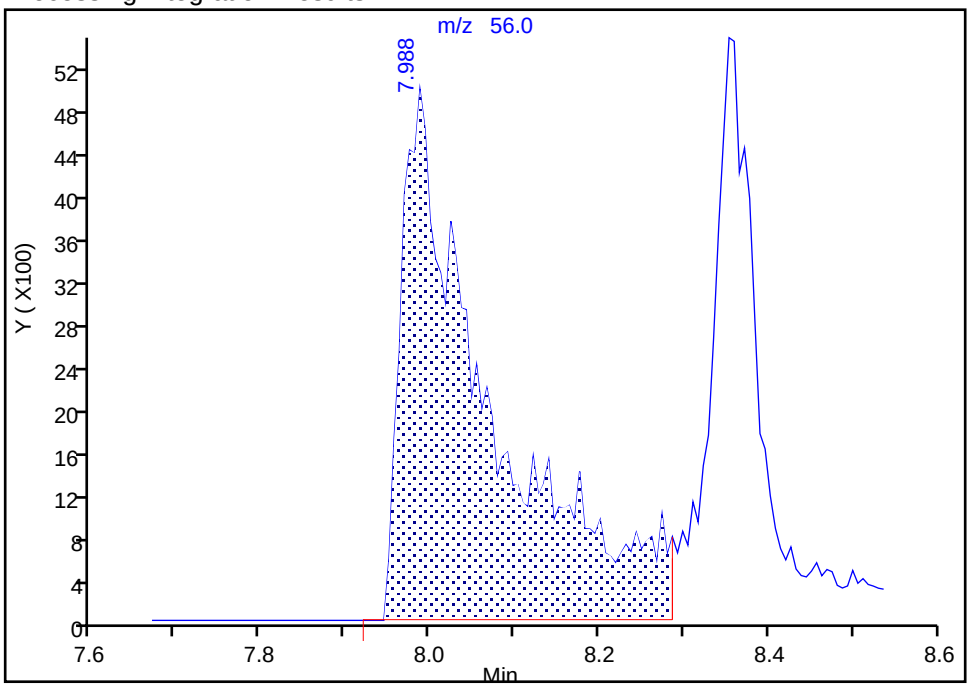
Data File:	\\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X16.D				
Injection Date:	21-Mar-2023 05:42:30	Instrument ID:	19930		
Lims ID:	IC std2				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	16	Worklist Smp#:	17
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

63 n-Butanol, CAS: 71-36-3

Signal: 1

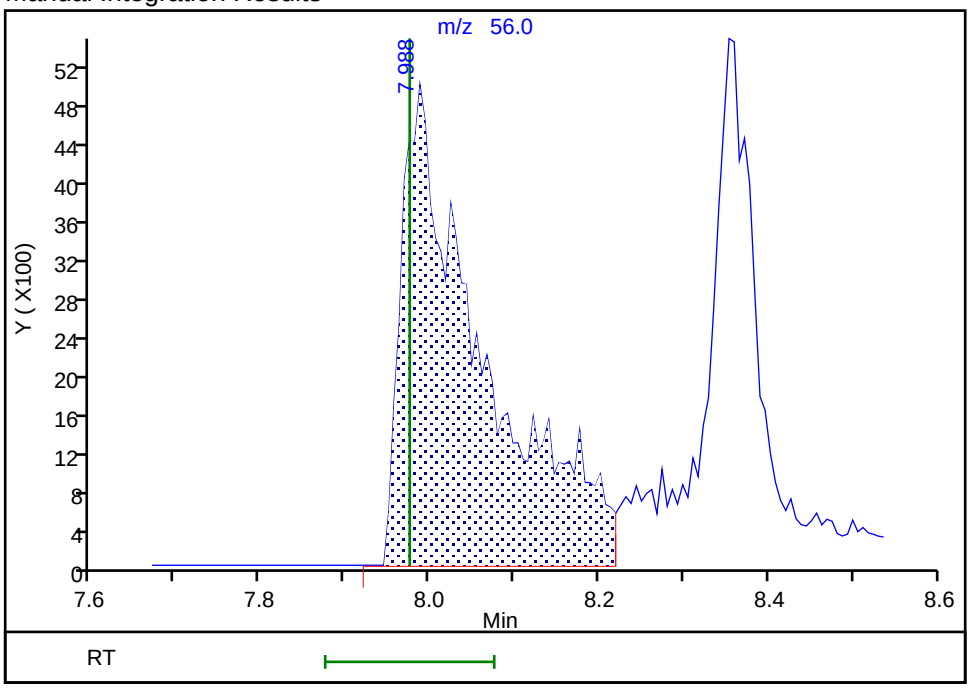
Processing Integration Results

RT: 7.99
Area: 35625
Amount: 43.941193
Amount Units: ug/l



Manual Integration Results

RT: 7.99
Area: 32752
Amount: 39.509341
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 16:07:35
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

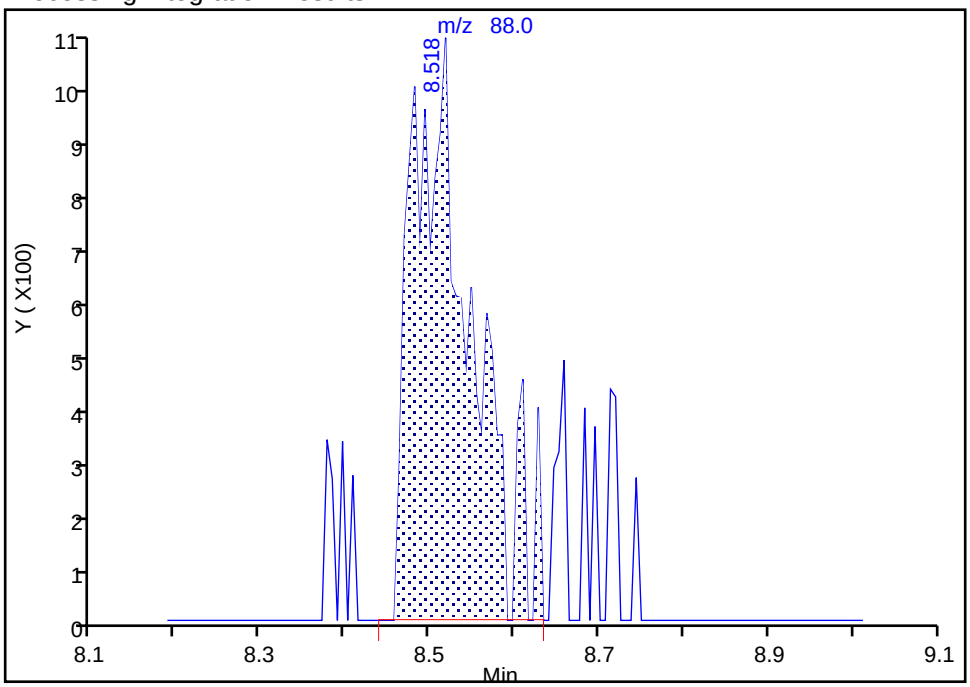
Data File:	\\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X16.D				
Injection Date:	21-Mar-2023 05:42:30	Instrument ID:	19930		
Lims ID:	IC std2				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	16	Worklist Smp#:	17
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

68 1,4-Dioxane, CAS: 123-91-1

Signal: 1

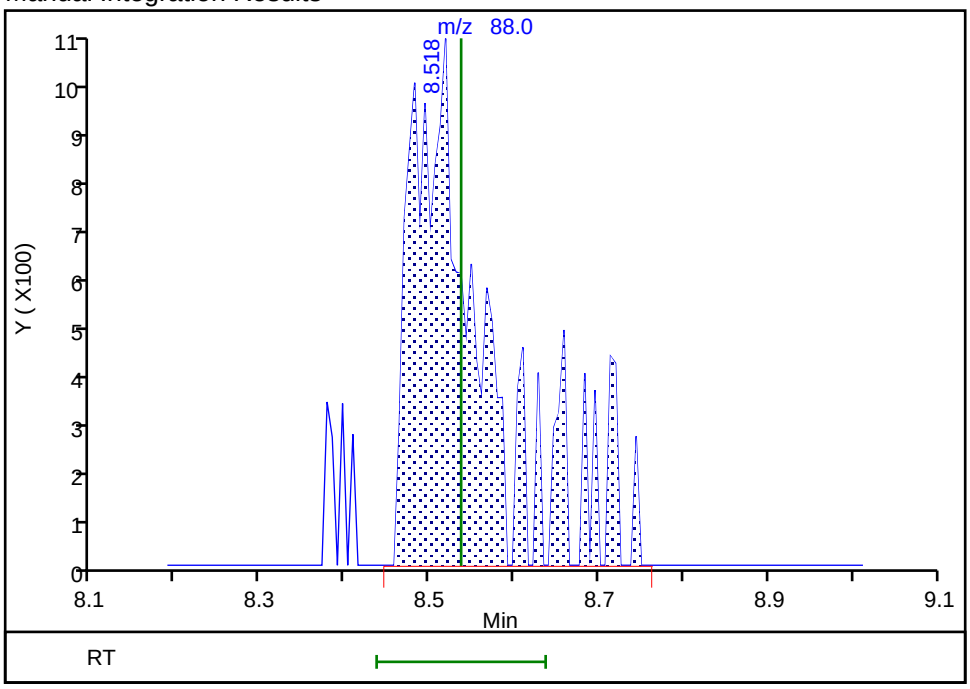
Processing Integration Results

RT: 8.52
Area: 5240
Amount: 21.167113
Amount Units: ug/l



Manual Integration Results

RT: 8.52
Area: 6296
Amount: 24.426812
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:56:02

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X17.D
Lims ID: IC std1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 21-Mar-2023 06:02:30 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0079468-018
Operator ID: mec29284 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 21-Mar-2023 17:38:06 Calib Date: 21-Mar-2023 06:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1651

First Level Reviewer: K4WN Date: 21-Mar-2023 16:07:19

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.904	1.898	0.006	98	17110	0.2000	0.2008	
4 Chloromethane	50	2.093	2.087	0.006	98	20747	0.2000	0.2246	
5 Vinyl chloride	62	2.209	2.203	0.006	92	18650	0.2000	0.2070	
6 Butadiene	39	2.215	2.209	0.006	93	19058	0.2000	0.2313	
7 Bromomethane	94	2.532	2.526	0.006	92	14521	0.2000	0.2078	
8 Chloroethane	64	2.605	2.599	0.006	95	11084	0.2000	0.2024	
9 Dichlorofluoromethane	67	2.837	2.837	0.000	94	32448	0.2000	0.2213	
10 Trichlorofluoromethane	101	2.898	2.898	0.000	95	30095	0.2000	0.2068	
11 Ethyl ether	59	3.141	3.135	0.006	91	9452	0.2000	0.1983	
13 1,2-Dichloro-1,1,2-trifluoroetha	67	3.221	3.227	-0.006	36	17475	0.2000	0.2149	
14 Acrolein	56	3.318	3.306	0.012	99	66213	10.0	9.87	
15 1,1-Dichloroethene	96	3.440	3.434	0.006	98	11991	0.2000	0.2036	
17 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.483	3.477	0.006	92	13036	0.2000	0.1944	
16 Acetone	43	3.495	3.477	0.018	94	22153	2.00	2.73	M
18 Iodomethane	142	3.641	3.629	0.012	98	25378	0.2000	0.1987	
19 Ethyl bromide	108	3.653	3.660	-0.007	52	10854	0.2004	0.1975	
20 Carbon disulfide	76	3.745	3.733	0.012	99	33647	0.2000	0.2037	
23 Methyl acetate	43	3.940	3.879	0.061	25	8017	0.2000	0.2763	M
24 3-Chloro-1-propene	41	3.910	3.897	0.013	86	20765	0.2000	0.2094	
25 Methylene Chloride	84	4.092	4.086	0.006	95	12493	0.2000	0.1996	
* 26 t-Butyl alcohol-d10 (IS)	65	4.123	4.135	-0.012	94	126445	50.0	50.0	
27 2-Methyl-2-propanol	59	4.251	4.263	-0.012	34	11132	4.00	4.22	M
28 Acrylonitrile	53	4.464	4.416	0.048	27	3733	0.5000	0.3788	
29 Methyl tert-butyl ether	73	4.489	4.477	0.012	92	30341	0.2000	0.2003	
30 trans-1,2-Dichloroethene	96	4.507	4.495	0.012	95	13932	0.2000	0.2102	
31 Hexane	57	4.922	4.915	0.007	92	15447	0.2000	0.1766	
32 1,1-Dichloroethane	63	5.165	5.147	0.018	95	23853	0.2000	0.1984	
35 Isopropyl ether	45	5.208	5.214	-0.006	93	38342	0.2000	0.1910	
36 2-Chloro-1,3-butadiene	53	5.263	5.263	0.000	93	19317	0.2000	0.1897	
37 Tert-butyl ethyl ether	59	5.751	5.751	0.000	96	27255	0.2000	0.1957	
38 2-Butanone (MEK)	43	5.982	5.958	0.024	85	29871	2.00	2.00	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
39 cis-1,2-Dichloroethene	96	6.001	5.982	0.019	79	13988	0.2000	0.1931	
40 2,2-Dichloropropane	77	6.013	5.995	0.018	89	21814	0.2000	0.1995	
43 Propionitrile	54	6.080	6.056	0.024	30	10606	4.00	3.06	M
S 41 1,2-Dichloroethene, Total	100				0			0.4033	
45 Methacrylonitrile	67	6.257	6.244	0.013	93	30294	2.00	1.90	
46 Chlorobromomethane	128	6.330	6.318	0.012	81	6246	0.2000	0.1852	
47 Tetrahydrofuran	71	6.348	6.330	0.018	77	4457	1.00	0.9703	
48 Chloroform	83	6.476	6.464	0.012	94	23932	0.2000	0.1937	
$ 49 Dibromofluoromethane (Surr)	113	6.683	6.677	0.006	93	600251	10.0	9.91	
50 1,1,1-Trichloroethane	97	6.696	6.690	0.006	36	22751	0.2000	0.1950	
51 Cyclohexane	56	6.793	6.793	0.000	92	21863	0.2000	0.1969	
53 1,1-Dichloropropene	75	6.909	6.903	0.006	89	17369	0.2000	0.1913	
54 Carbon tetrachloride	117	6.909	6.909	0.000	94	19970	0.2000	0.1849	
55 Isobutyl alcohol	41	7.116	7.092	0.024	33	9875	10.0	10.5	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.134	7.135	-0.001	67	114034	10.0	9.92	
57 Benzene	78	7.165	7.165	0.000	97	52092	0.2000	0.1965	
58 1,2-Dichloroethane	62	7.238	7.238	0.000	91	17147	0.2000	0.2109	
60 Tert-amyl methyl ether	73	7.354	7.354	0.000	96	21381	0.2000	0.1989	
* 61 Fluorobenzene (IS)	96	7.573	7.567	0.006	99	2286473	10.0	10.0	
62 n-Heptane	43	7.586	7.580	0.006	37	18966	0.2000	0.2080	
63 n-Butanol	56	8.171	7.976	0.195	22	8119	17.5	11.9	a
64 Trichloroethene	95	8.067	8.049	0.018	95	14586	0.2000	0.1951	
65 Methylcyclohexane	83	8.360	8.360	0.000	91	23390	0.2000	0.1900	
66 1,2-Dichloropropane	63	8.384	8.378	0.006	81	12331	0.2000	0.1846	
67 Methyl methacrylate	69	8.482	8.464	0.018	82	4729	0.2000	0.1463	M
69 Dibromomethane	93	8.488	8.488	0.000	90	6355	0.2000	0.1859	a
68 1,4-Dioxane	88	8.561	8.537	0.024	28	915	10.0	4.31	M
71 Dichlorobromomethane	83	8.726	8.726	0.000	97	16582	0.2000	0.1872	
72 2-Nitropropane	41	9.000	8.994	0.006	97	11676	1.00	1.01	
75 1-Bromo-2-chloroethane	63	9.128	9.122	0.006	96	12280	0.2000	0.1948	
76 cis-1,3-Dichloropropene	75	9.287	9.280	0.006	94	18856	0.2000	0.1843	
77 4-Methyl-2-pentanone (MIBK)	43	9.457	9.451	0.006	98	81398	2.00	1.83	
$ 78 Toluene-d8 (Surr)	98	9.591	9.591	0.000	94	2293084	10.0	10.1	
79 Toluene	92	9.677	9.671	0.006	97	34373	0.2000	0.1956	
97 trans-1,3-Dichloropropene	75	9.939	9.933	0.006	93	16145	0.2000	0.1892	
99 Ethyl methacrylate	69	10.012	9.994	0.018	87	12480	0.2000	0.1884	
S 98 1,3-Dichloropropene, Total	100				0			0.3735	
100 1,1,2-Trichloroethane	97	10.140	10.134	0.006	93	9264	0.2000	0.1927	
101 Tetrachloroethene	166	10.225	10.225	0.000	96	17910	0.2000	0.1891	
102 1,3-Dichloropropane	76	10.305	10.299	0.006	93	15353	0.2000	0.1938	
103 2-Hexanone	43	10.366	10.353	0.013	97	54958	2.00	1.78	
105 Chlorodibromomethane	129	10.518	10.518	0.000	87	12415	0.2000	0.1876	
106 Ethylene Dibromide	107	10.628	10.628	0.000	94	8713	0.2000	0.1870	
* 107 Chlorobenzene-d5 (IS)	117	11.061	11.061	0.000	86	1770499	10.0	10.0	
108 1-Chlorohexane	91	11.073	11.073	0.000	49	21421	0.2000	0.2116	
109 Chlorobenzene	112	11.091	11.091	0.000	95	38651	0.2000	0.1914	
111 1,1,1,2-Tetrachloroethane	131	11.176	11.170	0.006	89	13488	0.2000	0.1816	
112 Ethylbenzene	91	11.176	11.176	0.000	98	65799	0.2000	0.1923	
S 110 Xylenes, Total	106				0			0.5506	
113 m-Xylene & p-Xylene	106	11.292	11.292	0.000	93	49779	0.4000	0.3651	
114 o-Xylene	106	11.621	11.621	0.000	96	24739	0.2000	0.1856	
115 Styrene	104	11.640	11.634	0.006	94	36677	0.2000	0.1774	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
116 Bromoform	173	11.792	11.792	0.000	95	7927	0.2000	0.1838	
117 Isopropylbenzene	105	11.920	11.920	0.000	95	65240	0.2000	0.1864	
$ 120 4-Bromofluorobenzene (Surr)	95	12.066	12.067	-0.001	96	829348	10.0	9.98	
121 1,1,2,2-Tetrachloroethane	83	12.170	12.164	0.006	94	11706	0.2000	0.1937	
122 Bromobenzene	156	12.182	12.182	0.000	91	18174	0.2000	0.2014	
123 trans-1,4-Dichloro-2-butene	53	12.194	12.188	0.006	93	30616	2.00	1.76	
124 1,2,3-Trichloropropane	110	12.213	12.213	0.000	77	3351	0.2000	0.1962	
125 N-Propylbenzene	91	12.249	12.249	0.000	98	70616	0.2000	0.1783	
126 2-Chlorotoluene	126	12.329	12.329	0.000	97	15738	0.2000	0.1840	
127 1,3,5-Trimethylbenzene	105	12.390	12.384	0.006	95	53572	0.2000	0.1805	
128 4-Chlorotoluene	126	12.426	12.420	0.006	95	15367	0.2000	0.1801	
129 tert-Butylbenzene	134	12.627	12.627	0.000	93	13951	0.2000	0.1897	
130 Pentachloroethane	167	12.658	12.664	-0.006	74	9669	0.2000	0.1695	
131 1,2,4-Trimethylbenzene	105	12.670	12.670	0.000	97	55233	0.2000	0.1812	
132 sec-Butylbenzene	105	12.792	12.792	0.000	94	68845	0.2000	0.1824	
133 1,3-Dichlorobenzene	146	12.896	12.890	0.006	98	31892	0.2000	0.1881	
134 4-Isopropyltoluene	119	12.902	12.902	0.000	98	61116	0.2000	0.1813	
* 135 1,4-Dichlorobenzene-d4	152	12.950	12.944	0.006	94	1096665	10.0	10.0	
136 1,4-Dichlorobenzene	146	12.969	12.963	0.006	92	31956	0.2000	0.1928	
137 1,2,3-Trimethylbenzene	120	12.975	12.975	0.000	97	27998	0.2000	0.1986	
138 Benzyl chloride	126	13.042	13.042	0.000	98	3612	0.2000	0.1515	
139 n-Butylbenzene	92	13.194	13.188	0.006	97	25462	0.2000	0.1719	
140 1,2-Dichlorobenzene	146	13.225	13.225	0.000	97	30112	0.2000	0.1871	
142 1,2-Dibromo-3-Chloropropane	155	13.773	13.767	0.006	83	1695	0.2000	0.1709	
143 1,3,5-Trichlorobenzene	180	13.895	13.889	0.006	96	22925	0.2000	0.1785	
144 1,2,4-Trichlorobenzene	180	14.316	14.316	0.000	93	18177	0.2000	0.1760	
145 Hexachlorobutadiene	225	14.395	14.395	0.000	95	12245	0.2000	0.2066	
146 Naphthalene	128	14.499	14.493	0.006	97	38082	0.2000	0.1980	
147 1,2,3-Trichlorobenzene	180	14.639	14.639	0.000	92	17765	0.2000	0.1894	
155 2-Methylnaphthalene	142		0.000				ND	ND	
156 p-Diethylbenzene	1		0.000				ND	ND	
161 Pentane	43		0.000				ND	ND	
150 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
165 Isopropyl alcohol	45		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_LL_#1_826_00068	Amount Added:	2.00	Units: uL	
MSV_LL_#2_826_00077	Amount Added:	2.00	Units: uL	
MSV_LL_GAS826_00141	Amount Added:	2.00	Units: uL	
MSV_LLcentISS_00006	Amount Added:	5.00	Units: uL	Run Reagent

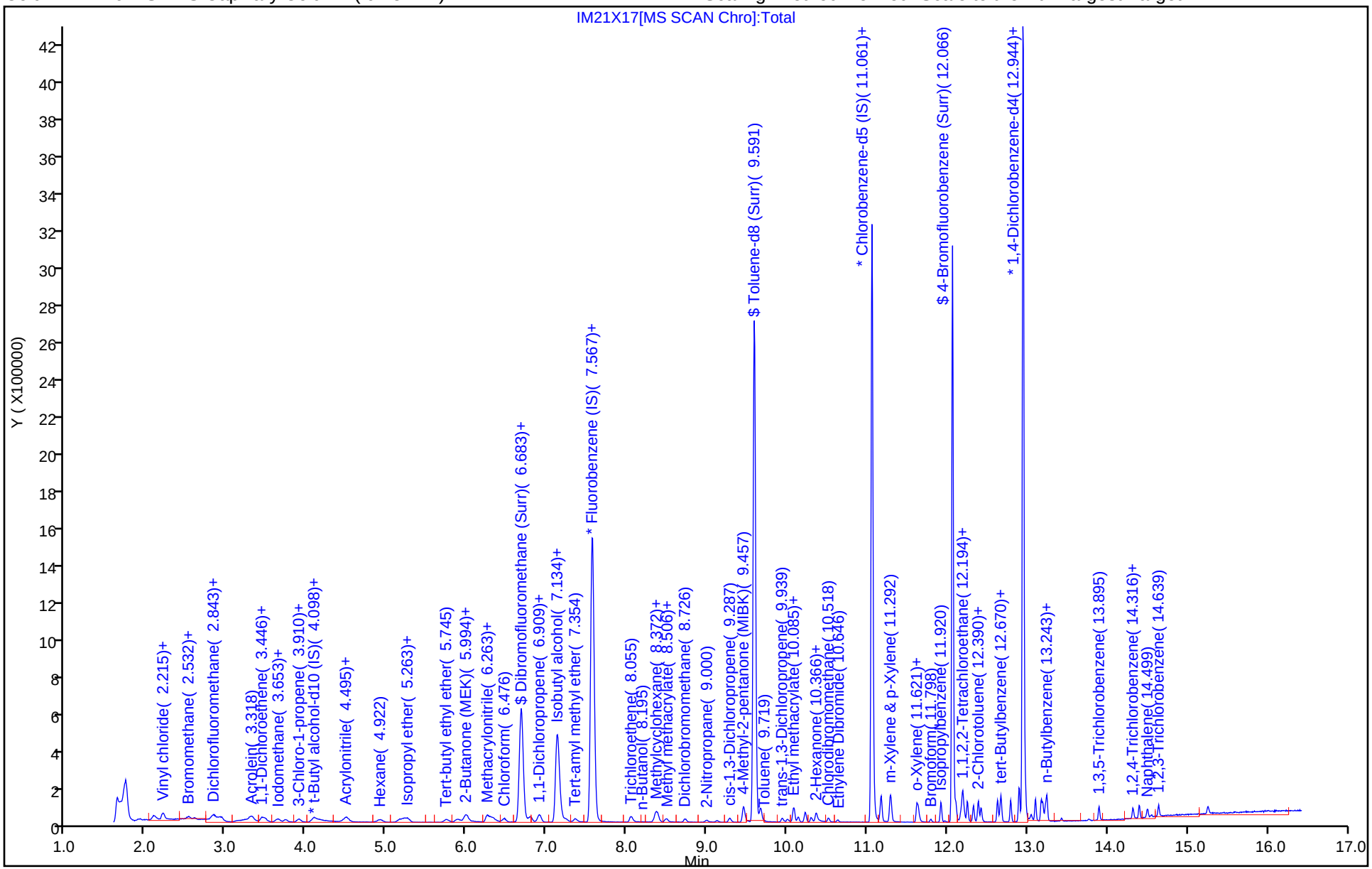
Report Date: 21-Mar-2023 17:38:07 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X17.D

Injection Date:	21-Mar-2023 06:02:30	Instrument ID:	19930	Operator ID:	mec29284
Lims ID:	IC std1			Worklist Smp#:	18
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

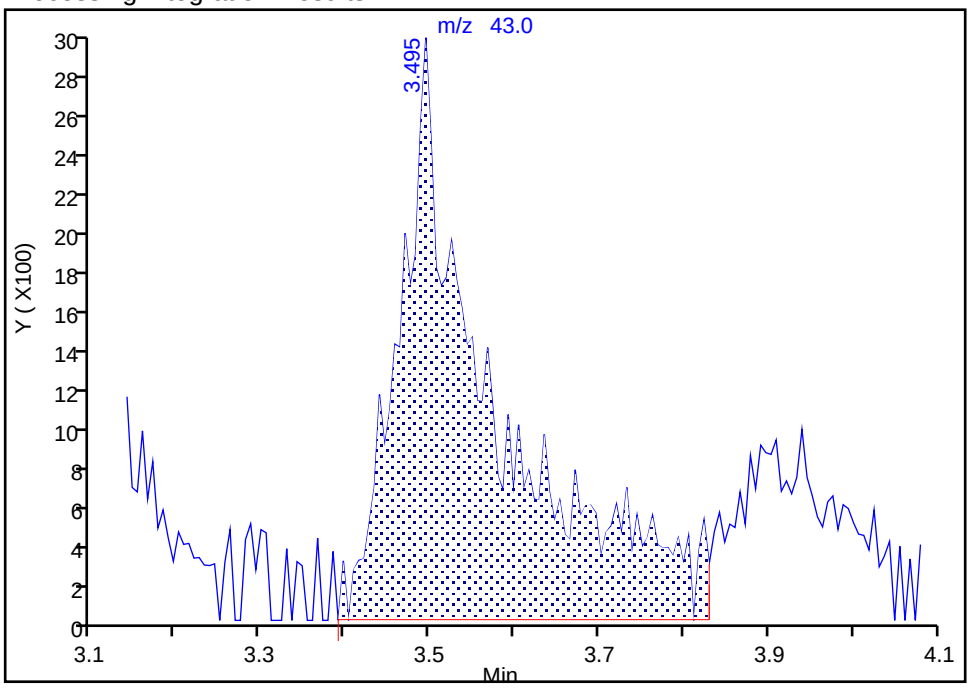
Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X17.D
Injection Date: 21-Mar-2023 06:02:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: mec29284 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

16 Acetone, CAS: 67-64-1

Signal: 1

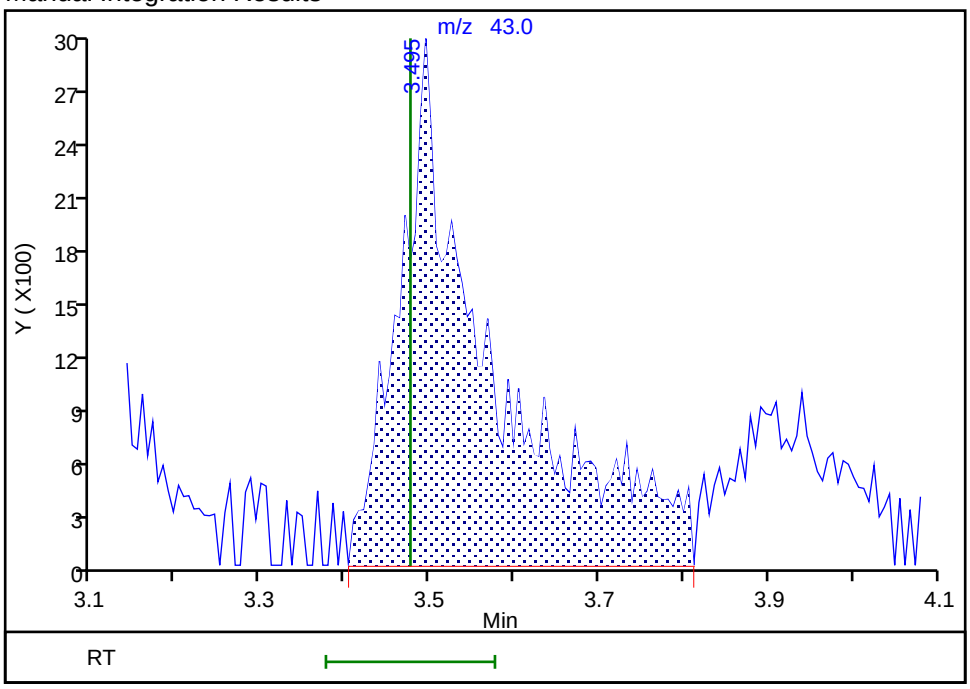
Processing Integration Results

RT: 3.49
Area: 22686
Amount: 2.753548
Amount Units: ug/l



Manual Integration Results

RT: 3.49
Area: 22153
Amount: 2.733339
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 16:02:38
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

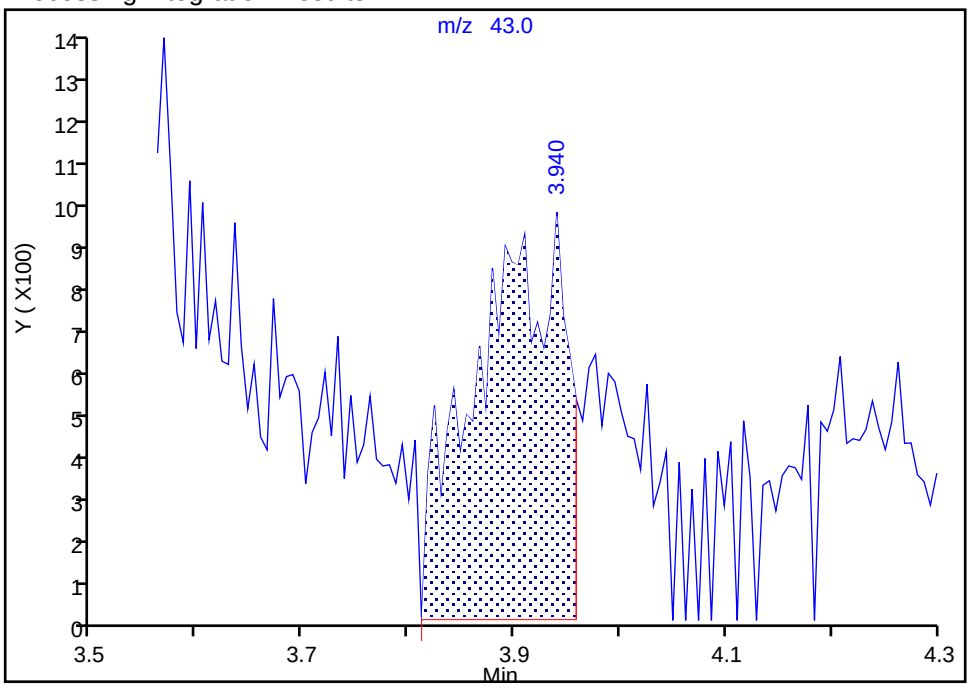
Data File:	\\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X17.D				
Injection Date:	21-Mar-2023 06:02:30	Instrument ID:	19930		
Lims ID:	IC std1				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

23 Methyl acetate, CAS: 79-20-9

Signal: 1

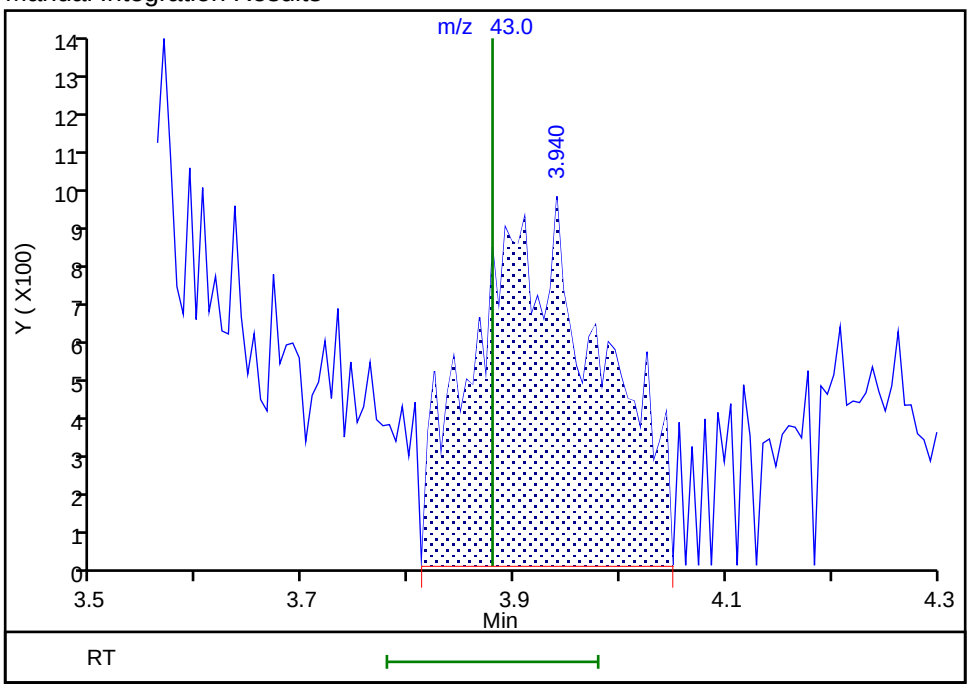
Processing Integration Results

RT: 3.94
Area: 5592
Amount: 0.202155
Amount Units: ug/l



Manual Integration Results

RT: 3.94
Area: 8017
Amount: 0.276345
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:57:10
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

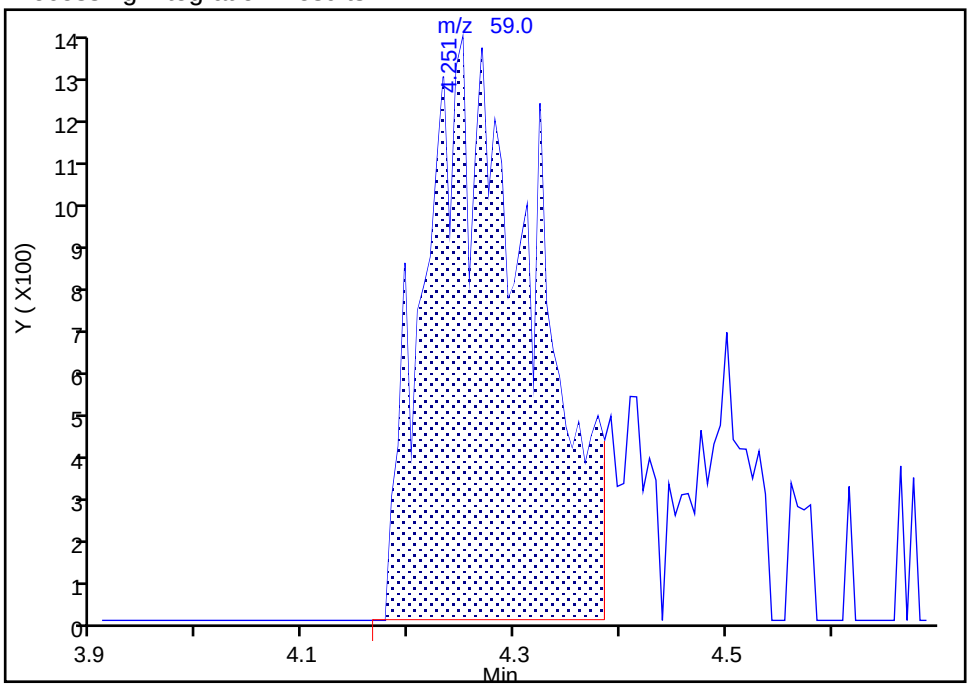
Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X17.D
Injection Date: 21-Mar-2023 06:02:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: mec29284 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

27 2-Methyl-2-propanol, CAS: 75-65-0

Signal: 1

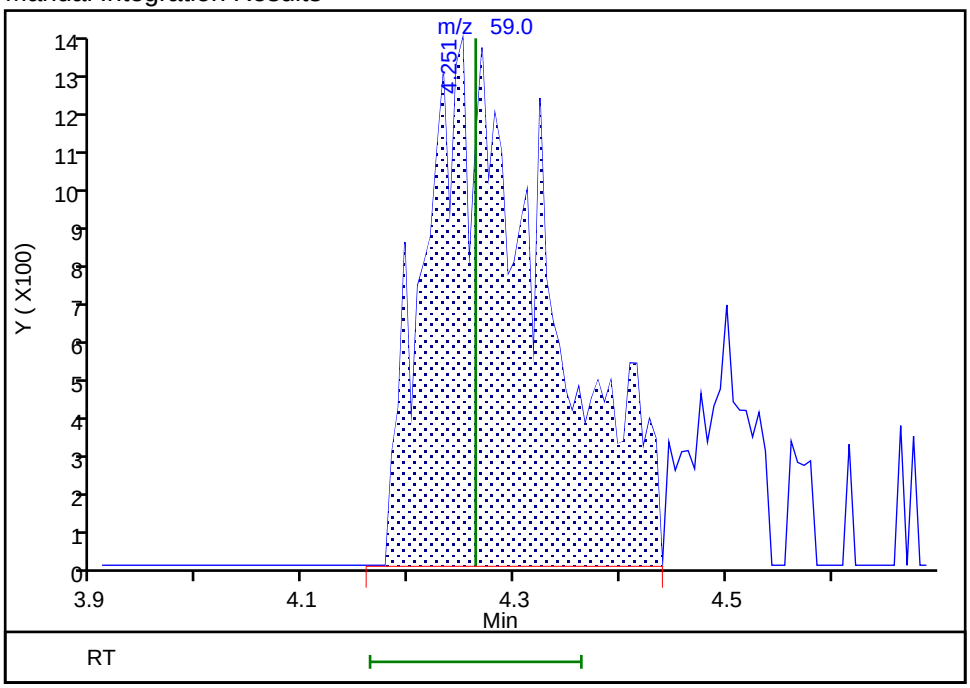
Processing Integration Results

RT: 4.25
Area: 9948
Amount: 3.790427
Amount Units: ug/l



Manual Integration Results

RT: 4.25
Area: 11132
Amount: 4.224428
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:57:18
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

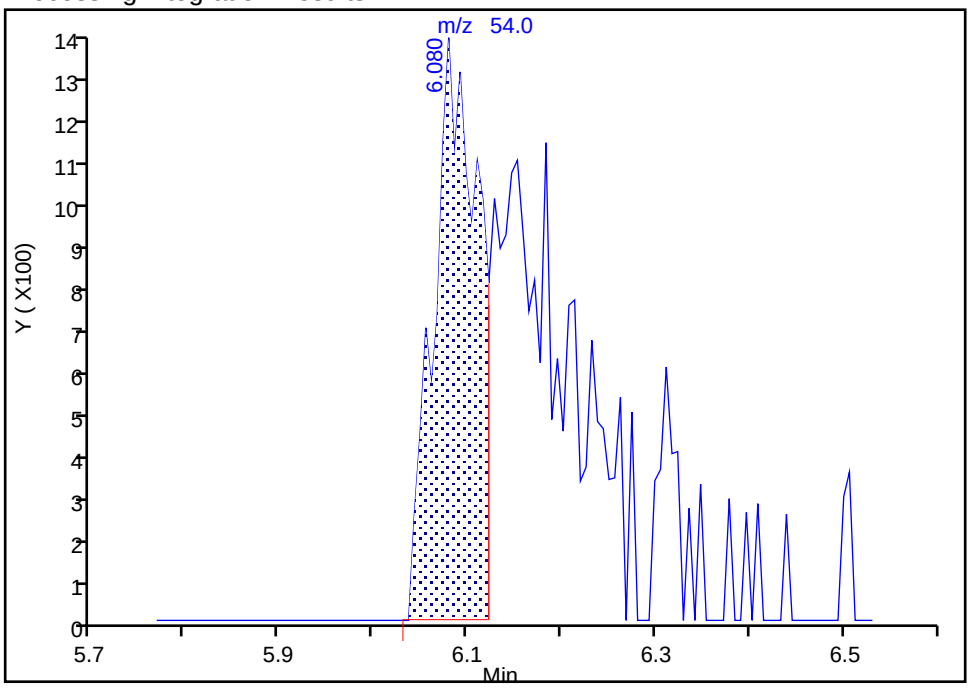
Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X17.D
Injection Date: 21-Mar-2023 06:02:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: mec29284 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

43 Propionitrile, CAS: 107-12-0

Signal: 1

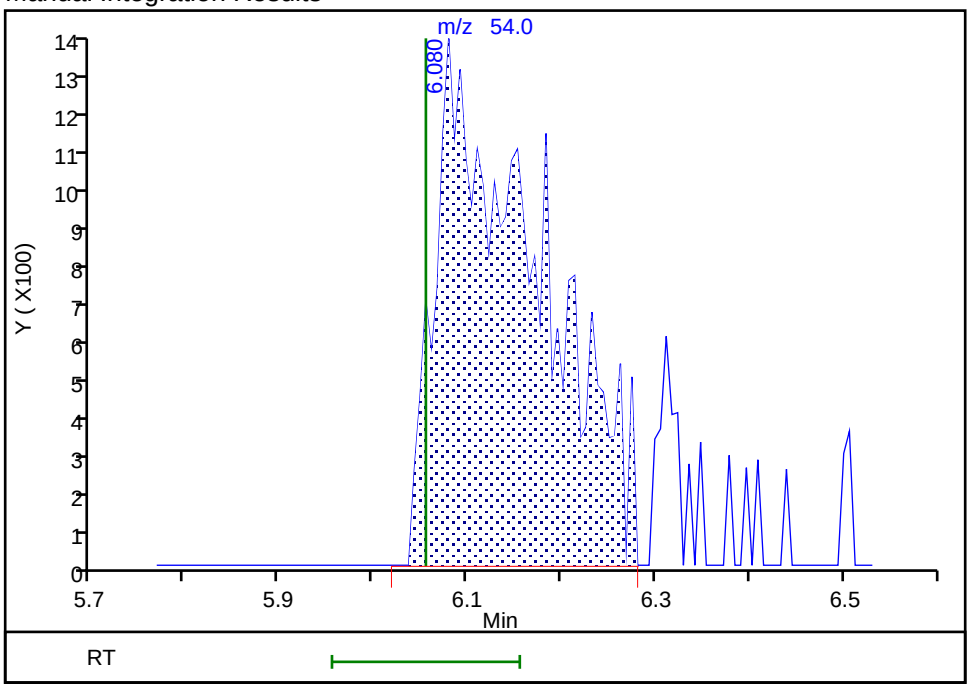
Processing Integration Results

RT: 6.08
Area: 4617
Amount: 3.806844
Amount Units: ug/l



Manual Integration Results

RT: 6.08
Area: 10606
Amount: 3.055648
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:57:35
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

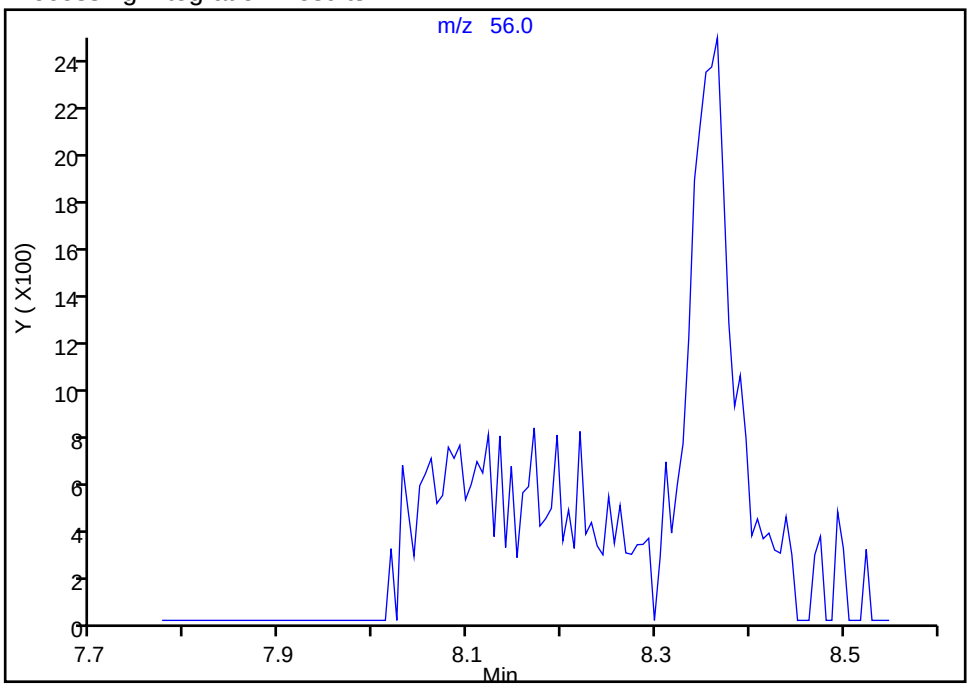
Data File:	\\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X17.D				
Injection Date:	21-Mar-2023 06:02:30	Instrument ID:	19930		
Lims ID:	IC std1				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

63 n-Butanol, CAS: 71-36-3

Signal: 1

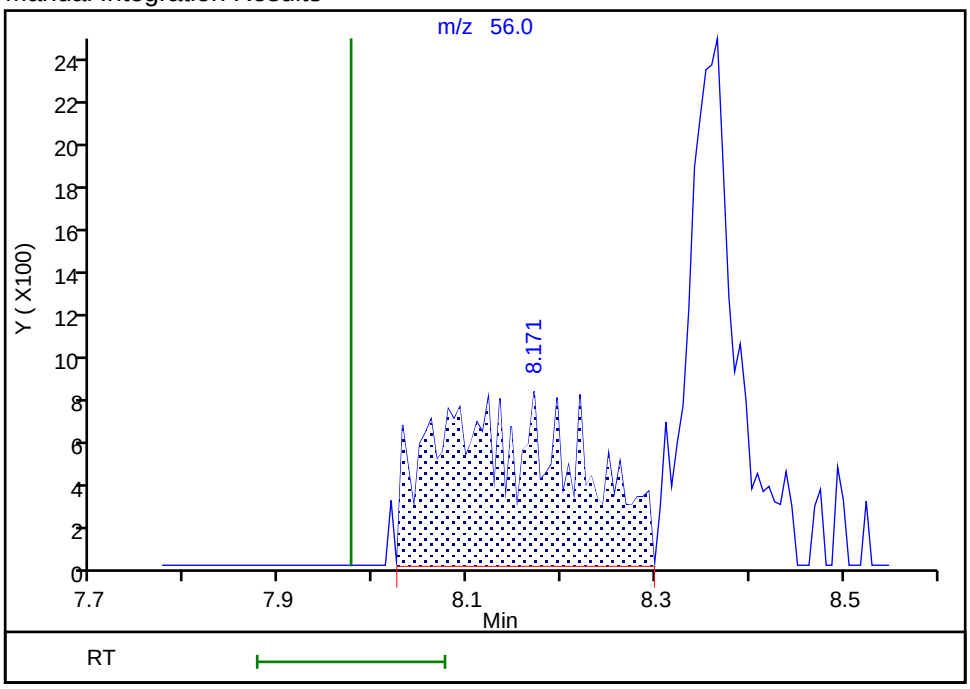
Not Detected
Expected RT: 7.98

Processing Integration Results



Manual Integration Results

RT: 8.17
Area: 8119
Amount: 11.889089
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:57:53
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

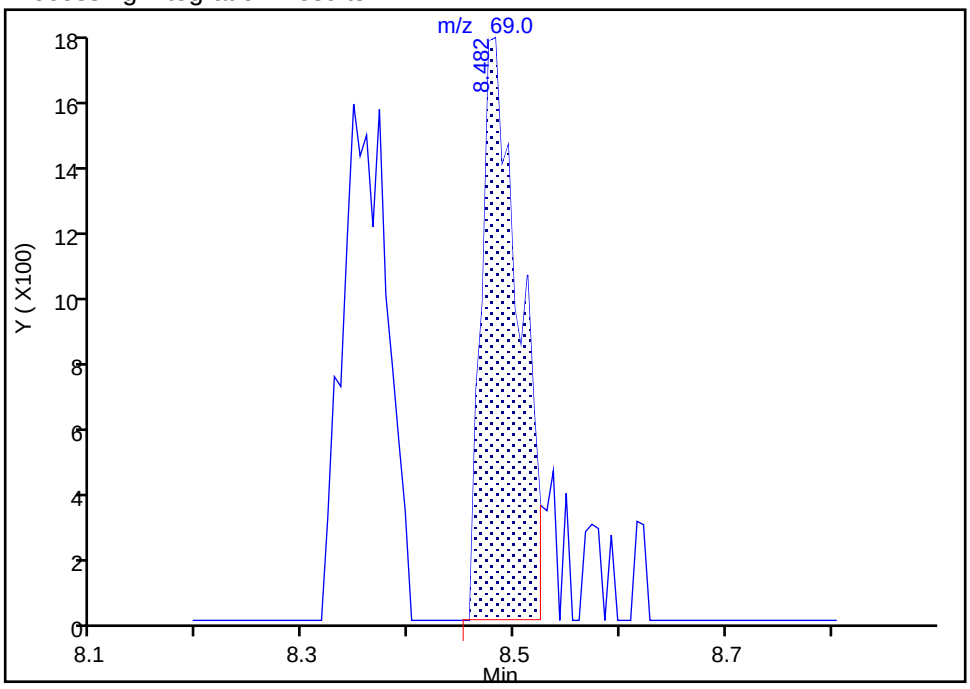
Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X17.D
Injection Date: 21-Mar-2023 06:02:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: mec29284 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

67 Methyl methacrylate, CAS: 80-62-6

Signal: 1

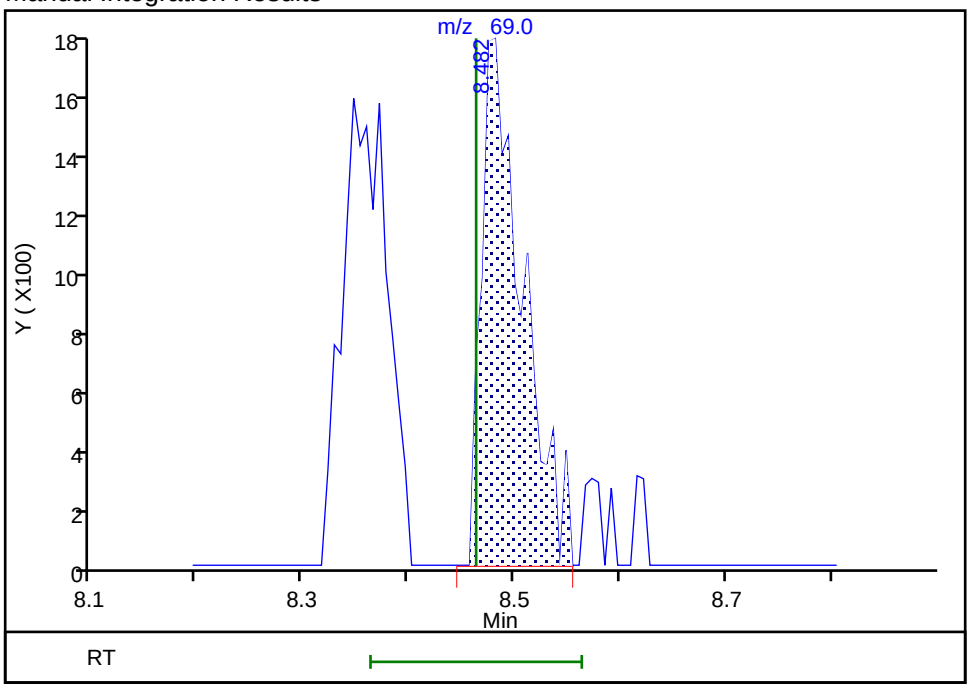
Processing Integration Results

RT: 8.48
Area: 4302
Amount: 0.247940
Amount Units: ug/l



Manual Integration Results

RT: 8.48
Area: 4729
Amount: 0.146339
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:58:04
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

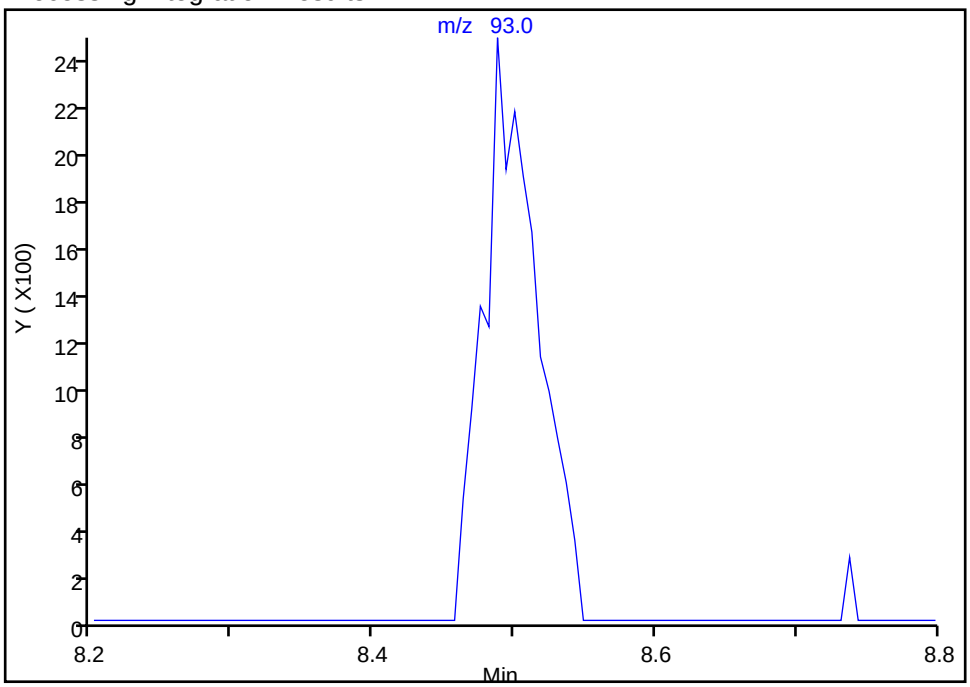
Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X17.D
Injection Date: 21-Mar-2023 06:02:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: mec29284 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

69 Dibromomethane, CAS: 74-95-3

Signal: 1

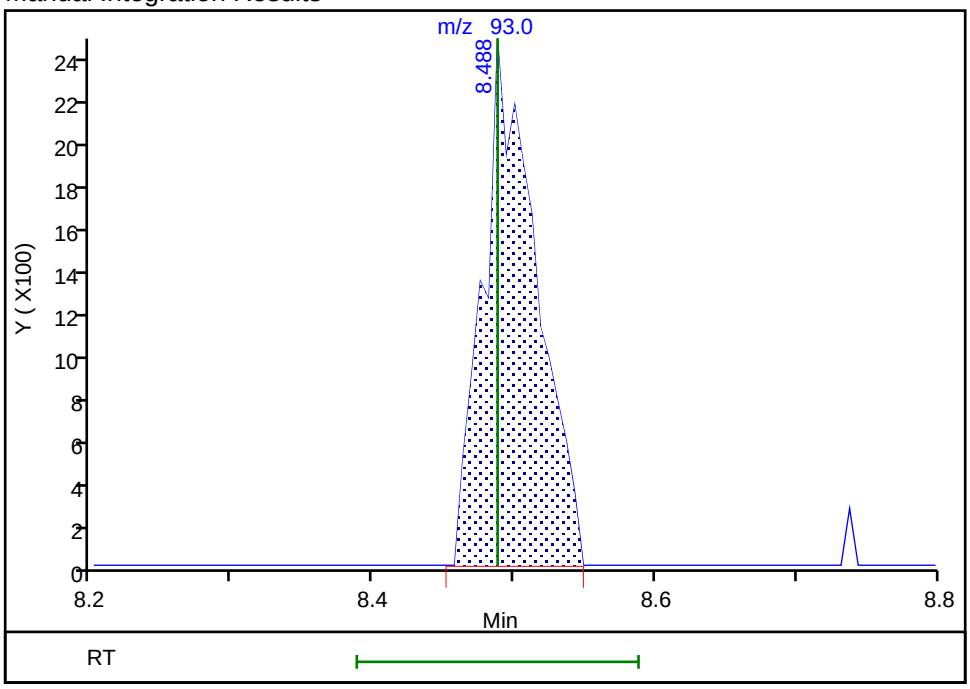
Not Detected
Expected RT: 8.49

Processing Integration Results



Manual Integration Results

RT: 8.49
Area: 6355
Amount: 0.185902
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:58:07
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

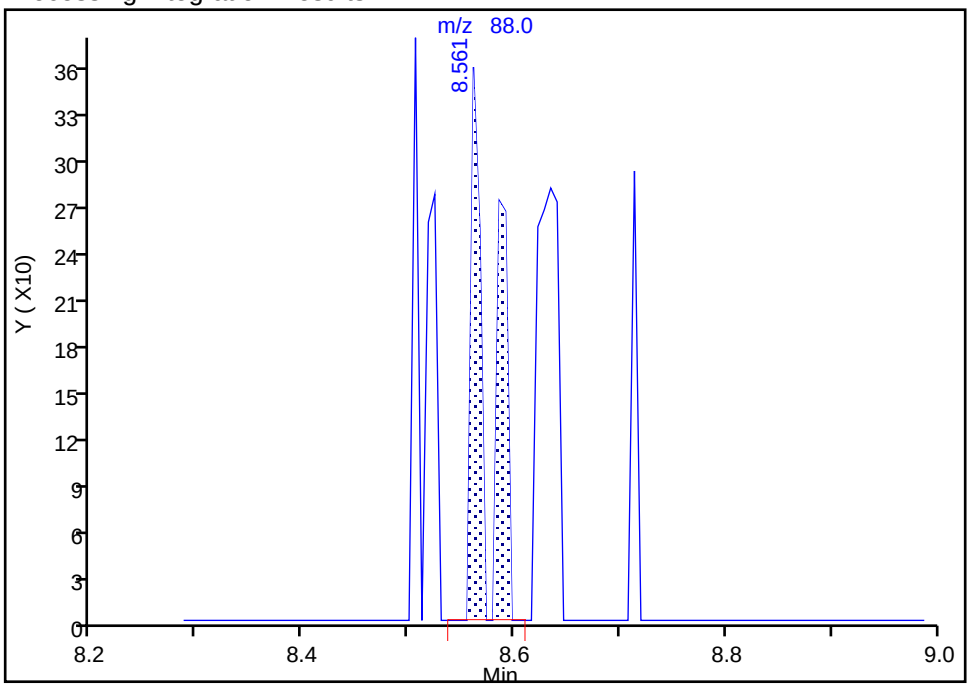
Data File: \\chromfs\Lancaster\ChromData\19930\20230321-79468.b\IM21X17.D
Injection Date: 21-Mar-2023 06:02:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: mec29284 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

68 1,4-Dioxane, CAS: 123-91-1

Signal: 1

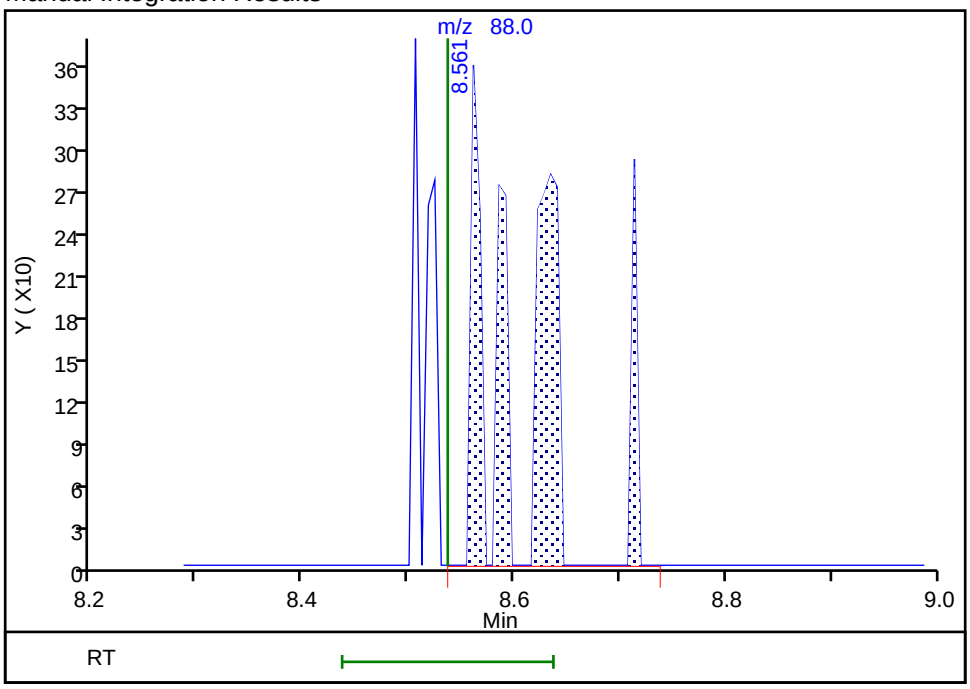
Processing Integration Results

RT: 8.56
Area: 419
Amount: 2.005715
Amount Units: ug/l



Manual Integration Results

RT: 8.56
Area: 915
Amount: 4.309305
Amount Units: ug/l



Reviewer: K4WN, 21-Mar-2023 15:58:26
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Calibration / Dichlorodifluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

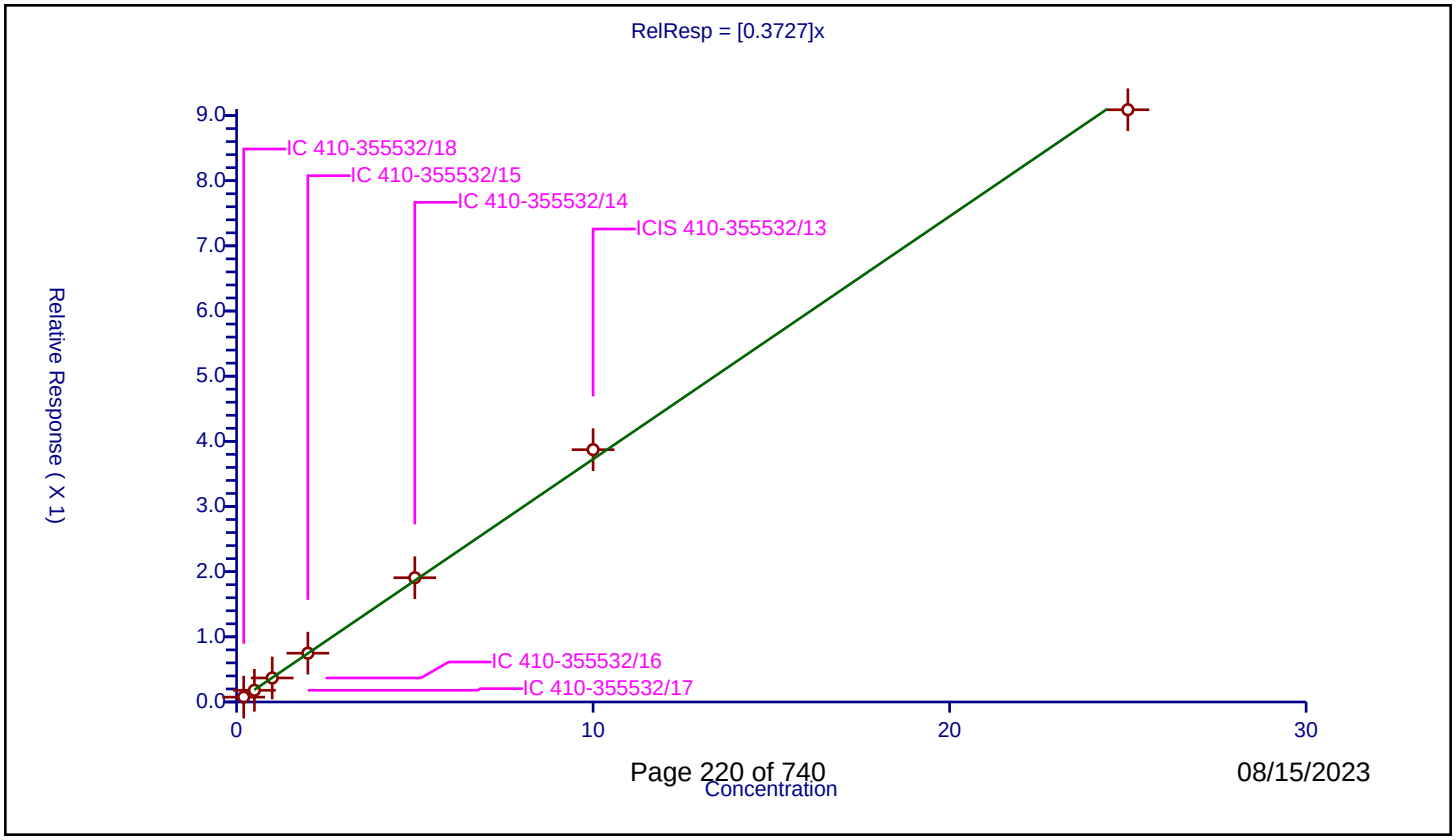
Curve Coefficients

Intercept:	0
Slope:	0.3727

Error Coefficients

Standard Error:	991000
Relative Standard Error:	2.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.074831	10.0	2286473.0	0.374157	Y
2	IC 410-355532/17	0.5	0.179477	10.0	2310552.0	0.358953	Y
3	IC 410-355532/16	1.0	0.36912	10.0	2343275.0	0.36912	Y
4	IC 410-355532/15	2.0	0.748502	10.0	2349279.0	0.374251	Y
5	IC 410-355532/14	5.0	1.906637	10.0	2387313.0	0.381327	Y
6	ICIS 410-355532/13	10.0	3.87203	10.0	2381761.0	0.387203	Y
7	IC 410-355532/12	25.0	9.088881	10.0	2408929.0	0.363555	Y



Calibration / Chloromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

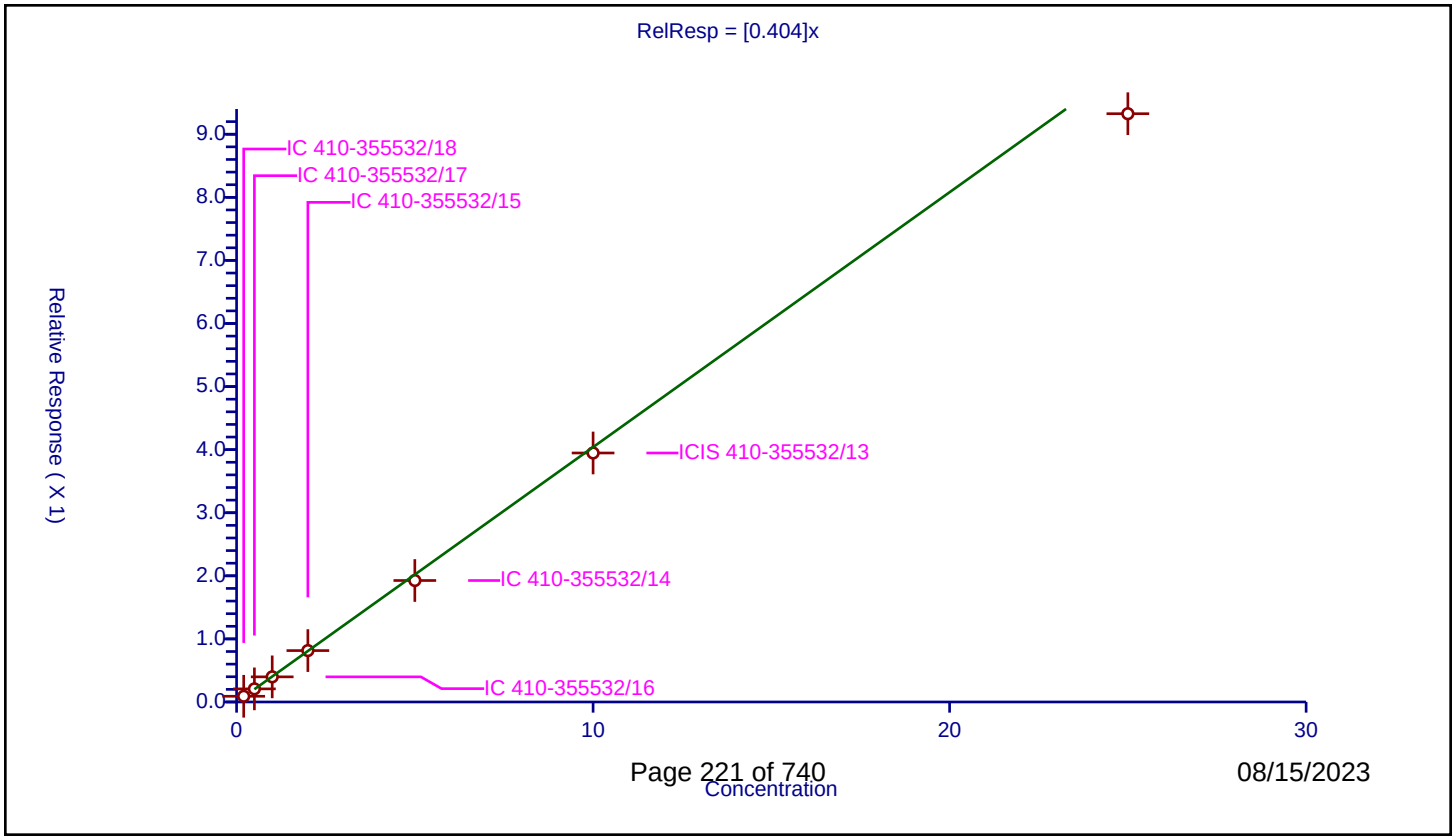
Curve Coefficients

Intercept:	0
Slope:	0.404

Error Coefficients

Standard Error:	1020000
Relative Standard Error:	6.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.090738	10.0	2286473.0	0.45369	Y
2	IC 410-355532/17	0.5	0.207911	10.0	2310552.0	0.415823	Y
3	IC 410-355532/16	1.0	0.398442	10.0	2343275.0	0.398442	Y
4	IC 410-355532/15	2.0	0.814705	10.0	2349279.0	0.407353	Y
5	IC 410-355532/14	5.0	1.925914	10.0	2387313.0	0.385183	Y
6	ICIS 410-355532/13	10.0	3.947294	10.0	2381761.0	0.394729	Y
7	IC 410-355532/12	25.0	9.325547	10.0	2408929.0	0.373022	Y



Calibration / Vinyl chloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

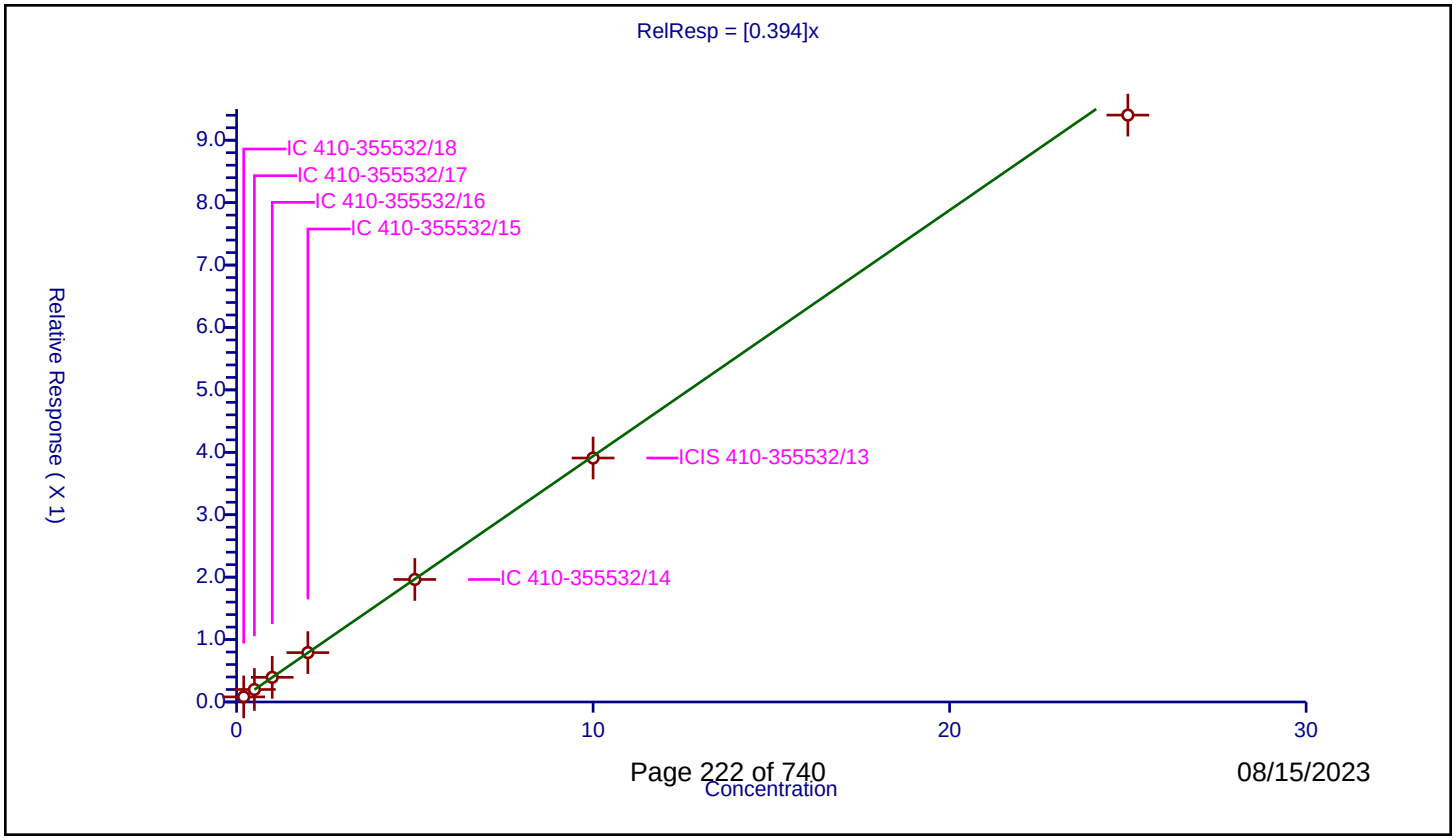
Curve Coefficients

Intercept:	0
Slope:	0.394

Error Coefficients

Standard Error:	1020000
Relative Standard Error:	2.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.081567	10.0	2286473.0	0.407833	Y
2	IC 410-355532/17	0.5	0.200013	10.0	2310552.0	0.400026	Y
3	IC 410-355532/16	1.0	0.394917	10.0	2343275.0	0.394917	Y
4	IC 410-355532/15	2.0	0.790924	10.0	2349279.0	0.395462	Y
5	IC 410-355532/14	5.0	1.962763	10.0	2387313.0	0.392553	Y
6	ICIS 410-355532/13	10.0	3.908465	10.0	2381761.0	0.390847	Y
7	IC 410-355532/12	25.0	9.402672	10.0	2408929.0	0.376107	Y



Calibration / Butadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

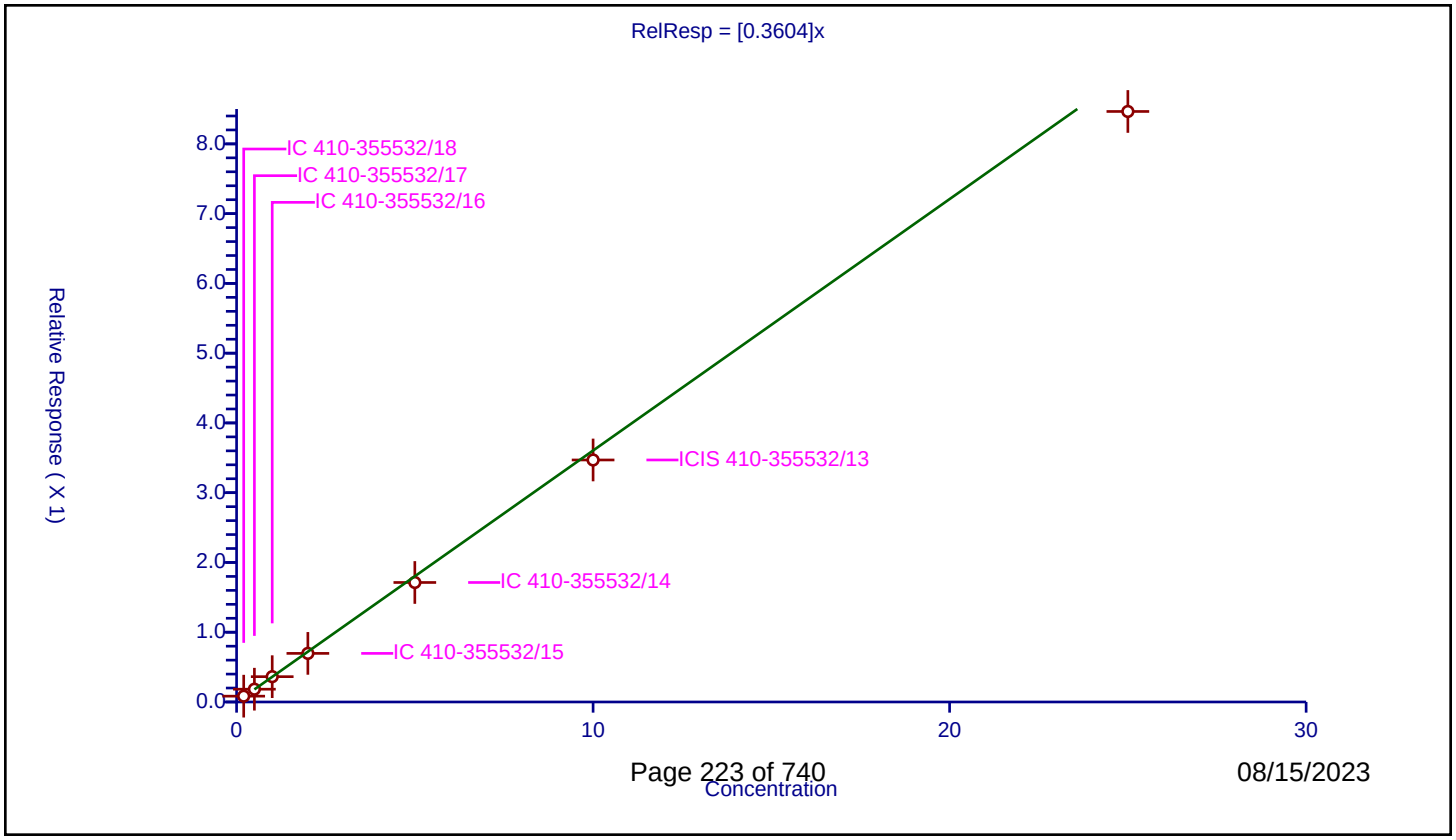
Curve Coefficients

Intercept:	0
Slope:	0.3604

Error Coefficients

Standard Error:	917000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.083351	10.0	2286473.0	0.416755	Y
2	IC 410-355532/17	0.5	0.183376	10.0	2310552.0	0.366752	Y
3	IC 410-355532/16	1.0	0.363077	10.0	2343275.0	0.363077	Y
4	IC 410-355532/15	2.0	0.696665	10.0	2349279.0	0.348332	Y
5	IC 410-355532/14	5.0	1.713131	10.0	2387313.0	0.342626	Y
6	ICIS 410-355532/13	10.0	3.469	10.0	2381761.0	0.3469	Y
7	IC 410-355532/12	25.0	8.464641	10.0	2408929.0	0.338586	Y



Calibration / Bromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

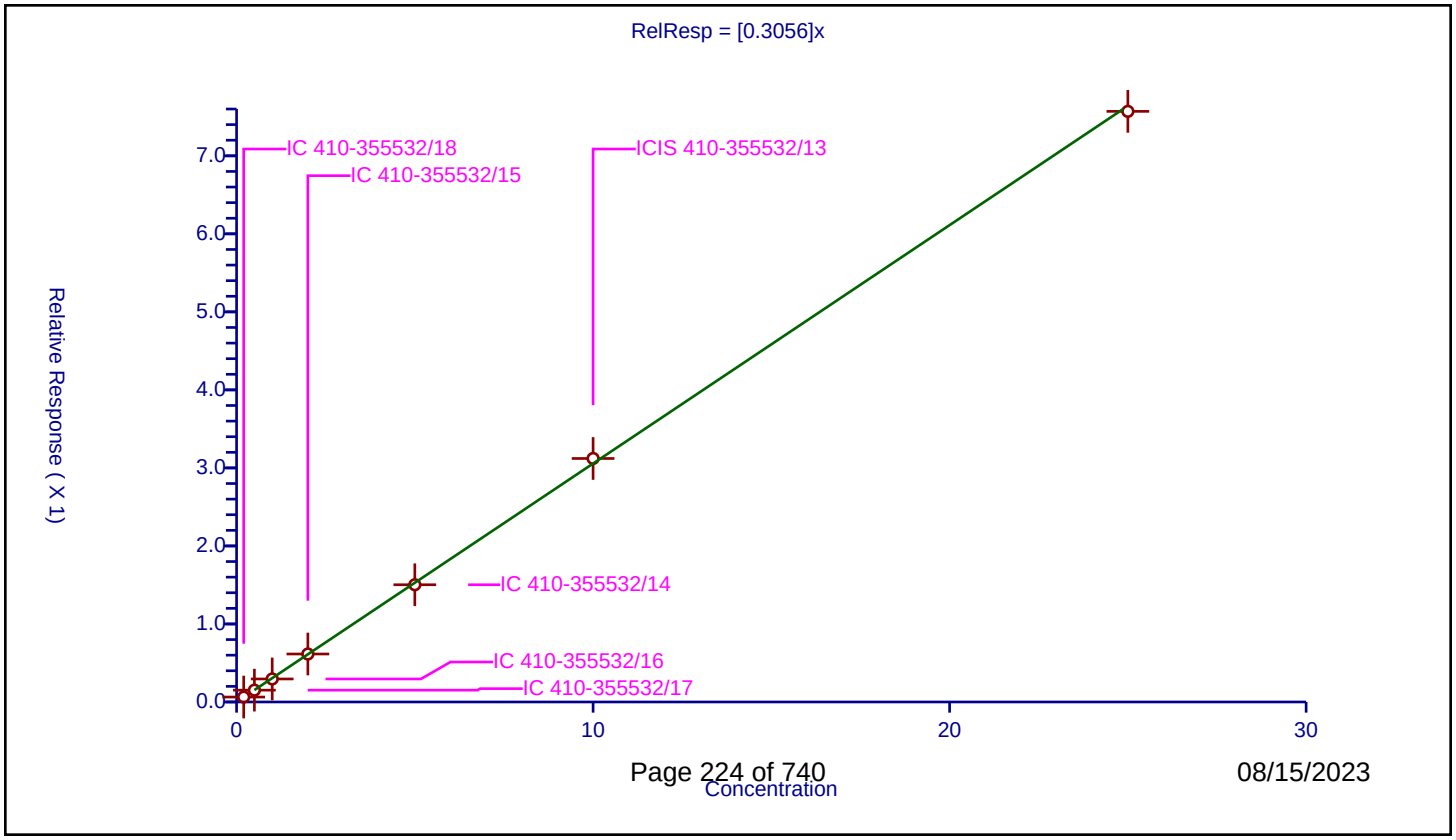
Curve Coefficients

Intercept:	0
Slope:	0.3056

Error Coefficients

Standard Error:	820000
Relative Standard Error:	2.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.063508	10.0	2286473.0	0.317541	Y
2	IC 410-355532/17	0.5	0.15173	10.0	2310552.0	0.30346	Y
3	IC 410-355532/16	1.0	0.295253	10.0	2343275.0	0.295253	Y
4	IC 410-355532/15	2.0	0.614895	10.0	2349279.0	0.307448	Y
5	IC 410-355532/14	5.0	1.502786	10.0	2387313.0	0.300557	Y
6	ICIS 410-355532/13	10.0	3.120993	10.0	2381761.0	0.312099	Y
7	IC 410-355532/12	25.0	7.569787	10.0	2408929.0	0.302791	Y



Calibration / Chloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

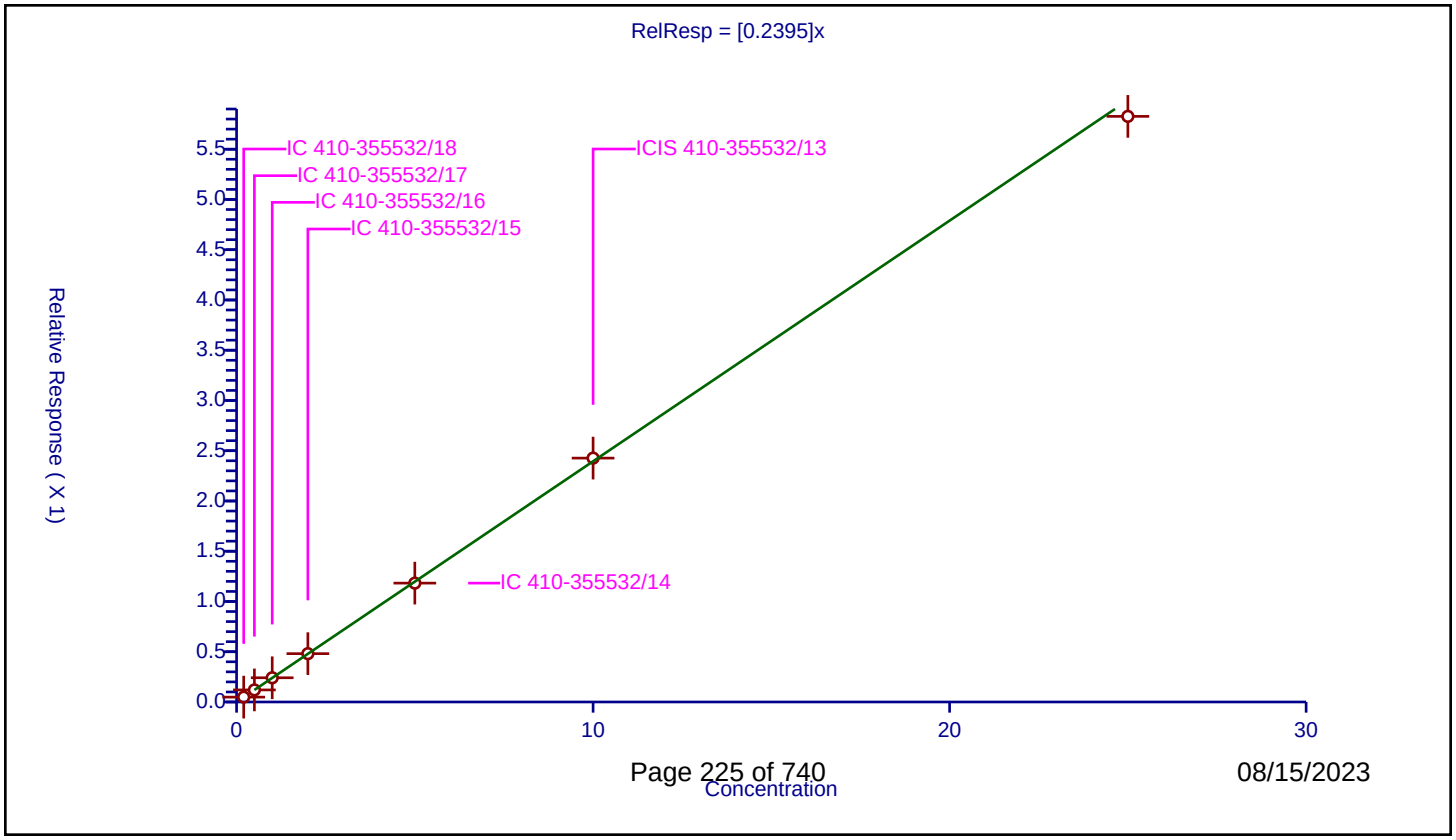
Curve Coefficients

Intercept:	0
Slope:	0.2395

Error Coefficients

Standard Error:	633000
Relative Standard Error:	1.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.048476	10.0	2286473.0	0.242382	Y
2	IC 410-355532/17	0.5	0.120036	10.0	2310552.0	0.240073	Y
3	IC 410-355532/16	1.0	0.241034	10.0	2343275.0	0.241034	Y
4	IC 410-355532/15	2.0	0.480884	10.0	2349279.0	0.240442	Y
5	IC 410-355532/14	5.0	1.182811	10.0	2387313.0	0.236562	Y
6	ICIS 410-355532/13	10.0	2.4267	10.0	2381761.0	0.24267	Y
7	IC 410-355532/12	25.0	5.826784	10.0	2408929.0	0.233071	Y



Calibration / Dichlorofluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

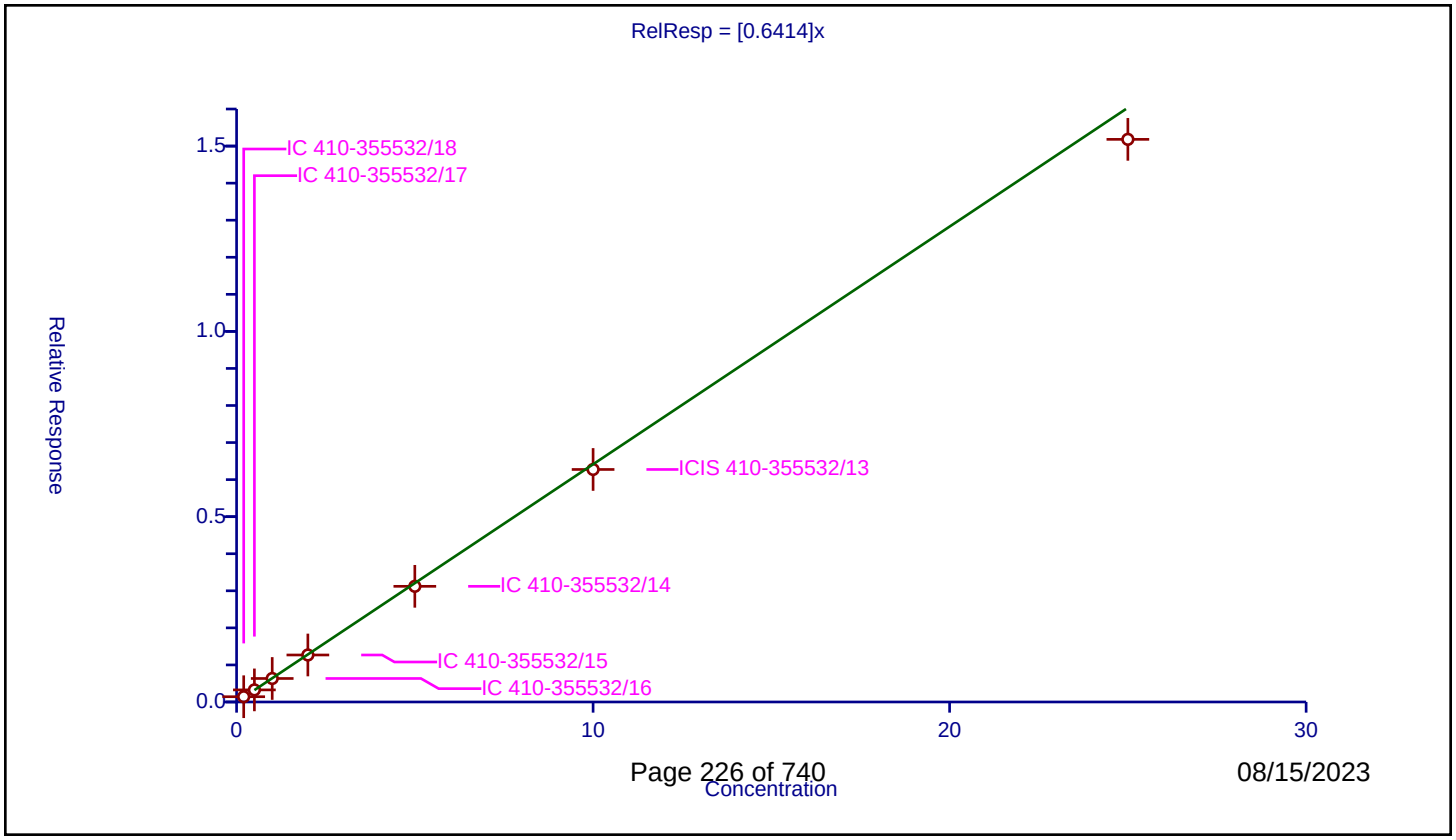
Curve Coefficients

Intercept:	0
Slope:	0.6414

Error Coefficients

Standard Error:	1650000
Relative Standard Error:	5.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.141913	10.0	2286473.0	0.709564	Y
2	IC 410-355532/17	0.5	0.326532	10.0	2310552.0	0.653065	Y
3	IC 410-355532/16	1.0	0.634147	10.0	2343275.0	0.634147	Y
4	IC 410-355532/15	2.0	1.267968	10.0	2349279.0	0.633984	Y
5	IC 410-355532/14	5.0	3.12068	10.0	2387313.0	0.624136	Y
6	ICIS 410-355532/13	10.0	6.274043	10.0	2381761.0	0.627404	Y
7	IC 410-355532/12	25.0	15.18144	10.0	2408929.0	0.607258	Y



Calibration / Trichlorofluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

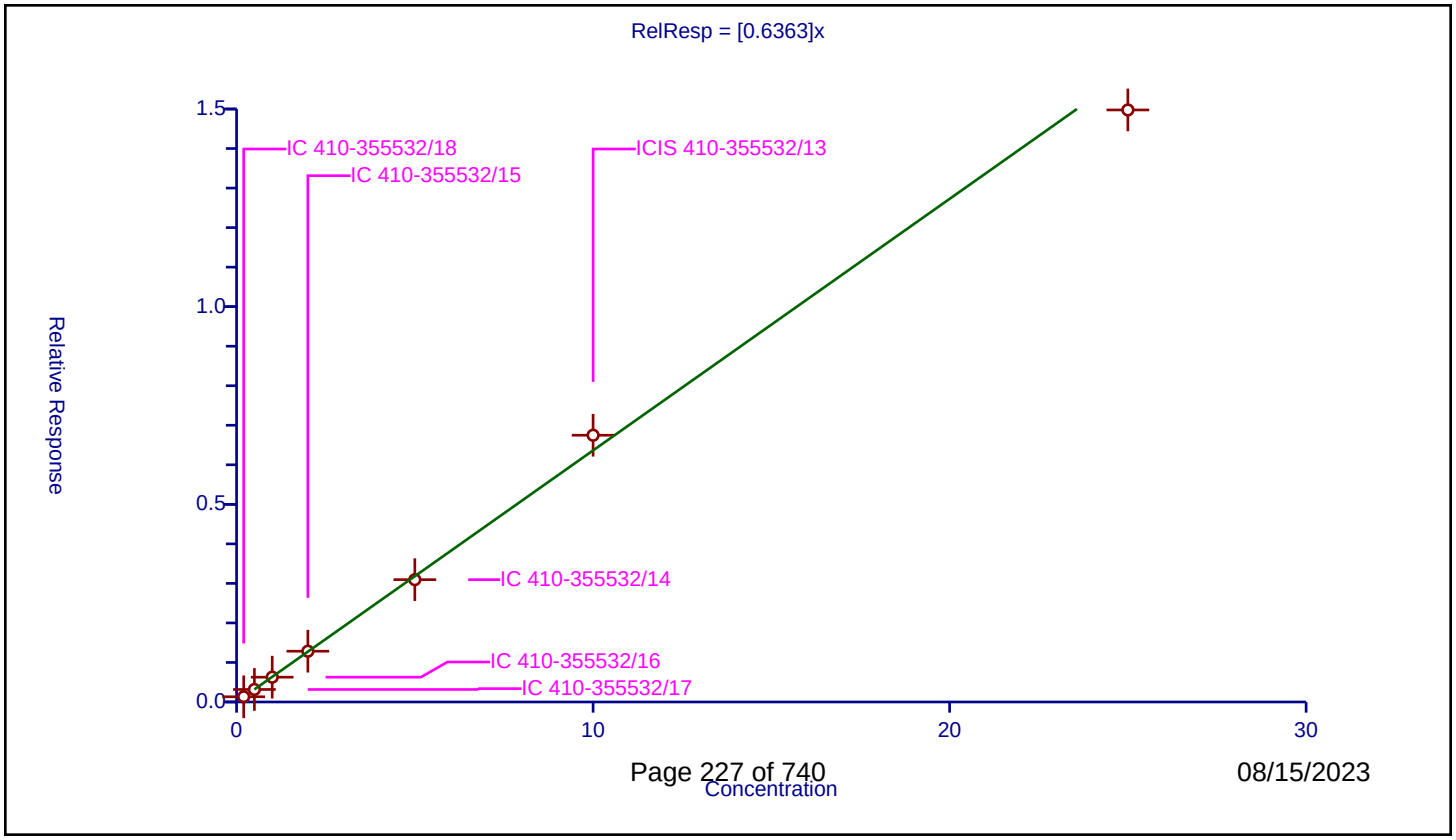
Curve Coefficients

Intercept:	0
Slope:	0.6363

Error Coefficients

Standard Error:	1650000
Relative Standard Error:	3.9
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.131622	10.0	2286473.0	0.65811	Y
2	IC 410-355532/17	0.5	0.316842	10.0	2310552.0	0.633684	Y
3	IC 410-355532/16	1.0	0.627511	10.0	2343275.0	0.627511	Y
4	IC 410-355532/15	2.0	1.284581	10.0	2349279.0	0.642291	Y
5	IC 410-355532/14	5.0	3.094232	10.0	2387313.0	0.618846	Y
6	ICIS 410-355532/13	10.0	6.748209	10.0	2381761.0	0.674821	Y
7	IC 410-355532/12	25.0	14.976672	10.0	2408929.0	0.599067	Y



Calibration / Ethyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

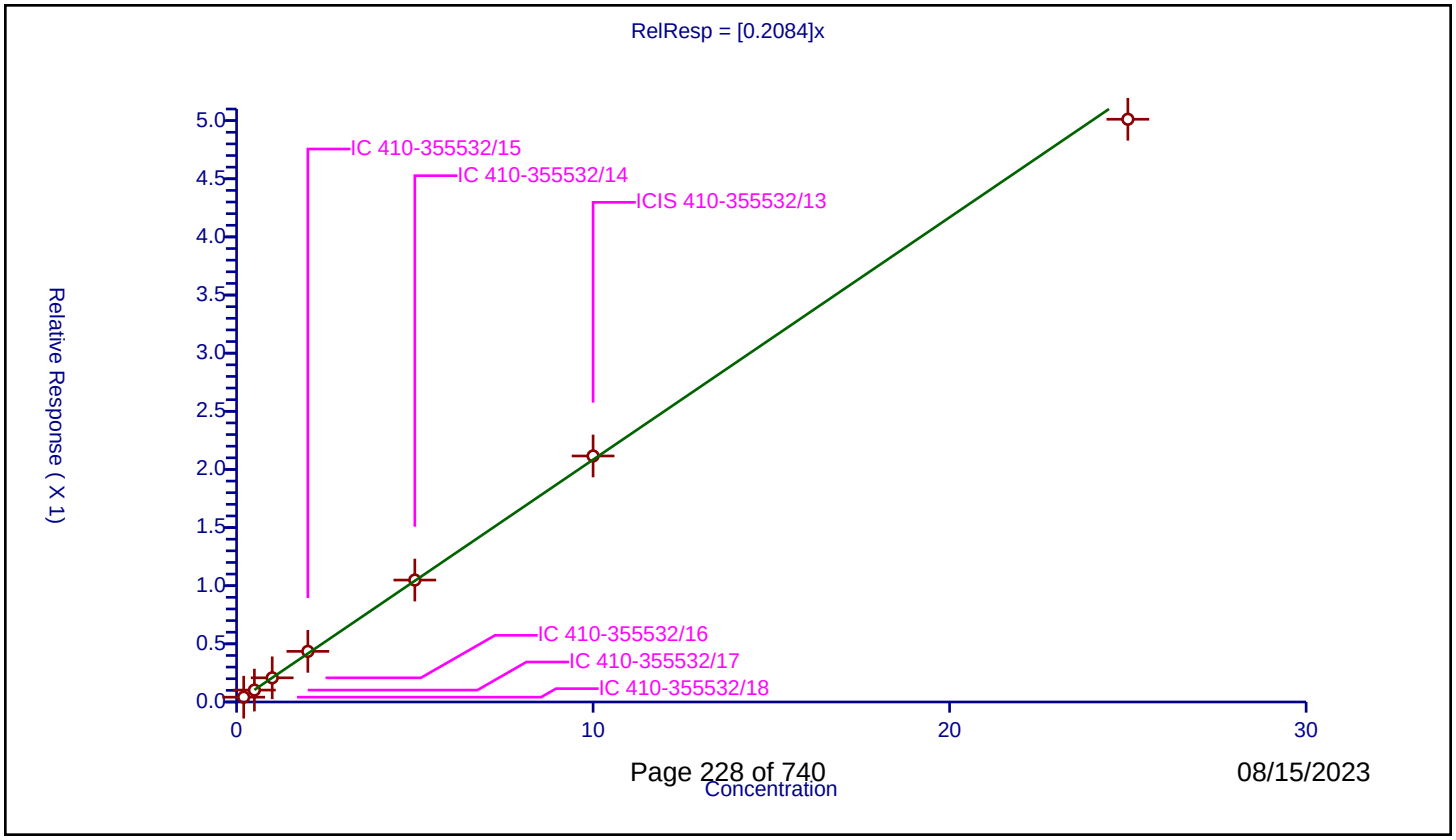
Curve Coefficients

Intercept:	0
Slope:	0.2084

Error Coefficients

Standard Error:	546000
Relative Standard Error:	2.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.199998	0.041339	10.0	2286473.0	0.206695	Y
2	IC 410-355532/17	0.499996	0.10243	10.0	2310552.0	0.204862	Y
3	IC 410-355532/16	0.999992	0.207799	10.0	2343275.0	0.2078	Y
4	IC 410-355532/15	1.999985	0.435436	10.0	2349279.0	0.21772	Y
5	IC 410-355532/14	4.999962	1.048807	10.0	2387313.0	0.209763	Y
6	ICIS 410-355532/13	9.999924	2.115897	10.0	2381761.0	0.211591	Y
7	IC 410-355532/12	24.99981	5.011999	10.0	2408929.0	0.200481	Y



Calibration / 1,2-Dichloro-1,1,2-trifluoroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

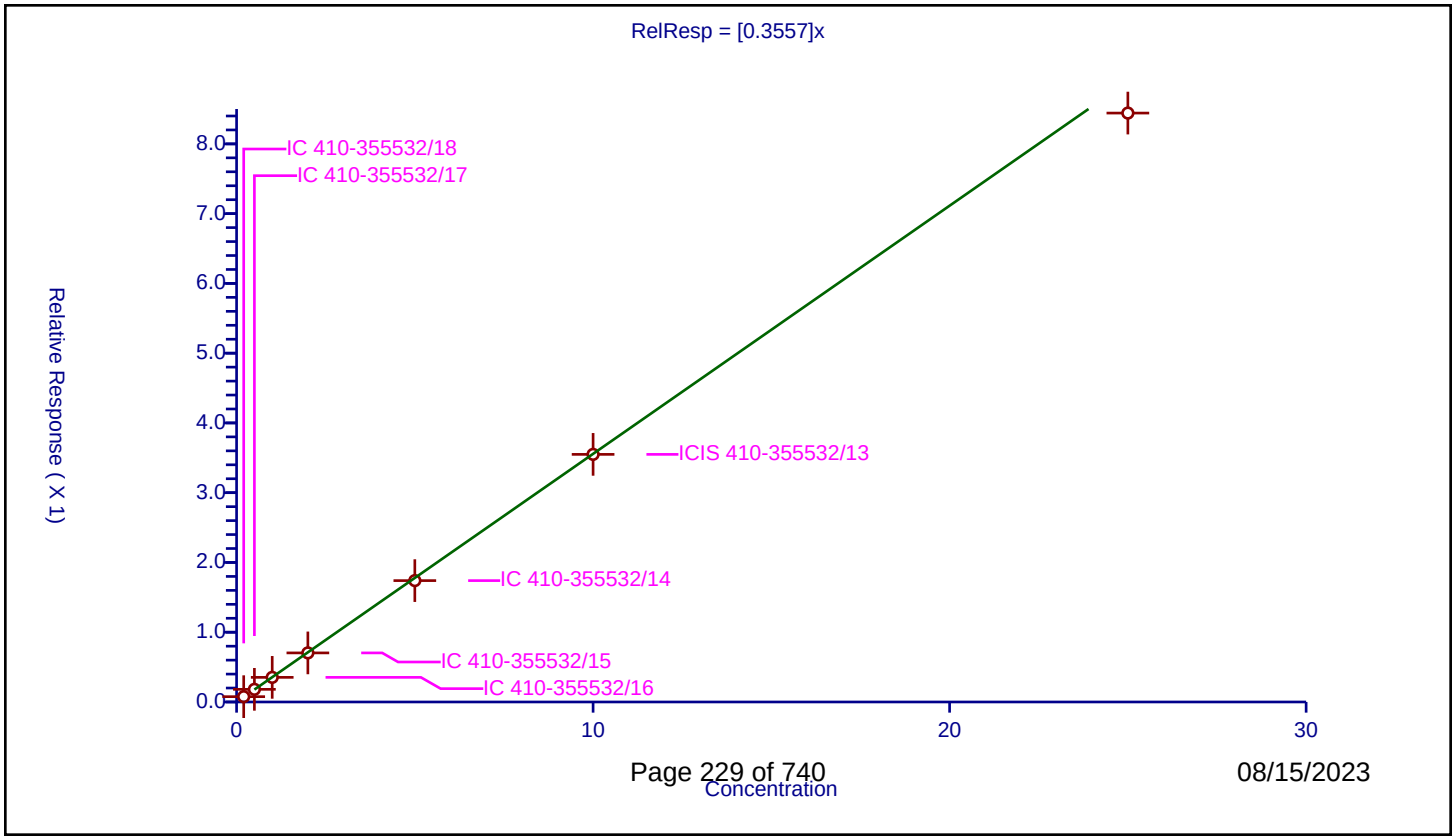
Curve Coefficients

Intercept:	0
Slope:	0.3557

Error Coefficients

Standard Error:	918000
Relative Standard Error:	3.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.076428	10.0	2286473.0	0.382139	Y
2	IC 410-355532/17	0.5	0.181199	10.0	2310552.0	0.362398	Y
3	IC 410-355532/16	1.0	0.352938	10.0	2343275.0	0.352938	Y
4	IC 410-355532/15	2.0	0.703556	10.0	2349279.0	0.351778	Y
5	IC 410-355532/14	5.0	1.73996	10.0	2387313.0	0.347992	Y
6	ICIS 410-355532/13	10.0	3.549395	10.0	2381761.0	0.354939	Y
7	IC 410-355532/12	25.0	8.441872	10.0	2408929.0	0.337675	Y



Calibration / Acrolein

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

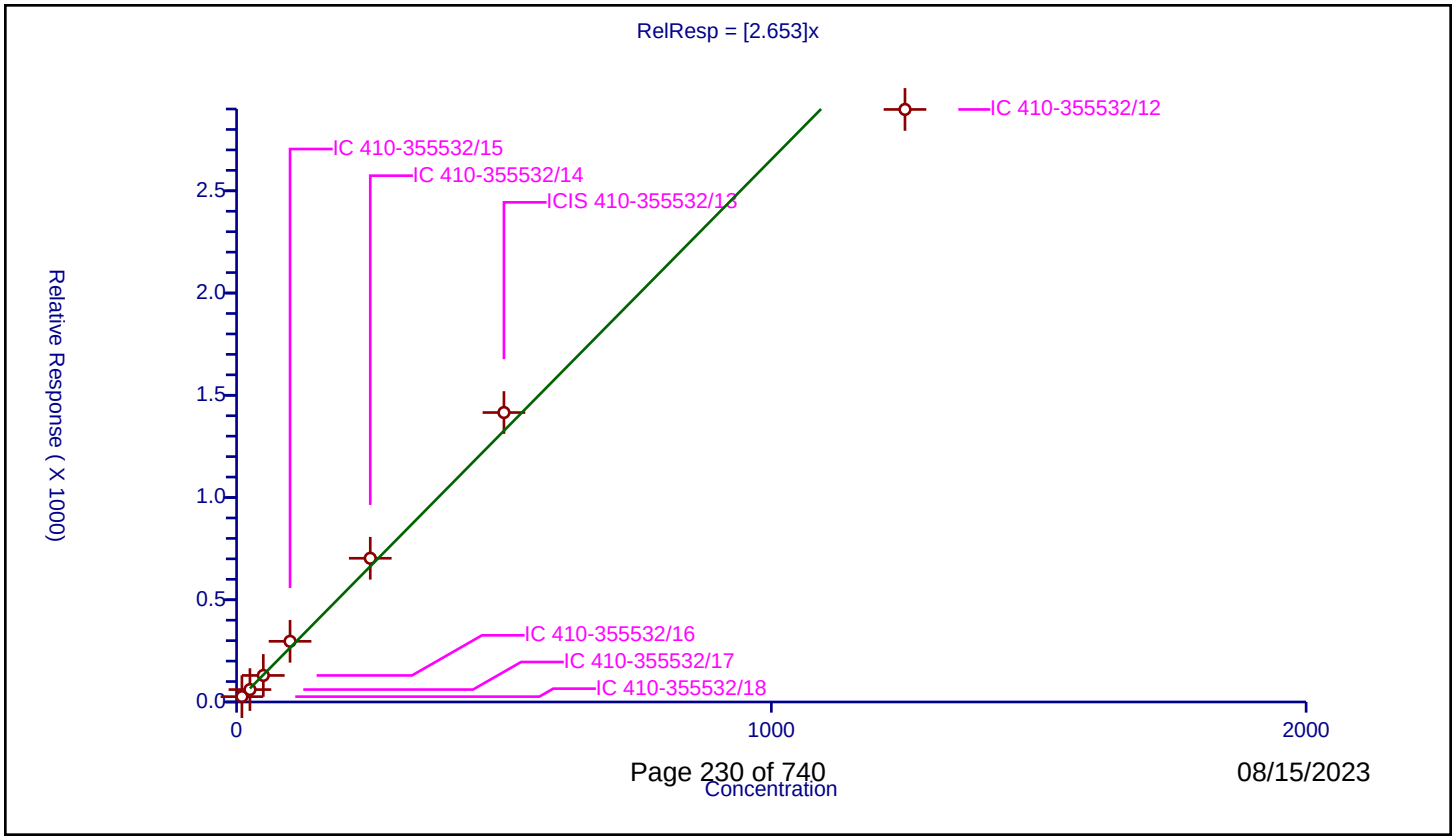
Curve Coefficients

Intercept:	0
Slope:	2.653

Error Coefficients

Standard Error:	3700000
Relative Standard Error:	8.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	9.999352	26.18253	50.0	126445.0	2.618423	Y
2	IC 410-355532/17	24.998379	60.695671	50.0	153492.0	2.427984	Y
3	IC 410-355532/16	49.996759	129.785908	50.0	134008.0	2.595886	Y
4	IC 410-355532/15	99.993517	296.792495	50.0	97646.0	2.968117	Y
5	IC 410-355532/14	249.983793	702.885698	50.0	125221.0	2.811725	Y
6	ICIS 410-355532/13	499.967587	1415.619316	50.0	120956.0	2.831422	Y
7	IC 410-355532/12	1249.918967	2897.927044	50.0	141127.0	2.318492	Y



Calibration / 1,1-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

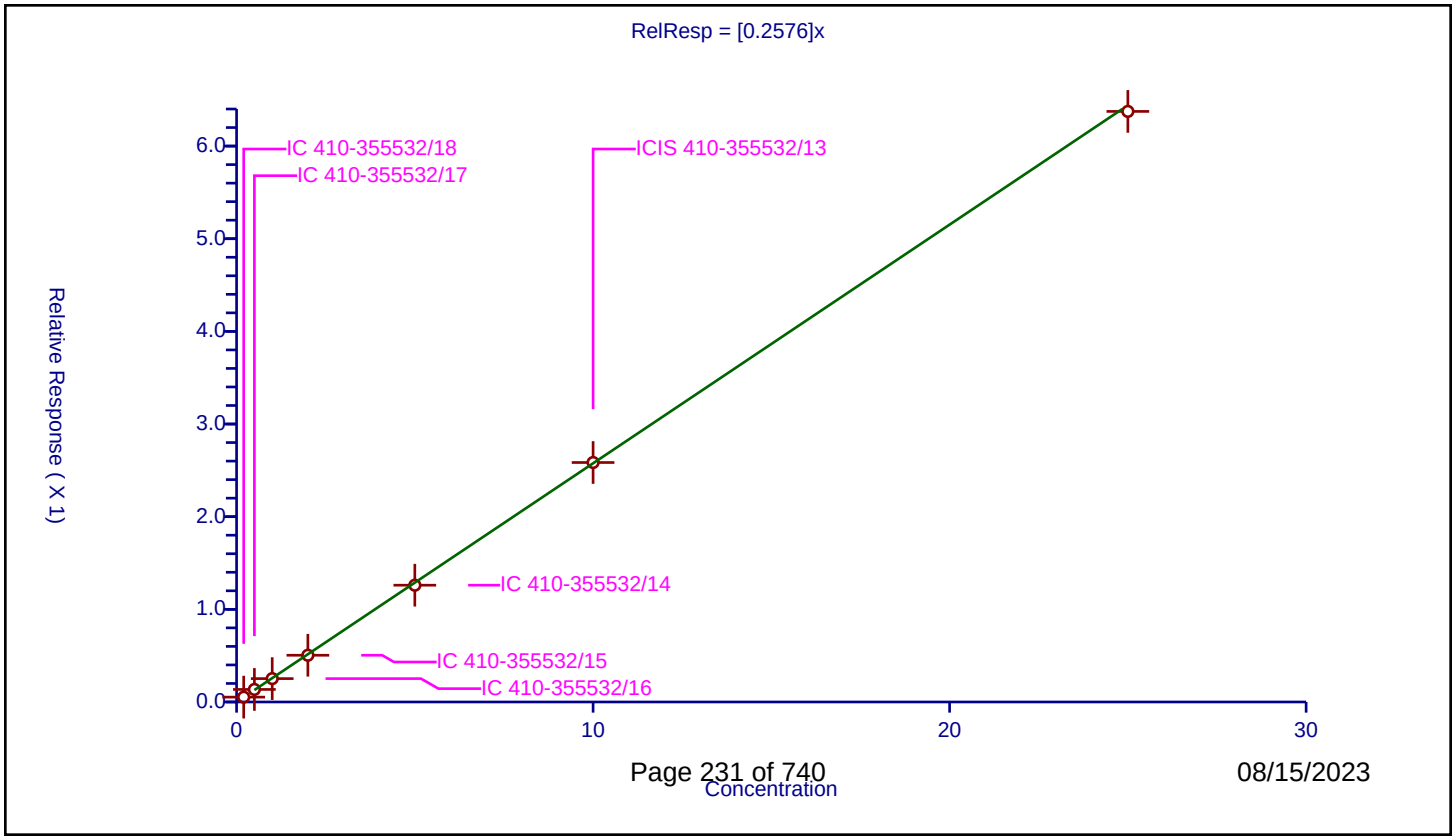
Curve Coefficients

Intercept:	0
Slope:	0.2576

Error Coefficients

Standard Error:	689000
Relative Standard Error:	2.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.052443	10.0	2286473.0	0.262216	Y
2	IC 410-355532/17	0.5	0.1355	10.0	2310552.0	0.271	Y
3	IC 410-355532/16	1.0	0.252232	10.0	2343275.0	0.252232	Y
4	IC 410-355532/15	2.0	0.504495	10.0	2349279.0	0.252248	Y
5	IC 410-355532/14	5.0	1.260543	10.0	2387313.0	0.252109	Y
6	ICIS 410-355532/13	10.0	2.584642	10.0	2381761.0	0.258464	Y
7	IC 410-355532/12	25.0	6.374131	10.0	2408929.0	0.254965	Y



Calibration / Acetone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

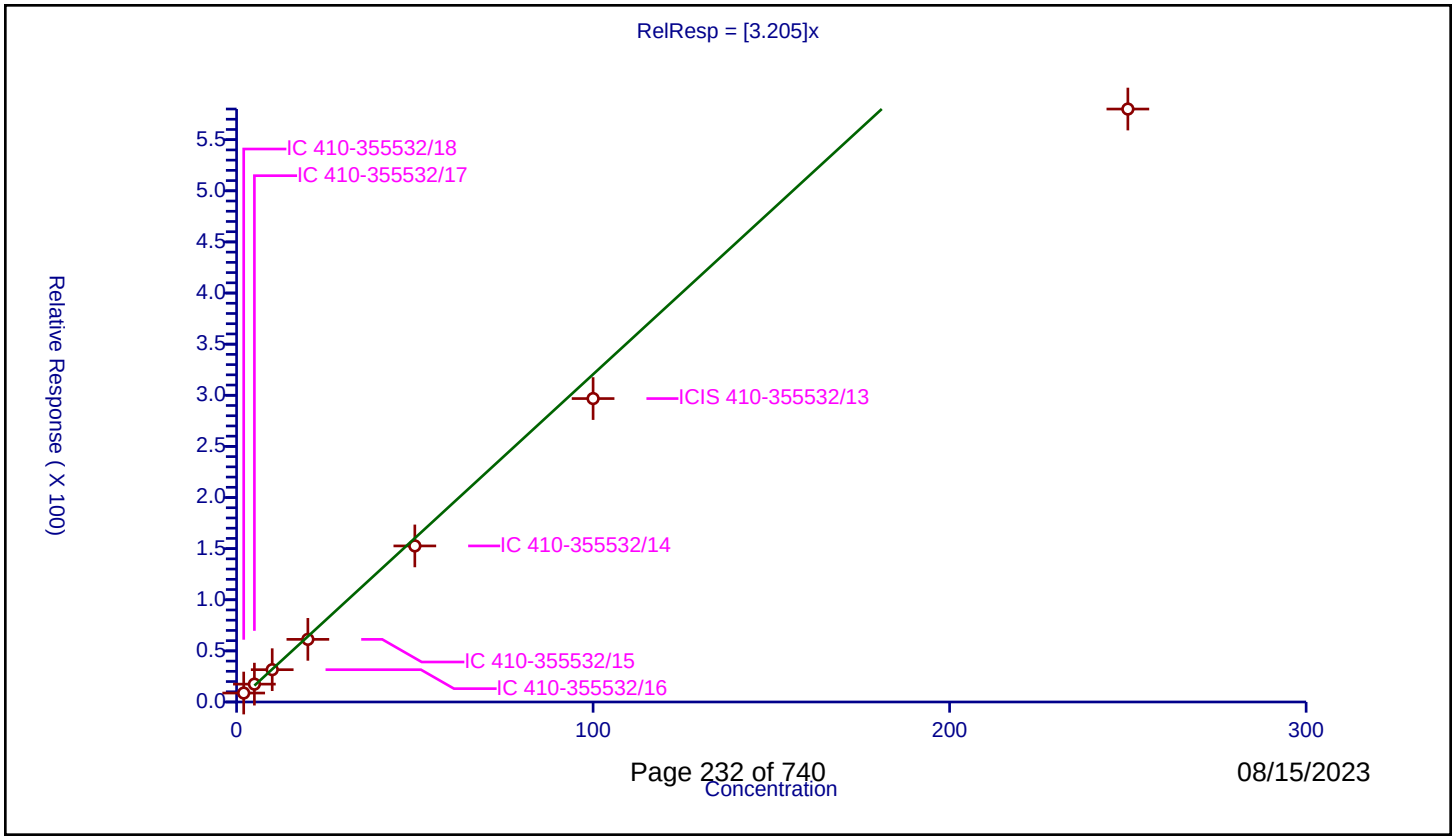
Curve Coefficients

Intercept:	0
Slope:	3.205

Error Coefficients

Standard Error:	749000
Relative Standard Error:	19.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.933

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	2.0	8.759935	50.0	126445.0	4.379968	Y
2	IC 410-355532/17	5.0	17.455959	50.0	153492.0	3.491192	Y
3	IC 410-355532/16	10.0	31.58692	50.0	134008.0	3.158692	Y
4	IC 410-355532/15	20.0	61.262622	50.0	97646.0	3.063131	Y
5	IC 410-355532/14	50.0	152.660896	50.0	125221.0	3.053218	Y
6	ICIS 410-355532/13	100.0	296.784781	50.0	120956.0	2.967848	Y
7	IC 410-355532/12	250.0	579.97194	50.0	141127.0	2.319888	Y



Calibration / 1,1,2-Trichloro-1,2,2-trifluoroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

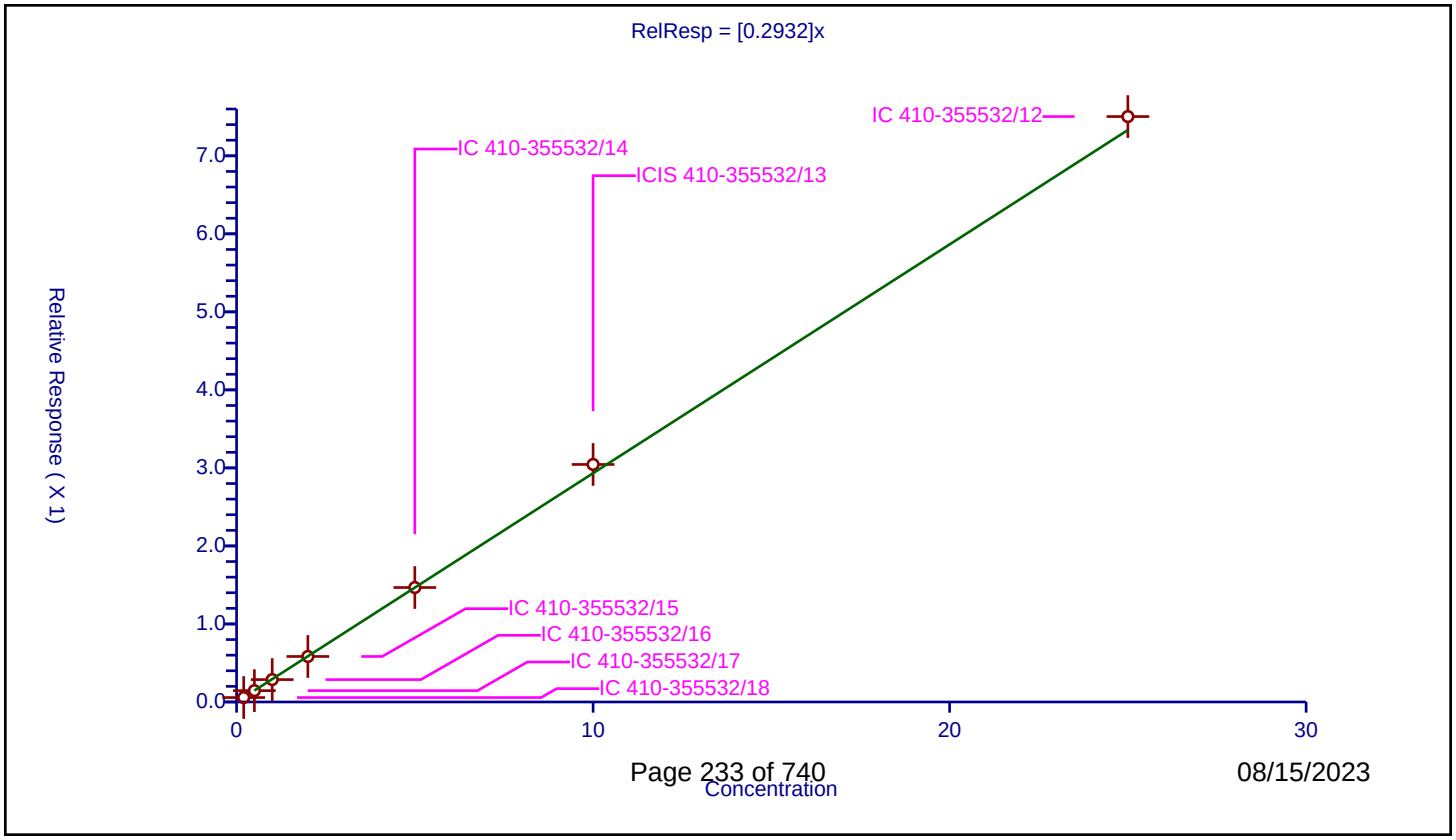
Curve Coefficients

Intercept:	0
Slope:	0.2932

Error Coefficients

Standard Error:	810000
Relative Standard Error:	2.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.057014	10.0	2286473.0	0.285068	Y
2	IC 410-355532/17	0.5	0.145407	10.0	2310552.0	0.290814	Y
3	IC 410-355532/16	1.0	0.287047	10.0	2343275.0	0.287047	Y
4	IC 410-355532/15	2.0	0.583324	10.0	2349279.0	0.291662	Y
5	IC 410-355532/14	5.0	1.466955	10.0	2387313.0	0.293391	Y
6	ICIS 410-355532/13	10.0	3.044428	10.0	2381761.0	0.304443	Y
7	IC 410-355532/12	25.0	7.50333	10.0	2408929.0	0.300133	Y



Calibration / Iodomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

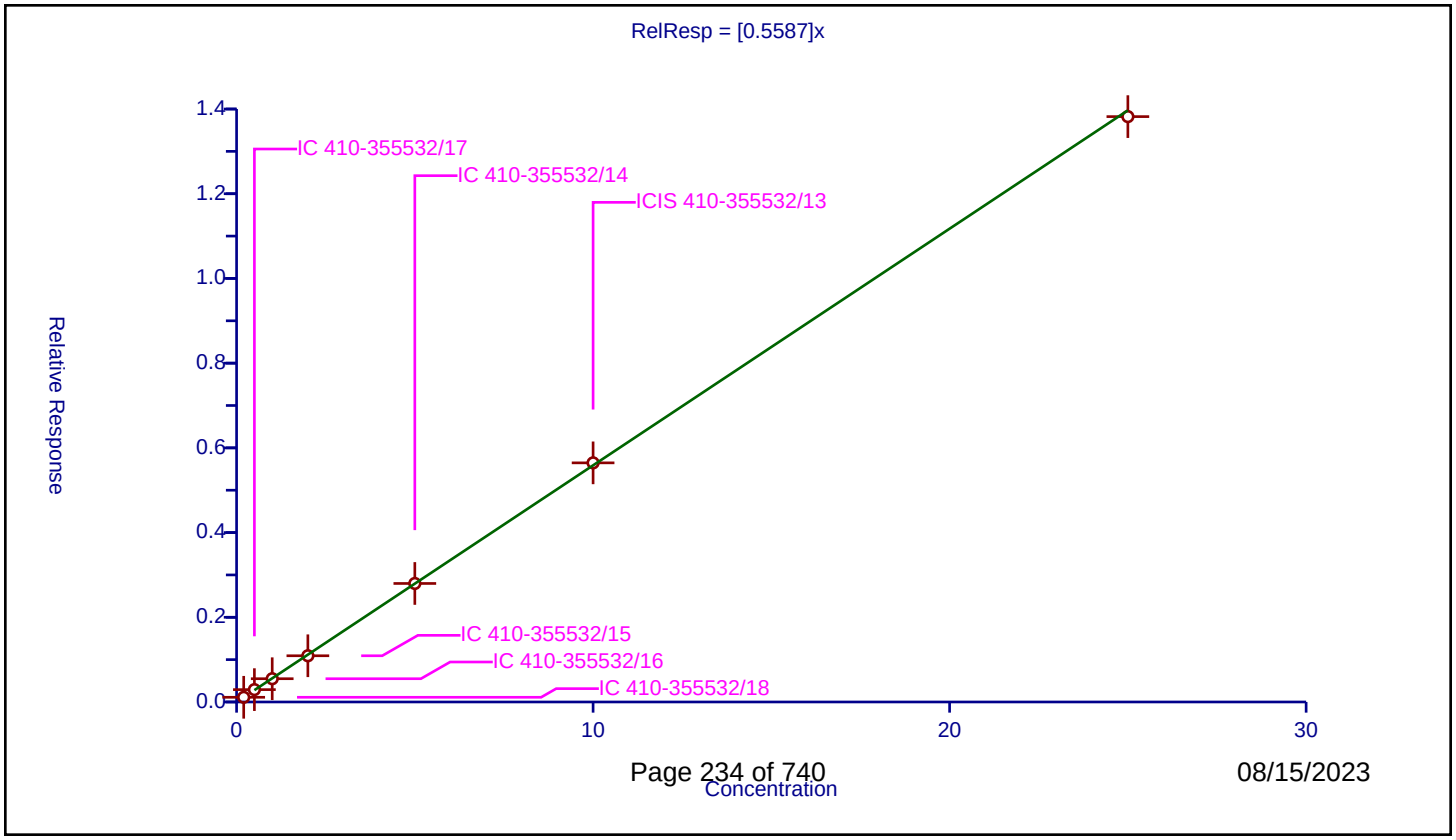
Curve Coefficients

Intercept:	0
Slope:	0.5587

Error Coefficients

Standard Error:	1500000
Relative Standard Error:	2.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.110992	10.0	2286473.0	0.55496	Y
2	IC 410-355532/17	0.5	0.292043	10.0	2310552.0	0.584086	Y
3	IC 410-355532/16	1.0	0.54912	10.0	2343275.0	0.54912	Y
4	IC 410-355532/15	2.0	1.091373	10.0	2349279.0	0.545687	Y
5	IC 410-355532/14	5.0	2.798489	10.0	2387313.0	0.559698	Y
6	ICIS 410-355532/13	10.0	5.645869	10.0	2381761.0	0.564587	Y
7	IC 410-355532/12	25.0	13.820839	10.0	2408929.0	0.552834	Y



Calibration / Ethyl bromide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

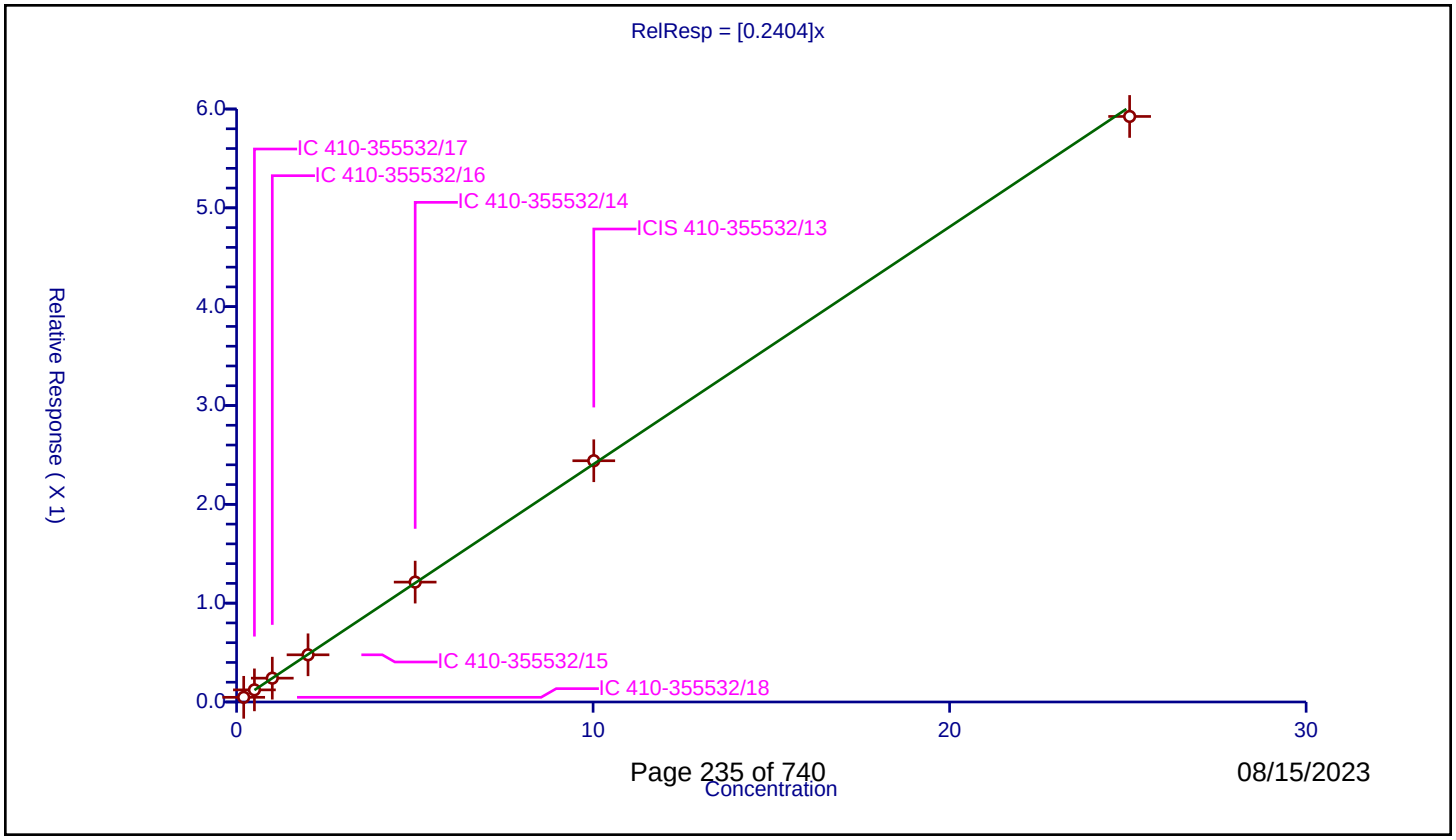
Curve Coefficients

Intercept:	0
Slope:	0.2404

Error Coefficients

Standard Error:	642000
Relative Standard Error:	1.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.200397	0.04747	10.0	2286473.0	0.236882	Y
2	IC 410-355532/17	0.500992	0.122633	10.0	2310552.0	0.24478	Y
3	IC 410-355532/16	1.001984	0.241124	10.0	2343275.0	0.240647	Y
4	IC 410-355532/15	2.003968	0.477381	10.0	2349279.0	0.238218	Y
5	IC 410-355532/14	5.00992	1.212966	10.0	2387313.0	0.242113	Y
6	ICIS 410-355532/13	10.01984	2.440992	10.0	2381761.0	0.243616	Y
7	IC 410-355532/12	25.0496	5.924654	10.0	2408929.0	0.236517	Y



Calibration / Carbon disulfide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

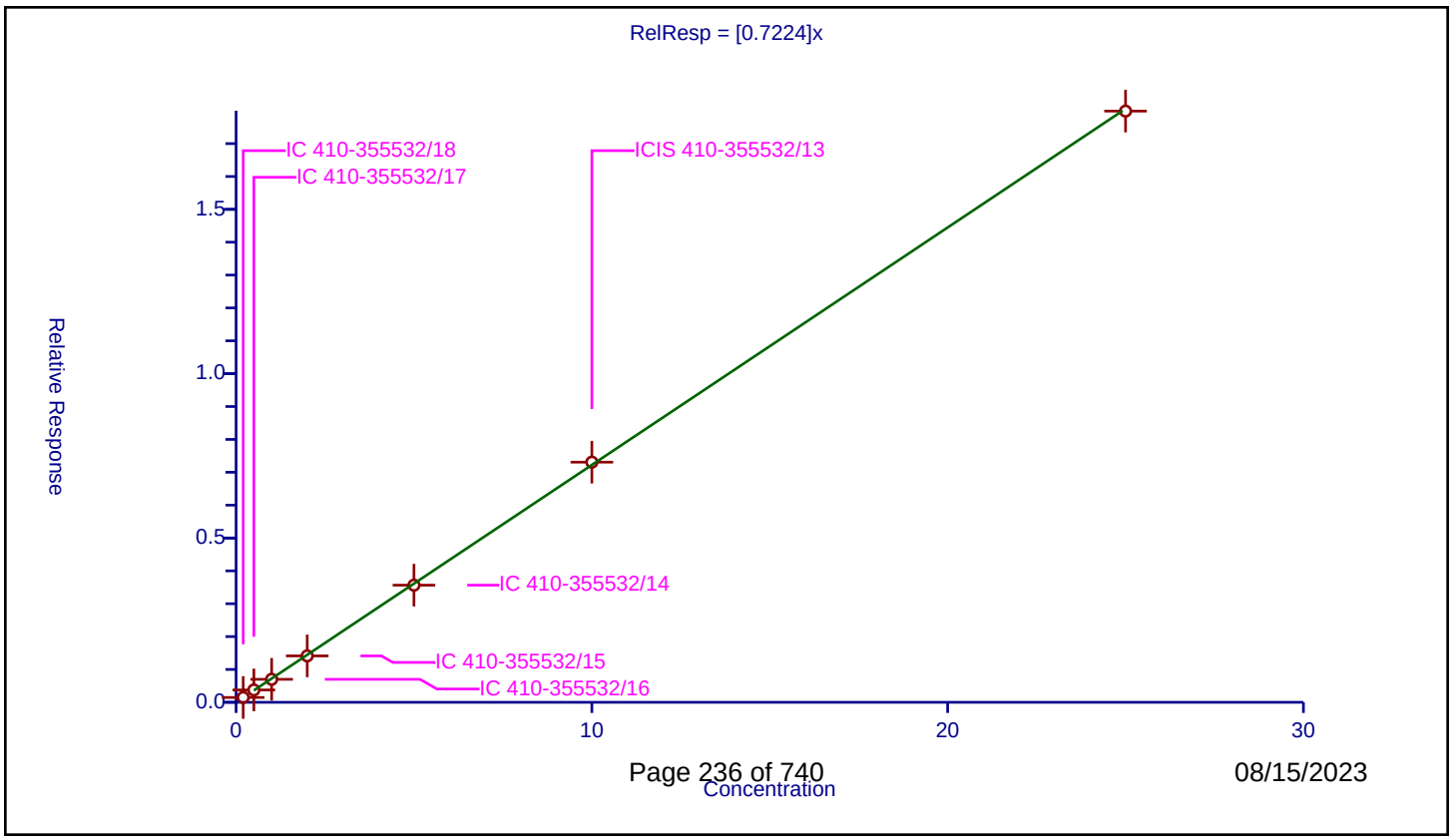
Curve Coefficients

Intercept:	0
Slope:	0.7224

Error Coefficients

Standard Error:	1940000
Relative Standard Error:	2.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.147157	10.0	2286473.0	0.735784	Y
2	IC 410-355532/17	0.5	0.375612	10.0	2310552.0	0.751223	Y
3	IC 410-355532/16	1.0	0.699956	10.0	2343275.0	0.699956	Y
4	IC 410-355532/15	2.0	1.412429	10.0	2349279.0	0.706215	Y
5	IC 410-355532/14	5.0	3.564887	10.0	2387313.0	0.712977	Y
6	ICIS 410-355532/13	10.0	7.307274	10.0	2381761.0	0.730727	Y
7	IC 410-355532/12	25.0	17.989235	10.0	2408929.0	0.719569	Y



Calibration / Methyl acetate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

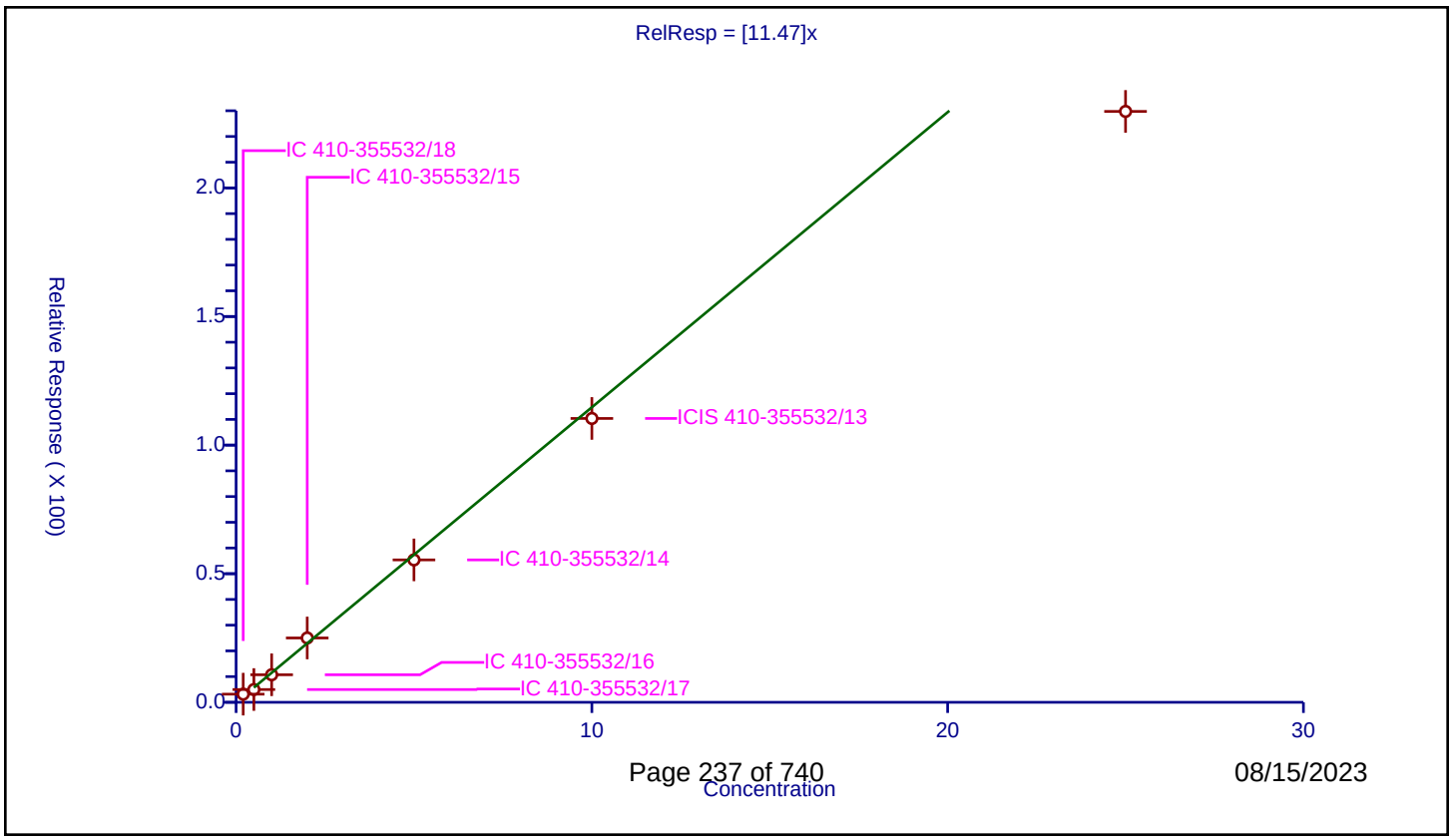
Curve Coefficients

Intercept:	0
Slope:	11.47

Error Coefficients

Standard Error:	293000
Relative Standard Error:	19.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.940

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	3.170153	50.0	126445.0	15.850765	Y
2	IC 410-355532/17	0.5	4.964754	50.0	153492.0	9.929508	Y
3	IC 410-355532/16	1.0	10.713166	50.0	134008.0	10.713166	Y
4	IC 410-355532/15	2.0	25.013313	50.0	97646.0	12.506657	Y
5	IC 410-355532/14	5.0	55.376894	50.0	125221.0	11.075379	Y
6	ICIS 410-355532/13	10.0	110.36906	50.0	120956.0	11.036906	Y
7	IC 410-355532/12	25.0	229.743068	50.0	141127.0	9.189723	Y



Calibration / 3-Chloro-1-propene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

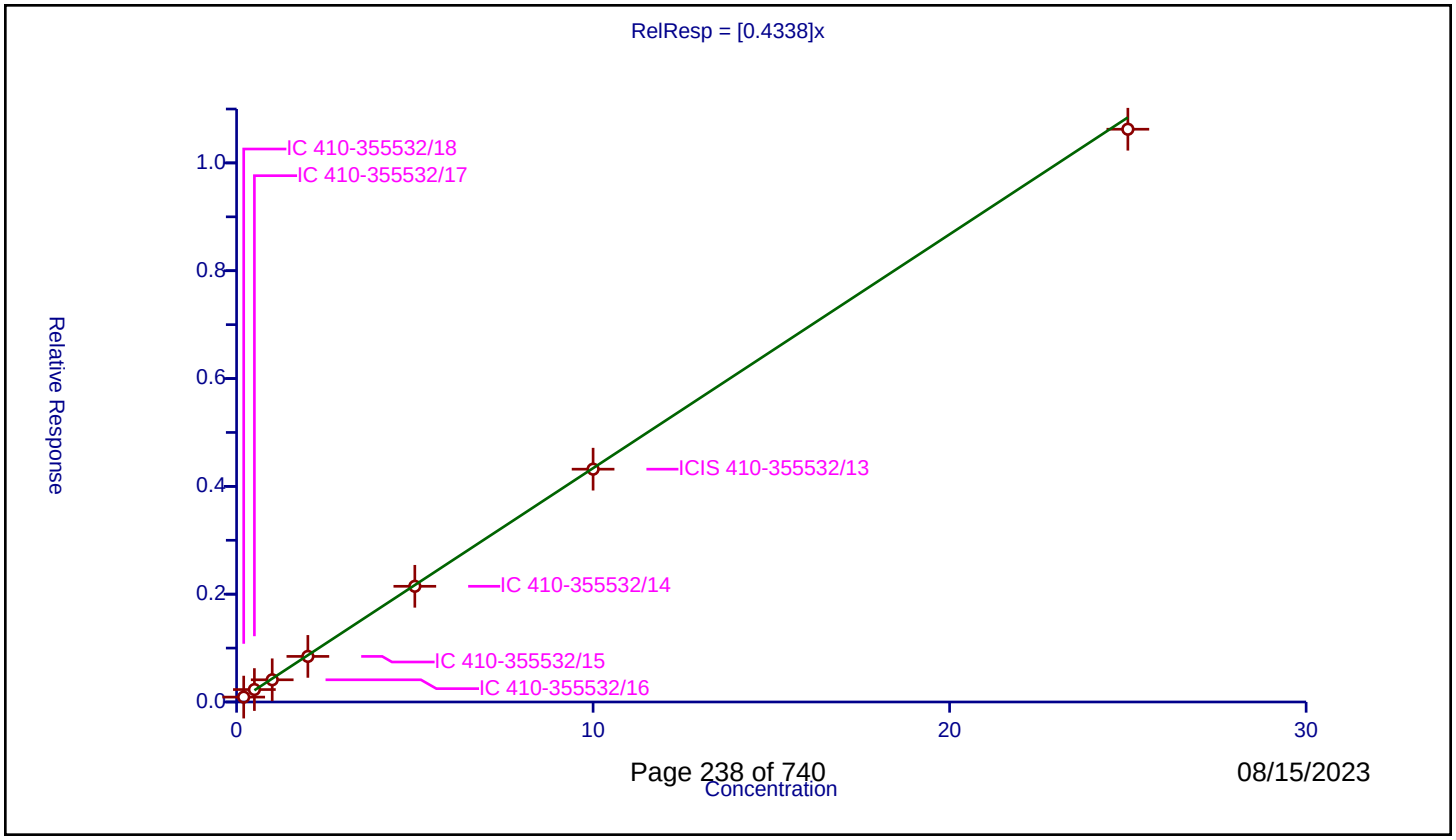
Curve Coefficients

Intercept:	0
Slope:	0.4338

Error Coefficients

Standard Error:	1150000
Relative Standard Error:	4.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.090817	10.0	2286473.0	0.454084	Y
2	IC 410-355532/17	0.5	0.23085	10.0	2310552.0	0.461699	Y
3	IC 410-355532/16	1.0	0.411723	10.0	2343275.0	0.411723	Y
4	IC 410-355532/15	2.0	0.845455	10.0	2349279.0	0.422728	Y
5	IC 410-355532/14	5.0	2.146271	10.0	2387313.0	0.429254	Y
6	ICIS 410-355532/13	10.0	4.319056	10.0	2381761.0	0.431906	Y
7	IC 410-355532/12	25.0	10.625182	10.0	2408929.0	0.425007	Y



Calibration / Methylene Chloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

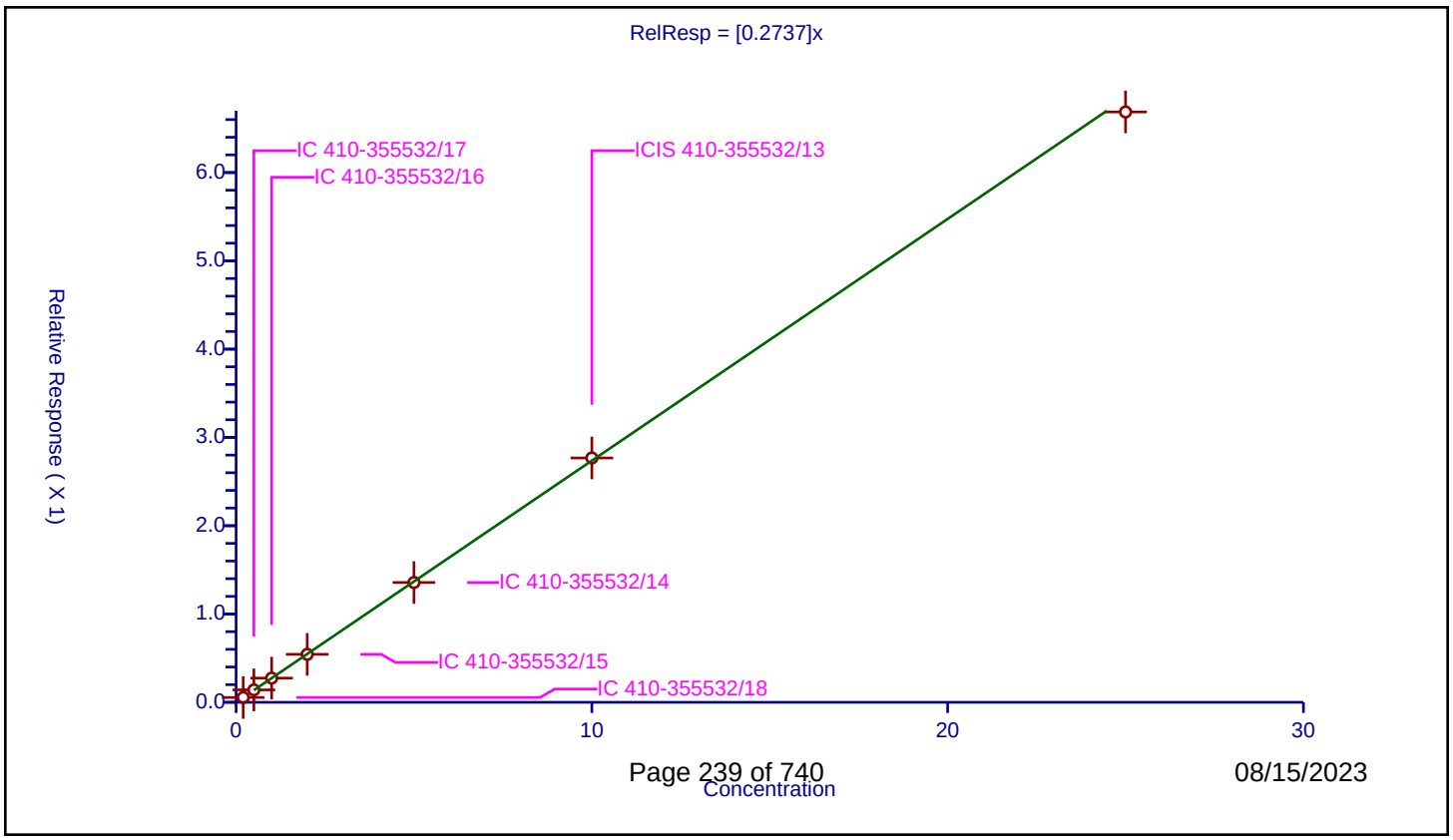
Curve Coefficients

Intercept:	0
Slope:	0.2737

Error Coefficients

Standard Error:	725000
Relative Standard Error:	1.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.054639	10.0	2286473.0	0.273194	Y
2	IC 410-355532/17	0.5	0.140737	10.0	2310552.0	0.281474	Y
3	IC 410-355532/16	1.0	0.274176	10.0	2343275.0	0.274176	Y
4	IC 410-355532/15	2.0	0.543367	10.0	2349279.0	0.271683	Y
5	IC 410-355532/14	5.0	1.356856	10.0	2387313.0	0.271371	Y
6	ICIS 410-355532/13	10.0	2.767284	10.0	2381761.0	0.276728	Y
7	IC 410-355532/12	25.0	6.686544	10.0	2408929.0	0.267462	Y



08/15/2023

Calibration / 2-Methyl-2-propanol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

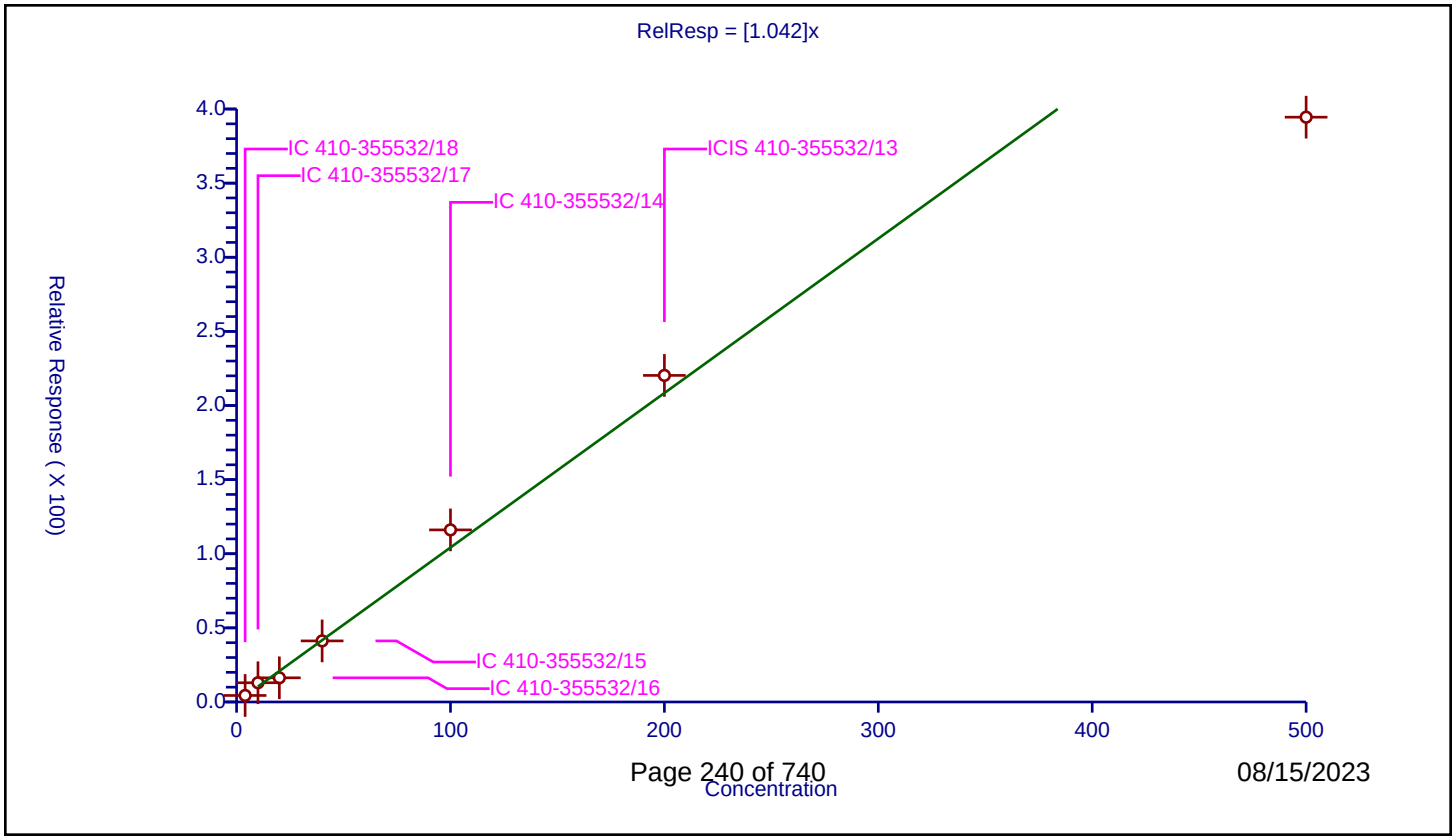
Curve Coefficients

Intercept:	0
Slope:	1.042

Error Coefficients

Standard Error:	519000
Relative Standard Error:	17.6
Correlation Coefficient:	0.991
Coefficient of Determination (Adjusted):	0.956

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	4.0	4.401914	50.0	126445.0	1.100478	Y
2	IC 410-355532/17	10.0	12.970383	50.0	153492.0	1.297038	Y
3	IC 410-355532/16	20.0	16.303504	50.0	134008.0	0.815175	Y
4	IC 410-355532/15	40.0	41.205989	50.0	97646.0	1.03015	Y
5	IC 410-355532/14	100.0	116.082366	50.0	125221.0	1.160824	Y
6	ICIS 410-355532/13	200.0	220.289609	50.0	120956.0	1.101448	Y
7	IC 410-355532/12	500.0	394.493258	50.0	141127.0	0.788987	Y



Calibration / Acrylonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

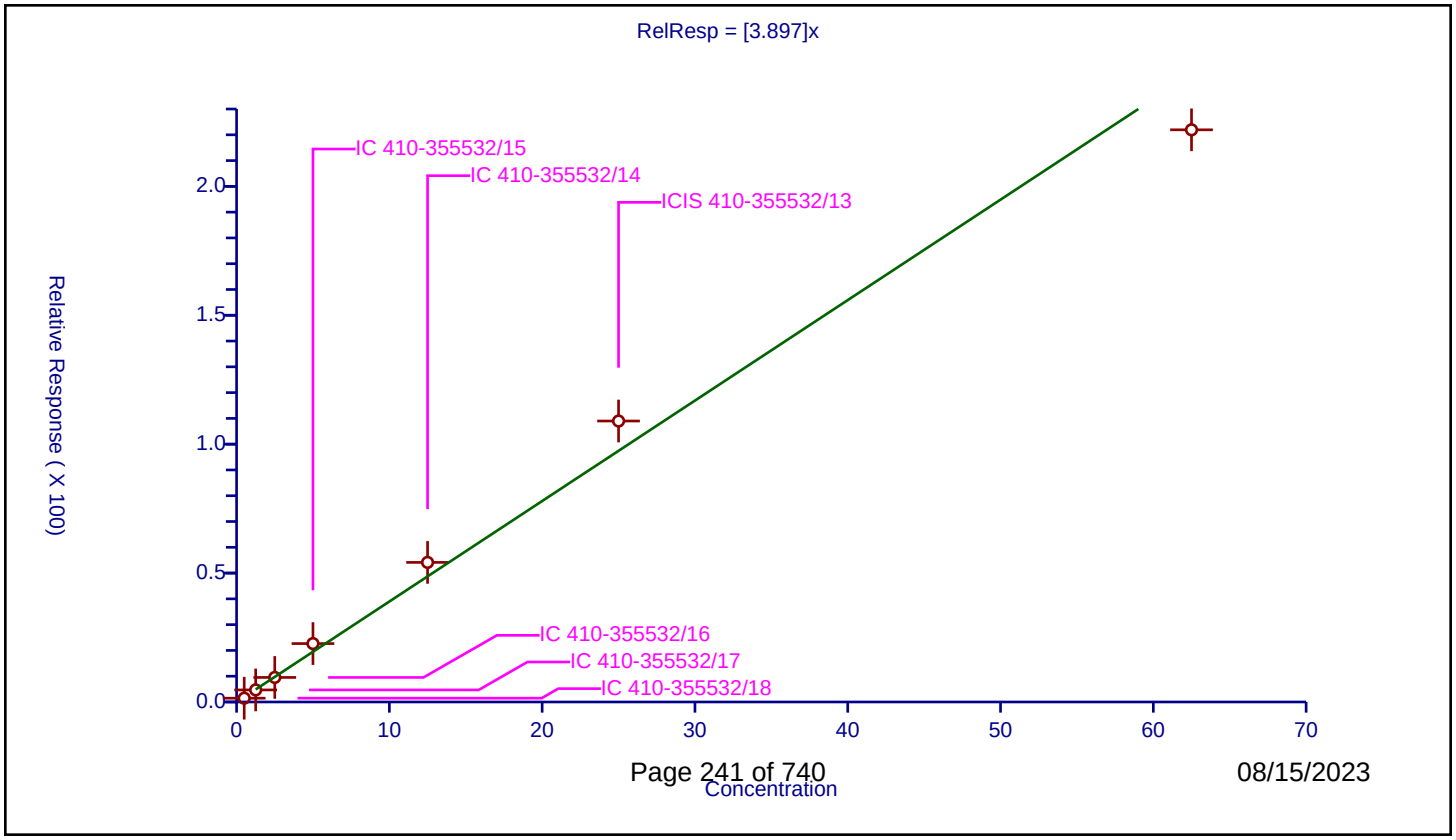
Curve Coefficients

Intercept:	0
Slope:	3.897

Error Coefficients

Standard Error:	284000
Relative Standard Error:	14.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.977

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.5	1.476136	50.0	126445.0	2.952272	Y
2	IC 410-355532/17	1.25	4.682654	50.0	153492.0	3.746124	Y
3	IC 410-355532/16	2.5	9.518835	50.0	134008.0	3.807534	Y
4	IC 410-355532/15	5.0	22.654282	50.0	97646.0	4.530856	Y
5	IC 410-355532/14	12.5	54.14587	50.0	125221.0	4.33167	Y
6	ICIS 410-355532/13	25.0	108.978885	50.0	120956.0	4.359155	Y
7	IC 410-355532/12	62.5	221.929184	50.0	141127.0	3.550867	Y



Calibration / Methyl tert-butyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

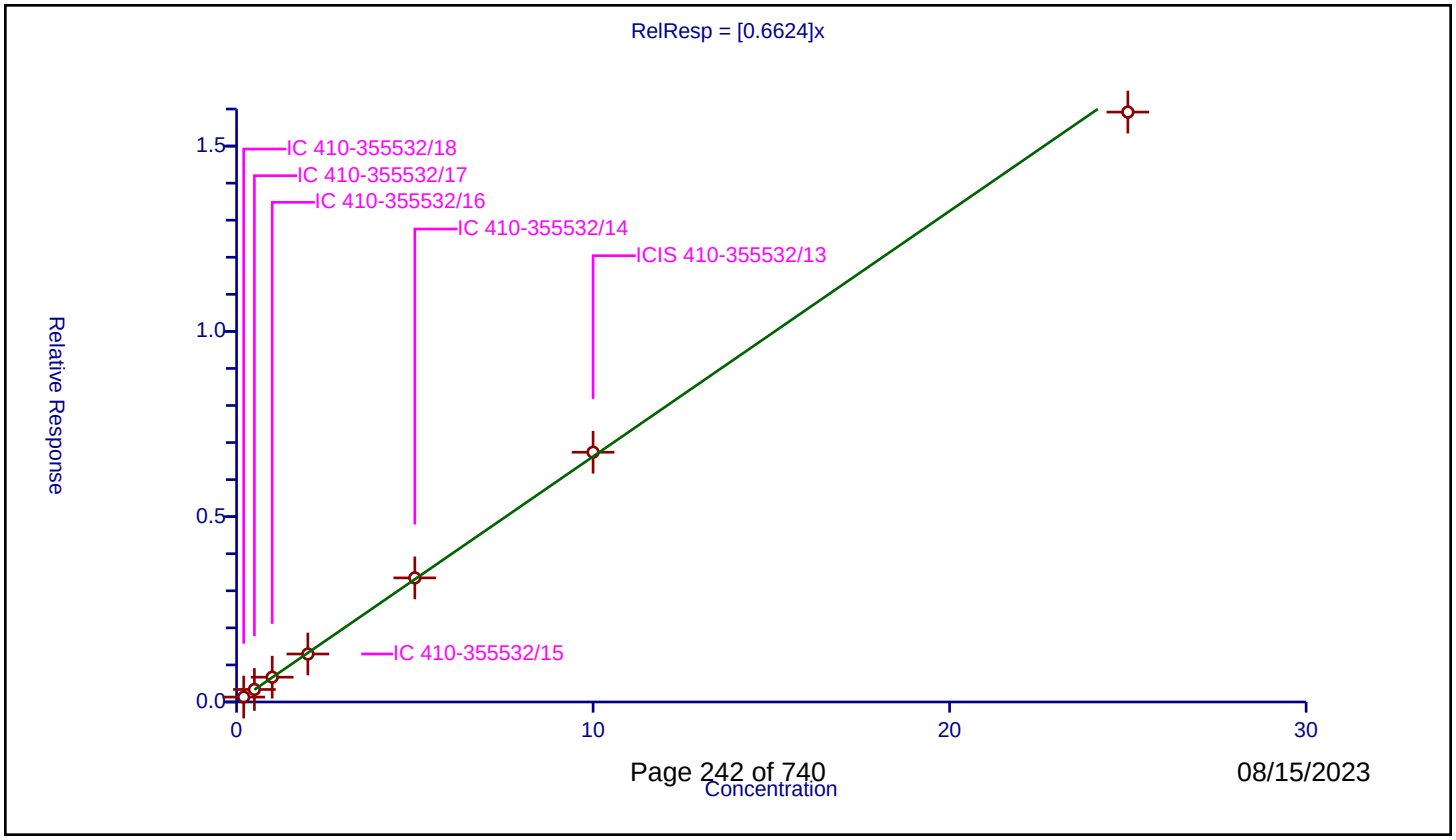
Curve Coefficients

Intercept:	0
Slope:	0.6624

Error Coefficients

Standard Error:	1730000
Relative Standard Error:	2.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.132698	10.0	2286473.0	0.663489	Y
2	IC 410-355532/17	0.5	0.337781	10.0	2310552.0	0.675562	Y
3	IC 410-355532/16	1.0	0.66961	10.0	2343275.0	0.66961	Y
4	IC 410-355532/15	2.0	1.294976	10.0	2349279.0	0.647488	Y
5	IC 410-355532/14	5.0	3.348497	10.0	2387313.0	0.669699	Y
6	ICIS 410-355532/13	10.0	6.739043	10.0	2381761.0	0.673904	Y
7	IC 410-355532/12	25.0	15.917601	10.0	2408929.0	0.636704	Y



Calibration / trans-1,2-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

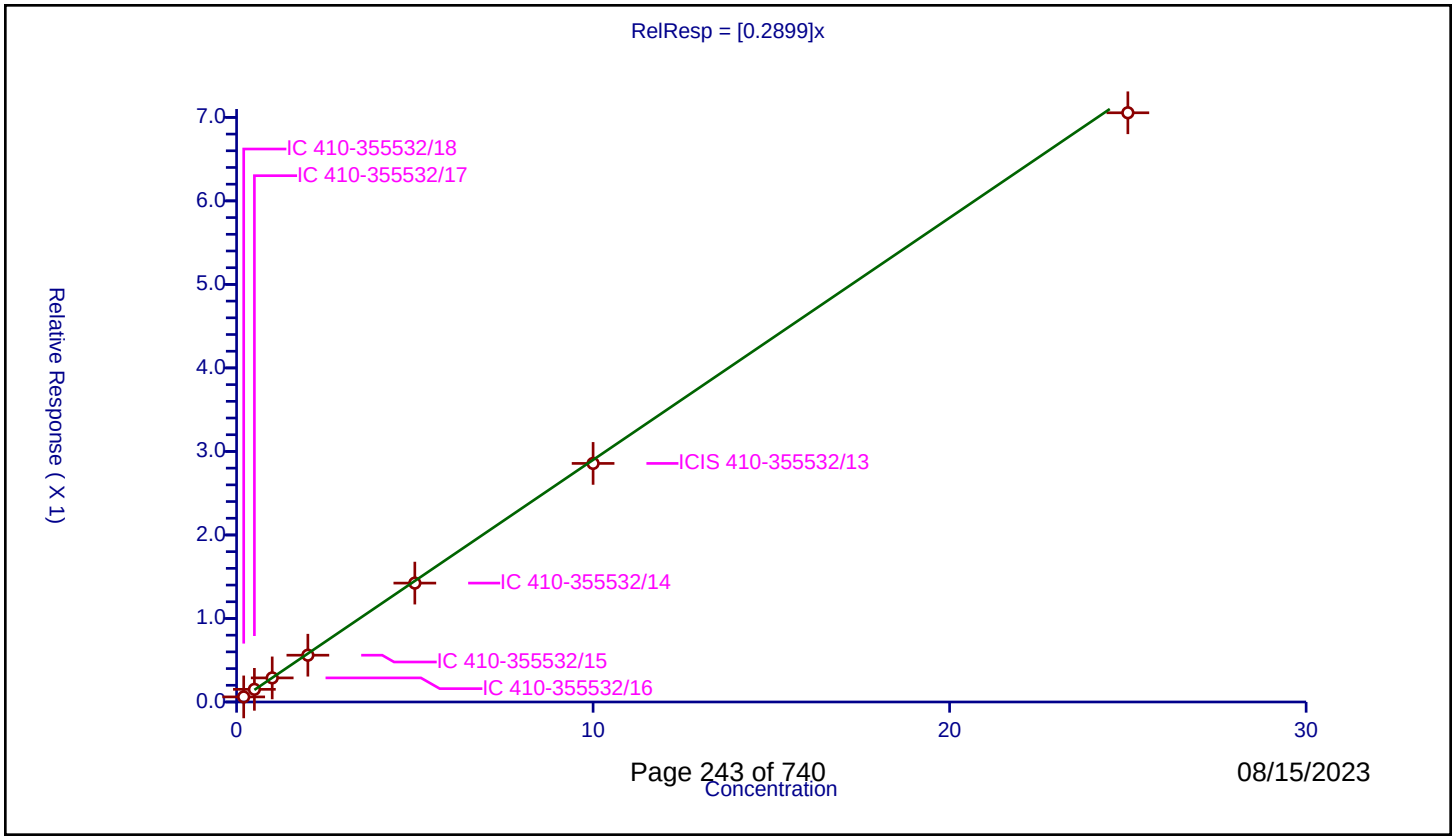
Curve Coefficients

Intercept:	0
Slope:	0.2899

Error Coefficients

Standard Error:	763000
Relative Standard Error:	3.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.060932	10.0	2286473.0	0.304661	Y
2	IC 410-355532/17	0.5	0.151652	10.0	2310552.0	0.303304	Y
3	IC 410-355532/16	1.0	0.288506	10.0	2343275.0	0.288506	Y
4	IC 410-355532/15	2.0	0.560214	10.0	2349279.0	0.280107	Y
5	IC 410-355532/14	5.0	1.423642	10.0	2387313.0	0.284728	Y
6	ICIS 410-355532/13	10.0	2.856462	10.0	2381761.0	0.285646	Y
7	IC 410-355532/12	25.0	7.055077	10.0	2408929.0	0.282203	Y



Calibration / Hexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

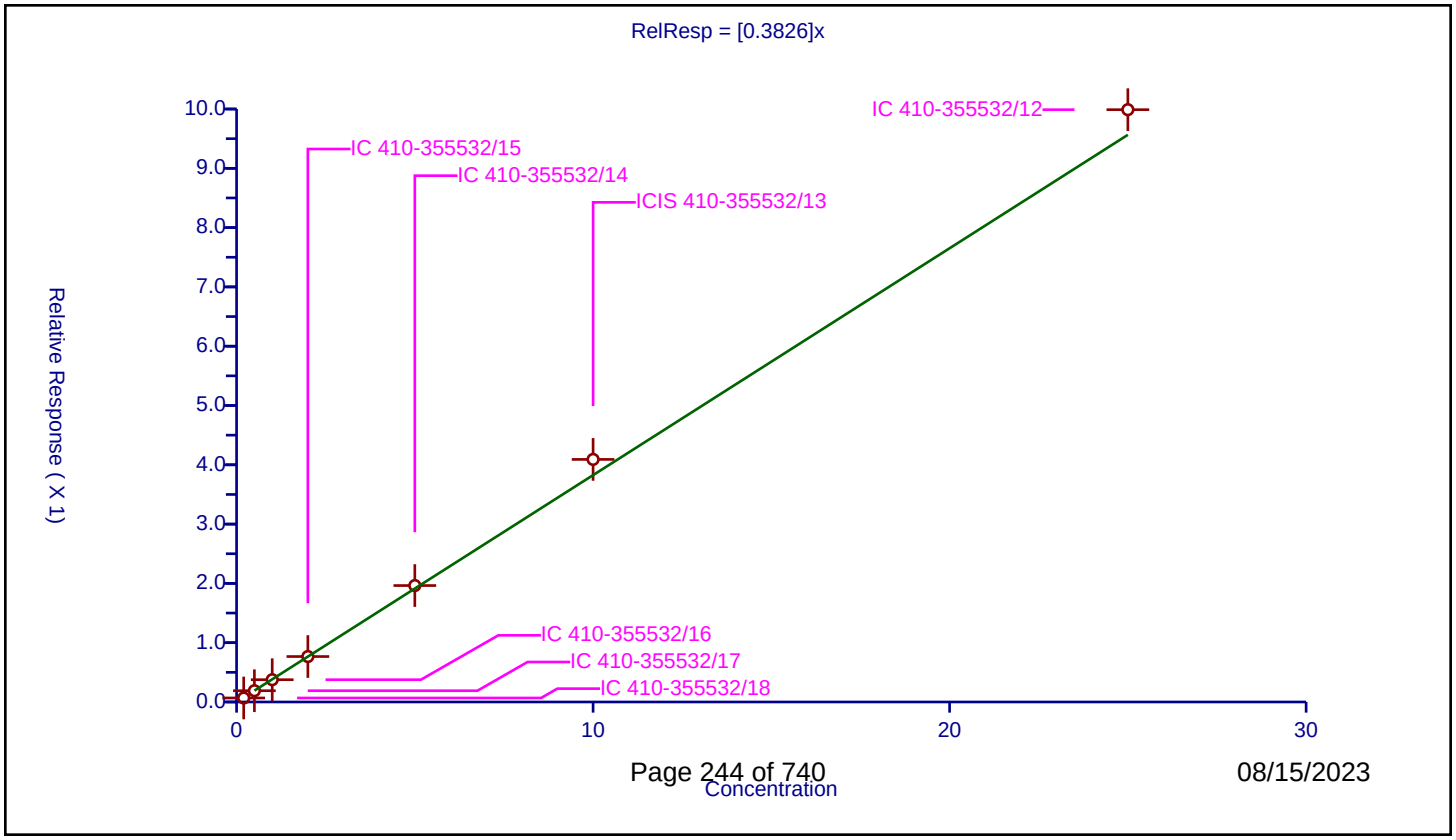
Curve Coefficients

Intercept:	0
Slope:	0.3826

Error Coefficients

Standard Error:	1080000
Relative Standard Error:	6.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.067558	10.0	2286473.0	0.337791	Y
2	IC 410-355532/17	0.5	0.190028	10.0	2310552.0	0.380056	Y
3	IC 410-355532/16	1.0	0.375773	10.0	2343275.0	0.375773	Y
4	IC 410-355532/15	2.0	0.766342	10.0	2349279.0	0.383171	Y
5	IC 410-355532/14	5.0	1.963676	10.0	2387313.0	0.392735	Y
6	ICIS 410-355532/13	10.0	4.090599	10.0	2381761.0	0.40906	Y
7	IC 410-355532/12	25.0	9.988538	10.0	2408929.0	0.399542	Y



Calibration / 1,1-Dichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

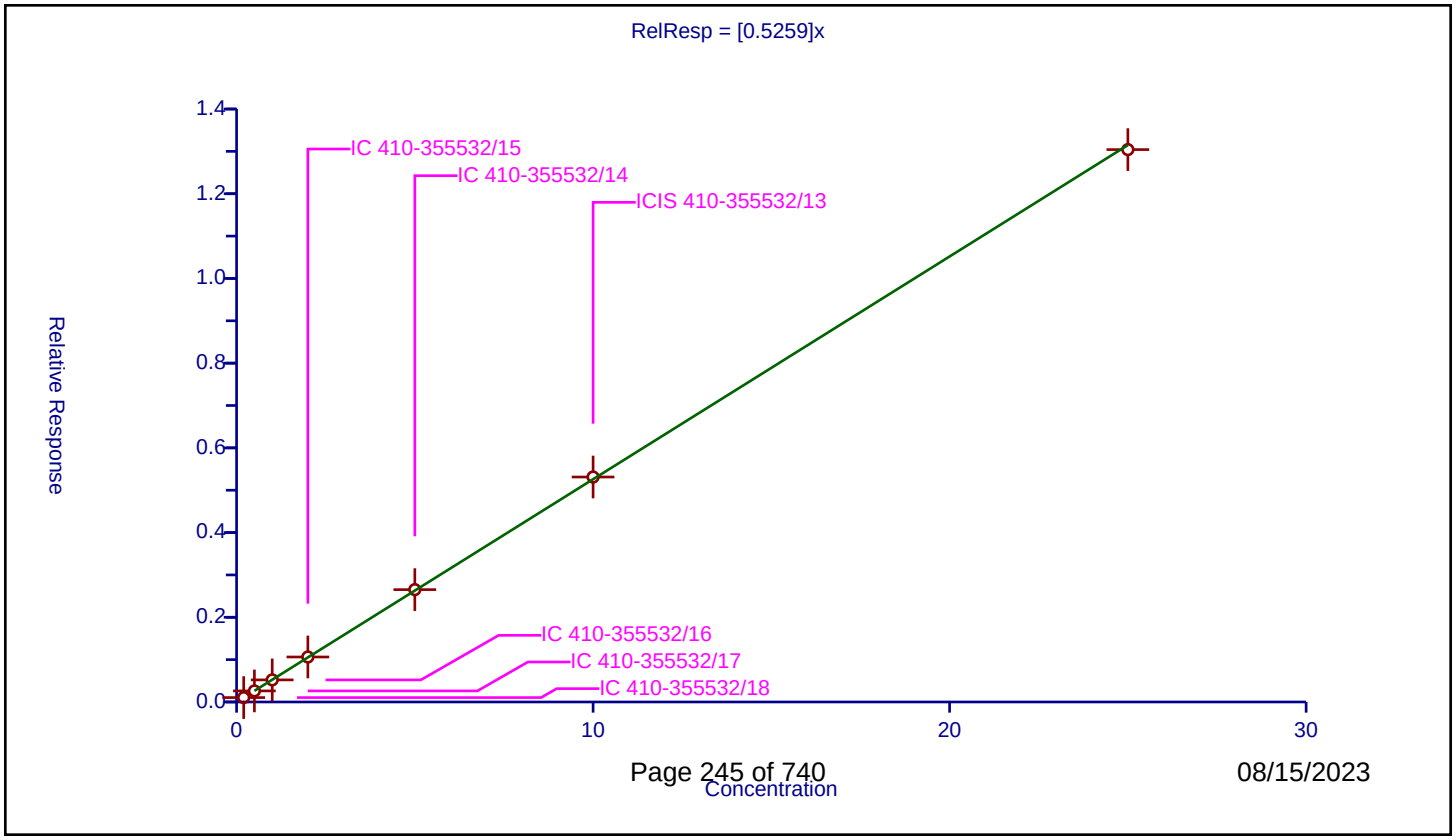
Curve Coefficients

Intercept:	0
Slope:	0.5259

Error Coefficients

Standard Error:	1410000
Relative Standard Error:	0.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.104322	10.0	2286473.0	0.521611	Y
2	IC 410-355532/17	0.5	0.261613	10.0	2310552.0	0.523226	Y
3	IC 410-355532/16	1.0	0.521804	10.0	2343275.0	0.521804	Y
4	IC 410-355532/15	2.0	1.062649	10.0	2349279.0	0.531325	Y
5	IC 410-355532/14	5.0	2.652576	10.0	2387313.0	0.530515	Y
6	ICIS 410-355532/13	10.0	5.311864	10.0	2381761.0	0.531186	Y
7	IC 410-355532/12	25.0	13.041879	10.0	2408929.0	0.521675	Y



Calibration / Isopropyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

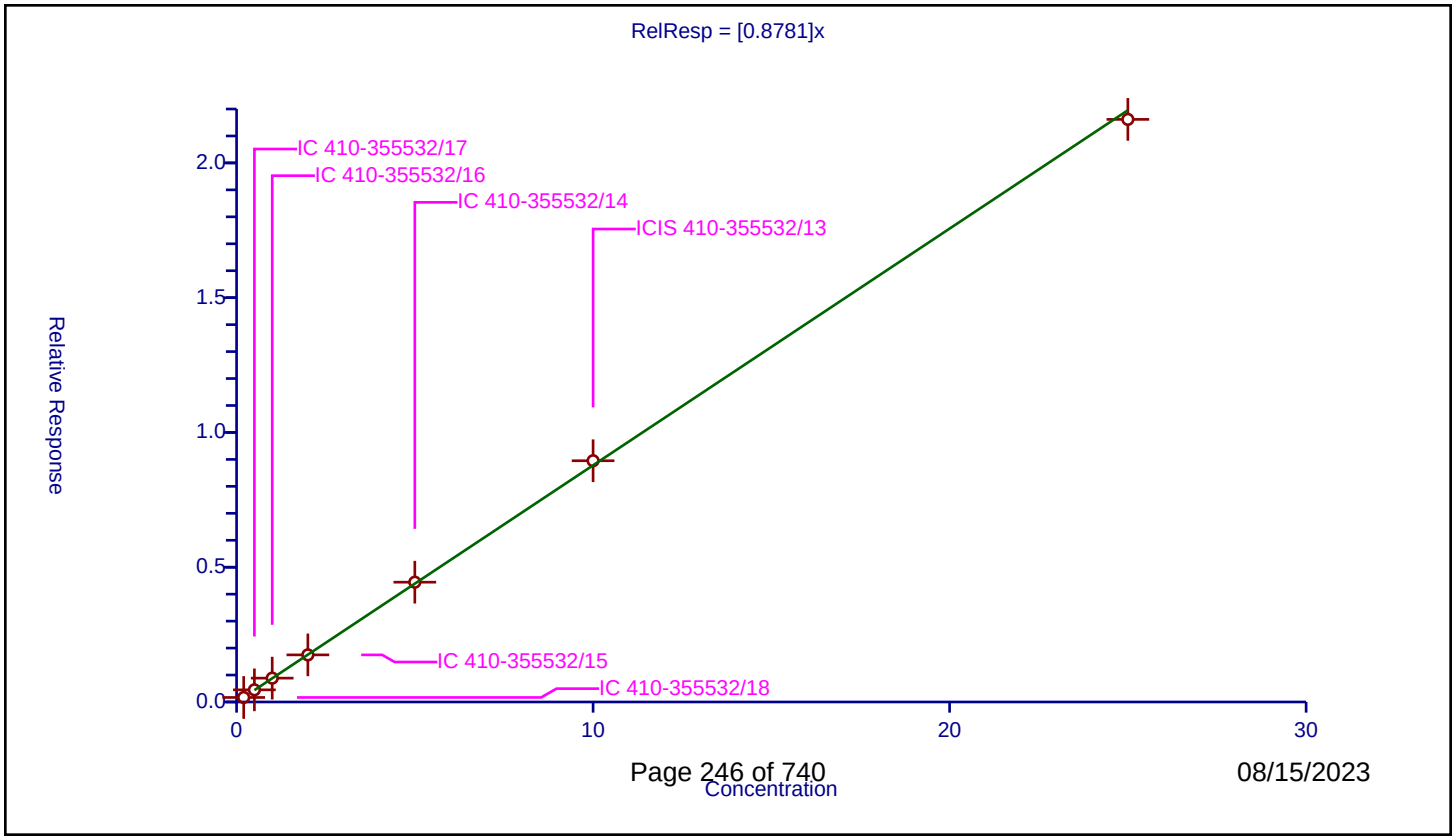
Curve Coefficients

Intercept:	0
Slope:	0.8781

Error Coefficients

Standard Error:	2350000
Relative Standard Error:	2.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.167691	10.0	2286473.0	0.838453	Y
2	IC 410-355532/17	0.5	0.450693	10.0	2310552.0	0.901386	Y
3	IC 410-355532/16	1.0	0.884689	10.0	2343275.0	0.884689	Y
4	IC 410-355532/15	2.0	1.747502	10.0	2349279.0	0.873751	Y
5	IC 410-355532/14	5.0	4.444838	10.0	2387313.0	0.888968	Y
6	ICIS 410-355532/13	10.0	8.950571	10.0	2381761.0	0.895057	Y
7	IC 410-355532/12	25.0	21.615099	10.0	2408929.0	0.864604	Y



Calibration / 2-Chloro-1,3-butadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

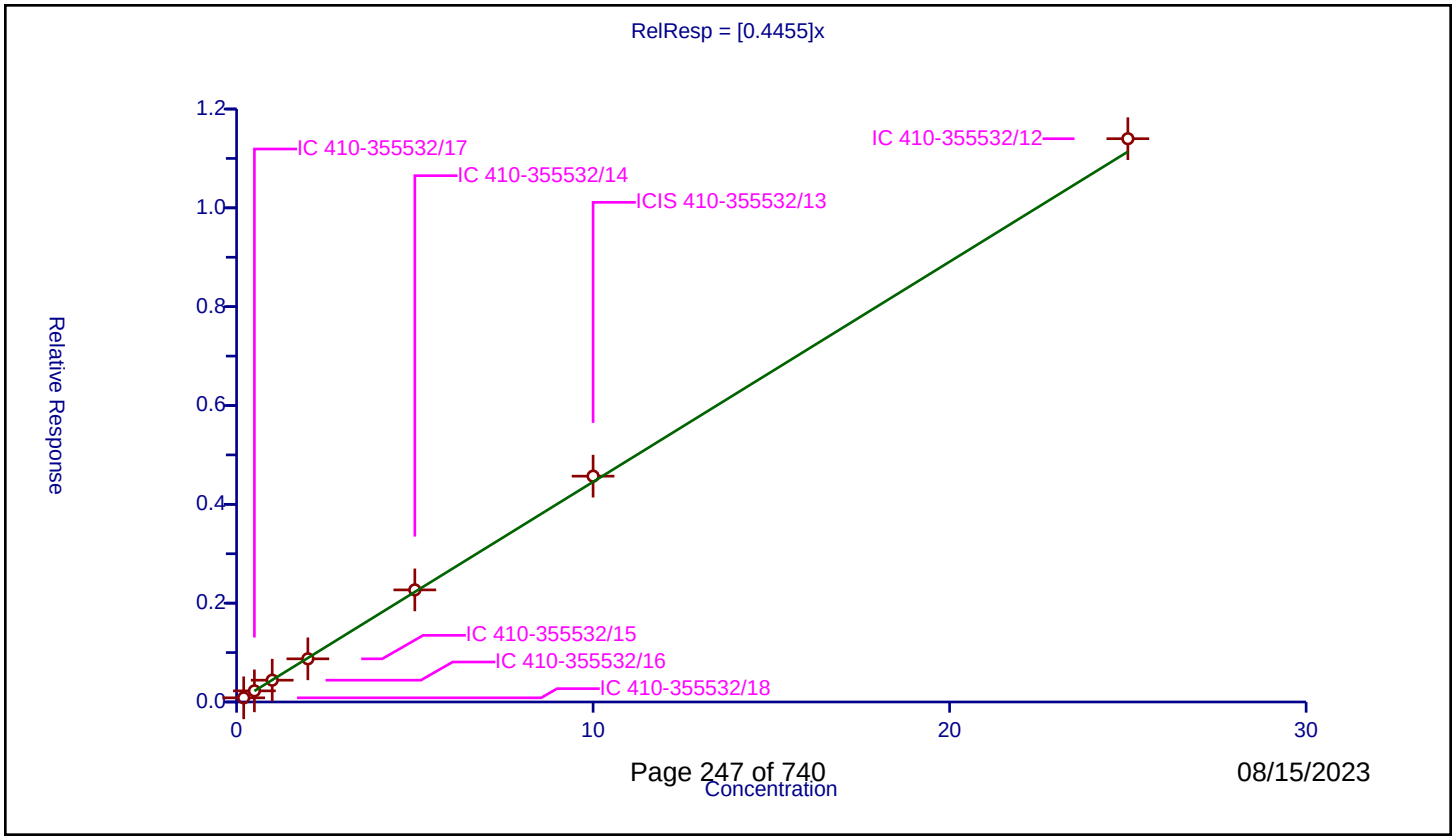
Curve Coefficients

Intercept:	0
Slope:	0.4455

Error Coefficients

Standard Error:	1230000
Relative Standard Error:	2.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.084484	10.0	2286473.0	0.422419	Y
2	IC 410-355532/17	0.5	0.225535	10.0	2310552.0	0.45107	Y
3	IC 410-355532/16	1.0	0.441323	10.0	2343275.0	0.441323	Y
4	IC 410-355532/15	2.0	0.873681	10.0	2349279.0	0.43684	Y
5	IC 410-355532/14	5.0	2.268215	10.0	2387313.0	0.453643	Y
6	ICIS 410-355532/13	10.0	4.56982	10.0	2381761.0	0.456982	Y
7	IC 410-355532/12	25.0	11.399244	10.0	2408929.0	0.45597	Y



Calibration / Tert-butyl ethyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

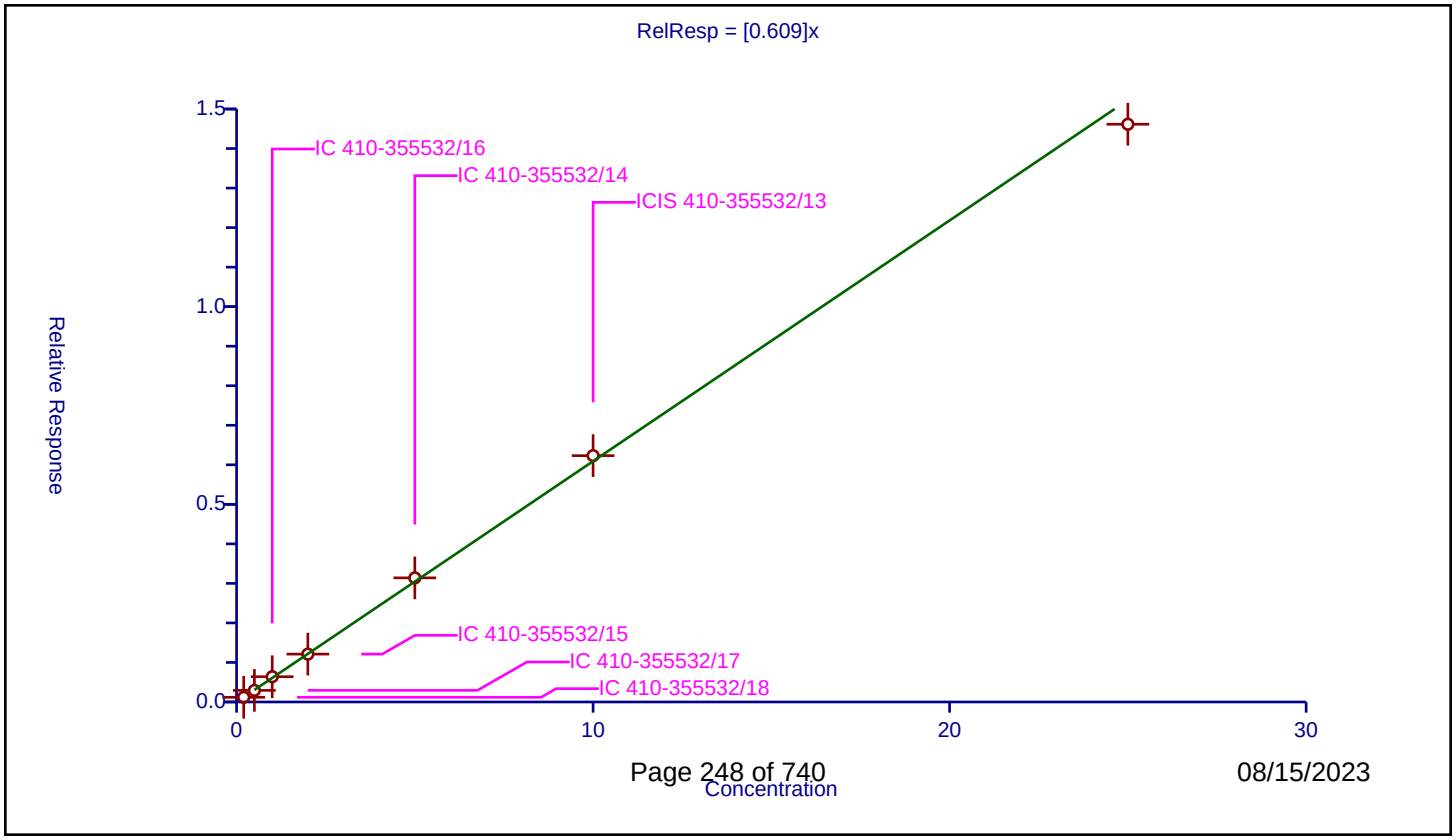
Curve Coefficients

Intercept:	0
Slope:	0.609

Error Coefficients

Standard Error:	1600000
Relative Standard Error:	3.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.119201	10.0	2286473.0	0.596005	Y
2	IC 410-355532/17	0.5	0.293588	10.0	2310552.0	0.587176	Y
3	IC 410-355532/16	1.0	0.63882	10.0	2343275.0	0.63882	Y
4	IC 410-355532/15	2.0	1.211427	10.0	2349279.0	0.605713	Y
5	IC 410-355532/14	5.0	3.13958	10.0	2387313.0	0.627916	Y
6	ICIS 410-355532/13	10.0	6.231238	10.0	2381761.0	0.623124	Y
7	IC 410-355532/12	25.0	14.614798	10.0	2408929.0	0.584592	Y



Calibration / 2-Butanone (MEK)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

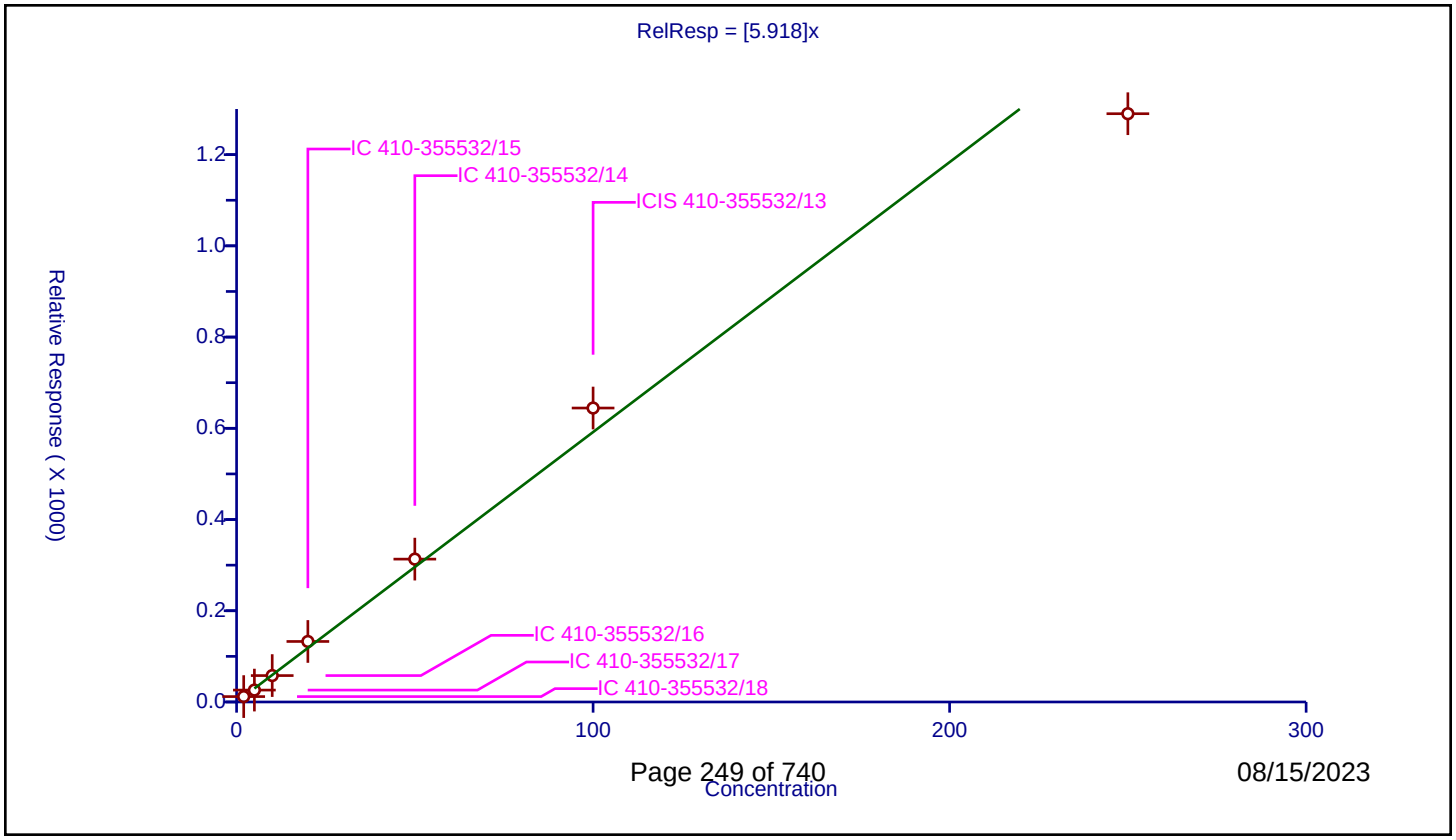
Curve Coefficients

Intercept:	0
Slope:	5.918

Error Coefficients

Standard Error:	1650000
Relative Standard Error:	9.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	2.0	11.811855	50.0	126445.0	5.905927	Y
2	IC 410-355532/17	5.0	26.122534	50.0	153492.0	5.224507	Y
3	IC 410-355532/16	10.0	57.91408	50.0	134008.0	5.791408	Y
4	IC 410-355532/15	20.0	132.673125	50.0	97646.0	6.633656	Y
5	IC 410-355532/14	50.0	313.199064	50.0	125221.0	6.263981	Y
6	ICIS 410-355532/13	100.0	644.450461	50.0	120956.0	6.444505	Y
7	IC 410-355532/12	250.0	1289.687303	50.0	141127.0	5.158749	Y



Calibration / cis-1,2-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

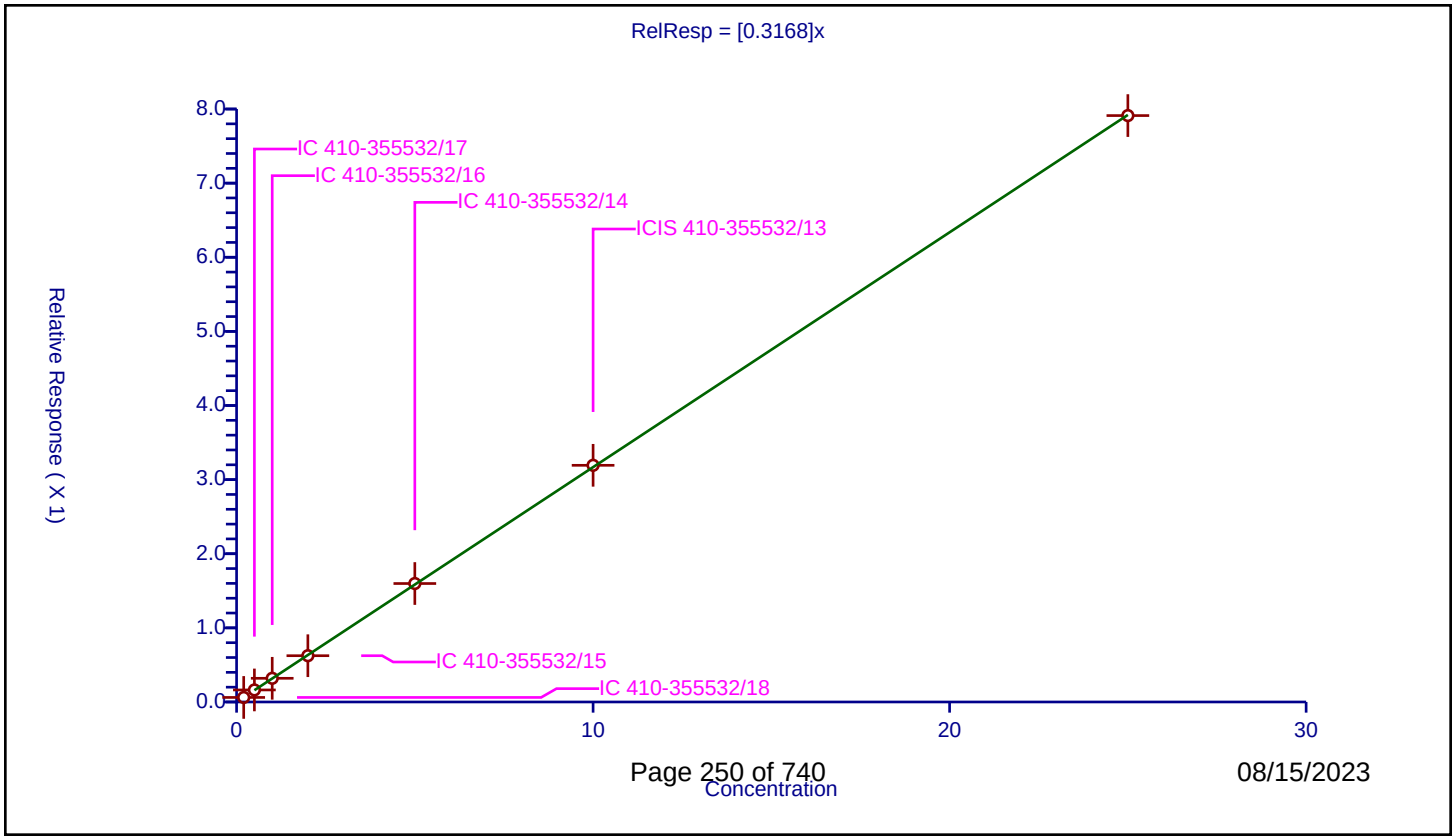
Curve Coefficients

Intercept:	0
Slope:	0.3168

Error Coefficients

Standard Error:	855000
Relative Standard Error:	1.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.061177	10.0	2286473.0	0.305886	Y
2	IC 410-355532/17	0.5	0.162264	10.0	2310552.0	0.324529	Y
3	IC 410-355532/16	1.0	0.319702	10.0	2343275.0	0.319702	Y
4	IC 410-355532/15	2.0	0.624417	10.0	2349279.0	0.312209	Y
5	IC 410-355532/14	5.0	1.598433	10.0	2387313.0	0.319687	Y
6	ICIS 410-355532/13	10.0	3.192948	10.0	2381761.0	0.319295	Y
7	IC 410-355532/12	25.0	7.911578	10.0	2408929.0	0.316463	Y



Calibration / 2,2-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

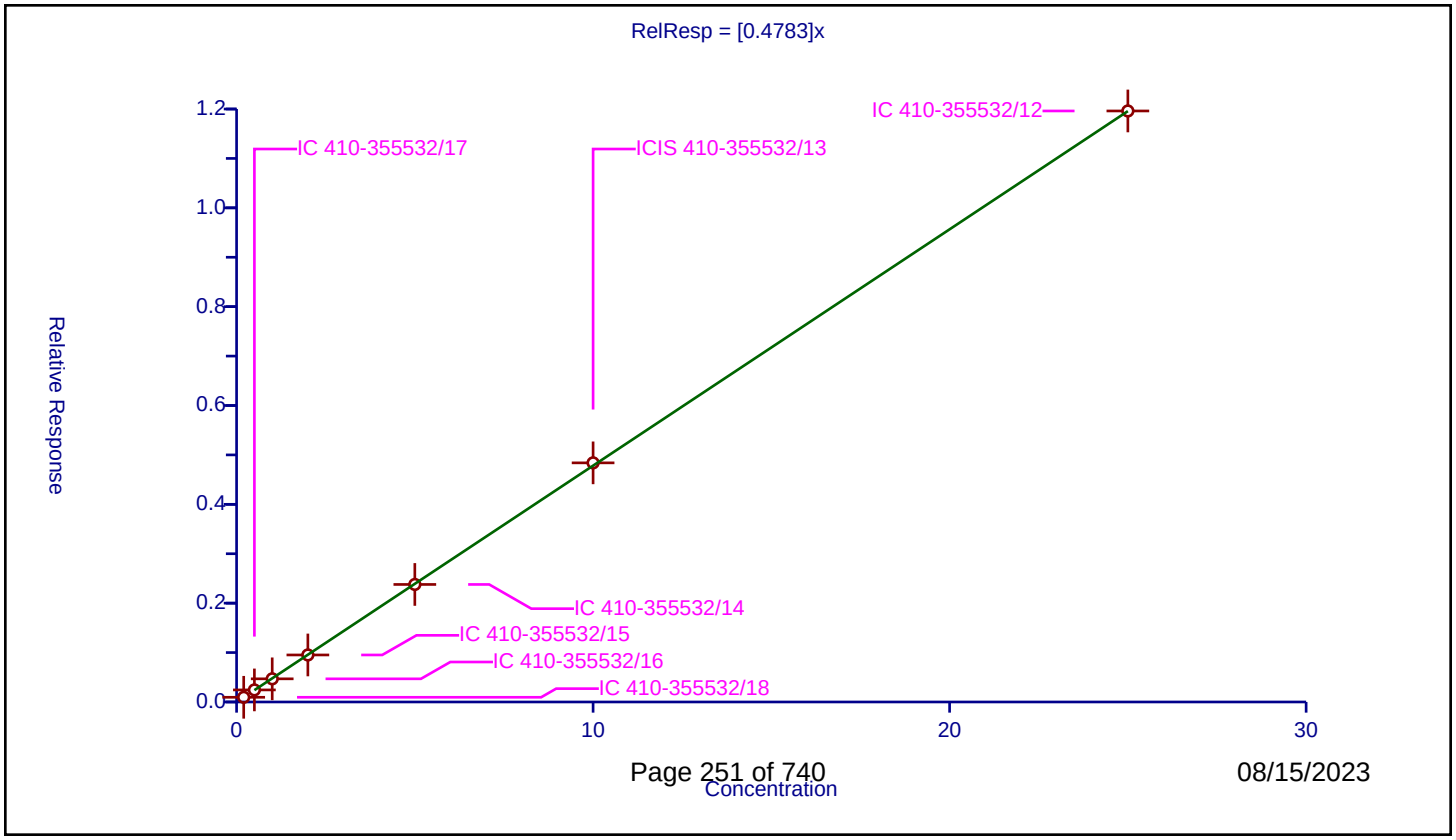
Curve Coefficients

Intercept:	0
Slope:	0.4783

Error Coefficients

Standard Error:	1290000
Relative Standard Error:	1.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.095405	10.0	2286473.0	0.477023	Y
2	IC 410-355532/17	0.5	0.244214	10.0	2310552.0	0.488429	Y
3	IC 410-355532/16	1.0	0.46843	10.0	2343275.0	0.46843	Y
4	IC 410-355532/15	2.0	0.951913	10.0	2349279.0	0.475957	Y
5	IC 410-355532/14	5.0	2.37826	10.0	2387313.0	0.475652	Y
6	ICIS 410-355532/13	10.0	4.839486	10.0	2381761.0	0.483949	Y
7	IC 410-355532/12	25.0	11.960751	10.0	2408929.0	0.47843	Y



Calibration / Propionitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

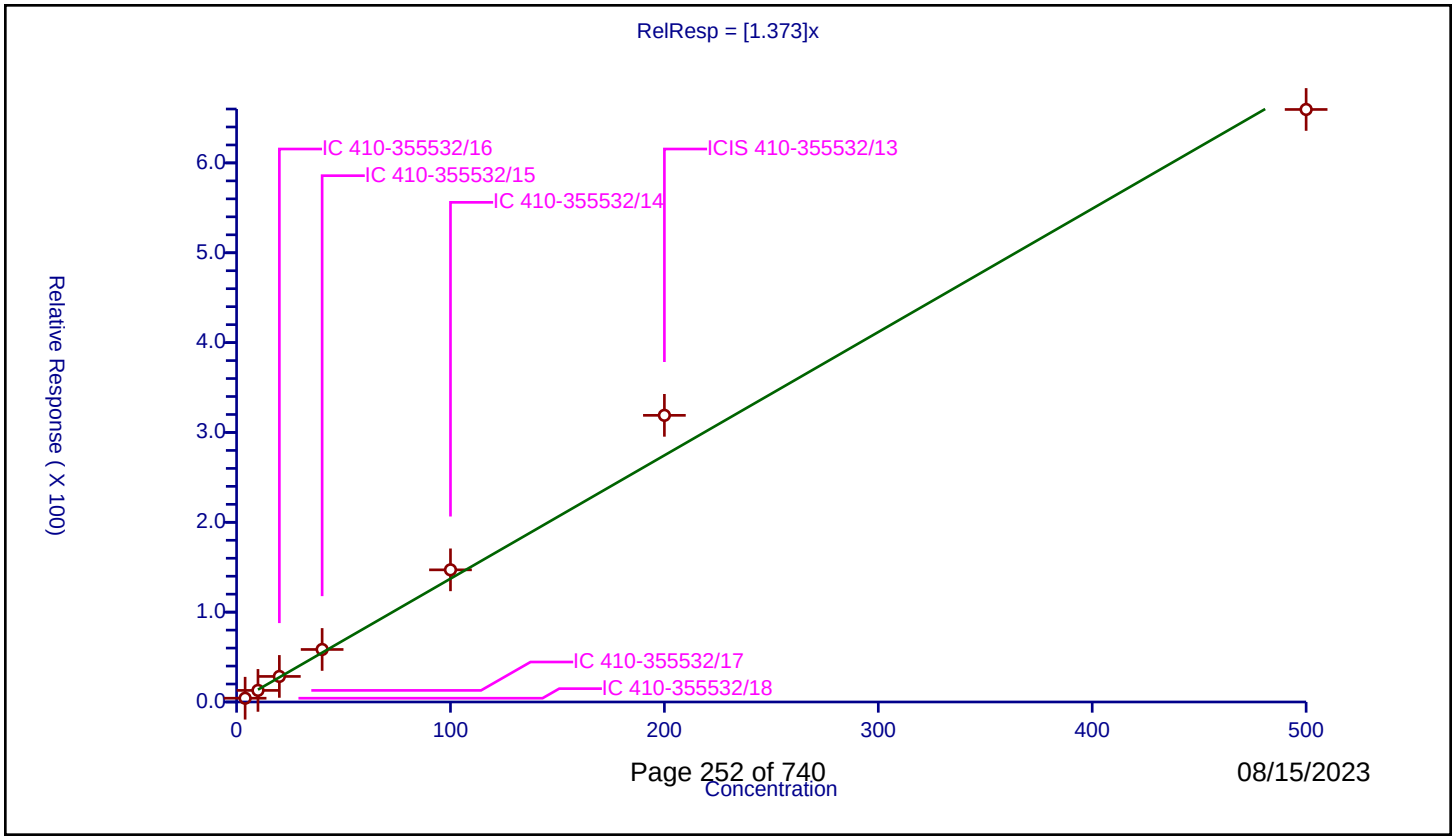
Curve Coefficients

Intercept:	0
Slope:	1.373

Error Coefficients

Standard Error:	838000
Relative Standard Error:	12.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.981

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	4.0	4.193918	50.0	126445.0	1.04848	Y
2	IC 410-355532/17	10.0	12.905559	50.0	153492.0	1.290556	Y
3	IC 410-355532/16	20.0	28.444197	50.0	134008.0	1.42221	Y
4	IC 410-355532/15	40.0	58.451447	50.0	97646.0	1.461286	Y
5	IC 410-355532/14	100.0	147.071977	50.0	125221.0	1.47072	Y
6	ICIS 410-355532/13	200.0	319.069331	50.0	120956.0	1.595347	Y
7	IC 410-355532/12	500.0	659.498891	50.0	141127.0	1.318998	Y



Calibration / Methacrylonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

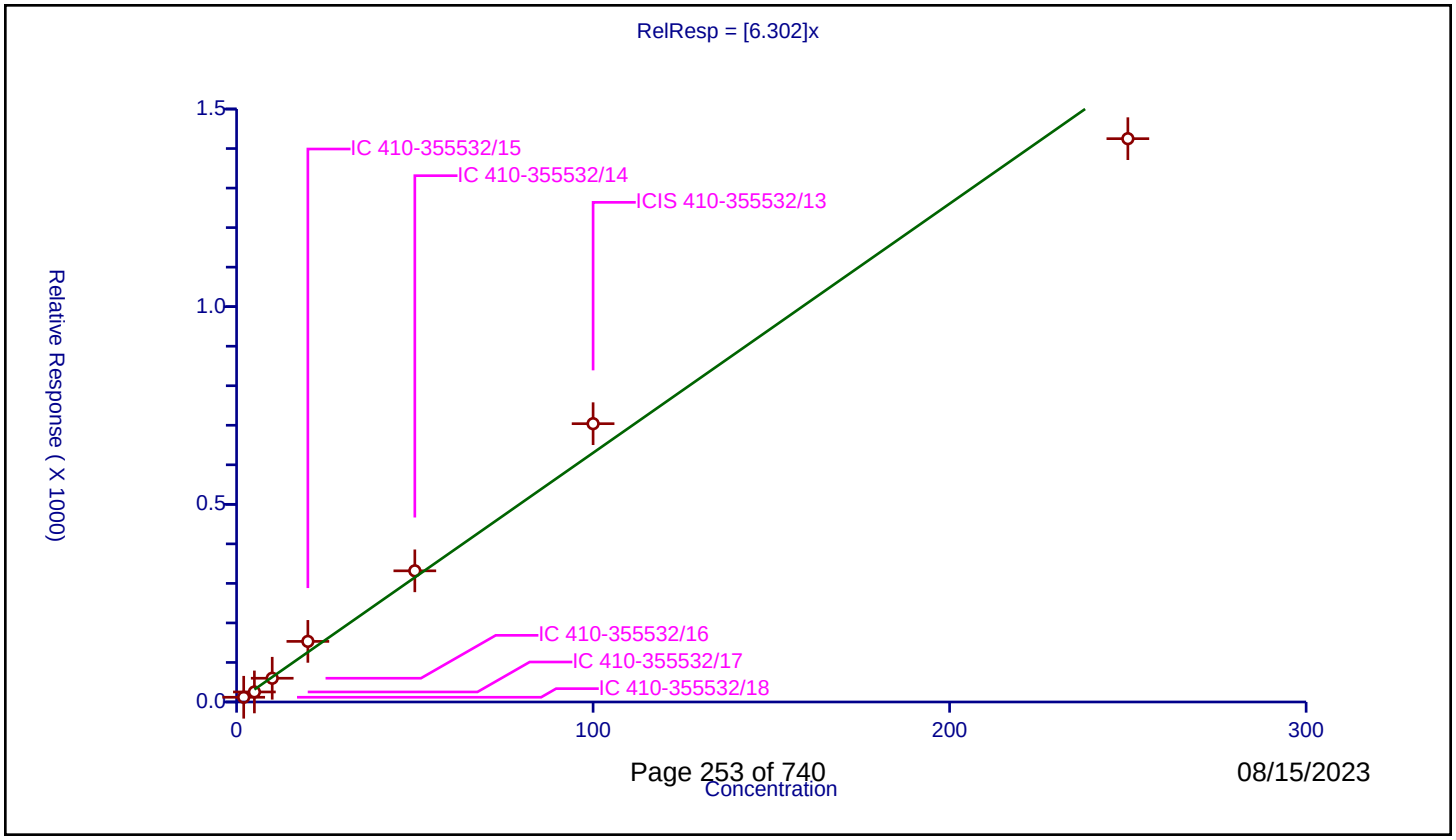
Curve Coefficients

Intercept:	0
Slope:	6.302

Error Coefficients

Standard Error:	1820000
Relative Standard Error:	13.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.976

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	2.0	11.979121	50.0	126445.0	5.989561	Y
2	IC 410-355532/17	5.0	25.391551	50.0	153492.0	5.07831	Y
3	IC 410-355532/16	10.0	60.08298	50.0	134008.0	6.008298	Y
4	IC 410-355532/15	20.0	153.266903	50.0	97646.0	7.663345	Y
5	IC 410-355532/14	50.0	331.796983	50.0	125221.0	6.63594	Y
6	ICIS 410-355532/13	100.0	703.995668	50.0	120956.0	7.039957	Y
7	IC 410-355532/12	250.0	1424.969	50.0	141127.0	5.699876	Y



Calibration / Chlorobromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

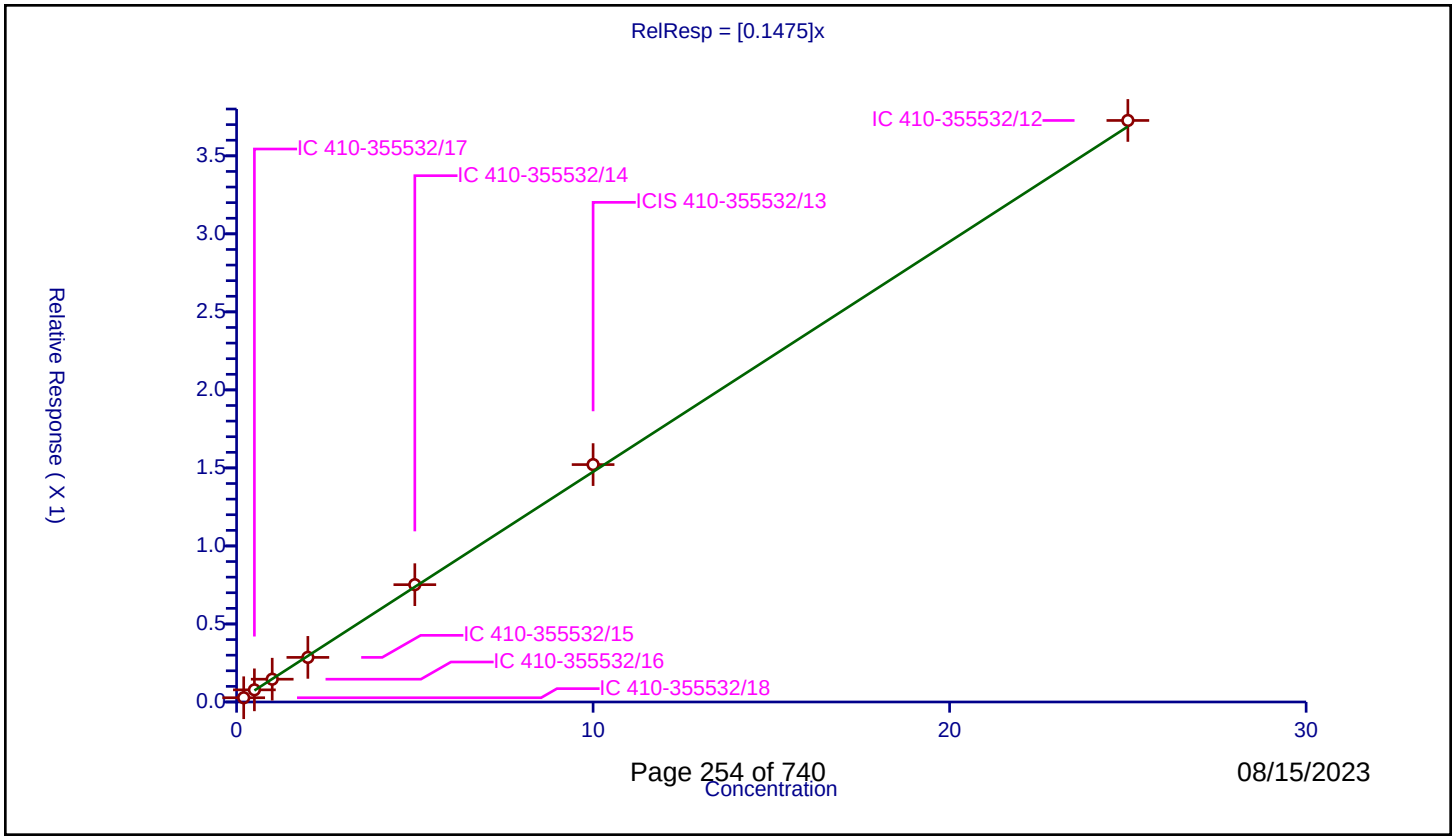
Curve Coefficients

Intercept:	0
Slope:	0.1475

Error Coefficients

Standard Error:	403000
Relative Standard Error:	4.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.027317	10.0	2286473.0	0.136586	Y
2	IC 410-355532/17	0.5	0.077782	10.0	2310552.0	0.155565	Y
3	IC 410-355532/16	1.0	0.145954	10.0	2343275.0	0.145954	Y
4	IC 410-355532/15	2.0	0.285764	10.0	2349279.0	0.142882	Y
5	IC 410-355532/14	5.0	0.751824	10.0	2387313.0	0.150365	Y
6	ICIS 410-355532/13	10.0	1.521274	10.0	2381761.0	0.152127	Y
7	IC 410-355532/12	25.0	3.726619	10.0	2408929.0	0.149065	Y



Calibration / Tetrahydrofuran

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

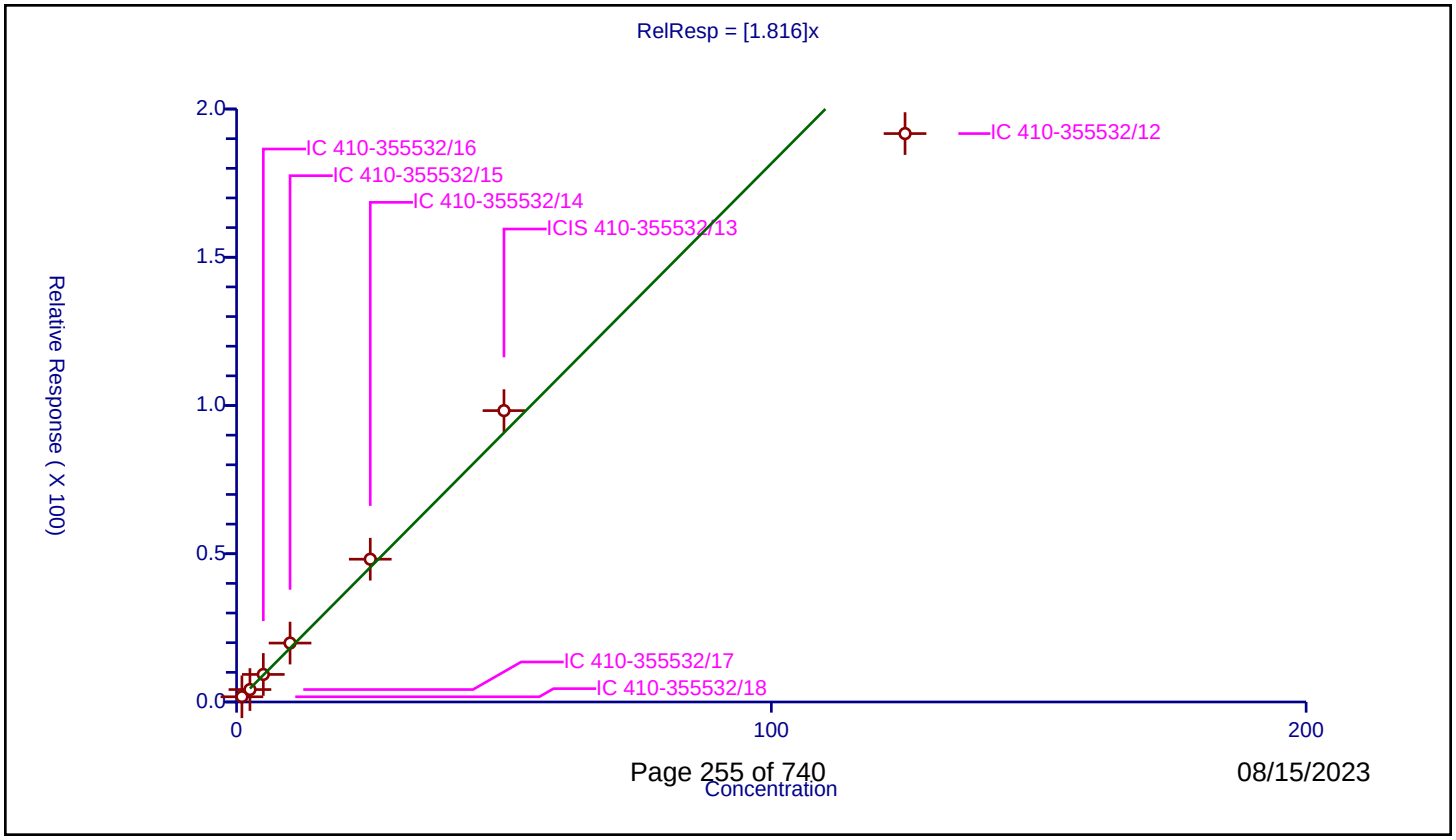
Curve Coefficients

Intercept:	0
Slope:	1.816

Error Coefficients

Standard Error:	247000
Relative Standard Error:	9.2
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	1.0	1.762426	50.0	126445.0	1.762426	Y
2	IC 410-355532/17	2.5	4.198916	50.0	153492.0	1.679566	Y
3	IC 410-355532/16	5.0	9.29646	50.0	134008.0	1.859292	Y
4	IC 410-355532/15	10.0	19.874342	50.0	97646.0	1.987434	Y
5	IC 410-355532/14	25.0	48.163647	50.0	125221.0	1.926546	Y
6	ICIS 410-355532/13	50.0	98.273339	50.0	120956.0	1.965467	Y
7	IC 410-355532/12	125.0	191.712075	50.0	141127.0	1.533697	Y



Calibration / Chloroform

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

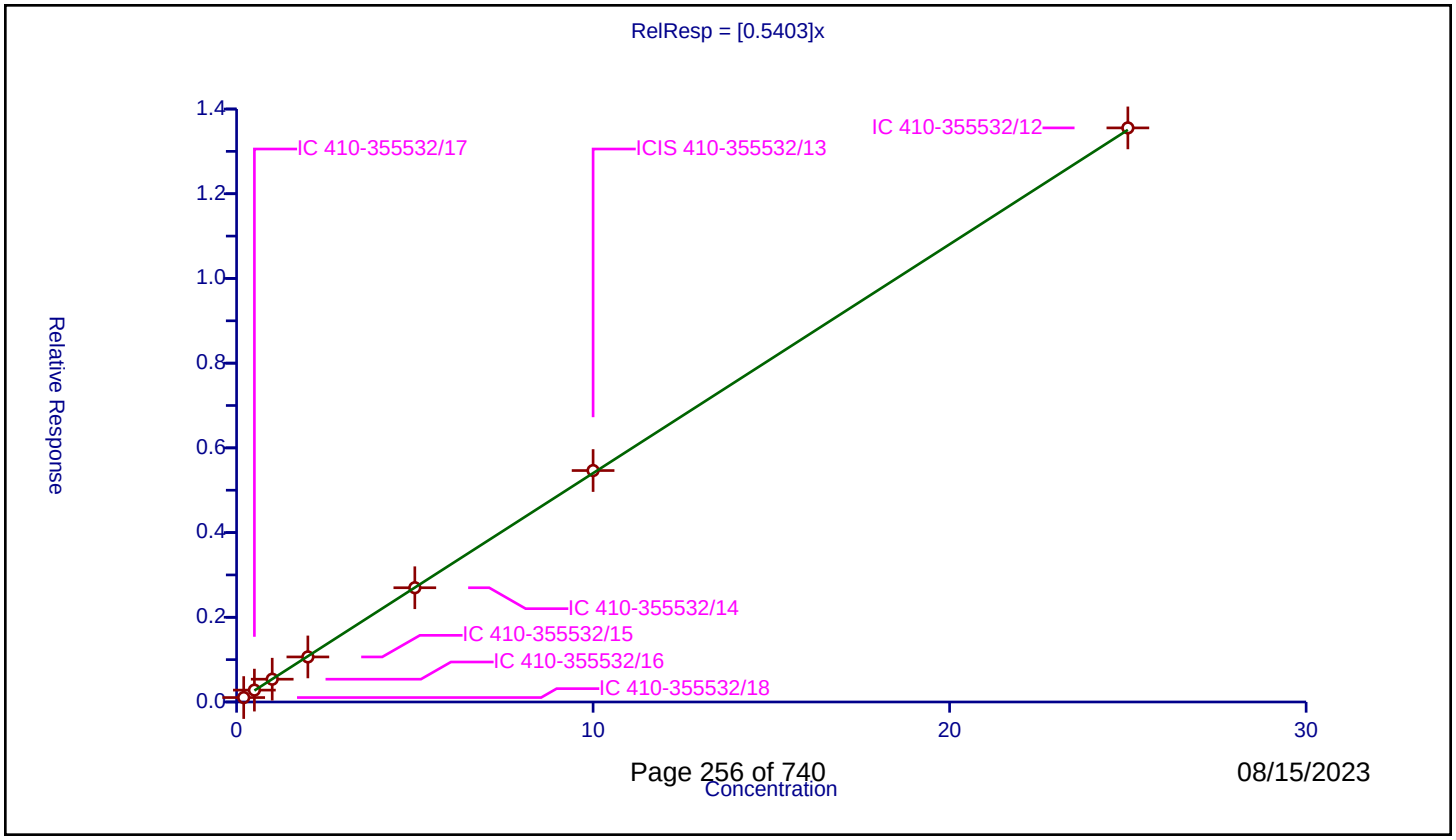
Curve Coefficients

Intercept:	0
Slope:	0.5403

Error Coefficients

Standard Error:	1460000
Relative Standard Error:	2.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.104668	10.0	2286473.0	0.523339	Y
2	IC 410-355532/17	0.5	0.280452	10.0	2310552.0	0.560905	Y
3	IC 410-355532/16	1.0	0.53791	10.0	2343275.0	0.53791	Y
4	IC 410-355532/15	2.0	1.063803	10.0	2349279.0	0.531901	Y
5	IC 410-355532/14	5.0	2.697497	10.0	2387313.0	0.539499	Y
6	ICIS 410-355532/13	10.0	5.464327	10.0	2381761.0	0.546433	Y
7	IC 410-355532/12	25.0	13.554218	10.0	2408929.0	0.542169	Y



Calibration / Dibromofluoromethane (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

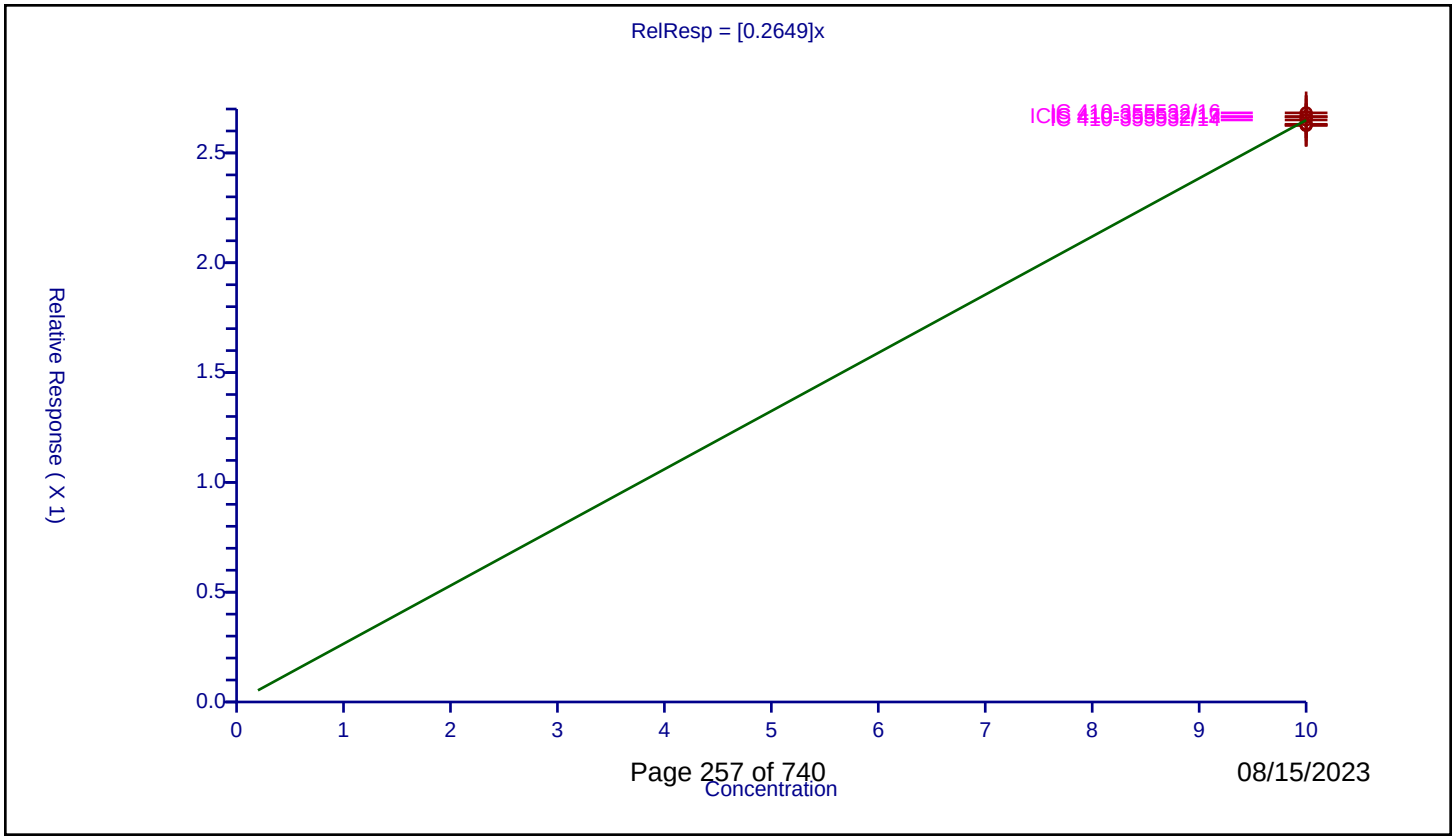
Curve Coefficients

Intercept:	0
Slope:	0.2649

Error Coefficients

Standard Error:	673000
Relative Standard Error:	0.8
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/12	10.0	2.630468	10.0	2408929.0	0.263047	Y
2	ICIS 410-355532/13	10.0	2.664768	10.0	2381761.0	0.266477	Y
3	IC 410-355532/14	10.0	2.650201	10.0	2387313.0	0.26502	Y
4	IC 410-355532/15	10.0	2.627793	10.0	2349279.0	0.262779	Y
5	IC 410-355532/16	10.0	2.682417	10.0	2343275.0	0.268242	Y
6	IC 410-355532/17	10.0	2.664995	10.0	2310552.0	0.2665	Y
7	IC 410-355532/18	10.0	2.625227	10.0	2286473.0	0.262523	Y



Calibration / 1,1,1-Trichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

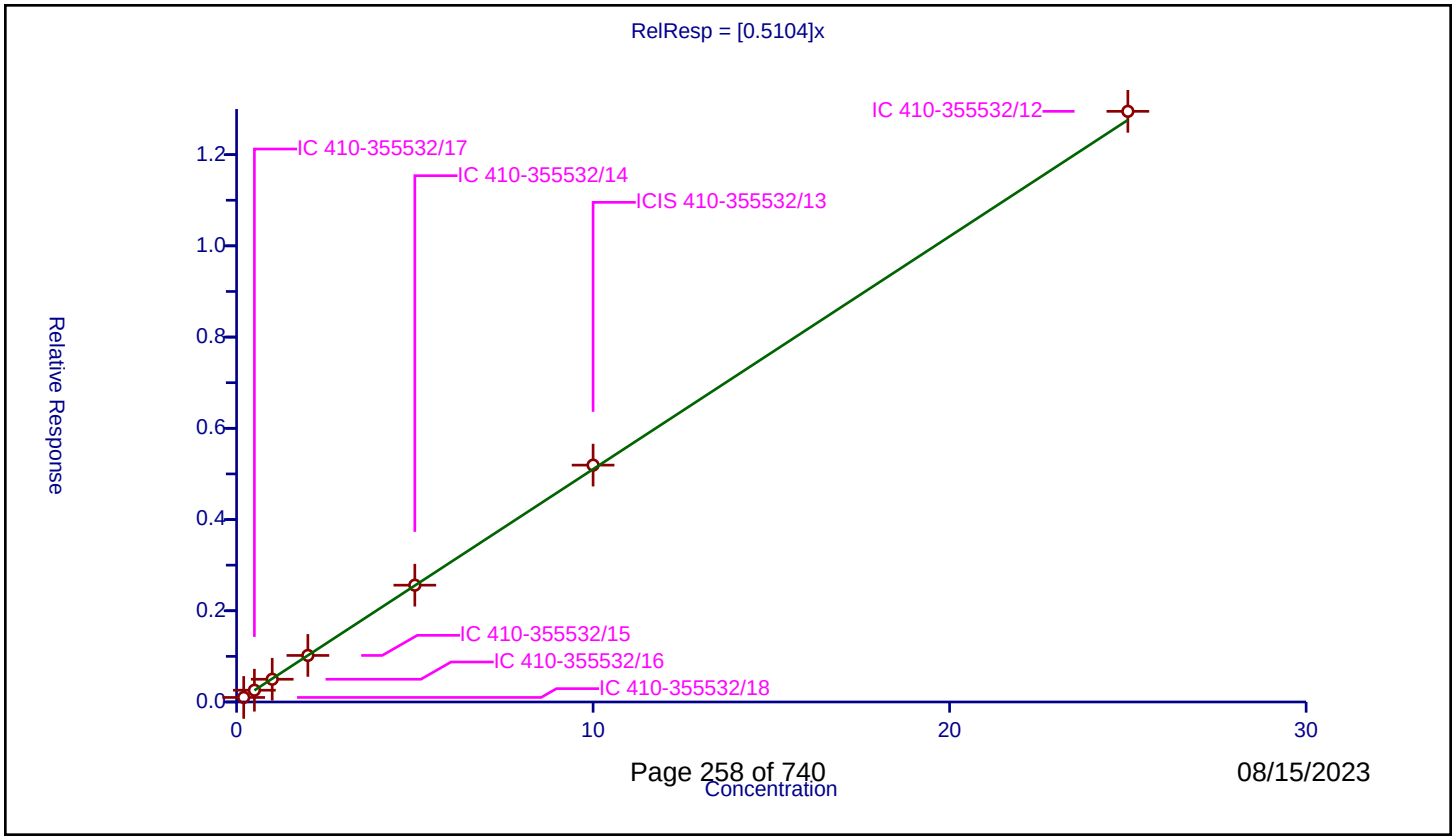
Curve Coefficients

Intercept:	0
Slope:	0.5104

Error Coefficients

Standard Error:	1400000
Relative Standard Error:	1.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.099503	10.0	2286473.0	0.497513	Y
2	IC 410-355532/17	0.5	0.258397	10.0	2310552.0	0.516794	Y
3	IC 410-355532/16	1.0	0.498648	10.0	2343275.0	0.498648	Y
4	IC 410-355532/15	2.0	1.020564	10.0	2349279.0	0.510282	Y
5	IC 410-355532/14	5.0	2.560988	10.0	2387313.0	0.512198	Y
6	ICIS 410-355532/13	10.0	5.192771	10.0	2381761.0	0.519277	Y
7	IC 410-355532/12	25.0	12.948962	10.0	2408929.0	0.517958	Y



Calibration / Cyclohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

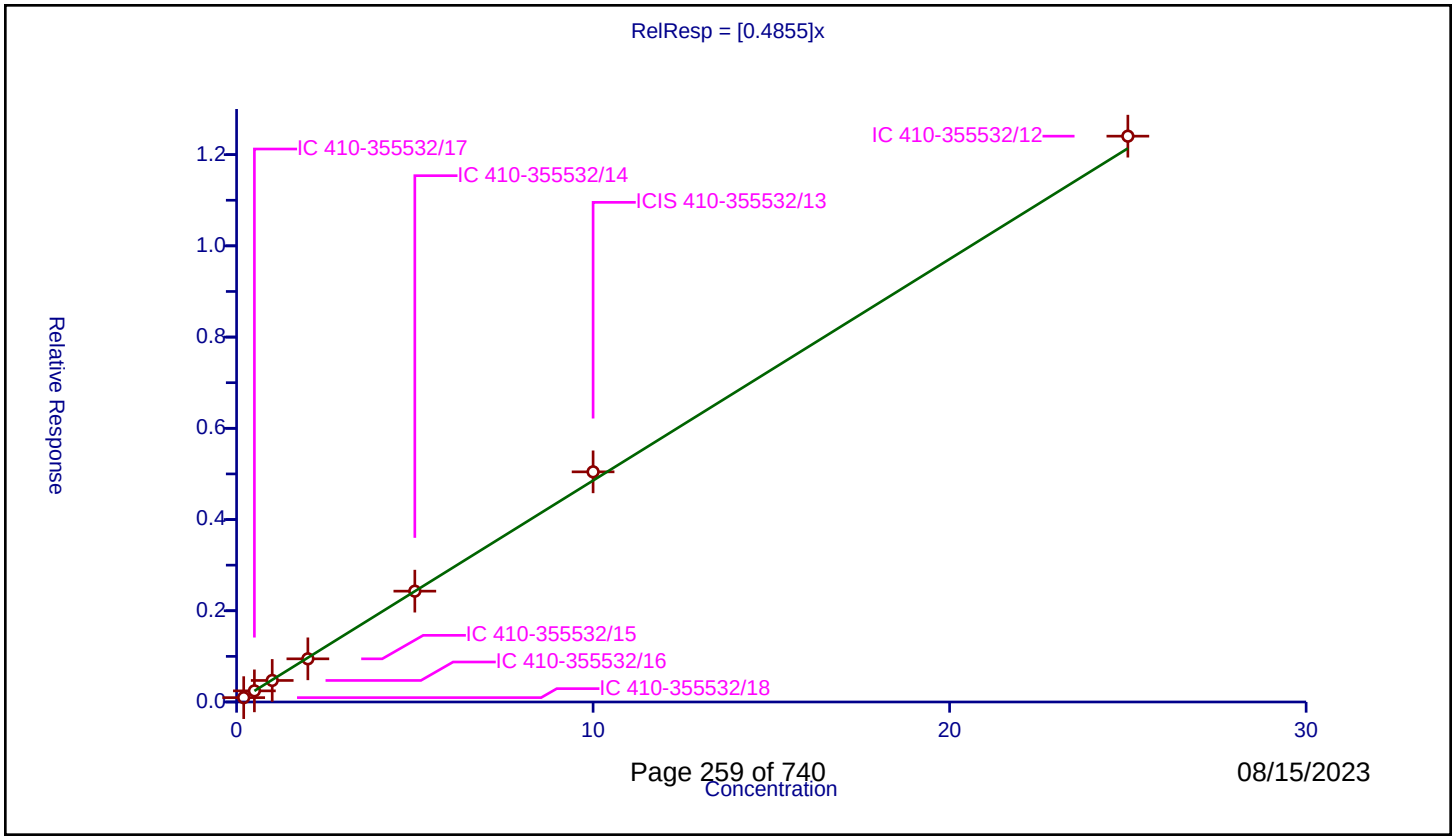
Curve Coefficients

Intercept:	0
Slope:	0.4855

Error Coefficients

Standard Error:	1340000
Relative Standard Error:	2.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.095619	10.0	2286473.0	0.478094	Y
2	IC 410-355532/17	0.5	0.244154	10.0	2310552.0	0.488308	Y
3	IC 410-355532/16	1.0	0.472309	10.0	2343275.0	0.472309	Y
4	IC 410-355532/15	2.0	0.946269	10.0	2349279.0	0.473135	Y
5	IC 410-355532/14	5.0	2.430234	10.0	2387313.0	0.486047	Y
6	ICIS 410-355532/13	10.0	5.045372	10.0	2381761.0	0.504537	Y
7	IC 410-355532/12	25.0	12.405007	10.0	2408929.0	0.4962	Y



Calibration / 1,1-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

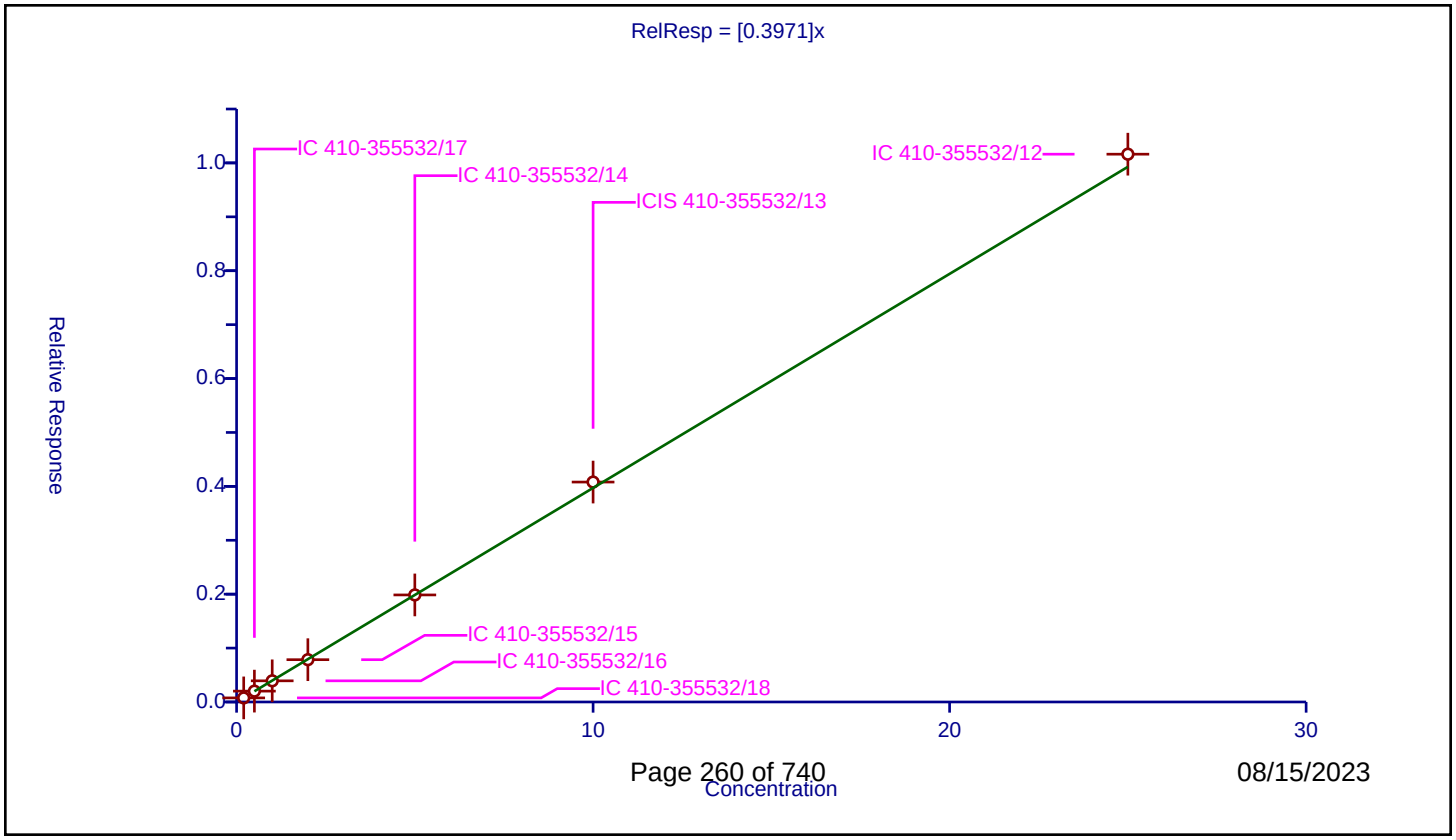
Curve Coefficients

Intercept:	0
Slope:	0.3971

Error Coefficients

Standard Error:	1100000
Relative Standard Error:	2.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.075964	10.0	2286473.0	0.379821	Y
2	IC 410-355532/17	0.5	0.201662	10.0	2310552.0	0.403324	Y
3	IC 410-355532/16	1.0	0.39231	10.0	2343275.0	0.39231	Y
4	IC 410-355532/15	2.0	0.785011	10.0	2349279.0	0.392506	Y
5	IC 410-355532/14	5.0	1.986019	10.0	2387313.0	0.397204	Y
6	ICIS 410-355532/13	10.0	4.079973	10.0	2381761.0	0.407997	Y
7	IC 410-355532/12	25.0	10.162192	10.0	2408929.0	0.406488	Y



Calibration / Carbon tetrachloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

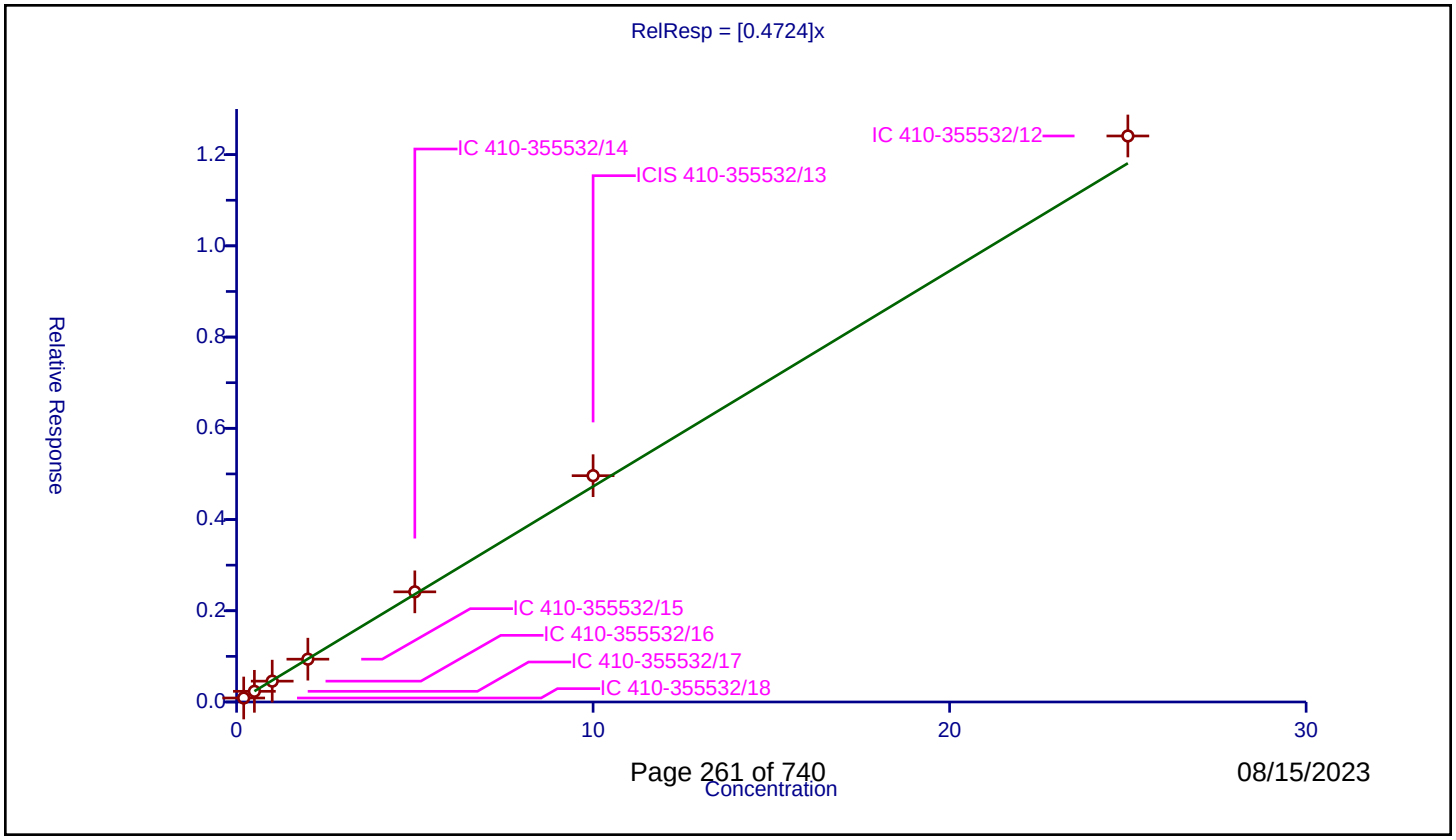
Curve Coefficients

Intercept:	0
Slope:	0.4724

Error Coefficients

Standard Error:	1340000
Relative Standard Error:	4.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.08734	10.0	2286473.0	0.436699	Y
2	IC 410-355532/17	0.5	0.23436	10.0	2310552.0	0.468719	Y
3	IC 410-355532/16	1.0	0.456903	10.0	2343275.0	0.456903	Y
4	IC 410-355532/15	2.0	0.938726	10.0	2349279.0	0.469363	Y
5	IC 410-355532/14	5.0	2.414685	10.0	2387313.0	0.482937	Y
6	ICIS 410-355532/13	10.0	4.9614	10.0	2381761.0	0.49614	Y
7	IC 410-355532/12	25.0	12.408988	10.0	2408929.0	0.49636	Y



Calibration / Isobutyl alcohol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

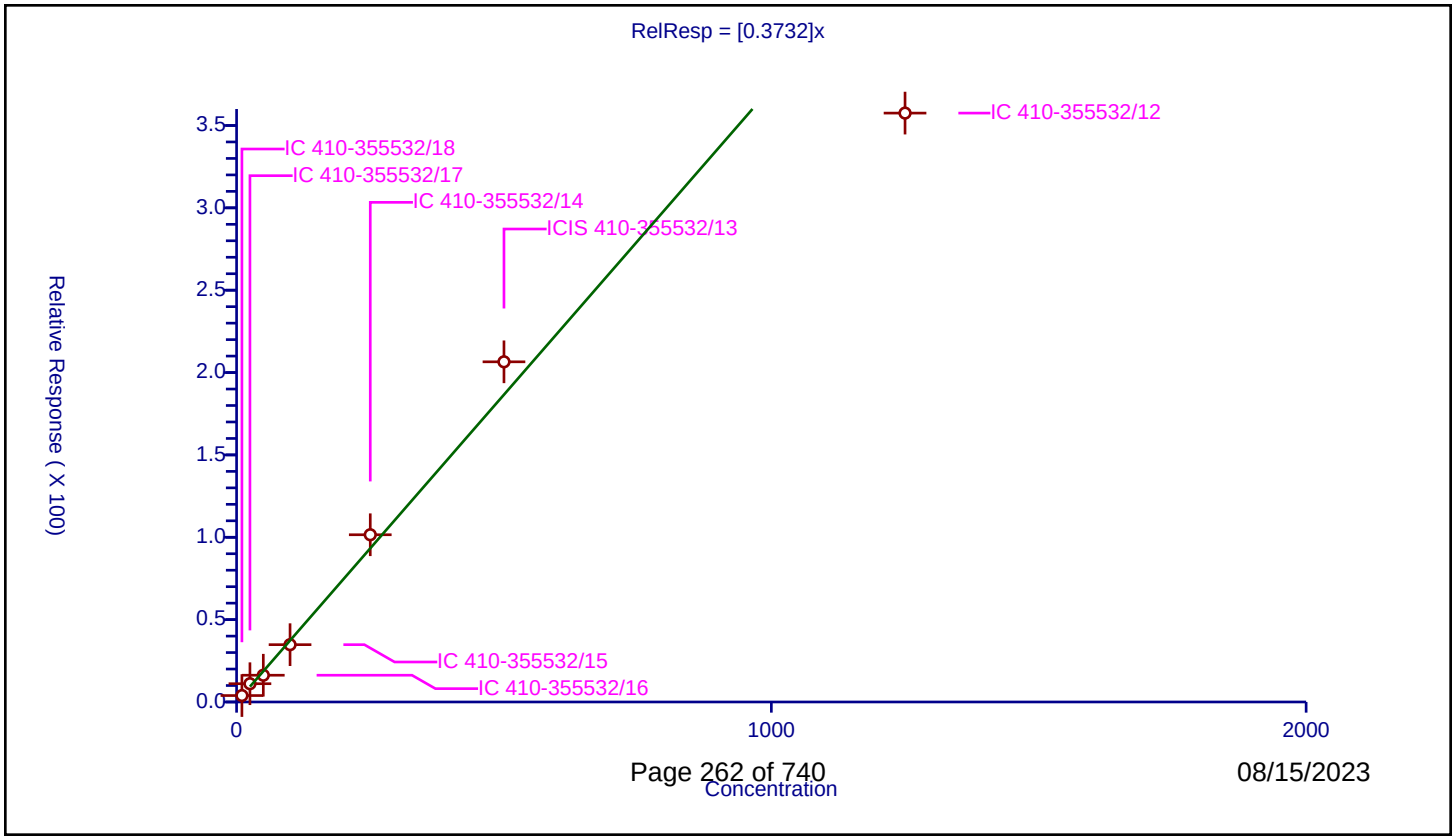
Curve Coefficients

Intercept:	0
Slope:	0.3732

Error Coefficients

Standard Error:	472000
Relative Standard Error:	14.9
Correlation Coefficient:	0.989
Coefficient of Determination (Adjusted):	0.969

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	10.0	3.90486	50.0	126445.0	0.390486	Y
2	IC 410-355532/17	25.0	11.091783	50.0	153492.0	0.443671	Y
3	IC 410-355532/16	50.0	16.240075	50.0	134008.0	0.324802	Y
4	IC 410-355532/15	100.0	34.79354	50.0	97646.0	0.347935	Y
5	IC 410-355532/14	250.0	101.539279	50.0	125221.0	0.406157	Y
6	ICIS 410-355532/13	500.0	206.529647	50.0	120956.0	0.413059	Y
7	IC 410-355532/12	1250.0	357.522657	50.0	141127.0	0.286018	Y



Calibration / 1,2-Dichloroethane-d4 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

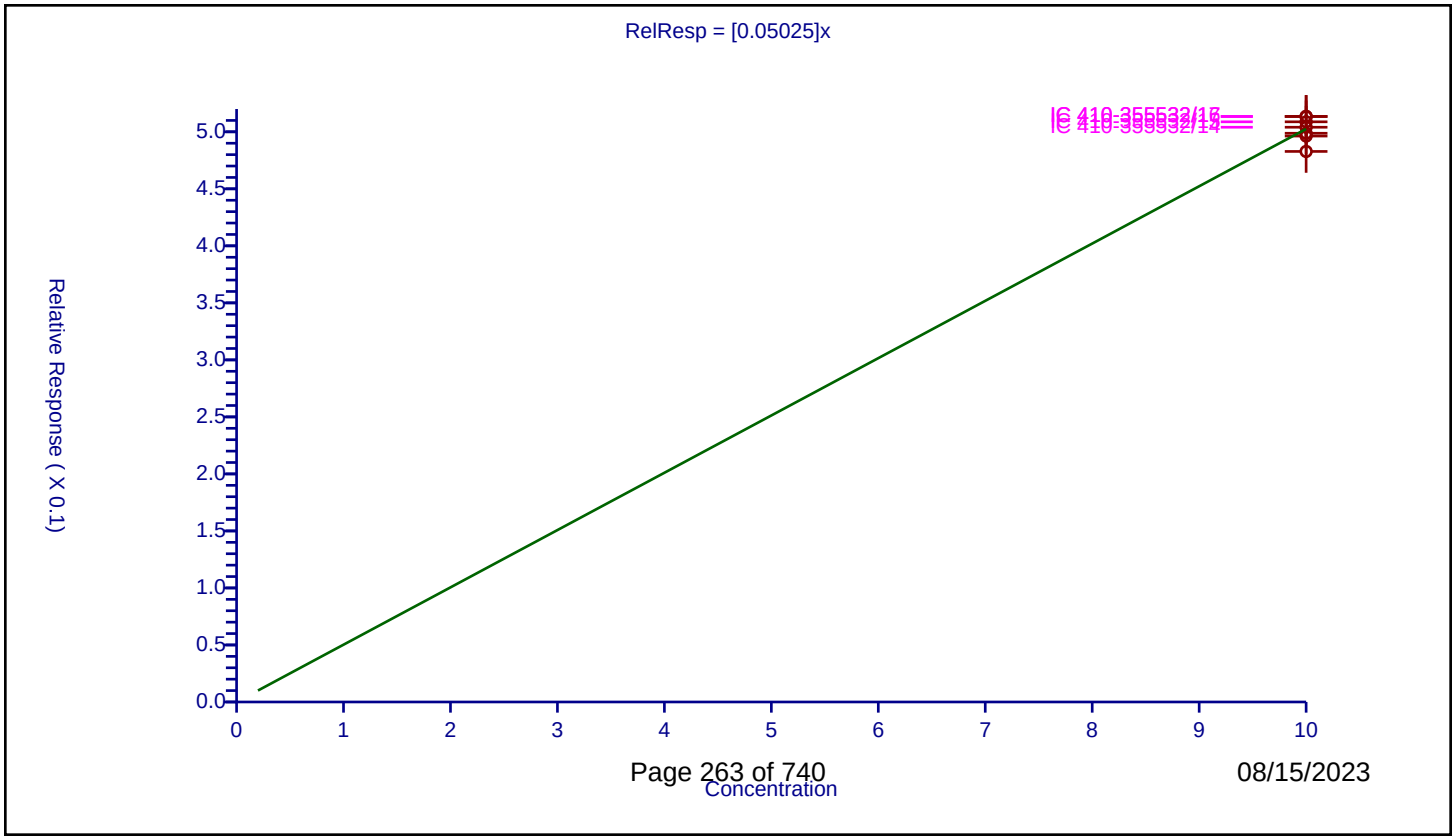
Curve Coefficients

Intercept:	0
Slope:	0.05025

Error Coefficients

Standard Error:	128000
Relative Standard Error:	2.2
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/12	10.0	0.482795	10.0	2408929.0	0.04828	Y
2	ICIS 410-355532/13	10.0	0.496297	10.0	2381761.0	0.04963	Y
3	IC 410-355532/14	10.0	0.504027	10.0	2387313.0	0.050403	Y
4	IC 410-355532/15	10.0	0.508769	10.0	2349279.0	0.050877	Y
5	IC 410-355532/16	10.0	0.51358	10.0	2343275.0	0.051358	Y
6	IC 410-355532/17	10.0	0.513384	10.0	2310552.0	0.051338	Y
7	IC 410-355532/18	10.0	0.498733	10.0	2286473.0	0.049873	Y



Calibration / Benzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

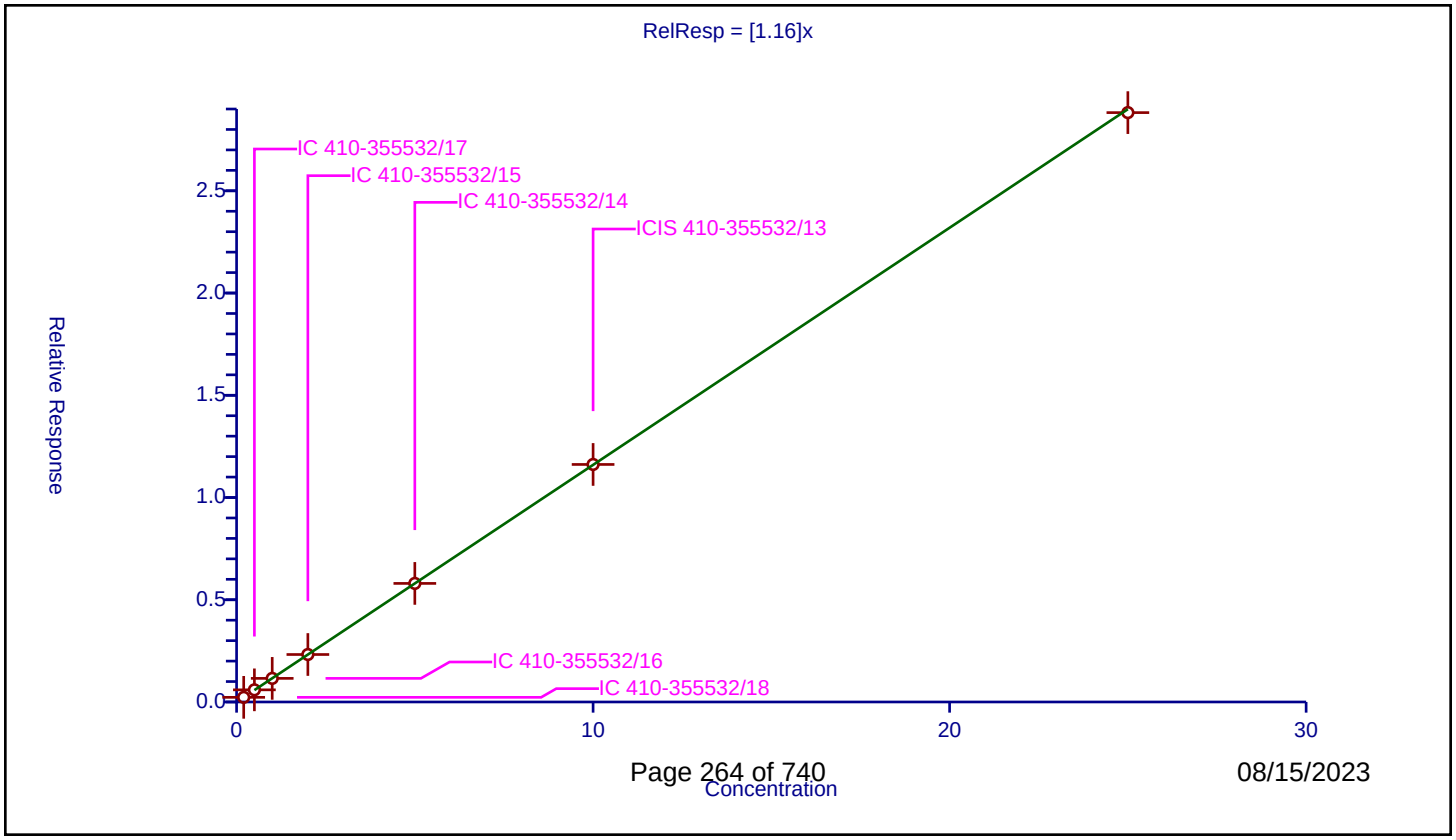
Curve Coefficients

Intercept:	0
Slope:	1.16

Error Coefficients

Standard Error:	3110000
Relative Standard Error:	1.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.227827	10.0	2286473.0	1.139134	Y
2	IC 410-355532/17	0.5	0.594269	10.0	2310552.0	1.188538	Y
3	IC 410-355532/16	1.0	1.154201	10.0	2343275.0	1.154201	Y
4	IC 410-355532/15	2.0	2.322185	10.0	2349279.0	1.161092	Y
5	IC 410-355532/14	5.0	5.799562	10.0	2387313.0	1.159912	Y
6	ICIS 410-355532/13	10.0	11.616321	10.0	2381761.0	1.161632	Y
7	IC 410-355532/12	25.0	28.824527	10.0	2408929.0	1.152981	Y



Calibration / 1,2-Dichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

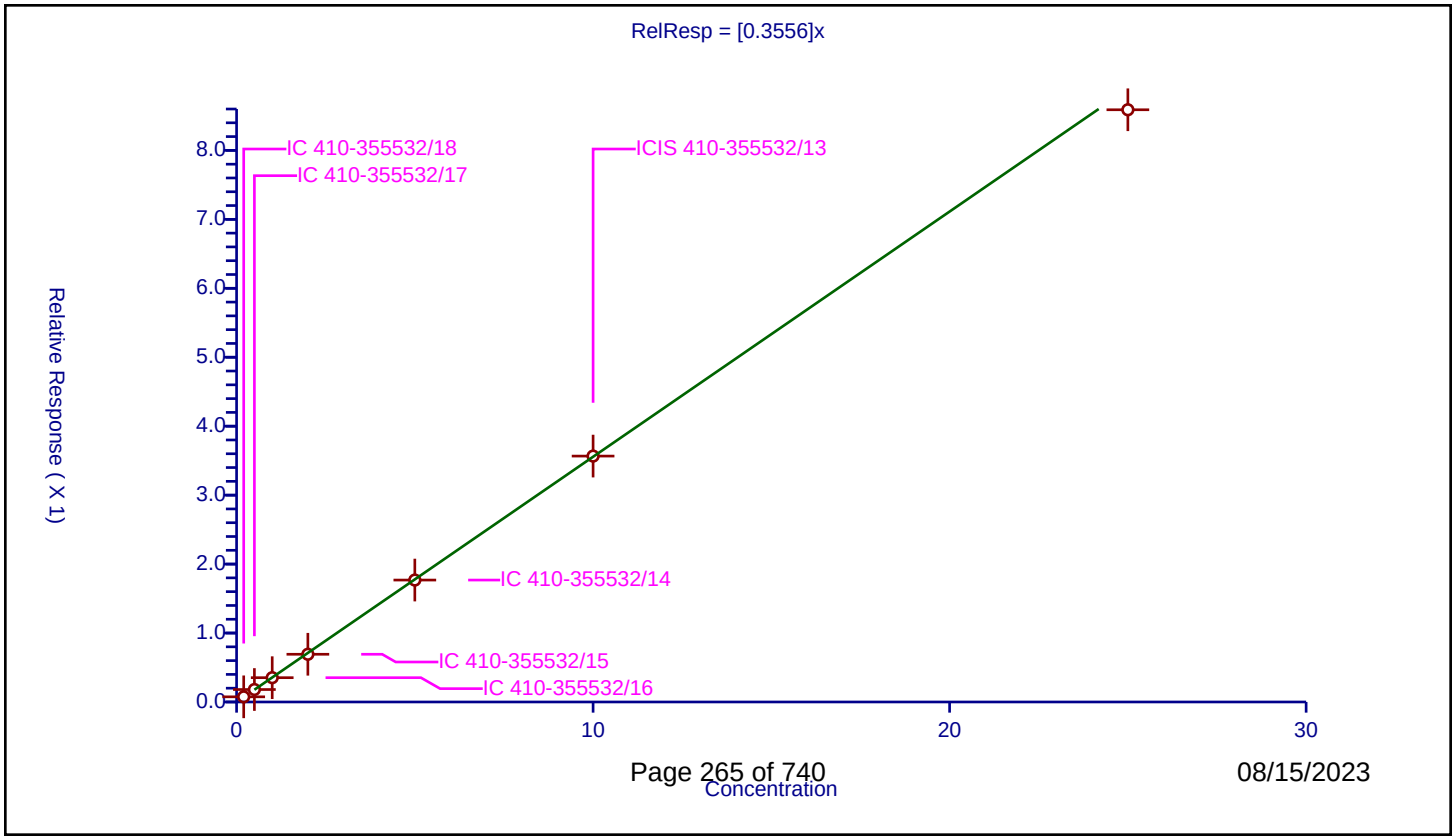
Curve Coefficients

Intercept:	0
Slope:	0.3556

Error Coefficients

Standard Error:	932000
Relative Standard Error:	3.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.074993	10.0	2286473.0	0.374966	Y
2	IC 410-355532/17	0.5	0.180939	10.0	2310552.0	0.361879	Y
3	IC 410-355532/16	1.0	0.352703	10.0	2343275.0	0.352703	Y
4	IC 410-355532/15	2.0	0.692034	10.0	2349279.0	0.346017	Y
5	IC 410-355532/14	5.0	1.768398	10.0	2387313.0	0.35368	Y
6	ICIS 410-355532/13	10.0	3.566349	10.0	2381761.0	0.356635	Y
7	IC 410-355532/12	25.0	8.589199	10.0	2408929.0	0.343568	Y



Calibration / Tert-amyl methyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

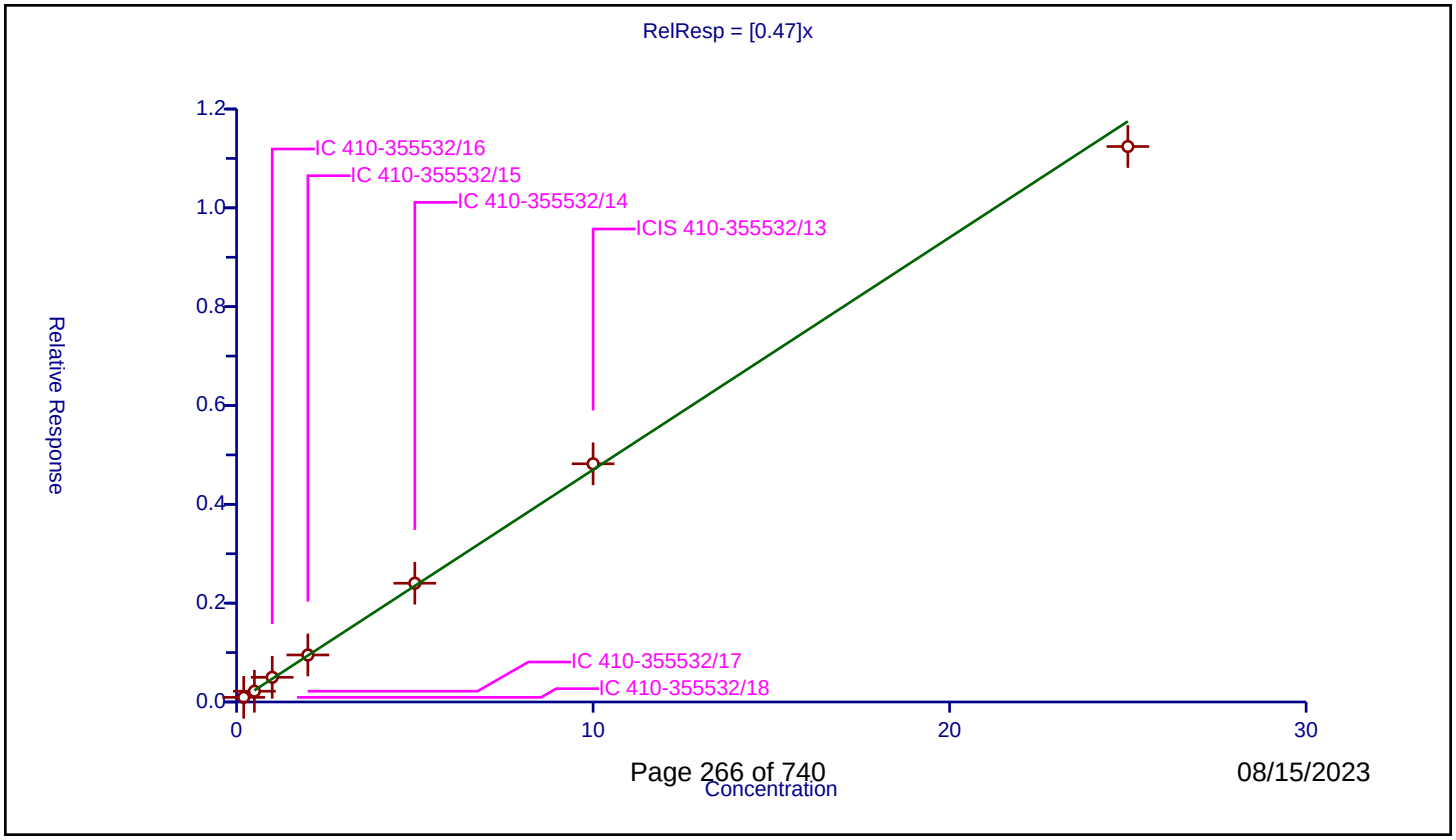
Curve Coefficients

Intercept:	0
Slope:	0.47

Error Coefficients

Standard Error:	1230000
Relative Standard Error:	4.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.093511	10.0	2286473.0	0.467554	Y
2	IC 410-355532/17	0.5	0.217667	10.0	2310552.0	0.435333	Y
3	IC 410-355532/16	1.0	0.49919	10.0	2343275.0	0.49919	Y
4	IC 410-355532/15	2.0	0.951539	10.0	2349279.0	0.475769	Y
5	IC 410-355532/14	5.0	2.403359	10.0	2387313.0	0.480672	Y
6	ICIS 410-355532/13	10.0	4.82024	10.0	2381761.0	0.482024	Y
7	IC 410-355532/12	25.0	11.241103	10.0	2408929.0	0.449644	Y



Calibration / n-Heptane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

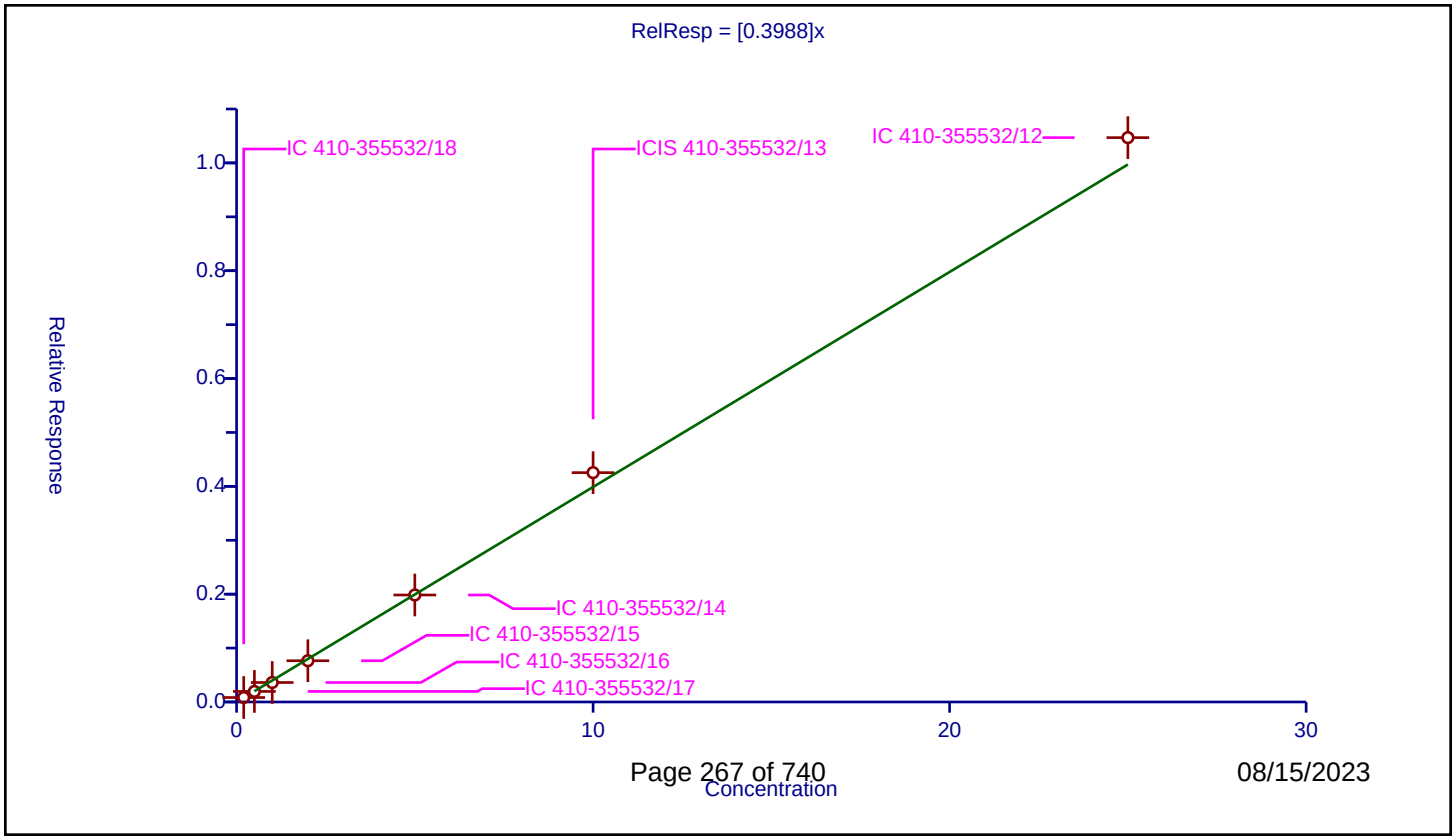
Curve Coefficients

Intercept:	0
Slope:	0.3988

Error Coefficients

Standard Error:	1130000
Relative Standard Error:	5.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.082949	10.0	2286473.0	0.414744	Y
2	IC 410-355532/17	0.5	0.196144	10.0	2310552.0	0.392287	Y
3	IC 410-355532/16	1.0	0.361174	10.0	2343275.0	0.361174	Y
4	IC 410-355532/15	2.0	0.764801	10.0	2349279.0	0.3824	Y
5	IC 410-355532/14	5.0	1.984935	10.0	2387313.0	0.396987	Y
6	ICIS 410-355532/13	10.0	4.254281	10.0	2381761.0	0.425428	Y
7	IC 410-355532/12	25.0	10.469076	10.0	2408929.0	0.418763	Y



Calibration / n-Butanol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

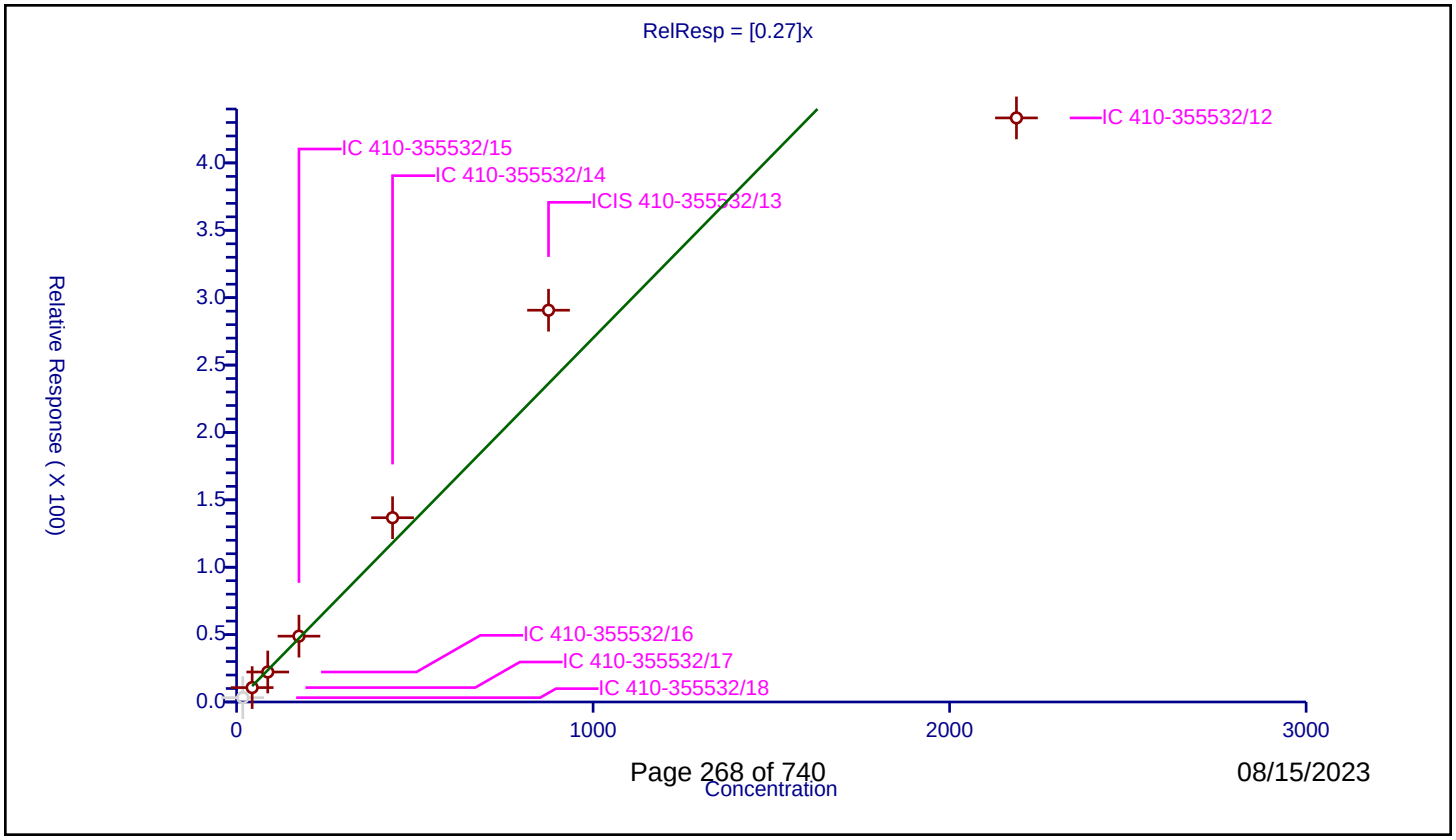
Curve Coefficients

Intercept:	0
Slope:	0.27

Error Coefficients

Standard Error:	651000
Relative Standard Error:	18.0
Correlation Coefficient:	0.966
Coefficient of Determination (Adjusted):	0.955

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	17.5	3.210487	50.0	126445.0	0.183456	N
2	IC 410-355532/17	43.75	10.66896	50.0	153492.0	0.243862	Y
3	IC 410-355532/16	87.5	22.257626	50.0	134008.0	0.254373	Y
4	IC 410-355532/15	175.0	48.839174	50.0	97646.0	0.279081	Y
5	IC 410-355532/14	437.5	136.738247	50.0	125221.0	0.312545	Y
6	ICIS 410-355532/13	875.0	290.708191	50.0	120956.0	0.332238	Y
7	IC 410-355532/12	2187.5	433.387658	50.0	141127.0	0.19812	Y



Calibration / Trichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

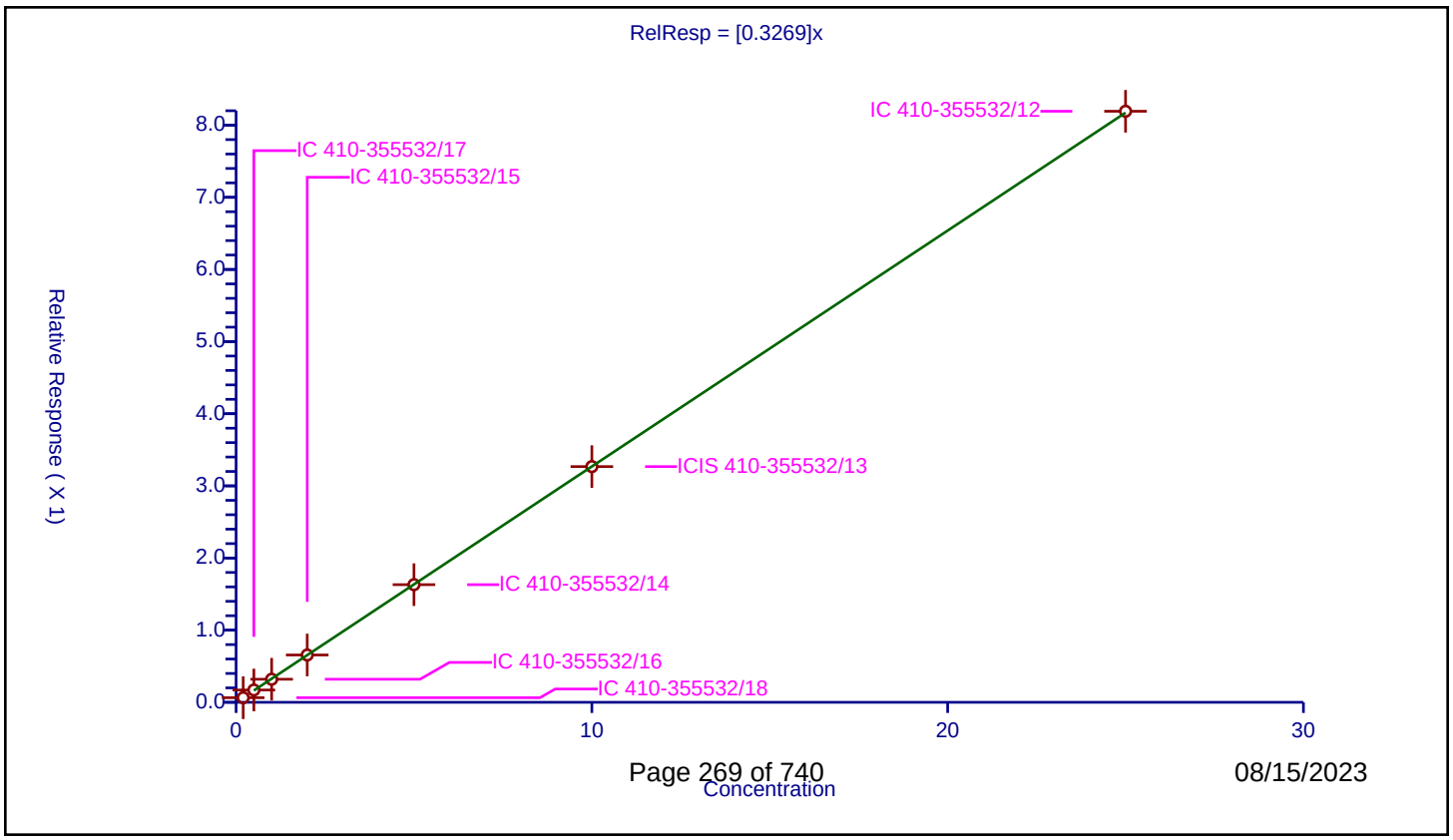
Curve Coefficients

Intercept:	0
Slope:	0.3269

Error Coefficients

Standard Error:	884000
Relative Standard Error:	2.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.063793	10.0	2286473.0	0.318963	Y
2	IC 410-355532/17	0.5	0.170626	10.0	2310552.0	0.341252	Y
3	IC 410-355532/16	1.0	0.319805	10.0	2343275.0	0.319805	Y
4	IC 410-355532/15	2.0	0.655767	10.0	2349279.0	0.327884	Y
5	IC 410-355532/14	5.0	1.630708	10.0	2387313.0	0.326142	Y
6	ICIS 410-355532/13	10.0	3.267356	10.0	2381761.0	0.326736	Y
7	IC 410-355532/12	25.0	8.193089	10.0	2408929.0	0.327724	Y



Calibration / Methylcyclohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

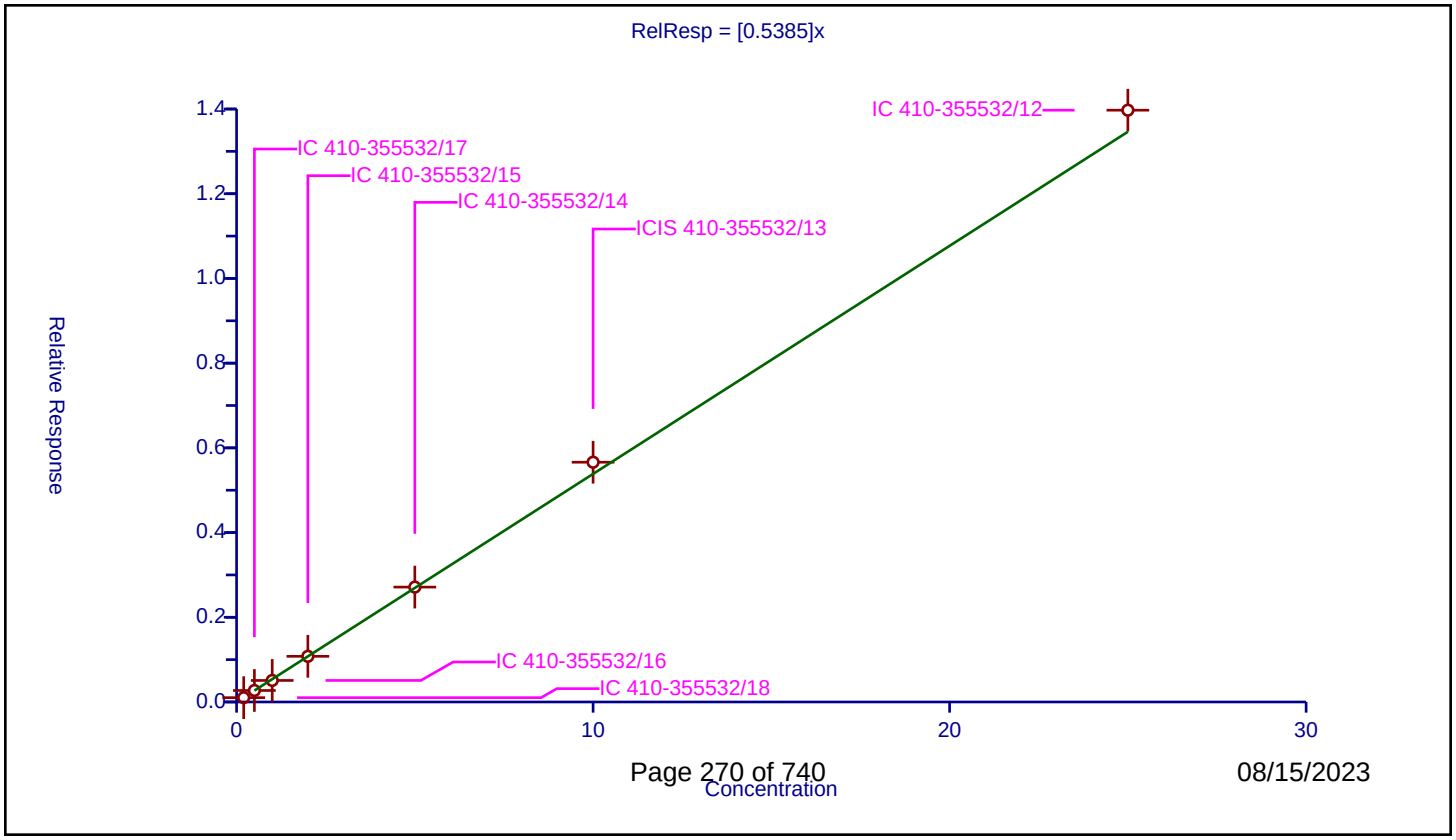
Curve Coefficients

Intercept:	0
Slope:	0.5385

Error Coefficients

Standard Error:	1510000
Relative Standard Error:	4.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.102297	10.0	2286473.0	0.511486	Y
2	IC 410-355532/17	0.5	0.271437	10.0	2310552.0	0.542875	Y
3	IC 410-355532/16	1.0	0.508515	10.0	2343275.0	0.508515	Y
4	IC 410-355532/15	2.0	1.078033	10.0	2349279.0	0.539016	Y
5	IC 410-355532/14	5.0	2.712552	10.0	2387313.0	0.54251	Y
6	ICIS 410-355532/13	10.0	5.660702	10.0	2381761.0	0.56607	Y
7	IC 410-355532/12	25.0	13.972222	10.0	2408929.0	0.558889	Y



Calibration / 1,2-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

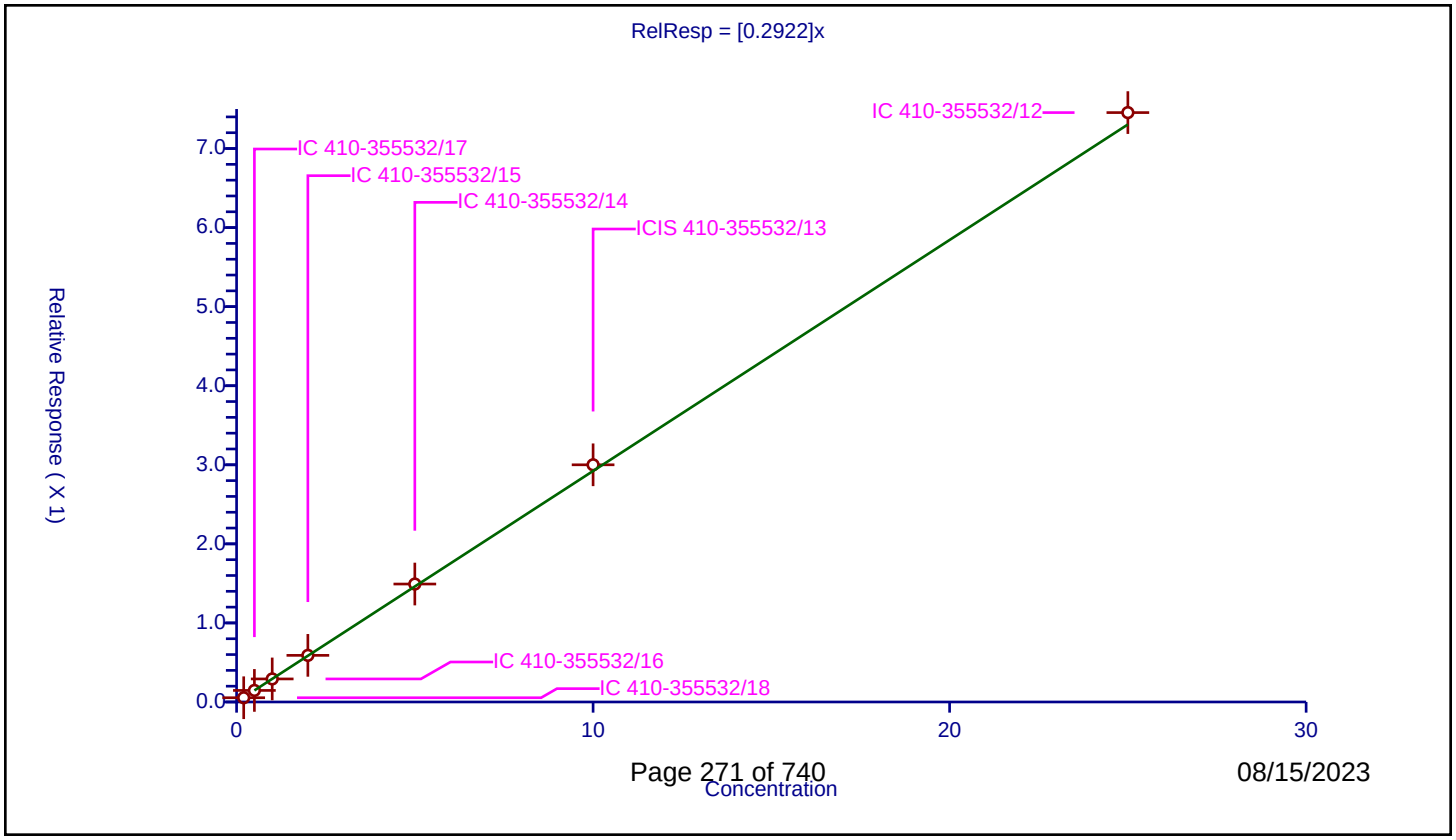
Curve Coefficients

Intercept:	0
Slope:	0.2922

Error Coefficients

Standard Error:	805000
Relative Standard Error:	3.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.05393	10.0	2286473.0	0.269651	Y
2	IC 410-355532/17	0.5	0.146342	10.0	2310552.0	0.292683	Y
3	IC 410-355532/16	1.0	0.291472	10.0	2343275.0	0.291472	Y
4	IC 410-355532/15	2.0	0.589636	10.0	2349279.0	0.294818	Y
5	IC 410-355532/14	5.0	1.491924	10.0	2387313.0	0.298385	Y
6	ICIS 410-355532/13	10.0	3.0001	10.0	2381761.0	0.30001	Y
7	IC 410-355532/12	25.0	7.454649	10.0	2408929.0	0.298186	Y



Calibration / Methyl methacrylate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

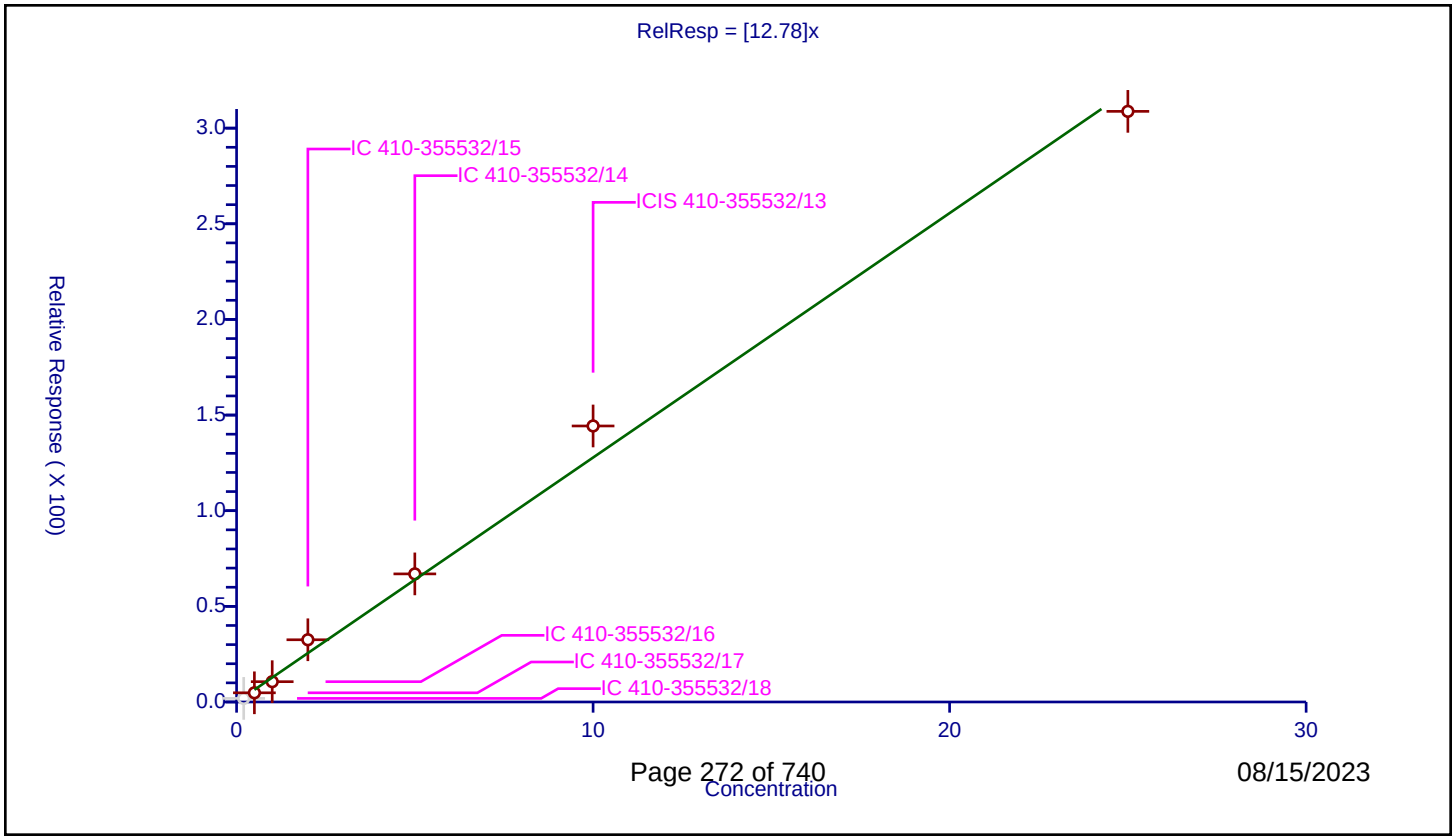
Curve Coefficients

Intercept:	0
Slope:	12.78

Error Coefficients

Standard Error:	428000
Relative Standard Error:	19.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.955

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	1.869983	50.0	126445.0	9.349915	N
2	IC 410-355532/17	0.5	4.809371	50.0	153492.0	9.618742	Y
3	IC 410-355532/16	1.0	10.612053	50.0	134008.0	10.612053	Y
4	IC 410-355532/15	2.0	32.530774	50.0	97646.0	16.265387	Y
5	IC 410-355532/14	5.0	66.971195	50.0	125221.0	13.394239	Y
6	ICIS 410-355532/13	10.0	144.295446	50.0	120956.0	14.429545	Y
7	IC 410-355532/12	25.0	308.767989	50.0	141127.0	12.35072	Y



Calibration / Dibromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

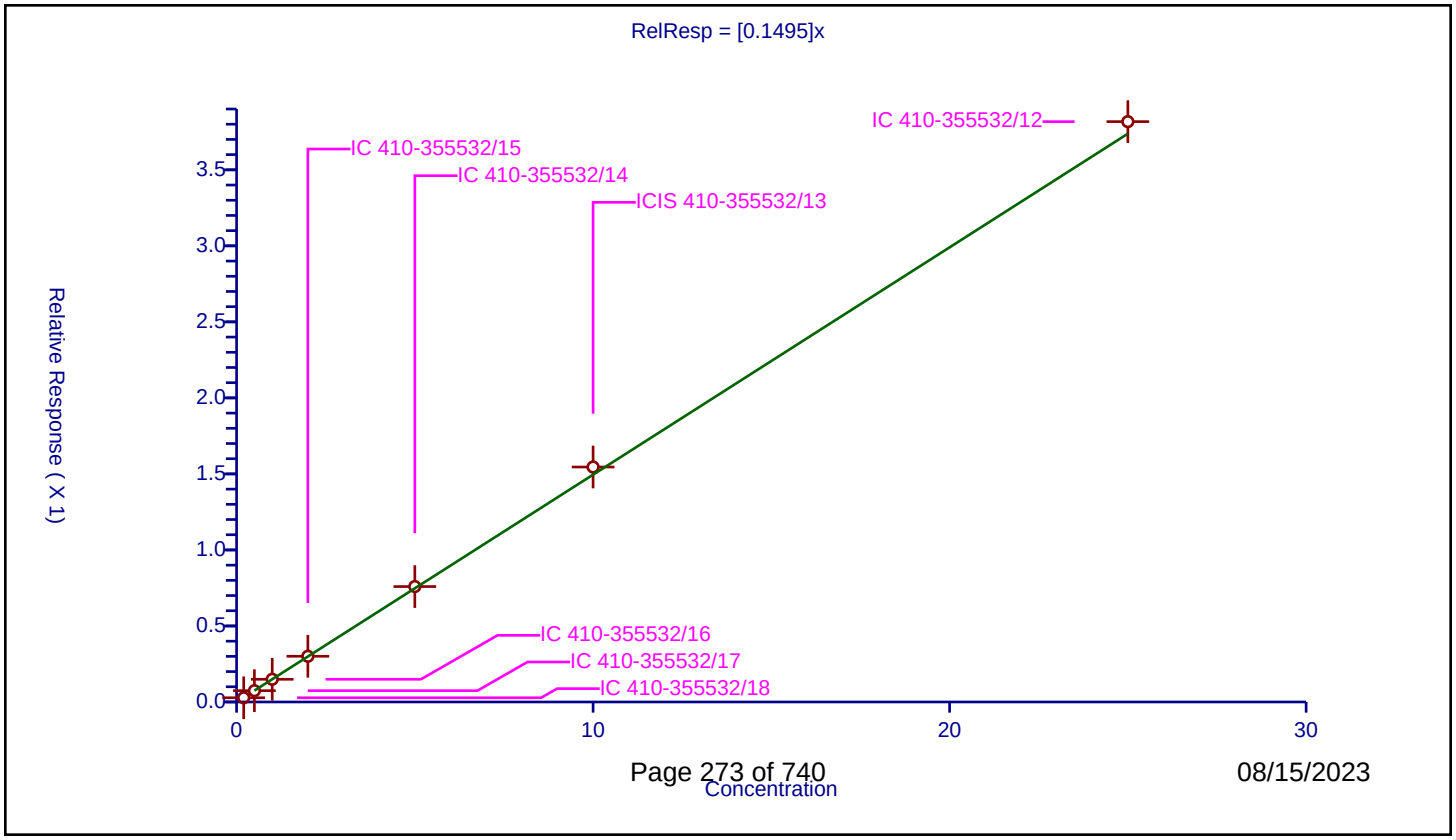
Curve Coefficients

Intercept:	0
Slope:	0.1495

Error Coefficients

Standard Error:	412000
Relative Standard Error:	3.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.027794	10.0	2286473.0	0.138969	Y
2	IC 410-355532/17	0.5	0.074363	10.0	2310552.0	0.148726	Y
3	IC 410-355532/16	1.0	0.149428	10.0	2343275.0	0.149428	Y
4	IC 410-355532/15	2.0	0.300748	10.0	2349279.0	0.150374	Y
5	IC 410-355532/14	5.0	0.759184	10.0	2387313.0	0.151837	Y
6	ICIS 410-355532/13	10.0	1.545441	10.0	2381761.0	0.154544	Y
7	IC 410-355532/12	25.0	3.81697	10.0	2408929.0	0.152679	Y



Calibration / 1,4-Dioxane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

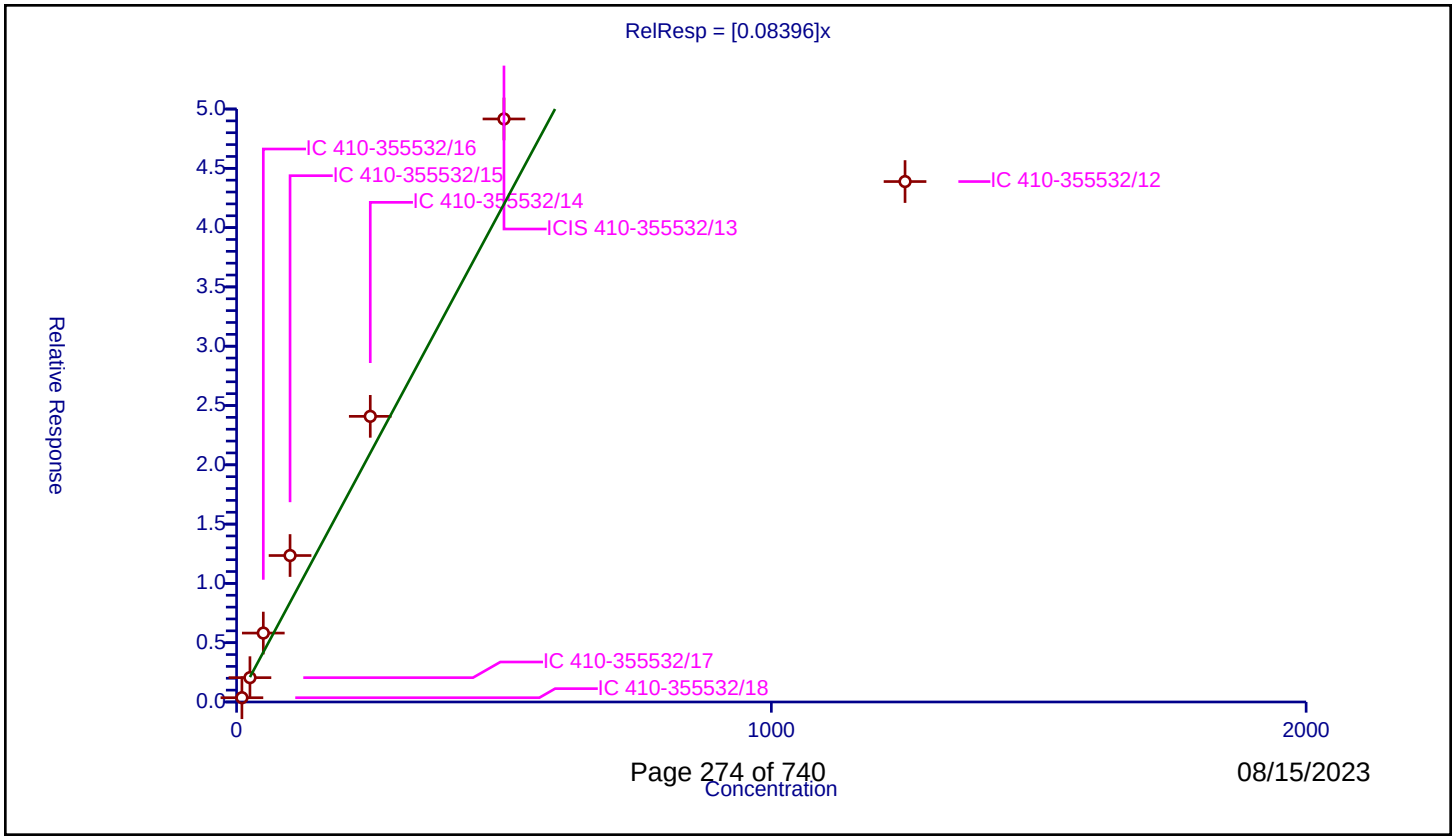
Curve Coefficients

Intercept:	0
Slope:	0.08396

Error Coefficients

Standard Error:	75200
Relative Standard Error:	42.5
Correlation Coefficient:	0.767
Coefficient of Determination (Adjusted):	0.837

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	10.0	0.361817	50.0	126445.0	0.036182	Y
2	IC 410-355532/17	25.0	2.050921	50.0	153492.0	0.082037	Y
3	IC 410-355532/16	50.0	5.811593	50.0	134008.0	0.116232	Y
4	IC 410-355532/15	100.0	12.351248	50.0	97646.0	0.123512	Y
5	IC 410-355532/14	250.0	24.085018	50.0	125221.0	0.09634	Y
6	ICIS 410-355532/13	500.0	49.161265	50.0	120956.0	0.098323	Y
7	IC 410-355532/12	1250.0	43.884586	50.0	141127.0	0.035108	Y



Calibration / Dichlorobromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

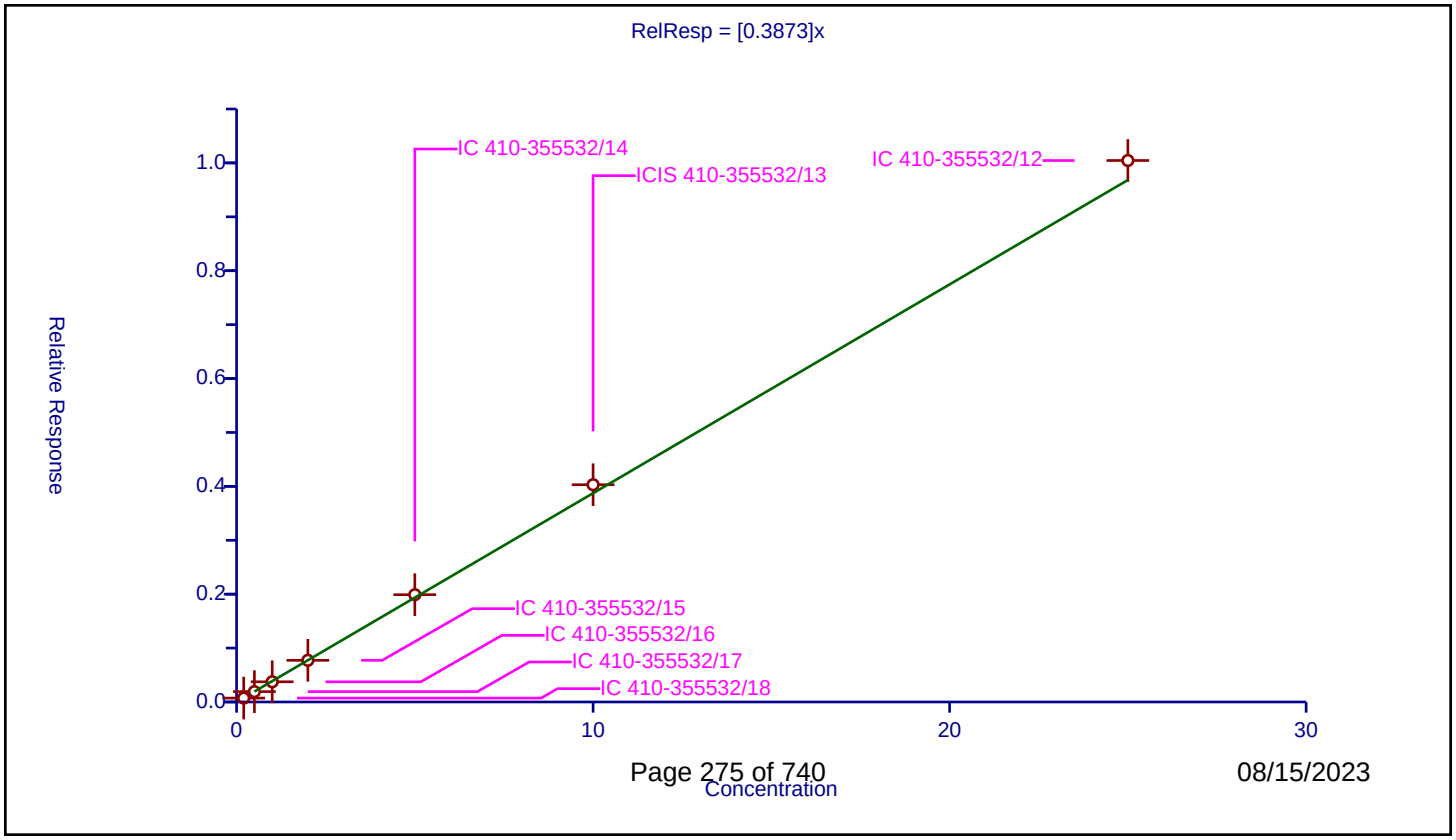
Curve Coefficients

Intercept:	0
Slope:	0.3873

Error Coefficients

Standard Error:	1080000
Relative Standard Error:	3.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.072522	10.0	2286473.0	0.362611	Y
2	IC 410-355532/17	0.5	0.192175	10.0	2310552.0	0.38435	Y
3	IC 410-355532/16	1.0	0.374822	10.0	2343275.0	0.374822	Y
4	IC 410-355532/15	2.0	0.772884	10.0	2349279.0	0.386442	Y
5	IC 410-355532/14	5.0	1.990455	10.0	2387313.0	0.398091	Y
6	ICIS 410-355532/13	10.0	4.03064	10.0	2381761.0	0.403064	Y
7	IC 410-355532/12	25.0	10.044721	10.0	2408929.0	0.401789	Y



Calibration / 2-Nitropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

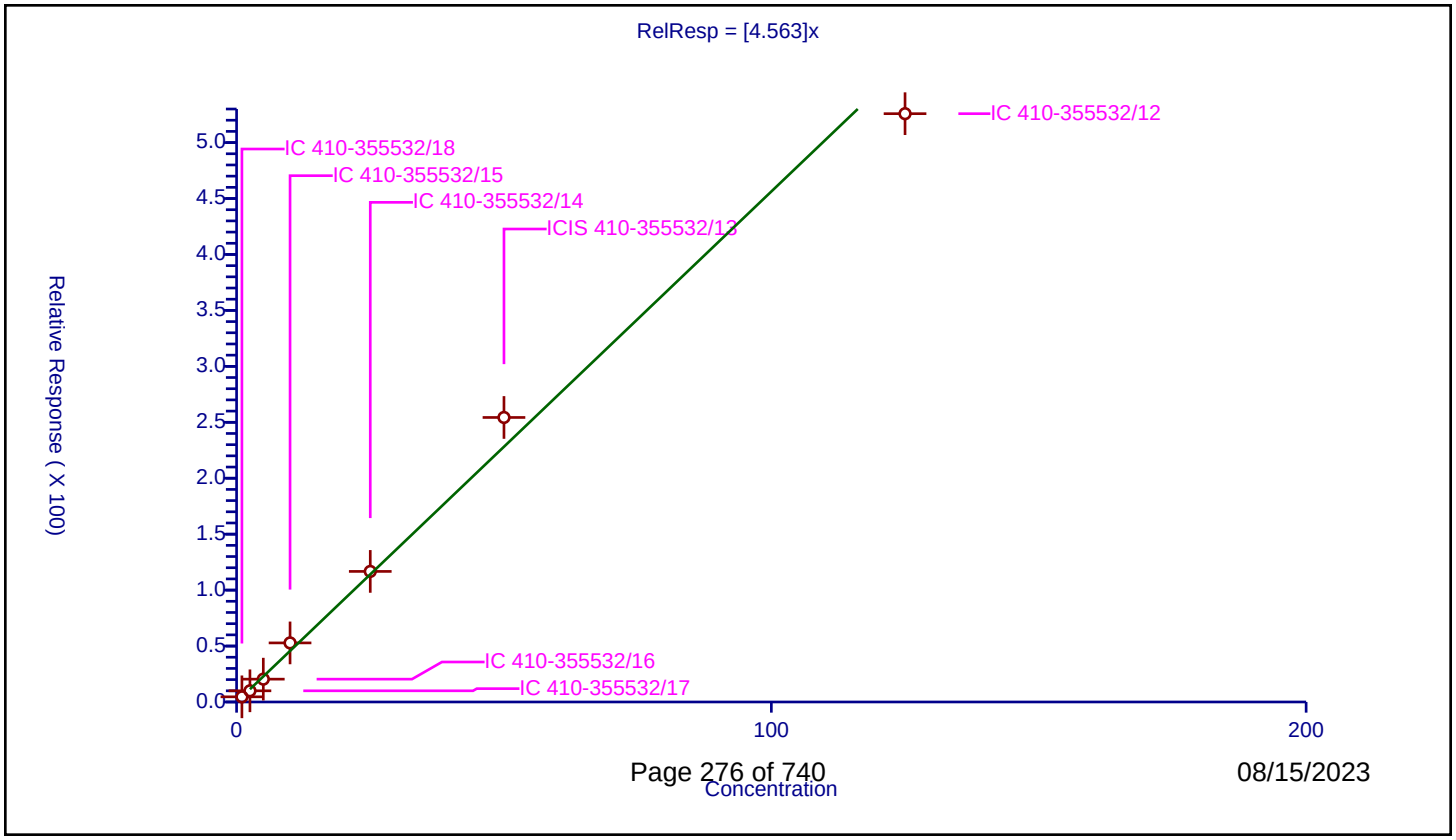
Curve Coefficients

Intercept:	0
Slope:	4.563

Error Coefficients

Standard Error:	668000
Relative Standard Error:	10.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	1.0	4.617027	50.0	126445.0	4.617027	Y
2	IC 410-355532/17	2.5	9.993355	50.0	153492.0	3.997342	Y
3	IC 410-355532/16	5.0	20.416318	50.0	134008.0	4.083264	Y
4	IC 410-355532/15	10.0	52.811175	50.0	97646.0	5.281118	Y
5	IC 410-355532/14	25.0	116.700474	50.0	125221.0	4.668019	Y
6	ICIS 410-355532/13	50.0	254.306938	50.0	120956.0	5.086139	Y
7	IC 410-355532/12	125.0	525.8278	50.0	141127.0	4.206622	Y



Calibration / 1-Bromo-2-chloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

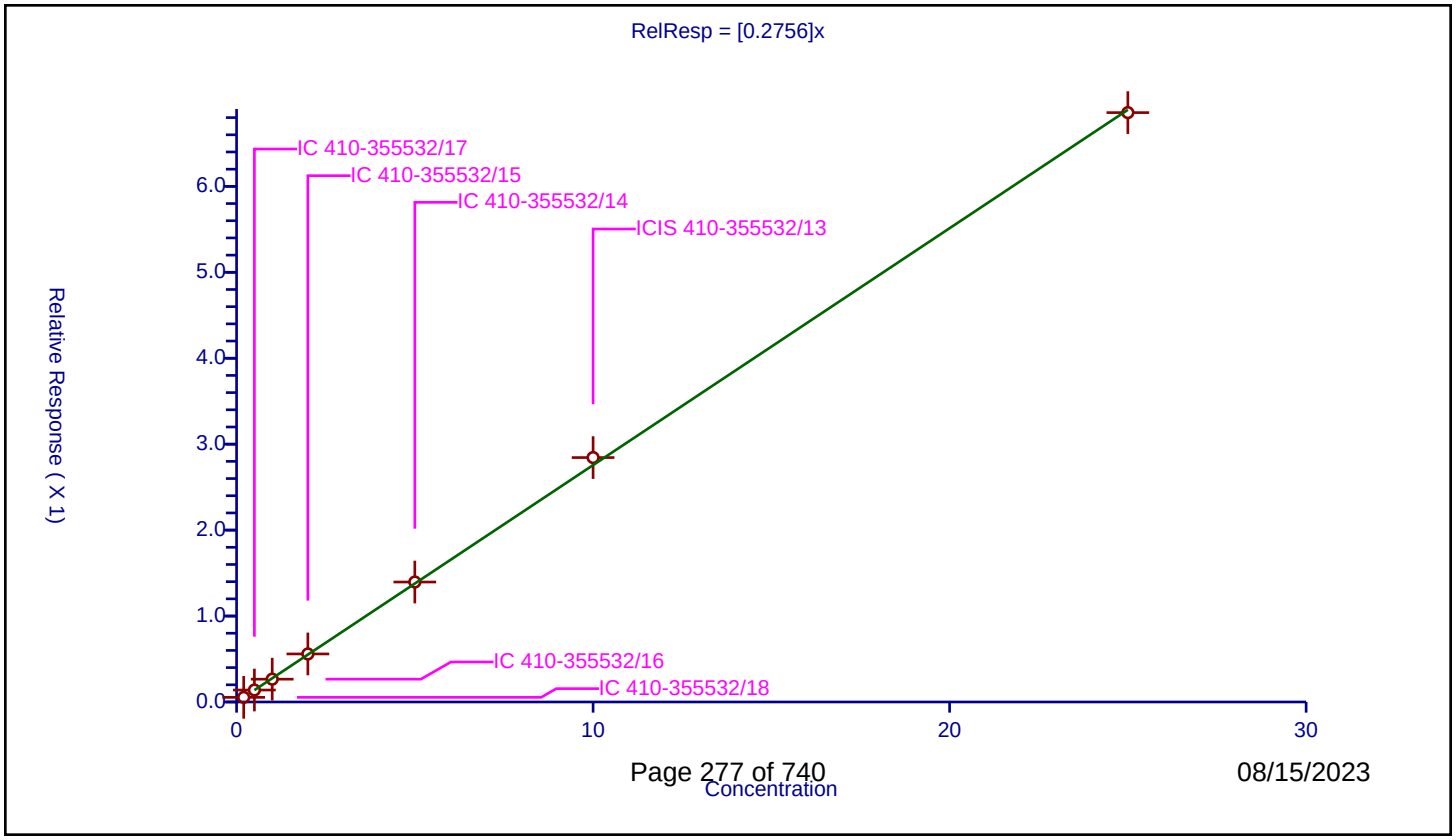
Curve Coefficients

Intercept:	0
Slope:	0.2756

Error Coefficients

Standard Error:	744000
Relative Standard Error:	2.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.053707	10.0	2286473.0	0.268536	Y
2	IC 410-355532/17	0.5	0.139023	10.0	2310552.0	0.278046	Y
3	IC 410-355532/16	1.0	0.265487	10.0	2343275.0	0.265487	Y
4	IC 410-355532/15	2.0	0.559099	10.0	2349279.0	0.27955	Y
5	IC 410-355532/14	5.0	1.395829	10.0	2387313.0	0.279166	Y
6	ICIS 410-355532/13	10.0	2.84416	10.0	2381761.0	0.284416	Y
7	IC 410-355532/12	25.0	6.858044	10.0	2408929.0	0.274322	Y



Calibration / cis-1,3-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

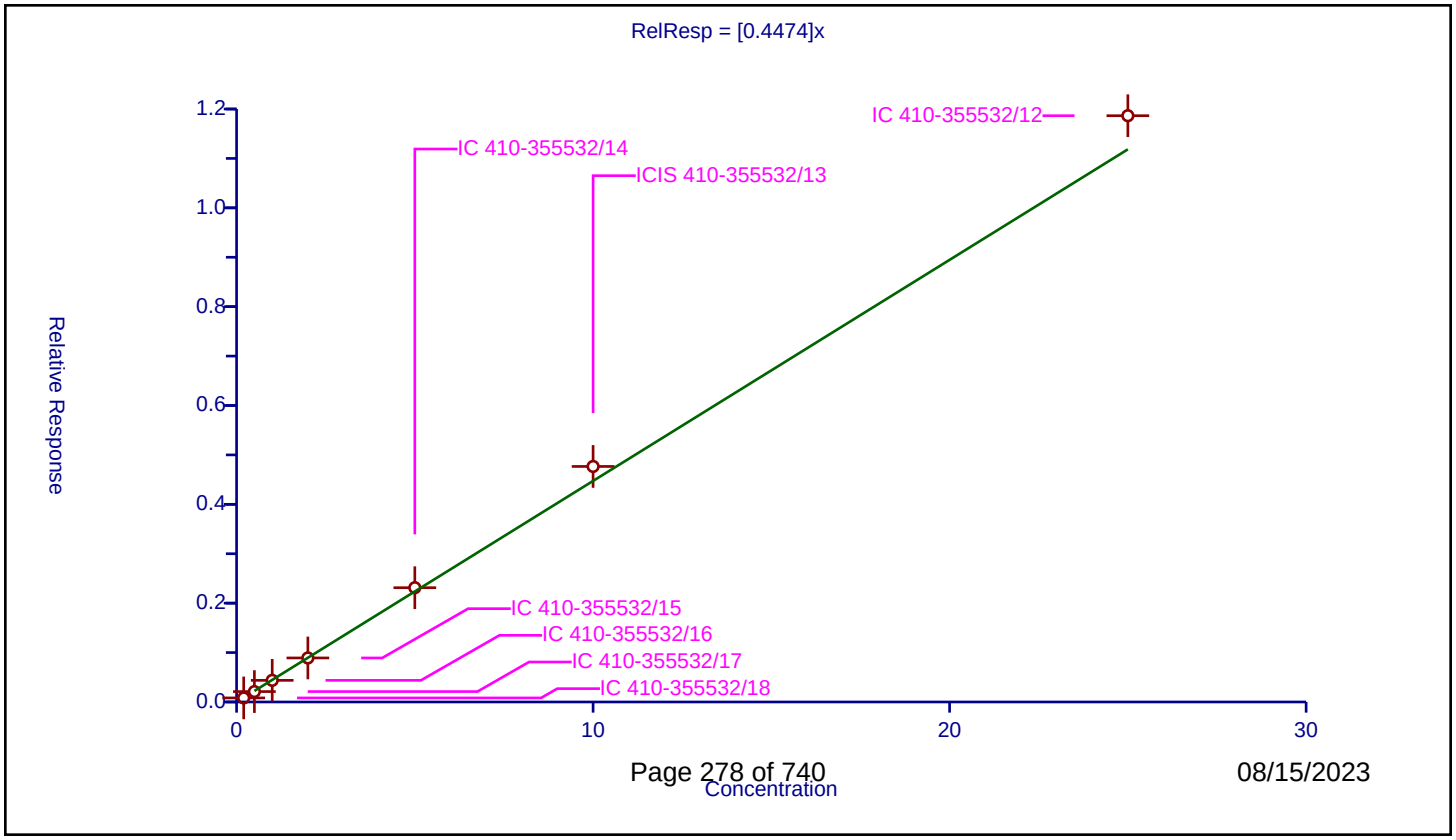
Curve Coefficients

Intercept:	0
Slope:	0.4474

Error Coefficients

Standard Error:	1280000
Relative Standard Error:	5.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.082468	10.0	2286473.0	0.412338	Y
2	IC 410-355532/17	0.5	0.210859	10.0	2310552.0	0.421717	Y
3	IC 410-355532/16	1.0	0.438002	10.0	2343275.0	0.438002	Y
4	IC 410-355532/15	2.0	0.891384	10.0	2349279.0	0.445692	Y
5	IC 410-355532/14	5.0	2.31278	10.0	2387313.0	0.462556	Y
6	ICIS 410-355532/13	10.0	4.766402	10.0	2381761.0	0.47664	Y
7	IC 410-355532/12	25.0	11.864409	10.0	2408929.0	0.474576	Y



Calibration / 4-Methyl-2-pentanone (MIBK)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

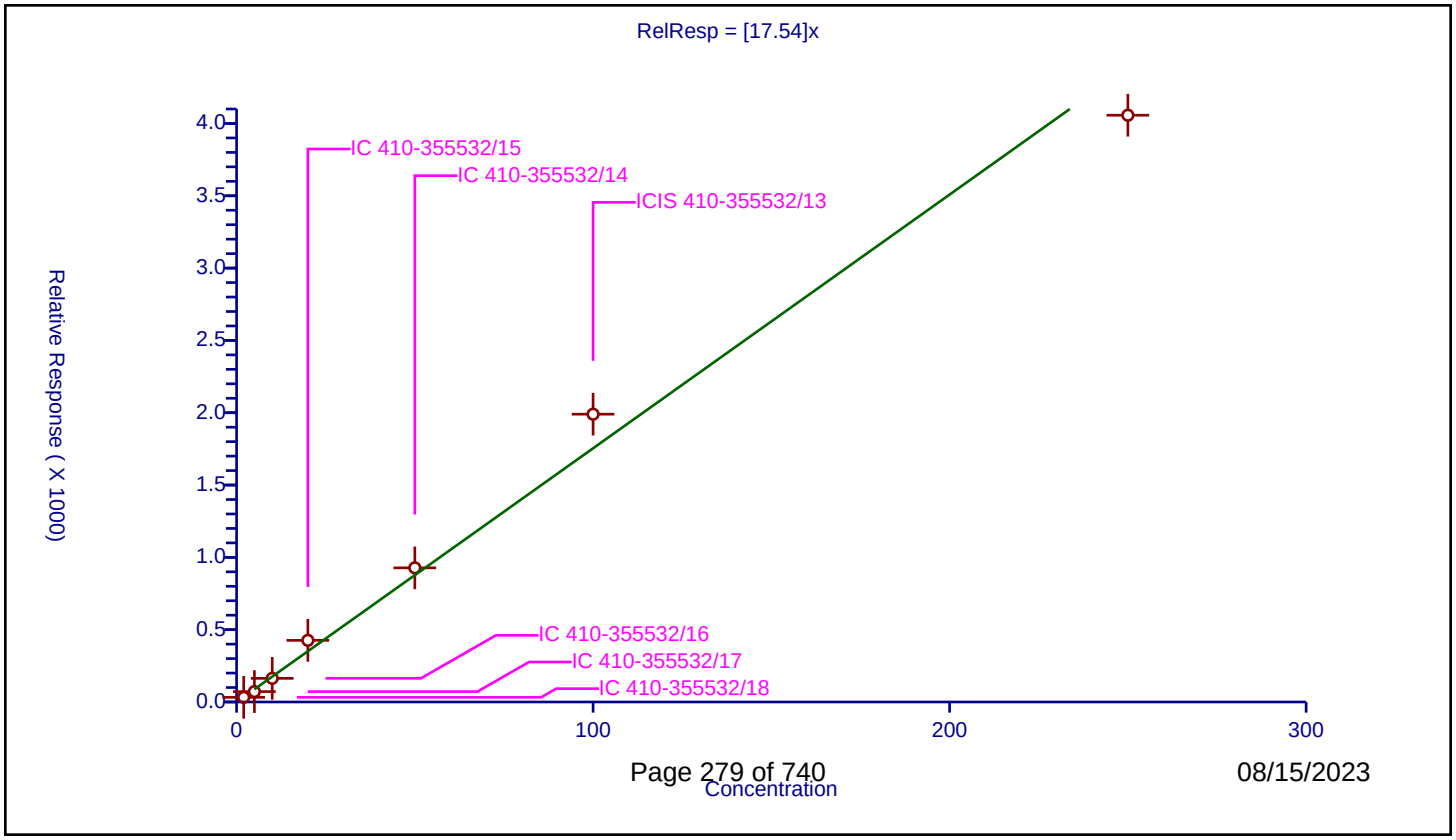
Curve Coefficients

Intercept:	0
Slope:	17.54

Error Coefficients

Standard Error:	5170000
Relative Standard Error:	14.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.976

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	2.0	32.187117	50.0	126445.0	16.093558	Y
2	IC 410-355532/17	5.0	71.851953	50.0	153492.0	14.370391	Y
3	IC 410-355532/16	10.0	163.426064	50.0	134008.0	16.342606	Y
4	IC 410-355532/15	20.0	426.192061	50.0	97646.0	21.309603	Y
5	IC 410-355532/14	50.0	927.439088	50.0	125221.0	18.548782	Y
6	ICIS 410-355532/13	100.0	1989.868217	50.0	120956.0	19.898682	Y
7	IC 410-355532/12	250.0	4057.115931	50.0	141127.0	16.228464	Y



Calibration / Toluene-d8 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

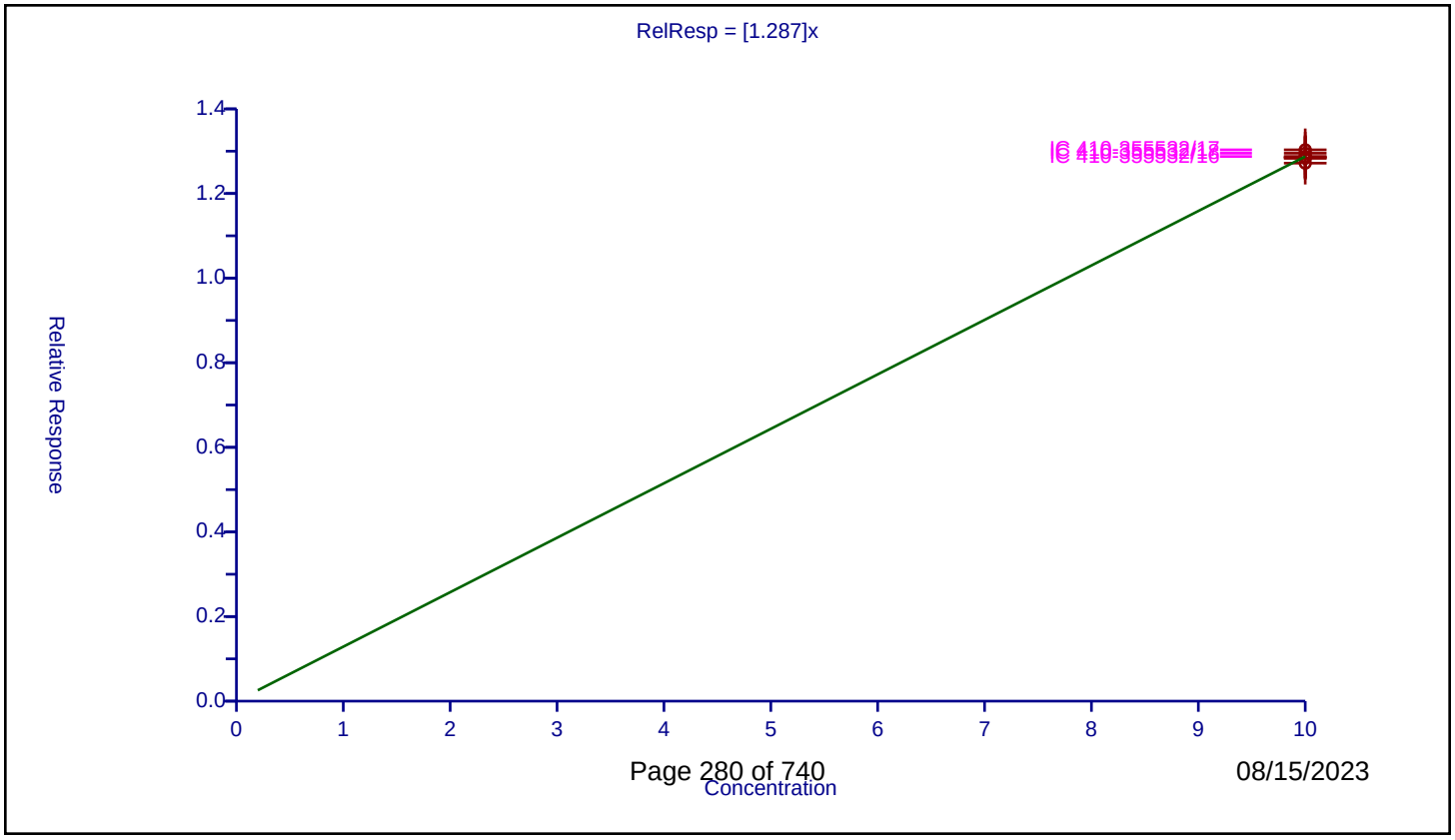
Curve Coefficients

Intercept:	0
Slope:	1.287

Error Coefficients

Standard Error:	2570000
Relative Standard Error:	0.8
Correlation Coefficient:	0.00000000000000000000
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/12	10.0	12.717465	10.0	1936058.0	1.271747	Y
2	ICIS 410-355532/13	10.0	12.832379	10.0	1886594.0	1.283238	Y
3	IC 410-355532/14	10.0	12.84399	10.0	1885942.0	1.284399	Y
4	IC 410-355532/15	10.0	12.862453	10.0	1844928.0	1.286245	Y
5	IC 410-355532/16	10.0	12.87498	10.0	1818962.0	1.287498	Y
6	IC 410-355532/17	10.0	13.032143	10.0	1779098.0	1.303214	Y
7	IC 410-355532/18	10.0	12.951626	10.0	1770499.0	1.295163	Y



Calibration / Toluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

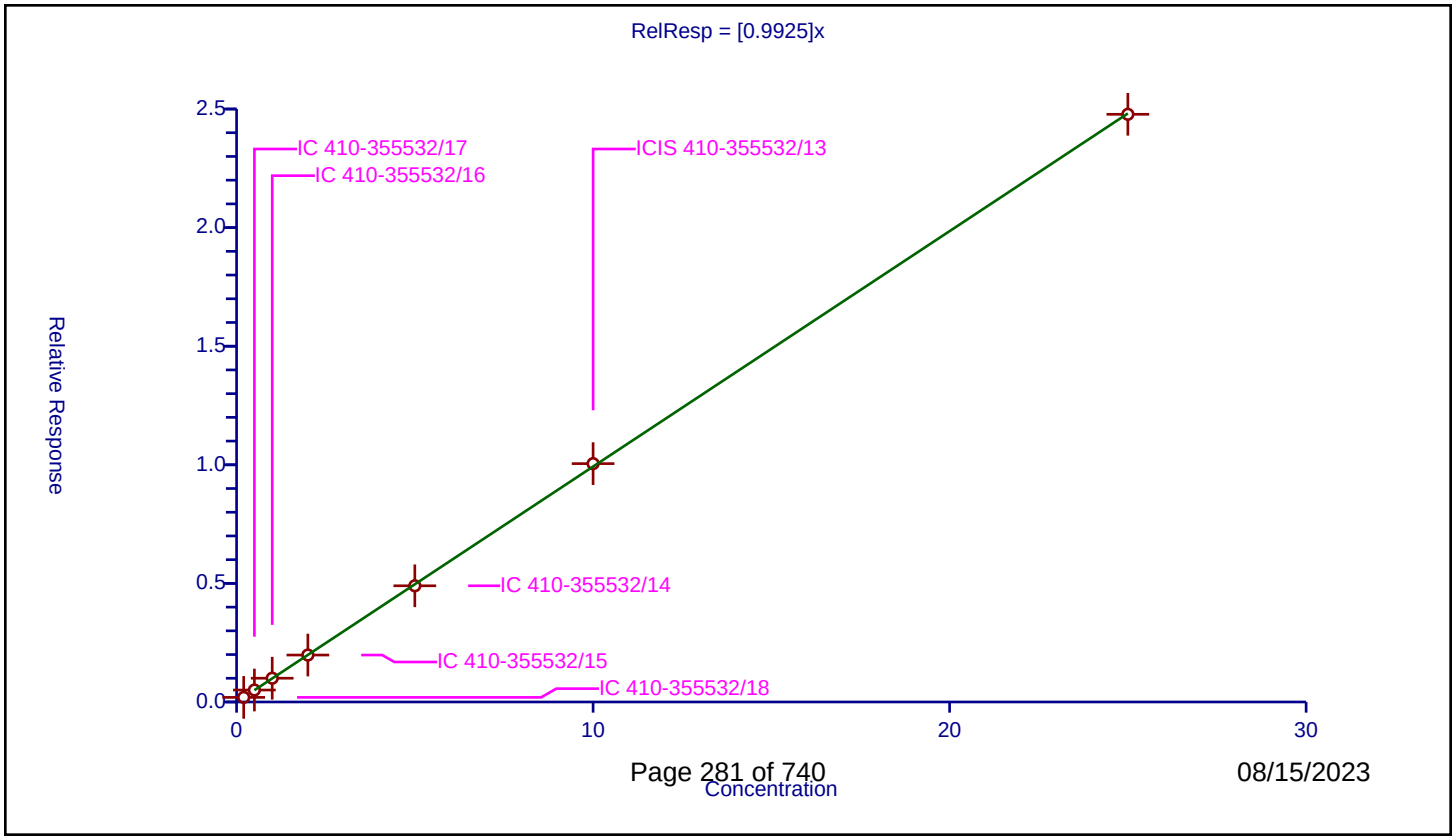
Curve Coefficients

Intercept:	0
Slope:	0.9925

Error Coefficients

Standard Error:	2150000
Relative Standard Error:	1.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.194143	10.0	1770499.0	0.970715	Y
2	IC 410-355532/17	0.5	0.504447	10.0	1779098.0	1.008893	Y
3	IC 410-355532/16	1.0	1.002742	10.0	1818962.0	1.002742	Y
4	IC 410-355532/15	2.0	1.979394	10.0	1844928.0	0.989697	Y
5	IC 410-355532/14	5.0	4.89873	10.0	1885942.0	0.979746	Y
6	ICIS 410-355532/13	10.0	10.048829	10.0	1886594.0	1.004883	Y
7	IC 410-355532/12	25.0	24.777367	10.0	1936058.0	0.991095	Y



Calibration / trans-1,3-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

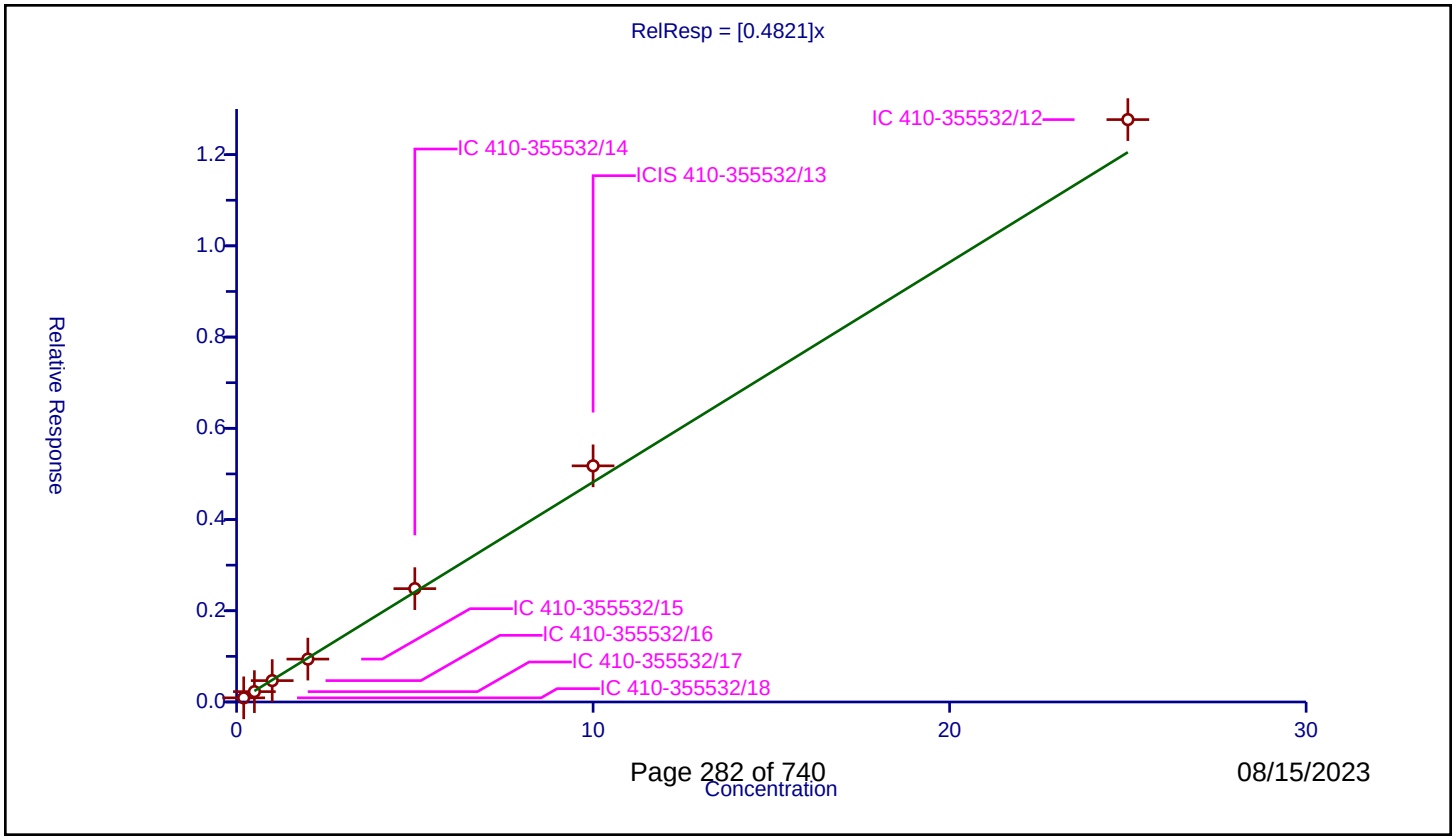
Curve Coefficients

Intercept:	0
Slope:	0.4821

Error Coefficients

Standard Error:	1100000
Relative Standard Error:	5.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.091189	10.0	1770499.0	0.455945	Y
2	IC 410-355532/17	0.5	0.227407	10.0	1779098.0	0.454815	Y
3	IC 410-355532/16	1.0	0.468306	10.0	1818962.0	0.468306	Y
4	IC 410-355532/15	2.0	0.940199	10.0	1844928.0	0.4701	Y
5	IC 410-355532/14	5.0	2.485103	10.0	1885942.0	0.497021	Y
6	ICIS 410-355532/13	10.0	5.176954	10.0	1886594.0	0.517695	Y
7	IC 410-355532/12	25.0	12.768187	10.0	1936058.0	0.510727	Y



Calibration / Ethyl methacrylate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

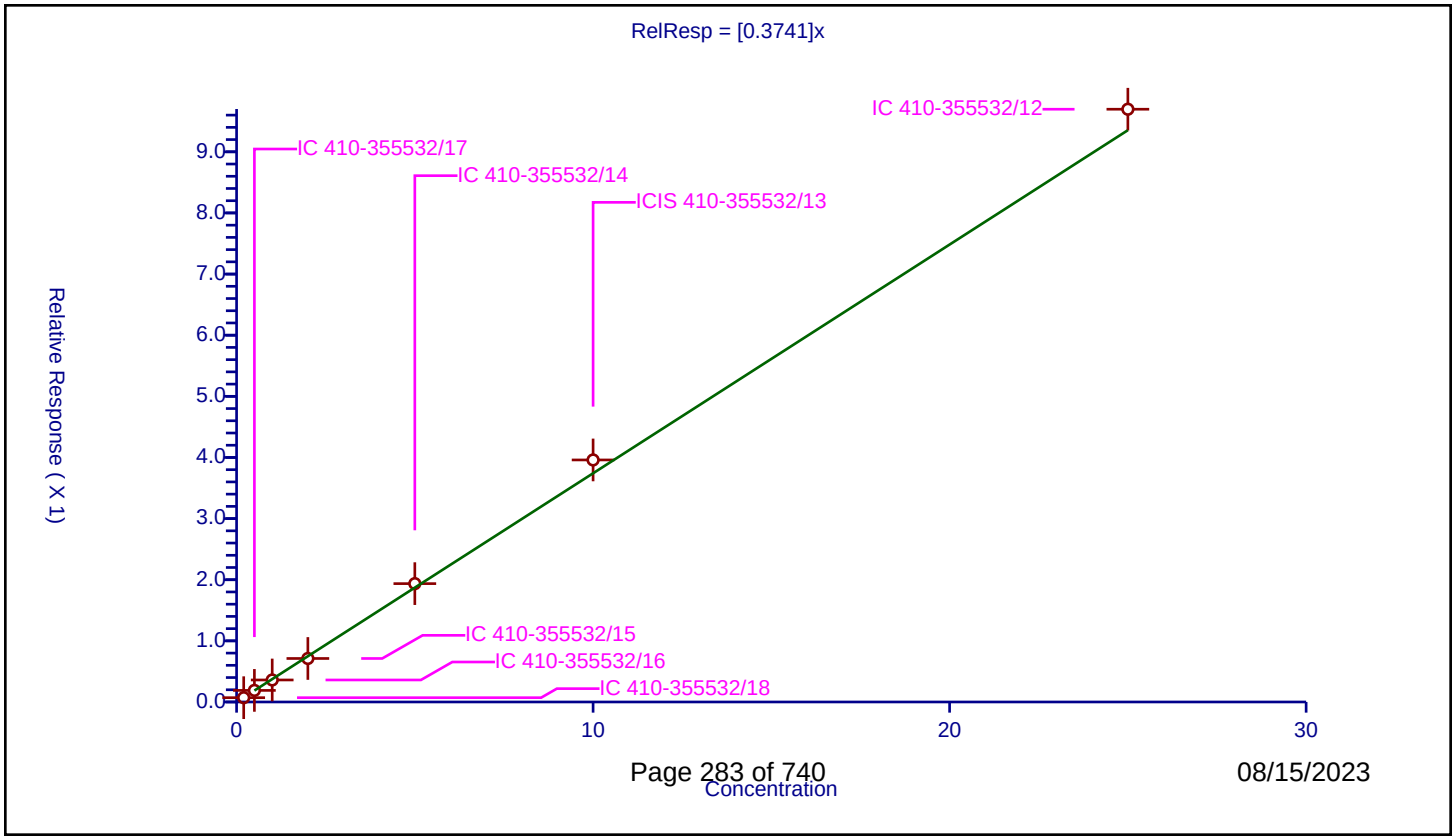
Curve Coefficients

Intercept:	0
Slope:	0.3741

Error Coefficients

Standard Error:	840000
Relative Standard Error:	4.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.070489	10.0	1770499.0	0.352443	Y
2	IC 410-355532/17	0.5	0.189748	10.0	1779098.0	0.379496	Y
3	IC 410-355532/16	1.0	0.360134	10.0	1818962.0	0.360134	Y
4	IC 410-355532/15	2.0	0.711638	10.0	1844928.0	0.355819	Y
5	IC 410-355532/14	5.0	1.936226	10.0	1885942.0	0.387245	Y
6	ICIS 410-355532/13	10.0	3.959283	10.0	1886594.0	0.395928	Y
7	IC 410-355532/12	25.0	9.696662	10.0	1936058.0	0.387866	Y



Calibration / 1,1,2-Trichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

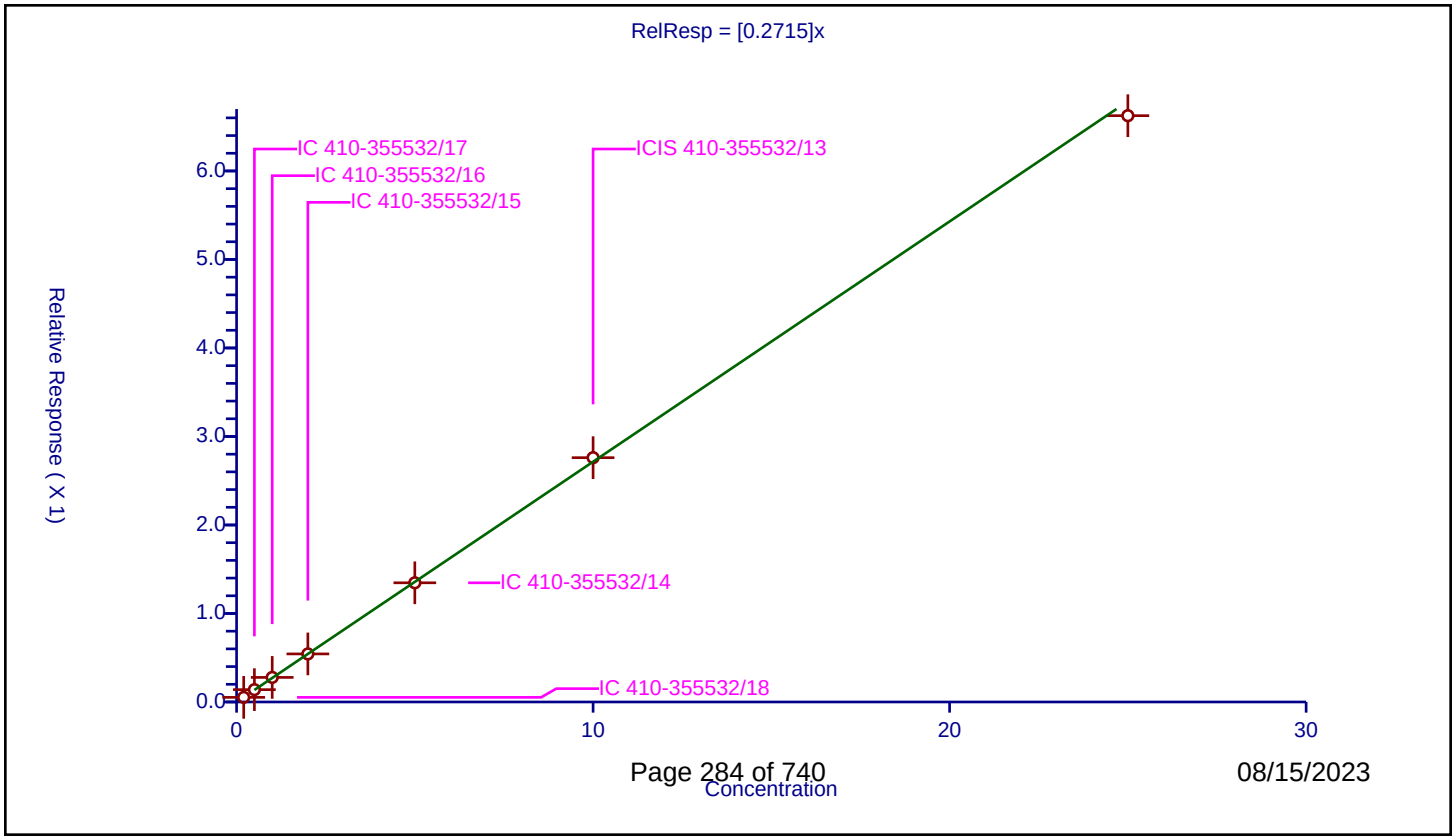
Curve Coefficients

Intercept:	0
Slope:	0.2715

Error Coefficients

Standard Error:	576000
Relative Standard Error:	2.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.052324	10.0	1770499.0	0.261621	Y
2	IC 410-355532/17	0.5	0.139492	10.0	1779098.0	0.278984	Y
3	IC 410-355532/16	1.0	0.277664	10.0	1818962.0	0.277664	Y
4	IC 410-355532/15	2.0	0.54317	10.0	1844928.0	0.271585	Y
5	IC 410-355532/14	5.0	1.346802	10.0	1885942.0	0.26936	Y
6	ICIS 410-355532/13	10.0	2.760472	10.0	1886594.0	0.276047	Y
7	IC 410-355532/12	25.0	6.62461	10.0	1936058.0	0.264984	Y



Calibration / Tetrachloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

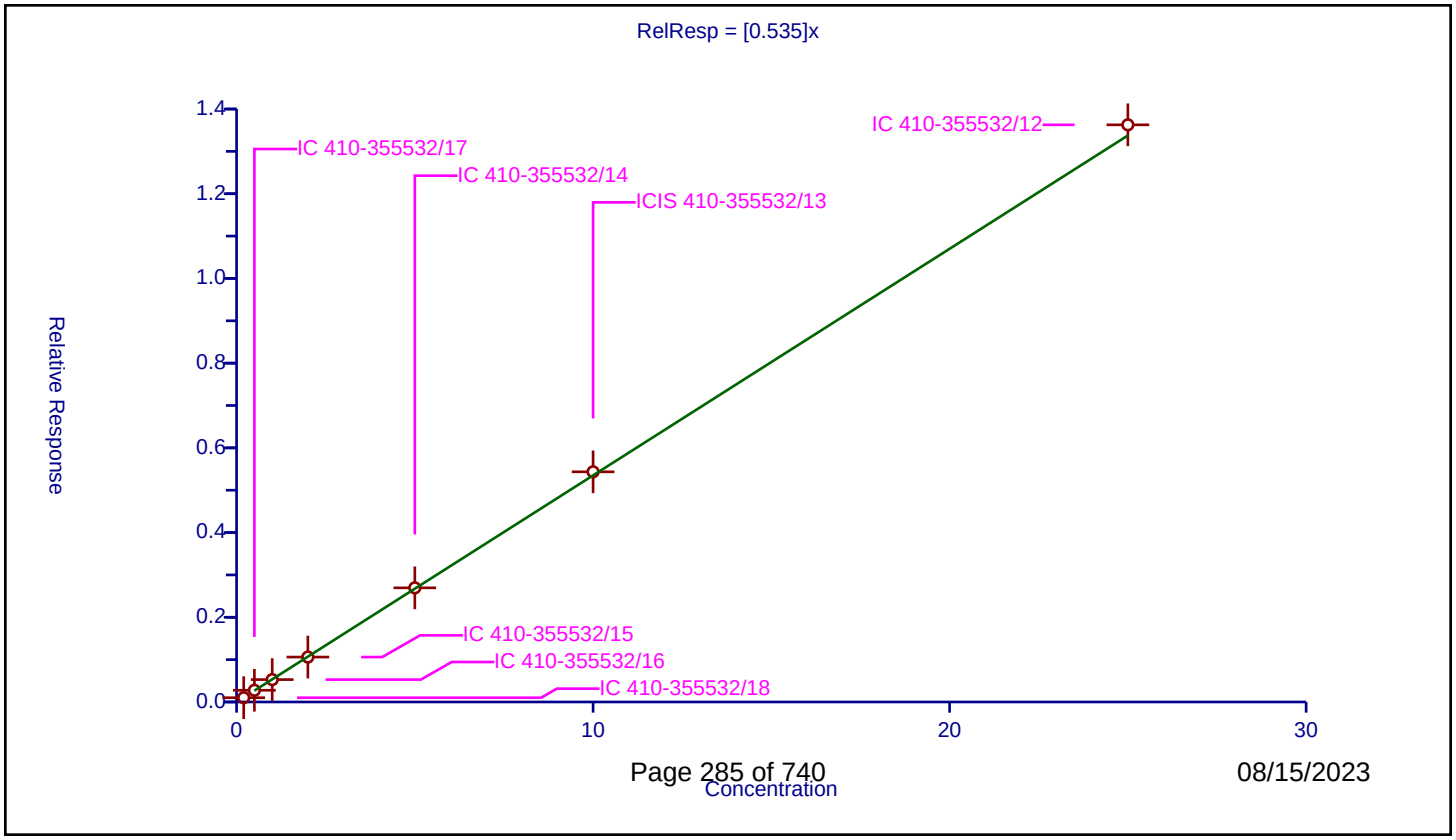
Curve Coefficients

Intercept:	0
Slope:	0.535

Error Coefficients

Standard Error:	1180000
Relative Standard Error:	2.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.101158	10.0	1770499.0	0.50579	Y
2	IC 410-355532/17	0.5	0.27655	10.0	1779098.0	0.553101	Y
3	IC 410-355532/16	1.0	0.528345	10.0	1818962.0	0.528345	Y
4	IC 410-355532/15	2.0	1.060388	10.0	1844928.0	0.530194	Y
5	IC 410-355532/14	5.0	2.695019	10.0	1885942.0	0.539004	Y
6	ICIS 410-355532/13	10.0	5.43454	10.0	1886594.0	0.543454	Y
7	IC 410-355532/12	25.0	13.626849	10.0	1936058.0	0.545074	Y



Calibration / 1,3-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

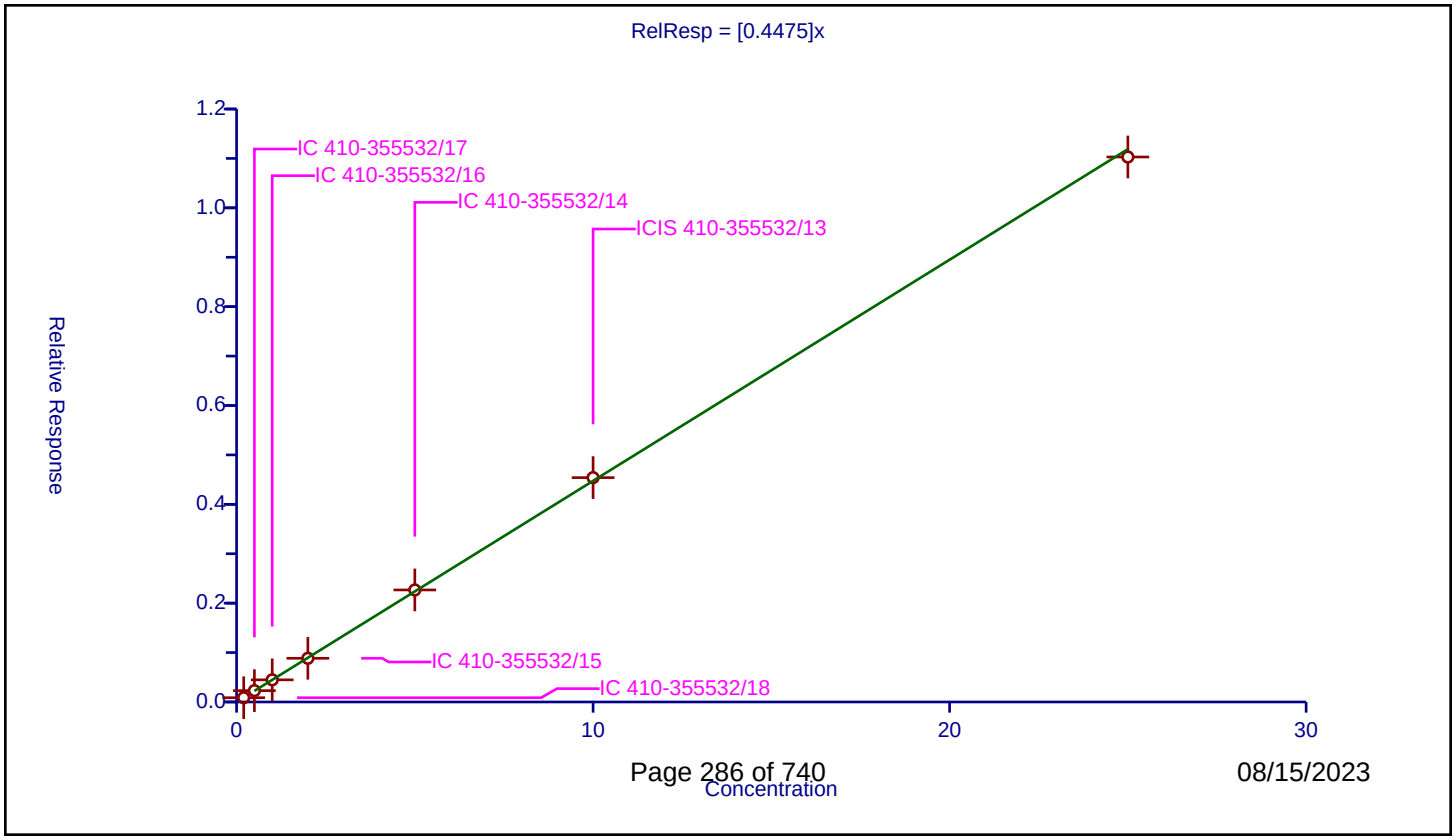
Curve Coefficients

Intercept:	0
Slope:	0.4475

Error Coefficients

Standard Error:	958000
Relative Standard Error:	2.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.086716	10.0	1770499.0	0.433578	Y
2	IC 410-355532/17	0.5	0.229836	10.0	1779098.0	0.459671	Y
3	IC 410-355532/16	1.0	0.4483	10.0	1818962.0	0.4483	Y
4	IC 410-355532/15	2.0	0.884262	10.0	1844928.0	0.442131	Y
5	IC 410-355532/14	5.0	2.267541	10.0	1885942.0	0.453508	Y
6	ICIS 410-355532/13	10.0	4.540521	10.0	1886594.0	0.454052	Y
7	IC 410-355532/12	25.0	11.029039	10.0	1936058.0	0.441162	Y



Calibration / 2-Hexanone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

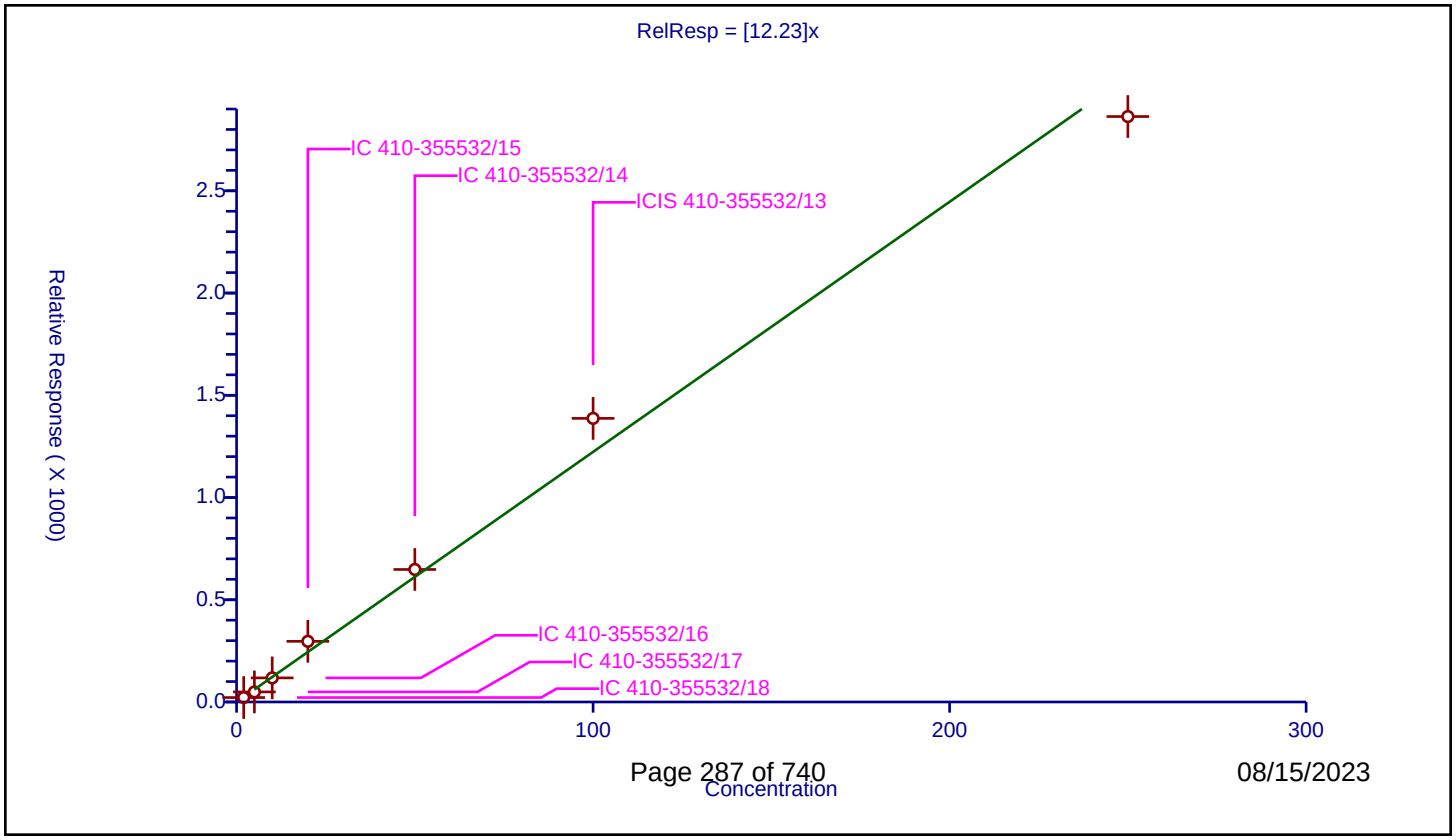
Curve Coefficients

Intercept:	0
Slope:	12.23

Error Coefficients

Standard Error:	3640000
Relative Standard Error:	14.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.976

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	2.0	21.731978	50.0	126445.0	10.865989	Y
2	IC 410-355532/17	5.0	49.241003	50.0	153492.0	9.848201	Y
3	IC 410-355532/16	10.0	117.85677	50.0	134008.0	11.785677	Y
4	IC 410-355532/15	20.0	296.574872	50.0	97646.0	14.828744	Y
5	IC 410-355532/14	50.0	648.136495	50.0	125221.0	12.96273	Y
6	ICIS 410-355532/13	100.0	1387.05645	50.0	120956.0	13.870565	Y
7	IC 410-355532/12	250.0	2863.199104	50.0	141127.0	11.452796	Y



08/15/2023

Calibration / Chlorodibromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

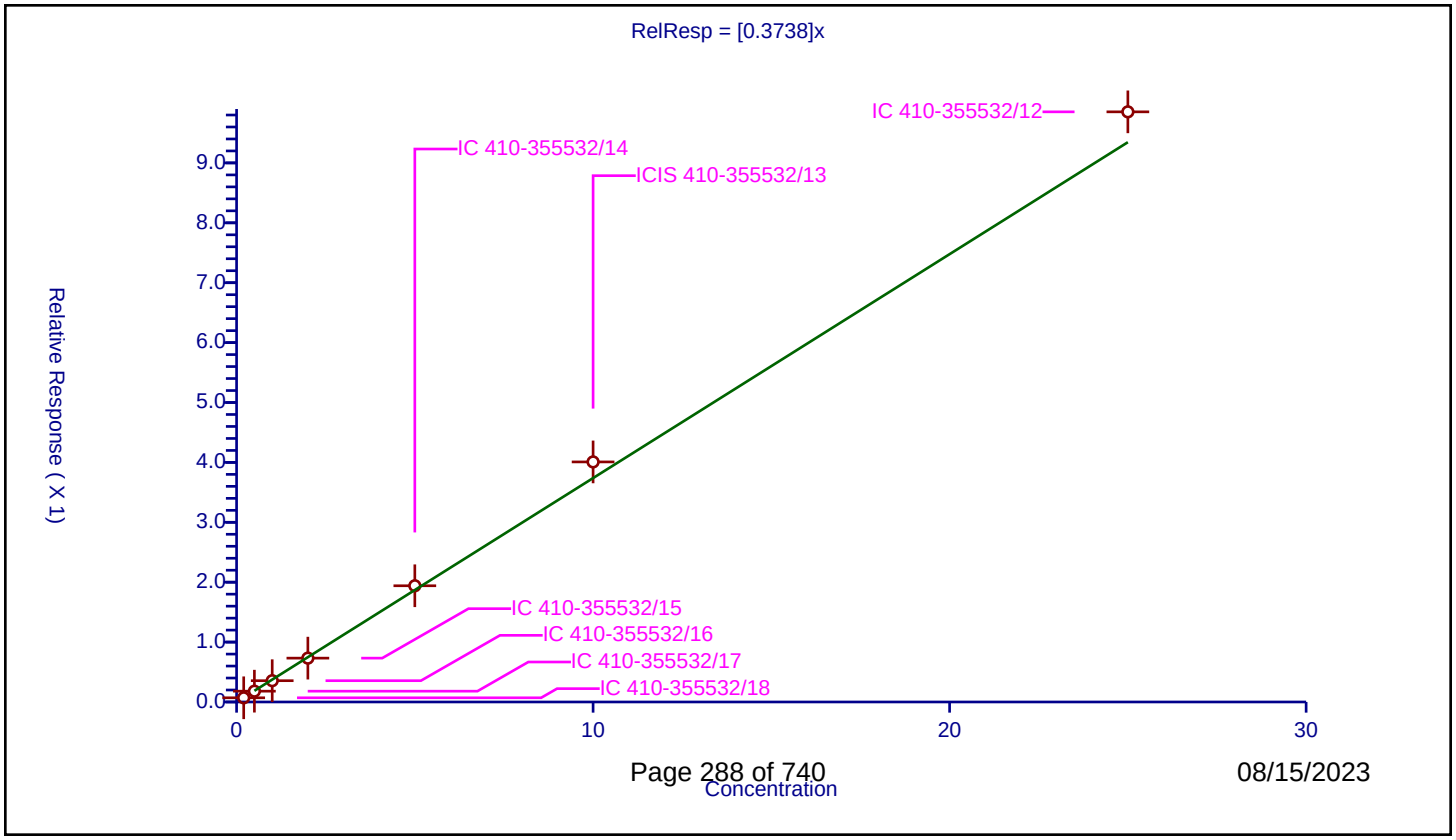
Curve Coefficients

Intercept:	0
Slope:	0.3738

Error Coefficients

Standard Error:	853000
Relative Standard Error:	5.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.070121	10.0	1770499.0	0.350607	Y
2	IC 410-355532/17	0.5	0.180676	10.0	1779098.0	0.361352	Y
3	IC 410-355532/16	1.0	0.355703	10.0	1818962.0	0.355703	Y
4	IC 410-355532/15	2.0	0.732338	10.0	1844928.0	0.366169	Y
5	IC 410-355532/14	5.0	1.94041	10.0	1885942.0	0.388082	Y
6	ICIS 410-355532/13	10.0	4.00808	10.0	1886594.0	0.400808	Y
7	IC 410-355532/12	25.0	9.852727	10.0	1936058.0	0.394109	Y



Calibration / Ethylene Dibromide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

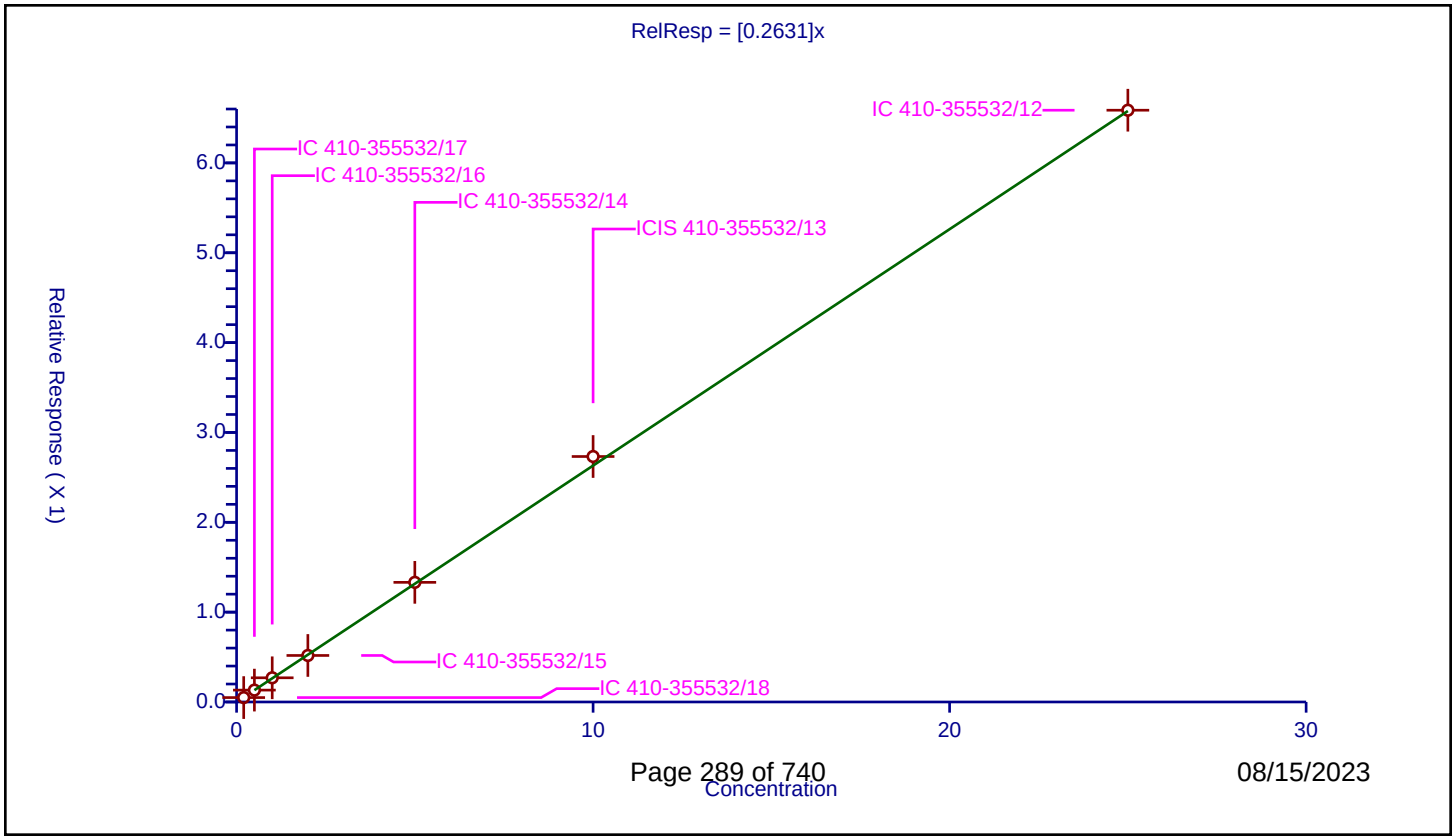
Curve Coefficients

Intercept:	0
Slope:	0.2631

Error Coefficients

Standard Error:	573000
Relative Standard Error:	3.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.049212	10.0	1770499.0	0.246061	Y
2	IC 410-355532/17	0.5	0.13223	10.0	1779098.0	0.26446	Y
3	IC 410-355532/16	1.0	0.269357	10.0	1818962.0	0.269357	Y
4	IC 410-355532/15	2.0	0.517711	10.0	1844928.0	0.258856	Y
5	IC 410-355532/14	5.0	1.331738	10.0	1885942.0	0.266348	Y
6	ICIS 410-355532/13	10.0	2.732326	10.0	1886594.0	0.273233	Y
7	IC 410-355532/12	25.0	6.586703	10.0	1936058.0	0.263468	Y



Calibration / 1-Chlorohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

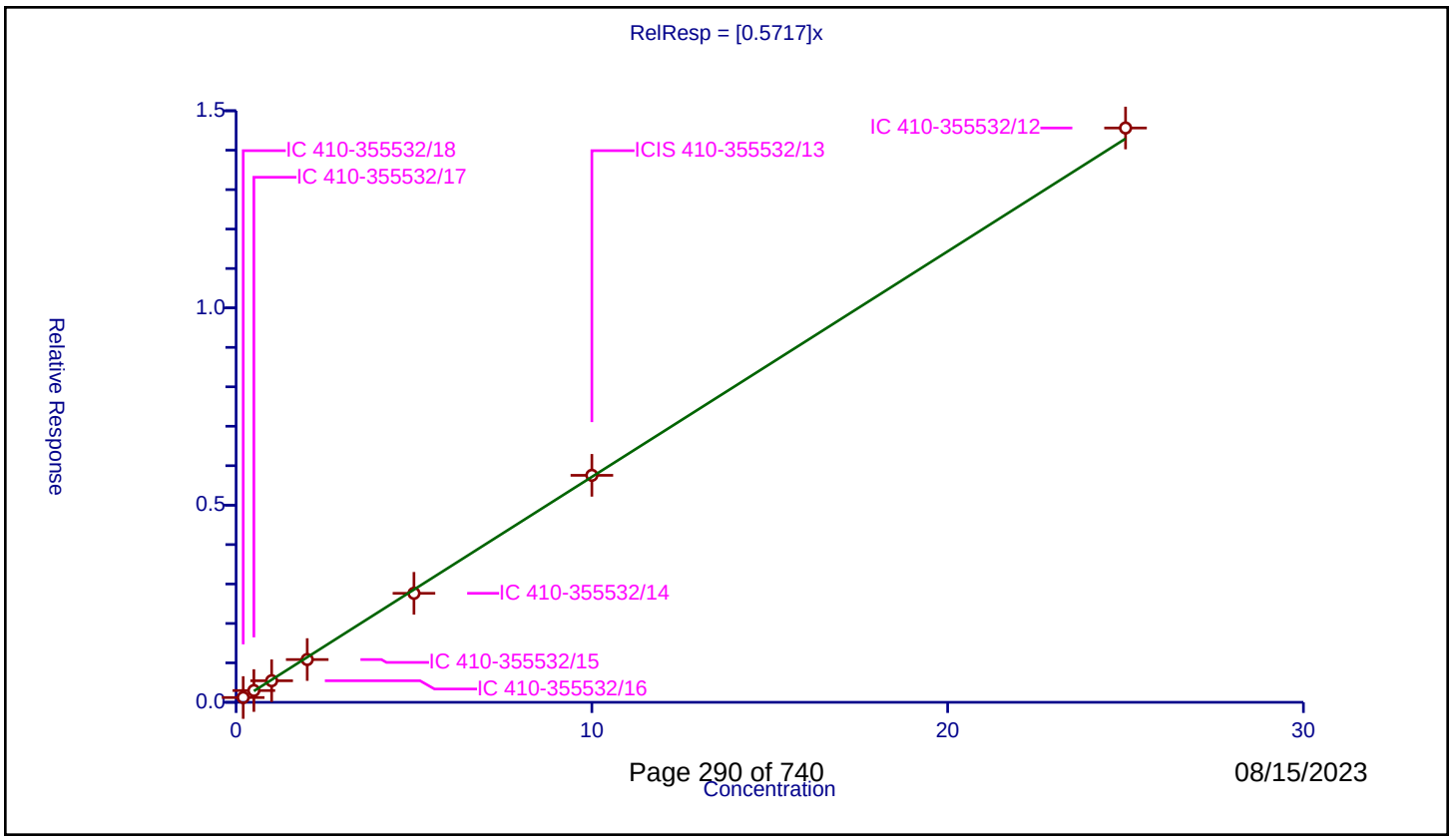
Curve Coefficients

Intercept:	0
Slope:	0.5717

Error Coefficients

Standard Error:	1260000
Relative Standard Error:	4.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.120988	10.0	1770499.0	0.604942	Y
2	IC 410-355532/17	0.5	0.298505	10.0	1779098.0	0.59701	Y
3	IC 410-355532/16	1.0	0.546619	10.0	1818962.0	0.546619	Y
4	IC 410-355532/15	2.0	1.084552	10.0	1844928.0	0.542276	Y
5	IC 410-355532/14	5.0	2.764343	10.0	1885942.0	0.552869	Y
6	ICIS 410-355532/13	10.0	5.755822	10.0	1886594.0	0.575582	Y
7	IC 410-355532/12	25.0	14.562859	10.0	1936058.0	0.582514	Y



Calibration / Chlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

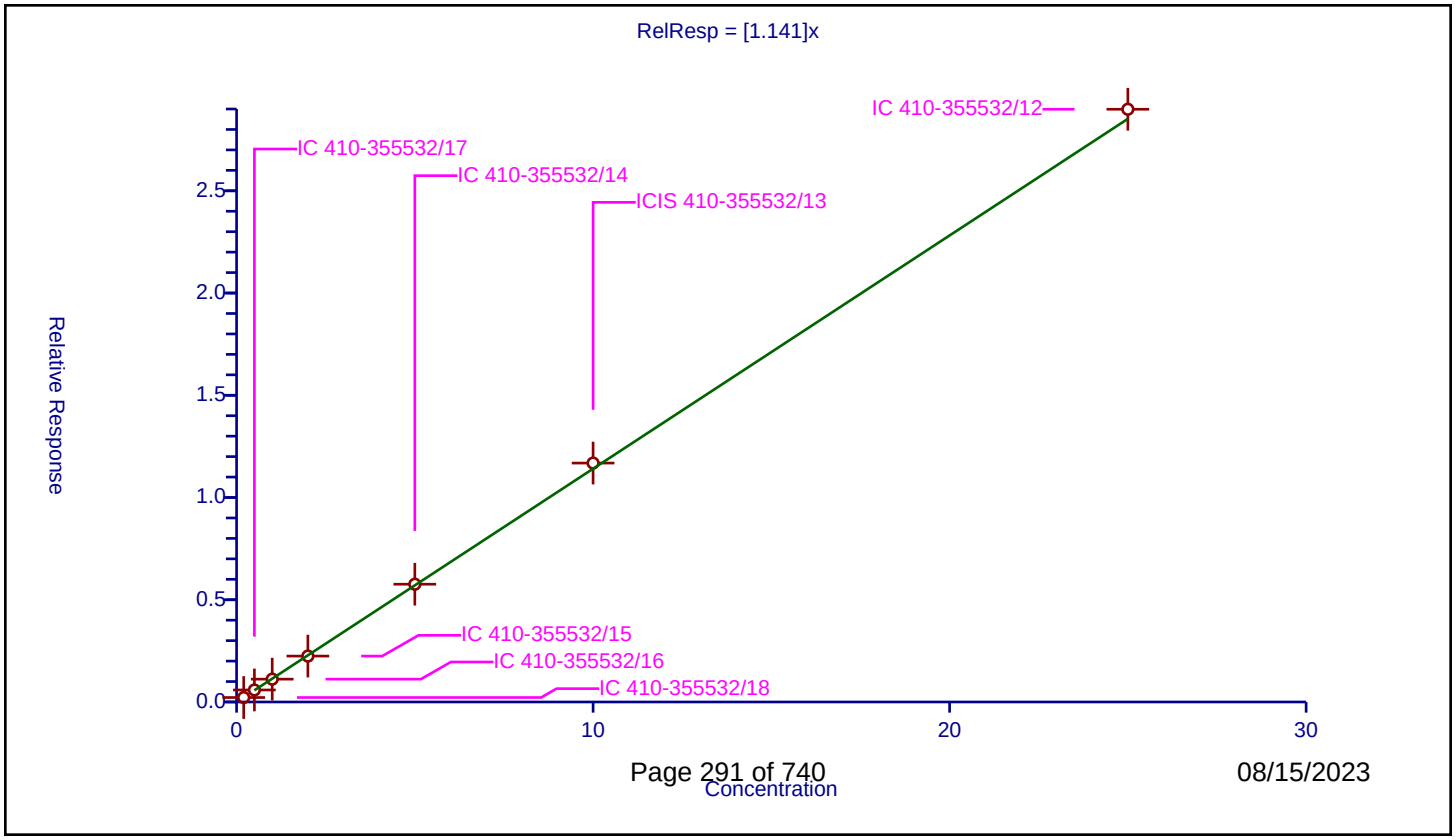
Curve Coefficients

Intercept:	0
Slope:	1.141

Error Coefficients

Standard Error:	2510000
Relative Standard Error:	2.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.218306	10.0	1770499.0	1.091528	Y
2	IC 410-355532/17	0.5	0.587511	10.0	1779098.0	1.175022	Y
3	IC 410-355532/16	1.0	1.116466	10.0	1818962.0	1.116466	Y
4	IC 410-355532/15	2.0	2.244841	10.0	1844928.0	1.12242	Y
5	IC 410-355532/14	5.0	5.760357	10.0	1885942.0	1.152071	Y
6	ICIS 410-355532/13	10.0	11.684533	10.0	1886594.0	1.168453	Y
7	IC 410-355532/12	25.0	28.988	10.0	1936058.0	1.15952	Y



Calibration / 1,1,1,2-Tetrachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

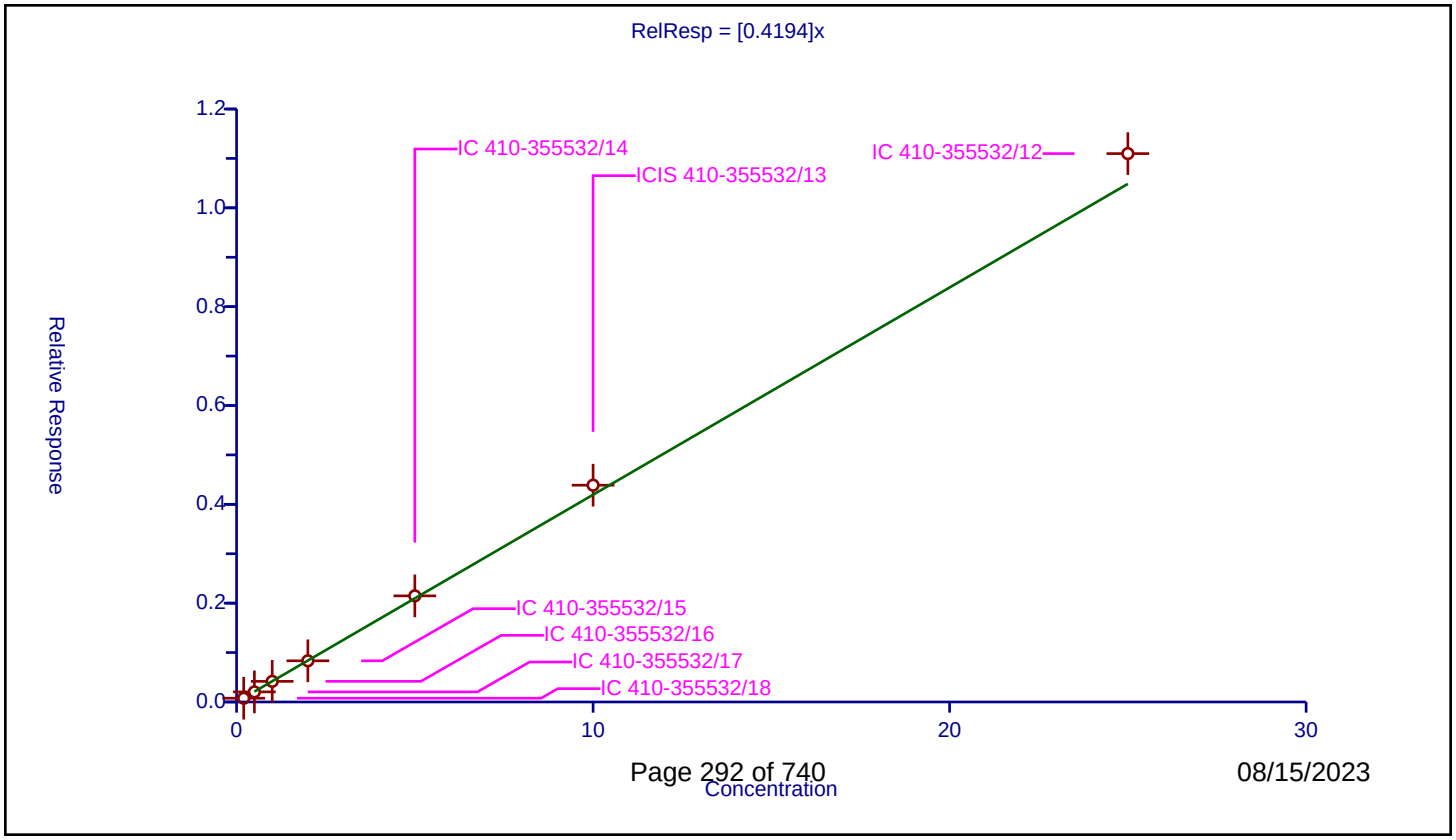
Curve Coefficients

Intercept:	0
Slope:	0.4194

Error Coefficients

Standard Error:	957000
Relative Standard Error:	5.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.076182	10.0	1770499.0	0.38091	Y
2	IC 410-355532/17	0.5	0.204474	10.0	1779098.0	0.408949	Y
3	IC 410-355532/16	1.0	0.417172	10.0	1818962.0	0.417172	Y
4	IC 410-355532/15	2.0	0.833344	10.0	1844928.0	0.416672	Y
5	IC 410-355532/14	5.0	2.147802	10.0	1885942.0	0.42956	Y
6	ICIS 410-355532/13	10.0	4.387054	10.0	1886594.0	0.438705	Y
7	IC 410-355532/12	25.0	11.097622	10.0	1936058.0	0.443905	Y



Calibration / Ethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

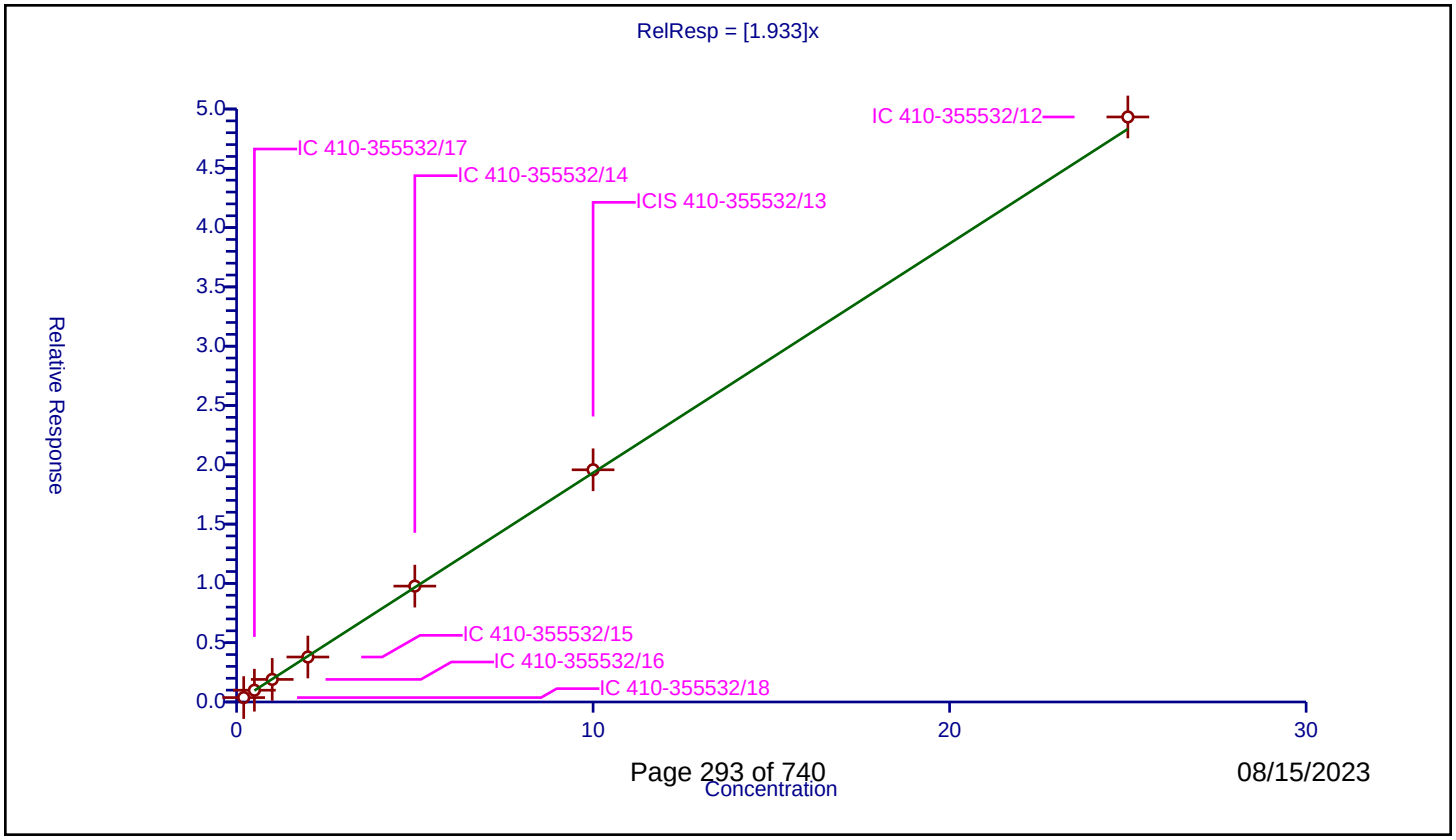
Curve Coefficients

Intercept:	0
Slope:	1.933

Error Coefficients

Standard Error:	4260000
Relative Standard Error:	2.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.371641	10.0	1770499.0	1.858205	Y
2	IC 410-355532/17	0.5	0.992733	10.0	1779098.0	1.985467	Y
3	IC 410-355532/16	1.0	1.903723	10.0	1818962.0	1.903723	Y
4	IC 410-355532/15	2.0	3.79224	10.0	1844928.0	1.89612	Y
5	IC 410-355532/14	5.0	9.770534	10.0	1885942.0	1.954107	Y
6	ICIS 410-355532/13	10.0	19.580307	10.0	1886594.0	1.958031	Y
7	IC 410-355532/12	25.0	49.329462	10.0	1936058.0	1.973178	Y



Calibration / m-Xylene & p-Xylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

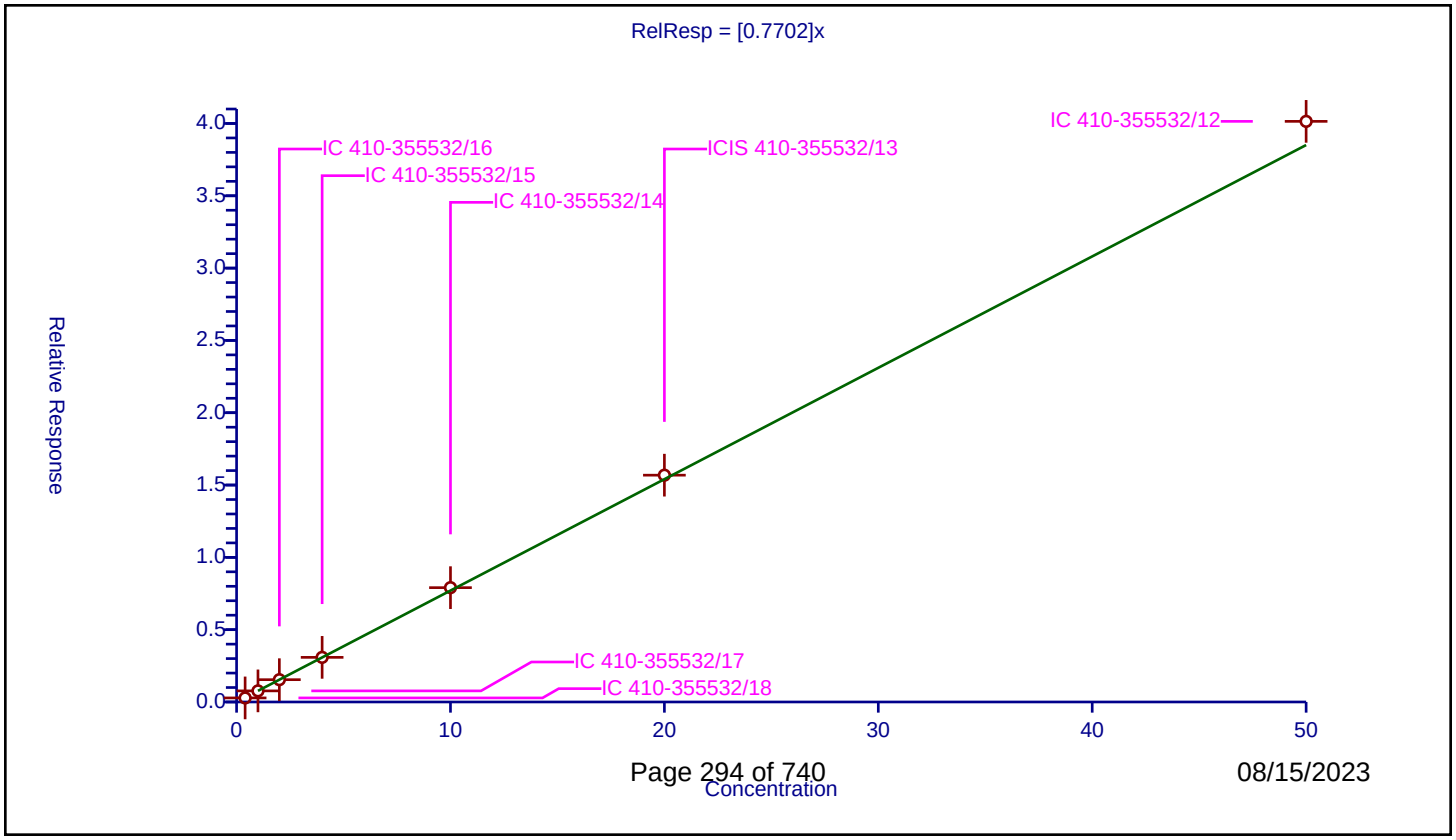
Curve Coefficients

Intercept:	0
Slope:	0.7702

Error Coefficients

Standard Error:	3460000
Relative Standard Error:	4.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.4	0.281158	10.0	1770499.0	0.702895	Y
2	IC 410-355532/17	1.0	0.767816	10.0	1779098.0	0.767816	Y
3	IC 410-355532/16	2.0	1.542506	10.0	1818962.0	0.771253	Y
4	IC 410-355532/15	4.0	3.086337	10.0	1844928.0	0.771584	Y
5	IC 410-355532/14	10.0	7.905604	10.0	1885942.0	0.79056	Y
6	ICIS 410-355532/13	20.0	15.682786	10.0	1886594.0	0.784139	Y
7	IC 410-355532/12	50.0	40.145683	10.0	1936058.0	0.802914	Y



Calibration / o-Xylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

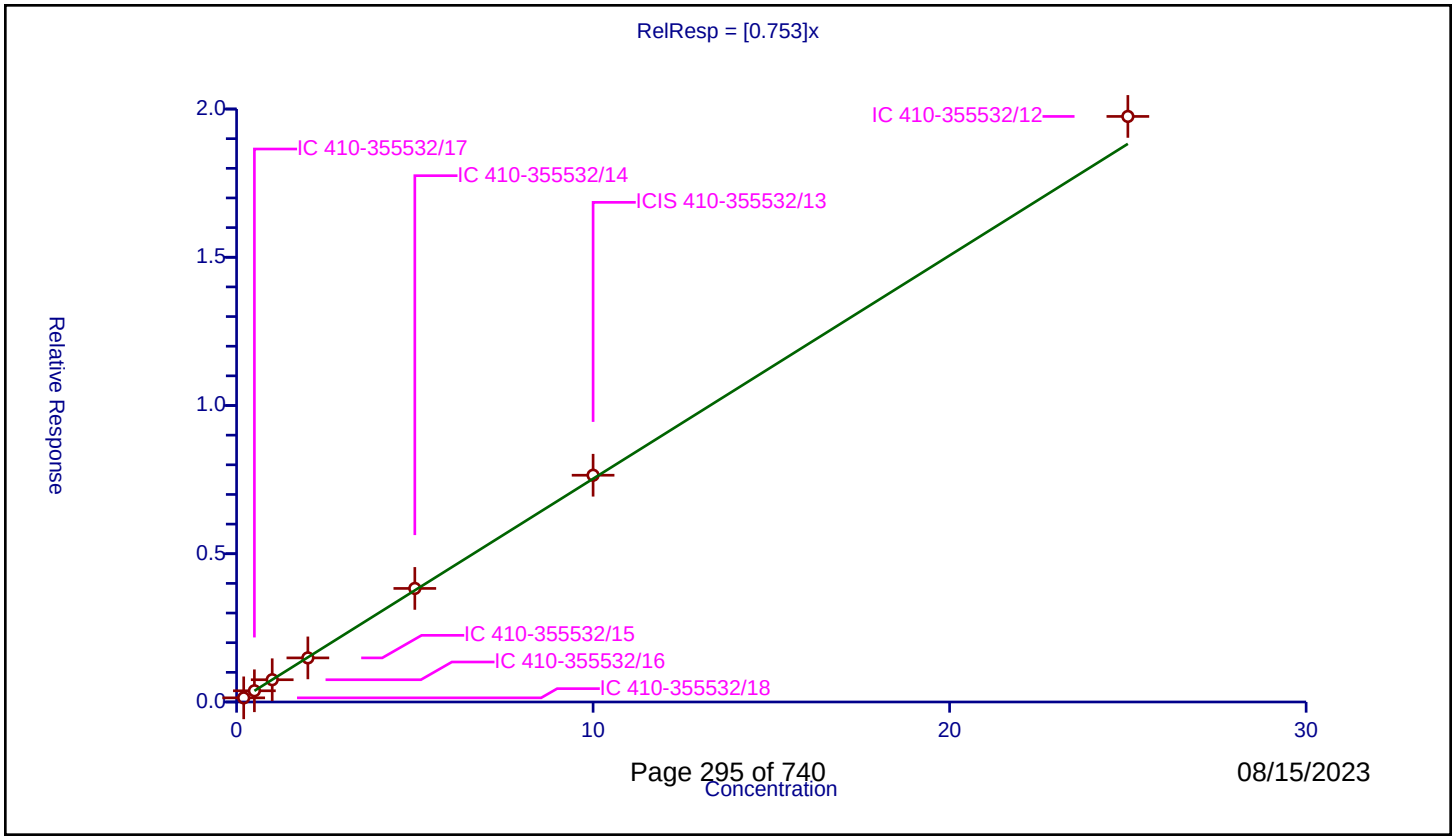
Curve Coefficients

Intercept:	0
Slope:	0.753

Error Coefficients

Standard Error:	1700000
Relative Standard Error:	3.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.139729	10.0	1770499.0	0.698645	Y
2	IC 410-355532/17	0.5	0.378501	10.0	1779098.0	0.757002	Y
3	IC 410-355532/16	1.0	0.750928	10.0	1818962.0	0.750928	Y
4	IC 410-355532/15	2.0	1.487153	10.0	1844928.0	0.743576	Y
5	IC 410-355532/14	5.0	3.830075	10.0	1885942.0	0.766015	Y
6	ICIS 410-355532/13	10.0	7.648328	10.0	1886594.0	0.764833	Y
7	IC 410-355532/12	25.0	19.749687	10.0	1936058.0	0.789987	Y



Calibration / Styrene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

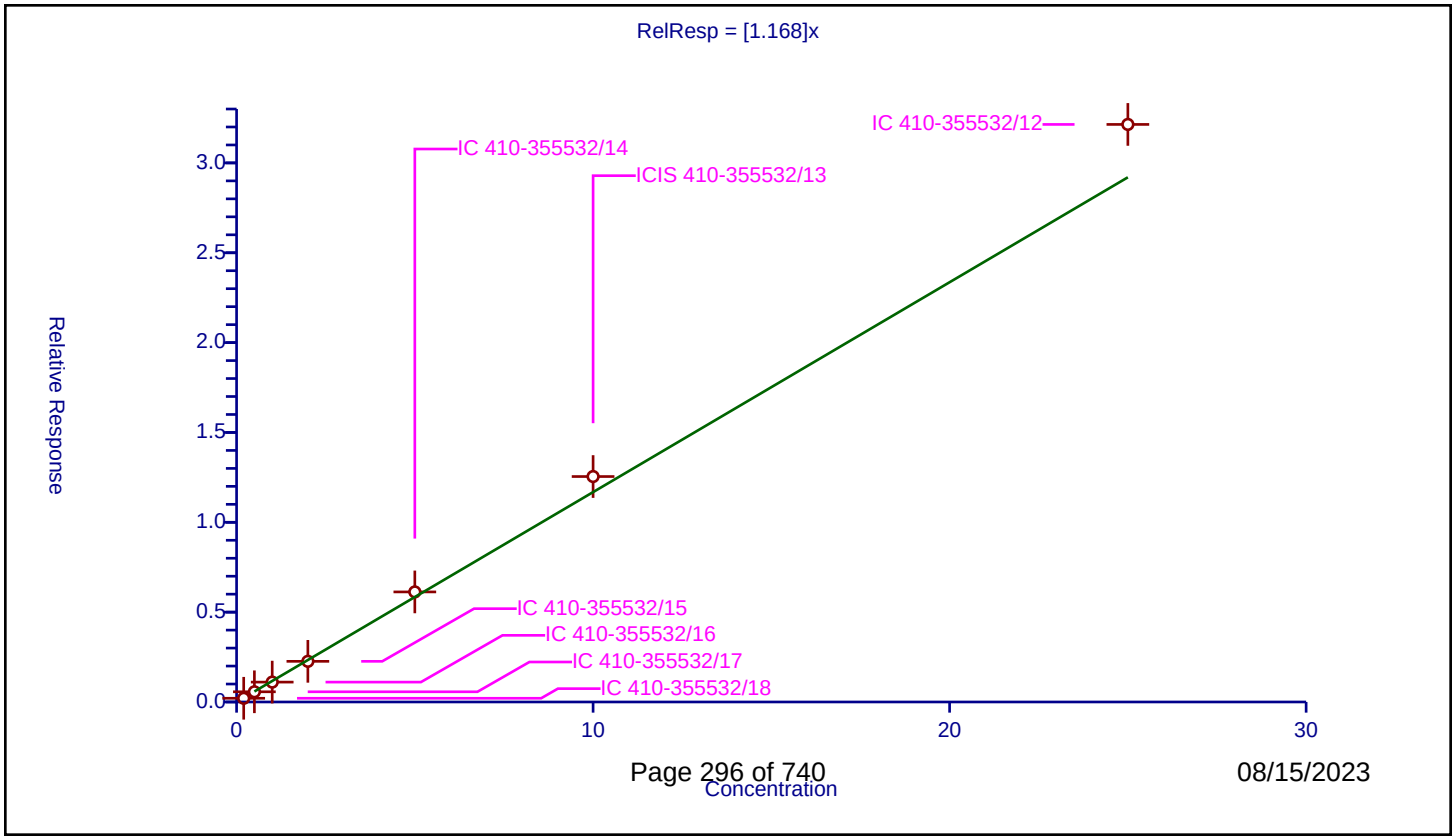
Curve Coefficients

Intercept:	0
Slope:	1.168

Error Coefficients

Standard Error:	2770000
Relative Standard Error:	7.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.207156	10.0	1770499.0	1.035781	Y
2	IC 410-355532/17	0.5	0.568316	10.0	1779098.0	1.136632	Y
3	IC 410-355532/16	1.0	1.106719	10.0	1818962.0	1.106719	Y
4	IC 410-355532/15	2.0	2.262045	10.0	1844928.0	1.131022	Y
5	IC 410-355532/14	5.0	6.125666	10.0	1885942.0	1.225133	Y
6	ICIS 410-355532/13	10.0	12.547225	10.0	1886594.0	1.254723	Y
7	IC 410-355532/12	25.0	32.142069	10.0	1936058.0	1.285683	Y



Calibration / Bromoform

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

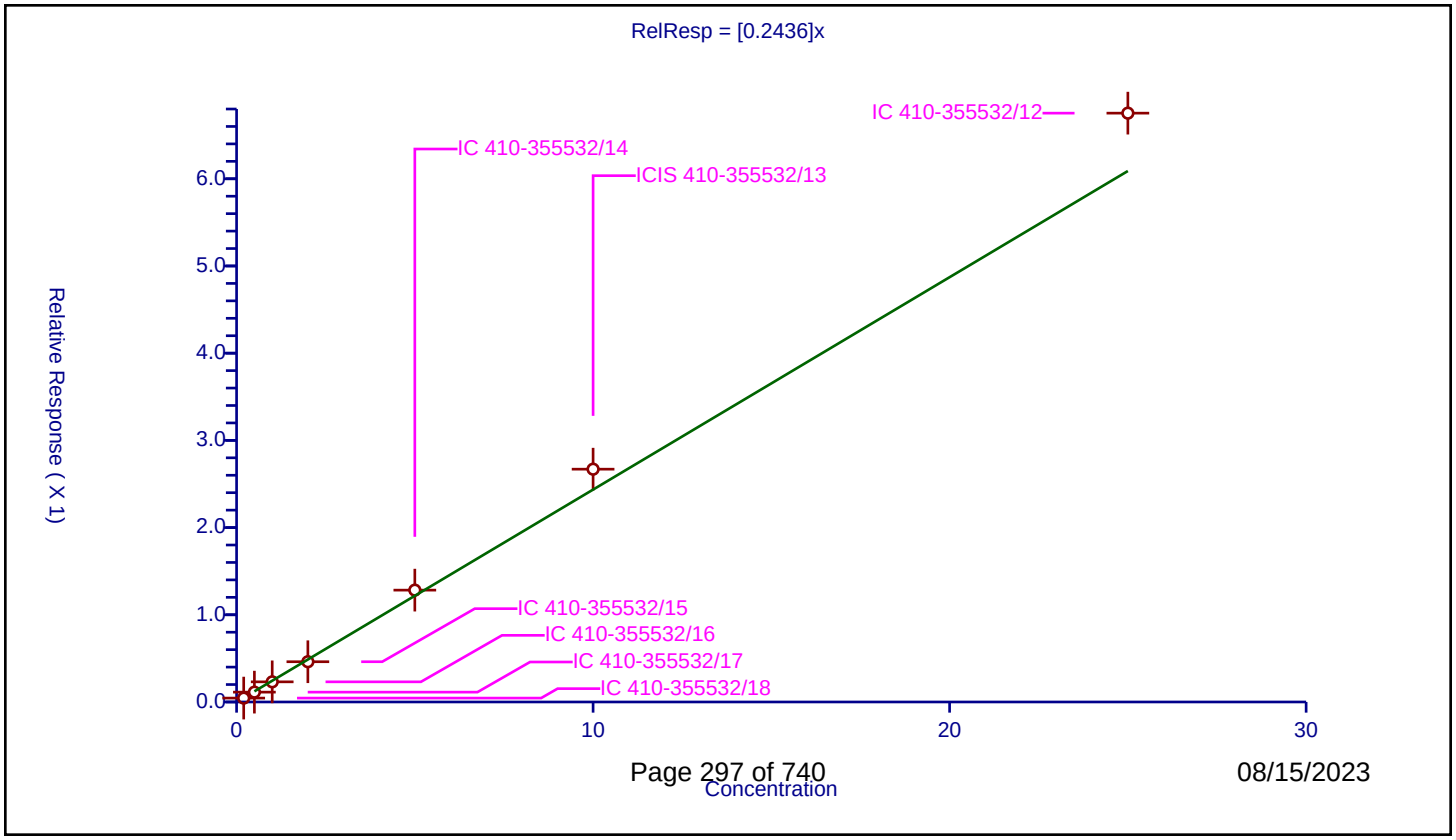
Curve Coefficients

Intercept:	0
Slope:	0.2436

Error Coefficients

Standard Error:	582000
Relative Standard Error:	8.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.044773	10.0	1770499.0	0.223863	Y
2	IC 410-355532/17	0.5	0.1129	10.0	1779098.0	0.2258	Y
3	IC 410-355532/16	1.0	0.230895	10.0	1818962.0	0.230895	Y
4	IC 410-355532/15	2.0	0.46159	10.0	1844928.0	0.230795	Y
5	IC 410-355532/14	5.0	1.282563	10.0	1885942.0	0.256513	Y
6	ICIS 410-355532/13	10.0	2.669679	10.0	1886594.0	0.266968	Y
7	IC 410-355532/12	25.0	6.752489	10.0	1936058.0	0.2701	Y



Calibration / Isopropylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

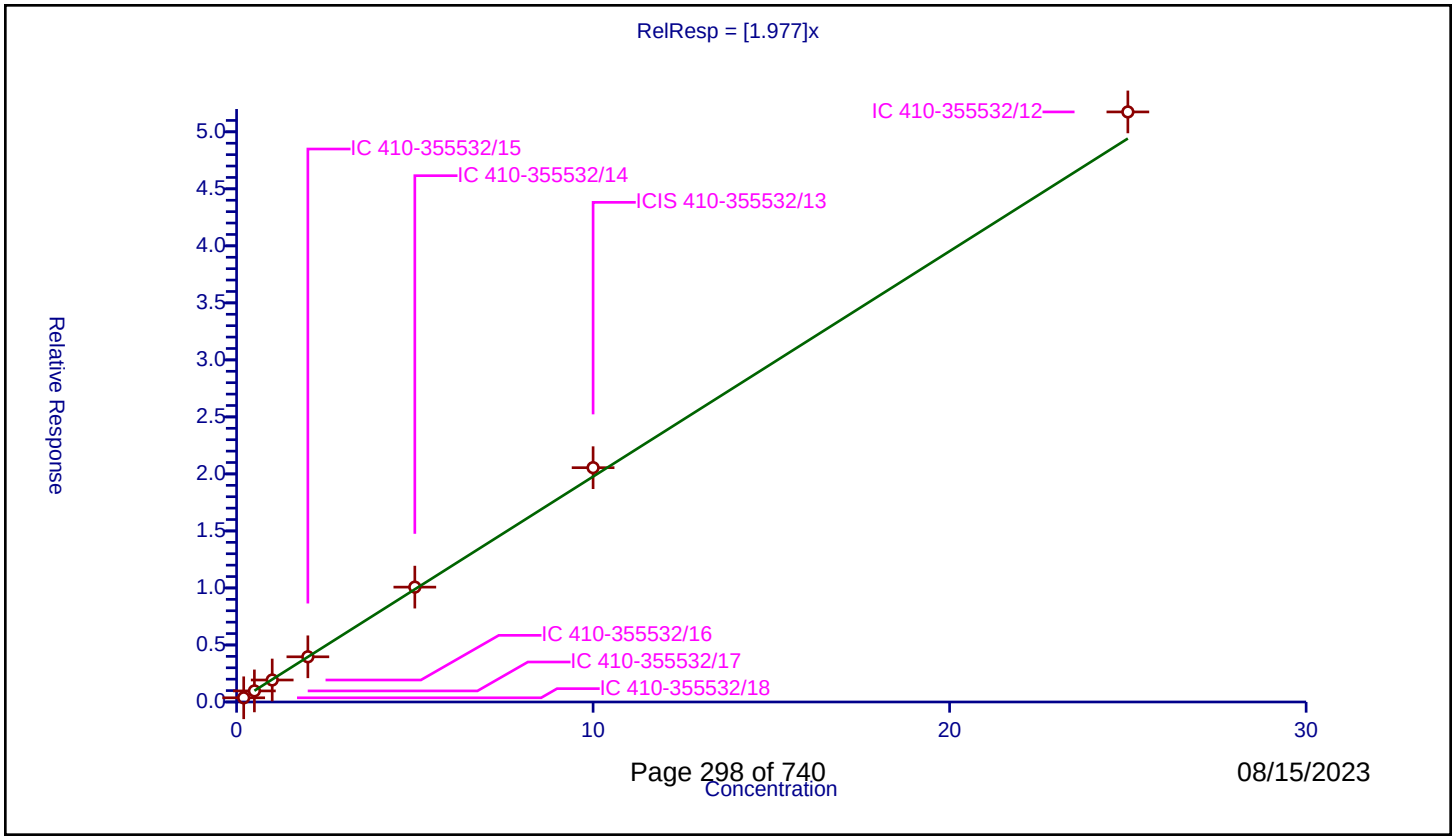
Curve Coefficients

Intercept:	0
Slope:	1.977

Error Coefficients

Standard Error:	4470000
Relative Standard Error:	4.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.368484	10.0	1770499.0	1.842418	Y
2	IC 410-355532/17	0.5	0.972628	10.0	1779098.0	1.945255	Y
3	IC 410-355532/16	1.0	1.92794	10.0	1818962.0	1.92794	Y
4	IC 410-355532/15	2.0	3.962805	10.0	1844928.0	1.981403	Y
5	IC 410-355532/14	5.0	10.072171	10.0	1885942.0	2.014434	Y
6	ICIS 410-355532/13	10.0	20.547929	10.0	1886594.0	2.054793	Y
7	IC 410-355532/12	25.0	51.744003	10.0	1936058.0	2.06976	Y



Calibration / 4-Bromofluorobenzene (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

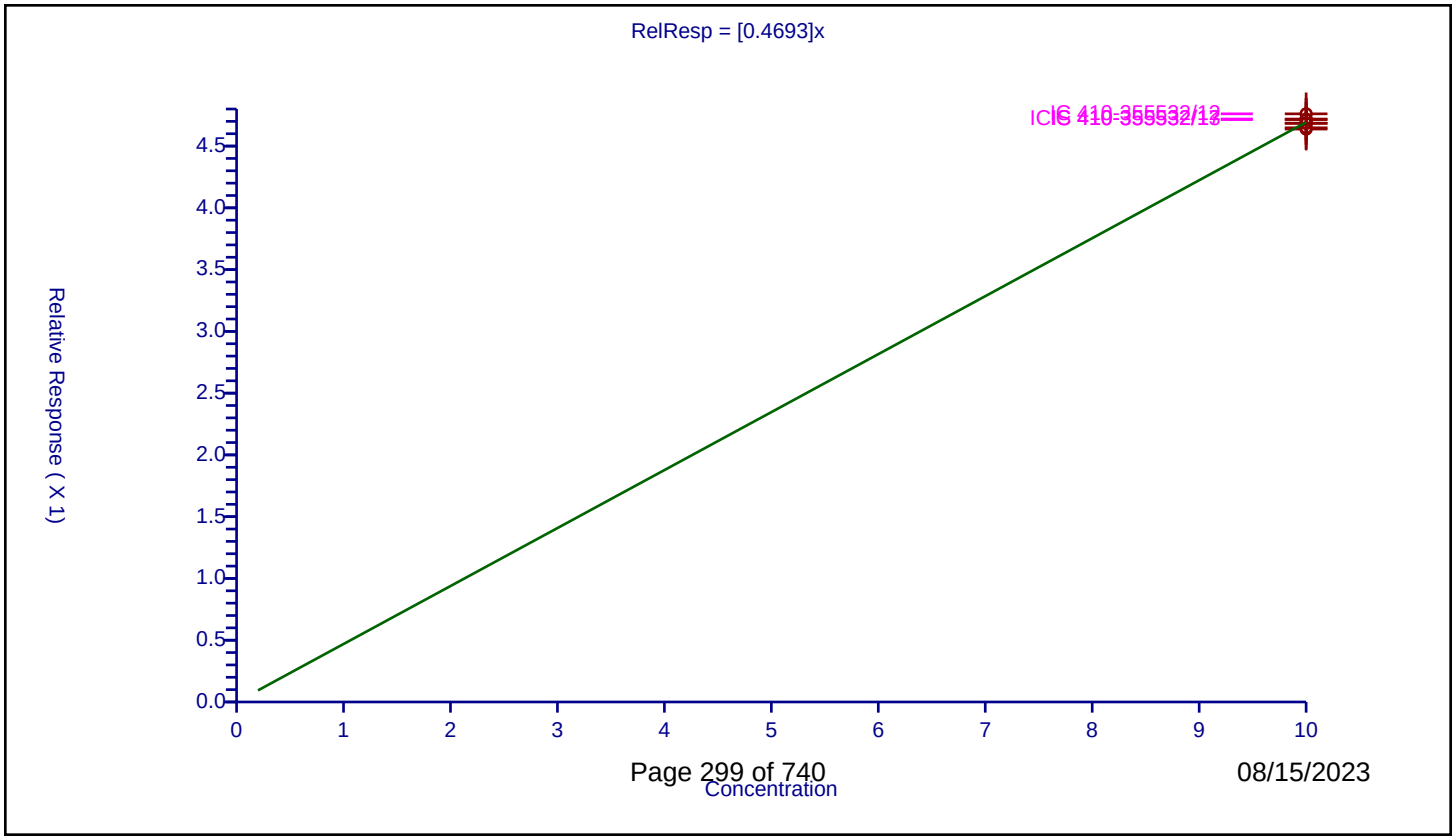
Curve Coefficients

Intercept:	0
Slope:	0.4693

Error Coefficients

Standard Error:	936000
Relative Standard Error:	0.9
Correlation Coefficient:	0.00000000000000000000
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/12	10.0	4.760999	10.0	1936058.0	0.4761	Y
2	ICIS 410-355532/13	10.0	4.714295	10.0	1886594.0	0.471429	Y
3	IC 410-355532/14	10.0	4.647943	10.0	1885942.0	0.464794	Y
4	IC 410-355532/15	10.0	4.637574	10.0	1844928.0	0.463757	Y
5	IC 410-355532/16	10.0	4.685337	10.0	1818962.0	0.468534	Y
6	IC 410-355532/17	10.0	4.718779	10.0	1779098.0	0.471878	Y
7	IC 410-355532/18	10.0	4.684261	10.0	1770499.0	0.468426	Y



Calibration / 1,1,2,2-Tetrachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

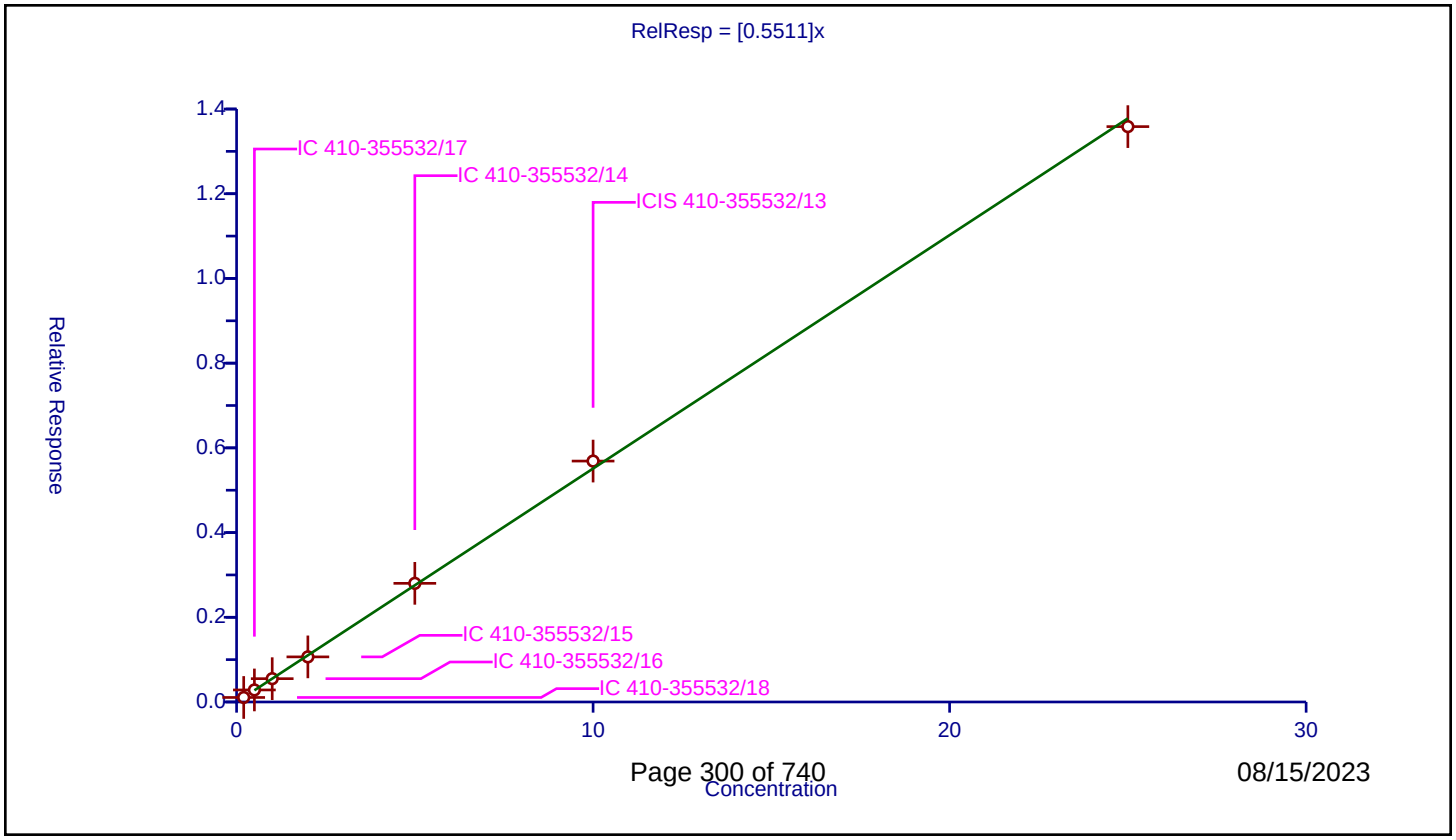
Curve Coefficients

Intercept:	0
Slope:	0.5511

Error Coefficients

Standard Error:	753000
Relative Standard Error:	2.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.106742	10.0	1096665.0	0.533709	Y
2	IC 410-355532/17	0.5	0.284154	10.0	1099896.0	0.568308	Y
3	IC 410-355532/16	1.0	0.550783	10.0	1128630.0	0.550783	Y
4	IC 410-355532/15	2.0	1.065272	10.0	1126529.0	0.532636	Y
5	IC 410-355532/14	5.0	2.801317	10.0	1162953.0	0.560263	Y
6	ICIS 410-355532/13	10.0	5.688045	10.0	1169233.0	0.568805	Y
7	IC 410-355532/12	25.0	13.584741	10.0	1240232.0	0.54339	Y



Calibration / Bromobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

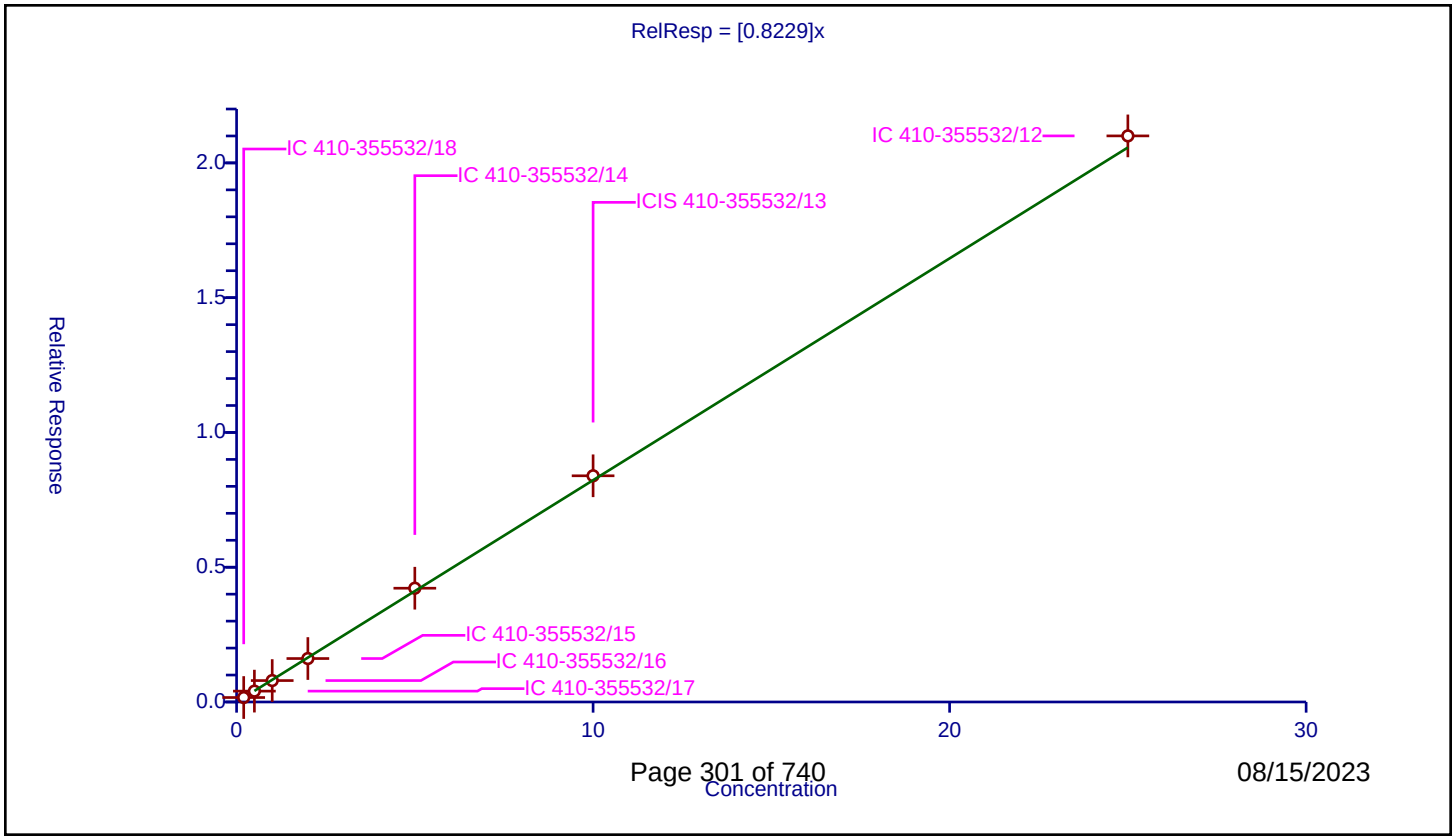
Curve Coefficients

Intercept:	0
Slope:	0.8229

Error Coefficients

Standard Error:	1160000
Relative Standard Error:	2.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.165721	10.0	1096665.0	0.828603	Y
2	IC 410-355532/17	0.5	0.403274	10.0	1099896.0	0.806549	Y
3	IC 410-355532/16	1.0	0.795097	10.0	1128630.0	0.795097	Y
4	IC 410-355532/15	2.0	1.612635	10.0	1126529.0	0.806317	Y
5	IC 410-355532/14	5.0	4.221349	10.0	1162953.0	0.84427	Y
6	ICIS 410-355532/13	10.0	8.392168	10.0	1169233.0	0.839217	Y
7	IC 410-355532/12	25.0	21.002829	10.0	1240232.0	0.840113	Y



Calibration / trans-1,4-Dichloro-2-butene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

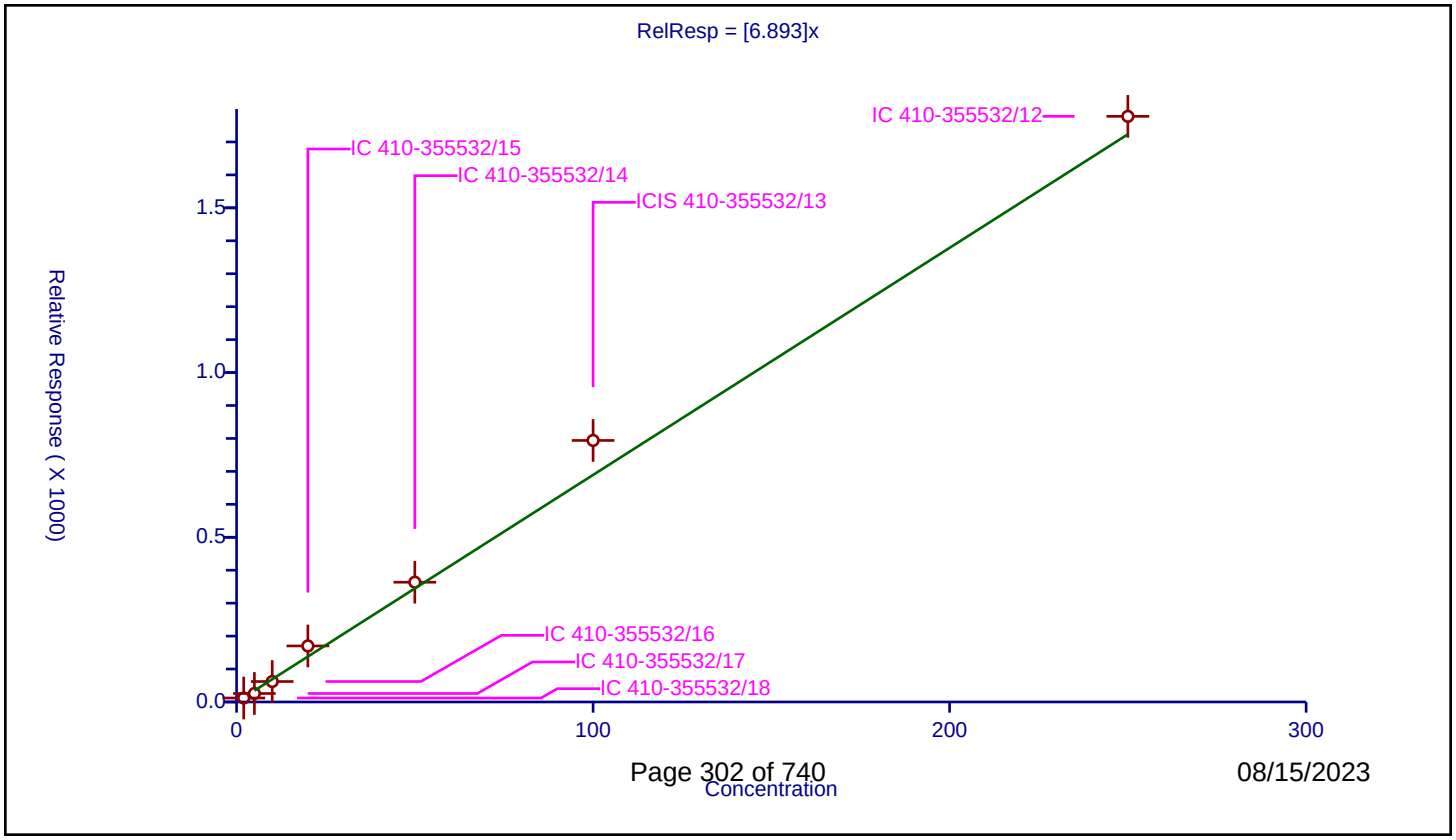
Curve Coefficients

Intercept:	0
Slope:	6.893

Error Coefficients

Standard Error:	2230000
Relative Standard Error:	16.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.967

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	2.0	12.106449	50.0	126445.0	6.053225	Y
2	IC 410-355532/17	5.0	25.770073	50.0	153492.0	5.154015	Y
3	IC 410-355532/16	10.0	62.135096	50.0	134008.0	6.21351	Y
4	IC 410-355532/15	20.0	170.116543	50.0	97646.0	8.505827	Y
5	IC 410-355532/14	50.0	363.587976	50.0	125221.0	7.27176	Y
6	ICIS 410-355532/13	100.0	793.935811	50.0	120956.0	7.939358	Y
7	IC 410-355532/12	250.0	1777.712273	50.0	141127.0	7.110849	Y



Calibration / 1,2,3-Trichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

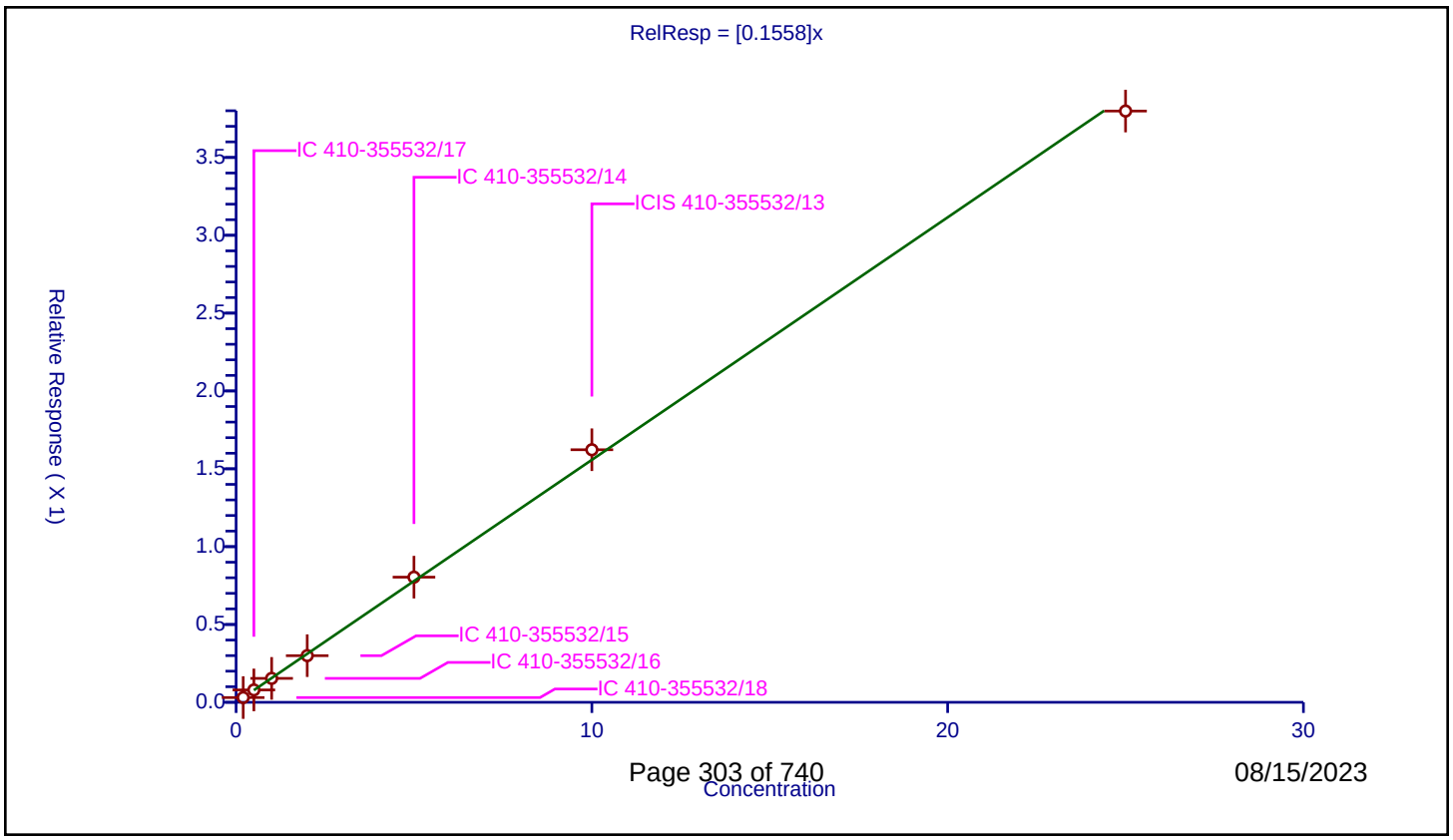
Curve Coefficients

Intercept:	0
Slope:	0.1558

Error Coefficients

Standard Error:	211000
Relative Standard Error:	3.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.030556	10.0	1096665.0	0.152781	Y
2	IC 410-355532/17	0.5	0.079471	10.0	1099896.0	0.158942	Y
3	IC 410-355532/16	1.0	0.153753	10.0	1128630.0	0.153753	Y
4	IC 410-355532/15	2.0	0.299717	10.0	1126529.0	0.149859	Y
5	IC 410-355532/14	5.0	0.803988	10.0	1162953.0	0.160798	Y
6	ICIS 410-355532/13	10.0	1.622431	10.0	1169233.0	0.162243	Y
7	IC 410-355532/12	25.0	3.798185	10.0	1240232.0	0.151927	Y



Calibration / N-Propylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

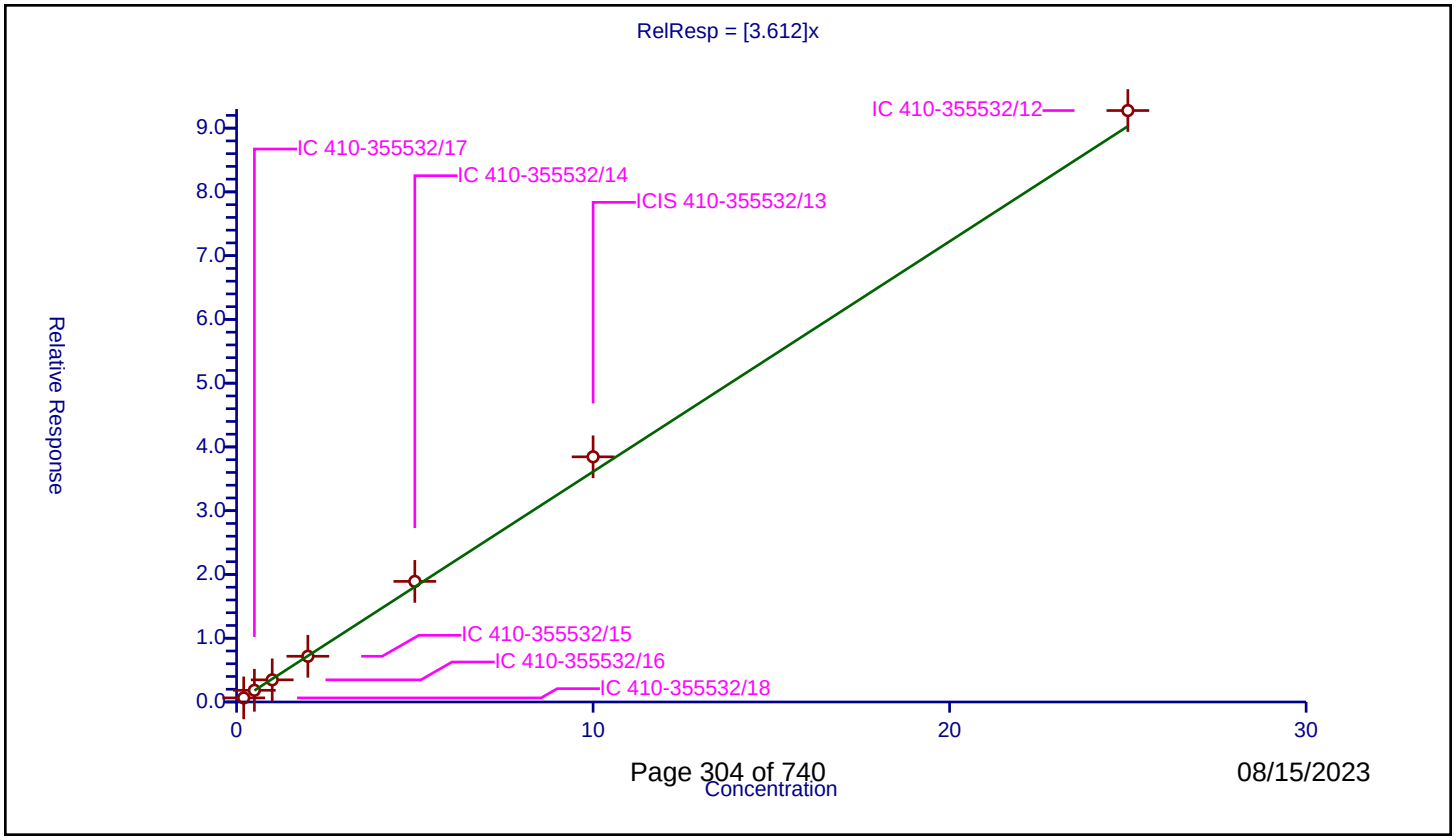
Curve Coefficients

Intercept:	0
Slope:	3.612

Error Coefficients

Standard Error:	5140000
Relative Standard Error:	5.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.643916	10.0	1096665.0	3.219579	Y
2	IC 410-355532/17	0.5	1.832564	10.0	1099896.0	3.665128	Y
3	IC 410-355532/16	1.0	3.475187	10.0	1128630.0	3.475187	Y
4	IC 410-355532/15	2.0	7.170344	10.0	1126529.0	3.585172	Y
5	IC 410-355532/14	5.0	18.915494	10.0	1162953.0	3.783099	Y
6	ICIS 410-355532/13	10.0	38.45125	10.0	1169233.0	3.845125	Y
7	IC 410-355532/12	25.0	92.762483	10.0	1240232.0	3.710499	Y



Calibration / 2-Chlorotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

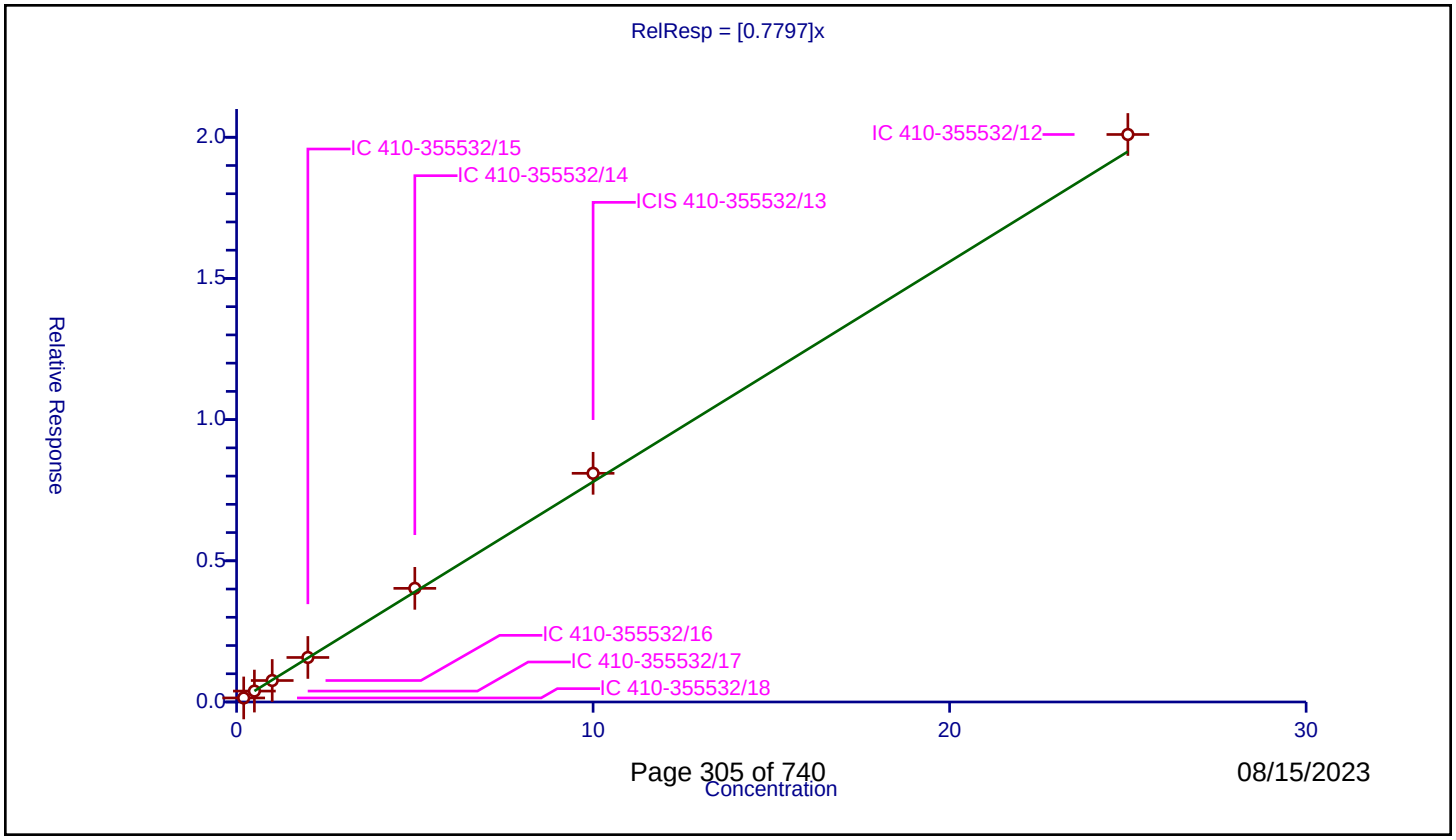
Curve Coefficients

Intercept:	0
Slope:	0.7797

Error Coefficients

Standard Error:	1110000
Relative Standard Error:	4.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.143508	10.0	1096665.0	0.717539	Y
2	IC 410-355532/17	0.5	0.386509	10.0	1099896.0	0.773019	Y
3	IC 410-355532/16	1.0	0.76071	10.0	1128630.0	0.76071	Y
4	IC 410-355532/15	2.0	1.576417	10.0	1126529.0	0.788209	Y
5	IC 410-355532/14	5.0	4.024084	10.0	1162953.0	0.804817	Y
6	ICIS 410-355532/13	10.0	8.098446	10.0	1169233.0	0.809845	Y
7	IC 410-355532/12	25.0	20.097933	10.0	1240232.0	0.803917	Y



Calibration / 1,3,5-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

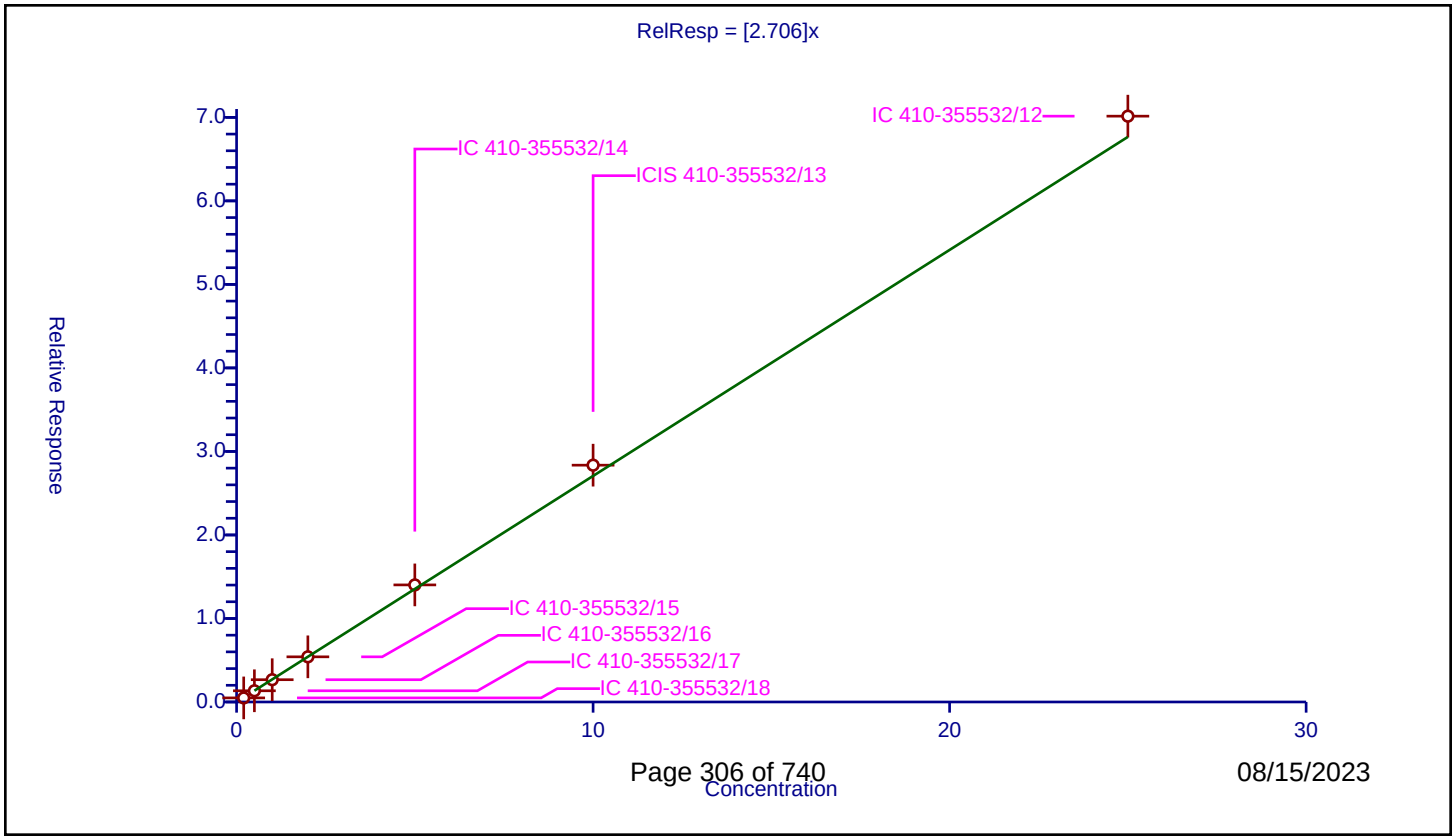
Curve Coefficients

Intercept:	0
Slope:	2.706

Error Coefficients

Standard Error:	3870000
Relative Standard Error:	4.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.488499	10.0	1096665.0	2.442496	Y
2	IC 410-355532/17	0.5	1.342145	10.0	1099896.0	2.68429	Y
3	IC 410-355532/16	1.0	2.669218	10.0	1128630.0	2.669218	Y
4	IC 410-355532/15	2.0	5.407087	10.0	1126529.0	2.703543	Y
5	IC 410-355532/14	5.0	14.017686	10.0	1162953.0	2.803537	Y
6	ICIS 410-355532/13	10.0	28.356059	10.0	1169233.0	2.835606	Y
7	IC 410-355532/12	25.0	70.144513	10.0	1240232.0	2.805781	Y



Calibration / 4-Chlorotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

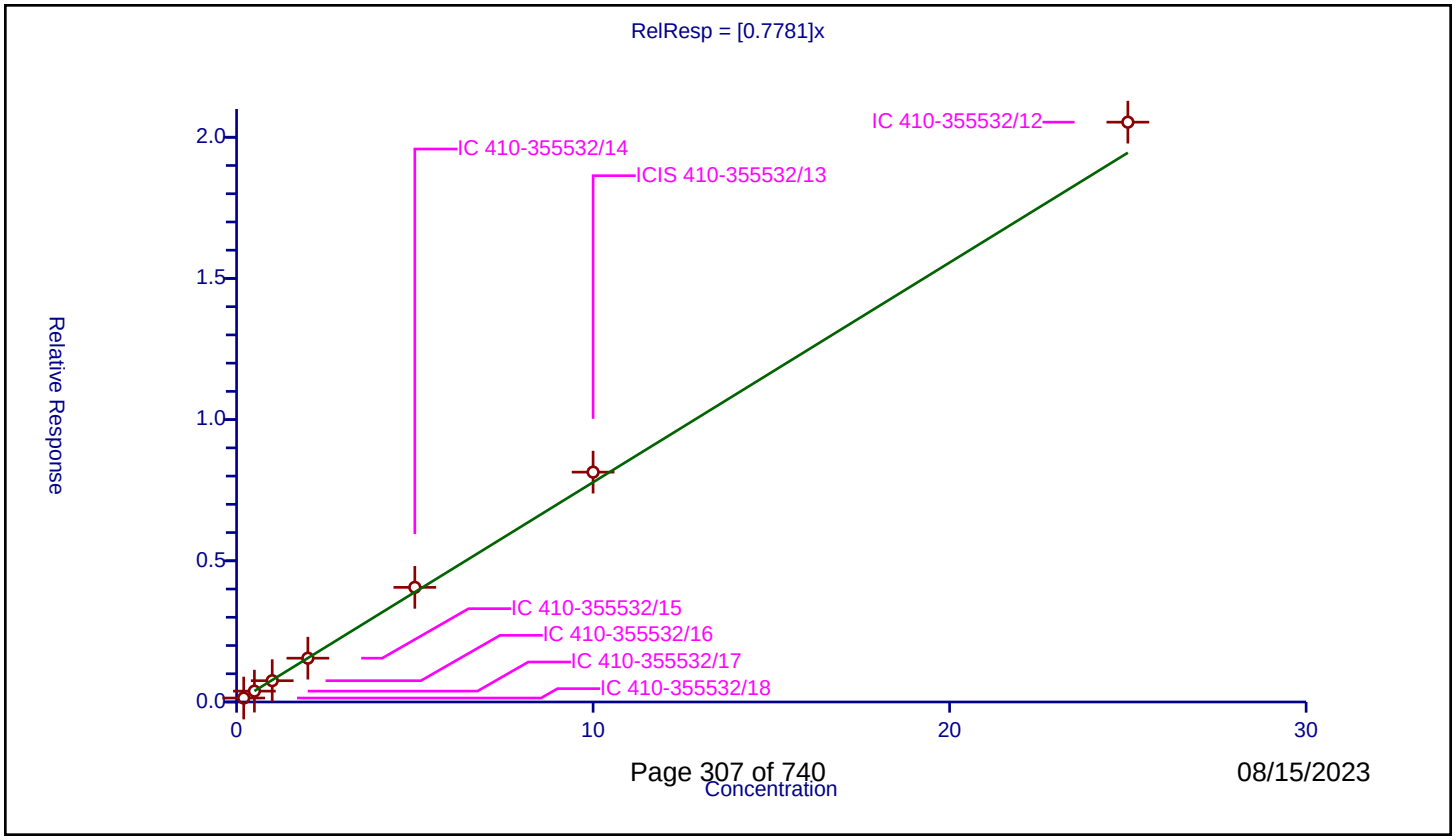
Curve Coefficients

Intercept:	0
Slope:	0.7781

Error Coefficients

Standard Error:	1130000
Relative Standard Error:	5.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.140125	10.0	1096665.0	0.700624	Y
2	IC 410-355532/17	0.5	0.3846	10.0	1099896.0	0.7692	Y
3	IC 410-355532/16	1.0	0.753648	10.0	1128630.0	0.753648	Y
4	IC 410-355532/15	2.0	1.551571	10.0	1126529.0	0.775786	Y
5	IC 410-355532/14	5.0	4.059898	10.0	1162953.0	0.81198	Y
6	ICIS 410-355532/13	10.0	8.140567	10.0	1169233.0	0.814057	Y
7	IC 410-355532/12	25.0	20.53469	10.0	1240232.0	0.821388	Y



Calibration / tert-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

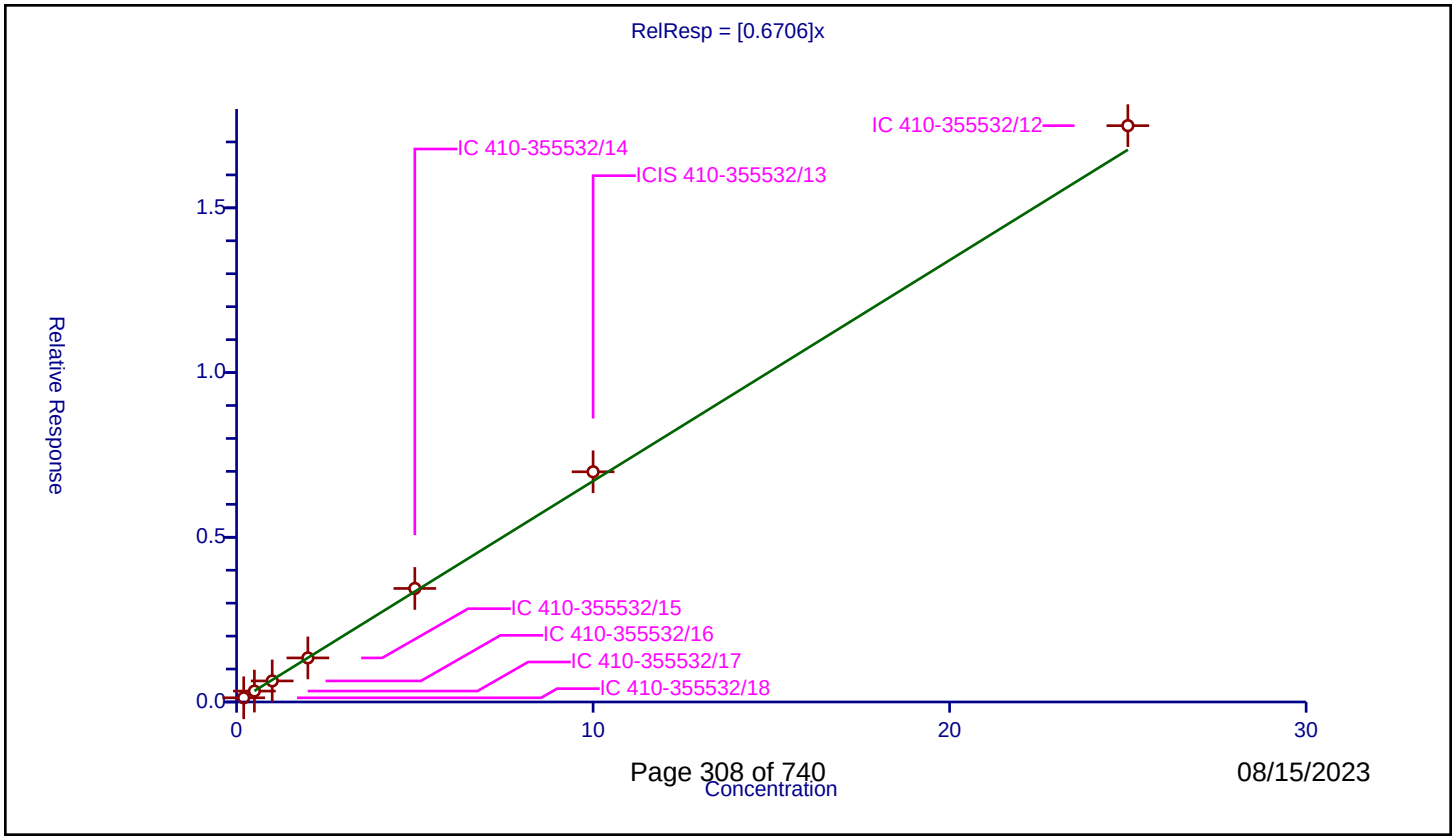
Curve Coefficients

Intercept:	0
Slope:	0.6706

Error Coefficients

Standard Error:	963000
Relative Standard Error:	4.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.127213	10.0	1096665.0	0.636065	Y
2	IC 410-355532/17	0.5	0.331277	10.0	1099896.0	0.662554	Y
3	IC 410-355532/16	1.0	0.638766	10.0	1128630.0	0.638766	Y
4	IC 410-355532/15	2.0	1.337294	10.0	1126529.0	0.668647	Y
5	IC 410-355532/14	5.0	3.446674	10.0	1162953.0	0.689335	Y
6	ICIS 410-355532/13	10.0	6.988068	10.0	1169233.0	0.698807	Y
7	IC 410-355532/12	25.0	17.495194	10.0	1240232.0	0.699808	Y



Calibration / Pentachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

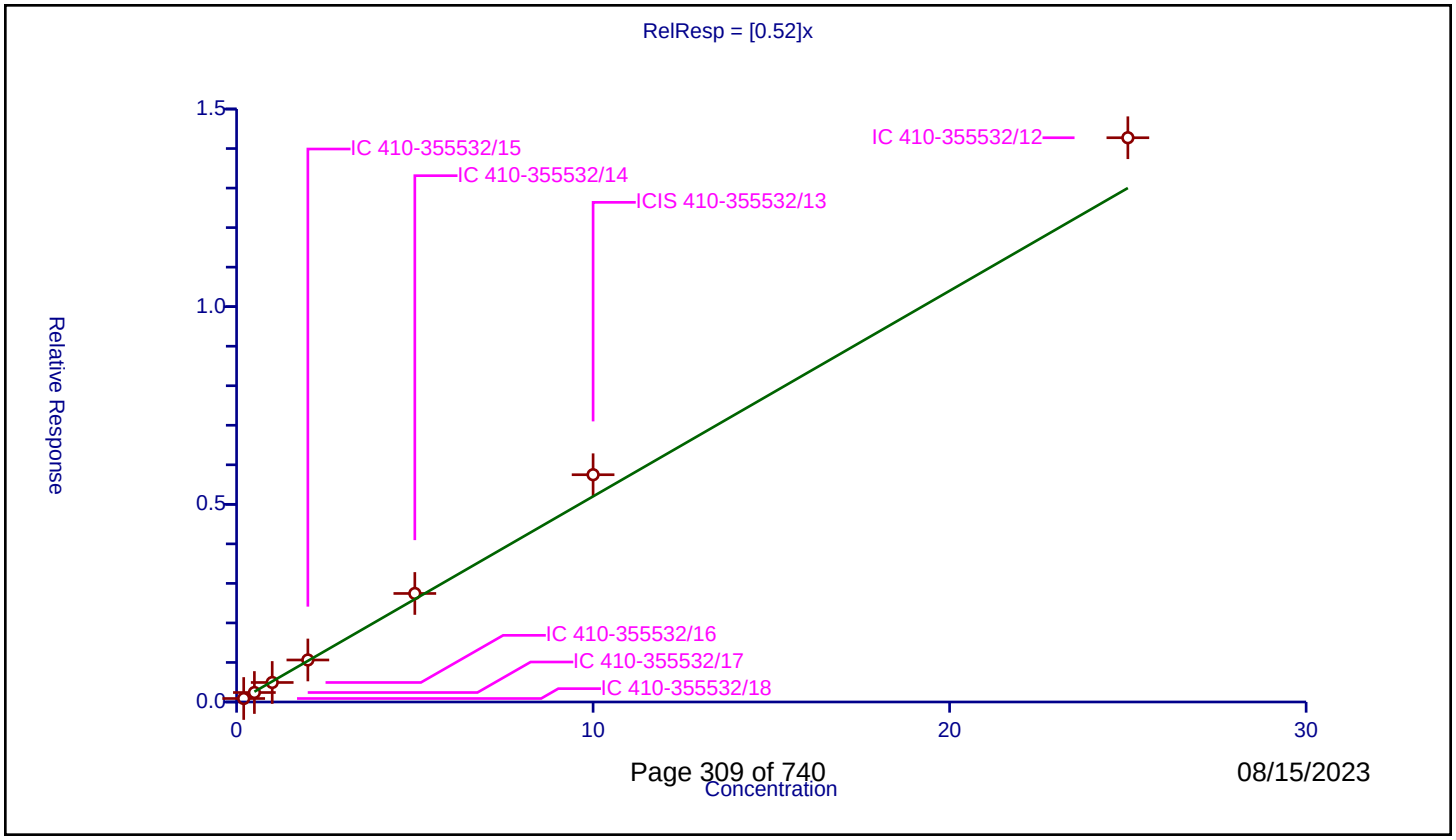
Curve Coefficients

Intercept:	0
Slope:	0.52

Error Coefficients

Standard Error:	786000
Relative Standard Error:	9.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.088167	10.0	1096665.0	0.440837	Y
2	IC 410-355532/17	0.5	0.239986	10.0	1099896.0	0.479973	Y
3	IC 410-355532/16	1.0	0.493288	10.0	1128630.0	0.493288	Y
4	IC 410-355532/15	2.0	1.06284	10.0	1126529.0	0.53142	Y
5	IC 410-355532/14	5.0	2.744874	10.0	1162953.0	0.548975	Y
6	ICIS 410-355532/13	10.0	5.749273	10.0	1169233.0	0.574927	Y
7	IC 410-355532/12	25.0	14.273241	10.0	1240232.0	0.57093	Y



Calibration / 1,2,4-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

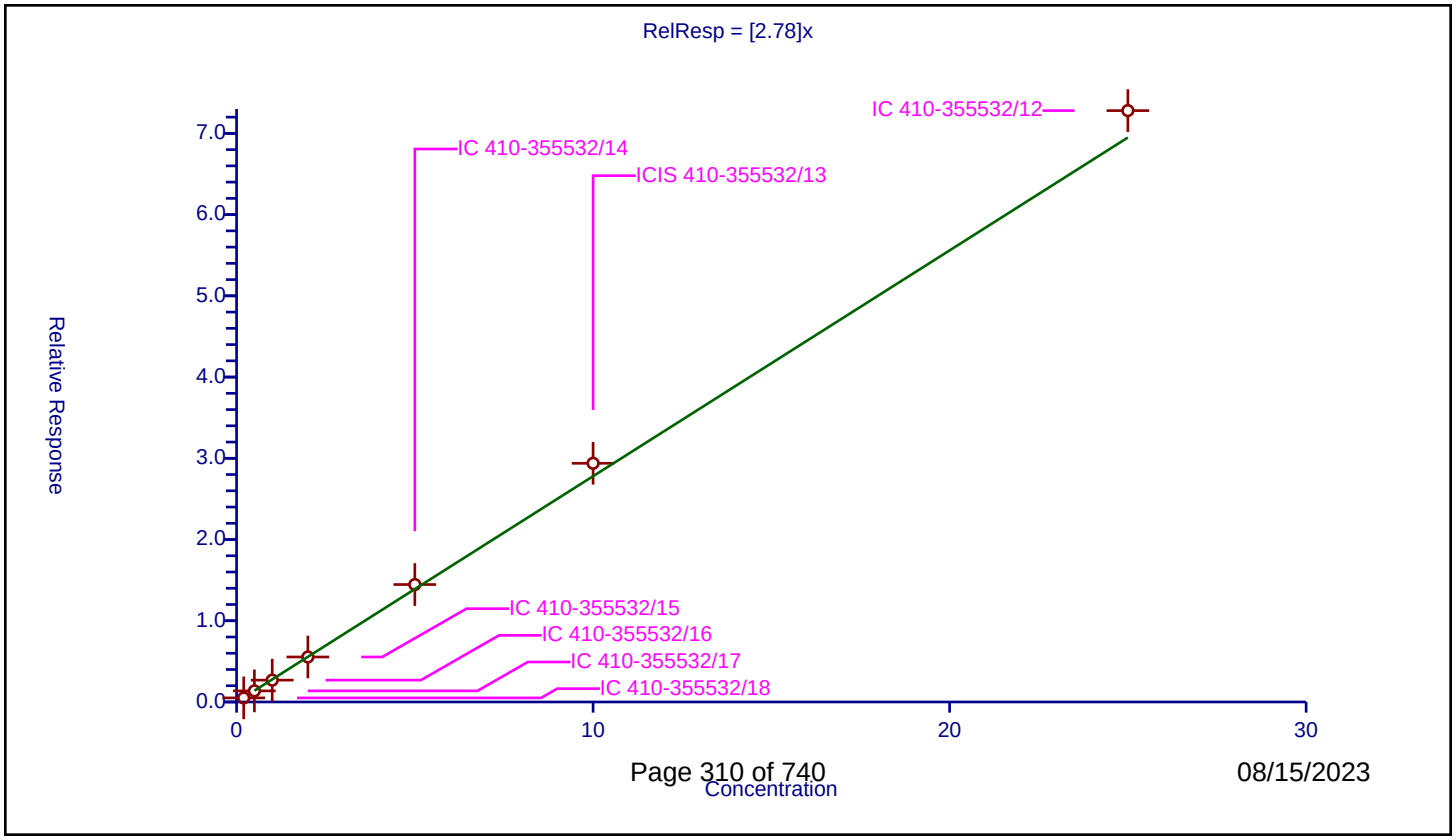
Curve Coefficients

Intercept:	0
Slope:	2.78

Error Coefficients

Standard Error:	4010000
Relative Standard Error:	5.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.503645	10.0	1096665.0	2.518226	Y
2	IC 410-355532/17	0.5	1.368584	10.0	1099896.0	2.737168	Y
3	IC 410-355532/16	1.0	2.689517	10.0	1128630.0	2.689517	Y
4	IC 410-355532/15	2.0	5.540044	10.0	1126529.0	2.770022	Y
5	IC 410-355532/14	5.0	14.460008	10.0	1162953.0	2.892002	Y
6	ICIS 410-355532/13	10.0	29.386572	10.0	1169233.0	2.938657	Y
7	IC 410-355532/12	25.0	72.803185	10.0	1240232.0	2.912127	Y



Calibration / sec-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

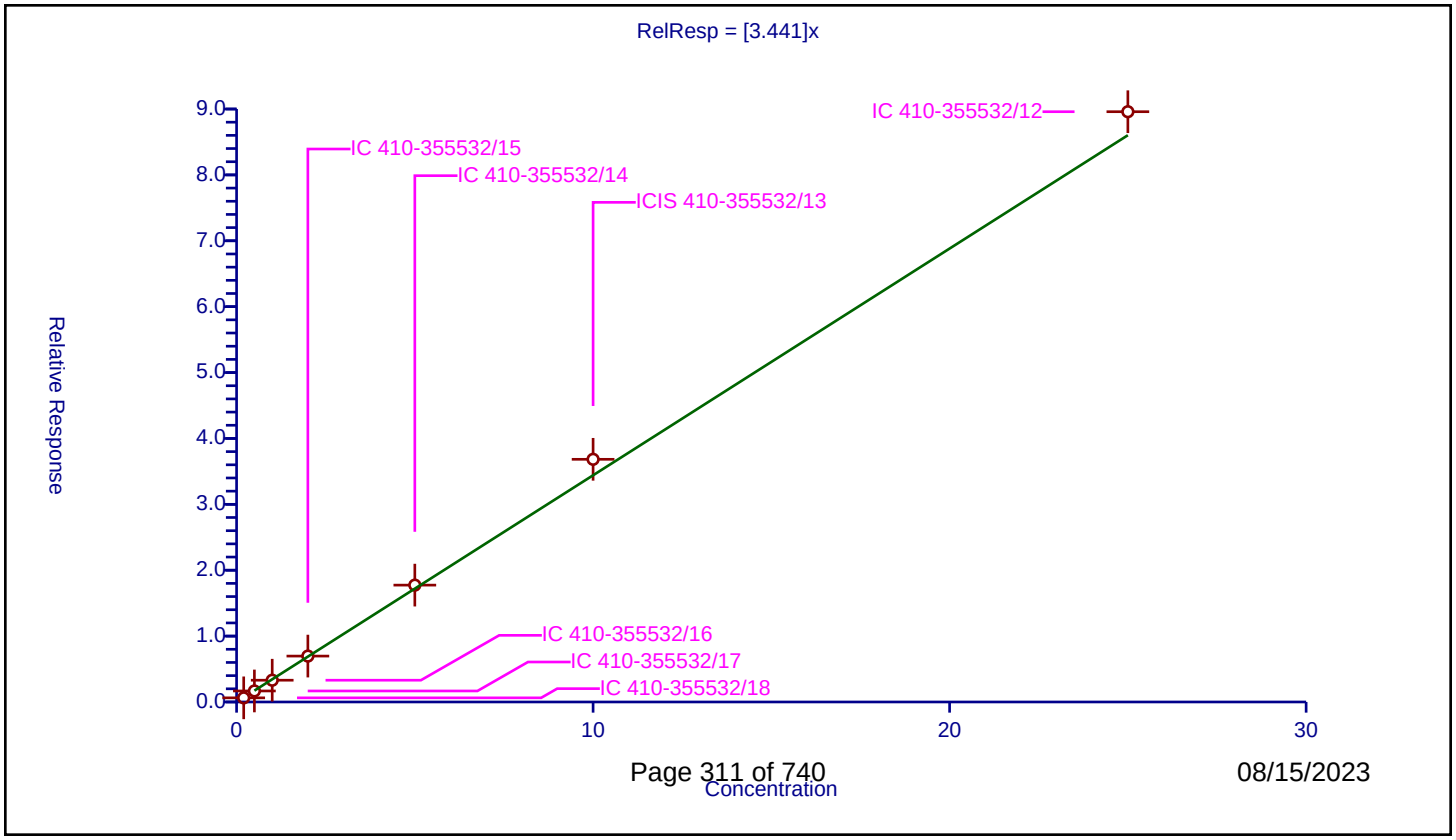
Curve Coefficients

Intercept:	0
Slope:	3.441

Error Coefficients

Standard Error:	4950000
Relative Standard Error:	5.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.627767	10.0	1096665.0	3.138835	Y
2	IC 410-355532/17	0.5	1.672194	10.0	1099896.0	3.344389	Y
3	IC 410-355532/16	1.0	3.304449	10.0	1128630.0	3.304449	Y
4	IC 410-355532/15	2.0	6.968831	10.0	1126529.0	3.484415	Y
5	IC 410-355532/14	5.0	17.737845	10.0	1162953.0	3.547569	Y
6	ICIS 410-355532/13	10.0	36.832522	10.0	1169233.0	3.683252	Y
7	IC 410-355532/12	25.0	89.59081	10.0	1240232.0	3.583632	Y



Calibration / 1,3-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

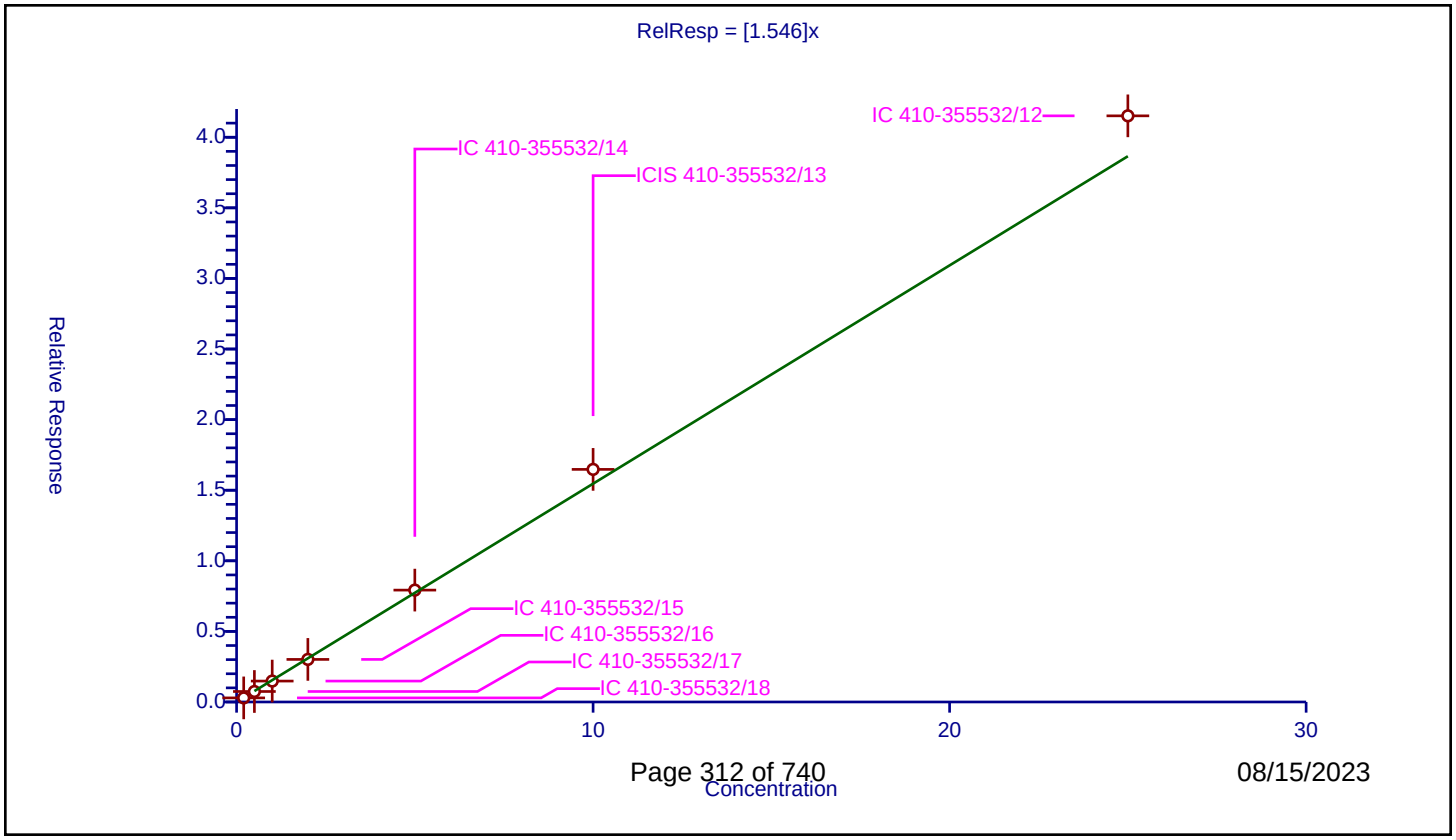
Curve Coefficients

Intercept:	0
Slope:	1.546

Error Coefficients

Standard Error:	2280000
Relative Standard Error:	5.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.290809	10.0	1096665.0	1.454045	Y
2	IC 410-355532/17	0.5	0.743516	10.0	1099896.0	1.487032	Y
3	IC 410-355532/16	1.0	1.481043	10.0	1128630.0	1.481043	Y
4	IC 410-355532/15	2.0	3.016132	10.0	1126529.0	1.508066	Y
5	IC 410-355532/14	5.0	7.924568	10.0	1162953.0	1.584914	Y
6	ICIS 410-355532/13	10.0	16.474783	10.0	1169233.0	1.647478	Y
7	IC 410-355532/12	25.0	41.516353	10.0	1240232.0	1.660654	Y



Calibration / 4-Isopropyltoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

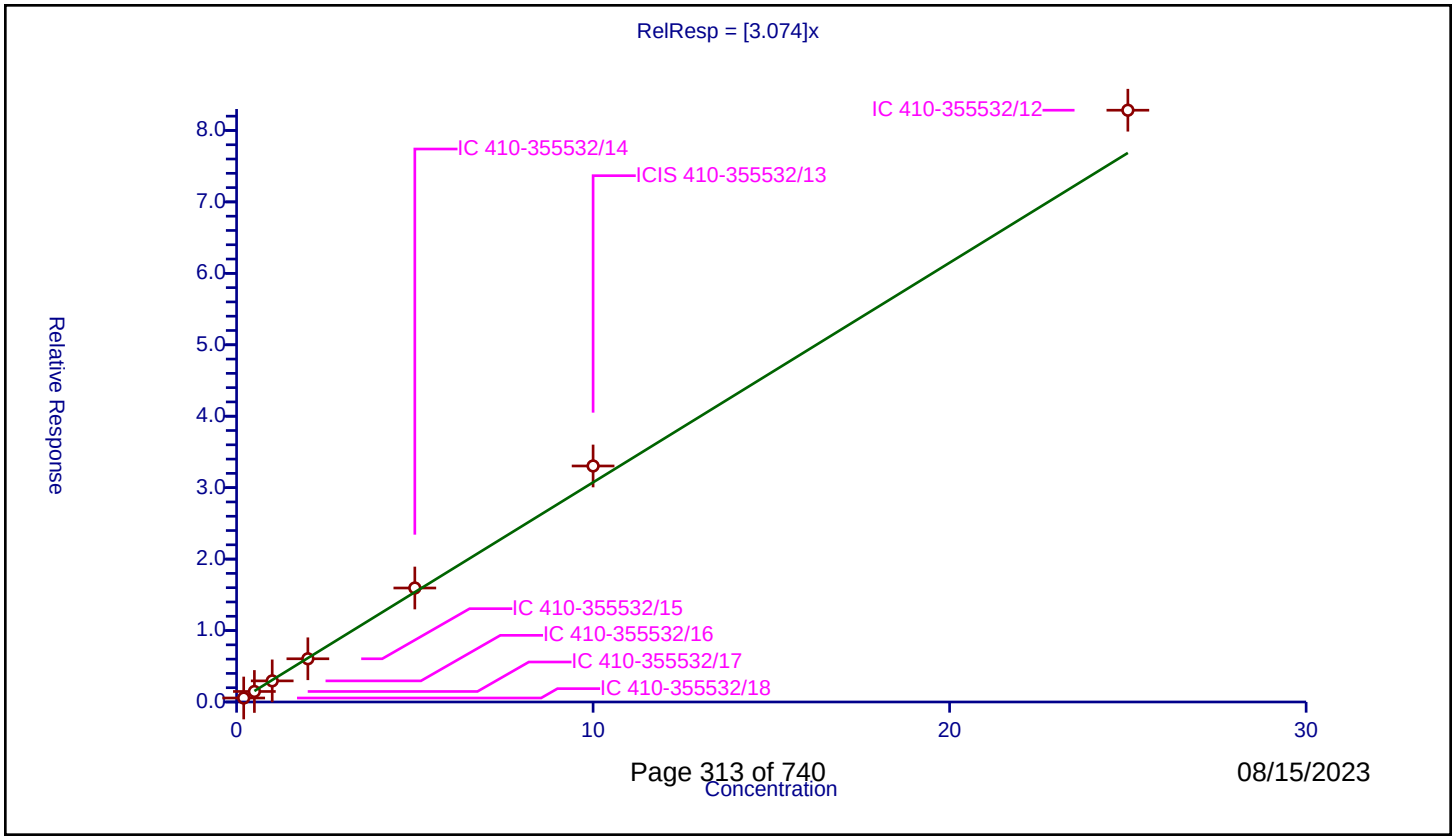
Curve Coefficients

Intercept:	0
Slope:	3.074

Error Coefficients

Standard Error:	4560000
Relative Standard Error:	6.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.55729	10.0	1096665.0	2.786448	Y
2	IC 410-355532/17	0.5	1.473748	10.0	1099896.0	2.947497	Y
3	IC 410-355532/16	1.0	2.953705	10.0	1128630.0	2.953705	Y
4	IC 410-355532/15	2.0	6.047408	10.0	1126529.0	3.023704	Y
5	IC 410-355532/14	5.0	15.955271	10.0	1162953.0	3.191054	Y
6	ICIS 410-355532/13	10.0	33.035486	10.0	1169233.0	3.303549	Y
7	IC 410-355532/12	25.0	82.832075	10.0	1240232.0	3.313283	Y



Calibration / 1,4-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

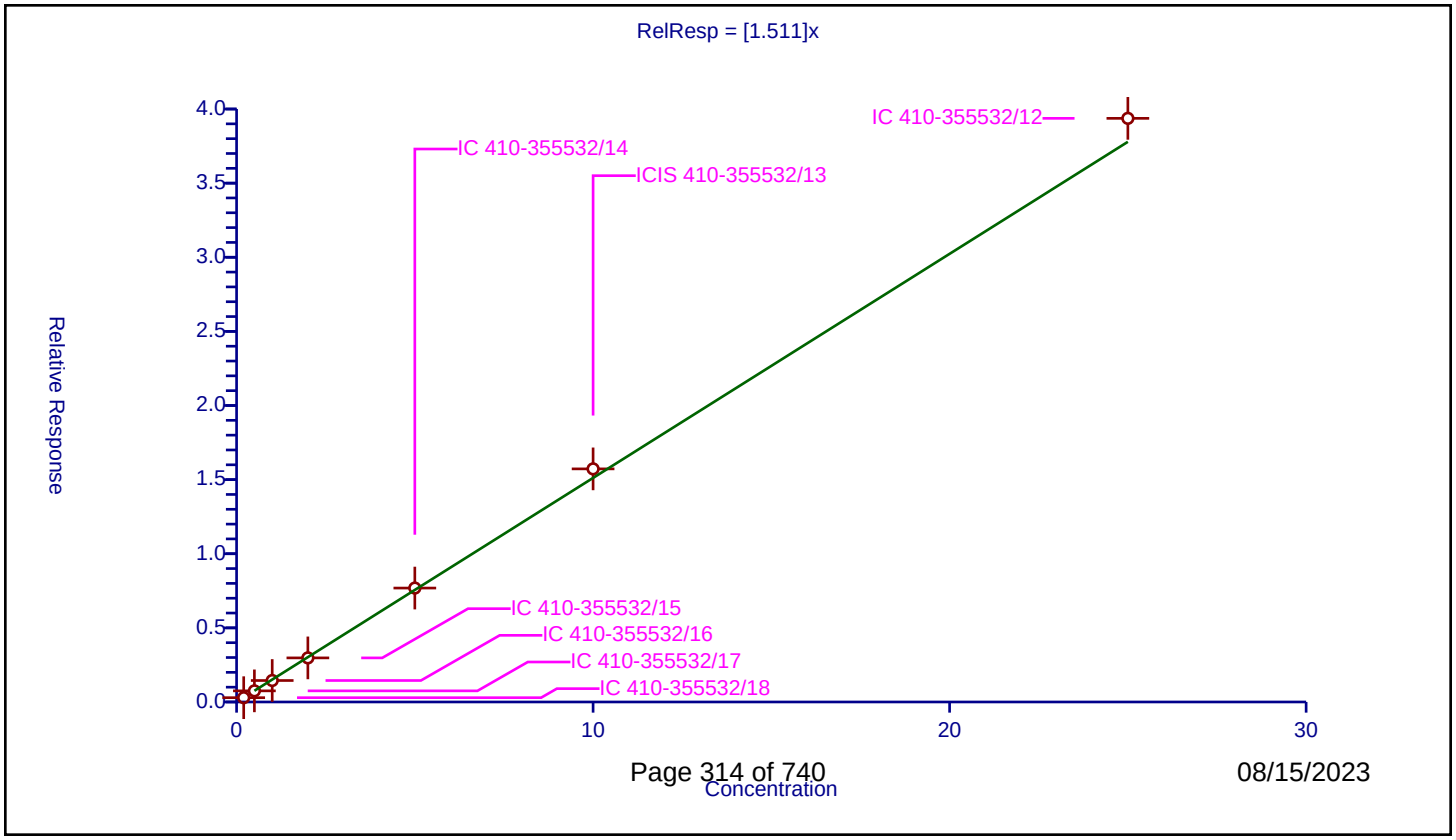
Curve Coefficients

Intercept:	0
Slope:	1.511

Error Coefficients

Standard Error:	2170000
Relative Standard Error:	3.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.291393	10.0	1096665.0	1.456963	Y
2	IC 410-355532/17	0.5	0.75118	10.0	1099896.0	1.50236	Y
3	IC 410-355532/16	1.0	1.449456	10.0	1128630.0	1.449456	Y
4	IC 410-355532/15	2.0	2.97481	10.0	1126529.0	1.487405	Y
5	IC 410-355532/14	5.0	7.684833	10.0	1162953.0	1.536967	Y
6	ICIS 410-355532/13	10.0	15.724992	10.0	1169233.0	1.572499	Y
7	IC 410-355532/12	25.0	39.371093	10.0	1240232.0	1.574844	Y



Calibration / 1,2,3-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

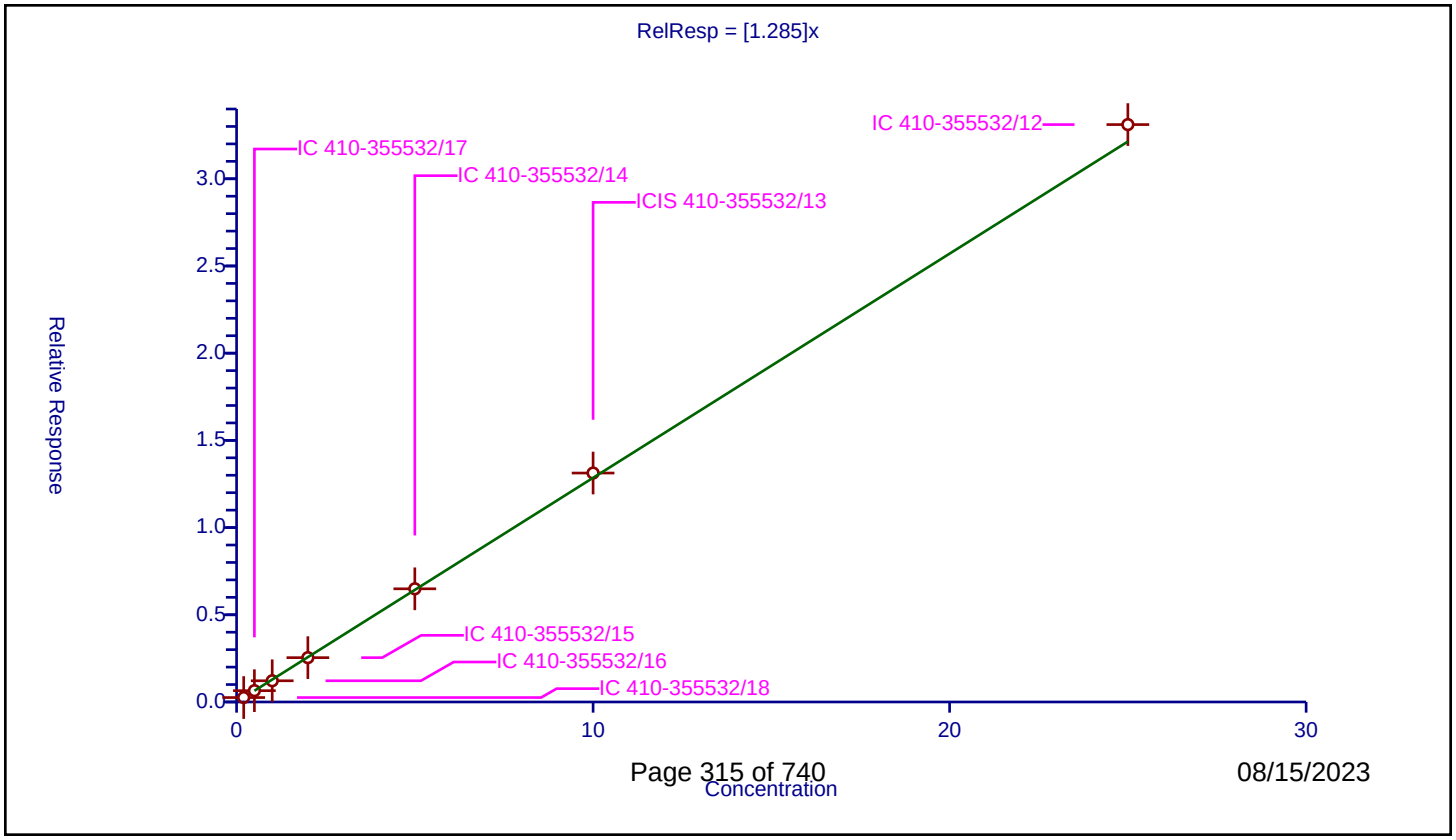
Curve Coefficients

Intercept:	0
Slope:	1.285

Error Coefficients

Standard Error:	1820000
Relative Standard Error:	2.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.255301	10.0	1096665.0	1.276506	Y
2	IC 410-355532/17	0.5	0.64958	10.0	1099896.0	1.299159	Y
3	IC 410-355532/16	1.0	1.21589	10.0	1128630.0	1.21589	Y
4	IC 410-355532/15	2.0	2.541639	10.0	1126529.0	1.270819	Y
5	IC 410-355532/14	5.0	6.490013	10.0	1162953.0	1.298003	Y
6	ICIS 410-355532/13	10.0	13.127589	10.0	1169233.0	1.312759	Y
7	IC 410-355532/12	25.0	33.10629	10.0	1240232.0	1.324252	Y



Calibration / Benzyl chloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

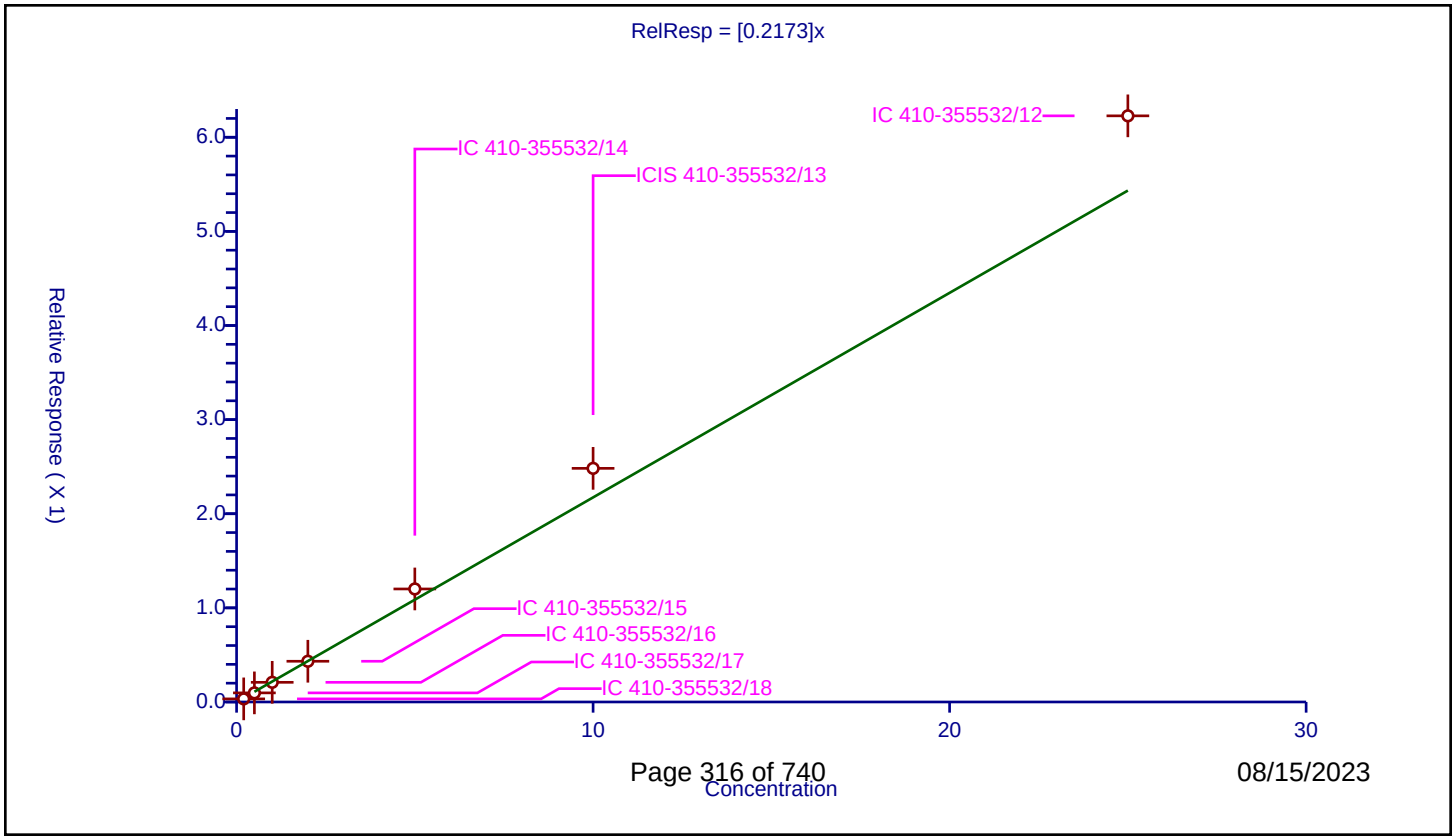
Curve Coefficients

Intercept:	0
Slope:	0.2173

Error Coefficients

Standard Error:	342000
Relative Standard Error:	14.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.977

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.032936	10.0	1096665.0	0.164681	Y
2	IC 410-355532/17	0.5	0.096873	10.0	1099896.0	0.193746	Y
3	IC 410-355532/16	1.0	0.209059	10.0	1128630.0	0.209059	Y
4	IC 410-355532/15	2.0	0.432896	10.0	1126529.0	0.216448	Y
5	IC 410-355532/14	5.0	1.200874	10.0	1162953.0	0.240175	Y
6	ICIS 410-355532/13	10.0	2.482268	10.0	1169233.0	0.248227	Y
7	IC 410-355532/12	25.0	6.227359	10.0	1240232.0	0.249094	Y



Calibration / n-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

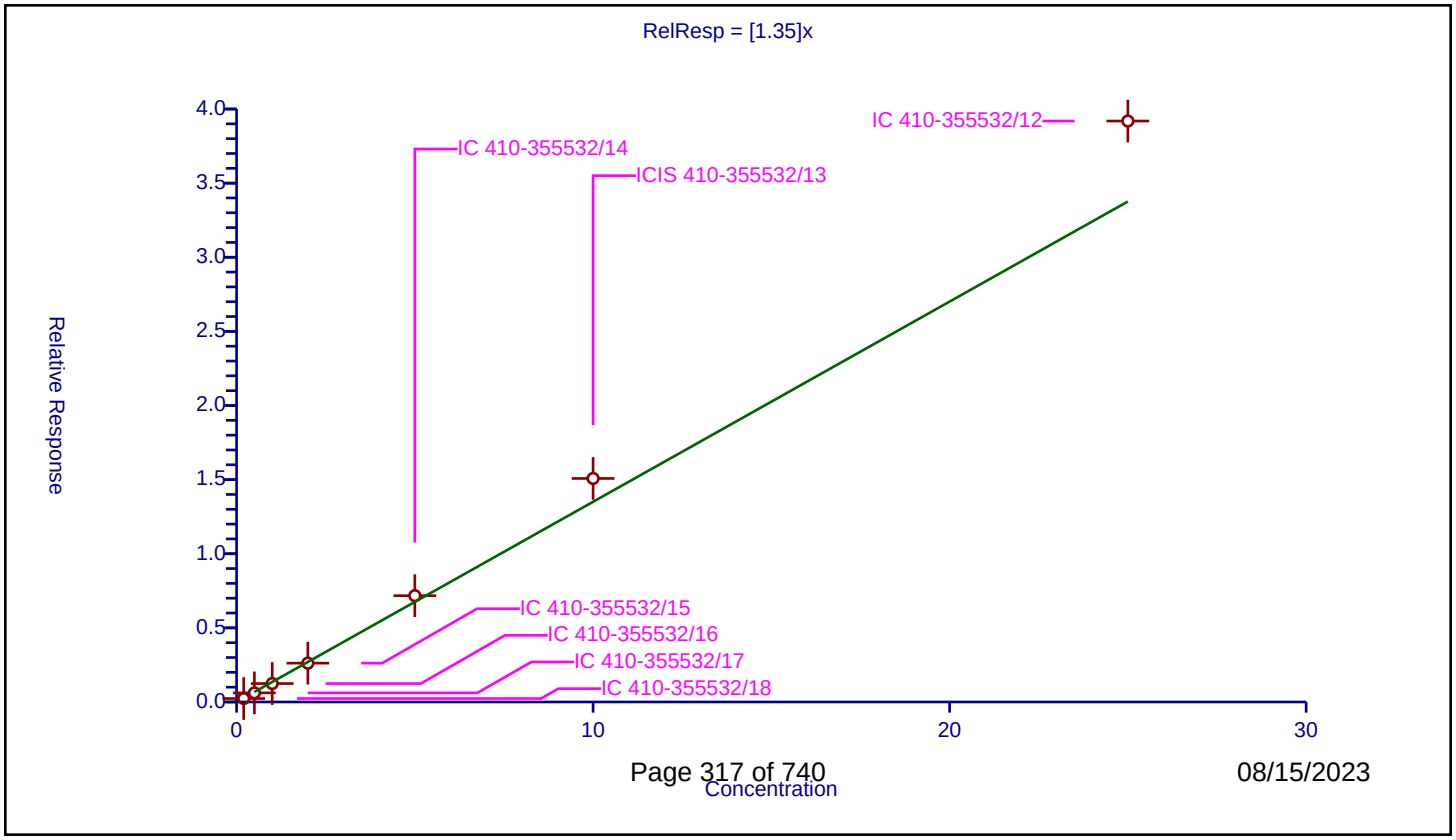
Curve Coefficients

Intercept:	0
Slope:	1.35

Error Coefficients

Standard Error:	2140000
Relative Standard Error:	11.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.232177	10.0	1096665.0	1.160883	Y
2	IC 410-355532/17	0.5	0.613922	10.0	1099896.0	1.227843	Y
3	IC 410-355532/16	1.0	1.244261	10.0	1128630.0	1.244261	Y
4	IC 410-355532/15	2.0	2.620758	10.0	1126529.0	1.310379	Y
5	IC 410-355532/14	5.0	7.171261	10.0	1162953.0	1.434252	Y
6	ICIS 410-355532/13	10.0	15.078004	10.0	1169233.0	1.5078	Y
7	IC 410-355532/12	25.0	39.189144	10.0	1240232.0	1.567566	Y



Calibration / 1,2-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

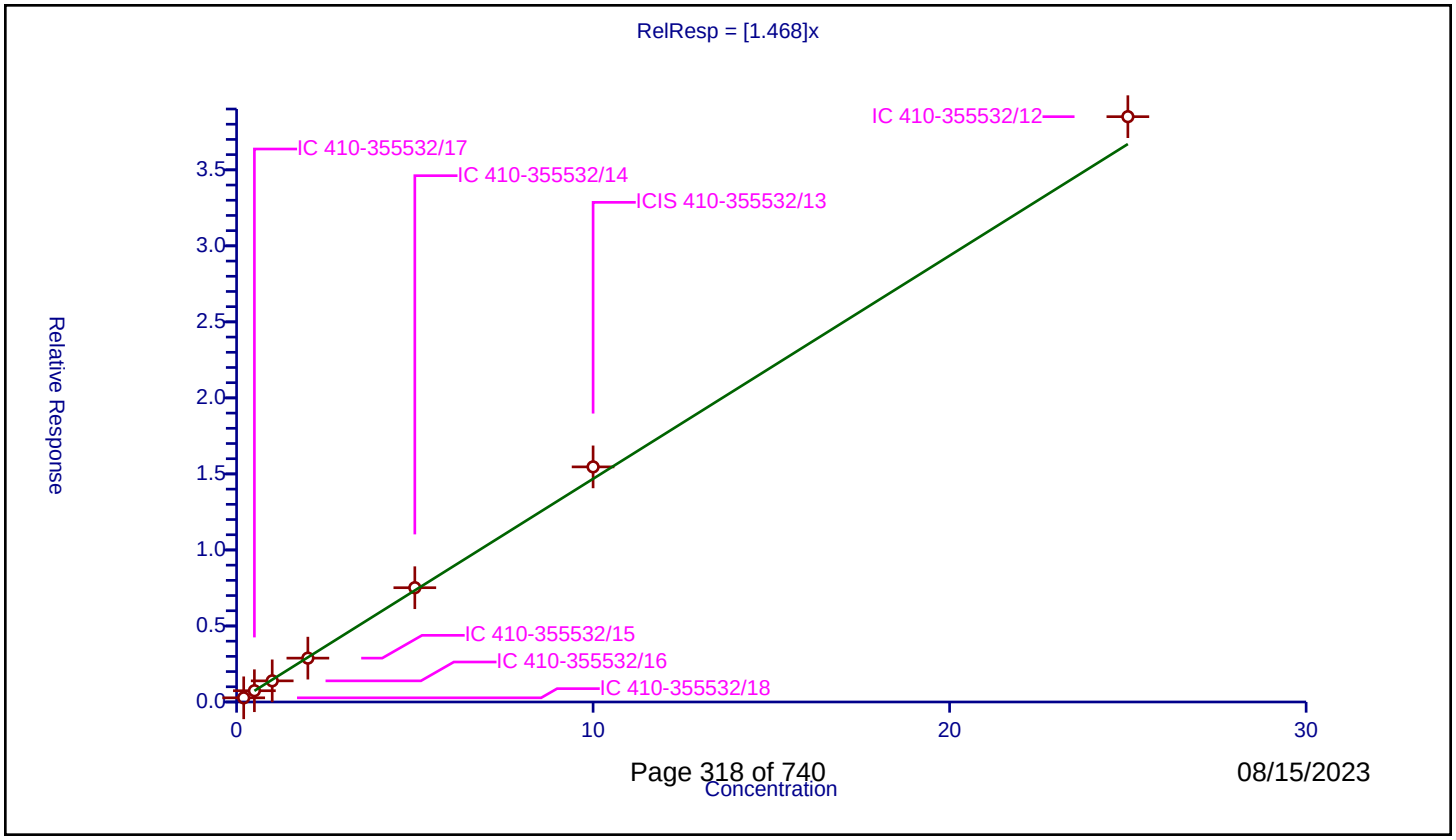
Curve Coefficients

Intercept:	0
Slope:	1.468

Error Coefficients

Standard Error:	2120000
Relative Standard Error:	4.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.274578	10.0	1096665.0	1.37289	Y
2	IC 410-355532/17	0.5	0.740743	10.0	1099896.0	1.481486	Y
3	IC 410-355532/16	1.0	1.389348	10.0	1128630.0	1.389348	Y
4	IC 410-355532/15	2.0	2.883388	10.0	1126529.0	1.441694	Y
5	IC 410-355532/14	5.0	7.515446	10.0	1162953.0	1.503089	Y
6	ICIS 410-355532/13	10.0	15.462324	10.0	1169233.0	1.546232	Y
7	IC 410-355532/12	25.0	38.496628	10.0	1240232.0	1.539865	Y



Calibration / 1,2-Dibromo-3-Chloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

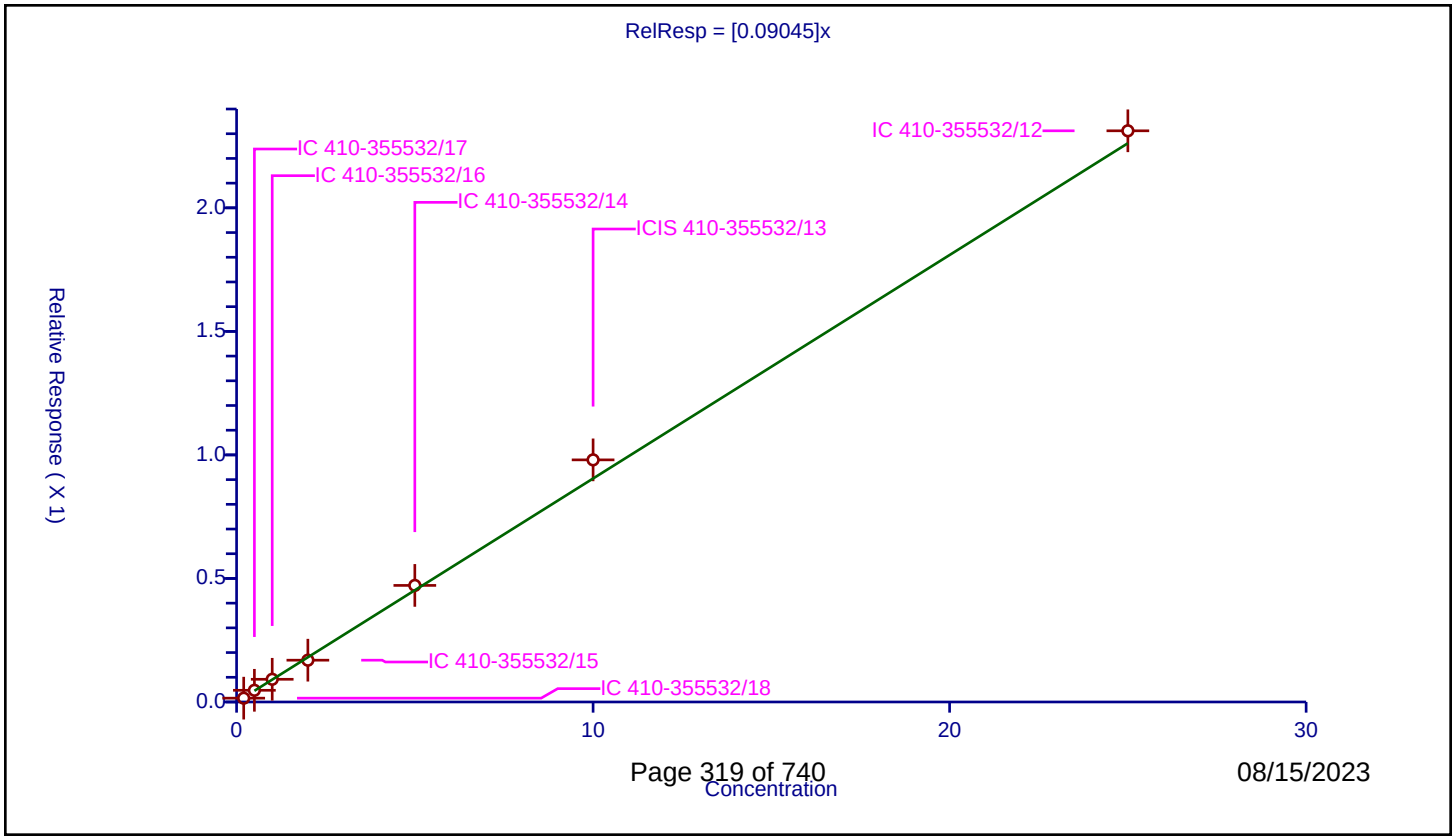
Curve Coefficients

Intercept:	0
Slope:	0.09045

Error Coefficients

Standard Error:	128000
Relative Standard Error:	7.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.015456	10.0	1096665.0	0.07728	Y
2	IC 410-355532/17	0.5	0.047314	10.0	1099896.0	0.094627	Y
3	IC 410-355532/16	1.0	0.091872	10.0	1128630.0	0.091872	Y
4	IC 410-355532/15	2.0	0.16913	10.0	1126529.0	0.084565	Y
5	IC 410-355532/14	5.0	0.471868	10.0	1162953.0	0.094374	Y
6	ICIS 410-355532/13	10.0	0.979959	10.0	1169233.0	0.097996	Y
7	IC 410-355532/12	25.0	2.311769	10.0	1240232.0	0.092471	Y



Calibration / 1,3,5-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

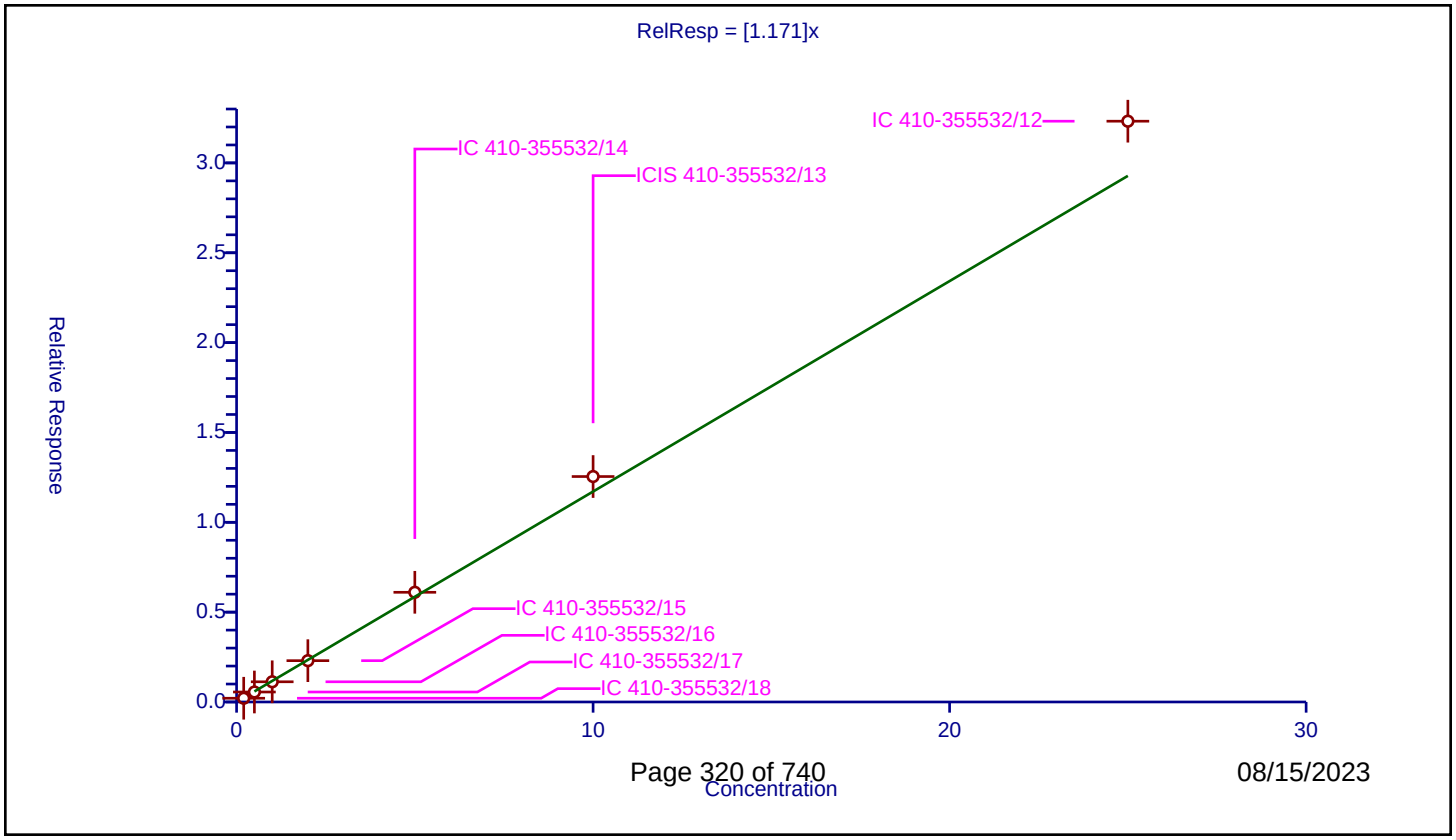
Curve Coefficients

Intercept:	0
Slope:	1.171

Error Coefficients

Standard Error:	1770000
Relative Standard Error:	7.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.209043	10.0	1096665.0	1.045214	Y
2	IC 410-355532/17	0.5	0.555589	10.0	1099896.0	1.111178	Y
3	IC 410-355532/16	1.0	1.123628	10.0	1128630.0	1.123628	Y
4	IC 410-355532/15	2.0	2.299559	10.0	1126529.0	1.14978	Y
5	IC 410-355532/14	5.0	6.104838	10.0	1162953.0	1.220968	Y
6	ICIS 410-355532/13	10.0	12.547046	10.0	1169233.0	1.254705	Y
7	IC 410-355532/12	25.0	32.321453	10.0	1240232.0	1.292858	Y



Calibration / 1,2,4-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

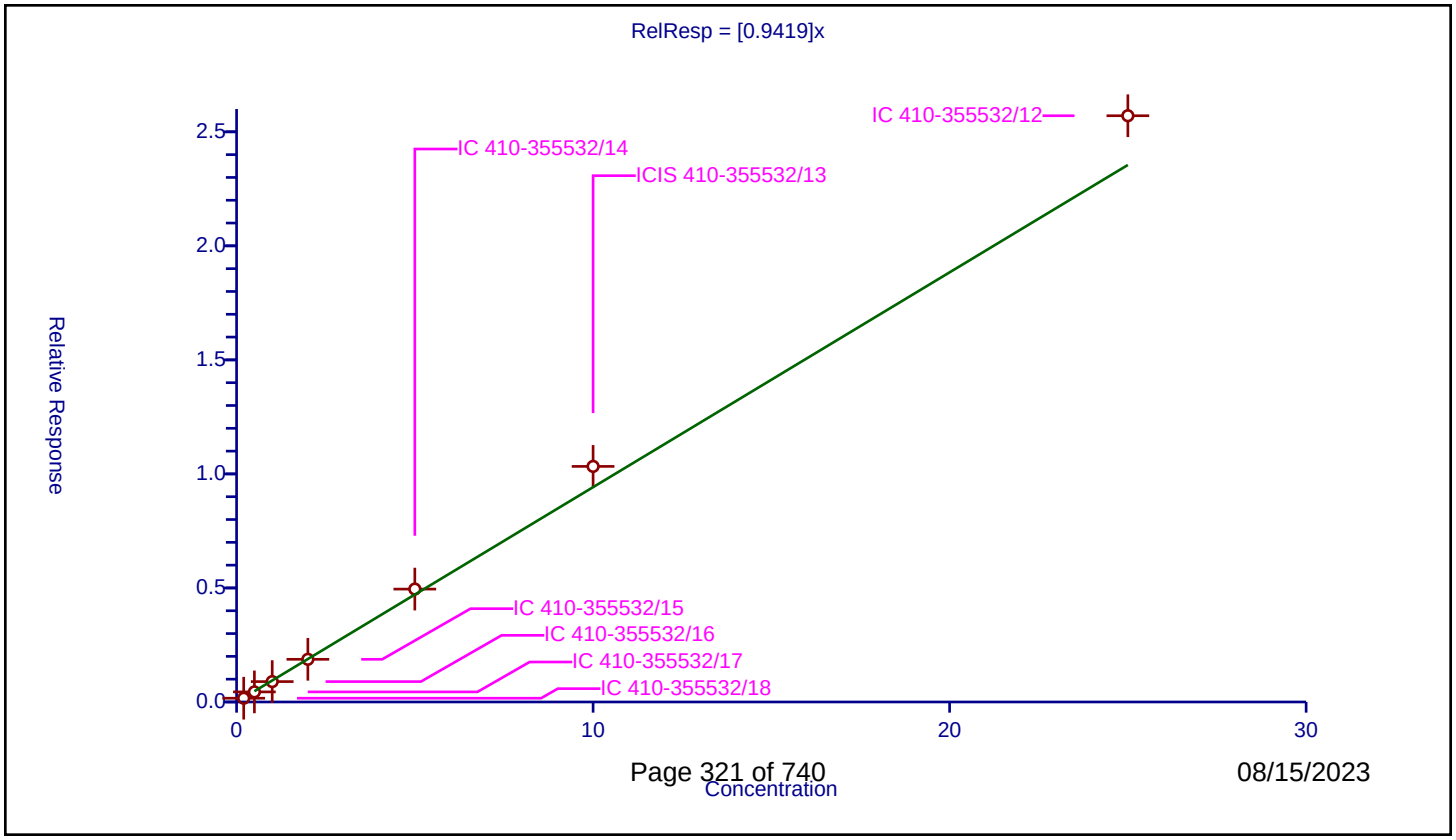
Curve Coefficients

Intercept:	0
Slope:	0.9419

Error Coefficients

Standard Error:	1410000
Relative Standard Error:	8.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.165748	10.0	1096665.0	0.82874	Y
2	IC 410-355532/17	0.5	0.442296	10.0	1099896.0	0.884593	Y
3	IC 410-355532/16	1.0	0.893349	10.0	1128630.0	0.893349	Y
4	IC 410-355532/15	2.0	1.870844	10.0	1126529.0	0.935422	Y
5	IC 410-355532/14	5.0	4.950123	10.0	1162953.0	0.990025	Y
6	ICIS 410-355532/13	10.0	10.329327	10.0	1169233.0	1.032933	Y
7	IC 410-355532/12	25.0	25.705545	10.0	1240232.0	1.028222	Y



Calibration / Hexachlorobutadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

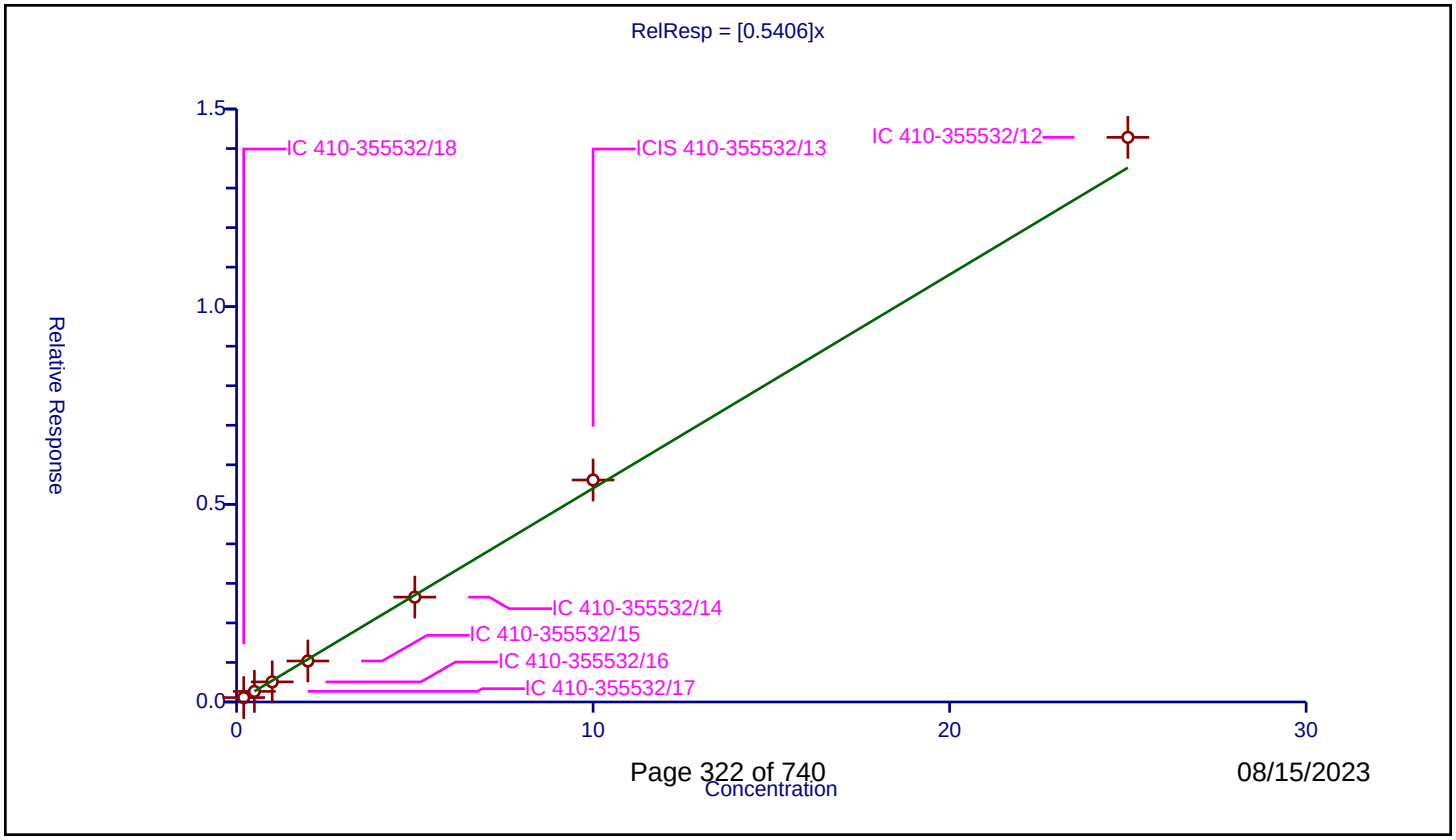
Curve Coefficients

Intercept:	0
Slope:	0.5406

Error Coefficients

Standard Error:	783000
Relative Standard Error:	4.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.111657	10.0	1096665.0	0.558284	Y
2	IC 410-355532/17	0.5	0.267798	10.0	1099896.0	0.535596	Y
3	IC 410-355532/16	1.0	0.508236	10.0	1128630.0	0.508236	Y
4	IC 410-355532/15	2.0	1.036937	10.0	1126529.0	0.518469	Y
5	IC 410-355532/14	5.0	2.652996	10.0	1162953.0	0.530599	Y
6	ICIS 410-355532/13	10.0	5.615177	10.0	1169233.0	0.561518	Y
7	IC 410-355532/12	25.0	14.282981	10.0	1240232.0	0.571319	Y



Calibration / Naphthalene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

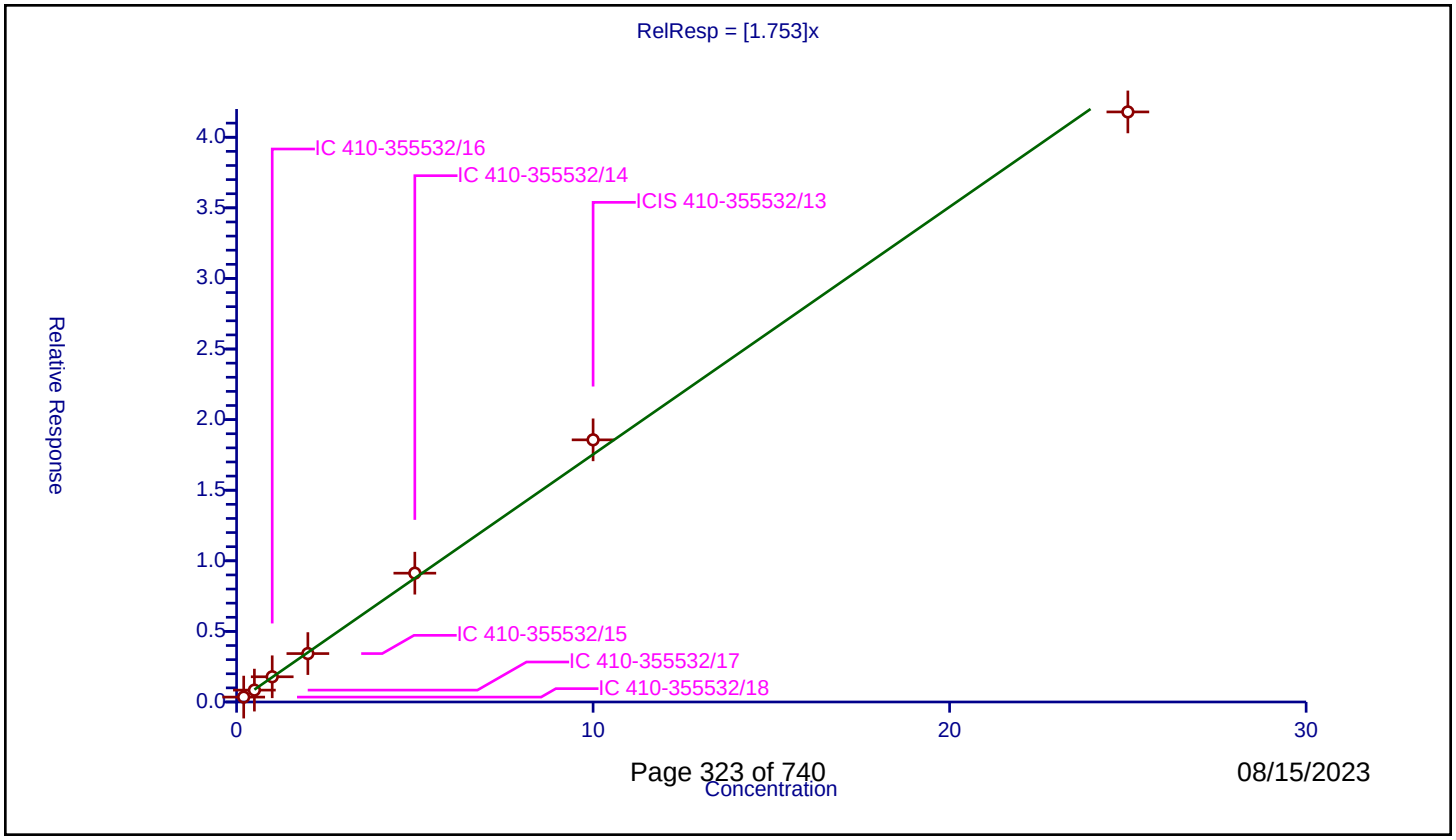
Curve Coefficients

Intercept:	0
Slope:	1.753

Error Coefficients

Standard Error:	2340000
Relative Standard Error:	4.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.347253	10.0	1096665.0	1.736264	Y
2	IC 410-355532/17	0.5	0.841598	10.0	1099896.0	1.683196	Y
3	IC 410-355532/16	1.0	1.785971	10.0	1128630.0	1.785971	Y
4	IC 410-355532/15	2.0	3.429881	10.0	1126529.0	1.71494	Y
5	IC 410-355532/14	5.0	9.123885	10.0	1162953.0	1.824777	Y
6	ICIS 410-355532/13	10.0	18.5673	10.0	1169233.0	1.85673	Y
7	IC 410-355532/12	25.0	41.793511	10.0	1240232.0	1.67174	Y



Calibration / 1,2,3-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

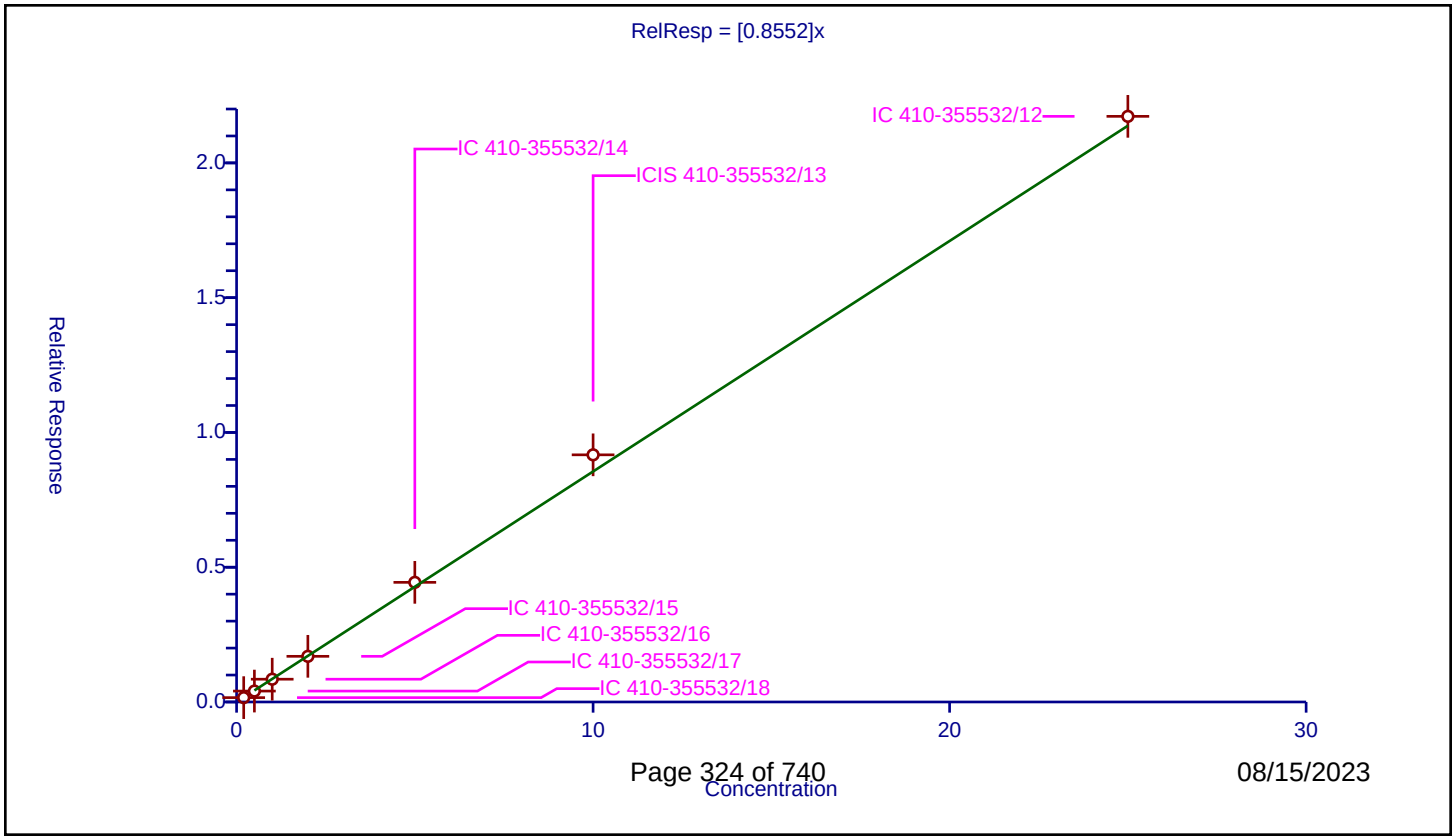
Curve Coefficients

Intercept:	0
Slope:	0.8552

Error Coefficients

Standard Error:	1210000
Relative Standard Error:	4.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-355532/18	0.2	0.161991	10.0	1096665.0	0.809956	Y
2	IC 410-355532/17	0.5	0.405102	10.0	1099896.0	0.810204	Y
3	IC 410-355532/16	1.0	0.845264	10.0	1128630.0	0.845264	Y
4	IC 410-355532/15	2.0	1.694373	10.0	1126529.0	0.847186	Y
5	IC 410-355532/14	5.0	4.438391	10.0	1162953.0	0.887678	Y
6	ICIS 410-355532/13	10.0	9.169601	10.0	1169233.0	0.91696	Y
7	IC 410-355532/12	25.0	21.727467	10.0	1240232.0	0.869099	Y



FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-2 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 14:49 Calibration End Date: 06/19/2023 16:55 Calibration ID: 51350

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-388102/3	IU19X02.D
Level 2	IC 410-388102/4	IU19X03.D
Level 3	IC 410-388102/5	IU19X04.D
Level 4	IC 410-388102/6	IU19X05.D
Level 5	IC 410-388102/7	IU19X06.D
Level 6	IC 410-388102/8	IU19X07.D
Level 7	IC 410-388102/9	IU19X08.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Chlorodifluoromethane	0.3654 0.3895	0.4339 0.3952	0.3891	0.4056	0.3874	Ave		0.3951				5.3		20.0			
Dimethyl ether	0.3130 0.3314	0.3292 0.3503	0.3736	0.3223	0.3453	Ave		0.3379				6.0		20.0			
Acetonitrile	+++++ 0.0094	+++++ 0.0122	0.0134	0.0123	0.0101	Ave		0.0115				14.4		20.0			
Vinyl acetate	0.3596 0.3305	0.3433 0.3403	0.3397	0.3123	0.3303	Ave		0.3366				4.3		20.0			
Ethyl acetate	0.1011 0.1479	0.1062 0.1523	0.1134	0.1281	0.1419	Ave		0.1273				16.3		20.0			
2-Chloroethyl vinyl ether	+++++ 0.0018	+++++ 0.0017	+++++	+++++	0.0010	Ave		0.0015				29.3	*	20.0			
cis-1,4-Dichloro-2-butene	0.0805 0.1146	0.0820 0.1200	0.0919	0.1019	0.1110	Ave		0.1002				15.8		20.0			
Cyclohexanone	+++++ 0.5272	0.4308 0.5277	0.4415	0.4967	0.4852	Ave		0.4848				8.5		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 14:49 Calibration End Date: 06/19/2023 16:55 Calibration ID: 51350

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-388102/3	IU19X02.D
Level 2	IC 410-388102/4	IU19X03.D
Level 3	IC 410-388102/5	IU19X04.D
Level 4	IC 410-388102/6	IU19X05.D
Level 5	IC 410-388102/7	IU19X06.D
Level 6	IC 410-388102/8	IU19X07.D
Level 7	IC 410-388102/9	IU19X08.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Chlorodifluoromethane	FB	Ave	13875 702885	42825 1791816	70059	147068	354220	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Dimethyl ether	FB	Ave	11886 597989	32491 1588476	67276	116853	315734	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Acetonitrile	FB	Ave	+++++ 84890	+++++ 276683	12033	22246	46193	+++++ 50.0	+++++ 125	5.00	10.0	25.0
Vinyl acetate	FB	Ave	13657 596485	33879 1543134	61164	113242	302053	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethyl acetate	FB	Ave	3840 266923	10477 690605	20416	46431	129747	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Chloroethyl vinyl ether	FB	Ave	+++++ 3197	+++++ 7591	+++++	+++++	895	+++++ 10.0	+++++ 25.0	+++++	+++++	5.00
cis-1,4-Dichloro-2-butene	CBZd 5	Ave	4787 329445	12683 865958	26241	58366	160237	0.400 20.0	1.00 50.0	2.00	4.00	10.0
Cyclohexanone	TBAd 10	Ave	+++++ 441030	30502 1415471	48696	99814	217173	+++++ 500	25.0 1250	50.0	100.0	250

Curve Type Legend
Ave = Average ISTD

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 14:49 Calibration End Date: 06/19/2023 16:55 Calibration ID: 51350

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-388102/3	IU19X02.D
Level 2	IC 410-388102/4	IU19X03.D
Level 3	IC 410-388102/5	IU19X04.D
Level 4	IC 410-388102/6	IU19X05.D
Level 5	IC 410-388102/7	IU19X06.D
Level 6	IC 410-388102/8	IU19X07.D
Level 7	IC 410-388102/9	IU19X08.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Chlorodifluoromethane	-7.5 0.0	9.8	-1.5	2.6	-2.0	-1.4	50 30	30	30	30	30	30
Dimethyl ether	-7.4 3.7	-2.6	10.6	-4.6	2.2	-1.9	50 30	30	30	30	30	30
Acetonitrile	+++++ 6.4	+++++	16.5	7.0	-11.9	-18.0	 30		50	30	30	30
Vinyl acetate	6.8 1.1	2.0	0.9	-7.2	-1.9	-1.8	50 30	30	30	30	30	30
Ethyl acetate	-20.5 19.7	-16.6	-10.9	0.6	11.5	16.2	50 30	30	30	30	30	30
2-Chloroethyl vinyl ether	+++++ 13.5	+++++	+++++	+++++	-33.6	20.1	 30				50	30
cis-1,4-Dichloro-2-butene	-19.7 19.7	-18.2	-8.3	1.6	10.7	14.3	50 30	30	30	30	30	30
Cyclohexanone	+++++ 8.8	-11.2	-8.9	2.4	0.1	8.7	 30	50	30	30	30	30

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X02.D
Lims ID: IC std1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 19-Jun-2023 14:49:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0086929-003
Misc. Info.: SM 25.0
Operator ID: KNK41612 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub44

Method: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 27-Jun-2023 12:29:44 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1687

First Level Reviewer: DVW2 Date: 20-Jun-2023 10:47:21

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Chlorodifluoromethane	51	1.867	1.867	0.000	96	13875	0.2000	0.1849	
3 Dimethyl ether	45	1.922	1.922	0.000	100	11886	0.2000	0.1853	Ma
21 Acetonitrile	41	3.824	3.788	0.036	19	11647	1.00	5.35	M
* 26 t-Butyl alcohol-d10 (IS)	65	3.940	3.977	-0.037	22	144911	50.0	50.0	M
33 Vinyl acetate	43	5.062	4.989	0.073	70	13657	0.2000	0.2137	M
42 Ethyl acetate	43	5.946	5.891	0.055	3	3840	0.2000	0.1589	Ma
59 Isopropyl acetate	43	7.141	7.128	0.013	94	15837	0.2000	0.2417	
* 61 Fluorobenzene (IS)	96	7.445	7.452	-0.007	99	1898742	10.0	10.0	
70 n-Propyl acetate	43	8.470	8.445	0.025	45	8658	0.2000	0.2066	Ma
73 2-Chloroethyl vinyl ether	63		9.006				ND	ND	
104 n-Butyl acetate	43	10.427	10.408	0.019	96	9343	0.2000	0.1790	
* 107 Chlorobenzene-d5 (IS)	117	10.987	10.988	-0.001	84	1487320	10.0	10.0	
118 cis-1,4-Dichloro-2-butene	88	11.908	11.902	0.006	29	4787	0.4000	0.3211	a
119 Cyclohexanone	55	11.945	11.938	0.007	86	7240	10.0	5.15	
* 135 1,4-Dichlorobenzene-d4	152	12.883	12.884	-0.001	93	920648	10.0	10.0	
149 2-Chloro-1,1,1-Trifluoroethane	1		0.000				ND	ND	
162 Chlorotrifluoroethene	1		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

MSV_CCV_V5ACE_00025	Amount Added:	0.20	Units: uL
MSV_DME_00046	Amount Added:	0.20	Units: uL
MSV_CCV_CYC_00005	Amount Added:	1.60	Units: uL
MSV_LLcentISO_00006	Amount Added:	5.00	Units: uL
MSV_V_SMRV4_00059	Amount Added:	1.00	Units: uL

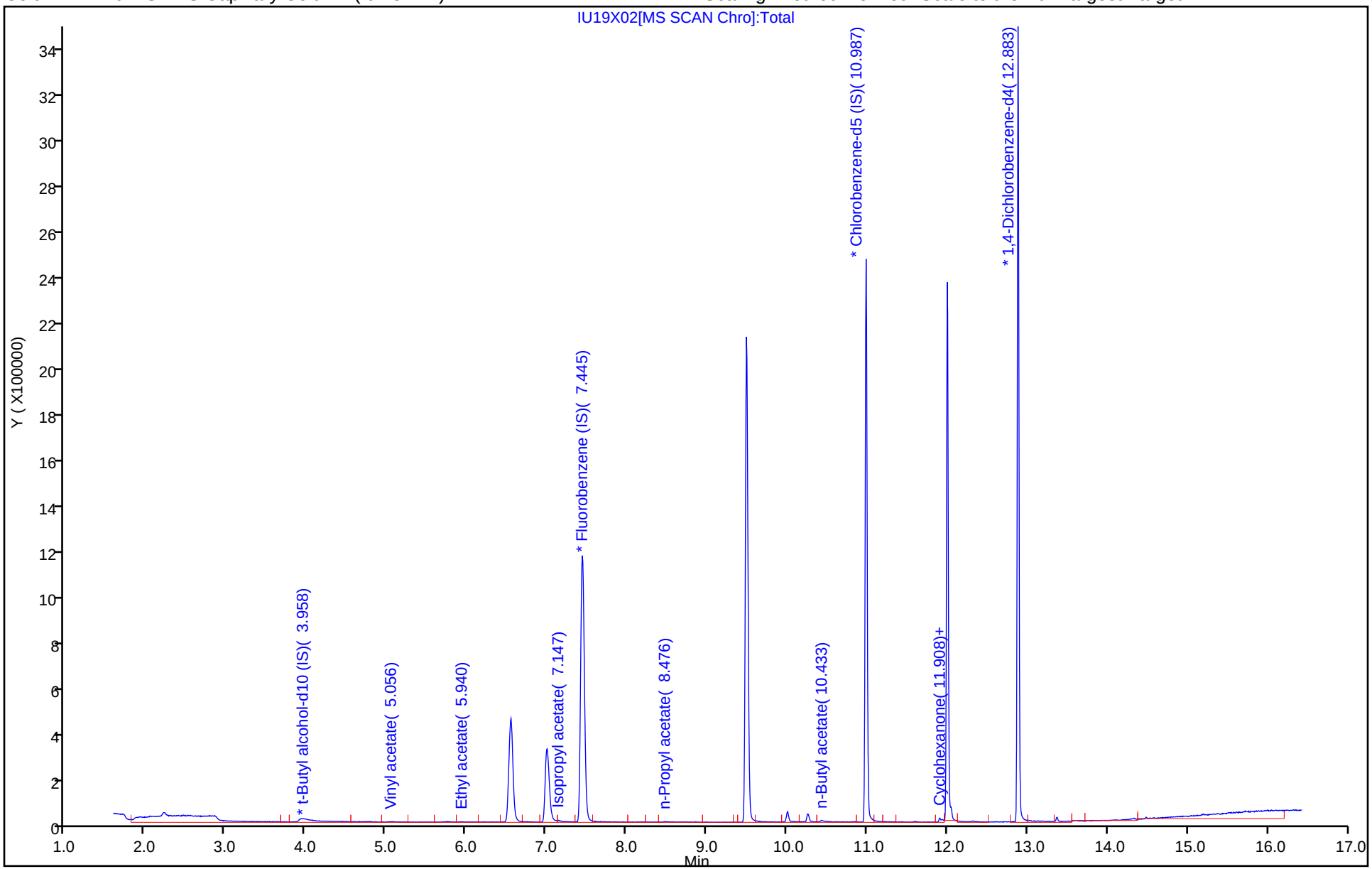
Report Date: 27-Jun-2023 12:29:45 Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X02.D

Injection Date:	19-Jun-2023 14:49:30	Instrument ID:	19930	Operator ID:	KNK41612
Lims ID:	IC std1			Worklist Smp#:	3
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

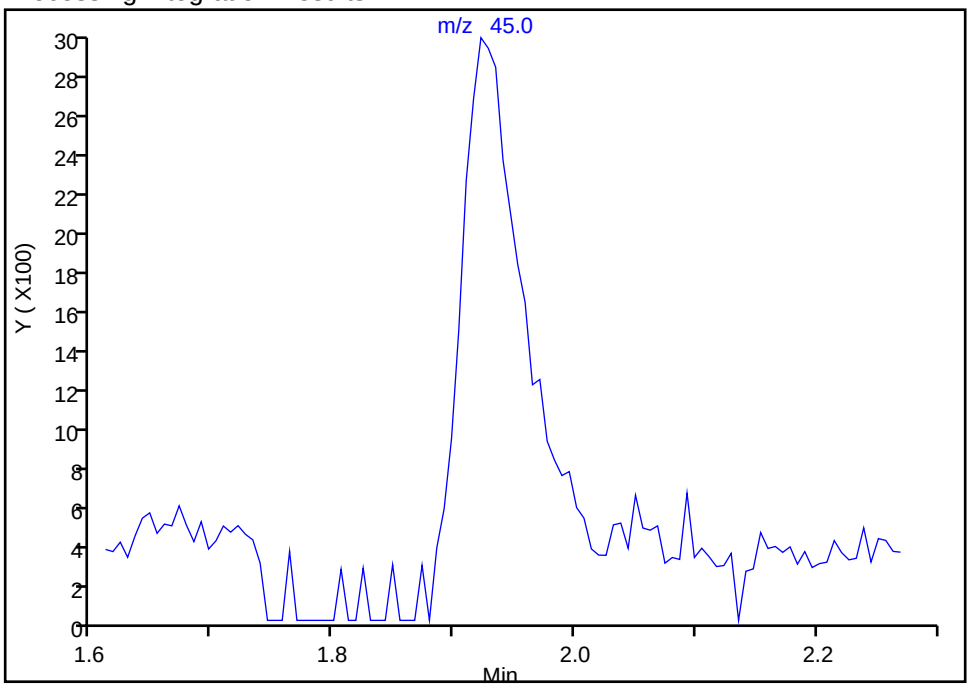
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X02.D				
Injection Date:	19-Jun-2023 14:49:30	Instrument ID:	19930		
Lims ID:	IC std1				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	2	Worklist Smp#:	3
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

3 Dimethyl ether, CAS: 115-10-6

Signal: 1

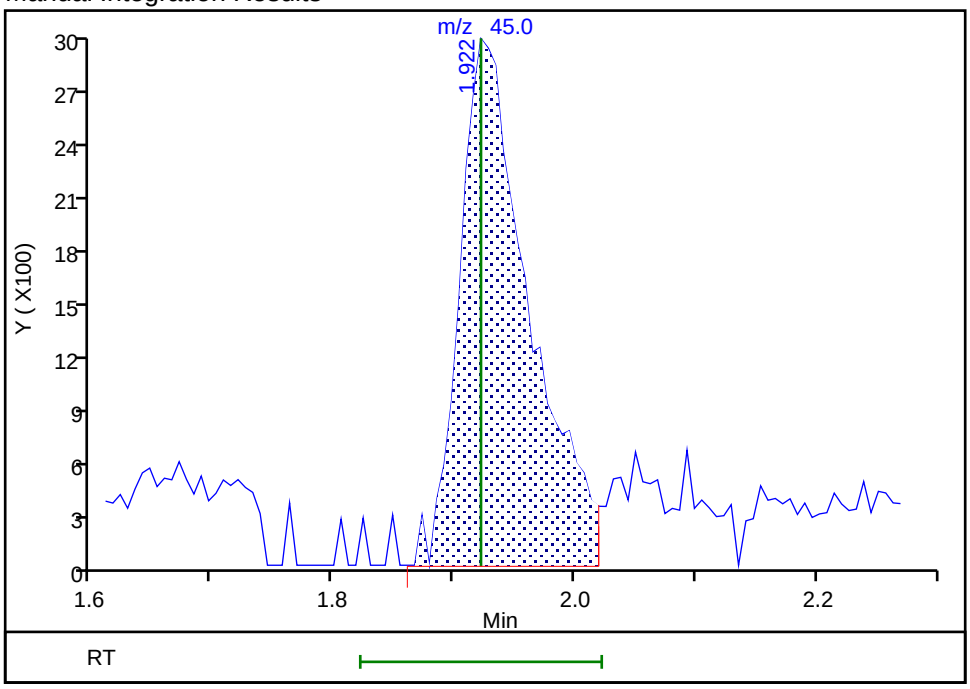
Not Detected
Expected RT: 1.92

Processing Integration Results



Manual Integration Results

RT: 1.92
Area: 11886
Amount: 0.185276
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:18:24 -04:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

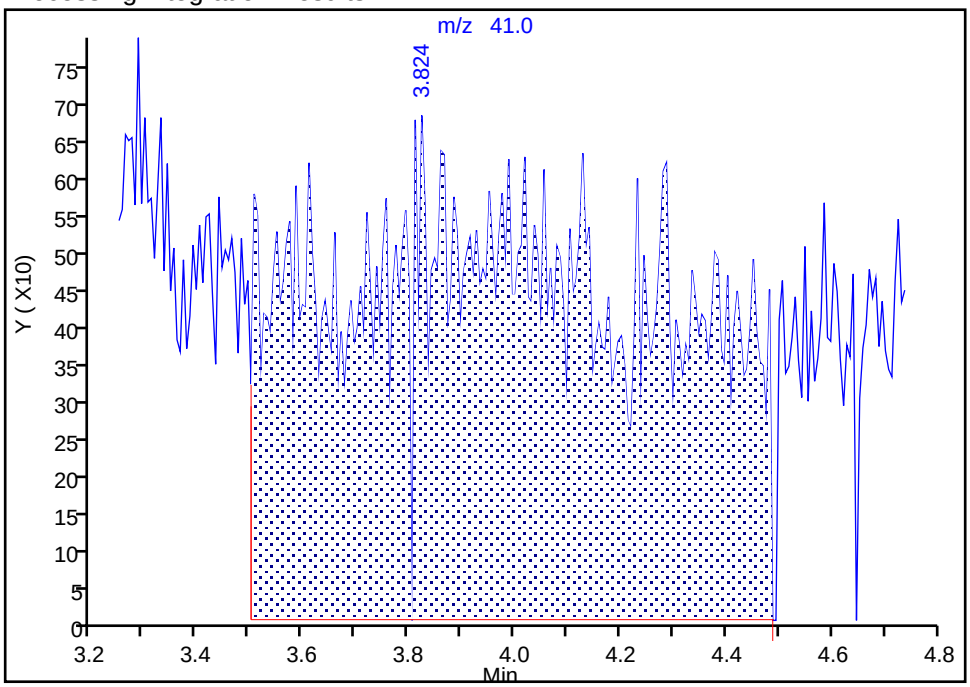
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X02.D
Injection Date: 19-Jun-2023 14:49:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: KNK41612 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

21 Acetonitrile, CAS: 75-05-8

Signal: 1

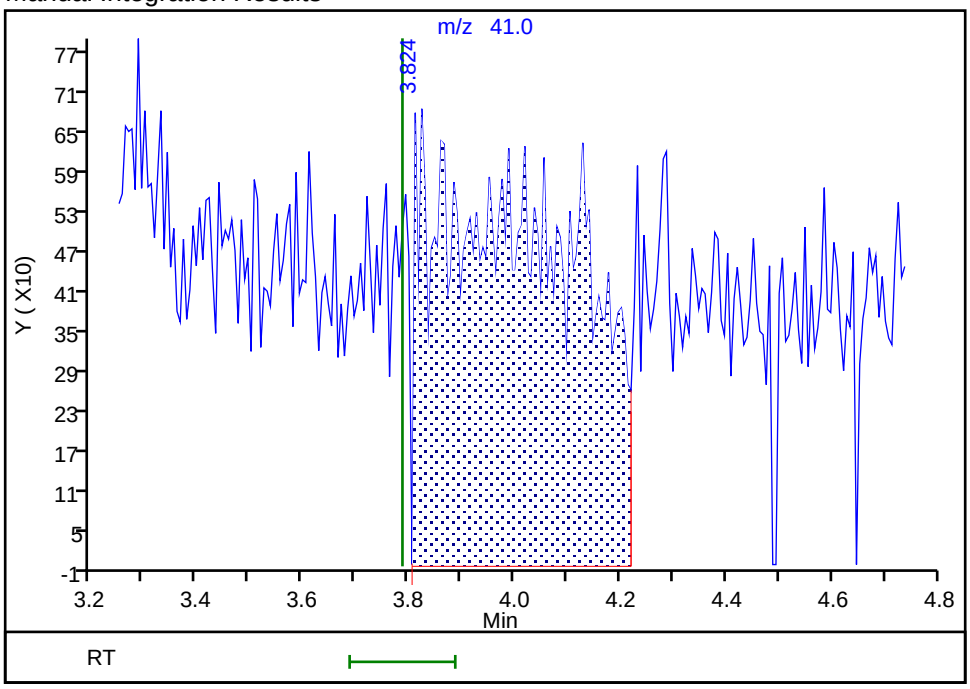
RT: 3.82
Area: 26038
Amount: 3.960059
Amount Units: ug/l

Processing Integration Results



RT: 3.82
Area: 11647
Amount: 5.347833
Amount Units: ug/l

Manual Integration Results



Reviewer: DVW2, 21-Jun-2023 08:19:20 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

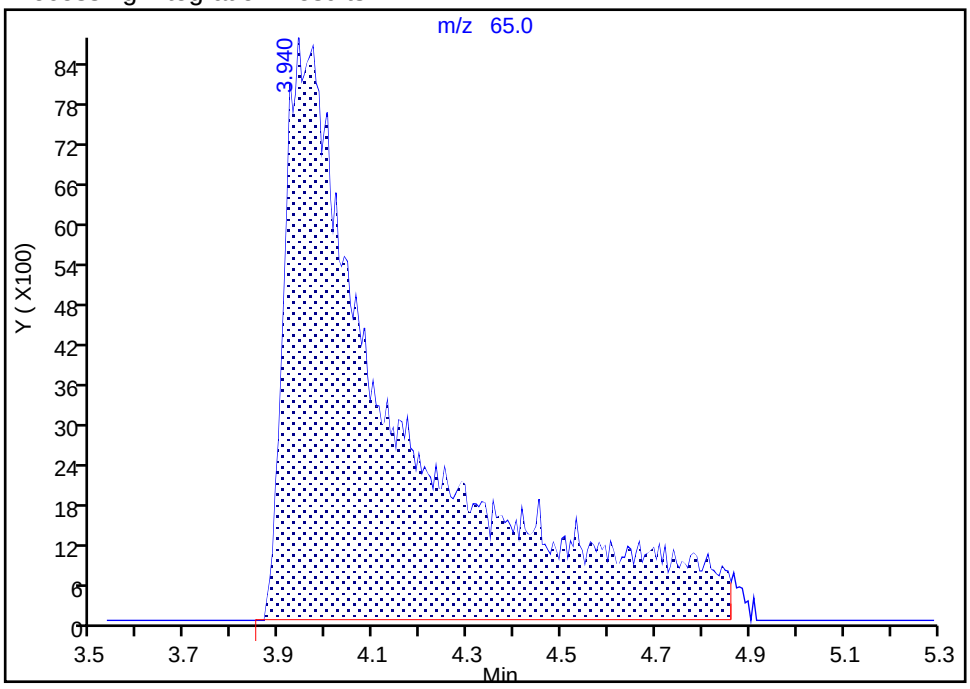
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X02.D
Injection Date: 19-Jun-2023 14:49:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: KNK41612 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 26 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

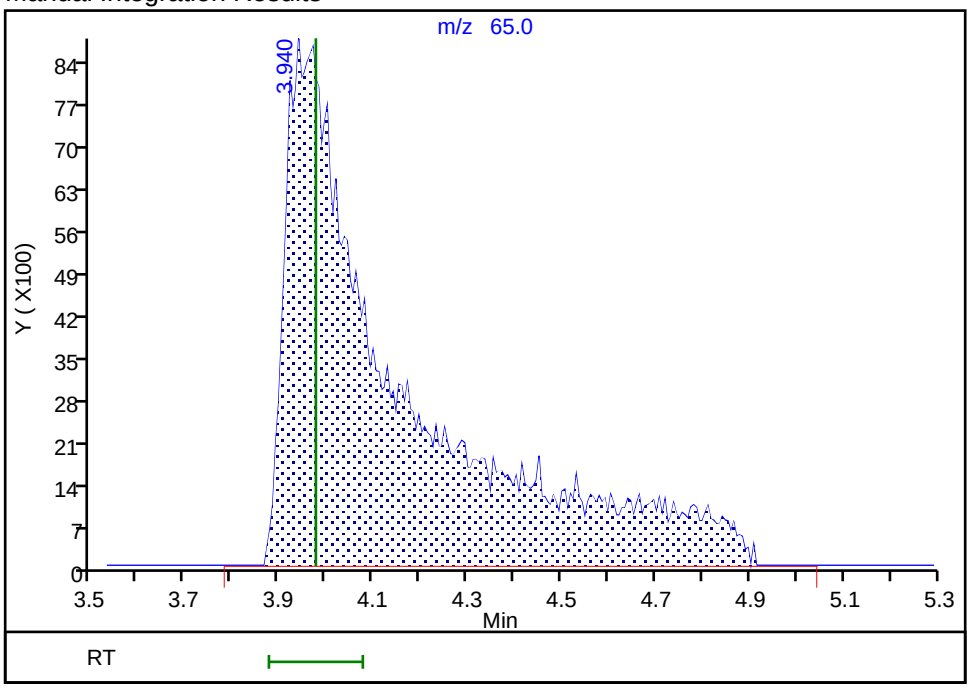
Processing Integration Results

RT: 3.94
Area: 143786
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 3.94
Area: 144911
Amount: 50.000000
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:19:28 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

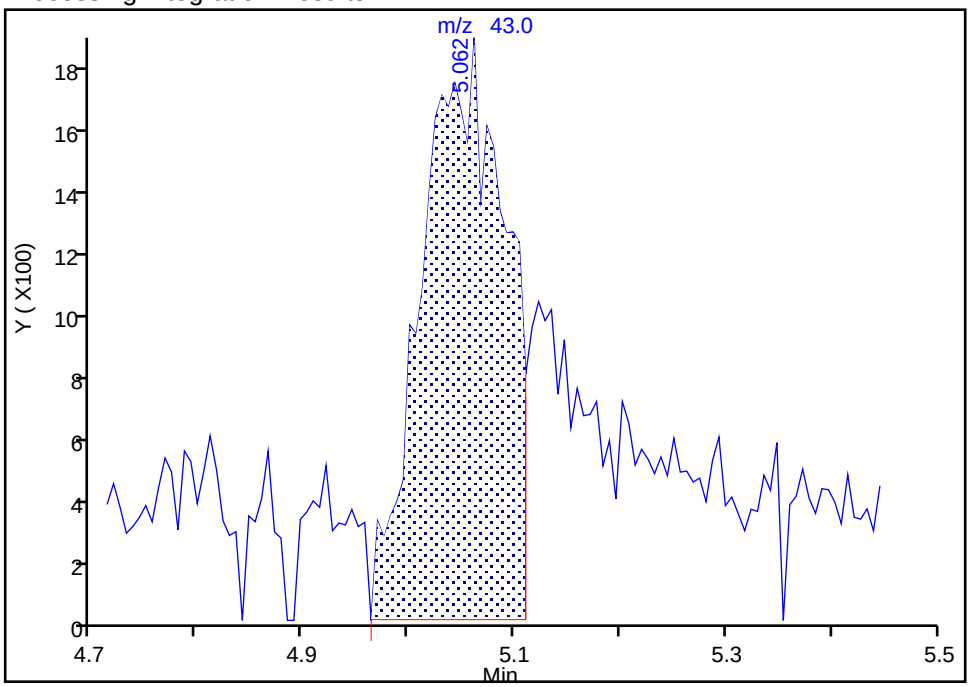
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X02.D				
Injection Date:	19-Jun-2023 14:49:30	Instrument ID:	19930		
Lims ID:	IC std1				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	2	Worklist Smp#:	3
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

33 Vinyl acetate, CAS: 108-05-4

Signal: 1

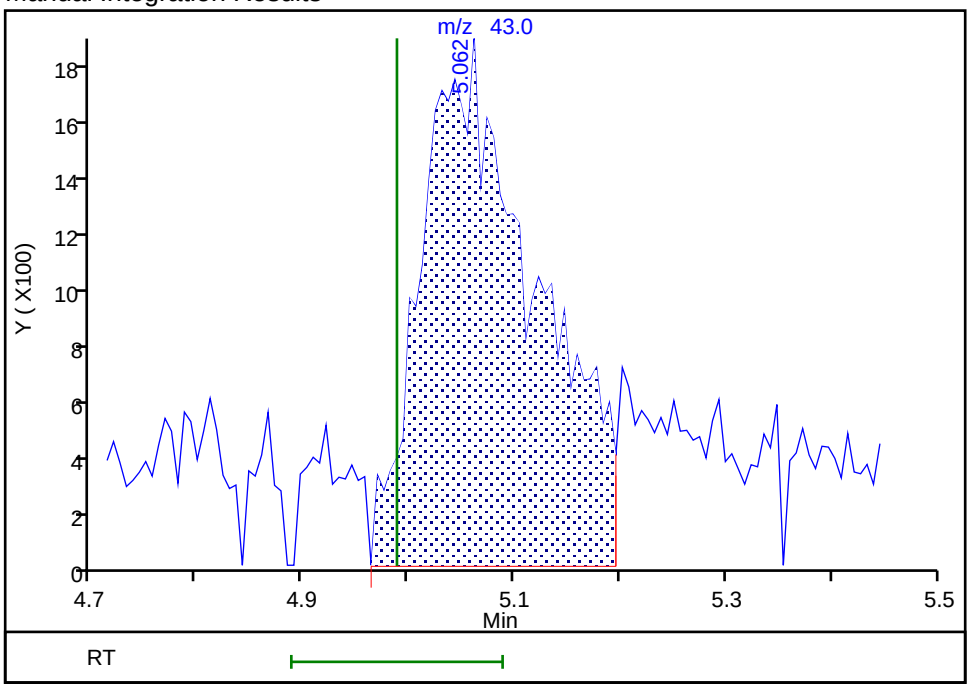
Processing Integration Results

RT: 5.06
Area: 9958
Amount: 0.163514
Amount Units: ug/l



Manual Integration Results

RT: 5.06
Area: 13657
Amount: 0.213695
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:19:45 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

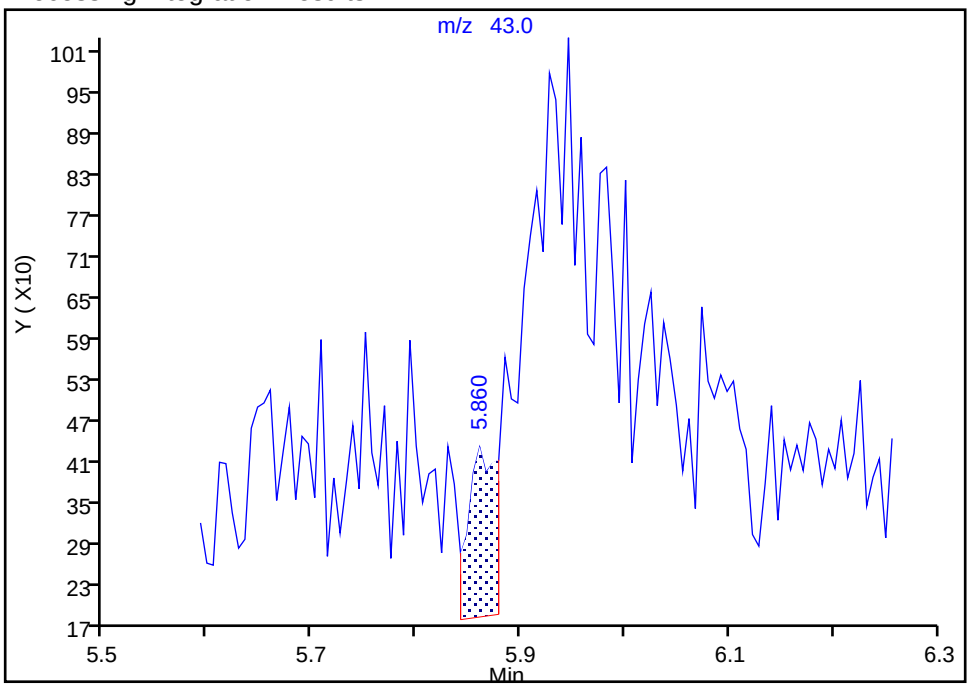
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X02.D				
Injection Date:	19-Jun-2023 14:49:30	Instrument ID:	19930		
Lims ID:	IC std1				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	2	Worklist Smp#:	3
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

42 Ethyl acetate, CAS: 141-78-6

Signal: 1

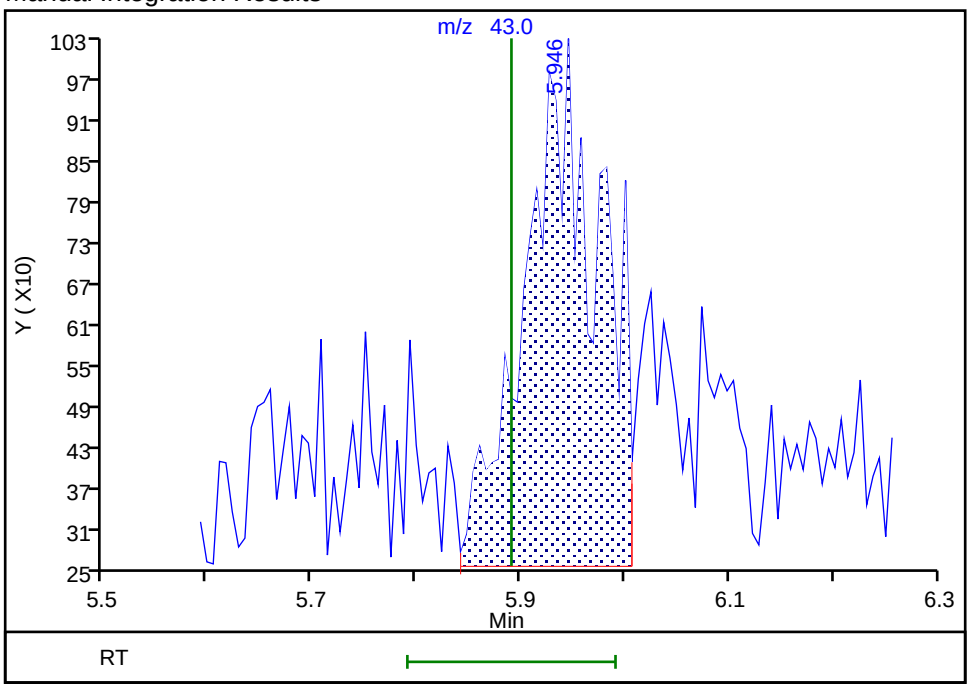
Processing Integration Results

RT: 5.86
Area: 494
Amount: 0.289235
Amount Units: ug/l



Manual Integration Results

RT: 5.95
Area: 3840
Amount: 0.158917
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:20:03 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

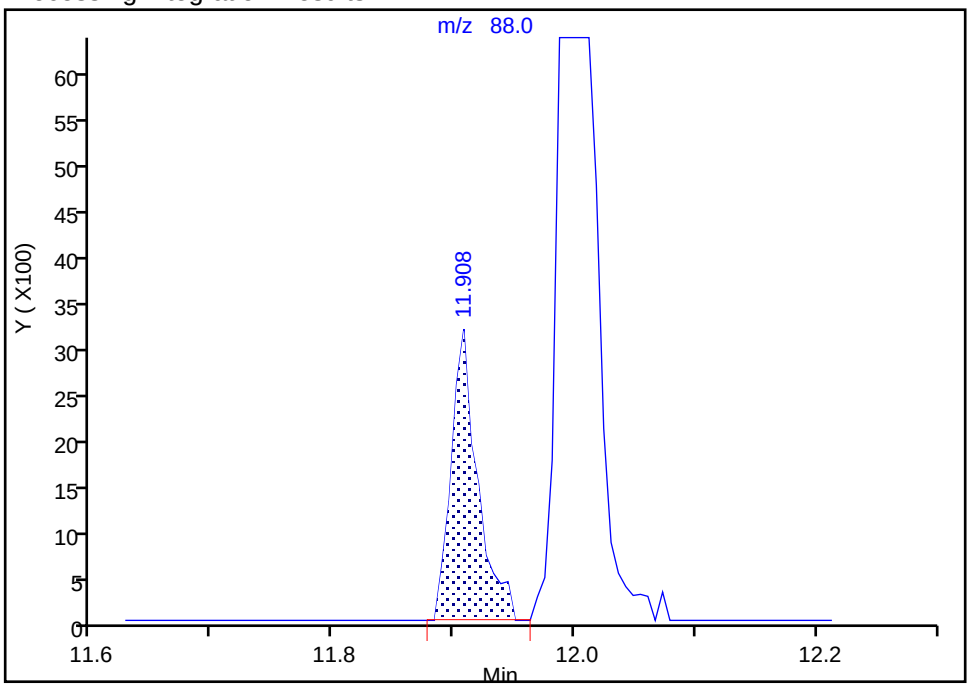
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X02.D				
Injection Date:	19-Jun-2023 14:49:30	Instrument ID:	19930		
Lims ID:	IC std1				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	2	Worklist Smp#:	3
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

118 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

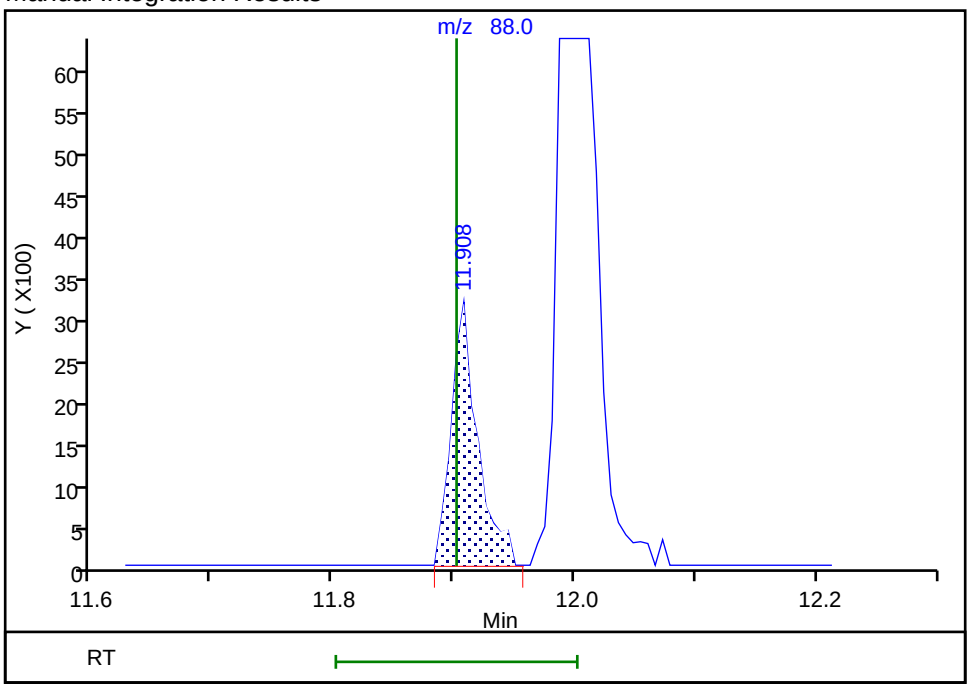
Processing Integration Results

RT: 11.91
Area: 4786
Amount: 0.292178
Amount Units: ug/l



Manual Integration Results

RT: 11.91
Area: 4787
Amount: 0.321094
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:32:12 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X03.D
Lims ID: IC std2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 19-Jun-2023 15:10:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0086929-004
Misc. Info.: SM 10.0
Operator ID: KNK41612 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub44

Method: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 27-Jun-2023 12:29:47 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1687

First Level Reviewer: DVW2 Date: 21-Jun-2023 08:17:52

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Chlorodifluoromethane	51	1.879	1.867	0.012	96	42825	0.5000	0.5491	
3 Dimethyl ether	45	1.928	1.922	0.006	98	32491	0.5000	0.4872	
21 Acetonitrile	41	3.769	3.788	-0.019	20	14059	2.50	6.21	M
* 26 t-Butyl alcohol-d10 (IS)	65	3.964	3.977	-0.013	22	141625	50.0	50.0	M
33 Vinyl acetate	43	5.025	4.989	0.036	97	33879	0.5000	0.5100	
42 Ethyl acetate	43	5.927	5.891	0.036	94	10477	0.5000	0.4171	
59 Isopropyl acetate	43	7.134	7.128	0.006	98	31989	0.5000	0.4696	
* 61 Fluorobenzene (IS)	96	7.445	7.452	-0.007	99	1973742	10.0	10.0	
70 n-Propyl acetate	43	8.470	8.445	0.025	98	15407	0.5000	0.3537	
73 2-Chloroethyl vinyl ether	63		9.006				ND	ND	
104 n-Butyl acetate	43	10.420	10.408	0.012	98	27123	0.5000	0.4995	M
* 107 Chlorobenzene-d5 (IS)	117	10.987	10.988	-0.001	84	1547291	10.0	10.0	
118 cis-1,4-Dichloro-2-butene	88	11.908	11.902	0.006	30	12683	1.00	0.8178	
119 Cyclohexanone	55	11.944	11.938	0.006	88	30502	25.0	22.2	
* 135 1,4-Dichlorobenzene-d4	152	12.883	12.884	-0.001	93	946775	10.0	10.0	
149 2-Chloro-1,1,1-Trifluoroethane	1		0.000				ND	ND	
162 Chlorotrifluoroethene	1		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND
Review Flags
M - Manually Integrated

Reagents:

MSV_CCV_V5ACE_00025	Amount Added:	0.50	Units: uL
MSV_DME_00046	Amount Added:	0.50	Units: uL
MSV_CCV_CYC_00005	Amount Added:	4.00	Units: uL
MSV_LLcentISO_00006	Amount Added:	5.00	Units: uL
MSV_V_SMRV4_00059	Amount Added:	2.50	Units: uL

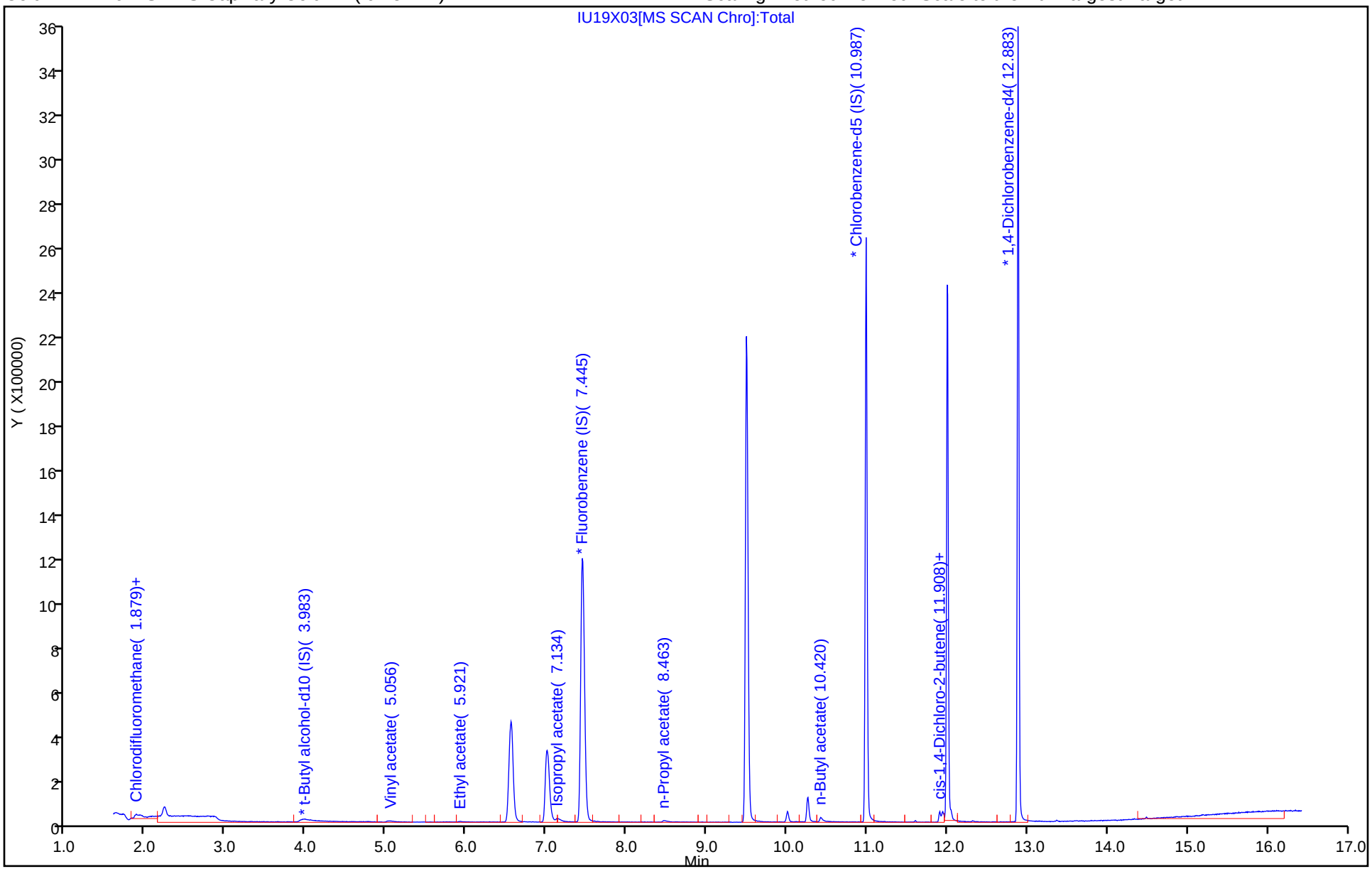
Report Date: 27-Jun-2023 12:29:48 Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X03.D

Injection Date:	19-Jun-2023 15:10:30	Instrument ID:	19930	Operator ID:	KNK41612
Lims ID:	IC std2			Worklist Smp#:	4
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

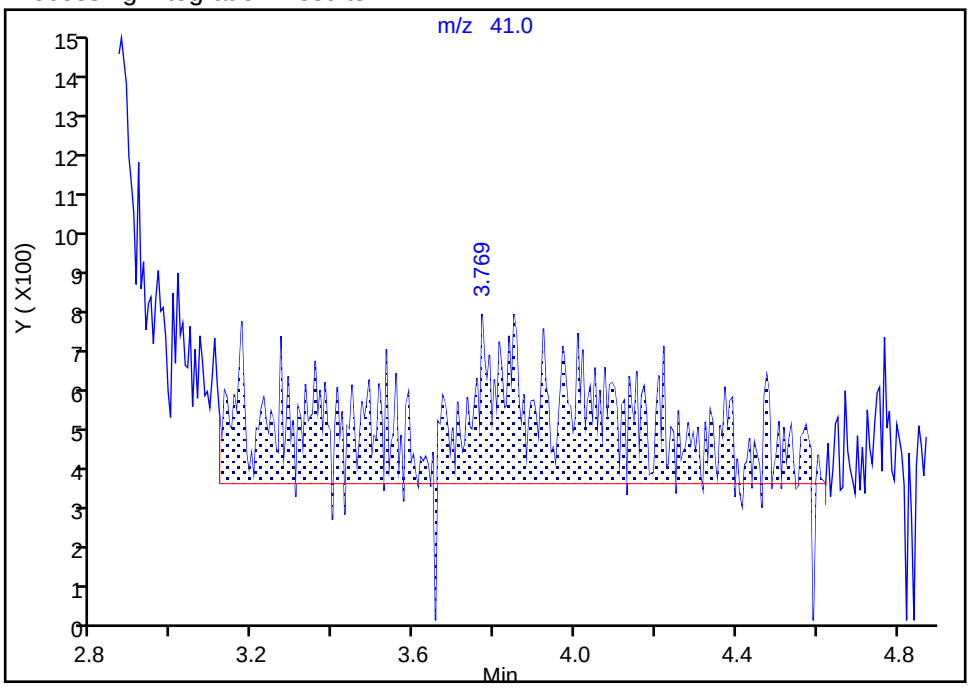
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X03.D
Injection Date: 19-Jun-2023 15:10:30 Instrument ID: 19930
Lims ID: IC std2
Client ID:
Operator ID: KNK41612 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

21 Acetonitrile, CAS: 75-05-8

Signal: 1

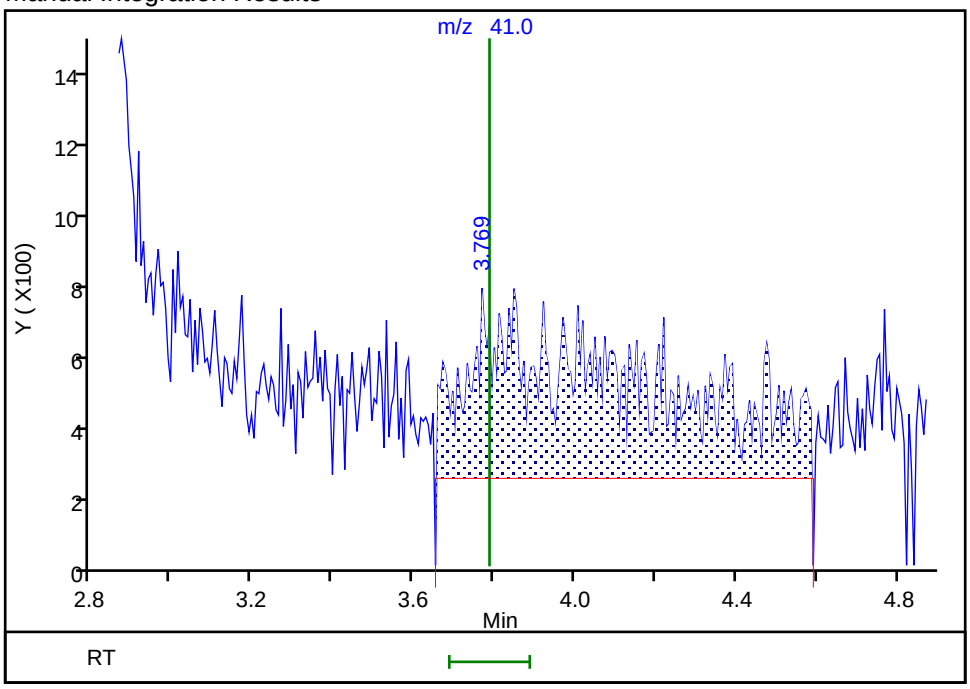
RT: 3.77
Area: 13000
Amount: 5.742258
Amount Units: ug/l

Processing Integration Results



Manual Integration Results

RT: 3.77
Area: 14059
Amount: 6.210031
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 16:08:51 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

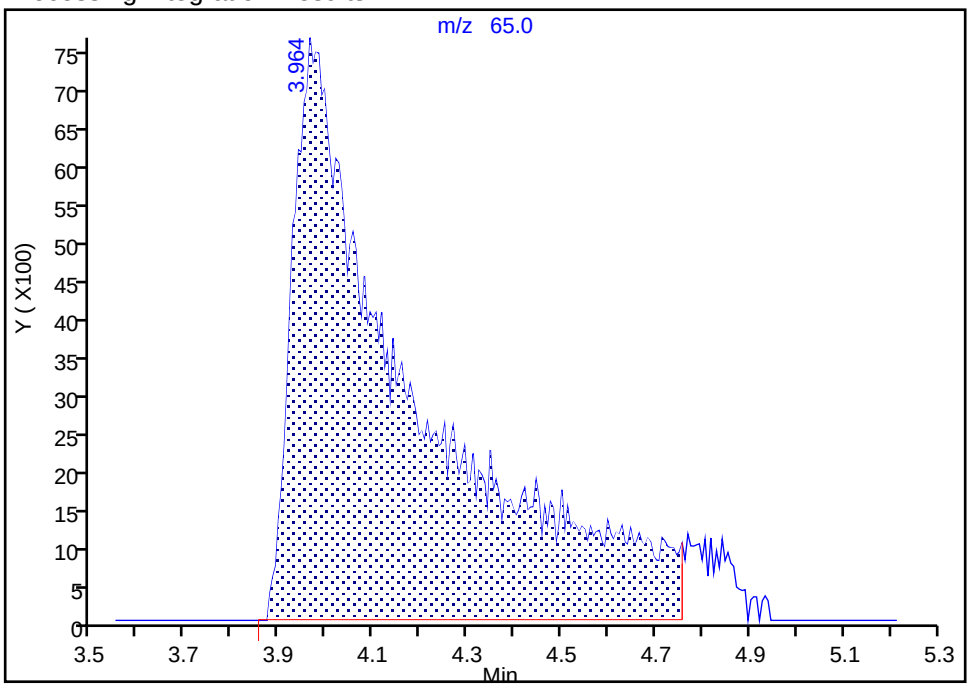
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X03.D
Injection Date: 19-Jun-2023 15:10:30 Instrument ID: 19930
Lims ID: IC std2
Client ID:
Operator ID: KNK41612 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 26 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

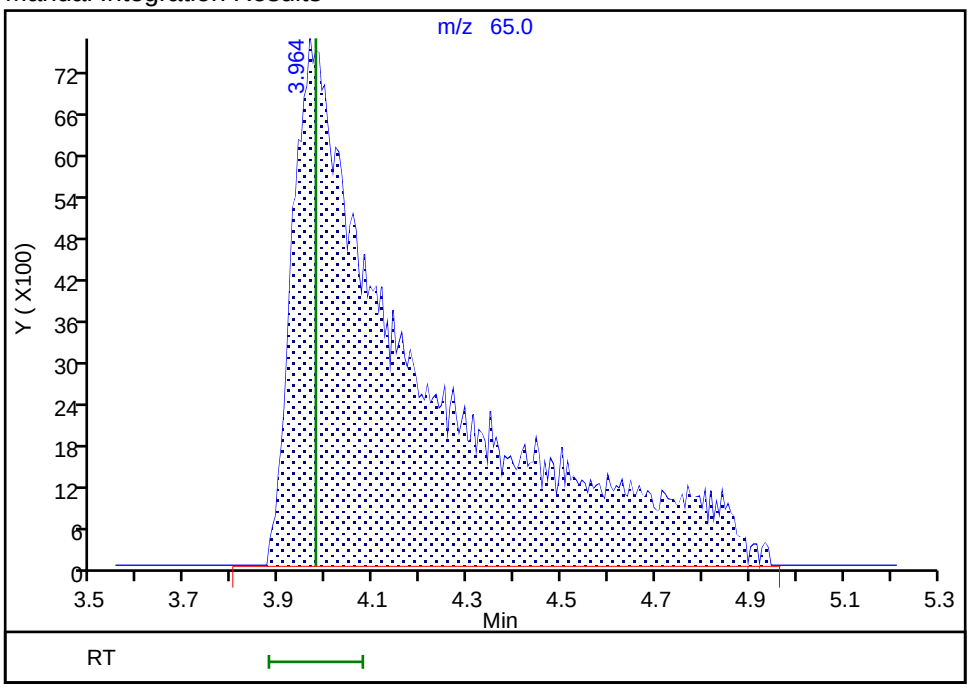
Processing Integration Results

RT: 3.96
Area: 134592
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 3.96
Area: 141625
Amount: 50.000000
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 16:08:59 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X04.D
Lims ID: IC std3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 19-Jun-2023 15:31:30 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0086929-005
Misc. Info.: SM 5.0
Operator ID: KNK41612 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub44

Method: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 27-Jun-2023 12:29:50 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1687

First Level Reviewer: DVW2 Date: 21-Jun-2023 08:23:00

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Chlorodifluoromethane	51	1.867	1.867	0.000	97	70059	1.00	0.9846	
3 Dimethyl ether	45	1.922	1.922	0.000	100	67276	1.00	1.11	
21 Acetonitrile	41	3.775	3.788	-0.013	22	12033	5.00	5.83	M
* 26 t-Butyl alcohol-d10 (IS)	65	3.995	3.977	0.018	22	110300	50.0	50.0	
33 Vinyl acetate	43	5.007	4.989	0.018	97	61164	1.00	1.01	
42 Ethyl acetate	43	5.909	5.891	0.018	97	20416	1.00	0.8909	
59 Isopropyl acetate	43	7.141	7.128	0.013	98	62822	1.00	1.01	M
* 61 Fluorobenzene (IS)	96	7.445	7.452	-0.007	99	1800694	10.0	10.0	
70 n-Propyl acetate	43	8.470	8.445	0.025	99	37708	1.00	0.9489	Ma
73 2-Chloroethyl vinyl ether	63		9.006				ND	ND	
104 n-Butyl acetate	43	10.414	10.408	0.006	98	52499	1.00	1.05	
* 107 Chlorobenzene-d5 (IS)	117	10.987	10.988	-0.001	84	1428082	10.0	10.0	
118 cis-1,4-Dichloro-2-butene	88	11.908	11.902	0.006	30	26241	2.00	1.83	a
119 Cyclohexanone	55	11.944	11.938	0.006	90	48696	50.0	45.5	
* 135 1,4-Dichlorobenzene-d4	152	12.883	12.884	-0.001	93	873761	10.0	10.0	
149 2-Chloro-1,1,1-Trifluoroethane	1		0.000				ND	ND	
162 Chlorotrifluoroethene	1		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

MSV_CCV_V5ACE_00025	Amount Added:	1.00	Units: uL
MSV_DME_00046	Amount Added:	1.00	Units: uL
MSV_CCV_CYC_00005	Amount Added:	8.00	Units: uL
MSV_LLcentISO_00006	Amount Added:	5.00	Units: uL
MSV_V_SMRV4_00059	Amount Added:	5.00	Units: uL

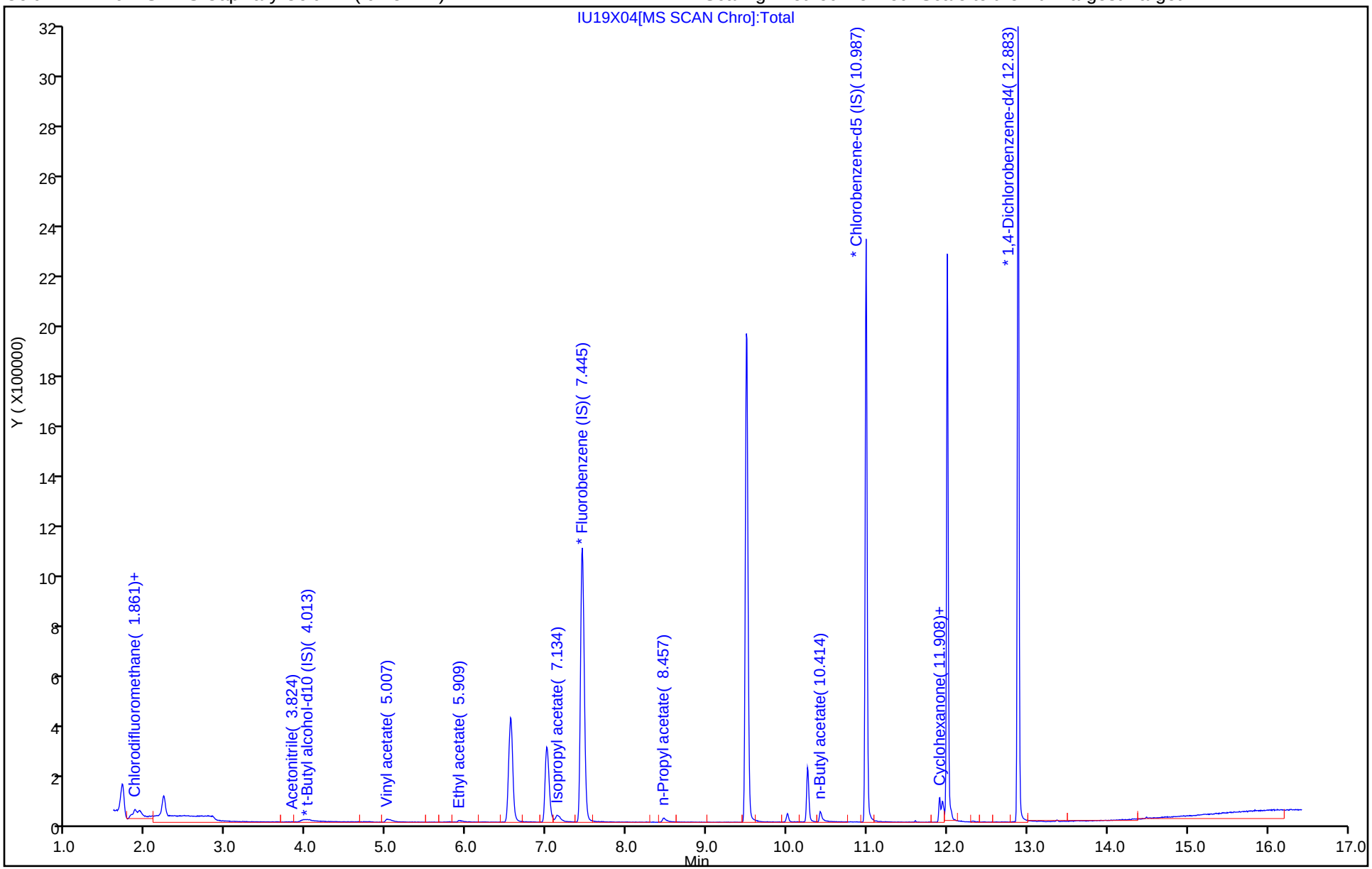
Report Date: 27-Jun-2023 12:29:51 Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X04.D

Injection Date:	19-Jun-2023 15:31:30	Instrument ID:	19930	Operator ID:	KNK41612
Lims ID:	IC std3			Worklist Smp#:	5
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

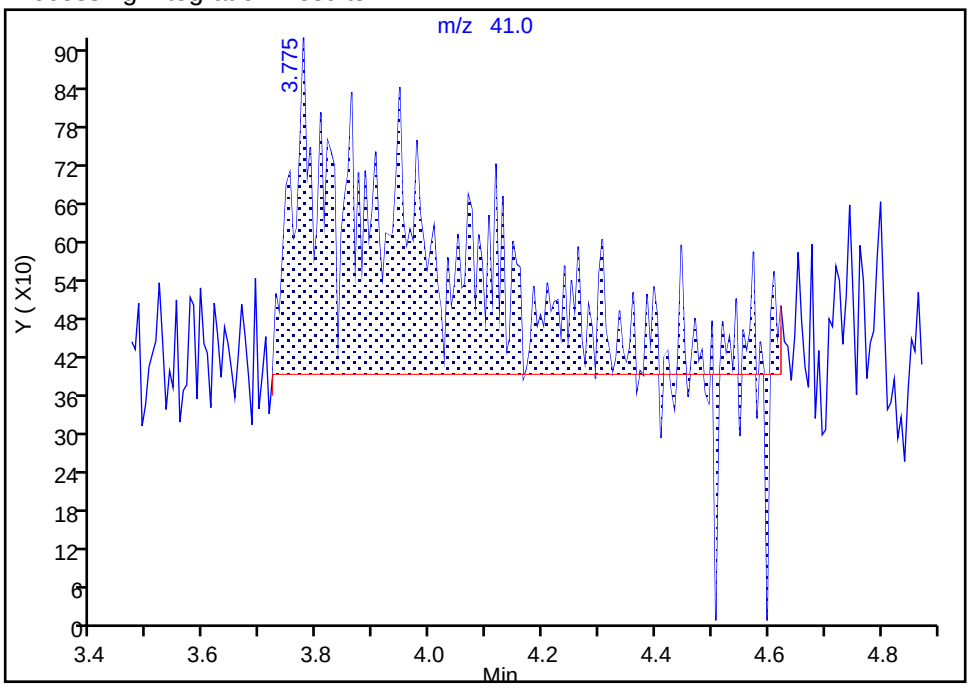
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X04.D
Injection Date: 19-Jun-2023 15:31:30 Instrument ID: 19930
Lims ID: IC std3
Client ID:
Operator ID: KNK41612 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

21 Acetonitrile, CAS: 75-05-8

Signal: 1

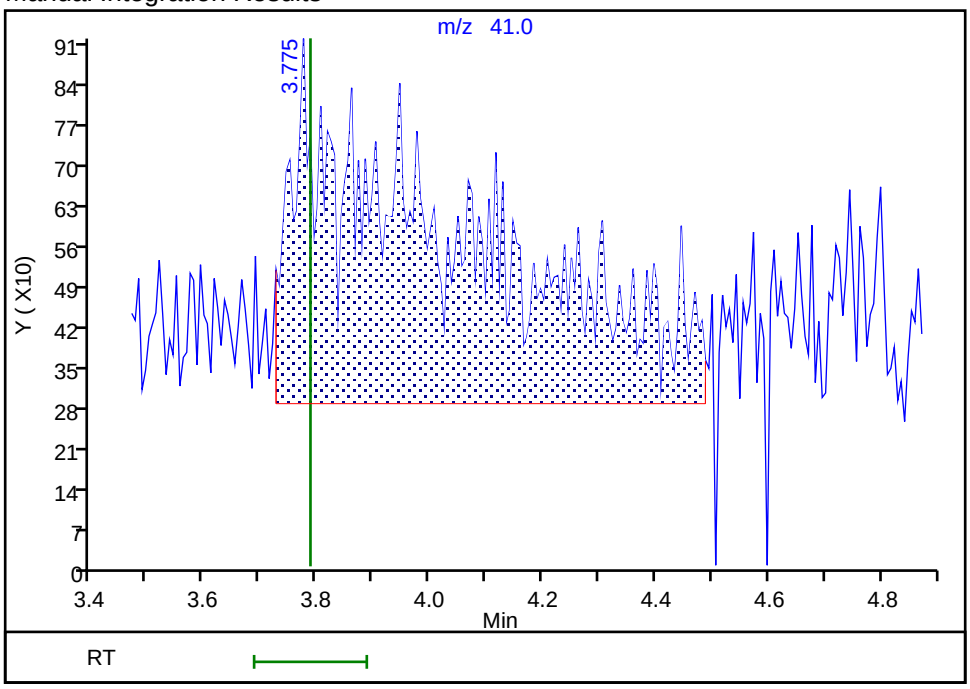
Processing Integration Results

RT: 3.78
Area: 7280
Amount: 1.698582
Amount Units: ug/l



Manual Integration Results

RT: 3.78
Area: 12033
Amount: 5.825910
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 14:56:16 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

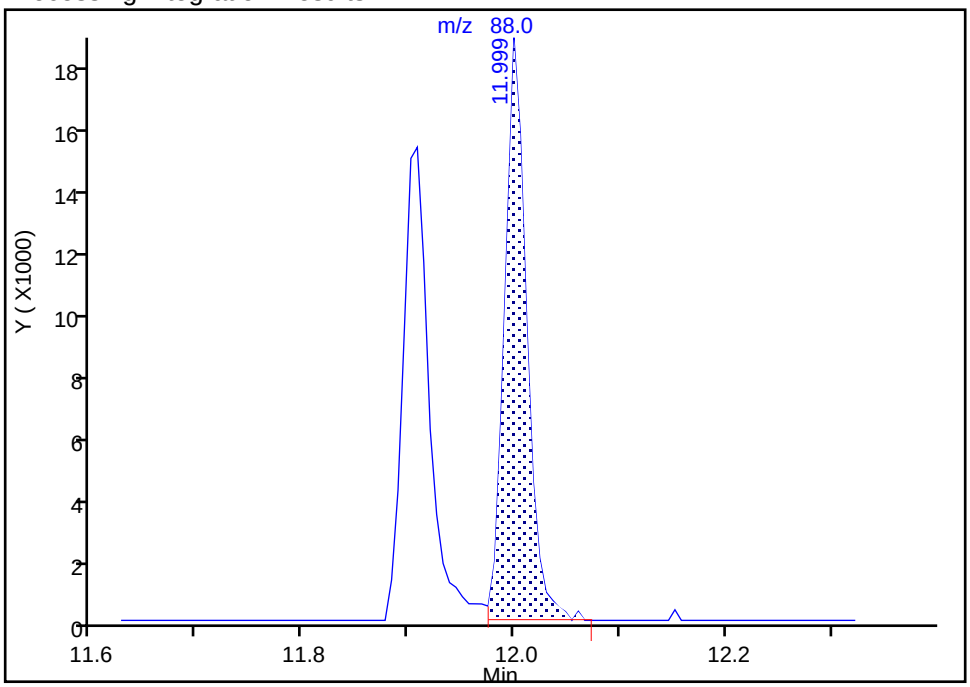
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X04.D
Injection Date: 19-Jun-2023 15:31:30 Instrument ID: 19930
Lims ID: IC std3
Client ID:
Operator ID: KNK41612 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

118 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

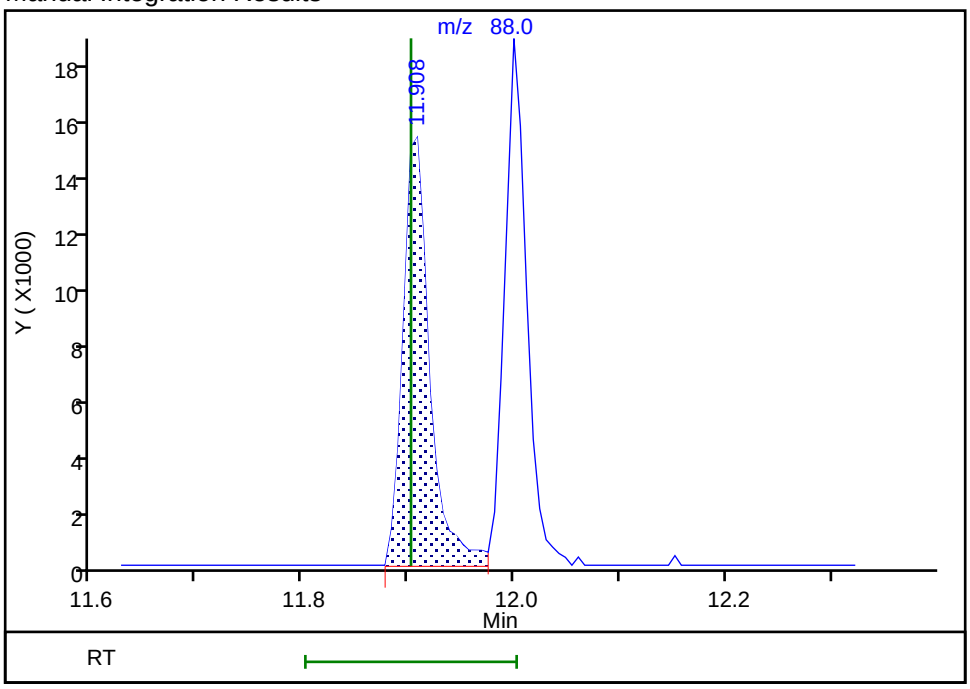
Processing Integration Results

RT: 12.00
Area: 26883
Amount: 2.018193
Amount Units: ug/l



Manual Integration Results

RT: 11.91
Area: 26241
Amount: 1.833162
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:32:31 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X05.D
Lims ID: IC std4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 19-Jun-2023 15:52:30 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0086929-006
Misc. Info.: SM 2.0
Operator ID: KNK41612 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub44

Method: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 27-Jun-2023 12:29:52 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1687

First Level Reviewer: DVW2 Date: 21-Jun-2023 08:23:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Chlorodifluoromethane	51	1.867	1.867	0.000	96	147068	2.00	2.05	
3 Dimethyl ether	45	1.928	1.922	0.006	99	116853	2.00	1.91	
21 Acetonitrile	41	3.830	3.788	0.042	19	22246	10.0	10.7	Ma
* 26 t-Butyl alcohol-d10 (IS)	65	3.982	3.977	0.005	22	100489	50.0	50.0	
33 Vinyl acetate	43	5.007	4.989	0.018	97	113242	2.00	1.86	M
42 Ethyl acetate	43	5.903	5.891	0.012	99	46431	2.00	2.01	M
59 Isopropyl acetate	43	7.134	7.128	0.006	97	118911	2.00	1.90	M
* 61 Fluorobenzene (IS)	96	7.445	7.452	-0.007	99	1812979	10.0	10.0	
70 n-Propyl acetate	43	8.451	8.445	0.006	98	80951	2.00	2.02	M
73 2-Chloroethyl vinyl ether	63		9.006				ND	ND	
104 n-Butyl acetate	43	10.414	10.408	0.006	98	92045	2.00	1.83	
* 107 Chlorobenzene-d5 (IS)	117	10.987	10.988	-0.001	84	1432231	10.0	10.0	
118 cis-1,4-Dichloro-2-butene	88	11.908	11.902	0.006	29	58366	4.00	4.07	a
119 Cyclohexanone	55	11.938	11.938	0.000	90	99814	100.0	102.4	
* 135 1,4-Dichlorobenzene-d4	152	12.883	12.884	-0.001	93	868921	10.0	10.0	
149 2-Chloro-1,1,1-Trifluoroethane	1		0.000				ND	ND	
162 Chlorotrifluoroethene	1		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

MSV_CCV_V5ACE_00025	Amount Added:	1.00	Units: uL
MSV_DME_00046	Amount Added:	1.00	Units: uL
MSV_CCV_CYC_00005	Amount Added:	8.00	Units: uL
MSV_LLcentISO_00006	Amount Added:	5.00	Units: uL
MSV_V_SMRV4_00059	Amount Added:	5.00	Units: uL

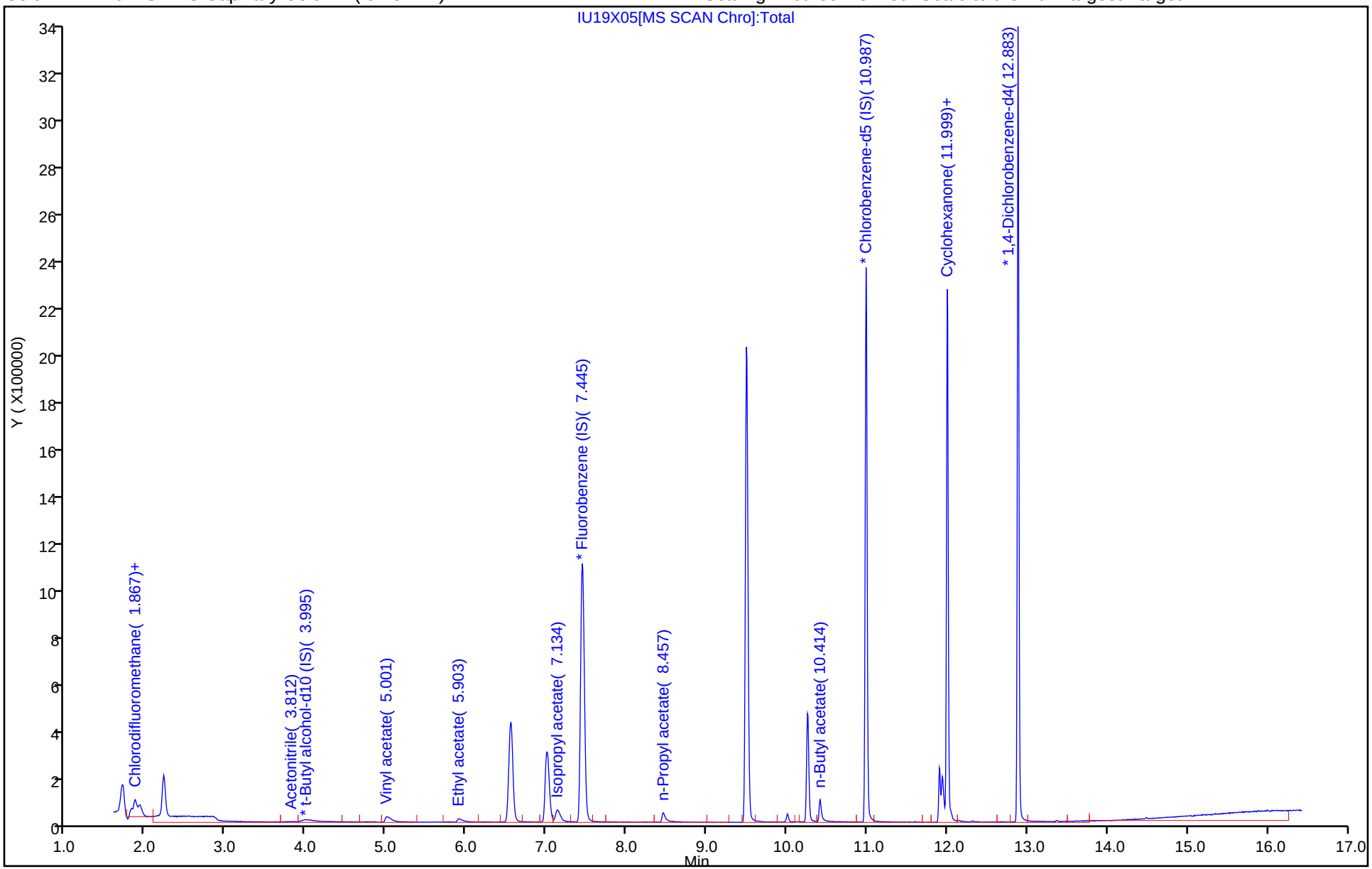
Report Date: 27-Jun-2023 12:29:53 Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X05.D

Injection Date:	19-Jun-2023 15:52:30	Instrument ID:	19930	Operator ID:	KNK41612
Lims ID:	IC std4			Worklist Smp#:	6
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

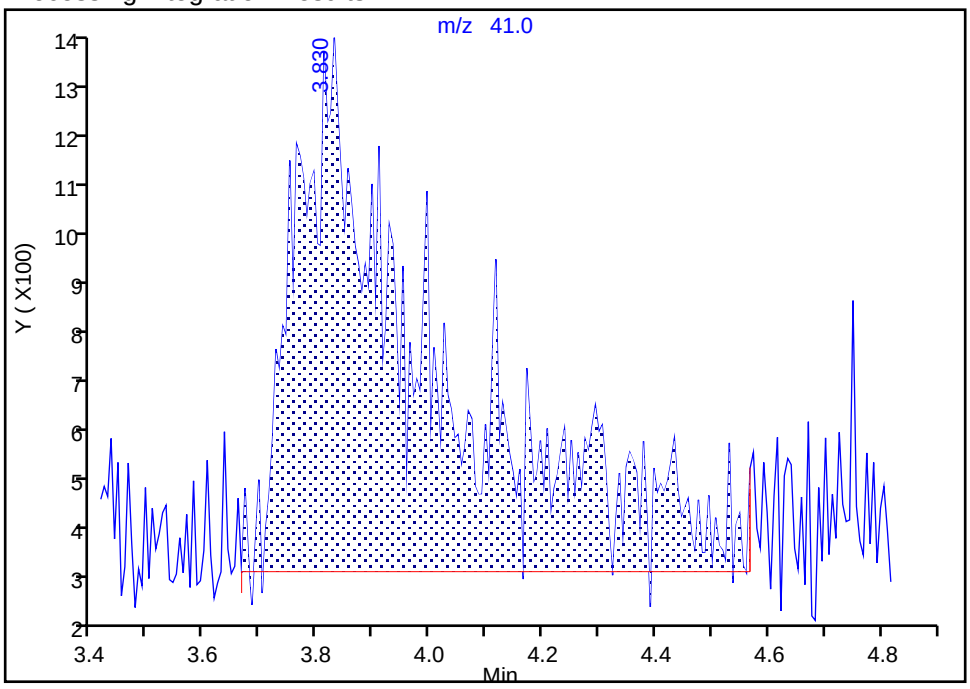
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X05.D
Injection Date: 19-Jun-2023 15:52:30 Instrument ID: 19930
Lims ID: IC std4
Client ID:
Operator ID: KNK41612 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

21 Acetonitrile, CAS: 75-05-8

Signal: 1

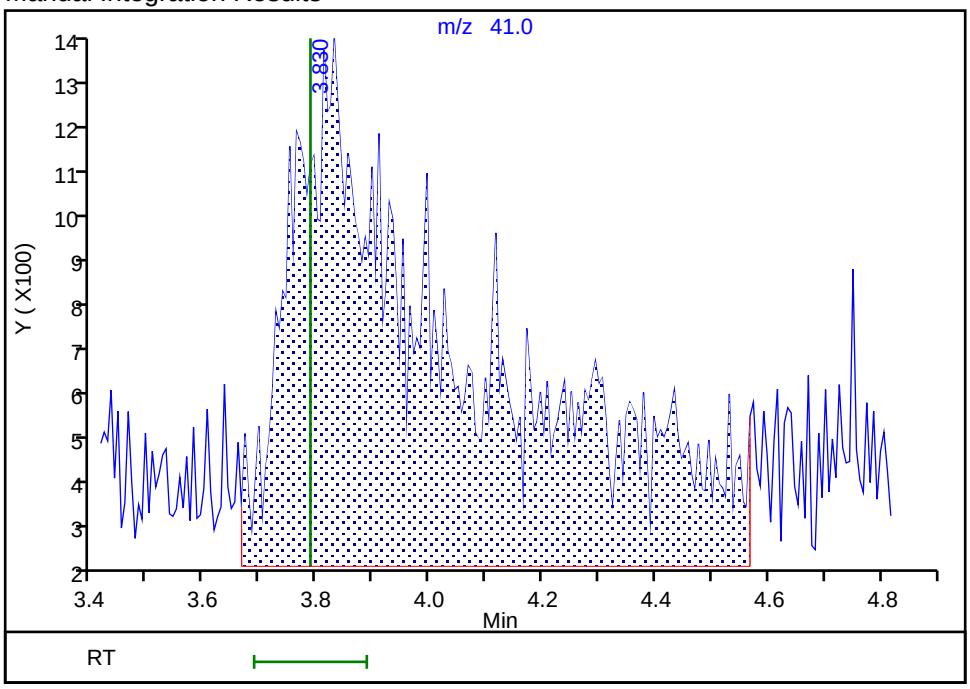
Processing Integration Results

RT: 3.83
Area: 15870
Amount: 3.294878
Amount Units: ug/l



Manual Integration Results

RT: 3.83
Area: 22246
Amount: 10.697663
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 14:55:53 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

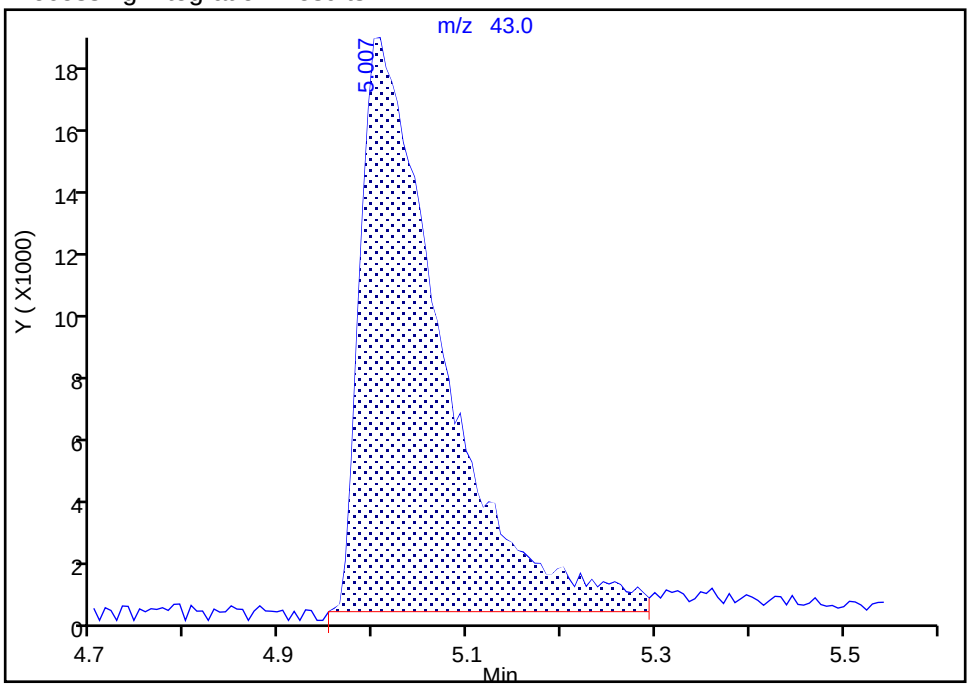
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X05.D				
Injection Date:	19-Jun-2023 15:52:30	Instrument ID:	19930		
Lims ID:	IC std4				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	5	Worklist Smp#:	6
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

33 Vinyl acetate, CAS: 108-05-4

Signal: 1

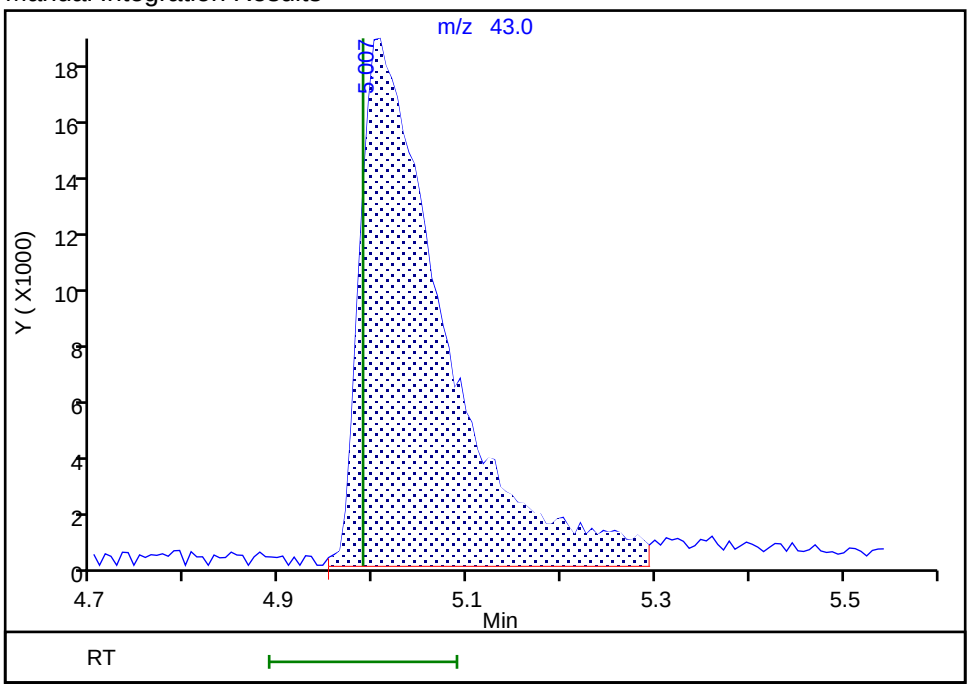
Processing Integration Results

RT: 5.01
Area: 107800
Amount: 1.776767
Amount Units: ug/l



Manual Integration Results

RT: 5.01
Area: 113242
Amount: 1.855750
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:25:28 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

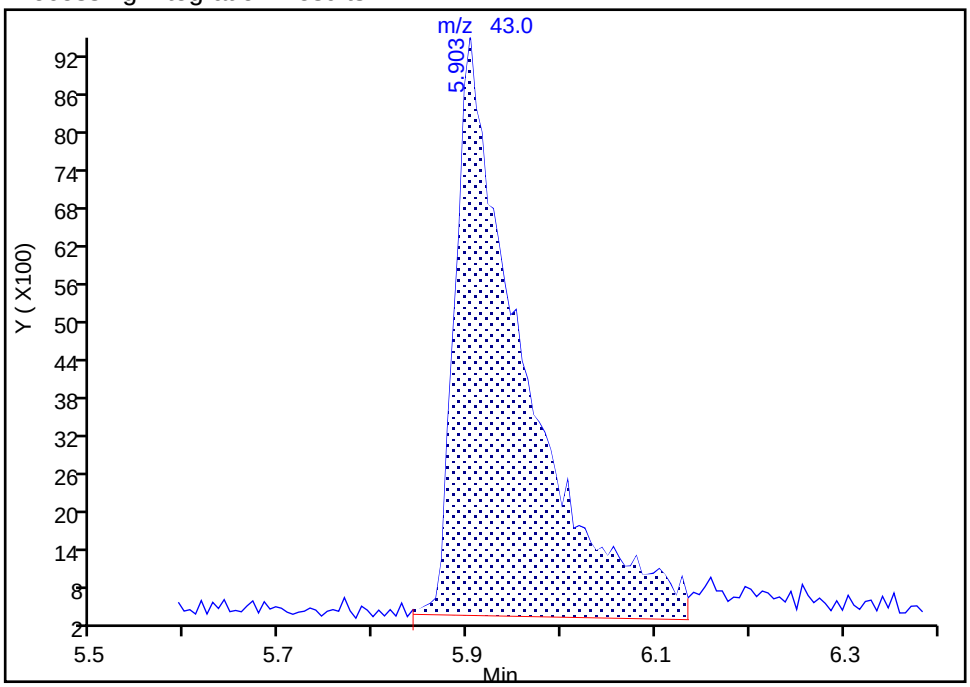
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X05.D
Injection Date: 19-Jun-2023 15:52:30 Instrument ID: 19930
Lims ID: IC std4
Client ID:
Operator ID: KNK41612 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

42 Ethyl acetate, CAS: 141-78-6

Signal: 1

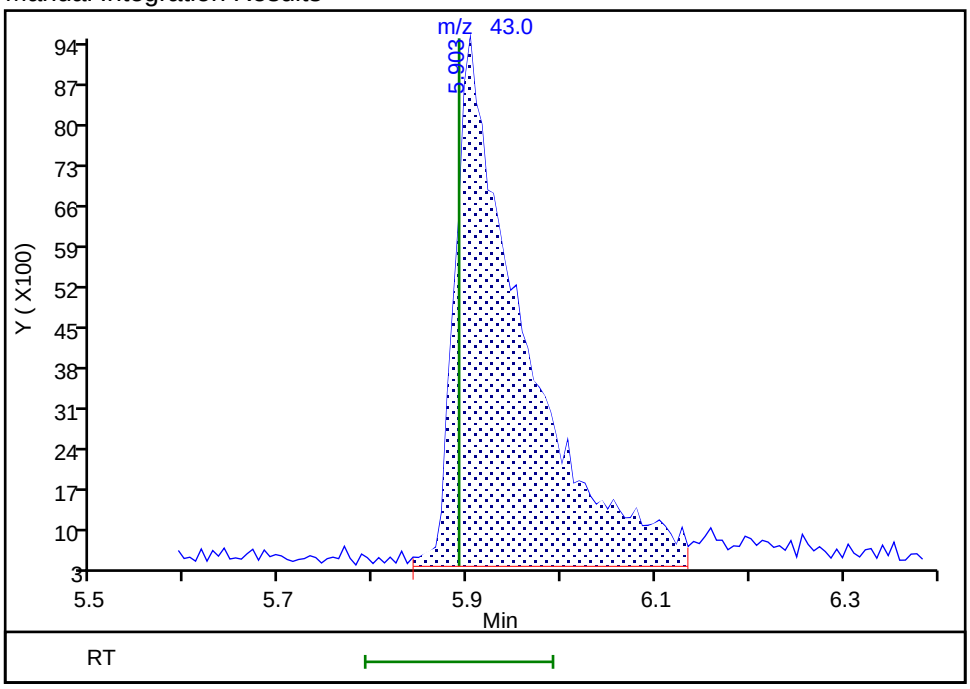
Processing Integration Results

RT: 5.90
Area: 45983
Amount: 1.994748
Amount Units: ug/l



Manual Integration Results

RT: 5.90
Area: 46431
Amount: 2.012427
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:25:36 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

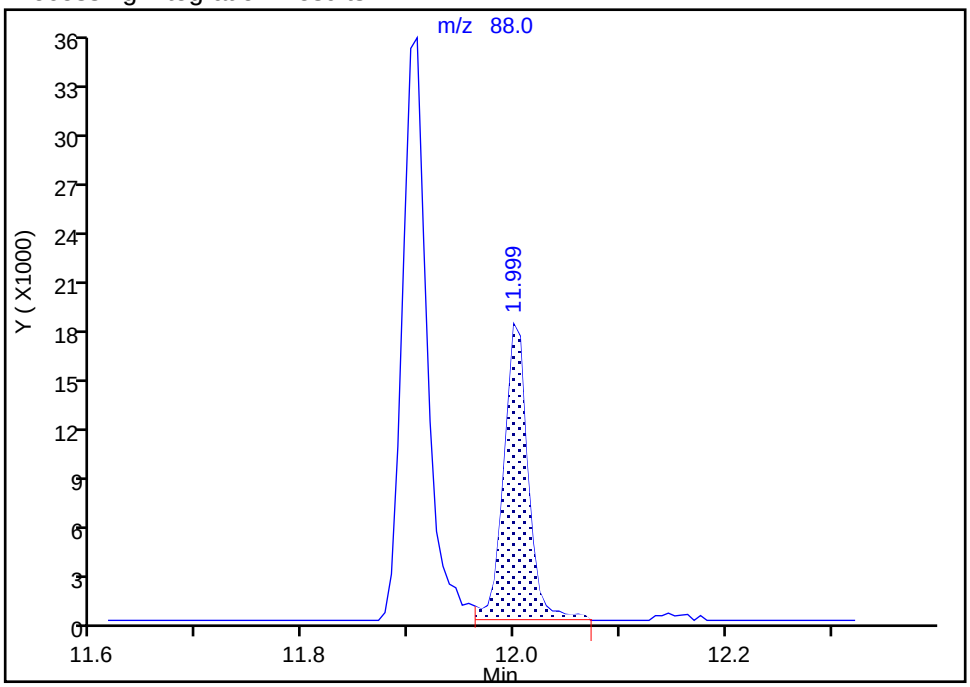
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X05.D
Injection Date: 19-Jun-2023 15:52:30 Instrument ID: 19930
Lims ID: IC std4
Client ID:
Operator ID: KNK41612 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

118 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

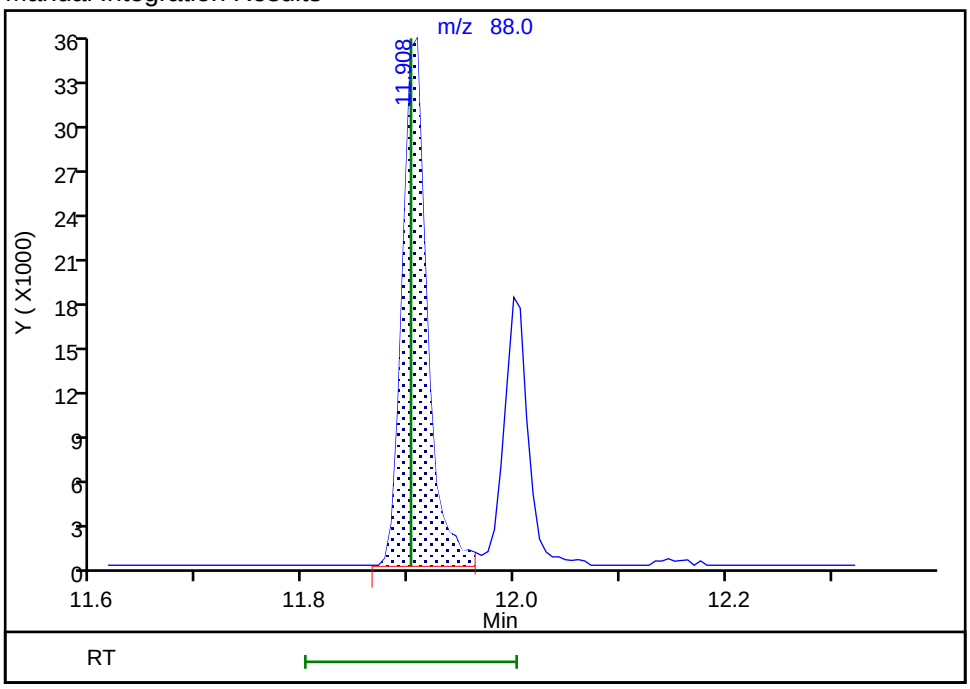
Processing Integration Results

RT: 12.00
Area: 29165
Amount: 1.213614
Amount Units: ug/l



Manual Integration Results

RT: 11.91
Area: 58366
Amount: 4.065560
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:32:36 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X06.D
Lims ID: IC std5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 19-Jun-2023 16:13:30 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0086929-007
Misc. Info.: SM 5.0
Operator ID: KNK41612 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub44

Method: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 27-Jun-2023 12:29:55 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1687

First Level Reviewer: DVW2 Date: 21-Jun-2023 08:26:51

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Chlorodifluoromethane	51	1.867	1.867	0.000	97	354220	5.00	4.90	
3 Dimethyl ether	45	1.922	1.922	0.000	99	315734	5.00	5.11	
21 Acetonitrile	41	3.812	3.788	0.024	19	46193	25.0	22.0	M
* 26 t-Butyl alcohol-d10 (IS)	65	4.050	3.977	0.073	27	89518	50.0	50.0	M
33 Vinyl acetate	43	5.001	4.989	0.012	97	302053	5.00	4.91	
42 Ethyl acetate	43	5.897	5.891	0.006	99	129747	5.00	5.57	
59 Isopropyl acetate	43	7.128	7.128	0.000	98	295497	5.00	4.68	
* 61 Fluorobenzene (IS)	96	7.445	7.452	-0.007	99	1828854	10.0	10.0	
70 n-Propyl acetate	43	8.445	8.445	0.000	98	216058	5.00	5.35	
73 2-Chloroethyl vinyl ether	63	9.012	9.006	0.006	1	895	5.00	3.32	
104 n-Butyl acetate	43	10.408	10.408	0.000	98	258101	5.00	5.09	
* 107 Chlorobenzene-d5 (IS)	117	10.987	10.988	-0.001	84	1444071	10.0	10.0	
118 cis-1,4-Dichloro-2-butene	88	11.902	11.902	0.000	29	160237	10.0	11.1	
119 Cyclohexanone	55	11.938	11.938	0.000	90	217173	250.0	250.2	
* 135 1,4-Dichlorobenzene-d4	152	12.883	12.884	-0.001	93	887604	10.0	10.0	
149 2-Chloro-1,1,1-Trifluoroethane	1		0.000				ND	ND	
162 Chlorotrifluoroethene	1		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND
Review Flags
M - Manually Integrated

Reagents:

MSV_CCV_V5ACE_00025	Amount Added:	1.00	Units: uL
MSV_DME_00046	Amount Added:	1.00	Units: uL
MSV_CCV_CYC_00005	Amount Added:	8.00	Units: uL
MSV_LLcentISO_00006	Amount Added:	5.00	Units: uL
MSV_V_SMRV4_00059	Amount Added:	5.00	Units: uL

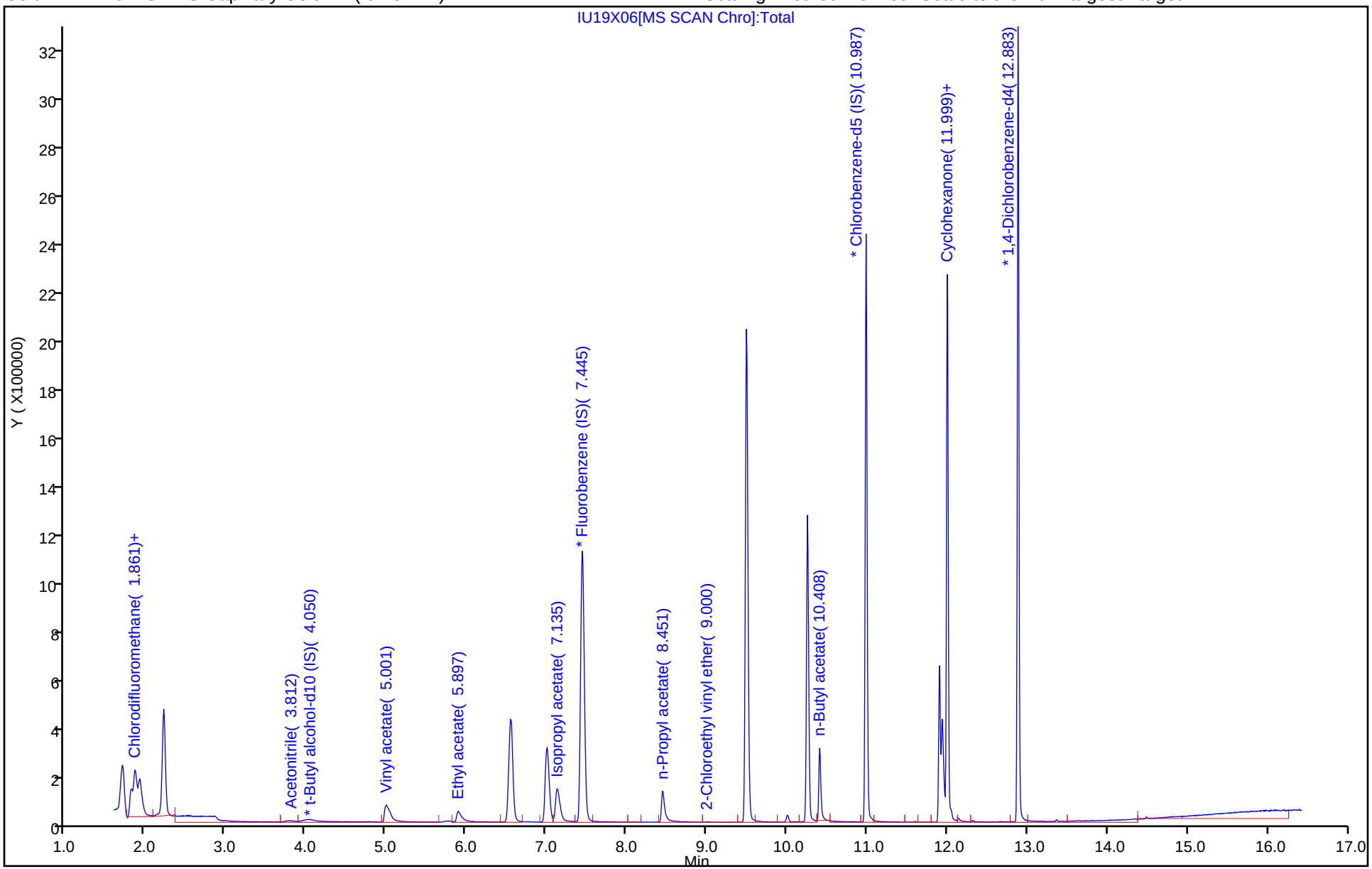
Report Date: 27-Jun-2023 12:29:55 Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X06.D

Injection Date:	19-Jun-2023 16:13:30	Instrument ID:	19930	Operator ID:	KNK41612
Lims ID:	IC std5			Worklist Smp#:	7
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

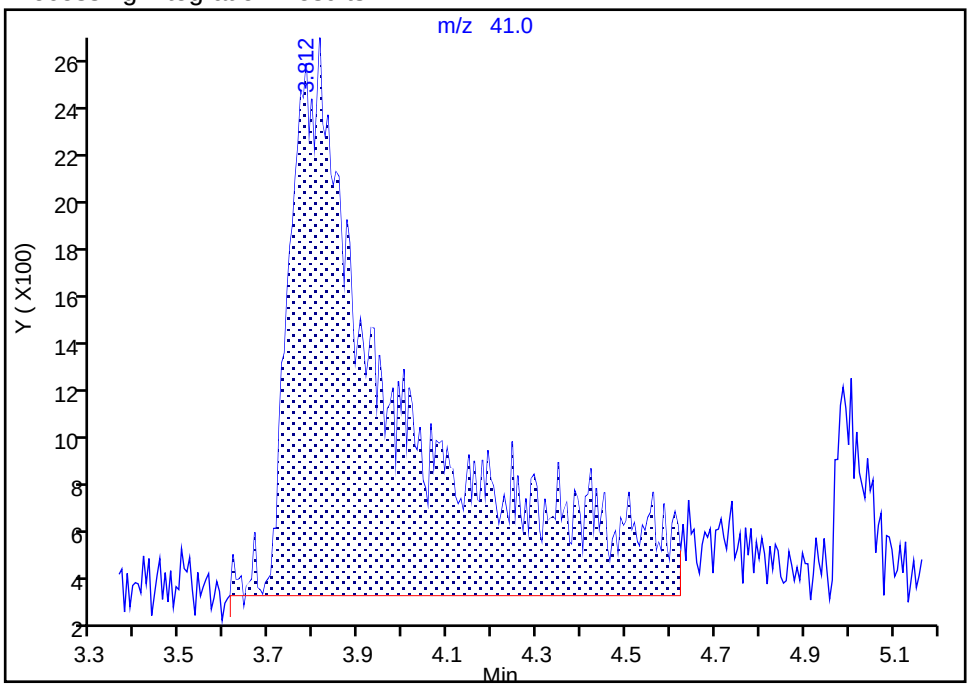
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X06.D
Injection Date: 19-Jun-2023 16:13:30 Instrument ID: 19930
Lims ID: IC std5
Client ID:
Operator ID: KNK41612 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

21 Acetonitrile, CAS: 75-05-8

Signal: 1

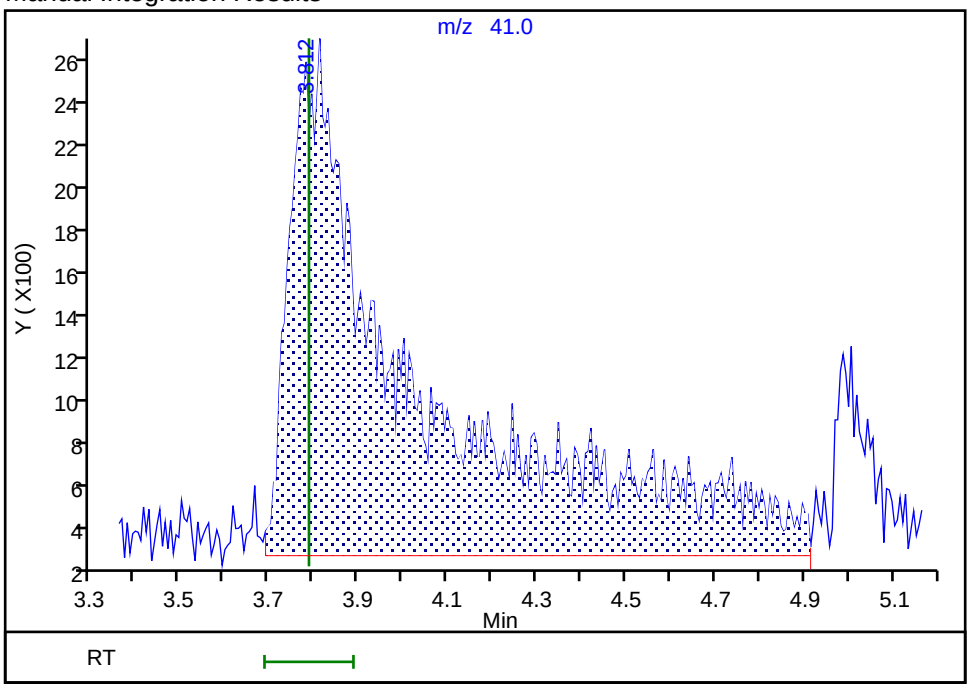
Processing Integration Results

RT: 3.81
Area: 38597
Amount: 7.501240
Amount Units: ug/l



Manual Integration Results

RT: 3.81
Area: 46193
Amount: 22.020485
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 14:55:37 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

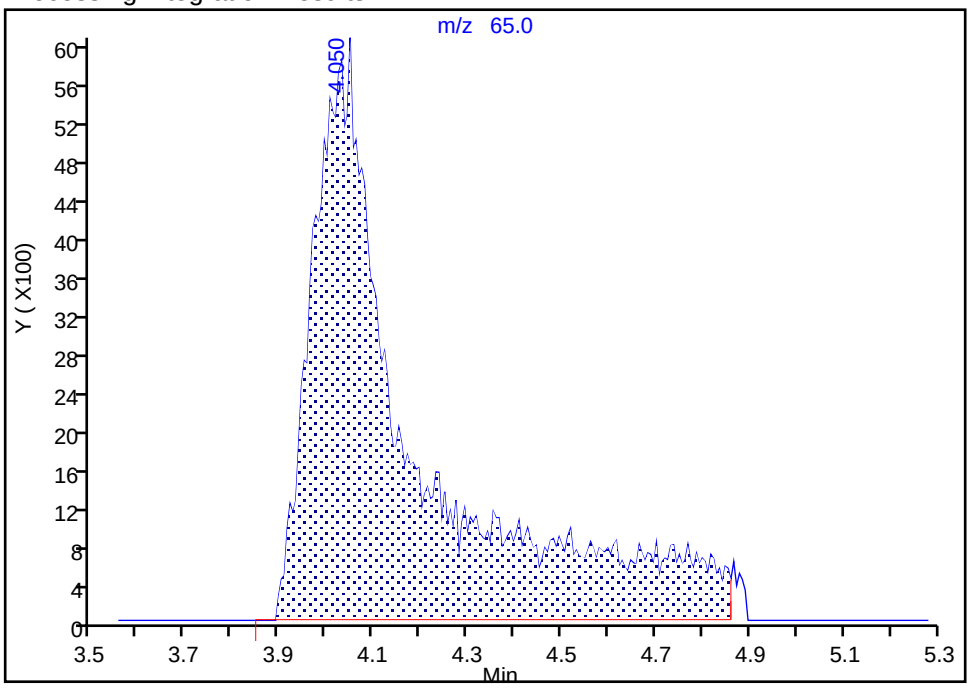
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X06.D
Injection Date: 19-Jun-2023 16:13:30 Instrument ID: 19930
Lims ID: IC std5
Client ID:
Operator ID: KNK41612 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 26 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

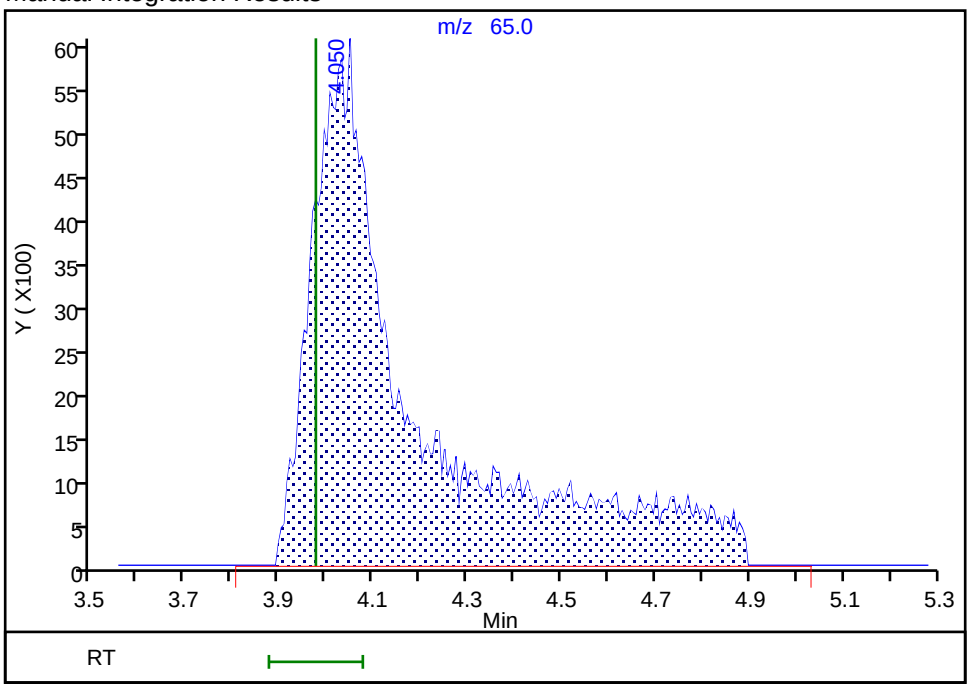
Processing Integration Results

RT: 4.05
Area: 88718
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 4.05
Area: 89518
Amount: 50.000000
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:26:39 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X07.D
Lims ID: IC std6 SM
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 19-Jun-2023 16:34:30 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0086929-008
Misc. Info.: SM 10.0
Operator ID: KNK41612 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub44

Method: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 27-Jun-2023 12:29:57 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1687

First Level Reviewer: DVW2 Date: 20-Jun-2023 15:14:24

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Chlorodifluoromethane	51	1.867	1.867	0.000	97	702885	10.0	9.86	
3 Dimethyl ether	45	1.922	1.922	0.000	99	597989	10.0	9.81	
21 Acetonitrile	41	3.788	3.788	0.000	25	84890	50.0	41.0	M
* 26 t-Butyl alcohol-d10 (IS)	65	4.025	4.025	0.000	22	83666	50.0	50.0	M
33 Vinyl acetate	43	4.989	4.989	0.000	97	596485	10.0	9.82	
42 Ethyl acetate	43	5.891	5.891	0.000	99	266923	10.0	11.6	
59 Isopropyl acetate	43	7.128	7.128	0.000	98	610049	10.0	9.79	
* 61 Fluorobenzene (IS)	96	7.445	7.445	0.000	99	1804558	10.0	10.0	
70 n-Propyl acetate	43	8.445	8.445	0.000	98	440656	10.0	11.1	
73 2-Chloroethyl vinyl ether	63	9.006	9.006	0.000	89	3197	10.0	12.0	
104 n-Butyl acetate	43	10.408	10.408	0.000	98	543448	10.0	10.8	
* 107 Chlorobenzene-d5 (IS)	117	10.987	10.987	0.000	84	1437525	10.0	10.0	
118 cis-1,4-Dichloro-2-butene	88	11.902	11.902	0.000	30	329445	20.0	22.9	
119 Cyclohexanone	55	11.938	11.938	0.000	91	441030	500.0	543.6	
* 135 1,4-Dichlorobenzene-d4	152	12.883	12.883	0.000	93	872295	10.0	10.0	
149 2-Chloro-1,1,1-Trifluoroethane	1		0.000				ND	ND	
162 Chlorotrifluoroethene	1		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND
Review Flags
M - Manually Integrated

Reagents:

MSV_CCV_V5ACE_00025	Amount Added:	1.00	Units: uL
MSV_DME_00046	Amount Added:	1.00	Units: uL
MSV_CCV_CYC_00005	Amount Added:	8.00	Units: uL
MSV_LLcentISO_00006	Amount Added:	5.00	Units: uL
MSV_V_SMRV4_00059	Amount Added:	5.00	Units: uL

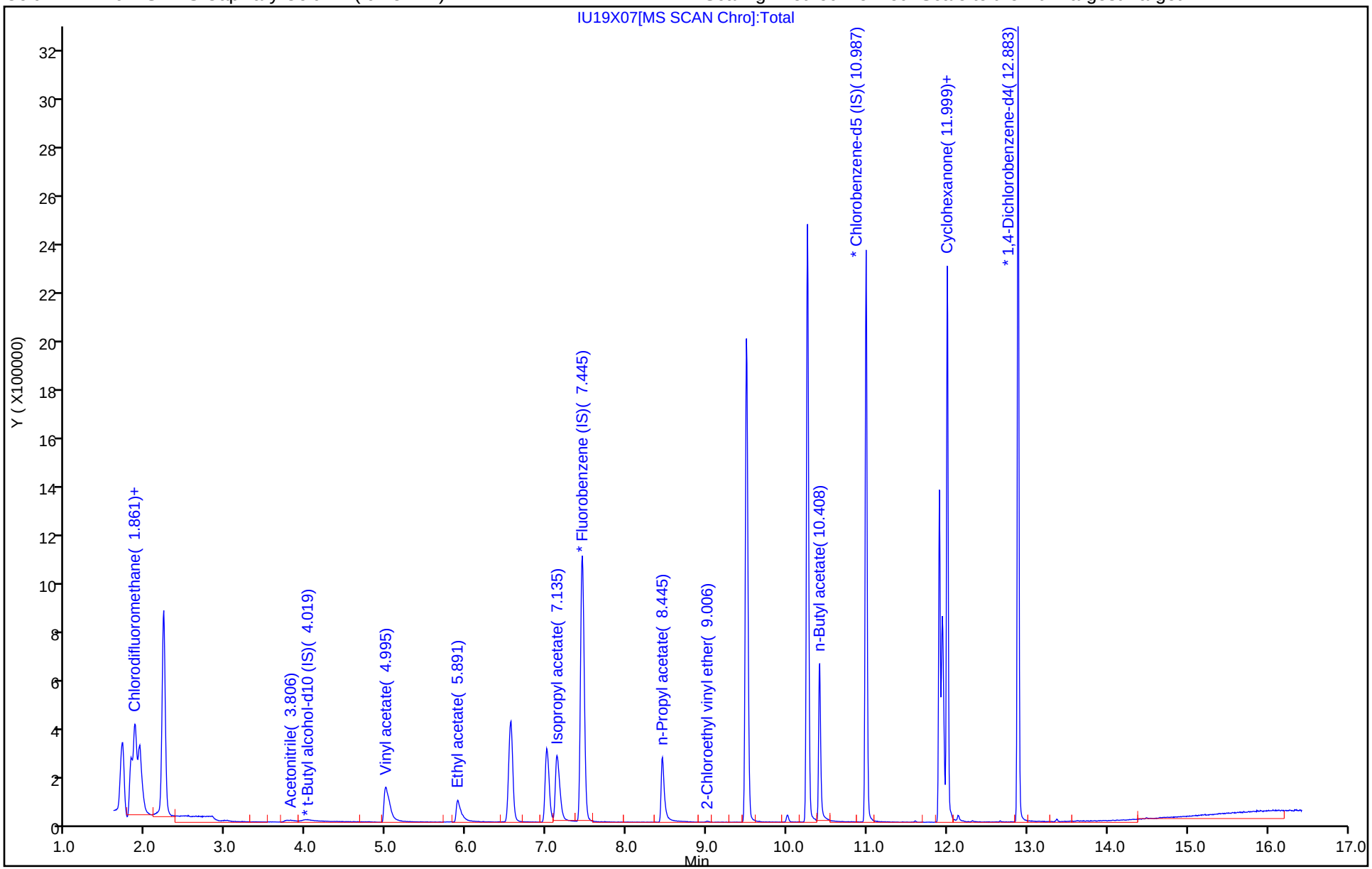
Report Date: 27-Jun-2023 12:29:58 Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X07.D

Injection Date:	19-Jun-2023 16:34:30	Instrument ID:	19930	Operator ID:	KNK41612
Lims ID:	IC std6 SM			Worklist Smp#:	8
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

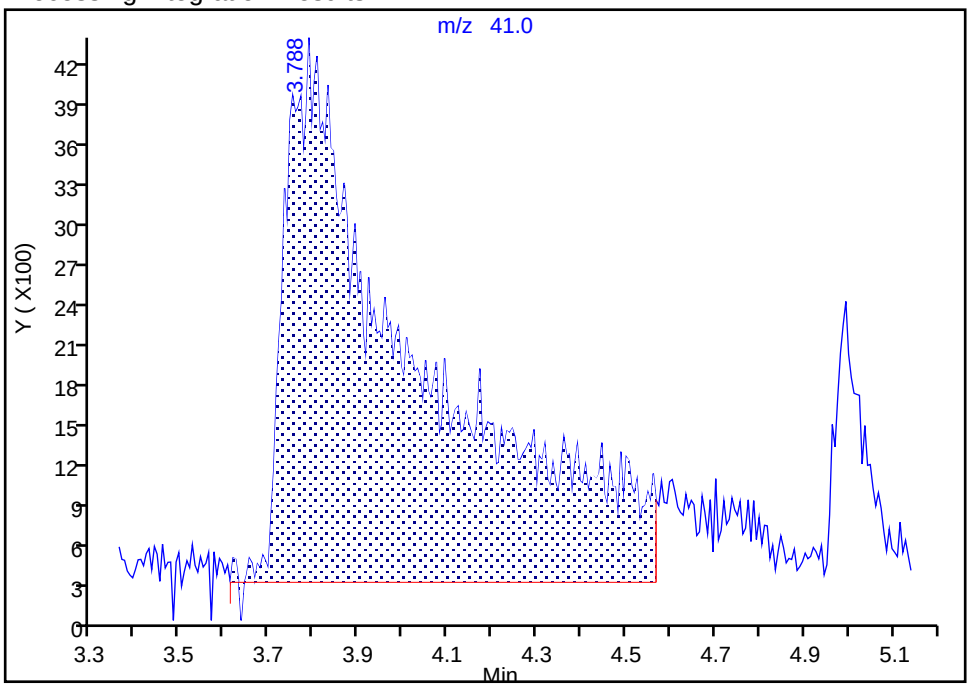
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X07.D
Injection Date: 19-Jun-2023 16:34:30 Instrument ID: 19930
Lims ID: IC std6 SM
Client ID:
Operator ID: KNK41612 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

21 Acetonitrile, CAS: 75-05-8

Signal: 1

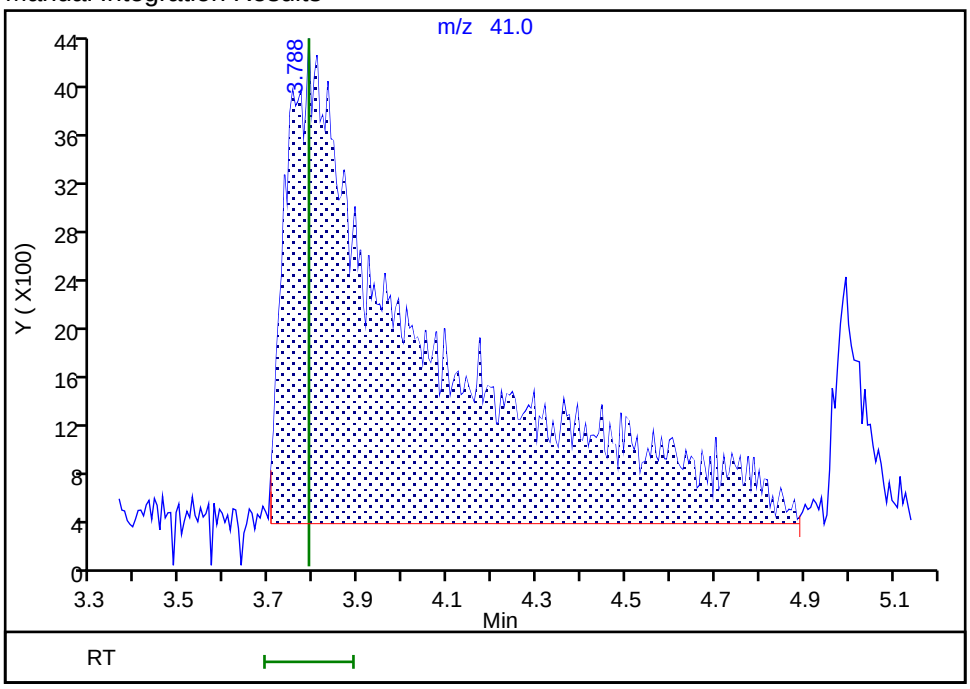
Processing Integration Results

RT: 3.79
Area: 81014
Amount: 6.118113
Amount Units: ug/l



Manual Integration Results

RT: 3.79
Area: 84890
Amount: 41.012423
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 14:54:49 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

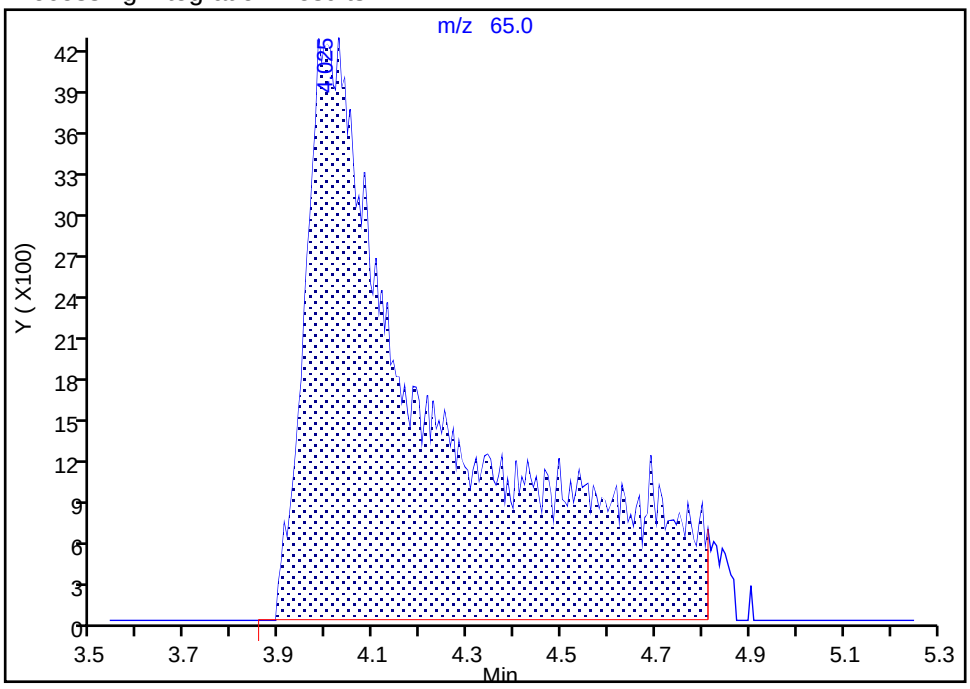
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X07.D
Injection Date: 19-Jun-2023 16:34:30 Instrument ID: 19930
Lims ID: IC std6 SM
Client ID:
Operator ID: KNK41612 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 26 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

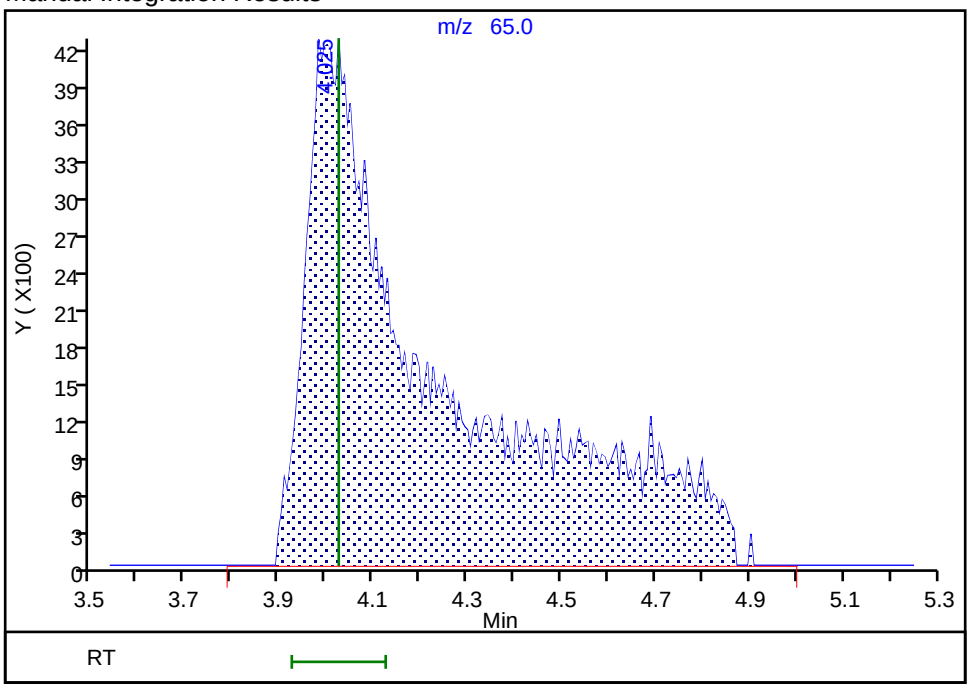
Processing Integration Results

RT: 4.03
Area: 82063
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 4.03
Area: 83666
Amount: 50.000000
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:14:41 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X08.D
Lims ID: IC std7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 19-Jun-2023 16:55:30 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0086929-009
Misc. Info.: SM 25.0
Operator ID: KNK41612 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub44

Method: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 27-Jun-2023 12:29:59 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1687

First Level Reviewer: DVW2 Date: 21-Jun-2023 08:27:27

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Chlorodifluoromethane	51	1.873	1.867	0.006	97	1791816	25.0	25.0	
3 Dimethyl ether	45	1.928	1.922	0.006	99	1588476	25.0	25.9	
21 Acetonitrile	41	3.751	3.788	-0.037	99	276683	125.0	133.0	M
* 26 t-Butyl alcohol-d10 (IS)	65	3.995	4.025	-0.030	30	107302	50.0	50.0	M
33 Vinyl acetate	43	4.989	4.989	0.000	97	1543134	25.0	25.3	
42 Ethyl acetate	43	5.885	5.891	-0.006	99	690605	25.0	29.9	
59 Isopropyl acetate	43	7.135	7.128	0.006	98	1527407	25.0	24.4	
* 61 Fluorobenzene (IS)	96	7.445	7.445	0.000	99	1813707	10.0	10.0	
70 n-Propyl acetate	43	8.445	8.445	0.000	98	1122558	25.0	28.0	
73 2-Chloroethyl vinyl ether	63	9.006	9.006	0.000	93	7591	25.0	28.4	
104 n-Butyl acetate	43	10.402	10.408	-0.006	98	1325744	25.0	26.2	
* 107 Chlorobenzene-d5 (IS)	117	10.987	10.987	0.000	84	1443609	10.0	10.0	
118 cis-1,4-Dichloro-2-butene	88	11.902	11.902	0.000	29	865958	50.0	59.8	a
119 Cyclohexanone	55	11.938	11.938	0.000	91	1415471	1250.0	1360.4	
* 135 1,4-Dichlorobenzene-d4	152	12.883	12.883	0.000	93	874610	10.0	10.0	
149 2-Chloro-1,1,1-Trifluoroethane	1		0.000				ND	ND	
162 Chlorotrifluoroethene	1		0.000				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

MSV_CCV_V5ACE_00025	Amount Added:	2.50	Units: uL
MSV_DME_00046	Amount Added:	2.50	Units: uL
MSV_CCV_CYC_00005	Amount Added:	20.00	Units: uL
MSV_LLcentISO_00006	Amount Added:	5.00	Units: uL
MSV_V_SMRV4_00059	Amount Added:	12.50	Units: uL

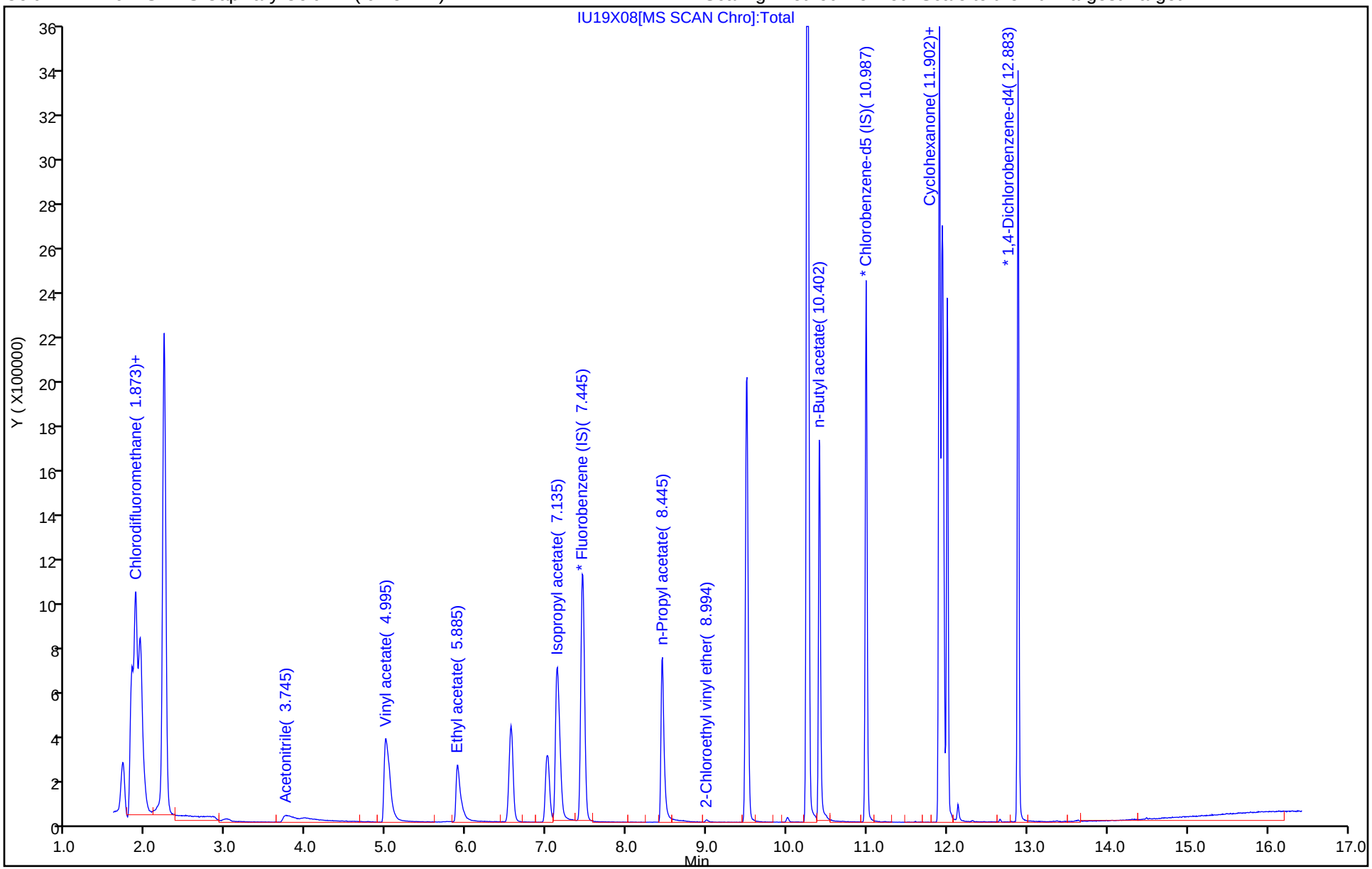
Report Date: 27-Jun-2023 12:30:00 Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X08.D

Injection Date:	19-Jun-2023 16:55:30	Instrument ID:	19930	Operator ID:	KNK41612
Lims ID:	IC std7			Worklist Smp#:	9
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

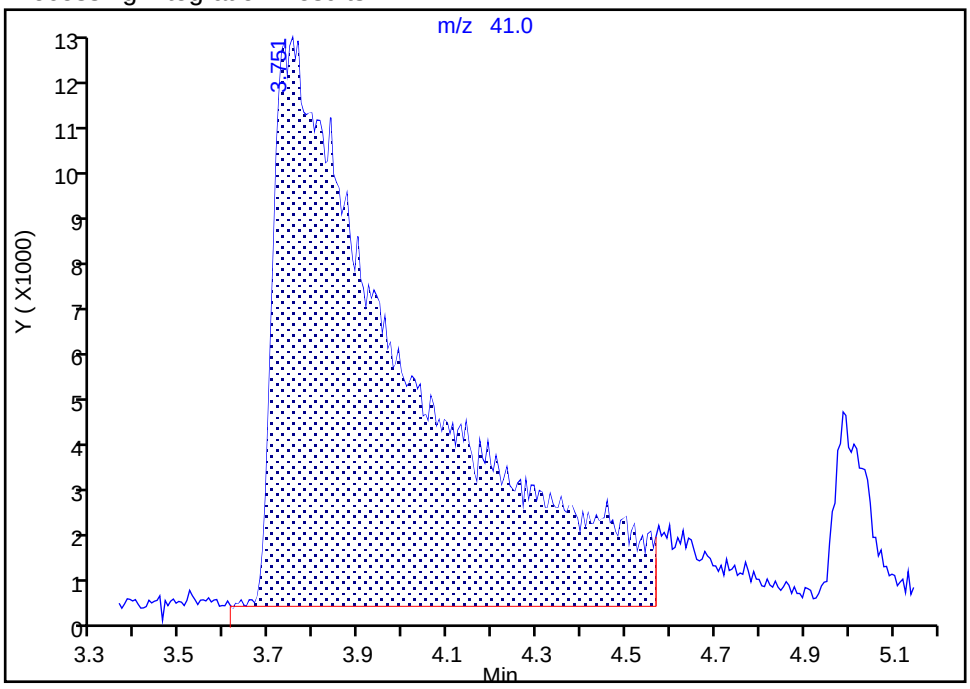
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X08.D
Injection Date: 19-Jun-2023 16:55:30 Instrument ID: 19930
Lims ID: IC std7
Client ID:
Operator ID: KNK41612 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

21 Acetonitrile, CAS: 75-05-8

Signal: 1

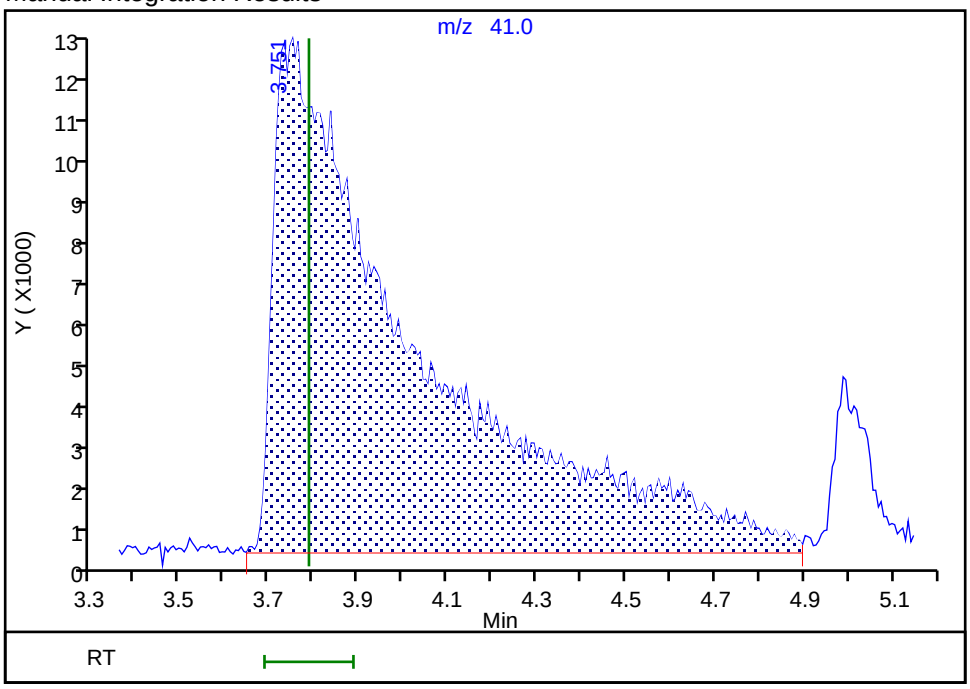
Processing Integration Results

RT: 3.75
Area: 256812
Amount: 49.978431
Amount Units: ug/l



Manual Integration Results

RT: 3.75
Area: 276683
Amount: 132.9980
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 14:54:24 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

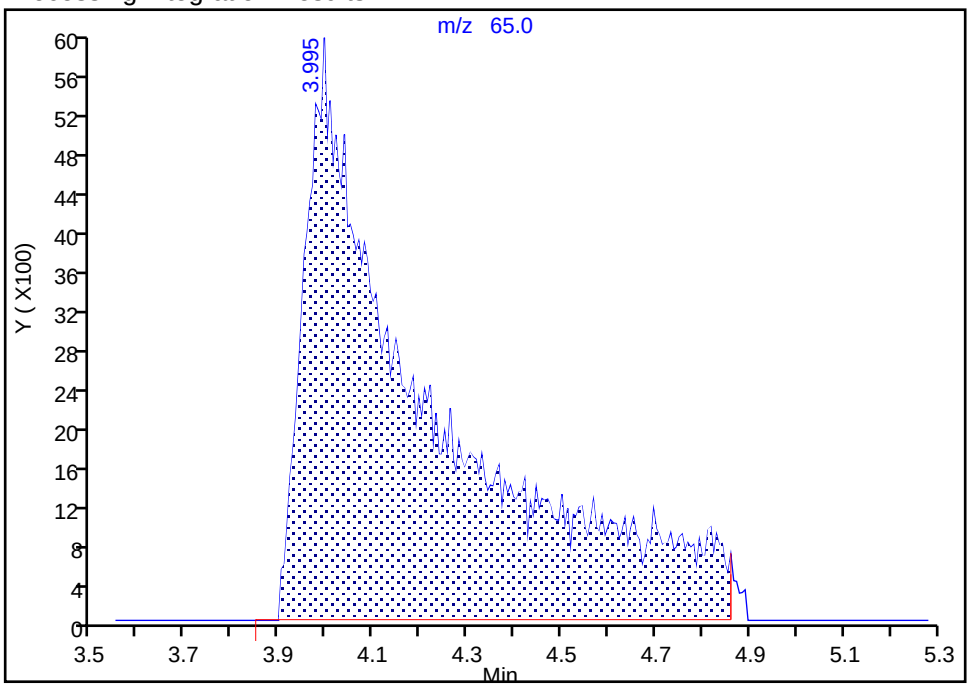
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X08.D				
Injection Date:	19-Jun-2023 16:55:30	Instrument ID:	19930		
Lims ID:	IC std7				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	8	Worklist Smp#:	9
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

* 26 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

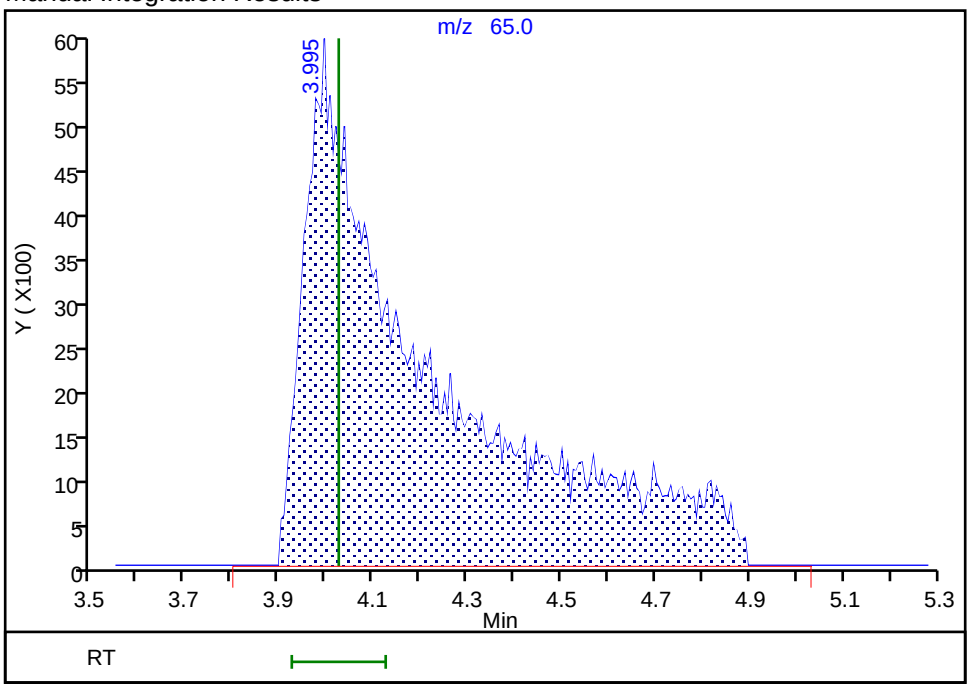
Processing Integration Results

RT: 3.99
Area: 106683
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 3.99
Area: 107302
Amount: 50.000000
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:27:13 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

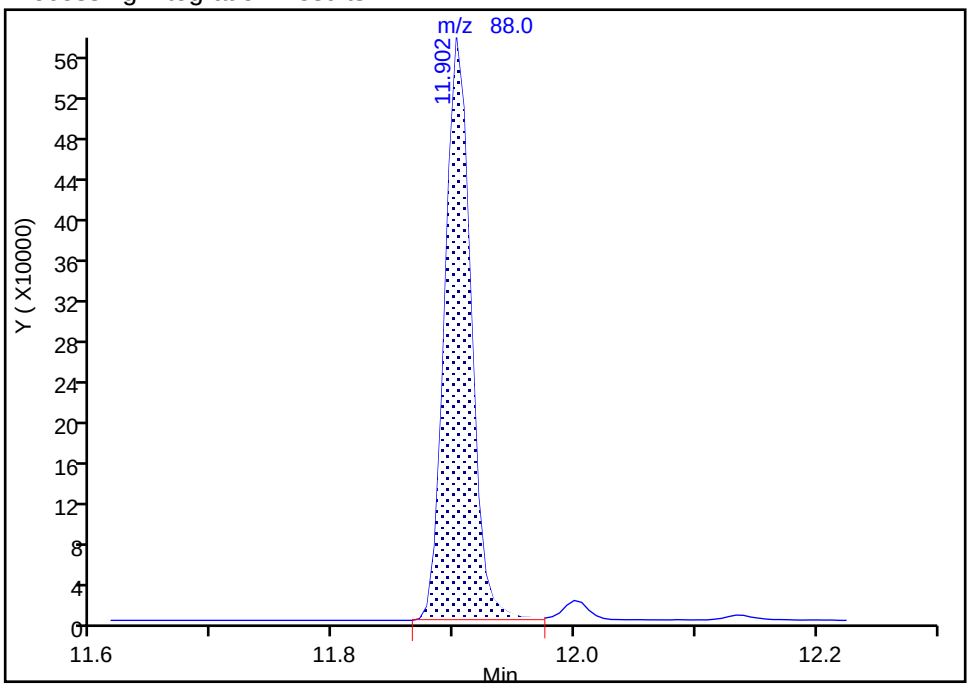
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X08.D
Injection Date: 19-Jun-2023 16:55:30 Instrument ID: 19930
Lims ID: IC std7
Client ID:
Operator ID: KNK41612 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

118 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

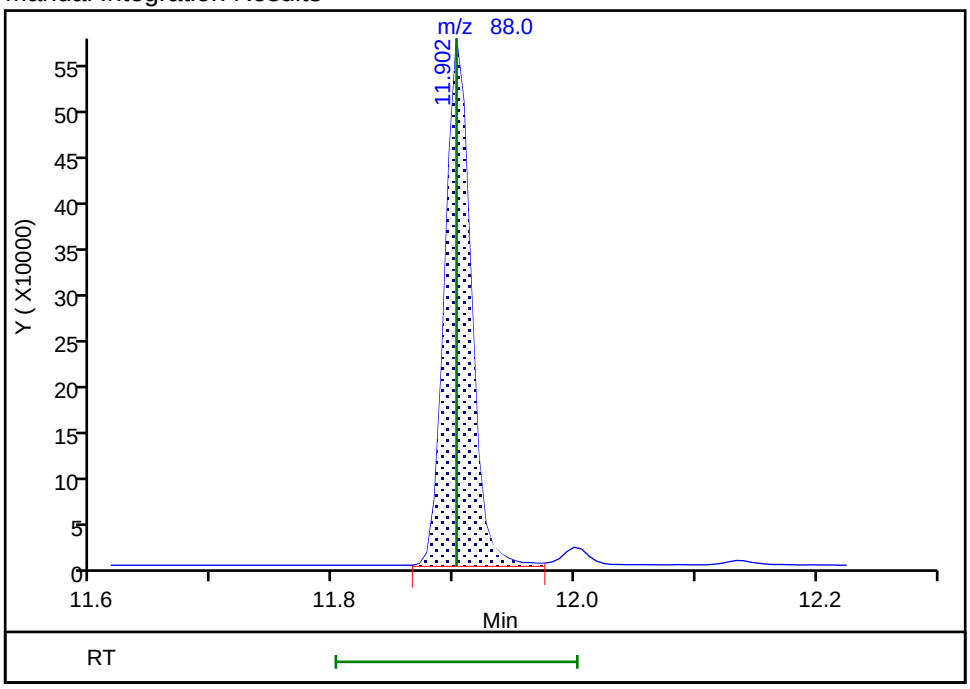
Processing Integration Results

RT: 11.90
Area: 865958
Amount: 35.750244
Amount Units: ug/l



Manual Integration Results

RT: 11.90
Area: 865958
Amount: 59.844022
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:32:50 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Calibration / Chlorodifluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

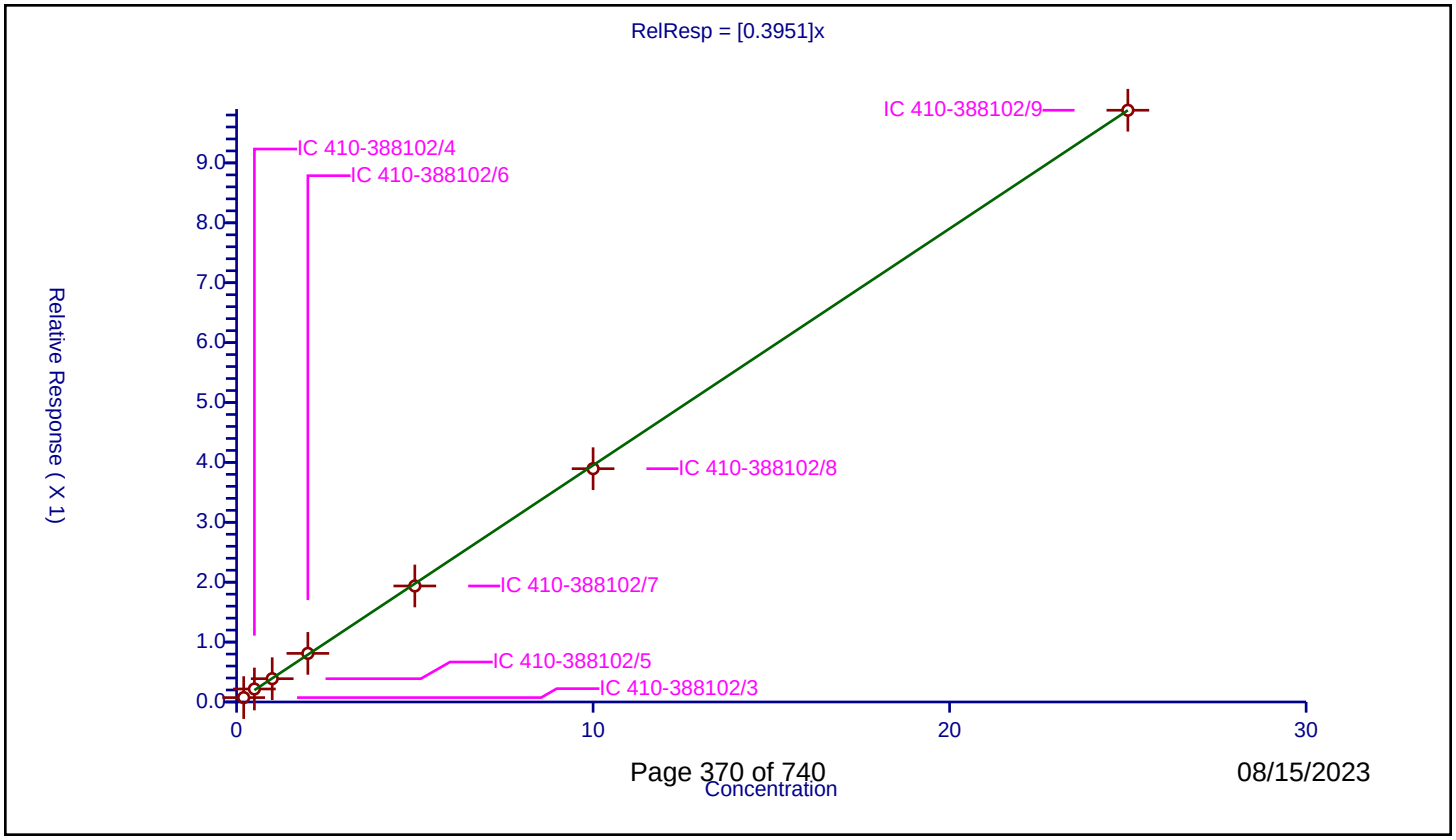
Curve Coefficients

Intercept:	0
Slope:	0.3951

Error Coefficients

Standard Error:	802000
Relative Standard Error:	5.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/3	0.2	0.073075	10.0	1898742.0	0.365373	Y
2	IC 410-388102/4	0.5	0.216974	10.0	1973742.0	0.433947	Y
3	IC 410-388102/5	1.0	0.389067	10.0	1800694.0	0.389067	Y
4	IC 410-388102/6	2.0	0.811195	10.0	1812979.0	0.405598	Y
5	IC 410-388102/7	5.0	1.936841	10.0	1828854.0	0.387368	Y
6	IC 410-388102/8	10.0	3.895054	10.0	1804558.0	0.389505	Y
7	IC 410-388102/9	25.0	9.879302	10.0	1813707.0	0.395172	Y



Calibration / Dimethyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

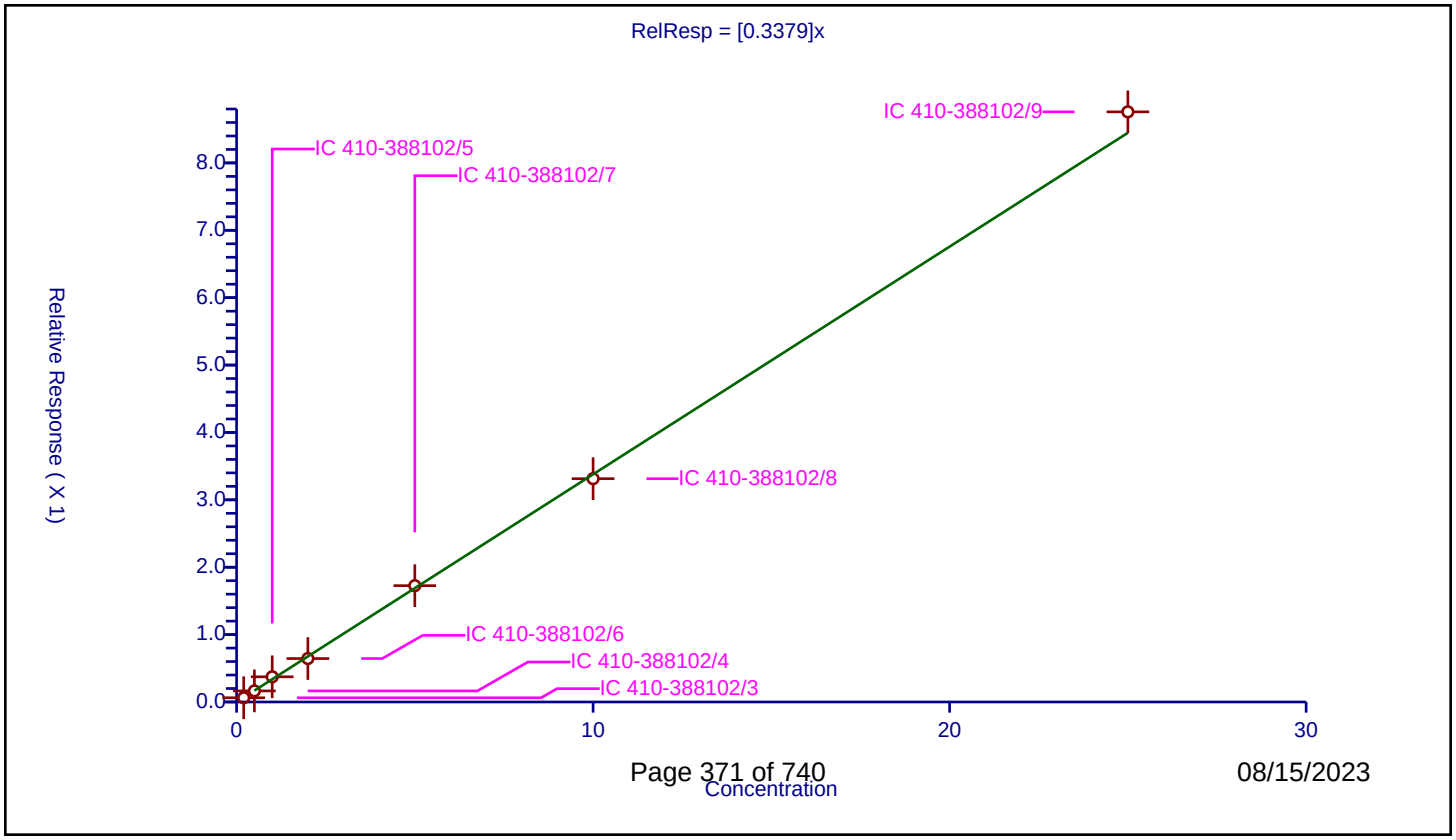
Curve Coefficients

Intercept:	0
Slope:	0.3379

Error Coefficients

Standard Error:	707000
Relative Standard Error:	6.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/3	0.2	0.062599	10.0	1898742.0	0.312997	Y
2	IC 410-388102/4	0.5	0.164616	10.0	1973742.0	0.329232	Y
3	IC 410-388102/5	1.0	0.373612	10.0	1800694.0	0.373612	Y
4	IC 410-388102/6	2.0	0.644536	10.0	1812979.0	0.322268	Y
5	IC 410-388102/7	5.0	1.726404	10.0	1828854.0	0.345281	Y
6	IC 410-388102/8	10.0	3.31377	10.0	1804558.0	0.331377	Y
7	IC 410-388102/9	25.0	8.758173	10.0	1813707.0	0.350327	Y



Calibration / Acetonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

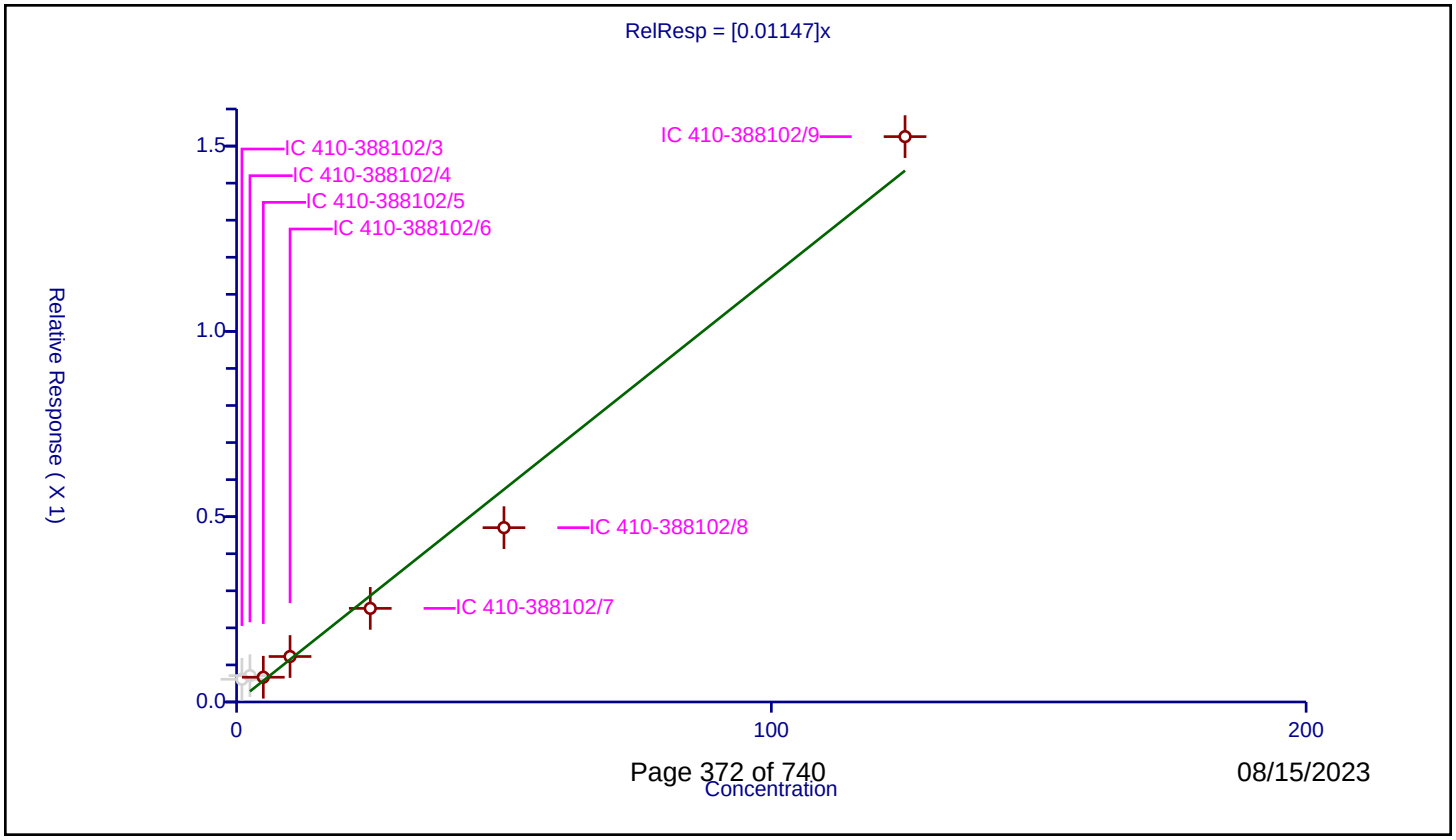
Curve Coefficients

Intercept:	0
Slope:	0.01147

Error Coefficients

Standard Error:	147000
Relative Standard Error:	14.4
Correlation Coefficient:	0.989
Coefficient of Determination (Adjusted):	0.959

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/3	1.0	0.061341	10.0	1898742.0	0.061341	N
2	IC 410-388102/4	2.5	0.07123	10.0	1973742.0	0.028492	N
3	IC 410-388102/5	5.0	0.066824	10.0	1800694.0	0.013365	Y
4	IC 410-388102/6	10.0	0.122704	10.0	1812979.0	0.01227	Y
5	IC 410-388102/7	25.0	0.252579	10.0	1828854.0	0.010103	Y
6	IC 410-388102/8	50.0	0.47042	10.0	1804558.0	0.009408	Y
7	IC 410-388102/9	125.0	1.525511	10.0	1813707.0	0.012204	Y



Calibration / Vinyl acetate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

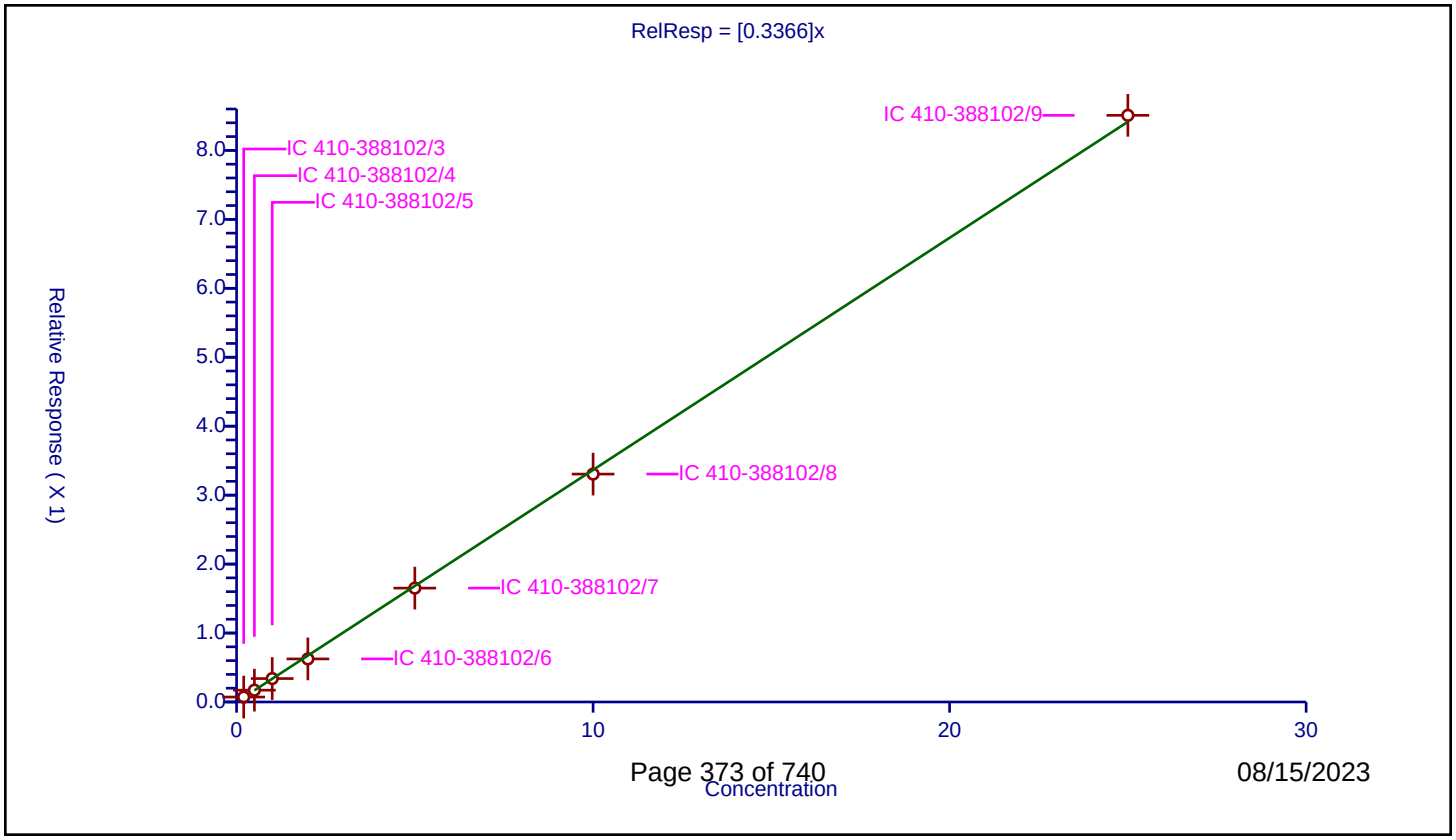
Curve Coefficients

Intercept:	0
Slope:	0.3366

Error Coefficients

Standard Error:	689000
Relative Standard Error:	4.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/3	0.2	0.071927	10.0	1898742.0	0.359633	Y
2	IC 410-388102/4	0.5	0.171649	10.0	1973742.0	0.343297	Y
3	IC 410-388102/5	1.0	0.339669	10.0	1800694.0	0.339669	Y
4	IC 410-388102/6	2.0	0.624618	10.0	1812979.0	0.312309	Y
5	IC 410-388102/7	5.0	1.651597	10.0	1828854.0	0.330319	Y
6	IC 410-388102/8	10.0	3.305435	10.0	1804558.0	0.330544	Y
7	IC 410-388102/9	25.0	8.508177	10.0	1813707.0	0.340327	Y



Calibration / Ethyl acetate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

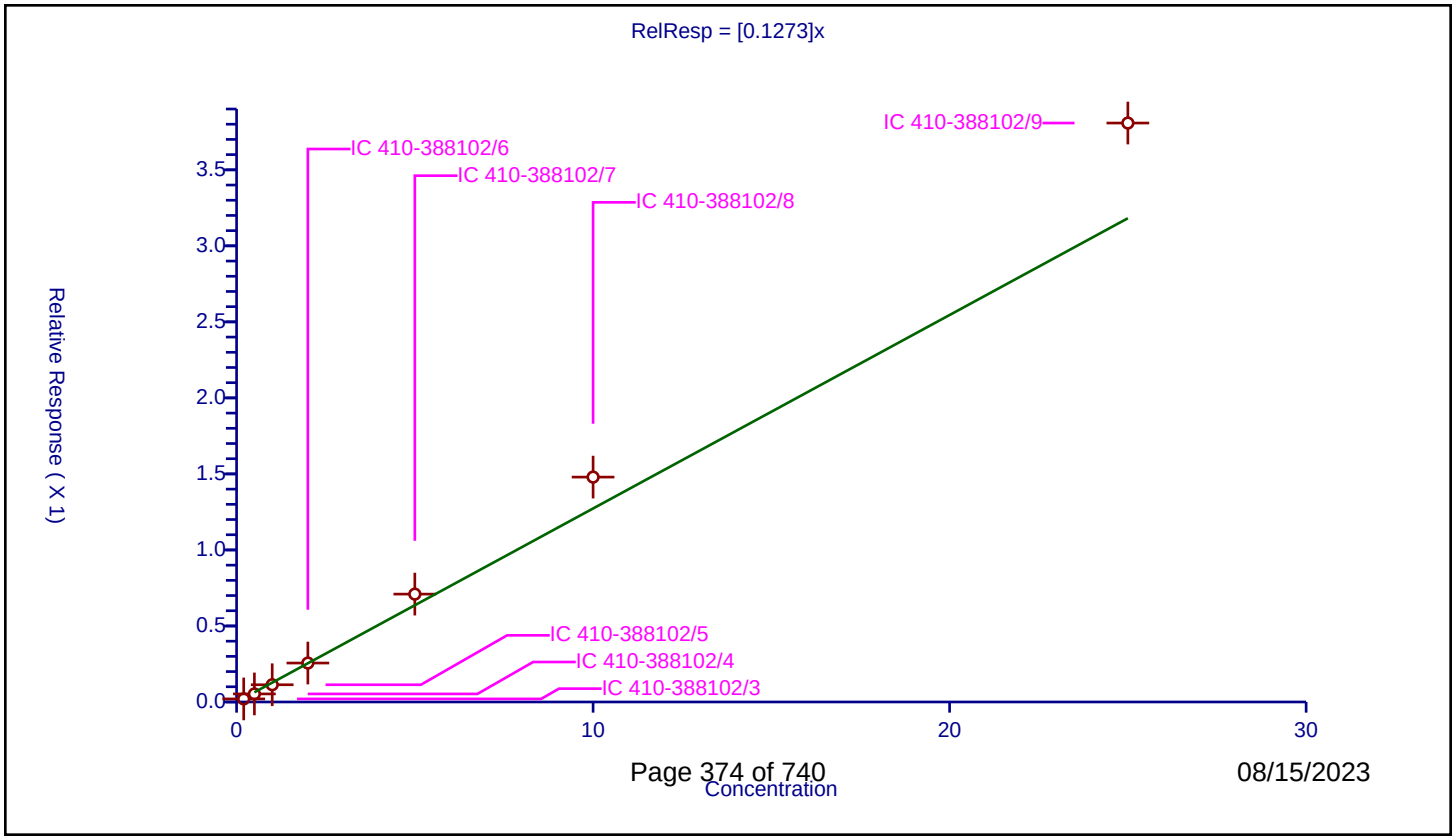
Curve Coefficients

Intercept:	0
Slope:	0.1273

Error Coefficients

Standard Error:	308000
Relative Standard Error:	16.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.970

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/3	0.2	0.020224	10.0	1898742.0	0.10112	Y
2	IC 410-388102/4	0.5	0.053082	10.0	1973742.0	0.106164	Y
3	IC 410-388102/5	1.0	0.113379	10.0	1800694.0	0.113379	Y
4	IC 410-388102/6	2.0	0.256103	10.0	1812979.0	0.128052	Y
5	IC 410-388102/7	5.0	0.709444	10.0	1828854.0	0.141889	Y
6	IC 410-388102/8	10.0	1.47916	10.0	1804558.0	0.147916	Y
7	IC 410-388102/9	25.0	3.807699	10.0	1813707.0	0.152308	Y



Calibration / 2-Chloroethyl vinyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

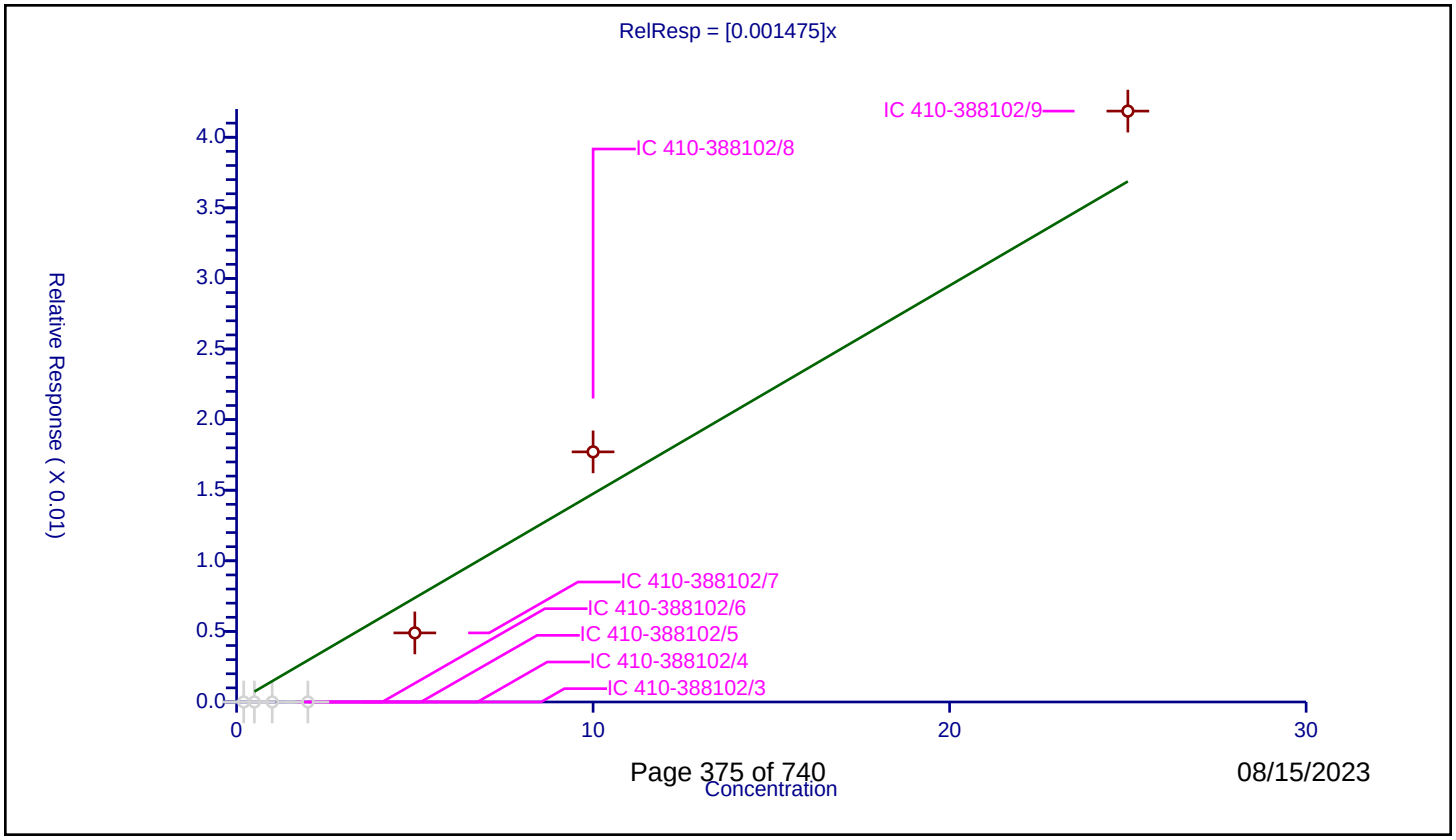
Curve Coefficients

Intercept:	0
Slope:	0.001475

Error Coefficients

Standard Error:	5860
Relative Standard Error:	29.3
Correlation Coefficient:	0.990
Coefficient of Determination (Adjusted):	0.881

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/3	0.2	0.0	10.0	1898742.0	0.0	N
2	IC 410-388102/4	0.5	0.0	10.0	1973742.0	0.0	N
3	IC 410-388102/5	1.0	0.0	10.0	1800694.0	0.0	N
4	IC 410-388102/6	2.0	0.0	10.0	1812979.0	0.0	N
5	IC 410-388102/7	5.0	0.004894	10.0	1828854.0	0.000979	Y
6	IC 410-388102/8	10.0	0.017716	10.0	1804558.0	0.001772	Y
7	IC 410-388102/9	25.0	0.041854	10.0	1813707.0	0.001674	Y



Calibration / cis-1,4-Dichloro-2-butene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

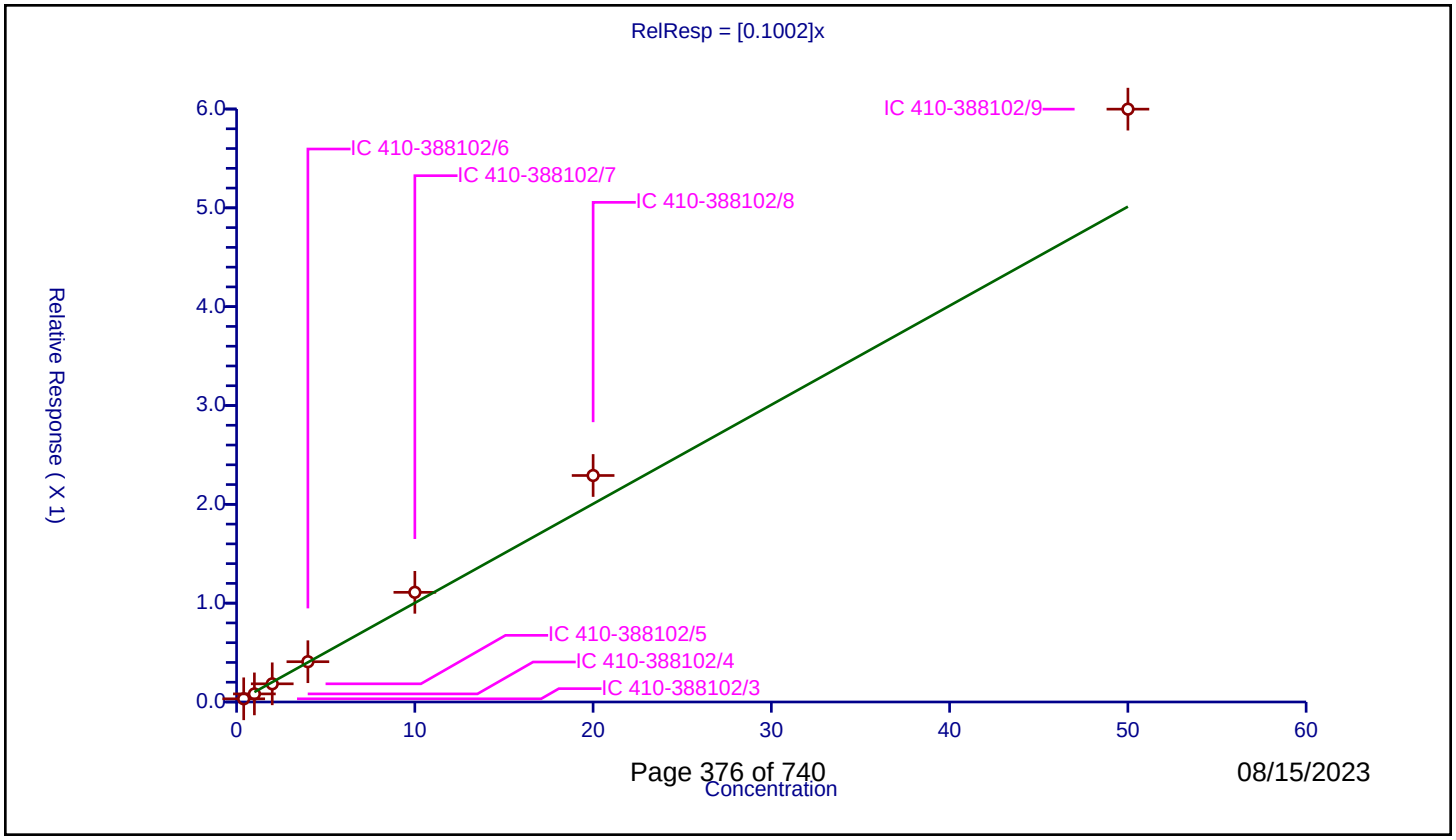
Curve Coefficients

Intercept:	0
Slope:	0.1002

Error Coefficients

Standard Error:	385000
Relative Standard Error:	15.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.972

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/3	0.400029	0.032185	10.0	1487320.0	0.080458	Y
2	IC 410-388102/4	1.000073	0.081969	10.0	1547291.0	0.081963	Y
3	IC 410-388102/5	2.000147	0.18375	10.0	1428082.0	0.091868	Y
4	IC 410-388102/6	4.000293	0.407518	10.0	1432231.0	0.101872	Y
5	IC 410-388102/7	10.000734	1.10962	10.0	1444071.0	0.110954	Y
6	IC 410-388102/8	20.001467	2.291751	10.0	1437525.0	0.114579	Y
7	IC 410-388102/9	50.003668	5.998563	10.0	1443609.0	0.119962	Y



Calibration / Cyclohexanone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

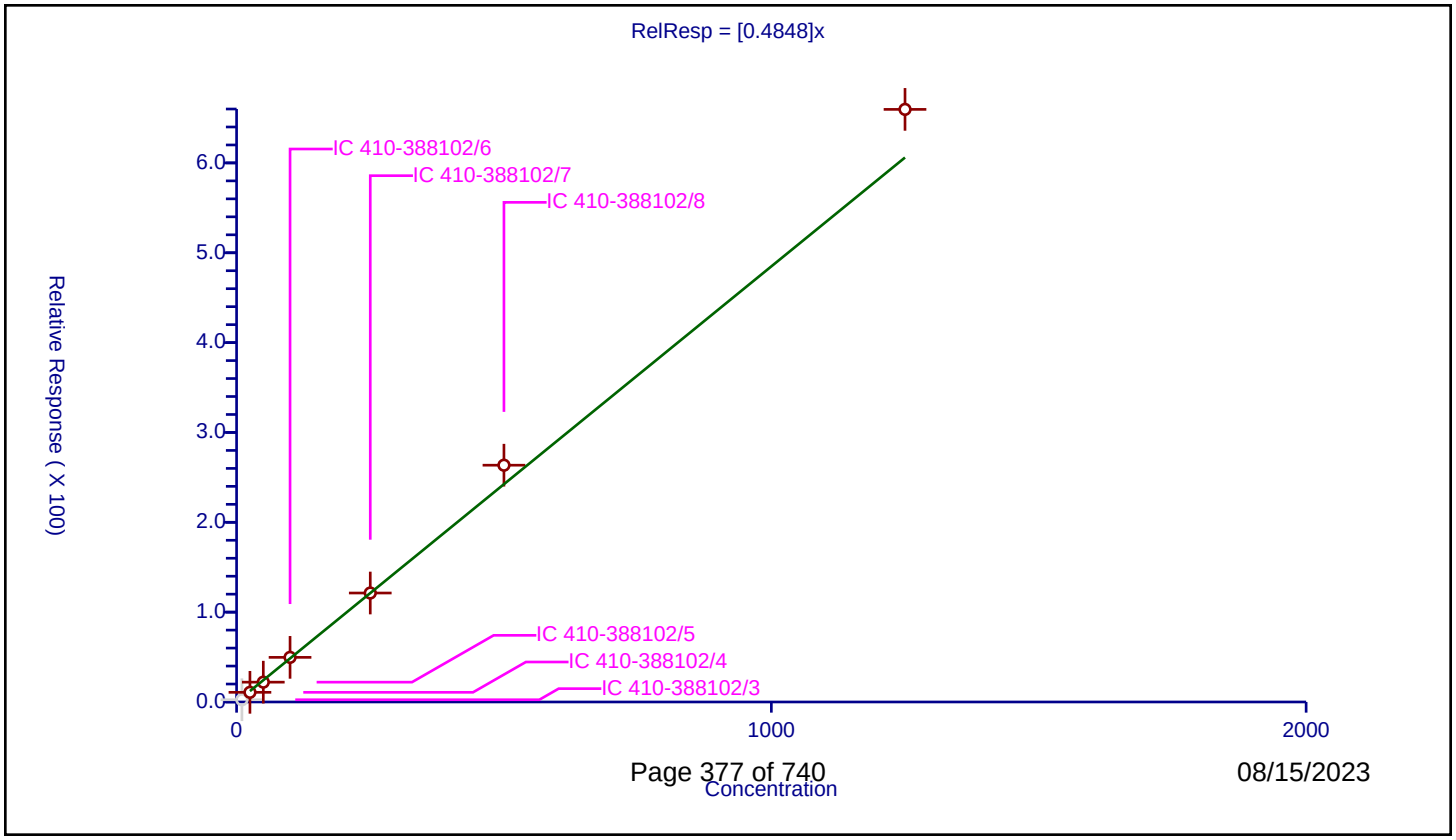
Curve Coefficients

Intercept:	0
Slope:	0.4848

Error Coefficients

Standard Error:	672000
Relative Standard Error:	8.5
Correlation Coefficient:	0.991
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/3	9.9996	2.498085	50.0	144911.0	0.249818	N
2	IC 410-388102/4	24.999	10.768579	50.0	141625.0	0.43076	Y
3	IC 410-388102/5	49.998	22.074343	50.0	110300.0	0.441505	Y
4	IC 410-388102/6	99.996	49.664142	50.0	100489.0	0.496661	Y
5	IC 410-388102/7	249.99	121.301303	50.0	89518.0	0.485225	Y
6	IC 410-388102/8	499.98	263.565845	50.0	83666.0	0.527153	Y
7	IC 410-388102/9	1249.95	659.573447	50.0	107302.0	0.52768	Y



FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-2 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-388102/13	IU19X12.D
Level 2	IC 410-388102/14	IU19X13.D
Level 3	IC 410-388102/15	IU19X14.D
Level 4	IC 410-388102/16	IU19X15.D
Level 5	IC 410-388102/17	IU19X16.D
Level 6	ICIS 410-388102/18	IU19X17.D
Level 7	IC 410-388102/19	IU19X18.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.4525 0.4048	0.3959 0.3520	0.3851	0.4247	0.3877	Ave		0.4004			0.1000	7.9		20.0			
Chloromethane	0.4433 0.3934	0.4368 0.3705	0.4085	0.4123	0.3826	Ave		0.4068			0.1000	6.6		20.0			
Vinyl chloride	0.4128 0.3849	0.3972 0.3663	0.3909	0.4002	0.3721	Ave		0.3892			0.1000	4.2		20.0			
1,3-Butadiene	0.5664 0.3662	0.4570 0.3293	0.3964	0.3854	0.3500	Ave		0.4073				19.9		20.0			
Bromomethane	0.3286 0.2931	0.3338 0.2760	0.3073	0.3027	0.2852	Ave		0.3038			0.1000	7.1		20.0			
Chloroethane	0.2544 0.2262	0.2542 0.2118	0.2302	0.2332	0.2201	Ave		0.2329			0.1000	7.0		20.0			
Dichlorofluoromethane	0.7728 0.6099	0.7173 0.5755	0.6529	0.6302	0.5908	Ave		0.6499			0.1000	11.0		20.0			
Trichlorofluoromethane	0.5073 0.5153	0.4966 0.4601	0.4861	0.5148	0.4884	Ave		0.4955			0.1000	3.9		20.0			
Ethyl ether	0.1976 0.2098	0.2136 0.2002	0.2097	0.1996	0.2014	Ave		0.2046				3.1		20.0			
Freon 123a	0.4218 0.3420	0.3693 0.3196	0.3401	0.3494	0.3315	Ave		0.3534				9.6		20.0			
Acrolein	2.1302 2.2533	2.1540 2.1214	2.1475	2.2512	2.0978	Ave		2.1650				2.9		20.0			
1,1-Dichloroethene	0.2869 0.2721	0.2788 0.2625	0.2395	0.2657	0.2718	Ave		0.2682			0.1000	5.6		20.0			
Acetone	+++++ 2.2593	2.6577 2.0209	2.6463	2.4301	2.3347	Ave		2.3915			0.1000	10.2		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-2 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Freon 113	0.2638 0.3056	0.2848 0.2883	0.2543	0.2884	0.3074	Ave		0.2847			0.1000	6.9		20.0			
Methyl iodide	0.5402 0.5790	0.5821 0.5553	0.5396	0.5761	0.5753	Ave		0.5640				3.3		20.0			
Ethyl bromide	0.2308 0.2402	0.2453 0.2303	0.2468	0.2236	0.2261	Ave		0.2347				4.0		20.0			
Carbon disulfide	0.7149 0.7487	0.7545 0.7334	0.6654	0.7357	0.7381	Ave		0.7273			0.1000	4.1		20.0			
Methyl acetate	5.4358 6.3319	6.2063 6.0419	5.3978	5.8772	6.0227	Ave		5.9019			0.1000	6.1		20.0			
Allyl chloride	0.4626 0.4175	0.4280 0.4051	0.3811	0.4125	0.4110	Ave		0.4168				5.9		20.0			
Methylene Chloride	0.2864 0.2867	0.3045 0.2734	0.2669	0.2808	0.2833	Ave		0.2831			0.1000	4.2		20.0			
t-Butyl alcohol	1.0041 0.8013	1.0479 0.8236	0.9841	0.9770	1.0217	Ave		0.9514				10.3		20.0			
Acrylonitrile	1.6935 3.2995	2.9982 3.1295	2.6051	3.3404	3.2807	Ave		2.9067				20.4	*	20.0			
Methyl tertiary butyl ether	0.7141 0.7350	0.7731 0.7210	0.7422	0.7418	0.7249	Ave		0.7360			0.1000	2.6		20.0			
trans-1,2-Dichloroethene	0.2943 0.3042	0.3166 0.2930	0.2773	0.3034	0.3005	Ave		0.2985			0.1000	4.1		20.0			
n-Hexane	0.4302 0.4138	0.3781 0.3892	0.3457	0.3839	0.3976	Ave		0.3912				6.9		20.0			
1,1-Dichloroethane	0.4683 0.5297	0.5304 0.5105	0.4963	0.5217	0.5225	Ave		0.5113			0.2000	4.4		20.0			
di-Isopropyl ether	0.7966 0.8513	0.8881 0.8227	0.8263	0.8469	0.8460	Ave		0.8397				3.4		20.0			
2-Chloro-1,3-butadiene	0.4161 0.4460	0.4352 0.4278	0.3940	0.4360	0.4378	Ave		0.4276				4.1		20.0			
Ethyl t-butyl ether	0.7685 0.8160	0.8385 0.7839	0.7901	0.8148	0.8023	Ave		0.8020				2.9		20.0			
2-Butanone	5.1322 4.6373	4.4498 4.3181	4.5676	4.7743	4.3775	Ave		4.6081			0.1000	6.1		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-2 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
cis-1,2-Dichloroethene	0.3215 0.3358	0.3567 0.3265	0.3175	0.3363	0.3302	Ave		0.3321			0.1000	3.9		20.0			
2,2-Dichloropropane	0.4598 0.4721	0.4783 0.4555	0.4215	0.4701	0.4682	Ave		0.4608				4.1		20.0			
Propionitrile	1.0481 1.3118	1.1977 1.2176	1.2436	1.3500	1.1627	Ave		1.2188				8.2		20.0			
Methacrylonitrile	4.5635 4.9890	4.7918 4.7422	4.8210	5.0216	4.7357	Ave		4.8093				3.3		20.0			
Bromochloromethane	0.1420 0.1540	0.1616 0.1468	0.1504	0.1524	0.1502	Ave		0.1511				4.0		20.0			
Tetrahydrofuran	1.5911 1.5342	1.6331 1.3936	1.5046	1.5387	1.4196	Ave		1.5164				5.7		20.0			
Chloroform	0.5098 0.5383	0.5474 0.5159	0.5102	0.5410	0.5348	Ave		0.5282			0.2000	3.0		20.0			
1,1,1-Trichloroethane	0.4856 0.5059	0.5086 0.4904	0.4532	0.5014	0.5077	Ave		0.4933			0.1000	4.0		20.0			
Cyclohexane	0.4612 0.4971	0.4664 0.4719	0.4112	0.4696	0.4947	Ave		0.4674			0.1000	6.1		20.0			
Carbon tetrachloride	0.4069 0.4690	0.4383 0.4552	0.3987	0.4478	0.4602	Ave		0.4394			0.1000	6.1		20.0			
1,1-Dichloropropene	0.3797 0.4086	0.4051 0.3980	0.3554	0.3980	0.4043	Ave		0.3927				4.8		20.0			
Isobutyl alcohol	0.4092 0.3121	0.3748 0.2863	0.3625	0.3029	0.3179	Ave		0.3380				13.2		20.0			
Benzene	1.1324 1.2126	1.2208 1.1743	1.1293	1.2019	1.1941	Ave		1.1808			0.5000	3.1		20.0			
1,2-Dichloroethane	0.3147 0.3261	0.3339 0.3094	0.3162	0.3176	0.3229	Ave		0.3201			0.1000	2.6		20.0			
t-Amyl methyl ether	0.6994 0.7606	0.7858 0.7275	0.7344	0.7445	0.7370	Ave		0.7413				3.6		20.0			
n-Heptane	0.4195 0.3999	0.3518 0.3803	0.3281	0.3627	0.3874	Ave		0.3757				8.2		20.0			
n-Butanol	+++++ 0.2896	0.2186 0.2709	0.2443	0.2525	0.2816	Ave		0.2596				10.2		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-2 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Trichloroethene	0.3086 0.3402	0.3473 0.3305	0.3074	0.3325	0.3331	Ave		0.3285			0.2000	4.6		20.0			
Methylcyclohexane	0.4972 0.5734	0.5243 0.5419	0.4769	0.5366	0.5642	Ave		0.5306			0.1000	6.5		20.0			
1,2-Dichloropropane	0.2673 0.3012	0.3075 0.2928	0.2835	0.2949	0.2965	Ave		0.2919			0.1000	4.5		20.0			
Methyl methacrylate	7.4884 10.561	8.8196 10.309	9.6140	9.6930	9.8628	Ave		9.4783				11.0		20.0			
1,4-Dioxane	+++++ 0.0609	+++++ 0.0569	0.0430	0.0548	0.0601	Ave		0.0551			0.0050	13.1		20.0			
Dibromomethane	0.1334 0.1503	0.1537 0.1434	0.1456	0.1503	0.1477	Ave		0.1463				4.5		20.0			
Bromodichloromethane	0.3547 0.3900	0.3883 0.3838	0.3732	0.3822	0.3839	Ave		0.3795			0.2000	3.2		20.0			
2-Nitropropane	4.1430 3.0167	2.9957 2.9052	2.9048	2.9221	2.8065	Ave		3.0991				15.0		20.0			
1-Bromo-2-chloroethane	0.2835 0.3087	0.3056 0.2944	0.3118	0.2873	0.2924	Ave		0.2977				3.7		20.0			
cis-1,3-Dichloropropene	0.3975 0.4841	0.4622 0.4722	0.4365	0.4632	0.4716	Ave		0.4553			0.2000	6.5		20.0			
4-Methyl-2-pentanone	12.137 12.918	12.249 12.109	12.159	12.861	12.142	Ave		12.368			0.1000	2.9		20.0			
Toluene	0.9498 1.0396	1.0588 1.0106	0.9539	1.0488	1.0369	Ave		1.0141			0.4000	4.4		20.0			
trans-1,3-Dichloropropene	0.4002 0.5158	0.4945 0.4987	0.4652	0.4821	0.4941	Ave		0.4787			0.1000	7.9		20.0			
Ethyl methacrylate	0.3574 0.4129	0.4090 0.3952	0.3972	0.3989	0.3999	Ave		0.3958				4.6		20.0			
1,1,2-Trichloroethane	0.2809 0.2865	0.3083 0.2726	0.2875	0.2881	0.2795	Ave		0.2862			0.1000	3.9		20.0			
Tetrachloroethene	0.5014 0.5475	0.5467 0.5307	0.4921	0.5405	0.5439	Ave		0.5290			0.2000	4.3		20.0			
1,3-Dichloropropane	0.4233 0.4641	0.4778 0.4436	0.4490	0.4616	0.4512	Ave		0.4529				3.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-2 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
2-Hexanone	8.8528 9.1467	8.2331 8.6577	8.7808	9.0425	8.5353	Ave		8.7498			0.1000	3.5		20.0			
Dibromochloromethane	0.3311 0.3948	0.3760 0.3851	0.3600	0.3771	0.3845	Ave		0.3726				5.7		20.0			
1,2-Dibromoethane	0.2490 0.2810	0.2725 0.2684	0.2745	0.2729	0.2718	Ave		0.2700			0.1000	3.7		20.0			
1-Chlorohexane	0.6591 0.5910	0.6133 0.5709	0.5318	0.5810	0.5843	Ave		0.5902				6.6		20.0			
Chlorobenzene	1.1145 1.2137	1.2421 1.1772	1.1389	1.2154	1.2035	Ave		1.1865			0.5000	3.8		20.0			
1,1,1,2-Tetrachloroethane	0.3909 0.4370	0.4363 0.4247	0.4106	0.4304	0.4299	Ave		0.4228				3.9		20.0			
Ethylbenzene	1.8937 2.0294	2.0779 1.9576	1.8576	2.0129	2.0058	Ave		1.9764			0.1000	4.0		20.0			
m&p-Xylene	0.7394 0.8258	0.8389 0.7973	0.7562	0.8222	0.8159	Ave		0.7994			0.1000	4.7		20.0			
o-Xylene	0.7350 0.8150	0.8284 0.7844	0.7597	0.8087	0.7990	Ave		0.7900			0.3000	4.2		20.0			
Styrene	1.1454 1.3288	1.3143 1.2965	1.2118	1.2952	1.3055	Ave		1.2711			0.3000	5.3		20.0			
Bromoform	0.2012 0.2639	0.2371 0.2586	0.2355	0.2444	0.2511	Ave		0.2417			0.1000	8.6		20.0			
Isopropylbenzene	1.9253 2.1240	2.1280 2.0372	1.9198	2.1066	2.1028	Ave		2.0491			0.1000	4.5		20.0			
1,1,2,2-Tetrachloroethane	0.5637 0.6041	0.6320 0.5707	0.6187	0.5949	0.5825	Ave		0.5952			0.3000	4.2		20.0			
Bromobenzene	0.8029 0.8744	0.9071 0.8596	0.8350	0.8740	0.8686	Ave		0.8602				3.9		20.0			
trans-1,4-Dichloro-2-butene	4.4463 4.8601	4.5473 4.6942	4.6249	4.8862	4.5387	Ave		4.6568				3.6		20.0			
1,2,3-Trichloropropane	0.1529 0.1682	0.1789 0.1595	0.1799	0.1681	0.1621	Ave		0.1671				5.9		20.0			
N-Propylbenzene	3.5762 3.9541	3.9093 3.8303	3.5631	3.8564	3.9626	Ave		3.8074				4.4		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-2 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
2-Chlorotoluene	0.7479 0.8603	0.8859 0.8359	0.7910	0.8531	0.8467	Ave		0.8316				5.6		20.0			
1,3,5-Trimethylbenzene	2.7354 3.0010	3.0084 2.9111	2.7669	2.9427	2.9480	Ave		2.9019				3.7		20.0			
4-Chlorotoluene	0.7768 0.8636	0.9021 0.8509	0.8266	0.8793	0.8647	Ave		0.8520				4.8		20.0			
tert-Butylbenzene	0.6389 0.7236	0.7280 0.7095	0.6604	0.7129	0.7079	Ave		0.6973				4.9		20.0			
Pentachloroethane	0.4612 0.5778	0.5310 0.5785	0.5635	0.5170	0.5459	Ave		0.5393				7.7		20.0			
1,2,4-Trimethylbenzene	2.7498 3.0738	3.1042 2.9947	2.8733	3.0134	3.0460	Ave		2.9793				4.2		20.0			
sec-Butylbenzene	3.4494 3.8478	3.8100 3.7003	3.4512	3.7866	3.7896	Ave		3.6907				4.6		20.0			
1,3-Dichlorobenzene	1.5119 1.7448	1.7192 1.7169	1.6056	1.7205	1.7489	Ave		1.6811			0.6000	5.3		20.0			
p-Isopropyltoluene	3.0078 3.4729	3.2975 3.3483	3.1075	3.3750	3.4248	Ave		3.2906				5.2		20.0			
1,4-Dichlorobenzene	1.5508 1.6728	1.7572 1.6451	1.6382	1.6842	1.6514	Ave		1.6571			0.5000	3.7		20.0			
1,2,3-Trimethylbenzene	1.3062 1.3657	1.3641 1.3507	1.3123	1.3647	1.3634	Ave		1.3467				1.9		20.0			
Benzyl chloride	0.2067 0.2763	0.2541 0.2737	0.2545	0.2640	0.2609	Ave		0.2558				9.1		20.0			
n-Butylbenzene	1.2574 1.5853	1.4653 1.5899	1.3608	1.4904	1.5647	Ave		1.4734				8.5		20.0			
1,2-Dichlorobenzene	1.4557 1.6147	1.6656 1.5763	1.5399	1.6033	1.6002	Ave		1.5794			0.4000	4.2		20.0			
1,2-Dibromo-3-Chloropropane	0.0799 0.1038	0.0949 0.1037	0.0986	0.1007	0.0994	Ave		0.0973			0.0500	8.5		20.0			
1,3,5-Trichlorobenzene	1.1011 1.3352	1.2246 1.3675	1.1948	1.2867	1.3162	Ave		1.2609				7.4		20.0			
1,2,4-Trichlorobenzene	0.8179 1.1039	0.9767 1.1316	0.9610	1.0464	1.0630	Ave		1.0144			0.2000	10.5		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-2 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Hexachlorobutadiene	0.4453 0.5269	0.4695 0.5414	0.4489	0.4990	0.5280	Ave		0.4941				8.1		20.0			
Naphthalene	1.6038 1.9170	1.8541 1.9319	1.8268	1.8969	1.8932	Ave		1.8463				6.1		20.0			
1,2,3-Trichlorobenzene	0.7343 0.9057	0.8133 0.9277	0.8120	0.8622	0.8883	Ave		0.8491				7.9		20.0			
Dibromofluoromethane (Surr)	0.2566 0.2570	0.2579 0.2549	0.2576	0.2551	0.2588	Ave		0.2569				0.6		20.0			
1,2-Dichloroethane-d4 (Surr)	0.0503 0.0509	0.0510 0.0491	0.0523	0.0511	0.0519	Ave		0.0509				2.1		20.0			
Toluene-d8 (Surr)	1.2909 1.2855	1.2924 1.2749	1.2762	1.2905	1.2890	Ave		1.2856				0.6		20.0			
4-Bromofluorobenzene (Surr)	0.4829 0.4850	0.4855 0.4808	0.4824	0.4880	0.4865	Ave		0.4844				0.5		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-388102/13	IU19X12.D
Level 2	IC 410-388102/14	IU19X13.D
Level 3	IC 410-388102/15	IU19X14.D
Level 4	IC 410-388102/16	IU19X15.D
Level 5	IC 410-388102/17	IU19X16.D
Level 6	ICIS 410-388102/18	IU19X17.D
Level 7	IC 410-388102/19	IU19X18.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	16248 731790	34723 1664427	68962	153092	360756	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Chloromethane	FB	Ave	15918 711149	38309 1751882	73144	148627	355971	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Vinyl chloride	FB	Ave	14822 695810	34833 1731717	69992	144284	346234	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3-Butadiene	FB	Ave	20337 661981	40081 1556945	70973	138958	325681	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromomethane	FB	Ave	11798 529829	29277 1304970	55026	109113	265387	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Chloroethane	FB	Ave	9134 408968	22289 1001229	41214	84063	204756	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Dichlorofluoromethane	FB	Ave	27749 1102425	62910 2721094	116915	227201	549690	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Trichlorofluoromethane	FB	Ave	18216 931553	43553 2175547	87039	185589	454389	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethyl ether	FB	Ave	7096 379387	18739 946563	37553	71951	187410	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Freon 123a	FB	Ave	15145 618203	32387 1511147	60893	125946	308465	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Acrolein	TBAd 10	Ave	49712 2946849	142596 7153643	286815	572441	1460333	10.0 500	25.0 1250	50.0	100	250
1,1-Dichloroethene	FB	Ave	10300 491920	24450 1241308	42885	95792	252853	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Acetone	TBAd 10	Ave	+++++	35188	70684	123579	325042	+++++	5.00	10.0	20.0	50.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
			590923	1362907				100	250			
Freon 113	FB	Ave	9472 552493	24980 1362883	45537	103962	285989	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methyl iodide	FB	Ave	19398 1046658	51051 2625621	96625	207682	535229	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethyl bromide	FB	Ave	8280 433776	21495 1087944	44143	80536	210130	0.200 9.99	0.500 25.0	0.999	2.00	5.00
Carbon disulfide	FB	Ave	25669 1353487	66169 3467769	119139	265233	686699	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methyl acetate	TBAd 10	Ave	2537 165612	8217 407475	14418	29888	83849	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Allyl chloride	FB	Ave	16611 754668	37534 1915265	68239	148700	382363	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methylene Chloride	FB	Ave	10282 518296	26705 1292711	47789	101250	263546	0.200 10.0	0.500 25.0	1.00	2.00	5.00
t-Butyl alcohol	TBAd 10	Ave	9373 419183	27747 1110969	52571	99365	284492	4.00 200	10.0 500	20.0	40.0	100
Acrylonitrile	TBAd 10	Ave	1976 215747	9924 527652	17396	42468	114187	0.500 25.0	1.25 62.5	2.50	5.00	12.5
Methyl tertiary butyl ether	FB	Ave	25640 1328588	67798 3409123	132891	267433	674458	0.200 10.0	0.500 25.0	1.00	2.00	5.00
trans-1,2-Dichloroethene	FB	Ave	10568 549965	27769 1385244	49647	109363	279615	0.200 10.0	0.500 25.0	1.00	2.00	5.00
n-Hexane	FB	Ave	15447 747981	33162 1840079	61908	138409	369911	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1-Dichloroethane	FB	Ave	16814 957603	46514 2413824	88859	188062	486164	0.200 10.0	0.500 25.0	1.00	2.00	5.00
di-Isopropyl ether	FB	Ave	28604 1538859	77884 3889612	147957	305304	787124	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Chloro-1,3-butadiene	FB	Ave	14941 806204	38162 2022645	70549	157183	407363	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethyl t-butyl ether	FB	Ave	27595 1475081	73536 3706375	141482	293761	746447	0.200 10.0	0.500 25.0	1.00	2.00	5.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
2-Butanone	TBAd 10	Ave	23953 1212881	58914 2912203	122006	242793	609434	2.00 100	5.00 250	10.0	20.0	50.0
cis-1,2-Dichloroethene	FB	Ave	11544 607013	31280 1543889	56850	121238	307184	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2,2-Dichloropropane	FB	Ave	16510 853357	41944 2153694	75466	169485	435561	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Propionitrile	TBAd 10	Ave	9783 686213	31714 1642296	66438	137306	323734	4.00 200	10.0 500	20.0	40.0	100
Methacrylonitrile	TBAd 10	Ave	21299 1304884	63442 3198256	128773	255367	659307	2.00 100	5.00 250	10.0	20.0	50.0
Bromochloromethane	FB	Ave	5098 278362	14176 693916	26936	54957	139749	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Tetrahydrofuran	TBAd 10	Ave	3713 200641	10811 469929	20095	39125	98820	1.00 50.0	2.50 125	5.00	10.0	25.0
Chloroform	FB	Ave	18306 973119	48008 2439280	91363	195036	497602	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,1-Trichloroethane	FB	Ave	17436 914467	44606 2318413	81153	180779	472367	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Cyclohexane	FB	Ave	16560 898646	40898 2230992	73626	169296	460220	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Carbon tetrachloride	FB	Ave	14611 847817	38435 2152417	71388	161435	428174	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1-Dichloropropene	FB	Ave	13634 738645	35524 1881849	63636	143481	376146	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Isobutyl alcohol	TBAd 10	Ave	9548 408183	24811 965364	48416	77021	221312	10.0 500	25.0 1250	50.0	100	250
Benzene	FB	Ave	40659 2192041	107059 5552169	202213	433294	1110945	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dichloroethane	FB	Ave	11298 589464	29283 1462742	56615	114498	300424	0.200 10.0	0.500 25.0	1.00	2.00	5.00
t-Amyl methyl ether	FB	Ave	25111	68913	131492	268420	685739	0.200	0.500	1.00	2.00	5.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
			1374850	3439411				10.0	25.0			
n-Heptane	FB	Ave	15063 722856	30853 1798135	58742	130745	360420	0.200 10.0	0.500 25.0	1.00	2.00	5.00
n-Butanol	TBAd 10	Ave	+++++ 662655	25327 1598692	57099	112349	343098	+++++ 875	43.8 2188	87.5	175	438
Trichloroethene	FB	Ave	11079 615027	30455 1562411	55041	119866	309932	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methylcyclohexane	FB	Ave	17852 1036558	45980 2562276	85392	193464	524891	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dichloropropane	FB	Ave	9597 544394	26965 1384198	50772	106323	275849	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methyl methacrylate	TBAd 10	Ave	3495 276225	11677 695290	25680	49293	137311	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,4-Dioxane	TBAd 10	Ave	+++++ 79624	+++++ 191965	5746	13925	41814	+++++ 500	+++++ 1250	50.0	100	250
Dibromomethane	FB	Ave	4789 271761	13482 678044	26070	54174	137376	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromodichloromethane	FB	Ave	12737 705073	34054 1814784	66817	137781	357171	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Nitropropane	TBAd 10	Ave	9668 394504	19831 979651	38795	74299	195361	1.00 50.0	2.50 125	5.00	10.0	25.0
1-Bromo-2-chloroethane	FB	Ave	10178 557990	26799 1391897	55828	103572	272020	0.200 10.0	0.500 25.0	1.00	2.00	5.00
cis-1,3-Dichloropropene	FB	Ave	14274 875051	40532 2232649	78154	166986	438752	0.200 10.0	0.500 25.0	1.00	2.00	5.00
4-Methyl-2-pentanone	TBAd 10	Ave	56646 3378679	162172 8166235	324775	654051	1690397	2.00 100	5.00 250	10.0	20.0	50.0
Toluene	CBZd 5	Ave	26878 1497015	73122 3812060	134873	296153	767071	0.200 10.0	0.500 25.0	1.00	2.00	5.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
trans-1,3-Dichloropropene	CBZd 5	Ave	11326 742761	34150 1881067	65778	136143	365510	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethyl methacrylate	CBZd 5	Ave	10113 594538	28243 1490629	56167	112647	295850	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,2-Trichloroethane	CBZd 5	Ave	7948 412606	21292 1028167	40644	81347	206782	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Tetrachloroethene	CBZd 5	Ave	14188 788455	37751 2002051	69578	152617	402350	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3-Dichloropropane	CBZd 5	Ave	11978 668224	32993 1673377	63491	130340	333810	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Hexanone	TBAd 10	Ave	41318 2392308	109004 5838914	234543	459845	1188293	2.00 100	5.00 250	10.0	20.0	50.0
Dibromochloromethane	CBZd 5	Ave	9369 568456	25969 1452583	50898	106469	284463	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dibromoethane	CBZd 5	Ave	7047 404683	18815 1012515	38807	77070	201076	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1-Chlorohexane	CBZd 5	Ave	18652 850962	42354 2153392	75197	164067	432239	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Chlorobenzene	CBZd 5	Ave	31539 1747675	85778 4440532	161040	343177	890297	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,1,2-Tetrachloroethane	CBZd 5	Ave	11062 629258	30129 1601843	58062	121541	318029	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethylbenzene	CBZd 5	Ave	53589 2922252	143495 7384442	262649	568378	1483797	0.200 10.0	0.500 25.0	1.00	2.00	5.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
m&p-Xylene	CBZd 5	Ave	41851 2378256	115867 6014911	213843	464338	1207085	0.400 20.0	1.00 50.0	2.00	4.00	10.0
o-Xylene	CBZd 5	Ave	20800 1173518	57211 2958784	107419	228364	591109	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Styrene	CBZd 5	Ave	32413 1913392	90765 4890581	171340	365726	965746	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromoform	CBZd 5	Ave	5694 380006	16371 975567	33303	69013	185725	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Isopropylbenzene	CBZd 5	Ave	54485 3058543	146958 7684471	271455	594828	1555613	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	9790 534348	26384 1308898	52659	103555	265162	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromobenzene	DCBd 4	Ave	13944 773433	37870 1971522	71063	152143	395435	0.200 10.0	0.500 25.0	1.00	2.00	5.00
trans-1,4-Dichloro-2-butene	TBAd 10	Ave	20752 1271163	60206 3165888	123536	248485	631878	2.00 100	5.00 250	10.0	20.0	50.0
1,2,3-Trichloropropane	DCBd 4	Ave	2656 148764	7469 365750	15312	29265	73791	0.200 10.0	0.500 25.0	1.00	2.00	5.00
N-Propylbenzene	DCBd 4	Ave	62107 3497528	163202 8784621	303252	671294	1803955	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Chlorotoluene	DCBd 4	Ave	12989 760985	36985 1917179	67323	148498	385471	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3,5-Trimethylbenzene	DCBd 4	Ave	47506 2654457	125592 6676624	235489	512246	1342032	0.200 10.0	0.500 25.0	1.00	2.00	5.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
4-Chlorotoluene	DCBd 4	Ave	13490 763897	37661 1951600	70351	153069	393652	0.200 10.0	0.500 25.0	1.00	2.00	5.00
tert-Butylbenzene	DCBd 4	Ave	11096 640020	30391 1627291	56204	124089	322256	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Pentachloroethane	DCBd 4	Ave	8010 511060	22167 1326828	47961	89999	248510	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,4-Trimethylbenzene	DCBd 4	Ave	47756 2718845	129589 6868217	244539	524551	1386678	0.200 10.0	0.500 25.0	1.00	2.00	5.00
sec-Butylbenzene	DCBd 4	Ave	59906 3403512	159057 8486591	293727	659131	1725161	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3-Dichlorobenzene	DCBd 4	Ave	26258 1543368	71773 3937722	136646	299493	796177	0.200 10.0	0.500 25.0	1.00	2.00	5.00
p-Isopropyltoluene	DCBd 4	Ave	52236 3071854	137662 7679357	264478	587493	1559110	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,4-Dichlorobenzene	DCBd 4	Ave	26932 1479609	73356 3772911	139429	293178	751794	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,3-Trimethylbenzene	DCBd 4	Ave	22684 1208040	56949 3097874	111687	237548	620671	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Benzyl chloride	DCBd 4	Ave	3590 244410	10607 627829	21662	45949	118785	0.200 10.0	0.500 25.0	1.00	2.00	5.00
n-Butylbenzene	DCBd 4	Ave	21838 1402209	61172 3646359	115817	259442	712295	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dichlorobenzene	DCBd 4	Ave	25281 1428274	69532 3615183	131059	279095	728454	0.200 10.0	0.500 25.0	1.00	2.00	5.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	1388 91829	3960 237783	8390	17537	45263	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3,5-Trichlorobenzene	DCBd 4	Ave	19123 1180993	51123 3136365	101687	223971	599184	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,4-Trichlorobenzene	DCBd 4	Ave	14205 976458	40773 2595192	81792	182141	483938	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Hexachlorobutadiene	DCBd 4	Ave	7733 466073	19602 1241765	38205	86860	240365	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Naphthalene	DCBd 4	Ave	27854 1695646	77405 4430802	155480	330200	861870	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,3-Trichlorobenzene	DCBd 4	Ave	12752 801092	33951 2127625	69112	150086	404377	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Dibromofluoromethane (Surr)	FB	Ave	460650 464653	452360 482075	461318	459886	481549	10.0 10.0	10.0 10.0	10.0	10.0	10.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	90262 91929	89414 92867	93659	92053	96600	10.0 10.0	10.0 10.0	10.0	10.0	10.0
Toluene-d8 (Surr)	CBZd 5	Ave	1826605 1851132	1785023 1923611	1804500	1822022	1907167	10.0 10.0	10.0 10.0	10.0	10.0	10.0
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	683248 698444	670589 725457	682073	688953	719841	10.0 10.0	10.0 10.0	10.0	10.0	10.0

Curve Type Legend
Ave = Average ISTD

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-388102/13	IU19X12.D
Level 2	IC 410-388102/14	IU19X13.D
Level 3	IC 410-388102/15	IU19X14.D
Level 4	IC 410-388102/16	IU19X15.D
Level 5	IC 410-388102/17	IU19X16.D
Level 6	ICIS 410-388102/18	IU19X17.D
Level 7	IC 410-388102/19	IU19X18.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Dichlorodifluoromethane	13.0 -12.1	-1.1	-3.8	6.1	-3.2	1.1	50 30	30	30	30	30	30
Chloromethane	9.0 -8.9	7.4	0.4	1.3	-5.9	-3.3	50 30	30	30	30	30	30
Vinyl chloride	6.1 -5.9	2.1	0.4	2.8	-4.4	-1.1	50 30	30	30	30	30	30
1,3-Butadiene	39.1 -19.1	12.2	-2.7	-5.4	-14.0	-10.1	50 30	30	30	30	30	30
Bromomethane	8.2 -9.2	9.9	1.1	-0.4	-6.1	-3.5	50 30	30	30	30	30	30
Chloroethane	9.2 -9.1	9.1	-1.2	0.1	-5.5	-2.8	50 30	30	30	30	30	30
Dichlorofluoromethane	18.9 -11.4	10.4	0.5	-3.0	-9.1	-6.2	50 30	30	30	30	30	30
Trichlorofluoromethane	2.4 -7.1	0.2	-1.9	3.9	-1.4	4.0	50 30	30	30	30	30	30
Ethyl ether	-3.4 -2.1	4.4	2.5	-2.4	-1.5	2.6	50 30	30	30	30	30	30
Freon 123a	19.4 -9.6	4.5	-3.8	-1.1	-6.2	-3.2	50 30	30	30	30	30	30
Acrolein	-1.6 -2.0	-0.5	-0.8	4.0	-3.1	4.1	50 30	30	30	30	30	30
1,1-Dichloroethene	7.0 -2.1	4.0	-10.7	-0.9	1.3	1.5	50 30	30	30	30	30	30
Acetone	+++++ -15.5	11.1	10.7	1.6	-2.4	-5.5	 30	50	30	30	30	30
Freon 113	-7.3 1.3	0.1	-10.7	1.3	8.0	7.4	50 30	30	30	30	30	30

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Methyl iodide	-4.2 -1.5	3.2	-4.3	2.1	2.0	2.7	50 30	30	30	30	30	30
Ethyl bromide	-1.7 -1.9	4.5	5.1	-4.7	-3.7	2.3	50 30	30	30	30	30	30
Carbon disulfide	-1.7 0.9	3.7	-8.5	1.2	1.5	3.0	50 30	30	30	30	30	30
Methyl acetate	-7.9 2.4	5.2	-8.5	-0.4	2.0	7.3	50 30	30	30	30	30	30
Allyl chloride	11.0 -2.8	2.7	-8.6	-1.0	-1.4	0.2	50 30	30	30	30	30	30
Methylene Chloride	1.1 -3.4	7.5	-5.7	-0.8	0.0	1.3	50 30	30	30	30	30	30
t-Butyl alcohol	5.5 -13.4	10.1	3.4	2.7	7.4	-15.8	50 30	30	30	30	30	30
Acrylonitrile	-41.7 7.7	3.1	-10.4	14.9	12.9	13.5	50 30	30	30	30	30	30
Methyl tertiary butyl ether	-3.0 -2.0	5.0	0.8	0.8	-1.5	-0.1	50 30	30	30	30	30	30
trans-1,2-Dichloroethene	-1.4 -1.8	6.1	-7.1	1.6	0.7	1.9	50 30	30	30	30	30	30
n-Hexane	10.0 -0.5	-3.3	-11.6	-1.9	1.6	5.8	50 30	30	30	30	30	30
1,1-Dichloroethane	-8.4 -0.2	3.7	-3.0	2.0	2.2	3.6	50 30	30	30	30	30	30
di-Isopropyl ether	-5.1 -2.0	5.8	-1.6	0.9	0.8	1.4	50 30	30	30	30	30	30
2-Chloro-1,3-butadiene	-2.7 0.1	1.8	-7.8	2.0	2.4	4.3	50 30	30	30	30	30	30
Ethyl t-butyl ether	-4.2 -2.3	4.5	-1.5	1.6	0.0	1.7	50 30	30	30	30	30	30
2-Butanone	11.4 -6.3	-3.4	-0.9	3.6	-5.0	0.6	50 30	30	30	30	30	30
cis-1,2-Dichloroethene	-3.2 -1.7	7.4	-4.4	1.3	-0.6	1.1	50 30	30	30	30	30	30
2,2-Dichloropropane	-0.2 -1.1	3.8	-8.5	2.0	1.6	2.5	50 30	30	30	30	30	30
Propionitrile	-14.0 -0.1	-1.7	2.0	10.8	-4.6	7.6	50 30	30	30	30	30	30

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Methacrylonitrile	-5.1 -1.4	-0.4	0.2	4.4	-1.5	3.7	50 30	30	30	30	30	30
Bromochloromethane	-6.0 -2.8	7.0	-0.4	0.9	-0.6	1.9	50 30	30	30	30	30	30
Tetrahydrofuran	4.9 -8.1	7.7	-0.8	1.5	-6.4	1.2	50 30	30	30	30	30	30
Chloroform	-3.5 -2.3	3.6	-3.4	2.4	1.3	1.9	50 30	30	30	30	30	30
1,1,1-Trichloroethane	-1.6 -0.6	3.1	-8.1	1.7	2.9	2.6	50 30	30	30	30	30	30
Cyclohexane	-1.3 0.9	-0.2	-12.0	0.5	5.8	6.4	50 30	30	30	30	30	30
Carbon tetrachloride	-7.4 3.6	-0.3	-9.3	1.9	4.7	6.7	50 30	30	30	30	30	30
1,1-Dichloropropene	-3.3 1.3	3.1	-9.5	1.3	2.9	4.0	50 30	30	30	30	30	30
Isobutyl alcohol	21.1 -15.3	10.9	7.3	-10.4	-5.9	-7.6	50 30	30	30	30	30	30
Benzene	-4.1 -0.5	3.4	-4.4	1.8	1.1	2.7	50 30	30	30	30	30	30
1,2-Dichloroethane	-1.7 -3.4	4.3	-1.2	-0.8	0.9	1.9	50 30	30	30	30	30	30
t-Amyl methyl ether	-5.7 -1.9	6.0	-0.9	0.4	-0.6	2.6	50 30	30	30	30	30	30
n-Heptane	11.7 1.2	-6.3	-12.7	-3.5	3.1	6.4	50 30	30	30	30	30	30
n-Butanol	+++++ 4.4	-15.8	-5.9	-2.7	8.5	11.5	 30	50	30	30	30	30
Trichloroethene	-6.1 0.6	5.7	-6.4	1.2	1.4	3.6	50 30	30	30	30	30	30
Methylcyclohexane	-6.3 2.1	-1.2	-10.1	1.1	6.3	8.1	50 30	30	30	30	30	30
1,2-Dichloropropane	-8.4 0.3	5.3	-2.9	1.0	1.6	3.2	50 30	30	30	30	30	30
Methyl methacrylate	-21.0 8.8	-6.9	1.4	2.3	4.1	11.4	50 30	30	30	30	30	30
1,4-Dioxane	+++++ 3.3	+++++	-22.0	-0.7	8.9	10.4	 30		50	30	30	30

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Dibromomethane	-8.9 -2.0	5.1	-0.5	2.7	0.9	2.7	50 30	30	30	30	30	30
Bromodichloromethane	-6.5 1.2	2.3	-1.7	0.7	1.2	2.8	50 30	30	30	30	30	30
2-Nitropropane	33.7 -6.3	-3.3	-6.3	-5.7	-9.4	-2.7	50 30	30	30	30	30	30
1-Bromo-2-chloroethane	-4.8 -1.1	2.7	4.7	-3.5	-1.8	3.7	50 30	30	30	30	30	30
cis-1,3-Dichloropropene	-12.7 3.7	1.5	-4.1	1.7	3.6	6.3	50 30	30	30	30	30	30
4-Methyl-2-pentanone	-1.9 -2.1	-1.0	-1.7	4.0	-1.8	4.4	50 30	30	30	30	30	30
Toluene	-6.3 -0.3	4.4	-5.9	3.4	2.3	2.5	50 30	30	30	30	30	30
trans-1,3-Dichloropropene	-16.4 4.2	3.3	-2.8	0.7	3.2	7.8	50 30	30	30	30	30	30
Ethyl methacrylate	-9.7 -0.2	3.3	0.4	0.8	1.0	4.3	50 30	30	30	30	30	30
1,1,2-Trichloroethane	-1.9 -4.8	7.7	0.4	0.7	-2.3	0.1	50 30	30	30	30	30	30
Tetrachloroethene	-5.2 0.3	3.3	-7.0	2.2	2.8	3.5	50 30	30	30	30	30	30
1,3-Dichloropropane	-6.6 -2.1	5.5	-0.9	1.9	-0.4	2.5	50 30	30	30	30	30	30
2-Hexanone	1.2 -1.1	-5.9	0.4	3.3	-2.5	4.5	50 30	30	30	30	30	30
Dibromochloromethane	-11.2 3.3	0.9	-3.4	1.2	3.2	5.9	50 30	30	30	30	30	30
1,2-Dibromoethane	-7.8 -0.6	0.9	1.6	1.1	0.7	4.1	50 30	30	30	30	30	30
1-Chlorohexane	11.7 -3.3	3.9	-9.9	-1.6	-1.0	0.1	50 30	30	30	30	30	30
Chlorobenzene	-6.1 -0.8	4.7	-4.0	2.4	1.4	2.3	50 30	30	30	30	30	30
1,1,1,2-Tetrachloroethane	-7.6 0.4	3.2	-2.9	1.8	1.7	3.3	50 30	30	30	30	30	30
Ethylbenzene	-4.2 -0.9	5.1	-6.0	1.8	1.5	2.7	50 30	30	30	30	30	30

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
m&p-Xylene	-7.5 -0.3	4.9	-5.4	2.9	2.1	3.3	50 30	30	30	30	30	30
o-Xylene	-7.0 -0.7	4.9	-3.8	2.4	1.1	3.2	50 30	30	30	30	30	30
Styrene	-9.9 2.0	3.4	-4.7	1.9	2.7	4.5	50 30	30	30	30	30	30
Bromoform	-16.7 7.0	-1.9	-2.5	1.1	3.9	9.2	50 30	30	30	30	30	30
Isopropylbenzene	-6.0 -0.6	3.9	-6.3	2.8	2.6	3.7	50 30	30	30	30	30	30
1,1,2,2-Tetrachloroethane	-5.3 -4.1	6.2	3.9	-0.1	-2.1	1.5	50 30	30	30	30	30	30
Bromobenzene	-6.7 -0.1	5.5	-2.9	1.6	1.0	1.6	50 30	30	30	30	30	30
trans-1,4-Dichloro-2-butene	-4.5 0.8	-2.4	-0.7	4.9	-2.5	4.4	50 30	30	30	30	30	30
1,2,3-Trichloropropane	-8.5 -4.6	7.1	7.7	0.6	-3.0	0.7	50 30	30	30	30	30	30
N-Propylbenzene	-6.1 0.6	2.7	-6.4	1.3	4.1	3.9	50 30	30	30	30	30	30
2-Chlorotoluene	-10.1 0.5	6.5	-4.9	2.6	1.8	3.5	50 30	30	30	30	30	30
1,3,5-Trimethylbenzene	-5.7 0.3	3.7	-4.7	1.4	1.6	3.4	50 30	30	30	30	30	30
4-Chlorotoluene	-8.8 -0.1	5.9	-3.0	3.2	1.5	1.4	50 30	30	30	30	30	30
tert-Butylbenzene	-8.4 1.8	4.4	-5.3	2.2	1.5	3.8	50 30	30	30	30	30	30
Pentachloroethane	-14.5 7.3	-1.5	4.5	-4.1	1.2	7.1	50 30	30	30	30	30	30
1,2,4-Trimethylbenzene	-7.7 0.5	4.2	-3.6	1.1	2.2	3.2	50 30	30	30	30	30	30
sec-Butylbenzene	-6.5 0.3	3.2	-6.5	2.6	2.7	4.3	50 30	30	30	30	30	30
1,3-Dichlorobenzene	-10.1 2.1	2.3	-4.5	2.3	4.0	3.8	50 30	30	30	30	30	30
p-Isopropyltoluene	-8.6 1.8	0.2	-5.6	2.6	4.1	5.5	50 30	30	30	30	30	30

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136514-2 Analy Batch No.: 388102

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/19/2023 18:19 Calibration End Date: 06/19/2023 20:25 Calibration ID: 51353

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
1,4-Dichlorobenzene	-6.4 -0.7	6.0	-1.1	1.6	-0.3	0.9	50 30	30	30	30	30	30
1,2,3-Trimethylbenzene	-3.0 0.3	1.3	-2.6	1.3	1.2	1.4	50 30	30	30	30	30	30
Benzyl chloride	-19.2 7.0	-0.7	-0.5	3.2	2.0	8.0	50 30	30	30	30	30	30
n-Butylbenzene	-14.7 7.9	-0.5	-7.6	1.2	6.2	7.6	50 30	30	30	30	30	30
1,2-Dichlorobenzene	-7.8 -0.2	5.5	-2.5	1.5	1.3	2.2	50 30	30	30	30	30	30
1,2-Dibromo-3-Chloropropane	-17.9 6.6	-2.5	1.3	3.6	2.2	6.7	50 30	30	30	30	30	30
1,3,5-Trichlorobenzene	-12.7 8.5	-2.9	-5.2	2.0	4.4	5.9	50 30	30	30	30	30	30
1,2,4-Trichlorobenzene	-19.4 11.6	-3.7	-5.3	3.2	4.8	8.8	50 30	30	30	30	30	30
Hexachlorobutadiene	-9.9 9.6	-5.0	-9.2	1.0	6.8	6.6	50 30	30	30	30	30	30
Naphthalene	-13.1 4.6	0.4	-1.1	2.7	2.5	3.8	50 30	30	30	30	30	30
1,2,3-Trichlorobenzene	-13.5 9.3	-4.2	-4.4	1.5	4.6	6.7	50 30	30	30	30	30	30
Dibromofluoromethane (Surr)	-0.1 -0.8	0.4	0.3	-0.7	0.8	0.1	50 30	30	30	30	30	30
1,2-Dichloroethane-d4 (Surr)	-1.3 -3.6	0.1	2.7	0.3	1.9	-0.1	50 30	30	30	30	30	30
Toluene-d8 (Surr)	0.4 -0.8	0.5	-0.7	0.4	0.3	0.0	50 30	30	30	30	30	30
4-Bromofluorobenzene (Surr)	-0.3 -0.8	0.2	-0.4	0.7	0.4	0.1	50 30	30	30	30	30	30

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X12.D
Lims ID: IC std1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 19-Jun-2023 18:19:30 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0086929-013
Misc. Info.: LG 0.2
Operator ID: KNK41612 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 27-Jun-2023 12:30:03 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1687

First Level Reviewer: DVW2 Date: 21-Jun-2023 07:51:12

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.849	1.855	-0.006	95	16248	0.2000	0.2260	M
4 Chloromethane	50	2.038	2.050	-0.012	99	15918	0.2000	0.2180	
5 Vinyl chloride	62	2.148	2.160	-0.012	79	14822	0.2000	0.2121	
6 Butadiene	39	2.142	2.160	-0.018	90	20337	0.2000	0.2782	M
7 Bromomethane	94	2.452	2.465	-0.013	90	11798	0.2000	0.2163	
8 Chloroethane	64	2.532	2.538	-0.006	99	9134	0.2000	0.2185	
9 Dichlorofluoromethane	67	2.751	2.764	-0.013	96	27749	0.2000	0.2378	M
10 Trichlorofluoromethane	101	2.836	2.824	0.012	61	18216	0.2000	0.2048	
11 Ethyl ether	59	3.038	3.050	-0.012	59	7096	0.2000	0.1932	
13 1,2-Dichloro-1,1,2-trifluoroetha	67	3.117	3.142	-0.025	88	15145	0.2000	0.2387	
14 Acrolein	56	3.208	3.209	-0.001	98	49712	10.0	9.84	
15 1,1-Dichloroethene	96	3.330	3.337	-0.007	94	10300	0.2000	0.2139	
16 Acetone	43	3.379	3.361	0.018	48	22071	2.00	3.95	M
17 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.379	3.385	-0.006	86	9472	0.2000	0.1853	
18 Iodomethane	142	3.513	3.526	-0.013	98	19398	0.2000	0.1916	
19 Ethyl bromide	108	3.538	3.550	-0.012	95	8280	0.1998	0.1965	
20 Carbon disulfide	76	3.617	3.629	-0.012	99	25669	0.2000	0.1966	
23 Methyl acetate	43	3.769	3.757	0.012	24	2537	0.2000	0.1842	M
24 3-Chloro-1-propene	41	3.775	3.782	-0.007	89	16611	0.2000	0.2220	M
25 Methylene Chloride	84	3.958	3.958	0.000	86	10282	0.2000	0.2023	
* 26 t-Butyl alcohol-d10 (IS)	65	3.964	4.025	-0.061	87	116680	50.0	50.0	M
27 2-Methyl-2-propanol	59	4.080	4.093	-0.013	26	9373	4.00	4.22	M
28 Acrylonitrile	53	4.330	4.282	0.048	24	1976	0.5000	0.2913	
29 Methyl tert-butyl ether	73	4.330	4.342	-0.012	93	25640	0.2000	0.1940	
30 trans-1,2-Dichloroethene	96	4.348	4.355	-0.007	96	10568	0.2000	0.1972	
31 Hexane	57	4.775	4.781	-0.006	94	15447	0.2000	0.2199	
32 1,1-Dichloroethane	63	5.013	5.013	0.000	94	16814	0.2000	0.1832	
35 Isopropyl ether	45	5.074	5.074	0.000	97	28604	0.2000	0.1897	
36 2-Chloro-1,3-butadiene	53	5.129	5.123	0.006	89	14941	0.2000	0.1946	
37 Tert-butyl ethyl ether	59	5.610	5.623	-0.013	97	27595	0.2000	0.1916	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
38 2-Butanone (MEK)	43	5.848	5.812	0.036	68	23953	2.00	2.23	
39 cis-1,2-Dichloroethene	96	5.848	5.854	-0.006	79	11544	0.2000	0.1936	
40 2,2-Dichloropropane	77	5.866	5.867	-0.001	66	16510	0.2000	0.1996	
43 Propionitrile	54	5.976	5.891	0.085	39	9783	4.00	3.44	
45 Methacrylonitrile	67	6.122	6.110	0.012	92	21299	2.00	1.90	
S 41 1,2-Dichloroethene, Total	100				0			0.3909	
46 Chlorobromomethane	128	6.190	6.190	0.000	83	5098	0.2000	0.1880	
47 Tetrahydrofuran	71	6.202	6.196	0.006	60	3713	1.00	1.05	
48 Chloroform	83	6.342	6.342	0.000	92	18306	0.2000	0.1930	
$ 49 Dibromofluoromethane (Surr)	113	6.549	6.555	-0.006	95	460650	10.0	9.99	
50 1,1,1-Trichloroethane	97	6.567	6.568	-0.001	37	17436	0.2000	0.1969	
51 Cyclohexane	56	6.659	6.671	-0.012	87	16560	0.2000	0.1973	
54 Carbon tetrachloride	117	6.775	6.781	-0.006	96	14611	0.2000	0.1852	
53 1,1-Dichloropropene	75	6.781	6.781	0.000	93	13634	0.2000	0.1934	
55 Isobutyl alcohol	41	6.952	6.940	0.012	50	9548	10.0	12.1	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.000	7.013	-0.013	65	90262	10.0	9.87	
57 Benzene	78	7.037	7.043	-0.006	92	40659	0.2000	0.1918	
58 1,2-Dichloroethane	62	7.116	7.116	0.000	59	11298	0.2000	0.1966	
60 Tert-amyl methyl ether	73	7.238	7.244	-0.006	98	25111	0.2000	0.1887	
* 61 Fluorobenzene (IS)	96	7.445	7.445	0.000	99	1795291	10.0	10.0	
62 n-Heptane	43	7.464	7.470	-0.006	36	15063	0.2000	0.2233	
63 n-Butanol	56	8.006	7.836	0.170	6	5699	17.5	9.41	M
64 Trichloroethene	95	7.933	7.933	0.000	95	11079	0.2000	0.1879	
65 Methylcyclohexane	83	8.244	8.244	0.000	89	17852	0.2000	0.1874	
66 1,2-Dichloropropane	63	8.262	8.269	-0.007	79	9597	0.2000	0.1831	
67 Methyl methacrylate	69	8.396	8.354	0.042	69	3495	0.2000	0.1580	
68 1,4-Dioxane	88		8.366				ND	ND	U
69 Dibromomethane	93	8.378	8.378	0.000	89	4789	0.2000	0.1823	
71 Dichlorobromomethane	83	8.616	8.616	0.000	97	12737	0.2000	0.1870	
72 2-Nitropropane	41	8.890	8.884	0.006	97	9668	1.00	1.34	M
75 1-Bromo-2-chloroethane	63	9.012	9.012	0.000	96	10178	0.2000	0.1905	
76 cis-1,3-Dichloropropene	75	9.189	9.177	0.012	94	14274	0.2000	0.1746	
77 4-Methyl-2-pentanone (MIBK)	43	9.366	9.360	0.006	96	56646	2.00	1.96	
$ 78 Toluene-d8 (Surr)	98	9.494	9.500	-0.006	93	1826605	10.0	10.0	
79 Toluene	92	9.579	9.579	0.000	98	26878	0.2000	0.1873	
97 trans-1,3-Dichloropropene	75	9.853	9.848	0.005	91	11326	0.2000	0.1672	
99 Ethyl methacrylate	69	9.927	9.915	0.012	86	10113	0.2000	0.1806	
100 1,1,2-Trichloroethane	97	10.061	10.055	0.006	89	7948	0.2000	0.1963	
S 98 1,3-Dichloropropene, Total	100				0			0.3418	
101 Tetrachloroethene	166	10.146	10.146	0.000	96	14188	0.2000	0.1896	
102 1,3-Dichloropropane	76	10.225	10.219	0.006	89	11978	0.2000	0.1869	
103 2-Hexanone	43	10.292	10.274	0.018	95	41318	2.00	2.02	
105 Chlorodibromomethane	129	10.439	10.439	0.000	89	9369	0.2000	0.1777	
106 Ethylene Dibromide	107	10.555	10.549	0.005	97	7047	0.2000	0.1844	
* 107 Chlorobenzene-d5 (IS)	117	10.987	10.987	0.000	84	1414940	10.0	10.0	
108 1-Chlorohexane	91	11.006	11.000	0.006	86	18652	0.2000	0.2234	a
109 Chlorobenzene	112	11.012	11.018	-0.006	96	31539	0.2000	0.1879	
111 1,1,1,2-Tetrachloroethane	131	11.097	11.097	0.000	91	11062	0.2000	0.1849	
112 Ethylbenzene	91	11.103	11.103	0.000	98	53589	0.2000	0.1916	a
113 m-Xylene & p-Xylene	106	11.225	11.219	0.006	93	41851	0.4000	0.3700	
S 110 Xylenes, Total	106				0			0.5561	
114 o-Xylene	106	11.554	11.554	0.000	95	20800	0.2000	0.1861	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
115 Styrene	104	11.579	11.567	0.012	94	32413	0.2000	0.1802	
116 Bromoform	173	11.731	11.725	0.006	96	5694	0.2000	0.1665	
117 Isopropylbenzene	105	11.859	11.859	0.000	95	54485	0.2000	0.1879	
$ 120 4-Bromofluorobenzene (Surr)	95	11.999	12.000	-0.001	96	683248	10.0	9.97	
121 1,1,2,2-Tetrachloroethane	83	12.103	12.103	0.000	95	9790	0.2000	0.1894	
122 Bromobenzene	156	12.121	12.115	0.006	89	13944	0.2000	0.1867	
123 trans-1,4-Dichloro-2-butene	53	12.133	12.128	0.005	94	20752	2.00	1.91	
124 1,2,3-Trichloropropane	110	12.152	12.146	0.006	79	2656	0.2000	0.1831	
125 N-Propylbenzene	91	12.188	12.189	-0.001	98	62107	0.2000	0.1879	M
126 2-Chlorotoluene	126	12.268	12.262	0.006	98	12989	0.2000	0.1799	a
127 1,3,5-Trimethylbenzene	105	12.329	12.323	0.006	95	47506	0.2000	0.1885	
128 4-Chlorotoluene	126	12.359	12.353	0.006	97	13490	0.2000	0.1823	
129 tert-Butylbenzene	134	12.566	12.566	0.000	93	11096	0.2000	0.1833	
130 Pentachloroethane	167	12.597	12.597	0.000	77	8010	0.2000	0.1711	
131 1,2,4-Trimethylbenzene	105	12.609	12.609	0.000	96	47756	0.2000	0.1846	
132 sec-Butylbenzene	105	12.731	12.731	0.000	93	59906	0.2000	0.1869	
133 1,3-Dichlorobenzene	146	12.835	12.829	0.006	97	26258	0.2000	0.1799	
134 4-Isopropyltoluene	119	12.841	12.841	0.000	97	52236	0.2000	0.1828	
* 135 1,4-Dichlorobenzene-d4	152	12.883	12.883	0.000	93	868350	10.0	10.0	
136 1,4-Dichlorobenzene	146	12.902	12.902	0.000	96	26932	0.2000	0.1872	
137 1,2,3-Trimethylbenzene	120	12.914	12.914	0.000	96	22684	0.2000	0.1940	
138 Benzyl chloride	126	12.987	12.981	0.006	97	3590	0.2000	0.1617	
139 n-Butylbenzene	92	13.133	13.133	0.000	97	21838	0.2000	0.1707	
140 1,2-Dichlorobenzene	146	13.164	13.158	0.006	98	25281	0.2000	0.1843	
142 1,2-Dibromo-3-Chloropropane	155	13.712	13.700	0.012	89	1388	0.2000	0.1643	
143 1,3,5-Trichlorobenzene	180	13.834	13.828	0.006	97	19123	0.2000	0.1747	
144 1,2,4-Trichlorobenzene	180	14.261	14.249	0.012	92	14205	0.2000	0.1613	
145 Hexachlorobutadiene	225	14.334	14.334	0.000	93	7733	0.2000	0.1802	
146 Naphthalene	128	14.438	14.426	0.012	97	27854	0.2000	0.1737	
147 1,2,3-Trichlorobenzene	180	14.578	14.572	0.006	97	12752	0.2000	0.1730	
155 2-Methylnaphthalene	142		0.000				ND	ND	
156 p-Diethylbenzene	1		0.000				ND	ND	
161 Pentane	43		0.000				ND	ND	
150 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
165 Isopropyl alcohol	45		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Reagents:

MSV_LL_#1_826_00081	Amount Added:	2.00	Units: uL	
MSV_LL_#2_826_00093	Amount Added:	2.00	Units: uL	
MSV_LL_GAS826_00156	Amount Added:	2.00	Units: uL	
MSV_LLcentISS_00007	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 27-Jun-2023 12:30:03 Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X12.D

Injection Date:	19-Jun-2023 18:19:30	Instrument ID:	19930	Operator ID:	KNK41612
Lims ID:	IC std1			Worklist Smp#:	13
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

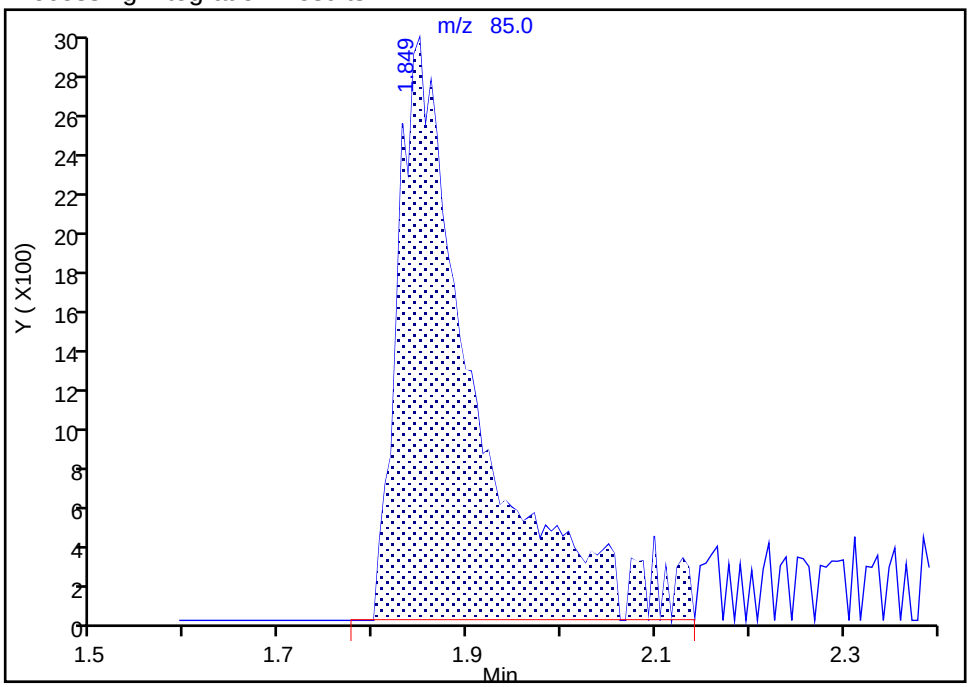
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X12.D
Injection Date: 19-Jun-2023 18:19:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: KNK41612 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

1 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

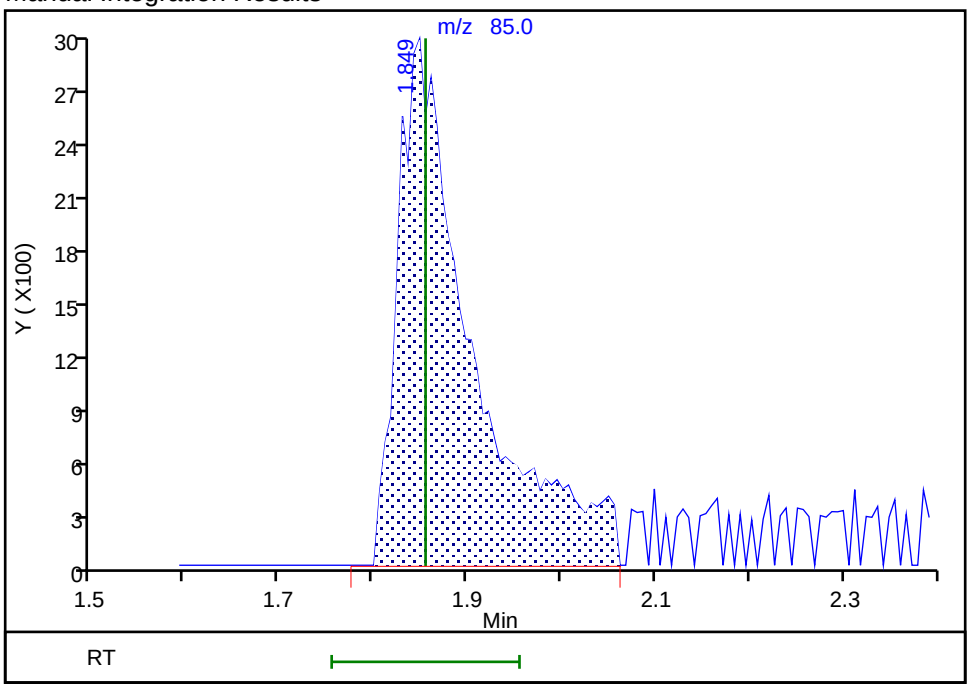
Processing Integration Results

RT: 1.85
Area: 17153
Amount: 0.228743
Amount Units: ug/l



Manual Integration Results

RT: 1.85
Area: 16248
Amount: 0.226029
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:45:13 -04:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

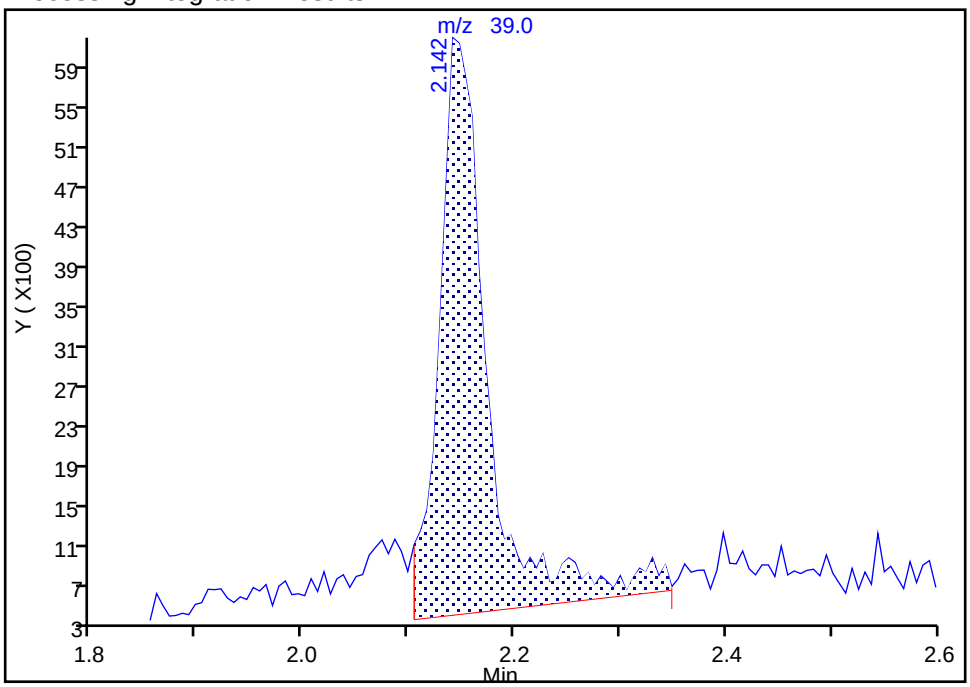
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X12.D
Injection Date: 19-Jun-2023 18:19:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: KNK41612 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

6 Butadiene, CAS: 106-99-0

Signal: 1

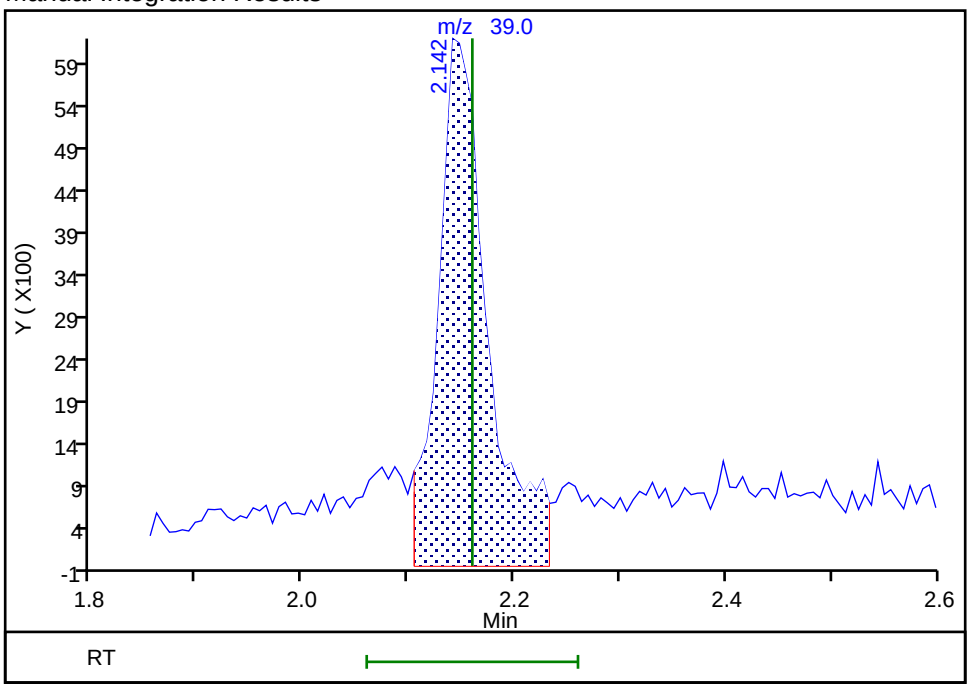
Processing Integration Results

RT: 2.14
Area: 18397
Amount: 0.251107
Amount Units: ug/l



Manual Integration Results

RT: 2.14
Area: 20337
Amount: 0.278153
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:45:27 -04:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

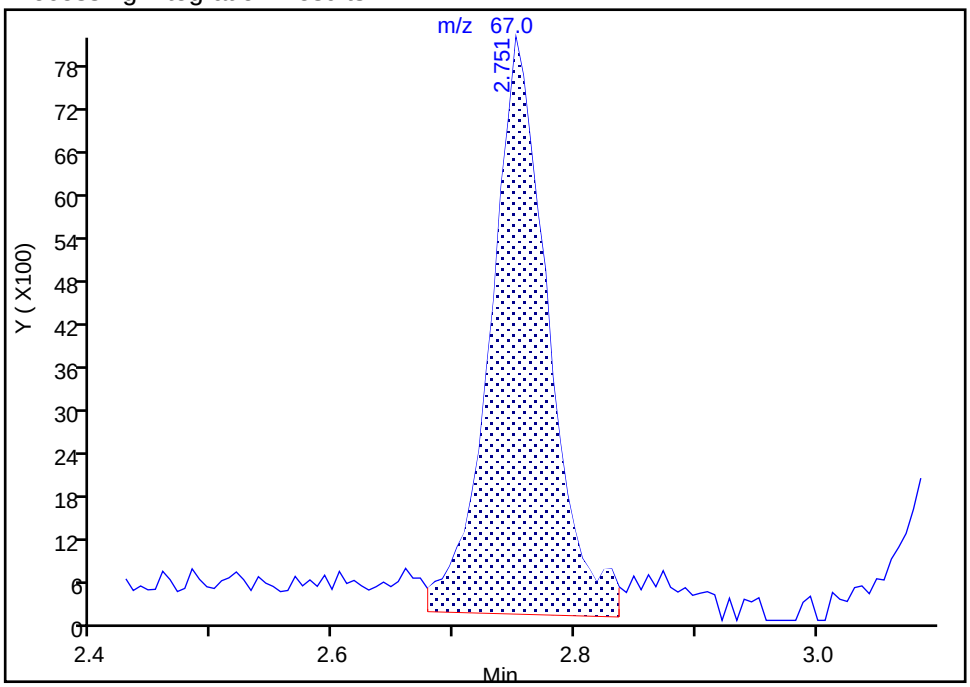
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X12.D				
Injection Date:	19-Jun-2023 18:19:30	Instrument ID:	19930		
Lims ID:	IC std1				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

9 Dichlorofluoromethane, CAS: 75-43-4

Signal: 1

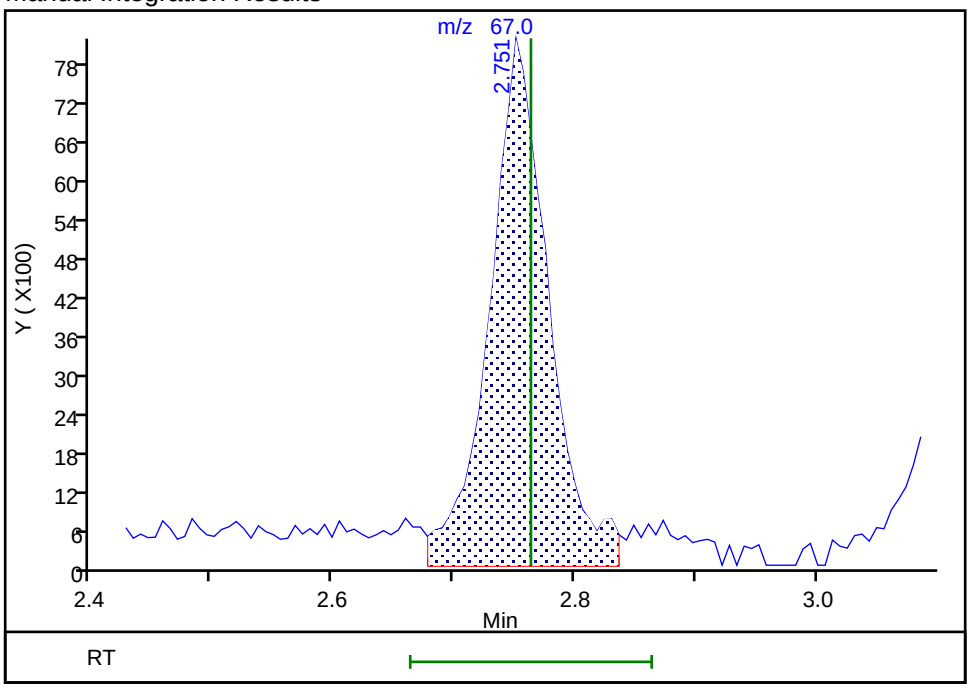
Processing Integration Results

RT: 2.75
Area: 26871
Amount: 0.307709
Amount Units: ug/l



Manual Integration Results

RT: 2.75
Area: 27749
Amount: 0.237817
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:46:06 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

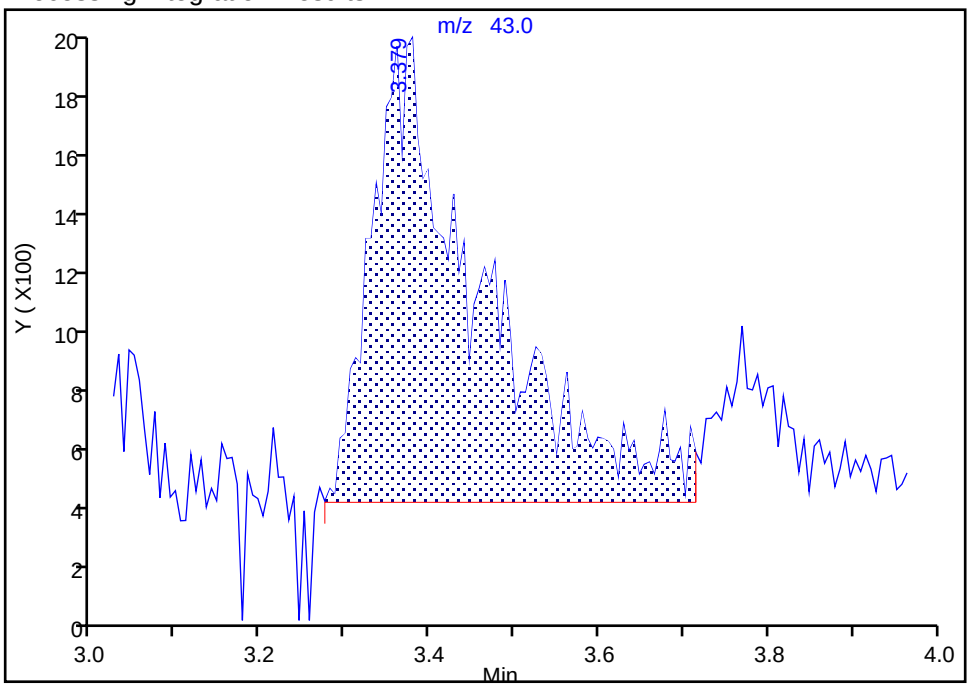
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X12.D
Injection Date: 19-Jun-2023 18:19:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: KNK41612 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

16 Acetone, CAS: 67-64-1

Signal: 1

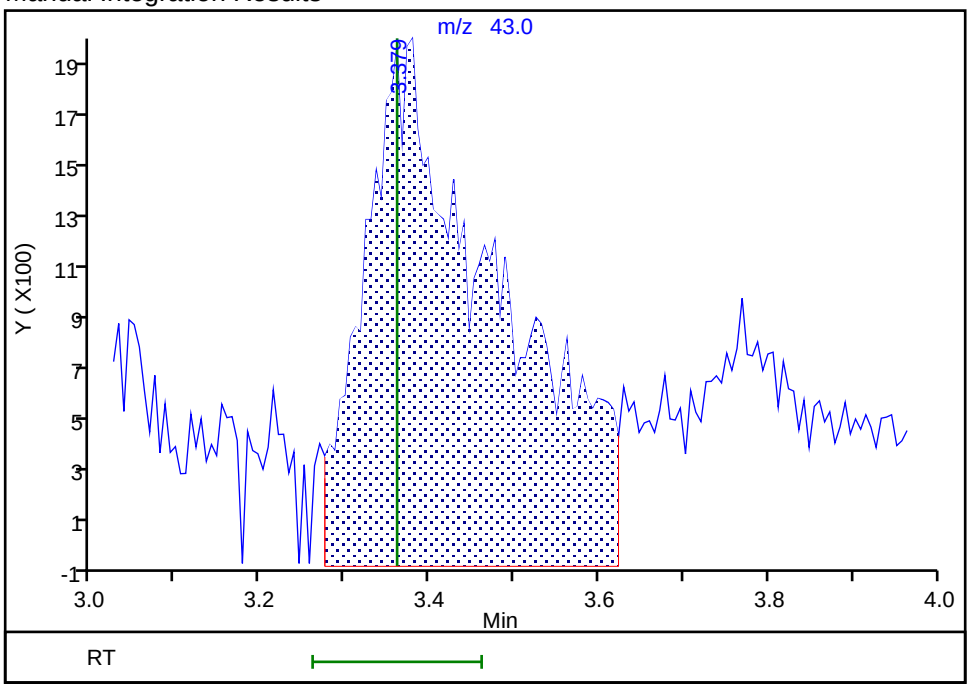
Processing Integration Results

RT: 3.38
Area: 14161
Amount: 2.451386
Amount Units: ug/l



Manual Integration Results

RT: 3.38
Area: 22071
Amount: 3.954818
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:47:22 -04:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

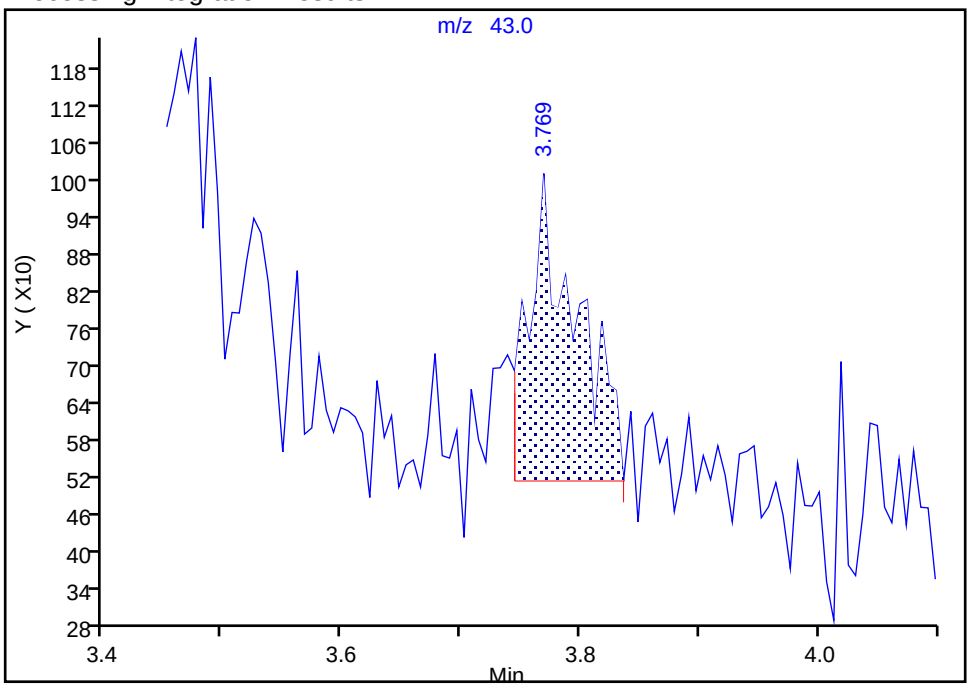
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X12.D
Injection Date: 19-Jun-2023 18:19:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: KNK41612 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

23 Methyl acetate, CAS: 79-20-9

Signal: 1

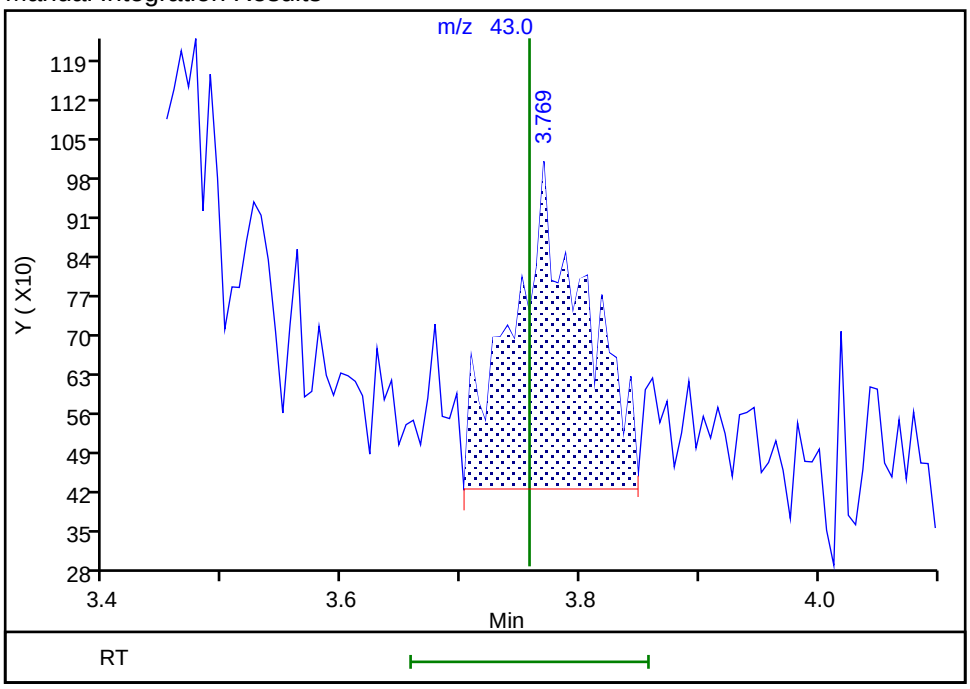
Processing Integration Results

RT: 3.77
Area: 1413
Amount: 0.145020
Amount Units: ug/l



Manual Integration Results

RT: 3.77
Area: 2537
Amount: 0.184204
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:47:43 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

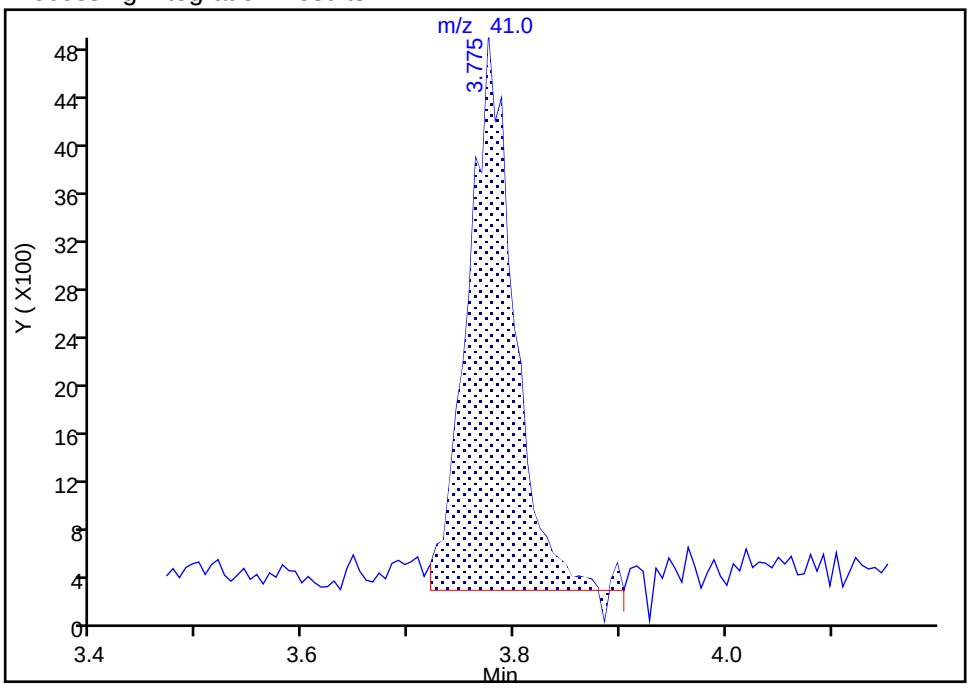
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X12.D				
Injection Date:	19-Jun-2023 18:19:30	Instrument ID:	19930		
Lims ID:	IC std1				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

24 3-Chloro-1-propene, CAS: 107-05-1

Signal: 1

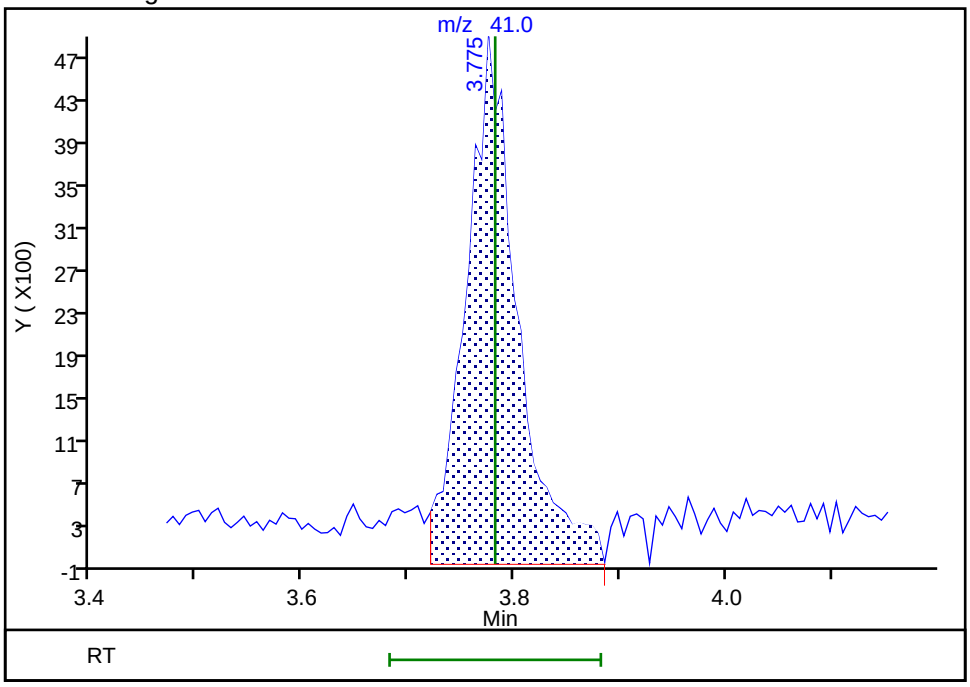
Processing Integration Results

RT: 3.78
Area: 14127
Amount: 0.194132
Amount Units: ug/l



Manual Integration Results

RT: 3.78
Area: 16611
Amount: 0.221980
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:48:01 -04:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

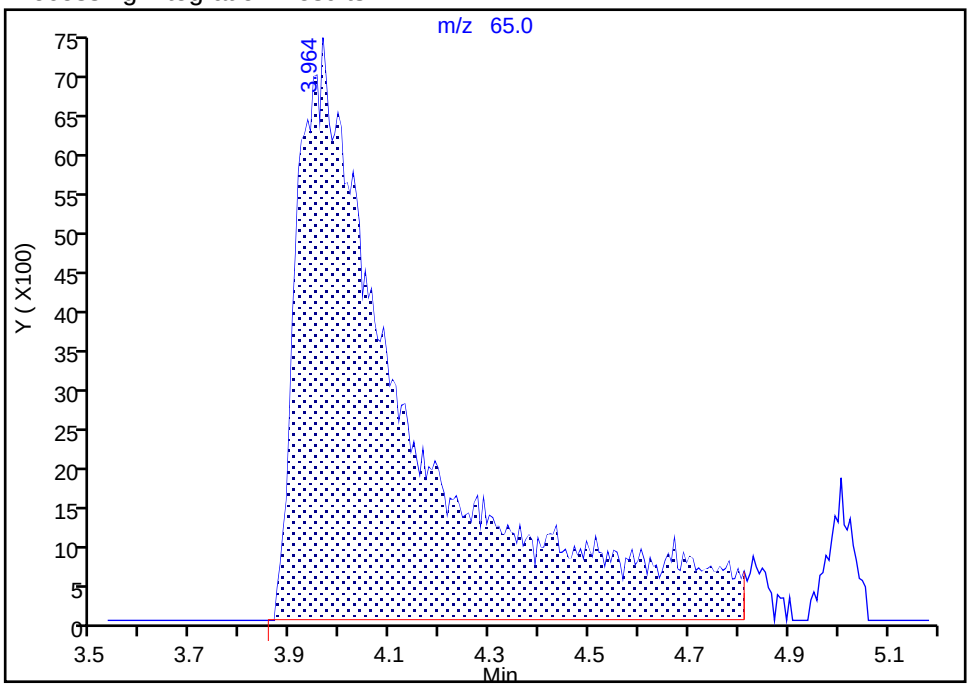
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X12.D
Injection Date: 19-Jun-2023 18:19:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: KNK41612 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 26 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

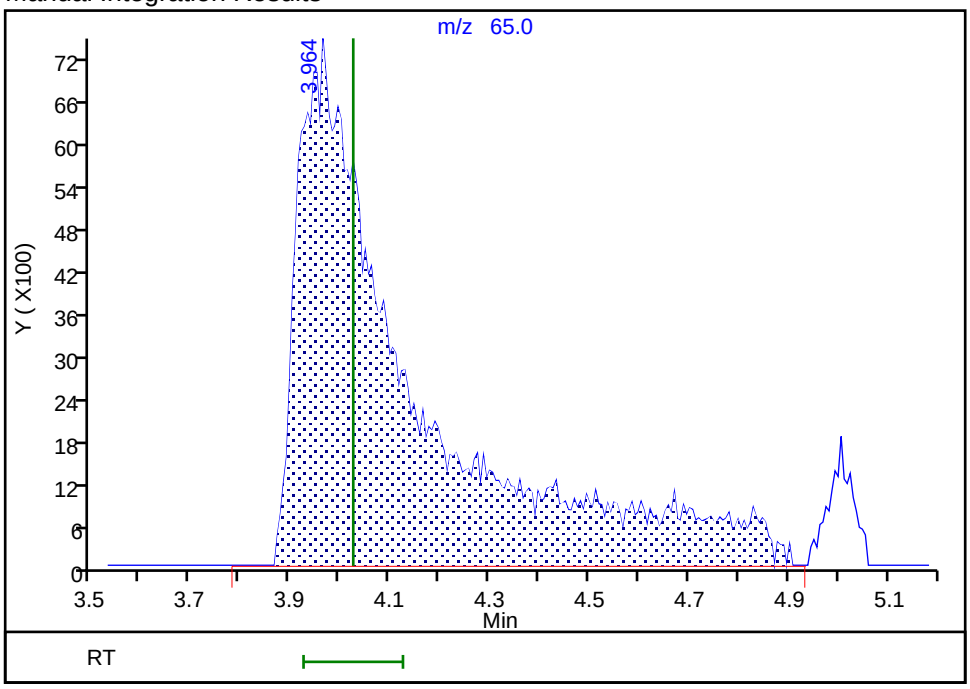
Processing Integration Results

RT: 3.96
Area: 114329
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 3.96
Area: 116680
Amount: 50.000000
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:48:08 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

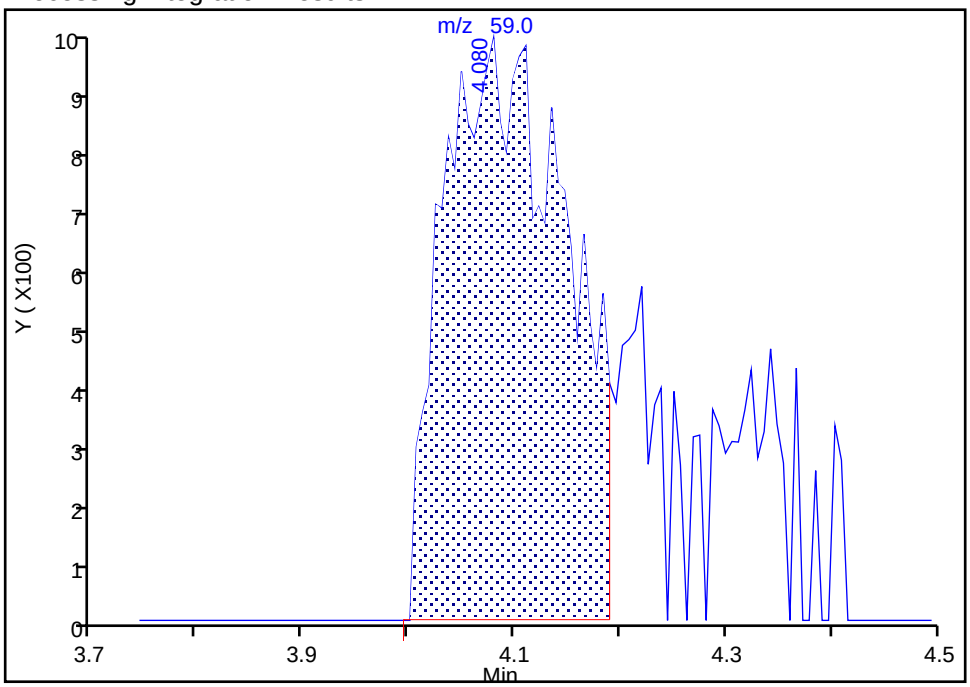
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X12.D
Injection Date: 19-Jun-2023 18:19:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: KNK41612 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

27 2-Methyl-2-propanol, CAS: 75-65-0

Signal: 1

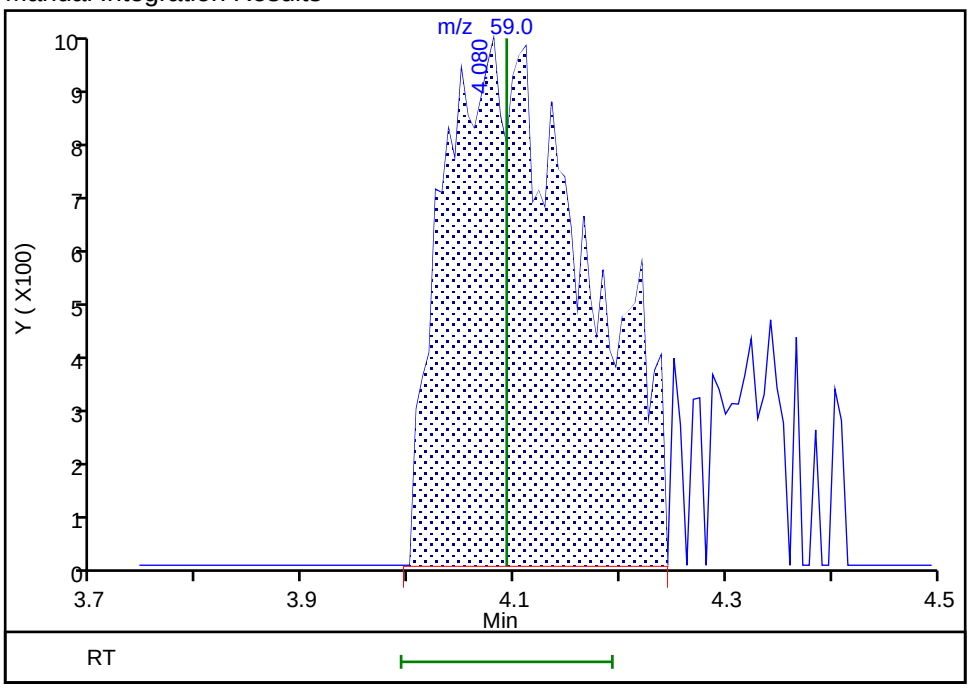
Processing Integration Results

RT: 4.08
Area: 8116
Amount: 4.003590
Amount Units: ug/l



Manual Integration Results

RT: 4.08
Area: 9373
Amount: 4.221747
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:48:15 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

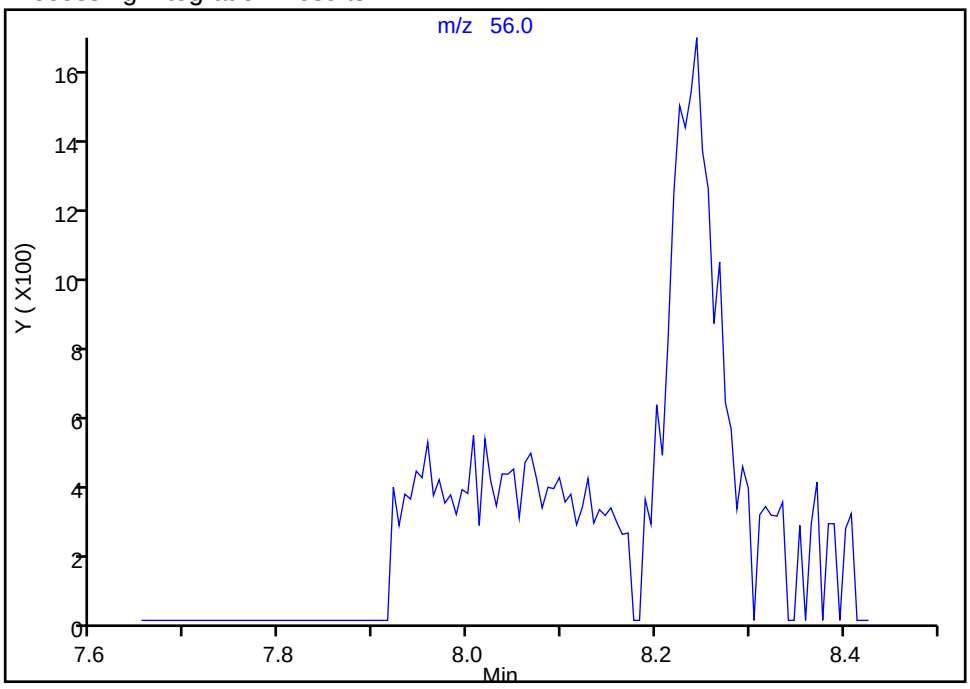
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X12.D				
Injection Date:	19-Jun-2023 18:19:30	Instrument ID:	19930		
Lims ID:	IC std1				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

63 n-Butanol, CAS: 71-36-3

Signal: 1

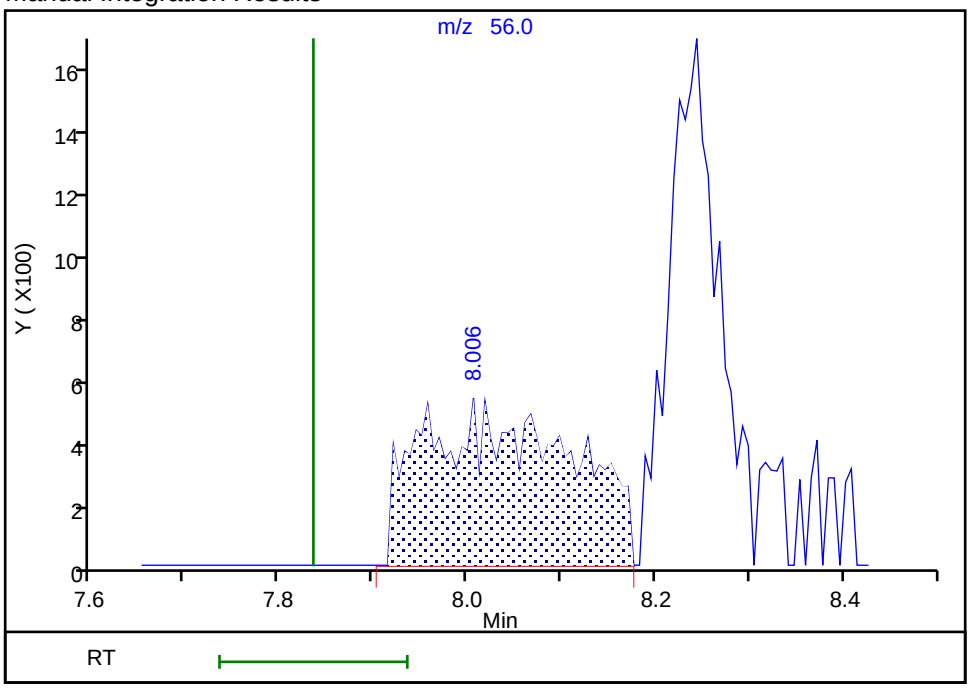
Not Detected
Expected RT: 7.84

Processing Integration Results



Manual Integration Results

RT: 8.01
Area: 5699
Amount: 9.407838
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:48:49 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

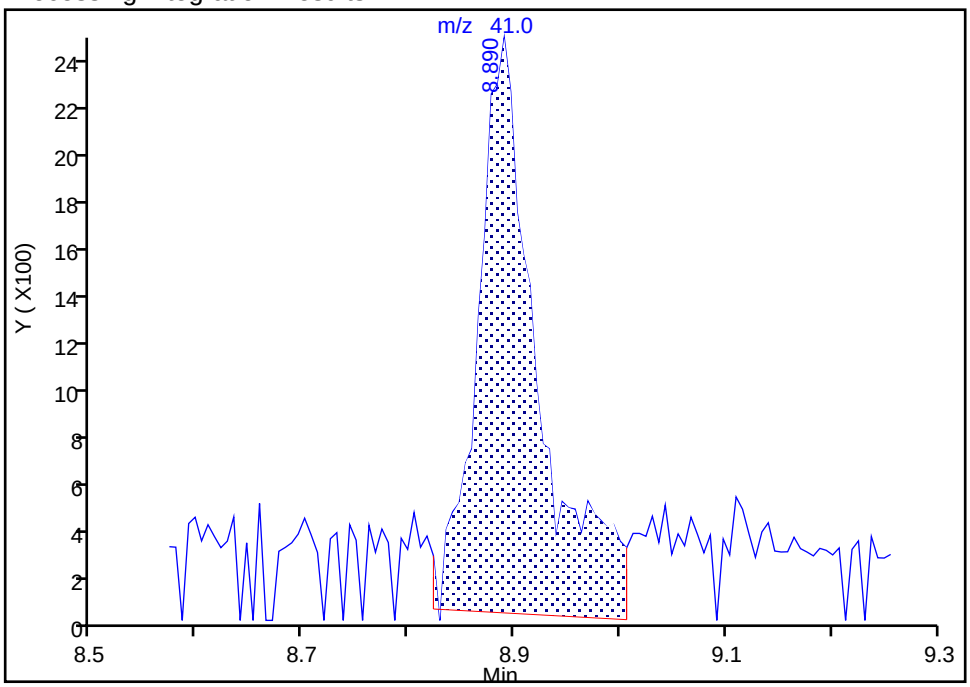
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X12.D
Injection Date: 19-Jun-2023 18:19:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: KNK41612 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

72 2-Nitropropane, CAS: 79-46-9

Signal: 1

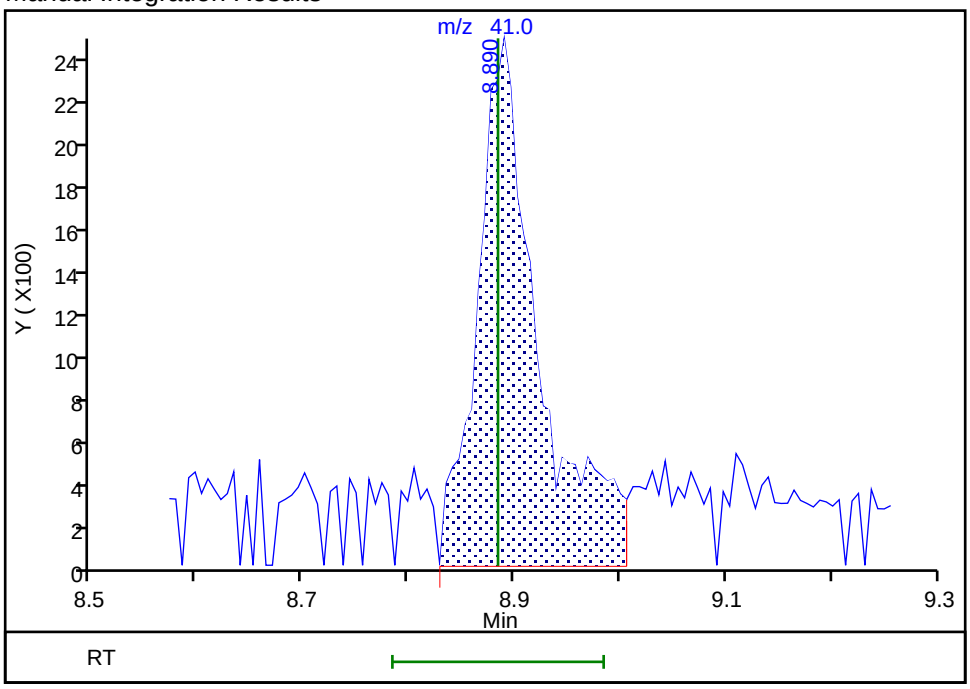
Processing Integration Results

RT: 8.89
Area: 9510
Amount: 1.267713
Amount Units: ug/l



Manual Integration Results

RT: 8.89
Area: 9668
Amount: 1.336820
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:49:40 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

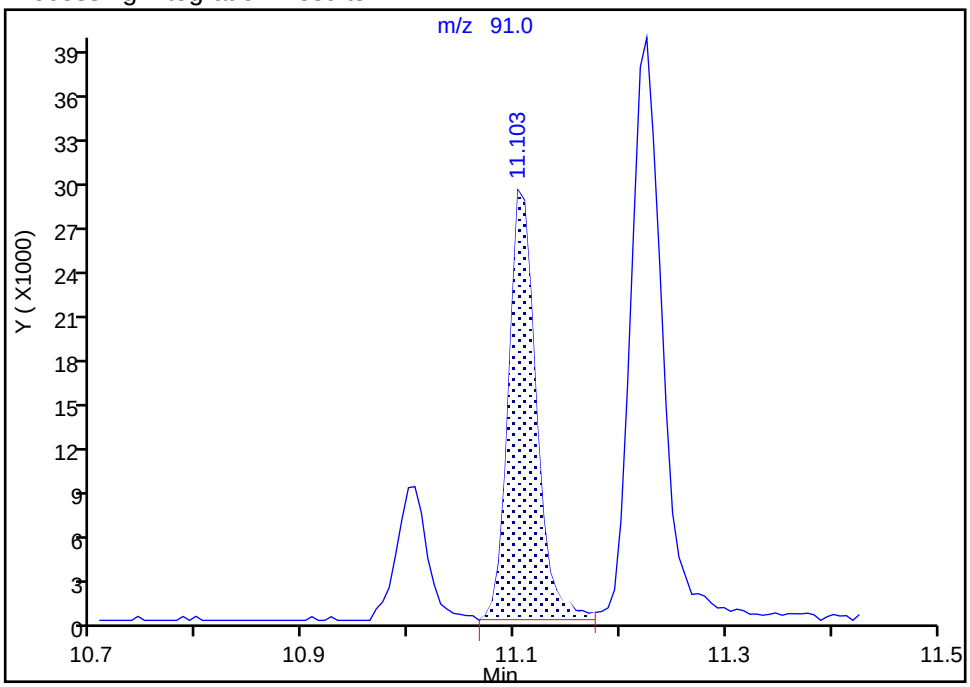
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X12.D
Injection Date: 19-Jun-2023 18:19:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: KNK41612 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

108 1-Chlorohexane, CAS: 544-10-5

Signal: 1

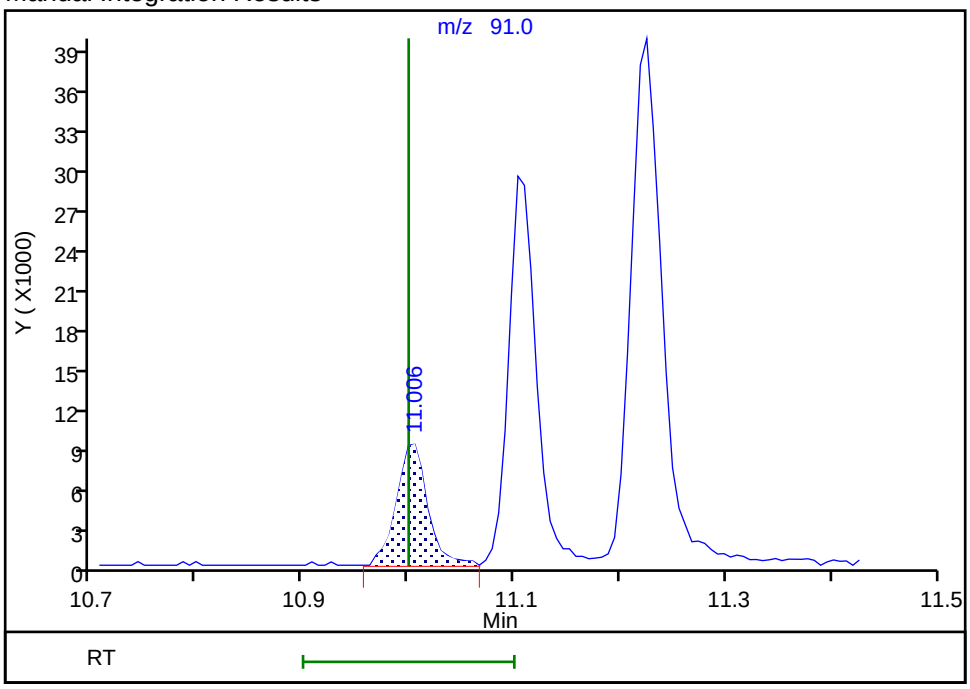
Processing Integration Results

RT: 11.10
Area: 53589
Amount: 0.191518
Amount Units: ug/l



Manual Integration Results

RT: 11.01
Area: 18652
Amount: 0.223351
Amount Units: ug/l



Reviewer: DVW2, 22-Jun-2023 07:47:06 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

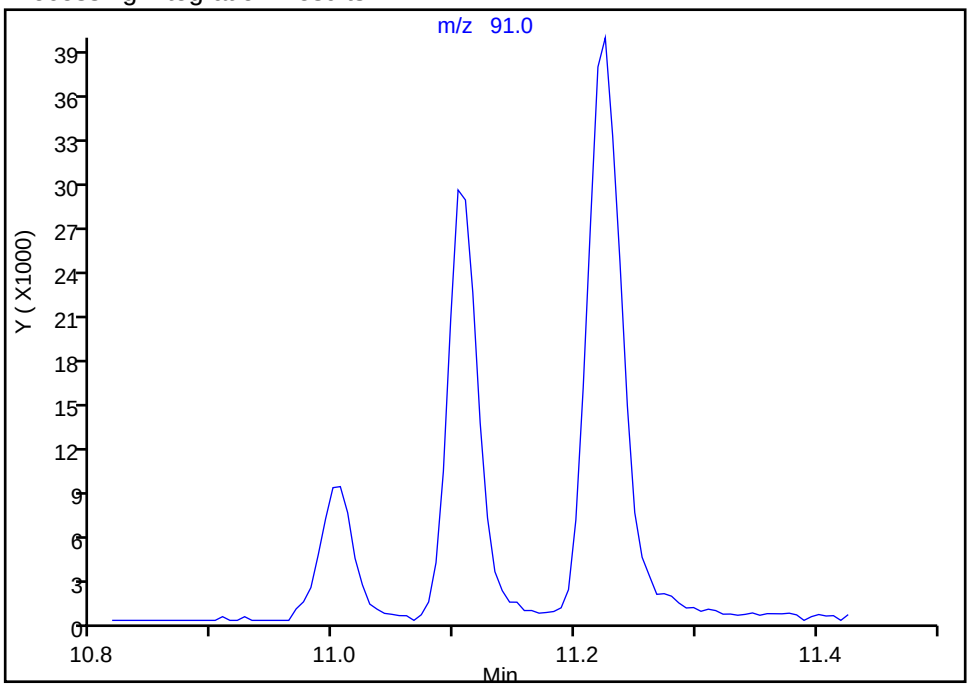
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X12.D
Injection Date: 19-Jun-2023 18:19:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: KNK41612 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

112 Ethylbenzene, CAS: 100-41-4

Signal: 1

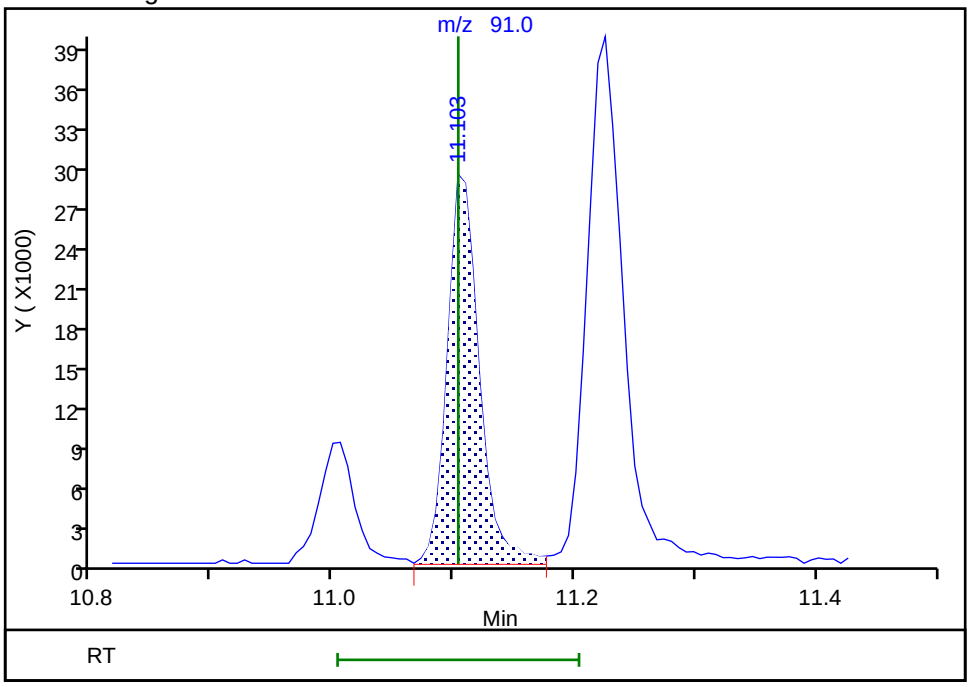
Not Detected
Expected RT: 11.10

Processing Integration Results



Manual Integration Results

RT: 11.10
Area: 53589
Amount: 0.191630
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 15:33:35 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

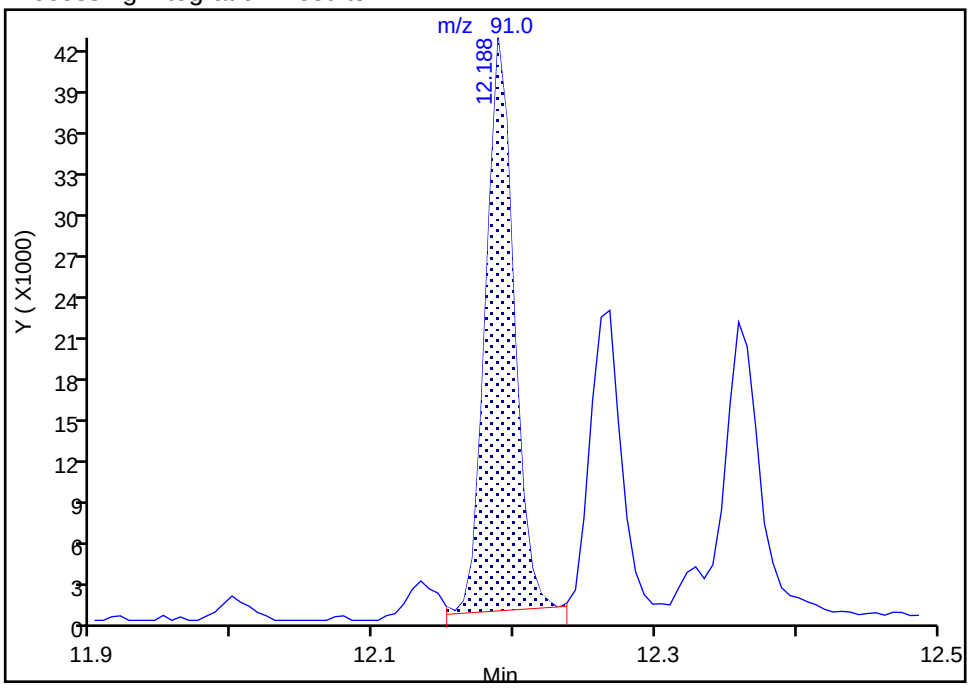
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X12.D
Injection Date: 19-Jun-2023 18:19:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: KNK41612 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

125 N-Propylbenzene, CAS: 103-65-1

Signal: 1

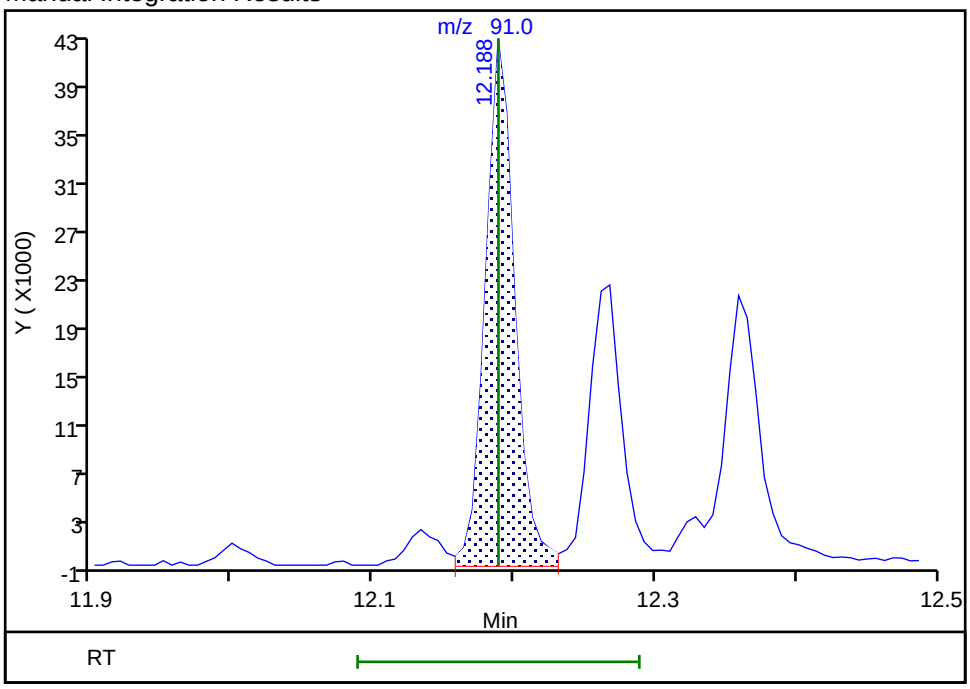
Processing Integration Results

RT: 12.19
Area: 58930
Amount: 0.204912
Amount Units: ug/l



Manual Integration Results

RT: 12.19
Area: 62107
Amount: 0.187851
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:50:50 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

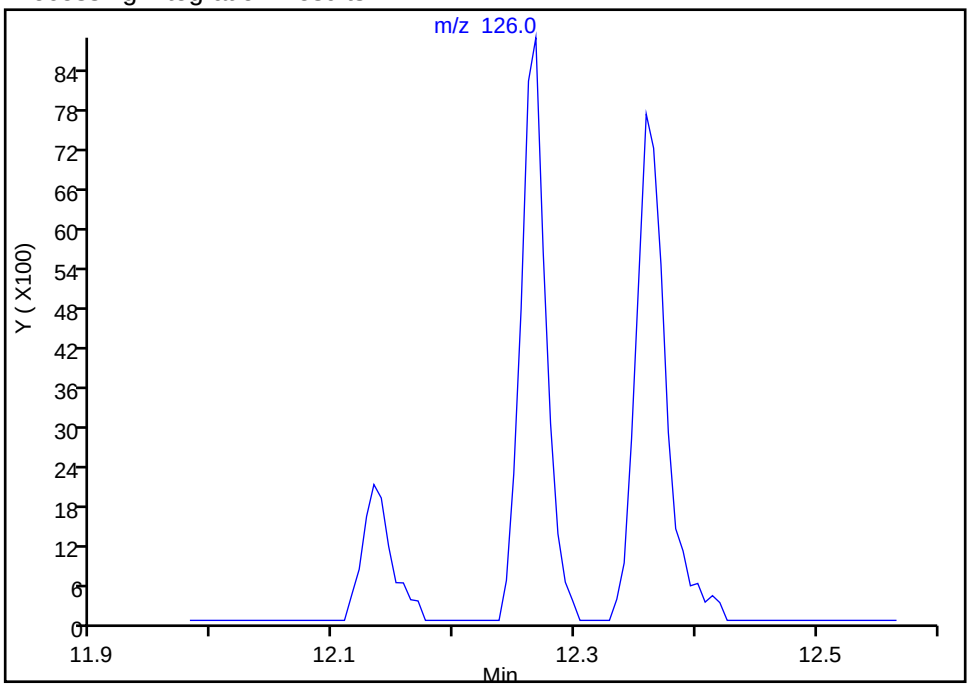
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X12.D				
Injection Date:	19-Jun-2023 18:19:30	Instrument ID:	19930		
Lims ID:	IC std1				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

126 2-Chlorotoluene, CAS: 95-49-8

Signal: 1

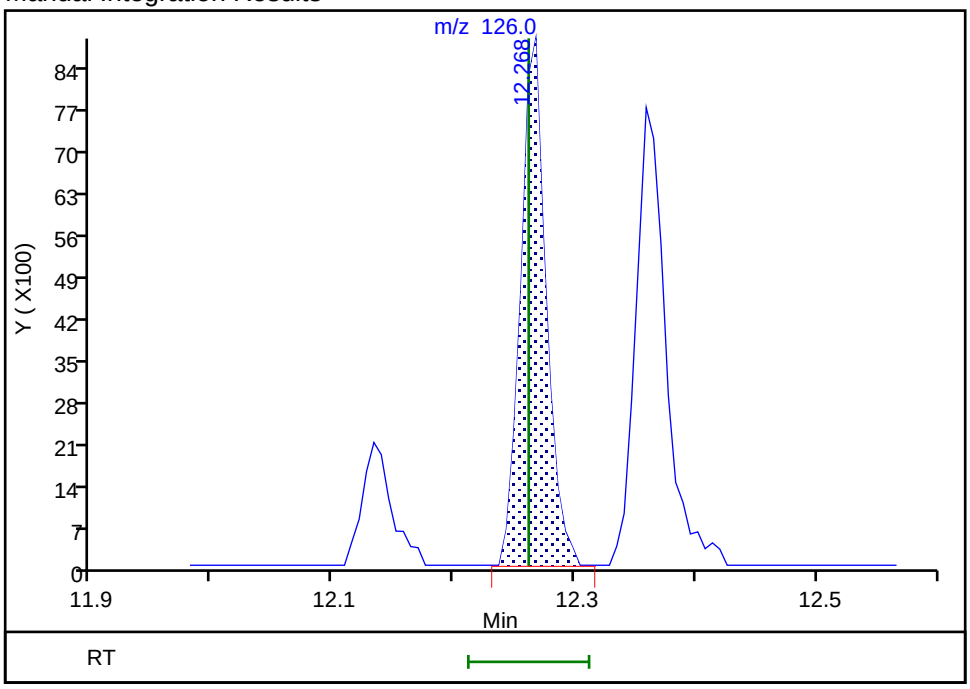
Processing Integration Results

Not Detected
Expected RT: 12.26



Manual Integration Results

RT: 12.27
Area: 12989
Amount: 0.179881
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 15:33:41 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

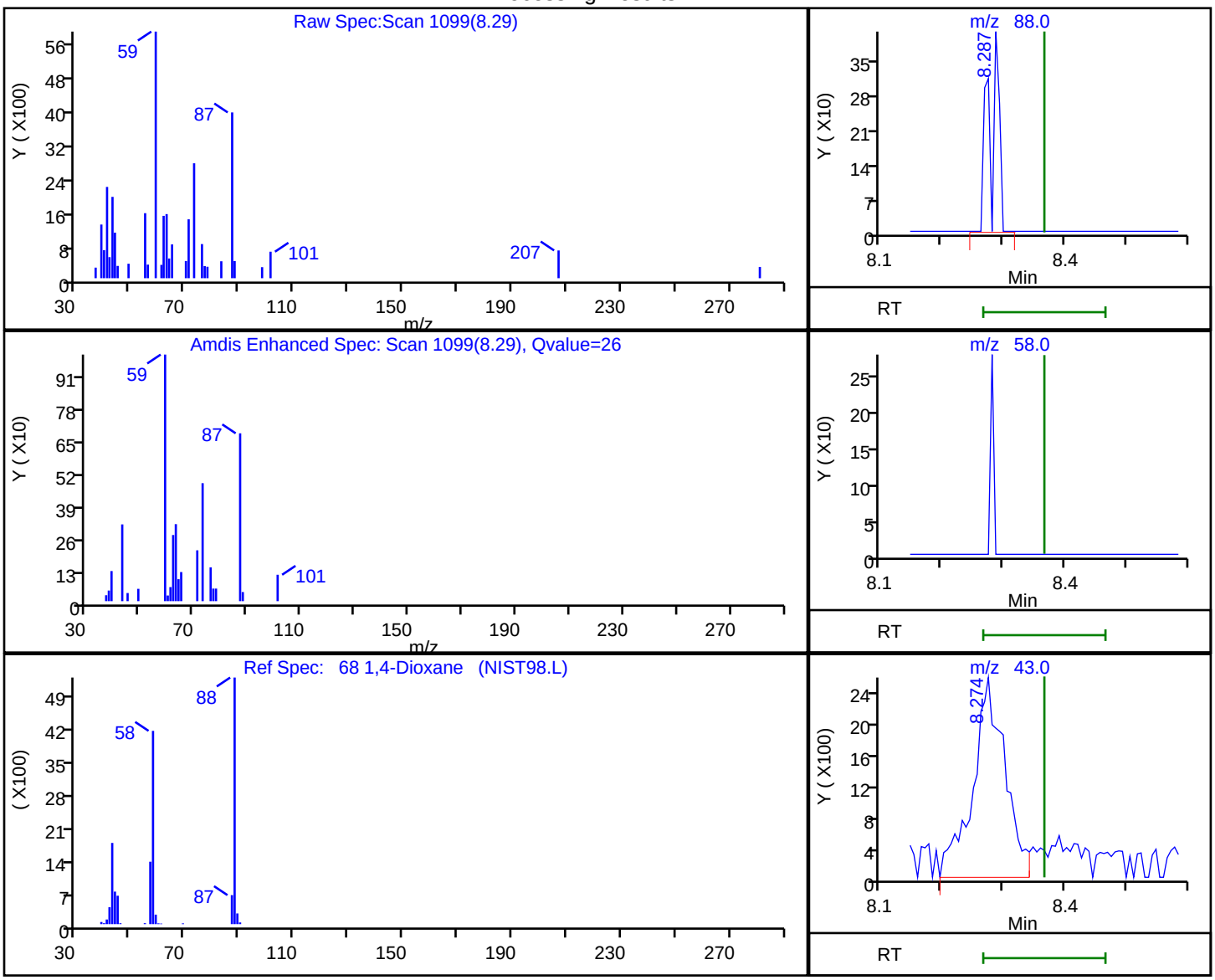
User Disabled Compound Report

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X12.D				
Injection Date:	19-Jun-2023 18:19:30	Instrument ID:	19930		
Lims ID:	IC std1				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

68 1,4-Dioxane, CAS: 123-91-1

Processing Results



RT	Mass	Response	Amount
8.29	88.00	468	4.950139
8.37	58.00	0	
8.27	43.00	9532	

Reviewer: DVW2, 21-Jun-2023 07:49:15 -04:00:00 (UTC)

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X13.D
Lims ID: IC std2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 19-Jun-2023 18:40:30 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0086929-014
Misc. Info.: LG 0.5
Operator ID: KNK41612 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 27-Jun-2023 12:30:09 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1687

First Level Reviewer: DVW2 Date: 20-Jun-2023 10:43:02

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.861	1.855	0.006	99	34723	0.5000	0.4944	M
4 Chloromethane	50	2.038	2.050	-0.012	99	38309	0.5000	0.5369	
5 Vinyl chloride	62	2.148	2.160	-0.012	71	34833	0.5000	0.5103	
6 Butadiene	39	2.154	2.160	-0.006	92	40081	0.5000	0.5611	M
7 Bromomethane	94	2.459	2.465	-0.007	90	29277	0.5000	0.5494	
8 Chloroethane	64	2.538	2.538	0.000	99	22289	0.5000	0.5457	
9 Dichlorofluoromethane	67	2.757	2.764	-0.007	97	62910	0.5000	0.5519	M
10 Trichlorofluoromethane	101	2.824	2.824	0.000	94	43553	0.5000	0.5011	
11 Ethyl ether	59	3.038	3.050	-0.012	88	18739	0.5001	0.5223	
13 1,2-Dichloro-1,1,2-trifluoroetha	67	3.111	3.142	-0.031	89	32387	0.5000	0.5225	
14 Acrolein	56	3.202	3.209	-0.007	99	142596	25.0	24.9	
15 1,1-Dichloroethene	96	3.330	3.337	-0.007	97	24450	0.5000	0.5198	
16 Acetone	43	3.373	3.361	0.012	97	35188	5.00	5.56	M
17 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.373	3.385	-0.012	89	24980	0.5000	0.5003	
18 Iodomethane	142	3.513	3.526	-0.013	99	51051	0.5000	0.5161	
19 Ethyl bromide	108	3.538	3.550	-0.012	98	21495	0.4995	0.5221	
20 Carbon disulfide	76	3.617	3.629	-0.012	99	66169	0.5000	0.5187	
23 Methyl acetate	43	3.769	3.757	0.012	24	8217	0.5000	0.5258	M
24 3-Chloro-1-propene	41	3.775	3.782	-0.007	91	37534	0.5000	0.5134	
25 Methylene Chloride	84	3.946	3.958	-0.012	87	26705	0.5000	0.5377	
* 26 t-Butyl alcohol-d10 (IS)	65	3.983	4.025	-0.042	92	132398	50.0	50.0	M
27 2-Methyl-2-propanol	59	4.092	4.093	-0.001	95	27747	10.0	11.0	
28 Acrylonitrile	53	4.300	4.282	0.018	91	9924	1.25	1.29	
29 Methyl tert-butyl ether	73	4.330	4.342	-0.012	94	67798	0.5000	0.5252	
30 trans-1,2-Dichloroethene	96	4.354	4.355	-0.001	97	27769	0.5000	0.5304	
31 Hexane	57	4.775	4.781	-0.006	95	33162	0.5000	0.4833	
32 1,1-Dichloroethane	63	5.013	5.013	0.000	96	46514	0.5000	0.5186	
35 Isopropyl ether	45	5.068	5.074	-0.006	93	77884	0.5000	0.5288	
36 2-Chloro-1,3-butadiene	53	5.123	5.123	0.000	90	38162	0.5000	0.5089	
37 Tert-butyl ethyl ether	59	5.604	5.623	-0.019	97	73536	0.5000	0.5227	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
38 2-Butanone (MEK)	43	5.824	5.812	0.012	99	58914	5.00	4.83	
39 cis-1,2-Dichloroethene	96	5.854	5.854	0.000	79	31280	0.5000	0.5371	
40 2,2-Dichloropropane	77	5.860	5.867	-0.007	73	41944	0.5000	0.5190	
43 Propionitrile	54	5.909	5.891	0.018	95	31714	10.0	9.83	
45 Methacrylonitrile	67	6.116	6.110	0.006	91	63442	5.00	4.98	
S 41 1,2-Dichloroethene, Total	100				0			1.07	
46 Chlorobromomethane	128	6.183	6.190	-0.007	88	14176	0.5000	0.5350	
47 Tetrahydrofuran	71	6.208	6.196	0.012	78	10811	2.50	2.69	
48 Chloroform	83	6.342	6.342	0.000	93	48008	0.5000	0.5182	
$ 49 Dibromofluoromethane (Surr)	113	6.549	6.555	-0.006	95	452360	10.0	10.0	
50 1,1,1-Trichloroethane	97	6.567	6.568	-0.001	96	44606	0.5000	0.5156	
51 Cyclohexane	56	6.659	6.671	-0.012	89	40898	0.5000	0.4988	
54 Carbon tetrachloride	117	6.775	6.781	-0.006	96	38435	0.5000	0.4987	
53 1,1-Dichloropropene	75	6.775	6.781	-0.006	95	35524	0.5000	0.5157	
55 Isobutyl alcohol	41	6.952	6.940	0.012	90	24811	25.0	27.7	M
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.006	7.013	-0.007	65	89414	10.0	10.0	
57 Benzene	78	7.037	7.043	-0.006	92	107059	0.5000	0.5169	
58 1,2-Dichloroethane	62	7.110	7.116	-0.006	96	29283	0.5000	0.5216	
60 Tert-amyl methyl ether	73	7.232	7.244	-0.012	98	68913	0.5000	0.5300	
* 61 Fluorobenzene (IS)	96	7.445	7.445	0.000	99	1753956	10.0	10.0	
62 n-Heptane	43	7.464	7.470	-0.006	37	30853	0.5000	0.4683	
63 n-Butanol	56	7.866	7.836	0.030	87	25327	43.8	36.8	
64 Trichloroethene	95	7.933	7.933	0.000	96	30455	0.5000	0.5286	
65 Methylcyclohexane	83	8.244	8.244	0.000	90	45980	0.5000	0.4940	
66 1,2-Dichloropropane	63	8.268	8.269	-0.001	95	26965	0.5000	0.5266	
67 Methyl methacrylate	69	8.366	8.354	0.012	76	11677	0.5000	0.4653	
68 1,4-Dioxane	88	8.372	8.366	0.006	31	1097	25.0	7.51	
69 Dibromomethane	93	8.378	8.378	0.000	90	13482	0.5000	0.5253	
71 Dichlorobromomethane	83	8.610	8.616	-0.006	99	34054	0.5000	0.5117	
72 2-Nitropropane	41	8.884	8.884	0.000	96	19831	2.50	2.42	
75 1-Bromo-2-chloroethane	63	9.018	9.012	0.006	98	26799	0.5000	0.5133	
76 cis-1,3-Dichloropropene	75	9.183	9.177	0.006	96	40532	0.5000	0.5075	
77 4-Methyl-2-pentanone (MIBK)	43	9.360	9.360	0.000	95	162172	5.00	4.95	
$ 78 Toluene-d8 (Surr)	98	9.494	9.500	-0.006	93	1785023	10.0	10.1	
79 Toluene	92	9.579	9.579	0.000	99	73122	0.5000	0.5221	
97 trans-1,3-Dichloropropene	75	9.847	9.848	-0.001	91	34150	0.5000	0.5165	
99 Ethyl methacrylate	69	9.920	9.915	0.005	90	28243	0.5000	0.5167	
100 1,1,2-Trichloroethane	97	10.055	10.055	0.000	90	21292	0.5000	0.5387	
S 98 1,3-Dichloropropene, Total	100				0			1.02	
101 Tetrachloroethene	166	10.146	10.146	0.000	98	37751	0.5000	0.5167	
102 1,3-Dichloropropane	76	10.219	10.219	0.000	88	32993	0.5000	0.5274	
103 2-Hexanone	43	10.280	10.274	0.006	96	109004	5.00	4.70	
105 Chlorodibromomethane	129	10.439	10.439	0.000	91	25969	0.5000	0.5046	
106 Ethylene Dibromide	107	10.554	10.549	0.005	98	18815	0.5000	0.5045	
* 107 Chlorobenzene-d5 (IS)	117	10.987	10.987	0.000	84	1381168	10.0	10.0	
108 1-Chlorohexane	91	11.006	11.000	0.006	95	42354	0.5000	0.5196	a
109 Chlorobenzene	112	11.018	11.018	0.000	97	85778	0.5000	0.5234	
111 1,1,1,2-Tetrachloroethane	131	11.097	11.097	0.000	95	30129	0.5000	0.5159	
112 Ethylbenzene	91	11.103	11.103	0.000	98	143495	0.5000	0.5257	a
113 m-Xylene & p-Xylene	106	11.225	11.219	0.006	93	115867	1.00	1.05	
S 110 Xylenes, Total	106				0			1.57	
114 o-Xylene	106	11.554	11.554	0.000	95	57211	0.5000	0.5243	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
115 Styrene	104	11.573	11.567	0.006	94	90765	0.5000	0.5170	
116 Bromoform	173	11.731	11.725	0.006	97	16371	0.5000	0.4904	
117 Isopropylbenzene	105	11.859	11.859	0.000	95	146958	0.5000	0.5193	
$ 120 4-Bromofluorobenzene (Surr)	95	11.999	12.000	-0.001	96	670589	10.0	10.0	
121 1,1,2,2-Tetrachloroethane	83	12.103	12.103	0.000	94	26384	0.5000	0.5309	
122 Bromobenzene	156	12.115	12.115	0.000	89	37870	0.5000	0.5273	
123 trans-1,4-Dichloro-2-butene	53	12.133	12.128	0.005	94	60206	5.00	4.88	
124 1,2,3-Trichloropropane	110	12.152	12.146	0.006	79	7469	0.5000	0.5354	
125 N-Propylbenzene	91	12.188	12.189	-0.001	98	163202	0.5000	0.5134	
126 2-Chlorotoluene	126	12.261	12.262	-0.001	98	36985	0.5000	0.5327	a
127 1,3,5-Trimethylbenzene	105	12.322	12.323	-0.001	94	125592	0.5000	0.5183	
128 4-Chlorotoluene	126	12.359	12.353	0.006	96	37661	0.5000	0.5294	
129 tert-Butylbenzene	134	12.566	12.566	0.000	91	30391	0.5000	0.5220	
130 Pentachloroethane	167	12.597	12.597	0.000	78	22167	0.5000	0.4923	
131 1,2,4-Trimethylbenzene	105	12.609	12.609	0.000	96	129589	0.5000	0.5210	
132 sec-Butylbenzene	105	12.731	12.731	0.000	93	159057	0.5000	0.5162	
133 1,3-Dichlorobenzene	146	12.828	12.829	-0.001	99	71773	0.5000	0.5113	
134 4-Isopropyltoluene	119	12.841	12.841	0.000	97	137662	0.5000	0.5011	
* 135 1,4-Dichlorobenzene-d4	152	12.883	12.883	0.000	93	834938	10.0	10.0	
136 1,4-Dichlorobenzene	146	12.902	12.902	0.000	96	73356	0.5000	0.5302	
137 1,2,3-Trimethylbenzene	120	12.914	12.914	0.000	97	56949	0.5000	0.5065	
138 Benzyl chloride	126	12.981	12.981	0.000	98	10607	0.5000	0.4967	
139 n-Butylbenzene	92	13.133	13.133	0.000	97	61172	0.5000	0.4973	
140 1,2-Dichlorobenzene	146	13.164	13.158	0.006	100	69532	0.5000	0.5273	
142 1,2-Dibromo-3-Chloropropane	155	13.712	13.700	0.012	86	3960	0.5000	0.4875	
143 1,3,5-Trichlorobenzene	180	13.834	13.828	0.006	97	51123	0.5000	0.4856	
144 1,2,4-Trichlorobenzene	180	14.255	14.249	0.006	94	40773	0.5000	0.4814	
145 Hexachlorobutadiene	225	14.334	14.334	0.000	95	19602	0.5000	0.4751	
146 Naphthalene	128	14.432	14.426	0.006	96	77405	0.5000	0.5021	
147 1,2,3-Trichlorobenzene	180	14.572	14.572	0.000	96	33951	0.5000	0.4789	
155 2-Methylnaphthalene	142		0.000				ND	ND	
156 p-Diethylbenzene	1		0.000				ND	ND	
161 Pentane	43		0.000				ND	ND	
150 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
165 Isopropyl alcohol	45		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_LL_#1_826_00081	Amount Added:	2.00	Units: uL	
MSV_LL_#2_826_00093	Amount Added:	2.00	Units: uL	
MSV_LL_GAS826_00156	Amount Added:	2.00	Units: uL	
MSV_LLcentISS_00007	Amount Added:	5.00	Units: uL	Run Reagent

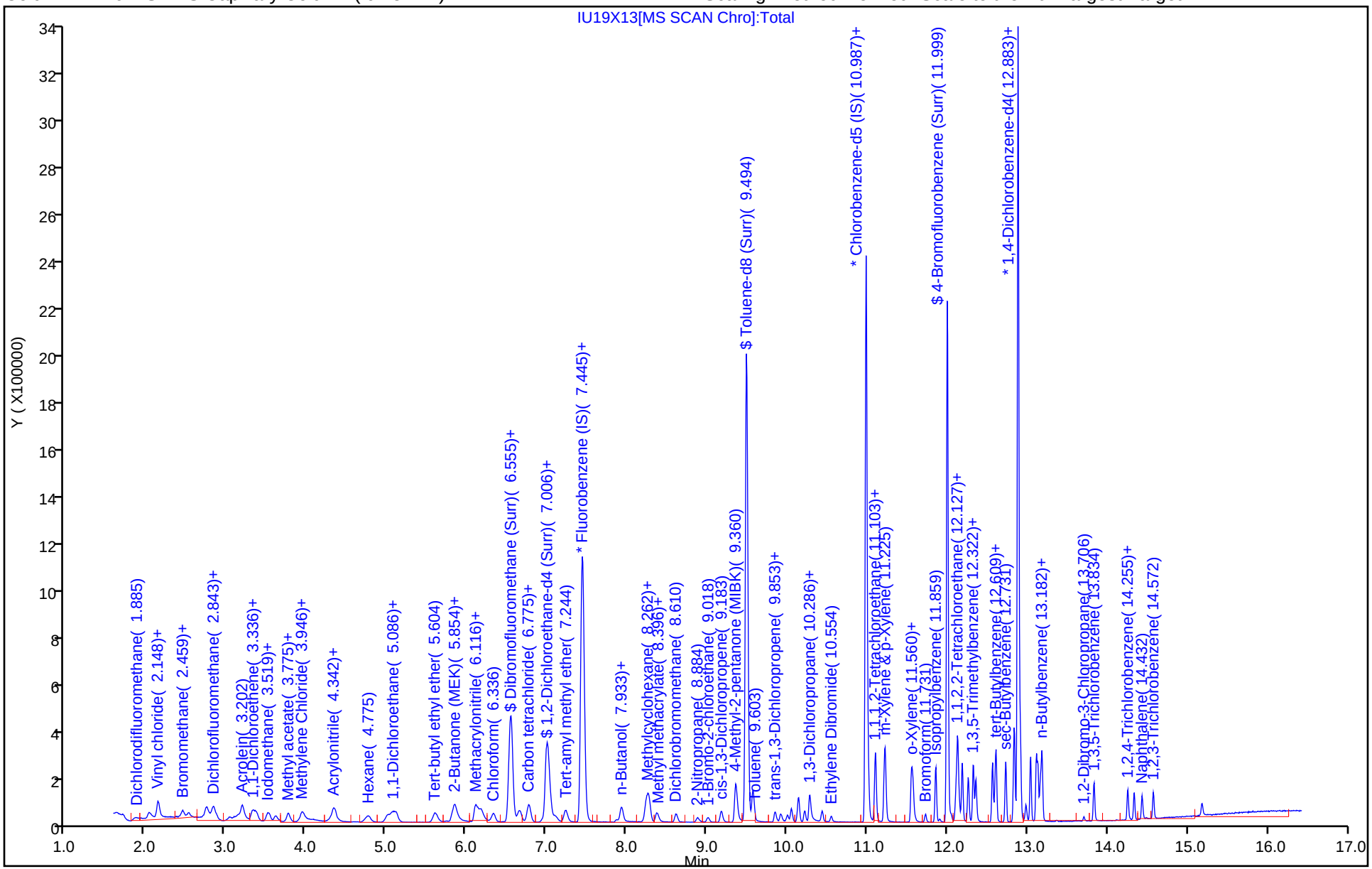
Report Date: 27-Jun-2023 12:30:10 Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X13.D

Injection Date:	19-Jun-2023 18:40:30	Instrument ID:	19930	Operator ID:	KNK41612
Lims ID:	IC std2			Worklist Smp#:	14
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

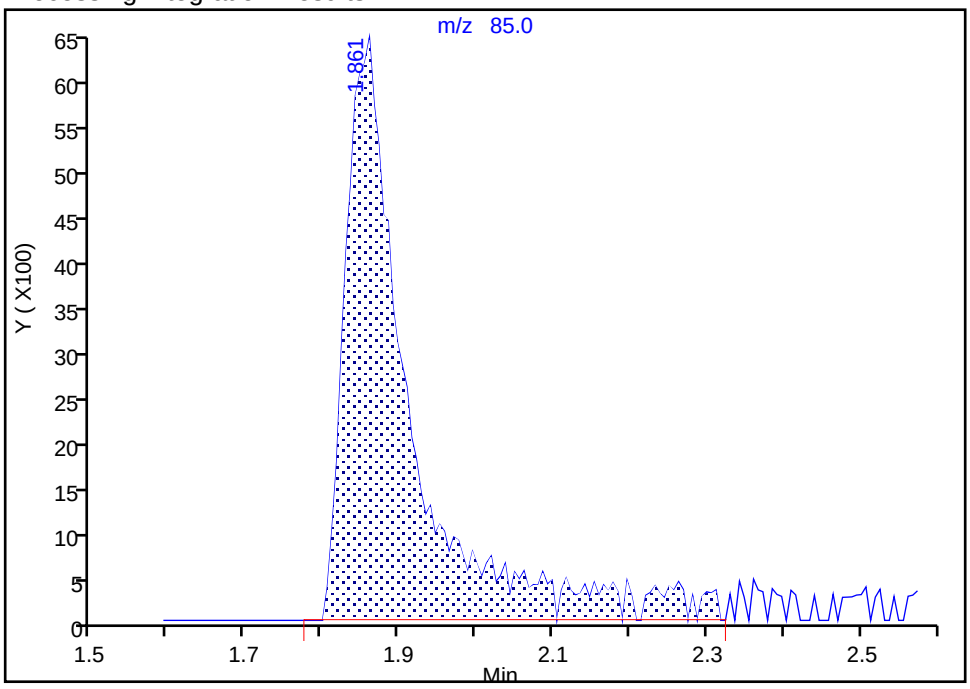
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X13.D				
Injection Date:	19-Jun-2023 18:40:30	Instrument ID:	19930		
Lims ID:	IC std2				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

1 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

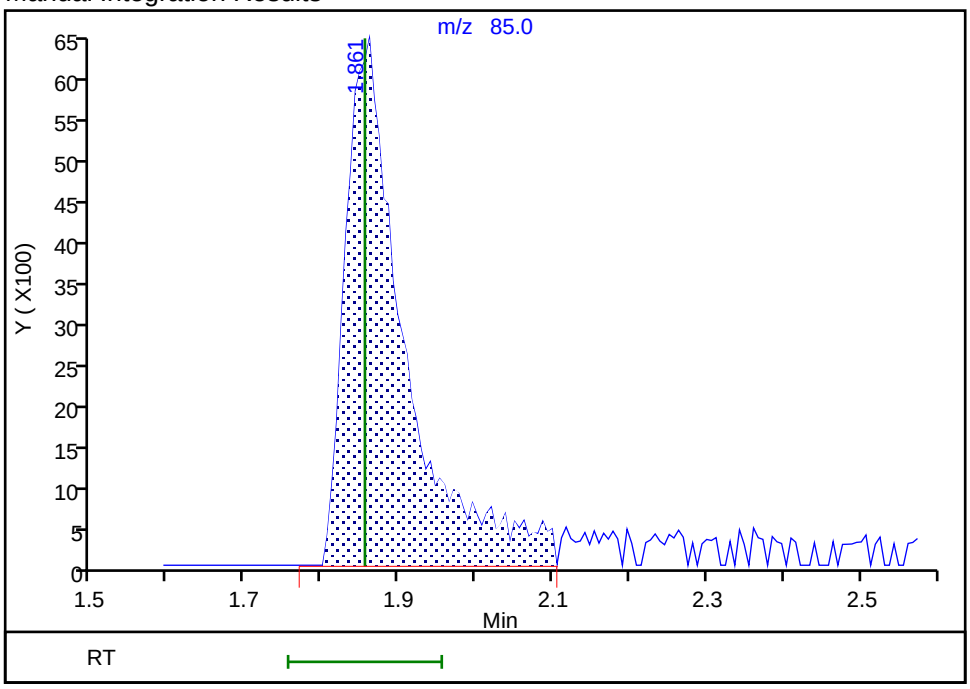
Processing Integration Results

RT: 1.86
Area: 38274
Amount: 0.530355
Amount Units: ug/l



Manual Integration Results

RT: 1.86
Area: 34723
Amount: 0.494421
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:51:45 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

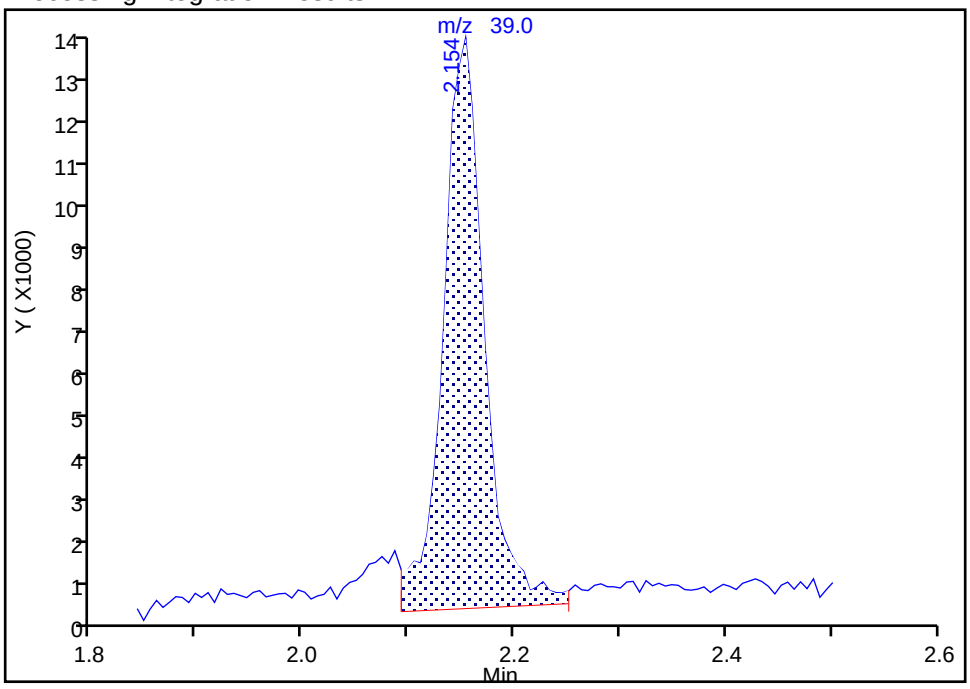
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X13.D
Injection Date: 19-Jun-2023 18:40:30 Instrument ID: 19930
Lims ID: IC std2
Client ID:
Operator ID: KNK41612 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

6 Butadiene, CAS: 106-99-0

Signal: 1

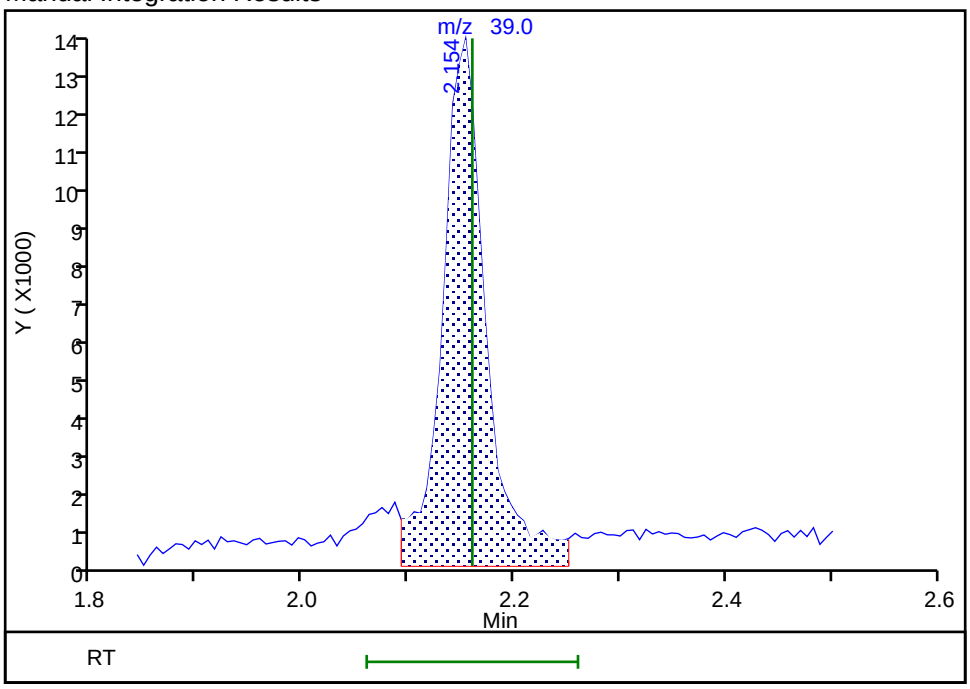
Processing Integration Results

RT: 2.15
Area: 37005
Amount: 0.500365
Amount Units: ug/l



Manual Integration Results

RT: 2.15
Area: 40081
Amount: 0.561114
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:52:00 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

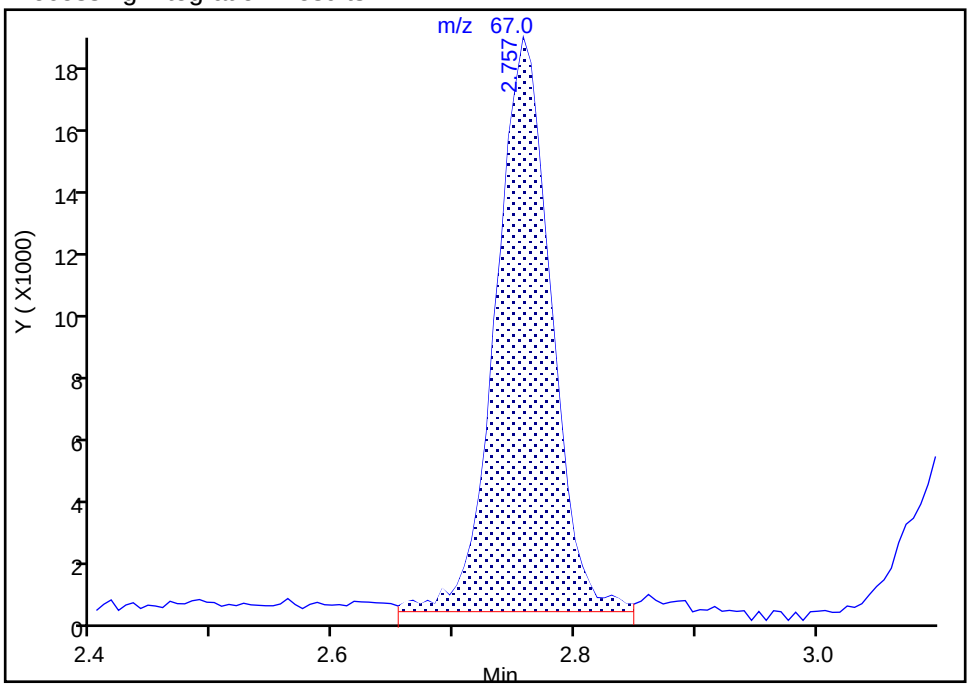
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X13.D				
Injection Date:	19-Jun-2023 18:40:30	Instrument ID:	19930		
Lims ID:	IC std2				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

9 Dichlorofluoromethane, CAS: 75-43-4

Signal: 1

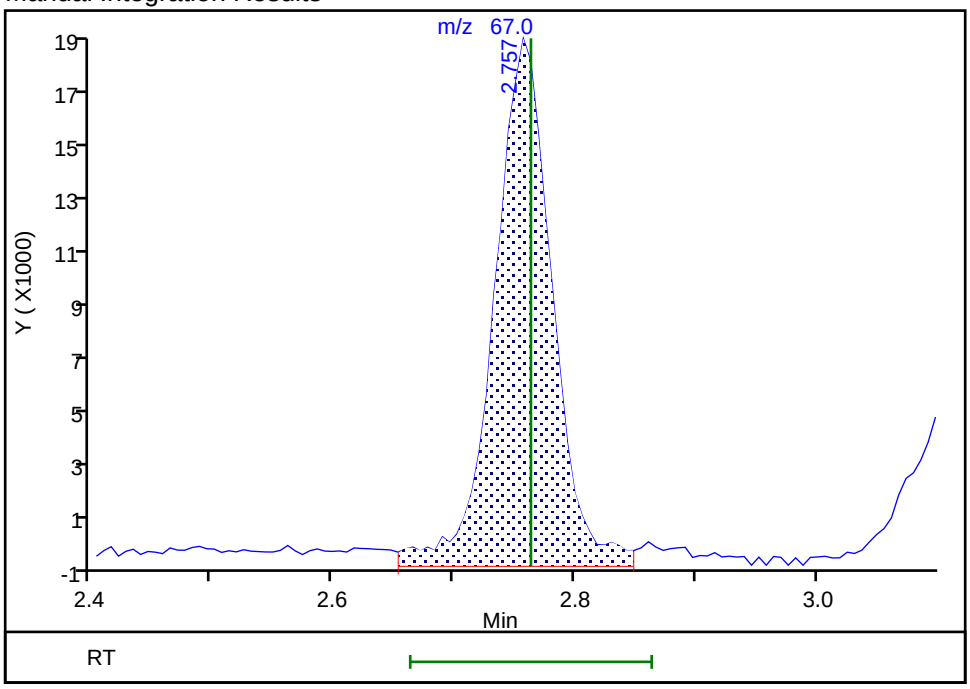
Processing Integration Results

RT: 2.76
Area: 59470
Amount: 0.514445
Amount Units: ug/l



Manual Integration Results

RT: 2.76
Area: 62910
Amount: 0.551864
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:52:13 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

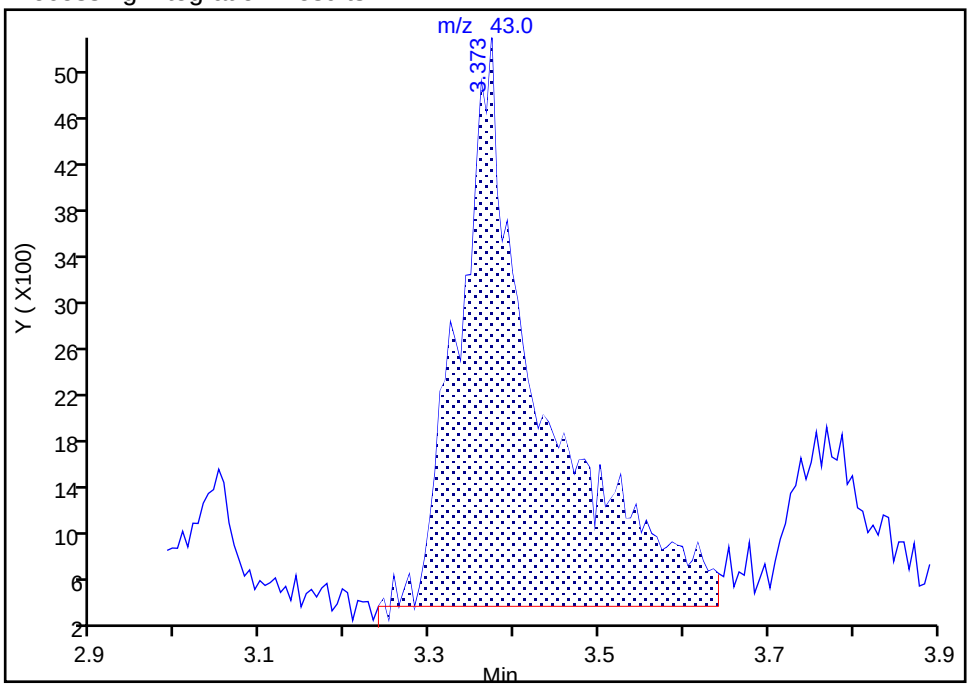
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X13.D				
Injection Date:	19-Jun-2023 18:40:30	Instrument ID:	19930		
Lims ID:	IC std2				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

16 Acetone, CAS: 67-64-1

Signal: 1

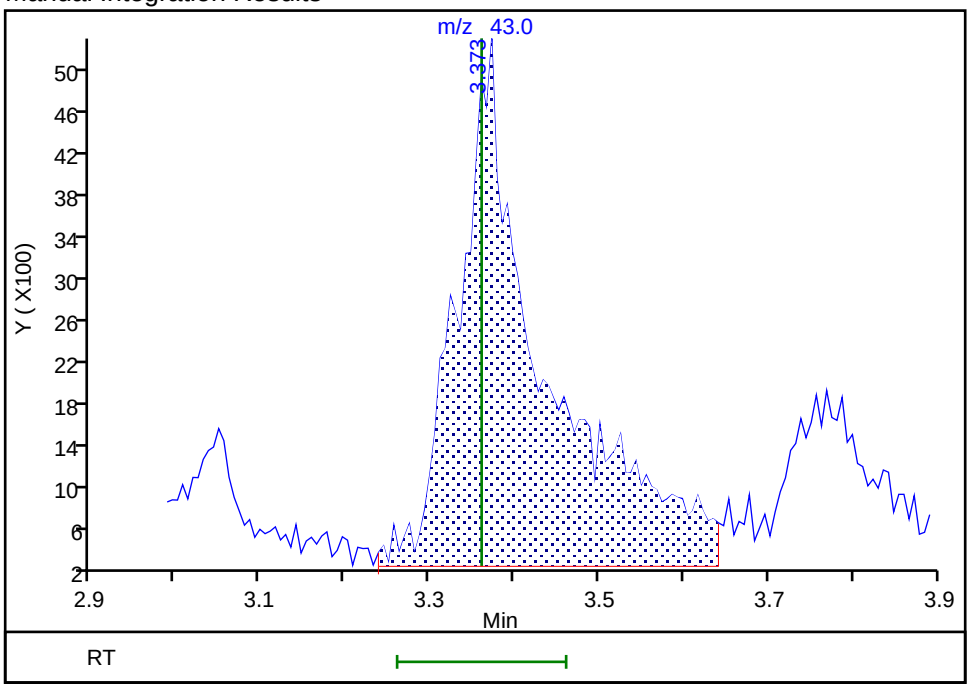
Processing Integration Results

RT: 3.37
Area: 32296
Amount: 4.222448
Amount Units: ug/l



Manual Integration Results

RT: 3.37
Area: 35188
Amount: 5.556663
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:52:28 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

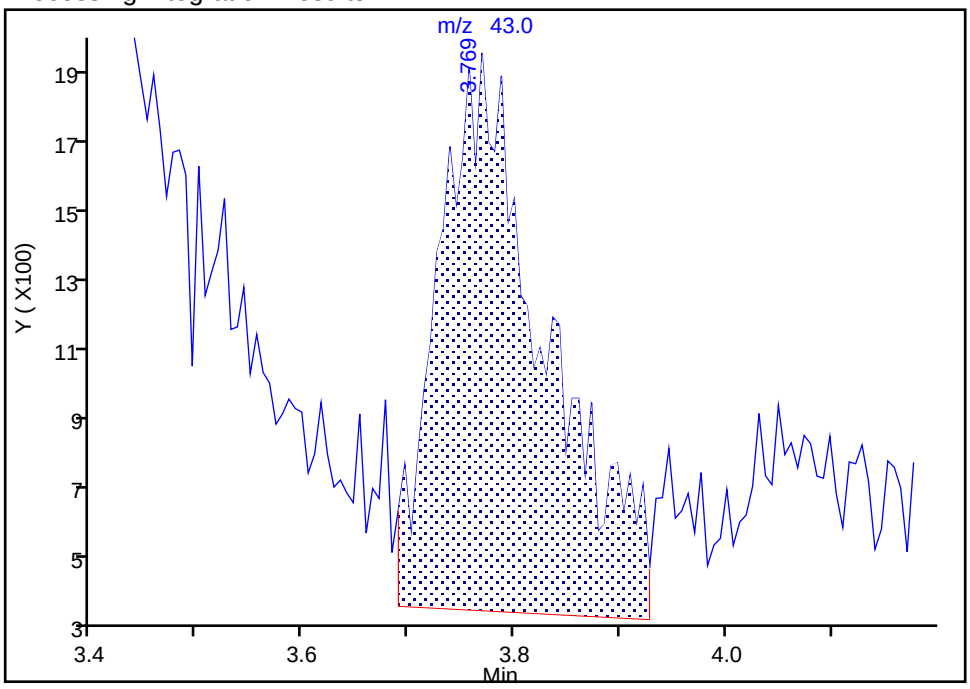
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X13.D				
Injection Date:	19-Jun-2023 18:40:30	Instrument ID:	19930		
Lims ID:	IC std2				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

23 Methyl acetate, CAS: 79-20-9

Signal: 1

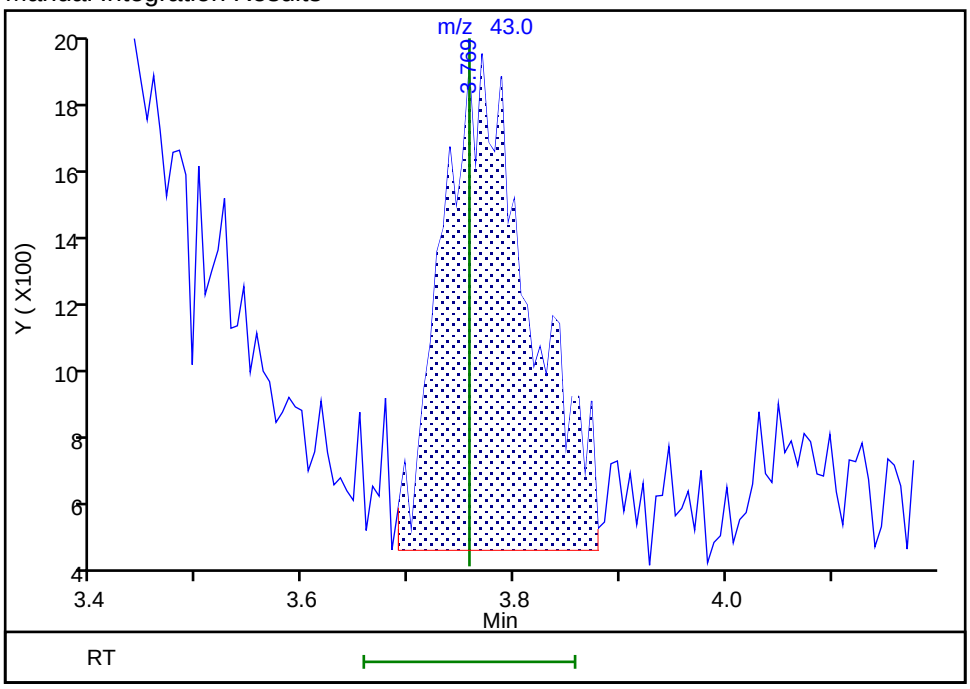
Processing Integration Results

RT: 3.77
Area: 11064
Amount: 0.695352
Amount Units: ug/l



Manual Integration Results

RT: 3.77
Area: 8217
Amount: 0.525783
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:52:48 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

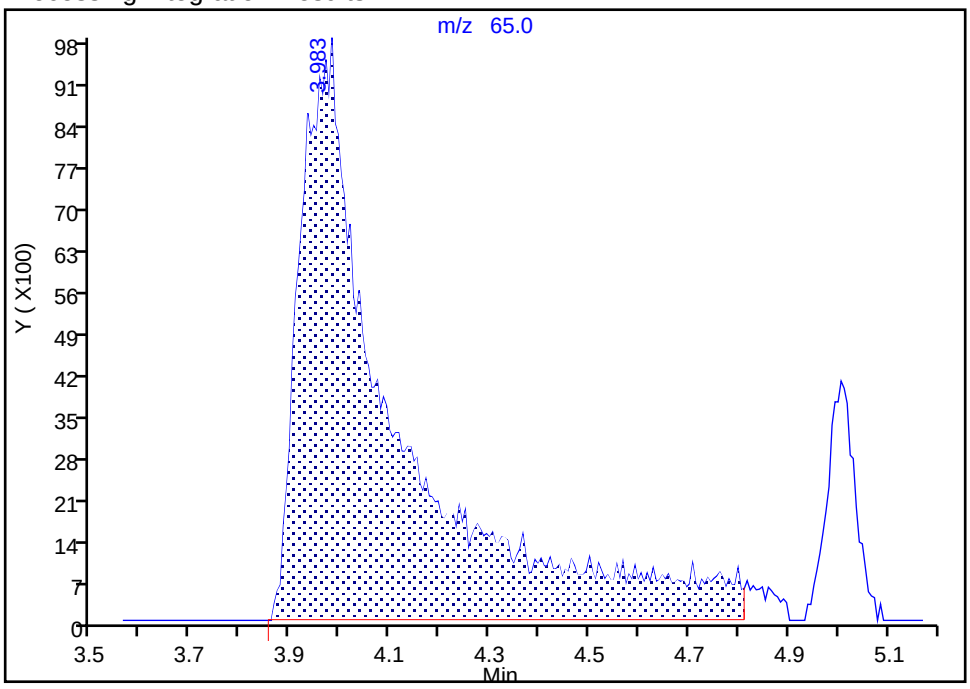
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X13.D				
Injection Date:	19-Jun-2023 18:40:30	Instrument ID:	19930		
Lims ID:	IC std2				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

* 26 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

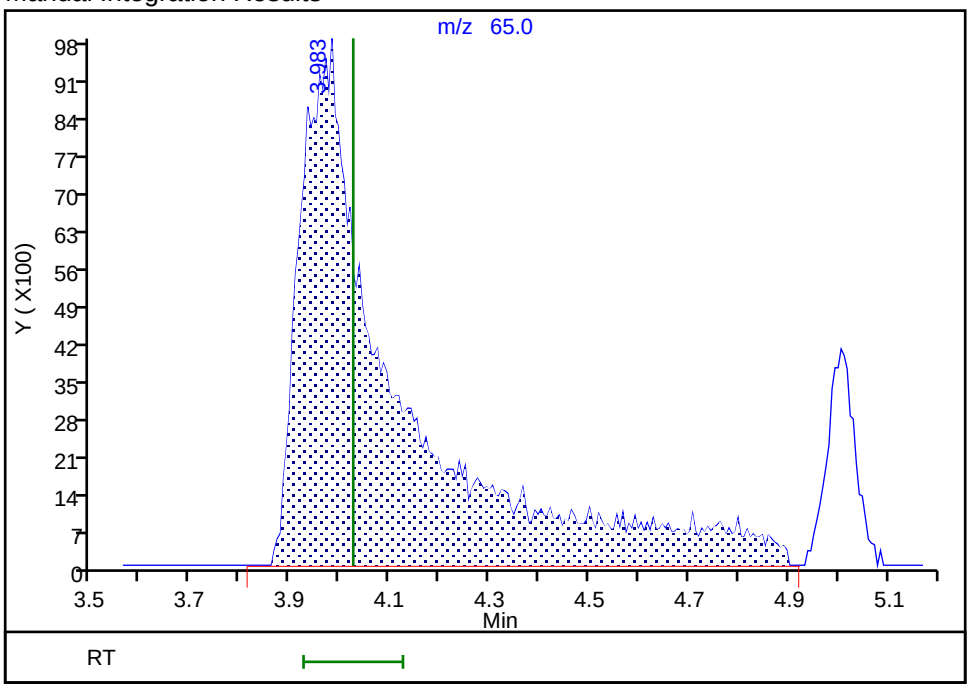
Processing Integration Results

RT: 3.98
Area: 129998
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 3.98
Area: 132398
Amount: 50.000000
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:53:02 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

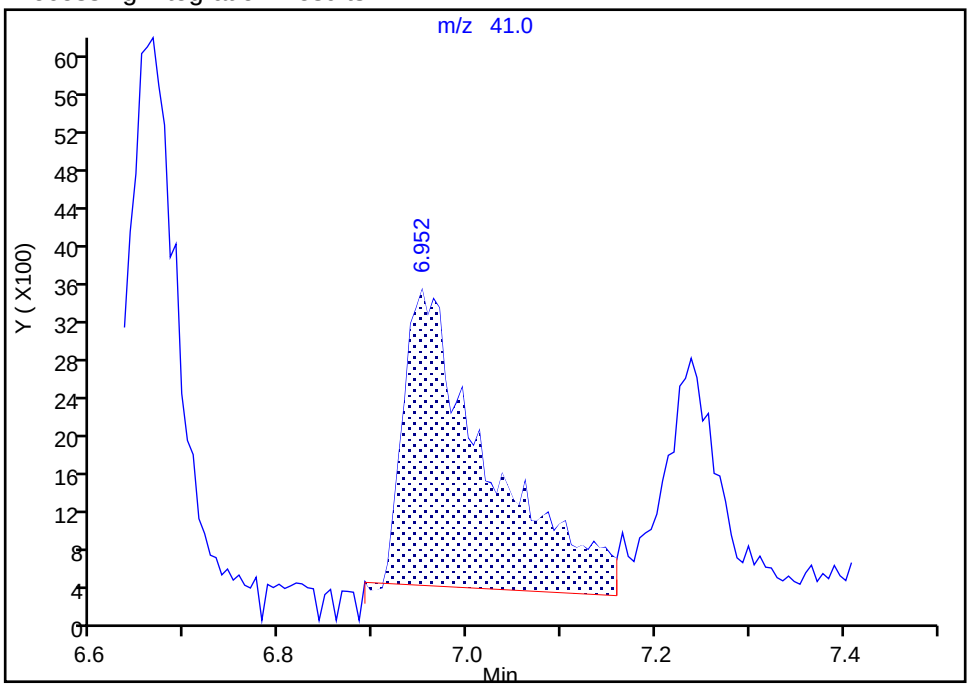
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X13.D
Injection Date: 19-Jun-2023 18:40:30 Instrument ID: 19930
Lims ID: IC std2
Client ID:
Operator ID: KNK41612 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

55 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

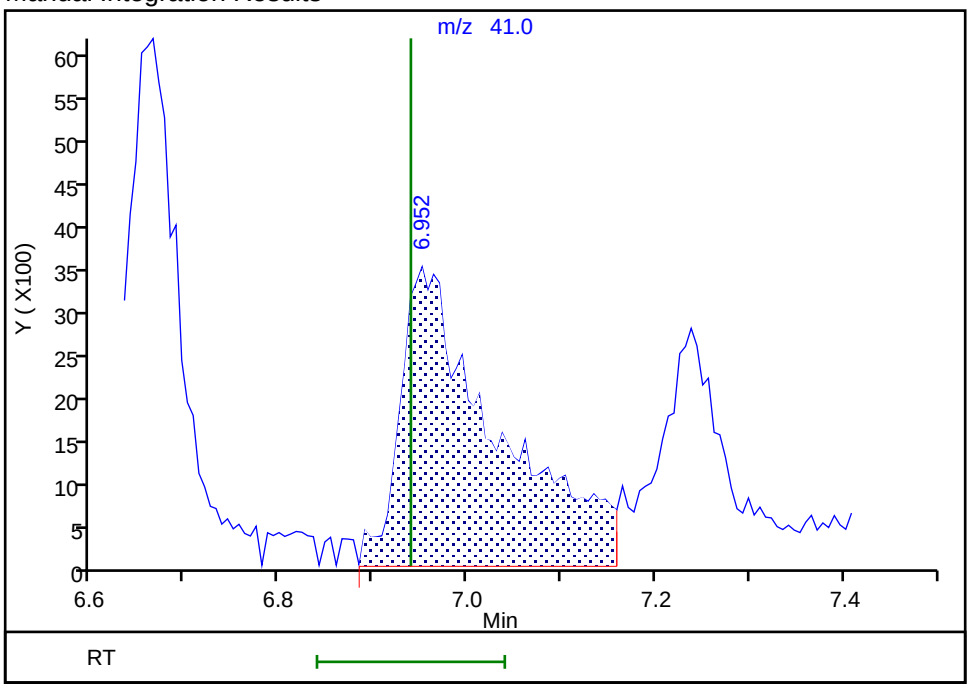
Processing Integration Results

RT: 6.95
Area: 19231
Amount: 21.730300
Amount Units: ug/l



Manual Integration Results

RT: 6.95
Area: 24811
Amount: 27.724861
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:53:30 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

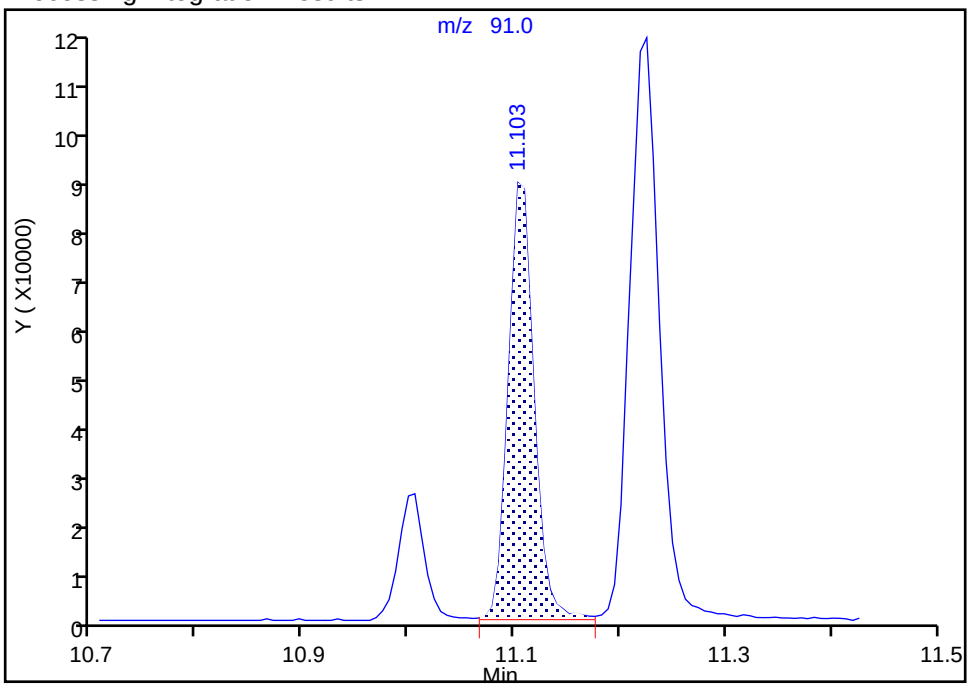
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X13.D
Injection Date: 19-Jun-2023 18:40:30 Instrument ID: 19930
Lims ID: IC std2
Client ID:
Operator ID: KNK41612 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

108 1-Chlorohexane, CAS: 544-10-5

Signal: 1

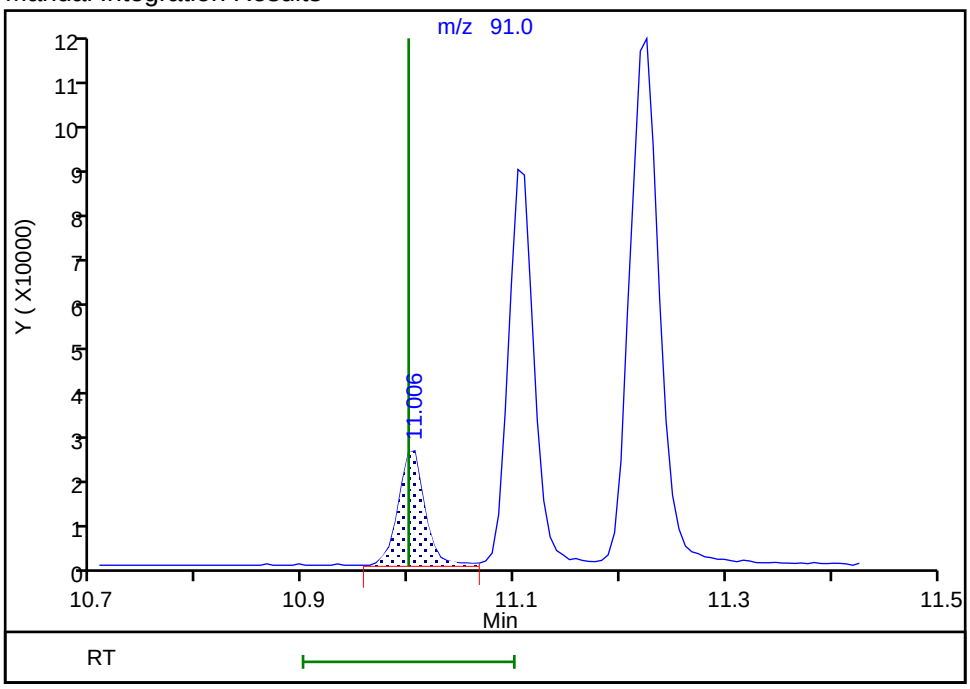
Processing Integration Results

RT: 11.10
Area: 143495
Amount: 0.598385
Amount Units: ug/l



Manual Integration Results

RT: 11.01
Area: 42354
Amount: 0.519576
Amount Units: ug/l



Reviewer: DVW2, 22-Jun-2023 07:47:29 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

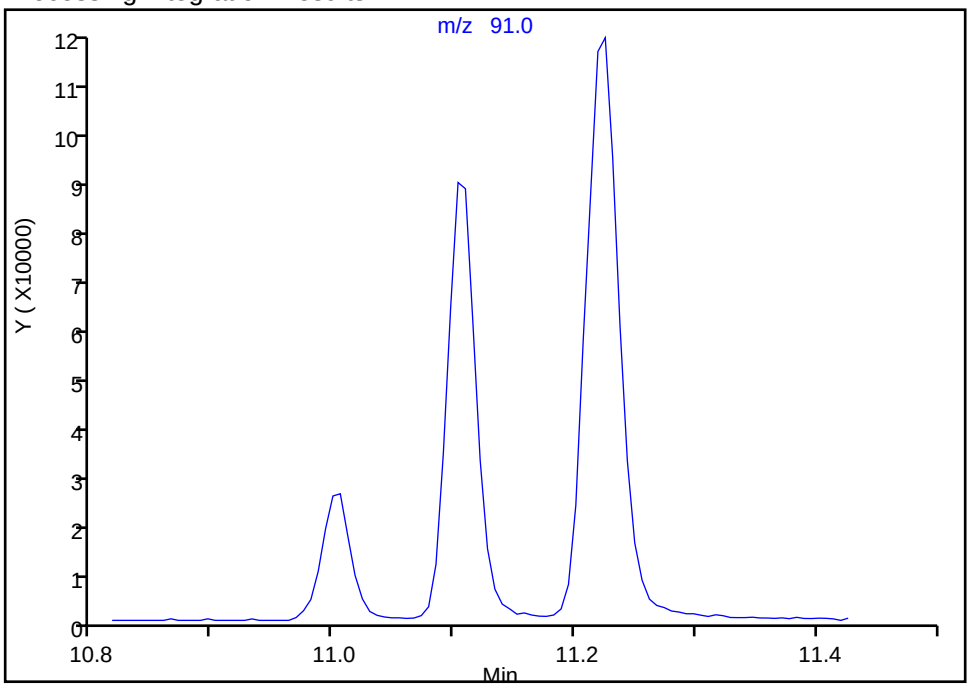
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X13.D				
Injection Date:	19-Jun-2023 18:40:30	Instrument ID:	19930		
Lims ID:	IC std2				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

112 Ethylbenzene, CAS: 100-41-4

Signal: 1

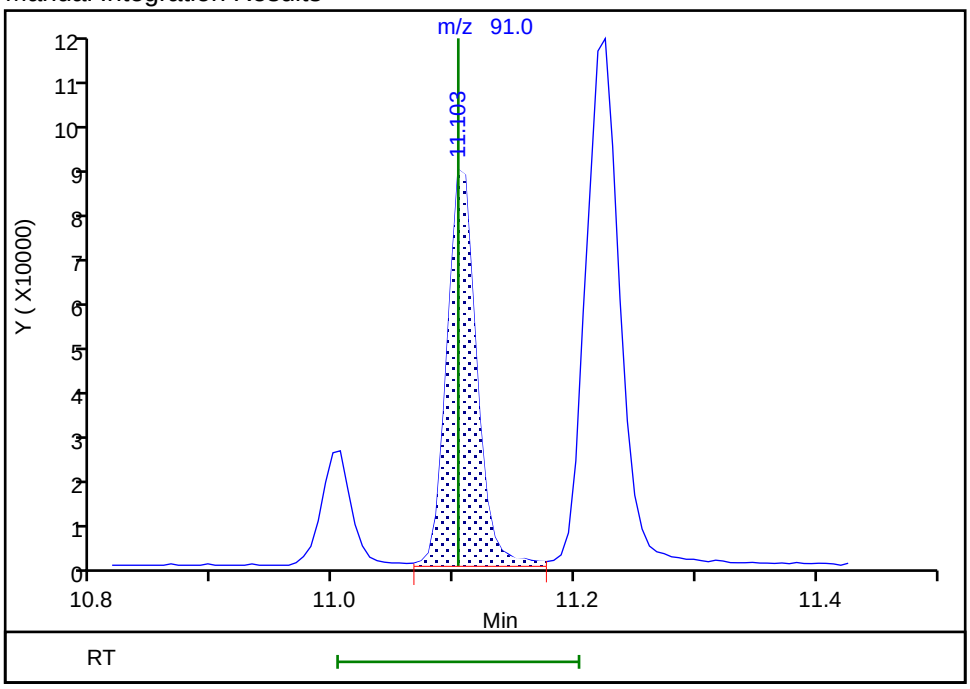
Not Detected
Expected RT: 11.10

Processing Integration Results



Manual Integration Results

RT: 11.10
Area: 143495
Amount: 0.525673
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 15:33:58 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

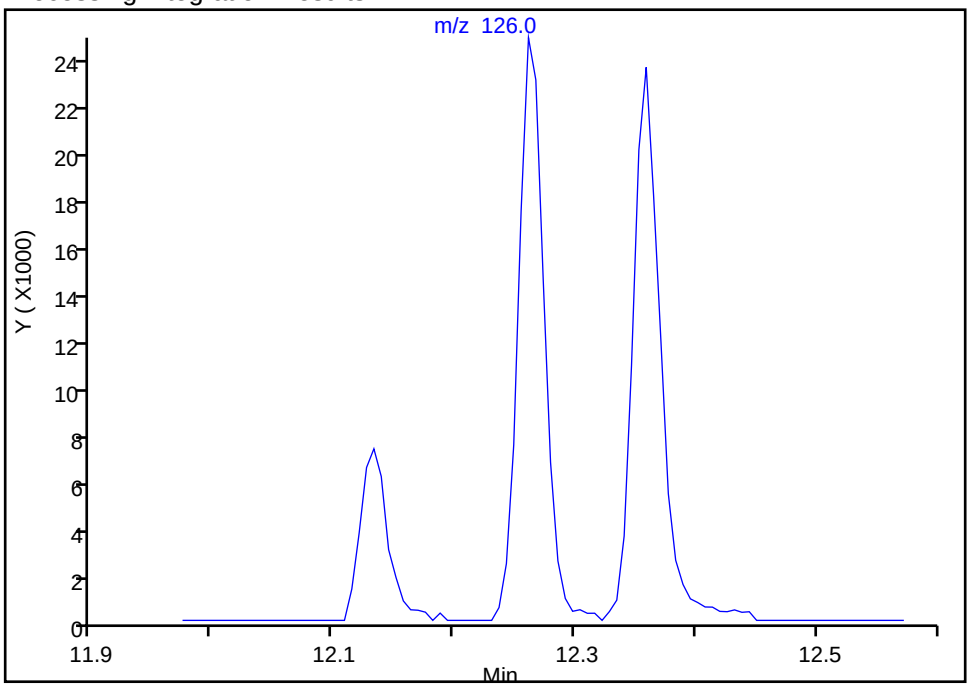
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X13.D				
Injection Date:	19-Jun-2023 18:40:30	Instrument ID:	19930		
Lims ID:	IC std2				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

126 2-Chlorotoluene, CAS: 95-49-8

Signal: 1

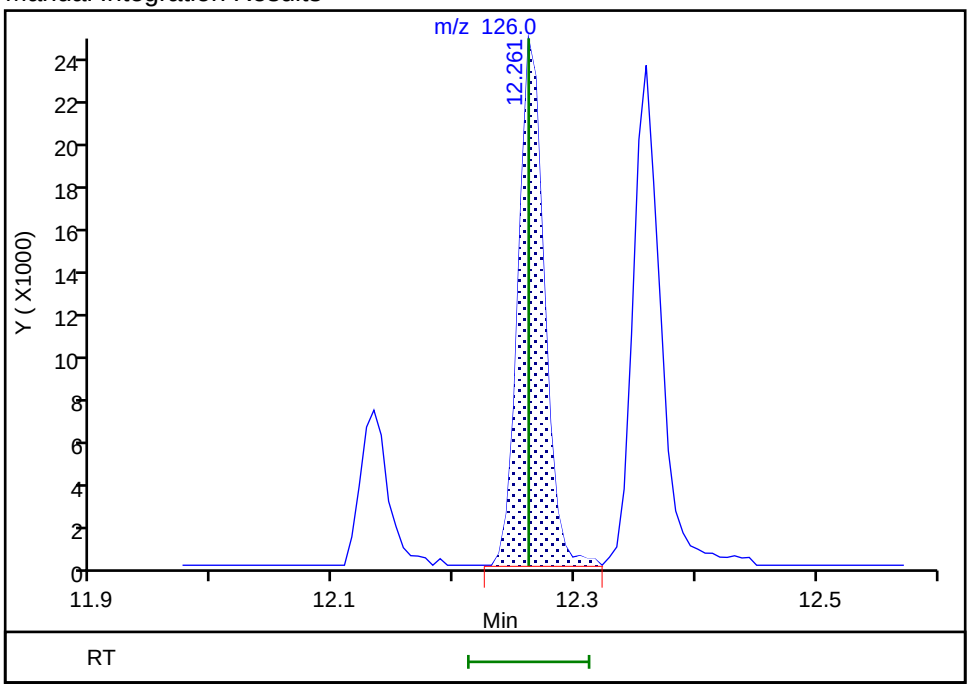
Not Detected
Expected RT: 12.26

Processing Integration Results



Manual Integration Results

RT: 12.26
Area: 36985
Amount: 0.532691
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 15:34:04 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X14.D
Lims ID: IC std3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 19-Jun-2023 19:01:30 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0086929-015
Misc. Info.: LG 1.0
Operator ID: KNK41612 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 27-Jun-2023 12:30:15 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1687

First Level Reviewer: DVW2 Date: 21-Jun-2023 07:57:36

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.849	1.855	-0.006	99	68962	1.00	0.9619	M
4 Chloromethane	50	2.044	2.050	-0.006	99	73144	1.00	1.00	
5 Vinyl chloride	62	2.148	2.160	-0.012	75	69992	1.00	1.00	
6 Butadiene	39	2.154	2.160	-0.006	91	70973	1.00	0.9733	M
7 Bromomethane	94	2.459	2.465	-0.006	90	55026	1.00	1.01	
8 Chloroethane	64	2.532	2.538	-0.006	99	41214	1.00	0.9885	
9 Dichlorofluoromethane	67	2.763	2.764	-0.001	97	116915	1.00	1.00	
10 Trichlorofluoromethane	101	2.824	2.824	0.000	97	87039	1.00	0.9810	
11 Ethyl ether	59	3.044	3.050	-0.006	91	37553	1.00	1.03	
13 1,2-Dichloro-1,1,2-trifluoroetha	67	3.117	3.142	-0.025	88	60893	1.00	0.9623	
14 Acrolein	56	3.208	3.209	-0.001	98	286815	50.0	49.6	
15 1,1-Dichloroethene	96	3.336	3.337	-0.001	98	42885	1.00	0.8930	
16 Acetone	43	3.367	3.361	0.006	84	70684	10.0	11.1	M
17 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.373	3.385	-0.012	89	45537	1.00	0.8934	
18 Iodomethane	142	3.519	3.526	-0.007	98	96625	1.00	0.9569	
19 Ethyl bromide	108	3.544	3.550	-0.006	97	44143	1.00	1.05	
20 Carbon disulfide	76	3.623	3.629	-0.006	99	119139	1.00	0.9149	
23 Methyl acetate	43	3.769	3.757	0.012	25	14418	1.00	0.9146	M
24 3-Chloro-1-propene	41	3.775	3.782	-0.007	91	68239	1.00	0.9143	
25 Methylene Chloride	84	3.952	3.958	-0.006	89	47789	1.00	0.9426	
* 26 t-Butyl alcohol-d10 (IS)	65	3.983	4.025	-0.042	95	133555	50.0	50.0	M
27 2-Methyl-2-propanol	59	4.092	4.093	-0.001	96	52571	20.0	20.7	
28 Acrylonitrile	53	4.294	4.282	0.012	98	17396	2.50	2.24	
29 Methyl tert-butyl ether	73	4.342	4.342	0.000	91	132891	1.00	1.01	
30 trans-1,2-Dichloroethene	96	4.348	4.355	-0.007	98	49647	1.00	0.9289	
31 Hexane	57	4.769	4.781	-0.012	91	61908	1.00	0.8837	
32 1,1-Dichloroethane	63	5.013	5.013	0.000	96	88859	1.00	0.9705	
35 Isopropyl ether	45	5.074	5.074	0.000	94	147957	1.00	0.9841	
36 2-Chloro-1,3-butadiene	53	5.123	5.123	0.000	91	70549	1.00	0.9215	
37 Tert-butyl ethyl ether	59	5.610	5.623	-0.013	96	141482	1.00	0.9852	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
38 2-Butanone (MEK)	43	5.824	5.812	0.012	99	122006	10.0	9.91	
39 cis-1,2-Dichloroethene	96	5.854	5.854	0.000	81	56850	1.00	0.9561	
40 2,2-Dichloropropane	77	5.866	5.867	-0.001	88	75466	1.00	0.9147	
43 Propionitrile	54	5.903	5.891	0.012	98	66438	20.0	20.4	
45 Methacrylonitrile	67	6.110	6.110	0.000	90	128773	10.0	10.0	
S 41 1,2-Dichloroethene, Total	100				0			1.89	
46 Chlorobromomethane	128	6.177	6.190	-0.013	84	26936	1.00	1.00	
47 Tetrahydrofuran	71	6.196	6.196	0.000	74	20095	5.00	4.96	
48 Chloroform	83	6.336	6.342	-0.006	93	91363	1.00	0.9660	
$ 49 Dibromofluoromethane (Surr)	113	6.555	6.555	0.000	95	461318	10.0	10.0	
50 1,1,1-Trichloroethane	97	6.568	6.568	0.000	96	81153	1.00	0.9188	
51 Cyclohexane	56	6.659	6.671	-0.012	88	73626	1.00	0.8797	
54 Carbon tetrachloride	117	6.775	6.781	-0.006	97	71388	1.00	0.9072	
53 1,1-Dichloropropene	75	6.781	6.781	0.000	94	63636	1.00	0.9049	
55 Isobutyl alcohol	41	6.952	6.940	0.012	94	48416	50.0	53.6	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.006	7.013	-0.007	68	93659	10.0	10.3	
57 Benzene	78	7.037	7.043	-0.006	92	202213	1.00	0.9564	
58 1,2-Dichloroethane	62	7.110	7.116	-0.006	98	56615	1.00	0.9878	
60 Tert-amyl methyl ether	73	7.238	7.244	-0.006	98	131492	1.00	0.99	
* 61 Fluorobenzene (IS)	96	7.445	7.445	0.000	99	1790586	10.0	10.0	
62 n-Heptane	43	7.470	7.470	0.000	92	58742	1.00	0.8733	
63 n-Butanol	56	7.860	7.836	0.024	85	57099	87.5	82.3	
64 Trichloroethene	95	7.933	7.933	0.000	96	55041	1.00	0.9357	
65 Methylcyclohexane	83	8.244	8.244	0.000	92	85392	1.00	0.8987	
66 1,2-Dichloropropane	63	8.262	8.269	-0.007	95	50772	1.00	0.9712	
67 Methyl methacrylate	69	8.366	8.354	0.012	89	25680	1.00	1.01	
68 1,4-Dioxane	88	8.372	8.366	0.006	31	5746	50.0	39.0	
69 Dibromomethane	93	8.384	8.378	0.006	92	26070	1.00	0.99	
71 Dichlorobromomethane	83	8.616	8.616	0.000	99	66817	1.00	0.9834	
72 2-Nitropropane	41	8.884	8.884	0.000	98	38795	5.00	4.69	
75 1-Bromo-2-chloroethane	63	9.018	9.012	0.006	98	55828	1.00	1.05	
76 cis-1,3-Dichloropropene	75	9.177	9.177	0.000	96	78154	1.00	0.9586	
77 4-Methyl-2-pentanone (MIBK)	43	9.360	9.360	0.000	95	324775	10.0	9.83	
$ 78 Toluene-d8 (Surr)	98	9.494	9.500	-0.006	93	1804500	10.0	9.93	
79 Toluene	92	9.573	9.579	-0.006	98	134873	1.00	0.9406	
97 trans-1,3-Dichloropropene	75	9.847	9.848	-0.001	92	65778	1.00	0.9719	
99 Ethyl methacrylate	69	9.921	9.915	0.005	89	56167	1.00	1.00	
100 1,1,2-Trichloroethane	97	10.055	10.055	0.000	90	40644	1.00	1.00	
S 98 1,3-Dichloropropene, Total	100				0			1.93	
101 Tetrachloroethene	166	10.140	10.146	-0.006	98	69578	1.00	0.9303	
102 1,3-Dichloropropane	76	10.219	10.219	0.000	89	63491	1.00	0.99	
103 2-Hexanone	43	10.280	10.274	0.006	95	234543	10.0	10.0	
105 Chlorodibromomethane	129	10.439	10.439	0.000	90	50898	1.00	0.9660	
106 Ethylene Dibromide	107	10.555	10.549	0.006	99	38807	1.00	1.02	
* 107 Chlorobenzene-d5 (IS)	117	10.987	10.987	0.000	84	1413947	10.0	10.0	
108 1-Chlorohexane	91	11.000	11.000	0.000	95	75197	1.00	0.9011	a
109 Chlorobenzene	112	11.018	11.018	0.000	97	161040	1.00	0.9599	
111 1,1,1,2-Tetrachloroethane	131	11.103	11.097	0.006	96	58062	1.00	0.9712	
112 Ethylbenzene	91	11.103	11.103	0.000	98	262649	1.00	0.9399	a
113 m-Xylene & p-Xylene	106	11.225	11.219	0.006	93	213843	2.00	1.89	
S 110 Xylenes, Total	106				0			2.85	
114 o-Xylene	106	11.554	11.554	0.000	95	107419	1.00	0.9616	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
115 Styrene	104	11.573	11.567	0.006	95	171340	1.00	0.9534	
116 Bromoform	173	11.725	11.725	0.000	98	33303	1.00	0.9745	
117 Isopropylbenzene	105	11.859	11.859	0.000	95	271455	1.00	0.9369	
$ 120 4-Bromofluorobenzene (Surr)	95	11.999	12.000	-0.001	96	682073	10.0	9.96	
121 1,1,2,2-Tetrachloroethane	83	12.103	12.103	0.000	93	52659	1.00	1.04	
122 Bromobenzene	156	12.115	12.115	0.000	94	71063	1.00	0.9706	
123 trans-1,4-Dichloro-2-butene	53	12.133	12.128	0.005	93	123536	10.0	9.93	
124 1,2,3-Trichloropropane	110	12.152	12.146	0.006	81	15312	1.00	1.08	
125 N-Propylbenzene	91	12.188	12.189	-0.001	98	303252	1.00	0.9358	
126 2-Chlorotoluene	126	12.262	12.262	0.000	97	67323	1.00	0.9512	a
127 1,3,5-Trimethylbenzene	105	12.322	12.323	-0.001	95	235489	1.00	0.9535	
128 4-Chlorotoluene	126	12.359	12.353	0.006	96	70351	1.00	0.9702	
129 tert-Butylbenzene	134	12.566	12.566	0.000	92	56204	1.00	0.9470	
130 Pentachloroethane	167	12.597	12.597	0.000	92	47961	1.00	1.04	
131 1,2,4-Trimethylbenzene	105	12.609	12.609	0.000	96	244539	1.00	0.9644	
132 sec-Butylbenzene	105	12.731	12.731	0.000	94	293727	1.00	0.9351	
133 1,3-Dichlorobenzene	146	12.828	12.829	-0.001	98	136646	1.00	0.9550	
134 4-Isopropyltoluene	119	12.841	12.841	0.000	97	264478	1.00	0.9444	
* 135 1,4-Dichlorobenzene-d4	152	12.883	12.883	0.000	93	851085	10.0	10.0	
136 1,4-Dichlorobenzene	146	12.902	12.902	0.000	96	139429	1.00	0.9886	
137 1,2,3-Trimethylbenzene	120	12.914	12.914	0.000	98	111687	1.00	0.9744	
138 Benzyl chloride	126	12.981	12.981	0.000	98	21662	1.00	1.00	
139 n-Butylbenzene	92	13.133	13.133	0.000	97	115817	1.00	0.9236	
140 1,2-Dichlorobenzene	146	13.164	13.158	0.006	99	131059	1.00	0.9750	
142 1,2-Dibromo-3-Chloropropane	155	13.706	13.700	0.006	89	8390	1.00	1.01	
143 1,3,5-Trichlorobenzene	180	13.834	13.828	0.006	97	101687	1.00	0.9476	
144 1,2,4-Trichlorobenzene	180	14.255	14.249	0.006	94	81792	1.00	0.9474	
145 Hexachlorobutadiene	225	14.334	14.334	0.000	96	38205	1.00	0.9084	
146 Naphthalene	128	14.432	14.426	0.006	96	155480	1.00	0.9895	
147 1,2,3-Trichlorobenzene	180	14.572	14.572	0.000	96	69112	1.00	0.9564	
155 2-Methylnaphthalene	142		0.000				ND	ND	
156 p-Diethylbenzene	1		0.000				ND	ND	
161 Pentane	43		0.000				ND	ND	
150 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
165 Isopropyl alcohol	45		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_LL_#1_826_00081	Amount Added:	2.00	Units: uL	
MSV_LL_#2_826_00093	Amount Added:	2.00	Units: uL	
MSV_LL_GAS826_00156	Amount Added:	2.00	Units: uL	
MSV_LLcentISS_00007	Amount Added:	5.00	Units: uL	Run Reagent

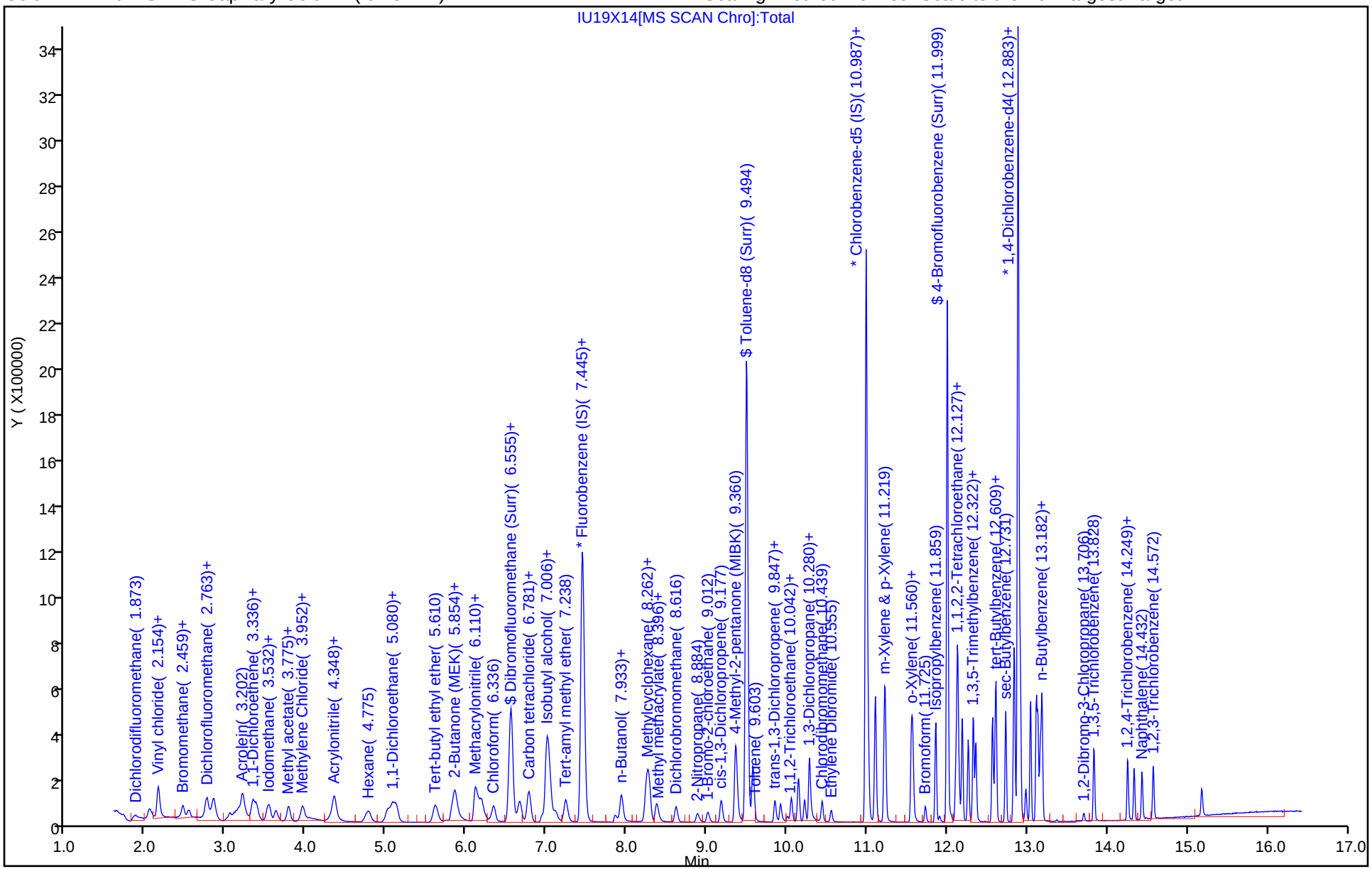
Report Date: 27-Jun-2023 12:30:15 Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X14.D

Injection Date:	19-Jun-2023 19:01:30	Instrument ID:	19930	Operator ID:	KNK41612
Lims ID:	IC std3			Worklist Smp#:	15
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

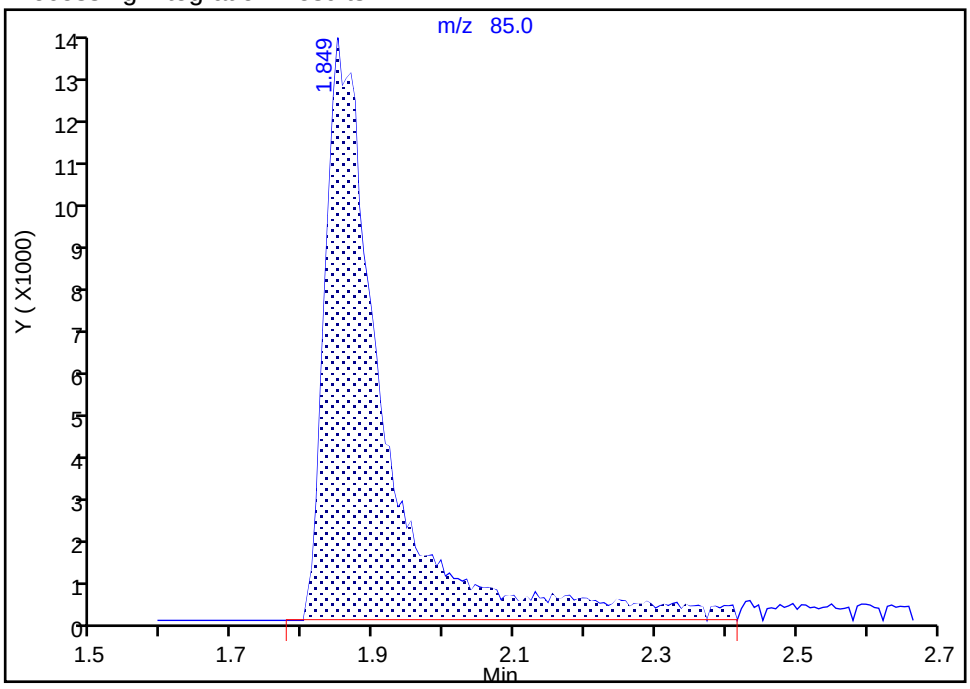
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X14.D				
Injection Date:	19-Jun-2023 19:01:30	Instrument ID:	19930		
Lims ID:	IC std3				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

1 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

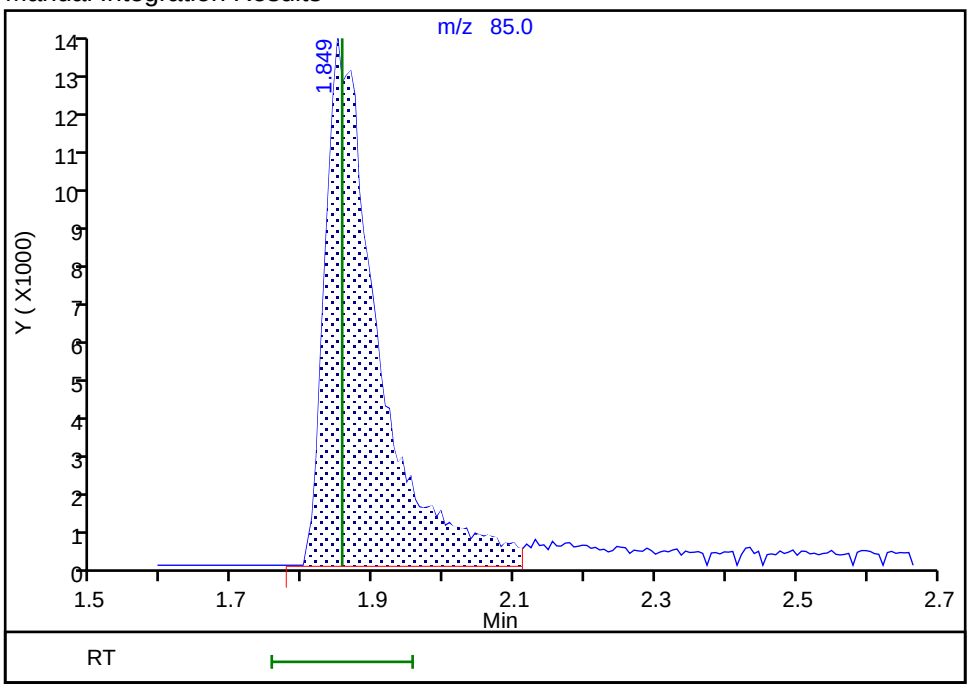
Processing Integration Results

RT: 1.85
Area: 76082
Amount: 1.046441
Amount Units: ug/l



Manual Integration Results

RT: 1.85
Area: 68962
Amount: 0.961862
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:54:35 -04:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

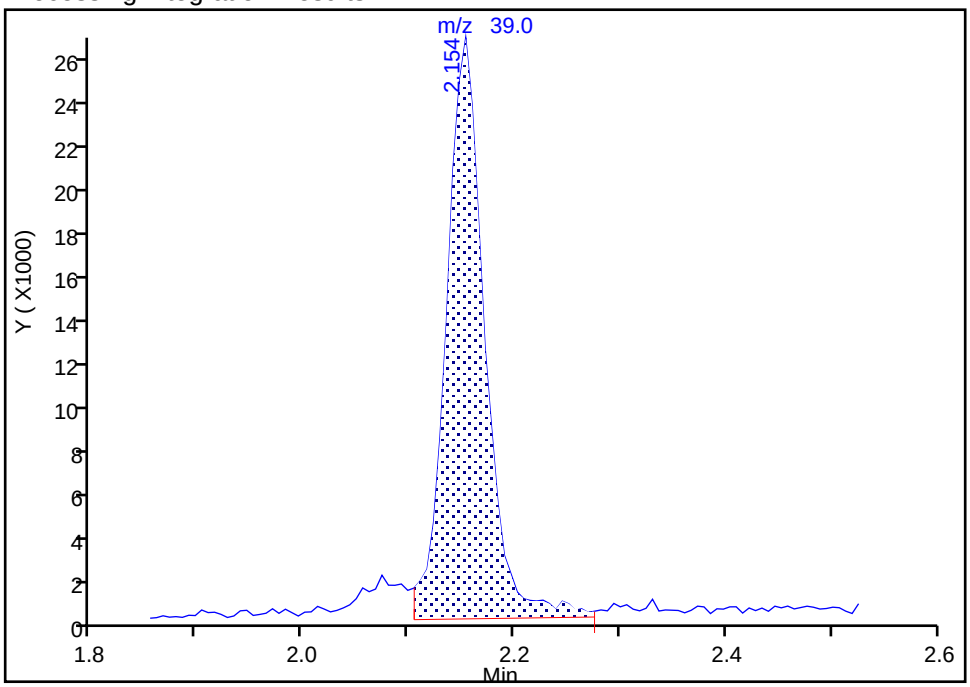
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X14.D				
Injection Date:	19-Jun-2023 19:01:30	Instrument ID:	19930		
Lims ID:	IC std3				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

6 Butadiene, CAS: 106-99-0

Signal: 1

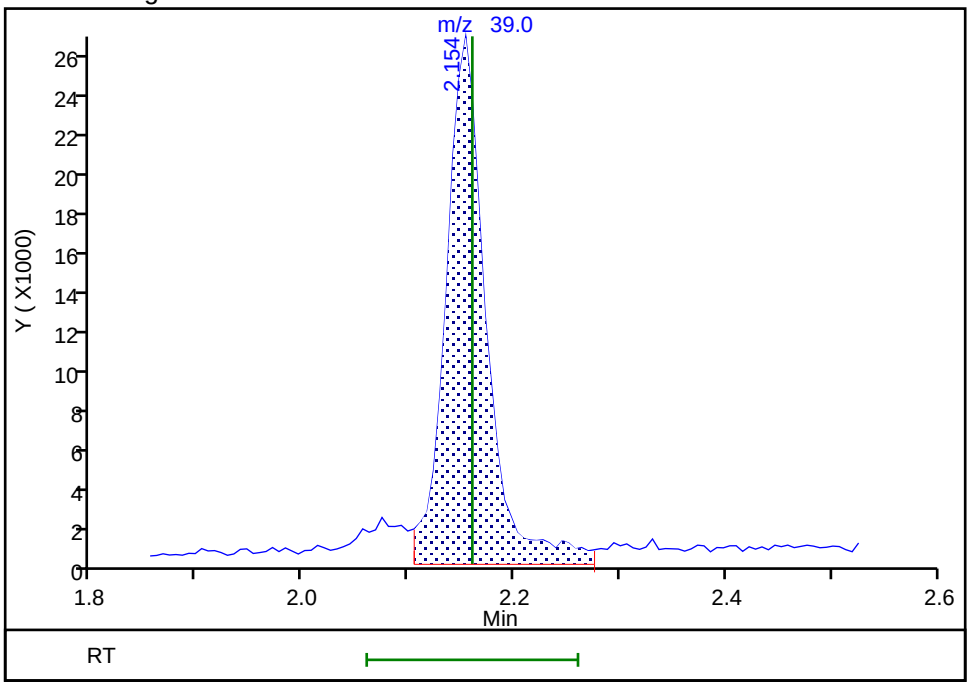
Processing Integration Results

RT: 2.15
Area: 67127
Amount: 0.953617
Amount Units: ug/l



Manual Integration Results

RT: 2.15
Area: 70973
Amount: 0.973260
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:54:49 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

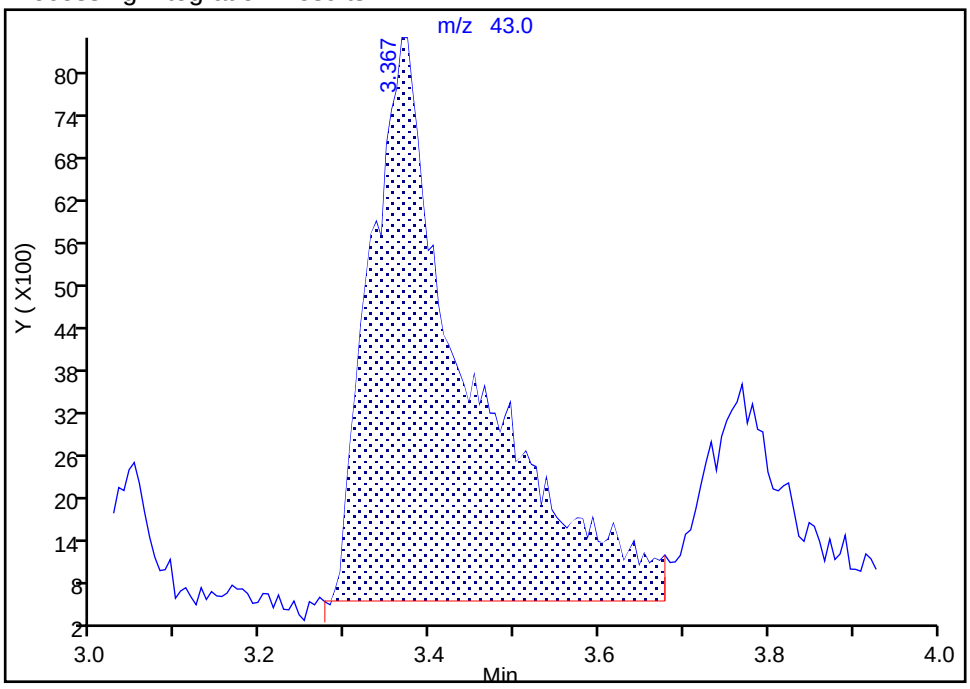
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X14.D
Injection Date: 19-Jun-2023 19:01:30 Instrument ID: 19930
Lims ID: IC std3
Client ID:
Operator ID: KNK41612 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

16 Acetone, CAS: 67-64-1

Signal: 1

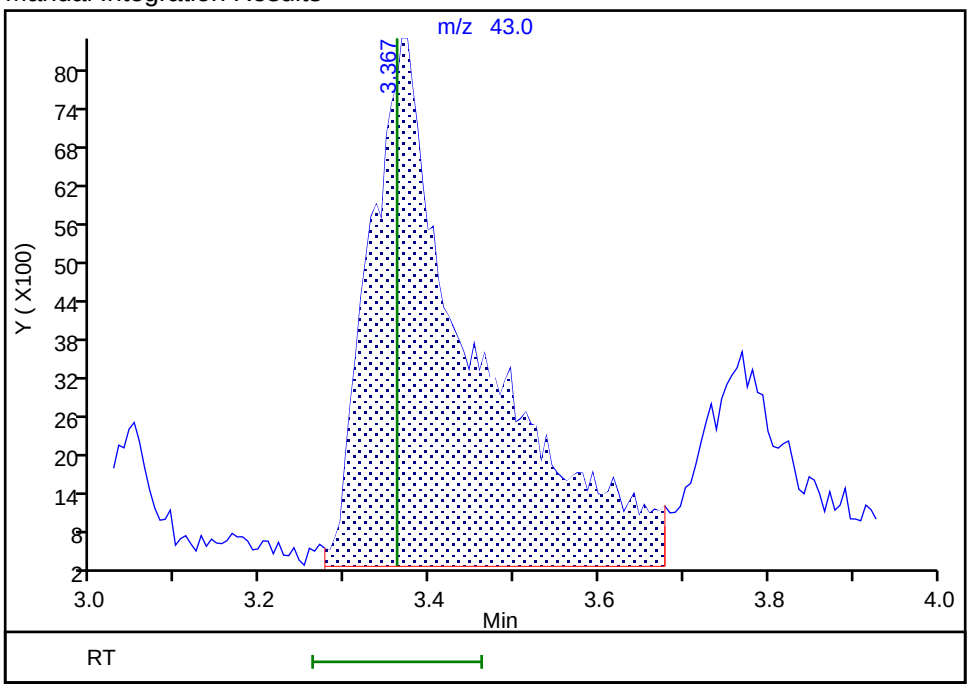
Processing Integration Results

RT: 3.37
Area: 64263
Amount: 9.340978
Amount Units: ug/l



Manual Integration Results

RT: 3.37
Area: 70684
Amount: 11.065266
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:55:06 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

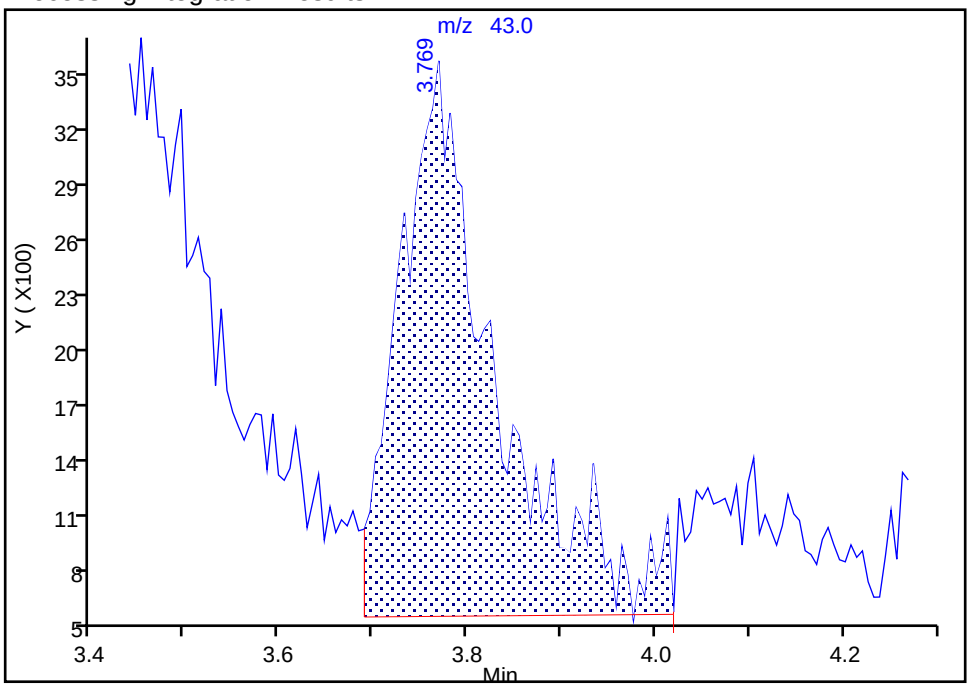
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X14.D				
Injection Date:	19-Jun-2023 19:01:30	Instrument ID:	19930		
Lims ID:	IC std3				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

23 Methyl acetate, CAS: 79-20-9

Signal: 1

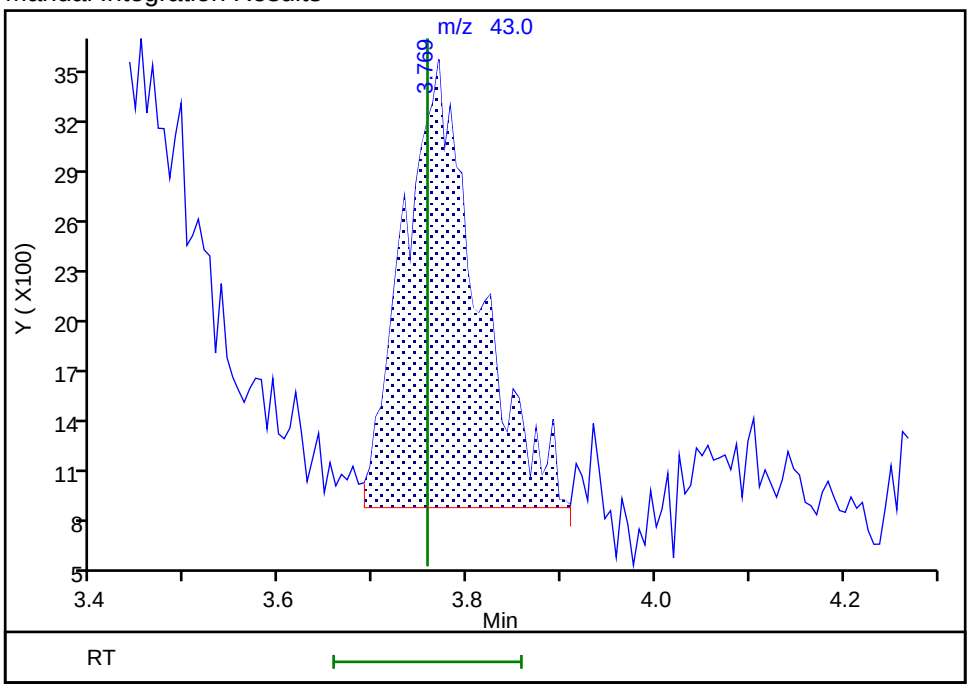
Processing Integration Results

RT: 3.77
Area: 20787
Amount: 1.131048
Amount Units: ug/l



Manual Integration Results

RT: 3.77
Area: 14418
Amount: 0.914576
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:55:31 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

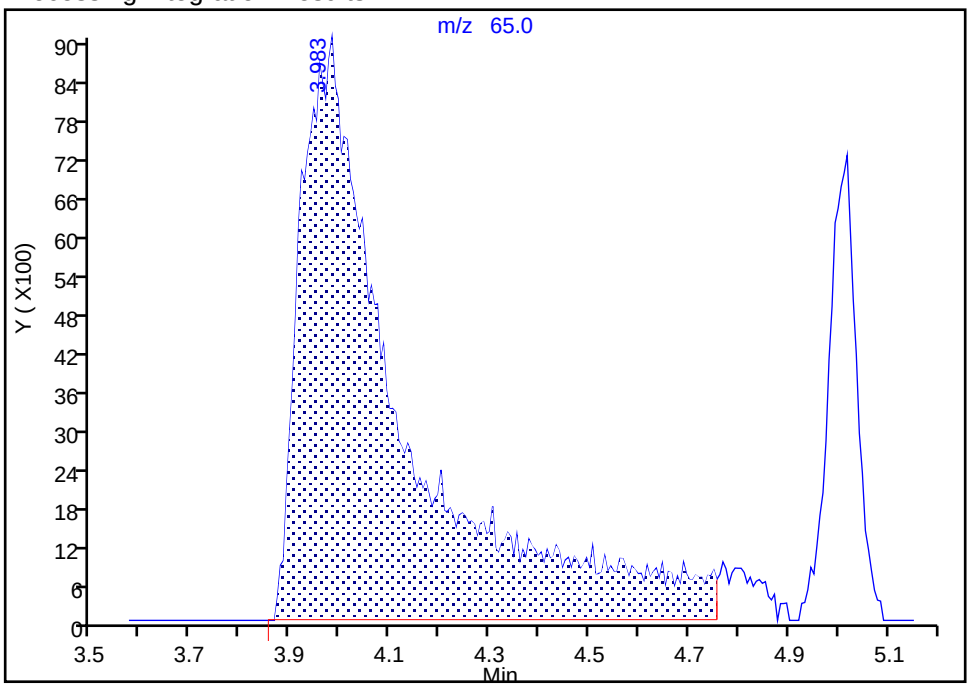
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X14.D
Injection Date: 19-Jun-2023 19:01:30 Instrument ID: 19930
Lims ID: IC std3
Client ID:
Operator ID: KNK41612 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 26 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

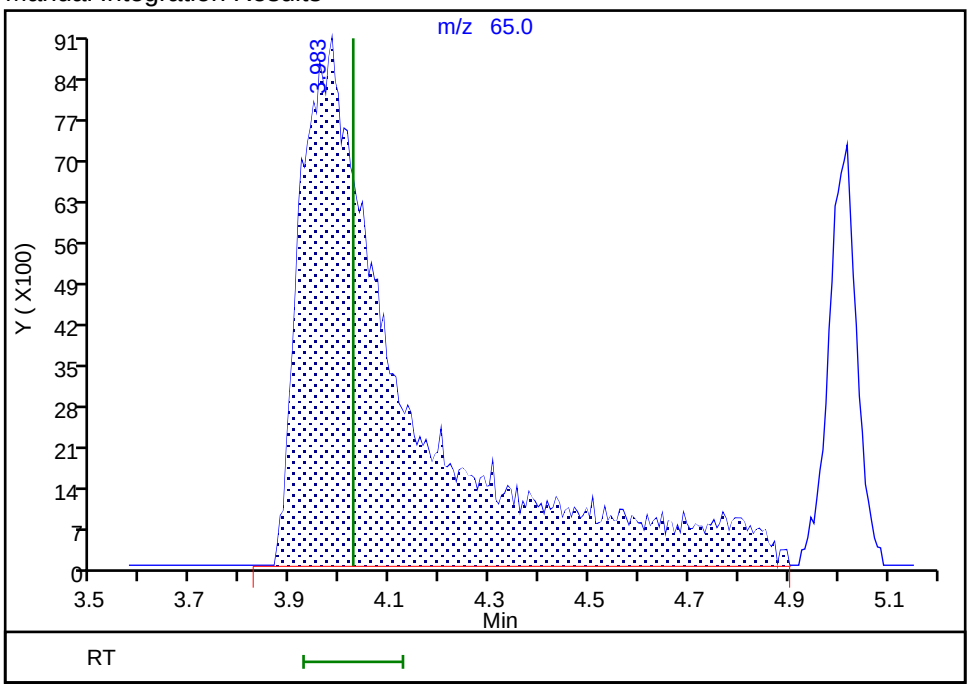
Processing Integration Results

RT: 3.98
Area: 128785
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 3.98
Area: 133555
Amount: 50.000000
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:55:40 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

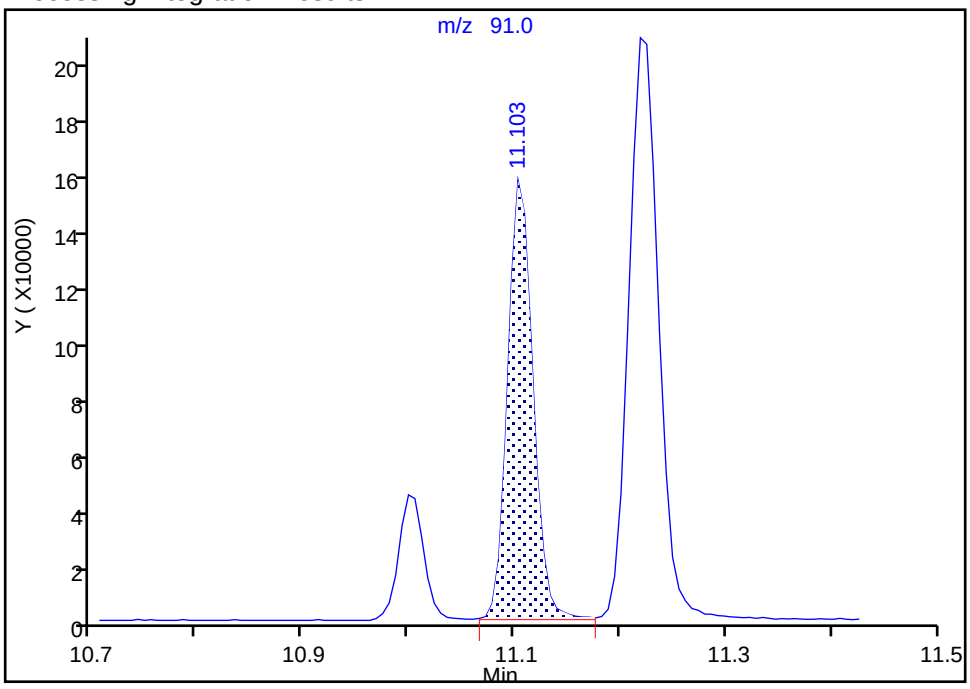
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X14.D
Injection Date: 19-Jun-2023 19:01:30 Instrument ID: 19930
Lims ID: IC std3
Client ID:
Operator ID: KNK41612 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

108 1-Chlorohexane, CAS: 544-10-5

Signal: 1

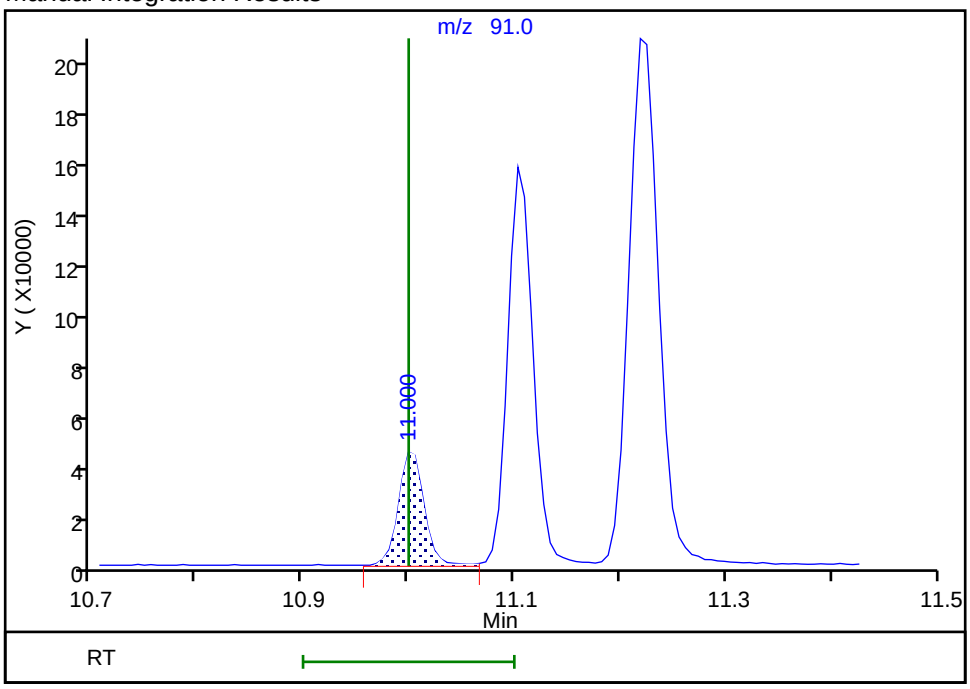
Processing Integration Results

RT: 11.10
Area: 262649
Amount: 1.166835
Amount Units: ug/l



Manual Integration Results

RT: 11.00
Area: 75197
Amount: 0.901091
Amount Units: ug/l



Reviewer: DVW2, 22-Jun-2023 07:47:42 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

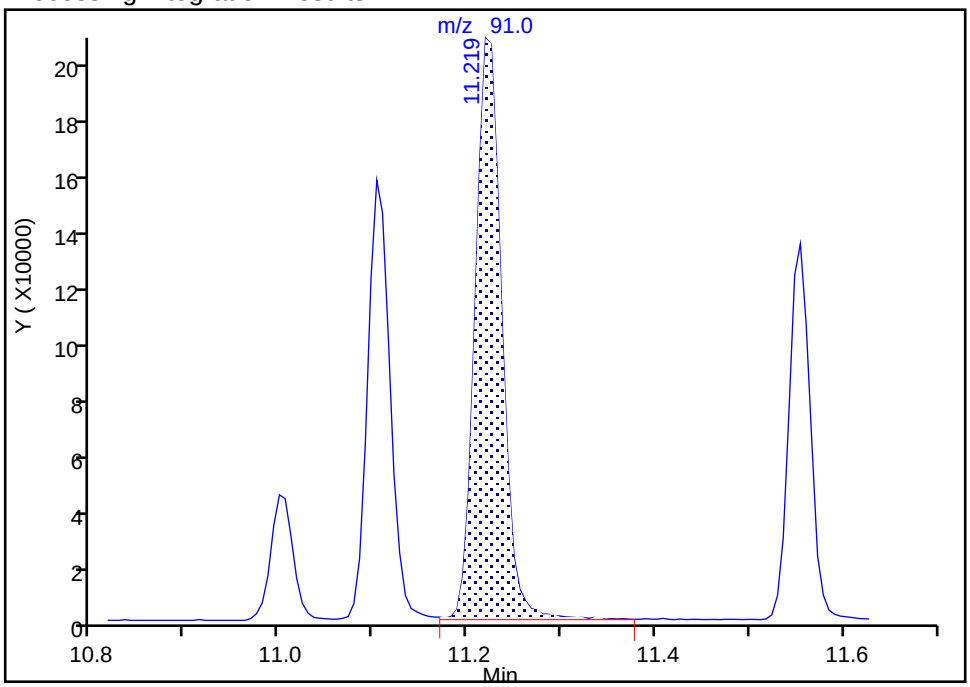
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X14.D
Injection Date: 19-Jun-2023 19:01:30 Instrument ID: 19930
Lims ID: IC std3
Client ID:
Operator ID: KNK41612 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

112 Ethylbenzene, CAS: 100-41-4

Signal: 1

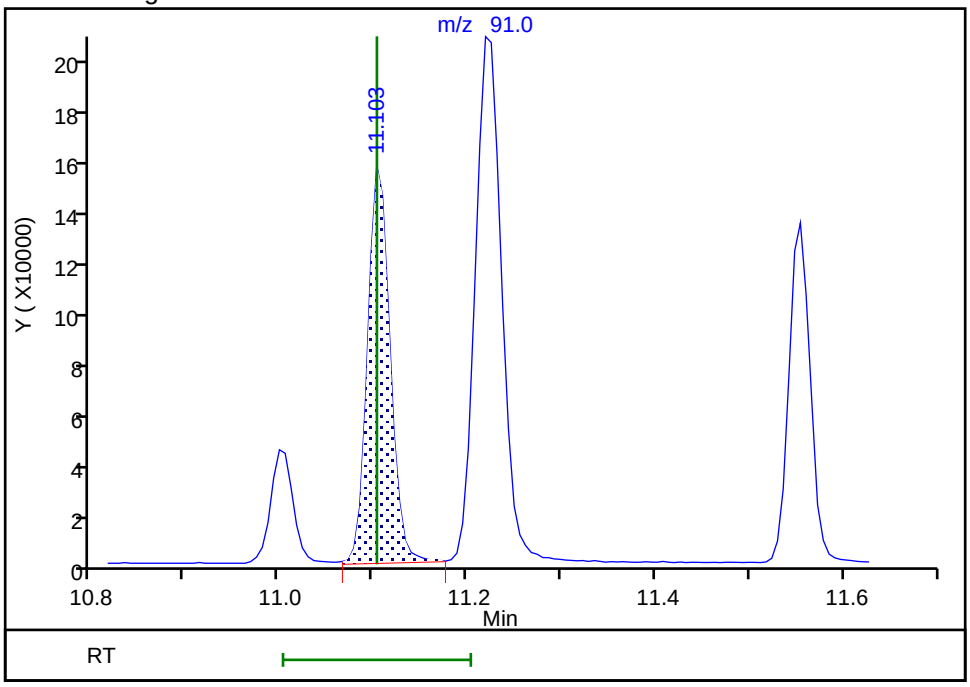
Processing Integration Results

RT: 11.22
Area: 410800
Amount: 1.054612
Amount Units: ug/l



Manual Integration Results

RT: 11.10
Area: 262649
Amount: 0.939871
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 15:34:29 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

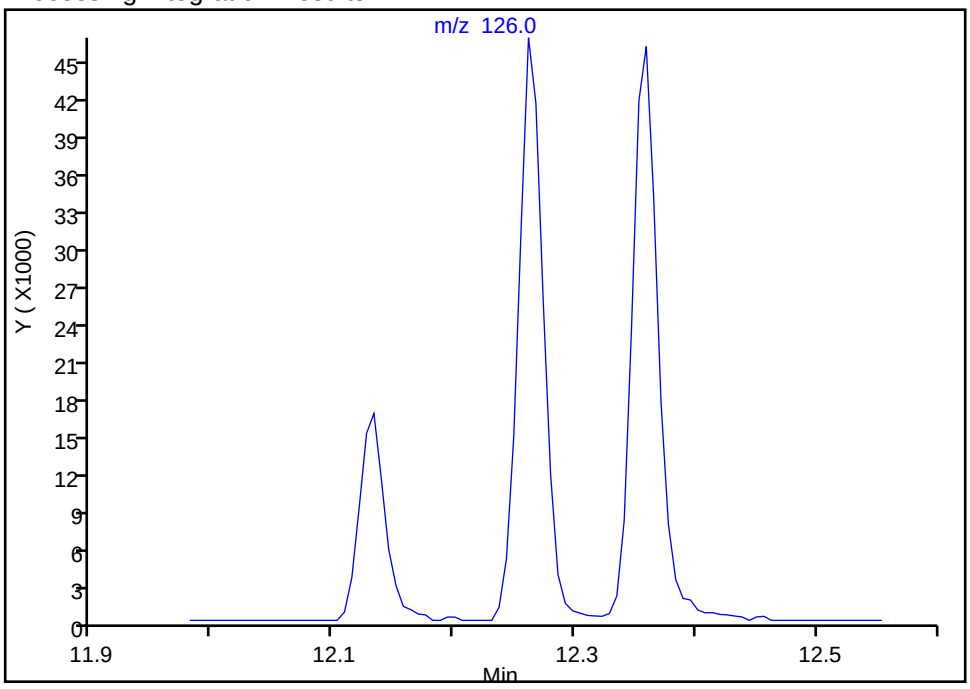
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X14.D				
Injection Date:	19-Jun-2023 19:01:30	Instrument ID:	19930		
Lims ID:	IC std3				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

126 2-Chlorotoluene, CAS: 95-49-8

Signal: 1

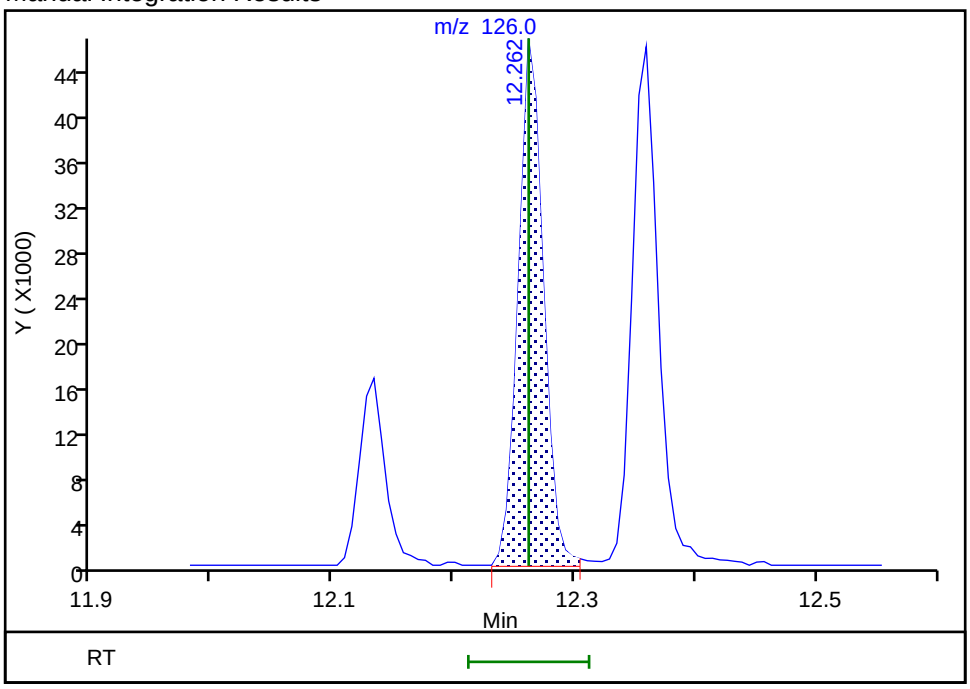
Not Detected
Expected RT: 12.26

Processing Integration Results



Manual Integration Results

RT: 12.26
Area: 67323
Amount: 0.951249
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 15:34:24 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X15.D
Lims ID: IC std4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 19-Jun-2023 19:22:30 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0086929-016
Misc. Info.: LG 2.0
Operator ID: KNK41612 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 27-Jun-2023 12:30:21 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1687

First Level Reviewer: DVW2 Date: 21-Jun-2023 08:05:25

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.849	1.855	-0.006	99	153092	2.00	2.12	
4 Chloromethane	50	2.038	2.050	-0.012	99	148627	2.00	2.03	
5 Vinyl chloride	62	2.148	2.160	-0.012	77	144284	2.00	2.06	
6 Butadiene	39	2.148	2.160	-0.012	90	138958	2.00	1.89	
7 Bromomethane	94	2.459	2.465	-0.006	90	109113	2.00	1.99	
8 Chloroethane	64	2.532	2.538	-0.006	100	84063	2.00	2.00	
9 Dichlorofluoromethane	67	2.757	2.764	-0.007	97	227201	2.00	1.94	
10 Trichlorofluoromethane	101	2.818	2.824	-0.006	95	185589	2.00	2.08	
11 Ethyl ether	59	3.038	3.050	-0.012	89	71951	2.00	1.95	
13 1,2-Dichloro-1,1,2-trifluoroetha	67	3.129	3.142	-0.013	89	125946	2.00	1.98	
14 Acrolein	56	3.202	3.209	-0.007	98	572441	100.0	104.0	
15 1,1-Dichloroethene	96	3.324	3.337	-0.013	97	95792	2.00	1.98	
16 Acetone	43	3.355	3.361	-0.006	76	123579	20.0	20.3	
17 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.379	3.385	-0.006	90	103962	2.00	2.03	
18 Iodomethane	142	3.513	3.526	-0.013	99	207682	2.00	2.04	
19 Ethyl bromide	108	3.538	3.550	-0.012	99	80536	2.00	1.90	
20 Carbon disulfide	76	3.617	3.629	-0.012	99	265233	2.00	2.02	
23 Methyl acetate	43	3.757	3.757	0.000	24	29888	2.00	1.99	M
24 3-Chloro-1-propene	41	3.769	3.782	-0.013	91	148700	2.00	1.98	
25 Methylene Chloride	84	3.952	3.958	-0.006	89	101250	2.00	1.98	
* 26 t-Butyl alcohol-d10 (IS)	65	3.971	4.025	-0.054	96	127135	50.0	50.0	M
27 2-Methyl-2-propanol	59	4.099	4.093	0.006	99	99365	40.0	41.1	
28 Acrylonitrile	53	4.281	4.282	-0.001	97	42468	5.00	5.75	
29 Methyl tert-butyl ether	73	4.336	4.342	-0.006	94	267433	2.00	2.02	
30 trans-1,2-Dichloroethene	96	4.349	4.355	-0.006	98	109363	2.00	2.03	
31 Hexane	57	4.769	4.781	-0.012	91	138409	2.00	1.96	
32 1,1-Dichloroethane	63	5.007	5.013	-0.006	96	188062	2.00	2.04	
35 Isopropyl ether	45	5.068	5.074	-0.006	92	305304	2.00	2.02	
36 2-Chloro-1,3-butadiene	53	5.117	5.123	-0.006	90	157183	2.00	2.04	
37 Tert-butyl ethyl ether	59	5.611	5.623	-0.013	96	293761	2.00	2.03	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
38 2-Butanone (MEK)	43	5.806	5.812	-0.006	100	242793	20.0	20.7	
39 cis-1,2-Dichloroethene	96	5.848	5.854	-0.006	81	121238	2.00	2.03	
40 2,2-Dichloropropane	77	5.854	5.867	-0.013	71	169485	2.00	2.04	
43 Propionitrile	54	5.897	5.891	0.006	98	137306	40.0	44.3	
45 Methacrylonitrile	67	6.110	6.110	0.000	90	255367	20.0	20.9	
S 41 1,2-Dichloroethene, Total	100				0			4.06	
46 Chlorobromomethane	128	6.184	6.190	-0.006	86	54957	2.00	2.02	
47 Tetrahydrofuran	71	6.196	6.196	0.000	78	39125	10.0	10.1	
48 Chloroform	83	6.336	6.342	-0.006	93	195036	2.00	2.05	
$ 49 Dibromofluoromethane (Surr)	113	6.555	6.555	0.000	95	459886	10.0	9.93	
50 1,1,1-Trichloroethane	97	6.555	6.568	-0.013	54	180779	2.00	2.03	
51 Cyclohexane	56	6.659	6.671	-0.012	89	169296	2.00	2.01	
54 Carbon tetrachloride	117	6.775	6.781	-0.006	96	161435	2.00	2.04	
53 1,1-Dichloropropene	75	6.775	6.781	-0.006	95	143481	2.00	2.03	
55 Isobutyl alcohol	41	6.946	6.940	0.006	93	77021	100.0	89.6	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.007	7.013	-0.006	83	92053	10.0	10.0	
57 Benzene	78	7.037	7.043	-0.006	96	433294	2.00	2.04	
58 1,2-Dichloroethane	62	7.110	7.116	-0.006	97	114498	2.00	1.98	
60 Tert-amyl methyl ether	73	7.238	7.244	-0.006	98	268420	2.00	2.01	
* 61 Fluorobenzene (IS)	96	7.446	7.445	0.001	99	1802566	10.0	10.0	
62 n-Heptane	43	7.464	7.470	-0.006	92	130745	2.00	1.93	
63 n-Butanol	56	7.848	7.836	0.012	87	112349	175.0	170.2	
64 Trichloroethene	95	7.927	7.933	-0.006	96	119866	2.00	2.02	
65 Methylcyclohexane	83	8.244	8.244	0.000	90	193464	2.00	2.02	
66 1,2-Dichloropropane	63	8.262	8.269	-0.007	96	106323	2.00	2.02	
67 Methyl methacrylate	69	8.360	8.354	0.006	89	49293	2.00	2.05	
68 1,4-Dioxane	88	8.372	8.366	0.006	30	13925	100.0	99.3	M
69 Dibromomethane	93	8.378	8.378	0.000	93	54174	2.00	2.05	
71 Dichlorobromomethane	83	8.616	8.616	0.000	99	137781	2.00	2.01	
72 2-Nitropropane	41	8.884	8.884	0.000	98	74299	10.0	9.43	
75 1-Bromo-2-chloroethane	63	9.006	9.012	-0.006	98	103572	2.00	1.93	
76 cis-1,3-Dichloropropene	75	9.177	9.177	0.000	97	166986	2.00	2.03	
77 4-Methyl-2-pentanone (MIBK)	43	9.360	9.360	0.000	96	654051	20.0	20.8	
$ 78 Toluene-d8 (Surr)	98	9.494	9.500	-0.006	93	1822022	10.0	10.0	
79 Toluene	92	9.573	9.579	-0.006	99	296153	2.00	2.07	
97 trans-1,3-Dichloropropene	75	9.847	9.848	-0.001	92	136143	2.00	2.01	
99 Ethyl methacrylate	69	9.915	9.915	0.000	89	112647	2.00	2.02	
100 1,1,2-Trichloroethane	97	10.055	10.055	0.000	90	81347	2.00	2.01	
S 98 1,3-Dichloropropene, Total	100				0			4.05	
101 Tetrachloroethene	166	10.140	10.146	-0.006	97	152617	2.00	2.04	
102 1,3-Dichloropropane	76	10.219	10.219	0.000	90	130340	2.00	2.04	
103 2-Hexanone	43	10.274	10.274	0.000	96	459845	20.0	20.7	
105 Chlorodibromomethane	129	10.439	10.439	0.000	89	106469	2.00	2.02	
106 Ethylene Dibromide	107	10.549	10.549	0.000	99	77070	2.00	2.02	
* 107 Chlorobenzene-d5 (IS)	117	10.988	10.987	0.001	84	1411844	10.0	10.0	
108 1-Chlorohexane	91	11.000	11.000	0.000	94	164067	2.00	1.97	a
109 Chlorobenzene	112	11.018	11.018	0.000	97	343177	2.00	2.05	
111 1,1,1,2-Tetrachloroethane	131	11.097	11.097	0.000	95	121541	2.00	2.04	
112 Ethylbenzene	91	11.103	11.103	0.000	98	568378	2.00	2.04	a
113 m-Xylene & p-Xylene	106	11.219	11.219	0.000	93	464338	4.00	4.11	
S 110 Xylenes, Total	106				0			6.16	
114 o-Xylene	106	11.554	11.554	0.000	95	228364	2.00	2.05	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
115 Styrene	104	11.573	11.567	0.006	95	365726	2.00	2.04	
116 Bromoform	173	11.725	11.725	0.000	97	69013	2.00	2.02	
117 Isopropylbenzene	105	11.853	11.859	-0.006	95	594828	2.00	2.06	
$ 120 4-Bromofluorobenzene (Surr)	95	12.000	12.000	0.000	96	688953	10.0	10.1	
121 1,1,2,2-Tetrachloroethane	83	12.103	12.103	0.000	93	103555	2.00	2.00	
122 Bromobenzene	156	12.115	12.115	0.000	94	152143	2.00	2.03	
123 trans-1,4-Dichloro-2-butene	53	12.128	12.128	0.000	93	248485	20.0	21.0	
124 1,2,3-Trichloropropane	110	12.152	12.146	0.006	82	29265	2.00	2.01	
125 N-Propylbenzene	91	12.188	12.189	-0.001	98	671294	2.00	2.03	
126 2-Chlorotoluene	126	12.262	12.262	0.000	98	148498	2.00	2.05	a
127 1,3,5-Trimethylbenzene	105	12.323	12.323	0.000	94	512246	2.00	2.03	
128 4-Chlorotoluene	126	12.359	12.353	0.006	96	153069	2.00	2.06	
129 tert-Butylbenzene	134	12.566	12.566	0.000	92	124089	2.00	2.04	
130 Pentachloroethane	167	12.597	12.597	0.000	90	89999	2.00	1.92	
131 1,2,4-Trimethylbenzene	105	12.609	12.609	0.000	96	524551	2.00	2.02	
132 sec-Butylbenzene	105	12.731	12.731	0.000	93	659131	2.00	2.05	
133 1,3-Dichlorobenzene	146	12.829	12.829	0.000	99	299493	2.00	2.05	
134 4-Isopropyltoluene	119	12.841	12.841	0.000	97	587493	2.00	2.05	
* 135 1,4-Dichlorobenzene-d4	152	12.883	12.883	0.000	93	870354	10.0	10.0	
136 1,4-Dichlorobenzene	146	12.902	12.902	0.000	97	293178	2.00	2.03	
137 1,2,3-Trimethylbenzene	120	12.914	12.914	0.000	98	237548	2.00	2.03	
138 Benzyl chloride	126	12.981	12.981	0.000	98	45949	2.00	2.06	
139 n-Butylbenzene	92	13.133	13.133	0.000	97	259442	2.00	2.02	
140 1,2-Dichlorobenzene	146	13.164	13.158	0.006	99	279095	2.00	2.03	
142 1,2-Dibromo-3-Chloropropane	155	13.706	13.700	0.006	91	17537	2.00	2.07	
143 1,3,5-Trichlorobenzene	180	13.828	13.828	0.000	97	223971	2.00	2.04	
144 1,2,4-Trichlorobenzene	180	14.255	14.249	0.006	94	182141	2.00	2.06	
145 Hexachlorobutadiene	225	14.334	14.334	0.000	95	86860	2.00	2.02	
146 Naphthalene	128	14.432	14.426	0.006	96	330200	2.00	2.05	
147 1,2,3-Trichlorobenzene	180	14.572	14.572	0.000	96	150086	2.00	2.03	
155 2-Methylnaphthalene	142		0.000				ND	ND	
156 p-Diethylbenzene	1		0.000				ND	ND	
161 Pentane	43		0.000				ND	ND	
150 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
165 Isopropyl alcohol	45		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_LL_#1_826_00081	Amount Added:	2.00	Units: uL	
MSV_LL_#2_826_00093	Amount Added:	2.00	Units: uL	
MSV_LL_GAS826_00156	Amount Added:	2.00	Units: uL	
MSV_LLcentISS_00007	Amount Added:	5.00	Units: uL	Run Reagent

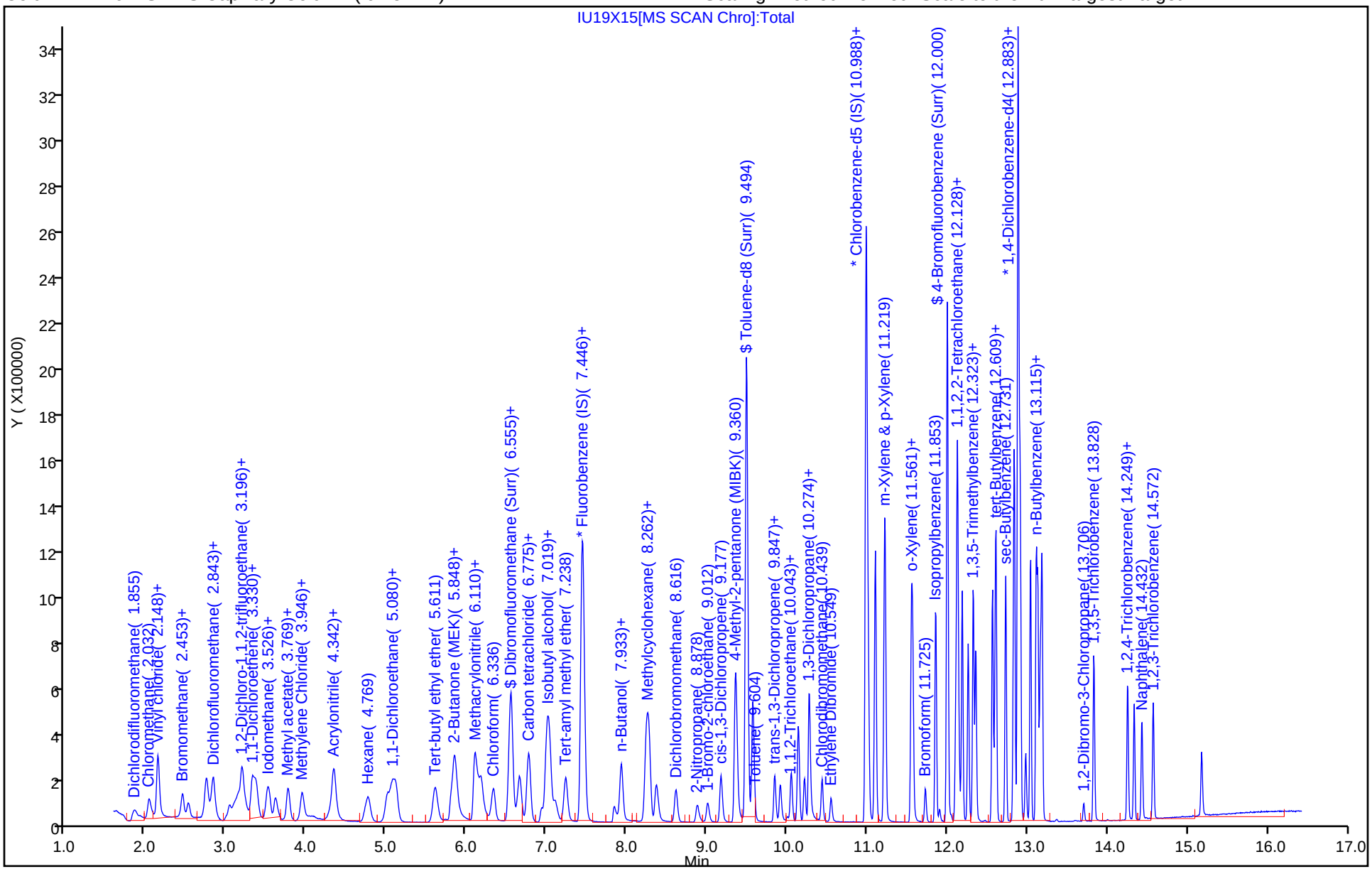
Report Date: 27-Jun-2023 12:30:21 Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X15.D

Injection Date:	19-Jun-2023 19:22:30	Instrument ID:	19930	Operator ID:	KNK41612
Lims ID:	IC std4			Worklist Smp#:	16
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

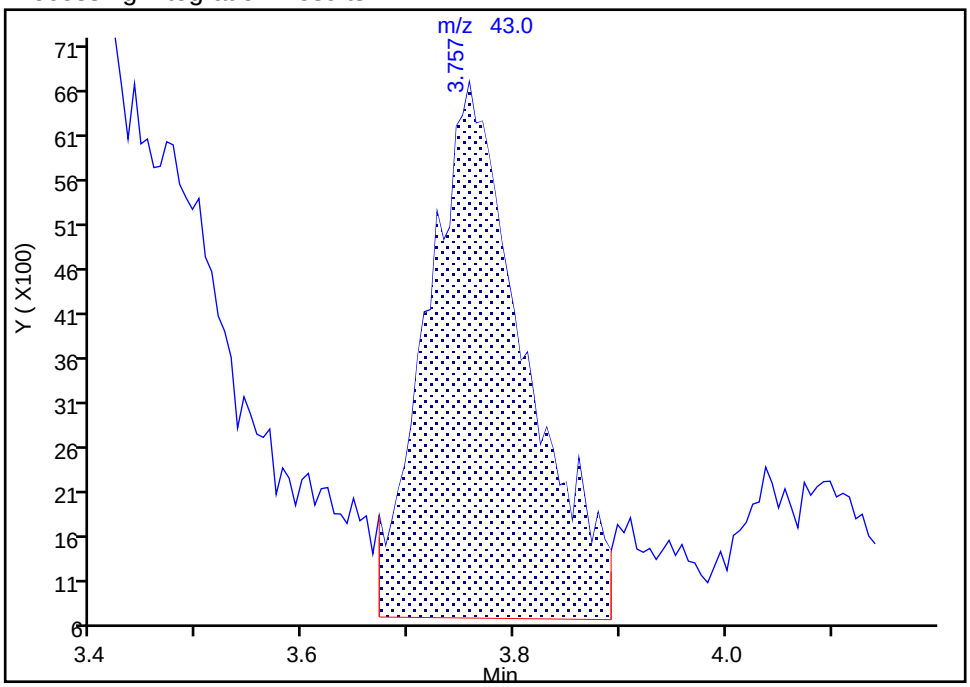
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X15.D				
Injection Date:	19-Jun-2023 19:22:30	Instrument ID:	19930		
Lims ID:	IC std4				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	15	Worklist Smp#:	16
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

23 Methyl acetate, CAS: 79-20-9

Signal: 1

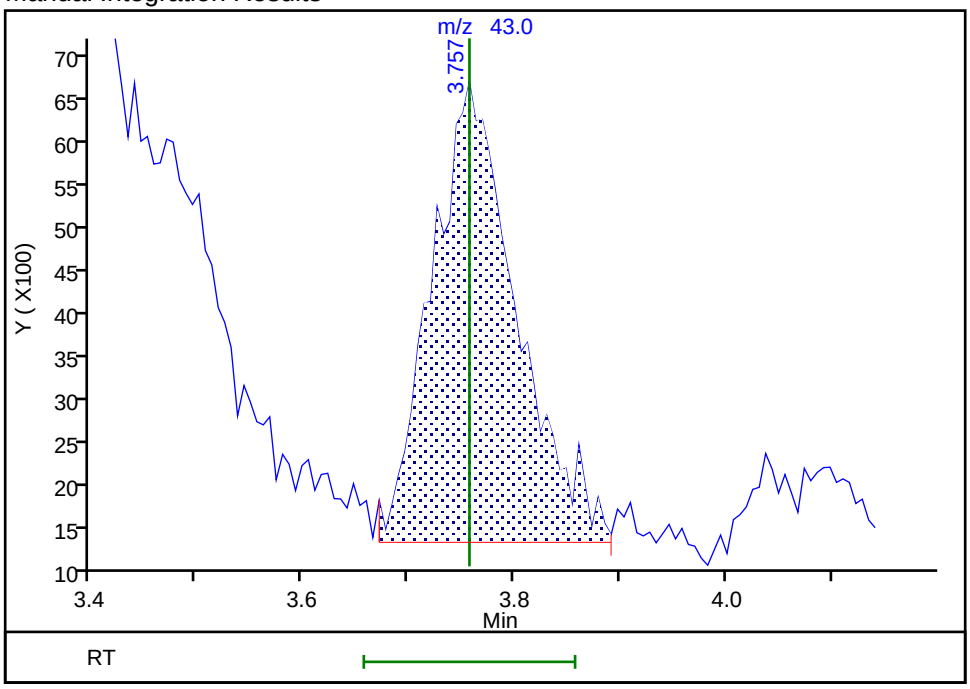
Processing Integration Results

RT: 3.76
Area: 38847
Amount: 2.303021
Amount Units: ug/l



Manual Integration Results

RT: 3.76
Area: 29888
Amount: 1.991620
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:04:18 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

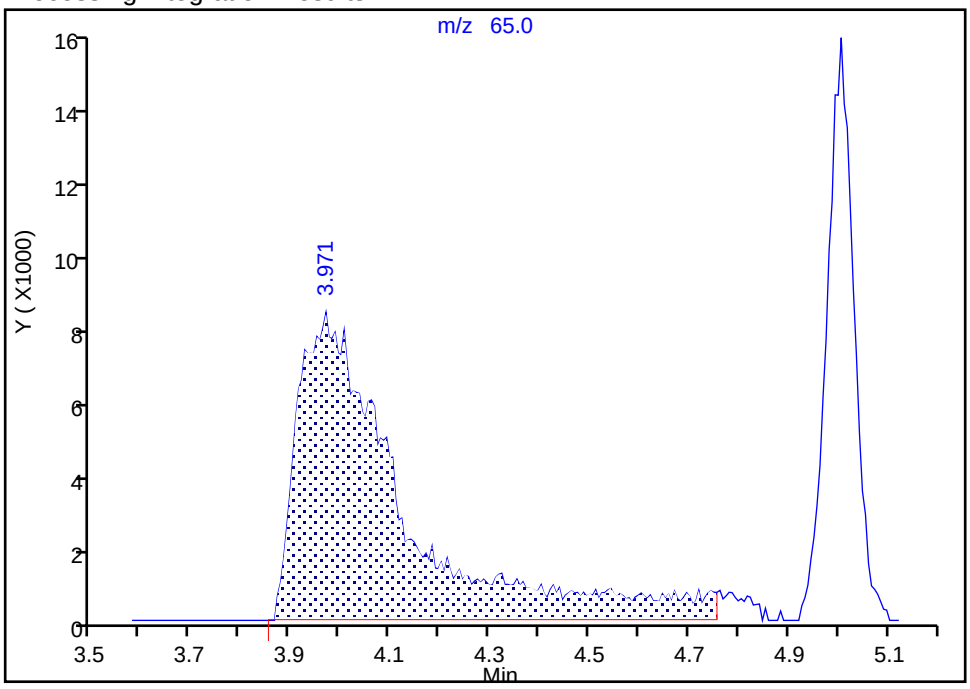
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X15.D
Injection Date: 19-Jun-2023 19:22:30 Instrument ID: 19930
Lims ID: IC std4
Client ID:
Operator ID: KNK41612 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 26 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

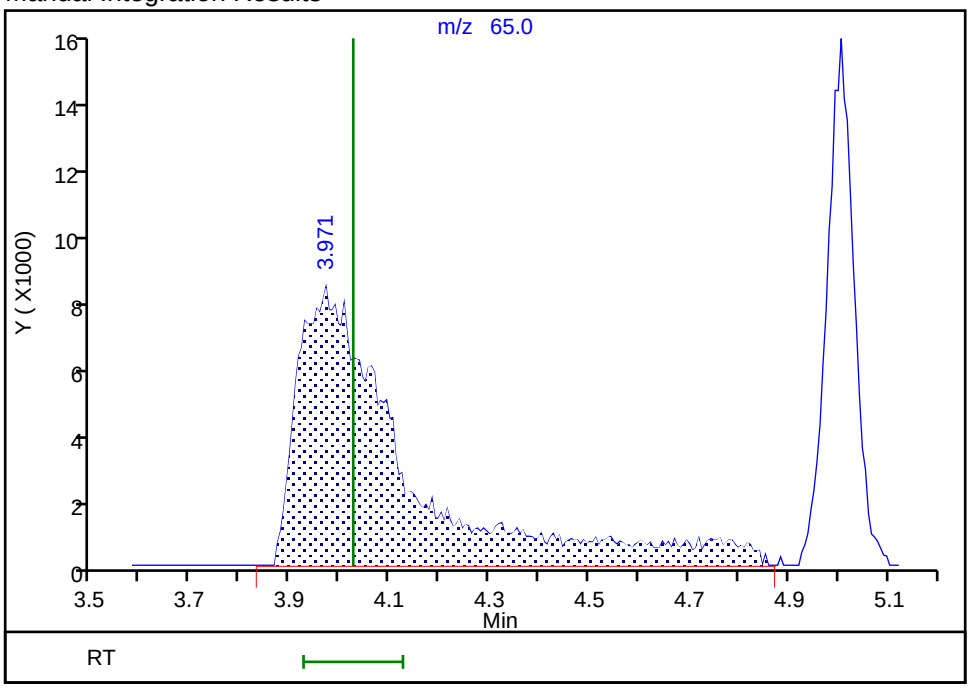
Processing Integration Results

RT: 3.97
Area: 123899
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 3.97
Area: 127135
Amount: 50.000000
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:04:29 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

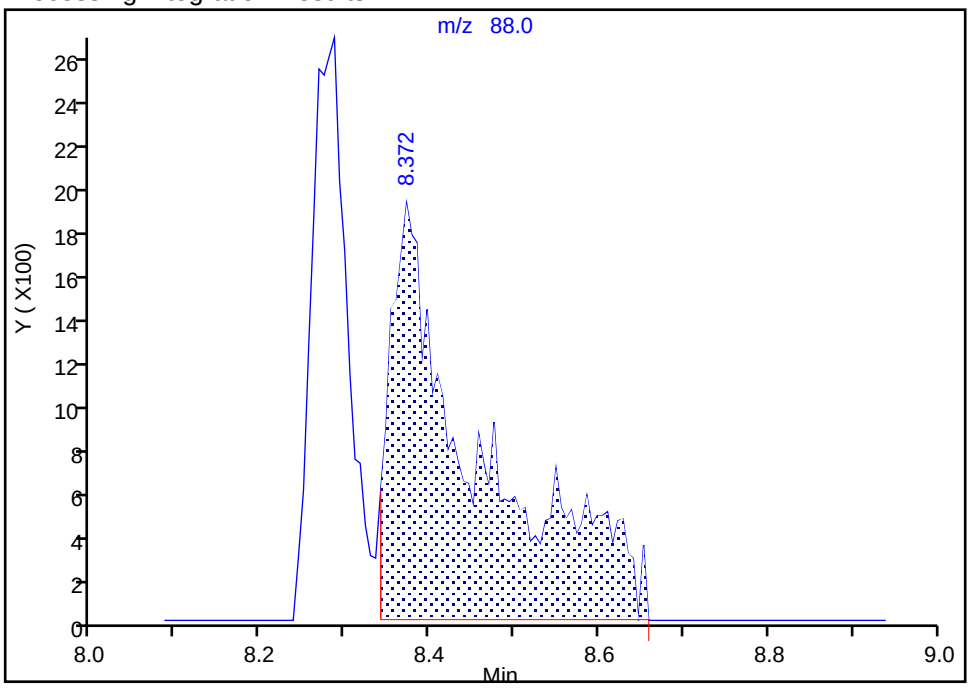
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X15.D
Injection Date: 19-Jun-2023 19:22:30 Instrument ID: 19930
Lims ID: IC std4
Client ID:
Operator ID: KNK41612 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

68 1,4-Dioxane, CAS: 123-91-1

Signal: 1

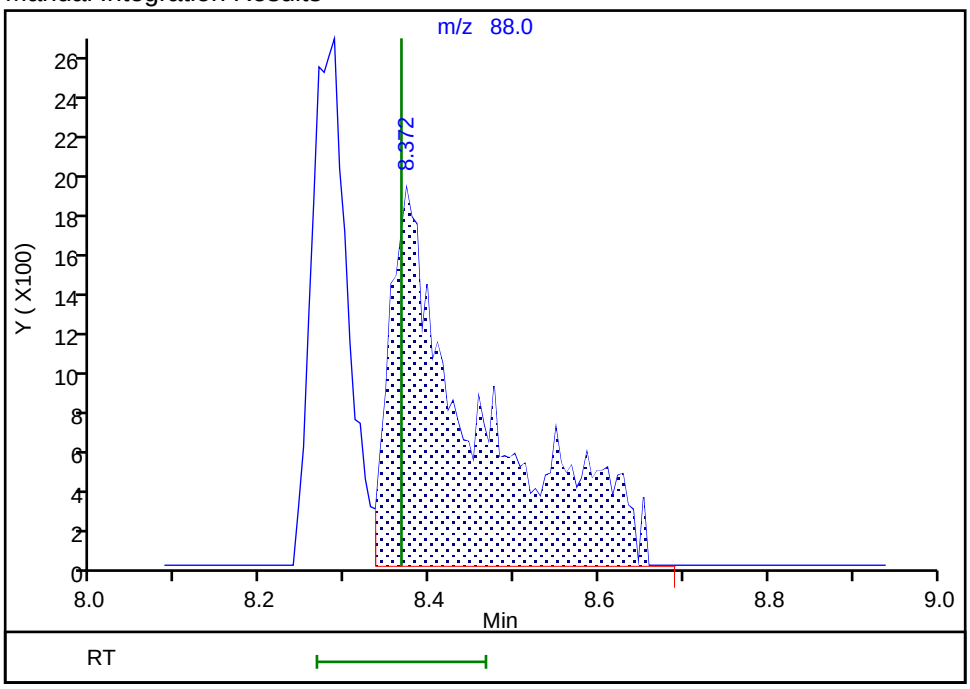
Processing Integration Results

RT: 8.37
Area: 13819
Amount: 104.2969
Amount Units: ug/l



Manual Integration Results

RT: 8.37
Area: 13925
Amount: 99.329922
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:04:56 -04:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

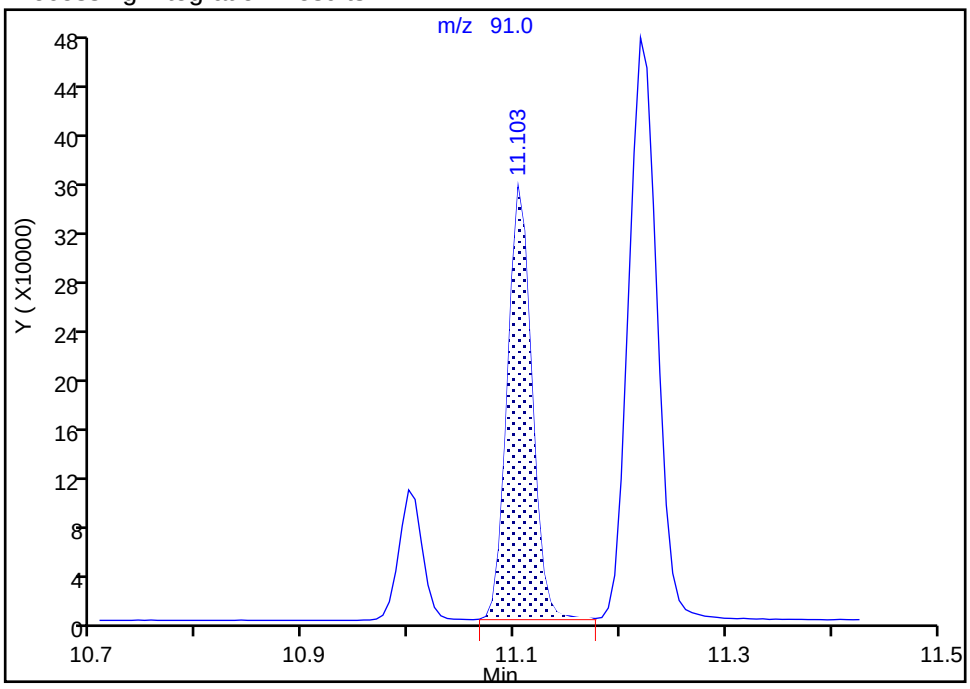
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X15.D				
Injection Date:	19-Jun-2023 19:22:30	Instrument ID:	19930		
Lims ID:	IC std4				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	15	Worklist Smp#:	16
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

108 1-Chlorohexane, CAS: 544-10-5

Signal: 1

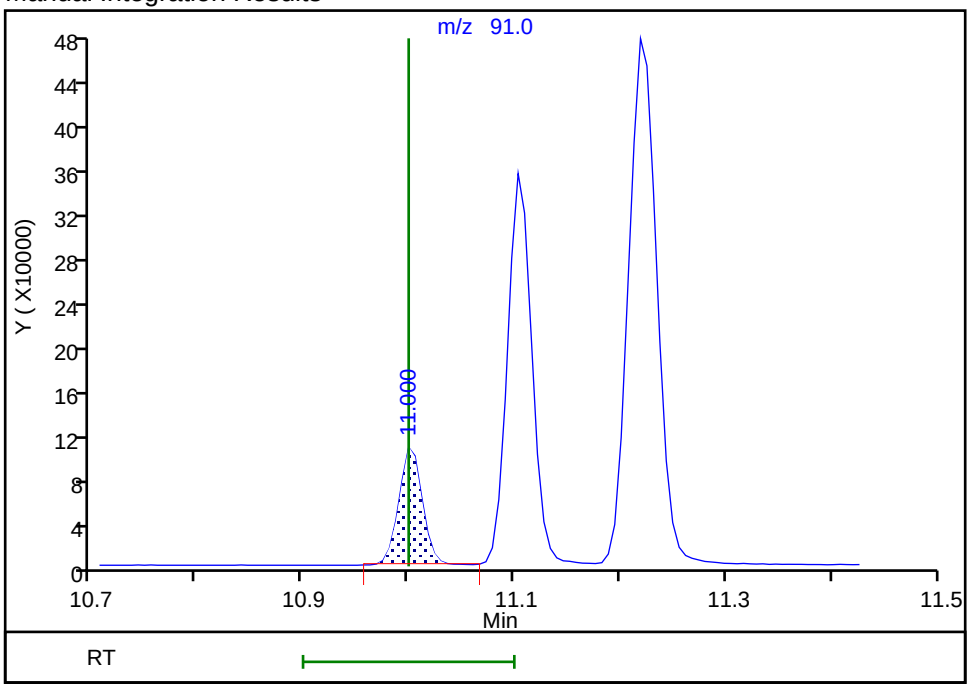
Processing Integration Results

RT: 11.10
Area: 568378
Amount: 2.870285
Amount Units: ug/l



Manual Integration Results

RT: 11.00
Area: 164067
Amount: 1.968956
Amount Units: ug/l



Reviewer: DVW2, 22-Jun-2023 07:47:52 -04:00:00 (UTC)

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

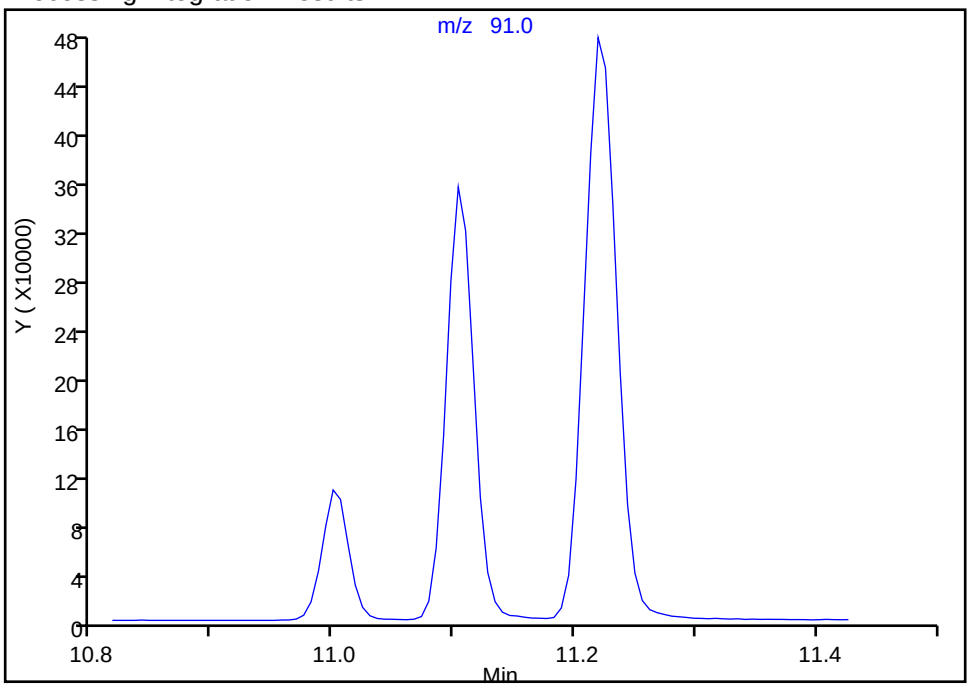
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X15.D				
Injection Date:	19-Jun-2023 19:22:30	Instrument ID:	19930		
Lims ID:	IC std4				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	15	Worklist Smp#:	16
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

112 Ethylbenzene, CAS: 100-41-4

Signal: 1

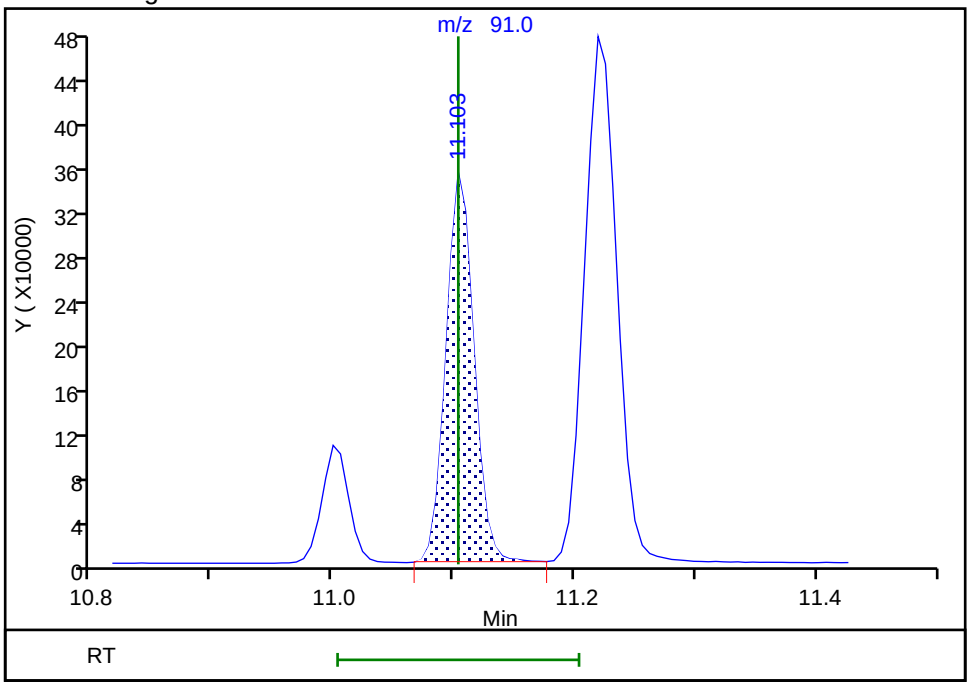
Not Detected
Expected RT: 11.10

Processing Integration Results



Manual Integration Results

RT: 11.10
Area: 568378
Amount: 2.036930
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 15:35:00 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

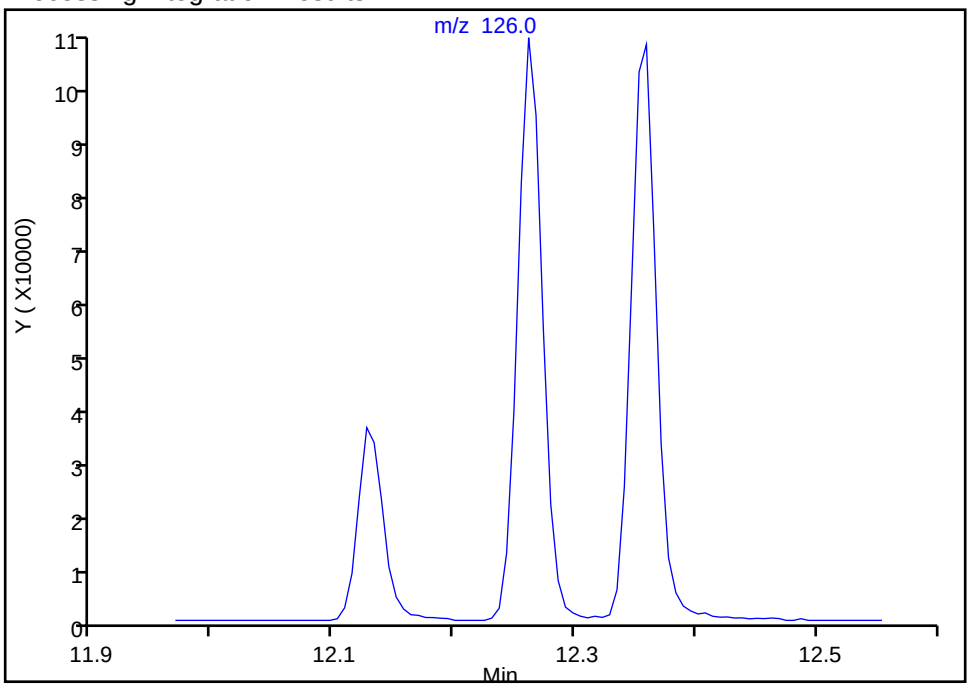
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X15.D				
Injection Date:	19-Jun-2023 19:22:30	Instrument ID:	19930		
Lims ID:	IC std4				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	15	Worklist Smp#:	16
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

126 2-Chlorotoluene, CAS: 95-49-8

Signal: 1

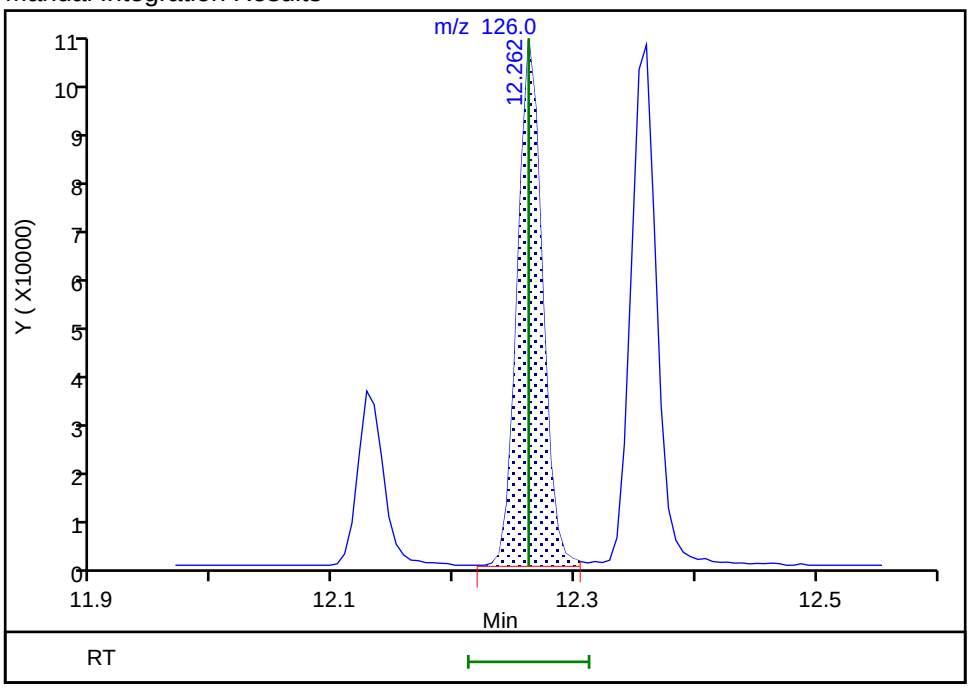
Not Detected
Expected RT: 12.26

Processing Integration Results



Manual Integration Results

RT: 12.26
Area: 148498
Amount: 2.051768
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 15:35:10 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X16.D
Lims ID: IC std5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 19-Jun-2023 19:42:30 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0086929-017
Misc. Info.: LG 5.0
Operator ID: KNK41612 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 27-Jun-2023 12:30:27 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1687

First Level Reviewer: DVW2 Date: 21-Jun-2023 08:07:10

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.849	1.855	-0.006	99	360756	5.00	4.84	
4 Chloromethane	50	2.044	2.050	-0.006	99	355971	5.00	4.70	
5 Vinyl chloride	62	2.148	2.160	-0.012	97	346234	5.00	4.78	
6 Butadiene	39	2.154	2.160	-0.006	90	325681	5.00	4.30	
7 Bromomethane	94	2.459	2.465	-0.006	91	265387	5.00	4.69	
8 Chloroethane	64	2.532	2.538	-0.006	100	204756	5.00	4.73	
9 Dichlorofluoromethane	67	2.757	2.764	-0.007	97	549690	5.00	4.55	
10 Trichlorofluoromethane	101	2.818	2.824	-0.006	97	454389	5.00	4.93	
11 Ethyl ether	59	3.044	3.050	-0.006	89	187410	5.00	4.92	
13 1,2-Dichloro-1,1,2-trifluoroetha	67	3.129	3.142	-0.013	88	308465	5.00	4.69	
14 Acrolein	56	3.196	3.209	-0.013	98	1460333	250.0	242.2	
15 1,1-Dichloroethene	96	3.330	3.337	-0.007	97	252853	5.00	5.07	
16 Acetone	43	3.361	3.361	0.000	100	325042	50.0	48.8	
17 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.379	3.385	-0.006	91	285989	5.00	5.40	
18 Iodomethane	142	3.519	3.526	-0.007	99	535229	5.00	5.10	
19 Ethyl bromide	108	3.544	3.550	-0.006	99	210130	5.00	4.81	
20 Carbon disulfide	76	3.623	3.629	-0.006	99	686699	5.00	5.07	
23 Methyl acetate	43	3.757	3.757	0.000	96	83849	5.00	5.10	M
24 3-Chloro-1-propene	41	3.775	3.782	-0.007	91	382363	5.00	4.93	
25 Methylene Chloride	84	3.952	3.958	-0.006	89	263546	5.00	5.00	
* 26 t-Butyl alcohol-d10 (IS)	65	3.983	4.025	-0.042	96	139221	50.0	50.0	M
27 2-Methyl-2-propanol	59	4.080	4.093	-0.013	100	284492	100.0	107.4	
28 Acrylonitrile	53	4.269	4.282	-0.013	98	114187	12.5	14.1	
29 Methyl tert-butyl ether	73	4.336	4.342	-0.006	94	674458	5.00	4.92	
30 trans-1,2-Dichloroethene	96	4.342	4.355	-0.013	98	279615	5.00	5.03	
31 Hexane	57	4.775	4.781	-0.006	91	369911	5.00	5.08	
32 1,1-Dichloroethane	63	5.007	5.013	-0.006	96	486164	5.00	5.11	
35 Isopropyl ether	45	5.068	5.074	-0.006	93	787124	5.00	5.04	
36 2-Chloro-1,3-butadiene	53	5.123	5.123	0.000	90	407363	5.00	5.12	
37 Tert-butyl ethyl ether	59	5.610	5.623	-0.013	96	746447	5.00	5.00	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
38 2-Butanone (MEK)	43	5.806	5.812	-0.006	99	609434	50.0	47.5	
39 cis-1,2-Dichloroethene	96	5.848	5.854	-0.006	81	307184	5.00	4.97	
40 2,2-Dichloropropane	77	5.860	5.867	-0.007	86	435561	5.00	5.08	
43 Propionitrile	54	5.897	5.891	0.006	99	323734	100.0	95.4	
45 Methacrylonitrile	67	6.116	6.110	0.006	90	659307	50.0	49.2	
S 41 1,2-Dichloroethene, Total	100				0			10.0	
46 Chlorobromomethane	128	6.184	6.190	-0.006	86	139749	5.00	4.97	
47 Tetrahydrofuran	71	6.190	6.196	-0.006	78	98820	25.0	23.4	
48 Chloroform	83	6.336	6.342	-0.006	93	497602	5.00	5.06	
$ 49 Dibromofluoromethane (Surr)	113	6.549	6.555	-0.006	95	481549	10.0	10.1	
50 1,1,1-Trichloroethane	97	6.562	6.568	-0.006	98	472367	5.00	5.15	
51 Cyclohexane	56	6.665	6.671	-0.006	88	460220	5.00	5.29	
54 Carbon tetrachloride	117	6.775	6.781	-0.006	97	428174	5.00	5.24	
53 1,1-Dichloropropene	75	6.781	6.781	0.000	96	376146	5.00	5.15	
55 Isobutyl alcohol	41	6.940	6.940	0.000	95	221312	250.0	235.2	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.000	7.013	-0.013	84	96600	10.0	10.2	
57 Benzene	78	7.037	7.043	-0.006	97	1110945	5.00	5.06	
58 1,2-Dichloroethane	62	7.110	7.116	-0.006	98	300424	5.00	5.04	
60 Tert-amyl methyl ether	73	7.238	7.244	-0.006	98	685739	5.00	4.97	
* 61 Fluorobenzene (IS)	96	7.446	7.445	0.001	98	1860774	10.0	10.0	
62 n-Heptane	43	7.464	7.470	-0.006	91	360420	5.00	5.16	
63 n-Butanol	56	7.836	7.836	0.000	88	343098	437.5	474.7	
64 Trichloroethene	95	7.933	7.933	0.000	96	309932	5.00	5.07	
65 Methylcyclohexane	83	8.244	8.244	0.000	91	524891	5.00	5.32	
66 1,2-Dichloropropane	63	8.262	8.269	-0.007	96	275849	5.00	5.08	
67 Methyl methacrylate	69	8.360	8.354	0.006	87	137311	5.00	5.20	
68 1,4-Dioxane	88	8.360	8.366	-0.006	32	41814	250.0	272.4	M
69 Dibromomethane	93	8.372	8.378	-0.006	91	137376	5.00	5.04	
71 Dichlorobromomethane	83	8.616	8.616	0.000	99	357171	5.00	5.06	
72 2-Nitropropane	41	8.878	8.884	-0.006	98	195361	25.0	22.6	
75 1-Bromo-2-chloroethane	63	9.012	9.012	0.000	98	272020	5.00	4.91	
76 cis-1,3-Dichloropropene	75	9.177	9.177	0.000	97	438752	5.00	5.18	
77 4-Methyl-2-pentanone (MIBK)	43	9.360	9.360	0.000	96	1690397	50.0	49.1	
$ 78 Toluene-d8 (Surr)	98	9.500	9.500	0.000	93	1907167	10.0	10.0	
79 Toluene	92	9.573	9.579	-0.006	99	767071	5.00	5.11	
97 trans-1,3-Dichloropropene	75	9.841	9.848	-0.007	92	365510	5.00	5.16	
99 Ethyl methacrylate	69	9.915	9.915	0.000	88	295850	5.00	5.05	
100 1,1,2-Trichloroethane	97	10.055	10.055	0.000	90	206782	5.00	4.88	
S 98 1,3-Dichloropropene, Total	100				0			10.3	
101 Tetrachloroethene	166	10.140	10.146	-0.006	98	402350	5.00	5.14	
102 1,3-Dichloropropane	76	10.219	10.219	0.000	89	333810	5.00	4.98	
103 2-Hexanone	43	10.274	10.274	0.000	95	1188293	50.0	48.8	
105 Chlorodibromomethane	129	10.439	10.439	0.000	90	284463	5.00	5.16	
106 Ethylene Dibromide	107	10.549	10.549	0.000	98	201076	5.00	5.03	
* 107 Chlorobenzene-d5 (IS)	117	10.987	10.987	0.000	84	1479531	10.0	10.0	
108 1-Chlorohexane	91	11.000	11.000	0.000	67	432239	5.00	4.95	a
109 Chlorobenzene	112	11.012	11.018	-0.006	97	890297	5.00	5.07	
111 1,1,1,2-Tetrachloroethane	131	11.097	11.097	0.000	95	318029	5.00	5.08	
112 Ethylbenzene	91	11.103	11.103	0.000	98	1483797	5.00	5.07	a
113 m-Xylene & p-Xylene	106	11.219	11.219	0.000	93	1207085	10.0	10.2	
S 110 Xylenes, Total	106				0			15.3	
114 o-Xylene	106	11.554	11.554	0.000	96	591109	5.00	5.06	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
115 Styrene	104	11.567	11.567	0.000	94	965746	5.00	5.14	
116 Bromoform	173	11.725	11.725	0.000	98	185725	5.00	5.19	
117 Isopropylbenzene	105	11.853	11.859	-0.006	95	1555613	5.00	5.13	
$ 120 4-Bromofluorobenzene (Surr)	95	11.999	12.000	-0.001	96	719841	10.0	10.0	
121 1,1,2,2-Tetrachloroethane	83	12.103	12.103	0.000	93	265162	5.00	4.89	
122 Bromobenzene	156	12.115	12.115	0.000	94	395435	5.00	5.05	
123 trans-1,4-Dichloro-2-butene	53	12.128	12.128	0.000	92	631878	50.0	48.7	
124 1,2,3-Trichloropropane	110	12.146	12.146	0.000	79	73791	5.00	4.85	
125 N-Propylbenzene	91	12.188	12.189	-0.001	98	1803955	5.00	5.20	
126 2-Chlorotoluene	126	12.262	12.262	0.000	98	385471	5.00	5.09	a
127 1,3,5-Trimethylbenzene	105	12.323	12.323	0.000	95	1342032	5.00	5.08	
128 4-Chlorotoluene	126	12.353	12.353	0.000	97	393652	5.00	5.07	
129 tert-Butylbenzene	134	12.566	12.566	0.000	92	322256	5.00	5.08	
130 Pentachloroethane	167	12.597	12.597	0.000	91	248510	5.00	5.06	
131 1,2,4-Trimethylbenzene	105	12.609	12.609	0.000	96	1386678	5.00	5.11	
132 sec-Butylbenzene	105	12.731	12.731	0.000	94	1725161	5.00	5.13	
133 1,3-Dichlorobenzene	146	12.829	12.829	0.000	99	796177	5.00	5.20	
134 4-Isopropyltoluene	119	12.841	12.841	0.000	97	1559110	5.00	5.20	
* 135 1,4-Dichlorobenzene-d4	152	12.883	12.883	0.000	93	910481	10.0	10.0	
136 1,4-Dichlorobenzene	146	12.902	12.902	0.000	96	751794	5.00	4.98	
137 1,2,3-Trimethylbenzene	120	12.914	12.914	0.000	98	620671	5.00	5.06	
138 Benzyl chloride	126	12.981	12.981	0.000	98	118785	5.00	5.10	
139 n-Butylbenzene	92	13.133	13.133	0.000	96	712295	5.00	5.31	
140 1,2-Dichlorobenzene	146	13.158	13.158	0.000	99	728454	5.00	5.07	
142 1,2-Dibromo-3-Chloropropane	155	13.706	13.700	0.006	91	45263	5.00	5.11	
143 1,3,5-Trichlorobenzene	180	13.828	13.828	0.000	97	599184	5.00	5.22	
144 1,2,4-Trichlorobenzene	180	14.249	14.249	0.000	94	483938	5.00	5.24	
145 Hexachlorobutadiene	225	14.334	14.334	0.000	95	240365	5.00	5.34	
146 Naphthalene	128	14.432	14.426	0.006	96	861870	5.00	5.13	
147 1,2,3-Trichlorobenzene	180	14.572	14.572	0.000	96	404377	5.00	5.23	
155 2-Methylnaphthalene	142		0.000				ND	ND	
156 p-Diethylbenzene	1		0.000				ND	ND	
161 Pentane	43		0.000				ND	ND	
150 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
165 Isopropyl alcohol	45		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_LL_#1_826_00081	Amount Added:	5.00	Units: uL	
MSV_LL_#2_826_00093	Amount Added:	5.00	Units: uL	
MSV_LL_GAS826_00156	Amount Added:	5.00	Units: uL	
MSV_LLcentISS_00007	Amount Added:	5.00	Units: uL	Run Reagent

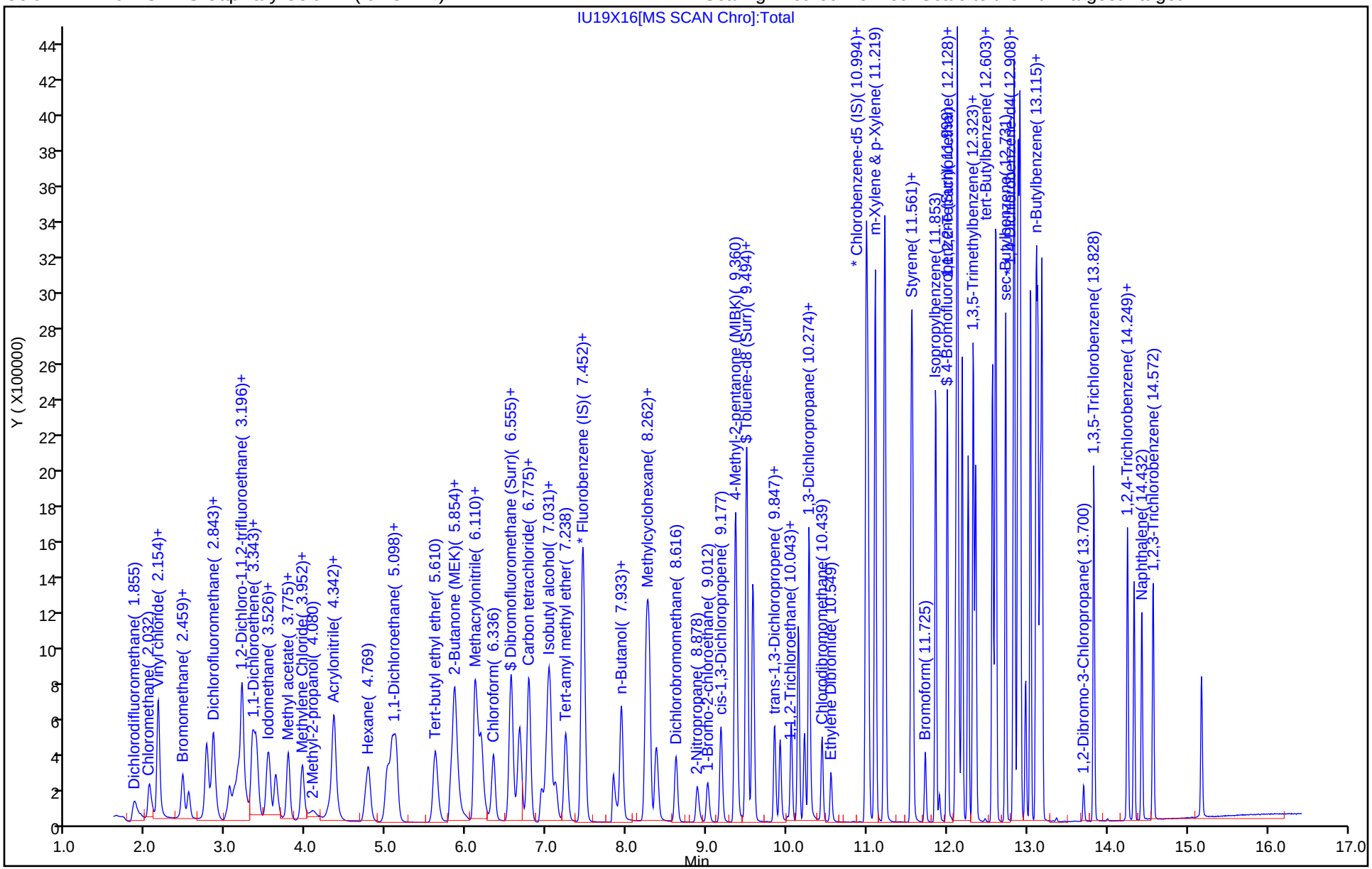
Report Date: 27-Jun-2023 12:30:28 Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X16.D

Injection Date:	19-Jun-2023 19:42:30	Instrument ID:	19930	Operator ID:	KNK41612
Lims ID:	IC std5			Worklist Smp#:	17
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

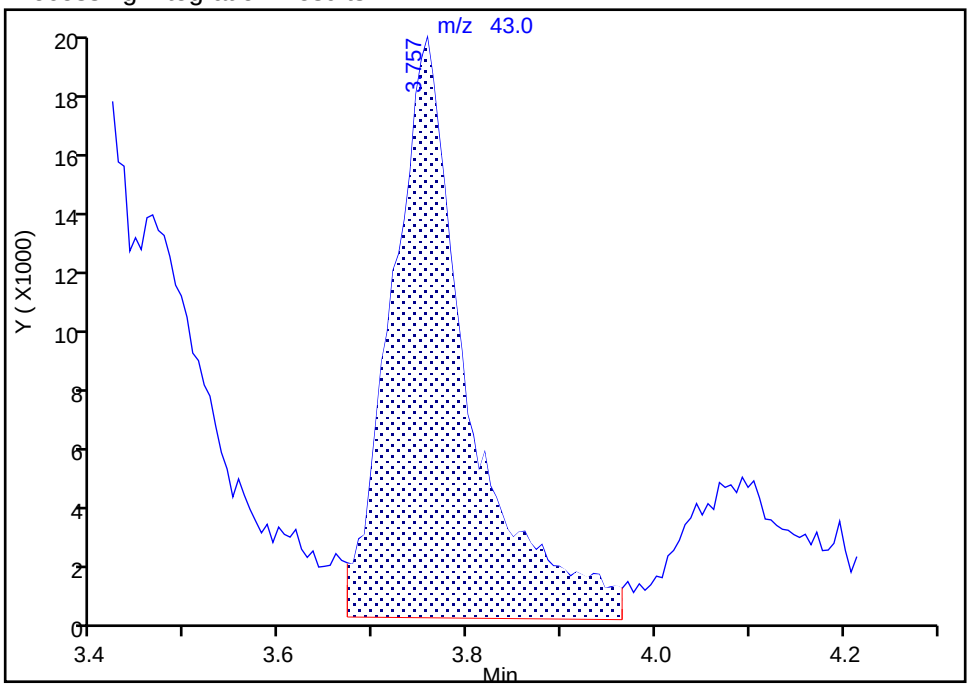
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X16.D				
Injection Date:	19-Jun-2023 19:42:30	Instrument ID:	19930		
Lims ID:	IC std5				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	16	Worklist Smp#:	17
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

23 Methyl acetate, CAS: 79-20-9

Signal: 1

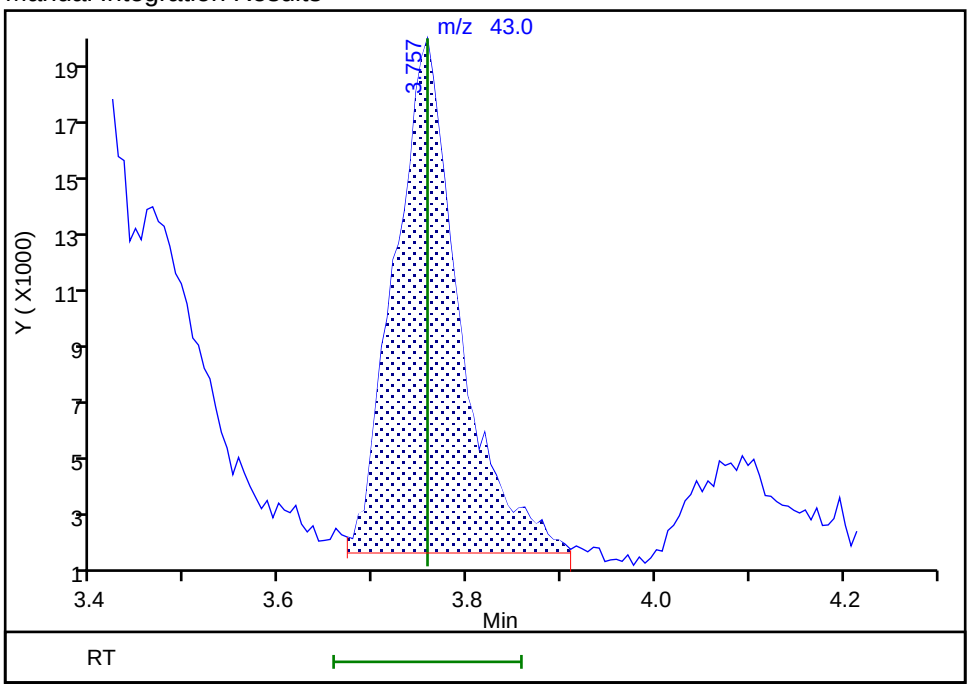
Processing Integration Results

RT: 3.76
Area: 107077
Amount: 6.058921
Amount Units: ug/l



Manual Integration Results

RT: 3.76
Area: 83849
Amount: 5.102323
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:06:09 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

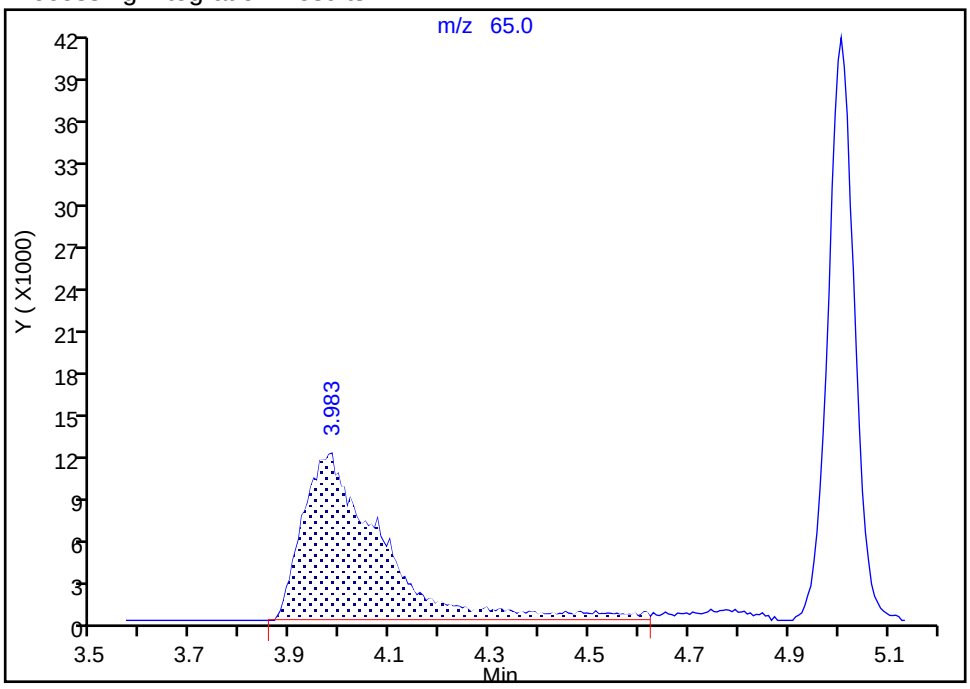
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X16.D
Injection Date: 19-Jun-2023 19:42:30 Instrument ID: 19930
Lims ID: IC std5
Client ID:
Operator ID: KNK41612 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 26 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

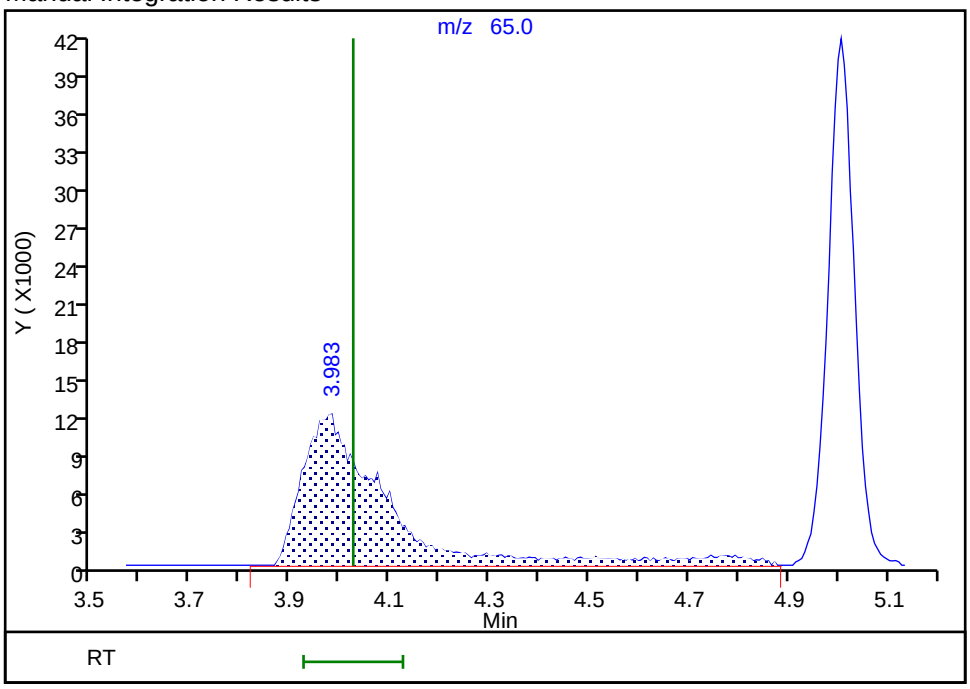
Processing Integration Results

RT: 3.98
Area: 131545
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 3.98
Area: 139221
Amount: 50.000000
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:06:17 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

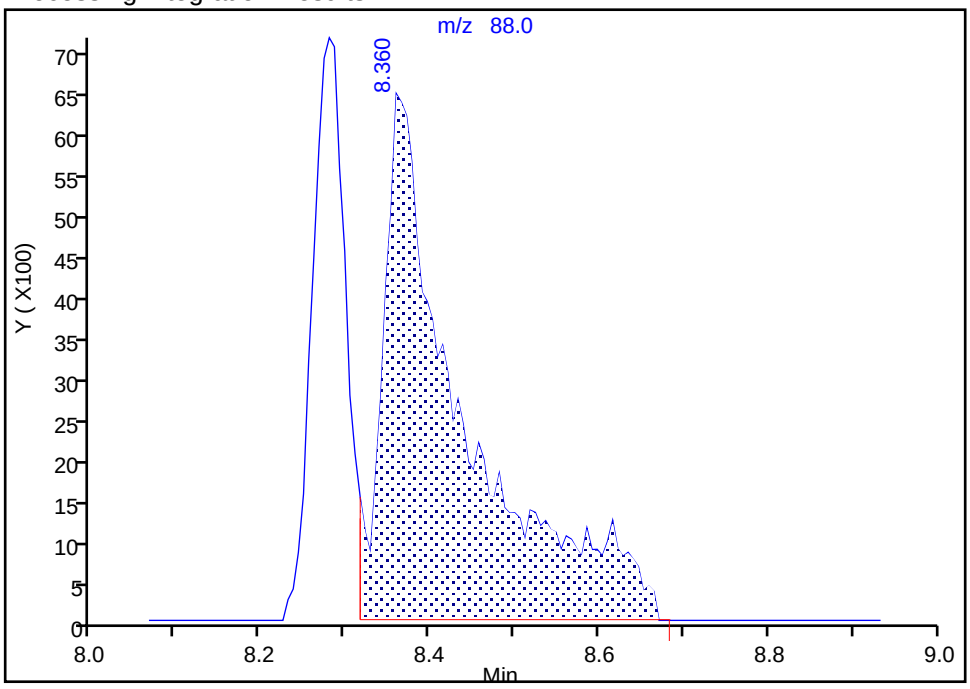
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X16.D
Injection Date: 19-Jun-2023 19:42:30 Instrument ID: 19930
Lims ID: IC std5
Client ID:
Operator ID: KNK41612 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

68 1,4-Dioxane, CAS: 123-91-1

Signal: 1

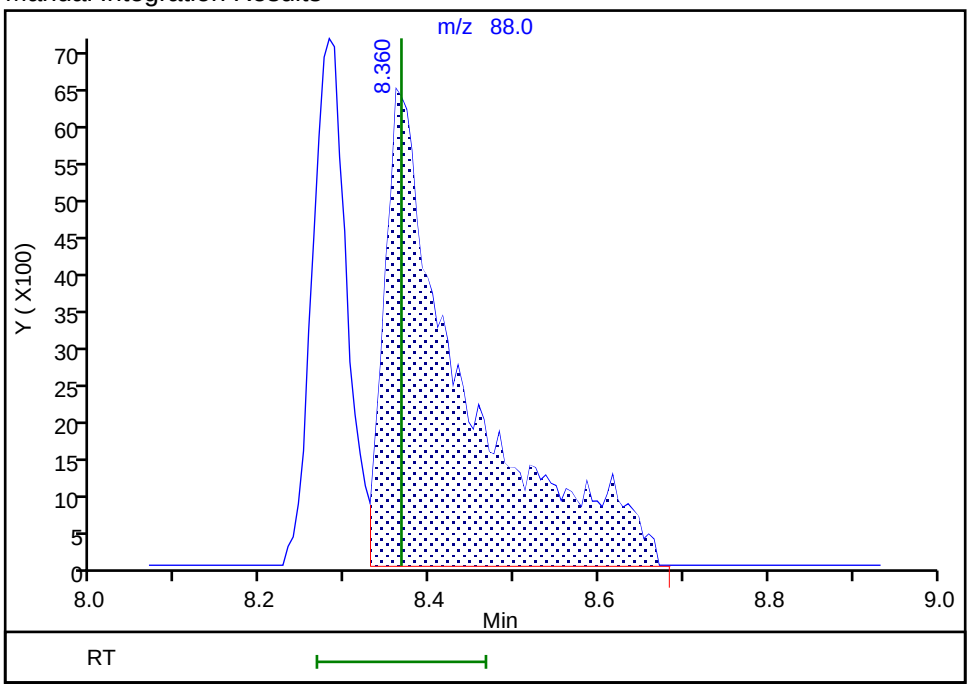
Processing Integration Results

RT: 8.36
Area: 42761
Amount: 252.0352
Amount Units: ug/l



Manual Integration Results

RT: 8.36
Area: 41814
Amount: 272.3748
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:06:38 -04:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

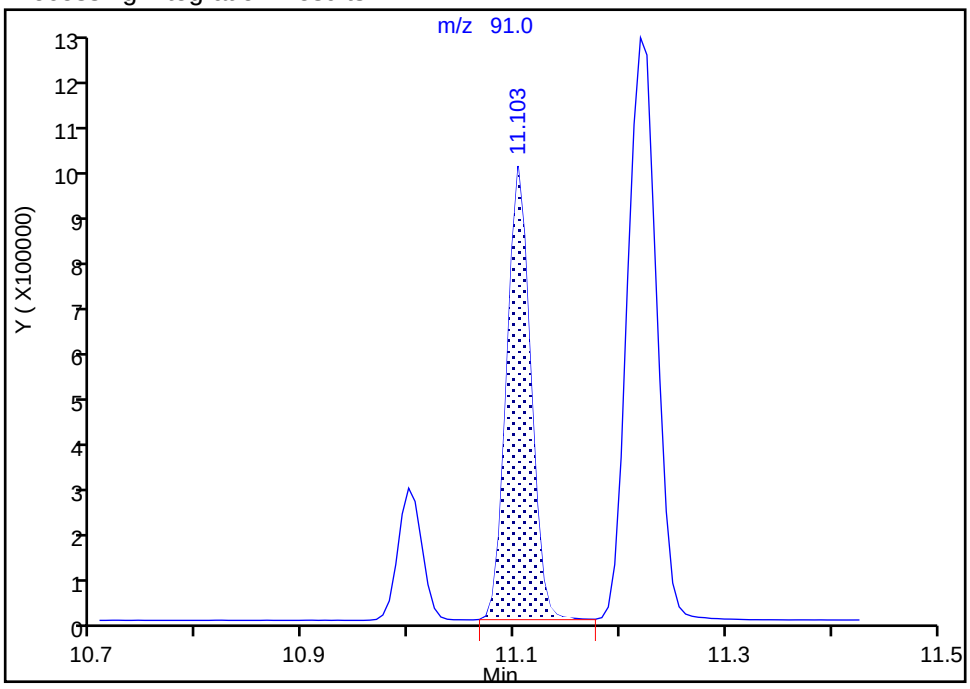
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X16.D
Injection Date: 19-Jun-2023 19:42:30 Instrument ID: 19930
Lims ID: IC std5
Client ID:
Operator ID: KNK41612 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

108 1-Chlorohexane, CAS: 544-10-5

Signal: 1

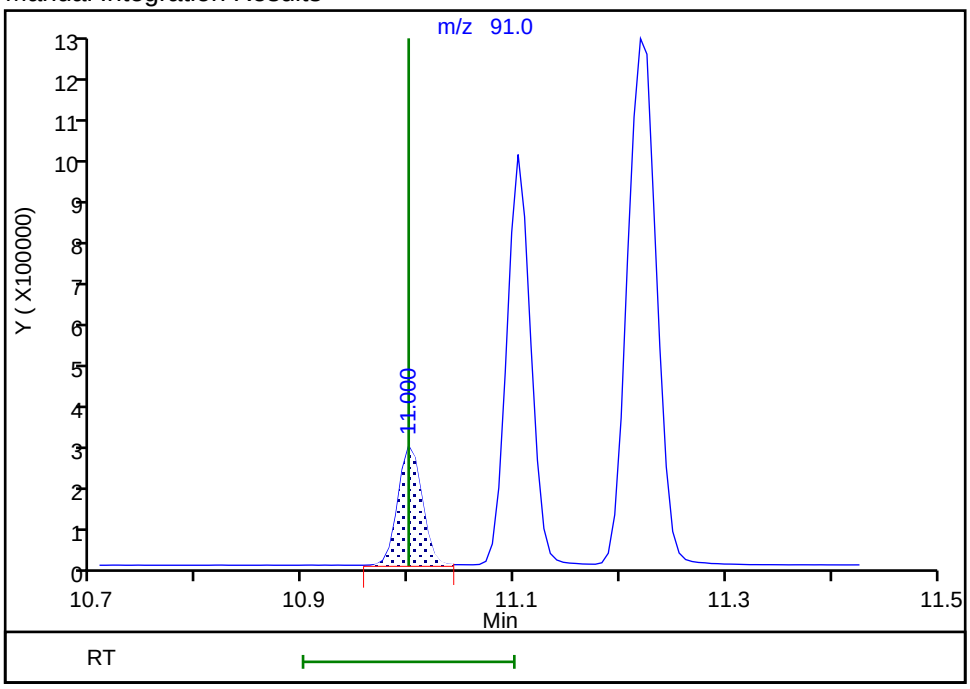
Processing Integration Results

RT: 11.10
Area: 1491281
Amount: 8.413378
Amount Units: ug/l



Manual Integration Results

RT: 11.00
Area: 432239
Amount: 4.949956
Amount Units: ug/l



Reviewer: DVW2, 22-Jun-2023 07:48:04 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

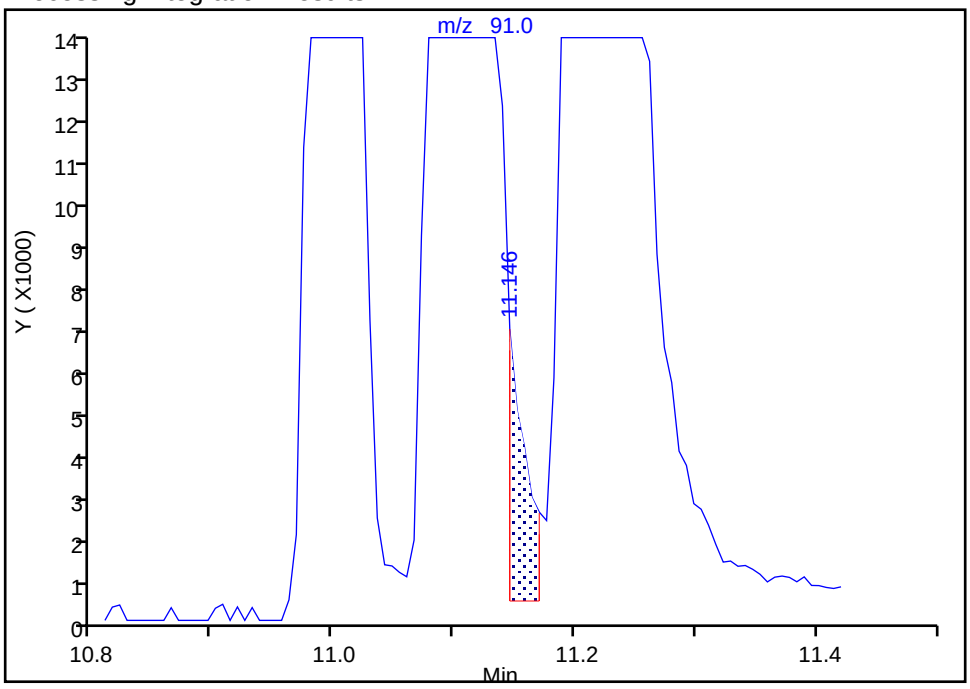
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X16.D
Injection Date: 19-Jun-2023 19:42:30 Instrument ID: 19930
Lims ID: IC std5
Client ID:
Operator ID: KNK41612 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

112 Ethylbenzene, CAS: 100-41-4

Signal: 1

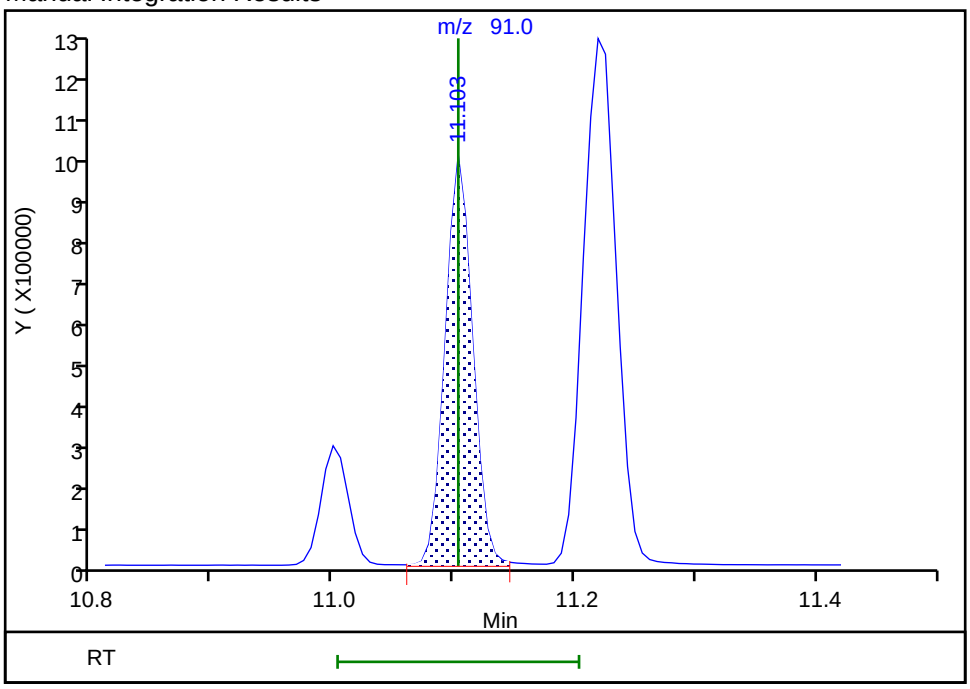
Processing Integration Results

RT: 11.15
Area: 6971
Amount: 0.021435
Amount Units: ug/l



Manual Integration Results

RT: 11.10
Area: 1483797
Amount: 5.074298
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 15:38:43 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

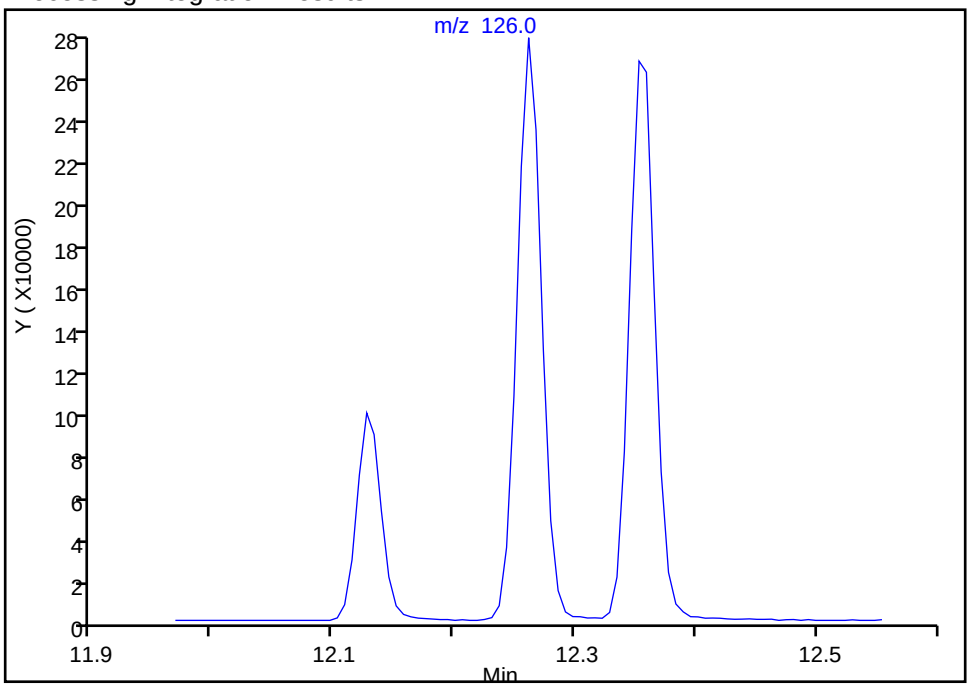
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X16.D
Injection Date: 19-Jun-2023 19:42:30 Instrument ID: 19930
Lims ID: IC std5
Client ID:
Operator ID: KNK41612 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

126 2-Chlorotoluene, CAS: 95-49-8

Signal: 1

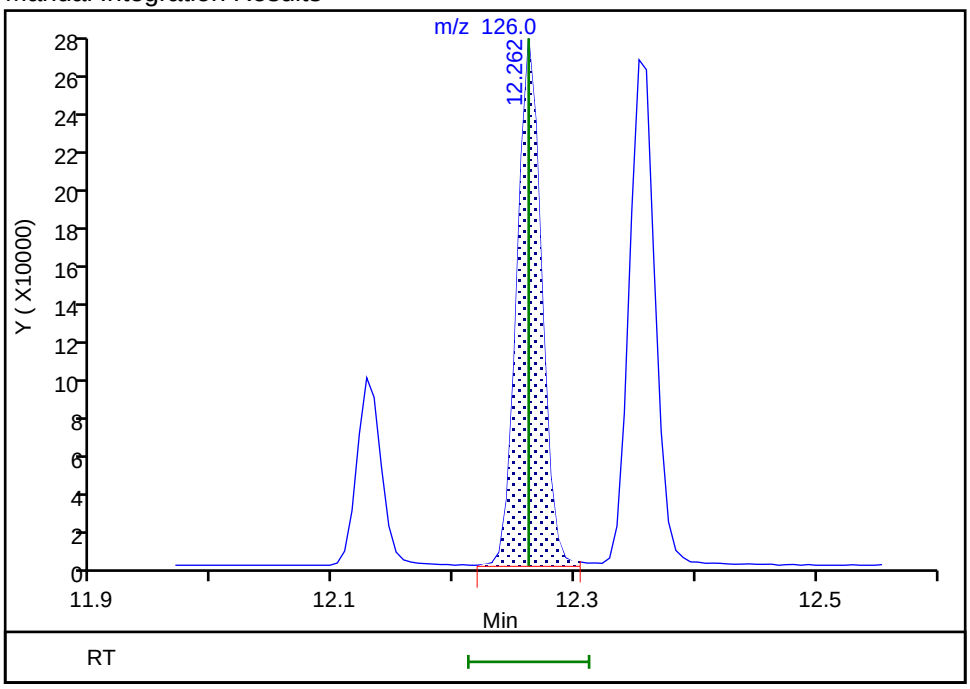
Not Detected
Expected RT: 12.26

Processing Integration Results



Manual Integration Results

RT: 12.26
Area: 385471
Amount: 5.091250
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 15:38:46 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Lims ID: ICIS std6 LG
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 19-Jun-2023 20:03:30 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0086929-018
Misc. Info.: LG 10.0
Operator ID: KNK41612 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 27-Jun-2023 12:30:34 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1687

First Level Reviewer: DVW2 Date: 21-Jun-2023 07:41:38

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.855	1.855	0.000	99	731790	10.0	10.1	
4 Chloromethane	50	2.050	2.050	0.000	99	711149	10.0	9.67	a
5 Vinyl chloride	62	2.160	2.160	0.000	98	695810	10.0	9.89	
6 Butadiene	39	2.160	2.160	0.000	91	661981	10.0	8.99	M
7 Bromomethane	94	2.465	2.465	0.000	90	529829	10.0	9.65	
8 Chloroethane	64	2.538	2.538	0.000	99	408968	10.0	9.72	
9 Dichlorofluoromethane	67	2.764	2.764	0.000	97	1102425	10.0	9.38	
10 Trichlorofluoromethane	101	2.824	2.824	0.000	96	931553	10.0	10.4	
11 Ethyl ether	59	3.050	3.050	0.000	90	379387	10.0	10.3	
13 1,2-Dichloro-1,1,2-trifluoroetha	67	3.142	3.142	0.000	94	618203	10.0	9.68	
14 Acrolein	56	3.209	3.209	0.000	98	2946849	500.0	520.4	
15 1,1-Dichloroethene	96	3.337	3.337	0.000	97	491920	10.0	10.1	a
16 Acetone	43	3.361	3.361	0.000	99	590923	100.0	94.5	a
17 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.385	3.385	0.000	91	552493	10.0	10.7	a
18 Iodomethane	142	3.526	3.526	0.000	99	1046658	10.0	10.3	a
19 Ethyl bromide	108	3.550	3.550	0.000	98	433776	10.0	10.2	a
20 Carbon disulfide	76	3.629	3.629	0.000	99	1353487	10.0	10.3	a
23 Methyl acetate	43	3.757	3.757	0.000	96	165612	10.0	10.7	Ma
24 3-Chloro-1-propene	41	3.782	3.782	0.000	91	754668	10.0	10.0	a
25 Methylene Chloride	84	3.958	3.958	0.000	89	518296	10.0	10.1	a
* 26 t-Butyl alcohol-d10 (IS)	65	3.977	3.977	0.000	95	130775	50.0	50.0	M
27 2-Methyl-2-propanol	59	4.093	4.093	0.000	99	419183	200.0	168.5	Ma
28 Acrylonitrile	53	4.282	4.282	0.000	97	215747	25.0	28.4	a
29 Methyl tert-butyl ether	73	4.342	4.342	0.000	94	1328588	10.0	9.99	a
30 trans-1,2-Dichloroethene	96	4.355	4.355	0.000	99	549965	10.0	10.2	a
31 Hexane	57	4.781	4.781	0.000	91	747981	10.0	10.6	a
32 1,1-Dichloroethane	63	5.013	5.013	0.000	96	957603	10.0	10.4	a
35 Isopropyl ether	45	5.074	5.074	0.000	93	1538859	10.0	10.1	a
36 2-Chloro-1,3-butadiene	53	5.123	5.123	0.000	90	806204	10.0	10.4	a
37 Tert-butyl ethyl ether	59	5.623	5.623	0.000	96	1475081	10.0	10.2	a

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
38 2-Butanone (MEK)	43	5.812	5.812	0.000	99	1212881	100.0	100.6	a
39 cis-1,2-Dichloroethene	96	5.854	5.854	0.000	81	607013	10.0	10.1	a
40 2,2-Dichloropropane	77	5.867	5.867	0.000	86	853357	10.0	10.2	a
43 Propionitrile	54	5.891	5.891	0.000	98	686213	200.0	215.3	a
45 Methacrylonitrile	67	6.110	6.110	0.000	90	1304884	100.0	103.7	a
46 Chlorobromomethane	128	6.190	6.190	0.000	86	278362	10.0	10.2	a
47 Tetrahydrofuran	71	6.196	6.196	0.000	74	200641	50.0	50.6	a
48 Chloroform	83	6.342	6.342	0.000	94	973119	10.0	10.2	a
$ 49 Dibromofluoromethane (Surr)	113	6.555	6.555	0.000	94	464653	10.0	10.0	a
50 1,1,1-Trichloroethane	97	6.568	6.568	0.000	98	914467	10.0	10.3	a
51 Cyclohexane	56	6.671	6.671	0.000	88	898646	10.0	10.6	a
54 Carbon tetrachloride	117	6.781	6.781	0.000	97	847817	10.0	10.7	a
53 1,1-Dichloropropene	75	6.781	6.781	0.000	95	738645	10.0	10.4	a
55 Isobutyl alcohol	41	6.940	6.940	0.000	94	408183	500.0	461.8	a
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.013	7.013	0.000	73	91929	10.0	9.99	a
57 Benzene	78	7.043	7.043	0.000	96	2192041	10.0	10.3	a
58 1,2-Dichloroethane	62	7.116	7.116	0.000	97	589464	10.0	10.2	a
60 Tert-amyl methyl ether	73	7.244	7.244	0.000	98	1374850	10.0	10.3	a
* 61 Fluorobenzene (IS)	96	7.452	7.452	0.000	99	1807671	10.0	10.0	a
62 n-Heptane	43	7.470	7.470	0.000	90	722856	10.0	10.6	a
63 n-Butanol	56	7.836	7.836	0.000	87	662655	875.0	976.0	a
64 Trichloroethene	95	7.933	7.933	0.000	96	615027	10.0	10.4	a
65 Methylcyclohexane	83	8.244	8.244	0.000	91	1036558	10.0	10.8	a
66 1,2-Dichloropropane	63	8.269	8.269	0.000	96	544394	10.0	10.3	a
67 Methyl methacrylate	69	8.354	8.354	0.000	93	276225	10.0	11.1	a
68 1,4-Dioxane	88	8.366	8.366	0.000	68	79624	500.0	552.2	M
69 Dibromomethane	93	8.378	8.378	0.000	91	271761	10.0	10.3	a
71 Dichlorobromomethane	83	8.616	8.616	0.000	99	705073	10.0	10.3	a
72 2-Nitropropane	41	8.884	8.884	0.000	97	394504	50.0	48.7	
75 1-Bromo-2-chloroethane	63	9.012	9.012	0.000	98	557990	10.0	10.4	a
76 cis-1,3-Dichloropropene	75	9.177	9.177	0.000	97	875051	10.0	10.6	
77 4-Methyl-2-pentanone (MIBK)	43	9.360	9.360	0.000	96	3378679	100.0	104.4	
$ 78 Toluene-d8 (Surr)	98	9.500	9.500	0.000	93	1851132	10.0	10.0	a
79 Toluene	92	9.579	9.579	0.000	99	1497015	10.0	10.3	
97 trans-1,3-Dichloropropene	75	9.848	9.848	0.000	92	742761	10.0	10.8	
99 Ethyl methacrylate	69	9.915	9.915	0.000	88	594538	10.0	10.4	
100 1,1,2-Trichloroethane	97	10.055	10.055	0.000	90	412606	10.0	10.0	
101 Tetrachloroethene	166	10.146	10.146	0.000	98	788455	10.0	10.4	
102 1,3-Dichloropropane	76	10.219	10.219	0.000	89	668224	10.0	10.2	
103 2-Hexanone	43	10.274	10.274	0.000	96	2392308	100.0	104.5	
105 Chlorodibromomethane	129	10.439	10.439	0.000	89	568456	10.0	10.6	
106 Ethylene Dibromide	107	10.549	10.549	0.000	98	404683	10.0	10.4	
* 107 Chlorobenzene-d5 (IS)	117	10.988	10.988	0.000	86	1439976	10.0	10.0	
108 1-Chlorohexane	91	11.000	11.000	0.000	95	850962	10.0	10.0	a
109 Chlorobenzene	112	11.018	11.018	0.000	97	1747675	10.0	10.2	
111 1,1,1,2-Tetrachloroethane	131	11.097	11.097	0.000	97	629258	10.0	10.3	
112 Ethylbenzene	91	11.103	11.103	0.000	98	2922252	10.0	10.3	a
113 m-Xylene & p-Xylene	106	11.219	11.219	0.000	93	2378256	20.0	20.7	
114 o-Xylene	106	11.554	11.554	0.000	95	1173518	10.0	10.3	
115 Styrene	104	11.567	11.567	0.000	95	1913392	10.0	10.5	
116 Bromoform	173	11.725	11.725	0.000	98	380006	10.0	10.9	
117 Isopropylbenzene	105	11.859	11.859	0.000	95	3058543	10.0	10.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 120 4-Bromofluorobenzene (Surr)	95	12.000	12.000	0.000	96	698444	10.0	10.0	a
121 1,1,2,2-Tetrachloroethane	83	12.103	12.103	0.000	93	534348	10.0	10.1	
122 Bromobenzene	156	12.115	12.115	0.000	95	773433	10.0	10.2	
123 trans-1,4-Dichloro-2-butene	53	12.128	12.128	0.000	91	1271163	100.0	104.4	
124 1,2,3-Trichloropropane	110	12.146	12.146	0.000	81	148764	10.0	10.1	
125 N-Propylbenzene	91	12.189	12.189	0.000	98	3497528	10.0	10.4	
126 2-Chlorotoluene	126	12.262	12.262	0.000	98	760985	10.0	10.3	a
127 1,3,5-Trimethylbenzene	105	12.323	12.323	0.000	95	2654457	10.0	10.3	
128 4-Chlorotoluene	126	12.353	12.353	0.000	95	763897	10.0	10.1	a
129 tert-Butylbenzene	134	12.566	12.566	0.000	92	640020	10.0	10.4	
130 Pentachloroethane	167	12.597	12.597	0.000	91	511060	10.0	10.7	
131 1,2,4-Trimethylbenzene	105	12.609	12.609	0.000	96	2718845	10.0	10.3	a
132 sec-Butylbenzene	105	12.731	12.731	0.000	94	3403512	10.0	10.4	
133 1,3-Dichlorobenzene	146	12.829	12.829	0.000	99	1543368	10.0	10.4	
134 4-Isopropyltoluene	119	12.841	12.841	0.000	97	3071854	10.0	10.6	
* 135 1,4-Dichlorobenzene-d4	152	12.884	12.884	0.000	93	884528	10.0	10.0	
136 1,4-Dichlorobenzene	146	12.902	12.902	0.000	95	1479609	10.0	10.1	
137 1,2,3-Trimethylbenzene	120	12.914	12.914	0.000	98	1208040	10.0	10.1	
138 Benzyl chloride	126	12.981	12.981	0.000	98	244410	10.0	10.8	a
139 n-Butylbenzene	92	13.133	13.133	0.000	97	1402209	10.0	10.8	
140 1,2-Dichlorobenzene	146	13.158	13.158	0.000	99	1428274	10.0	10.2	
142 1,2-Dibromo-3-Chloropropane	155	13.700	13.700	0.000	91	91829	10.0	10.7	
143 1,3,5-Trichlorobenzene	180	13.828	13.828	0.000	98	1180993	10.0	10.6	
144 1,2,4-Trichlorobenzene	180	14.249	14.249	0.000	94	976458	10.0	10.9	
145 Hexachlorobutadiene	225	14.334	14.334	0.000	95	466073	10.0	10.7	
146 Naphthalene	128	14.426	14.426	0.000	96	1695646	10.0	10.4	a
147 1,2,3-Trichlorobenzene	180	14.572	14.572	0.000	96	801092	10.0	10.7	
155 2-Methylnaphthalene	142		0.000				ND	ND	
156 p-Diethylbenzene	1		0.000				ND	ND	
161 Pentane	43		0.000				ND	ND	
150 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
165 Isopropyl alcohol	45		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_LL_#1_826_00081	Amount Added: 10.00	Units: uL	
MSV_LL_#2_826_00093	Amount Added: 10.00	Units: uL	
MSV_LL_GAS826_00156	Amount Added: 10.00	Units: uL	
MSV_LLcentISS_00007	Amount Added: 5.00	Units: uL	Run Reagent

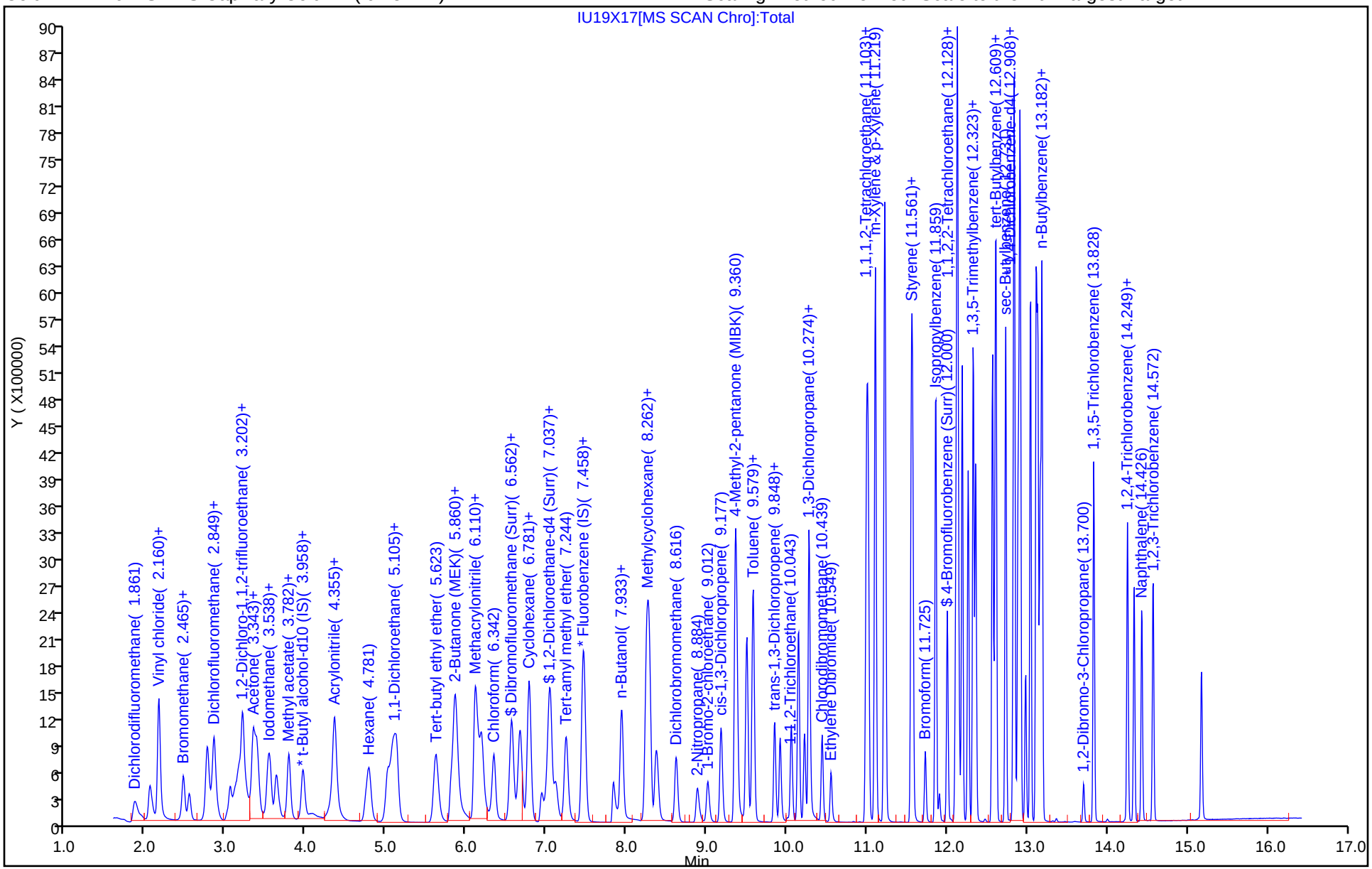
Report Date: 27-Jun-2023 12:30:35 Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D

Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930	Operator ID:	KNK41612
Lims ID:	ICIS std6 LG			Worklist Smp#:	18
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

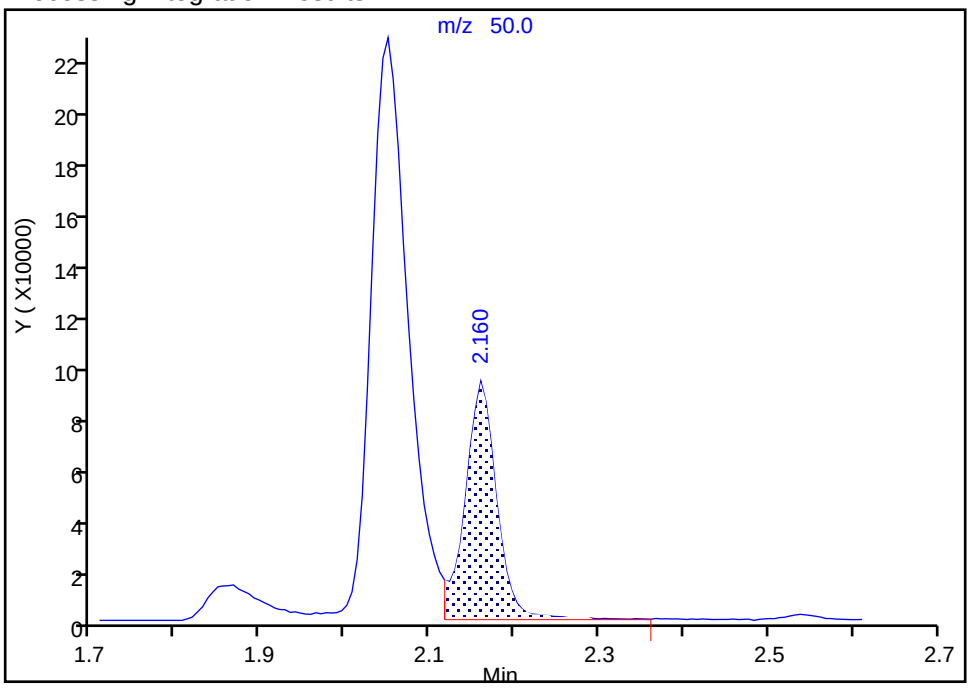
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

4 Chloromethane, CAS: 74-87-3

Signal: 1

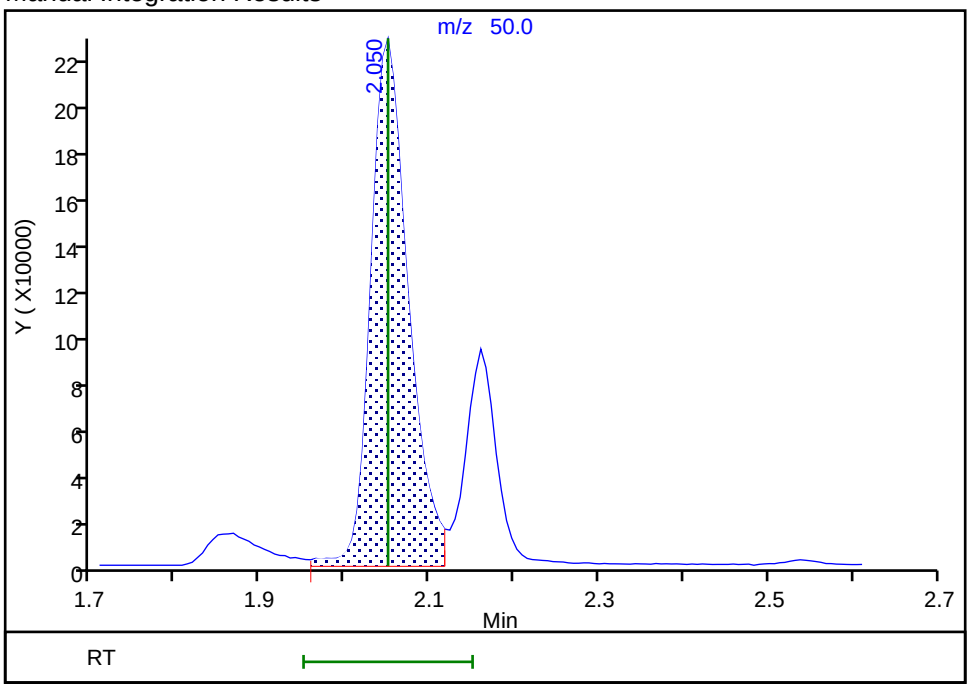
Processing Integration Results

RT: 2.16
Area: 250430
Amount: 0.112854
Amount Units: ug/l



Manual Integration Results

RT: 2.05
Area: 711149
Amount: 9.671244
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:36:29 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

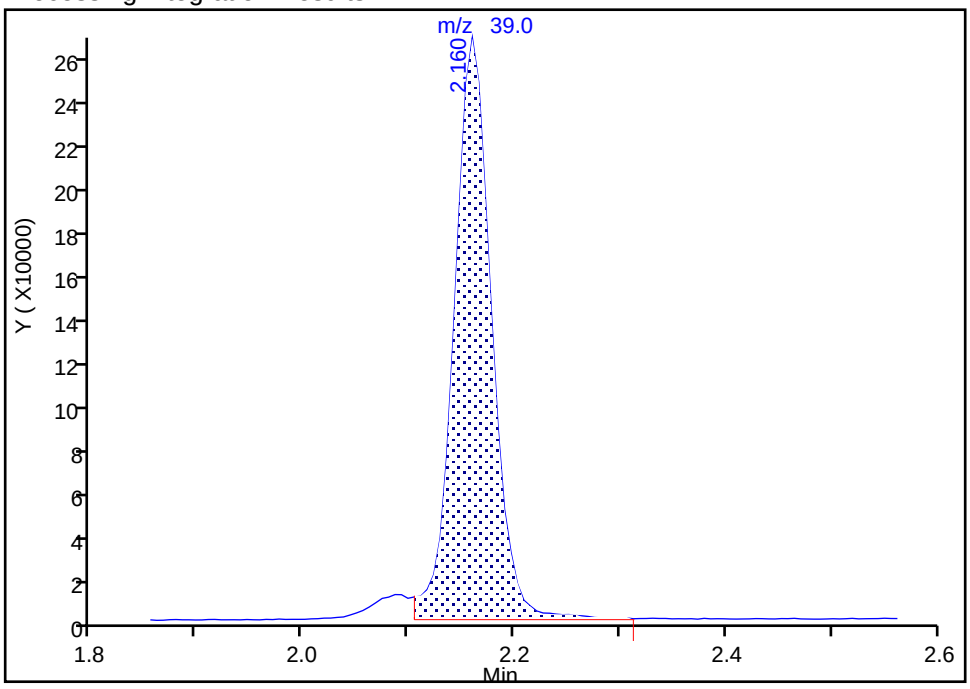
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

6 Butadiene, CAS: 106-99-0

Signal: 1

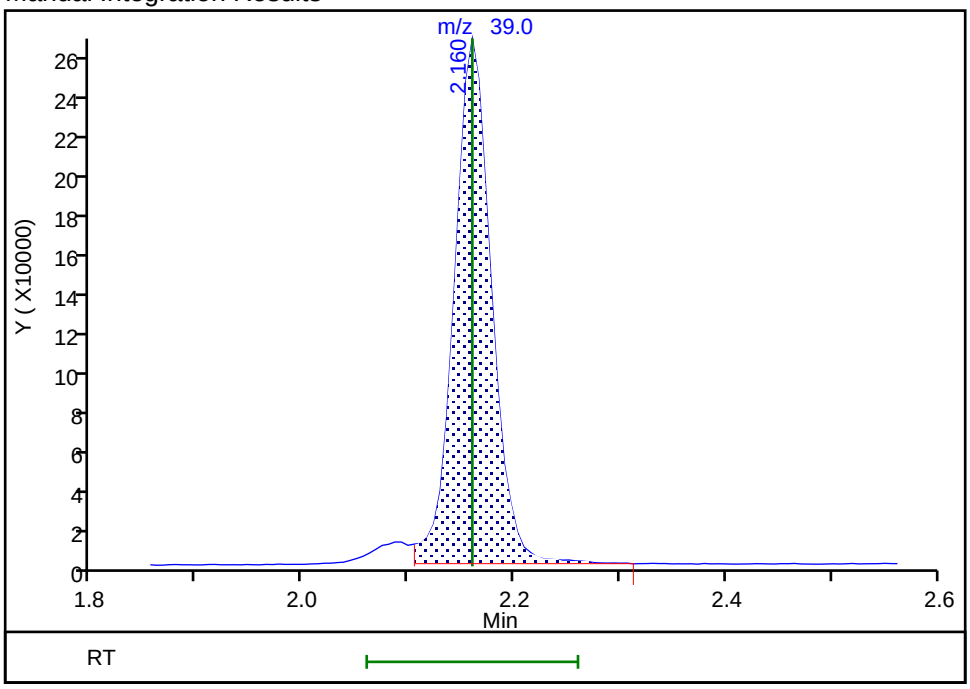
Processing Integration Results

RT: 2.16
Area: 663703
Amount: 9.006732
Amount Units: ug/l



Manual Integration Results

RT: 2.16
Area: 661981
Amount: 8.992016
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:07:48 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

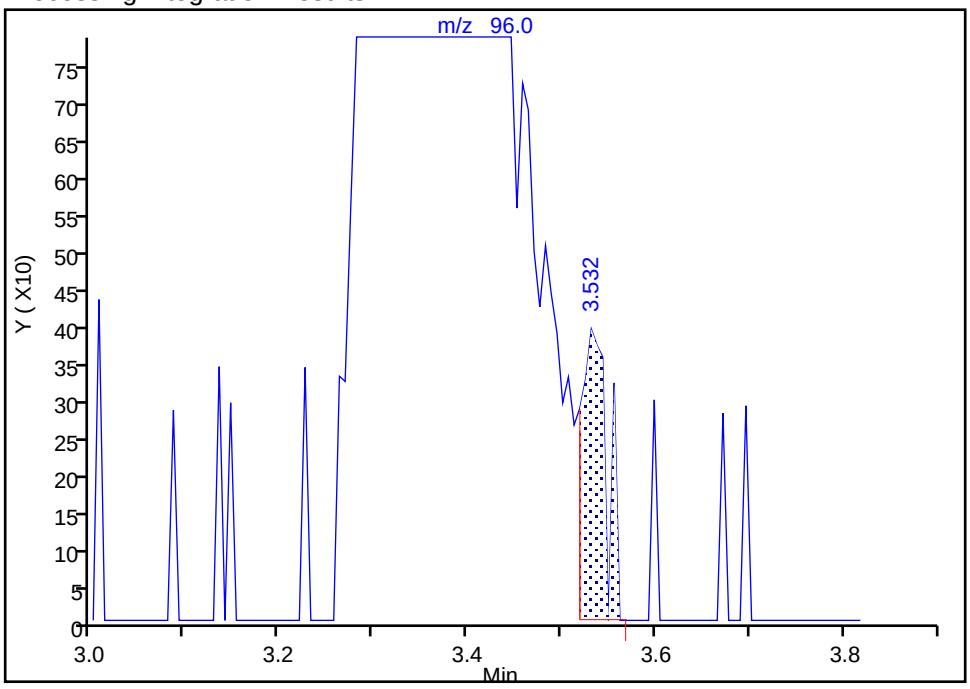
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

15 1,1-Dichloroethene, CAS: 75-35-4

Signal: 1

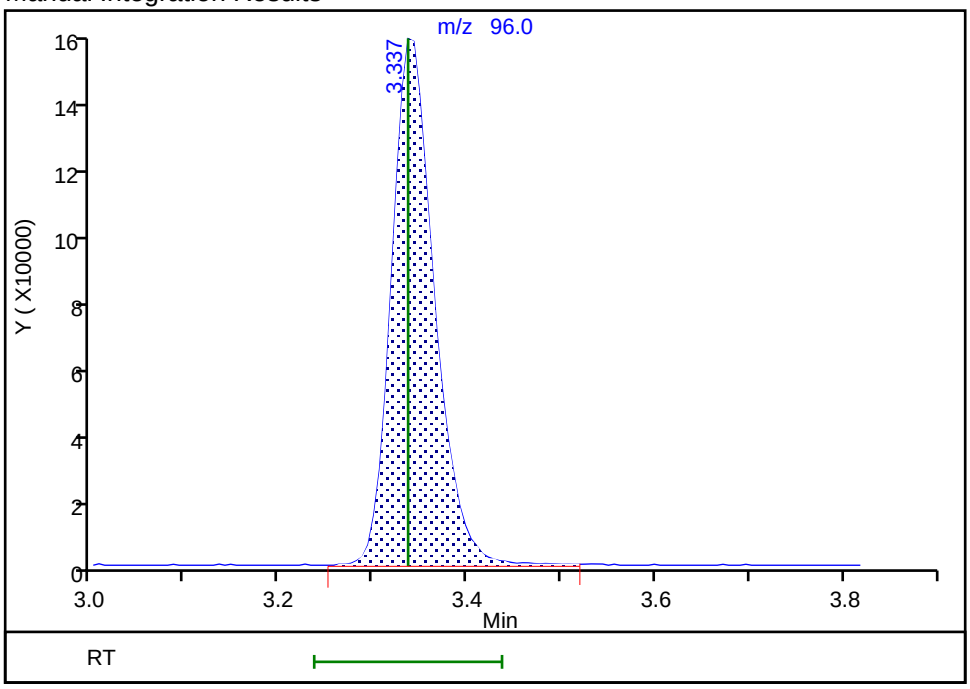
Processing Integration Results

RT: 3.53
Area: 754
Amount: 10.000000
Amount Units: ug/l



Manual Integration Results

RT: 3.34
Area: 491920
Amount: 10.146958
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:36:52 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

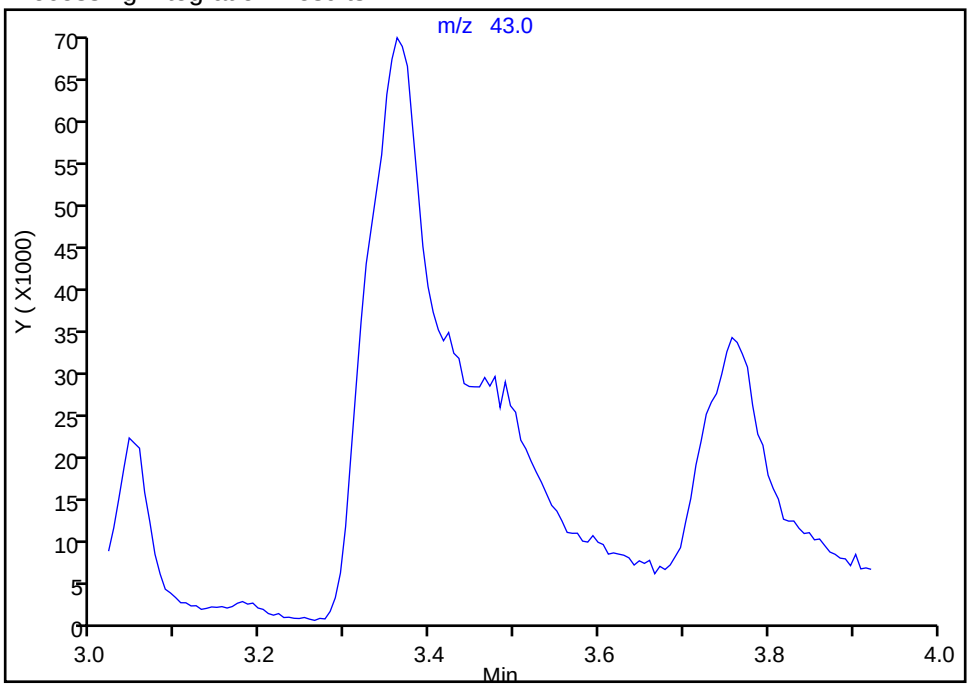
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

16 Acetone, CAS: 67-64-1

Signal: 1

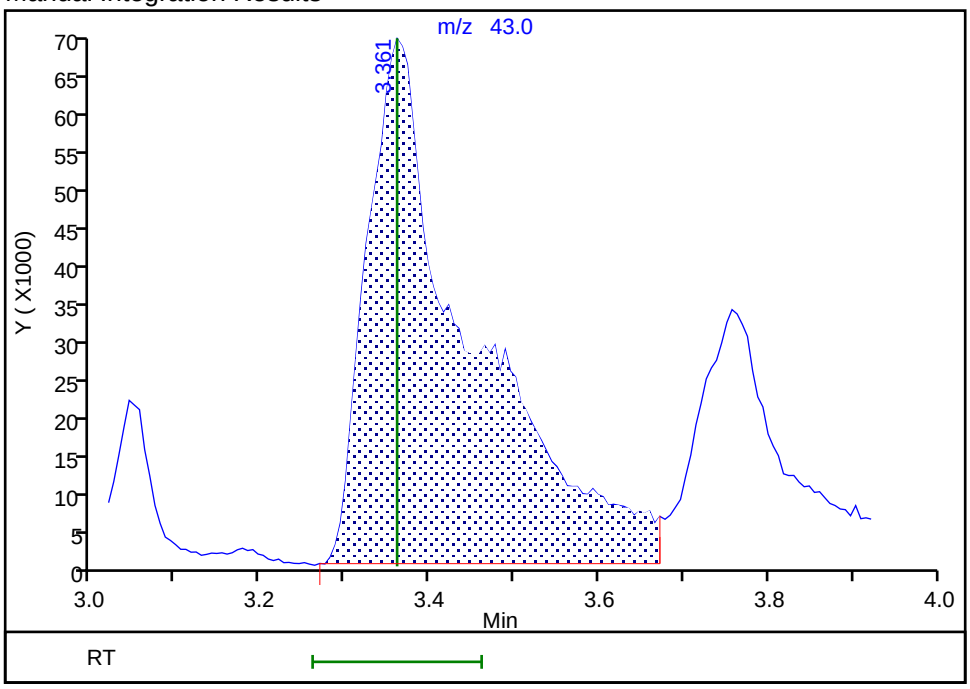
Not Detected
Expected RT: 3.36

Processing Integration Results



Manual Integration Results

RT: 3.36
Area: 590923
Amount: 94.472856
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:36:43 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

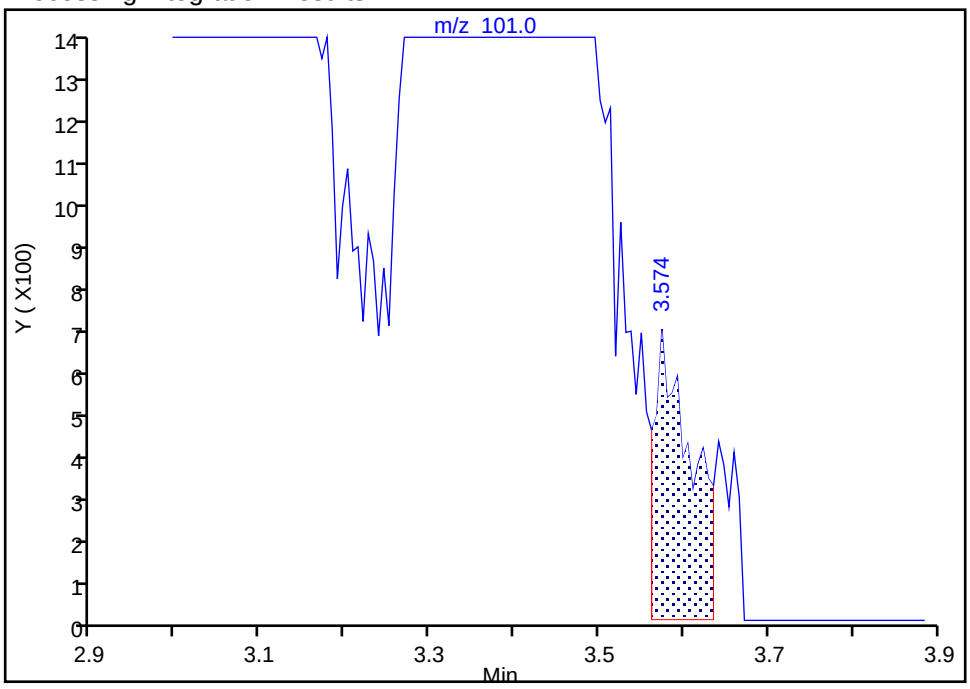
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

17 1,1,2-Trichloro-1,2,2-trifluoroe, CAS: 76-13-1

Signal: 1

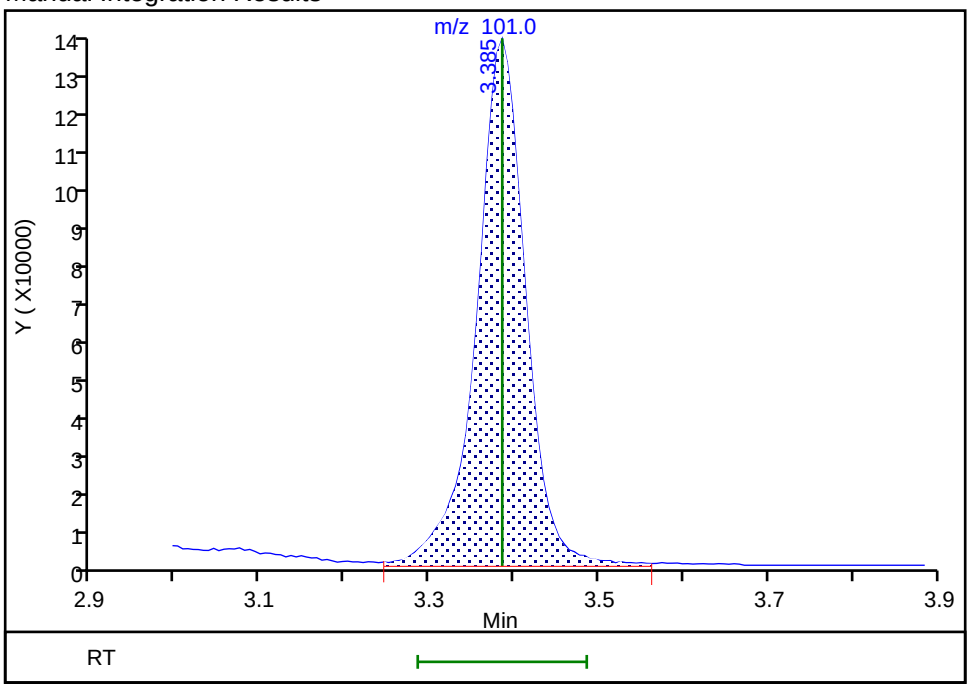
Processing Integration Results

RT: 3.57
Area: 2114
Amount: 10.000000
Amount Units: ug/l



Manual Integration Results

RT: 3.39
Area: 552493
Amount: 10.737007
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:36:55 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

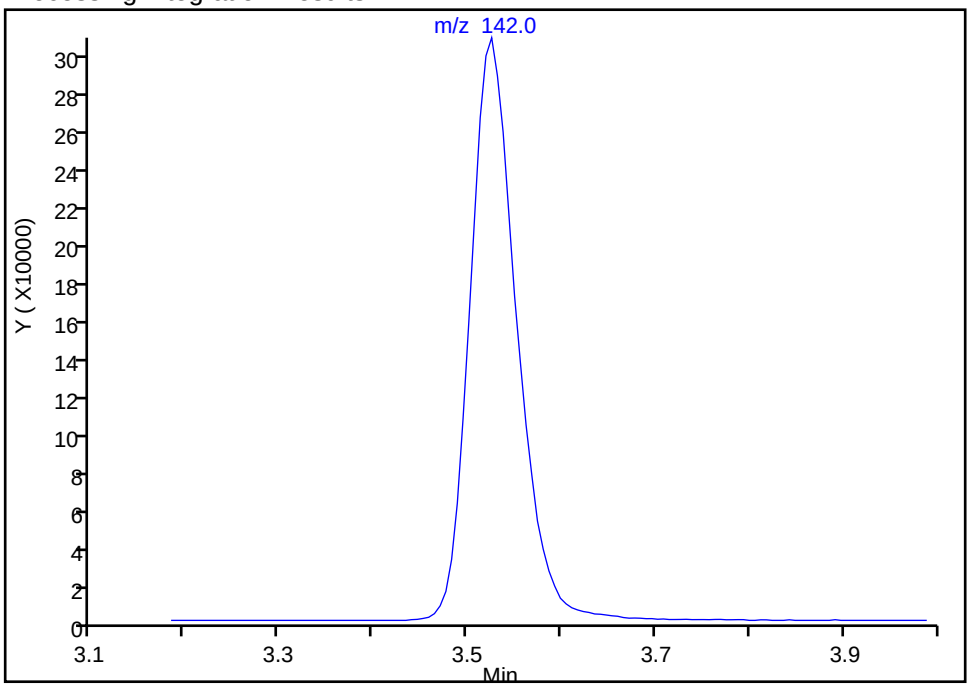
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

18 Iodomethane, CAS: 74-88-4

Signal: 1

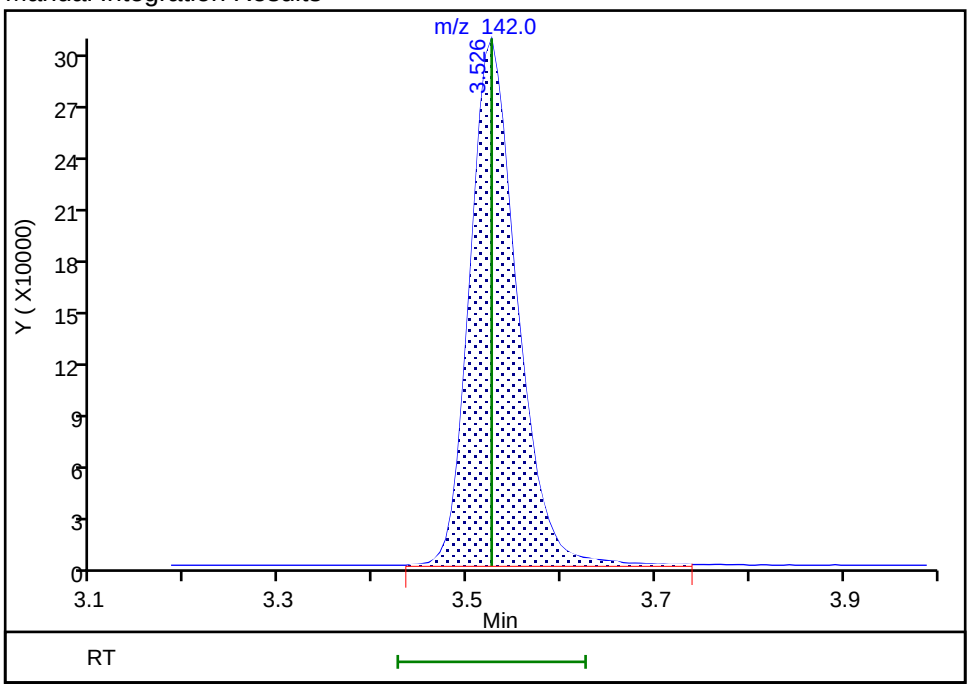
Not Detected
Expected RT: 3.53

Processing Integration Results



Manual Integration Results

RT: 3.53
Area: 1046658
Amount: 10.266934
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:37:00 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

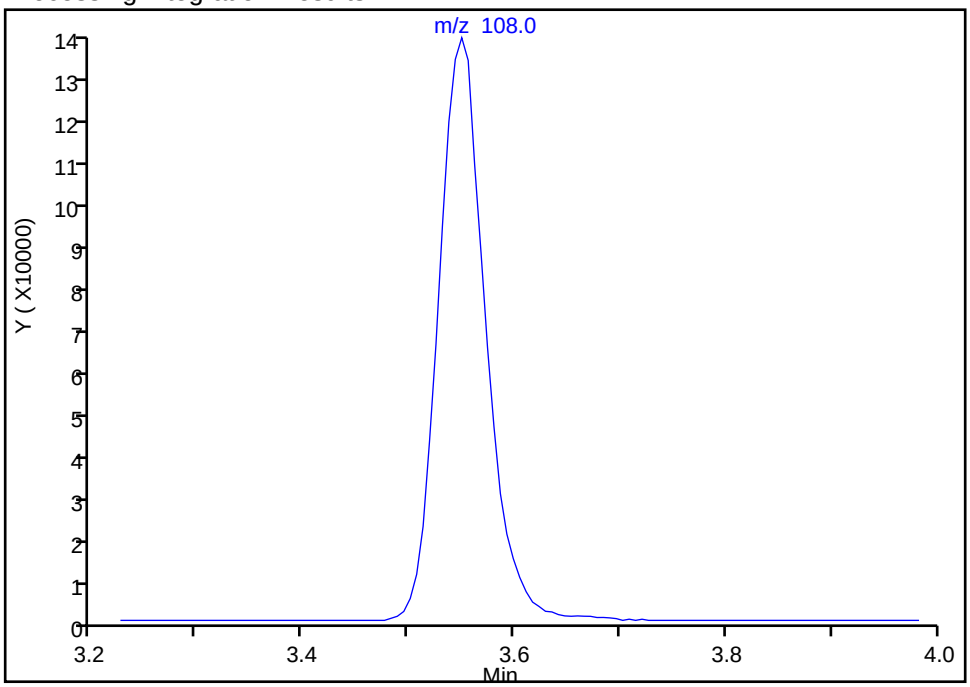
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

19 Ethyl bromide, CAS: 74-96-4

Signal: 1

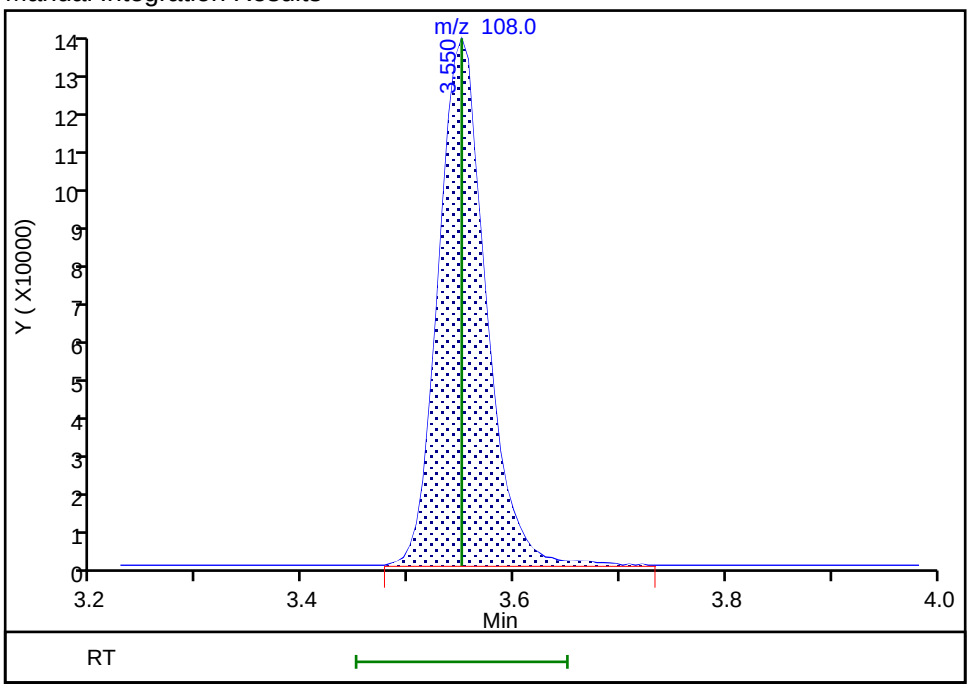
Not Detected
Expected RT: 3.55

Processing Integration Results



Manual Integration Results

RT: 3.55
Area: 433776
Amount: 10.223456
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:37:03 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

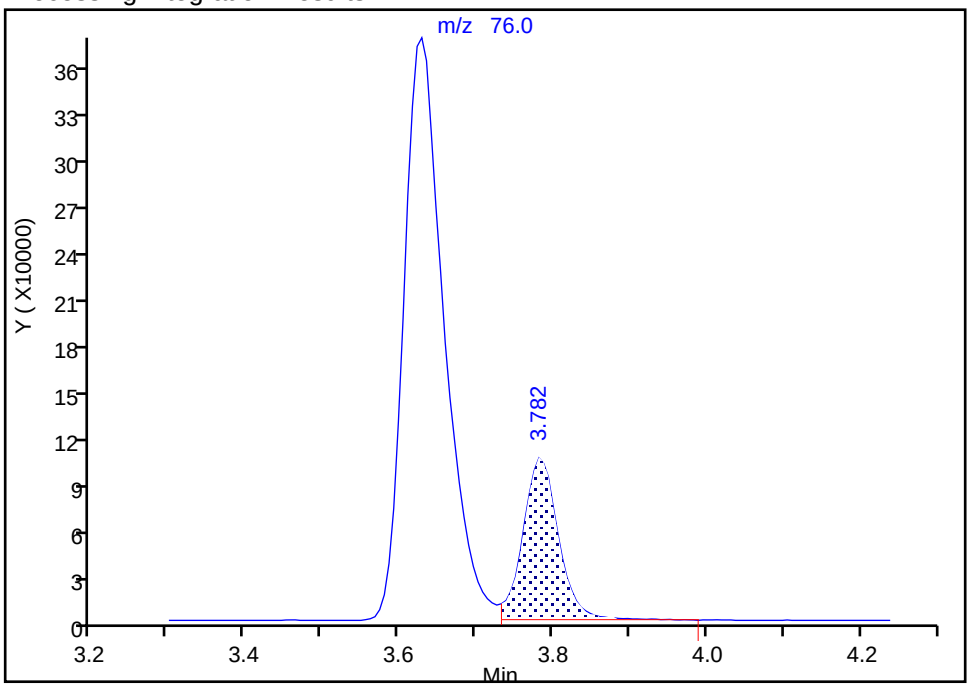
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

20 Carbon disulfide, CAS: 75-15-0

Signal: 1

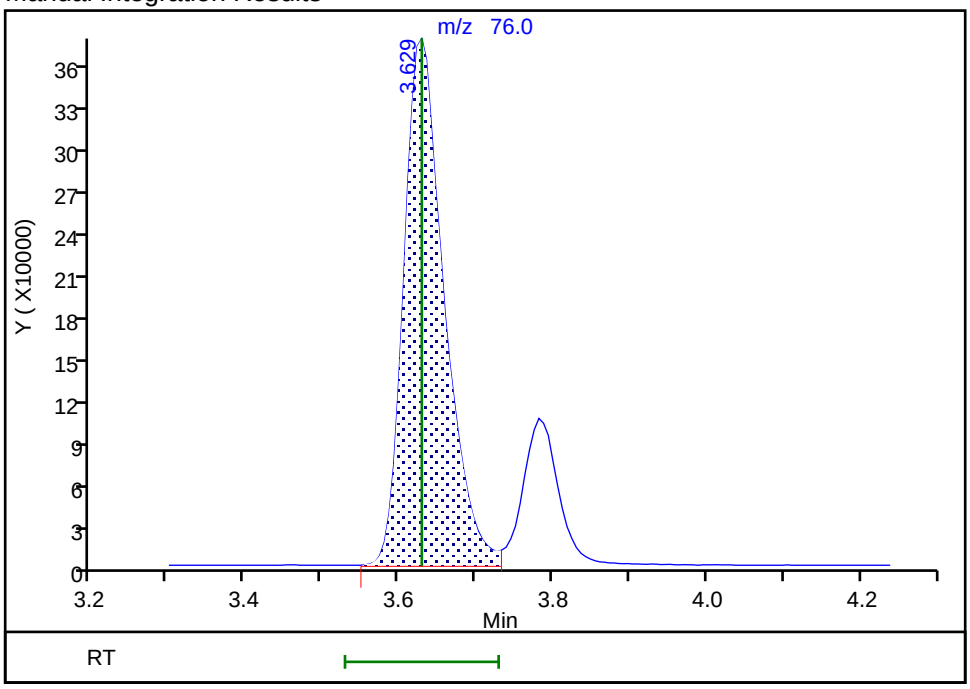
Processing Integration Results

RT: 3.78
Area: 335979
Amount: 0.167343
Amount Units: ug/l



Manual Integration Results

RT: 3.63
Area: 1353487
Amount: 10.295573
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:37:07 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

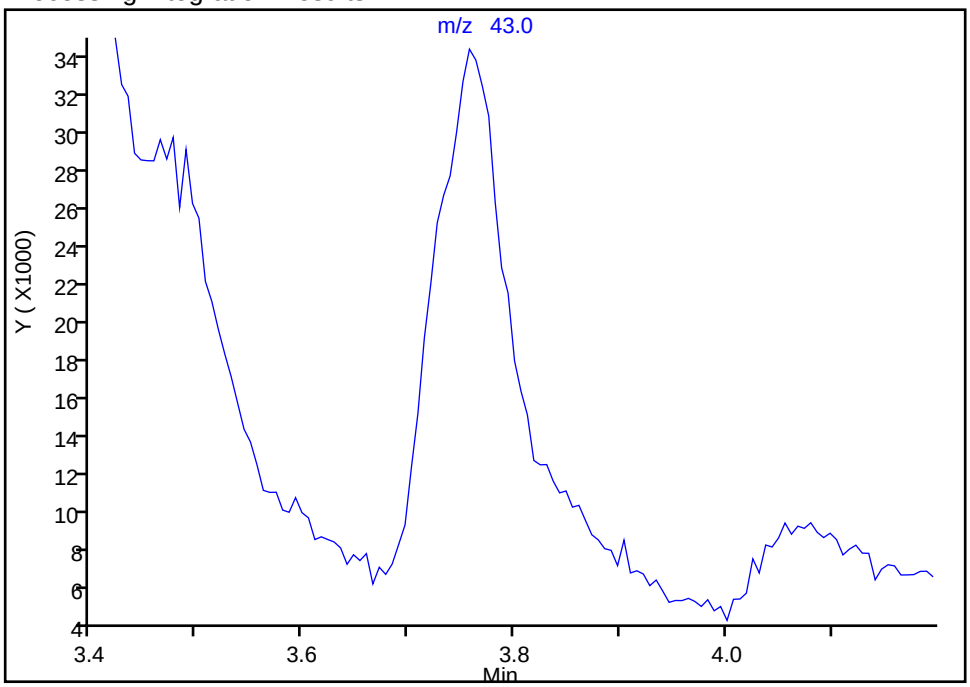
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

23 Methyl acetate, CAS: 79-20-9

Signal: 1

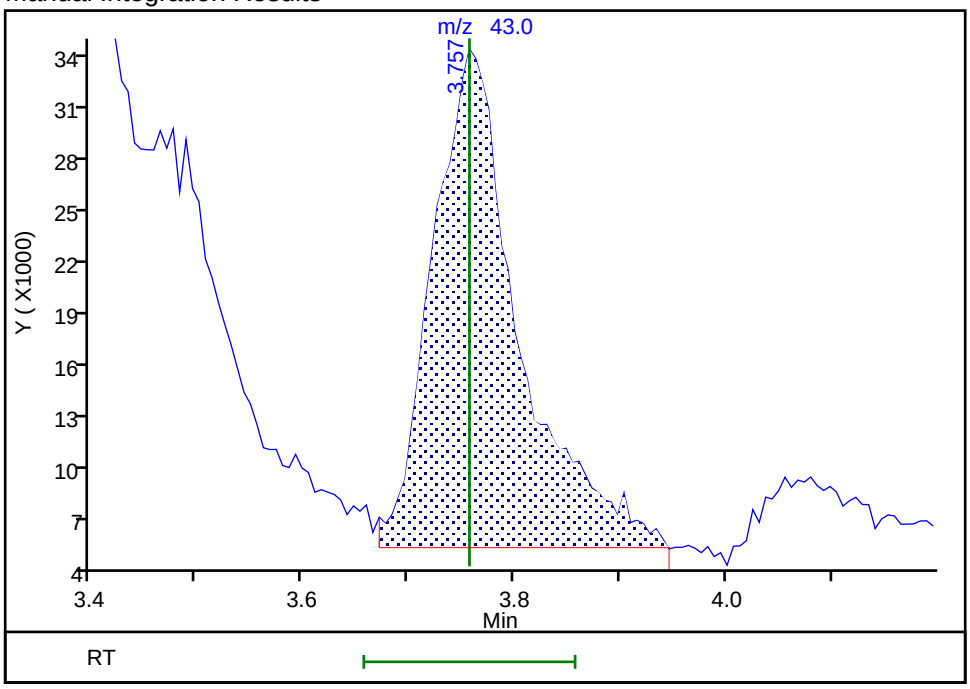
Not Detected
Expected RT: 3.76

Processing Integration Results



Manual Integration Results

RT: 3.76
Area: 165612
Amount: 10.728572
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:37:29 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

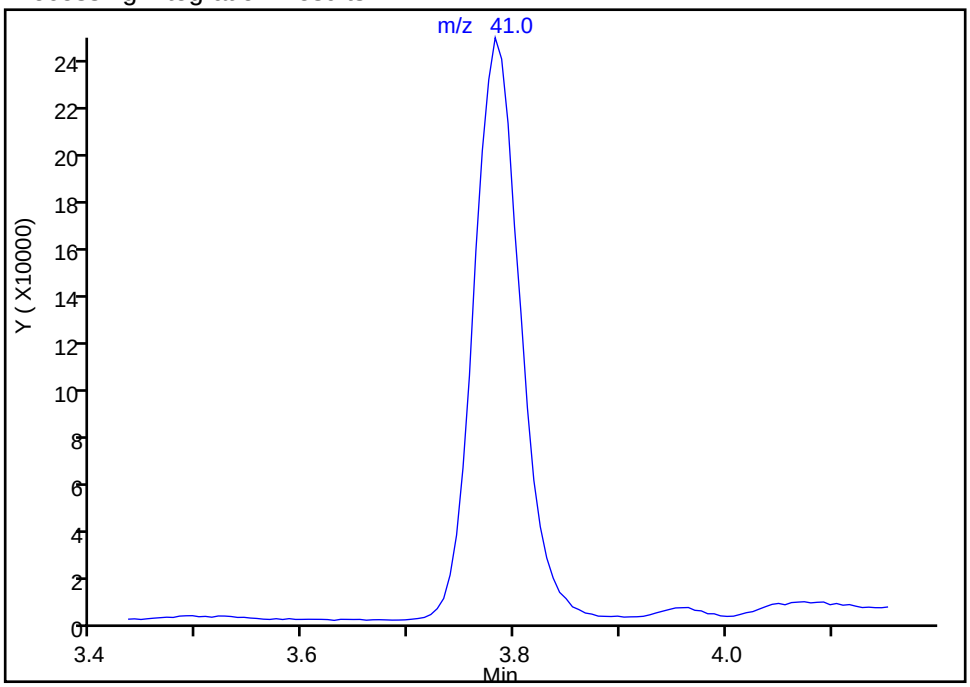
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

24 3-Chloro-1-propene, CAS: 107-05-1

Signal: 1

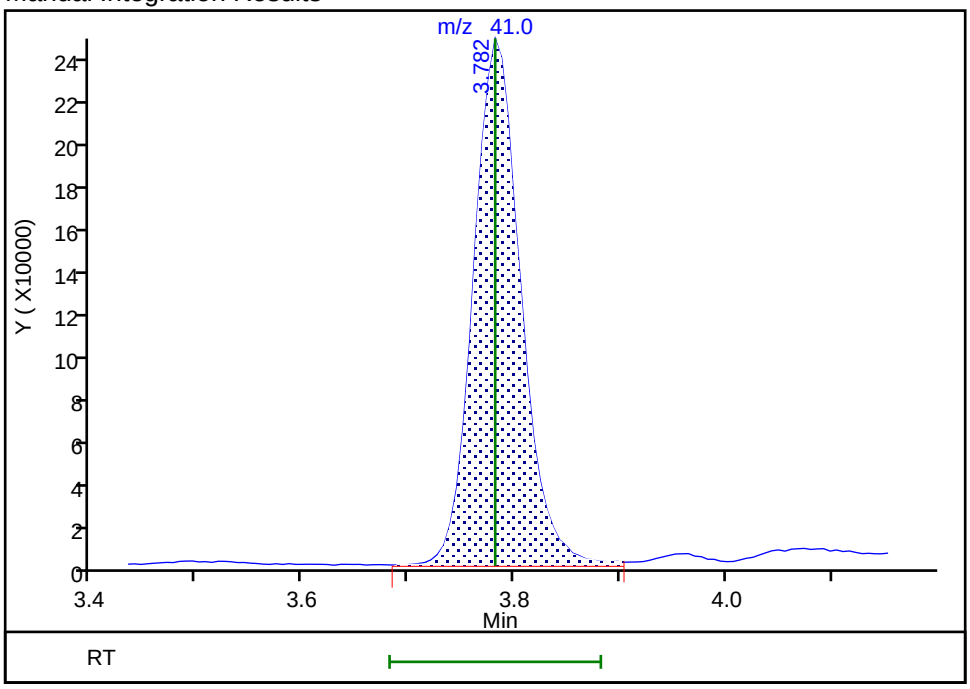
Not Detected
Expected RT: 3.78

Processing Integration Results



Manual Integration Results

RT: 3.78
Area: 754668
Amount: 10.015905
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:37:36 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

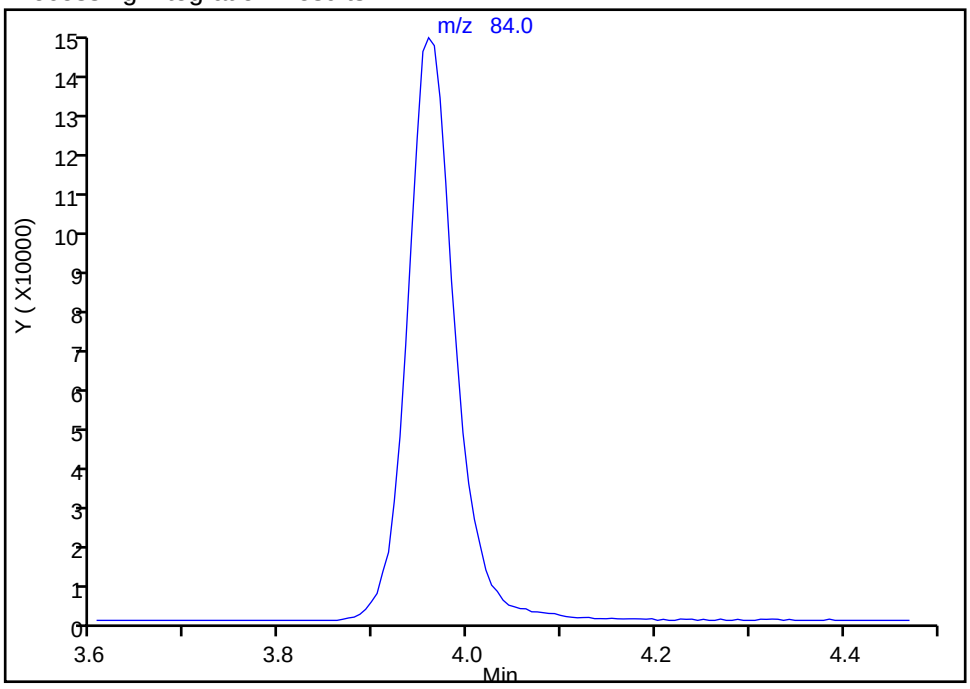
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

25 Methylene Chloride, CAS: 75-09-2

Signal: 1

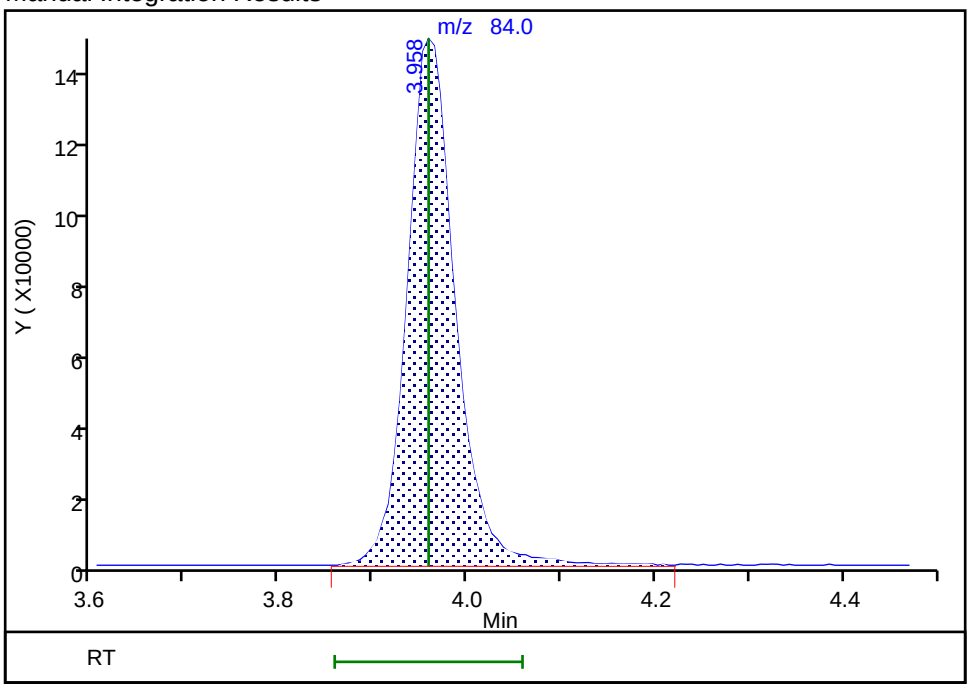
Not Detected
Expected RT: 3.96

Processing Integration Results



Manual Integration Results

RT: 3.96
Area: 518296
Amount: 10.126292
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:37:42 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

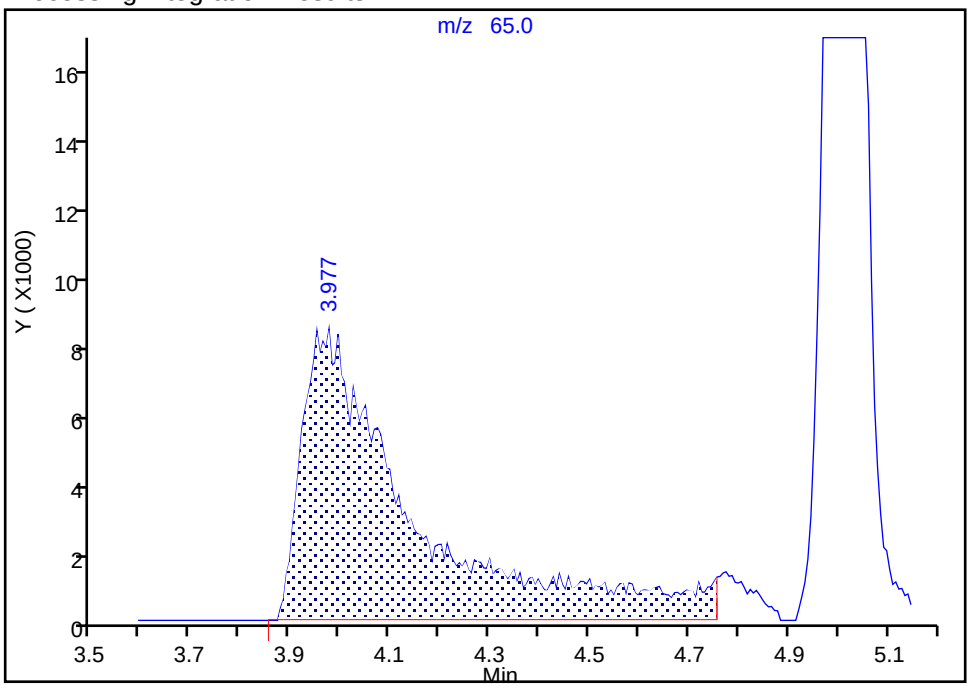
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 26 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

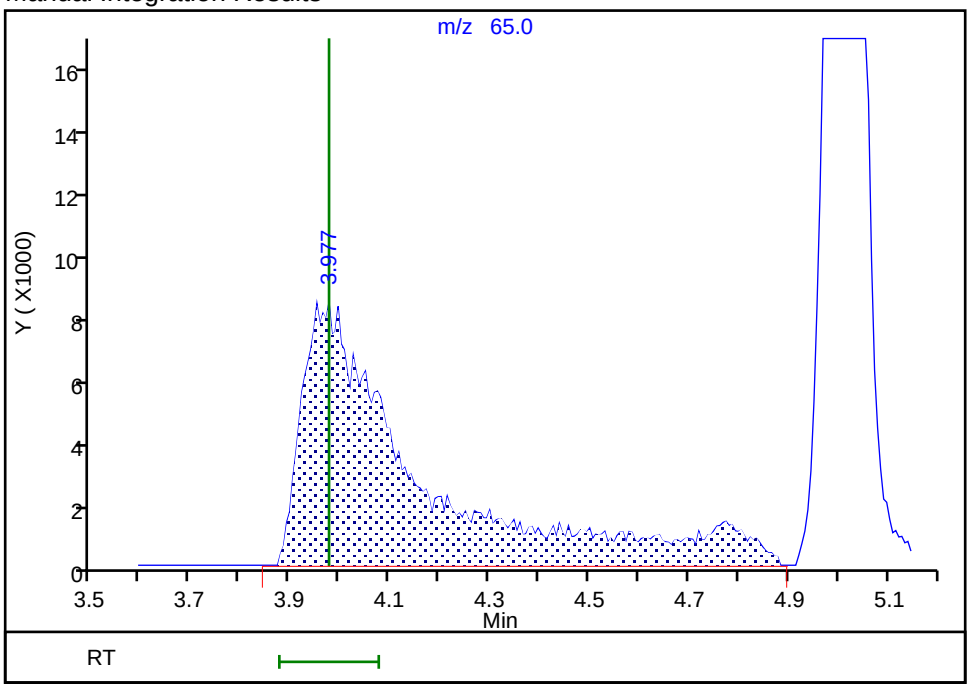
Processing Integration Results

RT: 3.98
Area: 124681
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 3.98
Area: 130775
Amount: 50.000000
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:35:34 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

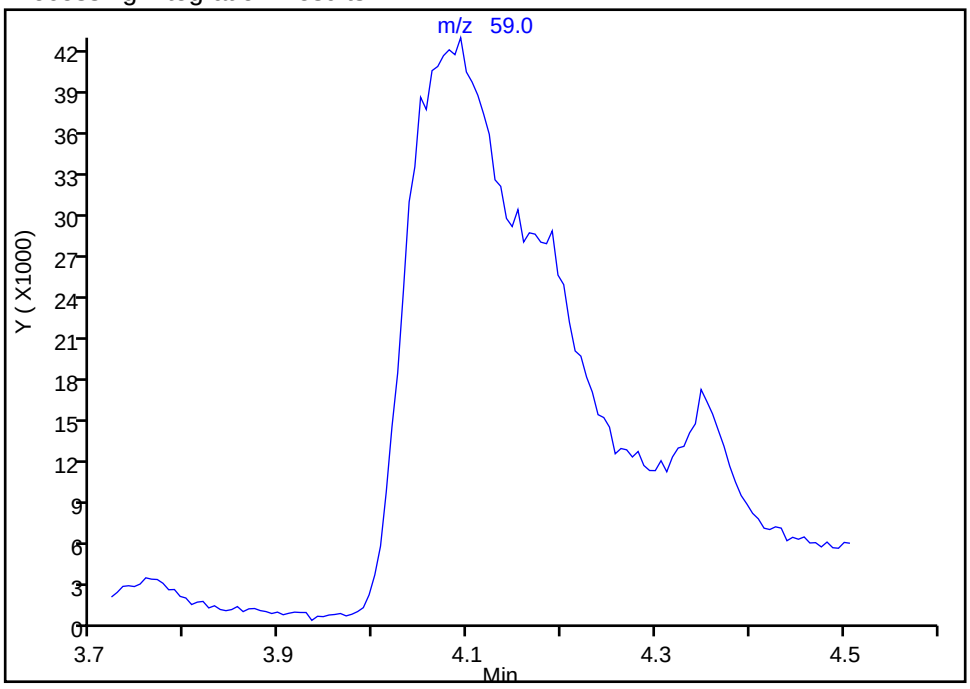
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

27 2-Methyl-2-propanol, CAS: 75-65-0

Signal: 1

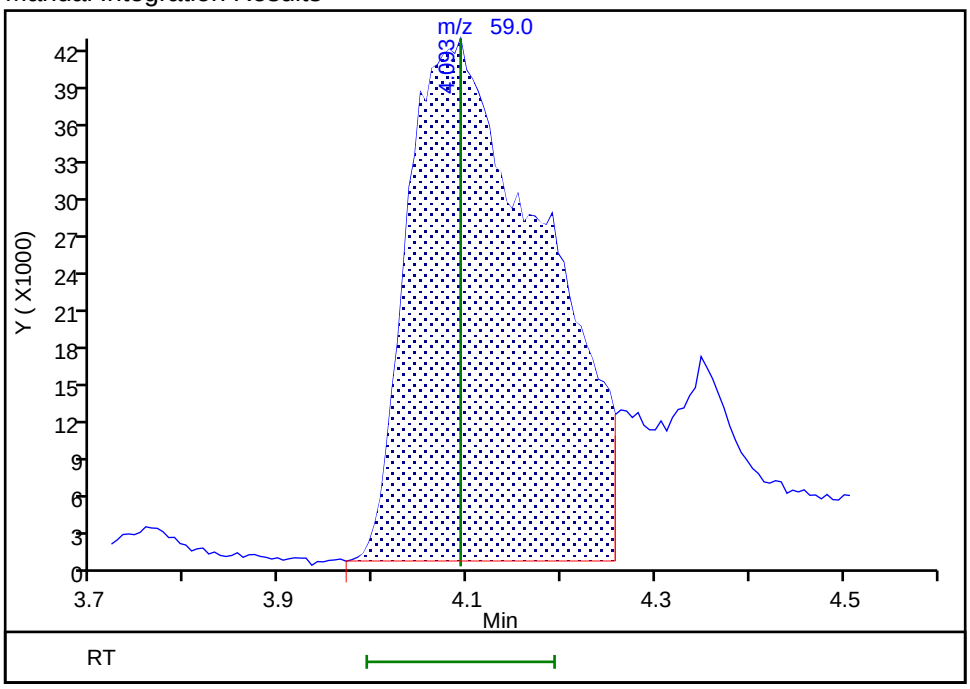
Not Detected
Expected RT: 4.09

Processing Integration Results



Manual Integration Results

RT: 4.09
Area: 419183
Amount: 168.4569
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:37:54 -04:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

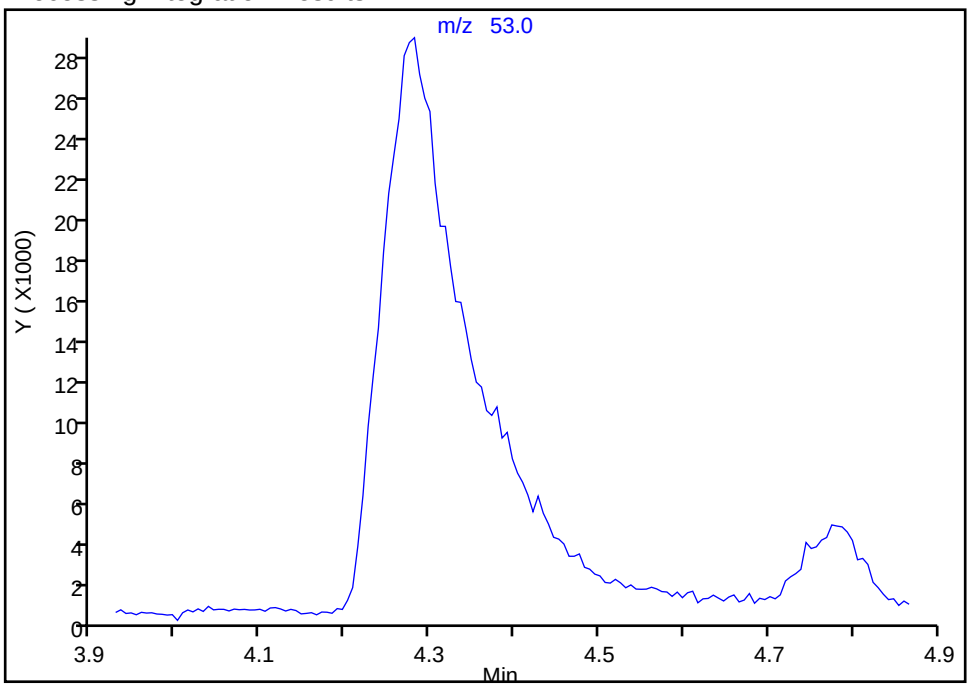
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

28 Acrylonitrile, CAS: 107-13-1

Signal: 1

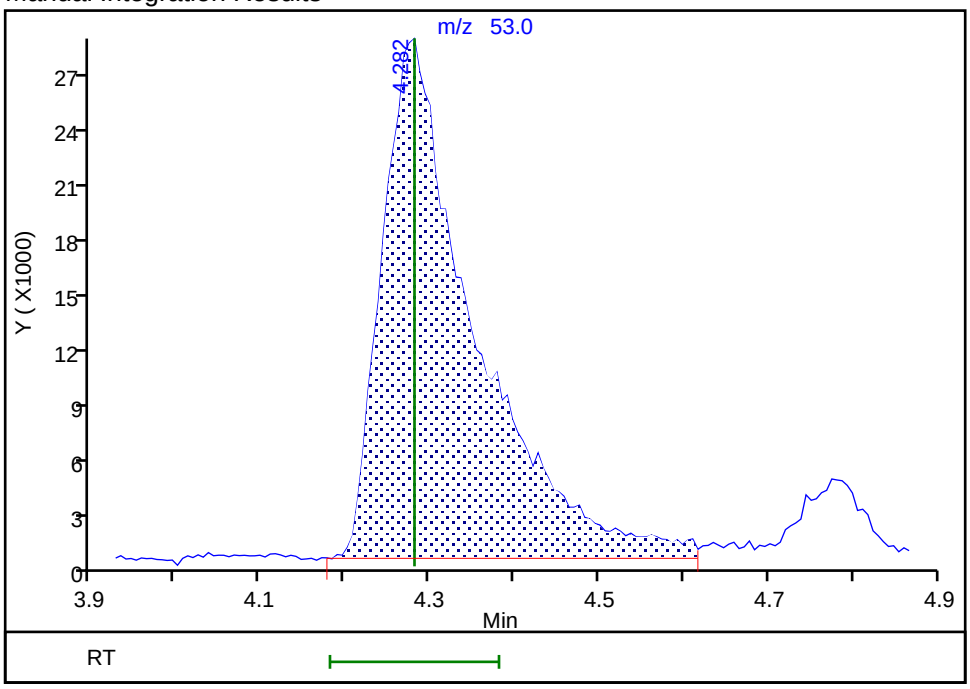
Not Detected
Expected RT: 4.28

Processing Integration Results



Manual Integration Results

RT: 4.28
Area: 215747
Amount: 28.378415
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:37:59 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

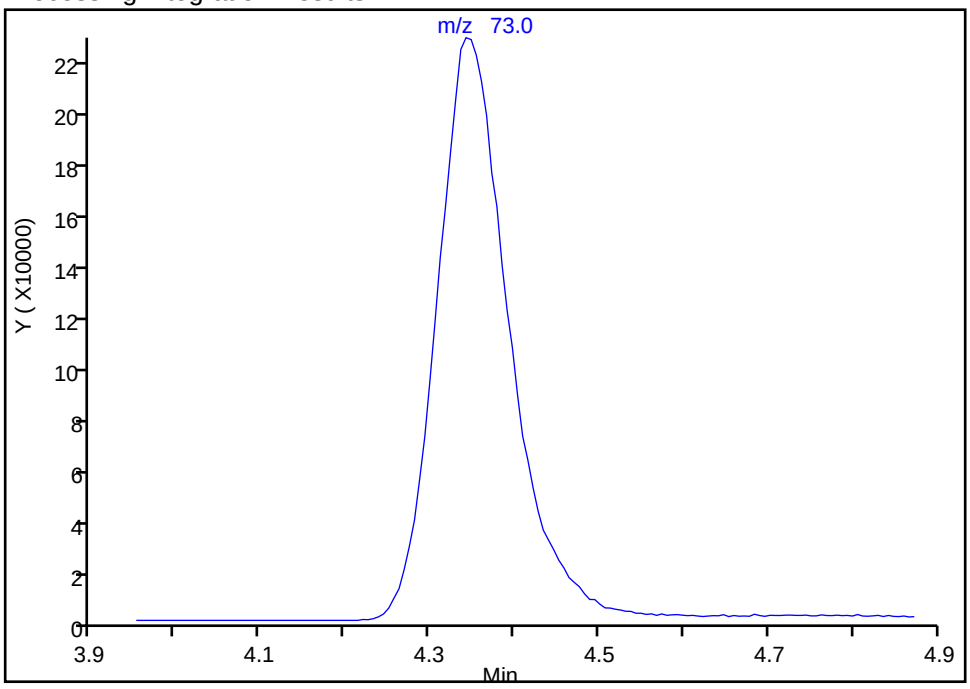
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

29 Methyl tert-butyl ether, CAS: 1634-04-4

Signal: 1

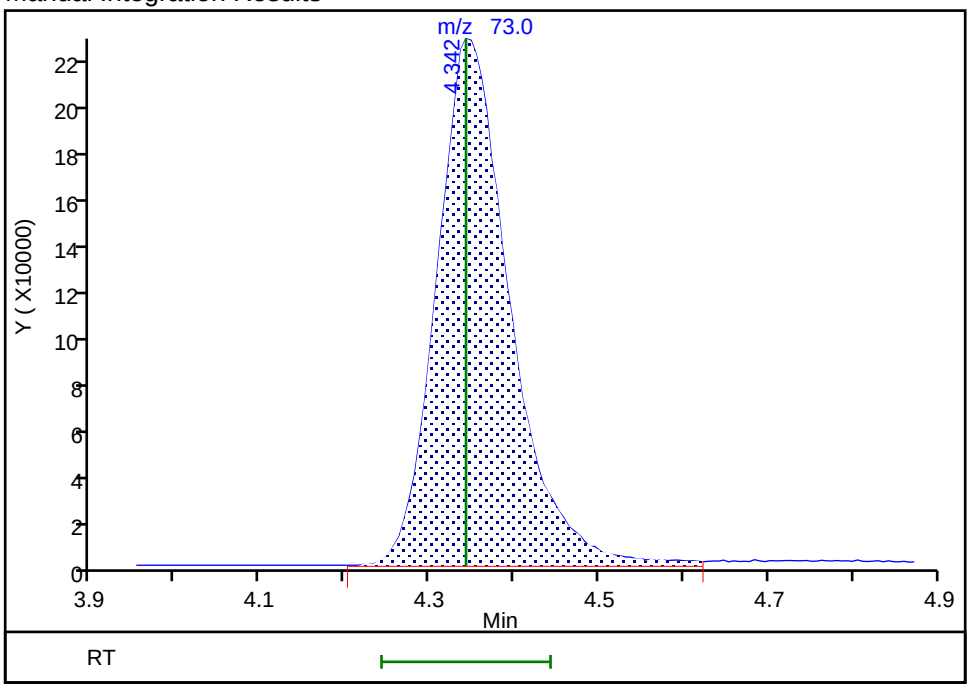
Not Detected
Expected RT: 4.34

Processing Integration Results



Manual Integration Results

RT: 4.34
Area: 1328588
Amount: 9.985857
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:38:02 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

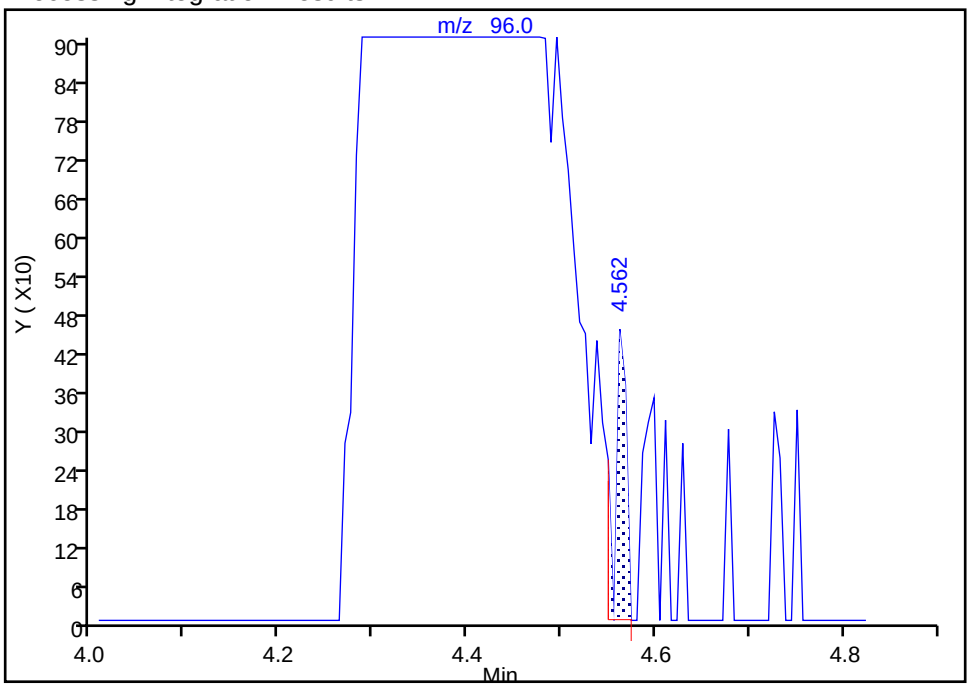
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

30 trans-1,2-Dichloroethene, CAS: 156-60-5

Signal: 1

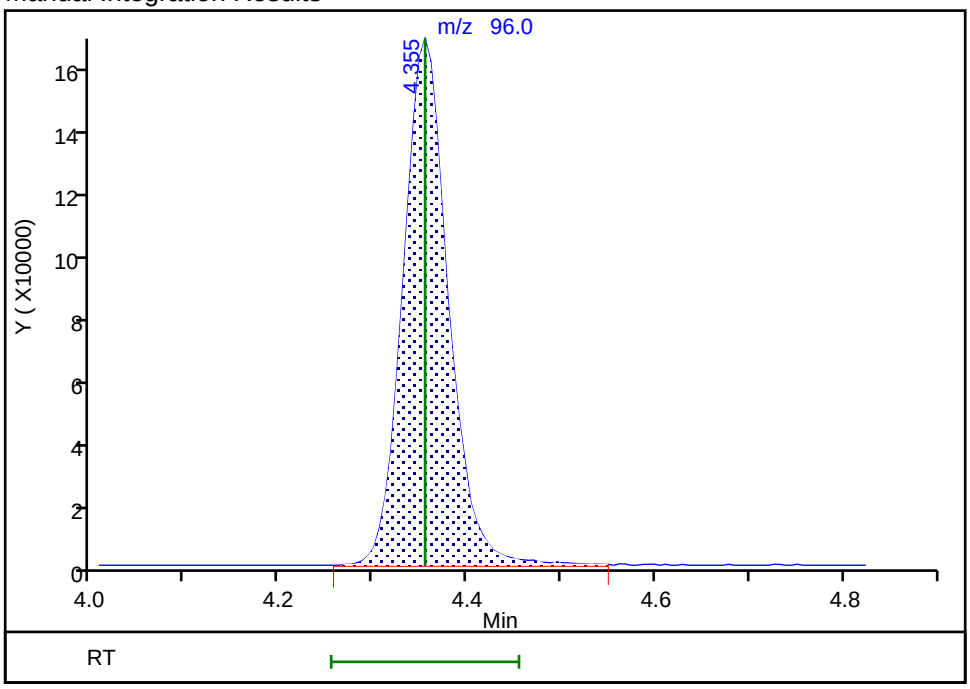
Processing Integration Results

RT: 4.56
Area: 392
Amount: 10.000000
Amount Units: ug/l



Manual Integration Results

RT: 4.35
Area: 549965
Amount: 10.193007
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:38:05 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

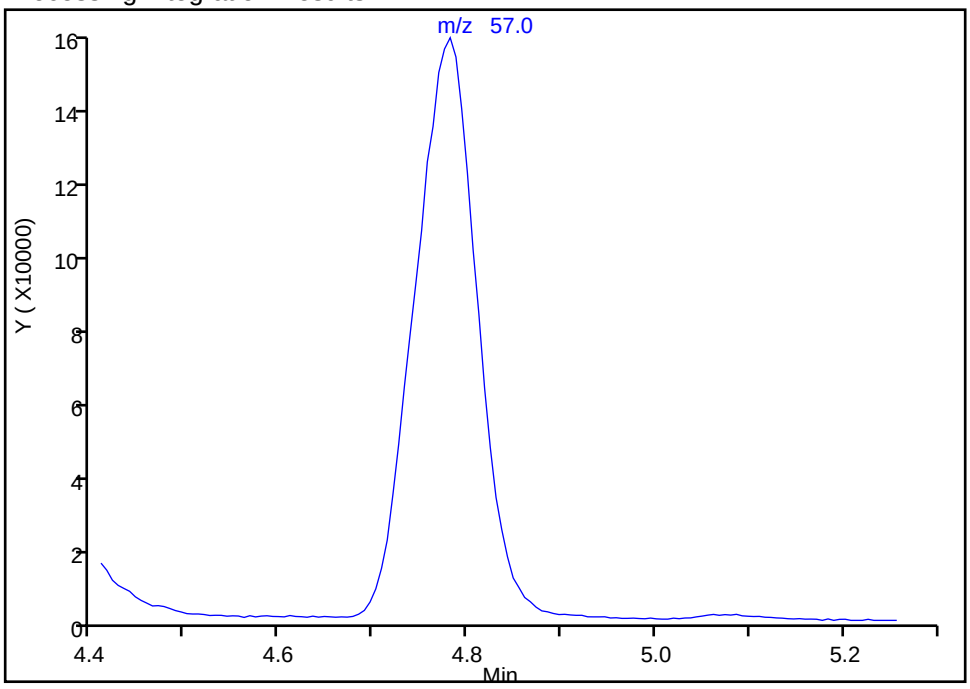
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

31 Hexane, CAS: 110-54-3

Signal: 1

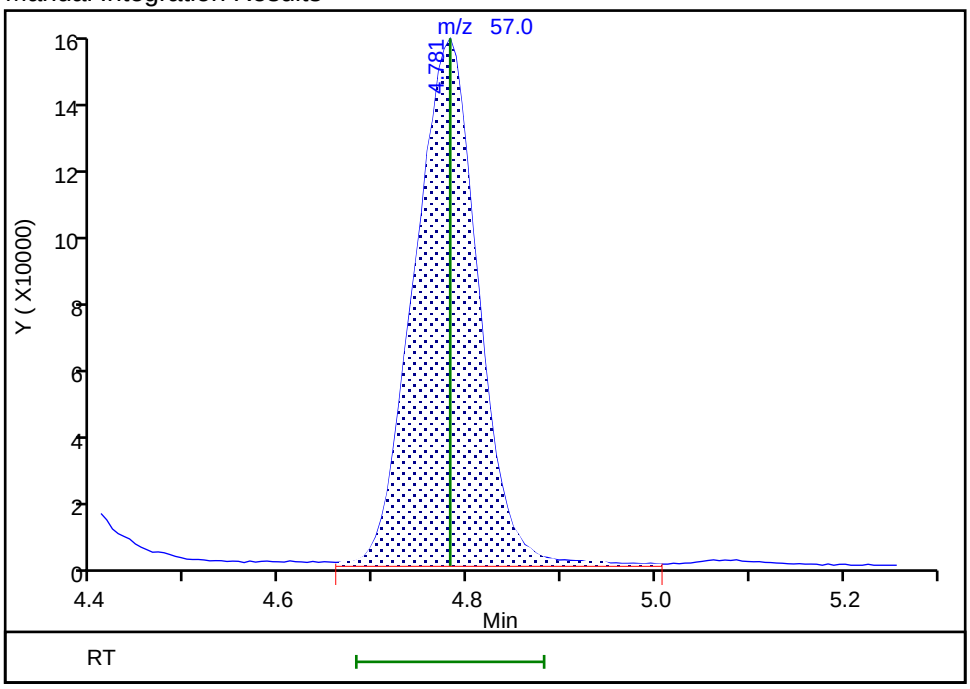
Not Detected
Expected RT: 4.78

Processing Integration Results



Manual Integration Results

RT: 4.78
Area: 747981
Amount: 10.576597
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:38:09 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

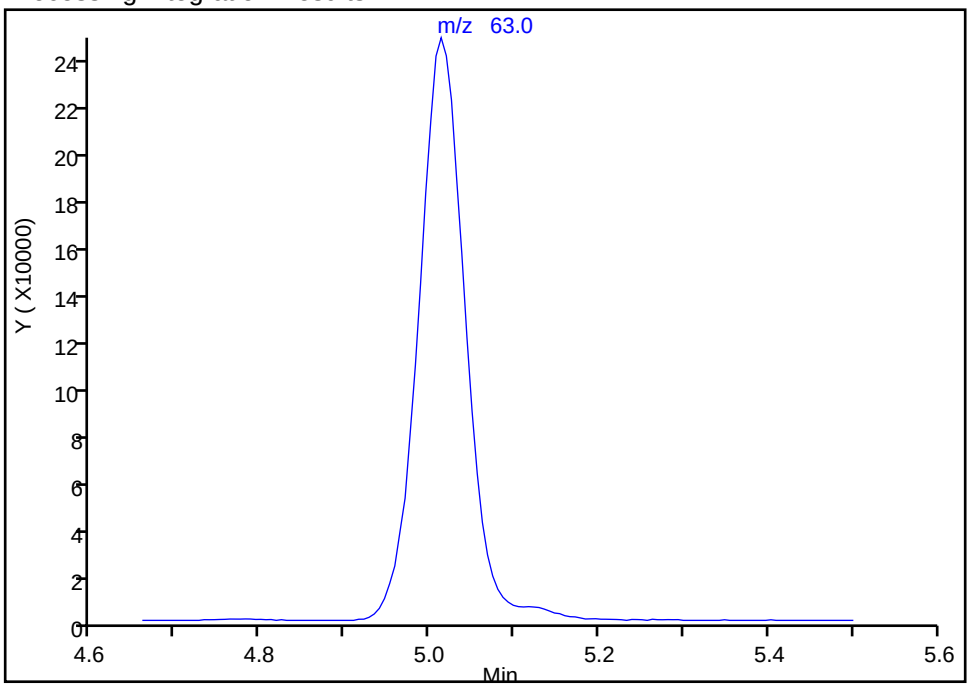
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

32 1,1-Dichloroethane, CAS: 75-34-3

Signal: 1

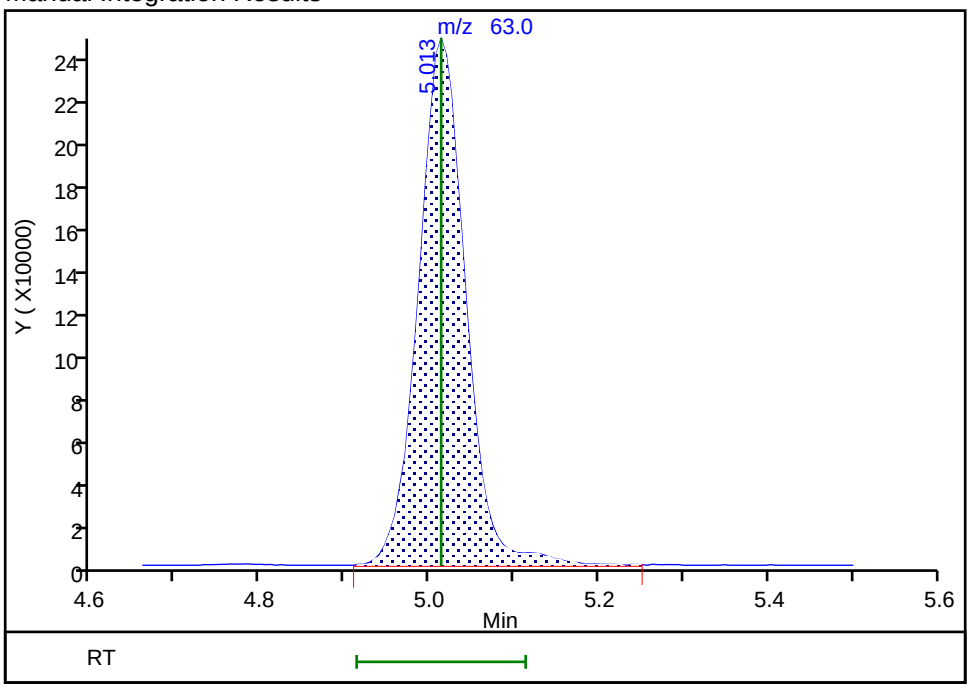
Not Detected
Expected RT: 5.01

Processing Integration Results



Manual Integration Results

RT: 5.01
Area: 957603
Amount: 10.359875
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:38:12 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

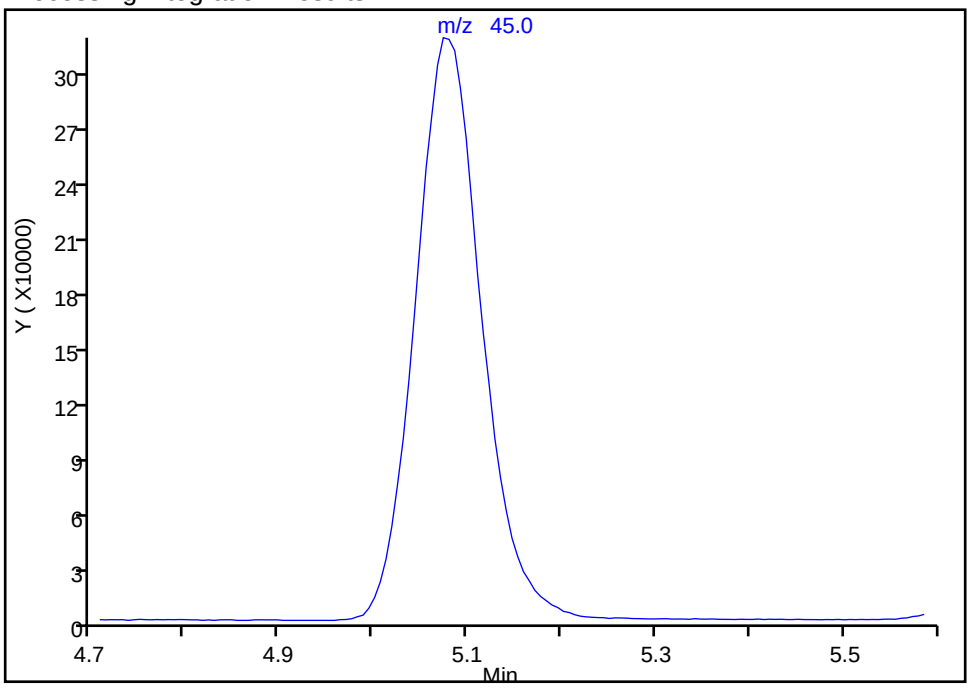
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

35 Isopropyl ether, CAS: 108-20-3

Signal: 1

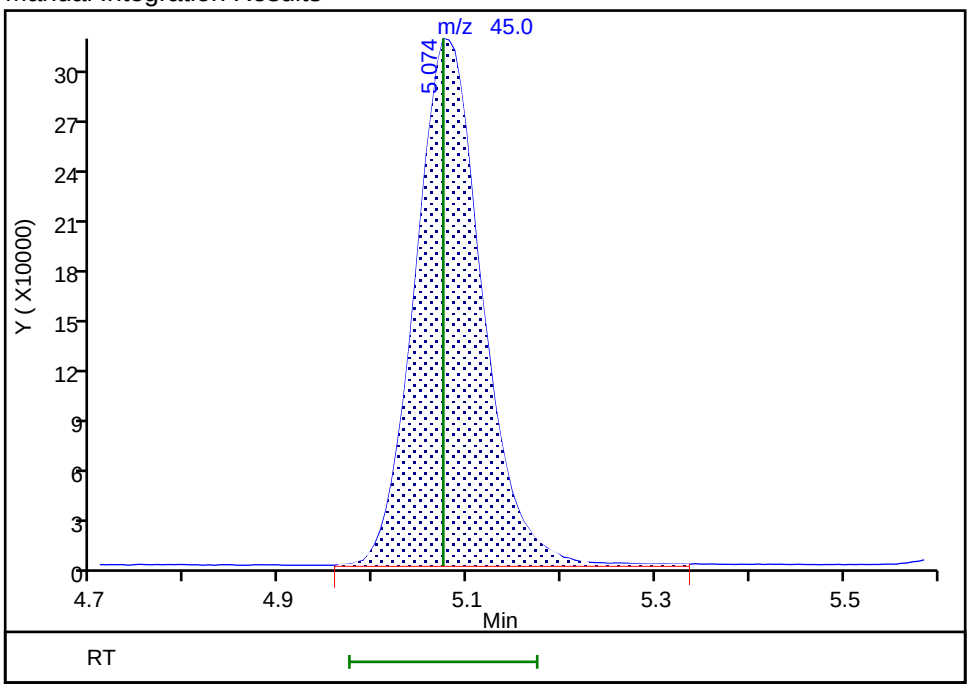
Not Detected
Expected RT: 5.07

Processing Integration Results



Manual Integration Results

RT: 5.07
Area: 1538859
Amount: 10.138104
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:38:15 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

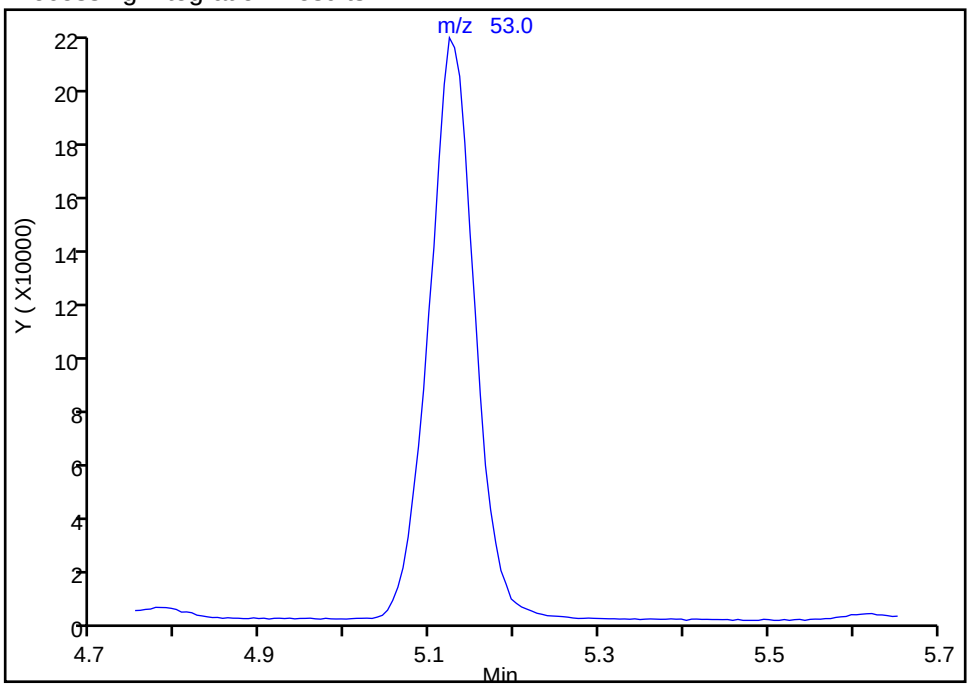
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

36 2-Chloro-1,3-butadiene, CAS: 126-99-8

Signal: 1

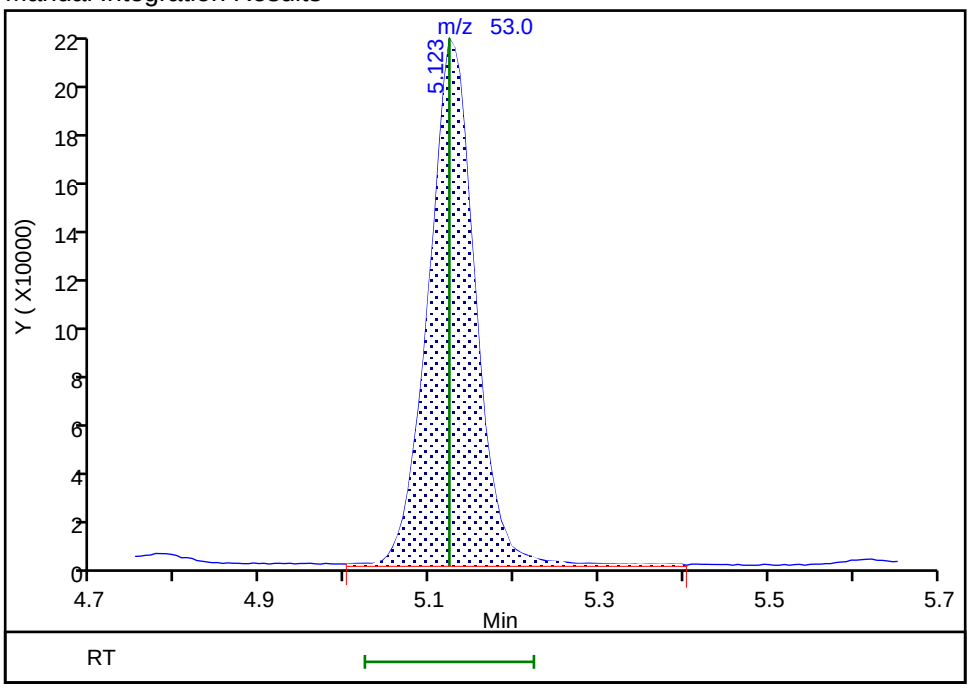
Not Detected
Expected RT: 5.12

Processing Integration Results



Manual Integration Results

RT: 5.12
Area: 806204
Amount: 10.431137
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:38:18 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

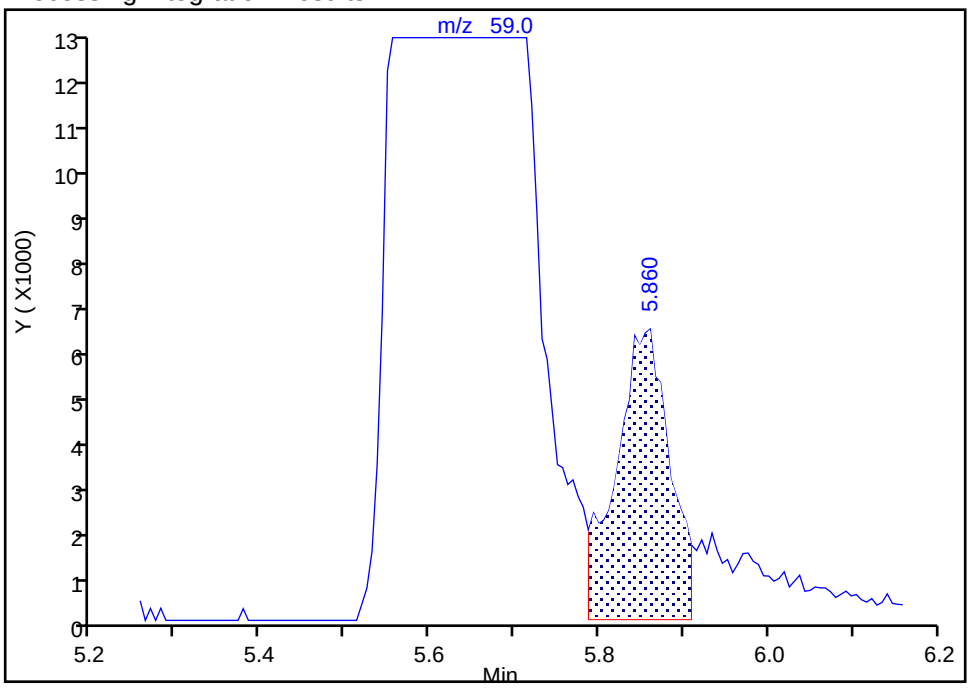
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

37 Tert-butyl ethyl ether, CAS: 637-92-3

Signal: 1

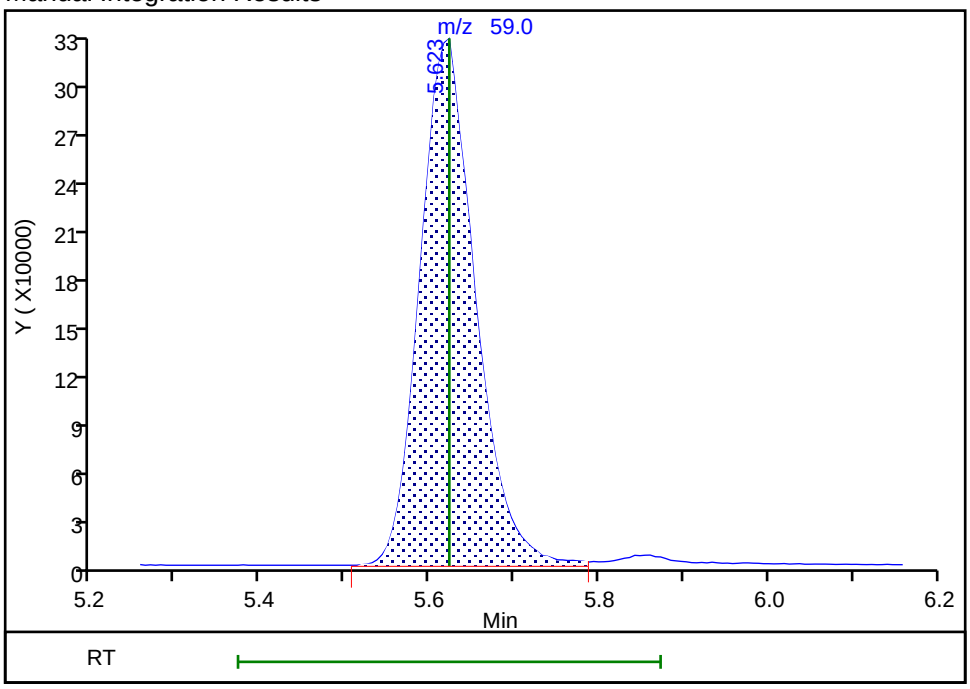
Processing Integration Results

RT: 5.86
Area: 28220
Amount: 0.003154
Amount Units: ug/l



Manual Integration Results

RT: 5.62
Area: 1475081
Amount: 10.174236
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:38:21 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

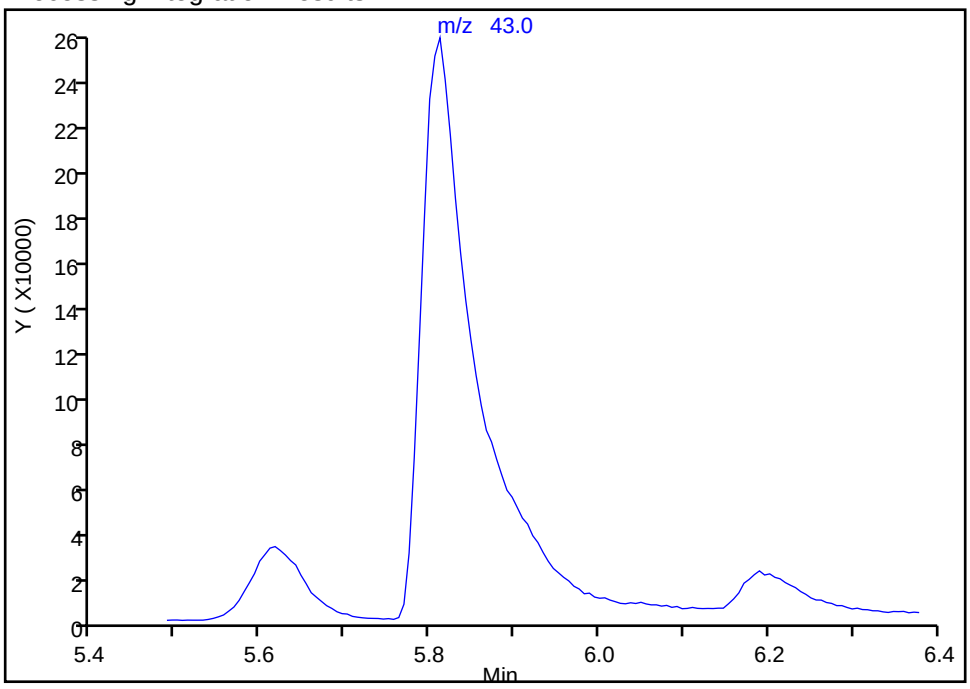
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

38 2-Butanone (MEK), CAS: 78-93-3

Signal: 1

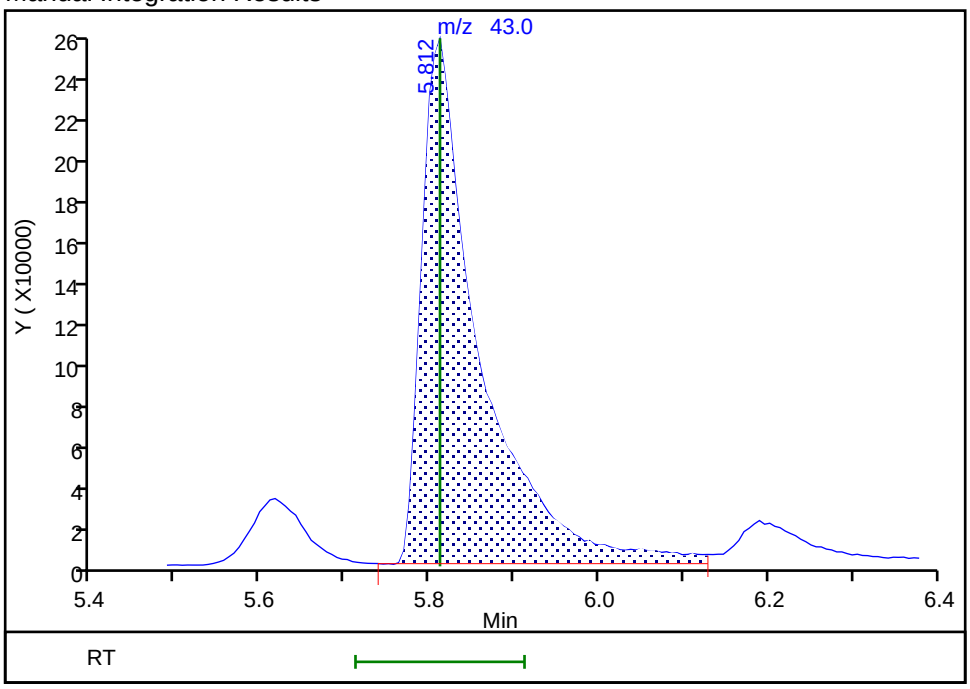
Not Detected
Expected RT: 5.81

Processing Integration Results



Manual Integration Results

RT: 5.81
Area: 1212881
Amount: 100.6332
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:38:25 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

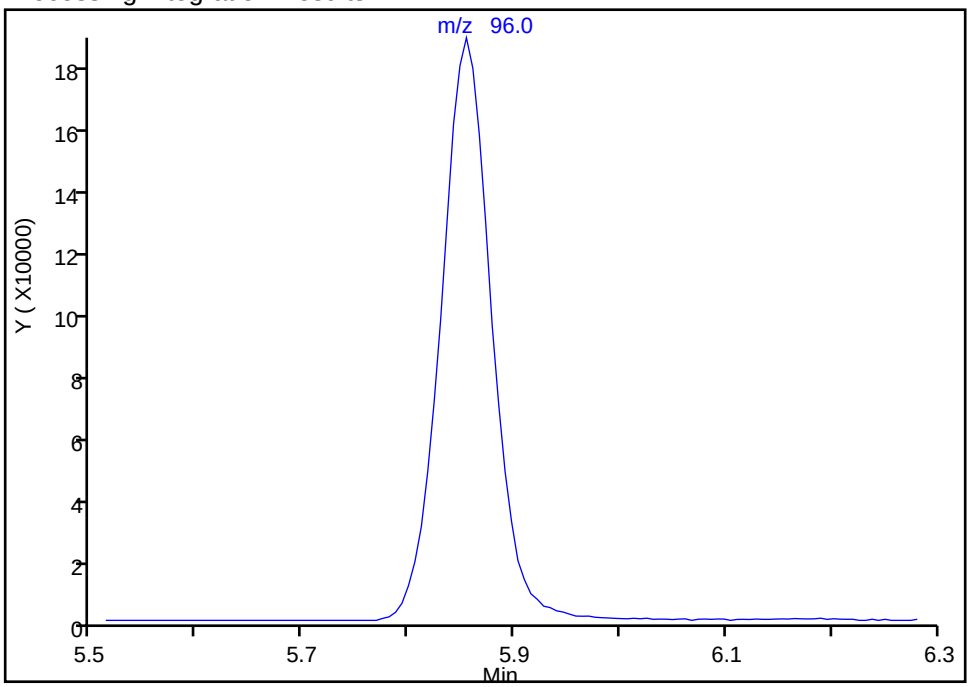
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

39 cis-1,2-Dichloroethene, CAS: 156-59-2

Signal: 1

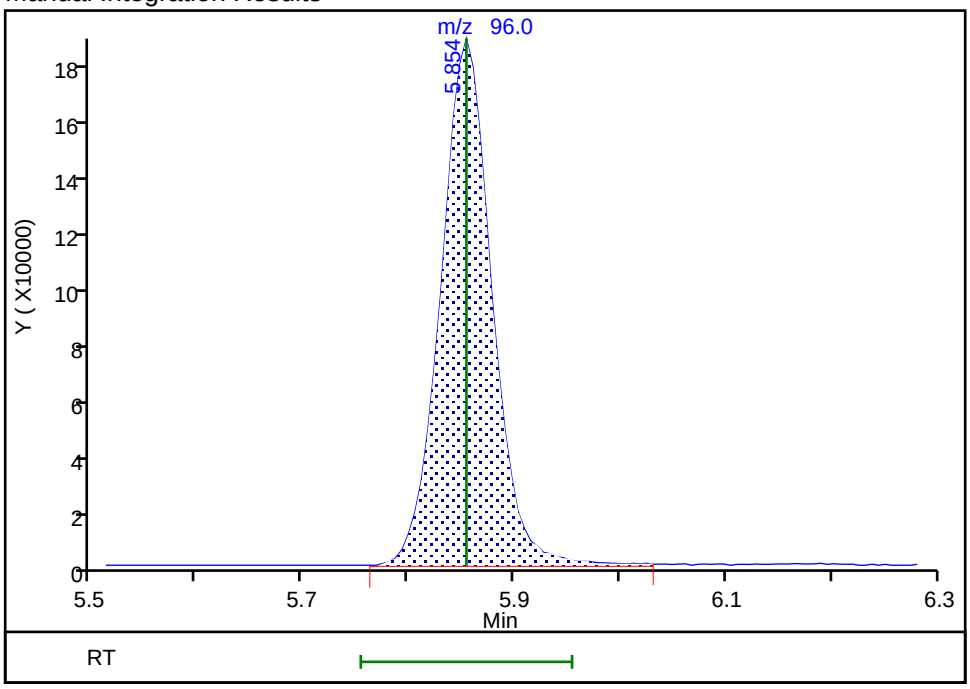
Not Detected
Expected RT: 5.85

Processing Integration Results



Manual Integration Results

RT: 5.85
Area: 607013
Amount: 10.112324
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:38:28 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

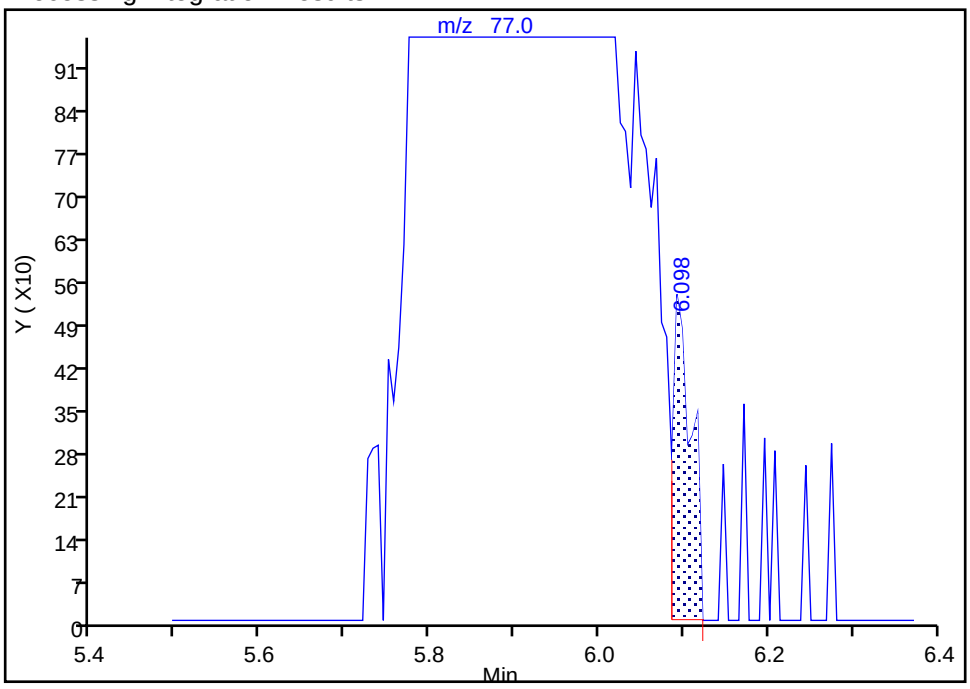
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

40 2,2-Dichloropropane, CAS: 594-20-7

Signal: 1

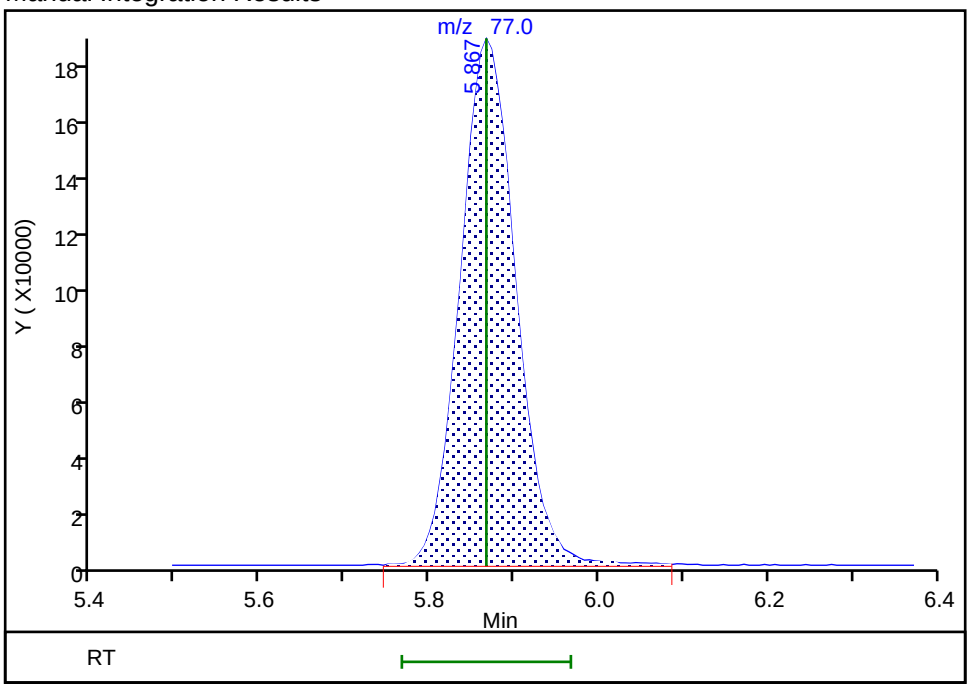
Processing Integration Results

RT: 6.10
Area: 809
Amount: 5.763513
Amount Units: ug/l



Manual Integration Results

RT: 5.87
Area: 853357
Amount: 10.245278
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:38:34 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

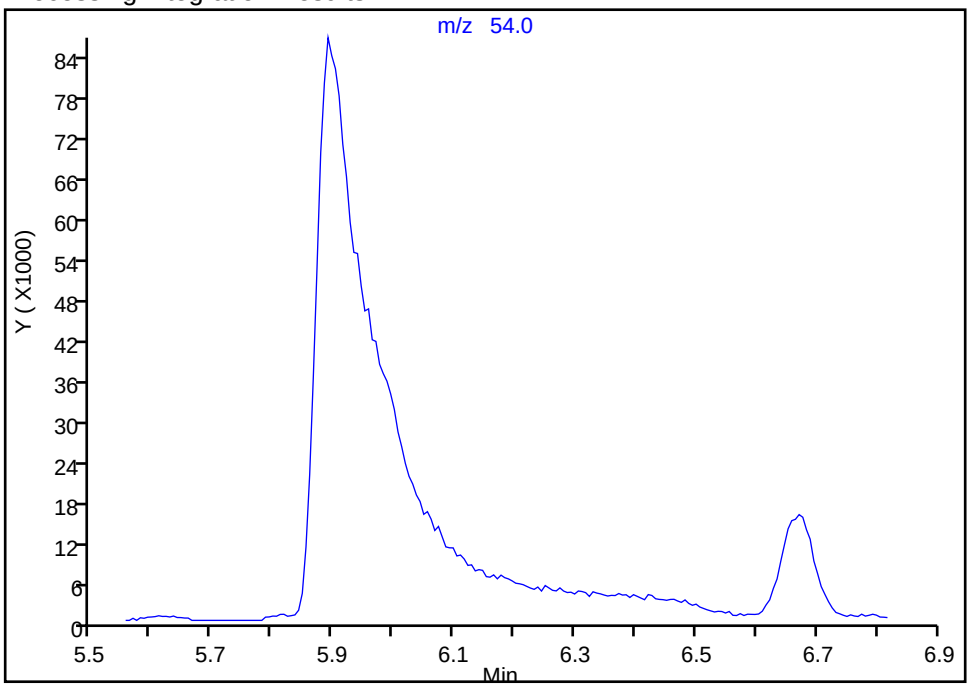
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

43 Propionitrile, CAS: 107-12-0

Signal: 1

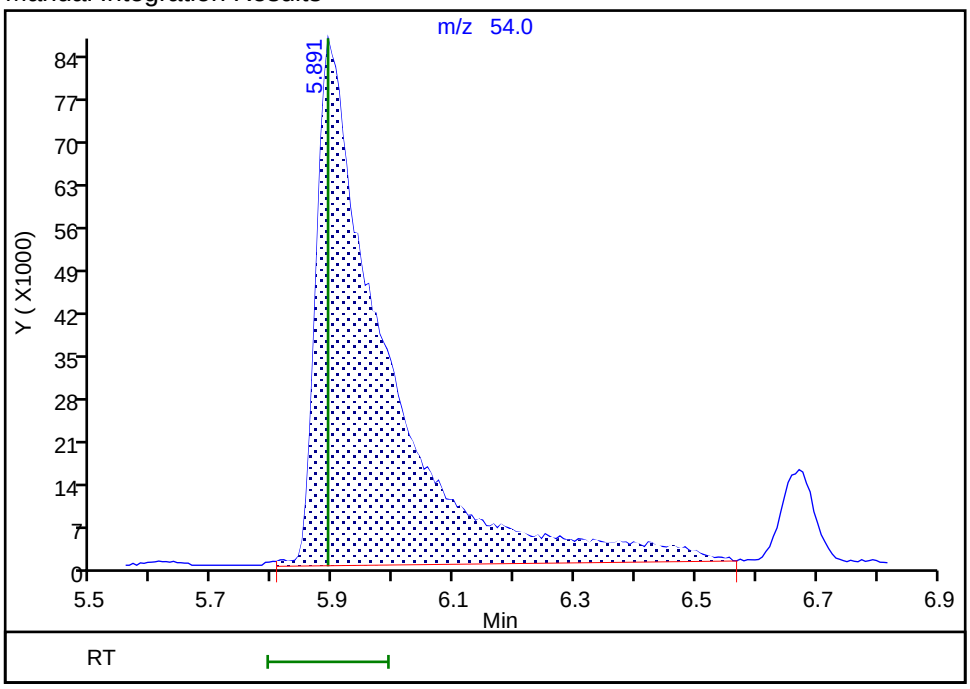
Not Detected
Expected RT: 5.89

Processing Integration Results



Manual Integration Results

RT: 5.89
Area: 686213
Amount: 215.2686
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:38:31 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

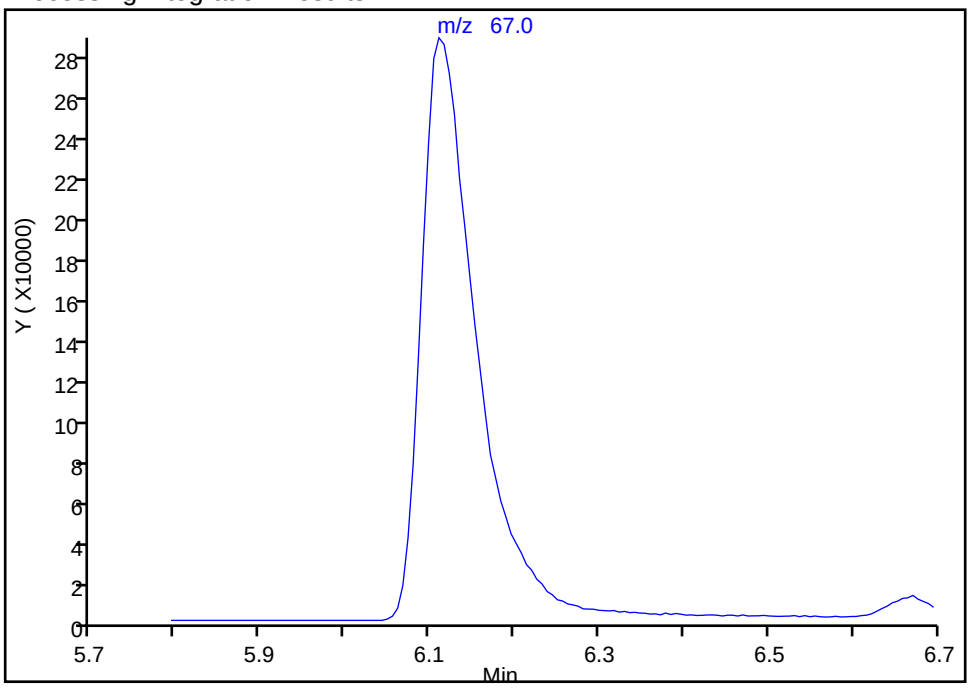
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

45 Methacrylonitrile, CAS: 126-98-7

Signal: 1

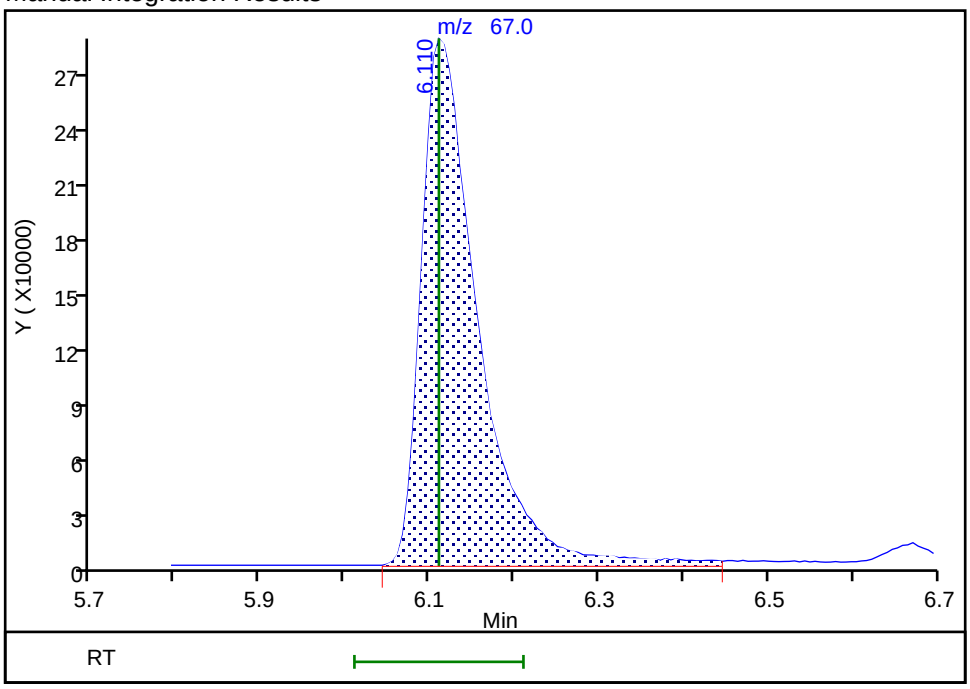
Not Detected
Expected RT: 6.11

Processing Integration Results



Manual Integration Results

RT: 6.11
Area: 1304884
Amount: 103.7383
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:38:38 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

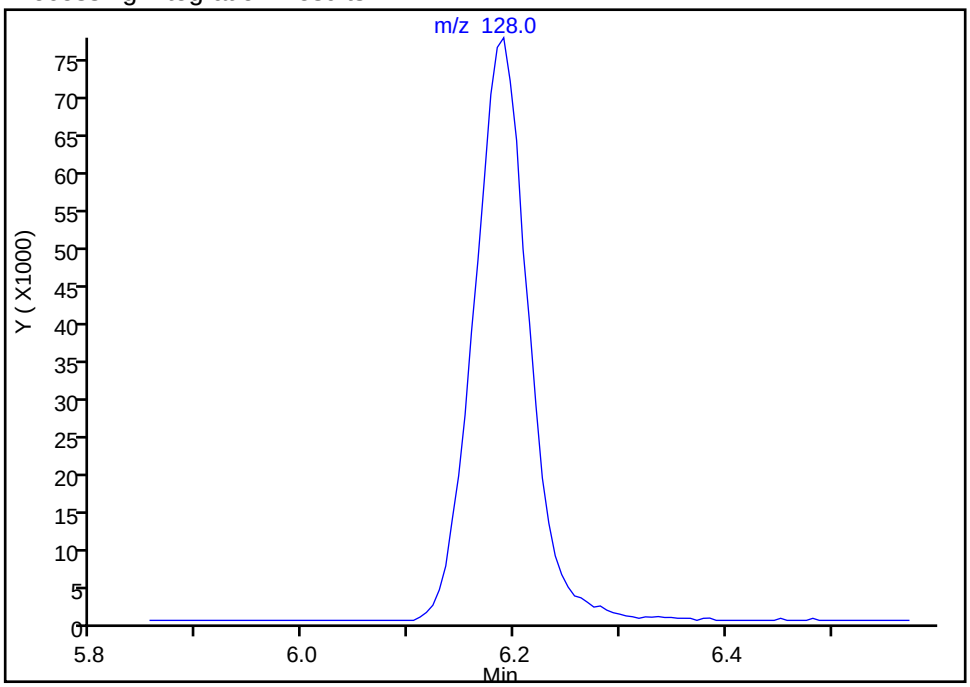
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

46 Chlorobromomethane, CAS: 74-97-5

Signal: 1

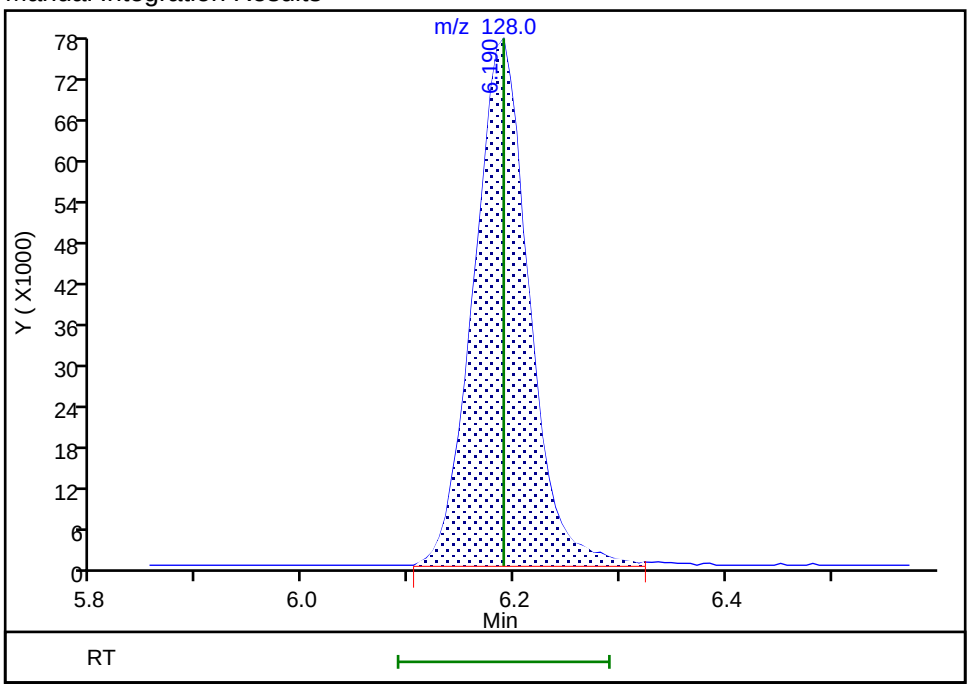
Not Detected
Expected RT: 6.19

Processing Integration Results



Manual Integration Results

RT: 6.19
Area: 278362
Amount: 10.193516
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:38:41 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

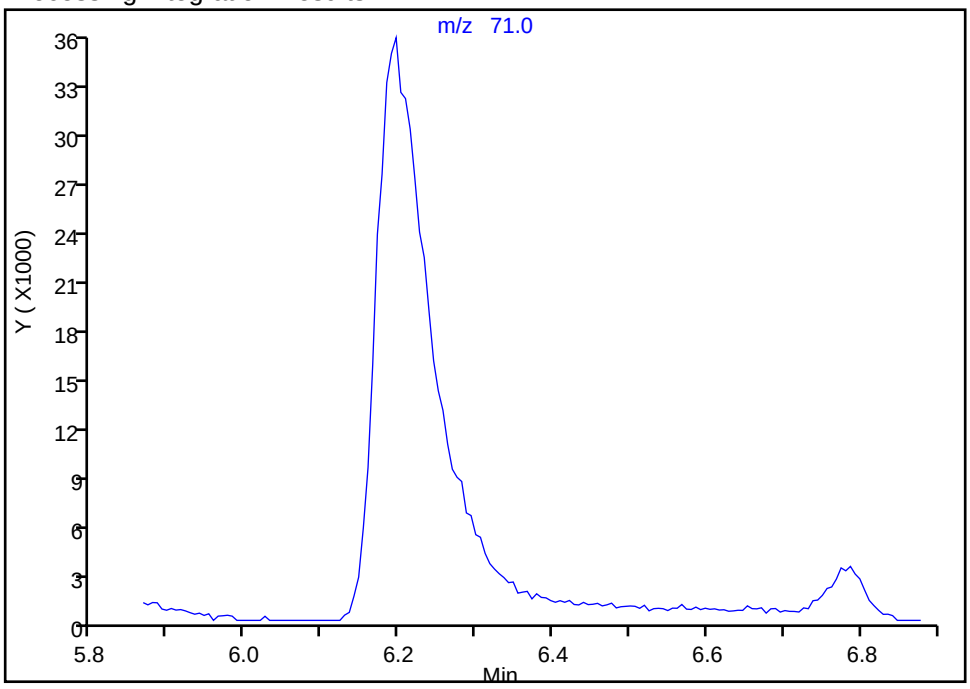
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

47 Tetrahydrofuran, CAS: 109-99-9

Signal: 1

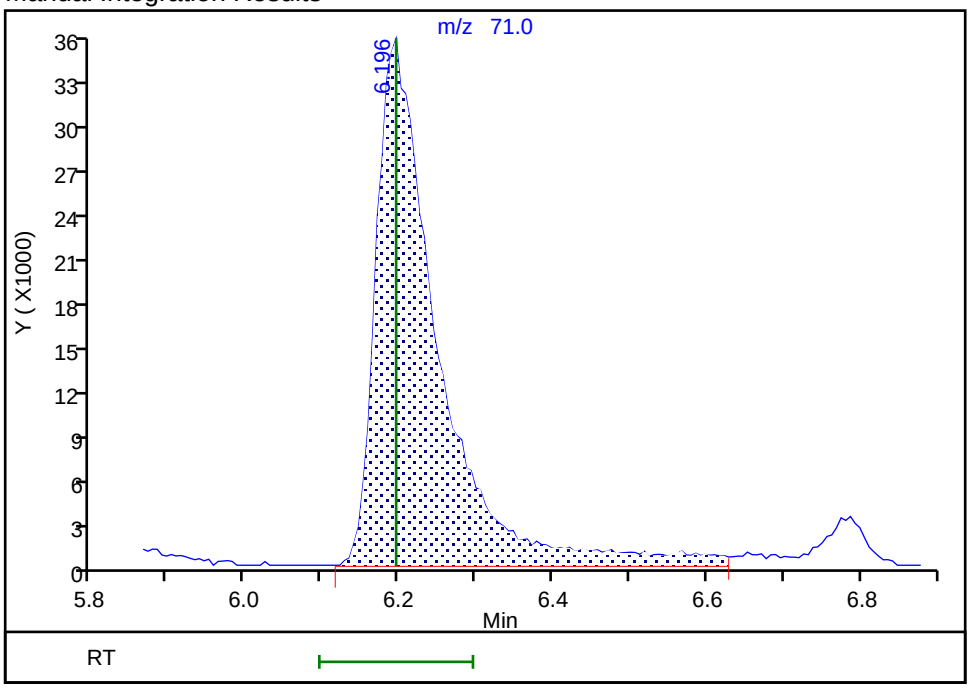
Not Detected
Expected RT: 6.20

Processing Integration Results



Manual Integration Results

RT: 6.20
Area: 200641
Amount: 50.587516
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:38:44 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

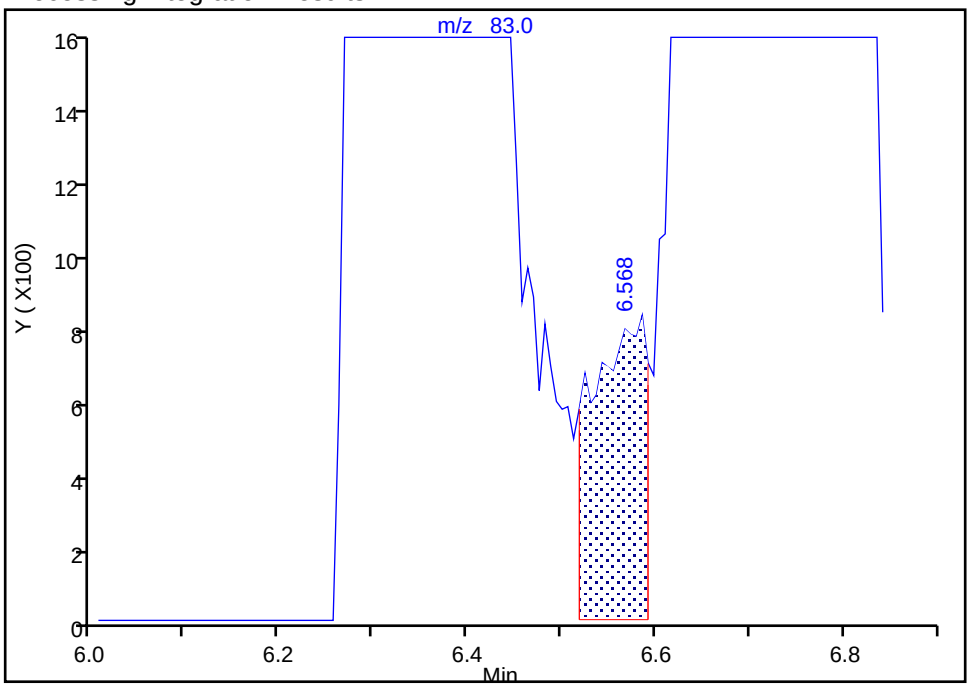
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

48 Chloroform, CAS: 67-66-3

Signal: 1

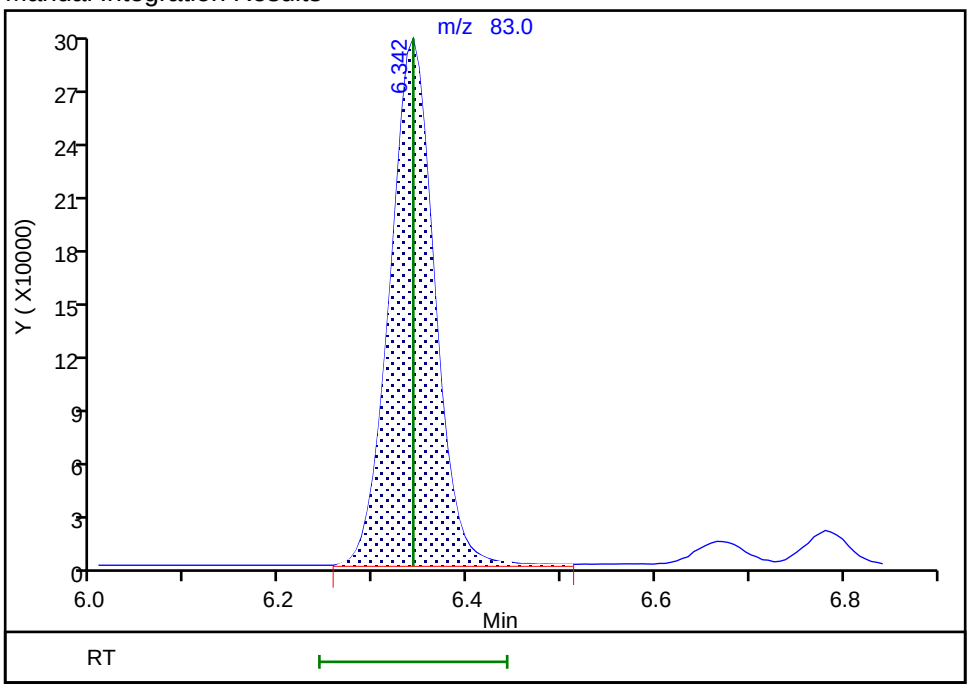
Processing Integration Results

RT: 6.57
Area: 3291
Amount: 10.000000
Amount Units: ug/l



Manual Integration Results

RT: 6.34
Area: 973119
Amount: 10.191256
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:38:50 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

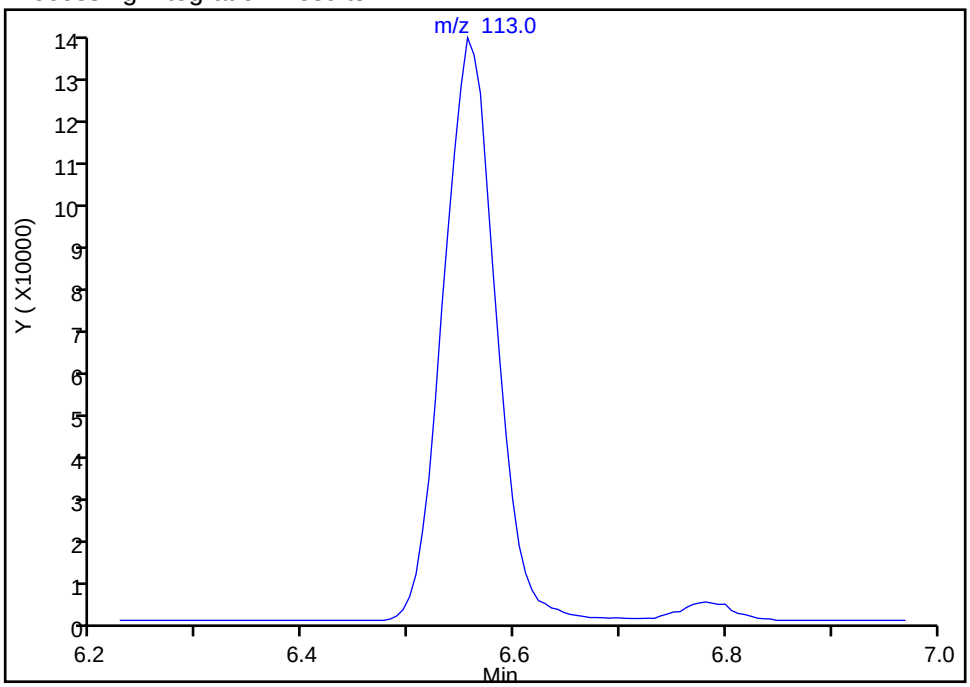
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

$ 49 Dibromofluoromethane (Surr), CAS: 1868-53-7

Signal: 1

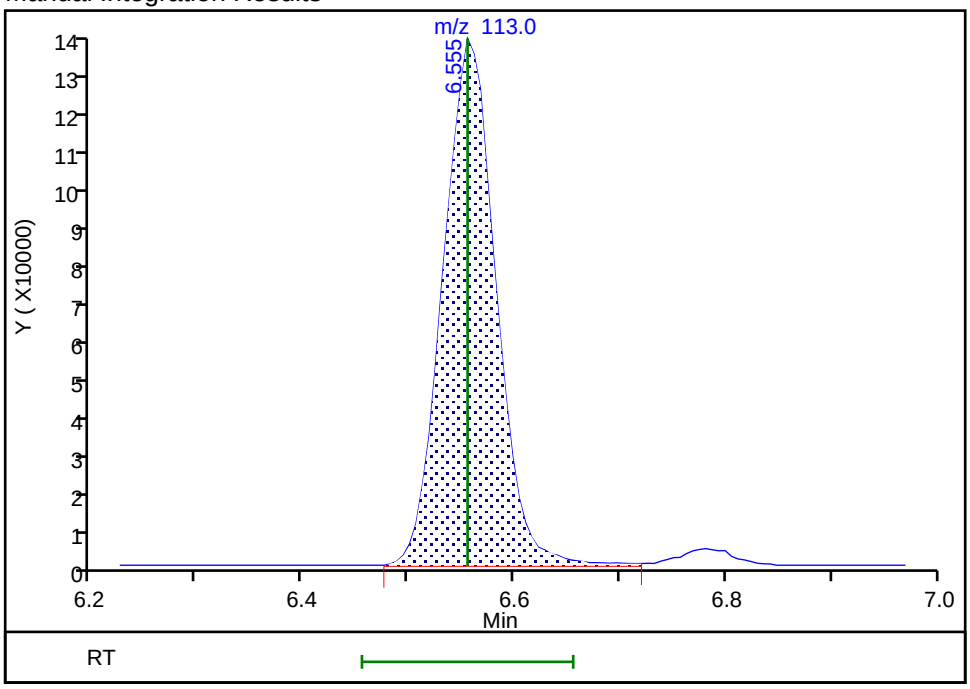
Processing Integration Results

Not Detected
Expected RT: 6.56



Manual Integration Results

RT: 6.56
Area: 464653
Amount: 10.007334
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:35:20 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

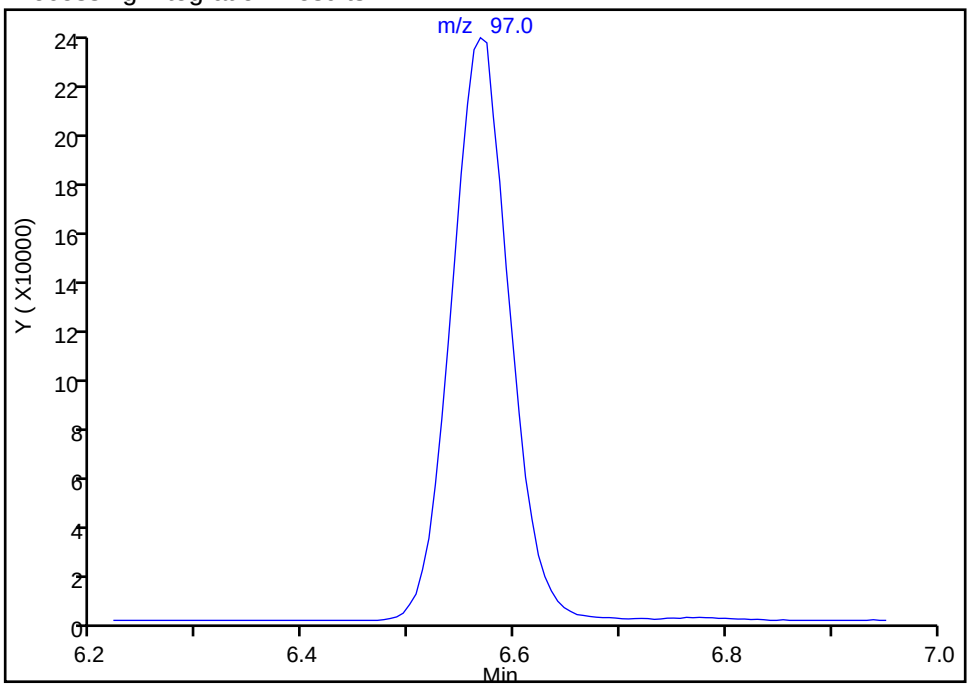
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

50 1,1,1-Trichloroethane, CAS: 71-55-6

Signal: 1

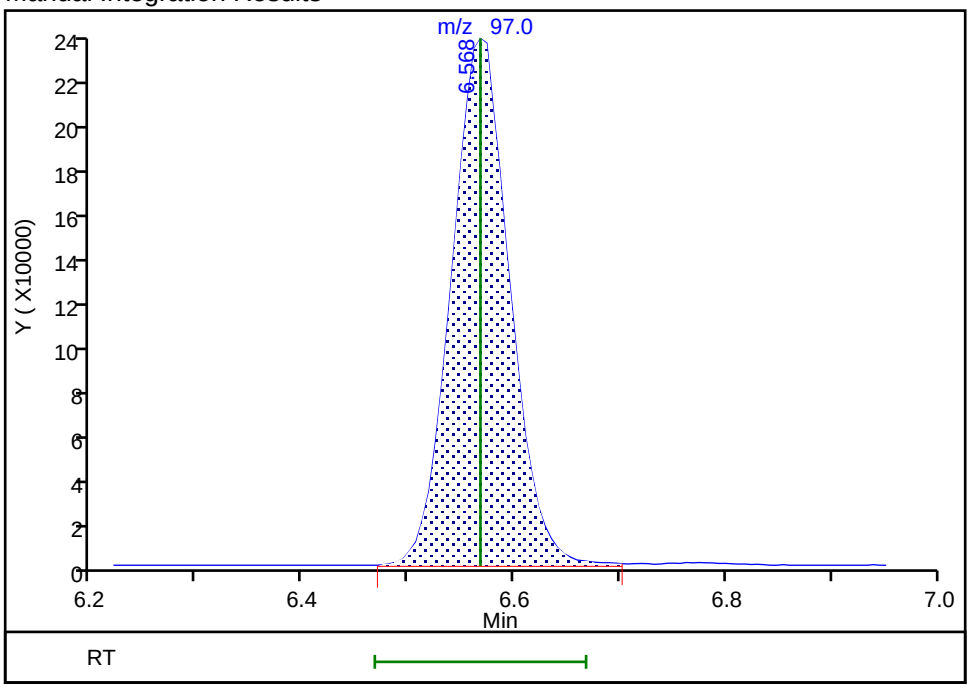
Not Detected
Expected RT: 6.57

Processing Integration Results



RT: 6.57
Area: 914467
Amount: 10.255781
Amount Units: ug/l

Manual Integration Results



Reviewer: DVW2, 21-Jun-2023 07:38:55 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

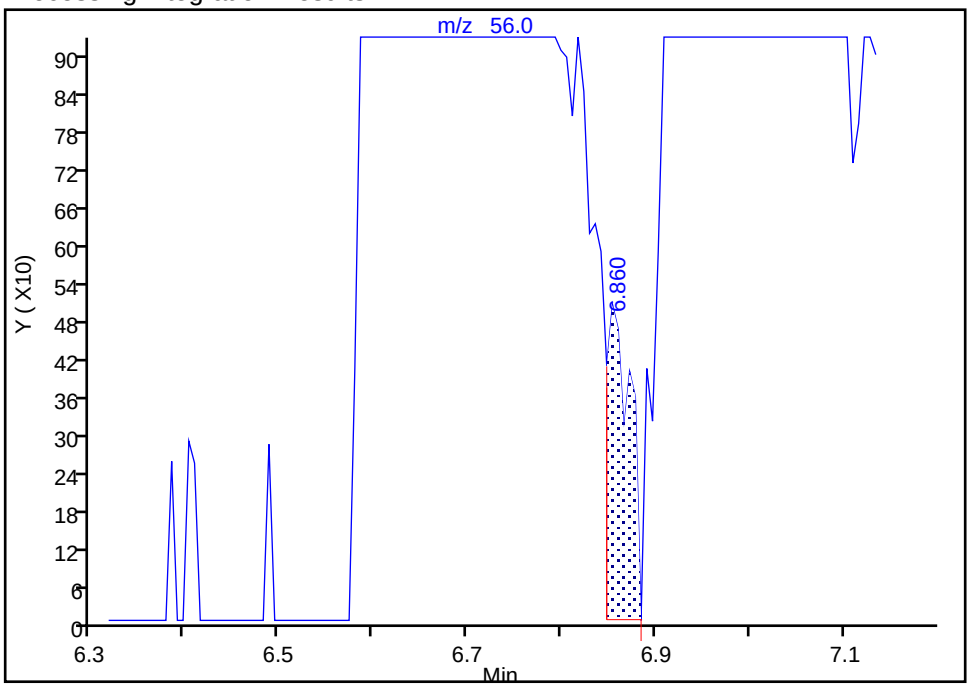
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

51 Cyclohexane, CAS: 110-82-7

Signal: 1

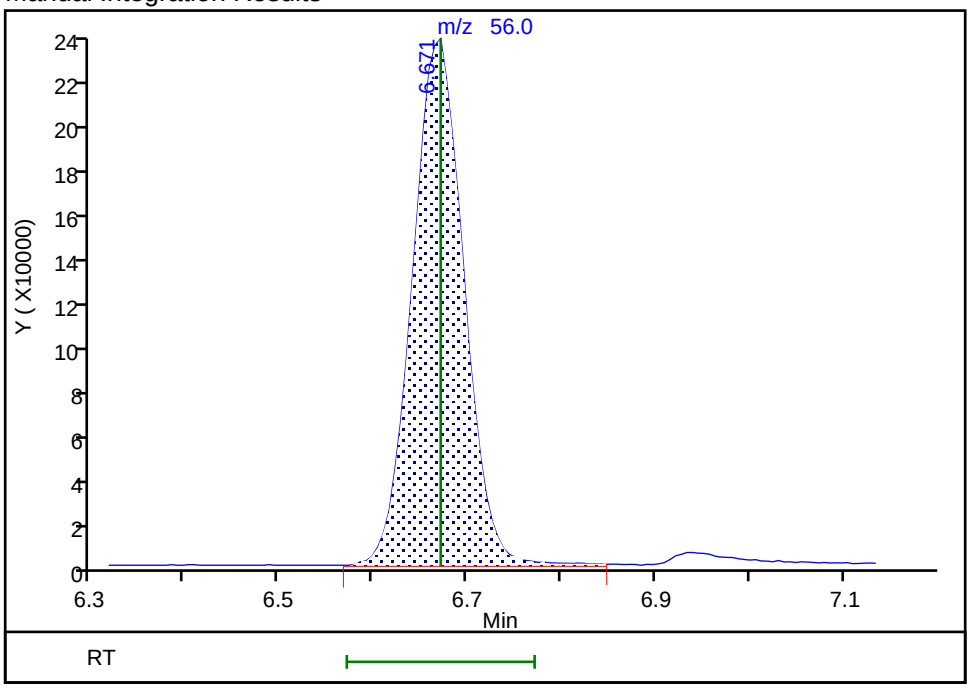
Processing Integration Results

RT: 6.86
Area: 891
Amount: 3.740536
Amount Units: ug/l



Manual Integration Results

RT: 6.67
Area: 898646
Amount: 10.635447
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:38:58 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

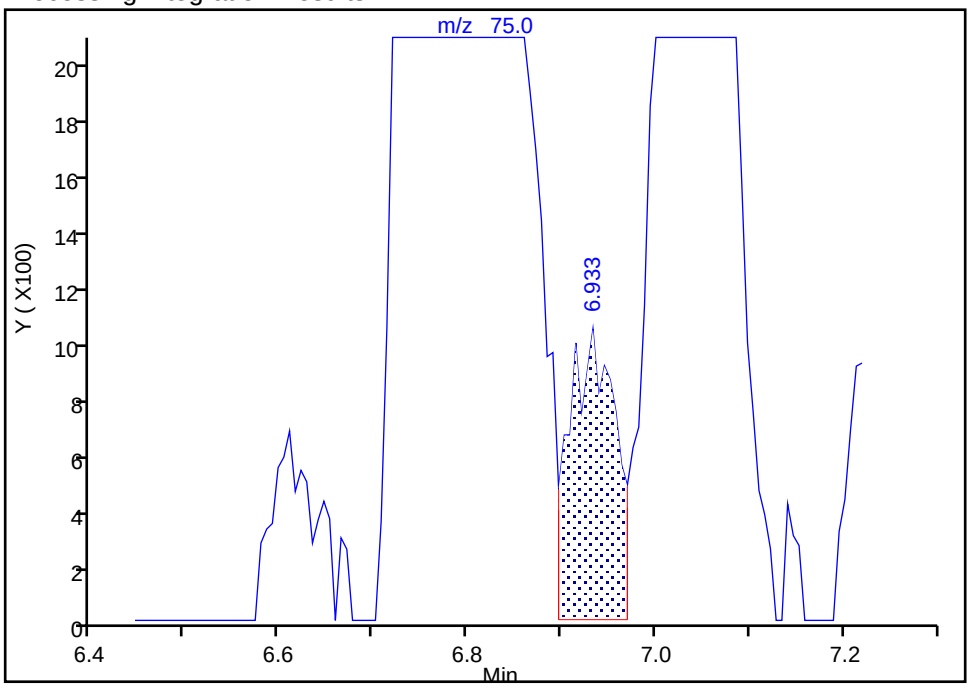
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

53 1,1-Dichloropropene, CAS: 563-58-6

Signal: 1

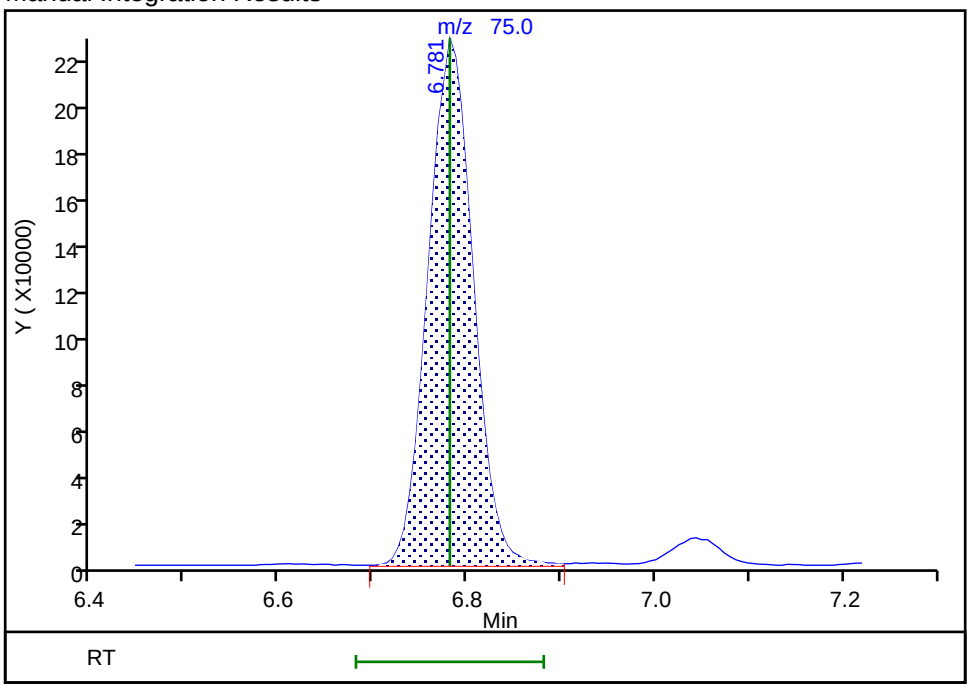
Processing Integration Results

RT: 6.93
Area: 3538
Amount: 10.000000
Amount Units: ug/l



Manual Integration Results

RT: 6.78
Area: 738645
Amount: 10.404574
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:39:13 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

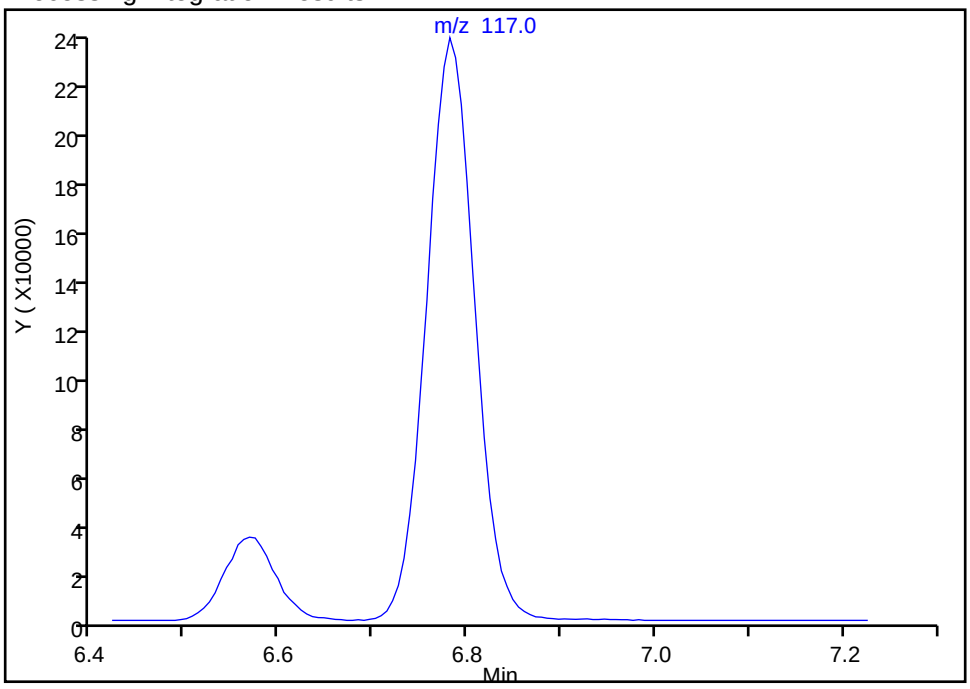
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

54 Carbon tetrachloride, CAS: 56-23-5

Signal: 1

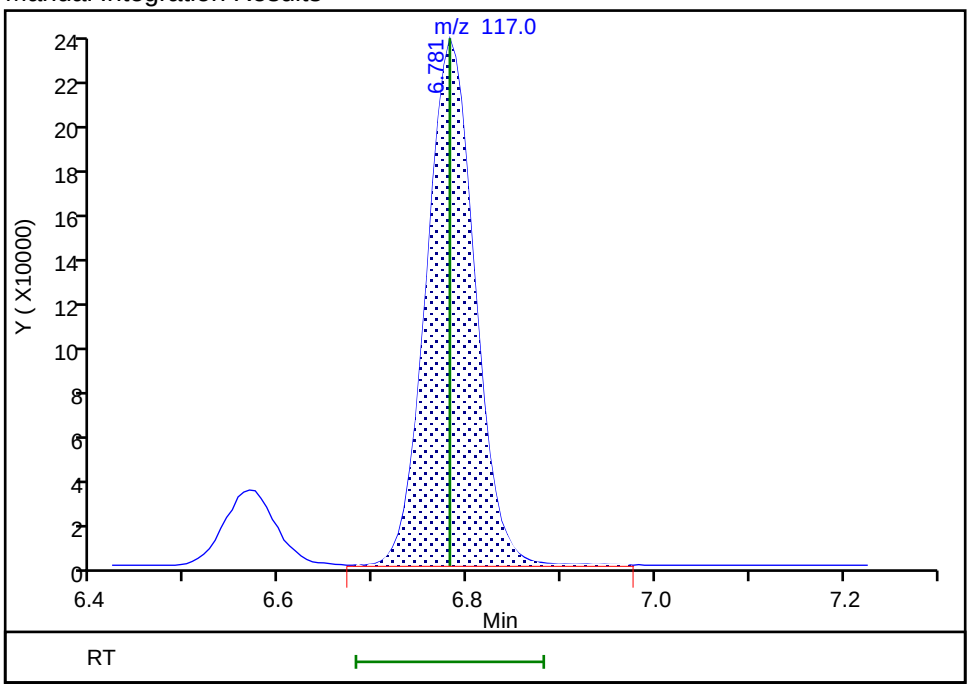
Not Detected
Expected RT: 6.78

Processing Integration Results



Manual Integration Results

RT: 6.78
Area: 847817
Amount: 10.672723
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:39:10 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

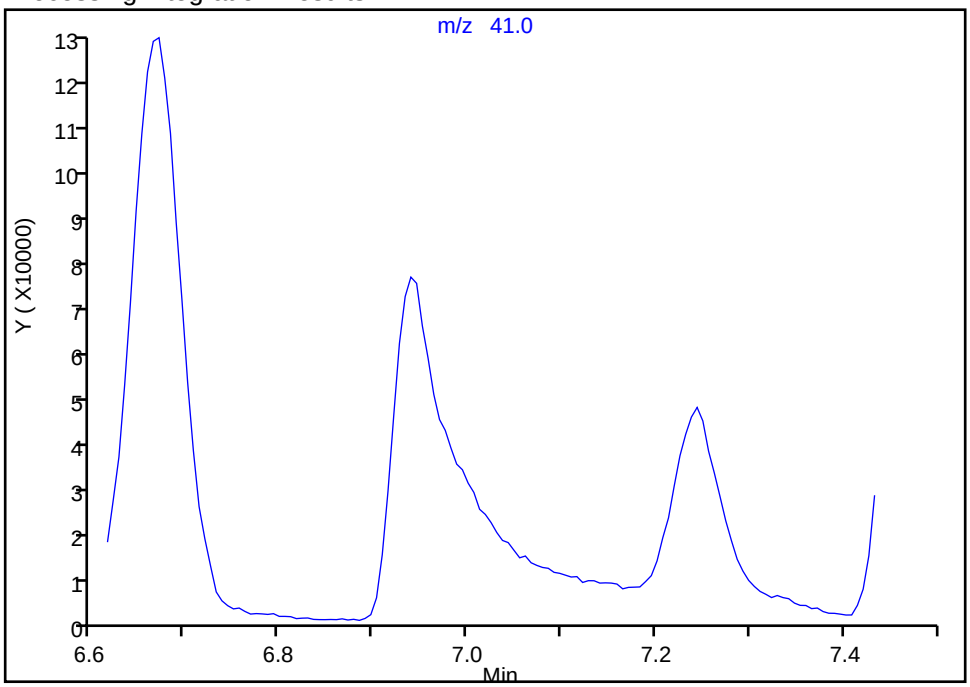
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

55 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

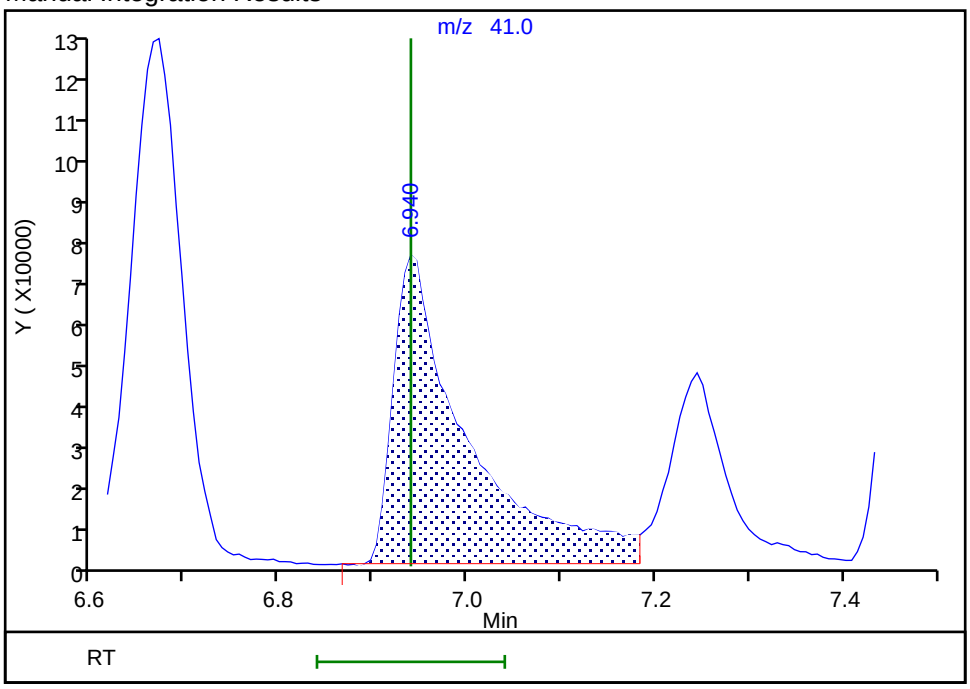
Not Detected
Expected RT: 6.94

Processing Integration Results



Manual Integration Results

RT: 6.94
Area: 408183
Amount: 461.7817
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:39:17 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

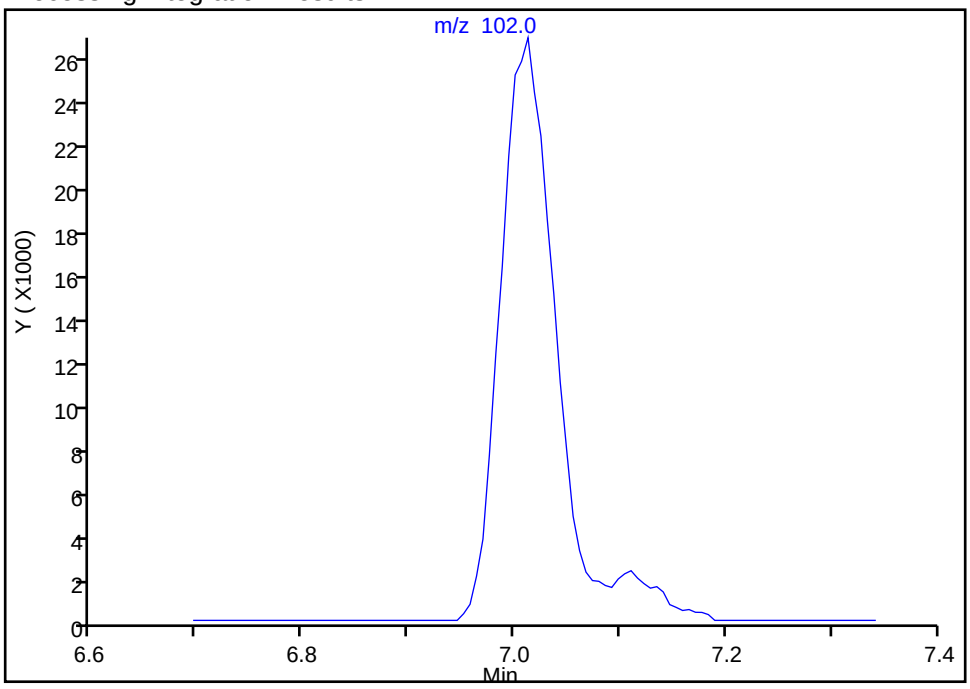
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

$ 56 1,2-Dichloroethane-d4 (Surr), CAS: 17060-07-0

Signal: 1

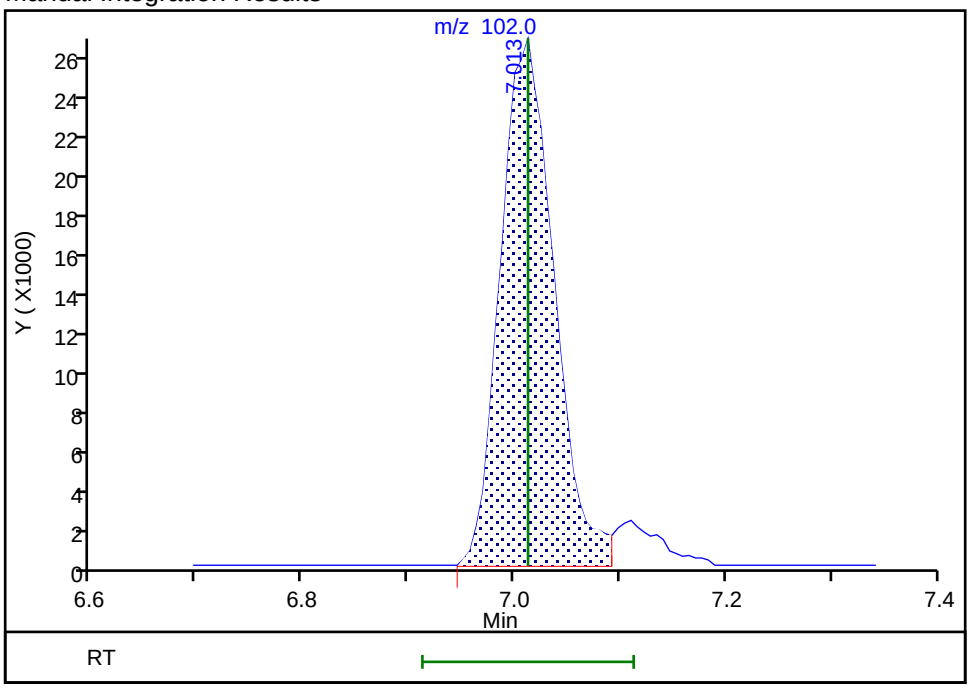
Processing Integration Results

Not Detected
Expected RT: 7.01



Manual Integration Results

RT: 7.01
Area: 91929
Amount: 9.985461
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:35:23 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

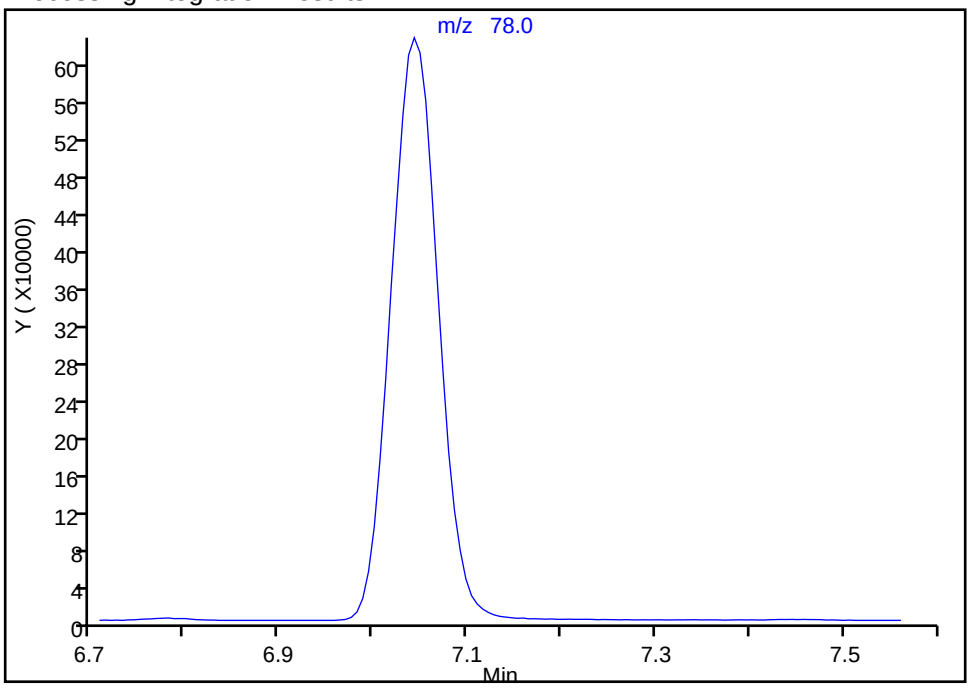
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

57 Benzene, CAS: 71-43-2

Signal: 1

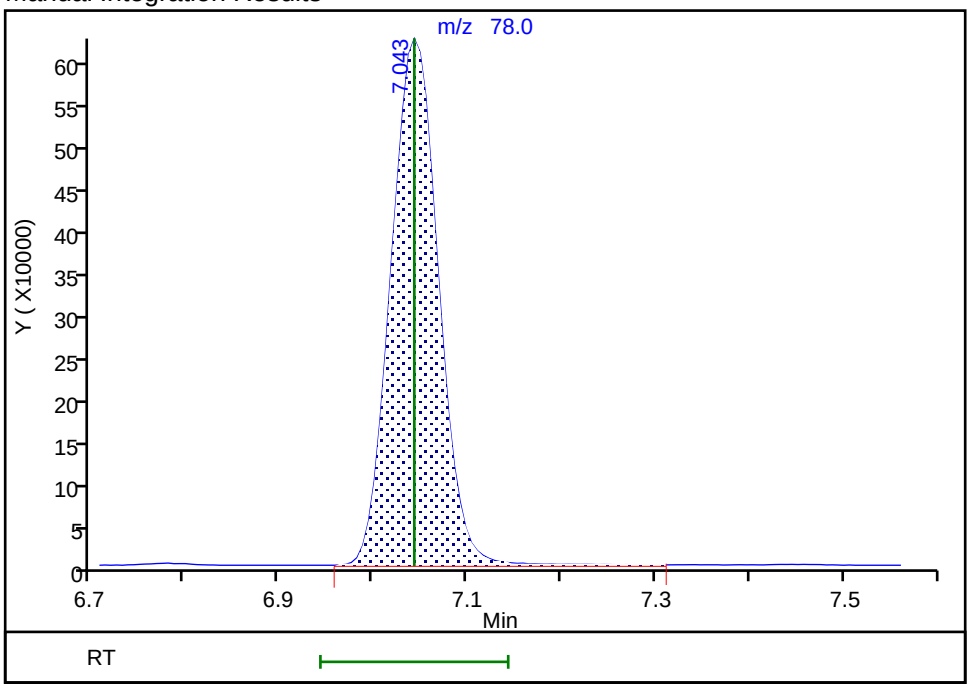
Not Detected
Expected RT: 7.04

Processing Integration Results



Manual Integration Results

RT: 7.04
Area: 2192041
Amount: 10.269895
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:39:23 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

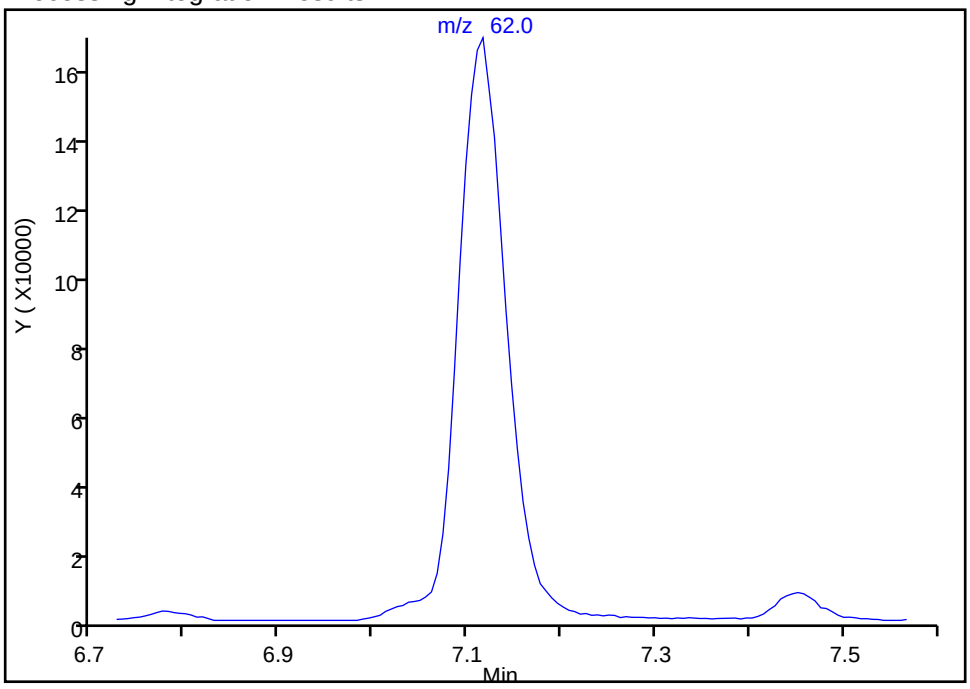
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

58 1,2-Dichloroethane, CAS: 107-06-2

Signal: 1

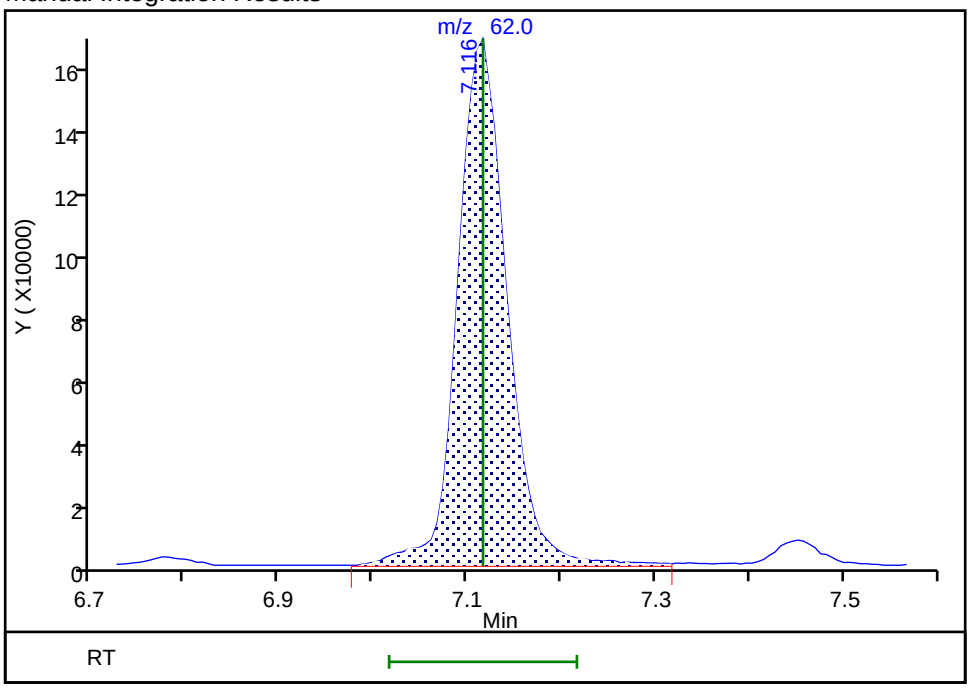
Not Detected
Expected RT: 7.12

Processing Integration Results



Manual Integration Results

RT: 7.12
Area: 589464
Amount: 10.187085
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:39:26 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

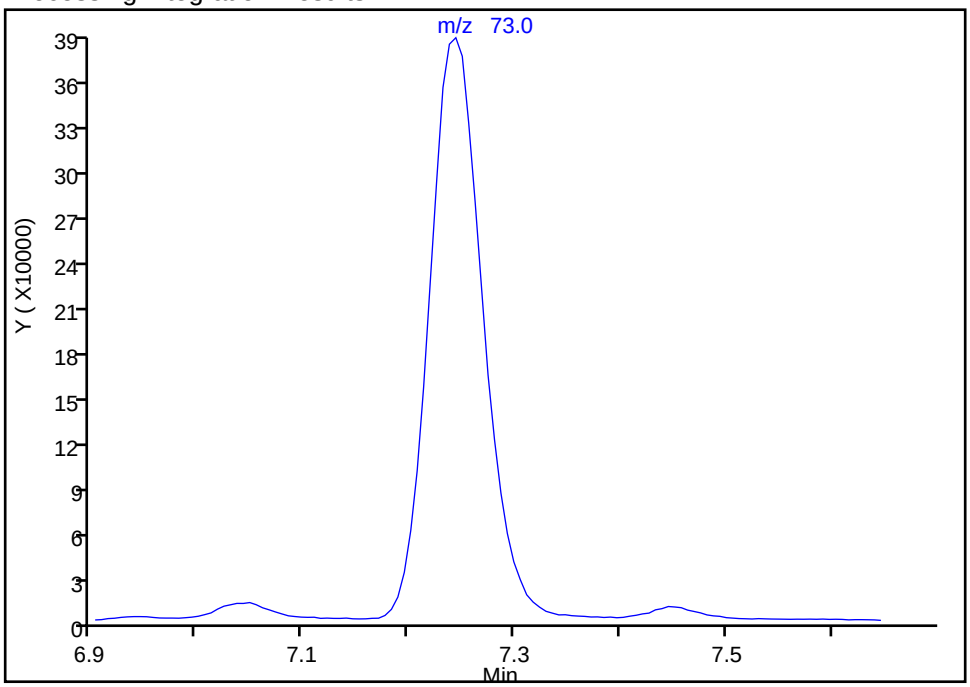
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

60 Tert-amyl methyl ether, CAS: 994-05-8

Signal: 1

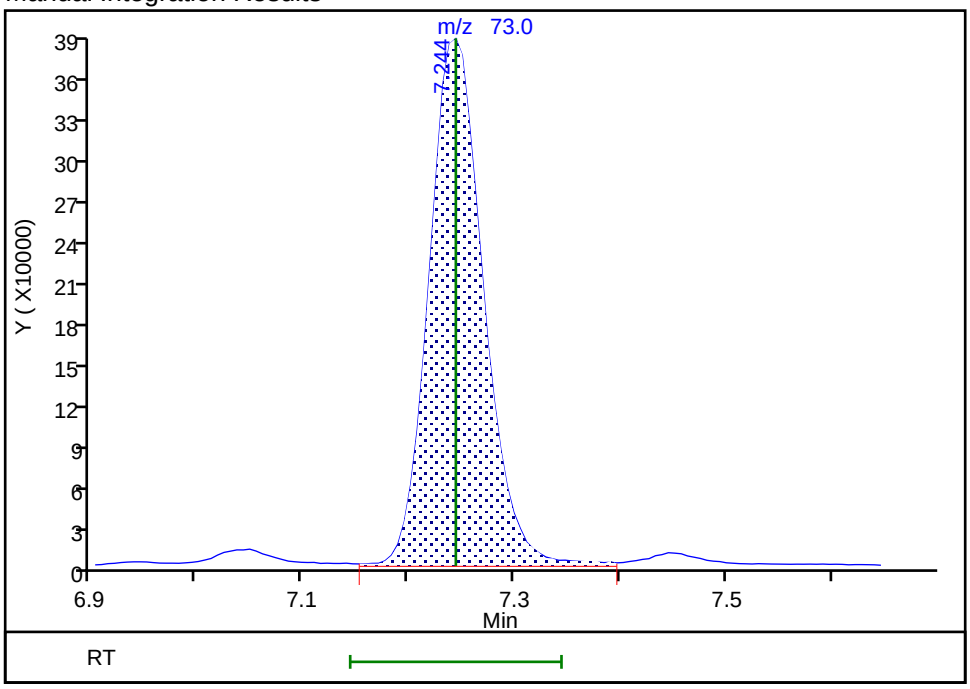
Not Detected
Expected RT: 7.24

Processing Integration Results



Manual Integration Results

RT: 7.24
Area: 1374850
Amount: 10.259830
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:39:29 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

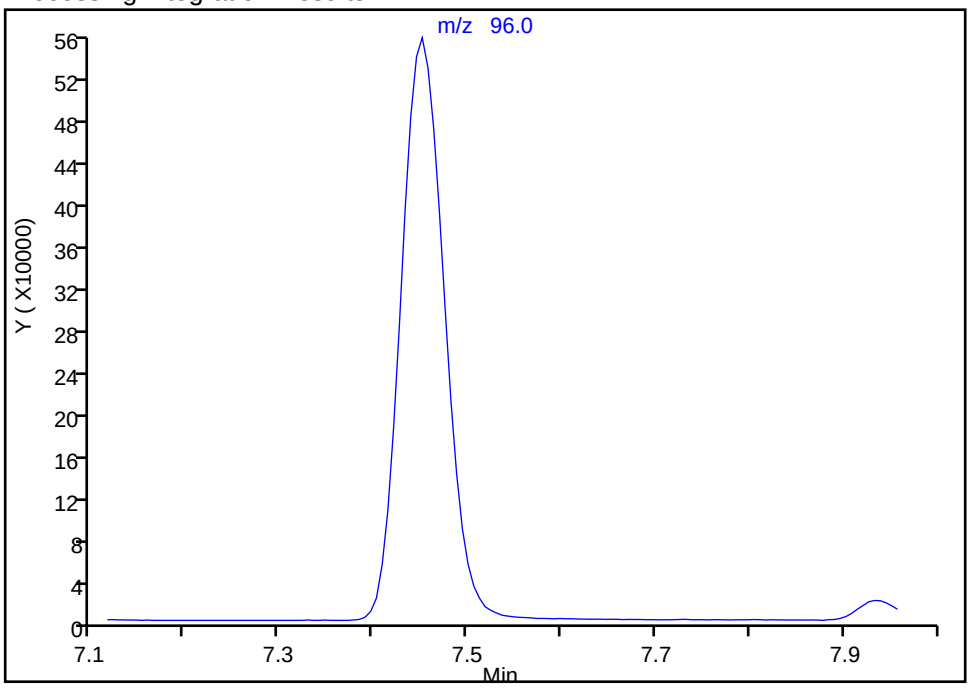
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

* 61 Fluorobenzene (IS), CAS: 462-06-6

Signal: 1

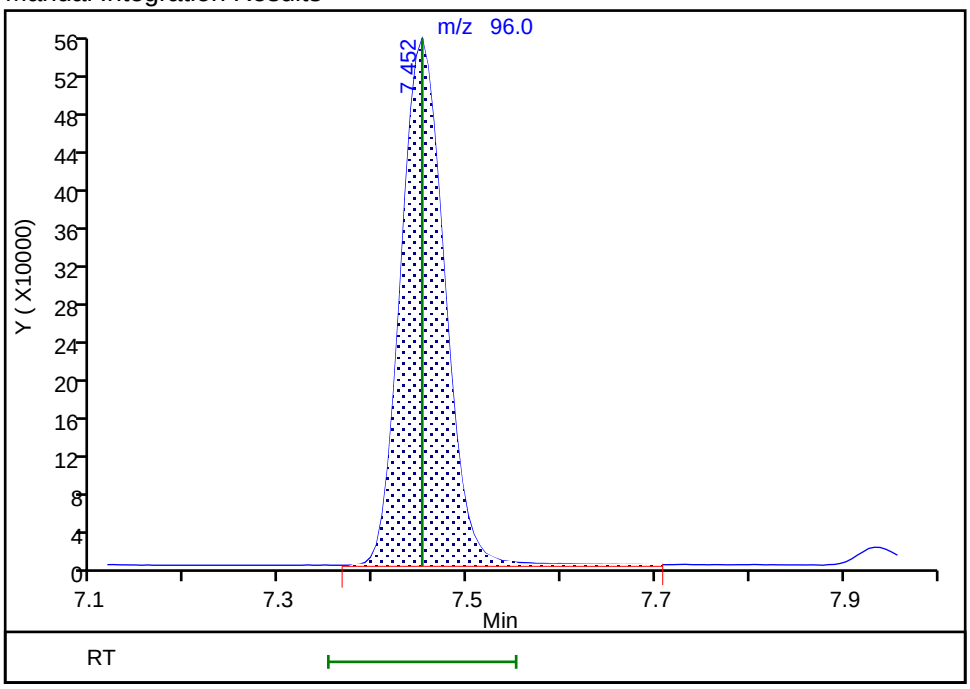
Not Detected
Expected RT: 7.45

Processing Integration Results



Manual Integration Results

RT: 7.45
Area: 1807671
Amount: 10.000000
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:35:11 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

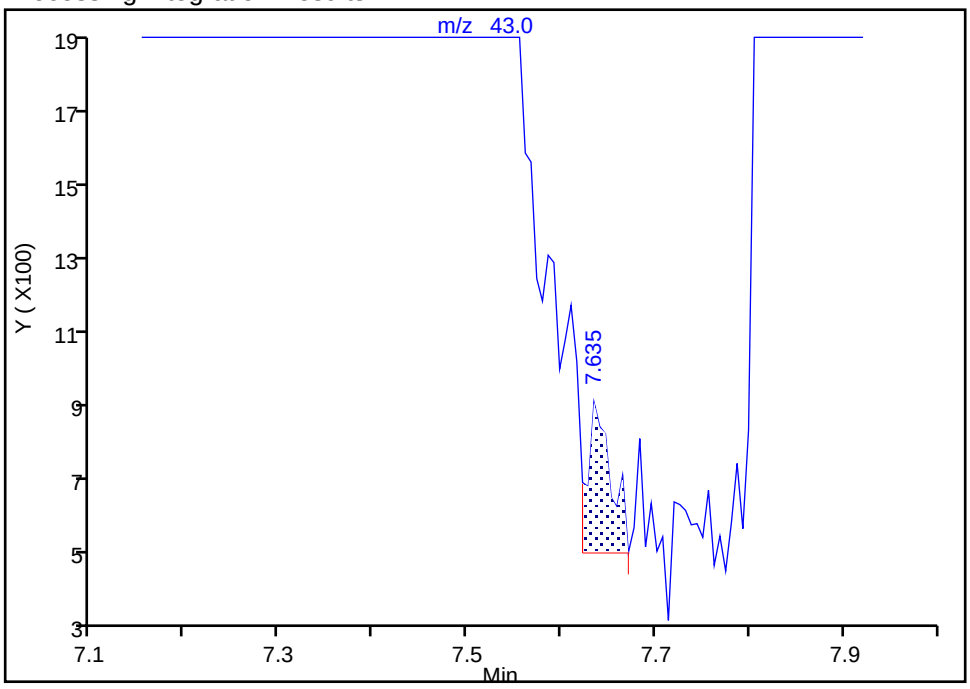
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

62 n-Heptane, CAS: 142-82-5

Signal: 1

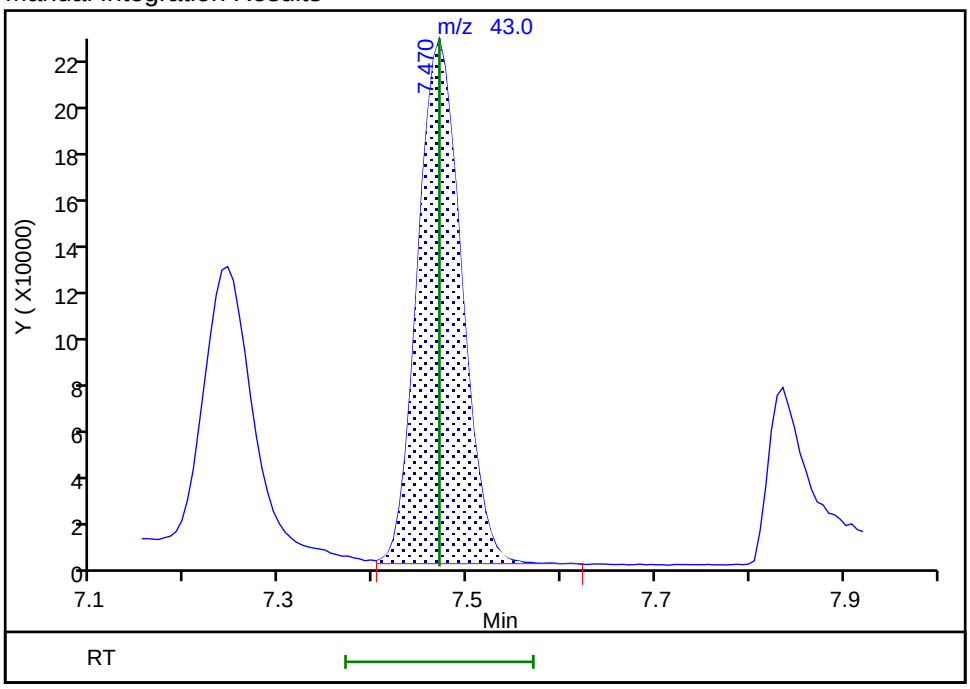
Processing Integration Results

RT: 7.63
Area: 669
Amount: 0.002433
Amount Units: ug/l



Manual Integration Results

RT: 7.47
Area: 722856
Amount: 10.644753
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:39:35 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

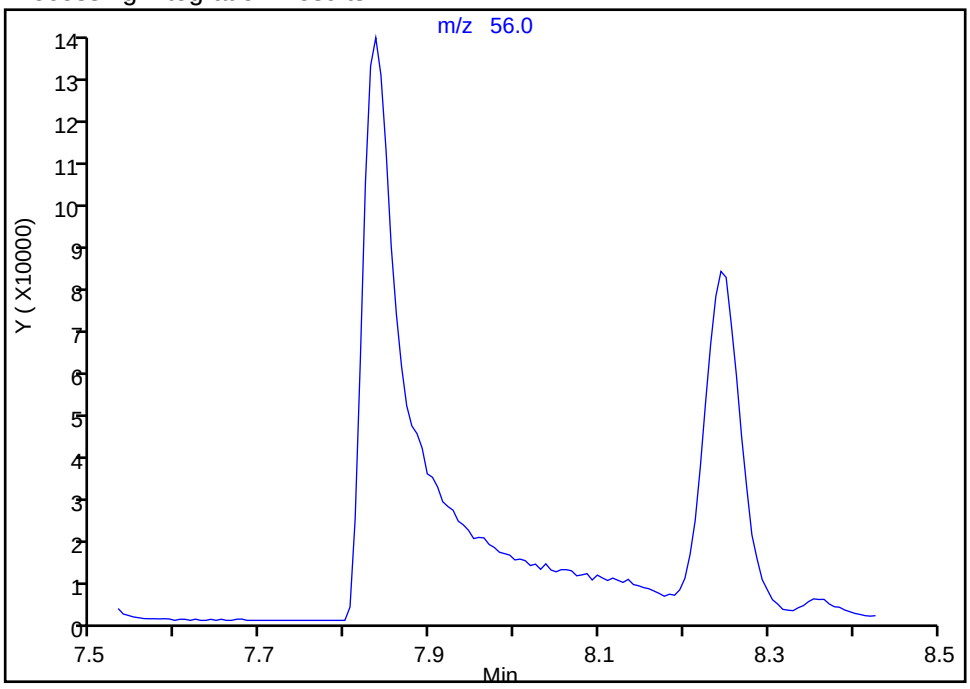
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

63 n-Butanol, CAS: 71-36-3

Signal: 1

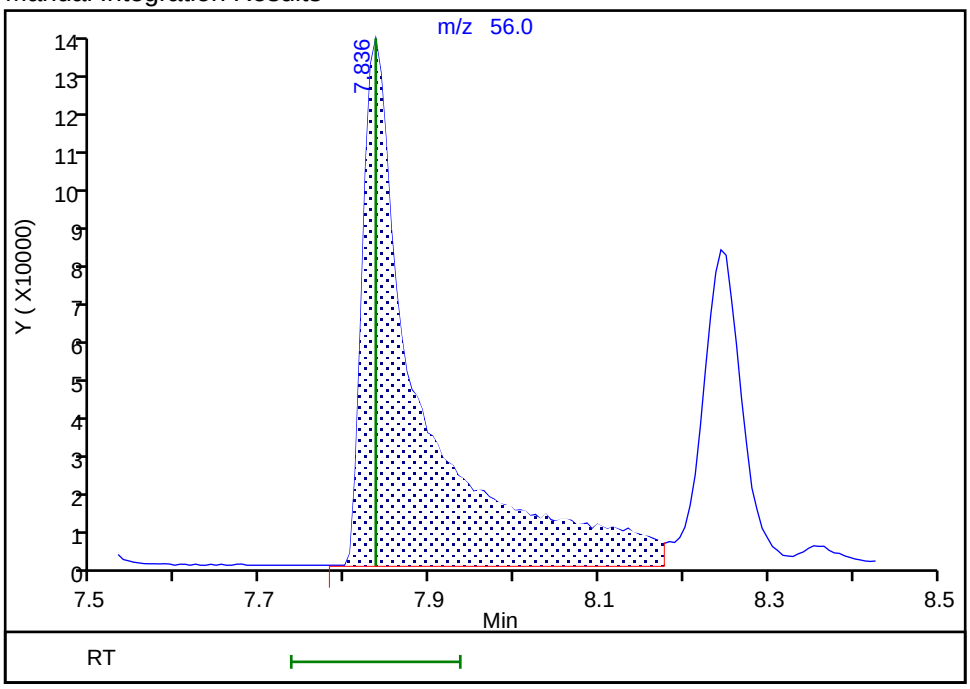
Not Detected
Expected RT: 7.84

Processing Integration Results



Manual Integration Results

RT: 7.84
Area: 662655
Amount: 976.0012
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:39:38 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

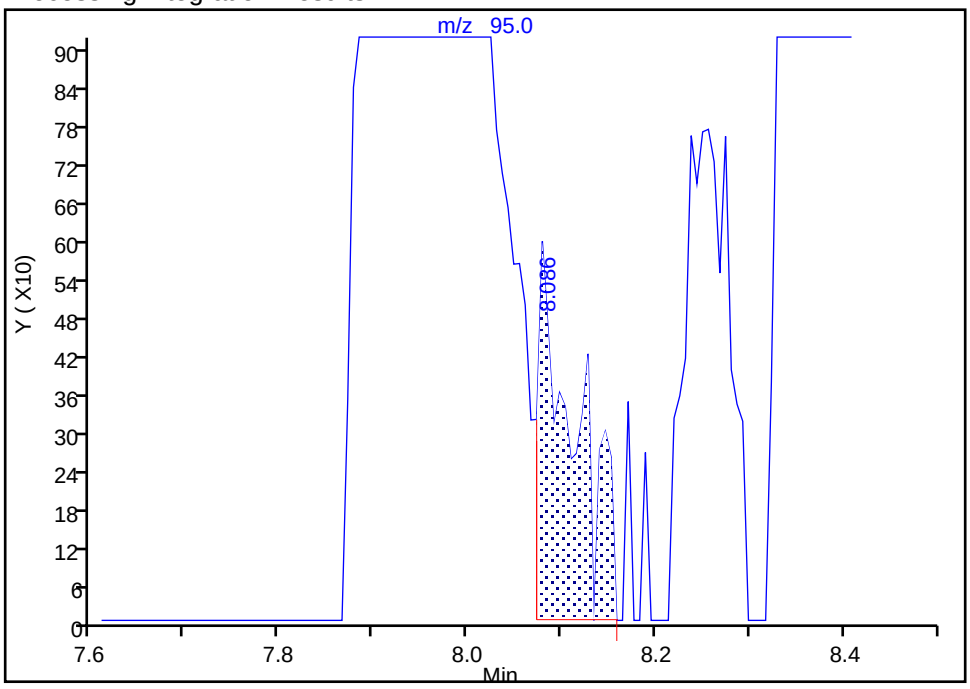
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

64 Trichloroethene, CAS: 79-01-6

Signal: 1

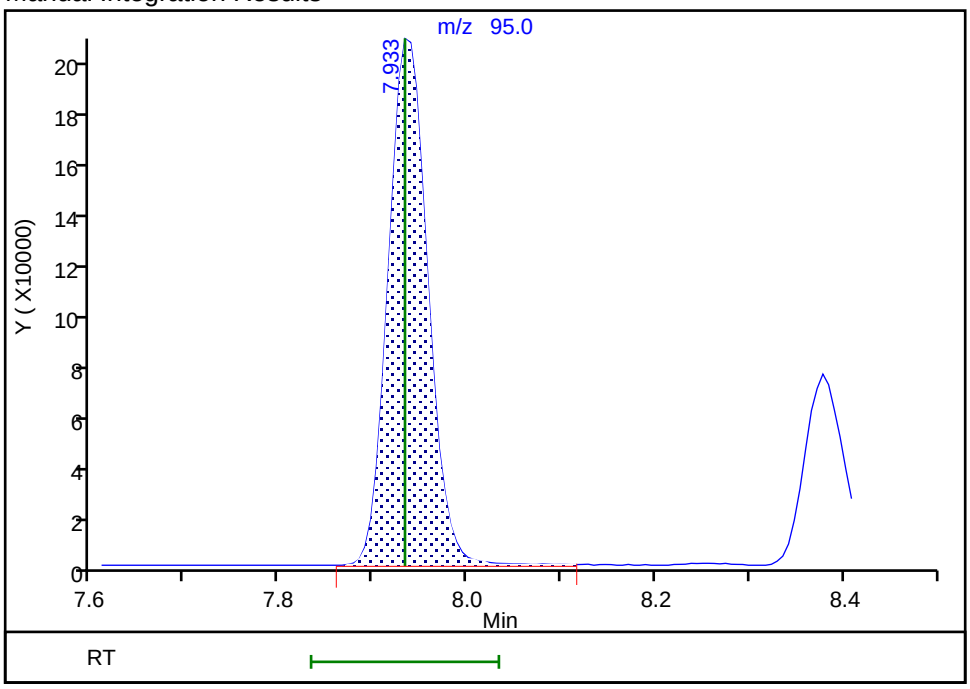
Processing Integration Results

RT: 8.09
Area: 1628
Amount: 10.000000
Amount Units: ug/l



Manual Integration Results

RT: 7.93
Area: 615027
Amount: 10.357052
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:39:44 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

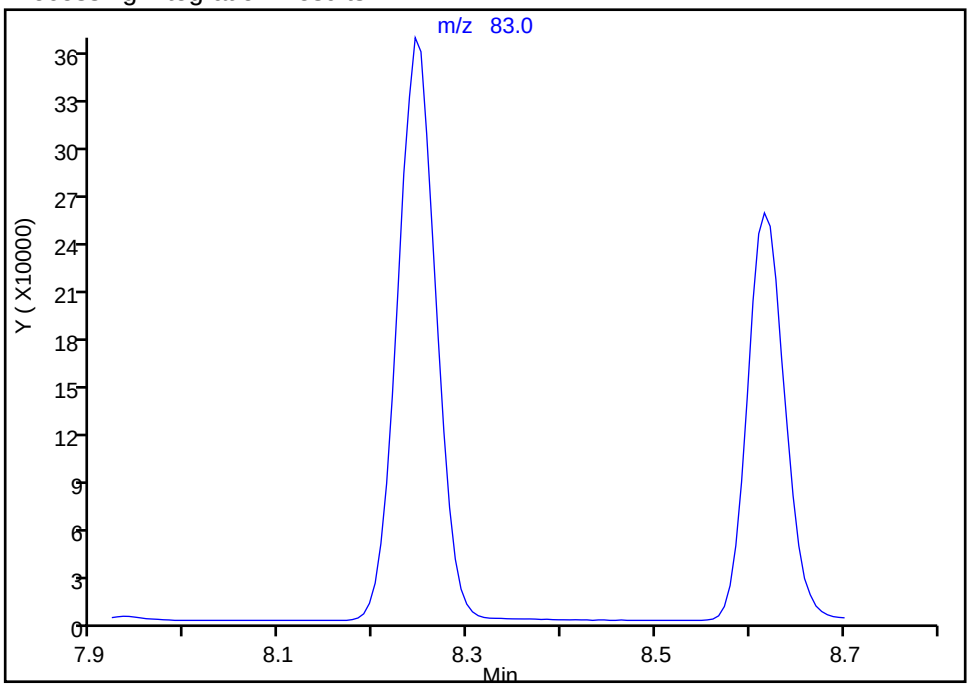
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

65 Methylcyclohexane, CAS: 108-87-2

Signal: 1

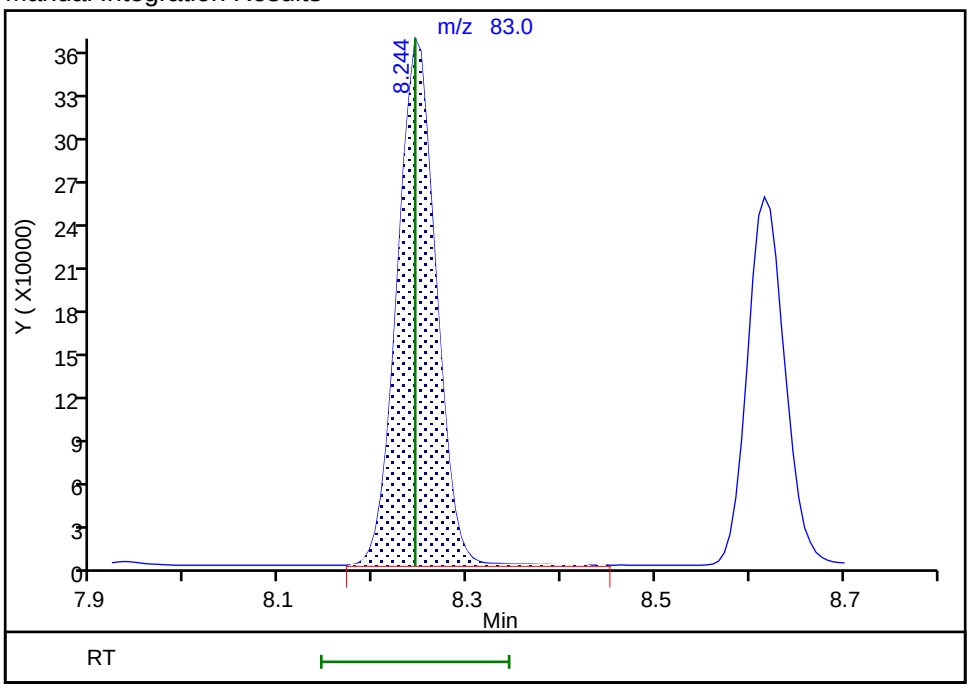
Not Detected
Expected RT: 8.24

Processing Integration Results



Manual Integration Results

RT: 8.24
Area: 1036558
Amount: 10.806063
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:39:47 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

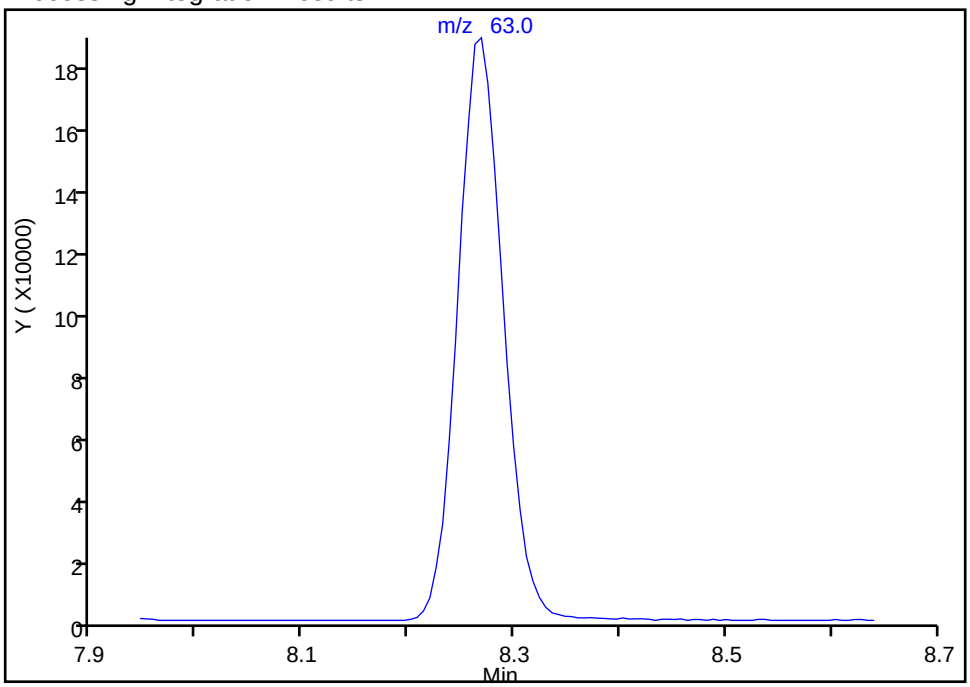
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

66 1,2-Dichloropropane, CAS: 78-87-5

Signal: 1

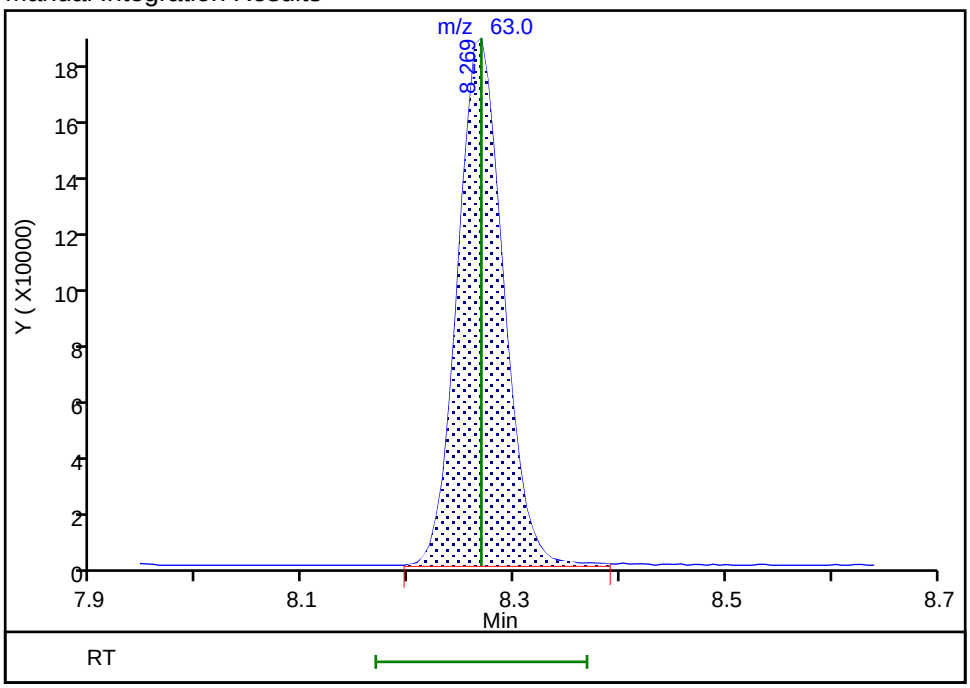
Not Detected
Expected RT: 8.27

Processing Integration Results



Manual Integration Results

RT: 8.27
Area: 544394
Amount: 10.315438
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:39:50 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

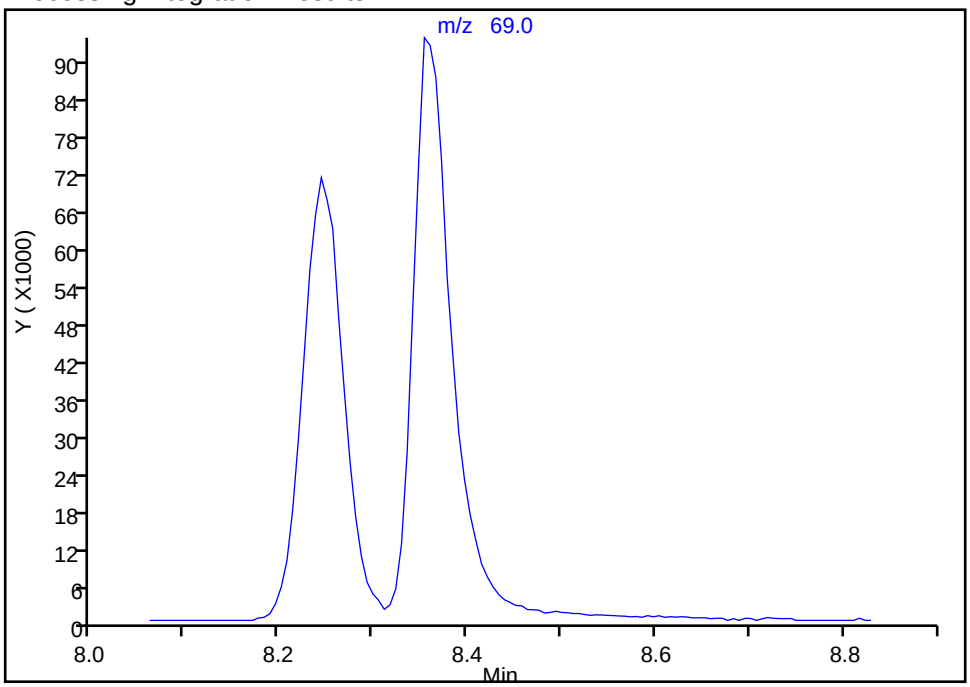
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

67 Methyl methacrylate, CAS: 80-62-6

Signal: 1

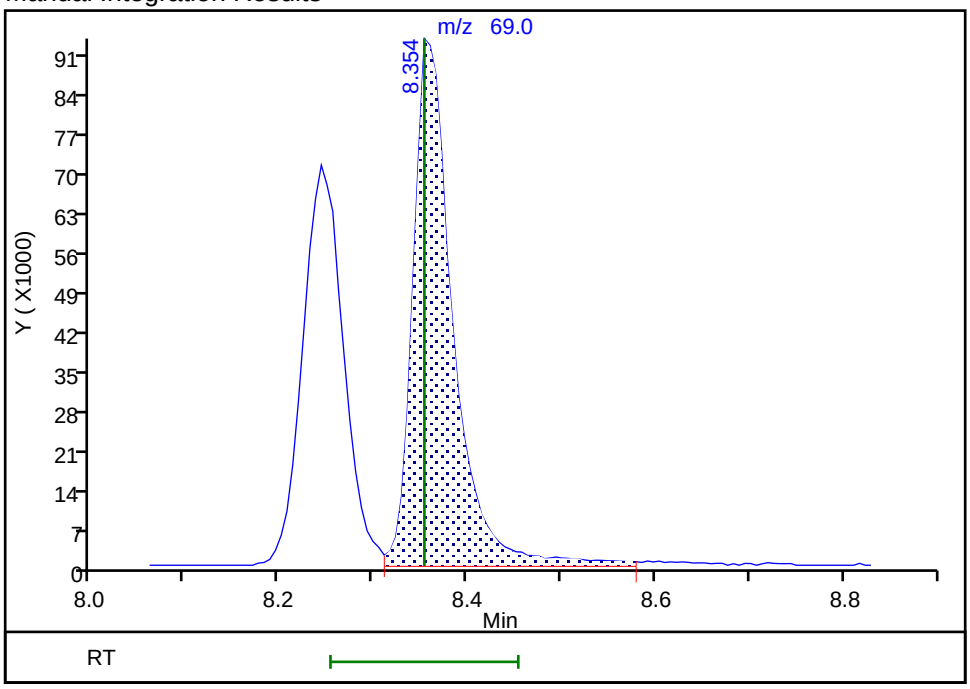
Not Detected
Expected RT: 8.35

Processing Integration Results



Manual Integration Results

RT: 8.35
Area: 276225
Amount: 11.142318
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:39:54 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

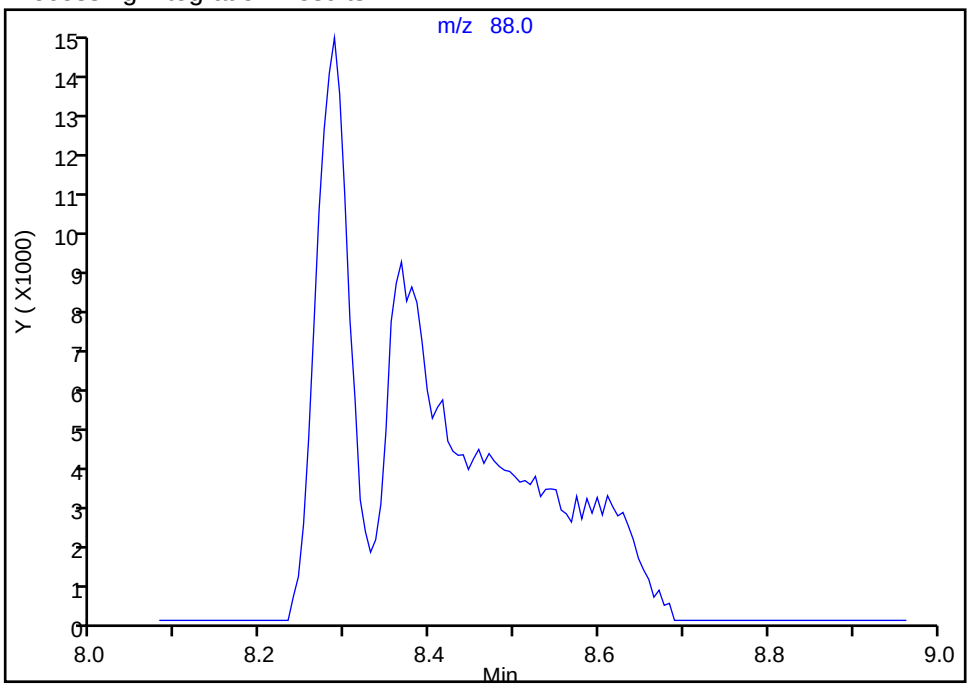
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

68 1,4-Dioxane, CAS: 123-91-1

Signal: 1

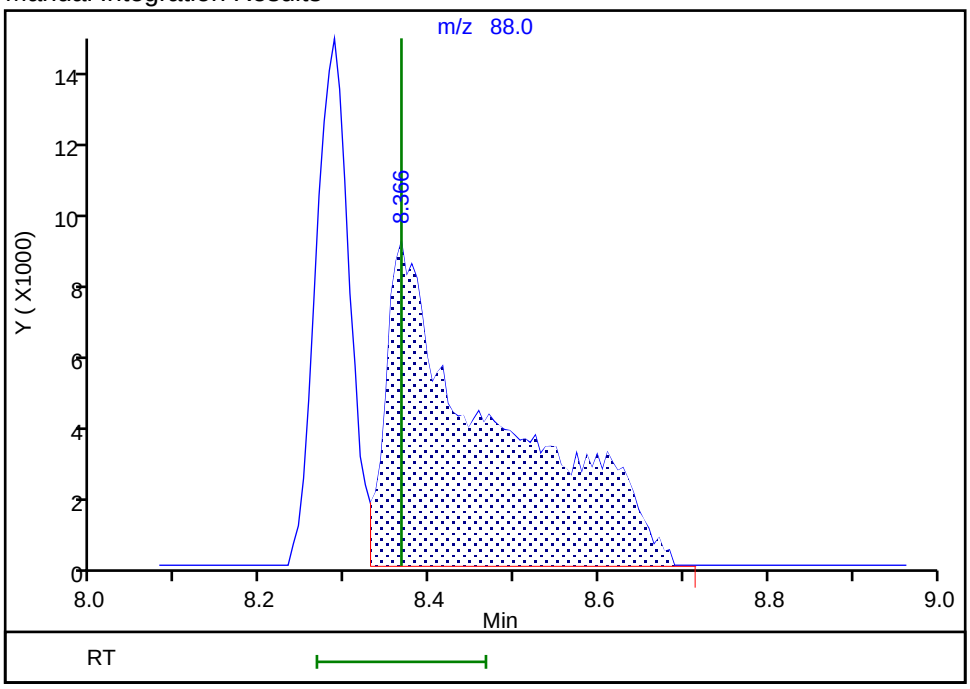
Not Detected
Expected RT: 8.37

Processing Integration Results



Manual Integration Results

RT: 8.37
Area: 79624
Amount: 552.1655
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:40:07 -04:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

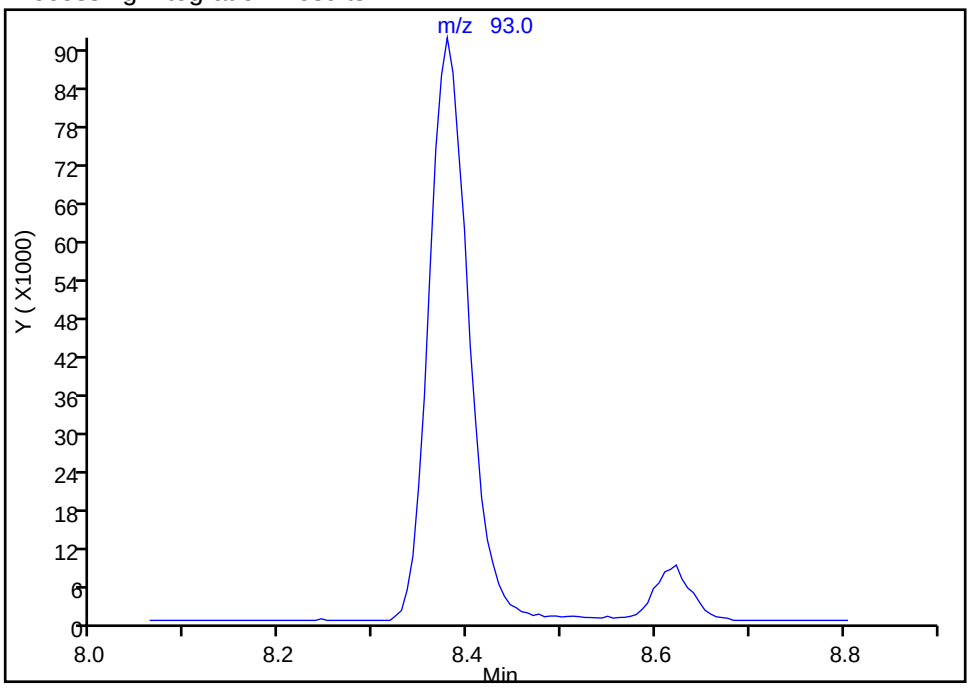
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

69 Dibromomethane, CAS: 74-95-3

Signal: 1

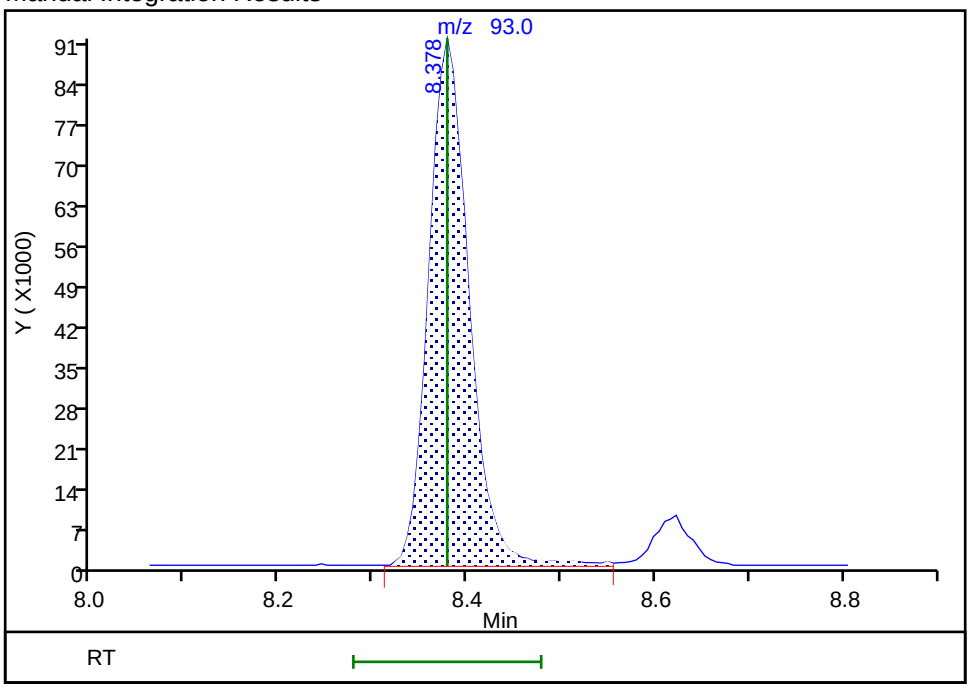
Not Detected
Expected RT: 8.38

Processing Integration Results



Manual Integration Results

RT: 8.38
Area: 271761
Amount: 10.273229
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:40:10 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

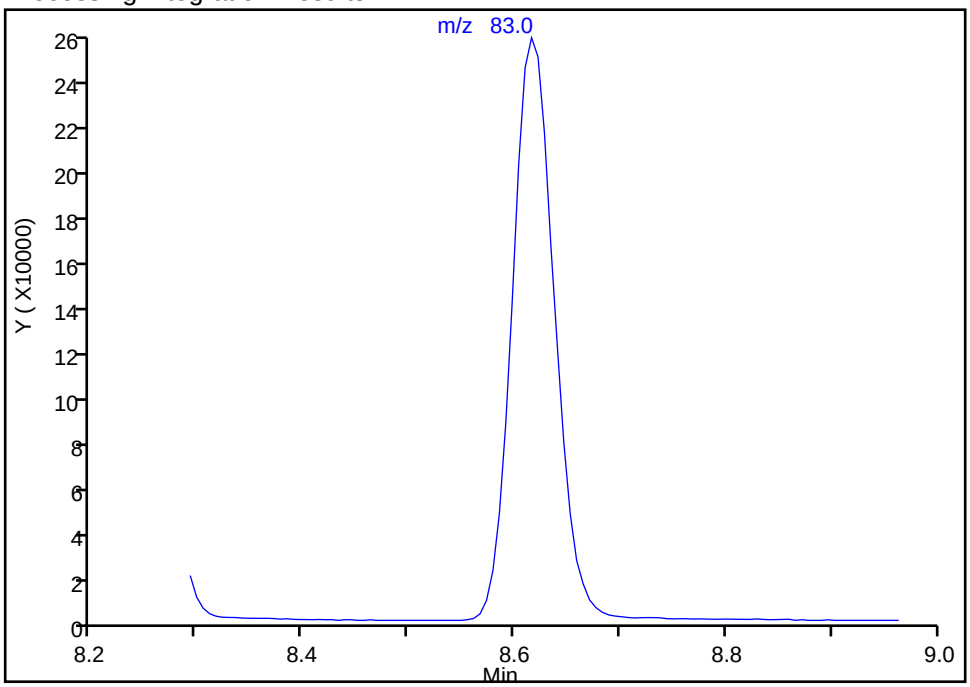
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

71 Dichlorobromomethane, CAS: 75-27-4

Signal: 1

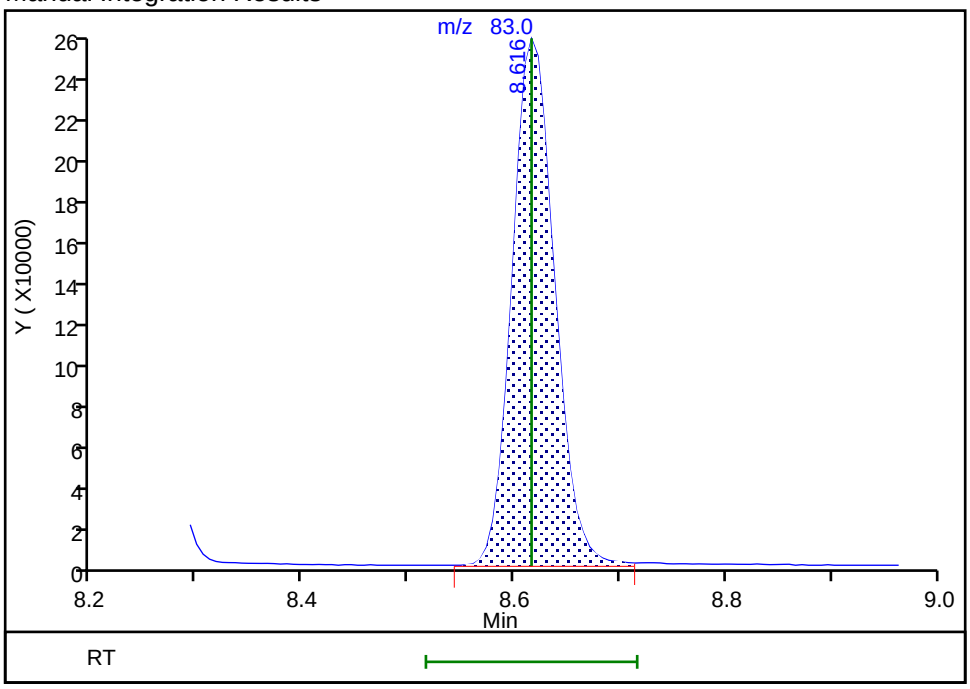
Not Detected
Expected RT: 8.62

Processing Integration Results



Manual Integration Results

RT: 8.62
Area: 705073
Amount: 10.279195
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:40:13 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

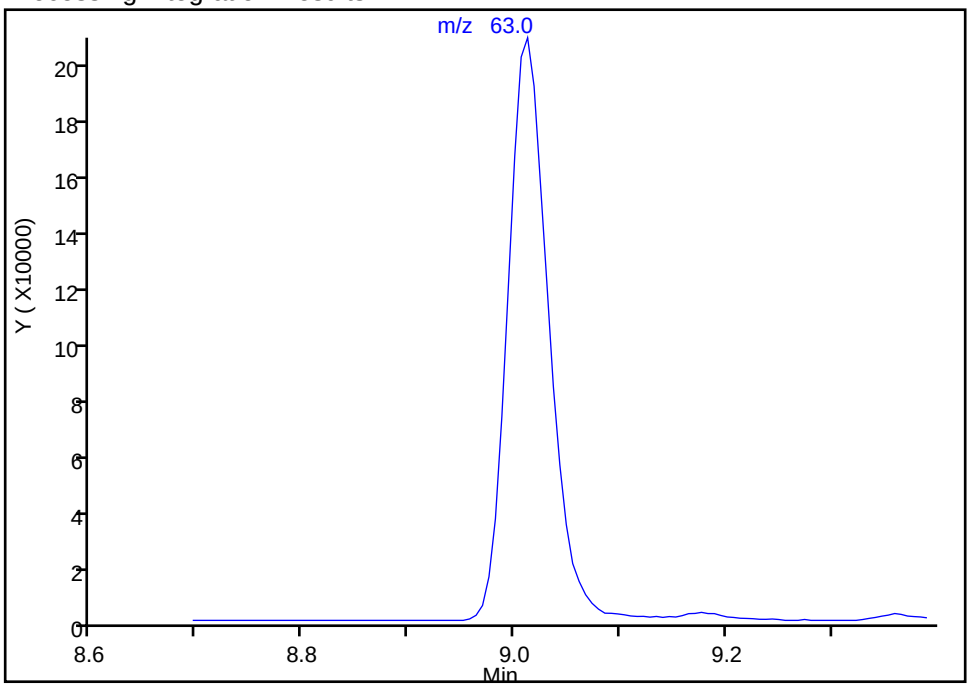
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

75 1-Bromo-2-chloroethane, CAS: 107-04-0

Signal: 1

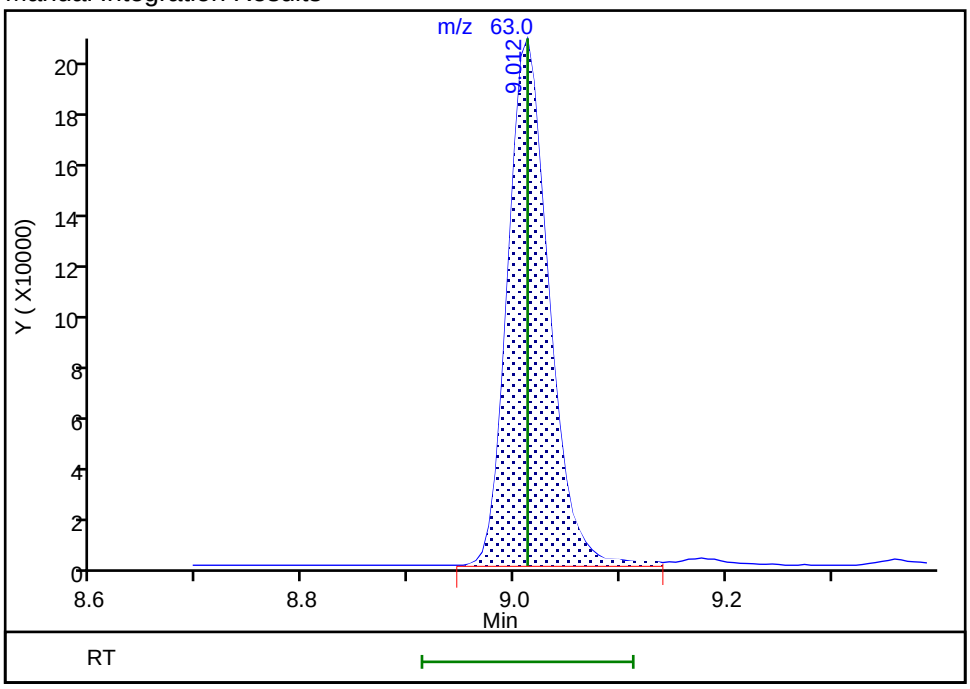
Not Detected
Expected RT: 9.01

Processing Integration Results



Manual Integration Results

RT: 9.01
Area: 557990
Amount: 10.370445
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:40:17 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

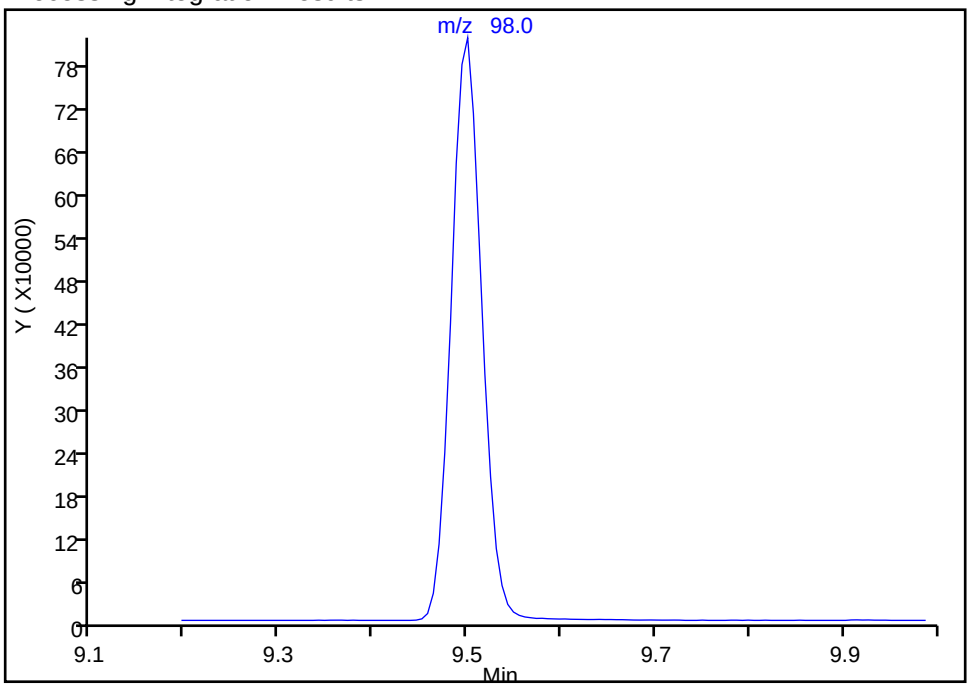
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

$ 78 Toluene-d8 (Surr), CAS: 2037-26-5

Signal: 1

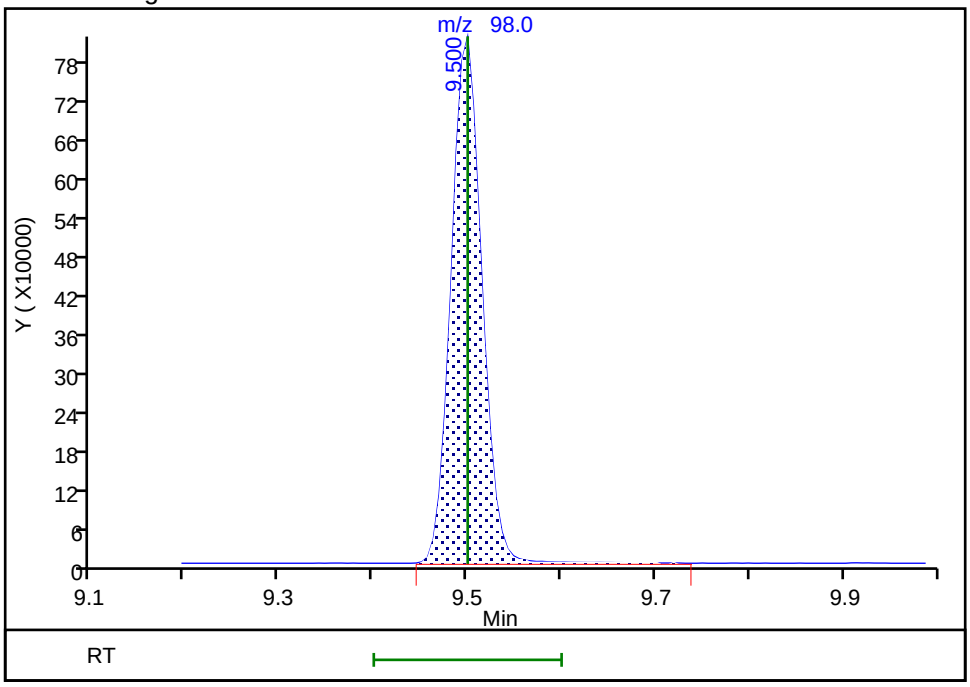
Not Detected
Expected RT: 9.50

Processing Integration Results



Manual Integration Results

RT: 9.50
Area: 1851132
Amount: 9.999085
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:35:47 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

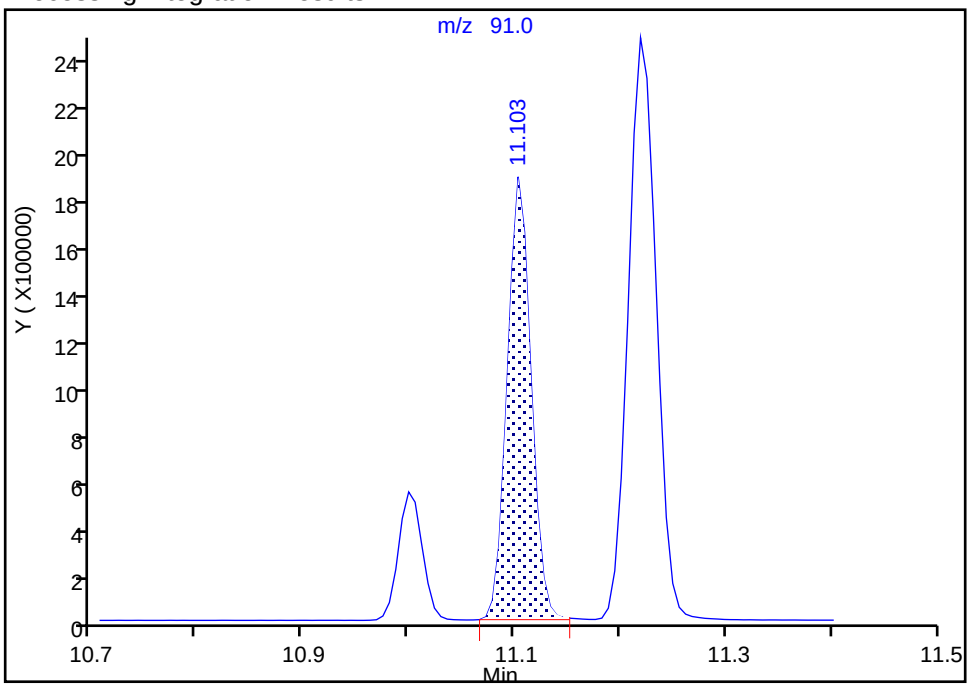
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

108 1-Chlorohexane, CAS: 544-10-5

Signal: 1

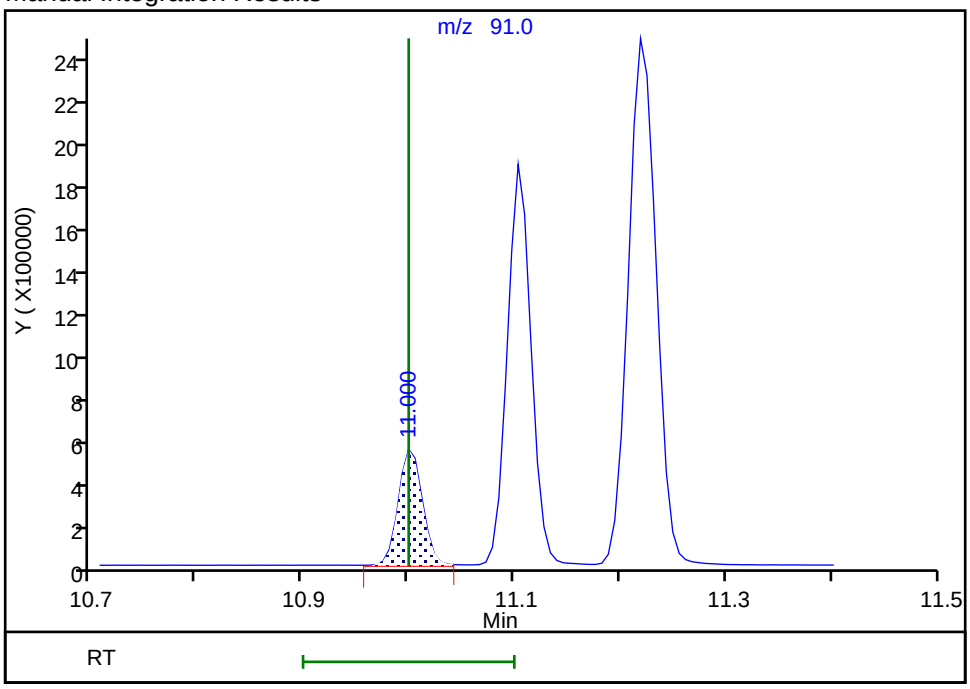
Processing Integration Results

RT: 11.10
Area: 2916569
Amount: 20.386606
Amount Units: ug/l



Manual Integration Results

RT: 11.00
Area: 850962
Amount: 10.012819
Amount Units: ug/l



Reviewer: DVW2, 22-Jun-2023 07:48:21 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

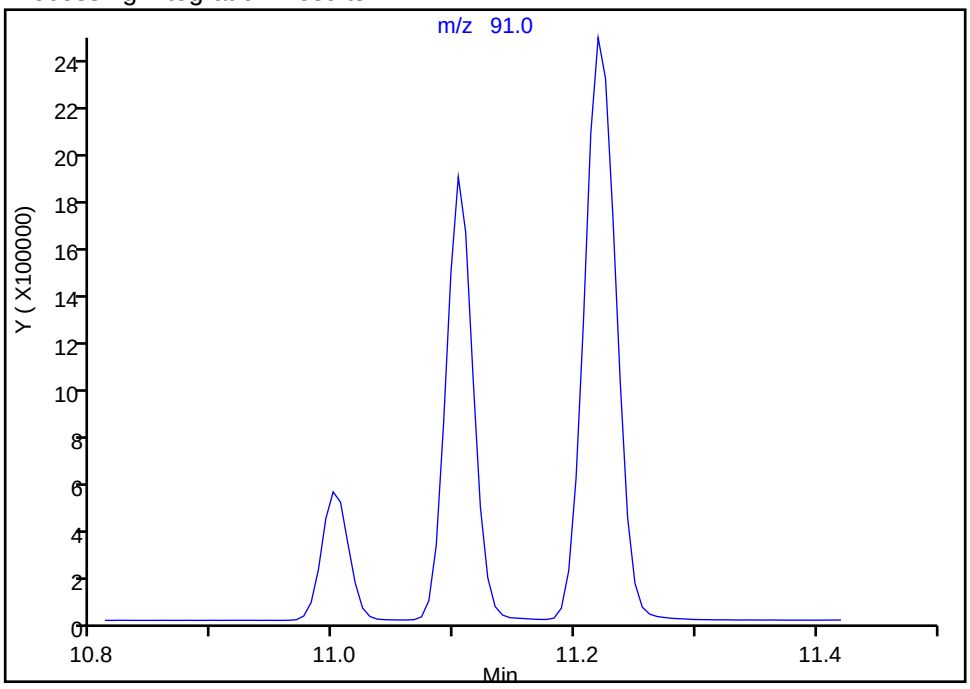
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

112 Ethylbenzene, CAS: 100-41-4

Signal: 1

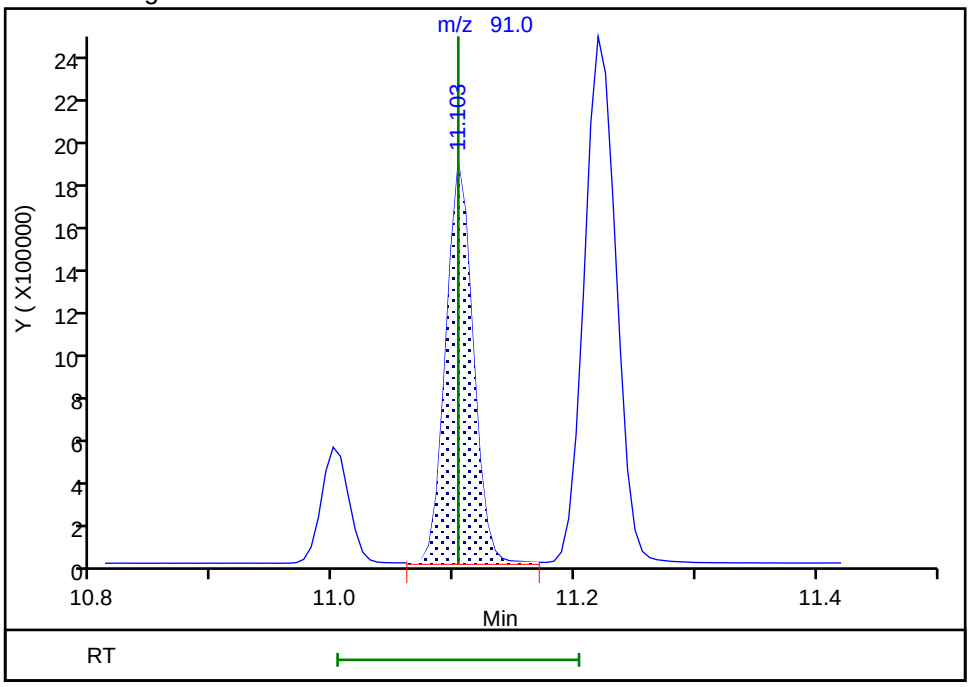
Not Detected
Expected RT: 11.10

Processing Integration Results



Manual Integration Results

RT: 11.10
Area: 2922252
Amount: 10.268049
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 15:39:03 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

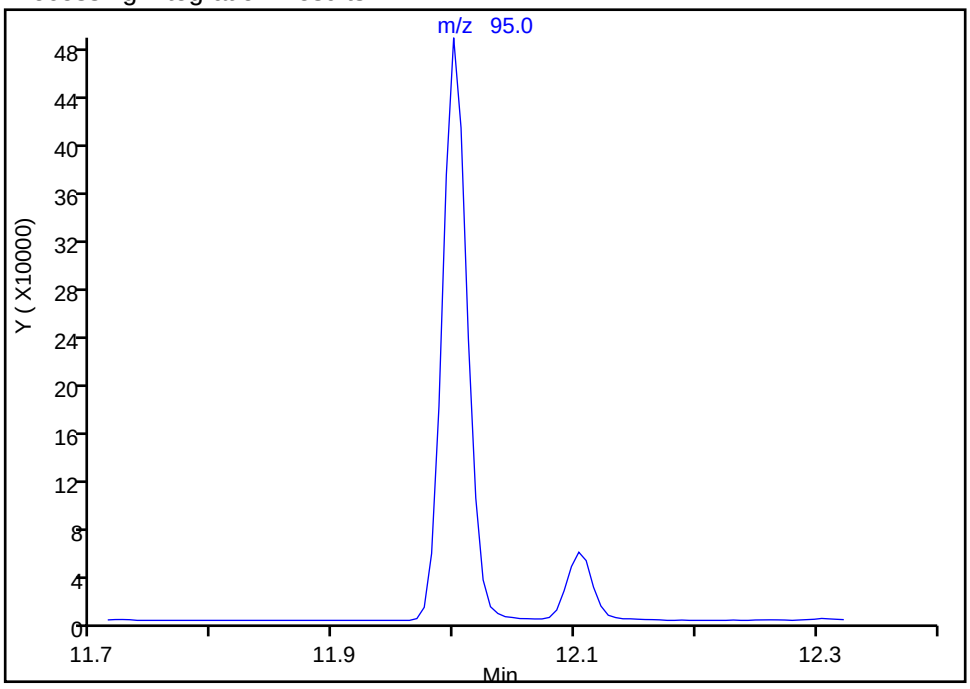
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D				
Injection Date:	19-Jun-2023 20:03:30	Instrument ID:	19930		
Lims ID:	ICIS std6 LG				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

$ 120 4-Bromofluorobenzene (Surr), CAS: 460-00-4

Signal: 1

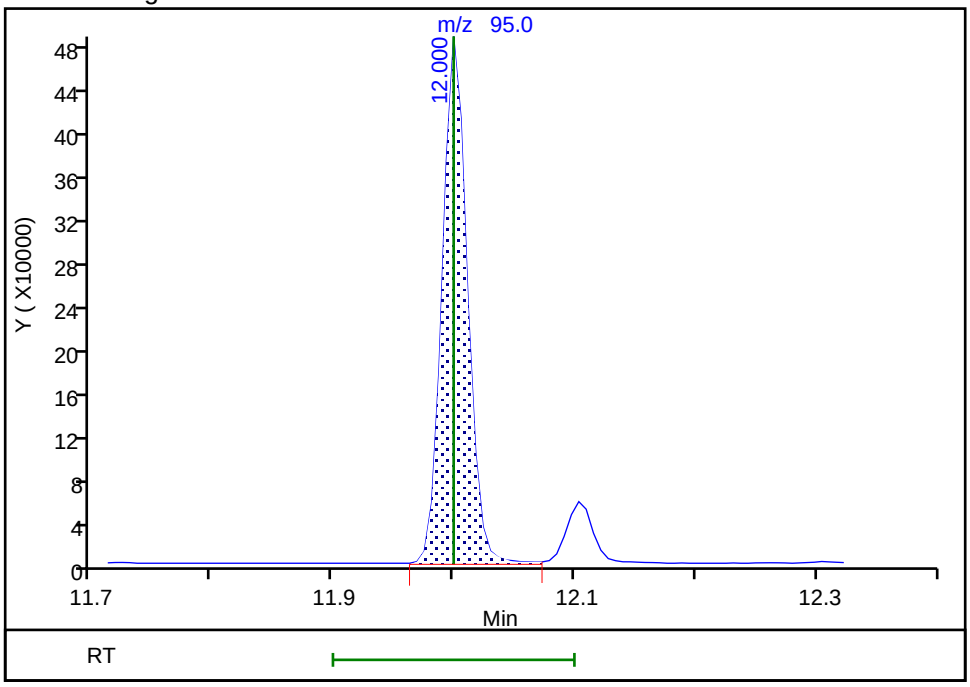
Not Detected
Expected RT: 12.00

Processing Integration Results



Manual Integration Results

RT: 12.00
Area: 698444
Amount: 10.012160
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:35:56 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

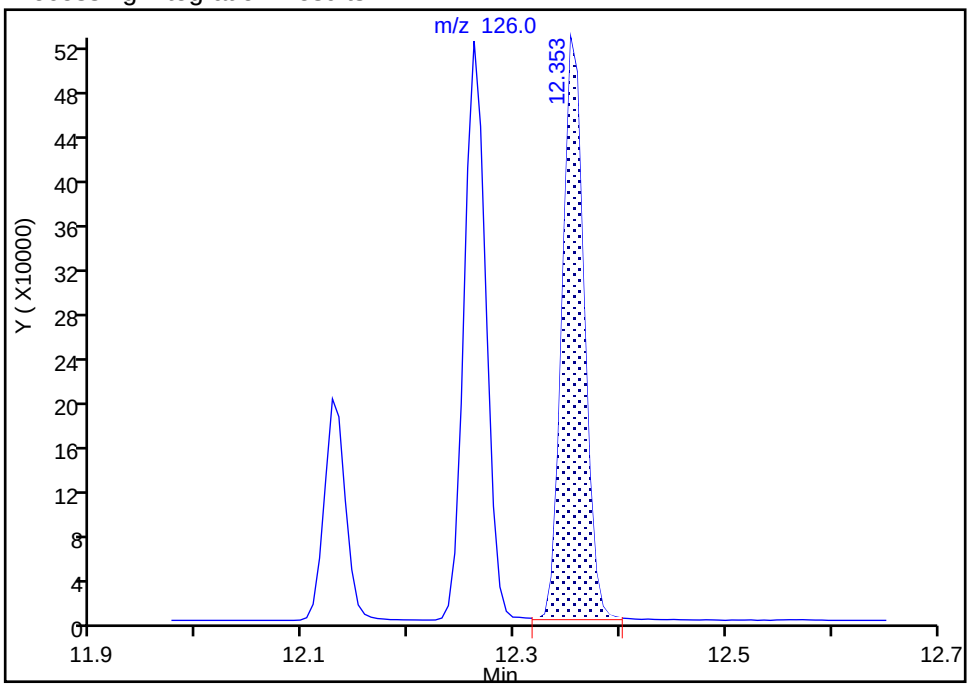
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

126 2-Chlorotoluene, CAS: 95-49-8

Signal: 1

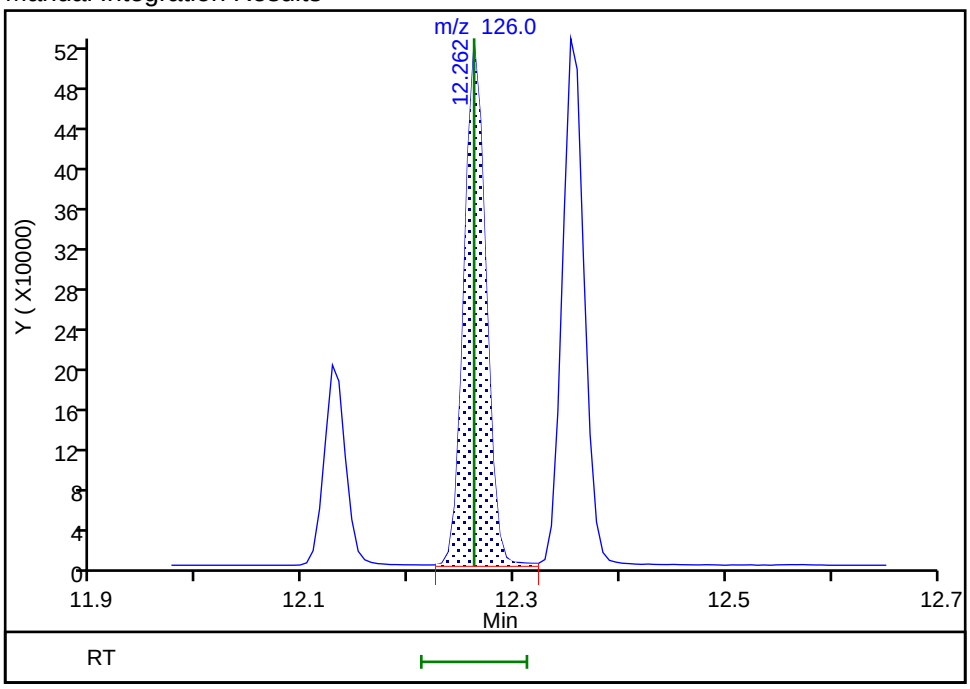
Processing Integration Results

RT: 12.35
Area: 763900
Amount: 10.352973
Amount Units: ug/l



Manual Integration Results

RT: 12.26
Area: 760985
Amount: 10.345897
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 15:39:09 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

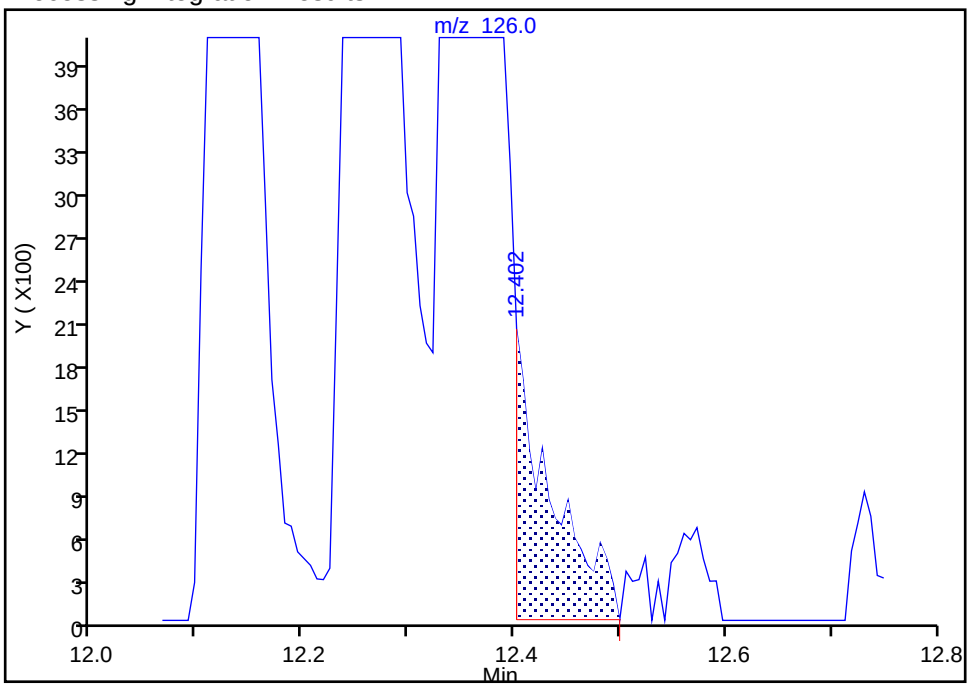
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

128 4-Chlorotoluene, CAS: 106-43-4

Signal: 1

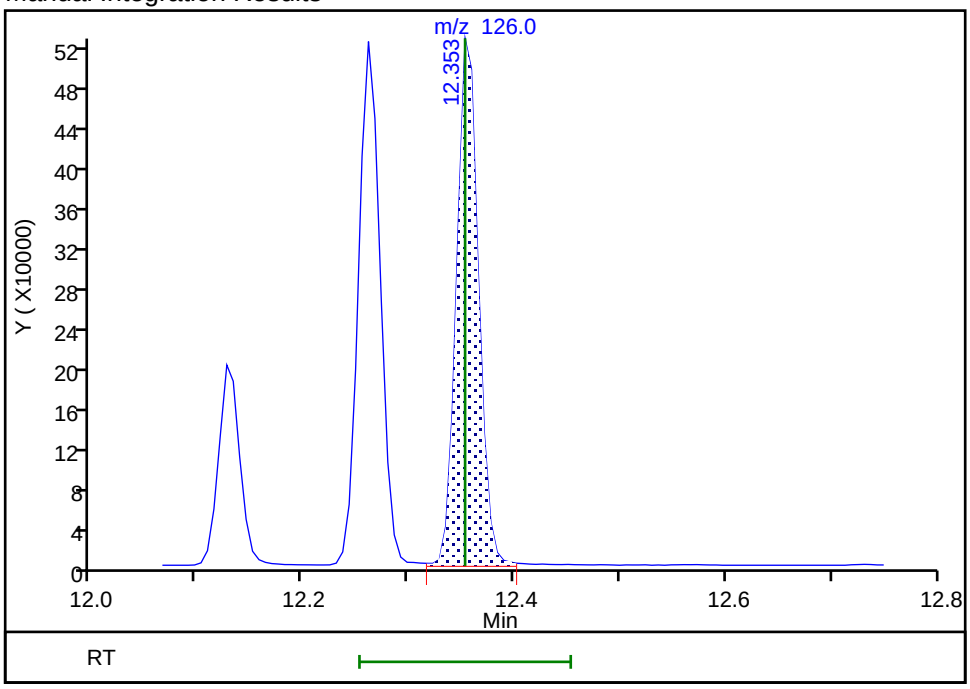
Processing Integration Results

RT: 12.40
Area: 4753
Amount: 0.088167
Amount Units: ug/l



Manual Integration Results

RT: 12.35
Area: 763897
Amount: 10.136216
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:40:51 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

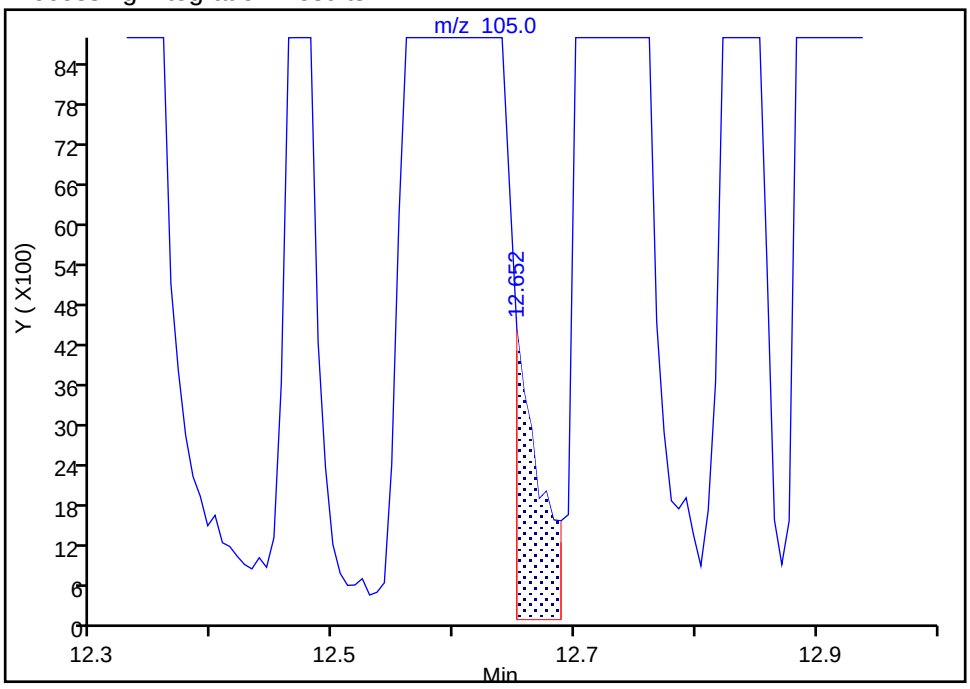
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

131 1,2,4-Trimethylbenzene, CAS: 95-63-6

Signal: 1

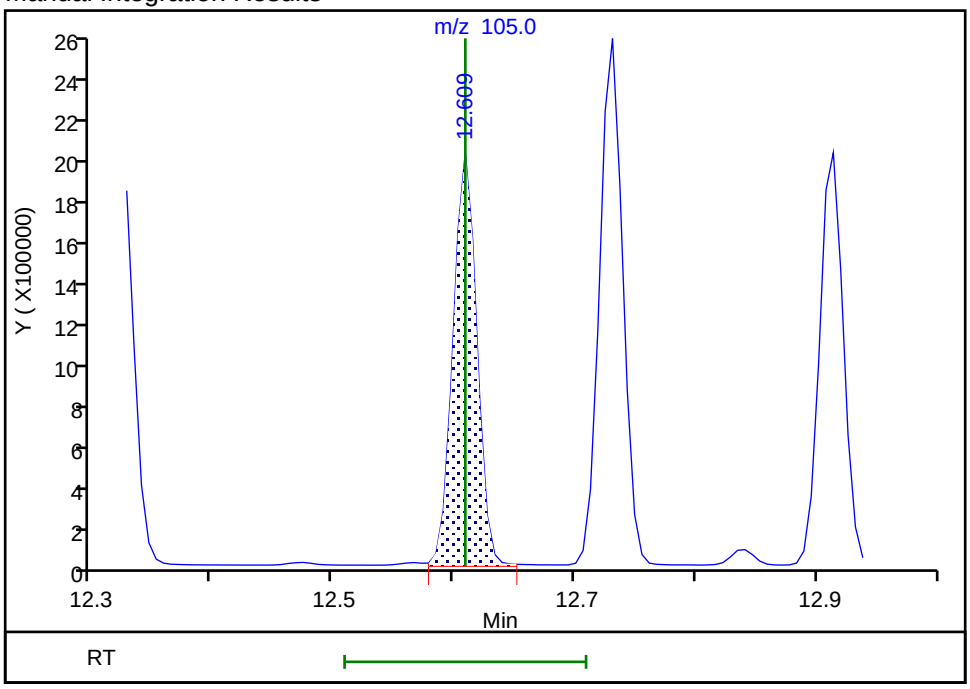
Processing Integration Results

RT: 12.65
Area: 6384
Amount: 0.034086
Amount Units: ug/l



Manual Integration Results

RT: 12.61
Area: 2718845
Amount: 10.317099
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:41:12 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

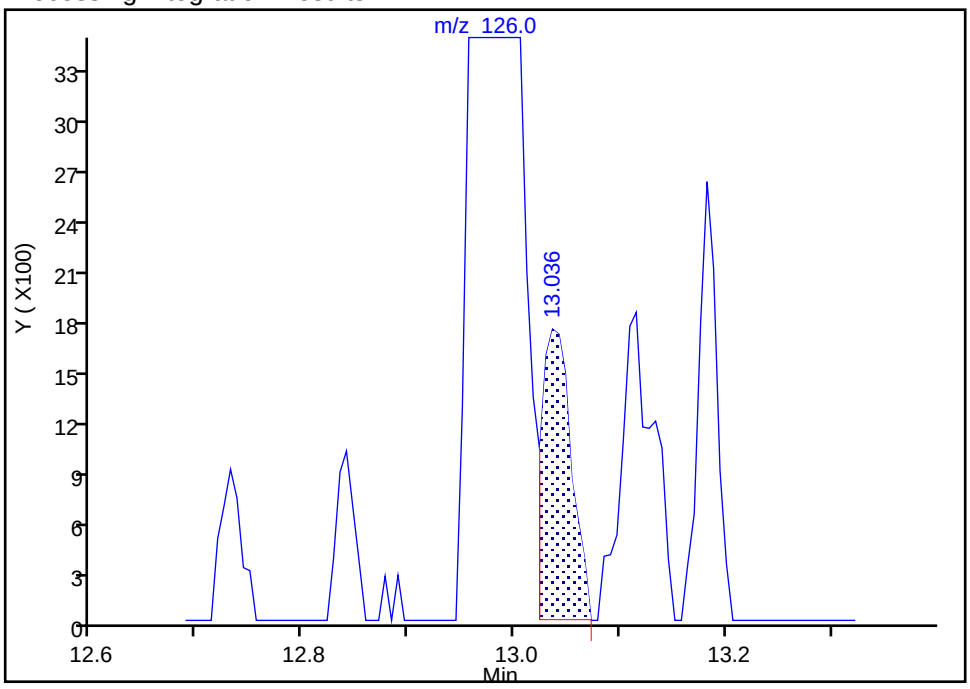
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

138 Benzyl chloride, CAS: 100-44-7

Signal: 1

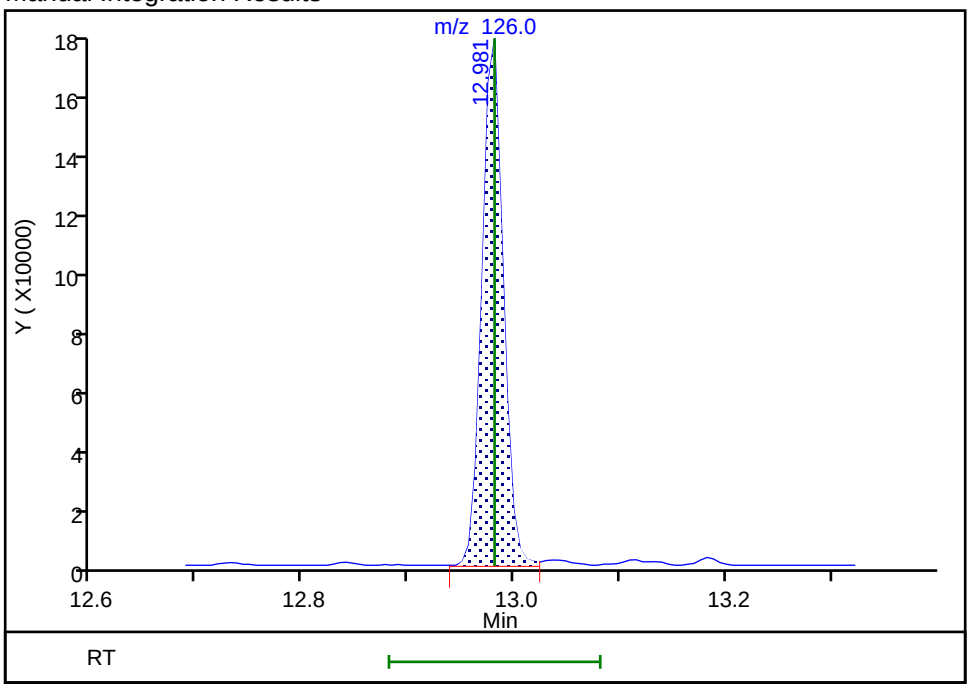
Processing Integration Results

RT: 13.04
Area: 3377
Amount: 0.271077
Amount Units: ug/l



Manual Integration Results

RT: 12.98
Area: 244410
Amount: 10.804047
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:41:22 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

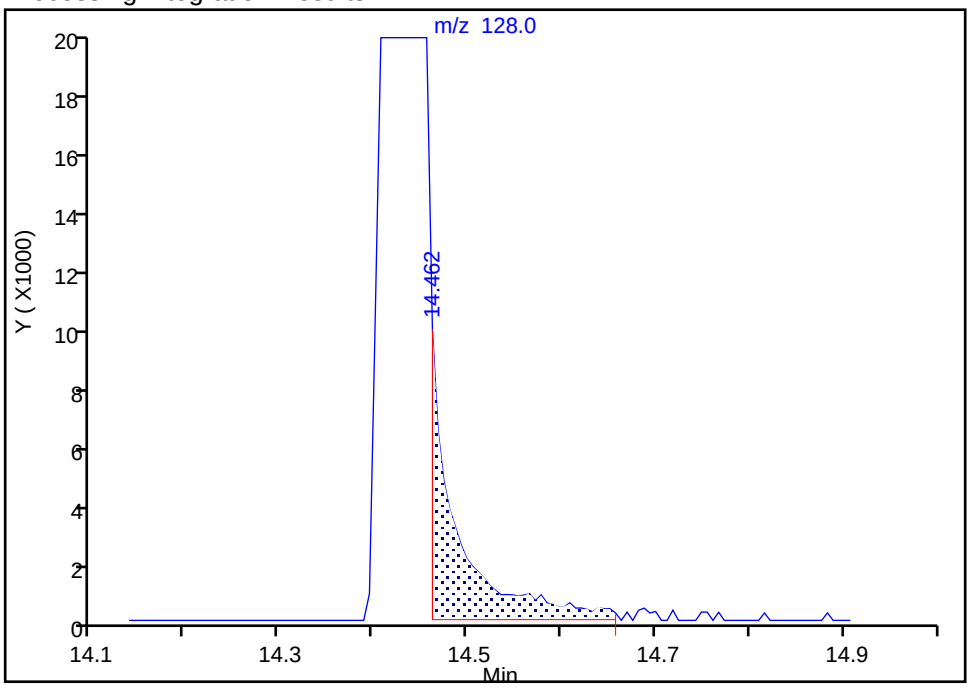
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X17.D
Injection Date: 19-Jun-2023 20:03:30 Instrument ID: 19930
Lims ID: ICIS std6 LG
Client ID:
Operator ID: KNK41612 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

146 Naphthalene, CAS: 91-20-3

Signal: 1

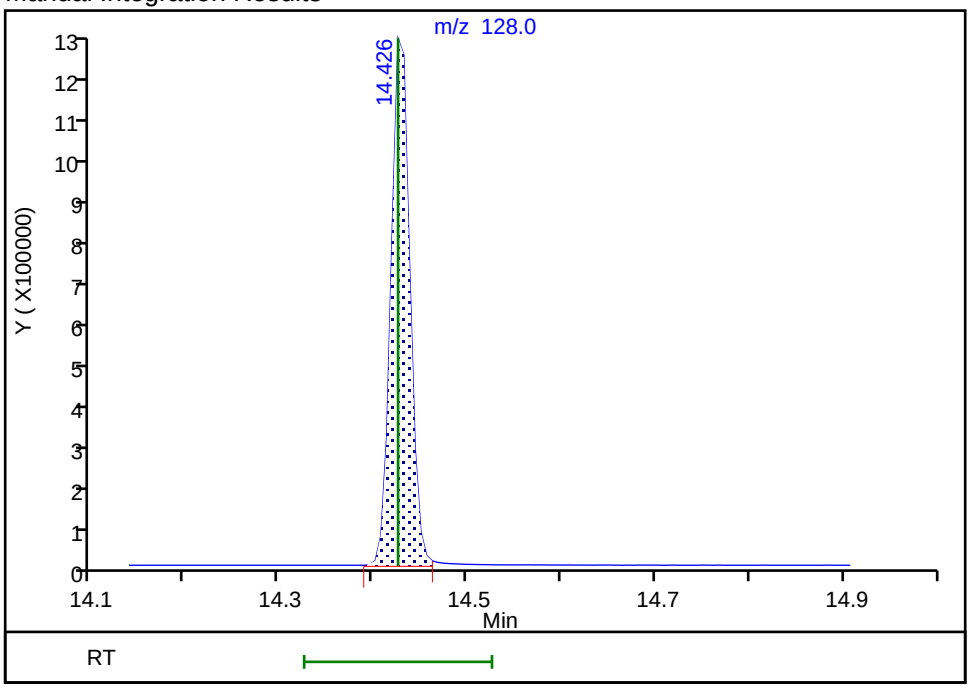
Processing Integration Results

RT: 14.46
Area: 19147
Amount: 0.166073
Amount Units: ug/l



Manual Integration Results

RT: 14.43
Area: 1695646
Amount: 10.383120
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 07:41:30 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D
Lims ID: IC std7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 19-Jun-2023 20:25:30 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0086929-019
Misc. Info.: LG 25.0
Operator ID: KNK41612 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 27-Jun-2023 12:30:46 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1687

First Level Reviewer: DVW2 Date: 21-Jun-2023 07:44:38

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.855	1.855	0.000	99	1664427	25.0	22.0	
4 Chloromethane	50	2.044	2.050	-0.006	99	1751882	25.0	22.8	
5 Vinyl chloride	62	2.148	2.160	-0.012	98	1731717	25.0	23.5	
6 Butadiene	39	2.154	2.160	-0.006	90	1556945	25.0	20.2	M
7 Bromomethane	94	2.459	2.465	-0.006	90	1304970	25.0	22.7	
8 Chloroethane	64	2.532	2.538	-0.006	99	1001229	25.0	22.7	
9 Dichlorofluoromethane	67	2.757	2.764	-0.007	97	2721094	25.0	22.1	
10 Trichlorofluoromethane	101	2.818	2.824	-0.006	98	2175547	25.0	23.2	
11 Ethyl ether	59	3.038	3.050	-0.012	89	946563	25.0	24.5	
13 1,2-Dichloro-1,1,2-trifluoroetha	67	3.129	3.142	-0.013	91	1511147	25.0	22.6	
14 Acrolein	56	3.196	3.209	-0.013	98	7153643	1250.0	1224.8	
15 1,1-Dichloroethene	96	3.330	3.337	-0.007	97	1241308	25.0	24.5	
16 Acetone	43	3.355	3.361	-0.006	100	1362907	250.0	211.3	
17 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.379	3.385	-0.006	90	1362883	25.0	25.3	
18 Iodomethane	142	3.519	3.526	-0.007	98	2625621	25.0	24.6	
19 Ethyl bromide	108	3.544	3.550	-0.006	98	1087944	25.0	24.5	
20 Carbon disulfide	76	3.617	3.629	-0.012	99	3467769	25.0	25.2	
23 Methyl acetate	43	3.751	3.757	-0.006	96	407475	25.0	25.6	M
24 3-Chloro-1-propene	41	3.775	3.782	-0.007	91	1915265	25.0	24.3	
25 Methylene Chloride	84	3.952	3.958	-0.006	89	1292711	25.0	24.1	
* 26 t-Butyl alcohol-d10 (IS)	65	3.977	3.977	0.000	95	134884	50.0	50.0	M
27 2-Methyl-2-propanol	59	4.099	4.093	0.006	99	1110969	500.0	432.9	
28 Acrylonitrile	53	4.269	4.282	-0.013	100	527652	62.5	67.3	
29 Methyl tert-butyl ether	73	4.342	4.342	0.000	94	3409123	25.0	24.5	
30 trans-1,2-Dichloroethene	96	4.342	4.355	-0.013	98	1385244	25.0	24.5	
31 Hexane	57	4.769	4.781	-0.012	91	1840079	25.0	24.9	
32 1,1-Dichloroethane	63	5.007	5.013	-0.006	96	2413824	25.0	25.0	
35 Isopropyl ether	45	5.068	5.074	-0.006	93	3889612	25.0	24.5	
36 2-Chloro-1,3-butadiene	53	5.117	5.123	-0.006	90	2022645	25.0	25.0	
37 Tert-butyl ethyl ether	59	5.617	5.623	-0.006	96	3706375	25.0	24.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
38 2-Butanone (MEK)	43	5.806	5.812	-0.006	99	2912203	250.0	234.3	
39 cis-1,2-Dichloroethene	96	5.848	5.854	-0.006	80	1543889	25.0	24.6	
40 2,2-Dichloropropane	77	5.860	5.867	-0.007	86	2153694	25.0	24.7	
43 Propionitrile	54	5.891	5.891	0.000	99	1642296	500.0	499.5	
45 Methacrylonitrile	67	6.110	6.110	0.000	91	3198256	250.0	246.5	
S 41 1,2-Dichloroethene, Total	100				0			49.1	
46 Chlorobromomethane	128	6.184	6.190	-0.006	86	693916	25.0	24.3	
47 Tetrahydrofuran	71	6.196	6.196	0.000	77	469929	125.0	114.9	
48 Chloroform	83	6.336	6.342	-0.006	93	2439280	25.0	24.4	
$ 49 Dibromofluoromethane (Surr)	113	6.549	6.555	-0.006	95	482075	10.0	9.92	
50 1,1,1-Trichloroethane	97	6.562	6.568	-0.006	98	2318413	25.0	24.9	
51 Cyclohexane	56	6.665	6.671	-0.006	88	2230992	25.0	25.2	
54 Carbon tetrachloride	117	6.775	6.781	-0.006	95	2152417	25.0	25.9	
53 1,1-Dichloropropene	75	6.775	6.781	-0.006	95	1881849	25.0	25.3	
55 Isobutyl alcohol	41	6.933	6.940	-0.007	95	965364	1250.0	1058.9	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.007	7.013	-0.006	78	92867	10.0	9.64	
57 Benzene	78	7.043	7.043	0.000	95	5552169	25.0	24.9	
58 1,2-Dichloroethane	62	7.110	7.116	-0.006	98	1462742	25.0	24.2	
60 Tert-amyl methyl ether	73	7.244	7.244	0.000	98	3439411	25.0	24.5	
* 61 Fluorobenzene (IS)	96	7.452	7.452	0.000	96	1891215	10.0	10.0	
62 n-Heptane	43	7.470	7.470	0.000	89	1798135	25.0	25.3	
63 n-Butanol	56	7.830	7.836	-0.006	86	1598692	2187.5	2282.9	
64 Trichloroethene	95	7.933	7.933	0.000	96	1562411	25.0	25.1	
65 Methylcyclohexane	83	8.244	8.244	0.000	91	2562276	25.0	25.5	
66 1,2-Dichloropropane	63	8.262	8.269	-0.007	97	1384198	25.0	25.1	
67 Methyl methacrylate	69	8.354	8.354	0.000	87	695290	25.0	27.2	
68 1,4-Dioxane	88	8.366	8.366	0.000	29	191965	1250.0	1290.7	M
69 Dibromomethane	93	8.378	8.378	0.000	91	678044	25.0	24.5	
71 Dichlorobromomethane	83	8.616	8.616	0.000	99	1814784	25.0	25.3	
72 2-Nitropropane	41	8.884	8.884	0.000	98	979651	125.0	117.2	
75 1-Bromo-2-chloroethane	63	9.012	9.012	0.000	98	1391897	25.0	24.7	
76 cis-1,3-Dichloropropene	75	9.177	9.177	0.000	97	2232649	25.0	25.9	
77 4-Methyl-2-pentanone (MIBK)	43	9.360	9.360	0.000	95	8166235	250.0	244.8	
$ 78 Toluene-d8 (Surr)	98	9.500	9.500	0.000	93	1923611	10.0	9.92	
79 Toluene	92	9.573	9.579	-0.006	99	3812060	25.0	24.9	
97 trans-1,3-Dichloropropene	75	9.847	9.848	-0.001	91	1881067	25.0	26.0	
99 Ethyl methacrylate	69	9.915	9.915	0.000	88	1490629	25.0	25.0	
100 1,1,2-Trichloroethane	97	10.055	10.055	0.000	90	1028167	25.0	23.8	
S 98 1,3-Dichloropropene, Total	100				0			52.0	
101 Tetrachloroethene	166	10.146	10.146	0.000	98	2002051	25.0	25.1	
102 1,3-Dichloropropane	76	10.219	10.219	0.000	89	1673377	25.0	24.5	
103 2-Hexanone	43	10.274	10.274	0.000	95	5838914	250.0	247.4	
105 Chlorodibromomethane	129	10.439	10.439	0.000	89	1452583	25.0	25.8	
106 Ethylene Dibromide	107	10.549	10.549	0.000	99	1012515	25.0	24.9	
* 107 Chlorobenzene-d5 (IS)	117	10.987	10.988	-0.001	84	1508853	10.0	10.0	
108 1-Chlorohexane	91	11.000	11.000	0.000	95	2153392	25.0	24.2	a
109 Chlorobenzene	112	11.018	11.018	0.000	97	4440532	25.0	24.8	
111 1,1,1,2-Tetrachloroethane	131	11.097	11.097	0.000	96	1601843	25.0	25.1	
112 Ethylbenzene	91	11.103	11.103	0.000	98	7384442	25.0	24.8	a
113 m-Xylene & p-Xylene	106	11.219	11.219	0.000	93	6014911	50.0	49.9	
S 110 Xylenes, Total	106				0			74.7	
114 o-Xylene	106	11.554	11.554	0.000	96	2958784	25.0	24.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
115 Styrene	104	11.567	11.567	0.000	95	4890581	25.0	25.5	
116 Bromoform	173	11.725	11.725	0.000	99	975567	25.0	26.8	
117 Isopropylbenzene	105	11.853	11.859	-0.006	95	7684471	25.0	24.9	
$ 120 4-Bromofluorobenzene (Surr)	95	11.999	12.000	-0.001	96	725457	10.0	9.92	
121 1,1,2,2-Tetrachloroethane	83	12.103	12.103	0.000	93	1308898	25.0	24.0	
122 Bromobenzene	156	12.115	12.115	0.000	95	1971522	25.0	25.0	
123 trans-1,4-Dichloro-2-butene	53	12.128	12.128	0.000	90	3165888	250.0	252.0	
124 1,2,3-Trichloropropane	110	12.146	12.146	0.000	79	365750	25.0	23.9	
125 N-Propylbenzene	91	12.188	12.189	-0.001	98	8784621	25.0	25.1	
126 2-Chlorotoluene	126	12.262	12.262	0.000	98	1917179	25.0	25.1	a
127 1,3,5-Trimethylbenzene	105	12.323	12.323	0.000	94	6676624	25.0	25.1	
128 4-Chlorotoluene	126	12.353	12.353	0.000	95	1951600	25.0	25.0	a
129 tert-Butylbenzene	134	12.566	12.566	0.000	92	1627291	25.0	25.4	
130 Pentachloroethane	167	12.597	12.597	0.000	91	1326828	25.0	26.8	
131 1,2,4-Trimethylbenzene	105	12.609	12.609	0.000	97	6868217	25.0	25.1	
132 sec-Butylbenzene	105	12.731	12.731	0.000	94	8486591	25.0	25.1	
133 1,3-Dichlorobenzene	146	12.829	12.829	0.000	99	3937722	25.0	25.5	
134 4-Isopropyltoluene	119	12.841	12.841	0.000	96	7679357	25.0	25.4	
* 135 1,4-Dichlorobenzene-d4	152	12.883	12.884	-0.001	92	917393	10.0	10.0	
136 1,4-Dichlorobenzene	146	12.902	12.902	0.000	95	3772911	25.0	24.8	
137 1,2,3-Trimethylbenzene	120	12.914	12.914	0.000	98	3097874	25.0	25.1	
138 Benzyl chloride	126	12.981	12.981	0.000	98	627829	25.0	26.8	
139 n-Butylbenzene	92	13.133	13.133	0.000	97	3646359	25.0	27.0	
140 1,2-Dichlorobenzene	146	13.158	13.158	0.000	99	3615183	25.0	25.0	
142 1,2-Dibromo-3-Chloropropane	155	13.700	13.700	0.000	92	237783	25.0	26.6	
143 1,3,5-Trichlorobenzene	180	13.828	13.828	0.000	98	3136365	25.0	27.1	
144 1,2,4-Trichlorobenzene	180	14.249	14.249	0.000	94	2595192	25.0	27.9	
145 Hexachlorobutadiene	225	14.334	14.334	0.000	95	1241765	25.0	27.4	
146 Naphthalene	128	14.426	14.426	0.000	97	4430802	25.0	26.2	
147 1,2,3-Trichlorobenzene	180	14.572	14.572	0.000	96	2127625	25.0	27.3	
155 2-Methylnaphthalene	142		0.000				ND	ND	
156 p-Diethylbenzene	1		0.000				ND	ND	
161 Pentane	43		0.000				ND	ND	
150 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
165 Isopropyl alcohol	45		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_LL_#1_826_00081	Amount Added: 25.00	Units: uL	
MSV_LL_#2_826_00093	Amount Added: 25.00	Units: uL	
MSV_LL_GAS826_00156	Amount Added: 25.00	Units: uL	
MSV_LLcentISS_00007	Amount Added: 5.00	Units: uL	Run Reagent

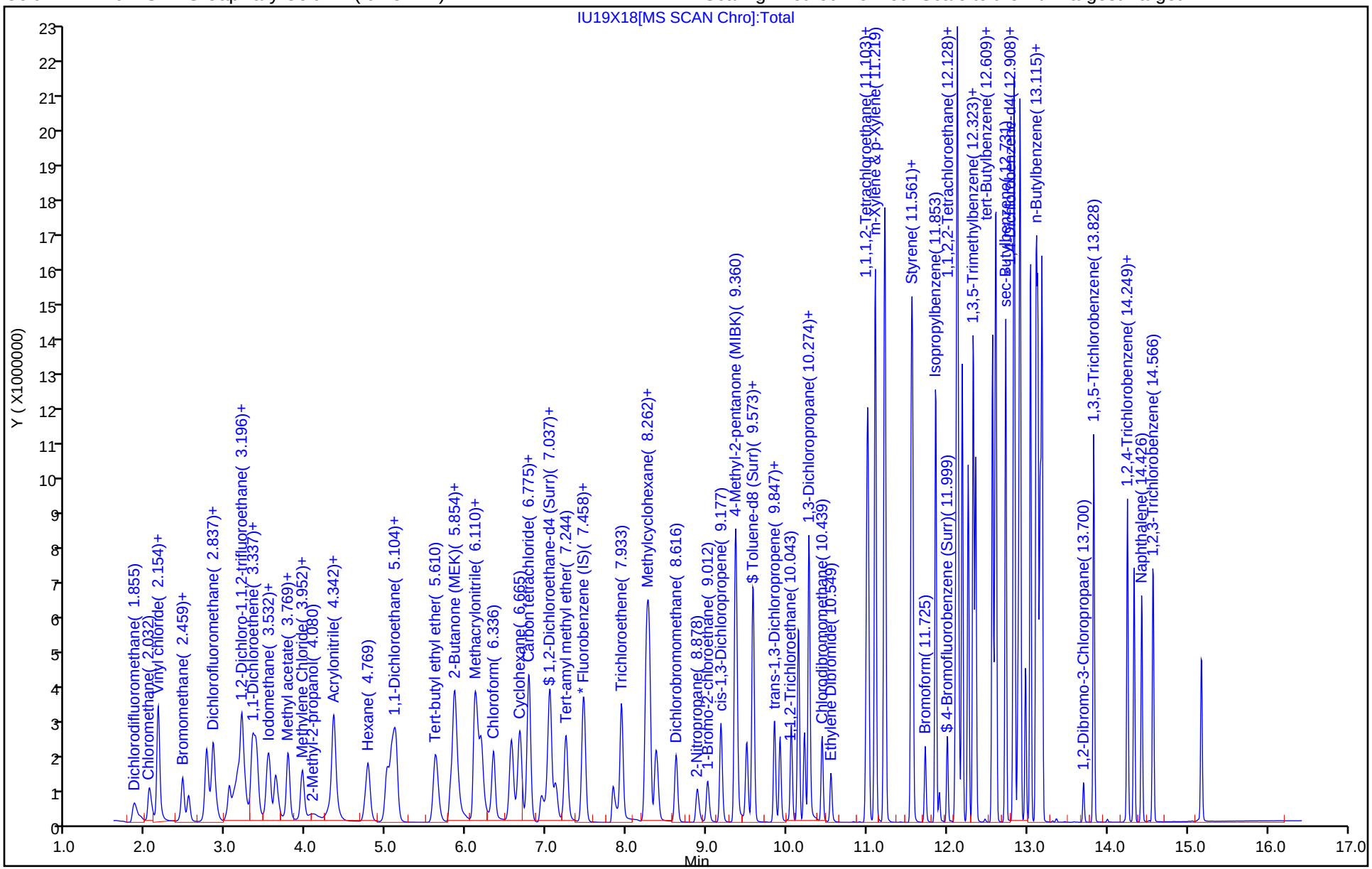
Report Date: 27-Jun-2023 12:30:47 Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Injection Date:	19-Jun-2023 20:25:30	Instrument ID:	19930	Operator ID:	KNK41612
Lims ID:	IC std7			Worklist Smp#:	19
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

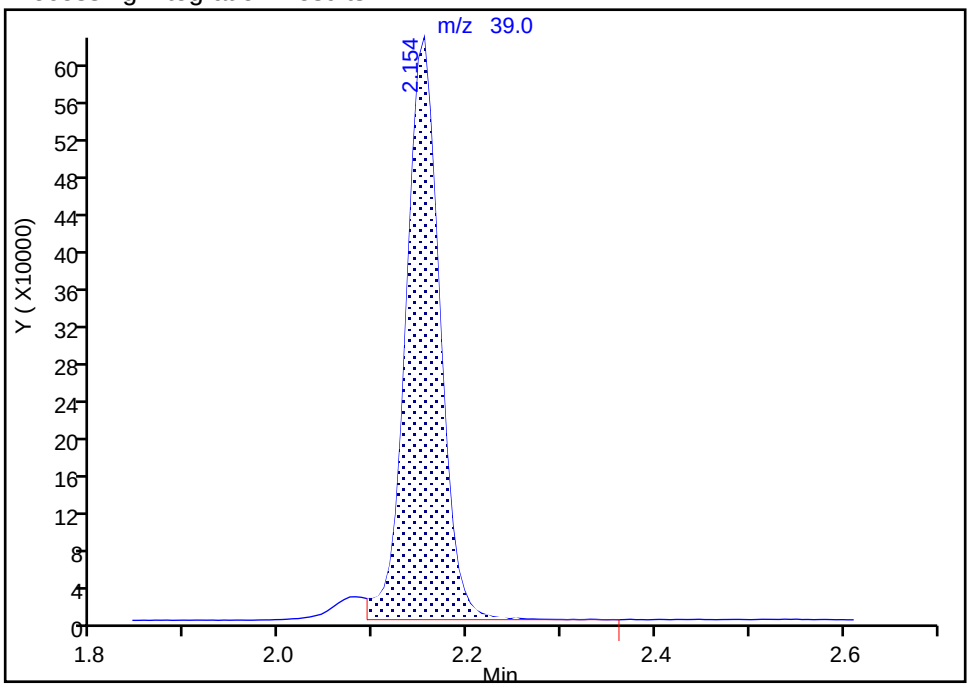
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D
Injection Date: 19-Jun-2023 20:25:30 Instrument ID: 19930
Lims ID: IC std7
Client ID:
Operator ID: KNK41612 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

6 Butadiene, CAS: 106-99-0

Signal: 1

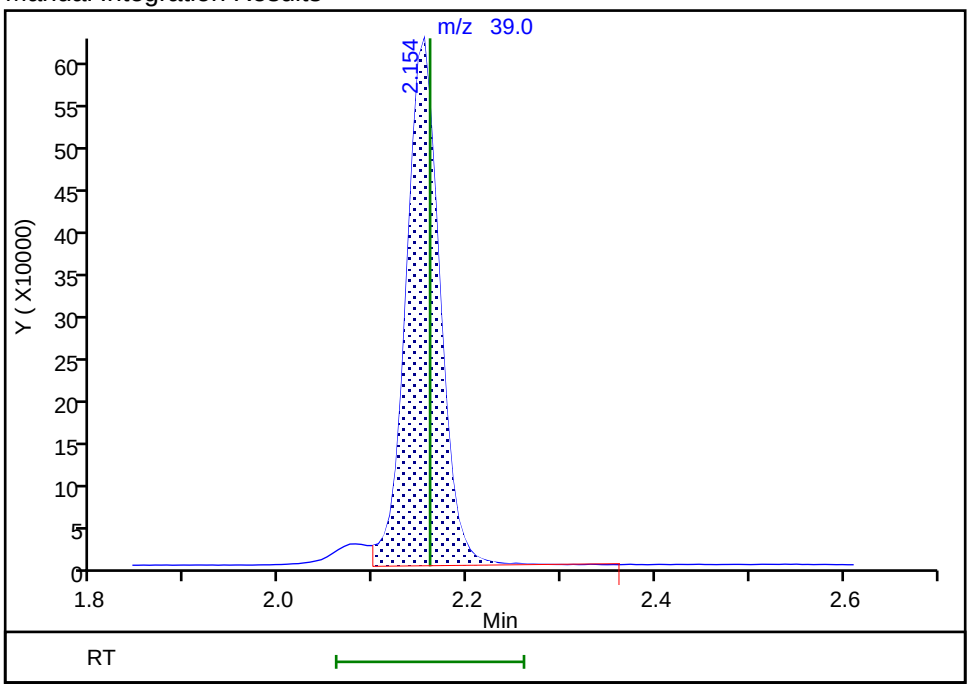
Processing Integration Results

RT: 2.15
Area: 1565423
Amount: 20.311812
Amount Units: ug/l



Manual Integration Results

RT: 2.15
Area: 1556945
Amount: 20.214514
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:08:46 -04:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

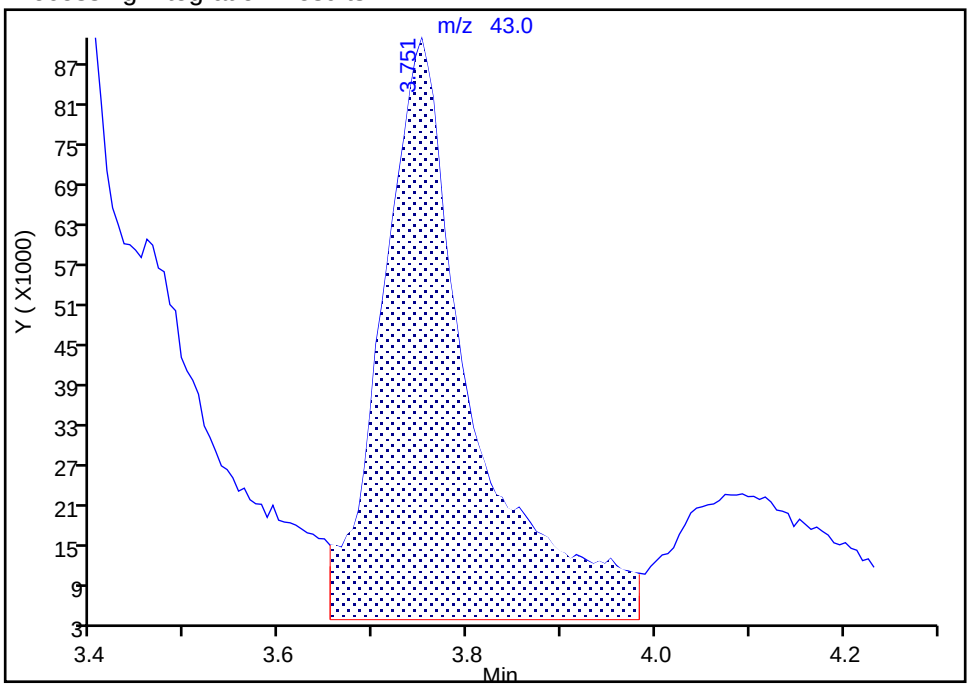
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D
Injection Date: 19-Jun-2023 20:25:30 Instrument ID: 19930
Lims ID: IC std7
Client ID:
Operator ID: KNK41612 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

23 Methyl acetate, CAS: 79-20-9

Signal: 1

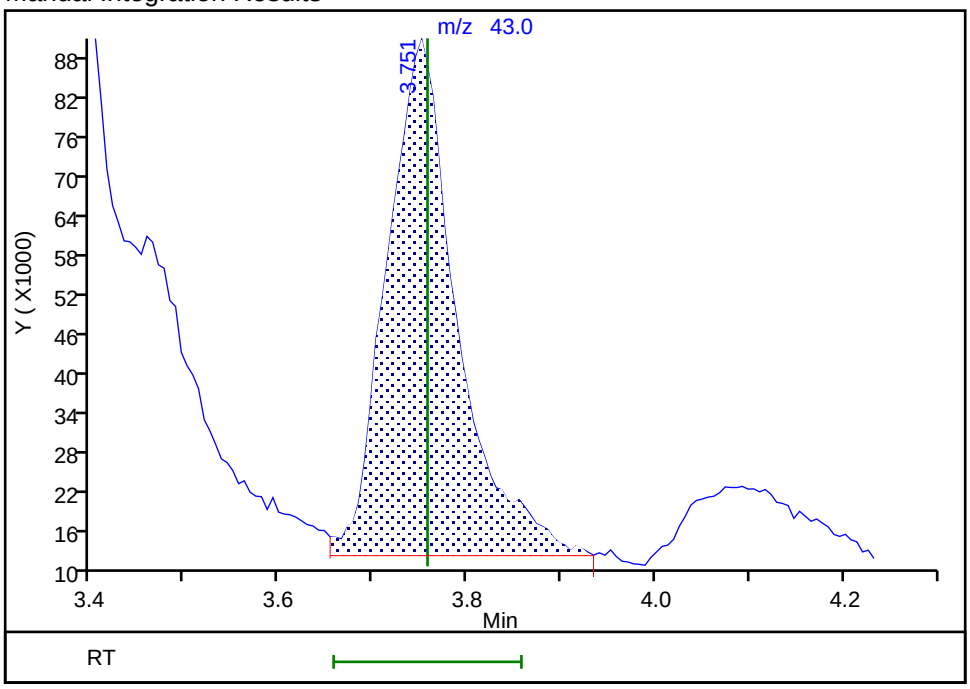
Processing Integration Results

RT: 3.75
Area: 572097
Amount: 37.539030
Amount Units: ug/l



Manual Integration Results

RT: 3.75
Area: 407475
Amount: 25.592656
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:09:07 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

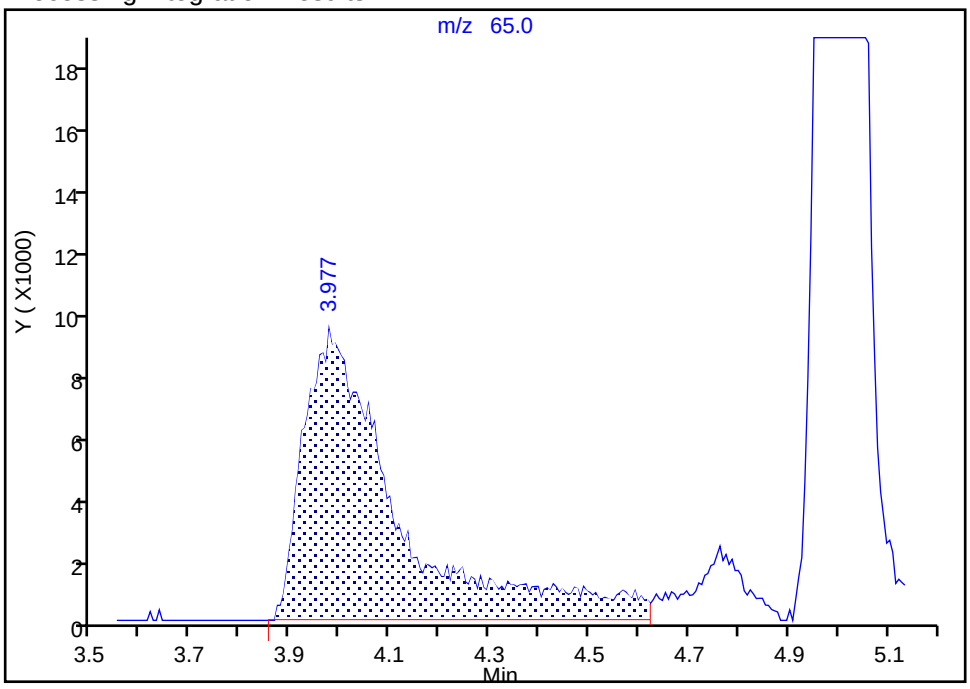
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D
Injection Date: 19-Jun-2023 20:25:30 Instrument ID: 19930
Lims ID: IC std7
Client ID:
Operator ID: KNK41612 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 26 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

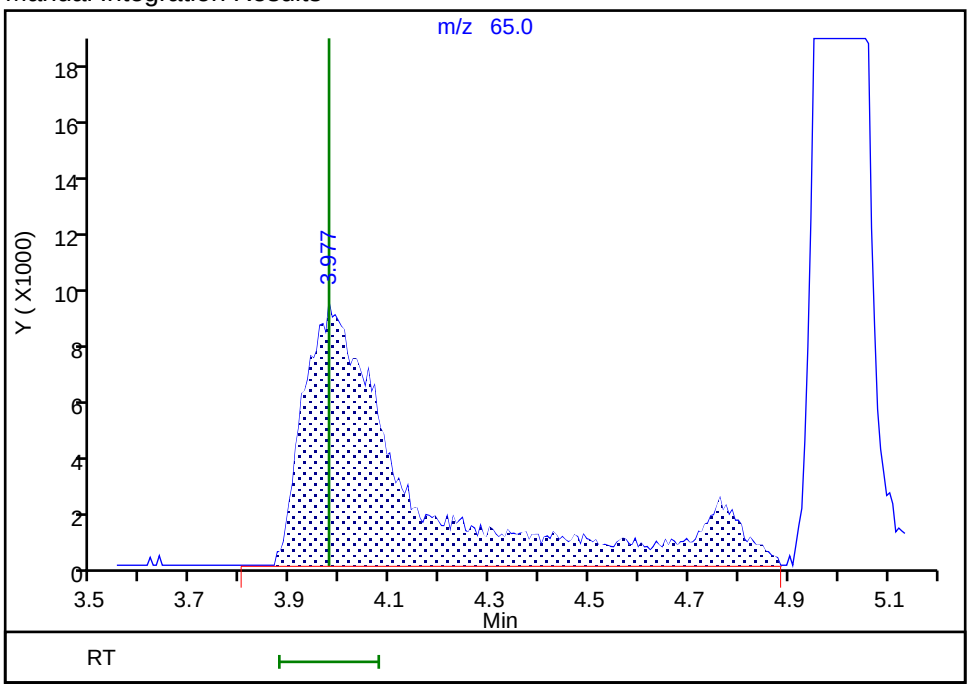
Processing Integration Results

RT: 3.98
Area: 118787
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 3.98
Area: 134884
Amount: 50.000000
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:09:14 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

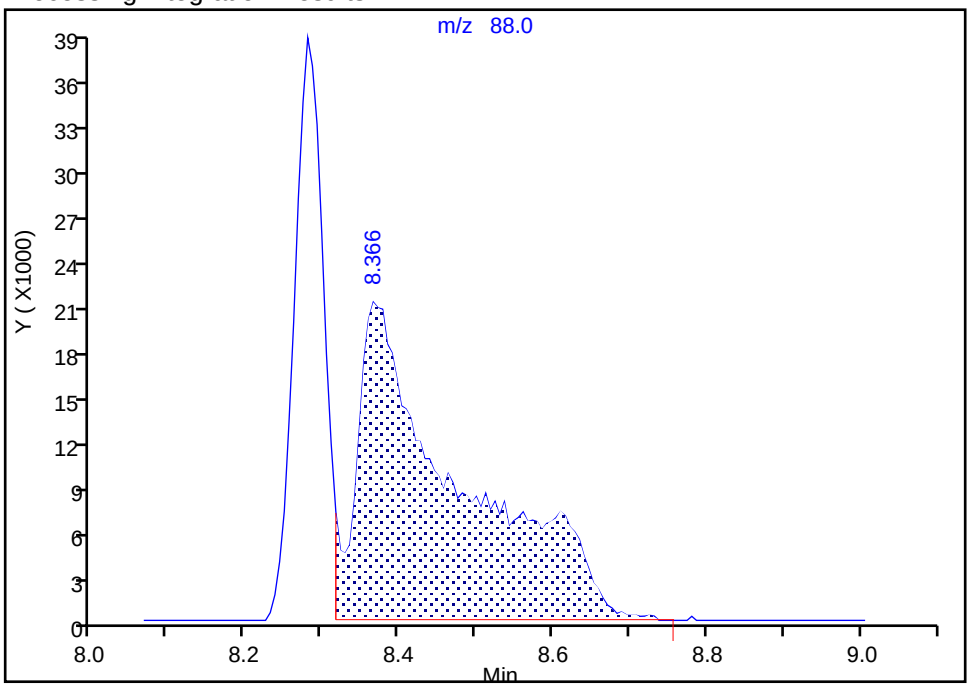
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D
Injection Date: 19-Jun-2023 20:25:30 Instrument ID: 19930
Lims ID: IC std7
Client ID:
Operator ID: KNK41612 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

68 1,4-Dioxane, CAS: 123-91-1

Signal: 1

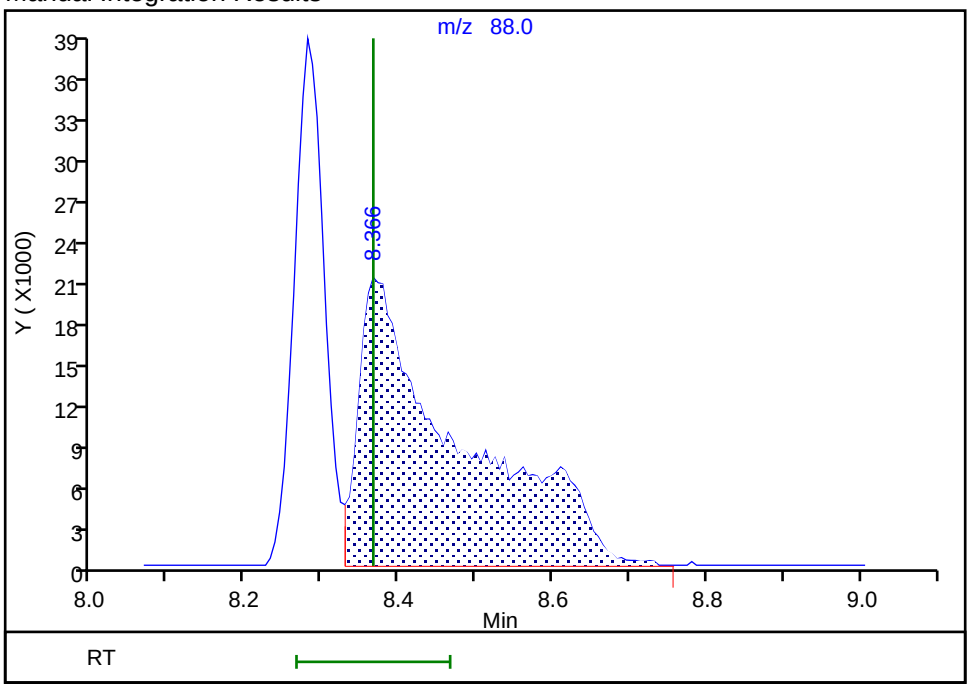
Processing Integration Results

RT: 8.37
Area: 196286
Amount: 1239.8637
Amount Units: ug/l



Manual Integration Results

RT: 8.37
Area: 191965
Amount: 1290.6594
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:09:34 -04:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

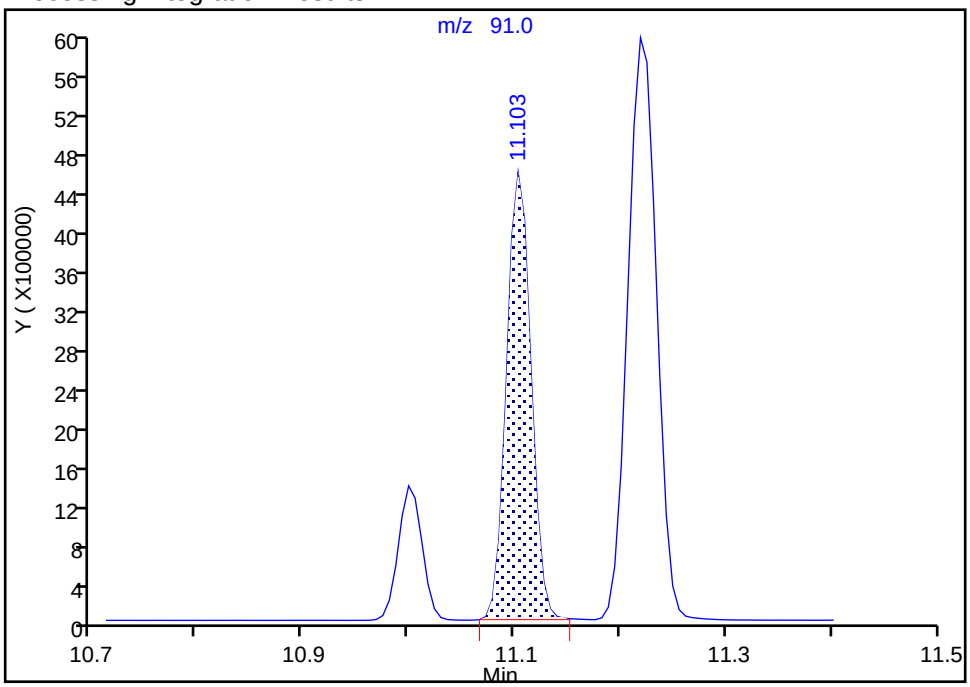
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D
Injection Date: 19-Jun-2023 20:25:30 Instrument ID: 19930
Lims ID: IC std7
Client ID:
Operator ID: KNK41612 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

108 1-Chlorohexane, CAS: 544-10-5

Signal: 1

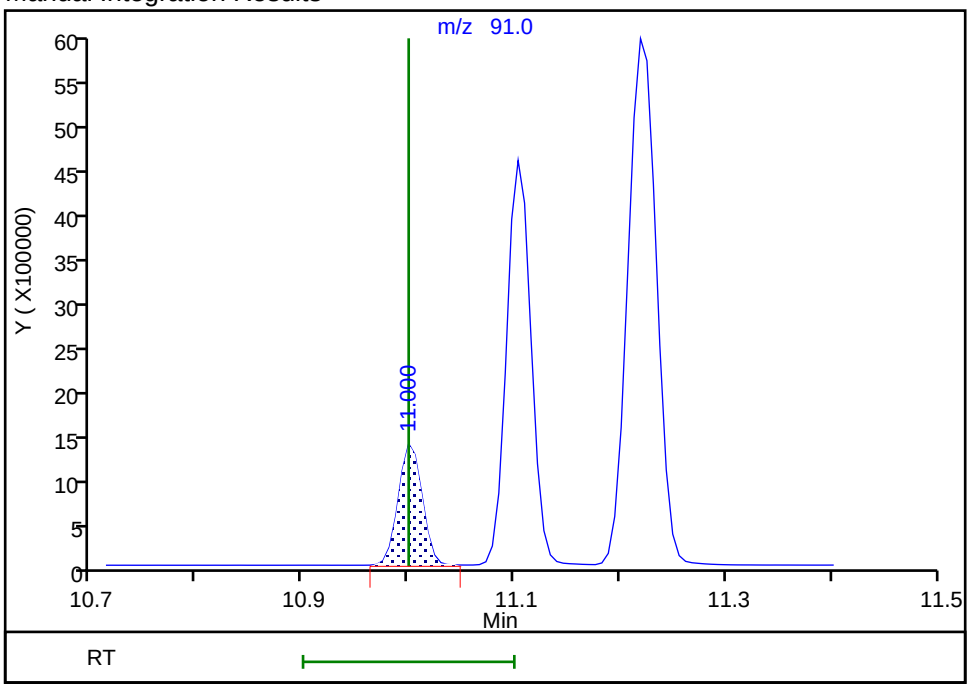
Processing Integration Results

RT: 11.10
Area: 7391753
Amount: 62.122953
Amount Units: ug/l



Manual Integration Results

RT: 11.00
Area: 2153392
Amount: 24.181187
Amount Units: ug/l



Reviewer: DVW2, 22-Jun-2023 07:48:40 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

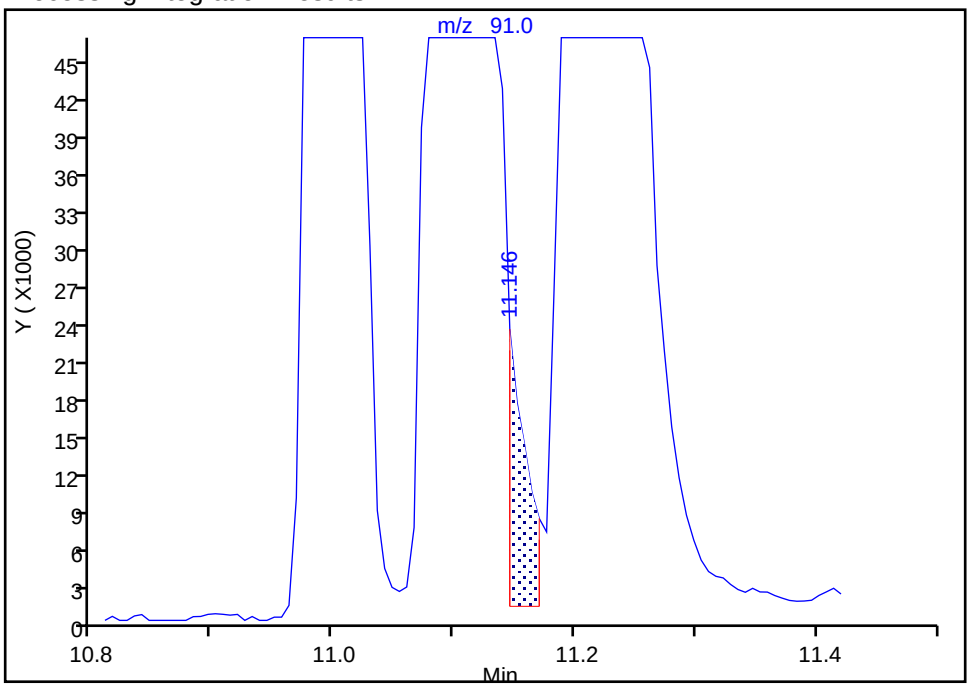
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D
Injection Date: 19-Jun-2023 20:25:30 Instrument ID: 19930
Lims ID: IC std7
Client ID:
Operator ID: KNK41612 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

112 Ethylbenzene, CAS: 100-41-4

Signal: 1

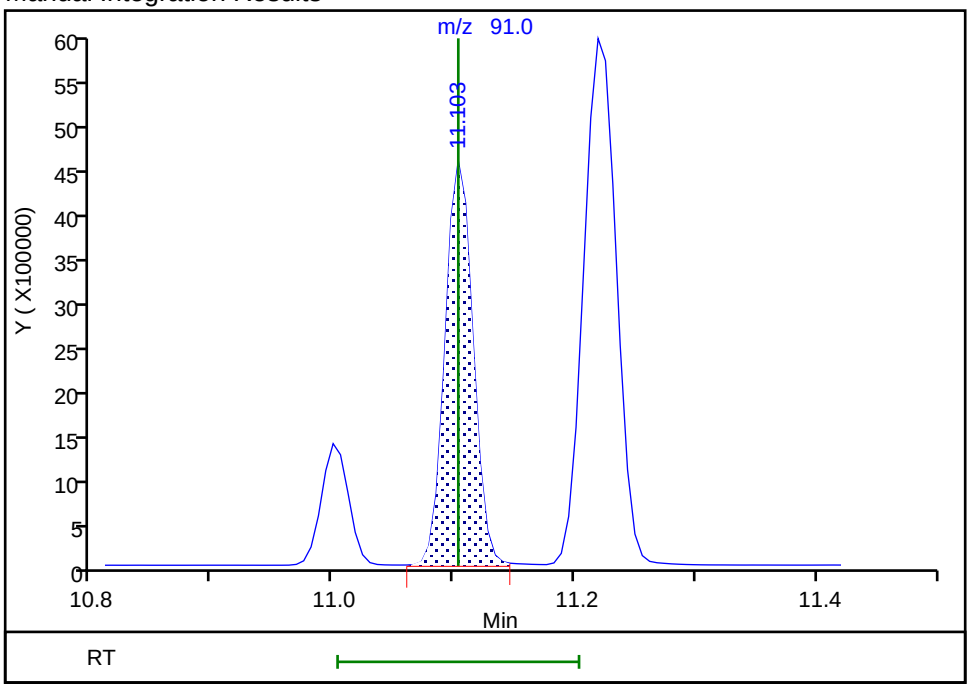
Processing Integration Results

RT: 11.15
Area: 24916
Amount: 0.062513
Amount Units: ug/l



Manual Integration Results

RT: 11.10
Area: 7384442
Amount: 24.762603
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 15:39:35 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

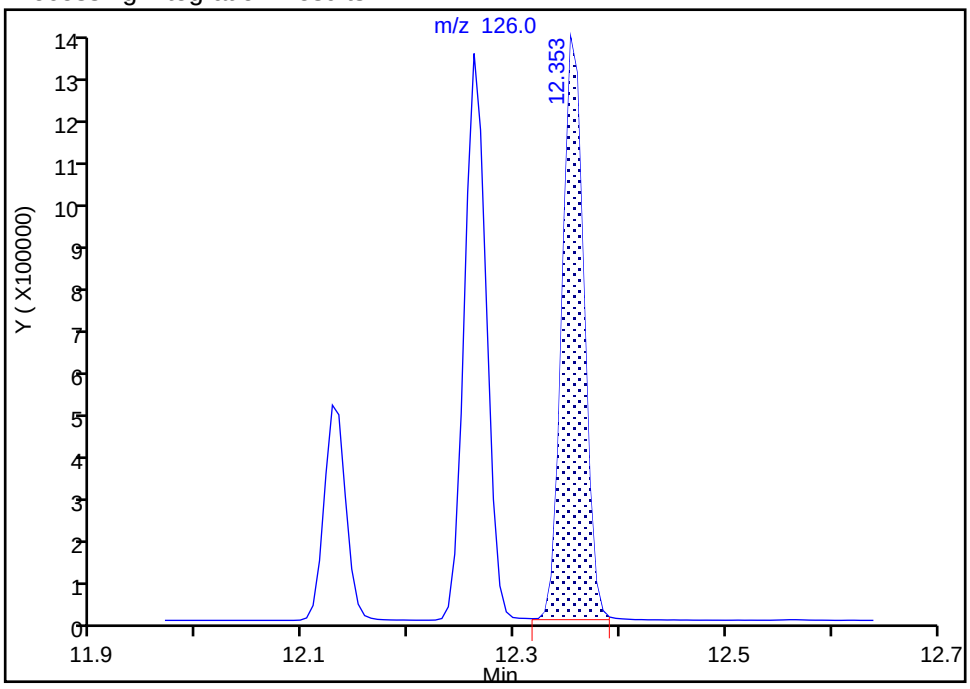
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D
Injection Date: 19-Jun-2023 20:25:30 Instrument ID: 19930
Lims ID: IC std7
Client ID:
Operator ID: KNK41612 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

126 2-Chlorotoluene, CAS: 95-49-8

Signal: 1

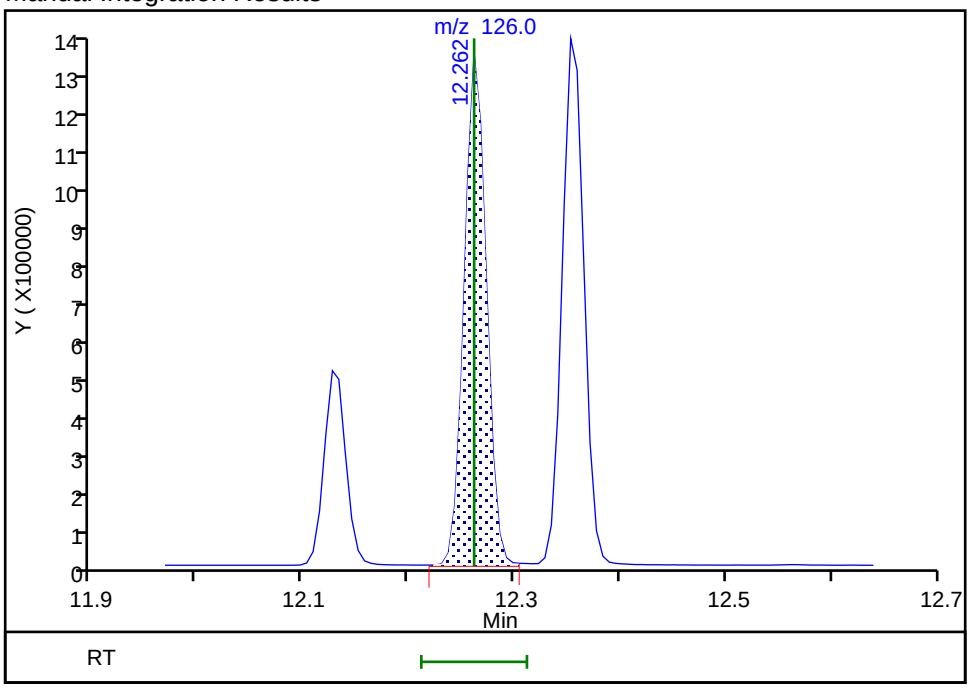
Processing Integration Results

RT: 12.35
Area: 1951600
Amount: 25.516478
Amount Units: ug/l



Manual Integration Results

RT: 12.26
Area: 1917179
Amount: 25.131064
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 15:39:42 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

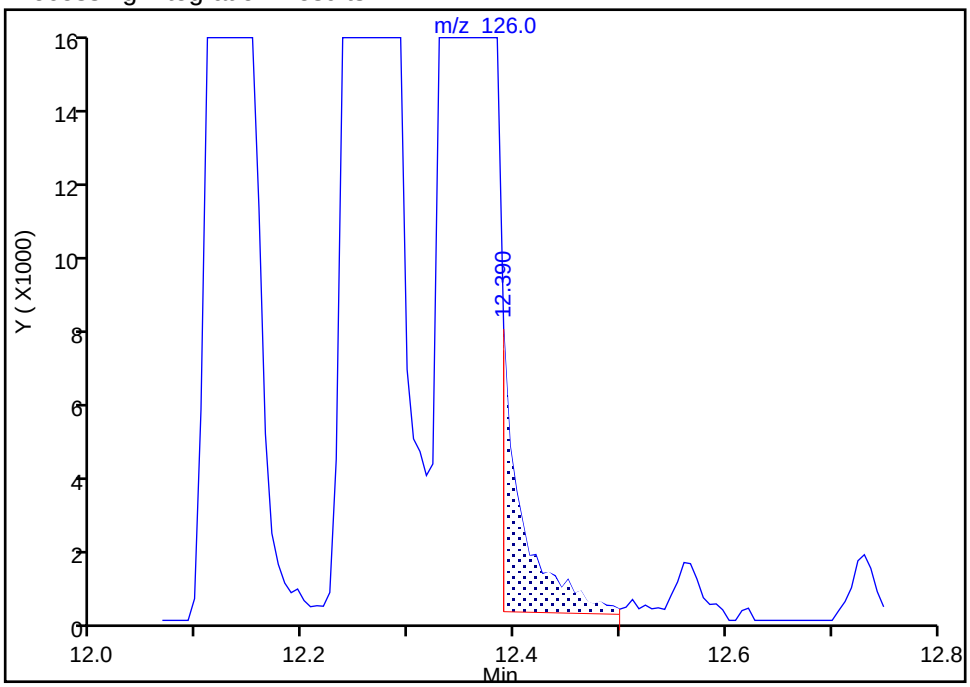
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D
Injection Date: 19-Jun-2023 20:25:30 Instrument ID: 19930
Lims ID: IC std7
Client ID:
Operator ID: KNK41612 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

128 4-Chlorotoluene, CAS: 106-43-4

Signal: 1

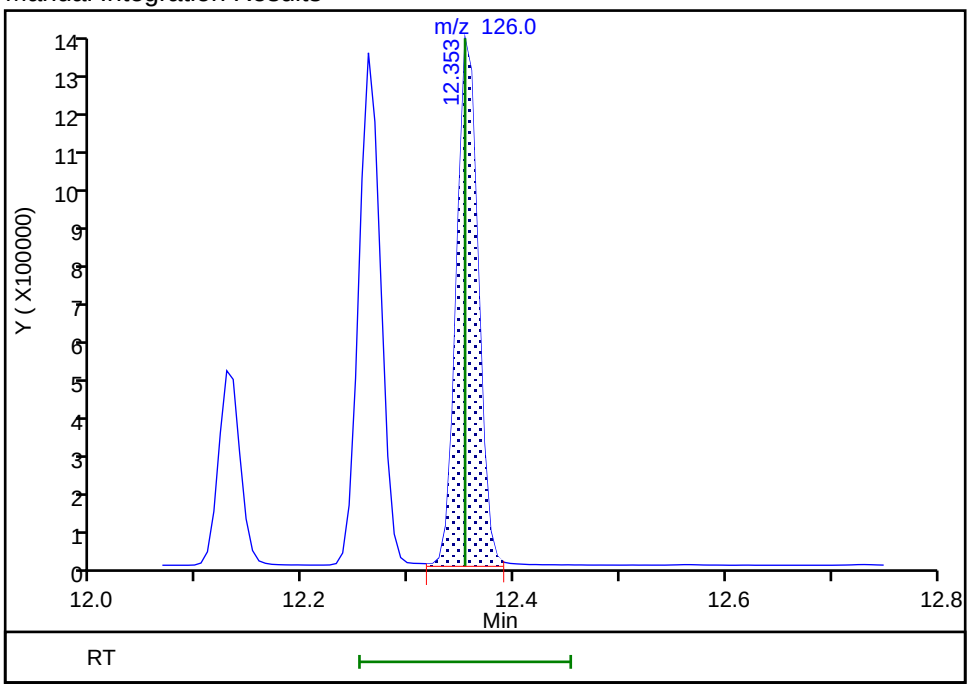
Processing Integration Results

RT: 12.39
Area: 10355
Amount: 0.154390
Amount Units: ug/l



Manual Integration Results

RT: 12.35
Area: 1951600
Amount: 24.968247
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:09:57 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Calibration / Dichlorodifluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

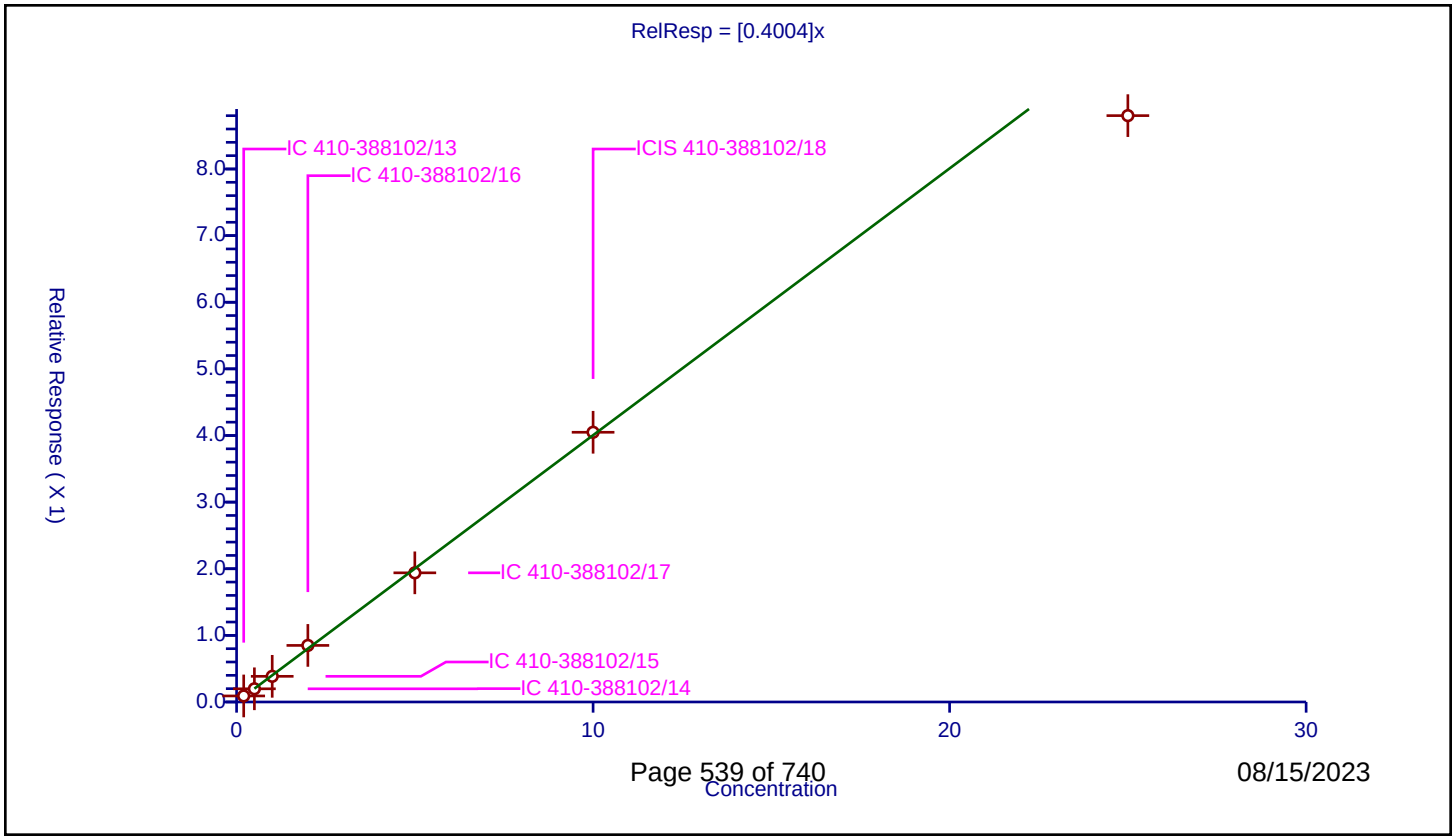
Curve Coefficients

Intercept:	0
Slope:	0.4004

Error Coefficients

Standard Error:	760000
Relative Standard Error:	7.9
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.090503	10.0	1795291.0	0.452517	Y
2	IC 410-388102/14	0.5	0.19797	10.0	1753956.0	0.395939	Y
3	IC 410-388102/15	1.0	0.385136	10.0	1790586.0	0.385136	Y
4	IC 410-388102/16	2.0	0.8493	10.0	1802566.0	0.42465	Y
5	IC 410-388102/17	5.0	1.938742	10.0	1860774.0	0.387748	Y
6	ICIS 410-388102/18	10.0	4.048248	10.0	1807671.0	0.404825	Y
7	IC 410-388102/19	25.0	8.800834	10.0	1891215.0	0.352033	Y



Calibration / Chloromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

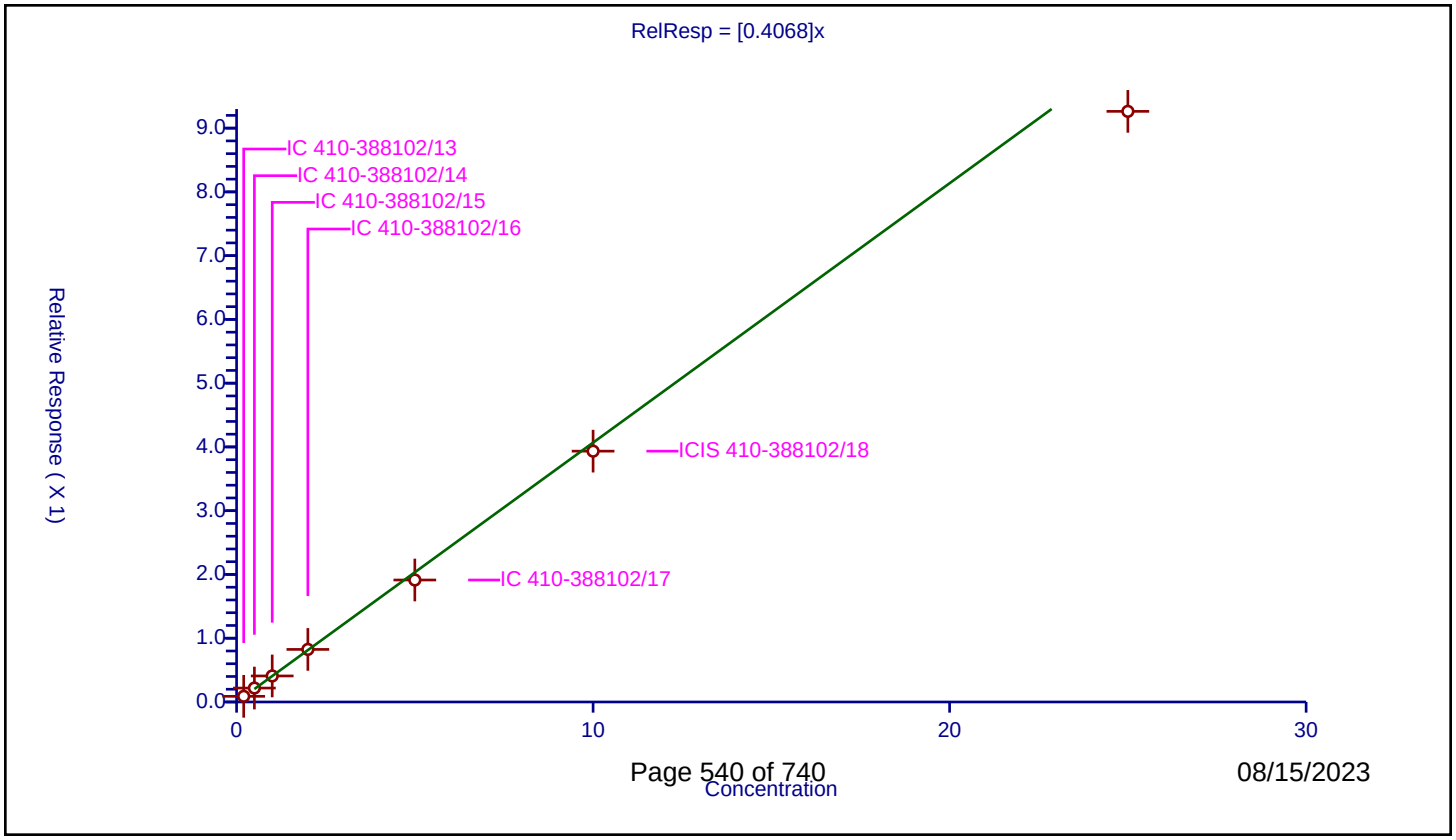
Curve Coefficients

Intercept:	0
Slope:	0.4068

Error Coefficients

Standard Error:	789000
Relative Standard Error:	6.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.088665	10.0	1795291.0	0.443326	Y
2	IC 410-388102/14	0.5	0.218415	10.0	1753956.0	0.43683	Y
3	IC 410-388102/15	1.0	0.408492	10.0	1790586.0	0.408492	Y
4	IC 410-388102/16	2.0	0.82453	10.0	1802566.0	0.412265	Y
5	IC 410-388102/17	5.0	1.913027	10.0	1860774.0	0.382605	Y
6	ICIS 410-388102/18	10.0	3.934062	10.0	1807671.0	0.393406	Y
7	IC 410-388102/19	25.0	9.263262	10.0	1891215.0	0.37053	Y



Calibration / Butadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

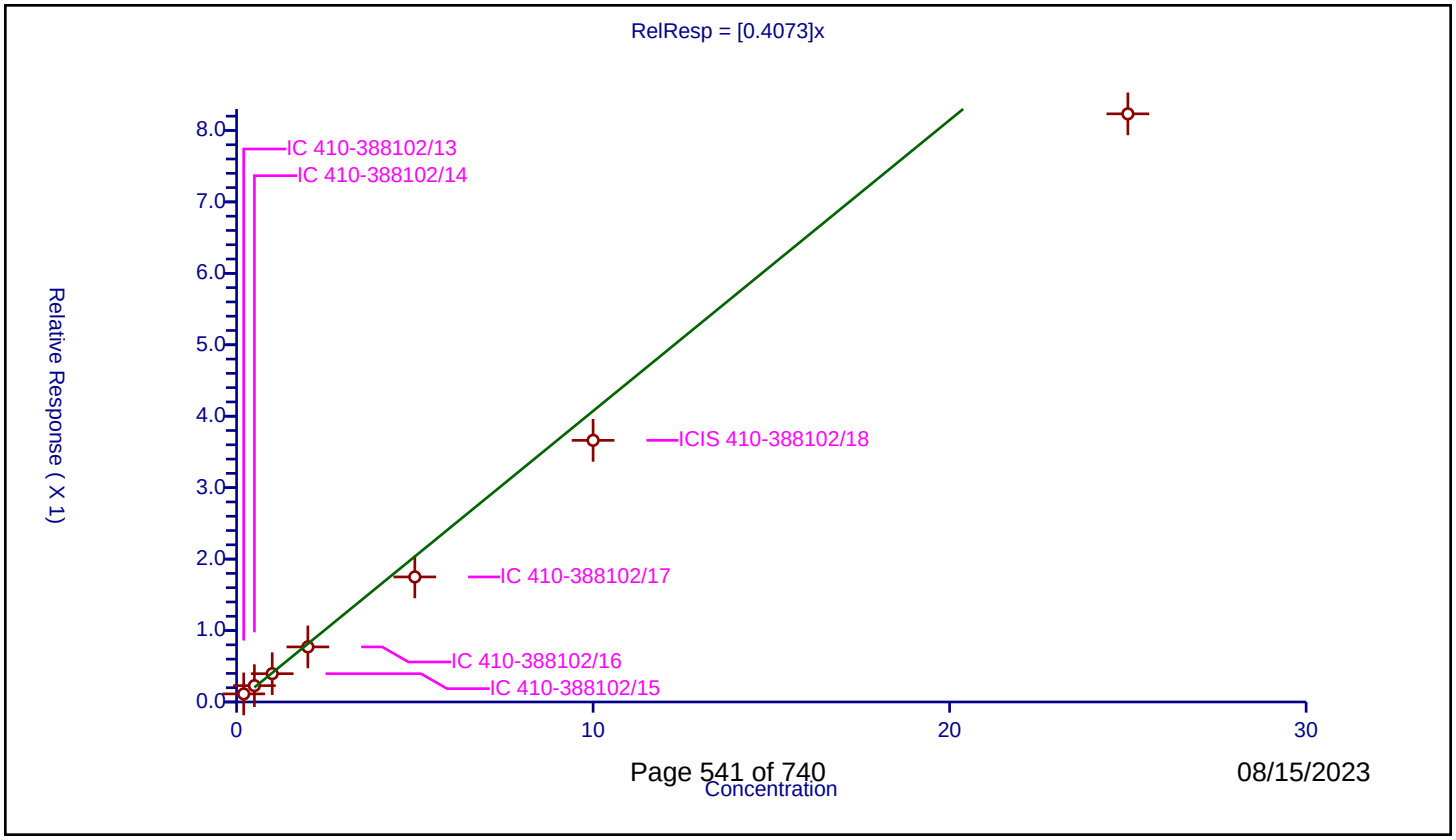
Curve Coefficients

Intercept:	0
Slope:	0.4073

Error Coefficients

Standard Error:	706000
Relative Standard Error:	19.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.928

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.11328	10.0	1795291.0	0.566398	Y
2	IC 410-388102/14	0.5	0.228518	10.0	1753956.0	0.457035	Y
3	IC 410-388102/15	1.0	0.396367	10.0	1790586.0	0.396367	Y
4	IC 410-388102/16	2.0	0.77089	10.0	1802566.0	0.385445	Y
5	IC 410-388102/17	5.0	1.750245	10.0	1860774.0	0.350049	Y
6	ICIS 410-388102/18	10.0	3.662066	10.0	1807671.0	0.366207	Y
7	IC 410-388102/19	25.0	8.232512	10.0	1891215.0	0.3293	Y



Calibration / Vinyl chloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

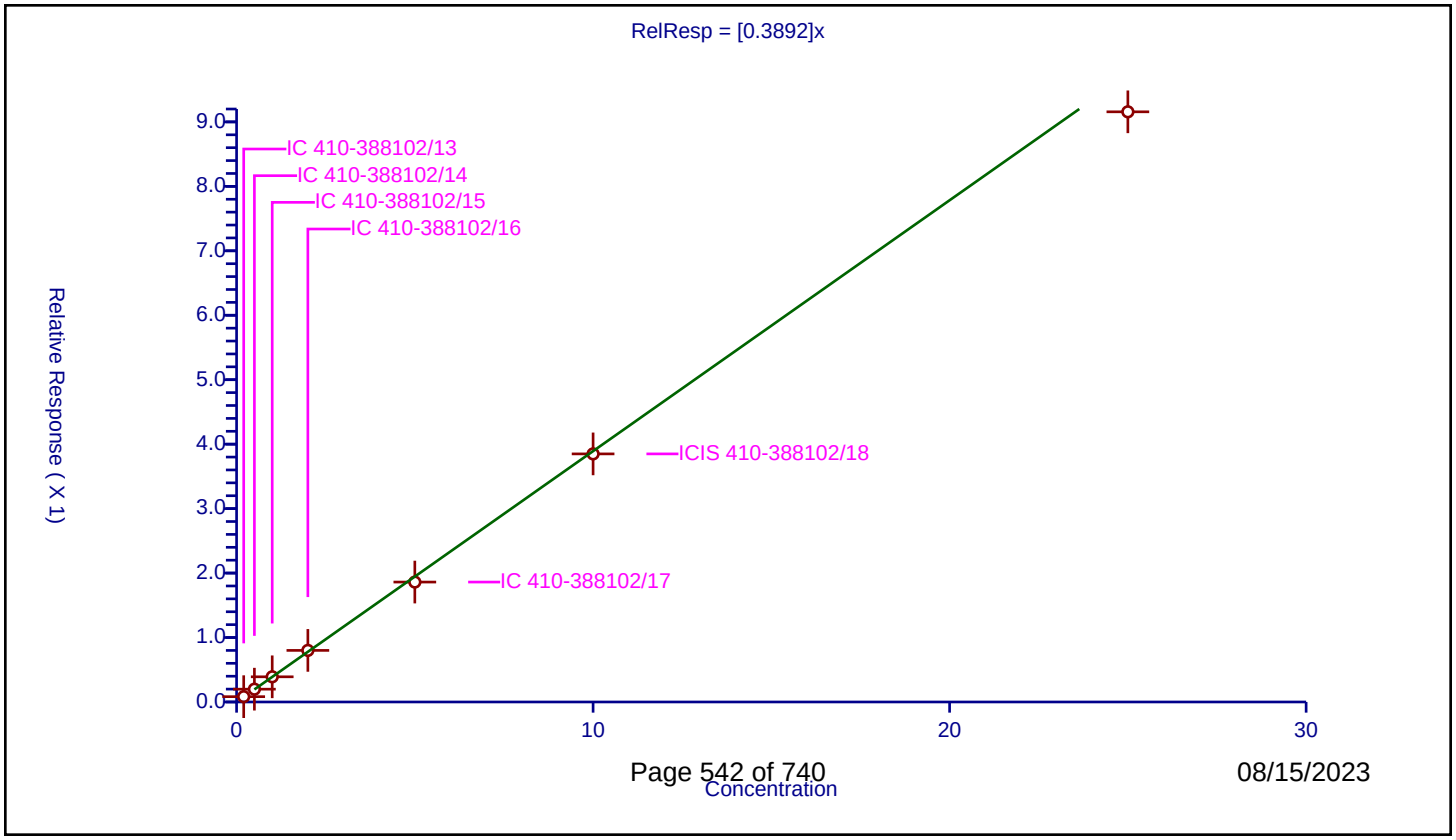
Curve Coefficients

Intercept:	0
Slope:	0.3892

Error Coefficients

Standard Error:	778000
Relative Standard Error:	4.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.08256	10.0	1795291.0	0.412802	Y
2	IC 410-388102/14	0.5	0.198597	10.0	1753956.0	0.397194	Y
3	IC 410-388102/15	1.0	0.390889	10.0	1790586.0	0.390889	Y
4	IC 410-388102/16	2.0	0.800437	10.0	1802566.0	0.400218	Y
5	IC 410-388102/17	5.0	1.860699	10.0	1860774.0	0.37214	Y
6	ICIS 410-388102/18	10.0	3.849207	10.0	1807671.0	0.384921	Y
7	IC 410-388102/19	25.0	9.156637	10.0	1891215.0	0.366265	Y



Calibration / Bromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

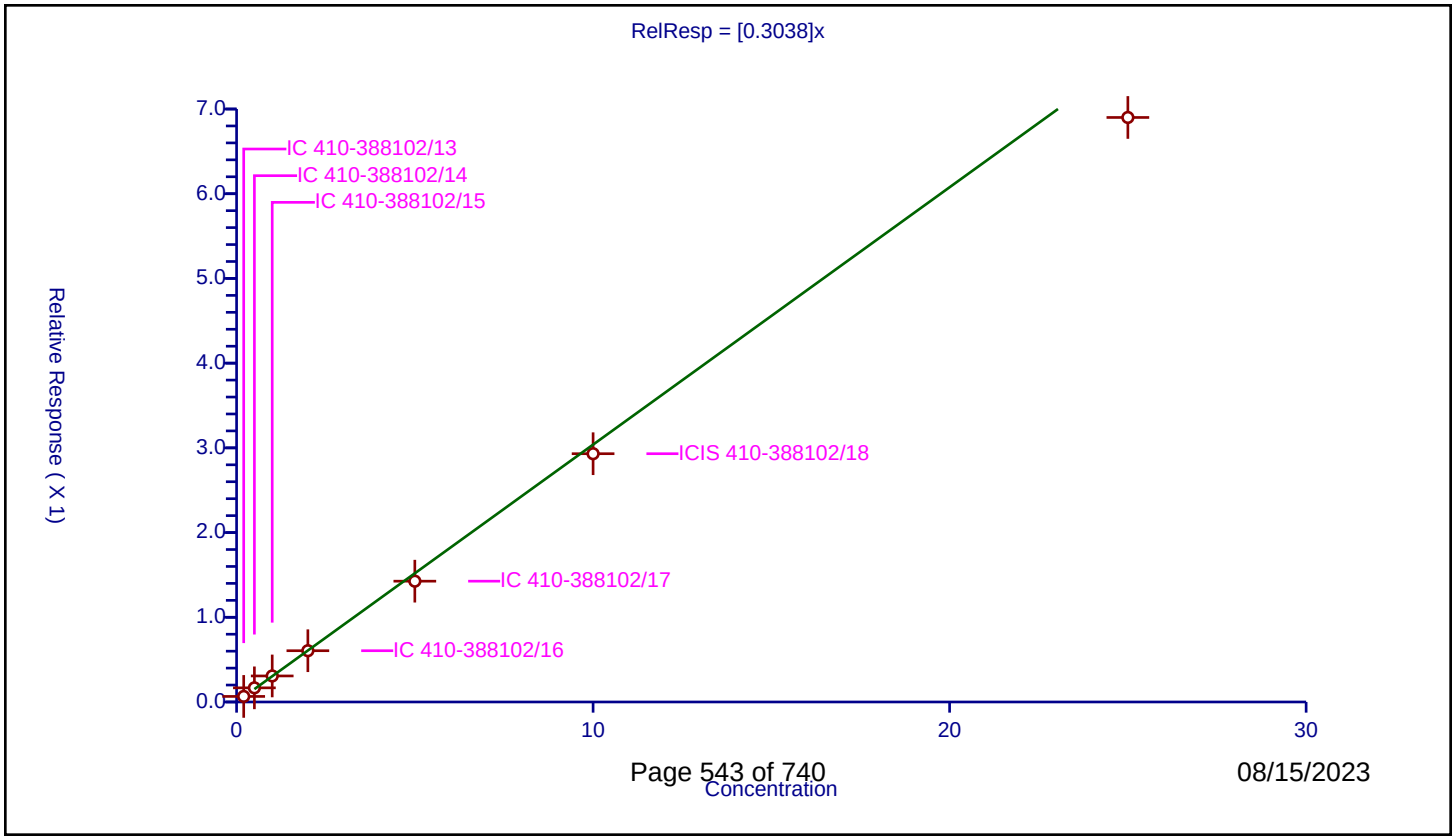
Curve Coefficients

Intercept:	0
Slope:	0.3038

Error Coefficients

Standard Error:	587000
Relative Standard Error:	7.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.065716	10.0	1795291.0	0.328582	Y
2	IC 410-388102/14	0.5	0.16692	10.0	1753956.0	0.33384	Y
3	IC 410-388102/15	1.0	0.307307	10.0	1790586.0	0.307307	Y
4	IC 410-388102/16	2.0	0.60532	10.0	1802566.0	0.30266	Y
5	IC 410-388102/17	5.0	1.426218	10.0	1860774.0	0.285244	Y
6	ICIS 410-388102/18	10.0	2.931003	10.0	1807671.0	0.2931	Y
7	IC 410-388102/19	25.0	6.900167	10.0	1891215.0	0.276007	Y



Calibration / Chloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

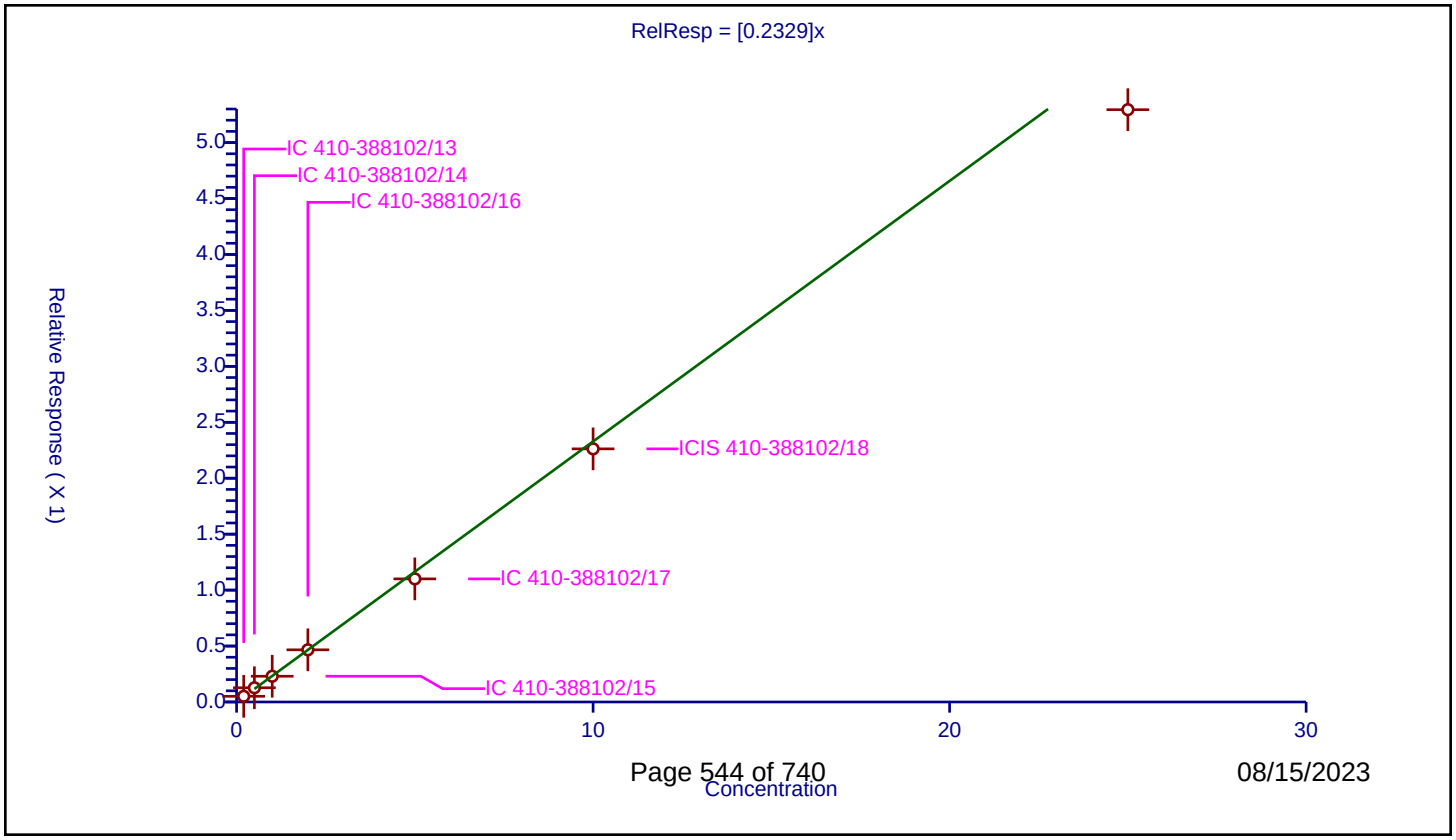
Curve Coefficients

Intercept:	0
Slope:	0.2329

Error Coefficients

Standard Error:	451000
Relative Standard Error:	7.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.050878	10.0	1795291.0	0.254388	Y
2	IC 410-388102/14	0.5	0.127078	10.0	1753956.0	0.254157	Y
3	IC 410-388102/15	1.0	0.23017	10.0	1790586.0	0.23017	Y
4	IC 410-388102/16	2.0	0.466352	10.0	1802566.0	0.233176	Y
5	IC 410-388102/17	5.0	1.100381	10.0	1860774.0	0.220076	Y
6	ICIS 410-388102/18	10.0	2.262403	10.0	1807671.0	0.22624	Y
7	IC 410-388102/19	25.0	5.294105	10.0	1891215.0	0.211764	Y



Calibration / Dichlorofluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

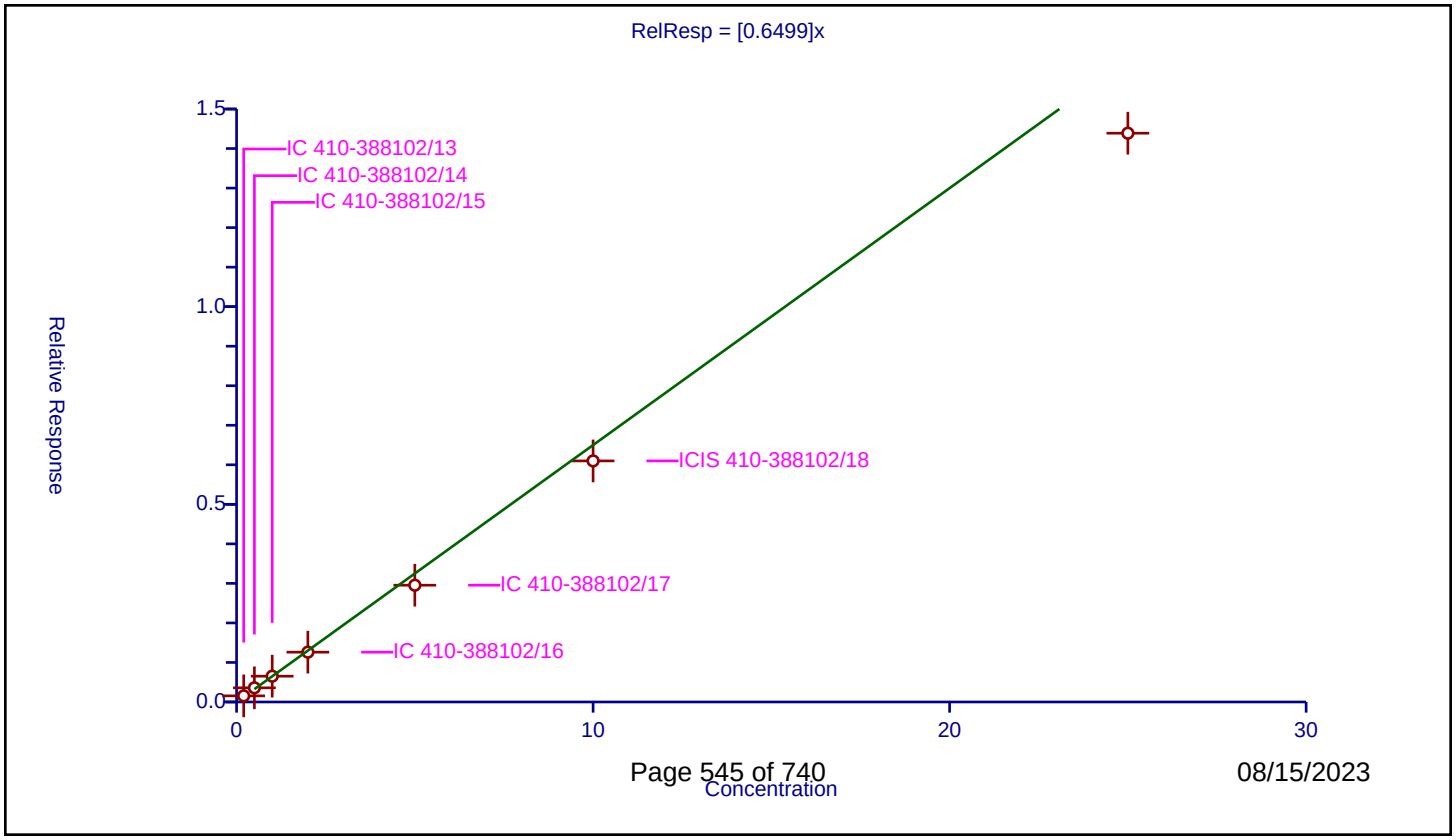
Curve Coefficients

Intercept:	0
Slope:	0.6499

Error Coefficients

Standard Error:	1220000
Relative Standard Error:	11.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.981

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.154565	10.0	1795291.0	0.772827	Y
2	IC 410-388102/14	0.5	0.358675	10.0	1753956.0	0.71735	Y
3	IC 410-388102/15	1.0	0.652943	10.0	1790586.0	0.652943	Y
4	IC 410-388102/16	2.0	1.260431	10.0	1802566.0	0.630215	Y
5	IC 410-388102/17	5.0	2.954093	10.0	1860774.0	0.590819	Y
6	ICIS 410-388102/18	10.0	6.098593	10.0	1807671.0	0.609859	Y
7	IC 410-388102/19	25.0	14.388073	10.0	1891215.0	0.575523	Y



Calibration / Trichlorofluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

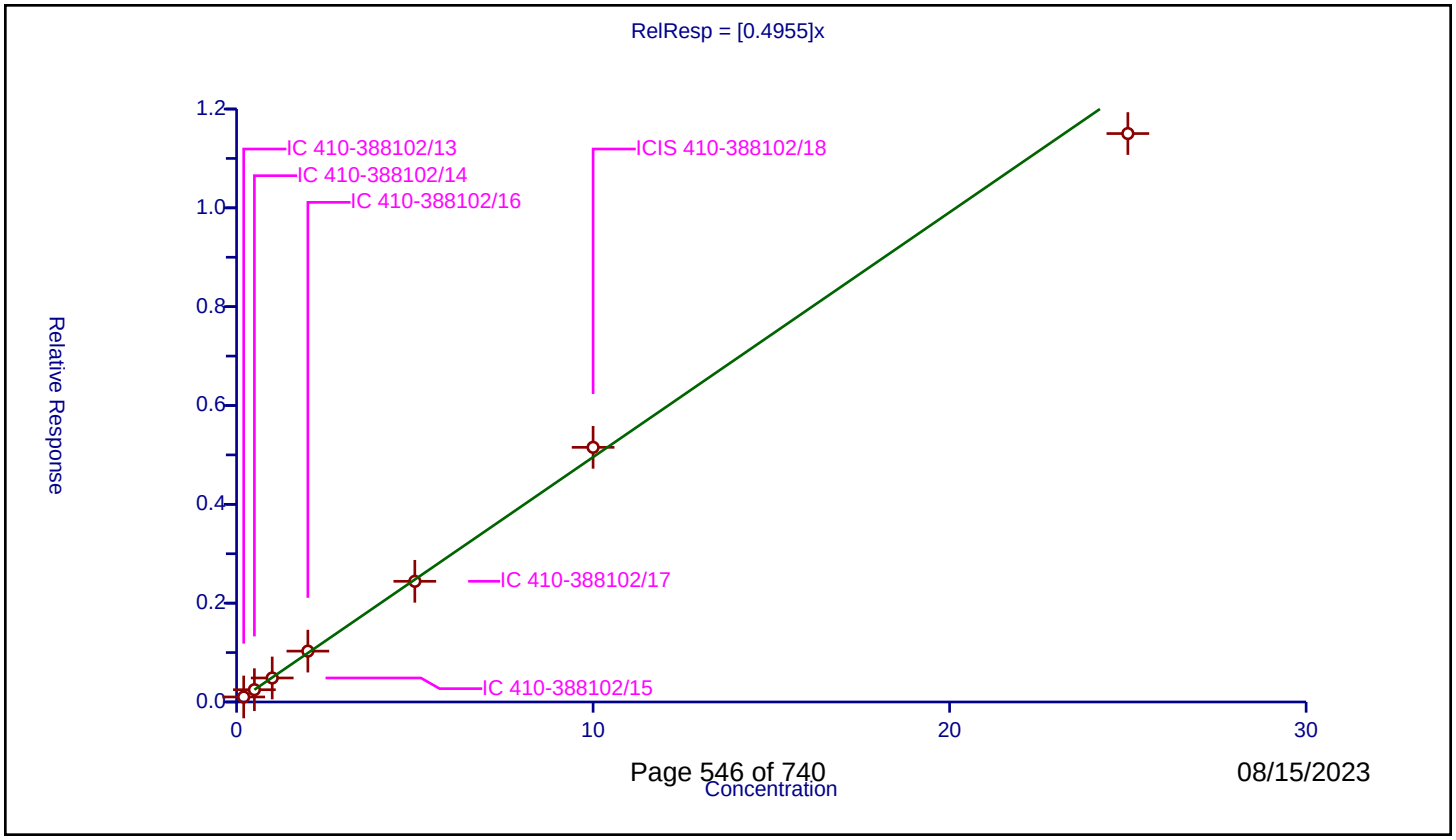
Curve Coefficients

Intercept:	0
Slope:	0.4955

Error Coefficients

Standard Error:	988000
Relative Standard Error:	3.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.101465	10.0	1795291.0	0.507327	Y
2	IC 410-388102/14	0.5	0.248313	10.0	1753956.0	0.496626	Y
3	IC 410-388102/15	1.0	0.486092	10.0	1790586.0	0.486092	Y
4	IC 410-388102/16	2.0	1.029582	10.0	1802566.0	0.514791	Y
5	IC 410-388102/17	5.0	2.441935	10.0	1860774.0	0.488387	Y
6	ICIS 410-388102/18	10.0	5.153333	10.0	1807671.0	0.515333	Y
7	IC 410-388102/19	25.0	11.503436	10.0	1891215.0	0.460137	Y



Calibration / Ethyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

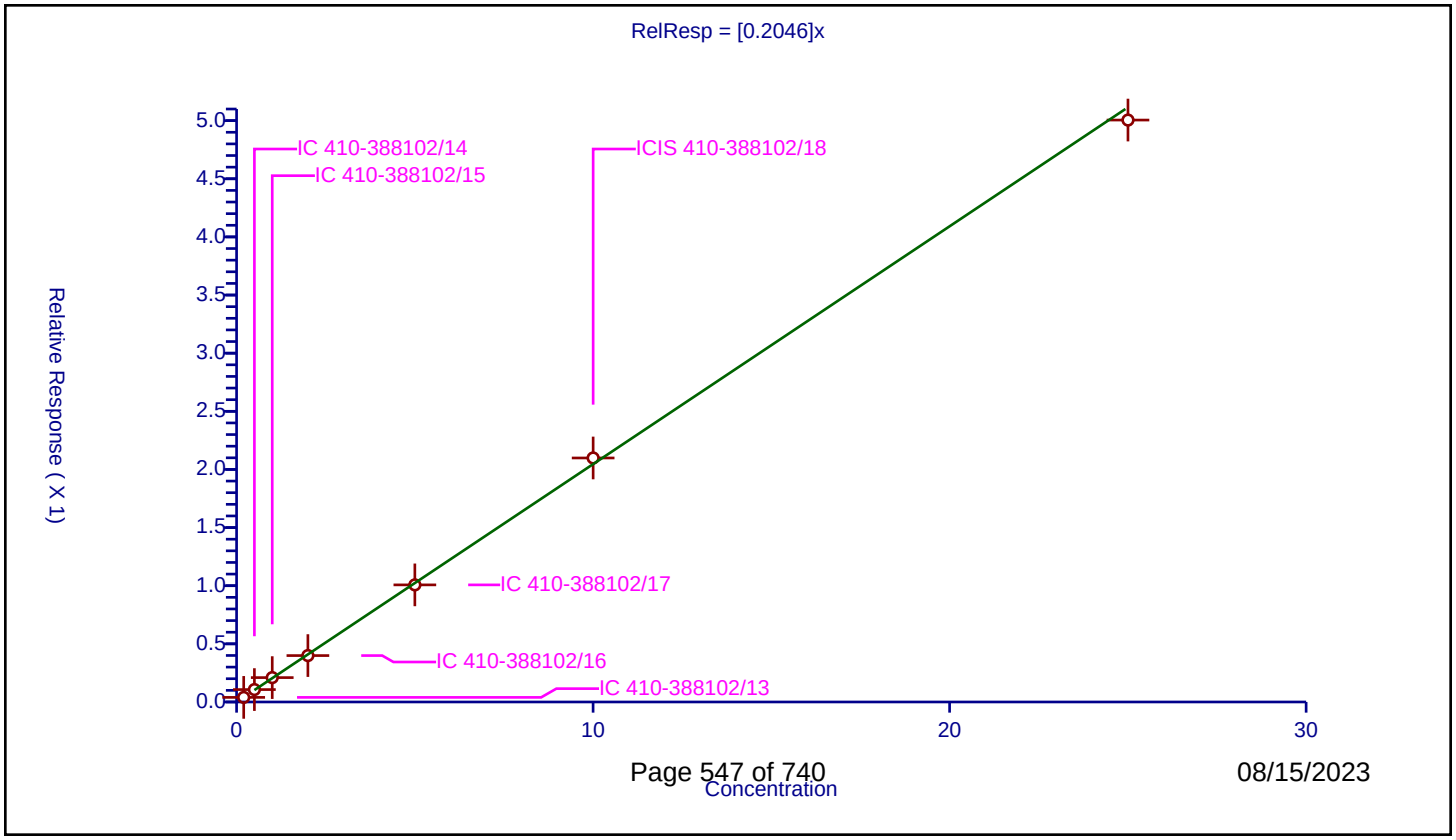
Curve Coefficients

Intercept:	0
Slope:	0.2046

Error Coefficients

Standard Error:	425000
Relative Standard Error:	3.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.200027	0.039526	10.0	1795291.0	0.197601	Y
2	IC 410-388102/14	0.500068	0.106838	10.0	1753956.0	0.213648	Y
3	IC 410-388102/15	1.000135	0.209725	10.0	1790586.0	0.209696	Y
4	IC 410-388102/16	2.00027	0.399159	10.0	1802566.0	0.199552	Y
5	IC 410-388102/17	5.000676	1.007162	10.0	1860774.0	0.201405	Y
6	ICIS 410-388102/18	10.001352	2.098761	10.0	1807671.0	0.209848	Y
7	IC 410-388102/19	25.00338	5.005052	10.0	1891215.0	0.200175	Y



Calibration / 1,2-Dichloro-1,1,2-trifluoroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

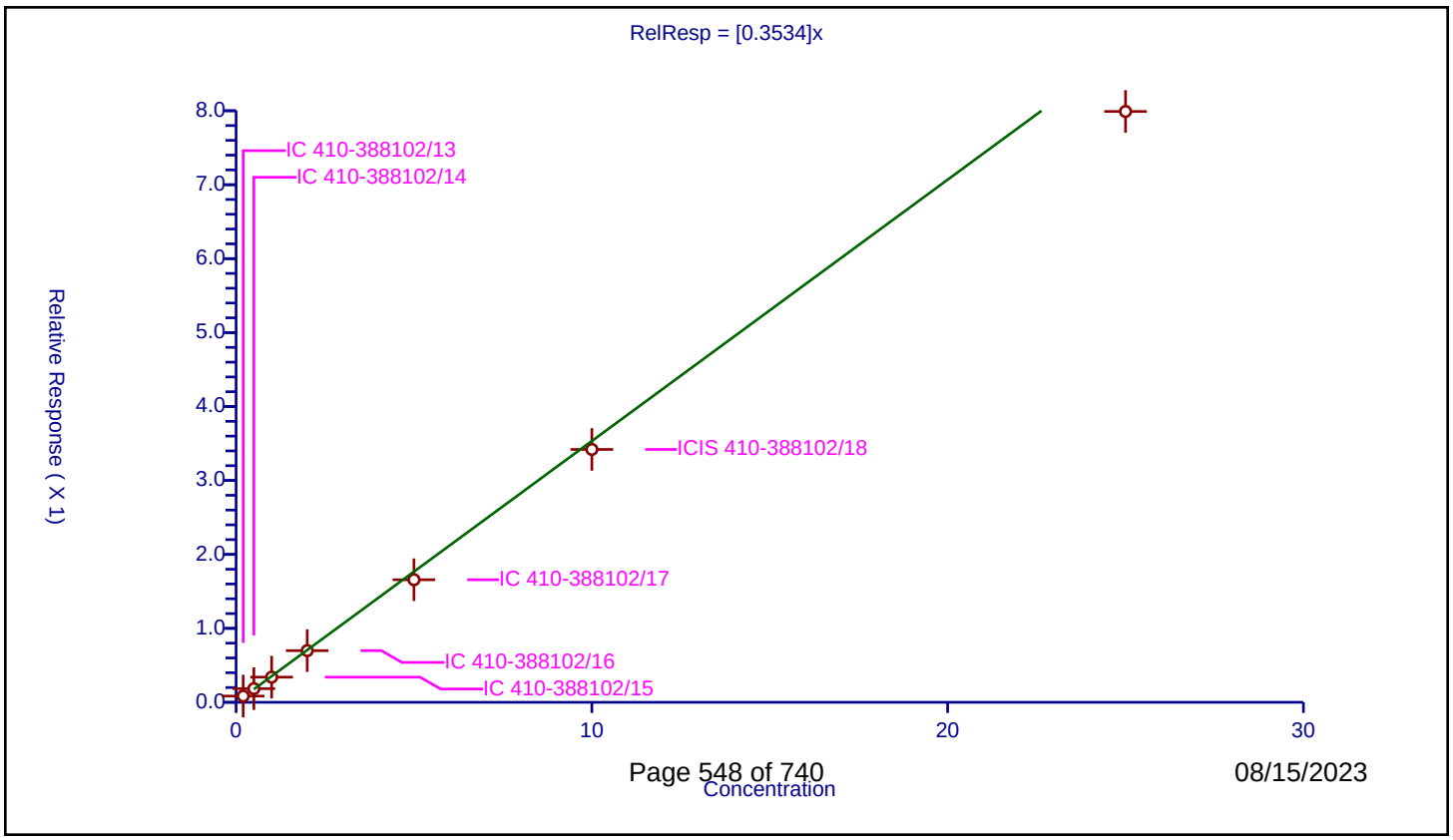
Curve Coefficients

Intercept:	0
Slope:	0.3534

Error Coefficients

Standard Error:	681000
Relative Standard Error:	9.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.08436	10.0	1795291.0	0.421798	Y
2	IC 410-388102/14	0.5	0.184651	10.0	1753956.0	0.369302	Y
3	IC 410-388102/15	1.0	0.340073	10.0	1790586.0	0.340073	Y
4	IC 410-388102/16	2.0	0.698704	10.0	1802566.0	0.349352	Y
5	IC 410-388102/17	5.0	1.657724	10.0	1860774.0	0.331545	Y
6	ICIS 410-388102/18	10.0	3.419887	10.0	1807671.0	0.341989	Y
7	IC 410-388102/19	25.0	7.99035	10.0	1891215.0	0.319614	Y



Calibration / Acrolein

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

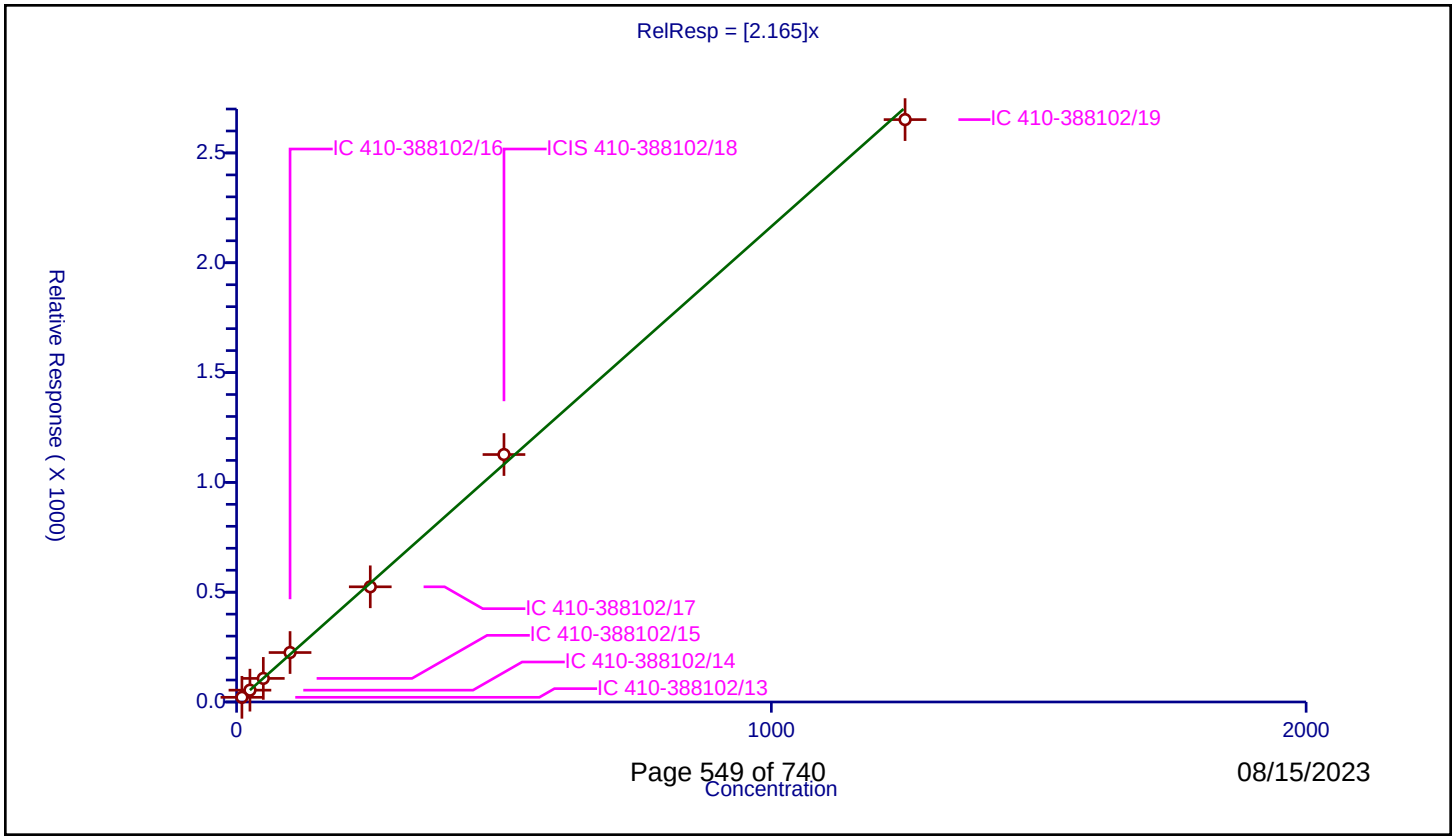
Curve Coefficients

Intercept:	0
Slope:	2.165

Error Coefficients

Standard Error:	3220000
Relative Standard Error:	2.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	10.000333	21.302708	50.0	116680.0	2.1302	Y
2	IC 410-388102/14	25.000833	53.851267	50.0	132398.0	2.153979	Y
3	IC 410-388102/15	50.001667	107.377111	50.0	133555.0	2.147471	Y
4	IC 410-388102/16	100.003333	225.13116	50.0	127135.0	2.251237	Y
5	IC 410-388102/17	250.008333	524.465777	50.0	139221.0	2.097793	Y
6	ICIS 410-388102/18	500.016666	1126.686676	50.0	130775.0	2.253298	Y
7	IC 410-388102/19	1250.041665	2651.77597	50.0	134884.0	2.12135	Y



Calibration / 1,1-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

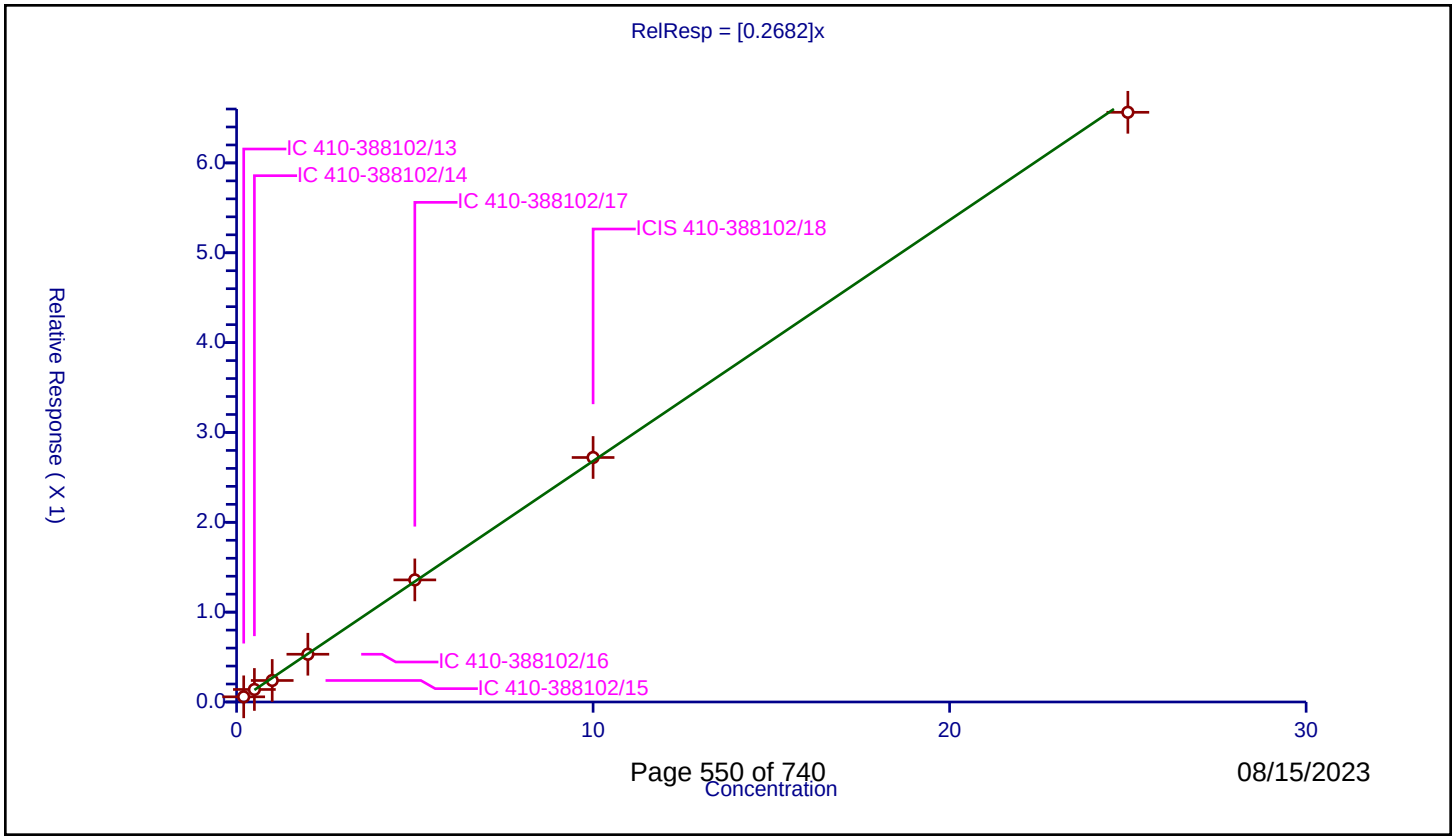
Curve Coefficients

Intercept:	0
Slope:	0.2682

Error Coefficients

Standard Error:	557000
Relative Standard Error:	5.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.057372	10.0	1795291.0	0.286862	Y
2	IC 410-388102/14	0.5	0.139399	10.0	1753956.0	0.278798	Y
3	IC 410-388102/15	1.0	0.239503	10.0	1790586.0	0.239503	Y
4	IC 410-388102/16	2.0	0.53142	10.0	1802566.0	0.26571	Y
5	IC 410-388102/17	5.0	1.358859	10.0	1860774.0	0.271772	Y
6	ICIS 410-388102/18	10.0	2.721292	10.0	1807671.0	0.272129	Y
7	IC 410-388102/19	25.0	6.563548	10.0	1891215.0	0.262542	Y



Calibration / Acetone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

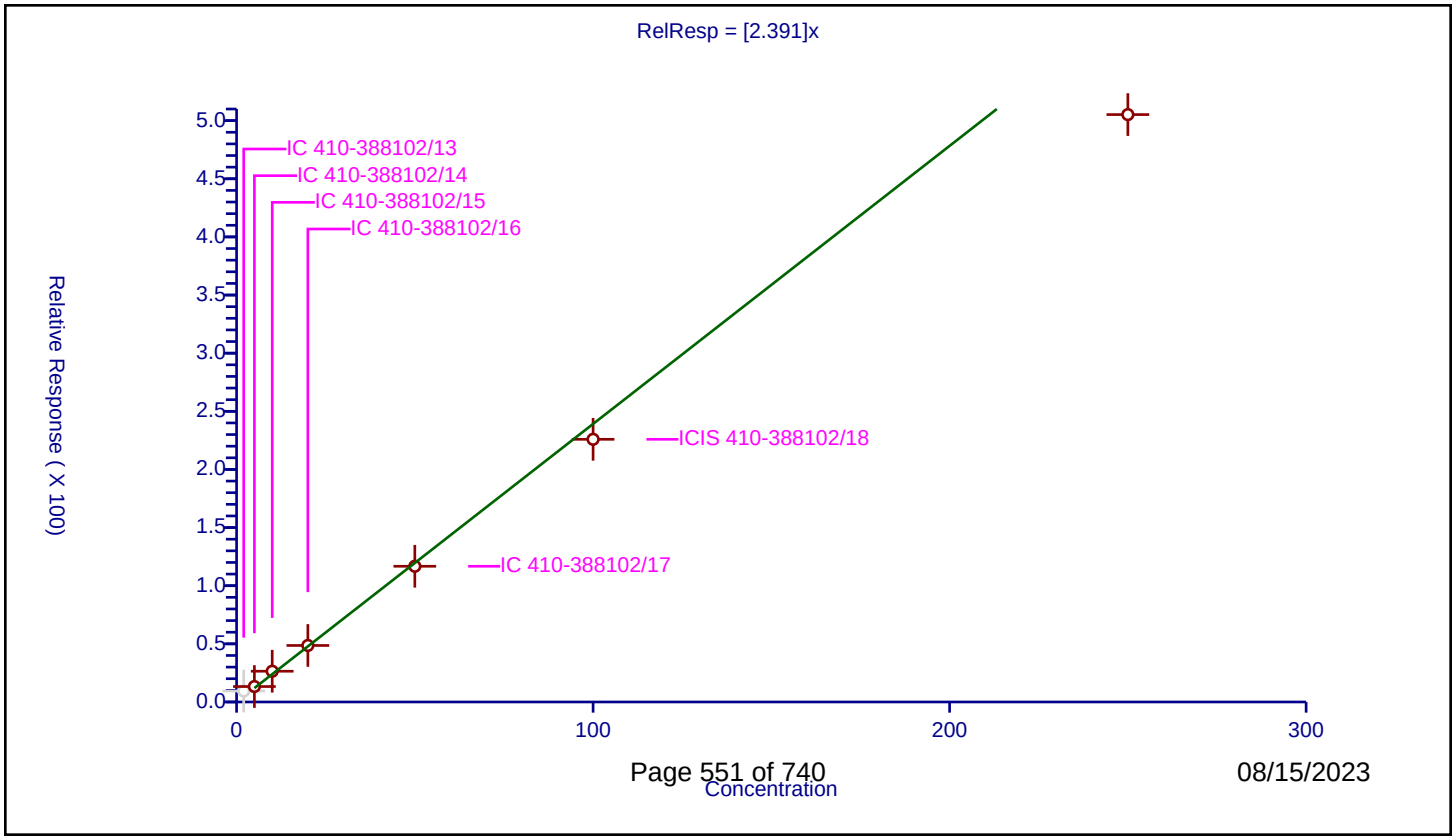
Curve Coefficients

Intercept:	0
Slope:	2.391

Error Coefficients

Standard Error:	683000
Relative Standard Error:	10.2
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.981

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	2.0	9.457919	50.0	116680.0	4.72896	N
2	IC 410-388102/14	5.0	13.28872	50.0	132398.0	2.657744	Y
3	IC 410-388102/15	10.0	26.462506	50.0	133555.0	2.646251	Y
4	IC 410-388102/16	20.0	48.601487	50.0	127135.0	2.430074	Y
5	IC 410-388102/17	50.0	116.735981	50.0	139221.0	2.33472	Y
6	ICIS 410-388102/18	100.0	225.93118	50.0	130775.0	2.259312	Y
7	IC 410-388102/19	250.0	505.214481	50.0	134884.0	2.020858	Y



Calibration / 1,1,2-Trichloro-1,2,2-trifluoroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

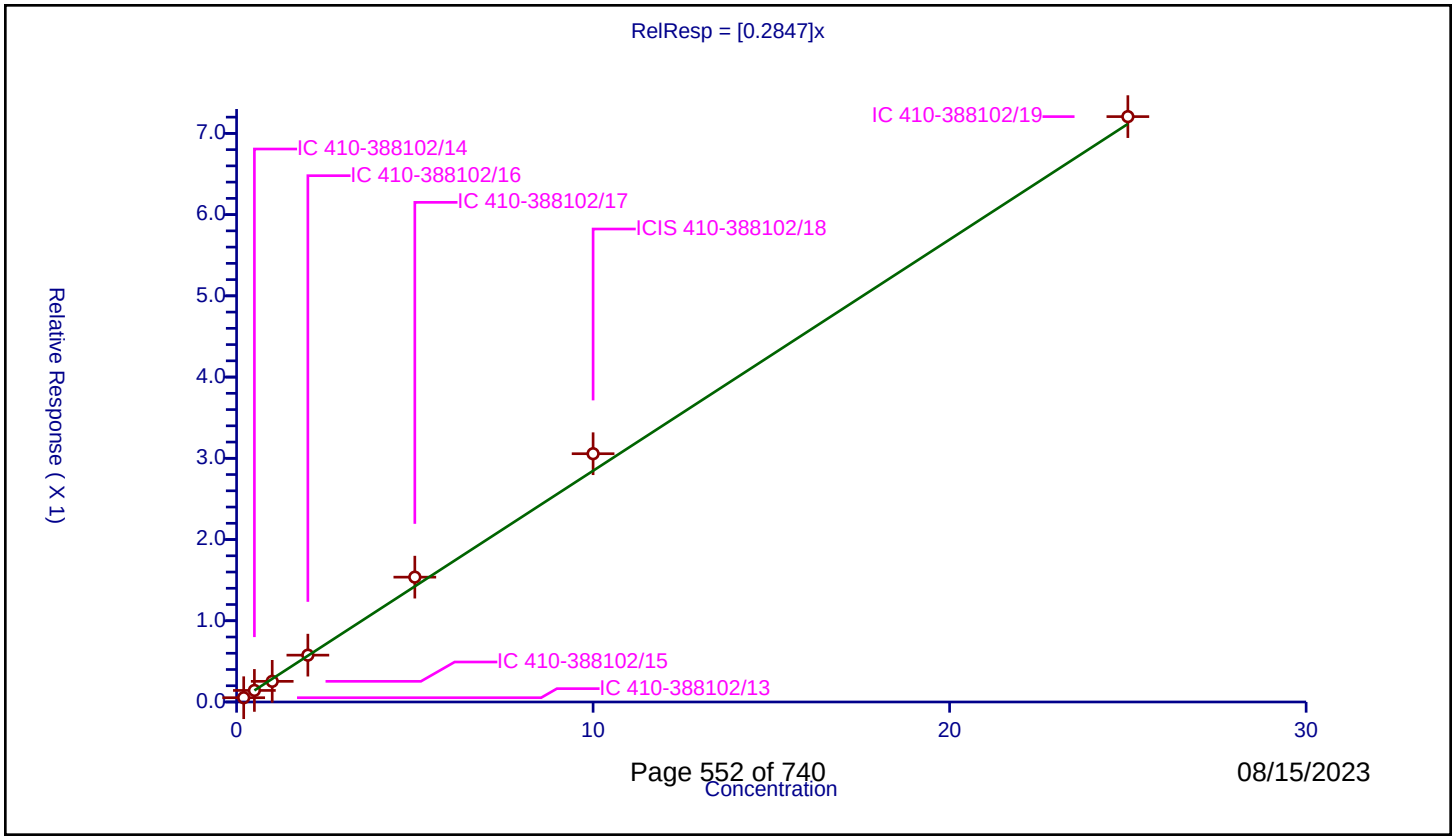
Curve Coefficients

Intercept:	0
Slope:	0.2847

Error Coefficients

Standard Error:	613000
Relative Standard Error:	6.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.05276	10.0	1795291.0	0.263801	Y
2	IC 410-388102/14	0.5	0.142421	10.0	1753956.0	0.284842	Y
3	IC 410-388102/15	1.0	0.254313	10.0	1790586.0	0.254313	Y
4	IC 410-388102/16	2.0	0.576744	10.0	1802566.0	0.288372	Y
5	IC 410-388102/17	5.0	1.536936	10.0	1860774.0	0.307387	Y
6	ICIS 410-388102/18	10.0	3.05638	10.0	1807671.0	0.305638	Y
7	IC 410-388102/19	25.0	7.206388	10.0	1891215.0	0.288256	Y



Calibration / Iodomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

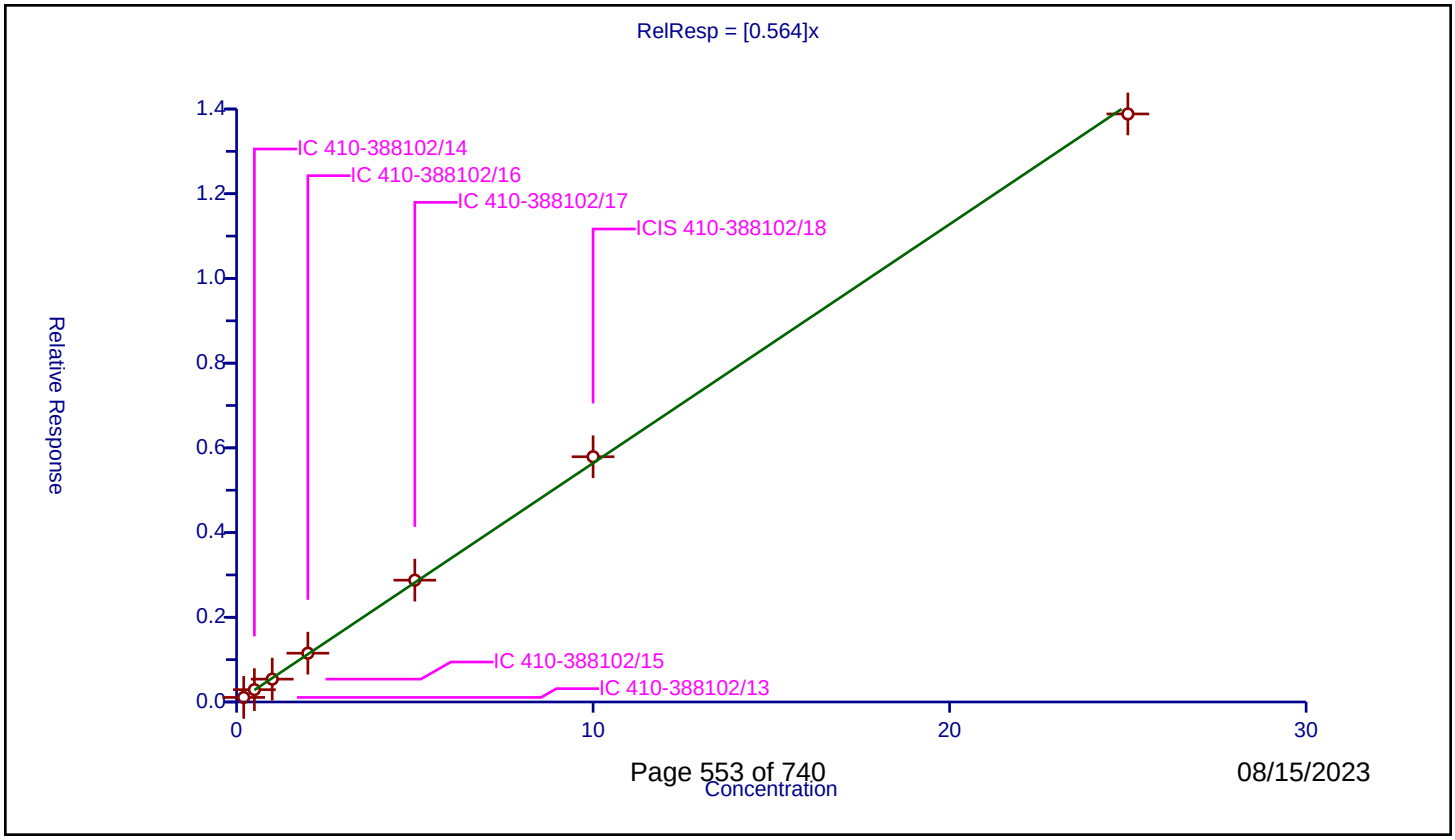
Curve Coefficients

Intercept:	0
Slope:	0.564

Error Coefficients

Standard Error:	1180000
Relative Standard Error:	3.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.108049	10.0	1795291.0	0.540247	Y
2	IC 410-388102/14	0.5	0.291062	10.0	1753956.0	0.582124	Y
3	IC 410-388102/15	1.0	0.539628	10.0	1790586.0	0.539628	Y
4	IC 410-388102/16	2.0	1.152146	10.0	1802566.0	0.576073	Y
5	IC 410-388102/17	5.0	2.876378	10.0	1860774.0	0.575276	Y
6	ICIS 410-388102/18	10.0	5.790091	10.0	1807671.0	0.579009	Y
7	IC 410-388102/19	25.0	13.88325	10.0	1891215.0	0.55533	Y



Calibration / Ethyl bromide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

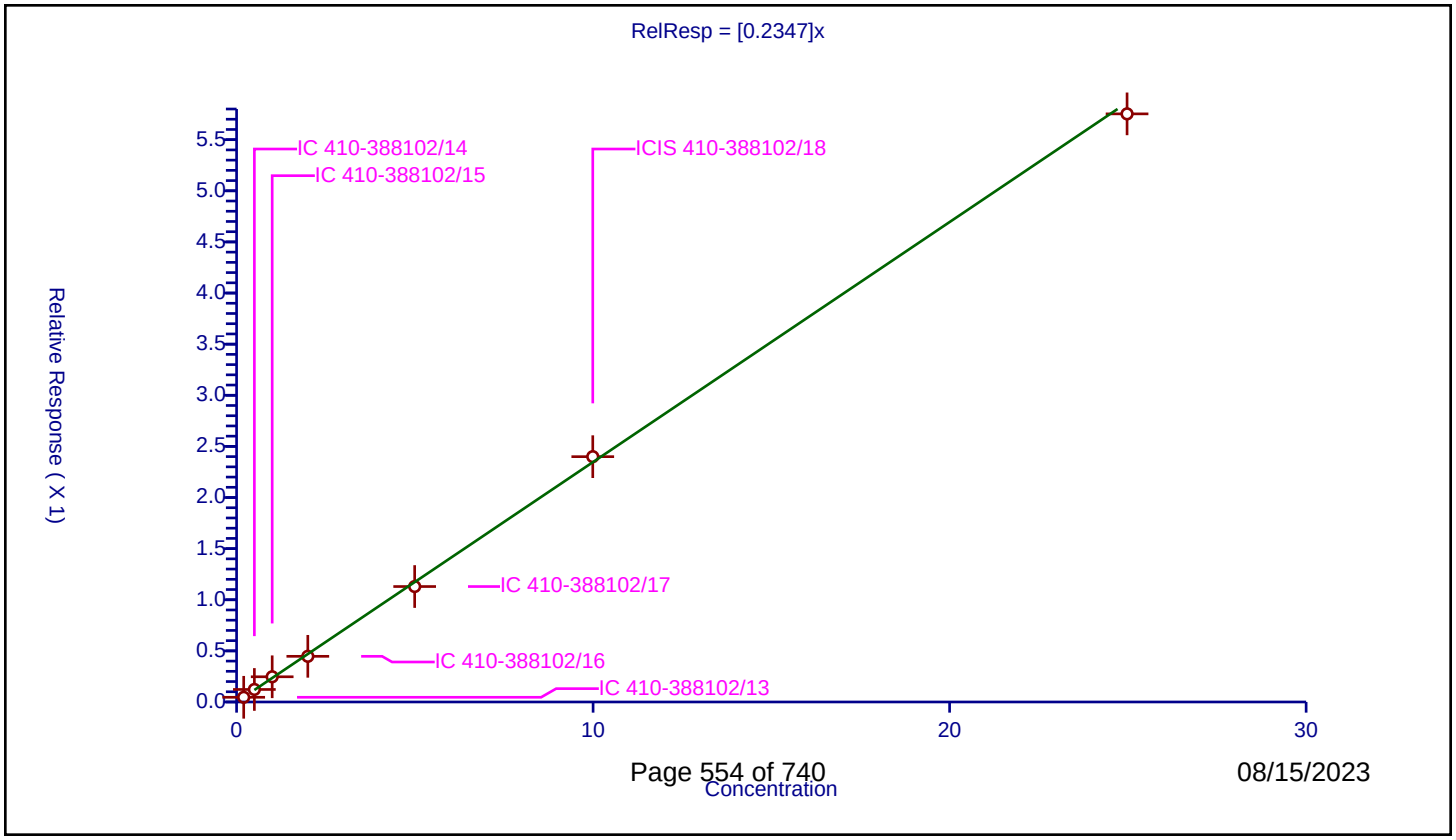
Curve Coefficients

Intercept:	0
Slope:	0.2347

Error Coefficients

Standard Error:	487000
Relative Standard Error:	4.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.199819	0.046121	10.0	1795291.0	0.230812	Y
2	IC 410-388102/14	0.499548	0.122552	10.0	1753956.0	0.245325	Y
3	IC 410-388102/15	0.999096	0.246528	10.0	1790586.0	0.246751	Y
4	IC 410-388102/16	1.998192	0.446785	10.0	1802566.0	0.223595	Y
5	IC 410-388102/17	4.99548	1.129261	10.0	1860774.0	0.226057	Y
6	ICIS 410-388102/18	9.99096	2.39964	10.0	1807671.0	0.240181	Y
7	IC 410-388102/19	24.9774	5.752619	10.0	1891215.0	0.230313	Y



Calibration / Carbon disulfide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

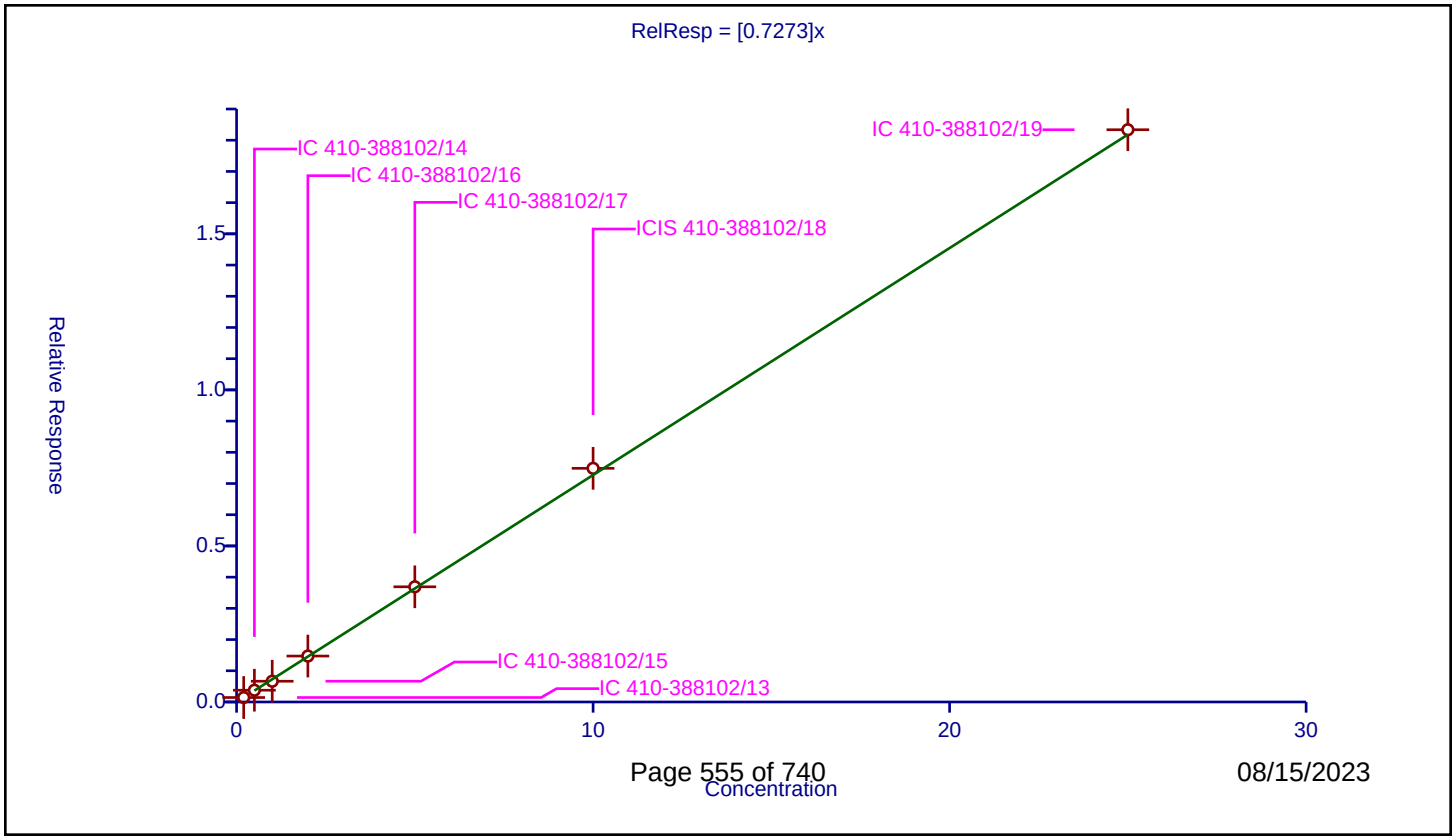
Curve Coefficients

Intercept:	0
Slope:	0.7273

Error Coefficients

Standard Error:	1550000
Relative Standard Error:	4.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.14298	10.0	1795291.0	0.714898	Y
2	IC 410-388102/14	0.5	0.377256	10.0	1753956.0	0.754512	Y
3	IC 410-388102/15	1.0	0.665363	10.0	1790586.0	0.665363	Y
4	IC 410-388102/16	2.0	1.471419	10.0	1802566.0	0.73571	Y
5	IC 410-388102/17	5.0	3.690394	10.0	1860774.0	0.738079	Y
6	ICIS 410-388102/18	10.0	7.487463	10.0	1807671.0	0.748746	Y
7	IC 410-388102/19	25.0	18.336197	10.0	1891215.0	0.733448	Y



Calibration / Methyl acetate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

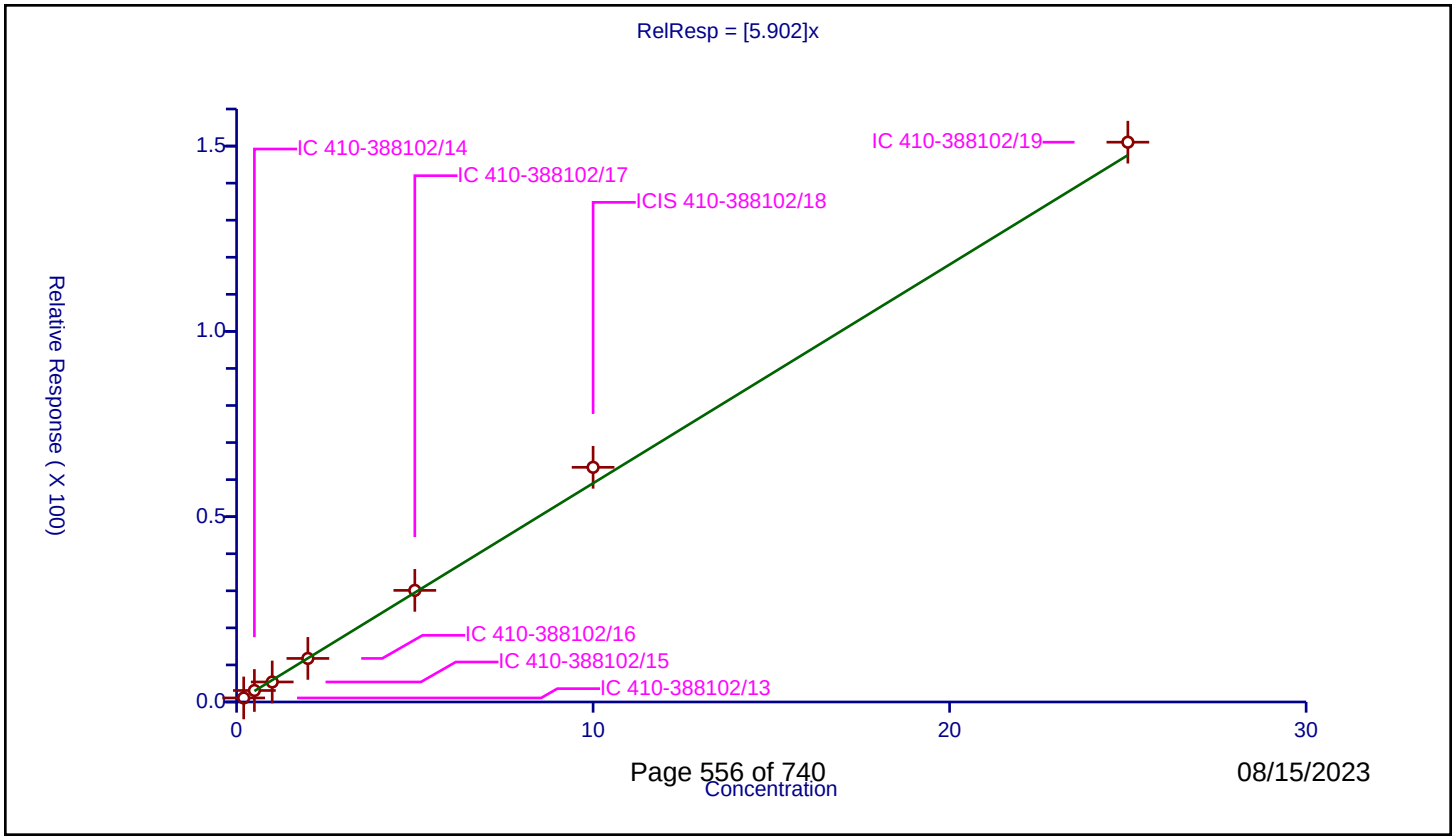
Curve Coefficients

Intercept:	0
Slope:	5.902

Error Coefficients

Standard Error:	183000
Relative Standard Error:	6.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	1.087161	50.0	116680.0	5.435807	Y
2	IC 410-388102/14	0.5	3.103144	50.0	132398.0	6.206287	Y
3	IC 410-388102/15	1.0	5.397776	50.0	133555.0	5.397776	Y
4	IC 410-388102/16	2.0	11.754434	50.0	127135.0	5.877217	Y
5	IC 410-388102/17	5.0	30.113632	50.0	139221.0	6.022726	Y
6	ICIS 410-388102/18	10.0	63.319442	50.0	130775.0	6.331944	Y
7	IC 410-388102/19	25.0	151.046455	50.0	134884.0	6.041858	Y



Calibration / 3-Chloro-1-propene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

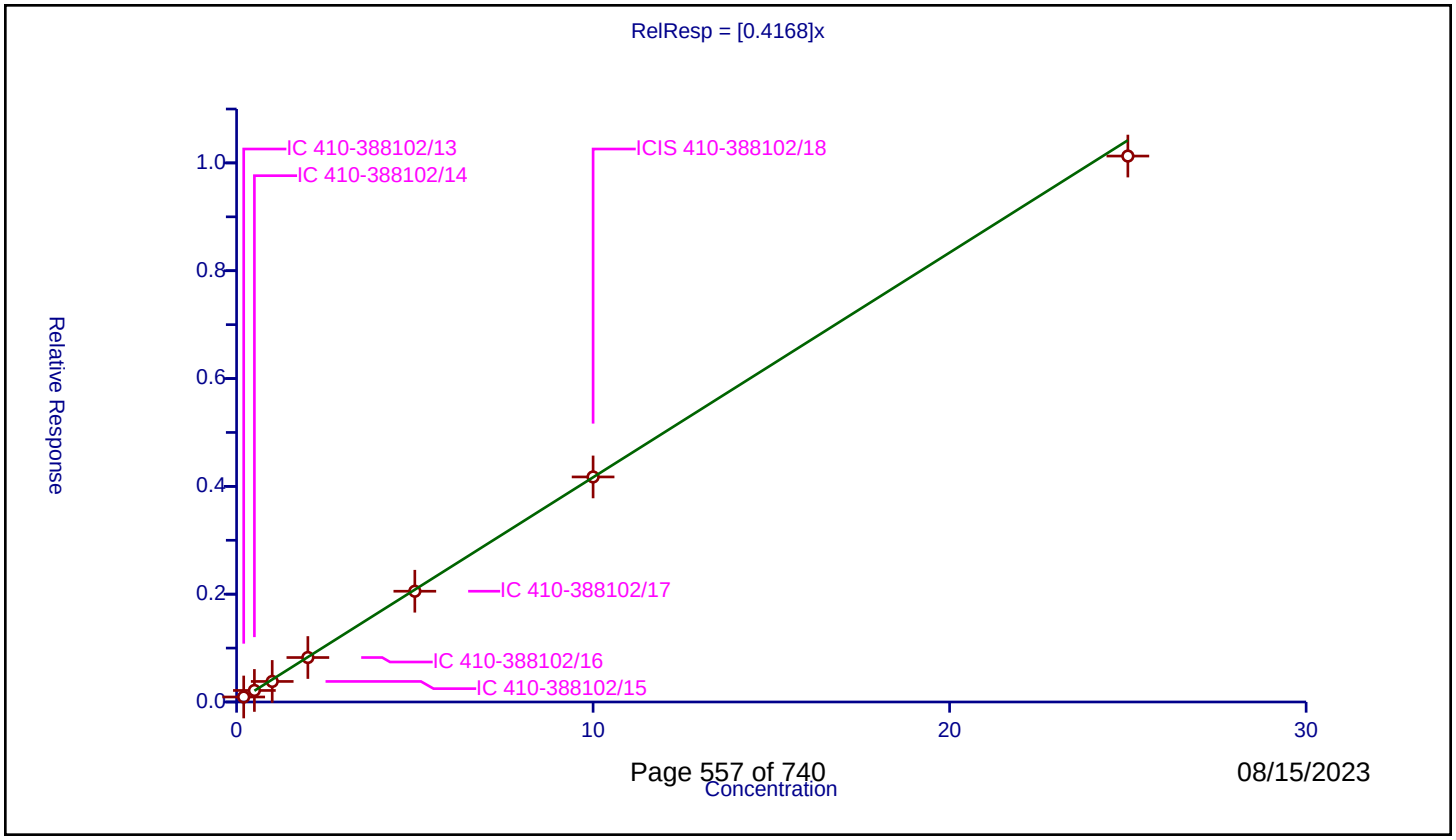
Curve Coefficients

Intercept:	0
Slope:	0.4168

Error Coefficients

Standard Error:	858000
Relative Standard Error:	5.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.092525	10.0	1795291.0	0.462627	Y
2	IC 410-388102/14	0.5	0.213996	10.0	1753956.0	0.427992	Y
3	IC 410-388102/15	1.0	0.381099	10.0	1790586.0	0.381099	Y
4	IC 410-388102/16	2.0	0.824935	10.0	1802566.0	0.412468	Y
5	IC 410-388102/17	5.0	2.05486	10.0	1860774.0	0.410972	Y
6	ICIS 410-388102/18	10.0	4.174808	10.0	1807671.0	0.417481	Y
7	IC 410-388102/19	25.0	10.127167	10.0	1891215.0	0.405087	Y



Calibration / Methylene Chloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

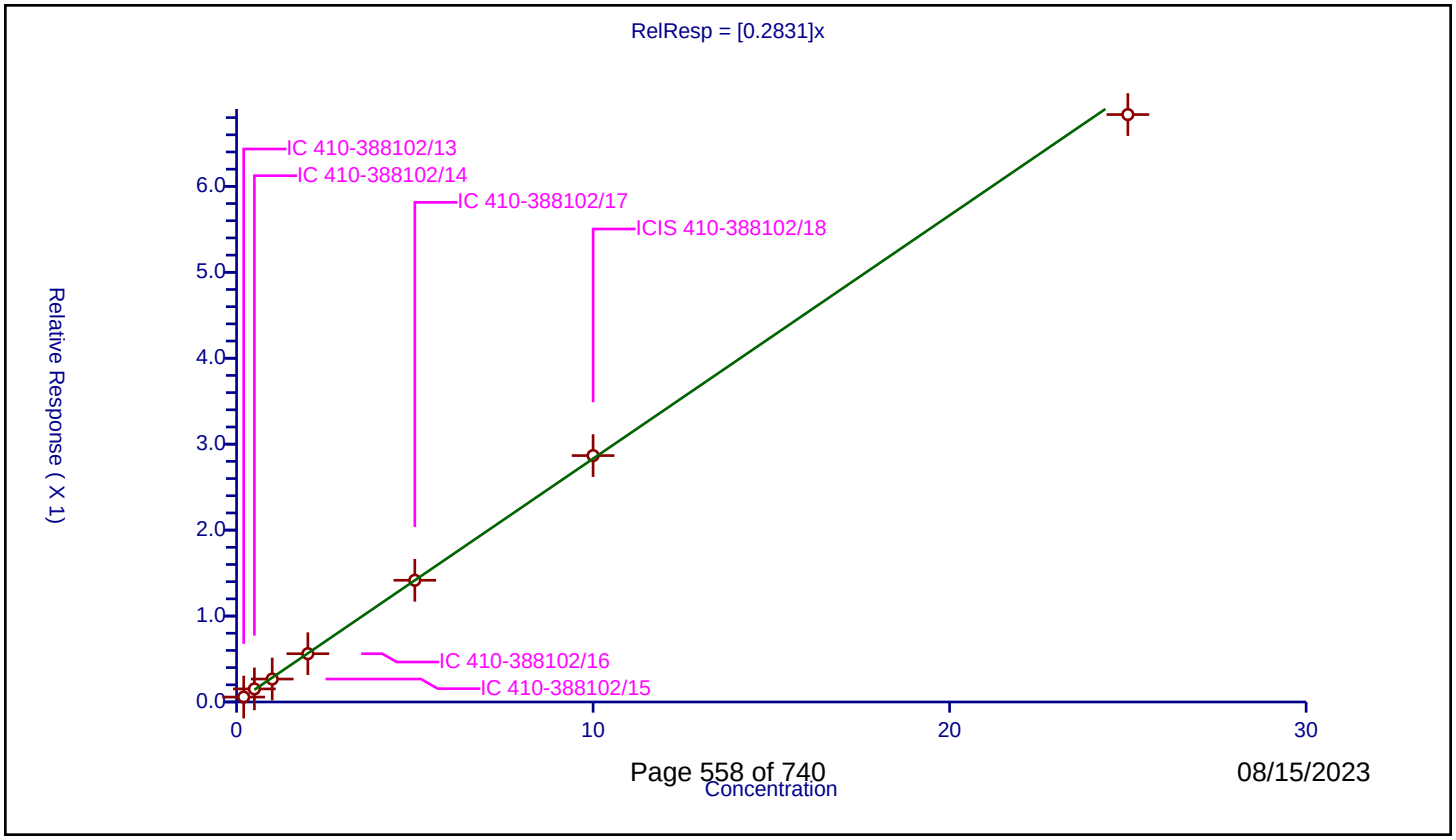
Curve Coefficients

Intercept:	0
Slope:	0.2831

Error Coefficients

Standard Error:	581000
Relative Standard Error:	4.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.057272	10.0	1795291.0	0.28636	Y
2	IC 410-388102/14	0.5	0.152256	10.0	1753956.0	0.304512	Y
3	IC 410-388102/15	1.0	0.26689	10.0	1790586.0	0.26689	Y
4	IC 410-388102/16	2.0	0.561699	10.0	1802566.0	0.28085	Y
5	IC 410-388102/17	5.0	1.416325	10.0	1860774.0	0.283265	Y
6	ICIS 410-388102/18	10.0	2.867203	10.0	1807671.0	0.28672	Y
7	IC 410-388102/19	25.0	6.835347	10.0	1891215.0	0.273414	Y



Calibration / 2-Methyl-2-propanol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

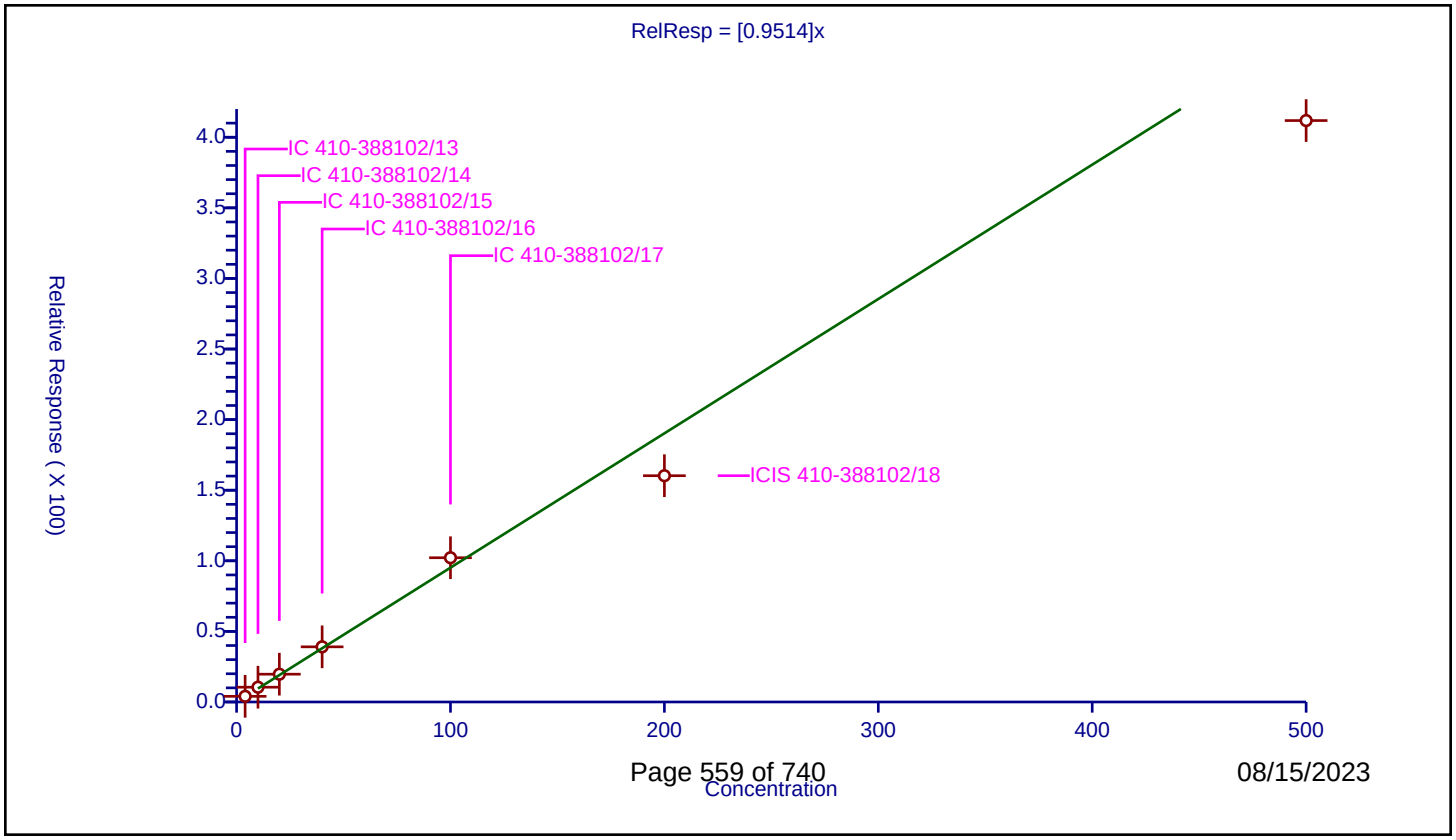
Curve Coefficients

Intercept:	0
Slope:	0.9514

Error Coefficients

Standard Error:	501000
Relative Standard Error:	10.3
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	4.0	4.016541	50.0	116680.0	1.004135	Y
2	IC 410-388102/14	10.0	10.478633	50.0	132398.0	1.047863	Y
3	IC 410-388102/15	20.0	19.681405	50.0	133555.0	0.98407	Y
4	IC 410-388102/16	40.0	39.078539	50.0	127135.0	0.976963	Y
5	IC 410-388102/17	100.0	102.172804	50.0	139221.0	1.021728	Y
6	ICIS 410-388102/18	200.0	160.268782	50.0	130775.0	0.801344	Y
7	IC 410-388102/19	500.0	411.823863	50.0	134884.0	0.823648	Y



Calibration / Acrylonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

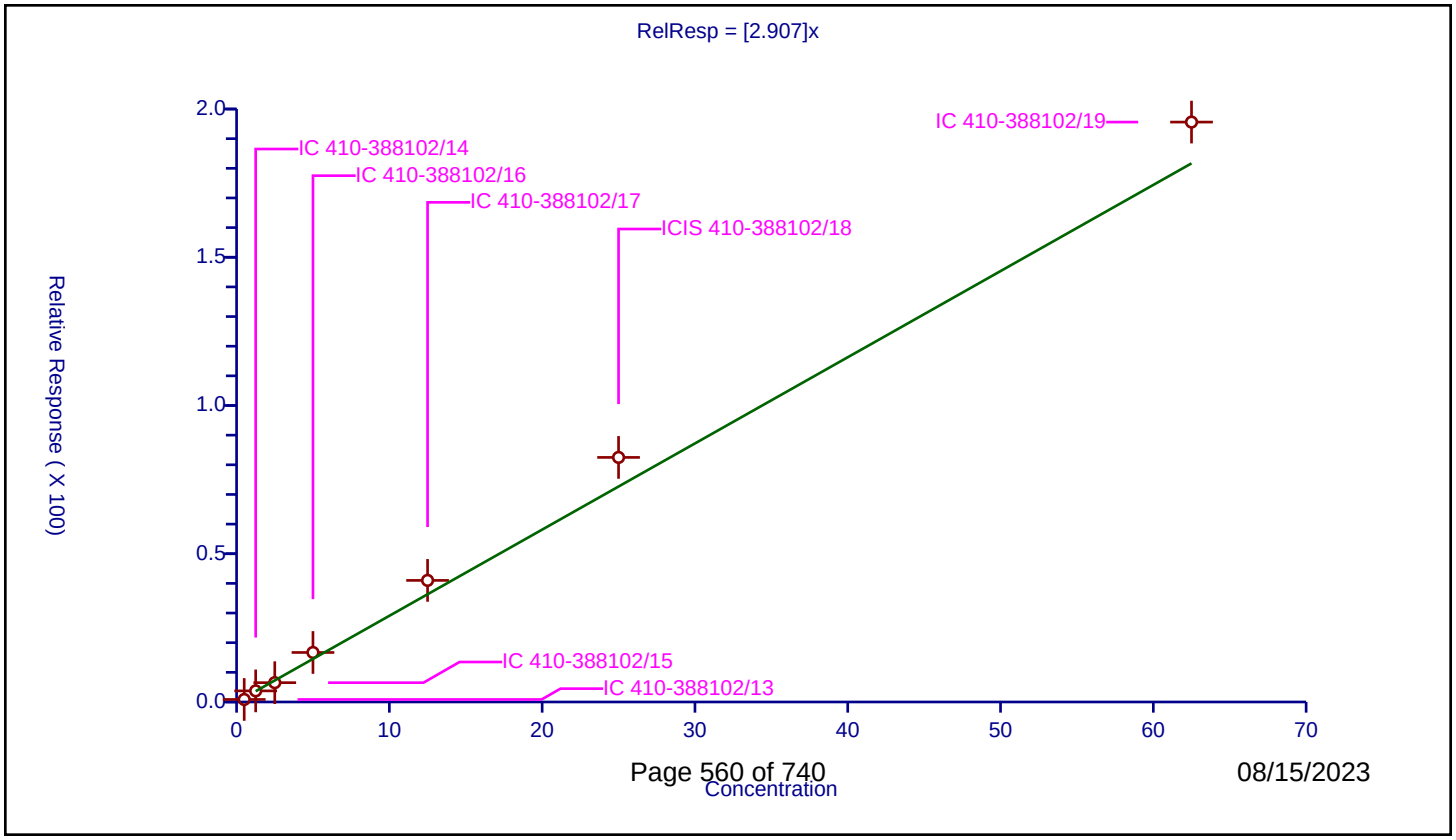
Curve Coefficients

Intercept:	0
Slope:	2.907

Error Coefficients

Standard Error:	238000
Relative Standard Error:	20.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.956

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.5	0.84676	50.0	116680.0	1.693521	Y
2	IC 410-388102/14	1.25	3.747791	50.0	132398.0	2.998233	Y
3	IC 410-388102/15	2.5	6.512673	50.0	133555.0	2.605069	Y
4	IC 410-388102/16	5.0	16.701931	50.0	127135.0	3.340386	Y
5	IC 410-388102/17	12.5	41.009259	50.0	139221.0	3.280741	Y
6	ICIS 410-388102/18	25.0	82.487861	50.0	130775.0	3.299514	Y
7	IC 410-388102/19	62.5	195.594733	50.0	134884.0	3.129516	Y



Calibration / Methyl tert-butyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

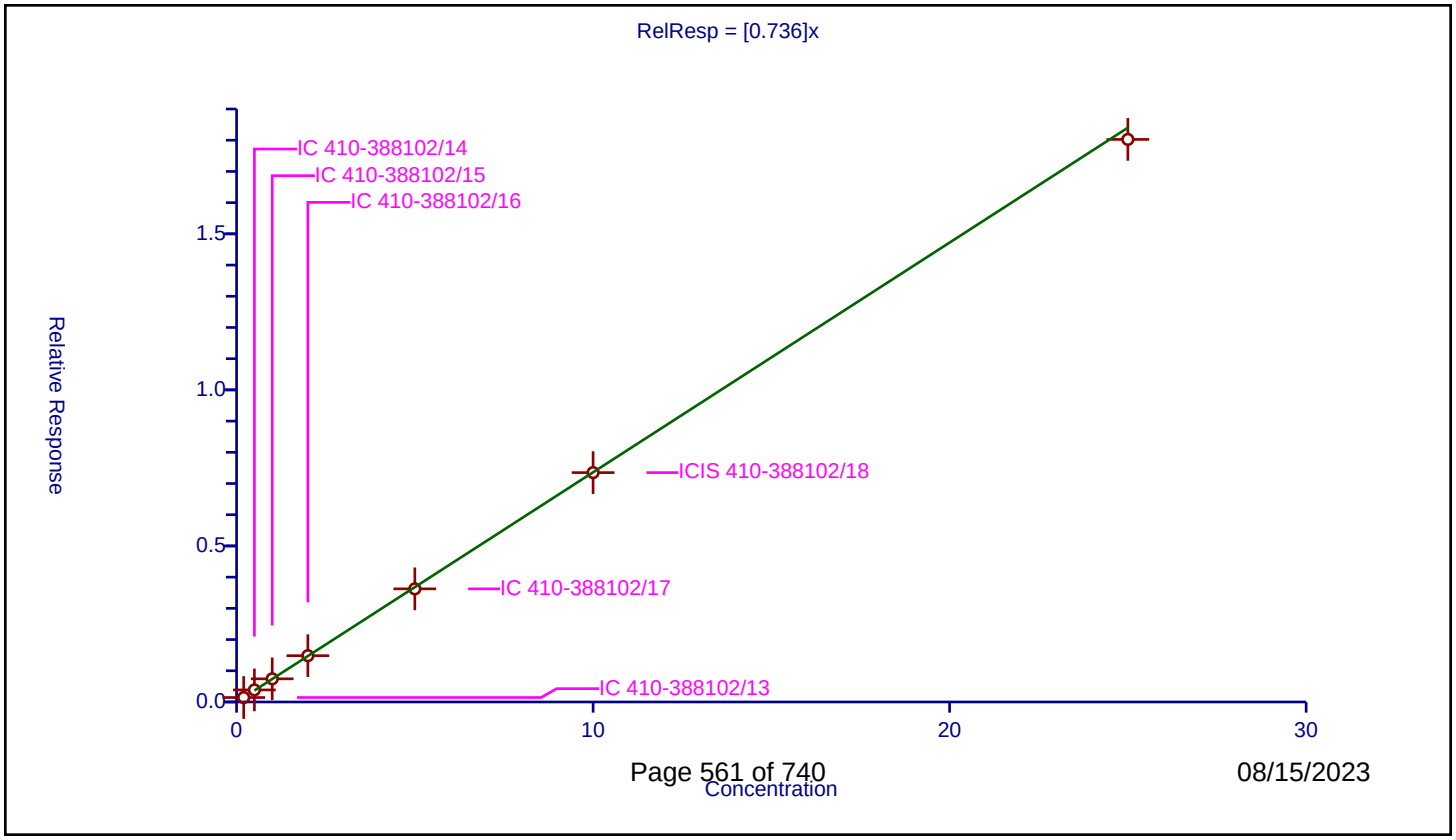
Curve Coefficients

Intercept:	0
Slope:	0.736

Error Coefficients

Standard Error:	1520000
Relative Standard Error:	2.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.142818	10.0	1795291.0	0.71409	Y
2	IC 410-388102/14	0.5	0.386543	10.0	1753956.0	0.773087	Y
3	IC 410-388102/15	1.0	0.742165	10.0	1790586.0	0.742165	Y
4	IC 410-388102/16	2.0	1.483624	10.0	1802566.0	0.741812	Y
5	IC 410-388102/17	5.0	3.62461	10.0	1860774.0	0.724922	Y
6	ICIS 410-388102/18	10.0	7.349722	10.0	1807671.0	0.734972	Y
7	IC 410-388102/19	25.0	18.0261	10.0	1891215.0	0.721044	Y



Calibration / trans-1,2-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

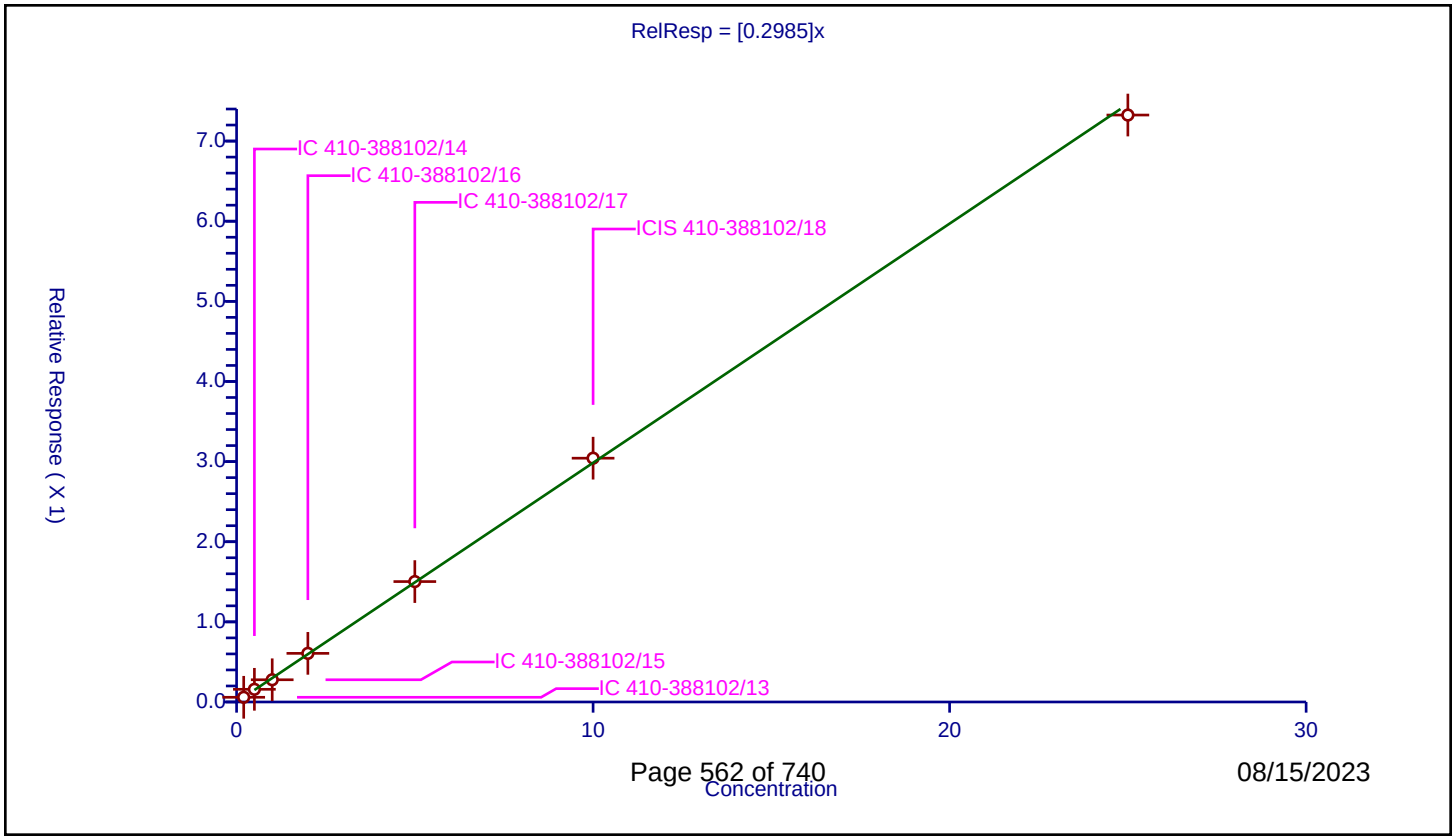
Curve Coefficients

Intercept:	0
Slope:	0.2985

Error Coefficients

Standard Error:	621000
Relative Standard Error:	4.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.058865	10.0	1795291.0	0.294326	Y
2	IC 410-388102/14	0.5	0.158322	10.0	1753956.0	0.316644	Y
3	IC 410-388102/15	1.0	0.277267	10.0	1790586.0	0.277267	Y
4	IC 410-388102/16	2.0	0.606707	10.0	1802566.0	0.303354	Y
5	IC 410-388102/17	5.0	1.502681	10.0	1860774.0	0.300536	Y
6	ICIS 410-388102/18	10.0	3.042395	10.0	1807671.0	0.30424	Y
7	IC 410-388102/19	25.0	7.324625	10.0	1891215.0	0.292985	Y



Calibration / Hexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

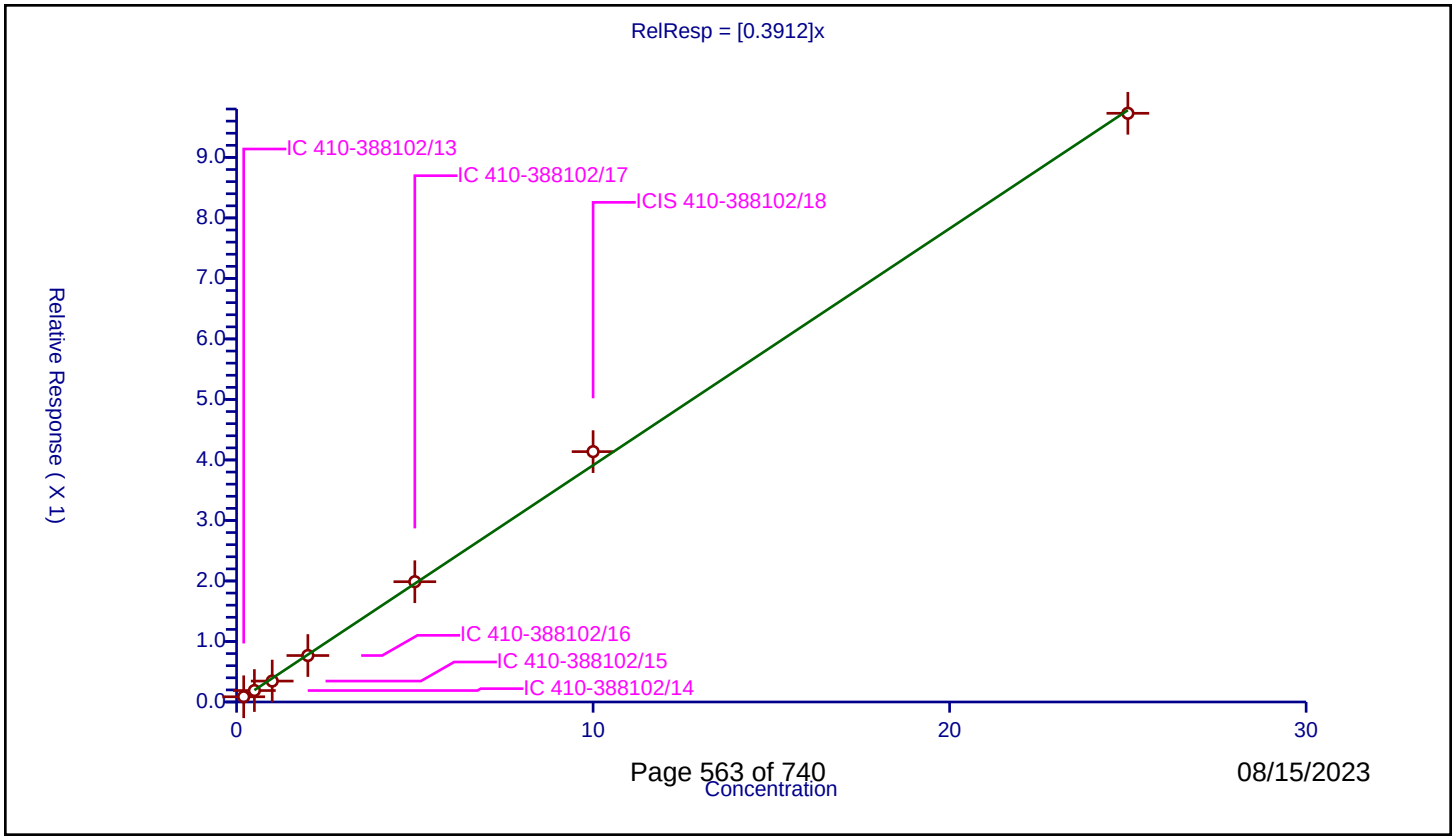
Curve Coefficients

Intercept:	0
Slope:	0.3912

Error Coefficients

Standard Error:	827000
Relative Standard Error:	6.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.086042	10.0	1795291.0	0.430209	Y
2	IC 410-388102/14	0.5	0.18907	10.0	1753956.0	0.378139	Y
3	IC 410-388102/15	1.0	0.345742	10.0	1790586.0	0.345742	Y
4	IC 410-388102/16	2.0	0.767844	10.0	1802566.0	0.383922	Y
5	IC 410-388102/17	5.0	1.987942	10.0	1860774.0	0.397588	Y
6	ICIS 410-388102/18	10.0	4.137816	10.0	1807671.0	0.413782	Y
7	IC 410-388102/19	25.0	9.729613	10.0	1891215.0	0.389185	Y



Calibration / 1,1-Dichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

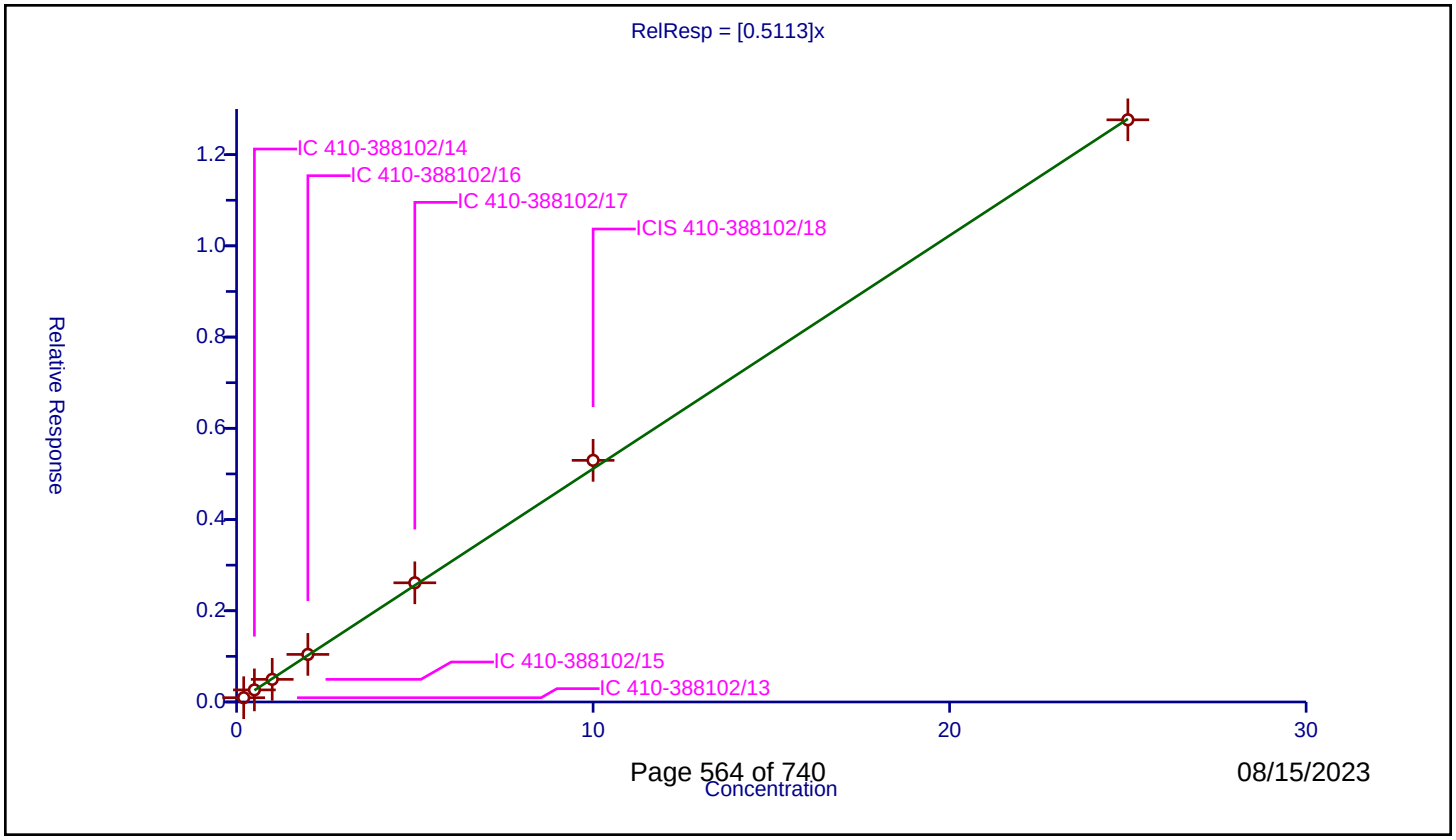
Curve Coefficients

Intercept:	0
Slope:	0.5113

Error Coefficients

Standard Error:	1080000
Relative Standard Error:	4.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.093656	10.0	1795291.0	0.468281	Y
2	IC 410-388102/14	0.5	0.265195	10.0	1753956.0	0.53039	Y
3	IC 410-388102/15	1.0	0.496257	10.0	1790586.0	0.496257	Y
4	IC 410-388102/16	2.0	1.043302	10.0	1802566.0	0.521651	Y
5	IC 410-388102/17	5.0	2.612698	10.0	1860774.0	0.52254	Y
6	ICIS 410-388102/18	10.0	5.297441	10.0	1807671.0	0.529744	Y
7	IC 410-388102/19	25.0	12.763351	10.0	1891215.0	0.510534	Y



Calibration / Isopropyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

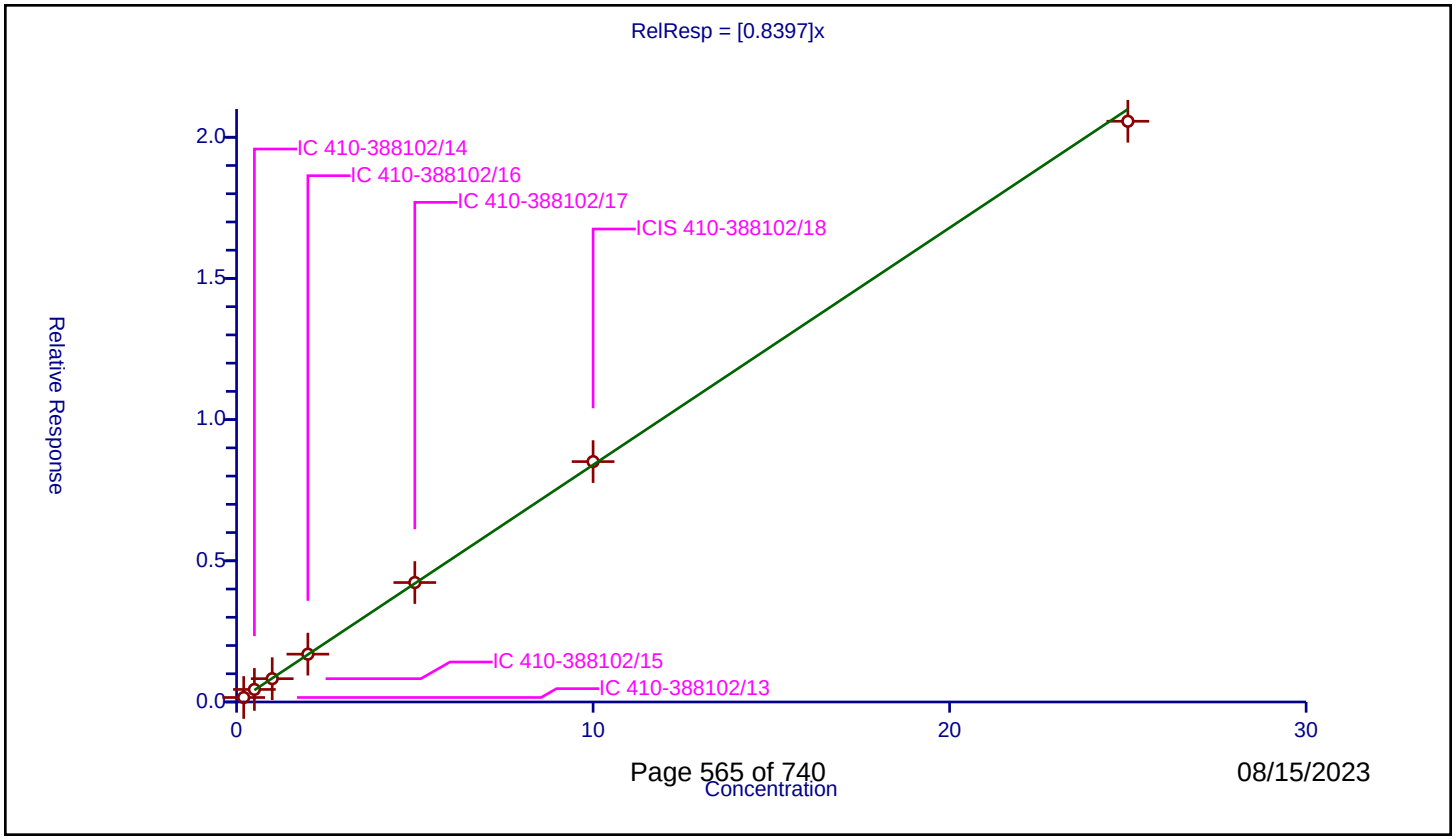
Curve Coefficients

Intercept:	0
Slope:	0.8397

Error Coefficients

Standard Error:	1740000
Relative Standard Error:	3.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.159328	10.0	1795291.0	0.79664	Y
2	IC 410-388102/14	0.5	0.444048	10.0	1753956.0	0.888095	Y
3	IC 410-388102/15	1.0	0.826305	10.0	1790586.0	0.826305	Y
4	IC 410-388102/16	2.0	1.693719	10.0	1802566.0	0.846859	Y
5	IC 410-388102/17	5.0	4.230089	10.0	1860774.0	0.846018	Y
6	ICIS 410-388102/18	10.0	8.512937	10.0	1807671.0	0.851294	Y
7	IC 410-388102/19	25.0	20.566736	10.0	1891215.0	0.822669	Y



Calibration / 2-Chloro-1,3-butadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

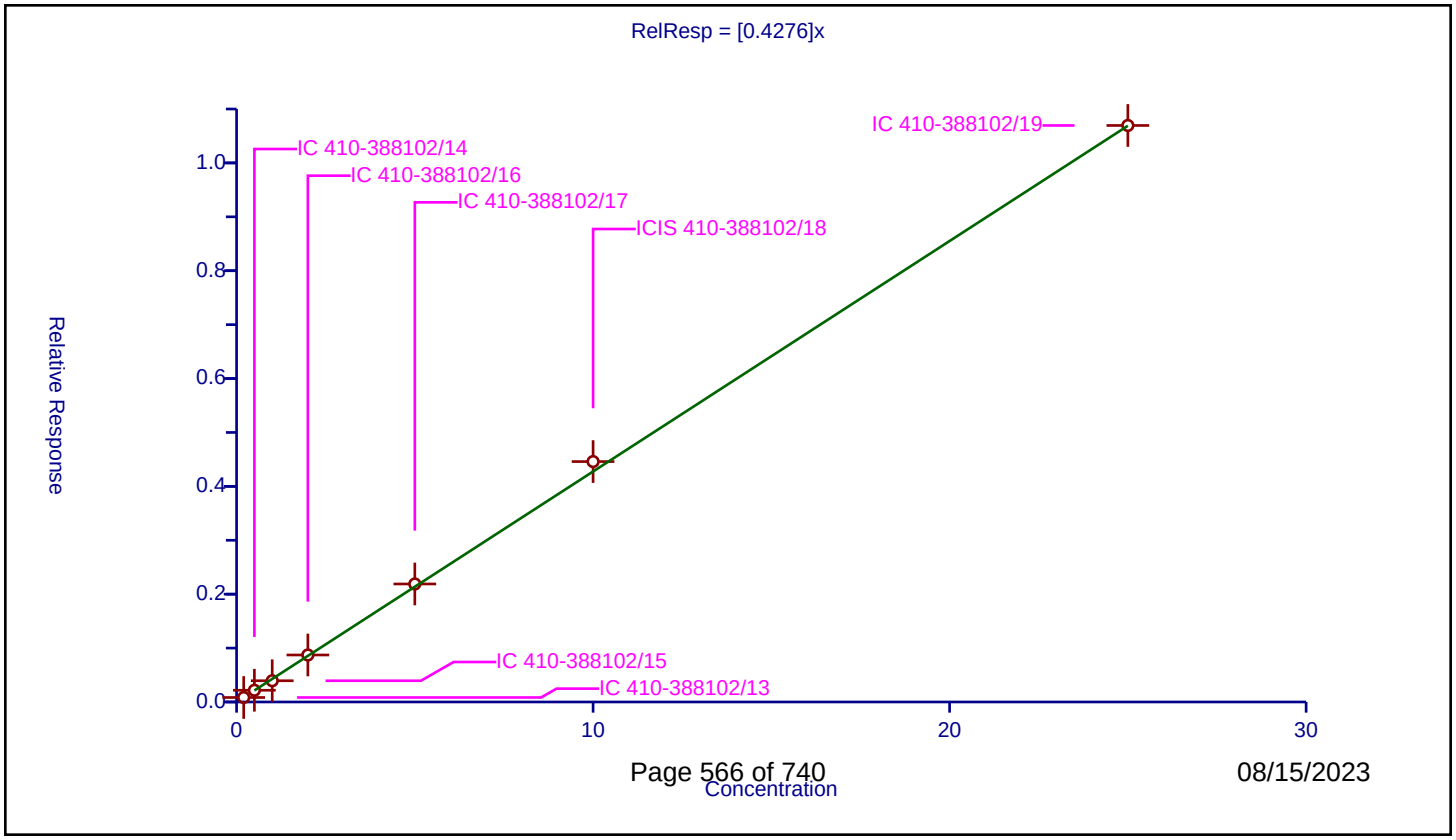
Curve Coefficients

Intercept:	0
Slope:	0.4276

Error Coefficients

Standard Error:	907000
Relative Standard Error:	4.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.083223	10.0	1795291.0	0.416116	Y
2	IC 410-388102/14	0.5	0.217577	10.0	1753956.0	0.435153	Y
3	IC 410-388102/15	1.0	0.394	10.0	1790586.0	0.394	Y
4	IC 410-388102/16	2.0	0.871996	10.0	1802566.0	0.435998	Y
5	IC 410-388102/17	5.0	2.189213	10.0	1860774.0	0.437843	Y
6	ICIS 410-388102/18	10.0	4.459904	10.0	1807671.0	0.44599	Y
7	IC 410-388102/19	25.0	10.69495	10.0	1891215.0	0.427798	Y



Calibration / Tert-butyl ethyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

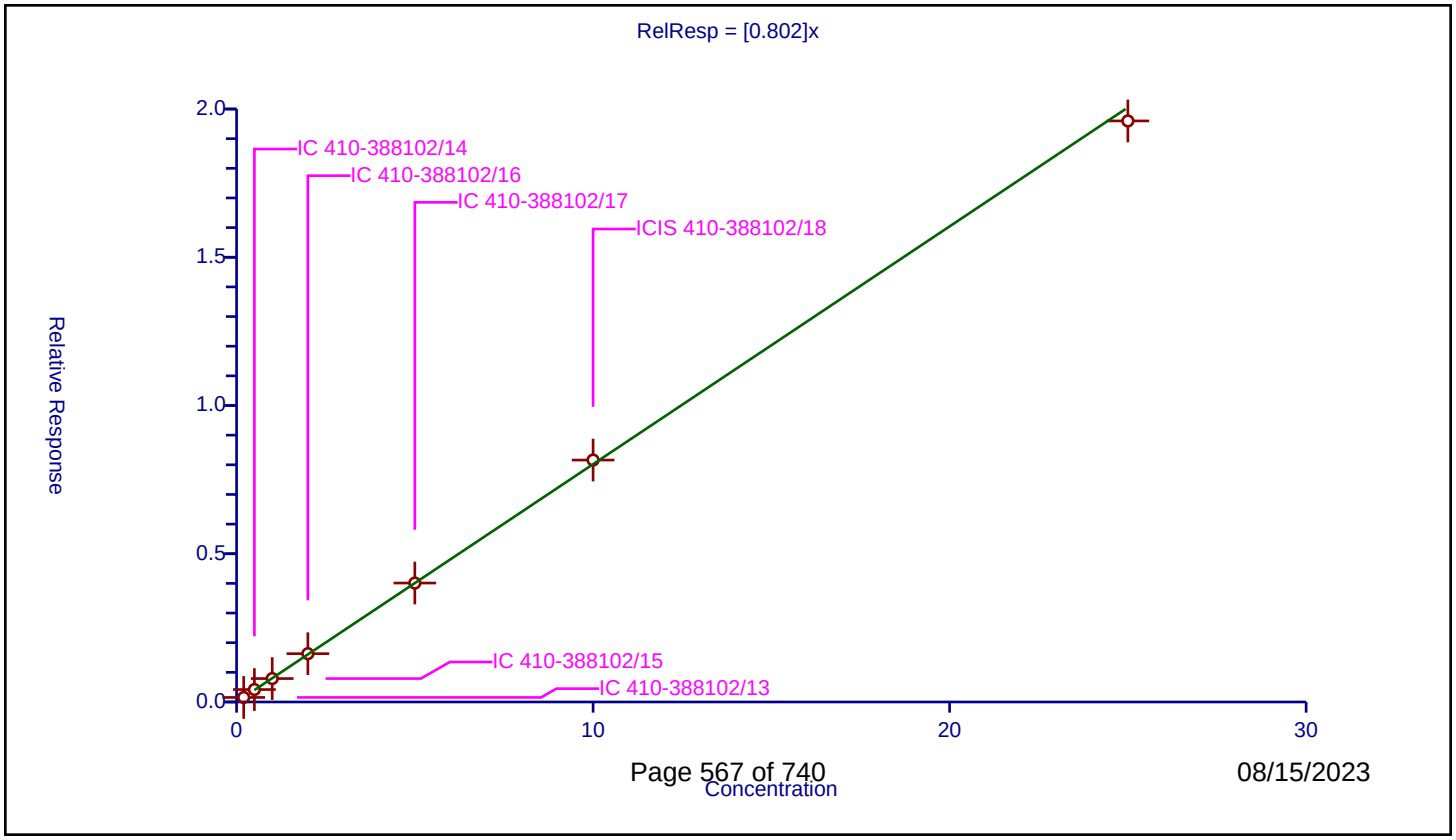
Curve Coefficients

Intercept:	0
Slope:	0.802

Error Coefficients

Standard Error:	1660000
Relative Standard Error:	2.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.153708	10.0	1795291.0	0.768538	Y
2	IC 410-388102/14	0.5	0.419258	10.0	1753956.0	0.838516	Y
3	IC 410-388102/15	1.0	0.790144	10.0	1790586.0	0.790144	Y
4	IC 410-388102/16	2.0	1.629682	10.0	1802566.0	0.814841	Y
5	IC 410-388102/17	5.0	4.011487	10.0	1860774.0	0.802297	Y
6	ICIS 410-388102/18	10.0	8.160119	10.0	1807671.0	0.816012	Y
7	IC 410-388102/19	25.0	19.597851	10.0	1891215.0	0.783914	Y



Calibration / 2-Butanone (MEK)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

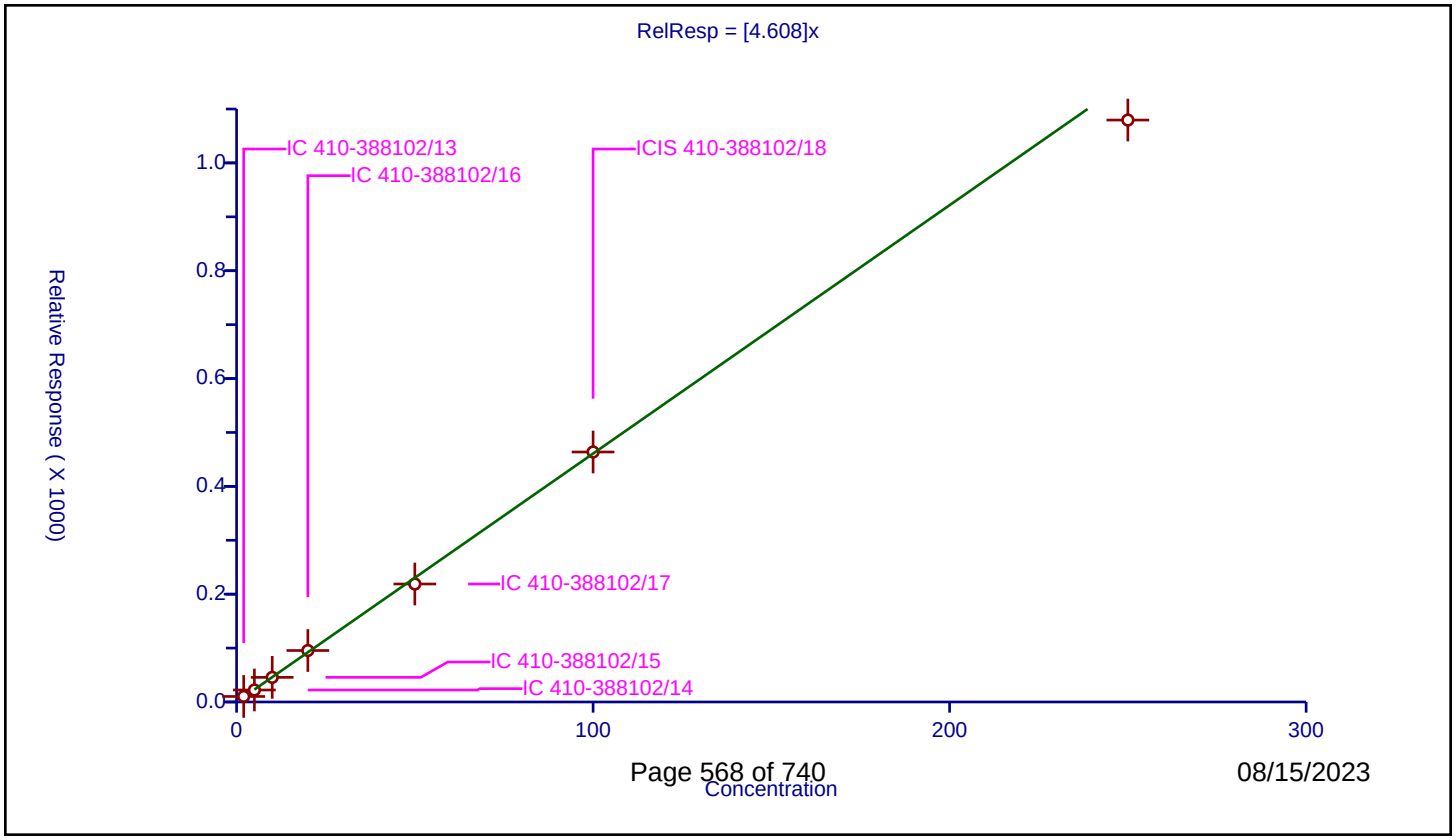
Curve Coefficients

Intercept:	0
Slope:	4.608

Error Coefficients

Standard Error:	1320000
Relative Standard Error:	6.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	2.0	10.264398	50.0	116680.0	5.132199	Y
2	IC 410-388102/14	5.0	22.248826	50.0	132398.0	4.449765	Y
3	IC 410-388102/15	10.0	45.676313	50.0	133555.0	4.567631	Y
4	IC 410-388102/16	20.0	95.486294	50.0	127135.0	4.774315	Y
5	IC 410-388102/17	50.0	218.872871	50.0	139221.0	4.377457	Y
6	ICIS 410-388102/18	100.0	463.728159	50.0	130775.0	4.637282	Y
7	IC 410-388102/19	250.0	1079.521292	50.0	134884.0	4.318085	Y



Calibration / cis-1,2-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

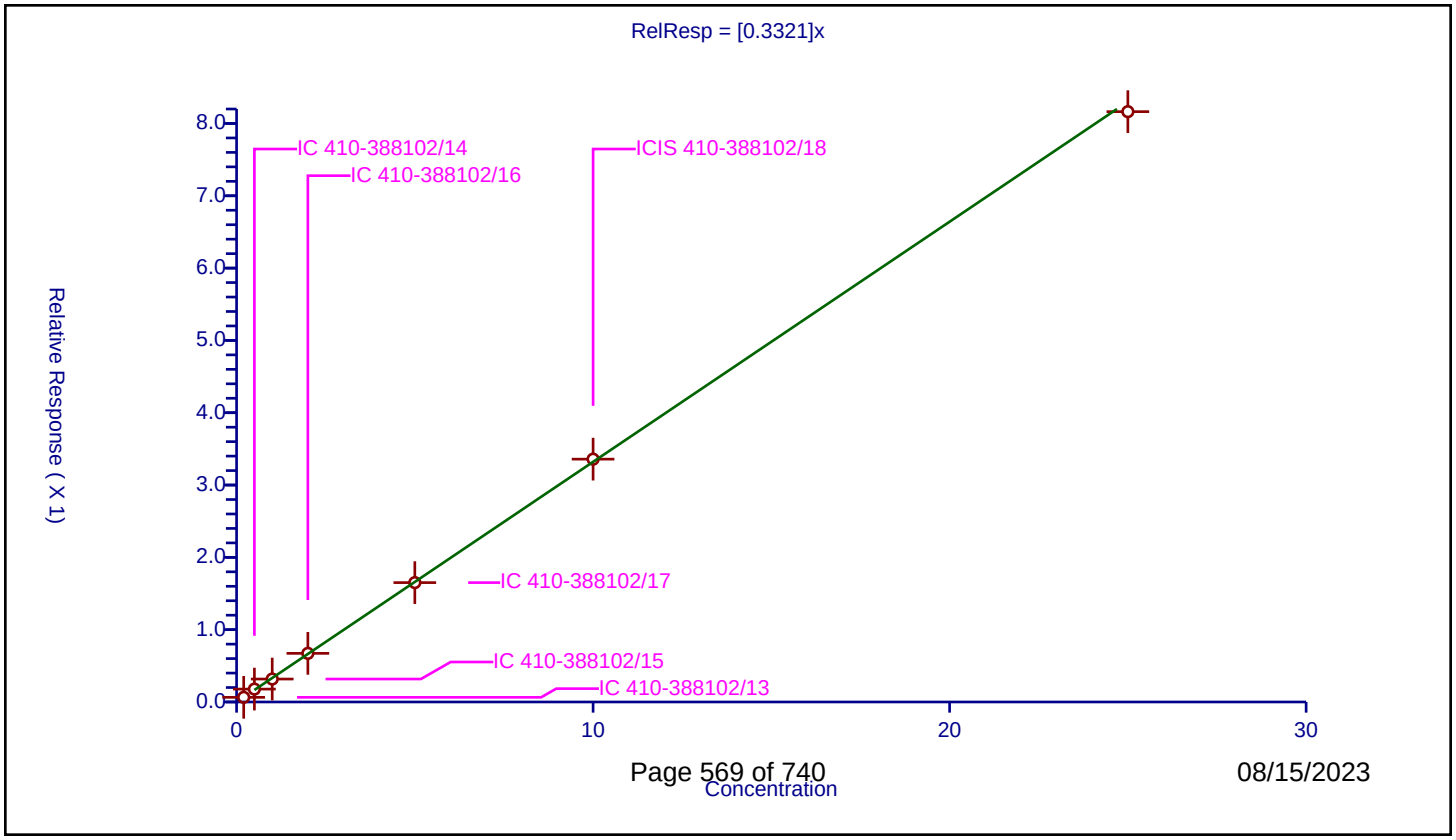
Curve Coefficients

Intercept:	0
Slope:	0.3321

Error Coefficients

Standard Error:	691000
Relative Standard Error:	3.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.064302	10.0	1795291.0	0.321508	Y
2	IC 410-388102/14	0.5	0.17834	10.0	1753956.0	0.356679	Y
3	IC 410-388102/15	1.0	0.317494	10.0	1790586.0	0.317494	Y
4	IC 410-388102/16	2.0	0.672586	10.0	1802566.0	0.336293	Y
5	IC 410-388102/17	5.0	1.65084	10.0	1860774.0	0.330168	Y
6	ICIS 410-388102/18	10.0	3.357984	10.0	1807671.0	0.335798	Y
7	IC 410-388102/19	25.0	8.163477	10.0	1891215.0	0.326539	Y



Calibration / 2,2-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

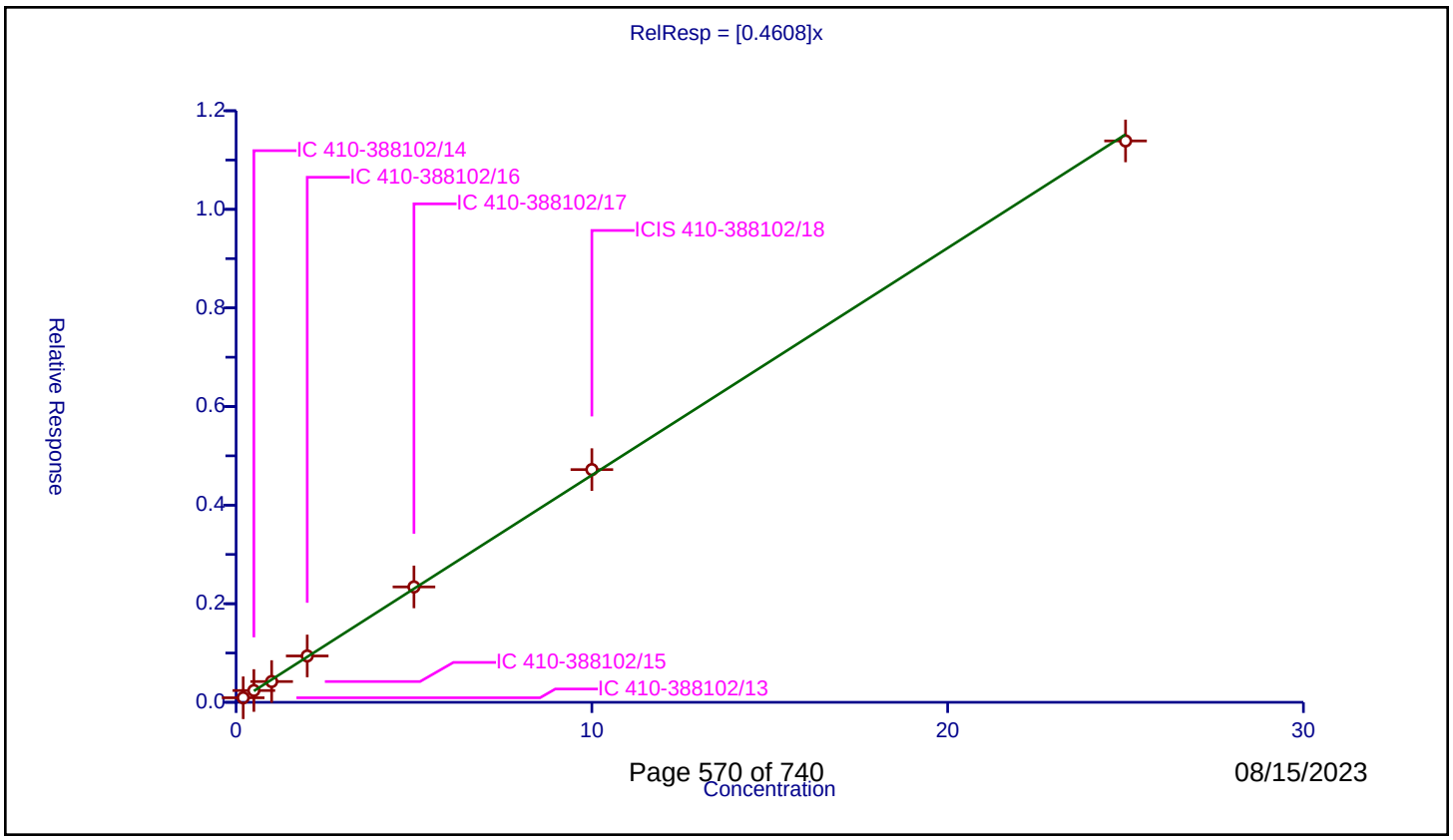
Curve Coefficients

Intercept:	0
Slope:	0.4608

Error Coefficients

Standard Error:	965000
Relative Standard Error:	4.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.091963	10.0	1795291.0	0.459814	Y
2	IC 410-388102/14	0.5	0.239139	10.0	1753956.0	0.478279	Y
3	IC 410-388102/15	1.0	0.42146	10.0	1790586.0	0.42146	Y
4	IC 410-388102/16	2.0	0.940243	10.0	1802566.0	0.470121	Y
5	IC 410-388102/17	5.0	2.340752	10.0	1860774.0	0.46815	Y
6	ICIS 410-388102/18	10.0	4.720754	10.0	1807671.0	0.472075	Y
7	IC 410-388102/19	25.0	11.387886	10.0	1891215.0	0.455515	Y



Calibration / Propionitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

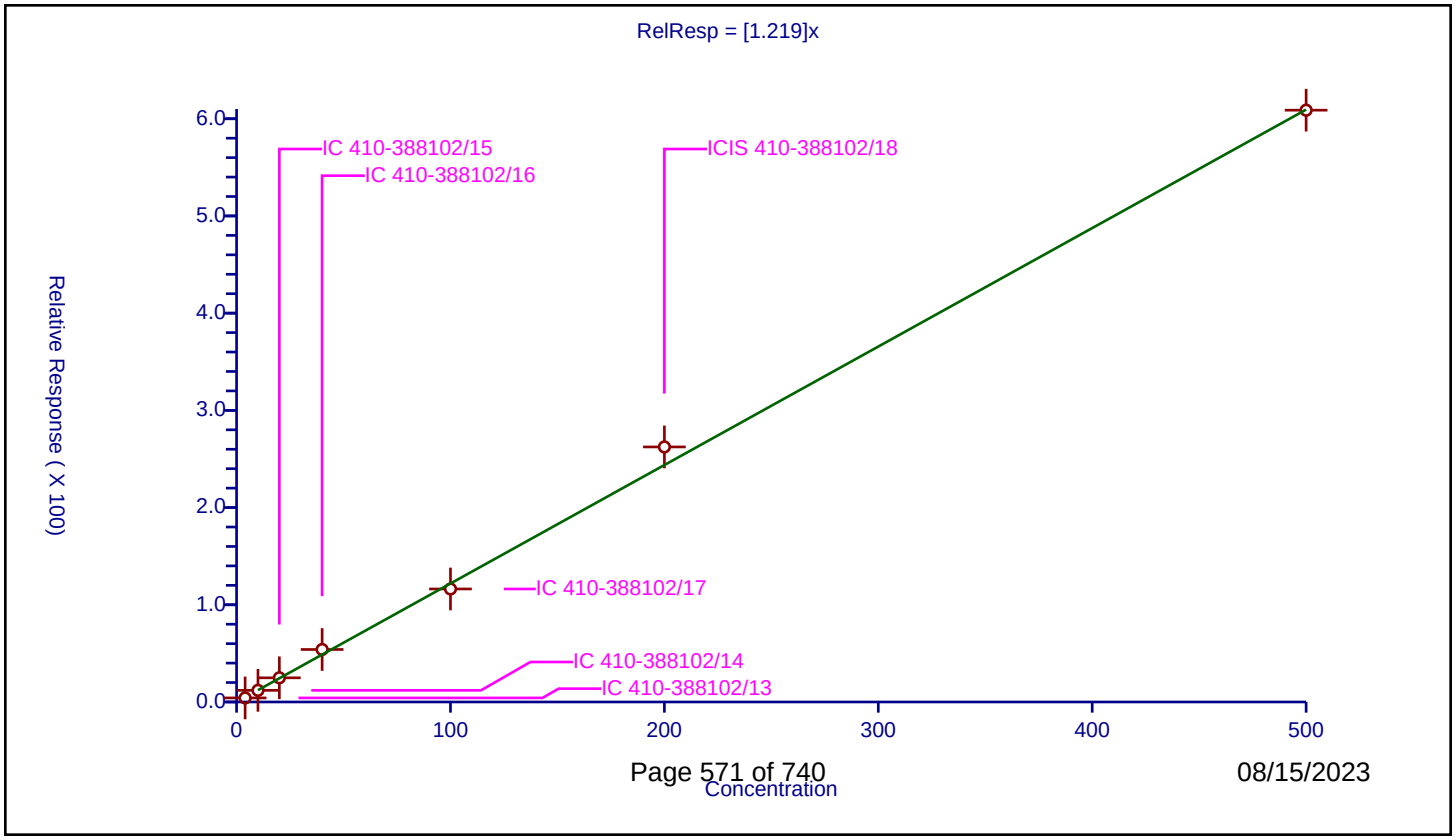
Curve Coefficients

Intercept:	0
Slope:	1.219

Error Coefficients

Standard Error:	741000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	4.0	4.192235	50.0	116680.0	1.048059	Y
2	IC 410-388102/14	10.0	11.976767	50.0	132398.0	1.197677	Y
3	IC 410-388102/15	20.0	24.872899	50.0	133555.0	1.243645	Y
4	IC 410-388102/16	40.0	54.000079	50.0	127135.0	1.350002	Y
5	IC 410-388102/17	100.0	116.266224	50.0	139221.0	1.162662	Y
6	ICIS 410-388102/18	200.0	262.363984	50.0	130775.0	1.31182	Y
7	IC 410-388102/19	500.0	608.780878	50.0	134884.0	1.217562	Y



Calibration / Methacrylonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

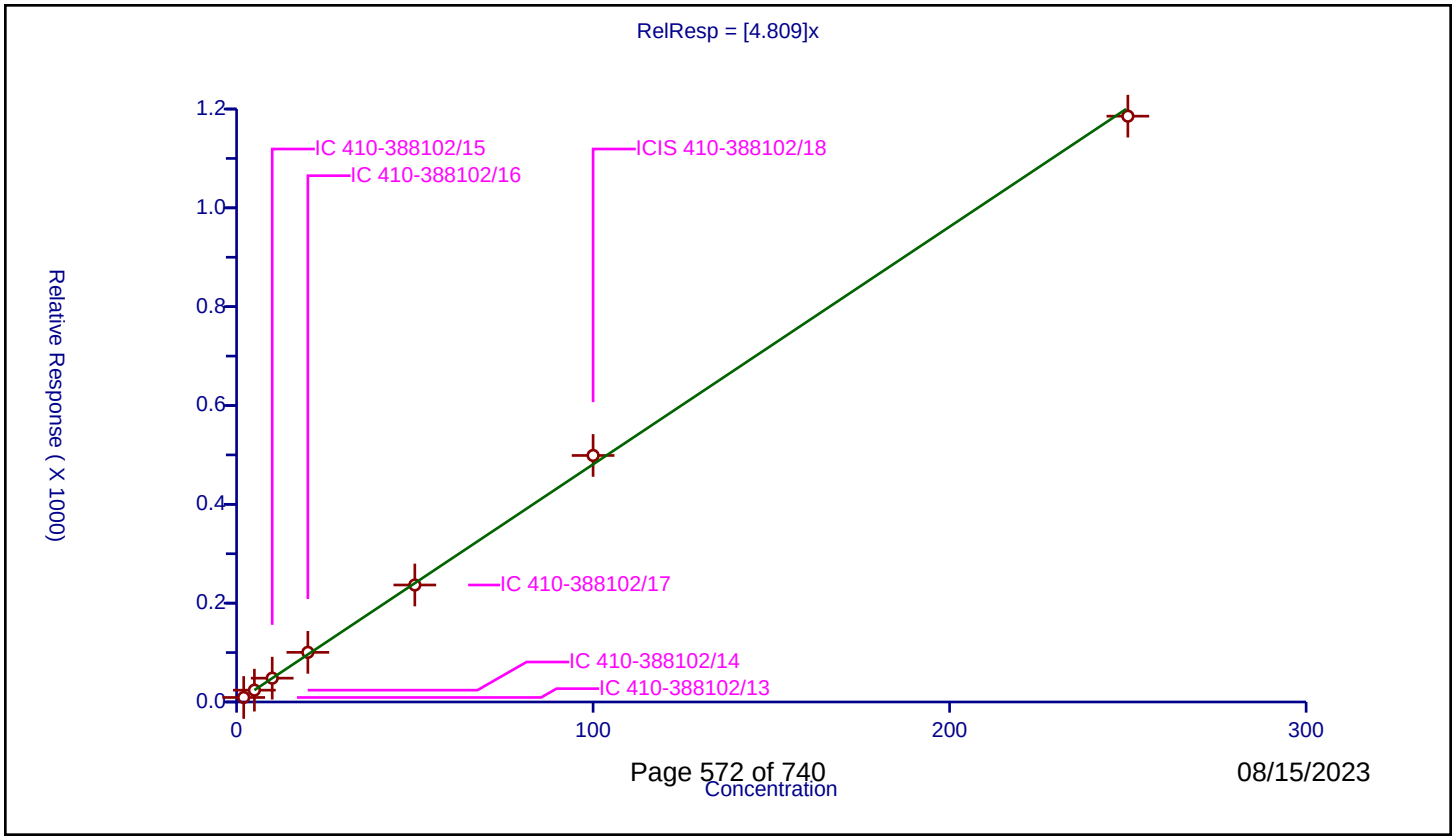
Curve Coefficients

Intercept:	0
Slope:	4.809

Error Coefficients

Standard Error:	1440000
Relative Standard Error:	3.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	2.0	9.1271	50.0	116680.0	4.56355	Y
2	IC 410-388102/14	5.0	23.958821	50.0	132398.0	4.791764	Y
3	IC 410-388102/15	10.0	48.209726	50.0	133555.0	4.820973	Y
4	IC 410-388102/16	20.0	100.431431	50.0	127135.0	5.021572	Y
5	IC 410-388102/17	50.0	236.784321	50.0	139221.0	4.735686	Y
6	ICIS 410-388102/18	100.0	498.904225	50.0	130775.0	4.989042	Y
7	IC 410-388102/19	250.0	1185.557961	50.0	134884.0	4.742232	Y



Calibration / Chlorobromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

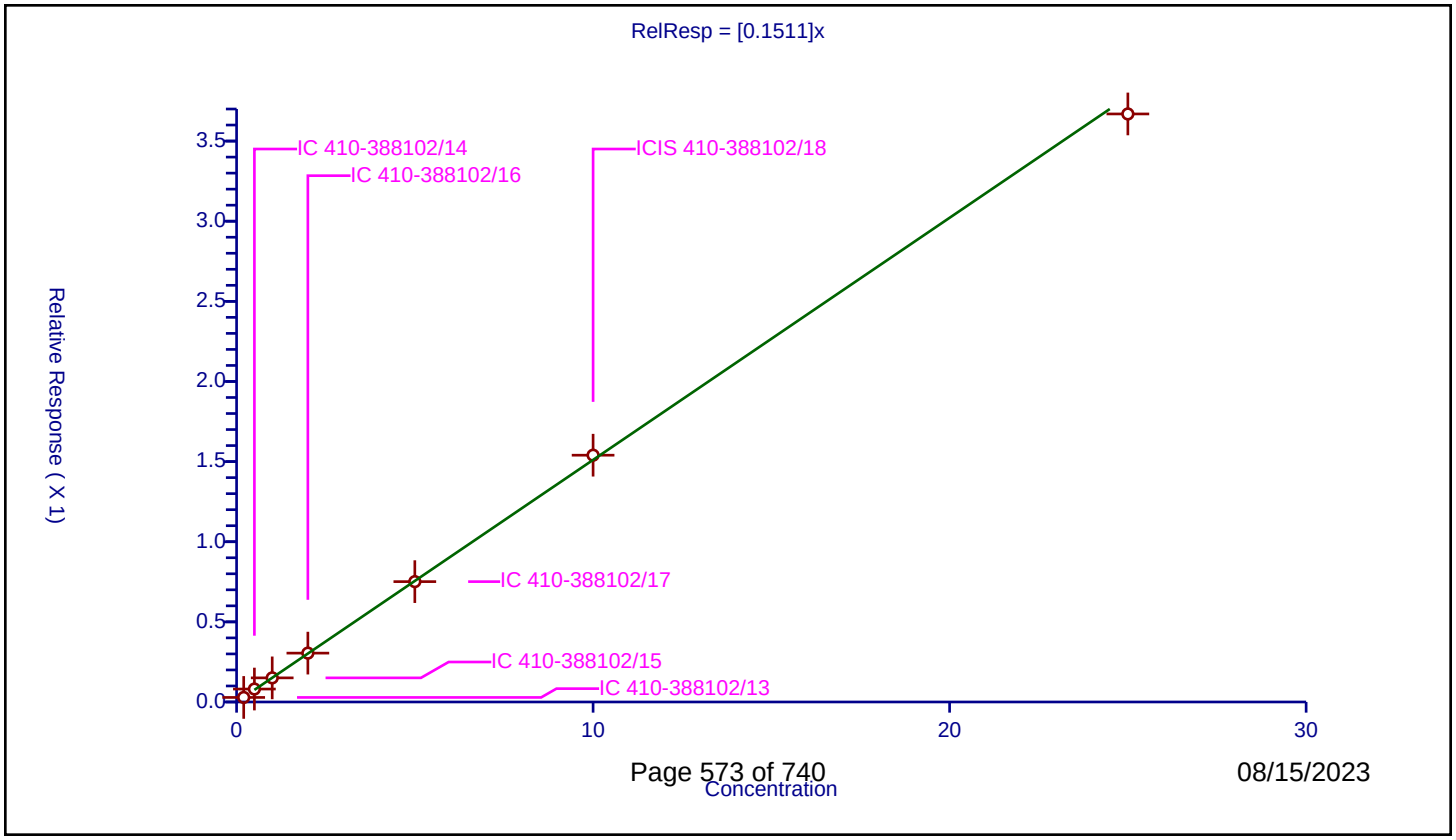
Curve Coefficients

Intercept:	0
Slope:	0.1511

Error Coefficients

Standard Error:	312000
Relative Standard Error:	4.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.028397	10.0	1795291.0	0.141983	Y
2	IC 410-388102/14	0.5	0.080823	10.0	1753956.0	0.161646	Y
3	IC 410-388102/15	1.0	0.150431	10.0	1790586.0	0.150431	Y
4	IC 410-388102/16	2.0	0.304882	10.0	1802566.0	0.152441	Y
5	IC 410-388102/17	5.0	0.751026	10.0	1860774.0	0.150205	Y
6	ICIS 410-388102/18	10.0	1.539893	10.0	1807671.0	0.153989	Y
7	IC 410-388102/19	25.0	3.669154	10.0	1891215.0	0.146766	Y



Calibration / Tetrahydrofuran

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

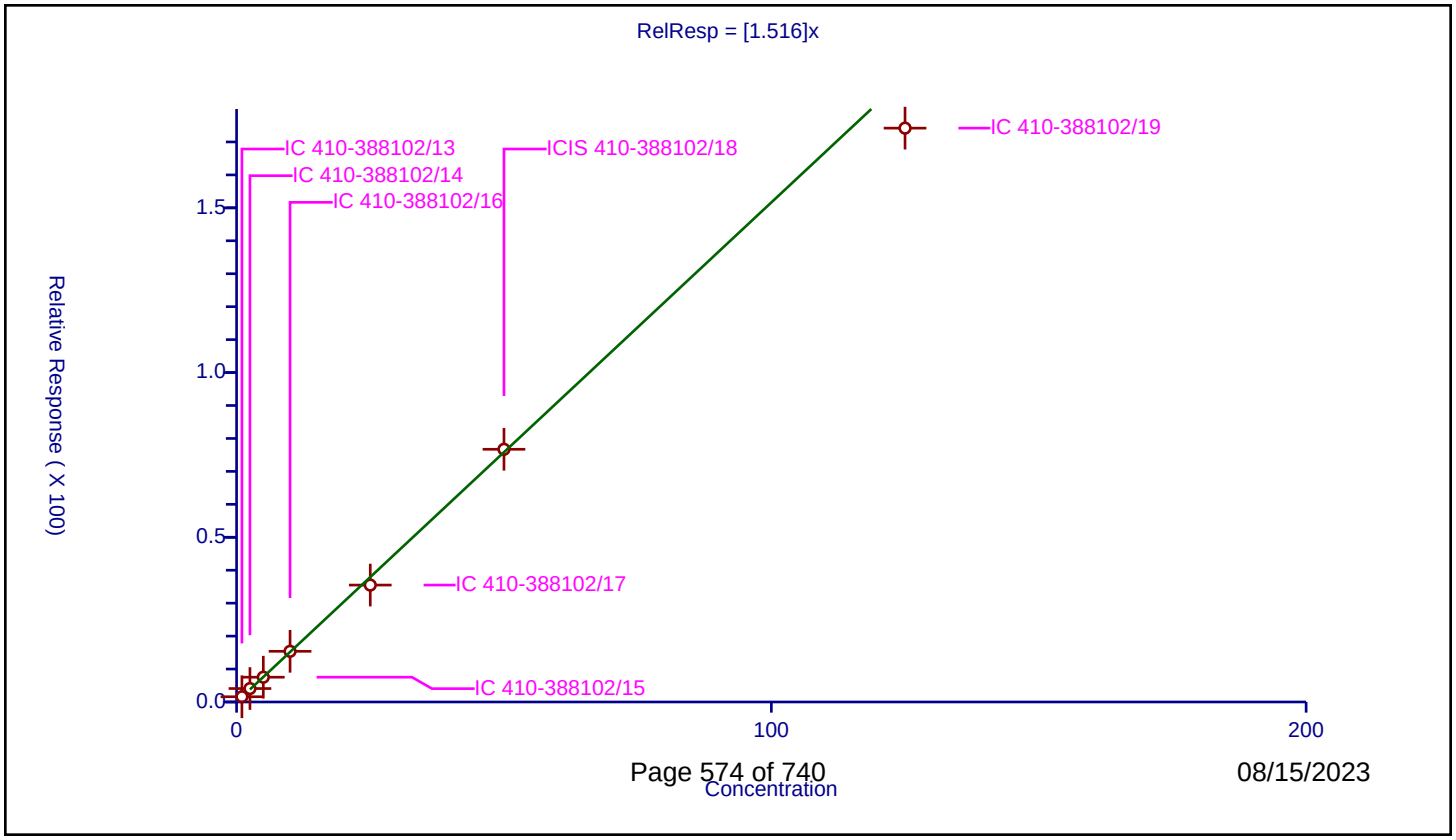
Curve Coefficients

Intercept:	0
Slope:	1.516

Error Coefficients

Standard Error:	213000
Relative Standard Error:	5.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	1.0	1.591104	50.0	116680.0	1.591104	Y
2	IC 410-388102/14	2.5	4.082766	50.0	132398.0	1.633106	Y
3	IC 410-388102/15	5.0	7.523118	50.0	133555.0	1.504624	Y
4	IC 410-388102/16	10.0	15.387187	50.0	127135.0	1.538719	Y
5	IC 410-388102/17	25.0	35.490336	50.0	139221.0	1.419613	Y
6	ICIS 410-388102/18	50.0	76.712292	50.0	130775.0	1.534246	Y
7	IC 410-388102/19	125.0	174.197459	50.0	134884.0	1.39358	Y



Calibration / Chloroform

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

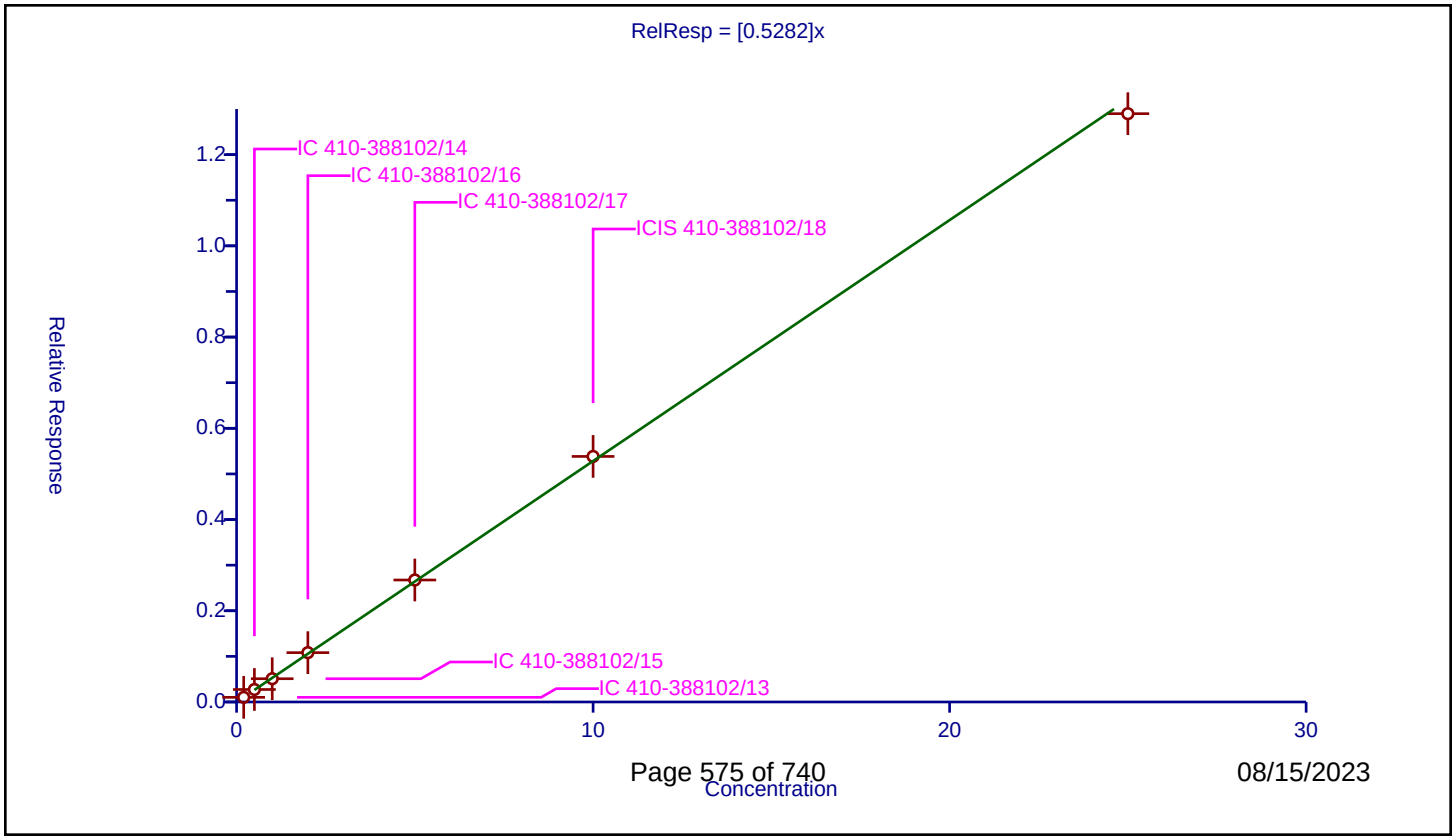
Curve Coefficients

Intercept:	0
Slope:	0.5282

Error Coefficients

Standard Error:	1090000
Relative Standard Error:	3.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.101967	10.0	1795291.0	0.509834	Y
2	IC 410-388102/14	0.5	0.273713	10.0	1753956.0	0.547425	Y
3	IC 410-388102/15	1.0	0.510241	10.0	1790586.0	0.510241	Y
4	IC 410-388102/16	2.0	1.081991	10.0	1802566.0	0.540995	Y
5	IC 410-388102/17	5.0	2.674167	10.0	1860774.0	0.534833	Y
6	ICIS 410-388102/18	10.0	5.383275	10.0	1807671.0	0.538327	Y
7	IC 410-388102/19	25.0	12.897952	10.0	1891215.0	0.515918	Y



Calibration / Dibromofluoromethane (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

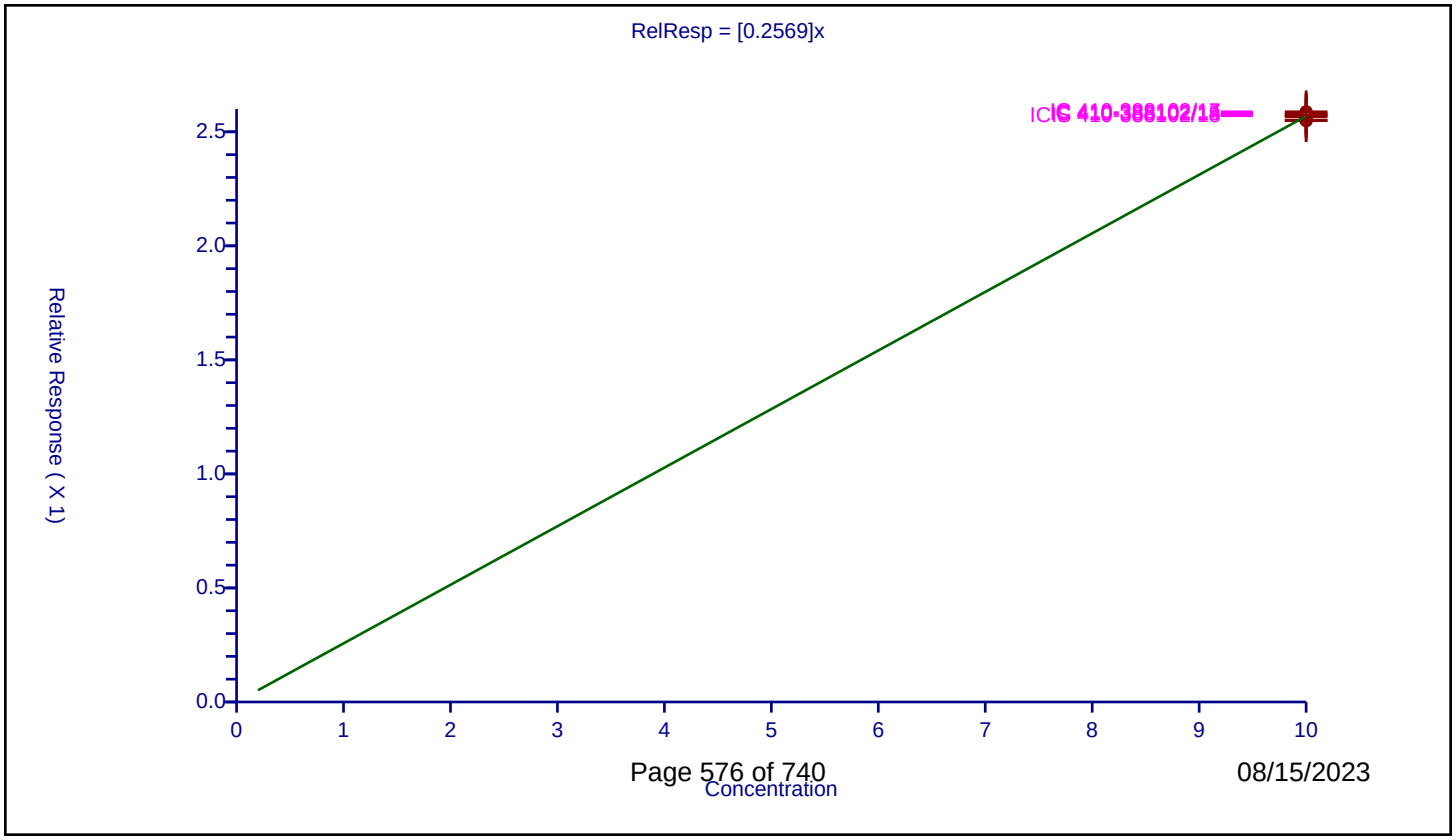
Curve Coefficients

Intercept:	0
Slope:	0.2569

Error Coefficients

Standard Error:	504000
Relative Standard Error:	0.6
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	10.0	2.565879	10.0	1795291.0	0.256588	Y
2	IC 410-388102/14	10.0	2.579084	10.0	1753956.0	0.257908	Y
3	IC 410-388102/15	10.0	2.576352	10.0	1790586.0	0.257635	Y
4	IC 410-388102/16	10.0	2.551285	10.0	1802566.0	0.255129	Y
5	IC 410-388102/17	10.0	2.587896	10.0	1860774.0	0.25879	Y
6	ICIS 410-388102/18	10.0	2.570451	10.0	1807671.0	0.257045	Y
7	IC 410-388102/19	10.0	2.549023	10.0	1891215.0	0.254902	Y



Calibration / 1,1,1-Trichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

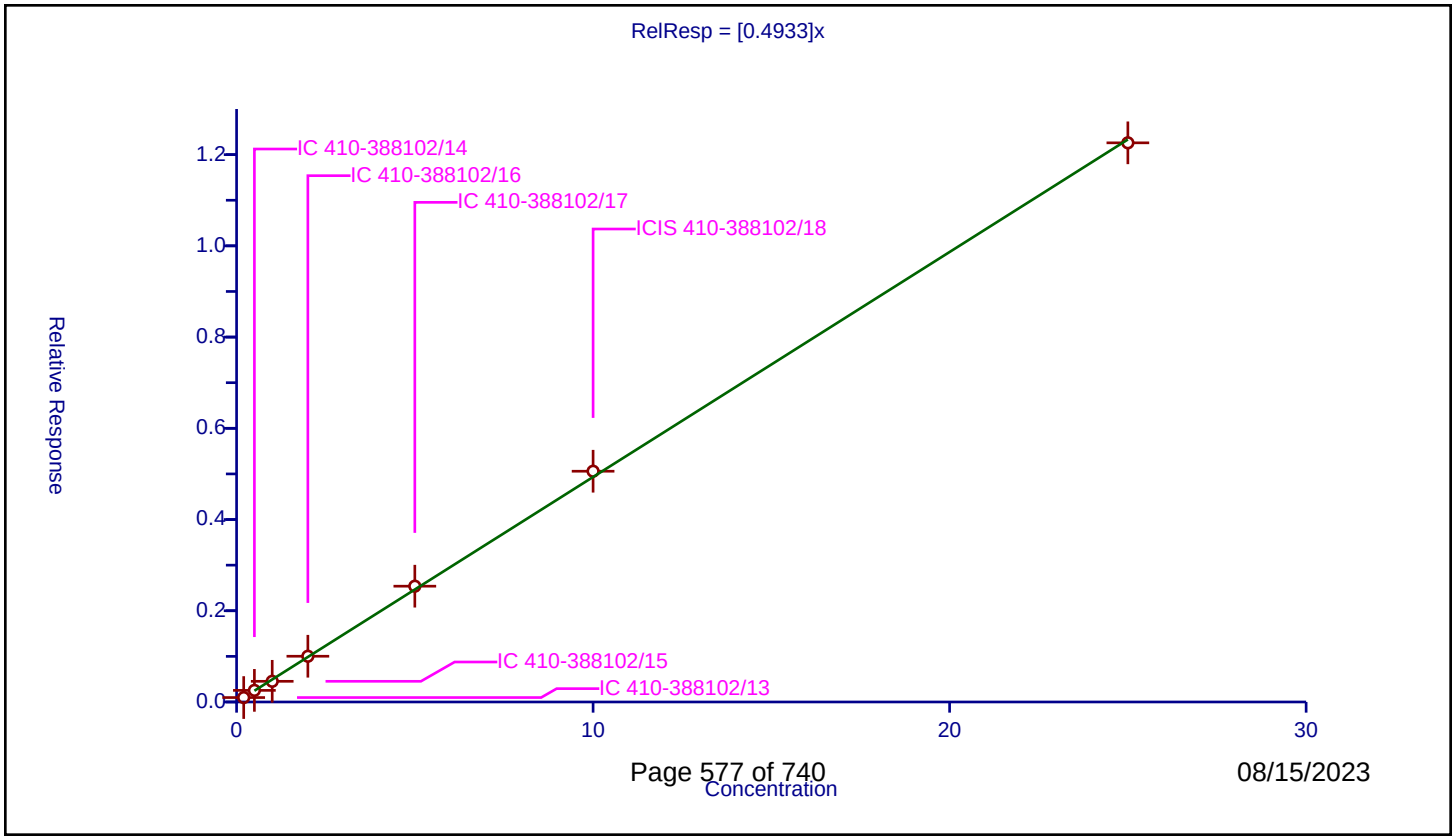
Curve Coefficients

Intercept:	0
Slope:	0.4933

Error Coefficients

Standard Error:	1040000
Relative Standard Error:	4.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.097121	10.0	1795291.0	0.485604	Y
2	IC 410-388102/14	0.5	0.254317	10.0	1753956.0	0.508633	Y
3	IC 410-388102/15	1.0	0.45322	10.0	1790586.0	0.45322	Y
4	IC 410-388102/16	2.0	1.002898	10.0	1802566.0	0.501449	Y
5	IC 410-388102/17	5.0	2.538551	10.0	1860774.0	0.50771	Y
6	ICIS 410-388102/18	10.0	5.058813	10.0	1807671.0	0.505881	Y
7	IC 410-388102/19	25.0	12.258855	10.0	1891215.0	0.490354	Y



Calibration / Cyclohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

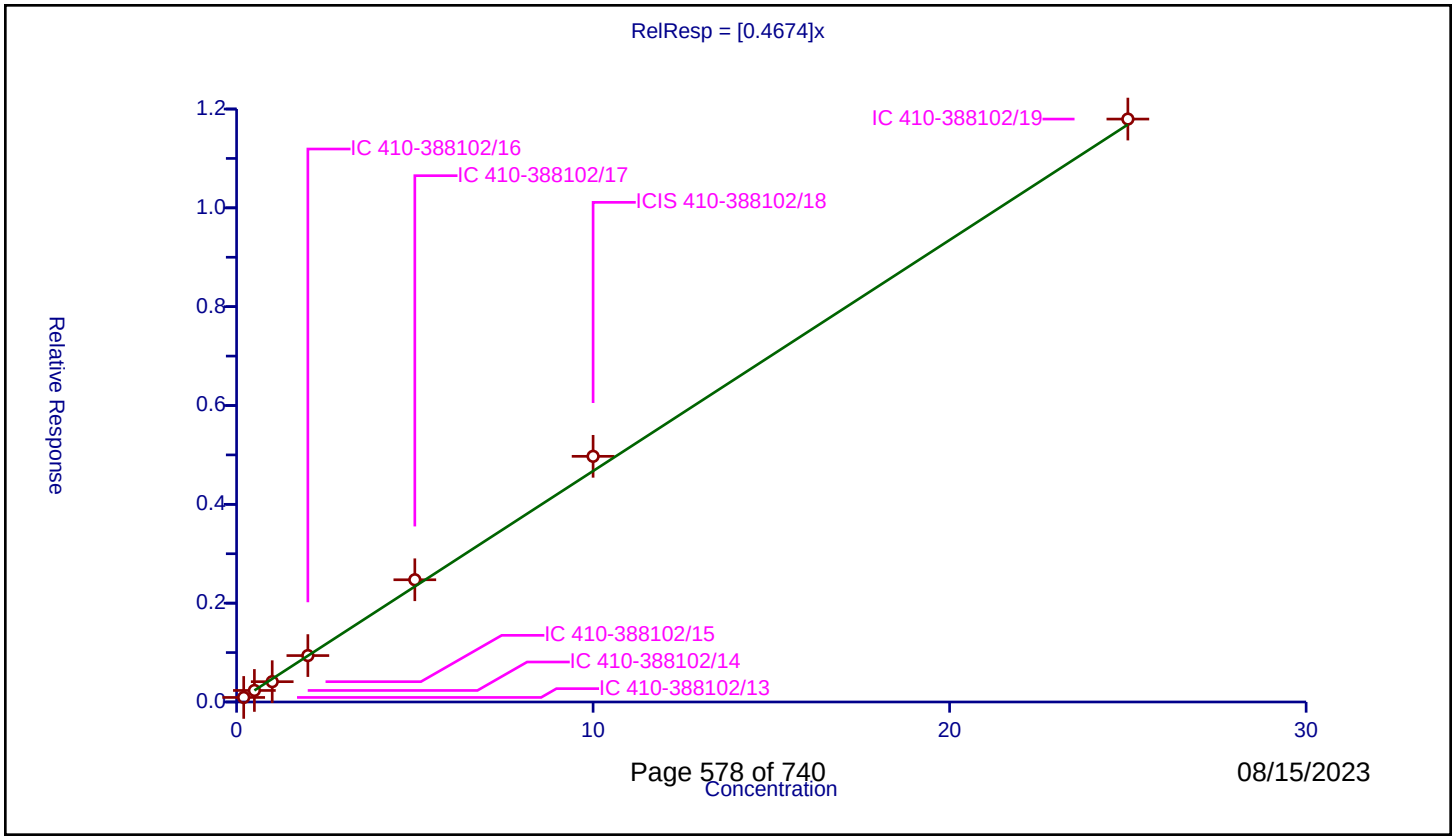
Curve Coefficients

Intercept:	0
Slope:	0.4674

Error Coefficients

Standard Error:	1000000
Relative Standard Error:	6.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.092241	10.0	1795291.0	0.461207	Y
2	IC 410-388102/14	0.5	0.233176	10.0	1753956.0	0.466351	Y
3	IC 410-388102/15	1.0	0.411184	10.0	1790586.0	0.411184	Y
4	IC 410-388102/16	2.0	0.939194	10.0	1802566.0	0.469597	Y
5	IC 410-388102/17	5.0	2.473272	10.0	1860774.0	0.494654	Y
6	ICIS 410-388102/18	10.0	4.971292	10.0	1807671.0	0.497129	Y
7	IC 410-388102/19	25.0	11.796607	10.0	1891215.0	0.471864	Y



Calibration / 1,1-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

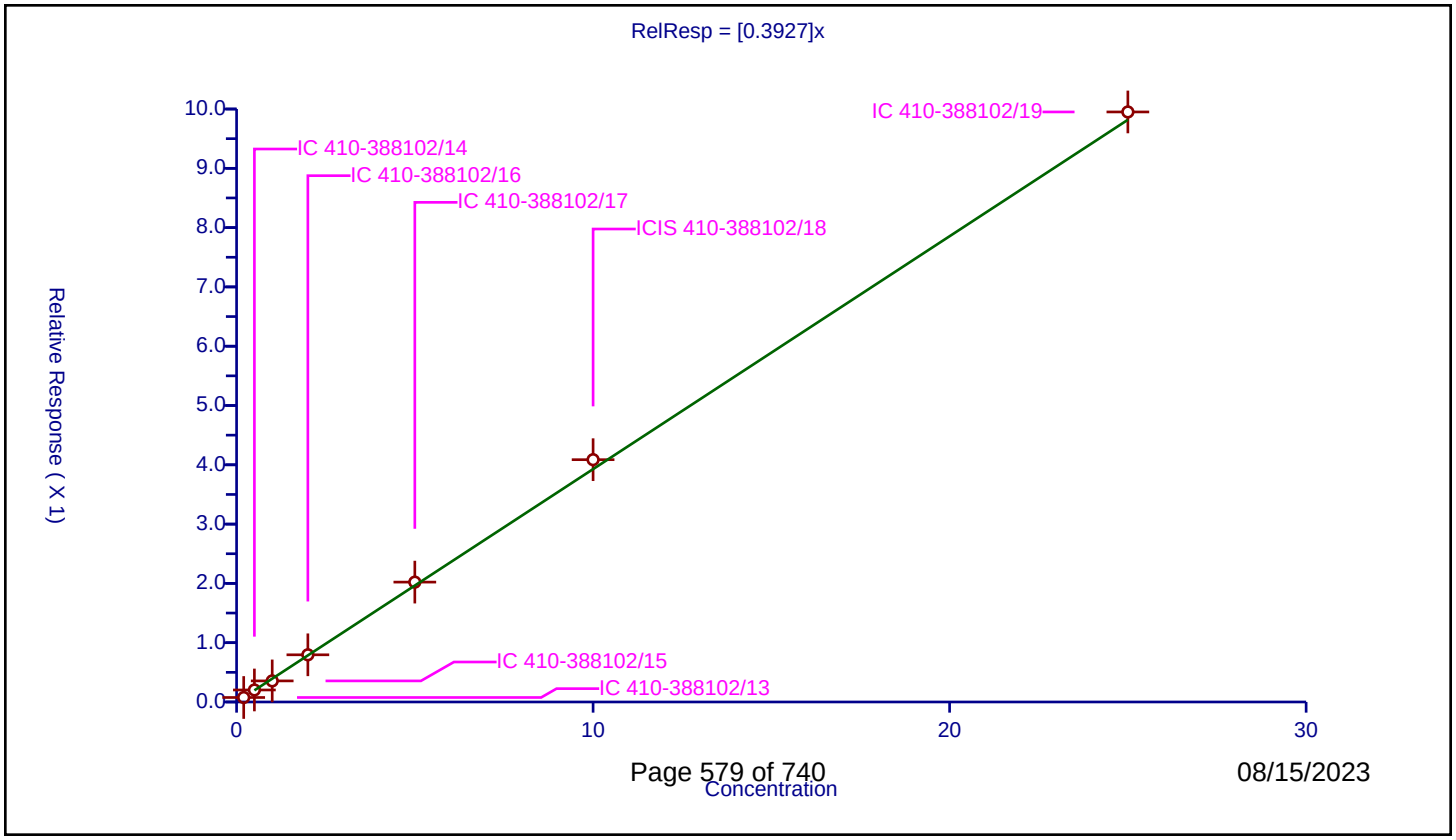
Curve Coefficients

Intercept:	0
Slope:	0.3927

Error Coefficients

Standard Error:	842000
Relative Standard Error:	4.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.075943	10.0	1795291.0	0.379716	Y
2	IC 410-388102/14	0.5	0.202536	10.0	1753956.0	0.405073	Y
3	IC 410-388102/15	1.0	0.355392	10.0	1790586.0	0.355392	Y
4	IC 410-388102/16	2.0	0.795982	10.0	1802566.0	0.397991	Y
5	IC 410-388102/17	5.0	2.021449	10.0	1860774.0	0.40429	Y
6	ICIS 410-388102/18	10.0	4.086169	10.0	1807671.0	0.408617	Y
7	IC 410-388102/19	25.0	9.950476	10.0	1891215.0	0.398019	Y



Calibration / Carbon tetrachloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

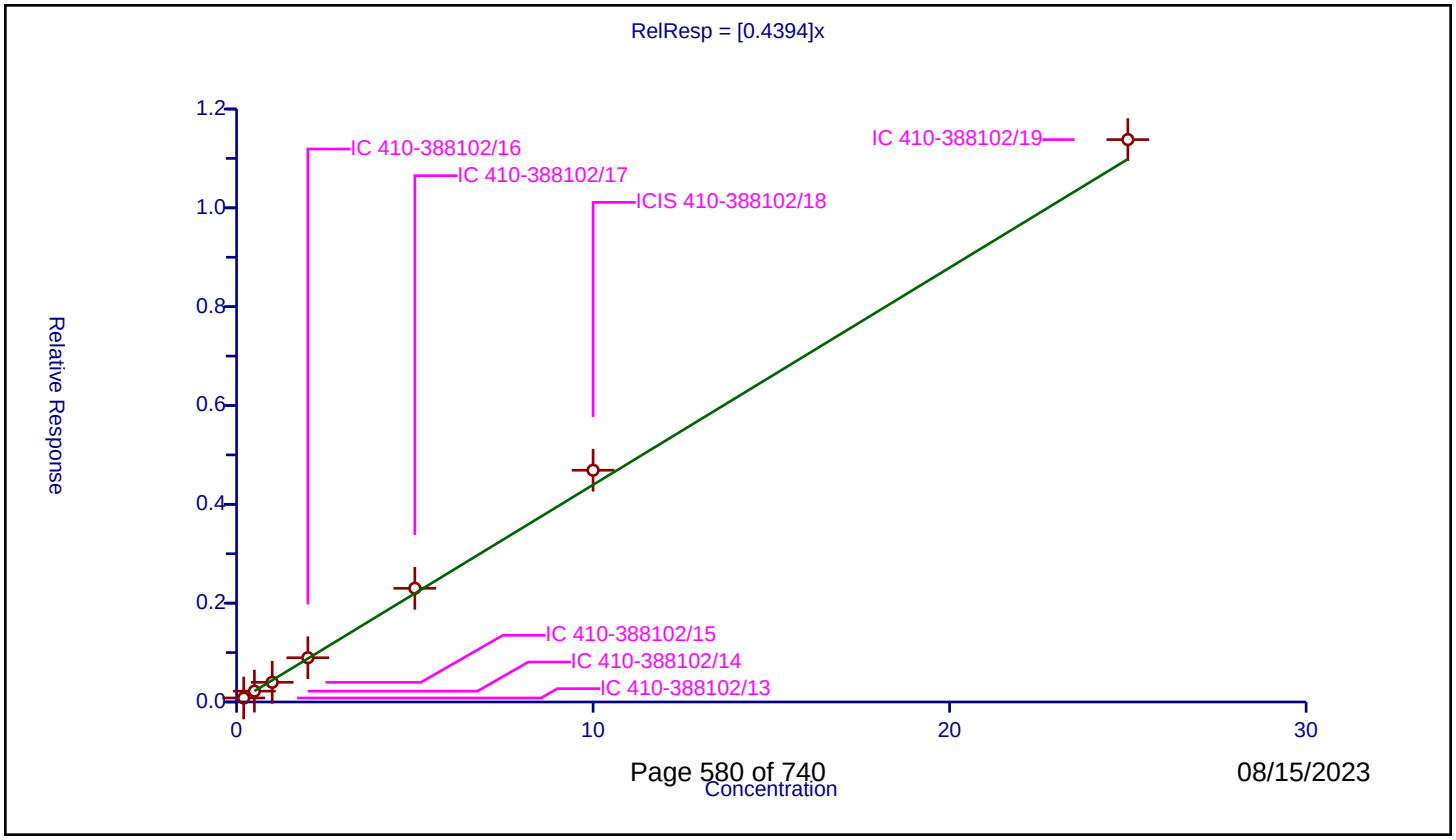
Curve Coefficients

Intercept:	0
Slope:	0.4394

Error Coefficients

Standard Error:	963000
Relative Standard Error:	6.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.081385	10.0	1795291.0	0.406926	Y
2	IC 410-388102/14	0.5	0.219133	10.0	1753956.0	0.438266	Y
3	IC 410-388102/15	1.0	0.398685	10.0	1790586.0	0.398685	Y
4	IC 410-388102/16	2.0	0.895584	10.0	1802566.0	0.447792	Y
5	IC 410-388102/17	5.0	2.301053	10.0	1860774.0	0.460211	Y
6	ICIS 410-388102/18	10.0	4.690107	10.0	1807671.0	0.469011	Y
7	IC 410-388102/19	25.0	11.381133	10.0	1891215.0	0.455245	Y



Calibration / Isobutyl alcohol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

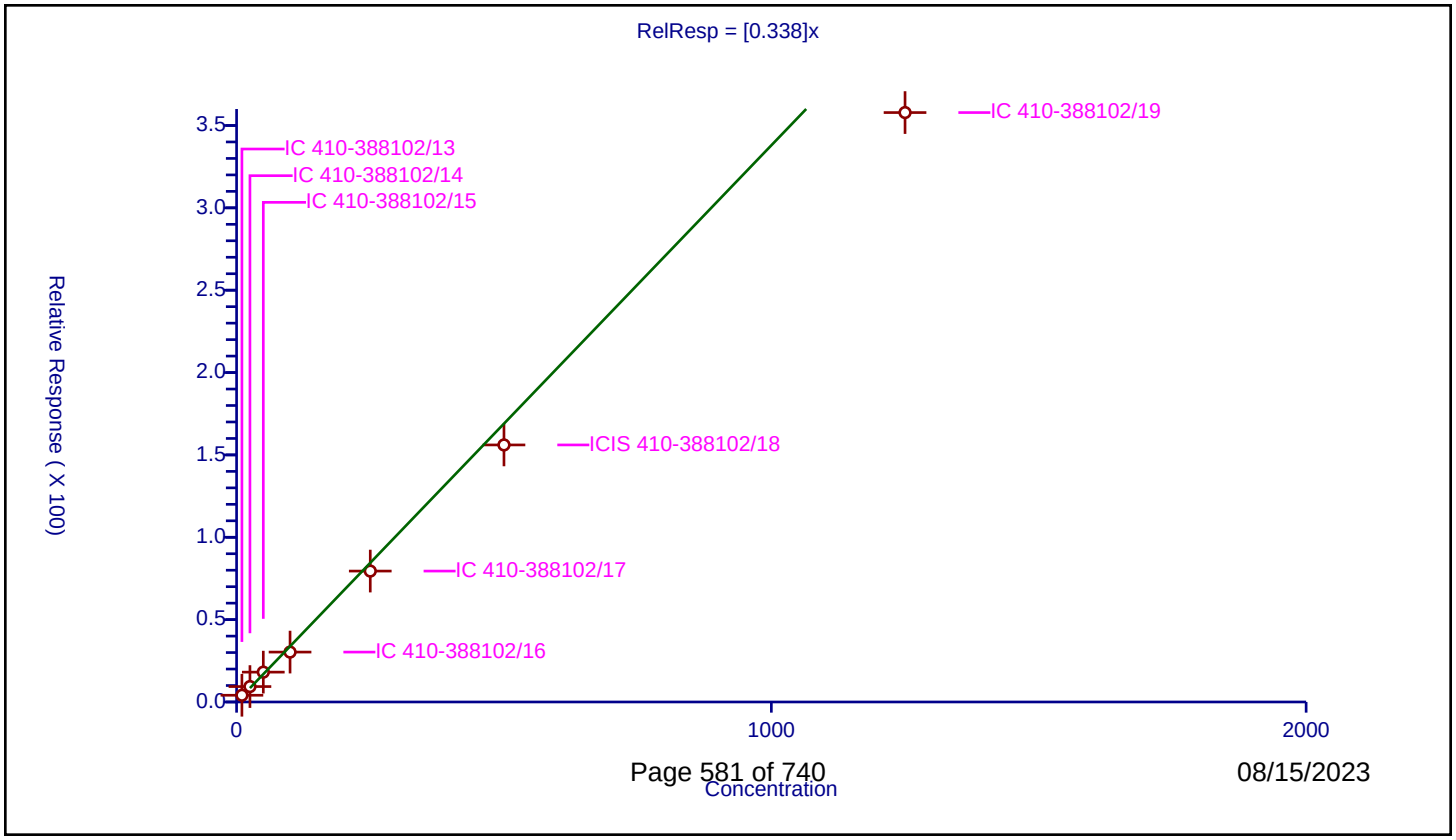
Curve Coefficients

Intercept:	0
Slope:	0.338

Error Coefficients

Standard Error:	439000
Relative Standard Error:	13.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.972

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	10.0	4.091532	50.0	116680.0	0.409153	Y
2	IC 410-388102/14	25.0	9.369855	50.0	132398.0	0.374794	Y
3	IC 410-388102/15	50.0	18.125866	50.0	133555.0	0.362517	Y
4	IC 410-388102/16	100.0	30.291029	50.0	127135.0	0.30291	Y
5	IC 410-388102/17	250.0	79.482262	50.0	139221.0	0.317929	Y
6	ICIS 410-388102/18	500.0	156.063085	50.0	130775.0	0.312126	Y
7	IC 410-388102/19	1250.0	357.849708	50.0	134884.0	0.28628	Y



Calibration / 1,2-Dichloroethane-d4 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

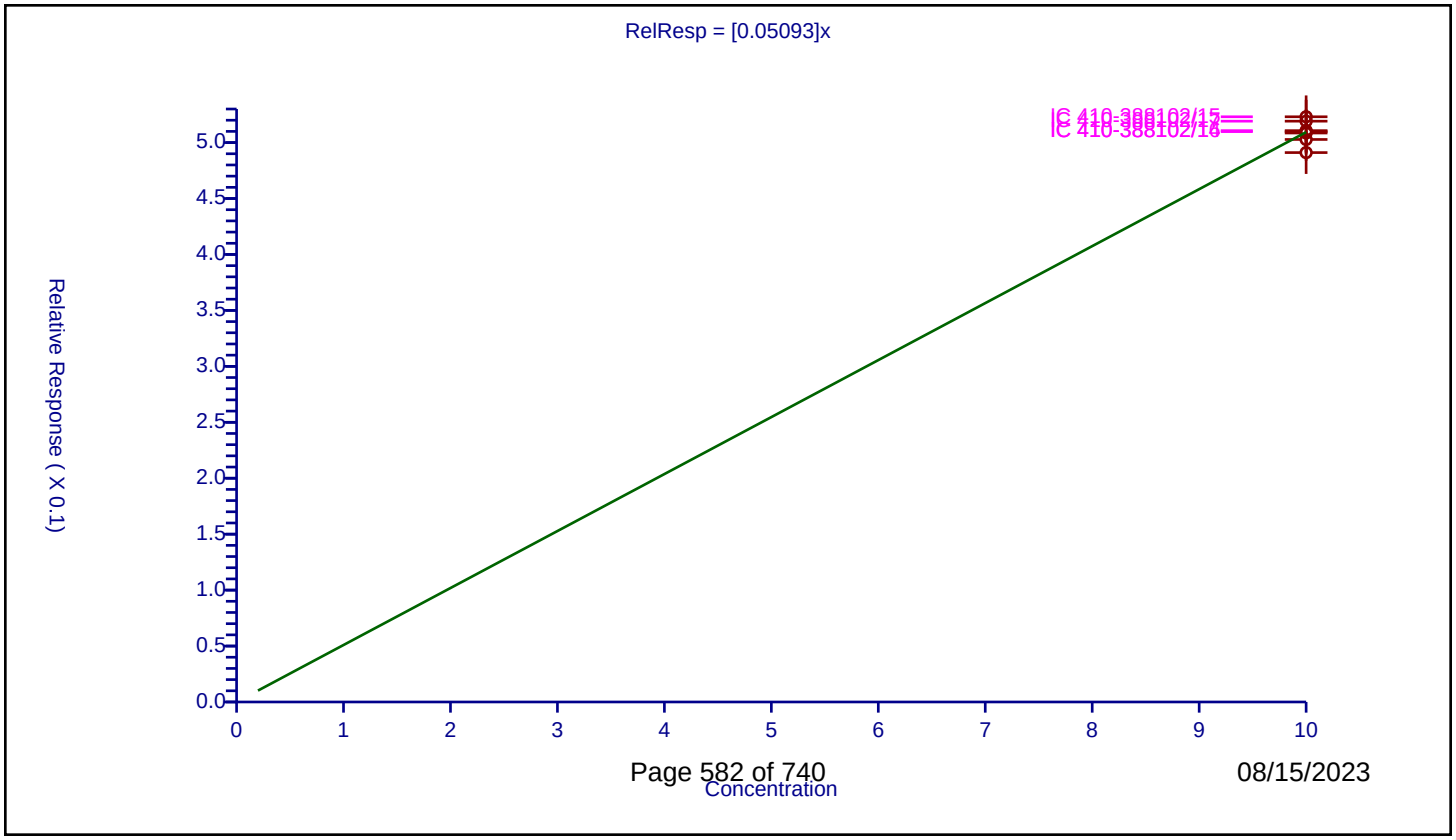
Curve Coefficients

Intercept:	0
Slope:	0.05093

Error Coefficients

Standard Error:	99800
Relative Standard Error:	2.1
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0.000000000000000111

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	10.0	0.502771	10.0	1795291.0	0.050277	Y
2	IC 410-388102/14	10.0	0.509785	10.0	1753956.0	0.050978	Y
3	IC 410-388102/15	10.0	0.523063	10.0	1790586.0	0.052306	Y
4	IC 410-388102/16	10.0	0.510678	10.0	1802566.0	0.051068	Y
5	IC 410-388102/17	10.0	0.519139	10.0	1860774.0	0.051914	Y
6	ICIS 410-388102/18	10.0	0.508549	10.0	1807671.0	0.050855	Y
7	IC 410-388102/19	10.0	0.491044	10.0	1891215.0	0.049104	Y



Calibration / Benzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

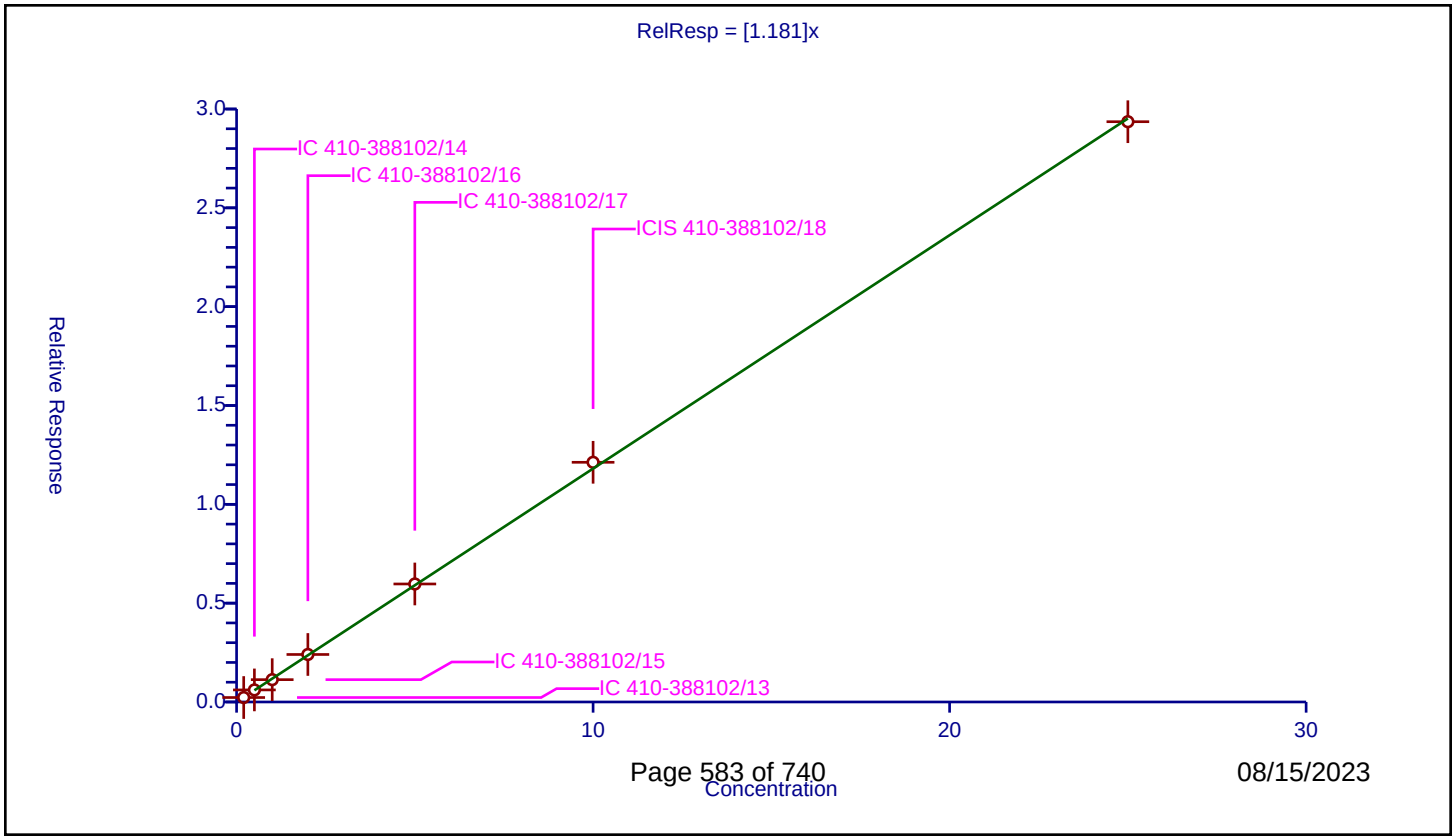
Curve Coefficients

Intercept:	0
Slope:	1.181

Error Coefficients

Standard Error:	2490000
Relative Standard Error:	3.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.226476	10.0	1795291.0	1.132379	Y
2	IC 410-388102/14	0.5	0.610386	10.0	1753956.0	1.220772	Y
3	IC 410-388102/15	1.0	1.129312	10.0	1790586.0	1.129312	Y
4	IC 410-388102/16	2.0	2.403762	10.0	1802566.0	1.201881	Y
5	IC 410-388102/17	5.0	5.970338	10.0	1860774.0	1.194068	Y
6	ICIS 410-388102/18	10.0	12.126327	10.0	1807671.0	1.212633	Y
7	IC 410-388102/19	25.0	29.357683	10.0	1891215.0	1.174307	Y



Calibration / 1,2-Dichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

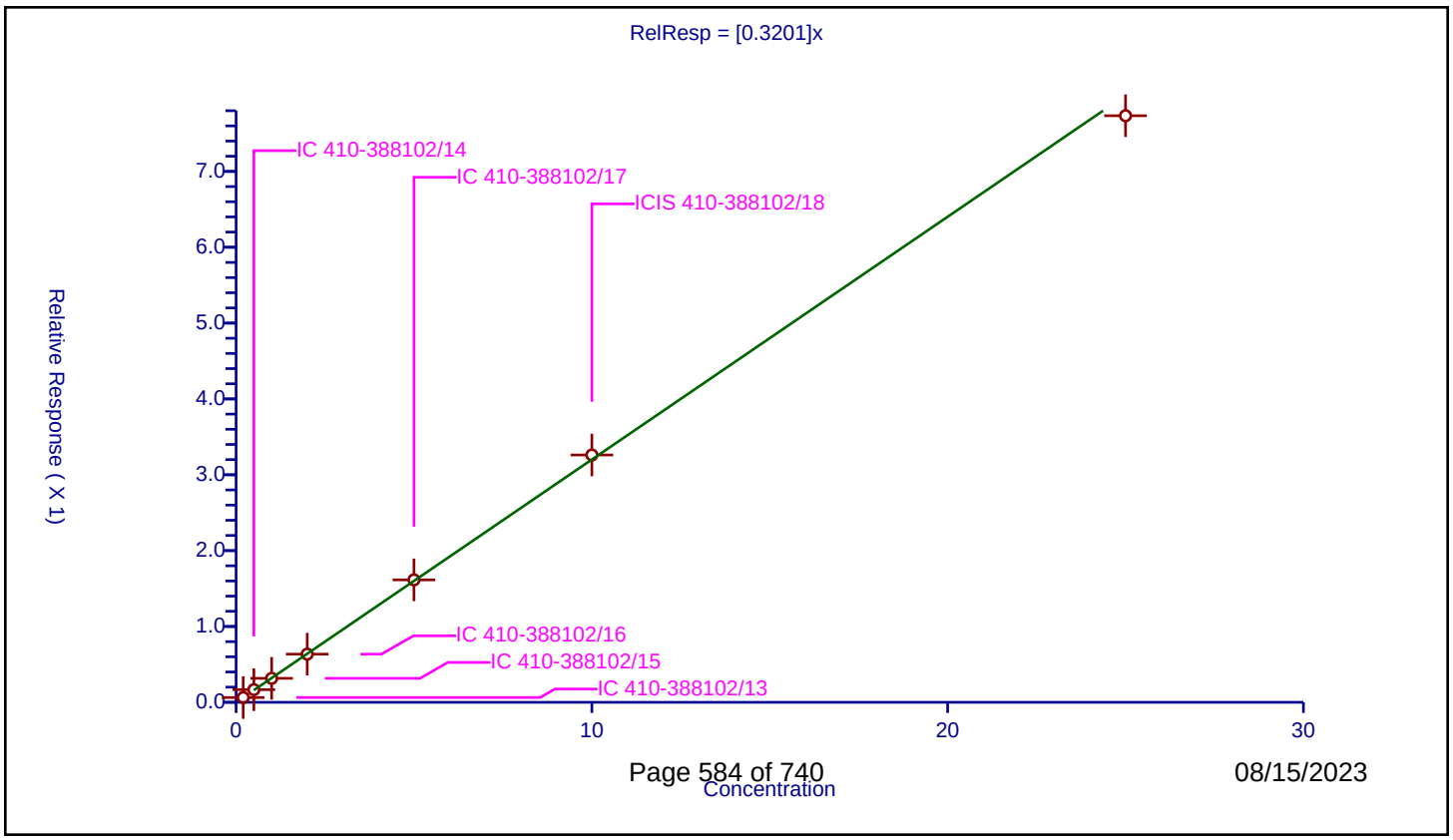
Curve Coefficients

Intercept:	0
Slope:	0.3201

Error Coefficients

Standard Error:	658000
Relative Standard Error:	2.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.062931	10.0	1795291.0	0.314657	Y
2	IC 410-388102/14	0.5	0.166954	10.0	1753956.0	0.333908	Y
3	IC 410-388102/15	1.0	0.316181	10.0	1790586.0	0.316181	Y
4	IC 410-388102/16	2.0	0.635194	10.0	1802566.0	0.317597	Y
5	IC 410-388102/17	5.0	1.614511	10.0	1860774.0	0.322902	Y
6	ICIS 410-388102/18	10.0	3.260903	10.0	1807671.0	0.32609	Y
7	IC 410-388102/19	25.0	7.734404	10.0	1891215.0	0.309376	Y



Calibration / Tert-amyl methyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

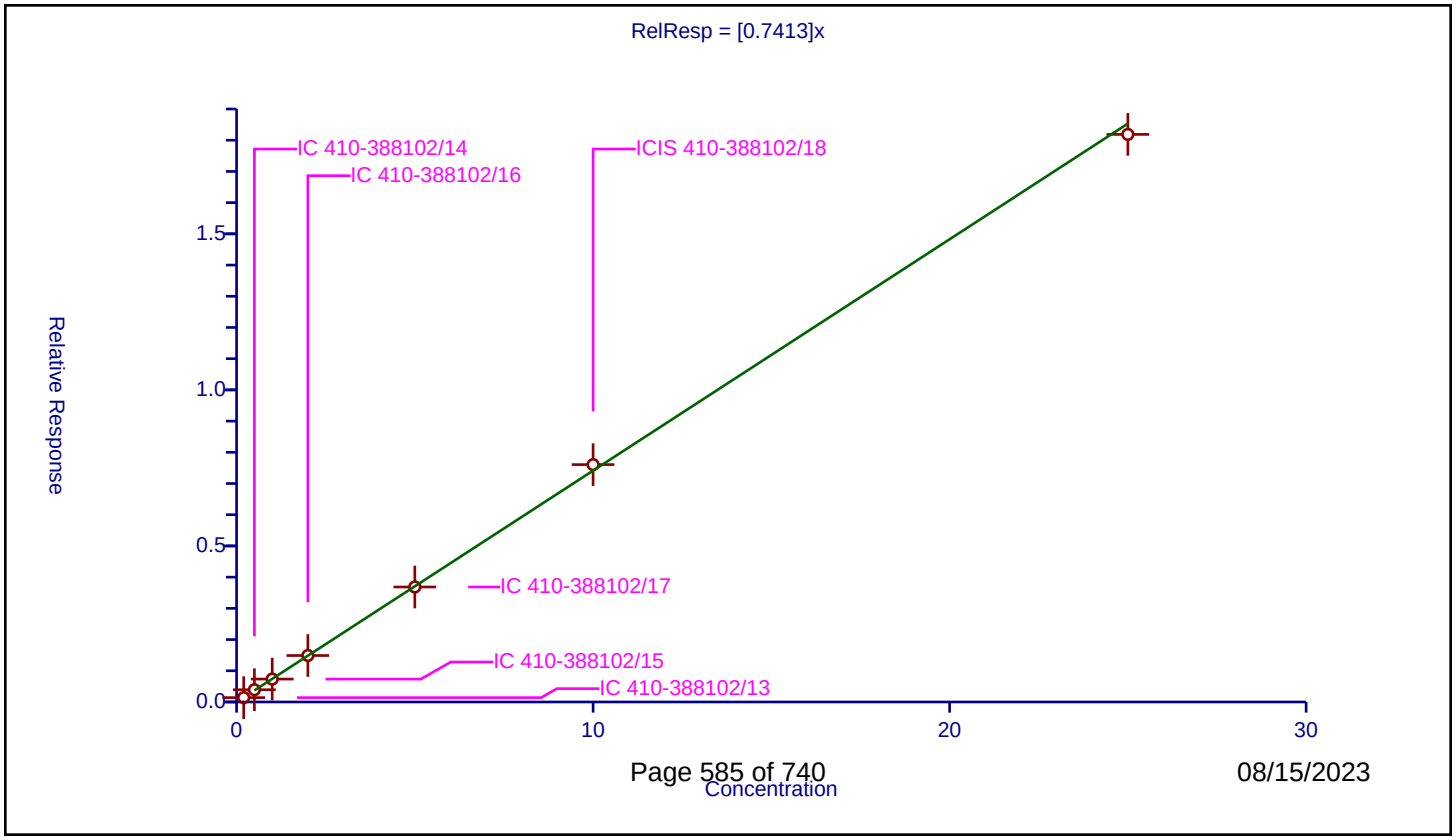
Curve Coefficients

Intercept:	0
Slope:	0.7413

Error Coefficients

Standard Error:	1540000
Relative Standard Error:	3.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.139871	10.0	1795291.0	0.699357	Y
2	IC 410-388102/14	0.5	0.3929	10.0	1753956.0	0.785801	Y
3	IC 410-388102/15	1.0	0.734352	10.0	1790586.0	0.734352	Y
4	IC 410-388102/16	2.0	1.489099	10.0	1802566.0	0.74455	Y
5	IC 410-388102/17	5.0	3.685235	10.0	1860774.0	0.737047	Y
6	ICIS 410-388102/18	10.0	7.605643	10.0	1807671.0	0.760564	Y
7	IC 410-388102/19	25.0	18.186251	10.0	1891215.0	0.72745	Y



Calibration / n-Heptane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

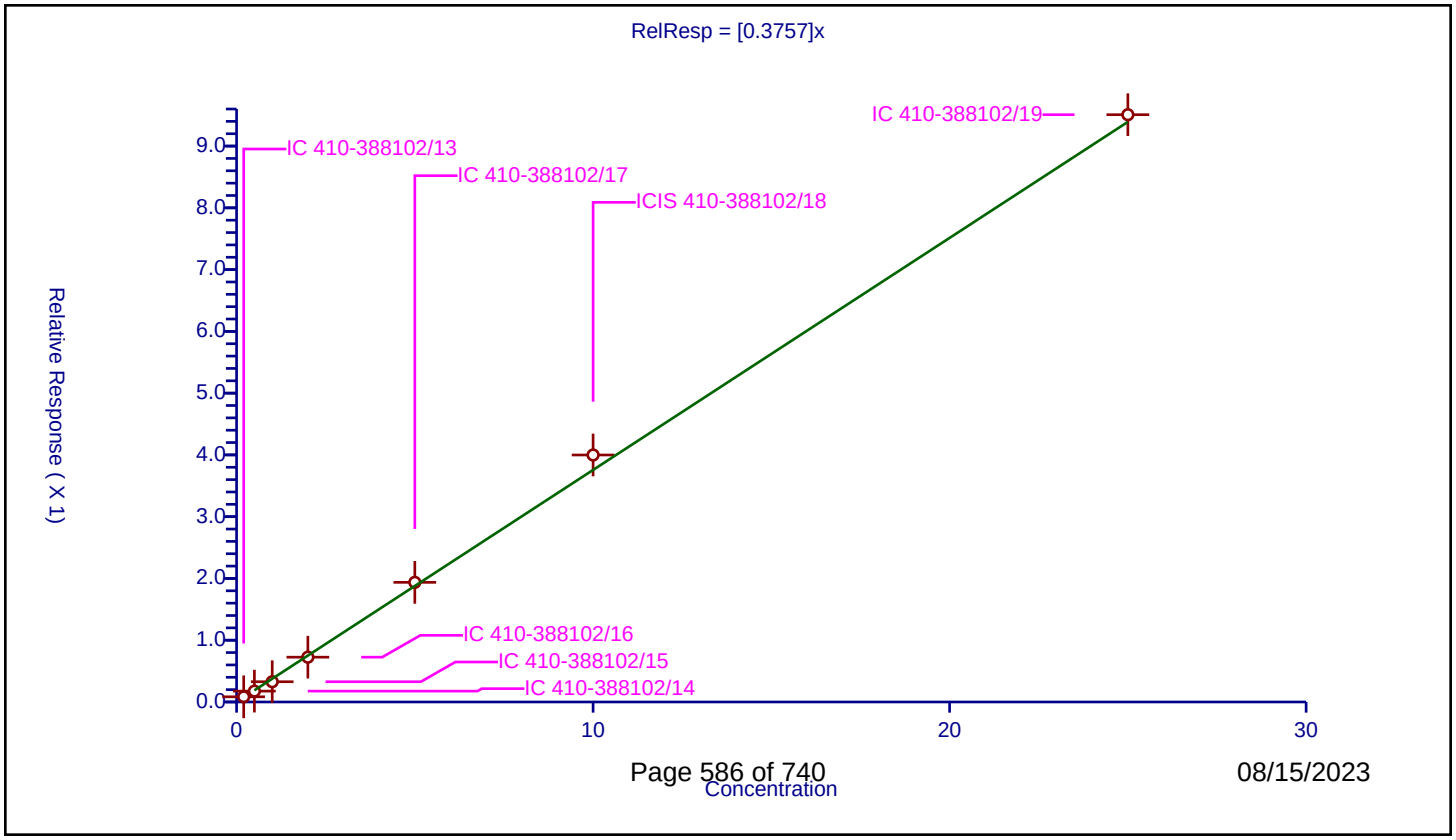
Curve Coefficients

Intercept:	0
Slope:	0.3757

Error Coefficients

Standard Error:	807000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.083903	10.0	1795291.0	0.419514	Y
2	IC 410-388102/14	0.5	0.175905	10.0	1753956.0	0.35181	Y
3	IC 410-388102/15	1.0	0.32806	10.0	1790586.0	0.32806	Y
4	IC 410-388102/16	2.0	0.725327	10.0	1802566.0	0.362664	Y
5	IC 410-388102/17	5.0	1.936936	10.0	1860774.0	0.387387	Y
6	ICIS 410-388102/18	10.0	3.998825	10.0	1807671.0	0.399883	Y
7	IC 410-388102/19	25.0	9.50783	10.0	1891215.0	0.380313	Y



Calibration / n-Butanol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

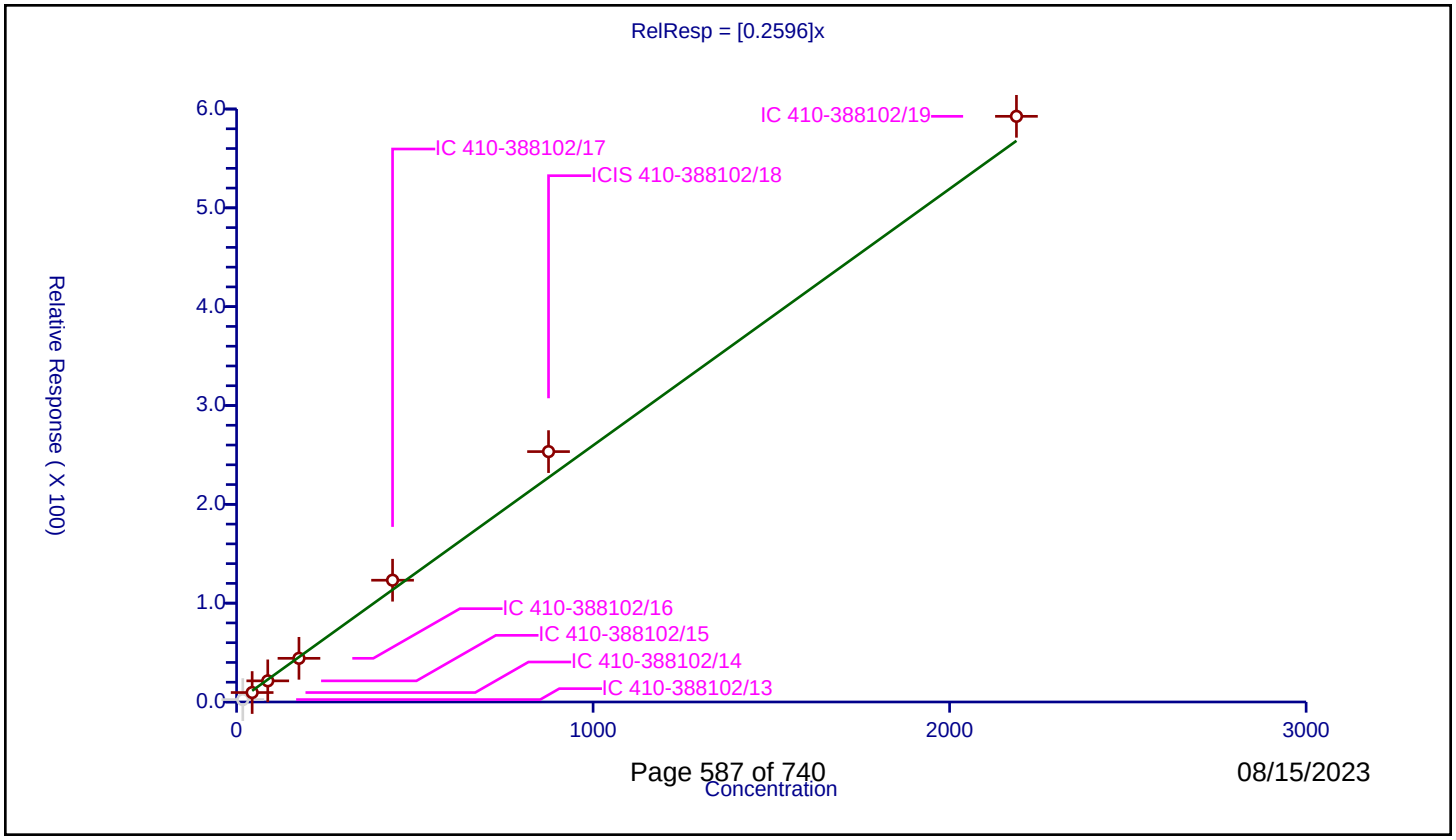
Curve Coefficients

Intercept:	0
Slope:	0.2596

Error Coefficients

Standard Error:	791000
Relative Standard Error:	10.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	17.5	2.442149	50.0	116680.0	0.139551	N
2	IC 410-388102/14	43.75	9.564722	50.0	132398.0	0.218622	Y
3	IC 410-388102/15	87.5	21.376586	50.0	133555.0	0.244304	Y
4	IC 410-388102/16	175.0	44.184922	50.0	127135.0	0.252485	Y
5	IC 410-388102/17	437.5	123.220635	50.0	139221.0	0.281647	Y
6	ICIS 410-388102/18	875.0	253.356911	50.0	130775.0	0.289551	Y
7	IC 410-388102/19	2187.5	592.61736	50.0	134884.0	0.270911	Y



Calibration / Trichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

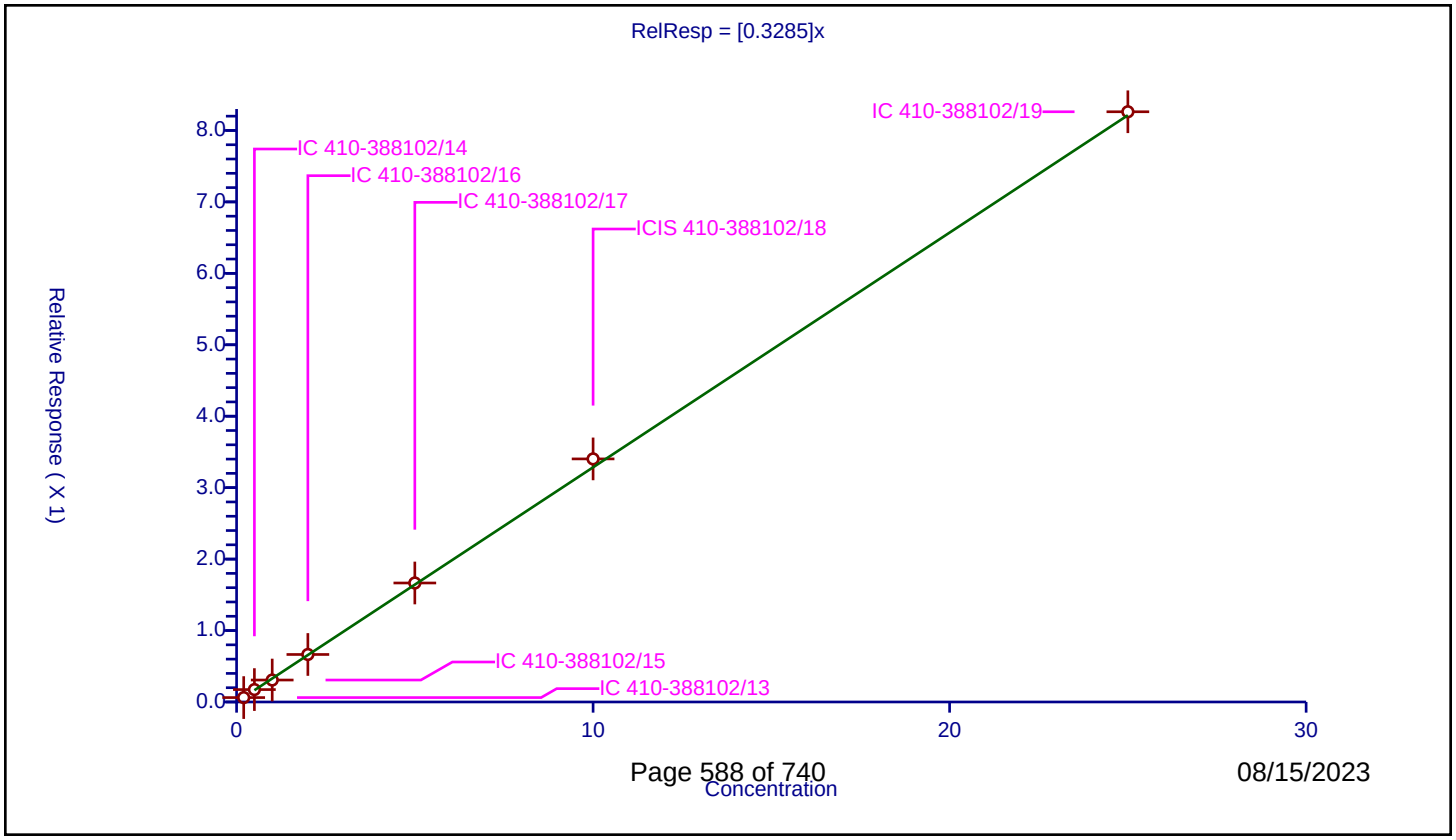
Curve Coefficients

Intercept:	0
Slope:	0.3285

Error Coefficients

Standard Error:	699000
Relative Standard Error:	4.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.061711	10.0	1795291.0	0.308557	Y
2	IC 410-388102/14	0.5	0.173636	10.0	1753956.0	0.347272	Y
3	IC 410-388102/15	1.0	0.307391	10.0	1790586.0	0.307391	Y
4	IC 410-388102/16	2.0	0.664974	10.0	1802566.0	0.332487	Y
5	IC 410-388102/17	5.0	1.665608	10.0	1860774.0	0.333122	Y
6	ICIS 410-388102/18	10.0	3.402317	10.0	1807671.0	0.340232	Y
7	IC 410-388102/19	25.0	8.261414	10.0	1891215.0	0.330457	Y



Calibration / Methylcyclohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

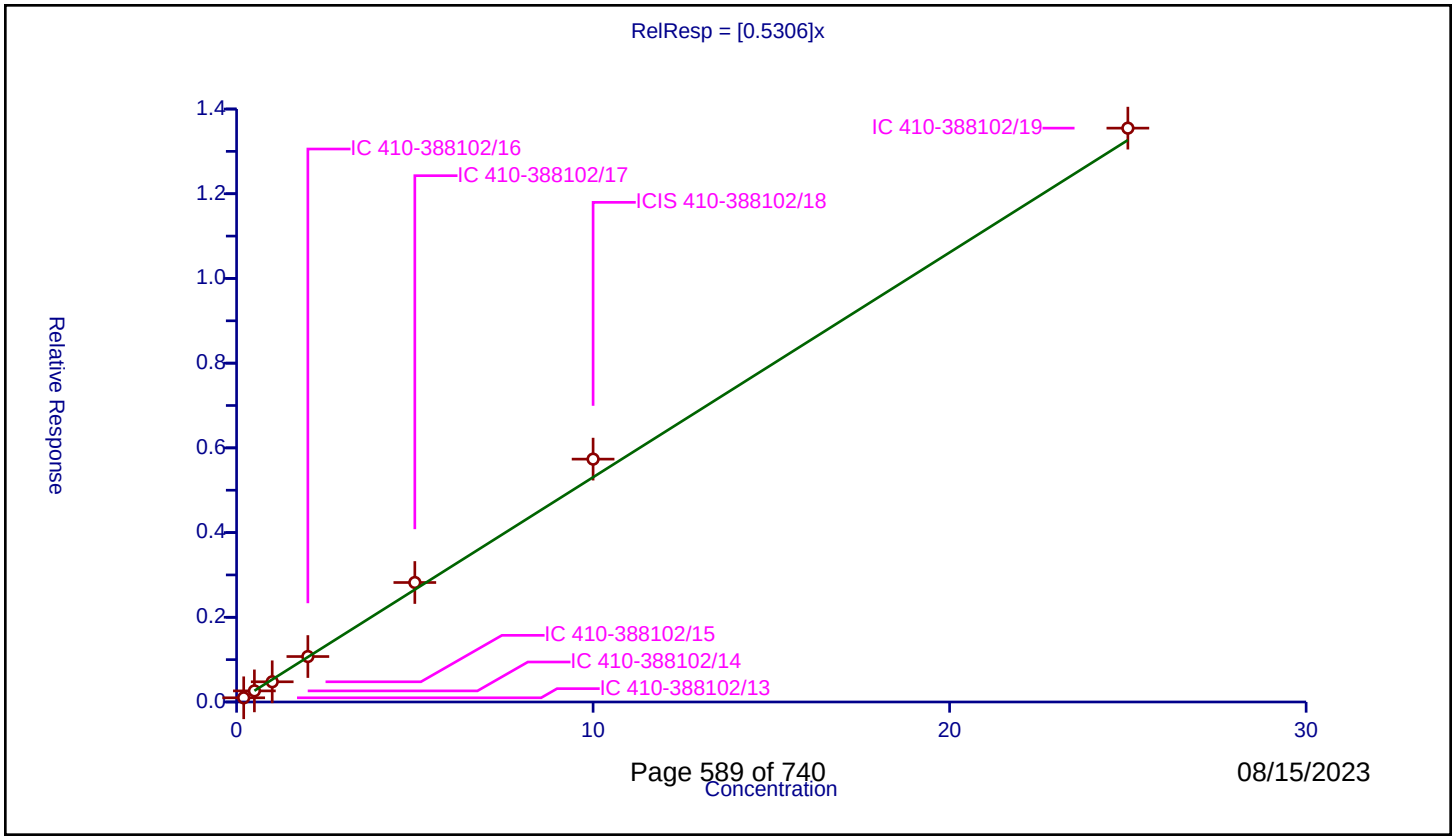
Curve Coefficients

Intercept:	0
Slope:	0.5306

Error Coefficients

Standard Error:	1150000
Relative Standard Error:	6.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.099438	10.0	1795291.0	0.49719	Y
2	IC 410-388102/14	0.5	0.26215	10.0	1753956.0	0.5243	Y
3	IC 410-388102/15	1.0	0.476894	10.0	1790586.0	0.476894	Y
4	IC 410-388102/16	2.0	1.07327	10.0	1802566.0	0.536635	Y
5	IC 410-388102/17	5.0	2.820821	10.0	1860774.0	0.564164	Y
6	ICIS 410-388102/18	10.0	5.734218	10.0	1807671.0	0.573422	Y
7	IC 410-388102/19	25.0	13.548306	10.0	1891215.0	0.541932	Y



Calibration / 1,2-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

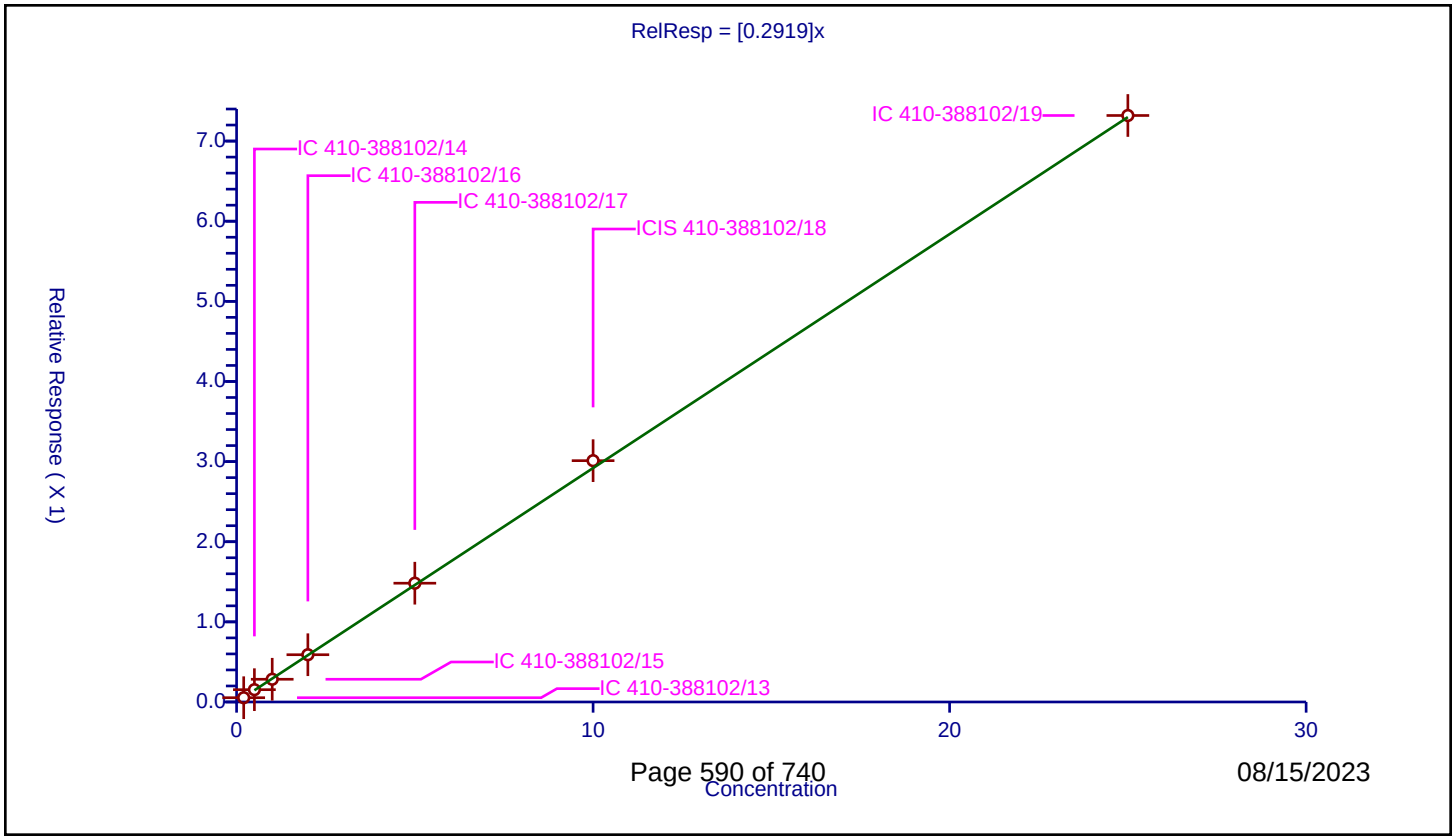
Curve Coefficients

Intercept:	0
Slope:	0.2919

Error Coefficients

Standard Error:	620000
Relative Standard Error:	4.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.053457	10.0	1795291.0	0.267283	Y
2	IC 410-388102/14	0.5	0.153738	10.0	1753956.0	0.307476	Y
3	IC 410-388102/15	1.0	0.28355	10.0	1790586.0	0.28355	Y
4	IC 410-388102/16	2.0	0.589842	10.0	1802566.0	0.294921	Y
5	IC 410-388102/17	5.0	1.482442	10.0	1860774.0	0.296488	Y
6	ICIS 410-388102/18	10.0	3.011577	10.0	1807671.0	0.301158	Y
7	IC 410-388102/19	25.0	7.319094	10.0	1891215.0	0.292764	Y



Calibration / Methyl methacrylate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

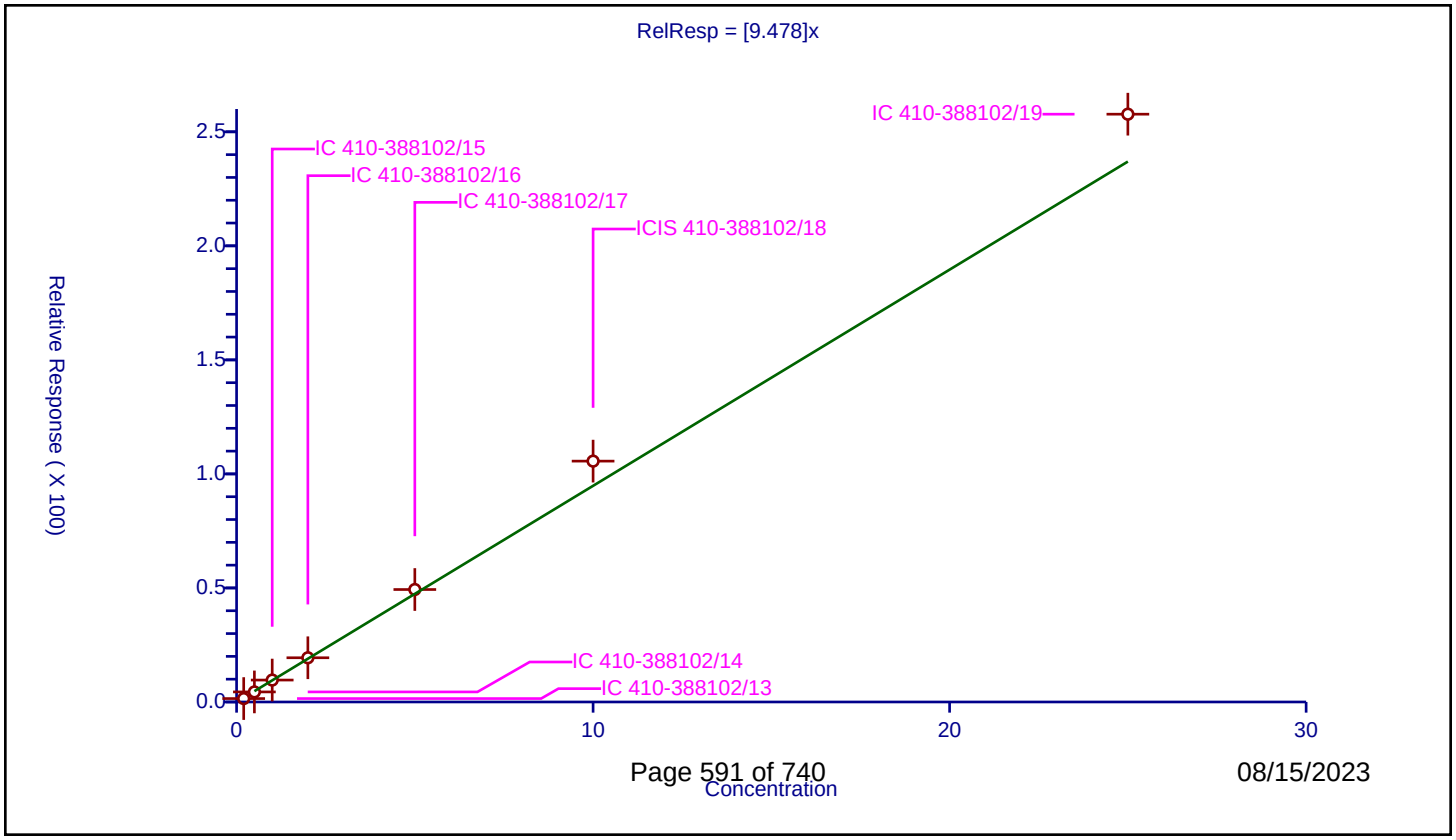
Curve Coefficients

Intercept:	0
Slope:	9.478

Error Coefficients

Standard Error:	311000
Relative Standard Error:	11.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	1.497686	50.0	116680.0	7.48843	Y
2	IC 410-388102/14	0.5	4.40981	50.0	132398.0	8.81962	Y
3	IC 410-388102/15	1.0	9.614017	50.0	133555.0	9.614017	Y
4	IC 410-388102/16	2.0	19.386086	50.0	127135.0	9.693043	Y
5	IC 410-388102/17	5.0	49.31404	50.0	139221.0	9.862808	Y
6	ICIS 410-388102/18	10.0	105.610782	50.0	130775.0	10.561078	Y
7	IC 410-388102/19	25.0	257.736277	50.0	134884.0	10.309451	Y



Calibration / 1,4-Dioxane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

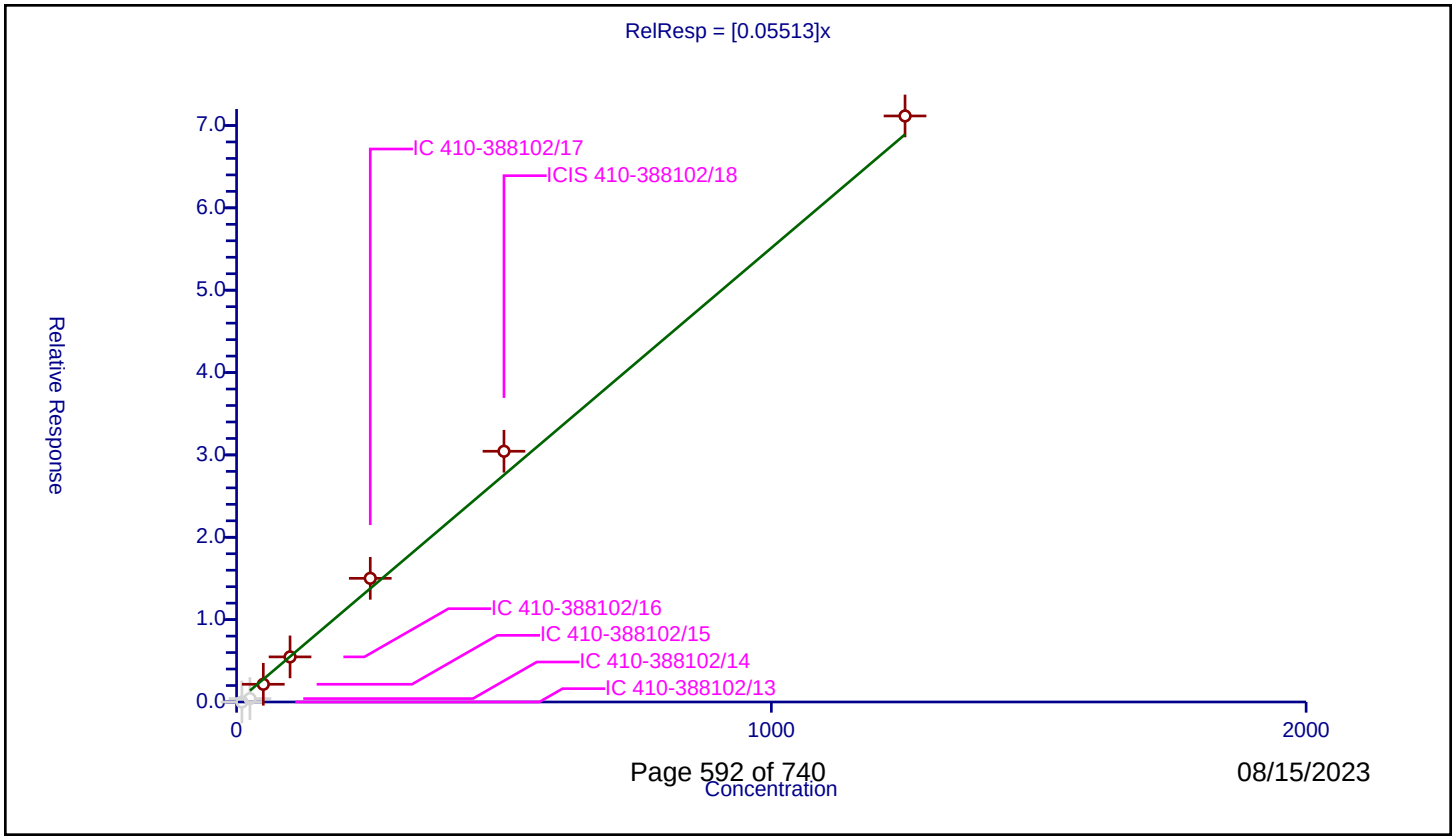
Curve Coefficients

Intercept:	0
Slope:	0.05513

Error Coefficients

Standard Error:	106000
Relative Standard Error:	13.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.977

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	10.0	0.0	50.0	116680.0	0.0	N
2	IC 410-388102/14	25.0	0.414281	50.0	132398.0	0.016571	N
3	IC 410-388102/15	50.0	2.151174	50.0	133555.0	0.043023	Y
4	IC 410-388102/16	100.0	5.476462	50.0	127135.0	0.054765	Y
5	IC 410-388102/17	250.0	15.017131	50.0	139221.0	0.060069	Y
6	ICIS 410-388102/18	500.0	30.443128	50.0	130775.0	0.060886	Y
7	IC 410-388102/19	1250.0	71.159292	50.0	134884.0	0.056927	Y



Calibration / Dibromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

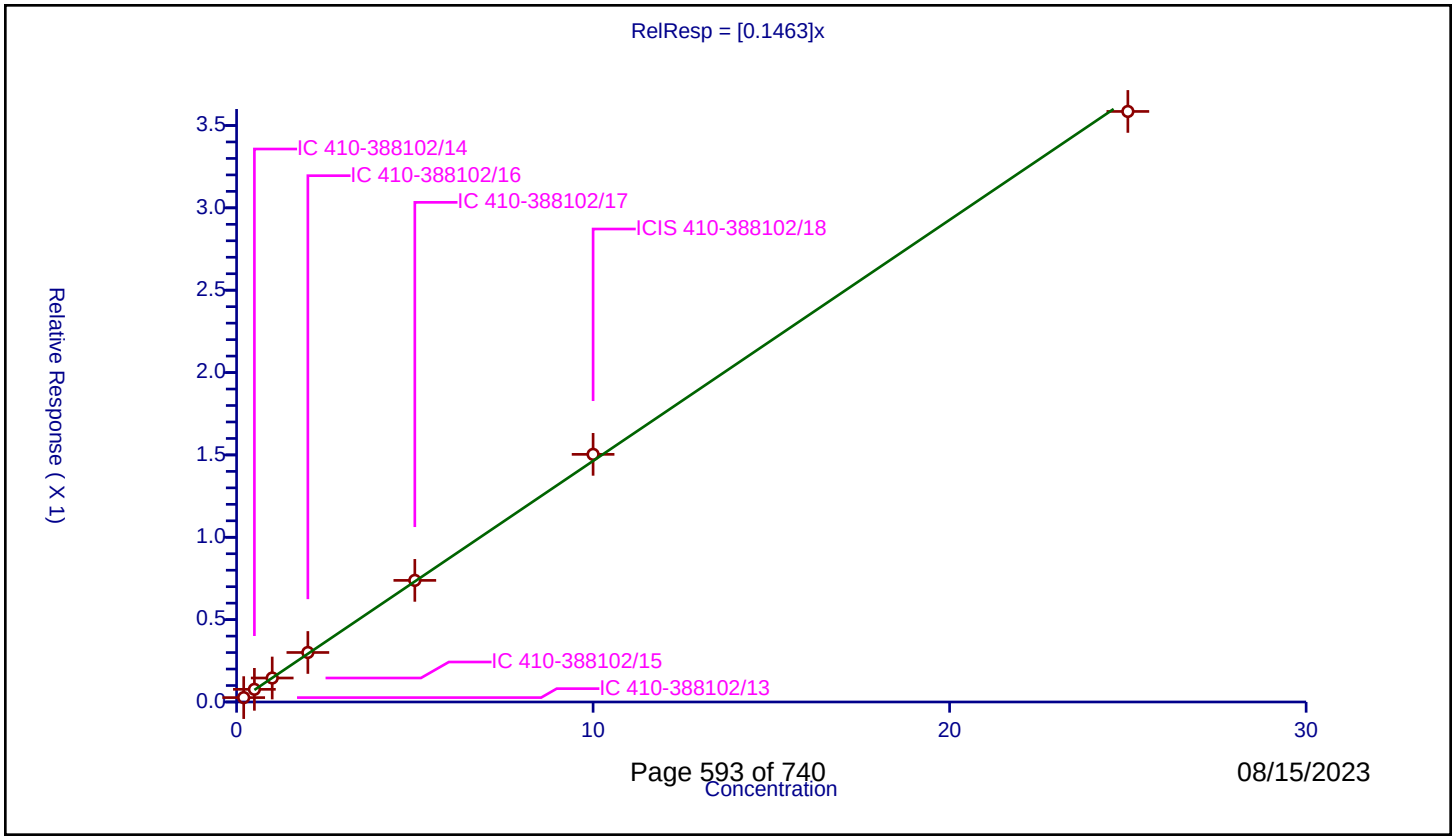
Curve Coefficients

Intercept:	0
Slope:	0.1463

Error Coefficients

Standard Error:	304000
Relative Standard Error:	4.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.026675	10.0	1795291.0	0.133377	Y
2	IC 410-388102/14	0.5	0.076866	10.0	1753956.0	0.153732	Y
3	IC 410-388102/15	1.0	0.145595	10.0	1790586.0	0.145595	Y
4	IC 410-388102/16	2.0	0.300538	10.0	1802566.0	0.150269	Y
5	IC 410-388102/17	5.0	0.738273	10.0	1860774.0	0.147655	Y
6	ICIS 410-388102/18	10.0	1.503376	10.0	1807671.0	0.150338	Y
7	IC 410-388102/19	25.0	3.58523	10.0	1891215.0	0.143409	Y



Calibration / Dichlorobromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

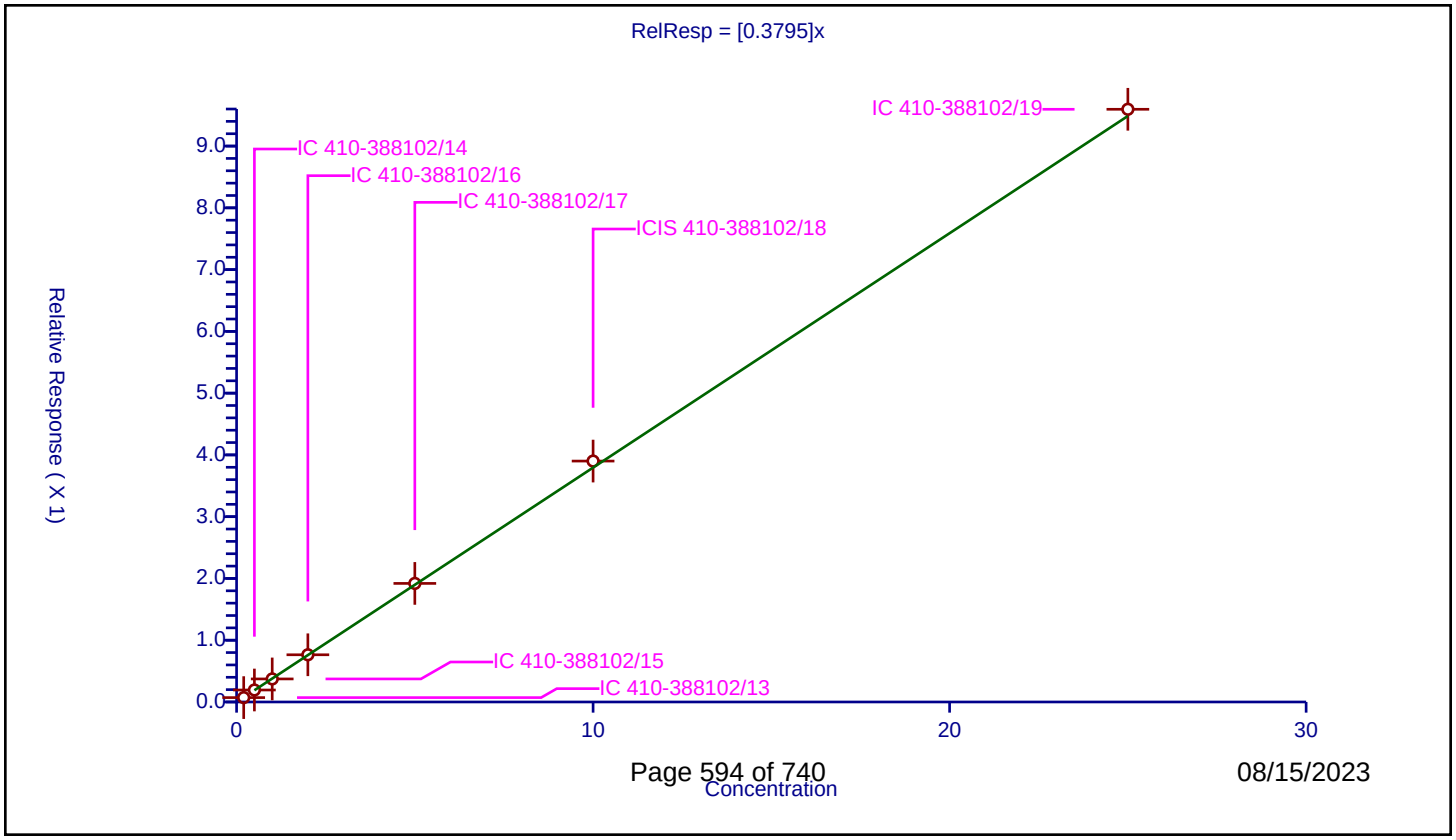
Curve Coefficients

Intercept:	0
Slope:	0.3795

Error Coefficients

Standard Error:	811000
Relative Standard Error:	3.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.070947	10.0	1795291.0	0.354734	Y
2	IC 410-388102/14	0.5	0.194155	10.0	1753956.0	0.388311	Y
3	IC 410-388102/15	1.0	0.373157	10.0	1790586.0	0.373157	Y
4	IC 410-388102/16	2.0	0.76436	10.0	1802566.0	0.38218	Y
5	IC 410-388102/17	5.0	1.919475	10.0	1860774.0	0.383895	Y
6	ICIS 410-388102/18	10.0	3.90045	10.0	1807671.0	0.390045	Y
7	IC 410-388102/19	25.0	9.595863	10.0	1891215.0	0.383835	Y



Calibration / 2-Nitropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

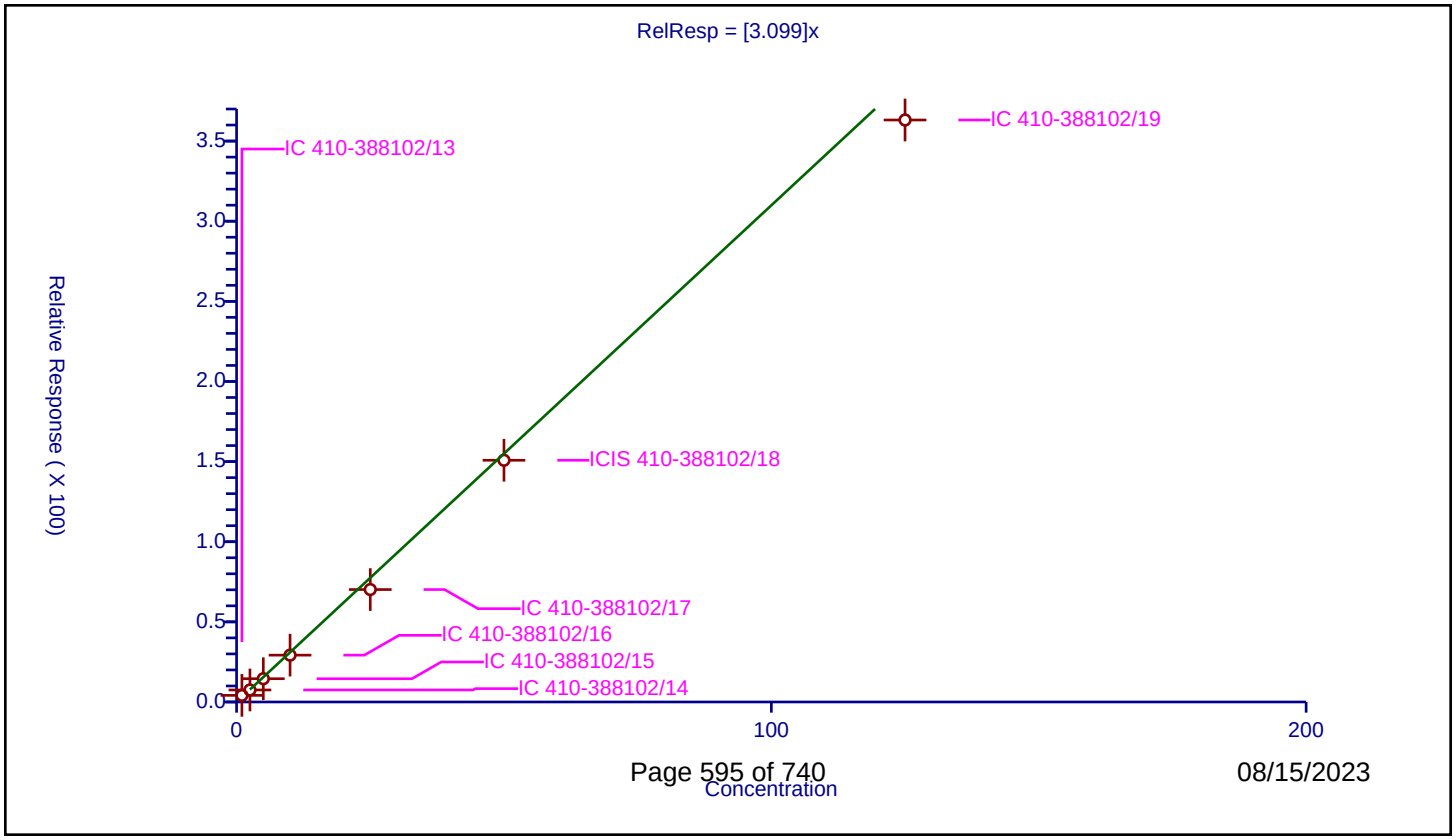
Curve Coefficients

Intercept:	0
Slope:	3.099

Error Coefficients

Standard Error:	440000
Relative Standard Error:	15.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.962

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	1.0	4.142955	50.0	116680.0	4.142955	Y
2	IC 410-388102/14	2.5	7.489161	50.0	132398.0	2.995665	Y
3	IC 410-388102/15	5.0	14.523979	50.0	133555.0	2.904796	Y
4	IC 410-388102/16	10.0	29.220514	50.0	127135.0	2.922051	Y
5	IC 410-388102/17	25.0	70.162188	50.0	139221.0	2.806488	Y
6	ICIS 410-388102/18	50.0	150.83311	50.0	130775.0	3.016662	Y
7	IC 410-388102/19	125.0	363.14574	50.0	134884.0	2.905166	Y



Calibration / 1-Bromo-2-chloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

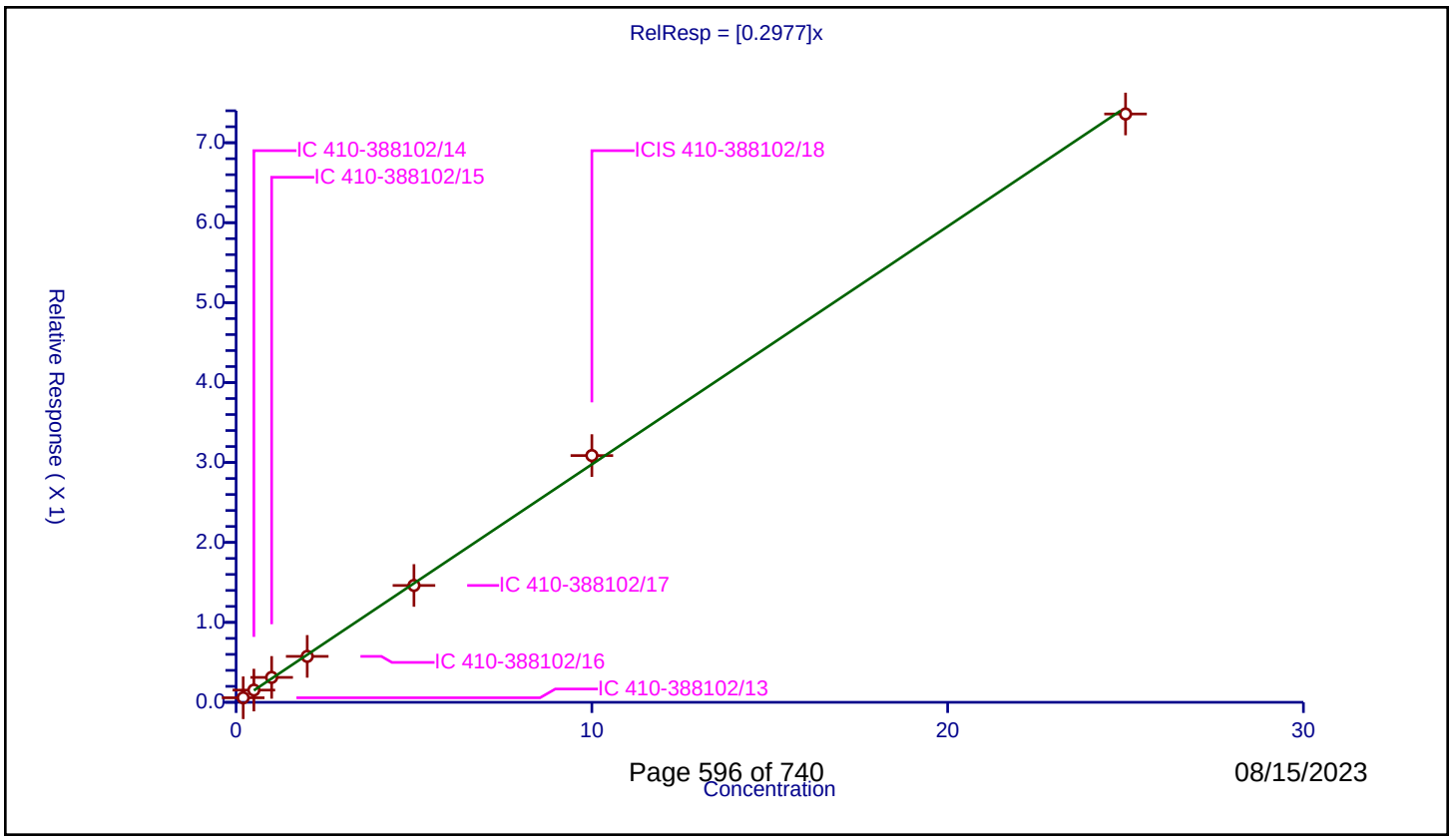
Curve Coefficients

Intercept:	0
Slope:	0.2977

Error Coefficients

Standard Error:	624000
Relative Standard Error:	3.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.056693	10.0	1795291.0	0.283464	Y
2	IC 410-388102/14	0.5	0.152792	10.0	1753956.0	0.305583	Y
3	IC 410-388102/15	1.0	0.311786	10.0	1790586.0	0.311786	Y
4	IC 410-388102/16	2.0	0.574581	10.0	1802566.0	0.28729	Y
5	IC 410-388102/17	5.0	1.461865	10.0	1860774.0	0.292373	Y
6	ICIS 410-388102/18	10.0	3.08679	10.0	1807671.0	0.308679	Y
7	IC 410-388102/19	25.0	7.359803	10.0	1891215.0	0.294392	Y



Calibration / cis-1,3-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

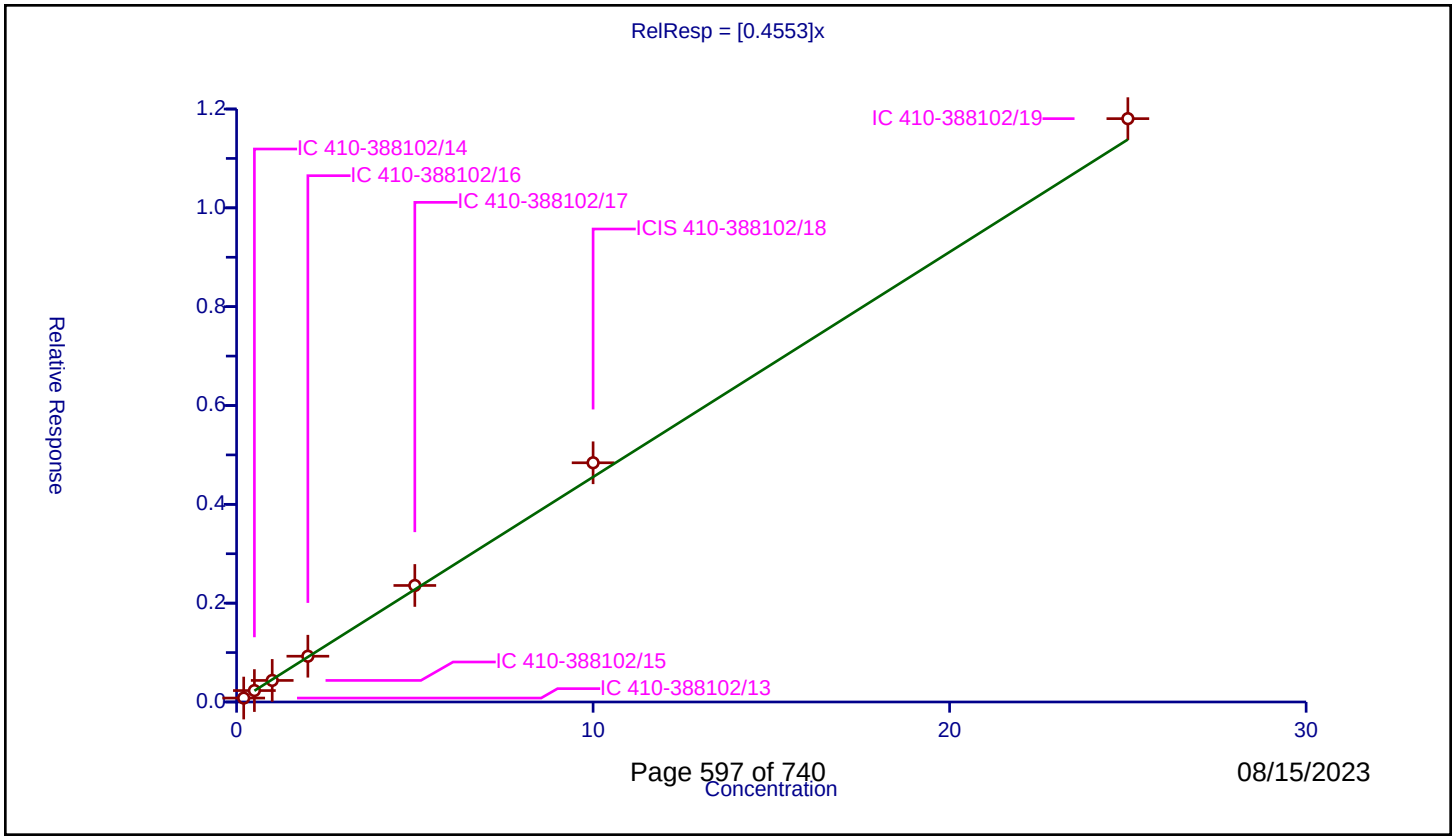
Curve Coefficients

Intercept:	0
Slope:	0.4553

Error Coefficients

Standard Error:	998000
Relative Standard Error:	6.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.079508	10.0	1795291.0	0.39754	Y
2	IC 410-388102/14	0.5	0.231089	10.0	1753956.0	0.462178	Y
3	IC 410-388102/15	1.0	0.436472	10.0	1790586.0	0.436472	Y
4	IC 410-388102/16	2.0	0.926379	10.0	1802566.0	0.46319	Y
5	IC 410-388102/17	5.0	2.357901	10.0	1860774.0	0.47158	Y
6	ICIS 410-388102/18	10.0	4.840765	10.0	1807671.0	0.484076	Y
7	IC 410-388102/19	25.0	11.805369	10.0	1891215.0	0.472215	Y



Calibration / 4-Methyl-2-pentanone (MIBK)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

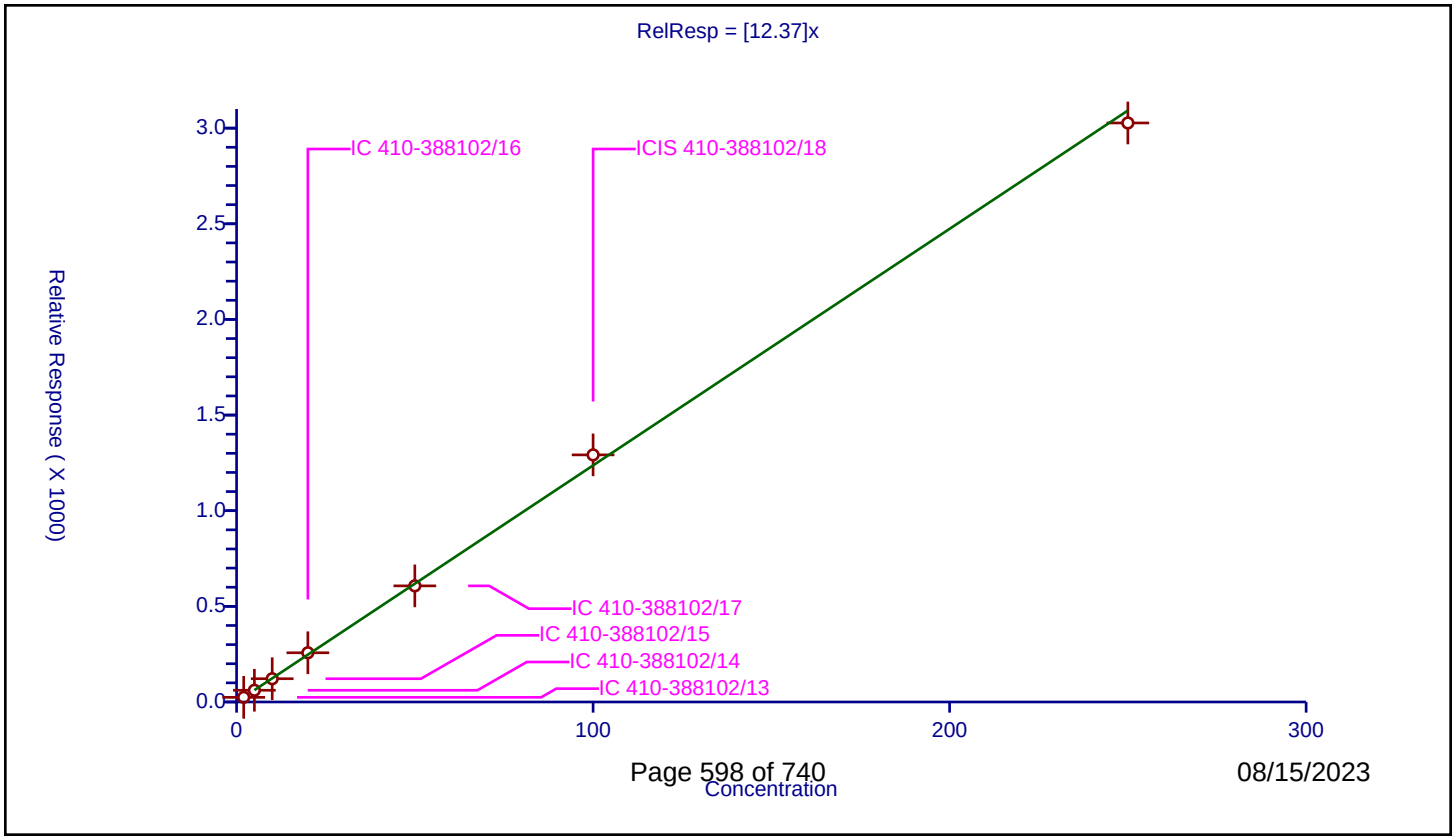
Curve Coefficients

Intercept:	0
Slope:	12.37

Error Coefficients

Standard Error:	3680000
Relative Standard Error:	2.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	2.0	24.274083	50.0	116680.0	12.137041	Y
2	IC 410-388102/14	5.0	61.244128	50.0	132398.0	12.248826	Y
3	IC 410-388102/15	10.0	121.588484	50.0	133555.0	12.158848	Y
4	IC 410-388102/16	20.0	257.226963	50.0	127135.0	12.861348	Y
5	IC 410-388102/17	50.0	607.091243	50.0	139221.0	12.141825	Y
6	ICIS 410-388102/18	100.0	1291.790862	50.0	130775.0	12.917909	Y
7	IC 410-388102/19	250.0	3027.132573	50.0	134884.0	12.10853	Y



Calibration / Toluene-d8 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

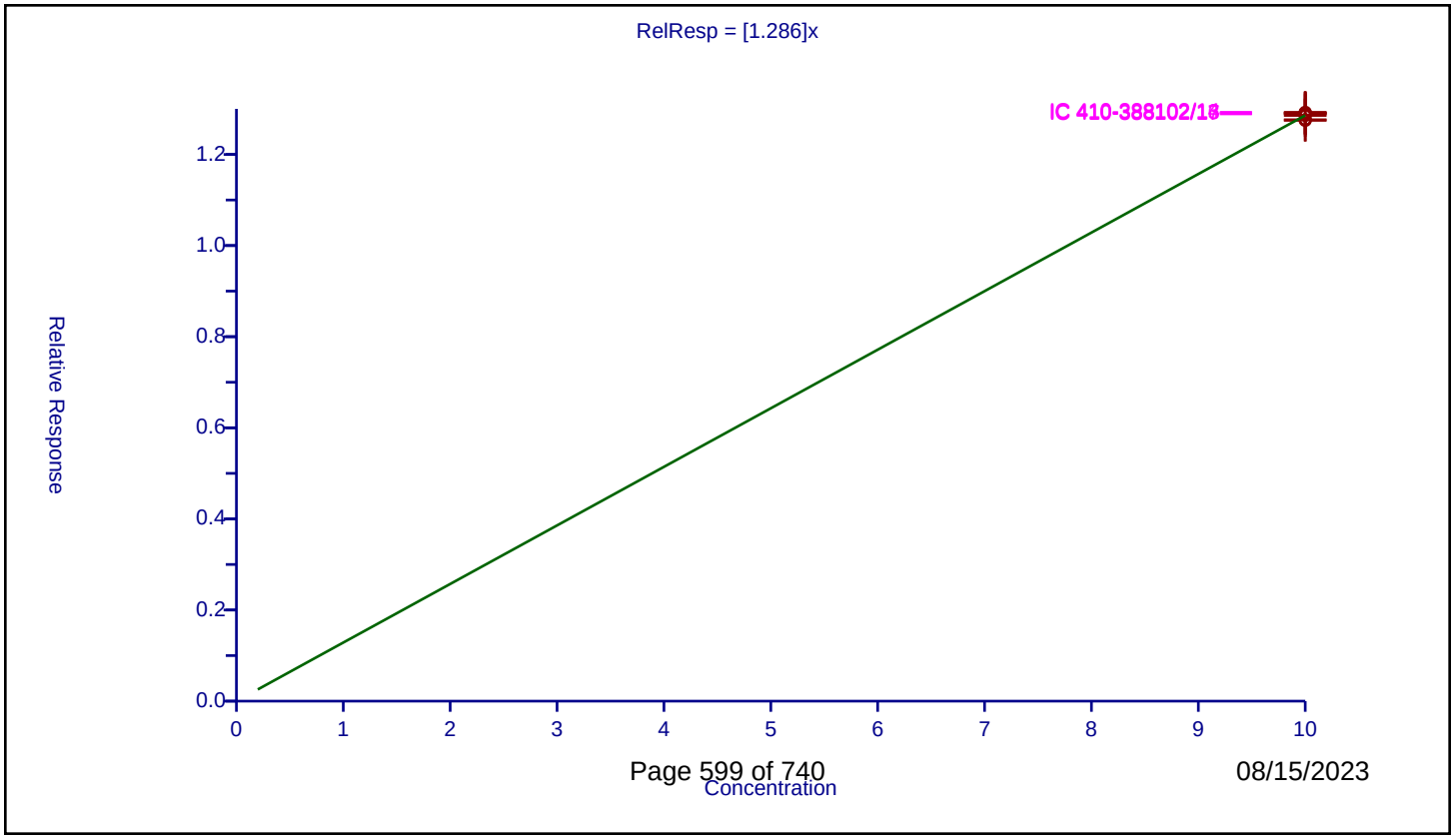
Curve Coefficients

Intercept:	0
Slope:	1.286

Error Coefficients

Standard Error:	1990000
Relative Standard Error:	0.6
Correlation Coefficient:	0.00000000000000000000
Coefficient of Determination (Adjusted):	0.000000000000000222

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	10.0	12.909417	10.0	1414940.0	1.290942	Y
2	IC 410-388102/14	10.0	12.924011	10.0	1381168.0	1.292401	Y
3	IC 410-388102/15	10.0	12.762147	10.0	1413947.0	1.276215	Y
4	IC 410-388102/16	10.0	12.905264	10.0	1411844.0	1.290526	Y
5	IC 410-388102/17	10.0	12.890348	10.0	1479531.0	1.289035	Y
6	ICIS 410-388102/18	10.0	12.855298	10.0	1439976.0	1.28553	Y
7	IC 410-388102/19	10.0	12.74883	10.0	1508853.0	1.274883	Y



Calibration / Toluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

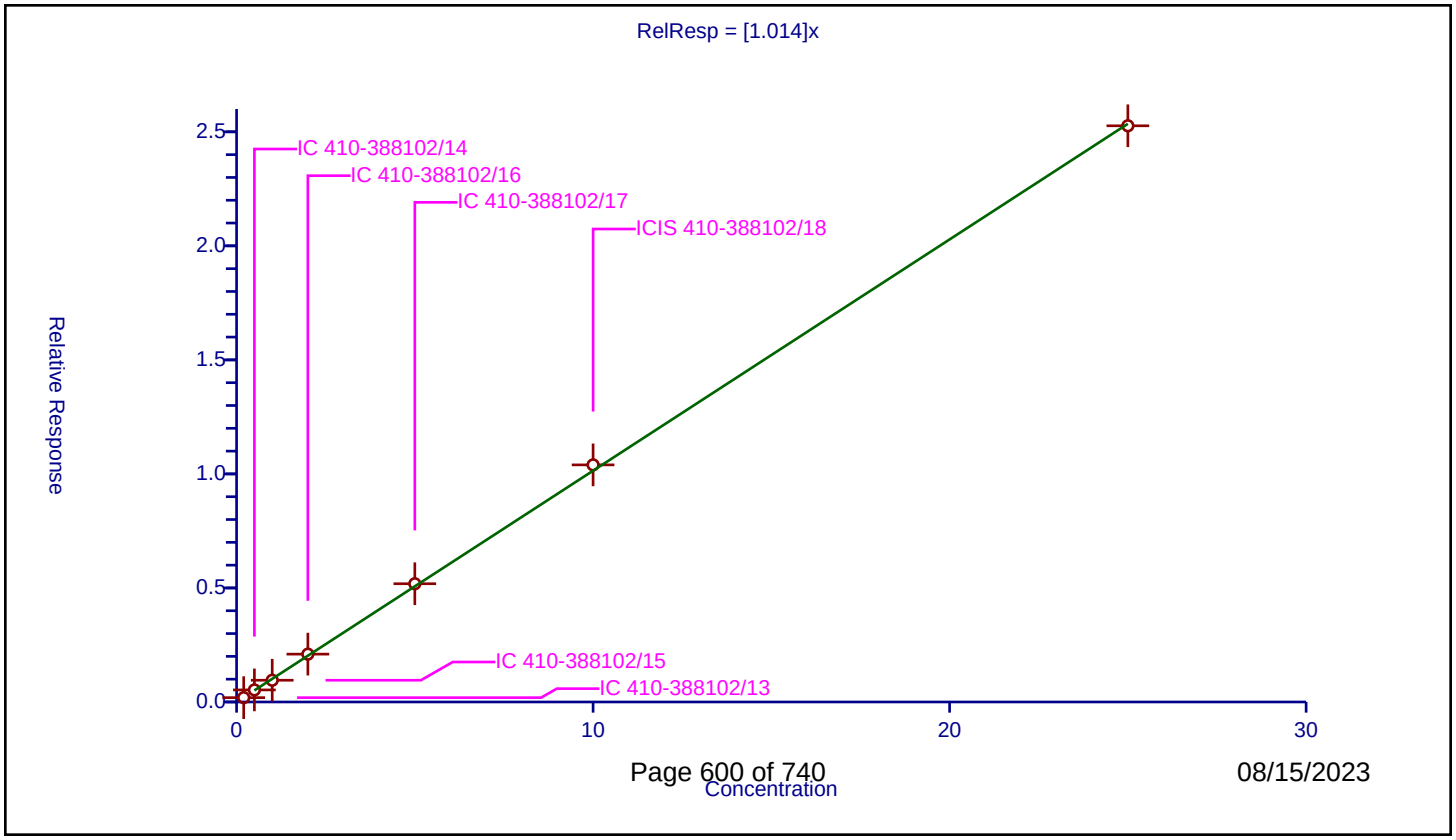
Curve Coefficients

Intercept:	0
Slope:	1.014

Error Coefficients

Standard Error:	1710000
Relative Standard Error:	4.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.189959	10.0	1414940.0	0.949793	Y
2	IC 410-388102/14	0.5	0.529421	10.0	1381168.0	1.058843	Y
3	IC 410-388102/15	1.0	0.953876	10.0	1413947.0	0.953876	Y
4	IC 410-388102/16	2.0	2.097633	10.0	1411844.0	1.048816	Y
5	IC 410-388102/17	5.0	5.184555	10.0	1479531.0	1.036911	Y
6	ICIS 410-388102/18	10.0	10.396111	10.0	1439976.0	1.039611	Y
7	IC 410-388102/19	25.0	25.264622	10.0	1508853.0	1.010585	Y



Calibration / trans-1,3-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

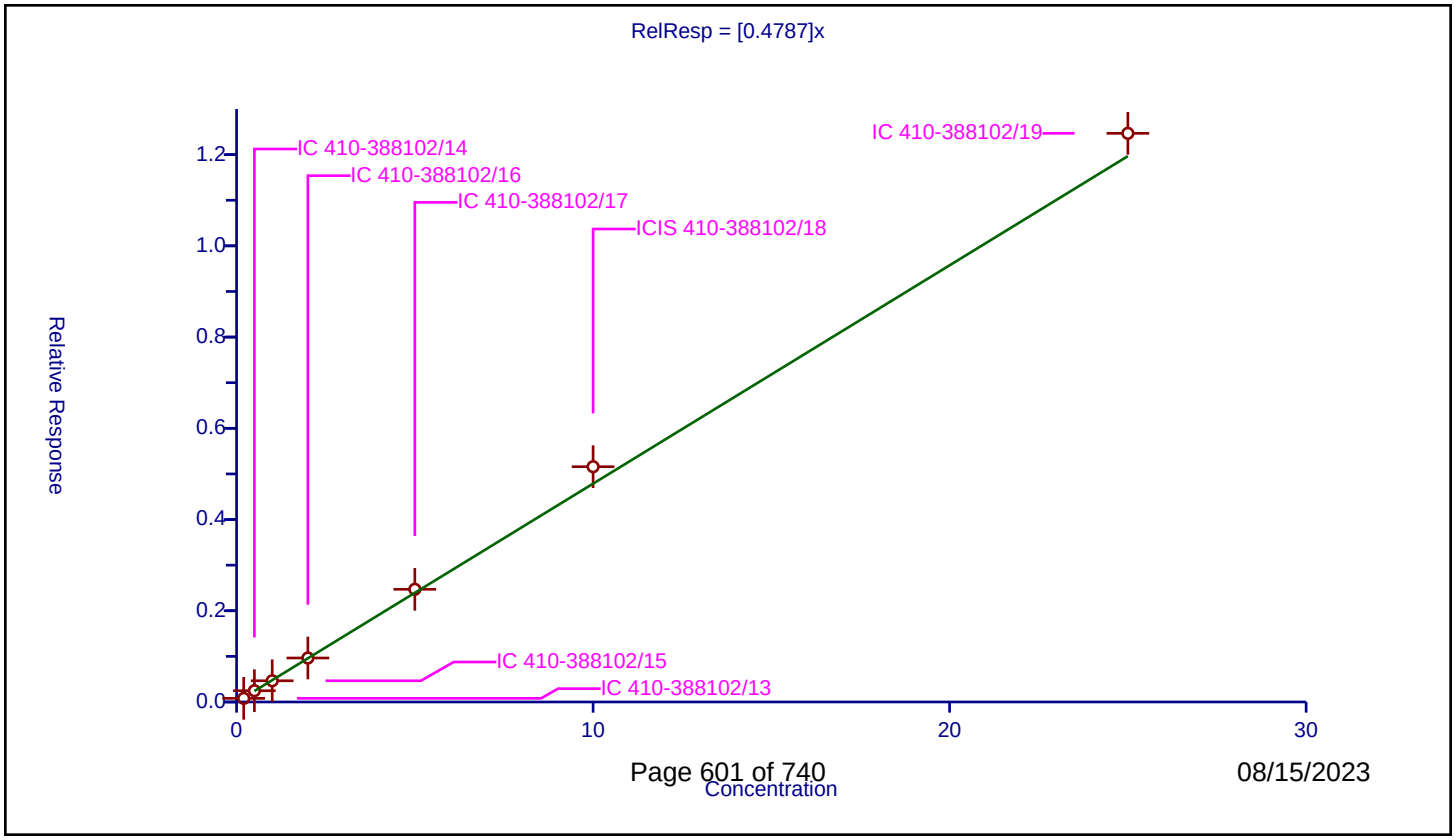
Curve Coefficients

Intercept:	0
Slope:	0.4787

Error Coefficients

Standard Error:	841000
Relative Standard Error:	7.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.080046	10.0	1414940.0	0.400229	Y
2	IC 410-388102/14	0.5	0.247254	10.0	1381168.0	0.494509	Y
3	IC 410-388102/15	1.0	0.465208	10.0	1413947.0	0.465208	Y
4	IC 410-388102/16	2.0	0.964292	10.0	1411844.0	0.482146	Y
5	IC 410-388102/17	5.0	2.470445	10.0	1479531.0	0.494089	Y
6	ICIS 410-388102/18	10.0	5.158148	10.0	1439976.0	0.515815	Y
7	IC 410-388102/19	25.0	12.466867	10.0	1508853.0	0.498675	Y



Calibration / Ethyl methacrylate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

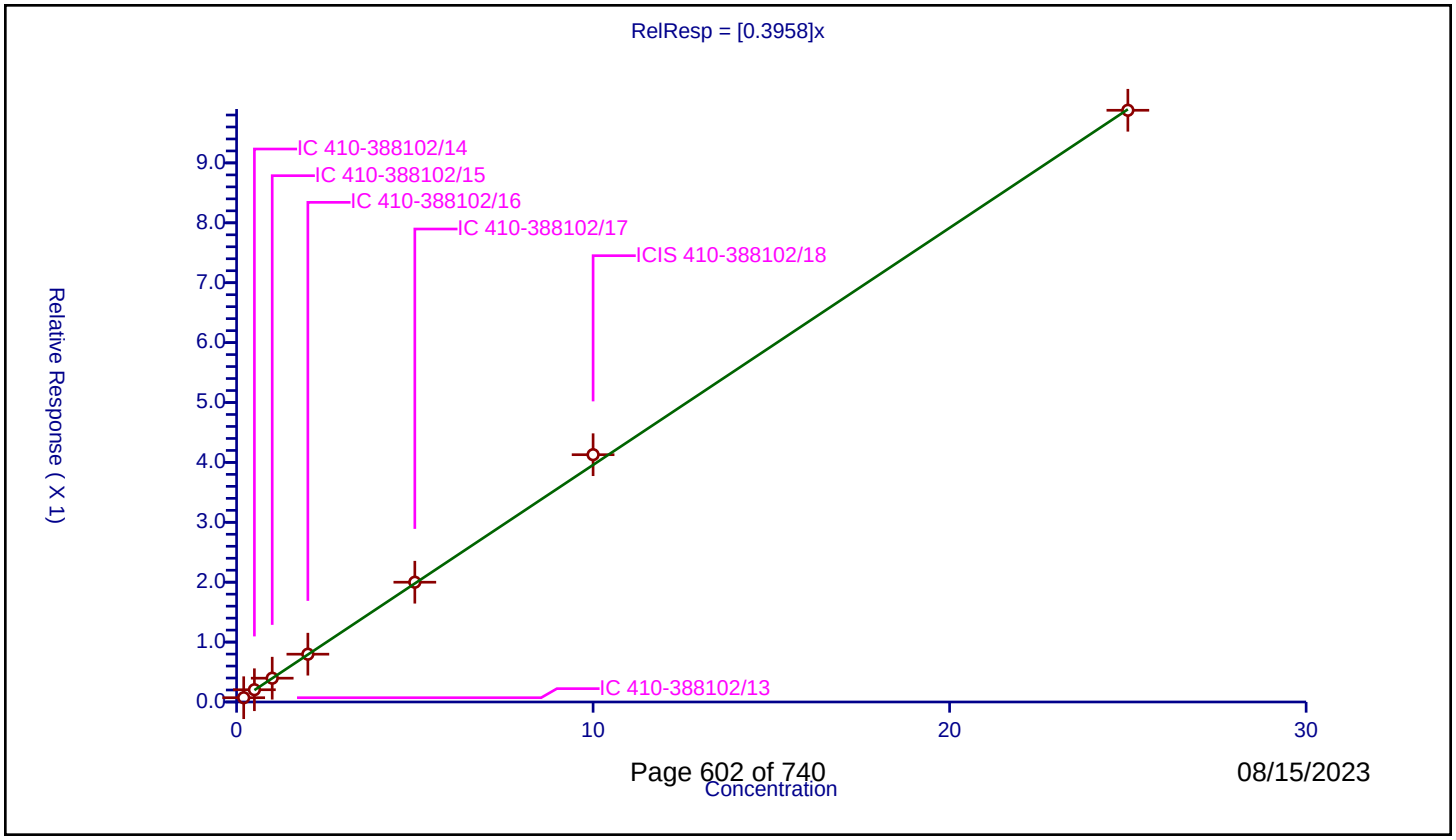
Curve Coefficients

Intercept:	0
Slope:	0.3958

Error Coefficients

Standard Error:	668000
Relative Standard Error:	4.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.071473	10.0	1414940.0	0.357365	Y
2	IC 410-388102/14	0.5	0.204486	10.0	1381168.0	0.408973	Y
3	IC 410-388102/15	1.0	0.397236	10.0	1413947.0	0.397236	Y
4	IC 410-388102/16	2.0	0.797871	10.0	1411844.0	0.398936	Y
5	IC 410-388102/17	5.0	1.99962	10.0	1479531.0	0.399924	Y
6	ICIS 410-388102/18	10.0	4.128805	10.0	1439976.0	0.41288	Y
7	IC 410-388102/19	25.0	9.87922	10.0	1508853.0	0.395169	Y



Calibration / 1,1,2-Trichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

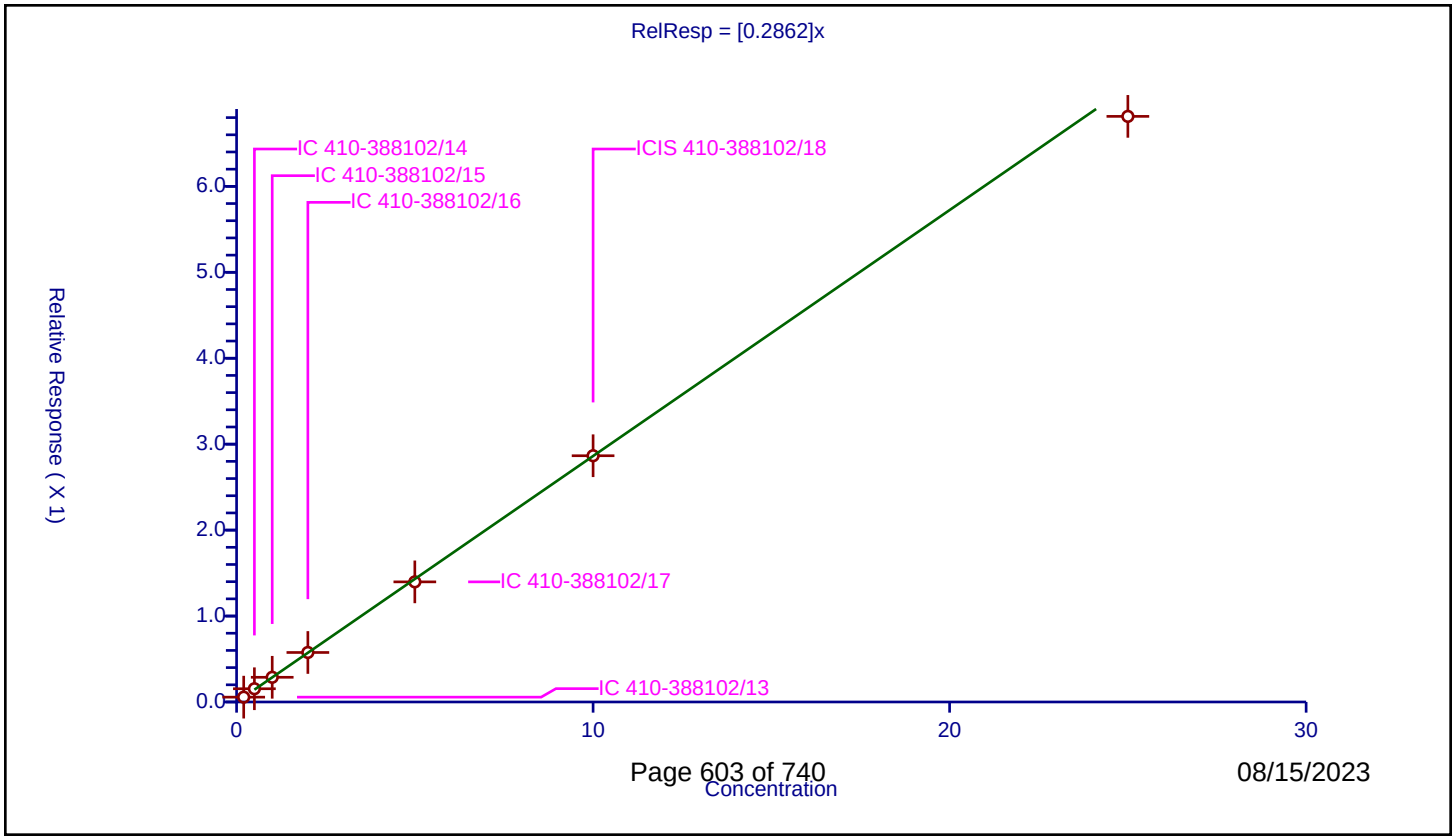
Curve Coefficients

Intercept:	0
Slope:	0.2862

Error Coefficients

Standard Error:	462000
Relative Standard Error:	3.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.056172	10.0	1414940.0	0.28086	Y
2	IC 410-388102/14	0.5	0.154159	10.0	1381168.0	0.308319	Y
3	IC 410-388102/15	1.0	0.287451	10.0	1413947.0	0.287451	Y
4	IC 410-388102/16	2.0	0.576176	10.0	1411844.0	0.288088	Y
5	IC 410-388102/17	5.0	1.397619	10.0	1479531.0	0.279524	Y
6	ICIS 410-388102/18	10.0	2.865367	10.0	1439976.0	0.286537	Y
7	IC 410-388102/19	25.0	6.814229	10.0	1508853.0	0.272569	Y



Calibration / Tetrachloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

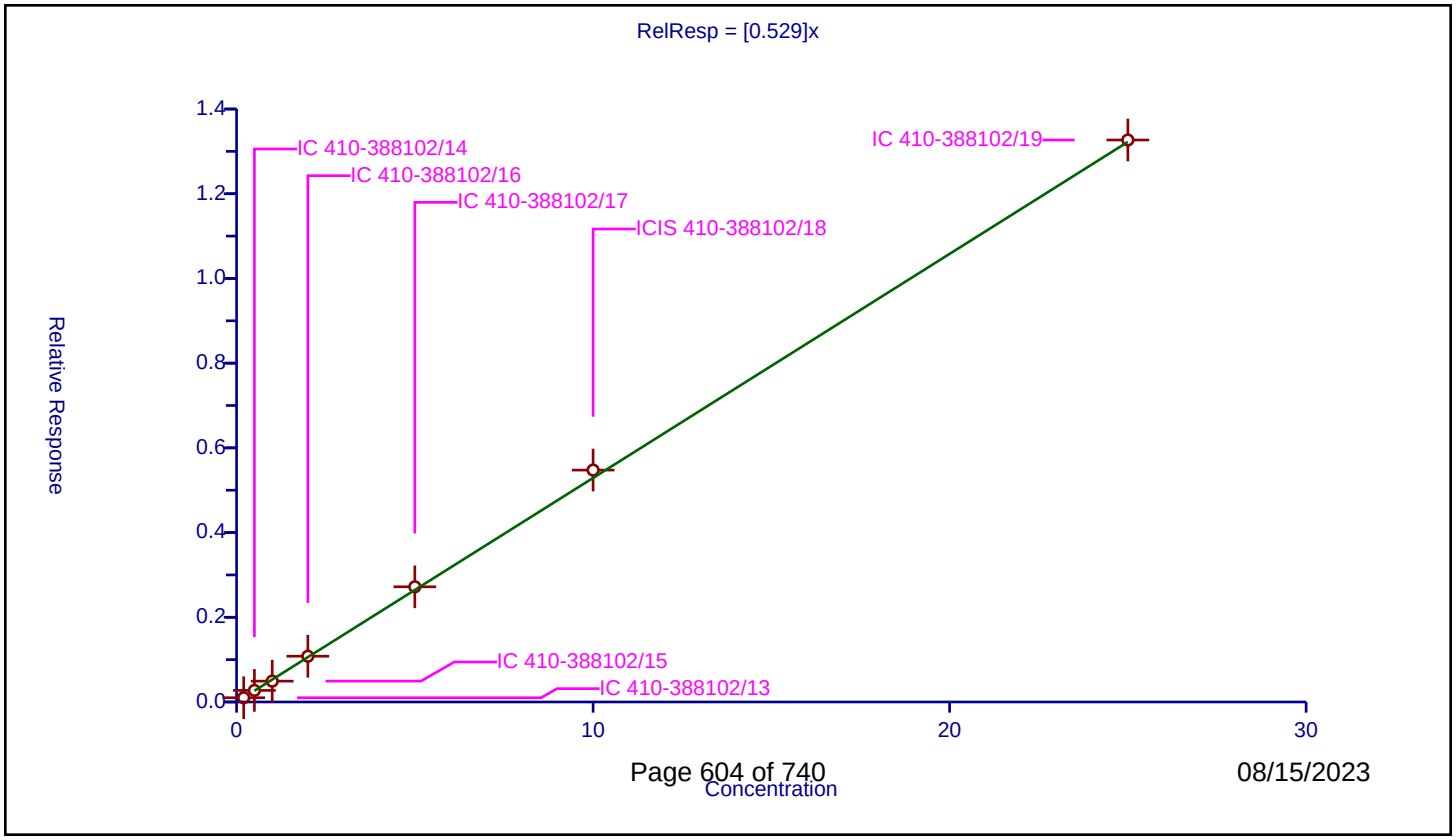
Curve Coefficients

Intercept:	0
Slope:	0.529

Error Coefficients

Standard Error:	896000
Relative Standard Error:	4.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.100273	10.0	1414940.0	0.501364	Y
2	IC 410-388102/14	0.5	0.273327	10.0	1381168.0	0.546653	Y
3	IC 410-388102/15	1.0	0.492084	10.0	1413947.0	0.492084	Y
4	IC 410-388102/16	2.0	1.080976	10.0	1411844.0	0.540488	Y
5	IC 410-388102/17	5.0	2.719443	10.0	1479531.0	0.543889	Y
6	ICIS 410-388102/18	10.0	5.475473	10.0	1439976.0	0.547547	Y
7	IC 410-388102/19	25.0	13.268695	10.0	1508853.0	0.530748	Y



Calibration / 1,3-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

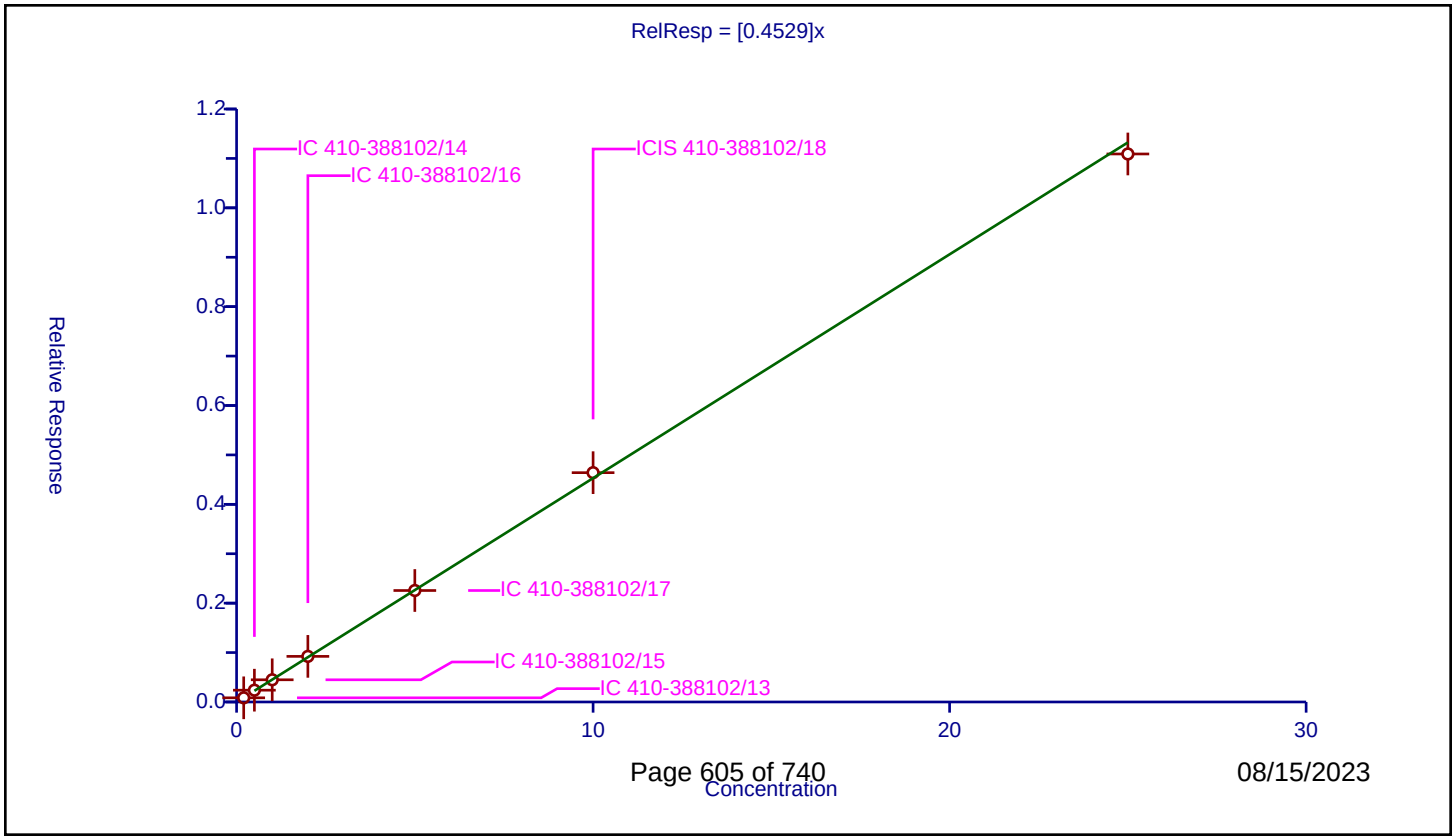
Curve Coefficients

Intercept:	0
Slope:	0.4529

Error Coefficients

Standard Error:	751000
Relative Standard Error:	3.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.084654	10.0	1414940.0	0.423269	Y
2	IC 410-388102/14	0.5	0.238878	10.0	1381168.0	0.477755	Y
3	IC 410-388102/15	1.0	0.449034	10.0	1413947.0	0.449034	Y
4	IC 410-388102/16	2.0	0.92319	10.0	1411844.0	0.461595	Y
5	IC 410-388102/17	5.0	2.256188	10.0	1479531.0	0.451238	Y
6	ICIS 410-388102/18	10.0	4.640522	10.0	1439976.0	0.464052	Y
7	IC 410-388102/19	25.0	11.090391	10.0	1508853.0	0.443616	Y



Calibration / 2-Hexanone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

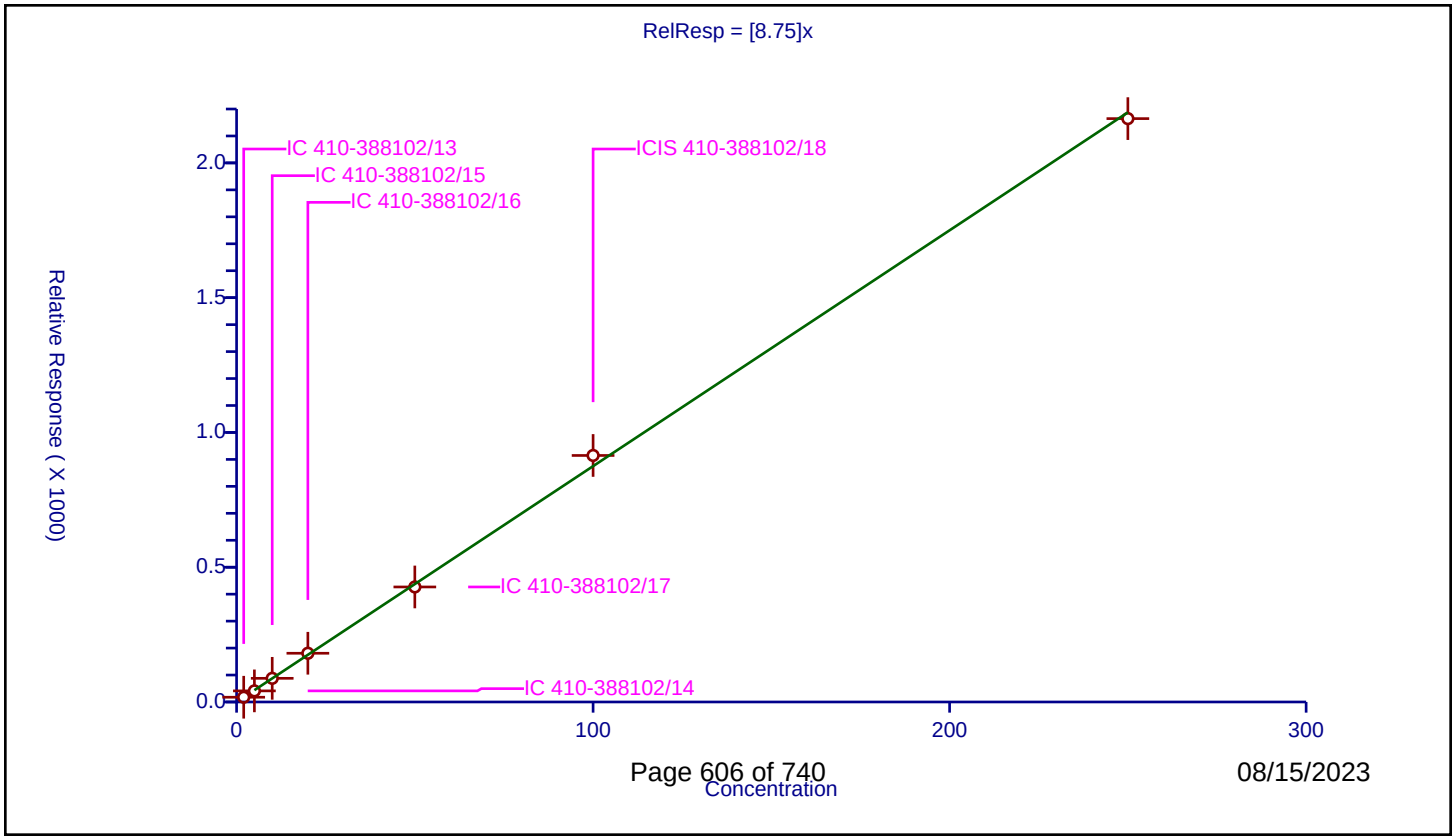
Curve Coefficients

Intercept:	0
Slope:	8.75

Error Coefficients

Standard Error:	2630000
Relative Standard Error:	3.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	2.0	17.705691	50.0	116680.0	8.852845	Y
2	IC 410-388102/14	5.0	41.165274	50.0	132398.0	8.233055	Y
3	IC 410-388102/15	10.0	87.807645	50.0	133555.0	8.780764	Y
4	IC 410-388102/16	20.0	180.849097	50.0	127135.0	9.042455	Y
5	IC 410-388102/17	50.0	426.765	50.0	139221.0	8.5353	Y
6	ICIS 410-388102/18	100.0	914.665647	50.0	130775.0	9.146656	Y
7	IC 410-388102/19	250.0	2164.420539	50.0	134884.0	8.657682	Y



Calibration / Chlorodibromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

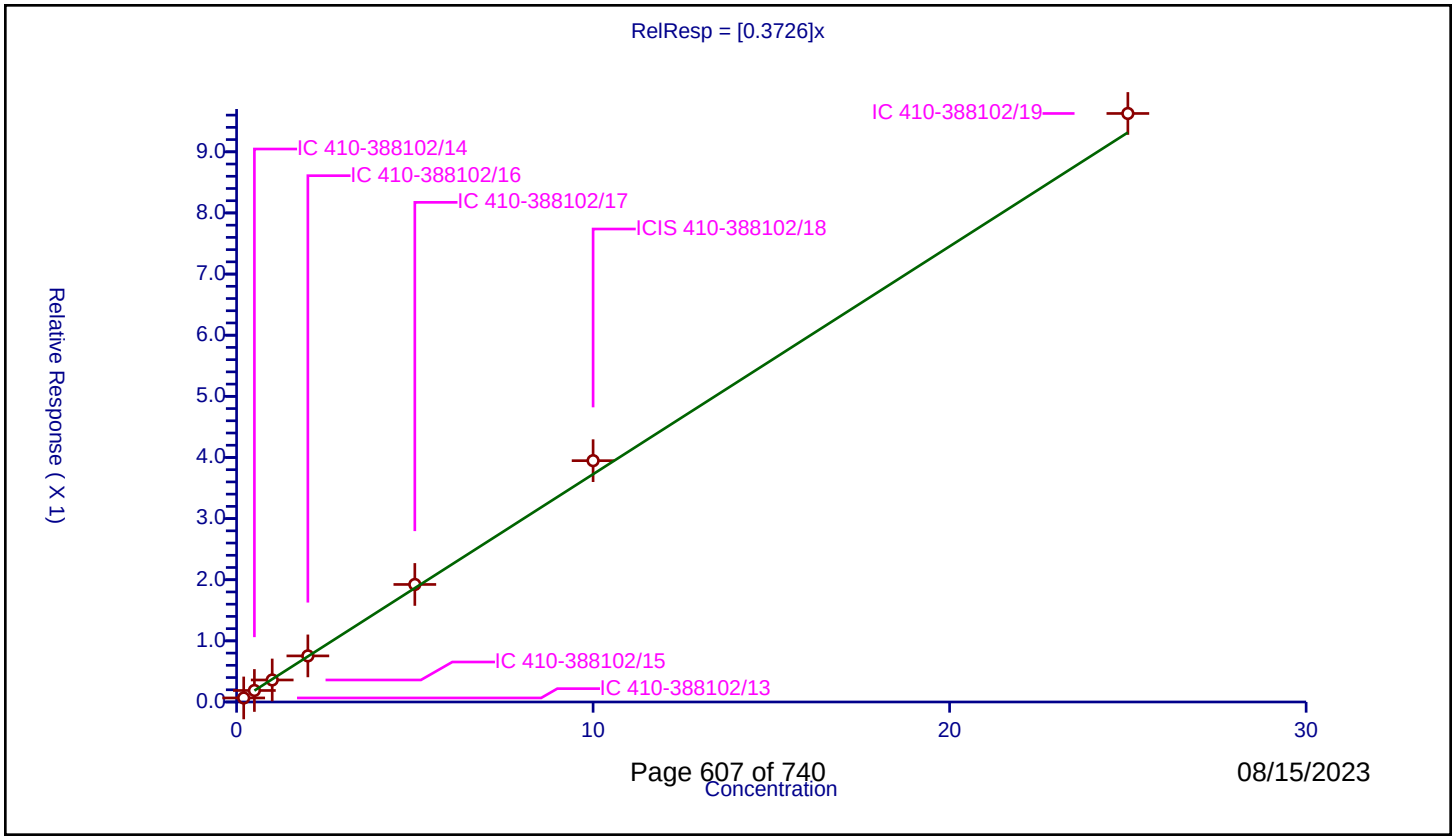
Curve Coefficients

Intercept:	0
Slope:	0.3726

Error Coefficients

Standard Error:	649000
Relative Standard Error:	5.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.066215	10.0	1414940.0	0.331074	Y
2	IC 410-388102/14	0.5	0.188022	10.0	1381168.0	0.376044	Y
3	IC 410-388102/15	1.0	0.359971	10.0	1413947.0	0.359971	Y
4	IC 410-388102/16	2.0	0.754113	10.0	1411844.0	0.377057	Y
5	IC 410-388102/17	5.0	1.922657	10.0	1479531.0	0.384531	Y
6	ICIS 410-388102/18	10.0	3.947677	10.0	1439976.0	0.394768	Y
7	IC 410-388102/19	25.0	9.627068	10.0	1508853.0	0.385083	Y



Calibration / Ethylene Dibromide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

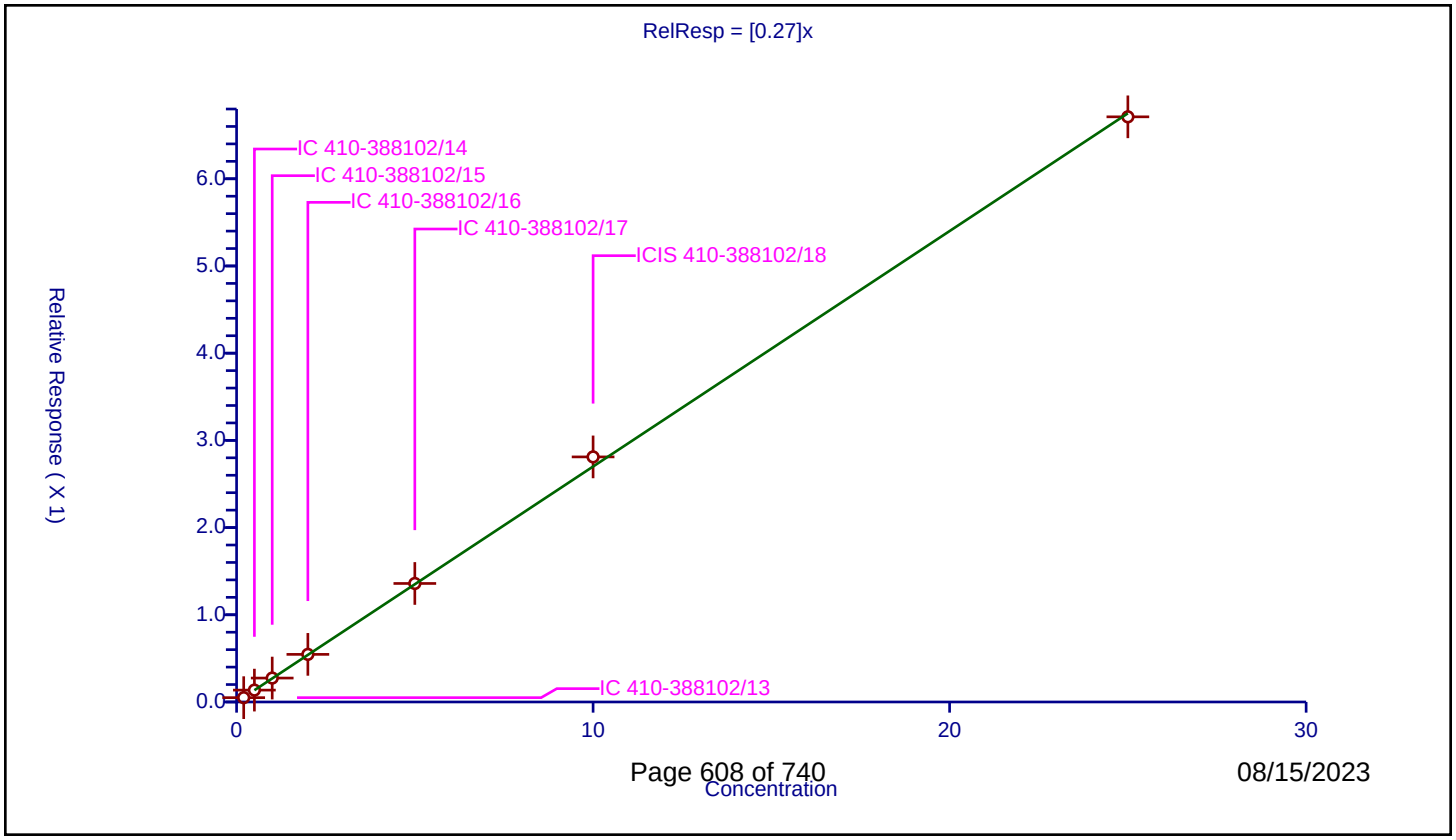
Curve Coefficients

Intercept:	0
Slope:	0.27

Error Coefficients

Standard Error:	454000
Relative Standard Error:	3.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.049804	10.0	1414940.0	0.249021	Y
2	IC 410-388102/14	0.5	0.136225	10.0	1381168.0	0.272451	Y
3	IC 410-388102/15	1.0	0.274459	10.0	1413947.0	0.274459	Y
4	IC 410-388102/16	2.0	0.545882	10.0	1411844.0	0.272941	Y
5	IC 410-388102/17	5.0	1.359052	10.0	1479531.0	0.27181	Y
6	ICIS 410-388102/18	10.0	2.810345	10.0	1439976.0	0.281035	Y
7	IC 410-388102/19	25.0	6.710495	10.0	1508853.0	0.26842	Y



Calibration / 1-Chlorohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

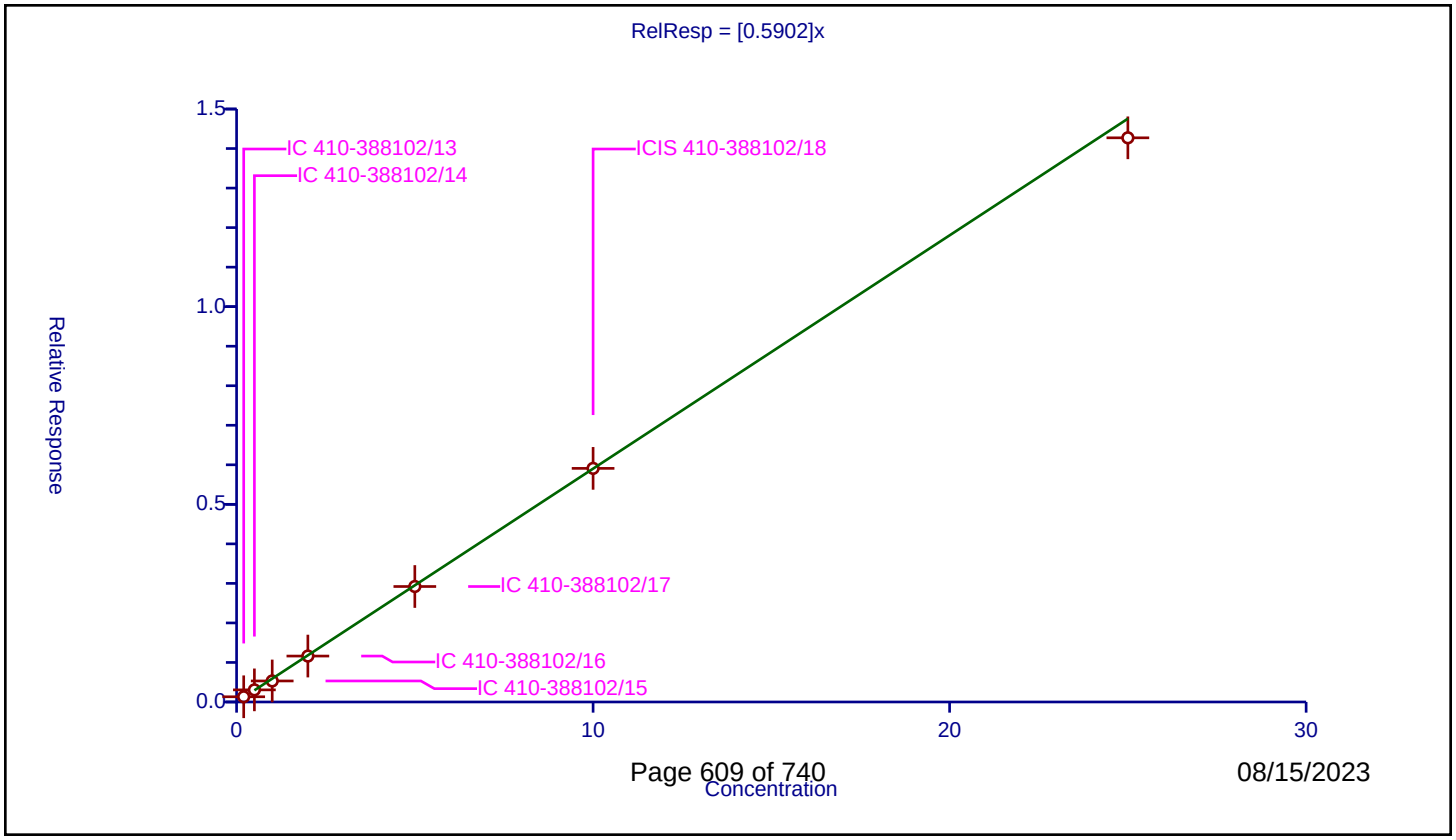
Curve Coefficients

Intercept:	0
Slope:	0.5902

Error Coefficients

Standard Error:	965000
Relative Standard Error:	6.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.131822	10.0	1414940.0	0.659109	Y
2	IC 410-388102/14	0.5	0.306653	10.0	1381168.0	0.613307	Y
3	IC 410-388102/15	1.0	0.531823	10.0	1413947.0	0.531823	Y
4	IC 410-388102/16	2.0	1.162076	10.0	1411844.0	0.581038	Y
5	IC 410-388102/17	5.0	2.92146	10.0	1479531.0	0.584292	Y
6	ICIS 410-388102/18	10.0	5.909557	10.0	1439976.0	0.590956	Y
7	IC 410-388102/19	25.0	14.271715	10.0	1508853.0	0.570869	Y



Calibration / Chlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

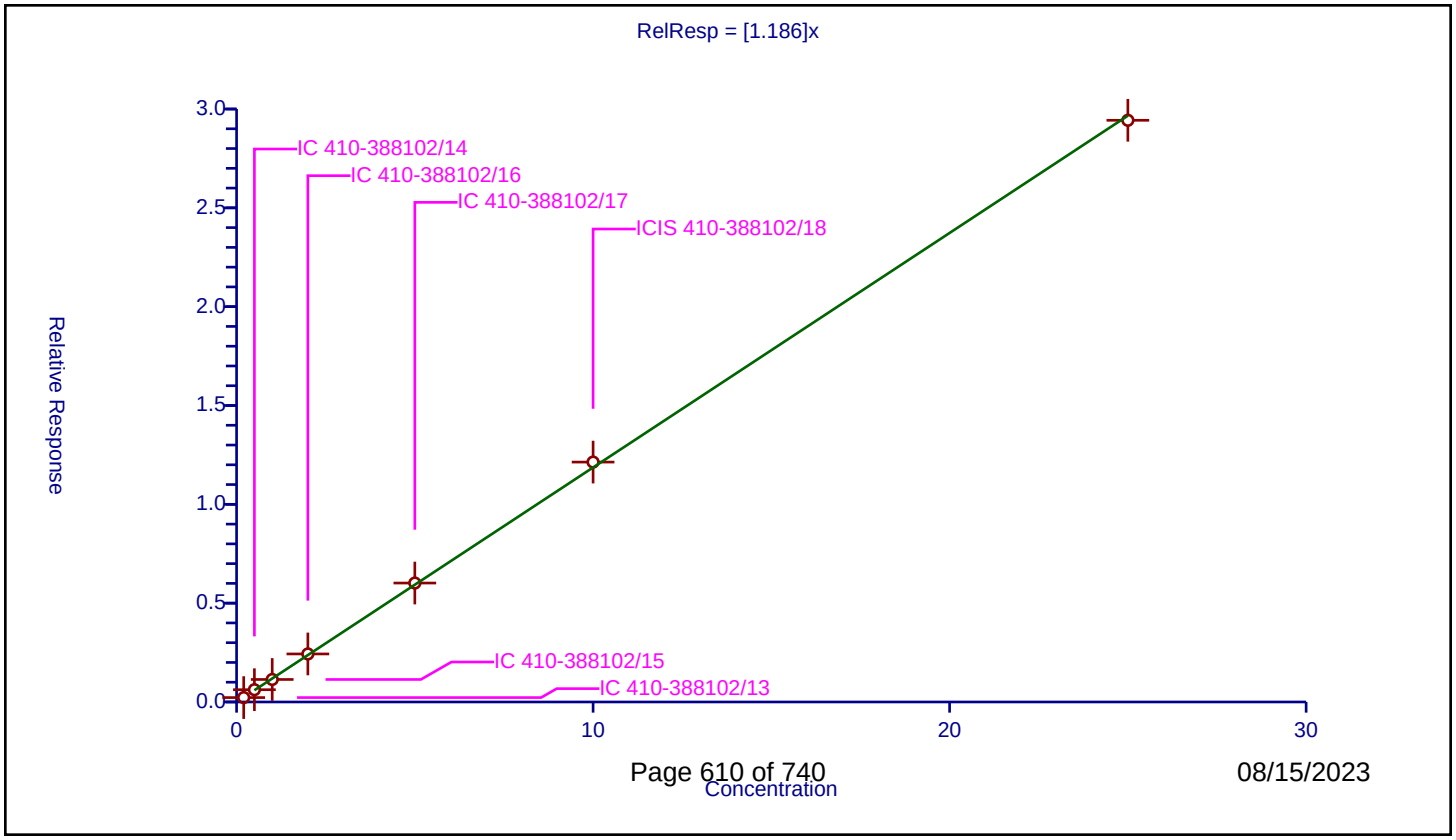
Curve Coefficients

Intercept:	0
Slope:	1.186

Error Coefficients

Standard Error:	1990000
Relative Standard Error:	3.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.2229	10.0	1414940.0	1.1145	Y
2	IC 410-388102/14	0.5	0.621054	10.0	1381168.0	1.242108	Y
3	IC 410-388102/15	1.0	1.138939	10.0	1413947.0	1.138939	Y
4	IC 410-388102/16	2.0	2.430701	10.0	1411844.0	1.21535	Y
5	IC 410-388102/17	5.0	6.017427	10.0	1479531.0	1.203485	Y
6	ICIS 410-388102/18	10.0	12.136834	10.0	1439976.0	1.213683	Y
7	IC 410-388102/19	25.0	29.429852	10.0	1508853.0	1.177194	Y



Calibration / 1,1,1,2-Tetrachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

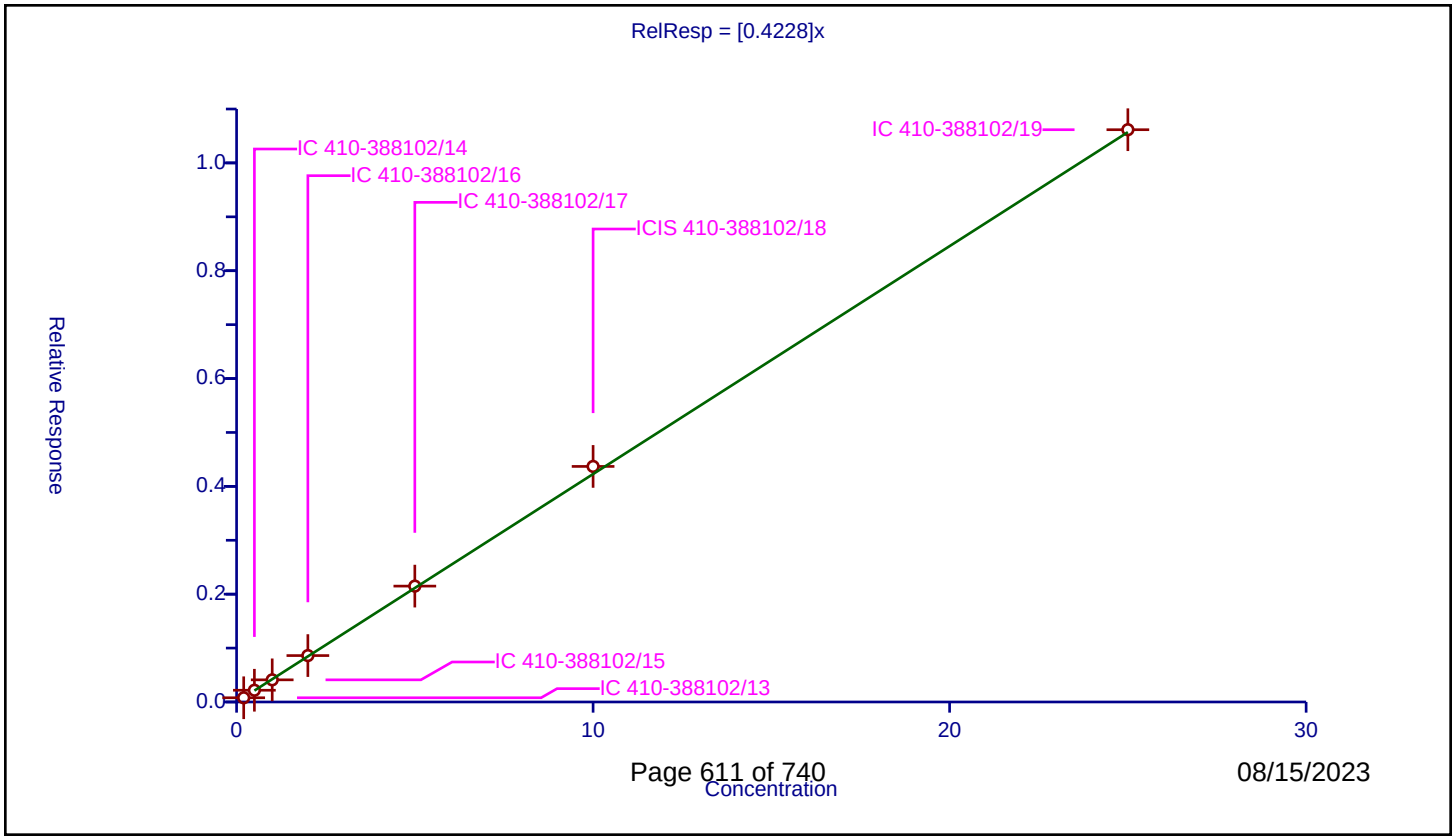
Curve Coefficients

Intercept:	0
Slope:	0.4228

Error Coefficients

Standard Error:	717000
Relative Standard Error:	3.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.07818	10.0	1414940.0	0.3909	Y
2	IC 410-388102/14	0.5	0.218141	10.0	1381168.0	0.436283	Y
3	IC 410-388102/15	1.0	0.410638	10.0	1413947.0	0.410638	Y
4	IC 410-388102/16	2.0	0.860867	10.0	1411844.0	0.430434	Y
5	IC 410-388102/17	5.0	2.149526	10.0	1479531.0	0.429905	Y
6	ICIS 410-388102/18	10.0	4.36992	10.0	1439976.0	0.436992	Y
7	IC 410-388102/19	25.0	10.616296	10.0	1508853.0	0.424652	Y



Calibration / Ethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

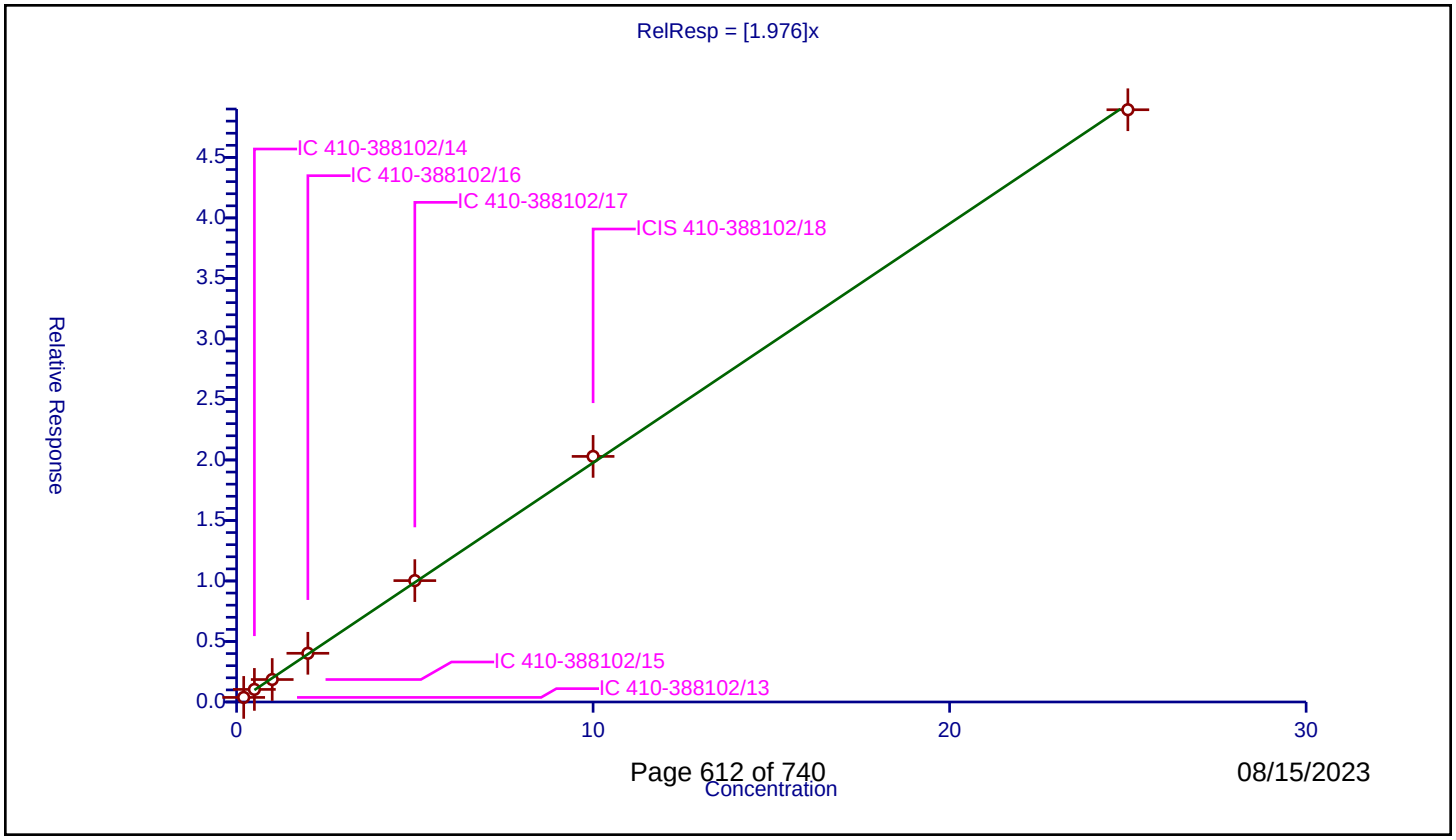
Curve Coefficients

Intercept:	0
Slope:	1.976

Error Coefficients

Standard Error:	3310000
Relative Standard Error:	4.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.378737	10.0	1414940.0	1.893685	Y
2	IC 410-388102/14	0.5	1.03894	10.0	1381168.0	2.077879	Y
3	IC 410-388102/15	1.0	1.857559	10.0	1413947.0	1.857559	Y
4	IC 410-388102/16	2.0	4.025785	10.0	1411844.0	2.012892	Y
5	IC 410-388102/17	5.0	10.028833	10.0	1479531.0	2.005767	Y
6	ICIS 410-388102/18	10.0	20.293755	10.0	1439976.0	2.029375	Y
7	IC 410-388102/19	25.0	48.940765	10.0	1508853.0	1.957631	Y



Calibration / m-Xylene & p-Xylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

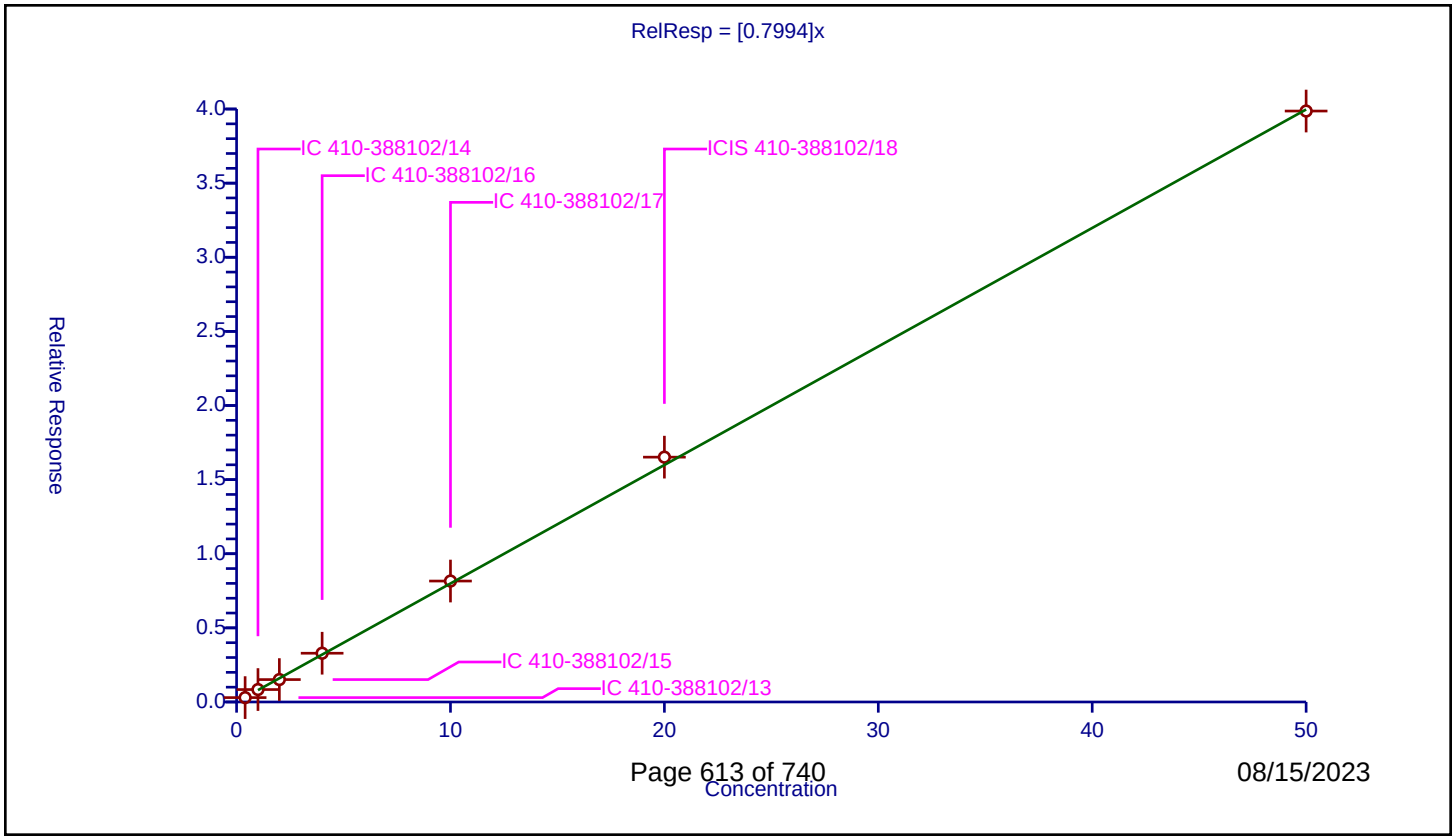
Curve Coefficients

Intercept:	0
Slope:	0.7994

Error Coefficients

Standard Error:	2690000
Relative Standard Error:	4.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.4	0.295779	10.0	1414940.0	0.739448	Y
2	IC 410-388102/14	1.0	0.838906	10.0	1381168.0	0.838906	Y
3	IC 410-388102/15	2.0	1.512383	10.0	1413947.0	0.756192	Y
4	IC 410-388102/16	4.0	3.288876	10.0	1411844.0	0.822219	Y
5	IC 410-388102/17	10.0	8.158565	10.0	1479531.0	0.815857	Y
6	ICIS 410-388102/18	20.0	16.515942	10.0	1439976.0	0.825797	Y
7	IC 410-388102/19	50.0	39.864129	10.0	1508853.0	0.797283	Y



Calibration / o-Xylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

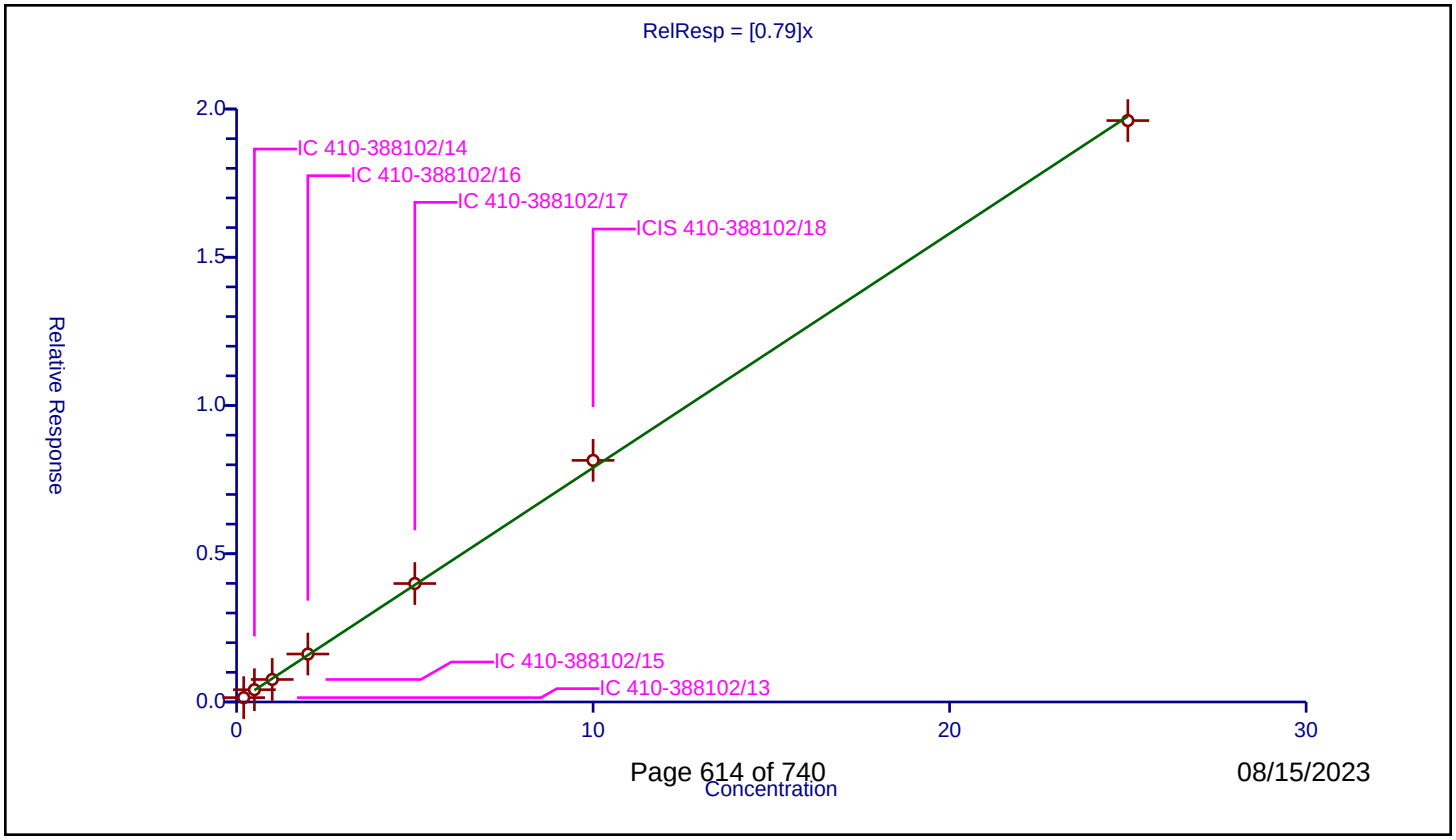
Curve Coefficients

Intercept:	0
Slope:	0.79

Error Coefficients

Standard Error:	1330000
Relative Standard Error:	4.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.147003	10.0	1414940.0	0.735013	Y
2	IC 410-388102/14	0.5	0.414222	10.0	1381168.0	0.828444	Y
3	IC 410-388102/15	1.0	0.75971	10.0	1413947.0	0.75971	Y
4	IC 410-388102/16	2.0	1.617487	10.0	1411844.0	0.808744	Y
5	IC 410-388102/17	5.0	3.995246	10.0	1479531.0	0.799049	Y
6	ICIS 410-388102/18	10.0	8.149566	10.0	1439976.0	0.814957	Y
7	IC 410-388102/19	25.0	19.609491	10.0	1508853.0	0.78438	Y



Calibration / Styrene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

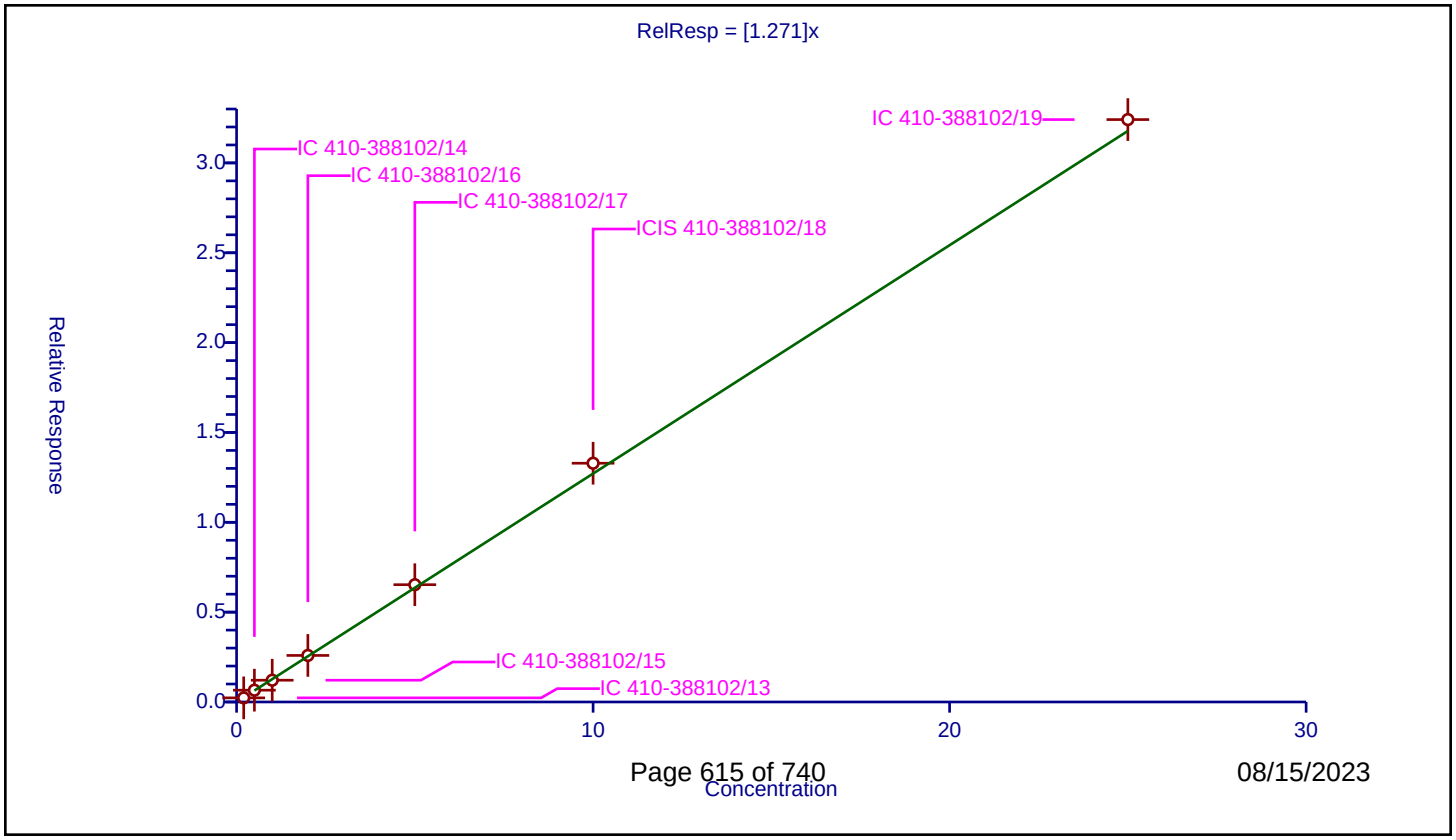
Curve Coefficients

Intercept:	0
Slope:	1.271

Error Coefficients

Standard Error:	2190000
Relative Standard Error:	5.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.229077	10.0	1414940.0	1.145384	Y
2	IC 410-388102/14	0.5	0.657161	10.0	1381168.0	1.314322	Y
3	IC 410-388102/15	1.0	1.211785	10.0	1413947.0	1.211785	Y
4	IC 410-388102/16	2.0	2.590414	10.0	1411844.0	1.295207	Y
5	IC 410-388102/17	5.0	6.527379	10.0	1479531.0	1.305476	Y
6	ICIS 410-388102/18	10.0	13.287666	10.0	1439976.0	1.328767	Y
7	IC 410-388102/19	25.0	32.412574	10.0	1508853.0	1.296503	Y



Calibration / Bromoform

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

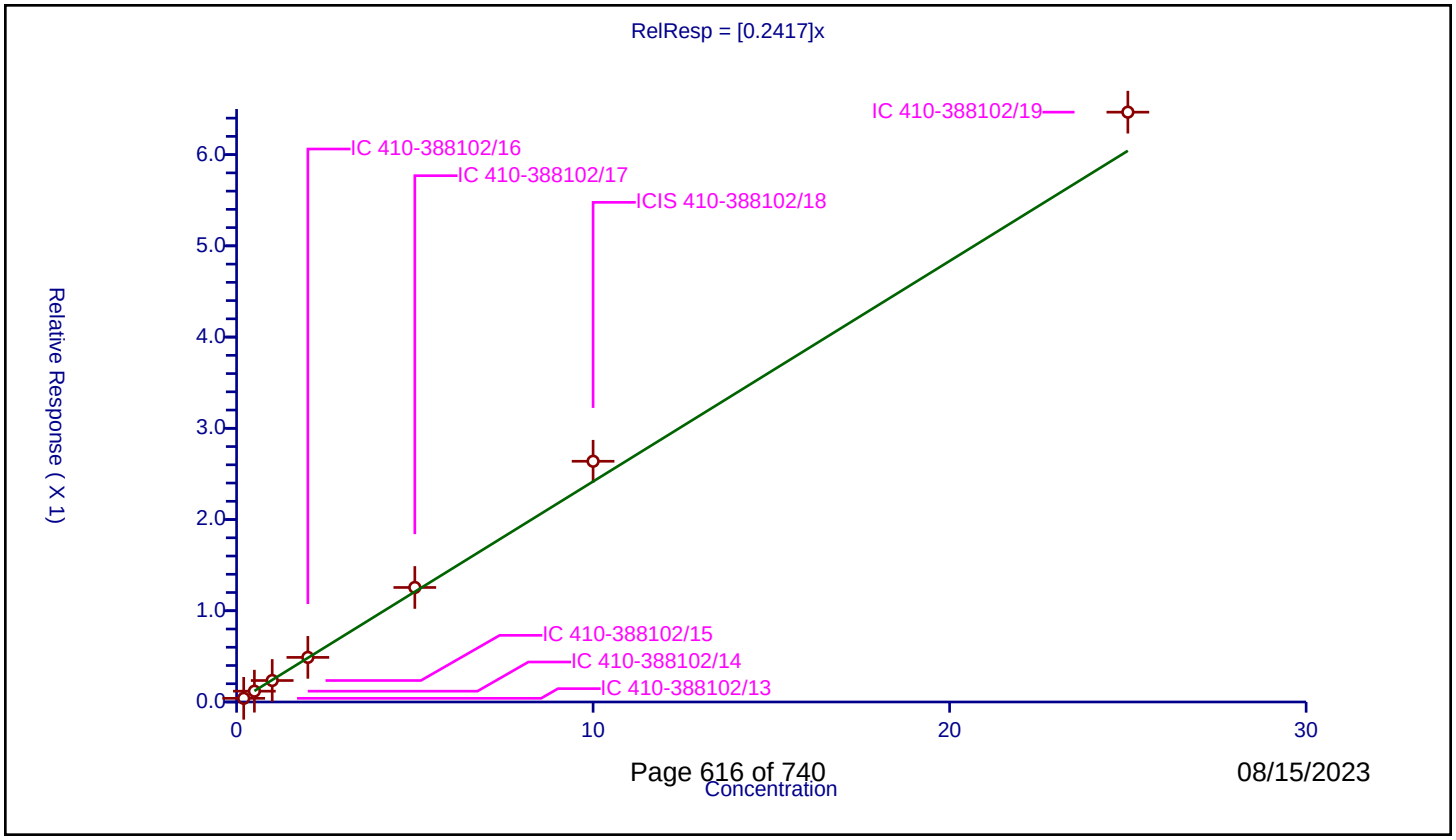
Curve Coefficients

Intercept:	0
Slope:	0.2417

Error Coefficients

Standard Error:	435000
Relative Standard Error:	8.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.040242	10.0	1414940.0	0.20121	Y
2	IC 410-388102/14	0.5	0.11853	10.0	1381168.0	0.23706	Y
3	IC 410-388102/15	1.0	0.235532	10.0	1413947.0	0.235532	Y
4	IC 410-388102/16	2.0	0.488815	10.0	1411844.0	0.244407	Y
5	IC 410-388102/17	5.0	1.255296	10.0	1479531.0	0.251059	Y
6	ICIS 410-388102/18	10.0	2.638975	10.0	1439976.0	0.263897	Y
7	IC 410-388102/19	25.0	6.46562	10.0	1508853.0	0.258625	Y



Calibration / Isopropylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

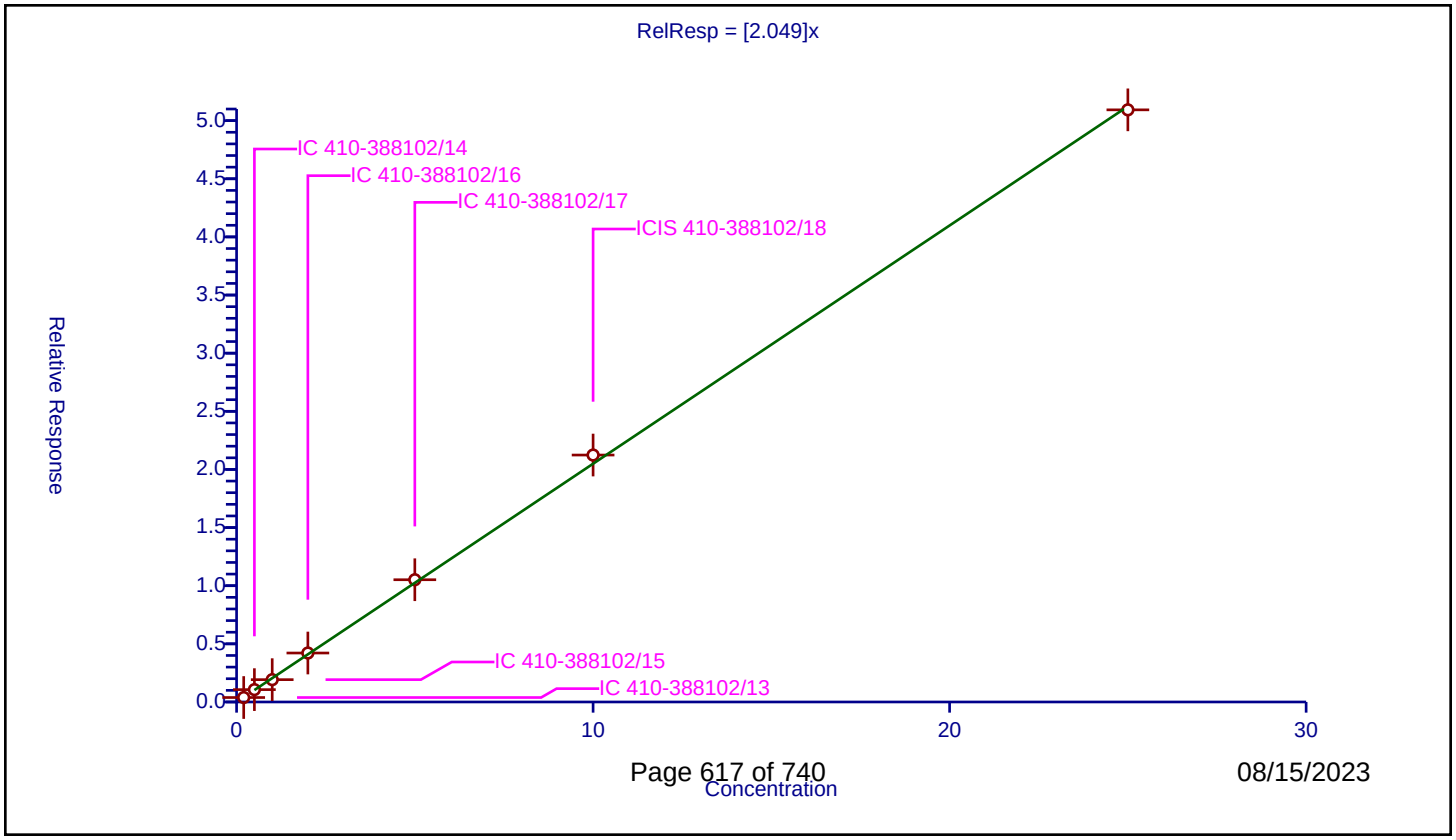
Curve Coefficients

Intercept:	0
Slope:	2.049

Error Coefficients

Standard Error:	3450000
Relative Standard Error:	4.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.385069	10.0	1414940.0	1.925347	Y
2	IC 410-388102/14	0.5	1.064012	10.0	1381168.0	2.128025	Y
3	IC 410-388102/15	1.0	1.919839	10.0	1413947.0	1.919839	Y
4	IC 410-388102/16	2.0	4.213128	10.0	1411844.0	2.106564	Y
5	IC 410-388102/17	5.0	10.514231	10.0	1479531.0	2.102846	Y
6	ICIS 410-388102/18	10.0	21.240236	10.0	1439976.0	2.124024	Y
7	IC 410-388102/19	25.0	50.929222	10.0	1508853.0	2.037169	Y



Calibration / 4-Bromofluorobenzene (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

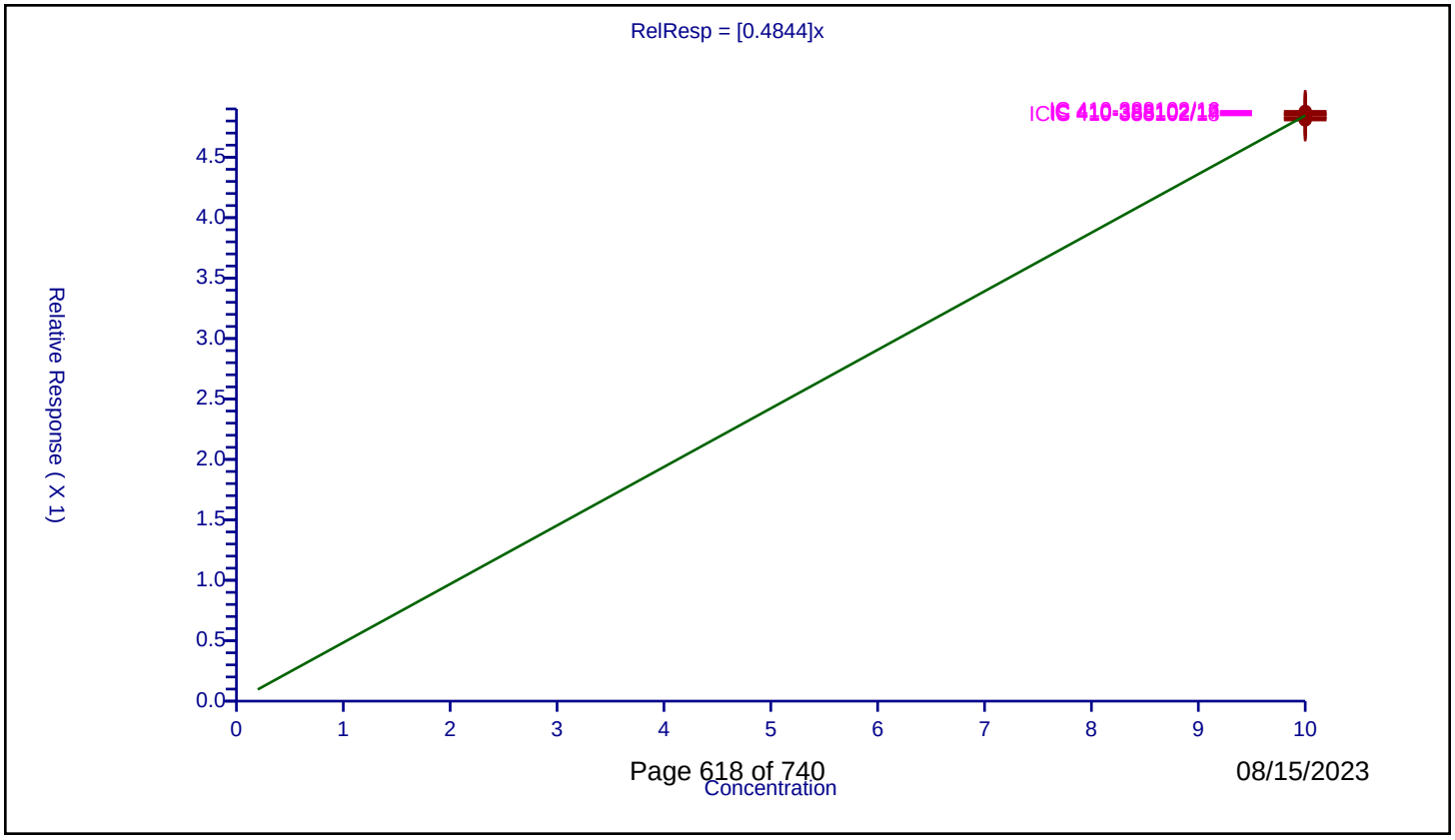
Curve Coefficients

Intercept:	0
Slope:	0.4844

Error Coefficients

Standard Error:	752000
Relative Standard Error:	0.5
Correlation Coefficient:	0
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	10.0	4.828813	10.0	1414940.0	0.482881	Y
2	IC 410-388102/14	10.0	4.855231	10.0	1381168.0	0.485523	Y
3	IC 410-388102/15	10.0	4.823894	10.0	1413947.0	0.482389	Y
4	IC 410-388102/16	10.0	4.87981	10.0	1411844.0	0.487981	Y
5	IC 410-388102/17	10.0	4.865332	10.0	1479531.0	0.486533	Y
6	ICIS 410-388102/18	10.0	4.850386	10.0	1439976.0	0.485039	Y
7	IC 410-388102/19	10.0	4.808003	10.0	1508853.0	0.4808	Y



Calibration / 1,1,2,2-Tetrachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

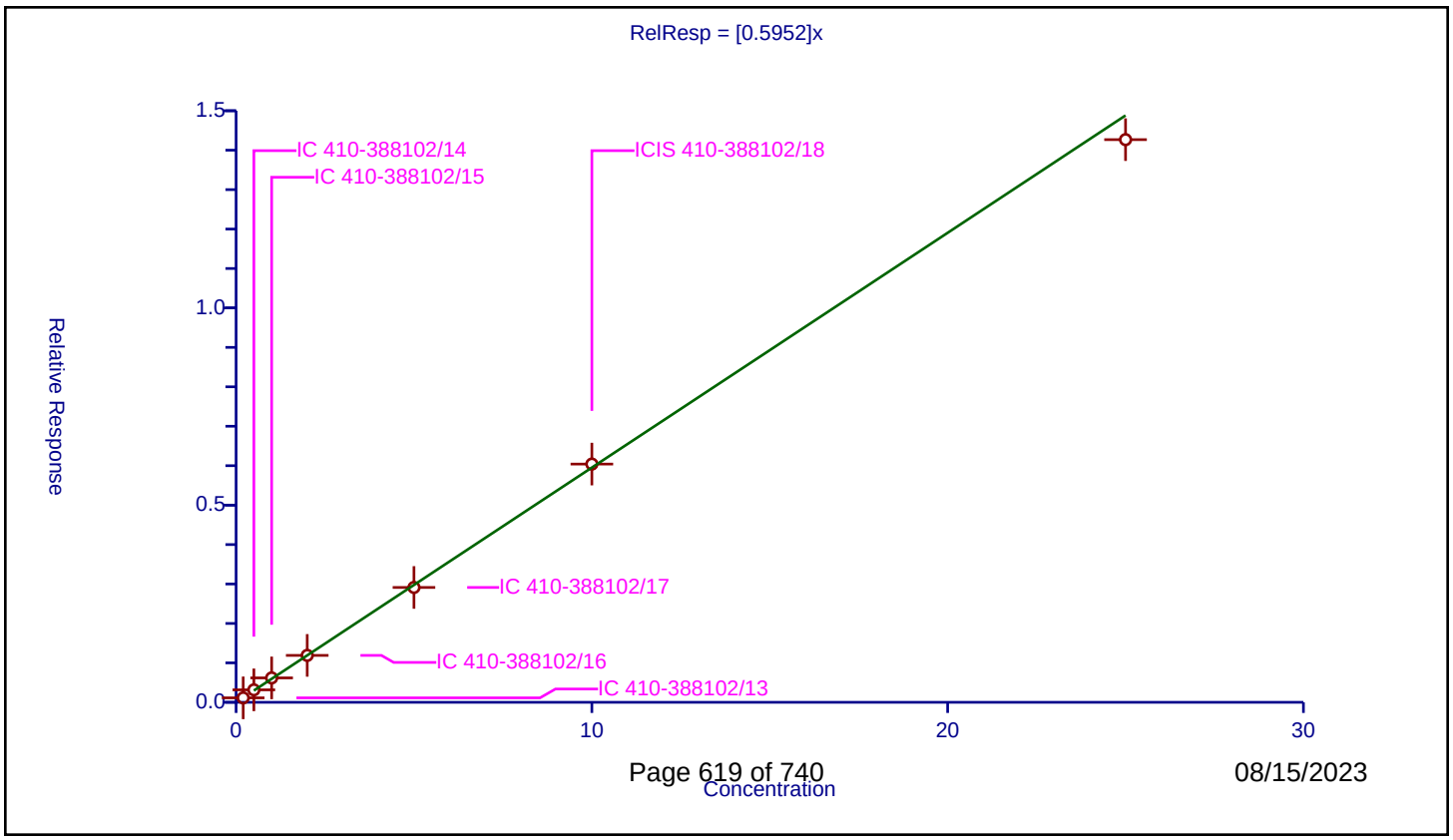
Curve Coefficients

Intercept:	0
Slope:	0.5952

Error Coefficients

Standard Error:	589000
Relative Standard Error:	4.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.112743	10.0	868350.0	0.563713	Y
2	IC 410-388102/14	0.5	0.316	10.0	834938.0	0.631999	Y
3	IC 410-388102/15	1.0	0.618728	10.0	851085.0	0.618728	Y
4	IC 410-388102/16	2.0	1.189803	10.0	870354.0	0.594902	Y
5	IC 410-388102/17	5.0	2.912329	10.0	910481.0	0.582466	Y
6	ICIS 410-388102/18	10.0	6.041052	10.0	884528.0	0.604105	Y
7	IC 410-388102/19	25.0	14.267582	10.0	917393.0	0.570703	Y



Calibration / Bromobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

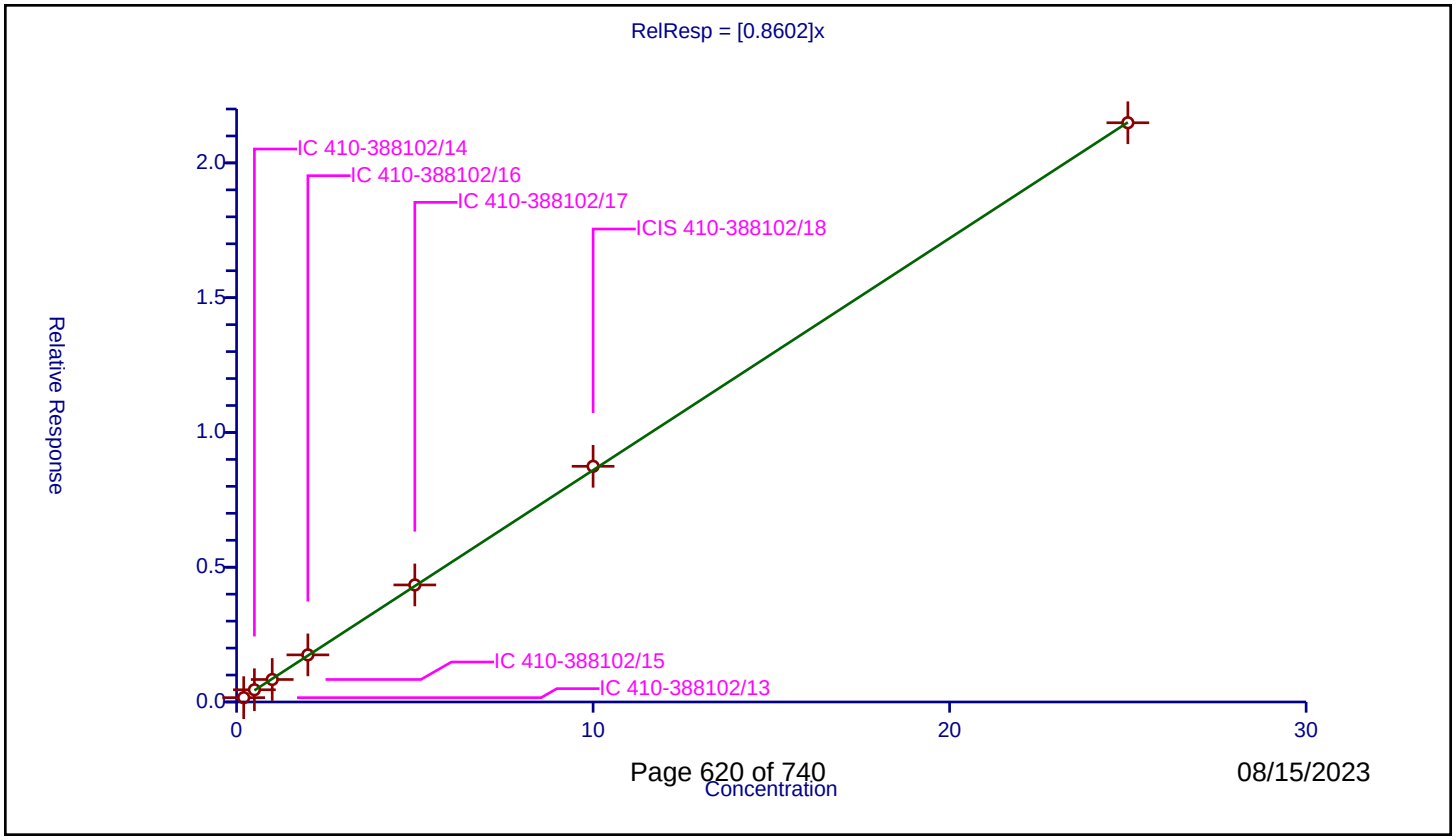
Curve Coefficients

Intercept:	0
Slope:	0.8602

Error Coefficients

Standard Error:	882000
Relative Standard Error:	3.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.16058	10.0	868350.0	0.802902	Y
2	IC 410-388102/14	0.5	0.453567	10.0	834938.0	0.907133	Y
3	IC 410-388102/15	1.0	0.834969	10.0	851085.0	0.834969	Y
4	IC 410-388102/16	2.0	1.748059	10.0	870354.0	0.874029	Y
5	IC 410-388102/17	5.0	4.343144	10.0	910481.0	0.868629	Y
6	ICIS 410-388102/18	10.0	8.744019	10.0	884528.0	0.874402	Y
7	IC 410-388102/19	25.0	21.490484	10.0	917393.0	0.859619	Y



Calibration / trans-1,4-Dichloro-2-butene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

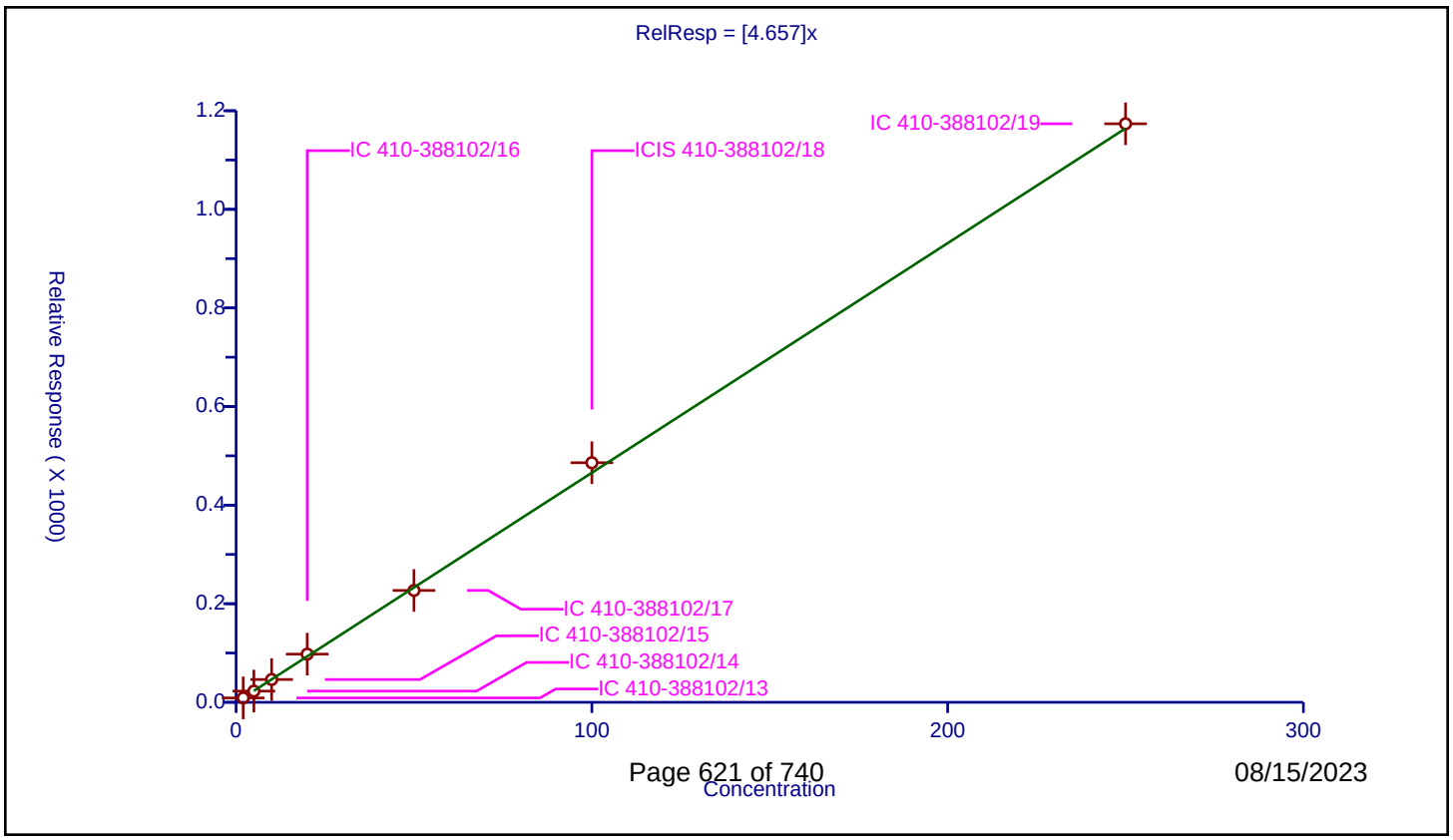
Curve Coefficients

Intercept:	0
Slope:	4.657

Error Coefficients

Standard Error:	1420000
Relative Standard Error:	3.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	2.0	8.892698	50.0	116680.0	4.446349	Y
2	IC 410-388102/14	5.0	22.736748	50.0	132398.0	4.54735	Y
3	IC 410-388102/15	10.0	46.249111	50.0	133555.0	4.624911	Y
4	IC 410-388102/16	20.0	97.724859	50.0	127135.0	4.886243	Y
5	IC 410-388102/17	50.0	226.933437	50.0	139221.0	4.538669	Y
6	ICIS 410-388102/18	100.0	486.01147	50.0	130775.0	4.860115	Y
7	IC 410-388102/19	250.0	1173.559503	50.0	134884.0	4.694238	Y



Calibration / 1,2,3-Trichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

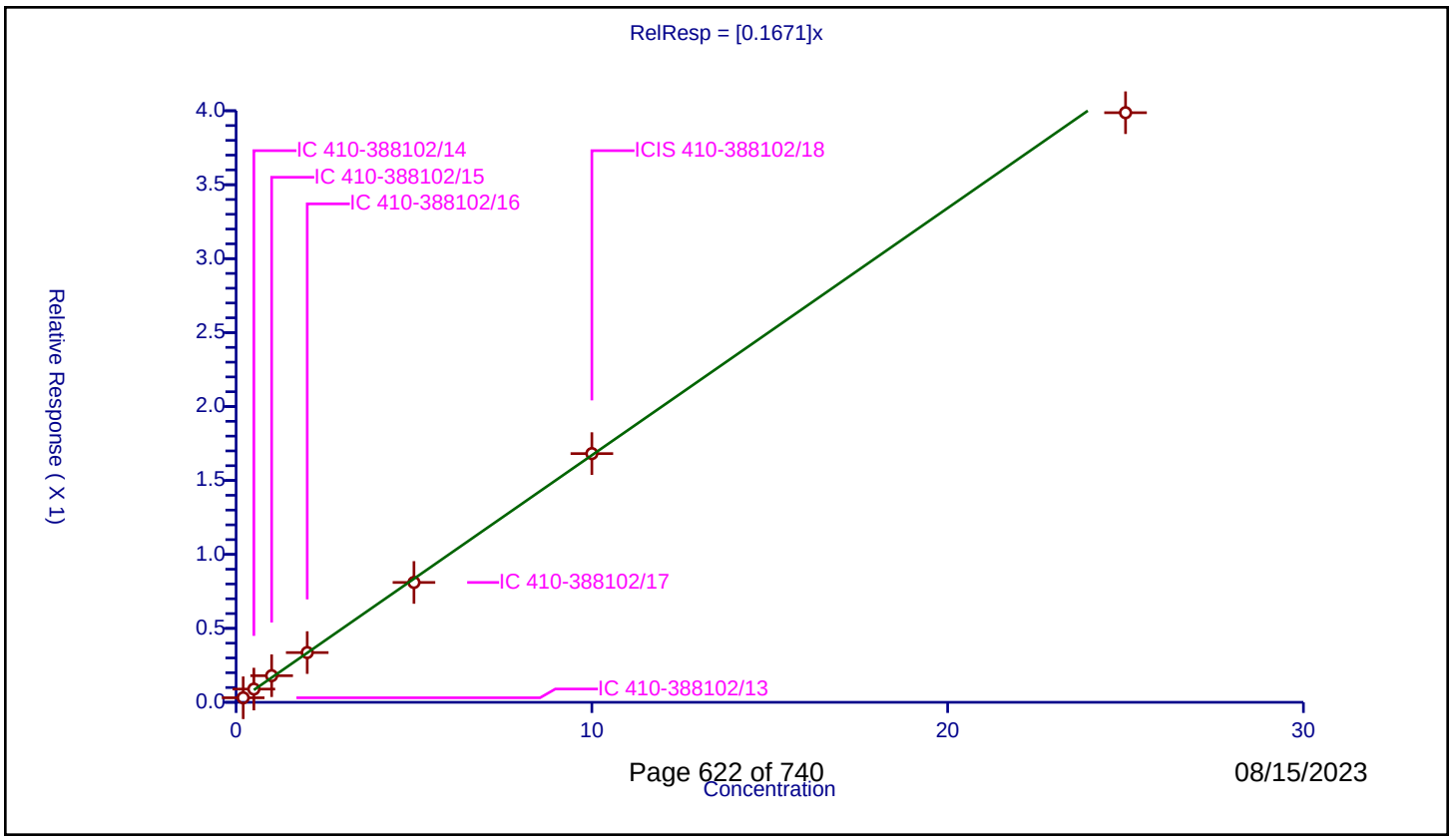
Curve Coefficients

Intercept:	0
Slope:	0.1671

Error Coefficients

Standard Error:	165000
Relative Standard Error:	5.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.030587	10.0	868350.0	0.152934	Y
2	IC 410-388102/14	0.5	0.089456	10.0	834938.0	0.178911	Y
3	IC 410-388102/15	1.0	0.179912	10.0	851085.0	0.179912	Y
4	IC 410-388102/16	2.0	0.336242	10.0	870354.0	0.168121	Y
5	IC 410-388102/17	5.0	0.810462	10.0	910481.0	0.162092	Y
6	ICIS 410-388102/18	10.0	1.681846	10.0	884528.0	0.168185	Y
7	IC 410-388102/19	25.0	3.986841	10.0	917393.0	0.159474	Y



Calibration / N-Propylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

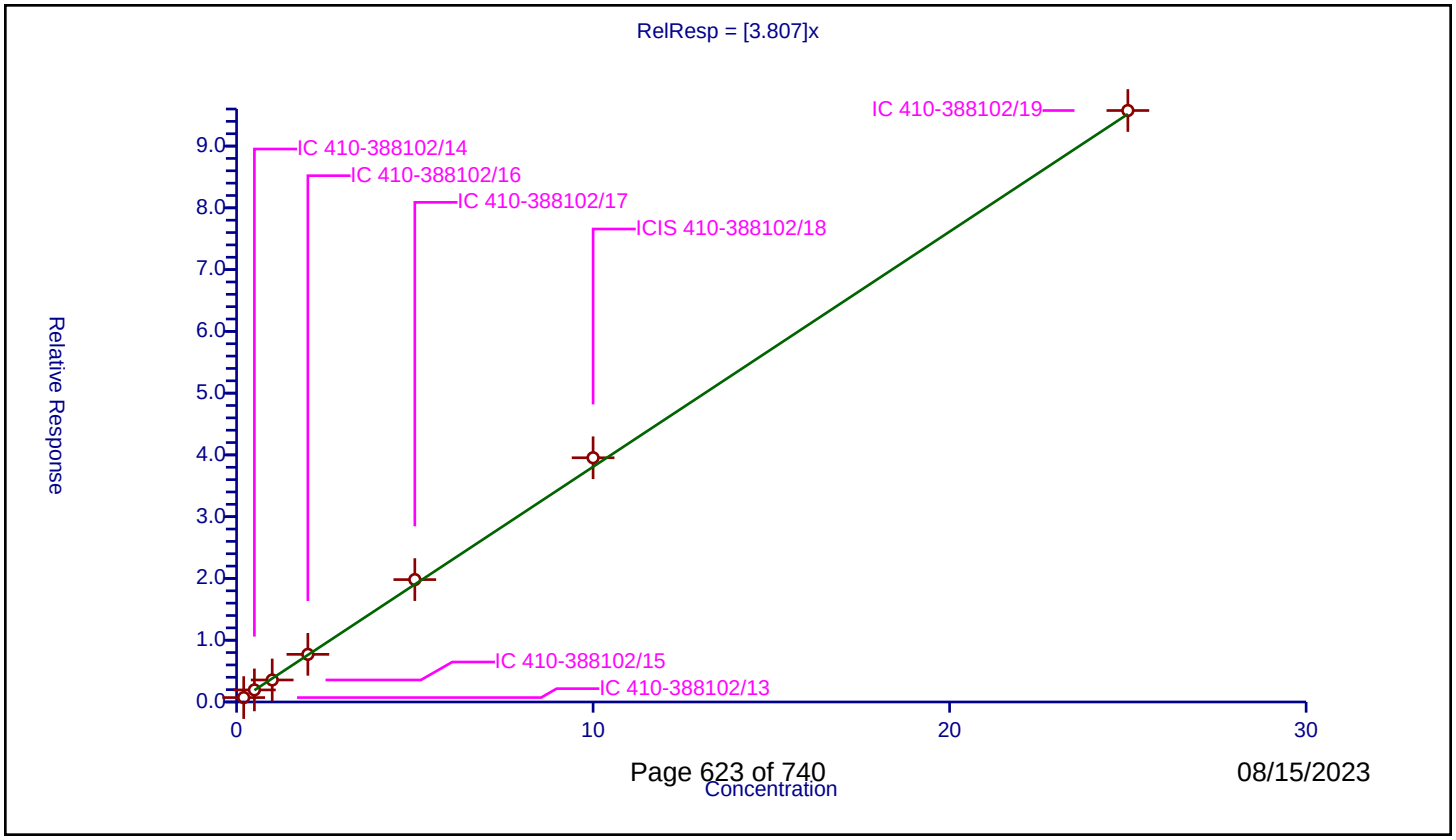
Curve Coefficients

Intercept:	0
Slope:	3.807

Error Coefficients

Standard Error:	3940000
Relative Standard Error:	4.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.71523	10.0	868350.0	3.57615	Y
2	IC 410-388102/14	0.5	1.95466	10.0	834938.0	3.90932	Y
3	IC 410-388102/15	1.0	3.563122	10.0	851085.0	3.563122	Y
4	IC 410-388102/16	2.0	7.712885	10.0	870354.0	3.856442	Y
5	IC 410-388102/17	5.0	19.813209	10.0	910481.0	3.962642	Y
6	ICIS 410-388102/18	10.0	39.541179	10.0	884528.0	3.954118	Y
7	IC 410-388102/19	25.0	95.756355	10.0	917393.0	3.830254	Y



Calibration / 2-Chlorotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

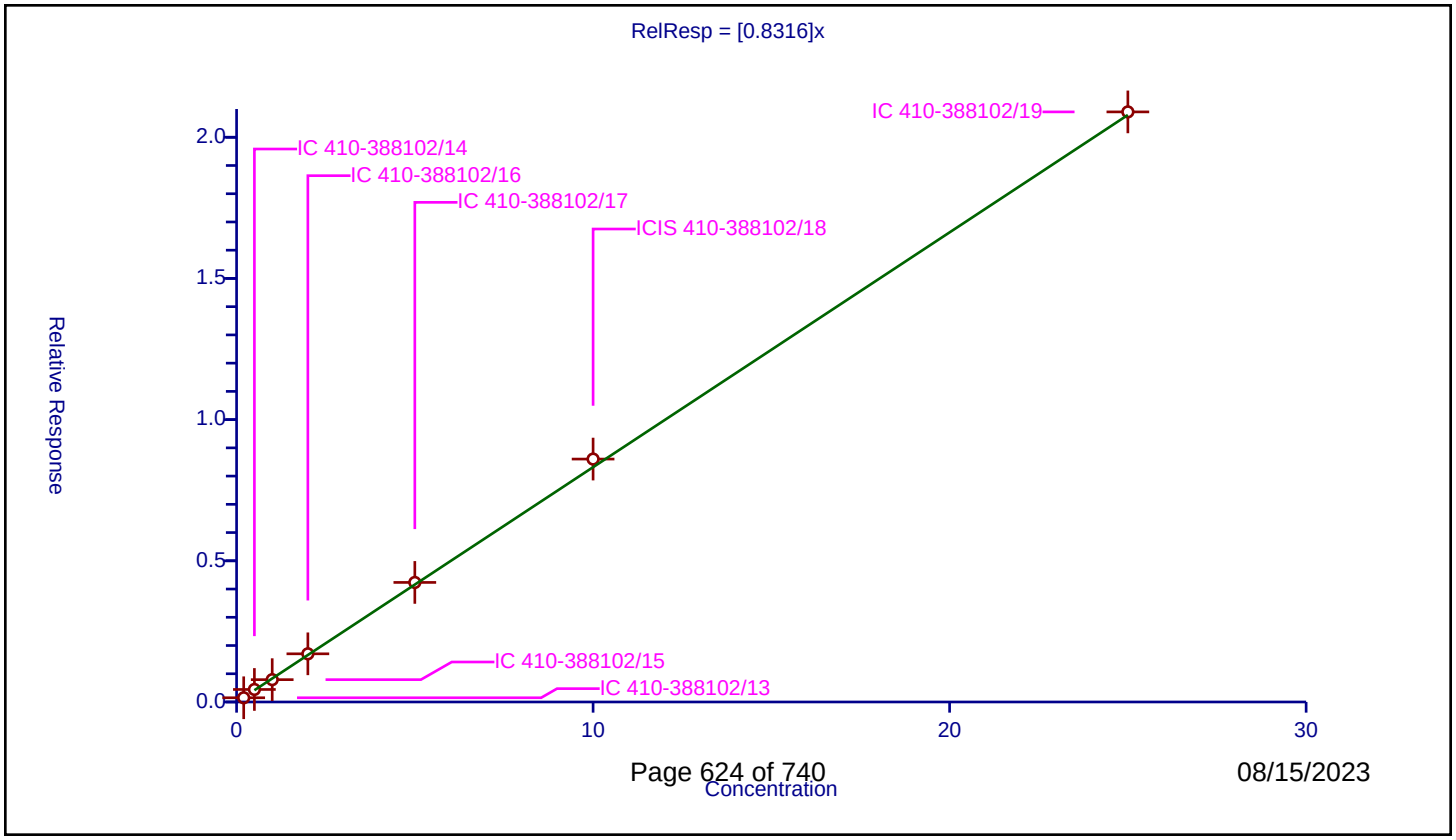
Curve Coefficients

Intercept:	0
Slope:	0.8316

Error Coefficients

Standard Error:	859000
Relative Standard Error:	5.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.149583	10.0	868350.0	0.747913	Y
2	IC 410-388102/14	0.5	0.442967	10.0	834938.0	0.885934	Y
3	IC 410-388102/15	1.0	0.791026	10.0	851085.0	0.791026	Y
4	IC 410-388102/16	2.0	1.706179	10.0	870354.0	0.85309	Y
5	IC 410-388102/17	5.0	4.233707	10.0	910481.0	0.846741	Y
6	ICIS 410-388102/18	10.0	8.603289	10.0	884528.0	0.860329	Y
7	IC 410-388102/19	25.0	20.898121	10.0	917393.0	0.835925	Y



Calibration / 1,3,5-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

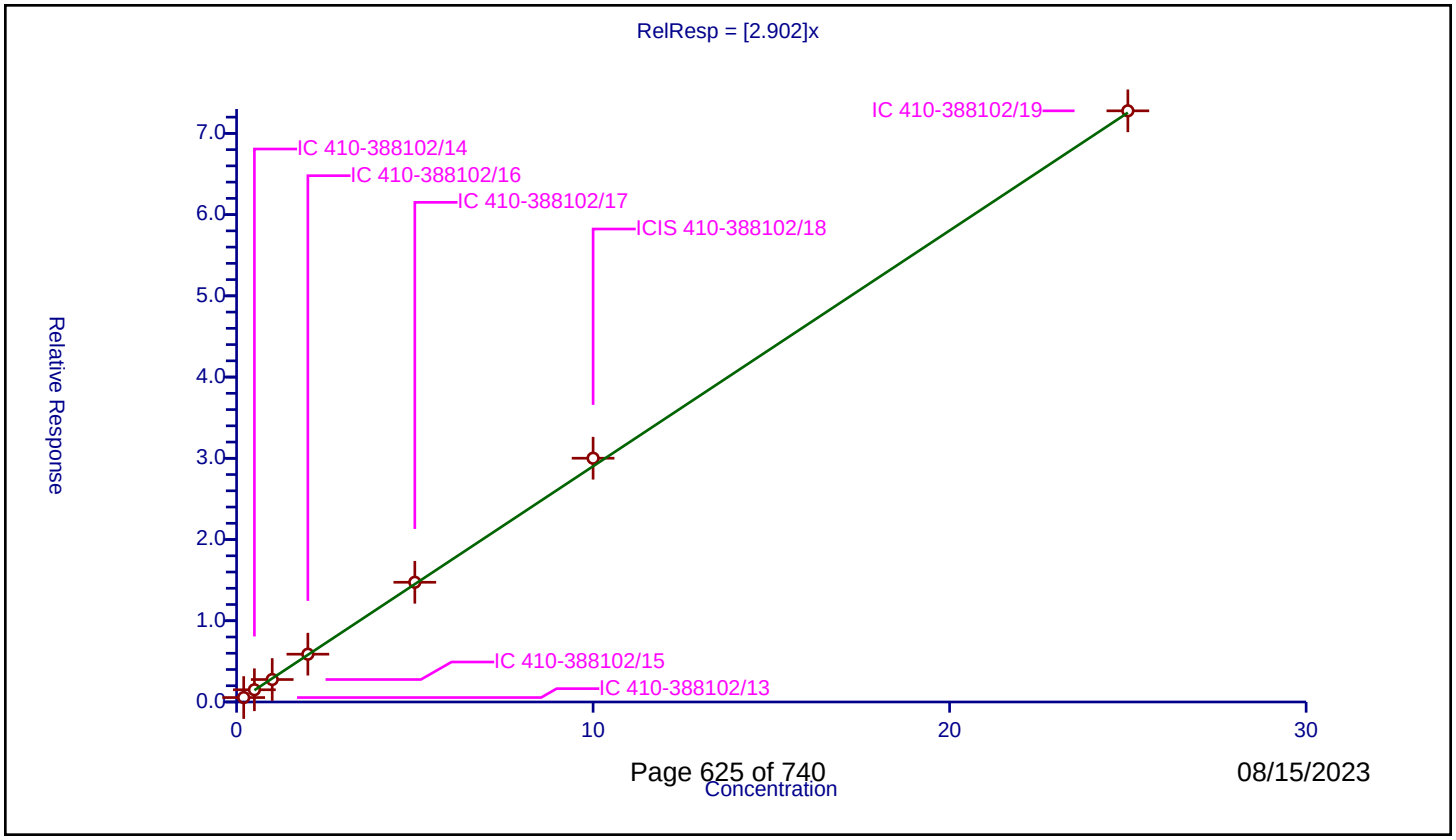
Curve Coefficients

Intercept:	0
Slope:	2.902

Error Coefficients

Standard Error:	2990000
Relative Standard Error:	3.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.547084	10.0	868350.0	2.735418	Y
2	IC 410-388102/14	0.5	1.504207	10.0	834938.0	3.008415	Y
3	IC 410-388102/15	1.0	2.766927	10.0	851085.0	2.766927	Y
4	IC 410-388102/16	2.0	5.88549	10.0	870354.0	2.942745	Y
5	IC 410-388102/17	5.0	14.739813	10.0	910481.0	2.947963	Y
6	ICIS 410-388102/18	10.0	30.00987	10.0	884528.0	3.000987	Y
7	IC 410-388102/19	25.0	72.778231	10.0	917393.0	2.911129	Y



Calibration / 4-Chlorotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

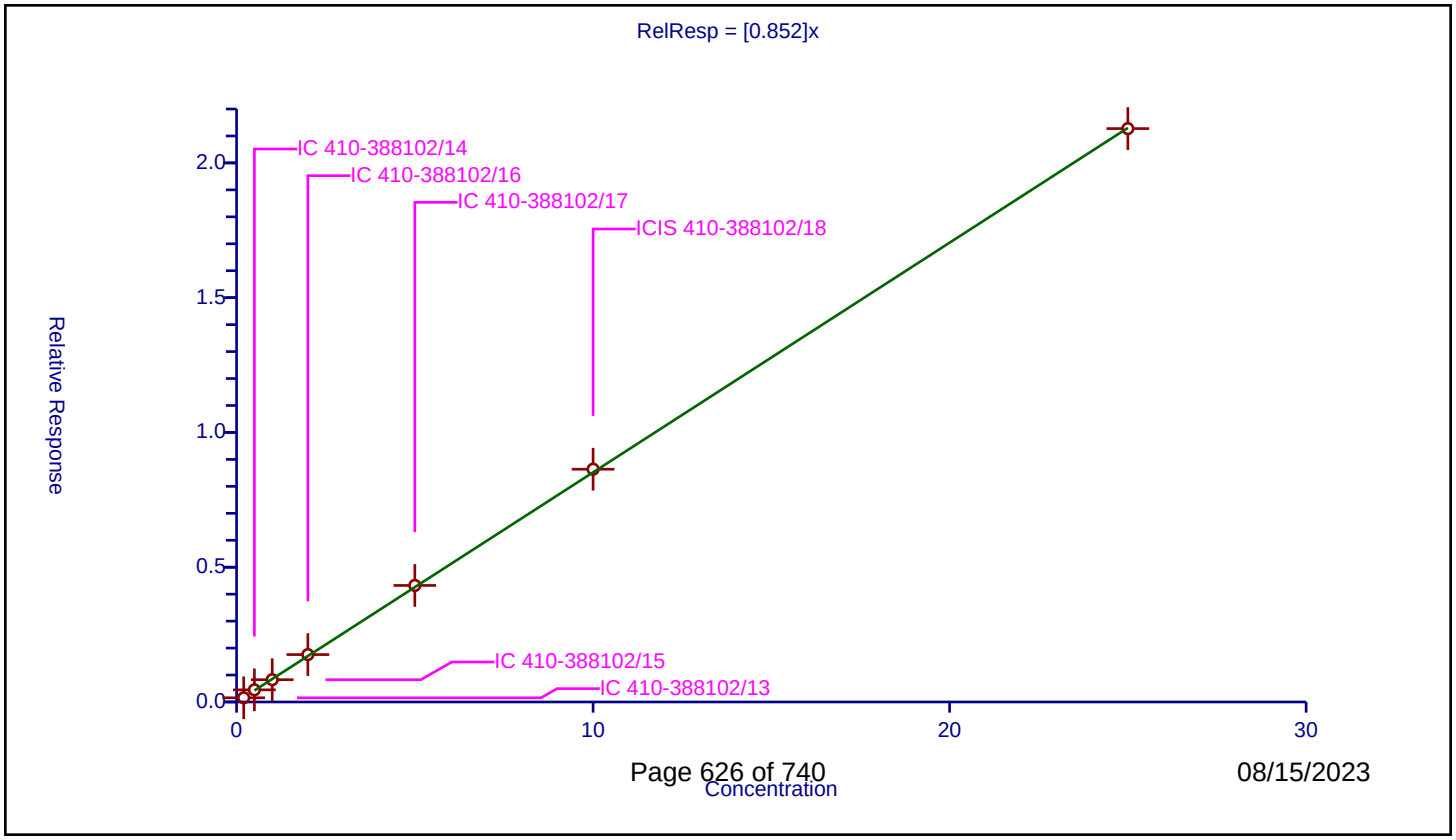
Curve Coefficients

Intercept:	0
Slope:	0.852

Error Coefficients

Standard Error:	873000
Relative Standard Error:	4.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.155352	10.0	868350.0	0.776761	Y
2	IC 410-388102/14	0.5	0.451063	10.0	834938.0	0.902127	Y
3	IC 410-388102/15	1.0	0.826604	10.0	851085.0	0.826604	Y
4	IC 410-388102/16	2.0	1.758698	10.0	870354.0	0.879349	Y
5	IC 410-388102/17	5.0	4.323561	10.0	910481.0	0.864712	Y
6	ICIS 410-388102/18	10.0	8.63621	10.0	884528.0	0.863621	Y
7	IC 410-388102/19	25.0	21.273326	10.0	917393.0	0.850933	Y



Calibration / tert-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

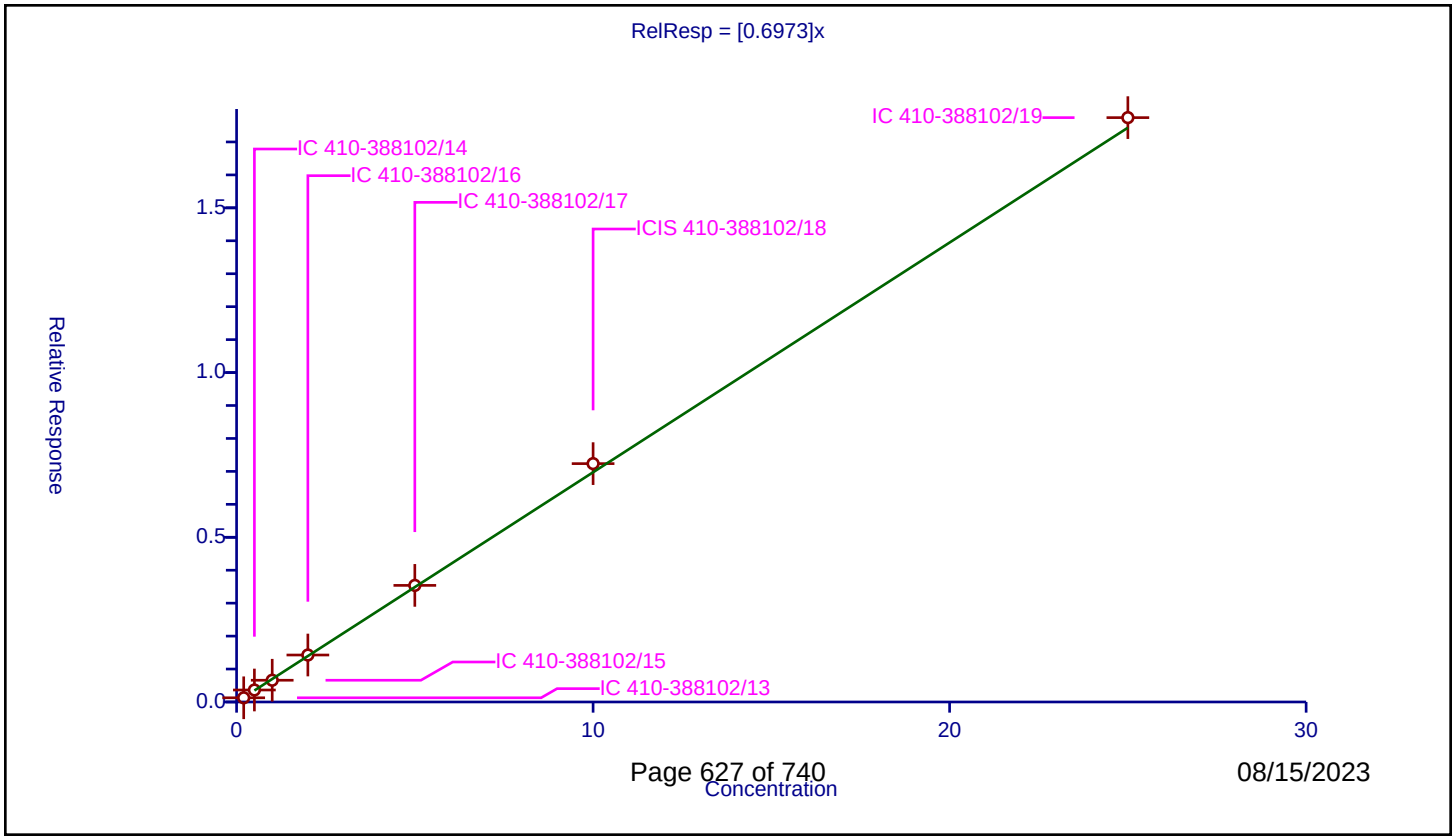
Curve Coefficients

Intercept:	0
Slope:	0.6973

Error Coefficients

Standard Error:	728000
Relative Standard Error:	4.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.127783	10.0	868350.0	0.638913	Y
2	IC 410-388102/14	0.5	0.363991	10.0	834938.0	0.727982	Y
3	IC 410-388102/15	1.0	0.660381	10.0	851085.0	0.660381	Y
4	IC 410-388102/16	2.0	1.42573	10.0	870354.0	0.712865	Y
5	IC 410-388102/17	5.0	3.539404	10.0	910481.0	0.707881	Y
6	ICIS 410-388102/18	10.0	7.235723	10.0	884528.0	0.723572	Y
7	IC 410-388102/19	25.0	17.73821	10.0	917393.0	0.709528	Y



Calibration / Pentachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

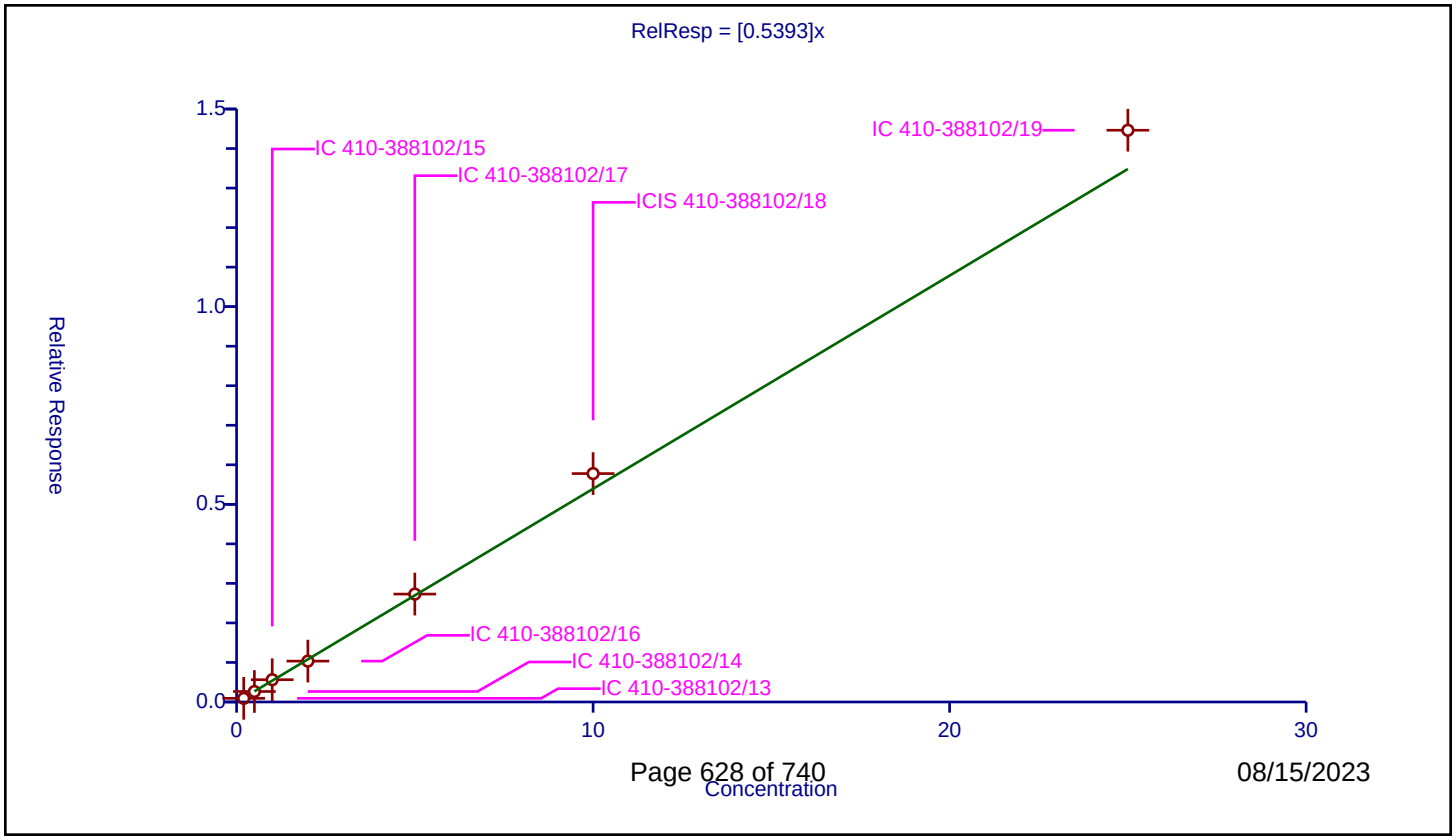
Curve Coefficients

Intercept:	0
Slope:	0.5393

Error Coefficients

Standard Error:	591000
Relative Standard Error:	7.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.092244	10.0	868350.0	0.46122	Y
2	IC 410-388102/14	0.5	0.265493	10.0	834938.0	0.530986	Y
3	IC 410-388102/15	1.0	0.563528	10.0	851085.0	0.563528	Y
4	IC 410-388102/16	2.0	1.034051	10.0	870354.0	0.517025	Y
5	IC 410-388102/17	5.0	2.729436	10.0	910481.0	0.545887	Y
6	ICIS 410-388102/18	10.0	5.777771	10.0	884528.0	0.577777	Y
7	IC 410-388102/19	25.0	14.463027	10.0	917393.0	0.578521	Y



Calibration / 1,2,4-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

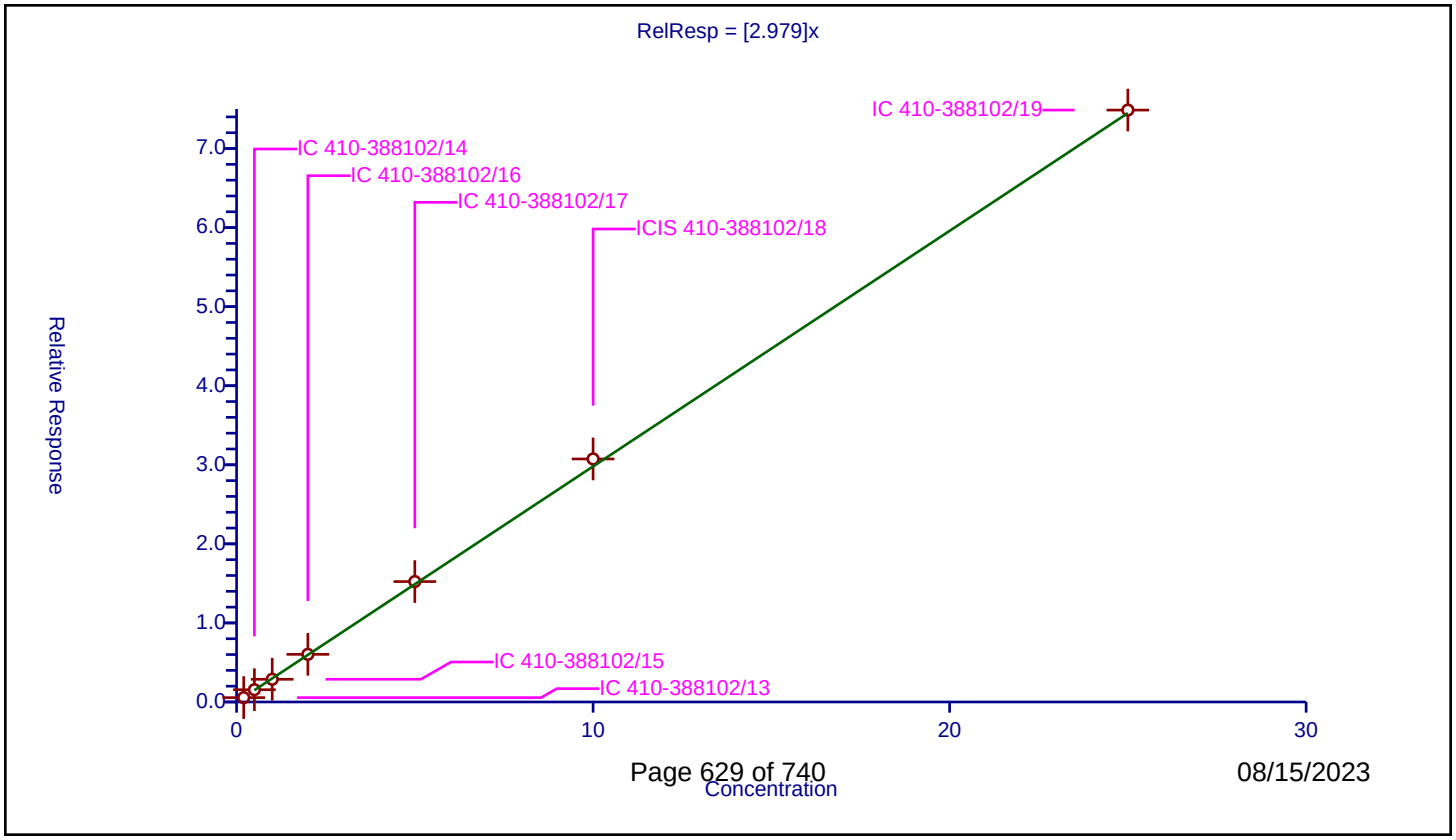
Curve Coefficients

Intercept:	0
Slope:	2.979

Error Coefficients

Standard Error:	3080000
Relative Standard Error:	4.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.549963	10.0	868350.0	2.749813	Y
2	IC 410-388102/14	0.5	1.552079	10.0	834938.0	3.104159	Y
3	IC 410-388102/15	1.0	2.873262	10.0	851085.0	2.873262	Y
4	IC 410-388102/16	2.0	6.02687	10.0	870354.0	3.013435	Y
5	IC 410-388102/17	5.0	15.23017	10.0	910481.0	3.046034	Y
6	ICIS 410-388102/18	10.0	30.737806	10.0	884528.0	3.073781	Y
7	IC 410-388102/19	25.0	74.866682	10.0	917393.0	2.994667	Y



Calibration / sec-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

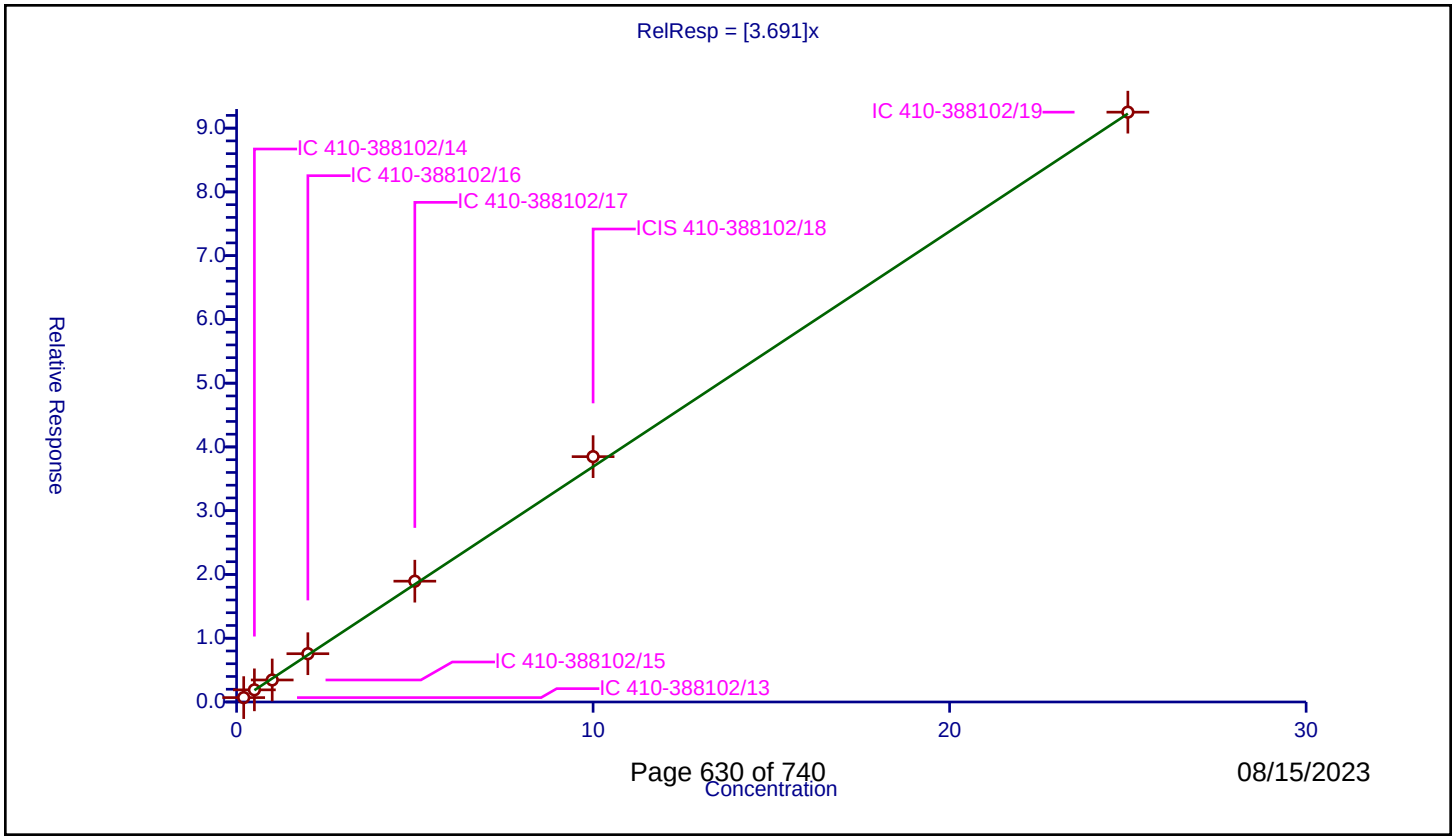
Curve Coefficients

Intercept:	0
Slope:	3.691

Error Coefficients

Standard Error:	3810000
Relative Standard Error:	4.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.689883	10.0	868350.0	3.449416	Y
2	IC 410-388102/14	0.5	1.905016	10.0	834938.0	3.810031	Y
3	IC 410-388102/15	1.0	3.451206	10.0	851085.0	3.451206	Y
4	IC 410-388102/16	2.0	7.573137	10.0	870354.0	3.786568	Y
5	IC 410-388102/17	5.0	18.947798	10.0	910481.0	3.78956	Y
6	ICIS 410-388102/18	10.0	38.478284	10.0	884528.0	3.847828	Y
7	IC 410-388102/19	25.0	92.507693	10.0	917393.0	3.700308	Y



Calibration / 1,3-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

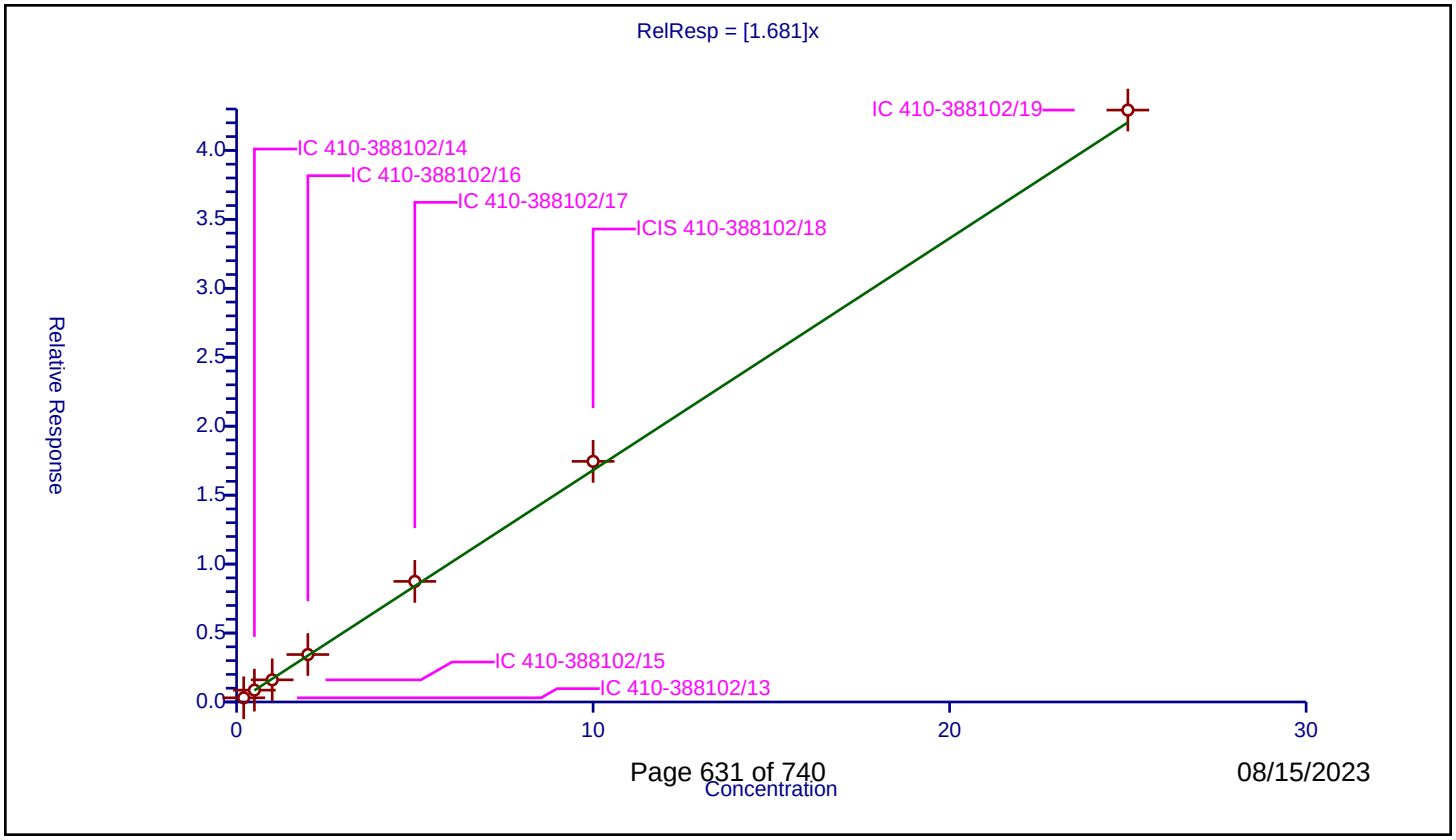
Curve Coefficients

Intercept:	0
Slope:	1.681

Error Coefficients

Standard Error:	1760000
Relative Standard Error:	5.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.30239	10.0	868350.0	1.511948	Y
2	IC 410-388102/14	0.5	0.859621	10.0	834938.0	1.719241	Y
3	IC 410-388102/15	1.0	1.605551	10.0	851085.0	1.605551	Y
4	IC 410-388102/16	2.0	3.441048	10.0	870354.0	1.720524	Y
5	IC 410-388102/17	5.0	8.744576	10.0	910481.0	1.748915	Y
6	ICIS 410-388102/18	10.0	17.448492	10.0	884528.0	1.744849	Y
7	IC 410-388102/19	25.0	42.922957	10.0	917393.0	1.716918	Y



Calibration / 4-Isopropyltoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

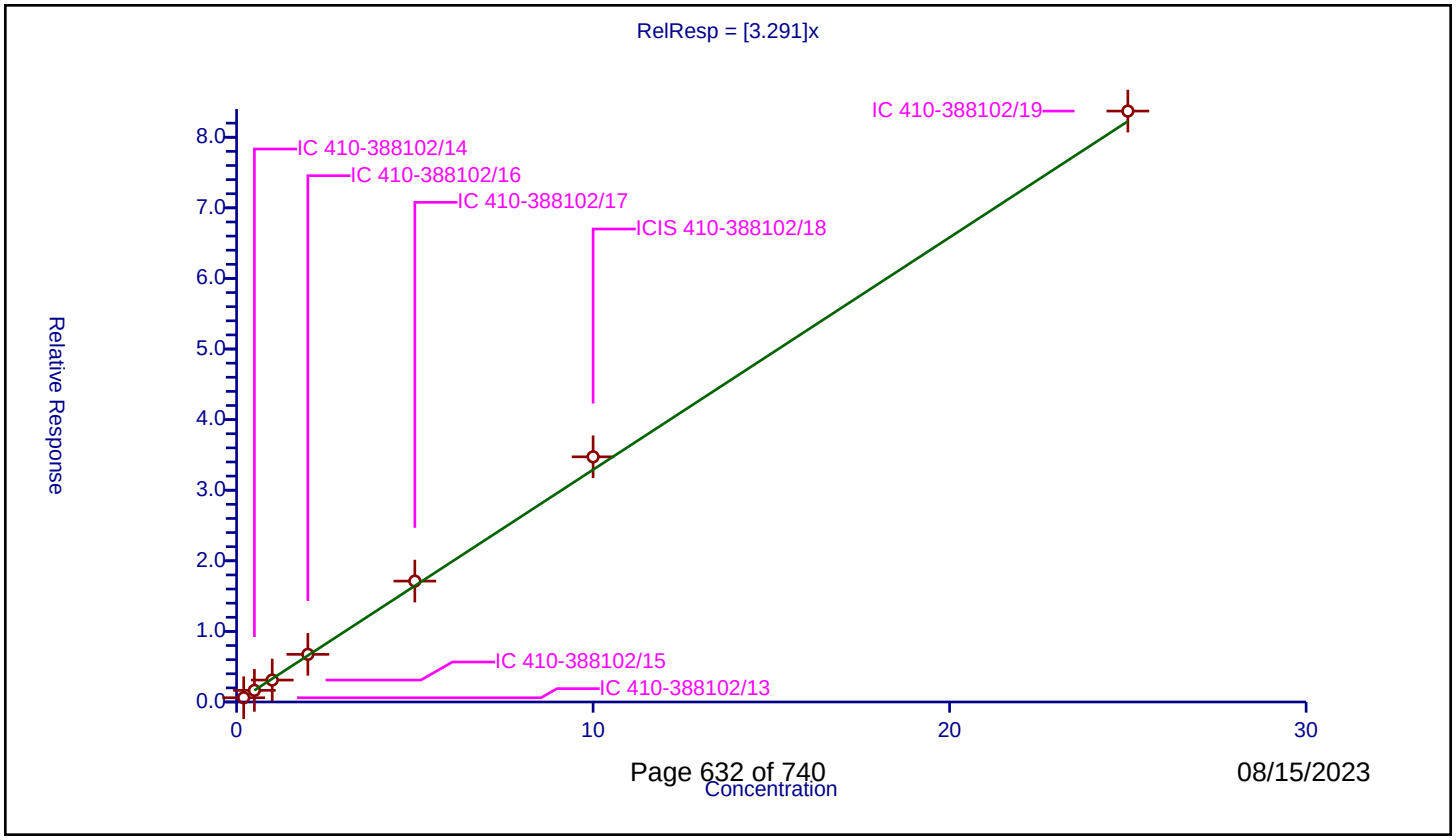
Curve Coefficients

Intercept:	0
Slope:	3.291

Error Coefficients

Standard Error:	3450000
Relative Standard Error:	5.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.601555	10.0	868350.0	3.007773	Y
2	IC 410-388102/14	0.5	1.648769	10.0	834938.0	3.297538	Y
3	IC 410-388102/15	1.0	3.107539	10.0	851085.0	3.107539	Y
4	IC 410-388102/16	2.0	6.750047	10.0	870354.0	3.375023	Y
5	IC 410-388102/17	5.0	17.124026	10.0	910481.0	3.424805	Y
6	ICIS 410-388102/18	10.0	34.728737	10.0	884528.0	3.472874	Y
7	IC 410-388102/19	25.0	83.708476	10.0	917393.0	3.348339	Y



Calibration / 1,4-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

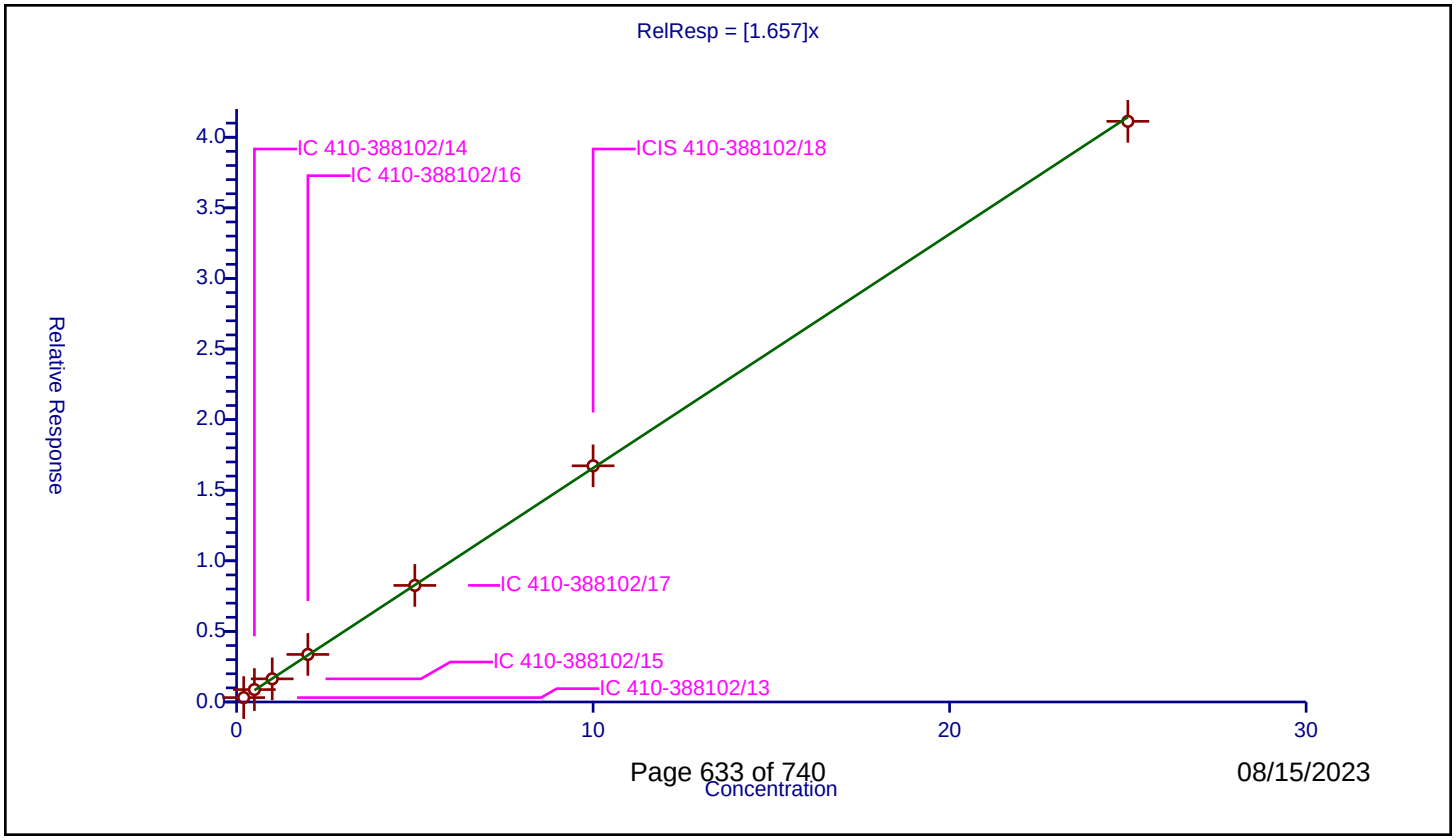
Curve Coefficients

Intercept:	0
Slope:	1.657

Error Coefficients

Standard Error:	1690000
Relative Standard Error:	3.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.310151	10.0	868350.0	1.550757	Y
2	IC 410-388102/14	0.5	0.87858	10.0	834938.0	1.75716	Y
3	IC 410-388102/15	1.0	1.63825	10.0	851085.0	1.63825	Y
4	IC 410-388102/16	2.0	3.368491	10.0	870354.0	1.684246	Y
5	IC 410-388102/17	5.0	8.257108	10.0	910481.0	1.651422	Y
6	ICIS 410-388102/18	10.0	16.727667	10.0	884528.0	1.672767	Y
7	IC 410-388102/19	25.0	41.126442	10.0	917393.0	1.645058	Y



Calibration / 1,2,3-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

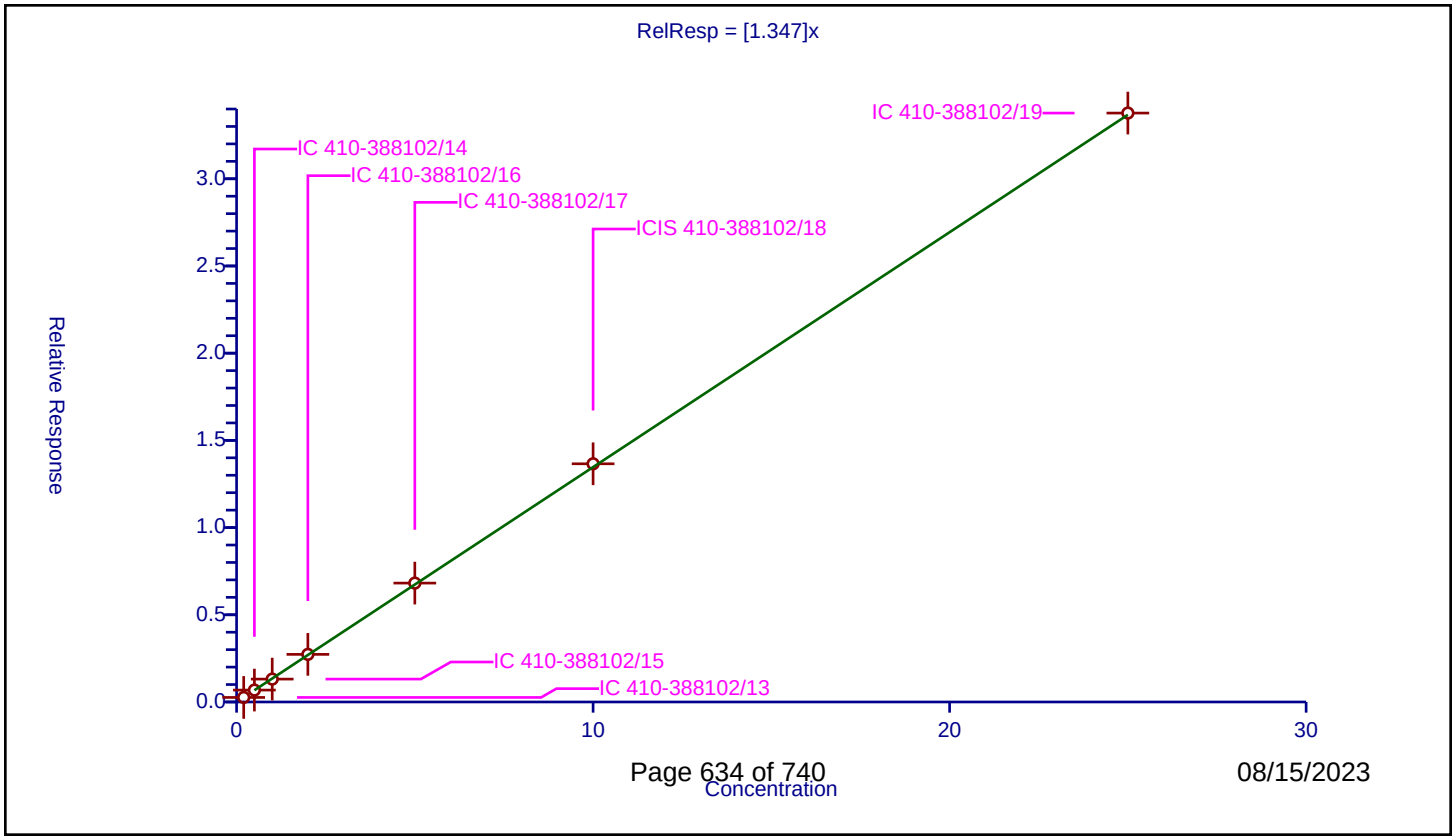
Curve Coefficients

Intercept:	0
Slope:	1.347

Error Coefficients

Standard Error:	1390000
Relative Standard Error:	1.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.261231	10.0	868350.0	1.306155	Y
2	IC 410-388102/14	0.5	0.682075	10.0	834938.0	1.364149	Y
3	IC 410-388102/15	1.0	1.31229	10.0	851085.0	1.31229	Y
4	IC 410-388102/16	2.0	2.729326	10.0	870354.0	1.364663	Y
5	IC 410-388102/17	5.0	6.816957	10.0	910481.0	1.363391	Y
6	ICIS 410-388102/18	10.0	13.657453	10.0	884528.0	1.365745	Y
7	IC 410-388102/19	25.0	33.768232	10.0	917393.0	1.350729	Y



Calibration / Benzyl chloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

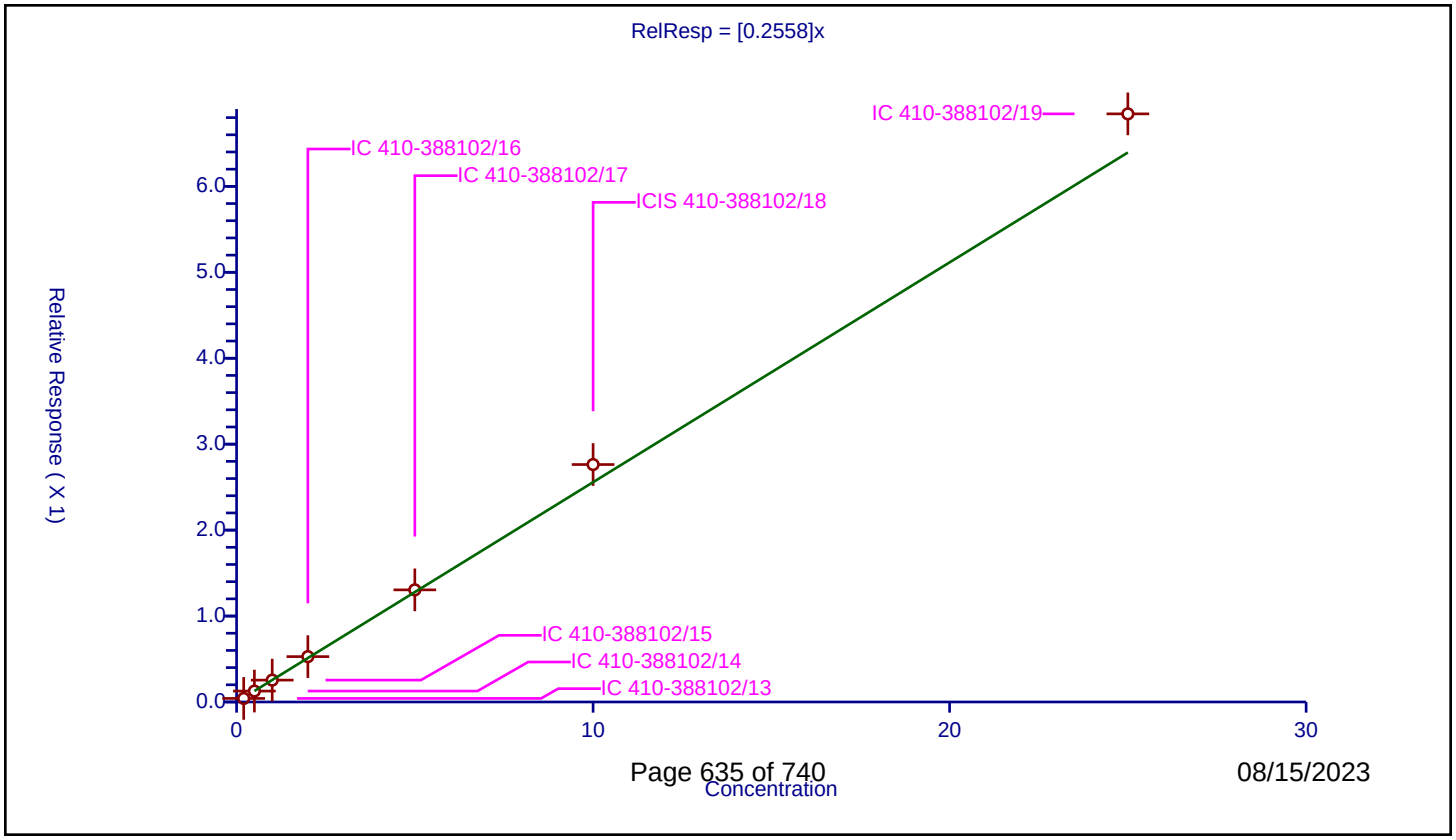
Curve Coefficients

Intercept:	0
Slope:	0.2558

Error Coefficients

Standard Error:	280000
Relative Standard Error:	9.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.041343	10.0	868350.0	0.206714	Y
2	IC 410-388102/14	0.5	0.127039	10.0	834938.0	0.254079	Y
3	IC 410-388102/15	1.0	0.254522	10.0	851085.0	0.254522	Y
4	IC 410-388102/16	2.0	0.527935	10.0	870354.0	0.263967	Y
5	IC 410-388102/17	5.0	1.30464	10.0	910481.0	0.260928	Y
6	ICIS 410-388102/18	10.0	2.763169	10.0	884528.0	0.276317	Y
7	IC 410-388102/19	25.0	6.843621	10.0	917393.0	0.273745	Y



Calibration / n-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

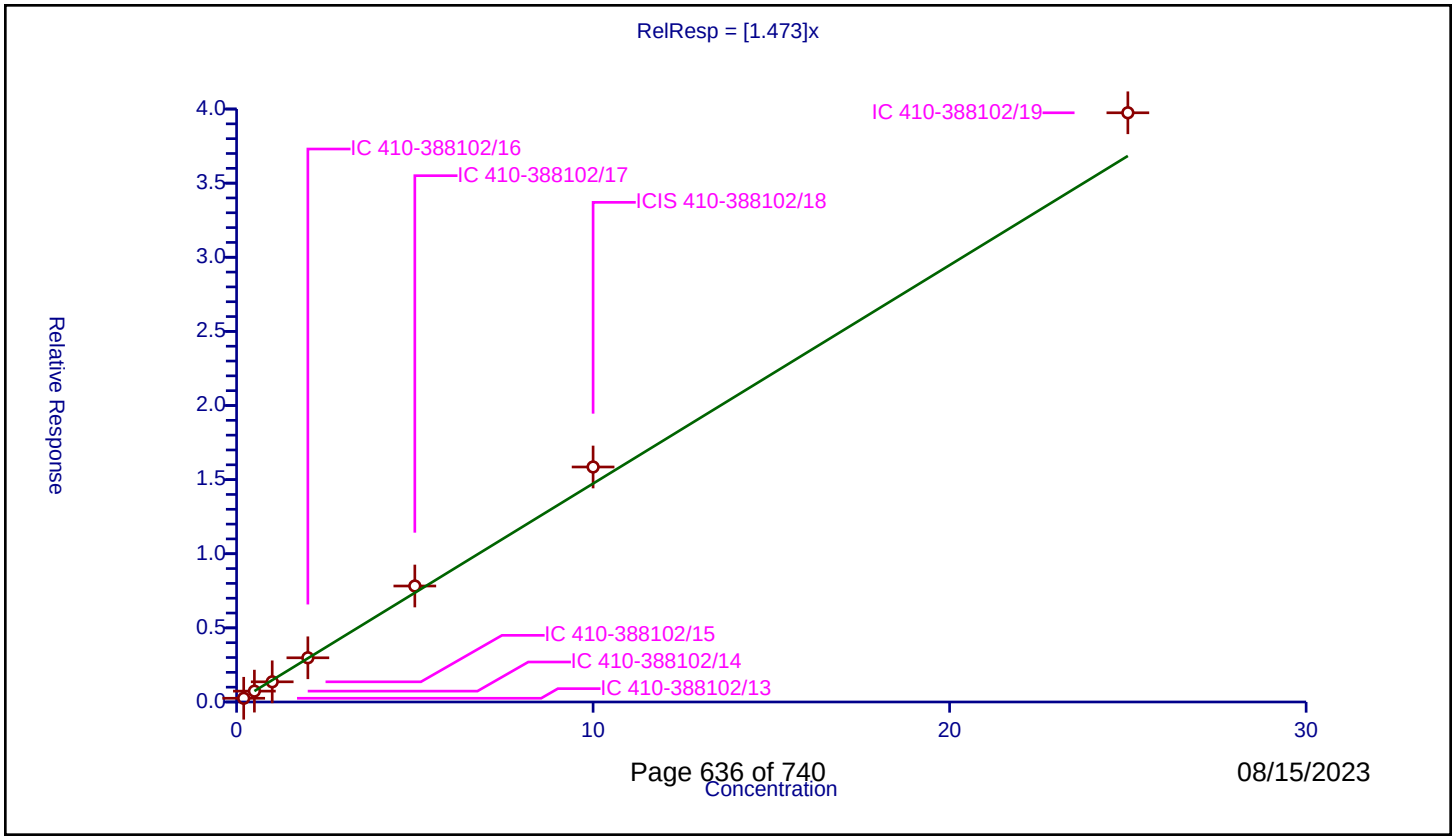
Curve Coefficients

Intercept:	0
Slope:	1.473

Error Coefficients

Standard Error:	1630000
Relative Standard Error:	8.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.251488	10.0	868350.0	1.257442	Y
2	IC 410-388102/14	0.5	0.732653	10.0	834938.0	1.465306	Y
3	IC 410-388102/15	1.0	1.360816	10.0	851085.0	1.360816	Y
4	IC 410-388102/16	2.0	2.980879	10.0	870354.0	1.49044	Y
5	IC 410-388102/17	5.0	7.823282	10.0	910481.0	1.564656	Y
6	ICIS 410-388102/18	10.0	15.852624	10.0	884528.0	1.585262	Y
7	IC 410-388102/19	25.0	39.746968	10.0	917393.0	1.589879	Y



Calibration / 1,2-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

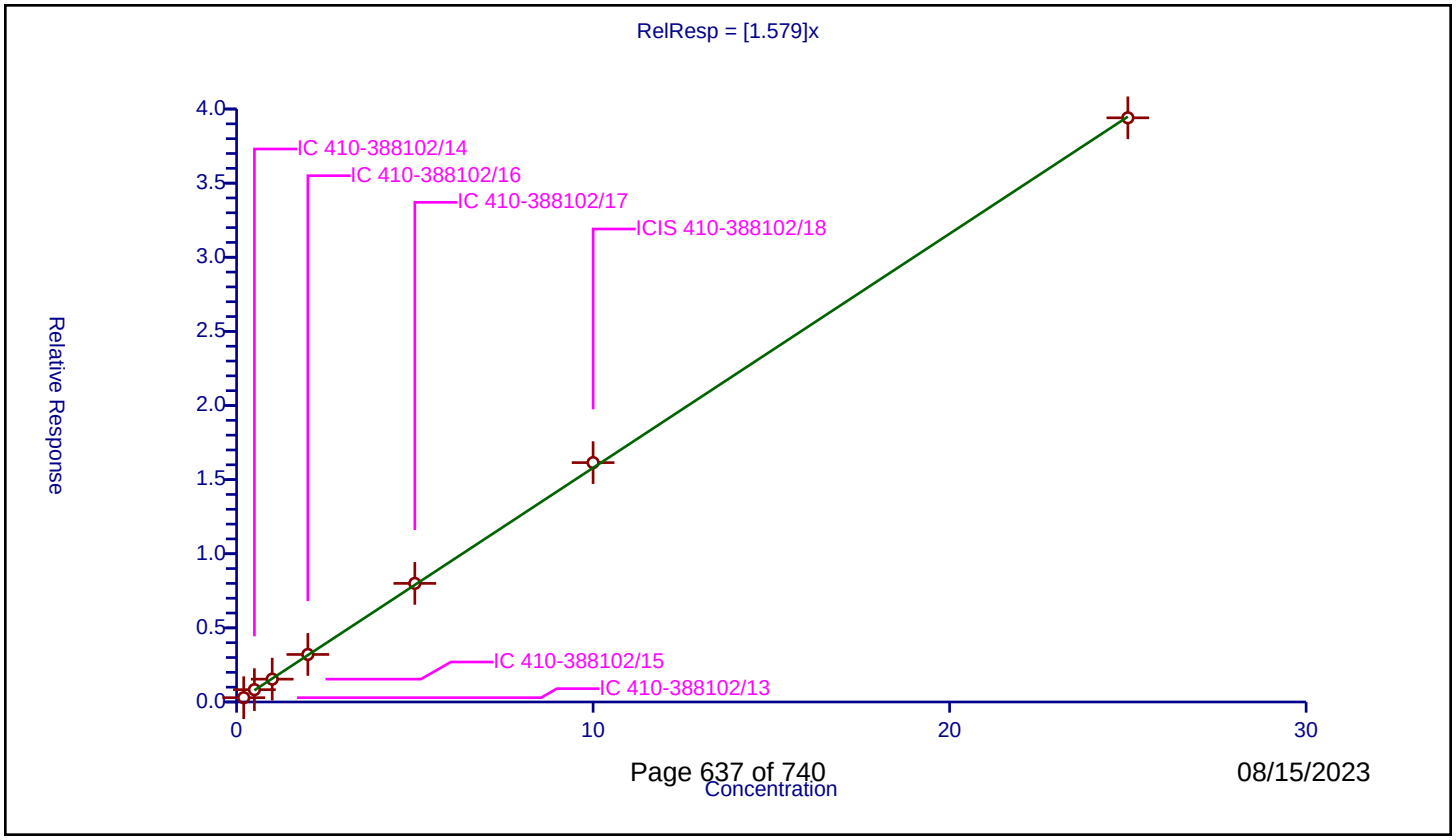
Curve Coefficients

Intercept:	0
Slope:	1.579

Error Coefficients

Standard Error:	1620000
Relative Standard Error:	4.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.291138	10.0	868350.0	1.455692	Y
2	IC 410-388102/14	0.5	0.83278	10.0	834938.0	1.665561	Y
3	IC 410-388102/15	1.0	1.539905	10.0	851085.0	1.539905	Y
4	IC 410-388102/16	2.0	3.206684	10.0	870354.0	1.603342	Y
5	IC 410-388102/17	5.0	8.00076	10.0	910481.0	1.600152	Y
6	ICIS 410-388102/18	10.0	16.147301	10.0	884528.0	1.61473	Y
7	IC 410-388102/19	25.0	39.407135	10.0	917393.0	1.576285	Y



Calibration / 1,2-Dibromo-3-Chloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

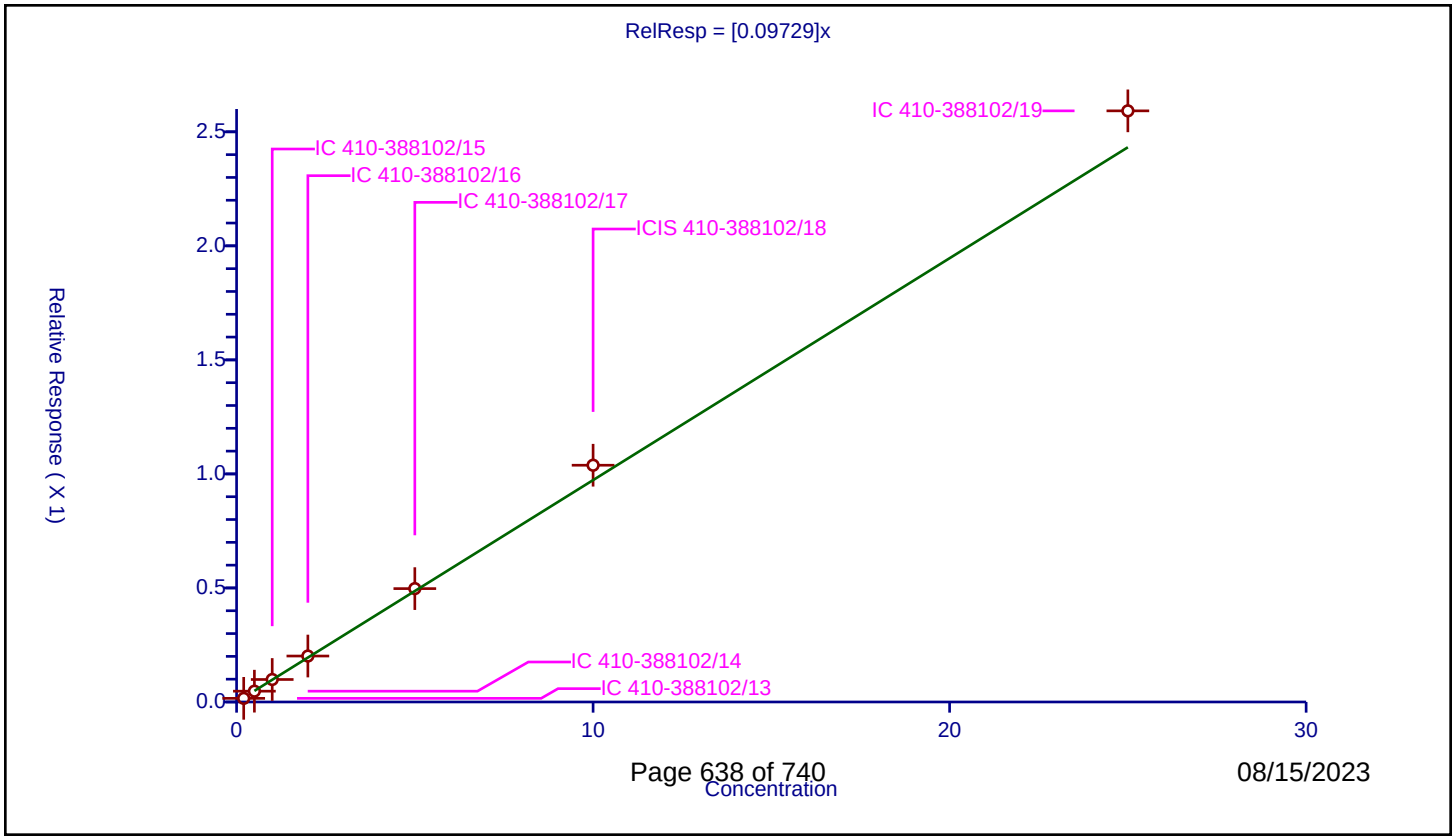
Curve Coefficients

Intercept:	0
Slope:	0.09729

Error Coefficients

Standard Error:	106000
Relative Standard Error:	8.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.015984	10.0	868350.0	0.079922	Y
2	IC 410-388102/14	0.5	0.047429	10.0	834938.0	0.094857	Y
3	IC 410-388102/15	1.0	0.09858	10.0	851085.0	0.09858	Y
4	IC 410-388102/16	2.0	0.201493	10.0	870354.0	0.100746	Y
5	IC 410-388102/17	5.0	0.497133	10.0	910481.0	0.099427	Y
6	ICIS 410-388102/18	10.0	1.03817	10.0	884528.0	0.103817	Y
7	IC 410-388102/19	25.0	2.591943	10.0	917393.0	0.103678	Y



Calibration / 1,3,5-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

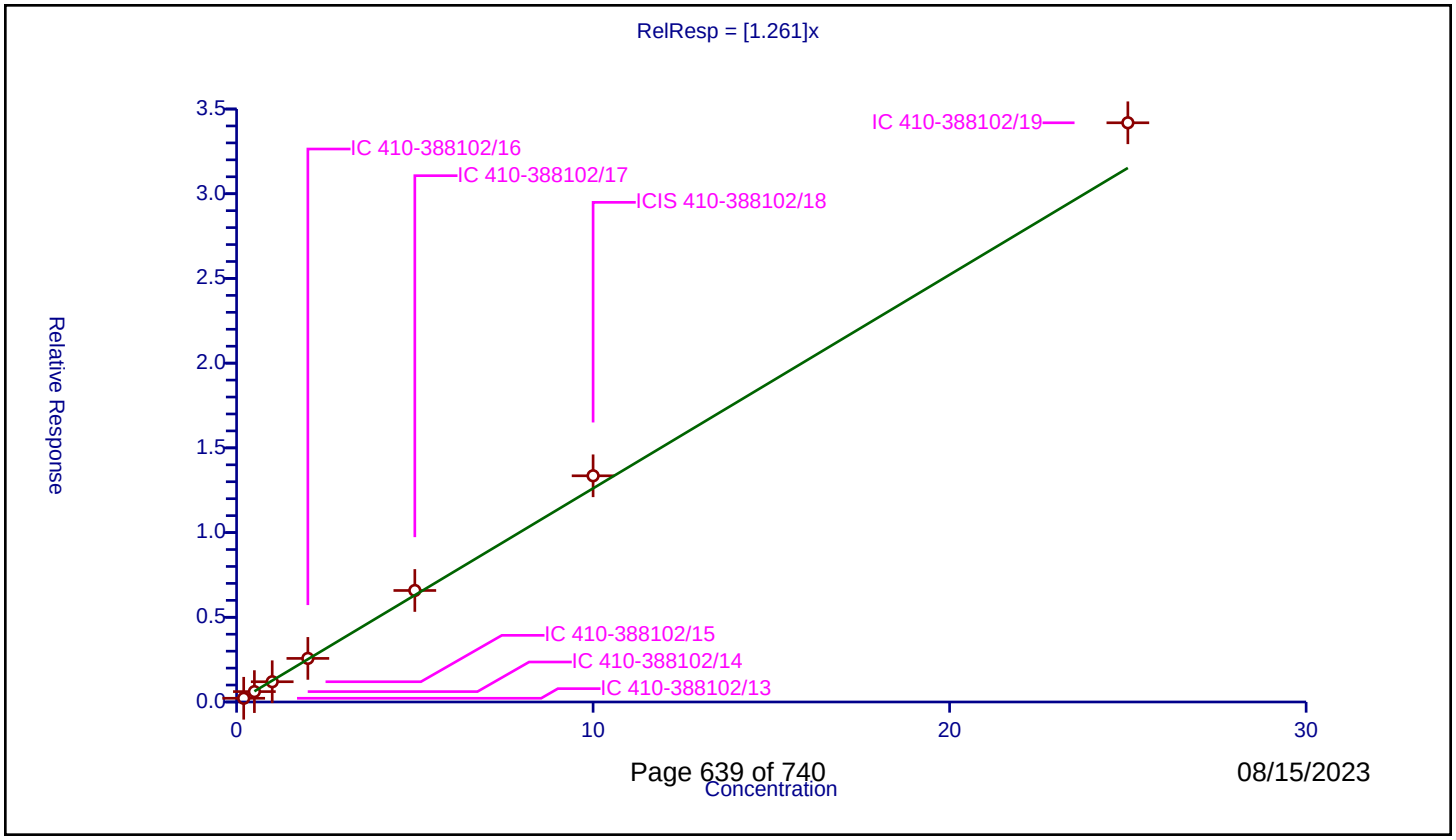
Curve Coefficients

Intercept:	0
Slope:	1.261

Error Coefficients

Standard Error:	1390000
Relative Standard Error:	7.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.220222	10.0	868350.0	1.101111	Y
2	IC 410-388102/14	0.5	0.612297	10.0	834938.0	1.224594	Y
3	IC 410-388102/15	1.0	1.194793	10.0	851085.0	1.194793	Y
4	IC 410-388102/16	2.0	2.573332	10.0	870354.0	1.286666	Y
5	IC 410-388102/17	5.0	6.580961	10.0	910481.0	1.316192	Y
6	ICIS 410-388102/18	10.0	13.351675	10.0	884528.0	1.335167	Y
7	IC 410-388102/19	25.0	34.187802	10.0	917393.0	1.367512	Y



Calibration / 1,2,4-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

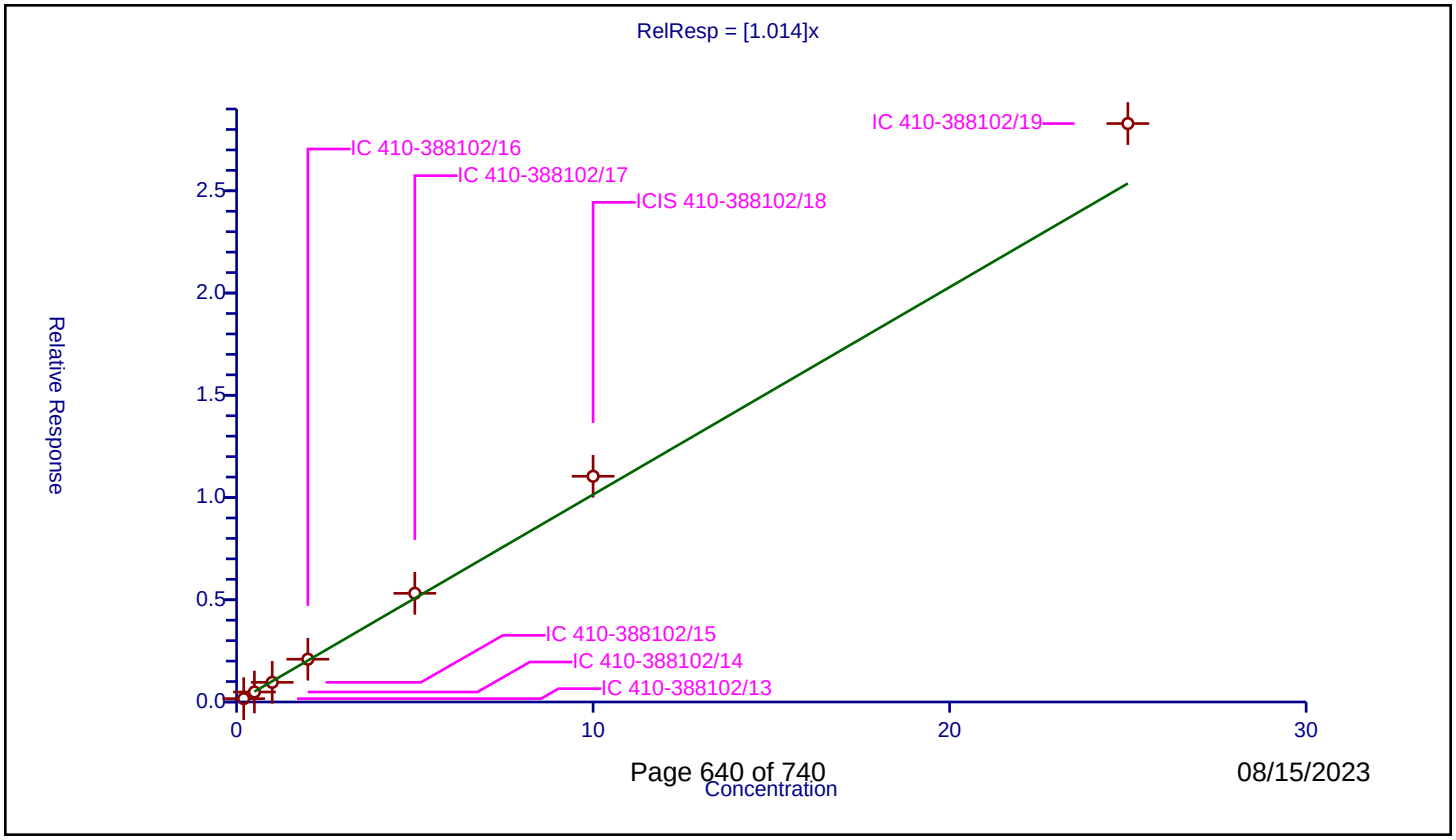
Curve Coefficients

Intercept:	0
Slope:	1.014

Error Coefficients

Standard Error:	1150000
Relative Standard Error:	10.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.163586	10.0	868350.0	0.817931	Y
2	IC 410-388102/14	0.5	0.488336	10.0	834938.0	0.976671	Y
3	IC 410-388102/15	1.0	0.961032	10.0	851085.0	0.961032	Y
4	IC 410-388102/16	2.0	2.092723	10.0	870354.0	1.046362	Y
5	IC 410-388102/17	5.0	5.315191	10.0	910481.0	1.063038	Y
6	ICIS 410-388102/18	10.0	11.039311	10.0	884528.0	1.103931	Y
7	IC 410-388102/19	25.0	28.28877	10.0	917393.0	1.131551	Y



Calibration / Hexachlorobutadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

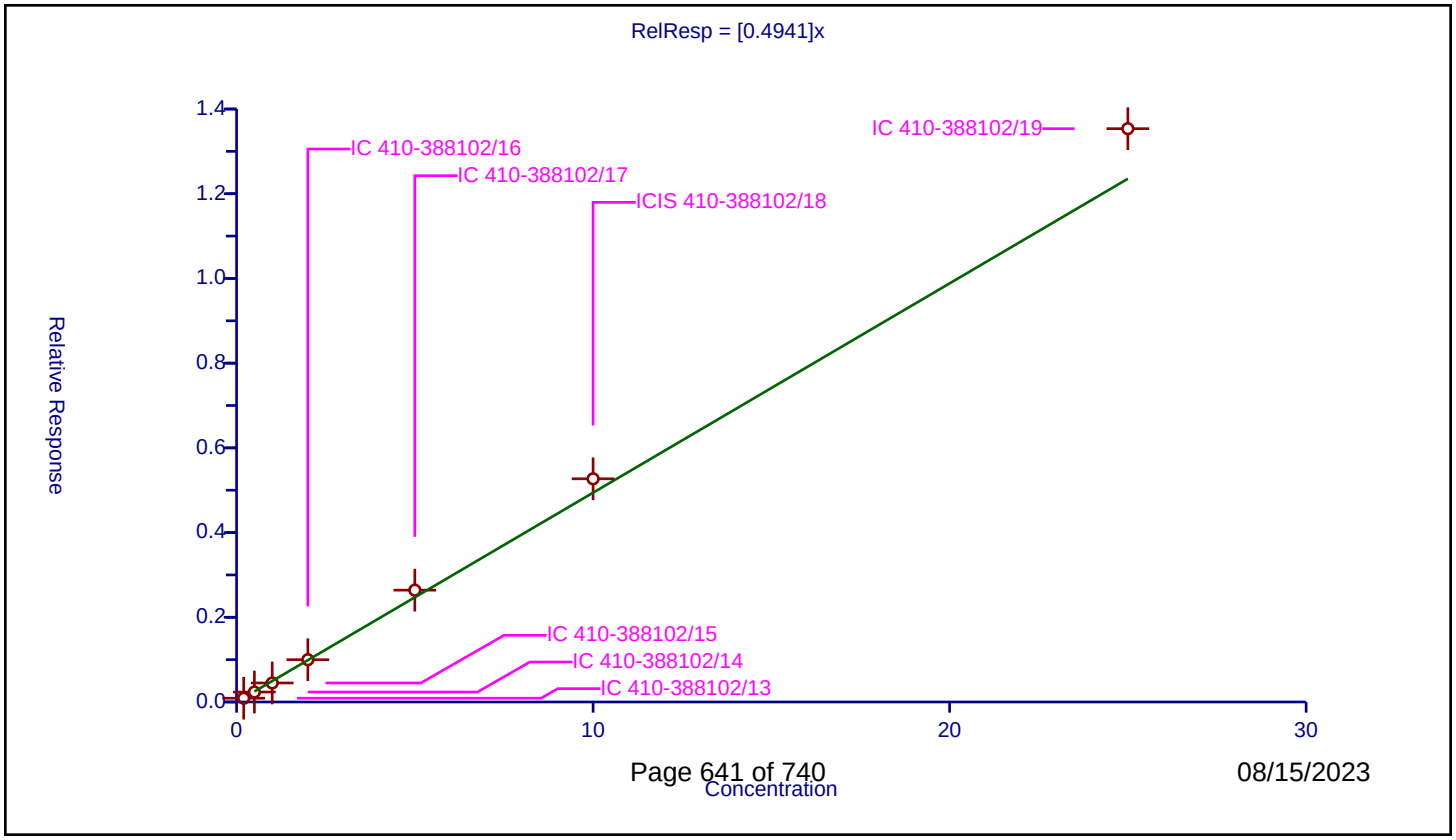
Curve Coefficients

Intercept:	0
Slope:	0.4941

Error Coefficients

Standard Error:	552000
Relative Standard Error:	8.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.089054	10.0	868350.0	0.44527	Y
2	IC 410-388102/14	0.5	0.234772	10.0	834938.0	0.469544	Y
3	IC 410-388102/15	1.0	0.448898	10.0	851085.0	0.448898	Y
4	IC 410-388102/16	2.0	0.997985	10.0	870354.0	0.498992	Y
5	IC 410-388102/17	5.0	2.639978	10.0	910481.0	0.527996	Y
6	ICIS 410-388102/18	10.0	5.269172	10.0	884528.0	0.526917	Y
7	IC 410-388102/19	25.0	13.535802	10.0	917393.0	0.541432	Y



Calibration / Naphthalene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

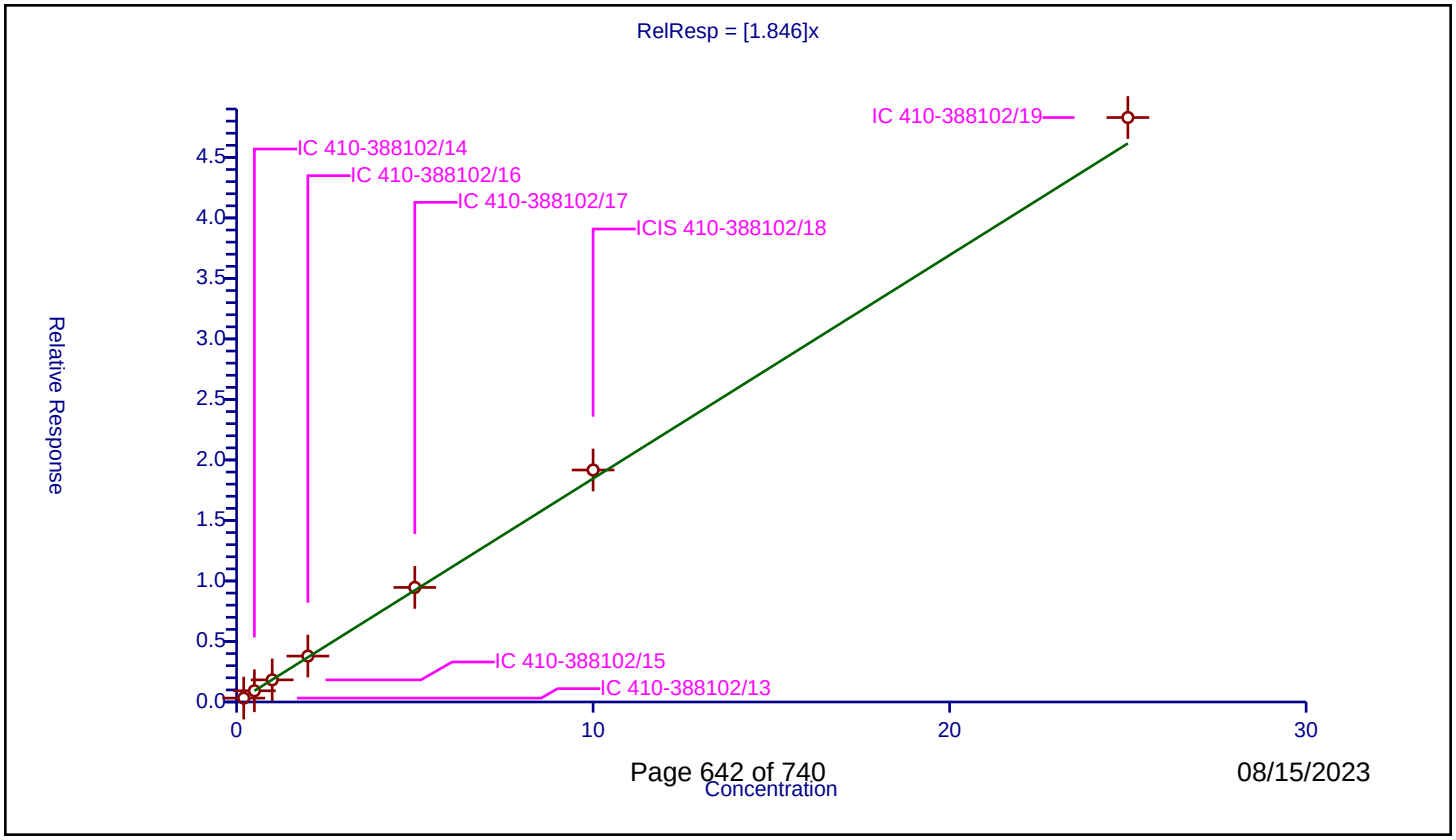
Curve Coefficients

Intercept:	0
Slope:	1.846

Error Coefficients

Standard Error:	1970000
Relative Standard Error:	6.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.320769	10.0	868350.0	1.603846	Y
2	IC 410-388102/14	0.5	0.927075	10.0	834938.0	1.85415	Y
3	IC 410-388102/15	1.0	1.826845	10.0	851085.0	1.826845	Y
4	IC 410-388102/16	2.0	3.793859	10.0	870354.0	1.896929	Y
5	IC 410-388102/17	5.0	9.466095	10.0	910481.0	1.893219	Y
6	ICIS 410-388102/18	10.0	19.170066	10.0	884528.0	1.917007	Y
7	IC 410-388102/19	25.0	48.297752	10.0	917393.0	1.93191	Y



Calibration / 1,2,3-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

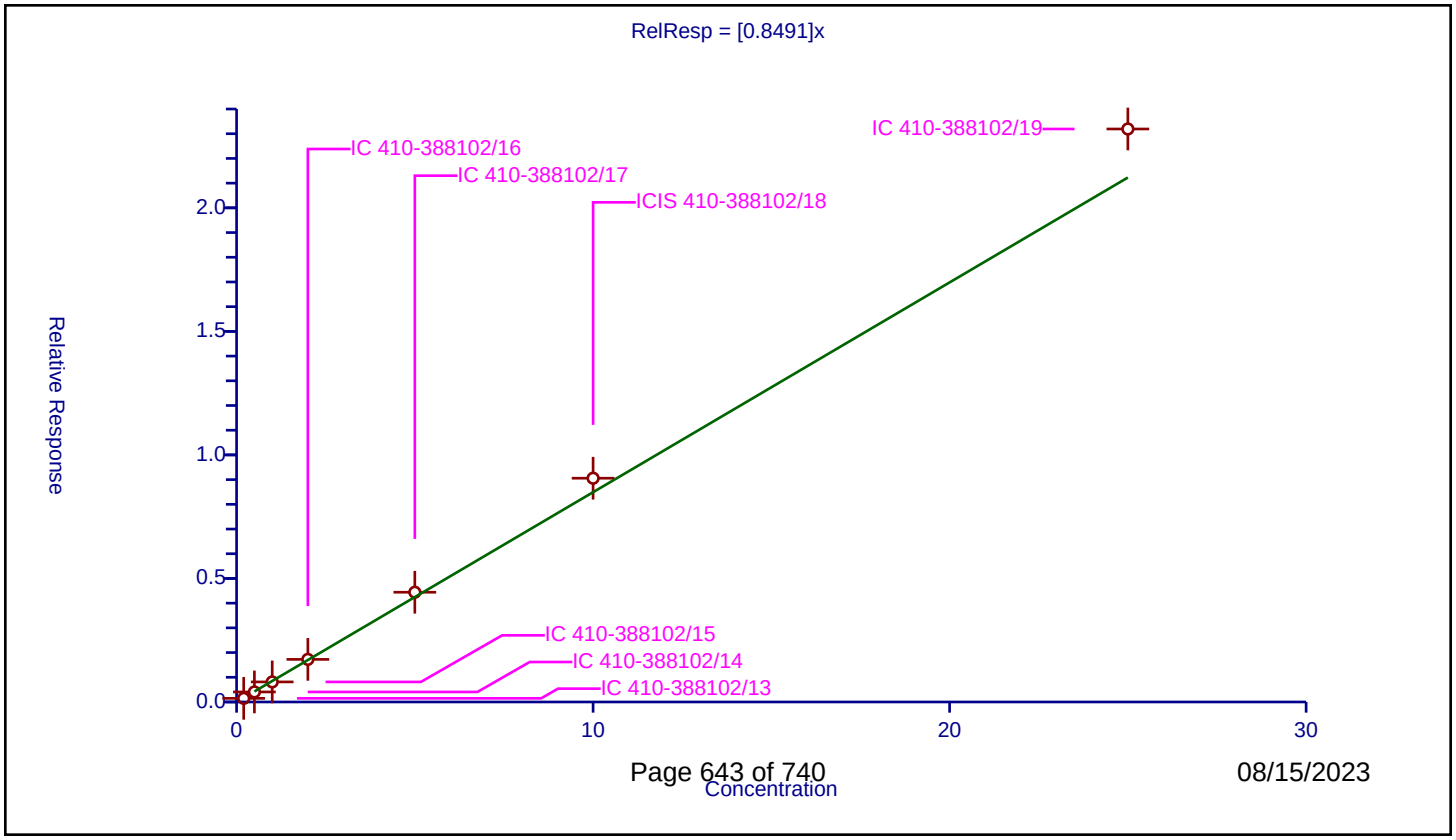
Curve Coefficients

Intercept:	0
Slope:	0.8491

Error Coefficients

Standard Error:	945000
Relative Standard Error:	7.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-388102/13	0.2	0.146853	10.0	868350.0	0.734266	Y
2	IC 410-388102/14	0.5	0.406629	10.0	834938.0	0.813258	Y
3	IC 410-388102/15	1.0	0.812046	10.0	851085.0	0.812046	Y
4	IC 410-388102/16	2.0	1.724425	10.0	870354.0	0.862212	Y
5	IC 410-388102/17	5.0	4.441356	10.0	910481.0	0.888271	Y
6	ICIS 410-388102/18	10.0	9.056717	10.0	884528.0	0.905672	Y
7	IC 410-388102/19	25.0	23.192078	10.0	917393.0	0.927683	Y



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-2

SDG No.:

Lab Sample ID: ICV 410-388102/11 Calibration Date: 06/19/2023 17:37

Instrument ID: 19930 Calib Start Date: 03/21/2023 04:01

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 03/21/2023 06:02

Lab File ID: IU19X10.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2649	0.2567		9.99	10.0	-3.1	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.0503	0.0512		10.0	10.0	1.9	30.0
Toluene-d8 (Surr)	Ave	1.287	1.277		9.93	10.0	-0.8	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4693	0.4887		10.1	10.0	4.1	30.0

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X10.D
Lims ID: ICV SM
Client ID:
Sample Type: ICV
Inject. Date: 19-Jun-2023 17:37:30 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0086929-011
Misc. Info.: ICV SM
Operator ID: KNK41612 Instrument ID: 19930
Sublist:

Method: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 27-Jun-2023 12:31:25 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1687

First Level Reviewer: DVW2 Date: 21-Jun-2023 08:28:07

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Chlorodifluoromethane	51	1.867	1.867	0.000	97	326341	5.00	4.46	M
3 Dimethyl ether	45	1.922	1.922	0.000	98	321388	5.00	5.14	
21 Acetonitrile	41	3.745	3.788	-0.043	19	36688	18.8	17.3	M
* 26 t-Butyl alcohol-d10 (IS)	65	3.964	3.977	-0.013	22	119910	50.0	50.0	
33 Vinyl acetate	43	4.989	4.989	0.000	97	860748	12.5	13.8	
42 Ethyl acetate	43	5.897	5.891	0.006	98	64694	2.50	2.74	
$ 49 Dibromofluoromethane (Surr)	113	6.549	6.555	-0.006	94	475443	10.0	10.0	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.006	7.013	-0.007	62	94808	10.0	10.0	
59 Isopropyl acetate	43	7.128	7.128	0.000	98	152331	2.50	2.38	
* 61 Fluorobenzene (IS)	96	7.445	7.452	-0.007	99	1852370	10.0	10.0	
70 n-Propyl acetate	43	8.451	8.445	0.006	98	105994	2.50	2.59	
73 2-Chloroethyl vinyl ether	63	9.018	9.006	0.012	1	697	5.00	2.55	
$ 78 Toluene-d8 (Surr)	98	9.494	9.500	-0.006	93	1861973	10.0	9.93	
104 n-Butyl acetate	43	10.408	10.408	0.000	98	131134	2.50	2.56	
* 107 Chlorobenzene-d5 (IS)	117	10.987	10.988	-0.001	84	1457982	10.0	10.0	
118 cis-1,4-Dichloro-2-butene	88	11.902	11.902	0.000	30	193345	12.5	13.2	a
119 Cyclohexanone	55	11.938	11.938	0.000	90	83207	125.0	71.6	
$ 120 4-Bromofluorobenzene (Surr)	95	11.999	12.000	-0.001	96	712515	10.0	10.1	
* 135 1,4-Dichlorobenzene-d4	152	12.883	12.884	-0.001	93	895612	10.0	10.0	
149 2-Chloro-1,1,1-Trifluoroethane	1		0.000				ND	ND	
162 Chlorotrifluoroethene	1		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

MSV_LCS_V5ACE_00026	Amount Added:	6.25	Units: uL	
MSV_LCS_CYC_00003	Amount Added:	12.50	Units: uL	
MSV_LCS_LKB_00006	Amount Added:	25.00	Units: uL	
MSV_Q_QDME_00032	Amount Added:	5.00	Units: uL	
MSV_LCS_2CEVE_00120	Amount Added:	12.50	Units: uL	
MSV_LCS_SMFre_00050	Amount Added:	12.50	Units: uL	
MSV_LLcentISS_00007	Amount Added:	5.00	Units: uL	Run Reagent

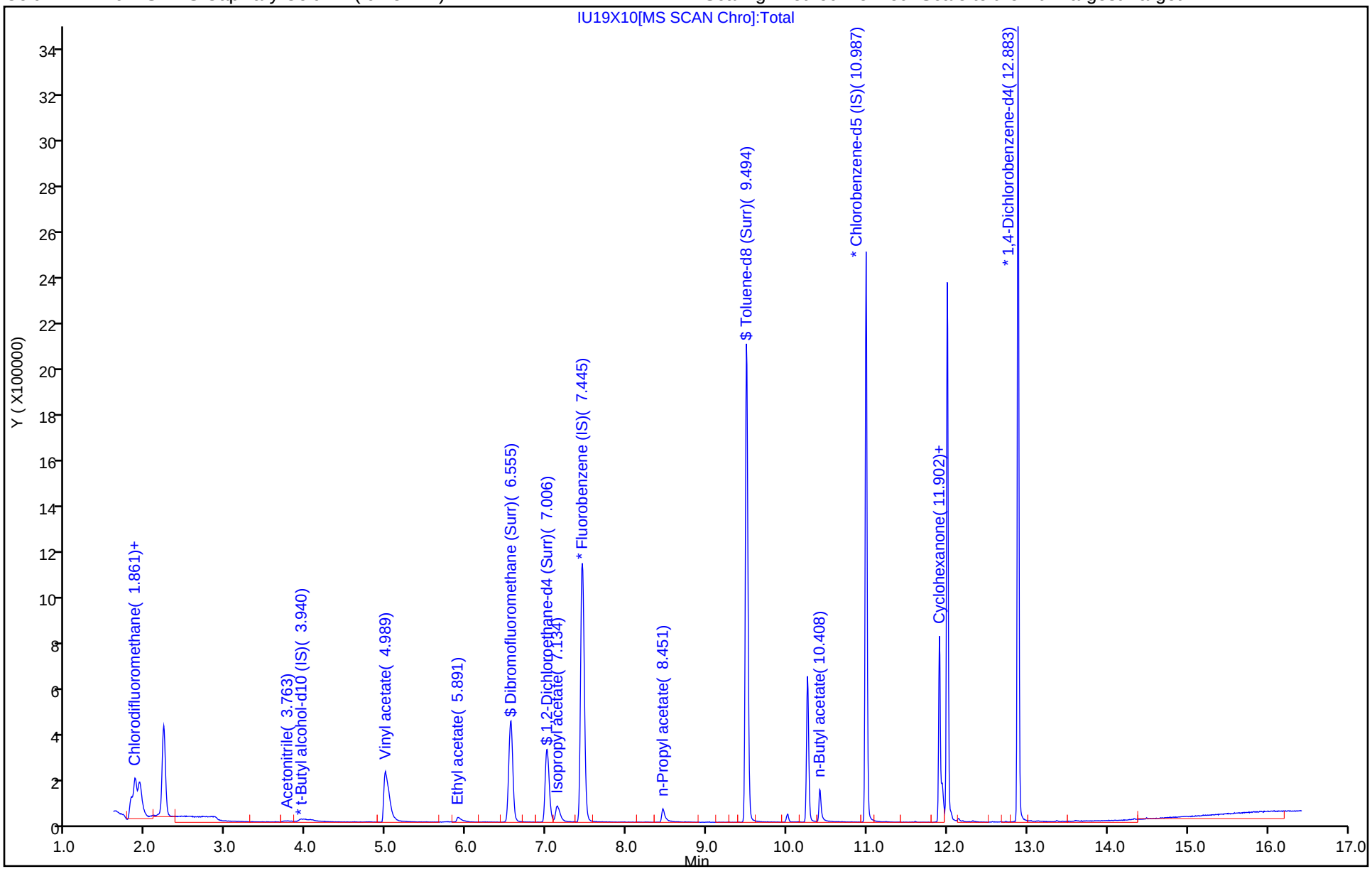
Report Date: 27-Jun-2023 12:31:28 Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X10.D

Injection Date:	19-Jun-2023 17:37:30	Instrument ID:	19930	Operator ID:	KNK41612
Lims ID:	ICV SM			Worklist Smp#:	11
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-2

SDG No.:

Lab Sample ID: ICV 410-388102/11 Calibration Date: 06/19/2023 17:37

Instrument ID: 19930 Calib Start Date: 06/19/2023 14:49

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 06/19/2023 16:55

Lab File ID: IU19X10.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.3951	0.3523		4.46	5.00	-10.8	30.0
Dimethyl ether	Ave	0.3379	0.3470		5.14	5.00	2.7	30.0
Acetonitrile	Ave	0.0115	0.0106		17.3	18.8	-7.9	30.0
Vinyl acetate	Ave	0.3366	0.3717		13.8	12.5	10.4	30.0
Ethyl acetate	Ave	0.1273	0.1397		2.74	2.50	9.8	30.0
2-Chloroethyl vinyl ether	Ave	0.0015	0.0008		2.55	5.00	-49.0*	30.0
cis-1,4-Dichloro-2-butene	Ave	0.1002	0.1061			12.5	5.8	30.0
Cyclohexanone	Ave	0.4848	0.2776		71.6	125	-42.8*	30.0
2-Chloro-1,1,1-Trifluoroethane	None					5.00		30.0
Chlorotrifluoroethene	None					5.00		30.0

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X10.D
Lims ID: ICV SM
Client ID:
Sample Type: ICV
Inject. Date: 19-Jun-2023 17:37:30 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0086929-011
Misc. Info.: ICV SM
Operator ID: KNK41612 Instrument ID: 19930
Sublist:

Method: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 27-Jun-2023 12:31:25 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1687

First Level Reviewer: DVW2 Date: 21-Jun-2023 08:28:07

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Chlorodifluoromethane	51	1.867	1.867	0.000	97	326341	5.00	4.46	M
3 Dimethyl ether	45	1.922	1.922	0.000	98	321388	5.00	5.14	
21 Acetonitrile	41	3.745	3.788	-0.043	19	36688	18.8	17.3	M
* 26 t-Butyl alcohol-d10 (IS)	65	3.964	3.977	-0.013	22	119910	50.0	50.0	
33 Vinyl acetate	43	4.989	4.989	0.000	97	860748	12.5	13.8	
42 Ethyl acetate	43	5.897	5.891	0.006	98	64694	2.50	2.74	
$ 49 Dibromofluoromethane (Surr)	113	6.549	6.555	-0.006	94	475443	10.0	10.0	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.006	7.013	-0.007	62	94808	10.0	10.0	
59 Isopropyl acetate	43	7.128	7.128	0.000	98	152331	2.50	2.38	
* 61 Fluorobenzene (IS)	96	7.445	7.452	-0.007	99	1852370	10.0	10.0	
70 n-Propyl acetate	43	8.451	8.445	0.006	98	105994	2.50	2.59	
73 2-Chloroethyl vinyl ether	63	9.018	9.006	0.012	1	697	5.00	2.55	
$ 78 Toluene-d8 (Surr)	98	9.494	9.500	-0.006	93	1861973	10.0	9.93	
104 n-Butyl acetate	43	10.408	10.408	0.000	98	131134	2.50	2.56	
* 107 Chlorobenzene-d5 (IS)	117	10.987	10.988	-0.001	84	1457982	10.0	10.0	
118 cis-1,4-Dichloro-2-butene	88	11.902	11.902	0.000	30	193345	12.5	13.2	a
119 Cyclohexanone	55	11.938	11.938	0.000	90	83207	125.0	71.6	
$ 120 4-Bromofluorobenzene (Surr)	95	11.999	12.000	-0.001	96	712515	10.0	10.1	
* 135 1,4-Dichlorobenzene-d4	152	12.883	12.884	-0.001	93	895612	10.0	10.0	
149 2-Chloro-1,1,1-Trifluoroethane	1		0.000				ND	ND	
162 Chlorotrifluoroethene	1		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

MSV_LCS_V5ACE_00026	Amount Added:	6.25	Units: uL	
MSV_LCS_CYC_00003	Amount Added:	12.50	Units: uL	
MSV_LCS_LKB_00006	Amount Added:	25.00	Units: uL	
MSV_Q_QDME_00032	Amount Added:	5.00	Units: uL	
MSV_LCS_2CEVE_00120	Amount Added:	12.50	Units: uL	
MSV_LCS_SMFre_00050	Amount Added:	12.50	Units: uL	
MSV_LLcentISS_00007	Amount Added:	5.00	Units: uL	Run Reagent

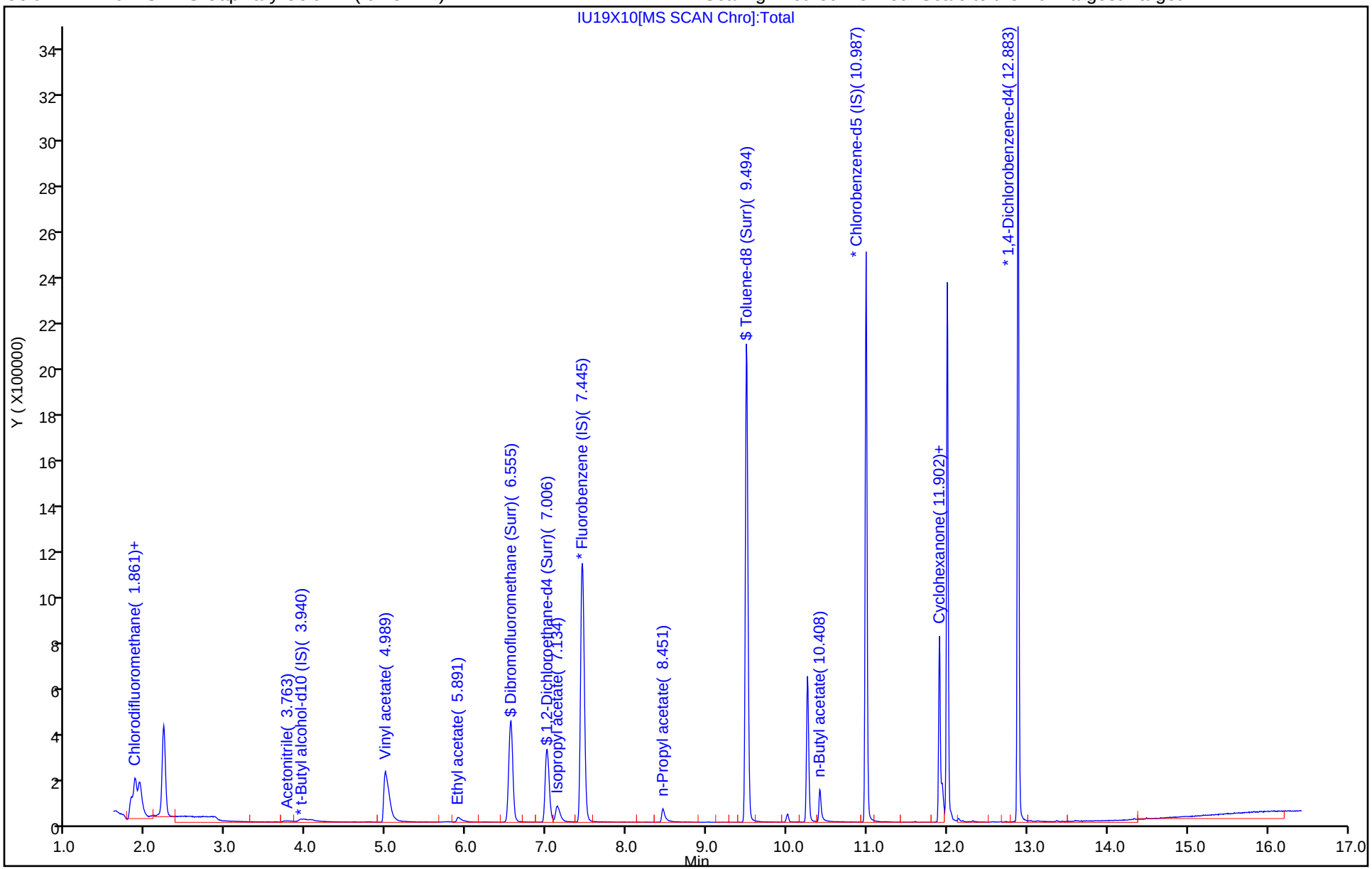
Report Date: 27-Jun-2023 12:31:28 Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X10.D

Injection Date:	19-Jun-2023 17:37:30	Instrument ID:	19930	Operator ID:	KNK41612
Lims ID:	ICV SM			Worklist Smp#:	11
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

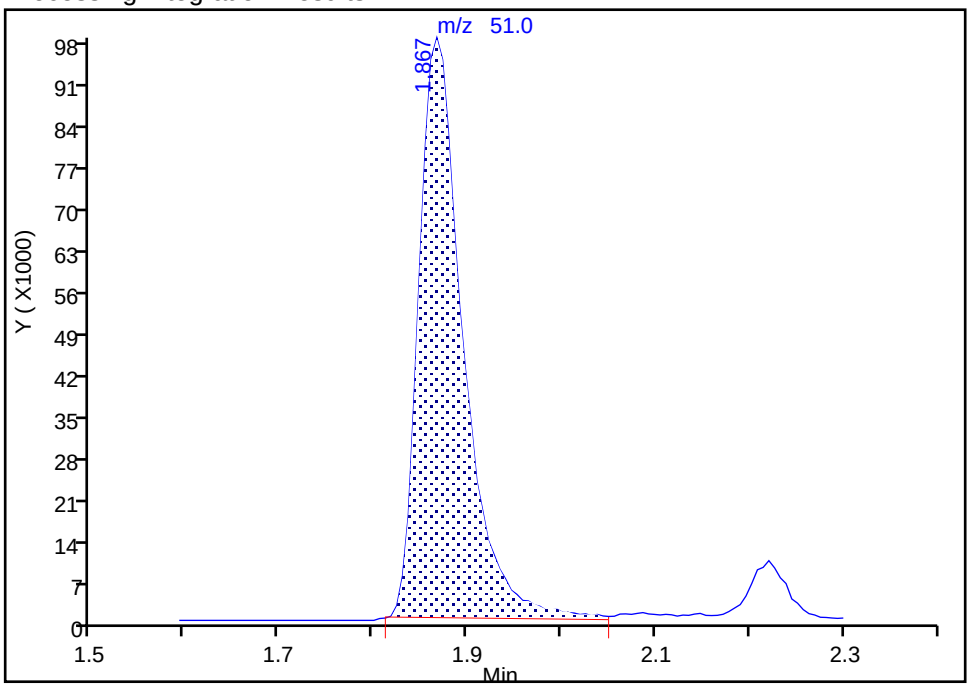
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X10.D
Injection Date: 19-Jun-2023 17:37:30 Instrument ID: 19930
Lims ID: ICV SM
Client ID:
Operator ID: KNK41612 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

2 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

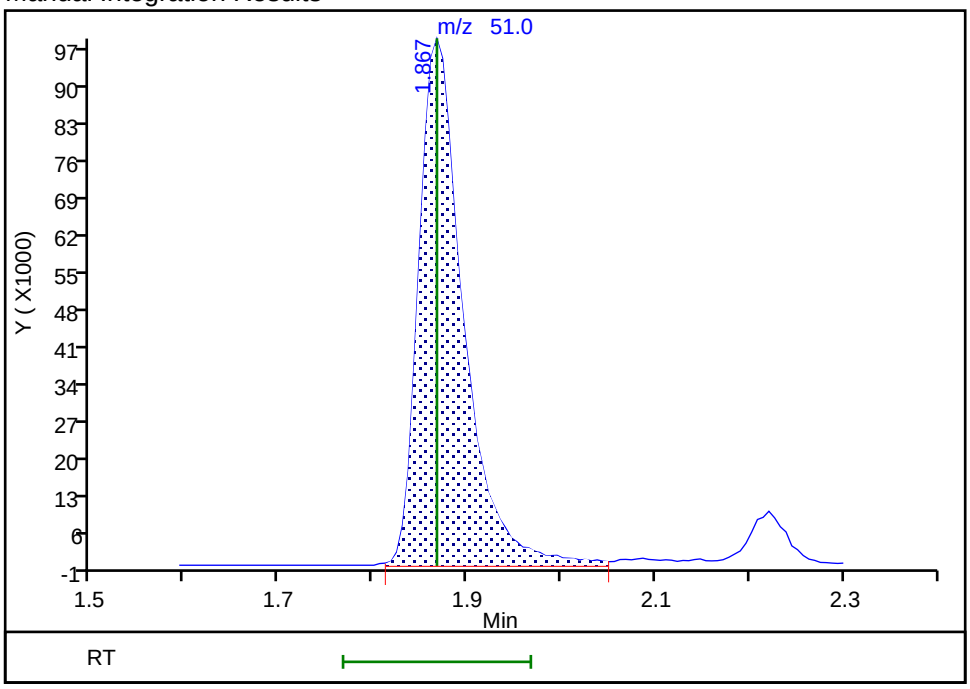
Processing Integration Results

RT: 1.87
Area: 323408
Amount: 4.500445
Amount Units: ug/l



Manual Integration Results

RT: 1.87
Area: 326341
Amount: 4.458461
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:27:45 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

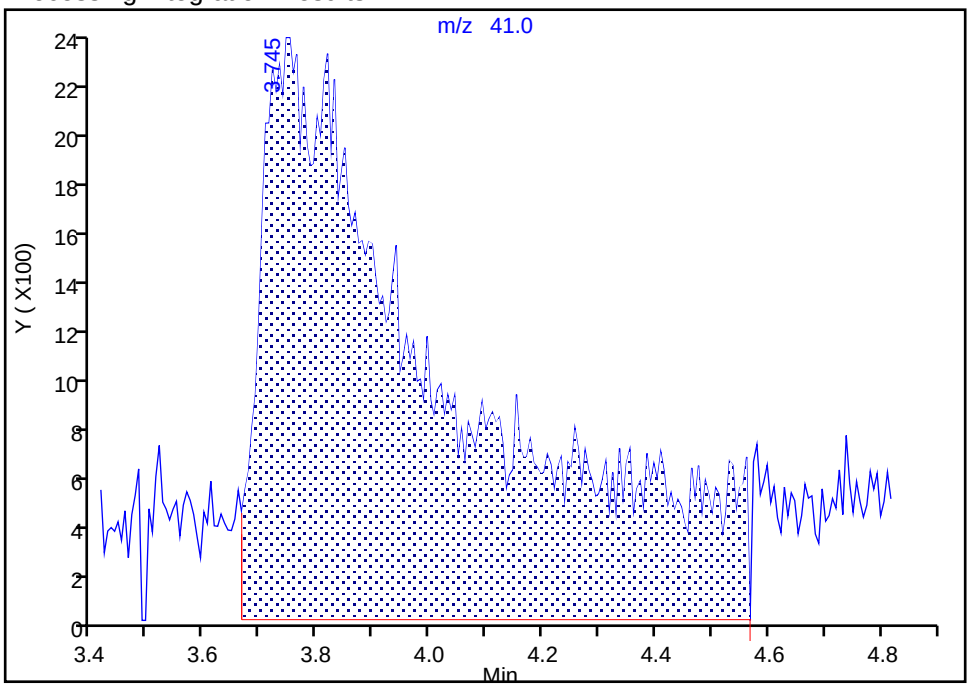
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X10.D
Injection Date: 19-Jun-2023 17:37:30 Instrument ID: 19930
Lims ID: ICV SM
Client ID:
Operator ID: KNK41612 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

21 Acetonitrile, CAS: 75-05-8

Signal: 1

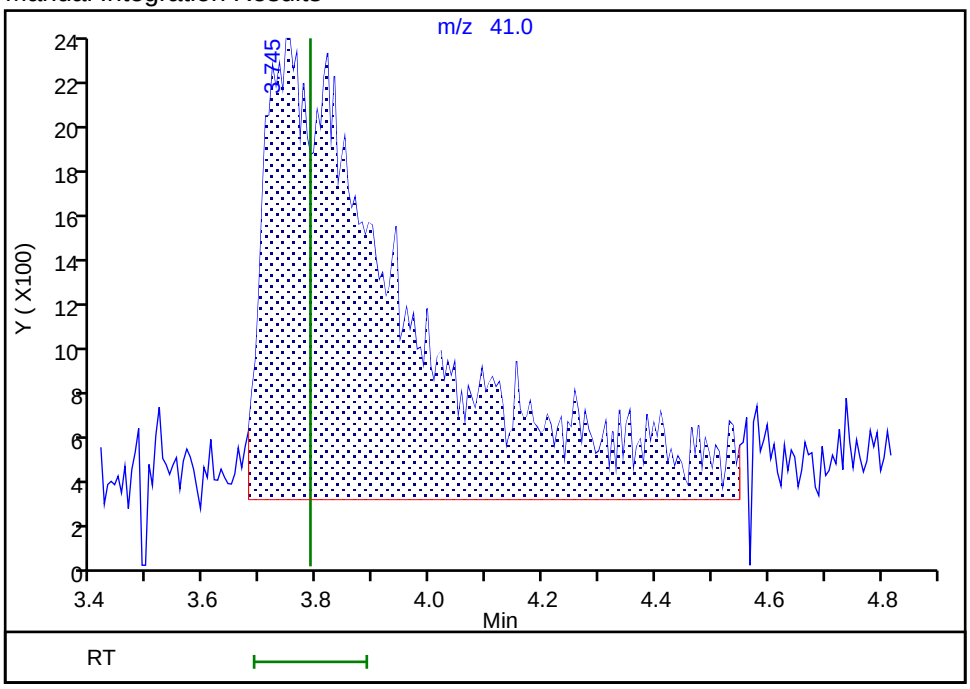
Processing Integration Results

RT: 3.74
Area: 52489
Amount: 24.704172
Amount Units: ug/l



Manual Integration Results

RT: 3.74
Area: 36688
Amount: 17.267364
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 14:58:14 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

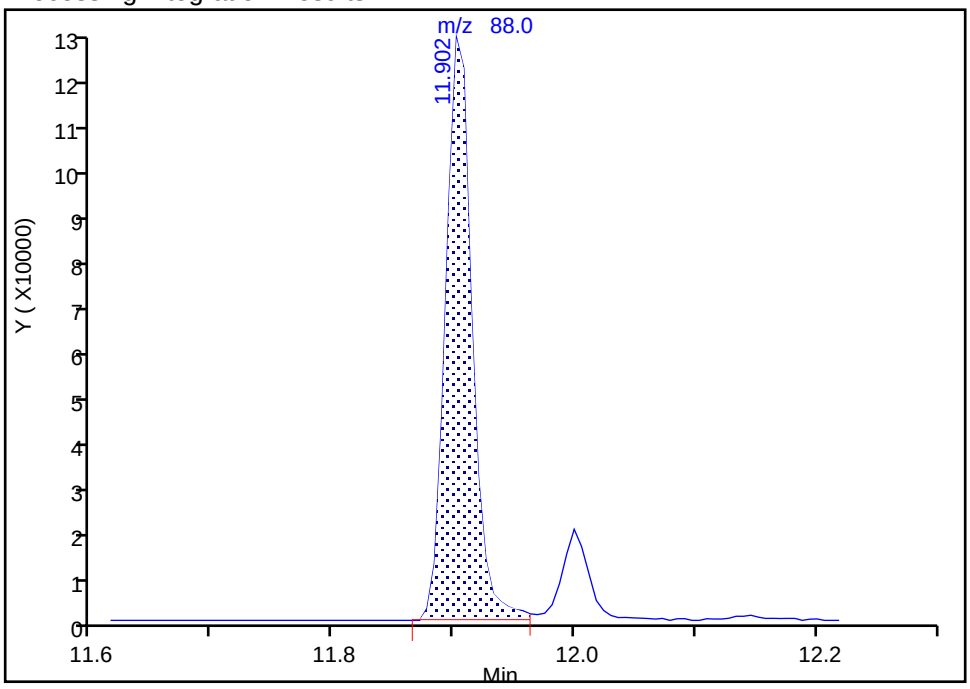
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X10.D				
Injection Date:	19-Jun-2023 17:37:30	Instrument ID:	19930		
Lims ID:	ICV SM				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	10	Worklist Smp#:	11
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

118 cis-1,4-Dichloro-2-butene, CAS: 1476-11-5

Signal: 1

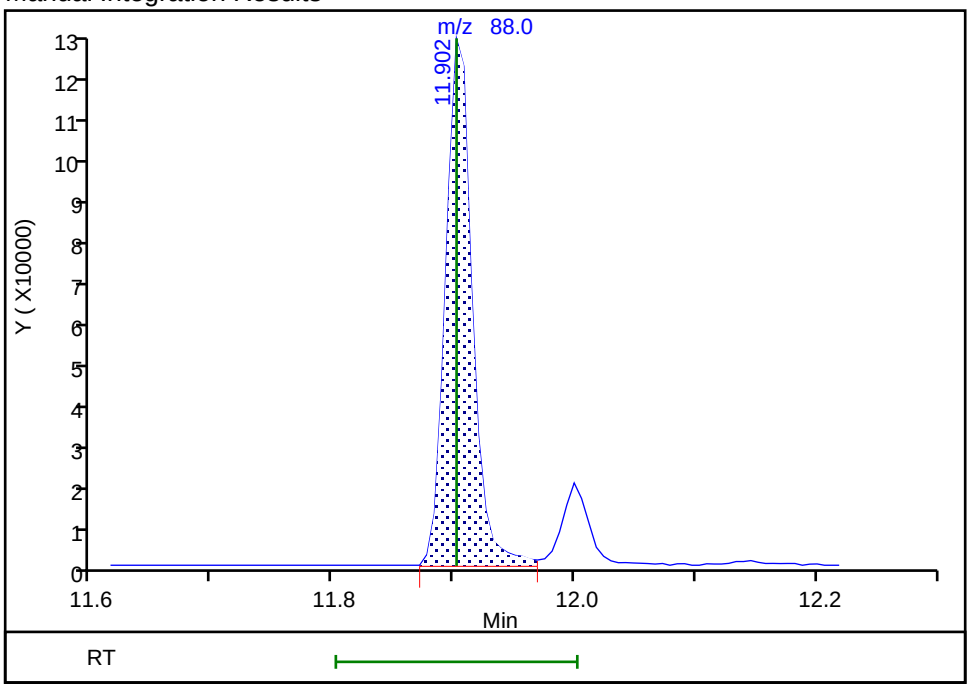
Processing Integration Results

RT: 11.90
Area: 192923
Amount: 8.749666
Amount Units: ug/l



Manual Integration Results

RT: 11.90
Area: 193345
Amount: 13.229831
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:32:59 -04:00:00 (UTC)

Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-2

SDG No.:

Lab Sample ID: ICV 410-388102/21 Calibration Date: 06/19/2023 21:07

Instrument ID: 19930 Calib Start Date: 06/19/2023 18:19

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 06/19/2023 20:25

Lab File ID: IU19X20.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4004	0.3483	0.1000	4.35	5.00	-13.0	30.0
Chloromethane	Ave	0.4068	0.3486	0.1000	4.28	5.00	-14.3	30.0
Vinyl chloride	Ave	0.3892	0.3475	0.1000	4.46	5.00	-10.7	30.0
1,3-Butadiene	Ave	0.4073	0.2992		3.67	5.00	-26.5	30.0
Bromomethane	Ave	0.3038	0.2659	0.1000	4.38	5.00	-12.5	30.0
Chloroethane	Ave	0.2329	0.2166	0.1000	4.65	5.00	-7.0	30.0
Dichlorofluoromethane	Ave	0.6499	0.5241		4.03	5.00	-19.4	30.0
Trichlorofluoromethane	Ave	0.4955	0.4545	0.1000	4.59	5.00	-8.3	30.0
Ethyl ether	Ave	0.2046	0.1909		4.67	5.01	-6.7	30.0
Freon 123a	Ave	0.3534	0.3205		4.53	5.00	-9.3	30.0
Acrolein	Ave	2.165	1.920		33.2	37.5	-11.3	30.0
1,1-Dichloroethene	Ave	0.2682	0.2593	0.1000	4.83	5.00	-3.3	30.0
Acetone	Ave	2.391	2.028	0.1000	53.0	62.5	-15.2	30.0
Freon 113	Ave	0.2847	0.2739	0.1000	4.81	5.00	-3.8	30.0
Methyl iodide	Ave	0.5640	0.5161		4.58	5.00	-8.5	30.0
Ethyl bromide	Ave	0.2347	0.2293		4.94	5.06	-2.3	30.0
Carbon disulfide	Ave	0.7273	0.6646	0.1000	4.57	5.00	-8.6	30.0
Methyl acetate	Ave	5.902	6.367	0.1000	5.39	5.00	7.9	30.0
Allyl chloride	Ave	0.4168	0.3807		4.57	5.00	-8.7	30.0
Methylene Chloride	Ave	0.2831	0.2674	0.1000	4.72	5.00	-5.5	30.0
t-Butyl alcohol	Ave	0.9514	0.8170		42.9	50.0	-14.1	30.0
Acrylonitrile	Ave	2.907	3.095		26.6	25.0	6.5	30.0
Methyl tertiary butyl ether	Ave	0.7360	0.6681	0.1000	4.54	5.00	-9.2	30.0
trans-1,2-Dichloroethene	Ave	0.2985	0.2748	0.1000	4.60	5.00	-7.9	30.0
n-Hexane	Ave	0.3912	0.3498		4.47	5.00	-10.6	30.0
1,1-Dichloroethane	Ave	0.5113	0.4837	0.2000	4.73	5.00	-5.4	30.0
di-Isopropyl ether	Ave	0.8397	0.7764		4.62	5.00	-7.5	30.0
2-Chloro-1,3-butadiene	Ave	0.4276	0.4100		4.80	5.00	-4.1	30.0
Ethyl t-butyl ether	Ave	0.8020	0.7635		4.76	5.00	-4.8	30.0
2-Butanone	Ave	4.608	4.254	0.1000	57.7	62.5	-7.7	30.0
cis-1,2-Dichloroethene	Ave	0.3321	0.3236	0.1000	4.87	5.00	-2.5	30.0
2,2-Dichloropropane	Ave	0.4608	0.4445		4.82	5.00	-3.5	30.0
Propionitrile	Ave	1.219	1.130		34.8	37.5	-7.3	30.0
Methacrylonitrile	Ave	4.809	4.437		34.6	37.5	-7.7	30.0
Bromochloromethane	Ave	0.1511	0.1441		4.77	5.00	-4.6	30.0
Tetrahydrofuran	Ave	1.516	1.392		22.9	25.0	-8.2	30.0
Chloroform	Ave	0.5282	0.4968	0.2000	4.70	5.00	-6.0	30.0
1,1,1-Trichloroethane	Ave	0.4933	0.4782	0.1000	4.85	5.00	-3.1	30.0
Cyclohexane	Ave	0.4674	0.4502	0.1000	4.82	5.00	-3.7	30.0
1,1-Dichloropropene	Ave	0.3927	0.3916		4.99	5.00	-0.3	30.0
Carbon tetrachloride	Ave	0.4394	0.4320	0.1000	4.92	5.00	-1.7	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-2

SDG No.:

Lab Sample ID: ICV 410-388102/21 Calibration Date: 06/19/2023 21:07

Instrument ID: 19930 Calib Start Date: 06/19/2023 18:19

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 06/19/2023 20:25

Lab File ID: IU19X20.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Isobutyl alcohol	Ave	0.3380	0.2702		99.9	125	-20.1	30.0
Benzene	Ave	1.181	1.145	0.5000	4.85	5.00	-3.0	30.0
1,2-Dichloroethane	Ave	0.3201	0.3020	0.1000	4.72	5.00	-5.6	30.0
t-Amyl methyl ether	Ave	0.7413	0.7125		4.81	5.00	-3.9	30.0
n-Heptane	Ave	0.3757	0.3328		4.43	5.00	-11.4	30.0
n-Butanol	Ave	0.2596	0.2519		243	250	-3.0	30.0
Trichloroethene	Ave	0.3285	0.3080	0.2000	4.69	5.00	-6.2	30.0
Methylcyclohexane	Ave	0.5306	0.5118	0.1000	4.82	5.00	-3.6	30.0
1,2-Dichloropropane	Ave	0.2919	0.2770	0.1000	4.74	5.00	-5.1	30.0
Methyl methacrylate	Ave	9.478	8.727		4.60	5.00	-7.9	30.0
1,4-Dioxane	Ave	0.0551	0.0600	0.0050	136	125	8.7	30.0
Dibromomethane	Ave	0.1463	0.1403		4.79	5.00	-4.1	30.0
Bromodichloromethane	Ave	0.3795	0.3600	0.2000	4.74	5.00	-5.1	30.0
2-Nitropropane	Ave	3.099	2.514			5.00	-18.9	30.0
1-Bromo-2-chloroethane	Ave	0.2977	0.2836		4.76	5.00	-4.7	30.0
cis-1,3-Dichloropropene	Ave	0.4553	0.4287	0.2000	4.71	5.00	-5.9	30.0
4-Methyl-2-pentanone	Ave	12.37	11.72	0.1000	59.2	62.5	-5.2	30.0
Toluene	Ave	1.014	0.9874	0.4000	4.87	5.00	-2.6	30.0
trans-1,3-Dichloropropene	Ave	0.4787	0.4640	0.1000	4.85	5.00	-3.1	30.0
Ethyl methacrylate	Ave	0.3958	0.3797		4.80	5.00	-4.1	30.0
1,1,2-Trichloroethane	Ave	0.2862	0.2652	0.1000	4.63	5.00	-7.3	30.0
Tetrachloroethene	Ave	0.5290	0.5110	0.2000	4.83	5.00	-3.4	30.0
1,3-Dichloropropane	Ave	0.4529	0.4379		4.83	5.00	-3.3	30.0
2-Hexanone	Ave	8.750	8.281	0.1000	59.1	62.5	-5.4	30.0
Dibromochloromethane	Ave	0.3726	0.3572		4.79	5.00	-4.1	30.0
1,2-Dibromoethane	Ave	0.2700	0.2601	0.1000	4.82	5.00	-3.7	30.0
1-Chlorohexane	Ave	0.5902	0.5297		4.49	5.00	-10.3	30.0
Chlorobenzene	Ave	1.186	1.119	0.5000	4.72	5.00	-5.7	30.0
1,1,1,2-Tetrachloroethane	Ave	0.4228	0.4160		4.92	5.00	-1.6	30.0
Ethylbenzene	Ave	1.976	1.898	0.1000	4.80	5.00	-4.0	30.0
m&p-Xylene	Ave	0.7994	0.7789	0.1000	9.74	10.0	-2.6	30.0
o-Xylene	Ave	0.7900	0.7609	0.3000	4.82	5.00	-3.7	30.0
Styrene	Ave	1.271	1.245	0.3000	4.90	5.00	-2.1	30.0
Bromoform	Ave	0.2417	0.2332	0.1000	4.82	5.00	-3.5	30.0
Isopropylbenzene	Ave	2.049	2.023	0.1000	4.94	5.00	-1.3	30.0
1,1,2,2-Tetrachloroethane	Ave	0.5952	0.5637	0.3000	4.73	5.00	-5.3	30.0
Bromobenzene	Ave	0.8602	0.8298		4.82	5.00	-3.5	30.0
trans-1,4-Dichloro-2-butene	Ave	4.657	4.133		22.2	25.0	-11.3	30.0
1,2,3-Trichloropropane	Ave	0.1671	0.1616		4.84	5.00	-3.3	30.0
N-Propylbenzene	Ave	3.807	3.712		4.87	5.00	-2.5	30.0
2-Chlorotoluene	Ave	0.8316	0.8008		4.82	5.00	-3.7	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-2

SDG No.:

Lab Sample ID: ICV 410-388102/21 Calibration Date: 06/19/2023 21:07

Instrument ID: 19930 Calib Start Date: 06/19/2023 18:19

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 06/19/2023 20:25

Lab File ID: IU19X20.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,3,5-Trimethylbenzene	Ave	2.902	2.762		4.76	5.00	-4.8	30.0
4-Chlorotoluene	Ave	0.8520	0.8209		4.82	5.00	-3.7	30.0
tert-Butylbenzene	Ave	0.6973	0.6719		4.82	5.00	-3.6	30.0
Pentachloroethane	Ave	0.5393	0.5204		4.82	5.00	-3.5	30.0
1,2,4-Trimethylbenzene	Ave	2.979	2.822		4.74	5.00	-5.3	30.0
sec-Butylbenzene	Ave	3.691	3.582		4.85	5.00	-2.9	30.0
1,3-Dichlorobenzene	Ave	1.681	1.571	0.6000	4.67	5.00	-6.6	30.0
p-Isopropyltoluene	Ave	3.291	3.189		4.85	5.00	-3.1	30.0
1,4-Dichlorobenzene	Ave	1.657	1.595	0.5000	4.81	5.00	-3.7	30.0
1,2,3-Trimethylbenzene	Ave	1.347	1.230		4.57	5.00	-8.7	30.0
Benzyl chloride	Ave	0.2558	0.2330		4.56	5.00	-8.9	30.0
n-Butylbenzene	Ave	1.473	1.434		4.87	5.00	-2.7	30.0
1,2-Dichlorobenzene	Ave	1.579	1.466	0.4000	4.64	5.00	-7.2	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.0973	0.0942	0.0500	4.84	5.00	-3.2	30.0
1,3,5-Trichlorobenzene	Ave	1.261	1.170		4.64	5.00	-7.2	30.0
1,2,4-Trichlorobenzene	Ave	1.014	0.9728	0.2000	4.80	5.00	-4.1	30.0
Hexachlorobutadiene	Ave	0.4941	0.4866		4.92	5.00	-1.5	30.0
Naphthalene	Ave	1.846	1.721		4.66	5.00	-6.8	30.0
1,2,3-Trichlorobenzene	Ave	0.8491	0.8046		4.74	5.00	-5.2	30.0
2-ethoxy-2-methyl butane	None					5.00		30.0
2-Methylnaphthalene	None					5.00		30.0
Isopropyl alcohol	None					37.5		30.0
p-Diethylbenzene	None					5.00		30.0
Pentane	None					5.00		30.0
Dibromofluoromethane (Surr)	Ave	0.2569	0.2580		10.0	10.0	0.5	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.0509	0.0537		10.5	10.0	5.5	30.0
Toluene-d8 (Surr)	Ave	1.286	1.295		10.1	10.0	0.7	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4844	0.4894		10.1	10.0	1.0	30.0

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X20.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 19-Jun-2023 21:07:30 ALS Bottle#: 20 Worklist Smp#: 21
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0086929-021
Misc. Info.: ICV LG
Operator ID: KNK41612 Instrument ID: 19930
Sublist:

Method: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 27-Jun-2023 12:31:25 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1687

First Level Reviewer: DVW2 Date: 21-Jun-2023 08:13:18

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.855	1.855	0.000	99	332540	5.00	4.35	
4 Chloromethane	50	2.044	2.050	-0.006	99	332810	5.00	4.28	
5 Vinyl chloride	62	2.148	2.160	-0.012	98	331776	5.00	4.46	
6 Butadiene	39	2.154	2.160	-0.006	90	285710	5.00	3.67	M
7 Bromomethane	94	2.459	2.465	-0.006	90	253865	5.00	4.38	
8 Chloroethane	64	2.532	2.538	-0.006	100	206791	5.00	4.65	
9 Dichlorofluoromethane	67	2.757	2.764	-0.007	97	500400	5.00	4.03	
10 Trichlorofluoromethane	101	2.824	2.824	0.000	96	433916	5.00	4.59	
11 Ethyl ether	59	3.044	3.050	-0.006	90	182439	5.01	4.67	
13 1,2-Dichloro-1,1,2-trifluoroetha	67	3.129	3.142	-0.013	90	306017	5.00	4.53	
14 Acrolein	56	3.202	3.209	-0.007	98	207154	37.5	33.2	
15 1,1-Dichloroethene	96	3.337	3.337	0.000	97	247568	5.00	4.83	
16 Acetone	43	3.361	3.361	0.000	99	364839	62.5	53.0	
17 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.379	3.385	-0.006	90	261561	5.00	4.81	
18 Iodomethane	142	3.519	3.526	-0.007	98	492761	5.00	4.58	
19 Ethyl bromide	108	3.544	3.550	-0.006	98	221545	5.06	4.94	
20 Carbon disulfide	76	3.623	3.629	-0.006	99	634568	5.00	4.57	
23 Methyl acetate	43	3.757	3.757	0.000	23	91621	5.00	5.39	M
24 3-Chloro-1-propene	41	3.776	3.782	-0.006	91	363509	5.00	4.57	
25 Methylene Chloride	84	3.946	3.958	-0.012	91	255339	5.00	4.72	
* 26 t-Butyl alcohol-d10 (IS)	65	3.958	3.977	-0.019	98	143904	50.0	50.0	M
27 2-Methyl-2-propanol	59	4.080	4.093	-0.013	98	117574	50.0	42.9	
28 Acrylonitrile	53	4.275	4.282	-0.007	97	222687	25.0	26.6	
29 Methyl tert-butyl ether	73	4.336	4.342	-0.006	89	637850	5.00	4.54	
30 trans-1,2-Dichloroethene	96	4.349	4.355	-0.006	98	262384	5.00	4.60	
31 Hexane	57	4.769	4.781	-0.012	92	333993	5.00	4.47	
32 1,1-Dichloroethane	63	5.013	5.013	0.000	96	461799	5.00	4.73	
35 Isopropyl ether	45	5.074	5.074	0.000	93	741335	5.00	4.62	
36 2-Chloro-1,3-butadiene	53	5.123	5.123	0.000	90	391488	5.00	4.80	
37 Tert-butyl ethyl ether	59	5.611	5.623	-0.012	97	728931	5.00	4.76	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
38 2-Butanone (MEK)	43	5.806	5.812	-0.006	99	765203	62.5	57.7	
39 cis-1,2-Dichloroethene	96	5.848	5.854	-0.006	80	309006	5.00	4.87	
40 2,2-Dichloropropane	77	5.860	5.867	-0.007	89	424413	5.00	4.82	
43 Propionitrile	54	5.897	5.891	0.006	98	121929	37.5	34.8	
45 Methacrylonitrile	67	6.110	6.110	0.000	91	478875	37.5	34.6	
46 Chlorobromomethane	128	6.184	6.190	-0.006	88	137582	5.00	4.77	
47 Tetrahydrofuran	71	6.190	6.196	-0.006	74	100129	25.0	22.9	
48 Chloroform	83	6.342	6.342	0.000	93	474321	5.00	4.70	
$ 49 Dibromofluoromethane (Surr)	113	6.555	6.555	0.000	95	492721	10.0	10.0	
50 1,1,1-Trichloroethane	97	6.562	6.568	-0.006	98	456568	5.00	4.85	
51 Cyclohexane	56	6.665	6.671	-0.006	89	429888	5.00	4.82	
54 Carbon tetrachloride	117	6.781	6.781	0.000	97	412457	5.00	4.92	
53 1,1-Dichloropropene	75	6.775	6.781	-0.006	95	373859	5.00	4.99	
55 Isobutyl alcohol	41	6.940	6.940	0.000	95	97204	125.0	99.9	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.007	7.013	-0.006	91	102560	10.0	10.5	
57 Benzene	78	7.037	7.043	-0.006	97	1093365	5.00	4.85	
58 1,2-Dichloroethane	62	7.110	7.116	-0.006	98	288380	5.00	4.72	
60 Tert-amyl methyl ether	73	7.238	7.244	-0.006	98	680277	5.00	4.81	
* 61 Fluorobenzene (IS)	96	7.446	7.452	-0.006	98	1909555	10.0	10.0	
62 n-Heptane	43	7.470	7.470	0.000	92	317781	5.00	4.43	
63 n-Butanol	56	7.848	7.836	0.012	87	181235	250.0	242.6	
64 Trichloroethene	95	7.933	7.933	0.000	96	294102	5.00	4.69	
65 Methylcyclohexane	83	8.244	8.244	0.000	91	488652	5.00	4.82	
66 1,2-Dichloropropane	63	8.262	8.269	-0.007	95	264486	5.00	4.74	
67 Methyl methacrylate	69	8.360	8.354	0.006	87	125585	5.00	4.60	
68 1,4-Dioxane	88	8.372	8.366	0.006	28	21568	125.0	135.9	M
69 Dibromomethane	93	8.372	8.378	-0.006	90	133984	5.00	4.79	
71 Dichlorobromomethane	83	8.616	8.616	0.000	99	343706	5.00	4.74	
72 2-Nitropropane	41	8.878	8.884	-0.006	99	36173	5.00	4.06	
75 1-Bromo-2-chloroethane	63	9.012	9.012	0.000	98	270736	5.00	4.76	
76 cis-1,3-Dichloropropene	75	9.177	9.177	0.000	97	409297	5.00	4.71	
77 4-Methyl-2-pentanone (MIBK)	43	9.360	9.360	0.000	96	2108105	62.5	59.2	
$ 78 Toluene-d8 (Surr)	98	9.494	9.500	-0.006	93	1943756	10.0	10.1	
79 Toluene	92	9.573	9.579	-0.006	99	741055	5.00	4.87	
97 trans-1,3-Dichloropropene	75	9.848	9.848	0.000	92	348233	5.00	4.85	
99 Ethyl methacrylate	69	9.915	9.915	0.000	88	284946	5.00	4.80	
100 1,1,2-Trichloroethane	97	10.055	10.055	0.000	90	199046	5.00	4.63	
101 Tetrachloroethene	166	10.140	10.146	-0.006	98	383524	5.00	4.83	
102 1,3-Dichloropropane	76	10.219	10.219	0.000	89	328646	5.00	4.83	
103 2-Hexanone	43	10.274	10.274	0.000	95	1489528	62.5	59.1	
105 Chlorodibromomethane	129	10.439	10.439	0.000	89	268087	5.00	4.79	
106 Ethylene Dibromide	107	10.549	10.549	0.000	99	195236	5.00	4.82	
* 107 Chlorobenzene-d5 (IS)	117	10.988	10.988	0.000	84	1501017	10.0	10.0	
108 1-Chlorohexane	91	11.000	11.000	0.000	95	397532	5.00	4.49	a
109 Chlorobenzene	112	11.012	11.018	-0.006	97	839963	5.00	4.72	
111 1,1,1,2-Tetrachloroethane	131	11.103	11.097	0.006	97	312189	5.00	4.92	
112 Ethylbenzene	91	11.103	11.103	0.000	98	1424703	5.00	4.80	a
113 m-Xylene & p-Xylene	106	11.219	11.219	0.000	93	1169154	10.0	9.74	
114 o-Xylene	106	11.554	11.554	0.000	95	571089	5.00	4.82	
115 Styrene	104	11.567	11.567	0.000	95	934299	5.00	4.90	
116 Bromoform	173	11.725	11.725	0.000	99	175012	5.00	4.82	
117 Isopropylbenzene	105	11.859	11.859	0.000	95	1517986	5.00	4.94	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 120 4-Bromofluorobenzene (Surr)	95	12.000	12.000	0.000	96	734581	10.0	10.1	
121 1,1,2,2-Tetrachloroethane	83	12.103	12.103	0.000	94	257715	5.00	4.73	
122 Bromobenzene	156	12.115	12.115	0.000	94	379404	5.00	4.82	
123 trans-1,4-Dichloro-2-butene	53	12.128	12.128	0.000	92	297356	25.0	22.2	
124 1,2,3-Trichloropropane	110	12.146	12.146	0.000	81	73904	5.00	4.84	
125 N-Propylbenzene	91	12.189	12.189	-0.001	98	1697161	5.00	4.87	
126 2-Chlorotoluene	126	12.262	12.262	0.000	97	366155	5.00	4.82	a
127 1,3,5-Trimethylbenzene	105	12.323	12.323	0.000	94	1262779	5.00	4.76	
128 4-Chlorotoluene	126	12.353	12.353	0.000	97	375312	5.00	4.82	
129 tert-Butylbenzene	134	12.566	12.566	0.000	92	307218	5.00	4.82	
130 Pentachloroethane	167	12.597	12.597	0.000	92	237922	5.00	4.82	
131 1,2,4-Trimethylbenzene	105	12.609	12.609	0.000	96	1290272	5.00	4.74	
132 sec-Butylbenzene	105	12.731	12.731	0.000	93	1637677	5.00	4.85	
133 1,3-Dichlorobenzene	146	12.829	12.829	0.000	99	718228	5.00	4.67	
134 4-Isopropyltoluene	119	12.841	12.841	0.000	97	1458168	5.00	4.85	
* 135 1,4-Dichlorobenzene-d4	152	12.883	12.884	-0.001	93	914425	10.0	10.0	
136 1,4-Dichlorobenzene	146	12.902	12.902	0.000	96	729452	5.00	4.81	
137 1,2,3-Trimethylbenzene	120	12.914	12.914	0.000	98	562323	5.00	4.57	
138 Benzyl chloride	126	12.981	12.981	0.000	98	106540	5.00	4.56	
139 n-Butylbenzene	92	13.127	13.133	-0.006	96	655530	5.00	4.87	
140 1,2-Dichlorobenzene	146	13.164	13.158	0.006	99	670246	5.00	4.64	
142 1,2-Dibromo-3-Chloropropane	155	13.707	13.700	0.006	91	43063	5.00	4.84	
143 1,3,5-Trichlorobenzene	180	13.828	13.828	0.000	98	534823	5.00	4.64	
144 1,2,4-Trichlorobenzene	180	14.249	14.249	0.000	94	444787	5.00	4.80	
145 Hexachlorobutadiene	225	14.334	14.334	0.000	95	222490	5.00	4.92	
146 Naphthalene	128	14.432	14.426	0.006	96	787088	5.00	4.66	
147 1,2,3-Trichlorobenzene	180	14.572	14.572	0.000	96	367878	5.00	4.74	
155 2-Methylnaphthalene	142		0.000				ND	ND	
156 p-Diethylbenzene	1		0.000				ND	ND	
161 Pentane	43		0.000				ND	ND	
150 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
165 Isopropyl alcohol	45		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_LCS_VOC#1_00115	Amount Added:	12.50	Units: uL	
MSV_LCS_ACROL_00118	Amount Added:	12.50	Units: uL	
LCS_ETBR_00006	Amount Added:	12.50	Units: uL	
MSV_LCS_EE_00007	Amount Added:	12.50	Units: uL	
MSV_QC_Gas826_00145	Amount Added:	12.50	Units: uL	
MSV_LCS_Penta_00029	Amount Added:	12.50	Units: uL	
MSV_LLcentISS_00007	Amount Added:	5.00	Units: uL	Run Reagent

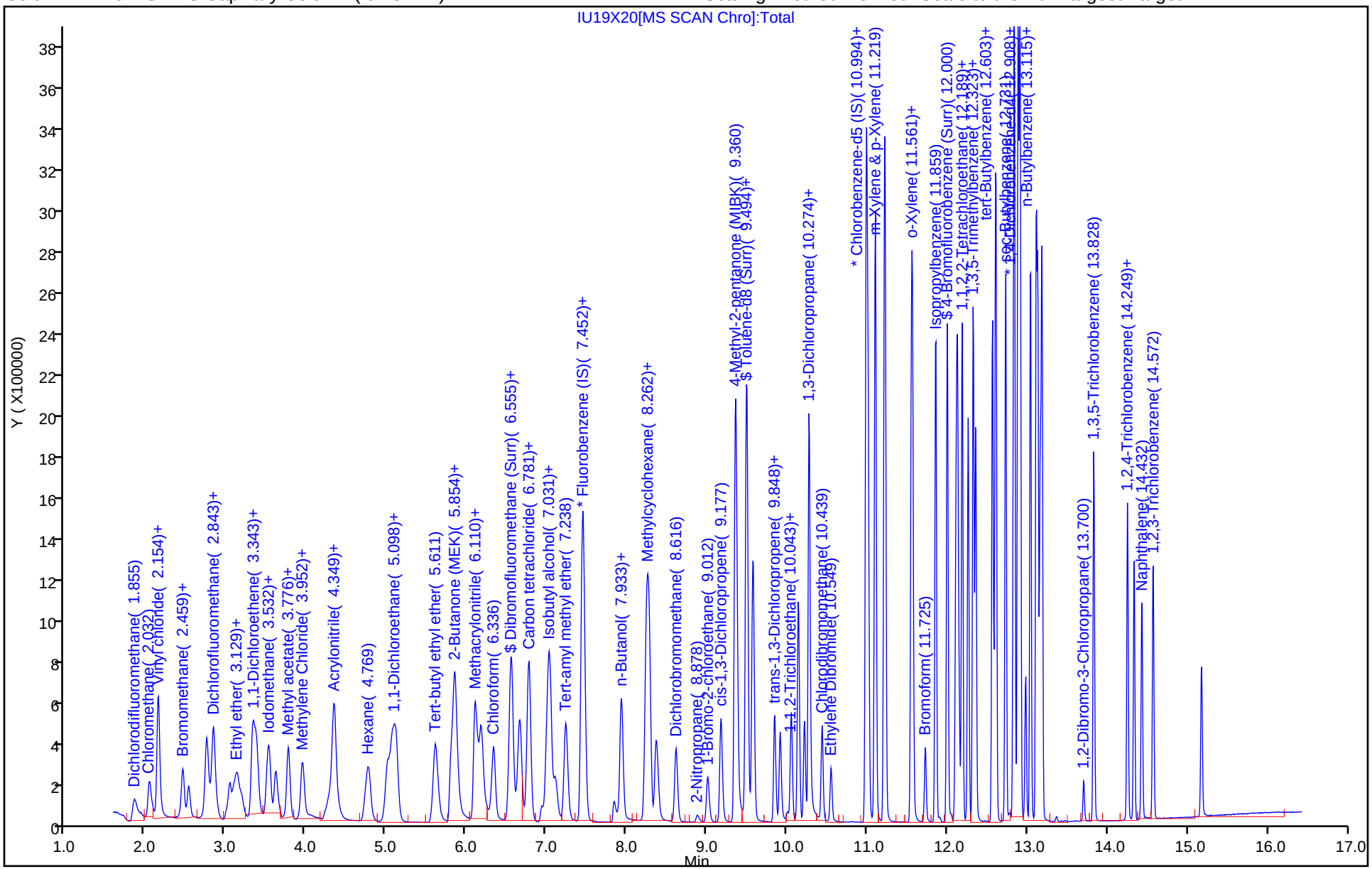
Report Date: 27-Jun-2023 12:31:31 Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X20.D

Injection Date:	19-Jun-2023 21:07:30	Instrument ID:	19930	Operator ID:	KNK41612
Lims ID:	ICV			Worklist Smp#:	21
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

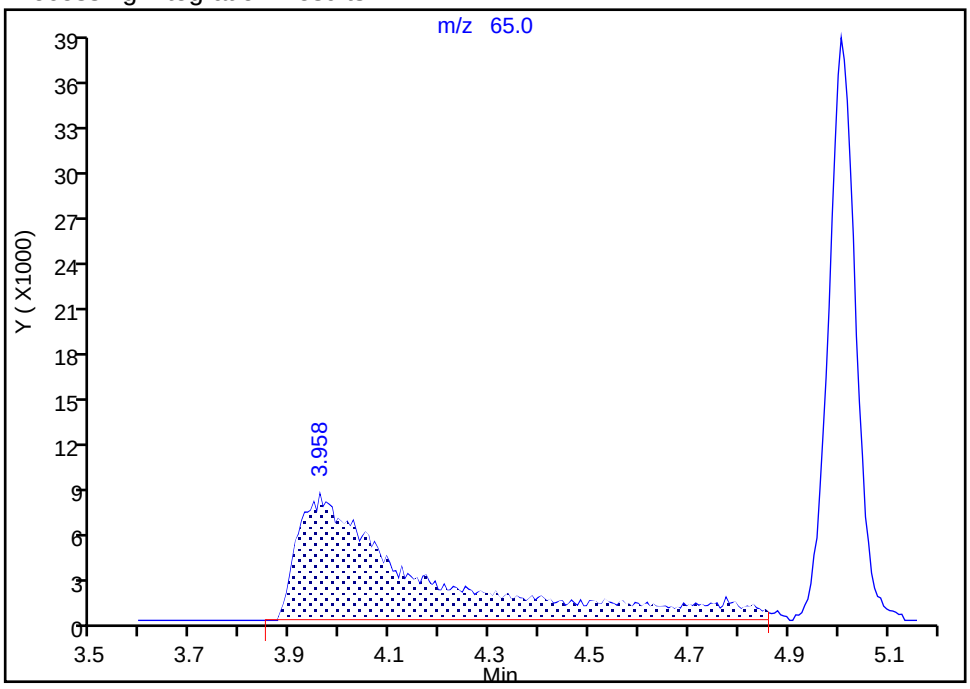
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X20.D				
Injection Date:	19-Jun-2023 21:07:30	Instrument ID:	19930		
Lims ID:	ICV				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	20	Worklist Smp#:	21
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

* 26 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

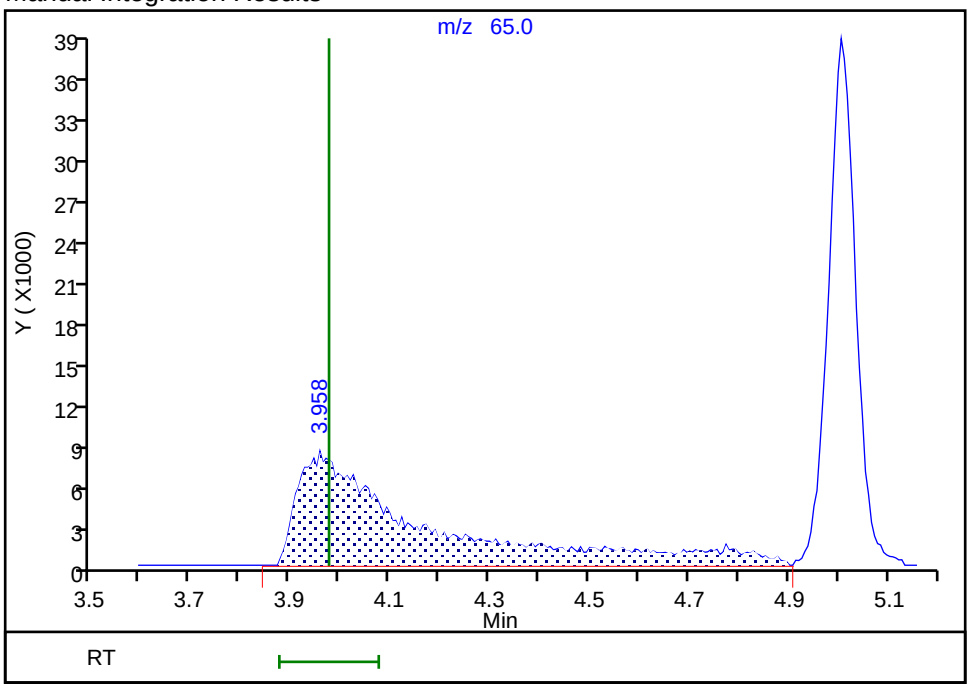
Processing Integration Results

RT: 3.96
Area: 142993
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 3.96
Area: 143904
Amount: 50.000000
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:11:25 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

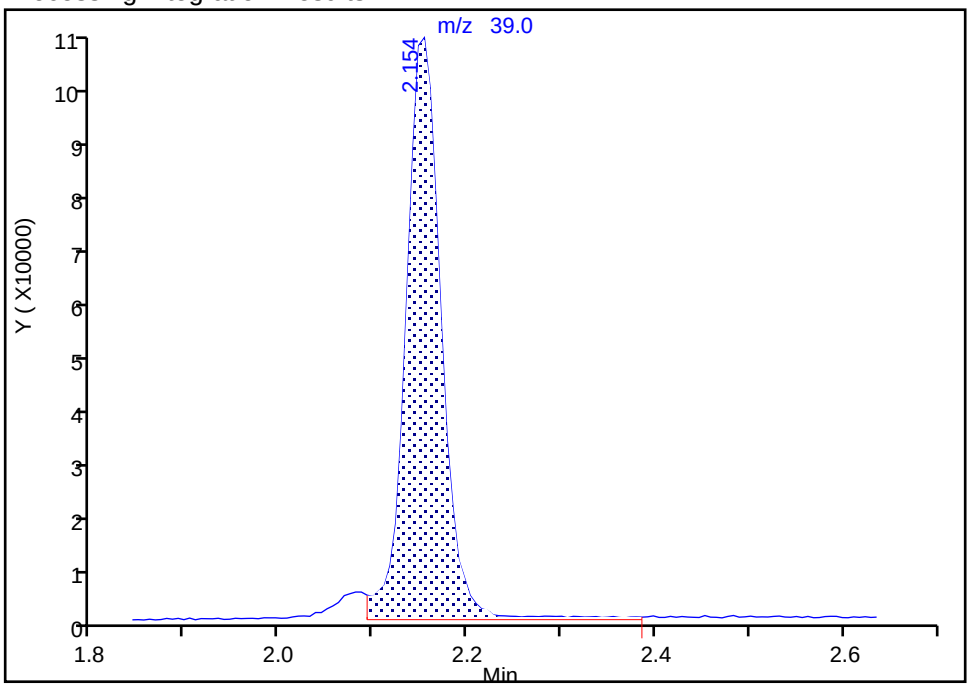
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X20.D
Injection Date: 19-Jun-2023 21:07:30 Instrument ID: 19930
Lims ID: ICV
Client ID:
Operator ID: KNK41612 ALS Bottle#: 20 Worklist Smp#: 21
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

6 Butadiene, CAS: 106-99-0

Signal: 1

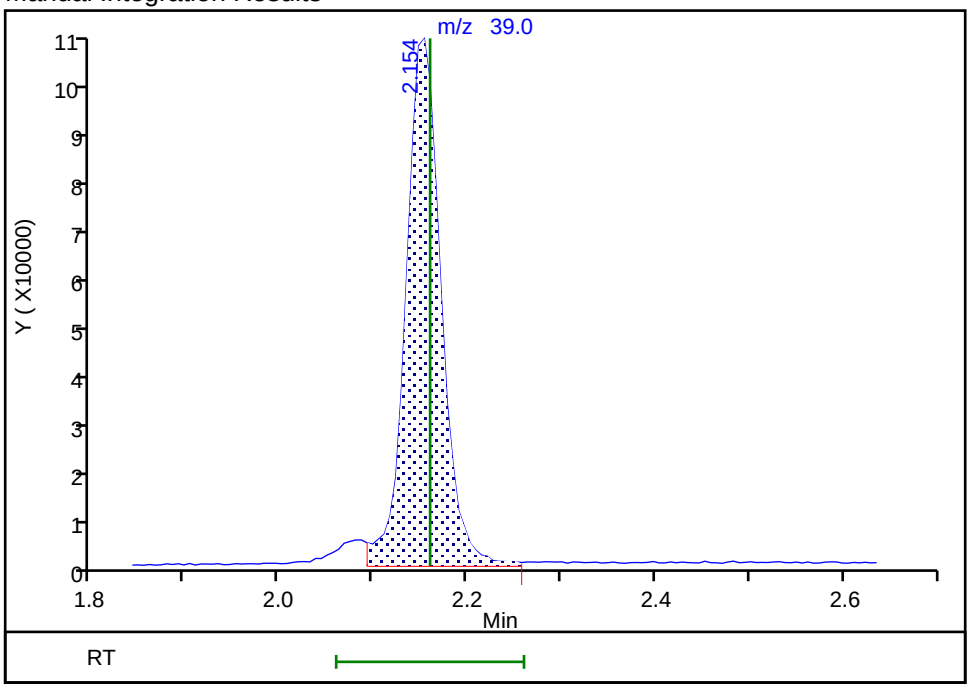
Processing Integration Results

RT: 2.15
Area: 289543
Amount: 3.723161
Amount Units: ug/l



Manual Integration Results

RT: 2.15
Area: 285710
Amount: 3.673874
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:10:59 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

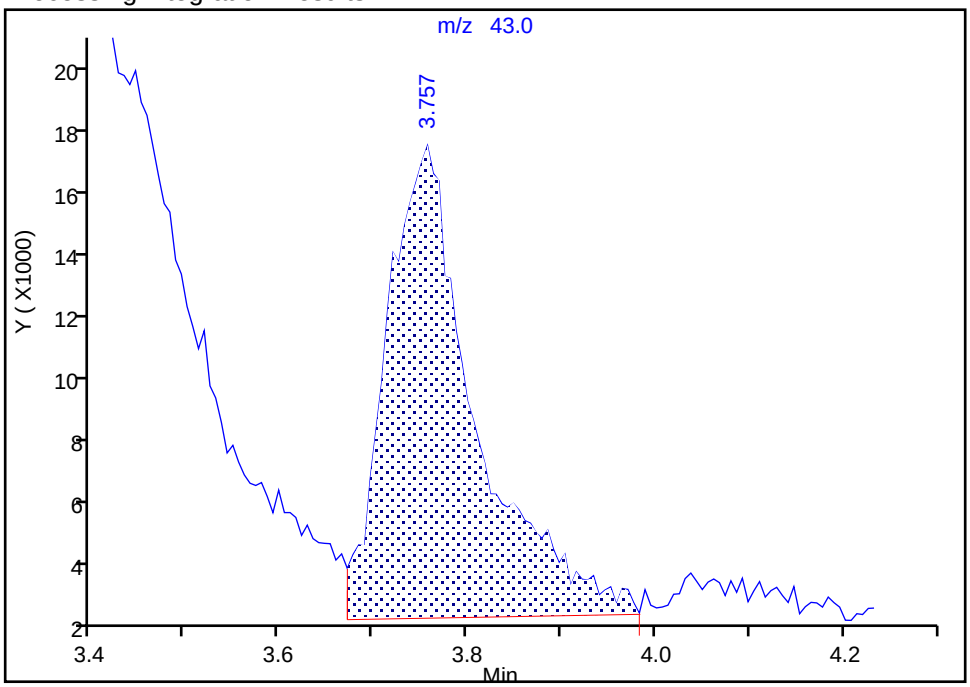
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X20.D
Injection Date: 19-Jun-2023 21:07:30 Instrument ID: 19930
Lims ID: ICV
Client ID:
Operator ID: KNK41612 ALS Bottle#: 20 Worklist Smp#: 21
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

23 Methyl acetate, CAS: 79-20-9

Signal: 1

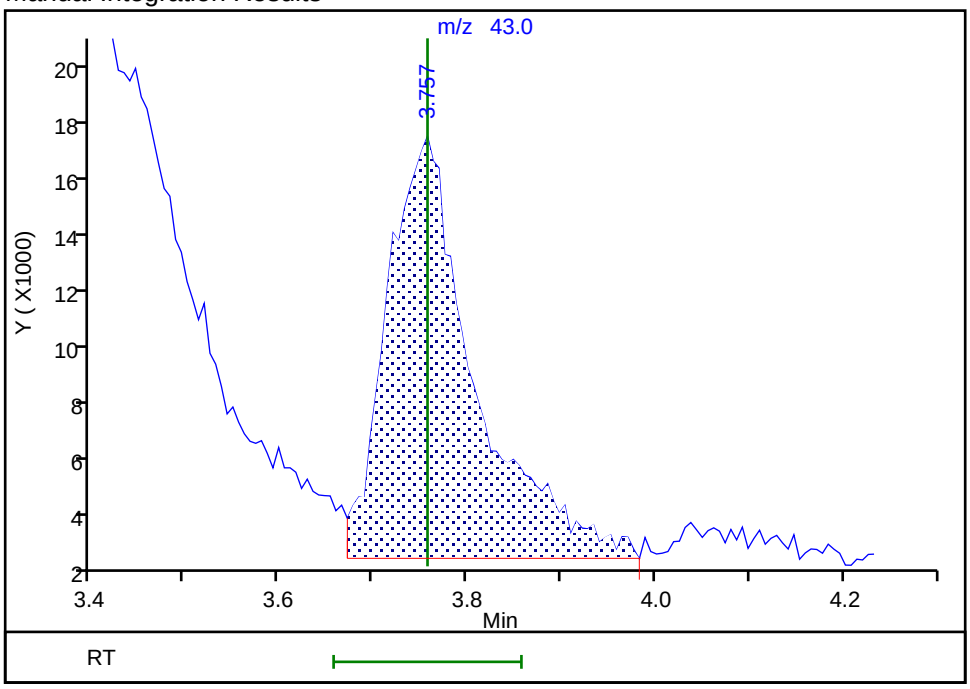
Processing Integration Results

RT: 3.76
Area: 93028
Amount: 5.511550
Amount Units: ug/l



Manual Integration Results

RT: 3.76
Area: 91621
Amount: 5.393827
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:11:17 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

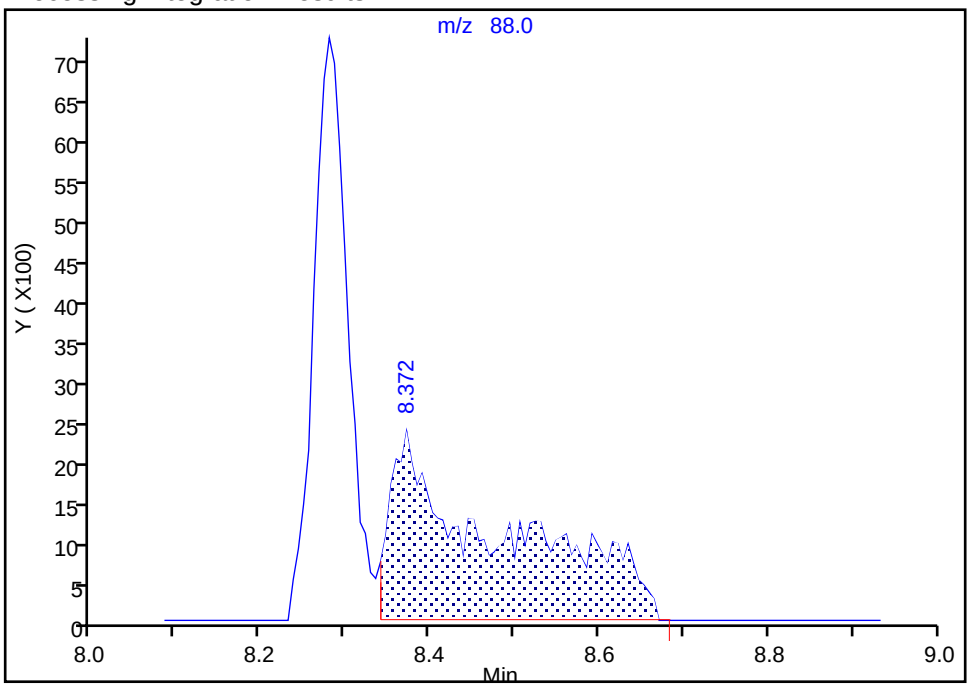
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X20.D
Injection Date: 19-Jun-2023 21:07:30 Instrument ID: 19930
Lims ID: ICV
Client ID:
Operator ID: KNK41612 ALS Bottle#: 20 Worklist Smp#: 21
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

68 1,4-Dioxane, CAS: 123-91-1

Signal: 1

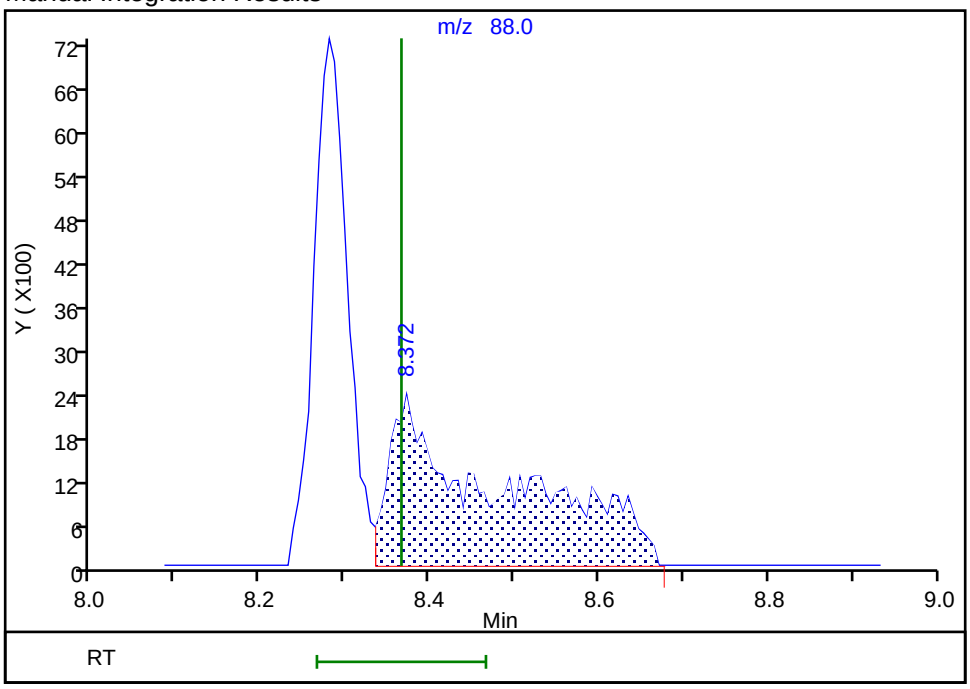
Processing Integration Results

RT: 8.37
Area: 21375
Amount: 135.6946
Amount Units: ug/l



Manual Integration Results

RT: 8.37
Area: 21568
Amount: 135.9211
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 08:11:47 -04:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

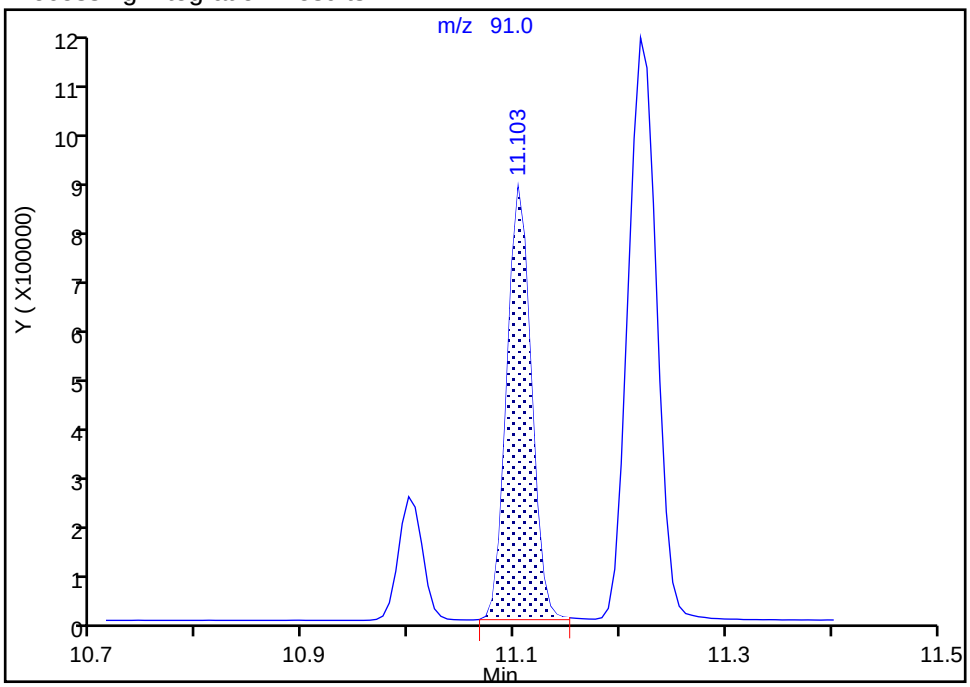
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X20.D
Injection Date: 19-Jun-2023 21:07:30 Instrument ID: 19930
Lims ID: ICV
Client ID:
Operator ID: KNK41612 ALS Bottle#: 20 Worklist Smp#: 21
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

108 1-Chlorohexane, CAS: 544-10-5

Signal: 1

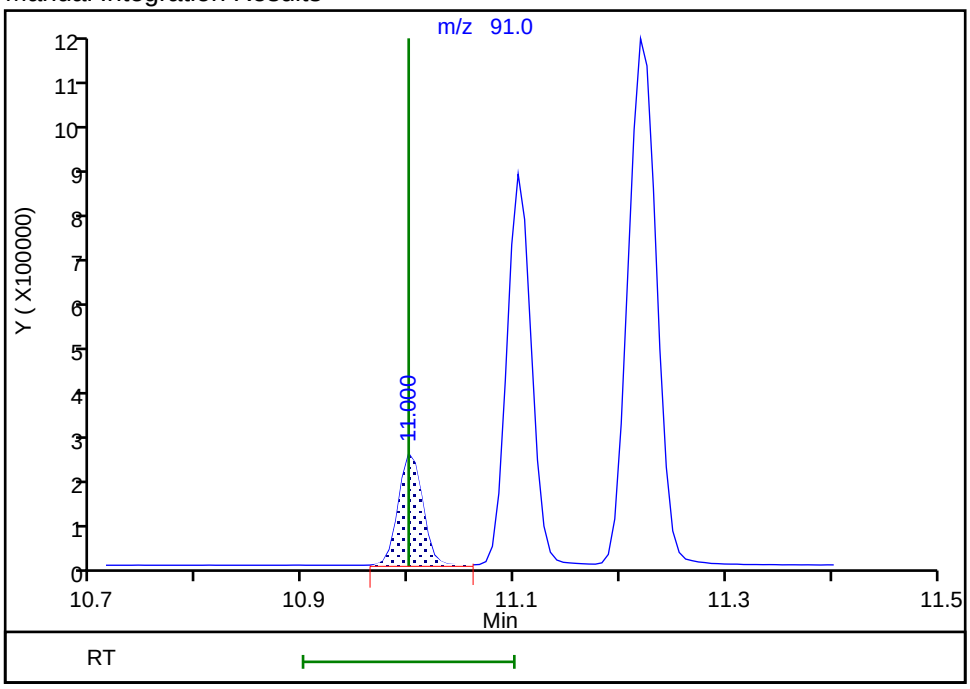
Processing Integration Results

RT: 11.10
Area: 1422236
Amount: 16.054157
Amount Units: ug/l



Manual Integration Results

RT: 11.00
Area: 397532
Amount: 4.487329
Amount Units: ug/l



Reviewer: DVW2, 22-Jun-2023 07:49:02 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

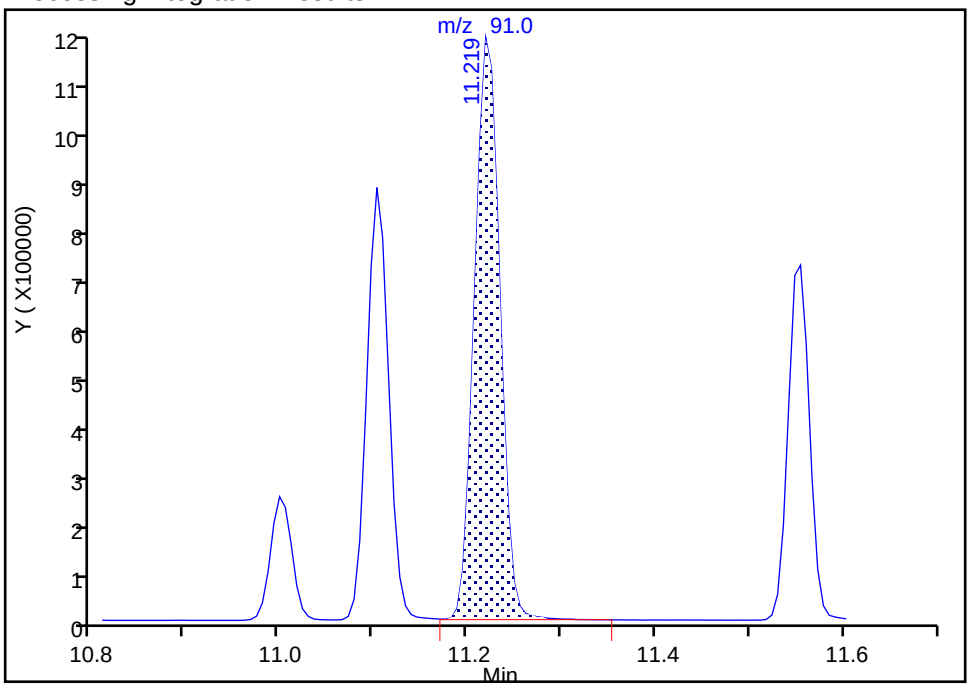
Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X20.D
Injection Date: 19-Jun-2023 21:07:30 Instrument ID: 19930
Lims ID: ICV
Client ID:
Operator ID: KNK41612 ALS Bottle#: 20 Worklist Smp#: 21
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

112 Ethylbenzene, CAS: 100-41-4

Signal: 1

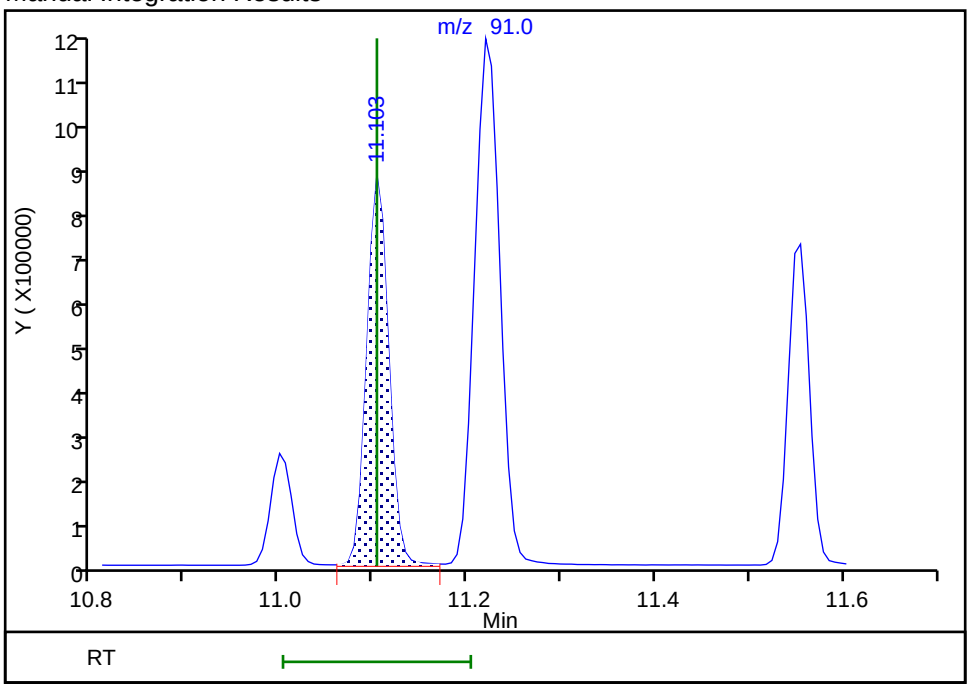
Processing Integration Results

RT: 11.22
Area: 2233460
Amount: 7.528667
Amount Units: ug/l



Manual Integration Results

RT: 11.10
Area: 1424703
Amount: 4.802466
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 15:40:53 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

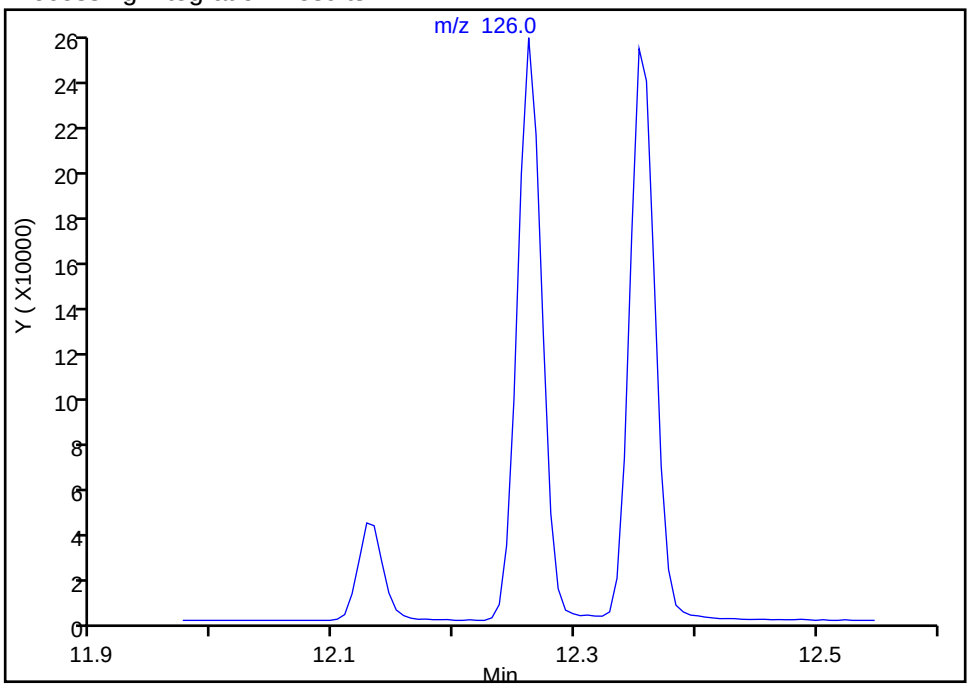
Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X20.D				
Injection Date:	19-Jun-2023 21:07:30	Instrument ID:	19930		
Lims ID:	ICV				
Client ID:					
Operator ID:	KNK41612	ALS Bottle#:	20	Worklist Smp#:	21
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

126 2-Chlorotoluene, CAS: 95-49-8

Signal: 1

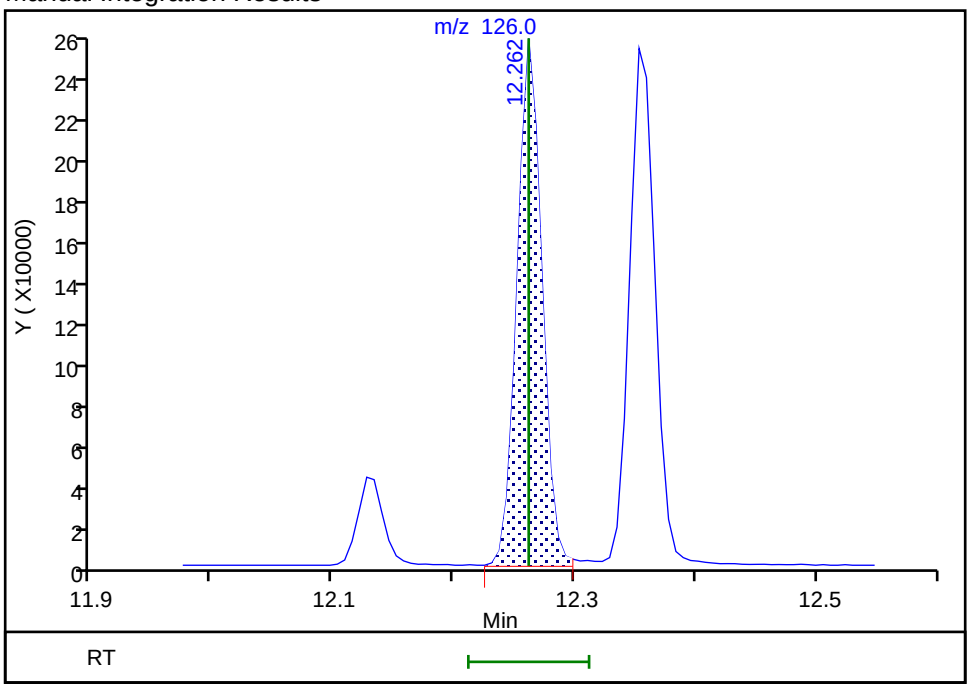
Not Detected
Expected RT: 12.26

Processing Integration Results



Manual Integration Results

RT: 12.26
Area: 366155
Amount: 4.815269
Amount Units: ug/l



Reviewer: DVW2, 21-Jun-2023 15:40:58 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-2

SDG No.:

Lab Sample ID: CCVIS 410-404020/3 Calibration Date: 08/03/2023 11:36

Instrument ID: 19930 Calib Start Date: 06/19/2023 18:19

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 06/19/2023 20:25

Lab File ID: IG03X02.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4004	0.3520	0.1000	8.79	10.0	-12.1	20.0
Chloromethane	Ave	0.4068	0.3519	0.1000	8.65	10.0	-13.5	20.0
Vinyl chloride	Ave	0.3892	0.3395	0.1000	8.72	10.0	-12.8	20.0
1,3-Butadiene	Ave	0.4073	0.3908		9.60	10.0	-4.0	20.0
Bromomethane	Ave	0.3038	0.2452	0.1000	8.07	10.0	-19.3	20.0
Chloroethane	Ave	0.2329	0.1994	0.1000	8.56	10.0	-14.4	20.0
Dichlorofluoromethane	Ave	0.6499	0.5775		8.89	10.0	-11.1	20.0
Trichlorofluoromethane	Ave	0.4955	0.4508	0.1000	9.10	10.0	-9.0	20.0
Ethyl ether	Ave	0.2046	0.1410		6.89	10.0	-31.1*	20.0
Freon 123a	Ave	0.3534	0.3477		9.84	10.0	-1.6	20.0
Acrolein	Ave	2.165	1.894		437	500	-12.5	20.0
1,1-Dichloroethene	Ave	0.2682	0.2386	0.1000	8.90	10.0	-11.0	20.0
Acetone	Ave	2.391	2.466	0.1000	103	100	3.1	20.0
Freon 113	Ave	0.2847	0.2718	0.1000	9.55	10.0	-4.5	20.0
Methyl iodide	Ave	0.5640	0.4839		8.58	10.0	-14.2	20.0
Ethyl bromide	Ave	0.2347	0.1112		4.73	9.99	-52.6*	20.0
Carbon disulfide	Ave	0.7273	0.6257	0.1000	8.60	10.0	-14.0	20.0
Methyl acetate	Ave	5.902	6.296	0.1000	10.7	10.0	6.7	20.0
Allyl chloride	Ave	0.4168	0.3817		9.16	10.0	-8.4	20.0
Methylene Chloride	Ave	0.2831	0.2686	0.1000	9.49	10.0	-5.1	20.0
t-Butyl alcohol	Ave	0.9514	0.8391		176	200	-11.8	20.0
Acrylonitrile	Ave	2.907	3.337		28.7	25.0	14.8	20.0
Methyl tertiary butyl ether	Ave	0.7360	0.6467	0.1000	8.79	10.0	-12.1	20.0
trans-1,2-Dichloroethene	Ave	0.2985	0.2639	0.1000	8.84	10.0	-11.6	20.0
n-Hexane	Ave	0.3912	0.3399		8.69	10.0	-13.1	20.0
1,1-Dichloroethane	Ave	0.5113	0.4974	0.2000	9.73	10.0	-2.7	20.0
di-Isopropyl ether	Ave	0.8397	0.8061		9.60	10.0	-4.0	20.0
2-Chloro-1,3-butadiene	Ave	0.4276	0.3913		9.15	10.0	-8.5	20.0
Ethyl t-butyl ether	Ave	0.8020	0.6973		8.69	10.0	-13.1	20.0
2-Butanone	Ave	4.608	4.687	0.1000	102	100	1.7	20.0
cis-1,2-Dichloroethene	Ave	0.3321	0.3070	0.1000	9.25	10.0	-7.5	20.0
2,2-Dichloropropane	Ave	0.4608	0.4309		9.35	10.0	-6.5	20.0
Propionitrile	Ave	1.219	1.303		214	200	6.9	20.0
Methacrylonitrile	Ave	4.809	4.745		98.7	100	-1.3	20.0
Bromochloromethane	Ave	0.1511	0.1441		9.54	10.0	-4.6	20.0
Tetrahydrofuran	Ave	1.516	1.333		43.9	50.0	-12.1	20.0
Chloroform	Ave	0.5282	0.5053	0.2000	9.57	10.0	-4.3	20.0
1,1,1-Trichloroethane	Ave	0.4933	0.4524	0.1000	9.17	10.0	-8.3	20.0
Cyclohexane	Ave	0.4674	0.4344	0.1000	9.29	10.0	-7.1	20.0
1,1-Dichloropropene	Ave	0.3927	0.3671		9.35	10.0	-6.5	20.0
Carbon tetrachloride	Ave	0.4394	0.4197	0.1000	9.55	10.0	-4.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-2

SDG No.:

Lab Sample ID: CCVIS 410-404020/3 Calibration Date: 08/03/2023 11:36

Instrument ID: 19930 Calib Start Date: 06/19/2023 18:19

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 06/19/2023 20:25

Lab File ID: IG03X02.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Isobutyl alcohol	Ave	0.3380	0.3251		481	500	-3.8	20.0
Benzene	Ave	1.181	1.132	0.5000	9.58	10.0	-4.2	20.0
1,2-Dichloroethane	Ave	0.3201	0.3080	0.1000	9.62	10.0	-3.8	20.0
t-Amyl methyl ether	Ave	0.7413	0.6790		9.16	10.0	-8.4	20.0
n-Heptane	Ave	0.3757	0.3494		9.30	10.0	-7.0	20.0
n-Butanol	Ave	0.2596	0.3339		1130	875	28.6*	20.0
Trichloroethene	Ave	0.3285	0.3079	0.2000	9.37	10.0	-6.3	20.0
Methylcyclohexane	Ave	0.5306	0.4811	0.1000	9.07	10.0	-9.3	20.0
1,2-Dichloropropane	Ave	0.2919	0.3038	0.1000	10.4	10.0	4.0	20.0
1,4-Dioxane	Ave	0.0551	0.0668	0.0050	606	500	21.2*	20.0
Methyl methacrylate	Ave	9.478	8.888		9.38	10.0	-6.2	20.0
Dibromomethane	Ave	0.1463	0.1461		9.99	10.0	-0.1	20.0
Bromodichloromethane	Ave	0.3795	0.3804	0.2000	10.0	10.0	0.2	20.0
2-Nitropropane	Ave	3.099	2.589		41.8	50.0	-16.5	20.0
1-Bromo-2-chloroethane	Ave	0.2977	0.2450		8.23	10.0	-17.7	20.0
cis-1,3-Dichloropropene	Ave	0.4553	0.4517	0.2000	9.92	10.0	-0.8	20.0
4-Methyl-2-pentanone	Ave	12.37	12.25	0.1000	99.1	100	-0.9	20.0
Toluene	Ave	1.014	0.8920	0.4000	8.80	10.0	-12.0	20.0
trans-1,3-Dichloropropene	Ave	0.4787	0.4575	0.1000	9.56	10.0	-4.4	20.0
Ethyl methacrylate	Ave	0.3958	0.3625		9.16	10.0	-8.4	20.0
1,1,2-Trichloroethane	Ave	0.2862	0.2650	0.1000	9.26	10.0	-7.4	20.0
Tetrachloroethene	Ave	0.5290	0.4578	0.2000	8.65	10.0	-13.5	20.0
1,3-Dichloropropane	Ave	0.4529	0.4303		9.50	10.0	-5.0	20.0
2-Hexanone	Ave	8.750	8.898	0.1000	102	100	1.7	20.0
Dibromochloromethane	Ave	0.3726	0.3603		9.67	10.0	-3.3	20.0
1,2-Dibromoethane	Ave	0.2700	0.2518	0.1000	9.33	10.0	-6.7	20.0
1-Chlorohexane	Ave	0.5902	0.4854		8.22	10.0	-17.8	20.0
Chlorobenzene	Ave	1.186	1.065	0.5000	8.97	10.0	-10.3	20.0
1,1,1,2-Tetrachloroethane	Ave	0.4228	0.3901		9.23	10.0	-7.7	20.0
Ethylbenzene	Ave	1.976	1.749	0.1000	8.85	10.0	-11.5	20.0
m&p-Xylene	Ave	0.7994	0.7083	0.1000	17.7	20.0	-11.4	20.0
o-Xylene	Ave	0.7900	0.6803	0.3000	8.61	10.0	-13.9	20.0
Styrene	Ave	1.271	1.151	0.3000	9.06	10.0	-9.4	20.0
Bromoform	Ave	0.2417	0.2358	0.1000	9.75	10.0	-2.5	20.0
Isopropylbenzene	Ave	2.049	1.775	0.1000	8.66	10.0	-13.4	20.0
1,1,2,2-Tetrachloroethane	Ave	0.5952	0.5380	0.3000	9.04	10.0	-9.6	20.0
Bromobenzene	Ave	0.8602	0.7405		8.61	10.0	-13.9	20.0
trans-1,4-Dichloro-2-butene	Ave	4.657	4.250		91.3	100	-8.7	20.0
1,2,3-Trichloropropane	Ave	0.1671	0.1485		8.88	10.0	-11.2	20.0
N-Propylbenzene	Ave	3.807	3.373		8.86	10.0	-11.4	20.0
2-Chlorotoluene	Ave	0.8316	0.7182		8.64	10.0	-13.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-2

SDG No.:

Lab Sample ID: CCVIS 410-404020/3 Calibration Date: 08/03/2023 11:36

Instrument ID: 19930 Calib Start Date: 06/19/2023 18:19

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 06/19/2023 20:25

Lab File ID: IG03X02.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,3,5-Trimethylbenzene	Ave	2.902	2.479		8.54	10.0	-14.6	20.0
4-Chlorotoluene	Ave	0.8520	0.7405		8.69	10.0	-13.1	20.0
tert-Butylbenzene	Ave	0.6973	0.5919		8.49	10.0	-15.1	20.0
Pentachloroethane	Ave	0.5393	0.4968		9.21	10.0	-7.9	20.0
1,2,4-Trimethylbenzene	Ave	2.979	2.549		8.56	10.0	-14.4	20.0
sec-Butylbenzene	Ave	3.691	3.197		8.66	10.0	-13.4	20.0
1,3-Dichlorobenzene	Ave	1.681	1.481	0.6000	8.81	10.0	-11.9	20.0
p-Isopropyltoluene	Ave	3.291	2.866		8.71	10.0	-12.9	20.0
1,4-Dichlorobenzene	Ave	1.657	1.429	0.5000	8.62	10.0	-13.8	20.0
1,2,3-Trimethylbenzene	Ave	1.347	1.147		8.52	10.0	-14.8	20.0
Benzyl chloride	Ave	0.2558	0.2533		9.90	10.0	-1.0	20.0
n-Butylbenzene	Ave	1.473	1.384		9.39	10.0	-6.1	20.0
1,2-Dichlorobenzene	Ave	1.579	1.361	0.4000	8.62	10.0	-13.8	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0973	0.0836	0.0500	8.59	10.0	-14.1	20.0
1,3,5-Trichlorobenzene	Ave	1.261	1.080		8.56	10.0	-14.4	20.0
1,2,4-Trichlorobenzene	Ave	1.014	0.8440	0.2000	8.32	10.0	-16.8	20.0
Hexachlorobutadiene	Ave	0.4941	0.4426		8.96	10.0	-10.4	20.0
Naphthalene	Ave	1.846	1.474		7.99	10.0	-20.1*	20.0
1,2,3-Trichlorobenzene	Ave	0.8491	0.7015		8.26	10.0	-17.4	20.0
Dibromofluoromethane (Surr)	Ave	0.2569	0.2593		10.1	10.0	1.0	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.0509	0.0528		10.4	10.0	3.6	20.0
Toluene-d8 (Surr)	Ave	1.286	1.246		9.69	10.0	-3.1	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4844	0.4917		10.1	10.0	1.5	20.0

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X02.D
Lims ID: CCVIS VSTD10
Client ID:
Sample Type: CCVIS
Inject. Date: 03-Aug-2023 11:36:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090530-003
Misc. Info.: CCVIS
Operator ID: knk41612 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 03-Aug-2023 13:57:40 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1684

First Level Reviewer: DVW2 Date: 03-Aug-2023 12:07:04

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1	Dichlorodifluoromethane	85	1.867	1.867	0.000	99	658716	10.0	8.79	
4	Chloromethane	50	2.056	2.056	0.000	99	658531	10.0	8.65	
5	Vinyl chloride	62	2.160	2.160	0.000	98	635267	10.0	8.72	
6	Butadiene	39	2.172	2.172	0.000	91	731384	10.0	9.60	
7	Bromomethane	94	2.477	2.477	0.000	91	458811	10.0	8.07	
8	Chloroethane	64	2.556	2.556	0.000	100	373101	10.0	8.56	
9	Dichlorofluoromethane	67	2.782	2.782	0.000	97	1080738	10.0	8.89	
10	Trichlorofluoromethane	101	2.843	2.843	0.000	98	843628	10.0	9.10	
11	Ethyl ether	59	3.062	3.062	0.000	90	263918	10.0	6.89	
13	1,2-Dichloro-1,1,2-trifluoroetha	67	3.154	3.154	0.000	90	650654	10.0	9.84	
14	Acrolein	56	3.215	3.215	0.000	99	2883827	500.0	437.3	
15	1,1-Dichloroethene	96	3.349	3.349	0.000	97	446411	10.0	8.90	
16	Acetone	43	3.379	3.379	0.000	100	751199	100.0	103.1	
17	1,1,2-Trichloro-1,2,2-trifluoroe	101	3.398	3.398	0.000	90	508638	10.0	9.55	
18	Iodomethane	142	3.538	3.538	0.000	98	905502	10.0	8.58	
19	Ethyl bromide	108	3.562	3.562	0.000	99	207892	10.0	4.73	
20	Carbon disulfide	76	3.641	3.641	0.000	99	1170835	10.0	8.60	
23	Methyl acetate	43	3.782	3.782	0.000	97	191764	10.0	10.7	M
24	3-Chloro-1-propene	41	3.800	3.800	0.000	93	714284	10.0	9.16	
25	Methylene Chloride	84	3.977	3.977	0.000	91	502634	10.0	9.49	
* 26	t-Butyl alcohol-d10 (IS)	65	3.983	3.983	0.000	97	152302	50.0	50.0	M
27	2-Methyl-2-propanol	59	4.099	4.099	0.000	99	511168	200.0	176.4	
28	Acrylonitrile	53	4.294	4.294	0.000	99	254145	25.0	28.7	
29	Methyl tert-butyl ether	73	4.361	4.361	0.000	95	1210152	10.0	8.79	
30	trans-1,2-Dichloroethene	96	4.373	4.373	0.000	99	493873	10.0	8.84	
31	Hexane	57	4.794	4.794	0.000	91	635981	10.0	8.69	
32	1,1-Dichloroethane	63	5.031	5.031	0.000	96	930695	10.0	9.73	
35	Isopropyl ether	45	5.092	5.092	0.000	96	1508506	10.0	9.60	
36	2-Chloro-1,3-butadiene	53	5.141	5.141	0.000	89	732277	10.0	9.15	
37	Tert-butyl ethyl ether	59	5.629	5.629	0.000	97	1304886	10.0	8.69	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
38 2-Butanone (MEK)	43	5.830	5.830	0.000	99	1427773	100.0	101.7	
39 cis-1,2-Dichloroethene	96	5.867	5.867	0.000	81	574554	10.0	9.25	
40 2,2-Dichloropropane	77	5.879	5.879	0.000	86	806325	10.0	9.35	
43 Propionitrile	54	5.915	5.915	0.000	99	793650	200.0	213.8	
45 Methacrylonitrile	67	6.141	6.141	0.000	92	1445244	100.0	98.7	
46 Chlorobromomethane	128	6.196	6.196	0.000	90	269560	10.0	9.54	
47 Tetrahydrofuran	71	6.214	6.214	0.000	83	202976	50.0	43.9	
48 Chloroform	83	6.354	6.354	0.000	93	945638	10.0	9.57	
$ 49 Dibromofluoromethane (Surr)	113	6.568	6.568	0.000	94	485315	10.0	10.1	
50 1,1,1-Trichloroethane	97	6.580	6.580	0.000	98	846624	10.0	9.17	
51 Cyclohexane	56	6.677	6.677	0.000	89	812901	10.0	9.29	
54 Carbon tetrachloride	117	6.793	6.793	0.000	96	785409	10.0	9.55	
53 1,1-Dichloropropene	75	6.793	6.793	0.000	96	686989	10.0	9.35	
55 Isobutyl alcohol	41	6.952	6.952	0.000	94	495161	500.0	481.0	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.025	7.025	0.000	86	98766	10.0	10.4	
57 Benzene	78	7.055	7.055	0.000	96	2117393	10.0	9.58	
58 1,2-Dichloroethane	62	7.122	7.122	0.000	97	576435	10.0	9.62	
60 Tert-amyl methyl ether	73	7.250	7.250	0.000	99	1270565	10.0	9.16	
* 61 Fluorobenzene (IS)	96	7.458	7.458	0.000	97	1871286	10.0	10.0	
62 n-Heptane	43	7.476	7.476	0.000	91	653852	10.0	9.30	
63 n-Butanol	56	7.836	7.836	0.000	88	890024	875.0	1125.6	
64 Trichloroethene	95	7.939	7.939	0.000	96	576227	10.0	9.37	
65 Methylcyclohexane	83	8.250	8.250	0.000	92	900365	10.0	9.07	
66 1,2-Dichloropropane	63	8.269	8.269	0.000	97	568416	10.0	10.4	
67 Methyl methacrylate	69	8.366	8.366	0.000	89	270739	10.0	9.38	
68 1,4-Dioxane	88	8.366	8.366	0.000	35	101771	500.0	606.0	M
69 Dibromomethane	93	8.378	8.378	0.000	92	273438	10.0	9.99	
71 Dichlorobromomethane	83	8.616	8.616	0.000	99	711781	10.0	10.0	
72 2-Nitropropane	41	8.878	8.878	0.000	98	394270	50.0	41.8	
75 1-Bromo-2-chloroethane	63	9.012	9.012	0.000	98	458552	10.0	8.23	
76 cis-1,3-Dichloropropene	75	9.177	9.177	0.000	97	845251	10.0	9.92	
77 4-Methyl-2-pentanone (MIBK)	43	9.354	9.354	0.000	96	3731905	100.0	99.1	
$ 78 Toluene-d8 (Surr)	98	9.494	9.494	0.000	93	1986464	10.0	9.69	
79 Toluene	92	9.573	9.573	0.000	98	1422341	10.0	8.80	
97 trans-1,3-Dichloropropene	75	9.841	9.841	0.000	91	729551	10.0	9.56	
99 Ethyl methacrylate	69	9.908	9.908	0.000	89	578042	10.0	9.16	
100 1,1,2-Trichloroethane	97	10.049	10.049	0.000	90	422609	10.0	9.26	
101 Tetrachloroethene	166	10.140	10.140	0.000	98	729918	10.0	8.65	
102 1,3-Dichloropropane	76	10.213	10.213	0.000	89	686113	10.0	9.50	
103 2-Hexanone	43	10.268	10.268	0.000	96	2710276	100.0	101.7	
105 Chlorodibromomethane	129	10.433	10.433	0.000	89	574557	10.0	9.67	
106 Ethylene Dibromide	107	10.542	10.542	0.000	99	401485	10.0	9.33	
* 107 Chlorobenzene-d5 (IS)	117	10.981	10.981	0.000	84	1594473	10.0	10.0	
108 1-Chlorohexane	91	10.994	10.994	0.000	96	774010	10.0	8.22	
109 Chlorobenzene	112	11.006	11.006	0.000	96	1697786	10.0	8.97	
111 1,1,1,2-Tetrachloroethane	131	11.091	11.091	0.000	96	622077	10.0	9.23	
112 Ethylbenzene	91	11.097	11.097	0.000	98	2788806	10.0	8.85	
113 m-Xylene & p-Xylene	106	11.213	11.213	0.000	93	2258684	20.0	17.7	
114 o-Xylene	106	11.542	11.542	0.000	96	1084754	10.0	8.61	
115 Styrene	104	11.561	11.561	0.000	95	1835998	10.0	9.06	
116 Bromoform	173	11.719	11.719	0.000	99	375907	10.0	9.75	
117 Isopropylbenzene	105	11.847	11.847	0.000	95	2830670	10.0	8.66	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 120 4-Bromofluorobenzene (Surr)	95	11.987	11.987	0.000	96	784025	10.0	10.1	
121 1,1,2,2-Tetrachloroethane	83	12.091	12.091	0.000	93	541861	10.0	9.04	
122 Bromobenzene	156	12.103	12.103	0.000	94	745761	10.0	8.61	
123 trans-1,4-Dichloro-2-butene	53	12.115	12.115	0.000	92	1294711	100.0	91.3	
124 1,2,3-Trichloropropane	110	12.140	12.140	0.000	81	149514	10.0	8.88	
125 N-Propylbenzene	91	12.176	12.176	0.000	98	3397109	10.0	8.86	
126 2-Chlorotoluene	126	12.249	12.249	0.000	98	723348	10.0	8.64	
127 1,3,5-Trimethylbenzene	105	12.317	12.317	0.000	94	2496223	10.0	8.54	
128 4-Chlorotoluene	126	12.347	12.347	0.000	96	745755	10.0	8.69	
129 tert-Butylbenzene	134	12.554	12.554	0.000	92	596150	10.0	8.49	
130 Pentachloroethane	167	12.585	12.585	0.000	94	500341	10.0	9.21	
131 1,2,4-Trimethylbenzene	105	12.597	12.597	0.000	96	2567427	10.0	8.56	
132 sec-Butylbenzene	105	12.719	12.719	0.000	94	3220149	10.0	8.66	
133 1,3-Dichlorobenzene	146	12.816	12.816	0.000	99	1491437	10.0	8.81	
134 4-Isopropyltoluene	119	12.829	12.829	0.000	97	2886308	10.0	8.71	
* 135 1,4-Dichlorobenzene-d4	152	12.871	12.871	0.000	93	1007139	10.0	10.0	
136 1,4-Dichlorobenzene	146	12.890	12.890	0.000	95	1438878	10.0	8.62	
137 1,2,3-Trimethylbenzene	120	12.902	12.902	0.000	98	1155483	10.0	8.52	
138 Benzyl chloride	126	12.969	12.969	0.000	98	255126	10.0	9.90	
139 n-Butylbenzene	92	13.121	13.121	0.000	97	1393544	10.0	9.39	
140 1,2-Dichlorobenzene	146	13.152	13.152	0.000	99	1371172	10.0	8.62	
142 1,2-Dibromo-3-Chloropropane	155	13.694	13.694	0.000	91	84209	10.0	8.59	
143 1,3,5-Trichlorobenzene	180	13.822	13.822	0.000	98	1087383	10.0	8.56	
144 1,2,4-Trichlorobenzene	180	14.243	14.243	0.000	94	849997	10.0	8.32	
145 Hexachlorobutadiene	225	14.322	14.322	0.000	95	445759	10.0	8.96	
146 Naphthalene	128	14.420	14.420	0.000	97	1484842	10.0	7.99	
147 1,2,3-Trichlorobenzene	180	14.560	14.560	0.000	96	706465	10.0	8.26	
155 2-Methylnaphthalene	142		0.000				ND	ND	
156 p-Diethylbenzene	1		0.000				ND	ND	
161 Pentane	43		0.000				ND	ND	
150 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
165 Isopropyl alcohol	45		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MSV_LL_GAS826_00162	Amount Added: 20.00	Units: uL	
MSV_LL_#1_826_00087	Amount Added: 20.00	Units: uL	
MSV_LL_#2_826_00097	Amount Added: 20.00	Units: uL	
MSV_LLcentISS_00009	Amount Added: 5.00	Units: uL	Run Reagent

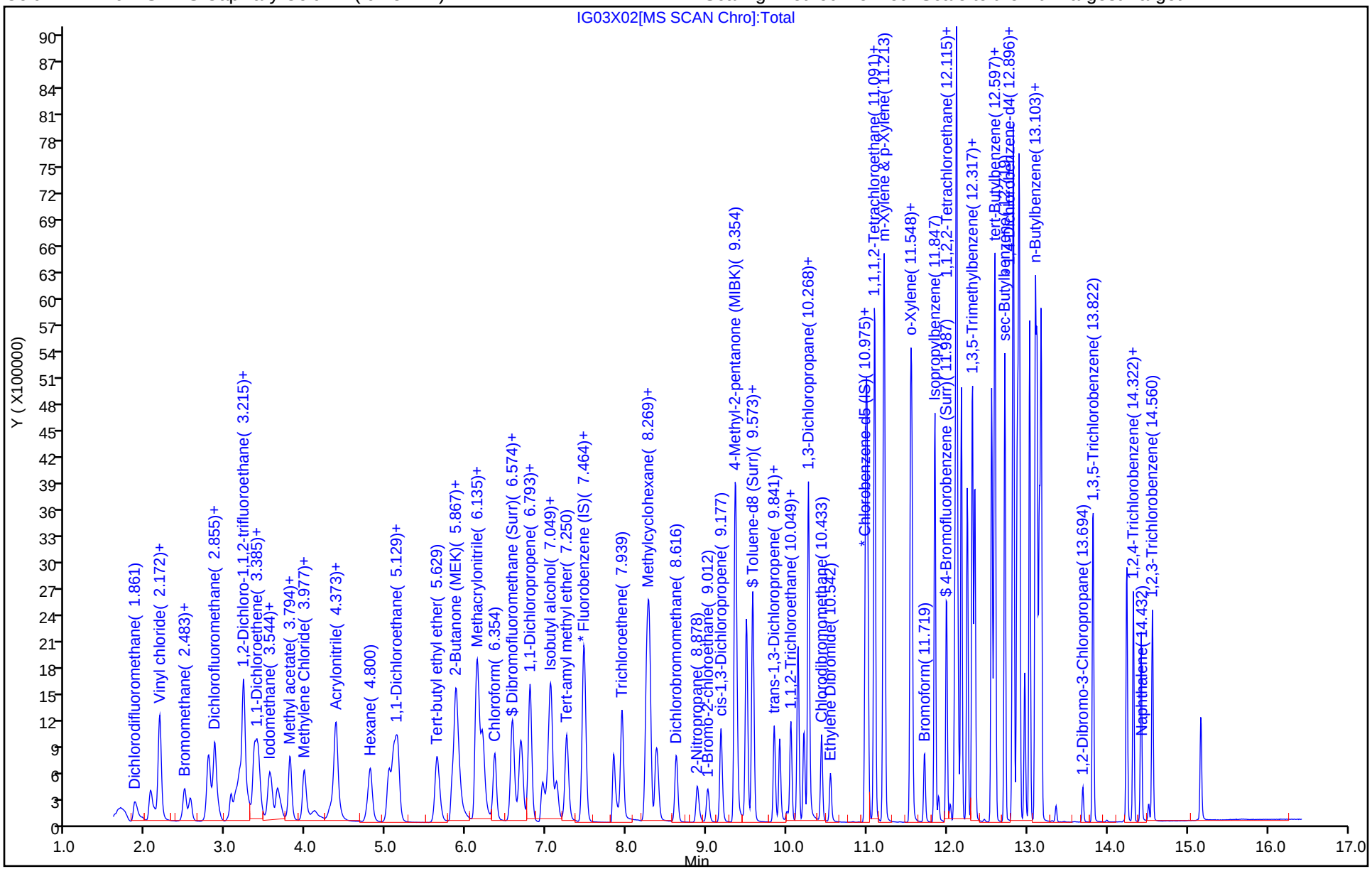
Report Date: 03-Aug-2023 13:57:41 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X02.D

Injection Date:	03-Aug-2023 11:36:30	Instrument ID:	19930	Operator ID:	knk41612
Lims ID:	CCVIS VSTD10			Worklist Smp#:	3
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

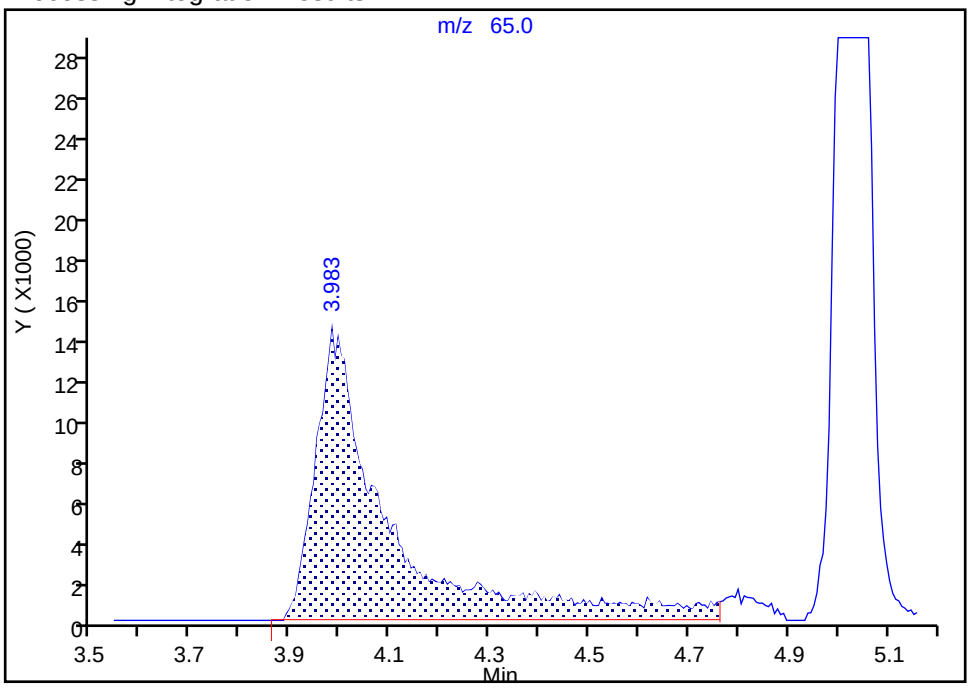
Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X02.D
Injection Date: 03-Aug-2023 11:36:30 Instrument ID: 19930
Lims ID: CCVIS VSTD10
Client ID:
Operator ID: knk41612 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 26 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

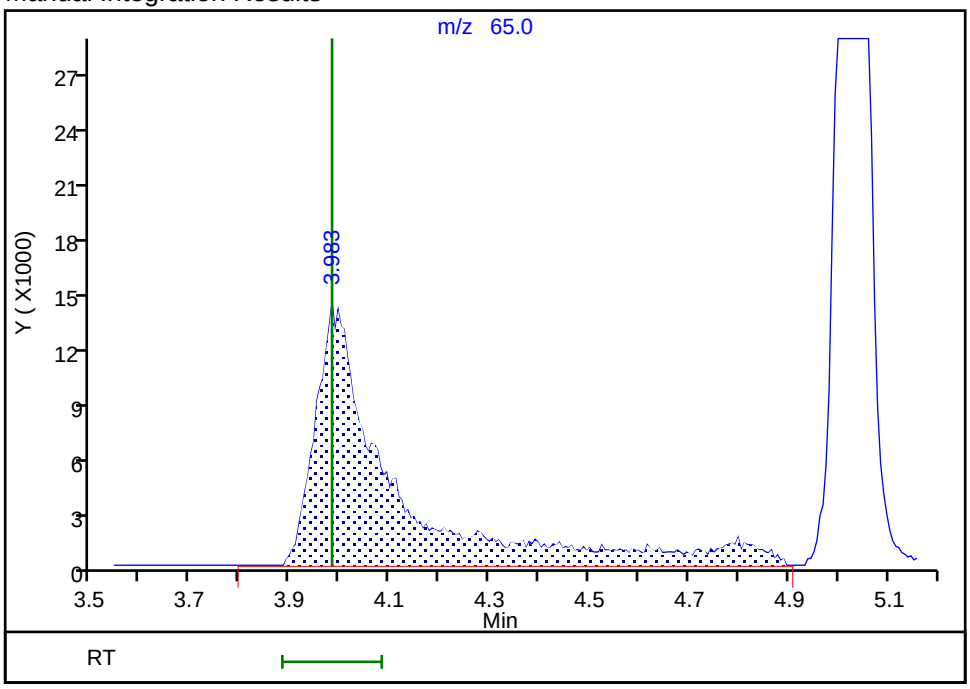
Processing Integration Results

RT: 3.98
Area: 145444
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 3.98
Area: 152302
Amount: 50.000000
Amount Units: ug/l



Reviewer: DVW2, 03-Aug-2023 12:03:43 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

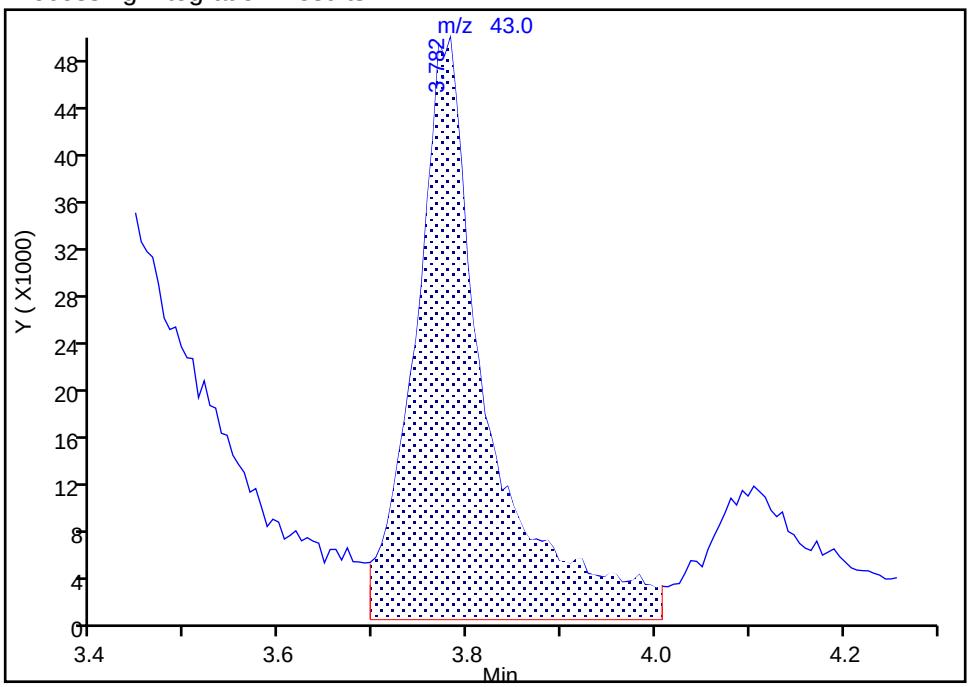
Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X02.D
Injection Date: 03-Aug-2023 11:36:30 Instrument ID: 19930
Lims ID: CCVIS VSTD10
Client ID:
Operator ID: knk41612 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

23 Methyl acetate, CAS: 79-20-9

Signal: 1

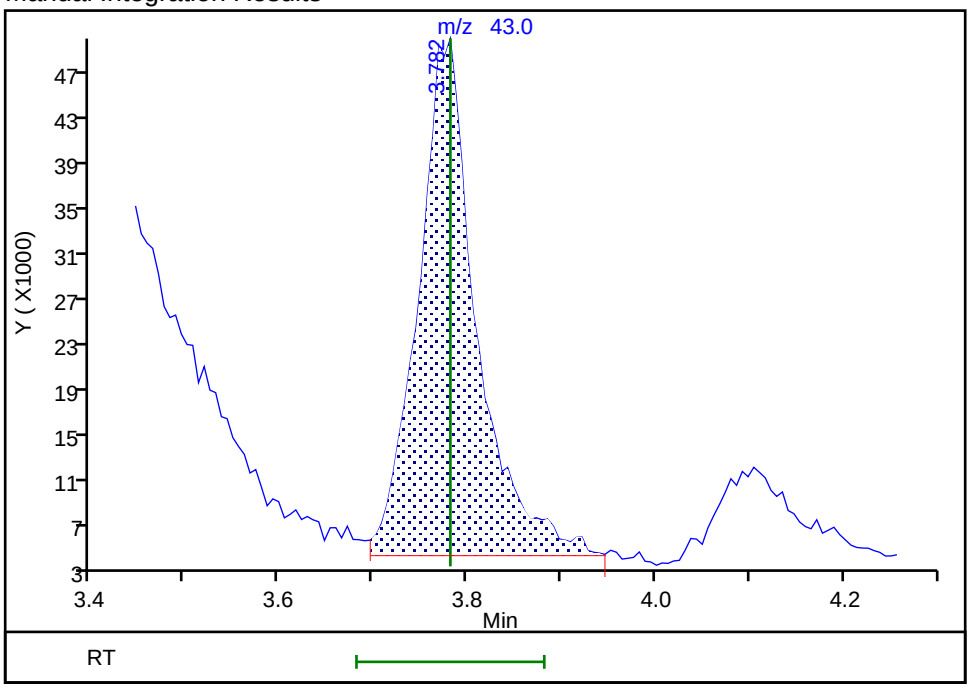
Processing Integration Results

RT: 3.78
Area: 257430
Amount: 14.994714
Amount Units: ug/l



Manual Integration Results

RT: 3.78
Area: 191764
Amount: 10.666853
Amount Units: ug/l



Reviewer: DVW2, 03-Aug-2023 12:03:33 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

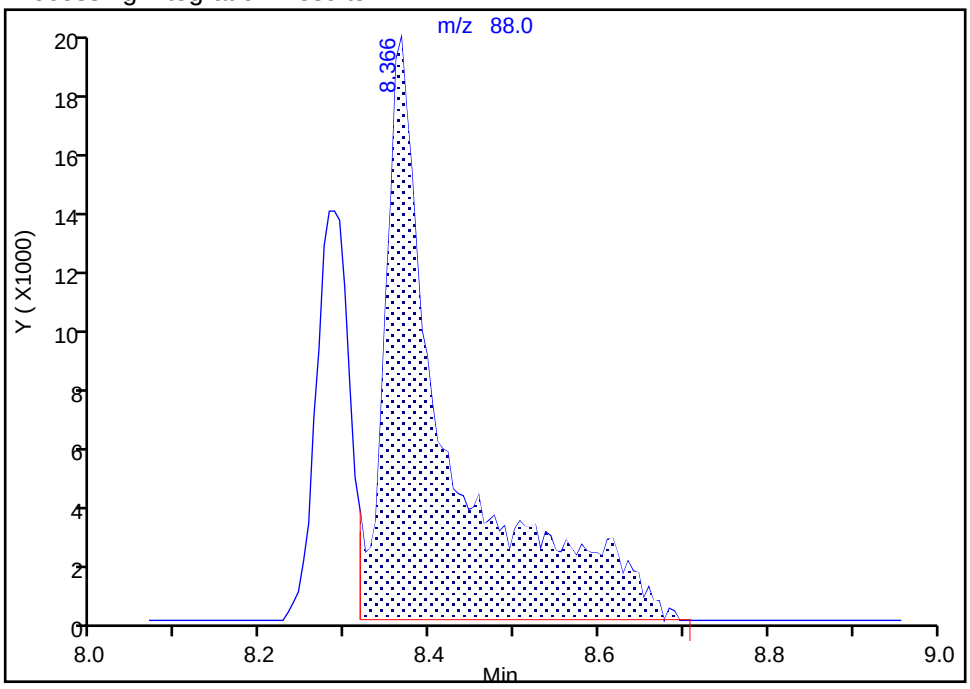
Data File:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X02.D				
Injection Date:	03-Aug-2023 11:36:30	Instrument ID:	19930		
Lims ID:	CCVIS VSTD10				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	2	Worklist Smp#:	3
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

68 1,4-Dioxane, CAS: 123-91-1

Signal: 1

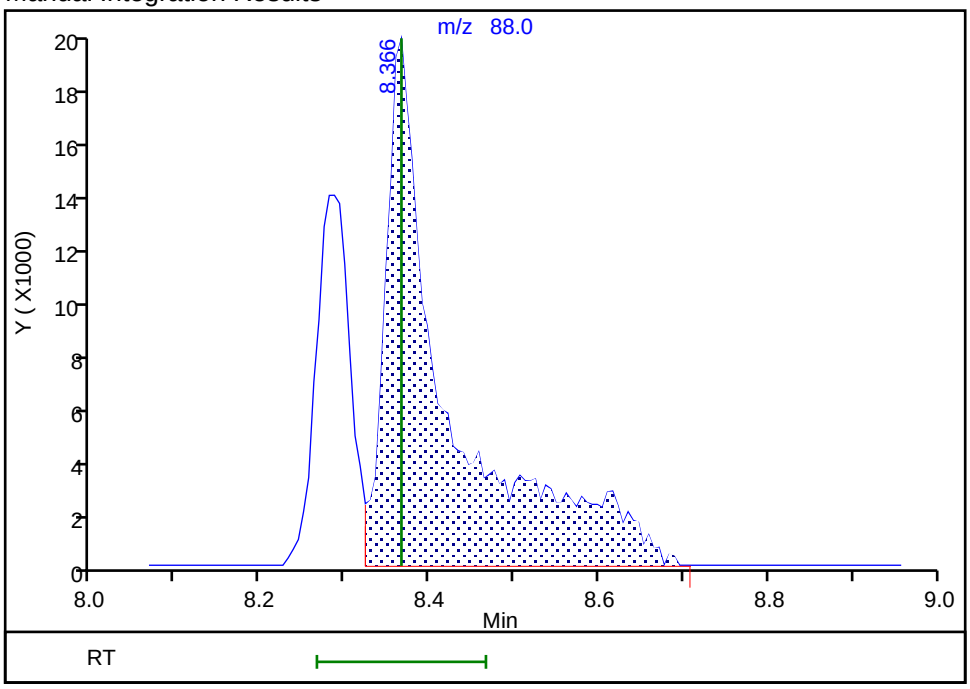
Processing Integration Results

RT: 8.37
Area: 103132
Amount: 614.0982
Amount Units: ug/l



Manual Integration Results

RT: 8.37
Area: 101771
Amount: 605.9942
Amount Units: ug/l



Reviewer: DVW2, 03-Aug-2023 12:04:20 -04:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-2

SDG No.:

Lab Sample ID: CCV 410-404020/4 Calibration Date: 08/03/2023 11:57

Instrument ID: 19930 Calib Start Date: 06/19/2023 14:49

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 06/19/2023 16:55

Lab File ID: IG03X03.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dimethyl ether	Ave	0.3379	0.3779		11.2	10.0	11.8	20.0
Acetonitrile	Ave	0.0115	0.0182		79.3	50.0	58.5*	20.0
Vinyl acetate	Ave	0.3366	0.3422		10.2	10.0	1.7	20.0
Ethyl acetate	Ave	0.1273	0.1793		14.1	10.0	40.9*	20.0

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X03.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 03-Aug-2023 11:57:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090530-004
Operator ID: knk41612 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub61

Method: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 03-Aug-2023 13:57:48 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1684

First Level Reviewer: DVW2 Date: 03-Aug-2023 12:57:00

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
3 Dimethyl ether	45	1.934	1.922	0.012	99	648901	10.0	11.2	
21 Acetonitrile	41	3.733	3.788	-0.055	99	156099	50.0	79.3	
* 26 t-Butyl alcohol-d10 (IS)	65	3.989	3.983	0.006	37	128596	50.0	50.0	
33 Vinyl acetate	43	5.037	4.989	0.048	97	587650	10.0	10.2	
42 Ethyl acetate	43	5.915	5.891	0.024	99	307847	10.0	14.1	
$ 49 Dibromofluoromethane (Surr)	113	6.568	6.568	0.000	94	451727	10.0	10.2	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.025	7.025	0.000	65	90085	10.0	10.3	
59 Isopropyl acetate	43	7.141	7.128	0.013	98	606289	10.0	10.2	
* 61 Fluorobenzene (IS)	96	7.458	7.458	0.000	99	1717126	10.0	10.0	
70 n-Propyl acetate	43	8.445	8.445	0.000	98	438093	10.0	11.6	
$ 78 Toluene-d8 (Surr)	98	9.494	9.494	0.000	93	1758353	10.0	9.45	
104 n-Butyl acetate	43	10.402	10.408	-0.006	98	533883	10.0	10.5	
* 107 Chlorobenzene-d5 (IS)	117	10.981	10.981	0.000	84	1447276	10.0	10.0	
$ 120 4-Bromofluorobenzene (Surr)	95	11.993	11.987	0.006	96	669484	10.0	9.55	
* 135 1,4-Dichlorobenzene-d4	152	12.877	12.871	0.006	93	864451	10.0	10.0	

QC Flag Legend

Processing Flags

Reagents:

MSV_CCV_V5ACE_00026	Amount Added:	1.00	Units: uL	
MSV_DME_00048	Amount Added:	1.00	Units: uL	
MSV_LLcentISS_00009	Amount Added:	5.00	Units: uL	Run Reagent

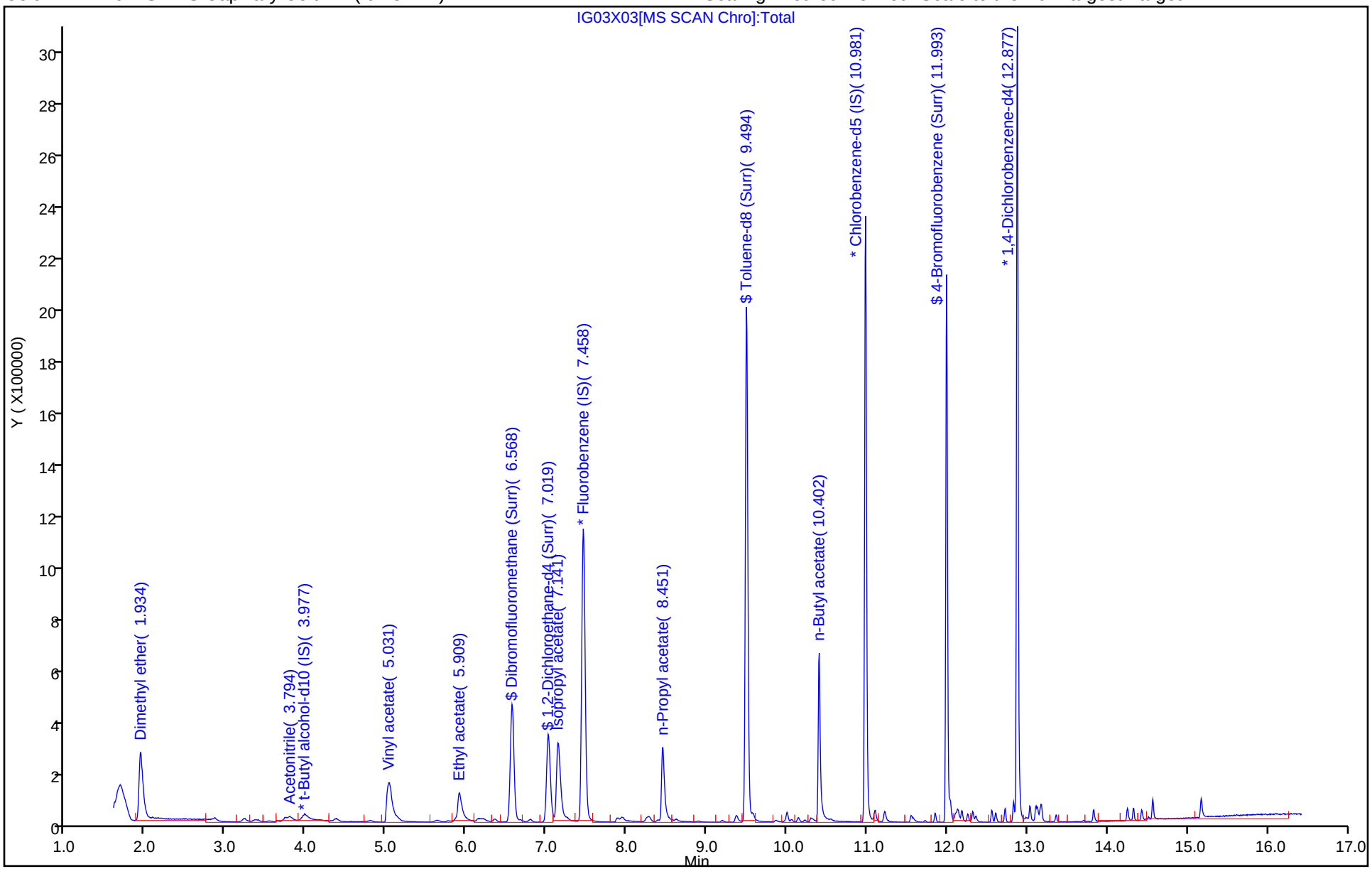
Report Date: 03-Aug-2023 13:57:49 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X03.D

Injection Date:	03-Aug-2023 11:57:30	Instrument ID:	19930	Operator ID:	knk41612
Lims ID:	CCV			Worklist Smp#:	4
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-2

SDG No.:

Lab Sample ID: CCV 410-404020/4 Calibration Date: 08/03/2023 11:57

Instrument ID: 19930 Calib Start Date: 06/19/2023 18:19

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 06/19/2023 20:25

Lab File ID: IG03X03.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2569	0.2631		10.2	10.0	2.4	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.0509	0.0525		10.3	10.0	3.0	20.0
Toluene-d8 (Surr)	Ave	1.286	1.215		9.45	10.0	-5.5	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4844	0.4626		9.55	10.0	-4.5	20.0

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X03.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 03-Aug-2023 11:57:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090530-004
Operator ID: knk41612 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub61

Method: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 03-Aug-2023 13:57:48 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1684

First Level Reviewer: DVW2 Date: 03-Aug-2023 12:57:00

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
3 Dimethyl ether	45	1.934	1.922	0.012	99	648901	10.0	11.2	
21 Acetonitrile	41	3.733	3.788	-0.055	99	156099	50.0	79.3	
* 26 t-Butyl alcohol-d10 (IS)	65	3.989	3.983	0.006	37	128596	50.0	50.0	
33 Vinyl acetate	43	5.037	4.989	0.048	97	587650	10.0	10.2	
42 Ethyl acetate	43	5.915	5.891	0.024	99	307847	10.0	14.1	
$ 49 Dibromofluoromethane (Surr)	113	6.568	6.568	0.000	94	451727	10.0	10.2	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.025	7.025	0.000	65	90085	10.0	10.3	
59 Isopropyl acetate	43	7.141	7.128	0.013	98	606289	10.0	10.2	
* 61 Fluorobenzene (IS)	96	7.458	7.458	0.000	99	1717126	10.0	10.0	
70 n-Propyl acetate	43	8.445	8.445	0.000	98	438093	10.0	11.6	
$ 78 Toluene-d8 (Surr)	98	9.494	9.494	0.000	93	1758353	10.0	9.45	
104 n-Butyl acetate	43	10.402	10.408	-0.006	98	533883	10.0	10.5	
* 107 Chlorobenzene-d5 (IS)	117	10.981	10.981	0.000	84	1447276	10.0	10.0	
$ 120 4-Bromofluorobenzene (Surr)	95	11.993	11.987	0.006	96	669484	10.0	9.55	
* 135 1,4-Dichlorobenzene-d4	152	12.877	12.871	0.006	93	864451	10.0	10.0	

QC Flag Legend

Processing Flags

Reagents:

MSV_CCV_V5ACE_00026	Amount Added:	1.00	Units: uL	
MSV_DME_00048	Amount Added:	1.00	Units: uL	
MSV_LLcentISS_00009	Amount Added:	5.00	Units: uL	Run Reagent

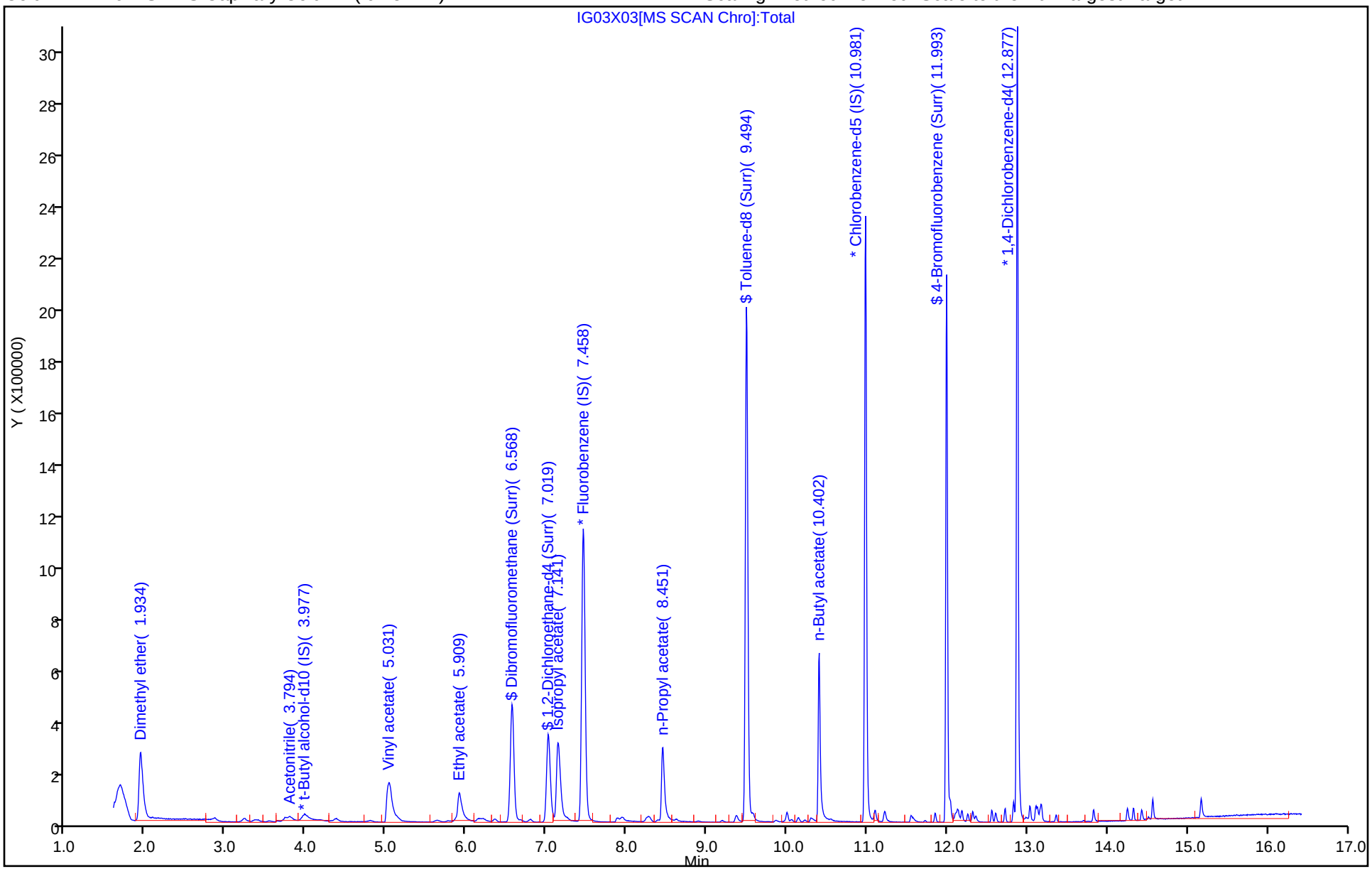
Report Date: 03-Aug-2023 13:57:49 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X03.D

Injection Date:	03-Aug-2023 11:57:30	Instrument ID:	19930	Operator ID:	knk41612
Lims ID:	CCV			Worklist Smp#:	4
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19T01.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 19-Jun-2023 14:12:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 410-0086929-001
Misc. Info.: BFB
Operator ID: KNK41612 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 27-Jun-2023 12:31:25 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1687

First Level Reviewer: DVW2 Date: 19-Jun-2023 15:39:15

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 167 BFB	95	5.032	5.032	0.000	0	220427	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

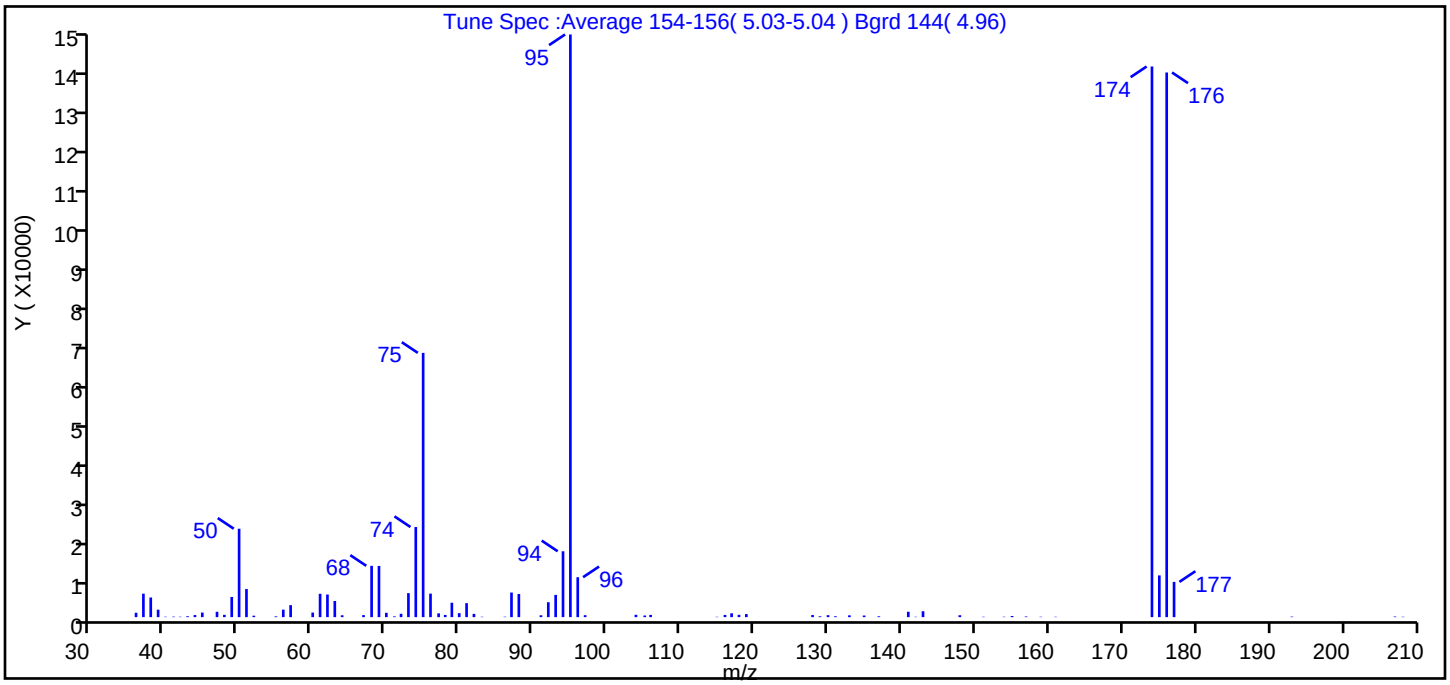
MSV_V_BFB_00012 Amount Added: 1.00 Units: uL

MS Tune Report

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19T01.D
Injection Date: 19-Jun-2023 14:12:30 Instrument ID: 19930
Lims ID: BFB
Client ID:
Operator ID: KNK41612 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Tune Method: BFB Method 8260

$ 167 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	15.2
75	30 to 60% of m/z 95	45.4
96	5 to 9% of m/z 95	6.9
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	94.5
175	5 to 9% of m/z 174	7.2 (7.6)
176	Greater than 95% but less than 101% of m/z 174	93.5 (98.9)
177	5 to 9% of m/z 176	6.1 (6.5)

Data File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19T01.D\8260 25ml HP31.rslt\spectra.d
Injection Date: 19-Jun-2023 14:12:30
Spectrum: Tune Spec :Average 154-156(5.03-5.04) Bgrd 144(4.96)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 83

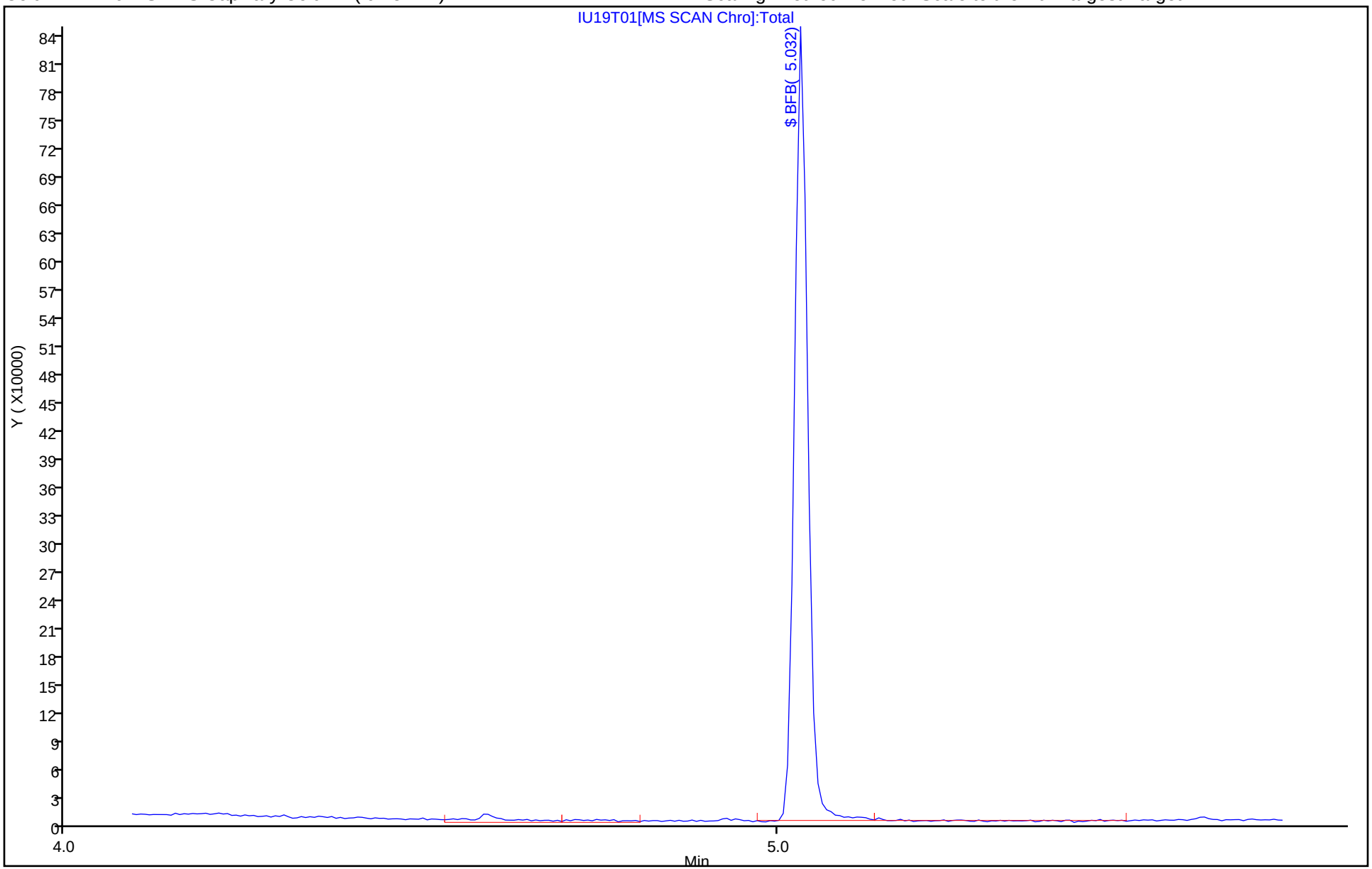
m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1075	62.00	5564	87.00	6046	133.00	446
37.00	5773	63.00	3978	88.00	5692	135.00	402
38.00	4835	64.00	462	91.00	457	137.00	203
39.00	1835	67.00	503	92.00	3671	141.00	1325
40.00	99	68.00	12615	93.00	5464	142.00	90
41.00	126	69.00	12585	94.00	16190	143.00	1453
42.00	98	70.00	1063	95.00	143232	148.00	471
43.00	217	71.00	188	96.00	9818	151.00	93
44.00	513	72.00	826	97.00	481	154.00	99
45.00	1125	73.00	5902	104.00	577	155.00	280
47.00	1319	74.00	22152	105.00	405	157.00	164
48.00	566	75.00	64968	106.00	555	159.00	100
49.00	4961	76.00	5785	115.00	87	161.00	90
50.00	21736	77.00	932	116.00	551	174.00	135360
51.00	6908	78.00	545	117.00	944	175.00	10258
52.00	358	79.00	3542	118.00	572	176.00	133888
55.00	193	80.00	985	119.00	750	177.00	8666
56.00	1838	81.00	3444	128.00	520	193.00	132
57.00	2949	82.00	806	129.00	205	207.00	149
60.00	1129	83.00	96	130.00	486	208.00	96
61.00	5738	86.00	103	131.00	217		

Report Date: 27-Jun-2023 12:31:26 Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19T01.D				
Injection Date:	19-Jun-2023 14:12:30	Instrument ID:	19930	Operator ID:	KNK41612
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03T01.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	03-Aug-2023 11:02:30	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:					
Misc. Info.:	BFB				
Operator ID:	knk41612	Instrument ID:	19930		
Method:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m				
Limit Group:	MSV - 8260C_D				
Last Update:	03-Aug-2023 13:58:33	Calib Date:	19-Jun-2023 20:25:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1684				

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 167 BFB	95	5.026	5.026	0.000	0	172517	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

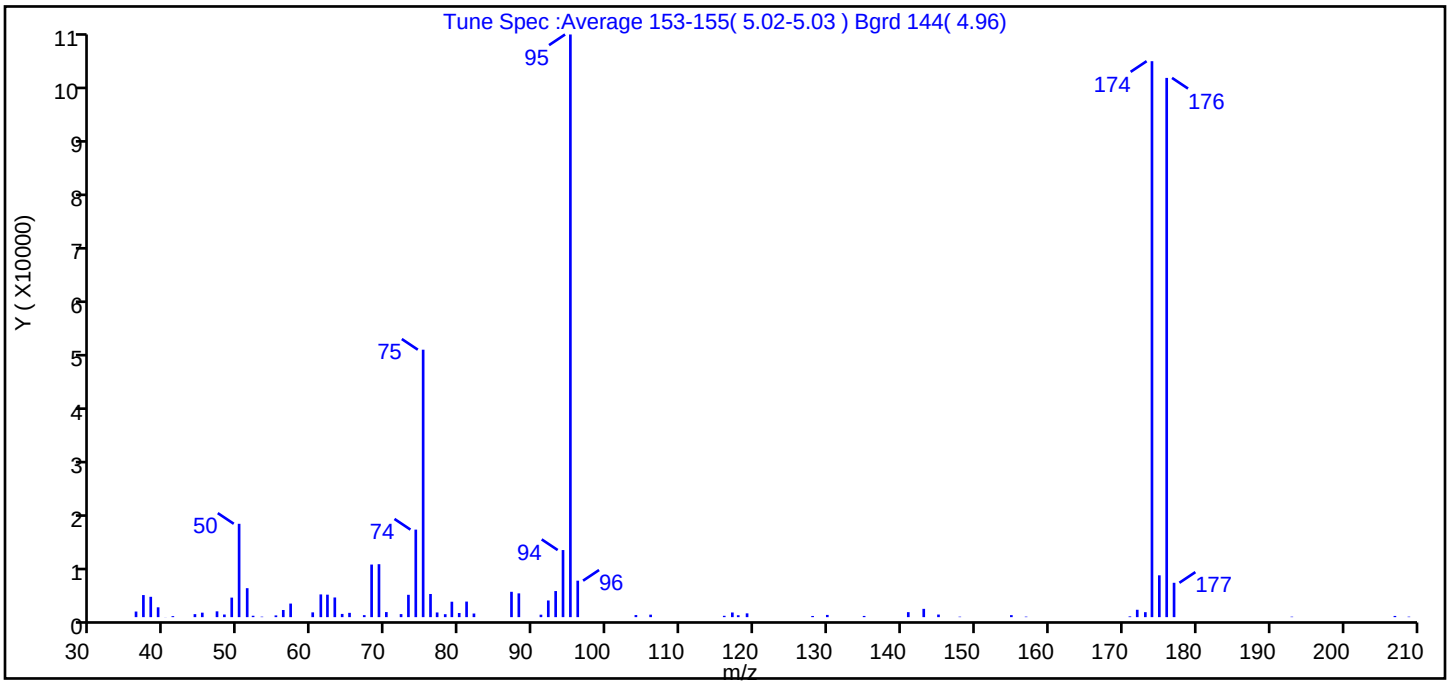
MSV_V_BFB_00012 Amount Added: 1.00 Units: uL

MS Tune Report

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03T01.D
Injection Date: 03-Aug-2023 11:02:30 Instrument ID: 19930
Lims ID: BFB
Client ID:
Operator ID: knk41612 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Tune Method: BFB Method 8260

$ 167 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	16.0
75	30 to 60% of m/z 95	45.9
96	5 to 9% of m/z 95	6.3
173	Less than 2% of m/z 174	0.9 (0.9)
174	50 to 120% of m/z 95	95.4
175	5 to 9% of m/z 174	7.2 (7.5)
176	Greater than 95% but less than 101% of m/z 174	92.5 (97.0)
177	5 to 9% of m/z 176	5.9 (6.4)

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03T01.D\8260 25ml HP31.rslt\spectra.d
Injection Date: 03-Aug-2023 11:02:30
Spectrum: Tune Spec :Average 153-155(5.02-5.03) Bgrd 144(4.96)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 72

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1038	60.00	884	80.00	762	130.00	410
37.00	4079	61.00	4200	81.00	2877	135.00	222
38.00	3758	62.00	4152	82.00	669	141.00	923
39.00	1816	63.00	3634	87.00	4683	143.00	1532
40.00	18	64.00	595	88.00	4393	145.00	480
41.00	186	65.00	795	91.00	453	148.00	85
44.00	556	67.00	370	92.00	3080	155.00	370
45.00	827	68.00	9716	93.00	4819	157.00	94
47.00	1074	69.00	9782	94.00	12395	171.00	139
48.00	485	70.00	937	95.00	107656	172.00	1363
49.00	3609	72.00	563	96.00	6737	173.00	919
50.00	17248	73.00	4127	104.00	385	174.00	102720
51.00	5352	74.00	16173	106.00	459	175.00	7727
52.00	257	75.00	49416	116.00	248	176.00	99632
53.00	87	76.00	4278	117.00	859	177.00	6349
55.00	321	77.00	865	118.00	351	193.00	85
56.00	1322	78.00	545	119.00	701	207.00	222
57.00	2507	79.00	2850	128.00	216	209.00	90

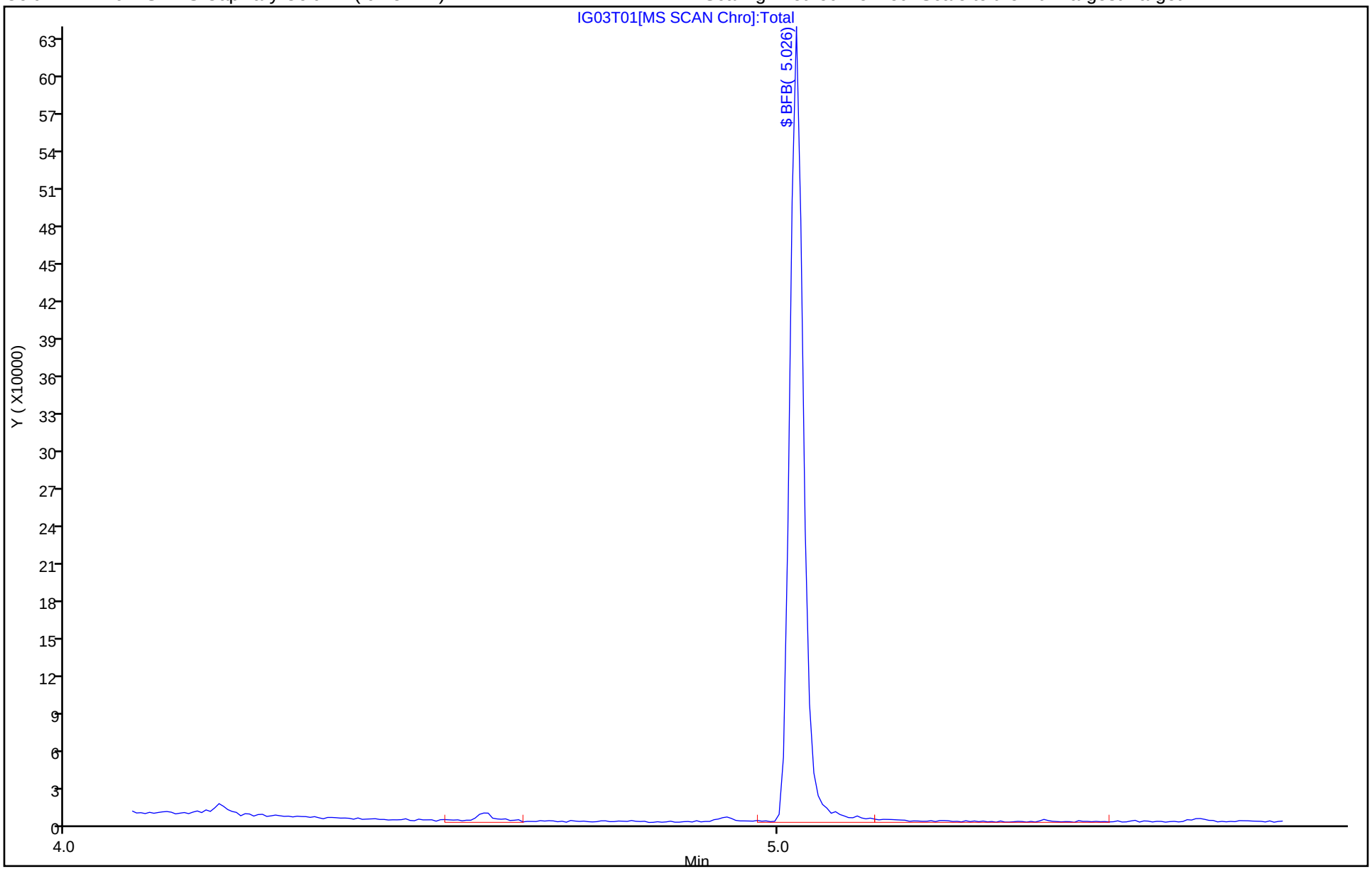
Report Date: 03-Aug-2023 13:58:33 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03T01.D

Injection Date:	03-Aug-2023 11:02:30	Instrument ID:	19930	Operator ID:	knk41612
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136514-2

SDG No.:

Client Sample ID: Lab Sample ID: MB 410-404020/11

Matrix: Water Lab File ID: IG03X10.D

Analysis Method: EPA 8260C Date Collected:

Sample wt/vol: 25(mL) Date Analyzed: 08/03/2023 14:25

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL) Heated Purge: (Y/N) N pH:

% Moisture: % Solids: Level: (low/med) Low

Analysis Batch No.: 404020 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
115-10-6	Dimethyl ether	ND		10	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	109		80-120
1868-53-7	Dibromofluoromethane (Surr)	106		80-120
460-00-4	4-Bromofluorobenzene (Surr)	95		80-120
2037-26-5	Toluene-d8 (Surr)	94		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X10.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 03-Aug-2023 14:25:30 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090530-011
Operator ID: knk41612 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 04-Aug-2023 10:56:08 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1601

First Level Reviewer: DVW2 Date: 03-Aug-2023 14:47:28

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Chlorodifluoromethane	51		1.867				ND		
1 Dichlorodifluoromethane	85		1.867				ND		
3 Dimethyl ether	45		1.922				ND		U
4 Chloromethane	50		2.056				ND		
5 Vinyl chloride	62		2.160				ND		
6 Butadiene	39		2.172				ND		7
7 Bromomethane	94		2.477				ND		
8 Chloroethane	64		2.556				ND		
9 Dichlorofluoromethane	67		2.782				ND		7
10 Trichlorofluoromethane	101		2.843				ND		
11 Ethyl ether	59		3.062				ND		
13 1,2-Dichloro-1,1,2-trifluoroetha	67		3.154				ND		
14 Acrolein	56		3.215				ND		
15 1,1-Dichloroethene	96		3.349				ND		
16 Acetone	43		3.379				ND		MU
17 1,1,2-Trichloro-1,2,2-trifluoroe	101		3.398				ND		
18 Iodomethane	142		3.538				ND		
19 Ethyl bromide	108		3.562				ND		
20 Carbon disulfide	76		3.641				ND		7
23 Methyl acetate	43		3.782				ND		7
21 Acetonitrile	41		3.788				ND		
24 3-Chloro-1-propene	41		3.800				ND		
25 Methylene Chloride	84		3.977				ND		
* 26 t-Butyl alcohol-d10 (IS)	65	3.983	3.983	0.000	27	140260	50.0	50.0	
27 2-Methyl-2-propanol	59		4.099				ND		U
28 Acrylonitrile	53		4.294				ND		
29 Methyl tert-butyl ether	73		4.361				ND		
30 trans-1,2-Dichloroethene	96		4.373				ND		
31 Hexane	57		4.794				ND		
33 Vinyl acetate	43		4.989				ND		
32 1,1-Dichloroethane	63		5.031				ND		
35 Isopropyl ether	45		5.092				ND		

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
	36 2-Chloro-1,3-butadiene	53		5.141				ND		
	37 Tert-butyl ethyl ether	59		5.629				ND		
	38 2-Butanone (MEK)	43		5.830				ND		
	39 cis-1,2-Dichloroethene	96		5.867				ND		
	40 2,2-Dichloropropane	77		5.879				ND		
	42 Ethyl acetate	43		5.891				ND		
	43 Propionitrile	54		5.915				ND		
	45 Methacrylonitrile	67		6.141				ND		
S	41 1,2-Dichloroethene, Total	100		6.155				ND		7
	46 Chlorobromomethane	128		6.196				ND		
	47 Tetrahydrofuran	71		6.214				ND		
	44 Methyl acrylate	55		6.220				ND		
	48 Chloroform	83		6.354				ND		
$	49 Dibromofluoromethane (Surr)	113	6.568	6.568	0.000	94	489777	10.0	10.6	
	50 1,1,1-Trichloroethane	97		6.580				ND		
	51 Cyclohexane	56		6.677				ND		
	54 Carbon tetrachloride	117		6.793				ND		
	53 1,1-Dichloropropene	75		6.793				ND		
	55 Isobutyl alcohol	41		6.952				ND		
	52 1-Chlorobutane	56		7.019				ND		
$	56 1,2-Dichloroethane-d4 (Surr)	102	7.019	7.025	-0.006	62	99847	10.0	10.9	
	57 Benzene	78		7.055				ND		
	58 1,2-Dichloroethane	62		7.122				ND		
	59 Isopropyl acetate	43		7.128				ND		
	60 Tert-amyl methyl ether	73		7.250				ND		
*	61 Fluorobenzene (IS)	96	7.458	7.458	0.000	99	1806795	10.0	10.0	
	62 n-Heptane	43		7.476				ND		7
	63 n-Butanol	56		7.836				ND		
	64 Trichloroethene	95		7.939				ND		
	65 Methylcyclohexane	83		8.250				ND		
	66 1,2-Dichloropropane	63		8.269				ND		
	67 Methyl methacrylate	69		8.366				ND		
	68 1,4-Dioxane	88		8.366				ND		
	69 Dibromomethane	93		8.378				ND		
	70 n-Propyl acetate	43		8.445				ND		
	71 Dichlorobromomethane	83		8.616				ND		
	72 2-Nitropropane	41		8.878				ND		
	73 2-Chloroethyl vinyl ether	63		9.006				ND		
	75 1-Bromo-2-chloroethane	63		9.012				ND		
	76 cis-1,3-Dichloropropene	75		9.177				ND		
	74 Chloroacetonitrile	75		9.226				ND		
	77 4-Methyl-2-pentanone (MIBK)	43		9.354				ND		
$	78 Toluene-d8 (Surr)	98	9.494	9.494	0.000	93	1866222	10.0	9.42	
	79 Toluene	92		9.573				ND		7
	97 trans-1,3-Dichloropropene	75		9.841				ND		
	99 Ethyl methacrylate	69		9.908				ND		
	100 1,1,2-Trichloroethane	97		10.049				ND		
S	98 1,3-Dichloropropene, Total	100		10.060				ND		7
	101 Tetrachloroethene	166		10.140				ND		
	102 1,3-Dichloropropane	76		10.213				ND		
	103 2-Hexanone	43		10.268				ND		
	104 n-Butyl acetate	43		10.408				ND		

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
105 Chlorodibromomethane	129		10.433					ND	
106 Ethylene Dibromide	107		10.542					ND	
* 107 Chlorobenzene-d5 (IS)	117	10.981	10.981	0.000	84	1540201	10.0	10.0	
108 1-Chlorohexane	91		10.994					ND	7
109 Chlorobenzene	112		11.006					ND	
111 1,1,1,2-Tetrachloroethane	131		11.091					ND	
112 Ethylbenzene	91		11.097					ND	
113 m-Xylene & p-Xylene	106		11.213					ND	
S 110 Xylenes, Total	106		11.245					ND	7
114 o-Xylene	106		11.542					ND	
115 Styrene	104		11.561					ND	
116 Bromoform	173		11.719					ND	7
117 Isopropylbenzene	105		11.847					ND	
118 cis-1,4-Dichloro-2-butene	88		11.902					ND	U
119 Cyclohexanone	55		11.938					ND	
$ 120 4-Bromofluorobenzene (Surr)	95	11.993	11.987	0.006	96	712299	10.0	9.55	
121 1,1,2,2-Tetrachloroethane	83		12.091					ND	
122 Bromobenzene	156		12.103					ND	
123 trans-1,4-Dichloro-2-butene	53		12.115					ND	
124 1,2,3-Trichloropropane	110		12.140					ND	
125 N-Propylbenzene	91		12.176					ND	
126 2-Chlorotoluene	126		12.249					ND	
127 1,3,5-Trimethylbenzene	105		12.317					ND	
128 4-Chlorotoluene	126		12.347					ND	
129 tert-Butylbenzene	134		12.554					ND	
130 Pentachloroethane	167		12.585					ND	
131 1,2,4-Trimethylbenzene	105		12.597					ND	
132 sec-Butylbenzene	105		12.719					ND	
133 1,3-Dichlorobenzene	146		12.816					ND	7
134 4-Isopropyltoluene	119		12.829					ND	
* 135 1,4-Dichlorobenzene-d4	152	12.877	12.871	0.006	93	913863	10.0	10.0	
136 1,4-Dichlorobenzene	146		12.890					ND	7
137 1,2,3-Trimethylbenzene	120		12.902					ND	7
138 Benzyl chloride	126		12.969					ND	
139 n-Butylbenzene	92		13.121					ND	
140 1,2-Dichlorobenzene	146		13.152					ND	
141 Hexachloroethane	117		13.542					ND	
142 1,2-Dibromo-3-Chloropropane	155		13.694					ND	
143 1,3,5-Trichlorobenzene	180		13.822					ND	
144 1,2,4-Trichlorobenzene	180		14.243					ND	
145 Hexachlorobutadiene	225		14.322					ND	
146 Naphthalene	128		14.420					ND	
147 1,2,3-Trichlorobenzene	180		14.560					ND	
148 Dodecane	57		0.000					ND	
151 1,1-Dichloroacetone	1		0.000					ND	
152 n-Decane	57		0.000					ND	
153 1-Bromo-3-Chloropropane	1		0.000					ND	
154 1,1-Dichloro-1-fluoroethane	1		0.000					ND	
155 2-Methylnaphthalene	142		0.000					ND	
156 p-Diethylbenzene	1		0.000					ND	
157 t-Amyl alcohol	1		0.000					ND	
158 Methylal	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
159 tert-Butyl Formate	1		0.000					ND	
160 2-Bromo-1-chloropropane	1		0.000					ND	
223 1,1,2-Trifluoroethane TIC	1		0.000					ND	
161 Pentane	43		0.000					ND	
149 2-Chloro-1,1,1-Trifluoroethane	1		0.000					ND	
150 2-ethoxy-2-methyl butane	1		0.000					ND	
165 Isopropyl alcohol	45		0.000					ND	
217 Freon 115 TIC	1		0.000					ND	
216 Ethyl ether TIC	1		0.000					ND	
215 1-Chloro-1,1-difluoroethane TIC	1		0.000					ND	
214 Dichloro-1,1,2,2-tetrafluoretha	1		0.000					ND	
213 Chlorofluoromethane TIC	1		0.000					ND	
218 Fluoromethane TIC	1		0.000					ND	
225 1,1-Dichloro-1-fluoroethane TIC	1		0.000					ND	
222 Vinyl Fluoride TIC	1		0.000					ND	
162 Chlorotrifluoroethene	1		0.000					ND	
163 Propene oxide	1		0.000					ND	
221 1,1,1-Trichloro-2,2,2-trifluoroe	1		0.000					ND	
220 1,2-Dichlorofluoroethane TIC	1		0.000					ND	
219 1,1,1-Trifluoro-2,2-dichloroetha	1		0.000					ND	
164 1-Chloropropane	1		0.000					ND	
166 Ethanol	45		3.269					ND	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

MSV_LLcentISS_00009 Amount Added: 5.00 Units: uL Run Reagent

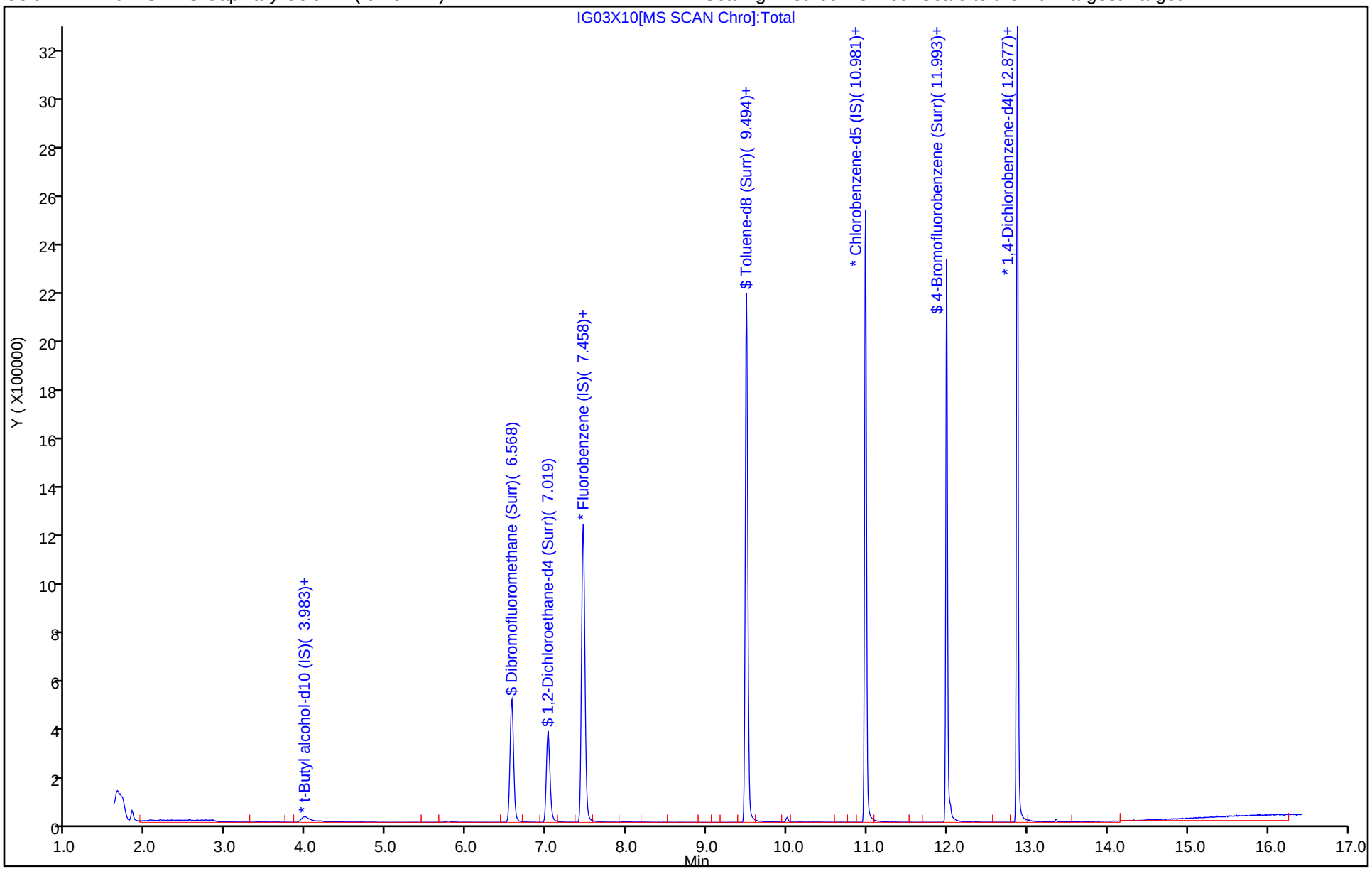
Report Date: 04-Aug-2023 10:56:09 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X10.D

Injection Date:	03-Aug-2023 14:25:30	Instrument ID:	19930	Operator ID:	knk41612
Lims ID:	MB			Worklist Smp#:	11
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X10.D				
Lims ID:	MB				
Client ID:					
Sample Type:	MB				
Inject. Date:	03-Aug-2023 14:25:30	ALS Bottle#:	10	Worklist Smp#:	11
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0090530-011				
Operator ID:	knk41612	Instrument ID:	19930		
Method:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m				
Limit Group:	MSV - 8260C_D				
Last Update:	04-Aug-2023 10:56:08	Calib Date:	19-Jun-2023 20:25:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1601				

First Level Reviewer: DVW2 Date: 03-Aug-2023 14:47:28

Compound	Amount Added	Amount Recovered	% Rec.
$ 49 Dibromofluoromethane (Surr)	10.0	10.6	105.54
$ 56 1,2-Dichloroethane-d4 (Surr)	10.0	10.9	108.51
$ 78 Toluene-d8 (Surr)	10.0	9.42	94.25
$ 120 4-Bromofluorobenzene (Surr)	10.0	9.55	95.46

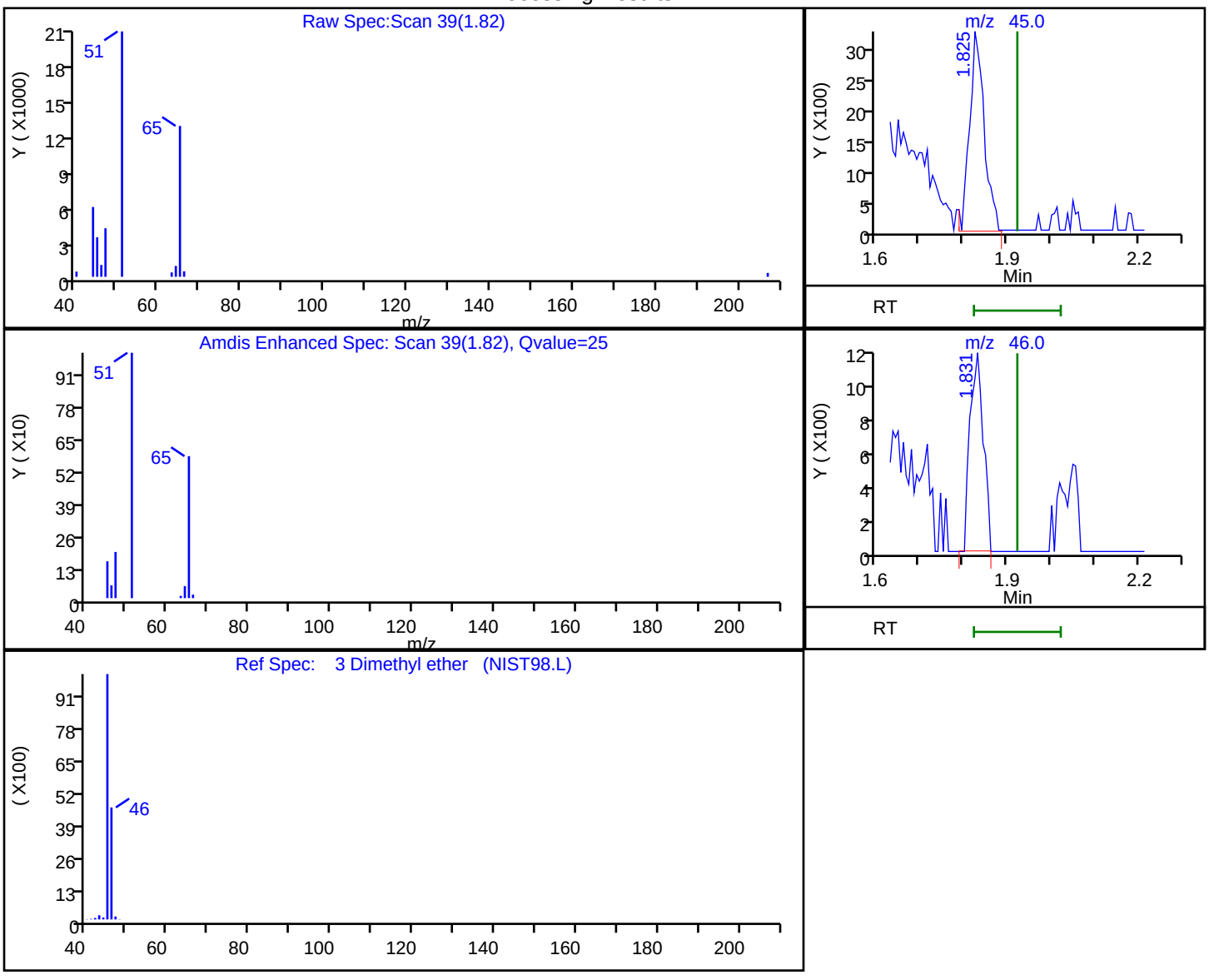
User Disabled Compound Report

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X10.D				
Injection Date:	03-Aug-2023 14:25:30	Instrument ID:	19930		
Lims ID:	MB				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	10	Worklist Smp#:	11
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

3 Dimethyl ether, CAS: 115-10-6

Processing Results



RT	Mass	Response	Amount
1.82	45.00	7599	0.124479
1.83	46.00	2395	

Reviewer: DVW2, 03-Aug-2023 14:48:47 -04:00:00 (UTC)

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136514-2

SDG No.:

Client Sample ID:
Lab Sample ID: LCS 410-404020/7

Matrix: Water
Lab File ID: IG03X06.D

Analysis Method: EPA 8260C
Date Collected:

Sample wt/vol: 25(mL)
Date Analyzed: 08/03/2023 13:00

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 404020
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
115-10-6	Dimethyl ether	4.66	J	10	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	107		80-120
1868-53-7	Dibromofluoromethane (Surr)	105		80-120
460-00-4	4-Bromofluorobenzene (Surr)	96		80-120
2037-26-5	Toluene-d8 (Surr)	95		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X06.D
Lims ID: LCS SM
Client ID:
Sample Type: LCS
Inject. Date: 03-Aug-2023 13:00:30 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090530-007
Operator ID: knk41612 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 03-Aug-2023 13:57:48 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1684

First Level Reviewer: DVW2 Date: 03-Aug-2023 13:56:24

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
3 Dimethyl ether	45	1.922	1.922	0.000	98	263694	5.00	4.66	
21 Acetonitrile	41	3.769	3.788	-0.019	96	53995	18.8	28.1	
* 26 t-Butyl alcohol-d10 (IS)	65	3.983	3.983	0.000	25	139805	50.0	50.0	
33 Vinyl acetate	43	5.019	4.989	0.030	97	748358	12.5	13.3	
42 Ethyl acetate	43	5.921	5.891	0.030	99	61365	2.50	2.88	
$ 49 Dibromofluoromethane (Surr)	113	6.568	6.568	0.000	94	452725	10.0	10.5	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.019	7.025	-0.006	62	91130	10.0	10.7	
59 Isopropyl acetate	43	7.147	7.128	0.019	99	135657	2.50	2.34	
* 61 Fluorobenzene (IS)	96	7.458	7.458	0.000	99	1676496	10.0	10.0	
70 n-Propyl acetate	43	8.457	8.445	0.012	98	98010	2.50	2.65	
$ 78 Toluene-d8 (Surr)	98	9.494	9.494	0.000	93	1737261	10.0	9.49	
104 n-Butyl acetate	43	10.408	10.408	0.000	97	105436	2.50	2.11	
* 107 Chlorobenzene-d5 (IS)	117	10.981	10.981	0.000	84	1424351	10.0	10.0	
$ 120 4-Bromofluorobenzene (Surr)	95	11.993	11.987	0.006	96	659309	10.0	9.55	
* 135 1,4-Dichlorobenzene-d4	152	12.877	12.871	0.006	93	834301	10.0	10.0	

QC Flag Legend

Processing Flags

Reagents:

MSV_LCS_V5ACE_00027	Amount Added:	6.25	Units: uL	
MSV_Q_QDME_00033	Amount Added:	5.00	Units: uL	
MSV_LLcentISS_00009	Amount Added:	5.00	Units: uL	Run Reagent

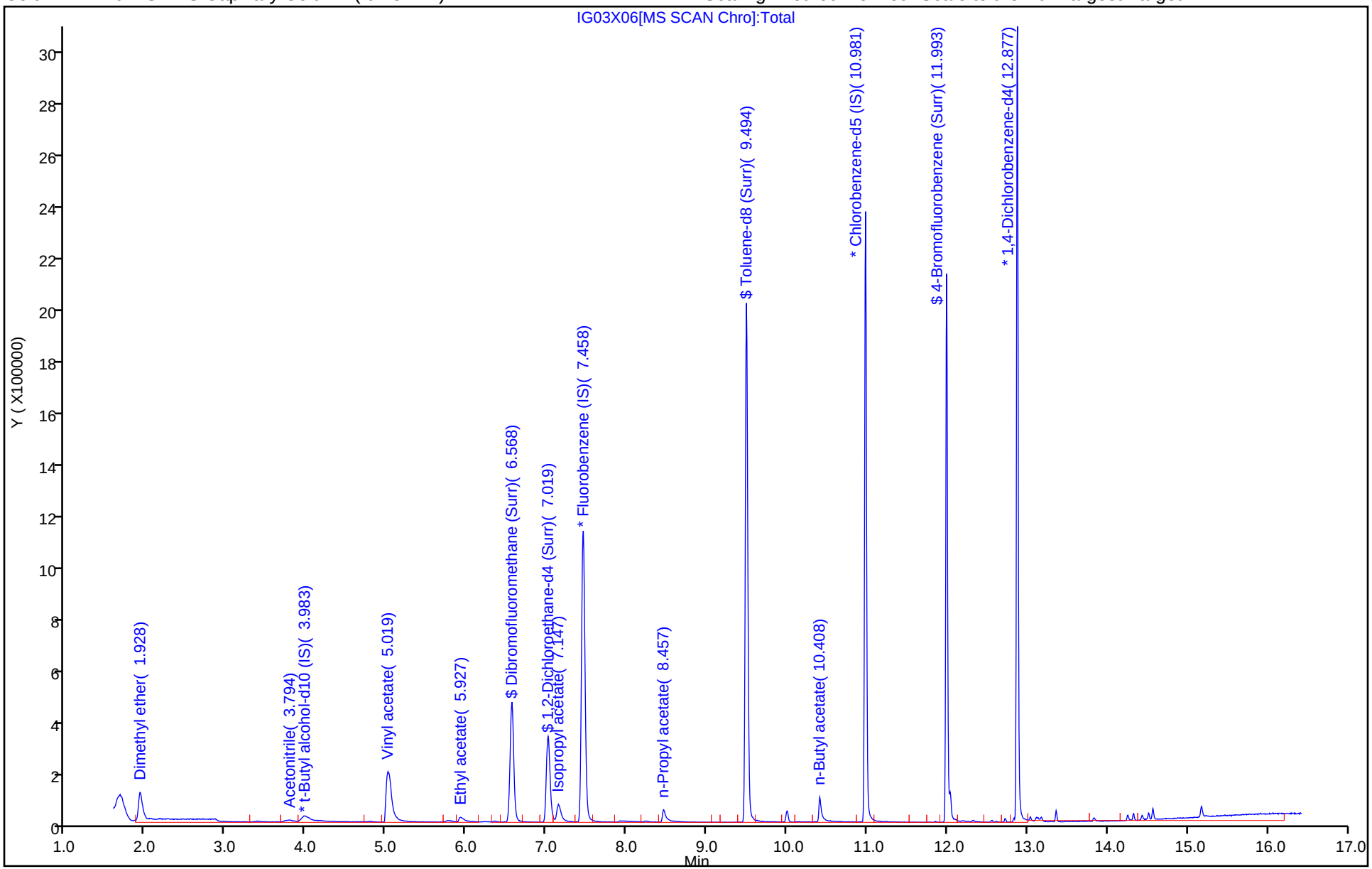
Report Date: 03-Aug-2023 13:58:29 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X06.D

Injection Date:	03-Aug-2023 13:00:30	Instrument ID:	19930	Operator ID:	knk41612
Lims ID:	LCS SM			Worklist Smp#:	7
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X06.D
Lims ID: LCS SM
Client ID:
Sample Type: LCS
Inject. Date: 03-Aug-2023 13:00:30 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090530-007
Operator ID: knk41612 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 03-Aug-2023 13:57:48 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1684

First Level Reviewer: DVW2 Date: 03-Aug-2023 13:56:24

Compound	Amount Added	Amount Recovered	% Rec.
$ 49 Dibromofluoromethane (Surr)	10.0	10.5	105.13
$ 56 1,2-Dichloroethane-d4 (Surr)	10.0	10.7	106.73
$ 78 Toluene-d8 (Surr)	10.0	9.49	94.87
$ 120 4-Bromofluorobenzene (Surr)	10.0	9.55	95.55

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136514-2

SDG No.:

Client Sample ID:
Lab Sample ID: LCSD 410-404020/8

Matrix: Water
Lab File ID: IG03X07.D

Analysis Method: EPA 8260C
Date Collected:

Sample wt/vol: 25(mL)
Date Analyzed: 08/03/2023 13:21

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 404020
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
115-10-6	Dimethyl ether	4.45	J	10	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	106		80-120
1868-53-7	Dibromofluoromethane (Surr)	104		80-120
460-00-4	4-Bromofluorobenzene (Surr)	96		80-120
2037-26-5	Toluene-d8 (Surr)	95		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X07.D
Lims ID: LCSD SM
Client ID:
Sample Type: LCSD
Inject. Date: 03-Aug-2023 13:21:30 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090530-008
Operator ID: knk41612 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 03-Aug-2023 13:57:48 Calib Date: 19-Jun-2023 20:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1684

First Level Reviewer: DVW2 Date: 03-Aug-2023 13:56:56

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
3 Dimethyl ether	45	1.934	1.922	0.012	99	255231	5.00	4.45	
21 Acetonitrile	41	3.788	3.788	0.000	94	49452	18.8	25.4	
* 26 t-Butyl alcohol-d10 (IS)	65	3.989	3.983	0.006	27	137719	50.0	50.0	
33 Vinyl acetate	43	5.037	4.989	0.048	97	742916	12.5	13.0	
42 Ethyl acetate	43	5.934	5.891	0.043	99	52989	2.50	2.46	
$ 49 Dibromofluoromethane (Surr)	113	6.574	6.568	0.006	94	453073	10.0	10.4	
$ 56 1,2-Dichloroethane-d4 (Surr)	102	7.019	7.025	-0.006	62	91134	10.0	10.6	
59 Isopropyl acetate	43	7.153	7.128	0.025	99	127045	2.50	2.17	
* 61 Fluorobenzene (IS)	96	7.458	7.458	0.000	99	1695714	10.0	10.0	
70 n-Propyl acetate	43	8.464	8.445	0.019	98	92783	2.50	2.48	
$ 78 Toluene-d8 (Surr)	98	9.494	9.494	0.000	93	1727664	10.0	9.49	
104 n-Butyl acetate	43	10.408	10.408	0.000	98	95664	2.50	1.92	
* 107 Chlorobenzene-d5 (IS)	117	10.981	10.981	0.000	84	1416559	10.0	10.0	
$ 120 4-Bromofluorobenzene (Surr)	95	11.993	11.987	0.006	96	660740	10.0	9.63	
* 135 1,4-Dichlorobenzene-d4	152	12.877	12.871	0.006	93	851220	10.0	10.0	

QC Flag Legend

Processing Flags

Reagents:

MSV_LCS_V5ACE_00027	Amount Added:	6.25	Units: uL	
MSV_Q_QDME_00033	Amount Added:	5.00	Units: uL	
MSV_LLcentISS_00009	Amount Added:	5.00	Units: uL	Run Reagent

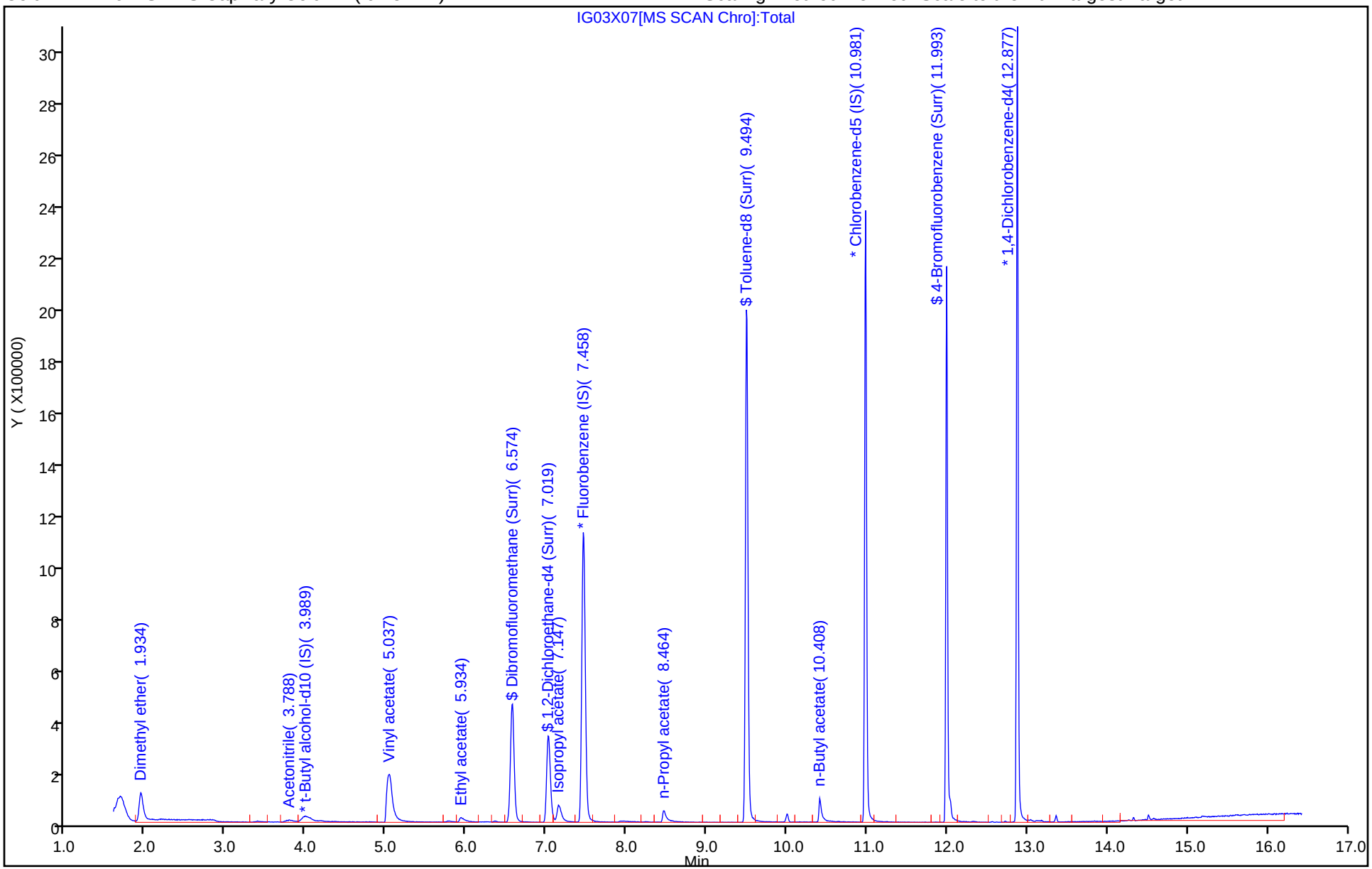
Report Date: 03-Aug-2023 13:58:31 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X07.D

Injection Date:	03-Aug-2023 13:21:30	Instrument ID:	19930	Operator ID:	knk41612
Lims ID:	LCSD SM			Worklist Smp#:	8
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\IG03X07.D				
Lims ID:	LCSD SM				
Client ID:					
Sample Type:	LCSD				
Inject. Date:	03-Aug-2023 13:21:30	ALS Bottle#:	7	Worklist Smp#:	8
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0090530-008				
Operator ID:	knk41612	Instrument ID:	19930		
Method:	\\chromfs\Lancaster\ChromData\19930\20230803-90530.b\8260 25ml HP31.m				
Limit Group:	MSV - 8260C_D				
Last Update:	03-Aug-2023 13:57:48	Calib Date:	19-Jun-2023 20:25:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19930\20230619-86929.b\IU19X18.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1684				

First Level Reviewer: DVW2 Date: 03-Aug-2023 13:56:56

Compound	Amount Added	Amount Recovered	% Rec.
$ 49 Dibromofluoromethane (Surr)	10.0	10.4	104.02
$ 56 1,2-Dichloroethane-d4 (Surr)	10.0	10.6	105.53
$ 78 Toluene-d8 (Surr)	10.0	9.49	94.86
$ 120 4-Bromofluorobenzene (Surr)	10.0	9.63	96.28

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-2

SDG No.:

Instrument ID: 19930 Start Date: 03/21/2023 00:26

Analysis Batch Number: 355532 End Date: 03/21/2023 06:23

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 410-355532/1		03/21/2023 00:26	1	IM21T01.D	R-624SilMS 30m 0.25(mm)
IC 410-355532/3		03/21/2023 01:00	1		R-624SilMS 30m 0.25(mm)
IC 410-355532/4		03/21/2023 01:20	1		R-624SilMS 30m 0.25(mm)
IC 410-355532/5		03/21/2023 01:40	1		R-624SilMS 30m 0.25(mm)
IC 410-355532/6		03/21/2023 02:00	1		R-624SilMS 30m 0.25(mm)
IC 410-355532/7		03/21/2023 02:20	1		R-624SilMS 30m 0.25(mm)
IC 410-355532/8		03/21/2023 02:41	1		R-624SilMS 30m 0.25(mm)
IC 410-355532/9		03/21/2023 03:01	1		R-624SilMS 30m 0.25(mm)
ICV 410-355532/10		03/21/2023 03:21	1		R-624SilMS 30m 0.25(mm)
IC 410-355532/12		03/21/2023 04:01	1	IM21X11.D	R-624SilMS 30m 0.25(mm)
ICIS 410-355532/13		03/21/2023 04:22	1	IM21X12.D	R-624SilMS 30m 0.25(mm)
IC 410-355532/14		03/21/2023 04:42	1	IM21X13.D	R-624SilMS 30m 0.25(mm)
IC 410-355532/15		03/21/2023 05:02	1	IM21X14.D	R-624SilMS 30m 0.25(mm)
IC 410-355532/16		03/21/2023 05:22	1	IM21X15.D	R-624SilMS 30m 0.25(mm)
IC 410-355532/17		03/21/2023 05:42	1	IM21X16.D	R-624SilMS 30m 0.25(mm)
IC 410-355532/18		03/21/2023 06:02	1	IM21X17.D	R-624SilMS 30m 0.25(mm)
ICV 410-355532/19		03/21/2023 06:23	1		R-624SilMS 30m 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-2

SDG No.:

Instrument ID: 19930 Start Date: 06/19/2023 14:12

Analysis Batch Number: 388102 End Date: 06/19/2023 21:07

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 410-388102/1		06/19/2023 14:12	1	IU19T01.D	R-624SilMS 30m 0.25(mm)
IC 410-388102/3		06/19/2023 14:49	1	IU19X02.D	R-624SilMS 30m 0.25(mm)
IC 410-388102/4		06/19/2023 15:10	1	IU19X03.D	R-624SilMS 30m 0.25(mm)
IC 410-388102/5		06/19/2023 15:31	1	IU19X04.D	R-624SilMS 30m 0.25(mm)
IC 410-388102/6		06/19/2023 15:52	1	IU19X05.D	R-624SilMS 30m 0.25(mm)
IC 410-388102/7		06/19/2023 16:13	1	IU19X06.D	R-624SilMS 30m 0.25(mm)
IC 410-388102/8		06/19/2023 16:34	1	IU19X07.D	R-624SilMS 30m 0.25(mm)
IC 410-388102/9		06/19/2023 16:55	1	IU19X08.D	R-624SilMS 30m 0.25(mm)
ICV 410-388102/11		06/19/2023 17:37	1	IU19X10.D	R-624SilMS 30m 0.25(mm)
IC 410-388102/13		06/19/2023 18:19	1	IU19X12.D	R-624SilMS 30m 0.25(mm)
IC 410-388102/14		06/19/2023 18:40	1	IU19X13.D	R-624SilMS 30m 0.25(mm)
IC 410-388102/15		06/19/2023 19:01	1	IU19X14.D	R-624SilMS 30m 0.25(mm)
IC 410-388102/16		06/19/2023 19:22	1	IU19X15.D	R-624SilMS 30m 0.25(mm)
IC 410-388102/17		06/19/2023 19:42	1	IU19X16.D	R-624SilMS 30m 0.25(mm)
ICIS 410-388102/18		06/19/2023 20:03	1	IU19X17.D	R-624SilMS 30m 0.25(mm)
IC 410-388102/19		06/19/2023 20:25	1	IU19X18.D	R-624SilMS 30m 0.25(mm)
ICV 410-388102/21		06/19/2023 21:07	1	IU19X20.D	R-624SilMS 30m 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136514-2

SDG No.:

Instrument ID: 19930 Start Date: 08/03/2023 11:02

Analysis Batch Number: 404020 End Date: 08/03/2023 22:07

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 410-404020/1		08/03/2023 11:02	1	IG03T01.D	R-624SilMS 30m 0.25(mm)
CCVIS 410-404020/3		08/03/2023 11:36	1	IG03X02.D	R-624SilMS 30m 0.25(mm)
CCV 410-404020/4		08/03/2023 11:57	1	IG03X03.D	R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 12:18	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 12:39	1		R-624SilMS 30m 0.25(mm)
LCS 410-404020/7		08/03/2023 13:00	1	IG03X06.D	R-624SilMS 30m 0.25(mm)
LCSD 410-404020/8		08/03/2023 13:21	1	IG03X07.D	R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 13:42	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 14:03	1		R-624SilMS 30m 0.25(mm)
MB 410-404020/11		08/03/2023 14:25	1	IG03X10.D	R-624SilMS 30m 0.25(mm)
410-136514-6	Trip Blank 1	08/03/2023 14:45	1	IG03X11.D	R-624SilMS 30m 0.25(mm)
410-136514-7	Trip Blank 2	08/03/2023 15:06	1	IG03X12.D	R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 15:28	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 15:48	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 16:09	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 16:30	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 16:51	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 17:12	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 17:34	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 17:55	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 18:16	1		R-624SilMS 30m 0.25(mm)
410-136514-1	16-2	08/03/2023 18:37	1	IG03X22.D	R-624SilMS 30m 0.25(mm)
410-136514-2	16-3	08/03/2023 18:58	1	IG03X23.D	R-624SilMS 30m 0.25(mm)
410-136514-3	16-5	08/03/2023 19:19	1	IG03X24.D	R-624SilMS 30m 0.25(mm)
410-136514-4	16WC2B	08/03/2023 19:40	1	IG03X25.D	R-624SilMS 30m 0.25(mm)
410-136514-5	16SPRING	08/03/2023 20:01	1	IG03X26.D	R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 20:22	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 20:43	10		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 21:04	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 21:25	10		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 21:46	50		R-624SilMS 30m 0.25(mm)
ZZZZZ		08/03/2023 22:07	1		R-624SilMS 30m 0.25(mm)

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-136514-2

SDG No.:

Batch Number: 355532 Batch Start Date: 03/21/23 00:26 Batch Analyst: Campbell, Miranda E

Batch Method: EPA 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Lot#Vial	MSV_LL_#1_826 00068	MSV_LL_#2_826 00077	MSV_LL_GAS826 00141
BFB 410-355532/1		EPA 8260C		1 uL	1 uL				
IC 410-355532/12		EPA 8260C		25 mL	25 mL	2680	25 uL	25 uL	25 uL
ICIS 410-355532/13		EPA 8260C		25 mL	25 mL	2680	10 uL	10 uL	10 uL
IC 410-355532/14		EPA 8260C		25 mL	25 mL	2680	5 uL	5 uL	5 uL
IC 410-355532/15		EPA 8260C		25 mL	25 mL	2680	2 uL	2 uL	2 uL
IC 410-355532/16		EPA 8260C		25 mL	25 mL	2680	2 uL	2 uL	2 uL
IC 410-355532/17		EPA 8260C		25 mL	25 mL	2680	2 uL	2 uL	2 uL
IC 410-355532/18		EPA 8260C		25 mL	25 mL	2680	2 uL	2 uL	2 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_LLcentISS 00006	MSV_V_BFB 00011				
BFB 410-355532/1		EPA 8260C			1 uL				
IC 410-355532/12		EPA 8260C		5 uL					
ICIS 410-355532/13		EPA 8260C		5 uL					
IC 410-355532/14		EPA 8260C		5 uL					
IC 410-355532/15		EPA 8260C		5 uL					
IC 410-355532/16		EPA 8260C		5 uL					
IC 410-355532/17		EPA 8260C		5 uL					
IC 410-355532/18		EPA 8260C		5 uL					

Batch Notes	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136514-2

SDG No.:

Batch Number: 355532 | Batch Start Date: 03/21/23 00:26 | Batch Analyst: Campbell, Miranda E

Batch Method: EPA 8260C | Batch End Date:

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-136514-2

SDG No.:

Batch Number: 388102 Batch Start Date: 06/19/23 14:12 Batch Analyst: Kephart, Kayla

Batch Method: EPA 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Lot#Vial	LCS_ETBR 00006	MSV_CCV_CYC 00005	MSV_CCV_V5ACE 00025
BFB 410-388102/1		EPA 8260C		1 uL	1 uL				
IC 410-388102/3		EPA 8260C		25 mL	25 mL	2692		1.6 uL	0.2 uL
IC 410-388102/4		EPA 8260C		25 mL	25 mL	2692		4 uL	0.5 uL
IC 410-388102/5		EPA 8260C		25 mL	25 mL	2692		8 uL	1 uL
IC 410-388102/6		EPA 8260C		25 mL	25 mL	2692		8 uL	1 uL
IC 410-388102/7		EPA 8260C		25 mL	25 mL	2692		8 uL	1 uL
IC 410-388102/8		EPA 8260C		25 mL	25 mL	2692		8 uL	1 uL
IC 410-388102/9		EPA 8260C		25 mL	25 mL	2692		20 uL	2.5 uL
ICV 410-388102/11		EPA 8260C		25 mL	25 mL	2692			
IC 410-388102/13		EPA 8260C		25 mL	25 mL	2692			
IC 410-388102/14		EPA 8260C		25 mL	25 mL	2692			
IC 410-388102/15		EPA 8260C		25 mL	25 mL	2692			
IC 410-388102/16		EPA 8260C		25 mL	25 mL	2692			
IC 410-388102/17		EPA 8260C		25 mL	25 mL	2692			
ICIS 410-388102/18		EPA 8260C		25 mL	25 mL	2692			
IC 410-388102/19		EPA 8260C		25 mL	25 mL	2692			
ICV 410-388102/21		EPA 8260C		25 mL	25 mL	2692	12.5 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_DME 00046	MSV_LCS_2CEVE 00120	MSV_LCS_ACROL 00118	MSV_LCS_CYC 00003	MSV_LCS_EE 00007	MSV_LCS_LKB 00006
BFB 410-388102/1		EPA 8260C							
IC 410-388102/3		EPA 8260C		0.2 uL					
IC 410-388102/4		EPA 8260C		0.5 uL					
IC 410-388102/5		EPA 8260C		1 uL					
IC 410-388102/6		EPA 8260C		1 uL					
IC 410-388102/7		EPA 8260C		1 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-136514-2

SDG No.:

Batch Number: 388102 Batch Start Date: 06/19/23 14:12 Batch Analyst: Kephart, Kayla

Batch Method: EPA 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_DME 00046	MSV_LCS_2CEVE 00120	MSV_LCS_ACROL 00118	MSV_LCS_CYC 00003	MSV_LCS_EE 00007	MSV_LCS_LKB 00006
IC 410-388102/8		EPA 8260C		1 uL					
IC 410-388102/9		EPA 8260C		2.5 uL					
ICV 410-388102/11		EPA 8260C			12.5 uL		12.5 uL		25 uL
IC 410-388102/13		EPA 8260C							
IC 410-388102/14		EPA 8260C							
IC 410-388102/15		EPA 8260C							
IC 410-388102/16		EPA 8260C							
IC 410-388102/17		EPA 8260C							
ICIS 410-388102/18		EPA 8260C							
IC 410-388102/19		EPA 8260C							
ICV 410-388102/21		EPA 8260C				12.5 uL		12.5 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_LCS_Penta 00029	MSV_LCS_SMFre 00050	MSV_LCS_V5ACE 00026	MSV_LCS_VOC#1 00115	MSV_LL_#1_826 00081	MSV_LL_#2_826 00093
BFB 410-388102/1		EPA 8260C							
IC 410-388102/3		EPA 8260C							
IC 410-388102/4		EPA 8260C							
IC 410-388102/5		EPA 8260C							
IC 410-388102/6		EPA 8260C							
IC 410-388102/7		EPA 8260C							
IC 410-388102/8		EPA 8260C							
IC 410-388102/9		EPA 8260C							
ICV 410-388102/11		EPA 8260C			12.5 uL	6.25 uL			
IC 410-388102/13		EPA 8260C						2 uL	2 uL
IC 410-388102/14		EPA 8260C						2 uL	2 uL

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136514-2

SDG No.:

Batch Number: 388102 | Batch Start Date: 06/19/23 14:12 | Batch Analyst: Kephart, Kayla

Batch Method: EPA 8260C | Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_LCS_Penta 00029	MSV_LCS_SMFre 00050	MSV_LCS_V5ACE 00026	MSV_LCS_VOC#1 00115	MSV_LL_#1_826 00081	MSV_LL_#2_826 00093
IC 410-388102/15		EPA 8260C						2 uL	2 uL
IC 410-388102/16		EPA 8260C						2 uL	2 uL
IC 410-388102/17		EPA 8260C						5 uL	5 uL
ICIS 410-388102/18		EPA 8260C						10 uL	10 uL
IC 410-388102/19		EPA 8260C						25 uL	25 uL
ICV 410-388102/21		EPA 8260C		12.5 uL			12.5 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_LL_GAS826 00156	MSV_LLcentISO 00006	MSV_LLcentISS 00007	MSV_Q_QDME 00032	MSV_QC_Gas826 00145	MSV_V_BFB 00012
BFB 410-388102/1		EPA 8260C							1 uL
IC 410-388102/3		EPA 8260C			5 uL				
IC 410-388102/4		EPA 8260C			5 uL				
IC 410-388102/5		EPA 8260C			5 uL				
IC 410-388102/6		EPA 8260C			5 uL				
IC 410-388102/7		EPA 8260C			5 uL				
IC 410-388102/8		EPA 8260C			5 uL				
IC 410-388102/9		EPA 8260C			5 uL				
ICV 410-388102/11		EPA 8260C				5 uL	5 uL		
IC 410-388102/13		EPA 8260C		2 uL		5 uL			
IC 410-388102/14		EPA 8260C		2 uL		5 uL			
IC 410-388102/15		EPA 8260C		2 uL		5 uL			
IC 410-388102/16		EPA 8260C		2 uL		5 uL			
IC 410-388102/17		EPA 8260C		5 uL		5 uL			
ICIS 410-388102/18		EPA 8260C		10 uL		5 uL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-136514-2

SDG No.:

Batch Number: 388102 Batch Start Date: 06/19/23 14:12 Batch Analyst: Kephart, Kayla

Batch Method: EPA 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_LL_GAS826 00156	MSV_LLcentISO 00006	MSV_LLcentISS 00007	MSV_Q_QDME 00032	MSV_QC_Gas826 00145	MSV_V_BFB 00012
IC 410-388102/19		EPA 8260C		25 uL		5 uL			
ICV 410-388102/21		EPA 8260C				5 uL		12.5 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_V_SMRV4 00059					
BFB 410-388102/1		EPA 8260C							
IC 410-388102/3		EPA 8260C		1 uL					
IC 410-388102/4		EPA 8260C		2.5 uL					
IC 410-388102/5		EPA 8260C		5 uL					
IC 410-388102/6		EPA 8260C		5 uL					
IC 410-388102/7		EPA 8260C		5 uL					
IC 410-388102/8		EPA 8260C		5 uL					
IC 410-388102/9		EPA 8260C		12.5 uL					
ICV 410-388102/11		EPA 8260C							
IC 410-388102/13		EPA 8260C							
IC 410-388102/14		EPA 8260C							
IC 410-388102/15		EPA 8260C							
IC 410-388102/16		EPA 8260C							
IC 410-388102/17		EPA 8260C							
ICIS 410-388102/18		EPA 8260C							
IC 410-388102/19		EPA 8260C							
ICV 410-388102/21		EPA 8260C							

Batch Notes	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136514-2

SDG No.:

Batch Number: 388102 | Batch Start Date: 06/19/23 14:12 | Batch Analyst: Kephart, Kayla

Batch Method: EPA 8260C | Batch End Date:

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136514-2

SDG No.:

Batch Number: 404020 | Batch Start Date: 08/03/23 11:02 | Batch Analyst: Kephart, Kayla

Batch Method: EPA 8260C | Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	ResidualChloCheck	Headspace	Lot#Vial
BFB 410-404020/1		EPA 8260C		1 uL	1 uL				
CCVIS 410-404020/3		EPA 8260C		25 mL	25 mL				2705
CCV 410-404020/4		EPA 8260C		25 mL	25 mL				2705
LCS 410-404020/7		EPA 8260C		25 mL	25 mL				2705
LCSD 410-404020/8		EPA 8260C		25 mL	25 mL				2705
MB 410-404020/11		EPA 8260C		25 mL	25 mL				2705
410-136514-A-6	Trip Blank 1	EPA 8260C	T	25 mL	25 mL	<2 SU	N	N	
410-136514-A-7	Trip Blank 2	EPA 8260C	T	25 mL	25 mL	<2 SU	N	N	
410-136514-A-1	16-2	EPA 8260C	T	25 mL	25 mL	<2 SU	N	N	
410-136514-A-2	16-3	EPA 8260C	T	25 mL	25 mL	<2 SU	N	N	
410-136514-A-3	16-5	EPA 8260C	T	25 mL	25 mL	<2 SU	N	N	
410-136514-A-4	16WC2B	EPA 8260C	T	25 mL	25 mL	<2 SU	N	N	
410-136514-A-5	16SPRING	EPA 8260C	T	25 mL	25 mL	<2 SU	N	N	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_CCV_V5ACE 00026	MSV_DME 00048	MSV_LCS_V5ACE 00027	MSV_LL_#1_826 00087	MSV_LL_#2_826 00097	MSV_LL_GAS826 00162
BFB 410-404020/1		EPA 8260C							
CCVIS 410-404020/3		EPA 8260C					20 uL	20 uL	20 uL
CCV 410-404020/4		EPA 8260C		1 uL	1 uL				
LCS 410-404020/7		EPA 8260C				6.25 uL			
LCSD 410-404020/8		EPA 8260C				6.25 uL			
MB 410-404020/11		EPA 8260C							
410-136514-A-6	Trip Blank 1	EPA 8260C	T						
410-136514-A-7	Trip Blank 2	EPA 8260C	T						
410-136514-A-1	16-2	EPA 8260C	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136514-2

SDG No.:

Batch Number: 404020 | Batch Start Date: 08/03/23 11:02 | Batch Analyst: Kephart, Kayla

Batch Method: EPA 8260C | Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_CCV_V5ACE 00026	MSV_DME 00048	MSV_LCS_V5ACE 00027	MSV_LL_#1_826 00087	MSV_LL_#2_826 00097	MSV_LL_GAS826 00162
410-136514-A-2	16-3	EPA 8260C	T						
410-136514-A-3	16-5	EPA 8260C	T						
410-136514-A-4	16WC2B	EPA 8260C	T						
410-136514-A-5	16SPRING	EPA 8260C	T						

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_LLcentISS 00009	MSV_Q_QDME 00033	MSV_V_BFB 00012			
BFB 410-404020/1		EPA 8260C				1 uL			
CCVIS 410-404020/3		EPA 8260C		5 uL					
CCV 410-404020/4		EPA 8260C		5 uL					
LCS 410-404020/7		EPA 8260C		5 uL	5 uL				
LCSD 410-404020/8		EPA 8260C		5 uL	5 uL				
MB 410-404020/11		EPA 8260C		5 uL					
410-136514-A-6	Trip Blank 1	EPA 8260C	T	5 uL					
410-136514-A-7	Trip Blank 2	EPA 8260C	T	5 uL					
410-136514-A-1	16-2	EPA 8260C	T	5 uL					
410-136514-A-2	16-3	EPA 8260C	T	5 uL					
410-136514-A-3	16-5	EPA 8260C	T	5 uL					
410-136514-A-4	16WC2B	EPA 8260C	T	5 uL					
410-136514-A-5	16SPRING	EPA 8260C	T	5 uL					

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Shipping and Receiving Documents

CHAIN OF CUSTODY RECORD

410-136514-01 Chain of Custody

nvironmental (ELLE), 2425 New Holland Pike, Lancaster, PA, 17605-2425/ Barb Weyandt, Manager/ (717) 656-2300 x1576

Consultant:	TRC Engineers Inc (formerly Draper Aden Assoc)	Sample Site:	RFAAP, Radford, Virginia
Attn:	Janet C. Frazier	Location:	HWMU16
Address:	2200 South Main Street Suite 1 Blacksburg, Virginia 24060	Event:	3Q 2023 Annual GW Monitoring Event
Phone:	(540) 552-0444	DAA JN:	547076
Fax:	(540) 552-0291	Lab JN:	

Project Specific (PS) QC: YES as indicated
Sample Collection for Project Complete? YES
WP-12.75Y-02X-70-7513-5028
Carrier: " - " - " - 7578-4238
Tracking Number:

Box 1: Matrix
SW Surface Water; GW Groundwater; L Leachate; S Soil; T Trip Blank; E Equipment Blank; P Product; O Other

Box 2: Preservative
A HCL; B HNO_3; C H_2SO_4; D $Na_2S_2O_3$; E NaOH; F ZnAc; G Other (Specify); H None

Box 3: Filtered/Unfiltered
F Filtered; U Unfiltered

Box 4: Sample Type
G Grab; C Composite

Box 5: Sample Container Type
P Plastic; AG Amber Glass; V VOA; CG Clear Glass

Invoice
Copy to Consultant: YES
Bill: CLIENT OTHER
Preserved and shipped on ice: YES

Sample ID	Date: 2023	Time	Box 1: Matrix	Number of Bottles	8260D/5030C 25 ml purge volume	8260C/5030C 25 ml purge Dimethylether only CAS NO 115-10-6 permit	8260D/5030C 5 ml purge volume for 2-propanol ONLY	8270d/3510C (Semivolatiles)	Additional Aliquot 8260D/5030C 25 ml purge volume	ICP/MS 6020B/3005A (Metals-Total)	7470A (Mercury-Total)	9012B (Cyanide)	
Box 4 - Sample Type					G	G	G	G	G	G	G	G	
Box 3 - Filtered/Unfiltered					U	U	U	U	U	U	U	U	
Required pH of Sample					<2	<2		<2		<2	<3	>12	
Box 2 - Preservative					A	A	H	A		B	B	E	
Box 5 - Sample Container Type					3-40mL VOA	3-40mL VOA	2-250mL AG	2-40mL VOA		1-500 mL P		1-500 mL P	
16C1	7/27	1245	GW	12	X	X	X	X	X	X	X	X	Additional VOA Aliquot if dilution is required.
16MW8	7/21	1005	GW	10	X	X	X	X		X	X	X	
16MW9	7/27	1125	GW	12	X	X	X	X	X	X	X	X	Additional VOA aliquot if dilution is required.
16WC1A	7/27	0955	GW	30	X	X	X	X		X	X	X	USE FOR QC
16WDUP	7/27	1020	GW	10	X	X	X	X		X	X	X	
16WC1B	7/26	1205	GW	10	X	X	X	X		X	X	X	
16-2	7/26	0930 1115	GW	6	X	X		X		X	X		
16-3	7/26	~~0930~~	GW	6	X	X		X		X	X		Sample time is 1115
16-5	7/26	0745	GW	6	X	X		X		X	X		
16WC2B	7/26	0840	GW	6	X	X		X		X	X		
16SPRING	7/26	0800	GW	6	X	X		X		X	X		
Trip Blank 1	7/26	—	T	2	X	X	X						one trip blank required per day per permit. Delete if not required.
Trip Blank 2	7/26	—	T	2	X	X	X						
Trip Blank 3			T	2	X	X	X						

GENERAL NOTES:
1. Report results to detection limit, with J flags, for italicized wells.
2. Report results at or greater than QL for non-italicized wells.
3. VELAP accreditation required.
4. FULL/Comprehensive Deliverable with EDD and ERIS EDD.
5. For 2- propanol report to QL 100 ug/l and DL of 50 ug/l.
6. See Atached target analytes. Report to these Permit Specified QLs and DLs. Per ELLE - A single 25 ml purge volume analysis will be performed where requested
However, lab to report 8260D for all 25 ml purge requested analytes except for Dimethylether to be reported as 8260C (VELAP), 2-propanol to be analyzed via 5 ml purge as noted.

* Barb - report preliminary results. JLF 7/25/23

Clients Special Instructions:

Received by lab in Good Condition ____ Yes ____ No Custody Seal Intact ____ Yes ____ No Temperature upon arrival ____ Received on Ice ____ Yes ____ No
Describe problems, if any:

mr/tr 0.9/0.9 mr/tr 1.8/1.8

Sampler Name (Print):	Ken Coddington	7/26/23 Date:	#1 Relinquished by (Signature):		7/27/23 Date:	#2 Relinquished by (Signature):	Date:
Sampler Signature:		0700 Time:	Company Name:	DAA/TRC	1700 Time:	Company Name:	Time:
Sampler Name (Print):	Alexa Prater	7/26/23 Date:	#1 Received by (Signature):		Date:	#2 Received by (Signature):	7/28/23 Date:
Sampler Signature:		0700 Time:	Company Name:		Time:	Company Name: ELLE	0925 Time:

Sample Storage
Time Requested:
30 DYS ORG/6 MTHS INORG
AEH

PQSC 1/17 QC Trip 7-19

JVR 7/25/23

page 2/17

ANALYTICAL METHOD: 8260D/5030C
TYPE METHOD: GCMS
CLASS: VOLATILE

THIS APPLIES TO WELLS 16-2, 16-3, 16-5, 16WC2B, 16SPRING ✓

1.	Carbon tetrachloride		56-23-5	1
2.	chloromethane ; (Methyl chloride)		74-87-3	1
3.	2-butanone (methyl ethyl ketone - MEK)		78-93-3	10
4.	1,1-dichloroethane		75-34-3	1
5.	Dichlorodifluoromethane		75-71-8	1
6.	Ethylbenzene		100-41-4	1
7.	Tetrachloroethene		127-18-4	1
8.	Toluene (methyl benzene)		108-88-3	1
9.	1,1,1-trichloroethane (methyl chloroform)		71-55-6	1
10.	Trichloroethene		79-01-6	1
11.	Trichlorofluoromethane (CFC-11)		75-69-4	1
12.	Xylenes (total)		1330-20-7	3
13	Chloroethane		75-00-3	1
14	Diethyl ether	60-29-7		12.5-report to 10 ug/l due to rounding issues
15	Dimethyl ether	115-10-6		12.5- report to 10 due to rounding issues
16	Methylene chloride		75-09-2	1
17	1,1,2-Trichloro-1,2,2-Trifluoroethane		76-13-1	1
18	Benzene		71-43-2	1
19	1,1-Dichloroethene		75-35-4	1
20	Tetrahydrofuran			25
21	Vinyl chloride			1

Notes
13-16 added 10/03. JCF
Revised 10/31/03 JCF
17 added 0704. Revised 7/28/2004
10/2008 JCF
18 added 04 2011. JCF
19 added 04 2014. KPO, location 16-1 removed 2014
20 added 04 2016 JCF
21 added 8-2020 JCF

Current as of 2021 Permit Mod. JCF 9-13-2021

QC JVR 7/25/23

Report to at or above the QL for these wells and analytes. JCF 9-13-2021 ✓

25 ml purge volume

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page 3/17

ANALYTICAL METHOD: 8270D/3510C
TYPE METHOD: GCMS
CLASS: SEMIVOLATILE

THIS APPLIES TO WELLS 16-2, 16-3, 16-5, 16WC2B, 16SPRING ✓

No.	PARAMETER	CAS RN	Required LOQ (µg/l)
1.	2,4-dinitrotoluene	121-14-2	10
2.	2,6-dinitrotoluene	606-20-2	10
3.	Diethylphthate		5

Report to at or above the QL.
10/13- diethylphthate added 10/13.

Current as of 2021 Permit Mod. JCF 9-13-2021

Report to at or above the QL for these wells and analytes. JCF 9-13-2021 ✓

JCF 7/25/23

page 4/17

ANALYTICAL METHOD: SEE BELOW
TYPE METHOD: SEE BELOW
CLASS: TOTAL

Method SW 846-6020B/3005A (ICP/MS)

THIS APPLIES TO WELLS 16-2, 16-3,16-5, 16WC2B, 16SPRING

No.	PARAMETER	CAS RN	Required QL/ LOQ (µg/l)
1.	Arsenic	7440-38-2	10
2.	Barium	7440-39-3	10
3.	Beryllium	7440-41-7	1
4.	Cadmium	7440-43-9	1
5.	Chromium	7440-47-3	5
6.	Cobalt	7440-48-4	5
7.	Copper	7440-50-8	5
8.	Lead	7440-92-1	3
9.	Nickel	7440-02-0	10
10.	Vanadium	7440-62-2	10
11.	Zinc	7440-66-6	30

Report to at or above the QL.

Updated 4/8/2013 jcf
Zinc QL updated 10 2016 – JCF
Current as of 2021 Permit Mod. JCF 9-13-2021

OK JCF 7/23/25

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ANALYTICAL METHOD: 7470A

THIS APPLIES TO ALL WELLS AND QC

	Method SW 7470A/CVAA	CAS#	Required LOQ
1	Mercury	7439-97-6	2 / 0.2 ug/l

Report to permit DL (0.2 ug/l) for 16C1, 16MW8, 16MW9, 16WC1A, 16WDUP, 16WC1B, QC. (Appendix IX wells)-jcf 9-13-2021 JCF 7/25/23

Report to at or above QL for remaining wells. jcf 9-13-2021 JCF 7/25/23

Page 4/17

ANALYTICAL METHOD: 9012B
TYPE METHOD: CLO
CLASS: CYANIDE

THIS APPLIES TO 16C1, 16MW8, 16MW9,16WC1A, 16WDUP, 16WC1B AND QC

No.	PARAMETER	CAS RN	Required LOQ/DL (µg/l)
1	Cyanide	57-12-5	20 / 5

These are Appendix IX wells.
Report estimated results.

Current as of 2021 Permit Mod. JCF 9-13-2021

OK JCF 7/25/23

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ANALYTICAL METHOD: 8260D/ 5030C
GCMS/ Volatile

✓

THIS APPLIES TO WELLS 16C1, 16MW8, 16MW9,16WC1A, 16WDUP, 16WC1B & QC

SEE attached list. Report only analytes.

For these wells and analytes, report to permit MDL with J flag.

* Note- 8260C/5030C 25 ml purge Dimethylether only CAS N0 115-10-6 permit limits are QL: 12.5 ug/l and MDL: 1.11 ug/l- However, please report to 10 ug/l due to rounding issues (instead of 12.5 ug/l)
JVR 7-19-23

≠ For 2-propanol report to QL 100 ug/l and DL at 50 ug/l. (5ml purge) JVR 7/25/23

JCF 7-19-23

* pok addition of Chloro methane + chloroethane (page 4/8 / page 13/17)
JVR 7/25/23

page 8/17

ANALYTICAL METHOD: 8270E/ GCMS/ Semivolatile
THIS APPLIES TO WELLS 16C1, 16MW8, 16MW9,16WC1A, 16WDUP, 16WC1B & QC

SEE attached list. Report only analytes.

Report diethylphthalate to 5 ug/l to be consistent with routine semiannual limit. JCF 7-19-23

page 9/17

INORGANICS

THIS APPLIES TO WELLS 16C1, 16MW8, 16MW9,16WC1A, 16WDUP, 16WC1B & QC

Report to QL, DL listed below and provide estimated results ("J"). ✓

6020B SW 7/25/23

HWMU 16

Analyte	Method Ref	LOQ/QL	LOD/ MDL	CAS#	Units
ANTIMONY	6020A	2	0.6	7440-36-0	UG/L
ARSENIC	6020A	10	2	7440-38-2	UG/L
BARIUM	6020A	10	1.3	7440-39-3	UG/L
BERYLLIUM	6020A	1	0.3	7440-41-7	UG/L
CADMIUM	6020A	1	0.2	7440-43-9	UG/L
CHROMIUM	6020A	5	1	7440-47-3	UG/L
COBALT	6020A	5	1	7440-48-4	UG/L
COPPER	6020A	5	1.7	7440-50-8	UG/L
LEAD	6020A	3	1	7439-92-1	UG/L
NICKEL	6020A	10	2	7440-02-0	UG/L
SELENIUM	6020A	10	3	7782-49-2	UG/L
SILVER	6020A	2	0.3	7440-22-4	UG/L
THALLIUM	6020A	1	0.2	7440-28-0	UG/L
VANADIUM	6020A	10	2.5	7440-62-2	UG/L
ZINC	6020A	30	7.3	7440-66-6	UG/L

15 analytes

These are Appendix IX wells. Report to permit MDL with estimated results. ✓

Rev 2021 Class 1 Permit Mod -JCF

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7-25-2023

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Barb

- See notes on COC
- report the analytes on attached list in yellow highlight. note isosafrole + Pronamide no longer w/ ELE as lab could not meet Permit MDL. Report to Permit MDL.
- report preliminary data so we can confirm project QL/dL is met.

HAZARDOUS WASTE MANAGEMENT
POST-CLOSURE CARE PERMIT

ATTACHMENT 1

APPENDIX I

ANNUAL GROUNDWATER SAMPLING CONSTITUENT LIST

(APPENDIX IX 40 CFR PART 264)

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APPENDIX IX METHOD/DETECTION LIMITS

Analyte	CAS Number	METHOD	PQL (ug/l)	MDL (ug/1)
1,1,1,2-Tetrachloroethane	630-20-6	8260	1	0.3
1,1,1 -Trichloroethane	71-55-6	8260	1	0.3
1,1,2,2-Tetrachloroethane	79-34-5	8260	1	0.3
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	8260	1	0.4
1,1,2-Trichloroethane	79-00-5	8260	1	0.3
1,1 -Dichloroethane	75-34-3	8260	1	0.3
1,1 -Dichloroethene	75-35-4	8260	1	0.3
1,2,3-Trichloropropane	96-18-4	8260	1	0.3
1,2,4,5-Tetrachlorobenzene	95-94-3	8270	10	2
1,2,4-Trichlorobenzene	120-82-1	8260	1	0.6
1,2,4-Trichlorobenzene (dup-8260)	120-82-1	8270	10	0.43
1,2-dibromo-3-chloropropane	96-12-8	8260	1	0.4
1,2-dibromoethane	106-93-4	8260	1	0.3
1,2-Dichlorobenzene	95-50-1	8260	1	0.4
1,2-Dichlorobenzene (dup 8260)	95-50-1	8270	10	0.48
1,2-Dichloroethane	107-06-2	8260	1	0.3
1,2-Dichloropropane	78-87-5	8260	1	0.4
1,3-Dichlorobenzene	541-73-1	8260	1	0.4
1,3-Dichlorobenzene (dup 8260)	541-73-1	8270	10	0.52
1,3-Dichloropropane	142-28-9	8260	1	0.4
1,3-Dinitrobenzene	99-65-0	8270	10	2.3
1,4-Dichlorobenzene	106-46-7	8260	1	0.4
1,4-Dichlorobenzene (dup 8260)	106-46-7	8270	10	0.37
1,4-Dioxane	123-91-1	8260	200	45.48
1,4-Napthoquinone	130-15-4	8270	10	3.0
1 -Naphthylamine	134-32-7	8270	10	3.0
2,3,4,6-Tetrachlorophenol	58-90-2	8270	10	1.8
2,4,5-Trichlorophenol	95-95-4	8270	10	2.0
2,4,6-Trichlorophenol	88-06-2	8270	10	1.8
2,4-Dichlorophenol	120-83-2	8270	10	1.59
2,4-Dimethylphenol	105-67-9	8270	10	3.0

Analyte	CAS Number	METHOD	PQL (ug/l)	MDL (ug/l)
2,4-Dinitrophenol	51-28-5	8270	10	6.2
2,4-Dinitrotoluene	121-14-2	8270	10	2.1
2,6-Dichlorophenol	87-65-0	8270	10	1.4
2,6-Dinitrotoluene	606-20-2	8270	10	2.1
2-Acetylaminofluorene	53-96-3	8270	10	3.0
2-Butanone	78-93-3	8260	10	1.7
2-Chloronaphthalene	91-58-7	8270	10	0.5
2-Chlorophenol	95-57-8	8270	10	1.0
2-Hexanone	591-78-6	8260	10	2.0
2-Methylnaphthalene	91-57-6	8270	10	0.29
2-Naphthylamine	91-59-8	8270	10	7.0
2-Nitroaniline	88-74-4	8270	10	1.0
2-Nitrophenol	88-75-5	8270	10	1.27
2-Picoline	109-06-8	8270	10	1.0
2-Propanol - 5 ml purge	67-63-0	8260	100	50
3,3 '-Dichlorobenzidine	91-94-1	8270	10	3.0
3,3 '-Dimethylbenzidine	119-93-7	8270	10	3.3
3-Methylcholanthrene	56-49-5	8270	10	1.0
3-Nitroaniline	99-09-2	8270	10	2.0
4,6-Dinitro-2-methylphenol	534-52-1	8270	10	3.0
4-Aminobiphenyl	92-67-1	8270	10	3.0
4-Bromophenyl phenyl ether	101-55-3	8270	10	0.56
4-Chloro-3-methylphenol	59-50-7	8270	10	1.0
4-Chloroaniline	106-47-8	8270	10	3.3
4-Chlorophenyl phenyl ether	7005-72-3	8270	10	0.6
4-Methyl-2-pentanone	108-10-1	8260	10	2.0
4-Nitroaniline	106-44-5	8270	10	1.5
4-Nitrophenol	100-01-6	8270	10	3.0
4-Nitroquinoline-1 -oxide	100-02-7	8270	50	5
5-Nitro-o-toluidine	56-57-5	8270	10	2.0
7,12-Dimethylbenz(a)anthracene	99-55-8	8270	10	1.8
a,a-Dimethylphenethylamine	57-97-6	8270	50	5
Acenaphthene	122-09-8	8270	10	0.35

Analyte	CAS Number	METHOD	PQL(ug/l)	MDL(ug/l)
Acenaphthylene	208-96-8	8270	10	0.48
Acetone	67-64-1	8260	10	2.0
Acetonitrile	75-05-8	8260	100	31.67
Acetophenone	98-86-2	8270	10	1.0
Acrolein	107-02-8	8260	10	3.4
Acrylonitrile	107-13-1	8260	10	1.1
Allyl chloride/ (3-Chloropropene)	107-05-1	8260	10	1.0
Aniline	62-53-3	8270	10	1.1
Anthracene	120-12-7	8270	10	0.52
Antimony	7440-36-0	6020 /6010	2	0.6
Aramite	140-57-8	8270	10	3.7
Arsenic	7440-38-2	6020/ 6010	10	2
Barium	7440-39-3	6020/ 6010	10	1.3
Benzene	71-43-2	8260	1	0.3
Benzo(a)anthracene	56-55-3	8270	10	0.45
Benzo(a)pyrene	50-32-8	8270	10	1.5
Benzo(b)fluoranthene	205-99-2	8270	10	1.2
Benzo(g,h,i)perylene	191-24-2	8270	10	0.42
Benzo(k)fluoranthene	207-08-9	8270	10	1.6
Benzyl alcohol	100-51-6	8270	10	3.0
Beryllium	7440-41-7	6020/ 6010	1	0.3
Bis(2-chlorethoxy)methane	111-91-1	8270	1	0.5
Bis(2-chloroethyl)ether	111-44-4	8270	1	0.5
Bis(2-chloroisopropyl)ether	108-60-1	8270	10	0.6
Bis(2-ethylhexyl)phthalate	117-81-7	8270	10	2.0
Bromodichloromethane	75-27-4	8260	1	0.3
Bromoform	75-25-2	8260	1	0.4
Bromomethane	74-83-9	8260	1	0.542
Butyl benzyl phthalate	85-68-7	8270	10	0.7
Cadmium	7440-43-9	6020/6010	1	0.2
Carbon disulfide	75-15-0	8260	10	0.4
Chloroethane (required as compliance well not App IX		8260	1	
Chloromethane (required as compliance well not App IX		8260	1	
Carbon tetrachloride	56-23-5	8260	1	0.3
Chlorobenzilate	510-15-6	8270	10	3.0

Analyte	CAS Number	METHOD	PQL(ug/l)	MDL(ug/l)
Chloroform	67-66-3	8260	1	0.3
Chloroprene/ (2-Chloro-1,3-butadiene	126-99-8	8260	10	0.46
Chromium	7440-47-3	6020/6010	5	1.0
Chrysene	218-01-9	8270	10	0.31
Cobalt	7440-48-4	6020/6010	5	1.0
Copper	7440-50-8	6020/6010	5	1.7
Cyanide	57-12-5	9010	20	5
Diallate	2303-16-4	8270	10	3.0
Dibenzo(a,h)anthracene	53-70-3	8270	10	0.38
Dibenzofuran	132-64-9	8270	10	0.6
Dibromochloromethane	124-48-1	8260	1	0.4
Dibromomethane/ (methylene bromide)	74-95-3	8260	1	0.3
Dichlorodifluoromethane	75-71-8	8260	1	0.4
Diethyl ether/ (ethyl ether)	60-29-7	8260	12.5	1.11
Diethyl phthalate	84-66-2	8270	10	2.0
Dimethoate	60-51-5	8270	10	3.0
Dimethyl ether (8260C)	115-10-6	8260	12.5	1.11
Dimethyl phthalate – GEL 1/0.3	131-11-3	8270	10	0.5
Di-n-butyl phthalate	84-74-2	8270	10	1.8
Di-n-octyl phthalate-GEL 1/0.3	117-84-0	8270	10	0.8
Diphenylamine (as n-nitrosodiphenylamine	86-30-6	8270	10	0.58
Disulfoton	298-04-4	8270	10	3.0
Ethyl methacrylate	97-63-2	8260	10	0.81
Ethyl methacrylate (DUP	97-63-2	8270	10	0.2
Ethyl methanesulfonate	62-50-0	8270	10	1.1
Ethylbenzene	100-41-4	8260	1	0.3
Famphur	52-85-7	8270	10	5.0
Fluoranthene	206-44-0	8270	10	0.42
Fluorene	86-73-7	8270	10	0.38

Analyte	CAS Number	METHOD	PQL (ug/I)	MDL (ug/I)
Heaxachloroethane	67-72-1	8260/8270	10	0.4
Hexachlorobenzene	118-74-1	8270	10	0.87
Hexachlorobutadiene	87-68-3	8260	1	0.4
Hexachlorocyclopentadiene	77-47-4	8270	10	3.0
Hexachlorophene – GEL 500/167	70-30-4	8270	500	185
Hexachloropropene	1888-71-7	8270	10	2
Indeno(1 ,2,3-cd)pyrene	193-39-5	8270	10	0.15
Iodomethane/ (methyl iodide)	74-88-4	8260	10	0.58
Isobutyl alcohol	78-83-1	8260	200	11.6
Isodrin	465-73-6	8270	10	1.1
Isophorone	78-59-1	8270	10	0.5
Isosafrole (Pace WC -)	120-58-1	8270	10	1.6
Kepone	143-50-0	8270	50	25
Lead	7439-92-1	6020/6010	3	1.0
m,p-Cresol	106-44-5	8270	20	2.47
m,p-Xylene	179601-23-1	8260	2	0.4
Mercury	7439-97-6	7470	2	0.2
Methacrylonitrile	126-98-7	8260	100	9.75
Methapyrilene	91-80-5	8270	10	3.0
Methyl methacrylate	80-62-6	8260	10	3.58
Methyl methanesulfonate	66-27-3	8270	10	1.0
Methyl parathion	298-00-0	8270	10	3.2
Methylene chloride	75-09-2	8260	1	0.7
Naphthalene	91-20-3	8260	1	0.4
Nickel	7440-02-0	6020/6010	10	2.0
Nitrobenzene	98-95-3	8270	10	0.6
N-Nitrosodiethylamine	55-18-5	8270	10	3.0
N-Nitrosodimethylamine	62-75-9	8270	10	2.0
N-Nitroso-di-n-butylamine	924-16-3	8270	10	3.0
N-Nitrosodi-n-propylamine	621-64-7	8270	10	0.5
N-Nitrosodiphenylamine (as diphenylamine)	86-30-6	8270	10	0.58
n-Nitrosomethylethylamine	10595-95-6	8270	10	1.0

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Analyte	CAS Number	METHOD	PQL(ug /I)	MDL (ug/1)
N-Nitrosomorpholine	59-89-2	8270	10	3.0
N-Nitrosopiperidine	100-75-4	8270	10	1.1
N-Nitrosopyrrolidine	930-55-2	8270	10	0.5
o,o,o-Triethylphosphorothioate	126-68-1	8270	10	2.6
o,o-Diethyl-o-2-pyrazinyl phosphorothioate/ (Thionazin)	297-97-2	8270	10	2.4
o-Cresol/ (2-methylphenol)	95-48-7	8270	10	0.96
o-Toluidine	95-53-4	8270	10	4.0
o-Xylene	95-47-6	8260	1	0.4
Parathion/ (Ethyl parathion)	56-38-2	8270	10	3.0
p-Dimethylaminoazobenzene	60-11-7	8270	10	3.0
Pentachlorobenzene	608-93-5	8270	10	1.6
Pentachloroethane	76-01-7	8260	10	1.7
Pentachloroethane (DUP)	76-01-7	8270	10	2.7
Pentachloronitrobenzene (PACE W.Columbia – 10/1)	82-68-8	8270	10	1.0
Pentachlorophenol	87-86-5	8270	10	3.0
Phenacetin	62-44-2	8270	10	1.4
Phenanthrene	85-01-8	8270	10	0.52
Phenol	108-95-2	8270	10	0.77
Phorate	298-02-2	8270	10	2.5
p-Phenylenediamine	106-50-3	8270	150	26.4
Pronamide (pace WC)	23950-58-5	8270	10	1.5
Propionitrile	107-12-0	8260	100	10.22
Pyrene	129-00-0	8270	10	0.41
Pyridine	110-86-1	8270	10	2.0
Safrole	94-59-7	8270	10	2.2
Selenium	7782-49-2	6020/6010	10	3.0
Silver	7440-22-4	6020/6010	2	0.3
Styrene	100-42-5	8260	1	0.3
Sulfotep	3689-24-5	8270	10	2.4
sym-Trinitrobenzene/ (1,3,5-trinitrobenzene)	99-35-4	8270	10	3.0
Tetrachloroethene	127-18-4	8260	1	0.3
Tetrahydrofuran	109-99-9	8260	25	2
Thallium	7440-28-0	6020/6010	1	0.2
Toluene	108-88-3	8260	1	0.3

Analyte	CAS Number	METHOD	PQL (ug/l)	MDL (ug/l)
trans-1,2-Dichloroethene	156-60-5	8260	1	0.3
trans-1,3-Dichloropropene	10061-02-6	8260	1	0.4
trans-1,4-Dichloro-2-butene	110-57-6	8260	10	1.5
Trichloroethene	79-01-6	8260	1	0.3
Trichlorofluoromethane	75-69-4	8260	1	0.4
Vanadium	7440-62-2	6020/6010	10	2.5
Vinyl acetate	108-05-4	8260	10	3.29
Vinyl chloride	75-01-4	8260	1	0.2
Xylenes, Total	1330-20-7	8260	3	0.4
Zinc	7440-66-6	6020/6010	30	7.3

Notes:
ug/l = micrograms per liter
PQL = Practical Quantitation Limit
MDL = Method Detection Limit
CAS = Chemical Abstracts Service Registry Number

Purple – GEL
Yellow – ELLE
Blue – Eurofins Test America- Canton
Pace – West Columbia – moved Isofrole and pronamide from ELLE to Paces WC

VOCs – ELLE and ETA
SVOCs – ELLE, TA, GEL, PACE WC….Final 7-25-23 JCF

Login Sample Receipt Checklist

Client: TRC, Engineers, Inc.

Job Number: 410-136514-2

Login Number: 136514

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 1

Creator: McCaskey, Jonathan

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable (</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	True	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	True	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Janet Frazier
TRC, Engineers, Inc.
2200 South Main Street
Suite A
Blacksburg VA 24060

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JOB DESCRIPTION

RFAAP, Radford HWMU16

JOB NUMBER

410-136864-3

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster PA 17601

See page two for job notes and contact information.

myEOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization

Barb Weyandt

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9/19/2023 12:23 PM

Authorized for release by
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Designee for
Barbara A Weyandt, Project Manager
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Eurofins Lancaster Laboratories Environment Testing, LLC

Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.
· QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
· Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
· Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. The foregoing express warranty is exclusive and is given in lieu of all other warranties, expressed or implied, except as otherwise agreed. We disclaim any other warranties, expressed or implied, including a warranty of fitness for particular purpose and warranty of merchantability. In no event shall Eurofins Lancaster Laboratories Environmental, LLC be liable for indirect, special, consequential, or incidental damages including, but not limited to, damages for loss of profit or goodwill regardless of (A) the negligence (either sole or concurrent) of Eurofins Lancaster Laboratories Environmental and (B) whether Eurofins Lancaster Laboratories Environmental has been informed of the possibility of such damages. We accept no legal responsibility for the purposes for which the client uses the test results. Except as otherwise agreed, no purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job Narrative
410-136864-3

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 7/28/2023 9:25 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.9°C and 1.8°C

Receipt Exceptions
A trip blank was received in the cooler/package, but not entered with this job. The Trip blank logged in and reported with job number 410-136514.

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Detection Summary

Client: TRC, Engineers, Inc.
Job ID: 410-136864-3
Project/Site: RFAAP, Radford HWMU16

Client Sample ID: 16WC1B
Lab Sample ID: 410-136864-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Silver	0.87	J	2.0	0.30	ug/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client: TRC, Engineers, Inc.
Job ID: 410-136864-3
Project/Site: RFAAP, Radford HWMU16

Client Sample ID: 16WC1B
Lab Sample ID: 410-136864-6
Date Collected: 07/26/23 12:05
Matrix: Water
Date Received: 07/28/23 09:25

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.87	J	2.0	0.30	ug/L		09/18/23 04:45	09/19/23 10:08	1

Default Detection Limits

Client: TRC, Engineers, Inc.
Job ID: 410-136864-3
Project/Site: RFAAP, Radford HWMU16

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Prep: 3005A

Analyte	RL	MDL	Units
Silver	2.0	0.30	ug/L

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 410-420398/1-A
Matrix: Water
Analysis Batch: 421066

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 420398

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		2.0	0.30	ug/L		09/18/23 04:45	09/19/23 09:14	1

Lab Sample ID: LCS 410-420398/2-A
Matrix: Water
Analysis Batch: 421066

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 420398

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Silver	50.0	49.5		ug/L		99	88 - 113

Lab Sample ID: LRC 410-421066/9
Matrix: Water
Analysis Batch: 421066

Client Sample ID: Lab Control Sample

Analyte	Spike Added	LRC Result	LRC Qualifier	Unit	D	%Rec	%Rec Limits
Silver	2000	1890		ug/L		94	90 - 110

Metals

Prep Batch: 420398

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136864-6	16WC1B	Total Recoverable	Water	3005A	
MB 410-420398/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-420398/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 421066

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136864-6	16WC1B	Total Recoverable	Water	6020B	420398
MB 410-420398/1-A	Method Blank	Total Recoverable	Water	6020B	420398
LCS 410-420398/2-A	Lab Control Sample	Total Recoverable	Water	6020B	420398
LRC 410-421066/9	Lab Control Sample		Water	6020B	

Lab Chronicle

Client: TRC, Engineers, Inc.
Job ID: 410-136864-3
Project/Site: RFAAP, Radford HWMU16

Client Sample ID: 16WC1B
Lab Sample ID: 410-136864-6
Date Collected: 07/26/23 12:05
Matrix: Water
Date Received: 07/28/23 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			420398	UAMX	ELLE	09/18/23 04:45
Total Recoverable	Analysis	6020B		1	421066	F7JF	ELLE	09/19/23 10:08

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: TRC, Engineers, Inc.
Job ID: 410-136864-3
Project/Site: RFAAP, Radford HWMU16

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Virginia	NELAP	460182	06-14-25

Method Summary

Client: TRC, Engineers, Inc. Job ID: 410-136864-3
Project/Site: RFAAP, Radford HWMU16

Method	Method Description	Protocol	Laboratory
6020B	Metals (ICP/MS)	SW846	ELLE
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	ELLE

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: TRC, Engineers, Inc.
Job ID: 410-136864-3
Project/Site: RFAAP, Radford HWMU16

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-136864-6	16WC1B	Water	07/26/23 12:05	07/28/23 09:25

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-3

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
MP_1:1HCl_00030	02/23/24	08/23/23	DI Water, Lot DI08232023	20000 mL	MT_HCl_JT_00012	10000 mL	Hydrogen Chloride	188000 ug/mL
.MT_HCl_JT_00012	08/18/24	J.T.Baker, Lot 23F0662014			(Purchased Reagent)		Hydrogen Chloride	37.6 %
MP_1:1HNO3_00047	03/11/24	09/11/23	DI Water, Lot DI09112023	20000 mL	MT_HNO3_Fishe_00009	10000 mL	Nitric acid	340000 ug/mL
.MT_HNO3_Fishe_00009	06/15/24	Fisher, Lot 226243			(Purchased Reagent)		Nitric acid	68 %
MP_FilterH20_00131	09/25/23	09/18/23	DI Water, Lot DI08142023	1000 mL	MP_PresSol_00024	5 mL	Nitric acid	571.2 ug/mL
.MP_PresSol_00024	12/01/23	06/01/23	DI Water, Lot DI06012023	1000 mL	MT_HNO3_Fishe_00004	168 mL	Nitric acid	114240 ug/mL
..MT_HNO3_Fishe_00004	02/28/24	Fisher, Lot 225038			(Purchased Reagent)		Nitric acid	68 %
MT_LCS-SPK-A_00028	09/14/24	Inorganic Ventures, Lot U2-MEB728825			(Purchased Reagent)		Al	1250 mg/L
							As	125 mg/L
							B	125 mg/L
							Ba	125 mg/L
							Be	12.5 mg/L
							Ca	1250 mg/L
							Cd	12.5 mg/L
							Co	125 mg/L
							Cr	125 mg/L
							Cu	125 mg/L
							Fe	1250 mg/L
							K	1250 mg/L
							Li	125 mg/L
							Mg	1250 mg/L
							Mn	125 mg/L
							Na	1250 mg/L
							Ni	125 mg/L
							P	125 mg/L
							Pb	12.5 mg/L
							Se	25 mg/L
							Silver	12.5 mg/L
							Sr	12.5 mg/L
							Sulfur	1250 mg/L
							Th	125 mg/L
							Tl	25 mg/L
							U	12.5 mg/L
							V	125 mg/L
							Zn	125 mg/L
MT_LCS-SPK-B_00027	09/14/24	Inorganic Ventures, Lot U2-MEB728826			(Purchased Reagent)		Mo	12.5 mg/L
							Sb	25 mg/L
							Si	1250 mg/L
							Sn	25 mg/L
							Ti	125 mg/L
							W	125 mg/L

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-3

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Zr	125 mg/L
MT_MJ_CCV_00172	10/06/23	09/06/23	DI Water, Lot DI09062023	5 L	MT_S_MSSPK-A_00007	5 mL	Silver	50 ppb
.MT_S_MSSPK-A_00007	08/23/24	Inorganic Ventures, Lot U2-MEB728823			(Purchased Reagent)		Silver	50 ug/mL
MT_MJ_CRI-V_00156	09/23/23	09/08/23	J, Lot 4170412	1 L	MT_S_MWLLC_SC_00005	1 mL	Silver	0.496 ug/L
.MT_S_MWLLC_SC_00005	09/30/23	SCP Science, Lot S220721047			(Purchased Reagent)		Silver	0.496 ug/mL
MT_MJ_ICSA_00106	09/30/23	08/31/23	J, Lot 4724411	500 mL	MT_S_ICS2A_IV_00011	50 mL	Al	100 ug/mL
							As	0.0077 ug/mL
							Ba	0.0004 ug/mL
							Be	0.000011 ug/mL
							Ca	298.8 ug/mL
							Cd	0.00045 ug/mL
							Co	0.00028 ug/mL
							Cr	0.0036 ug/mL
							Cu	0.00044 ug/mL
							Fe	260.1 ug/mL
							K	100 ug/mL
							Mg	100 ug/mL
							Mn	0.0006 ug/mL
							Mo	2.001 ug/mL
							Na	260.1 ug/mL
							Ni	0.0012 ug/mL
							Pb	0.000093 ug/mL
							Sb	0.00012 ug/mL
							Se	0.000072 ug/mL
							Silver	0.0003 ug/mL
							Sn	0.00017 ug/mL
							Sr	0.0018 ug/mL
							Ti	2.001 ug/mL
							Tl	0.000062 ug/mL
							U	0.00011 ug/mL
							V	0.00031 ug/mL
							Zn	0.0011 ug/mL
.MT_S_ICS2A_IV_00011	07/22/25	Inorganic Ventures, Lot T2-MEB714677			(Purchased Reagent)		Al	1000 ug/mL
							As	0.077 ug/mL
							Ba	0.004 ug/mL
							Be	0.00011 ug/mL
							Ca	2988 ug/mL
							Cd	0.0045 ug/mL
							Co	0.0028 ug/mL
							Cr	0.036 ug/mL
							Cu	0.0044 ug/mL

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-3

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Fe	2601 ug/mL
							K	1000 ug/mL
							Mg	1000 ug/mL
							Mn	0.006 ug/mL
							Mo	20.01 ug/mL
							Na	2601 ug/mL
							Ni	0.012 ug/mL
							Pb	0.00093 ug/mL
							Sb	0.0012 ug/mL
							Se	0.00072 ug/mL
							Silver	0.003 ug/mL
							Sn	0.0017 ug/mL
							Sr	0.018 ug/mL
							Ti	20.01 ug/mL
							Tl	0.00062 ug/mL
							U	0.0011 ug/mL
							V	0.0031 ug/mL
							Zn	0.011 ug/mL
MT_MJ_ICSAB_00083	10/07/23	09/07/23	J, Lot 4224585	500 mL	MT_S_ICS2A_IV_00011	50 mL	Al	100 ug/mL
							As	0.1077 ug/mL
							Ba	0.0004 ug/mL
							Be	0.000011 ug/mL
							Ca	298.8 ug/mL
							Cd	0.10045 ug/mL
							Co	0.20038 ug/mL
							Cr	0.2037 ug/mL
							Cu	0.20054 ug/mL
							Fe	260.1 ug/mL
							K	100 ug/mL
							Mg	100 ug/mL
							Mn	0.2007 ug/mL
							Mo	2.001 ug/mL
							Na	260.1 ug/mL
							Ni	0.2013 ug/mL
							Pb	0.000093 ug/mL
							Sb	0.00012 ug/mL
							Se	0.100072 ug/mL
							Silver	0.05032 ug/mL
							Sn	0.00017 ug/mL
							Sr	0.0018 ug/mL
							Ti	2.001 ug/mL
							Tl	0.000062 ug/mL
							U	0.00011 ug/mL

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-3

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							V	0.20041 ug/mL
							Zn	0.1011 ug/mL
					MT_S_ICS2B_IV_00011	5 mL	As	0.1077 ug/mL
							Cd	0.10045 ug/mL
							Co	0.20038 ug/mL
							Cr	0.2037 ug/mL
							Cu	0.20054 ug/mL
							Mn	0.2007 ug/mL
							Ni	0.2013 ug/mL
							Se	0.100072 ug/mL
							Silver	0.05032 ug/mL
							V	0.20041 ug/mL
							Zn	0.1011 ug/mL
.MT_S_ICS2A_IV_00011	07/22/25	Inorganic Ventures, Lot T2-MEB714677			(Purchased Reagent)		Al	1000 ug/mL
							As	0.077 ug/mL
							Ba	0.004 ug/mL
							Be	0.00011 ug/mL
							Ca	2988 ug/mL
							Cd	0.0045 ug/mL
							Co	0.0028 ug/mL
							Cr	0.036 ug/mL
							Cu	0.0044 ug/mL
							Fe	2601 ug/mL
							K	1000 ug/mL
							Mg	1000 ug/mL
							Mn	0.006 ug/mL
							Mo	20.01 ug/mL
							Na	2601 ug/mL
							Ni	0.012 ug/mL
							Pb	0.00093 ug/mL
							Sb	0.0012 ug/mL
							Se	0.00072 ug/mL
							Silver	0.003 ug/mL
							Sn	0.0017 ug/mL
							Sr	0.018 ug/mL
							Ti	20.01 ug/mL
							Tl	0.00062 ug/mL
							U	0.0011 ug/mL
							V	0.0031 ug/mL
							Zn	0.011 ug/mL
.MT_S_ICS2B_IV_00011	10/25/23	Inorganic Ventures, Lot S2-MEB711470			(Purchased Reagent)		As	10 ug/mL
							Cd	10 ug/mL
							Co	20.01 ug/mL
							Cr	20.01 ug/mL
							Cu	20.01 ug/mL
							Mn	20.01 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-3

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Ni	20.01 ug/mL
							Se	10 ug/mL
							Silver	5.002 ug/mL
							V	20.01 ug/mL
							Zn	10 ug/mL
MT_MJ_ICV_00091	10/07/23	09/08/23	J, Lot 4170412	1 L	MT_S_ICVSPK-A_00005	2 mL	Silver	50 ppb
.MT_S_ICVSPK-A_00005	04/03/24	High-Purity Standards, Lot U2-MEB728821			(Purchased Reagent)		Silver	25 ug/mL
MT_MJ_LRC_00096	10/07/23	09/08/23	J, Lot 4119918	0.5 L	MT_I_CCVSPK-A_00005	10 mL	Silver	2000 ppb
.MT_I_CCVSPK-A_00005	04/12/24	Inorganic Ventures, Lot T2-MEB720690			(Purchased Reagent)		Silver	100 mg/L
MT_MJ_S1_00112	10/09/23	09/10/23	J, Lot 4724411	500 mL	MT_S_MSSPK-A_00007	1 mL	Silver	100 ppb
.MT_S_MSSPK-A_00007	08/23/24	Inorganic Ventures, Lot U2-MEB728823			(Purchased Reagent)		Silver	50 ug/mL

Reagent

MT_HCl_JT_00012

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

Material No.: 9530-33
Batch No.: 23F0662014
Manufactured Date: 2023-05-18
Retest Date: 2028-05-16
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS - Assay (as HCl) (by acid-base titrn)	36.5 - 38.0 %	37.4 %
ACS - Color (APHA)	≤ 10	5
ACS - Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS - Specific Gravity at 60°/60°F	1.185 - 1.192	1.189
ACS - Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS - Extractable Organic Substances	≤ 5 ppm	1 ppm
ACS - Free Chlorine (as Cl_2)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO_4)	≤ 0.05 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO_3)	≤ 0.8 ppm	0.2 ppm
Ammonium (NH_4)	≤ 3 ppm	< 1 ppm
Trace Impurities - Arsenic (As)	≤ 0.010 ppm	< 0.003 ppm
Trace Impurities - Aluminum (Al)	≤ 10.0 ppb	0.6 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities - Barium (Ba)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Beryllium (Be)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Bismuth (Bi)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Boron (B)	≤ 20.0 ppb	< 5.0 ppb
Trace Impurities - Cadmium (Cd)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	40.0 ppb
Trace Impurities - Chromium (Cr)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities - Cobalt (Co)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities - Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities - Gallium (Ga)	≤ 1.0 ppb	0.2 ppb
Trace Impurities - Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities - Gold (Au)	≤ 4.0 ppb	< 0.2 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities - Iron (Fe)	≤ 15 ppb	< 1 ppb

>>> Continued on page 2 >>>

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

Material No.: 9530-33
Batch No.: 23F0662014

Test	Specification	Result
Trace Impurities - Lead (Pb)	≤ 1.0 ppb	< 0.5 ppb
Trace Impurities - Lithium (Li)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Magnesium (Mg)	≤ 10.0 ppb	1.3 ppb
Trace Impurities - Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities - Mercury (Hg)	≤ 0.5 ppb	0.1 ppb
Trace Impurities - Molybdenum (Mo)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Nickel (Ni)	≤ 4.0 ppb	< 0.3 ppb
Trace Impurities - Niobium (Nb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Potassium (K)	≤ 9.0 ppb	< 2.0 ppb
Trace Impurities - Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities - Silicon (Si)	≤ 100.0 ppb	< 10.0 ppb
Trace Impurities - Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities - Sodium (Na)	≤ 100.0 ppb	< 5.0 ppb
Trace Impurities - Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Tantalum (Ta)	≤ 1.0 ppb	< 0.9 ppb
Trace Impurities - Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Tin (Sn)	≤ 5.0 ppb	< 0.8 ppb
Trace Impurities - Titanium (Ti)	≤ 1.0 ppb	0.3 ppb
Trace Impurities - Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Zinc (Zn)	≤ 5.0 ppb	< 0.3 ppb
Trace Impurities - Zirconium (Zr)	≤ 1.0 ppb	0.2 ppb

>>> Continued on page 3 >>>

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
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Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

Material No.: 9530-33
Batch No.: 23F0662014

Test	Specification	Result

For Laboratory,Research,or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications
Storage Condition: Store below 25 °C.

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Ken Koehnlein
Sr. Manager, Quality Assurance

Reagent

MT_HNO3_Fishe_00004

ThermoFisher SCIENTIFIC

Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120633

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	A200	Quality Test / Release Date	11/14/2022
Lot Number	225038		
Description	NITRIC ACID, CERTIFIED ACS		
Country of Origin	United States	Suggested Retest Date	Nov/2027
Chemical Origin	Inorganic-non animal		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

N/A

Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Clear, colorless liquid free from suspended matter.
ALUMINUM	ppm	<= 0.2	<0.2
ARSENIC (As)	ppm	<= 0.004	<0.004
ASSAY	w/w %	Inclusive Between 68.0 - 70.0	69.8
BORON (B)	ppm	<= 0.1	<0.1
CALCIUM (Ca)	ppm	<= 0.2	<0.2
CHLORIDE	ppm	<= 0.08	<0.08
CHROMIUM (Cr)	ppm	<= 0.1	<0.1
COLOR	APHA	<= 10	<10
COPPER (Cu)	ppm	<= 0.05	<0.05
GOLD (Au)	ppm	<= 0.3	<0.3
HEAVY METALS (as Pb)	ppm	<= 0.2	<0.2
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
IRON (Fe)	ppm	<= 0.2	<0.2
LEAD (Pb)	ppm	<= 0.1	<0.1
MAGNESIUM (Mg)	ppm	<= 0.3	<0.3
NICKEL (Ni)	ppm	<= 0.05	<0.05
PHOSPHATE (PO4)	ppm	<= 0.2	<0.2
POTASSIUM (K)	ppm	<= 0.3	<0.3
RESIDUE AFTER IGNITION	ppm	<= 2	<2
SODIUM (Na)	ppm	<= 0.3	<0.3
SULFATE (SO4)	ppm	<= 0.5	<0.5
TIN (Sn)	ppm	<= 0.3	<0.3
TITANIUM (Ti)	ppm	<= 0.3	<0.3

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120633

ZINC (Zn)	ppm	<= 0.3	<0.3

Chetan Dudhatra - Quality Control Supervisor - Bridgewater

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

Reagent

MT_HNO3_Fishe_00009

ThermoFisher SCIENTIFIC

Certificate of Analysis

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201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120633

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Catalog Number	A200	Quality Test / Release Date	02/01/2023
Lot Number	226243		
Description	NITRIC ACID, CERTIFIED ACS		
Country of Origin	Canada	Suggested Retest Date	Jan/2028
Chemical Origin	Inorganic-non animal		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Clear, colorless free from suspended matter
ALUMINUM	ppm	<= 0.2	<0.2
ARSENIC (As)	ppm	<= 0.004	<0.004
ASSAY	w/w %	Inclusive Between 68.0 - 70.0	69.6
BORON (B)	ppm	<= 0.1	<0.1
CALCIUM (Ca)	ppm	<= 0.2	<0.2
CHLORIDE	ppm	<= 0.08	<0.08
CHROMIUM (Cr)	ppm	<= 0.1	<0.1
COLOR	APHA	<= 10	<10
COPPER (Cu)	ppm	<= 0.05	<0.05
GOLD (Au)	ppm	<= 0.3	<0.3
HEAVY METALS (as Pb)	ppm	<= 0.2	<0.2
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
IRON (Fe)	ppm	<= 0.2	<0.2
LEAD (Pb)	ppm	<= 0.1	<0.1
MAGNESIUM (Mg)	ppm	<= 0.3	<0.3
NICKEL (Ni)	ppm	<= 0.05	<0.05
PHOSPHATE (PO4)	ppm	<= 0.2	<0.2
POTASSIUM (K)	ppm	<= 0.3	<0.3
RESIDUE AFTER IGNITION	ppm	<= 2	<2
SODIUM (Na)	ppm	<= 0.3	<0.3
SULFATE (SO4)	ppm	<= 0.5	<0.5
TIN (Sn)	ppm	<= 0.3	<0.3
TITANIUM (Ti)	ppm	<= 0.3	<0.3

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120633

ZINC (Zn)	ppm	<= 0.3	<0.3

Chetan Dudhatra - Quality Control Supervisor - Bridgewater

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

Reagent

MT_I_CCVSPK-A_00005

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	35-TSPEURF-CCV-A
Lot Number:	T2-MEB720690
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea:

Aluminum, Calcium,
Iron, Potassium,
Magnesium, Sodium,
Sulfur,

100 µg/mL ea:

Selenium, Strontium,
Thorium, Thallium,
Vanadium, Zinc,
Silver, Nickel,
Phosphorus, Lead,
Manganese, Lithium,
Cadmium, Cobalt,
Chromium, Copper,
Arsenic, Boron,
Barium, Beryllium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	5 000 ± 18 µg/mL	Arsenic, As	100.0 ± 0.9 µg/mL
Barium, Ba	100.0 ± 0.5 µg/mL	Beryllium, Be	100.0 ± 0.7 µg/mL
Boron, B	100.0 ± 0.6 µg/mL	Cadmium, Cd	100.0 ± 0.4 µg/mL
Calcium, Ca	4 999 ± 22 µg/mL	Chromium, Cr	100.0 ± 0.8 µg/mL
Cobalt, Co	100.0 ± 0.6 µg/mL	Copper, Cu	100.0 ± 0.5 µg/mL
Iron, Fe	5 000 ± 21 µg/mL	Lead, Pb	100.0 ± 0.6 µg/mL
Lithium, Li	100.0 ± 0.4 µg/mL	Magnesium, Mg	5 000 ± 20 µg/mL
Manganese, Mn	100.0 ± 0.5 µg/mL	Nickel, Ni	100.0 ± 0.6 µg/mL
Phosphorus, P	100.0 ± 0.4 µg/mL	Potassium, K	5 000 ± 22 µg/mL
Selenium, Se	100.0 ± 0.6 µg/mL	Silver, Ag	100.0 ± 0.4 µg/mL
Sodium, Na	5 000 ± 22 µg/mL	Strontium, Sr	100.1 ± 0.4 µg/mL
Sulfur, S	5 000 ± 25 µg/mL	Thallium, Tl	100.0 ± 0.7 µg/mL
Thorium, Th	100.0 ± 0.5 µg/mL	Vanadium, V	100.0 ± 0.6 µg/mL
Zinc, Zn	100.0 ± 0.5 µg/mL		

Density: 1.127 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
B	ICP Assay	3107	190605
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
S	Acidimetric	84L	84L
S	ICP Assay	traceable to 3154	P2-S680745
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Th	EDTA	928	928
Tl	ICP Assay	3158	151215
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 27, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 27, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

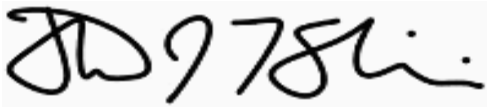
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_LCS-SPK-A_00028

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-62801-A
Lot Number:	U2-MEB728825
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	1 250 µg/mL ea:

Aluminum, Calcium,
Iron, Potassium,
Magnesium, Sodium,
Sulfur,

125 µg/mL ea:

Thorium, Vanadium,
Zinc, Nickel,
Phosphorus, Manganese,
Lithium, Cobalt,
Chromium, Copper,
Arsenic, Boron,
Barium,

25 µg/mL ea:

Thallium, Selenium,

12.5 µg/mL ea:

Strontium, Uranium,
Silver, Beryllium,
Cadmium, Lead

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	1 250 ± 4 µg/mL	Arsenic, As	125.0 ± 1.0 µg/mL
Barium, Ba	125.0 ± 0.6 µg/mL	Beryllium, Be	12.50 ± 0.08 µg/mL
Boron, B	125.0 ± 0.7 µg/mL	Cadmium, Cd	12.51 ± 0.05 µg/mL
Calcium, Ca	1 250 ± 6 µg/mL	Chromium, Cr	125.0 ± 0.9 µg/mL
Cobalt, Co	125.0 ± 0.6 µg/mL	Copper, Cu	125.0 ± 0.5 µg/mL
Iron, Fe	1 250 ± 5 µg/mL	Lead, Pb	12.50 ± 0.05 µg/mL
Lithium, Li	125.0 ± 0.5 µg/mL	Magnesium, Mg	1 250 ± 5 µg/mL
Manganese, Mn	125.0 ± 0.5 µg/mL	Nickel, Ni	125.0 ± 0.6 µg/mL
Phosphorus, P	125.0 ± 0.6 µg/mL	Potassium, K	1 250 ± 5 µg/mL
Selenium, Se	25.00 ± 0.16 µg/mL	Silver, Ag	12.50 ± 0.05 µg/mL
Sodium, Na	1 250 ± 6 µg/mL	Strontium, Sr	12.50 ± 0.05 µg/mL
Sulfur, S	1 250 ± 6 µg/mL	Thallium, Tl	25.00 ± 0.18 µg/mL
Thorium, Th	125.0 ± 0.6 µg/mL	Uranium, U	12.50 ± 0.06 µg/mL
Vanadium, V	125.0 ± 0.6 µg/mL	Zinc, Zn	125.0 ± 0.6 µg/mL

Density: 1.057 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
B	ICP Assay	3107	190605
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
S	Acidimetric	84L	84L
S	ICP Assay	traceable to 3154	P2-S680745
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Th	EDTA	928	928
Tl	ICP Assay	3158	151215
U	ICP Assay	traceable to 3164	R2-U689597
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.19 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Low Silver Note: This solution contains “LOW” levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 25, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 25, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

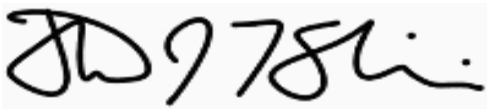
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_LCS-SPK-B_00027

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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

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ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-62801-B
Lot Number:	U2-MEB728826
Matrix:	5% (v/v) HNO3 1.5% (v/v) HF
Value / Analyte(s):	1 250 µg/mL ea: Silicon, 125 µg/mL ea: Titanium, Tungsten, Zirconium, 25 µg/mL ea: Tin, Antimony, 12.5 µg/mL ea: Molybdenum

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	**25.04 ± 0.19 µg/mL**	**Molybdenum, Mo**	**12.51 ± 0.07 µg/mL**
Silicon, Si	**1 252 ± 8 µg/mL**	**Tin, Sn**	**25.03 ± 0.16 µg/mL**
Titanium, Ti	**125.2 ± 0.9 µg/mL**	**Tungsten, W**	**125.2 ± 0.7 µg/mL**
Zirconium, Zr	**125.2 ± 1.0 µg/mL**		

Density: 1.033 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Sb	ICP Assay	3102a	140911
Si	ICP Assay	Traceable to 3150	S2-SI702546
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925
W	ICP Assay	3163	140606
Zr	ICP Assay	3169	130920

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 25, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 25, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

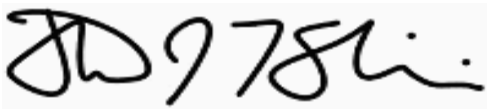
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

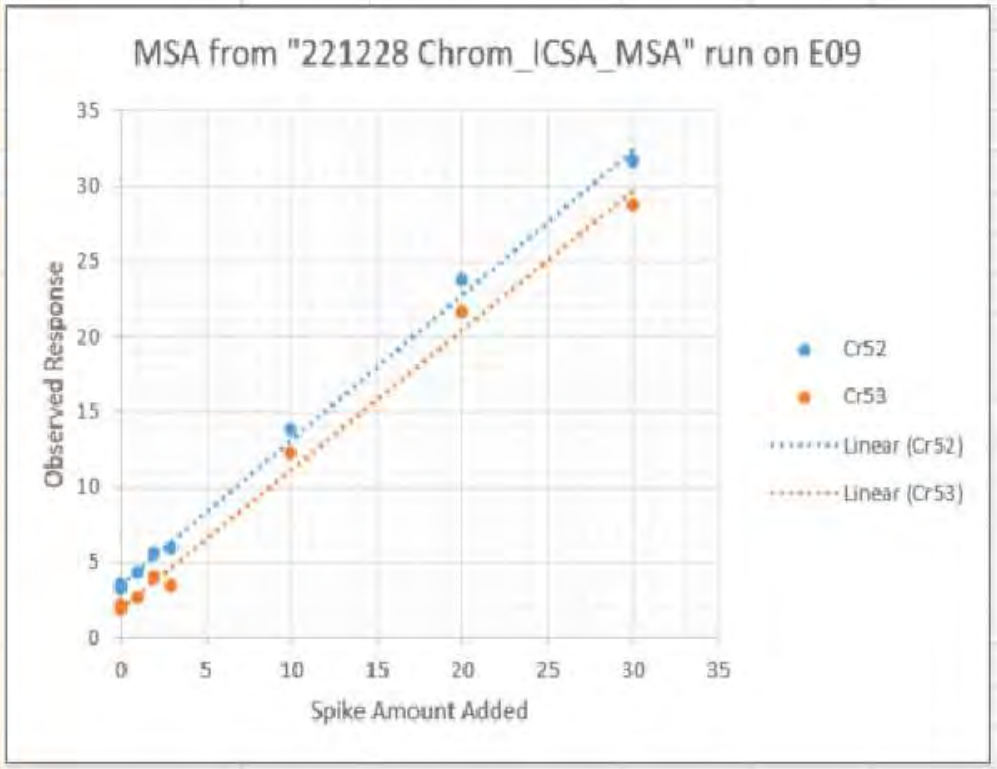
Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_S_ICS2A_IV_00011

	MSA CALC (Cr52) 3.618		MSA CALC (Cr53) 2.045
	ISOTOPE RATIO CALCULATION		
AVG CCB	180		503
AVG ICSA	2477		725
NET CPS	2297		223
RATIO 53/52		**0.10**	
NA 53/52		**0.11**	

The Chromium 53/52 ratio is close to the observed Natural Abundance (NA) ratio of 0.11
This suggests that Cr contaminant is real Cr and not due to anomalous interference on mass 52 alone.



INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

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inorganicventures.com

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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	6020ICS-9A
Lot Number:	T2-MEB714677
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	21 215 µg/mL ea: Chloride,
	3 000 µg/mL ea: Calcium,
	2 500 µg/mL ea: Iron, Sodium,
	2 000 µg/mL ea: Carbon,
	1 000 µg/mL ea: Aluminum, Phosphorus, Sulfur, Potassium, Magnesium,
	20 µg/mL ea: Molybdenum, Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	**1 000 ± 3 µg/mL**	**Calcium, Ca**	**3 001 ± 13 µg/mL**
Carbon, C	**2 001 ± 4 µg/mL**	**Chloride, Cl**	**21 230.0 ± 100.0 µg/mL**
Iron, Fe	**2 501 ± 11 µg/mL**	**Magnesium, Mg**	**1 000 ± 4 µg/mL**
Molybdenum, Mo	**20.01 ± 0.11 µg/mL**	**Phosphorus, P**	**1 000 ± 4 µg/mL**
Potassium, K	**1 000 ± 4 µg/mL**	**Sodium, Na**	**2 501 ± 11 µg/mL**
Sulfur, S	**1 001 ± 4 µg/mL**	**Titanium, Ti**	**20.01 ± 0.12 µg/mL**

Density: 1.051 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
C	Acidimetric	84L	84L
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cl	Acidimetric	84L	84L
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
S	Acidimetric	84L	84L
S	ICP Assay	traceable to 3154	P2-S680745
Ti	ICP Assay	3162a	130925
Ti	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.003300	M	Eu	<	0.000110	s	Na	<		M	Se	<	0.000720	O	Zn		0.011000
s	Al	<		s	Fe	<		M	Nb	<	0.000110	n	Si	<		M	Zr	<	0.002100
M	As		0.077000	M	Ga		0.016000	M	Nd	<	0.000420	M	Sm	<	0.000110				
M	Au	<	0.000410	M	Gd	<	0.000110	M	Ni		0.012000	M	Sn	<	0.001700				
M	B	<	0.006200	M	Ge	<	0.002500	M	Os	<	0.000110	M	Sr		0.018000				
M	Ba		0.004000	M	Hf	<	0.000110	s	P	<		M	Ta	<	0.000210				
O	Be	<	0.000110	M	Hg	<	0.000620	M	Pb		0.000930	M	Tb	<	0.000110				
M	Bi	<	0.001300	M	Ho	<	0.000110	M	Pd	<	0.000110	M	Te	<	0.003300				
s	Ca	<		M	In	<	0.000210	M	Pr	<	0.000110	M	Th	<	0.000210				
M	Cd		0.004500	M	Ir	<	0.000110	M	Pt	<	0.000110	s	Ti	<					
M	Ce	<	0.000620	s	K	<		M	Rb		0.027000	M	Tl	<	0.000620				
M	Co		0.002800	M	La	<	0.000830	M	Re	<	0.000110	M	Tm	<	0.000110				
M	Cr		0.029000	O	Li		0.001900	M	Rh	<	0.000110	M	U	<	0.001100				
M	Cs		0.001900	M	Lu	<	0.000110	M	Ru	<	0.000110	M	V	<	0.003100				
O	Cu	<	0.004400	s	Mg	<		s	S	<		M	W		0.001600				
M	Dy	<	0.000110	M	Mn		0.006000	M	Sb		0.001200	M	Y		0.000420				
M	Er	<	0.000110	s	Mo	<		M	Sc	<	0.000620	M	Yb	<	0.000110				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 30, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 30, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

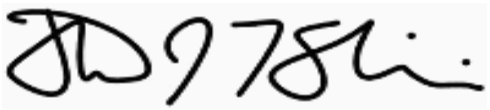
12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_S_ICVSPK-A_00005

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info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-69496
Lot Number:	U2-MEB728821
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	2 500 µg/mL ea:

Aluminum, Calcium,
Iron, Potassium,
Magnesium, Sodium,

250 µg/mL ea:

Nickel, Manganese,
Cobalt, Chromium,
Copper, Arsenic,
Barium, Vanadium,
Zinc,

25 µg/mL ea:

Silver, Beryllium,
Cadmium, Lead,
Selenium, Strontium,
Thallium, Uranium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	2 500 ± 9 µg/mL	Arsenic, As	250.0 ± 2.1 µg/mL
Barium, Ba	250.0 ± 1.2 µg/mL	Beryllium, Be	25.00 ± 0.16 µg/mL
Cadmium, Cd	25.00 ± 0.10 µg/mL	Calcium, Ca	2 500 ± 11 µg/mL
Chromium, Cr	250.0 ± 1.8 µg/mL	Cobalt, Co	250.0 ± 1.2 µg/mL
Copper, Cu	250.0 ± 1.0 µg/mL	Iron, Fe	2 500 ± 10 µg/mL
Lead, Pb	25.00 ± 0.11 µg/mL	Magnesium, Mg	2 500 ± 11 µg/mL
Manganese, Mn	250.0 ± 1.0 µg/mL	Nickel, Ni	250.0 ± 1.1 µg/mL
Potassium, K	2 500 ± 11 µg/mL	Selenium, Se	24.99 ± 0.20 µg/mL
Silver, Ag	25.00 ± 0.13 µg/mL	Sodium, Na	2 500 ± 11 µg/mL
Strontium, Sr	25.01 ± 0.10 µg/mL	Thallium, Tl	25.00 ± 0.13 µg/mL
Uranium, U	25.01 ± 0.15 µg/mL	Vanadium, V	250.0 ± 1.1 µg/mL
Zinc, Zn	250.0 ± 1.1 µg/mL		

Density: 1.074 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	EDTA	928	928
Co	ICP Assay	traceable to 3113	M2-CO661665
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	3153a	990906
Tl	ICP Assay	3158	151215
U	ICP Assay	3164	891509
U	Calculated		See Sec. 4.2
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.6 ± 0.1
Uranium 235U	0.42 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 25, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 25, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

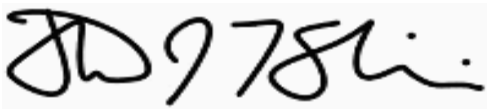
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_S_MSSPK-A_00007

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

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Christiansburg, VA 24073 USA
inorganicventures.com

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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-66048-A
Lot Number:	U2-MEB728823
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea:

Aluminum, Calcium,
Iron, Potassium,
Magnesium, Sodium,

500 µg/mL ea:

Nickel, Manganese,
Cobalt, Chromium,
Copper, Arsenic,
Barium, Vanadium,
Zinc,

50 µg/mL ea:

Silver, Beryllium,
Cadmium, Lead,
Selenium, Strontium,
Thallium, Uranium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	5 008 ± 18 µg/mL	Arsenic, As	500.8 ± 3.7 µg/mL
Barium, Ba	500.8 ± 2.3 µg/mL	Beryllium, Be	50.07 ± 0.33 µg/mL
Cadmium, Cd	50.07 ± 0.23 µg/mL	Calcium, Ca	5 008 ± 22 µg/mL
Chromium, Cr	500.8 ± 2.9 µg/mL	Cobalt, Co	500.8 ± 2.4 µg/mL
Copper, Cu	500.8 ± 2.0 µg/mL	Iron, Fe	5 008 ± 21 µg/mL
Lead, Pb	50.08 ± 0.22 µg/mL	Magnesium, Mg	5 008 ± 22 µg/mL
Manganese, Mn	500.8 ± 2.0 µg/mL	Nickel, Ni	500.8 ± 2.2 µg/mL
Potassium, K	5 008 ± 22 µg/mL	Selenium, Se	50.09 ± 0.32 µg/mL
Silver, Ag	50.07 ± 0.22 µg/mL	Sodium, Na	5 008 ± 22 µg/mL
Strontium, Sr	50.07 ± 0.19 µg/mL	Thallium, Tl	50.07 ± 0.36 µg/mL
Uranium, U	50.08 ± 0.27 µg/mL	Vanadium, V	500.8 ± 2.2 µg/mL
Zinc, Zn	500.8 ± 2.2 µg/mL		

Density: 1.130 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
As	Calculated		See Sec. 4.2
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Tl	ICP Assay	3158	151215
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2
U	X_U_CRM		See Sec. 4.2
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.19 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 26, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 26, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

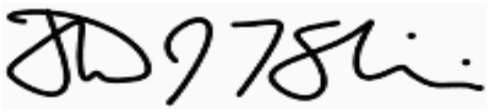
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_S_MWLLC_SC_00005

SCP SCIENCE

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Certificate of Analysis

1.0 DESCRIPTION : ***Plasma*** **CAL – Custom Standard**

Catalogue Number : **AQ0-154-615** **MW-LLC**

Lot Number : **S220721047**

Matrix: **2.0% HNO3 Tr. HF**

Expiration Date (End of month): **September 2023**

2.0 CERTIFIED VALUES AND ASSOCIATED UNCERTAINTY:

Method of Analysis: Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES)

Traceability: Applicable NIST Standard Reference Materials (see list below):

3101a	Al	3109a	Ca	3117a	Eu	3126a	Fe	3134	Mo	3142a	Pr	3151	Ag	3159	Th	3167a	Y
3102a	Sb	3110	Ce	3118a	Gd	3127a	La	3135a	Nd	3143	Re	3152a	Na	3160a	Tm	3168a	Zn
3103a	As	3111a	Cs	3119a	Ga	3128	Pb	3136	Ni	3144	Rh	3153a	Sr	3161a	Sn	3169	Zr
3104a	Ba	3112a	Cr	3120a	Ge	3129a	Li	3137	Nb	3145a	Rb	3154	S	3162a	Ti		
3105a	Be	3113	Co	3121	Au	3130a	Lu	3138	Pd	3147a	Sm	3155	Ta	3163	W		
3106	Bi	3114	Cu	3122	Hf	3131a	Mg	3139a	P	3148a	Sc	3156	Te	3164	U		
3107	B	3115a	Dy	3123a	Ho	3132	Mn	3140	Pt	3149	Se	3157a	Tb	3165	V		
3108	Cd	3116a	Er	3124a	In	3133	Hg	3141a	K	3150	Si	3158	Tl	3166a	Yb		

Certified Concentrations:

Ag*	0.496 ± 1%	µg/ml	K	199.5 ± 1.5	µg/ml	Ti	10.05 ± 0.06	µg/ml
Al	24.81 ± 0.14	µg/ml	Mg	50.3 ± 0.4	µg/ml	Tl*	0.500 ± 1%	µg/ml
As*	2.02 ± 0.01	µg/ml	Mn*	2.00 ± 0.02	µg/ml	U*	1.01 ± 0.01	µg/ml
Ba*	1.99 ± 0.01	µg/ml	Mo*	0.497 ± 1%	µg/ml	V*	0.501 ± 1%	µg/ml
Be*	0.499 ± 1%	µg/ml	Na	198.6 ± 1.9	µg/ml	Zn	10.00 ± 0.06	µg/ml
Ca	100.3 ± 1.0	µg/ml	Ni*	1.00 ± 0.01	µg/ml			
Cd*	0.496 ± 1%	µg/ml	Pb*	0.503 ± 1%	µg/ml			
Co*	0.504 ± 1%	µg/ml	Sb*	1.01 ± 0.01	µg/ml			
Cr*	2.00 ± 0.01	µg/ml	Se*	1.00 ± 0.01	µg/ml			
Cu*	0.999 ± 1%	µg/ml	Sn*	2.00 ± 0.02	µg/ml			
Fe	49.92 ± 0.28	µg/ml	Sr*	0.992 ± 1%	µg/ml			

ACCREDITED
Reference Material Producer
CERTIFICATE #2885.02

*Concentration value derived from v/v dilutions of certified, NIST-traceable starting materials

Note: The uncertainty of the certified value has been calculated from applicable uncertainty contributors (u_i) such as the SRM inherited uncertainty, weighing and dilution errors and instrument variability. The combined uncertainty ($uc= v\Sigma u_i^2$) has been multiplied by a coverage factor (k) of 2 to provide a 95% confidence interval.

3.0 REFERENCE VALUES:

Density: **1.010 g/ml @ 23.0 °C**

4.0 APPROVAL AND DATE OF CERTIFICATION:

Certification Approval: Yaling Sui, Chemist

Certification Date: **August 23, 2022**

Yaling Sui

SCP SCIENCE

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5.0 INTENDED USE:

- ICP Standards: For the calibration of, including but not limited to: ICP-AES, ICP-MS, FAAS, GFAA, XRF and DCP.
- AA Standards: For the calibration of Flame (FAAS) and Graphite Furnace (GFAA) Atomic Absorption Spectrometers.
- Matrix Modifiers: For the optimization of analytical conditions to provide better Graphite Furnace Atomic Absorption (GFAA) instrument response and improved detection limits.
- pH Standards: For the calibrating pH meters or for other wet chemistry applications.
- Conductivity Standards: For electrolytic conductivity measurement as a calibration standard.
- IC Standards: for calibration of, but not limited to IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS or other wet chemistry applications.

For any inquiries, please contact **SCP SCIENCE**.

6.0 INSTRUCTIONS FOR USE:

Handling and Storage: Keep product tightly capped when not in use. The solution should be opened for a minimum amount of time necessary to dispense the amount required. Do not pipet or use directly from container. Do not return unused portions back to container. Store under normal laboratory conditions. Avoid exposure to excessive sources of heat and humidity or direct sunlight.

Stability: This Standard is guaranteed to be stable and accurate to within the specified uncertainty of measurement up to the unopened expiry date, if sealed, or up to the opened expiry date (when indicated), whichever comes first, provided the solution is kept tightly capped and stored under the indicated storage conditions. Purchasers will be notified of any significant changes resulting in re-certification or withdrawal of the product prior to the expiration date.

7.0 HAZARDOUS INFORMATION :

Please refer to the associated Material Safety Data Sheet (MSDS) for information regarding this product (available at www.SCPSCIENCE.com).

8.0 HOMOGENEITY:

This solution has been blended according to an in-house procedure and its homogeneity is guaranteed to be fit for purpose when a sample size sufficient for the intended method of analysis is used.

9.0 TRACEABILITY:

This CRM (Certified Reference Material) is traceable to the NIST SRM (Standard Reference Material) indicated in section 2 through an unbroken chain of comparisons. In addition, balances used are regularly calibrated using weights which are traceable to NIST (National Institute of Standards and Technology) or NRC (National Research Council of Canada) standards. All conductivity meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable Thermometer and standards. All pH meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable thermometer and pH/MV simulator.

10.0 PREPARATION*:*

For the preparation of these solutions, 18 meghom/cm double deionized water, high-purity acids and glassware calibrated to ASTM Class A specifications are used.

11.0 QUALITY SYSTEM CERTIFICATIONS*:*

ISO 9001 Certification: This standard was produced in a facility which operates a **registered** ISO 9001 Quality Management System. Please consult our web site for a copy of the most recent revision of our certificate of registration.

ISO 17025 Accreditation: SCP SCIENCE (Corporate Headquarters) operates an ISO 17025 **accredited** laboratory. Please consult our web site for a copy of the most recent revision of our certificate and scope of accreditation.

ISO 17034 Accreditation: SCP SCIENCE (Corporate Headquarters) is an ISO 17034 accredited Reference Material Producer. Please consult our website for a copy of our most recent certificate and scope of accreditation.

Corporate Headquarters:

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PC-FRM005-CERT-8.0-B

Sample Container Check Report

Client: TRC, Engineers, Inc.
Job ID: 410-136864-3
Project/Site: RFAAP, Radford HWMU16

Sample Container Checks and Verifications

Lab Sample ID: 410-136864-6
Client Sample ID: 16WC1B

Bottle Code	Check Performed	By Employee	Date	Check Result	Expected Result	Adjusted Date	Reagent Lot #	Reagent Expires	Re-check Result	Re-check Date
I	pH Check, 24hr Adjustment Confirmation Required	T7ZN	08/02/2023	<2	<2	N/A	N/A	N/A	N/A	N/A

METALS

COVER PAGE
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job Number: 410-136864-3

SDG No.:

Project: RFAAP, Radford HWMU16

Client Sample ID	Lab Sample ID
16WC1B	410-136864-6

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: 16WC1B
Lab Sample ID: 410-136864-6
Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136864-3
SDG ID.:
Matrix: Water
Date Sampled: 07/26/2023 12:05
Reporting Basis: WET
Date Received: 07/28/2023 09:25

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-22-4	Silver	0.87	2.0	0.30	ug/L	J		1	6020B

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-3

SDG No.:

ICV Source: MT_MJ_ICV_00091 Concentration Units: ug/L

CCV Source: MT_MJ_CCV_00172

Analyte	ICV 410-421066/4 09/19/2023 07:25				CCV 410-421066/10 09/19/2023 08:02				CCV 410-421066/40 09/19/2023 09:10			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Silver	49.0		50.0	98	50.1		50.0	100	49.6		50.0	99

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-3

SDG No.:

ICV Source: MT_MJ_ICV_00091 Concentration Units: ug/L

CCV Source: MT_MJ_CCV_00172

Analyte	CCV 410-421066/50 09/19/2023 09:32				CCV 410-421066/60 09/19/2023 09:54				CCV 410-421066/68 09/19/2023 10:12			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Silver	49.8		50.0	100	49.3		50.0	99	48.4		50.0	97

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-3

SDG No.:

Method: 6020B Instrument ID: E08 - 30647

Lab Sample ID: CRI 410-421066/6 Concentration Units: ug/L

CRQL Check Standard Source: MT_MJ_CRI-V_00156

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Silver	0.496	0.555		112	80-120

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-3

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 410-421066/5 09/19/2023 07:27		CCB 410-421066/11 09/19/2023 08:04		CCB 410-421066/41 09/19/2023 09:12		CCB 410-421066/51 09/19/2023 09:34	
		Found	C	Found	C	Found	C	Found	C
Silver	0.50	ND		ND		ND		ND	

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-3

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 410-421066/61 09/19/2023 09:56		CCB 410-421066/69 09/19/2023 10:14					
		Found	C	Found	C	Found	C	Found	C
Silver	0.50	ND		ND					

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-3

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 410-420398/1-A

Instrument Code: E08 - 30647 Batch No.: 421066

CAS No.	Analyte	Concentration	C	Q	Method
7440-22-4	Silver	ND			6020B

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-3

SDG No.:

Lab Sample ID: ICSA 410-421066/7 Instrument ID: E08 - 30647

Lab File ID: 024ICSA.d ICS Source: MT_MJ_ICSA_00106

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Silver	**0.300**	**0.0140**	
Aluminum	*100000*	*99032*	*99*
Antimony	*0.120*	*0.198*	
Arsenic	*7.70*	*0.102*	
Barium	*0.400*	*0.287*	
Beryllium	*0.0110*	*0.0170*	
Cadmium	*0.450*	*0.179*	
Calcium	*299000*	*286463*	*96*
Chromium	*3.60*	*3.38*	
Cobalt	*0.280*	*0.242*	
Copper	*0.440*	*0.0620*	
Iron	*260000*	*242222*	*93*
Lead	*0.0930*	*0.0870*	
Magnesium	*100000*	*96163*	*96*
Manganese	*0.600*	*0.719*	
Molybdenum	*2000*	*2115*	*106*
Nickel	*1.20*	*0.277*	
Potassium	*100000*	*97407*	*97*
Selenium	*0.0720*	*0.0820*	
Sodium	*260000*	*242501*	*93*
Strontium	*1.80*	*1.80*	
Thallium	*0.0620*	*0.0140*	
Tin	*0.170*	*0.184*	
Titanium	*2000*	*1945*	*97*
Uranium	*0.110*	*0.0510*	
Vanadium	*0.310*	*-0.0200*	
Zinc	*1.10*	*1.23*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-3

SDG No.:

Lab Sample ID: ICSAB 410-421066/8 Instrument ID: E08 - 30647

Lab File ID: 025ICSB.d ICS Source: MT_MJ_ICSAB_00083

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Silver	**50.3**	**49.4**	**98**
Aluminum	*100000*	*98837*	*99*
Antimony	*0.120*	*0.147*	
Arsenic	*108*	*94.7*	*88*
Barium	*0.400*	*0.351*	
Beryllium	*0.0110*	*0.0090*	
Cadmium	*100*	*97.0*	*97*
Calcium	*299000*	*287035*	*96*
Chromium	*204*	*198*	*97*
Cobalt	*200*	*194*	*97*
Copper	*201*	*191*	*95*
Iron	*260000*	*242868*	*93*
Lead	*0.0930*	*0.0910*	
Magnesium	*100000*	*96675*	*97*
Manganese	*201*	*194*	*96*
Molybdenum	*2000*	*2058*	*103*
Nickel	*201*	*192*	*96*
Potassium	*100000*	*98626*	*99*
Selenium	*100*	*106*	*106*
Sodium	*260000*	*242253*	*93*
Strontium	*1.80*	*2.17*	
Thallium	*0.0620*	*0.0020*	
Tin	*0.170*	*0.0500*	
Titanium	*2000*	*1985*	*99*
Uranium	*0.110*	*0.0430*	
Vanadium	*200*	*200*	*100*
Zinc	*101*	*97.6*	*97*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

7A-IN
LINEAR RANGE CHECK STANDARD
METALS

Lab ID: LRC 410-421066/9

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC

Job No.: 410-136864-3

Sample Matrix:

LCS Source: MT_MJ_LRC_00096

Analyte	(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Silver	2000	1890		94	90	110		6020B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 410-420398/2-A

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC

Job No.: 410-136864-3

Sample Matrix: Water

LCS Source: MT_LCS-SPK-A_00028

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Silver	50.0	49.5		99	88	113		6020B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job Number: 410-136864-3

SDG Number:

Matrix: Water Instrument ID: E08 - 30647

Method: 6020B MDL Date: 02/11/2021 10:57

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Silver	107	2	0.3

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job Number: 410-136864-3

SDG Number:

Matrix: Water Instrument ID: E08 - 30647

Method: 6020B XMDL Date: 07/31/2023 00:00

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Silver	107	0.5	0.1

11-IN
LINEAR RANGES
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No: 410-136864-3

SDG No.:

Instrument ID: E08 - 30647 Date: 04/07/2022 16:22

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Silver		100	6020B

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-3

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 410-420398/1-A	09/18/2023 04:45	420398		50	50
LCS 410-420398/2-A	09/18/2023 04:45	420398		50	50
410-136864-6	09/18/2023 04:45	420398		50	50

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-3

SDG No.:

Instrument ID: E08 - 30647 Analysis Method: 6020B

Start Date: 09/19/2023 06:17 End Date: 09/19/2023 10:38

Lab Sample Id	D/F	Type	Time	Analytes
				Ag
ITUNE 410-421066/1	1		06:17	
ICIS 410-421066/2			07:21	X
STD1 410-421066/3 IC	1		07:23	X
ICV 410-421066/4	1		07:25	X
ICB 410-421066/5	1		07:27	X
CRI 410-421066/6	1		07:30	X
ICSA 410-421066/7	1		07:34	X
ICSAB 410-421066/8	1		07:36	X
LRC 410-421066/9	1		07:38	X
CCV 410-421066/10	1		08:02	X
CCB 410-421066/11	1		08:04	X
ZZZZZZ			08:08	
ZZZZZZ			08:10	
ZZZZZZ			08:12	
ZZZZZZ			08:14	
ZZZZZZ			08:16	
ZZZZZZ			08:18	
ZZZZZZ			08:20	
ZZZZZZ			08:22	
CCV 410-421066/20			08:26	
CCB 410-421066/21			08:28	
ZZZZZZ			08:30	
ZZZZZZ			08:32	
ZZZZZZ			08:34	
ZZZZZZ			08:36	
ZZZZZZ			08:38	
ZZZZZZ			08:40	
ZZZZZZ			08:42	
ZZZZZZ			08:44	
CCV 410-421066/30			08:48	
CCB 410-421066/31			08:50	
ZZZZZZ			08:52	
ZZZZZZ			08:54	
ZZZZZZ			08:56	
ZZZZZZ			08:58	
ZZZZZZ			09:00	
ZZZZZZ			09:02	
ZZZZZZ			09:04	
ZZZZZZ			09:06	
CCV 410-421066/40	1		09:10	X
CCB 410-421066/41	1		09:12	X

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-3

SDG No.:

Instrument ID: E08 - 30647 Analysis Method: 6020B

Start Date: 09/19/2023 06:17 End Date: 09/19/2023 10:38

Lab Sample Id	D/F	Type	Time	Analytes
				Ag
MB 410-420398/1-A	1	R	09:14	X
LCS 410-420398/2-A	1	R	09:16	X
ZZZZZZ			09:18	
ZZZZZZ			09:20	
ZZZZZZ			09:22	
ZZZZZZ			09:24	
ZZZZZZ			09:26	
ZZZZZZ			09:28	
CCV 410-421066/50	1		09:32	X
CCB 410-421066/51	1		09:34	X
ZZZZZZ			09:36	
ZZZZZZ			09:38	
ZZZZZZ			09:40	
ZZZZZZ			09:42	
ZZZZZZ			09:44	
ZZZZZZ			09:46	
ZZZZZZ			09:48	
ZZZZZZ			09:50	
CCV 410-421066/60	1		09:54	X
CCB 410-421066/61	1		09:56	X
ZZZZZZ			09:58	
ZZZZZZ			10:00	
ZZZZZZ			10:02	
ZZZZZZ			10:04	
ZZZZZZ			10:06	
410-136864-6	1	R	10:08	X
CCV 410-421066/68	1		10:12	X
CCB 410-421066/69	1		10:14	X
ZZZZZZ			10:16	
ZZZZZZ			10:18	
CCV 410-421066/72			10:22	
CCB 410-421066/73			10:24	
ZZZZZZ			10:26	
ZZZZZZ			10:28	
ZZZZZZ			10:30	
ZZZZZZ			10:32	
CCV 410-421066/78			10:36	
CCB 410-421066/79			10:38	

Prep Types:
R = Total Recoverable

FORM XIII-IN

14-IN
ICP-MS TUNE
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-3

SDG No.:

ICP-MS Instrument ID: E08 - 30647 Analysis Date: 09/19/23

Lab ID: ITUNE 410-421066/1

Element - Mass	Avg. Measured Mass (amu)	Avg. Peak Width at Peak Height (amu)	% RSD	Q
Be-9	9	0.7452	1.008	
Mg-24	24	0.7962	0.402	
Co-59	59	0.7809	0.558	
In-115	115	0.7292	0.521	
Pb-208	208	0.7373	0.688	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-3

SDG No.: Analysis Batch No.: 421066

ICP-MS Instrument ID: E08 - 30647 Start Date: 09/19/2023 End Date: 09/19/2023

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Sc-45/1	Q	Element Sc-45/2	Q	Element Sc-45/3	Q	Element Ge/1	Q	Element Ge/2	Q
STD1 410-421066/3	07:23	99		101		100		100		103	
IC ICV 410-421066/4	07:25	99		100		96		99		99	
ICB 410-421066/5	07:27	97		98		99		98		97	
CRI 410-421066/6	07:30	98		101		98		98		99	
ICSA 410-421066/7	07:34	101		100		100		104		103	
ICSAB 410-421066/8	07:36	98		99		99		104		101	
LRC 410-421066/9	07:38	103		100		102		101		100	
CCV 410-421066/10	08:02	100		101		102		98		99	
CCB 410-421066/11	08:04	99		100		102		98		100	
CCV 410-421066/40	09:10	97		101		98		96		97	
CCB 410-421066/41	09:12	96		98		101		97		97	
MB 410-420398/1-A	09:14	97		102		101		96		99	
LCS 410-420398/2-A	09:16	99		103		103		100		103	
CCV 410-421066/50	09:32	99		103		102		98		100	
CCB 410-421066/51	09:34	99		103		100		98		100	
CCV 410-421066/60	09:54	100		103		101		99		101	
CCB 410-421066/61	09:56	99		103		100		99		100	
410-136864-6	10:08	98		106		103		100		104	
CCV 410-421066/68	10:12	100		104		101		98		100	
CCB 410-421066/69	10:14	99		103		101		98		98	
IS Name on Instrument											

15A-IN
ICP-MS INTERNAL STANDARDS RELATIONS
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-3

SDG No.: Analysis Batch No.: 421066

ICP-MS Instrument ID: E08 - 30647 Start Date: 09/19/2023 End Date: 09/19/2023

Analyte	Mass	Internal Standard Used:				
		Element In-115/2 115	Element In-115/3 115	Element Tb-159 159	Element Bi-209 209	Element Sc-45/1 45
Silver	107		X			
Aluminum	27					
Antimony	121		X			
Arsenic	75					
Barium	137		X			
Beryllium	9					X
Cadmium	111		X			
Calcium	44					
Chromium	52					
Cobalt	59					
Copper	63					
Iron	57					
Lead	208				X	
Magnesium	24					
Manganese	55					
Molybdenum	98		X			
Nickel	60					
Potassium	39					
Selenium	78	X				
Sodium	23					
Strontium	88		X			
Thallium	205				X	
Tin	120		X			
Titanium	47					
Uranium	238				X	
Vanadium	51					
Zinc	66					
Internal Standard Name on Instrument		In-115 (IS)	In-115 (IS)	Tb-159 (IS)	Bi-209 (IS)	Sc-45 (IS)

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-3

SDG No.: Analysis Batch No.: 421066

ICP-MS Instrument ID: E08 - 30647 Start Date: 09/19/2023 End Date: 09/19/2023

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Ge/3	Q	Element In-115/2	Q	Element In-115/3	Q	Element Tb-159	Q	Element Bi-209	Q
STD1 410-421066/3	07:23	100		102		97		100		101	
IC ICV 410-421066/4	07:25	102		100		100		100		100	
ICB 410-421066/5	07:27	99		99		101		99		100	
CRI 410-421066/6	07:30	98		100		99		100		101	
ICSA 410-421066/7	07:34	103		96		94		99		96	
ICSAB 410-421066/8	07:36	101		96		97		98		96	
LRC 410-421066/9	07:38	100		128		102		99		95	
CCV 410-421066/10	08:02	101		102		102		100		100	
CCB 410-421066/11	08:04	101		101		101		100		100	
CCV 410-421066/40	09:10	100		101		100		100		100	
CCB 410-421066/41	09:12	99		101		100		99		99	
MB 410-420398/1-A	09:14	98		102		101		99		101	
LCS 410-420398/2-A	09:16	105		104		102		100		101	
CCV 410-421066/50	09:32	102		103		102		101		101	
CCB 410-421066/51	09:34	99		103		102		100		100	
CCV 410-421066/60	09:54	103		104		102		101		100	
CCB 410-421066/61	09:56	101		104		102		101		100	
410-136864-6	10:08	104		105		103		102		101	
CCV 410-421066/68	10:12	102		104		103		101		101	
CCB 410-421066/69	10:14	101		103		103		102		102	
IS Name on Instrument											

15A-IN
ICP-MS INTERNAL STANDARDS RELATIONS
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136864-3

SDG No.: Analysis Batch No.: 421066

ICP-MS Instrument ID: E08 - 30647 Start Date: 09/19/2023 End Date: 09/19/2023

Analyte	Mass	Internal Standard Used:				
		Element Sc-45/2 45	Element Sc-45/3 45	Element Ge/1 72	Element Ge/2 72	Element Ge/3 72
Silver	107					
Aluminum	27		X			
Antimony	121					
Arsenic	75					X
Barium	137					
Beryllium	9					
Cadmium	111					
Calcium	44		X			
Chromium	52		X			
Cobalt	59		X			
Copper	63					X
Iron	57		X			
Lead	208					
Magnesium	24		X			
Manganese	55		X			
Molybdenum	98					
Nickel	60					X
Potassium	39		X			
Selenium	78					
Sodium	23		X			
Strontium	88					
Thallium	205					
Tin	120					
Titanium	47		X			
Uranium	238					
Vanadium	51		X			
Zinc	66					X
Internal Standard Name on Instrument		Sc-45 (IS)	Sc-45 (IS)	Ge Internal Standard	Ge Internal Standard	Ge Internal Standard

METALS BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136864-3

SDG No.:

Batch Number: 420398 | Batch Start Date: 09/18/23 20:30 | Batch Analyst: Kuhns, Annamaria M

Batch Method: 3005A | Batch End Date: 09/19/23 00:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MP_1:1HCl 00030	MP_1:1HNO3 00047	MP_FilterH20 00131	MT_LCS-SPK-A 00028
MB 410-420398/1		3005A, 6020B		50 mL	50 mL	5 mL	2 mL	50 mL	
LCS 410-420398/2		3005A, 6020B		50 mL	50 mL	5 mL	2 mL	50 mL	0.2 mL
410-136864-I-6	16WC1B	3005A, 6020B	R	50 mL	50 mL	5 mL	2 mL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	MT_LCS-SPK-B 00027					
MB 410-420398/1		3005A, 6020B							
LCS 410-420398/2		3005A, 6020B		0.2 mL					
410-136864-I-6	16WC1B	3005A, 6020B	R						

Batch Notes	
Digestion Tube/Cup ID	2211204
Pipette/Syringe/Dispenser ID	G20054G
Pipette Tip Lot ID	F169949R
Digestion Unit ID	16
Thermometer ID	3811
Temperature - Uncorrected - Start	95 Degrees C
Temperature - Corrected - Start	95 Degrees C
Temperature - Uncorrected - End	95 Degrees C
Temperature - Corrected - End	95 Degrees C

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Quantitation Report

Data File Name	019CALB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
Acq Time	9/19/2023 7:21:46 AM
Sample Name	ICIS 4807280
Sample Type	CalBlk
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

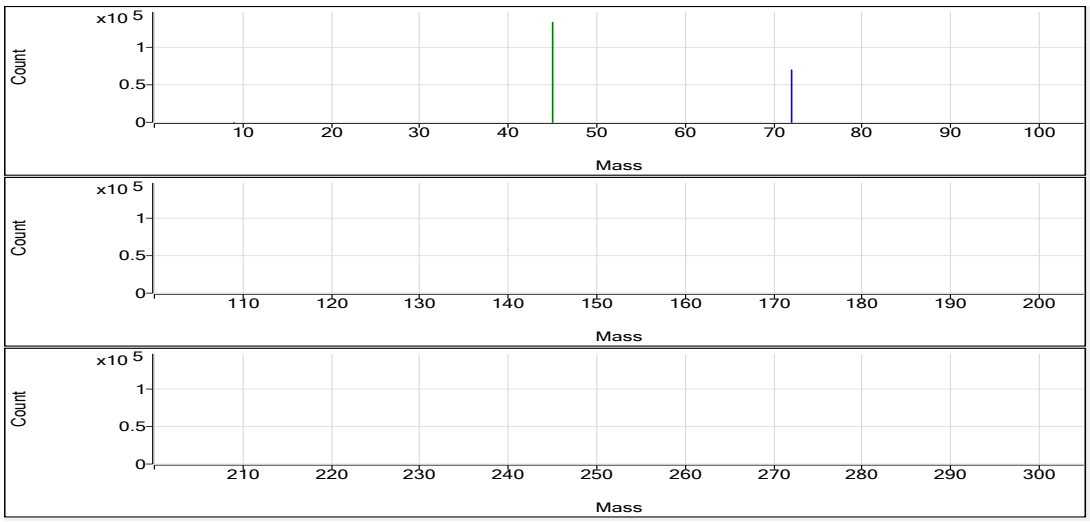
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.000	ppb	N/A	25.33	0.0000	Pulse	0.5000	3
Se	78	115	H2	0.000	ppb	N/A	1.34	0.0000	Pulse	1.5000	3
Na	23	45	He	0.000	ppb	N/A	16536.35	0.7194	Pulse	0.1000	3
Mg	24	45	He	0.000	ppb	N/A	156.67	0.0068	Pulse	0.1000	3
Al	27	45	He	0.000	ppb	N/A	60.00	0.0026	Pulse	0.1000	3
K	39	45	He	0.000	ppb	N/A	12816.12	0.5579	Pulse	0.1000	3
Ca	44	45	He	0.000	ppb	N/A	93.33	0.0041	Pulse	0.1000	3
Ti	47	45	He	0.000	ppb	N/A	6.67	0.0003	Pulse	0.1000	3
V	51	45	He	0.000	ppb	N/A	427.34	0.0186	Pulse	0.5000	3
Cr	52	45	He	0.000	ppb	N/A	2403.62	0.1047	Pulse	0.1000	3
Mn	55	45	He	0.000	ppb	N/A	116.67	0.0051	Pulse	0.1000	3
Fe	57	45	He	0.000	ppb	N/A	140.01	0.0061	Pulse	0.1000	3
Co	59	45	He	0.000	ppb	N/A	143.34	0.0062	Pulse	0.1000	3
Ni	60	72	He	0.000	ppb	N/A	726.72	0.0172	Pulse	0.1000	3
Cu	63	72	He	0.000	ppb	N/A	286.68	0.0068	Pulse	0.1000	3
Zn	66	72	He	0.000	ppb	N/A	133.34	0.0032	Pulse	0.1000	3
As	75	72	He	0.000	ppb	N/A	34.67	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.000	ppb	N/A	66.67	0.0017	Pulse	0.1000	3
Mo	98	115	He	0.000	ppb	N/A	33.33	0.0009	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	N/A	16.67	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.000	ppb	N/A	2.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.000	ppb	N/A	720.04	0.0185	Pulse	0.1000	3
Sb	121	115	He	0.000	ppb	N/A	43.33	0.0011	Pulse	0.1000	3
Ba	137	115	He	0.000	ppb	N/A	30.00	0.0008	Pulse	0.1000	3
Tl	205	209	He	0.000	ppb	N/A	103.34	0.0008	Pulse	0.1000	3
Pb	208	209	He	0.000	ppb	N/A	413.35	0.0032	Pulse	0.1000	3
U	238	209	He	0.000	ppb	N/A	53.34	0.0004	Pulse	0.1000	3

ISTD Table:

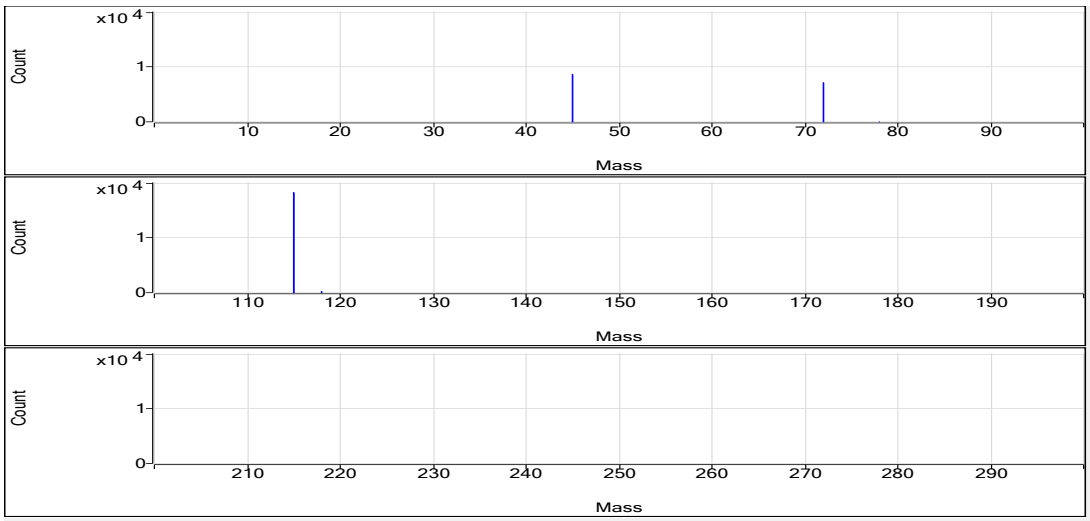
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1334670.50	0.8	100.0	Analog	0.1000	3
No Gas	Ge	72	699445.80	1.2	100.0	Pulse	0.1000	3
H2	Sc	45	86939.47	2.2	100.0	Pulse	0.1000	3
H2	Ge	72	71612.71	0.1	100.0	Pulse	0.1000	3
H2	In	115	183155.60	0.7	100.0	Pulse	0.1000	3
He	Sc	45	23005.43	3.0	100.0	Pulse	0.1000	3
He	Ge	72	42223.08	2.1	100.0	Pulse	0.1000	3
He	In	115	38933.93	1.2	100.0	Pulse	0.1000	3
He	Tb	159	176089.19	1.0	100.0	Pulse	0.1000	3
He	Bi	209	128219.45	0.9	100.0	Pulse	0.1000	3

No Gas

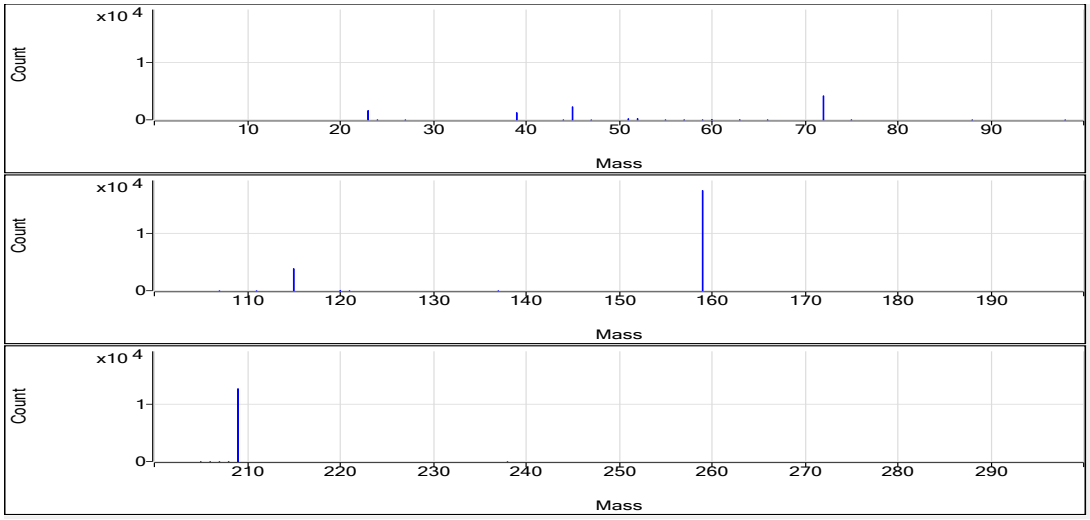


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.004	0	28.00	0.0005	1.901E-05
Be	9	1	No Gas	-0.012	0	18.00	0.0005	1.901E-05
Be	9	1	No Gas	0.007	0	30.00	0.0005	1.901E-05
Se	78	2	H2	-0.017	0	0.67	0.0002	7.279E-06
Se	78	2	H2	0.035	0	2.67	0.0002	7.279E-06
Se	78	2	H2	-0.018	0	0.67	0.0002	7.279E-06
Na	23	3	He	1.243	0.7238	16609.80	0.0036	0.7194
Na	23	3	He	6.92	0.744	16619.80	0.0036	0.7194
Na	23	3	He	-8.163	0.6902	16379.45	0.0036	0.7194
Mg	24	3	He	1.777	0.01	230.01	0.0018	0.006791
Mg	24	3	He	-1.519	0.004	90.00	0.0018	0.006791
Mg	24	3	He	-0.258	0.0063	150.01	0.0018	0.006791
Al	27	3	He	-0.797	0.0022	50.00	0.0006	0.002622
Al	27	3	He	1.722	0.0036	80.00	0.0006	0.002622
Al	27	3	He	-0.925	0.0021	50.00	0.0006	0.002622
K	39	3	He	38.411	0.6069	13927.11	0.0013	0.5579
K	39	3	He	8.924	0.5693	12716.02	0.0013	0.5579
K	39	3	He	-47.335	0.4975	11805.24	0.0013	0.5579
Ca	44	3	He	-25.696	0.0022	50.00	0.0001	0.004062
Ca	44	3	He	17.873	0.0054	120.00	0.0001	0.004062
Ca	44	3	He	7.823	0.0046	110.00	0.0001	0.004062
Ti	47	3	He	-0.479	0	0.00	0.0006	0.0002809
Ti	47	3	He	-0.479	0	0.00	0.0006	0.0002809
Ti	47	3	He	0.958	0.0008	20.00	0.0006	0.0002809
V	51	3	He	-0.019	0.0181	416.01	0.0259	0.01861
V	51	3	He	0.077	0.0206	460.01	0.0259	0.01861
V	51	3	He	-0.058	0.0171	406.01	0.0259	0.01861
Cr	52	3	He	0.035	0.1059	2430.30	0.0332	0.1047
Cr	52	3	He	0.365	0.1169	2610.31	0.0332	0.1047
Cr	52	3	He	-0.4	0.0915	2170.24	0.0332	0.1047
Mn	55	3	He	-0.02	0.0048	110.00	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.021	0.0054	120.00	0.0139	0.005074
Mn	55	3	He	-0.001	0.0051	120.00	0.0139	0.005074
Fe	57	3	He	1.388	0.007	160.01	0.0006	0.00609
Fe	57	3	He	-0.426	0.0058	130.00	0.0006	0.00609
Fe	57	3	He	-0.962	0.0055	130.01	0.0006	0.00609
Co	59	3	He	-0.041	0.0035	80.00	0.0661	0.00621
Co	59	3	He	0.008	0.0067	150.01	0.0661	0.00621
Co	59	3	He	0.034	0.0084	200.01	0.0661	0.00621
Ni	60	3	He	0.037	0.0176	760.05	0.01	0.01721
Ni	60	3	He	0.512	0.0223	930.07	0.01	0.01721
Ni	60	3	He	-0.548	0.0117	490.03	0.01	0.01721
Cu	63	3	He	-0.011	0.0065	280.01	0.0286	0.006793
Cu	63	3	He	0.006	0.007	290.01	0.0286	0.006793
Cu	63	3	He	0.005	0.0069	290.01	0.0286	0.006793
Zn	66	3	He	-0.046	0.003	130.01	0.0034	0.00316
Zn	66	3	He	0.202	0.0038	160.01	0.0034	0.00316
Zn	66	3	He	-0.157	0.0026	110.00	0.0034	0.00316
As	75	3	He	-0.068	0.0006	28.00	0.0026	0.0008231
As	75	3	He	-0.021	0.0008	32.00	0.0026	0.0008231
As	75	3	He	0.089	0.0011	44.00	0.0026	0.0008231
Sr	88	3	He	0.035	0.0021	80.00	0.0105	0.001715
Sr	88	3	He	-0.018	0.0015	60.00	0.0105	0.001715
Sr	88	3	He	-0.017	0.0015	60.00	0.0105	0.001715
Mo	98	3	He	-0.003	0.0008	30.00	0.0275	0.0008555
Mo	98	3	He	0.006	0.001	40.00	0.0275	0.0008555
Mo	98	3	He	-0.003	0.0008	30.00	0.0275	0.0008555
Ag	107	3	He	0.006	0.0008	30.00	0.0591	0.0004305
Ag	107	3	He	-0.003	0.0003	10.00	0.0591	0.0004305
Ag	107	3	He	-0.003	0.0003	10.00	0.0591	0.0004305
Cd	111	3	He	0	0.0001	2.00	0.0066	5.141E-05
Cd	111	3	He	-0.008	0	0.00	0.0066	5.141E-05
Cd	111	3	He	0.008	0.0001	4.00	0.0066	5.141E-05
Sn	120	3	He	0.083	0.0201	770.05	0.0187	0.0185
Sn	120	3	He	0.005	0.0186	730.04	0.0187	0.0185
Sn	120	3	He	-0.088	0.0169	660.04	0.0187	0.0185
Sb	121	3	He	-0.018	0.0008	30.00	0.0183	0.00111
Sb	121	3	He	0.023	0.0015	60.00	0.0183	0.00111
Sb	121	3	He	-0.005	0.001	40.00	0.0183	0.00111
Ba	137	3	He	0.002	0.0008	30.00	0.0059	0.0007704
Ba	137	3	He	0.042	0.001	40.00	0.0059	0.0007704
Ba	137	3	He	-0.044	0.0005	20.00	0.0059	0.0007704
Tl	205	3	He	-0.009	0.0005	60.00	0.0364	0.000808
Tl	205	3	He	0.008	0.0011	140.01	0.0364	0.000808
Tl	205	3	He	0.001	0.0009	110.00	0.0364	0.000808
Pb	208	3	He	-0.008	0.0029	180.01	0.0487	0.003226
Pb	208	3	He	0.008	0.0036	220.01	0.0487	0.003226
Pb	208	3	He	-0.001	0.0032	200.01	0.0487	0.003226
U	238	3	He	-0.003	0.0002	30.00	0.0535	0.0004157
U	238	3	He	-0.006	0.0001	10.00	0.0535	0.0004157
U	238	3	He	0.01	0.0009	120.01	0.0535	0.0004157
Sc	45	1	No Gas			1327521.54		
Sc	45	1	No Gas			1347635.45		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1328854.51		
Ge	72	1	No Gas			699462.88		
Ge	72	1	No Gas			707801.01		
Ge	72	1	No Gas			691073.51		
Sc	45	2	H2			86356.26		
Sc	45	2	H2			89031.88		
Sc	45	2	H2			85430.27		
Ge	72	2	H2			71649.68		
Ge	72	2	H2			71689.75		
Ge	72	2	H2			71498.70		
In	115	2	H2			181825.11		
In	115	2	H2			184144.24		
In	115	2	H2			183497.44		
Sc	45	3	He			22948.62		
Sc	45	3	He			22337.74		
Sc	45	3	He			23729.92		
Ge	72	3	He			43246.15		
Ge	72	3	He			41671.55		
Ge	72	3	He			41751.55		
In	115	3	He			38394.11		
In	115	3	He			39256.29		
In	115	3	He			39166.50		
Tb	159	3	He			176865.92		
Tb	159	3	He			177260.47		
Tb	159	3	He			174141.19		
Bi	209	3	He			129475.47		
Bi	209	3	He			127050.69		
Bi	209	3	He			128132.20		

Quantitation Report

Data File Name	020CALS.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
Acq Time	9/19/2023 7:23:44 AM
Sample Name	STD1 4826222
Sample Type	CalStd
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

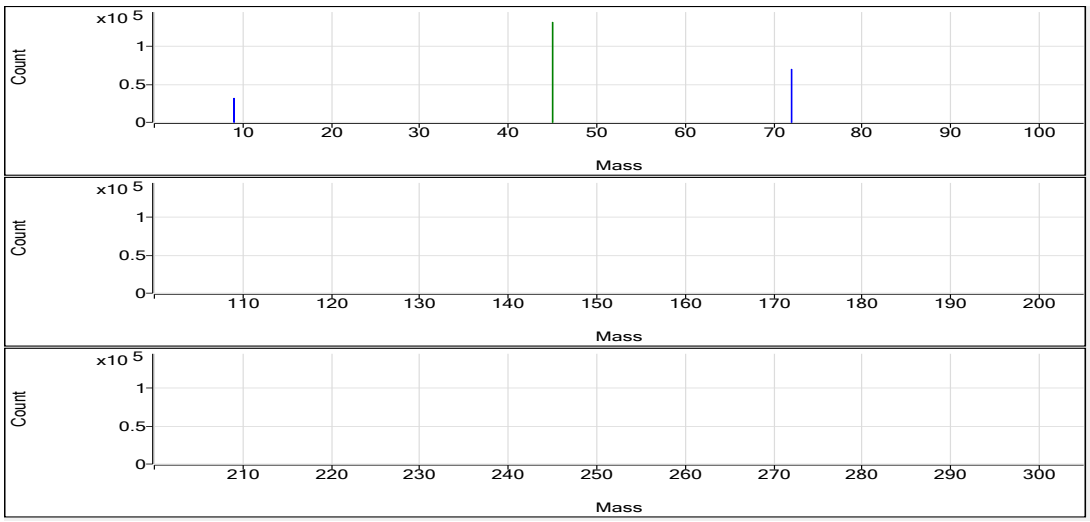
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	100.000	ppb	8.8	63677.06	0.0483	Pulse	0.5000	3
Se	78	115	H2	100.000	ppb	2.2	3820.29	0.0206	Pulse	1.5000	3
Na	23	45	He	10000.000	ppb	2.9	832953.92	36.3737	Pulse	0.1000	3
Mg	24	45	He	10000.000	ppb	2.8	416507.48	18.1880	Pulse	0.1000	3
Al	27	45	He	10000.000	ppb	4.4	127548.51	5.5714	Pulse	0.1000	3
K	39	45	He	10000.000	ppb	3.2	304930.73	13.3165	Pulse	0.1000	3
Ca	44	45	He	10000.000	ppb	6.2	16866.90	0.7370	Pulse	0.1000	3
Ti	47	45	He	10000.000	ppb	3.7	134242.43	5.8631	Pulse	0.1000	3
V	51	45	He	1000.000	ppb	3.2	592539.46	25.8770	Pulse	0.5000	3
Cr	52	45	He	1000.000	ppb	2.7	763029.21	33.3192	Pulse	0.1000	3
Mn	55	45	He	1000.000	ppb	3.6	317592.88	13.8707	Pulse	0.1000	3
Fe	57	45	He	10000.000	ppb	3.6	145655.39	6.3614	Pulse	0.1000	3
Co	59	45	He	1000.000	ppb	2.7	1514982.11	66.1555	Analog	0.1000	3
Ni	60	72	He	1000.000	ppb	1.3	422175.54	9.9992	Pulse	0.1000	3
Cu	63	72	He	1000.000	ppb	2.4	1208884.54	28.6376	Pulse	0.1000	3
Zn	66	72	He	1000.000	ppb	2.0	141862.32	3.3604	Pulse	0.1000	3
As	75	72	He	1000.000	ppb	1.8	109070.71	2.5836	Pulse	0.5000	3
Sr	88	115	He	100.000	ppb	0.7	40020.60	1.0560	Pulse	0.1000	3
Mo	98	115	He	100.000	ppb	0.8	104281.64	2.7517	Pulse	0.1000	3
Ag	107	115	He	100.000	ppb	1.5	223947.64	5.9099	Pulse	0.1000	3
Cd	111	115	He	100.000	ppb	1.6	25115.20	0.6628	Pulse	0.5000	3
Sn	120	115	He	100.000	ppb	1.9	71675.42	1.8916	Pulse	0.1000	3
Sb	121	115	He	100.000	ppb	1.8	69390.50	1.8313	Pulse	0.1000	3
Ba	137	115	He	1000.000	ppb	1.9	221990.33	5.8587	Pulse	0.1000	3
Tl	205	209	He	100.000	ppb	0.5	469371.00	3.6369	Pulse	0.1000	3
Pb	208	209	He	100.000	ppb	0.8	629555.18	4.8781	Pulse	0.1000	3
U	238	209	He	100.000	ppb	0.7	690342.75	5.3491	Pulse	0.1000	3

ISTD Table:

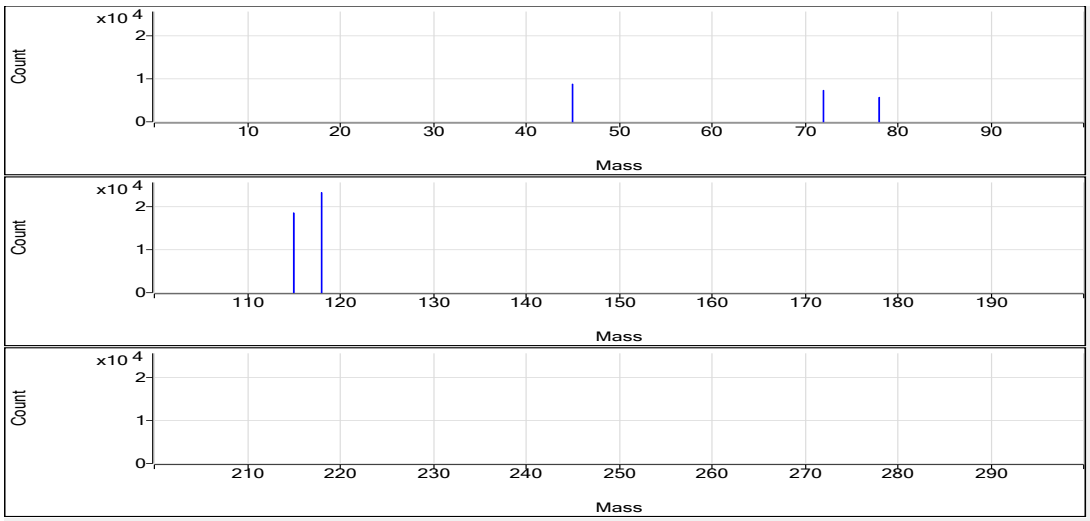
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1320246.26	1.1	98.9	Analog	0.1000	3
No Gas	Ge	72	701013.17	0.4	100.2	Pulse	0.1000	3
H2	Sc	45	88116.67	1.4	101.4	Pulse	0.1000	3
H2	Ge	72	73485.90	0.9	102.6	Pulse	0.1000	3
H2	In	115	185892.29	1.7	101.5	Pulse	0.1000	3
He	Sc	45	22912.03	2.8	99.6	Pulse	0.1000	3
He	Ge	72	42230.01	2.6	100.0	Pulse	0.1000	3
He	In	115	37902.21	2.3	97.4	Pulse	0.1000	3
He	Tb	159	175632.78	0.9	99.7	Pulse	0.1000	3
He	Bi	209	129057.95	0.2	100.7	Pulse	0.1000	3

No Gas

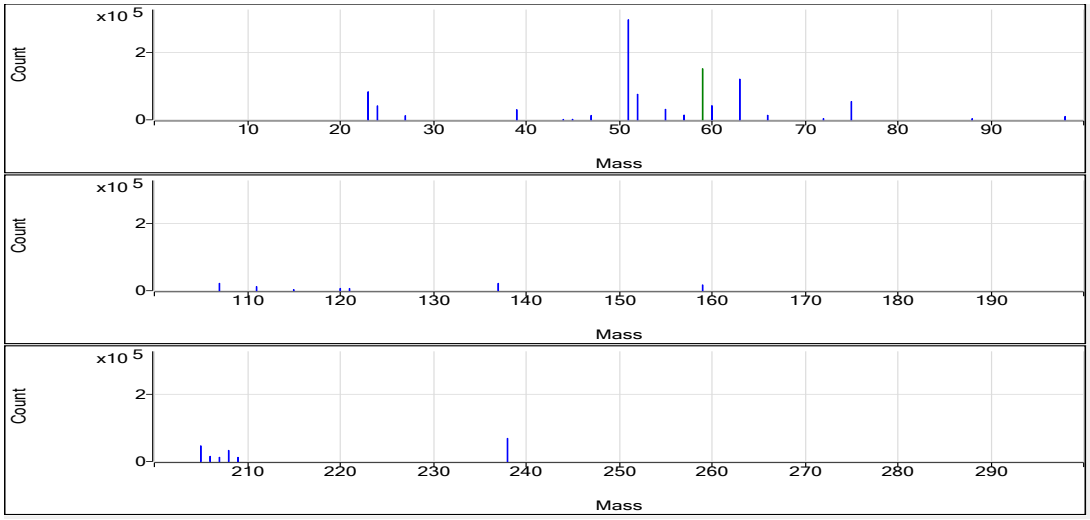


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	90.699	0.0438	58523.70	0.0005	1.901E-05
Be	9	1	No Gas	101.202	0.0488	64214.90	0.0005	1.901E-05
Be	9	1	No Gas	108.099	0.0522	68292.58	0.0005	1.901E-05
Se	78	2	H2	100.435	0.0206	3829.18	0.0002	7.279E-06
Se	78	2	H2	97.665	0.0201	3798.51	0.0002	7.279E-06
Se	78	2	H2	101.9	0.0209	3833.18	0.0002	7.279E-06
Na	23	3	He	9832.845	35.7777	832530.53	0.0036	0.7194
Na	23	3	He	10332.422	37.5589	832585.14	0.0036	0.7194
Na	23	3	He	9834.733	35.7844	833746.08	0.0036	0.7194
Mg	24	3	He	9823.37	17.8669	415753.82	0.0018	0.006791
Mg	24	3	He	10320.685	18.7711	416106.24	0.0018	0.006791
Mg	24	3	He	9855.945	17.9261	417662.38	0.0018	0.006791
Al	27	3	He	9681.824	5.3943	125521.90	0.0006	0.002622
Al	27	3	He	10506.494	5.8535	129757.21	0.0006	0.002622
Al	27	3	He	9811.682	5.4666	127366.41	0.0006	0.002622
K	39	3	He	9798.999	13.06	303900.44	0.0013	0.5579
K	39	3	He	10372.025	13.7911	305713.75	0.0013	0.5579
K	39	3	He	9828.976	13.0983	305178.00	0.0013	0.5579
Ca	44	3	He	9706.934	0.7155	16649.96	0.0001	0.004062
Ca	44	3	He	10709.915	0.789	17490.98	0.0001	0.004062
Ca	44	3	He	9583.151	0.7065	16459.75	0.0001	0.004062
Ti	47	3	He	9764.446	5.725	133217.14	0.0006	0.0002809
Ti	47	3	He	10423.033	6.1111	135466.91	0.0006	0.0002809
Ti	47	3	He	9812.521	5.7531	134043.24	0.0006	0.0002809
V	51	3	He	981.159	25.3898	590808.31	0.0259	0.01861
V	51	3	He	1036.842	26.8297	594744.88	0.0259	0.01861
V	51	3	He	981.998	25.4115	592065.19	0.0259	0.01861
Cr	52	3	He	983.024	32.7554	762202.41	0.0332	0.1047
Cr	52	3	He	1030.924	34.3463	761370.46	0.0332	0.1047
Cr	52	3	He	986.052	32.856	765514.75	0.0332	0.1047
Mn	55	3	He	976.782	13.5487	315272.96	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1041.246	14.4426	320155.03	0.0139	0.005074
Mn	55	3	He	981.972	13.6207	317350.64	0.0139	0.005074
Fe	57	3	He	9825.45	6.2505	145445.76	0.0006	0.00609
Fe	57	3	He	10411.267	6.6228	146810.23	0.0006	0.00609
Fe	57	3	He	9763.283	6.211	144710.19	0.0006	0.00609
Co	59	3	He	986.03	65.2313	1517902.79	0.0661	0.00621
Co	59	3	He	1031.371	68.2306	1512497.63	0.0661	0.00621
Co	59	3	He	982.599	65.0044	1514545.91	0.0661	0.00621
Ni	60	3	He	1009.525	10.0943	417206.52	0.01	0.01721
Ni	60	3	He	985.202	9.8515	427821.99	0.01	0.01721
Ni	60	3	He	1005.273	10.0519	421498.12	0.01	0.01721
Cu	63	3	He	1017.34	29.1341	1204136.08	0.0286	0.006793
Cu	63	3	He	973.108	27.8677	1210208.81	0.0286	0.006793
Cu	63	3	He	1009.552	28.9111	1212308.73	0.0286	0.006793
Zn	66	3	He	1012.302	3.4017	140594.01	0.0034	0.00316
Zn	66	3	He	977.301	3.2842	142621.37	0.0034	0.00316
Zn	66	3	He	1010.397	3.3953	142371.58	0.0034	0.00316
As	75	3	He	1010.697	2.6112	107922.41	0.0026	0.0008231
As	75	3	He	978.719	2.5286	109809.17	0.0026	0.0008231
As	75	3	He	1010.584	2.6109	109480.56	0.0026	0.0008231
Sr	88	3	He	99.551	1.0512	39496.02	0.0105	0.001715
Sr	88	3	He	99.586	1.0516	40899.49	0.0105	0.001715
Sr	88	3	He	100.863	1.0651	39666.30	0.0105	0.001715
Mo	98	3	He	100.278	2.7593	103669.97	0.0275	0.0008555
Mo	98	3	He	99.149	2.7282	106108.55	0.0275	0.0008555
Mo	98	3	He	100.573	2.7674	103066.39	0.0275	0.0008555
Ag	107	3	He	100.228	5.9234	222549.14	0.0591	0.0004305
Ag	107	3	He	98.356	5.8128	226073.88	0.0591	0.0004305
Ag	107	3	He	101.416	5.9936	223219.90	0.0591	0.0004305
Cd	111	3	He	100.114	0.6635	24930.22	0.0066	5.141E-05
Cd	111	3	He	98.345	0.6518	25350.95	0.0066	5.141E-05
Cd	111	3	He	101.541	0.673	25064.43	0.0066	5.141E-05
Sn	120	3	He	100.89	1.9083	71695.67	0.0187	0.0185
Sn	120	3	He	97.869	1.8517	72016.74	0.0187	0.0185
Sn	120	3	He	101.241	1.9148	71313.86	0.0187	0.0185
Sb	121	3	He	100.975	1.8491	69474.46	0.0183	0.00111
Sb	121	3	He	97.867	1.7923	69705.77	0.0183	0.00111
Sb	121	3	He	101.157	1.8525	68991.27	0.0183	0.00111
Ba	137	3	He	1004.657	5.8859	221141.32	0.0059	0.0007704
Ba	137	3	He	978.677	5.7337	223000.37	0.0059	0.0007704
Ba	137	3	He	1016.666	5.9563	221829.29	0.0059	0.0007704
Tl	205	3	He	99.457	3.6172	467710.62	0.0364	0.000808
Tl	205	3	He	100.341	3.6493	469735.70	0.0364	0.000808
Tl	205	3	He	100.202	3.6443	470666.67	0.0364	0.000808
Pb	208	3	He	99.097	4.8341	332663.98	0.0487	0.003226
Pb	208	3	He	100.57	4.9059	336340.66	0.0487	0.003226
Pb	208	3	He	100.333	4.8944	337262.07	0.0487	0.003226
U	238	3	He	99.19	5.3058	686057.65	0.0535	0.0004157
U	238	3	He	100.551	5.3786	692328.27	0.0535	0.0004157
U	238	3	He	100.259	5.363	692642.33	0.0535	0.0004157
Sc	45	1	No Gas			1336925.29		
Sc	45	1	No Gas			1314752.64		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1309060.84		
Ge	72	1	No Gas			700130.85		
Ge	72	1	No Gas			698929.44		
Ge	72	1	No Gas			703979.21		
Sc	45	2	H2			87331.63		
Sc	45	2	H2			89525.92		
Sc	45	2	H2			87492.45		
Ge	72	2	H2			73579.60		
Ge	72	2	H2			74062.19		
Ge	72	2	H2			72815.92		
In	115	2	H2			185473.47		
In	115	2	H2			189204.08		
In	115	2	H2			182999.33		
Sc	45	3	He			23269.53		
Sc	45	3	He			22167.44		
Sc	45	3	He			23299.12		
Ge	72	3	He			41330.82		
Ge	72	3	He			43426.95		
Ge	72	3	He			41932.25		
In	115	3	He			38073.01		
In	115	3	He			39396.72		
In	115	3	He			37742.10		
Tb	159	3	He			177360.82		
Tb	159	3	He			174556.62		
Tb	159	3	He			174980.90		
Bi	209	3	He			129303.22		
Bi	209	3	He			128718.13		
Bi	209	3	He			129152.49		

Quantitation Report

Data File Name	021_ICV.d
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Sample Type	ICV
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

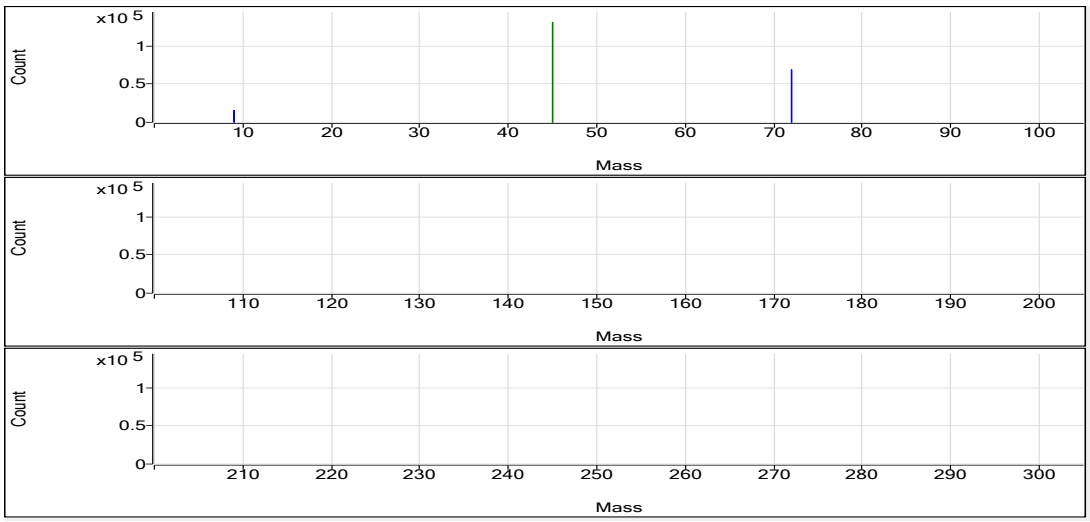
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	49.754	ppb	8.2	31644.18	0.0240	Pulse	0.5000	3
Se	78	115	H2	50.383	ppb	1.0	1896.35	0.0104	Pulse	1.5000	3
Na	23	45	He	5235.283	ppb	3.5	427690.52	19.3854	Pulse	0.1000	3
Mg	24	45	He	5200.765	ppb	3.5	208760.27	9.4624	Pulse	0.1000	3
Al	27	45	He	5213.389	ppb	4.3	64106.61	2.9059	Pulse	0.1000	3
K	39	45	He	5229.895	ppb	3.5	159532.32	7.2305	Pulse	0.1000	3
Ca	44	45	He	5121.712	ppb	3.0	8372.64	0.3795	Pulse	0.1000	3
Ti	47	45	He	5169.399	ppb	3.2	66877.52	3.0310	Pulse	0.1000	3
V	51	45	He	520.686	ppb	3.8	297433.55	13.4827	Pulse	0.5000	3
Cr	52	45	He	518.098	ppb	3.4	381968.46	17.3131	Pulse	0.1000	3
Mn	55	45	He	523.951	ppb	2.8	160414.38	7.2700	Pulse	0.1000	3
Fe	57	45	He	5296.950	ppb	4.7	74388.53	3.3725	Pulse	0.1000	3
Co	59	45	He	515.600	ppb	3.5	752598.69	34.1127	Pulse	0.1000	3
Ni	60	72	He	489.044	ppb	3.3	211494.64	4.8989	Pulse	0.1000	3
Cu	63	72	He	495.291	ppb	2.2	612614.78	14.1874	Pulse	0.1000	3
Zn	66	72	He	496.188	ppb	3.4	72051.33	1.6690	Pulse	0.1000	3
As	75	72	He	481.159	ppb	2.1	53696.73	1.2435	Pulse	0.5000	3
Sr	88	115	He	49.230	ppb	4.5	20154.94	0.5207	Pulse	0.1000	3
Mo	98	115	He	49.272	ppb	2.2	52505.47	1.3562	Pulse	0.1000	3
Ag	107	115	He	48.987	ppb	2.5	112077.50	2.8953	Pulse	0.1000	3
Cd	111	115	He	53.171	ppb	3.1	13641.36	0.3524	Pulse	0.5000	3
Sn	120	115	He	49.629	ppb	2.1	36702.74	0.9481	Pulse	0.1000	3
Sb	121	115	He	52.113	ppb	1.8	36966.83	0.9549	Pulse	0.1000	3
Ba	137	115	He	488.556	ppb	3.7	110795.43	2.8627	Pulse	0.1000	3
Tl	205	209	He	50.469	ppb	0.3	236270.74	1.8359	Pulse	0.1000	3
Pb	208	209	He	52.060	ppb	0.2	327023.14	2.5411	Pulse	0.1000	3
U	238	209	He	51.086	ppb	1.6	351680.16	2.7328	Pulse	0.1000	3

ISTD Table:

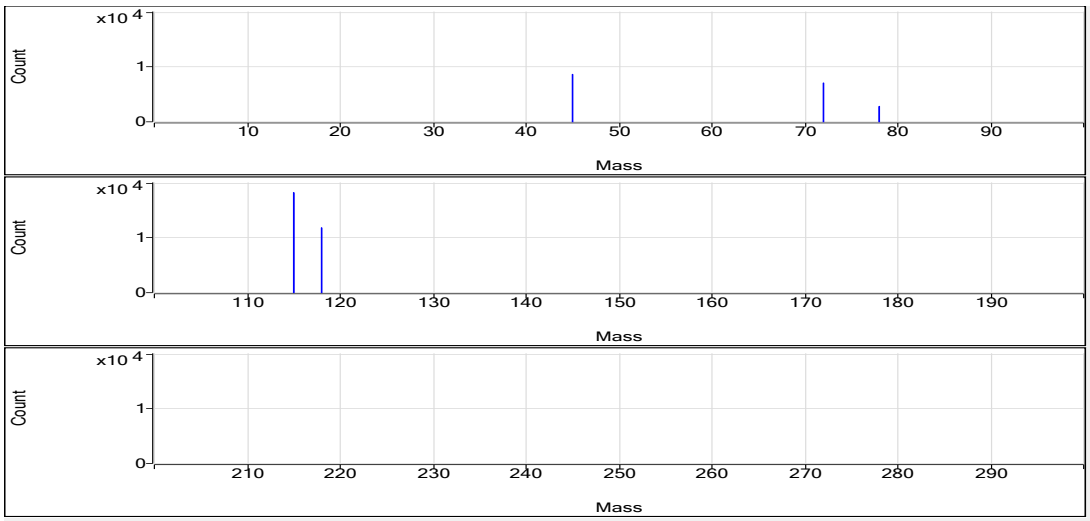
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1317345.53	0.5	98.7	Analog	0.1000	3
No Gas	Ge	72	693136.99	0.4	99.1	Pulse	0.1000	3
H2	Sc	45	86919.48	0.5	100.0	Pulse	0.1000	3
H2	Ge	72	71180.78	1.1	99.4	Pulse	0.1000	3
H2	In	115	183034.39	0.7	99.9	Pulse	0.1000	3
He	Sc	45	22080.72	3.7	96.0	Pulse	0.1000	3
He	Ge	72	43196.39	2.6	102.3	Pulse	0.1000	3
He	In	115	38722.05	2.0	99.5	Pulse	0.1000	3
He	Tb	159	175257.72	0.2	99.5	Pulse	0.1000	3
He	Bi	209	128694.61	0.7	100.4	Pulse	0.1000	3

No Gas

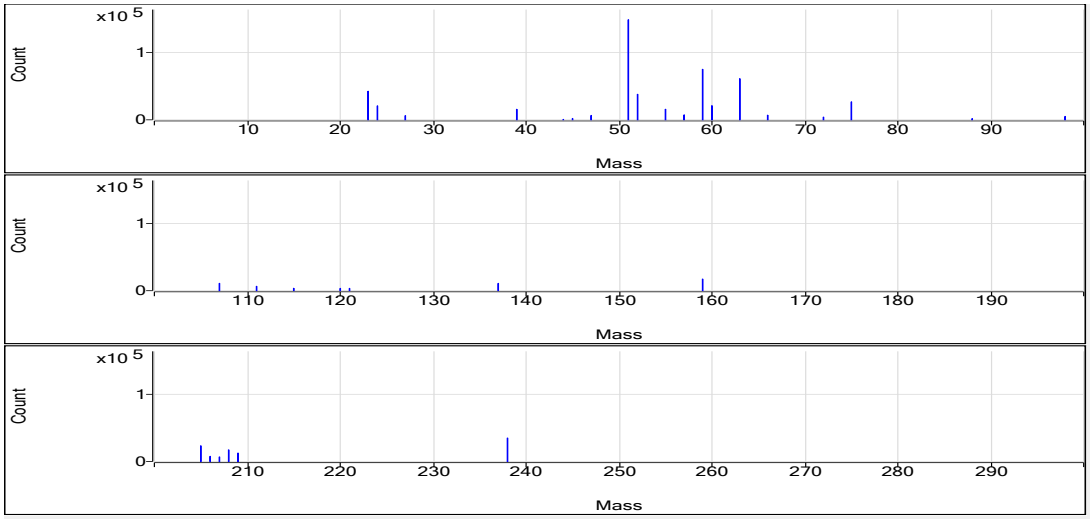


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	45.542	0.022	29056.15	0.0005	1.901E-05
Be	9	1	No Gas	49.995	0.0241	31617.31	0.0005	1.901E-05
Be	9	1	No Gas	53.725	0.0259	34259.09	0.0005	1.901E-05
Se	78	2	H2	50.867	0.0105	1918.80	0.0002	7.279E-06
Se	78	2	H2	50.431	0.0104	1908.80	0.0002	7.279E-06
Se	78	2	H2	49.85	0.0103	1861.46	0.0002	7.279E-06
Na	23	3	He	5022.992	18.6285	428617.34	0.0036	0.7194
Na	23	3	He	5334.334	19.7386	429055.66	0.0036	0.7194
Na	23	3	He	5348.522	19.7892	425398.55	0.0036	0.7194
Mg	24	3	He	4999.64	9.0967	209304.22	0.0018	0.006791
Mg	24	3	He	5253.087	9.5575	207751.56	0.0018	0.006791
Mg	24	3	He	5349.568	9.733	209225.02	0.0018	0.006791
Al	27	3	He	5017.566	2.7968	64351.09	0.0006	0.002622
Al	27	3	He	5167.018	2.88	62603.29	0.0006	0.002622
Al	27	3	He	5455.583	3.0407	65365.44	0.0006	0.002622
K	39	3	He	5019.257	6.9617	160180.51	0.0013	0.5579
K	39	3	He	5361.786	7.3988	160826.22	0.0013	0.5579
K	39	3	He	5308.643	7.331	157590.24	0.0013	0.5579
Ca	44	3	He	4944.961	0.3665	8432.69	0.0001	0.004062
Ca	44	3	He	5212.389	0.3861	8392.65	0.0001	0.004062
Ca	44	3	He	5207.785	0.3858	8292.59	0.0001	0.004062
Ti	47	3	He	4982.31	2.9213	67215.28	0.0006	0.0002809
Ti	47	3	He	5307	3.1117	67637.87	0.0006	0.0002809
Ti	47	3	He	5218.886	3.06	65779.42	0.0006	0.0002809
V	51	3	He	498.256	12.9027	296873.88	0.0259	0.01861
V	51	3	He	529.355	13.7069	297945.16	0.0259	0.01861
V	51	3	He	534.449	13.8386	297481.63	0.0259	0.01861
Cr	52	3	He	498.062	16.6476	383039.84	0.0332	0.1047
Cr	52	3	He	524.933	17.5401	381268.47	0.0332	0.1047
Cr	52	3	He	531.299	17.7515	381597.06	0.0332	0.1047
Mn	55	3	He	506.941	7.0341	161845.75	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	530.253	7.3574	159926.27	0.0139	0.005074
Mn	55	3	He	534.659	7.4185	159471.11	0.0139	0.005074
Fe	57	3	He	5021.45	3.1974	73567.62	0.0006	0.00609
Fe	57	3	He	5496.273	3.4991	76060.73	0.0006	0.00609
Fe	57	3	He	5373.127	3.4209	73537.25	0.0006	0.00609
Co	59	3	He	494.987	32.7492	753516.71	0.0661	0.00621
Co	59	3	He	525.466	34.7654	755692.64	0.0661	0.00621
Co	59	3	He	526.346	34.8236	748586.71	0.0661	0.00621
Ni	60	3	He	470.916	4.7179	209522.44	0.01	0.01721
Ni	60	3	He	494.732	4.9556	212972.03	0.01	0.01721
Ni	60	3	He	501.483	5.023	211989.45	0.01	0.01721
Cu	63	3	He	483.697	13.8554	615320.85	0.0286	0.006793
Cu	63	3	He	497.368	14.2469	612268.47	0.0286	0.006793
Cu	63	3	He	504.806	14.4598	610255.03	0.0286	0.006793
Zn	66	3	He	479.155	1.6118	71579.44	0.0034	0.00316
Zn	66	3	He	496.218	1.6691	71729.40	0.0034	0.00316
Zn	66	3	He	513.189	1.726	72845.16	0.0034	0.00316
As	75	3	He	470.419	1.2158	53993.25	0.0026	0.0008231
As	75	3	He	482.909	1.248	53635.69	0.0026	0.0008231
As	75	3	He	490.15	1.2667	53461.24	0.0026	0.0008231
Sr	88	3	He	51.791	0.5477	20845.90	0.0105	0.001715
Sr	88	3	He	47.895	0.5067	19513.99	0.0105	0.001715
Sr	88	3	He	48.005	0.5078	20104.92	0.0105	0.001715
Mo	98	3	He	50.527	1.3907	52929.97	0.0275	0.0008555
Mo	98	3	He	48.535	1.3359	51454.93	0.0275	0.0008555
Mo	98	3	He	48.754	1.342	53131.50	0.0275	0.0008555
Ag	107	3	He	50.336	2.975	113227.04	0.0591	0.0004305
Ag	107	3	He	48.685	2.8775	110827.95	0.0591	0.0004305
Ag	107	3	He	47.939	2.8334	112177.51	0.0591	0.0004305
Cd	111	3	He	54.628	0.3621	13780.84	0.0066	5.141E-05
Cd	111	3	He	53.51	0.3547	13660.71	0.0066	5.141E-05
Cd	111	3	He	51.376	0.3405	13482.54	0.0066	5.141E-05
Sn	120	3	He	50.099	0.9569	36418.38	0.0187	0.0185
Sn	120	3	He	50.369	0.962	37050.50	0.0187	0.0185
Sn	120	3	He	48.419	0.9254	36639.35	0.0187	0.0185
Sb	121	3	He	53.159	0.974	37070.32	0.0183	0.00111
Sb	121	3	He	51.832	0.9497	36579.17	0.0183	0.00111
Sb	121	3	He	51.349	0.9409	37250.99	0.0183	0.00111
Ba	137	3	He	499.366	2.926	111360.40	0.0059	0.0007704
Ba	137	3	He	498.445	2.9206	112489.01	0.0059	0.0007704
Ba	137	3	He	467.855	2.7414	108536.87	0.0059	0.0007704
Tl	205	3	He	50.465	1.8358	237943.36	0.0364	0.000808
Tl	205	3	He	50.597	1.8406	235449.33	0.0364	0.000808
Tl	205	3	He	50.344	1.8314	235419.53	0.0364	0.000808
Pb	208	3	He	51.942	2.5354	177954.33	0.0487	0.003226
Pb	208	3	He	52.108	2.5434	173838.22	0.0487	0.003226
Pb	208	3	He	52.13	2.5445	175685.00	0.0487	0.003226
U	238	3	He	50.13	2.6817	347593.86	0.0535	0.0004157
U	238	3	He	51.461	2.7529	352155.54	0.0535	0.0004157
U	238	3	He	51.666	2.7639	355291.09	0.0535	0.0004157
Sc	45	1	No Gas			1321354.36		
Sc	45	1	No Gas			1309861.46		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1320820.76		
Ge	72	1	No Gas			691899.68		
Ge	72	1	No Gas			691156.08		
Ge	72	1	No Gas			696355.22		
Sc	45	2	H2			87442.50		
Sc	45	2	H2			86708.53		
Sc	45	2	H2			86607.42		
Ge	72	2	H2			71418.41		
Ge	72	2	H2			71810.16		
Ge	72	2	H2			70313.76		
In	115	2	H2			183446.56		
In	115	2	H2			184063.98		
In	115	2	H2			181592.63		
Sc	45	3	He			23008.69		
Sc	45	3	He			21736.92		
Sc	45	3	He			21496.55		
Ge	72	3	He			44410.03		
Ge	72	3	He			42975.65		
Ge	72	3	He			42203.49		
In	115	3	He			38313.84		
In	115	3	He			38775.02		
In	115	3	He			39848.05		
Tb	159	3	He			174890.04		
Tb	159	3	He			175255.97		
Tb	159	3	He			175627.15		
Bi	209	3	He			129614.74		
Bi	209	3	He			127920.94		
Bi	209	3	He			128548.15		

Quantitation Report

Data File Name	022_ICB.d
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Sample Type	ICB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

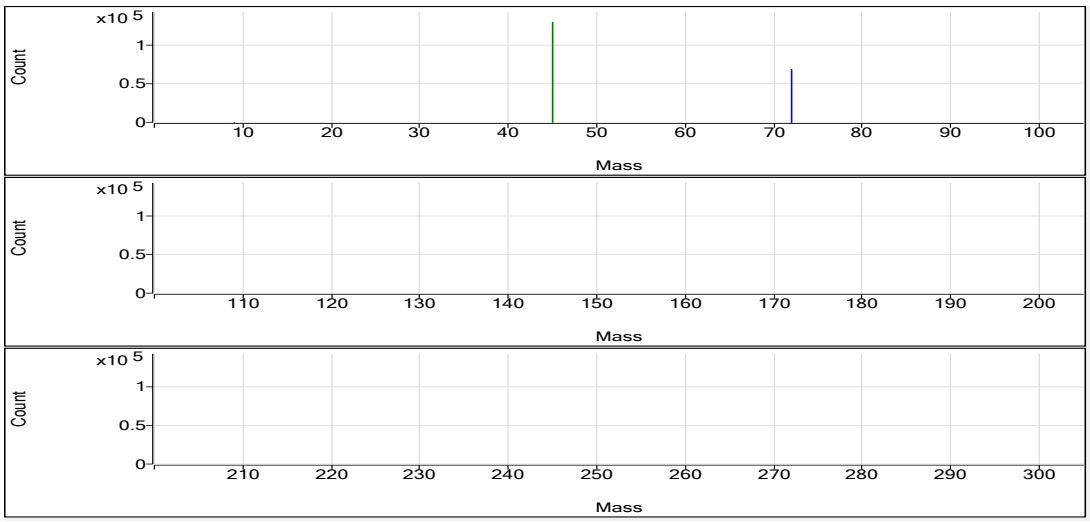
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.084	ppb	31.7	76.67	0.0001	Pulse	0.5000	3
Se	78	115	H2	0.054	ppb	32.4	3.33	0.0000	Pulse	1.5000	3
Na	23	45	He	-9.715	ppb	N/A	15551.91	0.6847	Pulse	0.1000	3
Mg	24	45	He	1.757	ppb	45.9	226.68	0.0100	Pulse	0.1000	3
Al	27	45	He	-1.031	ppb	N/A	46.67	0.0020	Pulse	0.1000	3
K	39	45	He	12.802	ppb	340.0	13042.99	0.5742	Pulse	0.1000	3
Ca	44	45	He	16.880	ppb	134.5	120.01	0.0053	Pulse	0.1000	3
Ti	47	45	He	2.765	ppb	29.6	43.33	0.0019	Pulse	0.1000	3
V	51	45	He	0.118	ppb	39.1	492.01	0.0217	Pulse	0.5000	3
Cr	52	45	He	0.513	ppb	57.2	2763.70	0.1218	Pulse	0.1000	3
Mn	55	45	He	0.164	ppb	15.3	166.68	0.0073	Pulse	0.1000	3
Fe	57	45	He	2.196	ppb	267.0	170.01	0.0075	Pulse	0.1000	3
Co	59	45	He	0.120	ppb	74.2	323.35	0.0142	Pulse	0.1000	3
Ni	60	72	He	-0.034	ppb	N/A	706.71	0.0169	Pulse	0.1000	3
Cu	63	72	He	0.157	ppb	34.3	473.36	0.0113	Pulse	0.1000	3
Zn	66	72	He	-0.231	ppb	N/A	100.00	0.0024	Pulse	0.1000	3
As	75	72	He	0.263	ppb	50.7	62.67	0.0015	Pulse	0.5000	3
Sr	88	115	He	0.031	ppb	239.2	80.00	0.0020	Pulse	0.1000	3
Mo	98	115	He	0.028	ppb	39.3	63.33	0.0016	Pulse	0.1000	3
Ag	107	115	He	0.007	ppb	126.5	33.33	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.015	ppb	51.5	6.00	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.001	ppb	12331.4	726.71	0.0185	Pulse	0.1000	3
Sb	121	115	He	0.130	ppb	35.1	136.67	0.0035	Pulse	0.1000	3
Ba	137	115	He	0.144	ppb	47.7	63.33	0.0016	Pulse	0.1000	3
Tl	205	209	He	0.110	ppb	11.5	613.37	0.0048	Pulse	0.1000	3
Pb	208	209	He	0.015	ppb	44.6	503.36	0.0039	Pulse	0.1000	3
U	238	209	He	0.018	ppb	25.5	176.68	0.0014	Pulse	0.1000	3

ISTD Table:

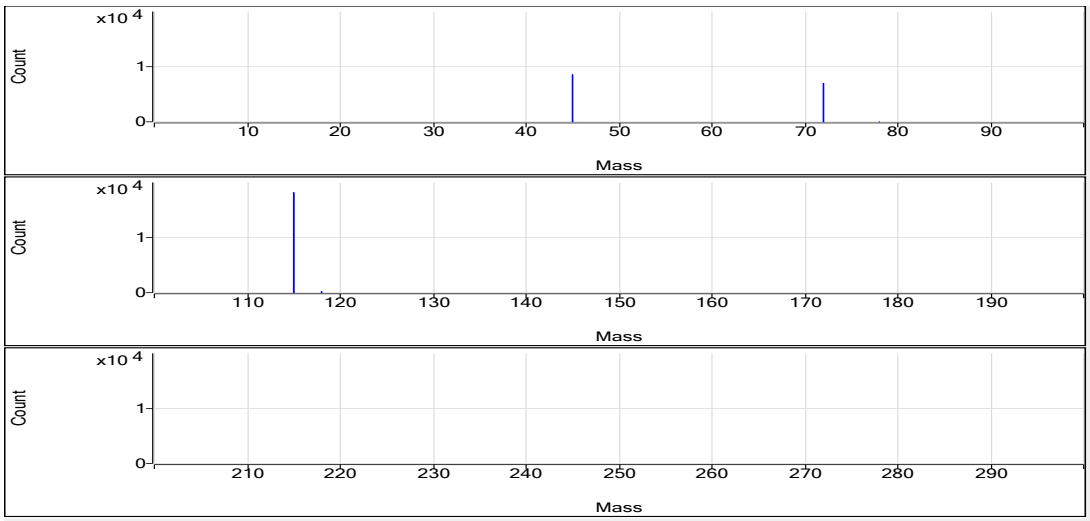
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1291564.72	1.2	96.8	Analog	0.1000	3
No Gas	Ge	72	683226.13	1.1	97.7	Pulse	0.1000	3
H2	Sc	45	85101.34	1.5	97.9	Pulse	0.1000	3
H2	Ge	72	69600.05	2.9	97.2	Pulse	0.1000	3
H2	In	115	180522.92	0.5	98.6	Pulse	0.1000	3
He	Sc	45	22714.90	1.8	98.7	Pulse	0.1000	3
He	Ge	72	41885.43	2.2	99.2	Pulse	0.1000	3
He	In	115	39261.02	0.9	100.8	Pulse	0.1000	3
He	Tb	159	173567.00	0.8	98.6	Pulse	0.1000	3
He	Bi	209	127957.58	0.6	99.8	Pulse	0.1000	3

No Gas

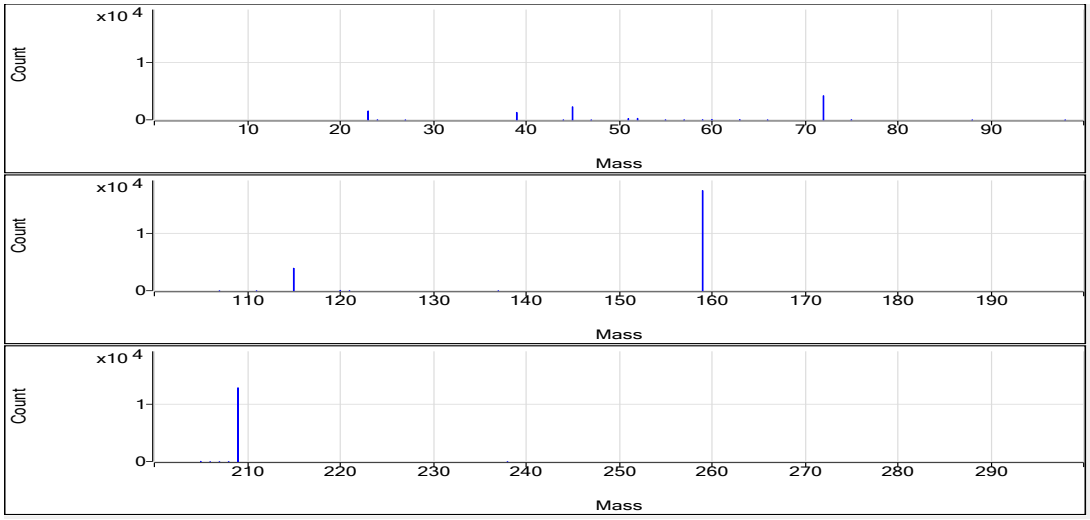


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.114	0.0001	94.00	0.0005	1.901E-05
Be	9	1	No Gas	0.075	0.0001	72.00	0.0005	1.901E-05
Be	9	1	No Gas	0.063	0	64.00	0.0005	1.901E-05
Se	78	2	H2	0.072	0	4.00	0.0002	7.279E-06
Se	78	2	H2	0.037	0	2.67	0.0002	7.279E-06
Se	78	2	H2	0.054	0	3.33	0.0002	7.279E-06
Na	23	3	He	-6.859	0.6949	15919.01	0.0036	0.7194
Na	23	3	He	-8.64	0.6885	15318.36	0.0036	0.7194
Na	23	3	He	-13.647	0.6707	15418.35	0.0036	0.7194
Mg	24	3	He	0.827	0.0083	190.01	0.0018	0.006791
Mg	24	3	He	2.198	0.0108	240.01	0.0018	0.006791
Mg	24	3	He	2.246	0.0109	250.01	0.0018	0.006791
Al	27	3	He	0.778	0.0031	70.00	0.0006	0.002622
Al	27	3	He	-2.288	0.0013	30.00	0.0006	0.002622
Al	27	3	He	-1.585	0.0017	40.00	0.0006	0.002622
K	39	3	He	58.422	0.6324	14487.67	0.0013	0.5579
K	39	3	He	8.264	0.5684	12645.92	0.0013	0.5579
K	39	3	He	-28.28	0.5218	11995.38	0.0013	0.5579
Ca	44	3	He	22.008	0.0057	130.01	0.0001	0.004062
Ca	44	3	He	36.574	0.0067	150.01	0.0001	0.004062
Ca	44	3	He	-7.943	0.0035	80.00	0.0001	0.004062
Ti	47	3	He	3.244	0.0022	50.00	0.0006	0.0002809
Ti	47	3	He	1.821	0.0013	30.00	0.0006	0.0002809
Ti	47	3	He	3.231	0.0022	50.00	0.0006	0.0002809
V	51	3	He	0.121	0.0217	498.01	0.0259	0.01861
V	51	3	He	0.163	0.0228	508.01	0.0259	0.01861
V	51	3	He	0.071	0.0204	470.01	0.0259	0.01861
Cr	52	3	He	0.527	0.1222	2800.38	0.0332	0.1047
Cr	52	3	He	0.799	0.1313	2920.41	0.0332	0.1047
Cr	52	3	He	0.213	0.1118	2570.31	0.0332	0.1047
Mn	55	3	He	0.169	0.0074	170.01	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.185	0.0076	170.01	0.0139	0.005074
Mn	55	3	He	0.136	0.007	160.01	0.0139	0.005074
Fe	57	3	He	8.276	0.0113	260.01	0.0006	0.00609
Fe	57	3	He	1.734	0.0072	160.01	0.0006	0.00609
Fe	57	3	He	-3.423	0.0039	90.00	0.0006	0.00609
Co	59	3	He	0.144	0.0157	360.02	0.0661	0.00621
Co	59	3	He	0.022	0.0076	170.01	0.0661	0.00621
Co	59	3	He	0.195	0.0191	440.02	0.0661	0.00621
Ni	60	3	He	-0.036	0.0169	690.04	0.01	0.01721
Ni	60	3	He	0.01	0.0173	740.05	0.01	0.01721
Ni	60	3	He	-0.077	0.0164	690.04	0.01	0.01721
Cu	63	3	He	0.181	0.012	490.03	0.0286	0.006793
Cu	63	3	He	0.196	0.0124	530.03	0.0286	0.006793
Cu	63	3	He	0.096	0.0095	400.02	0.0286	0.006793
Zn	66	3	He	-0.359	0.002	80.00	0.0034	0.00316
Zn	66	3	He	-0.314	0.0021	90.00	0.0034	0.00316
Zn	66	3	He	-0.019	0.0031	130.01	0.0034	0.00316
As	75	3	He	0.4	0.0019	76.00	0.0026	0.0008231
As	75	3	He	0.134	0.0012	50.00	0.0026	0.0008231
As	75	3	He	0.253	0.0015	62.00	0.0026	0.0008231
Sr	88	3	He	0.106	0.0028	110.00	0.0105	0.001715
Sr	88	3	He	-0.042	0.0013	50.00	0.0105	0.001715
Sr	88	3	He	0.029	0.002	80.00	0.0105	0.001715
Mo	98	3	He	0.034	0.0018	70.00	0.0275	0.0008555
Mo	98	3	He	0.015	0.0013	50.00	0.0275	0.0008555
Mo	98	3	He	0.033	0.0018	70.00	0.0275	0.0008555
Ag	107	3	He	0.01	0.001	40.00	0.0591	0.0004305
Ag	107	3	He	0.014	0.0013	50.00	0.0591	0.0004305
Ag	107	3	He	-0.003	0.0003	10.00	0.0591	0.0004305
Cd	111	3	He	0.023	0.0002	8.00	0.0066	5.141E-05
Cd	111	3	He	0.015	0.0002	6.00	0.0066	5.141E-05
Cd	111	3	He	0.008	0.0001	4.00	0.0066	5.141E-05
Sn	120	3	He	0.152	0.0214	830.05	0.0187	0.0185
Sn	120	3	He	-0.039	0.0178	700.04	0.0187	0.0185
Sn	120	3	He	-0.11	0.0164	650.04	0.0187	0.0185
Sb	121	3	He	0.164	0.0041	160.01	0.0183	0.00111
Sb	121	3	He	0.078	0.0025	100.00	0.0183	0.00111
Sb	121	3	He	0.147	0.0038	150.01	0.0183	0.00111
Ba	137	3	He	0.22	0.0021	80.00	0.0059	0.0007704
Ba	137	3	He	0.085	0.0013	50.00	0.0059	0.0007704
Ba	137	3	He	0.128	0.0015	60.00	0.0059	0.0007704
Tl	205	3	He	0.109	0.0048	610.04	0.0364	0.000808
Tl	205	3	He	0.123	0.0053	670.04	0.0364	0.000808
Tl	205	3	He	0.097	0.0044	560.04	0.0364	0.000808
Pb	208	3	He	0.017	0.0041	310.02	0.0487	0.003226
Pb	208	3	He	0.019	0.0042	260.01	0.0487	0.003226
Pb	208	3	He	0.007	0.0036	170.01	0.0487	0.003226
U	238	3	He	0.017	0.0013	170.01	0.0535	0.0004157
U	238	3	He	0.023	0.0017	210.01	0.0535	0.0004157
U	238	3	He	0.014	0.0012	150.01	0.0535	0.0004157
Sc	45	1	No Gas			1272964.28		
Sc	45	1	No Gas			1300760.14		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1300969.75		
Ge	72	1	No Gas			677937.88		
Ge	72	1	No Gas			692010.69		
Ge	72	1	No Gas			679729.83		
Sc	45	2	H2			83740.60		
Sc	45	2	H2			86334.74		
Sc	45	2	H2			85228.69		
Ge	72	2	H2			67309.60		
Ge	72	2	H2			70755.24		
Ge	72	2	H2			70735.31		
In	115	2	H2			180913.81		
In	115	2	H2			179456.85		
In	115	2	H2			181198.10		
Sc	45	3	He			22908.51		
Sc	45	3	He			22247.49		
Sc	45	3	He			22988.69		
Ge	72	3	He			40939.36		
Ge	72	3	He			42744.50		
Ge	72	3	He			41972.43		
In	115	3	He			38874.82		
In	115	3	He			39376.48		
In	115	3	He			39547.02		
Tb	159	3	He			173523.45		
Tb	159	3	He			174941.11		
Tb	159	3	He			172236.44		
Bi	209	3	He			127911.28		
Bi	209	3	He			127253.94		
Bi	209	3	He			128707.52		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
Acq Time	9/19/2023 7:30:04 AM
Sample Name	CRI 4823223
Sample Type	CRI
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

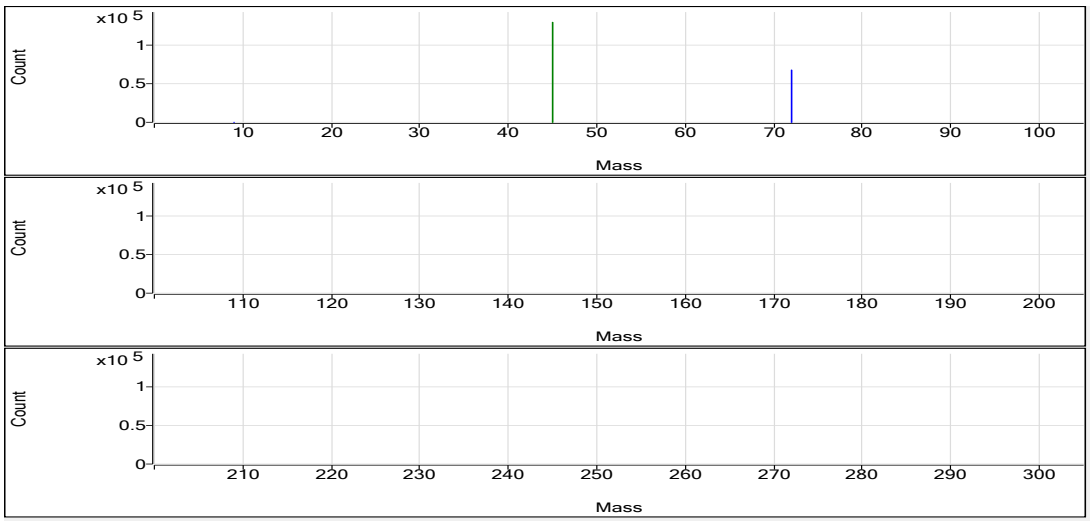
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.563	ppb	8.2	378.68	0.0003	Pulse	0.5000	3
Se	78	115	H2	0.988	ppb	3.8	38.66	0.0002	Pulse	1.5000	3
Na	23	45	He	189.490	ppb	7.1	31337.14	1.3950	Pulse	0.1000	3
Mg	24	45	He	48.337	ppb	4.0	2126.89	0.0947	Pulse	0.1000	3
Al	27	45	He	24.518	ppb	25.4	366.68	0.0163	Pulse	0.1000	3
K	39	45	He	211.689	ppb	26.8	18605.81	0.8280	Pulse	0.1000	3
Ca	44	45	He	93.868	ppb	20.6	246.68	0.0109	Pulse	0.1000	3
Ti	47	45	He	8.568	ppb	36.3	120.01	0.0053	Pulse	0.1000	3
V	51	45	He	2.143	ppb	6.0	1662.11	0.0740	Pulse	0.5000	3
Cr	52	45	He	2.232	ppb	0.9	4020.72	0.1789	Pulse	0.1000	3
Mn	55	45	He	2.031	ppb	4.1	746.71	0.0332	Pulse	0.1000	3
Fe	57	45	He	53.509	ppb	10.4	900.06	0.0401	Pulse	0.1000	3
Co	59	45	He	0.576	ppb	3.2	996.74	0.0443	Pulse	0.1000	3
Ni	60	72	He	1.185	ppb	11.5	1200.10	0.0290	Pulse	0.1000	3
Cu	63	72	He	1.079	ppb	16.2	1553.47	0.0377	Pulse	0.1000	3
Zn	66	72	He	9.977	ppb	5.8	1513.47	0.0367	Pulse	0.1000	3
As	75	72	He	2.209	ppb	12.8	269.34	0.0065	Pulse	0.5000	3
Sr	88	115	He	1.147	ppb	14.9	533.36	0.0138	Pulse	0.1000	3
Mo	98	115	He	0.471	ppb	0.9	533.37	0.0138	Pulse	0.1000	3
Ag	107	115	He	0.555	ppb	5.4	1283.44	0.0332	Pulse	0.1000	3
Cd	111	115	He	0.461	ppb	5.4	120.00	0.0031	Pulse	0.5000	3
Sn	120	115	He	2.160	ppb	18.8	2276.97	0.0590	Pulse	0.1000	3
Sb	121	115	He	0.806	ppb	7.4	613.37	0.0159	Pulse	0.1000	3
Ba	137	115	He	1.837	ppb	17.5	446.69	0.0115	Pulse	0.1000	3
Tl	205	209	He	0.541	ppb	7.6	2660.38	0.0205	Pulse	0.1000	3
Pb	208	209	He	0.483	ppb	5.8	3473.66	0.0268	Pulse	0.1000	3
U	238	209	He	0.973	ppb	2.6	6812.06	0.0525	Pulse	0.1000	3

ISTD Table:

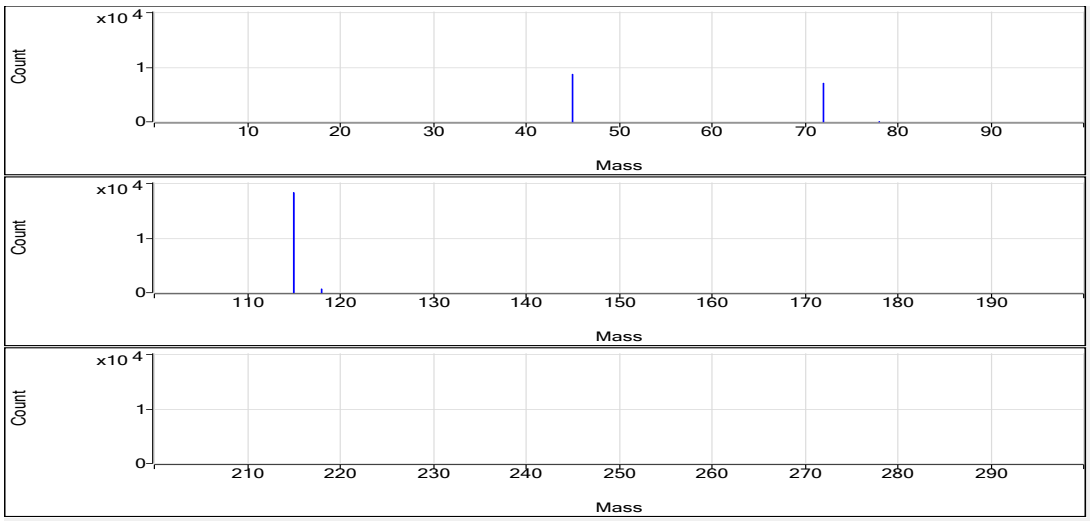
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1303388.08	1.5	97.7	Analog	0.1000	3
No Gas	Ge	72	681815.67	0.4	97.5	Pulse	0.1000	3
H2	Sc	45	87502.48	1.7	100.6	Pulse	0.1000	3
H2	Ge	72	71177.71	0.4	99.4	Pulse	0.1000	3
H2	In	115	183868.72	1.0	100.4	Pulse	0.1000	3
He	Sc	45	22477.90	3.5	97.7	Pulse	0.1000	3
He	Ge	72	41323.63	2.6	97.9	Pulse	0.1000	3
He	In	115	38658.74	1.8	99.3	Pulse	0.1000	3
He	Tb	159	175418.66	1.0	99.6	Pulse	0.1000	3
He	Bi	209	129852.29	0.5	101.3	Pulse	0.1000	3

No Gas

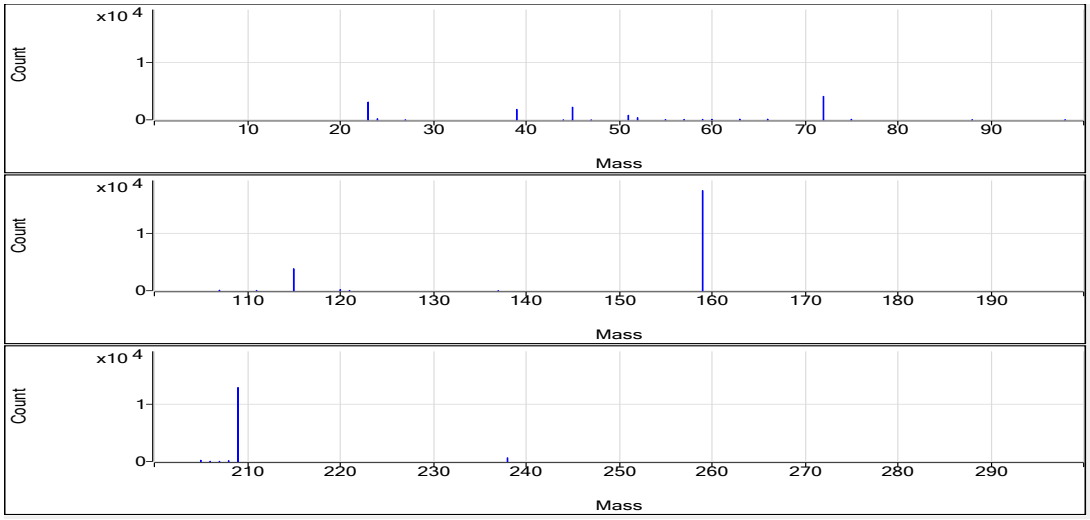


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.554	0.0003	374.01	0.0005	1.901E-05
Be	9	1	No Gas	0.522	0.0003	358.01	0.0005	1.901E-05
Be	9	1	No Gas	0.613	0.0003	404.01	0.0005	1.901E-05
Se	78	2	H2	0.946	0.0002	37.33	0.0002	7.279E-06
Se	78	2	H2	1.018	0.0002	39.33	0.0002	7.279E-06
Se	78	2	H2	1	0.0002	39.33	0.0002	7.279E-06
Na	23	3	He	198.845	1.4283	32205.68	0.0036	0.7194
Na	23	3	He	174.151	1.3403	31133.26	0.0036	0.7194
Na	23	3	He	195.476	1.4163	30672.49	0.0036	0.7194
Mg	24	3	He	46.52	0.0914	2060.22	0.0018	0.006791
Mg	24	3	He	48.125	0.0943	2190.23	0.0018	0.006791
Mg	24	3	He	50.366	0.0984	2130.22	0.0018	0.006791
Al	27	3	He	18.387	0.0129	290.01	0.0006	0.002622
Al	27	3	He	30.853	0.0198	460.02	0.0006	0.002622
Al	27	3	He	24.314	0.0162	350.02	0.0006	0.002622
K	39	3	He	275.865	0.9098	20515.07	0.0013	0.5579
K	39	3	He	167.783	0.7719	17931.50	0.0013	0.5579
K	39	3	He	191.42	0.8021	17370.85	0.0013	0.5579
Ca	44	3	He	89.806	0.0106	240.01	0.0001	0.004062
Ca	44	3	He	114.916	0.0125	290.01	0.0001	0.004062
Ca	44	3	He	76.883	0.0097	210.01	0.0001	0.004062
Ti	47	3	He	10.869	0.0067	150.01	0.0006	0.0002809
Ti	47	3	He	9.802	0.006	140.01	0.0006	0.0002809
Ti	47	3	He	5.034	0.0032	70.00	0.0006	0.0002809
V	51	3	He	2.189	0.0752	1696.11	0.0259	0.01861
V	51	3	He	1.997	0.0703	1632.11	0.0259	0.01861
V	51	3	He	2.241	0.0766	1658.10	0.0259	0.01861
Cr	52	3	He	2.215	0.1783	4020.71	0.0332	0.1047
Cr	52	3	He	2.226	0.1787	4150.77	0.0332	0.1047
Cr	52	3	He	2.255	0.1797	3890.67	0.0332	0.1047
Mn	55	3	He	1.937	0.0319	720.04	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2.056	0.0336	780.05	0.0139	0.005074
Mn	55	3	He	2.099	0.0342	740.04	0.0139	0.005074
Fe	57	3	He	48.341	0.0368	830.05	0.0006	0.00609
Fe	57	3	He	52.74	0.0396	920.07	0.0006	0.00609
Fe	57	3	He	59.444	0.0439	950.06	0.0006	0.00609
Co	59	3	He	0.59	0.0452	1020.07	0.0661	0.00621
Co	59	3	He	0.583	0.0448	1040.08	0.0661	0.00621
Co	59	3	He	0.555	0.0429	930.06	0.0661	0.00621
Ni	60	3	He	1.24	0.0296	1260.10	0.01	0.01721
Ni	60	3	He	1.284	0.03	1220.09	0.01	0.01721
Ni	60	3	He	1.03	0.0275	1120.10	0.01	0.01721
Cu	63	3	He	0.878	0.0319	1360.11	0.0286	0.006793
Cu	63	3	He	1.198	0.0411	1670.15	0.0286	0.006793
Cu	63	3	He	1.16	0.04	1630.14	0.0286	0.006793
Zn	66	3	He	9.412	0.0348	1480.13	0.0034	0.00316
Zn	66	3	He	10.567	0.0386	1570.14	0.0034	0.00316
Zn	66	3	He	9.951	0.0366	1490.13	0.0034	0.00316
As	75	3	He	1.954	0.0059	250.00	0.0026	0.0008231
As	75	3	He	2.159	0.0064	260.00	0.0026	0.0008231
As	75	3	He	2.513	0.0073	298.01	0.0026	0.0008231
Sr	88	3	He	1.113	0.0134	530.03	0.0105	0.001715
Sr	88	3	He	0.995	0.0122	470.02	0.0105	0.001715
Sr	88	3	He	1.333	0.0158	600.03	0.0105	0.001715
Mo	98	3	He	0.467	0.0137	540.04	0.0275	0.0008555
Mo	98	3	He	0.469	0.0138	530.03	0.0275	0.0008555
Mo	98	3	He	0.475	0.0139	530.03	0.0275	0.0008555
Ag	107	3	He	0.555	0.0332	1310.11	0.0591	0.0004305
Ag	107	3	He	0.525	0.0314	1210.10	0.0591	0.0004305
Ag	107	3	He	0.584	0.035	1330.11	0.0591	0.0004305
Cd	111	3	He	0.436	0.0029	116.00	0.0066	5.141E-05
Cd	111	3	He	0.486	0.0033	126.00	0.0066	5.141E-05
Cd	111	3	He	0.46	0.0031	118.00	0.0066	5.141E-05
Sn	120	3	He	1.721	0.0507	2000.20	0.0187	0.0185
Sn	120	3	He	2.521	0.0657	2530.42	0.0187	0.0185
Sn	120	3	He	2.239	0.0604	2300.29	0.0187	0.0185
Sb	121	3	He	0.813	0.016	630.04	0.0183	0.00111
Sb	121	3	He	0.862	0.0169	650.04	0.0183	0.00111
Sb	121	3	He	0.743	0.0147	560.03	0.0183	0.00111
Ba	137	3	He	2.207	0.0137	540.03	0.0059	0.0007704
Ba	137	3	He	1.687	0.0107	410.02	0.0059	0.0007704
Ba	137	3	He	1.618	0.0102	390.02	0.0059	0.0007704
Tl	205	3	He	0.579	0.0218	2850.42	0.0364	0.000808
Tl	205	3	He	0.548	0.0207	2690.38	0.0364	0.000808
Tl	205	3	He	0.497	0.0189	2440.33	0.0364	0.000808
Pb	208	3	He	0.451	0.0252	1590.14	0.0487	0.003226
Pb	208	3	He	0.504	0.0278	1990.25	0.0487	0.003226
Pb	208	3	He	0.493	0.0272	1890.23	0.0487	0.003226
U	238	3	He	0.948	0.0511	6671.97	0.0535	0.0004157
U	238	3	He	0.972	0.0524	6802.06	0.0535	0.0004157
U	238	3	He	0.999	0.0539	6962.15	0.0535	0.0004157
Sc	45	1	No Gas			1305915.68		
Sc	45	1	No Gas			1321569.20		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1282679.36		
Ge	72	1	No Gas			680855.77		
Ge	72	1	No Gas			685094.76		
Ge	72	1	No Gas			679496.47		
Sc	45	2	H2			87944.82		
Sc	45	2	H2			88760.15		
Sc	45	2	H2			85802.47		
Ge	72	2	H2			71157.73		
Ge	72	2	H2			71479.30		
Ge	72	2	H2			70896.09		
In	115	2	H2			185158.81		
In	115	2	H2			181663.12		
In	115	2	H2			184784.22		
Sc	45	3	He			22547.99		
Sc	45	3	He			23229.03		
Sc	45	3	He			21656.68		
Ge	72	3	He			42584.20		
Ge	72	3	He			40638.19		
Ge	72	3	He			40748.49		
In	115	3	He			39436.80		
In	115	3	He			38514.46		
In	115	3	He			38072.78		
Tb	159	3	He			177339.37		
Tb	159	3	He			174797.81		
Tb	159	3	He			174118.79		
Bi	209	3	He			130495.65		
Bi	209	3	He			129829.48		
Bi	209	3	He			129231.73		

Quantitation Report

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Sample Type	ICSA
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

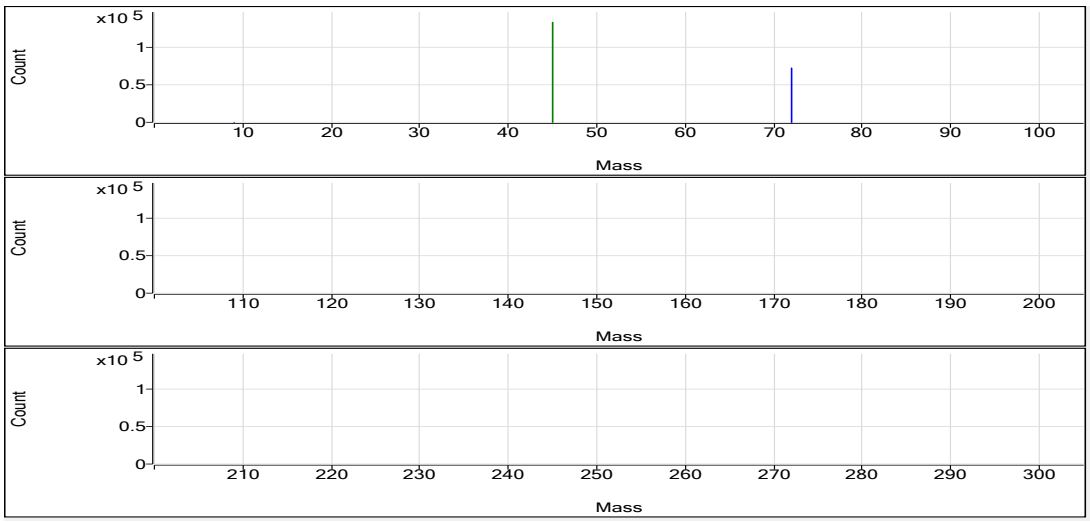
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.017	ppb	99.1	36.67	0.0000	Pulse	0.5000	3
Se	78	115	H2	0.082	ppb	11.6	4.22	0.0000	Pulse	1.5000	3
Na	23	45	He	242500.950	ppb	3.1	19791437.21	865.3405	Analog	0.1000	3
Mg	24	45	He	96163.187	ppb	4.0	3998019.21	174.8432	Analog	0.1000	3
Al	27	45	He	99032.149	ppb	5.2	1260772.17	55.1519	Analog	0.1000	3
K	39	45	He	97407.222	ppb	4.4	2854275.90	124.8358	Analog	0.1000	3
Ca	44	45	He	286462.995	ppb	3.7	480234.15	21.0002	Pulse	0.1000	3
Ti	47	45	He	1944.715	ppb	5.1	26070.86	1.1404	Pulse	0.1000	3
V	51	45	He	-0.020	ppb	N/A	414.01	0.0181	Pulse	0.5000	3
Cr	52	45	He	3.381	ppb	17.2	4961.05	0.2170	Pulse	0.1000	3
Mn	55	45	He	0.719	ppb	40.5	346.68	0.0150	Pulse	0.1000	3
Fe	57	45	He	242222.251	ppb	3.2	3520998.91	153.9462	Analog	0.1000	3
Co	59	45	He	0.242	ppb	20.1	506.70	0.0222	Pulse	0.1000	3
Ni	60	72	He	0.277	ppb	64.1	870.06	0.0200	Pulse	0.1000	3
Cu	63	72	He	0.062	ppb	58.3	373.35	0.0086	Pulse	0.1000	3
Zn	66	72	He	1.229	ppb	32.8	316.68	0.0073	Pulse	0.1000	3
As	75	72	He	0.102	ppb	7.1	47.33	0.0011	Pulse	0.5000	3
Sr	88	115	He	1.795	ppb	13.7	756.72	0.0206	Pulse	0.1000	3
Mo	98	115	He	2114.788	ppb	1.0	2135791.01	58.1744	Analog	0.1000	3
Ag	107	115	He	0.014	ppb	65.5	46.67	0.0013	Pulse	0.1000	3
Cd	111	115	He	0.179	ppb	10.9	45.33	0.0012	Pulse	0.5000	3
Sn	120	115	He	0.184	ppb	76.6	806.72	0.0219	Pulse	0.1000	3
Sb	121	115	He	0.198	ppb	18.9	173.34	0.0047	Pulse	0.1000	3
Ba	137	115	He	0.287	ppb	17.5	90.00	0.0025	Pulse	0.1000	3
Tl	205	209	He	0.014	ppb	161.2	160.01	0.0013	Pulse	0.1000	3
Pb	208	209	He	0.087	ppb	41.1	913.38	0.0075	Pulse	0.1000	3
U	238	209	He	0.051	ppb	3.2	383.35	0.0031	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1341760.24	1.2	100.5	Analog	0.1000	3
No Gas	Ge	72	728611.08	0.6	104.2	Pulse	0.1000	3
H2	Sc	45	87019.96	1.2	100.1	Pulse	0.1000	3
H2	Ge	72	73392.02	3.1	102.5	Pulse	0.1000	3
H2	In	115	175092.39	1.5	95.6	Pulse	0.1000	3
He	Sc	45	22888.62	3.6	99.5	Pulse	0.1000	3
He	Ge	72	43513.76	1.6	103.1	Pulse	0.1000	3
He	In	115	36716.96	1.4	94.3	Pulse	0.1000	3
He	Tb	159	174085.96	0.4	98.9	Pulse	0.1000	3
He	Bi	209	122707.34	2.6	95.7	Pulse	0.1000	3

No Gas



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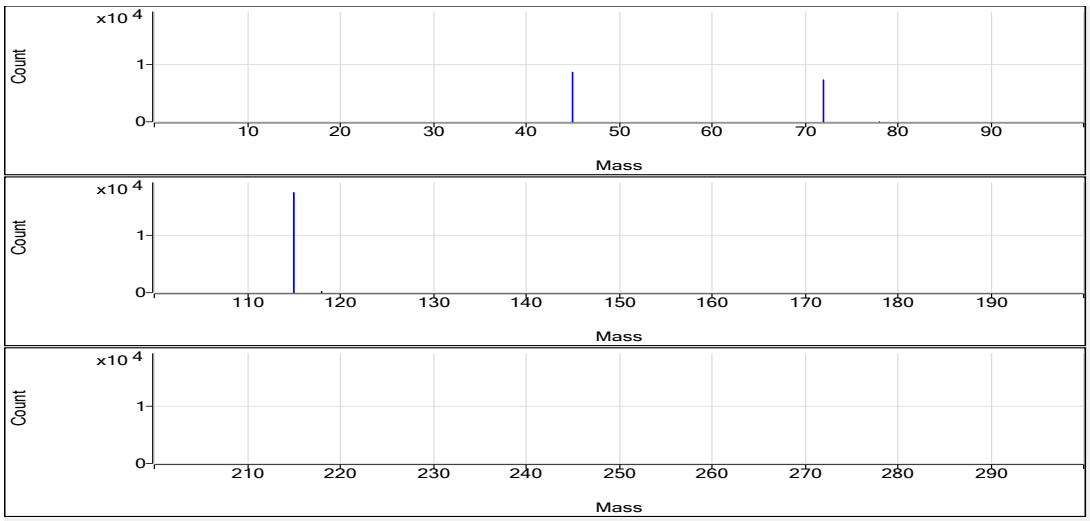
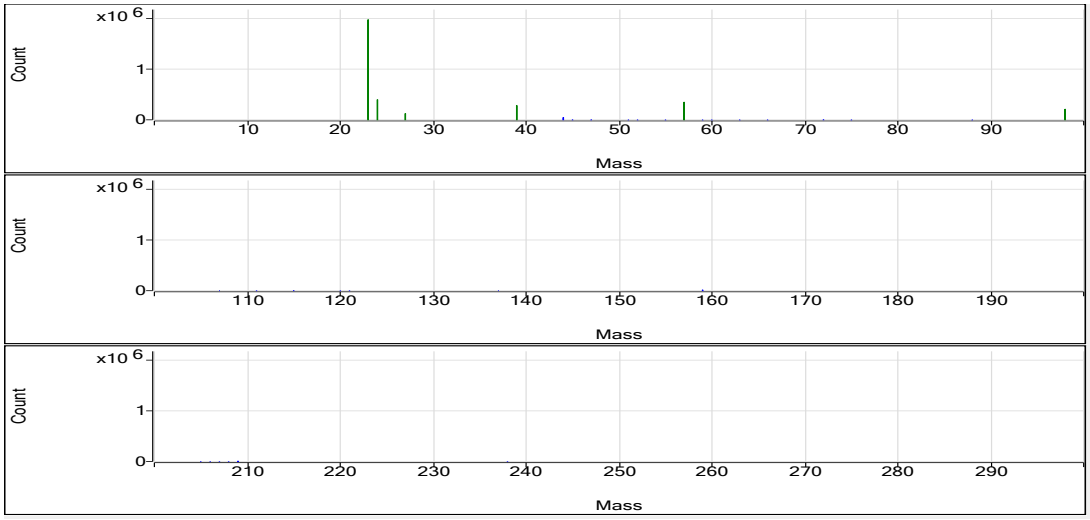


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.015	0	36.00	0.0005	1.901E-05
Be	9	1	No Gas	0.035	0	48.00	0.0005	1.901E-05
Be	9	1	No Gas	0.001	0	26.00	0.0005	1.901E-05
Se	78	2	H2	0.093	0	4.67	0.0002	7.279E-06
Se	78	2	H2	0.075	0	4.00	0.0002	7.279E-06
Se	78	2	H2	0.078	0	4.00	0.0002	7.279E-06
Na	23	3	He	233836.657	834.4486	19893370.95	0.0036	0.7194
Na	23	3	He	245848.575	877.2763	19780939.71	0.0036	0.7194
Na	23	3	He	247817.617	884.2968	19700000.96	0.0036	0.7194
Mg	24	3	He	91865.416	167.0293	3982002.44	0.0018	0.006791
Mg	24	3	He	97197.591	176.7239	3984792.75	0.0018	0.006791
Mg	24	3	He	99426.555	180.7764	4027262.44	0.0018	0.006791
Al	27	3	He	93407.462	52.0196	1240154.51	0.0006	0.002622
Al	27	3	He	100087.614	55.7397	1256825.06	0.0006	0.002622
Al	27	3	He	103601.372	57.6964	1285336.93	0.0006	0.002622
K	39	3	He	92461.146	118.5253	2825658.71	0.0013	0.5579
K	39	3	He	99533.439	127.5485	2875980.27	0.0013	0.5579
K	39	3	He	100227.081	128.4335	2861188.71	0.0013	0.5579
Ca	44	3	He	274707.379	20.1386	480106.63	0.0001	0.004062
Ca	44	3	He	289070.866	21.1913	477825.23	0.0001	0.004062
Ca	44	3	He	295610.739	21.6707	482770.58	0.0001	0.004062
Ti	47	3	He	1830.635	1.0735	25593.39	0.0006	0.0002809
Ti	47	3	He	2000.711	1.1733	26454.68	0.0006	0.0002809
Ti	47	3	He	2002.798	1.1745	26164.52	0.0006	0.0002809
V	51	3	He	-0.029	0.0179	426.01	0.0259	0.01861
V	51	3	He	0.045	0.0198	446.01	0.0259	0.01861
V	51	3	He	-0.077	0.0166	370.01	0.0259	0.01861
Cr	52	3	He	3.061	0.2064	4921.01	0.0332	0.1047
Cr	52	3	He	3.03	0.2054	4630.95	0.0332	0.1047
Cr	52	3	He	4.052	0.2393	5331.19	0.0332	0.1047
Mn	55	3	He	1.056	0.0197	470.03	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.562	0.0129	290.01	0.0139	0.005074
Mn	55	3	He	0.541	0.0126	280.01	0.0139	0.005074
Fe	57	3	He	233359.397	148.3135	3535815.26	0.0006	0.00609
Fe	57	3	He	247763.1	157.4675	3550598.70	0.0006	0.00609
Fe	57	3	He	245544.256	156.0574	3476582.76	0.0006	0.00609
Co	59	3	He	0.191	0.0189	450.03	0.0661	0.00621
Co	59	3	He	0.288	0.0253	570.03	0.0661	0.00621
Co	59	3	He	0.245	0.0224	500.03	0.0661	0.00621
Ni	60	3	He	0.47	0.0219	970.07	0.01	0.01721
Ni	60	3	He	0.119	0.0184	790.06	0.01	0.01721
Ni	60	3	He	0.242	0.0196	850.06	0.01	0.01721
Cu	63	3	He	0.078	0.009	400.02	0.0286	0.006793
Cu	63	3	He	0.088	0.0093	400.02	0.0286	0.006793
Cu	63	3	He	0.021	0.0074	320.01	0.0286	0.006793
Zn	66	3	He	1.009	0.0065	290.01	0.0034	0.00316
Zn	66	3	He	1.695	0.0089	380.02	0.0034	0.00316
Zn	66	3	He	0.985	0.0065	280.01	0.0034	0.00316
As	75	3	He	0.101	0.0011	48.00	0.0026	0.0008231
As	75	3	He	0.096	0.0011	46.00	0.0026	0.0008231
As	75	3	He	0.11	0.0011	48.00	0.0026	0.0008231
Sr	88	3	He	1.516	0.0177	660.04	0.0105	0.001715
Sr	88	3	He	1.885	0.0216	790.05	0.0105	0.001715
Sr	88	3	He	1.982	0.0226	820.06	0.0105	0.001715
Mo	98	3	He	2089.984	57.492	2144126.84	0.0275	0.0008555
Mo	98	3	He	2127.922	58.5357	2142040.28	0.0275	0.0008555
Mo	98	3	He	2126.458	58.4954	2121205.91	0.0275	0.0008555
Ag	107	3	He	0.024	0.0019	70.00	0.0591	0.0004305
Ag	107	3	He	0.007	0.0008	30.00	0.0591	0.0004305
Ag	107	3	He	0.011	0.0011	40.00	0.0591	0.0004305
Cd	111	3	He	0.162	0.0011	42.00	0.0066	5.141E-05
Cd	111	3	He	0.174	0.0012	44.00	0.0066	5.141E-05
Cd	111	3	He	0.2	0.0014	50.00	0.0066	5.141E-05
Sn	120	3	He	0.344	0.0249	930.07	0.0187	0.0185
Sn	120	3	He	0.077	0.02	730.05	0.0187	0.0185
Sn	120	3	He	0.131	0.021	760.05	0.0187	0.0185
Sb	121	3	He	0.174	0.0043	160.01	0.0183	0.00111
Sb	121	3	He	0.178	0.0044	160.01	0.0183	0.00111
Sb	121	3	He	0.241	0.0055	200.01	0.0183	0.00111
Ba	137	3	He	0.235	0.0021	80.00	0.0059	0.0007704
Ba	137	3	He	0.335	0.0027	100.00	0.0059	0.0007704
Ba	137	3	He	0.292	0.0025	90.00	0.0059	0.0007704
Tl	205	3	He	-0.009	0.0005	60.00	0.0364	0.000808
Tl	205	3	He	0.035	0.0021	260.01	0.0364	0.000808
Tl	205	3	He	0.015	0.0013	160.01	0.0364	0.000808
Pb	208	3	He	0.079	0.0071	430.02	0.0487	0.003226
Pb	208	3	He	0.056	0.006	430.02	0.0487	0.003226
Pb	208	3	He	0.126	0.0094	630.04	0.0487	0.003226
U	238	3	He	0.051	0.0032	390.02	0.0535	0.0004157
U	238	3	He	0.049	0.003	380.02	0.0535	0.0004157
U	238	3	He	0.052	0.0032	380.02	0.0535	0.0004157
Sc	45	1	No Gas			1359622.79		
Sc	45	1	No Gas			1334889.51		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1330768.42		
Ge	72	1	No Gas			723536.00		
Ge	72	1	No Gas			729604.52		
Ge	72	1	No Gas			732692.72		
Sc	45	2	H2			86013.59		
Sc	45	2	H2			88146.95		
Sc	45	2	H2			86899.35		
Ge	72	2	H2			75820.96		
Ge	72	2	H2			72996.74		
Ge	72	2	H2			71358.36		
In	115	2	H2			177308.08		
In	115	2	H2			175708.73		
In	115	2	H2			172260.37		
Sc	45	3	He			23840.14		
Sc	45	3	He			22548.13		
Sc	45	3	He			22277.59		
Ge	72	3	He			44299.36		
Ge	72	3	He			42935.12		
Ge	72	3	He			43306.79		
In	115	3	He			37300.83		
In	115	3	He			36598.88		
In	115	3	He			36268.12		
Tb	159	3	He			174748.24		
Tb	159	3	He			173511.29		
Tb	159	3	He			173998.36		
Bi	209	3	He			123255.75		
Bi	209	3	He			125597.16		
Bi	209	3	He			119269.10		

Quantitation Report

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Sample Type	ICSAB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

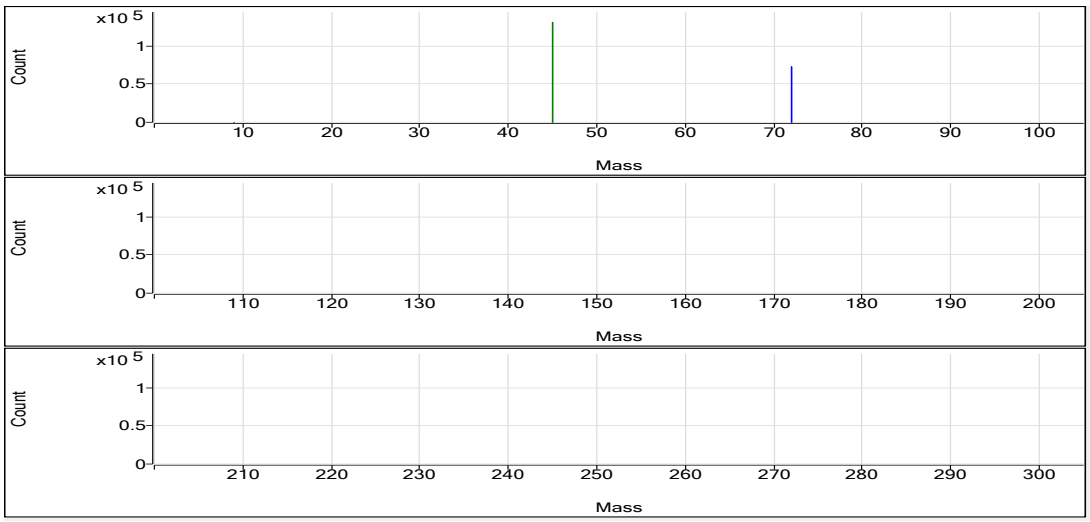
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.009	ppb	37.3	30.67	0.0000	Pulse	0.5000	3
Se	78	115	H2	106.114	ppb	0.9	3815.41	0.0218	Pulse	1.5000	3
Na	23	45	He	242252.925	ppb	1.8	19615170.96	864.4562	Analog	0.1000	3
Mg	24	45	He	96674.517	ppb	1.6	3988520.88	175.7729	Analog	0.1000	3
Al	27	45	He	98836.868	ppb	3.0	1248806.62	55.0431	Analog	0.1000	3
K	39	45	He	98625.771	ppb	1.3	2868038.08	126.3904	Analog	0.1000	3
Ca	44	45	He	287035.070	ppb	1.8	477457.63	21.0421	Pulse	0.1000	3
Ti	47	45	He	1985.474	ppb	0.2	26424.61	1.1643	Pulse	0.1000	3
V	51	45	He	199.731	ppb	2.2	117608.33	5.1833	Pulse	0.5000	3
Cr	52	45	He	198.055	ppb	1.8	151644.47	6.6830	Pulse	0.1000	3
Mn	55	45	He	193.663	ppb	2.8	61039.11	2.6903	Pulse	0.1000	3
Fe	57	45	He	242868.451	ppb	1.6	3502509.11	154.3568	Analog	0.1000	3
Co	59	45	He	194.049	ppb	1.7	291404.91	12.8424	Pulse	0.1000	3
Ni	60	72	He	192.463	ppb	1.5	82854.83	1.9384	Pulse	0.1000	3
Cu	63	72	He	190.739	ppb	1.1	233731.30	5.4678	Pulse	0.1000	3
Zn	66	72	He	97.600	ppb	5.4	14140.76	0.3308	Pulse	0.1000	3
As	75	72	He	94.695	ppb	0.4	10489.90	0.2454	Pulse	0.5000	3
Sr	88	115	He	2.169	ppb	10.1	926.73	0.0246	Pulse	0.1000	3
Mo	98	115	He	2057.823	ppb	0.7	2135012.21	56.6074	Analog	0.1000	3
Ag	107	115	He	49.390	ppb	0.9	110098.73	2.9192	Pulse	0.1000	3
Cd	111	115	He	96.998	ppb	0.6	24248.37	0.6429	Pulse	0.5000	3
Sn	120	115	He	0.050	ppb	300.7	733.38	0.0194	Pulse	0.1000	3
Sb	121	115	He	0.147	ppb	10.9	143.34	0.0038	Pulse	0.1000	3
Ba	137	115	He	0.351	ppb	51.9	106.67	0.0028	Pulse	0.1000	3
Tl	205	209	He	0.002	ppb	161.7	110.00	0.0009	Pulse	0.1000	3
Pb	208	209	He	0.091	ppb	13.1	943.38	0.0077	Pulse	0.1000	3
U	238	209	He	0.043	ppb	14.8	333.35	0.0027	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1310381.65	0.6	98.2	Analog	0.1000	3
No Gas	Ge	72	728105.17	0.7	104.1	Pulse	0.1000	3
H2	Sc	45	86301.91	0.7	99.3	Pulse	0.1000	3
H2	Ge	72	72581.33	1.7	101.4	Pulse	0.1000	3
H2	In	115	174926.21	0.7	95.5	Pulse	0.1000	3
He	Sc	45	22694.95	1.6	98.7	Pulse	0.1000	3
He	Ge	72	42748.12	1.0	101.2	Pulse	0.1000	3
He	In	115	37716.98	0.5	96.9	Pulse	0.1000	3
He	Tb	159	172773.30	1.1	98.1	Pulse	0.1000	3
He	Bi	209	122805.42	0.6	95.8	Pulse	0.1000	3

No Gas



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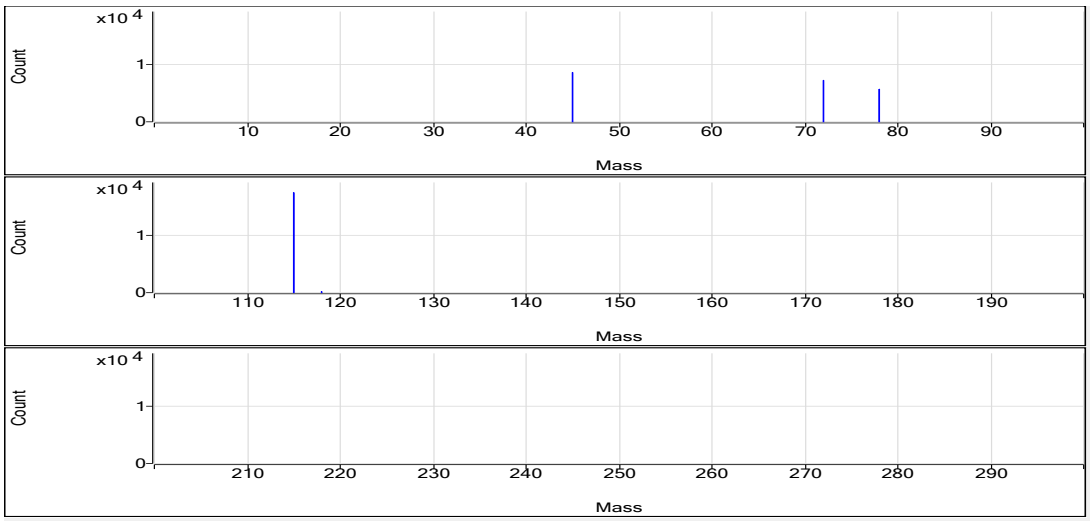
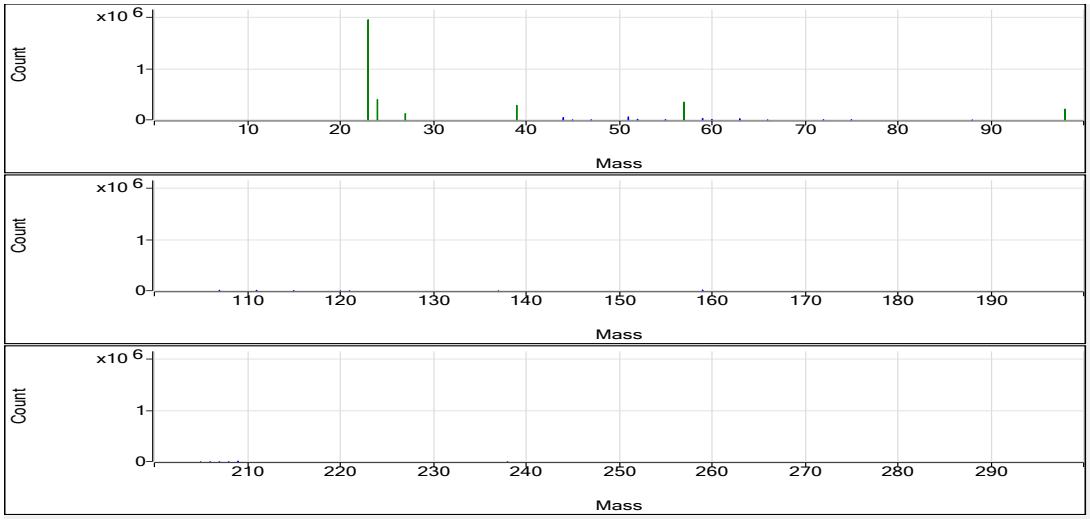


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.005	0	28.00	0.0005	1.901E-05
Be	9	1	No Gas	0.011	0	32.00	0.0005	1.901E-05
Be	9	1	No Gas	0.011	0	32.00	0.0005	1.901E-05
Se	78	2	H2	105.603	0.0217	3803.85	0.0002	7.279E-06
Se	78	2	H2	105.54	0.0217	3817.85	0.0002	7.279E-06
Se	78	2	H2	107.199	0.022	3824.52	0.0002	7.279E-06
Na	23	3	He	240868.127	859.5188	19673062.21	0.0036	0.7194
Na	23	3	He	247072.519	881.6402	19640827.21	0.0036	0.7194
Na	23	3	He	238818.129	852.2097	19531623.46	0.0036	0.7194
Mg	24	3	He	95411.353	173.4763	3970604.63	0.0018	0.006791
Mg	24	3	He	98370.635	178.8566	3984495.88	0.0018	0.006791
Mg	24	3	He	96241.564	174.9857	4010462.13	0.0018	0.006791
Al	27	3	He	96774.082	53.8944	1233560.06	0.0006	0.002622
Al	27	3	He	102251.948	56.9449	1268596.54	0.0006	0.002622
Al	27	3	He	97484.573	54.2901	1244263.26	0.0006	0.002622
K	39	3	He	97951.675	125.5304	2873197.46	0.0013	0.5579
K	39	3	He	100077.707	128.2429	2856944.33	0.0013	0.5579
K	39	3	He	97847.931	125.398	2873972.46	0.0013	0.5579
Ca	44	3	He	284178.599	20.8328	476830.03	0.0001	0.004062
Ca	44	3	He	293081.914	21.4853	478641.67	0.0001	0.004062
Ca	44	3	He	283844.696	20.8083	476901.20	0.0001	0.004062
Ti	47	3	He	1988.877	1.1663	26695.17	0.0006	0.0002809
Ti	47	3	He	1982.047	1.1623	25893.51	0.0006	0.0002809
Ti	47	3	He	1985.498	1.1643	26685.15	0.0006	0.0002809
V	51	3	He	197.739	5.1318	117459.29	0.0259	0.01861
V	51	3	He	204.717	5.3122	118344.10	0.0259	0.01861
V	51	3	He	196.738	5.1059	117021.60	0.0259	0.01861
Cr	52	3	He	197.213	6.6551	152324.06	0.0332	0.1047
Cr	52	3	He	201.876	6.81	151709.35	0.0332	0.1047
Cr	52	3	He	195.077	6.5841	150899.99	0.0332	0.1047
Mn	55	3	He	189.72	2.6357	60326.16	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	199.808	2.7755	61832.09	0.0139	0.005074
Mn	55	3	He	191.46	2.6598	60959.08	0.0139	0.005074
Fe	57	3	He	240636.186	152.9382	3500519.01	0.0006	0.00609
Fe	57	3	He	247480.599	157.288	3503999.32	0.0006	0.00609
Fe	57	3	He	240488.569	152.8443	3503009.01	0.0006	0.00609
Co	59	3	He	191.463	12.6713	290026.95	0.0661	0.00621
Co	59	3	He	197.882	13.096	291746.81	0.0661	0.00621
Co	59	3	He	192.801	12.7599	292440.97	0.0661	0.00621
Ni	60	3	He	192.386	1.9376	83250.72	0.01	0.01721
Ni	60	3	He	189.586	1.9097	82164.15	0.01	0.01721
Ni	60	3	He	195.418	1.9679	83149.62	0.01	0.01721
Cu	63	3	He	192.343	5.5137	236901.03	0.0286	0.006793
Cu	63	3	He	188.281	5.3974	232227.20	0.0286	0.006793
Cu	63	3	He	191.592	5.4922	232065.68	0.0286	0.006793
Zn	66	3	He	102.135	0.346	14868.11	0.0034	0.00316
Zn	66	3	He	91.804	0.3114	13396.72	0.0034	0.00316
Zn	66	3	He	98.862	0.3351	14157.45	0.0034	0.00316
As	75	3	He	94.464	0.2448	10517.91	0.0026	0.0008231
As	75	3	He	94.44	0.2447	10529.93	0.0026	0.0008231
As	75	3	He	95.182	0.2467	10421.86	0.0026	0.0008231
Sr	88	3	He	2.106	0.0239	900.06	0.0105	0.001715
Sr	88	3	He	1.987	0.0227	860.06	0.0105	0.001715
Sr	88	3	He	2.413	0.0272	1020.08	0.0105	0.001715
Mo	98	3	He	2068.529	56.9019	2141657.31	0.0275	0.0008555
Mo	98	3	He	2042.637	56.1896	2132228.09	0.0275	0.0008555
Mo	98	3	He	2062.302	56.7306	2131151.22	0.0275	0.0008555
Ag	107	3	He	49.816	2.9443	110817.78	0.0591	0.0004305
Ag	107	3	He	48.92	2.8914	109719.18	0.0591	0.0004305
Ag	107	3	He	49.434	2.9218	109759.24	0.0591	0.0004305
Cd	111	3	He	96.58	0.6401	24092.74	0.0066	5.141E-05
Cd	111	3	He	97.673	0.6474	24565.64	0.0066	5.141E-05
Cd	111	3	He	96.74	0.6412	24086.72	0.0066	5.141E-05
Sn	120	3	He	-0.123	0.0162	610.04	0.0187	0.0185
Sn	120	3	He	0.152	0.0213	810.06	0.0187	0.0185
Sn	120	3	He	0.121	0.0208	780.05	0.0187	0.0185
Sb	121	3	He	0.157	0.004	150.01	0.0183	0.00111
Sb	121	3	He	0.155	0.004	150.01	0.0183	0.00111
Sb	121	3	He	0.128	0.0035	130.01	0.0183	0.00111
Ba	137	3	He	0.141	0.0016	60.00	0.0059	0.0007704
Ba	137	3	He	0.453	0.0034	130.01	0.0059	0.0007704
Ba	137	3	He	0.459	0.0035	130.00	0.0059	0.0007704
Tl	205	3	He	0	0.0008	100.00	0.0364	0.000808
Tl	205	3	He	0	0.0008	100.00	0.0364	0.000808
Tl	205	3	He	0.007	0.0011	130.00	0.0364	0.000808
Pb	208	3	He	0.1	0.0081	530.03	0.0487	0.003226
Pb	208	3	He	0.097	0.0079	420.02	0.0487	0.003226
Pb	208	3	He	0.078	0.007	450.03	0.0487	0.003226
U	238	3	He	0.041	0.0026	320.01	0.0535	0.0004157
U	238	3	He	0.038	0.0025	300.01	0.0535	0.0004157
U	238	3	He	0.05	0.0031	380.02	0.0535	0.0004157
Sc	45	1	No Gas			1301794.51		
Sc	45	1	No Gas			1314767.95		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1314582.48		
Ge	72	1	No Gas			722701.47		
Ge	72	1	No Gas			731718.19		
Ge	72	1	No Gas			729895.85		
Sc	45	2	H2			86386.31		
Sc	45	2	H2			85651.24		
Sc	45	2	H2			86868.17		
Ge	72	2	H2			72655.27		
Ge	72	2	H2			73740.99		
Ge	72	2	H2			71347.72		
In	115	2	H2			175232.24		
In	115	2	H2			175983.30		
In	115	2	H2			173563.08		
Sc	45	3	He			22888.46		
Sc	45	3	He			22277.60		
Sc	45	3	He			22918.80		
Ge	72	3	He			42965.52		
Ge	72	3	He			43025.47		
Ge	72	3	He			42253.36		
In	115	3	He			37642.00		
In	115	3	He			37952.68		
In	115	3	He			37571.65		
Tb	159	3	He			173209.43		
Tb	159	3	He			170708.26		
Tb	159	3	He			174402.22		
Bi	209	3	He			123559.68		
Bi	209	3	He			122196.41		
Bi	209	3	He			122660.17		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
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Sample Name	LRC 4816707
Sample Type	LRC
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

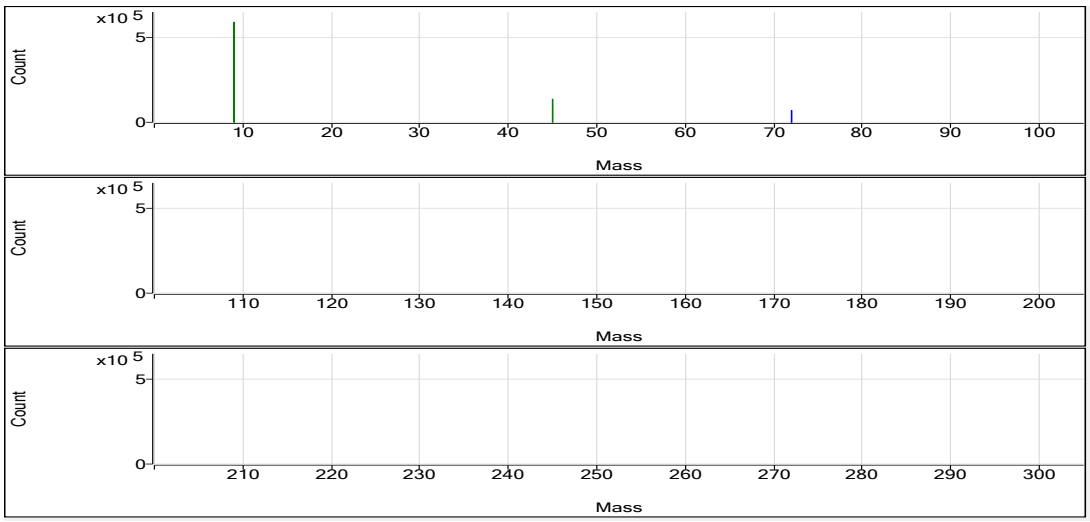
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	1781.108	ppb	6.3	1177342.25	0.8593	Analog	0.5000	3
Se	78	115	H2	1556.644	ppb	0.7	75021.74	0.3199	Pulse	1.5000	3
Na	23	45	He	185739.701	ppb	1.9	15482183.10	662.9620	Analog	0.1000	3
Mg	24	45	He	187173.161	ppb	2.5	7946504.26	340.3104	Analog	0.1000	3
Al	27	45	He	192481.053	ppb	2.7	2502972.72	107.1919	Analog	0.1000	3
K	39	45	He	189354.889	ppb	2.3	5654587.42	242.1480	Analog	0.1000	3
Ca	44	45	He	192980.070	ppb	2.3	330385.37	14.1484	Pulse	0.1000	3
Ti	47	45	He	2001.644	ppb	1.1	27416.58	1.1738	Pulse	0.1000	3
V	51	45	He	1919.731	ppb	2.0	1159679.62	49.6597	Pulse	0.5000	3
Cr	52	45	He	1905.227	ppb	1.7	1480327.27	63.3859	Analog	0.1000	3
Mn	55	45	He	5721.313	ppb	1.7	1852733.88	79.3345	Analog	0.1000	3
Fe	57	45	He	151624.096	ppb	1.7	2250642.57	96.3681	Analog	0.1000	3
Co	59	45	He	1868.573	ppb	1.4	2886890.89	123.6109	Analog	0.1000	3
Ni	60	72	He	1886.327	ppb	1.9	796081.21	18.8466	Pulse	0.1000	3
Cu	63	72	He	1916.729	ppb	2.2	2318286.69	54.8844	Analog	0.1000	3
Zn	66	72	He	1944.459	ppb	2.4	275854.50	6.5311	Pulse	0.1000	3
As	75	72	He	1916.763	ppb	2.6	209121.55	4.9513	Pulse	0.5000	3
Sr	88	115	He	1889.192	ppb	1.0	790879.36	19.9186	Pulse	0.1000	3
Mo	98	115	He	1970.189	ppb	1.6	2151796.53	54.1967	Analog	0.1000	3
Ag	107	115	He	1888.132	ppb	1.3	4430256.50	111.5797	Analog	0.1000	3
Cd	111	115	He	1851.200	ppb	1.0	487132.16	12.2686	Pulse	0.5000	3
Sn	120	115	He	1890.381	ppb	1.3	1406607.22	35.4270	Pulse	0.1000	3
Sb	121	115	He	1874.333	ppb	1.7	1362000.24	34.3048	Pulse	0.1000	3
Ba	137	115	He	1876.407	ppb	0.7	436476.18	10.9925	Pulse	0.1000	3
Tl	205	209	He	2081.868	ppb	1.9	9177769.65	75.6999	Analog	0.1000	3
Pb	208	209	He	2081.917	ppb	1.2	12305802.73	101.4947	Analog	0.1000	3
U	238	209	He	207.605	ppb	0.7	1346437.32	11.1046	Pulse	0.1000	3

ISTD Table:

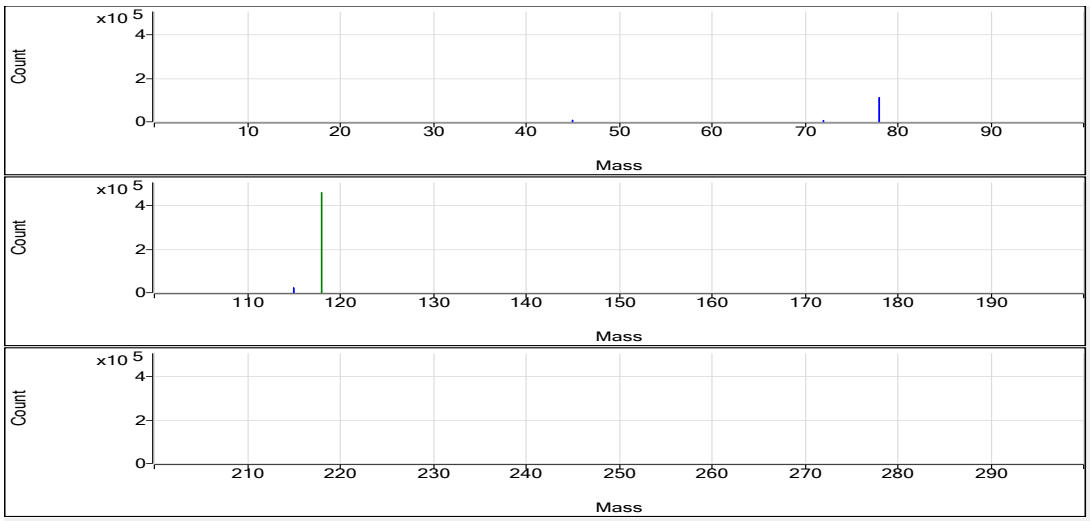
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1370111.02	2.0	102.7	Analog	0.1000	3
No Gas	Ge	72	708322.05	1.4	101.3	Pulse	0.1000	3
H2	Sc	45	86640.82	0.3	99.7	Pulse	0.1000	3
H2	Ge	72	71351.62	2.1	99.6	Pulse	0.1000	3
H2	In	115	234530.29	0.2	128.0	Pulse	0.1000	3
He	Sc	45	23359.49	2.3	101.5	Pulse	0.1000	3
He	Ge	72	42253.42	2.5	100.1	Pulse	0.1000	3
He	In	115	39709.37	1.5	102.0	Pulse	0.1000	3
He	Tb	159	174648.48	0.6	99.2	Pulse	0.1000	3
He	Bi	209	121256.93	1.2	94.6	Pulse	0.1000	3

No Gas

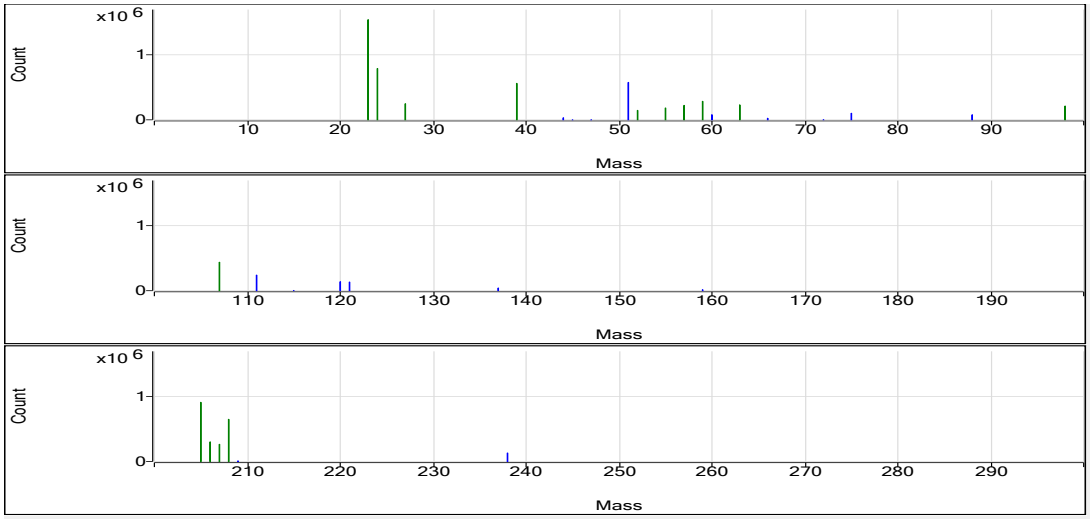


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	1652.923	0.7974	1096064.50	0.0005	1.901E-05
Be	9	1	No Gas	1825.471	0.8807	1180835.13	0.0005	1.901E-05
Be	9	1	No Gas	1864.929	0.8997	1255127.13	0.0005	1.901E-05
Se	78	2	H2	1546.016	0.3177	74363.04	0.0002	7.279E-06
Se	78	2	H2	1556.675	0.3199	75045.14	0.0002	7.279E-06
Se	78	2	H2	1567.24	0.3221	75657.05	0.0002	7.279E-06
Na	23	3	He	182590.157	651.7326	15452572.27	0.0036	0.7194
Na	23	3	He	185091.817	660.6521	15604568.52	0.0036	0.7194
Na	23	3	He	189537.13	676.5015	15389408.52	0.0036	0.7194
Mg	24	3	He	183707.822	334.01	7919374.26	0.0018	0.006791
Mg	24	3	He	185367.789	337.028	7960585.51	0.0018	0.006791
Mg	24	3	He	192443.872	349.8932	7959553.01	0.0018	0.006791
Al	27	3	He	187908.788	104.6457	2481149.18	0.0006	0.002622
Al	27	3	He	191491.971	106.6411	2518858.40	0.0006	0.002622
Al	27	3	He	198042.399	110.289	2508910.59	0.0006	0.002622
K	39	3	He	185287.243	236.9583	5618278.04	0.0013	0.5579
K	39	3	He	188808.648	241.4511	5703062.42	0.0013	0.5579
K	39	3	He	193968.777	248.0347	5642421.79	0.0013	0.5579
Ca	44	3	He	189515.207	13.8945	329437.77	0.0001	0.004062
Ca	44	3	He	191420.214	14.0341	331484.68	0.0001	0.004062
Ca	44	3	He	198004.789	14.5167	330233.67	0.0001	0.004062
Ti	47	3	He	1975.446	1.1584	27466.63	0.0006	0.0002809
Ti	47	3	He	2014.077	1.1811	27897.29	0.0006	0.0002809
Ti	47	3	He	2015.41	1.1819	26885.82	0.0006	0.0002809
V	51	3	He	1895.49	49.0329	1162569.25	0.0259	0.01861
V	51	3	He	1900.449	49.1611	1161183.13	0.0259	0.01861
V	51	3	He	1963.253	50.7851	1155286.50	0.0259	0.01861
Cr	52	3	He	1871.484	62.2651	1476305.76	0.0332	0.1047
Cr	52	3	He	1907.839	63.4726	1499220.76	0.0332	0.1047
Cr	52	3	He	1936.356	64.4198	1465455.29	0.0332	0.1047
Mn	55	3	He	5641.509	78.228	1854785.60	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	5690.092	78.9016	1863652.94	0.0139	0.005074
Mn	55	3	He	5832.338	80.874	1839763.10	0.0139	0.005074
Fe	57	3	He	151635.394	96.3753	2285057.00	0.0006	0.00609
Fe	57	3	He	149082.774	94.753	2238061.37	0.0006	0.00609
Fe	57	3	He	154154.121	97.976	2228809.34	0.0006	0.00609
Co	59	3	He	1853.606	122.6209	2907339.64	0.0661	0.00621
Co	59	3	He	1854.022	122.6484	2896949.02	0.0661	0.00621
Co	59	3	He	1898.091	125.5635	2856384.02	0.0661	0.00621
Ni	60	3	He	1852.485	18.5088	801185.53	0.01	0.01721
Ni	60	3	He	1881.275	18.7962	794385.07	0.01	0.01721
Ni	60	3	He	1925.219	19.2348	792673.04	0.01	0.01721
Cu	63	3	He	1886.977	54.0325	2338894.50	0.0286	0.006793
Cu	63	3	He	1899.236	54.3835	2298418.56	0.0286	0.006793
Cu	63	3	He	1963.974	56.237	2317547.00	0.0286	0.006793
Zn	66	3	He	1902.694	6.3909	276641.79	0.0034	0.00316
Zn	66	3	He	1935.375	6.5006	274736.81	0.0034	0.00316
Zn	66	3	He	1995.309	6.7018	276184.90	0.0034	0.00316
As	75	3	He	1861.922	4.8097	208195.20	0.0026	0.0008231
As	75	3	He	1927.524	4.9791	210432.64	0.0026	0.0008231
As	75	3	He	1960.842	5.0652	208736.81	0.0026	0.0008231
Sr	88	3	He	1894.234	19.9717	789089.99	0.0105	0.001715
Sr	88	3	He	1868.814	19.7037	795308.66	0.0105	0.001715
Sr	88	3	He	1904.528	20.0803	788239.44	0.0105	0.001715
Mo	98	3	He	1975.176	54.3339	2146751.84	0.0275	0.0008555
Mo	98	3	He	1937.433	53.2957	2151191.22	0.0275	0.0008555
Mo	98	3	He	1997.957	54.9606	2157446.53	0.0275	0.0008555
Ag	107	3	He	1906.343	112.6559	4451071.50	0.0591	0.0004305
Ag	107	3	He	1860.939	109.9727	4438864.00	0.0591	0.0004305
Ag	107	3	He	1897.114	112.1104	4400834.00	0.0591	0.0004305
Cd	111	3	He	1861.37	12.336	487401.00	0.0066	5.141E-05
Cd	111	3	He	1829.326	12.1237	489351.91	0.0066	5.141E-05
Cd	111	3	He	1862.904	12.3462	484643.56	0.0066	5.141E-05
Sn	120	3	He	1903.857	35.6794	1409706.70	0.0187	0.0185
Sn	120	3	He	1861.677	34.8894	1408250.92	0.0187	0.0185
Sn	120	3	He	1905.608	35.7122	1401864.04	0.0187	0.0185
Sb	121	3	He	1890.442	34.5996	1367042.95	0.0183	0.00111
Sb	121	3	He	1837.834	33.6368	1357693.57	0.0183	0.00111
Sb	121	3	He	1894.722	34.678	1361264.20	0.0183	0.00111
Ba	137	3	He	1879.081	11.0082	434938.16	0.0059	0.0007704
Ba	137	3	He	1861.502	10.9052	440171.56	0.0059	0.0007704
Ba	137	3	He	1888.638	11.0642	434318.82	0.0059	0.0007704
Tl	205	3	He	2068.101	75.1993	9139716.74	0.0364	0.000808
Tl	205	3	He	2051.118	74.5818	9139164.86	0.0364	0.000808
Tl	205	3	He	2126.384	77.3186	9254427.36	0.0364	0.000808
Pb	208	3	He	2074.733	101.1444	6549025.53	0.0487	0.003226
Pb	208	3	He	2062.22	100.5345	6551263.03	0.0487	0.003226
Pb	208	3	He	2108.797	102.805	6555071.15	0.0487	0.003226
U	238	3	He	206.92	11.068	1345200.60	0.0535	0.0004157
U	238	3	He	206.533	11.0473	1353722.32	0.0535	0.0004157
U	238	3	He	209.362	11.1986	1340389.04	0.0535	0.0004157
Sc	45	1	No Gas			1374483.42		
Sc	45	1	No Gas			1340822.79		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1395026.85		
Ge	72	1	No Gas			711794.91		
Ge	72	1	No Gas			696803.66		
Ge	72	1	No Gas			716367.57		
Sc	45	2	H2			86728.20		
Sc	45	2	H2			86848.78		
Sc	45	2	H2			86345.48		
Ge	72	2	H2			72956.01		
Ge	72	2	H2			71177.01		
Ge	72	2	H2			69921.83		
In	115	2	H2			234071.03		
In	115	2	H2			234600.70		
In	115	2	H2			234919.14		
Sc	45	3	He			23709.99		
Sc	45	3	He			23619.95		
Sc	45	3	He			22748.52		
Ge	72	3	He			43286.78		
Ge	72	3	He			42263.14		
Ge	72	3	He			41210.33		
In	115	3	He			49378.29		
In	115	3	He			50221.09		
In	115	3	He			49067.50		
Tb	159	3	He			173853.40		
Tb	159	3	He			174321.42		
Tb	159	3	He			175770.62		
Bi	209	3	He			121539.84		
Bi	209	3	He			122538.80		
Bi	209	3	He			119692.14		

Quantitation Report

Data File Name	037_CCV.d
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Sample Type	CCV
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

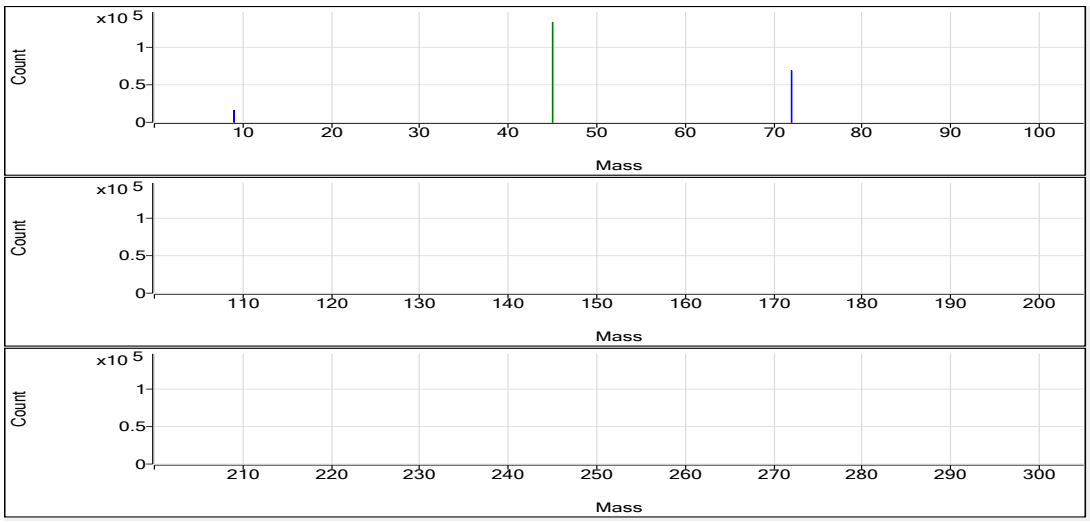
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.420	ppb	7.9	32390.50	0.0243	Pulse	0.5000	3
Se	78	115	H2	50.392	ppb	1.8	1931.69	0.0104	Pulse	1.5000	3
Na	23	45	He	5082.665	ppb	3.4	440294.30	18.8413	Pulse	0.1000	3
Mg	24	45	He	5056.659	ppb	3.4	214993.69	9.2004	Pulse	0.1000	3
Al	27	45	He	5032.025	ppb	3.5	65542.92	2.8049	Pulse	0.1000	3
K	39	45	He	5154.789	ppb	3.6	166737.05	7.1347	Pulse	0.1000	3
Ca	44	45	He	4995.023	ppb	6.6	8649.48	0.3702	Pulse	0.1000	3
Ti	47	45	He	5064.984	ppb	3.5	69396.23	2.9698	Pulse	0.1000	3
V	51	45	He	514.002	ppb	3.1	311043.75	13.3099	Pulse	0.5000	3
Cr	52	45	He	511.196	ppb	2.5	399284.44	17.0839	Pulse	0.1000	3
Mn	55	45	He	510.021	ppb	3.5	165366.04	7.0768	Pulse	0.1000	3
Fe	57	45	He	5103.864	ppb	2.9	75949.90	3.2498	Pulse	0.1000	3
Co	59	45	He	503.926	ppb	3.1	779140.95	33.3405	Pulse	0.1000	3
Ni	60	72	He	518.281	ppb	1.6	220572.12	5.1907	Pulse	0.1000	3
Cu	63	72	He	515.722	ppb	1.5	627723.04	14.7724	Pulse	0.1000	3
Zn	66	72	He	523.565	ppb	2.0	74822.00	1.7609	Pulse	0.1000	3
As	75	72	He	518.728	ppb	1.8	56962.53	1.3406	Pulse	0.5000	3
Sr	88	115	He	49.196	ppb	3.0	20572.22	0.5204	Pulse	0.1000	3
Mo	98	115	He	50.318	ppb	3.0	54764.04	1.3850	Pulse	0.1000	3
Ag	107	115	He	50.074	ppb	0.4	117037.51	2.9595	Pulse	0.1000	3
Cd	111	115	He	49.664	ppb	1.3	13017.43	0.3292	Pulse	0.5000	3
Sn	120	115	He	50.494	ppb	2.1	38126.56	0.9643	Pulse	0.1000	3
Sb	121	115	He	49.254	ppb	2.2	35687.00	0.9026	Pulse	0.1000	3
Ba	137	115	He	497.067	ppb	0.9	115171.45	2.9125	Pulse	0.1000	3
Tl	205	209	He	51.907	ppb	1.9	241732.16	1.8882	Pulse	0.1000	3
Pb	208	209	He	51.726	ppb	0.3	323267.71	2.5248	Pulse	0.1000	3
U	238	209	He	51.185	ppb	1.0	350570.75	2.7382	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1330094.46	0.7	99.7	Analog	0.1000	3
No Gas	Ge	72	688385.69	0.4	98.4	Pulse	0.1000	3
H2	Sc	45	87781.51	1.1	101.0	Pulse	0.1000	3
H2	Ge	72	70641.22	2.2	98.6	Pulse	0.1000	3
H2	In	115	186402.61	0.8	101.8	Pulse	0.1000	3
He	Sc	45	23382.68	2.8	101.6	Pulse	0.1000	3
He	Ge	72	42500.80	1.8	100.7	Pulse	0.1000	3
He	In	115	39547.59	1.8	101.6	Pulse	0.1000	3
He	Tb	159	176551.65	0.9	100.3	Pulse	0.1000	3
He	Bi	209	128040.63	1.2	99.9	Pulse	0.1000	3

No Gas



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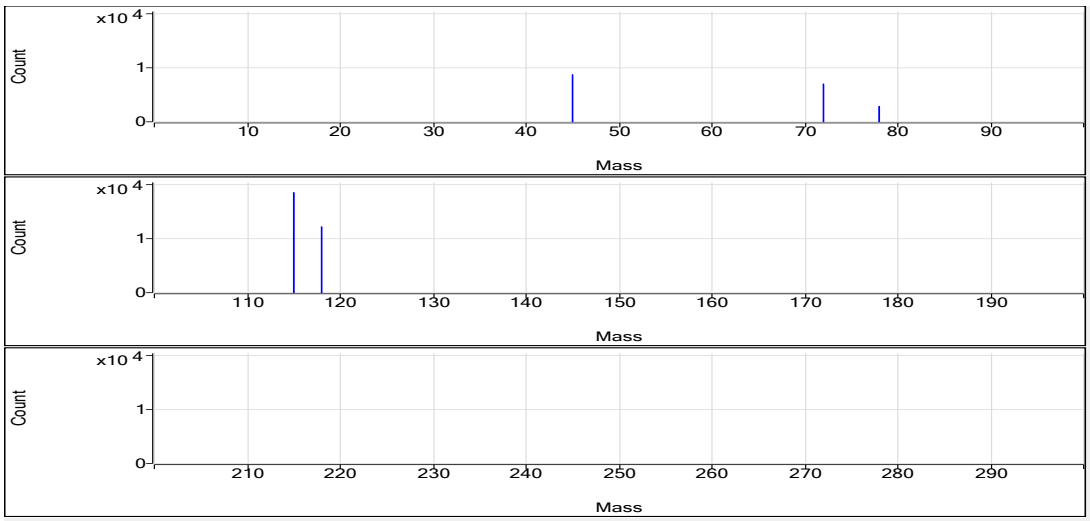
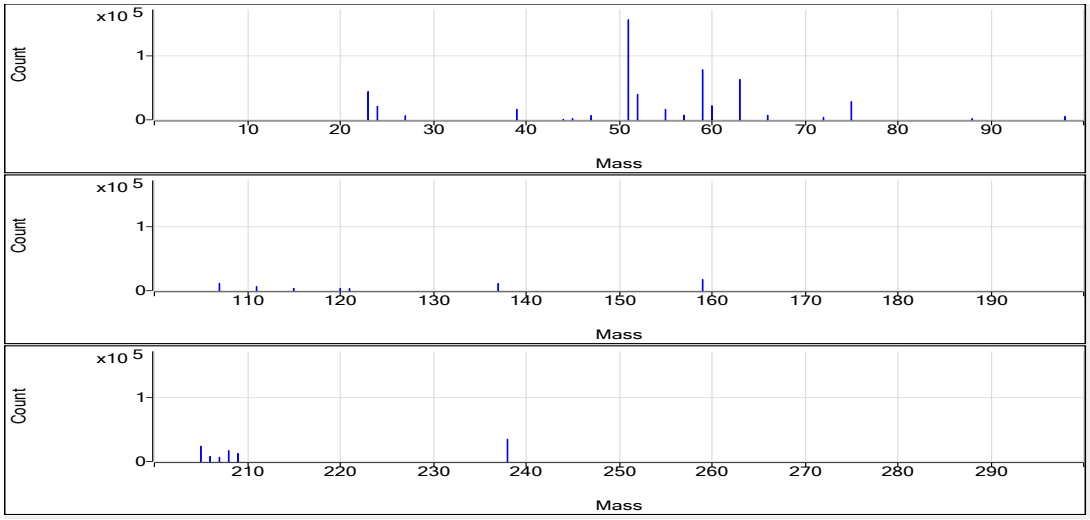


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	46.156	0.0223	29410.87	0.0005	1.901E-05
Be	9	1	No Gas	51.027	0.0246	32827.96	0.0005	1.901E-05
Be	9	1	No Gas	54.076	0.0261	34932.68	0.0005	1.901E-05
Se	78	2	H2	50.182	0.0103	1912.13	0.0002	7.279E-06
Se	78	2	H2	49.596	0.0102	1896.13	0.0002	7.279E-06
Se	78	2	H2	51.398	0.0106	1986.81	0.0002	7.279E-06
Na	23	3	He	5272.625	19.5185	443229.56	0.0036	0.7194
Na	23	3	He	4936.819	18.3213	440086.60	0.0036	0.7194
Na	23	3	He	5038.55	18.684	437566.75	0.0036	0.7194
Mg	24	3	He	5225.85	9.508	215909.33	0.0018	0.006791
Mg	24	3	He	4881.723	8.8824	213359.16	0.0018	0.006791
Mg	24	3	He	5062.405	9.2109	215712.57	0.0018	0.006791
Al	27	3	He	5218.27	2.9086	66048.50	0.0006	0.002622
Al	27	3	He	4872.076	2.7158	65234.91	0.0006	0.002622
Al	27	3	He	5005.731	2.7902	65345.34	0.0006	0.002622
K	39	3	He	5369.523	7.4086	168236.05	0.0013	0.5579
K	39	3	He	5055.264	7.0077	168328.32	0.0013	0.5579
K	39	3	He	5039.579	6.9877	163646.77	0.0013	0.5579
Ca	44	3	He	5047.179	0.374	8492.66	0.0001	0.004062
Ca	44	3	He	4643.402	0.3444	8272.62	0.0001	0.004062
Ca	44	3	He	5294.488	0.3921	9183.17	0.0001	0.004062
Ti	47	3	He	5254.34	3.0808	69958.83	0.0006	0.0002809
Ti	47	3	He	4906.56	2.8769	69104.46	0.0006	0.0002809
Ti	47	3	He	5034.051	2.9516	69125.41	0.0006	0.0002809
V	51	3	He	531.686	13.7672	312626.13	0.0259	0.01861
V	51	3	He	500.826	12.9692	311526.31	0.0259	0.01861
V	51	3	He	509.494	13.1933	308978.81	0.0259	0.01861
Cr	52	3	He	525.44	17.5569	398685.31	0.0332	0.1047
Cr	52	3	He	500.733	16.7363	402015.66	0.0332	0.1047
Cr	52	3	He	507.416	16.9583	397152.34	0.0332	0.1047
Mn	55	3	He	528.115	7.3277	166398.42	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	492.161	6.8292	164040.86	0.0139	0.005074
Mn	55	3	He	509.787	7.0736	165658.83	0.0139	0.005074
Fe	57	3	He	5271.88	3.3565	76220.72	0.0006	0.00609
Fe	57	3	He	5002.479	3.1853	76513.31	0.0006	0.00609
Fe	57	3	He	5037.235	3.2074	75115.66	0.0006	0.00609
Co	59	3	He	520.035	34.4061	781297.88	0.0661	0.00621
Co	59	3	He	489.066	32.3576	777246.63	0.0661	0.00621
Co	59	3	He	502.676	33.2579	778878.35	0.0661	0.00621
Ni	60	3	He	526.699	5.2747	221448.67	0.01	0.01721
Ni	60	3	He	510.469	5.1127	221874.84	0.01	0.01721
Ni	60	3	He	517.674	5.1846	218392.85	0.01	0.01721
Cu	63	3	He	521.103	14.9264	626653.47	0.0286	0.006793
Cu	63	3	He	506.932	14.5207	630147.88	0.0286	0.006793
Cu	63	3	He	519.132	14.87	626367.76	0.0286	0.006793
Zn	66	3	He	534.002	1.7959	75397.89	0.0034	0.00316
Zn	66	3	He	512.924	1.7252	74865.70	0.0034	0.00316
Zn	66	3	He	523.769	1.7616	74202.41	0.0034	0.00316
As	75	3	He	523.924	1.354	56843.99	0.0026	0.0008231
As	75	3	He	508.013	1.3129	56974.66	0.0026	0.0008231
As	75	3	He	524.248	1.3548	57068.95	0.0026	0.0008231
Sr	88	3	He	49.292	0.5214	20505.37	0.0105	0.001715
Sr	88	3	He	47.684	0.5044	20345.34	0.0105	0.001715
Sr	88	3	He	50.613	0.5353	20865.94	0.0105	0.001715
Mo	98	3	He	52.039	1.4324	56333.54	0.0275	0.0008555
Mo	98	3	He	49.132	1.3524	54546.42	0.0275	0.0008555
Mo	98	3	He	49.783	1.3703	53412.15	0.0275	0.0008555
Ag	107	3	He	50.21	2.9676	116714.14	0.0591	0.0004305
Ag	107	3	He	49.856	2.9467	118852.40	0.0591	0.0004305
Ag	107	3	He	50.154	2.9643	115545.98	0.0591	0.0004305
Cd	111	3	He	49.246	0.3264	12837.94	0.0066	5.141E-05
Cd	111	3	He	49.359	0.3272	13196.25	0.0066	5.141E-05
Cd	111	3	He	50.386	0.334	13018.11	0.0066	5.141E-05
Sn	120	3	He	50.967	0.9732	38273.58	0.0187	0.0185
Sn	120	3	He	49.301	0.942	37992.73	0.0187	0.0185
Sn	120	3	He	51.214	0.9778	38113.38	0.0187	0.0185
Sb	121	3	He	50.34	0.9224	36278.29	0.0183	0.00111
Sb	121	3	He	48.148	0.8823	35587.08	0.0183	0.00111
Sb	121	3	He	49.275	0.9029	35195.63	0.0183	0.00111
Ba	137	3	He	498.807	2.9227	114949.06	0.0059	0.0007704
Ba	137	3	He	492.014	2.8829	116280.48	0.0059	0.0007704
Ba	137	3	He	500.38	2.9319	114284.82	0.0059	0.0007704
Tl	205	3	He	50.901	1.8516	240112.97	0.0364	0.000808
Tl	205	3	He	51.971	1.8905	241588.59	0.0364	0.000808
Tl	205	3	He	52.849	1.9225	243494.92	0.0364	0.000808
Pb	208	3	He	51.525	2.515	174429.16	0.0487	0.003226
Pb	208	3	He	51.788	2.5279	171226.66	0.0487	0.003226
Pb	208	3	He	51.863	2.5315	169190.62	0.0487	0.003226
U	238	3	He	50.617	2.7078	351137.96	0.0535	0.0004157
U	238	3	He	51.35	2.747	351029.57	0.0535	0.0004157
U	238	3	He	51.589	2.7598	349544.72	0.0535	0.0004157
Sc	45	1	No Gas			1319693.57		
Sc	45	1	No Gas			1332522.01		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1338067.79		
Ge	72	1	No Gas			684820.46		
Ge	72	1	No Gas			690284.13		
Ge	72	1	No Gas			690052.49		
Sc	45	2	H2			87594.00		
Sc	45	2	H2			86959.71		
Sc	45	2	H2			88790.83		
Ge	72	2	H2			72443.88		
Ge	72	2	H2			69468.76		
Ge	72	2	H2			70011.03		
In	115	2	H2			185302.20		
In	115	2	H2			185920.76		
In	115	2	H2			187984.86		
Sc	45	3	He			22708.12		
Sc	45	3	He			24020.55		
Sc	45	3	He			23419.37		
Ge	72	3	He			41982.89		
Ge	72	3	He			43396.53		
Ge	72	3	He			42122.99		
In	115	3	He			39597.37		
In	115	3	He			40600.02		
In	115	3	He			39246.04		
Tb	159	3	He			177219.49		
Tb	159	3	He			177727.48		
Tb	159	3	He			174707.97		
Bi	209	3	He			129676.38		
Bi	209	3	He			127787.91		
Bi	209	3	He			126657.61		

Quantitation Report

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Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

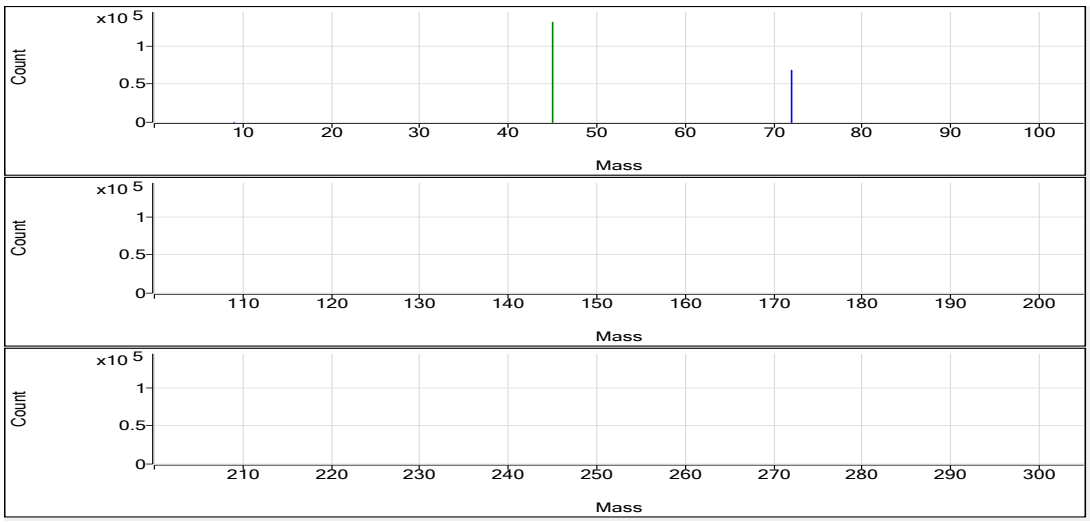
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.133	ppb	14.0	109.33	0.0001	Pulse	0.5000	3
Se	78	115	H2	0.093	ppb	60.8	4.89	0.0000	Pulse	1.5000	3
Na	23	45	He	-40.960	ppb	N/A	13476.53	0.5733	Pulse	0.1000	3
Mg	24	45	He	5.866	ppb	22.8	410.02	0.0175	Pulse	0.1000	3
Al	27	45	He	3.684	ppb	38.7	110.01	0.0047	Pulse	0.1000	3
K	39	45	He	4.867	ppb	930.5	13246.39	0.5641	Pulse	0.1000	3
Ca	44	45	He	13.992	ppb	96.6	120.00	0.0051	Pulse	0.1000	3
Ti	47	45	He	4.323	ppb	60.4	66.67	0.0028	Pulse	0.1000	3
V	51	45	He	0.100	ppb	66.7	498.01	0.0212	Pulse	0.5000	3
Cr	52	45	He	0.305	ppb	62.5	2703.67	0.1149	Pulse	0.1000	3
Mn	55	45	He	0.298	ppb	29.8	216.68	0.0092	Pulse	0.1000	3
Fe	57	45	He	4.231	ppb	24.6	206.68	0.0088	Pulse	0.1000	3
Co	59	45	He	0.108	ppb	38.6	313.35	0.0133	Pulse	0.1000	3
Ni	60	72	He	0.226	ppb	64.2	826.72	0.0195	Pulse	0.1000	3
Cu	63	72	He	0.132	ppb	62.0	450.03	0.0106	Pulse	0.1000	3
Zn	66	72	He	-0.052	ppb	N/A	126.67	0.0030	Pulse	0.1000	3
As	75	72	He	0.137	ppb	90.6	50.00	0.0012	Pulse	0.5000	3
Sr	88	115	He	0.127	ppb	44.2	120.01	0.0030	Pulse	0.1000	3
Mo	98	115	He	0.160	ppb	5.9	206.68	0.0053	Pulse	0.1000	3
Ag	107	115	He	0.027	ppb	41.4	80.00	0.0020	Pulse	0.1000	3
Cd	111	115	He	0.047	ppb	54.0	14.00	0.0004	Pulse	0.5000	3
Sn	120	115	He	-0.006	ppb	N/A	720.05	0.0184	Pulse	0.1000	3
Sb	121	115	He	0.138	ppb	43.2	143.34	0.0036	Pulse	0.1000	3
Ba	137	115	He	0.170	ppb	105.2	70.00	0.0018	Pulse	0.1000	3
Tl	205	209	He	0.124	ppb	6.7	676.71	0.0053	Pulse	0.1000	3
Pb	208	209	He	0.036	ppb	7.3	633.36	0.0050	Pulse	0.1000	3
U	238	209	He	0.016	ppb	42.9	160.01	0.0013	Pulse	0.1000	3

ISTD Table:

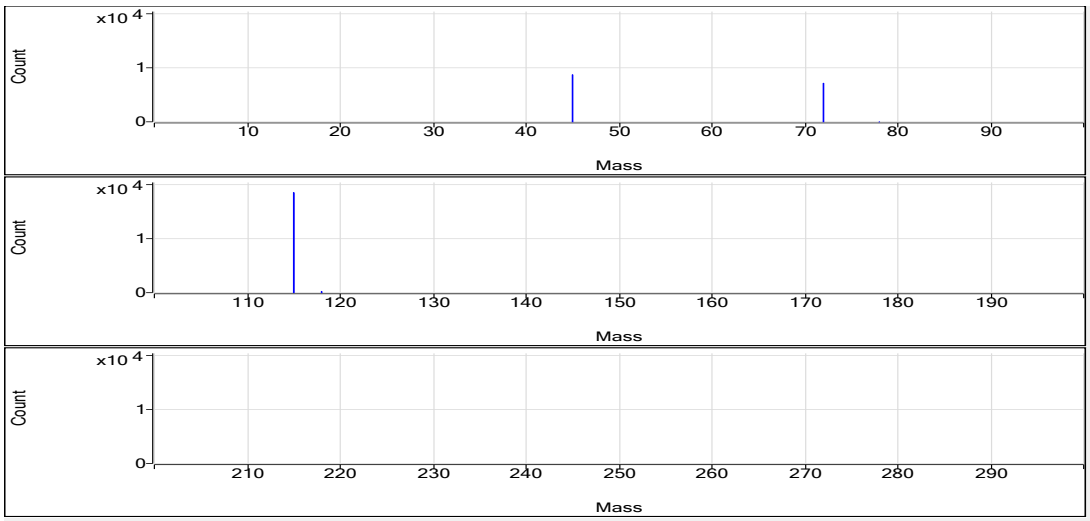
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1316152.25	1.6	98.6	Analog	0.1000	3
No Gas	Ge	72	685312.80	1.3	98.0	Pulse	0.1000	3
H2	Sc	45	86993.54	0.1	100.1	Pulse	0.1000	3
H2	Ge	72	71462.37	1.5	99.8	Pulse	0.1000	3
H2	In	115	184916.04	0.8	101.0	Pulse	0.1000	3
He	Sc	45	23512.93	2.7	102.2	Pulse	0.1000	3
He	Ge	72	42473.90	1.3	100.6	Pulse	0.1000	3
He	In	115	39201.13	3.7	100.7	Pulse	0.1000	3
He	Tb	159	176706.59	1.3	100.4	Pulse	0.1000	3
He	Bi	209	127596.51	0.3	99.5	Pulse	0.1000	3

No Gas

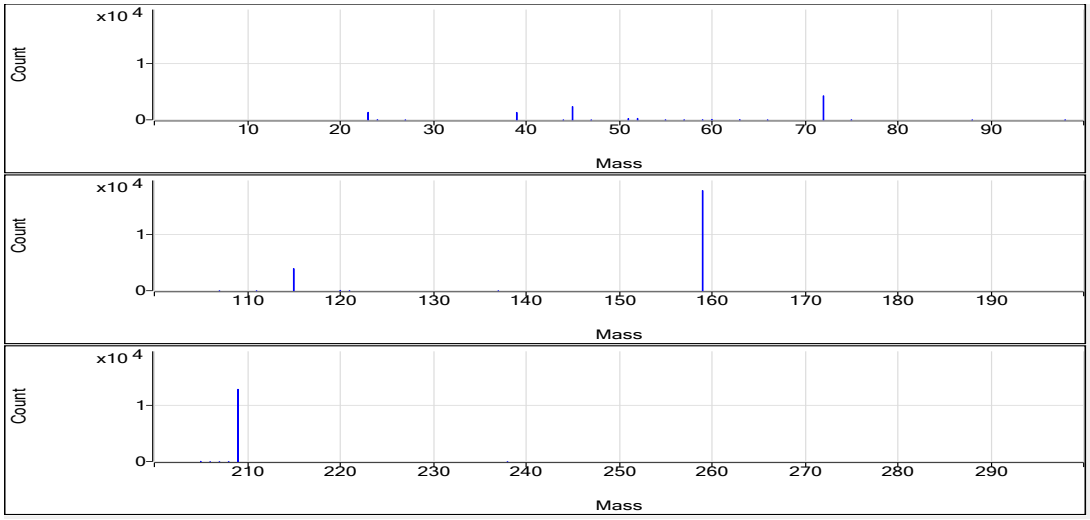


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.141	0.0001	116.00	0.0005	1.901E-05
Be	9	1	No Gas	0.145	0.0001	118.00	0.0005	1.901E-05
Be	9	1	No Gas	0.111	0.0001	94.00	0.0005	1.901E-05
Se	78	2	H2	0.053	0	3.33	0.0002	7.279E-06
Se	78	2	H2	0.069	0	4.00	0.0002	7.279E-06
Se	78	2	H2	0.158	0	7.33	0.0002	7.279E-06
Na	23	3	He	-41.373	0.5718	13466.60	0.0036	0.7194
Na	23	3	He	-38.315	0.5827	13326.39	0.0036	0.7194
Na	23	3	He	-43.192	0.5654	13636.61	0.0036	0.7194
Mg	24	3	He	4.44	0.0149	350.02	0.0018	0.006791
Mg	24	3	He	7.088	0.0197	450.02	0.0018	0.006791
Mg	24	3	He	6.07	0.0178	430.02	0.0018	0.006791
Al	27	3	He	2.154	0.0038	90.00	0.0006	0.002622
Al	27	3	He	3.929	0.0048	110.01	0.0006	0.002622
Al	27	3	He	4.97	0.0054	130.01	0.0006	0.002622
K	39	3	He	40.259	0.6092	14347.40	0.0013	0.5579
K	39	3	He	20.517	0.5841	13356.40	0.0013	0.5579
K	39	3	He	-46.173	0.499	12035.36	0.0013	0.5579
Ca	44	3	He	8.307	0.0047	110.00	0.0001	0.004062
Ca	44	3	He	4.239	0.0044	100.00	0.0001	0.004062
Ca	44	3	He	29.43	0.0062	150.01	0.0001	0.004062
Ti	47	3	He	2.418	0.0017	40.00	0.0006	0.0002809
Ti	47	3	He	3.25	0.0022	50.00	0.0006	0.0002809
Ti	47	3	He	7.3	0.0046	110.01	0.0006	0.0002809
V	51	3	He	0.167	0.0229	540.01	0.0259	0.01861
V	51	3	He	0.099	0.0212	484.01	0.0259	0.01861
V	51	3	He	0.034	0.0195	470.01	0.0259	0.01861
Cr	52	3	He	0.401	0.1181	2780.37	0.0332	0.1047
Cr	52	3	He	0.086	0.1076	2460.28	0.0332	0.1047
Cr	52	3	He	0.429	0.119	2870.37	0.0332	0.1047
Mn	55	3	He	0.4	0.0106	250.01	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.233	0.0083	190.01	0.0139	0.005074
Mn	55	3	He	0.262	0.0087	210.01	0.0139	0.005074
Fe	57	3	He	3.781	0.0085	200.01	0.0006	0.00609
Fe	57	3	He	3.491	0.0083	190.01	0.0006	0.00609
Fe	57	3	He	5.421	0.0095	230.01	0.0006	0.00609
Co	59	3	He	0.06	0.0102	240.01	0.0661	0.00621
Co	59	3	He	0.138	0.0153	350.02	0.0661	0.00621
Co	59	3	He	0.125	0.0145	350.02	0.0661	0.00621
Ni	60	3	He	0.061	0.0178	760.05	0.01	0.01721
Ni	60	3	He	0.331	0.0205	880.07	0.01	0.01721
Ni	60	3	He	0.286	0.0201	840.05	0.01	0.01721
Cu	63	3	He	0.09	0.0094	400.02	0.0286	0.006793
Cu	63	3	He	0.227	0.0133	570.03	0.0286	0.006793
Cu	63	3	He	0.08	0.0091	380.03	0.0286	0.006793
Zn	66	3	He	-0.173	0.0026	110.00	0.0034	0.00316
Zn	66	3	He	-0.039	0.003	130.00	0.0034	0.00316
Zn	66	3	He	0.055	0.0033	140.01	0.0034	0.00316
As	75	3	He	0.044	0.0009	40.00	0.0026	0.0008231
As	75	3	He	0.277	0.0015	66.00	0.0026	0.0008231
As	75	3	He	0.088	0.0011	44.00	0.0026	0.0008231
Sr	88	3	He	0.173	0.0035	140.01	0.0105	0.001715
Sr	88	3	He	0.142	0.0032	130.01	0.0105	0.001715
Sr	88	3	He	0.064	0.0024	90.00	0.0105	0.001715
Mo	98	3	He	0.171	0.0056	220.01	0.0275	0.0008555
Mo	98	3	He	0.158	0.0052	210.01	0.0275	0.0008555
Mo	98	3	He	0.153	0.0051	190.01	0.0275	0.0008555
Ag	107	3	He	0.04	0.0028	110.00	0.0591	0.0004305
Ag	107	3	He	0.018	0.0015	60.00	0.0591	0.0004305
Ag	107	3	He	0.024	0.0019	70.00	0.0591	0.0004305
Cd	111	3	He	0.046	0.0004	14.00	0.0066	5.141E-05
Cd	111	3	He	0.022	0.0002	8.00	0.0066	5.141E-05
Cd	111	3	He	0.073	0.0005	20.00	0.0066	5.141E-05
Sn	120	3	He	0.011	0.0187	740.05	0.0187	0.0185
Sn	120	3	He	-0.051	0.0176	710.05	0.0187	0.0185
Sn	120	3	He	0.02	0.0189	710.04	0.0187	0.0185
Sb	121	3	He	0.16	0.004	160.01	0.0183	0.00111
Sb	121	3	He	0.183	0.0045	180.01	0.0183	0.00111
Sb	121	3	He	0.07	0.0024	90.00	0.0183	0.00111
Ba	137	3	He	0.084	0.0013	50.00	0.0059	0.0007704
Ba	137	3	He	0.375	0.003	120.00	0.0059	0.0007704
Ba	137	3	He	0.05	0.0011	40.00	0.0059	0.0007704
Tl	205	3	He	0.118	0.0051	650.04	0.0364	0.000808
Tl	205	3	He	0.12	0.0052	660.04	0.0364	0.000808
Tl	205	3	He	0.133	0.0056	720.06	0.0364	0.000808
Pb	208	3	He	0.035	0.0049	370.02	0.0487	0.003226
Pb	208	3	He	0.033	0.0048	290.01	0.0487	0.003226
Pb	208	3	He	0.038	0.0051	250.01	0.0487	0.003226
U	238	3	He	0.022	0.0016	200.01	0.0535	0.0004157
U	238	3	He	0.017	0.0013	170.01	0.0535	0.0004157
U	238	3	He	0.008	0.0009	110.00	0.0535	0.0004157
Sc	45	1	No Gas			1332779.98		
Sc	45	1	No Gas			1323334.36		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1292342.40		
Ge	72	1	No Gas			688923.51		
Ge	72	1	No Gas			691701.86		
Ge	72	1	No Gas			675313.04		
Sc	45	2	H2			86908.82		
Sc	45	2	H2			86969.79		
Sc	45	2	H2			87102.02		
Ge	72	2	H2			70575.04		
Ge	72	2	H2			72634.66		
Ge	72	2	H2			71177.41		
In	115	2	H2			183751.42		
In	115	2	H2			186526.46		
In	115	2	H2			184470.23		
Sc	45	3	He			23549.67		
Sc	45	3	He			22868.47		
Sc	45	3	He			24120.65		
Ge	72	3	He			42664.31		
Ge	72	3	He			42895.15		
Ge	72	3	He			41862.25		
In	115	3	He			39566.92		
In	115	3	He			40449.87		
In	115	3	He			37601.71		
Tb	159	3	He			179266.21		
Tb	159	3	He			175629.08		
Tb	159	3	He			175224.47		
Bi	209	3	He			127333.86		
Bi	209	3	He			127960.65		
Bi	209	3	He			127495.01		

Quantitation Report

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Acq Time	9/19/2023 8:08:22 AM
Sample Name	MB 410-417572/1-A
Sample Type	Sample
Comment	B25
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

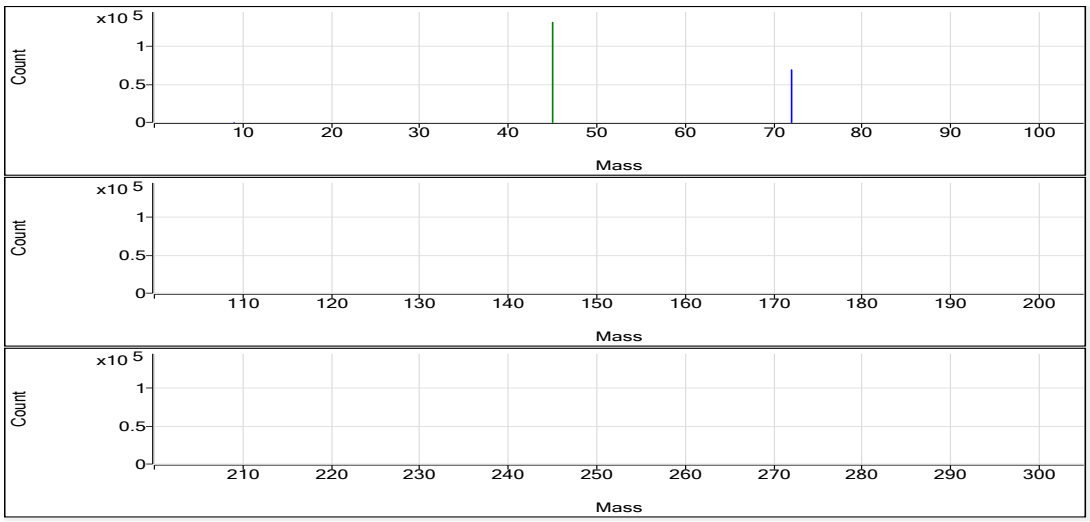
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.070	ppb	20.8	70.00	0.0001	Pulse	0.5000	3
Se	78	115	H2	0.011	ppb	321.6	1.78	0.0000	Pulse	1.5000	3
Na	23	45	He	-46.314	ppb	N/A	12795.92	0.5542	Pulse	0.1000	3
Mg	24	45	He	4.295	ppb	21.6	336.69	0.0146	Pulse	0.1000	3
Al	27	45	He	4.352	ppb	72.8	116.67	0.0050	Pulse	0.1000	3
K	39	45	He	22.116	ppb	256.3	13526.70	0.5861	Pulse	0.1000	3
Ca	44	45	He	13.613	ppb	94.5	116.67	0.0051	Pulse	0.1000	3
Ti	47	45	He	0.259	ppb	286.8	10.00	0.0004	Pulse	0.1000	3
V	51	45	He	0.026	ppb	119.3	444.68	0.0193	Pulse	0.5000	3
Cr	52	45	He	-0.117	ppb	N/A	2326.93	0.1009	Pulse	0.1000	3
Mn	55	45	He	0.218	ppb	69.0	186.68	0.0081	Pulse	0.1000	3
Fe	57	45	He	7.462	ppb	2.9	250.01	0.0108	Pulse	0.1000	3
Co	59	45	He	0.030	ppb	59.8	190.01	0.0082	Pulse	0.1000	3
Ni	60	72	He	0.086	ppb	167.8	756.71	0.0181	Pulse	0.1000	3
Cu	63	72	He	0.167	ppb	44.1	483.36	0.0116	Pulse	0.1000	3
Zn	66	72	He	-0.095	ppb	N/A	120.01	0.0028	Pulse	0.1000	3
As	75	72	He	0.118	ppb	7.0	47.33	0.0011	Pulse	0.5000	3
Sr	88	115	He	0.118	ppb	77.8	116.67	0.0030	Pulse	0.1000	3
Mo	98	115	He	0.080	ppb	69.5	120.00	0.0030	Pulse	0.1000	3
Ag	107	115	He	0.022	ppb	32.6	66.67	0.0017	Pulse	0.1000	3
Cd	111	115	He	0.033	ppb	37.2	10.67	0.0003	Pulse	0.5000	3
Sn	120	115	He	-0.132	ppb	N/A	630.04	0.0160	Pulse	0.1000	3
Sb	121	115	He	0.023	ppb	162.6	60.00	0.0015	Pulse	0.1000	3
Ba	137	115	He	0.028	ppb	99.6	36.67	0.0009	Pulse	0.1000	3
Tl	205	209	He	0.027	ppb	39.5	230.01	0.0018	Pulse	0.1000	3
Pb	208	209	He	0.016	ppb	46.3	510.02	0.0040	Pulse	0.1000	3
U	238	209	He	-0.002	ppb	N/A	40.00	0.0003	Pulse	0.1000	3

ISTD Table:

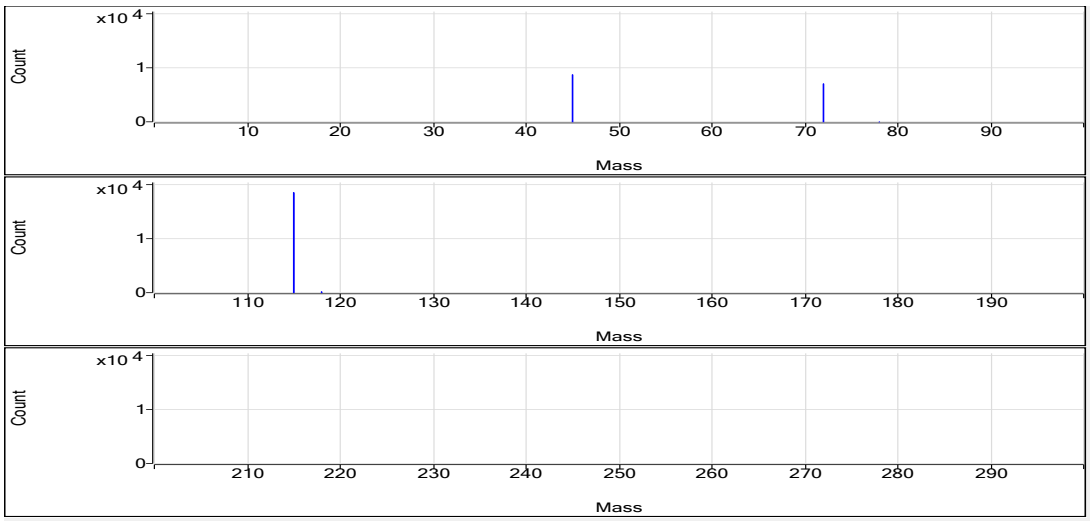
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1322430.35	1.7	99.1	Analog	0.1000	3
No Gas	Ge	72	693833.66	1.1	99.2	Pulse	0.1000	3
H2	Sc	45	87019.75	1.0	100.1	Pulse	0.1000	3
H2	Ge	72	70262.92	1.0	98.1	Pulse	0.1000	3
H2	In	115	184875.67	0.3	100.9	Pulse	0.1000	3
He	Sc	45	23082.21	1.3	100.3	Pulse	0.1000	3
He	Ge	72	41922.43	3.0	99.3	Pulse	0.1000	3
He	In	115	39261.88	2.2	100.8	Pulse	0.1000	3
He	Tb	159	176830.95	1.7	100.4	Pulse	0.1000	3
He	Bi	209	127233.48	0.9	99.2	Pulse	0.1000	3

No Gas

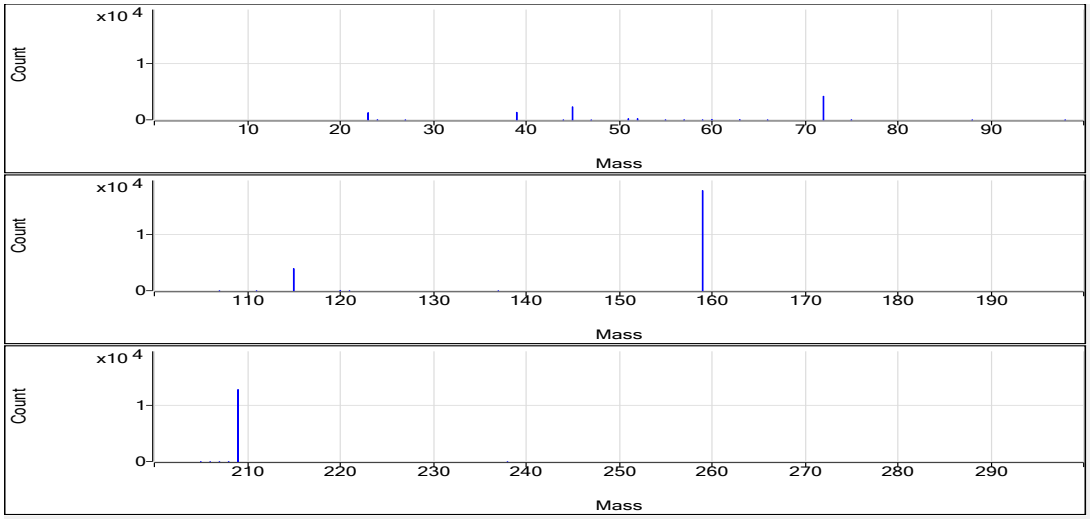


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.056	0	60.00	0.0005	1.901E-05
Be	9	1	No Gas	0.085	0.0001	80.00	0.0005	1.901E-05
Be	9	1	No Gas	0.069	0.0001	70.00	0.0005	1.901E-05
Se	78	2	H2	-0.018	0	0.67	0.0002	7.279E-06
Se	78	2	H2	-0.001	0	1.33	0.0002	7.279E-06
Se	78	2	H2	0.052	0	3.33	0.0002	7.279E-06
Na	23	3	He	-54.036	0.5267	12055.20	0.0036	0.7194
Na	23	3	He	-41.32	0.572	13396.50	0.0036	0.7194
Na	23	3	He	-43.587	0.5639	12936.05	0.0036	0.7194
Mg	24	3	He	5.156	0.0162	370.02	0.0018	0.006791
Mg	24	3	He	3.311	0.0128	300.02	0.0018	0.006791
Mg	24	3	He	4.418	0.0148	340.02	0.0018	0.006791
Al	27	3	He	5.491	0.0057	130.01	0.0006	0.002622
Al	27	3	He	6.793	0.0064	150.01	0.0006	0.002622
Al	27	3	He	0.771	0.0031	70.00	0.0006	0.002622
K	39	3	He	79.758	0.6596	15098.19	0.0013	0.5579
K	39	3	He	20.139	0.5836	13666.86	0.0013	0.5579
K	39	3	He	-33.548	0.5151	11815.05	0.0013	0.5579
Ca	44	3	He	10.147	0.0048	110.00	0.0001	0.004062
Ca	44	3	He	2.836	0.0043	100.00	0.0001	0.004062
Ca	44	3	He	27.854	0.0061	140.01	0.0001	0.004062
Ti	47	3	He	-0.479	0	0.00	0.0006	0.0002809
Ti	47	3	He	0.249	0.0004	10.00	0.0006	0.0002809
Ti	47	3	He	1.008	0.0009	20.00	0.0006	0.0002809
V	51	3	He	0.044	0.0197	452.01	0.0259	0.01861
V	51	3	He	-0.01	0.0184	430.01	0.0259	0.01861
V	51	3	He	0.042	0.0197	452.01	0.0259	0.01861
Cr	52	3	He	-0.049	0.1031	2360.26	0.0332	0.1047
Cr	52	3	He	-0.286	0.0952	2230.24	0.0332	0.1047
Cr	52	3	He	-0.016	0.1042	2390.29	0.0332	0.1047
Mn	55	3	He	0.107	0.0066	150.01	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.158	0.0073	170.01	0.0139	0.005074
Mn	55	3	He	0.389	0.0105	240.01	0.0139	0.005074
Fe	57	3	He	7.604	0.0109	250.01	0.0006	0.00609
Fe	57	3	He	7.214	0.0107	250.01	0.0006	0.00609
Fe	57	3	He	7.567	0.0109	250.01	0.0006	0.00609
Co	59	3	He	0.012	0.007	160.01	0.0661	0.00621
Co	59	3	He	0.048	0.0094	220.01	0.0661	0.00621
Co	59	3	He	0.031	0.0083	190.01	0.0661	0.00621
Ni	60	3	He	0.246	0.0197	810.05	0.01	0.01721
Ni	60	3	He	-0.037	0.0168	730.04	0.01	0.01721
Ni	60	3	He	0.051	0.0177	730.04	0.01	0.01721
Cu	63	3	He	0.246	0.0138	570.03	0.0286	0.006793
Cu	63	3	He	0.101	0.0097	420.02	0.0286	0.006793
Cu	63	3	He	0.153	0.0112	460.03	0.0286	0.006793
Zn	66	3	He	-0.652	0.001	40.00	0.0034	0.00316
Zn	66	3	He	0.295	0.0042	180.01	0.0034	0.00316
Zn	66	3	He	0.071	0.0034	140.01	0.0034	0.00316
As	75	3	He	0.114	0.0011	46.00	0.0026	0.0008231
As	75	3	He	0.128	0.0012	50.00	0.0026	0.0008231
As	75	3	He	0.114	0.0011	46.00	0.0026	0.0008231
Sr	88	3	He	0.215	0.004	160.01	0.0105	0.001715
Sr	88	3	He	0.108	0.0029	110.00	0.0105	0.001715
Sr	88	3	He	0.032	0.002	80.00	0.0105	0.001715
Mo	98	3	He	0.077	0.003	120.00	0.0275	0.0008555
Mo	98	3	He	0.026	0.0016	60.00	0.0275	0.0008555
Mo	98	3	He	0.136	0.0046	180.01	0.0275	0.0008555
Ag	107	3	He	0.014	0.0012	50.00	0.0591	0.0004305
Ag	107	3	He	0.023	0.0018	70.00	0.0591	0.0004305
Ag	107	3	He	0.027	0.002	80.00	0.0591	0.0004305
Cd	111	3	He	0.03	0.0002	10.00	0.0066	5.141E-05
Cd	111	3	He	0.047	0.0004	14.00	0.0066	5.141E-05
Cd	111	3	He	0.023	0.0002	8.00	0.0066	5.141E-05
Sn	120	3	He	-0.125	0.0162	650.04	0.0187	0.0185
Sn	120	3	He	-0.197	0.0148	570.03	0.0187	0.0185
Sn	120	3	He	-0.072	0.0171	670.04	0.0187	0.0185
Sb	121	3	He	0.034	0.0017	70.00	0.0183	0.00111
Sb	121	3	He	0.053	0.0021	80.00	0.0183	0.00111
Sb	121	3	He	-0.019	0.0008	30.00	0.0183	0.00111
Ba	137	3	He	-0.004	0.0007	30.00	0.0059	0.0007704
Ba	137	3	He	0.046	0.001	40.00	0.0059	0.0007704
Ba	137	3	He	0.043	0.001	40.00	0.0059	0.0007704
Tl	205	3	He	0.017	0.0014	180.01	0.0364	0.000808
Tl	205	3	He	0.027	0.0018	230.01	0.0364	0.000808
Tl	205	3	He	0.039	0.0022	280.02	0.0364	0.000808
Pb	208	3	He	0.016	0.004	270.01	0.0487	0.003226
Pb	208	3	He	0.023	0.0044	240.01	0.0487	0.003226
Pb	208	3	He	0.008	0.0036	220.01	0.0487	0.003226
U	238	3	He	0	0.0004	50.00	0.0535	0.0004157
U	238	3	He	-0.005	0.0002	20.00	0.0535	0.0004157
U	238	3	He	0	0.0004	50.00	0.0535	0.0004157
Sc	45	1	No Gas			1297351.86		
Sc	45	1	No Gas			1327793.42		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1342145.76		
Ge	72	1	No Gas			684825.38		
Ge	72	1	No Gas			699803.82		
Ge	72	1	No Gas			696871.79		
Sc	45	2	H2			86467.00		
Sc	45	2	H2			86566.93		
Sc	45	2	H2			88025.32		
Ge	72	2	H2			71007.26		
Ge	72	2	H2			69709.75		
Ge	72	2	H2			70071.74		
In	115	2	H2			184523.22		
In	115	2	H2			185482.32		
In	115	2	H2			184621.46		
Sc	45	3	He			22888.67		
Sc	45	3	He			23419.40		
Sc	45	3	He			22938.57		
Ge	72	3	He			41200.44		
Ge	72	3	He			43356.59		
Ge	72	3	He			41210.26		
In	115	3	He			40229.14		
In	115	3	He			38494.18		
In	115	3	He			39075.55		
Tb	159	3	He			178200.64		
Tb	159	3	He			173290.17		
Tb	159	3	He			179002.03		
Bi	209	3	He			126556.59		
Bi	209	3	He			128567.17		
Bi	209	3	He			126576.69		

Quantitation Report

Data File Name	040SMPL.d
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Sample Name	LCS 410-417572/2-A
Sample Type	Sample
Comment	B25
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

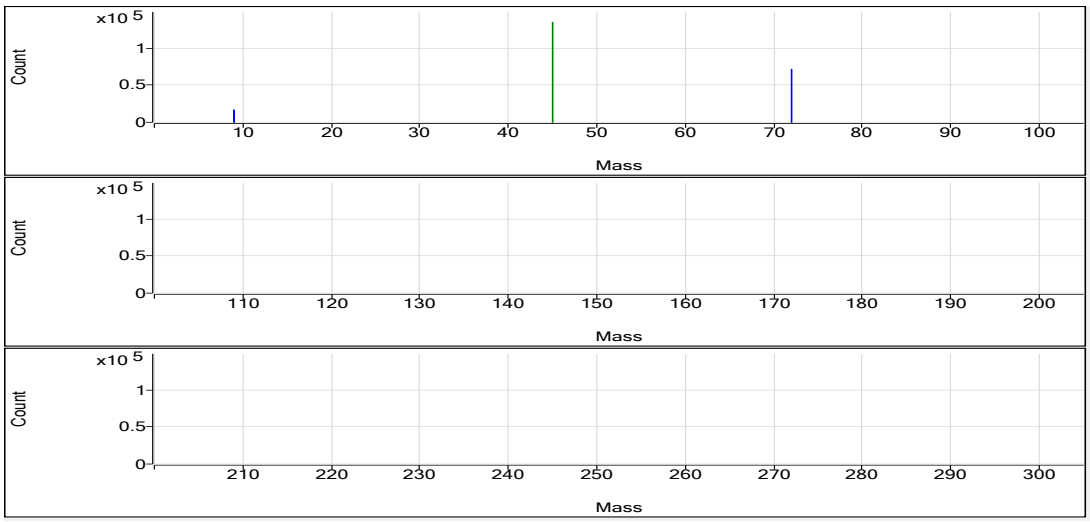
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.591	ppb	3.7	33667.79	0.0249	Pulse	0.5000	3
Se	78	115	H2	101.897	ppb	1.4	3980.78	0.0209	Pulse	1.5000	3
Na	23	45	He	5018.492	ppb	2.3	438106.41	18.6125	Pulse	0.1000	3
Mg	24	45	He	5035.572	ppb	2.8	215630.37	9.1621	Pulse	0.1000	3
Al	27	45	He	4956.965	ppb	2.1	65037.00	2.7631	Pulse	0.1000	3
K	39	45	He	5089.722	ppb	2.8	165972.55	7.0516	Pulse	0.1000	3
Ca	44	45	He	5137.378	ppb	5.8	8953.09	0.3806	Pulse	0.1000	3
Ti	47	45	He	491.036	ppb	1.9	6785.16	0.2882	Pulse	0.1000	3
V	51	45	He	504.312	ppb	2.3	307382.40	13.0593	Pulse	0.5000	3
Cr	52	45	He	503.862	ppb	2.4	396369.42	16.8403	Pulse	0.1000	3
Mn	55	45	He	503.660	ppb	1.6	164517.13	6.9886	Pulse	0.1000	3
Fe	57	45	He	5118.899	ppb	0.7	76737.53	3.2593	Pulse	0.1000	3
Co	59	45	He	499.454	ppb	2.8	777742.31	33.0447	Pulse	0.1000	3
Ni	60	72	He	501.200	ppb	1.0	220097.26	5.0202	Pulse	0.1000	3
Cu	63	72	He	501.619	ppb	2.6	629841.10	14.3686	Pulse	0.1000	3
Zn	66	72	He	505.831	ppb	2.2	74583.77	1.7013	Pulse	0.1000	3
As	75	72	He	501.640	ppb	1.4	56836.07	1.2964	Pulse	0.5000	3
Sr	88	115	He	50.750	ppb	2.1	21527.08	0.5367	Pulse	0.1000	3
Mo	98	115	He	49.282	ppb	2.6	54382.77	1.3565	Pulse	0.1000	3
Ag	107	115	He	48.728	ppb	1.2	115504.46	2.8800	Pulse	0.1000	3
Cd	111	115	He	48.797	ppb	2.6	12968.06	0.3234	Pulse	0.5000	3
Sn	120	115	He	98.843	ppb	2.0	74976.65	1.8699	Pulse	0.1000	3
Sb	121	115	He	97.668	ppb	2.9	71705.97	1.7886	Pulse	0.1000	3
Ba	137	115	He	493.196	ppb	1.4	115881.11	2.8899	Pulse	0.1000	3
Tl	205	209	He	100.540	ppb	0.2	472184.20	3.6566	Pulse	0.1000	3
Pb	208	209	He	50.796	ppb	0.5	320192.17	2.4795	Pulse	0.1000	3
U	238	209	He	50.303	ppb	0.4	347494.67	2.6910	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1351284.35	1.2	101.2	Analog	0.1000	3
No Gas	Ge	72	718020.77	1.0	102.7	Pulse	0.1000	3
H2	Sc	45	89034.89	1.7	102.4	Pulse	0.1000	3
H2	Ge	72	74062.02	2.4	103.4	Pulse	0.1000	3
H2	In	115	190047.91	0.6	103.8	Pulse	0.1000	3
He	Sc	45	23546.44	2.6	102.4	Pulse	0.1000	3
He	Ge	72	43844.61	1.3	103.8	Pulse	0.1000	3
He	In	115	40108.57	2.6	103.0	Pulse	0.1000	3
He	Tb	159	178092.11	0.6	101.1	Pulse	0.1000	3
He	Bi	209	129134.65	0.8	100.7	Pulse	0.1000	3

No Gas



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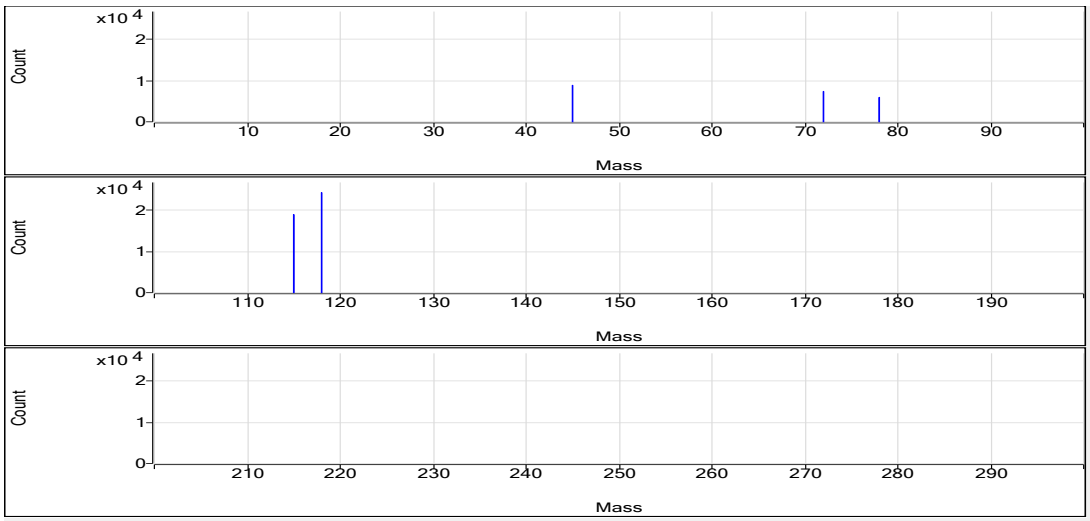
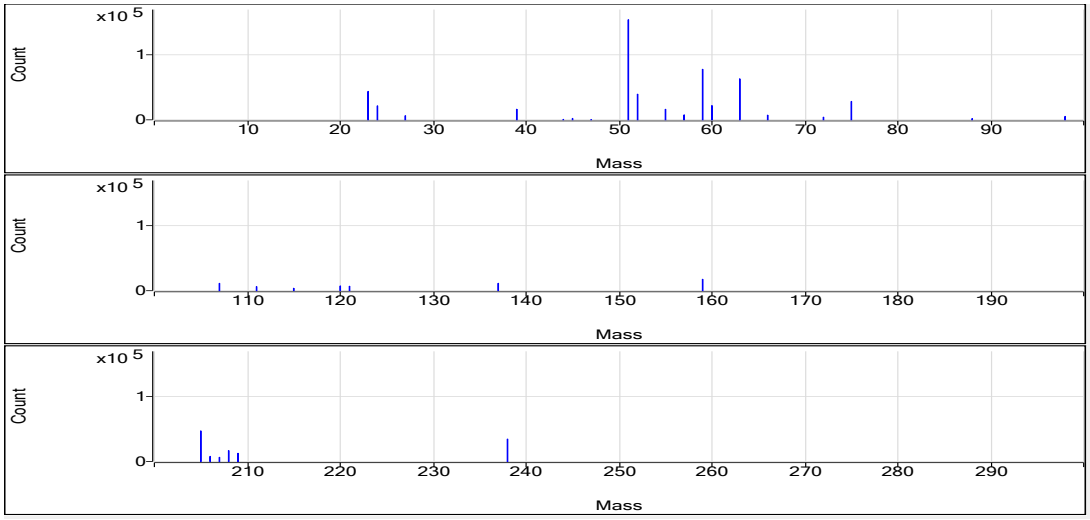


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	49.45	0.0239	31807.66	0.0005	1.901E-05
Be	9	1	No Gas	52.296	0.0252	34369.34	0.0005	1.901E-05
Be	9	1	No Gas	53.029	0.0256	34826.38	0.0005	1.901E-05
Se	78	2	H2	101.283	0.0208	3979.89	0.0002	7.279E-06
Se	78	2	H2	103.581	0.0213	4047.91	0.0002	7.279E-06
Se	78	2	H2	100.828	0.0207	3914.54	0.0002	7.279E-06
Na	23	3	He	5103.763	18.9165	442071.75	0.0036	0.7194
Na	23	3	He	4887.038	18.1438	439456.67	0.0036	0.7194
Na	23	3	He	5064.674	18.7771	432790.81	0.0036	0.7194
Mg	24	3	He	5099.511	9.2783	216831.27	0.0018	0.006791
Mg	24	3	He	4871.811	8.8643	214701.44	0.0018	0.006791
Mg	24	3	He	5135.394	9.3436	215358.40	0.0018	0.006791
Al	27	3	He	5007.095	2.791	65224.39	0.0006	0.002622
Al	27	3	He	4835.456	2.6954	65284.84	0.0006	0.002622
Al	27	3	He	5028.345	2.8028	64601.77	0.0006	0.002622
K	39	3	He	5180.464	7.1674	167500.10	0.0013	0.5579
K	39	3	He	4927.368	6.8445	165779.39	0.0013	0.5579
K	39	3	He	5161.334	7.143	164638.16	0.0013	0.5579
Ca	44	3	He	5224.104	0.387	9043.12	0.0001	0.004062
Ca	44	3	He	4807.469	0.3564	8632.85	0.0001	0.004062
Ca	44	3	He	5380.561	0.3984	9183.29	0.0001	0.004062
Ti	47	3	He	501.807	0.2945	6881.88	0.0006	0.0002809
Ti	47	3	He	487.677	0.2862	6931.88	0.0006	0.0002809
Ti	47	3	He	483.625	0.2838	6541.72	0.0006	0.0002809
V	51	3	He	511.194	13.2372	309349.97	0.0259	0.01861
V	51	3	He	490.818	12.7104	307855.03	0.0259	0.01861
V	51	3	He	510.923	13.2303	304942.19	0.0259	0.01861
Cr	52	3	He	509.74	17.0355	398113.90	0.0332	0.1047
Cr	52	3	He	490.014	16.3803	396744.53	0.0332	0.1047
Cr	52	3	He	511.832	17.105	394249.84	0.0332	0.1047
Mn	55	3	He	509.282	7.0666	165143.65	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	494.689	6.8642	166257.38	0.0139	0.005074
Mn	55	3	He	507.01	7.0351	162150.36	0.0139	0.005074
Fe	57	3	He	5104.14	3.2499	75949.90	0.0006	0.00609
Fe	57	3	He	5091.662	3.242	78524.01	0.0006	0.00609
Fe	57	3	He	5160.897	3.286	75738.68	0.0006	0.00609
Co	59	3	He	509.525	33.7109	787812.96	0.0661	0.00621
Co	59	3	He	483.395	31.9824	774640.69	0.0661	0.00621
Co	59	3	He	505.443	33.4409	770773.27	0.0661	0.00621
Ni	60	3	He	505.733	5.0655	218756.48	0.01	0.01721
Ni	60	3	He	502.03	5.0285	222860.70	0.01	0.01721
Ni	60	3	He	495.838	4.9667	218674.61	0.01	0.01721
Cu	63	3	He	516.751	14.8018	639230.03	0.0286	0.006793
Cu	63	3	He	493.929	14.1484	627051.01	0.0286	0.006793
Cu	63	3	He	494.177	14.1555	623242.26	0.0286	0.006793
Zn	66	3	He	517.229	1.7396	75126.58	0.0034	0.00316
Zn	66	3	He	505.193	1.6992	75307.93	0.0034	0.00316
Zn	66	3	He	495.072	1.6652	73316.81	0.0034	0.00316
As	75	3	He	508.744	1.3148	56779.76	0.0026	0.0008231
As	75	3	He	501.372	1.2957	57426.43	0.0026	0.0008231
As	75	3	He	494.804	1.2788	56302.03	0.0026	0.0008231
Sr	88	3	He	51.698	0.5467	22268.43	0.0105	0.001715
Sr	88	3	He	49.623	0.5249	21356.81	0.0105	0.001715
Sr	88	3	He	50.928	0.5386	20956.00	0.0105	0.001715
Mo	98	3	He	48.359	1.3311	54215.63	0.0275	0.0008555
Mo	98	3	He	48.738	1.3415	54586.84	0.0275	0.0008555
Mo	98	3	He	50.748	1.3968	54345.85	0.0275	0.0008555
Ag	107	3	He	48.049	2.8399	115665.63	0.0591	0.0004305
Ag	107	3	He	49.16	2.9056	118226.22	0.0591	0.0004305
Ag	107	3	He	48.976	2.8946	112621.53	0.0591	0.0004305
Cd	111	3	He	47.531	0.3151	12831.94	0.0066	5.141E-05
Cd	111	3	He	48.831	0.3237	13170.24	0.0066	5.141E-05
Cd	111	3	He	50.029	0.3316	12901.99	0.0066	5.141E-05
Sn	120	3	He	96.852	1.8326	74641.32	0.0187	0.0185
Sn	120	3	He	98.807	1.8693	76059.42	0.0187	0.0185
Sn	120	3	He	100.869	1.9079	74229.21	0.0187	0.0185
Sb	121	3	He	97.43	1.7843	72671.22	0.0183	0.00111
Sb	121	3	He	94.933	1.7385	70741.07	0.0183	0.00111
Sb	121	3	He	100.64	1.843	71705.61	0.0183	0.00111
Ba	137	3	He	491.174	2.878	117218.97	0.0059	0.0007704
Ba	137	3	He	487.545	2.8568	116240.50	0.0059	0.0007704
Ba	137	3	He	500.869	2.9348	114183.86	0.0059	0.0007704
Tl	205	3	He	100.483	3.6545	474236.24	0.0364	0.000808
Tl	205	3	He	100.334	3.6491	473415.66	0.0364	0.000808
Tl	205	3	He	100.804	3.6662	468900.70	0.0364	0.000808
Pb	208	3	He	50.702	2.4749	171764.31	0.0487	0.003226
Pb	208	3	He	51.105	2.4945	172230.92	0.0487	0.003226
Pb	208	3	He	50.58	2.469	167285.15	0.0487	0.003226
U	238	3	He	50.22	2.6866	348629.60	0.0535	0.0004157
U	238	3	He	50.183	2.6846	348289.33	0.0535	0.0004157
U	238	3	He	50.506	2.7018	345565.07	0.0535	0.0004157
Sc	45	1	No Gas			1332261.54		
Sc	45	1	No Gas			1361272.32		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1360319.20		
Ge	72	1	No Gas			719987.57		
Ge	72	1	No Gas			723847.96		
Ge	72	1	No Gas			710226.79		
Sc	45	2	H2			89233.33		
Sc	45	2	H2			90400.10		
Sc	45	2	H2			87471.23		
Ge	72	2	H2			72011.00		
Ge	72	2	H2			75278.38		
Ge	72	2	H2			74896.68		
In	115	2	H2			191160.31		
In	115	2	H2			190114.92		
In	115	2	H2			188868.49		
Sc	45	3	He			23369.66		
Sc	45	3	He			24220.81		
Sc	45	3	He			23048.85		
Ge	72	3	He			43185.94		
Ge	72	3	He			44319.61		
Ge	72	3	He			44028.27		
In	115	3	He			41251.65		
In	115	3	He			41222.13		
In	115	3	He			39426.45		
Tb	159	3	He			178423.34		
Tb	159	3	He			178979.26		
Tb	159	3	He			176873.73		
Bi	209	3	He			129767.66		
Bi	209	3	He			129736.47		
Bi	209	3	He			127899.83		

Quantitation Report

Data File Name	041SMPL.d
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Sample Type	Sample
Comment	B25
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

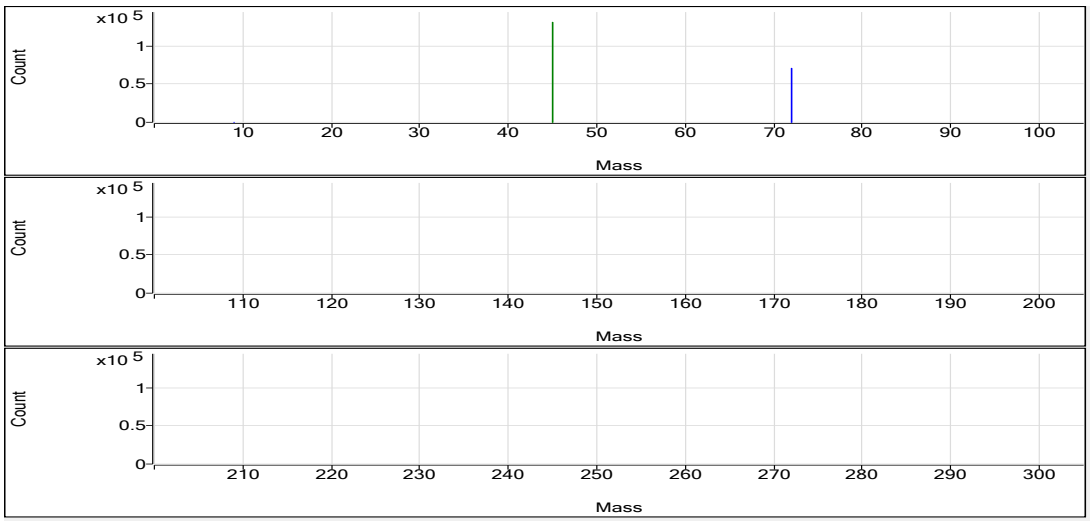
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.135	ppb	29.7	110.00	0.0001	Pulse	0.5000	3
Se	78	115	H2	0.727	ppb	15.7	28.89	0.0002	Pulse	1.5000	3
Na	23	45	He	203023.014	ppb	2.6	16539155.58	724.5846	Analog	0.1000	3
Mg	24	45	He	10362.059	ppb	3.1	430142.56	18.8463	Pulse	0.1000	3
Al	27	45	He	346.297	ppb	0.9	4464.17	0.1955	Pulse	0.1000	3
K	39	45	He	7226.581	ppb	3.0	223186.16	9.7780	Pulse	0.1000	3
Ca	44	45	He	81324.263	ppb	2.8	136144.20	5.9647	Pulse	0.1000	3
Ti	47	45	He	3.731	ppb	62.9	56.67	0.0025	Pulse	0.1000	3
V	51	45	He	1.450	ppb	15.8	1278.73	0.0561	Pulse	0.5000	3
Cr	52	45	He	9.399	ppb	7.8	9513.48	0.4169	Pulse	0.1000	3
Mn	55	45	He	761.775	ppb	2.9	241202.61	10.5675	Pulse	0.1000	3
Fe	57	45	He	8859.872	ppb	2.7	128666.20	5.6368	Pulse	0.1000	3
Co	59	45	He	0.386	ppb	12.5	726.71	0.0318	Pulse	0.1000	3
Ni	60	72	He	3.115	ppb	5.7	2093.56	0.0483	Pulse	0.1000	3
Cu	63	72	He	22.955	ppb	0.3	28783.03	0.6640	Pulse	0.1000	3
Zn	66	72	He	70.061	ppb	3.5	10330.72	0.2384	Pulse	0.1000	3
As	75	72	He	3.600	ppb	4.5	438.68	0.0101	Pulse	0.5000	3
Sr	88	115	He	311.341	ppb	2.8	132452.13	3.2840	Pulse	0.1000	3
Mo	98	115	He	1.672	ppb	7.0	1890.20	0.0468	Pulse	0.1000	3
Ag	107	115	He	0.030	ppb	59.5	90.00	0.0022	Pulse	0.1000	3
Cd	111	115	He	0.075	ppb	20.6	22.00	0.0005	Pulse	0.5000	3
Sn	120	115	He	0.124	ppb	32.4	840.06	0.0208	Pulse	0.1000	3
Sb	121	115	He	0.265	ppb	20.7	240.01	0.0060	Pulse	0.1000	3
Ba	137	115	He	102.200	ppb	1.4	24182.04	0.5994	Pulse	0.1000	3
Tl	205	209	He	0.191	ppb	14.6	986.74	0.0078	Pulse	0.1000	3
Pb	208	209	He	4.954	ppb	0.5	31075.52	0.2447	Pulse	0.1000	3
U	238	209	He	0.413	ppb	3.3	2860.43	0.0225	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1311893.89	1.1	98.3	Analog	0.1000	3
No Gas	Ge	72	709220.46	0.2	101.4	Pulse	0.1000	3
H2	Sc	45	89121.97	1.1	102.5	Pulse	0.1000	3
H2	Ge	72	72718.22	2.3	101.5	Pulse	0.1000	3
H2	In	115	184642.67	1.3	100.8	Pulse	0.1000	3
He	Sc	45	22835.27	2.4	99.3	Pulse	0.1000	3
He	Ge	72	43346.54	0.7	102.7	Pulse	0.1000	3
He	In	115	40346.76	1.9	103.6	Pulse	0.1000	3
He	Tb	159	176587.91	0.5	100.3	Pulse	0.1000	3
He	Bi	209	126973.72	1.0	99.0	Pulse	0.1000	3

No Gas



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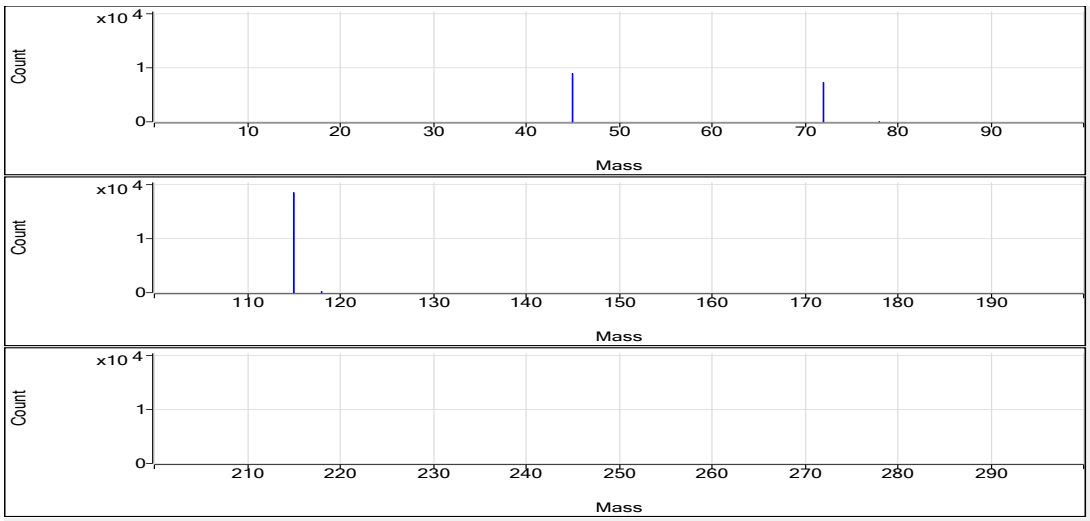
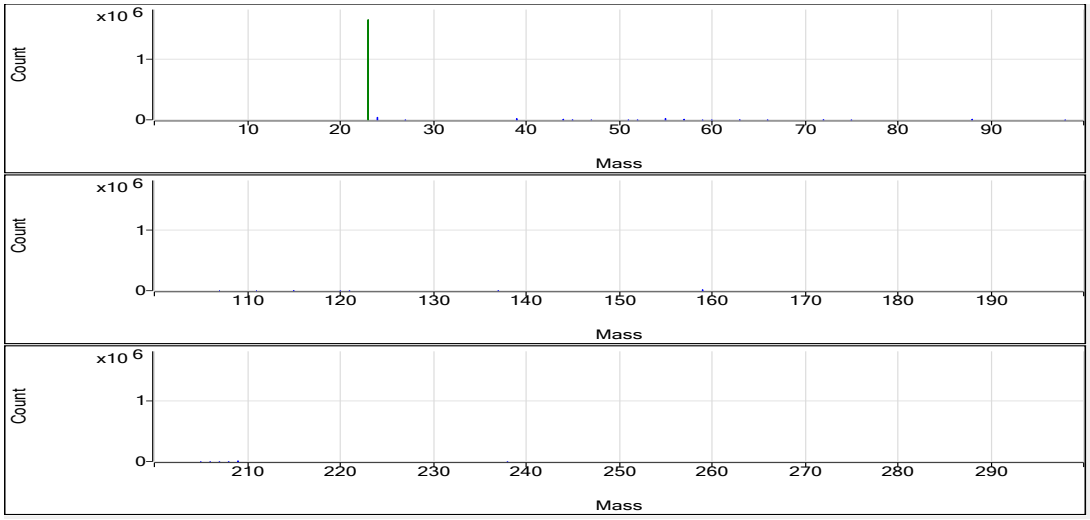


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.126	0.0001	106.00	0.0005	1.901E-05
Be	9	1	No Gas	0.178	0.0001	136.00	0.0005	1.901E-05
Be	9	1	No Gas	0.099	0.0001	88.00	0.0005	1.901E-05
Se	78	2	H2	0.839	0.0002	32.67	0.0002	7.279E-06
Se	78	2	H2	0.611	0.0001	24.67	0.0002	7.279E-06
Se	78	2	H2	0.731	0.0002	29.33	0.0002	7.279E-06
Na	23	3	He	206623.637	737.4223	16597968.50	0.0036	0.7194
Na	23	3	He	205537.261	733.5489	16525427.25	0.0036	0.7194
Na	23	3	He	196908.146	702.7824	16494071.00	0.0036	0.7194
Mg	24	3	He	10549.136	19.1864	431849.37	0.0018	0.006791
Mg	24	3	He	10551.797	19.1912	432341.32	0.0018	0.006791
Mg	24	3	He	9985.245	18.1612	426236.99	0.0018	0.006791
Al	27	3	He	345.594	0.1951	4390.82	0.0006	0.002622
Al	27	3	He	343.687	0.194	4370.80	0.0006	0.002622
Al	27	3	He	349.609	0.1973	4630.88	0.0006	0.002622
K	39	3	He	7415.342	10.0188	225504.18	0.0013	0.5579
K	39	3	He	7274.814	9.8395	221665.02	0.0013	0.5579
K	39	3	He	6989.588	9.4756	222389.29	0.0013	0.5579
Ca	44	3	He	82547.315	6.0543	136271.19	0.0001	0.004062
Ca	44	3	He	82719.147	6.0669	136675.76	0.0001	0.004062
Ca	44	3	He	78706.327	5.7728	135485.65	0.0001	0.004062
Ti	47	3	He	1.036	0.0009	20.00	0.0006	0.0002809
Ti	47	3	He	4.821	0.0031	70.00	0.0006	0.0002809
Ti	47	3	He	5.335	0.0034	80.00	0.0006	0.0002809
V	51	3	He	1.579	0.0594	1338.07	0.0259	0.01861
V	51	3	He	1.584	0.0596	1342.07	0.0259	0.01861
V	51	3	He	1.185	0.0493	1156.05	0.0259	0.01861
Cr	52	3	He	9.358	0.4156	9353.36	0.0332	0.1047
Cr	52	3	He	10.149	0.4418	9953.78	0.0332	0.1047
Cr	52	3	He	8.691	0.3934	9233.29	0.0332	0.1047
Mn	55	3	He	779.182	10.8089	243287.67	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	769.278	10.6716	240409.94	0.0139	0.005074
Mn	55	3	He	736.864	10.2221	239910.21	0.0139	0.005074
Fe	57	3	He	8912.826	5.6705	127631.66	0.0006	0.00609
Fe	57	3	He	9067.59	5.7688	129960.64	0.0006	0.00609
Fe	57	3	He	8599.2	5.4712	128406.31	0.0006	0.00609
Co	59	3	He	0.37	0.0307	690.04	0.0661	0.00621
Co	59	3	He	0.349	0.0293	660.04	0.0661	0.00621
Co	59	3	He	0.441	0.0354	830.06	0.0661	0.00621
Ni	60	3	He	2.957	0.0467	2040.21	0.01	0.01721
Ni	60	3	He	3.307	0.0502	2160.24	0.01	0.01721
Ni	60	3	He	3.081	0.048	2080.23	0.01	0.01721
Cu	63	3	He	23.012	0.6656	29060.13	0.0286	0.006793
Cu	63	3	He	22.985	0.6649	28599.39	0.0286	0.006793
Cu	63	3	He	22.869	0.6616	28689.56	0.0286	0.006793
Zn	66	3	He	67.585	0.2301	10043.79	0.0034	0.00316
Zn	66	3	He	72.49	0.2465	10604.31	0.0034	0.00316
Zn	66	3	He	70.108	0.2385	10344.06	0.0034	0.00316
As	75	3	He	3.495	0.0098	430.01	0.0026	0.0008231
As	75	3	He	3.786	0.0106	456.01	0.0026	0.0008231
As	75	3	He	3.521	0.0099	430.01	0.0026	0.0008231
Sr	88	3	He	309.438	3.264	132334.25	0.0105	0.001715
Sr	88	3	He	320.852	3.3843	133616.10	0.0105	0.001715
Sr	88	3	He	303.733	3.2038	131406.04	0.0105	0.001715
Mo	98	3	He	1.547	0.0434	1760.19	0.0275	0.0008555
Mo	98	3	He	1.691	0.0474	1870.19	0.0275	0.0008555
Mo	98	3	He	1.777	0.0497	2040.21	0.0275	0.0008555
Ag	107	3	He	0.051	0.0035	140.00	0.0591	0.0004305
Ag	107	3	He	0.023	0.0018	70.00	0.0591	0.0004305
Ag	107	3	He	0.017	0.0015	60.00	0.0591	0.0004305
Cd	111	3	He	0.089	0.0006	26.00	0.0066	5.141E-05
Cd	111	3	He	0.076	0.0006	22.00	0.0066	5.141E-05
Cd	111	3	He	0.058	0.0004	18.00	0.0066	5.141E-05
Sn	120	3	He	0.158	0.0215	870.06	0.0187	0.0185
Sn	120	3	He	0.135	0.021	830.06	0.0187	0.0185
Sn	120	3	He	0.08	0.02	820.05	0.0187	0.0185
Sb	121	3	He	0.222	0.0052	210.01	0.0183	0.00111
Sb	121	3	He	0.327	0.0071	280.01	0.0183	0.00111
Sb	121	3	He	0.246	0.0056	230.01	0.0183	0.00111
Ba	137	3	He	101.054	0.5927	24031.65	0.0059	0.0007704
Ba	137	3	He	103.778	0.6087	24031.69	0.0059	0.0007704
Ba	137	3	He	101.769	0.5969	24482.79	0.0059	0.0007704
Tl	205	3	He	0.22	0.0088	1120.09	0.0364	0.000808
Tl	205	3	He	0.19	0.0077	990.08	0.0364	0.000808
Tl	205	3	He	0.164	0.0068	850.06	0.0364	0.000808
Pb	208	3	He	4.954	0.2447	16200.54	0.0487	0.003226
Pb	208	3	He	4.929	0.2435	17001.74	0.0487	0.003226
Pb	208	3	He	4.98	0.246	15980.29	0.0487	0.003226
U	238	3	He	0.427	0.0233	2960.49	0.0535	0.0004157
U	238	3	He	0.412	0.0225	2880.42	0.0535	0.0004157
U	238	3	He	0.4	0.0218	2740.38	0.0535	0.0004157
Sc	45	1	No Gas			1325555.61		
Sc	45	1	No Gas			1296336.54		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1313789.51		
Ge	72	1	No Gas			707802.18		
Ge	72	1	No Gas			709971.94		
Ge	72	1	No Gas			709887.26		
Sc	45	2	H2			88196.79		
Sc	45	2	H2			89061.75		
Sc	45	2	H2			90107.36		
Ge	72	2	H2			74604.03		
Ge	72	2	H2			72192.11		
Ge	72	2	H2			71358.51		
In	115	2	H2			181906.40		
In	115	2	H2			185706.36		
In	115	2	H2			186315.25		
Sc	45	3	He			22508.09		
Sc	45	3	He			22528.05		
Sc	45	3	He			23469.67		
Ge	72	3	He			43657.73		
Ge	72	3	He			43015.38		
Ge	72	3	He			43366.52		
In	115	3	He			40550.00		
In	115	3	He			39486.90		
In	115	3	He			41021.02		
Tb	159	3	He			175619.45		
Tb	159	3	He			176884.84		
Tb	159	3	He			177259.45		
Bi	209	3	He			127172.20		
Bi	209	3	He			128192.12		
Bi	209	3	He			125556.85		

Quantitation Report

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Sample Name	410-141945-P-3-A PDS
Sample Type	Sample
Comment	B25
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

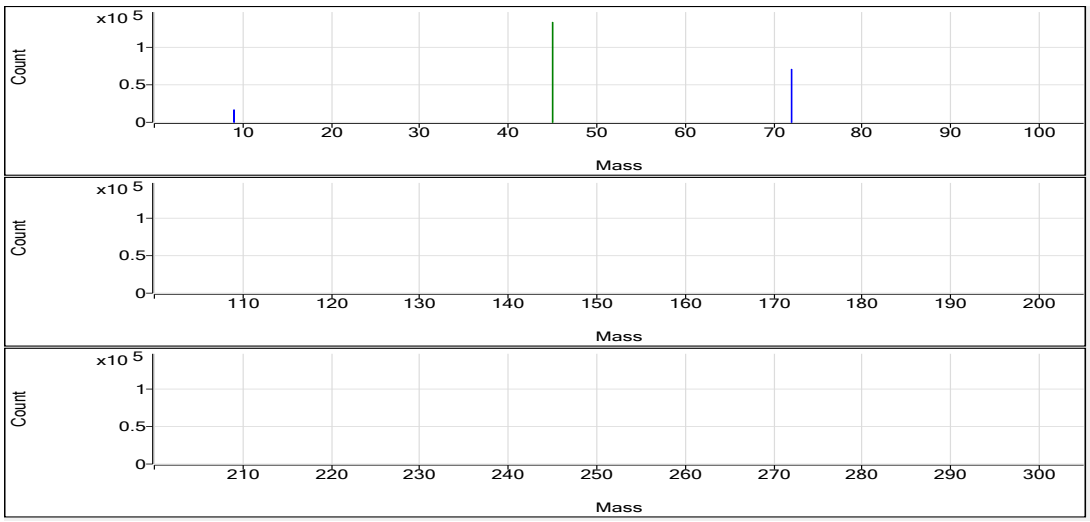
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	52.009	ppb	5.4	33538.88	0.0251	Pulse	0.5000	3
Se	78	115	H2	101.465	ppb	3.4	3903.43	0.0209	Pulse	1.5000	3
Na	23	45	He	198348.135	ppb	1.4	16588943.92	707.9166	Analog	0.1000	3
Mg	24	45	He	14737.994	ppb	1.0	628086.51	26.8023	Pulse	0.1000	3
Al	27	45	He	5320.231	ppb	0.5	69494.12	2.9654	Pulse	0.1000	3
K	39	45	He	11810.874	ppb	2.3	366168.69	15.6269	Pulse	0.1000	3
Ca	44	45	He	82830.856	ppb	1.0	142365.52	6.0751	Pulse	0.1000	3
Ti	47	45	He	507.385	ppb	5.1	6975.23	0.2977	Pulse	0.1000	3
V	51	45	He	506.458	ppb	1.3	307327.97	13.1148	Pulse	0.5000	3
Cr	52	45	He	506.769	ppb	1.4	396888.41	16.9368	Pulse	0.1000	3
Mn	55	45	He	1225.738	ppb	1.3	398386.74	17.0007	Pulse	0.1000	3
Fe	57	45	He	13457.229	ppb	1.4	200559.32	8.5586	Pulse	0.1000	3
Co	59	45	He	489.601	ppb	1.3	759082.10	32.3930	Pulse	0.1000	3
Ni	60	72	He	488.293	ppb	2.6	215837.42	4.8914	Pulse	0.1000	3
Cu	63	72	He	509.840	ppb	2.0	644458.69	14.6040	Pulse	0.1000	3
Zn	66	72	He	568.334	ppb	1.9	84337.78	1.9112	Pulse	0.1000	3
As	75	72	He	503.528	ppb	1.9	57425.80	1.3013	Pulse	0.5000	3
Sr	88	115	He	361.248	ppb	2.6	150159.87	3.8102	Pulse	0.1000	3
Mo	98	115	He	51.083	ppb	3.2	55406.40	1.4060	Pulse	0.1000	3
Ag	107	115	He	12.931	ppb	2.3	30136.53	0.7646	Pulse	0.1000	3
Cd	111	115	He	49.114	ppb	2.7	12829.93	0.3255	Pulse	0.5000	3
Sn	120	115	He	98.440	ppb	3.0	73397.82	1.8624	Pulse	0.1000	3
Sb	121	115	He	96.105	ppb	2.1	69367.73	1.7600	Pulse	0.1000	3
Ba	137	115	He	583.407	ppb	2.6	134719.07	3.4183	Pulse	0.1000	3
Tl	205	209	He	101.892	ppb	0.5	465004.08	3.7057	Pulse	0.1000	3
Pb	208	209	He	56.280	ppb	0.4	344680.13	2.7468	Pulse	0.1000	3
U	238	209	He	51.805	ppb	0.3	347753.51	2.7713	Pulse	0.1000	3

ISTD Table:

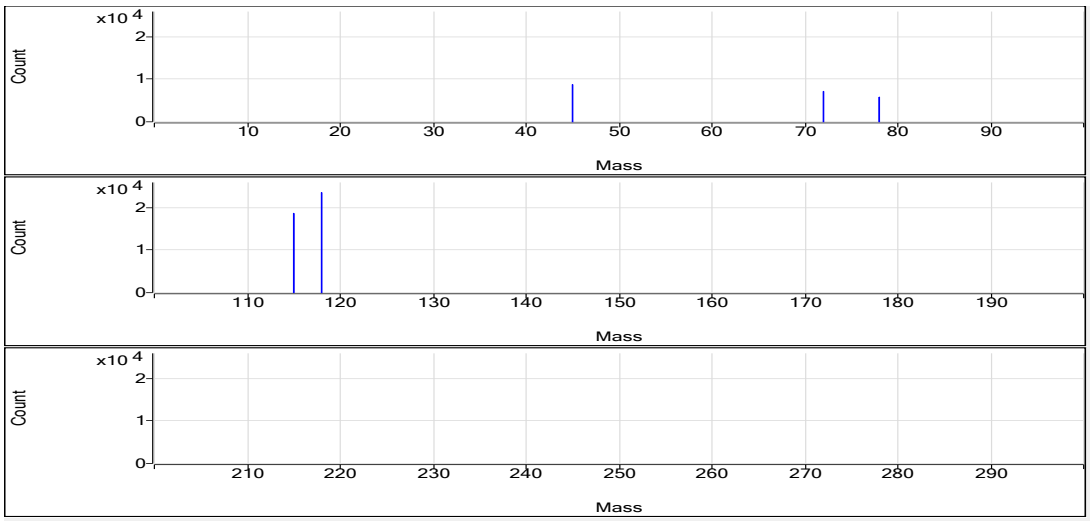
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1335168.21	2.0	100.0	Analog	0.1000	3
No Gas	Ge	72	709125.64	1.0	101.4	Pulse	0.1000	3
H2	Sc	45	87969.22	0.8	101.2	Pulse	0.1000	3
H2	Ge	72	71897.77	2.2	100.4	Pulse	0.1000	3
H2	In	115	187218.79	1.6	102.2	Pulse	0.1000	3
He	Sc	45	23436.06	1.2	101.9	Pulse	0.1000	3
He	Ge	72	44135.75	1.3	104.5	Pulse	0.1000	3
He	In	115	39428.03	2.6	101.3	Pulse	0.1000	3
He	Tb	159	176672.58	1.1	100.3	Pulse	0.1000	3
He	Bi	209	125483.57	0.3	97.9	Pulse	0.1000	3

No Gas

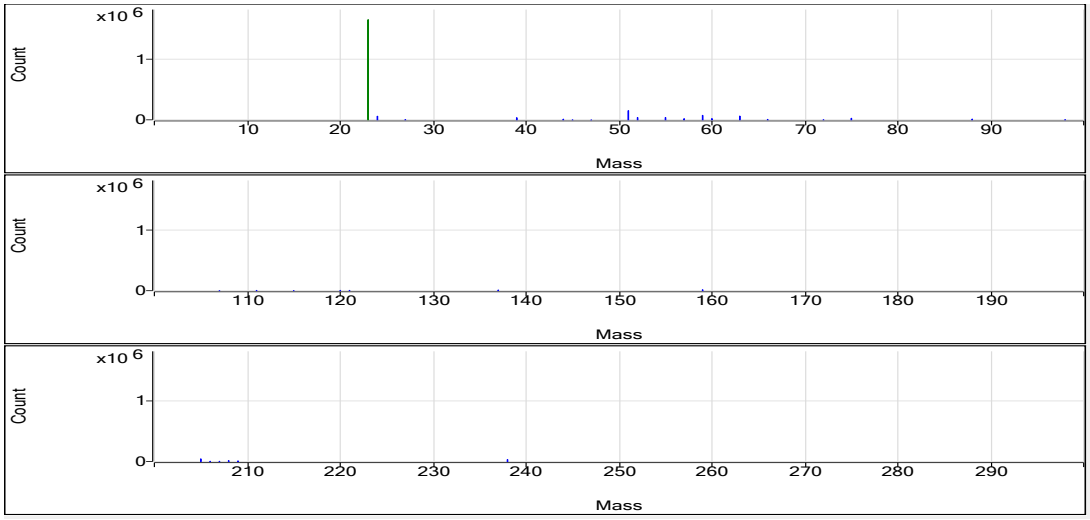


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	48.772	0.0235	31100.22	0.0005	1.901E-05
Be	9	1	No Gas	53.39	0.0258	33978.43	0.0005	1.901E-05
Be	9	1	No Gas	53.866	0.026	35538.00	0.0005	1.901E-05
Se	78	2	H2	102.815	0.0211	3937.88	0.0002	7.279E-06
Se	78	2	H2	104.038	0.0214	3951.89	0.0002	7.279E-06
Se	78	2	H2	97.542	0.0201	3820.52	0.0002	7.279E-06
Na	23	3	He	200948.238	717.1871	16587827.25	0.0036	0.7194
Na	23	3	He	195339.958	697.1911	16516186.00	0.0036	0.7194
Na	23	3	He	198756.21	709.3716	16662818.50	0.0036	0.7194
Mg	24	3	He	14909.765	27.1146	627133.00	0.0018	0.006791
Mg	24	3	He	14611.764	26.5728	629498.35	0.0018	0.006791
Mg	24	3	He	14692.454	26.7195	627628.19	0.0018	0.006791
Al	27	3	He	5336.906	2.9747	68800.75	0.0006	0.002622
Al	27	3	He	5286.66	2.9467	69805.48	0.0006	0.002622
Al	27	3	He	5337.128	2.9748	69876.13	0.0006	0.002622
K	39	3	He	12124.903	16.0275	370701.17	0.0013	0.5579
K	39	3	He	11626.177	15.3912	364612.42	0.0013	0.5579
K	39	3	He	11681.542	15.4619	363192.49	0.0013	0.5579
Ca	44	3	He	83676.533	6.1371	141944.72	0.0001	0.004062
Ca	44	3	He	82119.599	6.023	142681.84	0.0001	0.004062
Ca	44	3	He	82696.437	6.0653	142470.00	0.0001	0.004062
Ti	47	3	He	536.542	0.3148	7282.02	0.0006	0.0002809
Ti	47	3	He	487.094	0.2859	6771.76	0.0006	0.0002809
Ti	47	3	He	498.519	0.2926	6871.90	0.0006	0.0002809
V	51	3	He	512.797	13.2787	307123.03	0.0259	0.01861
V	51	3	He	499.905	12.9453	306670.09	0.0259	0.01861
V	51	3	He	506.673	13.1203	308190.78	0.0259	0.01861
Cr	52	3	He	514.605	17.1971	397751.44	0.0332	0.1047
Cr	52	3	He	501.267	16.754	396896.87	0.0332	0.1047
Cr	52	3	He	504.435	16.8593	396016.91	0.0332	0.1047
Mn	55	3	He	1241.753	17.2227	398344.68	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1209.047	16.7692	397256.71	0.0139	0.005074
Mn	55	3	He	1226.415	17.0101	399558.82	0.0139	0.005074
Fe	57	3	He	13670.159	8.6939	201081.72	0.0006	0.00609
Fe	57	3	He	13360.075	8.4968	201287.05	0.0006	0.00609
Fe	57	3	He	13341.454	8.485	199309.20	0.0006	0.00609
Co	59	3	He	497.137	32.8914	760746.63	0.0661	0.00621
Co	59	3	He	484.834	32.0776	759905.69	0.0661	0.00621
Co	59	3	He	486.832	32.2098	756593.97	0.0661	0.00621
Ni	60	3	He	483.824	4.8468	214758.02	0.01	0.01721
Ni	60	3	He	502.385	5.032	218929.25	0.01	0.01721
Ni	60	3	He	478.669	4.7953	213825.00	0.01	0.01721
Cu	63	3	He	511.634	14.6553	649370.03	0.0286	0.006793
Cu	63	3	He	518.818	14.861	646558.31	0.0286	0.006793
Cu	63	3	He	499.07	14.2956	637447.72	0.0286	0.006793
Zn	66	3	He	564.997	1.9	84187.06	0.0034	0.00316
Zn	66	3	He	580.325	1.9514	84901.28	0.0034	0.00316
Zn	66	3	He	559.68	1.8821	83925.01	0.0034	0.00316
As	75	3	He	505.662	1.3068	57904.34	0.0026	0.0008231
As	75	3	He	511.689	1.3224	57532.93	0.0026	0.0008231
As	75	3	He	493.233	1.2747	56840.13	0.0026	0.0008231
Sr	88	3	He	350.973	3.7019	150008.22	0.0105	0.001715
Sr	88	3	He	369.354	3.8956	149776.79	0.0105	0.001715
Sr	88	3	He	363.418	3.8331	150694.59	0.0105	0.001715
Mo	98	3	He	49.488	1.3622	55198.60	0.0275	0.0008555
Mo	98	3	He	52.769	1.4524	55841.99	0.0275	0.0008555
Mo	98	3	He	50.991	1.4035	55178.62	0.0275	0.0008555
Ag	107	3	He	12.798	0.7567	30664.35	0.0591	0.0004305
Ag	107	3	He	13.277	0.7851	30183.15	0.0591	0.0004305
Ag	107	3	He	12.717	0.7519	29562.08	0.0591	0.0004305
Cd	111	3	He	47.975	0.318	12885.99	0.0066	5.141E-05
Cd	111	3	He	50.549	0.3351	12881.98	0.0066	5.141E-05
Cd	111	3	He	48.819	0.3236	12721.83	0.0066	5.141E-05
Sn	120	3	He	96.676	1.8293	74128.89	0.0187	0.0185
Sn	120	3	He	101.835	1.926	74047.65	0.0187	0.0185
Sn	120	3	He	96.809	1.8318	72016.91	0.0187	0.0185
Sb	121	3	He	93.875	1.7192	69665.90	0.0183	0.00111
Sb	121	3	He	97.917	1.7932	68942.19	0.0183	0.00111
Sb	121	3	He	96.524	1.7677	69495.11	0.0183	0.00111
Ba	137	3	He	570.877	3.3449	135543.56	0.0059	0.0007704
Ba	137	3	He	600.128	3.5163	135190.21	0.0059	0.0007704
Ba	137	3	He	579.216	3.3938	133423.43	0.0059	0.0007704
Tl	205	3	He	101.81	3.7027	465170.46	0.0364	0.000808
Tl	205	3	He	102.437	3.7255	466078.43	0.0364	0.000808
Tl	205	3	He	101.429	3.6889	463763.35	0.0364	0.000808
Pb	208	3	He	56.042	2.7352	183580.39	0.0487	0.003226
Pb	208	3	He	56.411	2.7532	184471.99	0.0487	0.003226
Pb	208	3	He	56.387	2.752	183084.26	0.0487	0.003226
U	238	3	He	51.949	2.779	349121.52	0.0535	0.0004157
U	238	3	He	51.672	2.7642	345809.45	0.0535	0.0004157
U	238	3	He	51.793	2.7707	348329.57	0.0535	0.0004157
Sc	45	1	No Gas			1320722.79		
Sc	45	1	No Gas			1318220.61		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1366561.23		
Ge	72	1	No Gas			707851.24		
Ge	72	1	No Gas			703041.32		
Ge	72	1	No Gas			716484.36		
Sc	45	2	H2			87734.05		
Sc	45	2	H2			88730.68		
Sc	45	2	H2			87442.92		
Ge	72	2	H2			71046.76		
Ge	72	2	H2			73730.20		
Ge	72	2	H2			70916.36		
In	115	2	H2			186325.58		
In	115	2	H2			184790.76		
In	115	2	H2			190540.04		
Sc	45	3	He			23129.01		
Sc	45	3	He			23689.61		
Sc	45	3	He			23489.55		
Ge	72	3	He			44309.58		
Ge	72	3	He			43507.11		
Ge	72	3	He			44590.55		
In	115	3	He			41041.31		
In	115	3	He			38965.57		
In	115	3	He			39818.56		
Tb	159	3	He			178841.68		
Tb	159	3	He			175162.73		
Tb	159	3	He			176013.34		
Bi	209	3	He			125628.42		
Bi	209	3	He			125103.40		
Bi	209	3	He			125718.88		

Quantitation Report

Data File Name	043SMPL.d
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Acq Time	9/19/2023 8:16:24 AM
Sample Name	410-141945-P-3-A SD @5
Sample Type	Sample
Comment	B25
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

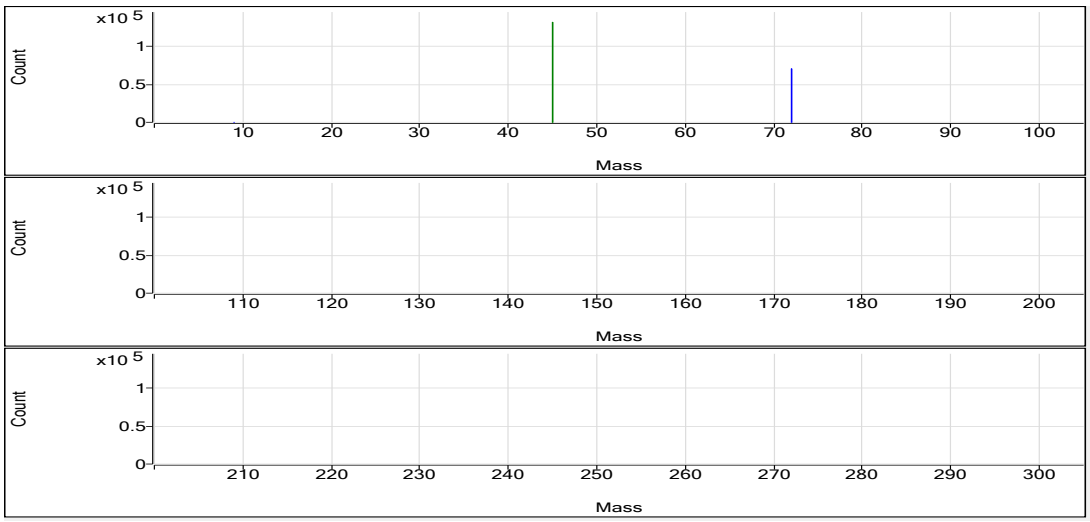
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.114	ppb	17.8	98.00	0.0001	Pulse	0.5000	3
Se	78	115	H2	0.212	ppb	50.8	9.33	0.0001	Pulse	1.5000	3
Na	23	45	He	40594.020	ppb	3.6	3276844.22	145.4547	Analog	0.1000	3
Mg	24	45	He	2065.566	ppb	2.7	84762.90	3.7622	Pulse	0.1000	3
Al	27	45	He	65.833	ppb	15.4	886.72	0.0393	Pulse	0.1000	3
K	39	45	He	1448.860	ppb	4.7	54231.37	2.4064	Pulse	0.1000	3
Ca	44	45	He	16373.125	ppb	1.3	27136.03	1.2041	Pulse	0.1000	3
Ti	47	45	He	2.554	ppb	78.3	40.00	0.0018	Pulse	0.1000	3
V	51	45	He	0.335	ppb	23.4	614.02	0.0273	Pulse	0.5000	3
Cr	52	45	He	2.090	ppb	6.2	3924.01	0.1742	Pulse	0.1000	3
Mn	55	45	He	150.109	ppb	1.4	47017.01	2.0864	Pulse	0.1000	3
Fe	57	45	He	1744.977	ppb	2.4	25125.72	1.1151	Pulse	0.1000	3
Co	59	45	He	0.175	ppb	31.5	400.02	0.0178	Pulse	0.1000	3
Ni	60	72	He	0.612	ppb	73.0	1013.41	0.0233	Pulse	0.1000	3
Cu	63	72	He	4.522	ppb	2.8	5918.13	0.1363	Pulse	0.1000	3
Zn	66	72	He	13.234	ppb	1.0	2066.89	0.0476	Pulse	0.1000	3
As	75	72	He	0.815	ppb	30.5	127.33	0.0029	Pulse	0.5000	3
Sr	88	115	He	62.542	ppb	2.2	25817.61	0.6611	Pulse	0.1000	3
Mo	98	115	He	0.387	ppb	22.5	450.02	0.0115	Pulse	0.1000	3
Ag	107	115	He	0.026	ppb	41.2	76.67	0.0020	Pulse	0.1000	3
Cd	111	115	He	0.036	ppb	33.9	11.33	0.0003	Pulse	0.5000	3
Sn	120	115	He	0.026	ppb	707.5	740.05	0.0190	Pulse	0.1000	3
Sb	121	115	He	0.242	ppb	34.1	216.68	0.0055	Pulse	0.1000	3
Ba	137	115	He	19.962	ppb	1.9	4597.59	0.1177	Pulse	0.1000	3
Tl	205	209	He	0.335	ppb	4.1	1673.50	0.0130	Pulse	0.1000	3
Pb	208	209	He	0.959	ppb	3.6	6440.89	0.0500	Pulse	0.1000	3
U	238	209	He	0.091	ppb	16.2	680.05	0.0053	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1326981.91	0.1	99.4	Analog	0.1000	3
No Gas	Ge	72	710204.13	0.8	101.5	Pulse	0.1000	3
H2	Sc	45	86590.70	1.5	99.6	Pulse	0.1000	3
H2	Ge	72	71257.97	0.1	99.5	Pulse	0.1000	3
H2	In	115	183760.85	0.8	100.3	Pulse	0.1000	3
He	Sc	45	22538.02	2.0	98.0	Pulse	0.1000	3
He	Ge	72	43433.37	0.6	102.9	Pulse	0.1000	3
He	In	115	39064.02	2.3	100.3	Pulse	0.1000	3
He	Tb	159	176440.39	1.6	100.2	Pulse	0.1000	3
He	Bi	209	128869.20	1.9	100.5	Pulse	0.1000	3

No Gas



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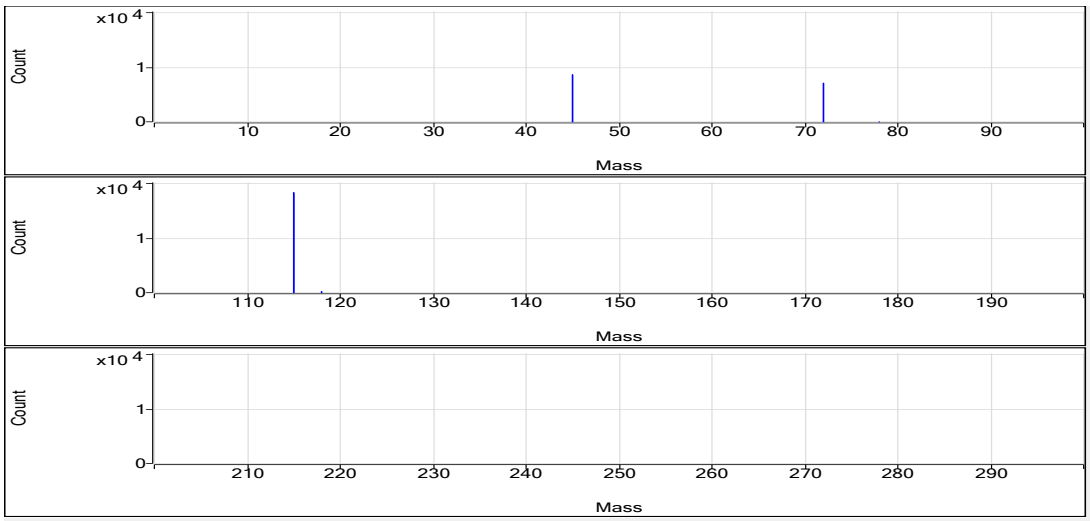
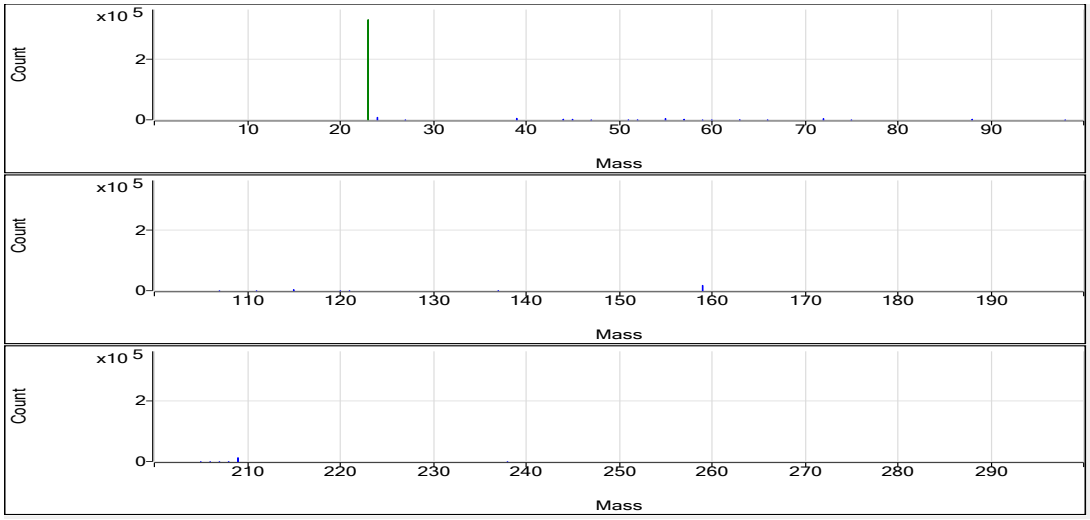


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.135	0.0001	112.00	0.0005	1.901E-05
Be	9	1	No Gas	0.11	0.0001	96.00	0.0005	1.901E-05
Be	9	1	No Gas	0.095	0.0001	86.00	0.0005	1.901E-05
Se	78	2	H2	0.32	0.0001	13.33	0.0002	7.279E-06
Se	78	2	H2	0.105	0	5.33	0.0002	7.279E-06
Se	78	2	H2	0.212	0.0001	9.33	0.0002	7.279E-06
Na	23	3	He	40220.997	144.1247	3295897.76	0.0036	0.7194
Na	23	3	He	42196.639	151.1687	3328334.01	0.0036	0.7194
Na	23	3	He	39364.424	141.0706	3206300.89	0.0036	0.7194
Mg	24	3	He	2034.947	3.7066	84763.33	0.0018	0.006791
Mg	24	3	He	2130.551	3.8804	85435.95	0.0018	0.006791
Mg	24	3	He	2031.2	3.6998	84089.41	0.0018	0.006791
Al	27	3	He	65.966	0.0394	900.05	0.0006	0.002622
Al	27	3	He	55.648	0.0336	740.04	0.0006	0.002622
Al	27	3	He	75.884	0.0449	1020.07	0.0006	0.002622
K	39	3	He	1500.929	2.4728	56550.05	0.0013	0.5579
K	39	3	He	1473.994	2.4385	53688.97	0.0013	0.5579
K	39	3	He	1371.657	2.3079	52455.10	0.0013	0.5579
Ca	44	3	He	16134.183	1.1866	27135.80	0.0001	0.004062
Ca	44	3	He	16468.442	1.2111	26665.37	0.0001	0.004062
Ca	44	3	He	16516.75	1.2146	27606.93	0.0001	0.004062
Ti	47	3	He	3.996	0.0026	60.00	0.0006	0.0002809
Ti	47	3	He	3.394	0.0023	50.00	0.0006	0.0002809
Ti	47	3	He	0.271	0.0004	10.00	0.0006	0.0002809
V	51	3	He	0.349	0.0276	632.02	0.0259	0.01861
V	51	3	He	0.404	0.0291	640.02	0.0259	0.01861
V	51	3	He	0.25	0.0251	570.01	0.0259	0.01861
Cr	52	3	He	2.087	0.1741	3980.71	0.0332	0.1047
Cr	52	3	He	2.222	0.1785	3930.67	0.0332	0.1047
Cr	52	3	He	1.961	0.1699	3860.66	0.0332	0.1047
Mn	55	3	He	150.223	2.088	47749.20	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	152.198	2.1154	46575.36	0.0139	0.005074
Mn	55	3	He	147.905	2.0559	46726.48	0.0139	0.005074
Fe	57	3	He	1747.249	1.1165	25533.09	0.0006	0.00609
Fe	57	3	He	1785.088	1.1406	25112.36	0.0006	0.00609
Fe	57	3	He	1702.594	1.0881	24731.71	0.0006	0.00609
Co	59	3	He	0.217	0.0206	470.03	0.0661	0.00621
Co	59	3	He	0.195	0.0191	420.02	0.0661	0.00621
Co	59	3	He	0.112	0.0136	310.01	0.0661	0.00621
Ni	60	3	He	0.957	0.0268	1170.09	0.01	0.01721
Ni	60	3	He	0.772	0.0249	1080.08	0.01	0.01721
Ni	60	3	He	0.107	0.0183	790.05	0.01	0.01721
Cu	63	3	He	4.397	0.1327	5801.46	0.0286	0.006793
Cu	63	3	He	4.518	0.1361	5901.45	0.0286	0.006793
Cu	63	3	He	4.652	0.14	6051.47	0.0286	0.006793
Zn	66	3	He	13.093	0.0471	2060.23	0.0034	0.00316
Zn	66	3	He	13.353	0.048	2080.21	0.0034	0.00316
Zn	66	3	He	13.255	0.0477	2060.22	0.0034	0.00316
As	75	3	He	1.098	0.0037	160.00	0.0026	0.0008231
As	75	3	He	0.717	0.0027	116.00	0.0026	0.0008231
As	75	3	He	0.631	0.0025	106.00	0.0026	0.0008231
Sr	88	3	He	61.021	0.645	25804.12	0.0105	0.001715
Sr	88	3	He	63.686	0.6731	26245.05	0.0105	0.001715
Sr	88	3	He	62.92	0.6651	25403.66	0.0105	0.001715
Mo	98	3	He	0.478	0.014	560.03	0.0275	0.0008555
Mo	98	3	He	0.305	0.0092	360.02	0.0275	0.0008555
Mo	98	3	He	0.378	0.0113	430.02	0.0275	0.0008555
Ag	107	3	He	0.027	0.002	80.00	0.0591	0.0004305
Ag	107	3	He	0.036	0.0026	100.00	0.0591	0.0004305
Ag	107	3	He	0.015	0.0013	50.00	0.0591	0.0004305
Cd	111	3	He	0.038	0.0003	12.00	0.0066	5.141E-05
Cd	111	3	He	0.023	0.0002	8.00	0.0066	5.141E-05
Cd	111	3	He	0.048	0.0004	14.00	0.0066	5.141E-05
Sn	120	3	He	-0.187	0.015	600.04	0.0187	0.0185
Sn	120	3	He	0.121	0.0208	810.06	0.0187	0.0185
Sn	120	3	He	0.144	0.0212	810.06	0.0187	0.0185
Sb	121	3	He	0.253	0.0057	230.01	0.0183	0.00111
Sb	121	3	He	0.318	0.0069	270.01	0.0183	0.00111
Sb	121	3	He	0.154	0.0039	150.01	0.0183	0.00111
Ba	137	3	He	19.971	0.1178	4710.97	0.0059	0.0007704
Ba	137	3	He	19.575	0.1154	4500.88	0.0059	0.0007704
Ba	137	3	He	20.341	0.1199	4580.93	0.0059	0.0007704
Tl	205	3	He	0.321	0.0125	1640.15	0.0364	0.000808
Tl	205	3	He	0.336	0.013	1650.15	0.0364	0.000808
Tl	205	3	He	0.348	0.0135	1730.21	0.0364	0.000808
Pb	208	3	He	0.974	0.0507	3720.68	0.0487	0.003226
Pb	208	3	He	0.983	0.0511	3500.59	0.0487	0.003226
Pb	208	3	He	0.92	0.0481	3190.52	0.0487	0.003226
U	238	3	He	0.106	0.0061	800.06	0.0535	0.0004157
U	238	3	He	0.09	0.0052	660.05	0.0535	0.0004157
U	238	3	He	0.077	0.0045	580.03	0.0535	0.0004157
Sc	45	1	No Gas			1328590.29		
Sc	45	1	No Gas			1327512.64		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1324842.79		
Ge	72	1	No Gas			712579.44		
Ge	72	1	No Gas			714472.65		
Ge	72	1	No Gas			703560.30		
Sc	45	2	H2			86537.95		
Sc	45	2	H2			85309.05		
Sc	45	2	H2			87925.09		
Ge	72	2	H2			71348.47		
Ge	72	2	H2			71247.94		
Ge	72	2	H2			71177.49		
In	115	2	H2			182341.91		
In	115	2	H2			185310.95		
In	115	2	H2			183629.70		
Sc	45	3	He			22868.38		
Sc	45	3	He			22017.35		
Sc	45	3	He			22728.34		
Ge	72	3	He			43727.68		
Ge	72	3	He			43346.37		
Ge	72	3	He			43226.06		
In	115	3	He			40008.73		
In	115	3	He			38995.34		
In	115	3	He			38203.54		
Tb	159	3	He			174210.78		
Tb	159	3	He			179642.05		
Tb	159	3	He			175468.34		
Bi	209	3	He			131496.11		
Bi	209	3	He			126728.36		
Bi	209	3	He			128383.14		

Quantitation Report

Data File Name	044SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
Acq Time	9/19/2023 8:18:25 AM
Sample Name	410-141945-S-3-A DU
Sample Type	Sample
Comment	B25
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

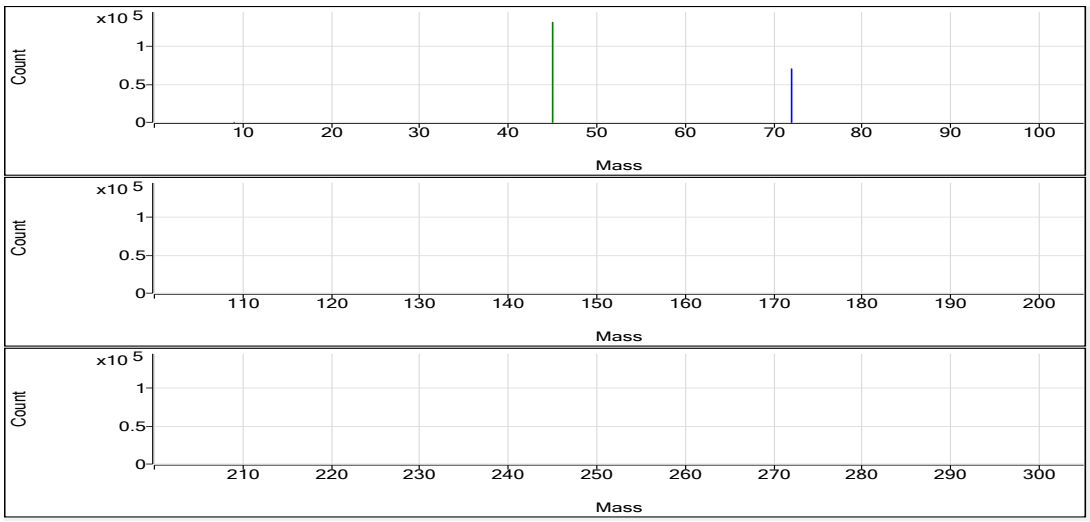
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.086	ppb	32.7	80.00	0.0001	Pulse	0.5000	3
Se	78	115	H2	0.551	ppb	18.9	22.22	0.0001	Pulse	1.5000	3
Na	23	45	He	201026.843	ppb	2.8	16721767.25	717.4673	Analog	0.1000	3
Mg	24	45	He	10238.610	ppb	3.8	433947.86	18.6218	Pulse	0.1000	3
Al	27	45	He	354.831	ppb	5.3	4670.89	0.2002	Pulse	0.1000	3
K	39	45	He	7092.527	ppb	4.3	223868.30	9.6069	Pulse	0.1000	3
Ca	44	45	He	80046.863	ppb	4.0	136811.02	5.8711	Pulse	0.1000	3
Ti	47	45	He	5.356	ppb	39.2	80.00	0.0034	Pulse	0.1000	3
V	51	45	He	1.346	ppb	7.4	1244.73	0.0534	Pulse	0.5000	3
Cr	52	45	He	9.466	ppb	5.4	9770.31	0.4191	Pulse	0.1000	3
Mn	55	45	He	752.991	ppb	2.7	243459.77	10.4457	Pulse	0.1000	3
Fe	57	45	He	8788.092	ppb	3.6	130297.71	5.5912	Pulse	0.1000	3
Co	59	45	He	0.315	ppb	19.2	630.03	0.0271	Pulse	0.1000	3
Ni	60	72	He	2.363	ppb	15.7	1750.18	0.0408	Pulse	0.1000	3
Cu	63	72	He	20.603	ppb	3.7	25600.13	0.5967	Pulse	0.1000	3
Zn	66	72	He	69.522	ppb	1.4	10147.18	0.2366	Pulse	0.1000	3
As	75	72	He	3.585	ppb	8.4	432.68	0.0101	Pulse	0.5000	3
Sr	88	115	He	322.451	ppb	1.6	132616.78	3.4012	Pulse	0.1000	3
Mo	98	115	He	1.519	ppb	6.7	1663.50	0.0426	Pulse	0.1000	3
Ag	107	115	He	0.015	ppb	54.0	50.00	0.0013	Pulse	0.1000	3
Cd	111	115	He	0.044	ppb	52.1	13.33	0.0003	Pulse	0.5000	3
Sn	120	115	He	-0.111	ppb	N/A	640.04	0.0164	Pulse	0.1000	3
Sb	121	115	He	0.229	ppb	27.8	206.68	0.0053	Pulse	0.1000	3
Ba	137	115	He	107.174	ppb	2.0	24519.19	0.6286	Pulse	0.1000	3
Tl	205	209	He	0.086	ppb	30.6	496.70	0.0039	Pulse	0.1000	3
Pb	208	209	He	4.896	ppb	1.3	30541.70	0.2419	Pulse	0.1000	3
U	238	209	He	0.425	ppb	4.5	2923.78	0.0232	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1324489.46	0.6	99.2	Analog	0.1000	3
No Gas	Ge	72	707524.03	0.2	101.2	Pulse	0.1000	3
H2	Sc	45	88243.88	1.0	101.5	Pulse	0.1000	3
H2	Ge	72	73324.94	1.6	102.4	Pulse	0.1000	3
H2	In	115	184510.71	1.6	100.7	Pulse	0.1000	3
He	Sc	45	23315.95	2.2	101.3	Pulse	0.1000	3
He	Ge	72	42898.23	0.9	101.6	Pulse	0.1000	3
He	In	115	38997.77	1.8	100.2	Pulse	0.1000	3
He	Tb	159	176576.72	0.8	100.3	Pulse	0.1000	3
He	Bi	209	126260.53	1.2	98.5	Pulse	0.1000	3

No Gas



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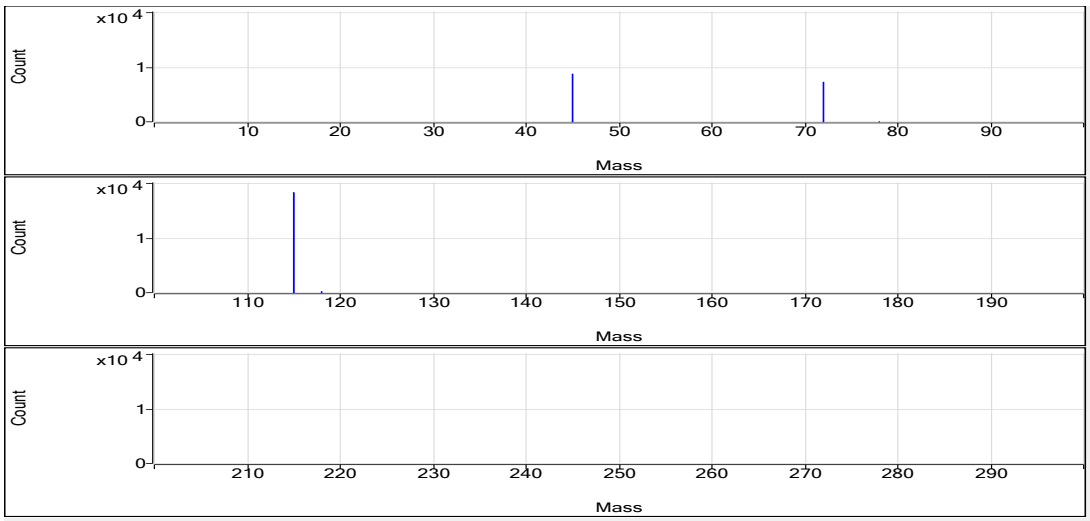
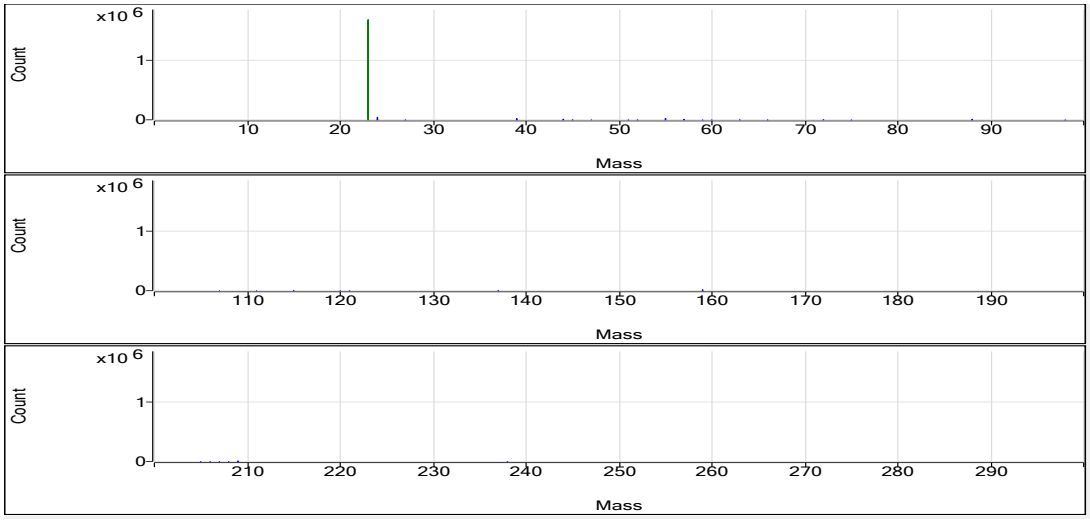


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.066	0.0001	68.00	0.0005	1.901E-05
Be	9	1	No Gas	0.073	0.0001	72.00	0.0005	1.901E-05
Be	9	1	No Gas	0.118	0.0001	100.00	0.0005	1.901E-05
Se	78	2	H2	0.573	0.0001	22.67	0.0002	7.279E-06
Se	78	2	H2	0.437	0.0001	18.00	0.0002	7.279E-06
Se	78	2	H2	0.641	0.0001	26.00	0.0002	7.279E-06
Na	23	3	He	205490.631	733.3827	16771406.00	0.0036	0.7194
Na	23	3	He	202870.94	724.0424	16811633.50	0.0036	0.7194
Na	23	3	He	194718.957	694.977	16582262.25	0.0036	0.7194
Mg	24	3	He	10594.064	19.2681	440633.51	0.0018	0.006791
Mg	24	3	He	10301.045	18.7353	435018.47	0.0018	0.006791
Mg	24	3	He	9820.721	17.8621	426191.60	0.0018	0.006791
Al	27	3	He	333	0.1881	4300.76	0.0006	0.002622
Al	27	3	He	367.36	0.2072	4810.97	0.0006	0.002622
Al	27	3	He	364.135	0.2054	4900.94	0.0006	0.002622
K	39	3	He	7295.346	9.8657	225614.53	0.0013	0.5579
K	39	3	He	7243.224	9.7992	227529.08	0.0013	0.5579
K	39	3	He	6739.01	9.1559	218461.29	0.0013	0.5579
Ca	44	3	He	82733.672	6.068	138765.95	0.0001	0.004062
Ca	44	3	He	80878.835	5.932	137736.58	0.0001	0.004062
Ca	44	3	He	76528.083	5.6131	133930.52	0.0001	0.004062
Ti	47	3	He	5.488	0.0035	80.00	0.0006	0.0002809
Ti	47	3	He	3.194	0.0022	50.00	0.0006	0.0002809
Ti	47	3	He	7.385	0.0046	110.01	0.0006	0.0002809
V	51	3	He	1.404	0.0549	1256.07	0.0259	0.01861
V	51	3	He	1.402	0.0549	1274.07	0.0259	0.01861
V	51	3	He	1.232	0.0505	1204.06	0.0259	0.01861
Cr	52	3	He	9.319	0.4143	9473.40	0.0332	0.1047
Cr	52	3	He	10.039	0.4382	10173.96	0.0332	0.1047
Cr	52	3	He	9.04	0.405	9663.56	0.0332	0.1047
Mn	55	3	He	770.032	10.682	244282.73	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	757.931	10.5142	244131.64	0.0139	0.005074
Mn	55	3	He	731.009	10.141	241964.94	0.0139	0.005074
Fe	57	3	He	9068.522	5.7694	131938.53	0.0006	0.00609
Fe	57	3	He	8844.669	5.6272	130657.83	0.0006	0.00609
Fe	57	3	He	8451.087	5.377	128296.77	0.0006	0.00609
Co	59	3	He	0.375	0.031	710.04	0.0661	0.00621
Co	59	3	He	0.316	0.0271	630.03	0.0661	0.00621
Co	59	3	He	0.255	0.0231	550.03	0.0661	0.00621
Ni	60	3	He	2.021	0.0374	1610.15	0.01	0.01721
Ni	60	3	He	2.756	0.0447	1930.20	0.01	0.01721
Ni	60	3	He	2.311	0.0403	1710.18	0.01	0.01721
Cu	63	3	He	21.376	0.6188	26655.18	0.0286	0.006793
Cu	63	3	He	20.561	0.5955	25703.90	0.0286	0.006793
Cu	63	3	He	19.871	0.5757	24441.32	0.0286	0.006793
Zn	66	3	He	69.411	0.2362	10173.88	0.0034	0.00316
Zn	66	3	He	68.642	0.2336	10083.77	0.0034	0.00316
Zn	66	3	He	70.512	0.2399	10183.89	0.0034	0.00316
As	75	3	He	3.762	0.0105	454.01	0.0026	0.0008231
As	75	3	He	3.754	0.0105	454.01	0.0026	0.0008231
As	75	3	He	3.238	0.0092	390.01	0.0026	0.0008231
Sr	88	3	He	317.609	3.3501	133414.27	0.0105	0.001715
Sr	88	3	He	327.755	3.4571	133373.15	0.0105	0.001715
Sr	88	3	He	321.99	3.3963	131062.91	0.0105	0.001715
Mo	98	3	He	1.612	0.0452	1800.20	0.0275	0.0008555
Mo	98	3	He	1.533	0.043	1660.17	0.0275	0.0008555
Mo	98	3	He	1.41	0.0397	1530.14	0.0275	0.0008555
Ag	107	3	He	0.005	0.0008	30.00	0.0591	0.0004305
Ag	107	3	He	0.019	0.0016	60.00	0.0591	0.0004305
Ag	107	3	He	0.019	0.0016	60.00	0.0591	0.0004305
Cd	111	3	He	0.03	0.0003	10.00	0.0066	5.141E-05
Cd	111	3	He	0.031	0.0003	10.00	0.0066	5.141E-05
Cd	111	3	He	0.07	0.0005	20.00	0.0066	5.141E-05
Sn	120	3	He	-0.17	0.0153	610.04	0.0187	0.0185
Sn	120	3	He	-0.075	0.0171	660.04	0.0187	0.0185
Sn	120	3	He	-0.089	0.0168	650.04	0.0187	0.0185
Sb	121	3	He	0.227	0.0053	210.01	0.0183	0.00111
Sb	121	3	He	0.166	0.0041	160.01	0.0183	0.00111
Sb	121	3	He	0.293	0.0065	250.01	0.0183	0.00111
Ba	137	3	He	109.583	0.6427	25594.49	0.0059	0.0007704
Ba	137	3	He	105.718	0.6201	23921.50	0.0059	0.0007704
Ba	137	3	He	106.221	0.623	24041.58	0.0059	0.0007704
Tl	205	3	He	0.114	0.0049	630.04	0.0364	0.000808
Tl	205	3	He	0.082	0.0038	480.03	0.0364	0.000808
Tl	205	3	He	0.062	0.003	380.02	0.0364	0.000808
Pb	208	3	He	4.887	0.2414	16360.74	0.0487	0.003226
Pb	208	3	He	4.84	0.2392	16240.69	0.0487	0.003226
Pb	208	3	He	4.962	0.2451	16010.19	0.0487	0.003226
U	238	3	He	0.447	0.0243	3100.47	0.0535	0.0004157
U	238	3	He	0.416	0.0227	2870.46	0.0535	0.0004157
U	238	3	He	0.412	0.0225	2800.40	0.0535	0.0004157
Sc	45	1	No Gas			1332020.14		
Sc	45	1	No Gas			1325531.54		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1315916.70		
Ge	72	1	No Gas			707838.04		
Ge	72	1	No Gas			706020.54		
Ge	72	1	No Gas			708713.51		
Sc	45	2	H2			87523.11		
Sc	45	2	H2			88004.75		
Sc	45	2	H2			89203.78		
Ge	72	2	H2			73116.91		
Ge	72	2	H2			72293.02		
Ge	72	2	H2			74564.89		
In	115	2	H2			181258.02		
In	115	2	H2			185353.10		
In	115	2	H2			186921.01		
Sc	45	3	He			22868.56		
Sc	45	3	He			23219.13		
Sc	45	3	He			23860.16		
Ge	72	3	He			43075.49		
Ge	72	3	He			43165.56		
Ge	72	3	He			42453.63		
In	115	3	He			39828.09		
In	115	3	He			38584.27		
In	115	3	He			38594.38		
Tb	159	3	He			178220.19		
Tb	159	3	He			175384.14		
Tb	159	3	He			176125.82		
Bi	209	3	He			127465.25		
Bi	209	3	He			126668.14		
Bi	209	3	He			124648.21		

Quantitation Report

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Sample Name	410-141945-Q-3-A MS
Sample Type	Sample
Comment	B25
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

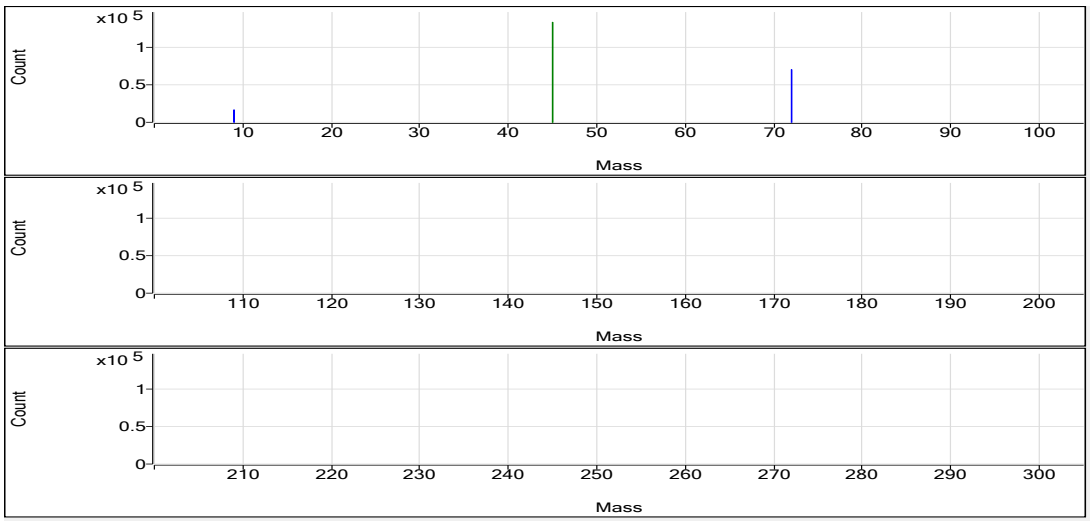
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.918	ppb	5.0	33619.67	0.0251	Pulse	0.5000	3
Se	78	115	H2	80.462	ppb	0.8	3100.12	0.0165	Pulse	1.5000	3
Na	23	45	He	202926.417	ppb	0.8	16929446.83	724.2402	Analog	0.1000	3
Mg	24	45	He	14987.845	ppb	0.5	637139.91	27.2565	Pulse	0.1000	3
Al	27	45	He	5585.432	ppb	1.9	72766.56	3.1131	Pulse	0.1000	3
K	39	45	He	12147.027	ppb	1.1	375306.61	16.0558	Pulse	0.1000	3
Ca	44	45	He	84602.497	ppb	0.5	145045.38	6.2050	Pulse	0.1000	3
Ti	47	45	He	489.475	ppb	1.4	6715.11	0.2872	Pulse	0.1000	3
V	51	45	He	510.075	ppb	1.3	308744.26	13.2083	Pulse	0.5000	3
Cr	52	45	He	506.770	ppb	1.6	395898.92	16.9368	Pulse	0.1000	3
Mn	55	45	He	1235.378	ppb	1.5	400512.18	17.1343	Pulse	0.1000	3
Fe	57	45	He	13604.864	ppb	0.6	202255.41	8.6524	Pulse	0.1000	3
Co	59	45	He	494.161	ppb	1.3	764234.83	32.6946	Pulse	0.1000	3
Ni	60	72	He	503.487	ppb	1.6	216679.80	5.0430	Pulse	0.1000	3
Cu	63	72	He	526.322	ppb	0.8	647771.40	15.0758	Pulse	0.1000	3
Zn	66	72	He	572.138	ppb	0.6	82667.79	1.9239	Pulse	0.1000	3
As	75	72	He	513.558	ppb	0.6	57027.47	1.3272	Pulse	0.5000	3
Sr	88	115	He	363.985	ppb	3.4	151254.63	3.8390	Pulse	0.1000	3
Mo	98	115	He	50.503	ppb	3.1	54770.71	1.3901	Pulse	0.1000	3
Ag	107	115	He	48.267	ppb	3.2	112400.31	2.8528	Pulse	0.1000	3
Cd	111	115	He	49.567	ppb	2.7	12946.03	0.3286	Pulse	0.5000	3
Sn	120	115	He	98.704	ppb	3.2	73572.61	1.8673	Pulse	0.1000	3
Sb	121	115	He	97.782	ppb	5.0	70533.67	1.7907	Pulse	0.1000	3
Ba	137	115	He	589.337	ppb	2.1	136076.09	3.4530	Pulse	0.1000	3
Tl	205	209	He	100.241	ppb	0.8	461316.66	3.6457	Pulse	0.1000	3
Pb	208	209	He	55.557	ppb	1.2	343108.74	2.7116	Pulse	0.1000	3
U	238	209	He	51.371	ppb	0.9	347736.08	2.7481	Pulse	0.1000	3

ISTD Table:

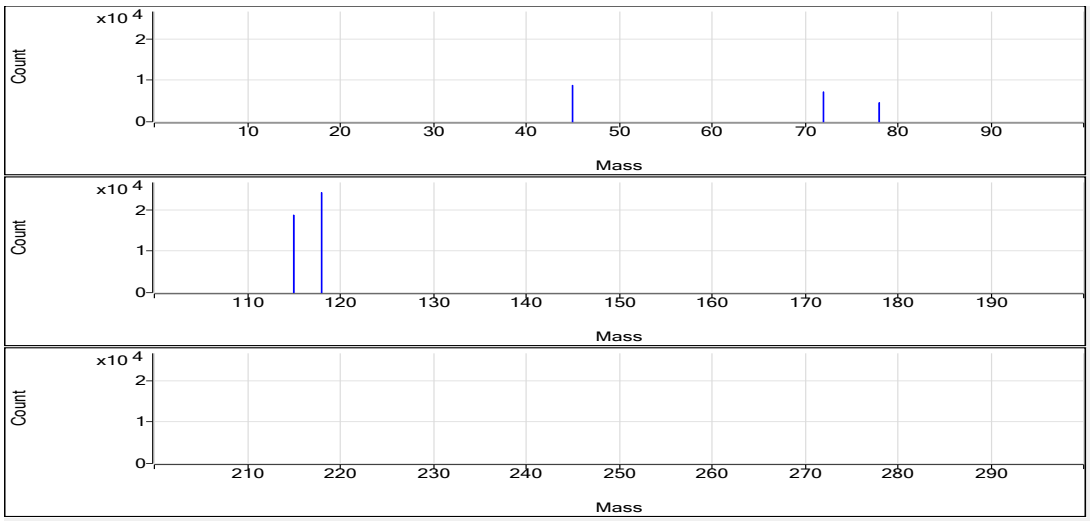
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1341368.42	0.8	100.5	Analog	0.1000	3
No Gas	Ge	72	706706.01	1.0	101.0	Pulse	0.1000	3
H2	Sc	45	88274.09	1.7	101.5	Pulse	0.1000	3
H2	Ge	72	72313.12	0.2	101.0	Pulse	0.1000	3
H2	In	115	187422.67	0.7	102.3	Pulse	0.1000	3
He	Sc	45	23376.14	0.6	101.6	Pulse	0.1000	3
He	Ge	72	42968.68	0.5	101.8	Pulse	0.1000	3
He	In	115	39419.85	2.4	101.2	Pulse	0.1000	3
He	Tb	159	175636.15	0.8	99.7	Pulse	0.1000	3
He	Bi	209	126543.74	0.9	98.7	Pulse	0.1000	3

No Gas

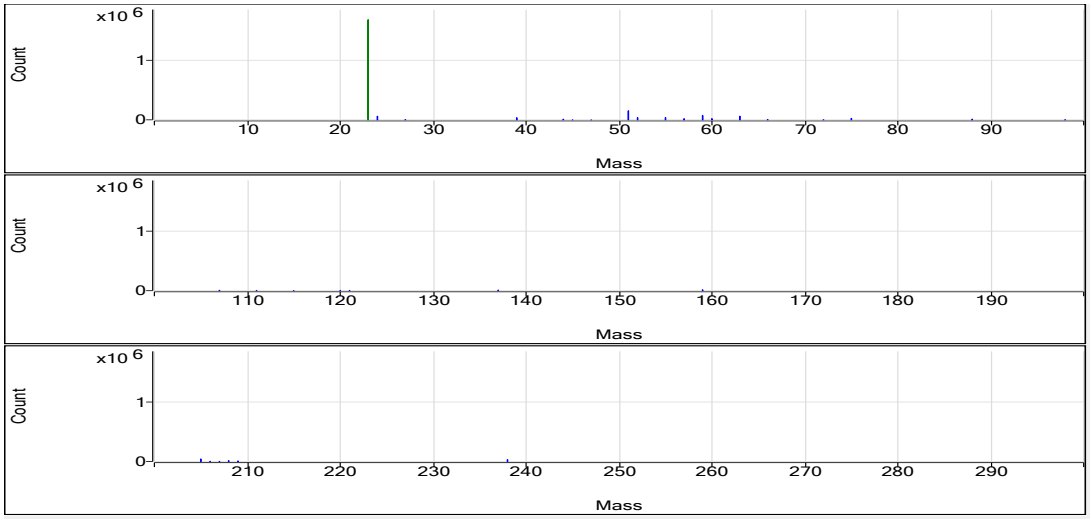


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	49.312	0.0238	31873.82	0.0005	1.901E-05
Be	9	1	No Gas	51.908	0.0251	33924.27	0.0005	1.901E-05
Be	9	1	No Gas	54.536	0.0263	35060.92	0.0005	1.901E-05
Se	78	2	H2	79.82	0.0164	3099.67	0.0002	7.279E-06
Se	78	2	H2	80.531	0.0166	3084.34	0.0002	7.279E-06
Se	78	2	H2	81.036	0.0167	3116.35	0.0002	7.279E-06
Na	23	3	He	203293.102	725.5475	16919478.50	0.0036	0.7194
Na	23	3	He	204272.46	729.0394	16971409.75	0.0036	0.7194
Na	23	3	He	201213.69	718.1335	16897452.25	0.0036	0.7194
Mg	24	3	He	15047.131	27.3643	638124.76	0.0018	0.006791
Mg	24	3	He	15019.436	27.314	635845.46	0.0018	0.006791
Mg	24	3	He	14896.968	27.0913	637449.52	0.0018	0.006791
Al	27	3	He	5678.582	3.1649	73804.78	0.0006	0.002622
Al	27	3	He	5605.552	3.1243	72729.99	0.0006	0.002622
Al	27	3	He	5472.163	3.05	71764.91	0.0006	0.002622
K	39	3	He	12243.673	16.1791	377289.56	0.0013	0.5579
K	39	3	He	12209.422	16.1354	375617.69	0.0013	0.5579
K	39	3	He	11987.985	15.8529	373012.57	0.0013	0.5579
Ca	44	3	He	85049.443	6.2377	145460.96	0.0001	0.004062
Ca	44	3	He	84633.976	6.2073	144499.70	0.0001	0.004062
Ca	44	3	He	84124.072	6.1699	145175.49	0.0001	0.004062
Ti	47	3	He	489.716	0.2874	6701.83	0.0006	0.0002809
Ti	47	3	He	482.498	0.2832	6591.70	0.0006	0.0002809
Ti	47	3	He	496.211	0.2912	6851.81	0.0006	0.0002809
V	51	3	He	514.311	13.3179	310566.94	0.0259	0.01861
V	51	3	He	513.505	13.297	309543.16	0.0259	0.01861
V	51	3	He	502.408	13.0101	306122.69	0.0259	0.01861
Cr	52	3	He	514.516	17.1941	400960.35	0.0332	0.1047
Cr	52	3	He	507.041	16.9458	394484.80	0.0332	0.1047
Cr	52	3	He	498.751	16.6705	392251.60	0.0332	0.1047
Mn	55	3	He	1243.842	17.2517	402302.73	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1247.77	17.3062	402872.45	0.0139	0.005074
Mn	55	3	He	1214.523	16.8452	396361.36	0.0139	0.005074
Fe	57	3	He	13641.832	8.6759	202318.88	0.0006	0.00609
Fe	57	3	He	13664.283	8.6902	202300.00	0.0006	0.00609
Fe	57	3	He	13508.478	8.5912	202147.36	0.0006	0.00609
Co	59	3	He	497.434	32.9111	767473.89	0.0661	0.00621
Co	59	3	He	498.332	32.9705	767525.22	0.0661	0.00621
Co	59	3	He	486.716	32.2021	757705.38	0.0661	0.00621
Ni	60	3	He	503.09	5.0391	216910.31	0.01	0.01721
Ni	60	3	He	511.978	5.1278	218979.68	0.01	0.01721
Ni	60	3	He	495.392	4.9622	214149.41	0.01	0.01721
Cu	63	3	He	526.533	15.0819	649209.60	0.0286	0.006793
Cu	63	3	He	530.167	15.1859	648507.10	0.0286	0.006793
Cu	63	3	He	522.265	14.9597	645597.49	0.0286	0.006793
Zn	66	3	He	569.424	1.9148	82425.55	0.0034	0.00316
Zn	66	3	He	576.235	1.9377	82748.70	0.0034	0.00316
Zn	66	3	He	570.754	1.9193	82829.13	0.0034	0.00316
As	75	3	He	515.496	1.3322	57345.98	0.0026	0.0008231
As	75	3	He	515.211	1.3315	56860.07	0.0026	0.0008231
As	75	3	He	509.966	1.3179	56876.35	0.0026	0.0008231
Sr	88	3	He	376.724	3.9733	152717.61	0.0105	0.001715
Sr	88	3	He	352.331	3.7162	149684.57	0.0105	0.001715
Sr	88	3	He	362.9	3.8276	151361.72	0.0105	0.001715
Mo	98	3	He	52.12	1.4346	55139.01	0.0275	0.0008555
Mo	98	3	He	49.026	1.3495	54355.69	0.0275	0.0008555
Mo	98	3	He	50.362	1.3862	54817.44	0.0275	0.0008555
Ag	107	3	He	49.918	2.9503	113398.19	0.0591	0.0004305
Ag	107	3	He	46.863	2.7698	111564.73	0.0591	0.0004305
Ag	107	3	He	48.021	2.8383	112238.00	0.0591	0.0004305
Cd	111	3	He	51.098	0.3387	13018.09	0.0066	5.141E-05
Cd	111	3	He	48.557	0.3219	12964.04	0.0066	5.141E-05
Cd	111	3	He	49.046	0.3251	12855.95	0.0066	5.141E-05
Sn	120	3	He	102.132	1.9315	74239.24	0.0187	0.0185
Sn	120	3	He	95.907	1.8149	73103.67	0.0187	0.0185
Sn	120	3	He	98.073	1.8555	73374.93	0.0187	0.0185
Sb	121	3	He	102.734	1.8813	72310.04	0.0183	0.00111
Sb	121	3	He	92.888	1.7011	68519.97	0.0183	0.00111
Sb	121	3	He	97.724	1.7896	70771.00	0.0183	0.00111
Ba	137	3	He	603.313	3.5349	135866.15	0.0059	0.0007704
Ba	137	3	He	581.049	3.4045	137130.22	0.0059	0.0007704
Ba	137	3	He	583.649	3.4197	135231.91	0.0059	0.0007704
Tl	205	3	He	99.793	3.6294	460066.05	0.0364	0.000808
Tl	205	3	He	99.727	3.627	462424.52	0.0364	0.000808
Tl	205	3	He	101.202	3.6806	461459.41	0.0364	0.000808
Pb	208	3	He	55.377	2.7028	183070.64	0.0487	0.003226
Pb	208	3	He	54.994	2.6841	180702.13	0.0487	0.003226
Pb	208	3	He	56.3	2.7478	182881.19	0.0487	0.003226
U	238	3	He	51.215	2.7398	347294.76	0.0535	0.0004157
U	238	3	He	51.026	2.7297	348021.09	0.0535	0.0004157
U	238	3	He	51.87	2.7748	347892.38	0.0535	0.0004157
Sc	45	1	No Gas			1338755.29		
Sc	45	1	No Gas			1353683.10		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1331666.86		
Ge	72	1	No Gas			706504.52		
Ge	72	1	No Gas			713542.65		
Ge	72	1	No Gas			700070.85		
Sc	45	2	H2			89202.81		
Sc	45	2	H2			86577.33		
Sc	45	2	H2			89042.14		
Ge	72	2	H2			72323.11		
Ge	72	2	H2			72172.65		
Ge	72	2	H2			72443.61		
In	115	2	H2			188897.95		
In	115	2	H2			186303.88		
In	115	2	H2			187066.17		
Sc	45	3	He			23319.60		
Sc	45	3	He			23279.14		
Sc	45	3	He			23529.68		
Ge	72	3	He			43045.68		
Ge	72	3	He			42704.50		
Ge	72	3	He			43155.85		
In	115	3	He			38955.22		
In	115	3	He			40790.97		
In	115	3	He			40058.39		
Tb	159	3	He			176825.39		
Tb	159	3	He			173999.22		
Tb	159	3	He			176083.83		
Bi	209	3	He			126760.88		
Bi	209	3	He			127495.14		
Bi	209	3	He			125375.19		

Quantitation Report

Data File Name	046SMPL.d
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Sample Type	Sample
Comment	B25
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

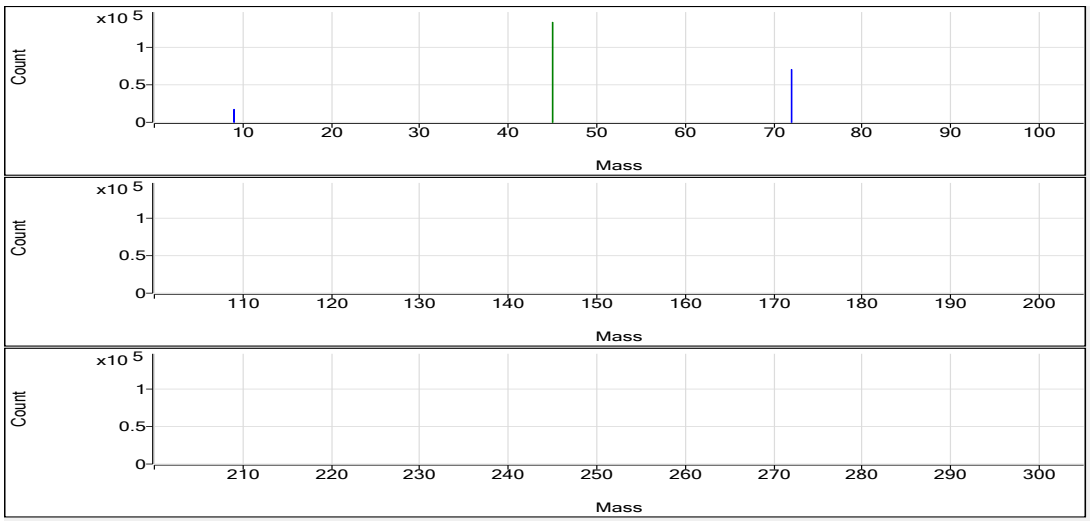
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	53.926	ppb	6.6	34833.80	0.0260	Pulse	0.5000	3
Se	78	115	H2	82.151	ppb	2.7	3160.36	0.0169	Pulse	1.5000	3
Na	23	45	He	202382.470	ppb	2.7	17188174.33	722.3007	Analog	0.1000	3
Mg	24	45	He	14928.891	ppb	2.0	646128.64	27.1493	Pulse	0.1000	3
Al	27	45	He	5539.090	ppb	1.9	73476.58	3.0872	Pulse	0.1000	3
K	39	45	He	12028.095	ppb	2.9	378453.31	15.9040	Pulse	0.1000	3
Ca	44	45	He	84367.772	ppb	3.1	147234.45	6.1877	Pulse	0.1000	3
Ti	47	45	He	521.356	ppb	7.8	7278.73	0.3059	Pulse	0.1000	3
V	51	45	He	505.347	ppb	2.8	311391.45	13.0861	Pulse	0.5000	3
Cr	52	45	He	503.593	ppb	2.6	400528.20	16.8313	Pulse	0.1000	3
Mn	55	45	He	1233.655	ppb	2.8	407153.43	17.1104	Pulse	0.1000	3
Fe	57	45	He	13656.185	ppb	2.7	206672.16	8.6850	Pulse	0.1000	3
Co	59	45	He	489.631	ppb	2.6	770896.24	32.3949	Pulse	0.1000	3
Ni	60	72	He	496.394	ppb	1.3	216873.34	4.9722	Pulse	0.1000	3
Cu	63	72	He	520.204	ppb	1.0	649923.66	14.9007	Pulse	0.1000	3
Zn	66	72	He	577.462	ppb	1.5	84696.28	1.9418	Pulse	0.1000	3
As	75	72	He	510.174	ppb	0.5	57508.09	1.3185	Pulse	0.5000	3
Sr	88	115	He	382.923	ppb	1.5	155714.98	4.0387	Pulse	0.1000	3
Mo	98	115	He	53.558	ppb	1.6	56831.81	1.4741	Pulse	0.1000	3
Ag	107	115	He	49.613	ppb	0.6	113054.65	2.9323	Pulse	0.1000	3
Cd	111	115	He	49.817	ppb	1.5	12730.51	0.3302	Pulse	0.5000	3
Sn	120	115	He	102.481	ppb	0.3	74724.78	1.9381	Pulse	0.1000	3
Sb	121	115	He	102.766	ppb	0.7	72557.00	1.8819	Pulse	0.1000	3
Ba	137	115	He	614.095	ppb	1.1	138720.03	3.5981	Pulse	0.1000	3
Tl	205	209	He	103.235	ppb	0.3	469765.82	3.7545	Pulse	0.1000	3
Pb	208	209	He	56.613	ppb	0.7	345703.82	2.7630	Pulse	0.1000	3
U	238	209	He	52.417	ppb	0.8	350836.65	2.8041	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1338488.00	0.9	100.3	Analog	0.1000	3
No Gas	Ge	72	706731.92	0.5	101.0	Pulse	0.1000	3
H2	Sc	45	87539.28	1.0	100.7	Pulse	0.1000	3
H2	Ge	72	72587.60	1.7	101.4	Pulse	0.1000	3
H2	In	115	187169.57	1.1	102.2	Pulse	0.1000	3
He	Sc	45	23806.94	2.5	103.5	Pulse	0.1000	3
He	Ge	72	43617.52	0.2	103.3	Pulse	0.1000	3
He	In	115	38556.08	0.8	99.0	Pulse	0.1000	3
He	Tb	159	175923.51	0.7	99.9	Pulse	0.1000	3
He	Bi	209	125119.81	0.6	97.6	Pulse	0.1000	3

No Gas



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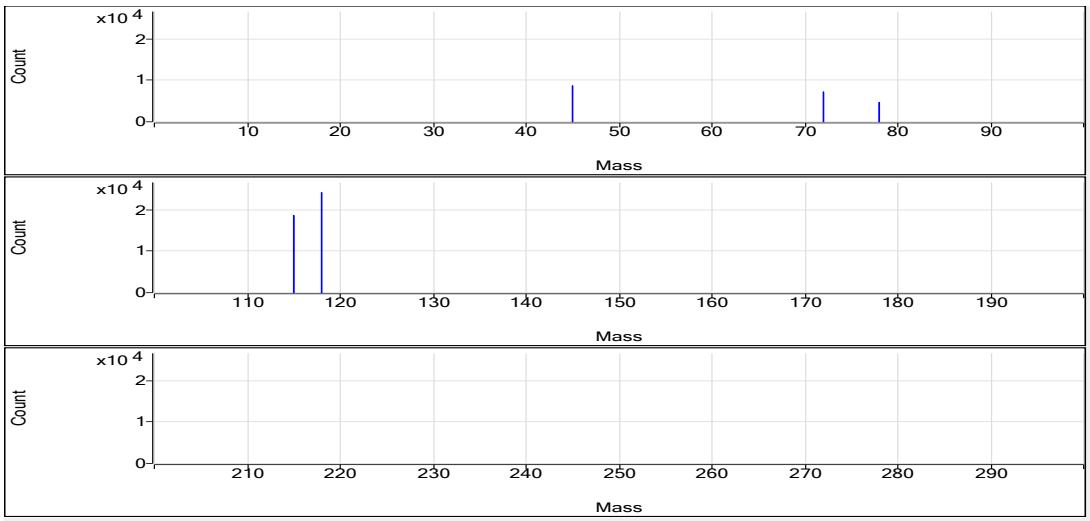
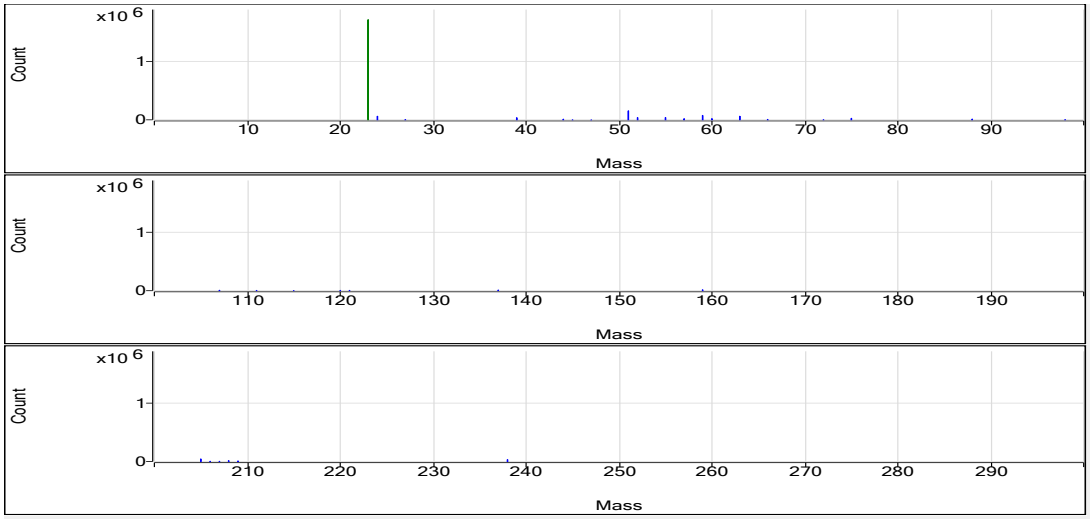


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.058	0.0242	32655.52	0.0005	1.901E-05
Be	9	1	No Gas	54.664	0.0264	35255.37	0.0005	1.901E-05
Be	9	1	No Gas	57.057	0.0275	36590.51	0.0005	1.901E-05
Se	78	2	H2	79.704	0.0164	3102.34	0.0002	7.279E-06
Se	78	2	H2	83.915	0.0173	3195.03	0.0002	7.279E-06
Se	78	2	H2	82.833	0.017	3183.70	0.0002	7.279E-06
Na	23	3	He	206346.228	736.4333	17306152.24	0.0036	0.7194
Na	23	3	He	196177.688	700.178	17155292.24	0.0036	0.7194
Na	23	3	He	204623.494	730.291	17103078.50	0.0036	0.7194
Mg	24	3	He	15071.618	27.4088	644106.44	0.0018	0.006791
Mg	24	3	He	14591.772	26.5364	650177.41	0.0018	0.006791
Mg	24	3	He	15123.282	27.5028	644102.06	0.0018	0.006791
Al	27	3	He	5627.285	3.1364	73704.30	0.0006	0.002622
Al	27	3	He	5426.623	3.0246	74107.06	0.0006	0.002622
Al	27	3	He	5563.361	3.1008	72618.38	0.0006	0.002622
K	39	3	He	12312.409	16.2668	382268.51	0.0013	0.5579
K	39	3	He	11630.978	15.3974	377255.89	0.0013	0.5579
K	39	3	He	12140.896	16.0479	375835.54	0.0013	0.5579
Ca	44	3	He	85504.261	6.271	147369.38	0.0001	0.004062
Ca	44	3	He	81371.582	5.9681	146227.51	0.0001	0.004062
Ca	44	3	He	86227.472	6.3241	148106.47	0.0001	0.004062
Ti	47	3	He	568.008	0.3333	7832.34	0.0006	0.0002809
Ti	47	3	He	495.323	0.2907	7121.99	0.0006	0.0002809
Ti	47	3	He	500.736	0.2939	6881.87	0.0006	0.0002809
V	51	3	He	514.344	13.3187	312989.28	0.0259	0.01861
V	51	3	He	488.848	12.6594	310172.78	0.0259	0.01861
V	51	3	He	512.848	13.28	311012.28	0.0259	0.01861
Cr	52	3	He	512.795	17.137	402718.12	0.0332	0.1047
Cr	52	3	He	488.359	16.3253	399992.53	0.0332	0.1047
Cr	52	3	He	509.625	17.0317	398873.94	0.0332	0.1047
Mn	55	3	He	1255.036	17.4069	409061.67	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1193.271	16.5505	405509.33	0.0139	0.005074
Mn	55	3	He	1252.657	17.3739	406889.29	0.0139	0.005074
Fe	57	3	He	13898.344	8.8389	207714.66	0.0006	0.00609
Fe	57	3	He	13236.617	8.4184	206261.70	0.0006	0.00609
Fe	57	3	He	13833.594	8.7978	206040.11	0.0006	0.00609
Co	59	3	He	498.933	33.0102	775739.52	0.0661	0.00621
Co	59	3	He	475.206	31.4407	770339.05	0.0661	0.00621
Co	59	3	He	494.754	32.7338	766610.14	0.0661	0.00621
Ni	60	3	He	498.172	4.99	217499.90	0.01	0.01721
Ni	60	3	He	501.639	5.0246	218908.73	0.01	0.01721
Ni	60	3	He	489.369	4.9021	214211.38	0.01	0.01721
Cu	63	3	He	522.639	14.9704	652518.27	0.0286	0.006793
Cu	63	3	He	523.905	15.0066	653800.62	0.0286	0.006793
Cu	63	3	He	514.07	14.7251	643452.10	0.0286	0.006793
Zn	66	3	He	585.091	1.9674	85755.15	0.0034	0.00316
Zn	66	3	He	579.04	1.9471	84831.11	0.0034	0.00316
Zn	66	3	He	568.254	1.9109	83502.58	0.0034	0.00316
As	75	3	He	507.768	1.3123	57197.59	0.0026	0.0008231
As	75	3	He	513.174	1.3262	57779.80	0.0026	0.0008231
As	75	3	He	509.579	1.3169	57546.87	0.0026	0.0008231
Sr	88	3	He	389.062	4.1034	158487.44	0.0105	0.001715
Sr	88	3	He	378.216	3.9891	154849.79	0.0105	0.001715
Sr	88	3	He	381.491	4.0236	153807.72	0.0105	0.001715
Mo	98	3	He	53.293	1.4668	56653.99	0.0275	0.0008555
Mo	98	3	He	52.856	1.4548	56473.85	0.0275	0.0008555
Mo	98	3	He	54.525	1.5007	57367.60	0.0275	0.0008555
Ag	107	3	He	49.671	2.9357	113387.13	0.0591	0.0004305
Ag	107	3	He	49.28	2.9126	113063.75	0.0591	0.0004305
Ag	107	3	He	49.888	2.9486	112713.08	0.0591	0.0004305
Cd	111	3	He	49.826	0.3303	12755.89	0.0066	5.141E-05
Cd	111	3	He	49.085	0.3254	12629.76	0.0066	5.141E-05
Cd	111	3	He	50.54	0.335	12805.88	0.0066	5.141E-05
Sn	120	3	He	102.271	1.9341	74702.16	0.0187	0.0185
Sn	120	3	He	102.773	1.9435	75444.73	0.0187	0.0185
Sn	120	3	He	102.4	1.9366	74027.45	0.0187	0.0185
Sb	121	3	He	102.616	1.8792	72579.99	0.0183	0.00111
Sb	121	3	He	102.157	1.8708	72620.39	0.0183	0.00111
Sb	121	3	He	103.526	1.8958	72470.62	0.0183	0.00111
Ba	137	3	He	615.296	3.6051	139240.96	0.0059	0.0007704
Ba	137	3	He	606.924	3.5561	138041.07	0.0059	0.0007704
Ba	137	3	He	620.065	3.633	138878.06	0.0059	0.0007704
Tl	205	3	He	103.305	3.7571	472943.98	0.0364	0.000808
Tl	205	3	He	103.517	3.7648	468824.41	0.0364	0.000808
Tl	205	3	He	102.882	3.7417	467529.06	0.0364	0.000808
Pb	208	3	He	56.162	2.7411	183862.54	0.0487	0.003226
Pb	208	3	He	56.762	2.7703	183732.69	0.0487	0.003226
Pb	208	3	He	56.914	2.7777	184755.29	0.0487	0.003226
U	238	3	He	52.117	2.788	350957.53	0.0535	0.0004157
U	238	3	He	52.91	2.8304	352467.53	0.0535	0.0004157
U	238	3	He	52.225	2.7938	349084.88	0.0535	0.0004157
Sc	45	1	No Gas			1351154.35		
Sc	45	1	No Gas			1335918.89		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1328390.76		
Ge	72	1	No Gas			707586.63		
Ge	72	1	No Gas			709759.68		
Ge	72	1	No Gas			702849.44		
Sc	45	2	H2			86546.17		
Sc	45	2	H2			87764.15		
Sc	45	2	H2			88307.53		
Ge	72	2	H2			71308.53		
Ge	72	2	H2			73769.88		
Ge	72	2	H2			72684.39		
In	115	2	H2			189334.78		
In	115	2	H2			185210.60		
In	115	2	H2			186963.32		
Sc	45	3	He			23499.96		
Sc	45	3	He			24501.33		
Sc	45	3	He			23419.54		
Ge	72	3	He			43587.30		
Ge	72	3	He			43567.47		
Ge	72	3	He			43697.78		
In	115	3	He			39146.23		
In	115	3	He			39346.63		
In	115	3	He			38744.60		
Tb	159	3	He			176234.45		
Tb	159	3	He			176957.73		
Tb	159	3	He			174578.34		
Bi	209	3	He			125880.31		
Bi	209	3	He			124528.32		
Bi	209	3	He			124950.79		

Quantitation Report

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Sample Type	CCV
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Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

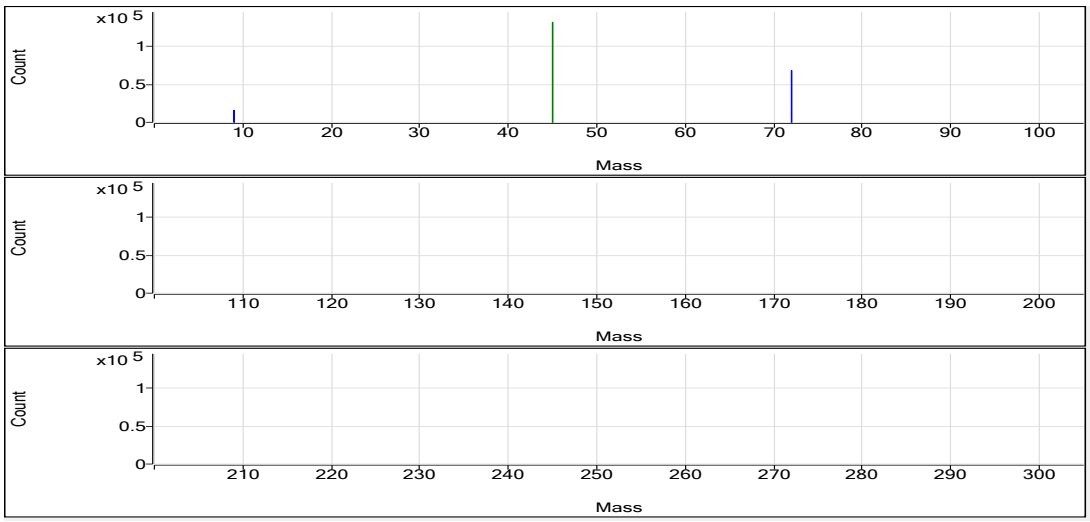
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.776	ppb	8.8	32344.95	0.0245	Pulse	0.5000	3
Se	78	115	H2	53.594	ppb	1.9	2036.60	0.0110	Pulse	1.5000	3
Na	23	45	He	5279.625	ppb	2.1	445068.65	19.5435	Pulse	0.1000	3
Mg	24	45	He	5255.856	ppb	3.4	217723.92	9.5626	Pulse	0.1000	3
Al	27	45	He	5235.066	ppb	1.5	66457.24	2.9179	Pulse	0.1000	3
K	39	45	He	5328.401	ppb	2.0	167532.34	7.3562	Pulse	0.1000	3
Ca	44	45	He	5335.664	ppb	4.4	8996.34	0.3951	Pulse	0.1000	3
Ti	47	45	He	5190.448	ppb	2.2	69305.62	3.0433	Pulse	0.1000	3
V	51	45	He	526.587	ppb	2.4	310498.42	13.6353	Pulse	0.5000	3
Cr	52	45	He	531.179	ppb	1.8	404184.64	17.7476	Pulse	0.1000	3
Mn	55	45	He	530.358	ppb	2.7	167564.05	7.3588	Pulse	0.1000	3
Fe	57	45	He	5259.668	ppb	2.1	76265.07	3.3488	Pulse	0.1000	3
Co	59	45	He	520.910	ppb	3.1	784692.91	34.4640	Pulse	0.1000	3
Ni	60	72	He	534.688	ppb	1.9	222242.07	5.3545	Pulse	0.1000	3
Cu	63	72	He	535.643	ppb	2.7	636765.02	15.3427	Pulse	0.1000	3
Zn	66	72	He	548.297	ppb	1.9	76537.59	1.8439	Pulse	0.1000	3
As	75	72	He	538.467	ppb	2.4	57754.49	1.3915	Pulse	0.5000	3
Sr	88	115	He	51.032	ppb	0.8	21143.07	0.5397	Pulse	0.1000	3
Mo	98	115	He	50.267	ppb	2.2	54181.86	1.3836	Pulse	0.1000	3
Ag	107	115	He	50.435	ppb	2.7	116718.13	2.9809	Pulse	0.1000	3
Cd	111	115	He	50.414	ppb	3.0	13085.51	0.3342	Pulse	0.5000	3
Sn	120	115	He	50.249	ppb	0.6	37588.52	0.9597	Pulse	0.1000	3
Sb	121	115	He	49.774	ppb	1.0	35720.61	0.9121	Pulse	0.1000	3
Ba	137	115	He	508.758	ppb	2.0	116754.91	2.9810	Pulse	0.1000	3
Tl	205	209	He	51.643	ppb	1.1	241533.75	1.8786	Pulse	0.1000	3
Pb	208	209	He	51.486	ppb	0.9	323116.50	2.5131	Pulse	0.1000	3
U	238	209	He	51.524	ppb	0.7	354379.07	2.7563	Pulse	0.1000	3

ISTD Table:

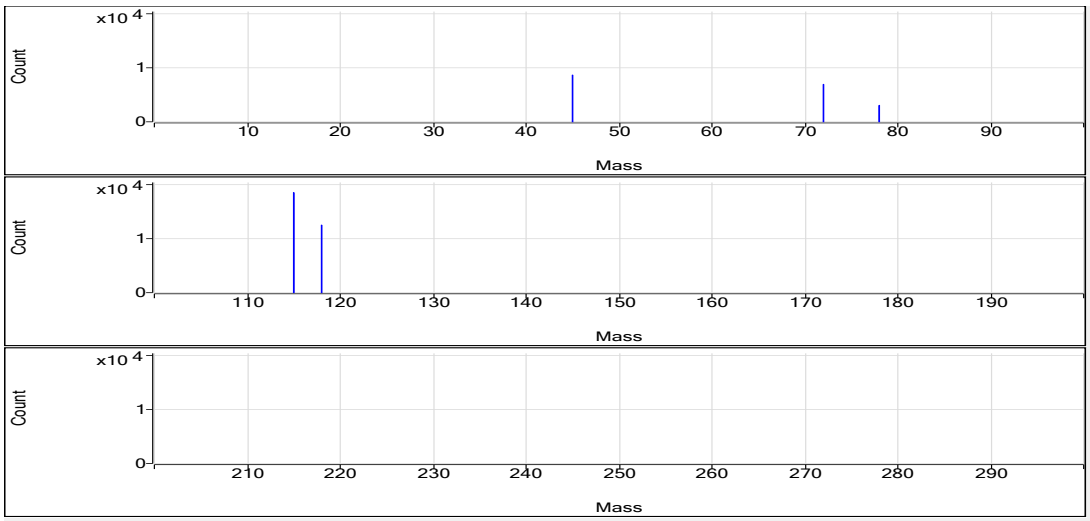
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1320782.17	1.9	99.0	Analog	0.1000	3
No Gas	Ge	72	683712.75	0.5	97.8	Pulse	0.1000	3
H2	Sc	45	86483.21	0.7	99.5	Pulse	0.1000	3
H2	Ge	72	69318.25	1.0	96.8	Pulse	0.1000	3
H2	In	115	184815.20	0.5	100.9	Pulse	0.1000	3
He	Sc	45	22781.80	2.8	99.0	Pulse	0.1000	3
He	Ge	72	41514.76	1.7	98.3	Pulse	0.1000	3
He	In	115	39170.16	2.1	100.6	Pulse	0.1000	3
He	Tb	159	173542.67	0.1	98.6	Pulse	0.1000	3
He	Bi	209	128572.41	0.2	100.3	Pulse	0.1000	3

No Gas

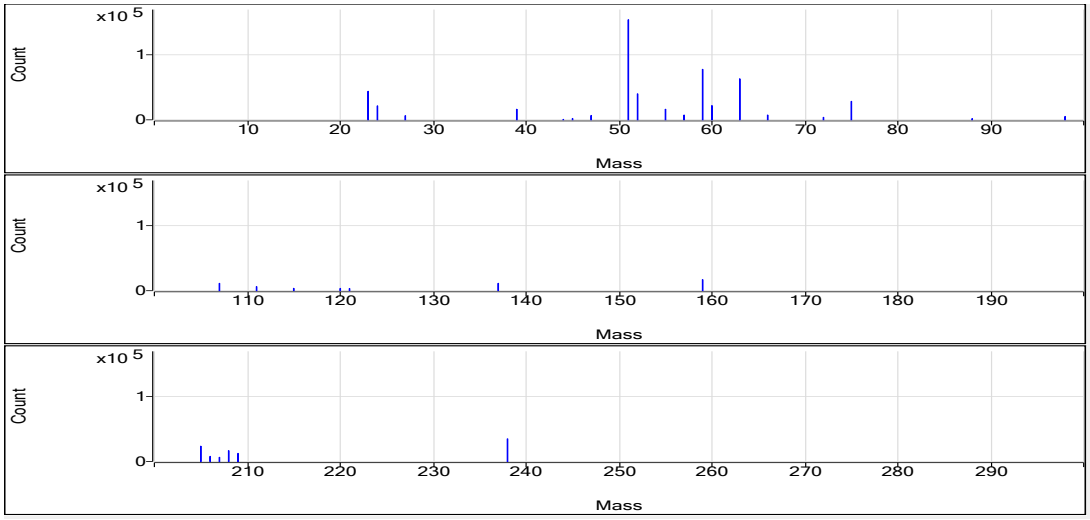


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	46.319	0.0224	29993.94	0.0005	1.901E-05
Be	9	1	No Gas	50.784	0.0245	32553.31	0.0005	1.901E-05
Be	9	1	No Gas	55.226	0.0267	34487.59	0.0005	1.901E-05
Se	78	2	H2	52.484	0.0108	2004.15	0.0002	7.279E-06
Se	78	2	H2	53.817	0.0111	2044.15	0.0002	7.279E-06
Se	78	2	H2	54.483	0.0112	2061.49	0.0002	7.279E-06
Na	23	3	He	5169.618	19.1513	449088.55	0.0036	0.7194
Na	23	3	He	5277.66	19.5365	443835.11	0.0036	0.7194
Na	23	3	He	5391.596	19.9427	442282.30	0.0036	0.7194
Mg	24	3	He	5111.644	9.3004	218089.61	0.0018	0.006791
Mg	24	3	He	5201.901	9.4645	215016.48	0.0018	0.006791
Mg	24	3	He	5454.023	9.9229	220065.66	0.0018	0.006791
Al	27	3	He	5143.922	2.8672	67234.08	0.0006	0.002622
Al	27	3	He	5263.598	2.9338	66651.43	0.0006	0.002622
Al	27	3	He	5297.678	2.9528	65486.22	0.0006	0.002622
K	39	3	He	5208.935	7.2037	168924.37	0.0013	0.5579
K	39	3	He	5373.259	7.4134	168419.39	0.0013	0.5579
K	39	3	He	5403.008	7.4514	165253.26	0.0013	0.5579
Ca	44	3	He	5223.513	0.3869	9073.01	0.0001	0.004062
Ca	44	3	He	5177.158	0.3835	8712.88	0.0001	0.004062
Ca	44	3	He	5606.321	0.415	9203.14	0.0001	0.004062
Ti	47	3	He	5092.538	2.9859	70018.51	0.0006	0.0002809
Ti	47	3	He	5166.788	3.0295	68823.91	0.0006	0.0002809
Ti	47	3	He	5312.019	3.1146	69074.43	0.0006	0.0002809
V	51	3	He	513.495	13.2968	311802.78	0.0259	0.01861
V	51	3	He	527.715	13.6644	310432.31	0.0259	0.01861
V	51	3	He	538.552	13.9447	309260.16	0.0259	0.01861
Cr	52	3	He	521.435	17.4239	408583.12	0.0332	0.1047
Cr	52	3	He	531.191	17.748	403202.92	0.0332	0.1047
Cr	52	3	He	540.911	18.0708	400767.88	0.0332	0.1047
Mn	55	3	He	514.356	7.1369	167357.58	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	534.814	7.4206	168583.02	0.0139	0.005074
Mn	55	3	He	541.905	7.5189	166751.54	0.0139	0.005074
Fe	57	3	He	5133.212	3.2684	76642.73	0.0006	0.00609
Fe	57	3	He	5328.791	3.3927	77076.41	0.0006	0.00609
Fe	57	3	He	5317.002	3.3852	75076.06	0.0006	0.00609
Co	59	3	He	504.693	33.3913	783009.60	0.0661	0.00621
Co	59	3	He	520.563	34.4411	782440.46	0.0661	0.00621
Co	59	3	He	537.473	35.5597	788628.66	0.0661	0.00621
Ni	60	3	He	544.446	5.4519	222764.00	0.01	0.01721
Ni	60	3	He	535.888	5.3665	222392.11	0.01	0.01721
Ni	60	3	He	523.73	5.2451	221570.09	0.01	0.01721
Cu	63	3	He	551.433	15.7948	645374.72	0.0286	0.006793
Cu	63	3	He	532.472	15.2519	632055.46	0.0286	0.006793
Cu	63	3	He	523.026	14.9815	632864.87	0.0286	0.006793
Zn	66	3	He	550.536	1.8514	75649.27	0.0034	0.00316
Zn	66	3	He	557.618	1.8752	77710.38	0.0034	0.00316
Zn	66	3	He	536.736	1.8051	76253.11	0.0034	0.00316
As	75	3	He	551.576	1.4254	58241.69	0.0026	0.0008231
As	75	3	He	537.535	1.3891	57567.13	0.0026	0.0008231
As	75	3	He	526.291	1.3601	57454.66	0.0026	0.0008231
Sr	88	3	He	51.237	0.5419	21687.26	0.0105	0.001715
Sr	88	3	He	50.536	0.5345	20495.37	0.0105	0.001715
Sr	88	3	He	51.323	0.5428	21246.57	0.0105	0.001715
Mo	98	3	He	49.005	1.3489	53985.14	0.0275	0.0008555
Mo	98	3	He	50.834	1.3992	53652.54	0.0275	0.0008555
Mo	98	3	He	50.963	1.4027	54907.90	0.0275	0.0008555
Ag	107	3	He	48.911	2.8908	115696.56	0.0591	0.0004305
Ag	107	3	He	51.558	3.0472	116846.47	0.0591	0.0004305
Ag	107	3	He	50.837	3.0046	117611.35	0.0591	0.0004305
Cd	111	3	He	49.978	0.3313	13258.32	0.0066	5.141E-05
Cd	111	3	He	52.077	0.3452	13236.31	0.0066	5.141E-05
Cd	111	3	He	49.187	0.326	12761.89	0.0066	5.141E-05
Sn	120	3	He	49.907	0.9533	38153.52	0.0187	0.0185
Sn	120	3	He	50.555	0.9654	37019.97	0.0187	0.0185
Sn	120	3	He	50.284	0.9604	37592.08	0.0187	0.0185
Sb	121	3	He	49.249	0.9025	36118.07	0.0183	0.00111
Sb	121	3	He	50.263	0.921	35316.29	0.0183	0.00111
Sb	121	3	He	49.811	0.9127	35727.46	0.0183	0.00111
Ba	137	3	He	510.177	2.9893	119639.40	0.0059	0.0007704
Ba	137	3	He	517.991	3.0351	116381.57	0.0059	0.0007704
Ba	137	3	He	498.106	2.9186	114243.77	0.0059	0.0007704
Tl	205	3	He	52.301	1.9025	244468.02	0.0364	0.000808
Tl	205	3	He	51.379	1.869	239989.39	0.0364	0.000808
Tl	205	3	He	51.247	1.8642	240143.84	0.0364	0.000808
Pb	208	3	He	51.79	2.5279	172380.58	0.0487	0.003226
Pb	208	3	He	51.735	2.5252	172087.60	0.0487	0.003226
Pb	208	3	He	50.935	2.4862	169806.60	0.0487	0.003226
U	238	3	He	51.426	2.751	353495.15	0.0535	0.0004157
U	238	3	He	51.92	2.7775	356640.70	0.0535	0.0004157
U	238	3	He	51.225	2.7403	353001.36	0.0535	0.0004157
Sc	45	1	No Gas			1341135.45		
Sc	45	1	No Gas			1327690.61		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1293520.45		
Ge	72	1	No Gas			682311.01		
Ge	72	1	No Gas			687948.66		
Ge	72	1	No Gas			680878.58		
Sc	45	2	H2			86898.72		
Sc	45	2	H2			86758.23		
Sc	45	2	H2			85792.68		
Ge	72	2	H2			69167.33		
Ge	72	2	H2			70042.32		
Ge	72	2	H2			68745.09		
In	115	2	H2			185706.36		
In	115	2	H2			184724.35		
In	115	2	H2			184014.88		
Sc	45	3	He			23449.53		
Sc	45	3	He			22718.25		
Sc	45	3	He			22177.62		
Ge	72	3	He			40859.99		
Ge	72	3	He			41441.07		
Ge	72	3	He			42243.21		
In	115	3	He			40289.22		
In	115	3	He			38604.35		
In	115	3	He			39406.26		
Tb	159	3	He			173664.18		
Tb	159	3	He			173654.24		
Tb	159	3	He			173309.59		
Bi	209	3	He			128495.62		
Bi	209	3	He			128403.79		
Bi	209	3	He			128817.82		

Quantitation Report

Data File Name	049_CCB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
Acq Time	9/19/2023 8:28:25 AM
Sample Name	CCB 4807280
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

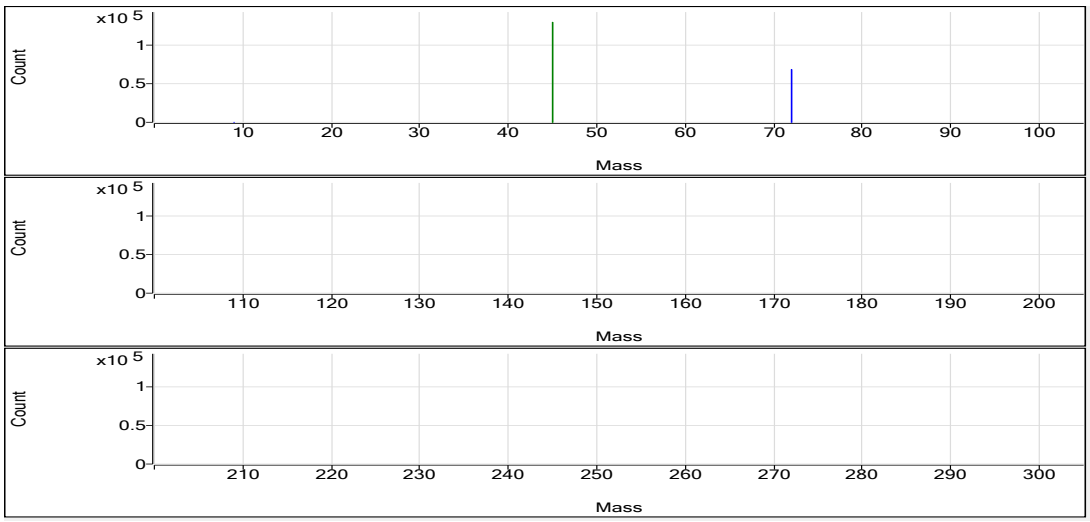
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.119	ppb	21.5	99.33	0.0001	Pulse	0.5000	3
Se	78	115	H2	0.076	ppb	27.1	4.22	0.0000	Pulse	1.5000	3
Na	23	45	He	-6.424	ppb	N/A	15608.74	0.6964	Pulse	0.1000	3
Mg	24	45	He	4.619	ppb	31.0	340.02	0.0152	Pulse	0.1000	3
Al	27	45	He	2.745	ppb	56.1	93.34	0.0042	Pulse	0.1000	3
K	39	45	He	12.217	ppb	493.8	12846.11	0.5735	Pulse	0.1000	3
Ca	44	45	He	15.574	ppb	25.5	116.67	0.0052	Pulse	0.1000	3
Ti	47	45	He	4.310	ppb	52.2	63.34	0.0028	Pulse	0.1000	3
V	51	45	He	0.126	ppb	92.5	490.01	0.0219	Pulse	0.5000	3
Cr	52	45	He	0.245	ppb	73.5	2530.32	0.1129	Pulse	0.1000	3
Mn	55	45	He	0.244	ppb	21.8	190.01	0.0085	Pulse	0.1000	3
Fe	57	45	He	9.186	ppb	53.3	266.68	0.0119	Pulse	0.1000	3
Co	59	45	He	0.170	ppb	32.8	390.02	0.0174	Pulse	0.1000	3
Ni	60	72	He	0.294	ppb	98.2	836.72	0.0201	Pulse	0.1000	3
Cu	63	72	He	0.094	ppb	60.2	393.35	0.0095	Pulse	0.1000	3
Zn	66	72	He	0.112	ppb	392.8	146.67	0.0035	Pulse	0.1000	3
As	75	72	He	0.154	ppb	42.5	50.67	0.0012	Pulse	0.5000	3
Sr	88	115	He	0.031	ppb	130.5	80.00	0.0020	Pulse	0.1000	3
Mo	98	115	He	0.065	ppb	31.1	103.34	0.0026	Pulse	0.1000	3
Ag	107	115	He	0.024	ppb	19.3	73.33	0.0019	Pulse	0.1000	3
Cd	111	115	He	0.018	ppb	123.8	6.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.093	ppb	N/A	656.71	0.0168	Pulse	0.1000	3
Sb	121	115	He	0.143	ppb	77.8	146.67	0.0037	Pulse	0.1000	3
Ba	137	115	He	0.043	ppb	176.9	40.00	0.0010	Pulse	0.1000	3
Tl	205	209	He	0.169	ppb	15.0	870.06	0.0070	Pulse	0.1000	3
Pb	208	209	He	0.014	ppb	56.4	490.02	0.0039	Pulse	0.1000	3
U	238	209	He	0.016	ppb	57.5	156.67	0.0013	Pulse	0.1000	3

ISTD Table:

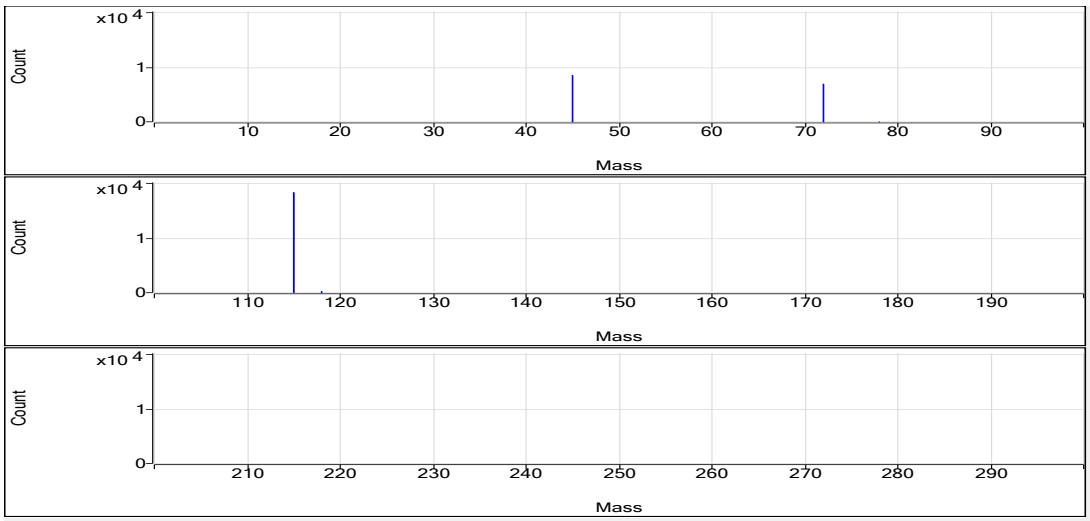
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1300319.56	1.1	97.4	Analog	0.1000	3
No Gas	Ge	72	686593.37	1.6	98.2	Pulse	0.1000	3
H2	Sc	45	85460.08	1.4	98.3	Pulse	0.1000	3
H2	Ge	72	69445.75	2.0	97.0	Pulse	0.1000	3
H2	In	115	183730.47	0.5	100.3	Pulse	0.1000	3
He	Sc	45	22427.91	1.9	97.5	Pulse	0.1000	3
He	Ge	72	41524.38	1.1	98.3	Pulse	0.1000	3
He	In	115	39157.91	1.0	100.6	Pulse	0.1000	3
He	Tb	159	174430.84	1.4	99.1	Pulse	0.1000	3
He	Bi	209	124932.34	1.6	97.4	Pulse	0.1000	3

No Gas

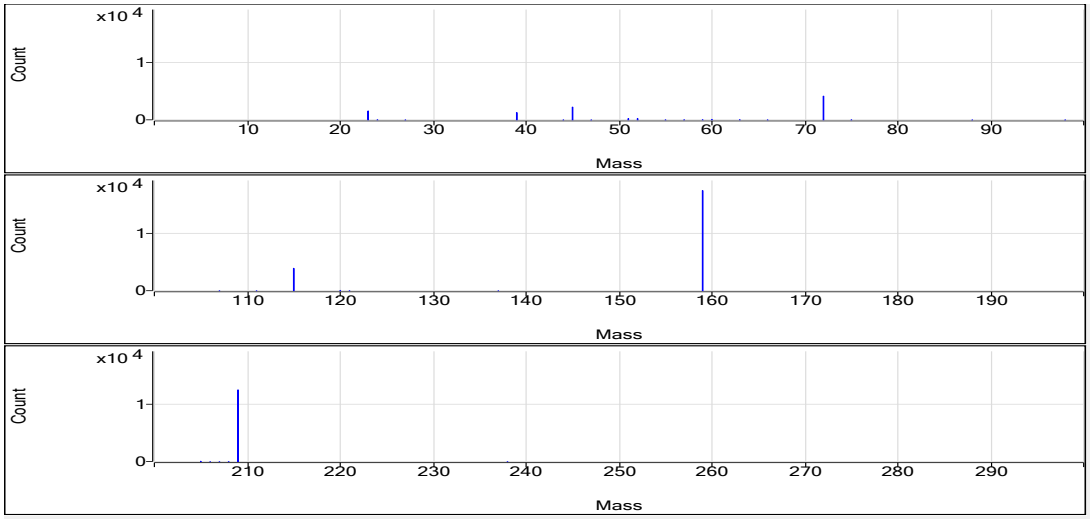


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.138	0.0001	112.00	0.0005	1.901E-05
Be	9	1	No Gas	0.129	0.0001	106.00	0.0005	1.901E-05
Be	9	1	No Gas	0.09	0.0001	80.00	0.0005	1.901E-05
Se	78	2	H2	0.088	0	4.67	0.0002	7.279E-06
Se	78	2	H2	0.053	0	3.33	0.0002	7.279E-06
Se	78	2	H2	0.089	0	4.67	0.0002	7.279E-06
Na	23	3	He	6.255	0.7417	16299.44	0.0036	0.7194
Na	23	3	He	-15.402	0.6644	15148.13	0.0036	0.7194
Na	23	3	He	-10.124	0.6833	15378.64	0.0036	0.7194
Mg	24	3	He	5.775	0.0173	380.02	0.0018	0.006791
Mg	24	3	He	3.02	0.0123	280.02	0.0018	0.006791
Mg	24	3	He	5.062	0.016	360.02	0.0018	0.006791
Al	27	3	He	1.01	0.0032	70.00	0.0006	0.002622
Al	27	3	He	3.956	0.0048	110.01	0.0006	0.002622
Al	27	3	He	3.269	0.0044	100.00	0.0006	0.002622
K	39	3	He	76.216	0.6551	14397.62	0.0013	0.5579
K	39	3	He	4.029	0.563	12835.95	0.0013	0.5579
K	39	3	He	-43.595	0.5023	11304.75	0.0013	0.5579
Ca	44	3	He	19.075	0.0055	120.00	0.0001	0.004062
Ca	44	3	He	16.391	0.0053	120.00	0.0001	0.004062
Ca	44	3	He	11.256	0.0049	110.00	0.0001	0.004062
Ti	47	3	He	1.849	0.0014	30.00	0.0006	0.0002809
Ti	47	3	He	6.255	0.0039	90.01	0.0006	0.0002809
Ti	47	3	He	4.825	0.0031	70.00	0.0006	0.0002809
V	51	3	He	0.227	0.0245	538.01	0.0259	0.01861
V	51	3	He	0.152	0.0225	514.01	0.0259	0.01861
V	51	3	He	-0.001	0.0186	418.01	0.0259	0.01861
Cr	52	3	He	0.45	0.1197	2630.34	0.0332	0.1047
Cr	52	3	He	0.175	0.1105	2520.33	0.0332	0.1047
Cr	52	3	He	0.111	0.1084	2440.29	0.0332	0.1047
Mn	55	3	He	0.192	0.0077	170.01	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.298	0.0092	210.01	0.0139	0.005074
Mn	55	3	He	0.243	0.0084	190.01	0.0139	0.005074
Fe	57	3	He	14.761	0.0155	340.02	0.0006	0.00609
Fe	57	3	He	5.601	0.0097	220.01	0.0006	0.00609
Fe	57	3	He	7.196	0.0107	240.01	0.0006	0.00609
Co	59	3	He	0.223	0.0209	460.03	0.0661	0.00621
Co	59	3	He	0.112	0.0136	310.02	0.0661	0.00621
Co	59	3	He	0.175	0.0178	400.02	0.0661	0.00621
Ni	60	3	He	0.133	0.0185	760.04	0.01	0.01721
Ni	60	3	He	0.626	0.0235	980.07	0.01	0.01721
Ni	60	3	He	0.121	0.0184	770.06	0.01	0.01721
Cu	63	3	He	0.138	0.0107	440.02	0.0286	0.006793
Cu	63	3	He	0.114	0.0101	420.02	0.0286	0.006793
Cu	63	3	He	0.03	0.0077	320.01	0.0286	0.006793
Zn	66	3	He	0.221	0.0039	160.01	0.0034	0.00316
Zn	66	3	He	0.485	0.0048	200.01	0.0034	0.00316
Zn	66	3	He	-0.371	0.0019	80.00	0.0034	0.00316
As	75	3	He	0.229	0.0014	58.00	0.0026	0.0008231
As	75	3	He	0.126	0.0011	48.00	0.0026	0.0008231
As	75	3	He	0.107	0.0011	46.00	0.0026	0.0008231
Sr	88	3	He	-0.016	0.0015	60.00	0.0105	0.001715
Sr	88	3	He	0.055	0.0023	90.00	0.0105	0.001715
Sr	88	3	He	0.053	0.0023	90.00	0.0105	0.001715
Mo	98	3	He	0.082	0.0031	120.00	0.0275	0.0008555
Mo	98	3	He	0.071	0.0028	110.01	0.0275	0.0008555
Mo	98	3	He	0.043	0.002	80.00	0.0275	0.0008555
Ag	107	3	He	0.019	0.0015	60.00	0.0591	0.0004305
Ag	107	3	He	0.027	0.002	80.00	0.0591	0.0004305
Ag	107	3	He	0.027	0.002	80.00	0.0591	0.0004305
Cd	111	3	He	0.031	0.0003	10.00	0.0066	5.141E-05
Cd	111	3	He	0.031	0.0003	10.00	0.0066	5.141E-05
Cd	111	3	He	-0.008	0	0.00	0.0066	5.141E-05
Sn	120	3	He	-0.105	0.0165	640.04	0.0187	0.0185
Sn	120	3	He	-0.104	0.0166	650.04	0.0187	0.0185
Sn	120	3	He	-0.069	0.0172	680.05	0.0187	0.0185
Sb	121	3	He	0.066	0.0023	90.00	0.0183	0.00111
Sb	121	3	He	0.092	0.0028	110.00	0.0183	0.00111
Sb	121	3	He	0.271	0.0061	240.01	0.0183	0.00111
Ba	137	3	He	0.089	0.0013	50.00	0.0059	0.0007704
Ba	137	3	He	0.086	0.0013	50.00	0.0059	0.0007704
Ba	137	3	He	-0.045	0.0005	20.00	0.0059	0.0007704
Tl	205	3	He	0.147	0.0061	780.05	0.0364	0.000808
Tl	205	3	He	0.197	0.008	990.08	0.0364	0.000808
Tl	205	3	He	0.165	0.0068	840.06	0.0364	0.000808
Pb	208	3	He	0.013	0.0039	210.01	0.0487	0.003226
Pb	208	3	He	0.023	0.0043	320.02	0.0487	0.003226
Pb	208	3	He	0.007	0.0036	280.01	0.0487	0.003226
U	238	3	He	0.005	0.0007	90.00	0.0535	0.0004157
U	238	3	He	0.019	0.0014	180.01	0.0535	0.0004157
U	238	3	He	0.023	0.0016	200.01	0.0535	0.0004157
Sc	45	1	No Gas			1311709.20		
Sc	45	1	No Gas			1305407.32		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1283842.17		
Ge	72	1	No Gas			692598.27		
Ge	72	1	No Gas			693466.94		
Ge	72	1	No Gas			673714.91		
Sc	45	2	H2			86485.84		
Sc	45	2	H2			84203.56		
Sc	45	2	H2			85690.84		
Ge	72	2	H2			69609.30		
Ge	72	2	H2			70725.77		
Ge	72	2	H2			68002.18		
In	115	2	H2			184416.64		
In	115	2	H2			184127.30		
In	115	2	H2			182647.46		
Sc	45	3	He			21977.20		
Sc	45	3	He			22798.54		
Sc	45	3	He			22507.98		
Ge	72	3	He			40989.17		
Ge	72	3	He			41771.76		
Ge	72	3	He			41812.20		
In	115	3	He			38714.82		
In	115	3	He			39256.04		
In	115	3	He			39516.65		
Tb	159	3	He			174717.20		
Tb	159	3	He			176792.81		
Tb	159	3	He			171782.50		
Bi	209	3	He			127113.62		
Bi	209	3	He			124345.67		
Bi	209	3	He			123337.73		

Quantitation Report

Data File Name	050SMPL.d
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Acq Time	9/19/2023 8:30:25 AM
Sample Name	410-141896-I-3-A
Sample Type	Sample
Comment	B25
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

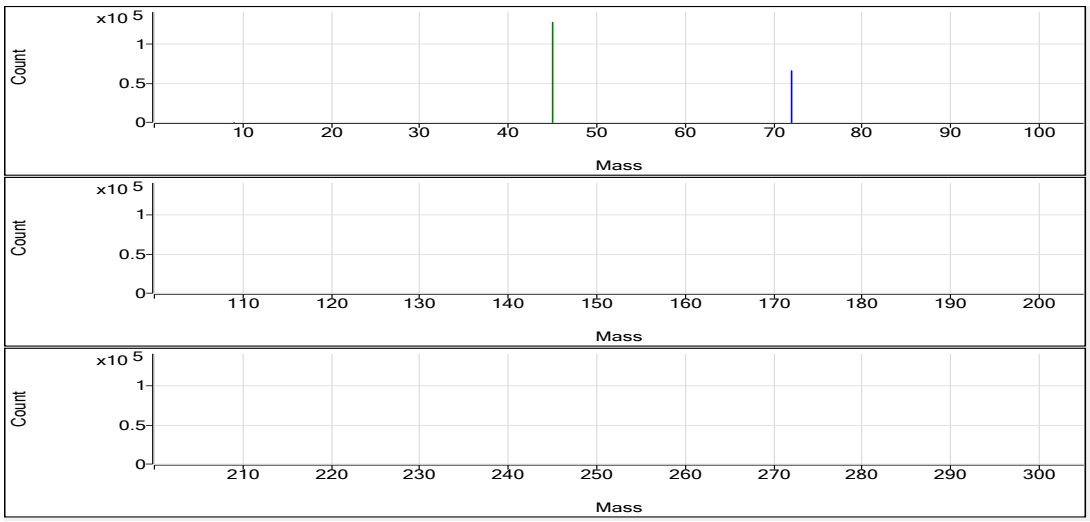
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.054	ppb	25.3	58.00	0.0000	Pulse	0.5000	3
Se	78	115	H2	0.493	ppb	16.9	18.89	0.0001	Pulse	1.5000	3
Na	23	45	He	1605950.096	ppb	2.5	129646131.40	5,726.6289	Analog	0.1000	3
Mg	24	45	He	134562.216	ppb	2.2	5539087.42	244.6573	Analog	0.1000	3
Al	27	45	He	281.488	ppb	4.1	3607.24	0.1594	Pulse	0.1000	3
K	39	45	He	30655.044	ppb	3.6	897926.39	39.6694	Pulse	0.1000	3
Ca	44	45	He	302381.525	ppb	2.3	501854.47	22.1669	Pulse	0.1000	3
Ti	47	45	He	6.535	ppb	14.9	93.34	0.0041	Pulse	0.1000	3
V	51	45	He	2.342	ppb	8.3	1791.46	0.0792	Pulse	0.5000	3
Cr	52	45	He	1.216	ppb	22.8	3287.16	0.1451	Pulse	0.1000	3
Mn	55	45	He	2622.480	ppb	2.1	823377.15	36.3673	Pulse	0.1000	3
Fe	57	45	He	15520.713	ppb	2.6	223447.60	9.8700	Pulse	0.1000	3
Co	59	45	He	0.581	ppb	5.8	1010.07	0.0446	Pulse	0.1000	3
Ni	60	72	He	3.294	ppb	7.2	2063.55	0.0501	Pulse	0.1000	3
Cu	63	72	He	0.804	ppb	12.5	1226.76	0.0298	Pulse	0.1000	3
Zn	66	72	He	5.382	ppb	20.3	873.39	0.0212	Pulse	0.1000	3
As	75	72	He	3.645	ppb	6.2	421.34	0.0102	Pulse	0.5000	3
Sr	88	115	He	3158.930	ppb	1.7	1258506.18	33.3048	Pulse	0.1000	3
Mo	98	115	He	1.041	ppb	16.9	1113.43	0.0295	Pulse	0.1000	3
Ag	107	115	He	0.020	ppb	60.7	60.00	0.0016	Pulse	0.1000	3
Cd	111	115	He	0.035	ppb	35.1	10.67	0.0003	Pulse	0.5000	3
Sn	120	115	He	-0.150	ppb	N/A	593.37	0.0157	Pulse	0.1000	3
Sb	121	115	He	0.450	ppb	4.8	353.35	0.0094	Pulse	0.1000	3
Ba	137	115	He	2016.499	ppb	1.5	446398.72	11.8132	Pulse	0.1000	3
Tl	205	209	He	0.049	ppb	12.9	306.68	0.0026	Pulse	0.1000	3
Pb	208	209	He	2.002	ppb	1.8	11919.24	0.1008	Pulse	0.1000	3
U	238	209	He	0.178	ppb	1.4	1176.77	0.0100	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1282548.08	1.6	96.1	Analog	0.1000	3
No Gas	Ge	72	660232.88	0.4	94.4	Pulse	0.1000	3
H2	Sc	45	86721.35	1.5	99.7	Pulse	0.1000	3
H2	Ge	72	68407.54	1.0	95.5	Pulse	0.1000	3
H2	In	115	174281.83	1.6	95.2	Pulse	0.1000	3
He	Sc	45	22648.22	2.5	98.4	Pulse	0.1000	3
He	Ge	72	41176.66	1.8	97.5	Pulse	0.1000	3
He	In	115	37791.64	1.0	97.1	Pulse	0.1000	3
He	Tb	159	169745.34	0.3	96.4	Pulse	0.1000	3
He	Bi	209	118207.64	1.3	92.2	Pulse	0.1000	3

No Gas



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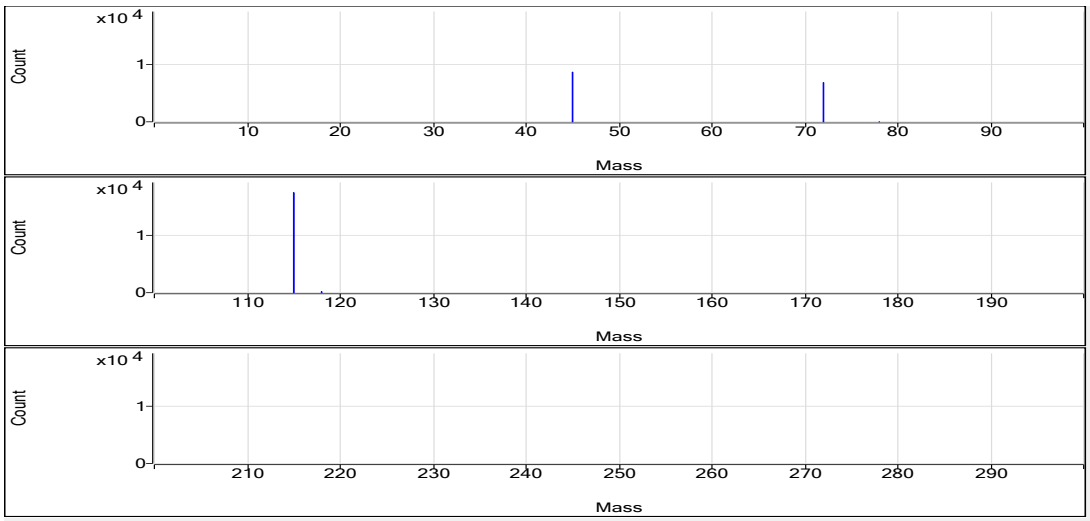
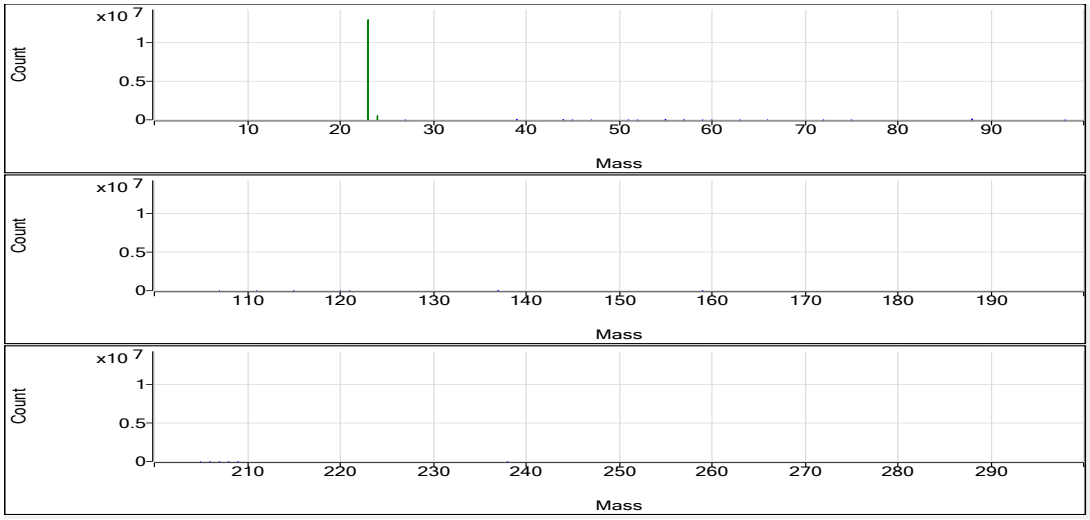


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.046	0	52.00	0.0005	1.901E-05
Be	9	1	No Gas	0.07	0.0001	68.00	0.0005	1.901E-05
Be	9	1	No Gas	0.047	0	54.00	0.0005	1.901E-05
Se	78	2	H2	0.421	0.0001	16.67	0.0002	7.279E-06
Se	78	2	H2	0.472	0.0001	18.00	0.0002	7.279E-06
Se	78	2	H2	0.584	0.0001	22.00	0.0002	7.279E-06
Na	23	3	He	1631371.029	5817.2655	130119548.06	0.0036	0.7194
Na	23	3	He	1560397.614	5564.2145	129586048.07	0.0036	0.7194
Na	23	3	He	1626081.644	5798.4066	129232798.07	0.0036	0.7194
Mg	24	3	He	136451.868	248.0929	5549298.04	0.0018	0.006791
Mg	24	3	He	131174.534	238.4981	5554427.42	0.0018	0.006791
Mg	24	3	He	136060.246	247.3809	5513536.79	0.0018	0.006791
Al	27	3	He	285.953	0.1619	3620.56	0.0006	0.002622
Al	27	3	He	268.286	0.152	3540.57	0.0006	0.002622
Al	27	3	He	290.224	0.1642	3660.59	0.0006	0.002622
K	39	3	He	31412.921	40.6363	908946.16	0.0013	0.5579
K	39	3	He	29386.5	38.0509	886174.75	0.0013	0.5579
K	39	3	He	31165.71	40.3209	898658.27	0.0013	0.5579
Ca	44	3	He	307332.732	22.5298	503943.39	0.0001	0.004062
Ca	44	3	He	294332.161	21.577	502510.15	0.0001	0.004062
Ca	44	3	He	305479.682	22.394	499109.88	0.0001	0.004062
Ti	47	3	He	6.385	0.004	90.01	0.0006	0.0002809
Ti	47	3	He	7.577	0.0047	110.00	0.0006	0.0002809
Ti	47	3	He	5.643	0.0036	80.00	0.0006	0.0002809
V	51	3	He	2.438	0.0816	1826.13	0.0259	0.01861
V	51	3	He	2.12	0.0734	1710.11	0.0259	0.01861
V	51	3	He	2.47	0.0825	1838.13	0.0259	0.01861
Cr	52	3	He	0.912	0.135	3020.42	0.0332	0.1047
Cr	52	3	He	1.281	0.1473	3430.54	0.0332	0.1047
Cr	52	3	He	1.454	0.153	3410.52	0.0332	0.1047
Mn	55	3	He	2662.207	36.9182	825779.36	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2559.163	35.4894	826519.99	0.0139	0.005074
Mn	55	3	He	2646.069	36.6944	817832.10	0.0139	0.005074
Fe	57	3	He	15856.486	10.0834	225543.67	0.0006	0.00609
Fe	57	3	He	15067.685	9.5821	223159.14	0.0006	0.00609
Fe	57	3	He	15637.968	9.9445	221639.98	0.0006	0.00609
Co	59	3	He	0.616	0.0469	1050.08	0.0661	0.00621
Co	59	3	He	0.549	0.0425	990.07	0.0661	0.00621
Co	59	3	He	0.578	0.0444	990.07	0.0661	0.00621
Ni	60	3	He	3.455	0.0517	2170.24	0.01	0.01721
Ni	60	3	He	3.406	0.0512	2100.23	0.01	0.01721
Ni	60	3	He	3.021	0.0474	1920.19	0.01	0.01721
Cu	63	3	He	0.695	0.0267	1120.08	0.0286	0.006793
Cu	63	3	He	0.827	0.0305	1250.09	0.0286	0.006793
Cu	63	3	He	0.891	0.0323	1310.10	0.0286	0.006793
Zn	66	3	He	4.522	0.0183	770.05	0.0034	0.00316
Zn	66	3	He	6.613	0.0254	1040.07	0.0034	0.00316
Zn	66	3	He	5.011	0.02	810.06	0.0034	0.00316
As	75	3	He	3.536	0.01	418.01	0.0026	0.0008231
As	75	3	He	3.496	0.0099	404.01	0.0026	0.0008231
As	75	3	He	3.903	0.0109	442.01	0.0026	0.0008231
Sr	88	3	He	3182.98	33.5584	1265084.59	0.0105	0.001715
Sr	88	3	He	3195.335	33.6886	1262233.65	0.0105	0.001715
Sr	88	3	He	3098.475	32.6675	1248200.29	0.0105	0.001715
Mo	98	3	He	1.184	0.0334	1260.11	0.0275	0.0008555
Mo	98	3	He	1.094	0.031	1160.10	0.0275	0.0008555
Mo	98	3	He	0.844	0.0241	920.07	0.0275	0.0008555
Ag	107	3	He	0.033	0.0024	90.00	0.0591	0.0004305
Ag	107	3	He	0.011	0.0011	40.00	0.0591	0.0004305
Ag	107	3	He	0.015	0.0013	50.00	0.0591	0.0004305
Cd	111	3	He	0.048	0.0004	14.00	0.0066	5.141E-05
Cd	111	3	He	0.024	0.0002	8.00	0.0066	5.141E-05
Cd	111	3	He	0.032	0.0003	10.00	0.0066	5.141E-05
Sn	120	3	He	-0.166	0.0154	580.03	0.0187	0.0185
Sn	120	3	He	-0.176	0.0152	570.04	0.0187	0.0185
Sn	120	3	He	-0.108	0.0165	630.04	0.0187	0.0185
Sb	121	3	He	0.461	0.0096	360.02	0.0183	0.00111
Sb	121	3	He	0.464	0.0096	360.02	0.0183	0.00111
Sb	121	3	He	0.426	0.0089	340.02	0.0183	0.00111
Ba	137	3	He	2038.575	11.9425	450209.06	0.0059	0.0007704
Ba	137	3	He	2029.718	11.8906	445513.63	0.0059	0.0007704
Ba	137	3	He	1981.204	11.6064	443473.47	0.0059	0.0007704
Tl	205	3	He	0.043	0.0024	280.01	0.0364	0.000808
Tl	205	3	He	0.056	0.0028	340.02	0.0364	0.000808
Tl	205	3	He	0.048	0.0026	300.01	0.0364	0.000808
Pb	208	3	He	2.045	0.1029	6822.02	0.0487	0.003226
Pb	208	3	He	1.98	0.0998	6001.59	0.0487	0.003226
Pb	208	3	He	1.982	0.0998	6131.65	0.0487	0.003226
U	238	3	He	0.181	0.0101	1190.11	0.0535	0.0004157
U	238	3	He	0.178	0.0099	1190.10	0.0535	0.0004157
U	238	3	He	0.176	0.0098	1150.09	0.0535	0.0004157
Sc	45	1	No Gas			1259967.95		
Sc	45	1	No Gas			1286655.68		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1301020.61		
Ge	72	1	No Gas			657975.07		
Ge	72	1	No Gas			662603.27		
Ge	72	1	No Gas			660120.30		
Sc	45	2	H2			87492.52		
Sc	45	2	H2			85229.71		
Sc	45	2	H2			87441.83		
Ge	72	2	H2			69157.53		
Ge	72	2	H2			68244.06		
Ge	72	2	H2			67821.02		
In	115	2	H2			177571.31		
In	115	2	H2			172510.35		
In	115	2	H2			172763.83		
Sc	45	3	He			22367.82		
Sc	45	3	He			23289.19		
Sc	45	3	He			22287.64		
Ge	72	3	He			41982.07		
Ge	72	3	He			41009.89		
Ge	72	3	He			40538.02		
In	115	3	He			37702.08		
In	115	3	He			37471.63		
In	115	3	He			38213.67		
Tb	159	3	He			170230.43		
Tb	159	3	He			169909.04		
Tb	159	3	He			169096.56		
Bi	209	3	He			117818.05		
Bi	209	3	He			119904.94		
Bi	209	3	He			116899.92		

Quantitation Report

Data File Name	051SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
Acq Time	9/19/2023 8:32:30 AM
Sample Name	410-141874-N-2-A
Sample Type	Sample
Comment	B25
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

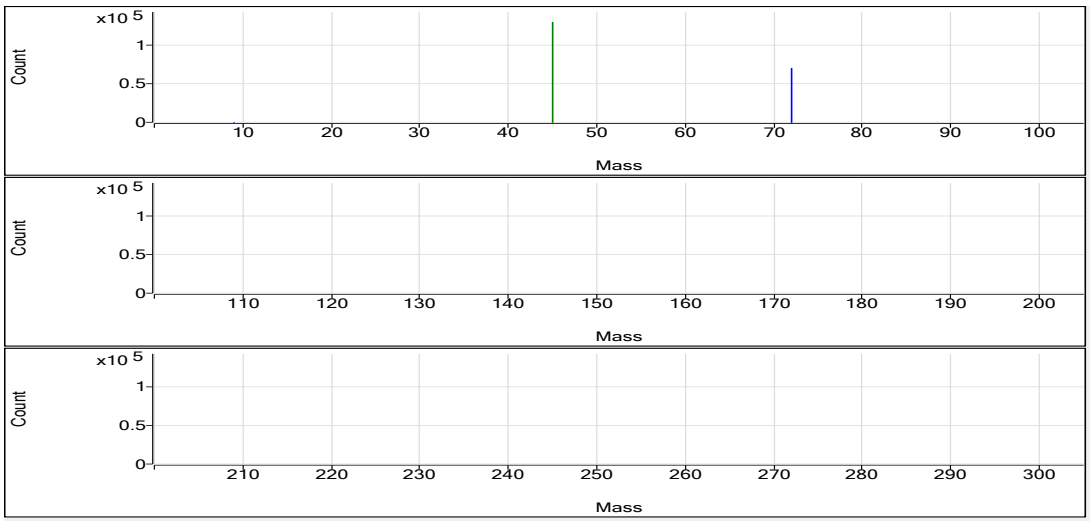
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.055	ppb	24.4	59.33	0.0000	Pulse	0.5000	3
Se	78	115	H2	0.035	ppb	0.5	2.67	0.0000	Pulse	1.5000	3
Na	23	45	He	636.645	ppb	1.6	68948.03	2.9893	Pulse	0.1000	3
Mg	24	45	He	49.231	ppb	4.2	2223.58	0.0963	Pulse	0.1000	3
Al	27	45	He	3.340	ppb	27.6	103.34	0.0045	Pulse	0.1000	3
K	39	45	He	43.879	ppb	70.8	14177.34	0.6139	Pulse	0.1000	3
Ca	44	45	He	135.587	ppb	9.4	323.35	0.0140	Pulse	0.1000	3
Ti	47	45	He	1.729	ppb	39.2	30.00	0.0013	Pulse	0.1000	3
V	51	45	He	0.104	ppb	57.4	490.68	0.0213	Pulse	0.5000	3
Cr	52	45	He	0.009	ppb	3418.8	2416.95	0.1050	Pulse	0.1000	3
Mn	55	45	He	0.923	ppb	23.2	413.35	0.0179	Pulse	0.1000	3
Fe	57	45	He	7.934	ppb	5.7	256.68	0.0111	Pulse	0.1000	3
Co	59	45	He	0.064	ppb	19.4	240.01	0.0104	Pulse	0.1000	3
Ni	60	72	He	0.039	ppb	178.6	753.38	0.0176	Pulse	0.1000	3
Cu	63	72	He	0.135	ppb	40.5	456.69	0.0106	Pulse	0.1000	3
Zn	66	72	He	-0.219	ppb	N/A	103.34	0.0024	Pulse	0.1000	3
As	75	72	He	0.120	ppb	118.1	48.67	0.0011	Pulse	0.5000	3
Sr	88	115	He	0.884	ppb	24.2	433.35	0.0110	Pulse	0.1000	3
Mo	98	115	He	0.006	ppb	273.4	40.00	0.0010	Pulse	0.1000	3
Ag	107	115	He	0.014	ppb	27.6	50.00	0.0013	Pulse	0.1000	3
Cd	111	115	He	0.007	ppb	176.7	4.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.043	ppb	321.8	760.05	0.0193	Pulse	0.1000	3
Sb	121	115	He	0.065	ppb	78.5	90.00	0.0023	Pulse	0.1000	3
Ba	137	115	He	0.764	ppb	17.9	206.68	0.0052	Pulse	0.1000	3
Tl	205	209	He	0.039	ppb	24.7	290.01	0.0022	Pulse	0.1000	3
Pb	208	209	He	0.006	ppb	108.9	453.36	0.0035	Pulse	0.1000	3
U	238	209	He	0.002	ppb	62.1	70.00	0.0005	Pulse	0.1000	3

ISTD Table:

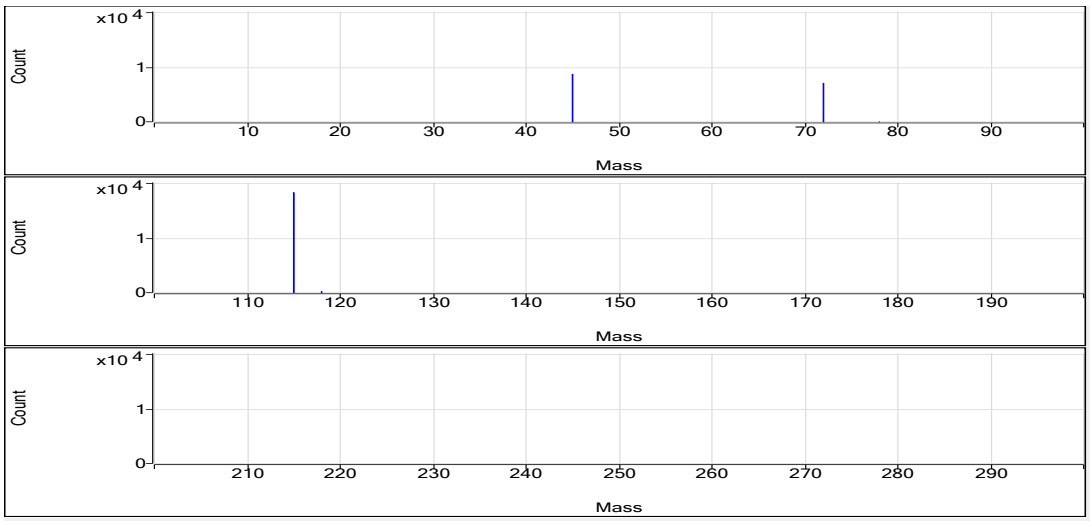
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1297973.70	0.7	97.3	Analog	0.1000	3
No Gas	Ge	72	700667.96	0.8	100.2	Pulse	0.1000	3
H2	Sc	45	87972.39	1.2	101.2	Pulse	0.1000	3
H2	Ge	72	71389.01	1.8	99.7	Pulse	0.1000	3
H2	In	115	184422.96	0.3	100.7	Pulse	0.1000	3
He	Sc	45	23068.96	4.0	100.3	Pulse	0.1000	3
He	Ge	72	42818.08	2.4	101.4	Pulse	0.1000	3
He	In	115	39341.26	1.8	101.0	Pulse	0.1000	3
He	Tb	159	175666.33	0.2	99.8	Pulse	0.1000	3
He	Bi	209	129710.70	0.1	101.2	Pulse	0.1000	3

No Gas

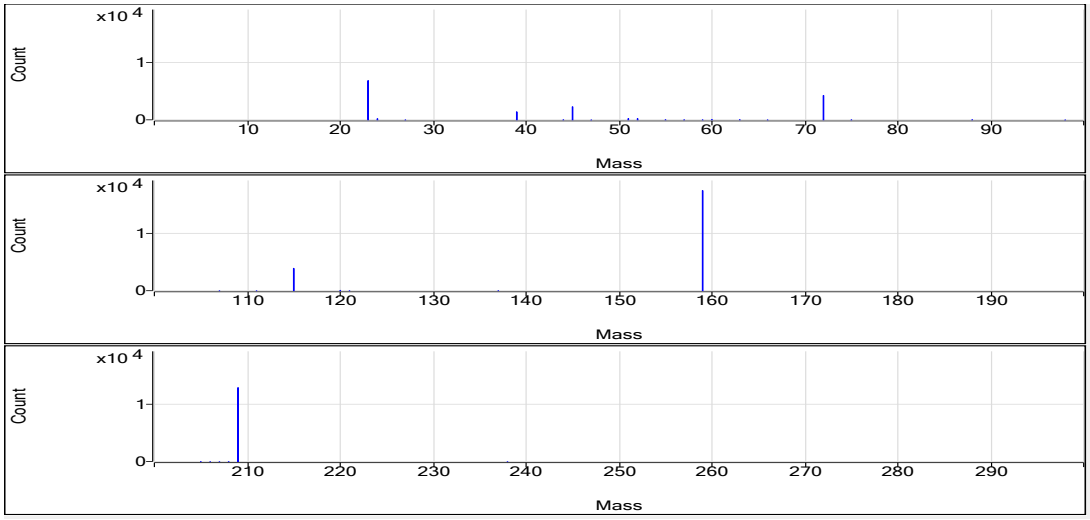


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.053	0	58.00	0.0005	1.901E-05
Be	9	1	No Gas	0.043	0	52.00	0.0005	1.901E-05
Be	9	1	No Gas	0.07	0.0001	68.00	0.0005	1.901E-05
Se	78	2	H2	0.035	0	2.67	0.0002	7.279E-06
Se	78	2	H2	0.035	0	2.67	0.0002	7.279E-06
Se	78	2	H2	0.035	0	2.67	0.0002	7.279E-06
Na	23	3	He	627.417	2.9564	71131.36	0.0036	0.7194
Na	23	3	He	647.83	3.0291	69363.39	0.0036	0.7194
Na	23	3	He	634.688	2.9823	66349.35	0.0036	0.7194
Mg	24	3	He	51.592	0.1006	2420.28	0.0018	0.006791
Mg	24	3	He	47.912	0.0939	2150.22	0.0018	0.006791
Mg	24	3	He	48.187	0.0944	2100.23	0.0018	0.006791
Al	27	3	He	3.501	0.0046	110.00	0.0006	0.002622
Al	27	3	He	2.349	0.0039	90.00	0.0006	0.002622
Al	27	3	He	4.17	0.0049	110.01	0.0006	0.002622
K	39	3	He	75.78	0.6546	15748.98	0.0013	0.5579
K	39	3	He	13.751	0.5754	13176.37	0.0013	0.5579
K	39	3	He	42.105	0.6116	13606.66	0.0013	0.5579
Ca	44	3	He	148.73	0.015	360.02	0.0001	0.004062
Ca	44	3	He	123.337	0.0131	300.02	0.0001	0.004062
Ca	44	3	He	134.694	0.0139	310.01	0.0001	0.004062
Ti	47	3	He	2.356	0.0017	40.00	0.0006	0.0002809
Ti	47	3	He	1.011	0.0009	20.00	0.0006	0.0002809
Ti	47	3	He	1.821	0.0013	30.00	0.0006	0.0002809
V	51	3	He	0.036	0.0195	470.01	0.0259	0.01861
V	51	3	He	0.131	0.022	504.01	0.0259	0.01861
V	51	3	He	0.146	0.0224	498.01	0.0259	0.01861
Cr	52	3	He	-0.3	0.0948	2280.25	0.0332	0.1047
Cr	52	3	He	0.003	0.1048	2400.29	0.0332	0.1047
Cr	52	3	He	0.325	0.1155	2570.31	0.0332	0.1047
Mn	55	3	He	1.133	0.0208	500.03	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.705	0.0148	340.01	0.0139	0.005074
Mn	55	3	He	0.931	0.018	400.02	0.0139	0.005074
Fe	57	3	He	7.421	0.0108	260.01	0.0006	0.00609
Fe	57	3	He	8.284	0.0114	260.01	0.0006	0.00609
Fe	57	3	He	8.099	0.0112	250.01	0.0006	0.00609
Co	59	3	He	0.063	0.0104	250.01	0.0661	0.00621
Co	59	3	He	0.051	0.0096	220.01	0.0661	0.00621
Co	59	3	He	0.076	0.0112	250.01	0.0661	0.00621
Ni	60	3	He	-0.035	0.0169	740.05	0.01	0.01721
Ni	60	3	He	0.104	0.0183	780.04	0.01	0.01721
Ni	60	3	He	0.048	0.0177	740.04	0.01	0.01721
Cu	63	3	He	0.169	0.0116	510.03	0.0286	0.006793
Cu	63	3	He	0.163	0.0115	490.02	0.0286	0.006793
Cu	63	3	He	0.072	0.0088	370.02	0.0286	0.006793
Zn	66	3	He	-0.398	0.0018	80.00	0.0034	0.00316
Zn	66	3	He	-0.314	0.0021	90.00	0.0034	0.00316
Zn	66	3	He	0.056	0.0033	140.01	0.0034	0.00316
As	75	3	He	0.175	0.0013	56.00	0.0026	0.0008231
As	75	3	He	0.225	0.0014	60.00	0.0026	0.0008231
As	75	3	He	-0.041	0.0007	30.00	0.0026	0.0008231
Sr	88	3	He	1.045	0.0127	500.02	0.0105	0.001715
Sr	88	3	He	0.642	0.0085	340.02	0.0105	0.001715
Sr	88	3	He	0.965	0.0119	460.02	0.0105	0.001715
Mo	98	3	He	0.024	0.0015	60.00	0.0275	0.0008555
Mo	98	3	He	-0.004	0.0007	30.00	0.0275	0.0008555
Mo	98	3	He	-0.003	0.0008	30.00	0.0275	0.0008555
Ag	107	3	He	0.014	0.0013	50.00	0.0591	0.0004305
Ag	107	3	He	0.018	0.0015	60.00	0.0591	0.0004305
Ag	107	3	He	0.01	0.001	40.00	0.0591	0.0004305
Cd	111	3	He	0.015	0.0002	6.00	0.0066	5.141E-05
Cd	111	3	He	0.015	0.0001	6.00	0.0066	5.141E-05
Cd	111	3	He	-0.008	0	0.00	0.0066	5.141E-05
Sn	120	3	He	0.195	0.0222	870.07	0.0187	0.0185
Sn	120	3	He	0.011	0.0187	750.04	0.0187	0.0185
Sn	120	3	He	-0.077	0.0171	660.04	0.0187	0.0185
Sb	121	3	He	0.12	0.0033	130.01	0.0183	0.00111
Sb	121	3	He	0.021	0.0015	60.00	0.0183	0.00111
Sb	121	3	He	0.052	0.0021	80.00	0.0183	0.00111
Ba	137	3	He	0.782	0.0053	210.01	0.0059	0.0007704
Ba	137	3	He	0.891	0.006	240.01	0.0059	0.0007704
Ba	137	3	He	0.619	0.0044	170.01	0.0059	0.0007704
Tl	205	3	He	0.037	0.0022	280.01	0.0364	0.000808
Tl	205	3	He	0.031	0.0019	250.01	0.0364	0.000808
Tl	205	3	He	0.05	0.0026	340.02	0.0364	0.000808
Pb	208	3	He	-0.001	0.0032	180.01	0.0487	0.003226
Pb	208	3	He	0.01	0.0037	320.02	0.0487	0.003226
Pb	208	3	He	0.008	0.0036	230.01	0.0487	0.003226
U	238	3	He	0.001	0.0005	60.00	0.0535	0.0004157
U	238	3	He	0.002	0.0005	70.00	0.0535	0.0004157
U	238	3	He	0.004	0.0006	80.00	0.0535	0.0004157
Sc	45	1	No Gas			1298339.28		
Sc	45	1	No Gas			1306322.32		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1289259.51		
Ge	72	1	No Gas			695991.24		
Ge	72	1	No Gas			706732.72		
Ge	72	1	No Gas			699279.91		
Sc	45	2	H2			87241.26		
Sc	45	2	H2			89202.79		
Sc	45	2	H2			87473.11		
Ge	72	2	H2			72655.10		
Ge	72	2	H2			70102.53		
Ge	72	2	H2			71409.39		
In	115	2	H2			184885.49		
In	115	2	H2			183945.00		
In	115	2	H2			184438.40		
Sc	45	3	He			24060.41		
Sc	45	3	He			22898.68		
Sc	45	3	He			22247.79		
Ge	72	3	He			43887.71		
Ge	72	3	He			42734.34		
Ge	72	3	He			41832.18		
In	115	3	He			39266.47		
In	115	3	He			40088.34		
In	115	3	He			38684.94		
Tb	159	3	He			175213.67		
Tb	159	3	He			175782.03		
Tb	159	3	He			176003.30		
Bi	209	3	He			129748.92		
Bi	209	3	He			129626.06		
Bi	209	3	He			129757.11		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
Acq Time	9/19/2023 8:34:31 AM
Sample Name	410-141880-E-9-A
Sample Type	Sample
Comment	B25
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

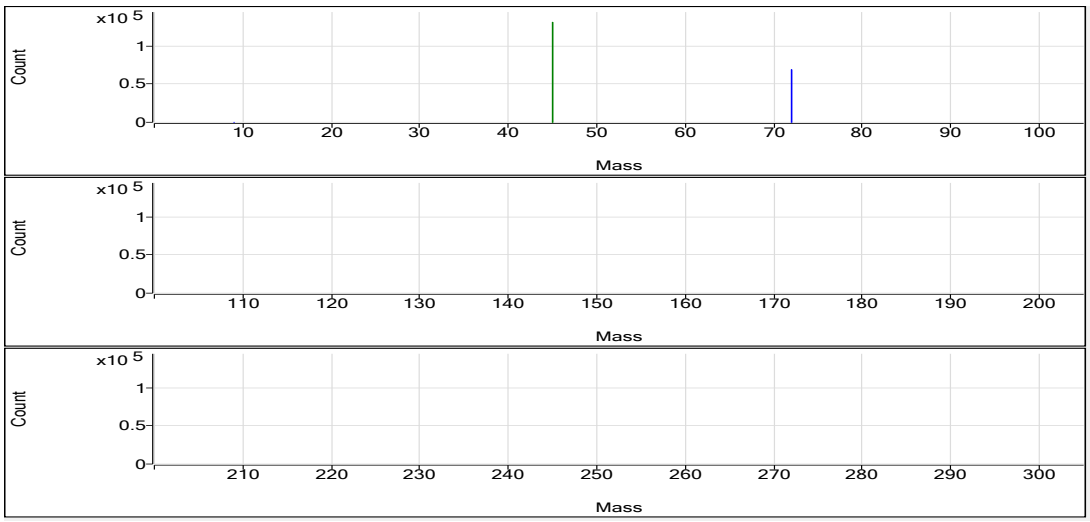
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.070	ppb	3.2	69.33	0.0001	Pulse	0.5000	3
Se	78	115	H2	0.304	ppb	26.6	12.67	0.0001	Pulse	1.5000	3
Na	23	45	He	163968.054	ppb	3.7	13517028.97	585.3367	Analog	0.1000	3
Mg	24	45	He	13115.168	ppb	3.5	550823.92	23.8518	Pulse	0.1000	3
Al	27	45	He	220.786	ppb	6.5	2900.40	0.1256	Pulse	0.1000	3
K	39	45	He	7538.016	ppb	3.4	235000.74	10.1753	Pulse	0.1000	3
Ca	44	45	He	143160.316	ppb	2.9	242438.56	10.4969	Pulse	0.1000	3
Ti	47	45	He	5.162	ppb	19.1	76.67	0.0033	Pulse	0.1000	3
V	51	45	He	2.549	ppb	3.8	1952.14	0.0845	Pulse	0.5000	3
Cr	52	45	He	0.395	ppb	55.0	2720.35	0.1179	Pulse	0.1000	3
Mn	55	45	He	2461.397	ppb	3.3	788305.77	34.1338	Pulse	0.1000	3
Fe	57	45	He	21123.651	ppb	3.2	310188.10	13.4309	Pulse	0.1000	3
Co	59	45	He	0.389	ppb	8.5	736.71	0.0319	Pulse	0.1000	3
Ni	60	72	He	0.522	ppb	43.5	960.07	0.0224	Pulse	0.1000	3
Cu	63	72	He	0.954	ppb	13.2	1460.12	0.0341	Pulse	0.1000	3
Zn	66	72	He	25.938	ppb	3.4	3863.98	0.0902	Pulse	0.1000	3
As	75	72	He	4.461	ppb	11.8	528.68	0.0123	Pulse	0.5000	3
Sr	88	115	He	939.349	ppb	1.3	384779.21	9.9048	Pulse	0.1000	3
Mo	98	115	He	1.020	ppb	5.9	1123.43	0.0289	Pulse	0.1000	3
Ag	107	115	He	-0.003	ppb	N/A	10.00	0.0003	Pulse	0.1000	3
Cd	111	115	He	0.010	ppb	113.8	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.012	ppb	N/A	710.04	0.0183	Pulse	0.1000	3
Sb	121	115	He	0.277	ppb	18.1	240.01	0.0062	Pulse	0.1000	3
Ba	137	115	He	320.299	ppb	0.9	72921.16	1.8770	Pulse	0.1000	3
Tl	205	209	He	0.050	ppb	9.7	326.69	0.0026	Pulse	0.1000	3
Pb	208	209	He	1.504	ppb	1.3	9488.41	0.0766	Pulse	0.1000	3
U	238	209	He	0.102	ppb	1.7	726.72	0.0059	Pulse	0.1000	3

ISTD Table:

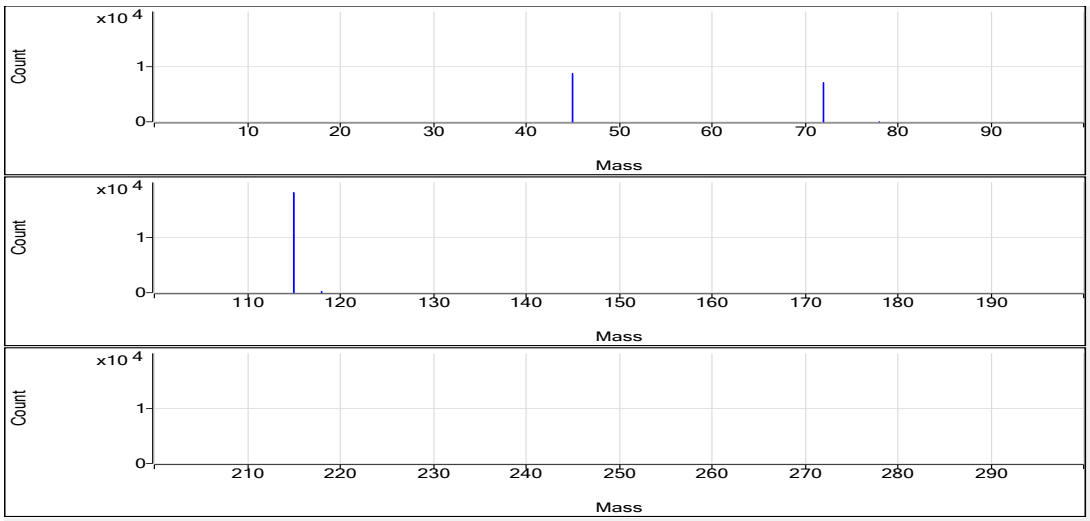
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1312701.20	1.3	98.4	Analog	0.1000	3
No Gas	Ge	72	690957.15	0.5	98.8	Pulse	0.1000	3
H2	Sc	45	87740.72	0.9	100.9	Pulse	0.1000	3
H2	Ge	72	71123.99	1.0	99.3	Pulse	0.1000	3
H2	In	115	181579.29	1.3	99.1	Pulse	0.1000	3
He	Sc	45	23108.99	2.8	100.5	Pulse	0.1000	3
He	Ge	72	42818.43	0.3	101.4	Pulse	0.1000	3
He	In	115	38850.14	0.9	99.8	Pulse	0.1000	3
He	Tb	159	174710.44	0.4	99.2	Pulse	0.1000	3
He	Bi	209	123956.16	1.3	96.7	Pulse	0.1000	3

No Gas

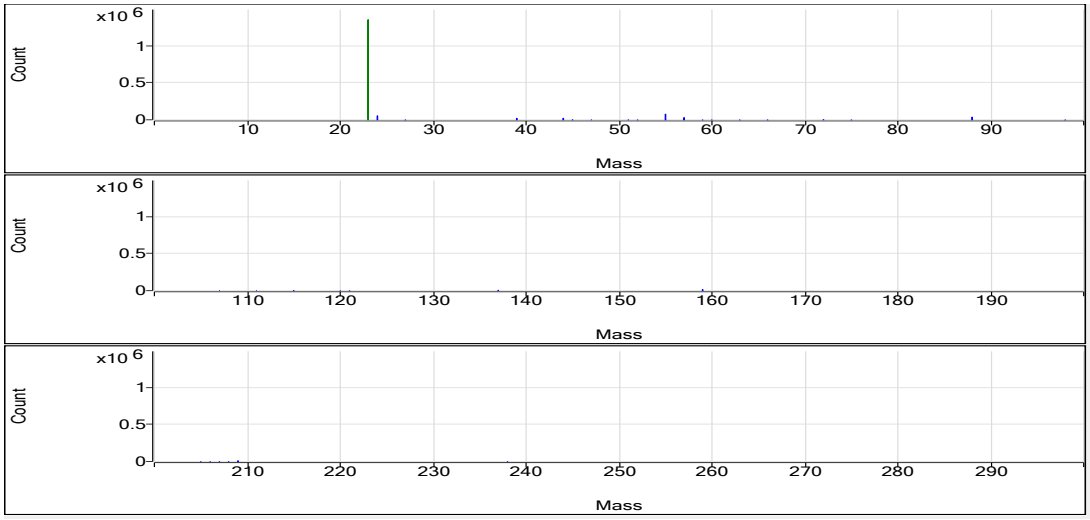


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.068	0.0001	68.00	0.0005	1.901E-05
Be	9	1	No Gas	0.073	0.0001	70.00	0.0005	1.901E-05
Be	9	1	No Gas	0.07	0.0001	70.00	0.0005	1.901E-05
Se	78	2	H2	0.264	0.0001	11.33	0.0002	7.279E-06
Se	78	2	H2	0.398	0.0001	16.00	0.0002	7.279E-06
Se	78	2	H2	0.252	0.0001	10.67	0.0002	7.279E-06
Na	23	3	He	171037.488	610.5423	13650473.55	0.0036	0.7194
Na	23	3	He	160762.59	573.9078	13446321.05	0.0036	0.7194
Na	23	3	He	160104.084	571.5599	13454292.30	0.0036	0.7194
Mg	24	3	He	13649.094	24.8225	554980.42	0.0018	0.006791
Mg	24	3	He	12873.745	23.4128	548548.78	0.0018	0.006791
Mg	24	3	He	12822.666	23.32	548942.57	0.0018	0.006791
Al	27	3	He	226.633	0.1288	2880.38	0.0006	0.002622
Al	27	3	He	231.388	0.1315	3080.46	0.0006	0.002622
Al	27	3	He	204.338	0.1164	2740.35	0.0006	0.002622
K	39	3	He	7833.006	10.5517	235914.08	0.0013	0.5579
K	39	3	He	7374.976	9.9673	233528.08	0.0013	0.5579
K	39	3	He	7406.065	10.007	235560.07	0.0013	0.5579
Ca	44	3	He	148017.568	10.8529	242649.16	0.0001	0.004062
Ca	44	3	He	141044.21	10.3418	242302.67	0.0001	0.004062
Ca	44	3	He	140419.17	10.296	242363.84	0.0001	0.004062
Ti	47	3	He	4.098	0.0027	60.00	0.0006	0.0002809
Ti	47	3	He	5.345	0.0034	80.00	0.0006	0.0002809
Ti	47	3	He	6.042	0.0038	90.00	0.0006	0.0002809
V	51	3	He	2.66	0.0874	1954.14	0.0259	0.01861
V	51	3	He	2.493	0.0831	1946.14	0.0259	0.01861
V	51	3	He	2.494	0.0831	1956.15	0.0259	0.01861
Cr	52	3	He	0.645	0.1261	2820.38	0.0332	0.1047
Cr	52	3	He	0.252	0.1131	2650.32	0.0332	0.1047
Cr	52	3	He	0.288	0.1143	2690.36	0.0332	0.1047
Mn	55	3	He	2555.718	35.4417	792402.80	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2417.279	33.5221	785403.43	0.0139	0.005074
Mn	55	3	He	2411.194	33.4377	787111.08	0.0139	0.005074
Fe	57	3	He	21896.438	13.922	311267.03	0.0006	0.00609
Fe	57	3	He	20774.997	13.2093	309485.46	0.0006	0.00609
Fe	57	3	He	20699.518	13.1613	309811.81	0.0006	0.00609
Co	59	3	He	0.427	0.0344	770.05	0.0661	0.00621
Co	59	3	He	0.371	0.0307	720.04	0.0661	0.00621
Co	59	3	He	0.369	0.0306	720.04	0.0661	0.00621
Ni	60	3	He	0.504	0.0222	950.06	0.01	0.01721
Ni	60	3	He	0.305	0.0203	870.06	0.01	0.01721
Ni	60	3	He	0.758	0.0248	1060.08	0.01	0.01721
Cu	63	3	He	0.834	0.0307	1310.10	0.0286	0.006793
Cu	63	3	He	0.942	0.0338	1450.12	0.0286	0.006793
Cu	63	3	He	1.085	0.0379	1620.15	0.0286	0.006793
Zn	66	3	He	25.074	0.0873	3730.61	0.0034	0.00316
Zn	66	3	He	25.899	0.0901	3870.68	0.0034	0.00316
Zn	66	3	He	26.841	0.0933	3990.65	0.0034	0.00316
As	75	3	He	3.996	0.0111	476.01	0.0026	0.0008231
As	75	3	He	5.036	0.0138	594.02	0.0026	0.0008231
As	75	3	He	4.351	0.0121	516.01	0.0026	0.0008231
Sr	88	3	He	939.766	9.9092	387464.84	0.0105	0.001715
Sr	88	3	He	926.853	9.7731	381351.24	0.0105	0.001715
Sr	88	3	He	951.429	10.0322	385521.56	0.0105	0.001715
Mo	98	3	He	1.001	0.0284	1110.10	0.0275	0.0008555
Mo	98	3	He	1.087	0.0308	1200.10	0.0275	0.0008555
Mo	98	3	He	0.972	0.0276	1060.08	0.0275	0.0008555
Ag	107	3	He	-0.003	0.0003	10.00	0.0591	0.0004305
Ag	107	3	He	-0.003	0.0003	10.00	0.0591	0.0004305
Ag	107	3	He	-0.003	0.0003	10.00	0.0591	0.0004305
Cd	111	3	He	0	0.0001	2.00	0.0066	5.141E-05
Cd	111	3	He	0.023	0.0002	8.00	0.0066	5.141E-05
Cd	111	3	He	0.008	0.0001	4.00	0.0066	5.141E-05
Sn	120	3	He	-0.1	0.0166	650.04	0.0187	0.0185
Sn	120	3	He	-0.003	0.0185	720.04	0.0187	0.0185
Sn	120	3	He	0.068	0.0198	760.05	0.0187	0.0185
Sb	121	3	He	0.233	0.0054	210.01	0.0183	0.00111
Sb	121	3	He	0.331	0.0072	280.01	0.0183	0.00111
Sb	121	3	He	0.266	0.006	230.01	0.0183	0.00111
Ba	137	3	He	317.102	1.8583	72662.84	0.0059	0.0007704
Ba	137	3	He	321.898	1.8864	73608.78	0.0059	0.0007704
Ba	137	3	He	321.898	1.8864	72491.86	0.0059	0.0007704
Tl	205	3	He	0.054	0.0028	340.02	0.0364	0.000808
Tl	205	3	He	0.045	0.0024	300.02	0.0364	0.000808
Tl	205	3	He	0.052	0.0027	340.02	0.0364	0.000808
Pb	208	3	He	1.519	0.0773	5301.26	0.0487	0.003226
Pb	208	3	He	1.512	0.0769	5061.18	0.0487	0.003226
Pb	208	3	He	1.482	0.0755	5201.22	0.0487	0.003226
U	238	3	He	0.1	0.0058	710.05	0.0535	0.0004157
U	238	3	He	0.101	0.0058	720.05	0.0535	0.0004157
U	238	3	He	0.104	0.006	750.06	0.0535	0.0004157
Sc	45	1	No Gas			1310964.51		
Sc	45	1	No Gas			1296393.65		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1330745.45		
Ge	72	1	No Gas			694896.47		
Ge	72	1	No Gas			689716.32		
Ge	72	1	No Gas			688258.66		
Sc	45	2	H2			88539.03		
Sc	45	2	H2			87703.55		
Sc	45	2	H2			86979.59		
Ge	72	2	H2			71539.46		
Ge	72	2	H2			71560.14		
Ge	72	2	H2			70272.36		
In	115	2	H2			184357.44		
In	115	2	H2			179759.31		
In	115	2	H2			180621.13		
Sc	45	3	He			22357.95		
Sc	45	3	He			23429.41		
Sc	45	3	He			23539.60		
Ge	72	3	He			42714.77		
Ge	72	3	He			42955.61		
Ge	72	3	He			42784.91		
In	115	3	He			39105.98		
In	115	3	He			39025.56		
In	115	3	He			38433.79		
Tb	159	3	He			175053.40		
Tb	159	3	He			175162.34		
Tb	159	3	He			173915.58		
Bi	209	3	He			122842.53		
Bi	209	3	He			123245.78		
Bi	209	3	He			125780.17		

Quantitation Report

Data File Name	053SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
Acq Time	9/19/2023 8:36:32 AM
Sample Name	410-141896-I-2-A
Sample Type	Sample
Comment	B25
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

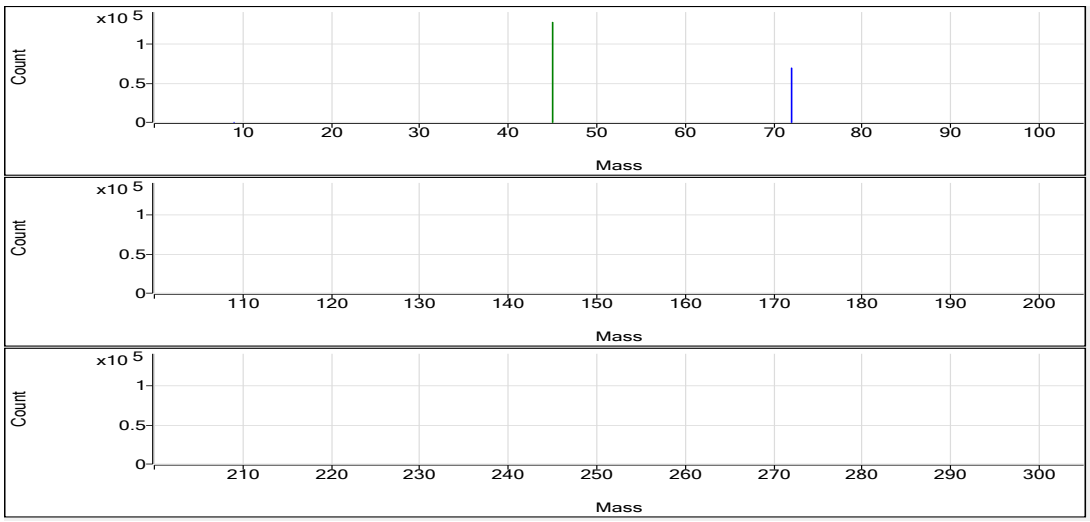
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.034	ppb	31.0	45.33	0.0000	Pulse	0.5000	3
Se	78	115	H2	0.042	ppb	64.4	2.89	0.0000	Pulse	1.5000	3
Na	23	45	He	374.311	ppb	6.3	47108.93	2.0539	Pulse	0.1000	3
Mg	24	45	He	26.841	ppb	7.2	1276.77	0.0556	Pulse	0.1000	3
Al	27	45	He	3.394	ppb	39.8	103.33	0.0045	Pulse	0.1000	3
K	39	45	He	33.408	ppb	104.9	13773.61	0.6005	Pulse	0.1000	3
Ca	44	45	He	132.303	ppb	21.4	316.68	0.0138	Pulse	0.1000	3
Ti	47	45	He	0.273	ppb	477.7	10.00	0.0004	Pulse	0.1000	3
V	51	45	He	0.143	ppb	29.1	512.01	0.0223	Pulse	0.5000	3
Cr	52	45	He	-0.299	ppb	N/A	2173.58	0.0948	Pulse	0.1000	3
Mn	55	45	He	1.065	ppb	23.2	456.69	0.0198	Pulse	0.1000	3
Fe	57	45	He	6.852	ppb	13.2	240.01	0.0104	Pulse	0.1000	3
Co	59	45	He	0.046	ppb	113.2	213.34	0.0093	Pulse	0.1000	3
Ni	60	72	He	0.028	ppb	894.5	763.38	0.0175	Pulse	0.1000	3
Cu	63	72	He	0.254	ppb	28.9	613.37	0.0141	Pulse	0.1000	3
Zn	66	72	He	-0.282	ppb	N/A	96.67	0.0022	Pulse	0.1000	3
As	75	72	He	0.054	ppb	214.1	42.00	0.0010	Pulse	0.5000	3
Sr	88	115	He	0.548	ppb	17.6	296.68	0.0075	Pulse	0.1000	3
Mo	98	115	He	0.033	ppb	72.2	70.00	0.0018	Pulse	0.1000	3
Ag	107	115	He	0.010	ppb	116.1	40.00	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.000	ppb	N/A	2.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.015	ppb	676.1	743.38	0.0188	Pulse	0.1000	3
Sb	121	115	He	0.036	ppb	133.2	70.00	0.0018	Pulse	0.1000	3
Ba	137	115	He	0.414	ppb	47.0	126.67	0.0032	Pulse	0.1000	3
Tl	205	209	He	0.019	ppb	62.9	193.34	0.0015	Pulse	0.1000	3
Pb	208	209	He	0.006	ppb	63.1	450.02	0.0035	Pulse	0.1000	3
U	238	209	He	0.001	ppb	503.4	60.00	0.0005	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1281073.13	1.2	96.0	Analog	0.1000	3
No Gas	Ge	72	695963.79	0.6	99.5	Pulse	0.1000	3
H2	Sc	45	85712.20	2.0	98.6	Pulse	0.1000	3
H2	Ge	72	71827.11	1.4	100.3	Pulse	0.1000	3
H2	In	115	182046.14	0.6	99.4	Pulse	0.1000	3
He	Sc	45	22955.43	3.1	99.8	Pulse	0.1000	3
He	Ge	72	43610.89	1.6	103.3	Pulse	0.1000	3
He	In	115	39575.27	0.8	101.6	Pulse	0.1000	3
He	Tb	159	175440.56	1.3	99.6	Pulse	0.1000	3
He	Bi	209	127893.37	1.0	99.7	Pulse	0.1000	3

No Gas



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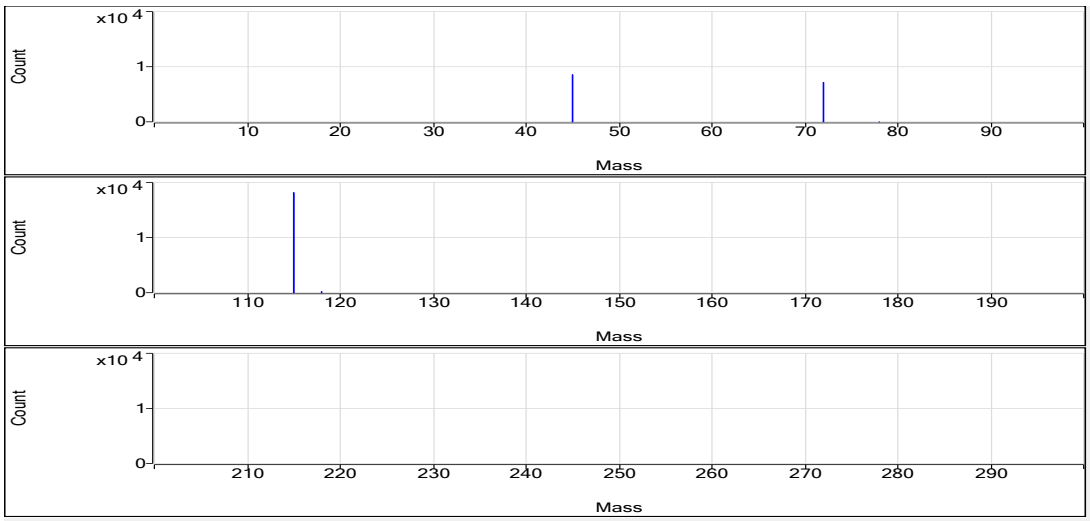
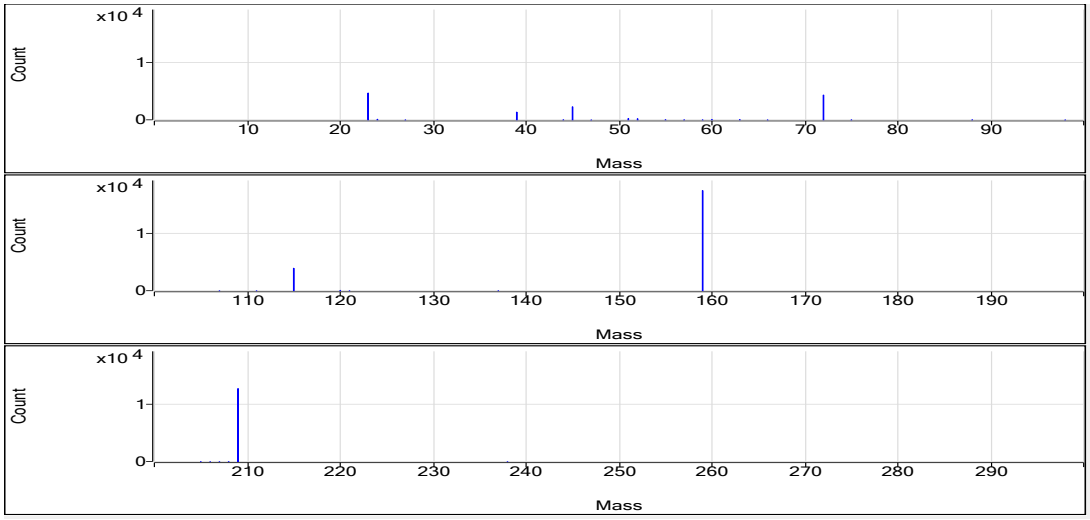


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.023	0	38.00	0.0005	1.901E-05
Be	9	1	No Gas	0.035	0	46.00	0.0005	1.901E-05
Be	9	1	No Gas	0.044	0	52.00	0.0005	1.901E-05
Se	78	2	H2	0.071	0	4.00	0.0002	7.279E-06
Se	78	2	H2	0.036	0	2.67	0.0002	7.279E-06
Se	78	2	H2	0.018	0	2.00	0.0002	7.279E-06
Na	23	3	He	384.776	2.0912	47446.54	0.0036	0.7194
Na	23	3	He	347.179	1.9572	46503.46	0.0036	0.7194
Na	23	3	He	390.977	2.1134	47376.78	0.0036	0.7194
Mg	24	3	He	28.51	0.0586	1330.10	0.0018	0.006791
Mg	24	3	He	27.286	0.0564	1340.10	0.0018	0.006791
Mg	24	3	He	24.728	0.0517	1160.10	0.0018	0.006791
Al	27	3	He	4.789	0.0053	120.00	0.0006	0.002622
Al	27	3	He	2.093	0.0038	90.00	0.0006	0.002622
Al	27	3	He	3.301	0.0045	100.00	0.0006	0.002622
K	39	3	He	72.912	0.6509	14767.78	0.0013	0.5579
K	39	3	He	5.984	0.5655	13436.69	0.0013	0.5579
K	39	3	He	21.327	0.5851	13116.35	0.0013	0.5579
Ca	44	3	He	106.949	0.0119	270.01	0.0001	0.004062
Ca	44	3	He	162.793	0.016	380.02	0.0001	0.004062
Ca	44	3	He	127.166	0.0134	300.01	0.0001	0.004062
Ti	47	3	He	1.776	0.0013	30.00	0.0006	0.0002809
Ti	47	3	He	-0.479	0	0.00	0.0006	0.0002809
Ti	47	3	He	-0.479	0	0.00	0.0006	0.0002809
V	51	3	He	0.098	0.0212	480.01	0.0259	0.01861
V	51	3	He	0.149	0.0225	534.01	0.0259	0.01861
V	51	3	He	0.181	0.0233	522.01	0.0259	0.01861
Cr	52	3	He	-0.048	0.1031	2340.26	0.0332	0.1047
Cr	52	3	He	-0.517	0.0876	2080.23	0.0332	0.1047
Cr	52	3	He	-0.333	0.0937	2100.24	0.0332	0.1047
Mn	55	3	He	1.128	0.0207	470.02	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1.273	0.0227	540.03	0.0139	0.005074
Mn	55	3	He	0.792	0.0161	360.02	0.0139	0.005074
Fe	57	3	He	7.062	0.0106	240.01	0.0006	0.00609
Fe	57	3	He	7.636	0.0109	260.01	0.0006	0.00609
Fe	57	3	He	5.859	0.0098	220.01	0.0006	0.00609
Co	59	3	He	0.086	0.0119	270.01	0.0661	0.00621
Co	59	3	He	0.065	0.0105	250.01	0.0661	0.00621
Co	59	3	He	-0.013	0.0054	120.00	0.0661	0.00621
Ni	60	3	He	-0.007	0.0171	760.05	0.01	0.01721
Ni	60	3	He	0.299	0.0202	880.05	0.01	0.01721
Ni	60	3	He	-0.207	0.0151	650.04	0.01	0.01721
Cu	63	3	He	0.259	0.0142	630.04	0.0286	0.006793
Cu	63	3	He	0.324	0.0161	700.05	0.0286	0.006793
Cu	63	3	He	0.178	0.0119	510.03	0.0286	0.006793
Zn	66	3	He	-0.135	0.0027	120.00	0.0034	0.00316
Zn	66	3	He	-0.326	0.0021	90.00	0.0034	0.00316
Zn	66	3	He	-0.386	0.0019	80.00	0.0034	0.00316
As	75	3	He	0.031	0.0009	40.00	0.0026	0.0008231
As	75	3	He	0.179	0.0013	56.00	0.0026	0.0008231
As	75	3	He	-0.048	0.0007	30.00	0.0026	0.0008231
Sr	88	3	He	0.574	0.0078	310.01	0.0105	0.001715
Sr	88	3	He	0.441	0.0064	250.01	0.0105	0.001715
Sr	88	3	He	0.629	0.0083	330.02	0.0105	0.001715
Mo	98	3	He	0.051	0.0023	90.00	0.0275	0.0008555
Mo	98	3	He	0.006	0.001	40.00	0.0275	0.0008555
Mo	98	3	He	0.042	0.002	80.00	0.0275	0.0008555
Ag	107	3	He	0.001	0.0005	20.00	0.0591	0.0004305
Ag	107	3	He	0.023	0.0018	70.00	0.0591	0.0004305
Ag	107	3	He	0.006	0.0008	30.00	0.0591	0.0004305
Cd	111	3	He	0.007	0.0001	4.00	0.0066	5.141E-05
Cd	111	3	He	-0.008	0	0.00	0.0066	5.141E-05
Cd	111	3	He	0	0.0001	2.00	0.0066	5.141E-05
Sn	120	3	He	-0.105	0.0165	660.03	0.0187	0.0185
Sn	120	3	He	0.072	0.0199	780.05	0.0187	0.0185
Sn	120	3	He	0.079	0.02	790.06	0.0187	0.0185
Sb	121	3	He	0.008	0.0013	50.00	0.0183	0.00111
Sb	121	3	He	0.009	0.0013	50.00	0.0183	0.00111
Sb	121	3	He	0.091	0.0028	110.00	0.0183	0.00111
Ba	137	3	He	0.638	0.0045	180.01	0.0059	0.0007704
Ba	137	3	He	0.303	0.0025	100.00	0.0059	0.0007704
Ba	137	3	He	0.3	0.0025	100.00	0.0059	0.0007704
Tl	205	3	He	0.033	0.002	260.01	0.0364	0.000808
Tl	205	3	He	0.01	0.0012	150.01	0.0364	0.000808
Tl	205	3	He	0.015	0.0013	170.01	0.0364	0.000808
Pb	208	3	He	0.008	0.0036	270.01	0.0487	0.003226
Pb	208	3	He	0.002	0.0033	210.01	0.0487	0.003226
Pb	208	3	He	0.008	0.0036	240.01	0.0487	0.003226
U	238	3	He	-0.002	0.0003	40.00	0.0535	0.0004157
U	238	3	He	0.007	0.0008	100.00	0.0535	0.0004157
U	238	3	He	-0.002	0.0003	40.00	0.0535	0.0004157
Sc	45	1	No Gas			1266667.56		
Sc	45	1	No Gas			1278332.01		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1298219.82		
Ge	72	1	No Gas			694620.15		
Ge	72	1	No Gas			692738.90		
Ge	72	1	No Gas			700532.33		
Sc	45	2	H2			86778.39		
Sc	45	2	H2			83780.78		
Sc	45	2	H2			86577.42		
Ge	72	2	H2			72433.36		
Ge	72	2	H2			70654.22		
Ge	72	2	H2			72393.75		
In	115	2	H2			182952.11		
In	115	2	H2			180803.06		
In	115	2	H2			182383.24		
Sc	45	3	He			22688.19		
Sc	45	3	He			23760.26		
Sc	45	3	He			22417.83		
Ge	72	3	He			44339.98		
Ge	72	3	He			43577.22		
Ge	72	3	He			42915.46		
In	115	3	He			39917.91		
In	115	3	He			39286.51		
In	115	3	He			39537.00		
Tb	159	3	He			177745.78		
Tb	159	3	He			175246.01		
Tb	159	3	He			173329.90		
Bi	209	3	He			129394.86		
Bi	209	3	He			127061.42		
Bi	209	3	He			127223.83		

Quantitation Report

Data File Name	054SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
Acq Time	9/19/2023 8:38:30 AM
Sample Name	410-141896-I-4-A
Sample Type	Sample
Comment	B25
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

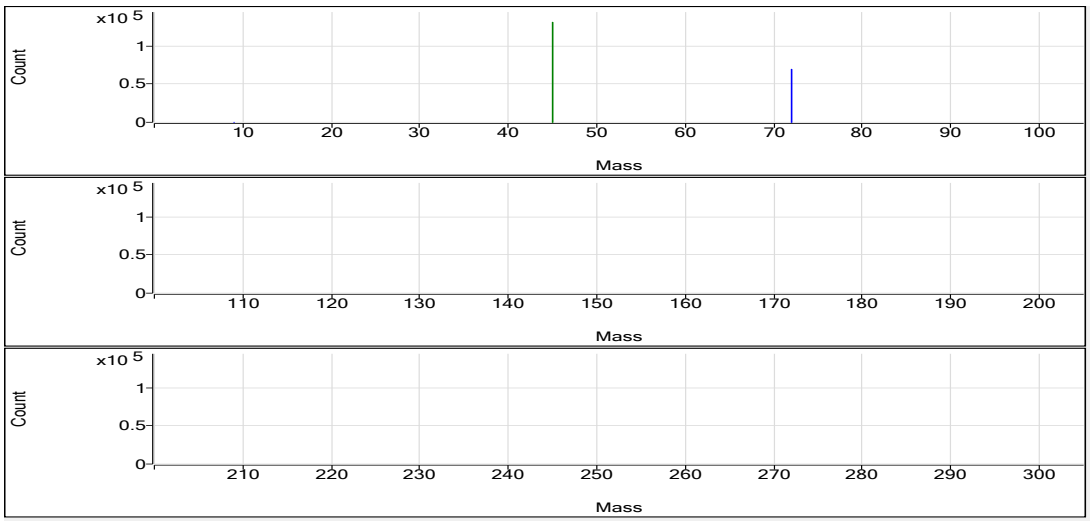
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.073	ppb	15.5	71.33	0.0001	Pulse	0.5000	3
Se	78	115	H2	0.296	ppb	40.5	12.44	0.0001	Pulse	1.5000	3
Na	23	45	He	118853.540	ppb	2.3	9800745.89	424.4838	Analog	0.1000	3
Mg	24	45	He	27263.898	ppb	2.4	1144605.11	49.5759	Mix	0.1000	3
Al	27	45	He	410.359	ppb	4.1	5341.20	0.2311	Pulse	0.1000	3
K	39	45	He	15446.942	ppb	2.4	467905.75	20.2660	Pulse	0.1000	3
Ca	44	45	He	168158.579	ppb	2.5	284644.05	12.3291	Pulse	0.1000	3
Ti	47	45	He	11.344	ppb	28.5	160.01	0.0069	Pulse	0.1000	3
V	51	45	He	3.201	ppb	3.0	2340.87	0.1014	Pulse	0.5000	3
Cr	52	45	He	1.754	ppb	10.1	3763.96	0.1630	Pulse	0.1000	3
Mn	55	45	He	452.142	ppb	0.9	144891.28	6.2743	Pulse	0.1000	3
Fe	57	45	He	8792.200	ppb	2.8	129140.09	5.5938	Pulse	0.1000	3
Co	59	45	He	0.434	ppb	10.9	806.72	0.0349	Pulse	0.1000	3
Ni	60	72	He	2.311	ppb	15.6	1766.84	0.0403	Pulse	0.1000	3
Cu	63	72	He	1.932	ppb	6.2	2727.03	0.0621	Pulse	0.1000	3
Zn	66	72	He	18.120	ppb	10.3	2810.37	0.0640	Pulse	0.1000	3
As	75	72	He	1.983	ppb	21.4	260.67	0.0059	Pulse	0.5000	3
Sr	88	115	He	1485.023	ppb	1.6	600481.50	15.6576	Pulse	0.1000	3
Mo	98	115	He	0.604	ppb	13.3	670.04	0.0175	Pulse	0.1000	3
Ag	107	115	He	0.015	ppb	91.1	50.00	0.0013	Pulse	0.1000	3
Cd	111	115	He	0.323	ppb	13.6	84.00	0.0022	Pulse	0.5000	3
Sn	120	115	He	0.037	ppb	211.5	736.71	0.0192	Pulse	0.1000	3
Sb	121	115	He	0.158	ppb	52.7	153.34	0.0040	Pulse	0.1000	3
Ba	137	115	He	2209.449	ppb	1.3	496388.53	12.9435	Pulse	0.1000	3
Tl	205	209	He	0.012	ppb	75.3	156.67	0.0013	Pulse	0.1000	3
Pb	208	209	He	5.566	ppb	1.9	34318.75	0.2746	Pulse	0.1000	3
U	238	209	He	0.288	ppb	4.5	1976.90	0.0158	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1316023.08	1.4	98.6	Analog	0.1000	3
No Gas	Ge	72	698285.20	0.6	99.8	Pulse	0.1000	3
H2	Sc	45	86500.23	0.9	99.5	Pulse	0.1000	3
H2	Ge	72	71616.55	2.0	100.0	Pulse	0.1000	3
H2	In	115	183123.11	0.7	100.0	Pulse	0.1000	3
He	Sc	45	23095.50	2.1	100.4	Pulse	0.1000	3
He	Ge	72	43897.92	1.2	104.0	Pulse	0.1000	3
He	In	115	38355.24	1.4	98.5	Pulse	0.1000	3
He	Tb	159	174852.44	0.2	99.3	Pulse	0.1000	3
He	Bi	209	124999.21	0.3	97.5	Pulse	0.1000	3

No Gas



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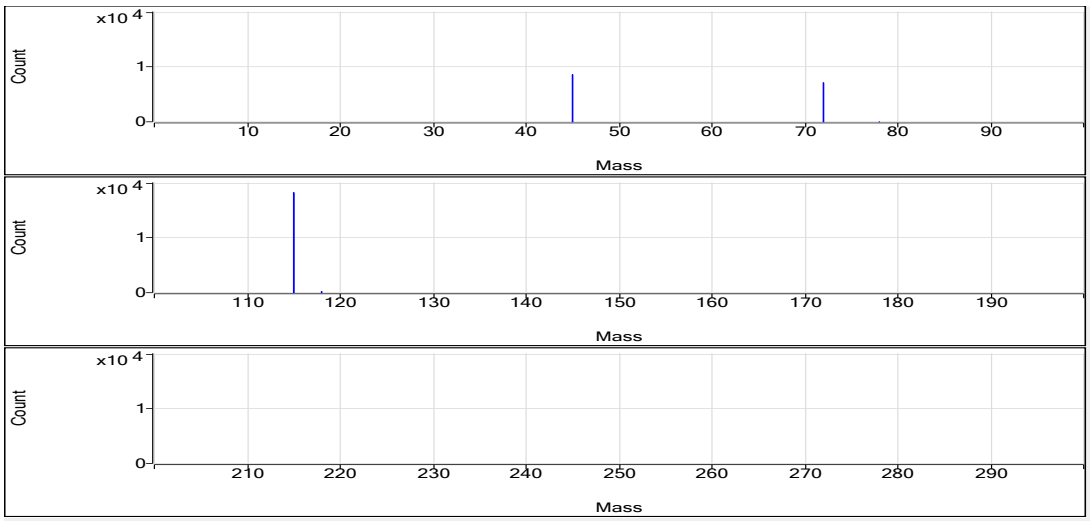
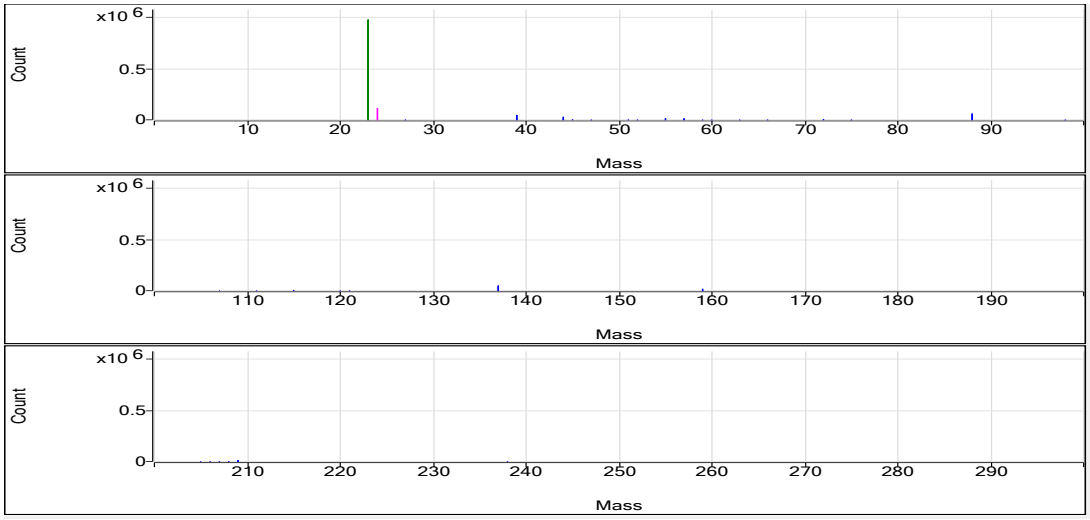


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.066	0.0001	66.00	0.0005	1.901E-05
Be	9	1	No Gas	0.067	0.0001	68.00	0.0005	1.901E-05
Be	9	1	No Gas	0.086	0.0001	80.00	0.0005	1.901E-05
Se	78	2	H2	0.158	0	7.33	0.0002	7.279E-06
Se	78	2	H2	0.373	0.0001	15.33	0.0002	7.279E-06
Se	78	2	H2	0.356	0.0001	14.67	0.0002	7.279E-06
Na	23	3	He	119914.09	428.2652	9900993.60	0.0036	0.7194
Na	23	3	He	120836.916	431.5554	9747917.98	0.0036	0.7194
Na	23	3	He	115809.615	413.6309	9753326.10	0.0036	0.7194
Mg	24	3	He	27418.664	49.8573	1152642.17	0.0018	0.006791
Mg	24	3	He	27815.017	50.5779	1142446.70	0.0018	0.006791
Mg	24	3	He	26558.013	48.2925	1138726.47	0.0018	0.006791
Al	27	3	He	403.164	0.2271	5251.15	0.0006	0.002622
Al	27	3	He	398.435	0.2245	5071.07	0.0006	0.002622
Al	27	3	He	429.477	0.2418	5701.37	0.0006	0.002622
K	39	3	He	15594.869	20.4547	472889.60	0.0013	0.5579
K	39	3	He	15727.763	20.6243	465858.63	0.0013	0.5579
K	39	3	He	15018.193	19.719	464969.02	0.0013	0.5579
Ca	44	3	He	168257.555	12.3364	285203.34	0.0001	0.004062
Ca	44	3	He	172394.62	12.6396	285502.26	0.0001	0.004062
Ca	44	3	He	163823.562	12.0114	283226.56	0.0001	0.004062
Ti	47	3	He	15.015	0.0091	210.01	0.0006	0.0002809
Ti	47	3	He	10.093	0.0062	140.00	0.0006	0.0002809
Ti	47	3	He	8.925	0.0055	130.01	0.0006	0.0002809
V	51	3	He	3.098	0.0987	2282.20	0.0259	0.01861
V	51	3	He	3.287	0.1036	2340.20	0.0259	0.01861
V	51	3	He	3.217	0.1018	2400.21	0.0259	0.01861
Cr	52	3	He	1.939	0.1692	3910.70	0.0332	0.1047
Cr	52	3	He	1.739	0.1625	3670.59	0.0332	0.1047
Cr	52	3	He	1.584	0.1574	3710.59	0.0332	0.1047
Mn	55	3	He	453.838	6.2978	145598.17	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	455.035	6.3144	142629.16	0.0139	0.005074
Mn	55	3	He	447.554	6.2107	146446.51	0.0139	0.005074
Fe	57	3	He	8802.655	5.6005	129476.18	0.0006	0.00609
Fe	57	3	He	9034.359	5.7477	129828.69	0.0006	0.00609
Fe	57	3	He	8539.586	5.4333	128115.39	0.0006	0.00609
Co	59	3	He	0.488	0.0385	890.06	0.0661	0.00621
Co	59	3	He	0.415	0.0336	760.05	0.0661	0.00621
Co	59	3	He	0.4	0.0327	770.05	0.0661	0.00621
Ni	60	3	He	2.69	0.0441	1910.21	0.01	0.01721
Ni	60	3	He	1.972	0.0369	1640.15	0.01	0.01721
Ni	60	3	He	2.271	0.0399	1750.16	0.01	0.01721
Cu	63	3	He	1.858	0.06	2600.34	0.0286	0.006793
Cu	63	3	He	1.869	0.0603	2680.34	0.0286	0.006793
Cu	63	3	He	2.071	0.0661	2900.40	0.0286	0.006793
Zn	66	3	He	16.236	0.0577	2500.33	0.0034	0.00316
Zn	66	3	He	18.159	0.0641	2850.37	0.0034	0.00316
Zn	66	3	He	19.965	0.0702	3080.41	0.0034	0.00316
As	75	3	He	2.432	0.0071	308.01	0.0026	0.0008231
As	75	3	He	1.929	0.0058	258.00	0.0026	0.0008231
As	75	3	He	1.587	0.0049	216.00	0.0026	0.0008231
Sr	88	3	He	1482.627	15.6324	606370.58	0.0105	0.001715
Sr	88	3	He	1509.704	15.9178	600847.88	0.0105	0.001715
Sr	88	3	He	1462.738	15.4227	594226.05	0.0105	0.001715
Mo	98	3	He	0.569	0.0165	640.03	0.0275	0.0008555
Mo	98	3	He	0.547	0.0159	600.03	0.0275	0.0008555
Mo	98	3	He	0.695	0.02	770.05	0.0275	0.0008555
Ag	107	3	He	0.001	0.0005	20.00	0.0591	0.0004305
Ag	107	3	He	0.029	0.0021	80.00	0.0591	0.0004305
Ag	107	3	He	0.015	0.0013	50.00	0.0591	0.0004305
Cd	111	3	He	0.272	0.0019	72.00	0.0066	5.141E-05
Cd	111	3	He	0.352	0.0024	90.00	0.0066	5.141E-05
Cd	111	3	He	0.345	0.0023	90.00	0.0066	5.141E-05
Sn	120	3	He	0.127	0.0209	810.05	0.0187	0.0185
Sn	120	3	He	0.002	0.0185	700.04	0.0187	0.0185
Sn	120	3	He	-0.018	0.0182	700.05	0.0187	0.0185
Sb	121	3	He	0.066	0.0023	90.00	0.0183	0.00111
Sb	121	3	He	0.229	0.0053	200.01	0.0183	0.00111
Sb	121	3	He	0.18	0.0044	170.01	0.0183	0.00111
Ba	137	3	He	2188.373	12.82	497281.24	0.0059	0.0007704
Ba	137	3	He	2242.592	13.1376	495904.13	0.0059	0.0007704
Ba	137	3	He	2197.382	12.8728	495980.23	0.0059	0.0007704
Tl	205	3	He	0.002	0.0009	110.00	0.0364	0.000808
Tl	205	3	He	0.02	0.0015	190.01	0.0364	0.000808
Tl	205	3	He	0.015	0.0014	170.01	0.0364	0.000808
Pb	208	3	He	5.623	0.2774	17672.44	0.0487	0.003226
Pb	208	3	He	5.446	0.2687	18052.98	0.0487	0.003226
Pb	208	3	He	5.628	0.2776	18603.75	0.0487	0.003226
U	238	3	He	0.295	0.0162	2030.24	0.0535	0.0004157
U	238	3	He	0.296	0.0162	2030.26	0.0535	0.0004157
U	238	3	He	0.273	0.015	1870.20	0.0535	0.0004157
Sc	45	1	No Gas			1295646.47		
Sc	45	1	No Gas			1329688.26		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1322734.51		
Ge	72	1	No Gas			698305.15		
Ge	72	1	No Gas			702622.72		
Ge	72	1	No Gas			693927.72		
Sc	45	2	H2			87413.80		
Sc	45	2	H2			86073.65		
Sc	45	2	H2			86013.24		
Ge	72	2	H2			73298.07		
Ge	72	2	H2			70816.14		
Ge	72	2	H2			70735.44		
In	115	2	H2			184592.07		
In	115	2	H2			182506.36		
In	115	2	H2			182270.90		
Sc	45	3	He			23118.84		
Sc	45	3	He			22587.87		
Sc	45	3	He			23579.78		
Ge	72	3	He			43356.19		
Ge	72	3	He			44449.85		
Ge	72	3	He			43887.73		
In	115	3	He			38795.13		
In	115	3	He			37751.78		
In	115	3	He			38534.27		
Tb	159	3	He			174363.51		
Tb	159	3	He			174990.66		
Tb	159	3	He			175203.14		
Bi	209	3	He			125426.30		
Bi	209	3	He			124962.44		
Bi	209	3	He			124608.88		

Quantitation Report

Data File Name	055SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
Acq Time	9/19/2023 8:40:31 AM
Sample Name	410-141880-E-2-A
Sample Type	Sample
Comment	B25
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

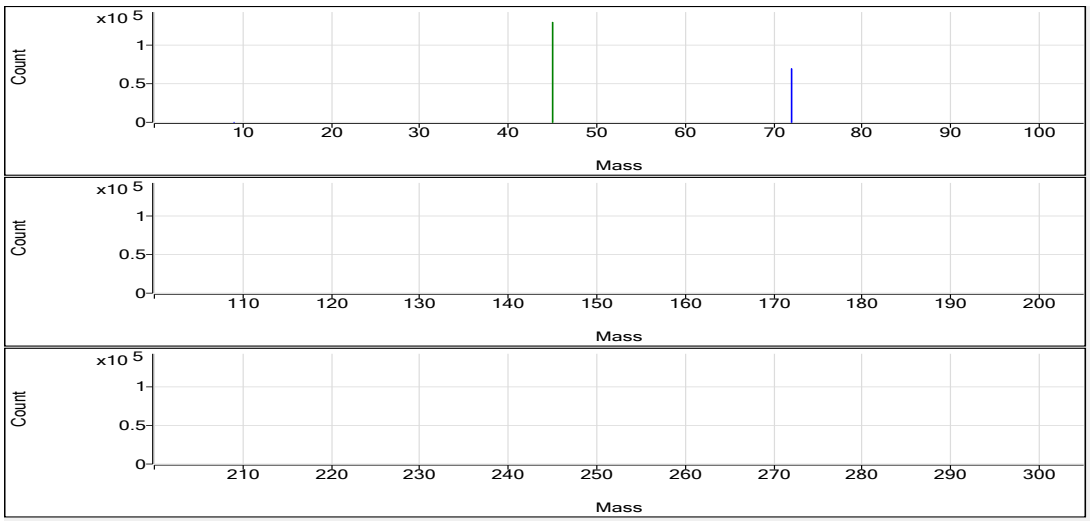
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.094	ppb	23.0	84.00	0.0001	Pulse	0.5000	3
Se	78	115	H2	1.023	ppb	30.2	39.78	0.0002	Pulse	1.5000	3
Na	23	45	He	54063.844	ppb	2.3	4470916.08	193.4804	Analog	0.1000	3
Mg	24	45	He	18364.449	ppb	1.9	771742.70	33.3956	Pulse	0.1000	3
Al	27	45	He	769.154	ppb	5.5	9953.69	0.4310	Pulse	0.1000	3
K	39	45	He	6721.209	ppb	2.1	211059.13	9.1332	Pulse	0.1000	3
Ca	44	45	He	113005.761	ppb	2.7	191480.93	8.2868	Pulse	0.1000	3
Ti	47	45	He	31.499	ppb	21.9	433.36	0.0187	Pulse	0.1000	3
V	51	45	He	3.837	ppb	6.5	2722.27	0.1178	Pulse	0.5000	3
Cr	52	45	He	2.381	ppb	5.0	4247.45	0.1838	Pulse	0.1000	3
Mn	55	45	He	3196.474	ppb	2.5	1024258.42	44.3261	Pulse	0.1000	3
Fe	57	45	He	1450.346	ppb	1.1	21449.86	0.9278	Pulse	0.1000	3
Co	59	45	He	1.084	ppb	11.8	1800.18	0.0779	Pulse	0.1000	3
Ni	60	72	He	7.269	ppb	6.8	3897.34	0.0898	Pulse	0.1000	3
Cu	63	72	He	6.314	ppb	6.8	8142.56	0.1876	Pulse	0.1000	3
Zn	66	72	He	128.541	ppb	2.0	18876.26	0.4347	Pulse	0.1000	3
As	75	72	He	5.001	ppb	5.4	596.69	0.0137	Pulse	0.5000	3
Sr	88	115	He	631.985	ppb	2.1	256809.80	6.6644	Pulse	0.1000	3
Mo	98	115	He	6.030	ppb	1.8	6425.04	0.1667	Pulse	0.1000	3
Ag	107	115	He	0.012	ppb	76.0	43.33	0.0011	Pulse	0.1000	3
Cd	111	115	He	0.559	ppb	13.6	144.67	0.0038	Pulse	0.5000	3
Sn	120	115	He	0.445	ppb	21.9	1033.42	0.0268	Pulse	0.1000	3
Sb	121	115	He	1.723	ppb	7.9	1256.78	0.0326	Pulse	0.1000	3
Ba	137	115	He	179.166	ppb	0.9	40480.51	1.0503	Pulse	0.1000	3
Tl	205	209	He	0.030	ppb	63.2	240.01	0.0019	Pulse	0.1000	3
Pb	208	209	He	3.543	ppb	2.3	22181.53	0.1759	Pulse	0.1000	3
U	238	209	He	4.038	ppb	3.2	27283.10	0.2164	Pulse	0.1000	3

ISTD Table:

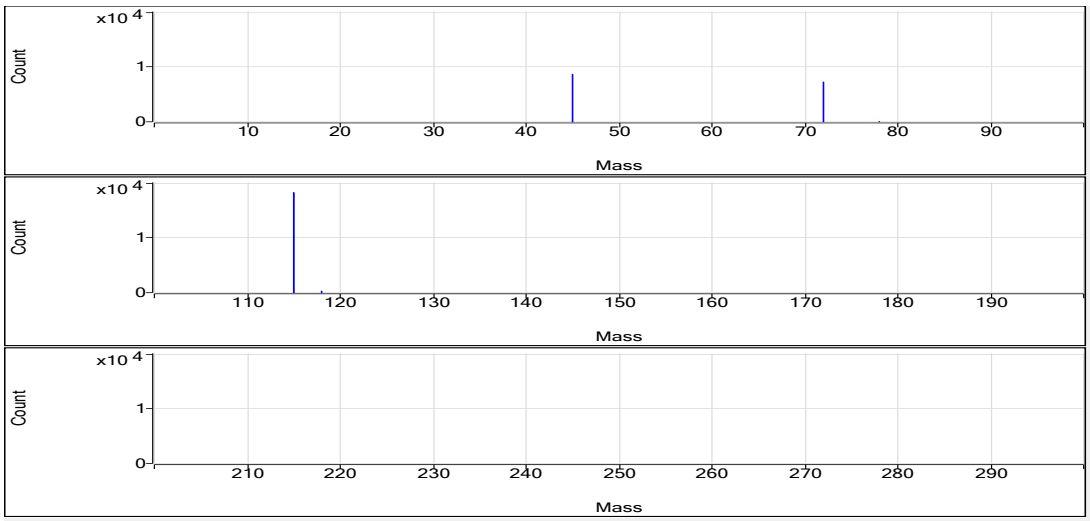
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1303887.92	1.4	97.7	Analog	0.1000	3
No Gas	Ge	72	698625.85	0.3	99.9	Pulse	0.1000	3
H2	Sc	45	86976.69	0.2	100.0	Pulse	0.1000	3
H2	Ge	72	72939.36	0.5	101.9	Pulse	0.1000	3
H2	In	115	183129.77	0.8	100.0	Pulse	0.1000	3
He	Sc	45	23115.74	2.3	100.5	Pulse	0.1000	3
He	Ge	72	43426.75	0.9	102.9	Pulse	0.1000	3
He	In	115	38543.49	2.0	99.0	Pulse	0.1000	3
He	Tb	159	174192.97	1.0	98.9	Pulse	0.1000	3
He	Bi	209	126095.67	1.1	98.3	Pulse	0.1000	3

No Gas

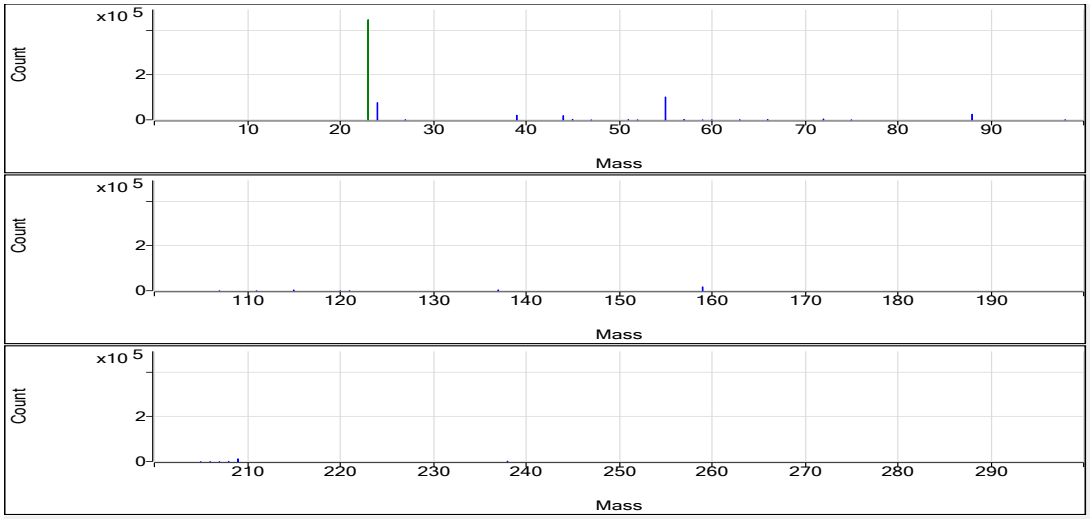


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.115	0.0001	96.00	0.0005	1.901E-05
Be	9	1	No Gas	0.072	0.0001	70.00	0.0005	1.901E-05
Be	9	1	No Gas	0.095	0.0001	86.00	0.0005	1.901E-05
Se	78	2	H2	1.351	0.0003	52.00	0.0002	7.279E-06
Se	78	2	H2	0.98	0.0002	38.00	0.0002	7.279E-06
Se	78	2	H2	0.737	0.0002	29.33	0.0002	7.279E-06
Na	23	3	He	53602.746	191.8364	4467749.31	0.0036	0.7194
Na	23	3	He	53131.255	190.1553	4474304.00	0.0036	0.7194
Na	23	3	He	55457.532	198.4495	4470694.93	0.0036	0.7194
Mg	24	3	He	18211.826	33.1181	771299.99	0.0018	0.006791
Mg	24	3	He	18115.846	32.9436	775154.21	0.0018	0.006791
Mg	24	3	He	18765.676	34.1251	768773.89	0.0018	0.006791
Al	27	3	He	765.078	0.4287	9983.71	0.0006	0.002622
Al	27	3	He	728.96	0.4086	9613.48	0.0006	0.002622
Al	27	3	He	813.423	0.4556	10263.89	0.0006	0.002622
K	39	3	He	6661.794	9.0574	210940.80	0.0013	0.5579
K	39	3	He	6622.416	9.0071	211935.68	0.0013	0.5579
K	39	3	He	6879.416	9.335	210300.91	0.0013	0.5579
Ca	44	3	He	113059.698	8.2907	193085.37	0.0001	0.004062
Ca	44	3	He	109959.675	8.0635	189731.83	0.0001	0.004062
Ca	44	3	He	115997.909	8.5061	191625.60	0.0001	0.004062
Ti	47	3	He	39.072	0.0232	540.03	0.0006	0.0002809
Ti	47	3	He	25.619	0.0153	360.02	0.0006	0.0002809
Ti	47	3	He	29.808	0.0178	400.02	0.0006	0.0002809
V	51	3	He	3.595	0.1116	2598.25	0.0259	0.01861
V	51	3	He	3.827	0.1176	2766.28	0.0259	0.01861
V	51	3	He	4.091	0.1244	2802.29	0.0259	0.01861
Cr	52	3	He	2.342	0.1825	4250.82	0.0332	0.1047
Cr	52	3	He	2.286	0.1807	4250.75	0.0332	0.1047
Cr	52	3	He	2.514	0.1882	4240.78	0.0332	0.1047
Mn	55	3	He	3148.594	43.6622	1016865.92	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	3152.383	43.7148	1028596.94	0.0139	0.005074
Mn	55	3	He	3288.444	45.6013	1027312.41	0.0139	0.005074
Fe	57	3	He	1441.421	0.9222	21476.52	0.0006	0.00609
Fe	57	3	He	1468.127	0.9391	22097.54	0.0006	0.00609
Fe	57	3	He	1441.489	0.9222	20775.51	0.0006	0.00609
Co	59	3	He	0.938	0.0683	1590.15	0.0661	0.00621
Co	59	3	He	1.14	0.0816	1920.21	0.0661	0.00621
Co	59	3	He	1.175	0.0839	1890.18	0.0661	0.00621
Ni	60	3	He	7.525	0.0923	3990.71	0.01	0.01721
Ni	60	3	He	6.702	0.0841	3690.61	0.01	0.01721
Ni	60	3	He	7.582	0.0929	4010.70	0.01	0.01721
Cu	63	3	He	6.407	0.1902	8222.57	0.0286	0.006793
Cu	63	3	He	5.846	0.1742	7642.30	0.0286	0.006793
Cu	63	3	He	6.69	0.1983	8562.82	0.0286	0.006793
Zn	66	3	He	131.456	0.4445	19213.43	0.0034	0.00316
Zn	66	3	He	126.701	0.4285	18802.76	0.0034	0.00316
Zn	66	3	He	127.465	0.4311	18612.60	0.0034	0.00316
As	75	3	He	5.235	0.0143	620.02	0.0026	0.0008231
As	75	3	He	5.064	0.0139	610.02	0.0026	0.0008231
As	75	3	He	4.703	0.013	560.02	0.0026	0.0008231
Sr	88	3	He	616.817	6.5045	255101.25	0.0105	0.001715
Sr	88	3	He	637.653	6.7242	260275.04	0.0105	0.001715
Sr	88	3	He	641.485	6.7646	255053.10	0.0105	0.001715
Mo	98	3	He	5.912	0.1635	6411.72	0.0275	0.0008555
Mo	98	3	He	6.056	0.1675	6481.70	0.0275	0.0008555
Mo	98	3	He	6.122	0.1693	6381.70	0.0275	0.0008555
Ag	107	3	He	0.019	0.0015	60.00	0.0591	0.0004305
Ag	107	3	He	0.015	0.0013	50.00	0.0591	0.0004305
Ag	107	3	He	0.002	0.0005	20.00	0.0591	0.0004305
Cd	111	3	He	0.577	0.0039	152.00	0.0066	5.141E-05
Cd	111	3	He	0.476	0.0032	124.00	0.0066	5.141E-05
Cd	111	3	He	0.625	0.0042	158.00	0.0066	5.141E-05
Sn	120	3	He	0.346	0.025	980.08	0.0187	0.0185
Sn	120	3	He	0.447	0.0269	1040.09	0.0187	0.0185
Sn	120	3	He	0.541	0.0286	1080.08	0.0187	0.0185
Sb	121	3	He	1.597	0.0303	1190.11	0.0183	0.00111
Sb	121	3	He	1.704	0.0323	1250.11	0.0183	0.00111
Sb	121	3	He	1.867	0.0353	1330.11	0.0183	0.00111
Ba	137	3	He	177.466	1.0403	40801.46	0.0059	0.0007704
Ba	137	3	He	180.787	1.0598	41022.00	0.0059	0.0007704
Ba	137	3	He	179.244	1.0508	39618.07	0.0059	0.0007704
Tl	205	3	He	0.037	0.0022	270.01	0.0364	0.000808
Tl	205	3	He	0.045	0.0024	310.02	0.0364	0.000808
Tl	205	3	He	0.009	0.0011	140.01	0.0364	0.000808
Pb	208	3	He	3.567	0.1771	12096.02	0.0487	0.003226
Pb	208	3	He	3.451	0.1715	11485.42	0.0487	0.003226
Pb	208	3	He	3.611	0.1792	11915.81	0.0487	0.003226
U	238	3	He	4.185	0.2243	28161.42	0.0535	0.0004157
U	238	3	He	3.956	0.212	27059.38	0.0535	0.0004157
U	238	3	He	3.973	0.2129	26628.49	0.0535	0.0004157
Sc	45	1	No Gas			1286518.42		
Sc	45	1	No Gas			1303202.56		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1321942.79		
Ge	72	1	No Gas			700168.74		
Ge	72	1	No Gas			699005.61		
Ge	72	1	No Gas			696703.19		
Sc	45	2	H2			87130.96		
Sc	45	2	H2			86979.63		
Sc	45	2	H2			86819.48		
Ge	72	2	H2			73318.25		
Ge	72	2	H2			72724.98		
Ge	72	2	H2			72774.84		
In	115	2	H2			182514.06		
In	115	2	H2			182090.97		
In	115	2	H2			184784.27		
Sc	45	3	He			23289.37		
Sc	45	3	He			23529.73		
Sc	45	3	He			22528.12		
Ge	72	3	He			43226.07		
Ge	72	3	He			43878.13		
Ge	72	3	He			43176.06		
In	115	3	He			39225.91		
In	115	3	He			38714.53		
In	115	3	He			37711.73		
Tb	159	3	He			175860.49		
Tb	159	3	He			172264.74		
Tb	159	3	He			174453.67		
Bi	209	3	He			125567.79		
Bi	209	3	He			127645.70		
Bi	209	3	He			125073.53		

Quantitation Report

Data File Name	056SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
Acq Time	9/19/2023 8:42:30 AM
Sample Name	410-141880-G-8-A
Sample Type	Sample
Comment	B25
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

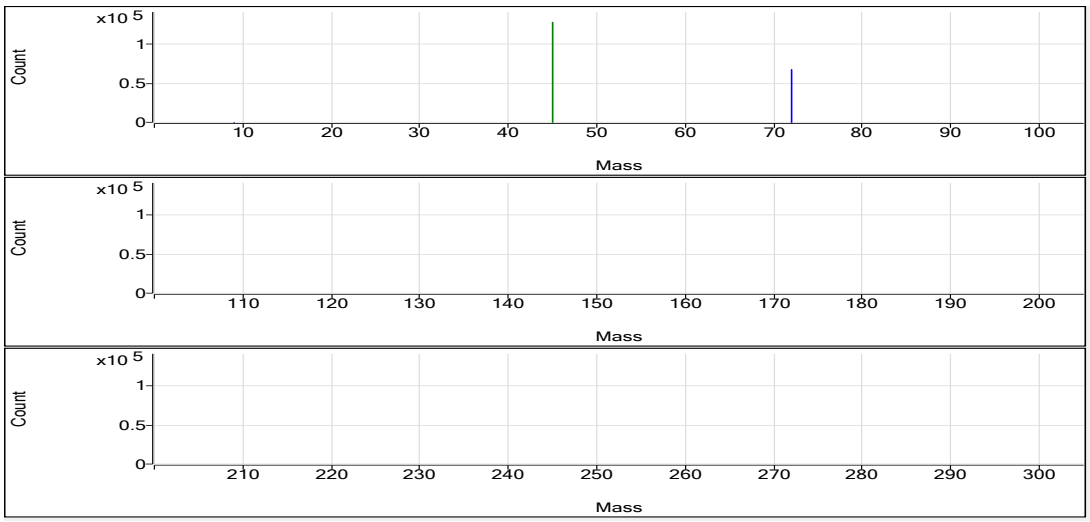
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.046	ppb	56.4	52.67	0.0000	Pulse	0.5000	3
Se	78	115	H2	0.138	ppb	28.2	6.44	0.0000	Pulse	1.5000	3
Na	23	45	He	303043.492	ppb	2.7	24745277.13	1,081.2010	Analog	0.1000	3
Mg	24	45	He	21370.545	ppb	2.4	889472.22	38.8610	Pulse	0.1000	3
Al	27	45	He	59.455	ppb	14.4	816.72	0.0357	Pulse	0.1000	3
K	39	45	He	11790.169	ppb	3.3	357032.65	15.6005	Pulse	0.1000	3
Ca	44	45	He	144319.517	ppb	3.1	242179.45	10.5819	Pulse	0.1000	3
Ti	47	45	He	0.767	ppb	57.9	16.67	0.0007	Pulse	0.1000	3
V	51	45	He	1.000	ppb	5.3	1018.71	0.0445	Pulse	0.5000	3
Cr	52	45	He	0.317	ppb	67.8	2640.33	0.1153	Pulse	0.1000	3
Mn	55	45	He	2437.052	ppb	2.0	773580.59	33.7963	Pulse	0.1000	3
Fe	57	45	He	12711.420	ppb	4.2	184995.17	8.0846	Pulse	0.1000	3
Co	59	45	He	1.245	ppb	9.7	2030.22	0.0886	Pulse	0.1000	3
Ni	60	72	He	1.694	ppb	11.8	1433.46	0.0341	Pulse	0.1000	3
Cu	63	72	He	0.456	ppb	11.7	833.39	0.0198	Pulse	0.1000	3
Zn	66	72	He	18.602	ppb	4.5	2757.03	0.0656	Pulse	0.1000	3
As	75	72	He	4.749	ppb	8.6	550.01	0.0131	Pulse	0.5000	3
Sr	88	115	He	722.557	ppb	1.2	291939.63	7.6193	Pulse	0.1000	3
Mo	98	115	He	14.201	ppb	2.0	15001.76	0.3915	Pulse	0.1000	3
Ag	107	115	He	0.002	ppb	565.2	20.00	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.005	ppb	168.5	3.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.112	ppb	167.1	790.05	0.0206	Pulse	0.1000	3
Sb	121	115	He	0.196	ppb	14.0	180.01	0.0047	Pulse	0.1000	3
Ba	137	115	He	215.032	ppb	2.4	48292.52	1.2604	Pulse	0.1000	3
Tl	205	209	He	0.007	ppb	73.2	133.34	0.0011	Pulse	0.1000	3
Pb	208	209	He	0.621	ppb	4.4	4157.09	0.0335	Pulse	0.1000	3
U	238	209	He	4.241	ppb	2.2	28178.28	0.2273	Pulse	0.1000	3

ISTD Table:

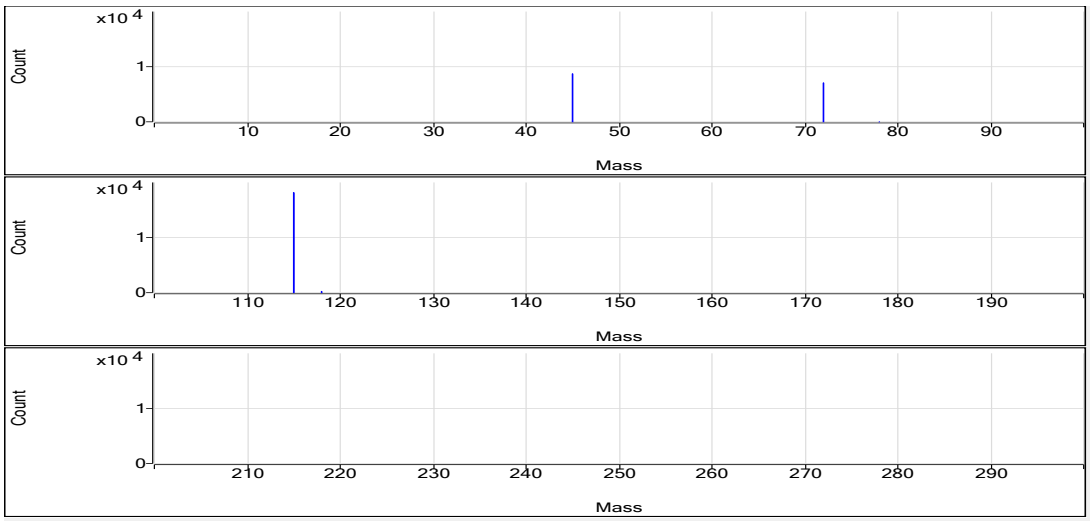
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1286715.82	1.7	96.4	Analog	0.1000	3
No Gas	Ge	72	677571.06	0.6	96.9	Pulse	0.1000	3
H2	Sc	45	86976.60	2.2	100.0	Pulse	0.1000	3
H2	Ge	72	70537.35	0.4	98.5	Pulse	0.1000	3
H2	In	115	181179.65	0.8	98.9	Pulse	0.1000	3
He	Sc	45	22895.26	2.0	99.5	Pulse	0.1000	3
He	Ge	72	42036.20	1.7	99.6	Pulse	0.1000	3
He	In	115	38318.12	0.8	98.4	Pulse	0.1000	3
He	Tb	159	173070.58	0.6	98.3	Pulse	0.1000	3
He	Bi	209	124006.81	1.4	96.7	Pulse	0.1000	3

No Gas

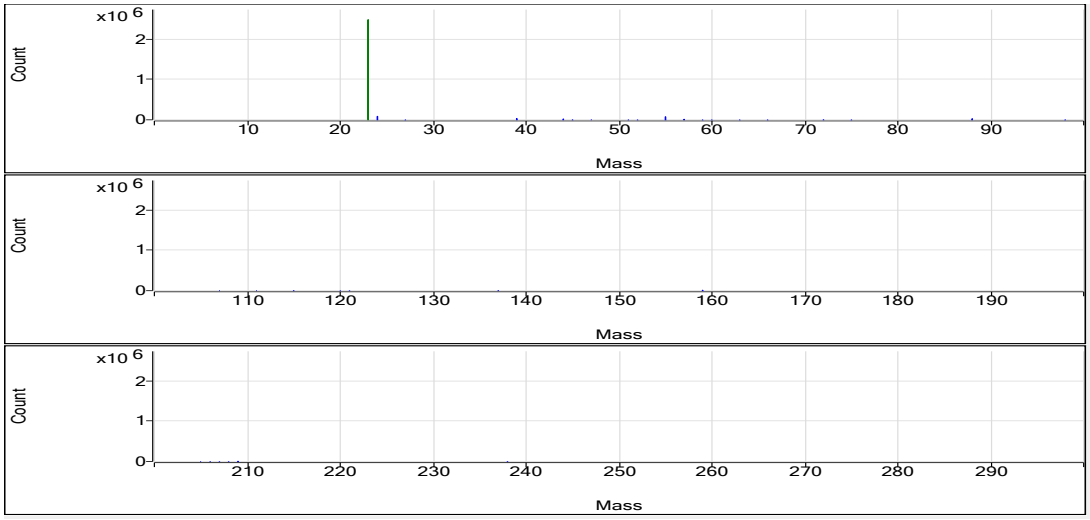


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.028	0	42.00	0.0005	1.901E-05
Be	9	1	No Gas	0.075	0.0001	70.00	0.0005	1.901E-05
Be	9	1	No Gas	0.033	0	46.00	0.0005	1.901E-05
Se	78	2	H2	0.125	0	6.00	0.0002	7.279E-06
Se	78	2	H2	0.107	0	5.33	0.0002	7.279E-06
Se	78	2	H2	0.181	0	8.00	0.0002	7.279E-06
Na	23	3	He	312513.139	1114.9644	24939289.63	0.0036	0.7194
Na	23	3	He	299357.258	1068.058	24649507.13	0.0036	0.7194
Na	23	3	He	297260.08	1060.5806	24647034.63	0.0036	0.7194
Mg	24	3	He	21938.489	39.8936	892332.56	0.0018	0.006791
Mg	24	3	He	20977.225	38.1459	880363.03	0.0018	0.006791
Mg	24	3	He	21195.92	38.5436	895721.08	0.0018	0.006791
Al	27	3	He	69.154	0.0411	920.06	0.0006	0.002622
Al	27	3	He	52.872	0.0321	740.04	0.0006	0.002622
Al	27	3	He	56.339	0.034	790.05	0.0006	0.002622
K	39	3	He	12234.302	16.1671	361622.73	0.0013	0.5579
K	39	3	He	11490.748	15.2184	351223.71	0.0013	0.5579
K	39	3	He	11645.456	15.4158	358251.52	0.0013	0.5579
Ca	44	3	He	149399.262	10.9542	245021.15	0.0001	0.004062
Ca	44	3	He	141079.474	10.3444	238736.48	0.0001	0.004062
Ca	44	3	He	142479.815	10.447	242780.72	0.0001	0.004062
Ti	47	3	He	1.046	0.0009	20.00	0.0006	0.0002809
Ti	47	3	He	0.999	0.0009	20.00	0.0006	0.0002809
Ti	47	3	He	0.255	0.0004	10.00	0.0006	0.0002809
V	51	3	He	0.951	0.0432	966.04	0.0259	0.01861
V	51	3	He	1.057	0.0459	1060.05	0.0259	0.01861
V	51	3	He	0.994	0.0443	1030.04	0.0259	0.01861
Cr	52	3	He	0.131	0.1091	2440.30	0.0332	0.1047
Cr	52	3	He	0.552	0.1231	2840.37	0.0332	0.1047
Cr	52	3	He	0.267	0.1136	2640.33	0.0332	0.1047
Mn	55	3	He	2491.537	34.5517	772846.16	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2403.034	33.3246	769092.18	0.0139	0.005074
Mn	55	3	He	2416.586	33.5125	778803.43	0.0139	0.005074
Fe	57	3	He	13308.879	8.4643	189327.97	0.0006	0.00609
Fe	57	3	He	12528.259	7.9682	183896.66	0.0006	0.00609
Fe	57	3	He	12297.122	7.8213	181760.88	0.0006	0.00609
Co	59	3	He	1.13	0.0809	1810.18	0.0661	0.00621
Co	59	3	He	1.236	0.088	2030.21	0.0661	0.00621
Co	59	3	He	1.37	0.0968	2250.26	0.0661	0.00621
Ni	60	3	He	1.518	0.0324	1360.12	0.01	0.01721
Ni	60	3	He	1.912	0.0363	1500.13	0.01	0.01721
Ni	60	3	He	1.65	0.0337	1440.14	0.01	0.01721
Cu	63	3	He	0.411	0.0186	780.05	0.0286	0.006793
Cu	63	3	He	0.515	0.0215	890.06	0.0286	0.006793
Cu	63	3	He	0.441	0.0194	830.05	0.0286	0.006793
Zn	66	3	He	19.263	0.0678	2850.38	0.0034	0.00316
Zn	66	3	He	18.88	0.0665	2750.36	0.0034	0.00316
Zn	66	3	He	17.663	0.0625	2670.34	0.0034	0.00316
As	75	3	He	5.191	0.0142	598.02	0.0026	0.0008231
As	75	3	He	4.665	0.0129	532.01	0.0026	0.0008231
As	75	3	He	4.391	0.0122	520.01	0.0026	0.0008231
Sr	88	3	He	717.52	7.5662	291962.93	0.0105	0.001715
Sr	88	3	He	717.17	7.5625	290162.63	0.0105	0.001715
Sr	88	3	He	732.981	7.7292	293693.32	0.0105	0.001715
Mo	98	3	He	14.514	0.4001	15438.82	0.0275	0.0008555
Mo	98	3	He	13.952	0.3846	14758.17	0.0275	0.0008555
Mo	98	3	He	14.136	0.3897	14808.30	0.0275	0.0008555
Ag	107	3	He	0.001	0.0005	20.00	0.0591	0.0004305
Ag	107	3	He	-0.007	0	0.00	0.0591	0.0004305
Ag	107	3	He	0.011	0.0011	40.00	0.0591	0.0004305
Cd	111	3	He	0.016	0.0002	6.00	0.0066	5.141E-05
Cd	111	3	He	0	0.0001	2.00	0.0066	5.141E-05
Cd	111	3	He	0	0.0001	2.00	0.0066	5.141E-05
Sn	120	3	He	0.327	0.0246	950.07	0.0187	0.0185
Sn	120	3	He	0.028	0.019	730.05	0.0187	0.0185
Sn	120	3	He	-0.018	0.0182	690.04	0.0187	0.0185
Sb	121	3	He	0.194	0.0047	180.01	0.0183	0.00111
Sb	121	3	He	0.224	0.0052	200.01	0.0183	0.00111
Sb	121	3	He	0.169	0.0042	160.01	0.0183	0.00111
Ba	137	3	He	214.993	1.2602	48627.45	0.0059	0.0007704
Ba	137	3	He	209.924	1.2305	47211.84	0.0059	0.0007704
Ba	137	3	He	220.178	1.2906	49038.26	0.0059	0.0007704
Tl	205	3	He	0.006	0.001	130.01	0.0364	0.000808
Tl	205	3	He	0.003	0.0009	110.00	0.0364	0.000808
Tl	205	3	He	0.013	0.0013	160.01	0.0364	0.000808
Pb	208	3	He	0.652	0.035	2350.29	0.0487	0.003226
Pb	208	3	He	0.613	0.0331	2200.26	0.0487	0.003226
Pb	208	3	He	0.6	0.0325	2250.29	0.0487	0.003226
U	238	3	He	4.205	0.2253	28261.95	0.0535	0.0004157
U	238	3	He	4.346	0.2328	28432.12	0.0535	0.0004157
U	238	3	He	4.173	0.2236	27840.77	0.0535	0.0004157
Sc	45	1	No Gas			1286705.22		
Sc	45	1	No Gas			1265353.50		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1308088.73		
Ge	72	1	No Gas			677843.04		
Ge	72	1	No Gas			673236.55		
Ge	72	1	No Gas			681633.58		
Sc	45	2	H2			85731.88		
Sc	45	2	H2			86003.72		
Sc	45	2	H2			89194.21		
Ge	72	2	H2			70614.70		
Ge	72	2	H2			70755.04		
Ge	72	2	H2			70242.31		
In	115	2	H2			182138.12		
In	115	2	H2			181906.23		
In	115	2	H2			179494.61		
Sc	45	3	He			22367.79		
Sc	45	3	He			23078.81		
Sc	45	3	He			23239.19		
Ge	72	3	He			42023.02		
Ge	72	3	He			41330.80		
Ge	72	3	He			42754.77		
In	115	3	He			38594.48		
In	115	3	He			38373.70		
In	115	3	He			38002.76		
Tb	159	3	He			171961.79		
Tb	159	3	He			173160.06		
Tb	159	3	He			174089.88		
Bi	209	3	He			125426.35		
Bi	209	3	He			122105.44		
Bi	209	3	He			124488.65		

Quantitation Report

Data File Name	057SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
Acq Time	9/19/2023 8:44:29 AM
Sample Name	410-141880-G-10-A
Sample Type	Sample
Comment	B25
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

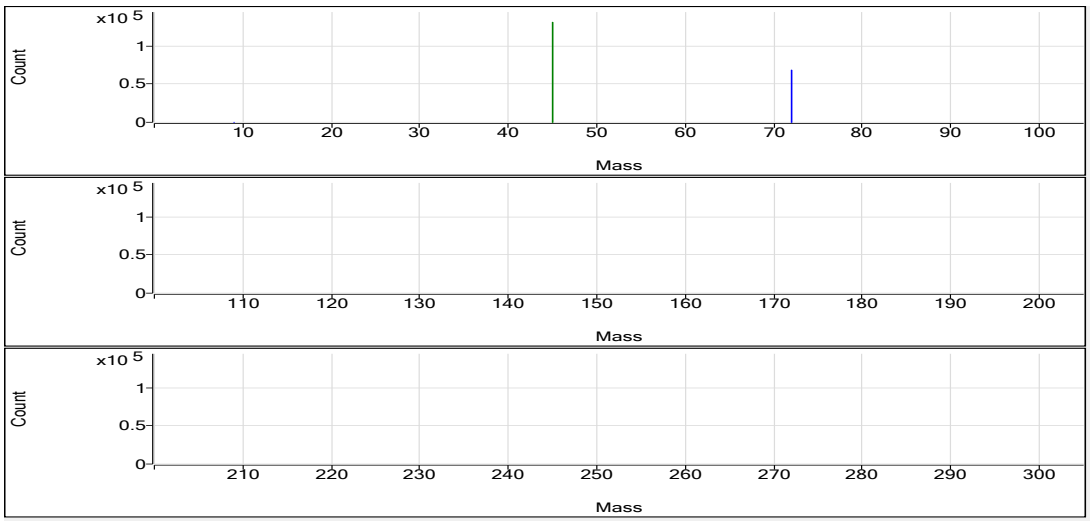
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.054	ppb	43.6	58.67	0.0000	Pulse	0.5000	3
Se	78	115	H2	0.703	ppb	17.1	27.33	0.0002	Pulse	1.5000	3
Na	23	45	He	198917.064	ppb	1.1	16110671.84	709.9451	Analog	0.1000	3
Mg	24	45	He	26608.568	ppb	2.1	1097881.52	48.3844	Pulse	0.1000	3
Al	27	45	He	444.069	ppb	7.7	5667.97	0.2499	Pulse	0.1000	3
K	39	45	He	10895.051	ppb	2.3	328070.94	14.4584	Pulse	0.1000	3
Ca	44	45	He	108949.285	ppb	2.8	181278.92	7.9894	Pulse	0.1000	3
Ti	47	45	He	15.069	ppb	21.0	206.68	0.0091	Pulse	0.1000	3
V	51	45	He	3.828	ppb	0.7	2668.93	0.1176	Pulse	0.5000	3
Cr	52	45	He	0.922	ppb	32.9	3070.43	0.1354	Pulse	0.1000	3
Mn	55	45	He	5127.342	ppb	1.1	1613452.00	71.0988	Analog	0.1000	3
Fe	57	45	He	54847.837	ppb	1.6	791122.54	34.8637	Pulse	0.1000	3
Co	59	45	He	1.780	ppb	5.1	2813.71	0.1240	Pulse	0.1000	3
Ni	60	72	He	1.496	ppb	10.7	1356.78	0.0321	Pulse	0.1000	3
Cu	63	72	He	2.041	ppb	6.9	2753.69	0.0652	Pulse	0.1000	3
Zn	66	72	He	30.216	ppb	1.3	4417.50	0.1046	Pulse	0.1000	3
As	75	72	He	24.617	ppb	3.2	2718.95	0.0644	Pulse	0.5000	3
Sr	88	115	He	753.787	ppb	3.8	307502.14	7.9485	Pulse	0.1000	3
Mo	98	115	He	2.242	ppb	9.6	2416.97	0.0625	Pulse	0.1000	3
Ag	107	115	He	0.012	ppb	56.3	43.33	0.0011	Pulse	0.1000	3
Cd	111	115	He	0.024	ppb	68.7	8.00	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.156	ppb	62.9	830.06	0.0214	Pulse	0.1000	3
Sb	121	115	He	0.458	ppb	19.8	366.69	0.0095	Pulse	0.1000	3
Ba	137	115	He	509.947	ppb	3.3	115604.34	2.9880	Pulse	0.1000	3
Tl	205	209	He	0.017	ppb	84.3	176.67	0.0014	Pulse	0.1000	3
Pb	208	209	He	4.950	ppb	2.4	30414.79	0.2445	Pulse	0.1000	3
U	238	209	He	0.109	ppb	2.6	780.05	0.0063	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1309319.67	2.6	98.1	Analog	0.1000	3
No Gas	Ge	72	684184.31	0.6	97.8	Pulse	0.1000	3
H2	Sc	45	88619.61	1.8	101.9	Pulse	0.1000	3
H2	Ge	72	69760.09	1.2	97.4	Pulse	0.1000	3
H2	In	115	180081.03	0.8	98.3	Pulse	0.1000	3
He	Sc	45	22695.04	1.4	98.7	Pulse	0.1000	3
He	Ge	72	42226.46	1.7	100.0	Pulse	0.1000	3
He	In	115	38709.01	2.3	99.4	Pulse	0.1000	3
He	Tb	159	172680.39	0.5	98.1	Pulse	0.1000	3
He	Bi	209	124386.22	0.1	97.0	Pulse	0.1000	3

No Gas



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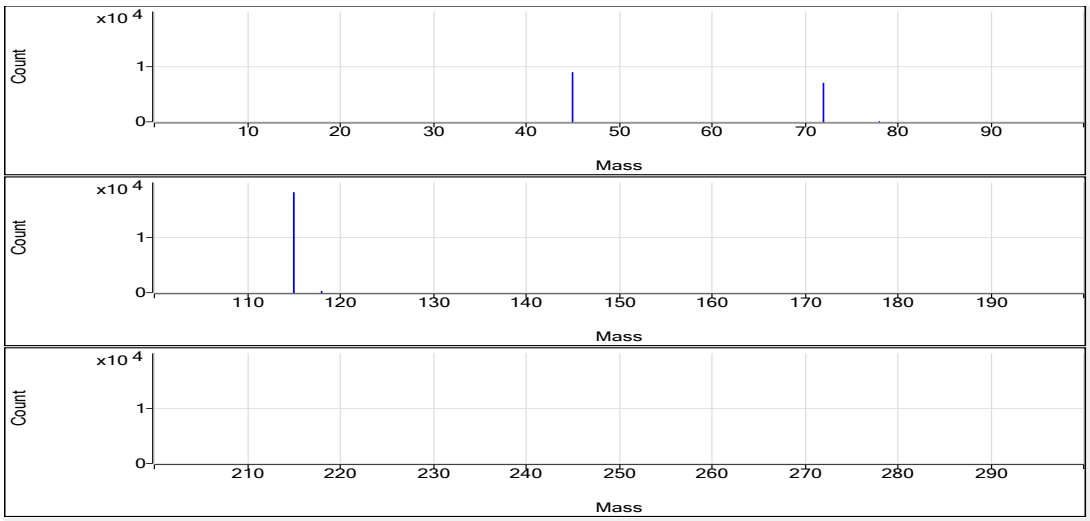
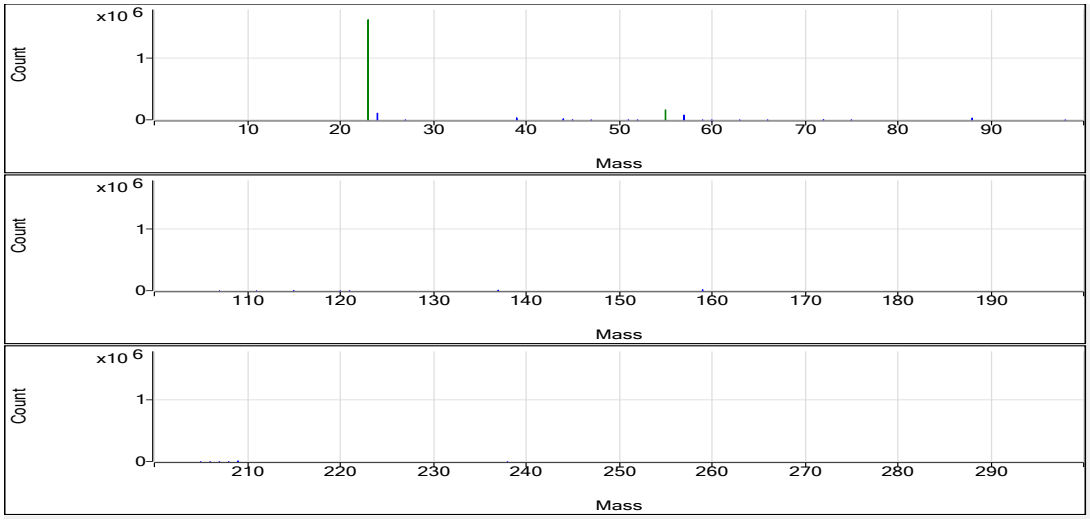


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.04	0	50.00	0.0005	1.901E-05
Be	9	1	No Gas	0.041	0	52.00	0.0005	1.901E-05
Be	9	1	No Gas	0.081	0.0001	74.00	0.0005	1.901E-05
Se	78	2	H2	0.769	0.0002	30.00	0.0002	7.279E-06
Se	78	2	H2	0.775	0.0002	30.00	0.0002	7.279E-06
Se	78	2	H2	0.564	0.0001	22.00	0.0002	7.279E-06
Na	23	3	He	201303.08	718.4522	16106126.01	0.0036	0.7194
Na	23	3	He	196899.632	702.752	16183726.01	0.0036	0.7194
Na	23	3	He	198548.479	708.6309	16042163.51	0.0036	0.7194
Mg	24	3	He	27137.499	49.3461	1106230.92	0.0018	0.006791
Mg	24	3	He	26042.119	47.3545	1090531.00	0.0018	0.006791
Mg	24	3	He	26646.086	48.4526	1096882.64	0.0018	0.006791
Al	27	3	He	471.21	0.265	5941.42	0.0006	0.002622
Al	27	3	He	405.53	0.2285	5261.11	0.0006	0.002622
Al	27	3	He	455.467	0.2563	5801.37	0.0006	0.002622
K	39	3	He	11143.392	14.7753	331229.25	0.0013	0.5579
K	39	3	He	10652.302	14.1487	325831.64	0.0013	0.5579
K	39	3	He	10889.46	14.4513	327151.93	0.0013	0.5579
Ca	44	3	He	112439.663	8.2453	184840.74	0.0001	0.004062
Ca	44	3	He	106548.695	7.8135	179937.36	0.0001	0.004062
Ca	44	3	He	107859.497	7.9096	179058.65	0.0001	0.004062
Ti	47	3	He	18.543	0.0112	250.01	0.0006	0.0002809
Ti	47	3	He	14.335	0.0087	200.01	0.0006	0.0002809
Ti	47	3	He	12.33	0.0075	170.01	0.0006	0.0002809
V	51	3	He	3.852	0.1182	2650.26	0.0259	0.01861
V	51	3	He	3.798	0.1168	2690.27	0.0259	0.01861
V	51	3	He	3.835	0.1178	2666.26	0.0259	0.01861
Cr	52	3	He	1.078	0.1405	3150.48	0.0332	0.1047
Cr	52	3	He	0.573	0.1238	2850.39	0.0332	0.1047
Cr	52	3	He	1.116	0.1418	3210.43	0.0332	0.1047
Mn	55	3	He	5151.602	71.4352	1601419.66	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	5064.693	70.2301	1617334.19	0.0139	0.005074
Mn	55	3	He	5165.732	71.6311	1621602.16	0.0139	0.005074
Fe	57	3	He	55480.189	35.2655	790576.24	0.0006	0.00609
Fe	57	3	He	53878.339	34.2475	788688.43	0.0006	0.00609
Fe	57	3	He	55184.983	35.0779	794102.96	0.0006	0.00609
Co	59	3	He	1.714	0.1196	2680.33	0.0661	0.00621
Co	59	3	He	1.744	0.1216	2800.40	0.0661	0.00621
Co	59	3	He	1.883	0.1308	2960.40	0.0661	0.00621
Ni	60	3	He	1.329	0.0305	1310.10	0.01	0.01721
Ni	60	3	He	1.649	0.0337	1420.13	0.01	0.01721
Ni	60	3	He	1.509	0.0323	1340.10	0.01	0.01721
Cu	63	3	He	1.924	0.0619	2660.37	0.0286	0.006793
Cu	63	3	He	2.198	0.0697	2940.39	0.0286	0.006793
Cu	63	3	He	2.001	0.0641	2660.32	0.0286	0.006793
Zn	66	3	He	30.525	0.1056	4540.88	0.0034	0.00316
Zn	66	3	He	30.354	0.1051	4430.85	0.0034	0.00316
Zn	66	3	He	29.768	0.1031	4280.78	0.0034	0.00316
As	75	3	He	24.472	0.064	2752.29	0.0026	0.0008231
As	75	3	He	23.921	0.0626	2640.26	0.0026	0.0008231
As	75	3	He	25.458	0.0666	2764.29	0.0026	0.0008231
Sr	88	3	He	783.465	8.2614	312087.73	0.0105	0.001715
Sr	88	3	He	726.528	7.6612	302929.59	0.0105	0.001715
Sr	88	3	He	751.367	7.923	307489.10	0.0105	0.001715
Mo	98	3	He	2.433	0.0678	2560.33	0.0275	0.0008555
Mo	98	3	He	2.01	0.0562	2220.28	0.0275	0.0008555
Mo	98	3	He	2.283	0.0637	2470.31	0.0275	0.0008555
Ag	107	3	He	0.006	0.0008	30.00	0.0591	0.0004305
Ag	107	3	He	0.01	0.001	40.00	0.0591	0.0004305
Ag	107	3	He	0.019	0.0015	60.00	0.0591	0.0004305
Cd	111	3	He	0.04	0.0003	12.00	0.0066	5.141E-05
Cd	111	3	He	0.023	0.0002	8.00	0.0066	5.141E-05
Cd	111	3	He	0.008	0.0001	4.00	0.0066	5.141E-05
Sn	120	3	He	0.115	0.0206	780.06	0.0187	0.0185
Sn	120	3	He	0.268	0.0235	930.06	0.0187	0.0185
Sn	120	3	He	0.085	0.0201	780.06	0.0187	0.0185
Sb	121	3	He	0.518	0.0106	400.02	0.0183	0.00111
Sb	121	3	He	0.354	0.0076	300.02	0.0183	0.00111
Sb	121	3	He	0.503	0.0103	400.02	0.0183	0.00111
Ba	137	3	He	526.972	3.0877	116643.12	0.0059	0.0007704
Ba	137	3	He	493.825	2.8935	114413.36	0.0059	0.0007704
Ba	137	3	He	509.042	2.9827	115756.54	0.0059	0.0007704
Tl	205	3	He	0.007	0.001	130.00	0.0364	0.000808
Tl	205	3	He	0.033	0.002	250.01	0.0364	0.000808
Tl	205	3	He	0.011	0.0012	150.01	0.0364	0.000808
Pb	208	3	He	5.082	0.251	16310.54	0.0487	0.003226
Pb	208	3	He	4.916	0.2429	15409.56	0.0487	0.003226
Pb	208	3	He	4.852	0.2397	16090.42	0.0487	0.003226
U	238	3	He	0.107	0.0061	760.05	0.0535	0.0004157
U	238	3	He	0.112	0.0064	800.05	0.0535	0.0004157
U	238	3	He	0.109	0.0063	780.05	0.0535	0.0004157
Sc	45	1	No Gas			1311673.57		
Sc	45	1	No Gas			1341698.42		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1274587.01		
Ge	72	1	No Gas			681746.08		
Ge	72	1	No Gas			688708.97		
Ge	72	1	No Gas			682097.88		
Sc	45	2	H2			90380.42		
Sc	45	2	H2			87421.57		
Sc	45	2	H2			88056.84		
Ge	72	2	H2			70513.98		
Ge	72	2	H2			69880.74		
Ge	72	2	H2			68885.54		
In	115	2	H2			181381.56		
In	115	2	H2			180194.43		
In	115	2	H2			178667.11		
Sc	45	3	He			22417.81		
Sc	45	3	He			23029.07		
Sc	45	3	He			22638.25		
Ge	72	3	He			42985.26		
Ge	72	3	He			42172.93		
Ge	72	3	He			41521.19		
In	115	3	He			37781.99		
In	115	3	He			39547.45		
In	115	3	He			38815.02		
Tb	159	3	He			173157.09		
Tb	159	3	He			173257.15		
Tb	159	3	He			171626.93		
Bi	209	3	He			124183.90		
Bi	209	3	He			124446.36		
Bi	209	3	He			124528.39		

Quantitation Report

Data File Name	059_CCV.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
Acq Time	9/19/2023 8:48:28 AM
Sample Name	CCV 4807398
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

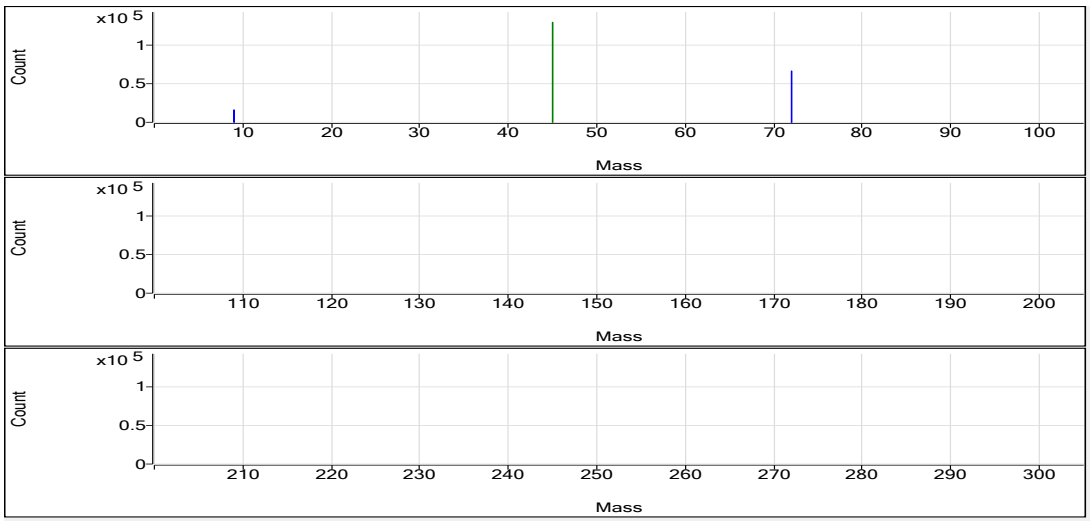
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.822	ppb	6.2	32695.72	0.0250	Pulse	0.5000	3
Se	78	115	H2	52.602	ppb	2.5	2007.03	0.0108	Pulse	1.5000	3
Na	23	45	He	5291.216	ppb	0.9	448848.09	19.5848	Pulse	0.1000	3
Mg	24	45	He	5226.900	ppb	1.1	217943.30	9.5099	Pulse	0.1000	3
Al	27	45	He	5223.557	ppb	2.2	66721.26	2.9115	Pulse	0.1000	3
K	39	45	He	5243.718	ppb	1.1	166116.42	7.2481	Pulse	0.1000	3
Ca	44	45	He	5333.121	ppb	3.3	9053.11	0.3950	Pulse	0.1000	3
Ti	47	45	He	5180.023	ppb	1.9	69603.50	3.0372	Pulse	0.1000	3
V	51	45	He	524.017	ppb	0.7	310969.86	13.5688	Pulse	0.5000	3
Cr	52	45	He	523.684	ppb	0.7	401035.89	17.4986	Pulse	0.1000	3
Mn	55	45	He	525.009	ppb	2.0	166937.35	7.2846	Pulse	0.1000	3
Fe	57	45	He	5357.392	ppb	1.3	78178.47	3.4109	Pulse	0.1000	3
Co	59	45	He	518.479	ppb	0.6	786163.40	34.3032	Pulse	0.1000	3
Ni	60	72	He	527.767	ppb	1.2	221672.84	5.2854	Pulse	0.1000	3
Cu	63	72	He	527.360	ppb	1.1	633570.63	15.1056	Pulse	0.1000	3
Zn	66	72	He	530.890	ppb	0.5	74885.49	1.7855	Pulse	0.1000	3
As	75	72	He	530.570	ppb	0.2	57509.44	1.3711	Pulse	0.5000	3
Sr	88	115	He	51.358	ppb	3.8	20989.37	0.5432	Pulse	0.1000	3
Mo	98	115	He	50.864	ppb	2.6	54114.92	1.4000	Pulse	0.1000	3
Ag	107	115	He	50.379	ppb	4.6	115047.71	2.9776	Pulse	0.1000	3
Cd	111	115	He	50.700	ppb	2.8	12989.41	0.3361	Pulse	0.5000	3
Sn	120	115	He	51.288	ppb	4.7	37832.51	0.9792	Pulse	0.1000	3
Sb	121	115	He	50.982	ppb	3.2	36104.61	0.9342	Pulse	0.1000	3
Ba	137	115	He	508.594	ppb	3.7	115161.39	2.9801	Pulse	0.1000	3
Tl	205	209	He	53.212	ppb	1.5	244945.64	1.9357	Pulse	0.1000	3
Pb	208	209	He	52.547	ppb	1.1	324564.43	2.5648	Pulse	0.1000	3
U	238	209	He	51.651	ppb	0.6	349658.39	2.7631	Pulse	0.1000	3

ISTD Table:

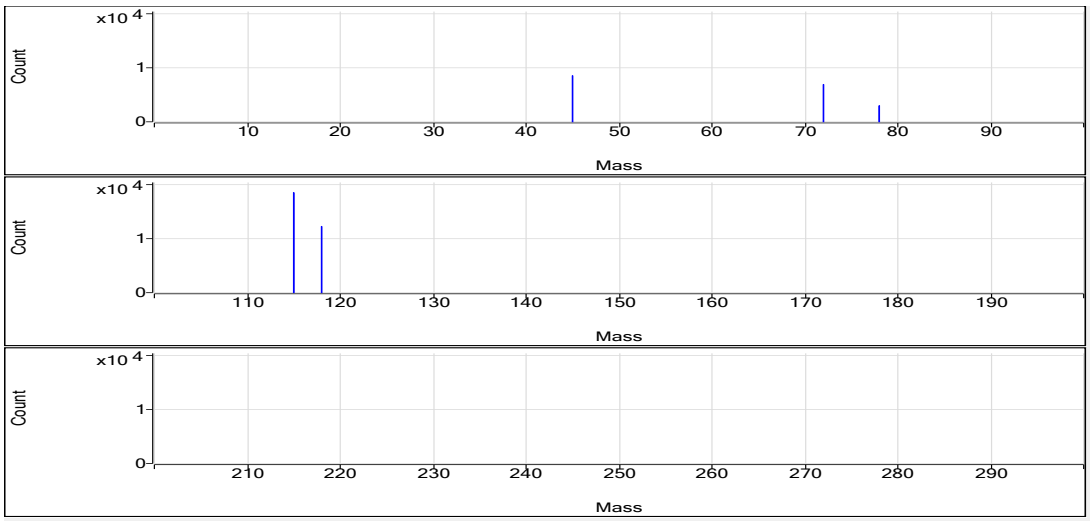
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1306570.11	0.5	97.9	Analog	0.1000	3
No Gas	Ge	72	670975.64	0.9	95.9	Pulse	0.1000	3
H2	Sc	45	85624.99	1.7	98.5	Pulse	0.1000	3
H2	Ge	72	69342.05	1.5	96.8	Pulse	0.1000	3
H2	In	115	185578.54	0.7	101.3	Pulse	0.1000	3
He	Sc	45	22918.78	0.8	99.6	Pulse	0.1000	3
He	Ge	72	41942.44	0.6	99.3	Pulse	0.1000	3
He	In	115	38673.90	3.2	99.3	Pulse	0.1000	3
He	Tb	159	175981.25	0.3	99.9	Pulse	0.1000	3
He	Bi	209	126549.99	0.7	98.7	Pulse	0.1000	3

No Gas

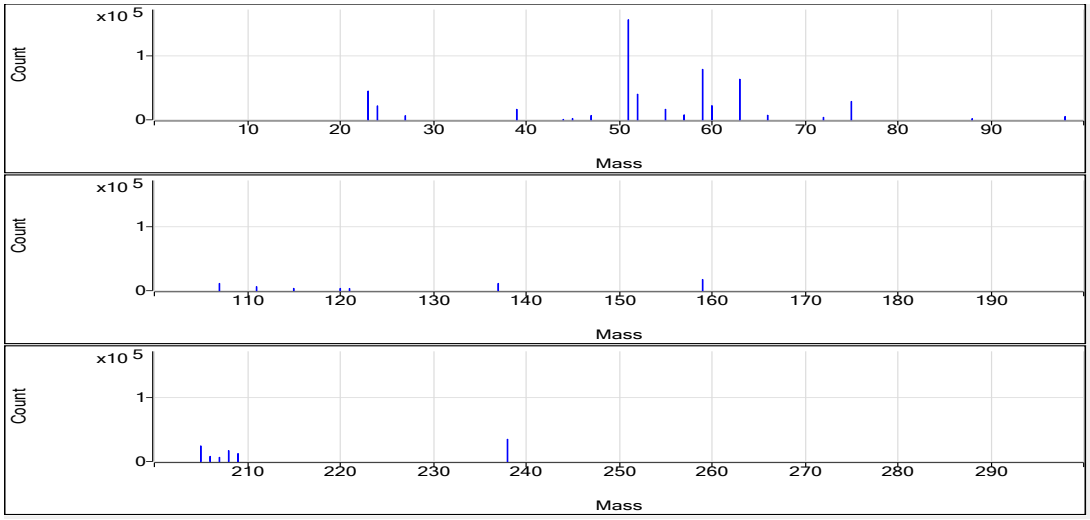


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	48.257	0.0233	30308.66	0.0005	1.901E-05
Be	9	1	No Gas	52.75	0.0255	33218.74	0.0005	1.901E-05
Be	9	1	No Gas	54.458	0.0263	34559.76	0.0005	1.901E-05
Se	78	2	H2	51.191	0.0105	1968.14	0.0002	7.279E-06
Se	78	2	H2	52.893	0.0109	2016.81	0.0002	7.279E-06
Se	78	2	H2	53.721	0.011	2036.15	0.0002	7.279E-06
Na	23	3	He	5268.261	19.503	451086.01	0.0036	0.7194
Na	23	3	He	5347.707	19.7862	450702.06	0.0036	0.7194
Na	23	3	He	5257.681	19.4653	444756.20	0.0036	0.7194
Mg	24	3	He	5165.358	9.398	217367.99	0.0018	0.006791
Mg	24	3	He	5280.207	9.6069	218830.15	0.0018	0.006791
Mg	24	3	He	5235.134	9.5249	217631.75	0.0018	0.006791
Al	27	3	He	5109.919	2.8482	65877.29	0.0006	0.002622
Al	27	3	He	5340.68	2.9768	67806.13	0.0006	0.002622
Al	27	3	He	5220.073	2.9096	66480.36	0.0006	0.002622
K	39	3	He	5244.312	7.2489	167659.82	0.0013	0.5579
K	39	3	He	5300.78	7.3209	166760.02	0.0013	0.5579
K	39	3	He	5186.062	7.1746	163929.43	0.0013	0.5579
Ca	44	3	He	5520.995	0.4087	9453.32	0.0001	0.004062
Ca	44	3	He	5307.172	0.393	8953.07	0.0001	0.004062
Ca	44	3	He	5171.197	0.3831	8752.93	0.0001	0.004062
Ti	47	3	He	5103.862	2.9926	69215.20	0.0006	0.0002809
Ti	47	3	He	5294.493	3.1043	70712.04	0.0006	0.0002809
Ti	47	3	He	5141.714	3.0148	68883.26	0.0006	0.0002809
V	51	3	He	520.365	13.4744	311650.09	0.0259	0.01861
V	51	3	He	527.673	13.6634	311231.81	0.0259	0.01861
V	51	3	He	524.013	13.5687	310027.69	0.0259	0.01861
Cr	52	3	He	521.036	17.4107	402692.92	0.0332	0.1047
Cr	52	3	He	527.974	17.6411	401839.29	0.0332	0.1047
Cr	52	3	He	522.042	17.4441	398575.46	0.0332	0.1047
Mn	55	3	He	513.926	7.131	164932.65	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	535.095	7.4245	169119.04	0.0139	0.005074
Mn	55	3	He	526.005	7.2985	166760.37	0.0139	0.005074
Fe	57	3	He	5426.739	3.455	79909.97	0.0006	0.00609
Fe	57	3	He	5288.969	3.3674	76704.52	0.0006	0.00609
Fe	57	3	He	5356.467	3.4103	77920.92	0.0006	0.00609
Co	59	3	He	515.547	34.1093	788916.00	0.0661	0.00621
Co	59	3	He	521.992	34.5356	786670.93	0.0661	0.00621
Co	59	3	He	517.896	34.2647	782903.27	0.0661	0.00621
Ni	60	3	He	527.296	5.2807	220745.02	0.01	0.01721
Ni	60	3	He	521.652	5.2244	220746.07	0.01	0.01721
Ni	60	3	He	534.354	5.3511	223527.44	0.01	0.01721
Cu	63	3	He	532.545	15.254	637651.63	0.0286	0.006793
Cu	63	3	He	528.504	15.1383	639642.18	0.0286	0.006793
Cu	63	3	He	521.031	14.9244	623418.08	0.0286	0.006793
Zn	66	3	He	533.449	1.7941	74995.77	0.0034	0.00316
Zn	66	3	He	527.888	1.7754	75016.05	0.0034	0.00316
Zn	66	3	He	531.333	1.787	74644.65	0.0034	0.00316
As	75	3	He	529.613	1.3687	57213.59	0.0026	0.0008231
As	75	3	He	531.427	1.3734	58028.77	0.0026	0.0008231
As	75	3	He	530.669	1.3714	57285.96	0.0026	0.0008231
Sr	88	3	He	53.128	0.5618	21156.24	0.0105	0.001715
Sr	88	3	He	51.677	0.5465	20945.99	0.0105	0.001715
Sr	88	3	He	49.269	0.5211	20865.89	0.0105	0.001715
Mo	98	3	He	52.152	1.4354	54054.49	0.0275	0.0008555
Mo	98	3	He	50.908	1.4012	53703.30	0.0275	0.0008555
Mo	98	3	He	49.531	1.3633	54586.96	0.0275	0.0008555
Ag	107	3	He	52.717	3.1158	117330.10	0.0591	0.0004305
Ag	107	3	He	50.297	2.9727	113931.72	0.0591	0.0004305
Ag	107	3	He	48.123	2.8443	113881.30	0.0591	0.0004305
Cd	111	3	He	51.545	0.3417	12865.95	0.0066	5.141E-05
Cd	111	3	He	51.473	0.3412	13076.17	0.0066	5.141E-05
Cd	111	3	He	49.082	0.3253	13026.10	0.0066	5.141E-05
Sn	120	3	He	52.819	1.0079	37952.76	0.0187	0.0185
Sn	120	3	He	52.509	1.002	38404.28	0.0187	0.0185
Sn	120	3	He	48.535	0.9276	37140.49	0.0187	0.0185
Sb	121	3	He	51.981	0.9525	35866.77	0.0183	0.00111
Sb	121	3	He	51.86	0.9502	36419.03	0.0183	0.00111
Sb	121	3	He	49.105	0.8998	36028.02	0.0183	0.00111
Ba	137	3	He	526.772	3.0865	116229.47	0.0059	0.0007704
Ba	137	3	He	509.943	2.988	114515.87	0.0059	0.0007704
Ba	137	3	He	489.068	2.8657	114738.83	0.0059	0.0007704
Tl	205	3	He	53.161	1.9338	246086.64	0.0364	0.000808
Tl	205	3	He	52.438	1.9075	241871.54	0.0364	0.000808
Tl	205	3	He	54.037	1.9657	246878.75	0.0364	0.000808
Pb	208	3	He	51.946	2.5355	173007.89	0.0487	0.003226
Pb	208	3	He	52.64	2.5694	172633.96	0.0487	0.003226
Pb	208	3	He	53.054	2.5896	172097.71	0.0487	0.003226
U	238	3	He	51.483	2.7541	350468.51	0.0535	0.0004157
U	238	3	He	51.454	2.7526	349023.00	0.0535	0.0004157
U	238	3	He	52.016	2.7826	349483.67	0.0535	0.0004157
Sc	45	1	No Gas			1300821.07		
Sc	45	1	No Gas			1304386.93		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1314502.32		
Ge	72	1	No Gas			673832.72		
Ge	72	1	No Gas			675008.74		
Ge	72	1	No Gas			664085.46		
Sc	45	2	H2			84887.11		
Sc	45	2	H2			87281.31		
Sc	45	2	H2			84706.56		
Ge	72	2	H2			70262.52		
Ge	72	2	H2			69599.85		
Ge	72	2	H2			68163.79		
In	115	2	H2			186972.95		
In	115	2	H2			185435.09		
In	115	2	H2			184327.58		
Sc	45	3	He			23129.07		
Sc	45	3	He			22778.55		
Sc	45	3	He			22848.71		
Ge	72	3	He			41802.24		
Ge	72	3	He			42253.20		
Ge	72	3	He			41771.87		
In	115	3	He			37922.57		
In	115	3	He			38594.64		
In	115	3	He			40298.98		
Tb	159	3	He			175458.32		
Tb	159	3	He			176633.53		
Tb	159	3	He			175851.91		
Bi	209	3	He			127254.47		
Bi	209	3	He			126799.54		
Bi	209	3	He			125595.96		

Quantitation Report

Data File Name	060_CCB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
Acq Time	9/19/2023 8:50:27 AM
Sample Name	CCB 4807280
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

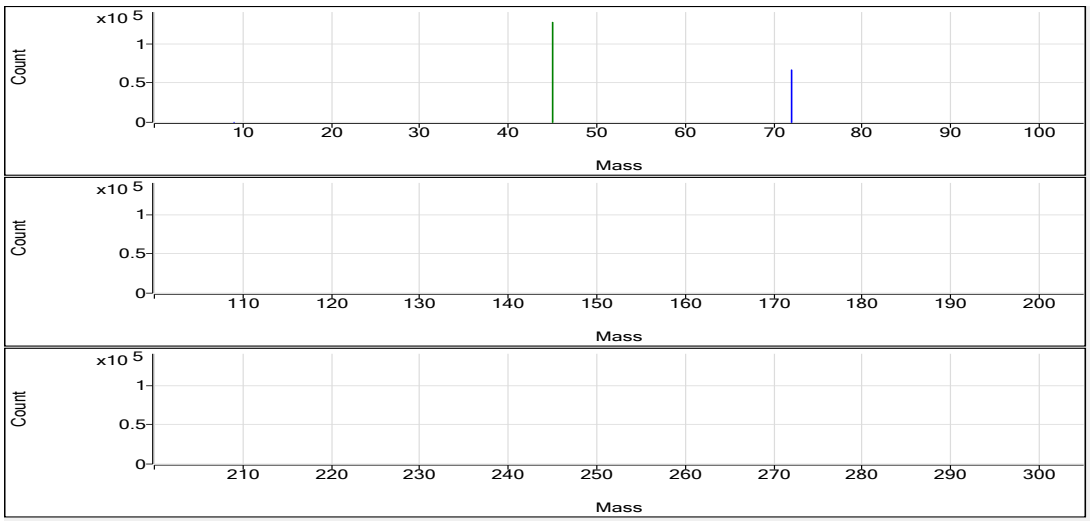
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.094	ppb	19.1	82.00	0.0001	Pulse	0.5000	3
Se	78	115	H2	0.090	ppb	69.6	4.66	0.0000	Pulse	1.5000	3
Na	23	45	He	37.732	ppb	15.2	19303.14	0.8539	Pulse	0.1000	3
Mg	24	45	He	7.718	ppb	34.9	470.03	0.0208	Pulse	0.1000	3
Al	27	45	He	1.909	ppb	62.7	83.33	0.0037	Pulse	0.1000	3
K	39	45	He	25.735	ppb	182.7	13349.95	0.5907	Pulse	0.1000	3
Ca	44	45	He	21.101	ppb	47.2	126.68	0.0056	Pulse	0.1000	3
Ti	47	45	He	2.290	ppb	20.0	36.67	0.0016	Pulse	0.1000	3
V	51	45	He	0.106	ppb	17.1	482.68	0.0214	Pulse	0.5000	3
Cr	52	45	He	0.534	ppb	50.3	2767.03	0.1225	Pulse	0.1000	3
Mn	55	45	He	0.847	ppb	32.9	380.02	0.0168	Pulse	0.1000	3
Fe	57	45	He	7.132	ppb	19.1	240.01	0.0106	Pulse	0.1000	3
Co	59	45	He	0.109	ppb	17.7	303.34	0.0134	Pulse	0.1000	3
Ni	60	72	He	0.079	ppb	121.6	743.38	0.0180	Pulse	0.1000	3
Cu	63	72	He	0.155	ppb	28.4	463.36	0.0112	Pulse	0.1000	3
Zn	66	72	He	0.284	ppb	110.5	170.01	0.0041	Pulse	0.1000	3
As	75	72	He	0.214	ppb	60.8	56.67	0.0014	Pulse	0.5000	3
Sr	88	115	He	0.296	ppb	3.4	190.01	0.0048	Pulse	0.1000	3
Mo	98	115	He	0.052	ppb	32.9	90.00	0.0023	Pulse	0.1000	3
Ag	107	115	He	0.014	ppb	4.7	50.00	0.0013	Pulse	0.1000	3
Cd	111	115	He	0.008	ppb	104.9	4.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.010	ppb	N/A	720.05	0.0183	Pulse	0.1000	3
Sb	121	115	He	0.089	ppb	53.8	106.67	0.0027	Pulse	0.1000	3
Ba	137	115	He	0.248	ppb	48.7	86.67	0.0022	Pulse	0.1000	3
Tl	205	209	He	0.069	ppb	43.4	420.02	0.0033	Pulse	0.1000	3
Pb	208	209	He	0.014	ppb	69.3	493.35	0.0039	Pulse	0.1000	3
U	238	209	He	0.017	ppb	41.2	166.67	0.0013	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1277410.71	1.2	95.7	Analog	0.1000	3
No Gas	Ge	72	669231.01	0.4	95.7	Pulse	0.1000	3
H2	Sc	45	85979.84	2.0	98.9	Pulse	0.1000	3
H2	Ge	72	69378.71	0.3	96.9	Pulse	0.1000	3
H2	In	115	181738.68	0.5	99.2	Pulse	0.1000	3
He	Sc	45	22604.83	1.0	98.3	Pulse	0.1000	3
He	Ge	72	41320.47	1.5	97.9	Pulse	0.1000	3
He	In	115	39254.53	3.1	100.8	Pulse	0.1000	3
He	Tb	159	173279.07	0.6	98.4	Pulse	0.1000	3
He	Bi	209	126883.57	1.6	99.0	Pulse	0.1000	3

No Gas



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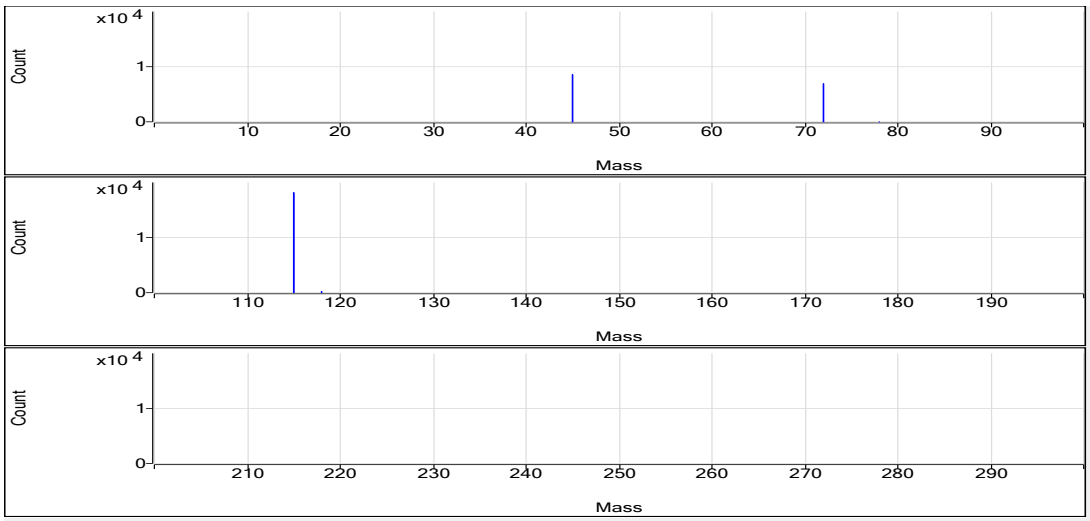
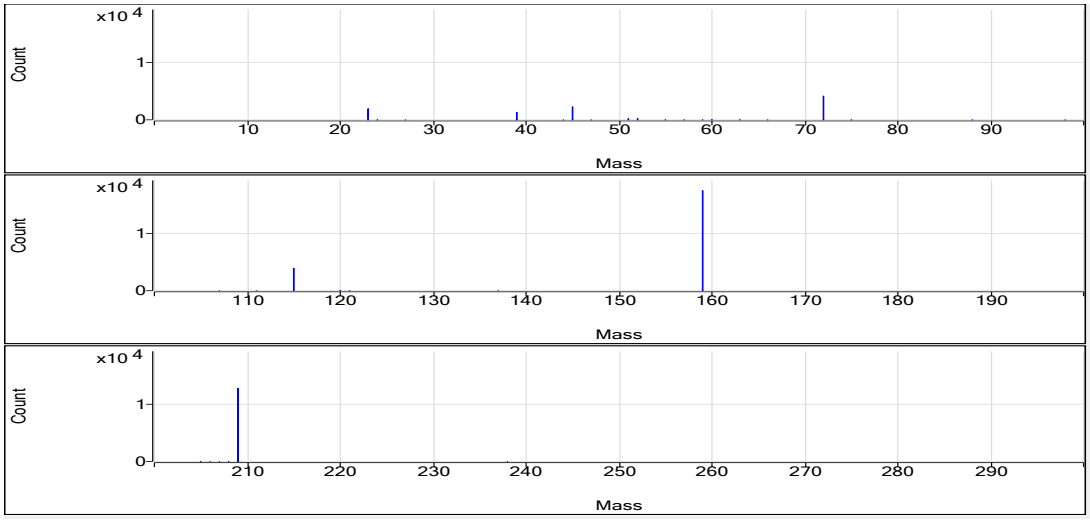


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.099	0.0001	86.00	0.0005	1.901E-05
Be	9	1	No Gas	0.109	0.0001	90.00	0.0005	1.901E-05
Be	9	1	No Gas	0.074	0.0001	70.00	0.0005	1.901E-05
Se	78	2	H2	0.053	0	3.33	0.0002	7.279E-06
Se	78	2	H2	0.054	0	3.33	0.0002	7.279E-06
Se	78	2	H2	0.162	0	7.33	0.0002	7.279E-06
Na	23	3	He	43.801	0.8755	19793.88	0.0036	0.7194
Na	23	3	He	32.395	0.8349	18682.28	0.0036	0.7194
Na	23	3	He	37.001	0.8513	19433.25	0.0036	0.7194
Mg	24	3	He	6.727	0.019	430.03	0.0018	0.006791
Mg	24	3	He	10.767	0.0264	590.03	0.0018	0.006791
Mg	24	3	He	5.662	0.0171	390.02	0.0018	0.006791
Al	27	3	He	3.234	0.0044	100.00	0.0006	0.002622
Al	27	3	He	0.908	0.0031	70.00	0.0006	0.002622
Al	27	3	He	1.584	0.0035	80.00	0.0006	0.002622
K	39	3	He	76.807	0.6559	14828.04	0.0013	0.5579
K	39	3	He	16.185	0.5785	12946.19	0.0013	0.5579
K	39	3	He	-15.787	0.5377	12275.62	0.0013	0.5579
Ca	44	3	He	23.037	0.0058	130.01	0.0001	0.004062
Ca	44	3	He	29.941	0.0063	140.01	0.0001	0.004062
Ca	44	3	He	10.327	0.0048	110.01	0.0001	0.004062
Ti	47	3	He	2.539	0.0018	40.00	0.0006	0.0002809
Ti	47	3	He	2.57	0.0018	40.00	0.0006	0.0002809
Ti	47	3	He	1.762	0.0013	30.00	0.0006	0.0002809
V	51	3	He	0.088	0.0209	472.01	0.0259	0.01861
V	51	3	He	0.106	0.0214	478.01	0.0259	0.01861
V	51	3	He	0.124	0.0218	498.01	0.0259	0.01861
Cr	52	3	He	0.363	0.1168	2640.32	0.0332	0.1047
Cr	52	3	He	0.843	0.1327	2970.41	0.0332	0.1047
Cr	52	3	He	0.395	0.1179	2690.35	0.0332	0.1047
Mn	55	3	He	0.559	0.0128	290.01	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1.117	0.0206	460.02	0.0139	0.005074
Mn	55	3	He	0.866	0.0171	390.02	0.0139	0.005074
Fe	57	3	He	6.425	0.0102	230.01	0.0006	0.00609
Fe	57	3	He	8.699	0.0116	260.01	0.0006	0.00609
Fe	57	3	He	6.271	0.0101	230.01	0.0006	0.00609
Co	59	3	He	0.127	0.0146	330.01	0.0661	0.00621
Co	59	3	He	0.089	0.0121	270.01	0.0661	0.00621
Co	59	3	He	0.111	0.0136	310.01	0.0661	0.00621
Ni	60	3	He	0.098	0.0182	740.04	0.01	0.01721
Ni	60	3	He	0.163	0.0188	780.05	0.01	0.01721
Ni	60	3	He	-0.025	0.017	710.04	0.01	0.01721
Cu	63	3	He	0.201	0.0125	510.03	0.0286	0.006793
Cu	63	3	He	0.151	0.0111	460.03	0.0286	0.006793
Cu	63	3	He	0.113	0.01	420.02	0.0286	0.006793
Zn	66	3	He	0.45	0.0047	190.01	0.0034	0.00316
Zn	66	3	He	-0.078	0.0029	120.00	0.0034	0.00316
Zn	66	3	He	0.481	0.0048	200.01	0.0034	0.00316
As	75	3	He	0.348	0.0017	70.00	0.0026	0.0008231
As	75	3	He	0.205	0.0014	56.00	0.0026	0.0008231
As	75	3	He	0.088	0.0011	44.00	0.0026	0.0008231
Sr	88	3	He	0.297	0.0048	190.01	0.0105	0.001715
Sr	88	3	He	0.286	0.0047	180.01	0.0105	0.001715
Sr	88	3	He	0.306	0.0049	200.01	0.0105	0.001715
Mo	98	3	He	0.034	0.0018	70.00	0.0275	0.0008555
Mo	98	3	He	0.055	0.0024	90.00	0.0275	0.0008555
Mo	98	3	He	0.068	0.0027	110.01	0.0275	0.0008555
Ag	107	3	He	0.014	0.0013	50.00	0.0591	0.0004305
Ag	107	3	He	0.015	0.0013	50.00	0.0591	0.0004305
Ag	107	3	He	0.014	0.0012	50.00	0.0591	0.0004305
Cd	111	3	He	0.008	0.0001	4.00	0.0066	5.141E-05
Cd	111	3	He	0.016	0.0002	6.00	0.0066	5.141E-05
Cd	111	3	He	0	0	2.00	0.0066	5.141E-05
Sn	120	3	He	-0.158	0.0155	610.04	0.0187	0.0185
Sn	120	3	He	0.008	0.0187	710.05	0.0187	0.0185
Sn	120	3	He	0.12	0.0208	840.06	0.0187	0.0185
Sb	121	3	He	0.12	0.0033	130.01	0.0183	0.00111
Sb	121	3	He	0.112	0.0032	120.01	0.0183	0.00111
Sb	121	3	He	0.034	0.0017	70.00	0.0183	0.00111
Ba	137	3	He	0.26	0.0023	90.00	0.0059	0.0007704
Ba	137	3	He	0.362	0.0029	110.00	0.0059	0.0007704
Ba	137	3	He	0.121	0.0015	60.00	0.0059	0.0007704
Tl	205	3	He	0.103	0.0046	580.03	0.0364	0.000808
Tl	205	3	He	0.048	0.0026	320.01	0.0364	0.000808
Tl	205	3	He	0.055	0.0028	360.02	0.0364	0.000808
Pb	208	3	He	0.024	0.0044	290.01	0.0487	0.003226
Pb	208	3	He	0.011	0.0038	260.01	0.0487	0.003226
Pb	208	3	He	0.006	0.0035	230.01	0.0487	0.003226
U	238	3	He	0.025	0.0017	220.01	0.0535	0.0004157
U	238	3	He	0.015	0.0012	150.01	0.0535	0.0004157
U	238	3	He	0.011	0.001	130.00	0.0535	0.0004157
Sc	45	1	No Gas			1290164.28		
Sc	45	1	No Gas			1260847.32		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1281220.53		
Ge	72	1	No Gas			668623.82		
Ge	72	1	No Gas			666700.46		
Ge	72	1	No Gas			672368.74		
Sc	45	2	H2			86073.53		
Sc	45	2	H2			87653.05		
Sc	45	2	H2			84212.94		
Ge	72	2	H2			69157.41		
Ge	72	2	H2			69579.75		
Ge	72	2	H2			69398.96		
In	115	2	H2			182715.88		
In	115	2	H2			181494.67		
In	115	2	H2			181005.49		
Sc	45	3	He			22608.17		
Sc	45	3	He			22377.90		
Sc	45	3	He			22828.42		
Ge	72	3	He			40678.47		
Ge	72	3	He			41410.74		
Ge	72	3	He			41872.21		
In	115	3	He			39236.09		
In	115	3	He			38052.79		
In	115	3	He			40489.84		
Tb	159	3	He			172216.38		
Tb	159	3	He			174392.26		
Tb	159	3	He			173228.57		
Bi	209	3	He			127415.27		
Bi	209	3	He			124699.85		
Bi	209	3	He			128535.59		

Quantitation Report

Data File Name	061SMPL.d
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Acq Time	9/19/2023 8:52:26 AM
Sample Name	410-141880-E-6-A
Sample Type	Sample
Comment	B25
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

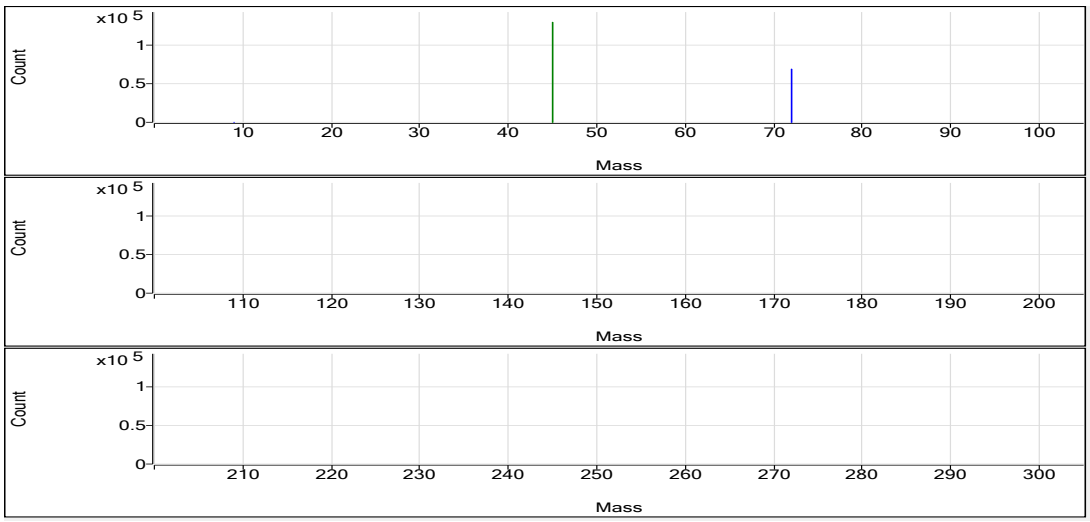
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.106	ppb	22.7	91.33	0.0001	Pulse	0.5000	3
Se	78	115	H2	0.180	ppb	1.5	8.00	0.0000	Pulse	1.5000	3
Na	23	45	He	105808.713	ppb	0.7	8597150.91	377.9734	Analog	0.1000	3
Mg	24	45	He	48727.371	ppb	0.0	2015184.61	88.5991	Analog	0.1000	3
Al	27	45	He	1561.204	ppb	0.4	19833.96	0.8720	Pulse	0.1000	3
K	39	45	He	3258.221	ppb	1.8	107244.67	4.7149	Pulse	0.1000	3
Ca	44	45	He	160724.894	ppb	0.3	268029.96	11.7843	Pulse	0.1000	3
Ti	47	45	He	50.799	ppb	11.2	683.37	0.0301	Pulse	0.1000	3
V	51	45	He	8.309	ppb	1.7	5310.33	0.2335	Pulse	0.5000	3
Cr	52	45	He	3.202	ppb	9.8	4800.94	0.2111	Pulse	0.1000	3
Mn	55	45	He	1956.758	ppb	0.4	617214.41	27.1367	Pulse	0.1000	3
Fe	57	45	He	2670.580	ppb	0.2	38742.66	1.7033	Pulse	0.1000	3
Co	59	45	He	5.697	ppb	2.3	8712.95	0.3831	Pulse	0.1000	3
Ni	60	72	He	6.274	ppb	19.0	3353.86	0.0798	Pulse	0.1000	3
Cu	63	72	He	6.933	ppb	1.8	8626.15	0.2053	Pulse	0.1000	3
Zn	66	72	He	70.729	ppb	2.4	10110.57	0.2406	Pulse	0.1000	3
As	75	72	He	4.866	ppb	1.5	562.68	0.0134	Pulse	0.5000	3
Sr	88	115	He	916.164	ppb	0.5	372249.58	9.6604	Pulse	0.1000	3
Mo	98	115	He	0.972	ppb	10.3	1063.41	0.0276	Pulse	0.1000	3
Ag	107	115	He	0.021	ppb	49.0	63.33	0.0016	Pulse	0.1000	3
Cd	111	115	He	1.029	ppb	7.9	264.67	0.0069	Pulse	0.5000	3
Sn	120	115	He	1.760	ppb	8.2	1983.56	0.0515	Pulse	0.1000	3
Sb	121	115	He	0.544	ppb	8.6	426.69	0.0111	Pulse	0.1000	3
Ba	137	115	He	118.007	ppb	1.0	26666.65	0.6920	Pulse	0.1000	3
Tl	205	209	He	0.047	ppb	9.9	313.35	0.0025	Pulse	0.1000	3
Pb	208	209	He	6.624	ppb	1.0	40856.68	0.3261	Pulse	0.1000	3
U	238	209	He	17.009	ppb	0.5	114022.37	0.9102	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1302636.62	0.8	97.6	Analog	0.1000	3
No Gas	Ge	72	693651.24	0.8	99.2	Pulse	0.1000	3
H2	Sc	45	86932.48	1.3	100.0	Pulse	0.1000	3
H2	Ge	72	71968.00	1.9	100.5	Pulse	0.1000	3
H2	In	115	180972.86	1.2	98.8	Pulse	0.1000	3
He	Sc	45	22745.03	0.8	98.9	Pulse	0.1000	3
He	Ge	72	42019.14	0.4	99.5	Pulse	0.1000	3
He	In	115	38533.68	0.3	99.0	Pulse	0.1000	3
He	Tb	159	175438.65	0.6	99.6	Pulse	0.1000	3
He	Bi	209	125272.17	0.3	97.7	Pulse	0.1000	3

No Gas



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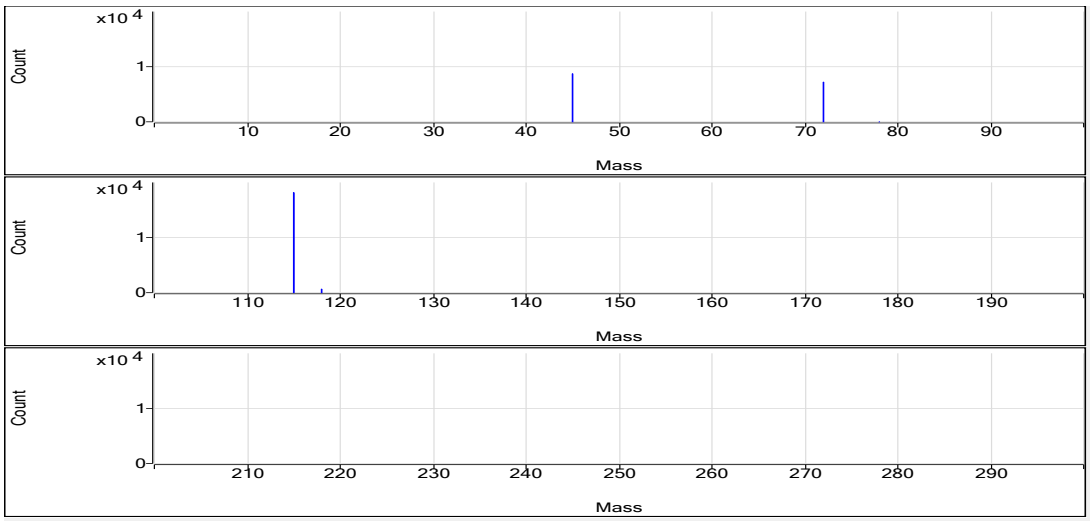
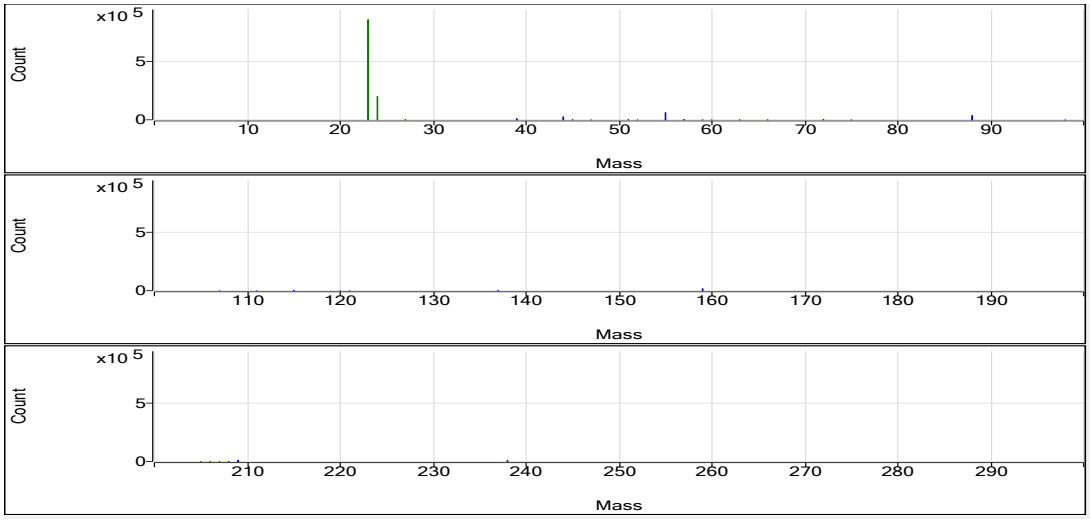


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.121	0.0001	100.00	0.0005	1.901E-05
Be	9	1	No Gas	0.118	0.0001	100.00	0.0005	1.901E-05
Be	9	1	No Gas	0.078	0.0001	74.00	0.0005	1.901E-05
Se	78	2	H2	0.178	0	8.00	0.0002	7.279E-06
Se	78	2	H2	0.183	0	8.00	0.0002	7.279E-06
Se	78	2	H2	0.179	0	8.00	0.0002	7.279E-06
Na	23	3	He	106462.318	380.3037	8723677.37	0.0036	0.7194
Na	23	3	He	105054.284	375.2835	8533252.37	0.0036	0.7194
Na	23	3	He	105909.536	378.3328	8534523.00	0.0036	0.7194
Mg	24	3	He	48708.869	88.5655	2031577.31	0.0018	0.006791
Mg	24	3	He	48722.669	88.5905	2014385.13	0.0018	0.006791
Mg	24	3	He	48750.576	88.6413	1999591.38	0.0018	0.006791
Al	27	3	He	1557.37	0.8699	19954.25	0.0006	0.002622
Al	27	3	He	1557.69	0.8701	19783.84	0.0006	0.002622
Al	27	3	He	1568.554	0.8761	19763.78	0.0006	0.002622
K	39	3	He	3311.715	4.7832	109719.45	0.0013	0.5579
K	39	3	He	3196.892	4.6367	105429.05	0.0013	0.5579
K	39	3	He	3266.057	4.7249	106585.52	0.0013	0.5579
Ca	44	3	He	160311.123	11.754	269621.01	0.0001	0.004062
Ca	44	3	He	160605.755	11.7756	267754.66	0.0001	0.004062
Ca	44	3	He	161257.803	11.8234	266714.21	0.0001	0.004062
Ti	47	3	He	44.881	0.0266	610.03	0.0006	0.0002809
Ti	47	3	He	51.283	0.0303	690.04	0.0006	0.0002809
Ti	47	3	He	56.234	0.0332	750.05	0.0006	0.0002809
V	51	3	He	8.355	0.2347	5383.02	0.0259	0.01861
V	51	3	He	8.15	0.2293	5214.96	0.0259	0.01861
V	51	3	He	8.423	0.2364	5333.00	0.0259	0.01861
Cr	52	3	He	2.977	0.2036	4670.89	0.0332	0.1047
Cr	52	3	He	3.561	0.223	5071.04	0.0332	0.1047
Cr	52	3	He	3.067	0.2066	4660.90	0.0332	0.1047
Mn	55	3	He	1952.841	27.0824	621235.19	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1951.698	27.0666	615443.31	0.0139	0.005074
Mn	55	3	He	1965.736	27.2612	614964.72	0.0139	0.005074
Fe	57	3	He	2676.193	1.7069	39154.03	0.0006	0.00609
Fe	57	3	He	2667.921	1.7016	38692.16	0.0006	0.00609
Fe	57	3	He	2667.627	1.7015	38381.79	0.0006	0.00609
Co	59	3	He	5.8	0.3899	8943.13	0.0661	0.00621
Co	59	3	He	5.546	0.3731	8482.75	0.0661	0.00621
Co	59	3	He	5.745	0.3862	8712.97	0.0661	0.00621
Ni	60	3	He	7.561	0.0927	3880.69	0.01	0.01721
Ni	60	3	He	5.216	0.0693	2910.40	0.01	0.01721
Ni	60	3	He	6.045	0.0775	3270.49	0.01	0.01721
Cu	63	3	He	6.805	0.2016	8442.68	0.0286	0.006793
Cu	63	3	He	6.94	0.2055	8632.83	0.0286	0.006793
Cu	63	3	He	7.053	0.2087	8802.93	0.0286	0.006793
Zn	66	3	He	70.935	0.2413	10103.86	0.0034	0.00316
Zn	66	3	He	68.921	0.2345	9853.75	0.0034	0.00316
Zn	66	3	He	72.331	0.246	10374.09	0.0034	0.00316
As	75	3	He	4.934	0.0136	568.02	0.0026	0.0008231
As	75	3	He	4.787	0.0132	554.01	0.0026	0.0008231
As	75	3	He	4.878	0.0134	566.02	0.0026	0.0008231
Sr	88	3	He	921.397	9.7156	374245.15	0.0105	0.001715
Sr	88	3	He	912.3	9.6197	371894.96	0.0105	0.001715
Sr	88	3	He	914.797	9.646	370608.63	0.0105	0.001715
Mo	98	3	He	0.894	0.0254	980.07	0.0275	0.0008555
Mo	98	3	He	0.938	0.0266	1030.07	0.0275	0.0008555
Mo	98	3	He	1.085	0.0307	1180.09	0.0275	0.0008555
Ag	107	3	He	0.015	0.0013	50.00	0.0591	0.0004305
Ag	107	3	He	0.032	0.0023	90.00	0.0591	0.0004305
Ag	107	3	He	0.015	0.0013	50.00	0.0591	0.0004305
Cd	111	3	He	0.956	0.0064	246.00	0.0066	5.141E-05
Cd	111	3	He	1.116	0.0074	288.01	0.0066	5.141E-05
Cd	111	3	He	1.013	0.0068	260.00	0.0066	5.141E-05
Sn	120	3	He	1.743	0.0511	1970.23	0.0187	0.0185
Sn	120	3	He	1.912	0.0543	2100.25	0.0187	0.0185
Sn	120	3	He	1.625	0.0489	1880.20	0.0187	0.0185
Sb	121	3	He	0.578	0.0117	450.02	0.0183	0.00111
Sb	121	3	He	0.491	0.0101	390.02	0.0183	0.00111
Sb	121	3	He	0.565	0.0115	440.02	0.0183	0.00111
Ba	137	3	He	116.848	0.6853	26396.08	0.0059	0.0007704
Ba	137	3	He	118.062	0.6924	26766.80	0.0059	0.0007704
Ba	137	3	He	119.11	0.6985	26837.08	0.0059	0.0007704
Tl	205	3	He	0.048	0.0025	320.02	0.0364	0.000808
Tl	205	3	He	0.041	0.0023	290.01	0.0364	0.000808
Tl	205	3	He	0.05	0.0026	330.02	0.0364	0.000808
Pb	208	3	He	6.678	0.3288	21949.22	0.0487	0.003226
Pb	208	3	He	6.546	0.3223	21858.76	0.0487	0.003226
Pb	208	3	He	6.648	0.3273	22029.26	0.0487	0.003226
U	238	3	He	17.027	0.9111	114446.13	0.0535	0.0004157
U	238	3	He	17.09	0.9145	114516.89	0.0535	0.0004157
U	238	3	He	16.911	0.905	113104.08	0.0535	0.0004157
Sc	45	1	No Gas			1290999.20		
Sc	45	1	No Gas			1312962.17		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1303948.50		
Ge	72	1	No Gas			687801.01		
Ge	72	1	No Gas			699037.02		
Ge	72	1	No Gas			694115.69		
Sc	45	2	H2			88006.09		
Sc	45	2	H2			85812.05		
Sc	45	2	H2			86979.29		
Ge	72	2	H2			73267.57		
Ge	72	2	H2			72061.89		
Ge	72	2	H2			70574.55		
In	115	2	H2			182709.18		
In	115	2	H2			178432.69		
In	115	2	H2			181776.70		
Sc	45	3	He			22938.71		
Sc	45	3	He			22738.15		
Sc	45	3	He			22558.24		
Ge	72	3	He			41871.93		
Ge	72	3	He			42012.58		
Ge	72	3	He			42172.91		
In	115	3	He			38533.95		
In	115	3	He			38674.58		
In	115	3	He			38434.15		
Tb	159	3	He			174199.68		
Tb	159	3	He			176163.65		
Tb	159	3	He			175952.63		
Bi	209	3	He			125609.87		
Bi	209	3	He			125224.44		
Bi	209	3	He			124982.21		

Quantitation Report

Data File Name	062SMPL.d
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Sample Type	Sample
Comment	B25
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

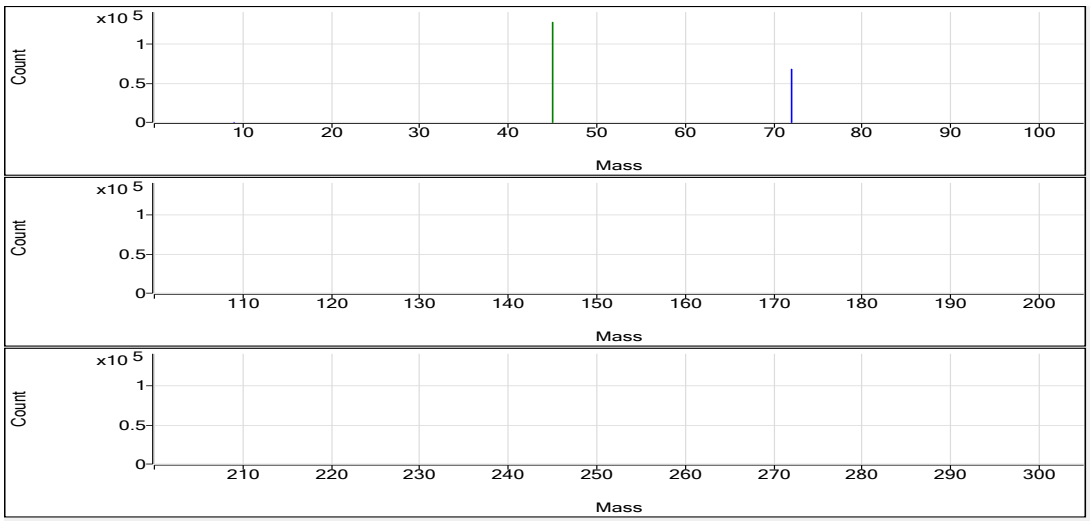
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.034	ppb	57.4	45.33	0.0000	Pulse	0.5000	3
Se	78	115	H2	-0.029	ppb	N/A	0.22	0.0000	Pulse	1.5000	3
Na	23	45	He	49.972	ppb	7.7	20441.31	0.8975	Pulse	0.1000	3
Mg	24	45	He	14.791	ppb	10.6	766.71	0.0337	Pulse	0.1000	3
Al	27	45	He	2.421	ppb	174.0	90.00	0.0040	Pulse	0.1000	3
K	39	45	He	39.109	ppb	146.8	13833.70	0.6078	Pulse	0.1000	3
Ca	44	45	He	82.134	ppb	44.4	230.01	0.0101	Pulse	0.1000	3
Ti	47	45	He	0.265	ppb	278.1	10.00	0.0004	Pulse	0.1000	3
V	51	45	He	0.063	ppb	154.4	461.34	0.0202	Pulse	0.5000	3
Cr	52	45	He	-0.205	ppb	N/A	2230.25	0.0979	Pulse	0.1000	3
Mn	55	45	He	1.155	ppb	7.5	480.02	0.0211	Pulse	0.1000	3
Fe	57	45	He	5.610	ppb	8.1	220.01	0.0097	Pulse	0.1000	3
Co	59	45	He	0.010	ppb	268.6	156.67	0.0069	Pulse	0.1000	3
Ni	60	72	He	-0.060	ppb	N/A	710.04	0.0166	Pulse	0.1000	3
Cu	63	72	He	0.115	ppb	59.8	430.02	0.0101	Pulse	0.1000	3
Zn	66	72	He	-0.198	ppb	N/A	106.67	0.0025	Pulse	0.1000	3
As	75	72	He	-0.041	ppb	N/A	30.67	0.0007	Pulse	0.5000	3
Sr	88	115	He	0.351	ppb	19.6	210.01	0.0054	Pulse	0.1000	3
Mo	98	115	He	0.034	ppb	45.3	70.00	0.0018	Pulse	0.1000	3
Ag	107	115	He	0.001	ppb	304.2	20.00	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.008	ppb	200.2	4.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.120	ppb	N/A	630.04	0.0163	Pulse	0.1000	3
Sb	121	115	He	0.024	ppb	104.2	60.00	0.0015	Pulse	0.1000	3
Ba	137	115	He	0.147	ppb	86.2	63.33	0.0016	Pulse	0.1000	3
Tl	205	209	He	0.003	ppb	118.1	120.01	0.0009	Pulse	0.1000	3
Pb	208	209	He	-0.004	ppb	N/A	396.69	0.0030	Pulse	0.1000	3
U	238	209	He	0.006	ppb	81.8	93.34	0.0007	Pulse	0.1000	3

ISTD Table:

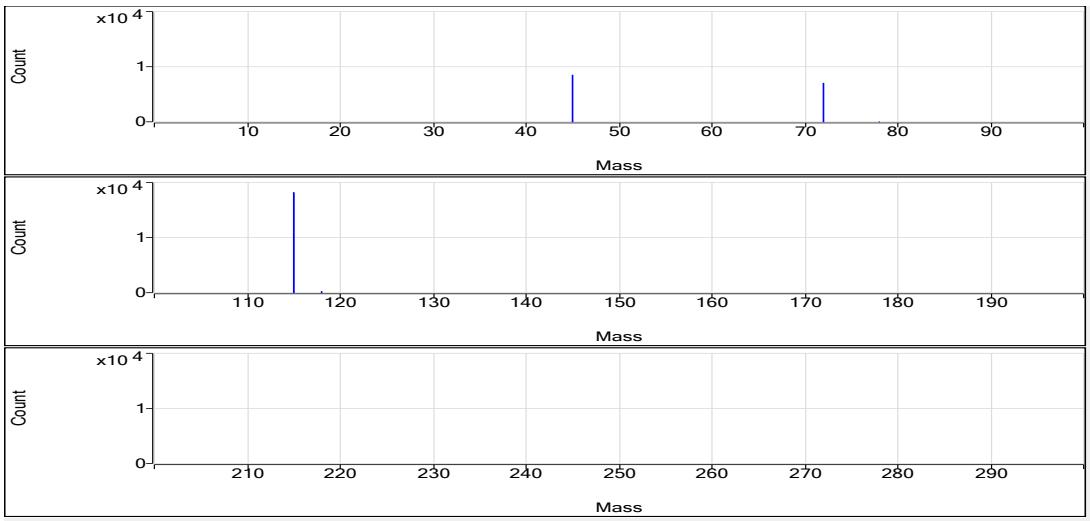
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1284768.16	1.5	96.3	Analog	0.1000	3
No Gas	Ge	72	683433.53	0.7	97.7	Pulse	0.1000	3
H2	Sc	45	85379.71	0.6	98.2	Pulse	0.1000	3
H2	Ge	72	70684.90	1.1	98.7	Pulse	0.1000	3
H2	In	115	182574.82	2.0	99.7	Pulse	0.1000	3
He	Sc	45	22778.40	1.6	99.0	Pulse	0.1000	3
He	Ge	72	42687.99	2.1	101.1	Pulse	0.1000	3
He	In	115	38784.00	0.9	99.6	Pulse	0.1000	3
He	Tb	159	174322.39	1.7	99.0	Pulse	0.1000	3
He	Bi	209	130656.50	0.3	101.9	Pulse	0.1000	3

No Gas

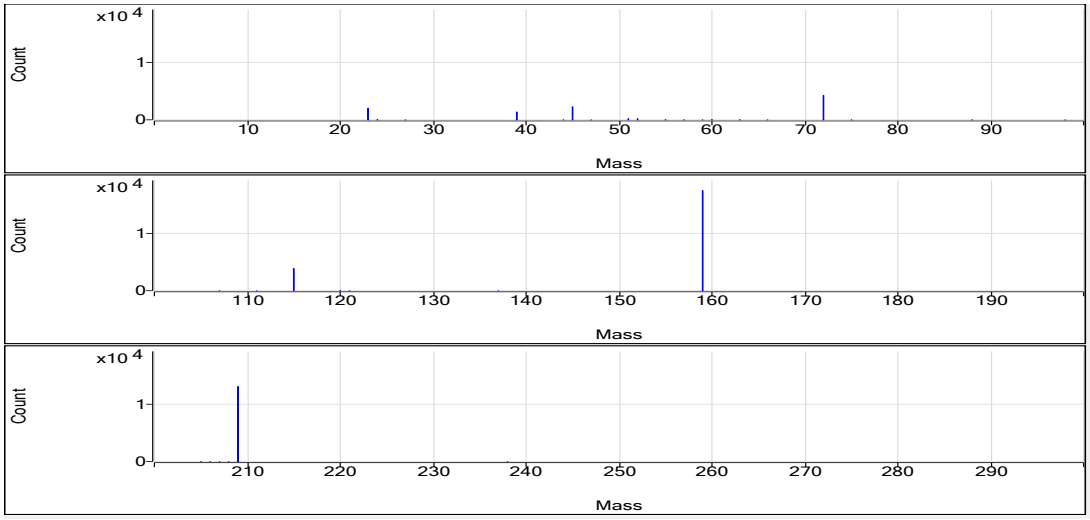


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.056	0	58.00	0.0005	1.901E-05
Be	9	1	No Gas	0.018	0	36.00	0.0005	1.901E-05
Be	9	1	No Gas	0.027	0	42.00	0.0005	1.901E-05
Se	78	2	H2	-0.017	0	0.67	0.0002	7.279E-06
Se	78	2	H2	-0.035	0	0.00	0.0002	7.279E-06
Se	78	2	H2	-0.035	0	0.00	0.0002	7.279E-06
Na	23	3	He	52.855	0.9078	20614.78	0.0036	0.7194
Na	23	3	He	51.449	0.9028	20274.55	0.0036	0.7194
Na	23	3	He	45.613	0.882	20434.60	0.0036	0.7194
Mg	24	3	He	13.947	0.0321	730.04	0.0018	0.006791
Mg	24	3	He	16.594	0.037	830.06	0.0018	0.006791
Mg	24	3	He	13.833	0.0319	740.04	0.0018	0.006791
Al	27	3	He	0.036	0.0026	60.00	0.0006	0.002622
Al	27	3	He	7.286	0.0067	150.01	0.0006	0.002622
Al	27	3	He	-0.059	0.0026	60.00	0.0006	0.002622
K	39	3	He	98.372	0.6834	15518.62	0.0013	0.5579
K	39	3	He	35.185	0.6028	13536.75	0.0013	0.5579
K	39	3	He	-16.228	0.5372	12445.72	0.0013	0.5579
Ca	44	3	He	112.812	0.0123	280.01	0.0001	0.004062
Ca	44	3	He	41.788	0.0071	160.01	0.0001	0.004062
Ca	44	3	He	91.802	0.0108	250.01	0.0001	0.004062
Ti	47	3	He	-0.479	0	0.00	0.0006	0.0002809
Ti	47	3	He	0.28	0.0004	10.00	0.0006	0.0002809
Ti	47	3	He	0.993	0.0009	20.00	0.0006	0.0002809
V	51	3	He	0.071	0.0204	464.01	0.0259	0.01861
V	51	3	He	-0.038	0.0176	396.01	0.0259	0.01861
V	51	3	He	0.155	0.0226	524.01	0.0259	0.01861
Cr	52	3	He	-0.143	0.1	2270.24	0.0332	0.1047
Cr	52	3	He	-0.231	0.0971	2180.23	0.0332	0.1047
Cr	52	3	He	-0.242	0.0967	2240.27	0.0332	0.1047
Mn	55	3	He	1.159	0.0211	480.02	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1.24	0.0223	500.03	0.0139	0.005074
Mn	55	3	He	1.066	0.0199	460.02	0.0139	0.005074
Fe	57	3	He	5.662	0.0097	220.01	0.0006	0.00609
Fe	57	3	He	5.131	0.0094	210.01	0.0006	0.00609
Fe	57	3	He	6.038	0.0099	230.01	0.0006	0.00609
Co	59	3	He	0.039	0.0088	200.01	0.0661	0.00621
Co	59	3	He	0.007	0.0067	150.01	0.0661	0.00621
Co	59	3	He	-0.016	0.0052	120.00	0.0661	0.00621
Ni	60	3	He	-0.133	0.0159	690.04	0.01	0.01721
Ni	60	3	He	0.305	0.0203	870.05	0.01	0.01721
Ni	60	3	He	-0.354	0.0137	570.03	0.01	0.01721
Cu	63	3	He	0.133	0.0106	460.02	0.0286	0.006793
Cu	63	3	He	0.039	0.0079	340.02	0.0286	0.006793
Cu	63	3	He	0.173	0.0118	490.02	0.0286	0.006793
Zn	66	3	He	-0.256	0.0023	100.00	0.0034	0.00316
Zn	66	3	He	-0.04	0.003	130.00	0.0034	0.00316
Zn	66	3	He	-0.298	0.0022	90.00	0.0034	0.00316
As	75	3	He	-0.14	0.0005	20.00	0.0026	0.0008231
As	75	3	He	0.096	0.0011	46.00	0.0026	0.0008231
As	75	3	He	-0.077	0.0006	26.00	0.0026	0.0008231
Sr	88	3	He	0.281	0.0047	180.01	0.0105	0.001715
Sr	88	3	He	0.419	0.0061	240.01	0.0105	0.001715
Sr	88	3	He	0.352	0.0054	210.01	0.0105	0.001715
Mo	98	3	He	0.026	0.0016	60.00	0.0275	0.0008555
Mo	98	3	He	0.052	0.0023	90.00	0.0275	0.0008555
Mo	98	3	He	0.025	0.0015	60.00	0.0275	0.0008555
Ag	107	3	He	0.006	0.0008	30.00	0.0591	0.0004305
Ag	107	3	He	0.001	0.0005	20.00	0.0591	0.0004305
Ag	107	3	He	-0.003	0.0003	10.00	0.0591	0.0004305
Cd	111	3	He	0.024	0.0002	8.00	0.0066	5.141E-05
Cd	111	3	He	0.008	0.0001	4.00	0.0066	5.141E-05
Cd	111	3	He	-0.008	0	0.00	0.0066	5.141E-05
Sn	120	3	He	-0.086	0.0169	650.04	0.0187	0.0185
Sn	120	3	He	-0.197	0.0148	580.04	0.0187	0.0185
Sn	120	3	He	-0.078	0.0171	660.04	0.0187	0.0185
Sb	121	3	He	0.039	0.0018	70.00	0.0183	0.00111
Sb	121	3	He	-0.005	0.001	40.00	0.0183	0.00111
Sb	121	3	He	0.038	0.0018	70.00	0.0183	0.00111
Ba	137	3	He	0.223	0.0021	80.00	0.0059	0.0007704
Ba	137	3	He	0.217	0.002	80.00	0.0059	0.0007704
Ba	137	3	He	0.001	0.0008	30.00	0.0059	0.0007704
Tl	205	3	He	0.007	0.0011	140.01	0.0364	0.000808
Tl	205	3	He	0.001	0.0008	110.01	0.0364	0.000808
Tl	205	3	He	0.001	0.0008	110.00	0.0364	0.000808
Pb	208	3	He	0.011	0.0037	240.01	0.0487	0.003226
Pb	208	3	He	-0.013	0.0026	220.01	0.0487	0.003226
Pb	208	3	He	-0.01	0.0028	200.01	0.0487	0.003226
U	238	3	He	0.011	0.001	130.01	0.0535	0.0004157
U	238	3	He	0.002	0.0005	70.00	0.0535	0.0004157
U	238	3	He	0.004	0.0006	80.00	0.0535	0.0004157
Sc	45	1	No Gas			1263001.31		
Sc	45	1	No Gas			1289902.56		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1301400.61		
Ge	72	1	No Gas			683530.77		
Ge	72	1	No Gas			678340.46		
Ge	72	1	No Gas			688429.36		
Sc	45	2	H2			84907.42		
Sc	45	2	H2			85892.46		
Sc	45	2	H2			85339.26		
Ge	72	2	H2			69931.02		
Ge	72	2	H2			70635.12		
Ge	72	2	H2			71488.57		
In	115	2	H2			179595.56		
In	115	2	H2			181369.37		
In	115	2	H2			186759.53		
Sc	45	3	He			22708.49		
Sc	45	3	He			22457.69		
Sc	45	3	He			23169.01		
Ge	72	3	He			43436.88		
Ge	72	3	He			42955.31		
Ge	72	3	He			41671.78		
In	115	3	He			38484.18		
In	115	3	He			39166.06		
In	115	3	He			38714.99		
Tb	159	3	He			174482.58		
Tb	159	3	He			177169.74		
Tb	159	3	He			171314.86		
Bi	209	3	He			130998.96		
Bi	209	3	He			130323.62		
Bi	209	3	He			130646.91		

Quantitation Report

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Sample Type	Sample
Comment	B25
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

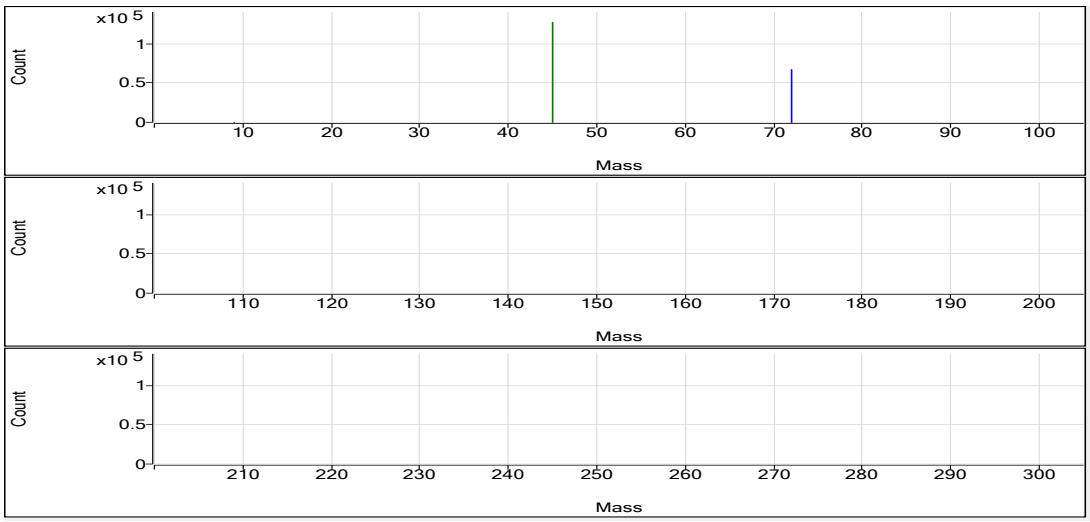
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.042	ppb	32.2	50.00	0.0000	Pulse	0.5000	3
Se	78	115	H2	0.215	ppb	7.8	9.33	0.0001	Pulse	1.5000	3
Na	23	45	He	425966.276	ppb	1.0	35310466.97	1,519.4741	Analog	0.1000	3
Mg	24	45	He	4363.597	ppb	1.4	184520.25	7.9403	Pulse	0.1000	3
Al	27	45	He	4.553	ppb	88.7	120.00	0.0052	Pulse	0.1000	3
K	39	45	He	9515.805	ppb	1.3	295101.15	12.6987	Pulse	0.1000	3
Ca	44	45	He	16817.695	ppb	1.6	28739.06	1.2367	Pulse	0.1000	3
Ti	47	45	He	0.501	ppb	85.6	13.33	0.0006	Pulse	0.1000	3
V	51	45	He	0.204	ppb	28.0	554.68	0.0239	Pulse	0.5000	3
Cr	52	45	He	-0.091	ppb	N/A	2363.60	0.1017	Pulse	0.1000	3
Mn	55	45	He	538.876	ppb	0.7	173753.19	7.4769	Pulse	0.1000	3
Fe	57	45	He	264.478	ppb	7.0	4047.36	0.1742	Pulse	0.1000	3
Co	59	45	He	0.244	ppb	15.5	520.03	0.0224	Pulse	0.1000	3
Ni	60	72	He	1.449	ppb	28.2	1336.78	0.0317	Pulse	0.1000	3
Cu	63	72	He	0.466	ppb	21.4	850.06	0.0201	Pulse	0.1000	3
Zn	66	72	He	1.293	ppb	17.1	316.69	0.0075	Pulse	0.1000	3
As	75	72	He	0.470	ppb	15.1	86.00	0.0020	Pulse	0.5000	3
Sr	88	115	He	125.331	ppb	1.0	51608.03	1.3230	Pulse	0.1000	3
Mo	98	115	He	2.205	ppb	10.7	2396.97	0.0615	Pulse	0.1000	3
Ag	107	115	He	0.082	ppb	20.8	206.68	0.0053	Pulse	0.1000	3
Cd	111	115	He	0.015	ppb	151.4	6.00	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.168	ppb	N/A	600.03	0.0154	Pulse	0.1000	3
Sb	121	115	He	0.145	ppb	21.3	146.68	0.0038	Pulse	0.1000	3
Ba	137	115	He	71.564	ppb	3.7	16386.90	0.4200	Pulse	0.1000	3
Tl	205	209	He	0.016	ppb	27.4	173.34	0.0014	Pulse	0.1000	3
Pb	208	209	He	0.056	ppb	23.6	746.71	0.0059	Pulse	0.1000	3
U	238	209	He	0.069	ppb	3.6	513.36	0.0041	Pulse	0.1000	3

ISTD Table:

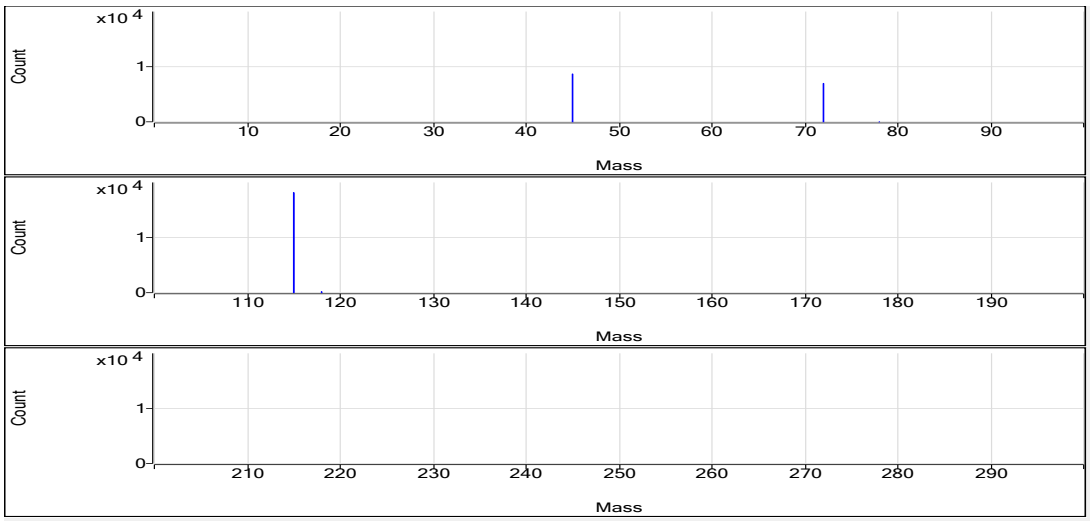
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1272490.68	1.4	95.3	Analog	0.1000	3
No Gas	Ge	72	669181.45	0.5	95.7	Pulse	0.1000	3
H2	Sc	45	86701.17	1.0	99.7	Pulse	0.1000	3
H2	Ge	72	69586.53	1.4	97.2	Pulse	0.1000	3
H2	In	115	181164.66	0.5	98.9	Pulse	0.1000	3
He	Sc	45	23239.16	0.5	101.0	Pulse	0.1000	3
He	Ge	72	42203.08	1.1	100.0	Pulse	0.1000	3
He	In	115	39011.34	1.3	100.2	Pulse	0.1000	3
He	Tb	159	173238.42	0.9	98.4	Pulse	0.1000	3
He	Bi	209	125691.72	0.9	98.0	Pulse	0.1000	3

No Gas

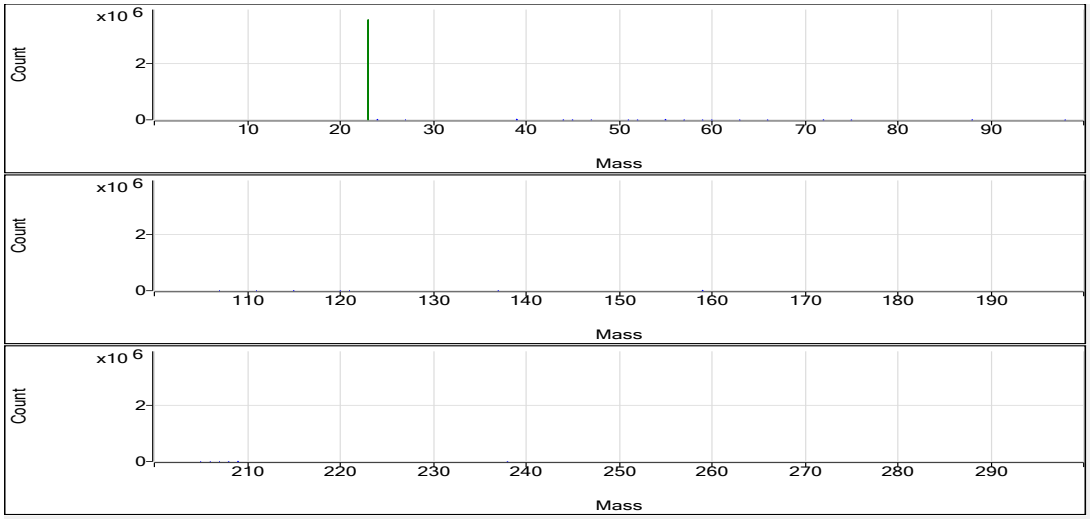


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.032	0	44.00	0.0005	1.901E-05
Be	9	1	No Gas	0.037	0	46.00	0.0005	1.901E-05
Be	9	1	No Gas	0.057	0	60.00	0.0005	1.901E-05
Se	78	2	H2	0.215	0.0001	9.33	0.0002	7.279E-06
Se	78	2	H2	0.232	0.0001	10.00	0.0002	7.279E-06
Se	78	2	H2	0.199	0	8.67	0.0002	7.279E-06
Na	23	3	He	423794.687	1511.7314	35313124.47	0.0036	0.7194
Na	23	3	He	430879.526	1536.992	35564441.97	0.0036	0.7194
Na	23	3	He	423224.615	1509.6989	35053834.48	0.0036	0.7194
Mg	24	3	He	4326.179	7.8723	183892.40	0.0018	0.006791
Mg	24	3	He	4434.044	8.0684	186695.17	0.0018	0.006791
Mg	24	3	He	4330.567	7.8803	182973.18	0.0018	0.006791
Al	27	3	He	9.129	0.0077	180.01	0.0006	0.002622
Al	27	3	He	3.051	0.0043	100.00	0.0006	0.002622
Al	27	3	He	1.478	0.0034	80.00	0.0006	0.002622
K	39	3	He	9494.772	12.6719	296007.05	0.0013	0.5579
K	39	3	He	9653.203	12.874	297891.38	0.0013	0.5579
K	39	3	He	9399.439	12.5502	291405.03	0.0013	0.5579
Ca	44	3	He	16718.656	1.2294	28719.12	0.0001	0.004062
Ca	44	3	He	17120.506	1.2589	29129.67	0.0001	0.004062
Ca	44	3	He	16613.923	1.2218	28368.39	0.0001	0.004062
Ti	47	3	He	0.251	0.0004	10.00	0.0006	0.0002809
Ti	47	3	He	0.995	0.0009	20.00	0.0006	0.0002809
Ti	47	3	He	0.255	0.0004	10.00	0.0006	0.0002809
V	51	3	He	0.138	0.0222	518.01	0.0259	0.01861
V	51	3	He	0.24	0.0248	574.02	0.0259	0.01861
V	51	3	He	0.233	0.0246	572.02	0.0259	0.01861
Cr	52	3	He	-0.073	0.1023	2390.29	0.0332	0.1047
Cr	52	3	He	-0.095	0.1016	2350.26	0.0332	0.1047
Cr	52	3	He	-0.106	0.1012	2350.25	0.0332	0.1047
Mn	55	3	He	534.74	7.4196	173316.60	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	542.336	7.5249	174118.40	0.0139	0.005074
Mn	55	3	He	539.551	7.4863	173824.57	0.0139	0.005074
Fe	57	3	He	264.619	0.1743	4070.71	0.0006	0.00609
Fe	57	3	He	282.873	0.1859	4300.74	0.0006	0.00609
Fe	57	3	He	245.941	0.1624	3770.63	0.0006	0.00609
Co	59	3	He	0.281	0.0248	580.03	0.0661	0.00621
Co	59	3	He	0.246	0.0225	520.03	0.0661	0.00621
Co	59	3	He	0.206	0.0198	460.02	0.0661	0.00621
Ni	60	3	He	1.862	0.0358	1500.13	0.01	0.01721
Ni	60	3	He	1.046	0.0277	1160.08	0.01	0.01721
Ni	60	3	He	1.439	0.0316	1350.13	0.01	0.01721
Cu	63	3	He	0.388	0.0179	750.05	0.0286	0.006793
Cu	63	3	He	0.579	0.0234	980.07	0.0286	0.006793
Cu	63	3	He	0.433	0.0192	820.06	0.0286	0.006793
Zn	66	3	He	1.476	0.0081	340.02	0.0034	0.00316
Zn	66	3	He	1.047	0.0067	280.02	0.0034	0.00316
Zn	66	3	He	1.358	0.0077	330.02	0.0034	0.00316
As	75	3	He	0.439	0.002	82.00	0.0026	0.0008231
As	75	3	He	0.42	0.0019	80.00	0.0026	0.0008231
As	75	3	He	0.551	0.0022	96.00	0.0026	0.0008231
Sr	88	3	He	123.84	1.3073	51785.09	0.0105	0.001715
Sr	88	3	He	125.903	1.3291	51383.47	0.0105	0.001715
Sr	88	3	He	126.249	1.3327	51655.54	0.0105	0.001715
Mo	98	3	He	1.942	0.0543	2150.25	0.0275	0.0008555
Mo	98	3	He	2.273	0.0634	2450.33	0.0275	0.0008555
Mo	98	3	He	2.398	0.0668	2590.32	0.0275	0.0008555
Ag	107	3	He	0.074	0.0048	190.01	0.0591	0.0004305
Ag	107	3	He	0.102	0.0065	250.01	0.0591	0.0004305
Ag	107	3	He	0.071	0.0046	180.01	0.0591	0.0004305
Cd	111	3	He	0.015	0.0002	6.00	0.0066	5.141E-05
Cd	111	3	He	0.039	0.0003	12.00	0.0066	5.141E-05
Cd	111	3	He	-0.008	0	0.00	0.0066	5.141E-05
Sn	120	3	He	-0.044	0.0177	700.04	0.0187	0.0185
Sn	120	3	He	-0.408	0.0109	420.02	0.0187	0.0185
Sn	120	3	He	-0.051	0.0175	680.04	0.0187	0.0185
Sb	121	3	He	0.119	0.0033	130.01	0.0183	0.00111
Sb	121	3	He	0.137	0.0036	140.01	0.0183	0.00111
Sb	121	3	He	0.179	0.0044	170.01	0.0183	0.00111
Ba	137	3	He	73.393	0.4307	17060.90	0.0059	0.0007704
Ba	137	3	He	72.726	0.4268	16500.48	0.0059	0.0007704
Ba	137	3	He	68.572	0.4025	15599.31	0.0059	0.0007704
Tl	205	3	He	0.019	0.0015	190.01	0.0364	0.000808
Tl	205	3	He	0.017	0.0014	180.01	0.0364	0.000808
Tl	205	3	He	0.011	0.0012	150.01	0.0364	0.000808
Pb	208	3	He	0.071	0.0067	510.03	0.0487	0.003226
Pb	208	3	He	0.046	0.0055	370.02	0.0487	0.003226
Pb	208	3	He	0.051	0.0057	420.03	0.0487	0.003226
U	238	3	He	0.069	0.0041	520.03	0.0535	0.0004157
U	238	3	He	0.071	0.0042	530.03	0.0535	0.0004157
U	238	3	He	0.066	0.0039	490.03	0.0535	0.0004157
Sc	45	1	No Gas			1279661.31		
Sc	45	1	No Gas			1251897.17		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1285913.57		
Ge	72	1	No Gas			672823.35		
Ge	72	1	No Gas			667853.66		
Ge	72	1	No Gas			666867.33		
Sc	45	2	H2			87332.48		
Sc	45	2	H2			85711.15		
Sc	45	2	H2			87059.89		
Ge	72	2	H2			69951.27		
Ge	72	2	H2			68505.43		
Ge	72	2	H2			70302.88		
In	115	2	H2			181563.94		
In	115	2	H2			181794.96		
In	115	2	H2			180135.08		
Sc	45	3	He			23359.39		
Sc	45	3	He			23138.99		
Sc	45	3	He			23219.09		
Ge	72	3	He			41902.47		
Ge	72	3	He			41951.88		
Ge	72	3	He			42754.89		
In	115	3	He			39617.00		
In	115	3	He			38664.68		
In	115	3	He			38764.93		
Tb	159	3	He			174989.88		
Tb	159	3	He			172650.70		
Tb	159	3	He			172074.67		
Bi	209	3	He			126011.00		
Bi	209	3	He			126566.47		
Bi	209	3	He			124497.70		

Quantitation Report

Data File Name	064SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
Acq Time	9/19/2023 8:58:23 AM
Sample Name	410-141880-G-3-A
Sample Type	Sample
Comment	B25
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

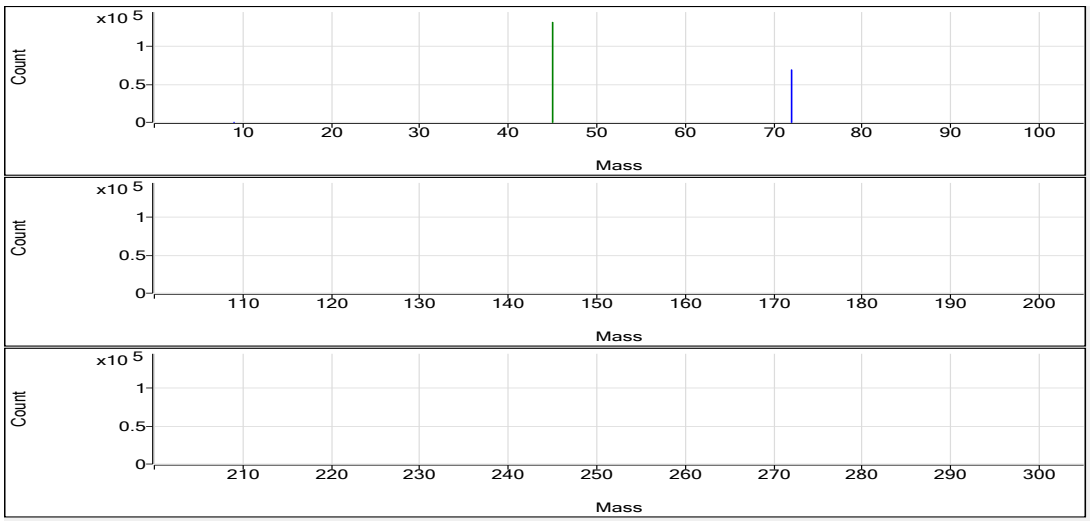
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.699	ppb	8.7	472.68	0.0004	Pulse	0.5000	3
Se	78	115	H2	1.306	ppb	10.9	50.22	0.0003	Pulse	1.5000	3
Na	23	45	He	195272.805	ppb	2.1	16324879.34	696.9517	Analog	0.1000	3
Mg	24	45	He	11389.651	ppb	2.4	485222.88	20.7146	Pulse	0.1000	3
Al	27	45	He	13919.173	ppb	1.2	181642.62	7.7540	Pulse	0.1000	3
K	39	45	He	4991.326	ppb	2.8	162241.62	6.9261	Pulse	0.1000	3
Ca	44	45	He	63508.265	ppb	2.3	109120.21	4.6589	Pulse	0.1000	3
Ti	47	45	He	356.399	ppb	9.1	4900.99	0.2092	Pulse	0.1000	3
V	51	45	He	33.876	ppb	2.9	20952.44	0.8946	Pulse	0.5000	3
Cr	52	45	He	19.942	ppb	2.4	17968.30	0.7671	Pulse	0.1000	3
Mn	55	45	He	1030.928	ppb	2.5	334931.68	14.2995	Pulse	0.1000	3
Fe	57	45	He	19058.872	ppb	1.0	283903.25	12.1186	Pulse	0.1000	3
Co	59	45	He	7.042	ppb	4.6	11058.01	0.4721	Pulse	0.1000	3
Ni	60	72	He	16.146	ppb	7.2	7695.62	0.1784	Pulse	0.1000	3
Cu	63	72	He	43.230	ppb	1.0	53697.53	1.2445	Pulse	0.1000	3
Zn	66	72	He	86.699	ppb	7.2	12692.70	0.2942	Pulse	0.1000	3
As	75	72	He	8.591	ppb	3.7	992.71	0.0230	Pulse	0.5000	3
Sr	88	115	He	417.381	ppb	2.9	167785.22	4.4020	Pulse	0.1000	3
Mo	98	115	He	7.414	ppb	1.4	7809.09	0.2048	Pulse	0.1000	3
Ag	107	115	He	0.090	ppb	23.9	220.01	0.0058	Pulse	0.1000	3
Cd	111	115	He	3.062	ppb	4.0	776.03	0.0203	Pulse	0.5000	3
Sn	120	115	He	1.318	ppb	21.1	1643.49	0.0432	Pulse	0.1000	3
Sb	121	115	He	3.167	ppb	3.6	2253.60	0.0591	Pulse	0.1000	3
Ba	137	115	He	181.670	ppb	3.1	40587.75	1.0650	Pulse	0.1000	3
Tl	205	209	He	0.124	ppb	15.1	656.71	0.0053	Pulse	0.1000	3
Pb	208	209	He	24.537	ppb	1.0	148429.96	1.1994	Pulse	0.1000	3
U	238	209	He	3.122	ppb	1.0	20717.34	0.1674	Pulse	0.1000	3

ISTD Table:

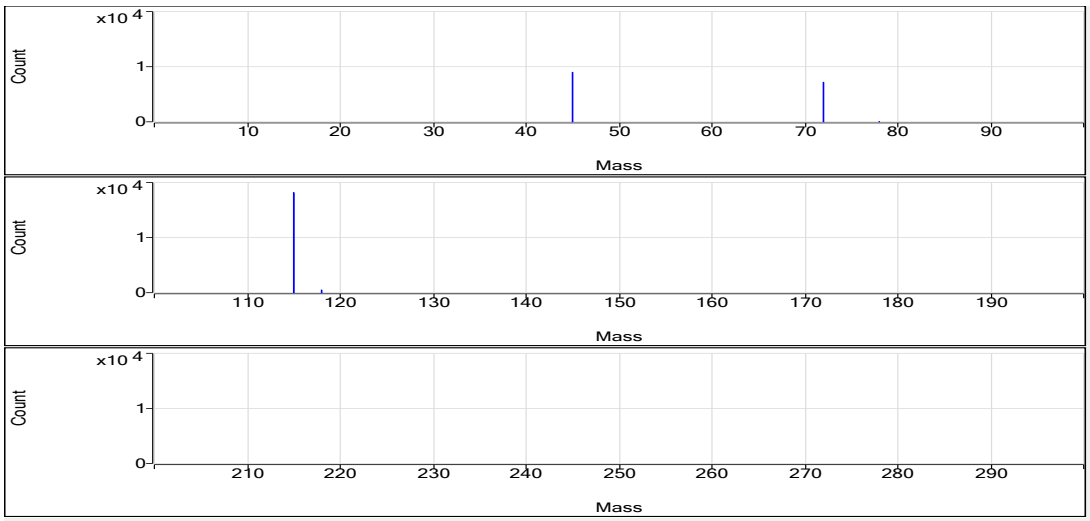
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1327024.62	1.2	99.4	Analog	0.1000	3
No Gas	Ge	72	696093.25	0.3	99.5	Pulse	0.1000	3
H2	Sc	45	90303.13	1.0	103.9	Pulse	0.1000	3
H2	Ge	72	72212.87	2.6	100.8	Pulse	0.1000	3
H2	In	115	182214.05	0.7	99.5	Pulse	0.1000	3
He	Sc	45	23429.44	2.0	101.8	Pulse	0.1000	3
He	Ge	72	43149.32	0.7	102.2	Pulse	0.1000	3
He	In	115	38131.53	2.5	97.9	Pulse	0.1000	3
He	Tb	159	176483.26	0.7	100.2	Pulse	0.1000	3
He	Bi	209	123767.65	1.4	96.5	Pulse	0.1000	3

No Gas

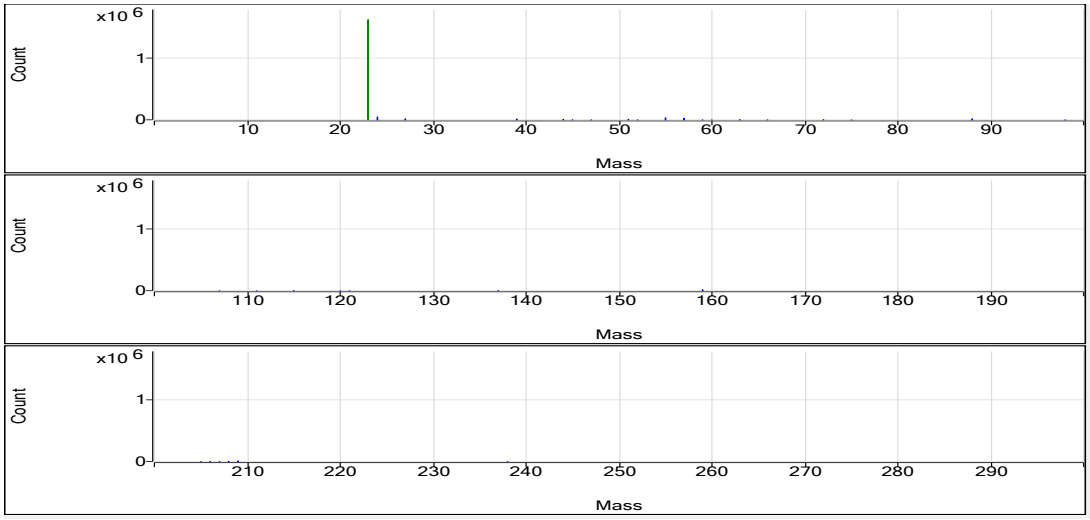


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.683	0.0003	458.01	0.0005	1.901E-05
Be	9	1	No Gas	0.647	0.0003	438.01	0.0005	1.901E-05
Be	9	1	No Gas	0.765	0.0004	522.01	0.0005	1.901E-05
Se	78	2	H2	1.344	0.0003	51.33	0.0002	7.279E-06
Se	78	2	H2	1.149	0.0002	44.67	0.0002	7.279E-06
Se	78	2	H2	1.426	0.0003	54.67	0.0002	7.279E-06
Na	23	3	He	198615.145	708.8686	16430872.26	0.0036	0.7194
Na	23	3	He	190819.668	681.0743	16332326.01	0.0036	0.7194
Na	23	3	He	196383.602	700.9122	16211439.76	0.0036	0.7194
Mg	24	3	He	11700.968	21.2806	493262.73	0.0018	0.006791
Mg	24	3	He	11162.511	20.3016	486837.18	0.0018	0.006791
Mg	24	3	He	11305.476	20.5615	475568.74	0.0018	0.006791
Al	27	3	He	14023.768	7.8122	181079.35	0.0006	0.002622
Al	27	3	He	13733.131	7.6504	183457.52	0.0006	0.002622
Al	27	3	He	14000.62	7.7993	180390.99	0.0006	0.002622
K	39	3	He	5148.06	7.1261	165175.35	0.0013	0.5579
K	39	3	He	4890.678	6.7977	163010.25	0.0013	0.5579
K	39	3	He	4935.242	6.8545	158539.25	0.0013	0.5579
Ca	44	3	He	64517.211	4.7328	109701.95	0.0001	0.004062
Ca	44	3	He	61796.966	4.5334	108712.87	0.0001	0.004062
Ca	44	3	He	64210.618	4.7103	108945.80	0.0001	0.004062
Ti	47	3	He	392.56	0.2304	5341.15	0.0006	0.0002809
Ti	47	3	He	347.41	0.204	4891.00	0.0006	0.0002809
Ti	47	3	He	329.226	0.1933	4470.82	0.0006	0.0002809
V	51	3	He	34.814	0.9188	21297.61	0.0259	0.01861
V	51	3	He	32.828	0.8675	20802.88	0.0259	0.01861
V	51	3	He	33.986	0.8974	20756.82	0.0259	0.01861
Cr	52	3	He	20.385	0.7818	18121.87	0.0332	0.1047
Cr	52	3	He	19.423	0.7499	17981.63	0.0332	0.1047
Cr	52	3	He	20.019	0.7697	17801.41	0.0332	0.1047
Mn	55	3	He	1056.354	14.6521	339620.19	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1004.545	13.9337	334133.32	0.0139	0.005074
Mn	55	3	He	1031.886	14.3128	331041.52	0.0139	0.005074
Fe	57	3	He	19269.642	12.2526	284002.46	0.0006	0.00609
Fe	57	3	He	18884.712	12.0079	287953.16	0.0006	0.00609
Fe	57	3	He	19022.262	12.0954	279754.14	0.0006	0.00609
Co	59	3	He	7.41	0.4964	11505.19	0.0661	0.00621
Co	59	3	He	6.919	0.4639	11124.61	0.0661	0.00621
Co	59	3	He	6.798	0.4559	10544.23	0.0661	0.00621
Ni	60	3	He	17.063	0.1875	8102.52	0.01	0.01721
Ni	60	3	He	16.547	0.1824	7812.32	0.01	0.01721
Ni	60	3	He	14.829	0.1652	7172.03	0.01	0.01721
Cu	63	3	He	43.206	1.2438	53740.80	0.0286	0.006793
Cu	63	3	He	43.672	1.2572	53850.87	0.0286	0.006793
Cu	63	3	He	42.813	1.2326	53500.91	0.0286	0.006793
Zn	66	3	He	80.996	0.2751	11885.22	0.0034	0.00316
Zn	66	3	He	93.33	0.3165	13556.85	0.0034	0.00316
Zn	66	3	He	85.77	0.2911	12636.03	0.0034	0.00316
As	75	3	He	8.571	0.023	992.04	0.0026	0.0008231
As	75	3	He	8.92	0.0239	1022.05	0.0026	0.0008231
As	75	3	He	8.281	0.0222	964.04	0.0026	0.0008231
Sr	88	3	He	418.865	4.4176	170579.88	0.0105	0.001715
Sr	88	3	He	428.541	4.5196	167349.78	0.0105	0.001715
Sr	88	3	He	404.737	4.2687	165425.99	0.0105	0.001715
Mo	98	3	He	7.296	0.2015	7782.46	0.0275	0.0008555
Mo	98	3	He	7.452	0.2059	7622.34	0.0275	0.0008555
Mo	98	3	He	7.494	0.207	8022.48	0.0275	0.0008555
Ag	107	3	He	0.076	0.0049	190.01	0.0591	0.0004305
Ag	107	3	He	0.08	0.0051	190.01	0.0591	0.0004305
Ag	107	3	He	0.115	0.0072	280.01	0.0591	0.0004305
Cd	111	3	He	2.962	0.0197	760.03	0.0066	5.141E-05
Cd	111	3	He	3.024	0.0201	744.03	0.0066	5.141E-05
Cd	111	3	He	3.201	0.0213	824.03	0.0066	5.141E-05
Sn	120	3	He	1.128	0.0396	1530.15	0.0187	0.0185
Sn	120	3	He	1.637	0.0492	1820.17	0.0187	0.0185
Sn	120	3	He	1.189	0.0408	1580.15	0.0187	0.0185
Sb	121	3	He	3.124	0.0583	2250.26	0.0183	0.00111
Sb	121	3	He	3.083	0.0575	2130.24	0.0183	0.00111
Sb	121	3	He	3.295	0.0614	2380.30	0.0183	0.00111
Ba	137	3	He	178.035	1.0437	40300.29	0.0059	0.0007704
Ba	137	3	He	188.255	1.1035	40861.47	0.0059	0.0007704
Ba	137	3	He	178.719	1.0477	40601.48	0.0059	0.0007704
Tl	205	3	He	0.145	0.0061	760.05	0.0364	0.000808
Tl	205	3	He	0.11	0.0048	600.04	0.0364	0.000808
Tl	205	3	He	0.115	0.005	610.04	0.0364	0.000808
Pb	208	3	He	24.472	1.1962	79711.73	0.0487	0.003226
Pb	208	3	He	24.331	1.1893	79460.81	0.0487	0.003226
Pb	208	3	He	24.806	1.2125	78475.18	0.0487	0.003226
U	238	3	He	3.104	0.1664	20807.54	0.0535	0.0004157
U	238	3	He	3.105	0.1665	20717.27	0.0535	0.0004157
U	238	3	He	3.157	0.1693	20627.21	0.0535	0.0004157
Sc	45	1	No Gas			1313422.17		
Sc	45	1	No Gas			1323025.45		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1344626.23		
Ge	72	1	No Gas			695437.96		
Ge	72	1	No Gas			694622.96		
Ge	72	1	No Gas			698218.82		
Sc	45	2	H2			91285.36		
Sc	45	2	H2			90078.25		
Sc	45	2	H2			89545.77		
Ge	72	2	H2			71871.32		
Ge	72	2	H2			74233.06		
Ge	72	2	H2			70534.23		
In	115	2	H2			181137.52		
In	115	2	H2			183497.30		
In	115	2	H2			182007.32		
Sc	45	3	He			23179.01		
Sc	45	3	He			23980.24		
Sc	45	3	He			23129.06		
Ge	72	3	He			43206.40		
Ge	72	3	He			42834.93		
Ge	72	3	He			43406.63		
In	115	3	He			38624.30		
In	115	3	He			37040.14		
In	115	3	He			38764.65		
Tb	159	3	He			177007.75		
Tb	159	3	He			177371.42		
Tb	159	3	He			175070.62		
Bi	209	3	He			125033.19		
Bi	209	3	He			124416.81		
Bi	209	3	He			121852.96		

Quantitation Report

Data File Name	065SMPL.d
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Sample Name	410-141815-V-5-A
Sample Type	Sample
Comment	B25
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

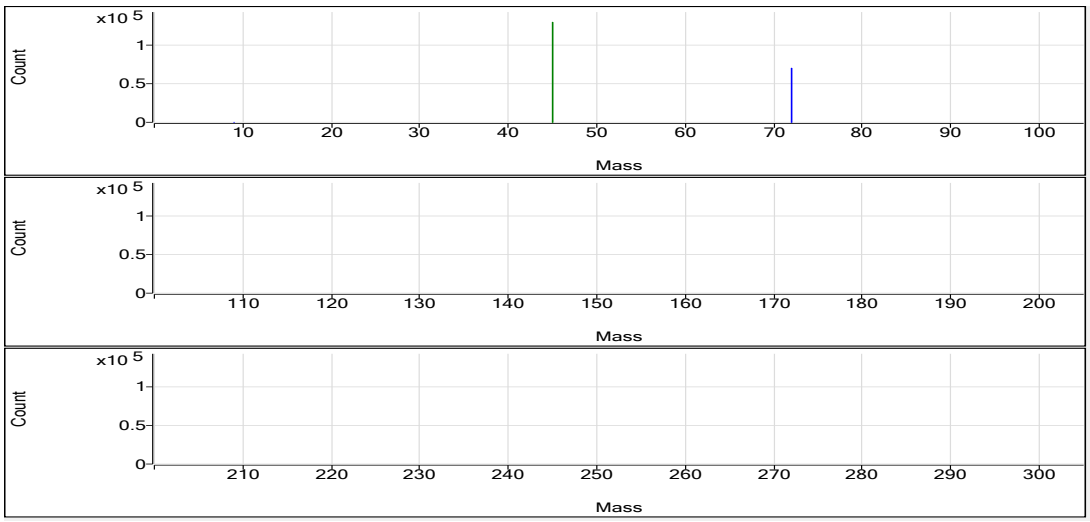
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.022	ppb	92.2	38.67	0.0000	Pulse	0.5000	3
Se	78	115	H2	0.211	ppb	40.4	9.33	0.0001	Pulse	1.5000	3
Na	23	45	He	18617.097	ppb	3.0	1522683.57	67.0974	Analog	0.1000	3
Mg	24	45	He	11922.071	ppb	3.7	491976.62	21.6826	Pulse	0.1000	3
Al	27	45	He	54.004	ppb	19.0	740.05	0.0327	Pulse	0.1000	3
K	39	45	He	2892.237	ppb	5.5	96366.53	4.2480	Pulse	0.1000	3
Ca	44	45	He	35535.163	ppb	3.6	59191.09	2.6086	Pulse	0.1000	3
Ti	47	45	He	1.509	ppb	126.6	26.67	0.0012	Pulse	0.1000	3
V	51	45	He	1.149	ppb	0.9	1097.38	0.0483	Pulse	0.5000	3
Cr	52	45	He	0.047	ppb	425.6	2410.29	0.1063	Pulse	0.1000	3
Mn	55	45	He	39.452	ppb	4.0	12525.85	0.5521	Pulse	0.1000	3
Fe	57	45	He	78.538	ppb	11.0	1270.10	0.0560	Pulse	0.1000	3
Co	59	45	He	0.092	ppb	13.8	280.01	0.0123	Pulse	0.1000	3
Ni	60	72	He	0.313	ppb	33.3	870.06	0.0203	Pulse	0.1000	3
Cu	63	72	He	1.129	ppb	7.5	1673.49	0.0391	Pulse	0.1000	3
Zn	66	72	He	1.332	ppb	16.1	326.68	0.0076	Pulse	0.1000	3
As	75	72	He	0.943	ppb	11.7	139.33	0.0033	Pulse	0.5000	3
Sr	88	115	He	258.366	ppb	1.4	104940.89	2.7255	Pulse	0.1000	3
Mo	98	115	He	0.753	ppb	10.9	830.06	0.0216	Pulse	0.1000	3
Ag	107	115	He	0.003	ppb	367.1	23.33	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.000	ppb	43051.7	2.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.087	ppb	N/A	650.04	0.0169	Pulse	0.1000	3
Sb	121	115	He	0.138	ppb	16.0	140.01	0.0036	Pulse	0.1000	3
Ba	137	115	He	56.504	ppb	4.4	12769.70	0.3318	Pulse	0.1000	3
Tl	205	209	He	0.001	ppb	1224.5	106.67	0.0008	Pulse	0.1000	3
Pb	208	209	He	0.298	ppb	3.7	2243.49	0.0178	Pulse	0.1000	3
U	238	209	He	0.368	ppb	3.1	2537.03	0.0201	Pulse	0.1000	3

ISTD Table:

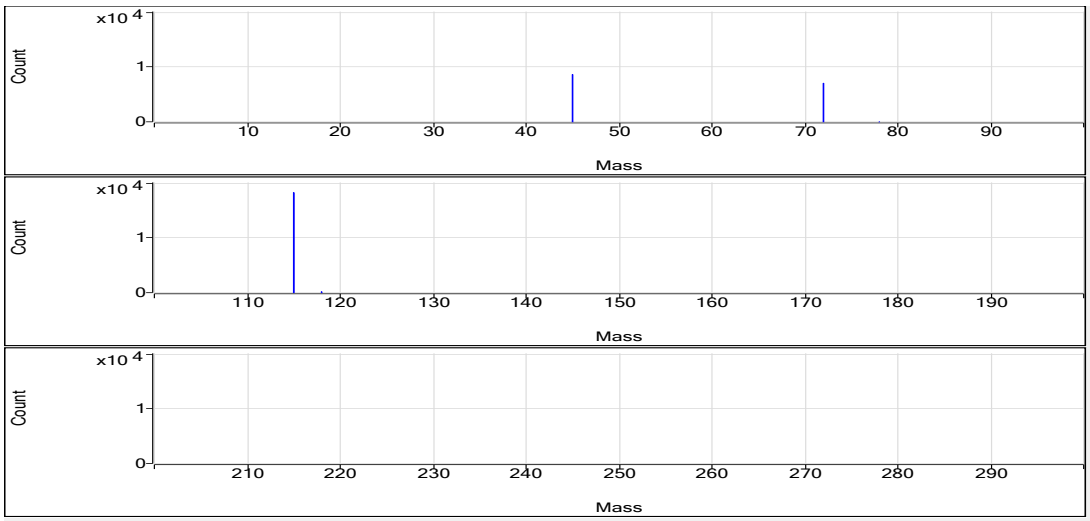
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1294070.27	1.6	97.0	Analog	0.1000	3
No Gas	Ge	72	701271.19	0.4	100.3	Pulse	0.1000	3
H2	Sc	45	86841.78	0.6	99.9	Pulse	0.1000	3
H2	Ge	72	70949.85	2.4	99.1	Pulse	0.1000	3
H2	In	115	183624.93	1.2	100.3	Pulse	0.1000	3
He	Sc	45	22711.68	4.0	98.7	Pulse	0.1000	3
He	Ge	72	42751.25	2.1	101.3	Pulse	0.1000	3
He	In	115	38506.16	1.4	98.9	Pulse	0.1000	3
He	Tb	159	175015.15	0.8	99.4	Pulse	0.1000	3
He	Bi	209	126314.87	0.7	98.5	Pulse	0.1000	3

No Gas

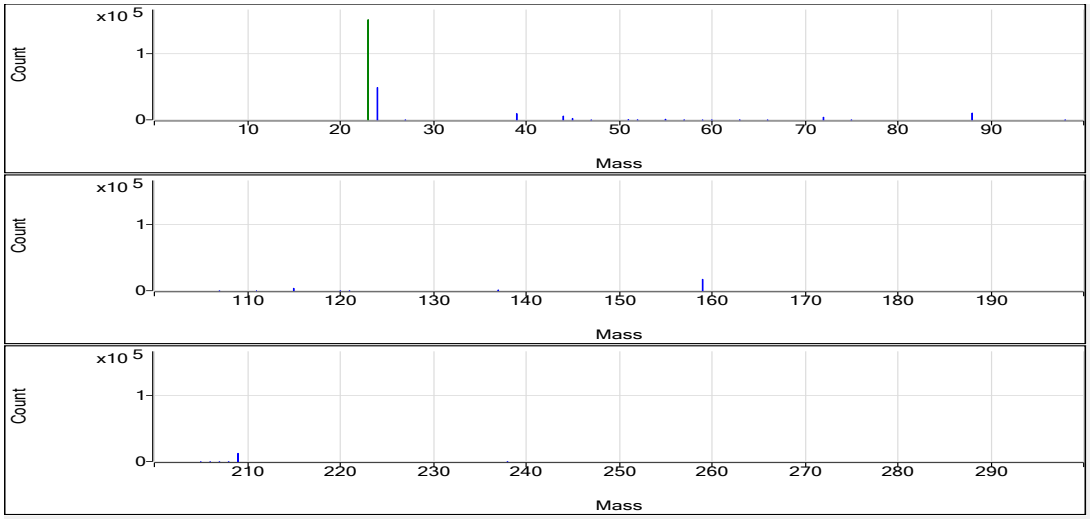


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.027	0	42.00	0.0005	1.901E-05
Be	9	1	No Gas	0.04	0	50.00	0.0005	1.901E-05
Be	9	1	No Gas	0	0	24.00	0.0005	1.901E-05
Se	78	2	H2	0.125	0	6.00	0.0002	7.279E-06
Se	78	2	H2	0.213	0.0001	9.33	0.0002	7.279E-06
Se	78	2	H2	0.296	0.0001	12.67	0.0002	7.279E-06
Na	23	3	He	18744.802	67.5527	1513025.29	0.0036	0.7194
Na	23	3	He	17996.859	64.886	1539741.38	0.0036	0.7194
Na	23	3	He	19109.63	68.8535	1515284.04	0.0036	0.7194
Mg	24	3	He	12170.602	22.1344	495760.31	0.0018	0.006791
Mg	24	3	He	11414.681	20.7601	492635.70	0.0018	0.006791
Mg	24	3	He	12180.931	22.1532	487533.86	0.0018	0.006791
Al	27	3	He	64.245	0.0384	860.06	0.0006	0.002622
Al	27	3	He	43.725	0.027	640.04	0.0006	0.002622
Al	27	3	He	54.043	0.0327	720.04	0.0006	0.002622
K	39	3	He	3012.125	4.4009	98570.55	0.0013	0.5579
K	39	3	He	2712.43	4.0186	95360.11	0.0013	0.5579
K	39	3	He	2952.157	4.3244	95168.92	0.0013	0.5579
Ca	44	3	He	35664.6	2.6181	58638.94	0.0001	0.004062
Ca	44	3	He	34213.316	2.5117	59602.72	0.0001	0.004062
Ca	44	3	He	36727.574	2.696	59331.62	0.0001	0.004062
Ti	47	3	He	3.329	0.0022	50.00	0.0006	0.0002809
Ti	47	3	He	1.677	0.0013	30.00	0.0006	0.0002809
Ti	47	3	He	-0.479	0	0.00	0.0006	0.0002809
V	51	3	He	1.152	0.0484	1084.05	0.0259	0.01861
V	51	3	He	1.138	0.048	1140.05	0.0259	0.01861
V	51	3	He	1.157	0.0485	1068.05	0.0259	0.01861
Cr	52	3	He	0.06	0.1067	2390.29	0.0332	0.1047
Cr	52	3	He	-0.159	0.0995	2360.28	0.0332	0.1047
Cr	52	3	He	0.24	0.1127	2480.30	0.0332	0.1047
Mn	55	3	He	40.29	0.5637	12625.87	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	37.612	0.5266	12495.82	0.0139	0.005074
Mn	55	3	He	40.453	0.566	12455.87	0.0139	0.005074
Fe	57	3	He	88.076	0.0621	1390.12	0.0006	0.00609
Fe	57	3	He	71.319	0.0514	1220.09	0.0006	0.00609
Fe	57	3	He	76.22	0.0545	1200.08	0.0006	0.00609
Co	59	3	He	0.102	0.0129	290.01	0.0661	0.00621
Co	59	3	He	0.097	0.0126	300.01	0.0661	0.00621
Co	59	3	He	0.078	0.0114	250.01	0.0661	0.00621
Ni	60	3	He	0.427	0.0215	940.06	0.01	0.01721
Ni	60	3	He	0.292	0.0201	850.06	0.01	0.01721
Ni	60	3	He	0.222	0.0194	820.05	0.01	0.01721
Cu	63	3	He	1.215	0.0416	1820.19	0.0286	0.006793
Cu	63	3	He	1.044	0.0367	1550.13	0.0286	0.006793
Cu	63	3	He	1.128	0.0391	1650.15	0.0286	0.006793
Zn	66	3	He	1.576	0.0085	370.02	0.0034	0.00316
Zn	66	3	He	1.174	0.0071	300.01	0.0034	0.00316
Zn	66	3	He	1.246	0.0073	310.01	0.0034	0.00316
As	75	3	He	0.937	0.0032	142.00	0.0026	0.0008231
As	75	3	He	0.836	0.003	126.00	0.0026	0.0008231
As	75	3	He	1.057	0.0036	150.00	0.0026	0.0008231
Sr	88	3	He	259.602	2.7386	106258.13	0.0105	0.001715
Sr	88	3	He	261.164	2.755	104382.72	0.0105	0.001715
Sr	88	3	He	254.332	2.683	104181.83	0.0105	0.001715
Mo	98	3	He	0.681	0.0196	760.05	0.0275	0.0008555
Mo	98	3	He	0.842	0.024	910.07	0.0275	0.0008555
Mo	98	3	He	0.737	0.0211	820.05	0.0275	0.0008555
Ag	107	3	He	0.001	0.0005	20.00	0.0591	0.0004305
Ag	107	3	He	0.015	0.0013	50.00	0.0591	0.0004305
Ag	107	3	He	-0.007	0	0.00	0.0591	0.0004305
Cd	111	3	He	0.008	0.0001	4.00	0.0066	5.141E-05
Cd	111	3	He	-0.008	0	0.00	0.0066	5.141E-05
Cd	111	3	He	0	0.0001	2.00	0.0066	5.141E-05
Sn	120	3	He	-0.093	0.0168	650.03	0.0187	0.0185
Sn	120	3	He	-0.142	0.0158	600.03	0.0187	0.0185
Sn	120	3	He	-0.025	0.018	700.05	0.0187	0.0185
Sb	121	3	He	0.151	0.0039	150.01	0.0183	0.00111
Sb	121	3	He	0.112	0.0032	120.01	0.0183	0.00111
Sb	121	3	He	0.15	0.0039	150.01	0.0183	0.00111
Ba	137	3	He	54.76	0.3215	12476.19	0.0059	0.0007704
Ba	137	3	He	59.374	0.3486	13206.78	0.0059	0.0007704
Ba	137	3	He	55.377	0.3252	12626.13	0.0059	0.0007704
Tl	205	3	He	0.009	0.0011	140.01	0.0364	0.000808
Tl	205	3	He	0.008	0.0011	140.01	0.0364	0.000808
Tl	205	3	He	-0.014	0.0003	40.00	0.0364	0.000808
Pb	208	3	He	0.292	0.0175	1220.09	0.0487	0.003226
Pb	208	3	He	0.291	0.0174	1130.09	0.0487	0.003226
Pb	208	3	He	0.311	0.0184	1090.09	0.0487	0.003226
U	238	3	He	0.365	0.02	2500.32	0.0535	0.0004157
U	238	3	He	0.358	0.0195	2480.37	0.0535	0.0004157
U	238	3	He	0.38	0.0208	2630.39	0.0535	0.0004157
Sc	45	1	No Gas			1308654.20		
Sc	45	1	No Gas			1303433.81		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1270122.79		
Ge	72	1	No Gas			704490.54		
Ge	72	1	No Gas			698330.46		
Ge	72	1	No Gas			700992.57		
Sc	45	2	H2			86989.96		
Sc	45	2	H2			86284.68		
Sc	45	2	H2			87250.71		
Ge	72	2	H2			69529.69		
Ge	72	2	H2			72845.55		
Ge	72	2	H2			70474.30		
In	115	2	H2			181906.62		
In	115	2	H2			182888.92		
In	115	2	H2			186079.24		
Sc	45	3	He			22397.70		
Sc	45	3	He			23729.96		
Sc	45	3	He			22007.37		
Ge	72	3	He			43787.75		
Ge	72	3	He			42243.18		
Ge	72	3	He			42222.83		
In	115	3	He			38805.01		
In	115	3	He			37892.09		
In	115	3	He			38835.02		
Tb	159	3	He			175397.95		
Tb	159	3	He			176247.20		
Tb	159	3	He			173400.29		
Bi	209	3	He			125294.88		
Bi	209	3	He			126900.17		
Bi	209	3	He			126749.57		

Quantitation Report

Data File Name	066SMPL.d
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Sample Type	Sample
Comment	B25
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

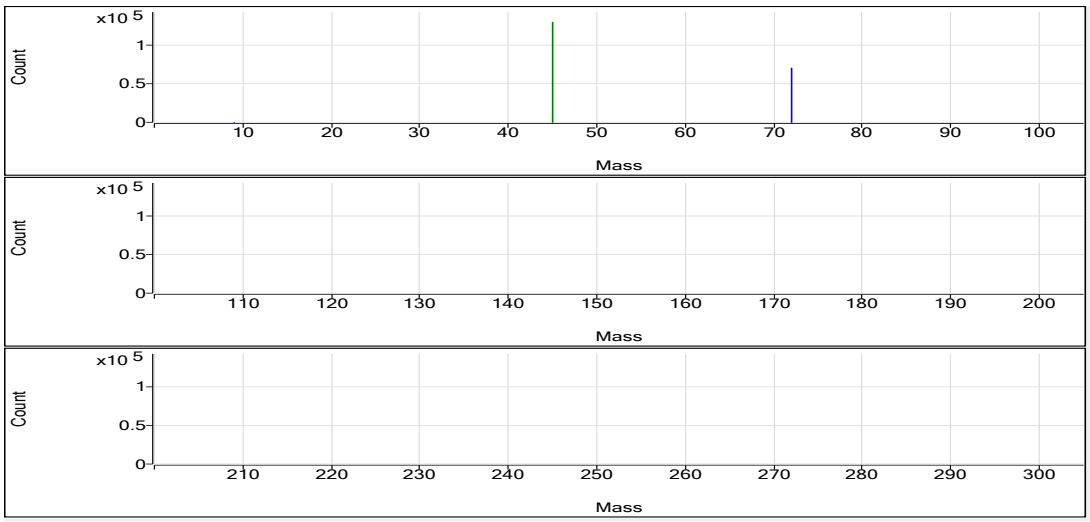
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.036	ppb	43.6	47.33	0.0000	Pulse	0.5000	3
Se	78	115	H2	0.174	ppb	41.5	7.78	0.0000	Pulse	1.5000	3
Na	23	45	He	33562.049	ppb	1.6	2727960.79	120.3826	Analog	0.1000	3
Mg	24	45	He	17411.690	ppb	1.9	717485.98	31.6634	Pulse	0.1000	3
Al	27	45	He	159.066	ppb	1.1	2066.88	0.0912	Pulse	0.1000	3
K	39	45	He	3589.962	ppb	2.0	116433.84	5.1382	Pulse	0.1000	3
Ca	44	45	He	48067.197	ppb	2.3	79922.01	3.5271	Pulse	0.1000	3
Ti	47	45	He	5.557	ppb	37.4	80.00	0.0035	Pulse	0.1000	3
V	51	45	He	1.576	ppb	8.2	1346.07	0.0594	Pulse	0.5000	3
Cr	52	45	He	0.360	ppb	49.7	2643.66	0.1167	Pulse	0.1000	3
Mn	55	45	He	63.678	ppb	3.1	20121.21	0.8880	Pulse	0.1000	3
Fe	57	45	He	223.392	ppb	7.9	3353.83	0.1481	Pulse	0.1000	3
Co	59	45	He	0.251	ppb	11.9	516.70	0.0228	Pulse	0.1000	3
Ni	60	72	He	0.609	ppb	63.4	1000.07	0.0233	Pulse	0.1000	3
Cu	63	72	He	1.634	ppb	14.0	2300.27	0.0536	Pulse	0.1000	3
Zn	66	72	He	1.997	ppb	15.6	423.36	0.0099	Pulse	0.1000	3
As	75	72	He	1.011	ppb	21.2	147.33	0.0034	Pulse	0.5000	3
Sr	88	115	He	442.446	ppb	1.2	182405.56	4.6662	Pulse	0.1000	3
Mo	98	115	He	4.964	ppb	2.0	5371.20	0.1374	Pulse	0.1000	3
Ag	107	115	He	0.003	ppb	235.1	23.33	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.013	ppb	185.0	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.164	ppb	N/A	603.36	0.0154	Pulse	0.1000	3
Sb	121	115	He	0.153	ppb	26.9	153.34	0.0039	Pulse	0.1000	3
Ba	137	115	He	56.566	ppb	4.5	12979.96	0.3321	Pulse	0.1000	3
Tl	205	209	He	0.016	ppb	110.8	180.01	0.0014	Pulse	0.1000	3
Pb	208	209	He	0.559	ppb	6.3	3883.71	0.0305	Pulse	0.1000	3
U	238	209	He	3.427	ppb	1.8	23451.90	0.1837	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1294210.92	1.3	97.0	Analog	0.1000	3
No Gas	Ge	72	702185.80	0.9	100.4	Pulse	0.1000	3
H2	Sc	45	85862.50	1.3	98.8	Pulse	0.1000	3
H2	Ge	72	70621.68	1.7	98.6	Pulse	0.1000	3
H2	In	115	180465.05	0.8	98.5	Pulse	0.1000	3
He	Sc	45	22665.01	1.8	98.5	Pulse	0.1000	3
He	Ge	72	42921.97	0.7	101.7	Pulse	0.1000	3
He	In	115	39094.63	1.3	100.4	Pulse	0.1000	3
He	Tb	159	174667.20	0.5	99.2	Pulse	0.1000	3
He	Bi	209	127606.72	2.4	99.5	Pulse	0.1000	3

No Gas



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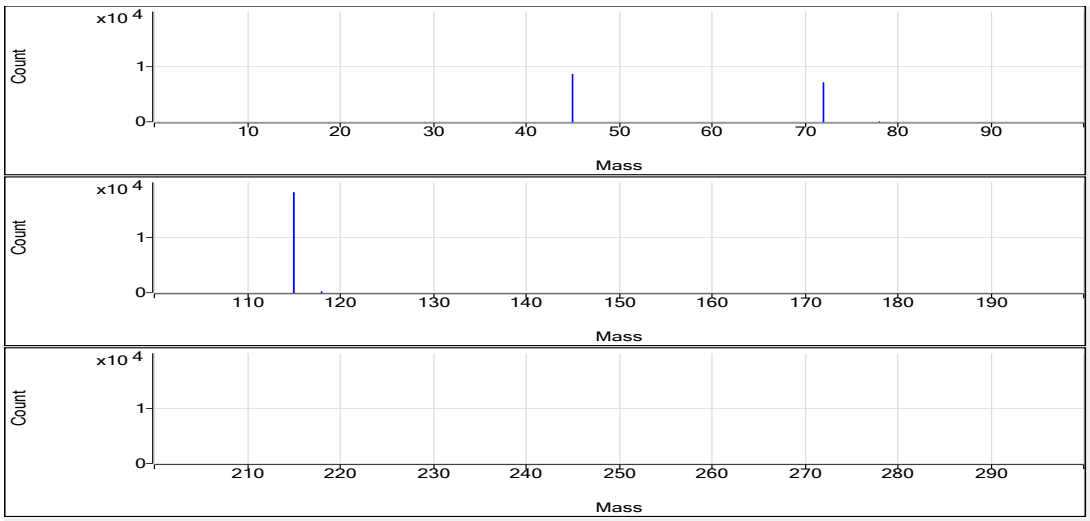
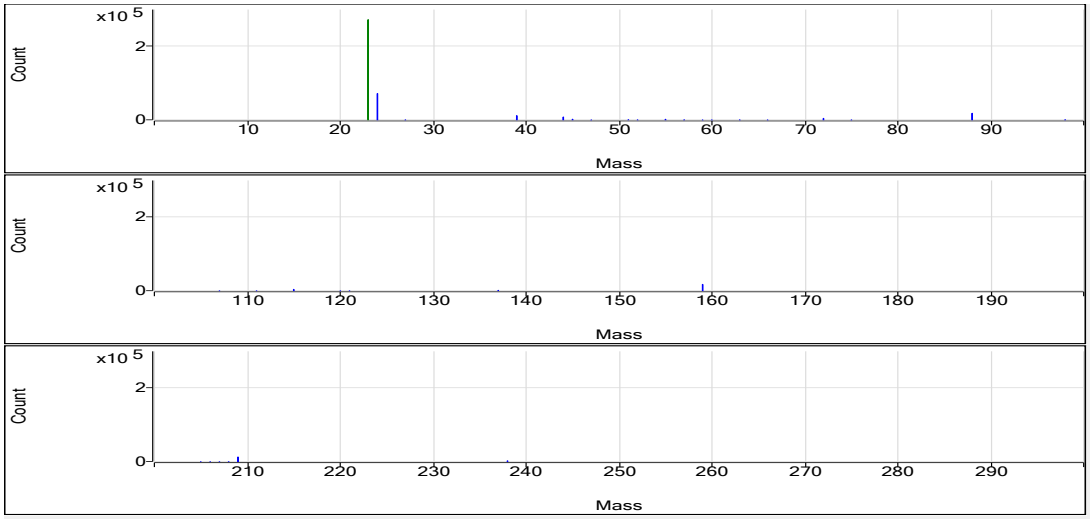


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.035	0	46.00	0.0005	1.901E-05
Be	9	1	No Gas	0.053	0	58.00	0.0005	1.901E-05
Be	9	1	No Gas	0.021	0	38.00	0.0005	1.901E-05
Se	78	2	H2	0.091	0	4.67	0.0002	7.279E-06
Se	78	2	H2	0.218	0.0001	9.33	0.0002	7.279E-06
Se	78	2	H2	0.214	0.0001	9.33	0.0002	7.279E-06
Na	23	3	He	33928.375	121.6887	2743847.46	0.0036	0.7194
Na	23	3	He	33831.915	121.3448	2708161.52	0.0036	0.7194
Na	23	3	He	32925.857	118.1143	2731873.40	0.0036	0.7194
Mg	24	3	He	17553.305	31.9208	719753.66	0.0018	0.006791
Mg	24	3	He	17645.198	32.0879	716134.83	0.0018	0.006791
Mg	24	3	He	17036.567	30.9813	716569.44	0.0018	0.006791
Al	27	3	He	158.568	0.0909	2050.21	0.0006	0.002622
Al	27	3	He	161.057	0.0923	2060.22	0.0006	0.002622
Al	27	3	He	157.573	0.0904	2090.22	0.0006	0.002622
K	39	3	He	3648.854	5.2133	117549.87	0.0013	0.5579
K	39	3	He	3613.435	5.1681	115341.35	0.0013	0.5579
K	39	3	He	3507.597	5.0331	116410.29	0.0013	0.5579
Ca	44	3	He	48929.297	3.5903	80954.53	0.0001	0.004062
Ca	44	3	He	48469.324	3.5566	79375.70	0.0001	0.004062
Ca	44	3	He	46802.97	3.4345	79435.81	0.0001	0.004062
Ti	47	3	He	4.06	0.0027	60.00	0.0006	0.0002809
Ti	47	3	He	7.928	0.0049	110.00	0.0006	0.0002809
Ti	47	3	He	4.683	0.003	70.00	0.0006	0.0002809
V	51	3	He	1.688	0.0623	1404.08	0.0259	0.01861
V	51	3	He	1.436	0.0557	1244.06	0.0259	0.01861
V	51	3	He	1.605	0.0601	1390.08	0.0259	0.01861
Cr	52	3	He	0.519	0.122	2750.34	0.0332	0.1047
Cr	52	3	He	0.395	0.1179	2630.33	0.0332	0.1047
Cr	52	3	He	0.166	0.1103	2550.31	0.0332	0.1047
Mn	55	3	He	62.594	0.873	19683.96	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	65.929	0.9192	20515.02	0.0139	0.005074
Mn	55	3	He	62.511	0.8718	20164.64	0.0139	0.005074
Fe	57	3	He	211.661	0.1406	3170.43	0.0006	0.00609
Fe	57	3	He	243.564	0.1609	3590.57	0.0006	0.00609
Fe	57	3	He	214.951	0.1427	3300.48	0.0006	0.00609
Co	59	3	He	0.235	0.0217	490.03	0.0661	0.00621
Co	59	3	He	0.285	0.0251	560.03	0.0661	0.00621
Co	59	3	He	0.233	0.0216	500.03	0.0661	0.00621
Ni	60	3	He	0.92	0.0264	1130.09	0.01	0.01721
Ni	60	3	He	0.73	0.0245	1060.08	0.01	0.01721
Ni	60	3	He	0.177	0.019	810.05	0.01	0.01721
Cu	63	3	He	1.37	0.046	1970.20	0.0286	0.006793
Cu	63	3	He	1.749	0.0569	2460.29	0.0286	0.006793
Cu	63	3	He	1.784	0.0579	2470.32	0.0286	0.006793
Zn	66	3	He	2.329	0.011	470.02	0.0034	0.00316
Zn	66	3	He	1.95	0.0097	420.03	0.0034	0.00316
Zn	66	3	He	1.711	0.0089	380.02	0.0034	0.00316
As	75	3	He	1.074	0.0036	154.00	0.0026	0.0008231
As	75	3	He	0.773	0.0028	122.00	0.0026	0.0008231
As	75	3	He	1.187	0.0039	166.00	0.0026	0.0008231
Sr	88	3	He	436.95	4.6083	182685.11	0.0105	0.001715
Sr	88	3	He	443.067	4.6728	182149.26	0.0105	0.001715
Sr	88	3	He	447.32	4.7176	182382.32	0.0105	0.001715
Mo	98	3	He	4.876	0.135	5351.19	0.0275	0.0008555
Mo	98	3	He	5.071	0.1404	5471.23	0.0275	0.0008555
Mo	98	3	He	4.944	0.1369	5291.18	0.0275	0.0008555
Ag	107	3	He	-0.003	0.0003	10.00	0.0591	0.0004305
Ag	107	3	He	0.001	0.0005	20.00	0.0591	0.0004305
Ag	107	3	He	0.01	0.001	40.00	0.0591	0.0004305
Cd	111	3	He	0.007	0.0001	4.00	0.0066	5.141E-05
Cd	111	3	He	0.039	0.0003	12.00	0.0066	5.141E-05
Cd	111	3	He	-0.008	0	0.00	0.0066	5.141E-05
Sn	120	3	He	-0.166	0.0154	610.03	0.0187	0.0185
Sn	120	3	He	-0.152	0.0156	610.03	0.0187	0.0185
Sn	120	3	He	-0.173	0.0153	590.03	0.0187	0.0185
Sb	121	3	He	0.187	0.0045	180.01	0.0183	0.00111
Sb	121	3	He	0.108	0.0031	120.00	0.0183	0.00111
Sb	121	3	He	0.165	0.0041	160.01	0.0183	0.00111
Ba	137	3	He	54.412	0.3195	12666.31	0.0059	0.0007704
Ba	137	3	He	55.908	0.3283	12796.55	0.0059	0.0007704
Ba	137	3	He	59.379	0.3486	13477.01	0.0059	0.0007704
Tl	205	3	He	0.037	0.0021	280.01	0.0364	0.000808
Tl	205	3	He	0.002	0.0009	110.00	0.0364	0.000808
Tl	205	3	He	0.011	0.0012	150.01	0.0364	0.000808
Pb	208	3	He	0.519	0.0285	1980.22	0.0487	0.003226
Pb	208	3	He	0.586	0.0318	2210.29	0.0487	0.003226
Pb	208	3	He	0.571	0.031	2130.25	0.0487	0.003226
U	238	3	He	3.498	0.1875	24573.85	0.0535	0.0004157
U	238	3	He	3.388	0.1817	22910.93	0.0535	0.0004157
U	238	3	He	3.396	0.182	22870.93	0.0535	0.0004157
Sc	45	1	No Gas			1274589.59		
Sc	45	1	No Gas			1304855.84		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1303187.32		
Ge	72	1	No Gas			704139.44		
Ge	72	1	No Gas			707150.46		
Ge	72	1	No Gas			695267.49		
Sc	45	2	H2			86486.36		
Sc	45	2	H2			86515.84		
Sc	45	2	H2			84585.31		
Ge	72	2	H2			70906.83		
Ge	72	2	H2			69338.71		
Ge	72	2	H2			71619.51		
In	115	2	H2			180134.26		
In	115	2	H2			179263.61		
In	115	2	H2			181997.28		
Sc	45	3	He			22548.08		
Sc	45	3	He			22317.90		
Sc	45	3	He			23129.06		
Ge	72	3	He			42814.74		
Ge	72	3	He			43266.81		
Ge	72	3	He			42684.35		
In	115	3	He			39647.12		
In	115	3	He			38985.34		
In	115	3	He			38664.11		
Tb	159	3	He			175225.37		
Tb	159	3	He			175050.51		
Tb	159	3	He			173725.72		
Bi	209	3	He			131060.68		
Bi	209	3	He			126121.79		
Bi	209	3	He			125637.68		

Quantitation Report

Data File Name	067SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
Acq Time	9/19/2023 9:04:22 AM
Sample Name	410-141815-V-3-A
Sample Type	Sample
Comment	B25
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

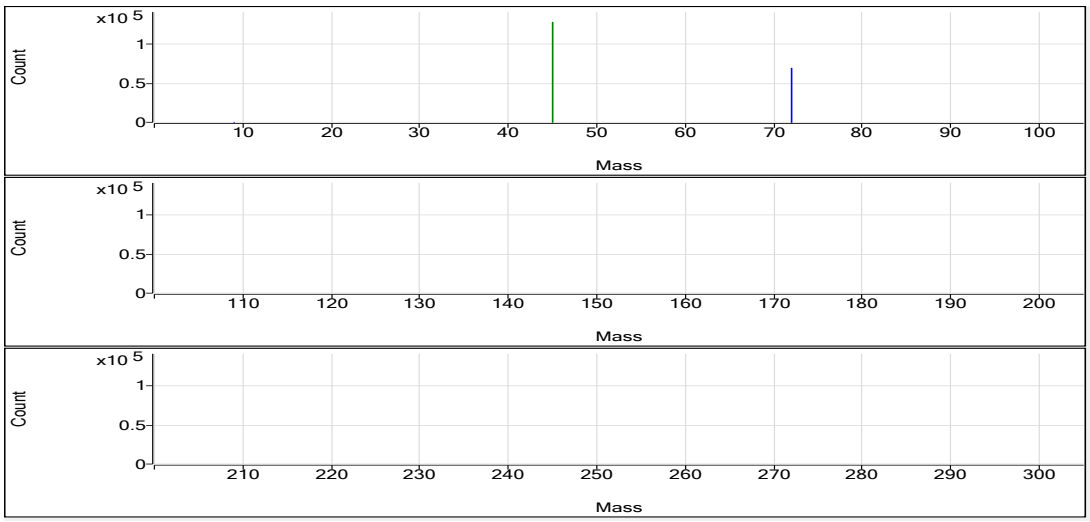
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.013	ppb	77.8	32.67	0.0000	Pulse	0.5000	3
Se	78	115	H2	-0.018	ppb	N/A	0.67	0.0000	Pulse	1.5000	3
Na	23	45	He	93879.820	ppb	1.2	7666918.43	335.4417	Analog	0.1000	3
Mg	24	45	He	22602.528	ppb	1.7	939397.15	41.1009	Pulse	0.1000	3
Al	27	45	He	13.029	ppb	70.8	226.67	0.0099	Pulse	0.1000	3
K	39	45	He	1437.022	ppb	5.1	54645.84	2.3913	Pulse	0.1000	3
Ca	44	45	He	42944.915	ppb	0.9	72038.11	3.1517	Pulse	0.1000	3
Ti	47	45	He	0.507	ppb	222.1	13.33	0.0006	Pulse	0.1000	3
V	51	45	He	0.160	ppb	20.1	520.01	0.0227	Pulse	0.5000	3
Cr	52	45	He	-0.334	ppb	N/A	2140.23	0.0936	Pulse	0.1000	3
Mn	55	45	He	15.746	ppb	5.3	5104.38	0.2234	Pulse	0.1000	3
Fe	57	45	He	10.154	ppb	27.6	286.68	0.0125	Pulse	0.1000	3
Co	59	45	He	0.076	ppb	59.6	256.68	0.0112	Pulse	0.1000	3
Ni	60	72	He	0.495	ppb	62.4	963.40	0.0221	Pulse	0.1000	3
Cu	63	72	He	5.254	ppb	5.4	6838.54	0.1572	Pulse	0.1000	3
Zn	66	72	He	245.710	ppb	0.7	36012.67	0.8281	Pulse	0.1000	3
As	75	72	He	0.239	ppb	24.0	62.67	0.0014	Pulse	0.5000	3
Sr	88	115	He	3267.097	ppb	0.4	1338916.23	34.4452	Pulse	0.1000	3
Mo	98	115	He	3.178	ppb	10.9	3430.54	0.0883	Pulse	0.1000	3
Ag	107	115	He	-0.003	ppb	N/A	10.00	0.0003	Pulse	0.1000	3
Cd	111	115	He	0.000	ppb	64099.7	2.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.191	ppb	N/A	580.03	0.0149	Pulse	0.1000	3
Sb	121	115	He	0.047	ppb	105.3	76.67	0.0020	Pulse	0.1000	3
Ba	137	115	He	109.982	ppb	1.3	25073.59	0.6450	Pulse	0.1000	3
Tl	205	209	He	-0.007	ppb	N/A	70.00	0.0006	Pulse	0.1000	3
Pb	208	209	He	1.166	ppb	0.5	7571.15	0.0601	Pulse	0.1000	3
U	238	209	He	1.178	ppb	2.0	7992.79	0.0634	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1281410.32	0.8	96.0	Analog	0.1000	3
No Gas	Ge	72	693359.23	1.2	99.1	Pulse	0.1000	3
H2	Sc	45	86130.83	2.3	99.1	Pulse	0.1000	3
H2	Ge	72	72119.18	1.3	100.7	Pulse	0.1000	3
H2	In	115	184092.10	1.0	100.5	Pulse	0.1000	3
He	Sc	45	22858.42	1.2	99.4	Pulse	0.1000	3
He	Ge	72	43489.99	0.6	103.0	Pulse	0.1000	3
He	In	115	38871.14	0.6	99.8	Pulse	0.1000	3
He	Tb	159	175996.12	1.1	99.9	Pulse	0.1000	3
He	Bi	209	126018.26	0.8	98.3	Pulse	0.1000	3

No Gas



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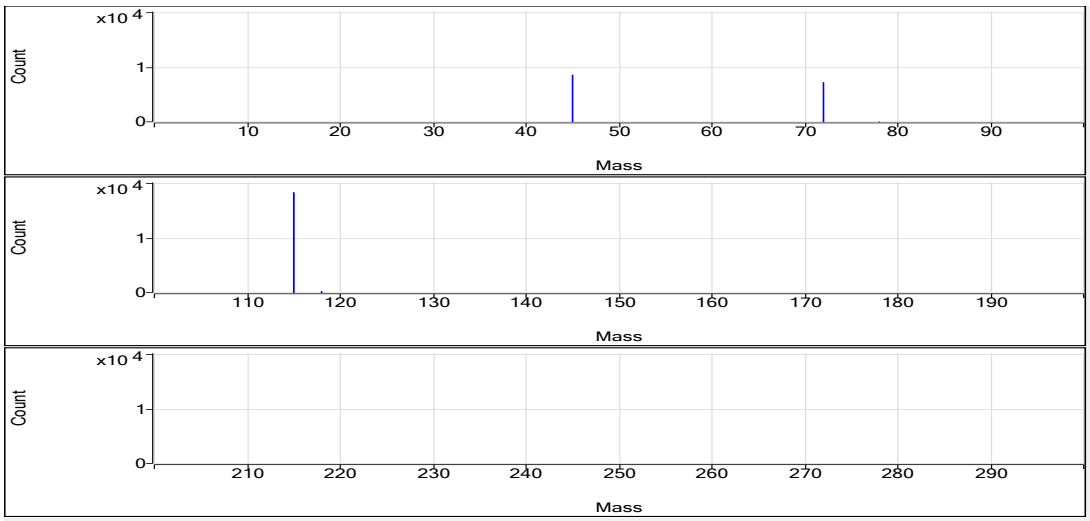
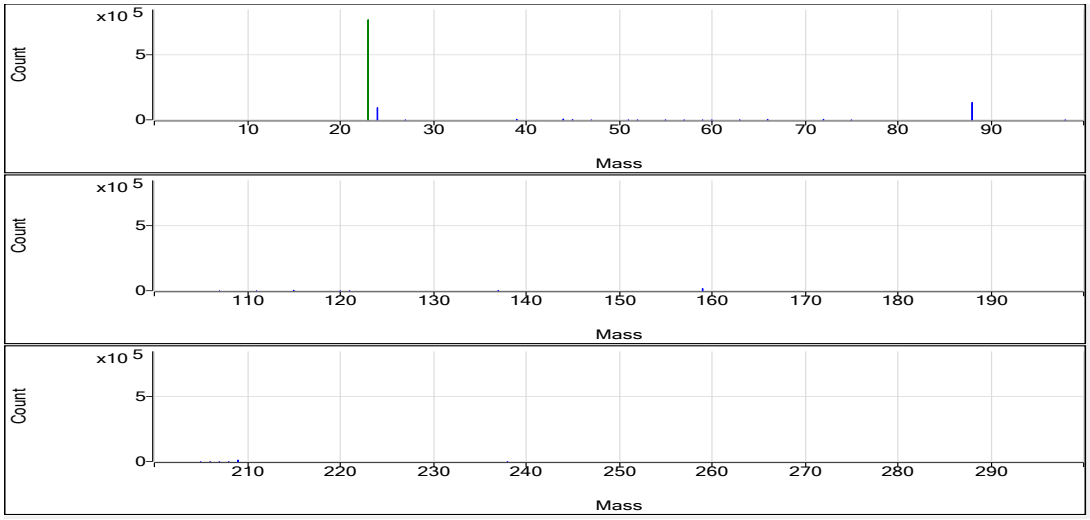


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.009	0	30.00	0.0005	1.901E-05
Be	9	1	No Gas	0.025	0	40.00	0.0005	1.901E-05
Be	9	1	No Gas	0.006	0	28.00	0.0005	1.901E-05
Se	78	2	H2	-0.018	0	0.67	0.0002	7.279E-06
Se	78	2	H2	0	0	1.33	0.0002	7.279E-06
Se	78	2	H2	-0.035	0	0.00	0.0002	7.279E-06
Na	23	3	He	95141.184	339.939	7675118.64	0.0036	0.7194
Na	23	3	He	92865.778	331.8262	7674781.14	0.0036	0.7194
Na	23	3	He	93632.497	334.5599	7650855.51	0.0036	0.7194
Mg	24	3	He	23047.039	41.9091	946221.16	0.0018	0.006791
Mg	24	3	He	22429.146	40.7857	943329.52	0.0018	0.006791
Mg	24	3	He	22331.399	40.608	928640.77	0.0018	0.006791
Al	27	3	He	2.449	0.004	90.00	0.0006	0.002622
Al	27	3	He	19.36	0.0134	310.01	0.0006	0.002622
Al	27	3	He	17.278	0.0122	280.01	0.0006	0.002622
K	39	3	He	1521.315	2.4989	56419.06	0.0013	0.5579
K	39	3	He	1388.262	2.3291	53869.63	0.0013	0.5579
K	39	3	He	1401.49	2.346	53648.83	0.0013	0.5579
Ca	44	3	He	43373.08	3.1831	71867.07	0.0001	0.004062
Ca	44	3	He	42724.287	3.1355	72521.06	0.0001	0.004062
Ca	44	3	He	42737.377	3.1365	71726.20	0.0001	0.004062
Ti	47	3	He	-0.479	0	0.00	0.0006	0.0002809
Ti	47	3	He	1.733	0.0013	30.00	0.0006	0.0002809
Ti	47	3	He	0.267	0.0004	10.00	0.0006	0.0002809
V	51	3	He	0.164	0.0229	516.01	0.0259	0.01861
V	51	3	He	0.19	0.0235	544.01	0.0259	0.01861
V	51	3	He	0.126	0.0219	500.01	0.0259	0.01861
Cr	52	3	He	-0.286	0.0952	2150.23	0.0332	0.1047
Cr	52	3	He	-0.302	0.0947	2190.25	0.0332	0.1047
Cr	52	3	He	-0.415	0.091	2080.21	0.0332	0.1047
Mn	55	3	He	16.536	0.2343	5291.13	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	14.885	0.2115	4890.96	0.0139	0.005074
Mn	55	3	He	15.816	0.2244	5131.06	0.0139	0.005074
Fe	57	3	He	12.022	0.0137	310.01	0.0006	0.00609
Fe	57	3	He	11.508	0.0134	310.02	0.0006	0.00609
Fe	57	3	He	6.931	0.0105	240.01	0.0006	0.00609
Co	59	3	He	0.027	0.008	180.01	0.0661	0.00621
Co	59	3	He	0.115	0.0138	320.01	0.0661	0.00621
Co	59	3	He	0.085	0.0118	270.01	0.0661	0.00621
Ni	60	3	He	0.79	0.0251	1090.07	0.01	0.01721
Ni	60	3	He	0.52	0.0224	980.07	0.01	0.01721
Ni	60	3	He	0.174	0.0189	820.05	0.01	0.01721
Cu	63	3	He	4.934	0.1481	6431.63	0.0286	0.006793
Cu	63	3	He	5.464	0.1632	7142.05	0.0286	0.006793
Cu	63	3	He	5.365	0.1604	6941.93	0.0286	0.006793
Zn	66	3	He	243.835	0.8218	35694.78	0.0034	0.00316
Zn	66	3	He	246.89	0.832	36407.15	0.0034	0.00316
Zn	66	3	He	246.404	0.8304	35936.08	0.0034	0.00316
As	75	3	He	0.305	0.0016	70.00	0.0026	0.0008231
As	75	3	He	0.212	0.0014	60.00	0.0026	0.0008231
As	75	3	He	0.2	0.0013	58.00	0.0026	0.0008231
Sr	88	3	He	3281.74	34.5996	1339017.01	0.0105	0.001715
Sr	88	3	He	3264.794	34.4209	1346602.95	0.0105	0.001715
Sr	88	3	He	3254.757	34.3151	1331128.73	0.0105	0.001715
Mo	98	3	He	3.201	0.0889	3440.53	0.0275	0.0008555
Mo	98	3	He	2.822	0.0785	3070.43	0.0275	0.0008555
Mo	98	3	He	3.512	0.0975	3780.66	0.0275	0.0008555
Ag	107	3	He	-0.007	0	0.00	0.0591	0.0004305
Ag	107	3	He	-0.003	0.0003	10.00	0.0591	0.0004305
Ag	107	3	He	0.001	0.0005	20.00	0.0591	0.0004305
Cd	111	3	He	0.008	0.0001	4.00	0.0066	5.141E-05
Cd	111	3	He	0	0.0001	2.00	0.0066	5.141E-05
Cd	111	3	He	-0.008	0	0.00	0.0066	5.141E-05
Sn	120	3	He	-0.202	0.0147	570.03	0.0187	0.0185
Sn	120	3	He	-0.114	0.0164	640.04	0.0187	0.0185
Sn	120	3	He	-0.258	0.0137	530.03	0.0187	0.0185
Sb	121	3	He	0.052	0.0021	80.00	0.0183	0.00111
Sb	121	3	He	-0.005	0.001	40.00	0.0183	0.00111
Sb	121	3	He	0.094	0.0028	110.01	0.0183	0.00111
Ba	137	3	He	110.867	0.6502	25163.73	0.0059	0.0007704
Ba	137	3	He	110.809	0.6499	25424.15	0.0059	0.0007704
Ba	137	3	He	108.271	0.635	24632.90	0.0059	0.0007704
Tl	205	3	He	0	0.0008	100.00	0.0364	0.000808
Tl	205	3	He	-0.005	0.0006	80.00	0.0364	0.000808
Tl	205	3	He	-0.016	0.0002	30.00	0.0364	0.000808
Pb	208	3	He	1.166	0.0601	4020.73	0.0487	0.003226
Pb	208	3	He	1.172	0.0604	4020.76	0.0487	0.003226
Pb	208	3	He	1.161	0.0598	4170.81	0.0487	0.003226
U	238	3	He	1.198	0.0645	8052.77	0.0535	0.0004157
U	238	3	He	1.184	0.0638	8082.88	0.0535	0.0004157
U	238	3	He	1.152	0.0621	7842.71	0.0535	0.0004157
Sc	45	1	No Gas			1271823.11		
Sc	45	1	No Gas			1281167.17		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1291240.68		
Ge	72	1	No Gas			687145.93		
Ge	72	1	No Gas			690578.66		
Ge	72	1	No Gas			702353.11		
Sc	45	2	H2			83861.28		
Sc	45	2	H2			87521.85		
Sc	45	2	H2			87009.37		
Ge	72	2	H2			71006.42		
Ge	72	2	H2			72806.88		
Ge	72	2	H2			72544.23		
In	115	2	H2			182543.71		
In	115	2	H2			183660.84		
In	115	2	H2			186071.76		
Sc	45	3	He			22577.93		
Sc	45	3	He			23128.92		
Sc	45	3	He			22868.42		
Ge	72	3	He			43436.58		
Ge	72	3	He			43757.33		
Ge	72	3	He			43276.07		
In	115	3	He			38704.40		
In	115	3	He			39126.14		
In	115	3	He			38795.06		
Tb	159	3	He			173844.96		
Tb	159	3	He			177653.16		
Tb	159	3	He			176490.23		
Bi	209	3	He			124910.51		
Bi	209	3	He			126759.13		
Bi	209	3	He			126385.13		

Quantitation Report

Data File Name	068SMPL.d
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Sample Name	410-141815-V-2-A
Sample Type	Sample
Comment	B25
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

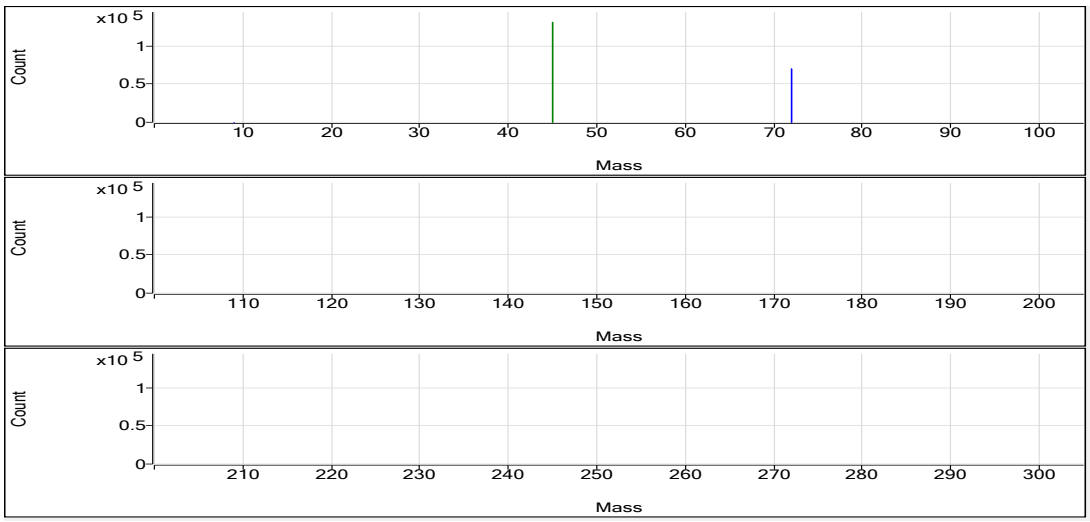
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.006	ppb	78.0	28.67	0.0000	Pulse	0.5000	3
Se	78	115	H2	0.163	ppb	11.4	7.56	0.0000	Pulse	1.5000	3
Na	23	45	He	32404.783	ppb	5.7	2633368.40	116.2565	Analog	0.1000	3
Mg	24	45	He	22051.851	ppb	5.4	908440.48	40.0997	Pulse	0.1000	3
Al	27	45	He	11.454	ppb	24.8	203.34	0.0090	Pulse	0.1000	3
K	39	45	He	3036.547	ppb	4.5	100467.03	4.4321	Pulse	0.1000	3
Ca	44	45	He	67034.745	ppb	5.5	111404.36	4.9173	Pulse	0.1000	3
Ti	47	45	He	-0.236	ppb	N/A	3.33	0.0001	Pulse	0.1000	3
V	51	45	He	0.734	ppb	13.0	851.36	0.0376	Pulse	0.5000	3
Cr	52	45	He	0.742	ppb	44.6	2933.74	0.1294	Pulse	0.1000	3
Mn	55	45	He	15.772	ppb	8.3	5064.37	0.2238	Pulse	0.1000	3
Fe	57	45	He	122.314	ppb	9.2	1896.86	0.0838	Pulse	0.1000	3
Co	59	45	He	0.113	ppb	12.8	310.01	0.0137	Pulse	0.1000	3
Ni	60	72	He	0.723	ppb	29.6	1046.75	0.0244	Pulse	0.1000	3
Cu	63	72	He	33.476	ppb	1.5	41330.42	0.9653	Pulse	0.1000	3
Zn	66	72	He	204.420	ppb	1.0	29520.97	0.6894	Pulse	0.1000	3
As	75	72	He	0.229	ppb	40.4	60.67	0.0014	Pulse	0.5000	3
Sr	88	115	He	649.215	ppb	2.0	265119.22	6.8461	Pulse	0.1000	3
Mo	98	115	He	3.670	ppb	3.6	3944.02	0.1018	Pulse	0.1000	3
Ag	107	115	He	0.006	ppb	128.2	30.00	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.021	ppb	56.1	7.33	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.004	ppb	1785.6	720.04	0.0186	Pulse	0.1000	3
Sb	121	115	He	0.250	ppb	8.7	220.01	0.0057	Pulse	0.1000	3
Ba	137	115	He	64.776	ppb	0.9	14728.42	0.3802	Pulse	0.1000	3
Tl	205	209	He	-0.002	ppb	N/A	93.33	0.0007	Pulse	0.1000	3
Pb	208	209	He	0.594	ppb	5.6	4063.75	0.0322	Pulse	0.1000	3
U	238	209	He	4.145	ppb	2.1	28038.01	0.2221	Pulse	0.1000	3

ISTD Table:

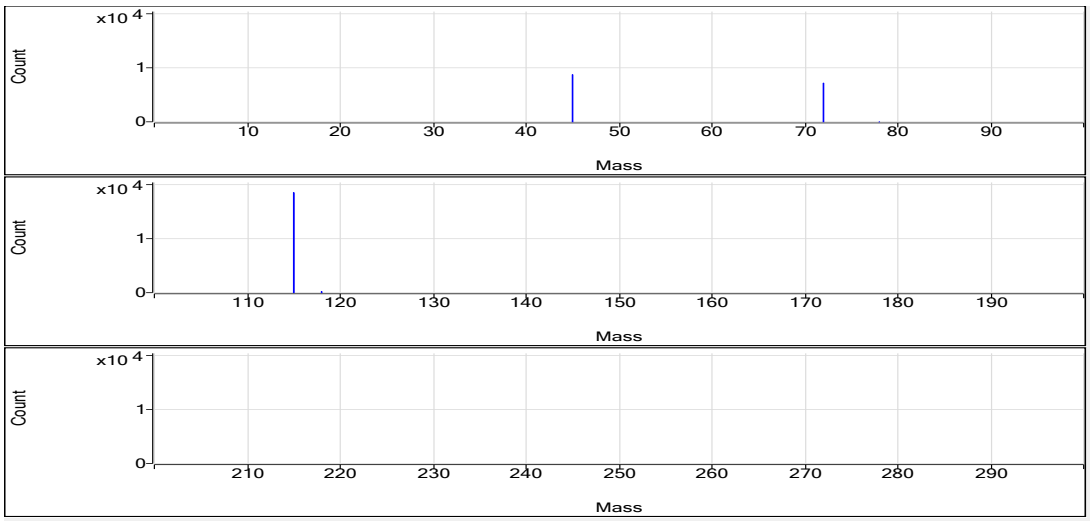
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1309032.06	0.8	98.1	Analog	0.1000	3
No Gas	Ge	72	700012.44	0.3	100.1	Pulse	0.1000	3
H2	Sc	45	87264.67	1.8	100.4	Pulse	0.1000	3
H2	Ge	72	71771.16	1.8	100.2	Pulse	0.1000	3
H2	In	115	185041.06	1.3	101.0	Pulse	0.1000	3
He	Sc	45	22701.70	5.8	98.7	Pulse	0.1000	3
He	Ge	72	42814.86	1.5	101.4	Pulse	0.1000	3
He	In	115	38733.16	1.5	99.5	Pulse	0.1000	3
He	Tb	159	175996.42	0.9	99.9	Pulse	0.1000	3
He	Bi	209	126240.37	1.4	98.5	Pulse	0.1000	3

No Gas

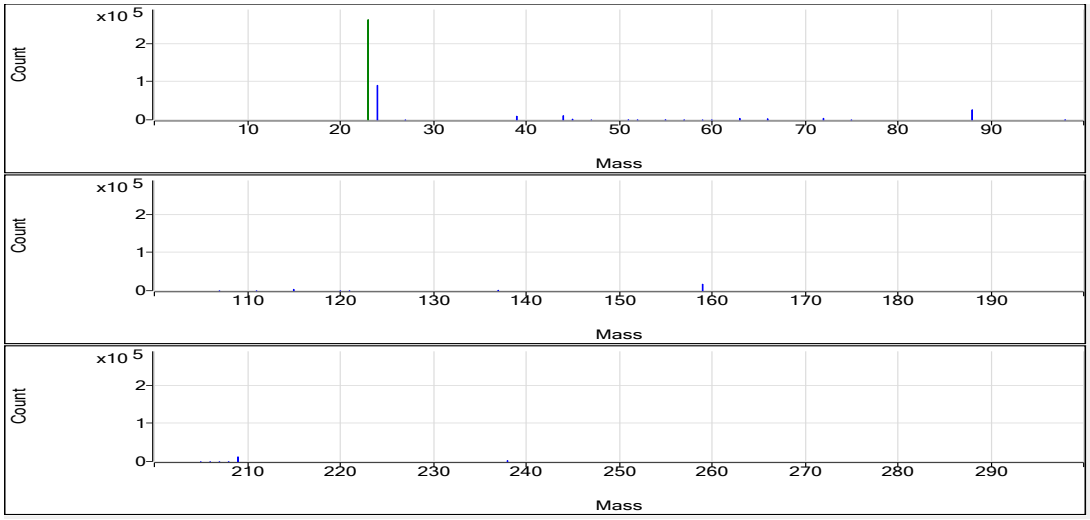


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.005	0	28.00	0.0005	1.901E-05
Be	9	1	No Gas	0.011	0	32.00	0.0005	1.901E-05
Be	9	1	No Gas	0.002	0	26.00	0.0005	1.901E-05
Se	78	2	H2	0.176	0	8.00	0.0002	7.279E-06
Se	78	2	H2	0.172	0	8.00	0.0002	7.279E-06
Se	78	2	H2	0.142	0	6.67	0.0002	7.279E-06
Na	23	3	He	31586.849	113.3402	2647549.65	0.0036	0.7194
Na	23	3	He	31094.213	111.5837	2629999.34	0.0036	0.7194
Na	23	3	He	34533.285	123.8455	2622556.21	0.0036	0.7194
Mg	24	3	He	21384.977	38.8873	908380.61	0.0018	0.006791
Mg	24	3	He	21356.03	38.8347	915322.80	0.0018	0.006791
Mg	24	3	He	23414.547	42.5773	901618.03	0.0018	0.006791
Al	27	3	He	8.36	0.0073	170.01	0.0006	0.002622
Al	27	3	He	12.053	0.0093	220.01	0.0006	0.002622
Al	27	3	He	13.948	0.0104	220.01	0.0006	0.002622
K	39	3	He	3013.716	4.403	102849.97	0.0013	0.5579
K	39	3	He	2911.271	4.2722	100695.74	0.0013	0.5579
K	39	3	He	3184.654	4.621	97855.39	0.0013	0.5579
Ca	44	3	He	66389.649	4.8701	113761.14	0.0001	0.004062
Ca	44	3	He	63733.056	4.6753	110196.55	0.0001	0.004062
Ca	44	3	He	70981.53	5.2066	110255.39	0.0001	0.004062
Ti	47	3	He	0.251	0.0004	10.00	0.0006	0.0002809
Ti	47	3	He	-0.479	0	0.00	0.0006	0.0002809
Ti	47	3	He	-0.479	0	0.00	0.0006	0.0002809
V	51	3	He	0.691	0.0365	852.03	0.0259	0.01861
V	51	3	He	0.668	0.0359	846.03	0.0259	0.01861
V	51	3	He	0.844	0.0404	856.03	0.0259	0.01861
Cr	52	3	He	1.01	0.1383	3230.47	0.0332	0.1047
Cr	52	3	He	0.373	0.1171	2760.35	0.0332	0.1047
Cr	52	3	He	0.842	0.1327	2810.41	0.0332	0.1047
Mn	55	3	He	15.538	0.2205	5151.07	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	14.6	0.2075	4890.96	0.0139	0.005074
Mn	55	3	He	17.178	0.2433	5151.09	0.0139	0.005074
Fe	57	3	He	119.762	0.0822	1920.20	0.0006	0.00609
Fe	57	3	He	112.597	0.0776	1830.17	0.0006	0.00609
Fe	57	3	He	134.584	0.0916	1940.21	0.0006	0.00609
Co	59	3	He	0.113	0.0137	320.02	0.0661	0.00621
Co	59	3	He	0.099	0.0127	300.01	0.0661	0.00621
Co	59	3	He	0.127	0.0146	310.01	0.0661	0.00621
Ni	60	3	He	0.958	0.0268	1160.10	0.01	0.01721
Ni	60	3	He	0.674	0.0239	1030.07	0.01	0.01721
Ni	60	3	He	0.538	0.0226	950.07	0.01	0.01721
Cu	63	3	He	34.036	0.9813	42524.17	0.0286	0.006793
Cu	63	3	He	33.102	0.9545	41069.22	0.0286	0.006793
Cu	63	3	He	33.292	0.96	40397.86	0.0286	0.006793
Zn	66	3	He	206.651	0.6969	30202.44	0.0034	0.00316
Zn	66	3	He	203.918	0.6878	29591.13	0.0034	0.00316
Zn	66	3	He	202.692	0.6836	28769.34	0.0034	0.00316
As	75	3	He	0.271	0.0015	66.00	0.0026	0.0008231
As	75	3	He	0.293	0.0016	68.00	0.0026	0.0008231
As	75	3	He	0.123	0.0011	48.00	0.0026	0.0008231
Sr	88	3	He	642.522	6.7755	263913.20	0.0105	0.001715
Sr	88	3	He	664.135	7.0034	266745.00	0.0105	0.001715
Sr	88	3	He	640.989	6.7594	264699.45	0.0105	0.001715
Mo	98	3	He	3.609	0.1001	3900.66	0.0275	0.0008555
Mo	98	3	He	3.577	0.0993	3780.64	0.0275	0.0008555
Mo	98	3	He	3.822	0.106	4150.76	0.0275	0.0008555
Ag	107	3	He	0.001	0.0005	20.00	0.0591	0.0004305
Ag	107	3	He	0.002	0.0005	20.00	0.0591	0.0004305
Ag	107	3	He	0.014	0.0013	50.00	0.0591	0.0004305
Cd	111	3	He	0.031	0.0003	10.00	0.0066	5.141E-05
Cd	111	3	He	0.008	0.0001	4.00	0.0066	5.141E-05
Cd	111	3	He	0.023	0.0002	8.00	0.0066	5.141E-05
Sn	120	3	He	-0.042	0.0177	690.04	0.0187	0.0185
Sn	120	3	He	-0.035	0.0179	680.04	0.0187	0.0185
Sn	120	3	He	0.089	0.0202	790.05	0.0187	0.0185
Sb	121	3	He	0.234	0.0054	210.01	0.0183	0.00111
Sb	121	3	He	0.241	0.0055	210.01	0.0183	0.00111
Sb	121	3	He	0.274	0.0061	240.01	0.0183	0.00111
Ba	137	3	He	65.12	0.3822	14888.56	0.0059	0.0007704
Ba	137	3	He	64.087	0.3762	14328.06	0.0059	0.0007704
Ba	137	3	He	65.121	0.3822	14968.65	0.0059	0.0007704
Tl	205	3	He	-0.007	0.0005	70.00	0.0364	0.000808
Tl	205	3	He	0.002	0.0009	110.00	0.0364	0.000808
Tl	205	3	He	0	0.0008	100.00	0.0364	0.000808
Pb	208	3	He	0.594	0.0322	2340.31	0.0487	0.003226
Pb	208	3	He	0.627	0.0338	1940.23	0.0487	0.003226
Pb	208	3	He	0.561	0.0306	2240.28	0.0487	0.003226
U	238	3	He	4.058	0.2175	27860.87	0.0535	0.0004157
U	238	3	He	4.15	0.2224	28021.30	0.0535	0.0004157
U	238	3	He	4.228	0.2266	28231.87	0.0535	0.0004157
Sc	45	1	No Gas			1296566.54		
Sc	45	1	No Gas			1317942.32		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1312587.32		
Ge	72	1	No Gas			698862.72		
Ge	72	1	No Gas			698391.55		
Ge	72	1	No Gas			702783.04		
Sc	45	2	H2			87654.15		
Sc	45	2	H2			88568.88		
Sc	45	2	H2			85570.97		
Ge	72	2	H2			71208.19		
Ge	72	2	H2			73237.87		
Ge	72	2	H2			70867.41		
In	115	2	H2			184316.95		
In	115	2	H2			187632.40		
In	115	2	H2			183173.83		
Sc	45	3	He			23359.32		
Sc	45	3	He			23569.74		
Sc	45	3	He			21176.03		
Ge	72	3	He			43336.35		
Ge	72	3	He			43025.61		
Ge	72	3	He			42082.63		
In	115	3	He			38955.83		
In	115	3	He			38092.81		
In	115	3	He			39165.97		
Tb	159	3	He			177310.41		
Tb	159	3	He			176509.14		
Tb	159	3	He			174169.72		
Bi	209	3	He			128121.77		
Bi	209	3	He			126002.10		
Bi	209	3	He			124597.23		

Quantitation Report

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Sample Type	CCV
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

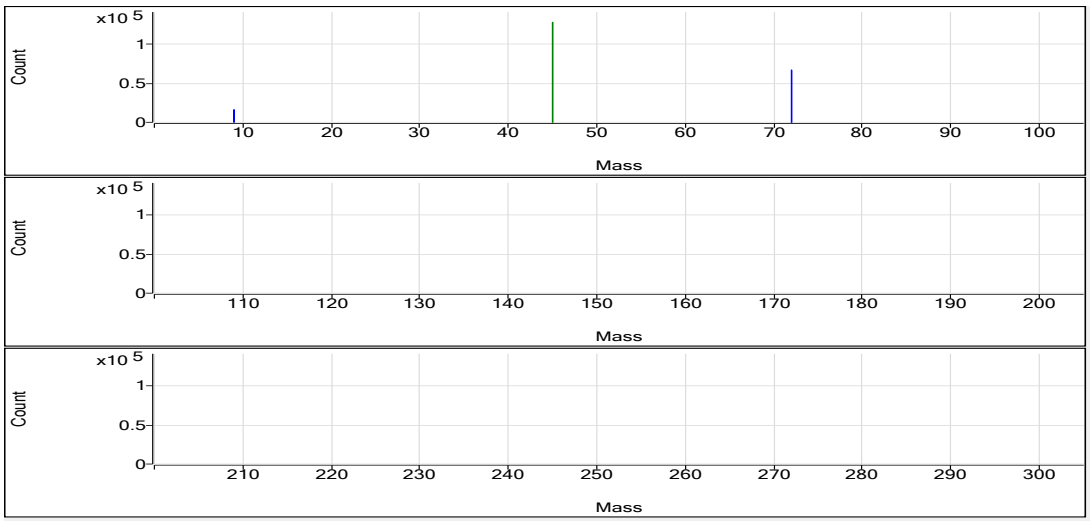
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	52.499	ppb	6.7	32643.63	0.0253	Pulse	0.5000	3
Se	78	115	H2	52.248	ppb	1.7	1979.70	0.0107	Pulse	1.5000	3
Na	23	45	He	5331.689	ppb	2.0	443353.52	19.7291	Pulse	0.1000	3
Mg	24	45	He	5200.601	ppb	2.9	212587.39	9.4621	Pulse	0.1000	3
Al	27	45	He	5175.273	ppb	2.7	64812.74	2.8846	Pulse	0.1000	3
K	39	45	He	5303.788	ppb	2.0	164606.48	7.3248	Pulse	0.1000	3
Ca	44	45	He	5231.398	ppb	2.8	8706.20	0.3875	Pulse	0.1000	3
Ti	47	45	He	5261.836	ppb	2.7	69318.63	3.0852	Pulse	0.1000	3
V	51	45	He	524.212	ppb	2.3	305006.65	13.5739	Pulse	0.5000	3
Cr	52	45	He	529.438	ppb	2.2	397496.20	17.6897	Pulse	0.1000	3
Mn	55	45	He	527.964	ppb	3.4	164577.56	7.3256	Pulse	0.1000	3
Fe	57	45	He	5274.177	ppb	3.1	75457.29	3.3580	Pulse	0.1000	3
Co	59	45	He	521.102	ppb	2.7	774615.04	34.4767	Pulse	0.1000	3
Ni	60	72	He	516.519	ppb	2.6	218541.77	5.1731	Pulse	0.1000	3
Cu	63	72	He	518.114	ppb	2.2	626993.77	14.8408	Pulse	0.1000	3
Zn	66	72	He	522.315	ppb	1.9	74222.09	1.7567	Pulse	0.1000	3
As	75	72	He	513.042	ppb	1.5	56018.89	1.3259	Pulse	0.5000	3
Sr	88	115	He	51.159	ppb	0.9	21036.32	0.5411	Pulse	0.1000	3
Mo	98	115	He	49.893	ppb	1.1	53398.62	1.3733	Pulse	0.1000	3
Ag	107	115	He	49.632	ppb	1.1	114052.14	2.9335	Pulse	0.1000	3
Cd	111	115	He	50.768	ppb	0.8	13084.17	0.3365	Pulse	0.5000	3
Sn	120	115	He	50.595	ppb	1.6	37564.94	0.9662	Pulse	0.1000	3
Sb	121	115	He	50.011	ppb	2.4	35626.72	0.9164	Pulse	0.1000	3
Ba	137	115	He	499.438	ppb	1.2	113780.21	2.9264	Pulse	0.1000	3
Tl	205	209	He	51.709	ppb	1.8	240406.74	1.8810	Pulse	0.1000	3
Pb	208	209	He	51.426	ppb	1.4	320831.21	2.5102	Pulse	0.1000	3
U	238	209	He	50.595	ppb	0.7	345955.32	2.7066	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1287474.46	1.0	96.5	Analog	0.1000	3
No Gas	Ge	72	673835.46	1.7	96.3	Pulse	0.1000	3
H2	Sc	45	87424.99	0.5	100.6	Pulse	0.1000	3
H2	Ge	72	69358.93	1.6	96.9	Pulse	0.1000	3
H2	In	115	184264.88	0.7	100.6	Pulse	0.1000	3
He	Sc	45	22481.45	3.3	97.7	Pulse	0.1000	3
He	Ge	72	42256.77	1.6	100.1	Pulse	0.1000	3
He	In	115	38882.76	1.1	99.9	Pulse	0.1000	3
He	Tb	159	175363.06	0.7	99.6	Pulse	0.1000	3
He	Bi	209	127830.43	1.9	99.7	Pulse	0.1000	3

No Gas



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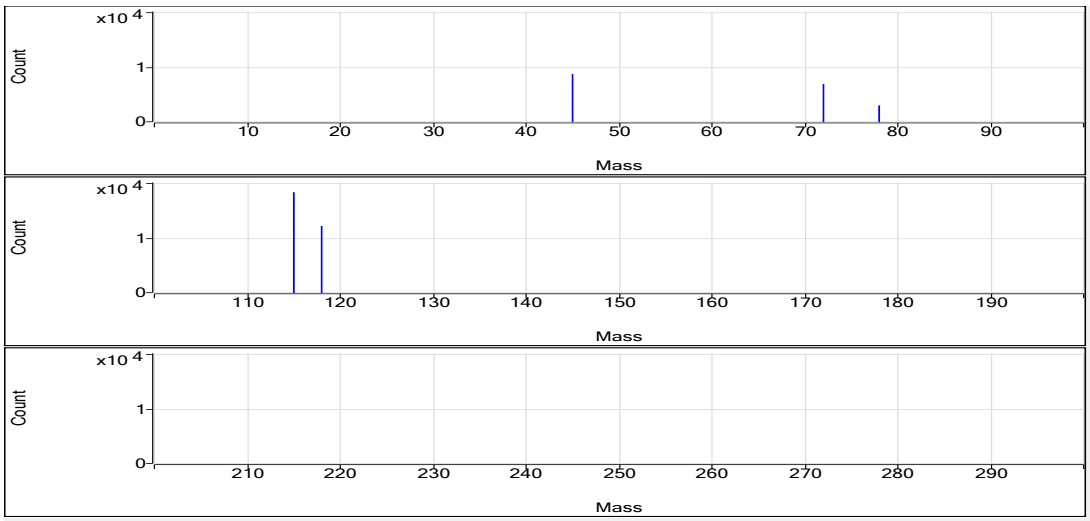
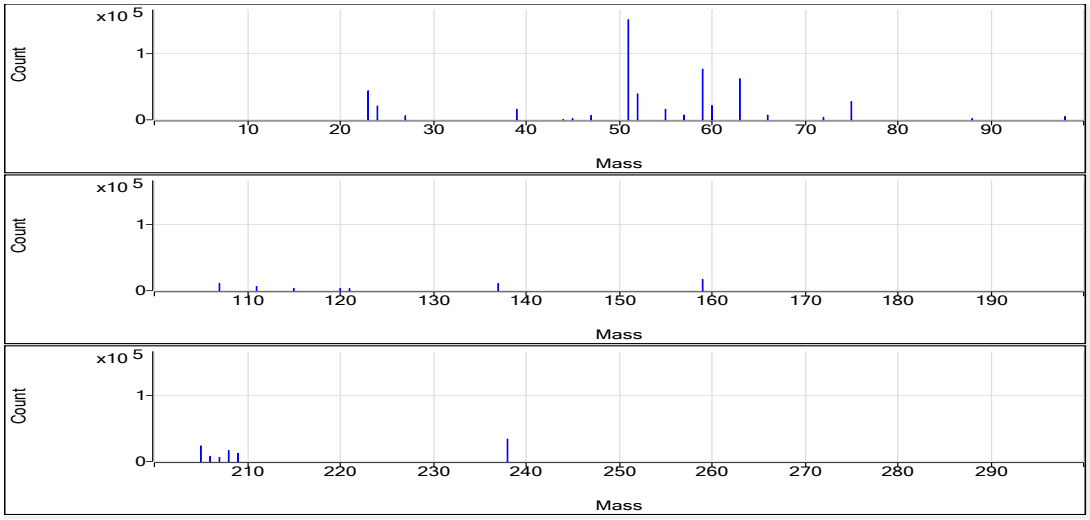


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	48.65	0.0235	30050.08	0.0005	1.901E-05
Be	9	1	No Gas	53.312	0.0257	32978.27	0.0005	1.901E-05
Be	9	1	No Gas	55.535	0.0268	34902.55	0.0005	1.901E-05
Se	78	2	H2	51.753	0.0106	1974.14	0.0002	7.279E-06
Se	78	2	H2	51.707	0.0106	1943.47	0.0002	7.279E-06
Se	78	2	H2	53.284	0.011	2021.48	0.0002	7.279E-06
Na	23	3	He	5322.492	19.6963	446878.55	0.0036	0.7194
Na	23	3	He	5231.16	19.3707	447641.52	0.0036	0.7194
Na	23	3	He	5441.417	20.1204	435540.50	0.0036	0.7194
Mg	24	3	He	5201.862	9.4644	214732.32	0.0018	0.006791
Mg	24	3	He	5047.662	9.1841	212236.19	0.0018	0.006791
Mg	24	3	He	5352.28	9.7379	210793.65	0.0018	0.006791
Al	27	3	He	5163.112	2.8779	65294.24	0.0006	0.002622
Al	27	3	He	5043.297	2.8111	64963.33	0.0006	0.002622
Al	27	3	He	5319.411	2.9649	64180.65	0.0006	0.002622
K	39	3	He	5302.63	7.3233	166153.59	0.0013	0.5579
K	39	3	He	5200.481	7.193	166223.45	0.0013	0.5579
K	39	3	He	5408.253	7.458	161442.41	0.0013	0.5579
Ca	44	3	He	5226.131	0.3871	8782.87	0.0001	0.004062
Ca	44	3	He	5088.654	0.377	8712.91	0.0001	0.004062
Ca	44	3	He	5379.41	0.3983	8622.83	0.0001	0.004062
Ti	47	3	He	5247.573	3.0768	69808.07	0.0006	0.0002809
Ti	47	3	He	5129.684	3.0077	69505.58	0.0006	0.0002809
Ti	47	3	He	5408.25	3.171	68642.25	0.0006	0.0002809
V	51	3	He	523.298	13.5503	307433.53	0.0259	0.01861
V	51	3	He	512.649	13.2749	306771.75	0.0259	0.01861
V	51	3	He	536.69	13.8965	300814.66	0.0259	0.01861
Cr	52	3	He	526.552	17.5939	399177.22	0.0332	0.1047
Cr	52	3	He	519.457	17.3582	401134.95	0.0332	0.1047
Cr	52	3	He	542.305	18.1171	392176.44	0.0332	0.1047
Mn	55	3	He	532.14	7.3835	167520.11	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	508.305	7.053	162989.84	0.0139	0.005074
Mn	55	3	He	543.446	7.5403	163222.73	0.0139	0.005074
Fe	57	3	He	5376.192	3.4228	77658.63	0.0006	0.00609
Fe	57	3	He	5087.178	3.2392	74854.31	0.0006	0.00609
Fe	57	3	He	5359.161	3.412	73858.93	0.0006	0.00609
Co	59	3	He	516.616	34.18	775488.50	0.0661	0.00621
Co	59	3	He	509.678	33.721	779265.38	0.0661	0.00621
Co	59	3	He	537.012	35.5292	769091.24	0.0661	0.00621
Ni	60	3	He	526.377	5.2715	219883.20	0.01	0.01721
Ni	60	3	He	521.723	5.2251	219835.39	0.01	0.01721
Ni	60	3	He	501.457	5.0228	215906.72	0.01	0.01721
Cu	63	3	He	523.403	14.9923	625349.72	0.0286	0.006793
Cu	63	3	He	525.89	15.0635	633768.74	0.0286	0.006793
Cu	63	3	He	505.049	14.4668	621862.84	0.0286	0.006793
Zn	66	3	He	521.764	1.7548	73196.74	0.0034	0.00316
Zn	66	3	He	532.571	1.7911	75357.90	0.0034	0.00316
Zn	66	3	He	512.611	1.7241	74111.62	0.0034	0.00316
As	75	3	He	516.88	1.3358	55717.74	0.0026	0.0008231
As	75	3	He	518.199	1.3392	56344.13	0.0026	0.0008231
As	75	3	He	504.047	1.3026	55994.79	0.0026	0.0008231
Sr	88	3	He	50.697	0.5362	21086.22	0.0105	0.001715
Sr	88	3	He	51.655	0.5463	21006.37	0.0105	0.001715
Sr	88	3	He	51.123	0.5407	21016.36	0.0105	0.001715
Mo	98	3	He	50.318	1.385	54465.95	0.0275	0.0008555
Mo	98	3	He	50.076	1.3783	53000.75	0.0275	0.0008555
Mo	98	3	He	49.284	1.3565	52729.17	0.0275	0.0008555
Ag	107	3	He	49.174	2.9064	114294.54	0.0591	0.0004305
Ag	107	3	He	50.233	2.9689	114162.71	0.0591	0.0004305
Ag	107	3	He	49.491	2.9251	113699.18	0.0591	0.0004305
Cd	111	3	He	50.886	0.3373	13264.35	0.0066	5.141E-05
Cd	111	3	He	51.107	0.3388	13026.10	0.0066	5.141E-05
Cd	111	3	He	50.31	0.3335	12962.06	0.0066	5.141E-05
Sn	120	3	He	49.679	0.949	37321.35	0.0187	0.0185
Sn	120	3	He	50.968	0.9732	37421.06	0.0187	0.0185
Sn	120	3	He	51.139	0.9764	37952.42	0.0187	0.0185
Sb	121	3	He	48.645	0.8914	35055.17	0.0183	0.00111
Sb	121	3	He	50.706	0.9291	35726.91	0.0183	0.00111
Sb	121	3	He	50.682	0.9287	36098.08	0.0183	0.00111
Ba	137	3	He	497.321	2.914	114595.99	0.0059	0.0007704
Ba	137	3	He	505.981	2.9647	114001.99	0.0059	0.0007704
Ba	137	3	He	495.013	2.9005	112742.66	0.0059	0.0007704
Tl	205	3	He	50.663	1.843	239663.81	0.0364	0.000808
Tl	205	3	He	52.22	1.8996	243358.98	0.0364	0.000808
Tl	205	3	He	52.244	1.9005	238197.42	0.0364	0.000808
Pb	208	3	He	50.584	2.4691	171571.40	0.0487	0.003226
Pb	208	3	He	51.794	2.5282	171782.18	0.0487	0.003226
Pb	208	3	He	51.9	2.5333	169089.12	0.0487	0.003226
U	238	3	He	50.205	2.6857	349261.01	0.0535	0.0004157
U	238	3	He	50.677	2.711	347312.49	0.0535	0.0004157
U	238	3	He	50.902	2.723	341292.46	0.0535	0.0004157
Sc	45	1	No Gas			1279320.68		
Sc	45	1	No Gas			1281282.79		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1301819.90		
Ge	72	1	No Gas			660776.63		
Ge	72	1	No Gas			683176.63		
Ge	72	1	No Gas			677553.11		
Sc	45	2	H2			87642.88		
Sc	45	2	H2			86929.01		
Sc	45	2	H2			87703.08		
Ge	72	2	H2			68102.72		
Ge	72	2	H2			70001.74		
Ge	72	2	H2			69972.32		
In	115	2	H2			185505.11		
In	115	2	H2			182788.71		
In	115	2	H2			184500.82		
Sc	45	3	He			22688.40		
Sc	45	3	He			23109.20		
Sc	45	3	He			21646.75		
Ge	72	3	He			41711.53		
Ge	72	3	He			42073.19		
Ge	72	3	He			42985.58		
In	115	3	He			39586.97		
In	115	3	He			38714.44		
In	115	3	He			39135.73		
Tb	159	3	He			176451.13		
Tb	159	3	He			175731.66		
Tb	159	3	He			173906.40		
Bi	209	3	He			130042.32		
Bi	209	3	He			128112.33		
Bi	209	3	He			125336.64		

Quantitation Report

Data File Name	071_CCB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
Acq Time	9/19/2023 9:12:21 AM
Sample Name	CCB 4807280
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

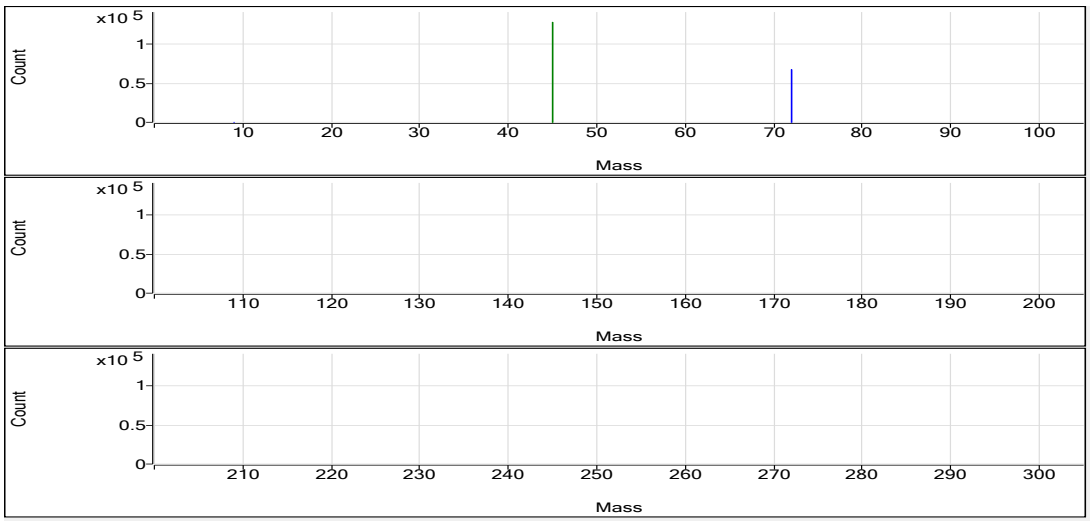
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.079	ppb	34.5	73.33	0.0001	Pulse	0.5000	3
Se	78	115	H2	0.070	ppb	45.0	4.00	0.0000	Pulse	1.5000	3
Na	23	45	He	-12.025	ppb	N/A	15652.11	0.6765	Pulse	0.1000	3
Mg	24	45	He	6.413	ppb	18.2	426.69	0.0185	Pulse	0.1000	3
Al	27	45	He	-0.048	ppb	N/A	60.00	0.0026	Pulse	0.1000	3
K	39	45	He	19.745	ppb	235.0	13500.06	0.5831	Pulse	0.1000	3
Ca	44	45	He	19.255	ppb	137.1	126.67	0.0055	Pulse	0.1000	3
Ti	47	45	He	3.448	ppb	88.3	53.33	0.0023	Pulse	0.1000	3
V	51	45	He	0.116	ppb	35.7	500.01	0.0216	Pulse	0.5000	3
Cr	52	45	He	0.340	ppb	97.9	2683.68	0.1160	Pulse	0.1000	3
Mn	55	45	He	0.620	ppb	30.8	316.68	0.0137	Pulse	0.1000	3
Fe	57	45	He	3.346	ppb	44.7	190.01	0.0082	Pulse	0.1000	3
Co	59	45	He	0.097	ppb	59.1	293.35	0.0127	Pulse	0.1000	3
Ni	60	72	He	0.250	ppb	175.6	823.39	0.0197	Pulse	0.1000	3
Cu	63	72	He	0.097	ppb	21.0	400.02	0.0096	Pulse	0.1000	3
Zn	66	72	He	-0.085	ppb	N/A	120.00	0.0029	Pulse	0.1000	3
As	75	72	He	0.145	ppb	39.7	50.00	0.0012	Pulse	0.5000	3
Sr	88	115	He	0.340	ppb	12.9	206.68	0.0053	Pulse	0.1000	3
Mo	98	115	He	0.059	ppb	40.5	96.67	0.0025	Pulse	0.1000	3
Ag	107	115	He	0.010	ppb	75.2	40.00	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.010	ppb	174.3	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.001	ppb	8571.3	723.38	0.0185	Pulse	0.1000	3
Sb	121	115	He	0.112	ppb	25.1	123.34	0.0032	Pulse	0.1000	3
Ba	137	115	He	0.261	ppb	58.7	90.00	0.0023	Pulse	0.1000	3
Tl	205	209	He	0.094	ppb	28.7	536.70	0.0042	Pulse	0.1000	3
Pb	208	209	He	0.003	ppb	360.7	426.68	0.0034	Pulse	0.1000	3
U	238	209	He	0.022	ppb	16.1	203.34	0.0016	Pulse	0.1000	3

ISTD Table:

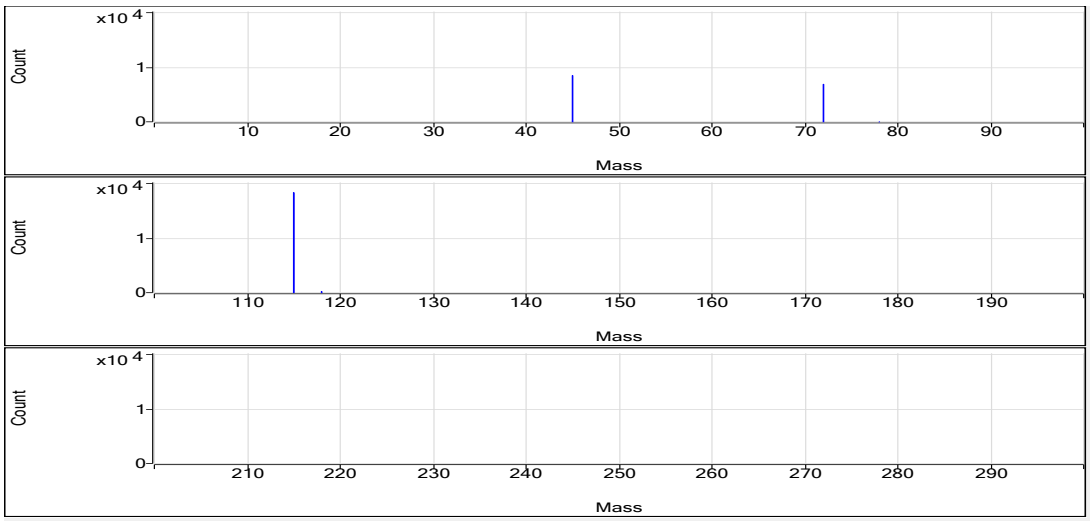
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1284636.00	1.7	96.3	Analog	0.1000	3
No Gas	Ge	72	676989.54	1.0	96.8	Pulse	0.1000	3
H2	Sc	45	85340.17	2.3	98.2	Pulse	0.1000	3
H2	Ge	72	69345.29	2.8	96.8	Pulse	0.1000	3
H2	In	115	184473.31	1.1	100.7	Pulse	0.1000	3
He	Sc	45	23142.34	1.1	100.6	Pulse	0.1000	3
He	Ge	72	41741.55	0.7	98.9	Pulse	0.1000	3
He	In	115	39007.33	1.4	100.2	Pulse	0.1000	3
He	Tb	159	173983.71	1.9	98.8	Pulse	0.1000	3
He	Bi	209	126564.17	0.8	98.7	Pulse	0.1000	3

No Gas

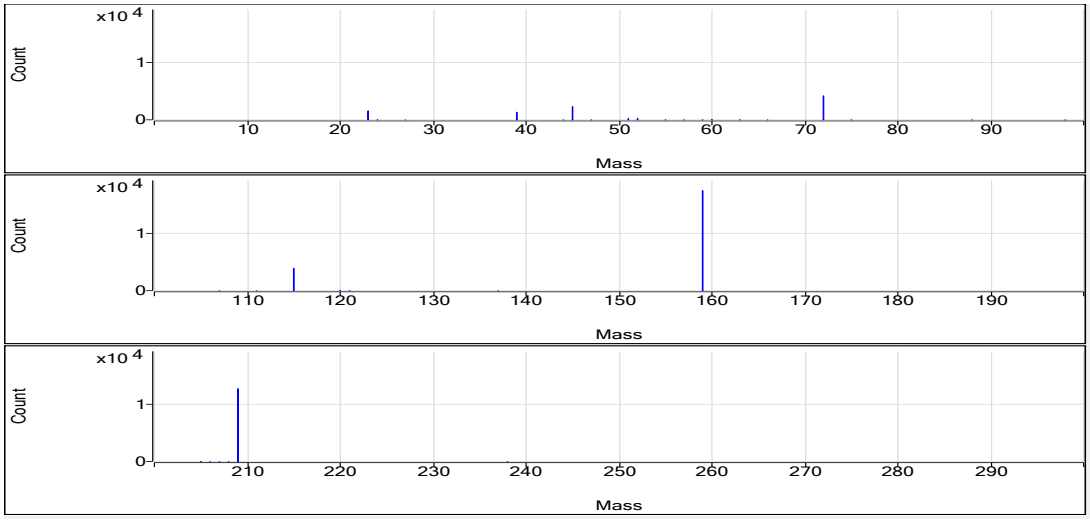


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.11	0.0001	94.00	0.0005	1.901E-05
Be	9	1	No Gas	0.062	0	62.00	0.0005	1.901E-05
Be	9	1	No Gas	0.064	0	64.00	0.0005	1.901E-05
Se	78	2	H2	0.107	0	5.33	0.0002	7.279E-06
Se	78	2	H2	0.051	0	3.33	0.0002	7.279E-06
Se	78	2	H2	0.053	0	3.33	0.0002	7.279E-06
Na	23	3	He	-14.986	0.6659	15528.72	0.0036	0.7194
Na	23	3	He	-14.987	0.6659	15488.57	0.0036	0.7194
Na	23	3	He	-6.103	0.6976	15939.04	0.0036	0.7194
Mg	24	3	He	6.407	0.0184	430.02	0.0018	0.006791
Mg	24	3	He	5.251	0.0163	380.02	0.0018	0.006791
Mg	24	3	He	7.579	0.0206	470.03	0.0018	0.006791
Al	27	3	He	-0.089	0.0026	60.00	0.0006	0.002622
Al	27	3	He	-0.849	0.0021	50.00	0.0006	0.002622
Al	27	3	He	0.792	0.0031	70.00	0.0006	0.002622
K	39	3	He	73.243	0.6513	15188.35	0.0013	0.5579
K	39	3	He	-4.367	0.5523	12846.12	0.0013	0.5579
K	39	3	He	-9.64	0.5456	12465.70	0.0013	0.5579
Ca	44	3	He	44.048	0.0073	170.01	0.0001	0.004062
Ca	44	3	He	-8.495	0.0034	80.00	0.0001	0.004062
Ca	44	3	He	22.211	0.0057	130.01	0.0001	0.004062
Ti	47	3	He	0.984	0.0009	20.00	0.0006	0.0002809
Ti	47	3	He	6.854	0.0043	100.00	0.0006	0.0002809
Ti	47	3	He	2.507	0.0018	40.00	0.0006	0.0002809
V	51	3	He	0.096	0.0211	492.01	0.0259	0.01861
V	51	3	He	0.088	0.0209	486.01	0.0259	0.01861
V	51	3	He	0.164	0.0228	522.01	0.0259	0.01861
Cr	52	3	He	0.372	0.1171	2730.36	0.0332	0.1047
Cr	52	3	He	-0.008	0.1045	2430.29	0.0332	0.1047
Cr	52	3	He	0.655	0.1265	2890.39	0.0332	0.1047
Mn	55	3	He	0.84	0.0167	390.02	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.502	0.012	280.01	0.0139	0.005074
Mn	55	3	He	0.518	0.0123	280.01	0.0139	0.005074
Fe	57	3	He	1.889	0.0073	170.01	0.0006	0.00609
Fe	57	3	He	3.271	0.0082	190.01	0.0006	0.00609
Fe	57	3	He	4.879	0.0092	210.01	0.0006	0.00609
Co	59	3	He	0.159	0.0167	390.02	0.0661	0.00621
Co	59	3	He	0.088	0.012	280.01	0.0661	0.00621
Co	59	3	He	0.045	0.0092	210.01	0.0661	0.00621
Ni	60	3	He	0.732	0.0245	1030.08	0.01	0.01721
Ni	60	3	He	-0.129	0.0159	660.04	0.01	0.01721
Ni	60	3	He	0.147	0.0187	780.04	0.01	0.01721
Cu	63	3	He	0.12	0.0102	430.02	0.0286	0.006793
Cu	63	3	He	0.091	0.0094	390.02	0.0286	0.006793
Cu	63	3	He	0.081	0.0091	380.02	0.0286	0.006793
Zn	66	3	He	-0.232	0.0024	100.00	0.0034	0.00316
Zn	66	3	He	-0.079	0.0029	120.00	0.0034	0.00316
Zn	66	3	He	0.057	0.0034	140.01	0.0034	0.00316
As	75	3	He	0.142	0.0012	50.00	0.0026	0.0008231
As	75	3	He	0.205	0.0014	56.00	0.0026	0.0008231
As	75	3	He	0.089	0.0011	44.00	0.0026	0.0008231
Sr	88	3	He	0.35	0.0054	210.01	0.0105	0.001715
Sr	88	3	He	0.379	0.0057	220.01	0.0105	0.001715
Sr	88	3	He	0.292	0.0048	190.01	0.0105	0.001715
Mo	98	3	He	0.034	0.0018	70.00	0.0275	0.0008555
Mo	98	3	He	0.082	0.0031	120.00	0.0275	0.0008555
Mo	98	3	He	0.061	0.0025	100.00	0.0275	0.0008555
Ag	107	3	He	0.019	0.0015	60.00	0.0591	0.0004305
Ag	107	3	He	0.006	0.0008	30.00	0.0591	0.0004305
Ag	107	3	He	0.006	0.0008	30.00	0.0591	0.0004305
Cd	111	3	He	0	0.0001	2.00	0.0066	5.141E-05
Cd	111	3	He	0.031	0.0003	10.00	0.0066	5.141E-05
Cd	111	3	He	0	0.0001	2.00	0.0066	5.141E-05
Sn	120	3	He	-0.136	0.016	620.04	0.0187	0.0185
Sn	120	3	He	0.023	0.0189	730.04	0.0187	0.0185
Sn	120	3	He	0.118	0.0207	820.06	0.0187	0.0185
Sb	121	3	He	0.136	0.0036	140.01	0.0183	0.00111
Sb	121	3	He	0.081	0.0026	100.00	0.0183	0.00111
Sb	121	3	He	0.119	0.0033	130.01	0.0183	0.00111
Ba	137	3	He	0.308	0.0026	100.00	0.0059	0.0007704
Ba	137	3	He	0.09	0.0013	50.00	0.0059	0.0007704
Ba	137	3	He	0.386	0.003	120.01	0.0059	0.0007704
Tl	205	3	He	0.112	0.0049	620.04	0.0364	0.000808
Tl	205	3	He	0.107	0.0047	600.04	0.0364	0.000808
Tl	205	3	He	0.063	0.0031	390.02	0.0364	0.000808
Pb	208	3	He	-0.005	0.003	140.01	0.0487	0.003226
Pb	208	3	He	-0.002	0.0031	200.01	0.0487	0.003226
Pb	208	3	He	0.015	0.004	320.02	0.0487	0.003226
U	238	3	He	0.019	0.0014	180.01	0.0535	0.0004157
U	238	3	He	0.026	0.0018	230.01	0.0535	0.0004157
U	238	3	He	0.022	0.0016	200.01	0.0535	0.0004157
Sc	45	1	No Gas			1304252.25		
Sc	45	1	No Gas			1261686.07		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1287969.67		
Ge	72	1	No Gas			682110.22		
Ge	72	1	No Gas			669390.30		
Ge	72	1	No Gas			679468.11		
Sc	45	2	H2			84475.74		
Sc	45	2	H2			87572.89		
Sc	45	2	H2			83971.89		
Ge	72	2	H2			67851.97		
Ge	72	2	H2			71498.56		
Ge	72	2	H2			68685.33		
In	115	2	H2			182535.56		
In	115	2	H2			186728.43		
In	115	2	H2			184155.93		
Sc	45	3	He			23319.21		
Sc	45	3	He			23259.12		
Sc	45	3	He			22848.68		
Ge	72	3	He			42022.42		
Ge	72	3	He			41440.46		
Ge	72	3	He			41761.78		
In	115	3	He			38875.46		
In	115	3	He			38554.07		
In	115	3	He			39607.66		
Tb	159	3	He			174087.42		
Tb	159	3	He			177177.65		
Tb	159	3	He			170686.07		
Bi	209	3	He			126619.22		
Bi	209	3	He			127496.28		
Bi	209	3	He			125577.02		

Quantitation Report

Data File Name	072SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
Acq Time	9/19/2023 9:14:23 AM
Sample Name	MB 410-420398/1-A
Sample Type	Sample
Comment	F6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

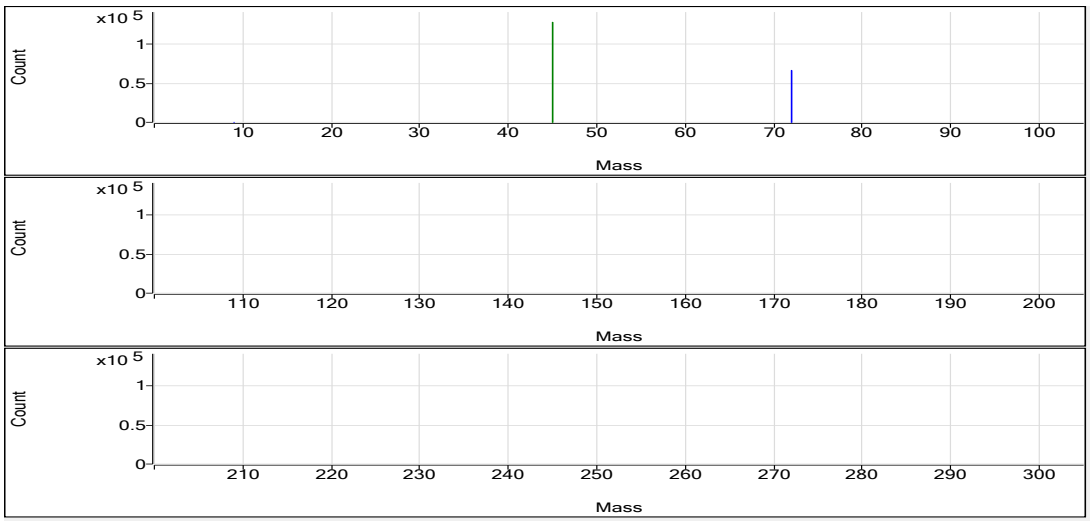
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.024	ppb	87.3	39.33	0.0000	Pulse	0.5000	3
Se	78	115	H2	-0.012	ppb	N/A	0.89	0.0000	Pulse	1.5000	3
Na	23	45	He	-19.544	ppb	N/A	15078.11	0.6497	Pulse	0.1000	3
Mg	24	45	He	4.145	ppb	21.0	333.35	0.0143	Pulse	0.1000	3
Al	27	45	He	3.005	ppb	139.1	100.00	0.0043	Pulse	0.1000	3
K	39	45	He	30.733	ppb	158.9	13883.85	0.5971	Pulse	0.1000	3
Ca	44	45	He	30.430	ppb	55.0	146.68	0.0063	Pulse	0.1000	3
Ti	47	45	He	0.497	ppb	82.5	13.33	0.0006	Pulse	0.1000	3
V	51	45	He	0.035	ppb	154.2	452.68	0.0195	Pulse	0.5000	3
Cr	52	45	He	-0.057	ppb	N/A	2390.28	0.1028	Pulse	0.1000	3
Mn	55	45	He	0.181	ppb	52.4	176.67	0.0076	Pulse	0.1000	3
Fe	57	45	He	2.183	ppb	96.8	173.34	0.0075	Pulse	0.1000	3
Co	59	45	He	0.000	ppb	N/A	143.34	0.0062	Pulse	0.1000	3
Ni	60	72	He	0.002	ppb	17448.7	713.38	0.0172	Pulse	0.1000	3
Cu	63	72	He	-0.039	ppb	N/A	233.34	0.0057	Pulse	0.1000	3
Zn	66	72	He	-0.170	ppb	N/A	106.67	0.0026	Pulse	0.1000	3
As	75	72	He	0.005	ppb	501.8	34.67	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.229	ppb	14.2	163.34	0.0041	Pulse	0.1000	3
Mo	98	115	He	0.018	ppb	156.5	53.33	0.0013	Pulse	0.1000	3
Ag	107	115	He	0.011	ppb	87.8	43.33	0.0011	Pulse	0.1000	3
Cd	111	115	He	-0.003	ppb	N/A	1.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.153	ppb	N/A	616.70	0.0156	Pulse	0.1000	3
Sb	121	115	He	0.013	ppb	399.9	53.33	0.0013	Pulse	0.1000	3
Ba	137	115	He	0.128	ppb	2.0	60.00	0.0015	Pulse	0.1000	3
Tl	205	209	He	0.013	ppb	10.0	163.34	0.0013	Pulse	0.1000	3
Pb	208	209	He	-0.005	ppb	N/A	386.68	0.0030	Pulse	0.1000	3
U	238	209	He	-0.002	ppb	N/A	36.67	0.0003	Pulse	0.1000	3

ISTD Table:

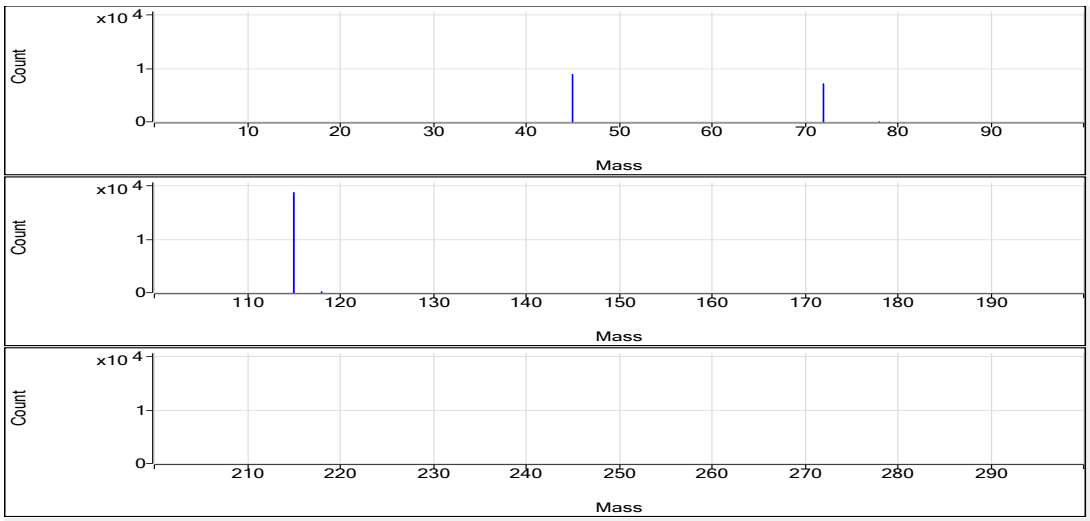
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1288708.00	0.4	96.6	Analog	0.1000	3
No Gas	Ge	72	668725.80	0.4	95.6	Pulse	0.1000	3
H2	Sc	45	88854.33	0.6	102.2	Pulse	0.1000	3
H2	Ge	72	71147.15	1.7	99.3	Pulse	0.1000	3
H2	In	115	187442.21	0.7	102.3	Pulse	0.1000	3
He	Sc	45	23225.77	2.9	101.0	Pulse	0.1000	3
He	Ge	72	41480.73	3.3	98.2	Pulse	0.1000	3
He	In	115	39492.50	1.0	101.4	Pulse	0.1000	3
He	Tb	159	174807.99	2.0	99.3	Pulse	0.1000	3
He	Bi	209	129101.66	1.0	100.7	Pulse	0.1000	3

No Gas

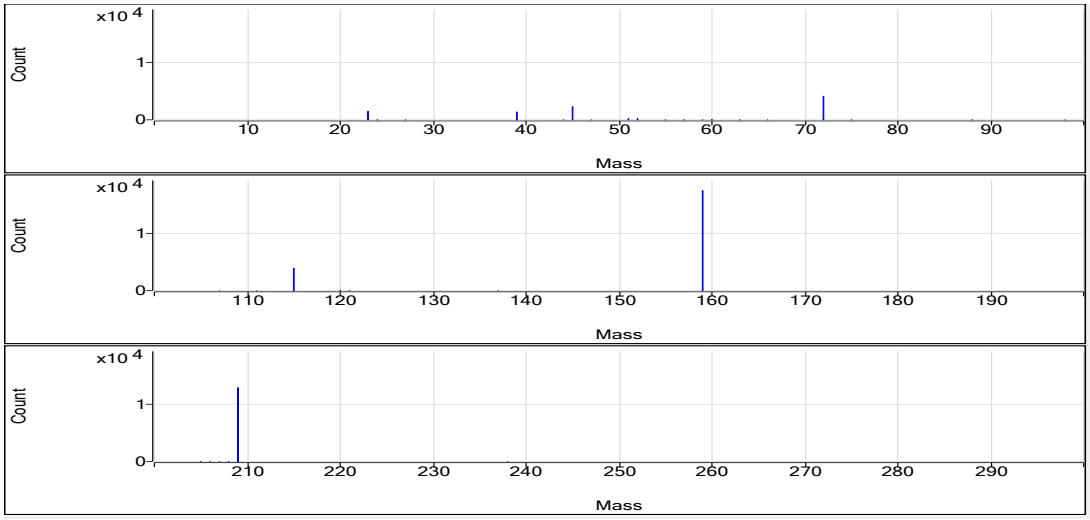


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.048	0	54.00	0.0005	1.901E-05
Be	9	1	No Gas	0.009	0	30.00	0.0005	1.901E-05
Be	9	1	No Gas	0.015	0	34.00	0.0005	1.901E-05
Se	78	2	H2	-0.018	0	0.67	0.0002	7.279E-06
Se	78	2	H2	-0.001	0	1.33	0.0002	7.279E-06
Se	78	2	H2	-0.018	0	0.67	0.0002	7.279E-06
Na	23	3	He	-22.889	0.6377	15108.03	0.0036	0.7194
Na	23	3	He	-24.131	0.6333	14908.01	0.0036	0.7194
Na	23	3	He	-11.613	0.6779	15218.30	0.0036	0.7194
Mg	24	3	He	5.088	0.016	380.02	0.0018	0.006791
Mg	24	3	He	3.976	0.014	330.02	0.0018	0.006791
Mg	24	3	He	3.371	0.0129	290.01	0.0018	0.006791
Al	27	3	He	7.42	0.0068	160.01	0.0006	0.002622
Al	27	3	He	-0.895	0.0021	50.00	0.0006	0.002622
Al	27	3	He	2.49	0.004	90.00	0.0006	0.002622
K	39	3	He	87.117	0.669	15849.13	0.0013	0.5579
K	39	3	He	1.139	0.5593	13166.42	0.0013	0.5579
K	39	3	He	3.945	0.5629	12636.01	0.0013	0.5579
Ca	44	3	He	36.732	0.0068	160.01	0.0001	0.004062
Ca	44	3	He	43.116	0.0072	170.01	0.0001	0.004062
Ca	44	3	He	11.442	0.0049	110.01	0.0001	0.004062
Ti	47	3	He	0.241	0.0004	10.00	0.0006	0.0002809
Ti	47	3	He	0.97	0.0008	20.00	0.0006	0.0002809
Ti	47	3	He	0.281	0.0004	10.00	0.0006	0.0002809
V	51	3	He	-0.021	0.0181	428.01	0.0259	0.01861
V	51	3	He	0.039	0.0196	462.01	0.0259	0.01861
V	51	3	He	0.087	0.0208	468.01	0.0259	0.01861
Cr	52	3	He	0.202	0.1115	2640.31	0.0332	0.1047
Cr	52	3	He	-0.211	0.0977	2300.28	0.0332	0.1047
Cr	52	3	He	-0.162	0.0994	2230.24	0.0332	0.1047
Mn	55	3	He	0.273	0.0089	210.01	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.186	0.0076	180.01	0.0139	0.005074
Mn	55	3	He	0.084	0.0062	140.00	0.0139	0.005074
Fe	57	3	He	3.037	0.008	190.01	0.0006	0.00609
Fe	57	3	He	-0.224	0.0059	140.01	0.0006	0.00609
Fe	57	3	He	3.736	0.0085	190.01	0.0006	0.00609
Co	59	3	He	-0.005	0.0059	140.01	0.0661	0.00621
Co	59	3	He	-0.004	0.0059	140.01	0.0661	0.00621
Co	59	3	He	0.007	0.0067	150.01	0.0661	0.00621
Ni	60	3	He	-0.362	0.0136	580.03	0.01	0.01721
Ni	60	3	He	0.312	0.0203	850.06	0.01	0.01721
Ni	60	3	He	0.055	0.0178	710.05	0.01	0.01721
Cu	63	3	He	-0.098	0.004	170.01	0.0286	0.006793
Cu	63	3	He	-0.062	0.005	210.01	0.0286	0.006793
Cu	63	3	He	0.042	0.008	320.01	0.0286	0.006793
Zn	66	3	He	-0.383	0.0019	80.00	0.0034	0.00316
Zn	66	3	He	-0.229	0.0024	100.00	0.0034	0.00316
Zn	66	3	He	0.102	0.0035	140.01	0.0034	0.00316
As	75	3	He	0.008	0.0008	36.00	0.0026	0.0008231
As	75	3	He	-0.022	0.0008	32.00	0.0026	0.0008231
As	75	3	He	0.03	0.0009	36.00	0.0026	0.0008231
Sr	88	3	He	0.222	0.0041	160.01	0.0105	0.001715
Sr	88	3	He	0.265	0.0045	180.01	0.0105	0.001715
Sr	88	3	He	0.201	0.0038	150.01	0.0105	0.001715
Mo	98	3	He	0.043	0.002	80.00	0.0275	0.0008555
Mo	98	3	He	0.024	0.0015	60.00	0.0275	0.0008555
Mo	98	3	He	-0.013	0.0005	20.00	0.0275	0.0008555
Ag	107	3	He	0.023	0.0018	70.00	0.0591	0.0004305
Ag	107	3	He	0.005	0.0008	30.00	0.0591	0.0004305
Ag	107	3	He	0.006	0.0008	30.00	0.0591	0.0004305
Cd	111	3	He	0	0.0001	2.00	0.0066	5.141E-05
Cd	111	3	He	0	0.0001	2.00	0.0066	5.141E-05
Cd	111	3	He	-0.008	0	0.00	0.0066	5.141E-05
Sn	120	3	He	-0.203	0.0147	580.03	0.0187	0.0185
Sn	120	3	He	-0.306	0.0128	510.03	0.0187	0.0185
Sn	120	3	He	0.05	0.0194	760.05	0.0187	0.0185
Sb	121	3	He	-0.047	0.0003	10.00	0.0183	0.00111
Sb	121	3	He	0.049	0.002	80.00	0.0183	0.00111
Sb	121	3	He	0.037	0.0018	70.00	0.0183	0.00111
Ba	137	3	He	0.128	0.0015	60.00	0.0059	0.0007704
Ba	137	3	He	0.125	0.0015	60.00	0.0059	0.0007704
Ba	137	3	He	0.13	0.0015	60.00	0.0059	0.0007704
Tl	205	3	He	0.012	0.0012	160.01	0.0364	0.000808
Tl	205	3	He	0.014	0.0013	170.01	0.0364	0.000808
Tl	205	3	He	0.012	0.0013	160.01	0.0364	0.000808
Pb	208	3	He	0.005	0.0035	210.01	0.0487	0.003226
Pb	208	3	He	-0.009	0.0028	200.01	0.0487	0.003226
Pb	208	3	He	-0.01	0.0027	170.01	0.0487	0.003226
U	238	3	He	-0.005	0.0002	20.00	0.0535	0.0004157
U	238	3	He	-0.002	0.0003	40.00	0.0535	0.0004157
U	238	3	He	0	0.0004	50.00	0.0535	0.0004157
Sc	45	1	No Gas			1285440.84		
Sc	45	1	No Gas			1294121.54		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1286561.62		
Ge	72	1	No Gas			667724.99		
Ge	72	1	No Gas			666434.76		
Ge	72	1	No Gas			672017.65		
Sc	45	2	H2			89082.71		
Sc	45	2	H2			88216.37		
Sc	45	2	H2			89263.91		
Ge	72	2	H2			69811.02		
Ge	72	2	H2			72202.13		
Ge	72	2	H2			71428.29		
In	115	2	H2			186245.09		
In	115	2	H2			188705.06		
In	115	2	H2			187376.48		
Sc	45	3	He			23689.90		
Sc	45	3	He			23539.68		
Sc	45	3	He			22447.72		
Ge	72	3	He			42644.16		
Ge	72	3	He			41821.85		
Ge	72	3	He			39976.18		
In	115	3	He			39466.49		
In	115	3	He			39908.33		
In	115	3	He			39115.62		
Tb	159	3	He			178890.49		
Tb	159	3	He			173136.81		
Tb	159	3	He			172396.66		
Bi	209	3	He			130323.82		
Bi	209	3	He			129173.24		
Bi	209	3	He			127807.91		

Quantitation Report

Data File Name	073SMPL.d
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Acq Time	9/19/2023 9:16:22 AM
Sample Name	LCS 410-420398/2-A
Sample Type	Sample
Comment	F6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

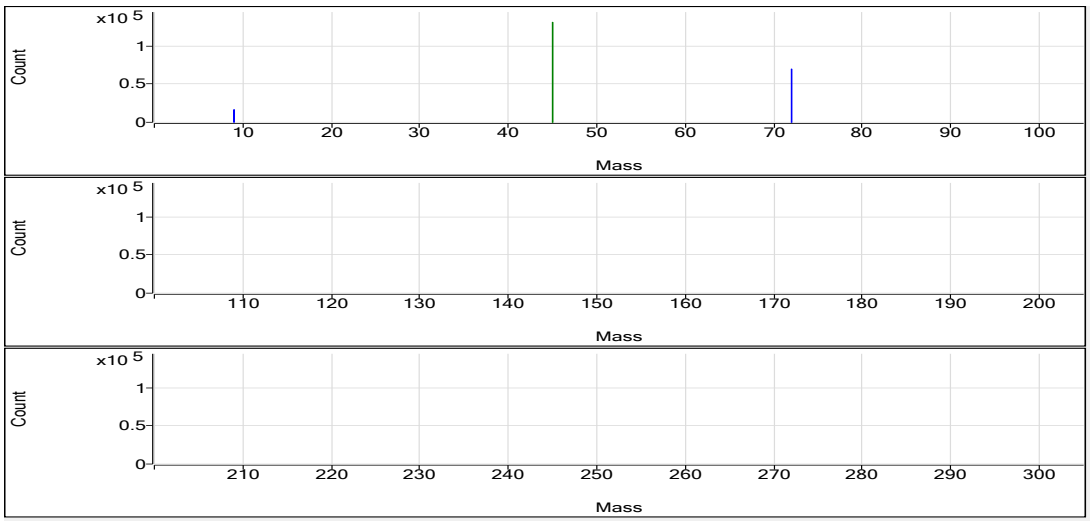
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	52.649	ppb	7.3	33451.39	0.0254	Pulse	0.5000	3
Se	78	115	H2	101.715	ppb	1.9	3980.34	0.0209	Pulse	1.5000	3
Na	23	45	He	5022.355	ppb	2.5	439612.06	18.6262	Pulse	0.1000	3
Mg	24	45	He	5079.948	ppb	2.9	218129.53	9.2428	Pulse	0.1000	3
Al	27	45	He	4925.192	ppb	4.1	64779.71	2.7454	Pulse	0.1000	3
K	39	45	He	5084.579	ppb	1.9	166293.14	7.0451	Pulse	0.1000	3
Ca	44	45	He	4953.221	ppb	5.3	8662.87	0.3671	Pulse	0.1000	3
Ti	47	45	He	504.708	ppb	7.4	6985.25	0.2962	Pulse	0.1000	3
V	51	45	He	502.687	ppb	2.6	307225.36	13.0173	Pulse	0.5000	3
Cr	52	45	He	501.367	ppb	3.4	395448.86	16.7574	Pulse	0.1000	3
Mn	55	45	He	506.357	ppb	2.1	165833.65	7.0260	Pulse	0.1000	3
Fe	57	45	He	5076.406	ppb	2.4	76288.35	3.2323	Pulse	0.1000	3
Co	59	45	He	498.011	ppb	2.4	777656.16	32.9493	Pulse	0.1000	3
Ni	60	72	He	492.068	ppb	1.8	219171.59	4.9290	Pulse	0.1000	3
Cu	63	72	He	495.239	ppb	0.9	630789.03	14.1859	Pulse	0.1000	3
Zn	66	72	He	503.569	ppb	1.3	75314.52	1.6937	Pulse	0.1000	3
As	75	72	He	495.409	ppb	1.4	56930.45	1.2803	Pulse	0.5000	3
Sr	88	115	He	49.996	ppb	0.9	21029.64	0.5288	Pulse	0.1000	3
Mo	98	115	He	50.184	ppb	3.7	54921.37	1.3813	Pulse	0.1000	3
Ag	107	115	He	49.519	ppb	1.7	116379.24	2.9267	Pulse	0.1000	3
Cd	111	115	He	48.293	ppb	1.4	12729.17	0.3201	Pulse	0.5000	3
Sn	120	115	He	100.357	ppb	1.6	75485.86	1.8983	Pulse	0.1000	3
Sb	121	115	He	98.870	ppb	1.7	71997.57	1.8106	Pulse	0.1000	3
Ba	137	115	He	493.943	ppb	1.2	115093.60	2.8942	Pulse	0.1000	3
Tl	205	209	He	99.821	ppb	0.3	470556.10	3.6304	Pulse	0.1000	3
Pb	208	209	He	50.386	ppb	0.5	318786.93	2.4595	Pulse	0.1000	3
U	238	209	He	50.056	ppb	0.6	347070.50	2.6778	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1315540.16	1.2	98.6	Analog	0.1000	3
No Gas	Ge	72	701172.98	0.9	100.2	Pulse	0.1000	3
H2	Sc	45	89749.30	0.8	103.2	Pulse	0.1000	3
H2	Ge	72	73636.46	1.2	102.8	Pulse	0.1000	3
H2	In	115	190365.26	0.5	103.9	Pulse	0.1000	3
He	Sc	45	23609.86	2.2	102.6	Pulse	0.1000	3
He	Ge	72	44466.73	0.3	105.3	Pulse	0.1000	3
He	In	115	39767.48	0.8	102.1	Pulse	0.1000	3
He	Tb	159	176277.00	0.6	100.1	Pulse	0.1000	3
He	Bi	209	129613.81	0.3	101.1	Pulse	0.1000	3

No Gas



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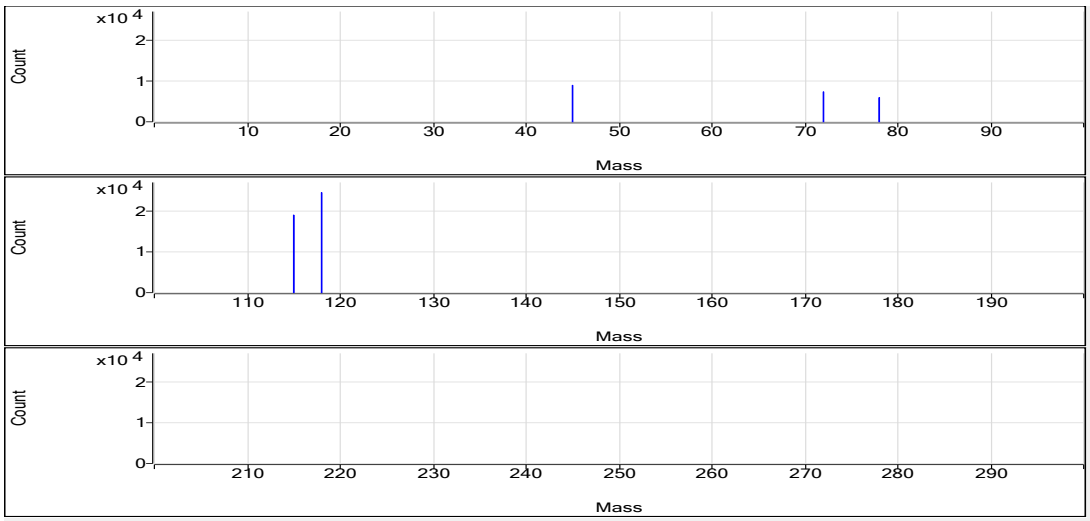
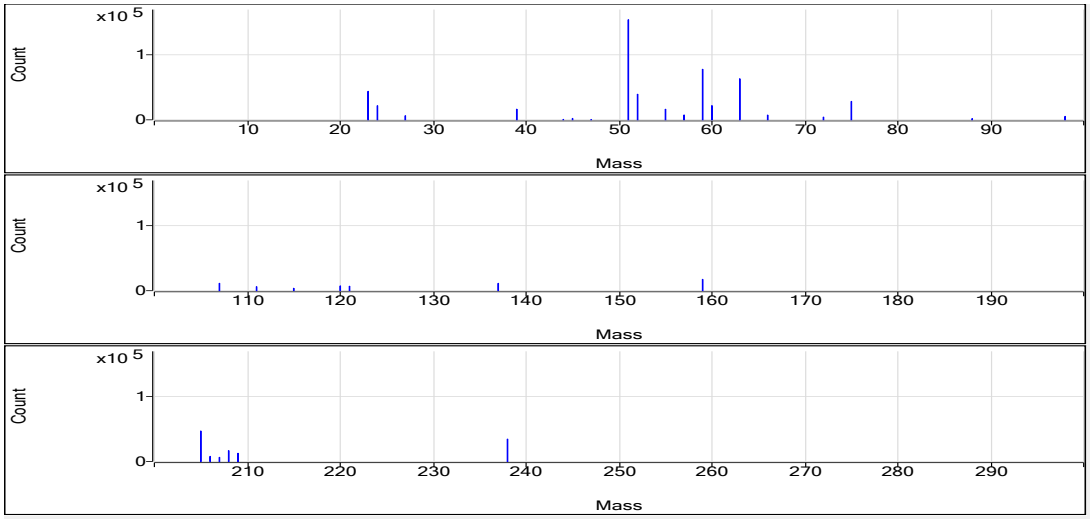


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	49.14	0.0237	30775.54	0.0005	1.901E-05
Be	9	1	No Gas	52.062	0.0251	33393.09	0.0005	1.901E-05
Be	9	1	No Gas	56.743	0.0274	36185.54	0.0005	1.901E-05
Se	78	2	H2	100.822	0.0207	3920.54	0.0002	7.279E-06
Se	78	2	H2	100.35	0.0206	3940.55	0.0002	7.279E-06
Se	78	2	H2	103.973	0.0214	4079.92	0.0002	7.279E-06
Na	23	3	He	4927.05	18.2864	438150.15	0.0036	0.7194
Na	23	3	He	5162.151	19.1247	440230.58	0.0036	0.7194
Na	23	3	He	4977.863	18.4676	440455.46	0.0036	0.7194
Mg	24	3	He	4977.143	9.0558	216981.72	0.0018	0.006791
Mg	24	3	He	5246.336	9.5453	219722.56	0.0018	0.006791
Mg	24	3	He	5016.366	9.1272	217684.31	0.0018	0.006791
Al	27	3	He	4800.023	2.6757	64110.17	0.0006	0.002622
Al	27	3	He	5156.354	2.8741	66159.03	0.0006	0.002622
Al	27	3	He	4819.199	2.6863	64069.92	0.0006	0.002622
K	39	3	He	5053.863	7.0059	167864.06	0.0013	0.5579
K	39	3	He	5194.394	7.1852	165395.88	0.0013	0.5579
K	39	3	He	5005.479	6.9442	165619.49	0.0013	0.5579
Ca	44	3	He	5014.211	0.3716	8903.11	0.0001	0.004062
Ca	44	3	He	5179.942	0.3837	8832.92	0.0001	0.004062
Ca	44	3	He	4665.509	0.346	8252.59	0.0001	0.004062
Ti	47	3	He	482.304	0.283	6781.88	0.0006	0.0002809
Ti	47	3	He	548.008	0.3216	7402.13	0.0006	0.0002809
Ti	47	3	He	483.81	0.2839	6771.74	0.0006	0.0002809
V	51	3	He	497.061	12.8718	308413.53	0.0259	0.01861
V	51	3	He	517.379	13.3972	308389.53	0.0259	0.01861
V	51	3	He	493.621	12.7828	304873.03	0.0259	0.01861
Cr	52	3	He	492.984	16.4789	394842.06	0.0332	0.1047
Cr	52	3	He	520.946	17.4077	400707.49	0.0332	0.1047
Cr	52	3	He	490.17	16.3855	390797.03	0.0332	0.1047
Mn	55	3	He	497.414	6.902	165375.08	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	518.153	7.1896	165496.81	0.0139	0.005074
Mn	55	3	He	503.506	6.9865	166629.06	0.0139	0.005074
Fe	57	3	He	5005.764	3.1874	76371.78	0.0006	0.00609
Fe	57	3	He	5215.051	3.3204	76432.84	0.0006	0.00609
Fe	57	3	He	5008.403	3.1891	76060.43	0.0006	0.00609
Co	59	3	He	490.744	32.4686	777960.54	0.0661	0.00621
Co	59	3	He	511.865	33.8657	779553.97	0.0661	0.00621
Co	59	3	He	491.424	32.5135	775453.97	0.0661	0.00621
Ni	60	3	He	490.676	4.9152	218230.86	0.01	0.01721
Ni	60	3	He	501.502	5.0232	222878.86	0.01	0.01721
Ni	60	3	He	484.025	4.8488	216405.04	0.01	0.01721
Cu	63	3	He	496.802	14.2306	631834.17	0.0286	0.006793
Cu	63	3	He	498.548	14.2806	633627.49	0.0286	0.006793
Cu	63	3	He	490.368	14.0464	626905.42	0.0286	0.006793
Zn	66	3	He	498.546	1.6769	74452.99	0.0034	0.00316
Zn	66	3	He	510.967	1.7186	76253.06	0.0034	0.00316
Zn	66	3	He	501.193	1.6858	75237.52	0.0034	0.00316
As	75	3	He	498.315	1.2878	57179.48	0.0026	0.0008231
As	75	3	He	500.595	1.2937	57402.32	0.0026	0.0008231
As	75	3	He	487.316	1.2594	56209.55	0.0026	0.0008231
Sr	88	3	He	49.999	0.5288	20886.12	0.0105	0.001715
Sr	88	3	He	49.564	0.5242	20815.95	0.0105	0.001715
Sr	88	3	He	50.425	0.5333	21386.85	0.0105	0.001715
Mo	98	3	He	51.387	1.4144	55861.65	0.0275	0.0008555
Mo	98	3	He	51.094	1.4064	55841.43	0.0275	0.0008555
Mo	98	3	He	48.07	1.3232	53061.03	0.0275	0.0008555
Ag	107	3	He	50.428	2.9805	117712.94	0.0591	0.0004305
Ag	107	3	He	49.399	2.9197	115930.39	0.0591	0.0004305
Ag	107	3	He	48.729	2.8801	115494.38	0.0591	0.0004305
Cd	111	3	He	48.29	0.3201	12641.76	0.0066	5.141E-05
Cd	111	3	He	48.968	0.3246	12887.97	0.0066	5.141E-05
Cd	111	3	He	47.62	0.3156	12657.79	0.0066	5.141E-05
Sn	120	3	He	102.166	1.9322	76309.98	0.0187	0.0185
Sn	120	3	He	99.29	1.8783	74580.87	0.0187	0.0185
Sn	120	3	He	99.616	1.8844	75566.72	0.0187	0.0185
Sb	121	3	He	100.728	1.8446	72852.28	0.0183	0.00111
Sb	121	3	He	98.308	1.8003	71484.83	0.0183	0.00111
Sb	121	3	He	97.573	1.7869	71655.59	0.0183	0.00111
Ba	137	3	He	491.795	2.8817	113809.64	0.0059	0.0007704
Ba	137	3	He	500.656	2.9336	116481.44	0.0059	0.0007704
Ba	137	3	He	489.377	2.8675	114989.71	0.0059	0.0007704
Tl	205	3	He	99.568	3.6212	468966.16	0.0364	0.000808
Tl	205	3	He	100.131	3.6417	473683.27	0.0364	0.000808
Tl	205	3	He	99.765	3.6284	469018.86	0.0364	0.000808
Pb	208	3	He	50.565	2.4682	169868.96	0.0487	0.003226
Pb	208	3	He	50.486	2.4644	171812.30	0.0487	0.003226
Pb	208	3	He	50.106	2.4459	167367.46	0.0487	0.003226
U	238	3	He	50.263	2.6889	348221.99	0.0535	0.0004157
U	238	3	He	49.7	2.6587	345824.99	0.0535	0.0004157
U	238	3	He	50.204	2.6857	347164.53	0.0535	0.0004157
Sc	45	1	No Gas			1297147.25		
Sc	45	1	No Gas			1328527.95		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1320945.29		
Ge	72	1	No Gas			694271.08		
Ge	72	1	No Gas			706077.18		
Ge	72	1	No Gas			703170.69		
Sc	45	2	H2			90359.57		
Sc	45	2	H2			89907.17		
Sc	45	2	H2			88981.15		
Ge	72	2	H2			74012.03		
Ge	72	2	H2			72654.60		
Ge	72	2	H2			74242.76		
In	115	2	H2			189170.99		
In	115	2	H2			191028.65		
In	115	2	H2			190896.13		
Sc	45	3	He			23960.41		
Sc	45	3	He			23019.00		
Sc	45	3	He			23850.18		
Ge	72	3	He			44399.55		
Ge	72	3	He			44369.71		
Ge	72	3	He			44630.93		
In	115	3	He			40028.75		
In	115	3	He			40228.67		
In	115	3	He			40630.23		
Tb	159	3	He			176782.40		
Tb	159	3	He			175061.85		
Tb	159	3	He			176986.74		
Bi	209	3	He			129504.88		
Bi	209	3	He			130072.09		
Bi	209	3	He			129264.45		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
Acq Time	9/19/2023 9:18:20 AM
Sample Name	410-142705-G-1-A
Sample Type	Sample
Comment	F6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

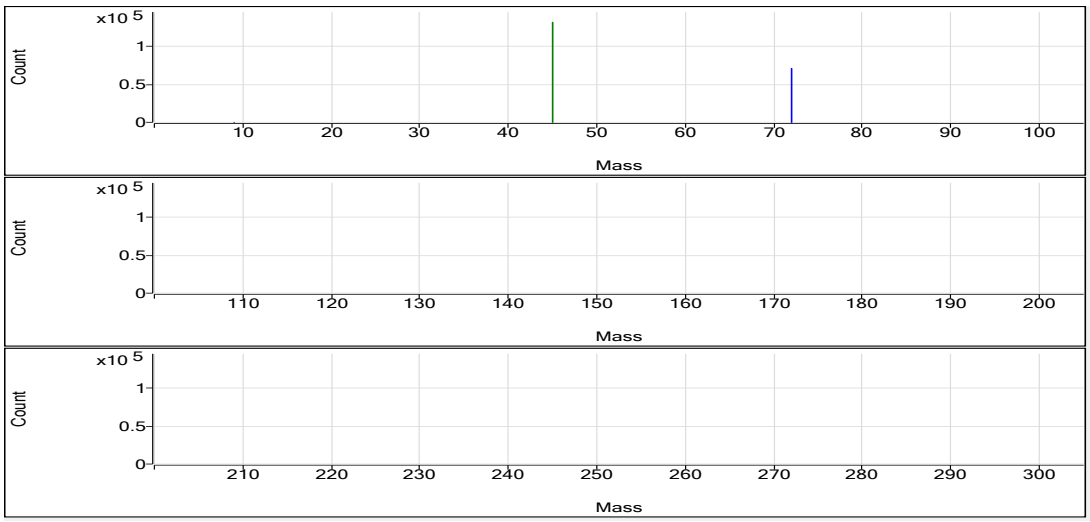
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.064	ppb	41.2	66.00	0.0000	Pulse	0.5000	3
Se	78	115	H2	0.092	ppb	61.3	4.89	0.0000	Pulse	1.5000	3
Na	23	45	He	4385.720	ppb	2.6	373977.09	16.3563	Pulse	0.1000	3
Mg	24	45	He	4762.788	ppb	2.8	198136.85	8.6661	Pulse	0.1000	3
Al	27	45	He	9.110	ppb	27.7	176.68	0.0077	Pulse	0.1000	3
K	39	45	He	606.685	ppb	8.0	30495.97	1.3319	Pulse	0.1000	3
Ca	44	45	He	37086.426	ppb	2.8	62247.10	2.7223	Pulse	0.1000	3
Ti	47	45	He	0.012	ppb	3477.9	6.67	0.0003	Pulse	0.1000	3
V	51	45	He	0.092	ppb	6.9	480.01	0.0210	Pulse	0.5000	3
Cr	52	45	He	0.326	ppb	74.8	2640.33	0.1156	Pulse	0.1000	3
Mn	55	45	He	255.426	ppb	3.5	81077.04	3.5467	Pulse	0.1000	3
Fe	57	45	He	64.476	ppb	12.2	1076.75	0.0471	Pulse	0.1000	3
Co	59	45	He	0.208	ppb	20.3	456.69	0.0200	Pulse	0.1000	3
Ni	60	72	He	-0.049	ppb	N/A	740.04	0.0167	Pulse	0.1000	3
Cu	63	72	He	0.096	ppb	30.6	423.35	0.0095	Pulse	0.1000	3
Zn	66	72	He	-0.115	ppb	N/A	123.34	0.0028	Pulse	0.1000	3
As	75	72	He	0.691	ppb	22.3	115.33	0.0026	Pulse	0.5000	3
Sr	88	115	He	41.023	ppb	3.8	17448.01	0.4342	Pulse	0.1000	3
Mo	98	115	He	0.153	ppb	24.0	203.34	0.0051	Pulse	0.1000	3
Ag	107	115	He	0.003	ppb	383.1	23.33	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.002	ppb	513.6	2.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.168	ppb	N/A	616.70	0.0153	Pulse	0.1000	3
Sb	121	115	He	0.112	ppb	49.4	126.67	0.0032	Pulse	0.1000	3
Ba	137	115	He	6.680	ppb	8.0	1603.48	0.0399	Pulse	0.1000	3
Tl	205	209	He	0.185	ppb	11.5	970.08	0.0075	Pulse	0.1000	3
Pb	208	209	He	0.005	ppb	370.4	450.02	0.0035	Pulse	0.1000	3
U	238	209	He	0.067	ppb	14.4	516.70	0.0040	Pulse	0.1000	3

ISTD Table:

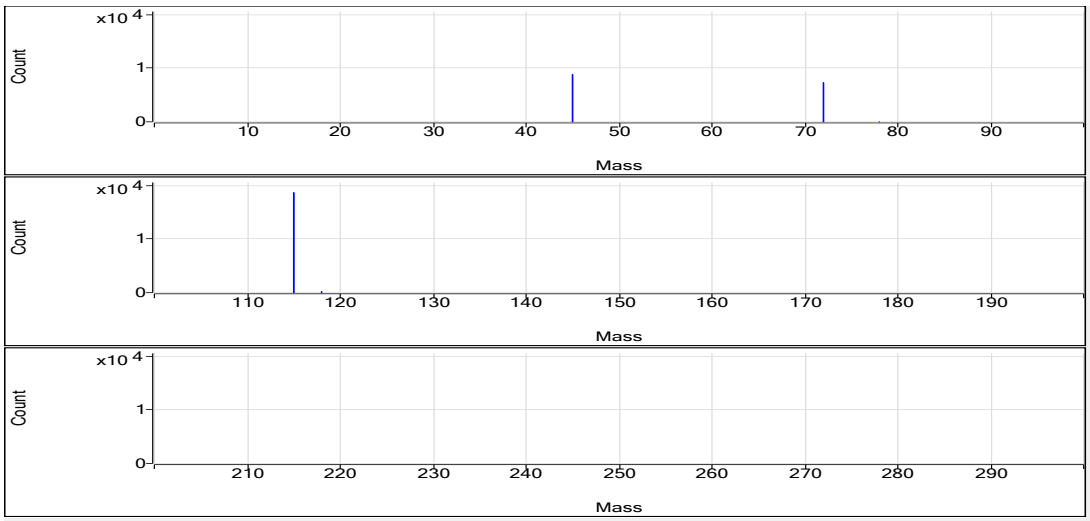
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1317580.61	1.5	98.7	Analog	0.1000	3
No Gas	Ge	72	710147.75	0.7	101.5	Pulse	0.1000	3
H2	Sc	45	88445.26	1.8	101.7	Pulse	0.1000	3
H2	Ge	72	73184.35	0.7	102.2	Pulse	0.1000	3
H2	In	115	186683.77	0.7	101.9	Pulse	0.1000	3
He	Sc	45	22875.28	3.0	99.4	Pulse	0.1000	3
He	Ge	72	44265.94	2.7	104.8	Pulse	0.1000	3
He	In	115	40187.94	0.7	103.2	Pulse	0.1000	3
He	Tb	159	178016.28	0.6	101.1	Pulse	0.1000	3
He	Bi	209	128653.69	1.4	100.3	Pulse	0.1000	3

No Gas

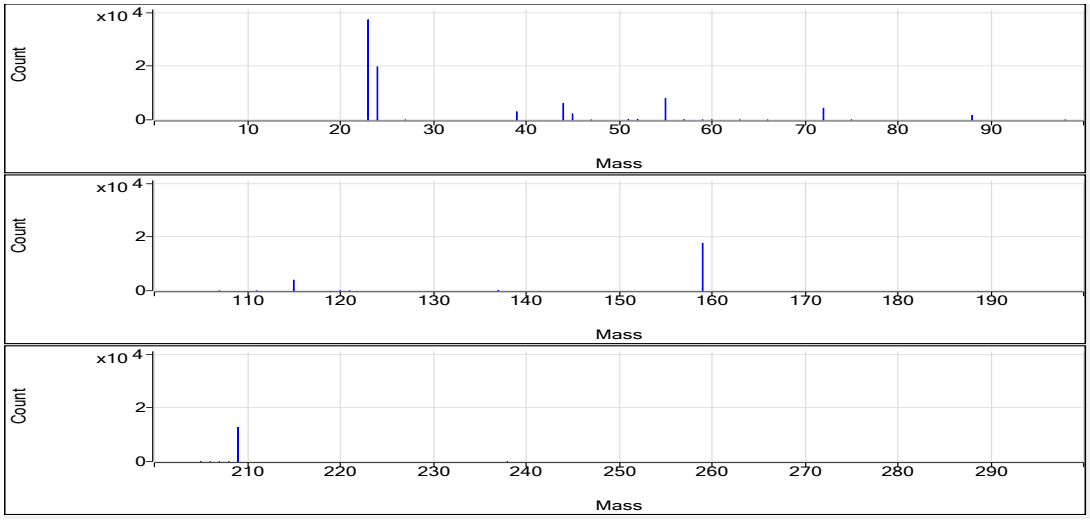


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.083	0.0001	78.00	0.0005	1.901E-05
Be	9	1	No Gas	0.075	0.0001	74.00	0.0005	1.901E-05
Be	9	1	No Gas	0.034	0	46.00	0.0005	1.901E-05
Se	78	2	H2	0.068	0	4.00	0.0002	7.279E-06
Se	78	2	H2	0.052	0	3.33	0.0002	7.279E-06
Se	78	2	H2	0.157	0	7.33	0.0002	7.279E-06
Na	23	3	He	4255.155	15.8908	375655.11	0.0036	0.7194
Na	23	3	He	4448.459	16.58	375675.50	0.0036	0.7194
Na	23	3	He	4453.547	16.5982	370600.66	0.0036	0.7194
Mg	24	3	He	4608.511	8.3856	198234.10	0.0018	0.006791
Mg	24	3	He	4860.483	8.8437	200384.16	0.0018	0.006791
Mg	24	3	He	4819.371	8.769	195792.28	0.0018	0.006791
Al	27	3	He	12.003	0.0093	220.01	0.0006	0.002622
Al	27	3	He	7.972	0.0071	160.01	0.0006	0.002622
Al	27	3	He	7.355	0.0067	150.01	0.0006	0.002622
K	39	3	He	658.8	1.3984	33058.10	0.0013	0.5579
K	39	3	He	598.465	1.3214	29941.43	0.0013	0.5579
K	39	3	He	562.789	1.2759	28488.37	0.0013	0.5579
Ca	44	3	He	36395.467	2.6716	63157.07	0.0001	0.004062
Ca	44	3	He	36602.02	2.6868	60878.01	0.0001	0.004062
Ca	44	3	He	38261.791	2.8084	62706.22	0.0001	0.004062
Ti	47	3	He	0.242	0.0004	10.00	0.0006	0.0002809
Ti	47	3	He	0.274	0.0004	10.00	0.0006	0.0002809
Ti	47	3	He	-0.479	0	0.00	0.0006	0.0002809
V	51	3	He	0.085	0.0208	492.01	0.0259	0.01861
V	51	3	He	0.093	0.021	476.01	0.0259	0.01861
V	51	3	He	0.098	0.0211	472.01	0.0259	0.01861
Cr	52	3	He	0.069	0.107	2530.32	0.0332	0.1047
Cr	52	3	He	0.355	0.1165	2640.32	0.0332	0.1047
Cr	52	3	He	0.555	0.1232	2750.36	0.0332	0.1047
Mn	55	3	He	245.054	3.4029	80443.66	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	260.71	3.62	82022.61	0.0139	0.005074
Mn	55	3	He	260.512	3.6172	80764.86	0.0139	0.005074
Fe	57	3	He	66.968	0.0487	1150.09	0.0006	0.00609
Fe	57	3	He	55.699	0.0415	940.06	0.0006	0.00609
Fe	57	3	He	70.761	0.0511	1140.09	0.0006	0.00609
Co	59	3	He	0.226	0.0212	500.03	0.0661	0.00621
Co	59	3	He	0.16	0.0168	380.02	0.0661	0.00621
Co	59	3	He	0.238	0.0219	490.03	0.0661	0.00621
Ni	60	3	He	-0.078	0.0164	750.04	0.01	0.01721
Ni	60	3	He	-0.181	0.0154	670.04	0.01	0.01721
Ni	60	3	He	0.112	0.0183	800.05	0.01	0.01721
Cu	63	3	He	0.13	0.0105	480.02	0.0286	0.006793
Cu	63	3	He	0.076	0.009	390.02	0.0286	0.006793
Cu	63	3	He	0.083	0.0092	400.02	0.0286	0.006793
Zn	66	3	He	0.103	0.0035	160.01	0.0034	0.00316
Zn	66	3	He	-0.051	0.003	130.01	0.0034	0.00316
Zn	66	3	He	-0.396	0.0018	80.00	0.0034	0.00316
As	75	3	He	0.597	0.0024	108.00	0.0026	0.0008231
As	75	3	He	0.607	0.0024	104.00	0.0026	0.0008231
As	75	3	He	0.87	0.0031	134.00	0.0026	0.0008231
Sr	88	3	He	41.224	0.4363	17651.68	0.0105	0.001715
Sr	88	3	He	42.473	0.4495	17931.79	0.0105	0.001715
Sr	88	3	He	39.37	0.4168	16760.56	0.0105	0.001715
Mo	98	3	He	0.194	0.0062	250.01	0.0275	0.0008555
Mo	98	3	He	0.142	0.0048	190.01	0.0275	0.0008555
Mo	98	3	He	0.123	0.0042	170.01	0.0275	0.0008555
Ag	107	3	He	-0.003	0.0002	10.00	0.0591	0.0004305
Ag	107	3	He	-0.003	0.0003	10.00	0.0591	0.0004305
Ag	107	3	He	0.014	0.0012	50.00	0.0591	0.0004305
Cd	111	3	He	0	0	2.00	0.0066	5.141E-05
Cd	111	3	He	-0.008	0	0.00	0.0066	5.141E-05
Cd	111	3	He	0.015	0.0001	6.00	0.0066	5.141E-05
Sn	120	3	He	-0.249	0.0138	560.03	0.0187	0.0185
Sn	120	3	He	-0.145	0.0158	630.04	0.0187	0.0185
Sn	120	3	He	-0.112	0.0164	660.04	0.0187	0.0185
Sb	121	3	He	0.061	0.0022	90.00	0.0183	0.00111
Sb	121	3	He	0.104	0.003	120.01	0.0183	0.00111
Sb	121	3	He	0.17	0.0042	170.01	0.0183	0.00111
Ba	137	3	He	6.958	0.0415	1680.16	0.0059	0.0007704
Ba	137	3	He	7.015	0.0419	1670.16	0.0059	0.0007704
Ba	137	3	He	6.067	0.0363	1460.13	0.0059	0.0007704
Tl	205	3	He	0.161	0.0067	870.07	0.0364	0.000808
Tl	205	3	He	0.2	0.0081	1030.08	0.0364	0.000808
Tl	205	3	He	0.196	0.0079	1010.08	0.0364	0.000808
Pb	208	3	He	0.028	0.0046	220.01	0.0487	0.003226
Pb	208	3	He	-0.002	0.0031	250.01	0.0487	0.003226
Pb	208	3	He	-0.01	0.0027	200.01	0.0487	0.003226
U	238	3	He	0.069	0.0041	540.03	0.0535	0.0004157
U	238	3	He	0.076	0.0045	570.04	0.0535	0.0004157
U	238	3	He	0.057	0.0034	440.02	0.0535	0.0004157
Sc	45	1	No Gas			1316755.45		
Sc	45	1	No Gas			1337592.48		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1298393.89		
Ge	72	1	No Gas			705752.02		
Ge	72	1	No Gas			709659.76		
Ge	72	1	No Gas			715031.47		
Sc	45	2	H2			86769.38		
Sc	45	2	H2			89947.28		
Sc	45	2	H2			88619.11		
Ge	72	2	H2			73057.57		
Ge	72	2	H2			72745.10		
Ge	72	2	H2			73750.39		
In	115	2	H2			188248.10		
In	115	2	H2			185960.02		
In	115	2	H2			185843.18		
Sc	45	3	He			23639.75		
Sc	45	3	He			22658.30		
Sc	45	3	He			22327.79		
Ge	72	3	He			45653.69		
Ge	72	3	He			43486.74		
Ge	72	3	He			43657.40		
In	115	3	He			40459.67		
In	115	3	He			39897.78		
In	115	3	He			40219.32		
Tb	159	3	He			179216.50		
Tb	159	3	He			177623.63		
Tb	159	3	He			177208.71		
Bi	209	3	He			130696.59		
Bi	209	3	He			127687.63		
Bi	209	3	He			127576.85		

Quantitation Report

Data File Name	075SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
Acq Time	9/19/2023 9:20:20 AM
Sample Name	410-142705-G-1-A PDS
Sample Type	Sample
Comment	F6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

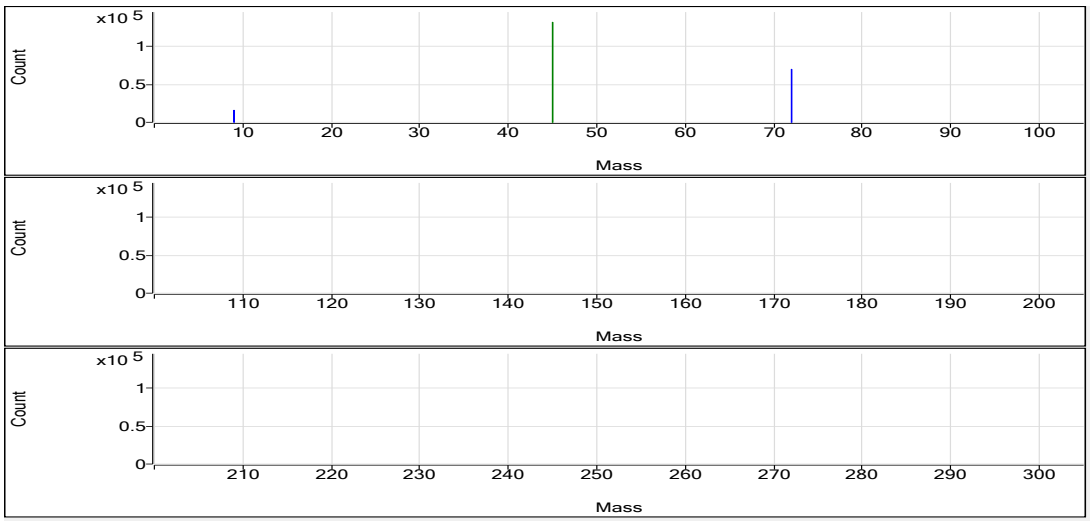
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.342	ppb	7.4	32207.37	0.0243	Pulse	0.5000	3
Se	78	115	H2	101.221	ppb	2.1	3938.99	0.0208	Pulse	1.5000	3
Na	23	45	He	9065.013	ppb	2.3	779242.07	33.0401	Pulse	0.1000	3
Mg	24	45	He	9325.755	ppb	1.8	400075.49	16.9622	Pulse	0.1000	3
Al	27	45	He	4917.554	ppb	2.5	64645.76	2.7411	Pulse	0.1000	3
K	39	45	He	5572.498	ppb	2.4	180879.59	7.6676	Pulse	0.1000	3
Ca	44	45	He	40313.376	ppb	2.0	69783.94	2.9588	Pulse	0.1000	3
Ti	47	45	He	512.889	ppb	1.9	7102.01	0.3010	Pulse	0.1000	3
V	51	45	He	496.323	ppb	1.9	303144.01	12.8527	Pulse	0.5000	3
Cr	52	45	He	488.086	ppb	1.8	384848.42	16.3163	Pulse	0.1000	3
Mn	55	45	He	734.129	ppb	1.9	240204.61	10.1842	Pulse	0.1000	3
Fe	57	45	He	4928.983	ppb	3.1	74013.24	3.1386	Pulse	0.1000	3
Co	59	45	He	481.137	ppb	2.2	750806.68	31.8331	Pulse	0.1000	3
Ni	60	72	He	487.467	ppb	1.4	212593.96	4.8831	Pulse	0.1000	3
Cu	63	72	He	486.191	ppb	1.6	606339.67	13.9268	Pulse	0.1000	3
Zn	66	72	He	496.061	ppb	2.2	72640.98	1.6685	Pulse	0.1000	3
As	75	72	He	501.287	ppb	1.5	56401.74	1.2955	Pulse	0.5000	3
Sr	88	115	He	89.280	ppb	2.9	37129.65	0.9430	Pulse	0.1000	3
Mo	98	115	He	49.753	ppb	2.5	53921.36	1.3695	Pulse	0.1000	3
Ag	107	115	He	45.180	ppb	3.4	105127.86	2.6703	Pulse	0.1000	3
Cd	111	115	He	48.326	ppb	1.7	12613.74	0.3203	Pulse	0.5000	3
Sn	120	115	He	100.225	ppb	3.6	74634.55	1.8958	Pulse	0.1000	3
Sb	121	115	He	95.754	ppb	4.2	69028.99	1.7536	Pulse	0.1000	3
Ba	137	115	He	493.184	ppb	2.5	113783.26	2.8898	Pulse	0.1000	3
Tl	205	209	He	100.850	ppb	2.1	470247.84	3.6678	Pulse	0.1000	3
Pb	208	209	He	50.258	ppb	1.0	314545.80	2.4533	Pulse	0.1000	3
U	238	209	He	49.931	ppb	1.1	342479.46	2.6711	Pulse	0.1000	3

ISTD Table:

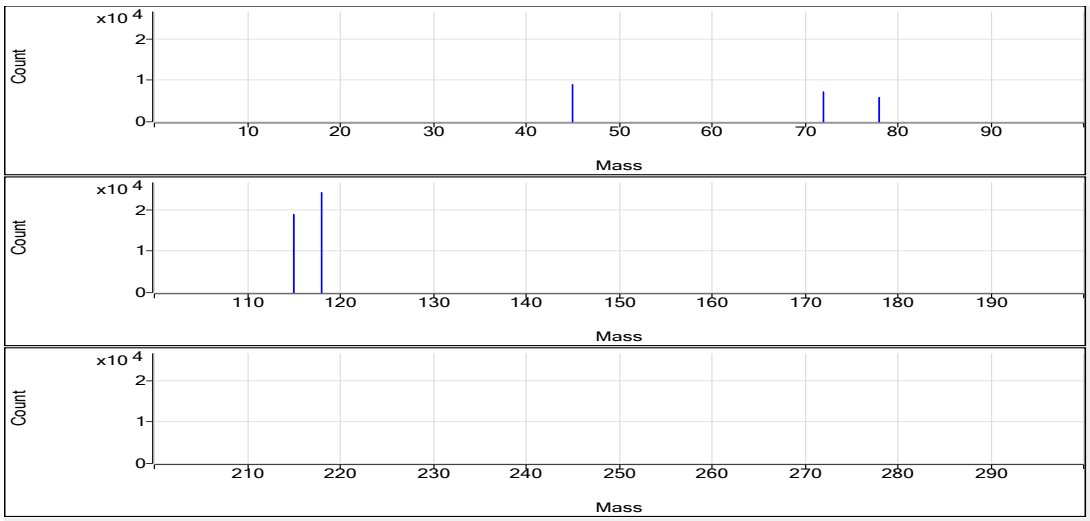
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1325204.93	0.8	99.3	Analog	0.1000	3
No Gas	Ge	72	702910.61	0.4	100.5	Pulse	0.1000	3
H2	Sc	45	90195.72	1.2	103.7	Pulse	0.1000	3
H2	Ge	72	72490.56	1.2	101.2	Pulse	0.1000	3
H2	In	115	189314.90	1.0	103.4	Pulse	0.1000	3
He	Sc	45	23593.15	2.5	102.6	Pulse	0.1000	3
He	Ge	72	43540.47	1.0	103.1	Pulse	0.1000	3
He	In	115	39385.72	1.9	101.2	Pulse	0.1000	3
He	Tb	159	177647.99	0.3	100.9	Pulse	0.1000	3
He	Bi	209	128226.22	1.3	100.0	Pulse	0.1000	3

No Gas

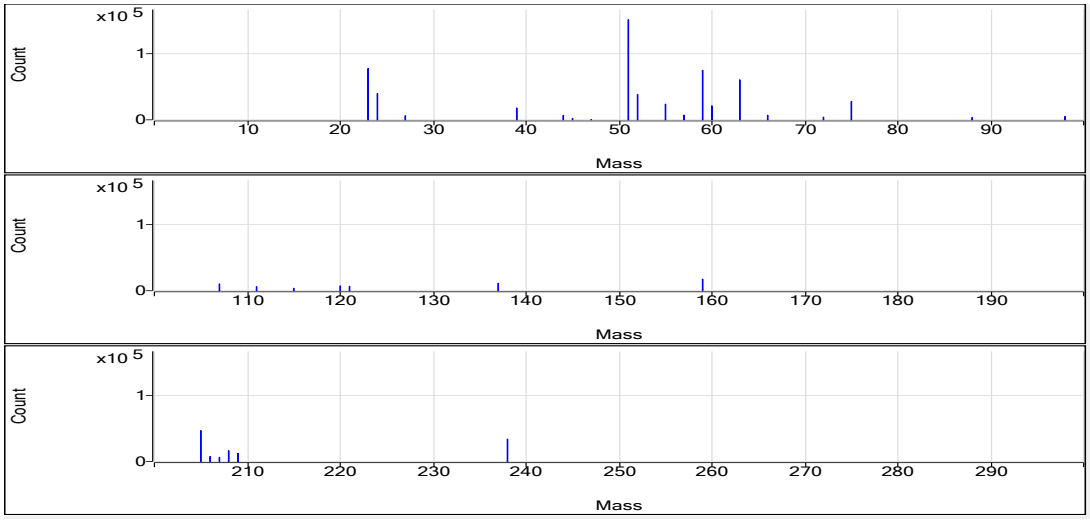


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	46.615	0.0225	29727.52	0.0005	1.901E-05
Be	9	1	No Gas	50.396	0.0243	32555.29	0.0005	1.901E-05
Be	9	1	No Gas	54.015	0.0261	34339.29	0.0005	1.901E-05
Se	78	2	H2	103.647	0.0213	4024.57	0.0002	7.279E-06
Se	78	2	H2	99.843	0.0205	3850.52	0.0002	7.279E-06
Se	78	2	H2	100.172	0.0206	3941.88	0.0002	7.279E-06
Na	23	3	He	8834.516	32.2182	781970.77	0.0036	0.7194
Na	23	3	He	9224.097	33.6073	782018.82	0.0036	0.7194
Na	23	3	He	9136.426	33.2947	773736.63	0.0036	0.7194
Mg	24	3	He	9137.52	16.6199	403383.00	0.0018	0.006791
Mg	24	3	He	9468.981	17.2226	400757.45	0.0018	0.006791
Mg	24	3	He	9370.765	17.044	396086.01	0.0018	0.006791
Al	27	3	He	4779.408	2.6642	64662.73	0.0006	0.002622
Al	27	3	He	5011.682	2.7935	65003.84	0.0006	0.002622
Al	27	3	He	4961.572	2.7656	64270.72	0.0006	0.002622
K	39	3	He	5515.263	7.5946	184328.34	0.0013	0.5579
K	39	3	He	5722.394	7.8588	182870.09	0.0013	0.5579
K	39	3	He	5479.838	7.5494	175440.33	0.0013	0.5579
Ca	44	3	He	39360.751	2.889	70118.75	0.0001	0.004062
Ca	44	3	He	40792.616	2.9939	69666.86	0.0001	0.004062
Ca	44	3	He	40786.761	2.9935	69566.20	0.0001	0.004062
Ti	47	3	He	518.308	0.3042	7382.13	0.0006	0.0002809
Ti	47	3	He	501.773	0.2945	6851.87	0.0006	0.0002809
Ti	47	3	He	518.586	0.3043	7072.03	0.0006	0.0002809
V	51	3	He	485.75	12.5793	305313.28	0.0259	0.01861
V	51	3	He	503.916	13.049	303642.72	0.0259	0.01861
V	51	3	He	499.304	12.9298	300476.03	0.0259	0.01861
Cr	52	3	He	478.785	16.0073	388515.31	0.0332	0.1047
Cr	52	3	He	496.535	16.5969	386198.78	0.0332	0.1047
Cr	52	3	He	488.937	16.3445	379831.17	0.0332	0.1047
Mn	55	3	He	718.496	9.9675	241920.58	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	744.885	10.3334	240450.35	0.0139	0.005074
Mn	55	3	He	739.006	10.2518	238242.89	0.0139	0.005074
Fe	57	3	He	4757.796	3.0298	73537.03	0.0006	0.00609
Fe	57	3	He	5049.387	3.2151	74814.16	0.0006	0.00609
Fe	57	3	He	4979.765	3.1709	73688.52	0.0006	0.00609
Co	59	3	He	470.476	31.1279	755506.16	0.0661	0.00621
Co	59	3	He	491.143	32.4949	756135.38	0.0661	0.00621
Co	59	3	He	481.793	31.8765	740778.50	0.0661	0.00621
Ni	60	3	He	495.281	4.9611	213752.56	0.01	0.01721
Ni	60	3	He	482.323	4.8318	212446.70	0.01	0.01721
Ni	60	3	He	484.796	4.8565	211582.61	0.01	0.01721
Cu	63	3	He	494.584	14.1672	610398.90	0.0286	0.006793
Cu	63	3	He	485.369	13.9033	611310.93	0.0286	0.006793
Cu	63	3	He	478.619	13.7101	597309.17	0.0286	0.006793
Zn	66	3	He	508.217	1.7094	73648.35	0.0034	0.00316
Zn	66	3	He	492.554	1.6568	72846.01	0.0034	0.00316
Zn	66	3	He	487.411	1.6395	71428.59	0.0034	0.00316
As	75	3	He	509.102	1.3157	56687.50	0.0026	0.0008231
As	75	3	He	494.626	1.2783	56205.68	0.0026	0.0008231
As	75	3	He	500.132	1.2925	56312.05	0.0026	0.0008231
Sr	88	3	He	89.3	0.9432	36538.20	0.0105	0.001715
Sr	88	3	He	91.818	0.9697	38001.94	0.0105	0.001715
Sr	88	3	He	86.723	0.916	36848.81	0.0105	0.001715
Mo	98	3	He	50.327	1.3852	53663.91	0.0275	0.0008555
Mo	98	3	He	50.588	1.3924	54567.21	0.0275	0.0008555
Mo	98	3	He	48.345	1.3307	53532.95	0.0275	0.0008555
Ag	107	3	He	46.704	2.7604	106937.47	0.0591	0.0004305
Ag	107	3	He	45.168	2.6697	104620.72	0.0591	0.0004305
Ag	107	3	He	43.666	2.5809	103825.38	0.0591	0.0004305
Cd	111	3	He	48.67	0.3226	12497.64	0.0066	5.141E-05
Cd	111	3	He	48.937	0.3244	12711.84	0.0066	5.141E-05
Cd	111	3	He	47.372	0.314	12631.74	0.0066	5.141E-05
Sn	120	3	He	102.665	1.9415	75213.95	0.0187	0.0185
Sn	120	3	He	101.889	1.927	75516.18	0.0187	0.0185
Sn	120	3	He	96.122	1.819	73173.52	0.0187	0.0185
Sb	121	3	He	99.19	1.8165	70369.97	0.0183	0.00111
Sb	121	3	He	96.734	1.7715	69424.06	0.0183	0.00111
Sb	121	3	He	91.339	1.6728	67292.93	0.0183	0.00111
Ba	137	3	He	498.445	2.9206	113143.85	0.0059	0.0007704
Ba	137	3	He	501.872	2.9407	115242.07	0.0059	0.0007704
Ba	137	3	He	479.233	2.8081	112963.87	0.0059	0.0007704
Tl	205	3	He	102.808	3.739	477616.20	0.0364	0.000808
Tl	205	3	He	98.676	3.5888	466834.37	0.0364	0.000808
Tl	205	3	He	101.066	3.6757	466292.96	0.0364	0.000808
Pb	208	3	He	50.318	2.4562	167092.20	0.0487	0.003226
Pb	208	3	He	49.752	2.4286	169200.02	0.0487	0.003226
Pb	208	3	He	50.704	2.475	166780.33	0.0487	0.003226
U	238	3	He	50.483	2.7006	344969.41	0.0535	0.0004157
U	238	3	He	49.364	2.6407	343511.40	0.0535	0.0004157
U	238	3	He	49.947	2.6719	338957.57	0.0535	0.0004157
Sc	45	1	No Gas			1320796.54		
Sc	45	1	No Gas			1337997.95		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1316820.29		
Ge	72	1	No Gas			705451.47		
Ge	72	1	No Gas			699802.26		
Ge	72	1	No Gas			703478.11		
Sc	45	2	H2			90188.84		
Sc	45	2	H2			89142.94		
Sc	45	2	H2			91255.39		
Ge	72	2	H2			73398.37		
Ge	72	2	H2			71679.85		
Ge	72	2	H2			72393.46		
In	115	2	H2			188898.47		
In	115	2	H2			187611.79		
In	115	2	H2			191434.43		
Sc	45	3	He			24271.06		
Sc	45	3	He			23269.34		
Sc	45	3	He			23239.05		
Ge	72	3	He			43085.49		
Ge	72	3	He			43968.69		
Ge	72	3	He			43567.23		
In	115	3	He			39266.36		
In	115	3	He			39717.52		
In	115	3	He			40740.60		
Tb	159	3	He			178241.70		
Tb	159	3	He			177400.45		
Tb	159	3	He			177301.81		
Bi	209	3	He			127738.05		
Bi	209	3	He			130081.56		
Bi	209	3	He			126859.05		

Quantitation Report

Data File Name	076SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
Acq Time	9/19/2023 9:22:19 AM
Sample Name	410-142705-G-1-A SD @5
Sample Type	Sample
Comment	F6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

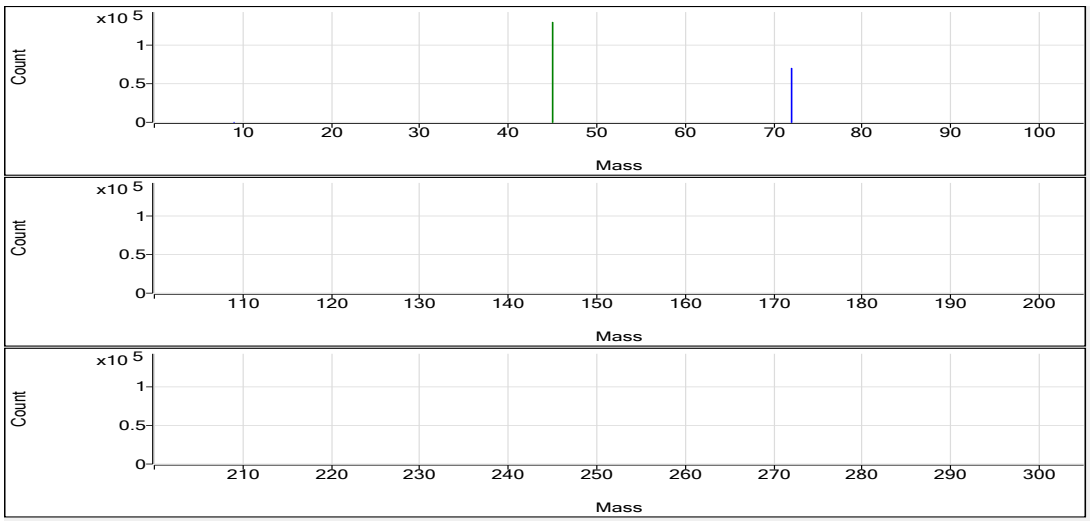
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.086	ppb	16.3	78.00	0.0001	Pulse	0.5000	3
Se	78	115	H2	0.093	ppb	21.1	4.89	0.0000	Pulse	1.5000	3
Na	23	45	He	799.827	ppb	0.6	83968.31	3.5711	Pulse	0.1000	3
Mg	24	45	He	900.463	ppb	1.9	38651.43	1.6439	Pulse	0.1000	3
Al	27	45	He	3.687	ppb	94.3	110.00	0.0047	Pulse	0.1000	3
K	39	45	He	122.378	ppb	39.1	16783.48	0.7140	Pulse	0.1000	3
Ca	44	45	He	7451.557	ppb	2.7	12936.19	0.5502	Pulse	0.1000	3
Ti	47	45	He	1.212	ppb	33.8	23.33	0.0010	Pulse	0.1000	3
V	51	45	He	0.075	ppb	60.4	483.34	0.0206	Pulse	0.5000	3
Cr	52	45	He	0.355	ppb	22.5	2740.37	0.1165	Pulse	0.1000	3
Mn	55	45	He	49.796	ppb	2.4	16353.05	0.6955	Pulse	0.1000	3
Fe	57	45	He	13.180	ppb	46.2	340.01	0.0145	Pulse	0.1000	3
Co	59	45	He	0.135	ppb	40.1	356.69	0.0152	Pulse	0.1000	3
Ni	60	72	He	0.167	ppb	75.6	823.39	0.0189	Pulse	0.1000	3
Cu	63	72	He	0.099	ppb	41.1	420.02	0.0096	Pulse	0.1000	3
Zn	66	72	He	-0.076	ppb	N/A	126.67	0.0029	Pulse	0.1000	3
As	75	72	He	0.437	ppb	35.0	85.33	0.0020	Pulse	0.5000	3
Sr	88	115	He	8.563	ppb	4.1	3670.60	0.0920	Pulse	0.1000	3
Mo	98	115	He	0.081	ppb	34.9	123.34	0.0031	Pulse	0.1000	3
Ag	107	115	He	0.012	ppb	69.6	46.67	0.0012	Pulse	0.1000	3
Cd	111	115	He	0.010	ppb	117.4	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.172	ppb	N/A	610.04	0.0153	Pulse	0.1000	3
Sb	121	115	He	0.258	ppb	31.6	233.35	0.0058	Pulse	0.1000	3
Ba	137	115	He	1.223	ppb	17.8	316.68	0.0079	Pulse	0.1000	3
Tl	205	209	He	0.409	ppb	7.4	2040.24	0.0157	Pulse	0.1000	3
Pb	208	209	He	0.005	ppb	321.7	450.02	0.0035	Pulse	0.1000	3
U	238	209	He	0.032	ppb	22.7	276.68	0.0021	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1292335.24	1.7	96.8	Analog	0.1000	3
No Gas	Ge	72	699032.78	0.6	99.9	Pulse	0.1000	3
H2	Sc	45	88267.31	2.4	101.5	Pulse	0.1000	3
H2	Ge	72	73398.45	0.6	102.5	Pulse	0.1000	3
H2	In	115	184818.67	0.8	100.9	Pulse	0.1000	3
He	Sc	45	23513.01	0.6	102.2	Pulse	0.1000	3
He	Ge	72	43557.02	2.8	103.2	Pulse	0.1000	3
He	In	115	39907.39	0.6	102.5	Pulse	0.1000	3
He	Tb	159	176615.10	1.0	100.3	Pulse	0.1000	3
He	Bi	209	130195.59	0.2	101.5	Pulse	0.1000	3

No Gas



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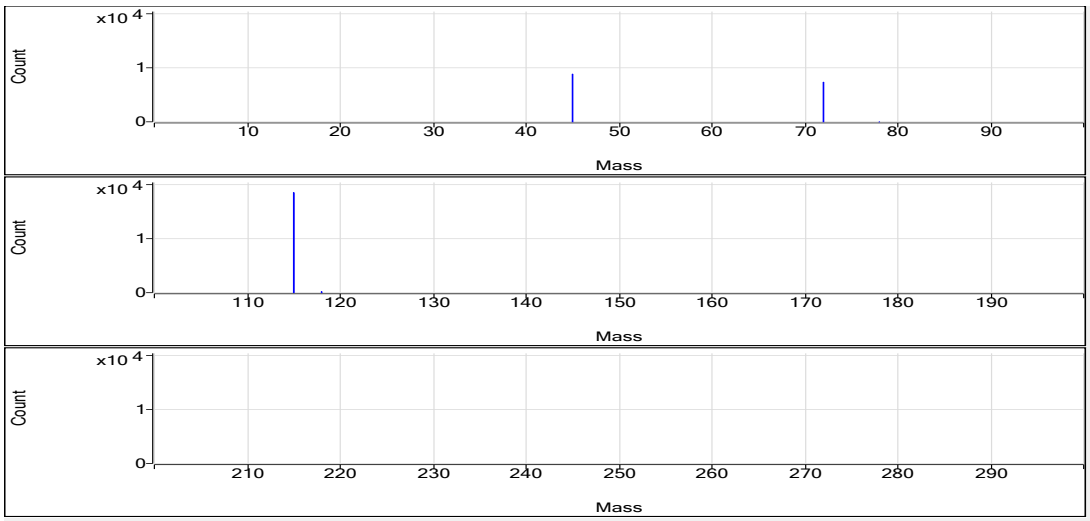
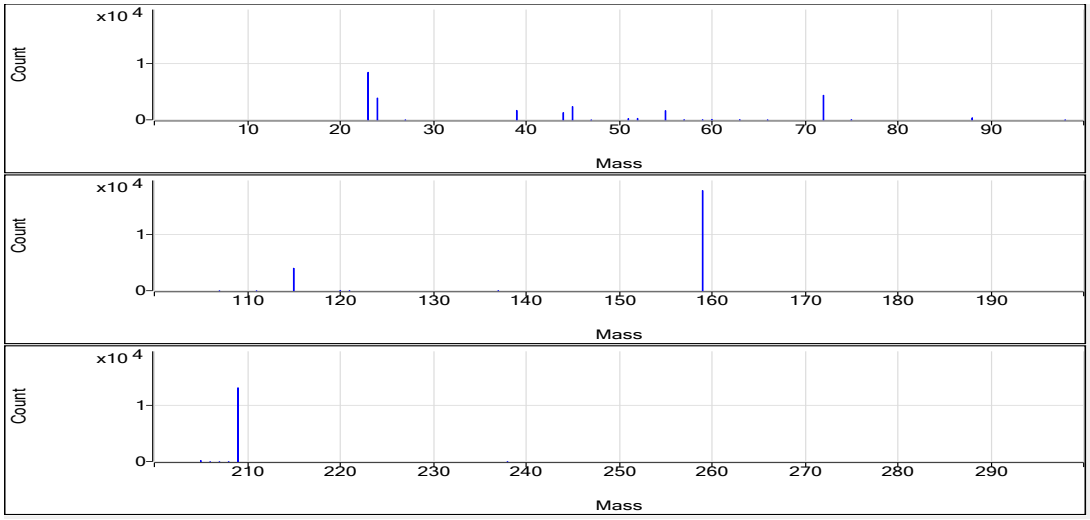


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.084	0.0001	78.00	0.0005	1.901E-05
Be	9	1	No Gas	0.101	0.0001	86.00	0.0005	1.901E-05
Be	9	1	No Gas	0.073	0.0001	70.00	0.0005	1.901E-05
Se	78	2	H2	0.104	0	5.33	0.0002	7.279E-06
Se	78	2	H2	0.105	0	5.33	0.0002	7.279E-06
Se	78	2	H2	0.07	0	4.00	0.0002	7.279E-06
Na	23	3	He	796.937	3.5608	83284.75	0.0036	0.7194
Na	23	3	He	796.811	3.5603	83666.48	0.0036	0.7194
Na	23	3	He	805.734	3.5921	84953.69	0.0036	0.7194
Mg	24	3	He	918.141	1.6761	39202.71	0.0018	0.006791
Mg	24	3	He	898.338	1.6401	38541.31	0.0018	0.006791
Mg	24	3	He	884.909	1.6157	38210.27	0.0018	0.006791
Al	27	3	He	4.504	0.0051	120.00	0.0006	0.002622
Al	27	3	He	-0.124	0.0026	60.00	0.0006	0.002622
Al	27	3	He	6.681	0.0063	150.01	0.0006	0.002622
K	39	3	He	174.708	0.7808	18261.99	0.0013	0.5579
K	39	3	He	111.726	0.7004	16459.69	0.0013	0.5579
K	39	3	He	80.701	0.6608	15628.76	0.0013	0.5579
Ca	44	3	He	7677.388	0.5668	13256.50	0.0001	0.004062
Ca	44	3	He	7367.931	0.5441	12785.94	0.0001	0.004062
Ca	44	3	He	7309.351	0.5398	12766.13	0.0001	0.004062
Ti	47	3	He	0.979	0.0009	20.00	0.0006	0.0002809
Ti	47	3	He	0.972	0.0009	20.00	0.0006	0.0002809
Ti	47	3	He	1.684	0.0013	30.00	0.0006	0.0002809
V	51	3	He	0.09	0.021	490.01	0.0259	0.01861
V	51	3	He	0.024	0.0192	452.01	0.0259	0.01861
V	51	3	He	0.111	0.0215	508.01	0.0259	0.01861
Cr	52	3	He	0.374	0.1172	2740.37	0.0332	0.1047
Cr	52	3	He	0.268	0.1136	2670.35	0.0332	0.1047
Cr	52	3	He	0.424	0.1188	2810.39	0.0332	0.1047
Mn	55	3	He	51.098	0.7136	16690.09	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	48.798	0.6817	16019.46	0.0139	0.005074
Mn	55	3	He	49.493	0.6913	16349.60	0.0139	0.005074
Fe	57	3	He	19.346	0.0184	430.02	0.0006	0.00609
Fe	57	3	He	7.157	0.0106	250.01	0.0006	0.00609
Fe	57	3	He	13.039	0.0144	340.01	0.0006	0.00609
Co	59	3	He	0.081	0.0115	270.01	0.0661	0.00621
Co	59	3	He	0.189	0.0187	440.03	0.0661	0.00621
Co	59	3	He	0.136	0.0152	360.02	0.0661	0.00621
Ni	60	3	He	0.264	0.0198	890.07	0.01	0.01721
Ni	60	3	He	0.024	0.0175	740.04	0.01	0.01721
Ni	60	3	He	0.214	0.0193	840.06	0.01	0.01721
Cu	63	3	He	0.098	0.0096	430.02	0.0286	0.006793
Cu	63	3	He	0.059	0.0085	360.02	0.0286	0.006793
Cu	63	3	He	0.141	0.0108	470.02	0.0286	0.006793
Zn	66	3	He	0.055	0.0033	150.01	0.0034	0.00316
Zn	66	3	He	-0.028	0.0031	130.01	0.0034	0.00316
Zn	66	3	He	-0.255	0.0023	100.00	0.0034	0.00316
As	75	3	He	0.614	0.0024	108.00	0.0026	0.0008231
As	75	3	He	0.357	0.0017	74.00	0.0026	0.0008231
As	75	3	He	0.341	0.0017	74.00	0.0026	0.0008231
Sr	88	3	He	8.193	0.0881	3540.58	0.0105	0.001715
Sr	88	3	He	8.901	0.0956	3800.62	0.0105	0.001715
Sr	88	3	He	8.596	0.0923	3670.61	0.0105	0.001715
Mo	98	3	He	0.05	0.0022	90.00	0.0275	0.0008555
Mo	98	3	He	0.106	0.0038	150.01	0.0275	0.0008555
Mo	98	3	He	0.088	0.0033	130.01	0.0275	0.0008555
Ag	107	3	He	0.022	0.0017	70.00	0.0591	0.0004305
Ag	107	3	He	0.005	0.0008	30.00	0.0591	0.0004305
Ag	107	3	He	0.01	0.001	40.00	0.0591	0.0004305
Cd	111	3	He	0.007	0.0001	4.00	0.0066	5.141E-05
Cd	111	3	He	0	0.0001	2.00	0.0066	5.141E-05
Cd	111	3	He	0.023	0.0002	8.00	0.0066	5.141E-05
Sn	120	3	He	-0.071	0.0172	690.04	0.0187	0.0185
Sn	120	3	He	-0.223	0.0143	570.03	0.0187	0.0185
Sn	120	3	He	-0.222	0.0143	570.04	0.0187	0.0185
Sb	121	3	He	0.347	0.0075	300.02	0.0183	0.00111
Sb	121	3	He	0.187	0.0045	180.01	0.0183	0.00111
Sb	121	3	He	0.242	0.0055	220.01	0.0183	0.00111
Ba	137	3	He	1.185	0.0077	310.01	0.0059	0.0007704
Ba	137	3	He	1.027	0.0068	270.01	0.0059	0.0007704
Ba	137	3	He	1.457	0.0093	370.02	0.0059	0.0007704
Tl	205	3	He	0.399	0.0153	1990.23	0.0364	0.000808
Tl	205	3	He	0.443	0.0169	2200.27	0.0364	0.000808
Tl	205	3	He	0.385	0.0148	1930.22	0.0364	0.000808
Pb	208	3	He	-0.006	0.0029	170.01	0.0487	0.003226
Pb	208	3	He	0.022	0.0043	260.01	0.0487	0.003226
Pb	208	3	He	-0.002	0.0031	180.01	0.0487	0.003226
U	238	3	He	0.031	0.0021	270.01	0.0535	0.0004157
U	238	3	He	0.04	0.0025	330.02	0.0535	0.0004157
U	238	3	He	0.025	0.0018	230.01	0.0535	0.0004157
Sc	45	1	No Gas			1315215.29		
Sc	45	1	No Gas			1271610.84		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1290179.59		
Ge	72	1	No Gas			702861.79		
Ge	72	1	No Gas			694705.07		
Ge	72	1	No Gas			699531.47		
Sc	45	2	H2			87382.71		
Sc	45	2	H2			90711.28		
Sc	45	2	H2			86707.95		
Ge	72	2	H2			72915.14		
Ge	72	2	H2			73680.82		
Ge	72	2	H2			73599.39		
In	115	2	H2			186478.10		
In	115	2	H2			184186.52		
In	115	2	H2			183791.38		
Sc	45	3	He			23389.48		
Sc	45	3	He			23499.66		
Sc	45	3	He			23649.88		
Ge	72	3	He			44841.12		
Ge	72	3	He			42403.51		
Ge	72	3	He			43426.44		
In	115	3	He			40199.25		
In	115	3	He			39778.24		
In	115	3	He			39757.48		
Tb	159	3	He			178739.67		
Tb	159	3	He			175336.77		
Tb	159	3	He			175768.85		
Bi	209	3	He			129969.85		
Bi	209	3	He			130162.70		
Bi	209	3	He			130454.21		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
Acq Time	9/19/2023 9:24:17 AM
Sample Name	410-142705-J-1-A DU
Sample Type	Sample
Comment	F6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

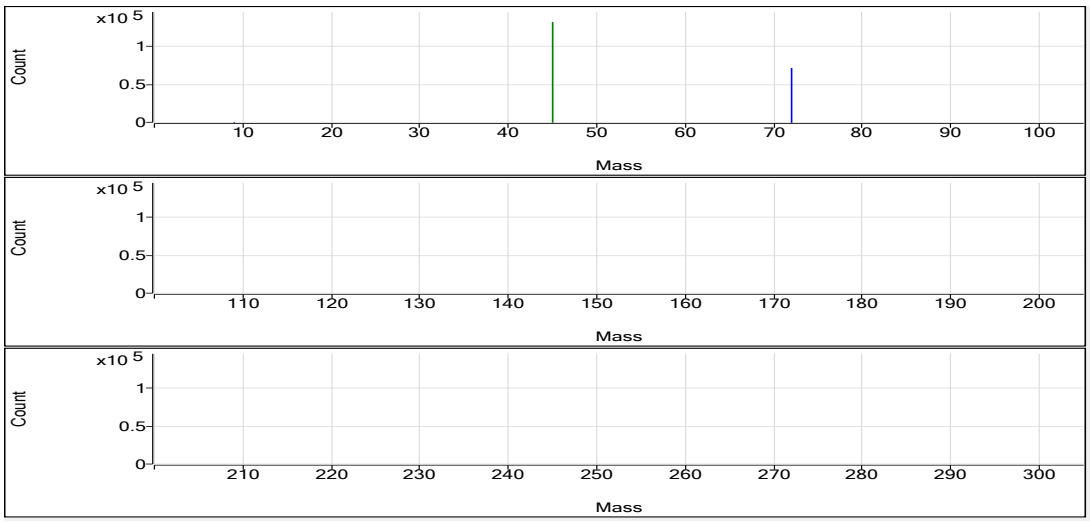
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.039	ppb	8.1	50.00	0.0000	Pulse	0.5000	3
Se	78	115	H2	0.016	ppb	184.4	2.00	0.0000	Pulse	1.5000	3
Na	23	45	He	4223.681	ppb	1.7	367050.36	15.7786	Pulse	0.1000	3
Mg	24	45	He	4582.488	ppb	2.1	193960.96	8.3383	Pulse	0.1000	3
Al	27	45	He	1.479	ppb	110.1	80.00	0.0034	Pulse	0.1000	3
K	39	45	He	586.336	ppb	5.3	30382.31	1.3060	Pulse	0.1000	3
Ca	44	45	He	36316.636	ppb	1.5	62015.73	2.6659	Pulse	0.1000	3
Ti	47	45	He	0.006	ppb	13678.6	6.67	0.0003	Pulse	0.1000	3
V	51	45	He	0.031	ppb	130.0	452.01	0.0194	Pulse	0.5000	3
Cr	52	45	He	0.152	ppb	145.1	2553.64	0.1098	Pulse	0.1000	3
Mn	55	45	He	244.197	ppb	0.4	78891.65	3.3910	Pulse	0.1000	3
Fe	57	45	He	54.995	ppb	31.5	956.73	0.0410	Pulse	0.1000	3
Co	59	45	He	0.106	ppb	52.9	306.68	0.0132	Pulse	0.1000	3
Ni	60	72	He	0.019	ppb	558.0	776.71	0.0174	Pulse	0.1000	3
Cu	63	72	He	0.043	ppb	118.6	356.68	0.0080	Pulse	0.1000	3
Zn	66	72	He	-0.247	ppb	N/A	103.34	0.0023	Pulse	0.1000	3
As	75	72	He	0.513	ppb	40.0	96.00	0.0021	Pulse	0.5000	3
Sr	88	115	He	39.858	ppb	0.7	16636.97	0.4219	Pulse	0.1000	3
Mo	98	115	He	0.098	ppb	65.2	140.00	0.0035	Pulse	0.1000	3
Ag	107	115	He	0.010	ppb	86.4	40.00	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.005	ppb	88.8	3.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.193	ppb	N/A	586.70	0.0149	Pulse	0.1000	3
Sb	121	115	He	0.073	ppb	48.6	96.67	0.0025	Pulse	0.1000	3
Ba	137	115	He	6.931	ppb	15.9	1630.16	0.0414	Pulse	0.1000	3
Tl	205	209	He	0.119	ppb	19.0	673.38	0.0052	Pulse	0.1000	3
Pb	208	209	He	0.002	ppb	488.2	433.35	0.0033	Pulse	0.1000	3
U	238	209	He	0.041	ppb	15.7	340.02	0.0026	Pulse	0.1000	3

ISTD Table:

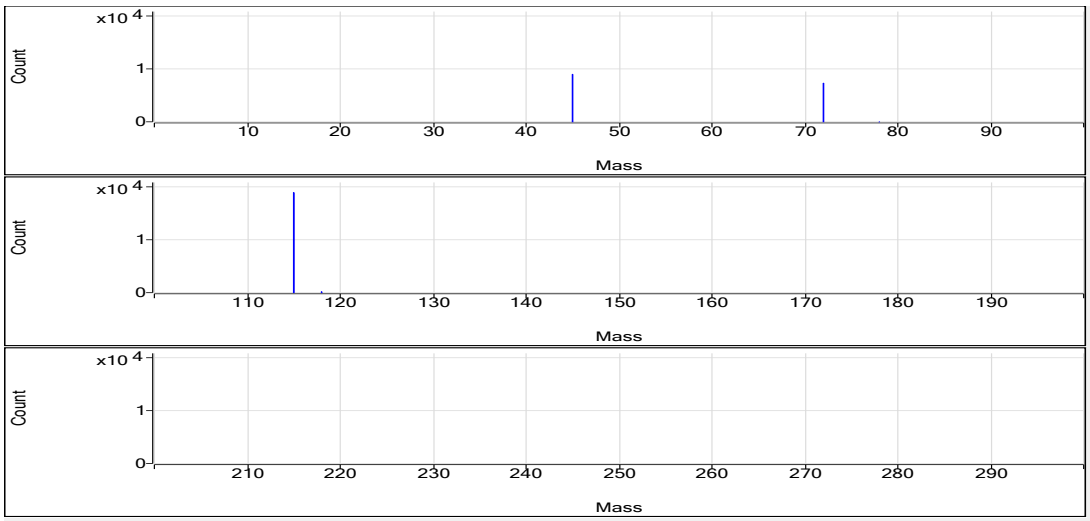
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1322069.85	1.0	99.1	Analog	0.1000	3
No Gas	Ge	72	712469.44	0.6	101.9	Pulse	0.1000	3
H2	Sc	45	89856.87	0.6	103.4	Pulse	0.1000	3
H2	Ge	72	73271.47	1.5	102.3	Pulse	0.1000	3
H2	In	115	189165.67	1.3	103.3	Pulse	0.1000	3
He	Sc	45	23265.84	1.4	101.1	Pulse	0.1000	3
He	Ge	72	44617.02	2.1	105.7	Pulse	0.1000	3
He	In	115	39432.28	0.8	101.3	Pulse	0.1000	3
He	Tb	159	178742.68	1.0	101.5	Pulse	0.1000	3
He	Bi	209	130710.22	0.3	101.9	Pulse	0.1000	3

No Gas

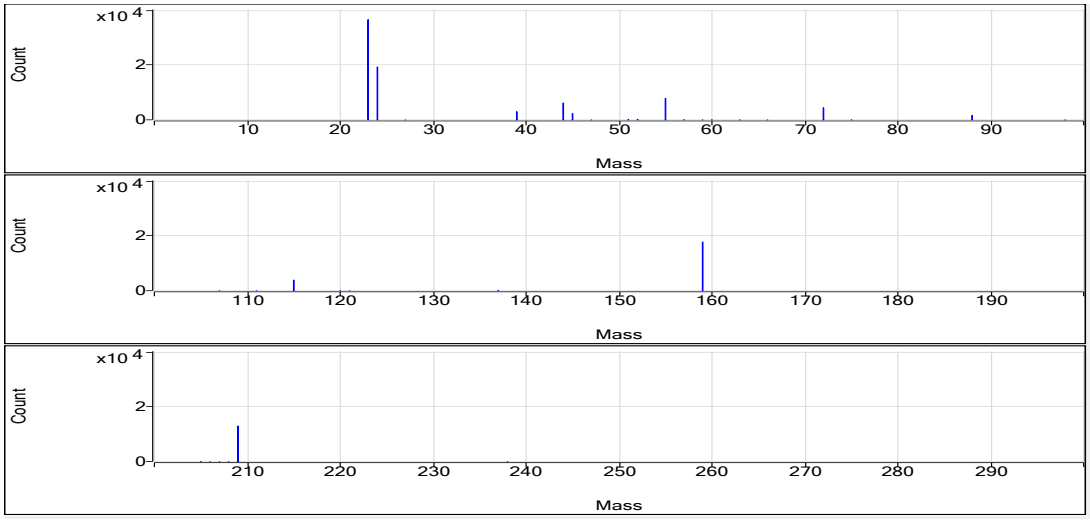


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.042	0	52.00	0.0005	1.901E-05
Be	9	1	No Gas	0.035	0	48.00	0.0005	1.901E-05
Be	9	1	No Gas	0.04	0	50.00	0.0005	1.901E-05
Se	78	2	H2	0.033	0	2.67	0.0002	7.279E-06
Se	78	2	H2	0.033	0	2.67	0.0002	7.279E-06
Se	78	2	H2	-0.018	0	0.67	0.0002	7.279E-06
Na	23	3	He	4221.653	15.7714	369514.53	0.0036	0.7194
Na	23	3	He	4151.331	15.5206	364416.56	0.0036	0.7194
Na	23	3	He	4298.058	16.0438	367219.99	0.0036	0.7194
Mg	24	3	He	4514.789	8.2152	192478.20	0.0018	0.006791
Mg	24	3	He	4541.473	8.2637	194028.32	0.0018	0.006791
Mg	24	3	He	4691.202	8.536	195376.36	0.0018	0.006791
Al	27	3	He	1.422	0.0034	80.00	0.0006	0.002622
Al	27	3	He	-0.12	0.0026	60.00	0.0006	0.002622
Al	27	3	He	3.136	0.0044	100.00	0.0006	0.002622
K	39	3	He	614.327	1.3417	31434.60	0.0013	0.5579
K	39	3	He	553.212	1.2637	29670.93	0.0013	0.5579
K	39	3	He	591.468	1.3125	30041.41	0.0013	0.5579
Ca	44	3	He	36313.362	2.6656	62454.20	0.0001	0.004062
Ca	44	3	He	35769.098	2.6257	61650.93	0.0001	0.004062
Ca	44	3	He	36867.448	2.7062	61942.06	0.0001	0.004062
Ti	47	3	He	0.977	0.0009	20.00	0.0006	0.0002809
Ti	47	3	He	-0.479	0	0.00	0.0006	0.0002809
Ti	47	3	He	-0.479	0	0.00	0.0006	0.0002809
V	51	3	He	0.066	0.0203	476.01	0.0259	0.01861
V	51	3	He	0.041	0.0197	462.01	0.0259	0.01861
V	51	3	He	-0.013	0.0183	418.01	0.0259	0.01861
Cr	52	3	He	0.304	0.1148	2690.34	0.0332	0.1047
Cr	52	3	He	-0.101	0.1014	2380.28	0.0332	0.1047
Cr	52	3	He	0.254	0.1132	2590.31	0.0332	0.1047
Mn	55	3	He	244.16	3.3905	79437.56	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	243.148	3.3765	79277.60	0.0139	0.005074
Mn	55	3	He	245.282	3.4061	77959.80	0.0139	0.005074
Fe	57	3	He	73.029	0.0525	1230.10	0.0006	0.00609
Fe	57	3	He	53.415	0.04	940.06	0.0006	0.00609
Fe	57	3	He	38.541	0.0306	700.04	0.0006	0.00609
Co	59	3	He	0.042	0.009	210.01	0.0661	0.00621
Co	59	3	He	0.144	0.0158	370.02	0.0661	0.00621
Co	59	3	He	0.131	0.0149	340.02	0.0661	0.00621
Ni	60	3	He	-0.072	0.0165	720.05	0.01	0.01721
Ni	60	3	He	0.139	0.0186	830.05	0.01	0.01721
Ni	60	3	He	-0.008	0.0171	780.04	0.01	0.01721
Cu	63	3	He	0.099	0.0096	420.02	0.0286	0.006793
Cu	63	3	He	0.029	0.0076	340.01	0.0286	0.006793
Cu	63	3	He	0	0.0068	310.02	0.0286	0.006793
Zn	66	3	He	0.218	0.0039	170.01	0.0034	0.00316
Zn	66	3	He	-0.608	0.0011	50.00	0.0034	0.00316
Zn	66	3	He	-0.353	0.002	90.00	0.0034	0.00316
As	75	3	He	0.337	0.0017	74.00	0.0026	0.0008231
As	75	3	He	0.739	0.0027	122.00	0.0026	0.0008231
As	75	3	He	0.463	0.002	92.00	0.0026	0.0008231
Sr	88	3	He	39.848	0.4218	16730.38	0.0105	0.001715
Sr	88	3	He	39.6	0.4192	16580.37	0.0105	0.001715
Sr	88	3	He	40.128	0.4248	16600.16	0.0105	0.001715
Mo	98	3	He	0.171	0.0055	220.01	0.0275	0.0008555
Mo	98	3	He	0.07	0.0028	110.00	0.0275	0.0008555
Mo	98	3	He	0.053	0.0023	90.00	0.0275	0.0008555
Ag	107	3	He	0.01	0.001	40.00	0.0591	0.0004305
Ag	107	3	He	0.018	0.0015	60.00	0.0591	0.0004305
Ag	107	3	He	0.001	0.0005	20.00	0.0591	0.0004305
Cd	111	3	He	0.007	0.0001	4.00	0.0066	5.141E-05
Cd	111	3	He	0	0.0001	2.00	0.0066	5.141E-05
Cd	111	3	He	0.008	0.0001	4.00	0.0066	5.141E-05
Sn	120	3	He	-0.221	0.0144	570.03	0.0187	0.0185
Sn	120	3	He	-0.232	0.0142	560.04	0.0187	0.0185
Sn	120	3	He	-0.127	0.0161	630.04	0.0187	0.0185
Sb	121	3	He	0.077	0.0025	100.00	0.0183	0.00111
Sb	121	3	He	0.036	0.0018	70.00	0.0183	0.00111
Sb	121	3	He	0.107	0.0031	120.01	0.0183	0.00111
Ba	137	3	He	5.765	0.0345	1370.11	0.0059	0.0007704
Ba	137	3	He	7.077	0.0422	1670.19	0.0059	0.0007704
Ba	137	3	He	7.95	0.0473	1850.19	0.0059	0.0007704
Tl	205	3	He	0.146	0.0061	800.05	0.0364	0.000808
Tl	205	3	He	0.106	0.0047	610.04	0.0364	0.000808
Tl	205	3	He	0.106	0.0047	610.04	0.0364	0.000808
Pb	208	3	He	0.012	0.0038	250.01	0.0487	0.003226
Pb	208	3	He	-0.003	0.0031	170.01	0.0487	0.003226
Pb	208	3	He	-0.003	0.0031	140.01	0.0487	0.003226
U	238	3	He	0.048	0.003	390.02	0.0535	0.0004157
U	238	3	He	0.035	0.0023	300.01	0.0535	0.0004157
U	238	3	He	0.039	0.0025	330.02	0.0535	0.0004157
Sc	45	1	No Gas			1331088.57		
Sc	45	1	No Gas			1328907.95		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1306213.03		
Ge	72	1	No Gas			714510.22		
Ge	72	1	No Gas			715098.27		
Ge	72	1	No Gas			707799.83		
Sc	45	2	H2			90260.44		
Sc	45	2	H2			90007.31		
Sc	45	2	H2			89302.86		
Ge	72	2	H2			74483.99		
Ge	72	2	H2			72856.56		
Ge	72	2	H2			72473.87		
In	115	2	H2			189711.07		
In	115	2	H2			191228.71		
In	115	2	H2			186557.24		
Sc	45	3	He			23429.44		
Sc	45	3	He			23479.47		
Sc	45	3	He			22888.60		
Ge	72	3	He			43667.14		
Ge	72	3	He			44640.62		
Ge	72	3	He			45543.30		
In	115	3	He			39666.91		
In	115	3	He			39556.73		
In	115	3	He			39085.52		
Tb	159	3	He			180807.67		
Tb	159	3	He			177746.09		
Tb	159	3	He			177674.27		
Bi	209	3	He			131151.55		
Bi	209	3	He			130343.46		
Bi	209	3	He			130635.64		

Quantitation Report

Data File Name	078SMPL.d
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Acq Time	9/19/2023 9:26:18 AM
Sample Name	410-142705-H-1-A MS
Sample Type	Sample
Comment	F6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

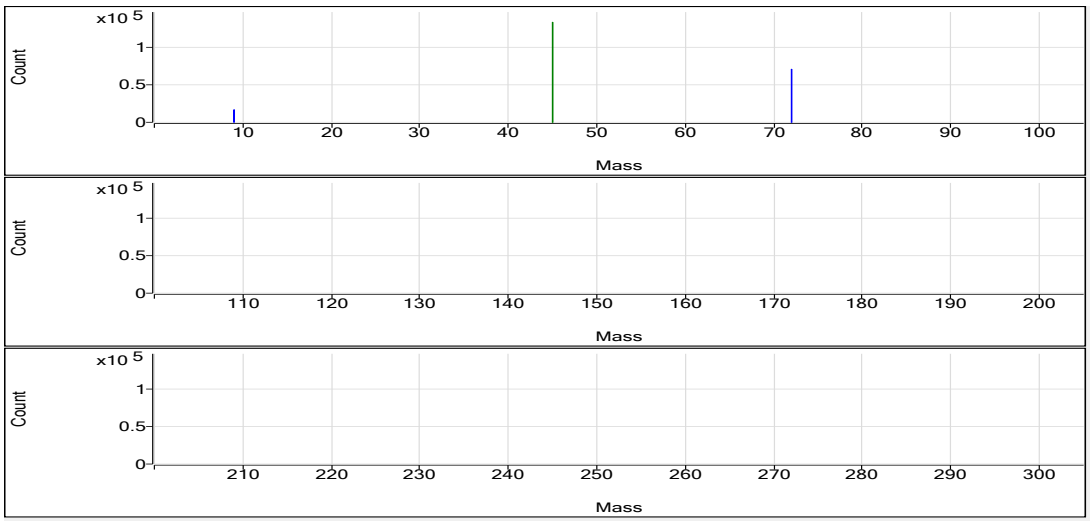
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	52.143	ppb	4.4	33844.15	0.0252	Pulse	0.5000	3
Se	78	115	H2	100.814	ppb	1.1	4001.46	0.0207	Pulse	1.5000	3
Na	23	45	He	9393.546	ppb	2.3	814615.54	34.2114	Pulse	0.1000	3
Mg	24	45	He	9453.201	ppb	2.4	409396.79	17.1939	Pulse	0.1000	3
Al	27	45	He	4899.190	ppb	3.1	65017.28	2.7309	Pulse	0.1000	3
K	39	45	He	5577.578	ppb	2.0	182743.42	7.6741	Pulse	0.1000	3
Ca	44	45	He	40927.414	ppb	2.4	71525.60	3.0038	Pulse	0.1000	3
Ti	47	45	He	497.842	ppb	3.5	6955.23	0.2922	Pulse	0.1000	3
V	51	45	He	500.619	ppb	1.8	308707.63	12.9638	Pulse	0.5000	3
Cr	52	45	He	496.736	ppb	1.5	395403.65	16.6036	Pulse	0.1000	3
Mn	55	45	He	738.532	ppb	1.7	243975.10	10.2453	Pulse	0.1000	3
Fe	57	45	He	5046.452	ppb	1.7	76525.68	3.2133	Pulse	0.1000	3
Co	59	45	He	485.399	ppb	1.8	764757.04	32.1150	Pulse	0.1000	3
Ni	60	72	He	483.255	ppb	1.7	217461.12	4.8411	Pulse	0.1000	3
Cu	63	72	He	481.982	ppb	2.7	620070.06	13.8064	Pulse	0.1000	3
Zn	66	72	He	489.995	ppb	4.8	73990.90	1.6482	Pulse	0.1000	3
As	75	72	He	498.752	ppb	1.9	57899.77	1.2890	Pulse	0.5000	3
Sr	88	115	He	93.633	ppb	2.0	38998.11	0.9888	Pulse	0.1000	3
Mo	98	115	He	49.810	ppb	1.7	54061.21	1.3710	Pulse	0.1000	3
Ag	107	115	He	49.432	ppb	2.2	115195.50	2.9216	Pulse	0.1000	3
Cd	111	115	He	49.946	ppb	3.7	13052.13	0.3311	Pulse	0.5000	3
Sn	120	115	He	100.304	ppb	0.7	74818.62	1.8973	Pulse	0.1000	3
Sb	121	115	He	100.082	ppb	0.6	72272.13	1.8328	Pulse	0.1000	3
Ba	137	115	He	503.336	ppb	1.2	116294.06	2.9493	Pulse	0.1000	3
Tl	205	209	He	100.379	ppb	1.7	472972.08	3.6507	Pulse	0.1000	3
Pb	208	209	He	50.630	ppb	0.4	320186.03	2.4714	Pulse	0.1000	3
U	238	209	He	50.209	ppb	0.7	347984.45	2.6860	Pulse	0.1000	3

ISTD Table:

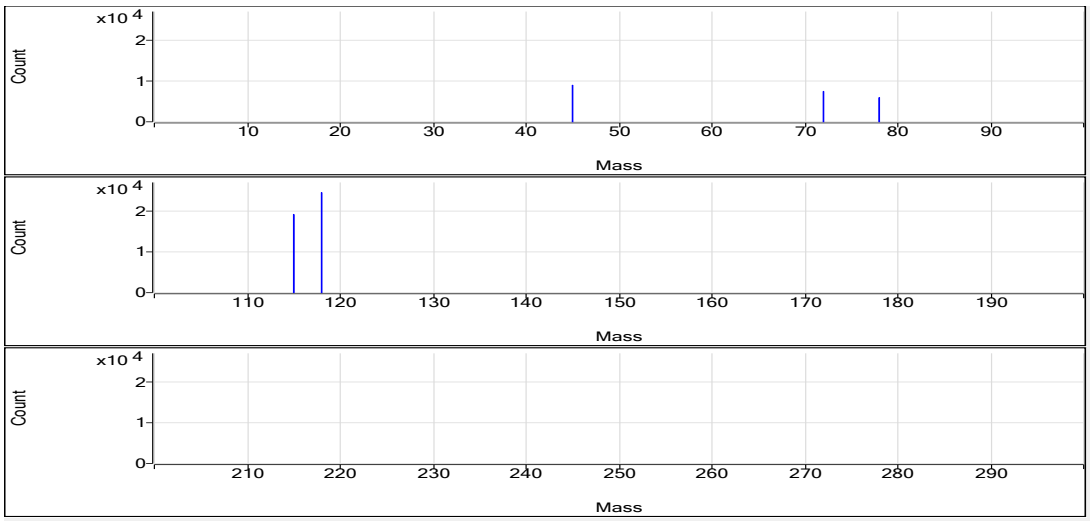
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1344452.58	0.4	100.7	Analog	0.1000	3
No Gas	Ge	72	714561.66	0.8	102.2	Pulse	0.1000	3
H2	Sc	45	90658.50	1.3	104.3	Pulse	0.1000	3
H2	Ge	72	75248.47	0.7	105.1	Pulse	0.1000	3
H2	In	115	193106.14	1.2	105.4	Pulse	0.1000	3
He	Sc	45	23820.05	2.4	103.5	Pulse	0.1000	3
He	Ge	72	44934.64	3.0	106.4	Pulse	0.1000	3
He	In	115	39434.61	1.0	101.3	Pulse	0.1000	3
He	Tb	159	178143.82	0.6	101.2	Pulse	0.1000	3
He	Bi	209	129556.78	0.0	101.0	Pulse	0.1000	3

No Gas

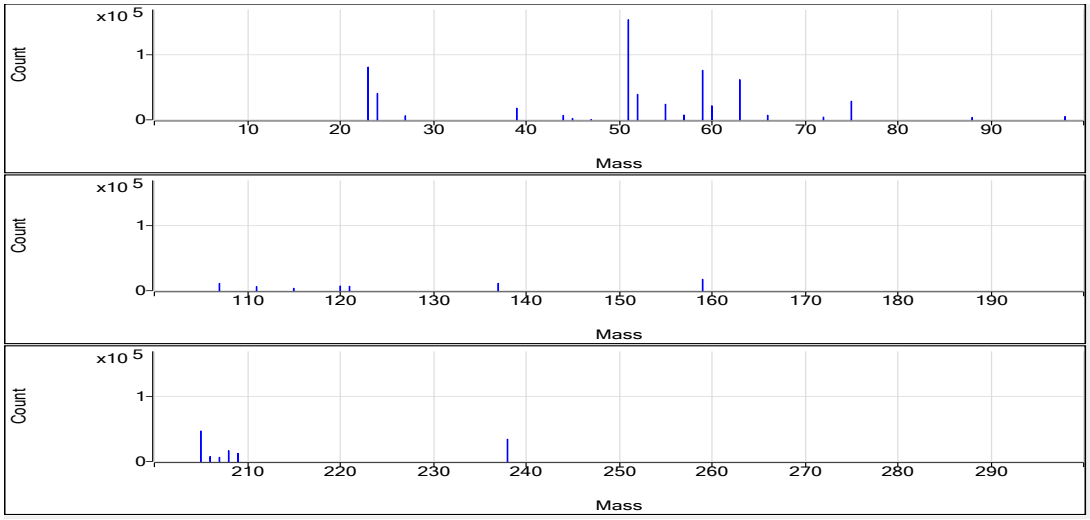


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.032	0.0242	32447.05	0.0005	1.901E-05
Be	9	1	No Gas	51.79	0.025	33753.91	0.0005	1.901E-05
Be	9	1	No Gas	54.606	0.0264	35331.49	0.0005	1.901E-05
Se	78	2	H2	101.742	0.0209	4012.57	0.0002	7.279E-06
Se	78	2	H2	99.553	0.0205	4008.57	0.0002	7.279E-06
Se	78	2	H2	101.148	0.0208	3983.23	0.0002	7.279E-06
Na	23	3	He	9159.643	33.3775	814778.43	0.0036	0.7194
Na	23	3	He	9425.316	34.3247	816929.83	0.0036	0.7194
Na	23	3	He	9595.678	34.9321	812138.35	0.0036	0.7194
Mg	24	3	He	9219.632	16.7692	409353.78	0.0018	0.006791
Mg	24	3	He	9460.95	17.208	409550.31	0.0018	0.006791
Mg	24	3	He	9679.02	17.6044	409286.28	0.0018	0.006791
Al	27	3	He	4750.468	2.6481	64642.25	0.0006	0.002622
Al	27	3	He	4892.269	2.727	64903.74	0.0006	0.002622
Al	27	3	He	5054.835	2.8176	65505.85	0.0006	0.002622
K	39	3	He	5477.271	7.5461	184208.18	0.0013	0.5579
K	39	3	He	5560.746	7.6526	182132.42	0.0013	0.5579
K	39	3	He	5694.716	7.8235	181889.65	0.0013	0.5579
Ca	44	3	He	39774.977	2.9193	71264.28	0.0001	0.004062
Ca	44	3	He	41471.441	3.0437	72439.95	0.0001	0.004062
Ca	44	3	He	41535.825	3.0484	70872.56	0.0001	0.004062
Ti	47	3	He	478.282	0.2807	6851.86	0.0006	0.0002809
Ti	47	3	He	502.758	0.295	7021.89	0.0006	0.0002809
Ti	47	3	He	512.487	0.3007	6991.94	0.0006	0.0002809
V	51	3	He	491.059	12.7166	310425.22	0.0259	0.01861
V	51	3	He	501.73	12.9925	309222.78	0.0259	0.01861
V	51	3	He	509.067	13.1823	306474.88	0.0259	0.01861
Cr	52	3	He	489.527	16.3641	399465.62	0.0332	0.1047
Cr	52	3	He	496.541	16.5971	395011.99	0.0332	0.1047
Cr	52	3	He	504.138	16.8494	391733.35	0.0332	0.1047
Mn	55	3	He	724.389	10.0492	245310.56	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	741.822	10.2909	244923.86	0.0139	0.005074
Mn	55	3	He	749.384	10.3957	241690.89	0.0139	0.005074
Fe	57	3	He	4953.328	3.1541	76994.63	0.0006	0.00609
Fe	57	3	He	5117.295	3.2583	77547.65	0.0006	0.00609
Fe	57	3	He	5068.733	3.2274	75034.77	0.0006	0.00609
Co	59	3	He	477.256	31.5764	770811.86	0.0661	0.00621
Co	59	3	He	484.132	32.0312	762343.97	0.0661	0.00621
Co	59	3	He	494.809	32.7375	761115.30	0.0661	0.00621
Ni	60	3	He	475.121	4.7599	220409.94	0.01	0.01721
Ni	60	3	He	483.42	4.8427	217153.22	0.01	0.01721
Ni	60	3	He	491.224	4.9206	214820.21	0.01	0.01721
Cu	63	3	He	467.159	13.3819	619660.50	0.0286	0.006793
Cu	63	3	He	487.411	13.9618	626061.79	0.0286	0.006793
Cu	63	3	He	491.377	14.0753	614487.88	0.0286	0.006793
Zn	66	3	He	467.966	1.5742	72895.43	0.0034	0.00316
Zn	66	3	He	486.884	1.6377	73437.75	0.0034	0.00316
Zn	66	3	He	515.137	1.7326	75639.53	0.0034	0.00316
As	75	3	He	487.797	1.2607	58376.38	0.0026	0.0008231
As	75	3	He	504.086	1.3027	58416.47	0.0026	0.0008231
As	75	3	He	504.374	1.3035	56906.47	0.0026	0.0008231
Sr	88	3	He	91.922	0.9708	37841.94	0.0105	0.001715
Sr	88	3	He	95.572	1.0093	39927.11	0.0105	0.001715
Sr	88	3	He	93.405	0.9864	39225.29	0.0105	0.001715
Mo	98	3	He	50.372	1.3865	54044.79	0.0275	0.0008555
Mo	98	3	He	50.251	1.3832	54717.13	0.0275	0.0008555
Mo	98	3	He	48.808	1.3435	53421.70	0.0275	0.0008555
Ag	107	3	He	50.525	2.9862	116402.14	0.0591	0.0004305
Ag	107	3	He	49.422	2.921	115554.68	0.0591	0.0004305
Ag	107	3	He	48.348	2.8576	113629.67	0.0591	0.0004305
Cd	111	3	He	52.02	0.3448	13440.53	0.0066	5.141E-05
Cd	111	3	He	49.241	0.3264	12911.98	0.0066	5.141E-05
Cd	111	3	He	48.578	0.322	12803.89	0.0066	5.141E-05
Sn	120	3	He	100.169	1.8948	73856.90	0.0187	0.0185
Sn	120	3	He	101.06	1.9114	75616.00	0.0187	0.0185
Sn	120	3	He	99.684	1.8857	74982.95	0.0187	0.0185
Sb	121	3	He	100.805	1.846	71957.35	0.0183	0.00111
Sb	121	3	He	99.701	1.8258	72228.68	0.0183	0.00111
Sb	121	3	He	99.739	1.8265	72630.37	0.0183	0.00111
Ba	137	3	He	508.671	2.9805	116179.51	0.0059	0.0007704
Ba	137	3	He	504.524	2.9562	116947.05	0.0059	0.0007704
Ba	137	3	He	496.812	2.911	115755.63	0.0059	0.0007704
Tl	205	3	He	102.272	3.7195	481851.28	0.0364	0.000808
Tl	205	3	He	99.85	3.6315	470628.98	0.0364	0.000808
Tl	205	3	He	99.014	3.6011	466435.97	0.0364	0.000808
Pb	208	3	He	50.858	2.4825	171084.22	0.0487	0.003226
Pb	208	3	He	50.526	2.4663	170213.04	0.0487	0.003226
Pb	208	3	He	50.506	2.4653	171449.68	0.0487	0.003226
U	238	3	He	50.433	2.6979	349505.35	0.0535	0.0004157
U	238	3	He	50.372	2.6946	349218.98	0.0535	0.0004157
U	238	3	He	49.823	2.6653	345229.02	0.0535	0.0004157
Sc	45	1	No Gas			1343223.26		
Sc	45	1	No Gas			1349927.95		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1340206.54		
Ge	72	1	No Gas			720756.47		
Ge	72	1	No Gas			712799.76		
Ge	72	1	No Gas			710128.74		
Sc	45	2	H2			92060.40		
Sc	45	2	H2			90087.95		
Sc	45	2	H2			89827.16		
Ge	72	2	H2			75841.29		
Ge	72	2	H2			75107.99		
Ge	72	2	H2			74796.14		
In	115	2	H2			191860.00		
In	115	2	H2			195882.01		
In	115	2	H2			191576.40		
Sc	45	3	He			24411.04		
Sc	45	3	He			23800.06		
Sc	45	3	He			23249.05		
Ge	72	3	He			46305.73		
Ge	72	3	He			44841.12		
Ge	72	3	He			43657.08		
In	115	3	He			39496.75		
In	115	3	He			40089.04		
In	115	3	He			40289.23		
Tb	159	3	He			179397.69		
Tb	159	3	He			177865.95		
Tb	159	3	He			177167.83		
Bi	209	3	He			129545.91		
Bi	209	3	He			129597.18		
Bi	209	3	He			129527.25		

Quantitation Report

Data File Name	079SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
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Sample Name	410-142705-I-1-A MSD
Sample Type	Sample
Comment	F6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

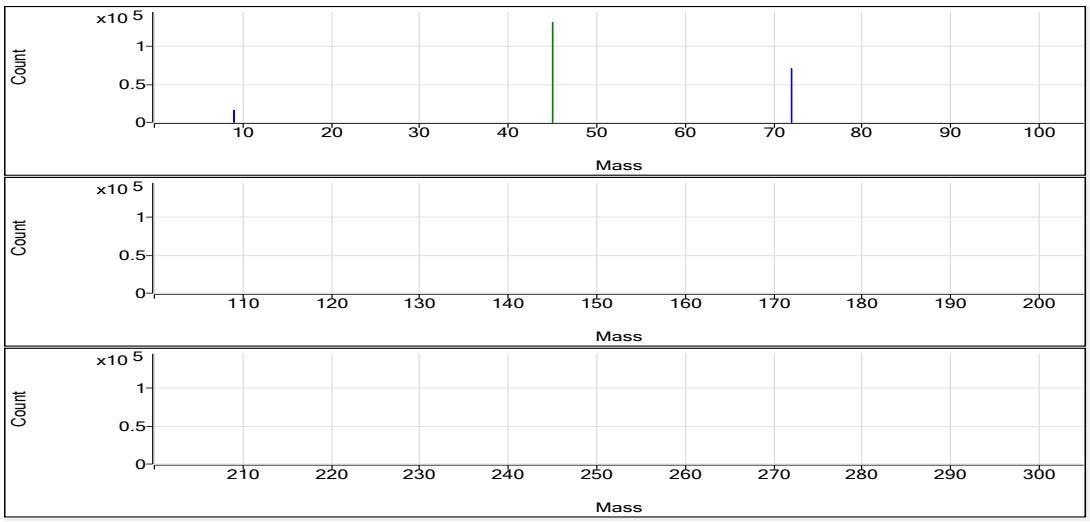
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.085	ppb	6.5	32670.31	0.0247	Pulse	0.5000	3
Se	78	115	H2	101.836	ppb	2.5	4009.46	0.0209	Pulse	1.5000	3
Na	23	45	He	9086.300	ppb	1.4	788496.34	33.1160	Pulse	0.1000	3
Mg	24	45	He	9410.100	ppb	1.5	407523.60	17.1155	Pulse	0.1000	3
Al	27	45	He	4957.390	ppb	1.1	65797.22	2.7633	Pulse	0.1000	3
K	39	45	He	5664.744	ppb	2.1	185362.18	7.7853	Pulse	0.1000	3
Ca	44	45	He	40588.720	ppb	2.5	70926.62	2.9790	Pulse	0.1000	3
Ti	47	45	He	495.991	ppb	9.5	6925.22	0.2911	Pulse	0.1000	3
V	51	45	He	505.040	ppb	1.9	311379.26	13.0781	Pulse	0.5000	3
Cr	52	45	He	499.752	ppb	1.6	397717.26	16.7038	Pulse	0.1000	3
Mn	55	45	He	737.043	ppb	2.4	243428.64	10.2246	Pulse	0.1000	3
Fe	57	45	He	5028.719	ppb	2.0	76241.22	3.2020	Pulse	0.1000	3
Co	59	45	He	489.658	ppb	1.1	771396.99	32.3967	Pulse	0.1000	3
Ni	60	72	He	487.033	ppb	2.4	217623.21	4.8788	Pulse	0.1000	3
Cu	63	72	He	486.298	ppb	2.2	621397.84	13.9299	Pulse	0.1000	3
Zn	66	72	He	495.930	ppb	2.2	74409.72	1.6681	Pulse	0.1000	3
As	75	72	He	501.044	ppb	2.5	57759.09	1.2949	Pulse	0.5000	3
Sr	88	115	He	92.928	ppb	4.1	38991.11	0.9814	Pulse	0.1000	3
Mo	98	115	He	50.718	ppb	3.0	55480.33	1.3960	Pulse	0.1000	3
Ag	107	115	He	49.391	ppb	3.2	115998.92	2.9192	Pulse	0.1000	3
Cd	111	115	He	49.701	ppb	3.2	13092.17	0.3294	Pulse	0.5000	3
Sn	120	115	He	98.913	ppb	2.5	74369.69	1.8712	Pulse	0.1000	3
Sb	121	115	He	98.787	ppb	2.8	71893.32	1.8091	Pulse	0.1000	3
Ba	137	115	He	509.047	ppb	2.9	118532.61	2.9827	Pulse	0.1000	3
Tl	205	209	He	101.066	ppb	0.7	477365.88	3.6757	Pulse	0.1000	3
Pb	208	209	He	50.281	ppb	0.9	318747.02	2.4544	Pulse	0.1000	3
U	238	209	He	49.770	ppb	0.2	345779.40	2.6625	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1325070.66	0.8	99.3	Analog	0.1000	3
No Gas	Ge	72	712234.96	0.5	101.8	Pulse	0.1000	3
H2	Sc	45	88997.95	1.5	102.4	Pulse	0.1000	3
H2	Ge	72	75204.63	0.3	105.0	Pulse	0.1000	3
H2	In	115	191579.39	1.4	104.6	Pulse	0.1000	3
He	Sc	45	23813.38	1.4	103.5	Pulse	0.1000	3
He	Ge	72	44620.54	2.1	105.7	Pulse	0.1000	3
He	In	115	39762.03	3.0	102.1	Pulse	0.1000	3
He	Tb	159	178407.88	1.8	101.3	Pulse	0.1000	3
He	Bi	209	129872.23	0.3	101.3	Pulse	0.1000	3

No Gas



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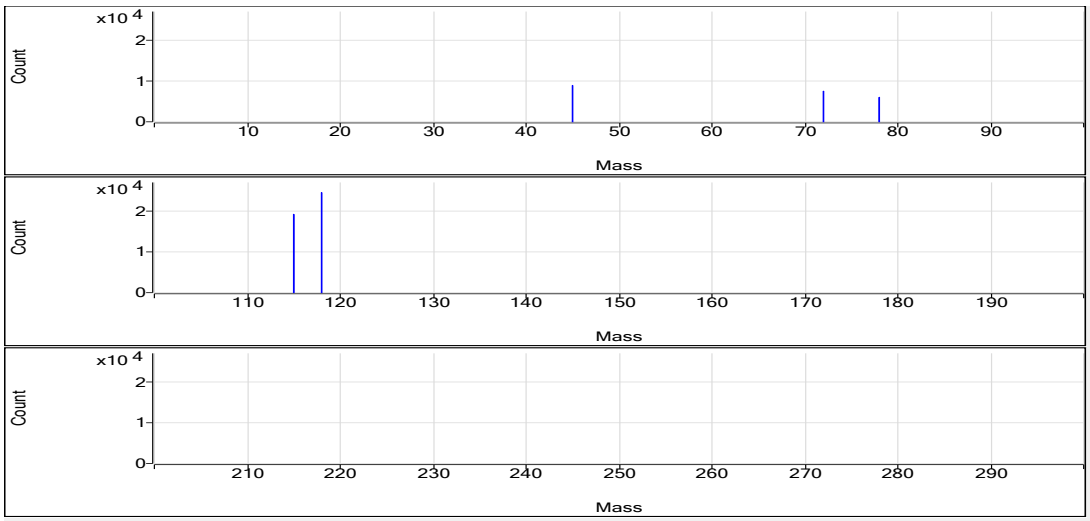
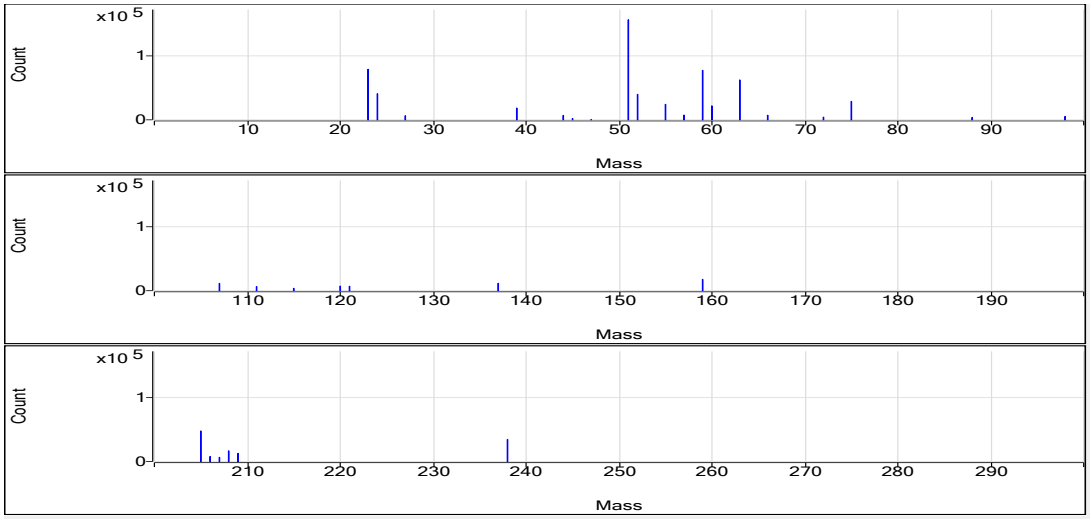


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	47.378	0.0229	30573.14	0.0005	1.901E-05
Be	9	1	No Gas	52.04	0.0251	33230.83	0.0005	1.901E-05
Be	9	1	No Gas	53.838	0.026	34206.95	0.0005	1.901E-05
Se	78	2	H2	99.794	0.0205	3959.89	0.0002	7.279E-06
Se	78	2	H2	100.976	0.0208	4010.57	0.0002	7.279E-06
Se	78	2	H2	104.736	0.0215	4057.92	0.0002	7.279E-06
Na	23	3	He	9231.744	33.6345	788370.46	0.0036	0.7194
Na	23	3	He	8976.98	32.7262	789047.88	0.0036	0.7194
Na	23	3	He	9050.175	32.9872	788070.69	0.0036	0.7194
Mg	24	3	He	9571.431	17.4088	408050.89	0.0018	0.006791
Mg	24	3	He	9333.121	16.9755	409290.54	0.0018	0.006791
Mg	24	3	He	9325.748	16.9621	405229.37	0.0018	0.006791
Al	27	3	He	5004.49	2.7895	65384.81	0.0006	0.002622
Al	27	3	He	4896.506	2.7294	65807.49	0.0006	0.002622
Al	27	3	He	4971.172	2.771	66199.37	0.0006	0.002622
K	39	3	He	5803.426	7.9622	186629.22	0.0013	0.5579
K	39	3	He	5607.899	7.7128	185959.37	0.0013	0.5579
K	39	3	He	5582.908	7.6809	183497.95	0.0013	0.5579
Ca	44	3	He	41695.455	3.0601	71726.82	0.0001	0.004062
Ca	44	3	He	40402.668	2.9654	71496.43	0.0001	0.004062
Ca	44	3	He	39668.036	2.9115	69556.60	0.0001	0.004062
Ti	47	3	He	549.824	0.3226	7562.24	0.0006	0.0002809
Ti	47	3	He	463.72	0.2722	6561.70	0.0006	0.0002809
Ti	47	3	He	474.429	0.2784	6651.72	0.0006	0.0002809
V	51	3	He	515.988	13.3612	313178.13	0.0259	0.01861
V	51	3	He	498.643	12.9127	311333.19	0.0259	0.01861
V	51	3	He	500.487	12.9604	309626.47	0.0259	0.01861
Cr	52	3	He	508.931	17.0086	398670.31	0.0332	0.1047
Cr	52	3	He	495.763	16.5712	399542.53	0.0332	0.1047
Cr	52	3	He	494.563	16.5314	394938.94	0.0332	0.1047
Mn	55	3	He	757.035	10.5018	246155.43	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	724.811	10.055	242432.36	0.0139	0.005074
Mn	55	3	He	729.283	10.117	241698.12	0.0139	0.005074
Fe	57	3	He	5128.039	3.2651	76532.31	0.0006	0.00609
Fe	57	3	He	5032.278	3.2043	77256.77	0.0006	0.00609
Fe	57	3	He	4925.84	3.1366	74934.59	0.0006	0.00609
Co	59	3	He	495.679	32.795	768692.10	0.0661	0.00621
Co	59	3	He	485.782	32.1403	774921.86	0.0661	0.00621
Co	59	3	He	487.514	32.2549	770577.02	0.0661	0.00621
Ni	60	3	He	474.63	4.755	216797.87	0.01	0.01721
Ni	60	3	He	488.666	4.8951	217781.97	0.01	0.01721
Ni	60	3	He	497.804	4.9863	218289.80	0.01	0.01721
Cu	63	3	He	473.959	13.5767	619011.48	0.0286	0.006793
Cu	63	3	He	493.911	14.1479	629437.96	0.0286	0.006793
Cu	63	3	He	491.023	14.0652	615744.09	0.0286	0.006793
Zn	66	3	He	484.807	1.6308	74352.65	0.0034	0.00316
Zn	66	3	He	496.728	1.6708	74332.88	0.0034	0.00316
Zn	66	3	He	506.256	1.7028	74543.62	0.0034	0.00316
As	75	3	He	487.692	1.2604	57466.55	0.0026	0.0008231
As	75	3	He	503.384	1.3009	57878.25	0.0026	0.0008231
As	75	3	He	512.056	1.3233	57932.47	0.0026	0.0008231
Sr	88	3	He	88.715	0.937	38432.91	0.0105	0.001715
Sr	88	3	He	96.26	1.0165	39315.72	0.0105	0.001715
Sr	88	3	He	93.809	0.9907	39224.70	0.0105	0.001715
Mo	98	3	He	49.728	1.3688	56142.92	0.0275	0.0008555
Mo	98	3	He	52.476	1.4444	55862.07	0.0275	0.0008555
Mo	98	3	He	49.95	1.3749	54436.00	0.0275	0.0008555
Ag	107	3	He	47.578	2.8121	115343.25	0.0591	0.0004305
Ag	107	3	He	50.631	2.9925	115737.11	0.0591	0.0004305
Ag	107	3	He	49.962	2.953	116916.39	0.0591	0.0004305
Cd	111	3	He	48.611	0.3222	13216.30	0.0066	5.141E-05
Cd	111	3	He	51.507	0.3414	13204.27	0.0066	5.141E-05
Cd	111	3	He	48.986	0.3247	12855.94	0.0066	5.141E-05
Sn	120	3	He	96.765	1.831	75102.60	0.0187	0.0185
Sn	120	3	He	101.616	1.9219	74329.88	0.0187	0.0185
Sn	120	3	He	98.359	1.8609	73676.60	0.0187	0.0185
Sb	121	3	He	95.887	1.756	72027.22	0.0183	0.00111
Sb	121	3	He	101.355	1.8561	71785.99	0.0183	0.00111
Sb	121	3	He	99.117	1.8151	71866.76	0.0183	0.00111
Ba	137	3	He	492.085	2.8833	118266.92	0.0059	0.0007704
Ba	137	3	He	519.48	3.0438	117722.63	0.0059	0.0007704
Ba	137	3	He	515.574	3.0209	119608.28	0.0059	0.0007704
Tl	205	3	He	101.874	3.7051	480500.07	0.0364	0.000808
Tl	205	3	He	100.47	3.654	476348.24	0.0364	0.000808
Tl	205	3	He	100.855	3.668	475249.33	0.0364	0.000808
Pb	208	3	He	50.486	2.4644	169080.29	0.0487	0.003226
Pb	208	3	He	49.768	2.4294	168056.23	0.0487	0.003226
Pb	208	3	He	50.588	2.4694	168856.40	0.0487	0.003226
U	238	3	He	49.881	2.6684	346055.39	0.0535	0.0004157
U	238	3	He	49.735	2.6606	346843.08	0.0535	0.0004157
U	238	3	He	49.694	2.6584	344439.72	0.0535	0.0004157
Sc	45	1	No Gas			1336508.57		
Sc	45	1	No Gas			1322646.86		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1316056.54		
Ge	72	1	No Gas			712648.27		
Ge	72	1	No Gas			715651.71		
Ge	72	1	No Gas			708404.91		
Sc	45	2	H2			89141.81		
Sc	45	2	H2			90219.08		
Sc	45	2	H2			87632.96		
Ge	72	2	H2			75379.28		
Ge	72	2	H2			74976.84		
Ge	72	2	H2			75257.77		
In	115	2	H2			193035.80		
In	115	2	H2			193218.69		
In	115	2	H2			188483.67		
Sc	45	3	He			23439.32		
Sc	45	3	He			24110.60		
Sc	45	3	He			23890.23		
Ge	72	3	He			45593.82		
Ge	72	3	He			44489.91		
Ge	72	3	He			43777.88		
In	115	3	He			41542.94		
In	115	3	He			39196.19		
In	115	3	He			40108.72		
Tb	159	3	He			181353.26		
Tb	159	3	He			174918.75		
Tb	159	3	He			178951.64		
Bi	209	3	He			129686.84		
Bi	209	3	He			130363.65		
Bi	209	3	He			129566.21		

Quantitation Report

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Sample Name	CCV 4807398
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

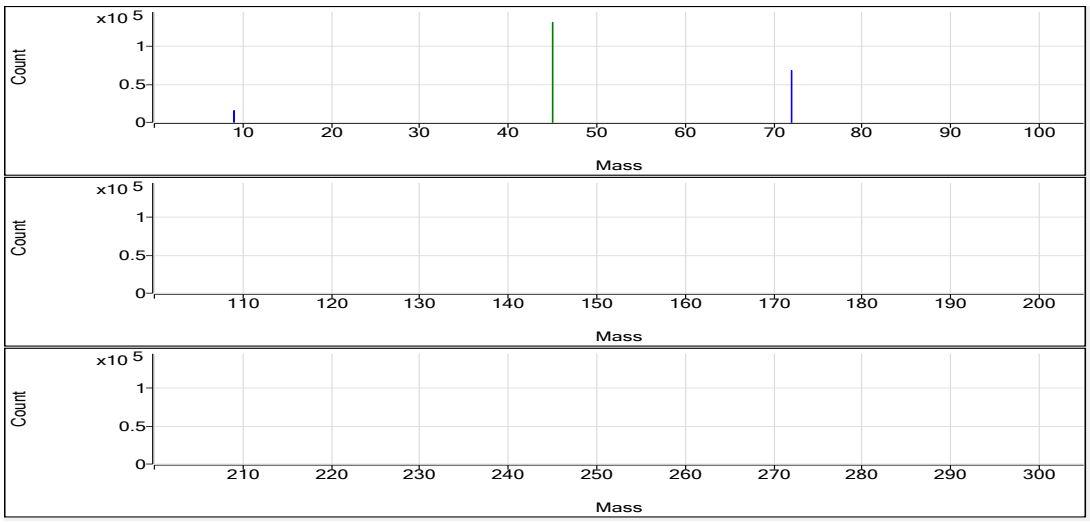
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	48.870	ppb	6.8	31225.93	0.0236	Pulse	0.5000	3
Se	78	115	H2	51.381	ppb	0.7	1991.03	0.0106	Pulse	1.5000	3
Na	23	45	He	5015.289	ppb	0.6	436661.35	18.6010	Pulse	0.1000	3
Mg	24	45	He	5041.397	ppb	1.0	215322.10	9.1727	Pulse	0.1000	3
Al	27	45	He	5081.581	ppb	1.2	66490.39	2.8325	Pulse	0.1000	3
K	39	45	He	5137.489	ppb	2.6	166950.11	7.1126	Pulse	0.1000	3
Ca	44	45	He	5066.740	ppb	1.4	8812.92	0.3754	Pulse	0.1000	3
Ti	47	45	He	5097.983	ppb	2.6	70159.69	2.9891	Pulse	0.1000	3
V	51	45	He	511.568	ppb	1.2	310959.06	13.2469	Pulse	0.5000	3
Cr	52	45	He	513.917	ppb	1.0	403163.13	17.1742	Pulse	0.1000	3
Mn	55	45	He	512.025	ppb	0.9	166777.69	7.1046	Pulse	0.1000	3
Fe	57	45	He	5093.591	ppb	2.2	76127.26	3.2432	Pulse	0.1000	3
Co	59	45	He	503.374	ppb	1.0	781789.55	33.3040	Pulse	0.1000	3
Ni	60	72	He	510.623	ppb	2.5	219448.49	5.1143	Pulse	0.1000	3
Cu	63	72	He	513.800	ppb	1.4	631587.13	14.7173	Pulse	0.1000	3
Zn	66	72	He	517.080	ppb	3.5	74614.21	1.7391	Pulse	0.1000	3
As	75	72	He	521.320	ppb	1.4	57817.33	1.3473	Pulse	0.5000	3
Sr	88	115	He	51.353	ppb	3.3	21590.42	0.5431	Pulse	0.1000	3
Mo	98	115	He	50.473	ppb	1.5	55249.43	1.3893	Pulse	0.1000	3
Ag	107	115	He	49.827	ppb	2.7	117087.79	2.9450	Pulse	0.1000	3
Cd	111	115	He	49.865	ppb	2.2	13142.88	0.3305	Pulse	0.5000	3
Sn	120	115	He	49.367	ppb	2.4	37504.96	0.9432	Pulse	0.1000	3
Sb	121	115	He	49.879	ppb	3.1	36335.32	0.9140	Pulse	0.1000	3
Ba	137	115	He	508.170	ppb	4.0	118348.54	2.9776	Pulse	0.1000	3
Tl	205	209	He	51.292	ppb	2.0	242106.80	1.8659	Pulse	0.1000	3
Pb	208	209	He	50.672	ppb	2.2	320937.83	2.4734	Pulse	0.1000	3
U	238	209	He	50.461	ppb	2.2	350263.41	2.6994	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1323102.61	1.3	99.1	Analog	0.1000	3
No Gas	Ge	72	686127.86	1.6	98.1	Pulse	0.1000	3
H2	Sc	45	89722.91	0.8	103.2	Pulse	0.1000	3
H2	Ge	72	71837.50	1.0	100.3	Pulse	0.1000	3
H2	In	115	188448.84	0.8	102.9	Pulse	0.1000	3
He	Sc	45	23476.19	1.2	102.0	Pulse	0.1000	3
He	Ge	72	42922.04	1.8	101.7	Pulse	0.1000	3
He	In	115	39782.60	3.4	102.2	Pulse	0.1000	3
He	Tb	159	177192.75	0.8	100.6	Pulse	0.1000	3
He	Bi	209	129785.23	1.7	101.2	Pulse	0.1000	3

No Gas



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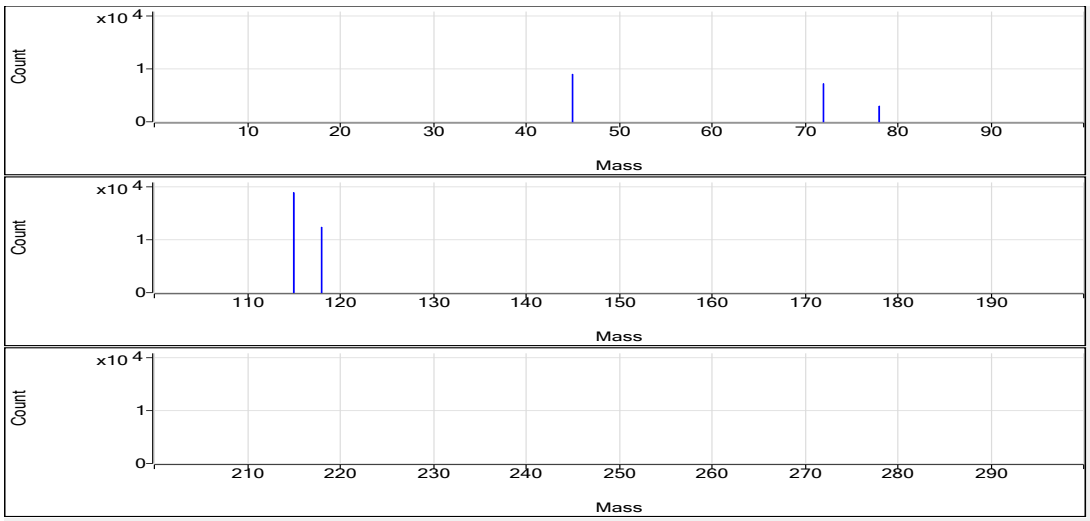
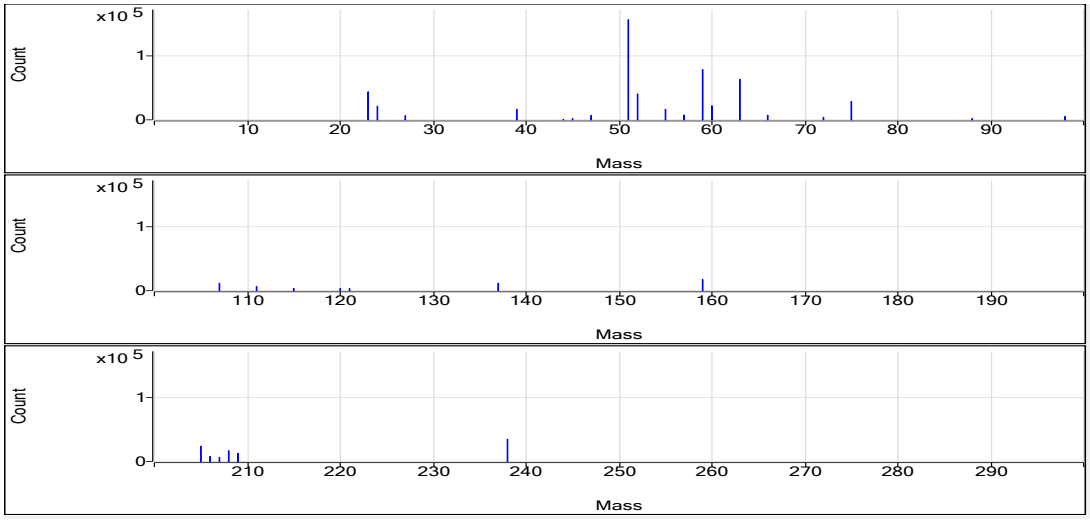


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	45.475	0.022	28713.46	0.0005	1.901E-05
Be	9	1	No Gas	49.023	0.0237	31767.59	0.0005	1.901E-05
Be	9	1	No Gas	52.111	0.0252	33196.73	0.0005	1.901E-05
Se	78	2	H2	51.713	0.0106	1989.48	0.0002	7.279E-06
Se	78	2	H2	51.425	0.0106	2010.81	0.0002	7.279E-06
Se	78	2	H2	51.005	0.0105	1972.81	0.0002	7.279E-06
Na	23	3	He	5042.631	18.6985	433411.83	0.0036	0.7194
Na	23	3	He	4981.221	18.4796	438706.01	0.0036	0.7194
Na	23	3	He	5022.016	18.625	437866.20	0.0036	0.7194
Mg	24	3	He	5096.717	9.2732	214943.98	0.0018	0.006791
Mg	24	3	He	4998.009	9.0938	215886.91	0.0018	0.006791
Mg	24	3	He	5029.465	9.151	215135.41	0.0018	0.006791
Al	27	3	He	5151.839	2.8716	66560.44	0.0006	0.002622
Al	27	3	He	5062.651	2.8219	66992.64	0.0006	0.002622
Al	27	3	He	5030.254	2.8039	65918.08	0.0006	0.002622
K	39	3	He	5288.247	7.3049	169320.60	0.0013	0.5579
K	39	3	He	5085.107	7.0458	167266.64	0.0013	0.5579
K	39	3	He	5039.113	6.9871	164263.10	0.0013	0.5579
Ca	44	3	He	5090.8	0.3772	8742.85	0.0001	0.004062
Ca	44	3	He	4986.428	0.3695	8772.89	0.0001	0.004062
Ca	44	3	He	5122.991	0.3795	8923.03	0.0001	0.004062
Ti	47	3	He	5252.646	3.0798	71386.30	0.0006	0.0002809
Ti	47	3	He	5023.016	2.9452	69918.38	0.0006	0.0002809
Ti	47	3	He	5018.288	2.9424	69174.39	0.0006	0.0002809
V	51	3	He	518.742	13.4324	311349.47	0.0259	0.01861
V	51	3	He	507.548	13.143	312014.94	0.0259	0.01861
V	51	3	He	508.415	13.1654	309512.78	0.0259	0.01861
Cr	52	3	He	519.355	17.3548	402266.83	0.0332	0.1047
Cr	52	3	He	512.893	17.1402	406910.07	0.0332	0.1047
Cr	52	3	He	509.504	17.0276	400312.49	0.0332	0.1047
Mn	55	3	He	516.806	7.1709	166214.00	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	508.121	7.0505	167378.92	0.0139	0.005074
Mn	55	3	He	511.147	7.0924	166740.15	0.0139	0.005074
Fe	57	3	He	5222.658	3.3253	77075.96	0.0006	0.00609
Fe	57	3	He	5043.668	3.2115	76241.31	0.0006	0.00609
Fe	57	3	He	5014.448	3.1929	75064.51	0.0006	0.00609
Co	59	3	He	508.563	33.6472	779907.33	0.0661	0.00621
Co	59	3	He	498.719	32.9961	783329.60	0.0661	0.00621
Co	59	3	He	502.839	33.2687	782131.71	0.0661	0.00621
Ni	60	3	He	523.101	5.2388	221305.06	0.01	0.01721
Ni	60	3	He	497.559	4.9839	218231.93	0.01	0.01721
Ni	60	3	He	511.209	5.1201	218808.49	0.01	0.01721
Cu	63	3	He	520.855	14.9193	630240.69	0.0286	0.006793
Cu	63	3	He	506.12	14.4974	634810.58	0.0286	0.006793
Cu	63	3	He	514.425	14.7352	629710.11	0.0286	0.006793
Zn	66	3	He	533.966	1.7958	75860.33	0.0034	0.00316
Zn	66	3	He	497.943	1.6749	73338.44	0.0034	0.00316
Zn	66	3	He	519.331	1.7467	74643.85	0.0034	0.00316
As	75	3	He	528.295	1.3653	57673.48	0.0026	0.0008231
As	75	3	He	514.072	1.3285	58173.48	0.0026	0.0008231
As	75	3	He	521.592	1.348	57605.04	0.0026	0.0008231
Sr	88	3	He	49.375	0.5223	21557.13	0.0105	0.001715
Sr	88	3	He	52.308	0.5532	21807.45	0.0105	0.001715
Sr	88	3	He	52.376	0.5539	21406.67	0.0105	0.001715
Mo	98	3	He	49.608	1.3655	56363.54	0.0275	0.0008555
Mo	98	3	He	50.75	1.3969	55068.81	0.0275	0.0008555
Mo	98	3	He	51.06	1.4054	54315.95	0.0275	0.0008555
Ag	107	3	He	48.311	2.8554	117863.16	0.0591	0.0004305
Ag	107	3	He	50.313	2.9737	117229.13	0.0591	0.0004305
Ag	107	3	He	50.858	3.0059	116171.08	0.0591	0.0004305
Cd	111	3	He	48.641	0.3224	13308.35	0.0066	5.141E-05
Cd	111	3	He	50.317	0.3335	13148.23	0.0066	5.141E-05
Cd	111	3	He	50.638	0.3356	12972.06	0.0066	5.141E-05
Sn	120	3	He	48.048	0.9185	37912.65	0.0187	0.0185
Sn	120	3	He	50.233	0.9594	37822.58	0.0187	0.0185
Sn	120	3	He	49.819	0.9517	36779.66	0.0187	0.0185
Sb	121	3	He	48.24	0.884	36489.01	0.0183	0.00111
Sb	121	3	He	50.082	0.9177	36178.42	0.0183	0.00111
Sb	121	3	He	51.314	0.9402	36338.53	0.0183	0.00111
Ba	137	3	He	486.859	2.8527	117753.32	0.0059	0.0007704
Ba	137	3	He	509.813	2.9872	117763.22	0.0059	0.0007704
Ba	137	3	He	527.837	3.0928	119529.09	0.0059	0.0007704
Tl	205	3	He	50.138	1.8239	241271.13	0.0364	0.000808
Tl	205	3	He	52.04	1.893	242616.91	0.0364	0.000808
Tl	205	3	He	51.699	1.8806	242432.36	0.0364	0.000808
Pb	208	3	He	49.485	2.4156	168483.08	0.0487	0.003226
Pb	208	3	He	51.73	2.525	172493.47	0.0487	0.003226
Pb	208	3	He	50.801	2.4797	171325.74	0.0487	0.003226
U	238	3	He	49.203	2.6322	348191.09	0.0535	0.0004157
U	238	3	He	51.179	2.7379	350891.71	0.0535	0.0004157
U	238	3	He	51.001	2.7283	351707.42	0.0535	0.0004157
Sc	45	1	No Gas			1307683.34		
Sc	45	1	No Gas			1342148.26		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1319476.23		
Ge	72	1	No Gas			688244.91		
Ge	72	1	No Gas			695867.65		
Ge	72	1	No Gas			674271.01		
Sc	45	2	H2			90571.77		
Sc	45	2	H2			89233.35		
Sc	45	2	H2			89363.60		
Ge	72	2	H2			72203.31		
Ge	72	2	H2			71016.61		
Ge	72	2	H2			72292.57		
In	115	2	H2			187092.99		
In	115	2	H2			190155.25		
In	115	2	H2			188098.28		
Sc	45	3	He			23178.94		
Sc	45	3	He			23740.06		
Sc	45	3	He			23509.57		
Ge	72	3	He			42243.29		
Ge	72	3	He			43787.75		
Ge	72	3	He			42735.07		
In	115	3	He			41542.74		
In	115	3	He			39687.39		
In	115	3	He			38905.28		
Tb	159	3	He			178696.95		
Tb	159	3	He			176763.79		
Tb	159	3	He			176117.50		
Bi	209	3	He			132283.70		
Bi	209	3	He			128163.00		
Bi	209	3	He			128909.00		

Quantitation Report

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Sample Type	CCB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

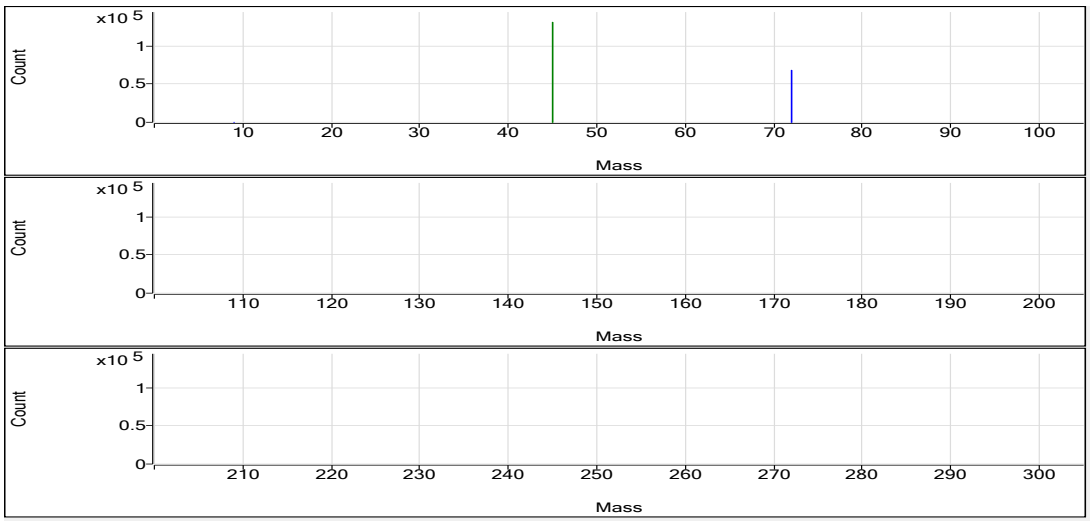
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.093	ppb	10.6	84.00	0.0001	Pulse	0.5000	3
Se	78	115	H2	0.051	ppb	33.8	3.33	0.0000	Pulse	1.5000	3
Na	23	45	He	-41.576	ppb	N/A	13162.92	0.5711	Pulse	0.1000	3
Mg	24	45	He	3.899	ppb	10.8	320.02	0.0139	Pulse	0.1000	3
Al	27	45	He	1.274	ppb	144.4	76.67	0.0033	Pulse	0.1000	3
K	39	45	He	10.563	ppb	345.4	13166.34	0.5714	Pulse	0.1000	3
Ca	44	45	He	17.598	ppb	21.5	123.33	0.0054	Pulse	0.1000	3
Ti	47	45	He	2.477	ppb	28.9	40.00	0.0017	Pulse	0.1000	3
V	51	45	He	0.117	ppb	69.0	498.68	0.0216	Pulse	0.5000	3
Cr	52	45	He	0.313	ppb	79.2	2653.67	0.1151	Pulse	0.1000	3
Mn	55	45	He	0.500	ppb	35.3	276.68	0.0120	Pulse	0.1000	3
Fe	57	45	He	4.990	ppb	45.7	213.34	0.0093	Pulse	0.1000	3
Co	59	45	He	0.206	ppb	6.8	456.69	0.0198	Pulse	0.1000	3
Ni	60	72	He	0.272	ppb	88.4	830.05	0.0199	Pulse	0.1000	3
Cu	63	72	He	0.151	ppb	50.7	463.36	0.0111	Pulse	0.1000	3
Zn	66	72	He	0.298	ppb	47.6	173.34	0.0042	Pulse	0.1000	3
As	75	72	He	0.332	ppb	32.5	70.00	0.0017	Pulse	0.5000	3
Sr	88	115	He	0.179	ppb	26.5	143.34	0.0036	Pulse	0.1000	3
Mo	98	115	He	0.063	ppb	19.9	103.33	0.0026	Pulse	0.1000	3
Ag	107	115	He	0.013	ppb	50.5	46.67	0.0012	Pulse	0.1000	3
Cd	111	115	He	0.015	ppb	88.3	6.00	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.057	ppb	544.3	776.72	0.0196	Pulse	0.1000	3
Sb	121	115	He	0.196	ppb	27.9	186.68	0.0047	Pulse	0.1000	3
Ba	137	115	He	0.270	ppb	61.7	93.34	0.0024	Pulse	0.1000	3
Tl	205	209	He	0.171	ppb	20.9	903.40	0.0070	Pulse	0.1000	3
Pb	208	209	He	-0.005	ppb	N/A	383.34	0.0030	Pulse	0.1000	3
U	238	209	He	0.018	ppb	36.7	176.68	0.0014	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1314475.68	1.2	98.5	Analog	0.1000	3
No Gas	Ge	72	684733.74	0.3	97.9	Pulse	0.1000	3
H2	Sc	45	89867.10	1.2	103.4	Pulse	0.1000	3
H2	Ge	72	71806.98	1.9	100.3	Pulse	0.1000	3
H2	In	115	188087.70	0.7	102.7	Pulse	0.1000	3
He	Sc	45	23048.92	0.8	100.2	Pulse	0.1000	3
He	Ge	72	41661.52	1.0	98.7	Pulse	0.1000	3
He	In	115	39802.49	1.4	102.2	Pulse	0.1000	3
He	Tb	159	176668.64	0.7	100.3	Pulse	0.1000	3
He	Bi	209	128397.91	1.0	100.1	Pulse	0.1000	3

No Gas



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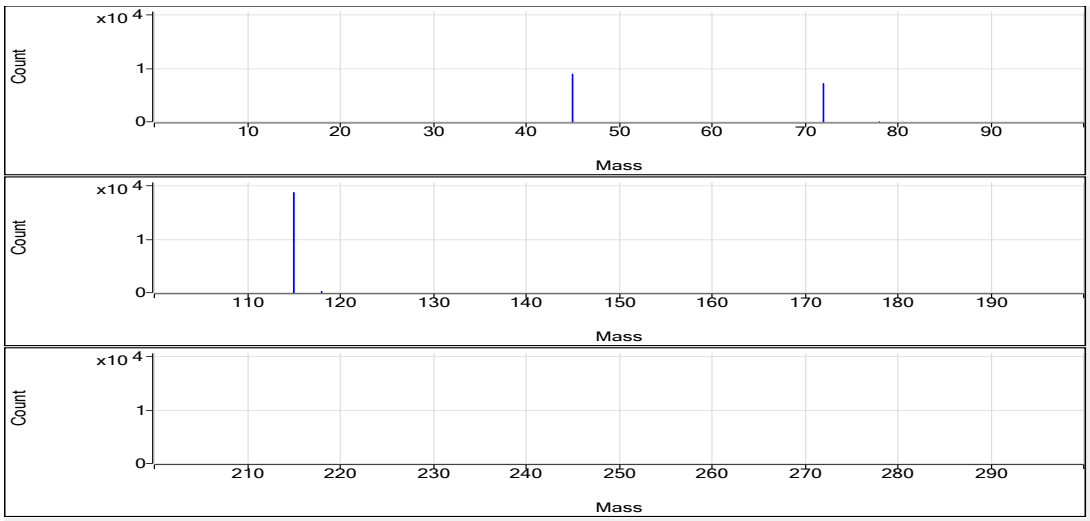
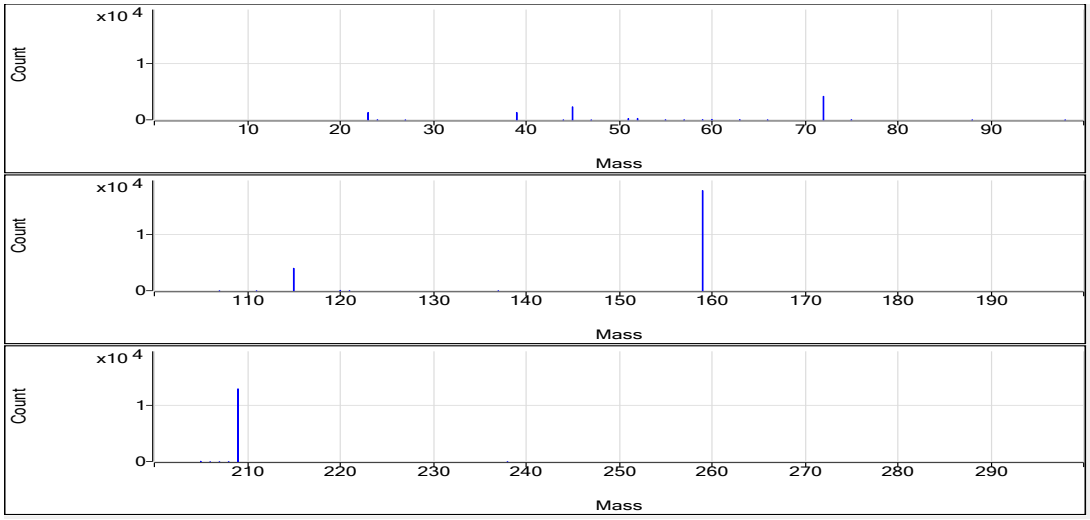


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.086	0.0001	80.00	0.0005	1.901E-05
Be	9	1	No Gas	0.089	0.0001	82.00	0.0005	1.901E-05
Be	9	1	No Gas	0.104	0.0001	90.00	0.0005	1.901E-05
Se	78	2	H2	0.051	0	3.33	0.0002	7.279E-06
Se	78	2	H2	0.033	0	2.67	0.0002	7.279E-06
Se	78	2	H2	0.068	0	4.00	0.0002	7.279E-06
Na	23	3	He	-44.012	0.5624	12895.96	0.0036	0.7194
Na	23	3	He	-43.3	0.565	13146.30	0.0036	0.7194
Na	23	3	He	-37.418	0.5859	13446.49	0.0036	0.7194
Mg	24	3	He	3.461	0.0131	300.01	0.0018	0.006791
Mg	24	3	He	4.302	0.0146	340.02	0.0018	0.006791
Mg	24	3	He	3.935	0.0139	320.02	0.0018	0.006791
Al	27	3	He	2.34	0.0039	90.01	0.0006	0.002622
Al	27	3	He	-0.851	0.0021	50.00	0.0006	0.002622
Al	27	3	He	2.333	0.0039	90.00	0.0006	0.002622
K	39	3	He	52.504	0.6249	14327.49	0.0013	0.5579
K	39	3	He	-6.917	0.5491	12775.94	0.0013	0.5579
K	39	3	He	-13.897	0.5401	12395.60	0.0013	0.5579
Ca	44	3	He	21.933	0.0057	130.00	0.0001	0.004062
Ca	44	3	He	14.939	0.0052	120.00	0.0001	0.004062
Ca	44	3	He	15.921	0.0052	120.00	0.0001	0.004062
Ti	47	3	He	1.752	0.0013	30.00	0.0006	0.0002809
Ti	47	3	He	3.186	0.0021	50.00	0.0006	0.0002809
Ti	47	3	He	2.494	0.0017	40.00	0.0006	0.0002809
V	51	3	He	0.205	0.0239	548.01	0.0259	0.01861
V	51	3	He	0.101	0.0212	494.01	0.0259	0.01861
V	51	3	He	0.045	0.0198	454.01	0.0259	0.01861
Cr	52	3	He	0.511	0.1217	2790.36	0.0332	0.1047
Cr	52	3	He	0.392	0.1178	2740.35	0.0332	0.1047
Cr	52	3	He	0.035	0.1059	2430.30	0.0332	0.1047
Mn	55	3	He	0.42	0.0109	250.01	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.378	0.0103	240.01	0.0139	0.005074
Mn	55	3	He	0.703	0.0148	340.02	0.0139	0.005074
Fe	57	3	He	7.574	0.0109	250.01	0.0006	0.00609
Fe	57	3	He	3.266	0.0082	190.01	0.0006	0.00609
Fe	57	3	He	4.131	0.0087	200.01	0.0006	0.00609
Co	59	3	He	0.19	0.0188	430.02	0.0661	0.00621
Co	59	3	He	0.211	0.0202	470.03	0.0661	0.00621
Co	59	3	He	0.216	0.0205	470.02	0.0661	0.00621
Ni	60	3	He	0.044	0.0176	730.04	0.01	0.01721
Ni	60	3	He	0.523	0.0224	930.06	0.01	0.01721
Ni	60	3	He	0.249	0.0197	830.06	0.01	0.01721
Cu	63	3	He	0.084	0.0092	380.02	0.0286	0.006793
Cu	63	3	He	0.234	0.0135	560.03	0.0286	0.006793
Cu	63	3	He	0.136	0.0107	450.03	0.0286	0.006793
Zn	66	3	He	0.355	0.0044	180.01	0.0034	0.00316
Zn	66	3	He	0.136	0.0036	150.01	0.0034	0.00316
Zn	66	3	He	0.402	0.0045	190.01	0.0034	0.00316
As	75	3	He	0.318	0.0016	68.00	0.0026	0.0008231
As	75	3	He	0.447	0.002	82.00	0.0026	0.0008231
As	75	3	He	0.233	0.0014	60.00	0.0026	0.0008231
Sr	88	3	He	0.213	0.004	160.01	0.0105	0.001715
Sr	88	3	He	0.125	0.003	120.00	0.0105	0.001715
Sr	88	3	He	0.199	0.0038	150.01	0.0105	0.001715
Mo	98	3	He	0.077	0.003	120.00	0.0275	0.0008555
Mo	98	3	He	0.061	0.0025	100.00	0.0275	0.0008555
Mo	98	3	He	0.052	0.0023	90.00	0.0275	0.0008555
Ag	107	3	He	0.018	0.0015	60.00	0.0591	0.0004305
Ag	107	3	He	0.006	0.0008	30.00	0.0591	0.0004305
Ag	107	3	He	0.014	0.0013	50.00	0.0591	0.0004305
Cd	111	3	He	0	0	2.00	0.0066	5.141E-05
Cd	111	3	He	0.023	0.0002	8.00	0.0066	5.141E-05
Cd	111	3	He	0.023	0.0002	8.00	0.0066	5.141E-05
Sn	120	3	He	-0.262	0.0136	550.03	0.0187	0.0185
Sn	120	3	He	0.076	0.0199	790.05	0.0187	0.0185
Sn	120	3	He	0.356	0.0252	990.07	0.0187	0.0185
Sb	121	3	He	0.169	0.0042	170.01	0.0183	0.00111
Sb	121	3	He	0.16	0.004	160.01	0.0183	0.00111
Sb	121	3	He	0.259	0.0058	230.01	0.0183	0.00111
Ba	137	3	He	0.08	0.0012	50.00	0.0059	0.0007704
Ba	137	3	He	0.342	0.0028	110.01	0.0059	0.0007704
Ba	137	3	He	0.389	0.0031	120.00	0.0059	0.0007704
Tl	205	3	He	0.135	0.0057	740.05	0.0364	0.000808
Tl	205	3	He	0.206	0.0083	1060.09	0.0364	0.000808
Tl	205	3	He	0.174	0.0071	910.07	0.0364	0.000808
Pb	208	3	He	-0.006	0.0029	230.01	0.0487	0.003226
Pb	208	3	He	0.001	0.0033	230.01	0.0487	0.003226
Pb	208	3	He	-0.01	0.0027	200.01	0.0487	0.003226
U	238	3	He	0.018	0.0014	180.01	0.0535	0.0004157
U	238	3	He	0.011	0.001	130.01	0.0535	0.0004157
U	238	3	He	0.024	0.0017	220.01	0.0535	0.0004157
Sc	45	1	No Gas			1319404.98		
Sc	45	1	No Gas			1327327.17		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1296694.90		
Ge	72	1	No Gas			685142.72		
Ge	72	1	No Gas			686470.46		
Ge	72	1	No Gas			682588.04		
Sc	45	2	H2			91004.61		
Sc	45	2	H2			88779.75		
Sc	45	2	H2			89816.93		
Ge	72	2	H2			72564.08		
Ge	72	2	H2			70242.66		
Ge	72	2	H2			72614.20		
In	115	2	H2			186607.58		
In	115	2	H2			188949.76		
In	115	2	H2			188705.76		
Sc	45	3	He			22929.01		
Sc	45	3	He			23269.12		
Sc	45	3	He			22948.63		
Ge	72	3	He			41370.58		
Ge	72	3	He			41471.10		
Ge	72	3	He			42142.89		
In	115	3	He			40439.55		
In	115	3	He			39637.70		
In	115	3	He			39346.52		
Tb	159	3	He			177888.40		
Tb	159	3	He			176601.77		
Tb	159	3	He			175515.76		
Bi	209	3	He			129808.39		
Bi	209	3	He			127677.43		
Bi	209	3	He			127707.92		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

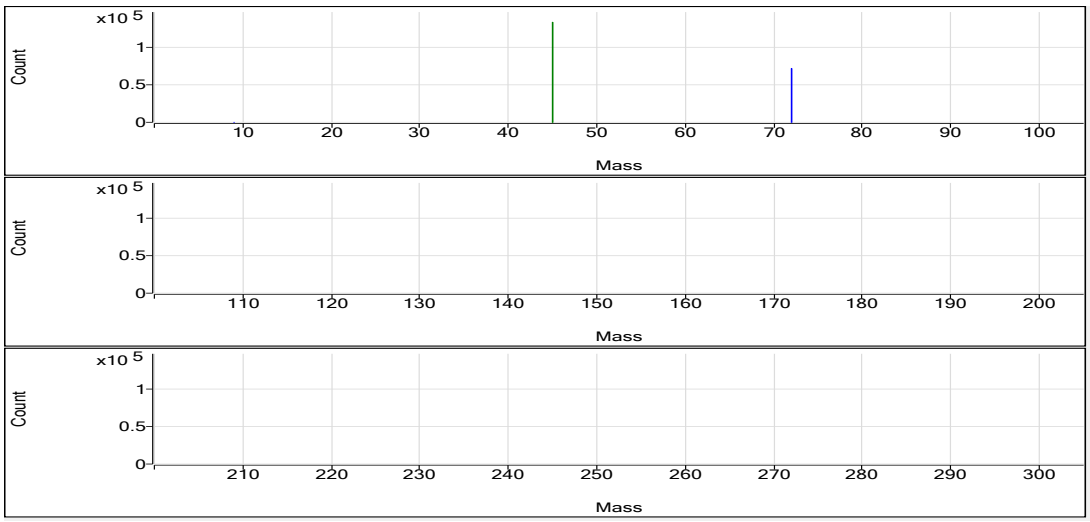
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.044	ppb	58.8	53.33	0.0000	Pulse	0.5000	3
Se	78	115	H2	0.221	ppb	32.3	10.00	0.0001	Pulse	1.5000	3
Na	23	45	He	17592.813	ppb	2.9	1503101.33	63.4454	Analog	0.1000	3
Mg	24	45	He	5700.986	ppb	5.5	245550.76	10.3719	Pulse	0.1000	3
Al	27	45	He	188.414	ppb	24.5	2533.81	0.1075	Pulse	0.1000	3
K	39	45	He	4852.555	ppb	3.8	159872.60	6.7491	Pulse	0.1000	3
Ca	44	45	He	61426.672	ppb	3.1	106755.93	4.5063	Pulse	0.1000	3
Ti	47	45	He	3.295	ppb	86.7	53.34	0.0022	Pulse	0.1000	3
V	51	45	He	2.338	ppb	12.8	1870.13	0.0791	Pulse	0.5000	3
Cr	52	45	He	1.022	ppb	24.7	3283.81	0.1387	Pulse	0.1000	3
Mn	55	45	He	428.909	ppb	3.2	141008.17	5.9522	Pulse	0.1000	3
Fe	57	45	He	8959.923	ppb	4.7	134982.80	5.7004	Pulse	0.1000	3
Co	59	45	He	2.816	ppb	3.9	4560.87	0.1925	Pulse	0.1000	3
Ni	60	72	He	1.484	ppb	23.4	1436.78	0.0320	Pulse	0.1000	3
Cu	63	72	He	1.605	ppb	4.7	2366.95	0.0527	Pulse	0.1000	3
Zn	66	72	He	11.994	ppb	8.3	1950.20	0.0434	Pulse	0.1000	3
As	75	72	He	0.750	ppb	23.8	124.00	0.0028	Pulse	0.5000	3
Sr	88	115	He	246.059	ppb	1.9	105320.26	2.5958	Pulse	0.1000	3
Mo	98	115	He	1.119	ppb	9.3	1283.44	0.0316	Pulse	0.1000	3
Ag	107	115	He	0.004	ppb	126.1	26.67	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.015	ppb	101.6	6.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.039	ppb	81.4	780.05	0.0192	Pulse	0.1000	3
Sb	121	115	He	0.142	ppb	51.0	150.01	0.0037	Pulse	0.1000	3
Ba	137	115	He	70.954	ppb	2.7	16894.29	0.4164	Pulse	0.1000	3
Tl	205	209	He	0.054	ppb	30.4	360.02	0.0028	Pulse	0.1000	3
Pb	208	209	He	0.381	ppb	4.1	2813.57	0.0218	Pulse	0.1000	3
U	238	209	He	0.335	ppb	12.2	2363.64	0.0183	Pulse	0.1000	3

ISTD Table:

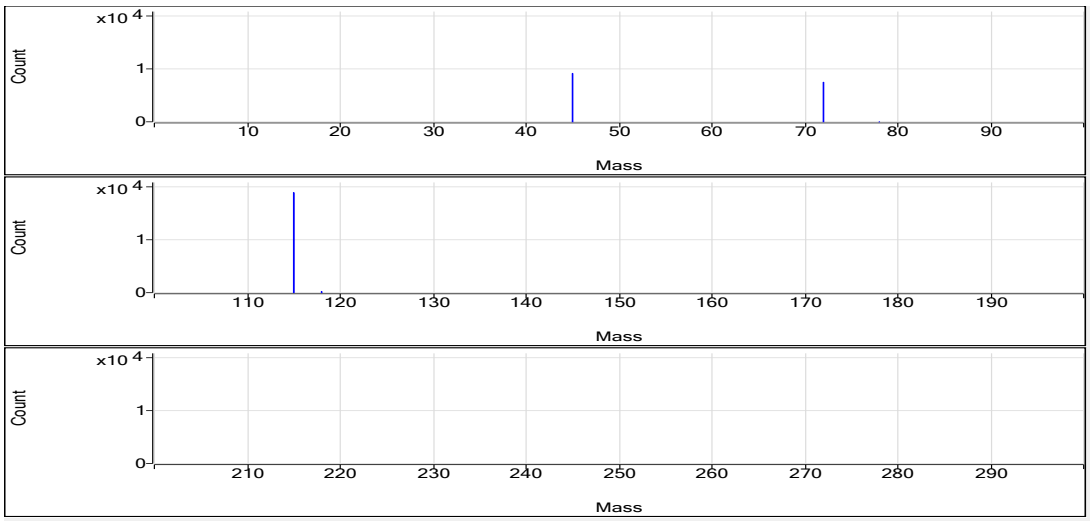
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1327595.29	0.7	99.5	Analog	0.1000	3
No Gas	Ge	72	714598.09	0.2	102.2	Pulse	0.1000	3
H2	Sc	45	92124.62	0.7	106.0	Pulse	0.1000	3
H2	Ge	72	75439.59	2.5	105.3	Pulse	0.1000	3
H2	In	115	190279.05	1.3	103.9	Pulse	0.1000	3
He	Sc	45	23709.87	4.1	103.1	Pulse	0.1000	3
He	Ge	72	44884.58	1.3	106.3	Pulse	0.1000	3
He	In	115	40574.61	0.5	104.2	Pulse	0.1000	3
He	Tb	159	178688.47	0.4	101.5	Pulse	0.1000	3
He	Bi	209	129038.13	0.5	100.6	Pulse	0.1000	3

No Gas

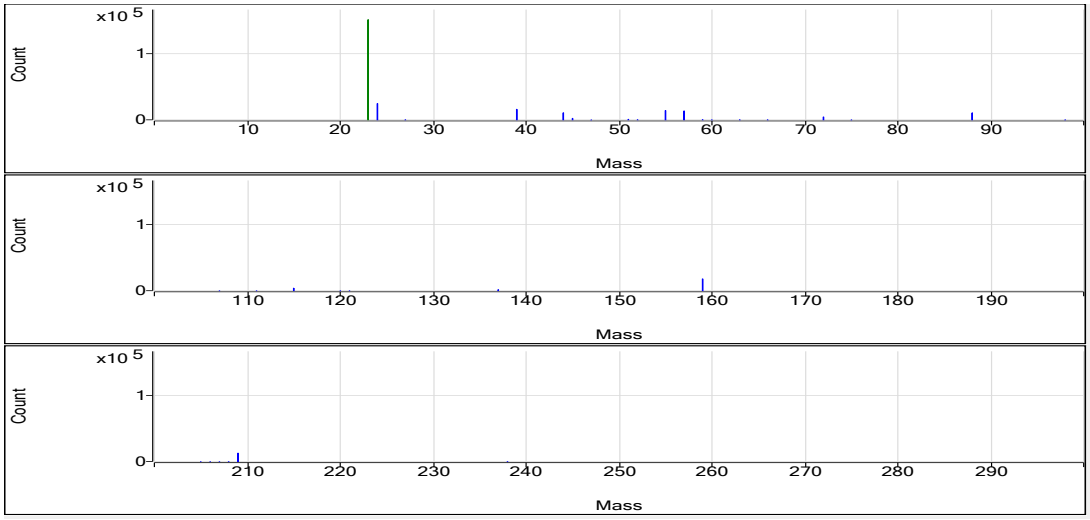


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.032	0	46.00	0.0005	1.901E-05
Be	9	1	No Gas	0.026	0	42.00	0.0005	1.901E-05
Be	9	1	No Gas	0.074	0.0001	72.00	0.0005	1.901E-05
Se	78	2	H2	0.294	0.0001	12.67	0.0002	7.279E-06
Se	78	2	H2	0.218	0.0001	10.00	0.0002	7.279E-06
Se	78	2	H2	0.151	0	7.33	0.0002	7.279E-06
Na	23	3	He	17389.886	62.7218	1510998.10	0.0036	0.7194
Na	23	3	He	17213.26	62.0921	1516979.51	0.0036	0.7194
Na	23	3	He	18175.293	65.5222	1481326.38	0.0036	0.7194
Mg	24	3	He	5549.827	10.0971	243242.67	0.0018	0.006791
Mg	24	3	He	5493.44	9.9945	244177.67	0.0018	0.006791
Mg	24	3	He	6059.691	11.024	249231.93	0.0018	0.006791
Al	27	3	He	158.553	0.0909	2190.25	0.0006	0.002622
Al	27	3	He	165.102	0.0946	2310.32	0.0006	0.002622
Al	27	3	He	241.586	0.1372	3100.86	0.0006	0.002622
K	39	3	He	4835.062	6.7267	162050.10	0.0013	0.5579
K	39	3	He	4677.821	6.5261	159440.32	0.0013	0.5579
K	39	3	He	5044.781	6.9943	158127.37	0.0013	0.5579
Ca	44	3	He	61246.715	4.4931	108240.97	0.0001	0.004062
Ca	44	3	He	59603.588	4.3727	106829.30	0.0001	0.004062
Ca	44	3	He	63429.713	4.6531	105197.53	0.0001	0.004062
Ti	47	3	He	2.353	0.0017	40.00	0.0006	0.0002809
Ti	47	3	He	6.503	0.0041	100.01	0.0006	0.0002809
Ti	47	3	He	1.03	0.0009	20.00	0.0006	0.0002809
V	51	3	He	2.366	0.0798	1922.14	0.0259	0.01861
V	51	3	He	2.025	0.071	1734.12	0.0259	0.01861
V	51	3	He	2.623	0.0864	1954.14	0.0259	0.01861
Cr	52	3	He	1.096	0.1412	3400.50	0.0332	0.1047
Cr	52	3	He	0.741	0.1294	3160.45	0.0332	0.1047
Cr	52	3	He	1.229	0.1455	3290.48	0.0332	0.1047
Mn	55	3	He	419.369	5.8199	140203.49	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	422.816	5.8677	143353.98	0.0139	0.005074
Mn	55	3	He	444.542	6.1689	139467.03	0.0139	0.005074
Fe	57	3	He	8831.465	5.6188	135358.79	0.0006	0.00609
Fe	57	3	He	8615.971	5.4818	133926.96	0.0006	0.00609
Fe	57	3	He	9432.332	6.0006	135662.64	0.0006	0.00609
Co	59	3	He	2.699	0.1848	4450.85	0.0661	0.00621
Co	59	3	He	2.833	0.1936	4730.93	0.0661	0.00621
Co	59	3	He	2.916	0.1991	4500.84	0.0661	0.00621
Ni	60	3	He	1.877	0.036	1600.14	0.01	0.01721
Ni	60	3	He	1.218	0.0294	1310.10	0.01	0.01721
Ni	60	3	He	1.356	0.0307	1400.11	0.01	0.01721
Cu	63	3	He	1.583	0.0521	2320.27	0.0286	0.006793
Cu	63	3	He	1.689	0.0552	2460.29	0.0286	0.006793
Cu	63	3	He	1.543	0.051	2320.30	0.0286	0.006793
Zn	66	3	He	12.11	0.0438	1950.19	0.0034	0.00316
Zn	66	3	He	10.945	0.0399	1780.17	0.0034	0.00316
Zn	66	3	He	12.929	0.0466	2120.25	0.0034	0.00316
As	75	3	He	0.586	0.0023	104.00	0.0026	0.0008231
As	75	3	He	0.723	0.0027	120.00	0.0026	0.0008231
As	75	3	He	0.94	0.0033	148.00	0.0026	0.0008231
Sr	88	3	He	242.72	2.5606	103638.02	0.0105	0.001715
Sr	88	3	He	244.139	2.5756	105148.71	0.0105	0.001715
Sr	88	3	He	251.318	2.6512	107174.04	0.0105	0.001715
Mo	98	3	He	1.11	0.0314	1270.10	0.0275	0.0008555
Mo	98	3	He	1.02	0.0289	1180.09	0.0275	0.0008555
Mo	98	3	He	1.228	0.0346	1400.12	0.0275	0.0008555
Ag	107	3	He	0.009	0.001	40.00	0.0591	0.0004305
Ag	107	3	He	0.001	0.0005	20.00	0.0591	0.0004305
Ag	107	3	He	0.001	0.0005	20.00	0.0591	0.0004305
Cd	111	3	He	0	0	2.00	0.0066	5.141E-05
Cd	111	3	He	0.029	0.0002	10.00	0.0066	5.141E-05
Cd	111	3	He	0.015	0.0001	6.00	0.0066	5.141E-05
Sn	120	3	He	0.041	0.0193	780.05	0.0187	0.0185
Sn	120	3	He	0.006	0.0186	760.05	0.0187	0.0185
Sn	120	3	He	0.069	0.0198	800.05	0.0187	0.0185
Sb	121	3	He	0.169	0.0042	170.01	0.0183	0.00111
Sb	121	3	He	0.06	0.0022	90.00	0.0183	0.00111
Sb	121	3	He	0.196	0.0047	190.01	0.0183	0.00111
Ba	137	3	He	71.026	0.4168	16870.93	0.0059	0.0007704
Ba	137	3	He	69.032	0.4052	16540.51	0.0059	0.0007704
Ba	137	3	He	72.805	0.4273	17271.42	0.0059	0.0007704
Tl	205	3	He	0.066	0.0032	410.03	0.0364	0.000808
Tl	205	3	He	0.035	0.0021	270.01	0.0364	0.000808
Tl	205	3	He	0.063	0.0031	400.02	0.0364	0.000808
Pb	208	3	He	0.366	0.0211	1320.12	0.0487	0.003226
Pb	208	3	He	0.397	0.0226	1580.15	0.0487	0.003226
Pb	208	3	He	0.379	0.0217	1630.17	0.0487	0.003226
U	238	3	He	0.29	0.016	2050.26	0.0535	0.0004157
U	238	3	He	0.342	0.0187	2410.30	0.0535	0.0004157
U	238	3	He	0.371	0.0203	2630.35	0.0535	0.0004157
Sc	45	1	No Gas			1338266.07		
Sc	45	1	No Gas			1324024.36		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1320495.45		
Ge	72	1	No Gas			716164.60		
Ge	72	1	No Gas			713249.99		
Ge	72	1	No Gas			714379.68		
Sc	45	2	H2			92092.06		
Sc	45	2	H2			91467.49		
Sc	45	2	H2			92814.32		
Ge	72	2	H2			73238.35		
Ge	72	2	H2			76525.30		
Ge	72	2	H2			76555.13		
In	115	2	H2			187440.06		
In	115	2	H2			191831.91		
In	115	2	H2			191565.19		
Sc	45	3	He			24090.46		
Sc	45	3	He			24431.12		
Sc	45	3	He			22608.02		
Ge	72	3	He			44510.03		
Ge	72	3	He			44610.31		
Ge	72	3	He			45533.40		
In	115	3	He			40479.69		
In	115	3	He			40830.92		
In	115	3	He			40429.60		
Tb	159	3	He			178626.56		
Tb	159	3	He			179357.46		
Tb	159	3	He			178081.40		
Bi	209	3	He			128517.09		
Bi	209	3	He			128778.53		
Bi	209	3	He			129818.77		

Quantitation Report

Data File Name	084SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
Acq Time	9/19/2023 9:38:13 AM
Sample Name	410-142530-M-8-A
Sample Type	Sample
Comment	F6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

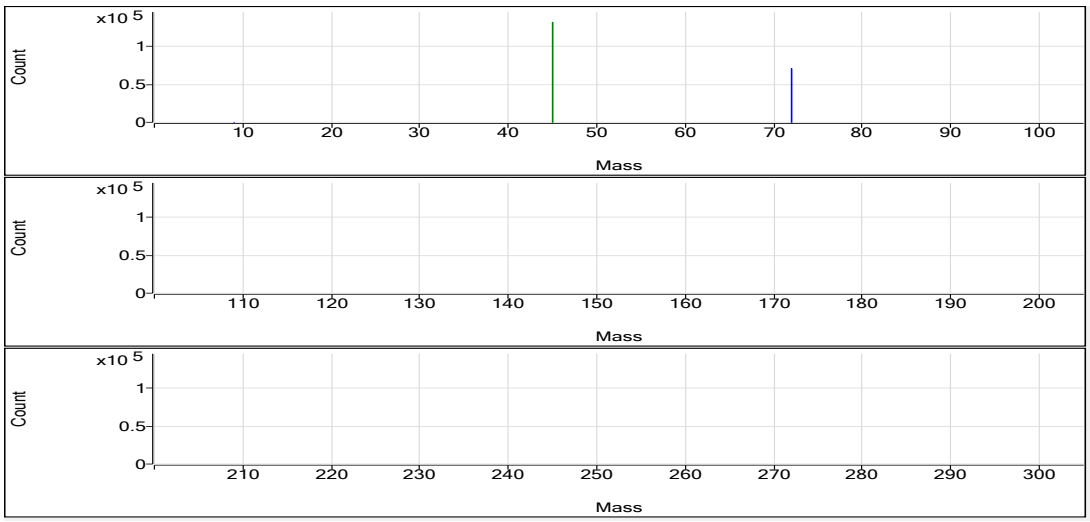
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.043	ppb	23.4	52.67	0.0000	Pulse	0.5000	3
Se	78	115	H2	0.723	ppb	18.8	29.56	0.0002	Pulse	1.5000	3
Na	23	45	He	84899.356	ppb	0.2	6830450.10	303.4224	Analog	0.1000	3
Mg	24	45	He	7255.996	ppb	0.4	297130.09	13.1991	Pulse	0.1000	3
Al	27	45	He	139.700	ppb	5.3	1810.31	0.0804	Pulse	0.1000	3
K	39	45	He	46360.754	ppb	2.5	1344066.23	59.7077	Analog	0.1000	3
Ca	44	45	He	171310.269	ppb	0.5	282745.13	12.5602	Pulse	0.1000	3
Ti	47	45	He	5.324	ppb	104.6	76.68	0.0034	Pulse	0.1000	3
V	51	45	He	1.034	ppb	4.2	1020.71	0.0453	Pulse	0.5000	3
Cr	52	45	He	0.654	ppb	65.5	2847.05	0.1265	Pulse	0.1000	3
Mn	55	45	He	89.900	ppb	3.8	28174.86	1.2516	Pulse	0.1000	3
Fe	57	45	He	1644.230	ppb	2.4	23660.03	1.0511	Pulse	0.1000	3
Co	59	45	He	0.723	ppb	7.5	1216.76	0.0540	Pulse	0.1000	3
Ni	60	72	He	4.026	ppb	9.9	2580.33	0.0574	Pulse	0.1000	3
Cu	63	72	He	0.459	ppb	6.2	896.73	0.0199	Pulse	0.1000	3
Zn	66	72	He	2.042	ppb	24.0	450.02	0.0100	Pulse	0.1000	3
As	75	72	He	8.922	ppb	7.1	1072.71	0.0239	Pulse	0.5000	3
Sr	88	115	He	905.217	ppb	1.1	385182.91	9.5450	Pulse	0.1000	3
Mo	98	115	He	13.558	ppb	1.2	15085.19	0.3738	Pulse	0.1000	3
Ag	107	115	He	0.001	ppb	382.6	20.00	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.025	ppb	75.8	8.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.233	ppb	N/A	570.03	0.0141	Pulse	0.1000	3
Sb	121	115	He	0.427	ppb	17.3	360.02	0.0089	Pulse	0.1000	3
Ba	137	115	He	66.722	ppb	2.4	15802.94	0.3916	Pulse	0.1000	3
Tl	205	209	He	0.047	ppb	32.6	330.02	0.0025	Pulse	0.1000	3
Pb	208	209	He	0.435	ppb	1.1	3210.28	0.0244	Pulse	0.1000	3
U	238	209	He	23.695	ppb	0.9	166458.14	1.2678	Pulse	0.1000	3

ISTD Table:

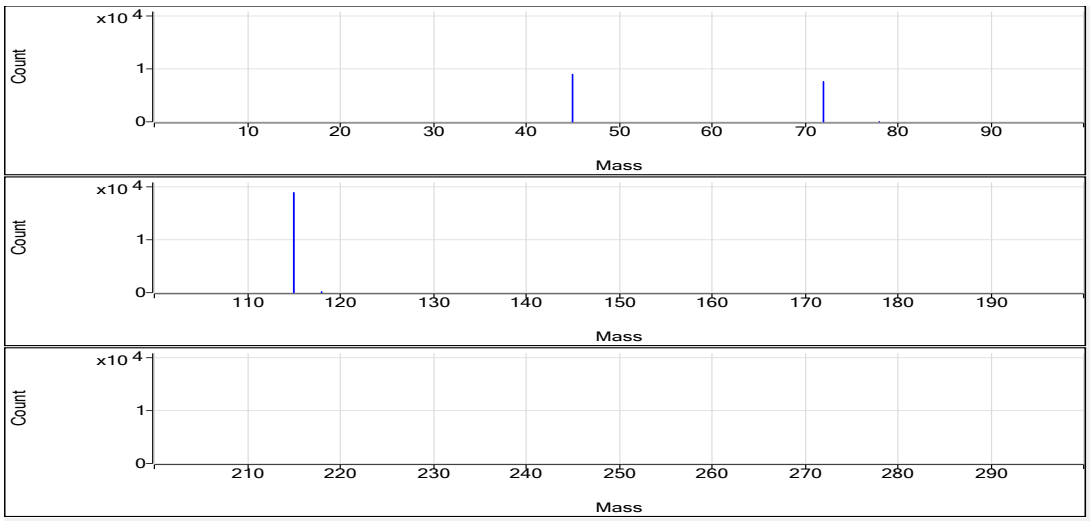
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1322127.90	1.4	99.1	Analog	0.1000	3
No Gas	Ge	72	710160.48	0.7	101.5	Pulse	0.1000	3
H2	Sc	45	90426.69	0.5	104.0	Pulse	0.1000	3
H2	Ge	72	76310.06	0.9	106.6	Pulse	0.1000	3
H2	In	115	189540.43	1.1	103.5	Pulse	0.1000	3
He	Sc	45	22511.42	0.2	97.9	Pulse	0.1000	3
He	Ge	72	44951.55	0.5	106.5	Pulse	0.1000	3
He	In	115	40355.58	0.6	103.7	Pulse	0.1000	3
He	Tb	159	179640.68	0.2	102.0	Pulse	0.1000	3
He	Bi	209	131303.10	0.8	102.4	Pulse	0.1000	3

No Gas

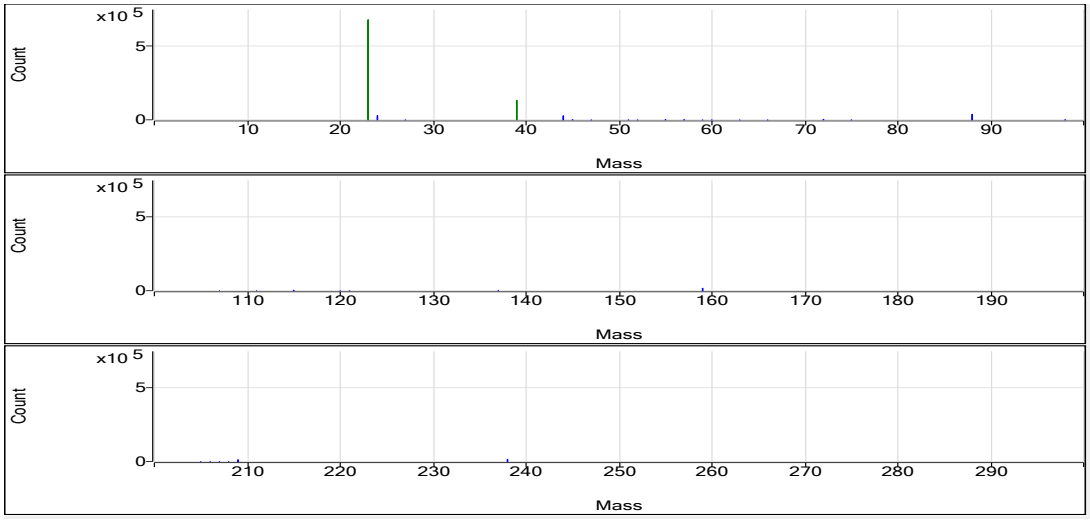


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.034	0	46.00	0.0005	1.901E-05
Be	9	1	No Gas	0.041	0	52.00	0.0005	1.901E-05
Be	9	1	No Gas	0.054	0	60.00	0.0005	1.901E-05
Se	78	2	H2	0.88	0.0002	36.00	0.0002	7.279E-06
Se	78	2	H2	0.648	0.0001	26.67	0.0002	7.279E-06
Se	78	2	H2	0.64	0.0001	26.00	0.0002	7.279E-06
Na	23	3	He	85075.159	304.0492	6837480.52	0.0036	0.7194
Na	23	3	He	84665.101	302.5872	6825810.52	0.0036	0.7194
Na	23	3	He	84957.809	303.6308	6828059.27	0.0036	0.7194
Mg	24	3	He	7280.639	13.2439	297829.33	0.0018	0.006791
Mg	24	3	He	7259.295	13.2051	297882.20	0.0018	0.006791
Mg	24	3	He	7228.052	13.1483	295678.73	0.0018	0.006791
Al	27	3	He	147.834	0.0849	1910.33	0.0006	0.002622
Al	27	3	He	137.797	0.0794	1790.19	0.0006	0.002622
Al	27	3	He	133.468	0.0769	1730.42	0.0006	0.002622
K	39	3	He	46580.193	59.9876	1349006.07	0.0013	0.5579
K	39	3	He	45087.771	58.0835	1310257.17	0.0013	0.5579
K	39	3	He	47414.299	61.0518	1372935.45	0.0013	0.5579
Ca	44	3	He	172096.215	12.6178	283748.98	0.0001	0.004062
Ca	44	3	He	170319.712	12.4875	281696.11	0.0001	0.004062
Ca	44	3	He	171514.879	12.5751	282790.29	0.0001	0.004062
Ti	47	3	He	1.038	0.0009	20.00	0.0006	0.0002809
Ti	47	3	He	11.621	0.0071	160.03	0.0006	0.0002809
Ti	47	3	He	3.314	0.0022	50.01	0.0006	0.0002809
V	51	3	He	1.083	0.0466	1048.05	0.0259	0.01861
V	51	3	He	1.002	0.0445	1004.04	0.0259	0.01861
V	51	3	He	1.017	0.0449	1010.04	0.0259	0.01861
Cr	52	3	He	0.569	0.1236	2780.36	0.0332	0.1047
Cr	52	3	He	1.118	0.1419	3200.47	0.0332	0.1047
Cr	52	3	He	0.274	0.1139	2560.31	0.0332	0.1047
Mn	55	3	He	87.143	1.2134	27286.33	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	88.793	1.2362	27887.30	0.0139	0.005074
Mn	55	3	He	93.765	1.3052	29350.94	0.0139	0.005074
Fe	57	3	He	1649.404	1.0543	23710.07	0.0006	0.00609
Fe	57	3	He	1601.636	1.024	23099.15	0.0006	0.00609
Fe	57	3	He	1681.649	1.0748	24170.87	0.0006	0.00609
Co	59	3	He	0.706	0.0529	1190.09	0.0661	0.00621
Co	59	3	He	0.784	0.0581	1310.11	0.0661	0.00621
Co	59	3	He	0.679	0.0511	1150.09	0.0661	0.00621
Ni	60	3	He	4.102	0.0582	2600.32	0.01	0.01721
Ni	60	3	He	3.593	0.0531	2390.31	0.01	0.01721
Ni	60	3	He	4.384	0.061	2750.35	0.01	0.01721
Cu	63	3	He	0.435	0.0192	860.05	0.0286	0.006793
Cu	63	3	He	0.453	0.0198	890.06	0.0286	0.006793
Cu	63	3	He	0.491	0.0208	940.07	0.0286	0.006793
Zn	66	3	He	2.457	0.0114	510.03	0.0034	0.00316
Zn	66	3	He	2.168	0.0104	470.02	0.0034	0.00316
Zn	66	3	He	1.502	0.0082	370.02	0.0034	0.00316
As	75	3	He	9.294	0.0248	1110.05	0.0026	0.0008231
As	75	3	He	8.194	0.022	990.04	0.0026	0.0008231
As	75	3	He	9.277	0.0248	1118.05	0.0026	0.0008231
Sr	88	3	He	908.748	9.5822	384187.38	0.0105	0.001715
Sr	88	3	He	894.235	9.4292	382610.62	0.0105	0.001715
Sr	88	3	He	912.668	9.6235	388750.74	0.0105	0.001715
Mo	98	3	He	13.659	0.3766	15098.59	0.0275	0.0008555
Mo	98	3	He	13.648	0.3763	15268.68	0.0275	0.0008555
Mo	98	3	He	13.367	0.3686	14888.29	0.0275	0.0008555
Ag	107	3	He	-0.003	0.0002	10.00	0.0591	0.0004305
Ag	107	3	He	0.001	0.0005	20.00	0.0591	0.0004305
Ag	107	3	He	0.005	0.0007	30.00	0.0591	0.0004305
Cd	111	3	He	0.022	0.0002	8.00	0.0066	5.141E-05
Cd	111	3	He	0.044	0.0003	14.00	0.0066	5.141E-05
Cd	111	3	He	0.007	0.0001	4.00	0.0066	5.141E-05
Sn	120	3	He	-0.016	0.0182	730.04	0.0187	0.0185
Sn	120	3	He	-0.422	0.0106	430.02	0.0187	0.0185
Sn	120	3	He	-0.261	0.0136	550.03	0.0187	0.0185
Sb	121	3	He	0.416	0.0087	350.02	0.0183	0.00111
Sb	121	3	He	0.505	0.0104	420.02	0.0183	0.00111
Sb	121	3	He	0.359	0.0077	310.02	0.0183	0.00111
Ba	137	3	He	68.504	0.4021	16119.98	0.0059	0.0007704
Ba	137	3	He	66.339	0.3894	15799.68	0.0059	0.0007704
Ba	137	3	He	65.325	0.3834	15489.16	0.0059	0.0007704
Tl	205	3	He	0.061	0.003	400.02	0.0364	0.000808
Tl	205	3	He	0.031	0.0019	250.01	0.0364	0.000808
Tl	205	3	He	0.049	0.0026	340.02	0.0364	0.000808
Pb	208	3	He	0.441	0.0247	1610.16	0.0487	0.003226
Pb	208	3	He	0.432	0.0243	1850.20	0.0487	0.003226
Pb	208	3	He	0.433	0.0244	1900.19	0.0487	0.003226
U	238	3	He	23.48	1.2563	166210.66	0.0535	0.0004157
U	238	3	He	23.91	1.2793	166555.99	0.0535	0.0004157
U	238	3	He	23.695	1.2678	166607.77	0.0535	0.0004157
Sc	45	1	No Gas			1300436.07		
Sc	45	1	No Gas			1333287.01		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1332660.61		
Ge	72	1	No Gas			705283.66		
Ge	72	1	No Gas			715179.75		
Ge	72	1	No Gas			710018.04		
Sc	45	2	H2			90731.92		
Sc	45	2	H2			89927.38		
Sc	45	2	H2			90620.76		
Ge	72	2	H2			75821.24		
Ge	72	2	H2			77107.55		
Ge	72	2	H2			76001.39		
In	115	2	H2			191401.13		
In	115	2	H2			190014.84		
In	115	2	H2			187205.33		
Sc	45	3	He			22488.07		
Sc	45	3	He			22558.16		
Sc	45	3	He			22488.03		
Ge	72	3	He			44710.77		
Ge	72	3	He			45031.69		
Ge	72	3	He			45112.18		
In	115	3	He			40098.90		
In	115	3	He			40580.16		
In	115	3	He			40399.66		
Tb	159	3	He			179814.20		
Tb	159	3	He			179864.00		
Tb	159	3	He			179243.83		
Bi	209	3	He			132302.48		
Bi	209	3	He			130192.26		
Bi	209	3	He			131414.55		

Quantitation Report

Data File Name	085SMPL.d
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Acq Time	9/19/2023 9:40:12 AM
Sample Name	410-142530-M-7-A
Sample Type	Sample
Comment	F6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

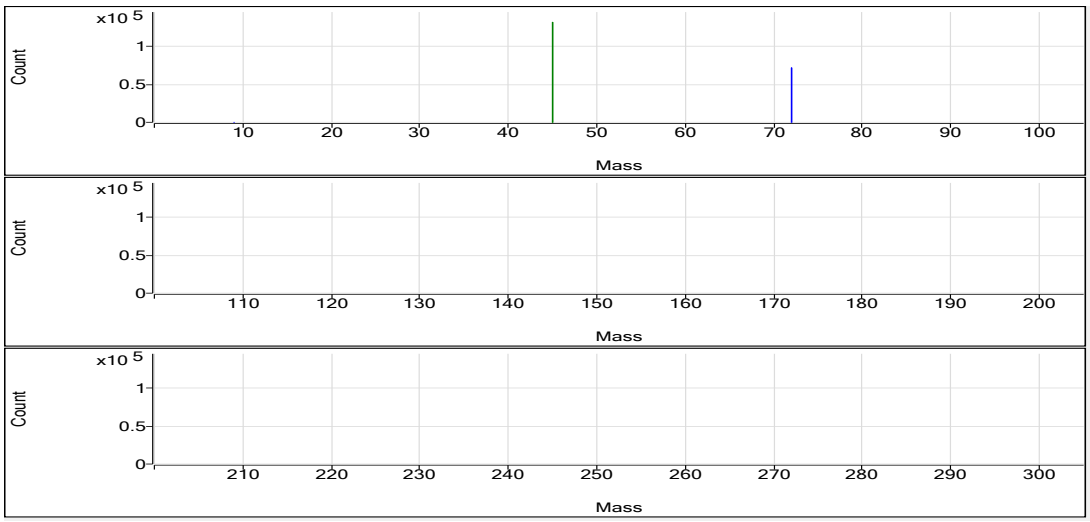
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.022	ppb	68.4	39.33	0.0000	Pulse	0.5000	3
Se	78	115	H2	0.038	ppb	27.0	2.89	0.0000	Pulse	1.5000	3
Na	23	45	He	7612.481	ppb	1.1	658781.22	27.8612	Pulse	0.1000	3
Mg	24	45	He	2064.843	ppb	1.6	88927.00	3.7609	Pulse	0.1000	3
Al	27	45	He	10.722	ppb	20.7	203.34	0.0086	Pulse	0.1000	3
K	39	45	He	1346.841	ppb	3.1	53819.33	2.2763	Pulse	0.1000	3
Ca	44	45	He	99181.252	ppb	0.4	171991.62	7.2735	Pulse	0.1000	3
Ti	47	45	He	0.485	ppb	88.0	13.33	0.0006	Pulse	0.1000	3
V	51	45	He	0.128	ppb	22.4	518.01	0.0219	Pulse	0.5000	3
Cr	52	45	He	0.025	ppb	707.4	2496.97	0.1056	Pulse	0.1000	3
Mn	55	45	He	25.808	ppb	5.1	8579.54	0.3629	Pulse	0.1000	3
Fe	57	45	He	1547.291	ppb	0.7	23396.23	0.9894	Pulse	0.1000	3
Co	59	45	He	0.047	ppb	91.8	220.01	0.0093	Pulse	0.1000	3
Ni	60	72	He	0.046	ppb	533.2	806.72	0.0177	Pulse	0.1000	3
Cu	63	72	He	0.125	ppb	51.9	473.36	0.0104	Pulse	0.1000	3
Zn	66	72	He	2.146	ppb	10.2	473.36	0.0104	Pulse	0.1000	3
As	75	72	He	0.077	ppb	135.5	46.67	0.0010	Pulse	0.5000	3
Sr	88	115	He	329.364	ppb	3.1	142154.68	3.4740	Pulse	0.1000	3
Mo	98	115	He	0.321	ppb	4.8	396.69	0.0097	Pulse	0.1000	3
Ag	107	115	He	0.005	ppb	145.9	30.00	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.009	ppb	192.9	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.177	ppb	N/A	623.37	0.0152	Pulse	0.1000	3
Sb	121	115	He	0.066	ppb	143.6	93.34	0.0023	Pulse	0.1000	3
Ba	137	115	He	25.572	ppb	5.7	6171.60	0.1506	Pulse	0.1000	3
Tl	205	209	He	0.014	ppb	35.2	173.34	0.0013	Pulse	0.1000	3
Pb	208	209	He	0.018	ppb	24.1	543.35	0.0041	Pulse	0.1000	3
U	238	209	He	0.033	ppb	23.0	290.01	0.0022	Pulse	0.1000	3

ISTD Table:

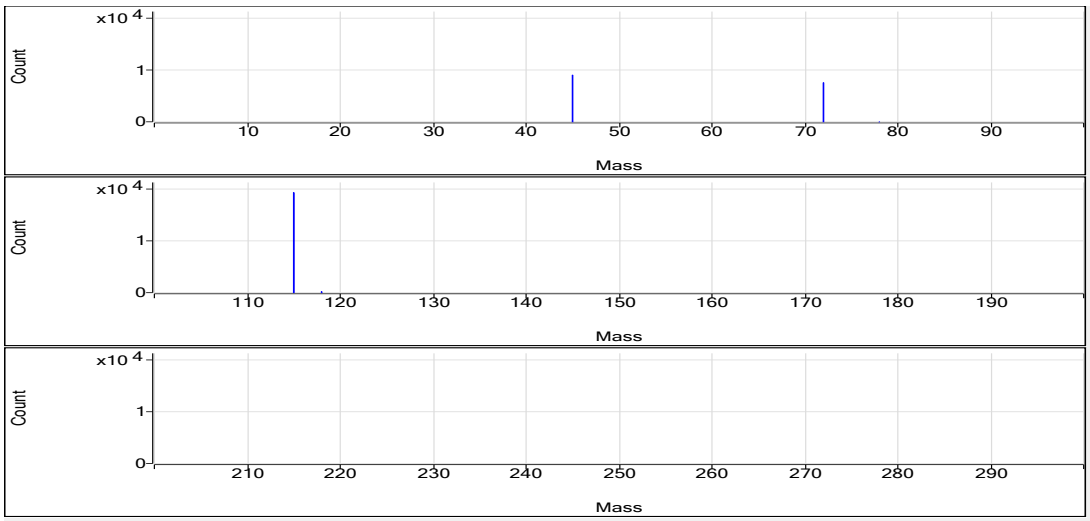
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1318720.95	1.0	98.8	Analog	0.1000	3
No Gas	Ge	72	718589.75	0.5	102.7	Pulse	0.1000	3
H2	Sc	45	90209.08	1.0	103.8	Pulse	0.1000	3
H2	Ge	72	75455.90	0.8	105.4	Pulse	0.1000	3
H2	In	115	192882.81	0.9	105.3	Pulse	0.1000	3
He	Sc	45	23646.59	0.8	102.8	Pulse	0.1000	3
He	Ge	72	45683.55	1.0	108.2	Pulse	0.1000	3
He	In	115	40943.58	3.2	105.2	Pulse	0.1000	3
He	Tb	159	178469.28	1.1	101.4	Pulse	0.1000	3
He	Bi	209	132649.68	1.5	103.5	Pulse	0.1000	3

No Gas

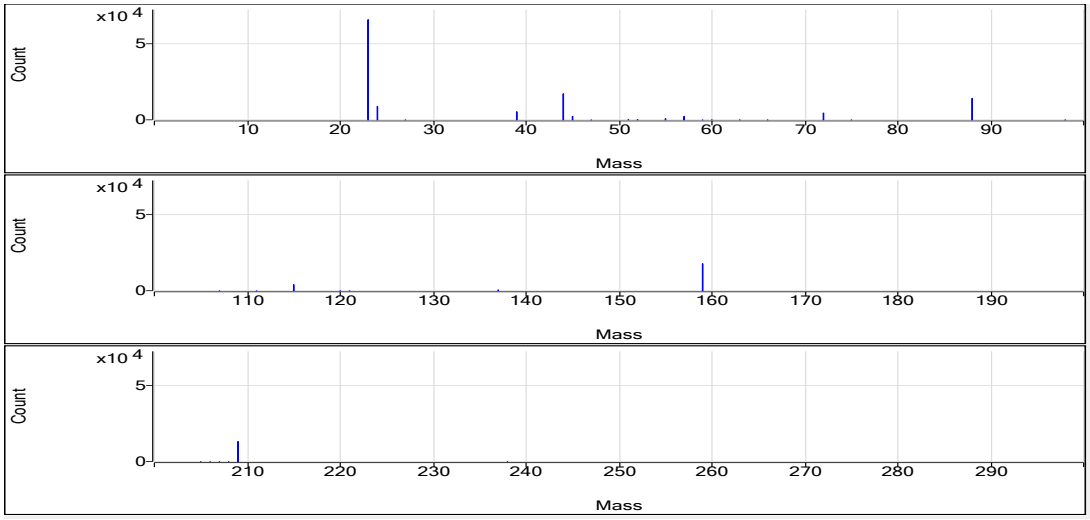


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.02	0	38.00	0.0005	1.901E-05
Be	9	1	No Gas	0.039	0	50.00	0.0005	1.901E-05
Be	9	1	No Gas	0.008	0	30.00	0.0005	1.901E-05
Se	78	2	H2	0.049	0	3.33	0.0002	7.279E-06
Se	78	2	H2	0.032	0	2.67	0.0002	7.279E-06
Se	78	2	H2	0.031	0	2.67	0.0002	7.279E-06
Na	23	3	He	7709.952	28.2087	660635.38	0.0036	0.7194
Na	23	3	He	7573.174	27.721	657821.40	0.0036	0.7194
Na	23	3	He	7554.318	27.6538	657886.87	0.0036	0.7194
Mg	24	3	He	2097.503	3.8203	89470.01	0.0018	0.006791
Mg	24	3	He	2032.243	3.7017	87840.58	0.0018	0.006791
Mg	24	3	He	2064.784	3.7608	89470.40	0.0018	0.006791
Al	27	3	He	8.327	0.0073	170.01	0.0006	0.002622
Al	27	3	He	12.696	0.0097	230.01	0.0006	0.002622
Al	27	3	He	11.143	0.0088	210.01	0.0006	0.002622
K	39	3	He	1386.432	2.3268	54491.91	0.0013	0.5579
K	39	3	He	1350.628	2.2811	54130.33	0.0013	0.5579
K	39	3	He	1303.463	2.2209	52835.75	0.0013	0.5579
Ca	44	3	He	99325.912	7.2841	170590.52	0.0001	0.004062
Ca	44	3	He	99495.333	7.2965	173146.83	0.0001	0.004062
Ca	44	3	He	98722.51	7.2399	172237.50	0.0001	0.004062
Ti	47	3	He	0.977	0.0009	20.00	0.0006	0.0002809
Ti	47	3	He	0.24	0.0004	10.00	0.0006	0.0002809
Ti	47	3	He	0.238	0.0004	10.00	0.0006	0.0002809
V	51	3	He	0.149	0.0225	526.01	0.0259	0.01861
V	51	3	He	0.095	0.0211	500.01	0.0259	0.01861
V	51	3	He	0.139	0.0222	528.01	0.0259	0.01861
Cr	52	3	He	-0.029	0.1038	2430.31	0.0332	0.1047
Cr	52	3	He	-0.121	0.1007	2390.26	0.0332	0.1047
Cr	52	3	He	0.226	0.1122	2670.34	0.0332	0.1047
Mn	55	3	He	27.082	0.3806	8913.09	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	25.902	0.3642	8642.95	0.0139	0.005074
Mn	55	3	He	24.44	0.3439	8182.57	0.0139	0.005074
Fe	57	3	He	1558.523	0.9966	23339.54	0.0006	0.00609
Fe	57	3	He	1537.332	0.9831	23329.38	0.0006	0.00609
Fe	57	3	He	1546.019	0.9886	23519.76	0.0006	0.00609
Co	59	3	He	0.093	0.0124	290.02	0.0661	0.00621
Co	59	3	He	0.008	0.0067	160.01	0.0661	0.00621
Co	59	3	He	0.04	0.0088	210.01	0.0661	0.00621
Ni	60	3	He	-0.009	0.0171	790.05	0.01	0.01721
Ni	60	3	He	0.315	0.0203	920.06	0.01	0.01721
Ni	60	3	He	-0.167	0.0155	710.05	0.01	0.01721
Cu	63	3	He	0.179	0.0119	550.03	0.0286	0.006793
Cu	63	3	He	0.141	0.0108	490.03	0.0286	0.006793
Cu	63	3	He	0.053	0.0083	380.02	0.0286	0.006793
Zn	66	3	He	1.899	0.0095	440.03	0.0034	0.00316
Zn	66	3	He	2.221	0.0106	480.03	0.0034	0.00316
Zn	66	3	He	2.318	0.0109	500.03	0.0034	0.00316
As	75	3	He	-0.017	0.0008	36.00	0.0026	0.0008231
As	75	3	He	0.058	0.001	44.00	0.0026	0.0008231
As	75	3	He	0.19	0.0013	60.00	0.0026	0.0008231
Sr	88	3	He	321.584	3.392	140492.96	0.0105	0.001715
Sr	88	3	He	325.771	3.4362	144177.81	0.0105	0.001715
Sr	88	3	He	340.738	3.594	141793.26	0.0105	0.001715
Mo	98	3	He	0.338	0.0101	420.03	0.0275	0.0008555
Mo	98	3	He	0.307	0.0093	390.02	0.0275	0.0008555
Mo	98	3	He	0.319	0.0096	380.02	0.0275	0.0008555
Ag	107	3	He	0.001	0.0005	20.00	0.0591	0.0004305
Ag	107	3	He	0.001	0.0005	20.00	0.0591	0.0004305
Ag	107	3	He	0.014	0.0013	50.00	0.0591	0.0004305
Cd	111	3	He	0.029	0.0002	10.00	0.0066	5.141E-05
Cd	111	3	He	-0.008	0	0.00	0.0066	5.141E-05
Cd	111	3	He	0.008	0.0001	4.00	0.0066	5.141E-05
Sn	120	3	He	-0.279	0.0133	550.04	0.0187	0.0185
Sn	120	3	He	-0.008	0.0184	770.05	0.0187	0.0185
Sn	120	3	He	-0.244	0.0139	550.03	0.0187	0.0185
Sb	121	3	He	0.005	0.0012	50.00	0.0183	0.00111
Sb	121	3	He	0.017	0.0014	60.00	0.0183	0.00111
Sb	121	3	He	0.175	0.0043	170.01	0.0183	0.00111
Ba	137	3	He	25.346	0.1492	6181.61	0.0059	0.0007704
Ba	137	3	He	27.135	0.1597	6701.82	0.0059	0.0007704
Ba	137	3	He	24.235	0.1427	5631.37	0.0059	0.0007704
Tl	205	3	He	0.013	0.0013	170.01	0.0364	0.000808
Tl	205	3	He	0.019	0.0015	200.01	0.0364	0.000808
Tl	205	3	He	0.009	0.0012	150.01	0.0364	0.000808
Pb	208	3	He	0.015	0.004	350.02	0.0487	0.003226
Pb	208	3	He	0.023	0.0043	220.01	0.0487	0.003226
Pb	208	3	He	0.016	0.004	320.02	0.0487	0.003226
U	238	3	He	0.024	0.0017	230.01	0.0535	0.0004157
U	238	3	He	0.037	0.0024	320.01	0.0535	0.0004157
U	238	3	He	0.038	0.0025	320.02	0.0535	0.0004157
Sc	45	1	No Gas			1323935.45		
Sc	45	1	No Gas			1328613.11		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1303614.28		
Ge	72	1	No Gas			722408.97		
Ge	72	1	No Gas			716802.25		
Ge	72	1	No Gas			716558.04		
Sc	45	2	H2			89816.74		
Sc	45	2	H2			89614.94		
Sc	45	2	H2			91195.57		
Ge	72	2	H2			76163.12		
Ge	72	2	H2			75277.60		
Ge	72	2	H2			74926.99		
In	115	2	H2			191453.20		
In	115	2	H2			192346.34		
In	115	2	H2			194848.90		
Sc	45	3	He			23419.58		
Sc	45	3	He			23730.07		
Sc	45	3	He			23790.13		
Ge	72	3	He			46145.23		
Ge	72	3	He			45212.15		
Ge	72	3	He			45693.28		
In	115	3	He			41422.43		
In	115	3	He			41964.33		
In	115	3	He			39457.08		
Tb	159	3	He			176722.95		
Tb	159	3	He			180563.43		
Tb	159	3	He			178121.46		
Bi	209	3	He			133808.16		
Bi	209	3	He			133756.29		
Bi	209	3	He			130384.58		

Quantitation Report

Data File Name	086SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
Acq Time	9/19/2023 9:42:11 AM
Sample Name	410-142530-M-6-A
Sample Type	Sample
Comment	F6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

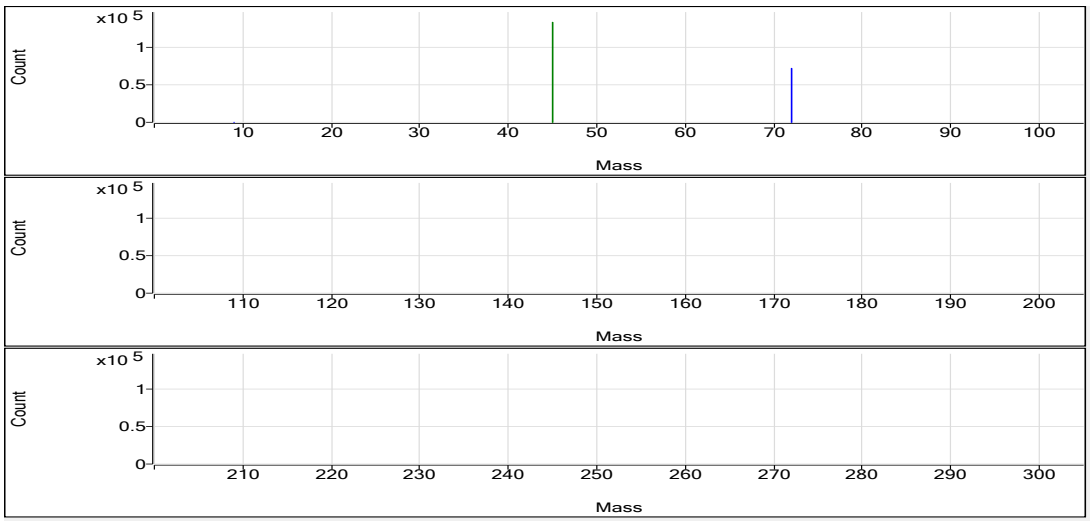
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.313	ppb	4.7	228.00	0.0002	Pulse	0.5000	3
Se	78	115	H2	0.162	ppb	24.0	7.78	0.0000	Pulse	1.5000	3
Na	23	45	He	11178.473	ppb	2.4	986720.66	40.5755	Pulse	0.1000	3
Mg	24	45	He	4717.085	ppb	2.4	208723.48	8.5830	Pulse	0.1000	3
Al	27	45	He	1663.975	ppb	2.5	22600.88	0.9293	Pulse	0.1000	3
K	39	45	He	2529.516	ppb	5.1	92034.77	3.7852	Pulse	0.1000	3
Ca	44	45	He	39714.035	ppb	3.8	70882.70	2.9149	Pulse	0.1000	3
Ti	47	45	He	22.706	ppb	35.1	330.03	0.0136	Pulse	0.1000	3
V	51	45	He	4.517	ppb	1.3	3293.73	0.1354	Pulse	0.5000	3
Cr	52	45	He	3.771	ppb	5.1	5594.60	0.2300	Pulse	0.1000	3
Mn	55	45	He	143.299	ppb	0.7	48451.60	1.9920	Pulse	0.1000	3
Fe	57	45	He	22078.321	ppb	1.8	341388.00	14.0376	Pulse	0.1000	3
Co	59	45	He	1.133	ppb	7.2	1973.53	0.0812	Pulse	0.1000	3
Ni	60	72	He	2.677	ppb	16.5	1983.55	0.0439	Pulse	0.1000	3
Cu	63	72	He	1.679	ppb	6.0	2476.95	0.0549	Pulse	0.1000	3
Zn	66	72	He	23.136	ppb	6.7	3650.59	0.0808	Pulse	0.1000	3
As	75	72	He	2.042	ppb	11.5	275.34	0.0061	Pulse	0.5000	3
Sr	88	115	He	156.199	ppb	1.9	66908.13	1.6484	Pulse	0.1000	3
Mo	98	115	He	0.366	ppb	59.9	443.41	0.0109	Pulse	0.1000	3
Ag	107	115	He	0.008	ppb	80.2	36.67	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.020	ppb	24.4	7.33	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.033	ppb	N/A	726.72	0.0179	Pulse	0.1000	3
Sb	121	115	He	0.304	ppb	29.0	270.01	0.0067	Pulse	0.1000	3
Ba	137	115	He	61.563	ppb	3.7	14665.07	0.3614	Pulse	0.1000	3
Tl	205	209	He	0.048	ppb	11.1	336.69	0.0026	Pulse	0.1000	3
Pb	208	209	He	4.827	ppb	4.5	31415.95	0.2385	Pulse	0.1000	3
U	238	209	He	0.658	ppb	6.3	4687.74	0.0356	Pulse	0.1000	3

ISTD Table:

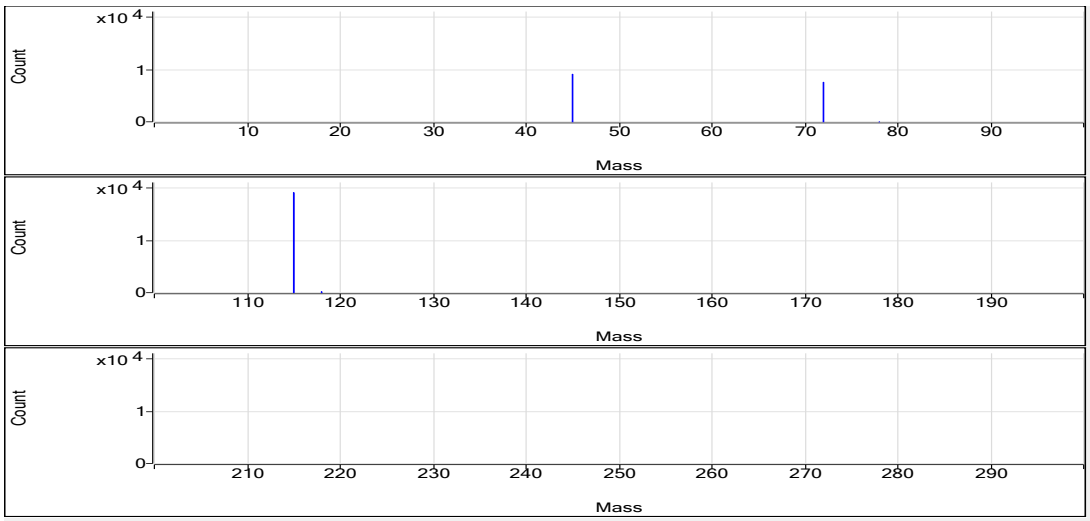
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1339150.87	1.8	100.3	Analog	0.1000	3
No Gas	Ge	72	722910.51	1.0	103.4	Pulse	0.1000	3
H2	Sc	45	91560.74	1.0	105.3	Pulse	0.1000	3
H2	Ge	72	76115.92	0.1	106.3	Pulse	0.1000	3
H2	In	115	192129.60	0.8	104.9	Pulse	0.1000	3
He	Sc	45	24324.32	1.6	105.7	Pulse	0.1000	3
He	Ge	72	45158.54	0.4	107.0	Pulse	0.1000	3
He	In	115	40598.45	2.0	104.3	Pulse	0.1000	3
He	Tb	159	180733.02	1.2	102.6	Pulse	0.1000	3
He	Bi	209	131743.72	1.0	102.7	Pulse	0.1000	3

No Gas

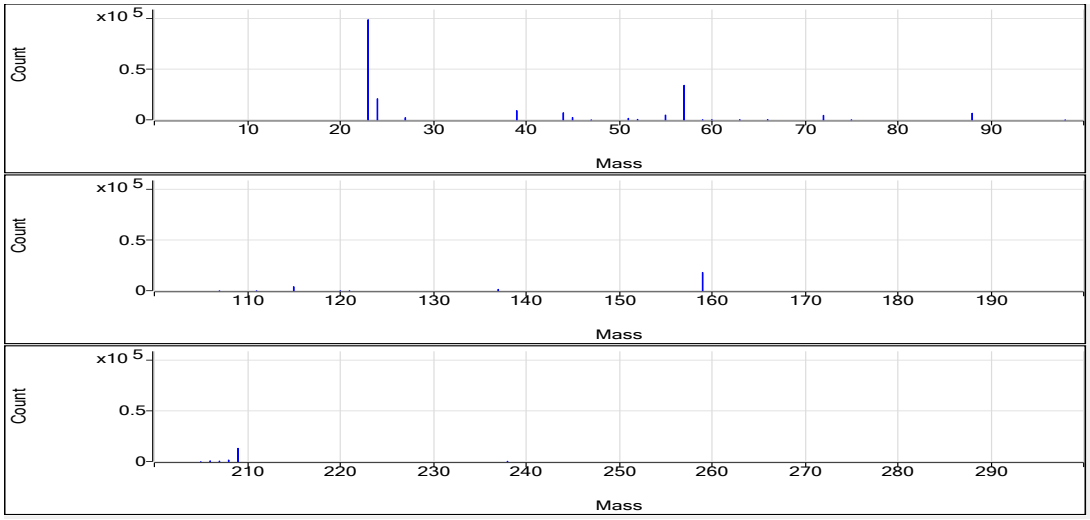


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.302	0.0002	216.00	0.0005	1.901E-05
Be	9	1	No Gas	0.33	0.0002	240.00	0.0005	1.901E-05
Be	9	1	No Gas	0.308	0.0002	228.00	0.0005	1.901E-05
Se	78	2	H2	0.186	0	8.67	0.0002	7.279E-06
Se	78	2	H2	0.117	0	6.00	0.0002	7.279E-06
Se	78	2	H2	0.182	0	8.67	0.0002	7.279E-06
Na	23	3	He	11396.357	41.3523	989990.92	0.0036	0.7194
Na	23	3	He	11266.278	40.8885	993633.27	0.0036	0.7194
Na	23	3	He	10872.782	39.4855	976537.80	0.0036	0.7194
Mg	24	3	He	4833.1	8.794	210530.82	0.0018	0.006791
Mg	24	3	He	4706.297	8.5634	208099.78	0.0018	0.006791
Mg	24	3	He	4611.857	8.3917	207539.84	0.0018	0.006791
Al	27	3	He	1705.394	0.9523	22799.08	0.0006	0.002622
Al	27	3	He	1622.328	0.9061	22018.40	0.0006	0.002622
Al	27	3	He	1664.201	0.9294	22985.16	0.0006	0.002622
K	39	3	He	2677.736	3.9743	95146.07	0.0013	0.5579
K	39	3	He	2460.222	3.6968	89835.36	0.0013	0.5579
K	39	3	He	2450.589	3.6845	91122.87	0.0013	0.5579
Ca	44	3	He	41394.048	3.038	72731.30	0.0001	0.004062
Ca	44	3	He	38505.596	2.8263	68682.19	0.0001	0.004062
Ca	44	3	He	39242.462	2.8803	71234.62	0.0001	0.004062
Ti	47	3	He	30.873	0.0184	440.05	0.0006	0.0002809
Ti	47	3	He	14.963	0.0091	220.01	0.0006	0.0002809
Ti	47	3	He	22.282	0.0133	330.03	0.0006	0.0002809
V	51	3	He	4.544	0.1361	3258.39	0.0259	0.01861
V	51	3	He	4.558	0.1365	3316.40	0.0259	0.01861
V	51	3	He	4.45	0.1337	3306.41	0.0259	0.01861
Cr	52	3	He	3.891	0.234	5601.25	0.0332	0.1047
Cr	52	3	He	3.551	0.2227	5411.18	0.0332	0.1047
Cr	52	3	He	3.872	0.2334	5771.37	0.0332	0.1047
Mn	55	3	He	144.387	2.0071	48050.61	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	142.625	1.9827	48180.49	0.0139	0.005074
Mn	55	3	He	142.886	1.9863	49123.70	0.0139	0.005074
Fe	57	3	He	22519.59	14.318	342779.06	0.0006	0.00609
Fe	57	3	He	21996.61	13.9856	339865.62	0.0006	0.00609
Fe	57	3	He	21718.763	13.8091	341519.33	0.0006	0.00609
Co	59	3	He	1.138	0.0815	1950.20	0.0661	0.00621
Co	59	3	He	1.213	0.0864	2100.22	0.0661	0.00621
Co	59	3	He	1.049	0.0756	1870.18	0.0661	0.00621
Ni	60	3	He	2.595	0.0431	1950.22	0.01	0.01721
Ni	60	3	He	2.282	0.04	1810.18	0.01	0.01721
Ni	60	3	He	3.155	0.0487	2190.24	0.01	0.01721
Cu	63	3	He	1.57	0.0517	2340.25	0.0286	0.006793
Cu	63	3	He	1.699	0.0554	2510.31	0.0286	0.006793
Cu	63	3	He	1.767	0.0574	2580.30	0.0286	0.006793
Zn	66	3	He	22.374	0.0783	3540.56	0.0034	0.00316
Zn	66	3	He	24.92	0.0868	3930.67	0.0034	0.00316
Zn	66	3	He	22.112	0.0774	3480.54	0.0034	0.00316
As	75	3	He	1.838	0.0056	252.00	0.0026	0.0008231
As	75	3	He	2.298	0.0068	306.01	0.0026	0.0008231
As	75	3	He	1.989	0.006	268.00	0.0026	0.0008231
Sr	88	3	He	158.63	1.6741	67320.11	0.0105	0.001715
Sr	88	3	He	157.166	1.6586	66435.93	0.0105	0.001715
Sr	88	3	He	152.8	1.6126	66968.36	0.0105	0.001715
Mo	98	3	He	0.611	0.0177	710.21	0.0275	0.0008555
Mo	98	3	He	0.187	0.006	240.01	0.0275	0.0008555
Mo	98	3	He	0.302	0.0092	380.02	0.0275	0.0008555
Ag	107	3	He	0.001	0.0005	20.00	0.0591	0.0004305
Ag	107	3	He	0.014	0.0012	50.00	0.0591	0.0004305
Ag	107	3	He	0.009	0.001	40.00	0.0591	0.0004305
Cd	111	3	He	0.022	0.0002	8.00	0.0066	5.141E-05
Cd	111	3	He	0.022	0.0002	8.00	0.0066	5.141E-05
Cd	111	3	He	0.014	0.0001	6.00	0.0066	5.141E-05
Sn	120	3	He	0.127	0.0209	840.06	0.0187	0.0185
Sn	120	3	He	-0.215	0.0145	580.03	0.0187	0.0185
Sn	120	3	He	-0.011	0.0183	760.06	0.0187	0.0185
Sb	121	3	He	0.361	0.0077	310.01	0.0183	0.00111
Sb	121	3	He	0.349	0.0075	300.01	0.0183	0.00111
Sb	121	3	He	0.202	0.0048	200.01	0.0183	0.00111
Ba	137	3	He	62.69	0.368	14798.56	0.0059	0.0007704
Ba	137	3	He	63.067	0.3702	14828.50	0.0059	0.0007704
Ba	137	3	He	58.932	0.346	14368.14	0.0059	0.0007704
Tl	205	3	He	0.042	0.0023	310.02	0.0364	0.000808
Tl	205	3	He	0.052	0.0027	350.02	0.0364	0.000808
Tl	205	3	He	0.051	0.0027	350.02	0.0364	0.000808
Pb	208	3	He	4.58	0.2265	15730.11	0.0487	0.003226
Pb	208	3	He	4.988	0.2464	16661.01	0.0487	0.003226
Pb	208	3	He	4.911	0.2426	17272.16	0.0487	0.003226
U	238	3	He	0.61	0.033	4390.96	0.0535	0.0004157
U	238	3	He	0.687	0.0371	4841.18	0.0535	0.0004157
U	238	3	He	0.676	0.0366	4831.08	0.0535	0.0004157
Sc	45	1	No Gas			1312735.92		
Sc	45	1	No Gas			1346246.54		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1358470.14		
Ge	72	1	No Gas			714374.29		
Ge	72	1	No Gas			727301.86		
Ge	72	1	No Gas			727055.38		
Sc	45	2	H2			91587.88		
Sc	45	2	H2			90611.18		
Sc	45	2	H2			92483.16		
Ge	72	2	H2			76011.66		
Ge	72	2	H2			76123.35		
Ge	72	2	H2			76212.76		
In	115	2	H2			190813.57		
In	115	2	H2			191759.80		
In	115	2	H2			193815.43		
Sc	45	3	He			23940.40		
Sc	45	3	He			24301.03		
Sc	45	3	He			24731.53		
Ge	72	3	He			45232.18		
Ge	72	3	He			45272.12		
Ge	72	3	He			44971.33		
In	115	3	He			40219.13		
In	115	3	He			40058.44		
In	115	3	He			41533.05		
Tb	159	3	He			181486.79		
Tb	159	3	He			178324.86		
Tb	159	3	He			182387.40		
Bi	209	3	He			132858.82		
Bi	209	3	He			130342.63		
Bi	209	3	He			132029.70		

Quantitation Report

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Acq Time	9/19/2023 9:44:09 AM
Sample Name	410-142837-H-2-A
Sample Type	Sample
Comment	F6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

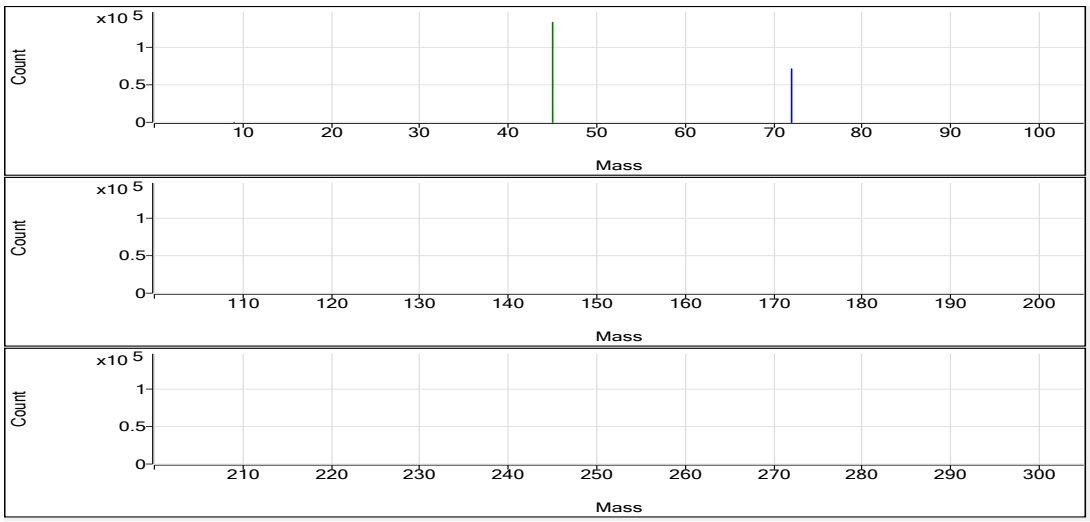
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.468	ppb	8.1	325.34	0.0002	Pulse	0.5000	3
Se	78	115	H2	0.163	ppb	12.5	7.78	0.0000	Pulse	1.5000	3
Na	23	45	He	2017.891	ppb	1.7	189278.81	7.9140	Pulse	0.1000	3
Mg	24	45	He	3580.617	ppb	2.2	155852.08	6.5168	Pulse	0.1000	3
Al	27	45	He	1514.310	ppb	10.4	20238.24	0.8459	Pulse	0.1000	3
K	39	45	He	860.108	ppb	7.7	39575.13	1.6553	Pulse	0.1000	3
Ca	44	45	He	3016.618	ppb	3.7	5384.48	0.2252	Pulse	0.1000	3
Ti	47	45	He	17.879	ppb	31.1	256.72	0.0108	Pulse	0.1000	3
V	51	45	He	1.585	ppb	3.5	1426.09	0.0596	Pulse	0.5000	3
Cr	52	45	He	3.058	ppb	5.6	4934.34	0.2063	Pulse	0.1000	3
Mn	55	45	He	205.742	ppb	1.3	68352.08	2.8578	Pulse	0.1000	3
Fe	57	45	He	1246.078	ppb	7.3	19100.25	0.7980	Pulse	0.1000	3
Co	59	45	He	4.285	ppb	5.0	6925.25	0.2896	Pulse	0.1000	3
Ni	60	72	He	10.045	ppb	3.0	5287.81	0.1175	Pulse	0.1000	3
Cu	63	72	He	7.987	ppb	2.3	10597.57	0.2355	Pulse	0.1000	3
Zn	66	72	He	33.991	ppb	3.4	5277.81	0.1173	Pulse	0.1000	3
As	75	72	He	0.123	ppb	67.9	51.33	0.0011	Pulse	0.5000	3
Sr	88	115	He	33.799	ppb	2.5	14290.96	0.3580	Pulse	0.1000	3
Mo	98	115	He	0.305	ppb	27.8	370.02	0.0093	Pulse	0.1000	3
Ag	107	115	He	0.044	ppb	20.5	120.00	0.0030	Pulse	0.1000	3
Cd	111	115	He	0.153	ppb	16.5	42.67	0.0011	Pulse	0.5000	3
Sn	120	115	He	-0.172	ppb	N/A	610.04	0.0153	Pulse	0.1000	3
Sb	121	115	He	0.656	ppb	3.3	523.36	0.0131	Pulse	0.1000	3
Ba	137	115	He	56.016	ppb	2.0	13126.89	0.3289	Pulse	0.1000	3
Tl	205	209	He	0.037	ppb	39.9	283.35	0.0022	Pulse	0.1000	3
Pb	208	209	He	0.733	ppb	5.1	5110.61	0.0389	Pulse	0.1000	3
U	238	209	He	0.040	ppb	14.2	333.35	0.0025	Pulse	0.1000	3

ISTD Table:

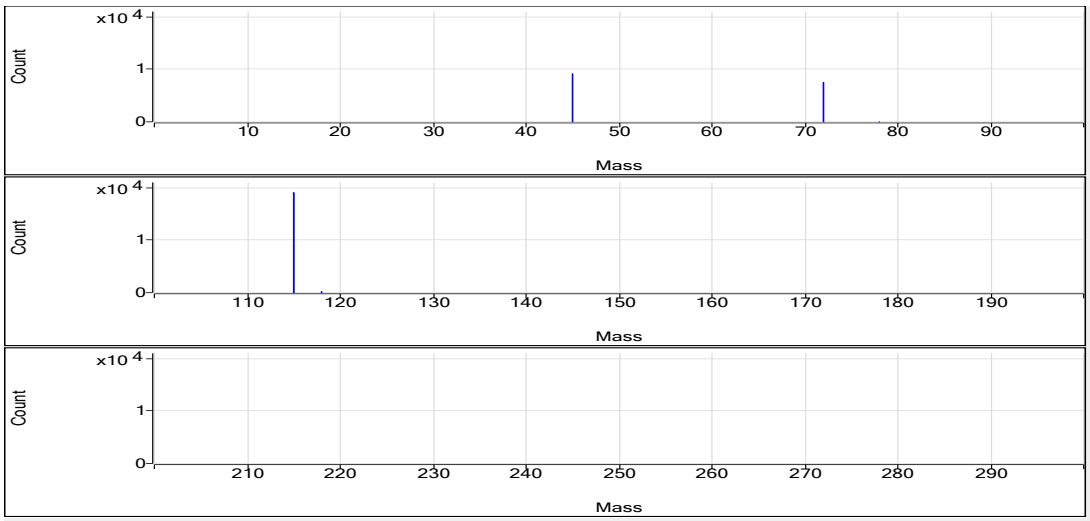
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1329045.19	0.4	99.6	Analog	0.1000	3
No Gas	Ge	72	709836.37	0.7	101.5	Pulse	0.1000	3
H2	Sc	45	91779.14	1.1	105.6	Pulse	0.1000	3
H2	Ge	72	75677.07	1.6	105.7	Pulse	0.1000	3
H2	In	115	191253.45	0.3	104.4	Pulse	0.1000	3
He	Sc	45	23920.34	1.4	104.0	Pulse	0.1000	3
He	Ge	72	45008.35	0.5	106.6	Pulse	0.1000	3
He	In	115	39913.89	1.0	102.5	Pulse	0.1000	3
He	Tb	159	179234.96	0.2	101.8	Pulse	0.1000	3
He	Bi	209	131262.69	1.3	102.4	Pulse	0.1000	3

No Gas

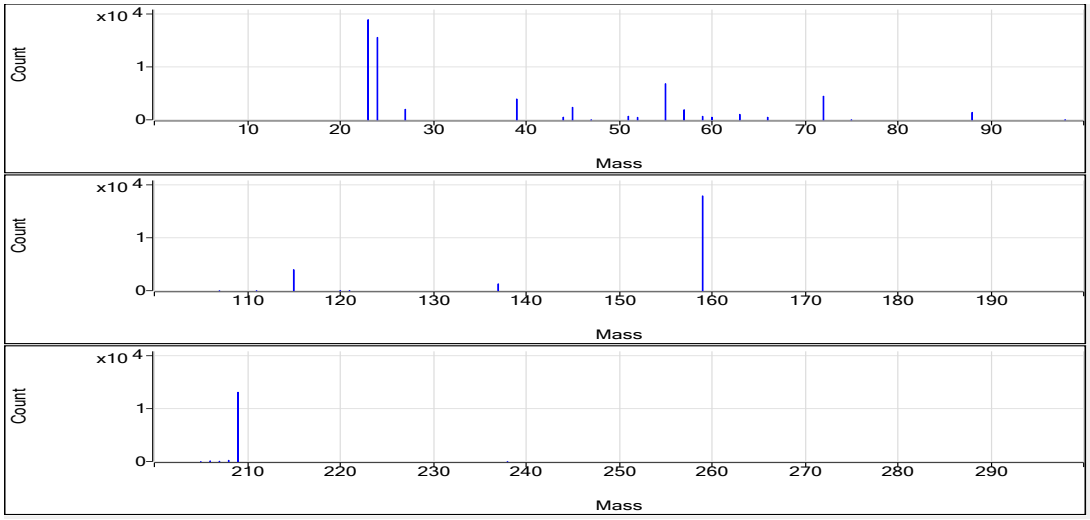


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.427	0.0002	298.00	0.0005	1.901E-05
Be	9	1	No Gas	0.501	0.0003	346.01	0.0005	1.901E-05
Be	9	1	No Gas	0.476	0.0002	332.01	0.0005	1.901E-05
Se	78	2	H2	0.151	0	7.33	0.0002	7.279E-06
Se	78	2	H2	0.186	0	8.67	0.0002	7.279E-06
Se	78	2	H2	0.151	0	7.33	0.0002	7.279E-06
Na	23	3	He	2056.697	8.0524	189550.06	0.0036	0.7194
Na	23	3	He	1994.738	7.8315	189371.34	0.0036	0.7194
Na	23	3	He	2002.238	7.8582	188915.02	0.0036	0.7194
Mg	24	3	He	3671.077	6.6813	157274.59	0.0018	0.006791
Mg	24	3	He	3530.122	6.425	155361.63	0.0018	0.006791
Mg	24	3	He	3540.651	6.4441	154920.01	0.0018	0.006791
Al	27	3	He	1443.867	0.8067	18989.14	0.0006	0.002622
Al	27	3	He	1403.655	0.7843	18964.89	0.0006	0.002622
Al	27	3	He	1695.406	0.9468	22760.69	0.0006	0.002622
K	39	3	He	936.267	1.7524	41251.41	0.0013	0.5579
K	39	3	He	812.662	1.5947	38561.64	0.0013	0.5579
K	39	3	He	831.393	1.6186	38912.35	0.0013	0.5579
Ca	44	3	He	3104.096	0.2316	5451.20	0.0001	0.004062
Ca	44	3	He	2890.47	0.2159	5221.07	0.0001	0.004062
Ca	44	3	He	3055.289	0.228	5481.18	0.0001	0.004062
Ti	47	3	He	24.166	0.0144	340.13	0.0006	0.0002809
Ti	47	3	He	13.629	0.0083	200.01	0.0006	0.0002809
Ti	47	3	He	15.841	0.0096	230.03	0.0006	0.0002809
V	51	3	He	1.525	0.058	1366.08	0.0259	0.01861
V	51	3	He	1.596	0.0599	1448.09	0.0259	0.01861
V	51	3	He	1.635	0.0609	1464.10	0.0259	0.01861
Cr	52	3	He	3.179	0.2103	4951.01	0.0332	0.1047
Cr	52	3	He	2.862	0.1998	4830.95	0.0332	0.1047
Cr	52	3	He	3.135	0.2089	5021.06	0.0332	0.1047
Mn	55	3	He	208.836	2.9007	68281.95	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	204.756	2.8441	68773.85	0.0139	0.005074
Mn	55	3	He	203.634	2.8286	68000.43	0.0139	0.005074
Fe	57	3	He	1164.956	0.7465	17571.37	0.0006	0.00609
Fe	57	3	He	1343.555	0.86	20794.64	0.0006	0.00609
Fe	57	3	He	1229.723	0.7876	18934.75	0.0006	0.00609
Co	59	3	He	4.519	0.3051	7182.09	0.0661	0.00621
Co	59	3	He	4.234	0.2863	6921.87	0.0661	0.00621
Co	59	3	He	4.102	0.2775	6671.80	0.0661	0.00621
Ni	60	3	He	10.389	0.1209	5441.22	0.01	0.01721
Ni	60	3	He	9.925	0.1163	5261.13	0.01	0.01721
Ni	60	3	He	9.822	0.1153	5161.09	0.01	0.01721
Cu	63	3	He	7.799	0.2301	10354.11	0.0286	0.006793
Cu	63	3	He	7.988	0.2355	10654.27	0.0286	0.006793
Cu	63	3	He	8.174	0.2408	10784.33	0.0286	0.006793
Zn	66	3	He	33.286	0.1149	5171.09	0.0034	0.00316
Zn	66	3	He	33.368	0.1152	5211.17	0.0034	0.00316
Zn	66	3	He	35.318	0.1217	5451.17	0.0034	0.00316
As	75	3	He	0.18	0.0013	58.00	0.0026	0.0008231
As	75	3	He	0.161	0.0012	56.00	0.0026	0.0008231
As	75	3	He	0.027	0.0009	40.00	0.0026	0.0008231
Sr	88	3	He	33.013	0.3498	14037.41	0.0105	0.001715
Sr	88	3	He	33.674	0.3567	14077.41	0.0105	0.001715
Sr	88	3	He	34.708	0.3676	14758.06	0.0105	0.001715
Mo	98	3	He	0.34	0.0102	410.02	0.0275	0.0008555
Mo	98	3	He	0.208	0.0066	260.01	0.0275	0.0008555
Mo	98	3	He	0.367	0.011	440.02	0.0275	0.0008555
Ag	107	3	He	0.035	0.0025	100.00	0.0591	0.0004305
Ag	107	3	He	0.053	0.0035	140.01	0.0591	0.0004305
Ag	107	3	He	0.043	0.003	120.00	0.0591	0.0004305
Cd	111	3	He	0.18	0.0012	50.00	0.0066	5.141E-05
Cd	111	3	He	0.13	0.0009	36.00	0.0066	5.141E-05
Cd	111	3	He	0.15	0.001	42.00	0.0066	5.141E-05
Sn	120	3	He	-0.11	0.0164	660.04	0.0187	0.0185
Sn	120	3	He	-0.23	0.0142	560.03	0.0187	0.0185
Sn	120	3	He	-0.177	0.0152	610.04	0.0187	0.0185
Sb	121	3	He	0.675	0.0135	540.03	0.0183	0.00111
Sb	121	3	He	0.632	0.0127	500.02	0.0183	0.00111
Sb	121	3	He	0.661	0.0132	530.03	0.0183	0.00111
Ba	137	3	He	54.724	0.3213	12896.62	0.0059	0.0007704
Ba	137	3	He	56.782	0.3334	13156.69	0.0059	0.0007704
Ba	137	3	He	56.542	0.332	13327.35	0.0059	0.0007704
Tl	205	3	He	0.021	0.0016	210.01	0.0364	0.000808
Tl	205	3	He	0.039	0.0022	290.02	0.0364	0.000808
Tl	205	3	He	0.051	0.0027	350.02	0.0364	0.000808
Pb	208	3	He	0.753	0.0399	2660.38	0.0487	0.003226
Pb	208	3	He	0.755	0.04	2850.43	0.0487	0.003226
Pb	208	3	He	0.69	0.0369	2410.30	0.0487	0.003226
U	238	3	He	0.037	0.0024	320.02	0.0535	0.0004157
U	238	3	He	0.036	0.0023	300.01	0.0535	0.0004157
U	238	3	He	0.046	0.0029	380.02	0.0535	0.0004157
Sc	45	1	No Gas			1325582.32		
Sc	45	1	No Gas			1326616.70		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1334936.54		
Ge	72	1	No Gas			706349.36		
Ge	72	1	No Gas			708016.55		
Ge	72	1	No Gas			715143.19		
Sc	45	2	H2			92955.54		
Sc	45	2	H2			91005.28		
Sc	45	2	H2			91376.61		
Ge	72	2	H2			74715.39		
Ge	72	2	H2			77047.68		
Ge	72	2	H2			75268.14		
In	115	2	H2			191534.18		
In	115	2	H2			190508.34		
In	115	2	H2			191717.83		
Sc	45	3	He			23539.67		
Sc	45	3	He			24180.86		
Sc	45	3	He			24040.50		
Ge	72	3	He			45001.58		
Ge	72	3	He			45242.72		
Ge	72	3	He			44780.75		
In	115	3	He			40139.18		
In	115	3	He			39466.79		
In	115	3	He			40148.50		
Tb	159	3	He			178767.85		
Tb	159	3	He			179580.08		
Tb	159	3	He			179356.95		
Bi	209	3	He			132524.60		
Bi	209	3	He			129373.73		
Bi	209	3	He			131889.74		

Quantitation Report

Data File Name	088SMPL.d
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Acq Time	9/19/2023 9:46:10 AM
Sample Name	410-142837-H-3-A
Sample Type	Sample
Comment	F6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

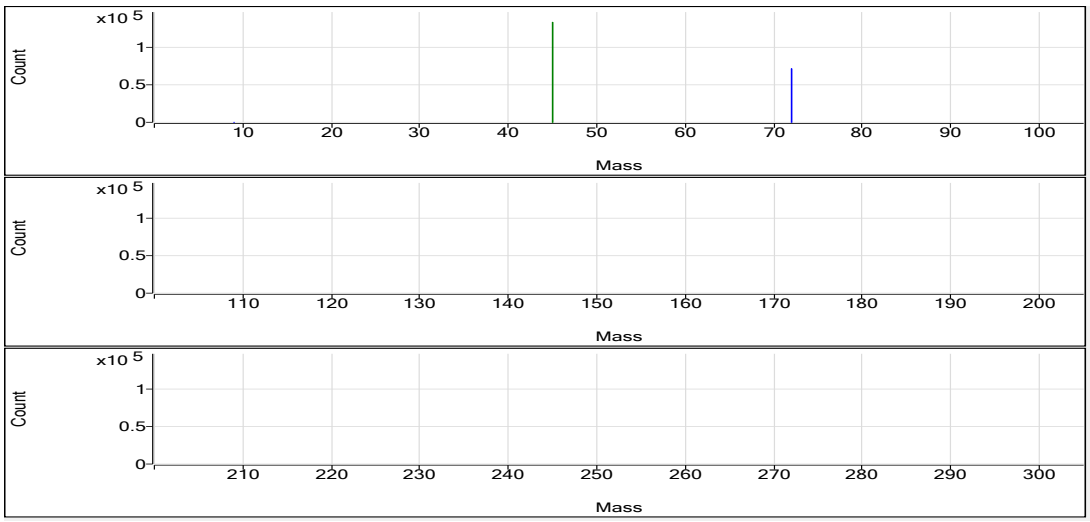
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.427	ppb	11.4	300.67	0.0002	Pulse	0.5000	3
Se	78	115	H2	0.122	ppb	42.8	6.22	0.0000	Pulse	1.5000	3
Na	23	45	He	5444.186	ppb	0.8	483992.25	20.1302	Pulse	0.1000	3
Mg	24	45	He	9185.101	ppb	0.6	401677.59	16.7064	Pulse	0.1000	3
Al	27	45	He	2177.224	ppb	5.7	29208.74	1.2151	Pulse	0.1000	3
K	39	45	He	1907.747	ppb	1.7	71935.20	2.9919	Pulse	0.1000	3
Ca	44	45	He	16546.493	ppb	3.0	29256.86	1.2168	Pulse	0.1000	3
Ti	47	45	He	99.775	ppb	98.8	1410.51	0.0588	Pulse	0.1000	3
V	51	45	He	2.799	ppb	1.4	2187.53	0.0910	Pulse	0.5000	3
Cr	52	45	He	5.149	ppb	9.0	6628.51	0.2757	Pulse	0.1000	3
Mn	55	45	He	44.609	ppb	1.8	14994.86	0.6236	Pulse	0.1000	3
Fe	57	45	He	1312.850	ppb	6.8	20205.85	0.8404	Pulse	0.1000	3
Co	59	45	He	0.703	ppb	8.6	1266.77	0.0527	Pulse	0.1000	3
Ni	60	72	He	2.068	ppb	9.1	1726.83	0.0379	Pulse	0.1000	3
Cu	63	72	He	1.055	ppb	17.4	1686.84	0.0370	Pulse	0.1000	3
Zn	66	72	He	10.901	ppb	91.5	1807.83	0.0398	Pulse	0.1000	3
As	75	72	He	0.163	ppb	77.4	56.67	0.0012	Pulse	0.5000	3
Sr	88	115	He	49.707	ppb	1.3	21002.95	0.5258	Pulse	0.1000	3
Mo	98	115	He	0.130	ppb	31.1	176.68	0.0044	Pulse	0.1000	3
Ag	107	115	He	0.004	ppb	220.9	26.67	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.015	ppb	103.4	6.00	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.297	ppb	N/A	516.70	0.0129	Pulse	0.1000	3
Sb	121	115	He	0.085	ppb	21.4	106.67	0.0027	Pulse	0.1000	3
Ba	137	115	He	27.714	ppb	4.9	6515.21	0.1631	Pulse	0.1000	3
Tl	205	209	He	0.031	ppb	59.6	253.35	0.0019	Pulse	0.1000	3
Pb	208	209	He	0.797	ppb	5.4	5497.41	0.0421	Pulse	0.1000	3
U	238	209	He	0.149	ppb	12.1	1096.76	0.0084	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1335768.89	0.5	100.1	Analog	0.1000	3
No Gas	Ge	72	715963.40	0.8	102.4	Pulse	0.1000	3
H2	Sc	45	91574.41	0.2	105.3	Pulse	0.1000	3
H2	Ge	72	76679.25	1.6	107.1	Pulse	0.1000	3
H2	In	115	192670.25	1.3	105.2	Pulse	0.1000	3
He	Sc	45	24043.82	0.6	104.5	Pulse	0.1000	3
He	Ge	72	45623.58	0.8	108.1	Pulse	0.1000	3
He	In	115	39954.54	2.0	102.6	Pulse	0.1000	3
He	Tb	159	181779.76	1.4	103.2	Pulse	0.1000	3
He	Bi	209	130689.82	1.2	101.9	Pulse	0.1000	3

No Gas



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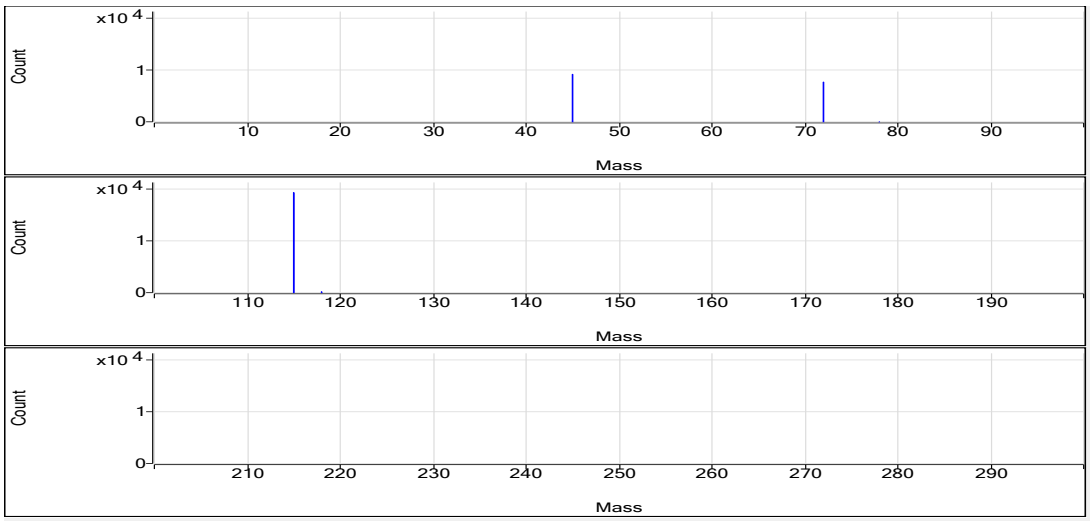
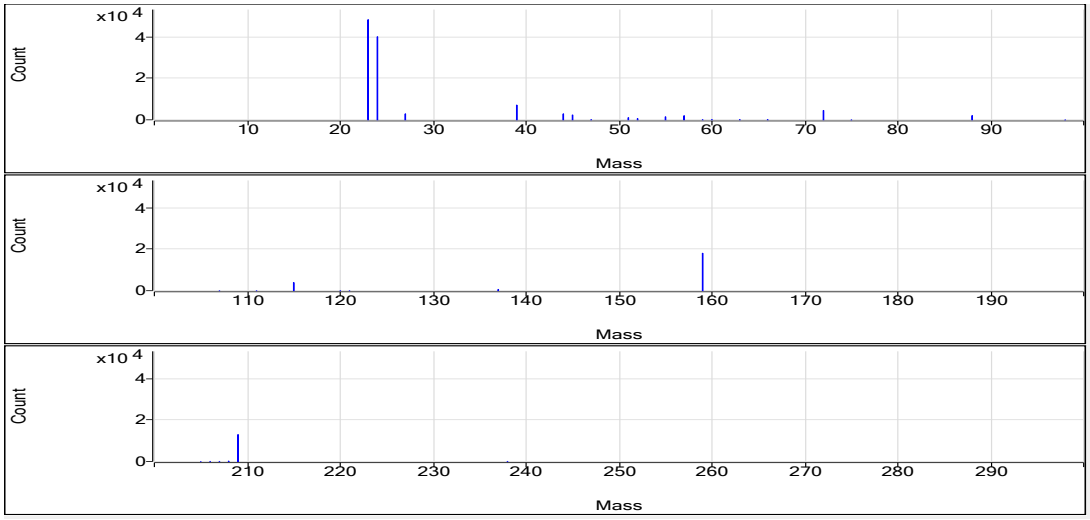


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.371	0.0002	264.00	0.0005	1.901E-05
Be	9	1	No Gas	0.458	0.0002	322.01	0.0005	1.901E-05
Be	9	1	No Gas	0.453	0.0002	316.01	0.0005	1.901E-05
Se	78	2	H2	0.169	0	8.00	0.0002	7.279E-06
Se	78	2	H2	0.066	0	4.00	0.0002	7.279E-06
Se	78	2	H2	0.131	0	6.67	0.0002	7.279E-06
Na	23	3	He	5473.119	20.2334	484798.00	0.0036	0.7194
Na	23	3	He	5394.718	19.9539	483299.72	0.0036	0.7194
Na	23	3	He	5464.722	20.2035	483879.02	0.0036	0.7194
Mg	24	3	He	9190.28	16.7158	400516.40	0.0018	0.006791
Mg	24	3	He	9131.831	16.6096	402298.16	0.0018	0.006791
Mg	24	3	He	9233.193	16.7939	402218.20	0.0018	0.006791
Al	27	3	He	2188.211	1.2212	29260.28	0.0006	0.002622
Al	27	3	He	2048.925	1.1436	27699.77	0.0006	0.002622
Al	27	3	He	2294.535	1.2804	30666.18	0.0006	0.002622
K	39	3	He	1945.288	3.0398	72834.23	0.0013	0.5579
K	39	3	He	1894.979	2.9756	72071.64	0.0013	0.5579
K	39	3	He	1882.973	2.9603	70899.72	0.0013	0.5579
Ca	44	3	He	17074.118	1.2555	30082.14	0.0001	0.004062
Ca	44	3	He	16477.546	1.2118	29350.22	0.0001	0.004062
Ca	44	3	He	16087.815	1.1832	28338.23	0.0001	0.004062
Ti	47	3	He	35.119	0.0209	500.06	0.0006	0.0002809
Ti	47	3	He	50.943	0.0301	730.20	0.0006	0.0002809
Ti	47	3	He	213.264	0.1253	3001.28	0.0006	0.0002809
V	51	3	He	2.77	0.0902	2162.19	0.0259	0.01861
V	51	3	He	2.784	0.0906	2194.19	0.0259	0.01861
V	51	3	He	2.843	0.0921	2206.20	0.0259	0.01861
Cr	52	3	He	5.544	0.2889	6921.96	0.0332	0.1047
Cr	52	3	He	4.643	0.2589	6271.66	0.0332	0.1047
Cr	52	3	He	5.259	0.2794	6691.90	0.0332	0.1047
Mn	55	3	He	44.628	0.6239	14948.22	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	45.396	0.6345	15368.62	0.0139	0.005074
Mn	55	3	He	43.803	0.6124	14667.75	0.0139	0.005074
Fe	57	3	He	1241.001	0.7948	19043.31	0.0006	0.00609
Fe	57	3	He	1284.881	0.8227	19925.86	0.0006	0.00609
Fe	57	3	He	1412.669	0.9039	21648.38	0.0006	0.00609
Co	59	3	He	0.638	0.0484	1160.08	0.0661	0.00621
Co	59	3	He	0.711	0.0533	1290.11	0.0661	0.00621
Co	59	3	He	0.758	0.0564	1350.12	0.0661	0.00621
Ni	60	3	He	1.909	0.0363	1650.15	0.01	0.01721
Ni	60	3	He	2.018	0.0374	1720.16	0.01	0.01721
Ni	60	3	He	2.277	0.0399	1810.18	0.01	0.01721
Cu	63	3	He	1.229	0.042	1910.22	0.0286	0.006793
Cu	63	3	He	0.863	0.0315	1450.14	0.0286	0.006793
Cu	63	3	He	1.073	0.0375	1700.17	0.0286	0.006793
Zn	66	3	He	5.474	0.0215	980.06	0.0034	0.00316
Zn	66	3	He	4.817	0.0193	890.06	0.0034	0.00316
Zn	66	3	He	22.412	0.0784	3553.36	0.0034	0.00316
As	75	3	He	0.226	0.0014	64.00	0.0026	0.0008231
As	75	3	He	0.018	0.0009	40.00	0.0026	0.0008231
As	75	3	He	0.245	0.0015	66.00	0.0026	0.0008231
Sr	88	3	He	49.071	0.519	21066.30	0.0105	0.001715
Sr	88	3	He	49.693	0.5256	21126.63	0.0105	0.001715
Sr	88	3	He	50.358	0.5326	20815.92	0.0105	0.001715
Mo	98	3	He	0.085	0.0032	130.01	0.0275	0.0008555
Mo	98	3	He	0.141	0.0047	190.01	0.0275	0.0008555
Mo	98	3	He	0.164	0.0054	210.01	0.0275	0.0008555
Ag	107	3	He	-0.003	0.0002	10.00	0.0591	0.0004305
Ag	107	3	He	0.001	0.0005	20.00	0.0591	0.0004305
Ag	107	3	He	0.014	0.0013	50.00	0.0591	0.0004305
Cd	111	3	He	0.015	0.0001	6.00	0.0066	5.141E-05
Cd	111	3	He	0	0	2.00	0.0066	5.141E-05
Cd	111	3	He	0.031	0.0003	10.00	0.0066	5.141E-05
Sn	120	3	He	-0.356	0.0118	480.03	0.0187	0.0185
Sn	120	3	He	-0.271	0.0134	540.04	0.0187	0.0185
Sn	120	3	He	-0.264	0.0136	530.03	0.0187	0.0185
Sb	121	3	He	0.101	0.003	120.01	0.0183	0.00111
Sb	121	3	He	0.089	0.0027	110.00	0.0183	0.00111
Sb	121	3	He	0.065	0.0023	90.00	0.0183	0.00111
Ba	137	3	He	26.206	0.1543	6261.82	0.0059	0.0007704
Ba	137	3	He	28.842	0.1697	6822.00	0.0059	0.0007704
Ba	137	3	He	28.093	0.1653	6461.80	0.0059	0.0007704
Tl	205	3	He	0.012	0.0012	160.01	0.0364	0.000808
Tl	205	3	He	0.032	0.002	260.01	0.0364	0.000808
Tl	205	3	He	0.049	0.0026	340.04	0.0364	0.000808
Pb	208	3	He	0.837	0.044	3010.51	0.0487	0.003226
Pb	208	3	He	0.803	0.0424	3240.58	0.0487	0.003226
Pb	208	3	He	0.752	0.0399	3040.49	0.0487	0.003226
U	238	3	He	0.133	0.0075	970.07	0.0535	0.0004157
U	238	3	He	0.169	0.0094	1240.10	0.0535	0.0004157
U	238	3	He	0.146	0.0082	1080.10	0.0535	0.0004157
Sc	45	1	No Gas			1333628.89		
Sc	45	1	No Gas			1342764.51		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1330913.26		
Ge	72	1	No Gas			710001.79		
Ge	72	1	No Gas			717142.96		
Ge	72	1	No Gas			720745.46		
Sc	45	2	H2			91366.11		
Sc	45	2	H2			91557.96		
Sc	45	2	H2			91799.17		
Ge	72	2	H2			76163.36		
Ge	72	2	H2			75780.63		
Ge	72	2	H2			78093.77		
In	115	2	H2			190440.09		
In	115	2	H2			192244.22		
In	115	2	H2			195326.44		
Sc	45	3	He			23960.29		
Sc	45	3	He			24220.86		
Sc	45	3	He			23950.31		
Ge	72	3	He			45503.47		
Ge	72	3	He			46044.71		
Ge	72	3	He			45322.57		
In	115	3	He			40589.87		
In	115	3	He			40198.65		
In	115	3	He			39085.94		
Tb	159	3	He			184709.37		
Tb	159	3	He			180521.58		
Tb	159	3	He			180108.32		
Bi	209	3	He			128838.59		
Bi	209	3	He			131525.75		
Bi	209	3	He			131705.13		

Quantitation Report

Data File Name	089SMPL.d
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Acq Time	9/19/2023 9:48:09 AM
Sample Name	410-142837-H-11-A
Sample Type	Sample
Comment	F6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

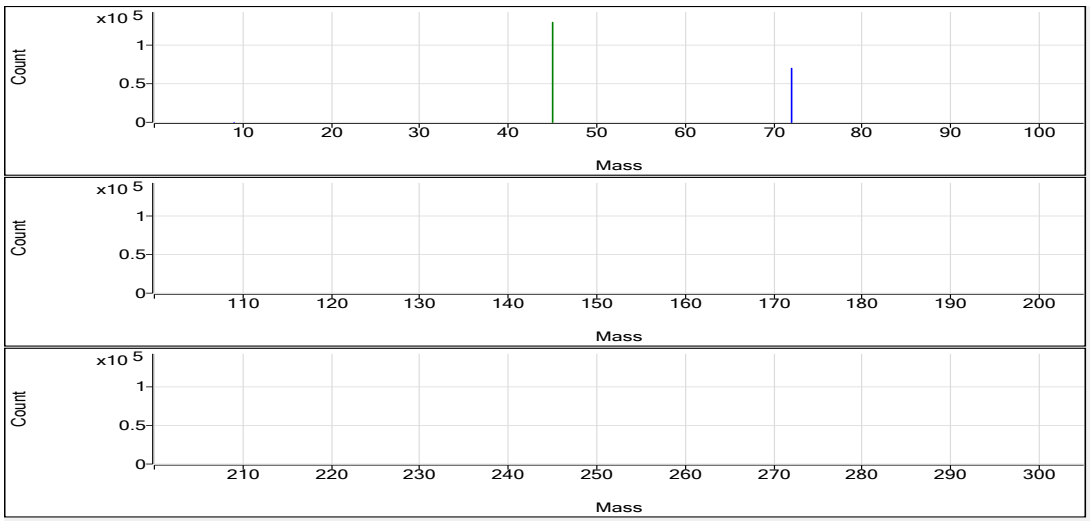
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.012	ppb	117.4	32.00	0.0000	Pulse	0.5000	3
Se	78	115	H2	0.004	ppb	530.9	1.56	0.0000	Pulse	1.5000	3
Na	23	45	He	407.000	ppb	2.9	51537.17	2.1705	Pulse	0.1000	3
Mg	24	45	He	15.797	ppb	14.7	843.39	0.0355	Pulse	0.1000	3
Al	27	45	He	9.640	ppb	67.3	190.01	0.0080	Pulse	0.1000	3
K	39	45	He	49.881	ppb	103.1	14747.99	0.6215	Pulse	0.1000	3
Ca	44	45	He	112.955	ppb	9.8	293.35	0.0123	Pulse	0.1000	3
Ti	47	45	He	0.960	ppb	200.2	20.00	0.0008	Pulse	0.1000	3
V	51	45	He	0.047	ppb	154.3	470.01	0.0198	Pulse	0.5000	3
Cr	52	45	He	0.083	ppb	238.1	2550.32	0.1075	Pulse	0.1000	3
Mn	55	45	He	0.332	ppb	19.6	230.01	0.0097	Pulse	0.1000	3
Fe	57	45	He	5.637	ppb	16.0	230.01	0.0097	Pulse	0.1000	3
Co	59	45	He	0.023	ppb	95.1	183.34	0.0077	Pulse	0.1000	3
Ni	60	72	He	0.174	ppb	129.4	836.73	0.0189	Pulse	0.1000	3
Cu	63	72	He	0.387	ppb	27.0	790.05	0.0179	Pulse	0.1000	3
Zn	66	72	He	2.248	ppb	1.9	473.36	0.0107	Pulse	0.1000	3
As	75	72	He	0.021	ppb	585.2	38.67	0.0009	Pulse	0.5000	3
Sr	88	115	He	0.322	ppb	33.1	206.68	0.0051	Pulse	0.1000	3
Mo	98	115	He	0.014	ppb	64.2	50.00	0.0012	Pulse	0.1000	3
Ag	107	115	He	-0.004	ppb	N/A	6.67	0.0002	Pulse	0.1000	3
Cd	111	115	He	-0.003	ppb	N/A	1.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.120	ppb	N/A	660.04	0.0163	Pulse	0.1000	3
Sb	121	115	He	0.003	ppb	2173.7	46.67	0.0012	Pulse	0.1000	3
Ba	137	115	He	0.261	ppb	37.8	93.34	0.0023	Pulse	0.1000	3
Tl	205	209	He	0.003	ppb	296.4	120.00	0.0009	Pulse	0.1000	3
Pb	208	209	He	0.011	ppb	160.4	493.35	0.0037	Pulse	0.1000	3
U	238	209	He	-0.003	ppb	N/A	36.67	0.0003	Pulse	0.1000	3

ISTD Table:

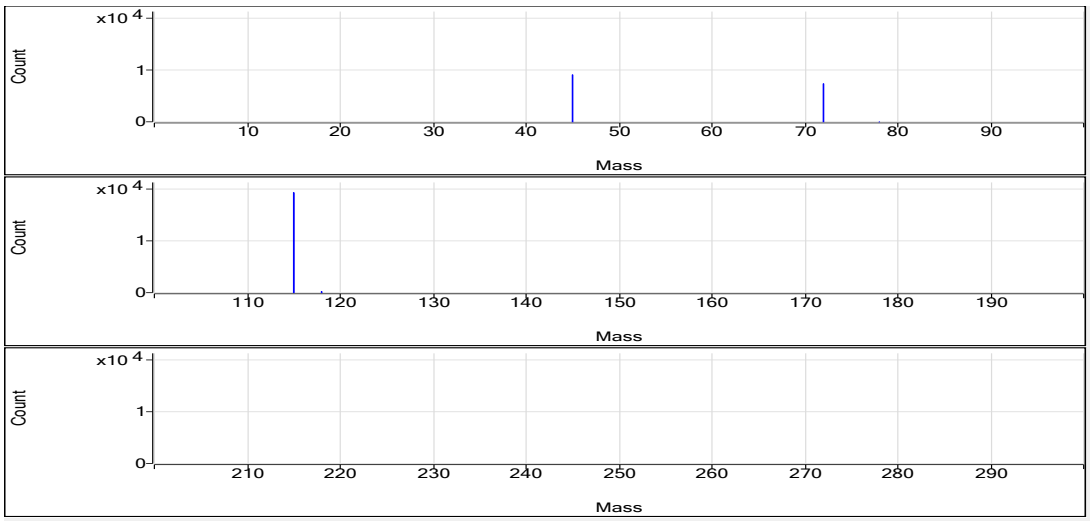
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1296715.66	1.8	97.2	Analog	0.1000	3
No Gas	Ge	72	702139.76	1.1	100.4	Pulse	0.1000	3
H2	Sc	45	91259.09	1.3	105.0	Pulse	0.1000	3
H2	Ge	72	73974.93	0.5	103.3	Pulse	0.1000	3
H2	In	115	194191.22	0.7	106.0	Pulse	0.1000	3
He	Sc	45	23753.29	2.9	103.3	Pulse	0.1000	3
He	Ge	72	44205.92	2.2	104.7	Pulse	0.1000	3
He	In	115	40598.92	2.1	104.3	Pulse	0.1000	3
He	Tb	159	178445.67	0.9	101.3	Pulse	0.1000	3
He	Bi	209	131889.21	0.5	102.9	Pulse	0.1000	3

No Gas

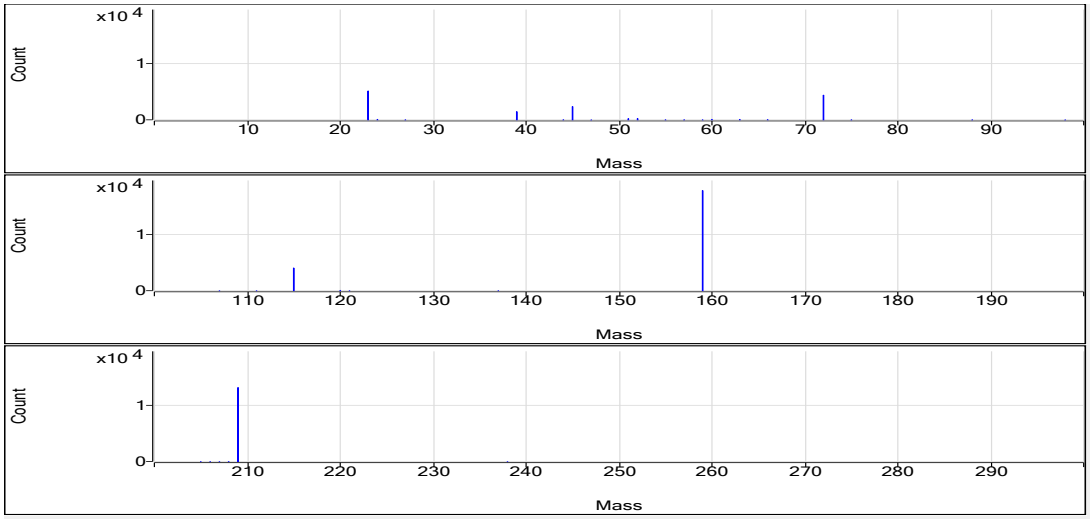


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.022	0	38.00	0.0005	1.901E-05
Be	9	1	No Gas	-0.004	0	22.00	0.0005	1.901E-05
Be	9	1	No Gas	0.017	0	36.00	0.0005	1.901E-05
Se	78	2	H2	0.015	0	2.00	0.0002	7.279E-06
Se	78	2	H2	-0.019	0	0.67	0.0002	7.279E-06
Se	78	2	H2	0.015	0	2.00	0.0002	7.279E-06
Na	23	3	He	407.52	2.1723	51179.50	0.0036	0.7194
Na	23	3	He	418.497	2.2115	51259.54	0.0036	0.7194
Na	23	3	He	394.983	2.1276	52172.47	0.0036	0.7194
Mg	24	3	He	18.445	0.0403	950.06	0.0018	0.006791
Mg	24	3	He	14.063	0.0324	750.05	0.0018	0.006791
Mg	24	3	He	14.883	0.0339	830.05	0.0018	0.006791
Al	27	3	He	16.633	0.0119	280.01	0.0006	0.002622
Al	27	3	He	3.813	0.0047	110.00	0.0006	0.002622
Al	27	3	He	8.473	0.0073	180.01	0.0006	0.002622
K	39	3	He	107.002	0.6944	16359.71	0.0013	0.5579
K	39	3	He	35.376	0.603	13977.14	0.0013	0.5579
K	39	3	He	7.265	0.5671	13907.13	0.0013	0.5579
Ca	44	3	He	100.943	0.0115	270.01	0.0001	0.004062
Ca	44	3	He	115.284	0.0125	290.01	0.0001	0.004062
Ca	44	3	He	122.636	0.0131	320.02	0.0001	0.004062
Ti	47	3	He	3.141	0.0021	50.01	0.0006	0.0002809
Ti	47	3	He	-0.479	0	0.00	0.0006	0.0002809
Ti	47	3	He	0.216	0.0004	10.00	0.0006	0.0002809
V	51	3	He	0.114	0.0216	508.01	0.0259	0.01861
V	51	3	He	0.054	0.02	464.01	0.0259	0.01861
V	51	3	He	-0.029	0.0179	438.01	0.0259	0.01861
Cr	52	3	He	0.195	0.1112	2620.34	0.0332	0.1047
Cr	52	3	He	0.198	0.1113	2580.33	0.0332	0.1047
Cr	52	3	He	-0.145	0.0999	2450.30	0.0332	0.1047
Mn	55	3	He	0.369	0.0102	240.01	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.256	0.0086	200.01	0.0139	0.005074
Mn	55	3	He	0.369	0.0102	250.01	0.0139	0.005074
Fe	57	3	He	5.779	0.0098	230.01	0.0006	0.00609
Fe	57	3	He	4.673	0.0091	210.01	0.0006	0.00609
Fe	57	3	He	6.46	0.0102	250.01	0.0006	0.00609
Co	59	3	He	0.047	0.0093	220.01	0.0661	0.00621
Co	59	3	He	0.017	0.0073	170.01	0.0661	0.00621
Co	59	3	He	0.005	0.0065	160.01	0.0661	0.00621
Ni	60	3	He	0.022	0.0174	790.06	0.01	0.01721
Ni	60	3	He	0.433	0.0215	940.07	0.01	0.01721
Ni	60	3	He	0.067	0.0179	780.05	0.01	0.01721
Cu	63	3	He	0.387	0.0179	810.05	0.0286	0.006793
Cu	63	3	He	0.283	0.0149	650.04	0.0286	0.006793
Cu	63	3	He	0.491	0.0209	910.06	0.0286	0.006793
Zn	66	3	He	2.279	0.0108	490.03	0.0034	0.00316
Zn	66	3	He	2.265	0.0108	470.02	0.0034	0.00316
Zn	66	3	He	2.2	0.0105	460.03	0.0034	0.00316
As	75	3	He	-0.079	0.0006	28.00	0.0026	0.0008231
As	75	3	He	-0.017	0.0008	34.00	0.0026	0.0008231
As	75	3	He	0.161	0.0012	54.00	0.0026	0.0008231
Sr	88	3	He	0.409	0.006	240.01	0.0105	0.001715
Sr	88	3	He	0.353	0.0054	220.01	0.0105	0.001715
Sr	88	3	He	0.203	0.0039	160.01	0.0105	0.001715
Mo	98	3	He	0.005	0.001	40.00	0.0275	0.0008555
Mo	98	3	He	0.023	0.0015	60.00	0.0275	0.0008555
Mo	98	3	He	0.013	0.0012	50.00	0.0275	0.0008555
Ag	107	3	He	-0.007	0	0.00	0.0591	0.0004305
Ag	107	3	He	0.001	0.0005	20.00	0.0591	0.0004305
Ag	107	3	He	-0.007	0	0.00	0.0591	0.0004305
Cd	111	3	He	0	0.0001	2.00	0.0066	5.141E-05
Cd	111	3	He	-0.008	0	0.00	0.0066	5.141E-05
Cd	111	3	He	0	0	2.00	0.0066	5.141E-05
Sn	120	3	He	-0.17	0.0153	610.04	0.0187	0.0185
Sn	120	3	He	-0.038	0.0178	720.04	0.0187	0.0185
Sn	120	3	He	-0.152	0.0157	650.04	0.0187	0.0185
Sb	121	3	He	-0.006	0.001	40.00	0.0183	0.00111
Sb	121	3	He	0.061	0.0022	90.00	0.0183	0.00111
Sb	121	3	He	-0.048	0.0002	10.00	0.0183	0.00111
Ba	137	3	He	0.211	0.002	80.00	0.0059	0.0007704
Ba	137	3	He	0.375	0.003	120.01	0.0059	0.0007704
Ba	137	3	He	0.198	0.0019	80.00	0.0059	0.0007704
Tl	205	3	He	0.003	0.0009	120.00	0.0364	0.000808
Tl	205	3	He	-0.005	0.0006	80.00	0.0364	0.000808
Tl	205	3	He	0.011	0.0012	160.01	0.0364	0.000808
Pb	208	3	He	0.007	0.0036	240.01	0.0487	0.003226
Pb	208	3	He	0.029	0.0046	320.01	0.0487	0.003226
Pb	208	3	He	-0.004	0.003	160.01	0.0487	0.003226
U	238	3	He	-0.002	0.0003	40.00	0.0535	0.0004157
U	238	3	He	-0.001	0.0004	50.00	0.0535	0.0004157
U	238	3	He	-0.005	0.0002	20.00	0.0535	0.0004157
Sc	45	1	No Gas			1282800.14		
Sc	45	1	No Gas			1284214.51		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1323132.32		
Ge	72	1	No Gas			701321.40		
Ge	72	1	No Gas			694944.36		
Ge	72	1	No Gas			710153.51		
Sc	45	2	H2			92473.53		
Sc	45	2	H2			90148.40		
Sc	45	2	H2			91155.35		
Ge	72	2	H2			73931.77		
Ge	72	2	H2			74383.28		
Ge	72	2	H2			73609.74		
In	115	2	H2			192568.42		
In	115	2	H2			195205.27		
In	115	2	H2			194799.96		
Sc	45	3	He			23559.65		
Sc	45	3	He			23178.91		
Sc	45	3	He			24521.32		
Ge	72	3	He			45322.68		
Ge	72	3	He			43667.48		
Ge	72	3	He			43627.60		
In	115	3	He			39848.06		
In	115	3	He			40459.85		
In	115	3	He			41502.72		
Tb	159	3	He			179834.53		
Tb	159	3	He			178810.37		
Tb	159	3	He			176692.11		
Bi	209	3	He			132072.06		
Bi	209	3	He			131200.58		
Bi	209	3	He			132394.98		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
Acq Time	9/19/2023 9:50:08 AM
Sample Name	410-142837-H-5-A
Sample Type	Sample
Comment	F6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

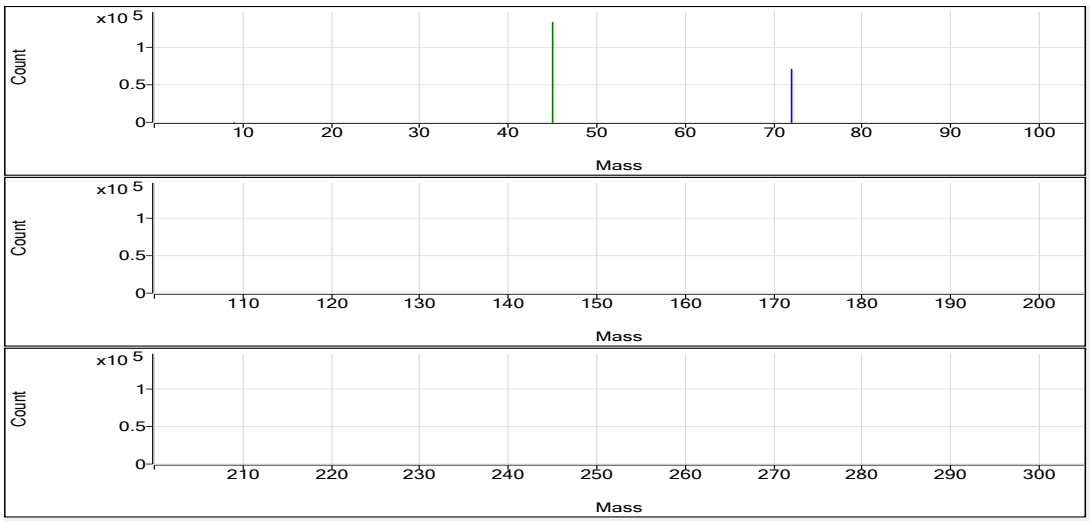
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.025	ppb	63.9	41.33	0.0000	Pulse	0.5000	3
Se	78	115	H2	0.099	ppb	29.2	5.34	0.0000	Pulse	1.5000	3
Na	23	45	He	20250.929	ppb	4.8	1708007.11	72.9227	Analog	0.1000	3
Mg	24	45	He	11688.214	ppb	4.7	497908.01	21.2574	Pulse	0.1000	3
Al	27	45	He	184.839	ppb	8.6	2470.37	0.1056	Pulse	0.1000	3
K	39	45	He	2258.063	ppb	6.7	80525.06	3.4388	Pulse	0.1000	3
Ca	44	45	He	100365.646	ppb	4.4	172415.90	7.3603	Pulse	0.1000	3
Ti	47	45	He	2.486	ppb	82.0	40.00	0.0017	Pulse	0.1000	3
V	51	45	He	0.960	ppb	13.3	1017.38	0.0434	Pulse	0.5000	3
Cr	52	45	He	0.213	ppb	116.0	2617.00	0.1118	Pulse	0.1000	3
Mn	55	45	He	170.241	ppb	5.3	55396.69	2.3656	Pulse	0.1000	3
Fe	57	45	He	446.449	ppb	2.3	6795.48	0.2898	Pulse	0.1000	3
Co	59	45	He	0.369	ppb	14.5	716.71	0.0306	Pulse	0.1000	3
Ni	60	72	He	0.385	ppb	49.4	916.73	0.0211	Pulse	0.1000	3
Cu	63	72	He	1.563	ppb	3.0	2243.60	0.0515	Pulse	0.1000	3
Zn	66	72	He	0.952	ppb	33.0	276.68	0.0064	Pulse	0.1000	3
As	75	72	He	0.707	ppb	10.0	115.33	0.0026	Pulse	0.5000	3
Sr	88	115	He	193.319	ppb	1.8	81454.28	2.0398	Pulse	0.1000	3
Mo	98	115	He	0.096	ppb	43.9	140.01	0.0035	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	N/A	16.67	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.002	ppb	492.6	2.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.079	ppb	N/A	680.04	0.0170	Pulse	0.1000	3
Sb	121	115	He	0.081	ppb	64.7	103.34	0.0026	Pulse	0.1000	3
Ba	137	115	He	60.637	ppb	5.5	14217.77	0.3560	Pulse	0.1000	3
Tl	205	209	He	-0.003	ppb	N/A	93.34	0.0007	Pulse	0.1000	3
Pb	208	209	He	0.103	ppb	7.8	1080.06	0.0082	Pulse	0.1000	3
U	238	209	He	0.137	ppb	11.1	1016.75	0.0078	Pulse	0.1000	3

ISTD Table:

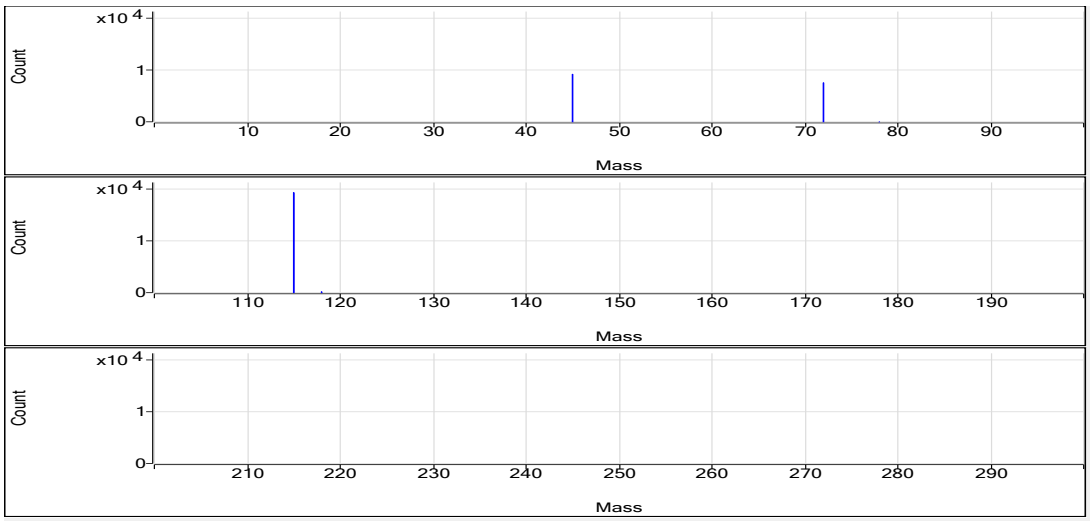
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1329756.41	1.5	99.6	Analog	0.1000	3
No Gas	Ge	72	705956.87	0.2	100.9	Pulse	0.1000	3
H2	Sc	45	92033.73	0.8	105.9	Pulse	0.1000	3
H2	Ge	72	75449.73	0.9	105.4	Pulse	0.1000	3
H2	In	115	193308.81	0.2	105.5	Pulse	0.1000	3
He	Sc	45	23462.77	5.4	102.0	Pulse	0.1000	3
He	Ge	72	43534.04	0.2	103.1	Pulse	0.1000	3
He	In	115	39933.33	0.5	102.6	Pulse	0.1000	3
He	Tb	159	179957.21	1.6	102.2	Pulse	0.1000	3
He	Bi	209	130960.49	0.7	102.1	Pulse	0.1000	3

No Gas

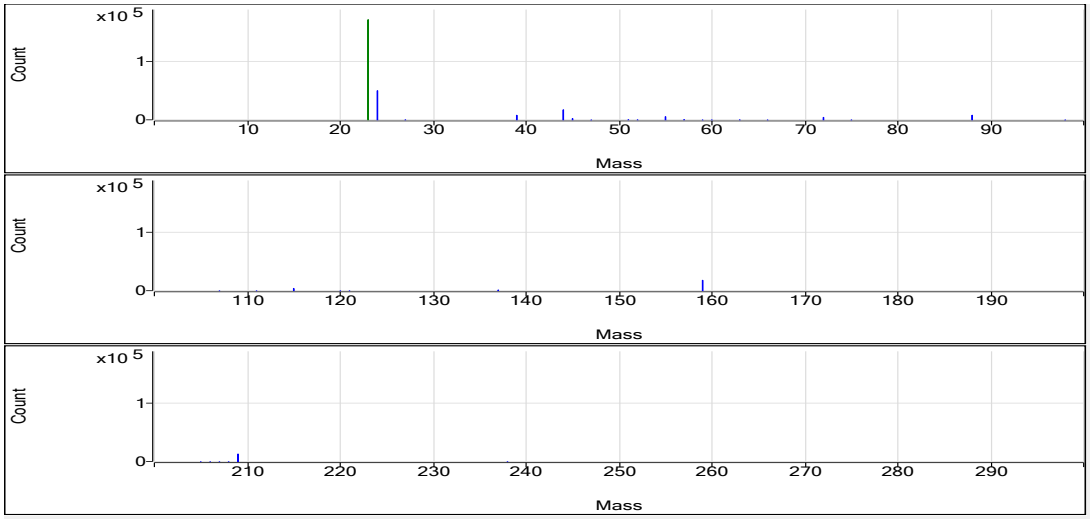


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.032	0	46.00	0.0005	1.901E-05
Be	9	1	No Gas	0.037	0	48.00	0.0005	1.901E-05
Be	9	1	No Gas	0.007	0	30.00	0.0005	1.901E-05
Se	78	2	H2	0.082	0	4.67	0.0002	7.279E-06
Se	78	2	H2	0.132	0	6.67	0.0002	7.279E-06
Se	78	2	H2	0.082	0	4.67	0.0002	7.279E-06
Na	23	3	He	19811.631	71.3564	1717583.26	0.0036	0.7194
Na	23	3	He	21370.69	76.9151	1691903.88	0.0036	0.7194
Na	23	3	He	19570.466	70.4966	1714534.19	0.0036	0.7194
Mg	24	3	He	11441.838	20.8094	500893.39	0.0018	0.006791
Mg	24	3	He	12317.826	22.4021	492779.48	0.0018	0.006791
Mg	24	3	He	11304.978	20.5606	500051.16	0.0018	0.006791
Al	27	3	He	169.135	0.0968	2330.28	0.0006	0.002622
Al	27	3	He	201.049	0.1146	2520.48	0.0006	0.002622
Al	27	3	He	184.333	0.1053	2560.35	0.0006	0.002622
K	39	3	He	2218.726	3.3887	81566.59	0.0013	0.5579
K	39	3	He	2423.981	3.6505	80300.87	0.0013	0.5579
K	39	3	He	2131.481	3.2773	79707.73	0.0013	0.5579
Ca	44	3	He	98093.246	7.1938	173157.03	0.0001	0.004062
Ca	44	3	He	105494.057	7.7362	170173.10	0.0001	0.004062
Ca	44	3	He	97509.635	7.151	173917.58	0.0001	0.004062
Ti	47	3	He	3.064	0.0021	50.00	0.0006	0.0002809
Ti	47	3	He	4.173	0.0027	60.00	0.0006	0.0002809
Ti	47	3	He	0.222	0.0004	10.00	0.0006	0.0002809
V	51	3	He	1.028	0.0452	1088.05	0.0259	0.01861
V	51	3	He	1.038	0.0455	1000.04	0.0259	0.01861
V	51	3	He	0.813	0.0396	964.04	0.0259	0.01861
Cr	52	3	He	0.212	0.1118	2690.34	0.0332	0.1047
Cr	52	3	He	0.46	0.12	2640.34	0.0332	0.1047
Cr	52	3	He	-0.033	0.1036	2520.31	0.0332	0.1047
Mn	55	3	He	165.765	2.3035	55446.63	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	180.604	2.5093	55196.34	0.0139	0.005074
Mn	55	3	He	164.353	2.2839	55547.09	0.0139	0.005074
Fe	57	3	He	448.846	0.2913	7012.85	0.0006	0.00609
Fe	57	3	He	455.494	0.2956	6501.69	0.0006	0.00609
Fe	57	3	He	435.008	0.2826	6871.90	0.0006	0.00609
Co	59	3	He	0.383	0.0316	760.05	0.0661	0.00621
Co	59	3	He	0.415	0.0336	740.05	0.0661	0.00621
Co	59	3	He	0.31	0.0267	650.04	0.0661	0.00621
Ni	60	3	He	0.23	0.0195	850.05	0.01	0.01721
Ni	60	3	He	0.328	0.0205	890.06	0.01	0.01721
Ni	60	3	He	0.598	0.0232	1010.07	0.01	0.01721
Cu	63	3	He	1.614	0.053	2310.30	0.0286	0.006793
Cu	63	3	He	1.523	0.0504	2190.25	0.0286	0.006793
Cu	63	3	He	1.55	0.0512	2230.26	0.0286	0.006793
Zn	66	3	He	1.314	0.0076	330.02	0.0034	0.00316
Zn	66	3	He	0.773	0.0058	250.01	0.0034	0.00316
Zn	66	3	He	0.768	0.0057	250.01	0.0034	0.00316
As	75	3	He	0.694	0.0026	114.00	0.0026	0.0008231
As	75	3	He	0.644	0.0025	108.00	0.0026	0.0008231
As	75	3	He	0.783	0.0028	124.00	0.0026	0.0008231
Sr	88	3	He	194.417	2.0514	82330.22	0.0105	0.001715
Sr	88	3	He	189.351	1.998	79764.15	0.0105	0.001715
Sr	88	3	He	196.188	2.07	82268.48	0.0105	0.001715
Mo	98	3	He	0.059	0.0025	100.00	0.0275	0.0008555
Mo	98	3	He	0.087	0.0033	130.01	0.0275	0.0008555
Mo	98	3	He	0.143	0.0048	190.01	0.0275	0.0008555
Ag	107	3	He	0.005	0.0007	30.00	0.0591	0.0004305
Ag	107	3	He	-0.007	0	0.00	0.0591	0.0004305
Ag	107	3	He	0.001	0.0005	20.00	0.0591	0.0004305
Cd	111	3	He	-0.008	0	0.00	0.0066	5.141E-05
Cd	111	3	He	0	0.0001	2.00	0.0066	5.141E-05
Cd	111	3	He	0.015	0.0002	6.00	0.0066	5.141E-05
Sn	120	3	He	-0.176	0.0152	610.03	0.0187	0.0185
Sn	120	3	He	0.002	0.0185	740.04	0.0187	0.0185
Sn	120	3	He	-0.061	0.0174	690.04	0.0187	0.0185
Sb	121	3	He	0.021	0.0015	60.00	0.0183	0.00111
Sb	121	3	He	0.104	0.003	120.01	0.0183	0.00111
Sb	121	3	He	0.118	0.0033	130.01	0.0183	0.00111
Ba	137	3	He	64.176	0.3767	15118.79	0.0059	0.0007704
Ba	137	3	He	60.107	0.3529	14087.58	0.0059	0.0007704
Ba	137	3	He	57.628	0.3383	13446.93	0.0059	0.0007704
Tl	205	3	He	0.005	0.001	130.01	0.0364	0.000808
Tl	205	3	He	-0.008	0.0005	70.00	0.0364	0.000808
Tl	205	3	He	-0.005	0.0006	80.00	0.0364	0.000808
Pb	208	3	He	0.099	0.0081	540.03	0.0487	0.003226
Pb	208	3	He	0.098	0.008	570.03	0.0487	0.003226
Pb	208	3	He	0.112	0.0087	540.04	0.0487	0.003226
U	238	3	He	0.123	0.007	920.08	0.0535	0.0004157
U	238	3	He	0.136	0.0077	1010.07	0.0535	0.0004157
U	238	3	He	0.153	0.0086	1120.10	0.0535	0.0004157
Sc	45	1	No Gas			1334376.07		
Sc	45	1	No Gas			1308534.75		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1346358.42		
Ge	72	1	No Gas			707111.71		
Ge	72	1	No Gas			705986.63		
Ge	72	1	No Gas			704772.26		
Sc	45	2	H2			92825.34		
Sc	45	2	H2			91376.92		
Sc	45	2	H2			91898.94		
Ge	72	2	H2			74745.61		
Ge	72	2	H2			76073.39		
Ge	72	2	H2			75530.19		
In	115	2	H2			193521.56		
In	115	2	H2			193594.33		
In	115	2	H2			192810.54		
Sc	45	3	He			24070.48		
Sc	45	3	He			21997.02		
Sc	45	3	He			24320.82		
Ge	72	3	He			43577.15		
Ge	72	3	He			43447.38		
Ge	72	3	He			43577.59		
In	115	3	He			40138.72		
In	115	3	He			39928.02		
In	115	3	He			39747.52		
Tb	159	3	He			182011.95		
Tb	159	3	He			181300.90		
Tb	159	3	He			176558.79		
Bi	209	3	He			131435.14		
Bi	209	3	He			131556.21		
Bi	209	3	He			129890.11		

Quantitation Report

Data File Name	092_CCV.d
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Sample Type	CCV
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

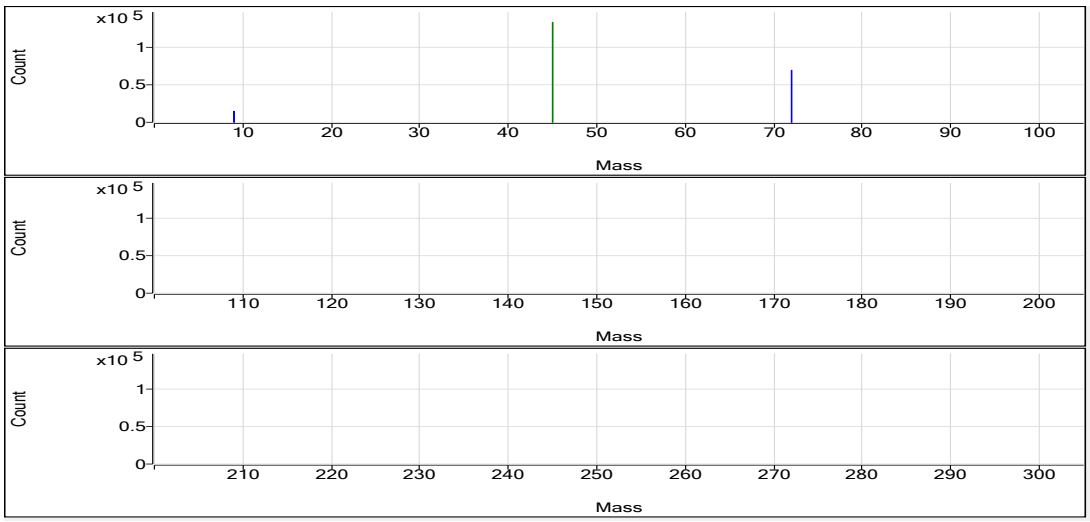
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	46.565	ppb	8.5	29849.83	0.0225	Pulse	0.5000	3
Se	78	115	H2	50.198	ppb	4.0	1966.81	0.0103	Pulse	1.5000	3
Na	23	45	He	4988.887	ppb	2.9	429951.91	18.5069	Pulse	0.1000	3
Mg	24	45	He	4990.215	ppb	2.5	210944.60	9.0796	Pulse	0.1000	3
Al	27	45	He	5015.589	ppb	2.4	64954.09	2.7957	Pulse	0.1000	3
K	39	45	He	5140.926	ppb	1.9	165372.40	7.1170	Pulse	0.1000	3
Ca	44	45	He	4803.142	ppb	6.8	8275.99	0.3561	Pulse	0.1000	3
Ti	47	45	He	5102.126	ppb	3.0	69496.62	2.9915	Pulse	0.1000	3
V	51	45	He	508.971	ppb	2.9	306179.03	13.1798	Pulse	0.5000	3
Cr	52	45	He	508.609	ppb	3.1	394866.47	16.9979	Pulse	0.1000	3
Mn	55	45	He	510.716	ppb	3.3	164614.02	7.0865	Pulse	0.1000	3
Fe	57	45	He	5073.675	ppb	3.1	75048.37	3.2306	Pulse	0.1000	3
Co	59	45	He	499.195	ppb	2.7	767301.89	33.0276	Pulse	0.1000	3
Ni	60	72	He	500.133	ppb	0.2	218450.38	5.0096	Pulse	0.1000	3
Cu	63	72	He	497.227	ppb	1.0	621048.08	14.2428	Pulse	0.1000	3
Zn	66	72	He	495.402	ppb	1.4	72657.25	1.6663	Pulse	0.1000	3
As	75	72	He	501.677	ppb	1.5	56531.58	1.2965	Pulse	0.5000	3
Sr	88	115	He	51.213	ppb	0.9	21453.46	0.5416	Pulse	0.1000	3
Mo	98	115	He	49.717	ppb	1.5	54195.42	1.3685	Pulse	0.1000	3
Ag	107	115	He	49.333	ppb	1.7	115466.93	2.9157	Pulse	0.1000	3
Cd	111	115	He	49.168	ppb	2.0	12905.99	0.3259	Pulse	0.5000	3
Sn	120	115	He	49.334	ppb	1.3	37331.29	0.9426	Pulse	0.1000	3
Sb	121	115	He	48.092	ppb	3.7	34891.35	0.8813	Pulse	0.1000	3
Ba	137	115	He	494.647	ppb	0.8	114794.48	2.8984	Pulse	0.1000	3
Tl	205	209	He	51.125	ppb	0.9	239032.77	1.8598	Pulse	0.1000	3
Pb	208	209	He	50.902	ppb	0.9	319347.99	2.4847	Pulse	0.1000	3
U	238	209	He	49.761	ppb	1.1	342133.90	2.6620	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1328416.59	2.3	99.5	Analog	0.1000	3
No Gas	Ge	72	691941.71	1.5	98.9	Pulse	0.1000	3
H2	Sc	45	89504.56	1.2	103.0	Pulse	0.1000	3
H2	Ge	72	72521.15	0.6	101.3	Pulse	0.1000	3
H2	In	115	190619.81	1.8	104.1	Pulse	0.1000	3
He	Sc	45	23242.63	2.6	101.0	Pulse	0.1000	3
He	Ge	72	43607.44	1.1	103.3	Pulse	0.1000	3
He	In	115	39610.01	1.9	101.7	Pulse	0.1000	3
He	Tb	159	177897.84	1.4	101.0	Pulse	0.1000	3
He	Bi	209	128535.71	1.1	100.2	Pulse	0.1000	3

No Gas



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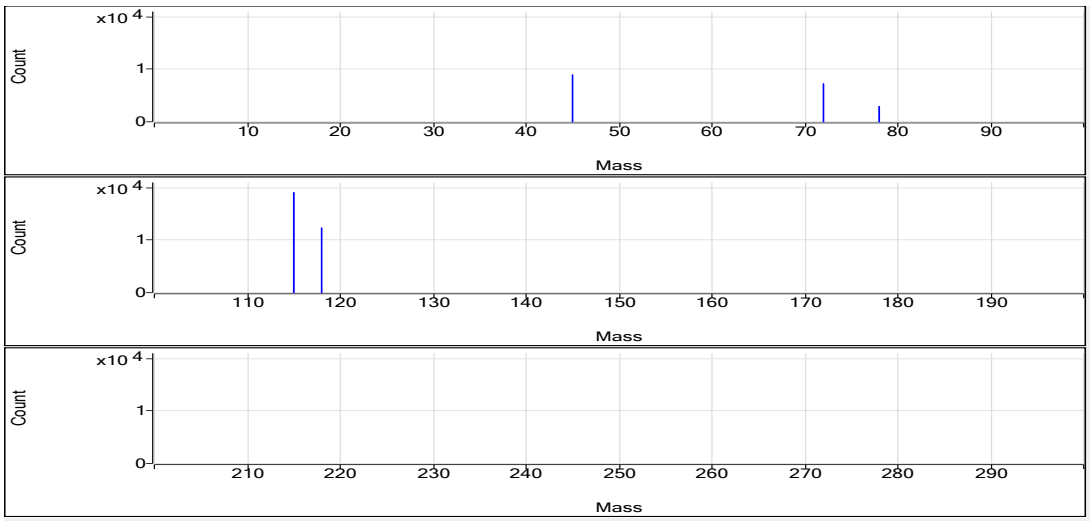
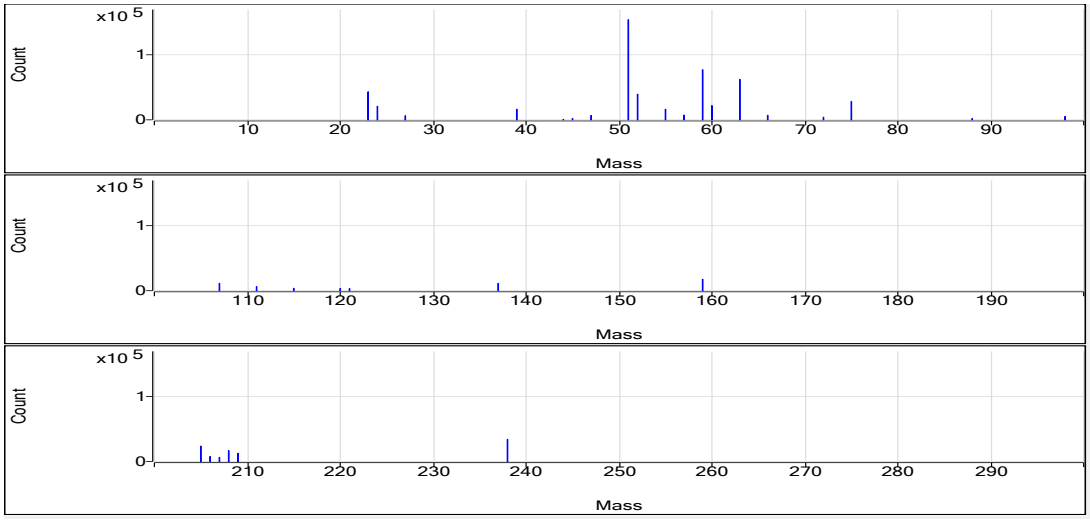


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	42.528	0.0205	27873.93	0.0005	1.901E-05
Be	9	1	No Gas	46.688	0.0225	29212.45	0.0005	1.901E-05
Be	9	1	No Gas	50.477	0.0244	32463.10	0.0005	1.901E-05
Se	78	2	H2	49.566	0.0102	1972.14	0.0002	7.279E-06
Se	78	2	H2	52.433	0.0108	2013.48	0.0002	7.279E-06
Se	78	2	H2	48.595	0.01	1914.80	0.0002	7.279E-06
Na	23	3	He	4856.519	18.0349	430864.64	0.0036	0.7194
Na	23	3	He	4970.838	18.4425	426744.49	0.0036	0.7194
Na	23	3	He	5139.304	19.0432	432246.60	0.0036	0.7194
Mg	24	3	He	4861.416	8.8454	211322.32	0.0018	0.006791
Mg	24	3	He	5004.009	9.1047	210674.61	0.0018	0.006791
Mg	24	3	He	5105.218	9.2887	210836.87	0.0018	0.006791
Al	27	3	He	4909.208	2.7365	65375.84	0.0006	0.002622
Al	27	3	He	4989.295	2.7811	64351.61	0.0006	0.002622
Al	27	3	He	5148.266	2.8696	65134.81	0.0006	0.002622
K	39	3	He	5066.21	7.0216	167750.88	0.0013	0.5579
K	39	3	He	5104.51	7.0705	163605.46	0.0013	0.5579
K	39	3	He	5252.057	7.2588	164760.86	0.0013	0.5579
Ca	44	3	He	4908.966	0.3639	8692.86	0.0001	0.004062
Ca	44	3	He	4438.94	0.3294	7622.30	0.0001	0.004062
Ca	44	3	He	5061.519	0.375	8512.81	0.0001	0.004062
Ti	47	3	He	4964.157	2.9107	69537.16	0.0006	0.0002809
Ti	47	3	He	5071.986	2.9739	68812.87	0.0006	0.0002809
Ti	47	3	He	5270.235	3.0901	70139.82	0.0006	0.0002809
V	51	3	He	493.914	12.7904	305570.28	0.0259	0.01861
V	51	3	He	509.287	13.1879	305157.41	0.0259	0.01861
V	51	3	He	523.712	13.561	307809.41	0.0259	0.01861
Cr	52	3	He	492.358	16.4582	393194.45	0.0332	0.1047
Cr	52	3	He	509.526	17.0284	394022.18	0.0332	0.1047
Cr	52	3	He	523.943	17.5072	397382.77	0.0332	0.1047
Mn	55	3	He	492.859	6.8389	163384.20	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	512.846	7.116	164657.91	0.0139	0.005074
Mn	55	3	He	526.444	7.3045	165799.96	0.0139	0.005074
Fe	57	3	He	4897.301	3.1185	74502.25	0.0006	0.00609
Fe	57	3	He	5136.654	3.2706	75678.84	0.0006	0.00609
Fe	57	3	He	5187.069	3.3026	74964.03	0.0006	0.00609
Co	59	3	He	486.682	32.1999	769272.64	0.0661	0.00621
Co	59	3	He	497.519	32.9167	761664.75	0.0661	0.00621
Co	59	3	He	513.382	33.966	770968.27	0.0661	0.00621
Ni	60	3	He	499.154	4.9998	220485.39	0.01	0.01721
Ni	60	3	He	499.922	5.0074	218411.60	0.01	0.01721
Ni	60	3	He	501.324	5.0214	216454.14	0.01	0.01721
Cu	63	3	He	492.233	14.0998	621788.27	0.0286	0.006793
Cu	63	3	He	497.722	14.257	621852.22	0.0286	0.006793
Cu	63	3	He	501.727	14.3716	619503.74	0.0286	0.006793
Zn	66	3	He	487.761	1.6407	72352.25	0.0034	0.00316
Zn	66	3	He	497.758	1.6742	73025.94	0.0034	0.00316
Zn	66	3	He	500.687	1.6841	72593.56	0.0034	0.00316
As	75	3	He	494.433	1.2778	56350.23	0.0026	0.0008231
As	75	3	He	501.196	1.2953	56496.72	0.0026	0.0008231
As	75	3	He	509.402	1.3165	56747.80	0.0026	0.0008231
Sr	88	3	He	50.849	0.5378	21697.13	0.0105	0.001715
Sr	88	3	He	51.707	0.5468	21687.12	0.0105	0.001715
Sr	88	3	He	51.083	0.5403	20976.14	0.0105	0.001715
Mo	98	3	He	48.875	1.3453	54275.40	0.0275	0.0008555
Mo	98	3	He	49.941	1.3746	54516.79	0.0275	0.0008555
Mo	98	3	He	50.336	1.3855	53794.08	0.0275	0.0008555
Ag	107	3	He	48.528	2.8682	115715.19	0.0591	0.0004305
Ag	107	3	He	49.237	2.9101	115413.26	0.0591	0.0004305
Ag	107	3	He	50.233	2.9689	115272.33	0.0591	0.0004305
Cd	111	3	He	48.179	0.3193	12883.99	0.0066	5.141E-05
Cd	111	3	He	49.201	0.3261	12934.00	0.0066	5.141E-05
Cd	111	3	He	50.125	0.3322	12899.98	0.0066	5.141E-05
Sn	120	3	He	49.209	0.9402	37932.84	0.0187	0.0185
Sn	120	3	He	48.767	0.9319	36960.36	0.0187	0.0185
Sn	120	3	He	50.027	0.9556	37100.66	0.0187	0.0185
Sb	121	3	He	46.275	0.848	34213.05	0.0183	0.00111
Sb	121	3	He	48.194	0.8831	35025.12	0.0183	0.00111
Sb	121	3	He	49.808	0.9127	35435.89	0.0183	0.00111
Ba	137	3	He	493.037	2.8889	116552.09	0.0059	0.0007704
Ba	137	3	He	491.79	2.8816	114283.27	0.0059	0.0007704
Ba	137	3	He	499.114	2.9245	113548.08	0.0059	0.0007704
Tl	205	3	He	51.647	1.8788	238525.64	0.0364	0.000808
Tl	205	3	He	50.77	1.8469	238043.26	0.0364	0.000808
Tl	205	3	He	50.957	1.8537	240529.41	0.0364	0.000808
Pb	208	3	He	51.392	2.5085	169583.12	0.0487	0.003226
Pb	208	3	He	50.797	2.4795	172135.78	0.0487	0.003226
Pb	208	3	He	50.519	2.466	169697.13	0.0487	0.003226
U	238	3	He	50.396	2.696	342278.55	0.0535	0.0004157
U	238	3	He	49.309	2.6378	339989.21	0.0535	0.0004157
U	238	3	He	49.576	2.6521	344133.94	0.0535	0.0004157
Sc	45	1	No Gas			1357329.04		
Sc	45	1	No Gas			1295861.23		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1332059.51		
Ge	72	1	No Gas			694209.52		
Ge	72	1	No Gas			680719.44		
Ge	72	1	No Gas			700896.16		
Sc	45	2	H2			90520.98		
Sc	45	2	H2			89564.74		
Sc	45	2	H2			88427.95		
Ge	72	2	H2			72685.24		
Ge	72	2	H2			72886.61		
Ge	72	2	H2			71991.61		
In	115	2	H2			193491.31		
In	115	2	H2			186751.05		
In	115	2	H2			191617.07		
Sc	45	3	He			23890.54		
Sc	45	3	He			23139.13		
Sc	45	3	He			22698.21		
Ge	72	3	He			44098.99		
Ge	72	3	He			43617.38		
Ge	72	3	He			43105.96		
In	115	3	He			40609.99		
In	115	3	He			39918.08		
In	115	3	He			39085.91		
Tb	159	3	He			178495.37		
Tb	159	3	He			175204.08		
Tb	159	3	He			179994.06		
Bi	209	3	He			126958.59		
Bi	209	3	He			128890.18		
Bi	209	3	He			129758.35		

Quantitation Report

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Sample Type	CCB
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Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

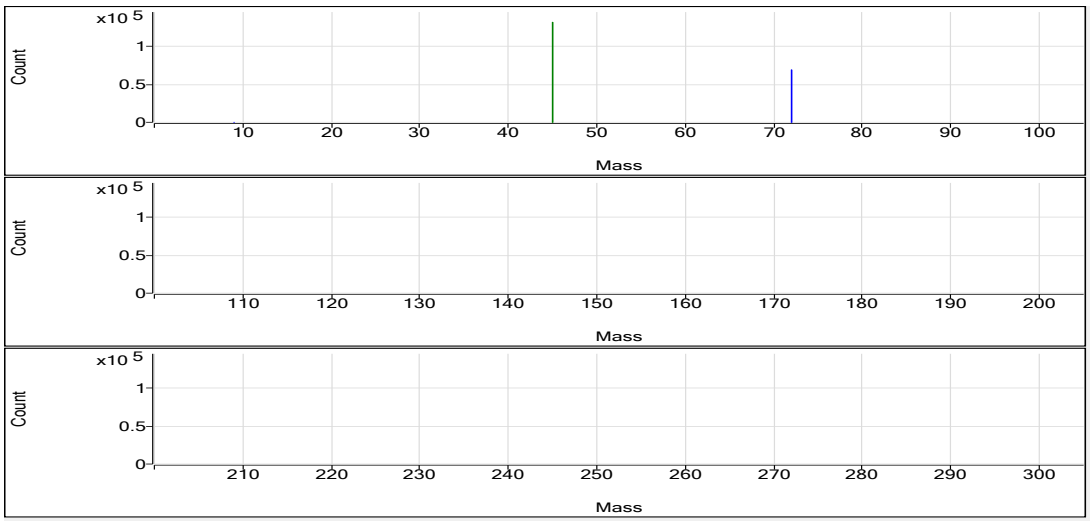
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.058	ppb	62.0	62.00	0.0000	Pulse	0.5000	3
Se	78	115	H2	0.056	ppb	47.4	3.56	0.0000	Pulse	1.5000	3
Na	23	45	He	-55.809	ppb	N/A	12001.92	0.5204	Pulse	0.1000	3
Mg	24	45	He	3.414	ppb	52.3	300.01	0.0130	Pulse	0.1000	3
Al	27	45	He	2.029	ppb	77.0	86.67	0.0038	Pulse	0.1000	3
K	39	45	He	22.579	ppb	208.3	13530.08	0.5867	Pulse	0.1000	3
Ca	44	45	He	35.054	ppb	150.9	153.34	0.0066	Pulse	0.1000	3
Ti	47	45	He	1.247	ppb	34.5	23.33	0.0010	Pulse	0.1000	3
V	51	45	He	0.146	ppb	47.4	516.01	0.0224	Pulse	0.5000	3
Cr	52	45	He	0.467	ppb	37.9	2773.69	0.1203	Pulse	0.1000	3
Mn	55	45	He	0.480	ppb	63.2	270.01	0.0117	Pulse	0.1000	3
Fe	57	45	He	1.335	ppb	207.1	160.01	0.0069	Pulse	0.1000	3
Co	59	45	He	0.098	ppb	48.0	293.35	0.0127	Pulse	0.1000	3
Ni	60	72	He	0.325	ppb	52.8	870.05	0.0205	Pulse	0.1000	3
Cu	63	72	He	0.053	ppb	147.9	353.35	0.0083	Pulse	0.1000	3
Zn	66	72	He	0.155	ppb	155.9	156.68	0.0037	Pulse	0.1000	3
As	75	72	He	0.228	ppb	32.9	60.00	0.0014	Pulse	0.5000	3
Sr	88	115	He	0.116	ppb	52.7	116.67	0.0029	Pulse	0.1000	3
Mo	98	115	He	0.064	ppb	52.8	103.33	0.0026	Pulse	0.1000	3
Ag	107	115	He	0.013	ppb	53.4	46.67	0.0012	Pulse	0.1000	3
Cd	111	115	He	0.010	ppb	86.9	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.031	ppb	297.6	760.05	0.0191	Pulse	0.1000	3
Sb	121	115	He	0.113	ppb	48.9	126.67	0.0032	Pulse	0.1000	3
Ba	137	115	He	0.026	ppb	189.5	36.67	0.0009	Pulse	0.1000	3
Tl	205	209	He	0.094	ppb	4.4	540.03	0.0042	Pulse	0.1000	3
Pb	208	209	He	0.005	ppb	272.4	446.69	0.0035	Pulse	0.1000	3
U	238	209	He	0.013	ppb	33.5	140.01	0.0011	Pulse	0.1000	3

ISTD Table:

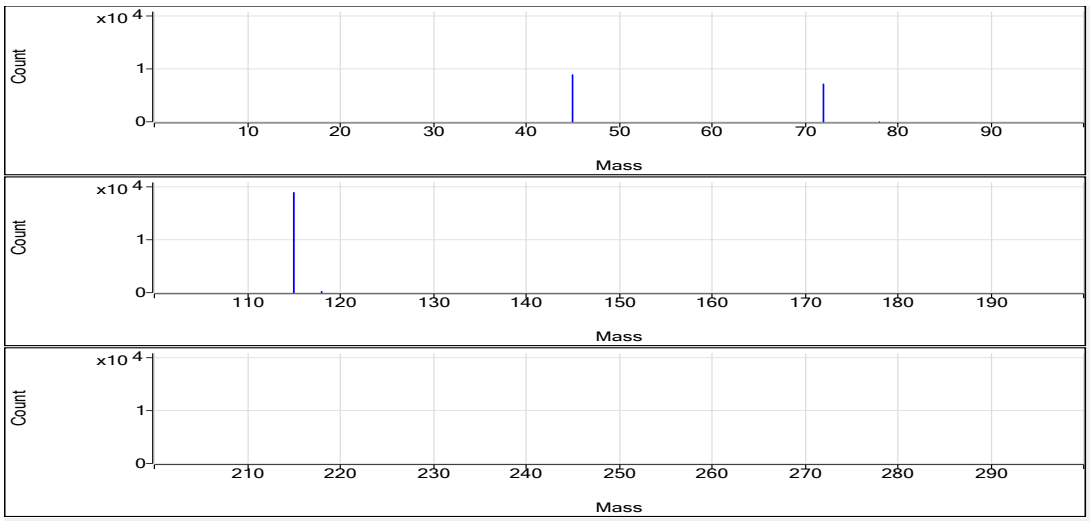
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1320916.44	1.3	99.0	Analog	0.1000	3
No Gas	Ge	72	692775.62	0.4	99.0	Pulse	0.1000	3
H2	Sc	45	89215.94	0.7	102.6	Pulse	0.1000	3
H2	Ge	72	71844.52	1.8	100.3	Pulse	0.1000	3
H2	In	115	189833.41	0.8	103.6	Pulse	0.1000	3
He	Sc	45	23068.94	0.8	100.3	Pulse	0.1000	3
He	Ge	72	42533.97	0.4	100.7	Pulse	0.1000	3
He	In	115	39792.45	1.6	102.2	Pulse	0.1000	3
He	Tb	159	177096.95	0.9	100.6	Pulse	0.1000	3
He	Bi	209	127796.50	0.7	99.7	Pulse	0.1000	3

No Gas

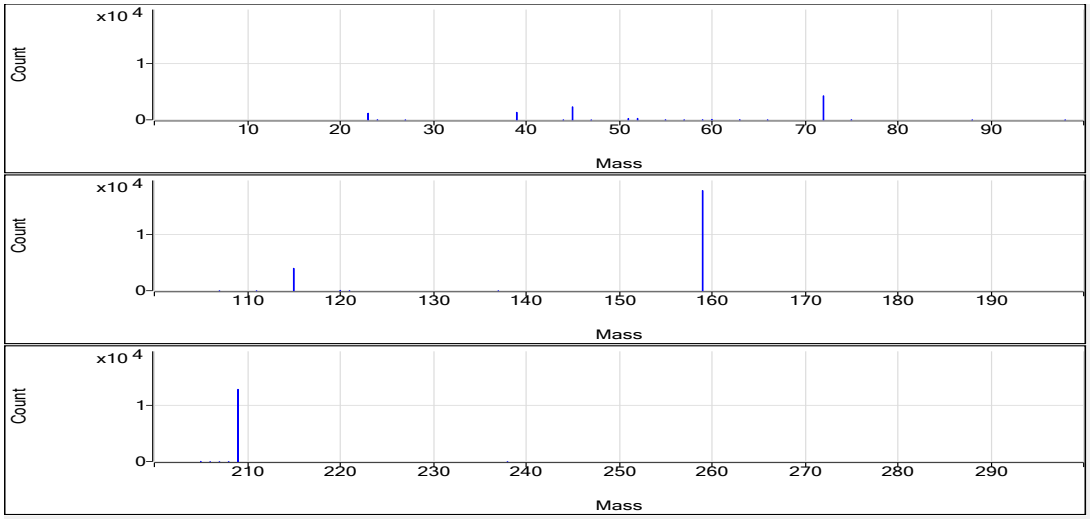


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.097	0.0001	88.00	0.0005	1.901E-05
Be	9	1	No Gas	0.048	0	56.00	0.0005	1.901E-05
Be	9	1	No Gas	0.027	0	42.00	0.0005	1.901E-05
Se	78	2	H2	0.051	0	3.33	0.0002	7.279E-06
Se	78	2	H2	0.084	0	4.67	0.0002	7.279E-06
Se	78	2	H2	0.032	0	2.67	0.0002	7.279E-06
Na	23	3	He	-56.211	0.5189	11945.20	0.0036	0.7194
Na	23	3	He	-49.697	0.5422	12425.60	0.0036	0.7194
Na	23	3	He	-61.518	0.5	11634.95	0.0036	0.7194
Mg	24	3	He	5.106	0.0161	370.02	0.0018	0.006791
Mg	24	3	He	1.545	0.0096	220.01	0.0018	0.006791
Mg	24	3	He	3.592	0.0133	310.01	0.0018	0.006791
Al	27	3	He	1.532	0.0035	80.00	0.0006	0.002622
Al	27	3	He	0.776	0.0031	70.00	0.0006	0.002622
Al	27	3	He	3.78	0.0047	110.00	0.0006	0.002622
K	39	3	He	73.427	0.6516	14998.09	0.0013	0.5579
K	39	3	He	13.702	0.5754	13186.45	0.0013	0.5579
K	39	3	He	-19.391	0.5331	12405.71	0.0013	0.5579
Ca	44	3	He	-13.932	0.003	70.00	0.0001	0.004062
Ca	44	3	He	27.927	0.0061	140.01	0.0001	0.004062
Ca	44	3	He	91.168	0.0107	250.01	0.0001	0.004062
Ti	47	3	He	1.744	0.0013	30.00	0.0006	0.0002809
Ti	47	3	He	1.009	0.0009	20.00	0.0006	0.0002809
Ti	47	3	He	0.987	0.0009	20.00	0.0006	0.0002809
V	51	3	He	0.208	0.024	552.01	0.0259	0.01861
V	51	3	He	0.158	0.0227	520.01	0.0259	0.01861
V	51	3	He	0.071	0.0205	476.01	0.0259	0.01861
Cr	52	3	He	0.562	0.1234	2840.37	0.0332	0.1047
Cr	52	3	He	0.578	0.1239	2840.37	0.0332	0.1047
Cr	52	3	He	0.263	0.1135	2640.32	0.0332	0.1047
Mn	55	3	He	0.637	0.0139	320.01	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.673	0.0144	330.02	0.0139	0.005074
Mn	55	3	He	0.13	0.0069	160.01	0.0139	0.005074
Fe	57	3	He	-1.38	0.0052	120.01	0.0006	0.00609
Fe	57	3	He	4.149	0.0087	200.01	0.0006	0.00609
Fe	57	3	He	1.237	0.0069	160.01	0.0006	0.00609
Co	59	3	He	0.149	0.0161	370.02	0.0661	0.00621
Co	59	3	He	0.091	0.0122	280.01	0.0661	0.00621
Co	59	3	He	0.056	0.0099	230.01	0.0661	0.00621
Ni	60	3	He	0.383	0.021	890.06	0.01	0.01721
Ni	60	3	He	0.461	0.0218	930.05	0.01	0.01721
Ni	60	3	He	0.132	0.0185	790.05	0.01	0.01721
Cu	63	3	He	-0.031	0.0059	250.01	0.0286	0.006793
Cu	63	3	He	0.066	0.0087	370.02	0.0286	0.006793
Cu	63	3	He	0.123	0.0103	440.02	0.0286	0.006793
Zn	66	3	He	-0.097	0.0028	120.01	0.0034	0.00316
Zn	66	3	He	0.176	0.0038	160.01	0.0034	0.00316
Zn	66	3	He	0.386	0.0045	190.01	0.0034	0.00316
As	75	3	He	0.303	0.0016	68.00	0.0026	0.0008231
As	75	3	He	0.153	0.0012	52.00	0.0026	0.0008231
As	75	3	He	0.226	0.0014	60.00	0.0026	0.0008231
Sr	88	3	He	0.169	0.0035	140.01	0.0105	0.001715
Sr	88	3	He	0.049	0.0022	90.00	0.0105	0.001715
Sr	88	3	He	0.129	0.0031	120.00	0.0105	0.001715
Mo	98	3	He	0.032	0.0017	70.00	0.0275	0.0008555
Mo	98	3	He	0.059	0.0025	100.00	0.0275	0.0008555
Mo	98	3	He	0.099	0.0036	140.00	0.0275	0.0008555
Ag	107	3	He	0.005	0.0007	30.00	0.0591	0.0004305
Ag	107	3	He	0.014	0.0012	50.00	0.0591	0.0004305
Ag	107	3	He	0.019	0.0015	60.00	0.0591	0.0004305
Cd	111	3	He	0.015	0.0001	6.00	0.0066	5.141E-05
Cd	111	3	He	0.015	0.0001	6.00	0.0066	5.141E-05
Cd	111	3	He	0	0.0001	2.00	0.0066	5.141E-05
Sn	120	3	He	0.025	0.019	760.06	0.0187	0.0185
Sn	120	3	He	0.125	0.0209	840.05	0.0187	0.0185
Sn	120	3	He	-0.058	0.0174	680.04	0.0187	0.0185
Sb	121	3	He	0.158	0.004	160.01	0.0183	0.00111
Sb	121	3	He	0.129	0.0035	140.01	0.0183	0.00111
Sb	121	3	He	0.051	0.002	80.00	0.0183	0.00111
Ba	137	3	He	0.082	0.0012	50.00	0.0059	0.0007704
Ba	137	3	He	-0.004	0.0007	30.00	0.0059	0.0007704
Ba	137	3	He	0	0.0008	30.00	0.0059	0.0007704
Tl	205	3	He	0.093	0.0042	540.04	0.0364	0.000808
Tl	205	3	He	0.098	0.0044	560.03	0.0364	0.000808
Tl	205	3	He	0.09	0.0041	520.03	0.0364	0.000808
Pb	208	3	He	0.02	0.0042	270.01	0.0487	0.003226
Pb	208	3	He	-0.01	0.0027	140.01	0.0487	0.003226
Pb	208	3	He	0.006	0.0035	250.01	0.0487	0.003226
U	238	3	He	0.017	0.0013	170.01	0.0535	0.0004157
U	238	3	He	0.013	0.0011	140.01	0.0535	0.0004157
U	238	3	He	0.008	0.0009	110.00	0.0535	0.0004157
Sc	45	1	No Gas			1337248.11		
Sc	45	1	No Gas			1321567.95		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1303933.26		
Ge	72	1	No Gas			695192.41		
Ge	72	1	No Gas			689400.93		
Ge	72	1	No Gas			693733.51		
Sc	45	2	H2			89000.70		
Sc	45	2	H2			89877.32		
Sc	45	2	H2			88769.80		
Ge	72	2	H2			70926.93		
Ge	72	2	H2			73308.75		
Ge	72	2	H2			71297.88		
In	115	2	H2			188413.24		
In	115	2	H2			189518.26		
In	115	2	H2			191568.73		
Sc	45	3	He			23018.81		
Sc	45	3	He			22918.70		
Sc	45	3	He			23269.32		
Ge	72	3	He			42323.37		
Ge	72	3	He			42644.19		
Ge	72	3	He			42634.34		
In	115	3	He			40048.30		
In	115	3	He			40288.96		
In	115	3	He			39056.05		
Tb	159	3	He			175252.50		
Tb	159	3	He			178202.11		
Tb	159	3	He			177836.25		
Bi	209	3	He			128709.05		
Bi	209	3	He			127637.70		
Bi	209	3	He			127042.76		

Quantitation Report

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Acq Time	9/19/2023 9:58:08 AM
Sample Name	410-142837-H-1-A
Sample Type	Sample
Comment	F6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

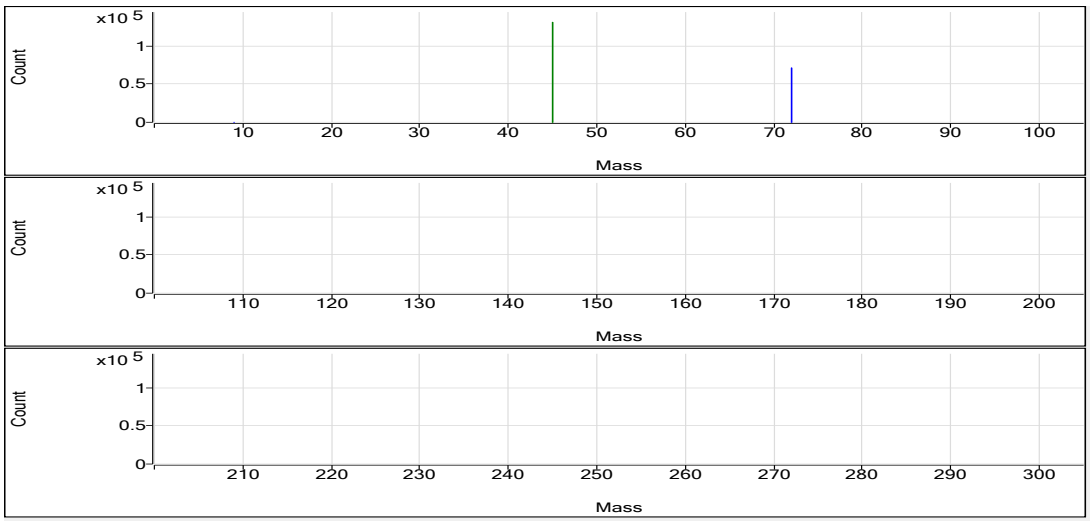
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.220	ppb	18.3	164.00	0.0001	Pulse	0.5000	3
Se	78	115	H2	0.105	ppb	64.1	5.56	0.0000	Pulse	1.5000	3
Na	23	45	He	4661.437	ppb	2.7	415489.90	17.3394	Pulse	0.1000	3
Mg	24	45	He	5467.523	ppb	2.8	238359.75	9.9474	Pulse	0.1000	3
Al	27	45	He	257.789	ppb	23.3	3489.31	0.1462	Pulse	0.1000	3
K	39	45	He	1468.529	ppb	3.2	58273.48	2.4315	Pulse	0.1000	3
Ca	44	45	He	19957.148	ppb	2.3	35149.88	1.4668	Pulse	0.1000	3
Ti	47	45	He	5.243	ppb	55.1	80.00	0.0034	Pulse	0.1000	3
V	51	45	He	0.748	ppb	10.8	909.37	0.0379	Pulse	0.5000	3
Cr	52	45	He	1.457	ppb	9.6	3670.59	0.1531	Pulse	0.1000	3
Mn	55	45	He	10.076	ppb	6.2	3467.20	0.1448	Pulse	0.1000	3
Fe	57	45	He	142.829	ppb	15.2	2326.98	0.0969	Pulse	0.1000	3
Co	59	45	He	0.225	ppb	27.5	503.36	0.0211	Pulse	0.1000	3
Ni	60	72	He	1.606	ppb	31.5	1470.14	0.0332	Pulse	0.1000	3
Cu	63	72	He	0.422	ppb	27.7	833.39	0.0189	Pulse	0.1000	3
Zn	66	72	He	3.243	ppb	30.1	616.70	0.0140	Pulse	0.1000	3
As	75	72	He	0.154	ppb	83.8	54.00	0.0012	Pulse	0.5000	3
Sr	88	115	He	48.523	ppb	1.4	20782.58	0.5133	Pulse	0.1000	3
Mo	98	115	He	0.029	ppb	19.7	66.67	0.0016	Pulse	0.1000	3
Ag	107	115	He	0.004	ppb	123.1	26.67	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.020	ppb	78.6	7.33	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.017	ppb	N/A	736.72	0.0182	Pulse	0.1000	3
Sb	121	115	He	0.110	ppb	24.3	126.67	0.0031	Pulse	0.1000	3
Ba	137	115	He	39.178	ppb	5.5	9320.18	0.2303	Pulse	0.1000	3
Tl	205	209	He	0.027	ppb	32.3	233.34	0.0018	Pulse	0.1000	3
Pb	208	209	He	0.268	ppb	10.6	2126.82	0.0163	Pulse	0.1000	3
U	238	209	He	0.024	ppb	21.4	220.01	0.0017	Pulse	0.1000	3

ISTD Table:

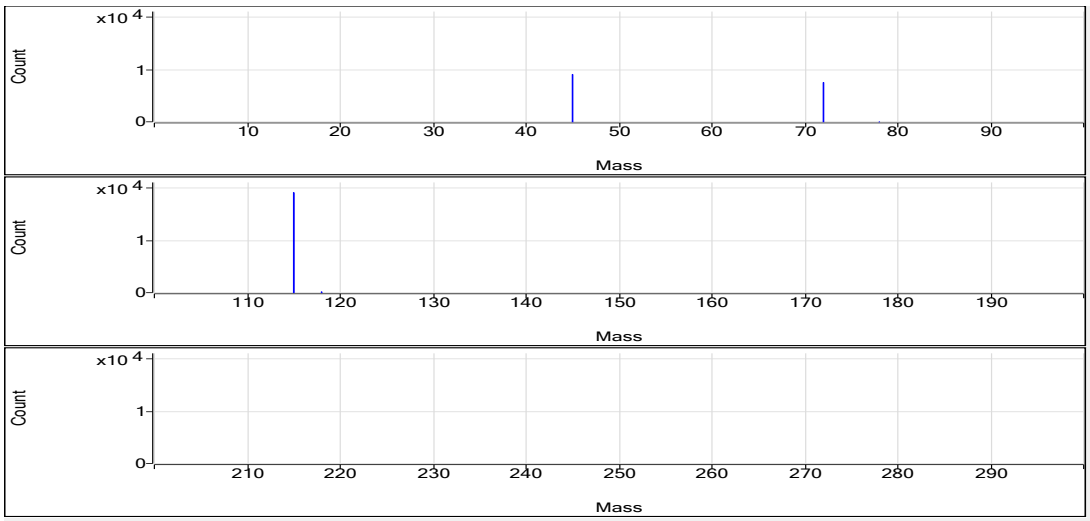
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1312444.51	1.5	98.3	Analog	0.1000	3
No Gas	Ge	72	714185.01	0.4	102.1	Pulse	0.1000	3
H2	Sc	45	91101.62	1.3	104.8	Pulse	0.1000	3
H2	Ge	72	75644.07	0.4	105.6	Pulse	0.1000	3
H2	In	115	192385.94	0.6	105.0	Pulse	0.1000	3
He	Sc	45	23973.81	2.8	104.2	Pulse	0.1000	3
He	Ge	72	44099.09	3.0	104.4	Pulse	0.1000	3
He	In	115	40494.83	1.3	104.0	Pulse	0.1000	3
He	Tb	159	181282.08	1.1	102.9	Pulse	0.1000	3
He	Bi	209	130605.64	0.7	101.9	Pulse	0.1000	3

No Gas

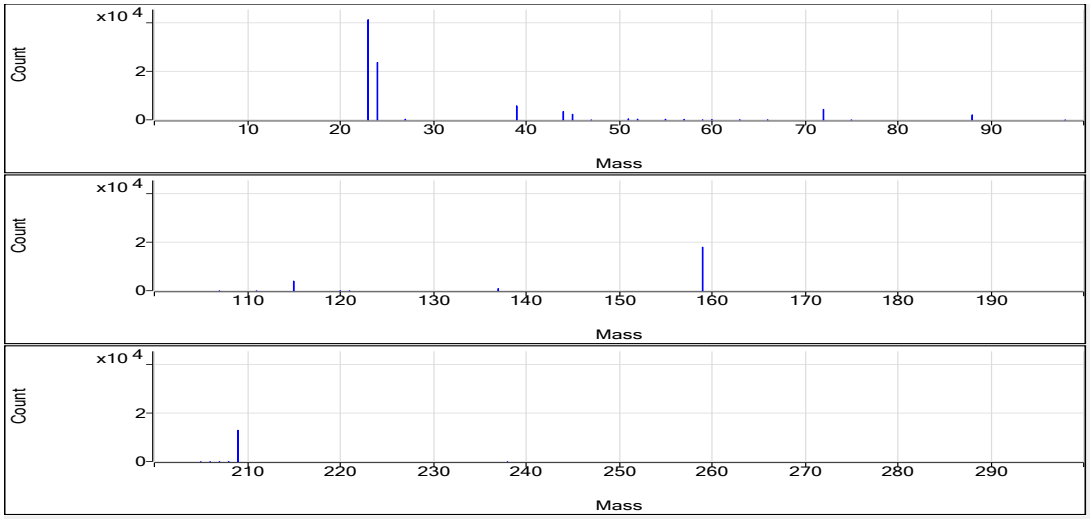


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.175	0.0001	136.00	0.0005	1.901E-05
Be	9	1	No Gas	0.23	0.0001	168.00	0.0005	1.901E-05
Be	9	1	No Gas	0.253	0.0001	188.00	0.0005	1.901E-05
Se	78	2	H2	0.066	0	4.00	0.0002	7.279E-06
Se	78	2	H2	0.183	0	8.67	0.0002	7.279E-06
Se	78	2	H2	0.066	0	4.00	0.0002	7.279E-06
Na	23	3	He	4637.206	17.253	413386.44	0.0036	0.7194
Na	23	3	He	4548.771	16.9377	417715.42	0.0036	0.7194
Na	23	3	He	4798.335	17.8275	415367.85	0.0036	0.7194
Mg	24	3	He	5407.686	9.8386	235735.99	0.0018	0.006791
Mg	24	3	He	5354.068	9.7411	240234.82	0.0018	0.006791
Mg	24	3	He	5640.816	10.2625	239108.45	0.0018	0.006791
Al	27	3	He	260.73	0.1478	3541.76	0.0006	0.002622
Al	27	3	He	196.283	0.1119	2760.38	0.0006	0.002622
Al	27	3	He	316.355	0.1788	4165.79	0.0006	0.002622
K	39	3	He	1507.831	2.4817	59461.11	0.0013	0.5579
K	39	3	He	1416.47	2.3651	58327.60	0.0013	0.5579
K	39	3	He	1481.287	2.4478	57031.72	0.0013	0.5579
Ca	44	3	He	19933.24	1.4651	35103.16	0.0001	0.004062
Ca	44	3	He	19514.169	1.4343	35373.57	0.0001	0.004062
Ca	44	3	He	20424.035	1.501	34972.92	0.0001	0.004062
Ti	47	3	He	8.064	0.005	120.01	0.0006	0.0002809
Ti	47	3	He	2.287	0.0016	40.00	0.0006	0.0002809
Ti	47	3	He	5.377	0.0034	80.00	0.0006	0.0002809
V	51	3	He	0.665	0.0358	858.03	0.0259	0.01861
V	51	3	He	0.751	0.038	938.04	0.0259	0.01861
V	51	3	He	0.827	0.04	932.04	0.0259	0.01861
Cr	52	3	He	1.295	0.1478	3540.54	0.0332	0.1047
Cr	52	3	He	1.523	0.1553	3830.62	0.0332	0.1047
Cr	52	3	He	1.551	0.1563	3640.60	0.0332	0.1047
Mn	55	3	He	10.05	0.1444	3460.52	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	9.461	0.1363	3360.49	0.0139	0.005074
Mn	55	3	He	10.717	0.1537	3580.58	0.0139	0.005074
Fe	57	3	He	158.554	0.1069	2560.31	0.0006	0.00609
Fe	57	3	He	151.864	0.1026	2530.43	0.0006	0.00609
Fe	57	3	He	118.069	0.0811	1890.20	0.0006	0.00609
Co	59	3	He	0.196	0.0192	460.02	0.0661	0.00621
Co	59	3	He	0.182	0.0182	450.02	0.0661	0.00621
Co	59	3	He	0.295	0.0258	600.03	0.0661	0.00621
Ni	60	3	He	1.568	0.0329	1460.12	0.01	0.01721
Ni	60	3	He	2.129	0.0385	1740.18	0.01	0.01721
Ni	60	3	He	1.12	0.0284	1210.11	0.01	0.01721
Cu	63	3	He	0.557	0.0227	1010.07	0.0286	0.006793
Cu	63	3	He	0.365	0.0172	780.05	0.0286	0.006793
Cu	63	3	He	0.345	0.0167	710.04	0.0286	0.006793
Zn	66	3	He	2.679	0.0122	540.03	0.0034	0.00316
Zn	66	3	He	2.68	0.0122	550.02	0.0034	0.00316
Zn	66	3	He	4.37	0.0178	760.05	0.0034	0.00316
As	75	3	He	0.047	0.0009	42.00	0.0026	0.0008231
As	75	3	He	0.297	0.0016	72.00	0.0026	0.0008231
As	75	3	He	0.117	0.0011	48.00	0.0026	0.0008231
Sr	88	3	He	48.583	0.5139	20996.15	0.0105	0.001715
Sr	88	3	He	47.796	0.5056	20605.78	0.0105	0.001715
Sr	88	3	He	49.189	0.5203	20745.81	0.0105	0.001715
Mo	98	3	He	0.022	0.0015	60.00	0.0275	0.0008555
Mo	98	3	He	0.031	0.0017	70.00	0.0275	0.0008555
Mo	98	3	He	0.033	0.0018	70.00	0.0275	0.0008555
Ag	107	3	He	0.009	0.001	40.00	0.0591	0.0004305
Ag	107	3	He	0.001	0.0005	20.00	0.0591	0.0004305
Ag	107	3	He	0.001	0.0005	20.00	0.0591	0.0004305
Cd	111	3	He	0.007	0.0001	4.00	0.0066	5.141E-05
Cd	111	3	He	0.037	0.0003	12.00	0.0066	5.141E-05
Cd	111	3	He	0.015	0.0002	6.00	0.0066	5.141E-05
Sn	120	3	He	-0.112	0.0164	670.03	0.0187	0.0185
Sn	120	3	He	0.152	0.0213	870.07	0.0187	0.0185
Sn	120	3	He	-0.091	0.0168	670.05	0.0187	0.0185
Sb	121	3	He	0.1	0.0029	120.01	0.0183	0.00111
Sb	121	3	He	0.14	0.0037	150.01	0.0183	0.00111
Sb	121	3	He	0.09	0.0028	110.00	0.0183	0.00111
Ba	137	3	He	37.696	0.2216	9053.28	0.0059	0.0007704
Ba	137	3	He	38.21	0.2246	9153.48	0.0059	0.0007704
Ba	137	3	He	41.627	0.2446	9753.77	0.0059	0.0007704
Tl	205	3	He	0.037	0.0021	280.01	0.0364	0.000808
Tl	205	3	He	0.02	0.0015	200.01	0.0364	0.000808
Tl	205	3	He	0.024	0.0017	220.01	0.0364	0.000808
Pb	208	3	He	0.295	0.0176	1140.09	0.0487	0.003226
Pb	208	3	He	0.239	0.0149	1000.08	0.0487	0.003226
Pb	208	3	He	0.269	0.0164	1180.10	0.0487	0.003226
U	238	3	He	0.019	0.0015	190.01	0.0535	0.0004157
U	238	3	He	0.029	0.002	260.01	0.0535	0.0004157
U	238	3	He	0.023	0.0016	210.01	0.0535	0.0004157
Sc	45	1	No Gas			1313783.11		
Sc	45	1	No Gas			1292366.54		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1331183.89		
Ge	72	1	No Gas			717065.61		
Ge	72	1	No Gas			712081.86		
Ge	72	1	No Gas			713407.57		
Sc	45	2	H2			92312.57		
Sc	45	2	H2			91084.11		
Sc	45	2	H2			89908.18		
Ge	72	2	H2			75438.97		
Ge	72	2	H2			75520.80		
Ge	72	2	H2			75972.45		
In	115	2	H2			192203.12		
In	115	2	H2			193611.23		
In	115	2	H2			191343.47		
Sc	45	3	He			23960.26		
Sc	45	3	He			24661.88		
Sc	45	3	He			23299.28		
Ge	72	3	He			44429.75		
Ge	72	3	He			45242.86		
Ge	72	3	He			42624.66		
In	115	3	He			40860.99		
In	115	3	He			40760.95		
In	115	3	He			39878.03		
Tb	159	3	He			183328.83		
Tb	159	3	He			181219.90		
Tb	159	3	He			179297.50		
Bi	209	3	He			131039.30		
Bi	209	3	He			131181.15		
Bi	209	3	He			129596.46		

Quantitation Report

Data File Name	095SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
Acq Time	9/19/2023 10:00:06 AM
Sample Name	410-142530-M-5-A
Sample Type	Sample
Comment	F6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

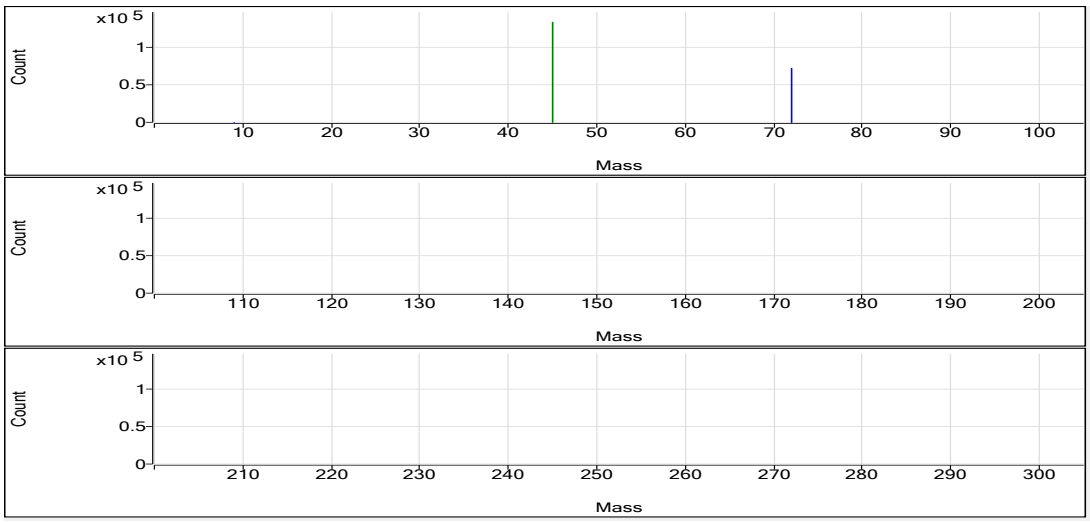
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.245	ppb	3.4	183.33	0.0001	Pulse	0.5000	3
Se	78	115	H2	0.150	ppb	12.1	7.33	0.0000	Pulse	1.5000	3
Na	23	45	He	12089.174	ppb	0.7	1041365.11	43.8225	Pulse	0.1000	3
Mg	24	45	He	4590.082	ppb	1.5	198468.33	8.3521	Pulse	0.1000	3
Al	27	45	He	450.129	ppb	7.6	6018.19	0.2533	Pulse	0.1000	3
K	39	45	He	2403.756	ppb	2.4	86139.97	3.6247	Pulse	0.1000	3
Ca	44	45	He	34560.387	ppb	0.5	60292.08	2.5371	Pulse	0.1000	3
Ti	47	45	He	2.154	ppb	51.2	36.67	0.0015	Pulse	0.1000	3
V	51	45	He	2.017	ppb	4.1	1681.44	0.0708	Pulse	0.5000	3
Cr	52	45	He	1.185	ppb	14.2	3423.86	0.1441	Pulse	0.1000	3
Mn	55	45	He	145.081	ppb	0.6	47923.38	2.0167	Pulse	0.1000	3
Fe	57	45	He	19968.227	ppb	0.3	301715.92	12.6965	Pulse	0.1000	3
Co	59	45	He	0.695	ppb	4.1	1240.10	0.0522	Pulse	0.1000	3
Ni	60	72	He	1.498	ppb	15.9	1460.13	0.0322	Pulse	0.1000	3
Cu	63	72	He	0.684	ppb	11.5	1196.76	0.0264	Pulse	0.1000	3
Zn	66	72	He	16.797	ppb	9.7	2703.69	0.0596	Pulse	0.1000	3
As	75	72	He	1.554	ppb	16.6	219.33	0.0048	Pulse	0.5000	3
Sr	88	115	He	143.059	ppb	3.2	59954.37	1.5099	Pulse	0.1000	3
Mo	98	115	He	0.170	ppb	9.2	220.01	0.0055	Pulse	0.1000	3
Ag	107	115	He	0.004	ppb	127.3	26.67	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.027	ppb	88.0	9.33	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.060	ppb	N/A	690.04	0.0174	Pulse	0.1000	3
Sb	121	115	He	0.363	ppb	39.9	306.68	0.0078	Pulse	0.1000	3
Ba	137	115	He	61.783	ppb	4.6	14398.01	0.3627	Pulse	0.1000	3
Tl	205	209	He	0.025	ppb	17.8	226.68	0.0017	Pulse	0.1000	3
Pb	208	209	He	2.494	ppb	3.5	16534.72	0.1248	Pulse	0.1000	3
U	238	209	He	0.336	ppb	6.2	2437.00	0.0184	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1334513.37	1.0	100.0	Analog	0.1000	3
No Gas	Ge	72	719995.69	0.7	102.9	Pulse	0.1000	3
H2	Sc	45	91792.32	2.3	105.6	Pulse	0.1000	3
H2	Ge	72	75402.30	1.6	105.3	Pulse	0.1000	3
H2	In	115	192719.94	1.1	105.2	Pulse	0.1000	3
He	Sc	45	23763.47	0.3	103.3	Pulse	0.1000	3
He	Ge	72	45376.11	0.9	107.5	Pulse	0.1000	3
He	In	115	39729.27	3.2	102.0	Pulse	0.1000	3
He	Tb	159	180115.26	0.8	102.3	Pulse	0.1000	3
He	Bi	209	132510.95	1.5	103.3	Pulse	0.1000	3

No Gas



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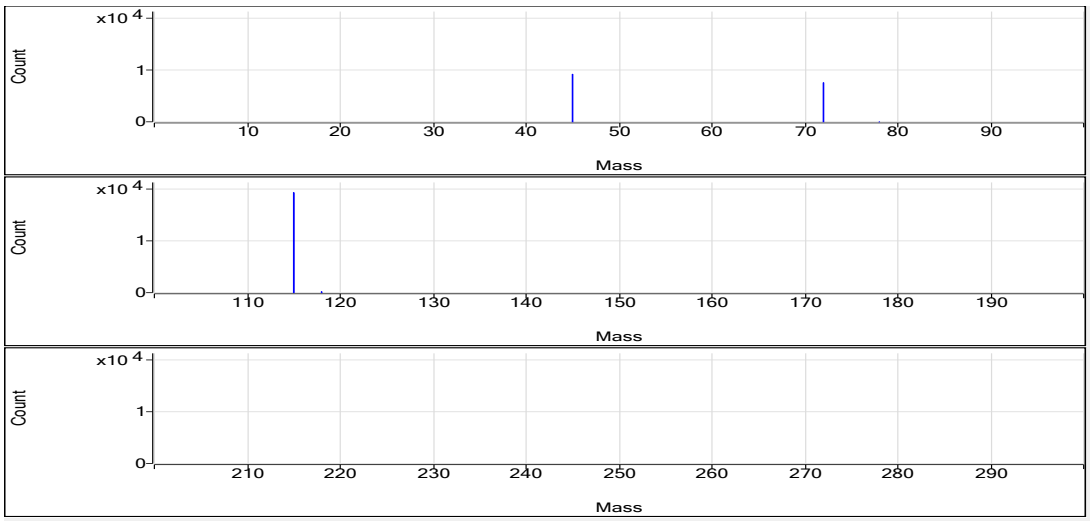
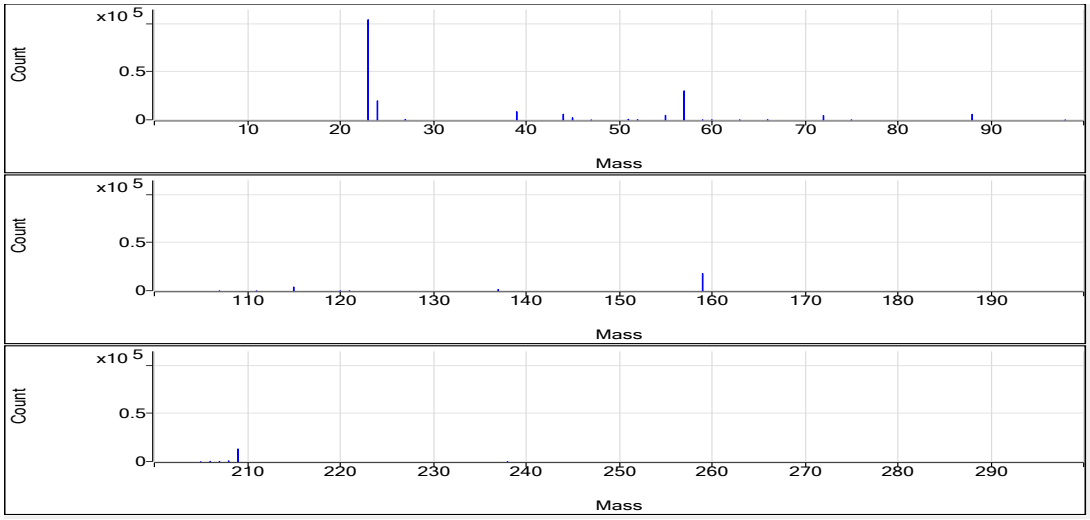


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.236	0.0001	178.00	0.0005	1.901E-05
Be	9	1	No Gas	0.25	0.0001	184.00	0.0005	1.901E-05
Be	9	1	No Gas	0.251	0.0001	188.00	0.0005	1.901E-05
Se	78	2	H2	0.133	0	6.67	0.0002	7.279E-06
Se	78	2	H2	0.148	0	7.33	0.0002	7.279E-06
Se	78	2	H2	0.169	0	8.00	0.0002	7.279E-06
Na	23	3	He	12146.49	44.0269	1047841.47	0.0036	0.7194
Na	23	3	He	11985.996	43.4546	1035095.84	0.0036	0.7194
Na	23	3	He	12135.037	43.986	1041158.03	0.0036	0.7194
Mg	24	3	He	4561.071	8.2994	197525.54	0.0018	0.006791
Mg	24	3	He	4538.06	8.2575	196695.78	0.0018	0.006791
Mg	24	3	He	4671.116	8.4994	201183.67	0.0018	0.006791
Al	27	3	He	418.661	0.2358	5611.28	0.0006	0.002622
Al	27	3	He	445.456	0.2507	5971.45	0.0006	0.002622
Al	27	3	He	486.269	0.2734	6471.84	0.0006	0.002622
K	39	3	He	2444.009	3.6761	87491.04	0.0013	0.5579
K	39	3	He	2428.999	3.6569	87108.76	0.0013	0.5579
K	39	3	He	2338.26	3.5412	83820.10	0.0013	0.5579
Ca	44	3	He	34705.186	2.5478	60636.79	0.0001	0.004062
Ca	44	3	He	34624.19	2.5418	60546.59	0.0001	0.004062
Ca	44	3	He	34351.785	2.5219	59692.85	0.0001	0.004062
Ti	47	3	He	0.954	0.0008	20.00	0.0006	0.0002809
Ti	47	3	He	2.385	0.0017	40.00	0.0006	0.0002809
Ti	47	3	He	3.124	0.0021	50.00	0.0006	0.0002809
V	51	3	He	1.955	0.0692	1646.10	0.0259	0.01861
V	51	3	He	1.985	0.0699	1666.11	0.0259	0.01861
V	51	3	He	2.11	0.0732	1732.11	0.0259	0.01861
Cr	52	3	He	1.363	0.15	3570.55	0.0332	0.1047
Cr	52	3	He	1.031	0.139	3310.48	0.0332	0.1047
Cr	52	3	He	1.159	0.1432	3390.55	0.0332	0.1047
Mn	55	3	He	145.303	2.0198	48070.91	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	144.084	2.0029	47708.91	0.0139	0.005074
Mn	55	3	He	145.856	2.0275	47990.33	0.0139	0.005074
Fe	57	3	He	19959.271	12.6909	302042.91	0.0006	0.00609
Fe	57	3	He	20039.495	12.7418	303512.46	0.0006	0.00609
Fe	57	3	He	19905.916	12.6569	299592.38	0.0006	0.00609
Co	59	3	He	0.662	0.05	1190.09	0.0661	0.00621
Co	59	3	He	0.712	0.0533	1270.10	0.0661	0.00621
Co	59	3	He	0.711	0.0532	1260.10	0.0661	0.00621
Ni	60	3	He	1.46	0.0318	1440.12	0.01	0.01721
Ni	60	3	He	1.752	0.0347	1590.14	0.01	0.01721
Ni	60	3	He	1.281	0.03	1350.13	0.01	0.01721
Cu	63	3	He	0.734	0.0278	1260.10	0.0286	0.006793
Cu	63	3	He	0.594	0.0238	1090.08	0.0286	0.006793
Cu	63	3	He	0.725	0.0276	1240.10	0.0286	0.006793
Zn	66	3	He	16.485	0.0585	2650.34	0.0034	0.00316
Zn	66	3	He	18.562	0.0655	3000.41	0.0034	0.00316
Zn	66	3	He	15.344	0.0547	2460.31	0.0034	0.00316
As	75	3	He	1.442	0.0045	206.00	0.0026	0.0008231
As	75	3	He	1.371	0.0044	200.00	0.0026	0.0008231
As	75	3	He	1.849	0.0056	252.00	0.0026	0.0008231
Sr	88	3	He	137.789	1.4544	59696.32	0.0105	0.001715
Sr	88	3	He	146.417	1.5453	61243.35	0.0105	0.001715
Sr	88	3	He	144.973	1.5301	58923.44	0.0105	0.001715
Mo	98	3	He	0.181	0.0058	240.01	0.0275	0.0008555
Mo	98	3	He	0.152	0.005	200.01	0.0275	0.0008555
Mo	98	3	He	0.177	0.0057	220.01	0.0275	0.0008555
Ag	107	3	He	0.001	0.0005	20.00	0.0591	0.0004305
Ag	107	3	He	0.001	0.0005	20.00	0.0591	0.0004305
Ag	107	3	He	0.01	0.001	40.00	0.0591	0.0004305
Cd	111	3	He	0.036	0.0003	12.00	0.0066	5.141E-05
Cd	111	3	He	0.046	0.0004	14.00	0.0066	5.141E-05
Cd	111	3	He	0	0.0001	2.00	0.0066	5.141E-05
Sn	120	3	He	-0.116	0.0163	670.04	0.0187	0.0185
Sn	120	3	He	0.049	0.0194	770.05	0.0187	0.0185
Sn	120	3	He	-0.114	0.0164	630.04	0.0187	0.0185
Sb	121	3	He	0.206	0.0049	200.01	0.0183	0.00111
Sb	121	3	He	0.491	0.0101	400.02	0.0183	0.00111
Sb	121	3	He	0.393	0.0083	320.02	0.0183	0.00111
Ba	137	3	He	60.29	0.3539	14528.13	0.0059	0.0007704
Ba	137	3	He	59.99	0.3522	13957.55	0.0059	0.0007704
Ba	137	3	He	65.069	0.3819	14708.34	0.0059	0.0007704
Tl	205	3	He	0.03	0.0019	250.02	0.0364	0.000808
Tl	205	3	He	0.023	0.0016	220.01	0.0364	0.000808
Tl	205	3	He	0.022	0.0016	210.01	0.0364	0.000808
Pb	208	3	He	2.543	0.1272	8743.19	0.0487	0.003226
Pb	208	3	He	2.393	0.1199	8873.40	0.0487	0.003226
Pb	208	3	He	2.547	0.1274	8713.16	0.0487	0.003226
U	238	3	He	0.315	0.0173	2280.28	0.0535	0.0004157
U	238	3	He	0.357	0.0195	2630.37	0.0535	0.0004157
U	238	3	He	0.335	0.0183	2400.34	0.0535	0.0004157
Sc	45	1	No Gas			1340937.17		
Sc	45	1	No Gas			1318994.51		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1343608.42		
Ge	72	1	No Gas			724342.80		
Ge	72	1	No Gas			720846.94		
Ge	72	1	No Gas			714797.33		
Sc	45	2	H2			94234.63		
Sc	45	2	H2			90933.39		
Sc	45	2	H2			90208.93		
Ge	72	2	H2			76806.02		
Ge	72	2	H2			74916.05		
Ge	72	2	H2			74484.82		
In	115	2	H2			192851.42		
In	115	2	H2			194736.95		
In	115	2	H2			190571.44		
Sc	45	3	He			23800.05		
Sc	45	3	He			23820.15		
Sc	45	3	He			23670.20		
Ge	72	3	He			45302.68		
Ge	72	3	He			45824.24		
Ge	72	3	He			45001.42		
In	115	3	He			41051.29		
In	115	3	He			39636.95		
In	115	3	He			38514.07		
Tb	159	3	He			178609.70		
Tb	159	3	He			180461.93		
Tb	159	3	He			181274.14		
Bi	209	3	He			131887.59		
Bi	209	3	He			134747.61		
Bi	209	3	He			130897.64		

Quantitation Report

Data File Name	096SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
Acq Time	9/19/2023 10:02:05 AM
Sample Name	410-142837-I-4-A
Sample Type	Sample
Comment	F6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

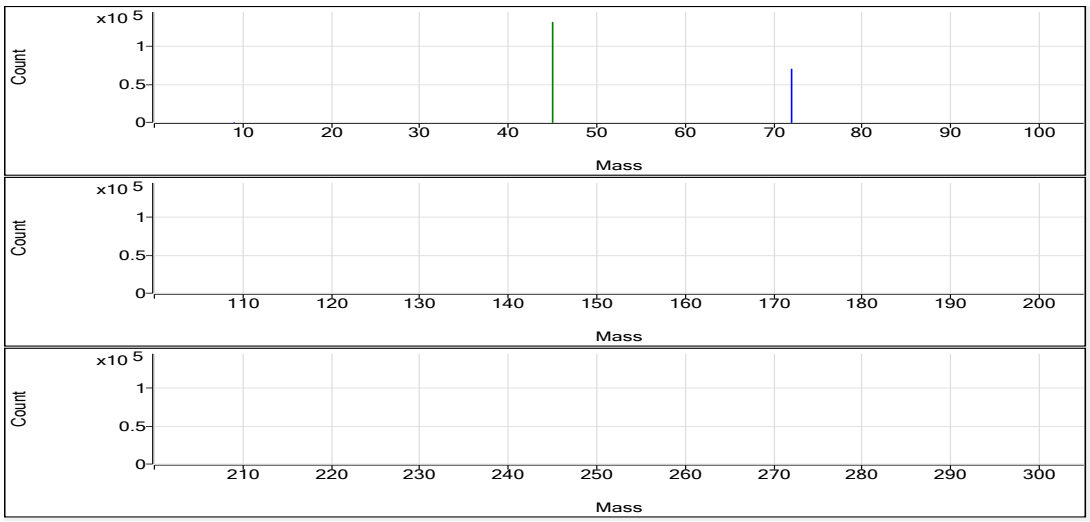
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.035	ppb	40.3	47.33	0.0000	Pulse	0.5000	3
Se	78	115	H2	0.038	ppb	52.5	2.89	0.0000	Pulse	1.5000	3
Na	23	45	He	20116.741	ppb	1.4	1686087.84	72.4443	Analog	0.1000	3
Mg	24	45	He	11653.865	ppb	0.8	493331.63	21.1949	Pulse	0.1000	3
Al	27	45	He	169.157	ppb	38.5	2256.41	0.0968	Pulse	0.1000	3
K	39	45	He	2237.471	ppb	1.7	79435.66	3.4126	Pulse	0.1000	3
Ca	44	45	He	99576.357	ppb	1.3	169961.16	7.3025	Pulse	0.1000	3
Ti	47	45	He	0.987	ppb	74.0	20.00	0.0009	Pulse	0.1000	3
V	51	45	He	0.687	ppb	3.6	846.70	0.0364	Pulse	0.5000	3
Cr	52	45	He	0.111	ppb	110.4	2523.64	0.1084	Pulse	0.1000	3
Mn	55	45	He	166.451	ppb	0.6	53837.55	2.3130	Pulse	0.1000	3
Fe	57	45	He	354.351	ppb	4.2	5384.55	0.2313	Pulse	0.1000	3
Co	59	45	He	0.270	ppb	11.9	560.03	0.0241	Pulse	0.1000	3
Ni	60	72	He	0.316	ppb	88.6	876.73	0.0204	Pulse	0.1000	3
Cu	63	72	He	0.898	ppb	12.6	1396.78	0.0325	Pulse	0.1000	3
Zn	66	72	He	0.907	ppb	55.4	266.68	0.0062	Pulse	0.1000	3
As	75	72	He	0.563	ppb	17.4	98.00	0.0023	Pulse	0.5000	3
Sr	88	115	He	189.281	ppb	4.0	80448.72	1.9972	Pulse	0.1000	3
Mo	98	115	He	0.090	ppb	52.0	133.34	0.0033	Pulse	0.1000	3
Ag	107	115	He	0.007	ppb	73.0	33.33	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.017	ppb	70.2	6.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.268	ppb	N/A	543.38	0.0135	Pulse	0.1000	3
Sb	121	115	He	0.056	ppb	63.5	86.67	0.0021	Pulse	0.1000	3
Ba	137	115	He	58.514	ppb	2.7	13847.50	0.3435	Pulse	0.1000	3
Tl	205	209	He	0.003	ppb	172.8	120.00	0.0009	Pulse	0.1000	3
Pb	208	209	He	0.066	ppb	34.0	840.04	0.0064	Pulse	0.1000	3
U	238	209	He	0.130	ppb	10.2	960.07	0.0074	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1318281.26	1.0	98.8	Analog	0.1000	3
No Gas	Ge	72	701734.60	1.2	100.3	Pulse	0.1000	3
H2	Sc	45	91181.87	0.5	104.9	Pulse	0.1000	3
H2	Ge	72	74132.56	2.7	103.5	Pulse	0.1000	3
H2	In	115	191473.02	0.9	104.5	Pulse	0.1000	3
He	Sc	45	23275.87	0.8	101.2	Pulse	0.1000	3
He	Ge	72	43001.95	1.6	101.8	Pulse	0.1000	3
He	In	115	40312.10	3.0	103.5	Pulse	0.1000	3
He	Tb	159	179901.86	1.1	102.2	Pulse	0.1000	3
He	Bi	209	130509.17	1.6	101.8	Pulse	0.1000	3

No Gas



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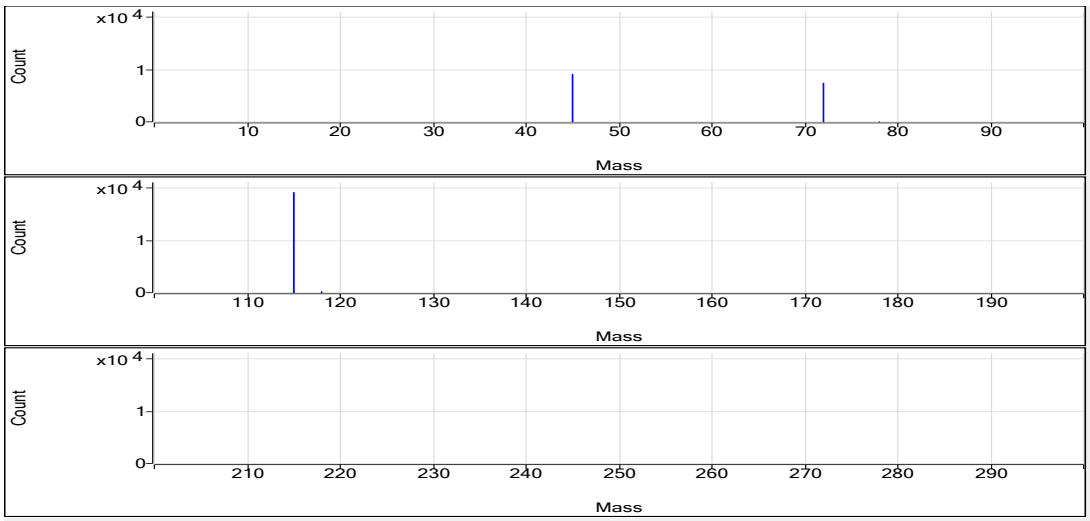
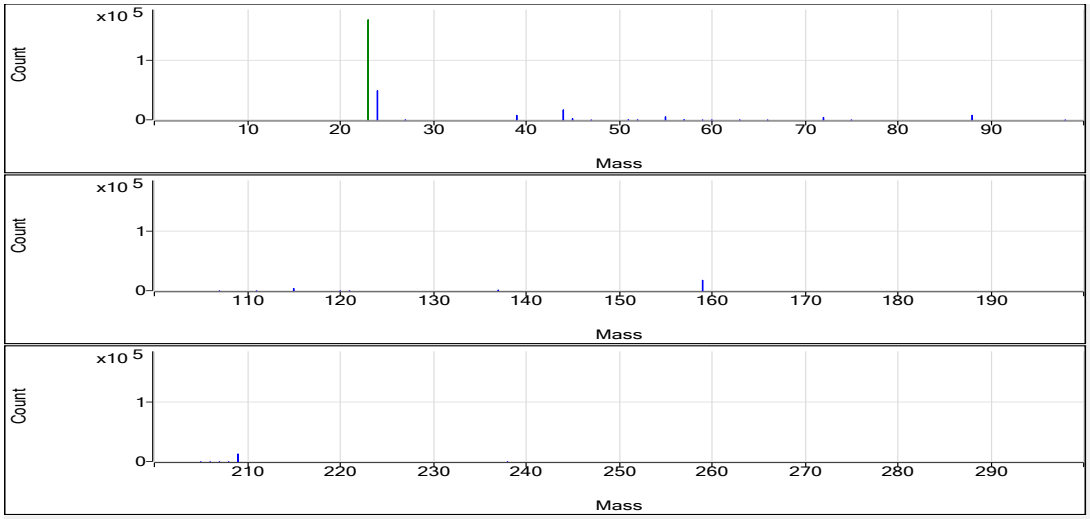


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.051	0	58.00	0.0005	1.901E-05
Be	9	1	No Gas	0.024	0	40.00	0.0005	1.901E-05
Be	9	1	No Gas	0.03	0	44.00	0.0005	1.901E-05
Se	78	2	H2	0.05	0	3.33	0.0002	7.279E-06
Se	78	2	H2	0.049	0	3.33	0.0002	7.279E-06
Se	78	2	H2	0.015	0	2.00	0.0002	7.279E-06
Na	23	3	He	19965.996	71.9068	1681858.26	0.0036	0.7194
Na	23	3	He	19953.547	71.8624	1679385.76	0.0036	0.7194
Na	23	3	He	20430.68	73.5636	1697019.51	0.0036	0.7194
Mg	24	3	He	11743.452	21.3578	499547.02	0.0018	0.006791
Mg	24	3	He	11563.442	21.0305	491472.34	0.0018	0.006791
Mg	24	3	He	11654.699	21.1965	488975.54	0.0018	0.006791
Al	27	3	He	243.902	0.1384	3238.20	0.0006	0.002622
Al	27	3	He	139.042	0.0801	1870.78	0.0006	0.002622
Al	27	3	He	124.527	0.072	1660.24	0.0006	0.002622
K	39	3	He	2275.851	3.4615	80963.42	0.0013	0.5579
K	39	3	He	2236.05	3.4108	79707.61	0.0013	0.5579
K	39	3	He	2200.511	3.3654	77635.95	0.0013	0.5579
Ca	44	3	He	98278.519	7.2073	168575.27	0.0001	0.004062
Ca	44	3	He	99620.281	7.3057	170729.65	0.0001	0.004062
Ca	44	3	He	100830.27	7.3944	170578.55	0.0001	0.004062
Ti	47	3	He	0.25	0.0004	10.00	0.0006	0.0002809
Ti	47	3	He	1.71	0.0013	30.00	0.0006	0.0002809
Ti	47	3	He	1	0.0009	20.00	0.0006	0.0002809
V	51	3	He	0.699	0.0367	858.03	0.0259	0.01861
V	51	3	He	0.703	0.0368	860.03	0.0259	0.01861
V	51	3	He	0.658	0.0356	822.03	0.0259	0.01861
Cr	52	3	He	0.014	0.1052	2460.30	0.0332	0.1047
Cr	52	3	He	0.248	0.113	2640.31	0.0332	0.1047
Cr	52	3	He	0.071	0.1071	2470.30	0.0332	0.1047
Mn	55	3	He	165.589	2.3011	53820.72	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	167.497	2.3275	54392.99	0.0139	0.005074
Mn	55	3	He	166.265	2.3104	53298.95	0.0139	0.005074
Fe	57	3	He	368.583	0.2403	5621.34	0.0006	0.00609
Fe	57	3	He	355.434	0.232	5421.25	0.0006	0.00609
Fe	57	3	He	339.035	0.2216	5111.07	0.0006	0.00609
Co	59	3	He	0.236	0.0218	510.03	0.0661	0.00621
Co	59	3	He	0.275	0.0244	570.03	0.0661	0.00621
Co	59	3	He	0.299	0.026	600.03	0.0661	0.00621
Ni	60	3	He	0.406	0.0213	930.06	0.01	0.01721
Ni	60	3	He	0.541	0.0226	970.07	0.01	0.01721
Ni	60	3	He	0.002	0.0172	730.05	0.01	0.01721
Cu	63	3	He	0.777	0.029	1270.09	0.0286	0.006793
Cu	63	3	He	1	0.0354	1520.13	0.0286	0.006793
Cu	63	3	He	0.917	0.0331	1400.12	0.0286	0.006793
Zn	66	3	He	0.965	0.0064	280.01	0.0034	0.00316
Zn	66	3	He	0.378	0.0044	190.01	0.0034	0.00316
Zn	66	3	He	1.379	0.0078	330.02	0.0034	0.00316
As	75	3	He	0.673	0.0026	112.00	0.0026	0.0008231
As	75	3	He	0.53	0.0022	94.00	0.0026	0.0008231
As	75	3	He	0.486	0.0021	88.00	0.0026	0.0008231
Sr	88	3	He	181.255	1.9126	79332.16	0.0105	0.001715
Sr	88	3	He	190.442	2.0095	81233.06	0.0105	0.001715
Sr	88	3	He	196.146	2.0696	80780.93	0.0105	0.001715
Mo	98	3	He	0.039	0.0019	80.00	0.0275	0.0008555
Mo	98	3	He	0.131	0.0045	180.01	0.0275	0.0008555
Mo	98	3	He	0.099	0.0036	140.00	0.0275	0.0008555
Ag	107	3	He	0.009	0.001	40.00	0.0591	0.0004305
Ag	107	3	He	0.001	0.0005	20.00	0.0591	0.0004305
Ag	107	3	He	0.01	0.001	40.00	0.0591	0.0004305
Cd	111	3	He	0.014	0.0001	6.00	0.0066	5.141E-05
Cd	111	3	He	0.007	0.0001	4.00	0.0066	5.141E-05
Cd	111	3	He	0.031	0.0003	10.00	0.0066	5.141E-05
Sn	120	3	He	-0.267	0.0135	560.03	0.0187	0.0185
Sn	120	3	He	-0.261	0.0136	550.07	0.0187	0.0185
Sn	120	3	He	-0.277	0.0133	520.03	0.0187	0.0185
Sb	121	3	He	0.097	0.0029	120.00	0.0183	0.00111
Sb	121	3	He	0.034	0.0017	70.00	0.0183	0.00111
Sb	121	3	He	0.037	0.0018	70.00	0.0183	0.00111
Ba	137	3	He	59.29	0.3481	14438.03	0.0059	0.0007704
Ba	137	3	He	56.696	0.3329	13457.16	0.0059	0.0007704
Ba	137	3	He	59.556	0.3496	13647.30	0.0059	0.0007704
Tl	205	3	He	0.009	0.0011	150.01	0.0364	0.000808
Tl	205	3	He	0.001	0.0009	110.00	0.0364	0.000808
Tl	205	3	He	-0.001	0.0008	100.00	0.0364	0.000808
Pb	208	3	He	0.087	0.0075	510.03	0.0487	0.003226
Pb	208	3	He	0.042	0.0053	410.02	0.0487	0.003226
Pb	208	3	He	0.067	0.0065	460.03	0.0487	0.003226
U	238	3	He	0.121	0.0069	910.07	0.0535	0.0004157
U	238	3	He	0.145	0.0082	1050.08	0.0535	0.0004157
U	238	3	He	0.124	0.007	920.07	0.0535	0.0004157
Sc	45	1	No Gas			1333500.61		
Sc	45	1	No Gas			1311348.26		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1309994.90		
Ge	72	1	No Gas			709720.46		
Ge	72	1	No Gas			702369.68		
Ge	72	1	No Gas			693113.66		
Sc	45	2	H2			90662.14		
Sc	45	2	H2			91395.98		
Sc	45	2	H2			91487.48		
Ge	72	2	H2			71791.16		
Ge	72	2	H2			75136.90		
Ge	72	2	H2			75469.63		
In	115	2	H2			189679.29		
In	115	2	H2			191706.48		
In	115	2	H2			193033.30		
Sc	45	3	He			23389.42		
Sc	45	3	He			23369.46		
Sc	45	3	He			23068.74		
Ge	72	3	He			43747.57		
Ge	72	3	He			42895.24		
Ge	72	3	He			42363.04		
In	115	3	He			41482.59		
In	115	3	He			40429.20		
In	115	3	He			39035.92		
Tb	159	3	He			181597.56		
Tb	159	3	He			177675.04		
Tb	159	3	He			180432.99		
Bi	209	3	He			132586.56		
Bi	209	3	He			128395.33		
Bi	209	3	He			130545.62		

Quantitation Report

Data File Name	097SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
Acq Time	9/19/2023 10:04:04 AM
Sample Name	410-142664-L-6-A
Sample Type	Sample
Comment	F6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

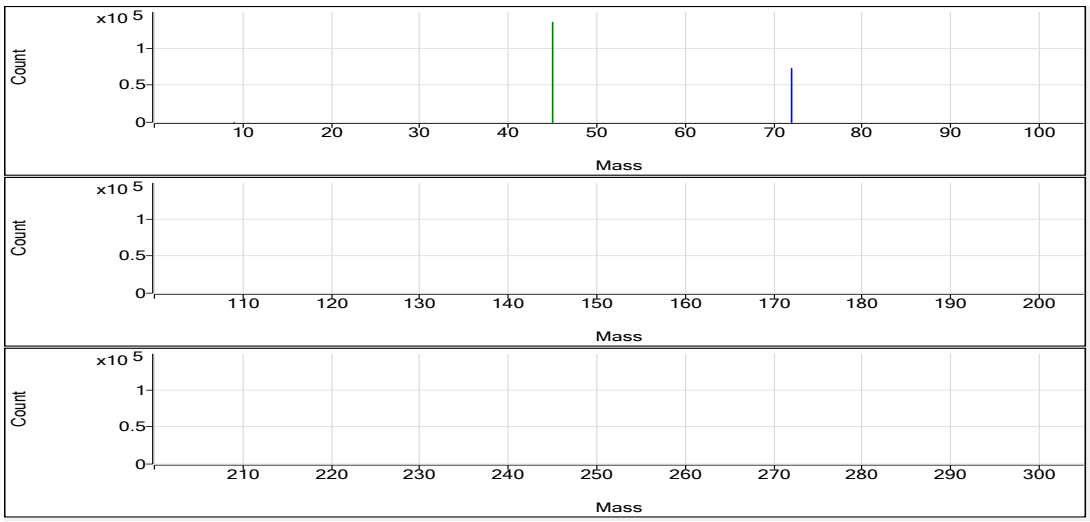
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.150	ppb	8.5	123.33	0.0001	Pulse	0.5000	3
Se	78	115	H2	0.246	ppb	16.9	11.11	0.0001	Pulse	1.5000	3
Na	23	45	He	26430.030	ppb	3.0	2257251.06	94.9539	Analog	0.1000	3
Mg	24	45	He	5916.900	ppb	3.8	255840.45	10.7644	Pulse	0.1000	3
Al	27	45	He	3409.670	ppb	4.6	45257.21	1.9014	Pulse	0.1000	3
K	39	45	He	14179.930	ppb	2.7	443364.33	18.6495	Pulse	0.1000	3
Ca	44	45	He	43891.987	ppb	2.2	76587.82	3.2211	Pulse	0.1000	3
Ti	47	45	He	75.557	ppb	44.8	1050.62	0.0446	Pulse	0.1000	3
V	51	45	He	13.540	ppb	4.6	8762.69	0.3687	Pulse	0.5000	3
Cr	52	45	He	7.209	ppb	11.6	8172.64	0.3442	Pulse	0.1000	3
Mn	55	45	He	197.680	ppb	2.4	65291.19	2.7460	Pulse	0.1000	3
Fe	57	45	He	7453.536	ppb	2.3	112764.23	4.7431	Pulse	0.1000	3
Co	59	45	He	3.513	ppb	6.1	5667.98	0.2386	Pulse	0.1000	3
Ni	60	72	He	5.394	ppb	3.1	3190.49	0.0711	Pulse	0.1000	3
Cu	63	72	He	7.235	ppb	2.8	9600.25	0.2139	Pulse	0.1000	3
Zn	66	72	He	10.061	ppb	20.2	1656.82	0.0369	Pulse	0.1000	3
As	75	72	He	15.004	ppb	4.5	1776.79	0.0396	Pulse	0.5000	3
Sr	88	115	He	286.352	ppb	1.2	121787.52	3.0206	Pulse	0.1000	3
Mo	98	115	He	2.685	ppb	5.2	3013.76	0.0747	Pulse	0.1000	3
Ag	107	115	He	0.046	ppb	20.2	126.67	0.0031	Pulse	0.1000	3
Cd	111	115	He	0.030	ppb	24.9	10.00	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.218	ppb	70.6	910.06	0.0226	Pulse	0.1000	3
Sb	121	115	He	0.409	ppb	19.6	346.68	0.0086	Pulse	0.1000	3
Ba	137	115	He	40.794	ppb	5.4	9663.95	0.2397	Pulse	0.1000	3
Tl	205	209	He	0.032	ppb	24.8	256.68	0.0020	Pulse	0.1000	3
Pb	208	209	He	3.066	ppb	0.6	19733.50	0.1527	Pulse	0.1000	3
U	238	209	He	0.825	ppb	5.3	5758.19	0.0446	Pulse	0.1000	3

ISTD Table:

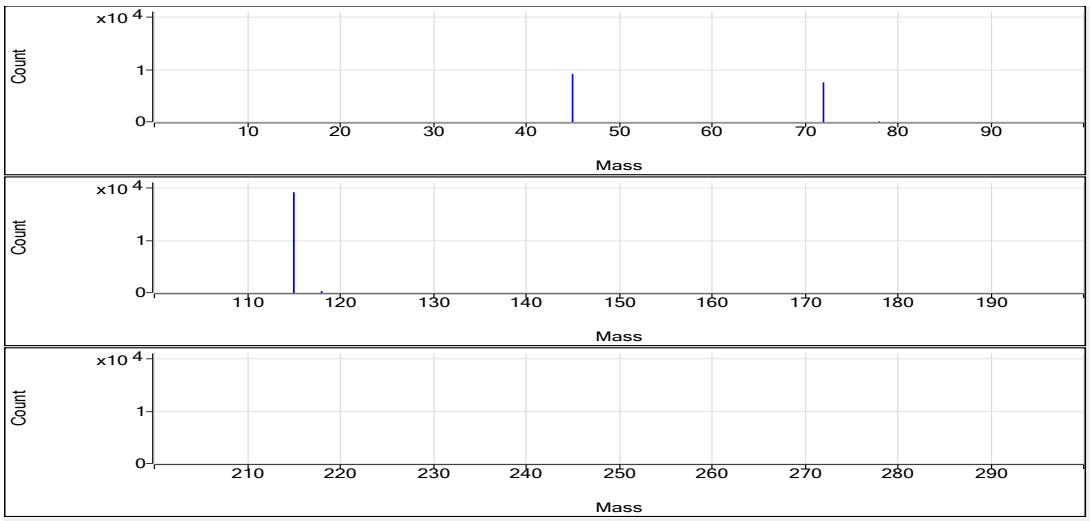
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1346974.67	0.6	100.9	Analog	0.1000	3
No Gas	Ge	72	724709.88	0.7	103.6	Pulse	0.1000	3
H2	Sc	45	91128.17	2.2	104.8	Pulse	0.1000	3
H2	Ge	72	74812.85	0.6	104.5	Pulse	0.1000	3
H2	In	115	192051.28	0.6	104.9	Pulse	0.1000	3
He	Sc	45	23786.77	3.3	103.4	Pulse	0.1000	3
He	Ge	72	44891.35	1.8	106.3	Pulse	0.1000	3
He	In	115	40323.02	1.2	103.6	Pulse	0.1000	3
He	Tb	159	181599.92	0.4	103.1	Pulse	0.1000	3
He	Bi	209	129253.65	1.2	100.8	Pulse	0.1000	3

No Gas

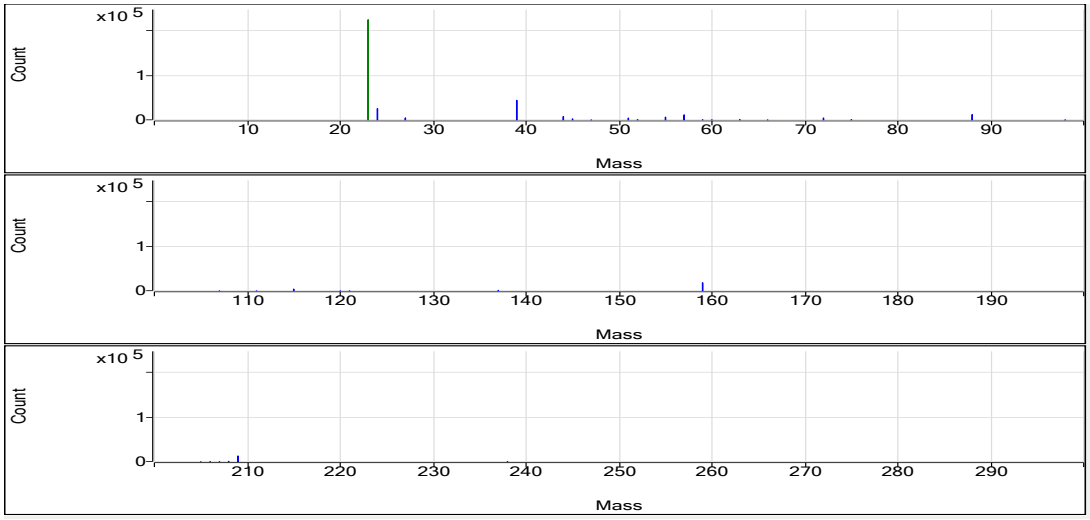


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.142	0.0001	118.00	0.0005	1.901E-05
Be	9	1	No Gas	0.145	0.0001	120.00	0.0005	1.901E-05
Be	9	1	No Gas	0.165	0.0001	132.00	0.0005	1.901E-05
Se	78	2	H2	0.202	0	9.33	0.0002	7.279E-06
Se	78	2	H2	0.25	0.0001	11.33	0.0002	7.279E-06
Se	78	2	H2	0.285	0.0001	12.67	0.0002	7.279E-06
Na	23	3	He	26119.83	93.8479	2286228.40	0.0036	0.7194
Na	23	3	He	27339.668	98.1971	2248597.62	0.0036	0.7194
Na	23	3	He	25830.592	92.8166	2236927.15	0.0036	0.7194
Mg	24	3	He	5790.776	10.5351	256646.25	0.0018	0.006791
Mg	24	3	He	6178.942	11.2409	257402.36	0.0018	0.006791
Mg	24	3	He	5780.982	10.5173	253472.73	0.0018	0.006791
Al	27	3	He	3592.665	2.0033	48802.75	0.0006	0.002622
Al	27	3	He	3320.003	1.8515	42396.55	0.0006	0.002622
Al	27	3	He	3316.343	1.8494	44572.32	0.0006	0.002622
K	39	3	He	13985.379	18.4012	448272.77	0.0013	0.5579
K	39	3	He	14619.559	19.2104	439894.64	0.0013	0.5579
K	39	3	He	13934.851	18.3368	441925.58	0.0013	0.5579
Ca	44	3	He	42817.663	3.1424	76550.99	0.0001	0.004062
Ca	44	3	He	44740.673	3.2833	75183.76	0.0001	0.004062
Ca	44	3	He	44117.624	3.2376	78028.70	0.0001	0.004062
Ti	47	3	He	42.234	0.025	610.04	0.0006	0.0002809
Ti	47	3	He	109.882	0.0647	1481.61	0.0006	0.0002809
Ti	47	3	He	74.555	0.044	1060.20	0.0006	0.0002809
V	51	3	He	13.27	0.3618	8812.73	0.0259	0.01861
V	51	3	He	14.255	0.3872	8866.76	0.0259	0.01861
V	51	3	He	13.094	0.3572	8608.59	0.0259	0.01861
Cr	52	3	He	6.638	0.3252	7922.53	0.0332	0.1047
Cr	52	3	He	8.171	0.3761	8612.91	0.0332	0.1047
Cr	52	3	He	6.819	0.3312	7982.49	0.0332	0.1047
Mn	55	3	He	197.261	2.7402	66754.43	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	202.633	2.8147	64453.29	0.0139	0.005074
Mn	55	3	He	193.147	2.6832	64665.85	0.0139	0.005074
Fe	57	3	He	7323.538	4.6604	113532.86	0.0006	0.00609
Fe	57	3	He	7651.99	4.8692	111498.36	0.0006	0.00609
Fe	57	3	He	7385.081	4.6995	113261.46	0.0006	0.00609
Co	59	3	He	3.425	0.2328	5671.29	0.0661	0.00621
Co	59	3	He	3.756	0.2547	5831.38	0.0661	0.00621
Co	59	3	He	3.357	0.2283	5501.27	0.0661	0.00621
Ni	60	3	He	5.583	0.0729	3320.54	0.01	0.01721
Ni	60	3	He	5.332	0.0704	3180.48	0.01	0.01721
Ni	60	3	He	5.267	0.0698	3070.46	0.01	0.01721
Cu	63	3	He	7.085	0.2096	9543.50	0.0286	0.006793
Cu	63	3	He	7.153	0.2116	9553.61	0.0286	0.006793
Cu	63	3	He	7.466	0.2205	9703.65	0.0286	0.006793
Zn	66	3	He	7.893	0.0297	1350.11	0.0034	0.00316
Zn	66	3	He	11.924	0.0432	1950.19	0.0034	0.00316
Zn	66	3	He	10.366	0.038	1670.16	0.0034	0.00316
As	75	3	He	15.706	0.0414	1884.14	0.0026	0.0008231
As	75	3	He	14.346	0.0379	1710.11	0.0026	0.0008231
As	75	3	He	14.959	0.0395	1736.12	0.0026	0.0008231
Sr	88	3	He	283.279	2.9882	122113.73	0.0105	0.001715
Sr	88	3	He	285.501	3.0116	121166.21	0.0105	0.001715
Sr	88	3	He	290.276	3.062	122082.62	0.0105	0.001715
Mo	98	3	He	2.834	0.0788	3220.48	0.0275	0.0008555
Mo	98	3	He	2.662	0.0741	2980.42	0.0275	0.0008555
Mo	98	3	He	2.559	0.0712	2840.39	0.0275	0.0008555
Ag	107	3	He	0.051	0.0034	140.00	0.0591	0.0004305
Ag	107	3	He	0.052	0.0035	140.00	0.0591	0.0004305
Ag	107	3	He	0.035	0.0025	100.00	0.0591	0.0004305
Cd	111	3	He	0.029	0.0002	10.00	0.0066	5.141E-05
Cd	111	3	He	0.037	0.0003	12.00	0.0066	5.141E-05
Cd	111	3	He	0.023	0.0002	8.00	0.0066	5.141E-05
Sn	120	3	He	0.07	0.0198	810.06	0.0187	0.0185
Sn	120	3	He	0.206	0.0224	900.06	0.0187	0.0185
Sn	120	3	He	0.378	0.0256	1020.07	0.0187	0.0185
Sb	121	3	He	0.474	0.0098	400.02	0.0183	0.00111
Sb	121	3	He	0.32	0.007	280.01	0.0183	0.00111
Sb	121	3	He	0.433	0.009	360.02	0.0183	0.00111
Ba	137	3	He	39.861	0.2343	9573.72	0.0059	0.0007704
Ba	137	3	He	39.216	0.2305	9273.47	0.0059	0.0007704
Ba	137	3	He	43.304	0.2544	10144.67	0.0059	0.0007704
Tl	205	3	He	0.024	0.0017	220.01	0.0364	0.000808
Tl	205	3	He	0.034	0.002	260.01	0.0364	0.000808
Tl	205	3	He	0.04	0.0023	290.02	0.0364	0.000808
Pb	208	3	He	3.054	0.1521	10755.03	0.0487	0.003226
Pb	208	3	He	3.087	0.1537	10514.66	0.0487	0.003226
Pb	208	3	He	3.057	0.1523	10454.81	0.0487	0.003226
U	238	3	He	0.793	0.0428	5611.42	0.0535	0.0004157
U	238	3	He	0.809	0.0437	5601.43	0.0535	0.0004157
U	238	3	He	0.875	0.0472	6061.71	0.0535	0.0004157
Sc	45	1	No Gas			1351855.76		
Sc	45	1	No Gas			1351492.32		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1337575.92		
Ge	72	1	No Gas			729429.05		
Ge	72	1	No Gas			725808.19		
Ge	72	1	No Gas			718892.41		
Sc	45	2	H2			88931.36		
Sc	45	2	H2			91537.31		
Sc	45	2	H2			92915.84		
Ge	72	2	H2			75128.33		
Ge	72	2	H2			74273.25		
Ge	72	2	H2			75036.96		
In	115	2	H2			190864.35		
In	115	2	H2			192984.49		
In	115	2	H2			192305.00		
Sc	45	3	He			24361.00		
Sc	45	3	He			22898.81		
Sc	45	3	He			24100.50		
Ge	72	3	He			45523.22		
Ge	72	3	He			45152.60		
Ge	72	3	He			43998.24		
In	115	3	He			40871.07		
In	115	3	He			40239.21		
In	115	3	He			39877.90		
Tb	159	3	He			181414.10		
Tb	159	3	He			182366.93		
Tb	159	3	He			181018.73		
Bi	209	3	He			131091.82		
Bi	209	3	He			128283.43		
Bi	209	3	He			128385.71		

Quantitation Report

Data File Name	098SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
Acq Time	9/19/2023 10:06:03 AM
Sample Name	410-142453-P-1-A
Sample Type	Sample
Comment	F6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

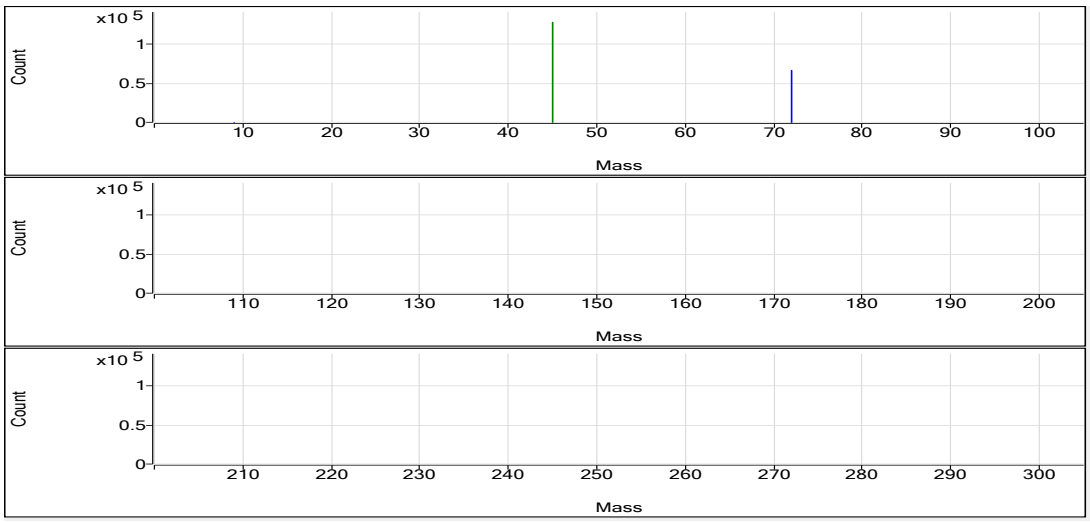
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.054	ppb	58.9	58.00	0.0000	Pulse	0.5000	3
Se	78	115	H2	1.155	ppb	20.8	43.33	0.0002	Pulse	1.5000	3
Na	23	45	He	2205484.589	ppb	4.1	176276310.71	7,864.2297	Analog	0.1000	3
Mg	24	45	He	267176.164	ppb	3.8	10889302.76	485.7656	Analog	0.1000	3
Al	27	45	He	27.838	ppb	13.5	406.69	0.0181	Pulse	0.1000	3
K	39	45	He	113494.444	ppb	4.3	3258157.45	145.3608	Analog	0.1000	3
Ca	44	45	He	201032.361	ppb	4.3	330355.32	14.7386	Pulse	0.1000	3
Ti	47	45	He	14.047	ppb	33.1	190.01	0.0085	Pulse	0.1000	3
V	51	45	He	14.312	ppb	5.1	8711.32	0.3887	Pulse	0.5000	3
Cr	52	45	He	6.736	ppb	6.3	7365.48	0.3285	Pulse	0.1000	3
Mn	55	45	He	1174.617	ppb	3.1	365276.45	16.2919	Pulse	0.1000	3
Fe	57	45	He	417.159	ppb	3.2	6088.14	0.2712	Pulse	0.1000	3
Co	59	45	He	0.946	ppb	16.2	1540.14	0.0688	Pulse	0.1000	3
Ni	60	72	He	4.580	ppb	15.0	2683.68	0.0629	Pulse	0.1000	3
Cu	63	72	He	3.539	ppb	2.3	4607.58	0.1081	Pulse	0.1000	3
Zn	66	72	He	176.264	ppb	2.7	25349.73	0.5949	Pulse	0.1000	3
As	75	72	He	10.695	ppb	3.8	1212.06	0.0284	Pulse	0.5000	3
Sr	88	115	He	1895.608	ppb	0.7	752730.04	19.9862	Pulse	0.1000	3
Mo	98	115	He	1.858	ppb	2.6	1956.87	0.0520	Pulse	0.1000	3
Ag	107	115	He	0.012	ppb	21.9	43.33	0.0012	Pulse	0.1000	3
Cd	111	115	He	0.027	ppb	33.8	8.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.057	ppb	N/A	656.71	0.0174	Pulse	0.1000	3
Sb	121	115	He	0.239	ppb	13.4	206.68	0.0055	Pulse	0.1000	3
Ba	137	115	He	79.170	ppb	1.4	17495.06	0.4645	Pulse	0.1000	3
Tl	205	209	He	0.000	ppb	N/A	93.34	0.0008	Pulse	0.1000	3
Pb	208	209	He	2.327	ppb	3.7	13726.62	0.1167	Pulse	0.1000	3
U	238	209	He	0.070	ppb	5.1	486.70	0.0041	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1289063.39	0.3	96.6	Analog	0.1000	3
No Gas	Ge	72	669649.96	0.5	95.7	Pulse	0.1000	3
H2	Sc	45	90544.05	0.2	104.1	Pulse	0.1000	3
H2	Ge	72	72199.44	0.8	100.8	Pulse	0.1000	3
H2	In	115	177103.52	0.3	96.7	Pulse	0.1000	3
He	Sc	45	22437.87	3.7	97.5	Pulse	0.1000	3
He	Ge	72	42617.45	1.1	100.9	Pulse	0.1000	3
He	In	115	37663.90	0.9	96.7	Pulse	0.1000	3
He	Tb	159	170791.39	0.6	97.0	Pulse	0.1000	3
He	Bi	209	117659.05	0.3	91.8	Pulse	0.1000	3

No Gas



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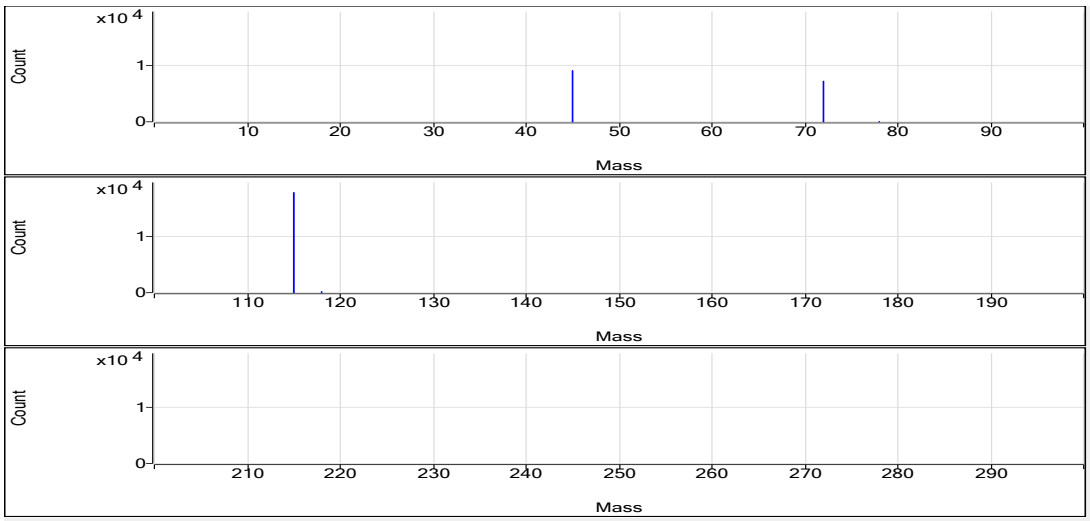
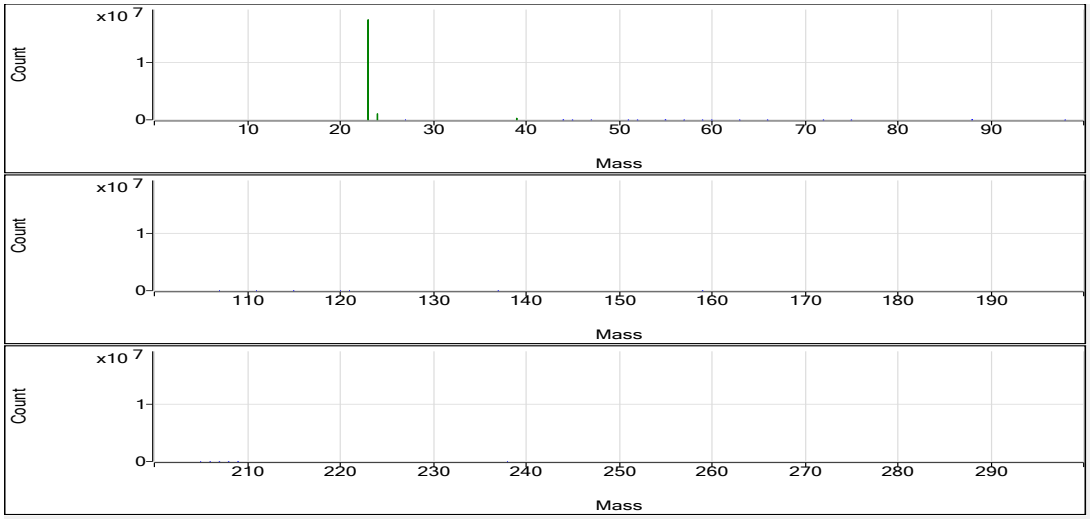


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.028	0	42.00	0.0005	1.901E-05
Be	9	1	No Gas	0.044	0	52.00	0.0005	1.901E-05
Be	9	1	No Gas	0.089	0.0001	80.00	0.0005	1.901E-05
Se	78	2	H2	0.883	0.0002	33.33	0.0002	7.279E-06
Se	78	2	H2	1.335	0.0003	50.00	0.0002	7.279E-06
Se	78	2	H2	1.247	0.0003	46.67	0.0002	7.279E-06
Na	23	3	He	2179747.596	7772.4661	176732977.37	0.0036	0.7194
Na	23	3	He	2129841.559	7594.5294	175273157.39	0.0036	0.7194
Na	23	3	He	2306864.61	8225.6935	176822797.37	0.0036	0.7194
Mg	24	3	He	263916.673	479.8395	10910753.59	0.0018	0.006791
Mg	24	3	He	259053.082	470.9969	10870076.09	0.0018	0.006791
Mg	24	3	He	278558.736	506.4606	10887078.59	0.0018	0.006791
Al	27	3	He	23.723	0.0158	360.02	0.0006	0.002622
Al	27	3	He	31.084	0.0199	460.02	0.0006	0.002622
Al	27	3	He	28.707	0.0186	400.02	0.0006	0.002622
K	39	3	He	111875.99	143.2959	3258309.95	0.0013	0.5579
K	39	3	He	109669.851	140.4811	3242145.89	0.0013	0.5579
K	39	3	He	118937.492	152.3053	3274016.51	0.0013	0.5579
Ca	44	3	He	198197.571	14.5308	330407.18	0.0001	0.004062
Ca	44	3	He	194261.479	14.2423	328697.26	0.0001	0.004062
Ca	44	3	He	210638.032	15.4427	331961.52	0.0001	0.004062
Ti	47	3	He	9.273	0.0057	130.00	0.0006	0.0002809
Ti	47	3	He	14.303	0.0087	200.01	0.0006	0.0002809
Ti	47	3	He	18.565	0.0112	240.01	0.0006	0.0002809
V	51	3	He	14.18	0.3853	8760.67	0.0259	0.01861
V	51	3	He	13.652	0.3716	8576.59	0.0259	0.01861
V	51	3	He	15.106	0.4092	8796.70	0.0259	0.01861
Cr	52	3	He	6.277	0.3132	7122.04	0.0332	0.1047
Cr	52	3	He	6.816	0.3311	7642.34	0.0332	0.1047
Cr	52	3	He	7.116	0.3411	7332.06	0.0332	0.1047
Mn	55	3	He	1154.156	16.0081	363998.71	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1152.656	15.9874	368970.03	0.0139	0.005074
Mn	55	3	He	1217.04	16.8801	362860.62	0.0139	0.005074
Fe	57	3	He	408.485	0.2657	6041.48	0.0006	0.00609
Fe	57	3	He	432.327	0.2808	6481.66	0.0006	0.00609
Fe	57	3	He	410.665	0.2671	5741.28	0.0006	0.00609
Co	59	3	He	1.056	0.0761	1730.18	0.0661	0.00621
Co	59	3	He	0.771	0.0572	1320.11	0.0661	0.00621
Co	59	3	He	1.01	0.073	1570.14	0.0661	0.00621
Ni	60	3	He	5.252	0.0696	3000.43	0.01	0.01721
Ni	60	3	He	3.88	0.0559	2360.28	0.01	0.01721
Ni	60	3	He	4.606	0.0632	2690.32	0.01	0.01721
Cu	63	3	He	3.452	0.1056	4550.92	0.0286	0.006793
Cu	63	3	He	3.613	0.1102	4650.90	0.0286	0.006793
Cu	63	3	He	3.554	0.1085	4620.91	0.0286	0.006793
Zn	66	3	He	170.73	0.5763	24831.99	0.0034	0.00316
Zn	66	3	He	178.466	0.6023	25413.15	0.0034	0.00316
Zn	66	3	He	179.596	0.6061	25804.06	0.0034	0.00316
As	75	3	He	10.286	0.0274	1180.06	0.0026	0.0008231
As	75	3	He	10.694	0.0284	1200.06	0.0026	0.0008231
As	75	3	He	11.105	0.0295	1256.06	0.0026	0.0008231
Sr	88	3	He	1903.16	20.0658	751006.32	0.0105	0.001715
Sr	88	3	He	1902.335	20.0571	752477.10	0.0105	0.001715
Sr	88	3	He	1881.33	19.8357	754706.71	0.0105	0.001715
Mo	98	3	He	1.912	0.0534	2000.22	0.0275	0.0008555
Mo	98	3	He	1.82	0.0509	1910.19	0.0275	0.0008555
Mo	98	3	He	1.842	0.0515	1960.21	0.0275	0.0008555
Ag	107	3	He	0.011	0.0011	40.00	0.0591	0.0004305
Ag	107	3	He	0.015	0.0013	50.00	0.0591	0.0004305
Ag	107	3	He	0.011	0.0011	40.00	0.0591	0.0004305
Cd	111	3	He	0.016	0.0002	6.00	0.0066	5.141E-05
Cd	111	3	He	0.032	0.0003	10.00	0.0066	5.141E-05
Cd	111	3	He	0.032	0.0003	10.00	0.0066	5.141E-05
Sn	120	3	He	-0.132	0.016	600.03	0.0187	0.0185
Sn	120	3	He	-0.049	0.0176	660.04	0.0187	0.0185
Sn	120	3	He	0.008	0.0187	710.07	0.0187	0.0185
Sb	121	3	He	0.202	0.0048	180.01	0.0183	0.00111
Sb	121	3	He	0.26	0.0059	220.01	0.0183	0.00111
Sb	121	3	He	0.255	0.0058	220.01	0.0183	0.00111
Ba	137	3	He	79.605	0.4671	17481.65	0.0059	0.0007704
Ba	137	3	He	80.007	0.4694	17611.94	0.0059	0.0007704
Ba	137	3	He	77.9	0.4571	17391.59	0.0059	0.0007704
Tl	205	3	He	0.008	0.0011	130.01	0.0364	0.000808
Tl	205	3	He	-0.008	0.0005	60.00	0.0364	0.000808
Tl	205	3	He	-0.001	0.0008	90.00	0.0364	0.000808
Pb	208	3	He	2.239	0.1124	7202.26	0.0487	0.003226
Pb	208	3	He	2.411	0.1207	7182.16	0.0487	0.003226
Pb	208	3	He	2.331	0.1169	7412.32	0.0487	0.003226
U	238	3	He	0.067	0.004	470.03	0.0535	0.0004157
U	238	3	He	0.074	0.0044	510.03	0.0535	0.0004157
U	238	3	He	0.068	0.0041	480.03	0.0535	0.0004157
Sc	45	1	No Gas			1292530.53		
Sc	45	1	No Gas			1285752.17		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1288907.48		
Ge	72	1	No Gas			666125.38		
Ge	72	1	No Gas			673176.86		
Ge	72	1	No Gas			669647.65		
Sc	45	2	H2			90641.60		
Sc	45	2	H2			90620.98		
Sc	45	2	H2			90369.58		
Ge	72	2	H2			71931.27		
Ge	72	2	H2			72866.43		
Ge	72	2	H2			71800.61		
In	115	2	H2			176691.03		
In	115	2	H2			177582.61		
In	115	2	H2			177036.93		
Sc	45	3	He			22738.34		
Sc	45	3	He			23078.87		
Sc	45	3	He			21496.40		
Ge	72	3	He			43085.79		
Ge	72	3	He			42192.80		
Ge	72	3	He			42573.76		
In	115	3	He			37431.32		
In	115	3	He			37521.29		
In	115	3	He			38052.89		
Tb	159	3	He			169704.49		
Tb	159	3	He			170778.16		
Tb	159	3	He			171891.52		
Bi	209	3	He			117736.99		
Bi	209	3	He			117221.77		
Bi	209	3	He			118018.39		

Quantitation Report

Data File Name	099SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
Acq Time	9/19/2023 10:08:05 AM
Sample Name	410-136864-I-6-A
Sample Type	Sample
Comment	F6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

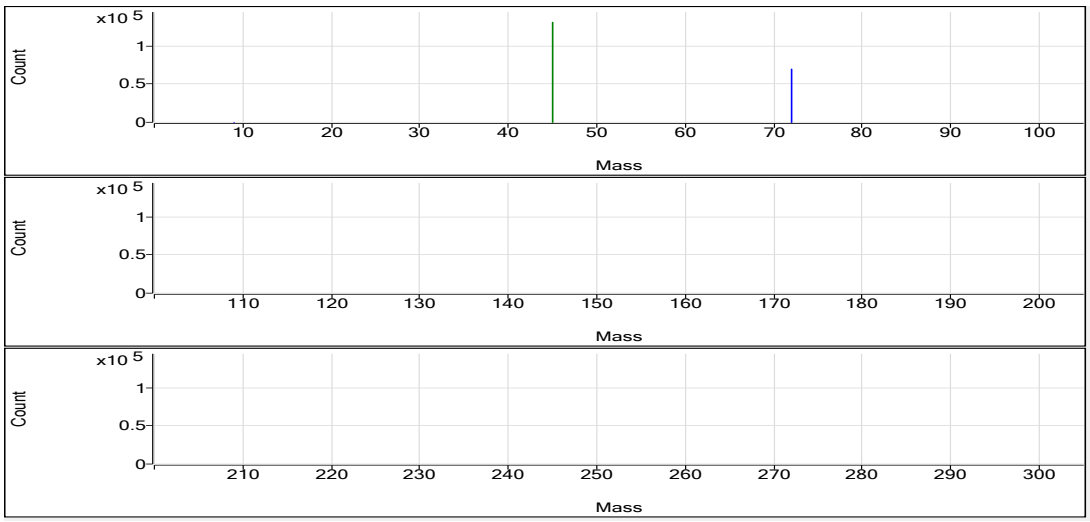
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.046	ppb	54.5	54.00	0.0000	Pulse	0.5000	3
Se	78	115	H2	0.021	ppb	245.5	2.22	0.0000	Pulse	1.5000	3
Na	23	45	He	2770.971	ppb	0.5	250012.38	10.5991	Pulse	0.1000	3
Mg	24	45	He	21846.115	ppb	2.4	936763.94	39.7257	Pulse	0.1000	3
Al	27	45	He	80.050	ppb	28.5	1113.70	0.0472	Pulse	0.1000	3
K	39	45	He	3582.386	ppb	1.9	120947.40	5.1285	Pulse	0.1000	3
Ca	44	45	He	47512.327	ppb	1.7	82225.88	3.4865	Pulse	0.1000	3
Ti	47	45	He	3.385	ppb	15.2	53.33	0.0023	Pulse	0.1000	3
V	51	45	He	0.482	ppb	18.9	732.02	0.0311	Pulse	0.5000	3
Cr	52	45	He	4.017	ppb	12.3	5624.63	0.2382	Pulse	0.1000	3
Mn	55	45	He	2089.532	ppb	1.9	683373.82	28.9777	Pulse	0.1000	3
Fe	57	45	He	969.198	ppb	5.7	14661.23	0.6220	Pulse	0.1000	3
Co	59	45	He	3.397	ppb	8.5	5444.55	0.2309	Pulse	0.1000	3
Ni	60	72	He	4.987	ppb	5.9	2933.72	0.0670	Pulse	0.1000	3
Cu	63	72	He	2.650	ppb	5.2	3617.26	0.0827	Pulse	0.1000	3
Zn	66	72	He	11.650	ppb	4.2	1850.18	0.0423	Pulse	0.1000	3
As	75	72	He	0.441	ppb	58.5	86.00	0.0020	Pulse	0.5000	3
Sr	88	115	He	167.057	ppb	0.8	70593.27	1.7629	Pulse	0.1000	3
Mo	98	115	He	0.135	ppb	38.4	183.34	0.0046	Pulse	0.1000	3
Ag	107	115	He	0.865	ppb	3.6	2063.57	0.0515	Pulse	0.1000	3
Cd	111	115	He	0.658	ppb	11.5	176.67	0.0044	Pulse	0.5000	3
Sn	120	115	He	0.142	ppb	116.7	846.72	0.0212	Pulse	0.1000	3
Sb	121	115	He	0.504	ppb	29.4	413.36	0.0103	Pulse	0.1000	3
Ba	137	115	He	85.719	ppb	3.3	20138.81	0.5029	Pulse	0.1000	3
Tl	205	209	He	0.012	ppb	3.4	160.01	0.0012	Pulse	0.1000	3
Pb	208	209	He	0.504	ppb	3.8	3603.68	0.0278	Pulse	0.1000	3
U	238	209	He	0.068	ppb	13.4	526.70	0.0041	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1313008.75	1.0	98.4	Analog	0.1000	3
No Gas	Ge	72	699290.59	0.6	100.0	Pulse	0.1000	3
H2	Sc	45	91738.46	0.7	105.5	Pulse	0.1000	3
H2	Ge	72	74698.54	0.6	104.3	Pulse	0.1000	3
H2	In	115	191561.59	1.7	104.6	Pulse	0.1000	3
He	Sc	45	23589.68	2.4	102.5	Pulse	0.1000	3
He	Ge	72	43794.72	2.9	103.7	Pulse	0.1000	3
He	In	115	40045.79	1.2	102.9	Pulse	0.1000	3
He	Tb	159	179868.57	1.0	102.1	Pulse	0.1000	3
He	Bi	209	129613.20	1.2	101.1	Pulse	0.1000	3

No Gas



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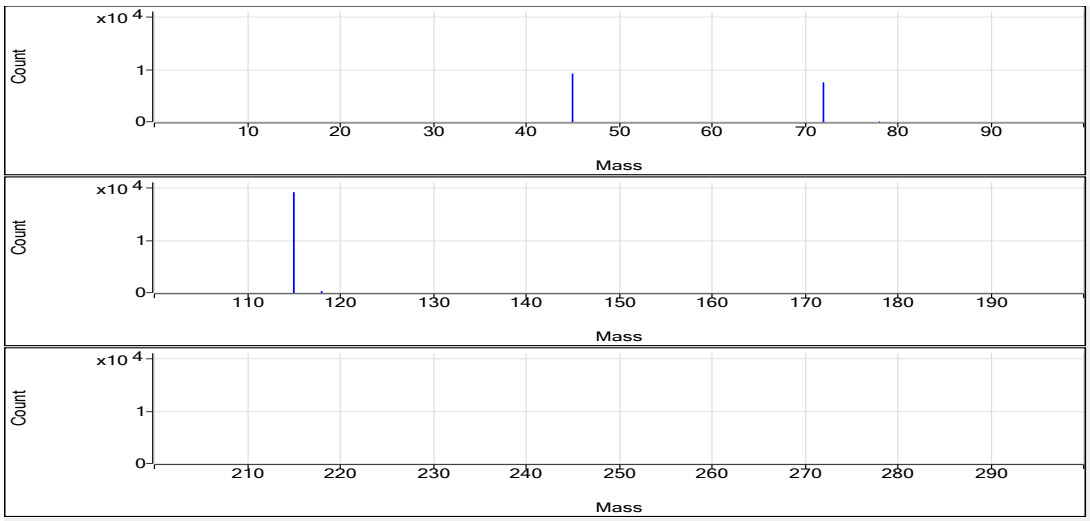
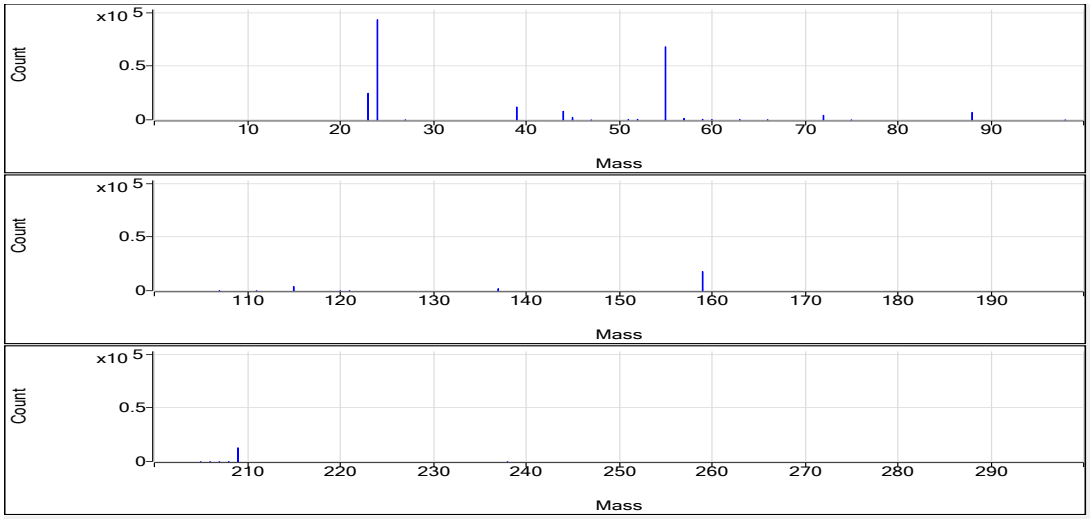


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.075	0.0001	72.00	0.0005	1.901E-05
Be	9	1	No Gas	0.032	0	46.00	0.0005	1.901E-05
Be	9	1	No Gas	0.031	0	44.00	0.0005	1.901E-05
Se	78	2	H2	0.064	0	4.00	0.0002	7.279E-06
Se	78	2	H2	0.033	0	2.67	0.0002	7.279E-06
Se	78	2	H2	-0.035	0	0.00	0.0002	7.279E-06
Na	23	3	He	2761.152	10.5641	251213.98	0.0036	0.7194
Na	23	3	He	2766.044	10.5815	254383.12	0.0036	0.7194
Na	23	3	He	2785.716	10.6516	244440.05	0.0036	0.7194
Mg	24	3	He	21557.843	39.2016	932216.31	0.0018	0.006791
Mg	24	3	He	21533.205	39.1568	941343.58	0.0018	0.006791
Mg	24	3	He	22447.297	40.8187	936731.94	0.0018	0.006791
Al	27	3	He	105.614	0.0614	1460.97	0.0006	0.002622
Al	27	3	He	61.775	0.037	890.06	0.0006	0.002622
Al	27	3	He	72.763	0.0431	990.07	0.0006	0.002622
K	39	3	He	3579.717	5.1251	121875.00	0.0013	0.5579
K	39	3	He	3515.207	5.0428	121230.39	0.0013	0.5579
K	39	3	He	3652.233	5.2176	119736.80	0.0013	0.5579
Ca	44	3	He	47817.409	3.5088	83439.79	0.0001	0.004062
Ca	44	3	He	46591.085	3.4189	82192.32	0.0001	0.004062
Ca	44	3	He	48128.488	3.5316	81045.52	0.0001	0.004062
Ti	47	3	He	3.107	0.0021	50.00	0.0006	0.0002809
Ti	47	3	He	3.068	0.0021	50.00	0.0006	0.0002809
Ti	47	3	He	3.98	0.0026	60.00	0.0006	0.0002809
V	51	3	He	0.471	0.0308	732.02	0.0259	0.01861
V	51	3	He	0.397	0.0289	694.02	0.0259	0.01861
V	51	3	He	0.578	0.0336	770.03	0.0259	0.01861
Cr	52	3	He	4.103	0.241	5731.31	0.0332	0.1047
Cr	52	3	He	4.463	0.253	6081.50	0.0332	0.1047
Cr	52	3	He	3.486	0.2205	5061.08	0.0332	0.1047
Mn	55	3	He	2086.368	28.9338	688048.51	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2052.181	28.4598	684184.21	0.0139	0.005074
Mn	55	3	He	2130.046	29.5395	677888.74	0.0139	0.005074
Fe	57	3	He	933.146	0.5991	14247.46	0.0006	0.00609
Fe	57	3	He	941.937	0.6047	14537.73	0.0006	0.00609
Fe	57	3	He	1032.511	0.6623	15198.50	0.0006	0.00609
Co	59	3	He	3.632	0.2465	5861.38	0.0661	0.00621
Co	59	3	He	3.076	0.2097	5041.05	0.0661	0.00621
Co	59	3	He	3.484	0.2367	5431.23	0.0661	0.00621
Ni	60	3	He	5.217	0.0693	3100.43	0.01	0.01721
Ni	60	3	He	4.657	0.0637	2820.36	0.01	0.01721
Ni	60	3	He	5.089	0.068	2880.38	0.01	0.01721
Cu	63	3	He	2.643	0.0825	3690.61	0.0286	0.006793
Cu	63	3	He	2.516	0.0788	3490.57	0.0286	0.006793
Cu	63	3	He	2.79	0.0867	3670.60	0.0286	0.006793
Zn	66	3	He	11.64	0.0422	1890.19	0.0034	0.00316
Zn	66	3	He	11.168	0.0407	1800.16	0.0034	0.00316
Zn	66	3	He	12.141	0.0439	1860.18	0.0034	0.00316
As	75	3	He	0.685	0.0026	116.00	0.0026	0.0008231
As	75	3	He	0.171	0.0013	56.00	0.0026	0.0008231
As	75	3	He	0.468	0.002	86.00	0.0026	0.0008231
Sr	88	3	He	167.57	1.7683	70114.48	0.0105	0.001715
Sr	88	3	He	168.096	1.7739	70746.83	0.0105	0.001715
Sr	88	3	He	165.506	1.7466	70918.50	0.0105	0.001715
Mo	98	3	He	0.18	0.0058	230.01	0.0275	0.0008555
Mo	98	3	He	0.078	0.003	120.00	0.0275	0.0008555
Mo	98	3	He	0.148	0.0049	200.01	0.0275	0.0008555
Ag	107	3	He	0.885	0.0527	2090.23	0.0591	0.0004305
Ag	107	3	He	0.829	0.0494	1970.22	0.0591	0.0004305
Ag	107	3	He	0.88	0.0525	2130.26	0.0591	0.0004305
Cd	111	3	He	0.746	0.005	198.00	0.0066	5.141E-05
Cd	111	3	He	0.62	0.0042	166.00	0.0066	5.141E-05
Cd	111	3	He	0.609	0.0041	166.00	0.0066	5.141E-05
Sn	120	3	He	0.332	0.0247	980.07	0.0187	0.0185
Sn	120	3	He	0.03	0.0191	760.05	0.0187	0.0185
Sn	120	3	He	0.064	0.0197	800.05	0.0187	0.0185
Sb	121	3	He	0.67	0.0134	530.03	0.0183	0.00111
Sb	121	3	He	0.46	0.0095	380.02	0.0183	0.00111
Sb	121	3	He	0.383	0.0081	330.02	0.0183	0.00111
Ba	137	3	He	88.285	0.5179	20536.17	0.0059	0.0007704
Ba	137	3	He	82.625	0.4848	19334.17	0.0059	0.0007704
Ba	137	3	He	86.248	0.506	20546.10	0.0059	0.0007704
Tl	205	3	He	0.011	0.0012	160.01	0.0364	0.000808
Tl	205	3	He	0.012	0.0012	160.01	0.0364	0.000808
Tl	205	3	He	0.012	0.0012	160.01	0.0364	0.000808
Pb	208	3	He	0.525	0.0288	2100.26	0.0487	0.003226
Pb	208	3	He	0.5	0.0276	2060.26	0.0487	0.003226
Pb	208	3	He	0.487	0.027	1910.21	0.0487	0.003226
U	238	3	He	0.068	0.004	530.03	0.0535	0.0004157
U	238	3	He	0.078	0.0046	590.04	0.0535	0.0004157
U	238	3	He	0.059	0.0036	460.03	0.0535	0.0004157
Sc	45	1	No Gas			1306961.54		
Sc	45	1	No Gas			1327628.26		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1304436.46		
Ge	72	1	No Gas			701552.10		
Ge	72	1	No Gas			701998.04		
Ge	72	1	No Gas			694321.63		
Sc	45	2	H2			90973.01		
Sc	45	2	H2			92221.81		
Sc	45	2	H2			92020.57		
Ge	72	2	H2			75077.32		
Ge	72	2	H2			74232.99		
Ge	72	2	H2			74785.30		
In	115	2	H2			195112.50		
In	115	2	H2			188565.13		
In	115	2	H2			191007.15		
Sc	45	3	He			23780.07		
Sc	45	3	He			24040.37		
Sc	45	3	He			22948.59		
Ge	72	3	He			44750.83		
Ge	72	3	He			44279.54		
Ge	72	3	He			42353.79		
In	115	3	He			39656.99		
In	115	3	He			39887.96		
In	115	3	He			40610.21		
Tb	159	3	He			181233.67		
Tb	159	3	He			180502.38		
Tb	159	3	He			177869.65		
Bi	209	3	He			131271.47		
Bi	209	3	He			129333.83		
Bi	209	3	He			128234.29		

Quantitation Report

Data File Name	101_CCV.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
Acq Time	9/19/2023 10:12:05 AM
Sample Name	CCV 4807398
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

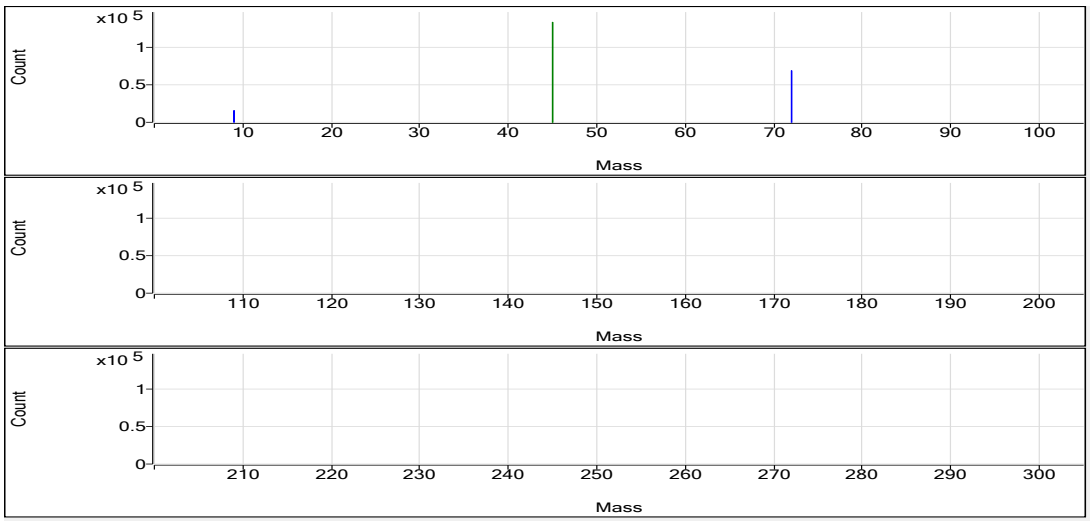
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	49.185	ppb	8.0	31594.69	0.0237	Pulse	0.5000	3
Se	78	115	H2	50.629	ppb	2.5	1987.92	0.0104	Pulse	1.5000	3
Na	23	45	He	5165.966	ppb	3.2	443233.56	19.1383	Pulse	0.1000	3
Mg	24	45	He	5036.558	ppb	2.4	212259.02	9.1639	Pulse	0.1000	3
Al	27	45	He	5010.690	ppb	3.5	64682.43	2.7930	Pulse	0.1000	3
K	39	45	He	5183.475	ppb	2.8	166125.25	7.1713	Pulse	0.1000	3
Ca	44	45	He	5251.634	ppb	2.5	9009.74	0.3890	Pulse	0.1000	3
Ti	47	45	He	5025.339	ppb	3.4	68240.43	2.9465	Pulse	0.1000	3
V	51	45	He	509.927	ppb	3.0	305812.47	13.2045	Pulse	0.5000	3
Cr	52	45	He	509.131	ppb	3.2	394053.89	17.0153	Pulse	0.1000	3
Mn	55	45	He	516.665	ppb	3.4	166017.45	7.1689	Pulse	0.1000	3
Fe	57	45	He	5157.589	ppb	2.6	76060.71	3.2839	Pulse	0.1000	3
Co	59	45	He	502.125	ppb	3.1	769391.78	33.2214	Pulse	0.1000	3
Ni	60	72	He	509.490	ppb	2.3	218533.95	5.1030	Pulse	0.1000	3
Cu	63	72	He	507.191	ppb	2.4	622136.03	14.5281	Pulse	0.1000	3
Zn	66	72	He	510.397	ppb	0.8	73538.89	1.7167	Pulse	0.1000	3
As	75	72	He	511.086	ppb	1.6	56571.14	1.3208	Pulse	0.5000	3
Sr	88	115	He	50.383	ppb	1.8	21356.80	0.5329	Pulse	0.1000	3
Mo	98	115	He	48.760	ppb	1.4	53790.35	1.3421	Pulse	0.1000	3
Ag	107	115	He	48.387	ppb	1.5	114617.88	2.8599	Pulse	0.1000	3
Cd	111	115	He	48.690	ppb	0.2	12934.69	0.3227	Pulse	0.5000	3
Sn	120	115	He	49.355	ppb	1.4	37792.38	0.9430	Pulse	0.1000	3
Sb	121	115	He	48.301	ppb	2.3	35473.02	0.8851	Pulse	0.1000	3
Ba	137	115	He	488.360	ppb	0.2	114684.09	2.8615	Pulse	0.1000	3
Tl	205	209	He	50.665	ppb	0.4	239550.49	1.8430	Pulse	0.1000	3
Pb	208	209	He	50.480	ppb	0.8	320273.12	2.4641	Pulse	0.1000	3
U	238	209	He	49.518	ppb	0.6	344299.21	2.6490	Pulse	0.1000	3

ISTD Table:

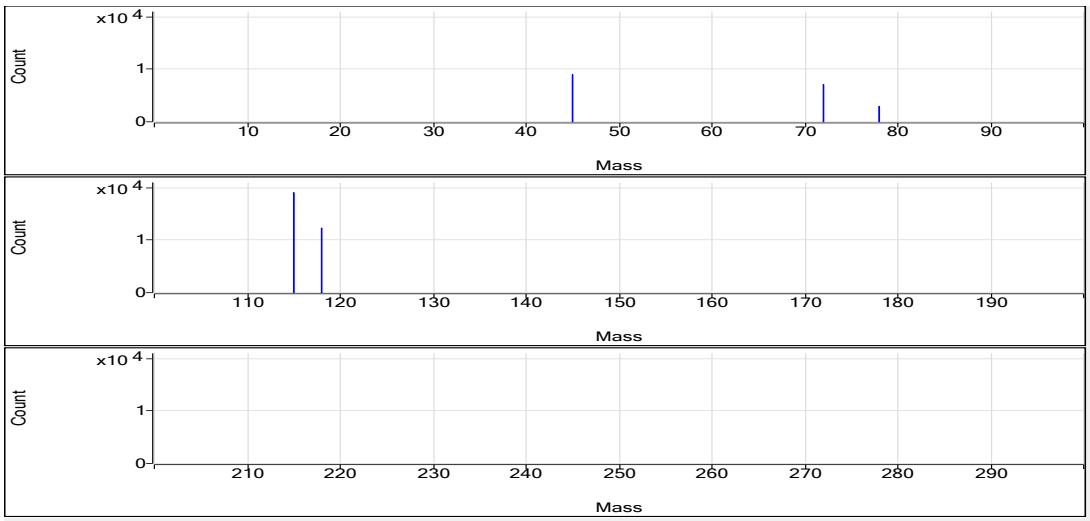
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1330931.07	0.8	99.7	Analog	0.1000	3
No Gas	Ge	72	687037.26	0.5	98.2	Pulse	0.1000	3
H2	Sc	45	90286.27	0.2	103.8	Pulse	0.1000	3
H2	Ge	72	71368.13	1.5	99.7	Pulse	0.1000	3
H2	In	115	190959.65	0.5	104.3	Pulse	0.1000	3
He	Sc	45	23172.48	2.9	100.7	Pulse	0.1000	3
He	Ge	72	42845.01	3.2	101.5	Pulse	0.1000	3
He	In	115	40077.90	0.1	102.9	Pulse	0.1000	3
He	Tb	159	177293.92	1.2	100.7	Pulse	0.1000	3
He	Bi	209	129974.20	0.5	101.4	Pulse	0.1000	3

No Gas

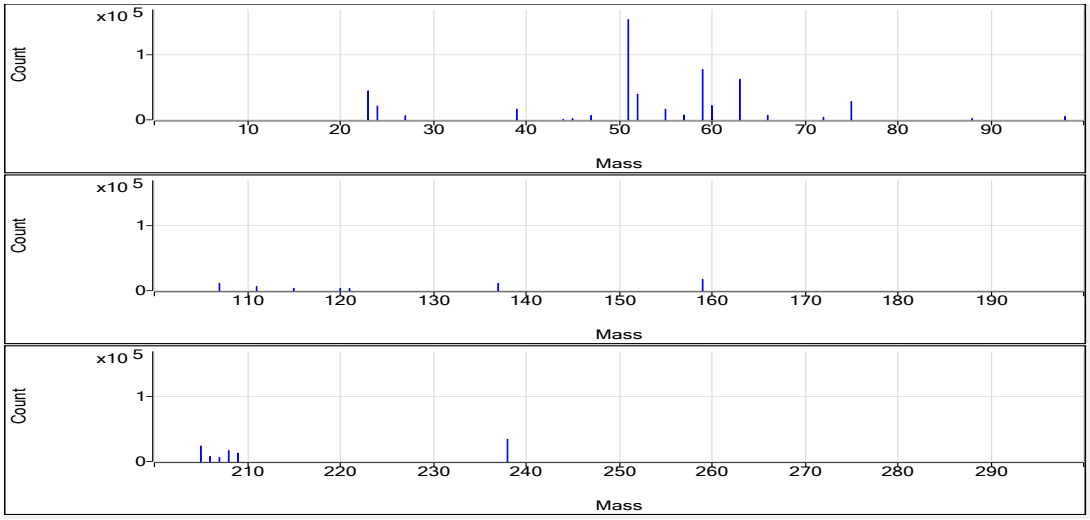


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	44.903	0.0217	29024.09	0.0005	1.901E-05
Be	9	1	No Gas	50.048	0.0242	32262.63	0.0005	1.901E-05
Be	9	1	No Gas	52.604	0.0254	33497.34	0.0005	1.901E-05
Se	78	2	H2	50.421	0.0104	1984.81	0.0002	7.279E-06
Se	78	2	H2	49.489	0.0102	1949.47	0.0002	7.279E-06
Se	78	2	H2	51.978	0.0107	2029.48	0.0002	7.279E-06
Na	23	3	He	5197.437	19.2505	448329.41	0.0036	0.7194
Na	23	3	He	5313.147	19.663	441591.87	0.0036	0.7194
Na	23	3	He	4987.314	18.5013	439779.41	0.0036	0.7194
Mg	24	3	He	5067.766	9.2206	214741.21	0.0018	0.006791
Mg	24	3	He	5138.974	9.3501	209983.75	0.0018	0.006791
Mg	24	3	He	4902.933	8.9209	212052.09	0.0018	0.006791
Al	27	3	He	5084.057	2.8338	65998.17	0.0006	0.002622
Al	27	3	He	5139.967	2.865	64341.66	0.0006	0.002622
Al	27	3	He	4808.047	2.6801	63707.45	0.0006	0.002622
K	39	3	He	5300.268	7.3203	170483.75	0.0013	0.5579
K	39	3	He	5231.385	7.2324	162424.75	0.0013	0.5579
K	39	3	He	5018.772	6.9611	165467.24	0.0013	0.5579
Ca	44	3	He	5300.905	0.3926	9143.11	0.0001	0.004062
Ca	44	3	He	5353.307	0.3964	8903.01	0.0001	0.004062
Ca	44	3	He	5100.691	0.3779	8983.10	0.0001	0.004062
Ti	47	3	He	5098.18	2.9892	69617.03	0.0006	0.0002809
Ti	47	3	He	5146.47	3.0175	67767.92	0.0006	0.0002809
Ti	47	3	He	4831.367	2.8328	67336.34	0.0006	0.0002809
V	51	3	He	511.432	13.2434	308429.16	0.0259	0.01861
V	51	3	He	524.256	13.575	304867.13	0.0259	0.01861
V	51	3	He	494.093	12.7951	304141.13	0.0259	0.01861
Cr	52	3	He	510.75	17.0691	397525.78	0.0332	0.1047
Cr	52	3	He	524.489	17.5254	393584.29	0.0332	0.1047
Cr	52	3	He	492.153	16.4513	391051.60	0.0332	0.1047
Mn	55	3	He	519.063	7.2022	167734.00	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	533.061	7.3963	166105.76	0.0139	0.005074
Mn	55	3	He	497.87	6.9083	164212.60	0.0139	0.005074
Fe	57	3	He	5183.624	3.3005	76865.09	0.0006	0.00609
Fe	57	3	He	5275.832	3.3591	75437.53	0.0006	0.00609
Fe	57	3	He	5013.311	3.1922	75879.50	0.0006	0.00609
Co	59	3	He	504.421	33.3733	777239.05	0.0661	0.00621
Co	59	3	He	516.186	34.1515	766974.75	0.0661	0.00621
Co	59	3	He	485.769	32.1395	763961.55	0.0661	0.00621
Ni	60	3	He	500.063	5.0089	221537.18	0.01	0.01721
Ni	60	3	He	505.718	5.0653	216870.11	0.01	0.01721
Ni	60	3	He	522.69	5.2347	217194.57	0.01	0.01721
Cu	63	3	He	495.449	14.1919	627695.03	0.0286	0.006793
Cu	63	3	He	506.065	14.4959	620637.49	0.0286	0.006793
Cu	63	3	He	520.06	14.8966	618075.58	0.0286	0.006793
Zn	66	3	He	507.178	1.7059	75448.81	0.0034	0.00316
Zn	66	3	He	508.997	1.712	73297.73	0.0034	0.00316
Zn	66	3	He	515.016	1.7322	71870.13	0.0034	0.00316
As	75	3	He	502.541	1.2988	57442.62	0.0026	0.0008231
As	75	3	He	511.687	1.3224	56617.18	0.0026	0.0008231
As	75	3	He	519.029	1.3413	55653.63	0.0026	0.0008231
Sr	88	3	He	51.099	0.5404	21677.39	0.0105	0.001715
Sr	88	3	He	49.329	0.5218	20896.14	0.0105	0.001715
Sr	88	3	He	50.72	0.5364	21496.86	0.0105	0.001715
Mo	98	3	He	49.314	1.3574	54446.44	0.0275	0.0008555
Mo	98	3	He	48.963	1.3477	53974.20	0.0275	0.0008555
Mo	98	3	He	48.003	1.3213	52950.41	0.0275	0.0008555
Ag	107	3	He	49.231	2.9098	116714.37	0.0591	0.0004305
Ag	107	3	He	47.822	2.8265	113196.61	0.0591	0.0004305
Ag	107	3	He	48.107	2.8433	113942.65	0.0591	0.0004305
Cd	111	3	He	48.79	0.3234	12972.07	0.0066	5.141E-05
Cd	111	3	He	48.67	0.3226	12920.01	0.0066	5.141E-05
Cd	111	3	He	48.61	0.3222	12912.00	0.0066	5.141E-05
Sn	120	3	He	49.981	0.9547	38294.13	0.0187	0.0185
Sn	120	3	He	48.59	0.9286	37190.57	0.0187	0.0185
Sn	120	3	He	49.494	0.9456	37892.43	0.0187	0.0185
Sb	121	3	He	47.173	0.8645	34674.48	0.0183	0.00111
Sb	121	3	He	49.353	0.9044	36218.36	0.0183	0.00111
Sb	121	3	He	48.378	0.8865	35526.23	0.0183	0.00111
Ba	137	3	He	488.393	2.8617	114787.75	0.0059	0.0007704
Ba	137	3	He	487.4	2.8559	114374.73	0.0059	0.0007704
Ba	137	3	He	489.288	2.867	114889.78	0.0059	0.0007704
Tl	205	3	He	50.905	1.8518	241688.53	0.0364	0.000808
Tl	205	3	He	50.518	1.8377	239163.94	0.0364	0.000808
Tl	205	3	He	50.571	1.8396	237799.00	0.0364	0.000808
Pb	208	3	He	50.736	2.4766	171276.81	0.0487	0.003226
Pb	208	3	He	50.709	2.4752	172321.05	0.0487	0.003226
Pb	208	3	He	49.995	2.4404	167032.85	0.0487	0.003226
U	238	3	He	49.713	2.6594	347095.62	0.0535	0.0004157
U	238	3	He	49.19	2.6314	342463.51	0.0535	0.0004157
U	238	3	He	49.651	2.6561	343338.51	0.0535	0.0004157
Sc	45	1	No Gas			1338652.32		
Sc	45	1	No Gas			1335183.11		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1318957.79		
Ge	72	1	No Gas			688746.55		
Ge	72	1	No Gas			689614.68		
Ge	72	1	No Gas			682750.54		
Sc	45	2	H2			90118.24		
Sc	45	2	H2			90481.19		
Sc	45	2	H2			90259.37		
Ge	72	2	H2			71147.09		
Ge	72	2	H2			70433.46		
Ge	72	2	H2			72523.84		
In	115	2	H2			191433.45		
In	115	2	H2			191564.51		
In	115	2	H2			189880.99		
Sc	45	3	He			23289.27		
Sc	45	3	He			22457.98		
Sc	45	3	He			23770.20		
Ge	72	3	He			44229.08		
Ge	72	3	He			42814.78		
Ge	72	3	He			41491.18		
In	115	3	He			40379.51		
In	115	3	He			40308.89		
In	115	3	He			40338.93		
Tb	159	3	He			179671.15		
Tb	159	3	He			175314.39		
Tb	159	3	He			176896.23		
Bi	209	3	He			130516.44		
Bi	209	3	He			130142.65		
Bi	209	3	He			129263.50		

Quantitation Report

Data File Name	102_CCB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
Acq Time	9/19/2023 10:14:04 AM
Sample Name	CCB 4807280
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

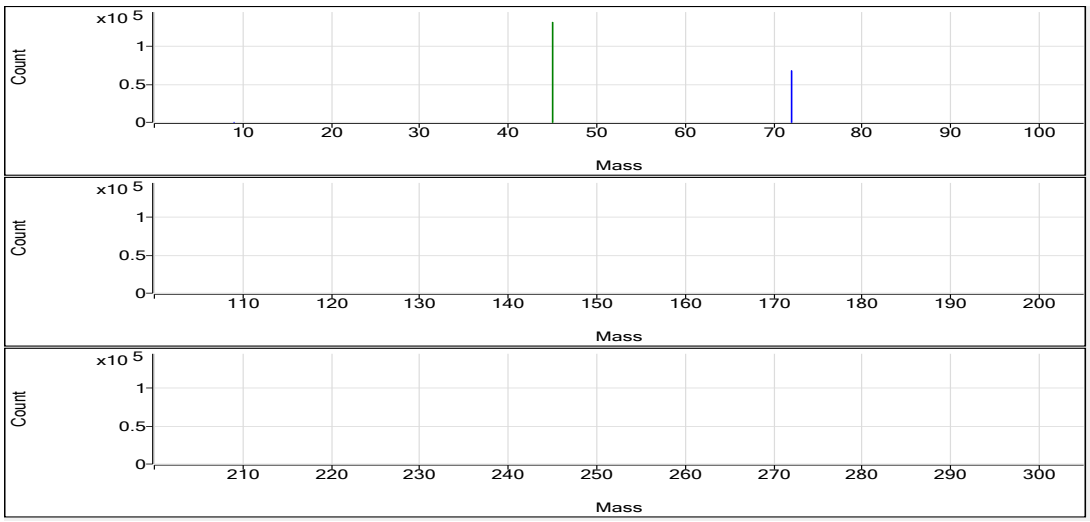
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.074	ppb	30.6	72.67	0.0001	Pulse	0.5000	3
Se	78	115	H2	0.062	ppb	85.5	3.78	0.0000	Pulse	1.5000	3
Na	23	45	He	33.577	ppb	39.2	19426.65	0.8391	Pulse	0.1000	3
Mg	24	45	He	13.588	ppb	2.9	730.04	0.0315	Pulse	0.1000	3
Al	27	45	He	0.733	ppb	126.4	70.00	0.0030	Pulse	0.1000	3
K	39	45	He	33.051	ppb	167.6	13917.11	0.6000	Pulse	0.1000	3
Ca	44	45	He	9.068	ppb	176.1	110.00	0.0047	Pulse	0.1000	3
Ti	47	45	He	1.988	ppb	79.0	33.33	0.0014	Pulse	0.1000	3
V	51	45	He	0.138	ppb	36.2	514.01	0.0222	Pulse	0.5000	3
Cr	52	45	He	0.268	ppb	32.8	2633.66	0.1136	Pulse	0.1000	3
Mn	55	45	He	0.349	ppb	26.1	230.01	0.0099	Pulse	0.1000	3
Fe	57	45	He	4.637	ppb	68.9	210.01	0.0090	Pulse	0.1000	3
Co	59	45	He	0.111	ppb	46.1	313.35	0.0136	Pulse	0.1000	3
Ni	60	72	He	0.196	ppb	134.5	813.38	0.0192	Pulse	0.1000	3
Cu	63	72	He	0.105	ppb	72.5	416.69	0.0098	Pulse	0.1000	3
Zn	66	72	He	0.067	ppb	295.6	143.34	0.0034	Pulse	0.1000	3
As	75	72	He	0.197	ppb	38.5	56.67	0.0013	Pulse	0.5000	3
Sr	88	115	He	0.138	ppb	20.5	126.67	0.0032	Pulse	0.1000	3
Mo	98	115	He	0.066	ppb	57.1	106.67	0.0027	Pulse	0.1000	3
Ag	107	115	He	0.012	ppb	18.5	46.67	0.0012	Pulse	0.1000	3
Cd	111	115	He	0.020	ppb	44.1	7.33	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.004	ppb	N/A	736.72	0.0184	Pulse	0.1000	3
Sb	121	115	He	0.117	ppb	52.1	130.01	0.0032	Pulse	0.1000	3
Ba	137	115	He	0.039	ppb	4.5	40.00	0.0010	Pulse	0.1000	3
Tl	205	209	He	0.088	ppb	18.6	526.69	0.0040	Pulse	0.1000	3
Pb	208	209	He	0.006	ppb	136.4	463.36	0.0035	Pulse	0.1000	3
U	238	209	He	0.017	ppb	42.9	176.67	0.0013	Pulse	0.1000	3

ISTD Table:

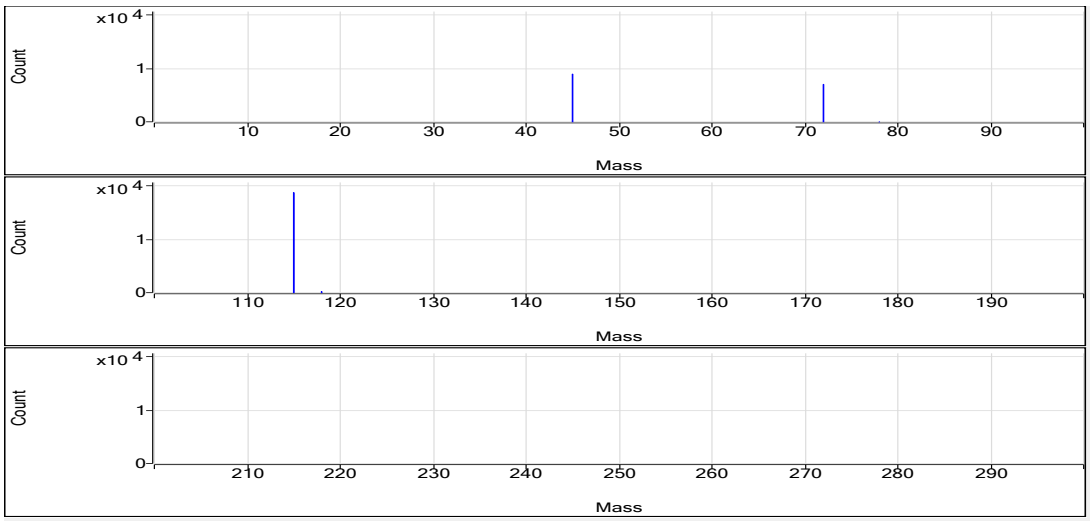
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1322864.98	0.9	99.1	Analog	0.1000	3
No Gas	Ge	72	681919.86	0.4	97.5	Pulse	0.1000	3
H2	Sc	45	89880.66	2.1	103.4	Pulse	0.1000	3
H2	Ge	72	70500.99	1.6	98.4	Pulse	0.1000	3
H2	In	115	188179.66	0.6	102.7	Pulse	0.1000	3
He	Sc	45	23169.18	2.7	100.7	Pulse	0.1000	3
He	Ge	72	42460.71	2.0	100.6	Pulse	0.1000	3
He	In	115	39976.52	1.0	102.7	Pulse	0.1000	3
He	Tb	159	179151.08	1.0	101.7	Pulse	0.1000	3
He	Bi	209	131054.34	1.0	102.2	Pulse	0.1000	3

No Gas

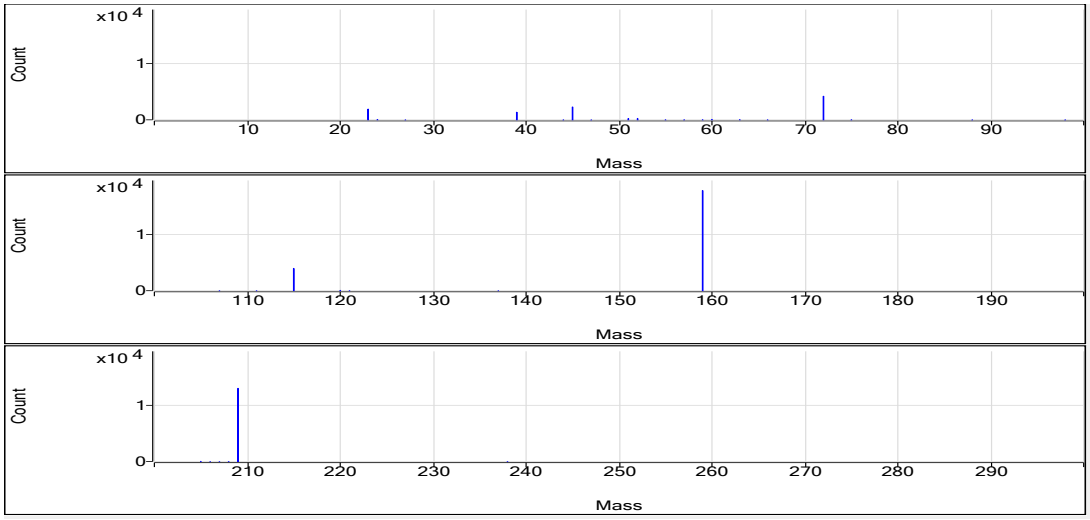


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.097	0.0001	88.00	0.0005	1.901E-05
Be	9	1	No Gas	0.074	0.0001	72.00	0.0005	1.901E-05
Be	9	1	No Gas	0.052	0	58.00	0.0005	1.901E-05
Se	78	2	H2	0.016	0	2.00	0.0002	7.279E-06
Se	78	2	H2	0.121	0	6.00	0.0002	7.279E-06
Se	78	2	H2	0.05	0	3.33	0.0002	7.279E-06
Na	23	3	He	42.425	0.8706	20284.59	0.0036	0.7194
Na	23	3	He	18.458	0.7852	18632.18	0.0036	0.7194
Na	23	3	He	39.849	0.8614	19363.18	0.0036	0.7194
Mg	24	3	He	13.735	0.0318	740.05	0.0018	0.006791
Mg	24	3	He	13.881	0.032	760.05	0.0018	0.006791
Mg	24	3	He	13.149	0.0307	690.03	0.0018	0.006791
Al	27	3	He	0.686	0.003	70.00	0.0006	0.002622
Al	27	3	He	-0.169	0.0025	60.00	0.0006	0.002622
Al	27	3	He	1.682	0.0036	80.00	0.0006	0.002622
K	39	3	He	93.551	0.6772	15779.00	0.0013	0.5579
K	39	3	He	20.753	0.5844	13866.92	0.0013	0.5579
K	39	3	He	-15.151	0.5385	12105.42	0.0013	0.5579
Ca	44	3	He	8.998	0.0047	110.01	0.0001	0.004062
Ca	44	3	He	25.07	0.0059	140.00	0.0001	0.004062
Ca	44	3	He	-6.864	0.0036	80.00	0.0001	0.004062
Ti	47	3	He	0.253	0.0004	10.00	0.0006	0.0002809
Ti	47	3	He	2.396	0.0017	40.00	0.0006	0.0002809
Ti	47	3	He	3.315	0.0022	50.00	0.0006	0.0002809
V	51	3	He	0.193	0.0236	550.01	0.0259	0.01861
V	51	3	He	0.095	0.0211	500.01	0.0259	0.01861
V	51	3	He	0.127	0.0219	492.01	0.0259	0.01861
Cr	52	3	He	0.336	0.1159	2700.34	0.0332	0.1047
Cr	52	3	He	0.298	0.1146	2720.35	0.0332	0.1047
Cr	52	3	He	0.169	0.1103	2480.30	0.0332	0.1047
Mn	55	3	He	0.408	0.0107	250.01	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.394	0.0105	250.02	0.0139	0.005074
Mn	55	3	He	0.244	0.0085	190.01	0.0139	0.005074
Fe	57	3	He	2.574	0.0077	180.01	0.0006	0.00609
Fe	57	3	He	8.32	0.0114	270.01	0.0006	0.00609
Fe	57	3	He	3.018	0.008	180.01	0.0006	0.00609
Co	59	3	He	0.114	0.0137	320.02	0.0661	0.00621
Co	59	3	He	0.059	0.0101	240.01	0.0661	0.00621
Co	59	3	He	0.162	0.0169	380.02	0.0661	0.00621
Ni	60	3	He	0.321	0.0204	880.06	0.01	0.01721
Ni	60	3	He	0.375	0.021	870.05	0.01	0.01721
Ni	60	3	He	-0.107	0.0161	690.04	0.01	0.01721
Cu	63	3	He	0.176	0.0118	510.03	0.0286	0.006793
Cu	63	3	He	0.116	0.0101	420.02	0.0286	0.006793
Cu	63	3	He	0.024	0.0075	320.02	0.0286	0.006793
Zn	66	3	He	-0.112	0.0028	120.00	0.0034	0.00316
Zn	66	3	He	0.278	0.0041	170.01	0.0034	0.00316
Zn	66	3	He	0.034	0.0033	140.00	0.0034	0.00316
As	75	3	He	0.184	0.0013	56.00	0.0026	0.0008231
As	75	3	He	0.129	0.0012	48.00	0.0026	0.0008231
As	75	3	He	0.279	0.0015	66.00	0.0026	0.0008231
Sr	88	3	He	0.119	0.003	120.00	0.0105	0.001715
Sr	88	3	He	0.125	0.003	120.00	0.0105	0.001715
Sr	88	3	He	0.17	0.0035	140.01	0.0105	0.001715
Mo	98	3	He	0.077	0.003	120.00	0.0275	0.0008555
Mo	98	3	He	0.024	0.0015	60.00	0.0275	0.0008555
Mo	98	3	He	0.097	0.0035	140.00	0.0275	0.0008555
Ag	107	3	He	0.014	0.0012	50.00	0.0591	0.0004305
Ag	107	3	He	0.01	0.001	40.00	0.0591	0.0004305
Ag	107	3	He	0.014	0.0013	50.00	0.0591	0.0004305
Cd	111	3	He	0.015	0.0001	6.00	0.0066	5.141E-05
Cd	111	3	He	0.015	0.0002	6.00	0.0066	5.141E-05
Cd	111	3	He	0.03	0.0003	10.00	0.0066	5.141E-05
Sn	120	3	He	0.095	0.0203	820.06	0.0187	0.0185
Sn	120	3	He	-0.004	0.0184	730.04	0.0187	0.0185
Sn	120	3	He	-0.104	0.0166	660.05	0.0187	0.0185
Sb	121	3	He	0.183	0.0045	180.01	0.0183	0.00111
Sb	121	3	He	0.105	0.003	120.01	0.0183	0.00111
Sb	121	3	He	0.063	0.0023	90.00	0.0183	0.00111
Ba	137	3	He	0.037	0.001	40.00	0.0059	0.0007704
Ba	137	3	He	0.041	0.001	40.00	0.0059	0.0007704
Ba	137	3	He	0.04	0.001	40.00	0.0059	0.0007704
Tl	205	3	He	0.097	0.0043	570.03	0.0364	0.000808
Tl	205	3	He	0.069	0.0033	440.02	0.0364	0.000808
Tl	205	3	He	0.099	0.0044	570.03	0.0364	0.000808
Pb	208	3	He	0.002	0.0033	230.01	0.0487	0.003226
Pb	208	3	He	0.016	0.004	300.02	0.0487	0.003226
Pb	208	3	He	0	0.0032	200.01	0.0487	0.003226
U	238	3	He	0.009	0.0009	120.00	0.0535	0.0004157
U	238	3	He	0.019	0.0014	190.01	0.0535	0.0004157
U	238	3	He	0.024	0.0017	220.01	0.0535	0.0004157
Sc	45	1	No Gas			1335372.48		
Sc	45	1	No Gas			1313028.26		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1320194.20		
Ge	72	1	No Gas			682028.51		
Ge	72	1	No Gas			684590.15		
Ge	72	1	No Gas			679140.93		
Sc	45	2	H2			91939.99		
Sc	45	2	H2			88187.29		
Sc	45	2	H2			89514.70		
Ge	72	2	H2			71710.59		
Ge	72	2	H2			69399.54		
Ge	72	2	H2			70392.84		
In	115	2	H2			188563.77		
In	115	2	H2			186812.61		
In	115	2	H2			189162.59		
Sc	45	3	He			23299.19		
Sc	45	3	He			23730.35		
Sc	45	3	He			22478.01		
Ge	72	3	He			43115.94		
Ge	72	3	He			41521.34		
Ge	72	3	He			42744.84		
In	115	3	He			40439.37		
In	115	3	He			39627.28		
In	115	3	He			39878.39		
Tb	159	3	He			180907.48		
Tb	159	3	He			179194.33		
Tb	159	3	He			177351.44		
Bi	209	3	He			131536.20		
Bi	209	3	He			132050.45		
Bi	209	3	He			129576.36		

Quantitation Report

Data File Name	103SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
Acq Time	9/19/2023 10:16:04 AM
Sample Name	MB 410-413337/1-A
Sample Type	Sample
Comment	T29
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

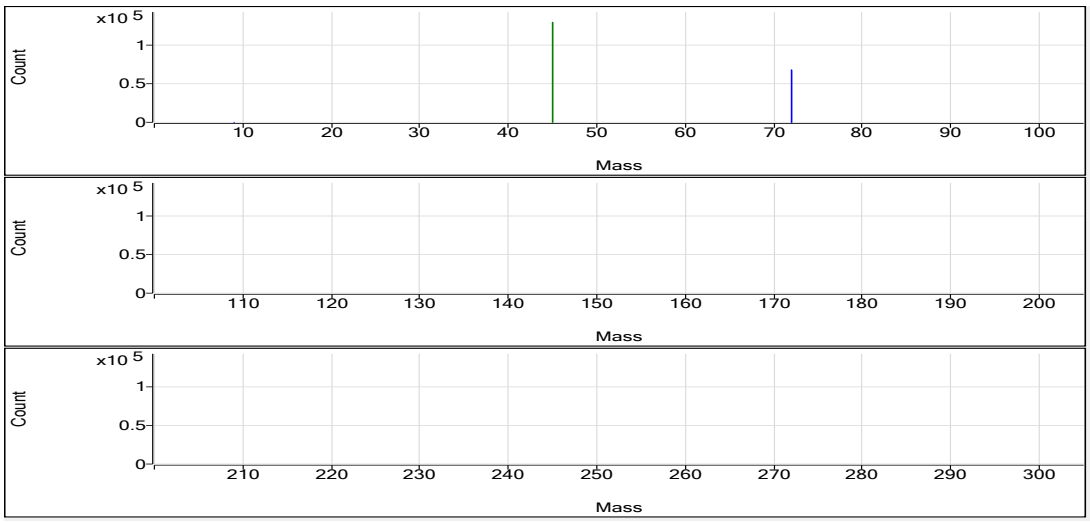
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.002	ppb	250.4	26.00	0.0000	Pulse	0.5000	3
Se	78	115	H2	-0.018	ppb	N/A	0.67	0.0000	Pulse	1.5000	3
Na	23	45	He	9.252	ppb	116.4	17630.98	0.7523	Pulse	0.1000	3
Mg	24	45	He	9.936	ppb	25.5	583.37	0.0249	Pulse	0.1000	3
Al	27	45	He	2.252	ppb	163.5	90.00	0.0039	Pulse	0.1000	3
K	39	45	He	11.638	ppb	408.5	13416.62	0.5727	Pulse	0.1000	3
Ca	44	45	He	6.629	ppb	202.5	106.67	0.0045	Pulse	0.1000	3
Ti	47	45	He	1.225	ppb	241.0	23.33	0.0010	Pulse	0.1000	3
V	51	45	He	-0.056	ppb	N/A	402.68	0.0172	Pulse	0.5000	3
Cr	52	45	He	-0.365	ppb	N/A	2170.24	0.0926	Pulse	0.1000	3
Mn	55	45	He	0.167	ppb	14.7	173.34	0.0074	Pulse	0.1000	3
Fe	57	45	He	-1.733	ppb	N/A	116.67	0.0050	Pulse	0.1000	3
Co	59	45	He	0.022	ppb	132.7	180.01	0.0077	Pulse	0.1000	3
Ni	60	72	He	-0.040	ppb	N/A	713.37	0.0168	Pulse	0.1000	3
Cu	63	72	He	-0.003	ppb	N/A	283.35	0.0067	Pulse	0.1000	3
Zn	66	72	He	0.276	ppb	86.7	173.34	0.0041	Pulse	0.1000	3
As	75	72	He	0.081	ppb	91.0	44.00	0.0010	Pulse	0.5000	3
Sr	88	115	He	0.062	ppb	142.7	96.67	0.0024	Pulse	0.1000	3
Mo	98	115	He	-0.001	ppb	N/A	33.33	0.0008	Pulse	0.1000	3
Ag	107	115	He	0.005	ppb	80.1	30.00	0.0007	Pulse	0.1000	3
Cd	111	115	He	-0.003	ppb	N/A	1.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.254	ppb	N/A	560.05	0.0137	Pulse	0.1000	3
Sb	121	115	He	0.006	ppb	215.1	50.00	0.0012	Pulse	0.1000	3
Ba	137	115	He	-0.006	ppb	N/A	30.00	0.0007	Pulse	0.1000	3
Tl	205	209	He	0.000	ppb	N/A	103.34	0.0008	Pulse	0.1000	3
Pb	208	209	He	-0.015	ppb	N/A	323.35	0.0025	Pulse	0.1000	3
U	238	209	He	-0.003	ppb	N/A	36.67	0.0003	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1300082.74	1.8	97.4	Analog	0.1000	3
No Gas	Ge	72	681424.23	0.5	97.4	Pulse	0.1000	3
H2	Sc	45	90826.11	0.8	104.5	Pulse	0.1000	3
H2	Ge	72	71586.26	0.8	100.0	Pulse	0.1000	3
H2	In	115	192740.31	1.3	105.2	Pulse	0.1000	3
He	Sc	45	23456.20	2.9	102.0	Pulse	0.1000	3
He	Ge	72	42483.89	2.4	100.6	Pulse	0.1000	3
He	In	115	40770.13	0.5	104.7	Pulse	0.1000	3
He	Tb	159	180527.39	0.5	102.5	Pulse	0.1000	3
He	Bi	209	130107.59	0.9	101.5	Pulse	0.1000	3

No Gas



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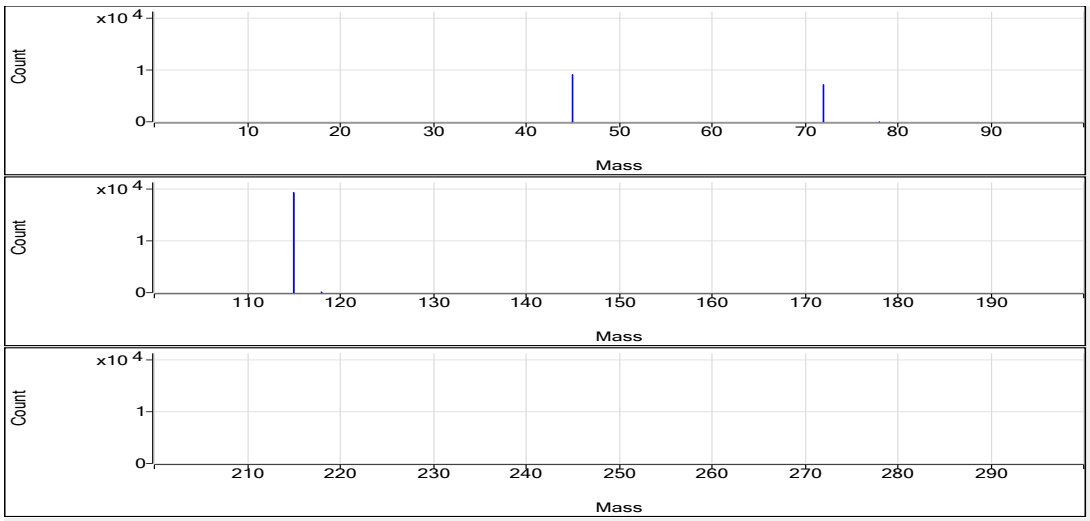
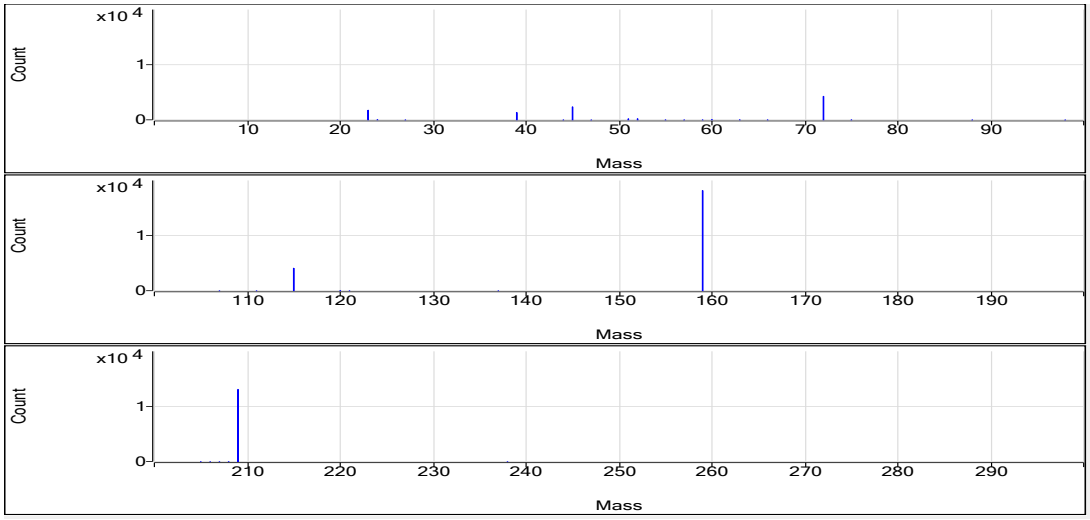


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.005	0	28.00	0.0005	1.901E-05
Be	9	1	No Gas	-0.004	0	22.00	0.0005	1.901E-05
Be	9	1	No Gas	0.004	0	28.00	0.0005	1.901E-05
Se	78	2	H2	-0.002	0	1.33	0.0002	7.279E-06
Se	78	2	H2	-0.018	0	0.67	0.0002	7.279E-06
Se	78	2	H2	-0.035	0	0.00	0.0002	7.279E-06
Na	23	3	He	15.586	0.7749	18101.65	0.0036	0.7194
Na	23	3	He	15.35	0.7741	17671.00	0.0036	0.7194
Na	23	3	He	-3.181	0.708	17120.29	0.0036	0.7194
Mg	24	3	He	12.748	0.03	700.04	0.0018	0.006791
Mg	24	3	He	7.83	0.021	480.03	0.0018	0.006791
Mg	24	3	He	9.231	0.0236	570.03	0.0018	0.006791
Al	27	3	He	2.978	0.0043	100.00	0.0006	0.002622
Al	27	3	He	5.518	0.0057	130.01	0.0006	0.002622
Al	27	3	He	-1.739	0.0017	40.00	0.0006	0.002622
K	39	3	He	58.261	0.6322	14767.98	0.0013	0.5579
K	39	3	He	13.421	0.575	13126.28	0.0013	0.5579
K	39	3	He	-36.767	0.511	12355.59	0.0013	0.5579
Ca	44	3	He	-8.696	0.0034	80.00	0.0001	0.004062
Ca	44	3	He	16.297	0.0053	120.00	0.0001	0.004062
Ca	44	3	He	12.286	0.005	120.00	0.0001	0.004062
Ti	47	3	He	4.632	0.003	70.00	0.0006	0.0002809
Ti	47	3	He	-0.479	0	0.00	0.0006	0.0002809
Ti	47	3	He	-0.479	0	0.00	0.0006	0.0002809
V	51	3	He	-0.057	0.0171	400.01	0.0259	0.01861
V	51	3	He	-0.059	0.0171	390.01	0.0259	0.01861
V	51	3	He	-0.051	0.0173	418.01	0.0259	0.01861
Cr	52	3	He	-0.292	0.095	2220.26	0.0332	0.1047
Cr	52	3	He	-0.291	0.0951	2170.24	0.0332	0.1047
Cr	52	3	He	-0.514	0.0877	2120.23	0.0332	0.1047
Mn	55	3	He	0.19	0.0077	180.01	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.171	0.0074	170.01	0.0139	0.005074
Mn	55	3	He	0.141	0.007	170.01	0.0139	0.005074
Fe	57	3	He	-1.5	0.0051	120.00	0.0006	0.00609
Fe	57	3	He	-0.622	0.0057	130.01	0.0006	0.00609
Fe	57	3	He	-3.076	0.0041	100.00	0.0006	0.00609
Co	59	3	He	0.055	0.0098	230.01	0.0661	0.00621
Co	59	3	He	-0.001	0.0061	140.01	0.0661	0.00621
Co	59	3	He	0.012	0.007	170.01	0.0661	0.00621
Ni	60	3	He	0.116	0.0184	770.04	0.01	0.01721
Ni	60	3	He	-0.209	0.0151	660.04	0.01	0.01721
Ni	60	3	He	-0.026	0.0169	710.04	0.01	0.01721
Cu	63	3	He	0.046	0.0081	340.02	0.0286	0.006793
Cu	63	3	He	-0.069	0.0048	210.01	0.0286	0.006793
Cu	63	3	He	0.013	0.0072	300.02	0.0286	0.006793
Zn	66	3	He	0.551	0.005	210.01	0.0034	0.00316
Zn	66	3	He	0.151	0.0037	160.01	0.0034	0.00316
Zn	66	3	He	0.125	0.0036	150.01	0.0034	0.00316
As	75	3	He	0.014	0.0009	36.00	0.0026	0.0008231
As	75	3	He	0.16	0.0012	54.00	0.0026	0.0008231
As	75	3	He	0.07	0.001	42.00	0.0026	0.0008231
Sr	88	3	He	0.165	0.0034	140.00	0.0105	0.001715
Sr	88	3	He	0.023	0.002	80.00	0.0105	0.001715
Sr	88	3	He	-0.001	0.0017	70.00	0.0105	0.001715
Mo	98	3	He	0.005	0.001	40.00	0.0275	0.0008555
Mo	98	3	He	-0.022	0.0002	10.00	0.0275	0.0008555
Mo	98	3	He	0.013	0.0012	50.00	0.0275	0.0008555
Ag	107	3	He	0.001	0.0005	20.00	0.0591	0.0004305
Ag	107	3	He	0.009	0.001	40.00	0.0591	0.0004305
Ag	107	3	He	0.005	0.0007	30.00	0.0591	0.0004305
Cd	111	3	He	-0.008	0	0.00	0.0066	5.141E-05
Cd	111	3	He	0.007	0.0001	4.00	0.0066	5.141E-05
Cd	111	3	He	-0.008	0	0.00	0.0066	5.141E-05
Sn	120	3	He	-0.08	0.017	690.10	0.0187	0.0185
Sn	120	3	He	-0.385	0.0113	460.02	0.0187	0.0185
Sn	120	3	He	-0.297	0.0129	530.03	0.0187	0.0185
Sb	121	3	He	0.02	0.0015	60.00	0.0183	0.00111
Sb	121	3	He	0.006	0.0012	50.00	0.0183	0.00111
Sb	121	3	He	-0.007	0.001	40.00	0.0183	0.00111
Ba	137	3	He	-0.047	0.0005	20.00	0.0059	0.0007704
Ba	137	3	He	0.036	0.001	40.00	0.0059	0.0007704
Ba	137	3	He	-0.006	0.0007	30.00	0.0059	0.0007704
Tl	205	3	He	0.01	0.0012	150.01	0.0364	0.000808
Tl	205	3	He	-0.005	0.0006	80.00	0.0364	0.000808
Tl	205	3	He	-0.005	0.0006	80.00	0.0364	0.000808
Pb	208	3	He	-0.014	0.0025	200.01	0.0487	0.003226
Pb	208	3	He	-0.007	0.0029	190.01	0.0487	0.003226
Pb	208	3	He	-0.025	0.002	190.01	0.0487	0.003226
U	238	3	He	-0.002	0.0003	40.00	0.0535	0.0004157
U	238	3	He	-0.002	0.0003	40.00	0.0535	0.0004157
U	238	3	He	-0.003	0.0002	30.00	0.0535	0.0004157
Sc	45	1	No Gas			1294730.22		
Sc	45	1	No Gas			1280074.28		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1325443.73		
Ge	72	1	No Gas			677582.33		
Ge	72	1	No Gas			683409.60		
Ge	72	1	No Gas			683280.77		
Sc	45	2	H2			90359.47		
Sc	45	2	H2			90510.42		
Sc	45	2	H2			91608.44		
Ge	72	2	H2			71007.29		
Ge	72	2	H2			71589.30		
Ge	72	2	H2			72162.20		
In	115	2	H2			190885.35		
In	115	2	H2			191664.84		
In	115	2	H2			195670.74		
Sc	45	3	He			23359.36		
Sc	45	3	He			22828.37		
Sc	45	3	He			24180.86		
Ge	72	3	He			41912.09		
Ge	72	3	He			43647.60		
Ge	72	3	He			41891.99		
In	115	3	He			40590.20		
In	115	3	He			40770.61		
In	115	3	He			40961.34		
Tb	159	3	He			179754.22		
Tb	159	3	He			180402.65		
Tb	159	3	He			181425.31		
Bi	209	3	He			129545.17		
Bi	209	3	He			131453.98		
Bi	209	3	He			129323.63		

Quantitation Report

Data File Name	104SMPL.d
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Sample Type	Sample
Comment	T29
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

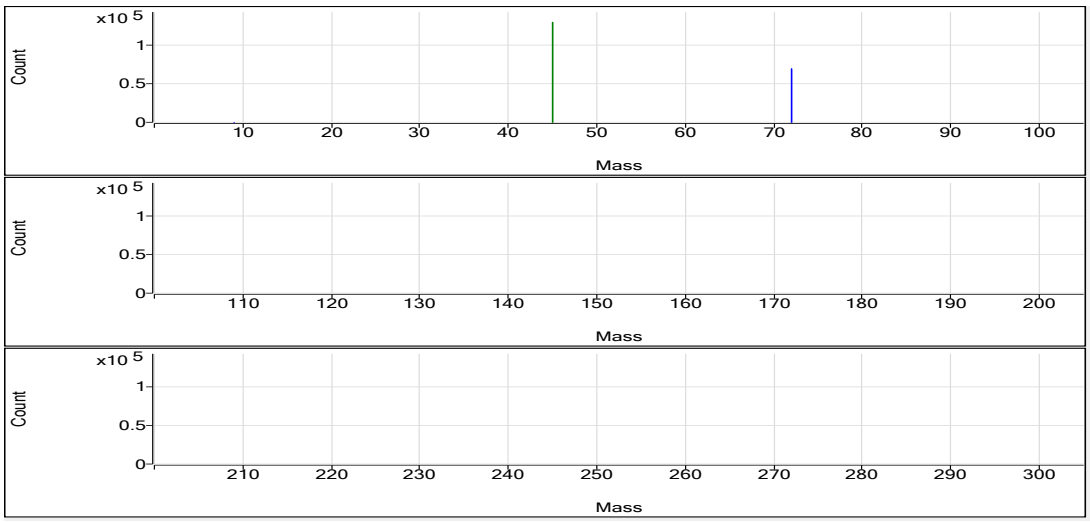
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.008	ppb	142.1	30.00	0.0000	Pulse	0.5000	3
Se	78	115	H2	0.113	ppb	83.6	5.78	0.0000	Pulse	1.5000	3
Na	23	45	He	105582.516	ppb	1.9	8819994.03	377.1669	Analog	0.1000	3
Mg	24	45	He	39029.247	ppb	4.0	1658852.11	70.9667	Analog	0.1000	3
Al	27	45	He	1.129	ppb	327.3	76.67	0.0033	Pulse	0.1000	3
K	39	45	He	25495.010	ppb	2.1	773683.01	33.0859	Pulse	0.1000	3
Ca	44	45	He	60170.851	ppb	2.3	103217.28	4.4143	Pulse	0.1000	3
Ti	47	45	He	0.006	ppb	6760.5	6.67	0.0003	Pulse	0.1000	3
V	51	45	He	0.031	ppb	60.8	454.01	0.0194	Pulse	0.5000	3
Cr	52	45	He	0.568	ppb	31.3	2890.39	0.1236	Pulse	0.1000	3
Mn	55	45	He	777.584	ppb	2.1	252230.42	10.7867	Pulse	0.1000	3
Fe	57	45	He	1038.400	ppb	4.0	15572.18	0.6660	Pulse	0.1000	3
Co	59	45	He	2.242	ppb	1.9	3613.90	0.1545	Pulse	0.1000	3
Ni	60	72	He	12.621	ppb	3.8	6281.60	0.1432	Pulse	0.1000	3
Cu	63	72	He	1.563	ppb	11.5	2260.26	0.0515	Pulse	0.1000	3
Zn	66	72	He	28.602	ppb	5.4	4350.81	0.0992	Pulse	0.1000	3
As	75	72	He	0.394	ppb	38.4	80.67	0.0018	Pulse	0.5000	3
Sr	88	115	He	199.987	ppb	1.2	85045.18	2.1101	Pulse	0.1000	3
Mo	98	115	He	0.598	ppb	18.2	696.71	0.0173	Pulse	0.1000	3
Ag	107	115	He	0.008	ppb	150.3	36.67	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.000	ppb	N/A	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.238	ppb	N/A	566.70	0.0140	Pulse	0.1000	3
Sb	121	115	He	0.179	ppb	10.5	176.68	0.0044	Pulse	0.1000	3
Ba	137	115	He	60.893	ppb	0.8	14408.07	0.3575	Pulse	0.1000	3
Tl	205	209	He	0.018	ppb	65.1	186.67	0.0015	Pulse	0.1000	3
Pb	208	209	He	-0.011	ppb	N/A	343.35	0.0027	Pulse	0.1000	3
U	238	209	He	0.321	ppb	5.8	2240.27	0.0176	Pulse	0.1000	3

ISTD Table:

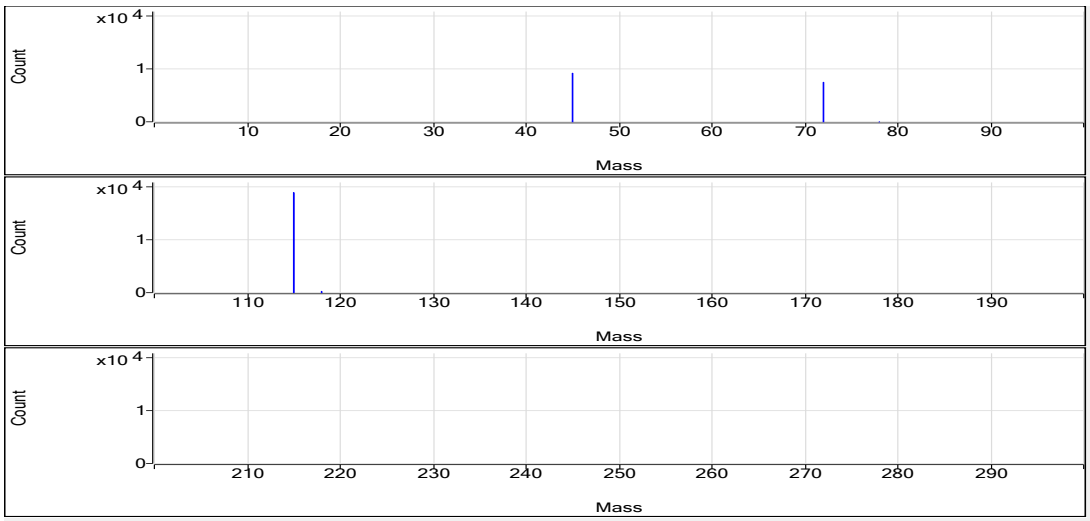
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1307160.17	1.5	97.9	Analog	0.1000	3
No Gas	Ge	72	699162.75	0.8	100.0	Pulse	0.1000	3
H2	Sc	45	92033.75	1.3	105.9	Pulse	0.1000	3
H2	Ge	72	74802.01	1.6	104.5	Pulse	0.1000	3
H2	In	115	189062.36	1.1	103.2	Pulse	0.1000	3
He	Sc	45	23392.76	2.9	101.7	Pulse	0.1000	3
He	Ge	72	43864.86	0.3	103.9	Pulse	0.1000	3
He	In	115	40305.40	1.2	103.5	Pulse	0.1000	3
He	Tb	159	179107.92	0.4	101.7	Pulse	0.1000	3
He	Bi	209	127311.00	1.0	99.3	Pulse	0.1000	3

No Gas

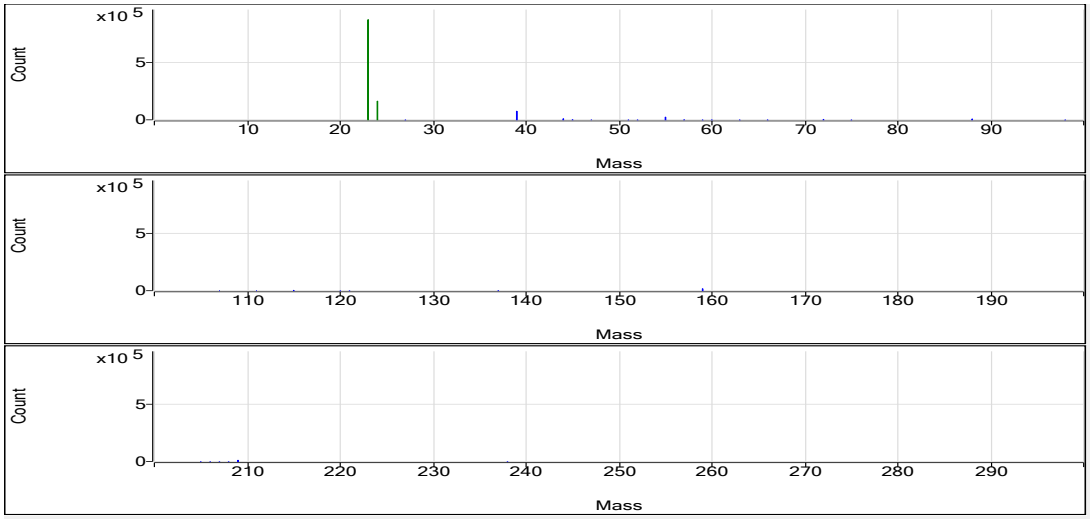


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.022	0	38.00	0.0005	1.901E-05
Be	9	1	No Gas	0.001	0	26.00	0.0005	1.901E-05
Be	9	1	No Gas	0.002	0	26.00	0.0005	1.901E-05
Se	78	2	H2	0.051	0	3.33	0.0002	7.279E-06
Se	78	2	H2	0.066	0	4.00	0.0002	7.279E-06
Se	78	2	H2	0.222	0.0001	10.00	0.0002	7.279E-06
Na	23	3	He	103961.623	371.3877	8954376.12	0.0036	0.7194
Na	23	3	He	107886.914	385.383	8778409.24	0.0036	0.7194
Na	23	3	He	104899.013	374.7299	8727196.74	0.0036	0.7194
Mg	24	3	He	37494.323	68.176	1643764.66	0.0018	0.006791
Mg	24	3	He	40617.218	73.8538	1682272.47	0.0018	0.006791
Mg	24	3	He	38976.201	70.8703	1650519.19	0.0018	0.006791
Al	27	3	He	4.974	0.0054	130.01	0.0006	0.002622
Al	27	3	He	0.809	0.0031	70.00	0.0006	0.002622
Al	27	3	He	-2.396	0.0013	30.00	0.0006	0.002622
K	39	3	He	25047.621	32.5151	783958.43	0.0013	0.5579
K	39	3	He	26100.925	33.859	771253.27	0.0013	0.5579
K	39	3	He	25336.484	32.8837	765837.33	0.0013	0.5579
Ca	44	3	He	58573.016	4.2971	103606.53	0.0001	0.004062
Ca	44	3	He	61145.659	4.4857	102177.03	0.0001	0.004062
Ca	44	3	He	60793.877	4.4599	103868.29	0.0001	0.004062
Ti	47	3	He	0.228	0.0004	10.00	0.0006	0.0002809
Ti	47	3	He	0.27	0.0004	10.00	0.0006	0.0002809
Ti	47	3	He	-0.479	0	0.00	0.0006	0.0002809
V	51	3	He	0.028	0.0193	466.01	0.0259	0.01861
V	51	3	He	0.014	0.019	432.01	0.0259	0.01861
V	51	3	He	0.051	0.0199	464.01	0.0259	0.01861
Cr	52	3	He	0.418	0.1186	2860.38	0.0332	0.1047
Cr	52	3	He	0.522	0.1221	2780.34	0.0332	0.1047
Cr	52	3	He	0.764	0.1301	3030.44	0.0332	0.1047
Mn	55	3	He	761.595	10.565	254729.57	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	794.789	11.0253	251138.71	0.0139	0.005074
Mn	55	3	He	776.368	10.7699	250822.98	0.0139	0.005074
Fe	57	3	He	994.692	0.6382	15388.57	0.0006	0.00609
Fe	57	3	He	1042.368	0.6685	15228.48	0.0006	0.00609
Fe	57	3	He	1078.139	0.6913	16099.48	0.0006	0.00609
Co	59	3	He	2.208	0.1522	3670.60	0.0661	0.00621
Co	59	3	He	2.289	0.1576	3590.56	0.0661	0.00621
Co	59	3	He	2.23	0.1537	3580.55	0.0661	0.00621
Ni	60	3	He	12.366	0.1406	6161.55	0.01	0.01721
Ni	60	3	He	12.327	0.1403	6141.55	0.01	0.01721
Ni	60	3	He	13.171	0.1487	6541.69	0.01	0.01721
Cu	63	3	He	1.692	0.0552	2420.29	0.0286	0.006793
Cu	63	3	He	1.637	0.0537	2350.28	0.0286	0.006793
Cu	63	3	He	1.358	0.0457	2010.21	0.0286	0.006793
Zn	66	3	He	29.866	0.1034	4530.90	0.0034	0.00316
Zn	66	3	He	26.885	0.0934	4090.70	0.0034	0.00316
Zn	66	3	He	29.055	0.1007	4430.84	0.0034	0.00316
As	75	3	He	0.565	0.0023	100.00	0.0026	0.0008231
As	75	3	He	0.336	0.0017	74.00	0.0026	0.0008231
As	75	3	He	0.28	0.0015	68.00	0.0026	0.0008231
Sr	88	3	He	199.382	2.1037	85970.31	0.0105	0.001715
Sr	88	3	He	202.587	2.1375	85467.61	0.0105	0.001715
Sr	88	3	He	197.991	2.089	83697.63	0.0105	0.001715
Mo	98	3	He	0.52	0.0152	620.03	0.0275	0.0008555
Mo	98	3	He	0.551	0.016	640.04	0.0275	0.0008555
Mo	98	3	He	0.722	0.0207	830.05	0.0275	0.0008555
Ag	107	3	He	0.001	0.0005	20.00	0.0591	0.0004305
Ag	107	3	He	0.022	0.0018	70.00	0.0591	0.0004305
Ag	107	3	He	0.001	0.0005	20.00	0.0591	0.0004305
Cd	111	3	He	-0.008	0	0.00	0.0066	5.141E-05
Cd	111	3	He	-0.008	0	0.00	0.0066	5.141E-05
Cd	111	3	He	0.015	0.0001	6.00	0.0066	5.141E-05
Sn	120	3	He	-0.113	0.0164	670.04	0.0187	0.0185
Sn	120	3	He	-0.307	0.0128	510.03	0.0187	0.0185
Sn	120	3	He	-0.295	0.013	520.03	0.0187	0.0185
Sb	121	3	He	0.193	0.0046	190.01	0.0183	0.00111
Sb	121	3	He	0.185	0.0045	180.01	0.0183	0.00111
Sb	121	3	He	0.158	0.004	160.01	0.0183	0.00111
Ba	137	3	He	60.85	0.3572	14598.33	0.0059	0.0007704
Ba	137	3	He	60.441	0.3548	14187.78	0.0059	0.0007704
Ba	137	3	He	61.387	0.3604	14438.09	0.0059	0.0007704
Tl	205	3	He	0.018	0.0015	190.01	0.0364	0.000808
Tl	205	3	He	0.03	0.0019	240.01	0.0364	0.000808
Tl	205	3	He	0.006	0.001	130.00	0.0364	0.000808
Pb	208	3	He	-0.02	0.0023	140.01	0.0487	0.003226
Pb	208	3	He	-0.015	0.0025	180.01	0.0487	0.003226
Pb	208	3	He	0.002	0.0033	150.01	0.0487	0.003226
U	238	3	He	0.341	0.0187	2400.31	0.0535	0.0004157
U	238	3	He	0.317	0.0174	2210.27	0.0535	0.0004157
U	238	3	He	0.305	0.0167	2110.24	0.0535	0.0004157
Sc	45	1	No Gas			1285406.47		
Sc	45	1	No Gas			1324531.39		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1311542.64		
Ge	72	1	No Gas			695494.36		
Ge	72	1	No Gas			705984.60		
Ge	72	1	No Gas			696009.29		
Sc	45	2	H2			90662.22		
Sc	45	2	H2			92433.48		
Sc	45	2	H2			93005.56		
Ge	72	2	H2			76122.71		
Ge	72	2	H2			74332.57		
Ge	72	2	H2			73950.75		
In	115	2	H2			187136.99		
In	115	2	H2			191282.87		
In	115	2	H2			188767.22		
Sc	45	3	He			24110.59		
Sc	45	3	He			22778.40		
Sc	45	3	He			23289.30		
Ge	72	3	He			43807.91		
Ge	72	3	He			43788.01		
Ge	72	3	He			43998.66		
In	115	3	He			40870.91		
In	115	3	He			39988.47		
In	115	3	He			40068.72		
Tb	159	3	He			179905.97		
Tb	159	3	He			178820.51		
Tb	159	3	He			178597.28		
Bi	209	3	He			128525.75		
Bi	209	3	He			127303.94		
Bi	209	3	He			126103.31		

Quantitation Report

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Sample Type	CCV
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Auto Dilution	1.0000
Total Dilution	1.0000
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Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

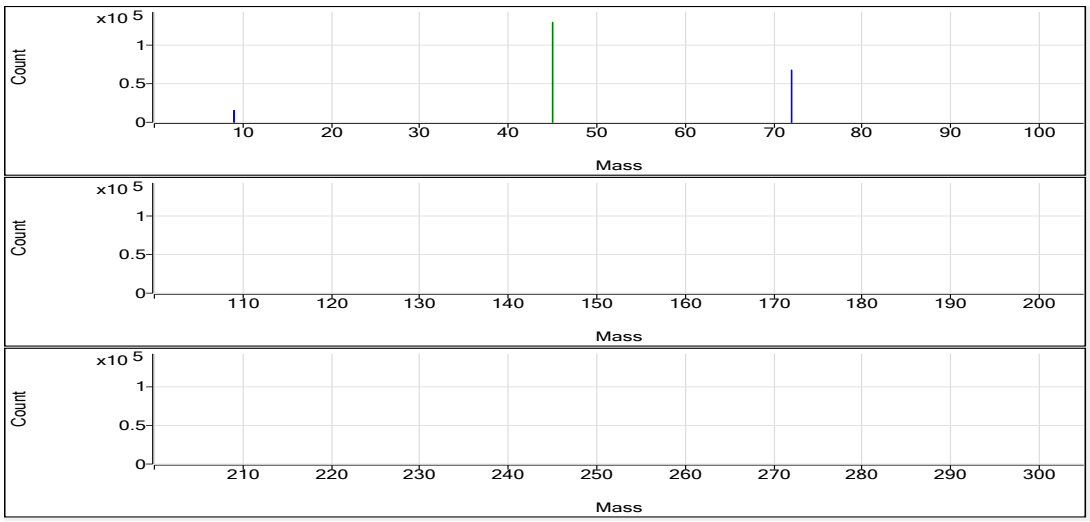
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	49.929	ppb	7.9	31350.87	0.0241	Pulse	0.5000	3
Se	78	115	H2	51.228	ppb	2.5	2004.37	0.0105	Pulse	1.5000	3
Na	23	45	He	5101.960	ppb	4.1	439466.48	18.9101	Pulse	0.1000	3
Mg	24	45	He	5051.436	ppb	3.5	213628.55	9.1909	Pulse	0.1000	3
Al	27	45	He	4999.983	ppb	5.6	64746.02	2.7870	Pulse	0.1000	3
K	39	45	He	5137.376	ppb	1.9	165399.62	7.1124	Pulse	0.1000	3
Ca	44	45	He	5052.323	ppb	1.9	8712.88	0.3744	Pulse	0.1000	3
Ti	47	45	He	5046.305	ppb	3.4	68776.18	2.9588	Pulse	0.1000	3
V	51	45	He	508.807	ppb	3.7	306215.91	13.1755	Pulse	0.5000	3
Cr	52	45	He	505.982	ppb	4.2	392974.42	16.9107	Pulse	0.1000	3
Mn	55	45	He	515.748	ppb	3.9	166310.18	7.1562	Pulse	0.1000	3
Fe	57	45	He	5071.468	ppb	3.5	75055.51	3.2292	Pulse	0.1000	3
Co	59	45	He	500.990	ppb	3.3	770432.96	33.1463	Pulse	0.1000	3
Ni	60	72	He	516.830	ppb	1.3	219313.46	5.1762	Pulse	0.1000	3
Cu	63	72	He	510.993	ppb	1.4	620164.56	14.6369	Pulse	0.1000	3
Zn	66	72	He	519.762	ppb	1.1	74068.07	1.7481	Pulse	0.1000	3
As	75	72	He	516.207	ppb	1.3	56522.79	1.3340	Pulse	0.5000	3
Sr	88	115	He	51.190	ppb	1.3	21016.22	0.5414	Pulse	0.1000	3
Mo	98	115	He	50.752	ppb	2.6	54222.05	1.3969	Pulse	0.1000	3
Ag	107	115	He	49.798	ppb	2.0	114248.35	2.9432	Pulse	0.1000	3
Cd	111	115	He	50.755	ppb	0.6	13060.82	0.3364	Pulse	0.5000	3
Sn	120	115	He	51.198	ppb	1.5	37946.12	0.9775	Pulse	0.1000	3
Sb	121	115	He	50.119	ppb	2.9	35646.70	0.9184	Pulse	0.1000	3
Ba	137	115	He	510.954	ppb	1.4	116220.19	2.9939	Pulse	0.1000	3
Tl	205	209	He	51.109	ppb	0.7	239699.07	1.8592	Pulse	0.1000	3
Pb	208	209	He	50.655	ppb	0.4	318783.52	2.4726	Pulse	0.1000	3
U	238	209	He	50.514	ppb	0.3	348381.35	2.7023	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1301166.78	2.4	97.5	Analog	0.1000	3
No Gas	Ge	72	680527.98	1.0	97.3	Pulse	0.1000	3
H2	Sc	45	88831.02	1.7	102.2	Pulse	0.1000	3
H2	Ge	72	70500.80	1.6	98.4	Pulse	0.1000	3
H2	In	115	190305.27	1.4	103.9	Pulse	0.1000	3
He	Sc	45	23262.53	3.7	101.1	Pulse	0.1000	3
He	Ge	72	42373.55	1.1	100.4	Pulse	0.1000	3
He	In	115	38823.79	1.3	99.7	Pulse	0.1000	3
He	Tb	159	178395.29	1.6	101.3	Pulse	0.1000	3
He	Bi	209	128923.23	0.6	100.5	Pulse	0.1000	3

No Gas



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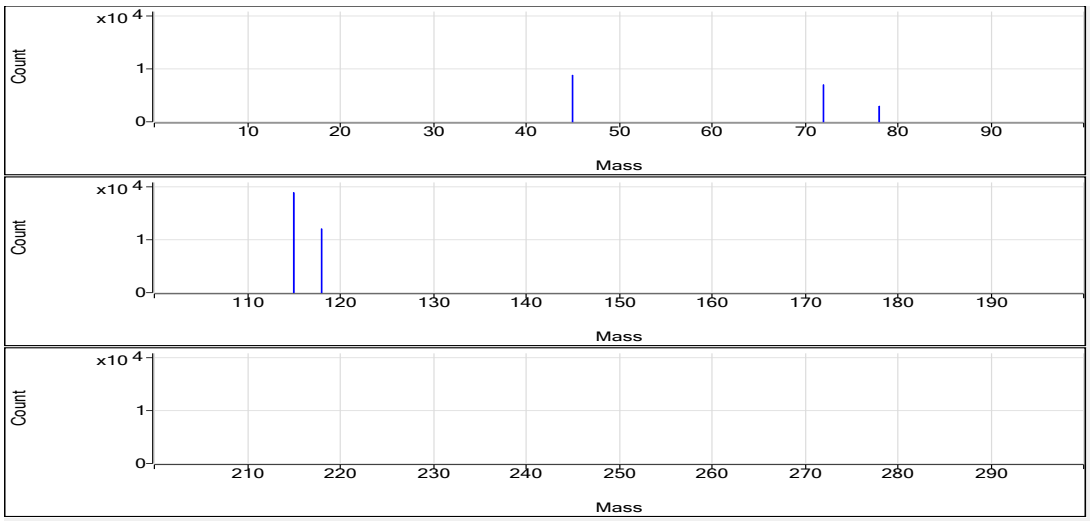
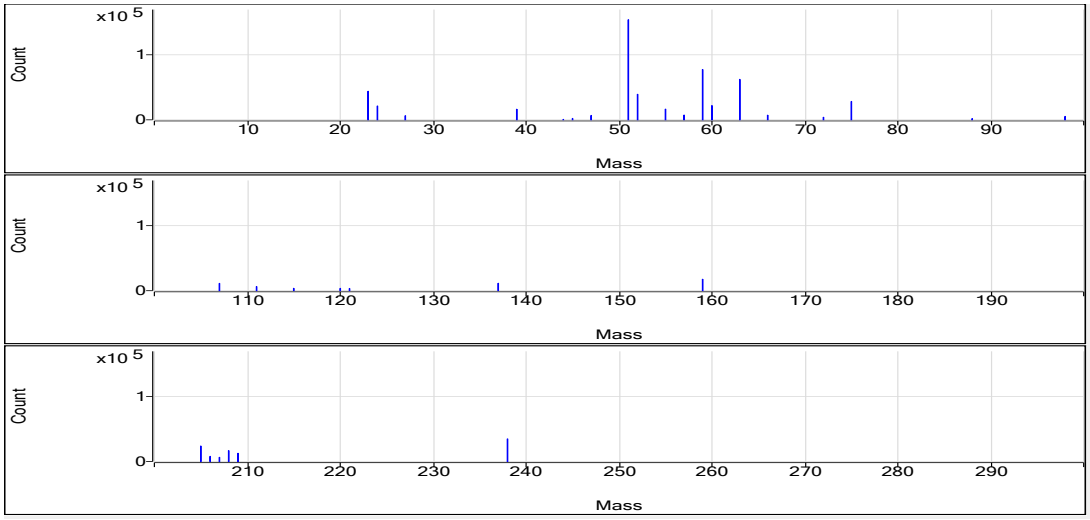


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	46.181	0.0223	28847.78	0.0005	1.901E-05
Be	9	1	No Gas	49.571	0.0239	31956.03	0.0005	1.901E-05
Be	9	1	No Gas	54.034	0.0261	33248.79	0.0005	1.901E-05
Se	78	2	H2	50.646	0.0104	1968.14	0.0002	7.279E-06
Se	78	2	H2	50.363	0.0104	2002.14	0.0002	7.279E-06
Se	78	2	H2	52.674	0.0108	2042.82	0.0002	7.279E-06
Na	23	3	He	4874.379	18.0986	437638.94	0.0036	0.7194
Na	23	3	He	5148.662	19.0766	441792.88	0.0036	0.7194
Na	23	3	He	5282.838	19.555	438967.61	0.0036	0.7194
Mg	24	3	He	4848.233	8.8215	213310.02	0.0018	0.006791
Mg	24	3	He	5139.479	9.351	216558.94	0.0018	0.006791
Mg	24	3	He	5166.595	9.4003	211016.70	0.0018	0.006791
Al	27	3	He	4683.137	2.6106	63125.84	0.0006	0.002622
Al	27	3	He	5111.121	2.8489	65977.84	0.0006	0.002622
Al	27	3	He	5205.692	2.9016	65134.37	0.0006	0.002622
K	39	3	He	5030.061	6.9755	168673.61	0.0013	0.5579
K	39	3	He	5220.926	7.219	167185.27	0.0013	0.5579
K	39	3	He	5161.142	7.1428	160339.99	0.0013	0.5579
Ca	44	3	He	5148.62	0.3814	9223.21	0.0001	0.004062
Ca	44	3	He	5054.025	0.3745	8672.88	0.0001	0.004062
Ca	44	3	He	4954.323	0.3672	8242.56	0.0001	0.004062
Ti	47	3	He	4850.617	2.8441	68772.34	0.0006	0.0002809
Ti	47	3	He	5138.709	3.013	69777.69	0.0006	0.0002809
Ti	47	3	He	5149.588	3.0194	67778.51	0.0006	0.0002809
V	51	3	He	489.087	12.6656	306263.91	0.0259	0.01861
V	51	3	He	511.105	13.235	306507.31	0.0259	0.01861
V	51	3	He	526.23	13.6261	305876.50	0.0259	0.01861
Cr	52	3	He	483.094	16.1505	390530.58	0.0332	0.1047
Cr	52	3	He	509.623	17.0316	394433.59	0.0332	0.1047
Cr	52	3	He	525.229	17.5499	393959.10	0.0332	0.1047
Mn	55	3	He	495.621	6.8772	166295.17	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	515.526	7.1532	165659.55	0.0139	0.005074
Mn	55	3	He	536.096	7.4384	166975.82	0.0139	0.005074
Fe	57	3	He	4866.495	3.0989	74933.95	0.0006	0.00609
Fe	57	3	He	5151.411	3.28	75960.79	0.0006	0.00609
Fe	57	3	He	5196.496	3.3086	74271.80	0.0006	0.00609
Co	59	3	He	484.367	32.0467	774914.21	0.0661	0.00621
Co	59	3	He	501.049	33.1502	767723.97	0.0661	0.00621
Co	59	3	He	517.554	34.242	768660.69	0.0661	0.00621
Ni	60	3	He	516.48	5.1727	219601.07	0.01	0.01721
Ni	60	3	He	523.878	5.2466	219631.89	0.01	0.01721
Ni	60	3	He	510.134	5.1094	218707.42	0.01	0.01721
Cu	63	3	He	505.562	14.4815	614790.15	0.0286	0.006793
Cu	63	3	He	519.091	14.8688	622437.33	0.0286	0.006793
Cu	63	3	He	508.325	14.5606	623266.20	0.0286	0.006793
Zn	66	3	He	515.941	1.7353	73669.10	0.0034	0.00316
Zn	66	3	He	526.537	1.7709	74131.50	0.0034	0.00316
Zn	66	3	He	516.809	1.7382	74403.61	0.0034	0.00316
As	75	3	He	514.321	1.3292	56428.46	0.0026	0.0008231
As	75	3	He	523.786	1.3536	56665.30	0.0026	0.0008231
As	75	3	He	510.514	1.3193	56474.62	0.0026	0.0008231
Sr	88	3	He	50.442	0.5335	21026.42	0.0105	0.001715
Sr	88	3	He	51.42	0.5438	21006.22	0.0105	0.001715
Sr	88	3	He	51.707	0.5468	21016.02	0.0105	0.001715
Mo	98	3	He	49.273	1.3563	53452.59	0.0275	0.0008555
Mo	98	3	He	51.219	1.4098	54456.15	0.0275	0.0008555
Mo	98	3	He	51.764	1.4248	54757.41	0.0275	0.0008555
Ag	107	3	He	48.691	2.8778	113419.39	0.0591	0.0004305
Ag	107	3	He	50.513	2.9855	115322.50	0.0591	0.0004305
Ag	107	3	He	50.189	2.9663	114003.15	0.0591	0.0004305
Cd	111	3	He	50.538	0.335	13202.30	0.0066	5.141E-05
Cd	111	3	He	51.087	0.3386	13080.15	0.0066	5.141E-05
Cd	111	3	He	50.639	0.3357	12900.00	0.0066	5.141E-05
Sn	120	3	He	50.464	0.9637	37982.62	0.0187	0.0185
Sn	120	3	He	51.953	0.9916	38303.70	0.0187	0.0185
Sn	120	3	He	51.177	0.9771	37552.04	0.0187	0.0185
Sb	121	3	He	48.705	0.8925	35175.37	0.0183	0.00111
Sb	121	3	He	50.079	0.9176	35446.06	0.0183	0.00111
Sb	121	3	He	51.574	0.945	36318.67	0.0183	0.00111
Ba	137	3	He	502.79	2.9461	116109.55	0.0059	0.0007704
Ba	137	3	He	516.253	3.0249	116844.82	0.0059	0.0007704
Ba	137	3	He	513.819	3.0107	115706.19	0.0059	0.0007704
Tl	205	3	He	51.011	1.8556	238440.80	0.0364	0.000808
Tl	205	3	He	51.486	1.8729	243194.72	0.0364	0.000808
Tl	205	3	He	50.83	1.849	237461.70	0.0364	0.000808
Pb	208	3	He	50.665	2.4731	169179.59	0.0487	0.003226
Pb	208	3	He	50.842	2.4817	171792.79	0.0487	0.003226
Pb	208	3	He	50.459	2.4631	167621.31	0.0487	0.003226
U	238	3	He	50.602	2.707	347836.28	0.0535	0.0004157
U	238	3	He	50.311	2.6914	349477.26	0.0535	0.0004157
U	238	3	He	50.629	2.7084	347830.50	0.0535	0.0004157
Sc	45	1	No Gas			1293744.12		
Sc	45	1	No Gas			1335209.82		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1274546.39		
Ge	72	1	No Gas			678126.79		
Ge	72	1	No Gas			688448.97		
Ge	72	1	No Gas			675008.19		
Sc	45	2	H2			87161.08		
Sc	45	2	H2			89182.88		
Sc	45	2	H2			90149.11		
Ge	72	2	H2			71649.82		
Ge	72	2	H2			69439.15		
Ge	72	2	H2			70413.44		
In	115	2	H2			188983.06		
In	115	2	H2			193327.95		
In	115	2	H2			188604.80		
Sc	45	3	He			24180.78		
Sc	45	3	He			23158.93		
Sc	45	3	He			22447.89		
Ge	72	3	He			42453.63		
Ge	72	3	He			41861.96		
Ge	72	3	He			42805.05		
In	115	3	He			39677.70		
In	115	3	He			38895.51		
In	115	3	He			38695.02		
Tb	159	3	He			179368.06		
Tb	159	3	He			180593.63		
Tb	159	3	He			175224.18		
Bi	209	3	He			128496.17		
Bi	209	3	He			129849.26		
Bi	209	3	He			128424.27		

Quantitation Report

Data File Name	107_CCB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
Acq Time	9/19/2023 10:24:03 AM
Sample Name	CCB 4807280
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

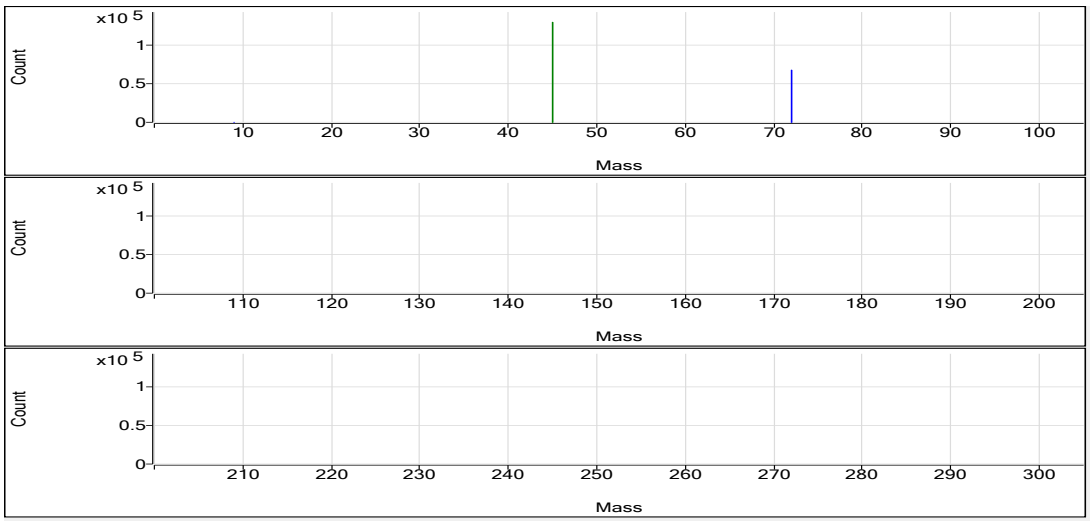
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.078	ppb	20.9	73.33	0.0001	Pulse	0.5000	3
Se	78	115	H2	0.027	ppb	129.0	2.44	0.0000	Pulse	1.5000	3
Na	23	45	He	-19.226	ppb	N/A	15061.40	0.6508	Pulse	0.1000	3
Mg	24	45	He	7.264	ppb	16.5	463.36	0.0200	Pulse	0.1000	3
Al	27	45	He	1.244	ppb	44.5	76.67	0.0033	Pulse	0.1000	3
K	39	45	He	30.505	ppb	157.0	13806.96	0.5968	Pulse	0.1000	3
Ca	44	45	He	13.706	ppb	284.5	116.67	0.0051	Pulse	0.1000	3
Ti	47	45	He	4.192	ppb	11.8	63.33	0.0027	Pulse	0.1000	3
V	51	45	He	0.167	ppb	43.9	530.68	0.0229	Pulse	0.5000	3
Cr	52	45	He	0.202	ppb	185.0	2580.33	0.1115	Pulse	0.1000	3
Mn	55	45	He	0.403	ppb	11.9	246.68	0.0107	Pulse	0.1000	3
Fe	57	45	He	4.732	ppb	118.5	210.01	0.0091	Pulse	0.1000	3
Co	59	45	He	0.109	ppb	45.0	310.01	0.0134	Pulse	0.1000	3
Ni	60	72	He	0.391	ppb	14.2	870.05	0.0211	Pulse	0.1000	3
Cu	63	72	He	0.111	ppb	46.6	410.02	0.0100	Pulse	0.1000	3
Zn	66	72	He	0.045	ppb	589.0	136.67	0.0033	Pulse	0.1000	3
As	75	72	He	0.276	ppb	42.0	63.33	0.0015	Pulse	0.5000	3
Sr	88	115	He	0.100	ppb	60.5	110.00	0.0028	Pulse	0.1000	3
Mo	98	115	He	0.064	ppb	30.9	103.34	0.0026	Pulse	0.1000	3
Ag	107	115	He	0.008	ppb	60.5	36.67	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.007	ppb	100.6	4.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.040	ppb	237.2	763.38	0.0192	Pulse	0.1000	3
Sb	121	115	He	0.137	ppb	16.0	143.34	0.0036	Pulse	0.1000	3
Ba	137	115	He	0.055	ppb	42.0	43.33	0.0011	Pulse	0.1000	3
Tl	205	209	He	0.096	ppb	22.8	550.04	0.0043	Pulse	0.1000	3
Pb	208	209	He	0.004	ppb	550.1	436.69	0.0034	Pulse	0.1000	3
U	238	209	He	0.020	ppb	26.9	193.34	0.0015	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1299655.79	0.2	97.4	Analog	0.1000	3
No Gas	Ge	72	679060.43	0.5	97.1	Pulse	0.1000	3
H2	Sc	45	89061.98	0.5	102.4	Pulse	0.1000	3
H2	Ge	72	70932.96	1.0	99.1	Pulse	0.1000	3
H2	In	115	188638.96	0.9	103.0	Pulse	0.1000	3
He	Sc	45	23152.39	1.9	100.6	Pulse	0.1000	3
He	Ge	72	41213.53	1.3	97.6	Pulse	0.1000	3
He	In	115	39662.22	1.0	101.9	Pulse	0.1000	3
He	Tb	159	174214.49	1.1	98.9	Pulse	0.1000	3
He	Bi	209	127660.66	1.7	99.6	Pulse	0.1000	3

No Gas



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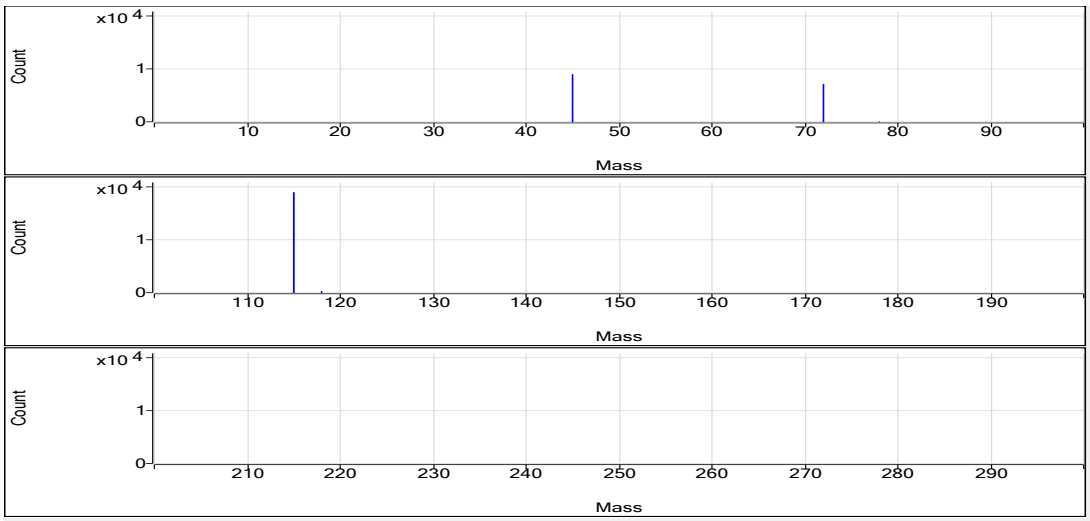
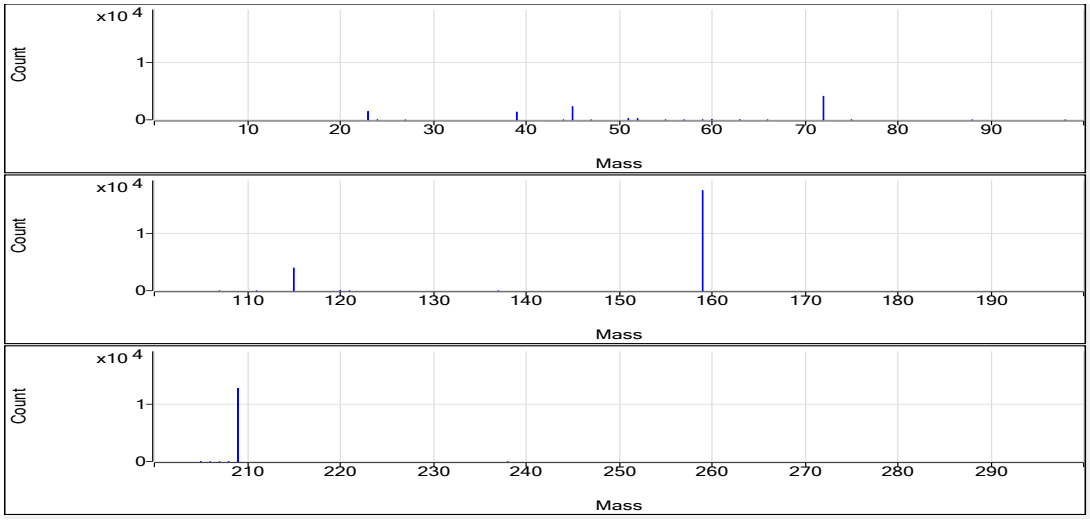


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.076	0.0001	72.00	0.0005	1.901E-05
Be	9	1	No Gas	0.062	0	64.00	0.0005	1.901E-05
Be	9	1	No Gas	0.095	0.0001	84.00	0.0005	1.901E-05
Se	78	2	H2	-0.001	0	1.33	0.0002	7.279E-06
Se	78	2	H2	0.067	0	4.00	0.0002	7.279E-06
Se	78	2	H2	0.016	0	2.00	0.0002	7.279E-06
Na	23	3	He	-19.869	0.6485	14927.96	0.0036	0.7194
Na	23	3	He	-12.734	0.6739	15358.27	0.0036	0.7194
Na	23	3	He	-25.076	0.6299	14897.96	0.0036	0.7194
Mg	24	3	He	8.213	0.0217	500.03	0.0018	0.006791
Mg	24	3	He	5.92	0.0176	400.02	0.0018	0.006791
Mg	24	3	He	7.661	0.0207	490.03	0.0018	0.006791
Al	27	3	He	1.532	0.0035	80.00	0.0006	0.002622
Al	27	3	He	1.595	0.0035	80.00	0.0006	0.002622
Al	27	3	He	0.606	0.003	70.00	0.0006	0.002622
K	39	3	He	82.627	0.6633	15268.34	0.0013	0.5579
K	39	3	He	20.404	0.5839	13306.45	0.0013	0.5579
K	39	3	He	-11.517	0.5432	12846.08	0.0013	0.5579
Ca	44	3	He	51.272	0.0078	180.01	0.0001	0.004062
Ca	44	3	He	16.423	0.0053	120.00	0.0001	0.004062
Ca	44	3	He	-26.577	0.0021	50.00	0.0001	0.004062
Ti	47	3	He	3.967	0.0026	60.00	0.0006	0.0002809
Ti	47	3	He	4.76	0.0031	70.00	0.0006	0.0002809
Ti	47	3	He	3.848	0.0025	60.00	0.0006	0.0002809
V	51	3	He	0.114	0.0215	496.01	0.0259	0.01861
V	51	3	He	0.251	0.0251	572.02	0.0259	0.01861
V	51	3	He	0.137	0.0222	524.01	0.0259	0.01861
Cr	52	3	He	-0.21	0.0978	2250.26	0.0332	0.1047
Cr	52	3	He	0.52	0.122	2780.38	0.0332	0.1047
Cr	52	3	He	0.297	0.1146	2710.34	0.0332	0.1047
Mn	55	3	He	0.386	0.0104	240.01	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.457	0.0114	260.01	0.0139	0.005074
Mn	55	3	He	0.366	0.0101	240.01	0.0139	0.005074
Fe	57	3	He	0.671	0.0065	150.01	0.0006	0.00609
Fe	57	3	He	11.132	0.0132	300.02	0.0006	0.00609
Fe	57	3	He	2.394	0.0076	180.01	0.0006	0.00609
Co	59	3	He	0.162	0.0169	390.02	0.0661	0.00621
Co	59	3	He	0.099	0.0127	290.01	0.0661	0.00621
Co	59	3	He	0.066	0.0106	250.01	0.0661	0.00621
Ni	60	3	He	0.374	0.0209	850.05	0.01	0.01721
Ni	60	3	He	0.453	0.0217	900.06	0.01	0.01721
Ni	60	3	He	0.345	0.0207	860.05	0.01	0.01721
Cu	63	3	He	0.167	0.0116	470.02	0.0286	0.006793
Cu	63	3	He	0.066	0.0087	360.02	0.0286	0.006793
Cu	63	3	He	0.098	0.0096	400.02	0.0286	0.006793
Zn	66	3	He	-0.134	0.0027	110.00	0.0034	0.00316
Zn	66	3	He	0.353	0.0043	180.01	0.0034	0.00316
Zn	66	3	He	-0.083	0.0029	120.00	0.0034	0.00316
As	75	3	He	0.235	0.0014	58.00	0.0026	0.0008231
As	75	3	He	0.186	0.0013	54.00	0.0026	0.0008231
As	75	3	He	0.407	0.0019	78.00	0.0026	0.0008231
Sr	88	3	He	0.169	0.0035	140.01	0.0105	0.001715
Sr	88	3	He	0.055	0.0023	90.00	0.0105	0.001715
Sr	88	3	He	0.077	0.0025	100.00	0.0105	0.001715
Mo	98	3	He	0.041	0.002	80.00	0.0275	0.0008555
Mo	98	3	He	0.071	0.0028	110.00	0.0275	0.0008555
Mo	98	3	He	0.079	0.003	120.01	0.0275	0.0008555
Ag	107	3	He	0.005	0.0007	30.00	0.0591	0.0004305
Ag	107	3	He	0.014	0.0013	50.00	0.0591	0.0004305
Ag	107	3	He	0.006	0.0008	30.00	0.0591	0.0004305
Cd	111	3	He	0.015	0.0001	6.00	0.0066	5.141E-05
Cd	111	3	He	0	0.0001	2.00	0.0066	5.141E-05
Cd	111	3	He	0.007	0.0001	4.00	0.0066	5.141E-05
Sn	120	3	He	0.011	0.0187	750.04	0.0187	0.0185
Sn	120	3	He	-0.037	0.0178	700.04	0.0187	0.0185
Sn	120	3	He	0.144	0.0212	840.07	0.0187	0.0185
Sb	121	3	He	0.117	0.0032	130.01	0.0183	0.00111
Sb	121	3	He	0.134	0.0036	140.01	0.0183	0.00111
Sb	121	3	He	0.16	0.004	160.01	0.0183	0.00111
Ba	137	3	He	0.081	0.0012	50.00	0.0059	0.0007704
Ba	137	3	He	0.042	0.001	40.00	0.0059	0.0007704
Ba	137	3	He	0.041	0.001	40.00	0.0059	0.0007704
Tl	205	3	He	0.119	0.0051	670.05	0.0364	0.000808
Tl	205	3	He	0.093	0.0042	530.03	0.0364	0.000808
Tl	205	3	He	0.076	0.0036	450.03	0.0364	0.000808
Pb	208	3	He	-0.005	0.003	200.01	0.0487	0.003226
Pb	208	3	He	-0.013	0.0026	170.01	0.0487	0.003226
Pb	208	3	He	0.03	0.0047	320.02	0.0487	0.003226
U	238	3	He	0.025	0.0018	230.01	0.0535	0.0004157
U	238	3	He	0.022	0.0016	200.01	0.0535	0.0004157
U	238	3	He	0.014	0.0012	150.01	0.0535	0.0004157
Sc	45	1	No Gas			1297816.93		
Sc	45	1	No Gas			1302515.06		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1298635.37		
Ge	72	1	No Gas			682567.18		
Ge	72	1	No Gas			678169.13		
Ge	72	1	No Gas			676444.99		
Sc	45	2	H2			88830.46		
Sc	45	2	H2			89615.13		
Sc	45	2	H2			88740.34		
Ge	72	2	H2			71770.22		
Ge	72	2	H2			70534.77		
Ge	72	2	H2			70493.88		
In	115	2	H2			186729.96		
In	115	2	H2			189609.31		
In	115	2	H2			189577.61		
Sc	45	3	He			23018.90		
Sc	45	3	He			22788.57		
Sc	45	3	He			23649.71		
Ge	72	3	He			40588.41		
Ge	72	3	He			41420.60		
Ge	72	3	He			41631.59		
In	115	3	He			40078.83		
In	115	3	He			39306.45		
In	115	3	He			39617.40		
Tb	159	3	He			173845.64		
Tb	159	3	He			176226.83		
Tb	159	3	He			172570.99		
Bi	209	3	He			130111.38		
Bi	209	3	He			126717.06		
Bi	209	3	He			126153.53		

Quantitation Report

Data File Name	108SMPL.d
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Sample Type	Sample
Comment	F8
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

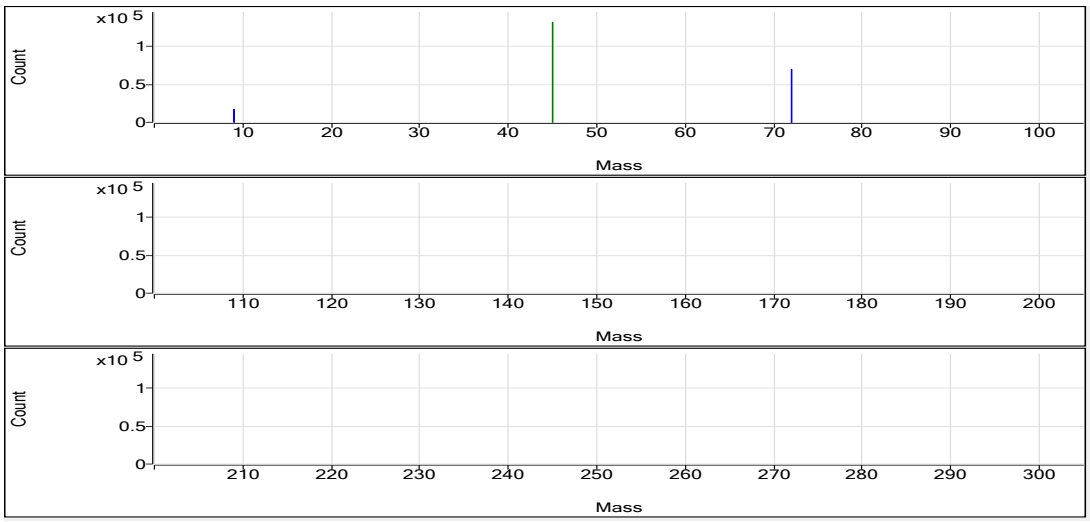
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	55.054	ppb	5.7	35218.68	0.0266	Pulse	0.5000	3
Se	78	115	H2	101.577	ppb	0.8	3991.01	0.0209	Pulse	1.5000	3
Na	23	45	He	4957.009	ppb	1.7	437827.09	18.3932	Pulse	0.1000	3
Mg	24	45	He	4938.758	ppb	2.5	213864.64	8.9861	Pulse	0.1000	3
Al	27	45	He	4877.044	ppb	2.6	64702.28	2.7186	Pulse	0.1000	3
K	39	45	He	5002.044	ppb	1.4	165206.73	6.9398	Pulse	0.1000	3
Ca	44	45	He	4991.773	ppb	3.1	8803.03	0.3699	Pulse	0.1000	3
Ti	47	45	He	497.978	ppb	3.3	6955.23	0.2922	Pulse	0.1000	3
V	51	45	He	494.435	ppb	2.4	304728.52	12.8039	Pulse	0.5000	3
Cr	52	45	He	493.461	ppb	2.4	392570.59	16.4948	Pulse	0.1000	3
Mn	55	45	He	494.812	ppb	2.0	163419.82	6.8659	Pulse	0.1000	3
Fe	57	45	He	4980.914	ppb	2.6	75480.61	3.1716	Pulse	0.1000	3
Co	59	45	He	488.018	ppb	2.7	768407.96	32.2883	Pulse	0.1000	3
Ni	60	72	He	498.764	ppb	1.2	216988.17	4.9959	Pulse	0.1000	3
Cu	63	72	He	503.291	ppb	1.2	626159.26	14.4164	Pulse	0.1000	3
Zn	66	72	He	507.714	ppb	1.8	74175.51	1.7077	Pulse	0.1000	3
As	75	72	He	500.085	ppb	1.1	56137.40	1.2924	Pulse	0.5000	3
Sr	88	115	He	51.185	ppb	2.1	21099.71	0.5413	Pulse	0.1000	3
Mo	98	115	He	50.472	ppb	2.7	54151.50	1.3892	Pulse	0.1000	3
Ag	107	115	He	50.293	ppb	2.1	115867.81	2.9725	Pulse	0.1000	3
Cd	111	115	He	50.017	ppb	2.2	12922.02	0.3315	Pulse	0.5000	3
Sn	120	115	He	99.704	ppb	3.0	73508.37	1.8861	Pulse	0.1000	3
Sb	121	115	He	99.672	ppb	2.3	71142.86	1.8253	Pulse	0.1000	3
Ba	137	115	He	503.505	ppb	2.5	114986.62	2.9502	Pulse	0.1000	3
Tl	205	209	He	101.172	ppb	0.5	475165.42	3.6795	Pulse	0.1000	3
Pb	208	209	He	51.017	ppb	1.0	321579.42	2.4903	Pulse	0.1000	3
U	238	209	He	50.267	ppb	0.9	347265.03	2.6891	Pulse	0.1000	3

ISTD Table:

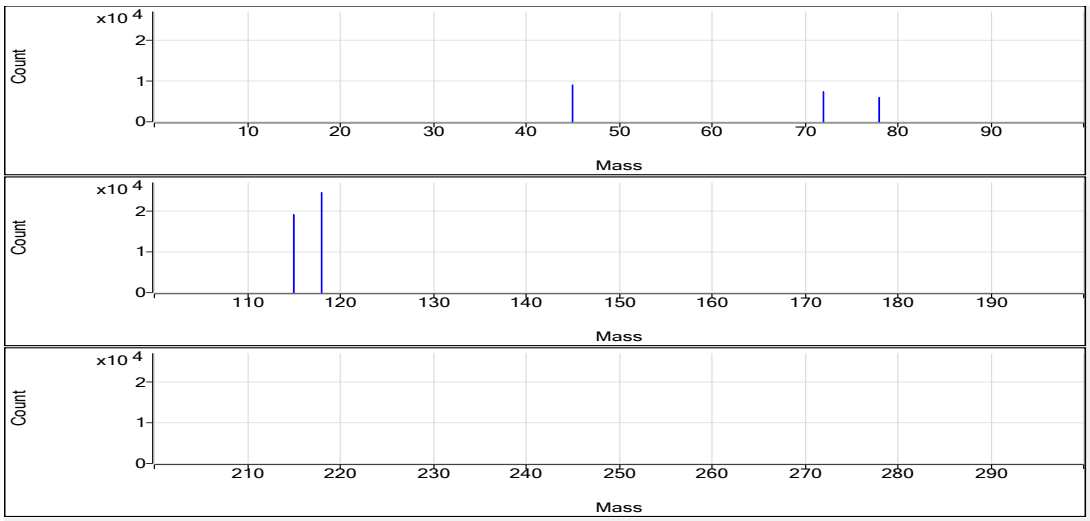
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1325505.22	1.2	99.3	Analog	0.1000	3
No Gas	Ge	72	703479.76	0.8	100.6	Pulse	0.1000	3
H2	Sc	45	90269.00	0.6	103.8	Pulse	0.1000	3
H2	Ge	72	73820.63	1.4	103.1	Pulse	0.1000	3
H2	In	115	191144.49	0.9	104.4	Pulse	0.1000	3
He	Sc	45	23810.19	2.9	103.5	Pulse	0.1000	3
He	Ge	72	43440.06	2.1	102.9	Pulse	0.1000	3
He	In	115	38985.84	1.6	100.1	Pulse	0.1000	3
He	Tb	159	179961.79	2.0	102.2	Pulse	0.1000	3
He	Bi	209	129138.66	0.9	100.7	Pulse	0.1000	3

No Gas

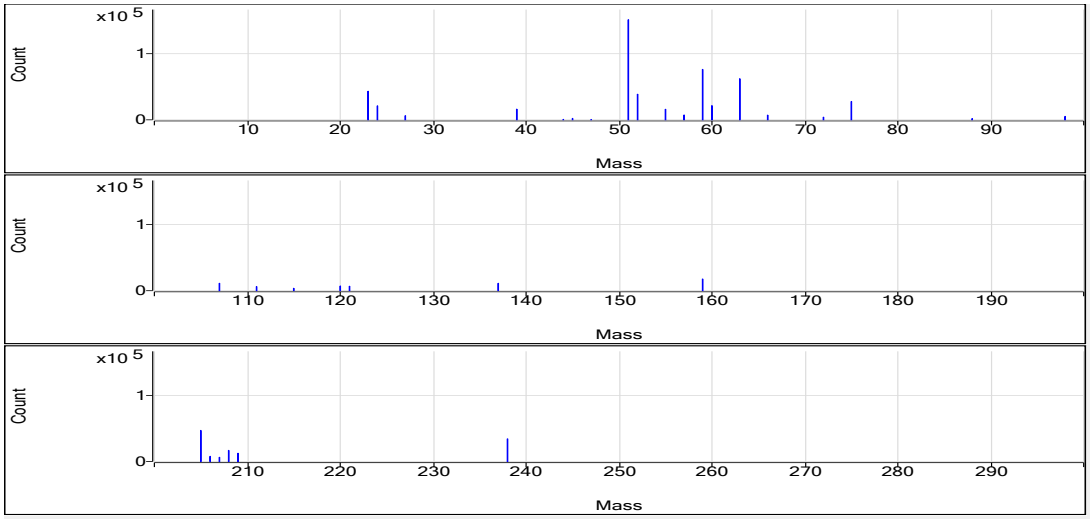


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	51.625	0.0249	33449.30	0.0005	1.901E-05
Be	9	1	No Gas	55.695	0.0269	35241.27	0.0005	1.901E-05
Be	9	1	No Gas	57.842	0.0279	36965.47	0.0005	1.901E-05
Se	78	2	H2	102.372	0.021	3987.23	0.0002	7.279E-06
Se	78	2	H2	101.543	0.0209	4027.91	0.0002	7.279E-06
Se	78	2	H2	100.814	0.0207	3957.89	0.0002	7.279E-06
Na	23	3	He	4861.684	18.0534	443594.99	0.0036	0.7194
Na	23	3	He	5029.032	18.65	440138.70	0.0036	0.7194
Na	23	3	He	4980.311	18.4763	429747.57	0.0036	0.7194
Mg	24	3	He	4795.907	8.7263	214417.57	0.0018	0.006791
Mg	24	3	He	5028.385	9.149	215915.58	0.0018	0.006791
Mg	24	3	He	4991.983	9.0828	211260.78	0.0018	0.006791
Al	27	3	He	4737.047	2.6406	64883.05	0.0006	0.002622
Al	27	3	He	4985.73	2.7791	65586.17	0.0006	0.002622
Al	27	3	He	4908.355	2.736	63637.62	0.0006	0.002622
K	39	3	He	4955.703	6.8807	169066.76	0.0013	0.5579
K	39	3	He	4968.403	6.8969	162765.08	0.0013	0.5579
K	39	3	He	5082.024	7.0418	163788.34	0.0013	0.5579
Ca	44	3	He	4821.479	0.3574	8783.01	0.0001	0.004062
Ca	44	3	He	5033.798	0.373	8803.03	0.0001	0.004062
Ca	44	3	He	5120.043	0.3793	8823.04	0.0001	0.004062
Ti	47	3	He	482.102	0.2829	6951.88	0.0006	0.0002809
Ti	47	3	He	514.982	0.3022	7131.97	0.0006	0.0002809
Ti	47	3	He	496.852	0.2916	6781.83	0.0006	0.0002809
V	51	3	He	480.882	12.4534	305997.28	0.0259	0.01861
V	51	3	He	500.751	12.9672	306024.56	0.0259	0.01861
V	51	3	He	501.673	12.9911	302163.72	0.0259	0.01861
Cr	52	3	He	480.181	16.0537	394460.31	0.0332	0.1047
Cr	52	3	He	498.51	16.6625	393232.69	0.0332	0.1047
Cr	52	3	He	501.694	16.7682	390018.78	0.0332	0.1047
Mn	55	3	He	483.437	6.7082	164829.74	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	500.812	6.9491	163998.83	0.0139	0.005074
Mn	55	3	He	500.187	6.9405	161430.90	0.0139	0.005074
Fe	57	3	He	4846.31	3.0861	75828.98	0.0006	0.00609
Fe	57	3	He	4995.932	3.1812	75075.18	0.0006	0.00609
Fe	57	3	He	5100.501	3.2476	75537.68	0.0006	0.00609
Co	59	3	He	473.099	31.3014	769116.16	0.0661	0.00621
Co	59	3	He	494.646	32.7266	772345.22	0.0661	0.00621
Co	59	3	He	496.31	32.8368	763762.49	0.0661	0.00621
Ni	60	3	He	495.046	4.9588	219620.99	0.01	0.01721
Ni	60	3	He	495.621	4.9645	216238.88	0.01	0.01721
Ni	60	3	He	505.627	5.0644	215104.65	0.01	0.01721
Cu	63	3	He	496.343	14.2175	629683.74	0.0286	0.006793
Cu	63	3	He	506.037	14.4951	631360.03	0.0286	0.006793
Cu	63	3	He	507.494	14.5368	617434.01	0.0286	0.006793
Zn	66	3	He	511.289	1.7197	76162.90	0.0034	0.00316
Zn	66	3	He	497.142	1.6722	72834.65	0.0034	0.00316
Zn	66	3	He	514.711	1.7312	73528.98	0.0034	0.00316
As	75	3	He	500.118	1.2925	57243.75	0.0026	0.0008231
As	75	3	He	494.7	1.2785	55687.57	0.0026	0.0008231
As	75	3	He	505.437	1.3062	55480.88	0.0026	0.0008231
Sr	88	3	He	51.456	0.5442	21086.18	0.0105	0.001715
Sr	88	3	He	52.083	0.5508	21206.45	0.0105	0.001715
Sr	88	3	He	50.016	0.529	21006.51	0.0105	0.001715
Mo	98	3	He	51.964	1.4303	55419.76	0.0275	0.0008555
Mo	98	3	He	50.126	1.3797	53121.00	0.0275	0.0008555
Mo	98	3	He	49.327	1.3577	53913.74	0.0275	0.0008555
Ag	107	3	He	51.409	3.0384	117732.48	0.0591	0.0004305
Ag	107	3	He	50.126	2.9626	114063.23	0.0591	0.0004305
Ag	107	3	He	49.344	2.9164	115807.71	0.0591	0.0004305
Cd	111	3	He	50.266	0.3332	12910.02	0.0066	5.141E-05
Cd	111	3	He	50.996	0.338	13014.10	0.0066	5.141E-05
Cd	111	3	He	48.79	0.3234	12841.93	0.0066	5.141E-05
Sn	120	3	He	99.181	1.8763	72700.54	0.0187	0.0185
Sn	120	3	He	102.918	1.9462	74932.32	0.0187	0.0185
Sn	120	3	He	97.014	1.8357	72892.24	0.0187	0.0185
Sb	121	3	He	100.827	1.8464	71544.81	0.0183	0.00111
Sb	121	3	He	101.13	1.852	71303.11	0.0183	0.00111
Sb	121	3	He	97.058	1.7775	70580.65	0.0183	0.00111
Ba	137	3	He	509.896	2.9877	115765.92	0.0059	0.0007704
Ba	137	3	He	511.598	2.9977	115412.72	0.0059	0.0007704
Ba	137	3	He	489.02	2.8654	113781.23	0.0059	0.0007704
Tl	205	3	He	101.406	3.6881	479560.07	0.0364	0.000808
Tl	205	3	He	100.629	3.6598	473886.20	0.0364	0.000808
Tl	205	3	He	101.48	3.6908	472049.99	0.0364	0.000808
Pb	208	3	He	51.157	2.4971	172533.77	0.0487	0.003226
Pb	208	3	He	50.46	2.4631	170991.50	0.0487	0.003226
Pb	208	3	He	51.434	2.5106	172411.95	0.0487	0.003226
U	238	3	He	49.902	2.6695	347121.95	0.0535	0.0004157
U	238	3	He	50.771	2.716	351680.97	0.0535	0.0004157
U	238	3	He	50.13	2.6817	342992.18	0.0535	0.0004157
Sc	45	1	No Gas			1342037.64		
Sc	45	1	No Gas			1310663.34		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1323814.67		
Ge	72	1	No Gas			704745.22		
Ge	72	1	No Gas			708061.40		
Ge	72	1	No Gas			697632.65		
Sc	45	2	H2			89696.25		
Sc	45	2	H2			90409.74		
Sc	45	2	H2			90701.00		
Ge	72	2	H2			73991.76		
Ge	72	2	H2			74765.24		
Ge	72	2	H2			72704.89		
In	115	2	H2			189475.60		
In	115	2	H2			192971.01		
In	115	2	H2			190986.85		
Sc	45	3	He			24571.32		
Sc	45	3	He			23599.89		
Sc	45	3	He			23259.37		
Ge	72	3	He			44289.33		
Ge	72	3	He			43556.92		
Ge	72	3	He			42473.93		
In	115	3	He			39256.59		
In	115	3	He			39025.56		
In	115	3	He			40219.05		
Tb	159	3	He			183661.64		
Tb	159	3	He			179802.95		
Tb	159	3	He			176420.78		
Bi	209	3	He			130030.31		
Bi	209	3	He			129484.90		
Bi	209	3	He			127900.77		

Quantitation Report

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Sample Type	Sample
Comment	F8
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

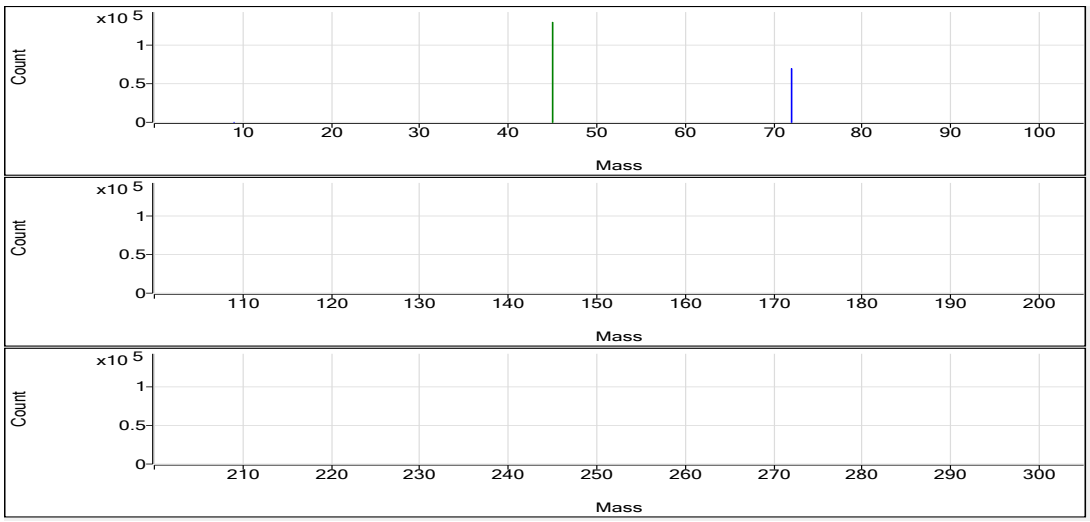
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.092	ppb	28.2	82.00	0.0001	Pulse	0.5000	3
Se	78	115	H2	0.093	ppb	42.1	4.89	0.0000	Pulse	1.5000	3
Na	23	45	He	5017.811	ppb	2.6	427734.84	18.6100	Pulse	0.1000	3
Mg	24	45	He	29844.112	ppb	1.6	1247386.54	54.2670	Analog	0.1000	3
Al	27	45	He	85.581	ppb	13.1	1156.75	0.0503	Pulse	0.1000	3
K	39	45	He	1499.533	ppb	6.5	56784.05	2.4711	Pulse	0.1000	3
Ca	44	45	He	54512.098	ppb	2.0	91929.10	3.9995	Pulse	0.1000	3
Ti	47	45	He	1.506	ppb	58.8	26.67	0.0012	Pulse	0.1000	3
V	51	45	He	0.239	ppb	34.3	570.02	0.0248	Pulse	0.5000	3
Cr	52	45	He	1.285	ppb	20.3	3387.17	0.1474	Pulse	0.1000	3
Mn	55	45	He	26.807	ppb	2.9	8659.58	0.3768	Pulse	0.1000	3
Fe	57	45	He	3210.499	ppb	1.4	47040.46	2.0465	Pulse	0.1000	3
Co	59	45	He	0.965	ppb	10.5	1610.15	0.0700	Pulse	0.1000	3
Ni	60	72	He	3.164	ppb	7.2	2113.57	0.0488	Pulse	0.1000	3
Cu	63	72	He	3.908	ppb	3.0	5141.09	0.1187	Pulse	0.1000	3
Zn	66	72	He	23.843	ppb	5.3	3603.91	0.0832	Pulse	0.1000	3
As	75	72	He	0.844	ppb	22.8	130.00	0.0030	Pulse	0.5000	3
Sr	88	115	He	94.989	ppb	1.0	39191.95	1.0031	Pulse	0.1000	3
Mo	98	115	He	2.280	ppb	3.6	2483.63	0.0636	Pulse	0.1000	3
Ag	107	115	He	0.069	ppb	27.1	176.68	0.0045	Pulse	0.1000	3
Cd	111	115	He	0.054	ppb	52.9	16.00	0.0004	Pulse	0.5000	3
Sn	120	115	He	0.166	ppb	100.1	843.39	0.0216	Pulse	0.1000	3
Sb	121	115	He	0.242	ppb	28.3	216.68	0.0055	Pulse	0.1000	3
Ba	137	115	He	74.974	ppb	1.2	17187.99	0.4400	Pulse	0.1000	3
Tl	205	209	He	0.232	ppb	9.8	1180.09	0.0092	Pulse	0.1000	3
Pb	208	209	He	0.952	ppb	4.6	6350.85	0.0497	Pulse	0.1000	3
U	238	209	He	3.353	ppb	3.3	22981.20	0.1797	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1296258.11	1.1	97.1	Analog	0.1000	3
No Gas	Ge	72	696204.52	1.2	99.5	Pulse	0.1000	3
H2	Sc	45	89058.32	1.8	102.4	Pulse	0.1000	3
H2	Ge	72	72296.63	1.2	101.0	Pulse	0.1000	3
H2	In	115	184420.39	0.9	100.7	Pulse	0.1000	3
He	Sc	45	22988.78	1.2	99.9	Pulse	0.1000	3
He	Ge	72	43323.11	0.7	102.6	Pulse	0.1000	3
He	In	115	39072.99	1.9	100.4	Pulse	0.1000	3
He	Tb	159	175968.77	1.3	99.9	Pulse	0.1000	3
He	Bi	209	127882.77	0.9	99.7	Pulse	0.1000	3

No Gas



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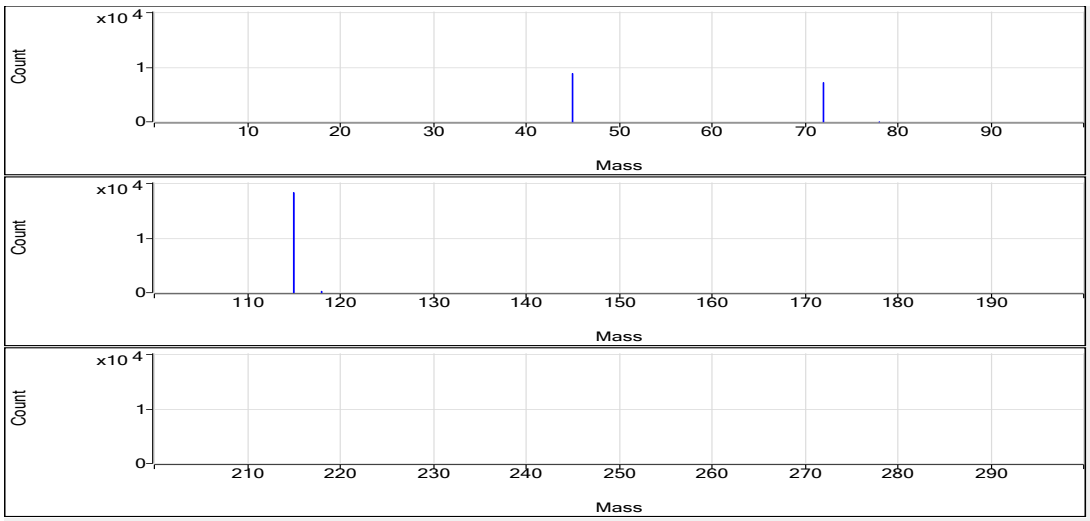
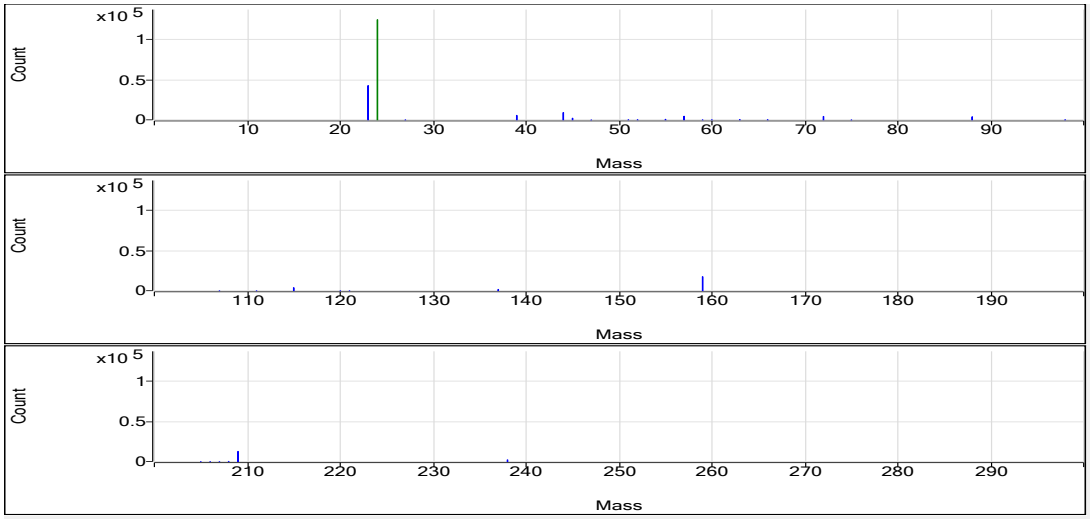


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.076	0.0001	72.00	0.0005	1.901E-05
Be	9	1	No Gas	0.077	0.0001	74.00	0.0005	1.901E-05
Be	9	1	No Gas	0.122	0.0001	100.00	0.0005	1.901E-05
Se	78	2	H2	0.139	0	6.67	0.0002	7.279E-06
Se	78	2	H2	0.071	0	4.00	0.0002	7.279E-06
Se	78	2	H2	0.071	0	4.00	0.0002	7.279E-06
Na	23	3	He	5162.552	19.1261	433939.45	0.0036	0.7194
Na	23	3	He	4988.936	18.5071	426566.56	0.0036	0.7194
Na	23	3	He	4901.944	18.1969	422698.51	0.0036	0.7194
Mg	24	3	He	30392.332	55.2638	1253843.50	0.0018	0.006791
Mg	24	3	He	29536.307	53.7074	1237893.26	0.0018	0.006791
Mg	24	3	He	29603.698	53.8299	1250422.87	0.0018	0.006791
Al	27	3	He	73.652	0.0436	990.07	0.0006	0.002622
Al	27	3	He	95.802	0.056	1290.11	0.0006	0.002622
Al	27	3	He	87.289	0.0512	1190.08	0.0006	0.002622
K	39	3	He	1601.615	2.6013	59019.44	0.0013	0.5579
K	39	3	He	1490.523	2.4596	56690.29	0.0013	0.5579
K	39	3	He	1406.461	2.3523	54642.42	0.0013	0.5579
Ca	44	3	He	55685.925	4.0855	92693.94	0.0001	0.004062
Ca	44	3	He	54260.335	3.981	91758.41	0.0001	0.004062
Ca	44	3	He	53590.034	3.9319	91334.96	0.0001	0.004062
Ti	47	3	He	2.528	0.0018	40.00	0.0006	0.0002809
Ti	47	3	He	1.001	0.0009	20.00	0.0006	0.0002809
Ti	47	3	He	0.989	0.0009	20.00	0.0006	0.0002809
V	51	3	He	0.15	0.0225	510.01	0.0259	0.01861
V	51	3	He	0.311	0.0266	614.02	0.0259	0.01861
V	51	3	He	0.256	0.0252	586.02	0.0259	0.01861
Cr	52	3	He	1.585	0.1574	3570.57	0.0332	0.1047
Cr	52	3	He	1.119	0.1419	3270.47	0.0332	0.1047
Cr	52	3	He	1.15	0.1429	3320.48	0.0332	0.1047
Mn	55	3	He	27.617	0.388	8802.95	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	26.741	0.3759	8662.99	0.0139	0.005074
Mn	55	3	He	26.064	0.3665	8512.79	0.0139	0.005074
Fe	57	3	He	3258.088	2.0767	47117.13	0.0006	0.00609
Fe	57	3	He	3206.34	2.0438	47107.75	0.0006	0.00609
Fe	57	3	He	3167.07	2.0189	46896.51	0.0006	0.00609
Co	59	3	He	0.952	0.0692	1570.15	0.0661	0.00621
Co	59	3	He	0.87	0.0638	1470.12	0.0661	0.00621
Co	59	3	He	1.071	0.0771	1790.18	0.0661	0.00621
Ni	60	3	He	3.134	0.0485	2090.24	0.01	0.01721
Ni	60	3	He	3.404	0.0512	2210.25	0.01	0.01721
Ni	60	3	He	2.954	0.0467	2040.21	0.01	0.01721
Cu	63	3	He	3.904	0.1186	5111.05	0.0286	0.006793
Cu	63	3	He	4.027	0.1221	5271.18	0.0286	0.006793
Cu	63	3	He	3.793	0.1154	5041.05	0.0286	0.006793
Zn	66	3	He	25.114	0.0875	3770.64	0.0034	0.00316
Zn	66	3	He	23.829	0.0832	3590.54	0.0034	0.00316
Zn	66	3	He	22.585	0.079	3450.54	0.0034	0.00316
As	75	3	He	1.065	0.0036	154.00	0.0026	0.0008231
As	75	3	He	0.757	0.0028	120.00	0.0026	0.0008231
As	75	3	He	0.709	0.0027	116.00	0.0026	0.0008231
Sr	88	3	He	94.368	0.9966	39767.05	0.0105	0.001715
Sr	88	3	He	94.558	0.9986	38763.81	0.0105	0.001715
Sr	88	3	He	96.039	1.0142	39044.99	0.0105	0.001715
Mo	98	3	He	2.192	0.0612	2440.28	0.0275	0.0008555
Mo	98	3	He	2.357	0.0657	2550.32	0.0275	0.0008555
Mo	98	3	He	2.292	0.0639	2460.30	0.0275	0.0008555
Ag	107	3	He	0.052	0.0035	140.01	0.0591	0.0004305
Ag	107	3	He	0.067	0.0044	170.01	0.0591	0.0004305
Ag	107	3	He	0.089	0.0057	220.01	0.0591	0.0004305
Cd	111	3	He	0.022	0.0002	8.00	0.0066	5.141E-05
Cd	111	3	He	0.062	0.0005	18.00	0.0066	5.141E-05
Cd	111	3	He	0.078	0.0006	22.00	0.0066	5.141E-05
Sn	120	3	He	-0.011	0.0183	730.05	0.0187	0.0185
Sn	120	3	He	0.319	0.0245	950.07	0.0187	0.0185
Sn	120	3	He	0.191	0.0221	850.06	0.0187	0.0185
Sb	121	3	He	0.268	0.006	240.01	0.0183	0.00111
Sb	121	3	He	0.165	0.0041	160.01	0.0183	0.00111
Sb	121	3	He	0.294	0.0065	250.01	0.0183	0.00111
Ba	137	3	He	73.929	0.4338	17311.38	0.0059	0.0007704
Ba	137	3	He	75.647	0.4439	17231.41	0.0059	0.0007704
Ba	137	3	He	75.345	0.4421	17021.17	0.0059	0.0007704
Tl	205	3	He	0.228	0.0091	1170.08	0.0364	0.000808
Tl	205	3	He	0.211	0.0085	1090.08	0.0364	0.000808
Tl	205	3	He	0.256	0.0101	1280.10	0.0364	0.000808
Pb	208	3	He	0.925	0.0483	3360.58	0.0487	0.003226
Pb	208	3	He	1.003	0.0521	3620.62	0.0487	0.003226
Pb	208	3	He	0.929	0.0485	3230.53	0.0487	0.003226
U	238	3	He	3.277	0.1757	22590.40	0.0535	0.0004157
U	238	3	He	3.299	0.1769	22740.79	0.0535	0.0004157
U	238	3	He	3.481	0.1866	23612.40	0.0535	0.0004157
Sc	45	1	No Gas			1288721.93		
Sc	45	1	No Gas			1313174.36		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1286878.03		
Ge	72	1	No Gas			688273.43		
Ge	72	1	No Gas			695374.60		
Ge	72	1	No Gas			704965.54		
Sc	45	2	H2			89705.07		
Sc	45	2	H2			90259.20		
Sc	45	2	H2			87210.68		
Ge	72	2	H2			72896.06		
Ge	72	2	H2			72705.21		
Ge	72	2	H2			71288.61		
In	115	2	H2			186346.15		
In	115	2	H2			183680.23		
In	115	2	H2			183234.78		
Sc	45	3	He			22688.35		
Sc	45	3	He			23048.84		
Sc	45	3	He			23229.14		
Ge	72	3	He			43106.23		
Ge	72	3	He			43175.81		
Ge	72	3	He			43687.30		
In	115	3	He			39908.07		
In	115	3	He			38824.80		
In	115	3	He			38503.80		
Tb	159	3	He			178474.68		
Tb	159	3	He			175242.24		
Tb	159	3	He			174189.39		
Bi	209	3	He			128566.30		
Bi	209	3	He			128556.19		
Bi	209	3	He			126525.82		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
Acq Time	9/19/2023 10:30:04 AM
Sample Name	410-140965-H-5-A
Sample Type	Sample
Comment	F8
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

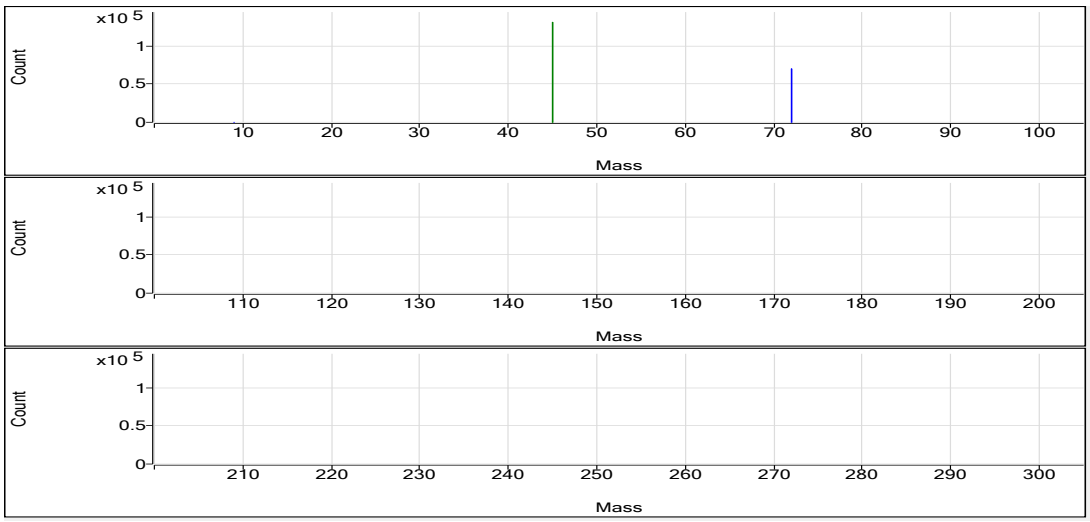
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.146	ppb	8.4	117.33	0.0001	Pulse	0.5000	3
Se	78	115	H2	0.881	ppb	29.5	34.67	0.0002	Pulse	1.5000	3
Na	23	45	He	71252.092	ppb	1.0	5761817.83	254.7640	Analog	0.1000	3
Mg	24	45	He	34651.818	ppb	0.6	1425049.35	63.0080	Analog	0.1000	3
Al	27	45	He	766.820	ppb	3.7	9720.19	0.4297	Pulse	0.1000	3
K	39	45	He	5461.359	ppb	1.0	170231.69	7.5258	Pulse	0.1000	3
Ca	44	45	He	92842.396	ppb	1.1	153989.28	6.8089	Pulse	0.1000	3
Ti	47	45	He	9.564	ppb	15.1	133.34	0.0059	Pulse	0.1000	3
V	51	45	He	1.150	ppb	5.3	1093.38	0.0484	Pulse	0.5000	3
Cr	52	45	He	4.728	ppb	7.8	5921.40	0.2618	Pulse	0.1000	3
Mn	55	45	He	1152.176	ppb	1.0	361437.78	15.9807	Pulse	0.1000	3
Fe	57	45	He	616.924	ppb	8.9	8999.78	0.3982	Pulse	0.1000	3
Co	59	45	He	10.541	ppb	1.4	15912.52	0.7035	Pulse	0.1000	3
Ni	60	72	He	184.496	ppb	1.7	80172.79	1.8589	Pulse	0.1000	3
Cu	63	72	He	3.786	ppb	4.6	4967.70	0.1152	Pulse	0.1000	3
Zn	66	72	He	84.216	ppb	3.6	12328.96	0.2859	Pulse	0.1000	3
As	75	72	He	0.859	ppb	16.2	131.33	0.0030	Pulse	0.5000	3
Sr	88	115	He	556.534	ppb	0.6	230239.14	5.8690	Pulse	0.1000	3
Mo	98	115	He	0.312	ppb	28.5	370.02	0.0094	Pulse	0.1000	3
Ag	107	115	He	0.105	ppb	15.0	260.01	0.0066	Pulse	0.1000	3
Cd	111	115	He	0.449	ppb	11.6	118.67	0.0030	Pulse	0.5000	3
Sn	120	115	He	0.174	ppb	40.7	853.39	0.0218	Pulse	0.1000	3
Sb	121	115	He	0.213	ppb	52.5	196.68	0.0050	Pulse	0.1000	3
Ba	137	115	He	233.235	ppb	0.2	53628.88	1.3670	Pulse	0.1000	3
Tl	205	209	He	0.120	ppb	8.9	650.04	0.0052	Pulse	0.1000	3
Pb	208	209	He	0.996	ppb	1.4	6507.56	0.0518	Pulse	0.1000	3
U	238	209	He	0.064	ppb	10.6	483.36	0.0038	Pulse	0.1000	3

ISTD Table:

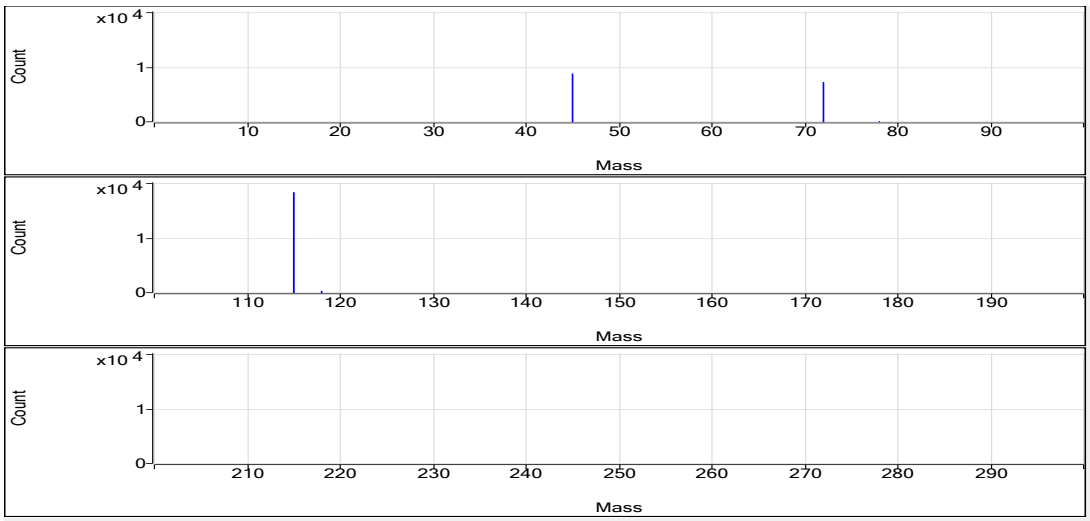
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1310195.24	1.2	98.2	Analog	0.1000	3
No Gas	Ge	72	700721.92	0.7	100.2	Pulse	0.1000	3
H2	Sc	45	88078.89	0.6	101.3	Pulse	0.1000	3
H2	Ge	72	72460.81	1.2	101.2	Pulse	0.1000	3
H2	In	115	183909.11	0.7	100.4	Pulse	0.1000	3
He	Sc	45	22618.20	1.4	98.3	Pulse	0.1000	3
He	Ge	72	43135.82	1.3	102.2	Pulse	0.1000	3
He	In	115	39230.14	0.2	100.8	Pulse	0.1000	3
He	Tb	159	177009.77	2.2	100.5	Pulse	0.1000	3
He	Bi	209	125675.57	0.8	98.0	Pulse	0.1000	3

No Gas

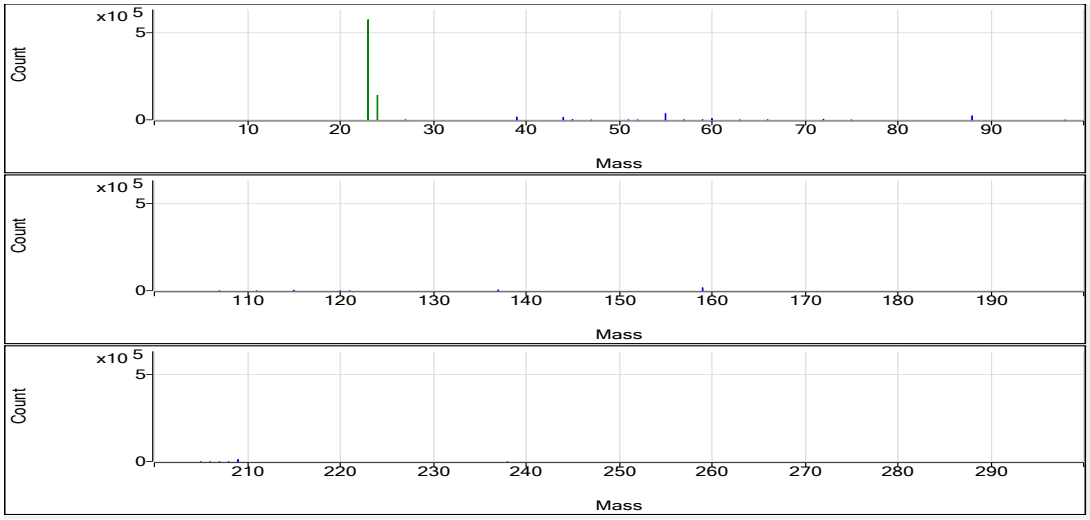


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.139	0.0001	112.00	0.0005	1.901E-05
Be	9	1	No Gas	0.16	0.0001	128.00	0.0005	1.901E-05
Be	9	1	No Gas	0.139	0.0001	112.00	0.0005	1.901E-05
Se	78	2	H2	0.584	0.0001	23.33	0.0002	7.279E-06
Se	78	2	H2	1.067	0.0002	42.00	0.0002	7.279E-06
Se	78	2	H2	0.992	0.0002	38.67	0.0002	7.279E-06
Na	23	3	He	70672.026	252.6958	5801569.91	0.0036	0.7194
Na	23	3	He	72006.026	257.4521	5748367.41	0.0036	0.7194
Na	23	3	He	71078.225	254.1441	5735516.16	0.0036	0.7194
Mg	24	3	He	34394.279	62.5398	1435832.79	0.0018	0.006791
Mg	24	3	He	34772.238	63.227	1411725.92	0.0018	0.006791
Mg	24	3	He	34788.937	63.2573	1427589.35	0.0018	0.006791
Al	27	3	He	796.509	0.4462	10243.81	0.0006	0.002622
Al	27	3	He	764.424	0.4283	9563.42	0.0006	0.002622
Al	27	3	He	739.526	0.4145	9353.33	0.0006	0.002622
K	39	3	He	5520.69	7.6015	174520.58	0.0013	0.5579
K	39	3	He	5443.663	7.5032	167531.27	0.0013	0.5579
K	39	3	He	5419.725	7.4727	168643.22	0.0013	0.5579
Ca	44	3	He	91729.228	6.7273	154450.21	0.0001	0.004062
Ca	44	3	He	93688.189	6.8709	153412.49	0.0001	0.004062
Ca	44	3	He	93109.771	6.8285	154105.15	0.0001	0.004062
Ti	47	3	He	10.666	0.0065	150.01	0.0006	0.0002809
Ti	47	3	He	7.924	0.0049	110.00	0.0006	0.0002809
Ti	47	3	He	10.102	0.0062	140.00	0.0006	0.0002809
V	51	3	He	1.083	0.0466	1070.05	0.0259	0.01861
V	51	3	He	1.203	0.0497	1110.05	0.0259	0.01861
V	51	3	He	1.165	0.0487	1100.05	0.0259	0.01861
Cr	52	3	He	4.677	0.2601	5971.42	0.0332	0.1047
Cr	52	3	He	4.386	0.2504	5591.26	0.0332	0.1047
Cr	52	3	He	5.12	0.2748	6201.53	0.0332	0.1047
Mn	55	3	He	1141.513	15.8328	363501.64	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1149.802	15.9478	356080.39	0.0139	0.005074
Mn	55	3	He	1165.213	16.1615	364731.32	0.0139	0.005074
Fe	57	3	He	583.447	0.3769	8652.91	0.0006	0.00609
Fe	57	3	He	680.591	0.4386	9793.64	0.0006	0.00609
Fe	57	3	He	586.735	0.379	8552.80	0.0006	0.00609
Co	59	3	He	10.619	0.7086	16269.57	0.0661	0.00621
Co	59	3	He	10.63	0.7094	15839.05	0.0661	0.00621
Co	59	3	He	10.375	0.6925	15628.93	0.0661	0.00621
Ni	60	3	He	182.52	1.8391	80383.95	0.01	0.01721
Ni	60	3	He	188.209	1.8959	80736.08	0.01	0.01721
Ni	60	3	He	182.759	1.8415	79398.35	0.01	0.01721
Cu	63	3	He	3.735	0.1137	4971.08	0.0286	0.006793
Cu	63	3	He	3.979	0.1207	5141.08	0.0286	0.006793
Cu	63	3	He	3.644	0.1111	4790.94	0.0286	0.006793
Zn	66	3	He	80.738	0.2742	11985.28	0.0034	0.00316
Zn	66	3	He	85.694	0.2909	12385.73	0.0034	0.00316
Zn	66	3	He	86.216	0.2926	12615.88	0.0034	0.00316
As	75	3	He	0.922	0.0032	140.00	0.0026	0.0008231
As	75	3	He	0.7	0.0026	112.00	0.0026	0.0008231
As	75	3	He	0.956	0.0033	142.00	0.0026	0.0008231
Sr	88	3	He	557.364	5.8777	230346.17	0.0105	0.001715
Sr	88	3	He	559.539	5.9007	231130.91	0.0105	0.001715
Sr	88	3	He	552.698	5.8286	229240.35	0.0105	0.001715
Mo	98	3	He	0.405	0.012	470.03	0.0275	0.0008555
Mo	98	3	He	0.303	0.0092	360.02	0.0275	0.0008555
Mo	98	3	He	0.228	0.0071	280.01	0.0275	0.0008555
Ag	107	3	He	0.118	0.0074	290.02	0.0591	0.0004305
Ag	107	3	He	0.109	0.0069	270.01	0.0591	0.0004305
Ag	107	3	He	0.087	0.0056	220.01	0.0591	0.0004305
Cd	111	3	He	0.493	0.0033	130.00	0.0066	5.141E-05
Cd	111	3	He	0.462	0.0031	122.00	0.0066	5.141E-05
Cd	111	3	He	0.391	0.0026	104.00	0.0066	5.141E-05
Sn	120	3	He	0.238	0.023	900.06	0.0187	0.0185
Sn	120	3	He	0.184	0.022	860.06	0.0187	0.0185
Sn	120	3	He	0.098	0.0203	800.05	0.0187	0.0185
Sb	121	3	He	0.148	0.0038	150.01	0.0183	0.00111
Sb	121	3	He	0.149	0.0038	150.01	0.0183	0.00111
Sb	121	3	He	0.342	0.0074	290.02	0.0183	0.00111
Ba	137	3	He	233.812	1.3704	53705.91	0.0059	0.0007704
Ba	137	3	He	232.702	1.3639	53424.77	0.0059	0.0007704
Ba	137	3	He	233.19	1.3668	53755.96	0.0059	0.0007704
Tl	205	3	He	0.113	0.0049	620.04	0.0364	0.000808
Tl	205	3	He	0.132	0.0056	700.05	0.0364	0.000808
Tl	205	3	He	0.115	0.005	630.04	0.0364	0.000808
Pb	208	3	He	0.992	0.0516	3530.62	0.0487	0.003226
Pb	208	3	He	1.011	0.0525	3310.54	0.0487	0.003226
Pb	208	3	He	0.985	0.0512	3670.63	0.0487	0.003226
U	238	3	He	0.071	0.0042	530.03	0.0535	0.0004157
U	238	3	He	0.064	0.0039	480.03	0.0535	0.0004157
U	238	3	He	0.057	0.0035	440.02	0.0535	0.0004157
Sc	45	1	No Gas			1298585.76		
Sc	45	1	No Gas			1328294.20		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1303705.76		
Ge	72	1	No Gas			695217.10		
Ge	72	1	No Gas			704615.69		
Ge	72	1	No Gas			702332.96		
Sc	45	2	H2			88357.75		
Sc	45	2	H2			88427.65		
Sc	45	2	H2			87451.28		
Ge	72	2	H2			73026.23		
Ge	72	2	H2			72856.92		
Ge	72	2	H2			71499.28		
In	115	2	H2			183152.40		
In	115	2	H2			185341.19		
In	115	2	H2			183233.73		
Sc	45	3	He			22958.71		
Sc	45	3	He			22327.91		
Sc	45	3	He			22567.97		
Ge	72	3	He			43707.54		
Ge	72	3	He			42584.10		
Ge	72	3	He			43115.83		
In	115	3	He			39195.90		
In	115	3	He			39176.26		
In	115	3	He			39336.18		
Tb	159	3	He			181464.78		
Tb	159	3	He			174098.08		
Tb	159	3	He			175466.46		
Bi	209	3	He			126023.12		
Bi	209	3	He			124527.91		
Bi	209	3	He			126475.68		

Quantitation Report

Data File Name	111SMPL.d
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Sample Name	410-140965-H-4-A
Sample Type	Sample
Comment	F8
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

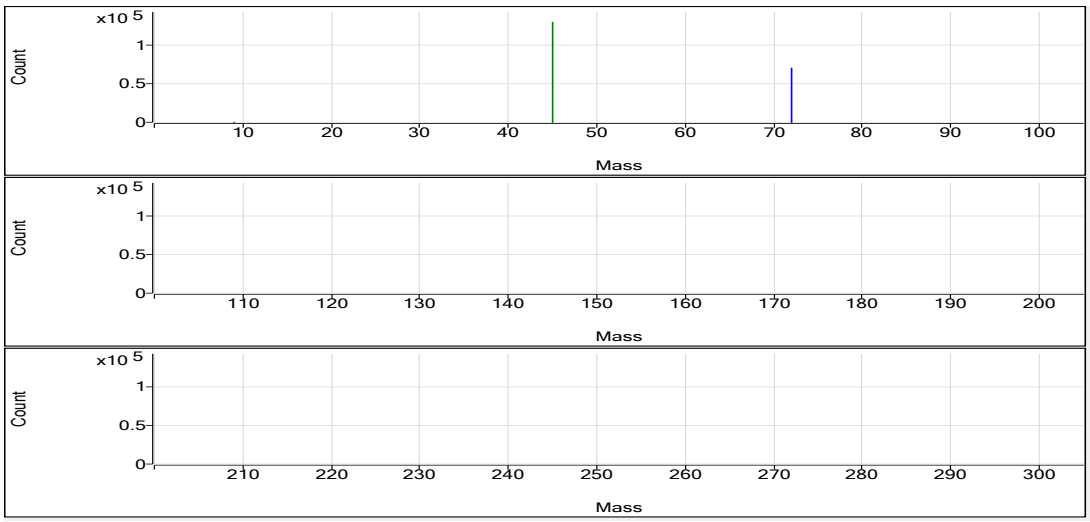
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.789	ppb	9.6	520.68	0.0004	Pulse	0.5000	3
Se	78	115	H2	0.040	ppb	26.0	2.89	0.0000	Pulse	1.5000	3
Na	23	45	He	7021.302	ppb	1.9	588539.18	25.7533	Pulse	0.1000	3
Mg	24	45	He	8472.466	ppb	2.9	352136.56	15.4108	Pulse	0.1000	3
Al	27	45	He	113.277	ppb	10.3	1500.12	0.0657	Pulse	0.1000	3
K	39	45	He	5828.698	ppb	2.3	182694.85	7.9945	Pulse	0.1000	3
Ca	44	45	He	13433.160	ppb	1.8	22594.72	0.9886	Pulse	0.1000	3
Ti	47	45	He	0.257	ppb	284.1	10.00	0.0004	Pulse	0.1000	3
V	51	45	He	0.097	ppb	22.0	482.68	0.0211	Pulse	0.5000	3
Cr	52	45	He	0.116	ppb	167.8	2480.30	0.1086	Pulse	0.1000	3
Mn	55	45	He	2304.505	ppb	2.6	730281.50	31.9584	Pulse	0.1000	3
Fe	57	45	He	20447.698	ppb	2.3	297102.50	13.0013	Pulse	0.1000	3
Co	59	45	He	24.653	ppb	1.9	37409.44	1.6370	Pulse	0.1000	3
Ni	60	72	He	29.309	ppb	1.3	13406.76	0.3098	Pulse	0.1000	3
Cu	63	72	He	0.740	ppb	5.6	1210.10	0.0280	Pulse	0.1000	3
Zn	66	72	He	84.398	ppb	3.0	12392.44	0.2865	Pulse	0.1000	3
As	75	72	He	1.361	ppb	19.2	188.00	0.0043	Pulse	0.5000	3
Sr	88	115	He	132.225	ppb	0.7	56065.10	1.3957	Pulse	0.1000	3
Mo	98	115	He	0.050	ppb	30.8	90.00	0.0022	Pulse	0.1000	3
Ag	107	115	He	0.005	ppb	284.8	30.00	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.147	ppb	21.2	41.33	0.0010	Pulse	0.5000	3
Sn	120	115	He	-0.190	ppb	N/A	600.04	0.0149	Pulse	0.1000	3
Sb	121	115	He	0.116	ppb	35.1	130.01	0.0032	Pulse	0.1000	3
Ba	137	115	He	63.319	ppb	4.1	14928.60	0.3717	Pulse	0.1000	3
Tl	205	209	He	0.065	ppb	39.8	420.03	0.0032	Pulse	0.1000	3
Pb	208	209	He	0.200	ppb	6.1	1713.44	0.0130	Pulse	0.1000	3
U	238	209	He	0.059	ppb	25.9	470.02	0.0036	Pulse	0.1000	3

ISTD Table:

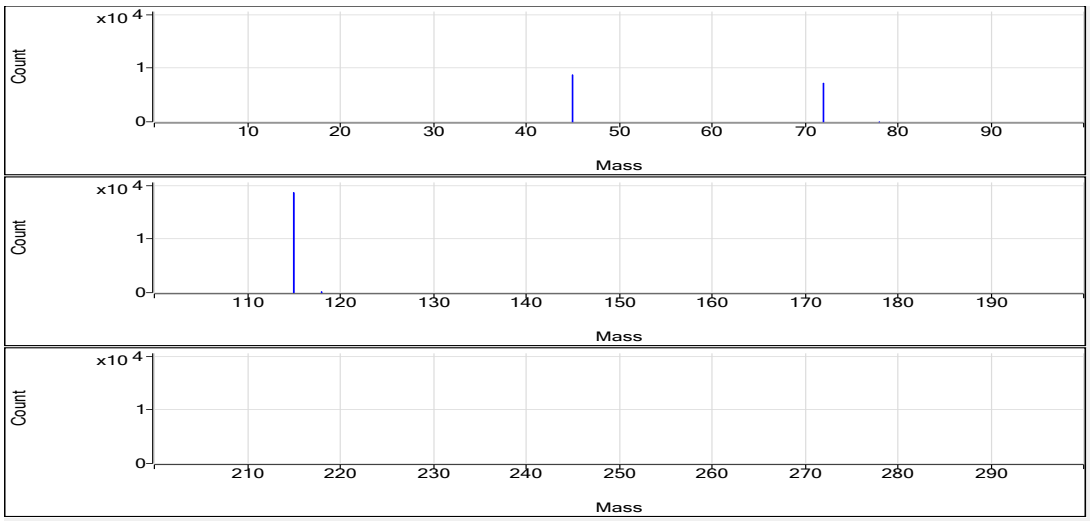
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1303952.71	1.5	97.7	Analog	0.1000	3
No Gas	Ge	72	707263.69	0.4	101.1	Pulse	0.1000	3
H2	Sc	45	87821.30	0.4	101.0	Pulse	0.1000	3
H2	Ge	72	72517.54	2.5	101.3	Pulse	0.1000	3
H2	In	115	187174.74	0.6	102.2	Pulse	0.1000	3
He	Sc	45	22858.51	2.0	99.4	Pulse	0.1000	3
He	Ge	72	43272.95	2.3	102.5	Pulse	0.1000	3
He	In	115	40171.52	0.9	103.2	Pulse	0.1000	3
He	Tb	159	178498.52	0.3	101.4	Pulse	0.1000	3
He	Bi	209	131950.46	0.9	102.9	Pulse	0.1000	3

No Gas

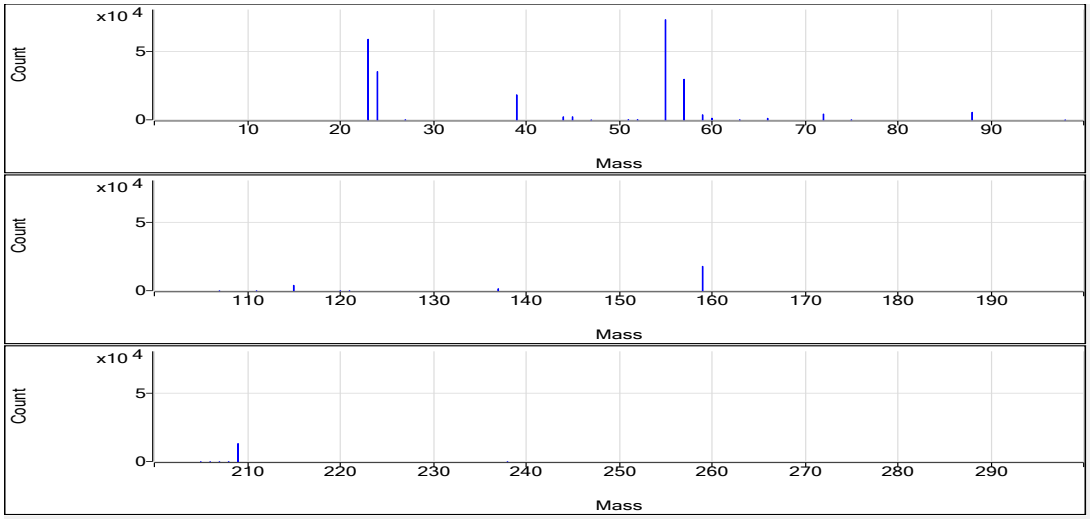


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.704	0.0004	472.01	0.0005	1.901E-05
Be	9	1	No Gas	0.812	0.0004	540.01	0.0005	1.901E-05
Be	9	1	No Gas	0.85	0.0004	550.01	0.0005	1.901E-05
Se	78	2	H2	0.052	0	3.33	0.0002	7.279E-06
Se	78	2	H2	0.034	0	2.67	0.0002	7.279E-06
Se	78	2	H2	0.034	0	2.67	0.0002	7.279E-06
Na	23	3	He	7163.646	26.2609	588977.22	0.0036	0.7194
Na	23	3	He	6890.976	25.2887	589710.81	0.0036	0.7194
Na	23	3	He	7009.286	25.7105	586929.52	0.0036	0.7194
Mg	24	3	He	8735.704	15.8894	356365.93	0.0018	0.006791
Mg	24	3	He	8248.175	15.003	349857.03	0.0018	0.006791
Mg	24	3	He	8433.52	15.34	350186.71	0.0018	0.006791
Al	27	3	He	126.61	0.0731	1640.14	0.0006	0.002622
Al	27	3	He	104.648	0.0609	1420.11	0.0006	0.002622
Al	27	3	He	108.573	0.0631	1440.12	0.0006	0.002622
K	39	3	He	5984.945	8.1938	183770.62	0.0013	0.5579
K	39	3	He	5731.715	7.8707	183539.02	0.0013	0.5579
K	39	3	He	5769.434	7.9189	180774.90	0.0013	0.5579
Ca	44	3	He	13514.955	0.9946	22307.58	0.0001	0.004062
Ca	44	3	He	13160.468	0.9687	22588.14	0.0001	0.004062
Ca	44	3	He	13624.057	1.0026	22888.43	0.0001	0.004062
Ti	47	3	He	-0.479	0	0.00	0.0006	0.0002809
Ti	47	3	He	0.984	0.0009	20.00	0.0006	0.0002809
Ti	47	3	He	0.268	0.0004	10.00	0.0006	0.0002809
V	51	3	He	0.105	0.0213	478.01	0.0259	0.01861
V	51	3	He	0.073	0.0205	478.01	0.0259	0.01861
V	51	3	He	0.114	0.0216	492.01	0.0259	0.01861
Cr	52	3	He	0.257	0.1133	2540.31	0.0332	0.1047
Cr	52	3	He	-0.106	0.1012	2360.27	0.0332	0.1047
Cr	52	3	He	0.197	0.1113	2540.33	0.0332	0.1047
Mn	55	3	He	2365.752	32.8077	735808.66	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2248.45	31.1812	727119.52	0.0139	0.005074
Mn	55	3	He	2299.313	31.8864	727916.32	0.0139	0.005074
Fe	57	3	He	20955.224	13.3238	298825.80	0.0006	0.00609
Fe	57	3	He	20025.432	12.7329	296920.64	0.0006	0.00609
Fe	57	3	He	20362.438	12.9471	295561.07	0.0006	0.00609
Co	59	3	He	25.061	1.664	37319.08	0.0661	0.00621
Co	59	3	He	24.132	1.6025	37369.27	0.0661	0.00621
Co	59	3	He	24.766	1.6444	37539.98	0.0661	0.00621
Ni	60	3	He	29.724	0.3139	13837.13	0.01	0.01721
Ni	60	3	He	29.028	0.307	12936.33	0.01	0.01721
Ni	60	3	He	29.175	0.3084	13446.82	0.01	0.01721
Cu	63	3	He	0.737	0.0279	1230.09	0.0286	0.006793
Cu	63	3	He	0.782	0.0292	1230.11	0.0286	0.006793
Cu	63	3	He	0.7	0.0268	1170.10	0.0286	0.006793
Zn	66	3	He	83.298	0.2828	12465.87	0.0034	0.00316
Zn	66	3	He	87.309	0.2963	12485.80	0.0034	0.00316
Zn	66	3	He	82.587	0.2804	12225.65	0.0034	0.00316
As	75	3	He	1.333	0.0043	188.00	0.0026	0.0008231
As	75	3	He	1.115	0.0037	156.00	0.0026	0.0008231
As	75	3	He	1.635	0.005	220.00	0.0026	0.0008231
Sr	88	3	He	132.936	1.4032	55991.32	0.0105	0.001715
Sr	88	3	He	132.606	1.3997	56051.68	0.0105	0.001715
Sr	88	3	He	131.133	1.3842	56152.31	0.0105	0.001715
Mo	98	3	He	0.06	0.0025	100.00	0.0275	0.0008555
Mo	98	3	He	0.032	0.0017	70.00	0.0275	0.0008555
Mo	98	3	He	0.059	0.0025	100.01	0.0275	0.0008555
Ag	107	3	He	-0.007	0	0.00	0.0591	0.0004305
Ag	107	3	He	0.022	0.0017	70.00	0.0591	0.0004305
Ag	107	3	He	0.001	0.0005	20.00	0.0591	0.0004305
Cd	111	3	He	0.174	0.0012	48.00	0.0066	5.141E-05
Cd	111	3	He	0.113	0.0008	32.00	0.0066	5.141E-05
Cd	111	3	He	0.156	0.0011	44.00	0.0066	5.141E-05
Sn	120	3	He	-0.051	0.0175	700.04	0.0187	0.0185
Sn	120	3	He	-0.228	0.0142	570.04	0.0187	0.0185
Sn	120	3	He	-0.29	0.0131	530.03	0.0187	0.0185
Sb	121	3	He	0.076	0.0025	100.01	0.0183	0.00111
Sb	121	3	He	0.158	0.004	160.01	0.0183	0.00111
Sb	121	3	He	0.114	0.0032	130.00	0.0183	0.00111
Ba	137	3	He	66.305	0.3892	15529.22	0.0059	0.0007704
Ba	137	3	He	61.972	0.3638	14568.19	0.0059	0.0007704
Ba	137	3	He	61.679	0.3621	14688.40	0.0059	0.0007704
Tl	205	3	He	0.04	0.0023	300.02	0.0364	0.000808
Tl	205	3	He	0.092	0.0042	550.03	0.0364	0.000808
Tl	205	3	He	0.064	0.0031	410.03	0.0364	0.000808
Pb	208	3	He	0.195	0.0127	920.06	0.0487	0.003226
Pb	208	3	He	0.214	0.0137	970.07	0.0487	0.003226
Pb	208	3	He	0.192	0.0126	860.06	0.0487	0.003226
U	238	3	He	0.072	0.0043	570.03	0.0535	0.0004157
U	238	3	He	0.061	0.0037	490.02	0.0535	0.0004157
U	238	3	He	0.042	0.0027	350.02	0.0535	0.0004157
Sc	45	1	No Gas			1315876.07		
Sc	45	1	No Gas			1314732.32		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1281249.75		
Ge	72	1	No Gas			709704.60		
Ge	72	1	No Gas			708189.05		
Ge	72	1	No Gas			703897.41		
Sc	45	2	H2			87402.36		
Sc	45	2	H2			88126.48		
Sc	45	2	H2			87935.07		
Ge	72	2	H2			74534.40		
Ge	72	2	H2			71107.16		
Ge	72	2	H2			71911.06		
In	115	2	H2			186070.35		
In	115	2	H2			187214.55		
In	115	2	H2			188239.31		
Sc	45	3	He			22427.95		
Sc	45	3	He			23319.17		
Sc	45	3	He			22828.40		
Ge	72	3	He			44078.72		
Ge	72	3	He			42142.82		
Ge	72	3	He			43597.31		
In	115	3	He			39907.61		
In	115	3	He			40048.86		
In	115	3	He			40570.70		
Tb	159	3	He			178799.72		
Tb	159	3	He			177785.84		
Tb	159	3	He			178910.00		
Bi	209	3	He			132777.95		
Bi	209	3	He			132515.63		
Bi	209	3	He			130557.79		

Quantitation Report

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Sample Type	CCV
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

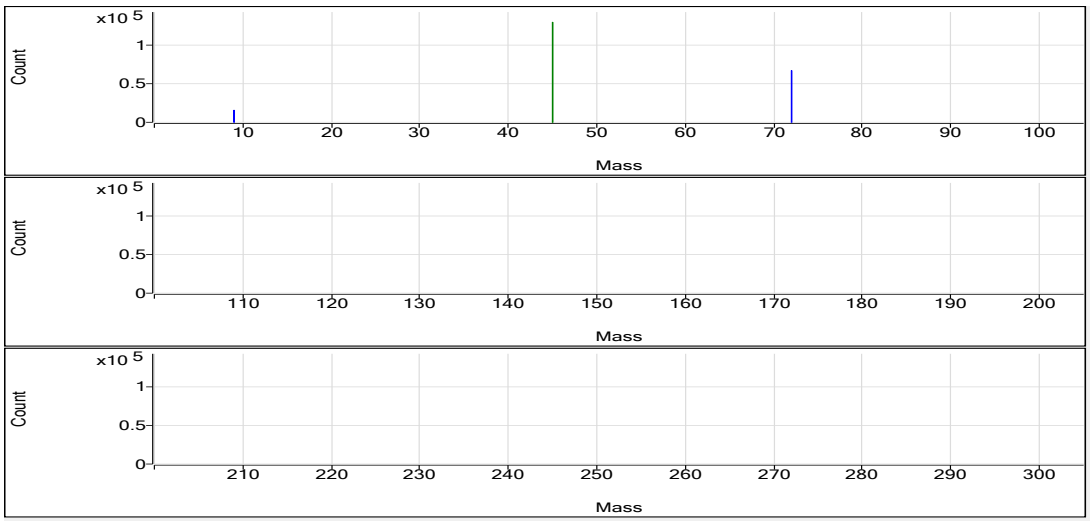
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.712	ppb	7.9	31866.64	0.0245	Pulse	0.5000	3
Se	78	115	H2	51.582	ppb	0.7	1984.36	0.0106	Pulse	1.5000	3
Na	23	45	He	5119.030	ppb	0.2	432376.69	18.9709	Pulse	0.1000	3
Mg	24	45	He	5126.411	ppb	0.8	212579.57	9.3272	Pulse	0.1000	3
Al	27	45	He	5115.948	ppb	0.7	64990.80	2.8516	Pulse	0.1000	3
K	39	45	He	5176.242	ppb	0.3	163236.07	7.1620	Pulse	0.1000	3
Ca	44	45	He	5012.619	ppb	0.5	8466.08	0.3715	Pulse	0.1000	3
Ti	47	45	He	5164.097	ppb	1.5	69007.50	3.0279	Pulse	0.1000	3
V	51	45	He	513.292	ppb	0.6	302931.35	13.2915	Pulse	0.5000	3
Cr	52	45	He	518.316	ppb	1.1	394749.75	17.3203	Pulse	0.1000	3
Mn	55	45	He	514.350	ppb	0.9	162655.63	7.1368	Pulse	0.1000	3
Fe	57	45	He	5097.243	ppb	1.3	73969.46	3.2456	Pulse	0.1000	3
Co	59	45	He	512.353	ppb	0.4	772586.21	33.8980	Pulse	0.1000	3
Ni	60	72	He	522.733	ppb	1.0	217972.98	5.2351	Pulse	0.1000	3
Cu	63	72	He	521.499	ppb	0.4	621969.69	14.9378	Pulse	0.1000	3
Zn	66	72	He	522.779	ppb	1.5	73209.84	1.7582	Pulse	0.1000	3
As	75	72	He	521.333	ppb	1.0	56096.50	1.3473	Pulse	0.5000	3
Sr	88	115	He	49.679	ppb	1.2	20391.95	0.5255	Pulse	0.1000	3
Mo	98	115	He	49.275	ppb	2.1	52625.84	1.3563	Pulse	0.1000	3
Ag	107	115	He	49.566	ppb	1.9	113672.72	2.9295	Pulse	0.1000	3
Cd	111	115	He	50.071	ppb	2.8	12876.65	0.3319	Pulse	0.5000	3
Sn	120	115	He	50.025	ppb	1.7	37076.93	0.9555	Pulse	0.1000	3
Sb	121	115	He	49.228	ppb	3.2	34998.39	0.9021	Pulse	0.1000	3
Ba	137	115	He	499.382	ppb	2.6	113528.05	2.9261	Pulse	0.1000	3
Tl	205	209	He	51.933	ppb	0.3	239503.21	1.8892	Pulse	0.1000	3
Pb	208	209	He	51.712	ppb	1.1	320000.54	2.5241	Pulse	0.1000	3
U	238	209	He	51.262	ppb	1.5	347650.22	2.7423	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1301582.27	2.0	97.5	Analog	0.1000	3
No Gas	Ge	72	673432.80	0.8	96.3	Pulse	0.1000	3
H2	Sc	45	88250.56	2.3	101.5	Pulse	0.1000	3
H2	Ge	72	68819.46	0.8	96.1	Pulse	0.1000	3
H2	In	115	187091.28	0.8	102.1	Pulse	0.1000	3
He	Sc	45	22791.71	0.7	99.1	Pulse	0.1000	3
He	Ge	72	41638.24	0.8	98.6	Pulse	0.1000	3
He	In	115	38809.64	1.6	99.7	Pulse	0.1000	3
He	Tb	159	175780.68	1.3	99.8	Pulse	0.1000	3
He	Bi	209	126778.95	0.4	98.9	Pulse	0.1000	3

No Gas



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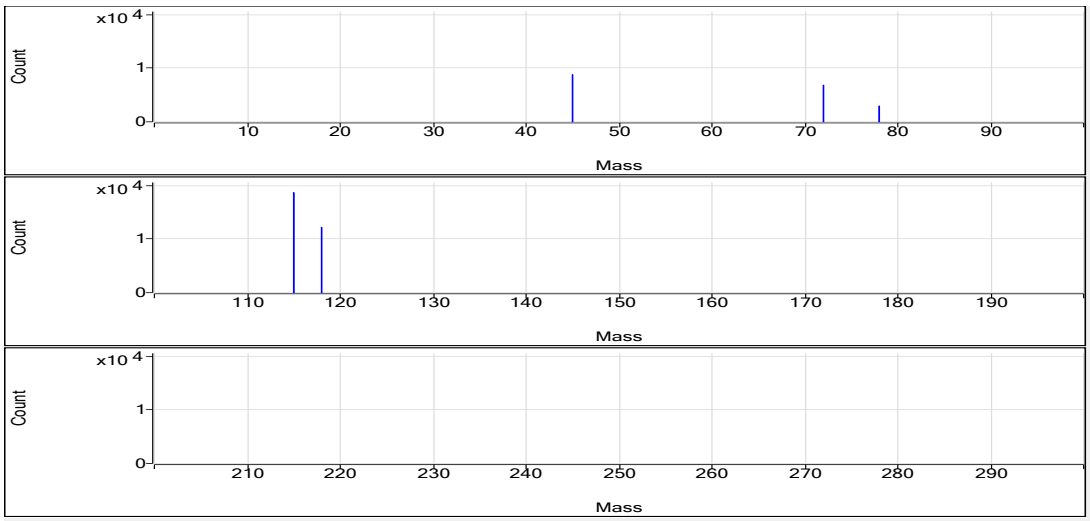
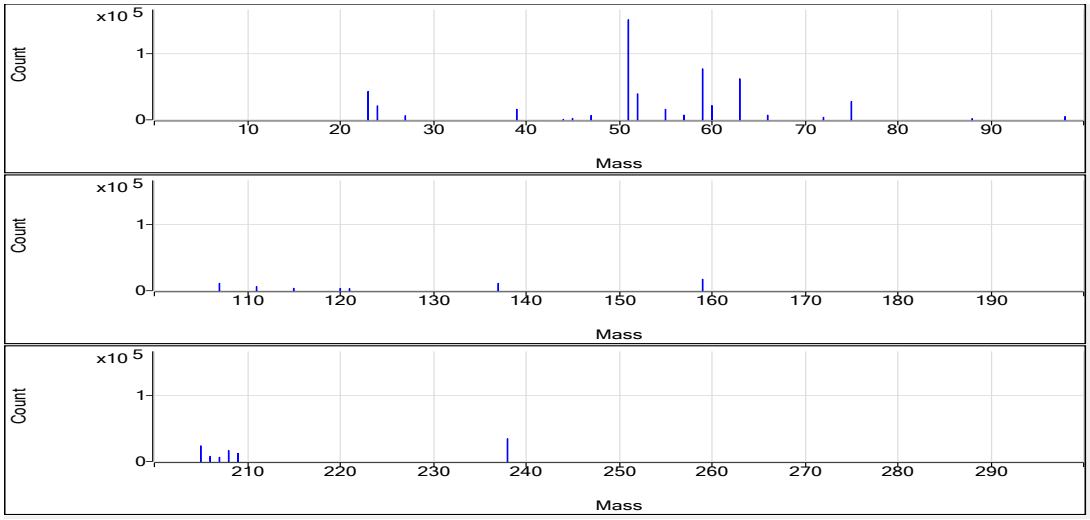


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	46.361	0.0224	29388.72	0.0005	1.901E-05
Be	9	1	No Gas	51.51	0.0249	31633.35	0.0005	1.901E-05
Be	9	1	No Gas	54.265	0.0262	34577.84	0.0005	1.901E-05
Se	78	2	H2	51.99	0.0107	1982.81	0.0002	7.279E-06
Se	78	2	H2	51.492	0.0106	1983.47	0.0002	7.279E-06
Se	78	2	H2	51.265	0.0105	1986.81	0.0002	7.279E-06
Na	23	3	He	5113.195	18.9501	433739.06	0.0036	0.7194
Na	23	3	He	5128.176	19.0035	429821.91	0.0036	0.7194
Na	23	3	He	5115.72	18.9591	433569.10	0.0036	0.7194
Mg	24	3	He	5145.595	9.3621	214284.39	0.0018	0.006791
Mg	24	3	He	5154.104	9.3776	212102.22	0.0018	0.006791
Mg	24	3	He	5079.535	9.242	211352.09	0.0018	0.006791
Al	27	3	He	5096.753	2.8409	65024.19	0.0006	0.002622
Al	27	3	He	5160.124	2.8762	65054.03	0.0006	0.002622
Al	27	3	He	5090.969	2.8377	64894.19	0.0006	0.002622
K	39	3	He	5195.741	7.1869	164497.34	0.0013	0.5579
K	39	3	He	5166.71	7.1499	161715.82	0.0013	0.5579
K	39	3	He	5166.274	7.1493	163495.05	0.0013	0.5579
Ca	44	3	He	5018.942	0.3719	8512.74	0.0001	0.004062
Ca	44	3	He	5031.357	0.3728	8432.73	0.0001	0.004062
Ca	44	3	He	4987.558	0.3696	8452.76	0.0001	0.004062
Ti	47	3	He	5184.472	3.0398	69576.89	0.0006	0.0002809
Ti	47	3	He	5226.753	3.0646	69315.41	0.0006	0.0002809
Ti	47	3	He	5081.066	2.9792	68130.21	0.0006	0.0002809
V	51	3	He	514.184	13.3146	304749.97	0.0259	0.01861
V	51	3	He	515.623	13.3518	301990.53	0.0259	0.01861
V	51	3	He	510.071	13.2082	302053.56	0.0259	0.01861
Cr	52	3	He	520.795	17.4027	398320.50	0.0332	0.1047
Cr	52	3	He	522.103	17.4461	394596.79	0.0332	0.1047
Cr	52	3	He	512.048	17.1122	391331.95	0.0332	0.1047
Mn	55	3	He	509	7.0627	161653.68	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	518.449	7.1937	162706.76	0.0139	0.005074
Mn	55	3	He	515.6	7.1542	163606.45	0.0139	0.005074
Fe	57	3	He	5131.419	3.2673	74782.88	0.0006	0.00609
Fe	57	3	He	5141.912	3.2739	74050.04	0.0006	0.00609
Fe	57	3	He	5018.397	3.1954	73075.45	0.0006	0.00609
Co	59	3	He	513.654	33.9841	777843.19	0.0661	0.00621
Co	59	3	He	513.609	33.9811	768583.74	0.0661	0.00621
Co	59	3	He	509.795	33.7288	771331.71	0.0661	0.00621
Ni	60	3	He	524.762	5.2554	219265.21	0.01	0.01721
Ni	60	3	He	517.056	5.1785	217094.66	0.01	0.01721
Ni	60	3	He	526.379	5.2715	217559.06	0.01	0.01721
Cu	63	3	He	519.492	14.8803	620833.35	0.0286	0.006793
Cu	63	3	He	520.956	14.9222	625575.23	0.0286	0.006793
Cu	63	3	He	524.049	15.0108	619500.50	0.0286	0.006793
Zn	66	3	He	531.752	1.7884	74613.90	0.0034	0.00316
Zn	66	3	He	516.201	1.7362	72783.98	0.0034	0.00316
Zn	66	3	He	520.385	1.7502	72231.65	0.0034	0.00316
As	75	3	He	524.467	1.3554	56549.02	0.0026	0.0008231
As	75	3	He	515.353	1.3318	55834.05	0.0026	0.0008231
As	75	3	He	524.178	1.3546	55906.44	0.0026	0.0008231
Sr	88	3	He	49.09	0.5192	20034.70	0.0105	0.001715
Sr	88	3	He	49.644	0.5251	20755.89	0.0105	0.001715
Sr	88	3	He	50.302	0.532	20385.27	0.0105	0.001715
Mo	98	3	He	49.498	1.3624	52568.84	0.0275	0.0008555
Mo	98	3	He	48.13	1.3248	52368.09	0.0275	0.0008555
Mo	98	3	He	50.197	1.3817	52940.58	0.0275	0.0008555
Ag	107	3	He	50.238	2.9693	114566.54	0.0591	0.0004305
Ag	107	3	He	48.516	2.8675	113346.85	0.0591	0.0004305
Ag	107	3	He	49.944	2.9519	113104.76	0.0591	0.0004305
Cd	111	3	He	50.682	0.3359	12962.05	0.0066	5.141E-05
Cd	111	3	He	48.494	0.3214	12705.84	0.0066	5.141E-05
Cd	111	3	He	51.037	0.3383	12962.05	0.0066	5.141E-05
Sn	120	3	He	50.583	0.966	37270.92	0.0187	0.0185
Sn	120	3	He	49.066	0.9376	37060.21	0.0187	0.0185
Sn	120	3	He	50.426	0.963	36899.67	0.0187	0.0185
Sb	121	3	He	48.871	0.8955	34553.74	0.0183	0.00111
Sb	121	3	He	47.841	0.8767	34654.14	0.0183	0.00111
Sb	121	3	He	50.972	0.934	35787.30	0.0183	0.00111
Ba	137	3	He	503.893	2.9525	113920.62	0.0059	0.0007704
Ba	137	3	He	484.627	2.8397	112247.12	0.0059	0.0007704
Ba	137	3	He	509.626	2.9861	114416.41	0.0059	0.0007704
Tl	205	3	He	52.109	1.8955	239204.98	0.0364	0.000808
Tl	205	3	He	51.884	1.8874	240193.39	0.0364	0.000808
Tl	205	3	He	51.806	1.8845	239111.27	0.0364	0.000808
Pb	208	3	He	52.327	2.5541	170739.74	0.0487	0.003226
Pb	208	3	He	51.563	2.5169	168602.91	0.0487	0.003226
Pb	208	3	He	51.247	2.5015	168722.54	0.0487	0.003226
U	238	3	He	52.091	2.7866	351653.63	0.0535	0.0004157
U	238	3	He	51.177	2.7377	348412.57	0.0535	0.0004157
U	238	3	He	50.517	2.7024	342884.45	0.0535	0.0004157
Sc	45	1	No Gas			1312880.76		
Sc	45	1	No Gas			1272006.07		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1319859.98		
Ge	72	1	No Gas			675250.22		
Ge	72	1	No Gas			667409.21		
Ge	72	1	No Gas			677638.97		
Sc	45	2	H2			90480.58		
Sc	45	2	H2			86567.06		
Sc	45	2	H2			87704.04		
Ge	72	2	H2			69187.63		
Ge	72	2	H2			68203.70		
Ge	72	2	H2			69067.05		
In	115	2	H2			185472.93		
In	115	2	H2			187328.24		
In	115	2	H2			188472.67		
Sc	45	3	He			22888.47		
Sc	45	3	He			22618.01		
Sc	45	3	He			22868.64		
Ge	72	3	He			41721.86		
Ge	72	3	He			41922.43		
Ge	72	3	He			41270.44		
In	115	3	He			38845.15		
In	115	3	He			39787.76		
In	115	3	He			38574.62		
Tb	159	3	He			174362.24		
Tb	159	3	He			178354.72		
Tb	159	3	He			174625.08		
Bi	209	3	He			126192.95		
Bi	209	3	He			127263.31		
Bi	209	3	He			126880.59		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23I19A00.b
Acq Time	9/19/2023 10:38:05 AM
Sample Name	CCB 4807280
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	9/19/2023 10:39:30 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

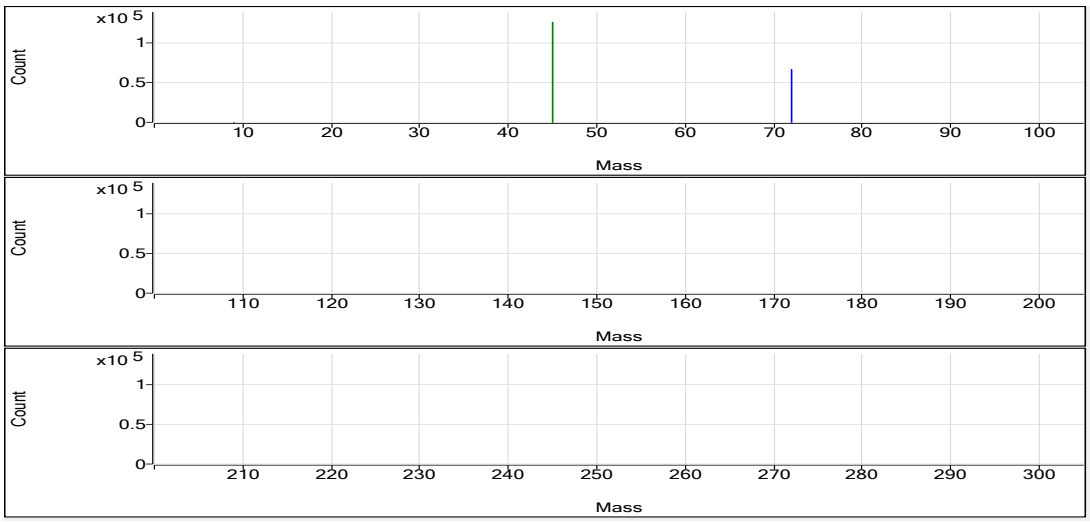
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.098	ppb	32.8	84.00	0.0001	Pulse	0.5000	3
Se	78	115	H2	0.070	ppb	131.2	4.00	0.0000	Pulse	1.5000	3
Na	23	45	He	-17.714	ppb	N/A	14707.79	0.6562	Pulse	0.1000	3
Mg	24	45	He	8.377	ppb	8.3	493.36	0.0220	Pulse	0.1000	3
Al	27	45	He	0.674	ppb	369.7	66.67	0.0030	Pulse	0.1000	3
K	39	45	He	20.633	ppb	246.1	13116.35	0.5842	Pulse	0.1000	3
Ca	44	45	He	35.716	ppb	23.1	150.01	0.0067	Pulse	0.1000	3
Ti	47	45	He	4.337	ppb	8.6	63.33	0.0028	Pulse	0.1000	3
V	51	45	He	0.191	ppb	9.8	528.01	0.0236	Pulse	0.5000	3
Cr	52	45	He	0.340	ppb	120.0	2600.33	0.1160	Pulse	0.1000	3
Mn	55	45	He	0.670	ppb	45.5	323.35	0.0144	Pulse	0.1000	3
Fe	57	45	He	6.327	ppb	22.5	226.68	0.0101	Pulse	0.1000	3
Co	59	45	He	0.148	ppb	38.3	360.02	0.0160	Pulse	0.1000	3
Ni	60	72	He	0.188	ppb	200.0	796.72	0.0191	Pulse	0.1000	3
Cu	63	72	He	0.184	ppb	25.8	503.36	0.0121	Pulse	0.1000	3
Zn	66	72	He	0.160	ppb	161.6	153.34	0.0037	Pulse	0.1000	3
As	75	72	He	0.314	ppb	11.5	68.00	0.0016	Pulse	0.5000	3
Sr	88	115	He	0.128	ppb	20.0	116.67	0.0031	Pulse	0.1000	3
Mo	98	115	He	0.090	ppb	33.8	126.67	0.0033	Pulse	0.1000	3
Ag	107	115	He	0.013	ppb	95.7	46.67	0.0012	Pulse	0.1000	3
Cd	111	115	He	0.021	ppb	21.3	7.33	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.098	ppb	155.4	773.38	0.0203	Pulse	0.1000	3
Sb	121	115	He	0.140	ppb	18.1	140.01	0.0037	Pulse	0.1000	3
Ba	137	115	He	0.093	ppb	49.5	50.00	0.0013	Pulse	0.1000	3
Tl	205	209	He	0.098	ppb	22.2	556.70	0.0044	Pulse	0.1000	3
Pb	208	209	He	0.010	ppb	74.7	470.03	0.0037	Pulse	0.1000	3
U	238	209	He	0.022	ppb	59.5	203.34	0.0016	Pulse	0.1000	3

ISTD Table:

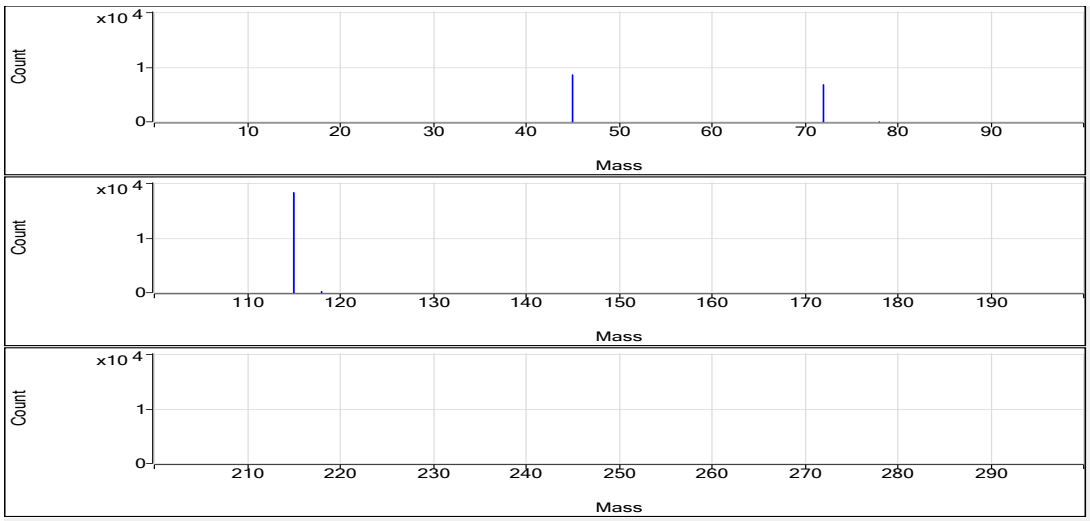
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1270493.00	0.7	95.2	Analog	0.1000	3
No Gas	Ge	72	669408.40	0.8	95.7	Pulse	0.1000	3
H2	Sc	45	86278.66	0.7	99.2	Pulse	0.1000	3
H2	Ge	72	68260.12	0.7	95.3	Pulse	0.1000	3
H2	In	115	183913.30	1.3	100.4	Pulse	0.1000	3
He	Sc	45	22421.28	2.7	97.5	Pulse	0.1000	3
He	Ge	72	41631.42	2.8	98.6	Pulse	0.1000	3
He	In	115	38050.66	1.1	97.7	Pulse	0.1000	3
He	Tb	159	171501.90	1.5	97.4	Pulse	0.1000	3
He	Bi	209	127257.46	2.3	99.2	Pulse	0.1000	3

No Gas

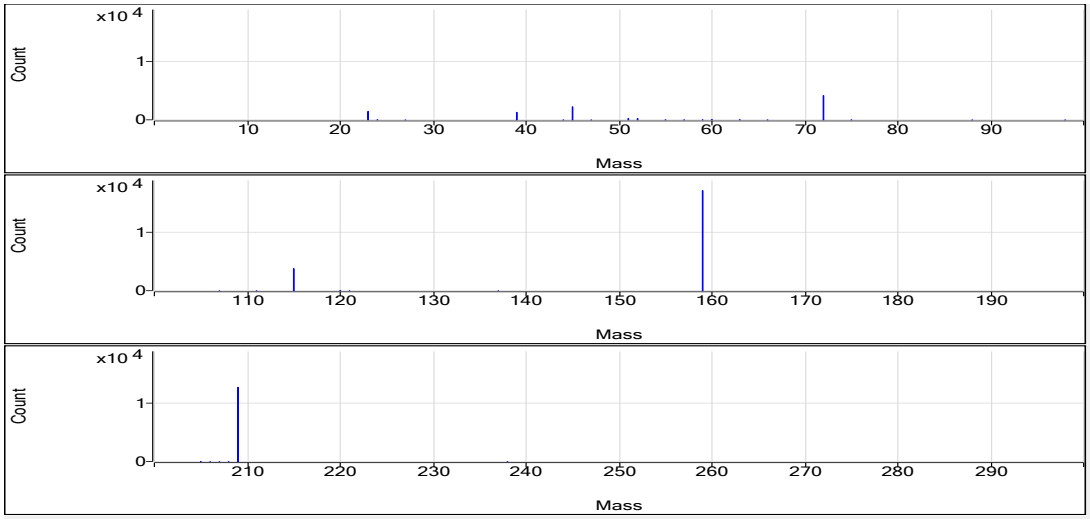


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.134	0.0001	106.00	0.0005	1.901E-05
Be	9	1	No Gas	0.087	0.0001	78.00	0.0005	1.901E-05
Be	9	1	No Gas	0.072	0.0001	68.00	0.0005	1.901E-05
Se	78	2	H2	0.036	0	2.67	0.0002	7.279E-06
Se	78	2	H2	0.173	0	8.00	0.0002	7.279E-06
Se	78	2	H2	0	0	1.33	0.0002	7.279E-06
Na	23	3	He	-27.005	0.6231	14217.37	0.0036	0.7194
Na	23	3	He	-11.57	0.6781	15398.47	0.0036	0.7194
Na	23	3	He	-14.568	0.6674	14507.52	0.0036	0.7194
Mg	24	3	He	7.594	0.0206	470.03	0.0018	0.006791
Mg	24	3	He	8.618	0.0225	510.03	0.0018	0.006791
Mg	24	3	He	8.917	0.023	500.03	0.0018	0.006791
Al	27	3	He	-0.774	0.0022	50.00	0.0006	0.002622
Al	27	3	He	-0.755	0.0022	50.00	0.0006	0.002622
Al	27	3	He	3.552	0.0046	100.00	0.0006	0.002622
K	39	3	He	78.601	0.6582	15018.20	0.0013	0.5579
K	39	3	He	-0.781	0.5569	12645.78	0.0013	0.5579
K	39	3	He	-15.92	0.5376	11685.06	0.0013	0.5579
Ca	44	3	He	40.251	0.007	160.01	0.0001	0.004062
Ca	44	3	He	40.715	0.007	160.01	0.0001	0.004062
Ca	44	3	He	26.181	0.006	130.01	0.0001	0.004062
Ti	47	3	He	4.753	0.0031	70.00	0.0006	0.0002809
Ti	47	3	He	4.028	0.0026	60.00	0.0006	0.0002809
Ti	47	3	He	4.229	0.0028	60.00	0.0006	0.0002809
V	51	3	He	0.172	0.0231	526.01	0.0259	0.01861
V	51	3	He	0.193	0.0236	536.01	0.0259	0.01861
V	51	3	He	0.209	0.024	522.01	0.0259	0.01861
Cr	52	3	He	-0.092	0.1017	2320.27	0.0332	0.1047
Cr	52	3	He	0.719	0.1286	2920.39	0.0332	0.1047
Cr	52	3	He	0.393	0.1178	2560.32	0.0332	0.1047
Mn	55	3	He	0.614	0.0136	310.01	0.0139	0.005074

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1	0.0189	430.02	0.0139	0.005074
Mn	55	3	He	0.397	0.0106	230.01	0.0139	0.005074
Fe	57	3	He	4.899	0.0092	210.01	0.0006	0.00609
Fe	57	3	He	7.74	0.011	250.01	0.0006	0.00609
Fe	57	3	He	6.343	0.0101	220.01	0.0006	0.00609
Co	59	3	He	0.158	0.0167	380.02	0.0661	0.00621
Co	59	3	He	0.199	0.0194	440.02	0.0661	0.00621
Co	59	3	He	0.087	0.012	260.01	0.0661	0.00621
Ni	60	3	He	0.337	0.0206	880.06	0.01	0.01721
Ni	60	3	He	0.466	0.0219	910.06	0.01	0.01721
Ni	60	3	He	-0.239	0.0148	600.03	0.01	0.01721
Cu	63	3	He	0.228	0.0133	570.03	0.0286	0.006793
Cu	63	3	He	0.191	0.0123	510.03	0.0286	0.006793
Cu	63	3	He	0.134	0.0106	430.03	0.0286	0.006793
Zn	66	3	He	0.033	0.0033	140.01	0.0034	0.00316
Zn	66	3	He	-0.011	0.0031	130.01	0.0034	0.00316
Zn	66	3	He	0.457	0.0047	190.01	0.0034	0.00316
As	75	3	He	0.279	0.0015	66.00	0.0026	0.0008231
As	75	3	He	0.314	0.0016	68.00	0.0026	0.0008231
As	75	3	He	0.351	0.0017	70.00	0.0026	0.0008231
Sr	88	3	He	0.114	0.0029	110.00	0.0105	0.001715
Sr	88	3	He	0.157	0.0034	130.01	0.0105	0.001715
Sr	88	3	He	0.112	0.0029	110.00	0.0105	0.001715
Mo	98	3	He	0.123	0.0042	160.01	0.0275	0.0008555
Mo	98	3	He	0.063	0.0026	100.00	0.0275	0.0008555
Mo	98	3	He	0.084	0.0032	120.00	0.0275	0.0008555
Ag	107	3	He	0.006	0.0008	30.00	0.0591	0.0004305
Ag	107	3	He	0.006	0.0008	30.00	0.0591	0.0004305
Ag	107	3	He	0.028	0.0021	80.00	0.0591	0.0004305
Cd	111	3	He	0.024	0.0002	8.00	0.0066	5.141E-05
Cd	111	3	He	0.024	0.0002	8.00	0.0066	5.141E-05
Cd	111	3	He	0.016	0.0002	6.00	0.0066	5.141E-05
Sn	120	3	He	0.259	0.0234	880.05	0.0187	0.0185
Sn	120	3	He	-0.045	0.0177	680.05	0.0187	0.0185
Sn	120	3	He	0.081	0.02	760.05	0.0187	0.0185
Sb	121	3	He	0.128	0.0034	130.01	0.0183	0.00111
Sb	121	3	He	0.124	0.0034	130.01	0.0183	0.00111
Sb	121	3	He	0.17	0.0042	160.01	0.0183	0.00111
Ba	137	3	He	0.14	0.0016	60.00	0.0059	0.0007704
Ba	137	3	He	0.09	0.0013	50.00	0.0059	0.0007704
Ba	137	3	He	0.048	0.0011	40.00	0.0059	0.0007704
Tl	205	3	He	0.106	0.0047	610.04	0.0364	0.000808
Tl	205	3	He	0.073	0.0035	440.03	0.0364	0.000808
Tl	205	3	He	0.115	0.005	620.04	0.0364	0.000808
Pb	208	3	He	0.011	0.0038	210.01	0.0487	0.003226
Pb	208	3	He	0.002	0.0033	170.01	0.0487	0.003226
Pb	208	3	He	0.016	0.004	210.01	0.0487	0.003226
U	238	3	He	0.027	0.0018	240.01	0.0535	0.0004157
U	238	3	He	0.032	0.0021	270.01	0.0535	0.0004157
U	238	3	He	0.007	0.0008	100.00	0.0535	0.0004157
Sc	45	1	No Gas			1269516.62		
Sc	45	1	No Gas			1279620.61		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1262341.78		
Ge	72	1	No Gas			673504.29		
Ge	72	1	No Gas			671583.35		
Ge	72	1	No Gas			663137.57		
Sc	45	2	H2			85701.80		
Sc	45	2	H2			86165.45		
Sc	45	2	H2			86968.72		
Ge	72	2	H2			68293.42		
Ge	72	2	H2			67790.68		
Ge	72	2	H2			68696.26		
In	115	2	H2			181694.72		
In	115	2	H2			186416.85		
In	115	2	H2			183628.34		
Sc	45	3	He			22818.47		
Sc	45	3	He			22708.32		
Sc	45	3	He			21737.04		
Ge	72	3	He			42784.56		
Ge	72	3	He			41621.31		
Ge	72	3	He			40488.39		
In	115	3	He			37691.73		
In	115	3	He			38524.04		
In	115	3	He			37952.45		
Tb	159	3	He			173678.30		
Tb	159	3	He			172064.26		
Tb	159	3	He			168763.14		
Bi	209	3	He			130465.69		
Bi	209	3	He			126587.77		
Bi	209	3	He			124718.92		

US EPA Tune Check Report

Operator Name	us19_usr_ins23851
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA_ICPMS.b
Acq. Date-Time	9/19/2023 6:17:02 AM
Report Comment	E08 Tune Report
Instrument Name	G8403A SG19504696

[No Gas]

Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	2800	28003.64			1.008	5.000
24	10.00	12399	123988.33			0.402	5.000
25	10.00	1695	16946.28			0.671	5.000
26	10.00	2592	25921.90			0.636	5.000
59	10.00	23883	238830.25			0.558	5.000
115	10.00	37923	379234.57			0.521	5.000
206	10.00	7923	79229.42			0.640	5.000
207	10.00	6947	69468.54			0.569	5.000
208	10.00	16542	165416.86			0.688	5.000

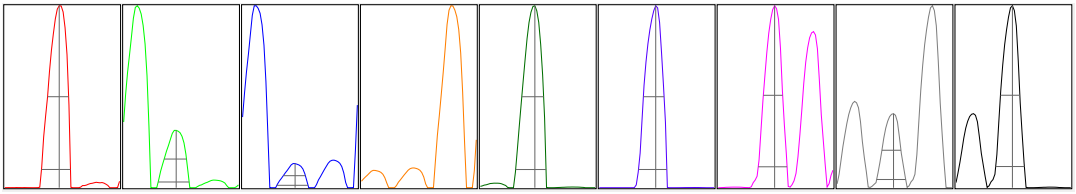
Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
9	2752	2810	2808	2827	2805
24	12318	12419	12431	12385	12440
25	1681	1684	1703	1700	1705
26	2586	2594	2578	2620	2583
59	23657	23870	23943	23959	23987
115	37589	37942	37945	38065	38076
206	7843	7944	7915	7933	7980
207	6887	6984	6932	6952	6980
208	16383	16508	16532	16592	16693

Integration Time [sec] 0.1

Resolution/Axis

US EPA Tune Check Report



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	5300.73	8.95	8.90 - 9.10	
24	23099.77	23.90	23.90 - 24.10	
25	3059.34	24.90	24.90 - 25.10	
26			25.90 - 26.10	
59	45053.72	58.95	58.90 - 59.10	
115	74637.84	115.00	114.90 - 115.10	
206	15868.52	206.00	205.90 - 206.10	
207	13612.99	207.00	206.90 - 207.10	
208	33451.83	208.00	207.90 - 208.10	

Mass	W-50%	W-10%	W-10% (Required)	W-10% (Flag)
9	0.54	0.745	0.900	
24	0.57	0.796	0.900	
25	0.57	0.802	0.900	
26			0.900	
59	0.56	0.781	0.900	
115	0.53	0.729	0.900	
206	0.50	0.741	0.900	
207	0.49	0.747	0.900	
208	0.50	0.737	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	235
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	1.05 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.40 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	10.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	11.6 V	Deflect	15.0 V
Extract 2	-250.0 V	Cell Entrance	-24 V	Plate Bias	-35 V
Omega Bias	-105 V	Cell Exit	-56 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.0 V

US EPA Tune Check Report

He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	190 V		

QP Parameters

Mass Gain	127	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	124	Axis Offset	-0.07		

Hardware Settings

Torch

Torch H	0.3 mm	Torch V	0.0 mm		

EM

Discriminator	3.4 mV	Analog HV	2180 V	Pulse HV	1684 V

Shipping and Receiving Documents

CHAIN OF CUSTODY RECORD

410-136864-01 Chain of Custody

Environmental (ELLE), 2425 New Holland Pike, Lancaster, PA, 17605-2425/ Barb Weyandt, Manager/ (717) 656-2300 x1576

Consultant:	TRC Engineers Inc (formerly Draper Aden Assoc)	Sample Site:	RFAAP, Radford, Virginia
Attn:	Janet C. Frazier	Location:	HWMU16
Address:	2200 South Main Street Suite 1 Blacksburg, Virginia 24060	Event:	3Q 2023 Annual GW Monitoring Event
Phone:	(540) 552-0444	DAA JN:	547076
Fax:	(540) 552-0291	Lab JN:	

Project Specific (PS) QC: YES as indicated — Sample Collection for Project Complete? YES

WB-12.75Y-02X-70-7513-5028

" - " - " - 11 7578-4238

Carrier:

Tracking Number:

Box 1: Matrix
SW Surface Water; GW Groundwater; L Leachate; S Soil; T Trip Blank; E Equipment Blank; P Product; O Other

Box 2: Preservative
A HCL; B HNO_3; C H_2SO_4; D $Na_2S_2O_3$; E NaOH; F ZnAc; G Other (Specify); H None

Box 3: Filtered/Unfiltered
F Filtered; U Unfiltered

Box 4: Sample Type
G Grab; C Composite

Box 5: Sample Container Type
P Plastic; AG Amber Glass; V VOA; CG Clear Glass

Invoice
Copy to Consultant: YES
Bill: CLIENT OTHER
Preserved and shipped on ice: YES

Box 4 - Sample Type	G	G	G	G	G	G	G
Box 3 - Filtered/Unfiltered	U	U	U	U	U	U	U
Required pH of Sample	<2	<2		<2	<2	<2	>12
Box 2 - Preservative	A	A	H	A	B	B	E
Box 5 - Sample Container Type	3-40mL VOA	3-40mL VOA	2-250mL AG	2-40mL VOA	1-500 mL P		1-500 mL P

Sample ID	Date: 2023	Time	Box 1: Matrix	Number of Bottles	8260D/5030C 25 ml purge volume	8250C/5030C 25 ml purge Dimethylether only CAS NO 115-10-6 permit	8260D/5030C 5 ml purge volume for 2-propanol ONLY	8270d/3510C (Semivolatiles)	Additional Aliquot 8260D/5030C 25 ml purge volume	ICP/MS 6020B/3005A (Metals-Total)	7470A (Mercury-Total)	9012B (Cyanide)	
16C1	7/27	1245	GW	12	X	X	X	X	X	X	X	X	Additional VOA Aliquot if dilution is required.
16MW8	7/21	1005	GW	10	X	X	X	X		X	X	X	
16MW9	7/27	1125	GW	12	X	X	X	X	X	X	X	X	Additional VOA aliquot if dilution is required.
16WC1A	7/27	0955	GW	30	X	X	X	X		X	X	X	USE FOR QC
16WDUP	7/27	1020	GW	10	X	X	X	X		X	X	X	
16WC1B	7/26	1205	GW	10	X	X	X	X		X	X	X	
16-2	7/26	0930	GW	6	X	X		X		X	X		
16-3	7/26	~~0930~~ 1115	GW	6	X	X		X		X	X		sample time is 1115
16-5	7/26	0745	GW	6	X	X		X		X	X		
16WC2B	7/26	0840	GW	6	X	X		X		X	X		
16SPRING	7/26	0800	GW	6	X	X		X		X	X		
Trip Blank 1	7/26	—	T	2	X	X	X						one trip blank required per day per permit. Delete if not required.
Trip Blank 2	7/26	—	T	2	X	X	X						
Trip Blank 3	—	—	T	2	X	X	X						

GENERAL NOTES:
1. Report results to detection limit, with J flags, for italicized wells.
2. Report results at or greater than QL for non-italicized wells.
3. VELAP accreditation required.
4. FULL/Comprehensive Deliverable with EDD and ERIS EDD.
5. For 2- propanol report to QL 100 ug/l and DL of 50 ug/l.
6. See Atached target analytes. Report to these Permit Specified QLs and DLs. Per ELLE - A single 25 ml purge volume analysis will be performed where requested
However, lab to report 8260D for all 25 ml purge requested analytes except for Dimethylether to be reported as 8260C (VELAP), 2-propanol to be analyzed via 5 ml purge as noted.

* Barb—report preliminary results. JVF 7/25/23

Clients Special Instructions:

Received by lab in Good Condition ____ Yes ____ No Custody Seal Intact ____ Yes ____ No Temperature upon arrival ____ Received on Ice ____ Yes ____ No
Describe problems, if any:

0.9/0.9 1.8/1.8

Sampler Name (Print): Ken Coddington	Date: 7/26/23	#1 Relinquished by (Signature):	Date: 7/27/23	#2 Relinquished by (Signature):	Date:	Sample Storage
Sampler Signature:	Time: 0700	Company Name: DAA/TRC	Time: 1700	Company Name:	Time:	Time Requested:
Sampler Name (Print): Alexa Prater	Date: 7/26/23	#1 Received by (Signature):	Date:	#2 Received by (Signature):	Date: 7/28/23	30 DYS ORG/8 MTHS INORG
Sampler Signature:	Time: 0700	Company Name:	Time:	Company Name: ELLET	Time: 0925	AEH

09/19/2023

410-136864-02 Chain of Custody

HWMU16
Radford Army Ammunition Plant
Annual Appendix IX Groundwater Monitoring Event

JCF 7/25/23

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ANALYTICAL METHOD: 8260D/5030C
TYPE METHOD: GCMS
CLASS: VOLATILE

THIS APPLIES TO WELLS 16-2, 16-3, 16-5, 16WC2B, 16SPRING ✓

1.	Carbon tetrachloride	56-23-5	1
2.	chloromethane ; (Methyl chloride)	74-87-3	1
3.	2-butanone (methyl ethyl ketone - MEK)	78-93-3	10
4.	1,1-dichloroethane	75-34-3	1
5.	Dichlorodifluoromethane	75-71-8	1
6.	Ethylbenzene	100-41-4	1
7.	Tetrachloroethene	127-18-4	1
8.	Toluene (methyl benzene)	108-88-3	1
9.	1,1,1-trichloroethane (methyl chloroform)	71-55-6	1
10.	Trichloroethene	79-01-6	1
11.	Trichlorofluoromethane (CFC-11)	75-69-4	1
12.	Xylenes (total)	1330-20-7	3
13	Chloroethane	75-00-3	1
14	Diethyl ether	60-29-7	12.5-report to 10 ug/l due to rounding issues
15	Dimethyl ether	115-10-6	12.5- report to 10 due to rounding issues
16	Methylene chloride	75-09-2	1
17	1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1
18	Benzene	71-43-2	1
19	1,1-Dichloroethene	75-35-4	1
20	Tetrahydrofuran		25
21	Vinyl chloride		1

Notes
13-16 added 10/03. JCF
Revised 10/31/03 JCF
17 added 0704. Revised 7/28/2004
10/2008 JCF
18 added 04 2011. JCF
19 added 04 2014. KPO, location 16-1 removed 2014
20 added 04 2016 JCF
21 added 8-2020 JCF

Current as of 2021 Permit Mod. JCF 9-13-2021

OK JCF 7/25/23

Report to at or above the QL for these wells and analytes. JCF 9-13-2021 ✓

25 ml purge volume

t:\environmental\bbg\databases\raap\sample event set up\semi-annual events\hwmu-16\hwmu16-target analtye list-annual rev 9-2021.doc

page 3/17

ANALYTICAL METHOD: 8270D/3510C
TYPE METHOD: GCMS
CLASS: SEMIVOLATILE

THIS APPLIES TO WELLS 16-2, 16-3, 16-5, 16WC2B, 16SPRING ✓

No.	PARAMETER	CAS RN	Required LOQ (µg/l)
1.	2,4-dinitrotoluene	121-14-2	10
2.	2,6-dinitrotoluene	606-20-2	10
3.	Diethylphthate		5

Report to at or above the QL.
10/13- diethylphthate added 10/13.

Current as of 2021 Permit Mod. JCF 9-13-2021

Report to at or above the QL for these wells and analytes. JCF 9-13-2021 ✓

JCF 7/25/23

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ANALYTICAL METHOD: SEE BELOW
TYPE METHOD: SEE BELOW
CLASS: TOTAL

Method SW 846-6020B/3005A (ICP/MS)

THIS APPLIES TO WELLS 16-2, 16-3,16-5, 16WC2B, 16SPRING

No.	PARAMETER	CAS RN	Required QL/ LOQ (µg/l)
1.	Arsenic	7440-38-2	10
2.	Barium	7440-39-3	10
3.	Beryllium	7440-41-7	1
4.	Cadmium	7440-43-9	1
5.	Chromium	7440-47-3	5
6.	Cobalt	7440-48-4	5
7.	Copper	7440-50-8	5
8.	Lead	7440-92-1	3
9.	Nickel	7440-02-0	10
10.	Vanadium	7440-62-2	10
11.	Zinc	7440-66-6	30

Report to at or above the QL.

Updated 4/8/2013 jcf
Zinc QL updated 10 2016 – JCF
Current as of 2021 Permit Mod. JCF 9-13-2021

OK JCF 7/23/25

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ANALYTICAL METHOD: 7470A

THIS APPLIES TO ALL WELLS AND QC

	Method SW 7470A/CVAA	CAS#	Required LOQ
1	Mercury	7439-97-6	2 / 0.2 ug/l

Report to permit DL (0.2 ug/l) for 16C1, 16MW8, 16MW9, 16WC1A, 16WDUP, 16WC1B, QC. (Appendix IX wells)-jcf 9-13-2021 JCF 7/25/23

Report to at or above QL for remaining wells. jcf 9-13-2021 JCF 7/25/23

page 4/17

ANALYTICAL METHOD: 9012B
TYPE METHOD: CLO
CLASS: CYANIDE

THIS APPLIES TO 16C1, 16MW8, 16MW9,16WC1A, 16WDUP, 16WC1B AND QC

No.	PARAMETER	CAS RN	Required LOQ/DL (µg/l)
1	Cyanide	57-12-5	20 / 5

These are Appendix IX wells. Report estimated results.

Current as of 2021 Permit Mod. JCF 9-13-2021

OK JCF 7/25/23

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ANALYTICAL METHOD: 8260D/ 5030C
GCMS/ Volatile

THIS APPLIES TO WELLS 16C1, 16MW8, 16MW9,16WC1A, 16WDUP, 16WC1B & QC

SEE attached list. Report only analytes.

For these wells and analytes, report to permit MDL with J flag.

* Note- 8260C/5030C 25 ml purge Dimethylether only CAS N0 115-10-6 permit limits are QL: 12.5 ug/l and MDL: 1.11 ug/l- However, please report to 10 ug/l due to rounding issues. (instead of 12.5 ug/l) JVR 7-19-23

\# For 2-propanol report to QL 100 ug/l and DL at 50 ug/l. (5ml purge) JVR 7/25/23

JCF 7-19-23

* nok addition of Chloro methane + chloroethane (page 4/8 / page 13/17) JVR 7/25/23

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ANALYTICAL METHOD: 8270E/ GCMS/ Semivolatile
THIS APPLIES TO WELLS 16C1, 16MW8, 16MW9,16WC1A, 16WDUP, 16WC1B & QC

SEE attached list. Report only analytes.

Report diethylphthalate to 5 ug/l to be consistent with routine semiannual limit. JCF 7-19-23

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INORGANICS

THIS APPLIES TO WELLS 16C1, 16MW8, 16MW9,16WC1A, 16WDUP, 16WC1B & QC

Report to QL, DL listed below and provide estimated results ("J"). ✓

6020B JVR 7/25/23

HWMU 16

Analyte	Method Ref	LOQ/QL	LOD/ MDL	CAS#	Units
ANTIMONY	6020A	2	0.6	7440-36-0	UG/L
ARSENIC	6020A	10	2	7440-38-2	UG/L
BARIUM	6020A	10	1.3	7440-39-3	UG/L
BERYLLIUM	6020A	1	0.3	7440-41-7	UG/L
CADMIUM	6020A	1	0.2	7440-43-9	UG/L
CHROMIUM	6020A	5	1	7440-47-3	UG/L
COBALT	6020A	5	1	7440-48-4	UG/L
COPPER	6020A	5	1.7	7440-50-8	UG/L
LEAD	6020A	3	1	7439-92-1	UG/L
NICKEL	6020A	10	2	7440-02-0	UG/L
SELENIUM	6020A	10	3	7782-49-2	UG/L
SILVER	6020A	2	0.3	7440-22-4	UG/L
THALLIUM	6020A	1	0.2	7440-28-0	UG/L
VANADIUM	6020A	10	2.5	7440-62-2	UG/L
ZINC	6020A	30	7.3	7440-66-6	UG/L

15 analytes

These are Appendix IX wells. Report to permit MDL with estimated results. ✓

Rev 2021 Class 1 Permit Mod -JCF

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7-25-2023

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Barb

- See notes on COC
- report the analytes on attached list in Yellow highlight. note isofrole + Pronamide no longer w/ ELE as lab could not meet Permit MDL. Report to Permit MDL.
- report preliminary data so we can confirm project QL/dL is met.

HAZARDOUS WASTE MANAGEMENT
POST-CLOSURE CARE PERMIT

ATTACHMENT 1

APPENDIX I

ANNUAL GROUNDWATER SAMPLING CONSTITUENT LIST

(APPENDIX IX 40 CFR PART 264)

APPENDIX IX METHOD/DETECTION LIMITS

Analyte	CAS Number	METHOD	PQL (ug/l)	MDL (ug/1)
1,1,1,2-Tetrachloroethane	630-20-6	8260	1	0.3
1,1,1 -Trichloroethane	71-55-6	8260	1	0.3
1,1,2,2-Tetrachloroethane	79-34-5	8260	1	0.3
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	8260	1	0.4
1,1,2-Trichloroethane	79-00-5	8260	1	0.3
1,1 -Dichloroethane	75-34-3	8260	1	0.3
1,1 -Dichloroethene	75-35-4	8260	1	0.3
1,2,3-Trichloropropane	96-18-4	8260	1	0.3
1,2,4,5-Tetrachlorobenzene	95-94-3	8270	10	2
1,2,4-Trichlorobenzene	120-82-1	8260	1	0.6
1,2,4-Trichlorobenzene (dup-8260)	120-82-1	8270	10	0.43
1,2-dibromo-3-chloropropane	96-12-8	8260	1	0.4
1,2-dibromoethane	106-93-4	8260	1	0.3
1,2-Dichlorobenzene	95-50-1	8260	1	0.4
1,2-Dichlorobenzene (dup 8260)	95-50-1	8270	10	0.48
1,2-Dichloroethane	107-06-2	8260	1	0.3
1,2-Dichloropropane	78-87-5	8260	1	0.4
1,3-Dichlorobenzene	541-73-1	8260	1	0.4
1,3-Dichlorobenzene (dup 8260)	541-73-1	8270	10	0.52
1,3-Dichloropropane	142-28-9	8260	1	0.4
1,3-Dinitrobenzene	99-65-0	8270	10	2.3
1,4-Dichlorobenzene	106-46-7	8260	1	0.4
1,4-Dichlorobenzene (dup 8260)	106-46-7	8270	10	0.37
1,4-Dioxane	123-91-1	8260	200	45.48
1,4-Napthoquinone	130-15-4	8270	10	3.0
1 -Naphthylamine	134-32-7	8270	10	3.0
2,3,4,6-Tetrachlorophenol	58-90-2	8270	10	1.8
2,4,5-Trichlorophenol	95-95-4	8270	10	2.0
2,4,6-Trichlorophenol	88-06-2	8270	10	1.8
2,4-Dichlorophenol	120-83-2	8270	10	1.59
2,4-Dimethylphenol	105-67-9	8270	10	3.0

Analyte	CAS Number	METHOD	PQL (ug/l)	MDL (ug/l)
2,4-Dinitrophenol	51-28-5	8270	10	6.2
2,4-Dinitrotoluene	121-14-2	8270	10	2.1
2,6-Dichlorophenol	87-65-0	8270	10	1.4
2,6-Dinitrotoluene	606-20-2	8270	10	2.1
2-Acetylaminofluorene	53-96-3	8270	10	3.0
2-Butanone	78-93-3	8260	10	1.7
2-Chloronaphthalene	91-58-7	8270	10	0.5
2-Chlorophenol	95-57-8	8270	10	1.0
2-Hexanone	591-78-6	8260	10	2.0
2-Methylnaphthalene	91-57-6	8270	10	0.29
2-Naphthylamine	91-59-8	8270	10	7.0
2-Nitroaniline	88-74-4	8270	10	1.0
2-Nitrophenol	88-75-5	8270	10	1.27
2-Picoline	109-06-8	8270	10	1.0
2-Propanol - 5 ml purge	67-63-0	8260	100	50
3,3 `-Dichlorobenzidine	91-94-1	8270	10	3.0
3,3 `-Dimethylbenzidine	119-93-7	8270	10	3.3
3-Methylcholanthrene	56-49-5	8270	10	1.0
3-Nitroaniline	99-09-2	8270	10	2.0
4,6-Dinitro-2-methylphenol	534-52-1	8270	10	3.0
4-Aminobiphenyl	92-67-1	8270	10	3.0
4-Bromophenyl phenyl ether	101-55-3	8270	10	0.56
4-Chloro-3-methylphenol	59-50-7	8270	10	1.0
4-Chloroaniline	106-47-8	8270	10	3.3
4-Chlorophenyl phenyl ether	7005-72-3	8270	10	0.6
4-Methyl-2-pentanone	108-10-1	8260	10	2.0
4-Nitroaniline	106-44-5	8270	10	1.5
4-Nitrophenol	100-01-6	8270	10	3.0
4-Nitroquinoline-1 -oxide	100-02-7	8270	50	5
5-Nitro-o-toluidine	56-57-5	8270	10	2.0
7,12-Dimethylbenz(a)anthracene	99-55-8	8270	10	1.8
a,a-Dimethylphenethylamine	57-97-6	8270	50	5
Acenaphthene	122-09-8	8270	10	0.35

Analyte	CAS Number	METHOD	PQL(ug/l)	MDL(ug/l)
Acenaphthylene	208-96-8	8270	10	0.48
Acetone	67-64-1	8260	10	2.0
Acetonitrile	75-05-8	8260	100	31.67
Acetophenone	98-86-2	8270	10	1.0
Acrolein	107-02-8	8260	10	3.4
Acrylonitrile	107-13-1	8260	10	1.1
Allyl chloride/ (3-Chloropropene)	107-05-1	8260	10	1.0
Aniline	62-53-3	8270	10	1.1
Anthracene	120-12-7	8270	10	0.52
Antimony	7440-36-0	6020 /6010	2	0.6
Aramite	140-57-8	8270	10	3.7
Arsenic	7440-38-2	6020/ 6010	10	2
Barium	7440-39-3	6020/ 6010	10	1.3
Benzene	71-43-2	8260	1	0.3
Benzo(a)anthracene	56-55-3	8270	10	0.45
Benzo(a)pyrene	50-32-8	8270	10	1.5
Benzo(b)fluoranthene	205-99-2	8270	10	1.2
Benzo(g,h,i)perylene	191-24-2	8270	10	0.42
Benzo(k)fluoranthene	207-08-9	8270	10	1.6
Benzyl alcohol	100-51-6	8270	10	3.0
Beryllium	7440-41-7	6020/ 6010	1	0.3
Bis(2-chlorethoxy)methane	111-91-1	8270	1	0.5
Bis(2-chloroethyl)ether	111-44-4	8270	1	0.5
Bis(2-chloroisopropyl)ether	108-60-1	8270	10	0.6
Bis(2-ethylhexyl)phthalate	117-81-7	8270	10	2.0
Bromodichloromethane	75-27-4	8260	1	0.3
Bromoform	75-25-2	8260	1	0.4
Bromomethane	74-83-9	8260	1	0.542
Butyl benzyl phthalate	85-68-7	8270	10	0.7
Cadmium	7440-43-9	6020/6010	1	0.2
Carbon disulfide	75-15-0	8260	10	0.4
Chloroethane (required as compliance well not App IX		8260	1	
Chloromethane (required as compliance well not App IX		8260	1	
Carbon tetrachloride	56-23-5	8260	1	0.3
Chlorobenzilate	510-15-6	8270	10	3.0

Analyte	CAS Number	METHOD	PQL(ug/l)	MDL(ug/l)
Chloroform	67-66-3	8260	1	0.3
Chloroprene/ (2-Chloro-1,3-butadiene	126-99-8	8260	10	0.46
Chromium	7440-47-3	6020/6010	5	1.0
Chrysene	218-01-9	8270	10	0.31
Cobalt	7440-48-4	6020/6010	5	1.0
Copper	7440-50-8	6020/6010	5	1.7
Cyanide	57-12-5	9010	20	5
Diallate	2303-16-4	8270	10	3.0
Dibenzo(a,h)anthracene	53-70-3	8270	10	0.38
Dibenzofuran	132-64-9	8270	10	0.6
Dibromochloromethane	124-48-1	8260	1	0.4
Dibromomethane/ (methylene bromide)	74-95-3	8260	1	0.3
Dichlorodifluoromethane	75-71-8	8260	1	0.4
Diethyl ether/ (ethyl ether)	60-29-7	8260	12.5	1.11
Diethyl phthalate	84-66-2	8270	10	2.0
Dimethoate	60-51-5	8270	10	3.0
Dimethyl ether (8260C)	115-10-6	8260	12.5	1.11
Dimethyl phthalate – GEL 1/0.3	131-11-3	8270	10	0.5
Di-n-butyl phthalate	84-74-2	8270	10	1.8
Di-n-octyl phthalate-GEL 1/0.3	117-84-0	8270	10	0.8
Diphenylamine (as n-nitrosodiphenylamine	86-30-6	8270	10	0.58
Disulfoton	298-04-4	8270	10	3.0
Ethyl methacrylate	97-63-2	8260	10	0.81
Ethyl methacrylate (DUP	97-63-2	8270	10	0.2
Ethyl methanesulfonate	62-50-0	8270	10	1.1
Ethylbenzene	100-41-4	8260	1	0.3
Famphur	52-85-7	8270	10	5.0
Fluoranthene	206-44-0	8270	10	0.42
Fluorene	86-73-7	8270	10	0.38

Analyte	CAS Number	METHOD	PQL (ug/I)	MDL (ug/I)
Heaxachloroethane	67-72-1	8260/8270	10	0.4
Hexachlorobenzene	118-74-1	8270	10	0.87
Hexachlorobutadiene	87-68-3	8260	1	0.4
Hexachlorocyclopentadiene	77-47-4	8270	10	3.0
Hexachlorophene – GEL 500/167	70-30-4	8270	500	185
Hexachloropropene	1888-71-7	8270	10	2
Indeno(1 ,2,3-cd)pyrene	193-39-5	8270	10	0.15
Iodomethane/ (methyl iodide)	74-88-4	8260	10	0.58
Isobutyl alcohol	78-83-1	8260	200	11.6
Isodrin	465-73-6	8270	10	1.1
Isophorone	78-59-1	8270	10	0.5
Isosafrole (Pace WC -)	120-58-1	8270	10	1.6
Kepone	143-50-0	8270	50	25
Lead	7439-92-1	6020/6010	3	1.0
m,p-Cresol	106-44-5	8270	20	2.47
m,p-Xylene	179601-23-1	8260	2	0.4
Mercury	7439-97-6	7470	2	0.2
Methacrylonitrile	126-98-7	8260	100	9.75
Methapyrilene	91-80-5	8270	10	3.0
Methyl methacrylate	80-62-6	8260	10	3.58
Methyl methanesulfonate	66-27-3	8270	10	1.0
Methyl parathion	298-00-0	8270	10	3.2
Methylene chloride	75-09-2	8260	1	0.7
Naphthalene	91-20-3	8260	1	0.4
Nickel	7440-02-0	6020/6010	10	2.0
Nitrobenzene	98-95-3	8270	10	0.6
N-Nitrosodiethylamine	55-18-5	8270	10	3.0
N-Nitrosodimethylamine	62-75-9	8270	10	2.0
N-Nitroso-di-n-butylamine	924-16-3	8270	10	3.0
N-Nitrosodi-n-propylamine	621-64-7	8270	10	0.5
N-Nitrosodiphenylamine (as diphenylamine)	86-30-6	8270	10	0.58
n-Nitrosomethylethylamine	10595-95-6	8270	10	1.0

Analyte	CAS Number	METHOD	PQL(ug /I)	MDL (ug/1)
N-Nitrosomorpholine	59-89-2	8270	10	3.0
N-Nitrosopiperidine	100-75-4	8270	10	1.1
N-Nitrosopyrrolidine	930-55-2	8270	10	0.5
o,o,o-Triethylphosphorothioate	126-68-1	8270	10	2.6
o,o-Diethyl-o-2-pyrazinyl phosphorothioate/ (Thionazin)	297-97-2	8270	10	2.4
o-Cresol/ (2-methylphenol)	95-48-7	8270	10	0.96
o-Toluidine	95-53-4	8270	10	4.0
o-Xylene	95-47-6	8260	1	0.4
Parathion/ (Ethyl parathion)	56-38-2	8270	10	3.0
p-Dimethylaminoazobenzene	60-11-7	8270	10	3.0
Pentachlorobenzene	608-93-5	8270	10	1.6
Pentachloroethane	76-01-7	8260	10	1.7
Pentachloroethane (DUP)	76-01-7	8270	10	2.7
Pentachloronitrobenzene (PACE W.Columbia – 10/1)	82-68-8	8270	10	1.0
Pentachlorophenol	87-86-5	8270	10	3.0
Phenacetin	62-44-2	8270	10	1.4
Phenanthrene	85-01-8	8270	10	0.52
Phenol	108-95-2	8270	10	0.77
Phorate	298-02-2	8270	10	2.5
p-Phenylenediamine	106-50-3	8270	150	26.4
Pronamide (pace WC)	23950-58-5	8270	10	1.5
Propionitrile	107-12-0	8260	100	10.22
Pyrene	129-00-0	8270	10	0.41
Pyridine	110-86-1	8270	10	2.0
Safrole	94-59-7	8270	10	2.2
Selenium	7782-49-2	6020/6010	10	3.0
Silver	7440-22-4	6020/6010	2	0.3
Styrene	100-42-5	8260	1	0.3
Sulfotep	3689-24-5	8270	10	2.4
sym-Trinitrobenzene (1,3.5-trinitrobenzene)	99-35-4	8270	10	3.0
Tetrachloroethene	127-18-4	8260	1	0.3
Tetrahydrofuran	109-99-9	8260	25	2
Thallium	7440-28-0	6020/6010	1	0.2
Toluene	108-88-3	8260	1	0.3

Analyte	CAS Number	METHOD	PQL (ug/l)	MDL (ug/l)
trans-1,2-Dichloroethene	156-60-5	8260	1	0.3
trans-1,3-Dichloropropene	10061-02-6	8260	1	0.4
trans-1,4-Dichloro-2-butene	110-57-6	8260	10	1.5
Trichloroethene	79-01-6	8260	1	0.3
Trichlorofluoromethane	75-69-4	8260	1	0.4
Vanadium	7440-62-2	6020/6010	10	2.5
Vinyl acetate	108-05-4	8260	10	3.29
Vinyl chloride	75-01-4	8260	1	0.2
Xylenes, Total	1330-20-7	8260	3	0.4
Zinc	7440-66-6	6020/6010	30	7.3

Notes:
ug/l = micrograms per liter
PQL = Practical Quantitation Limit
MDL = Method Detection Limit
CAS = Chemical Abstracts Service Registry Number

Purple – GEL
Yellow – ELLE
Blue – Eurofins Test America- Canton
Pace – West Columbia – moved Isofrole and pronamide from ELLE to Paces WC

VOCs – ELLE and ETA
SVOCs – ELLE, TA, GEL, PACE WC….Final 7-25-23 JCF

Pace 12/17
JCF 7/25/23

Login Sample Receipt Checklist

Client: TRC, Engineers, Inc.

Job Number: 410-136864-3

Login Number: 136864

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 1

Creator: Hess, Anna

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable (</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	True	

Sample Preservation Checks (performed by the laboratory)

Question	Answer	Comment
Did the sample containers checked meet expected preservation conditions?	False	Refer to Job Narrative for details.

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Janet Frazier
TRC, Engineers, Inc.
2200 South Main Street
Suite A
Blacksburg VA 24060

Generated 10/27/2023 4:48 AM

JOB DESCRIPTION

HWMU 16 – Verification Event

JOB NUMBER

410-147656-1

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster PA 17601

See page two for job notes and contact information.

myEOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization

Barb Weyandt

Generated
10/27/2023 4:48 AM

Authorized for release by
Barbara Weyandt, Project Manager
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Designee for
Barbara A Weyandt, Project Manager
Barbara.Weyandt@et.eurofinsus.com
717 556-7264

Eurofins Lancaster Laboratories Environment Testing, LLC

Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.
· QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
· Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
· Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job Narrative
410-147656-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 10/19/2023 9:50 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.2°C

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Detection Summary

Client: TRC, Engineers, Inc.
Job ID: 410-147656-1
Project/Site: HWMU 16 – Verification Event

Client Sample ID: 16WC1B
Lab Sample ID: 410-147656-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Silver	0.59	J	2.0	0.30	ug/L	1		6020B	Total Recoverable

Client Sample ID: 16DUP2
Lab Sample ID: 410-147656-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Silver	0.62	J	2.0	0.30	ug/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: 16WC1B — Lab Sample ID: 410-147656-1

Date Collected: 10/18/23 07:35 **Matrix: Water**
Date Received: 10/19/23 09:50

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.59	J	2.0	0.30	ug/L		10/23/23 17:14	10/26/23 18:29	1

Client Sample ID: 16DUP2 — Lab Sample ID: 410-147656-2

Date Collected: 10/18/23 07:40 **Matrix: Water**
Date Received: 10/19/23 09:50

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.62	J	2.0	0.30	ug/L		10/23/23 17:14	10/26/23 18:27	1

Default Detection Limits

Client: TRC, Engineers, Inc.
Job ID: 410-147656-1
Project/Site: HWMU 16 – Verification Event

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Prep: 3005A

Analyte	RL	MDL	Units
Silver	2.0	0.30	ug/L

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 410-434687/1-A
Matrix: Water
Analysis Batch: 436268

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 434687

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		2.0	0.30	ug/L		10/23/23 17:14	10/26/23 17:30	1

Lab Sample ID: LCS 410-434687/2-A
Matrix: Water
Analysis Batch: 436268

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 434687

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Silver	50.0	50.1		ug/L		100	88 - 113

Lab Sample ID: LRC 410-436268/9
Matrix: Water
Analysis Batch: 436268

Client Sample ID: Lab Control Sample

Analyte	Spike Added	LRC Result	LRC Qualifier	Unit	D	%Rec	%Rec Limits
Silver	2000	1950		ug/L		98	90 - 110

Metals

Prep Batch: 434687

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-147656-1	16WC1B	Total Recoverable	Water	3005A	
410-147656-2	16DUP2	Total Recoverable	Water	3005A	
MB 410-434687/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-434687/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 436268

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-147656-1	16WC1B	Total Recoverable	Water	6020B	434687
410-147656-2	16DUP2	Total Recoverable	Water	6020B	434687
MB 410-434687/1-A	Method Blank	Total Recoverable	Water	6020B	434687
LCS 410-434687/2-A	Lab Control Sample	Total Recoverable	Water	6020B	434687
LRC 410-436268/9	Lab Control Sample		Water	6020B	

Lab Chronicle

Client: TRC, Engineers, Inc.
Job ID: 410-147656-1
Project/Site: HWMU 16 – Verification Event

Client Sample ID: 16WC1B
Lab Sample ID: 410-147656-1

Date Collected: 10/18/23 07:35
Matrix: Water
Date Received: 10/19/23 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			434687	UAMX	ELLE	10/23/23 17:14
Total Recoverable	Analysis	6020B		1	436268	LC3M	ELLE	10/26/23 18:29

Client Sample ID: 16DUP2
Lab Sample ID: 410-147656-2

Date Collected: 10/18/23 07:40
Matrix: Water
Date Received: 10/19/23 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			434687	UAMX	ELLE	10/23/23 17:14
Total Recoverable	Analysis	6020B		1	436268	LC3M	ELLE	10/26/23 18:27

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: TRC, Engineers, Inc. Job ID: 410-147656-1

Project/Site: HWMU 16 – Verification Event

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Virginia	NELAP	460182	06-14-25

Method Summary

Client: TRC, Engineers, Inc. Job ID: 410-147656-1
Project/Site: HWMU 16 – Verification Event

Method	Method Description	Protocol	Laboratory
6020B	Metals (ICP/MS)	SW846	ELLE
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	ELLE

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: TRC, Engineers, Inc.
Job ID: 410-147656-1
Project/Site: HWMU 16 – Verification Event

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-147656-1	16WC1B	Water	10/18/23 07:35	10/19/23 09:50
410-147656-2	16DUP2	Water	10/18/23 07:40	10/19/23 09:50

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-147656-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
MP_1:1HCl_00031	04/06/24	10/06/23	DI Water, Lot DI10062023	20000 mL	MT_HCl_JT_00013	10000 mL	Hydrogen Chloride	188000 ug/mL
.MT_HCl_JT_00013	10/03/24	J.T.Baker, Lot 23H1462011			(Purchased Reagent)		Hydrogen Chloride	37.6 %
MP_1:1HNO3_00049	04/18/24	10/18/23	DI Water, Lot DI10182023	20000 mL	MT_HNO3_Fishe_00013	10000 mL	Nitric acid	340000 ug/mL
.MT_HNO3_Fishe_00013	10/03/24	Fisher, Lot 232616			(Purchased Reagent)		Nitric acid	68 %
MT_LCS-SPK-A_00031	10/11/24	Inorganic Ventures, Lot U2-MEB728825			(Purchased Reagent)		Al	1250 mg/L
							As	125 mg/L
							B	125 mg/L
							Ba	125 mg/L
							Be	12.5 mg/L
							Ca	1250 mg/L
							Cd	12.5 mg/L
							Co	125 mg/L
							Cr	125 mg/L
							Cu	125 mg/L
							Fe	1250 mg/L
							K	1250 mg/L
							Li	125 mg/L
							Mg	1250 mg/L
							Mn	125 mg/L
							Na	1250 mg/L
							Ni	125 mg/L
							P	125 mg/L
							Pb	12.5 mg/L
							Se	25 mg/L
							Silver	12.5 mg/L
							Sr	12.5 mg/L
							Sulfur	1250 mg/L
							Th	125 mg/L
							Tl	25 mg/L
							U	12.5 mg/L
							V	125 mg/L
							Zn	125 mg/L
MT_LCS-SPK-B_00032	10/11/24	Inorganic Ventures, Lot U2-MEB728826			(Purchased Reagent)		Mo	12.5 mg/L
							Sb	25 mg/L
							Si	1250 mg/L
							Sn	25 mg/L
							Ti	125 mg/L
							W	125 mg/L
							Zr	125 mg/L
MT_MJ_CCV_00175	11/12/23	10/13/23	DI Water, Lot DI10022023	5 L	MT_S_MSSPK-A_00007	5 mL	Silver	50 ppb
.MT_S_MSSPK-A_00007	08/23/24	Inorganic Ventures, Lot U2-MEB728823			(Purchased Reagent)		Silver	50 ug/mL
MT_MJ_CRI-V_00162	11/23/23	10/24/23	J, Lot 4170412	1 L	MT_S_MWLLC_SC_00005	1 mL	Silver	0.496 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-147656-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MT_S_MWLLC_SC_00005	09/30/23	SCP Science, Lot S220721047			(Purchased Reagent)		Silver	0.496 ug/mL
MT_MJ_ICSA_00109	11/24/23	10/25/23	J, Lot 4724411	500 mL	MT_S_ICS2A_IV_00012	50 mL	Al	100 ug/mL
							As	0.0077 ug/mL
							Ba	0.0004 ug/mL
							Be	0.000011 ug/mL
							Ca	298.8 ug/mL
							Cd	0.00045 ug/mL
							Co	0.00028 ug/mL
							Cr	0.0036 ug/mL
							Cu	0.00044 ug/mL
							Fe	260.1 ug/mL
							K	100 ug/mL
							Mg	100 ug/mL
							Mn	0.0006 ug/mL
							Mo	2.001 ug/mL
							Na	260.1 ug/mL
							Ni	0.0012 ug/mL
							Pb	0.000093 ug/mL
							Sb	0.00012 ug/mL
							Se	0.000072 ug/mL
							Silver	0.0003 ug/mL
							Sn	0.00017 ug/mL
							Sr	0.0018 ug/mL
							Ti	2.001 ug/mL
							Tl	0.000062 ug/mL
							U	0.00011 ug/mL
							V	0.00031 ug/mL
							Zn	0.0011 ug/mL
.MT_S_ICS2A_IV_00012	10/16/24	Inorganic Ventures, Lot T2-MEB714677			(Purchased Reagent)		Al	1000 ug/mL
							As	0.077 ug/mL
							Ba	0.004 ug/mL
							Be	0.00011 ug/mL
							Ca	2988 ug/mL
							Cd	0.0045 ug/mL
							Co	0.0028 ug/mL
							Cr	0.036 ug/mL
							Cu	0.0044 ug/mL
							Fe	2601 ug/mL
							K	1000 ug/mL
							Mg	1000 ug/mL
							Mn	0.006 ug/mL
							Mo	20.01 ug/mL
							Na	2601 ug/mL

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-147656-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Ni	0.012 ug/mL
							Pb	0.00093 ug/mL
							Sb	0.0012 ug/mL
							Se	0.00072 ug/mL
							Silver	0.003 ug/mL
							Sn	0.0017 ug/mL
							Sr	0.018 ug/mL
							Ti	20.01 ug/mL
							Tl	0.00062 ug/mL
							U	0.0011 ug/mL
							V	0.0031 ug/mL
							Zn	0.011 ug/mL
MT_MJ_ICSAB_00085	11/15/23	10/16/23	J, Lot 4224585	500 mL	MT_S_ICS2A_IV_00012	50 mL	Al	100 ug/mL
							As	0.1077 ug/mL
							Ba	0.0004 ug/mL
							Be	0.000011 ug/mL
							Ca	298.8 ug/mL
							Cd	0.10045 ug/mL
							Co	0.20038 ug/mL
							Cr	0.2037 ug/mL
							Cu	0.20054 ug/mL
							Fe	260.1 ug/mL
							K	100 ug/mL
							Mg	100 ug/mL
							Mn	0.2007 ug/mL
							Mo	2.001 ug/mL
							Na	260.1 ug/mL
							Ni	0.2013 ug/mL
							Pb	0.000093 ug/mL
							Sb	0.00012 ug/mL
							Se	0.100072 ug/mL
							Silver	0.05032 ug/mL
							Sn	0.00017 ug/mL
							Sr	0.0018 ug/mL
							Ti	2.001 ug/mL
							Tl	0.000062 ug/mL
							U	0.00011 ug/mL
							V	0.20041 ug/mL
							Zn	0.1011 ug/mL
					MT_S_ICS2B_IV_00006	5 mL	As	0.1077 ug/mL
							Cd	0.10045 ug/mL
							Co	0.20038 ug/mL
							Cr	0.2037 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-147656-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Cu	0.20054 ug/mL
							Mn	0.2007 ug/mL
							Ni	0.2013 ug/mL
							Se	0.100072 ug/mL
							Silver	0.05032 ug/mL
							V	0.20041 ug/mL
							Zn	0.1011 ug/mL
.MT_S_ICS2A_IV_00012	10/16/24	Inorganic Ventures, Lot T2-MEB714677			(Purchased Reagent)		Al	1000 ug/mL
							As	0.077 ug/mL
							Ba	0.004 ug/mL
							Be	0.00011 ug/mL
							Ca	2988 ug/mL
							Cd	0.0045 ug/mL
							Co	0.0028 ug/mL
							Cr	0.036 ug/mL
							Cu	0.0044 ug/mL
							Fe	2601 ug/mL
							K	1000 ug/mL
							Mg	1000 ug/mL
							Mn	0.006 ug/mL
							Mo	20.01 ug/mL
							Na	2601 ug/mL
							Ni	0.012 ug/mL
							Pb	0.00093 ug/mL
							Sb	0.0012 ug/mL
							Se	0.00072 ug/mL
							Silver	0.003 ug/mL
							Sn	0.0017 ug/mL
							Sr	0.018 ug/mL
							Ti	20.01 ug/mL
							Tl	0.00062 ug/mL
							U	0.0011 ug/mL
							V	0.0031 ug/mL
							Zn	0.011 ug/mL
.MT_S_ICS2B_IV_00006	10/16/24	Inorganic Ventures, Lot S2-MEB711470			(Purchased Reagent)		As	10 ug/mL
							Cd	10 ug/mL
							Co	20.01 ug/mL
							Cr	20.01 ug/mL
							Cu	20.01 ug/mL
							Mn	20.01 ug/mL
							Ni	20.01 ug/mL
							Se	10 ug/mL
							Silver	5.002 ug/mL
							V	20.01 ug/mL
							Zn	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-147656-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
MT_MJ_ICV_00094	11/16/23	10/17/23	J, Lot 4170412	1 L	MT_S_ICVSPK-A_00005	2 mL	Silver	50 ppb
.MT_S_ICVSPK-A_00005	04/03/24	High-Purity Standards, Lot U2-MEB728821			(Purchased Reagent)		Silver	25 ug/mL
MT_MJ_LRC_00098	11/18/23	10/19/23	J, Lot 4993845	0.5 L	MT_I_CCVSPK-A_00005	10 mL	Silver	2000 ppb
.MT_I_CCVSPK-A_00005	04/12/24	Inorganic Ventures, Lot T2-MEB720690			(Purchased Reagent)		Silver	100 mg/L
MT_MJ_S1_00116	11/16/23	10/17/23	J, Lot 4724411	500 mL	MT_S_MSSPK-A_00007	1 mL	Silver	100 ppb
.MT_S_MSSPK-A_00007	08/23/24	Inorganic Ventures, Lot U2-MEB728823			(Purchased Reagent)		Silver	50 ug/mL

Reagent

MT_HCl_JT_00013

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

Material No.: 9530-33
Batch No.: 23H1462011
Manufactured Date: 2023-07-26
Retest Date: 2028-07-24
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS - Assay (as HCl) (by acid-base titrn)	36.5 - 38.0 %	37.7 %
ACS - Color (APHA)	≤ 10	5
ACS - Residue after Ignition	≤ 3 ppm	1 ppm
ACS - Specific Gravity at 60°/60°F	1.185 - 1.192	1.191
ACS - Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS - Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS - Free Chlorine (as Cl_2)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO_4)	≤ 0.05 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.5 ppm	0.3 ppm
Sulfite (SO_3)	≤ 0.8 ppm	0.3 ppm
Ammonium (NH_4)	≤ 3 ppm	< 1 ppm
Trace Impurities - Arsenic (As)	≤ 0.010 ppm	< 0.003 ppm
Trace Impurities - Aluminum (Al)	≤ 10.0 ppb	0.4 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities - Barium (Ba)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Beryllium (Be)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Bismuth (Bi)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Boron (B)	≤ 20.0 ppb	2.1 ppb
Trace Impurities - Cadmium (Cd)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	28.7 ppb
Trace Impurities - Chromium (Cr)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities - Cobalt (Co)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities - Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities - Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities - Gold (Au)	≤ 4.0 ppb	< 0.2 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities - Iron (Fe)	≤ 15 ppb	1 ppb

>>> Continued on page 2 >>>

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

Material No.: 9530-33
Batch No.: 23H1462011

Test	Specification	Result
Trace Impurities - Lead (Pb)	≤ 1.0 ppb	< 0.5 ppb
Trace Impurities - Lithium (Li)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Magnesium (Mg)	≤ 10.0 ppb	1.1 ppb
Trace Impurities - Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities - Mercury (Hg)	≤ 0.5 ppb	0.1 ppb
Trace Impurities - Molybdenum (Mo)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Nickel (Ni)	≤ 4.0 ppb	< 0.3 ppb
Trace Impurities - Niobium (Nb)	≤ 1.0 ppb	0.2 ppb
Trace Impurities - Potassium (K)	≤ 9.0 ppb	< 2.0 ppb
Trace Impurities - Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities - Silicon (Si)	≤ 100.0 ppb	< 10.0 ppb
Trace Impurities - Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities - Sodium (Na)	≤ 100.0 ppb	< 5.0 ppb
Trace Impurities - Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Tantalum (Ta)	≤ 1.0 ppb	< 0.9 ppb
Trace Impurities - Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Tin (Sn)	≤ 5.0 ppb	< 0.8 ppb
Trace Impurities - Titanium (Ti)	≤ 1.0 ppb	0.4 ppb
Trace Impurities - Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Zinc (Zn)	≤ 5.0 ppb	< 0.3 ppb
Trace Impurities - Zirconium (Zr)	≤ 1.0 ppb	0.4 ppb

>>> Continued on page 3 >>>

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

Material No.: 9530-33
Batch No.: 23H1462011

Test	Specification	Result

For Laboratory,Research,or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications
Storage Condition: Store below 25 °C.

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Ken Koehnlein
Sr. Manager, Quality Assurance

Reagent

MT_HNO3_Fishe_00013

Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120633

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	A200	Quality Test / Release Date	07/31/2023
Lot Number	232616		
Description	NITRIC ACID, CERTIFIED ACS		
Country of Origin	Canada	Suggested Retest Date	Jul/2028
Chemical Origin	Inorganic-non animal		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Clear, colorless free from suspended matter
ALUMINUM	ppm	<= 0.2	<0.2
ARSENIC (As)	ppm	<= 0.004	<0.004
ASSAY	w/w %	Inclusive Between 68.0 - 70.0	69.5
BORON (B)	ppm	<= 0.1	<0.1
CALCIUM (Ca)	ppm	<= 0.2	<0.2
CHLORIDE	ppm	<= 0.08	<0.08
CHROMIUM (Cr)	ppm	<= 0.1	<0.1
COLOR	APHA	<= 10	<10
COPPER (Cu)	ppm	<= 0.05	<0.05
GOLD (Au)	ppm	<= 0.3	<0.3
HEAVY METALS (as Pb)	ppm	<= 0.2	<0.2
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
IRON (Fe)	ppm	<= 0.2	<0.2
LEAD (Pb)	ppm	<= 0.1	<0.1
MAGNESIUM (Mg)	ppm	<= 0.3	<0.3
NICKEL (Ni)	ppm	<= 0.05	<0.05
PHOSPHATE (PO4)	ppm	<= 0.2	<0.2
POTASSIUM (K)	ppm	<= 0.3	<0.3
RESIDUE AFTER IGNITION	ppm	<= 2	<2
SODIUM (Na)	ppm	<= 0.3	<0.3
SULFATE (SO4)	ppm	<= 0.5	<0.5
TIN (Sn)	ppm	<= 0.3	<0.3
TITANIUM (Ti)	ppm	<= 0.3	<0.3

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120633

ZINC (Zn)	ppm	<= 0.3	<0.3

Dudhatra chetan.

Chetan Dudhatra - Quality Control Supervisor - Bridgewater

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

Reagent

MT_I_CCVSPK-A_00005

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	35-TSPEURF-CCV-A
Lot Number:	T2-MEB720690
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea:

Aluminum, Calcium,
Iron, Potassium,
Magnesium, Sodium,
Sulfur,

100 µg/mL ea:

Selenium, Strontium,
Thorium, Thallium,
Vanadium, Zinc,
Silver, Nickel,
Phosphorus, Lead,
Manganese, Lithium,
Cadmium, Cobalt,
Chromium, Copper,
Arsenic, Boron,
Barium, Beryllium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	5 000 ± 18 µg/mL	Arsenic, As	100.0 ± 0.9 µg/mL
Barium, Ba	100.0 ± 0.5 µg/mL	Beryllium, Be	100.0 ± 0.7 µg/mL
Boron, B	100.0 ± 0.6 µg/mL	Cadmium, Cd	100.0 ± 0.4 µg/mL
Calcium, Ca	4 999 ± 22 µg/mL	Chromium, Cr	100.0 ± 0.8 µg/mL
Cobalt, Co	100.0 ± 0.6 µg/mL	Copper, Cu	100.0 ± 0.5 µg/mL
Iron, Fe	5 000 ± 21 µg/mL	Lead, Pb	100.0 ± 0.6 µg/mL
Lithium, Li	100.0 ± 0.4 µg/mL	Magnesium, Mg	5 000 ± 20 µg/mL
Manganese, Mn	100.0 ± 0.5 µg/mL	Nickel, Ni	100.0 ± 0.6 µg/mL
Phosphorus, P	100.0 ± 0.4 µg/mL	Potassium, K	5 000 ± 22 µg/mL
Selenium, Se	100.0 ± 0.6 µg/mL	Silver, Ag	100.0 ± 0.4 µg/mL
Sodium, Na	5 000 ± 22 µg/mL	Strontium, Sr	100.1 ± 0.4 µg/mL
Sulfur, S	5 000 ± 25 µg/mL	Thallium, Tl	100.0 ± 0.7 µg/mL
Thorium, Th	100.0 ± 0.5 µg/mL	Vanadium, V	100.0 ± 0.6 µg/mL
Zinc, Zn	100.0 ± 0.5 µg/mL		

Density: 1.127 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
B	ICP Assay	3107	190605
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
S	Acidimetric	84L	84L
S	ICP Assay	traceable to 3154	P2-S680745
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Th	EDTA	928	928
Tl	ICP Assay	3158	151215
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 27, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 27, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

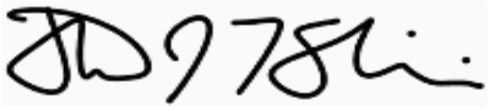
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_LCS-SPK-A_00031

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-62801-A
Lot Number:	U2-MEB737115
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	1 250 µg/mL ea:

Aluminum, Calcium,
Iron, Potassium,
Magnesium, Sodium,
Sulfur,

125 µg/mL ea:

Thorium, Vanadium,
Zinc, Nickel,
Phosphorus, Manganese,
Lithium, Cobalt,
Chromium, Copper,
Arsenic, Boron,
Barium,

25 µg/mL ea:

Thallium, Selenium,

12.5 µg/mL ea:

Strontium, Uranium,
Silver, Beryllium,
Cadmium, Lead

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	1 250 ± 4 µg/mL	Arsenic, As	125.0 ± 0.9 µg/mL
Barium, Ba	125.0 ± 0.5 µg/mL	Beryllium, Be	12.50 ± 0.07 µg/mL
Boron, B	125.0 ± 0.9 µg/mL	Cadmium, Cd	12.50 ± 0.08 µg/mL
Calcium, Ca	1 250 ± 4 µg/mL	Chromium, Cr	125.0 ± 0.7 µg/mL
Cobalt, Co	125.0 ± 0.6 µg/mL	Copper, Cu	125.0 ± 0.5 µg/mL
Iron, Fe	1 250 ± 5 µg/mL	Lead, Pb	12.50 ± 0.06 µg/mL
Lithium, Li	125.0 ± 0.5 µg/mL	Magnesium, Mg	1 250 ± 5 µg/mL
Manganese, Mn	125.0 ± 0.6 µg/mL	Nickel, Ni	125.0 ± 0.6 µg/mL
Phosphorus, P	125.0 ± 0.6 µg/mL	Potassium, K	1 251 ± 6 µg/mL
Selenium, Se	25.00 ± 0.16 µg/mL	Silver, Ag	12.50 ± 0.09 µg/mL
Sodium, Na	1 250 ± 6 µg/mL	Strontium, Sr	12.50 ± 0.06 µg/mL
Sulfur, S	1 250 ± 6 µg/mL	Thallium, Tl	25.01 ± 0.13 µg/mL
Thorium, Th	125.0 ± 0.6 µg/mL	Uranium, U	12.50 ± 0.07 µg/mL
Vanadium, V	124.9 ± 0.6 µg/mL	Zinc, Zn	125.0 ± 0.6 µg/mL

Density: 1.059 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
As	Calculated		See Sec. 4.2
B	ICP Assay	3107	190605
B	Calculated		See Sec. 4.2
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Cd	Calculated		See Sec. 4.2
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	200413
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Pb	Calculated		See Sec. 4.2
S	Acidimetric	84L	84L
S	ICP Assay	Traceable to 3154	T2-S727797
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Th	EDTA	928	928
Th	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	151215

U	ICP Assay	traceable to 3164	R2-U689597
U	Calculated		See Sec. 4.2
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.19 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Low Silver Note: This solution contains “LOW” levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 29, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **September 29, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Joseph Burns
Custom VS Manager

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_LCS-SPK-B_00032

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info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-62801-B
Lot Number:	U2-MEB737116
Matrix:	5% (v/v) HNO3 1.5% (v/v) HF
Value / Analyte(s):	1 250 µg/mL ea: Silicon, 125 µg/mL ea: Titanium, Tungsten, Zirconium, 25 µg/mL ea: Tin, Antimony, 12.5 µg/mL ea: Molybdenum

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	**25.00 ± 0.19 µg/mL**	**Molybdenum, Mo**	**12.50 ± 0.10 µg/mL**
Silicon, Si	**1 250 ± 9 µg/mL**	**Tin, Sn**	**25.01 ± 0.11 µg/mL**
Titanium, Ti	**124.9 ± 0.7 µg/mL**	**Tungsten, W**	**125.0 ± 0.7 µg/mL**
Zirconium, Zr	**124.9 ± 0.9 µg/mL**		

Density: 1.032 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Sb	ICP Assay	3102a	140911
Si	ICP Assay	Traceable to 3150	S2-SI702546
Sn	ICP Assay	3161a	140917
Sn	Calculated		See Sec. 4.2
Ti	ICP Assay	3162a	130925
Ti	Calculated		See Sec. 4.2
W	ICP Assay	3163	140606
W	Calculated		See Sec. 4.2
Zr	ICP Assay	traceable to SRM#3169	S2-ZR707913
Zr	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 29, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **September 29, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Joseph Burns
Custom VS Manager

Certifying Officer:

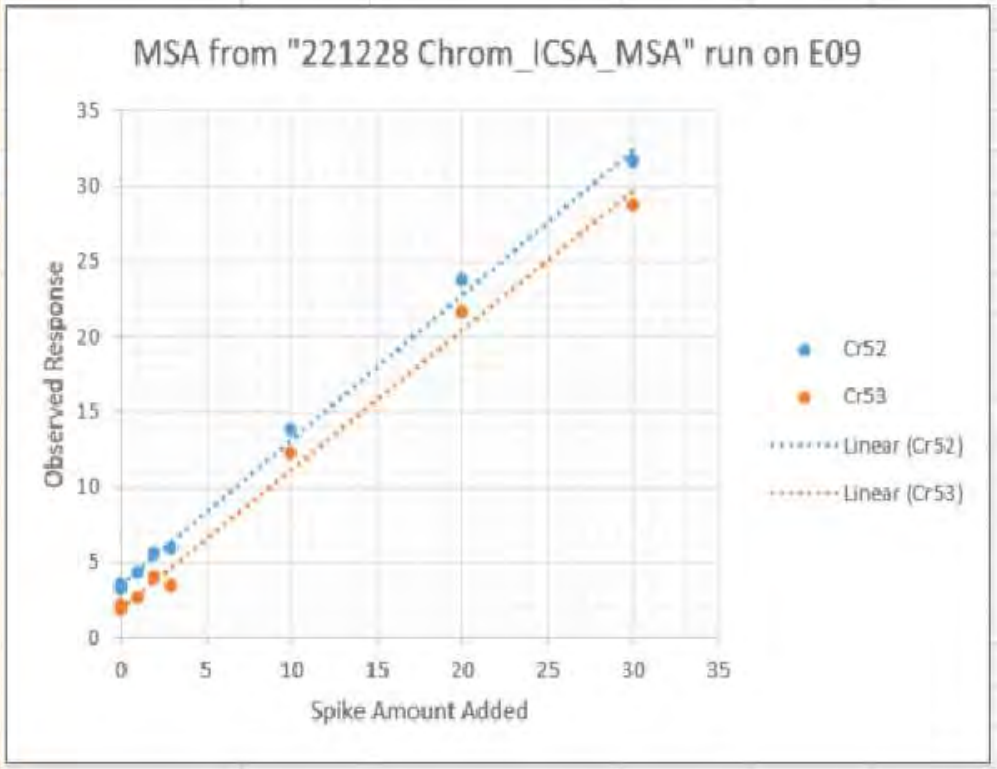
Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_S_ICS2A_IV_00012

	MSA CALC (Cr52) 3.618		MSA CALC (Cr53) 2.045
	ISOTOPE RATIO CALCULATION		
AVG CCB	180		503
AVG ICSA	2477		725
NET CPS	2297		223
RATIO 53/52		**0.10**	
NA 53/52		**0.11**	

The Chromium 53/52 ratio is close to the observed Natural Abundance (NA) ratio of 0.11
This suggests that Cr contaminant is real Cr and not due to anomalous interference on mass 52 alone.



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Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	6020ICS-9A
Lot Number:	T2-MEB714677
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	21 215 µg/mL ea: Chloride,
	3 000 µg/mL ea: Calcium,
	2 500 µg/mL ea: Iron, Sodium,
	2 000 µg/mL ea: Carbon,
	1 000 µg/mL ea: Aluminum, Phosphorus, Sulfur, Potassium, Magnesium,
	20 µg/mL ea: Molybdenum, Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	**1 000 ± 3 µg/mL**	**Calcium, Ca**	**3 001 ± 13 µg/mL**
Carbon, C	**2 001 ± 4 µg/mL**	**Chloride, Cl**	**21 230.0 ± 100.0 µg/mL**
Iron, Fe	**2 501 ± 11 µg/mL**	**Magnesium, Mg**	**1 000 ± 4 µg/mL**
Molybdenum, Mo	**20.01 ± 0.11 µg/mL**	**Phosphorus, P**	**1 000 ± 4 µg/mL**
Potassium, K	**1 000 ± 4 µg/mL**	**Sodium, Na**	**2 501 ± 11 µg/mL**
Sulfur, S	**1 001 ± 4 µg/mL**	**Titanium, Ti**	**20.01 ± 0.12 µg/mL**

Density: 1.051 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
C	Acidimetric	84L	84L
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cl	Acidimetric	84L	84L
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
S	Acidimetric	84L	84L
S	ICP Assay	traceable to 3154	P2-S680745
Ti	ICP Assay	3162a	130925
Ti	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.003300	M	Eu	<	0.000110	s	Na	<		M	Se	<	0.000720	O	Zn		0.011000
s	Al	<		s	Fe	<		M	Nb	<	0.000110	n	Si	<		M	Zr	<	0.002100
M	As		0.077000	M	Ga		0.016000	M	Nd	<	0.000420	M	Sm	<	0.000110				
M	Au	<	0.000410	M	Gd	<	0.000110	M	Ni		0.012000	M	Sn	<	0.001700				
M	B	<	0.006200	M	Ge	<	0.002500	M	Os	<	0.000110	M	Sr		0.018000				
M	Ba		0.004000	M	Hf	<	0.000110	s	P	<		M	Ta	<	0.000210				
O	Be	<	0.000110	M	Hg	<	0.000620	M	Pb		0.000930	M	Tb	<	0.000110				
M	Bi	<	0.001300	M	Ho	<	0.000110	M	Pd	<	0.000110	M	Te	<	0.003300				
s	Ca	<		M	In	<	0.000210	M	Pr	<	0.000110	M	Th	<	0.000210				
M	Cd		0.004500	M	Ir	<	0.000110	M	Pt	<	0.000110	s	Ti	<					
M	Ce	<	0.000620	s	K	<		M	Rb		0.027000	M	Tl	<	0.000620				
M	Co		0.002800	M	La	<	0.000830	M	Re	<	0.000110	M	Tm	<	0.000110				
M	Cr		0.029000	O	Li		0.001900	M	Rh	<	0.000110	M	U	<	0.001100				
M	Cs		0.001900	M	Lu	<	0.000110	M	Ru	<	0.000110	M	V	<	0.003100				
O	Cu	<	0.004400	s	Mg	<		s	S	<		M	W		0.001600				
M	Dy	<	0.000110	M	Mn		0.006000	M	Sb		0.001200	M	Y		0.000420				
M	Er	<	0.000110	s	Mo	<		M	Sc	<	0.000620	M	Yb	<	0.000110				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 30, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 30, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

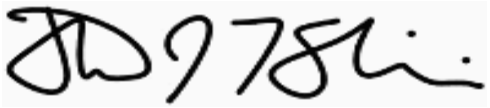
12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_S_ICS2B_IV_00006

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	6020ICS-9B
Lot Number:	S2-MEB711470
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	20 µg/mL ea: Cobalt, Chromium, Copper, Manganese, Nickel, Vanadium, 10 µg/mL ea: Zinc, Arsenic, Cadmium, Selenium, 5 µg/mL ea: Silver

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	**10.00 ± 0.06 µg/mL**	**Cadmium, Cd**	**10.00 ± 0.04 µg/mL**
Chromium, Cr	**20.01 ± 0.10 µg/mL**	**Cobalt, Co**	**20.01 ± 0.09 µg/mL**
Copper, Cu	**20.01 ± 0.09 µg/mL**	**Manganese, Mn**	**20.01 ± 0.09 µg/mL**
Nickel, Ni	**20.01 ± 0.09 µg/mL**	**Selenium, Se**	**10.00 ± 0.07 µg/mL**
Silver, Ag	**5.002 ± 0.034 µg/mL**	**Vanadium, V**	**20.01 ± 0.09 µg/mL**
Zinc, Zn	**10.00 ± 0.04 µg/mL**		

Density: 1.015 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
As	ICP Assay	3103a	100818
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Cd	Calculated		See Sec. 4.2
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Co	Calculated		See Sec. 4.2
Cr	ICP Assay	3112a	170630
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Cu	Calculated		See Sec. 4.2
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Mn	Calculated		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Ni	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928
Zn	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Low Silver Note: This solution contains “LOW” levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 02, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 02, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_S_ICVSPK-A_00005

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-69496
Lot Number:	U2-MEB728821
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	2 500 µg/mL ea:

Aluminum, Calcium,
Iron, Potassium,
Magnesium, Sodium,

250 µg/mL ea:

Nickel, Manganese,
Cobalt, Chromium,
Copper, Arsenic,
Barium, Vanadium,
Zinc,

25 µg/mL ea:

Silver, Beryllium,
Cadmium, Lead,
Selenium, Strontium,
Thallium, Uranium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	2 500 ± 9 µg/mL	Arsenic, As	250.0 ± 2.1 µg/mL
Barium, Ba	250.0 ± 1.2 µg/mL	Beryllium, Be	25.00 ± 0.16 µg/mL
Cadmium, Cd	25.00 ± 0.10 µg/mL	Calcium, Ca	2 500 ± 11 µg/mL
Chromium, Cr	250.0 ± 1.8 µg/mL	Cobalt, Co	250.0 ± 1.2 µg/mL
Copper, Cu	250.0 ± 1.0 µg/mL	Iron, Fe	2 500 ± 10 µg/mL
Lead, Pb	25.00 ± 0.11 µg/mL	Magnesium, Mg	2 500 ± 11 µg/mL
Manganese, Mn	250.0 ± 1.0 µg/mL	Nickel, Ni	250.0 ± 1.1 µg/mL
Potassium, K	2 500 ± 11 µg/mL	Selenium, Se	24.99 ± 0.20 µg/mL
Silver, Ag	25.00 ± 0.13 µg/mL	Sodium, Na	2 500 ± 11 µg/mL
Strontium, Sr	25.01 ± 0.10 µg/mL	Thallium, Tl	25.00 ± 0.13 µg/mL
Uranium, U	25.01 ± 0.15 µg/mL	Vanadium, V	250.0 ± 1.1 µg/mL
Zinc, Zn	250.0 ± 1.1 µg/mL		

Density: 1.074 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	EDTA	928	928
Co	ICP Assay	traceable to 3113	M2-CO661665
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	3153a	990906
Tl	ICP Assay	3158	151215
U	ICP Assay	3164	891509
U	Calculated		See Sec. 4.2
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.6 ± 0.1
Uranium 235U	0.42 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 25, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 25, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

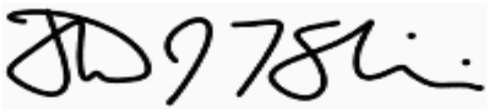
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_S_MSSPK-A_00007

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-66048-A
Lot Number:	U2-MEB728823
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea:

Aluminum, Calcium,
Iron, Potassium,
Magnesium, Sodium,

500 µg/mL ea:

Nickel, Manganese,
Cobalt, Chromium,
Copper, Arsenic,
Barium, Vanadium,
Zinc,

50 µg/mL ea:

Silver, Beryllium,
Cadmium, Lead,
Selenium, Strontium,
Thallium, Uranium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	5 008 ± 18 µg/mL	Arsenic, As	500.8 ± 3.7 µg/mL
Barium, Ba	500.8 ± 2.3 µg/mL	Beryllium, Be	50.07 ± 0.33 µg/mL
Cadmium, Cd	50.07 ± 0.23 µg/mL	Calcium, Ca	5 008 ± 22 µg/mL
Chromium, Cr	500.8 ± 2.9 µg/mL	Cobalt, Co	500.8 ± 2.4 µg/mL
Copper, Cu	500.8 ± 2.0 µg/mL	Iron, Fe	5 008 ± 21 µg/mL
Lead, Pb	50.08 ± 0.22 µg/mL	Magnesium, Mg	5 008 ± 22 µg/mL
Manganese, Mn	500.8 ± 2.0 µg/mL	Nickel, Ni	500.8 ± 2.2 µg/mL
Potassium, K	5 008 ± 22 µg/mL	Selenium, Se	50.09 ± 0.32 µg/mL
Silver, Ag	50.07 ± 0.22 µg/mL	Sodium, Na	5 008 ± 22 µg/mL
Strontium, Sr	50.07 ± 0.19 µg/mL	Thallium, Tl	50.07 ± 0.36 µg/mL
Uranium, U	50.08 ± 0.27 µg/mL	Vanadium, V	500.8 ± 2.2 µg/mL
Zinc, Zn	500.8 ± 2.2 µg/mL		

Density: 1.130 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
As	Calculated		See Sec. 4.2
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Tl	ICP Assay	3158	151215
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2
U	X_U_CRM		See Sec. 4.2
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.19 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 26, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 26, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

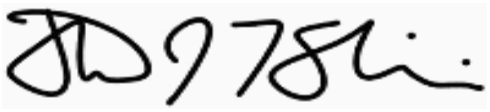
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_S_MWLLC_SC_00005

SCP SCIENCE

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Certificate of Analysis

1.0 DESCRIPTION : ***Plasma*** **CAL – Custom Standard**

Catalogue Number : **AQ0-154-615** **MW-LLC**

Lot Number : **S220721047**

Matrix: **2.0% HNO3 Tr. HF**

Expiration Date (End of month): **September 2023**

2.0 CERTIFIED VALUES AND ASSOCIATED UNCERTAINTY:

Method of Analysis: Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES)

Traceability: Applicable NIST Standard Reference Materials (see list below):

3101a	Al	3109a	Ca	3117a	Eu	3126a	Fe	3134	Mo	3142a	Pr	3151	Ag	3159	Th	3167a	Y
3102a	Sb	3110	Ce	3118a	Gd	3127a	La	3135a	Nd	3143	Re	3152a	Na	3160a	Tm	3168a	Zn
3103a	As	3111a	Cs	3119a	Ga	3128	Pb	3136	Ni	3144	Rh	3153a	Sr	3161a	Sn	3169	Zr
3104a	Ba	3112a	Cr	3120a	Ge	3129a	Li	3137	Nb	3145a	Rb	3154	S	3162a	Ti		
3105a	Be	3113	Co	3121	Au	3130a	Lu	3138	Pd	3147a	Sm	3155	Ta	3163	W		
3106	Bi	3114	Cu	3122	Hf	3131a	Mg	3139a	P	3148a	Sc	3156	Te	3164	U		
3107	B	3115a	Dy	3123a	Ho	3132	Mn	3140	Pt	3149	Se	3157a	Tb	3165	V		
3108	Cd	3116a	Er	3124a	In	3133	Hg	3141a	K	3150	Si	3158	Tl	3166a	Yb		

Certified Concentrations:

Ag*	0.496 ± 1%	µg/ml	K	199.5 ± 1.5	µg/ml	Ti	10.05 ± 0.06	µg/ml
Al	24.81 ± 0.14	µg/ml	Mg	50.3 ± 0.4	µg/ml	Tl*	0.500 ± 1%	µg/ml
As*	2.02 ± 0.01	µg/ml	Mn*	2.00 ± 0.02	µg/ml	U*	1.01 ± 0.01	µg/ml
Ba*	1.99 ± 0.01	µg/ml	Mo*	0.497 ± 1%	µg/ml	V*	0.501 ± 1%	µg/ml
Be*	0.499 ± 1%	µg/ml	Na	198.6 ± 1.9	µg/ml	Zn	10.00 ± 0.06	µg/ml
Ca	100.3 ± 1.0	µg/ml	Ni*	1.00 ± 0.01	µg/ml			
Cd*	0.496 ± 1%	µg/ml	Pb*	0.503 ± 1%	µg/ml			
Co*	0.504 ± 1%	µg/ml	Sb*	1.01 ± 0.01	µg/ml			
Cr*	2.00 ± 0.01	µg/ml	Se*	1.00 ± 0.01	µg/ml			
Cu*	0.999 ± 1%	µg/ml	Sn*	2.00 ± 0.02	µg/ml			
Fe	49.92 ± 0.28	µg/ml	Sr*	0.992 ± 1%	µg/ml			

ACCREDITED
Reference Material Producer
CERTIFICATE #2885.02

*Concentration value derived from v/v dilutions of certified, NIST-traceable starting materials

Note: The uncertainty of the certified value has been calculated from applicable uncertainty contributors (u_i) such as the SRM inherited uncertainty, weighing and dilution errors and instrument variability. The combined uncertainty ($uc= v\Sigma u_i^2$) has been multiplied by a coverage factor (k) of 2 to provide a 95% confidence interval.

3.0 REFERENCE VALUES:

Density: **1.010 g/ml @ 23.0 °C**

4.0 APPROVAL AND DATE OF CERTIFICATION:

Certification Approval: Yaling Sui, Chemist

Certification Date: **August 23, 2022**

Yaling Sui

SCP SCIENCE

Providing Innovative Solutions to Analytical Chemists

5.0 INTENDED USE:

- ICP Standards: For the calibration of, including but not limited to: ICP-AES, ICP-MS, FAAS, GFAA, XRF and DCP.
- AA Standards: For the calibration of Flame (FAAS) and Graphite Furnace (GFAA) Atomic Absorption Spectrometers.
- Matrix Modifiers: For the optimization of analytical conditions to provide better Graphite Furnace Atomic Absorption (GFAA) instrument response and improved detection limits.
- pH Standards: For the calibrating pH meters or for other wet chemistry applications.
- Conductivity Standards: For electrolytic conductivity measurement as a calibration standard.
- IC Standards: for calibration of, but not limited to IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS or other wet chemistry applications.

For any inquiries, please contact **SCP SCIENCE**.

6.0 INSTRUCTIONS FOR USE:

Handling and Storage: Keep product tightly capped when not in use. The solution should be opened for a minimum amount of time necessary to dispense the amount required. Do not pipet or use directly from container. Do not return unused portions back to container. Store under normal laboratory conditions. Avoid exposure to excessive sources of heat and humidity or direct sunlight.

Stability: This Standard is guaranteed to be stable and accurate to within the specified uncertainty of measurement up to the unopened expiry date, if sealed, or up to the opened expiry date (when indicated), whichever comes first, provided the solution is kept tightly capped and stored under the indicated storage conditions. Purchasers will be notified of any significant changes resulting in re-certification or withdrawal of the product prior to the expiration date.

7.0 HAZARDOUS INFORMATION :

Please refer to the associated Material Safety Data Sheet (MSDS) for information regarding this product (available at www.SCPSCIENCE.com).

8.0 HOMOGENEITY:

This solution has been blended according to an in-house procedure and its homogeneity is guaranteed to be fit for purpose when a sample size sufficient for the intended method of analysis is used.

9.0 TRACEABILITY:

This CRM (Certified Reference Material) is traceable to the NIST SRM (Standard Reference Material) indicated in section 2 through an unbroken chain of comparisons. In addition, balances used are regularly calibrated using weights which are traceable to NIST (National Institute of Standards and Technology) or NRC (National Research Council of Canada) standards. All conductivity meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable Thermometer and standards. All pH meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable thermometer and pH/MV simulator.

10.0 PREPARATION*:*

For the preparation of these solutions, 18 meghom/cm double deionized water, high-purity acids and glassware calibrated to ASTM Class A specifications are used.

11.0 QUALITY SYSTEM CERTIFICATIONS*:*

ISO 9001 Certification: This standard was produced in a facility which operates a **registered** ISO 9001 Quality Management System. Please consult our web site for a copy of the most recent revision of our certificate of registration.

ISO 17025 Accreditation: SCP SCIENCE (Corporate Headquarters) operates an ISO 17025 **accredited** laboratory. Please consult our web site for a copy of the most recent revision of our certificate and scope of accreditation.

ISO 17034 Accreditation: SCP SCIENCE (Corporate Headquarters) is an ISO 17034 accredited Reference Material Producer. Please consult our website for a copy of our most recent certificate and scope of accreditation.

ACCREDITED
Reference Material Producer
CERT# 2885.02

ilac-MRA ACCREDITED
Testing Laboratory CERT#2885.01

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Sample Container Check Report

Client: TRC, Engineers, Inc.
Job ID: 410-147656-1
Project/Site: HWMU 16 – Verification Event

Sample Container Checks and Verifications

Lab Sample ID: 410-147656-1 **Client Sample ID: 16WC1B**

Bottle Code	Check Performed	By Employee	Date	Check Result	Expected Result	Adjusted Date	Reagent Lot #	Reagent Expires	Re-check Result	Re-check Date
A	pH Check, 24hr Adjustment Confirmation Required	K9VH	10/20/2023	<2	<2	N/A	N/A	N/A	N/A	N/A

Lab Sample ID: 410-147656-2 **Client Sample ID: 16DUP2**

Bottle Code	Check Performed	By Employee	Date	Check Result	Expected Result	Adjusted Date	Reagent Lot #	Reagent Expires	Re-check Result	Re-check Date
A	pH Check, 24hr Adjustment Confirmation Required	K9VH	10/20/2023	<2	<2	N/A	N/A	N/A	N/A	N/A

METALS

COVER PAGE
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job Number: 410-147656-1

SDG No.:

Project: HWMU 16 - Verification Event

Client Sample ID	Lab Sample ID
16WC1B	410-147656-1
16DUP2	410-147656-2

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: 16WC1B
Lab Sample ID: 410-147656-1
Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-147656-1
SDG ID.:
Matrix: Water
Date Sampled: 10/18/2023 07:35
Reporting Basis: WET
Date Received: 10/19/2023 09:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-22-4	Silver	0.59	2.0	0.30	ug/L	J		1	6020B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: 16DUP2 Lab Sample ID: 410-147656-2

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-147656-1

SDG ID.:

Matrix: Water Date Sampled: 10/18/2023 07:40

Reporting Basis: WET Date Received: 10/19/2023 09:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-22-4	Silver	0.62	2.0	0.30	ug/L	J		1	6020B

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-147656-1

SDG No.:

ICV Source: MT_MJ_ICV_00094 Concentration Units: ug/L

CCV Source: MT_MJ_CCV_00175

Analyte	ICV 410-436268/4 10/26/2023 08:09				CCV 410-436268/10 10/26/2023 15:41				CCV 410-436268/33 10/26/2023 17:25			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Silver	48.5		50.0	97	48.8		50.0	98	48.5		50.0	97

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-147656-1

SDG No.:

ICV Source: MT_MJ_ICV_00094 Concentration Units: ug/L

CCV Source: MT_MJ_CCV_00175

Analyte	CCV 410-436268/37 10/26/2023 17:36				CCV 410-436268/53 10/26/2023 18:13				CCV 410-436268/62 10/26/2023 18:33			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Silver	48.3		50.0	97	49.2		50.0	98	48.9		50.0	98

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-147656-1

SDG No.:

Method: 6020B Instrument ID: E07 - 27813

Lab Sample ID: CRI 410-436268/6 Concentration Units: ug/L

CRQL Check Standard Source: MT_MJ_CRI-V_00162

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Silver	0.496	0.510		103	80-120

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-147656-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 410-436268/5 10/26/2023 08:11		CCB 410-436268/11 10/26/2023 15:43		CCB 410-436268/34 10/26/2023 17:27		CCB 410-436268/38 10/26/2023 17:38	
		Found	C	Found	C	Found	C	Found	C
Silver	0.50	ND		ND		ND		ND	

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-147656-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 410-436268/54 10/26/2023 18:15		CCB 410-436268/63 10/26/2023 18:35					
		Found	C	Found	C	Found	C	Found	C
Silver	0.50	ND		ND					

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-147656-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 410-434687/1-A

Instrument Code: E07 - 27813 Batch No.: 436268

CAS No.	Analyte	Concentration	C	Q	Method
7440-22-4	Silver	ND			6020B

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-147656-1

SDG No.:

Lab Sample ID: ICSA 410-436268/7 Instrument ID: E07 - 27813

Lab File ID: 028ICSA.d ICS Source: MT_MJ_ICSA_00109

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Silver	**0.300**	**0.0050**	
Aluminum	*100000*	*102370*	*102*
Antimony	*0.120*	*0.126*	
Arsenic	*7.70*	*0.338*	
Barium	*0.400*	*0.143*	
Beryllium	*0.0110*	*0.0070*	
Cadmium	*0.450*	*0.213*	
Calcium	*299000*	*293232*	*98*
Chromium	*3.60*	*3.32*	
Cobalt	*0.280*	*0.208*	
Copper	*0.440*	*0.104*	
Iron	*260000*	*249970*	*96*
Lead	*0.0930*	*0.129*	
Magnesium	*100000*	*101659*	*102*
Manganese	*0.600*	*0.718*	
Molybdenum	*2000*	*2064*	*103*
Nickel	*1.20*	*0.0580*	
Potassium	*100000*	*105598*	*106*
Selenium	*0.0720*	*0.0230*	
Sodium	*260000*	*251061*	*97*
Strontium	*1.80*	*1.90*	
Thallium	*0.0620*	*0.0120*	
Tin	*0.170*	*-0.0300*	
Titanium	*2000*	*2054*	*103*
Uranium	*0.110*	*0.0610*	
Vanadium	*0.310*	*0.0470*	
Zinc	*1.10*	*12.2*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-147656-1

SDG No.:

Lab Sample ID: ICSAB 410-436268/8 Instrument ID: E07 - 27813

Lab File ID: 029ICSB.d ICS Source: MT_MJ_ICSAB_00085

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Silver	**50.3**	**45.9**	**91**
Aluminum	*100000*	*101032*	*101*
Antimony	*0.120*	*0.138*	
Arsenic	*108*	*90.2*	*84*
Barium	*0.400*	*-0.0340*	
Beryllium	*0.0110*	*0.0030*	
Cadmium	*100*	*91.7*	*91*
Calcium	*299000*	*291530*	*98*
Chromium	*204*	*189*	*93*
Cobalt	*200*	*186*	*93*
Copper	*201*	*178*	*89*
Iron	*260000*	*248549*	*96*
Lead	*0.0930*	*0.0720*	
Magnesium	*100000*	*100266*	*100*
Manganese	*201*	*188*	*94*
Molybdenum	*2000*	*2034*	*102*
Nickel	*201*	*178*	*88*
Potassium	*100000*	*104207*	*104*
Selenium	*100*	*96.0*	*96*
Sodium	*260000*	*250502*	*96*
Strontium	*1.80*	*1.94*	
Thallium	*0.0620*	*0.0050*	
Tin	*0.170*	*0.145*	
Titanium	*2000*	*2034*	*102*
Uranium	*0.110*	*0.0530*	
Vanadium	*200*	*190*	*95*
Zinc	*101*	*90.9*	*90*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-147656-1

SDG No.:

Lab Sample ID: ICSA 410-436268/12 Instrument ID: E07 - 27813

Lab File ID: 211ICSA.d ICS Source: MT_MJ_ICSA_00109

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Silver	**0.300**	**0.0080**	
Aluminum	*100000*	*104254*	*104*
Antimony	*0.120*	*0.117*	
Arsenic	*7.70*	*0.338*	
Barium	*0.400*	*0.196*	
Beryllium	*0.0110*	*0.0000*	
Cadmium	*0.450*	*0.309*	
Calcium	*299000*	*293236*	*98*
Chromium	*3.60*	*3.40*	
Cobalt	*0.280*	*0.225*	
Copper	*0.440*	*0.117*	
Iron	*260000*	*256863*	*99*
Lead	*0.0930*	*0.151*	
Magnesium	*100000*	*103629*	*104*
Manganese	*0.600*	*0.788*	
Molybdenum	*2000*	*2118*	*106*
Nickel	*1.20*	*0.0530*	
Potassium	*100000*	*106257*	*106*
Selenium	*0.0720*	*0.0490*	
Sodium	*260000*	*257712*	*99*
Strontium	*1.80*	*2.07*	
Thallium	*0.0620*	*0.0190*	
Tin	*0.170*	*-0.112*	
Titanium	*2000*	*2091*	*105*
Uranium	*0.110*	*0.0570*	
Vanadium	*0.310*	*0.0710*	
Zinc	*1.10*	*11.8*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-147656-1

SDG No.:

Lab Sample ID: ICSAB 410-436268/13 Instrument ID: E07 - 27813

Lab File ID: 212ICSB.d ICS Source: MT_MJ_ICSAB_00085

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Silver	**50.3**	**47.2**	**94**
Aluminum	*100000*	*102861*	*103*
Antimony	*0.120*	*0.163*	
Arsenic	*108*	*92.1*	*86*
Barium	*0.400*	*0.214*	
Beryllium	*0.0110*	*-0.0030*	
Cadmium	*100*	*93.1*	*93*
Calcium	*299000*	*293544*	*98*
Chromium	*204*	*196*	*96*
Cobalt	*200*	*191*	*95*
Copper	*201*	*184*	*92*
Iron	*260000*	*256358*	*99*
Lead	*0.0930*	*0.0790*	
Magnesium	*100000*	*103736*	*104*
Manganese	*201*	*193*	*96*
Molybdenum	*2000*	*2085*	*104*
Nickel	*201*	*185*	*92*
Potassium	*100000*	*105893*	*106*
Selenium	*100*	*95.5*	*95*
Sodium	*260000*	*257642*	*99*
Strontium	*1.80*	*2.11*	
Thallium	*0.0620*	*-0.0070*	
Tin	*0.170*	*-0.0140*	
Titanium	*2000*	*2040*	*102*
Uranium	*0.110*	*0.0620*	
Vanadium	*200*	*195*	*97*
Zinc	*101*	*95.0*	*94*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

7A-IN
LINEAR RANGE CHECK STANDARD
METALS

Lab ID: LRC 410-436268/9

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC

Job No.: 410-147656-1

Sample Matrix:

LCS Source: MT_MJ_LRC_00098

Analyte	(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Silver	2000	1950		98	90	110		6020B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 410-434687/2-A

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC

Job No.: 410-147656-1

Sample Matrix: Water

LCS Source: MT_LCS-SPK-A_00031

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Silver	50.0	50.1		100	88	113		6020B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job Number: 410-147656-1

SDG Number:

Matrix: Water
Instrument ID: E07 - 27813

Method: 6020B
MDL Date: 02/11/2021 10:57

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Silver	107	2	0.3

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job Number: 410-147656-1

SDG Number:

Matrix: Water Instrument ID: E07 - 27813

Method: 6020B XMDL Date: 07/31/2023 00:00

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Silver	107	0.5	0.1

11-IN
LINEAR RANGES
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No: 410-147656-1

SDG No.:

Instrument ID: E07 - 27813 Date: 04/07/2022 16:18

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Silver		100	6020B

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-147656-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 410-434687/1-A	10/23/2023 17:14	434687		50	50
LCS 410-434687/2-A	10/23/2023 17:14	434687		50	50
410-147656-2	10/23/2023 17:14	434687		50	50
410-147656-1	10/23/2023 17:14	434687		50	50

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-147656-1

SDG No.:

Instrument ID: E07 - 27813 Analysis Method: 6020B

Start Date: 10/26/2023 06:58 End Date: 10/26/2023 18:35

Lab Sample Id	D/F	Type	Time	Analytes
				Ag
ITUNE 410-436268/1	1		06:58	
ICIS 410-436268/2			08:04	X
STD1 410-436268/3 IC	1		08:07	X
ICV 410-436268/4	1		08:09	X
ICB 410-436268/5	1		08:11	X
CRI 410-436268/6	1		08:14	X
ICSA 410-436268/7	1		08:16	X
ICSAB 410-436268/8	1		08:18	X
LRC 410-436268/9	1		08:20	X
CCV 410-436268/10	1		15:41	X
CCB 410-436268/11	1		15:43	X
ICSA 410-436268/12	1		16:05	X
ICSAB 410-436268/13	1		16:07	X
CCV 410-436268/14			16:19	
CCB 410-436268/15			16:21	
ZZZZZZ			16:23	
ZZZZZZ			16:25	
CCV 410-436268/18			16:29	
CCB 410-436268/19			16:31	
ZZZZZZ			16:33	
ZZZZZZ			16:35	
ZZZZZZ			16:37	
ZZZZZZ			16:39	
ZZZZZZ			16:41	
ZZZZZZ			16:43	
CCV 410-436268/26			16:47	
CCB 410-436268/27			16:49	
ZZZZZZ			16:51	
ZZZZZZ			16:53	
ZZZZZZ			16:55	
CCV 410-436268/31			17:09	
CCB 410-436268/32			17:11	
CCV 410-436268/33	1		17:25	X
CCB 410-436268/34	1		17:27	X
MB 410-434687/1-A	1	R	17:30	X
LCS 410-434687/2-A	1	R	17:32	X
CCV 410-436268/37	1		17:36	X
CCB 410-436268/38	1		17:38	X
ZZZZZZ			17:40	
ZZZZZZ			17:42	
ZZZZZZ			17:44	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-147656-1

SDG No.:

Instrument ID: E07 - 27813 Analysis Method: 6020B

Start Date: 10/26/2023 06:58 End Date: 10/26/2023 18:35

Lab Sample Id	D/F	Type	Time	Analytes
				Ag
ZZZZZZ			17:46	
CCV 410-436268/43			17:51	
CCB 410-436268/44			17:53	
ZZZZZZ			17:55	
ZZZZZZ			17:57	
ZZZZZZ			17:59	
ZZZZZZ			18:01	
ZZZZZZ			18:03	
ZZZZZZ			18:05	
ZZZZZZ			18:07	
ZZZZZZ			18:09	
CCV 410-436268/53	1		18:13	X
CCB 410-436268/54	1		18:15	X
ZZZZZZ			18:17	
ZZZZZZ			18:19	
ZZZZZZ			18:21	
ZZZZZZ			18:23	
ZZZZZZ			18:25	
410-147656-2	1	R	18:27	X
410-147656-1	1	R	18:29	X
CCV 410-436268/62	1		18:33	X
CCB 410-436268/63	1		18:35	X

Prep Types:
R = Total Recoverable

FORM XIII-IN

14-IN
ICP-MS TUNE
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-147656-1

SDG No.:

ICP-MS Instrument ID: E07 - 27813 Analysis Date: 10/26/23

Lab ID: ITUNE 410-436268/1

Element - Mass	Avg. Measured Mass (amu)	Avg. Peak Width at Peak Height (amu)	% RSD	Q
Be-9	9	0.7660	0.551	
Mg-24	24	0.7760	0.271	
Co-59	59	0.7629	0.307	
In-115	115	0.7184	0.422	
Pb-208	208	0.7246	0.879	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-147656-1

SDG No.: Analysis Batch No.: 436268

ICP-MS Instrument ID: E07 - 27813 Start Date: 10/26/2023 End Date: 10/26/2023

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Sc-45/1	Q	Element Sc-45/2	Q	Element Sc-45/3	Q	Element Ge/1	Q	Element Ge/2	Q
STD1 410-436268/3	08:07	102		102		100		102		101	
IC ICV 410-436268/4	08:09	103		102		98		103		102	
ICB 410-436268/5	08:11	102		101		100		102		101	
CRI 410-436268/6	08:14	101		100		98		101		100	
ICSA 410-436268/7	08:16	100		102		98		103		102	
ICSAB 410-436268/8	08:18	96		102		99		98		99	
LRC 410-436268/9	08:20	100		106		104		96		101	
CCV 410-436268/10	15:41	111		103		103		111		104	
CCB 410-436268/11	15:43	109		102		103		108		102	
ICSA 410-436268/12	16:05	108		97		97		109		97	
ICSAB 410-436268/13	16:07	104		100		97		106		99	
CCV 410-436268/33	17:25	110		104		103		108		103	
CCB 410-436268/34	17:27	108		102		105		107		102	
MB 410-434687/1-A	17:30	111		106		105		109		103	
LCS 410-434687/2-A	17:32	110		104		108		110		105	
CCV 410-436268/37	17:36	109		103		104		108		103	
CCB 410-436268/38	17:38	107		102		101		106		101	
CCV 410-436268/53	18:13	100		106		104		101		103	
CCB 410-436268/54	18:15	100		107		104		101		104	
410-147656-2	18:27	105		108		106		106		107	
410-147656-1	18:29	106		108		107		107		108	
CCV 410-436268/62	18:33	105		106		104		105		104	
CCB 410-436268/63	18:35	106		107		104		105		106	
IS Name on Instrument											

15A-IN
ICP-MS INTERNAL STANDARDS RELATIONS
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-147656-1

SDG No.: Analysis Batch No.: 436268

ICP-MS Instrument ID: E07 - 27813 Start Date: 10/26/2023 End Date: 10/26/2023

Analyte	Mass	Internal Standard Used:				
		Element In-115/2 115	Element In-115/3 115	Element Tb-159 159	Element Bi-209 209	Element Sc-45/1 45
Silver	107		X			
Aluminum	27					
Antimony	121		X			
Arsenic	75					
Barium	137		X			
Beryllium	9					X
Cadmium	111		X			
Calcium	44					
Chromium	52					
Cobalt	59					
Copper	63					
Iron	57					
Lead	208				X	
Magnesium	24					
Manganese	55					
Molybdenum	98		X			
Nickel	60					
Potassium	39					
Selenium	78					
Sodium	23					
Strontium	88		X			
Thallium	205				X	
Tin	120		X			
Titanium	47					
Uranium	238				X	
Vanadium	51					
Zinc	66					
Internal Standard Name on Instrument		In-115 (IS)	In-115 (IS)	Tb-159 (IS)	Bi-209 (IS)	Sc-45 (IS)

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-147656-1

SDG No.: Analysis Batch No.: 436268

ICP-MS Instrument ID: E07 - 27813 Start Date: 10/26/2023 End Date: 10/26/2023

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Ge/3	Q	Element In-115/2	Q	Element In-115/3	Q	Element Tb-159	Q	Element Bi-209	Q
STD1 410-436268/3	08:07	102		101		96		100		100	
IC ICV 410-436268/4	08:09	103		102		101		101		102	
ICB 410-436268/5	08:11	101		100		101		101		102	
CRI 410-436268/6	08:14	100		100		100		100		100	
ICSA 410-436268/7	08:16	103		96		95		99		94	
ICSAB 410-436268/8	08:18	104		95		97		100		94	
LRC 410-436268/9	08:20	102		123		99		99		92	
CCV 410-436268/10	15:41	102		104		103		103		104	
CCB 410-436268/11	15:43	102		104		102		101		102	
ICSA 410-436268/12	16:05	98		93		92		97		94	
ICSAB 410-436268/13	16:07	101		94		93		97		94	
CCV 410-436268/33	17:25	104		104		104		103		102	
CCB 410-436268/34	17:27	104		104		103		102		102	
MB 410-434687/1-A	17:30	104		104		104		103		103	
LCS 410-434687/2-A	17:32	107		105		103		103		103	
CCV 410-436268/37	17:36	103		103		104		103		103	
CCB 410-436268/38	17:38	103		102		102		102		102	
CCV 410-436268/53	18:13	107		105		103		104		102	
CCB 410-436268/54	18:15	105		105		105		103		102	
410-147656-2	18:27	109		105		107		105		103	
410-147656-1	18:29	108		106		104		104		103	
CCV 410-436268/62	18:33	106		105		105		104		102	
CCB 410-436268/63	18:35	105		105		105		103		103	
IS Name on Instrument											

15A-IN
ICP-MS INTERNAL STANDARDS RELATIONS
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-147656-1

SDG No.: Analysis Batch No.: 436268

ICP-MS Instrument ID: E07 - 27813 Start Date: 10/26/2023 End Date: 10/26/2023

Analyte	Mass	Internal Standard Used:				
		Element Sc-45/2 45	Element Sc-45/3 45	Element Ge/1 72	Element Ge/2 72	Element Ge/3 72
Silver	107					
Aluminum	27		X			
Antimony	121					
Arsenic	75					X
Barium	137					
Beryllium	9					
Cadmium	111					
Calcium	44		X			
Chromium	52		X			
Cobalt	59		X			
Copper	63					X
Iron	57		X			
Lead	208					
Magnesium	24		X			
Manganese	55		X			
Molybdenum	98					
Nickel	60					X
Potassium	39		X			
Selenium	78				X	
Sodium	23		X			
Strontium	88					
Thallium	205					
Tin	120					
Titanium	47		X			
Uranium	238					
Vanadium	51		X			
Zinc	66					X
Internal Standard Name on Instrument		Sc-45 (IS)	Sc-45 (IS)	Ge Internal Standard	Ge Internal Standard	Ge Internal Standard

METALS BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-147656-1

SDG No.:

Batch Number: 434687 | Batch Start Date: 10/24/23 08:50 | Batch Analyst: Kuhns, Annamaria M

Batch Method: 3005A | Batch End Date: 10/24/23 13:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MP_1:1HCl 00031	MP_1:1HNO3 00049	MT_LCS-SPK-A 00031	MT_LCS-SPK-B 00032
MB 410-434687/1		3005A, 6020B		50 mL	50 mL	5 mL	2 mL		
LCS 410-434687/2		3005A, 6020B		50 mL	50 mL	5 mL	2 mL	0.2 mL	0.2 mL
410-147656-B-2	16DUP2	3005A, 6020B	R	50 mL	50 mL	5 mL	2 mL		
410-147656-B-1	16WC1B	3005A, 6020B	R	50 mL	50 mL	5 mL	2 mL		

Batch Notes	
Digestion Tube/Cup ID	2307074
Pipette/Syringe/Dispenser ID	G20054G
Pipette Tip Lot ID	F16694R
Digestion Unit ID	16
Thermometer ID	3811
Temperature - Uncorrected - Start	94 Degrees C
Temperature - Corrected - Start	94 Degrees C
Temperature - Uncorrected - End	94 Degrees C
Temperature - Corrected - End	94 Degrees C

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Quantitation Report

Data File Name	023CALB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23J26A00.b
Acq Time	2023-10-26 08:04:53
Sample Name	ICIS 4993845
Sample Type	CalBlk
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

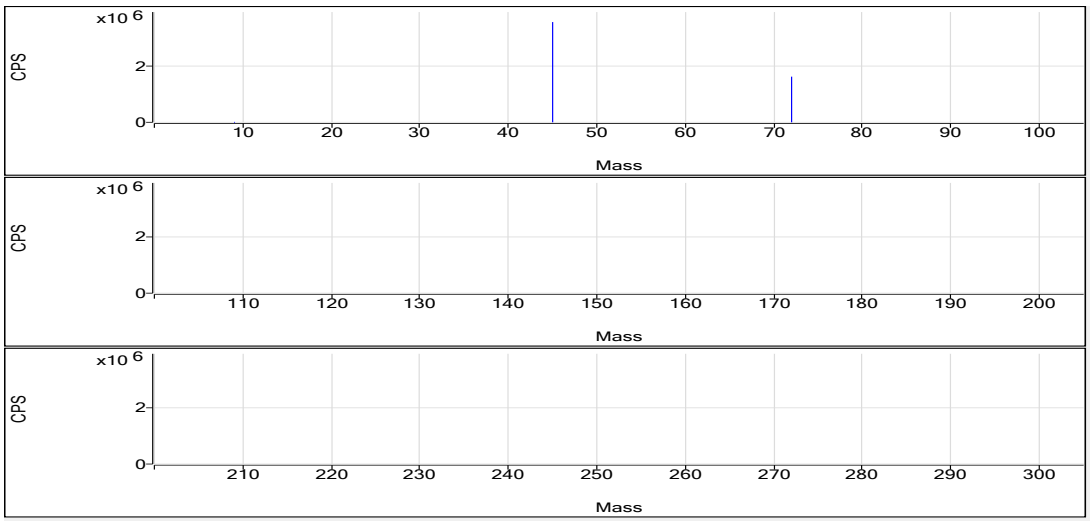
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.000	ppb	N/A	25.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.000	ppb	N/A	4.45	0.0000	Pulse	1.5000	3
Na	23	45	He	0.000	ppb	N/A	30455.36	0.5042	Pulse	0.1000	3
Mg	24	45	He	0.000	ppb	N/A	163.34	0.0027	Pulse	0.1000	3
Al	27	45	He	0.000	ppb	N/A	116.67	0.0019	Pulse	0.1000	3
K	39	45	He	0.000	ppb	N/A	15835.72	0.2621	Pulse	0.1000	3
Ca	44	45	He	0.000	ppb	N/A	210.01	0.0035	Pulse	0.1000	3
Ti	47	45	He	0.000	ppb	N/A	23.33	0.0004	Pulse	0.1000	3
V	51	45	He	0.000	ppb	N/A	438.68	0.0073	Pulse	0.5000	3
Cr	52	45	He	0.000	ppb	N/A	2586.99	0.0428	Pulse	0.1000	3
Mn	55	45	He	0.000	ppb	N/A	303.35	0.0050	Pulse	0.1000	3
Fe	57	45	He	0.000	ppb	N/A	196.68	0.0033	Pulse	0.1000	3
Co	59	45	He	0.000	ppb	N/A	256.68	0.0043	Pulse	0.1000	3
Ni	60	72	He	0.000	ppb	N/A	1463.46	0.0141	Pulse	0.1000	3
Cu	63	72	He	0.000	ppb	N/A	470.03	0.0045	Pulse	0.1000	3
Zn	66	72	He	0.000	ppb	N/A	170.01	0.0016	Pulse	0.1000	3
As	75	72	He	0.000	ppb	N/A	48.00	0.0005	Pulse	0.5000	3
Sr	88	115	He	0.000	ppb	N/A	103.34	0.0011	Pulse	0.1000	3
Mo	98	115	He	0.000	ppb	N/A	166.67	0.0018	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	N/A	43.33	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.000	ppb	N/A	0.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.000	ppb	N/A	1666.83	0.0184	Pulse	0.1000	3
Sb	121	115	He	0.000	ppb	N/A	20.00	0.0002	Pulse	0.1000	3
Ba	137	115	He	0.000	ppb	N/A	180.01	0.0020	Pulse	0.1000	3
Tl	205	209	He	0.000	ppb	N/A	283.34	0.0010	Pulse	0.1000	3
Pb	208	209	He	0.000	ppb	N/A	293.34	0.0010	Pulse	0.1000	3
U	238	209	He	0.000	ppb	N/A	36.67	0.0001	Pulse	0.1000	3

ISTD Table:

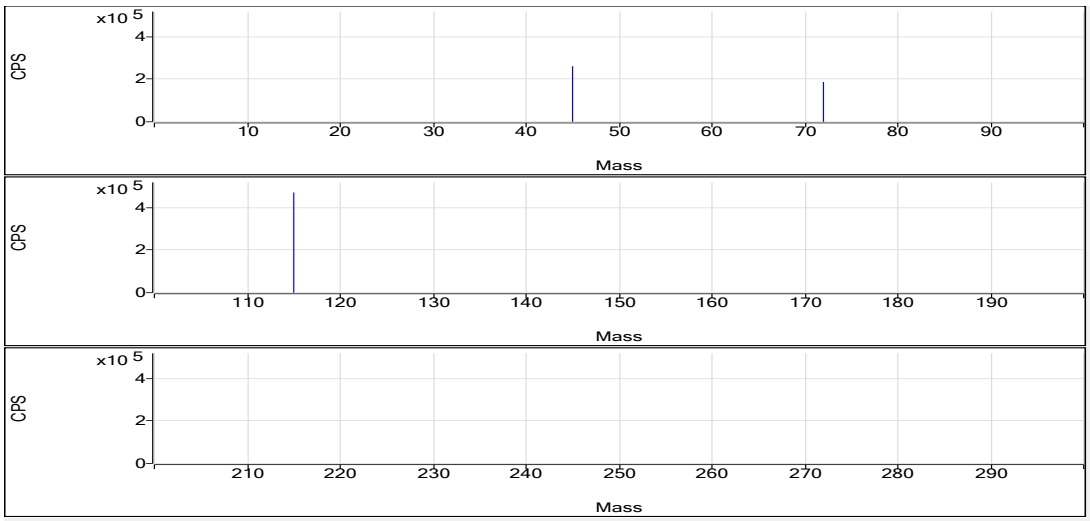
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3574287.45	0.6	100.0	Pulse	0.1000	3
No Gas	Ge	72	1627485.81	0.1	100.0	Pulse	0.1000	3
H2	Sc	45	261462.43	0.9	100.0	Pulse	0.1000	3
H2	Ge	72	187641.28	1.1	100.0	Pulse	0.1000	3
H2	In	115	471685.57	2.1	100.0	Pulse	0.1000	3
He	Sc	45	60408.37	0.6	100.0	Pulse	0.1000	3
He	Ge	72	103594.74	1.4	100.0	Pulse	0.1000	3
He	In	115	90375.25	1.2	100.0	Pulse	0.1000	3
He	Tb	159	376321.27	0.2	100.0	Pulse	0.1000	3
He	Bi	209	286592.05	0.4	100.0	Pulse	0.1000	3

No Gas

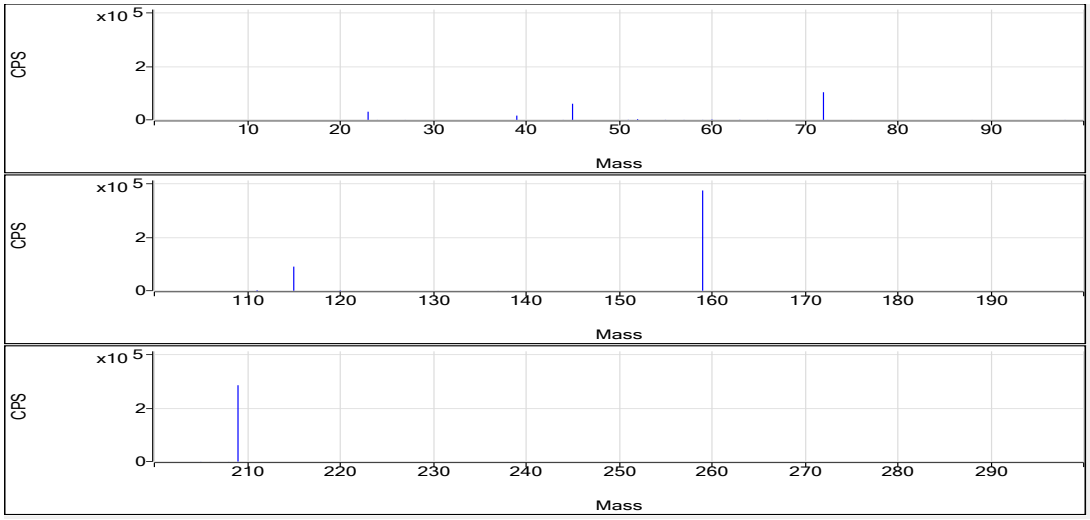


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.004	0	20.00	0.0004	7.085E-06
Be	9	1	No Gas	-0.001	0	24.00	0.0004	7.085E-06
Be	9	1	No Gas	0.005	0	32.00	0.0004	7.085E-06
Se	78	2	H2	0.028	0	6.67	0.0004	2.372E-05
Se	78	2	H2	-0.006	0	4.00	0.0004	2.372E-05
Se	78	2	H2	-0.022	0	2.67	0.0004	2.372E-05
Na	23	3	He	-2.895	0.4948	29971.04	0.0032	0.5042
Na	23	3	He	0.619	0.5062	30381.83	0.0032	0.5042
Na	23	3	He	2.276	0.5115	31013.20	0.0032	0.5042
Mg	24	3	He	0.799	0.004	240.01	0.0016	0.002702
Mg	24	3	He	-0.34	0.0022	130.00	0.0016	0.002702
Mg	24	3	He	-0.458	0.002	120.01	0.0016	0.002702
Al	27	3	He	-0.622	0.0017	100.00	0.0004	0.00193
Al	27	3	He	-0.96	0.0015	90.00	0.0004	0.00193
Al	27	3	He	1.582	0.0026	160.02	0.0004	0.00193
K	39	3	He	17.549	0.2811	17030.38	0.0011	0.2621
K	39	3	He	-5.311	0.2564	15388.53	0.0011	0.2621
K	39	3	He	-12.238	0.2489	15088.24	0.0011	0.2621
Ca	44	3	He	-10.973	0.0028	170.01	0.0001	0.003476
Ca	44	3	He	-2.355	0.0033	200.01	0.0001	0.003476
Ca	44	3	He	13.328	0.0043	260.01	0.0001	0.003476
Ti	47	3	He	0.234	0.0005	30.00	0.0005	0.000385
Ti	47	3	He	-0.819	0	0.00	0.0005	0.000385
Ti	47	3	He	0.584	0.0007	40.00	0.0005	0.000385
V	51	3	He	-0.028	0.0067	404.01	0.0212	0.007263
V	51	3	He	0.016	0.0076	456.01	0.0212	0.007263
V	51	3	He	0.012	0.0075	456.01	0.0212	0.007263
Cr	52	3	He	-0.068	0.0409	2480.31	0.0278	0.04283
Cr	52	3	He	0.095	0.0455	2730.35	0.0278	0.04283
Cr	52	3	He	-0.028	0.0421	2550.31	0.0278	0.04283
Mn	55	3	He	-0.064	0.0043	260.01	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.042	0.0055	330.02	0.0114	0.005023
Mn	55	3	He	0.022	0.0053	320.02	0.0114	0.005023
Fe	57	3	He	0.71	0.0036	220.01	0.0005	0.003255
Fe	57	3	He	-0.482	0.003	180.01	0.0005	0.003255
Fe	57	3	He	-0.228	0.0031	190.01	0.0005	0.003255
Co	59	3	He	-0.015	0.0035	210.01	0.0539	0.00425
Co	59	3	He	0.008	0.0047	280.01	0.0539	0.00425
Co	59	3	He	0.007	0.0046	280.01	0.0539	0.00425
Ni	60	3	He	-0.069	0.0135	1400.11	0.0088	0.01412
Ni	60	3	He	0.094	0.015	1570.14	0.0088	0.01412
Ni	60	3	He	-0.026	0.0139	1420.12	0.0088	0.01412
Cu	63	3	He	-0.004	0.0044	460.03	0.0251	0.004537
Cu	63	3	He	0.001	0.0046	480.03	0.0251	0.004537
Cu	63	3	He	0.002	0.0046	470.02	0.0251	0.004537
Zn	66	3	He	0.177	0.0021	220.01	0.0027	0.001642
Zn	66	3	He	-0.113	0.0013	140.01	0.0027	0.001642
Zn	66	3	He	-0.064	0.0015	150.01	0.0027	0.001642
As	75	3	He	-0.05	0.0004	38.00	0.0019	0.000463
As	75	3	He	0.047	0.0006	58.00	0.0019	0.000463
As	75	3	He	0.004	0.0005	48.00	0.0019	0.000463
Sr	88	3	He	-0.066	0.0006	50.00	0.009	0.001142
Sr	88	3	He	-0.002	0.0011	100.00	0.009	0.001142
Sr	88	3	He	0.068	0.0018	160.01	0.009	0.001142
Mo	98	3	He	0.021	0.0023	210.01	0.0225	0.001842
Mo	98	3	He	-0.017	0.0015	130.00	0.0225	0.001842
Mo	98	3	He	-0.004	0.0018	160.01	0.0225	0.001842
Ag	107	3	He	0.008	0.0009	80.00	0.048	0.0004774
Ag	107	3	He	-0.008	0.0001	10.00	0.048	0.0004774
Ag	107	3	He	-0.001	0.0004	40.00	0.048	0.0004774
Cd	111	3	He	-0.001	0	0.00	0.0055	7.481E-06
Cd	111	3	He	0.003	0	2.00	0.0055	7.481E-06
Cd	111	3	He	-0.001	0	0.00	0.0055	7.481E-06
Sn	120	3	He	-0.038	0.0179	1620.15	0.0157	0.01844
Sn	120	3	He	0.012	0.0186	1660.17	0.0157	0.01844
Sn	120	3	He	0.026	0.0188	1720.18	0.0157	0.01844
Sb	121	3	He	0	0.0002	20.00	0.0139	0.0002204
Sb	121	3	He	-0.008	0.0001	10.00	0.0139	0.0002204
Sb	121	3	He	0.008	0.0003	30.00	0.0139	0.0002204
Ba	137	3	He	-0.124	0.0014	130.00	0.0045	0.001994
Ba	137	3	He	0.08	0.0024	210.01	0.0045	0.001994
Ba	137	3	He	0.044	0.0022	200.01	0.0045	0.001994
Tl	205	3	He	0.001	0.001	290.01	0.03	0.0009888
Tl	205	3	He	0.001	0.001	290.01	0.03	0.0009888
Tl	205	3	He	-0.002	0.0009	270.01	0.03	0.0009888
Pb	208	3	He	-0.006	0.0008	140.01	0.0392	0.001024
Pb	208	3	He	0.003	0.0012	190.01	0.0392	0.001024
Pb	208	3	He	0.002	0.0011	180.01	0.0392	0.001024
U	238	3	He	-0.001	0.0001	30.00	0.0439	0.000128
U	238	3	He	0.001	0.0002	50.00	0.0439	0.000128
U	238	3	He	-0.001	0.0001	30.00	0.0439	0.000128
Sc	45	1	No Gas			3580282.13		
Sc	45	1	No Gas			3551911.20		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3590669.01		
Ge	72	1	No Gas			1627956.54		
Ge	72	1	No Gas			1625047.32		
Ge	72	1	No Gas			1629453.57		
Sc	45	2	H2			258649.88		
Sc	45	2	H2			262606.56		
Sc	45	2	H2			263130.86		
Ge	72	2	H2			186229.53		
Ge	72	2	H2			190041.07		
Ge	72	2	H2			186653.24		
In	115	2	H2			465431.05		
In	115	2	H2			482912.14		
In	115	2	H2			466713.51		
Sc	45	3	He			60575.60		
Sc	45	3	He			60023.09		
Sc	45	3	He			60626.42		
Ge	72	3	He			103580.38		
Ge	72	3	He			105012.07		
Ge	72	3	He			102191.78		
In	115	3	He			90754.68		
In	115	3	He			89133.37		
In	115	3	He			91276.70		
Tb	159	3	He			376329.68		
Tb	159	3	He			377204.80		
Tb	159	3	He			375429.33		
Bi	209	3	He			286683.41		
Bi	209	3	He			285458.96		
Bi	209	3	He			287633.77		

Quantitation Report

Data File Name	024CALS.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23J26A00.b
Acq Time	2023-10-26 08:07:04
Sample Name	STD1 5016672
Sample Type	CalStd
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

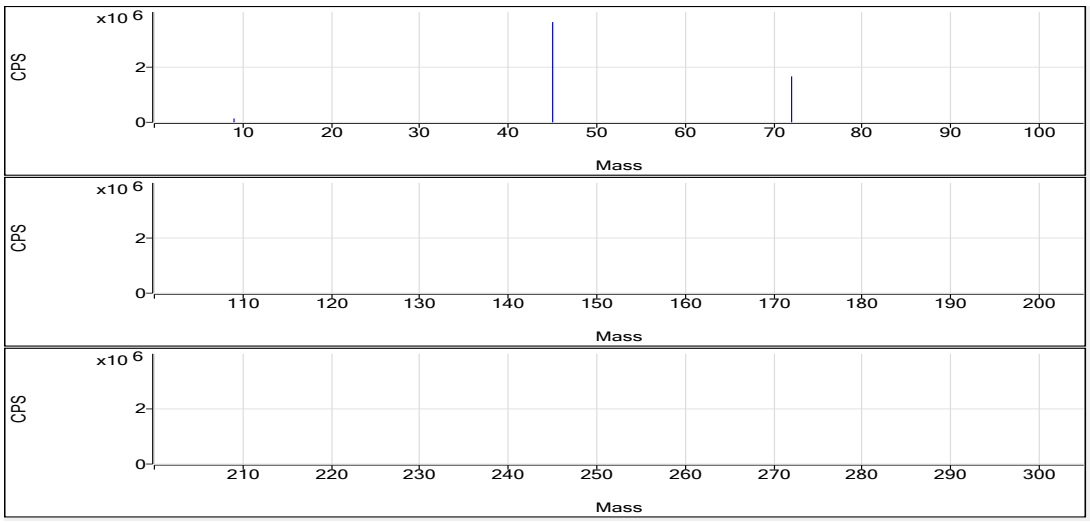
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	100.000	ppb	1.0	138939.92	0.0383	Pulse	0.5000	3
Se	78	72	H2	100.000	ppb	1.6	8265.04	0.0436	Pulse	1.5000	3
Na	23	45	He	10000.000	ppb	0.5	1981640.44	32.9472	Pulse	0.1000	3
Mg	24	45	He	10000.000	ppb	1.6	948729.78	15.7748	Pulse	0.1000	3
Al	27	45	He	10000.000	ppb	0.4	269893.67	4.4873	Pulse	0.1000	3
K	39	45	He	10000.000	ppb	1.3	667326.01	11.0956	Pulse	0.1000	3
Ca	44	45	He	10000.000	ppb	2.4	36890.55	0.6134	Pulse	0.1000	3
Ti	47	45	He	10000.000	ppb	0.9	282920.22	4.7040	Pulse	0.1000	3
V	51	45	He	1000.000	ppb	1.1	1273951.25	21.1817	Pulse	0.5000	3
Cr	52	45	He	1000.000	ppb	1.1	1675494.40	27.8581	Pulse	0.1000	3
Mn	55	45	He	1000.000	ppb	1.8	684704.31	11.3848	Pulse	0.1000	3
Fe	57	45	He	10000.000	ppb	1.5	319360.95	5.3100	Pulse	0.1000	3
Co	59	45	He	1000.000	ppb	1.4	3239624.84	53.8653	Pulse	0.1000	3
Ni	60	72	He	1000.000	ppb	0.6	930178.11	8.8346	Pulse	0.1000	3
Cu	63	72	He	1000.000	ppb	0.6	2646271.00	25.1337	Pulse	0.1000	3
Zn	66	72	He	1000.000	ppb	0.9	287426.10	2.7297	Pulse	0.1000	3
As	75	72	He	1000.000	ppb	0.5	200975.81	1.9087	Pulse	0.5000	3
Sr	88	115	He	100.000	ppb	2.6	78153.98	0.8975	Pulse	0.1000	3
Mo	98	115	He	100.000	ppb	1.0	196208.55	2.2530	Pulse	0.1000	3
Ag	107	115	He	100.000	ppb	0.9	417681.07	4.7959	Pulse	0.1000	3
Cd	111	115	He	100.000	ppb	1.1	47674.23	0.5474	Pulse	0.5000	3
Sn	120	115	He	100.000	ppb	0.5	138478.04	1.5900	Pulse	0.1000	3
Sb	121	115	He	100.000	ppb	0.9	121113.32	1.3907	Pulse	0.1000	3
Ba	137	115	He	1000.000	ppb	0.4	394443.39	4.5290	Pulse	0.1000	3
Tl	205	209	He	100.000	ppb	1.0	861630.48	3.0024	Pulse	0.1000	3
Pb	208	209	He	100.000	ppb	1.6	1125633.66	3.9227	Pulse	0.1000	3
U	238	209	He	100.000	ppb	1.5	1260132.27	4.3913	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3626608.70	0.5	101.5	Pulse	0.1000	3
No Gas	Ge	72	1662222.06	0.2	102.1	Pulse	0.1000	3
H2	Sc	45	266004.88	1.7	101.7	Pulse	0.1000	3
H2	Ge	72	189664.48	1.4	101.1	Pulse	0.1000	3
H2	In	115	475649.73	0.7	100.8	Pulse	0.1000	3
He	Sc	45	60147.56	0.9	99.6	Pulse	0.1000	3
He	Ge	72	105290.12	0.8	101.6	Pulse	0.1000	3
He	In	115	87094.21	1.3	96.4	Pulse	0.1000	3
He	Tb	159	377084.52	0.8	100.2	Pulse	0.1000	3
He	Bi	209	286996.23	1.6	100.1	Pulse	0.1000	3

No Gas



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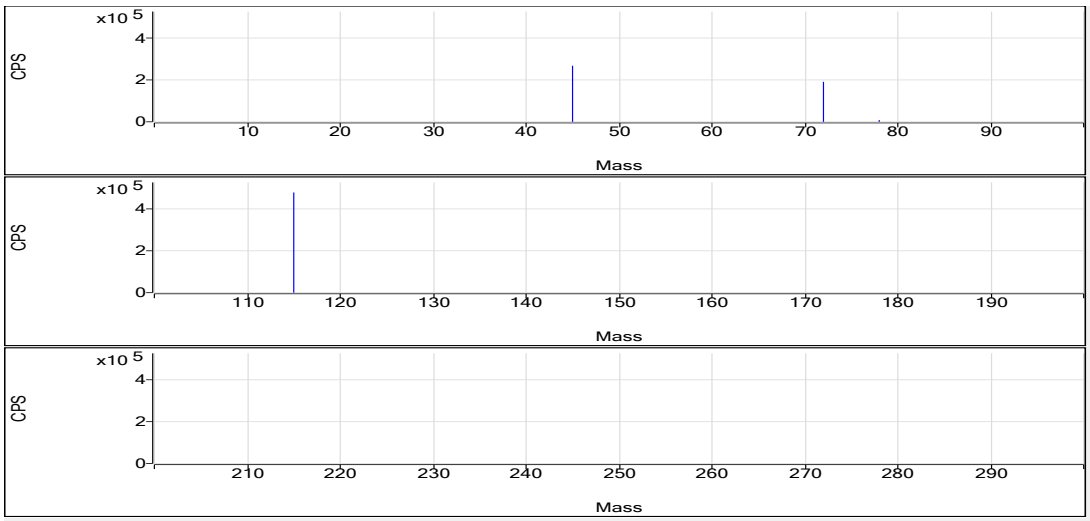
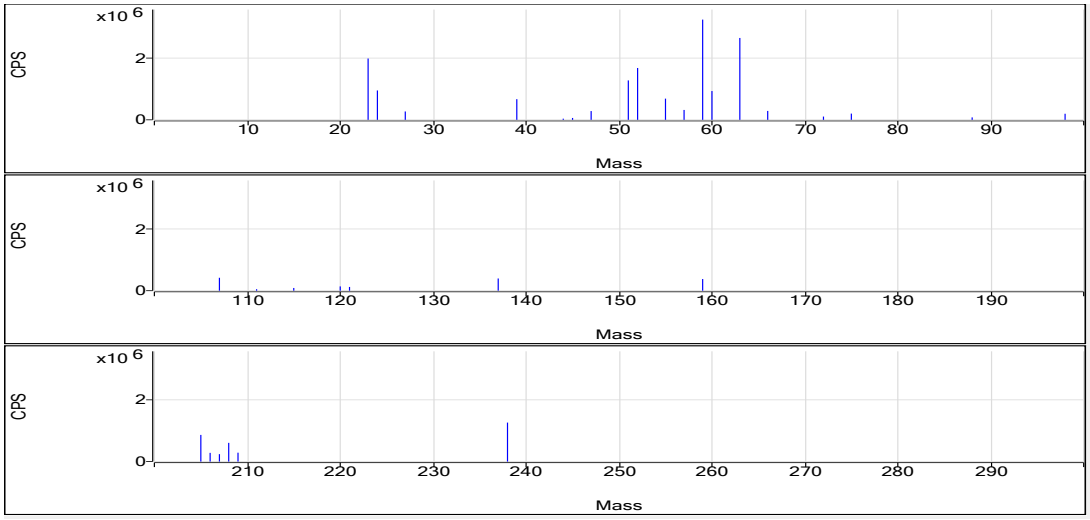


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	100.102	0.0384	138728.80	0.0004	7.085E-06
Be	9	1	No Gas	98.917	0.0379	138290.05	0.0004	7.085E-06
Be	9	1	No Gas	100.981	0.0387	139800.92	0.0004	7.085E-06
Se	78	2	H2	101.698	0.0443	8325.07	0.0004	2.372E-05
Se	78	2	H2	98.527	0.0429	8273.71	0.0004	2.372E-05
Se	78	2	H2	99.775	0.0435	8196.33	0.0004	2.372E-05
Na	23	3	He	9998.076	32.941	1975274.19	0.0032	0.5042
Na	23	3	He	9950.341	32.7861	1991959.81	0.0032	0.5042
Na	23	3	He	10051.583	33.1146	1977687.31	0.0032	0.5042
Mg	24	3	He	10012.004	15.7937	947055.22	0.0016	0.002702
Mg	24	3	He	9839.108	15.521	942998.74	0.0016	0.002702
Mg	24	3	He	10148.889	16.0096	956135.38	0.0016	0.002702
Al	27	3	He	10033.932	4.5025	269987.79	0.0004	0.00193
Al	27	3	He	9958.381	4.4686	271495.68	0.0004	0.00193
Al	27	3	He	10007.687	4.4907	268197.54	0.0004	0.00193
K	39	3	He	10056.715	11.1571	669022.88	0.0011	0.2621
K	39	3	He	9854.586	10.9381	664557.02	0.0011	0.2621
K	39	3	He	10088.699	11.1917	668398.12	0.0011	0.2621
Ca	44	3	He	9815.268	0.6021	36104.95	0.0001	0.003476
Ca	44	3	He	9919.344	0.6085	36967.58	0.0001	0.003476
Ca	44	3	He	10265.387	0.6296	37599.11	0.0001	0.003476
Ti	47	3	He	10006.164	4.7069	282244.90	0.0005	0.000385
Ti	47	3	He	9910.094	4.6617	283228.16	0.0005	0.000385
Ti	47	3	He	10083.742	4.7434	283287.59	0.0005	0.000385
V	51	3	He	1000.349	21.1891	1270585.25	0.0212	0.007263
V	51	3	He	989.084	20.9506	1272878.25	0.0212	0.007263
V	51	3	He	1010.567	21.4055	1278390.25	0.0212	0.007263
Cr	52	3	He	1007.019	28.0534	1682192.32	0.0278	0.04283
Cr	52	3	He	987.47	27.5096	1671377.48	0.0278	0.04283
Cr	52	3	He	1005.511	28.0114	1672913.41	0.0278	0.04283
Mn	55	3	He	994.493	11.3221	678919.52	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	985.208	11.2165	681468.90	0.0114	0.005023
Mn	55	3	He	1020.3	11.6158	693724.52	0.0114	0.005023
Fe	57	3	He	9929.84	5.2728	316176.03	0.0005	0.003255
Fe	57	3	He	9893.88	5.2537	319193.55	0.0005	0.003255
Fe	57	3	He	10176.28	5.4035	322713.28	0.0005	0.003255
Co	59	3	He	996.229	53.6622	3217799.01	0.0539	0.00425
Co	59	3	He	987.953	53.2164	3233225.26	0.0539	0.00425
Co	59	3	He	1015.817	54.7172	3267850.26	0.0539	0.00425
Ni	60	3	He	1006.12	8.8886	927942.72	0.0088	0.01412
Ni	60	3	He	994.087	8.7825	926598.42	0.0088	0.01412
Ni	60	3	He	999.792	8.8328	935993.19	0.0088	0.01412
Cu	63	3	He	1005.87	25.2812	2639275.59	0.0251	0.004537
Cu	63	3	He	994.519	24.9959	2637209.65	0.0251	0.004537
Cu	63	3	He	999.611	25.1239	2662327.77	0.0251	0.004537
Zn	66	3	He	993.542	2.7121	283137.52	0.0027	0.001642
Zn	66	3	He	995.558	2.7176	286724.41	0.0027	0.001642
Zn	66	3	He	1010.899	2.7595	292416.38	0.0027	0.001642
As	75	3	He	994.658	1.8985	198201.39	0.0019	0.000463
As	75	3	He	1000.216	1.9091	201425.02	0.0019	0.000463
As	75	3	He	1005.126	1.9185	203301.03	0.0019	0.000463
Sr	88	3	He	102.749	0.9222	79079.49	0.009	0.001142
Sr	88	3	He	97.628	0.8763	76796.44	0.009	0.001142
Sr	88	3	He	99.623	0.8942	78586.00	0.009	0.001142
Mo	98	3	He	101.062	2.2769	195253.32	0.0225	0.001842
Mo	98	3	He	98.993	2.2303	195467.24	0.0225	0.001842
Mo	98	3	He	99.945	2.2518	197905.09	0.0225	0.001842
Ag	107	3	He	100.548	4.8222	413520.42	0.048	0.0004774
Ag	107	3	He	99.02	4.7489	416196.17	0.048	0.0004774
Ag	107	3	He	100.432	4.8166	423326.63	0.048	0.0004774
Cd	111	3	He	101.233	0.5542	47523.71	0.0055	7.481E-06
Cd	111	3	He	99.489	0.5446	47732.45	0.0055	7.481E-06
Cd	111	3	He	99.278	0.5435	47766.52	0.0055	7.481E-06
Sn	120	3	He	100.181	1.5928	136592.61	0.0157	0.01844
Sn	120	3	He	100.389	1.5961	139884.92	0.0157	0.01844
Sn	120	3	He	99.43	1.5811	138956.60	0.0157	0.01844
Sb	121	3	He	101.064	1.4055	120527.34	0.0139	0.0002204
Sb	121	3	He	99.352	1.3817	121093.25	0.0139	0.0002204
Sb	121	3	He	99.584	1.3849	121719.36	0.0139	0.0002204
Ba	137	3	He	1001.427	4.5354	388929.29	0.0045	0.001994
Ba	137	3	He	995.581	4.509	395166.28	0.0045	0.001994
Ba	137	3	He	1002.992	4.5425	399234.60	0.0045	0.001994
Tl	205	3	He	99.478	2.9868	851596.24	0.03	0.0009888
Tl	205	3	He	101.12	3.0361	861148.66	0.03	0.0009888
Tl	205	3	He	99.402	2.9845	872146.55	0.03	0.0009888
Pb	208	3	He	100.071	3.9255	601785.15	0.0392	0.001024
Pb	208	3	He	101.536	3.983	604171.44	0.0392	0.001024
Pb	208	3	He	98.393	3.8597	608478.74	0.0392	0.001024
U	238	3	He	99.406	4.3652	1244621.70	0.0439	0.000128
U	238	3	He	101.739	4.4677	1267203.34	0.0439	0.000128
U	238	3	He	98.856	4.3411	1268571.78	0.0439	0.000128
Sc	45	1	No Gas			3617281.82		
Sc	45	1	No Gas			3649046.51		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3613497.76		
Ge	72	1	No Gas			1658980.13		
Ge	72	1	No Gas			1665511.38		
Ge	72	1	No Gas			1662174.66		
Sc	45	2	H2			260798.14		
Sc	45	2	H2			269054.90		
Sc	45	2	H2			268161.60		
Ge	72	2	H2			187830.54		
Ge	72	2	H2			192675.08		
Ge	72	2	H2			188487.83		
In	115	2	H2			479503.35		
In	115	2	H2			474814.68		
In	115	2	H2			472631.16		
Sc	45	3	He			59963.99		
Sc	45	3	He			60756.16		
Sc	45	3	He			59722.52		
Ge	72	3	He			104396.87		
Ge	72	3	He			105505.49		
Ge	72	3	He			105968.00		
In	115	3	He			86819.14		
In	115	3	He			88731.36		
In	115	3	He			88972.51		
Tb	159	3	He			374689.92		
Tb	159	3	He			375951.21		
Tb	159	3	He			380612.42		
Bi	209	3	He			285122.91		
Bi	209	3	He			283639.62		
Bi	209	3	He			292226.15		

Quantitation Report

Data File Name	025_ICV.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23J26A00.b
Acq Time	2023-10-26 08:09:06
Sample Name	ICV 5016675
Sample Type	ICV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

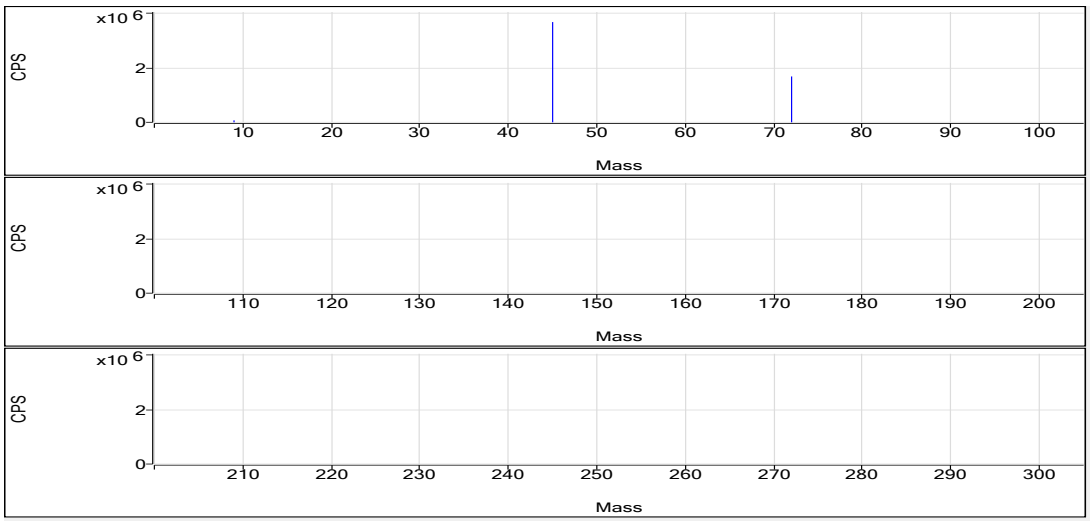
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.707	ppb	0.6	71443.56	0.0194	Pulse	0.5000	3
Se	78	72	H2	50.253	ppb	1.3	4205.06	0.0219	Pulse	1.5000	3
Na	23	45	He	5147.415	ppb	1.7	1020984.93	17.2040	Pulse	0.1000	3
Mg	24	45	He	5188.214	ppb	2.0	485759.04	8.1856	Pulse	0.1000	3
Al	27	45	He	5293.341	ppb	1.0	141028.77	2.3762	Pulse	0.1000	3
K	39	45	He	5265.297	ppb	1.7	354075.65	5.9663	Pulse	0.1000	3
Ca	44	45	He	5198.481	ppb	1.6	19022.97	0.3205	Pulse	0.1000	3
Ti	47	45	He	5154.027	ppb	2.3	143891.24	2.4246	Pulse	0.1000	3
V	51	45	He	516.687	ppb	1.2	649743.21	10.9478	Pulse	0.5000	3
Cr	52	45	He	514.430	ppb	1.2	851779.67	14.3519	Pulse	0.1000	3
Mn	55	45	He	520.421	ppb	1.2	351780.35	5.9273	Pulse	0.1000	3
Fe	57	45	He	5139.302	ppb	1.8	162048.62	2.7305	Pulse	0.1000	3
Co	59	45	He	518.453	ppb	1.6	1657478.10	27.9287	Pulse	0.1000	3
Ni	60	72	He	503.235	ppb	1.5	474380.48	4.4529	Pulse	0.1000	3
Cu	63	72	He	506.293	ppb	1.4	1355889.98	12.7272	Pulse	0.1000	3
Zn	66	72	He	504.959	ppb	0.8	146943.77	1.3792	Pulse	0.1000	3
As	75	72	He	490.976	ppb	1.0	99870.59	0.9374	Pulse	0.5000	3
Sr	88	115	He	48.595	ppb	2.0	39983.72	0.4367	Pulse	0.1000	3
Mo	98	115	He	48.659	ppb	1.0	100445.55	1.0972	Pulse	0.1000	3
Ag	107	115	He	48.475	ppb	1.1	212842.96	2.3251	Pulse	0.1000	3
Cd	111	115	He	52.109	ppb	1.4	26114.21	0.2853	Pulse	0.5000	3
Sn	120	115	He	49.751	ppb	1.5	73279.30	0.8003	Pulse	0.1000	3
Sb	121	115	He	51.439	ppb	3.0	65491.05	0.7155	Pulse	0.1000	3
Ba	137	115	He	480.421	ppb	0.9	199284.92	2.1768	Pulse	0.1000	3
Tl	205	209	He	49.816	ppb	0.7	435249.97	1.4962	Pulse	0.1000	3
Pb	208	209	He	50.086	ppb	0.9	571683.21	1.9653	Pulse	0.1000	3
U	238	209	He	51.150	ppb	1.1	653372.67	2.2462	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3676887.03	0.7	102.9	Pulse	0.1000	3
No Gas	Ge	72	1681629.30	0.5	103.3	Pulse	0.1000	3
H2	Sc	45	267059.28	1.2	102.1	Pulse	0.1000	3
H2	Ge	72	191904.78	0.7	102.3	Pulse	0.1000	3
H2	In	115	482627.53	1.7	102.3	Pulse	0.1000	3
He	Sc	45	59357.53	1.8	98.3	Pulse	0.1000	3
He	Ge	72	106545.83	1.2	102.8	Pulse	0.1000	3
He	In	115	91551.29	1.4	101.3	Pulse	0.1000	3
He	Tb	159	381063.60	1.9	101.3	Pulse	0.1000	3
He	Bi	209	290905.76	1.3	101.5	Pulse	0.1000	3

No Gas



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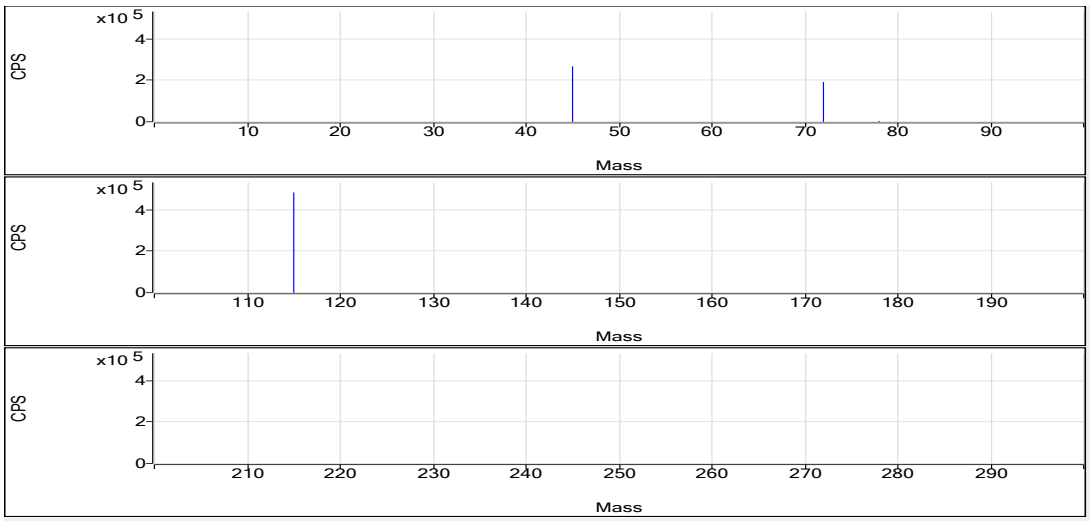
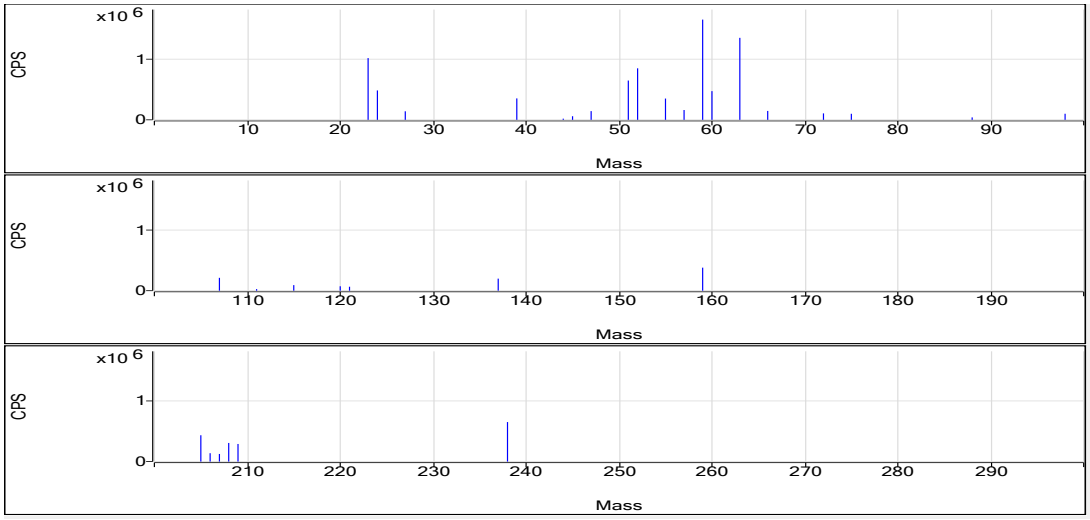


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.962	0.0195	71239.28	0.0004	7.085E-06
Be	9	1	No Gas	50.807	0.0195	72016.85	0.0004	7.085E-06
Be	9	1	No Gas	50.351	0.0193	71074.55	0.0004	7.085E-06
Se	78	2	H2	49.899	0.0218	4190.61	0.0004	2.372E-05
Se	78	2	H2	51.016	0.0222	4233.30	0.0004	2.372E-05
Se	78	2	H2	49.845	0.0217	4191.28	0.0004	2.372E-05
Na	23	3	He	5184.514	17.3243	1016730.53	0.0032	0.5042
Na	23	3	He	5211.411	17.4116	1023775.69	0.0032	0.5042
Na	23	3	He	5046.319	16.876	1022448.58	0.0032	0.5042
Mg	24	3	He	5246.315	8.2772	485774.99	0.0016	0.002702
Mg	24	3	He	5252.331	8.2867	487247.53	0.0016	0.002702
Mg	24	3	He	5065.997	7.9928	484254.60	0.0016	0.002702
Al	27	3	He	5305.883	2.3818	139783.37	0.0004	0.00193
Al	27	3	He	5337.305	2.3959	140875.25	0.0004	0.00193
Al	27	3	He	5236.837	2.3508	142427.70	0.0004	0.00193
K	39	3	He	5318.645	6.0241	353541.79	0.0011	0.2621
K	39	3	He	5315.137	6.0203	353983.98	0.0011	0.2621
K	39	3	He	5162.11	5.8545	354701.17	0.0011	0.2621
Ca	44	3	He	5198.83	0.3206	18812.64	0.0001	0.003476
Ca	44	3	He	5281.102	0.3256	19143.10	0.0001	0.003476
Ca	44	3	He	5115.51	0.3155	19113.17	0.0001	0.003476
Ti	47	3	He	5137.143	2.4167	141831.55	0.0005	0.000385
Ti	47	3	He	5277.877	2.4829	145990.81	0.0005	0.000385
Ti	47	3	He	5047.061	2.3743	143851.36	0.0005	0.000385
V	51	3	He	520.201	11.0223	646874.50	0.0212	0.007263
V	51	3	He	520.349	11.0254	648276.63	0.0212	0.007263
V	51	3	He	509.509	10.7959	654078.50	0.0212	0.007263
Cr	52	3	He	520.493	14.5205	852179.28	0.0278	0.04283
Cr	52	3	He	514.679	14.3588	844274.99	0.0278	0.04283
Cr	52	3	He	508.118	14.1763	858884.75	0.0278	0.04283
Mn	55	3	He	523.049	5.9572	349616.32	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	524.91	5.9784	351519.80	0.0114	0.005023
Mn	55	3	He	513.305	5.8463	354204.92	0.0114	0.005023
Fe	57	3	He	5237.842	2.7828	163319.57	0.0005	0.003255
Fe	57	3	He	5129.795	2.7255	160255.67	0.0005	0.003255
Fe	57	3	He	5050.268	2.6833	162570.63	0.0005	0.003255
Co	59	3	He	525.752	28.3218	1662151.54	0.0539	0.00425
Co	59	3	He	519.981	28.0109	1647002.01	0.0539	0.00425
Co	59	3	He	509.626	27.4532	1663280.76	0.0539	0.00425
Ni	60	3	He	510.096	4.5134	475823.16	0.0088	0.01412
Ni	60	3	He	494.994	4.3802	472816.48	0.0088	0.01412
Ni	60	3	He	504.614	4.4651	474501.79	0.0088	0.01412
Cu	63	3	He	513.446	12.907	1360706.07	0.0251	0.004537
Cu	63	3	He	499.634	12.5599	1355761.39	0.0251	0.004537
Cu	63	3	He	505.799	12.7148	1351202.48	0.0251	0.004537
Zn	66	3	He	504.969	1.3792	145405.99	0.0027	0.001642
Zn	66	3	He	500.773	1.3678	147645.63	0.0027	0.001642
Zn	66	3	He	509.133	1.3906	147779.70	0.0027	0.001642
As	75	3	He	489.282	0.9341	98481.11	0.0019	0.000463
As	75	3	He	487.269	0.9303	100420.41	0.0019	0.000463
As	75	3	He	496.378	0.9477	100710.26	0.0019	0.000463
Sr	88	3	He	47.568	0.4275	38934.25	0.009	0.001142
Sr	88	3	He	49.539	0.4452	40347.70	0.009	0.001142
Sr	88	3	He	48.678	0.4375	40669.22	0.009	0.001142
Mo	98	3	He	49.111	1.1074	100848.11	0.0225	0.001842
Mo	98	3	He	48.684	1.0978	99489.41	0.0225	0.001842
Mo	98	3	He	48.181	1.0865	100999.13	0.0225	0.001842
Ag	107	3	He	48.368	2.3199	211267.75	0.048	0.0004774
Ag	107	3	He	49.074	2.3538	213315.17	0.048	0.0004774
Ag	107	3	He	47.983	2.3015	213945.95	0.048	0.0004774
Cd	111	3	He	51.851	0.2839	25849.71	0.0055	7.481E-06
Cd	111	3	He	52.959	0.2899	26274.51	0.0055	7.481E-06
Cd	111	3	He	51.519	0.282	26218.42	0.0055	7.481E-06
Sn	120	3	He	49.329	0.7937	72277.49	0.0157	0.01844
Sn	120	3	He	49.313	0.7934	71905.95	0.0157	0.01844
Sn	120	3	He	50.611	0.8138	75654.45	0.0157	0.01844
Sb	121	3	He	50.516	0.7026	63987.45	0.0139	0.0002204
Sb	121	3	He	53.249	0.7406	67122.06	0.0139	0.0002204
Sb	121	3	He	50.551	0.7031	65363.63	0.0139	0.0002204
Ba	137	3	He	477.075	2.1617	196857.77	0.0045	0.001994
Ba	137	3	He	485.394	2.1994	199320.21	0.0045	0.001994
Ba	137	3	He	478.794	2.1695	201676.79	0.0045	0.001994
Tl	205	3	He	49.426	1.4845	430478.20	0.03	0.0009888
Tl	205	3	He	50.085	1.5043	432548.20	0.03	0.0009888
Tl	205	3	He	49.937	1.4998	442723.51	0.03	0.0009888
Pb	208	3	He	49.688	1.9496	304529.80	0.0392	0.001024
Pb	208	3	He	50.568	1.9841	306175.11	0.0392	0.001024
Pb	208	3	He	50.003	1.962	312505.80	0.0392	0.001024
U	238	3	He	51.142	2.2459	651262.37	0.0439	0.000128
U	238	3	He	51.732	2.2718	653253.78	0.0439	0.000128
U	238	3	He	50.575	2.221	655601.87	0.0439	0.000128
Sc	45	1	No Gas			3647961.20		
Sc	45	1	No Gas			3699023.38		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3683676.51		
Ge	72	1	No Gas			1673242.16		
Ge	72	1	No Gas			1681878.10		
Ge	72	1	No Gas			1689767.63		
Sc	45	2	H2			266830.89		
Sc	45	2	H2			263976.75		
Sc	45	2	H2			270370.21		
Ge	72	2	H2			192590.95		
Ge	72	2	H2			190295.80		
Ge	72	2	H2			192827.59		
In	115	2	H2			479197.65		
In	115	2	H2			491965.31		
In	115	2	H2			476719.64		
Sc	45	3	He			58688.03		
Sc	45	3	He			58798.53		
Sc	45	3	He			60586.03		
Ge	72	3	He			105423.97		
Ge	72	3	He			107943.69		
Ge	72	3	He			106269.82		
In	115	3	He			91630.08		
In	115	3	He			91187.40		
In	115	3	He			93551.12		
Tb	159	3	He			373461.56		
Tb	159	3	He			382281.87		
Tb	159	3	He			387447.38		
Bi	209	3	He			289982.42		
Bi	209	3	He			287550.21		
Bi	209	3	He			295184.64		

Quantitation Report

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Sample Type	ICB
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

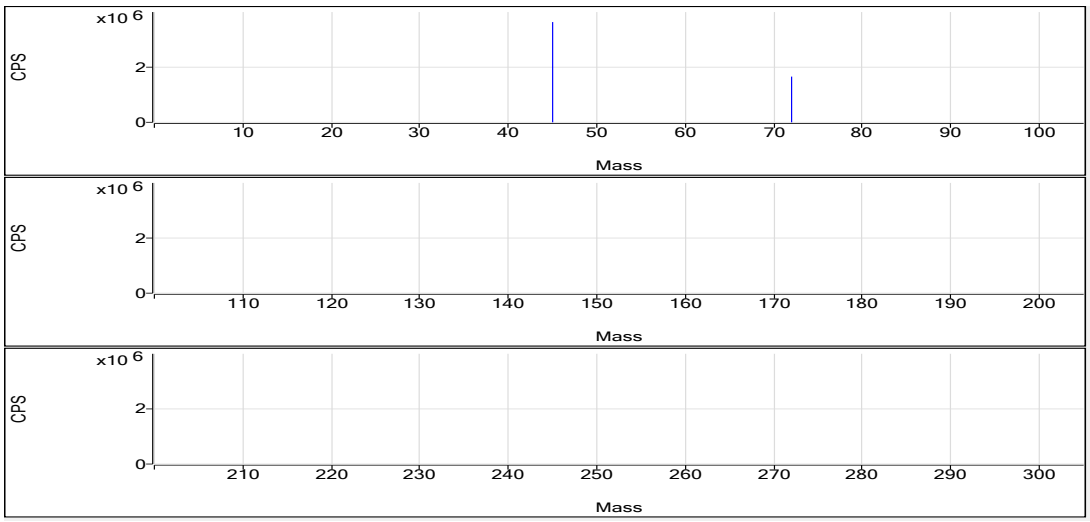
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.032	ppb	10.3	70.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.002	ppb	15.7	4.67	0.0000	Pulse	1.5000	3
Na	23	45	He	3.292	ppb	64.9	30969.50	0.5148	Pulse	0.1000	3
Mg	24	45	He	0.853	ppb	28.7	243.34	0.0040	Pulse	0.1000	3
Al	27	45	He	-0.232	ppb	N/A	110.00	0.0018	Pulse	0.1000	3
K	39	45	He	12.307	ppb	108.9	16576.53	0.2755	Pulse	0.1000	3
Ca	44	45	He	-2.403	ppb	N/A	200.01	0.0033	Pulse	0.1000	3
Ti	47	45	He	1.659	ppb	57.5	70.00	0.0012	Pulse	0.1000	3
V	51	45	He	0.187	ppb	22.4	675.35	0.0112	Pulse	0.5000	3
Cr	52	45	He	0.263	ppb	23.7	3017.09	0.0502	Pulse	0.1000	3
Mn	55	45	He	0.158	ppb	11.0	410.02	0.0068	Pulse	0.1000	3
Fe	57	45	He	1.177	ppb	20.7	233.34	0.0039	Pulse	0.1000	3
Co	59	45	He	0.176	ppb	6.0	826.72	0.0137	Pulse	0.1000	3
Ni	60	72	He	0.085	ppb	196.7	1556.80	0.0149	Pulse	0.1000	3
Cu	63	72	He	0.147	ppb	46.3	863.39	0.0082	Pulse	0.1000	3
Zn	66	72	He	0.273	ppb	33.3	250.01	0.0024	Pulse	0.1000	3
As	75	72	He	0.218	ppb	74.1	92.00	0.0009	Pulse	0.5000	3
Sr	88	115	He	-0.030	ppb	N/A	80.00	0.0009	Pulse	0.1000	3
Mo	98	115	He	0.045	ppb	61.7	260.01	0.0028	Pulse	0.1000	3
Ag	107	115	He	0.006	ppb	100.4	70.00	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.008	ppb	58.3	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.026	ppb	662.0	1720.18	0.0188	Pulse	0.1000	3
Sb	121	115	He	0.079	ppb	53.6	120.00	0.0013	Pulse	0.1000	3
Ba	137	115	He	0.196	ppb	65.8	263.35	0.0029	Pulse	0.1000	3
Tl	205	209	He	0.127	ppb	8.6	1396.80	0.0048	Pulse	0.1000	3
Pb	208	209	He	0.023	ppb	26.4	556.70	0.0019	Pulse	0.1000	3
U	238	209	He	0.048	ppb	17.6	646.71	0.0022	Pulse	0.1000	3

ISTD Table:

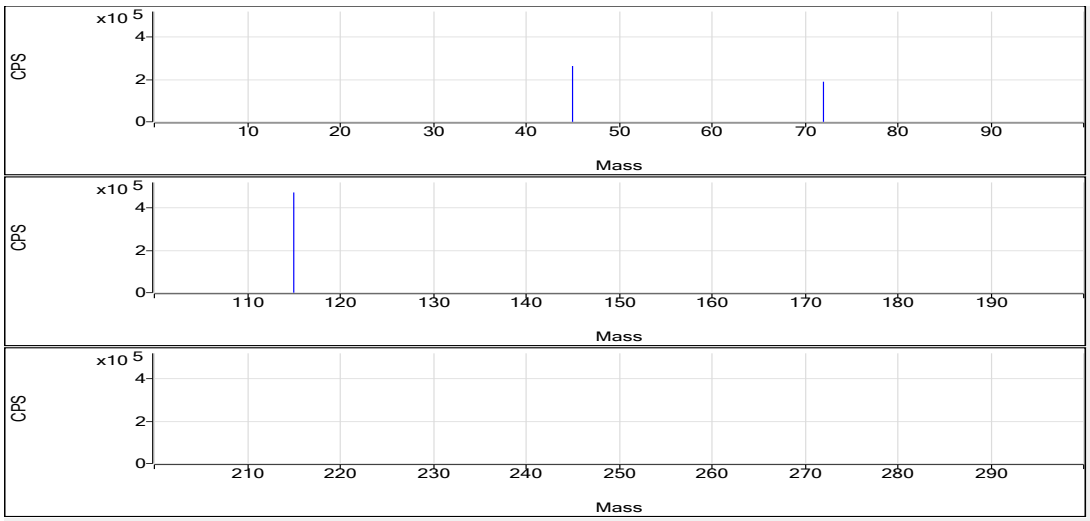
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3635569.11	1.1	101.7	Pulse	0.1000	3
No Gas	Ge	72	1657210.86	0.9	101.8	Pulse	0.1000	3
H2	Sc	45	263584.92	0.9	100.8	Pulse	0.1000	3
H2	Ge	72	189371.92	0.6	100.9	Pulse	0.1000	3
H2	In	115	473374.90	0.9	100.4	Pulse	0.1000	3
He	Sc	45	60157.45	1.1	99.6	Pulse	0.1000	3
He	Ge	72	104715.74	0.3	101.1	Pulse	0.1000	3
He	In	115	91300.83	0.6	101.0	Pulse	0.1000	3
He	Tb	159	380567.39	0.7	101.1	Pulse	0.1000	3
He	Bi	209	291023.11	0.5	101.5	Pulse	0.1000	3

No Gas

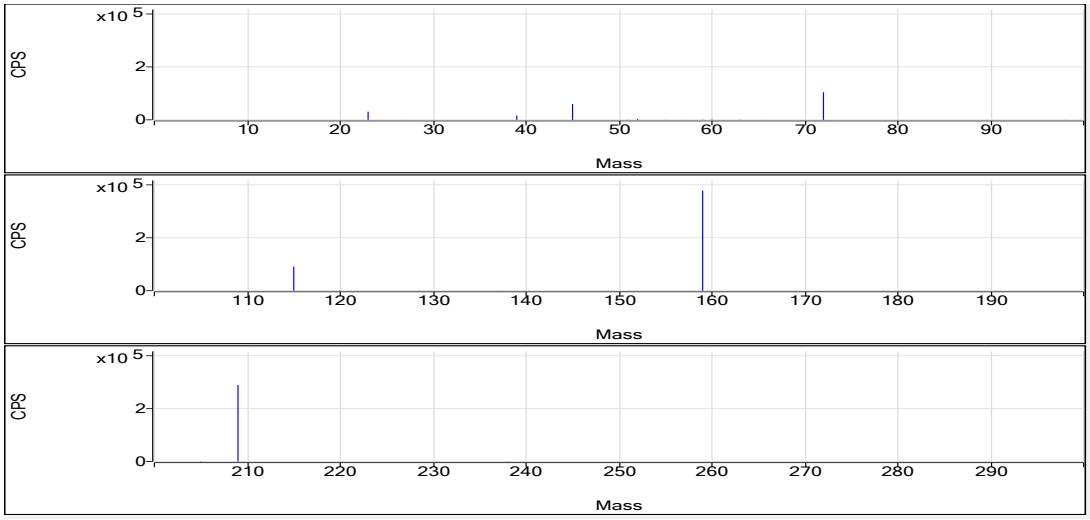


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.028	0	64.00	0.0004	7.085E-06
Be	9	1	No Gas	0.034	0	74.00	0.0004	7.085E-06
Be	9	1	No Gas	0.033	0	72.00	0.0004	7.085E-06
Se	78	2	H2	0.002	0	4.67	0.0004	2.372E-05
Se	78	2	H2	0.002	0	4.67	0.0004	2.372E-05
Se	78	2	H2	0.002	0	4.67	0.0004	2.372E-05
Na	23	3	He	1.342	0.5085	30982.83	0.0032	0.5042
Na	23	3	He	5.573	0.5222	31283.50	0.0032	0.5042
Na	23	3	He	2.96	0.5138	30642.16	0.0032	0.5042
Mg	24	3	He	0.576	0.0036	220.01	0.0016	0.002702
Mg	24	3	He	1.039	0.0043	260.01	0.0016	0.002702
Mg	24	3	He	0.944	0.0042	250.01	0.0016	0.002702
Al	27	3	He	0.454	0.0021	130.00	0.0004	0.00193
Al	27	3	He	0.536	0.0022	130.01	0.0004	0.00193
Al	27	3	He	-1.686	0.0012	70.00	0.0004	0.00193
K	39	3	He	23.025	0.2871	17490.87	0.0011	0.2621
K	39	3	He	16.61	0.2801	16780.10	0.0011	0.2621
K	39	3	He	-2.716	0.2592	15458.61	0.0011	0.2621
Ca	44	3	He	-16.621	0.0025	150.01	0.0001	0.003476
Ca	44	3	He	16.915	0.0045	270.01	0.0001	0.003476
Ca	44	3	He	-7.504	0.003	180.01	0.0001	0.003476
Ti	47	3	He	1.275	0.001	60.00	0.0005	0.000385
Ti	47	3	He	0.956	0.0008	50.00	0.0005	0.000385
Ti	47	3	He	2.746	0.0017	100.00	0.0005	0.000385
V	51	3	He	0.226	0.012	734.02	0.0212	0.007263
V	51	3	He	0.143	0.0103	616.02	0.0212	0.007263
V	51	3	He	0.192	0.0113	676.02	0.0212	0.007263
Cr	52	3	He	0.26	0.0501	3050.42	0.0278	0.04283
Cr	52	3	He	0.327	0.0519	3110.45	0.0278	0.04283
Cr	52	3	He	0.202	0.0485	2890.39	0.0278	0.04283
Mn	55	3	He	0.15	0.0067	410.02	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.145	0.0067	400.02	0.0114	0.005023
Mn	55	3	He	0.177	0.007	420.02	0.0114	0.005023
Fe	57	3	He	0.98	0.0038	230.01	0.0005	0.003255
Fe	57	3	He	1.102	0.0038	230.01	0.0005	0.003255
Fe	57	3	He	1.449	0.004	240.01	0.0005	0.003255
Co	59	3	He	0.183	0.0141	860.05	0.0539	0.00425
Co	59	3	He	0.181	0.014	840.05	0.0539	0.00425
Co	59	3	He	0.164	0.0131	780.05	0.0539	0.00425
Ni	60	3	He	0.254	0.0164	1710.15	0.0088	0.01412
Ni	60	3	He	0.08	0.0148	1550.14	0.0088	0.01412
Ni	60	3	He	-0.08	0.0134	1410.12	0.0088	0.01412
Cu	63	3	He	0.086	0.0067	700.04	0.0251	0.004537
Cu	63	3	He	0.135	0.0079	830.05	0.0251	0.004537
Cu	63	3	He	0.221	0.0101	1060.08	0.0251	0.004537
Zn	66	3	He	0.31	0.0025	260.01	0.0027	0.001642
Zn	66	3	He	0.17	0.0021	220.01	0.0027	0.001642
Zn	66	3	He	0.34	0.0026	270.01	0.0027	0.001642
As	75	3	He	0.389	0.0012	126.00	0.0019	0.000463
As	75	3	He	0.068	0.0006	62.00	0.0019	0.000463
As	75	3	He	0.196	0.0008	88.00	0.0019	0.000463
Sr	88	3	He	-0.017	0.001	90.00	0.009	0.001142
Sr	88	3	He	-0.03	0.0009	80.00	0.009	0.001142
Sr	88	3	He	-0.042	0.0008	70.00	0.009	0.001142
Mo	98	3	He	0.075	0.0035	320.02	0.0225	0.001842
Mo	98	3	He	0.039	0.0027	250.01	0.0225	0.001842
Mo	98	3	He	0.02	0.0023	210.01	0.0225	0.001842
Ag	107	3	He	0.002	0.0006	50.00	0.048	0.0004774
Ag	107	3	He	0.004	0.0007	60.00	0.048	0.0004774
Ag	107	3	He	0.013	0.0011	100.00	0.048	0.0004774
Cd	111	3	He	0.011	0.0001	6.00	0.0055	7.481E-06
Cd	111	3	He	0.003	0	2.00	0.0055	7.481E-06
Cd	111	3	He	0.011	0.0001	6.00	0.0055	7.481E-06
Sn	120	3	He	0.221	0.0219	1990.22	0.0157	0.01844
Sn	120	3	He	-0.052	0.0176	1620.16	0.0157	0.01844
Sn	120	3	He	-0.092	0.017	1550.15	0.0157	0.01844
Sb	121	3	He	0.127	0.002	180.01	0.0139	0.0002204
Sb	121	3	He	0.062	0.0011	100.00	0.0139	0.0002204
Sb	121	3	He	0.047	0.0009	80.00	0.0139	0.0002204
Ba	137	3	He	0.071	0.0023	210.01	0.0045	0.001994
Ba	137	3	He	0.329	0.0035	320.02	0.0045	0.001994
Ba	137	3	He	0.19	0.0029	260.01	0.0045	0.001994
Tl	205	3	He	0.137	0.0051	1490.15	0.03	0.0009888
Tl	205	3	He	0.129	0.0049	1410.14	0.03	0.0009888
Tl	205	3	He	0.115	0.0044	1290.11	0.03	0.0009888
Pb	208	3	He	0.017	0.0017	300.02	0.0392	0.001024
Pb	208	3	He	0.029	0.0022	290.02	0.0392	0.001024
Pb	208	3	He	0.021	0.0019	250.01	0.0392	0.001024
U	238	3	He	0.056	0.0026	760.05	0.0439	0.000128
U	238	3	He	0.039	0.0019	540.03	0.0439	0.000128
U	238	3	He	0.047	0.0022	640.05	0.0439	0.000128
Sc	45	1	No Gas			3590261.82		
Sc	45	1	No Gas			3660075.26		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3656370.26		
Ge	72	1	No Gas			1640185.60		
Ge	72	1	No Gas			1661225.91		
Ge	72	1	No Gas			1670221.07		
Sc	45	2	H2			261427.55		
Sc	45	2	H2			266272.42		
Sc	45	2	H2			263054.80		
Ge	72	2	H2			190525.99		
Ge	72	2	H2			189320.49		
Ge	72	2	H2			188269.29		
In	115	2	H2			478455.11		
In	115	2	H2			469905.89		
In	115	2	H2			471763.70		
Sc	45	3	He			60927.83		
Sc	45	3	He			59902.23		
Sc	45	3	He			59642.29		
Ge	72	3	He			104538.47		
Ge	72	3	He			104527.63		
Ge	72	3	He			105081.13		
In	115	3	He			90804.26		
In	115	3	He			91950.53		
In	115	3	He			91187.95		
Tb	159	3	He			380544.76		
Tb	159	3	He			377984.56		
Tb	159	3	He			383172.85		
Bi	209	3	He			292581.30		
Bi	209	3	He			290253.04		
Bi	209	3	He			290234.98		

Quantitation Report

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Sample Type	CRI
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Auto Dilution	1.0000
Total Dilution	1.0000
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Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

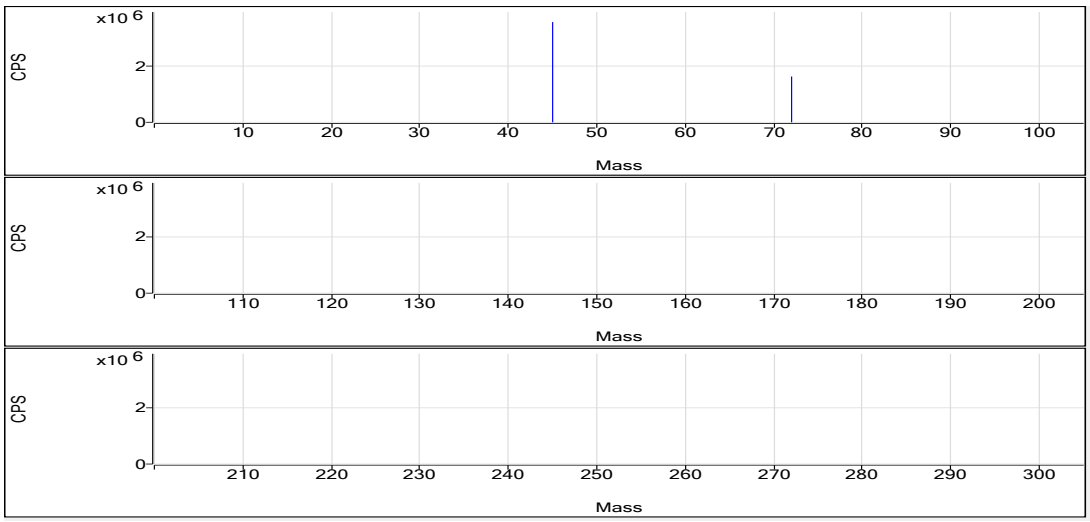
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.493	ppb	10.5	704.02	0.0002	Pulse	0.5000	3
Se	78	72	H2	1.039	ppb	7.3	89.56	0.0005	Pulse	1.5000	3
Na	23	45	He	206.983	ppb	3.2	69582.90	1.1757	Pulse	0.1000	3
Mg	24	45	He	53.038	ppb	6.7	5111.06	0.0864	Pulse	0.1000	3
Al	27	45	He	26.714	ppb	20.5	823.40	0.0139	Pulse	0.1000	3
K	39	45	He	220.318	ppb	9.8	29640.70	0.5008	Pulse	0.1000	3
Ca	44	45	He	84.327	ppb	26.3	510.03	0.0086	Pulse	0.1000	3
Ti	47	45	He	11.277	ppb	14.4	336.68	0.0057	Pulse	0.1000	3
V	51	45	He	2.105	ppb	3.8	3067.68	0.0518	Pulse	0.5000	3
Cr	52	45	He	2.276	ppb	1.5	6281.60	0.1061	Pulse	0.1000	3
Mn	55	45	He	2.064	ppb	19.0	1686.82	0.0285	Pulse	0.1000	3
Fe	57	45	He	53.947	ppb	3.6	1886.85	0.0319	Pulse	0.1000	3
Co	59	45	He	0.552	ppb	5.2	2010.21	0.0340	Pulse	0.1000	3
Ni	60	72	He	1.151	ppb	9.5	2516.97	0.0243	Pulse	0.1000	3
Cu	63	72	He	1.073	ppb	5.1	3267.16	0.0315	Pulse	0.1000	3
Zn	66	72	He	10.163	ppb	8.7	3047.12	0.0294	Pulse	0.1000	3
As	75	72	He	2.158	ppb	5.3	475.34	0.0046	Pulse	0.5000	3
Sr	88	115	He	0.983	ppb	5.2	903.39	0.0100	Pulse	0.1000	3
Mo	98	115	He	0.479	ppb	11.7	1146.75	0.0126	Pulse	0.1000	3
Ag	107	115	He	0.510	ppb	3.7	2260.26	0.0249	Pulse	0.1000	3
Cd	111	115	He	0.495	ppb	12.1	246.67	0.0027	Pulse	0.5000	3
Sn	120	115	He	1.981	ppb	1.5	4497.55	0.0496	Pulse	0.1000	3
Sb	121	115	He	1.017	ppb	3.8	1303.44	0.0144	Pulse	0.1000	3
Ba	137	115	He	1.687	ppb	4.1	873.40	0.0096	Pulse	0.1000	3
Tl	205	209	He	0.523	ppb	2.9	4777.73	0.0167	Pulse	0.1000	3
Pb	208	209	He	0.518	ppb	5.3	6114.10	0.0213	Pulse	0.1000	3
U	238	209	He	1.066	ppb	3.0	13437.43	0.0469	Pulse	0.1000	3

ISTD Table:

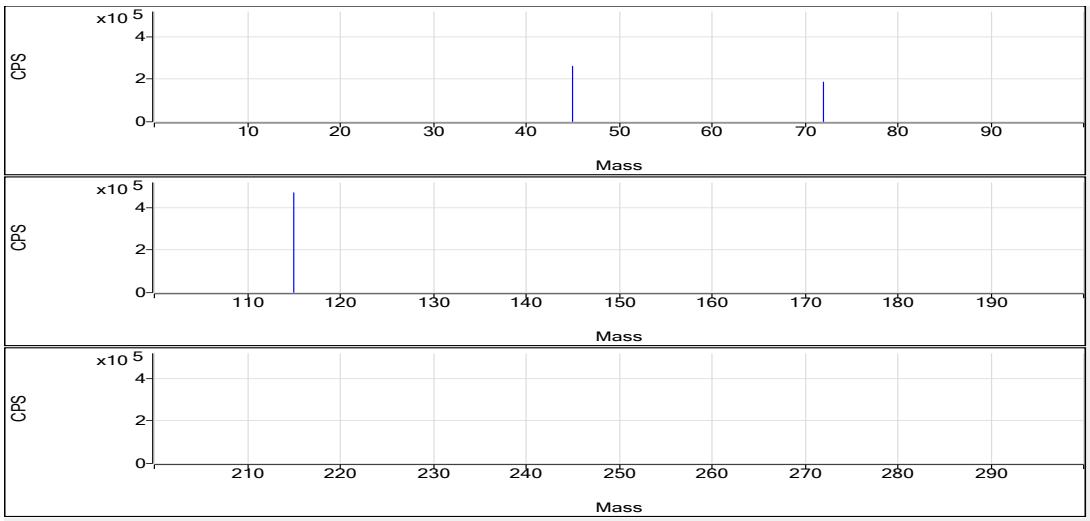
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3594436.09	0.9	100.6	Pulse	0.1000	3
No Gas	Ge	72	1642844.19	0.8	100.9	Pulse	0.1000	3
H2	Sc	45	262203.99	0.7	100.3	Pulse	0.1000	3
H2	Ge	72	188141.99	2.2	100.3	Pulse	0.1000	3
H2	In	115	470540.68	0.9	99.8	Pulse	0.1000	3
He	Sc	45	59183.47	0.2	98.0	Pulse	0.1000	3
He	Ge	72	103705.91	1.7	100.1	Pulse	0.1000	3
He	In	115	90709.22	1.1	100.4	Pulse	0.1000	3
He	Tb	159	377803.03	1.0	100.4	Pulse	0.1000	3
He	Bi	209	286365.43	1.4	99.9	Pulse	0.1000	3

No Gas

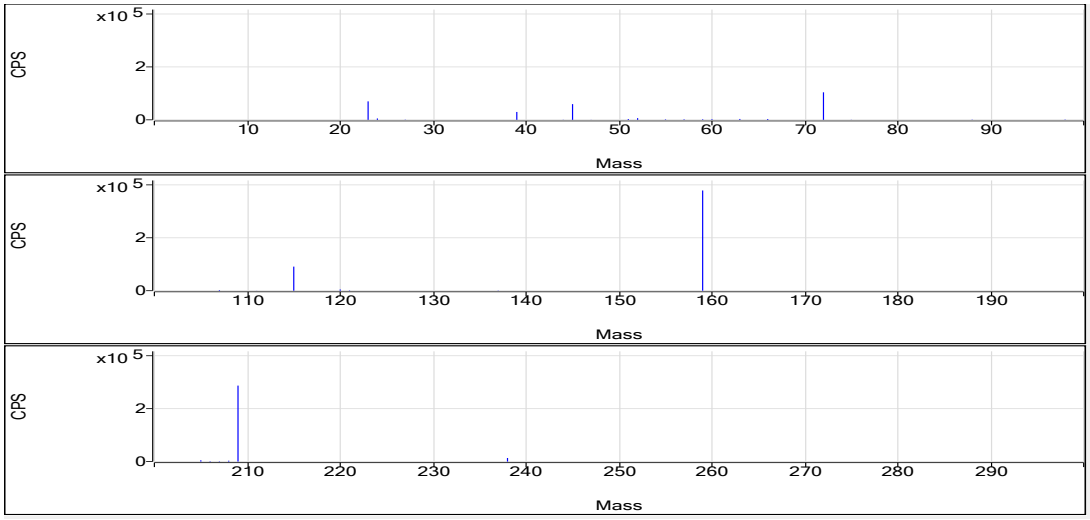


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.483	0.0002	684.02	0.0004	7.085E-06
Be	9	1	No Gas	0.447	0.0002	646.02	0.0004	7.085E-06
Be	9	1	No Gas	0.549	0.0002	782.03	0.0004	7.085E-06
Se	78	2	H2	1.041	0.0005	92.00	0.0004	2.372E-05
Se	78	2	H2	0.961	0.0004	82.67	0.0004	2.372E-05
Se	78	2	H2	1.113	0.0005	94.00	0.0004	2.372E-05
Na	23	3	He	207.913	1.1787	69814.51	0.0032	0.5042
Na	23	3	He	213.062	1.1954	70888.54	0.0032	0.5042
Na	23	3	He	199.975	1.1529	68045.66	0.0032	0.5042
Mg	24	3	He	57.067	0.0927	5491.22	0.0016	0.002702
Mg	24	3	He	51.756	0.0843	5000.99	0.0016	0.002702
Mg	24	3	He	50.292	0.082	4840.96	0.0016	0.002702
Al	27	3	He	20.918	0.0113	670.04	0.0004	0.00193
Al	27	3	He	31.793	0.0162	960.10	0.0004	0.00193
Al	27	3	He	27.431	0.0142	840.05	0.0004	0.00193
K	39	3	He	244.952	0.5275	31243.94	0.0011	0.2621
K	39	3	He	210.678	0.4904	29079.37	0.0011	0.2621
K	39	3	He	205.323	0.4846	28598.79	0.0011	0.2621
Ca	44	3	He	100.805	0.0096	570.03	0.0001	0.003476
Ca	44	3	He	59.141	0.0071	420.02	0.0001	0.003476
Ca	44	3	He	93.035	0.0092	540.03	0.0001	0.003476
Ti	47	3	He	12.822	0.0064	380.02	0.0005	0.000385
Ti	47	3	He	9.579	0.0049	290.01	0.0005	0.000385
Ti	47	3	He	11.43	0.0058	340.02	0.0005	0.000385
V	51	3	He	2.088	0.0515	3048.34	0.0212	0.007263
V	51	3	He	2.193	0.0537	3184.37	0.0212	0.007263
V	51	3	He	2.034	0.0503	2970.32	0.0212	0.007263
Cr	52	3	He	2.291	0.1066	6311.59	0.0278	0.04283
Cr	52	3	He	2.299	0.1068	6331.66	0.0278	0.04283
Cr	52	3	He	2.238	0.1051	6201.56	0.0278	0.04283
Mn	55	3	He	1.977	0.0275	1630.13	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1.722	0.0246	1460.12	0.0114	0.005023
Mn	55	3	He	2.492	0.0334	1970.21	0.0114	0.005023
Fe	57	3	He	53.366	0.0316	1870.18	0.0005	0.003255
Fe	57	3	He	52.341	0.031	1840.17	0.0005	0.003255
Fe	57	3	He	56.133	0.033	1950.20	0.0005	0.003255
Co	59	3	He	0.52	0.0323	1910.19	0.0539	0.00425
Co	59	3	He	0.56	0.0344	2040.22	0.0539	0.00425
Co	59	3	He	0.575	0.0352	2080.22	0.0539	0.00425
Ni	60	3	He	1.186	0.0246	2500.29	0.0088	0.01412
Ni	60	3	He	1.028	0.0232	2430.29	0.0088	0.01412
Ni	60	3	He	1.239	0.025	2620.34	0.0088	0.01412
Cu	63	3	He	1.036	0.0306	3110.45	0.0251	0.004537
Cu	63	3	He	1.046	0.0308	3230.50	0.0251	0.004537
Cu	63	3	He	1.136	0.0331	3460.52	0.0251	0.004537
Zn	66	3	He	9.599	0.0278	2830.41	0.0027	0.001642
Zn	66	3	He	11.187	0.0322	3370.54	0.0027	0.001642
Zn	66	3	He	9.702	0.0281	2940.41	0.0027	0.001642
As	75	3	He	2.035	0.0043	442.01	0.0019	0.000463
As	75	3	He	2.258	0.0048	500.01	0.0019	0.000463
As	75	3	He	2.182	0.0046	484.01	0.0019	0.000463
Sr	88	3	He	0.966	0.0098	890.06	0.009	0.001142
Sr	88	3	He	0.943	0.0096	860.05	0.009	0.001142
Sr	88	3	He	1.041	0.0105	960.07	0.009	0.001142
Mo	98	3	He	0.49	0.0129	1170.09	0.0225	0.001842
Mo	98	3	He	0.419	0.0113	1010.06	0.0225	0.001842
Mo	98	3	He	0.529	0.0137	1260.10	0.0225	0.001842
Ag	107	3	He	0.488	0.0239	2170.26	0.048	0.0004774
Ag	107	3	He	0.525	0.0257	2300.25	0.048	0.0004774
Ag	107	3	He	0.516	0.0252	2310.27	0.048	0.0004774
Cd	111	3	He	0.433	0.0024	216.00	0.0055	7.481E-06
Cd	111	3	He	0.5	0.0027	246.00	0.0055	7.481E-06
Cd	111	3	He	0.553	0.003	278.01	0.0055	7.481E-06
Sn	120	3	He	1.952	0.0491	4460.89	0.0157	0.01844
Sn	120	3	He	1.979	0.0495	4440.84	0.0157	0.01844
Sn	120	3	He	2.013	0.0501	4590.91	0.0157	0.01844
Sb	121	3	He	0.982	0.0139	1260.11	0.0139	0.0002204
Sb	121	3	He	1.011	0.0143	1280.10	0.0139	0.0002204
Sb	121	3	He	1.059	0.0149	1370.12	0.0139	0.0002204
Ba	137	3	He	1.725	0.0098	890.07	0.0045	0.001994
Ba	137	3	He	1.729	0.0098	880.07	0.0045	0.001994
Ba	137	3	He	1.608	0.0093	850.06	0.0045	0.001994
Tl	205	3	He	0.539	0.0172	4851.08	0.03	0.0009888
Tl	205	3	He	0.522	0.0167	4761.05	0.03	0.0009888
Tl	205	3	He	0.508	0.0162	4721.07	0.03	0.0009888
Pb	208	3	He	0.493	0.0203	2690.35	0.0392	0.001024
Pb	208	3	He	0.515	0.0212	3240.53	0.0392	0.001024
Pb	208	3	He	0.547	0.0225	3500.59	0.0392	0.001024
U	238	3	He	1.097	0.0483	13657.61	0.0439	0.000128
U	238	3	He	1.034	0.0455	13007.04	0.0439	0.000128
U	238	3	He	1.067	0.047	13647.64	0.0439	0.000128
Sc	45	1	No Gas			3558451.51		
Sc	45	1	No Gas			3624604.32		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3600252.45		
Ge	72	1	No Gas			1627479.98		
Ge	72	1	No Gas			1651515.44		
Ge	72	1	No Gas			1649537.16		
Sc	45	2	H2			264397.79		
Sc	45	2	H2			261473.49		
Sc	45	2	H2			260740.68		
Ge	72	2	H2			192755.33		
Ge	72	2	H2			186868.90		
Ge	72	2	H2			184801.74		
In	115	2	H2			470924.09		
In	115	2	H2			466196.09		
In	115	2	H2			474501.87		
Sc	45	3	He			59230.25		
Sc	45	3	He			59301.01		
Sc	45	3	He			59019.16		
Ge	72	3	He			101709.16		
Ge	72	3	He			104799.52		
Ge	72	3	He			104609.04		
In	115	3	He			90854.32		
In	115	3	He			89667.30		
In	115	3	He			91711.28		
Tb	159	3	He			373328.71		
Tb	159	3	He			379203.59		
Tb	159	3	He			380876.79		
Bi	209	3	He			282735.91		
Bi	209	3	He			285763.84		
Bi	209	3	He			290596.54		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23J26A00.b
Acq Time	2023-10-26 08:16:17
Sample Name	ICSA 5057032
Sample Type	ICSA
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

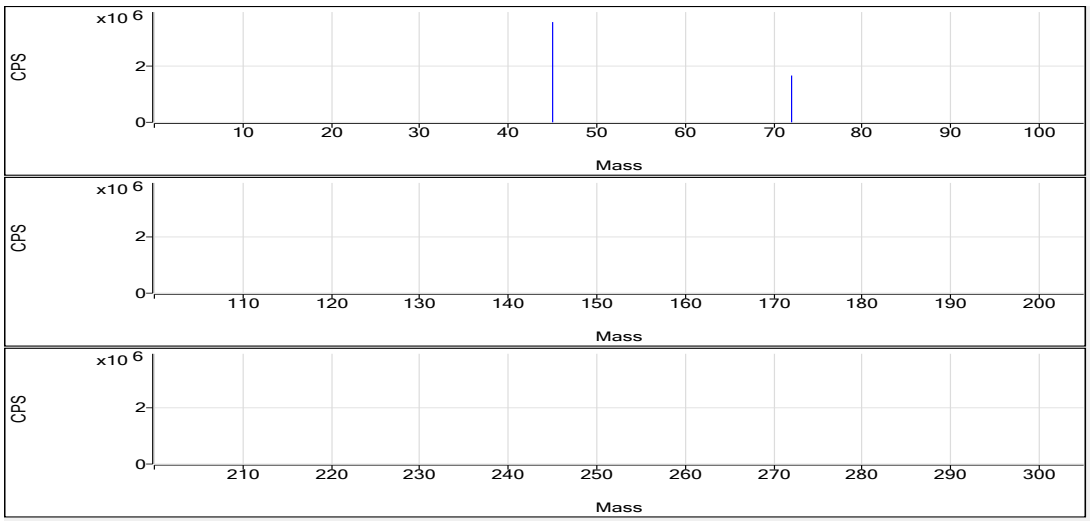
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.007	ppb	54.3	35.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.023	ppb	219.9	6.44	0.0000	Pulse	1.5000	3
Na	23	45	He	251060.796	ppb	0.1	48386349.28	815.0229	Analog	0.1000	3
Mg	24	45	He	101658.516	ppb	0.8	9518416.52	160.3395	Analog	0.1000	3
Al	27	45	He	102370.409	ppb	1.7	2725764.96	45.9186	Pulse	0.1000	3
K	39	45	He	105598.393	ppb	1.5	6806563.23	114.6622	Analog	0.1000	3
Ca	44	45	He	293232.016	ppb	1.5	1061829.85	17.8877	Pulse	0.1000	3
Ti	47	45	He	2054.124	ppb	1.5	57376.31	0.9666	Pulse	0.1000	3
V	51	45	He	0.047	ppb	59.5	490.01	0.0083	Pulse	0.5000	3
Cr	52	45	He	3.322	ppb	6.5	8025.83	0.1352	Pulse	0.1000	3
Mn	55	45	He	0.718	ppb	11.8	783.38	0.0132	Pulse	0.1000	3
Fe	57	45	He	249970.482	ppb	2.0	7874282.59	132.6561	Analog	0.1000	3
Co	59	45	He	0.208	ppb	20.0	916.73	0.0154	Pulse	0.1000	3
Ni	60	72	He	0.058	ppb	185.9	1556.81	0.0146	Pulse	0.1000	3
Cu	63	72	He	0.104	ppb	36.2	760.05	0.0071	Pulse	0.1000	3
Zn	66	72	He	12.218	ppb	4.5	3720.61	0.0350	Pulse	0.1000	3
As	75	72	He	0.338	ppb	43.8	118.00	0.0011	Pulse	0.5000	3
Sr	88	115	He	1.897	ppb	16.6	1560.15	0.0182	Pulse	0.1000	3
Mo	98	115	He	2063.689	ppb	2.2	3995171.82	46.4588	Pulse	0.1000	3
Ag	107	115	He	0.005	ppb	98.3	63.33	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.213	ppb	11.5	100.67	0.0012	Pulse	0.5000	3
Sn	120	115	He	-0.030	ppb	N/A	1543.48	0.0180	Pulse	0.1000	3
Sb	121	115	He	0.126	ppb	14.2	170.01	0.0020	Pulse	0.1000	3
Ba	137	115	He	0.143	ppb	62.7	226.68	0.0026	Pulse	0.1000	3
Tl	205	209	He	0.012	ppb	20.7	363.35	0.0013	Pulse	0.1000	3
Pb	208	209	He	0.129	ppb	8.3	1636.77	0.0061	Pulse	0.1000	3
U	238	209	He	0.061	ppb	11.0	753.39	0.0028	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3574283.59	1.3	100.0	Pulse	0.1000	3
No Gas	Ge	72	1667627.42	0.7	102.5	Pulse	0.1000	3
H2	Sc	45	267108.02	1.1	102.2	Pulse	0.1000	3
H2	Ge	72	190595.22	2.2	101.6	Pulse	0.1000	3
H2	In	115	450829.32	2.3	95.6	Pulse	0.1000	3
He	Sc	45	59367.61	1.2	98.3	Pulse	0.1000	3
He	Ge	72	106397.49	0.7	102.7	Pulse	0.1000	3
He	In	115	86028.75	2.8	95.2	Pulse	0.1000	3
He	Tb	159	370918.56	0.2	98.6	Pulse	0.1000	3
He	Bi	209	269225.43	0.8	93.9	Pulse	0.1000	3

No Gas



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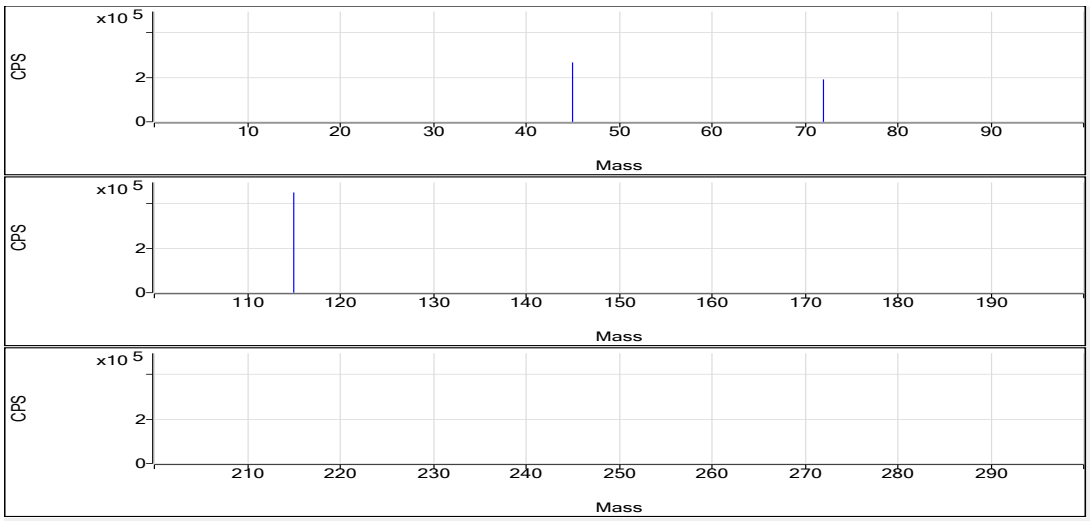
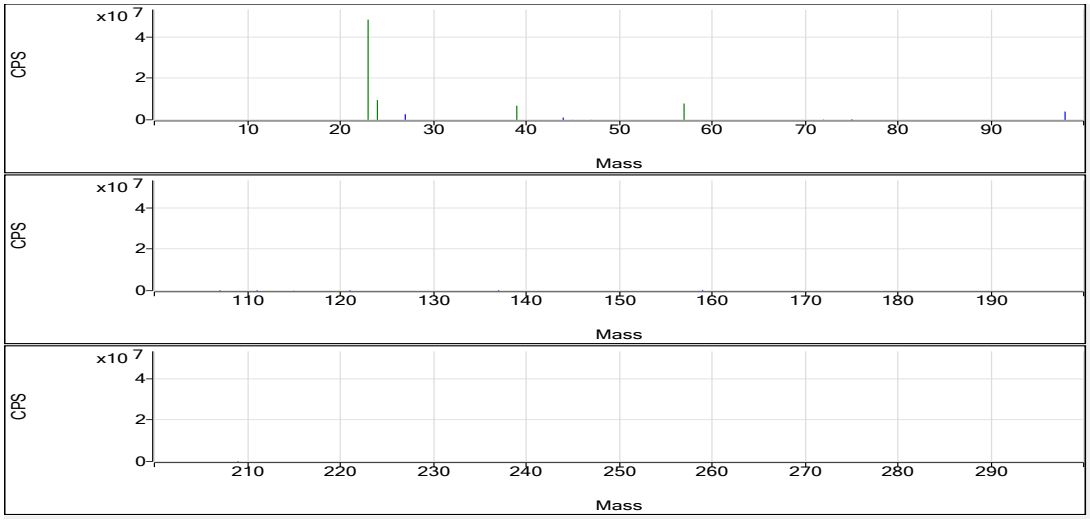


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.008	0	36.00	0.0004	7.085E-06
Be	9	1	No Gas	0.011	0	40.00	0.0004	7.085E-06
Be	9	1	No Gas	0.003	0	30.00	0.0004	7.085E-06
Se	78	2	H2	0.079	0.0001	11.33	0.0004	2.372E-05
Se	78	2	H2	-0.014	0	3.33	0.0004	2.372E-05
Se	78	2	H2	0.003	0	4.67	0.0004	2.372E-05
Na	23	3	He	250927	814.5888	48387624.28	0.0032	0.5042
Na	23	3	He	251385.509	816.0763	49016449.27	0.0032	0.5042
Na	23	3	He	250869.881	814.4035	47754974.29	0.0032	0.5042
Mg	24	3	He	101193.39	159.6059	9480796.73	0.0016	0.002702
Mg	24	3	He	101164.648	159.5606	9583776.11	0.0016	0.002702
Mg	24	3	He	102617.509	161.852	9490676.73	0.0016	0.002702
Al	27	3	He	101350.397	45.4611	2700449.33	0.0004	0.00193
Al	27	3	He	101440.641	45.5016	2732988.08	0.0004	0.00193
Al	27	3	He	104320.19	46.7932	2743857.46	0.0004	0.00193
K	39	3	He	104438.442	113.4056	6736436.77	0.0011	0.2621
K	39	3	He	104942.552	113.9517	6844344.27	0.0011	0.2621
K	39	3	He	107414.185	116.6293	6838908.65	0.0011	0.2621
Ca	44	3	He	292089.078	17.818	1058414.12	0.0001	0.003476
Ca	44	3	He	289615.495	17.6672	1061153.03	0.0001	0.003476
Ca	44	3	He	297991.474	18.178	1065922.41	0.0001	0.003476
Ti	47	3	He	2040.399	0.9601	57031.87	0.0005	0.000385
Ti	47	3	He	2032.445	0.9564	57443.00	0.0005	0.000385
Ti	47	3	He	2089.529	0.9832	57654.06	0.0005	0.000385
V	51	3	He	0.028	0.0078	466.01	0.0212	0.007263
V	51	3	He	0.034	0.008	480.01	0.0212	0.007263
V	51	3	He	0.079	0.0089	524.01	0.0212	0.007263
Cr	52	3	He	3.4	0.1374	8162.63	0.0278	0.04283
Cr	52	3	He	3.076	0.1284	7712.29	0.0278	0.04283
Cr	52	3	He	3.489	0.1399	8202.57	0.0278	0.04283
Mn	55	3	He	0.787	0.014	830.04	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.744	0.0135	810.06	0.0114	0.005023
Mn	55	3	He	0.623	0.0121	710.04	0.0114	0.005023
Fe	57	3	He	251949.058	133.7061	7942316.13	0.0005	0.003255
Fe	57	3	He	244170.029	129.578	7782915.51	0.0005	0.003255
Fe	57	3	He	253792.359	134.6843	7897616.13	0.0005	0.003255
Co	59	3	He	0.256	0.018	1070.08	0.0539	0.00425
Co	59	3	He	0.181	0.014	840.05	0.0539	0.00425
Co	59	3	He	0.187	0.0143	840.05	0.0539	0.00425
Ni	60	3	He	0.09	0.0149	1600.14	0.0088	0.01412
Ni	60	3	He	0.145	0.0154	1630.16	0.0088	0.01412
Ni	60	3	He	-0.062	0.0136	1440.13	0.0088	0.01412
Cu	63	3	He	0.109	0.0073	780.05	0.0251	0.004537
Cu	63	3	He	0.064	0.0061	650.03	0.0251	0.004537
Cu	63	3	He	0.138	0.008	850.06	0.0251	0.004537
Zn	66	3	He	11.772	0.0338	3620.59	0.0027	0.001642
Zn	66	3	He	12.042	0.0345	3650.59	0.0027	0.001642
Zn	66	3	He	12.84	0.0367	3890.66	0.0027	0.001642
As	75	3	He	0.353	0.0011	122.00	0.0019	0.000463
As	75	3	He	0.183	0.0008	86.00	0.0019	0.000463
As	75	3	He	0.479	0.0014	146.00	0.0019	0.000463
Sr	88	3	He	2.24	0.0212	1790.18	0.009	0.001142
Sr	88	3	He	1.62	0.0157	1330.11	0.009	0.001142
Sr	88	3	He	1.832	0.0176	1560.16	0.009	0.001142
Mo	98	3	He	2088.69	47.0216	3966763.69	0.0225	0.001842
Mo	98	3	He	2090.699	47.0669	3996725.57	0.0225	0.001842
Mo	98	3	He	2011.678	45.288	4022026.19	0.0225	0.001842
Ag	107	3	He	0.01	0.0009	80.00	0.048	0.0004774
Ag	107	3	He	0.007	0.0008	70.00	0.048	0.0004774
Ag	107	3	He	-0.001	0.0005	40.00	0.048	0.0004774
Cd	111	3	He	0.207	0.0011	96.00	0.0055	7.481E-06
Cd	111	3	He	0.24	0.0013	112.00	0.0055	7.481E-06
Cd	111	3	He	0.192	0.0011	94.00	0.0055	7.481E-06
Sn	120	3	He	0.101	0.02	1690.16	0.0157	0.01844
Sn	120	3	He	-0.042	0.0178	1510.15	0.0157	0.01844
Sn	120	3	He	-0.149	0.0161	1430.12	0.0157	0.01844
Sb	121	3	He	0.112	0.0018	150.01	0.0139	0.0002204
Sb	121	3	He	0.12	0.0019	160.01	0.0139	0.0002204
Sb	121	3	He	0.146	0.0023	200.01	0.0139	0.0002204
Ba	137	3	He	0.136	0.0026	220.01	0.0045	0.001994
Ba	137	3	He	0.236	0.0031	260.01	0.0045	0.001994
Ba	137	3	He	0.057	0.0023	200.01	0.0045	0.001994
Tl	205	3	He	0.011	0.0013	350.02	0.03	0.0009888
Tl	205	3	He	0.015	0.0014	390.02	0.03	0.0009888
Tl	205	3	He	0.011	0.0013	350.02	0.03	0.0009888
Pb	208	3	He	0.133	0.0062	870.06	0.0392	0.001024
Pb	208	3	He	0.137	0.0064	940.07	0.0392	0.001024
Pb	208	3	He	0.117	0.0056	690.05	0.0392	0.001024
U	238	3	He	0.063	0.0029	780.06	0.0439	0.000128
U	238	3	He	0.066	0.003	820.06	0.0439	0.000128
U	238	3	He	0.053	0.0025	660.04	0.0439	0.000128
Sc	45	1	No Gas			3585696.82		
Sc	45	1	No Gas			3524039.01		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3613114.95		
Ge	72	1	No Gas			1659764.35		
Ge	72	1	No Gas			1662427.32		
Ge	72	1	No Gas			1680690.60		
Sc	45	2	H2			269841.87		
Sc	45	2	H2			267606.48		
Sc	45	2	H2			263875.72		
Ge	72	2	H2			194597.65		
Ge	72	2	H2			191100.62		
Ge	72	2	H2			186087.40		
In	115	2	H2			462598.43		
In	115	2	H2			443483.00		
In	115	2	H2			446406.52		
Sc	45	3	He			59401.29		
Sc	45	3	He			60063.56		
Sc	45	3	He			58637.98		
Ge	72	3	He			107256.39		
Ge	72	3	He			105837.16		
Ge	72	3	He			106098.93		
In	115	3	He			84373.55		
In	115	3	He			84927.64		
In	115	3	He			88821.16		
Tb	159	3	He			371251.87		
Tb	159	3	He			370004.64		
Tb	159	3	He			371499.17		
Bi	209	3	He			268147.95		
Bi	209	3	He			271723.30		
Bi	209	3	He			267805.04		

Quantitation Report

Data File Name	029ICSB.d
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Sample Type	ICSAB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

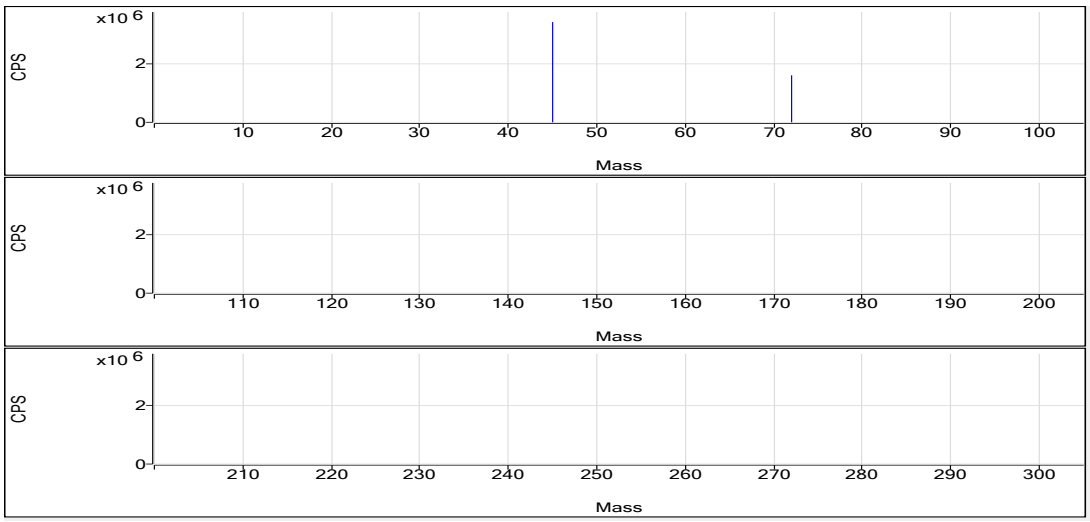
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.003	ppb	279.0	28.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	96.047	ppb	1.8	7803.23	0.0419	Pulse	1.5000	3
Na	23	45	He	250501.921	ppb	2.1	48420090.94	813.2097	Analog	0.1000	3
Mg	24	45	He	100265.917	ppb	1.8	9416285.28	158.1431	Analog	0.1000	3
Al	27	45	He	101031.666	ppb	1.9	2698423.19	45.3182	Pulse	0.1000	3
K	39	45	He	104207.297	ppb	1.9	6737494.90	113.1552	Analog	0.1000	3
Ca	44	45	He	291529.625	ppb	1.7	1058934.96	17.7839	Pulse	0.1000	3
Ti	47	45	He	2033.755	ppb	3.8	56961.85	0.9570	Pulse	0.1000	3
V	51	45	He	190.247	ppb	2.4	240269.82	4.0356	Pulse	0.5000	3
Cr	52	45	He	189.457	ppb	2.6	316290.70	5.3126	Pulse	0.1000	3
Mn	55	45	He	188.159	ppb	2.8	127770.96	2.1462	Pulse	0.1000	3
Fe	57	45	He	248548.813	ppb	2.8	7852518.42	131.9017	Analog	0.1000	3
Co	59	45	He	186.346	ppb	2.4	597817.33	10.0411	Pulse	0.1000	3
Ni	60	72	He	177.605	ppb	0.9	170458.22	1.5807	Pulse	0.1000	3
Cu	63	72	He	178.070	ppb	0.9	483043.31	4.4793	Pulse	0.1000	3
Zn	66	72	He	90.924	ppb	2.2	26925.81	0.2497	Pulse	0.1000	3
As	75	72	He	90.194	ppb	1.1	18611.37	0.1726	Pulse	0.5000	3
Sr	88	115	He	1.937	ppb	3.5	1613.49	0.0185	Pulse	0.1000	3
Mo	98	115	He	2034.171	ppb	1.2	3991636.40	45.7943	Pulse	0.1000	3
Ag	107	115	He	45.861	ppb	0.6	191757.31	2.1997	Pulse	0.1000	3
Cd	111	115	He	91.691	ppb	0.9	43754.32	0.5020	Pulse	0.5000	3
Sn	120	115	He	0.145	ppb	16.0	1806.85	0.0207	Pulse	0.1000	3
Sb	121	115	He	0.138	ppb	15.9	186.68	0.0021	Pulse	0.1000	3
Ba	137	115	He	-0.034	ppb	N/A	160.01	0.0018	Pulse	0.1000	3
Tl	205	209	He	0.005	ppb	112.0	306.68	0.0011	Pulse	0.1000	3
Pb	208	209	He	0.072	ppb	4.7	1036.72	0.0039	Pulse	0.1000	3
U	238	209	He	0.053	ppb	16.4	660.05	0.0025	Pulse	0.1000	3

ISTD Table:

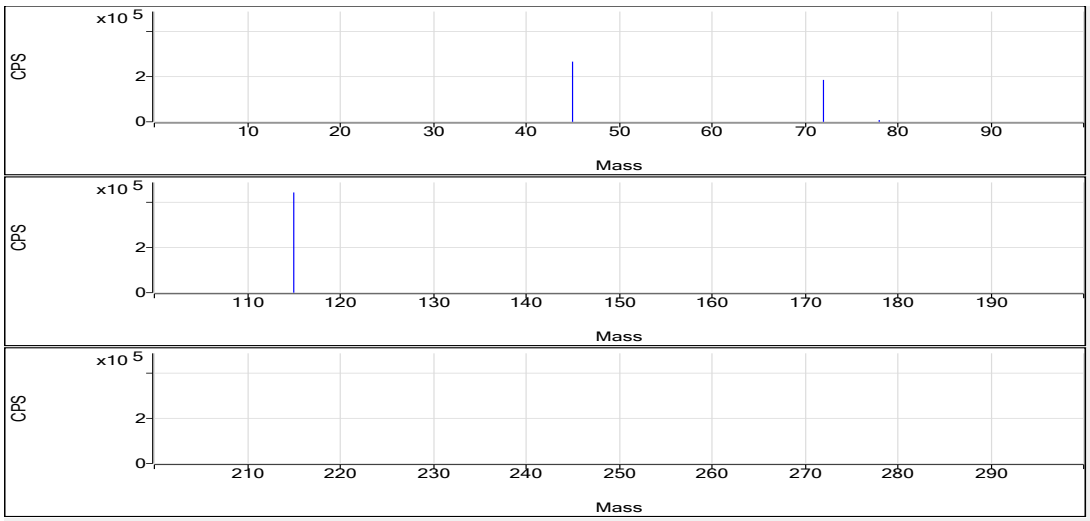
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3417675.99	0.7	95.6	Pulse	0.1000	3
No Gas	Ge	72	1601659.04	1.1	98.4	Pulse	0.1000	3
H2	Sc	45	267607.85	1.3	102.4	Pulse	0.1000	3
H2	Ge	72	186425.77	0.8	99.4	Pulse	0.1000	3
H2	In	115	445664.97	0.9	94.5	Pulse	0.1000	3
He	Sc	45	59561.85	2.6	98.6	Pulse	0.1000	3
He	Ge	72	107842.28	0.7	104.1	Pulse	0.1000	3
He	In	115	87170.56	1.1	96.5	Pulse	0.1000	3
He	Tb	159	376422.53	1.0	100.0	Pulse	0.1000	3
He	Bi	209	268715.25	0.9	93.8	Pulse	0.1000	3

No Gas

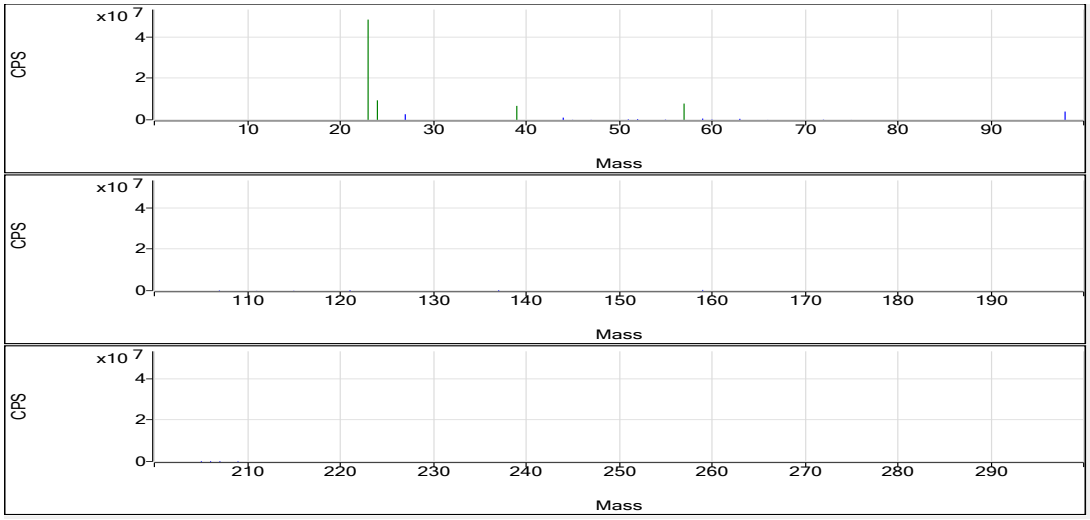


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.009	0	36.00	0.0004	7.085E-06
Be	9	1	No Gas	-0.006	0	16.00	0.0004	7.085E-06
Be	9	1	No Gas	0.006	0	32.00	0.0004	7.085E-06
Se	78	2	H2	95.63	0.0417	7812.12	0.0004	2.372E-05
Se	78	2	H2	94.52	0.0412	7712.74	0.0004	2.372E-05
Se	78	2	H2	97.993	0.0427	7884.83	0.0004	2.372E-05
Na	23	3	He	254488.808	826.1444	48750309.27	0.0032	0.5042
Na	23	3	He	244624.822	794.1426	48712149.27	0.0032	0.5042
Na	23	3	He	252392.135	819.3421	47797814.29	0.0032	0.5042
Mg	24	3	He	100813.221	159.0063	9382871.11	0.0016	0.002702
Mg	24	3	He	98236.746	154.9427	9504074.23	0.0016	0.002702
Mg	24	3	He	101747.784	160.4803	9361910.49	0.0016	0.002702
Al	27	3	He	100615.885	45.1317	2663194.02	0.0004	0.00193
Al	27	3	He	99319.763	44.5503	2732684.96	0.0004	0.00193
Al	27	3	He	103159.35	46.2725	2699390.58	0.0004	0.00193
K	39	3	He	104439.846	113.4071	6692087.40	0.0011	0.2621
K	39	3	He	102093.555	110.8652	6800395.52	0.0011	0.2621
K	39	3	He	106088.491	115.1931	6720001.77	0.0011	0.2621
Ca	44	3	He	294211.608	17.9475	1059070.92	0.0001	0.003476
Ca	44	3	He	285887.734	17.4398	1069745.84	0.0001	0.003476
Ca	44	3	He	294489.533	17.9644	1047988.11	0.0001	0.003476
Ti	47	3	He	2057.238	0.968	57123.02	0.0005	0.000385
Ti	47	3	He	1947.72	0.9165	56218.63	0.0005	0.000385
Ti	47	3	He	2096.306	0.9864	57543.91	0.0005	0.000385
V	51	3	He	191.254	4.057	239399.89	0.0212	0.007263
V	51	3	He	185.259	3.93	241065.09	0.0212	0.007263
V	51	3	He	194.228	4.1199	240344.48	0.0212	0.007263
Cr	52	3	He	190.032	5.3286	314439.76	0.0278	0.04283
Cr	52	3	He	184.302	5.1693	317078.43	0.0278	0.04283
Cr	52	3	He	194.037	5.44	317353.90	0.0278	0.04283
Mn	55	3	He	188.713	2.1525	127020.03	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	182.584	2.0828	127757.01	0.0114	0.005023
Mn	55	3	He	193.178	2.2033	128535.84	0.0114	0.005023
Fe	57	3	He	249294.651	132.2975	7806799.88	0.0005	0.003255
Fe	57	3	He	241244.223	128.0253	7852984.88	0.0005	0.003255
Fe	57	3	He	255107.564	135.3823	7897770.51	0.0005	0.003255
Co	59	3	He	187.138	10.0837	595034.05	0.0539	0.00425
Co	59	3	He	181.592	9.785	600205.46	0.0539	0.00425
Co	59	3	He	190.308	10.2545	598212.49	0.0539	0.00425
Ni	60	3	He	178.275	1.5866	170350.37	0.0088	0.01412
Ni	60	3	He	178.801	1.5912	171008.83	0.0088	0.01412
Ni	60	3	He	175.74	1.5642	170015.47	0.0088	0.01412
Cu	63	3	He	177.333	4.4608	478944.33	0.0251	0.004537
Cu	63	3	He	180.001	4.5278	486599.95	0.0251	0.004537
Cu	63	3	He	176.875	4.4493	483585.66	0.0251	0.004537
Zn	66	3	He	89.954	0.247	26524.97	0.0027	0.001642
Zn	66	3	He	93.219	0.256	27507.04	0.0027	0.001642
Zn	66	3	He	89.597	0.2461	26745.41	0.0027	0.001642
As	75	3	He	90.871	0.1739	18668.11	0.0019	0.000463
As	75	3	He	89.028	0.1704	18307.63	0.0019	0.000463
As	75	3	He	90.681	0.1735	18858.36	0.0019	0.000463
Sr	88	3	He	1.97	0.0188	1630.17	0.009	0.001142
Sr	88	3	He	1.983	0.0189	1670.17	0.009	0.001142
Sr	88	3	He	1.858	0.0178	1540.13	0.009	0.001142
Mo	98	3	He	2027.348	45.6407	3957224.00	0.0225	0.001842
Mo	98	3	He	2013.474	45.3284	4001778.69	0.0225	0.001842
Mo	98	3	He	2061.692	46.4139	4015906.50	0.0225	0.001842
Ag	107	3	He	45.548	2.1847	189420.13	0.048	0.0004774
Ag	107	3	He	46.132	2.2127	195347.05	0.048	0.0004774
Ag	107	3	He	45.904	2.2018	190504.74	0.048	0.0004774
Cd	111	3	He	91.044	0.4984	43213.98	0.0055	7.481E-06
Cd	111	3	He	91.381	0.5003	44164.89	0.0055	7.481E-06
Cd	111	3	He	92.648	0.5072	43884.08	0.0055	7.481E-06
Sn	120	3	He	0.148	0.0208	1800.18	0.0157	0.01844
Sn	120	3	He	0.167	0.0211	1860.18	0.0157	0.01844
Sn	120	3	He	0.121	0.0203	1760.19	0.0157	0.01844
Sb	121	3	He	0.125	0.002	170.01	0.0139	0.0002204
Sb	121	3	He	0.163	0.0025	220.01	0.0139	0.0002204
Sb	121	3	He	0.125	0.002	170.01	0.0139	0.0002204
Ba	137	3	He	-0.084	0.0016	140.01	0.0045	0.001994
Ba	137	3	He	-0.09	0.0016	140.01	0.0045	0.001994
Ba	137	3	He	0.07	0.0023	200.01	0.0045	0.001994
Tl	205	3	He	0.003	0.0011	290.02	0.03	0.0009888
Tl	205	3	He	0	0.001	270.01	0.03	0.0009888
Tl	205	3	He	0.011	0.0013	360.02	0.03	0.0009888
Pb	208	3	He	0.069	0.0037	570.03	0.0392	0.001024
Pb	208	3	He	0.072	0.0039	610.04	0.0392	0.001024
Pb	208	3	He	0.076	0.004	550.03	0.0392	0.001024
U	238	3	He	0.043	0.002	540.03	0.0439	0.000128
U	238	3	He	0.055	0.0026	690.05	0.0439	0.000128
U	238	3	He	0.06	0.0028	750.06	0.0439	0.000128
Sc	45	1	No Gas			3436614.01		
Sc	45	1	No Gas			3424411.20		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3392002.76		
Ge	72	1	No Gas			1612023.73		
Ge	72	1	No Gas			1610859.82		
Ge	72	1	No Gas			1582093.57		
Sc	45	2	H2			267400.23		
Sc	45	2	H2			271056.91		
Sc	45	2	H2			264366.40		
Ge	72	2	H2			187434.41		
Ge	72	2	H2			187222.44		
Ge	72	2	H2			184620.45		
In	115	2	H2			441175.15		
In	115	2	H2			448818.67		
In	115	2	H2			447001.09		
Sc	45	3	He			59009.43		
Sc	45	3	He			61339.30		
Sc	45	3	He			58336.82		
Ge	72	3	He			107368.34		
Ge	72	3	He			107469.30		
Ge	72	3	He			108689.20		
In	115	3	He			86717.80		
In	115	3	He			88298.62		
In	115	3	He			86537.55		
Tb	159	3	He			372062.49		
Tb	159	3	He			379018.31		
Tb	159	3	He			378186.79		
Bi	209	3	He			265847.38		
Bi	209	3	He			269716.23		
Bi	209	3	He			270582.14		

Quantitation Report

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Sample Type	LRC
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

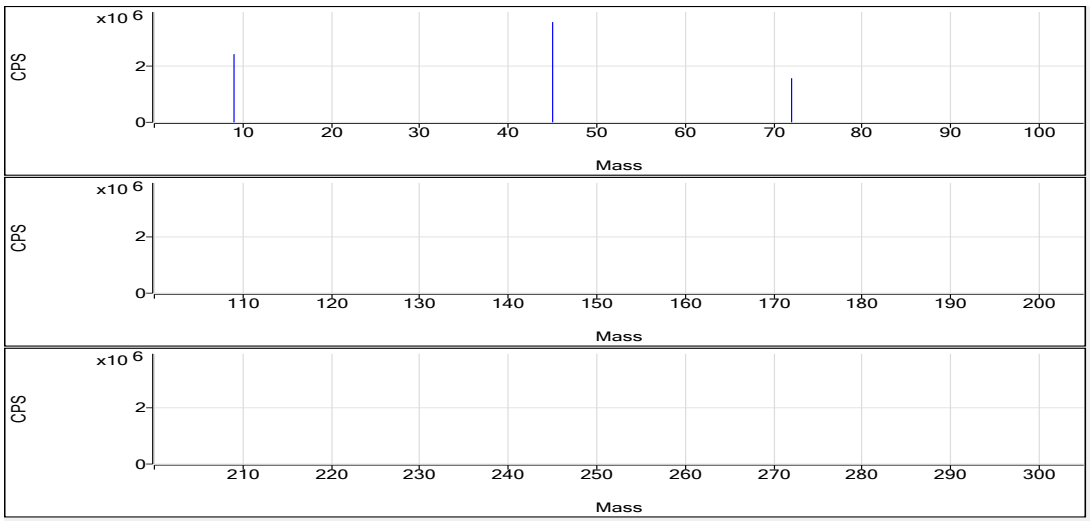
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	1774.650	ppb	0.5	2425646.50	0.6798	Pulse	0.5000	3
Se	78	72	H2	2089.435	ppb	1.4	171969.84	0.9102	Pulse	1.5000	3
Na	23	45	He	191691.457	ppb	0.3	39146170.25	622.4104	Analog	0.1000	3
Mg	24	45	He	196473.417	ppb	0.4	19489883.46	309.8825	Analog	0.1000	3
Al	27	45	He	198898.575	ppb	0.8	5611051.58	89.2149	Analog	0.1000	3
K	39	45	He	202262.473	ppb	1.1	13797540.21	219.3833	Analog	0.1000	3
Ca	44	45	He	197352.766	ppb	0.7	757241.01	12.0401	Pulse	0.1000	3
Ti	47	45	He	2045.753	ppb	2.8	60539.47	0.9626	Pulse	0.1000	3
V	51	45	He	1962.967	ppb	0.9	2614585.25	41.5721	Pulse	0.5000	3
Cr	52	45	He	1916.841	ppb	0.8	3356017.87	53.3603	Pulse	0.1000	3
Mn	55	45	He	5920.118	ppb	0.7	4237481.71	67.3746	Pulse	0.1000	3
Fe	57	45	He	155355.681	ppb	0.6	5185371.17	82.4465	Pulse	0.1000	3
Co	59	45	He	1947.256	ppb	0.6	6596748.03	104.8854	Analog	0.1000	3
Ni	60	72	He	1961.895	ppb	0.6	1825257.68	17.3190	Pulse	0.1000	3
Cu	63	72	He	1970.272	ppb	0.6	5218482.84	49.5158	Pulse	0.1000	3
Zn	66	72	He	2041.896	ppb	0.7	587250.10	5.5721	Pulse	0.1000	3
As	75	72	He	2020.703	ppb	0.9	406437.44	3.8565	Pulse	0.5000	3
Sr	88	115	He	2015.883	ppb	1.3	1615371.33	18.0713	Pulse	0.1000	3
Mo	98	115	He	2090.669	ppb	1.5	4207118.48	47.0662	Pulse	0.1000	3
Ag	107	115	He	1950.812	ppb	0.6	8362535.71	93.5503	Analog	0.1000	3
Cd	111	115	He	1971.424	ppb	1.4	964686.23	10.7922	Pulse	0.5000	3
Sn	120	115	He	1977.840	ppb	1.0	2780133.29	31.1015	Pulse	0.1000	3
Sb	121	115	He	2004.197	ppb	1.2	2491095.17	27.8684	Pulse	0.1000	3
Ba	137	115	He	1984.177	ppb	1.5	803070.19	8.9843	Pulse	0.1000	3
Tl	205	209	He	2144.043	ppb	1.0	16990010.58	64.3534	Analog	0.1000	3
Pb	208	209	He	2145.256	ppb	0.4	22212471.23	84.1320	Analog	0.1000	3
U	238	209	He	212.867	ppb	0.5	2467941.58	9.3475	Pulse	0.1000	3

ISTD Table:

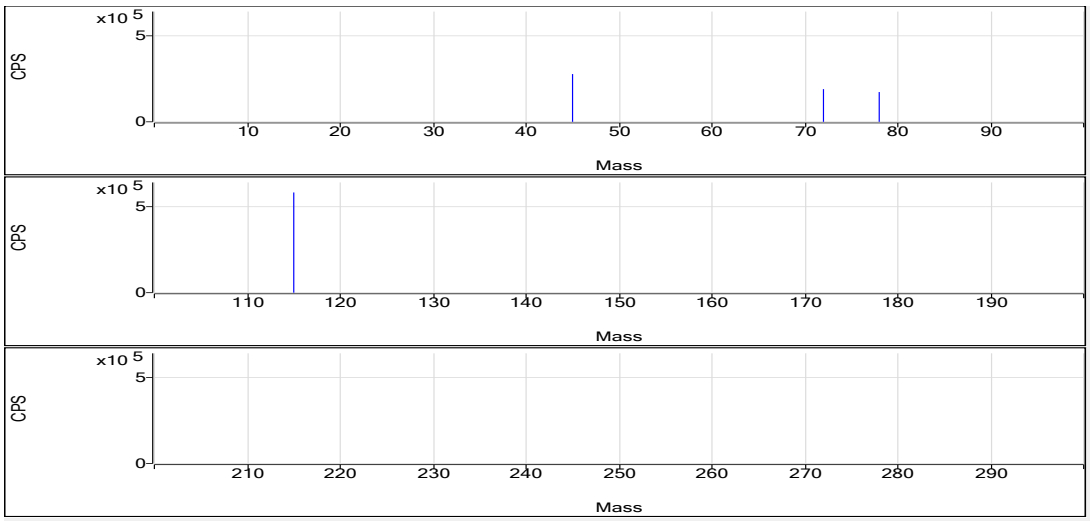
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3568247.45	0.8	99.8	Pulse	0.1000	3
No Gas	Ge	72	1569322.27	0.7	96.4	Pulse	0.1000	3
H2	Sc	45	275994.63	0.5	105.6	Pulse	0.1000	3
H2	Ge	72	188962.15	1.2	100.7	Pulse	0.1000	3
H2	In	115	579372.50	1.3	122.8	Pulse	0.1000	3
He	Sc	45	62895.30	0.7	104.1	Pulse	0.1000	3
He	Ge	72	105390.78	0.1	101.7	Pulse	0.1000	3
He	In	115	89395.03	1.2	98.9	Pulse	0.1000	3
He	Tb	159	372973.51	0.8	99.1	Pulse	0.1000	3
He	Bi	209	264025.37	1.1	92.1	Pulse	0.1000	3

No Gas

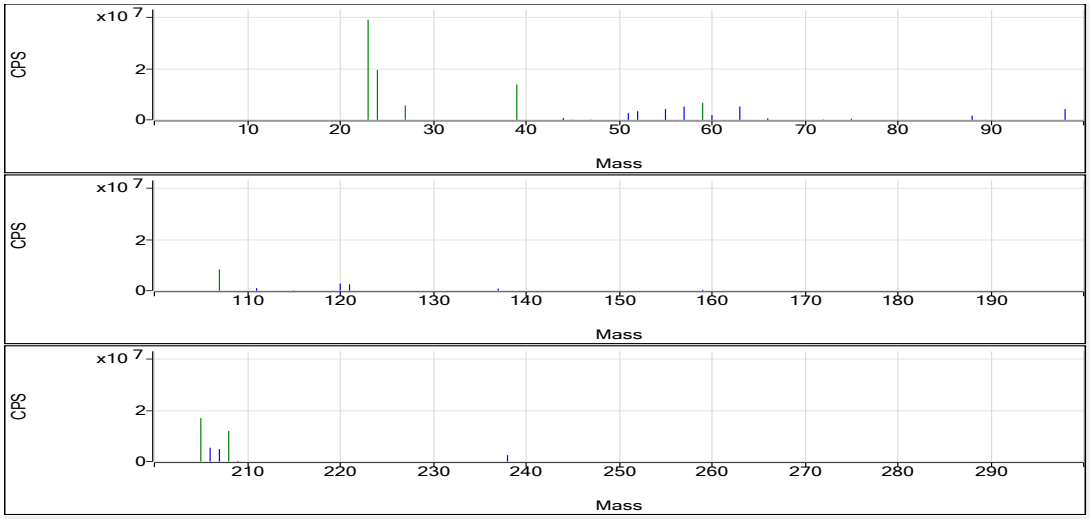


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	1775.315	0.6801	2408452.50	0.0004	7.085E-06
Be	9	1	No Gas	1783.086	0.683	2437046.25	0.0004	7.085E-06
Be	9	1	No Gas	1765.55	0.6763	2431440.75	0.0004	7.085E-06
Se	78	2	H2	2119.616	0.9233	172050.59	0.0004	2.372E-05
Se	78	2	H2	2063.36	0.8988	170699.18	0.0004	2.372E-05
Se	78	2	H2	2085.329	0.9084	173159.76	0.0004	2.372E-05
Na	23	3	He	191678.446	622.3682	39262731.91	0.0032	0.5042
Na	23	3	He	191065.783	620.3805	39193364.42	0.0032	0.5042
Na	23	3	He	192330.144	624.4825	38982414.42	0.0032	0.5042
Mg	24	3	He	195692.413	308.6507	19471543.46	0.0016	0.002702
Mg	24	3	He	196480.865	309.8942	19577980.96	0.0016	0.002702
Mg	24	3	He	197246.973	311.1026	19420125.96	0.0016	0.002702
Al	27	3	He	197318.893	88.5063	5583513.04	0.0004	0.00193
Al	27	3	He	198995.715	89.2585	5639021.79	0.0004	0.00193
Al	27	3	He	200381.118	89.8799	5610619.92	0.0004	0.00193
K	39	3	He	202169.632	219.2827	13833672.29	0.0011	0.2621
K	39	3	He	200002.988	216.9355	13705186.05	0.0011	0.2621
K	39	3	He	204614.798	221.9317	13853762.29	0.0011	0.2621
Ca	44	3	He	196066.264	11.9616	754608.90	0.0001	0.003476
Ca	44	3	He	197073.981	12.023	759572.02	0.0001	0.003476
Ca	44	3	He	198918.053	12.1355	757542.10	0.0001	0.003476
Ti	47	3	He	2068.389	0.9733	61400.18	0.0005	0.000385
Ti	47	3	He	1979.908	0.9317	58858.79	0.0005	0.000385
Ti	47	3	He	2088.961	0.983	61359.43	0.0005	0.000385
V	51	3	He	1954.377	41.3902	2611142.50	0.0212	0.007263
V	51	3	He	1951.081	41.3204	2610471.00	0.0212	0.007263
V	51	3	He	1983.444	42.0057	2622142.25	0.0212	0.007263
Cr	52	3	He	1920.428	53.4601	3372585.26	0.0278	0.04283
Cr	52	3	He	1899.738	52.8846	3341055.89	0.0278	0.04283
Cr	52	3	He	1930.358	53.7363	3354412.45	0.0278	0.04283
Mn	55	3	He	5947.471	67.6859	4270031.50	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	5873.946	66.8492	4223285.25	0.0114	0.005023
Mn	55	3	He	5938.935	67.5887	4219128.37	0.0114	0.005023
Fe	57	3	He	155126.372	82.3248	5193545.24	0.0005	0.003255
Fe	57	3	He	154606.094	82.0487	5183537.11	0.0005	0.003255
Fe	57	3	He	156334.576	82.966	5179031.17	0.0005	0.003255
Co	59	3	He	1957.125	105.417	6650339.28	0.0539	0.00425
Co	59	3	He	1934.65	104.2065	6583384.28	0.0539	0.00425
Co	59	3	He	1949.992	105.0328	6556520.53	0.0539	0.00425
Ni	60	3	He	1955.773	17.265	1821207.16	0.0088	0.01412
Ni	60	3	He	1954.901	17.2573	1819341.07	0.0088	0.01412
Ni	60	3	He	1975.012	17.4347	1835224.82	0.0088	0.01412
Cu	63	3	He	1963.267	49.3397	5204619.30	0.0251	0.004537
Cu	63	3	He	1963.163	49.3371	5201330.55	0.0251	0.004537
Cu	63	3	He	1984.387	49.8705	5249498.67	0.0251	0.004537
Zn	66	3	He	2041.249	5.5704	587593.16	0.0027	0.001642
Zn	66	3	He	2027.326	5.5324	583248.47	0.0027	0.001642
Zn	66	3	He	2057.114	5.6137	590908.66	0.0027	0.001642
As	75	3	He	2003.832	3.8243	403408.91	0.0019	0.000463
As	75	3	He	2017.828	3.851	405990.88	0.0019	0.000463
As	75	3	He	2040.449	3.8942	409912.53	0.0019	0.000463
Sr	88	3	He	2025.533	18.1578	1601800.60	0.009	0.001142
Sr	88	3	He	1987.065	17.813	1610528.73	0.009	0.001142
Sr	88	3	He	2035.051	18.2431	1633784.66	0.009	0.001142
Mo	98	3	He	2104.638	47.3807	4179714.00	0.0225	0.001842
Mo	98	3	He	2055.678	46.2785	4184189.00	0.0225	0.001842
Mo	98	3	He	2111.69	47.5394	4257452.44	0.0225	0.001842
Ag	107	3	He	1960.644	94.0218	8294192.38	0.048	0.0004774
Ag	107	3	He	1937.187	92.897	8399116.75	0.048	0.0004774
Ag	107	3	He	1954.603	93.7321	8394298.00	0.048	0.0004774
Cd	111	3	He	1984.757	10.8652	958480.06	0.0055	7.481E-06
Cd	111	3	He	1938.69	10.613	959557.13	0.0055	7.481E-06
Cd	111	3	He	1990.825	10.8984	976021.50	0.0055	7.481E-06
Sn	120	3	He	1989.268	31.2811	2759480.27	0.0157	0.01844
Sn	120	3	He	1954.512	30.7349	2778839.33	0.0157	0.01844
Sn	120	3	He	1989.739	31.2885	2802080.27	0.0157	0.01844
Sb	121	3	He	2020.284	28.0921	2478164.65	0.0139	0.0002204
Sb	121	3	He	1977.65	27.4993	2486302.31	0.0139	0.0002204
Sb	121	3	He	2014.657	28.0139	2508818.56	0.0139	0.0002204
Ba	137	3	He	2002.671	9.068	799941.00	0.0045	0.001994
Ba	137	3	He	1950.099	8.83	798351.47	0.0045	0.001994
Ba	137	3	He	1999.761	9.0548	810918.11	0.0045	0.001994
Tl	205	3	He	2141.984	64.2916	16850368.50	0.03	0.0009888
Tl	205	3	He	2166.966	65.0415	17088126.00	0.03	0.0009888
Tl	205	3	He	2123.18	63.7273	17031537.25	0.03	0.0009888
Pb	208	3	He	2154.111	84.4792	11981069.82	0.0392	0.001024
Pb	208	3	He	2143.635	84.0684	11790772.32	0.0392	0.001024
Pb	208	3	He	2138.022	83.8483	12049081.07	0.0392	0.001024
U	238	3	He	212.366	9.3255	2444142.93	0.0439	0.000128
U	238	3	He	214.061	9.3999	2469610.43	0.0439	0.000128
U	238	3	He	212.176	9.3172	2490071.37	0.0439	0.000128
Sc	45	1	No Gas			3541577.76		
Sc	45	1	No Gas			3568006.82		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3595157.76		
Ge	72	1	No Gas			1557695.91		
Ge	72	1	No Gas			1569147.63		
Ge	72	1	No Gas			1581123.26		
Sc	45	2	H2			275008.63		
Sc	45	2	H2			275381.83		
Sc	45	2	H2			277593.43		
Ge	72	2	H2			186341.62		
Ge	72	2	H2			189918.42		
Ge	72	2	H2			190626.42		
In	115	2	H2			584883.86		
In	115	2	H2			570626.24		
In	115	2	H2			582607.41		
Sc	45	3	He			63086.02		
Sc	45	3	He			63176.33		
Sc	45	3	He			62423.55		
Ge	72	3	He			105485.38		
Ge	72	3	He			105424.27		
Ge	72	3	He			105262.69		
In	115	3	He			109739.55		
In	115	3	He			112088.20		
In	115	3	He			111412.48		
Tb	159	3	He			369755.89		
Tb	159	3	He			374833.39		
Tb	159	3	He			374331.24		
Bi	209	3	He			262092.71		
Bi	209	3	He			262726.68		
Bi	209	3	He			267256.73		

US EPA Tune Check Report

Operator Name	us19_usr_ins21905
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA_ICPMS.b
Acq. Date-Time	2023-10-26 06:58:24
Report Comment	E07 Tune Report
Instrument Name	G8403A SG18254097

[No Gas]

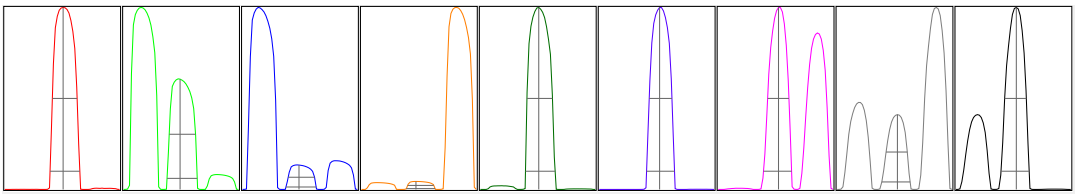
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)	RSD% (Flag)
9	10.00	6642	66418.91			0.551	5.000	
24	10.00	36127	361272.19			0.271	5.000	
25	10.00	4851	48511.98			0.219	5.000	
26	10.00	5630	56301.16			0.508	5.000	
59	10.00	65388	653875.97			0.307	5.000	
115	10.00	85338	853375.25			0.422	5.000	
206	10.00	15748	157480.43			0.429	5.000	
207	10.00	13499	134985.97			0.888	5.000	
208	10.00	32950	329495.75			0.879	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
9	6677	6660	6661	6624	6587
24	36176	36211	36053	36201	35994
25	4845	4851	4869	4850	4841
26	5655	5663	5606	5628	5598
59	65353	65653	65115	65494	65323
115	84994	85541	85705	84908	85540
206	15656	15742	15795	15718	15829
207	13321	13456	13552	13522	13642
208	32454	32988	33087	33206	33013

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	10796.06	9.05	8.90 - 9.10	
24	55643.29	24.00	23.90 - 24.10	
25	7472.11	25.00	24.90 - 25.10	
26	8793.08	25.95	25.90 - 26.10	
59	105488.31	59.05	58.90 - 59.10	

US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
115	151899.08	115.10	114.90 - 115.10	
206	29780.86	206.10	205.90 - 206.10	
207	25602.81	207.10	206.90 - 207.10	
208	62288.49	208.10	207.90 - 208.10	

Mass	W-50%	W-10%	W-10% (Required)	W-10% (Flag)
9	0.64	0.766	0.900	
24	0.68	0.776	0.900	
25	0.68	0.777	0.900	
26	0.67	0.739	0.900	
59	0.66	0.763	0.900	
115	0.58	0.718	0.900	
206	0.55	0.722	0.900	
207	0.54	0.729	0.900	
208	0.56	0.725	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	235
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	General Purpose	Nebulizer Gas	1.07 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	0.90 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	10.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	8.5 V	Deflect	15.6 V
Extract 2	-190.0 V	Cell Entrance	-40 V	Plate Bias	-50 V
Omega Bias	-90 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.5 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	126	Axis Gain	0.9995	QP Bias	-2.5 V
Mass Offset	125	Axis Offset	0.18		

Hardware Settings

Torch

Torch H	1.1 mm	Torch V	-0.7 mm		

EM

Discriminator	3.7 mV	Analog HV	2168 V	Pulse HV	1498 V

Quantitation Report

Data File Name	209_CCV.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23J26A00.b
Acq Time	2023-10-26 15:41:47
Sample Name	CCV 5001623
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

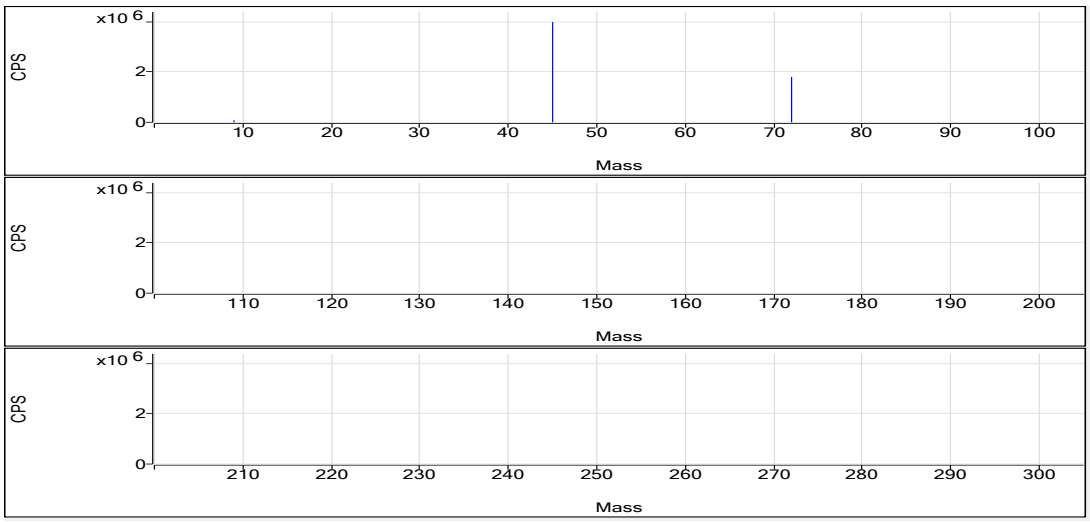
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	52.208	ppb	0.3	79604.70	0.0200	Pulse	0.5000	3
Se	78	72	H2	50.166	ppb	0.9	4258.86	0.0219	Pulse	1.5000	3
Na	23	45	He	5111.424	ppb	0.7	1062298.60	17.0872	Pulse	0.1000	3
Mg	24	45	He	5063.953	ppb	1.2	496685.16	7.9896	Pulse	0.1000	3
Al	27	45	He	5177.666	ppb	1.9	144485.25	2.3243	Pulse	0.1000	3
K	39	45	He	5203.323	ppb	2.2	366704.51	5.8992	Pulse	0.1000	3
Ca	44	45	He	5038.215	ppb	2.3	19323.30	0.3108	Pulse	0.1000	3
Ti	47	45	He	5184.054	ppb	1.3	151615.72	2.4388	Pulse	0.1000	3
V	51	45	He	512.269	ppb	1.3	674772.29	10.8543	Pulse	0.5000	3
Cr	52	45	He	514.203	ppb	0.6	891857.62	14.3456	Pulse	0.1000	3
Mn	55	45	He	510.073	ppb	0.8	361170.83	5.8095	Pulse	0.1000	3
Fe	57	45	He	5062.650	ppb	1.1	167222.42	2.6899	Pulse	0.1000	3
Co	59	45	He	516.017	ppb	0.7	1728139.25	27.7974	Pulse	0.1000	3
Ni	60	72	He	529.849	ppb	1.4	496018.70	4.6877	Pulse	0.1000	3
Cu	63	72	He	525.776	ppb	1.4	1398529.67	13.2168	Pulse	0.1000	3
Zn	66	72	He	516.254	ppb	1.5	149206.71	1.4100	Pulse	0.1000	3
As	75	72	He	523.977	ppb	1.1	105856.71	1.0004	Pulse	0.5000	3
Sr	88	115	He	50.193	ppb	2.0	41859.06	0.4511	Pulse	0.1000	3
Mo	98	115	He	49.158	ppb	0.2	102882.77	1.1085	Pulse	0.1000	3
Ag	107	115	He	48.792	ppb	0.6	217212.72	2.3403	Pulse	0.1000	3
Cd	111	115	He	48.363	ppb	1.1	24571.45	0.2648	Pulse	0.5000	3
Sn	120	115	He	49.249	ppb	1.5	73540.32	0.7924	Pulse	0.1000	3
Sb	121	115	He	49.635	ppb	1.5	64071.61	0.6904	Pulse	0.1000	3
Ba	137	115	He	494.413	ppb	1.6	207889.46	2.2402	Pulse	0.1000	3
Tl	205	209	He	50.292	ppb	1.2	449933.50	1.5105	Pulse	0.1000	3
Pb	208	209	He	50.433	ppb	0.7	589479.36	1.9789	Pulse	0.1000	3
U	238	209	He	50.591	ppb	0.9	661800.67	2.2217	Pulse	0.1000	3

ISTD Table:

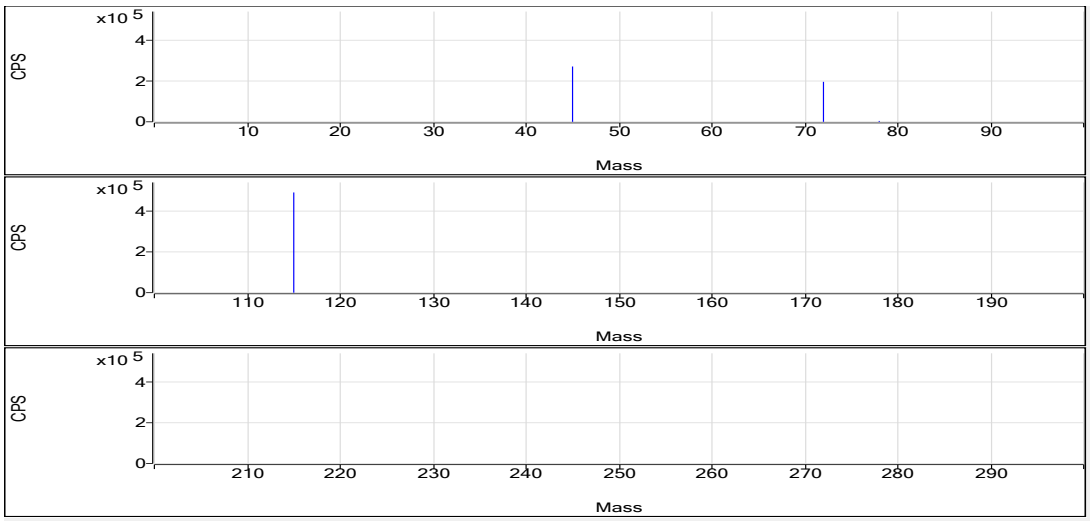
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3979311.29	1.9	111.3	Pulse	0.1000	3
No Gas	Ge	72	1800670.65	1.7	110.6	Pulse	0.1000	3
H2	Sc	45	269486.35	1.4	103.1	Pulse	0.1000	3
H2	Ge	72	194707.24	1.8	103.8	Pulse	0.1000	3
H2	In	115	488198.83	0.4	103.5	Pulse	0.1000	3
He	Sc	45	62172.23	1.2	102.9	Pulse	0.1000	3
He	Ge	72	105823.60	1.1	102.2	Pulse	0.1000	3
He	In	115	92816.99	1.7	102.7	Pulse	0.1000	3
He	Tb	159	385788.59	1.4	102.5	Pulse	0.1000	3
He	Bi	209	297906.65	1.4	103.9	Pulse	0.1000	3

No Gas

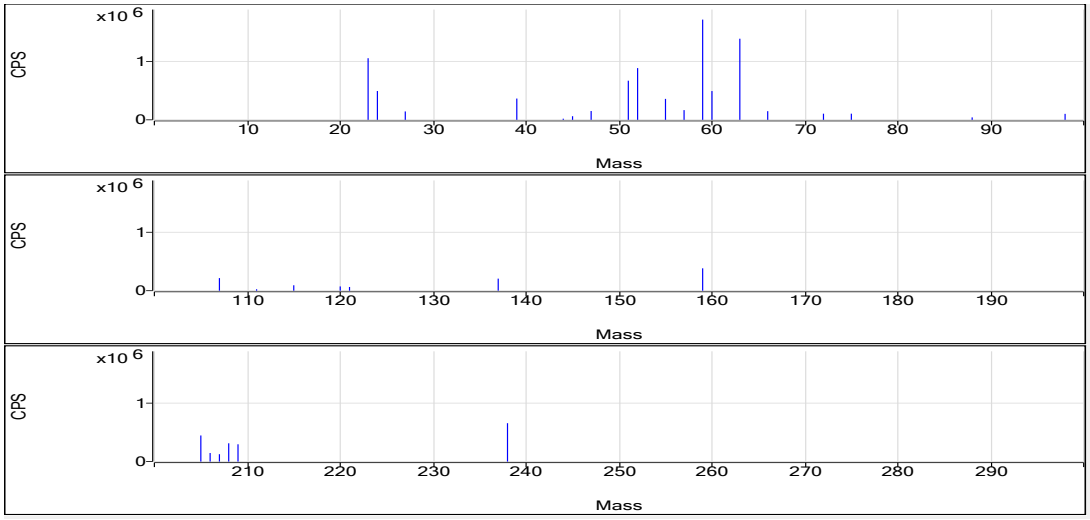


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	52.163	0.02	79846.13	0.0004	7.085E-06
Be	9	1	No Gas	52.405	0.0201	78269.60	0.0004	7.085E-06
Be	9	1	No Gas	52.055	0.0199	80698.38	0.0004	7.085E-06
Se	78	2	H2	49.732	0.0217	4300.65	0.0004	2.372E-05
Se	78	2	H2	50.603	0.0221	4217.96	0.0004	2.372E-05
Se	78	2	H2	50.162	0.0219	4257.96	0.0004	2.372E-05
Na	23	3	He	5150.417	17.2137	1056039.59	0.0032	0.5042
Na	23	3	He	5085.485	17.003	1062412.09	0.0032	0.5042
Na	23	3	He	5098.37	17.0448	1068444.12	0.0032	0.5042
Mg	24	3	He	5135.664	8.1027	497092.06	0.0016	0.002702
Mg	24	3	He	5035.105	7.9441	496377.45	0.0016	0.002702
Mg	24	3	He	5021.091	7.922	496585.97	0.0016	0.002702
Al	27	3	He	5288.403	2.374	145639.73	0.0004	0.00193
Al	27	3	He	5150.469	2.3121	144468.11	0.0004	0.00193
Al	27	3	He	5094.127	2.2868	143347.92	0.0004	0.00193
K	39	3	He	5331.219	6.0377	370406.05	0.0011	0.2621
K	39	3	He	5166.49	5.8592	366107.26	0.0011	0.2621
K	39	3	He	5112.26	5.8005	363600.23	0.0011	0.2621
Ca	44	3	He	4917.368	0.3034	18612.41	0.0001	0.003476
Ca	44	3	He	5150.173	0.3176	19843.91	0.0001	0.003476
Ca	44	3	He	5047.102	0.3113	19513.58	0.0001	0.003476
Ti	47	3	He	5215.297	2.4535	150516.99	0.0005	0.000385
Ti	47	3	He	5228.855	2.4598	153699.83	0.0005	0.000385
Ti	47	3	He	5108.009	2.403	150630.33	0.0005	0.000385
V	51	3	He	519.671	11.011	675512.81	0.0212	0.007263
V	51	3	He	508.084	10.7657	672679.19	0.0212	0.007263
V	51	3	He	509.053	10.7862	676124.88	0.0212	0.007263
Cr	52	3	He	517.15	14.4275	885109.75	0.0278	0.04283
Cr	52	3	He	514.651	14.358	897140.77	0.0278	0.04283
Cr	52	3	He	510.809	14.2511	893322.33	0.0278	0.04283
Mn	55	3	He	514.633	5.8614	359591.36	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	507.439	5.7796	361127.73	0.0114	0.005023
Mn	55	3	He	508.148	5.7876	362793.39	0.0114	0.005023
Fe	57	3	He	5124.361	2.7226	167029.47	0.0005	0.003255
Fe	57	3	He	5018.062	2.6662	166594.59	0.0005	0.003255
Fe	57	3	He	5045.528	2.6808	168043.20	0.0005	0.003255
Co	59	3	He	519.925	28.008	1718254.51	0.0539	0.00425
Co	59	3	He	514.933	27.7391	1733238.26	0.0539	0.00425
Co	59	3	He	513.192	27.6453	1732924.97	0.0539	0.00425
Ni	60	3	He	528.671	4.6773	492905.34	0.0088	0.01412
Ni	60	3	He	537.952	4.7591	499518.94	0.0088	0.01412
Ni	60	3	He	522.923	4.6266	495631.83	0.0088	0.01412
Cu	63	3	He	524.626	13.1879	1389787.95	0.0251	0.004537
Cu	63	3	He	533.522	13.4115	1407672.17	0.0251	0.004537
Cu	63	3	He	519.18	13.0511	1398128.89	0.0251	0.004537
Zn	66	3	He	510.432	1.3942	146920.44	0.0027	0.001642
Zn	66	3	He	525.124	1.4342	150537.29	0.0027	0.001642
Zn	66	3	He	513.206	1.4017	150162.41	0.0027	0.001642
As	75	3	He	519.866	0.9925	104593.64	0.0019	0.000463
As	75	3	He	530.231	1.0123	106249.61	0.0019	0.000463
As	75	3	He	521.834	0.9963	106726.87	0.0019	0.000463
Sr	88	3	He	50.771	0.4563	41611.29	0.009	0.001142
Sr	88	3	He	49.038	0.4407	41571.50	0.009	0.001142
Sr	88	3	He	50.77	0.4562	42394.38	0.009	0.001142
Mo	98	3	He	49.244	1.1104	101271.48	0.0225	0.001842
Mo	98	3	He	49.142	1.1081	104524.46	0.0225	0.001842
Mo	98	3	He	49.087	1.1069	102852.38	0.0225	0.001842
Ag	107	3	He	48.708	2.3363	213072.16	0.048	0.0004774
Ag	107	3	He	48.538	2.3281	219600.88	0.048	0.0004774
Ag	107	3	He	49.13	2.3565	218965.13	0.048	0.0004774
Cd	111	3	He	48.94	0.2679	24435.25	0.0055	7.481E-06
Cd	111	3	He	47.986	0.2627	24779.77	0.0055	7.481E-06
Cd	111	3	He	48.161	0.2637	24499.33	0.0055	7.481E-06
Sn	120	3	He	49.59	0.7978	72760.01	0.0157	0.01844
Sn	120	3	He	48.376	0.7787	73452.75	0.0157	0.01844
Sn	120	3	He	49.78	0.8008	74408.19	0.0157	0.01844
Sb	121	3	He	50.489	0.7023	64048.57	0.0139	0.0002204
Sb	121	3	He	49.367	0.6867	64771.27	0.0139	0.0002204
Sb	121	3	He	49.049	0.6822	63394.99	0.0139	0.0002204
Ba	137	3	He	502.432	2.2765	207621.54	0.0045	0.001994
Ba	137	3	He	486.469	2.2042	207918.47	0.0045	0.001994
Ba	137	3	He	494.337	2.2398	208128.38	0.0045	0.001994
Tl	205	3	He	50.6	1.5197	447790.66	0.03	0.0009888
Tl	205	3	He	50.661	1.5216	451344.72	0.03	0.0009888
Tl	205	3	He	49.614	1.4901	450665.11	0.03	0.0009888
Pb	208	3	He	50.552	1.9835	311874.86	0.0392	0.001024
Pb	208	3	He	50.716	1.99	316147.07	0.0392	0.001024
Pb	208	3	He	50.029	1.963	317455.27	0.0392	0.001024
U	238	3	He	50.927	2.2364	658964.52	0.0439	0.000128
U	238	3	He	50.797	2.2307	661699.68	0.0439	0.000128
U	238	3	He	50.051	2.198	664737.80	0.0439	0.000128
Sc	45	1	No Gas			3994651.82		
Sc	45	1	No Gas			3897657.75		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			4045624.31		
Ge	72	1	No Gas			1810336.85		
Ge	72	1	No Gas			1766395.60		
Ge	72	1	No Gas			1825279.50		
Sc	45	2	H2			272324.86		
Sc	45	2	H2			265229.08		
Sc	45	2	H2			270905.11		
Ge	72	2	H2			198308.90		
Ge	72	2	H2			191153.69		
Ge	72	2	H2			194659.14		
In	115	2	H2			490074.76		
In	115	2	H2			488372.22		
In	115	2	H2			486149.52		
Sc	45	3	He			61348.77		
Sc	45	3	He			62483.64		
Sc	45	3	He			62684.29		
Ge	72	3	He			105383.32		
Ge	72	3	He			104960.13		
Ge	72	3	He			107127.36		
In	115	3	He			91770.15		
In	115	3	He			94900.21		
In	115	3	He			93501.46		
Tb	159	3	He			380125.46		
Tb	159	3	He			386500.85		
Tb	159	3	He			390739.45		
Bi	209	3	He			294652.79		
Bi	209	3	He			296633.39		
Bi	209	3	He			302433.78		

Quantitation Report

Data File Name	210_CCB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23J26A00.b
Acq Time	2023-10-26 15:43:47
Sample Name	CCB 4993845
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

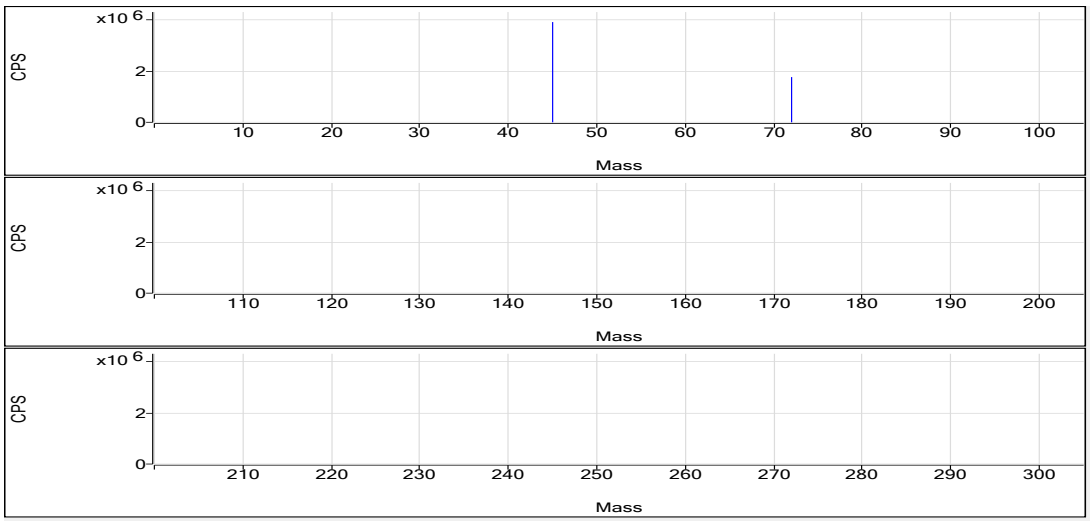
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.015	ppb	10.0	50.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.010	ppb	290.9	5.33	0.0000	Pulse	1.5000	3
Na	23	45	He	6.971	ppb	50.8	32596.31	0.5268	Pulse	0.1000	3
Mg	24	45	He	8.636	ppb	7.8	1010.07	0.0163	Pulse	0.1000	3
Al	27	45	He	1.239	ppb	181.7	153.34	0.0025	Pulse	0.1000	3
K	39	45	He	9.072	ppb	226.4	16836.92	0.2720	Pulse	0.1000	3
Ca	44	45	He	13.744	ppb	74.7	266.68	0.0043	Pulse	0.1000	3
Ti	47	45	He	0.437	ppb	159.6	36.67	0.0006	Pulse	0.1000	3
V	51	45	He	0.110	ppb	15.2	593.35	0.0096	Pulse	0.5000	3
Cr	52	45	He	0.037	ppb	336.9	2713.69	0.0439	Pulse	0.1000	3
Mn	55	45	He	0.226	ppb	34.5	470.03	0.0076	Pulse	0.1000	3
Fe	57	45	He	2.289	ppb	49.4	276.68	0.0045	Pulse	0.1000	3
Co	59	45	He	0.093	ppb	15.2	573.37	0.0093	Pulse	0.1000	3
Ni	60	72	He	0.126	ppb	134.8	1613.49	0.0152	Pulse	0.1000	3
Cu	63	72	He	0.066	ppb	66.2	656.71	0.0062	Pulse	0.1000	3
Zn	66	72	He	0.033	ppb	432.8	183.34	0.0017	Pulse	0.1000	3
As	75	72	He	0.123	ppb	31.0	74.00	0.0007	Pulse	0.5000	3
Sr	88	115	He	0.107	ppb	17.6	193.34	0.0021	Pulse	0.1000	3
Mo	98	115	He	0.047	ppb	43.3	266.68	0.0029	Pulse	0.1000	3
Ag	107	115	He	0.006	ppb	78.1	70.00	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.009	ppb	24.6	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.129	ppb	200.7	1883.58	0.0205	Pulse	0.1000	3
Sb	121	115	He	0.026	ppb	70.4	53.33	0.0006	Pulse	0.1000	3
Ba	137	115	He	0.079	ppb	37.8	216.68	0.0024	Pulse	0.1000	3
Tl	205	209	He	0.110	ppb	1.7	1246.77	0.0043	Pulse	0.1000	3
Pb	208	209	He	0.018	ppb	10.5	506.69	0.0017	Pulse	0.1000	3
U	238	209	He	0.036	ppb	2.3	496.69	0.0017	Pulse	0.1000	3

ISTD Table:

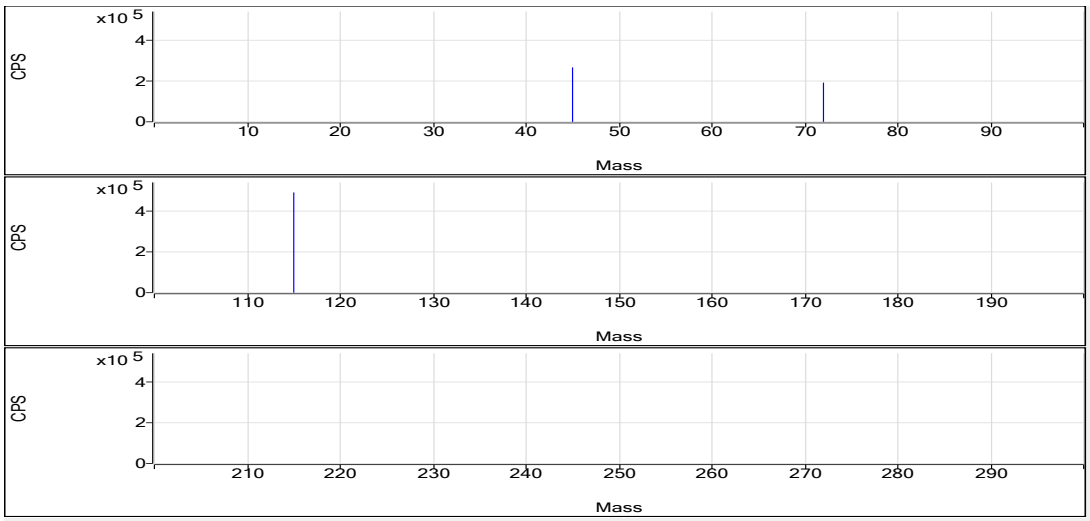
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3911174.11	0.3	109.4	Pulse	0.1000	3
No Gas	Ge	72	1764441.07	0.4	108.4	Pulse	0.1000	3
H2	Sc	45	265668.10	1.4	101.6	Pulse	0.1000	3
H2	Ge	72	191347.62	1.4	102.0	Pulse	0.1000	3
H2	In	115	489274.18	1.0	103.7	Pulse	0.1000	3
He	Sc	45	61894.74	1.8	102.5	Pulse	0.1000	3
He	Ge	72	105967.82	0.7	102.3	Pulse	0.1000	3
He	In	115	92097.89	0.7	101.9	Pulse	0.1000	3
He	Tb	159	381357.26	1.1	101.3	Pulse	0.1000	3
He	Bi	209	291468.47	1.2	101.7	Pulse	0.1000	3

No Gas

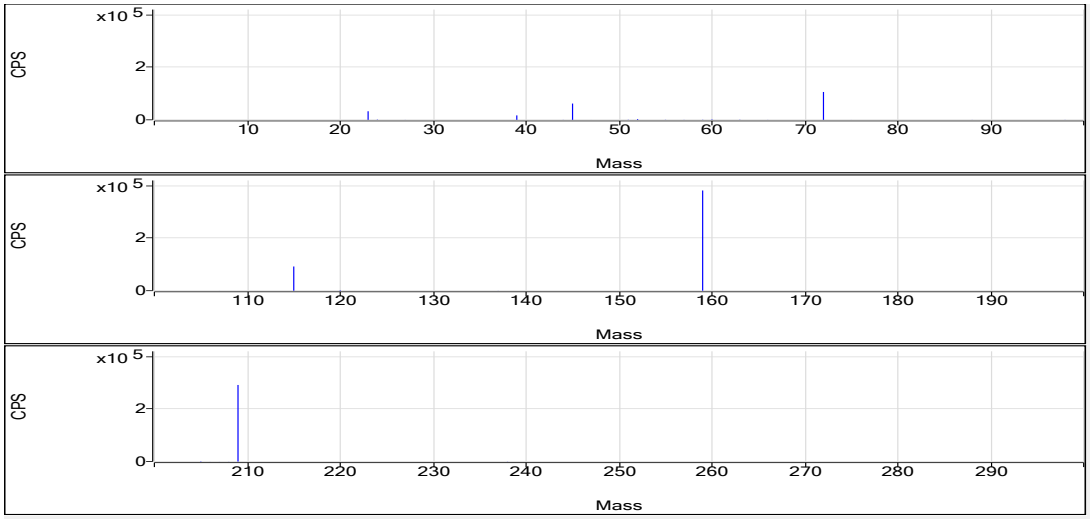


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.016	0	52.00	0.0004	7.085E-06
Be	9	1	No Gas	0.016	0	52.00	0.0004	7.085E-06
Be	9	1	No Gas	0.014	0	48.00	0.0004	7.085E-06
Se	78	2	H2	-0.007	0	4.00	0.0004	2.372E-05
Se	78	2	H2	0.042	0	8.00	0.0004	2.372E-05
Se	78	2	H2	-0.006	0	4.00	0.0004	2.372E-05
Na	23	3	He	4.406	0.5185	32546.27	0.0032	0.5042
Na	23	3	He	11.009	0.5399	32746.77	0.0032	0.5042
Na	23	3	He	5.497	0.522	32495.89	0.0032	0.5042
Mg	24	3	He	8.993	0.0169	1060.07	0.0016	0.002702
Mg	24	3	He	9.054	0.017	1030.07	0.0016	0.002702
Mg	24	3	He	7.861	0.0151	940.07	0.0016	0.002702
Al	27	3	He	1.38	0.0025	160.01	0.0004	0.00193
Al	27	3	He	3.417	0.0035	210.01	0.0004	0.00193
Al	27	3	He	-1.079	0.0014	90.00	0.0004	0.00193
K	39	3	He	29.805	0.2944	18482.29	0.0011	0.2621
K	39	3	He	8.675	0.2715	16469.78	0.0011	0.2621
K	39	3	He	-11.265	0.2499	15558.70	0.0011	0.2621
Ca	44	3	He	13.533	0.0043	270.01	0.0001	0.003476
Ca	44	3	He	24.109	0.0049	300.02	0.0001	0.003476
Ca	44	3	He	3.589	0.0037	230.01	0.0001	0.003476
Ti	47	3	He	1.213	0.001	60.00	0.0005	0.000385
Ti	47	3	He	0.233	0.0005	30.00	0.0005	0.000385
Ti	47	3	He	-0.136	0.0003	20.00	0.0005	0.000385
V	51	3	He	0.101	0.0094	590.02	0.0212	0.007263
V	51	3	He	0.099	0.0094	568.02	0.0212	0.007263
V	51	3	He	0.129	0.01	622.02	0.0212	0.007263
Cr	52	3	He	-0.108	0.0398	2500.31	0.0278	0.04283
Cr	52	3	He	0.114	0.046	2790.35	0.0278	0.04283
Cr	52	3	He	0.106	0.0458	2850.40	0.0278	0.04283
Mn	55	3	He	0.259	0.008	500.03	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.283	0.0082	500.03	0.0114	0.005023
Mn	55	3	He	0.137	0.0066	410.02	0.0114	0.005023
Fe	57	3	He	1.371	0.004	250.01	0.0005	0.003255
Fe	57	3	He	1.944	0.0043	260.01	0.0005	0.003255
Fe	57	3	He	3.553	0.0051	320.01	0.0005	0.003255
Co	59	3	He	0.107	0.01	630.04	0.0539	0.00425
Co	59	3	He	0.093	0.0092	560.03	0.0539	0.00425
Co	59	3	He	0.079	0.0085	530.03	0.0539	0.00425
Ni	60	3	He	0.165	0.0156	1650.16	0.0088	0.01412
Ni	60	3	He	0.273	0.0165	1740.17	0.0088	0.01412
Ni	60	3	He	-0.06	0.0136	1450.13	0.0088	0.01412
Cu	63	3	He	0.056	0.0059	630.04	0.0251	0.004537
Cu	63	3	He	0.114	0.0074	780.05	0.0251	0.004537
Cu	63	3	He	0.028	0.0052	560.03	0.0251	0.004537
Zn	66	3	He	0.159	0.0021	220.01	0.0027	0.001642
Zn	66	3	He	0.06	0.0018	190.01	0.0027	0.001642
Zn	66	3	He	-0.121	0.0013	140.00	0.0027	0.001642
As	75	3	He	0.084	0.0006	66.00	0.0019	0.000463
As	75	3	He	0.126	0.0007	74.00	0.0019	0.000463
As	75	3	He	0.16	0.0008	82.00	0.0019	0.000463
Sr	88	3	He	0.092	0.002	180.01	0.009	0.001142
Sr	88	3	He	0.128	0.0023	210.01	0.009	0.001142
Sr	88	3	He	0.101	0.002	190.01	0.009	0.001142
Mo	98	3	He	0.059	0.0032	290.01	0.0225	0.001842
Mo	98	3	He	0.058	0.0032	290.02	0.0225	0.001842
Mo	98	3	He	0.023	0.0024	220.01	0.0225	0.001842
Ag	107	3	He	0.011	0.001	90.00	0.048	0.0004774
Ag	107	3	He	0.006	0.0008	70.00	0.048	0.0004774
Ag	107	3	He	0.001	0.0005	50.00	0.048	0.0004774
Cd	111	3	He	0.011	0.0001	6.00	0.0055	7.481E-06
Cd	111	3	He	0.007	0	4.00	0.0055	7.481E-06
Cd	111	3	He	0.01	0.0001	6.00	0.0055	7.481E-06
Sn	120	3	He	0.416	0.025	2290.42	0.0157	0.01844
Sn	120	3	He	0.053	0.0193	1770.18	0.0157	0.01844
Sn	120	3	He	-0.084	0.0171	1590.15	0.0157	0.01844
Sb	121	3	He	0.016	0.0004	40.00	0.0139	0.0002204
Sb	121	3	He	0.047	0.0009	80.00	0.0139	0.0002204
Sb	121	3	He	0.015	0.0004	40.00	0.0139	0.0002204
Ba	137	3	He	0.114	0.0025	230.01	0.0045	0.001994
Ba	137	3	He	0.065	0.0023	210.01	0.0045	0.001994
Ba	137	3	He	0.059	0.0023	210.01	0.0045	0.001994
Tl	205	3	He	0.108	0.0042	1220.10	0.03	0.0009888
Tl	205	3	He	0.109	0.0043	1240.11	0.03	0.0009888
Tl	205	3	He	0.111	0.0043	1280.11	0.03	0.0009888
Pb	208	3	He	0.02	0.0018	260.01	0.0392	0.001024
Pb	208	3	He	0.016	0.0017	250.01	0.0392	0.001024
Pb	208	3	He	0.019	0.0018	330.02	0.0392	0.001024
U	238	3	He	0.035	0.0017	480.02	0.0439	0.000128
U	238	3	He	0.036	0.0017	500.03	0.0439	0.000128
U	238	3	He	0.036	0.0017	510.03	0.0439	0.000128
Sc	45	1	No Gas			3901038.38		
Sc	45	1	No Gas			3922486.50		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3909997.44		
Ge	72	1	No Gas			1763659.19		
Ge	72	1	No Gas			1757016.38		
Ge	72	1	No Gas			1772647.63		
Sc	45	2	H2			269772.87		
Sc	45	2	H2			265026.01		
Sc	45	2	H2			262205.41		
Ge	72	2	H2			194142.52		
Ge	72	2	H2			191189.96		
Ge	72	2	H2			188710.39		
In	115	2	H2			492188.70		
In	115	2	H2			492027.61		
In	115	2	H2			483606.24		
Sc	45	3	He			62775.25		
Sc	45	3	He			60655.79		
Sc	45	3	He			62253.18		
Ge	72	3	He			105947.39		
Ge	72	3	He			105282.91		
Ge	72	3	He			106673.16		
In	115	3	He			91679.71		
In	115	3	He			91820.30		
In	115	3	He			92837.74		
Tb	159	3	He			380711.91		
Tb	159	3	He			377390.97		
Tb	159	3	He			385968.90		
Bi	209	3	He			288856.58		
Bi	209	3	He			290119.33		
Bi	209	3	He			295429.51		

Quantitation Report

Data File Name	211ICSA.d
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Acq Time	2023-10-26 16:05:42
Sample Name	ICSA 5057032
Sample Type	ICSA
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

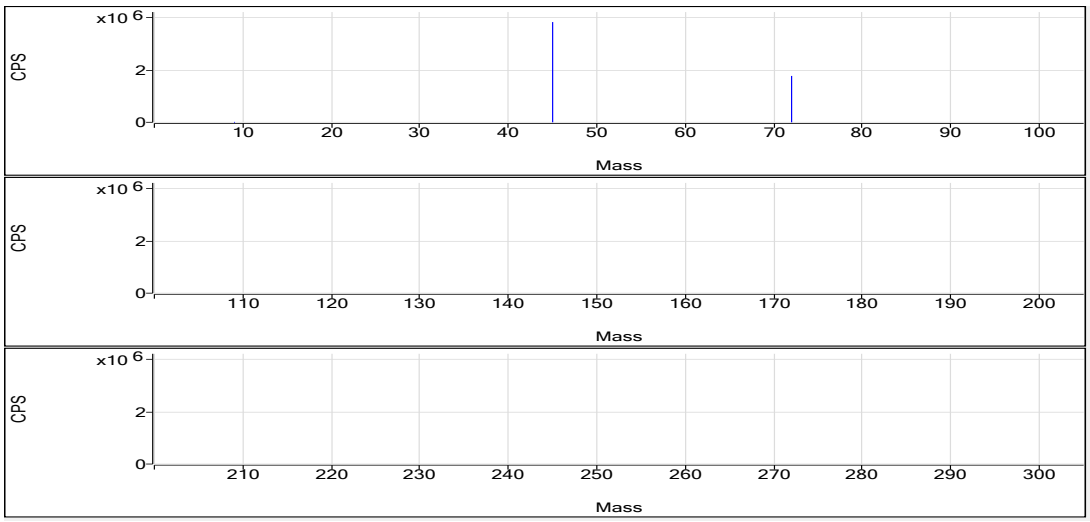
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.000	ppb	N/A	26.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.049	ppb	53.9	8.22	0.0000	Pulse	1.5000	3
Na	23	45	He	257712.475	ppb	1.8	48884447.60	836.6030	Analog	0.1000	3
Mg	24	45	He	103628.959	ppb	1.6	9550409.86	163.4473	Analog	0.1000	3
Al	27	45	He	104254.430	ppb	0.7	2732686.94	46.7637	Pulse	0.1000	3
K	39	45	He	106257.443	ppb	2.0	6741389.07	115.3762	Analog	0.1000	3
Ca	44	45	He	293235.565	ppb	1.4	1045238.79	17.8880	Pulse	0.1000	3
Ti	47	45	He	2091.418	ppb	2.0	57507.49	0.9841	Pulse	0.1000	3
V	51	45	He	0.071	ppb	27.6	512.68	0.0088	Pulse	0.5000	3
Cr	52	45	He	3.404	ppb	6.2	8035.81	0.1375	Pulse	0.1000	3
Mn	55	45	He	0.788	ppb	11.8	816.72	0.0140	Pulse	0.1000	3
Fe	57	45	He	256862.677	ppb	1.3	7965269.88	136.3137	Analog	0.1000	3
Co	59	45	He	0.225	ppb	2.1	956.73	0.0164	Pulse	0.1000	3
Ni	60	72	He	0.053	ppb	72.4	1476.79	0.0146	Pulse	0.1000	3
Cu	63	72	He	0.117	ppb	37.5	756.71	0.0075	Pulse	0.1000	3
Zn	66	72	He	11.834	ppb	3.1	3433.85	0.0339	Pulse	0.1000	3
As	75	72	He	0.338	ppb	23.1	112.00	0.0011	Pulse	0.5000	3
Sr	88	115	He	2.067	ppb	11.5	1636.82	0.0197	Pulse	0.1000	3
Mo	98	115	He	2118.455	ppb	0.4	3970943.80	47.6917	Pulse	0.1000	3
Ag	107	115	He	0.008	ppb	70.9	73.33	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.309	ppb	26.1	141.33	0.0017	Pulse	0.5000	3
Sn	120	115	He	-0.112	ppb	N/A	1390.13	0.0167	Pulse	0.1000	3
Sb	121	115	He	0.117	ppb	8.7	153.34	0.0018	Pulse	0.1000	3
Ba	137	115	He	0.196	ppb	47.0	240.01	0.0029	Pulse	0.1000	3
Tl	205	209	He	0.019	ppb	53.5	423.36	0.0016	Pulse	0.1000	3
Pb	208	209	He	0.151	ppb	13.1	1873.45	0.0070	Pulse	0.1000	3
U	238	209	He	0.057	ppb	10.9	713.38	0.0027	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3843111.82	0.7	107.5	Pulse	0.1000	3
No Gas	Ge	72	1777841.54	0.3	109.2	Pulse	0.1000	3
H2	Sc	45	252800.98	0.7	96.7	Pulse	0.1000	3
H2	Ge	72	182848.84	1.1	97.4	Pulse	0.1000	3
H2	In	115	436099.58	1.6	92.5	Pulse	0.1000	3
He	Sc	45	58440.28	1.6	96.7	Pulse	0.1000	3
He	Ge	72	101231.41	1.0	97.7	Pulse	0.1000	3
He	In	115	83263.26	1.1	92.1	Pulse	0.1000	3
He	Tb	159	363150.64	0.5	96.5	Pulse	0.1000	3
He	Bi	209	269075.21	0.4	93.9	Pulse	0.1000	3

No Gas



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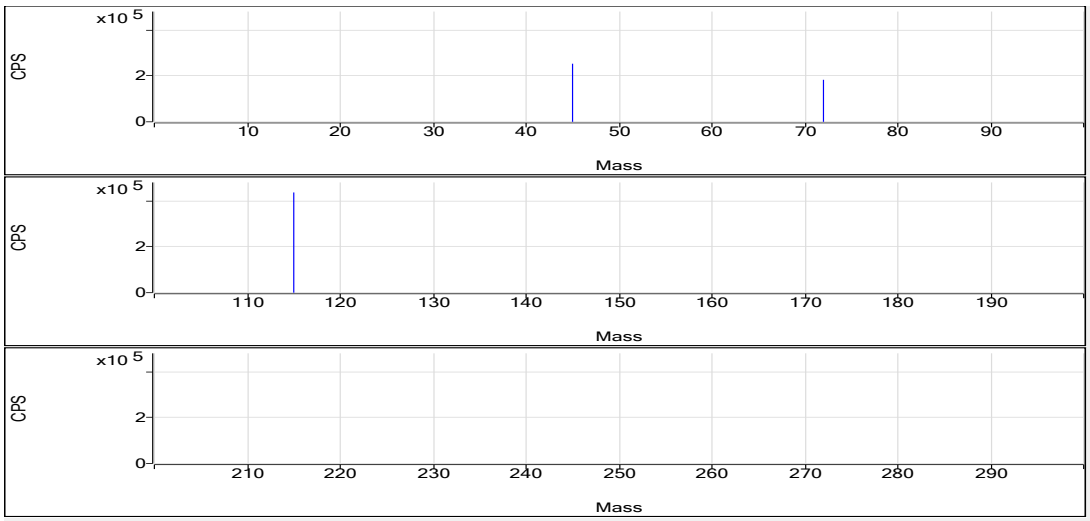
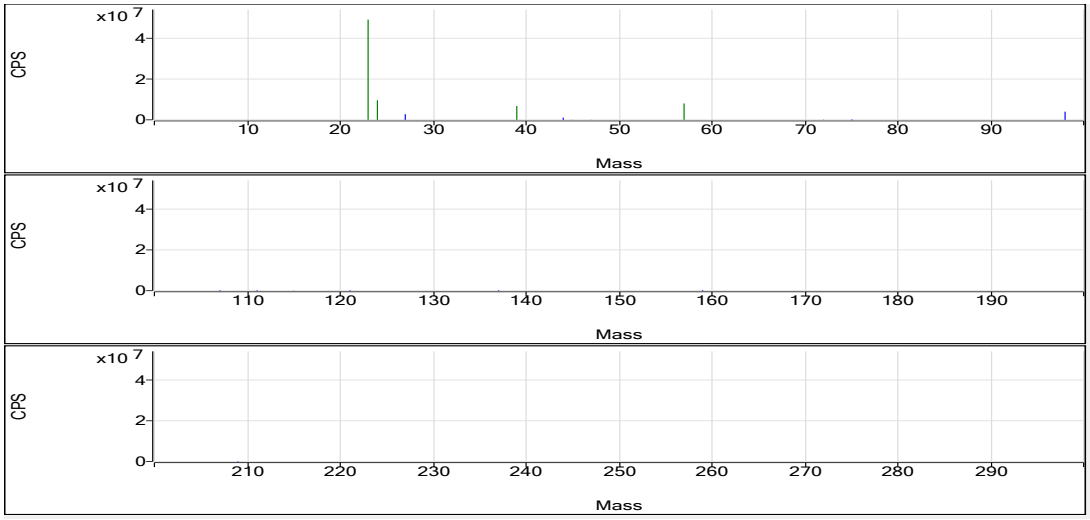


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.005	0	20.00	0.0004	7.085E-06
Be	9	1	No Gas	0.002	0	30.00	0.0004	7.085E-06
Be	9	1	No Gas	0.002	0	30.00	0.0004	7.085E-06
Se	78	2	H2	0.021	0	6.00	0.0004	2.372E-05
Se	78	2	H2	0.073	0.0001	10.00	0.0004	2.372E-05
Se	78	2	H2	0.054	0	8.67	0.0004	2.372E-05
Na	23	3	He	262745.564	852.9319	49345809.26	0.0032	0.5042
Na	23	3	He	256465.811	832.5584	48267714.28	0.0032	0.5042
Na	23	3	He	253926.049	824.3186	49039819.27	0.0032	0.5042
Mg	24	3	He	105191.704	165.9121	9598734.23	0.0016	0.002702
Mg	24	3	He	103819.994	163.7486	9493353.61	0.0016	0.002702
Mg	24	3	He	101875.179	160.6812	9559141.73	0.0016	0.002702
Al	27	3	He	104827.238	47.0206	2720346.21	0.0004	0.00193
Al	27	3	He	104500.379	46.874	2717528.08	0.0004	0.00193
Al	27	3	He	103435.674	46.3964	2760186.52	0.0004	0.00193
K	39	3	He	106508.3	115.6479	6690735.53	0.0011	0.2621
K	39	3	He	108228.568	117.5116	6812754.90	0.0011	0.2621
K	39	3	He	104035.46	112.969	6720676.77	0.0011	0.2621
Ca	44	3	He	294212.391	17.9475	1038342.72	0.0001	0.003476
Ca	44	3	He	296673.85	18.0977	1049214.83	0.0001	0.003476
Ca	44	3	He	288820.455	17.6187	1048158.81	0.0001	0.003476
Ti	47	3	He	2063.263	0.9709	56168.81	0.0005	0.000385
Ti	47	3	He	2139.222	1.0066	58357.48	0.0005	0.000385
Ti	47	3	He	2071.77	0.9749	57996.17	0.0005	0.000385
V	51	3	He	0.049	0.0083	480.01	0.0212	0.007263
V	51	3	He	0.079	0.0089	518.01	0.0212	0.007263
V	51	3	He	0.086	0.0091	540.01	0.0212	0.007263
Cr	52	3	He	3.632	0.1439	8322.68	0.0278	0.04283
Cr	52	3	He	3.218	0.1323	7672.30	0.0278	0.04283
Cr	52	3	He	3.363	0.1364	8112.46	0.0278	0.04283
Mn	55	3	He	0.85	0.0147	850.06	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.832	0.0145	840.05	0.0114	0.005023
Mn	55	3	He	0.681	0.0128	760.05	0.0114	0.005023
Fe	57	3	He	256952.076	136.3611	7889081.13	0.0005	0.003255
Fe	57	3	He	260265.94	138.1197	8007511.76	0.0005	0.003255
Fe	57	3	He	253370.016	134.4602	7999216.76	0.0005	0.003255
Co	59	3	He	0.22	0.0161	930.07	0.0539	0.00425
Co	59	3	He	0.229	0.0166	960.05	0.0539	0.00425
Co	59	3	He	0.227	0.0165	980.07	0.0539	0.00425
Ni	60	3	He	0.048	0.0145	1460.12	0.0088	0.01412
Ni	60	3	He	0.017	0.0143	1440.13	0.0088	0.01412
Ni	60	3	He	0.093	0.0149	1530.13	0.0088	0.01412
Cu	63	3	He	0.153	0.0084	840.05	0.0251	0.004537
Cu	63	3	He	0.068	0.0062	630.04	0.0251	0.004537
Cu	63	3	He	0.13	0.0078	800.05	0.0251	0.004537
Zn	66	3	He	11.854	0.034	3410.52	0.0027	0.001642
Zn	66	3	He	12.186	0.0349	3520.55	0.0027	0.001642
Zn	66	3	He	11.462	0.0329	3370.49	0.0027	0.001642
As	75	3	He	0.394	0.0012	122.00	0.0019	0.000463
As	75	3	He	0.37	0.0012	118.00	0.0019	0.000463
As	75	3	He	0.249	0.0009	96.00	0.0019	0.000463
Sr	88	3	He	2.23	0.0211	1740.18	0.009	0.001142
Sr	88	3	He	1.795	0.0172	1450.12	0.009	0.001142
Sr	88	3	He	2.177	0.0207	1720.16	0.009	0.001142
Mo	98	3	He	2115.486	47.6249	3922051.19	0.0225	0.001842
Mo	98	3	He	2111.559	47.5365	4000229.63	0.0225	0.001842
Mo	98	3	He	2128.321	47.9138	3990550.57	0.0225	0.001842
Ag	107	3	He	0.015	0.0012	100.00	0.048	0.0004774
Ag	107	3	He	0.005	0.0007	60.00	0.048	0.0004774
Ag	107	3	He	0.005	0.0007	60.00	0.048	0.0004774
Cd	111	3	He	0.318	0.0017	144.00	0.0055	7.481E-06
Cd	111	3	He	0.224	0.0012	104.00	0.0055	7.481E-06
Cd	111	3	He	0.385	0.0021	176.00	0.0055	7.481E-06
Sn	120	3	He	-0.3	0.0137	1130.08	0.0157	0.01844
Sn	120	3	He	-0.009	0.0183	1540.17	0.0157	0.01844
Sn	120	3	He	-0.027	0.018	1500.14	0.0157	0.01844
Sb	121	3	He	0.124	0.0019	160.01	0.0139	0.0002204
Sb	121	3	He	0.121	0.0019	160.01	0.0139	0.0002204
Sb	121	3	He	0.105	0.0017	140.01	0.0139	0.0002204
Ba	137	3	He	0.257	0.0032	260.01	0.0045	0.001994
Ba	137	3	He	0.242	0.0031	260.02	0.0045	0.001994
Ba	137	3	He	0.09	0.0024	200.01	0.0045	0.001994
Tl	205	3	He	0.016	0.0015	390.02	0.03	0.0009888
Tl	205	3	He	0.031	0.0019	520.03	0.03	0.0009888
Tl	205	3	He	0.012	0.0013	360.02	0.03	0.0009888
Pb	208	3	He	0.166	0.0075	1070.07	0.0392	0.001024
Pb	208	3	He	0.129	0.0061	750.05	0.0392	0.001024
Pb	208	3	He	0.159	0.0073	1090.09	0.0392	0.001024
U	238	3	He	0.055	0.0025	680.04	0.0439	0.000128
U	238	3	He	0.065	0.003	800.05	0.0439	0.000128
U	238	3	He	0.053	0.0024	660.05	0.0439	0.000128
Sc	45	1	No Gas			3810866.19		
Sc	45	1	No Gas			3860482.75		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3857986.51		
Ge	72	1	No Gas			1772370.29		
Ge	72	1	No Gas			1780773.25		
Ge	72	1	No Gas			1780381.07		
Sc	45	2	H2			250799.80		
Sc	45	2	H2			253419.43		
Sc	45	2	H2			254183.71		
Ge	72	2	H2			183686.64		
Ge	72	2	H2			180652.36		
Ge	72	2	H2			184207.52		
In	115	2	H2			431457.73		
In	115	2	H2			444119.45		
In	115	2	H2			432721.56		
Sc	45	3	He			57854.34		
Sc	45	3	He			57975.17		
Sc	45	3	He			59491.34		
Ge	72	3	He			100369.02		
Ge	72	3	He			100911.83		
Ge	72	3	He			102413.39		
In	115	3	He			82361.82		
In	115	3	He			84162.77		
In	115	3	He			83297.72		
Tb	159	3	He			360945.46		
Tb	159	3	He			364582.53		
Tb	159	3	He			363923.94		
Bi	209	3	He			267875.04		
Bi	209	3	He			269824.41		
Bi	209	3	He			269526.17		

Quantitation Report

Data File Name	212ICSB.d
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Sample Name	ICSAB 5012904
Sample Type	ICSAB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

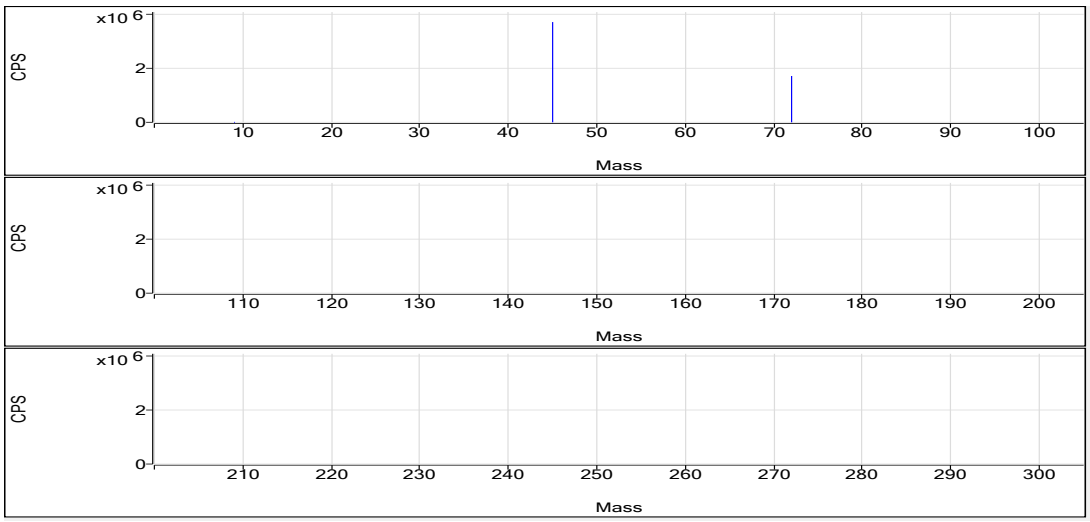
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.003	ppb	N/A	22.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	95.536	ppb	1.3	7742.53	0.0416	Pulse	1.5000	3
Na	23	45	He	257642.343	ppb	0.2	49026389.27	836.3754	Analog	0.1000	3
Mg	24	45	He	103735.732	ppb	0.1	9590826.94	163.6157	Analog	0.1000	3
Al	27	45	He	102861.457	ppb	0.1	2704563.60	46.1389	Pulse	0.1000	3
K	39	45	He	105893.211	ppb	0.3	6739953.86	114.9816	Analog	0.1000	3
Ca	44	45	He	293544.237	ppb	0.2	1049658.13	17.9068	Pulse	0.1000	3
Ti	47	45	He	2039.651	ppb	0.6	56258.60	0.9598	Pulse	0.1000	3
V	51	45	He	195.130	ppb	0.6	242618.24	4.1390	Pulse	0.5000	3
Cr	52	45	He	196.108	ppb	0.7	322253.55	5.4976	Pulse	0.1000	3
Mn	55	45	He	193.397	ppb	0.5	129300.23	2.2058	Pulse	0.1000	3
Fe	57	45	He	256357.645	ppb	0.4	7974739.67	136.0456	Analog	0.1000	3
Co	59	45	He	190.794	ppb	0.5	602635.76	10.2806	Pulse	0.1000	3
Ni	60	72	He	185.403	ppb	1.3	172424.24	1.6495	Pulse	0.1000	3
Cu	63	72	He	184.100	ppb	0.3	484061.44	4.6308	Pulse	0.1000	3
Zn	66	72	He	95.011	ppb	1.6	27266.43	0.2608	Pulse	0.1000	3
As	75	72	He	92.092	ppb	0.5	18418.48	0.1762	Pulse	0.5000	3
Sr	88	115	He	2.107	ppb	5.4	1690.17	0.0200	Pulse	0.1000	3
Mo	98	115	He	2084.744	ppb	0.9	3959332.13	46.9328	Pulse	0.1000	3
Ag	107	115	He	47.236	ppb	1.3	191132.14	2.2656	Pulse	0.1000	3
Cd	111	115	He	93.134	ppb	1.0	43012.04	0.5099	Pulse	0.5000	3
Sn	120	115	He	-0.014	ppb	N/A	1536.81	0.0182	Pulse	0.1000	3
Sb	121	115	He	0.163	ppb	14.5	210.01	0.0025	Pulse	0.1000	3
Ba	137	115	He	0.214	ppb	34.5	250.01	0.0030	Pulse	0.1000	3
Tl	205	209	He	-0.007	ppb	N/A	213.34	0.0008	Pulse	0.1000	3
Pb	208	209	He	0.079	ppb	2.5	1113.39	0.0041	Pulse	0.1000	3
U	238	209	He	0.062	ppb	4.4	770.05	0.0029	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3720196.72	0.4	104.1	Pulse	0.1000	3
No Gas	Ge	72	1718458.98	0.5	105.6	Pulse	0.1000	3
H2	Sc	45	261390.53	0.9	100.0	Pulse	0.1000	3
H2	Ge	72	185966.58	1.3	99.1	Pulse	0.1000	3
H2	In	115	445489.56	0.4	94.4	Pulse	0.1000	3
He	Sc	45	58617.83	0.3	97.0	Pulse	0.1000	3
He	Ge	72	104531.11	0.3	100.9	Pulse	0.1000	3
He	In	115	84365.46	0.7	93.4	Pulse	0.1000	3
He	Tb	159	365674.29	0.4	97.2	Pulse	0.1000	3
He	Bi	209	269289.62	0.9	94.0	Pulse	0.1000	3

No Gas



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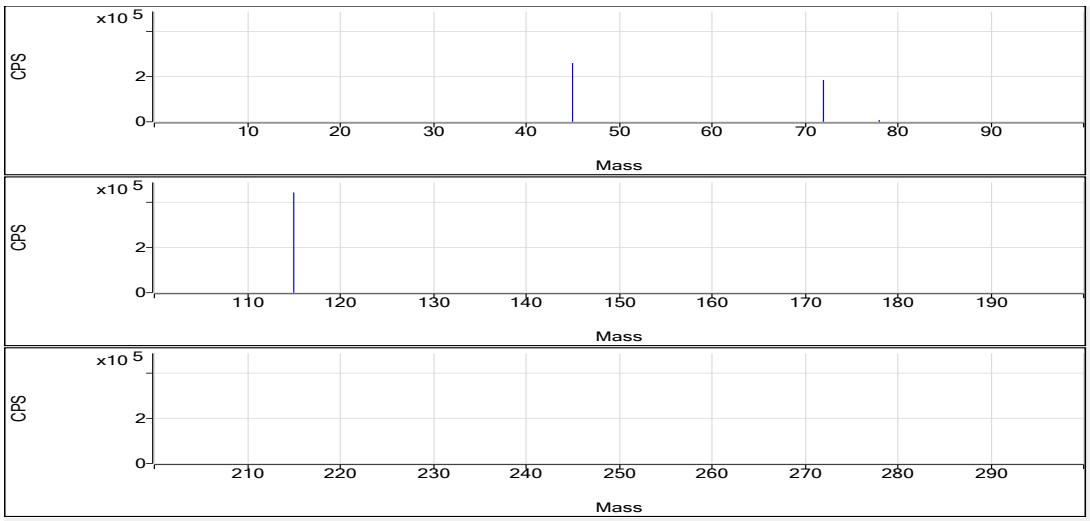
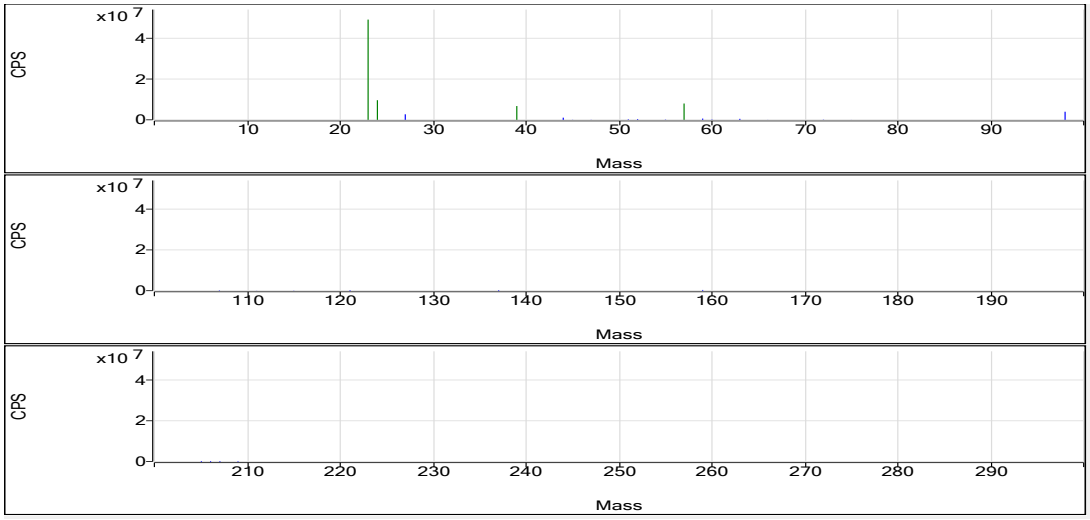


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.006	0	18.00	0.0004	7.085E-06
Be	9	1	No Gas	-0.003	0	22.00	0.0004	7.085E-06
Be	9	1	No Gas	0	0	26.00	0.0004	7.085E-06
Se	78	2	H2	96.464	0.042	7756.76	0.0004	2.372E-05
Se	78	2	H2	95.967	0.0418	7722.74	0.0004	2.372E-05
Se	78	2	H2	94.178	0.041	7748.08	0.0004	2.372E-05
Na	23	3	He	257226.839	835.0274	49140519.27	0.0032	0.5042
Na	23	3	He	258241.529	838.3194	49072994.27	0.0032	0.5042
Na	23	3	He	257458.662	835.7795	48865654.27	0.0032	0.5042
Mg	24	3	He	103878.477	163.8409	9641868.61	0.0016	0.002702
Mg	24	3	He	103727.402	163.6026	9576861.11	0.0016	0.002702
Mg	24	3	He	103601.319	163.4037	9553751.11	0.0016	0.002702
Al	27	3	He	102926.572	46.1681	2716945.58	0.0004	0.00193
Al	27	3	He	102705.92	46.0691	2696764.33	0.0004	0.00193
Al	27	3	He	102951.879	46.1794	2699980.90	0.0004	0.00193
K	39	3	He	105820.581	114.9029	6761919.90	0.0011	0.2621
K	39	3	He	105588.35	114.6513	6711384.27	0.0011	0.2621
K	39	3	He	106270.703	115.3905	6746557.40	0.0011	0.2621
Ca	44	3	He	293836.362	17.9246	1054844.59	0.0001	0.003476
Ca	44	3	He	292877.078	17.8661	1045833.73	0.0001	0.003476
Ca	44	3	He	293919.269	17.9297	1048296.08	0.0001	0.003476
Ti	47	3	He	2029.808	0.9551	56208.43	0.0005	0.000385
Ti	47	3	He	2053.368	0.9662	56559.49	0.0005	0.000385
Ti	47	3	He	2035.777	0.9579	56007.88	0.0005	0.000385
V	51	3	He	193.772	4.1103	241885.52	0.0212	0.007263
V	51	3	He	195.555	4.148	242815.75	0.0212	0.007263
V	51	3	He	196.063	4.1588	243153.44	0.0212	0.007263
Cr	52	3	He	194.573	5.455	321018.34	0.0278	0.04283
Cr	52	3	He	196.423	5.5064	322329.72	0.0278	0.04283
Cr	52	3	He	197.326	5.5315	323412.59	0.0278	0.04283
Mn	55	3	He	192.605	2.1968	129281.13	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	194.54	2.2188	129885.13	0.0114	0.005023
Mn	55	3	He	193.045	2.2018	128734.44	0.0114	0.005023
Fe	57	3	He	256816.958	136.2894	8020493.01	0.0005	0.003255
Fe	57	3	He	256976.59	136.3741	7982978.63	0.0005	0.003255
Fe	57	3	He	255279.386	135.4734	7920747.38	0.0005	0.003255
Co	59	3	He	191.963	10.3436	608707.73	0.0539	0.00425
Co	59	3	He	190.132	10.245	599712.73	0.0539	0.00425
Co	59	3	He	190.289	10.2534	599486.83	0.0539	0.00425
Ni	60	3	He	188.159	1.6738	175327.24	0.0088	0.01412
Ni	60	3	He	183.701	1.6345	170369.53	0.0088	0.01412
Ni	60	3	He	184.35	1.6402	171575.95	0.0088	0.01412
Cu	63	3	He	183.542	4.6168	483604.72	0.0251	0.004537
Cu	63	3	He	184.521	4.6414	483801.36	0.0251	0.004537
Cu	63	3	He	184.237	4.6342	484778.23	0.0251	0.004537
Zn	66	3	He	96.671	0.2654	27797.25	0.0027	0.001642
Zn	66	3	He	94.755	0.2601	27116.20	0.0027	0.001642
Zn	66	3	He	93.609	0.257	26885.85	0.0027	0.001642
As	75	3	He	92.007	0.176	18439.83	0.0019	0.000463
As	75	3	He	91.646	0.1753	18277.63	0.0019	0.000463
As	75	3	He	92.624	0.1772	18537.97	0.0019	0.000463
Sr	88	3	He	2.117	0.0201	1710.19	0.009	0.001142
Sr	88	3	He	1.989	0.019	1590.14	0.009	0.001142
Sr	88	3	He	2.215	0.021	1770.17	0.009	0.001142
Mo	98	3	He	2064.587	46.4791	3950568.69	0.0225	0.001842
Mo	98	3	He	2103.688	47.3593	3968683.07	0.0225	0.001842
Mo	98	3	He	2085.957	46.9601	3958744.63	0.0225	0.001842
Ag	107	3	He	46.527	2.2317	189683.81	0.048	0.0004774
Ag	107	3	He	47.552	2.2808	191129.51	0.048	0.0004774
Ag	107	3	He	47.629	2.2845	192583.10	0.048	0.0004774
Cd	111	3	He	92.1	0.5042	42854.89	0.0055	7.481E-06
Cd	111	3	He	93.858	0.5138	43057.58	0.0055	7.481E-06
Cd	111	3	He	93.444	0.5115	43123.64	0.0055	7.481E-06
Sn	120	3	He	-0.103	0.0168	1430.12	0.0157	0.01844
Sn	120	3	He	-0.072	0.0173	1450.13	0.0157	0.01844
Sn	120	3	He	0.132	0.0205	1730.18	0.0157	0.01844
Sb	121	3	He	0.136	0.0021	180.01	0.0139	0.0002204
Sb	121	3	He	0.182	0.0027	230.01	0.0139	0.0002204
Sb	121	3	He	0.172	0.0026	220.01	0.0139	0.0002204
Ba	137	3	He	0.287	0.0033	280.02	0.0045	0.001994
Ba	137	3	He	0.14	0.0026	220.01	0.0045	0.001994
Ba	137	3	He	0.215	0.003	250.01	0.0045	0.001994
Tl	205	3	He	-0.011	0.0007	180.01	0.03	0.0009888
Tl	205	3	He	0.001	0.001	270.01	0.03	0.0009888
Tl	205	3	He	-0.009	0.0007	190.01	0.03	0.0009888
Pb	208	3	He	0.078	0.0041	660.04	0.0392	0.001024
Pb	208	3	He	0.079	0.0041	570.03	0.0392	0.001024
Pb	208	3	He	0.082	0.0042	640.04	0.0392	0.001024
U	238	3	He	0.06	0.0028	750.05	0.0439	0.000128
U	238	3	He	0.062	0.0028	760.05	0.0439	0.000128
U	238	3	He	0.065	0.003	800.06	0.0439	0.000128
Sc	45	1	No Gas			3730269.01		
Sc	45	1	No Gas			3726503.38		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3703817.76		
Ge	72	1	No Gas			1722655.13		
Ge	72	1	No Gas			1709332.94		
Ge	72	1	No Gas			1723388.88		
Sc	45	2	H2			261610.95		
Sc	45	2	H2			258828.73		
Sc	45	2	H2			263731.91		
Ge	72	2	H2			184497.83		
Ge	72	2	H2			184639.61		
Ge	72	2	H2			188762.30		
In	115	2	H2			447344.09		
In	115	2	H2			444868.39		
In	115	2	H2			444256.20		
Sc	45	3	He			58848.99		
Sc	45	3	He			58537.35		
Sc	45	3	He			58467.16		
Ge	72	3	He			104749.28		
Ge	72	3	He			104236.14		
Ge	72	3	He			104607.91		
In	115	3	He			85007.91		
In	115	3	He			83810.79		
In	115	3	He			84313.63		
Tb	159	3	He			364276.67		
Tb	159	3	He			365472.49		
Tb	159	3	He			367273.71		
Bi	209	3	He			272192.26		
Bi	209	3	He			268127.89		
Bi	209	3	He			267548.71		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23J26A00.b
Acq Time	2023-10-26 16:19:44
Sample Name	CCV 5001623
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

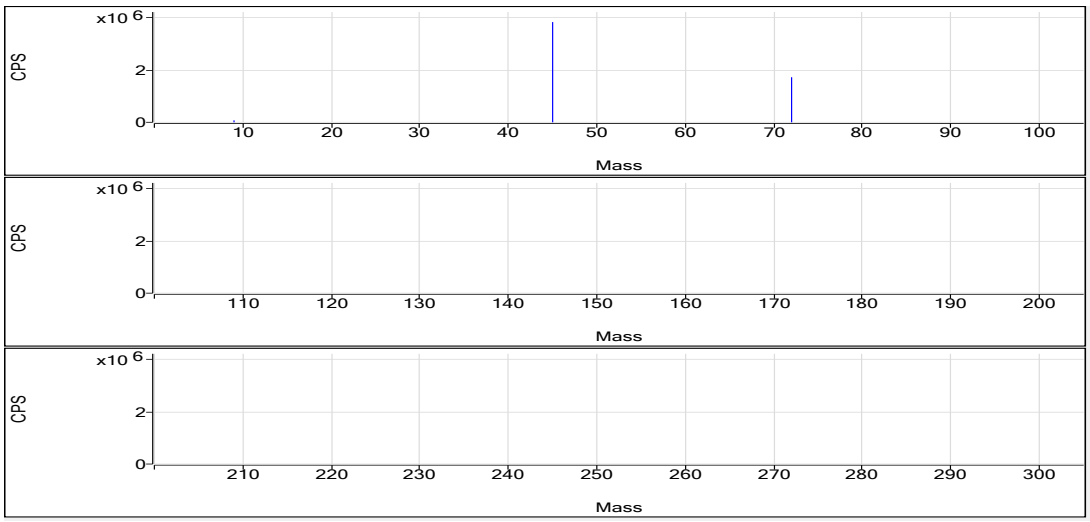
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.742	ppb	1.1	74746.88	0.0194	Pulse	0.5000	3
Se	78	72	H2	52.008	ppb	1.2	4310.65	0.0227	Pulse	1.5000	3
Na	23	45	He	5130.428	ppb	0.6	1072827.25	17.1489	Pulse	0.1000	3
Mg	24	45	He	5081.500	ppb	0.2	501567.92	8.0173	Pulse	0.1000	3
Al	27	45	He	5108.837	ppb	1.2	143475.15	2.2934	Pulse	0.1000	3
K	39	45	He	5139.991	ppb	0.6	364766.14	5.8305	Pulse	0.1000	3
Ca	44	45	He	5067.251	ppb	2.6	19550.34	0.3125	Pulse	0.1000	3
Ti	47	45	He	5080.272	ppb	1.4	149509.98	2.3900	Pulse	0.1000	3
V	51	45	He	506.350	ppb	1.2	671184.90	10.7290	Pulse	0.5000	3
Cr	52	45	He	506.005	ppb	1.1	883171.05	14.1175	Pulse	0.1000	3
Mn	55	45	He	501.679	ppb	0.7	357473.12	5.7140	Pulse	0.1000	3
Fe	57	45	He	5028.699	ppb	0.8	167148.76	2.6719	Pulse	0.1000	3
Co	59	45	He	508.077	ppb	1.1	1712230.91	27.3698	Pulse	0.1000	3
Ni	60	72	He	517.771	ppb	1.5	491612.36	4.5811	Pulse	0.1000	3
Cu	63	72	He	517.032	ppb	0.8	1394683.21	12.9971	Pulse	0.1000	3
Zn	66	72	He	513.972	ppb	0.1	150640.92	1.4038	Pulse	0.1000	3
As	75	72	He	513.527	ppb	0.2	105207.43	0.9804	Pulse	0.5000	3
Sr	88	115	He	49.762	ppb	1.6	41471.49	0.4472	Pulse	0.1000	3
Mo	98	115	He	49.552	ppb	2.1	103624.88	1.1173	Pulse	0.1000	3
Ag	107	115	He	49.134	ppb	1.4	218555.07	2.3567	Pulse	0.1000	3
Cd	111	115	He	48.306	ppb	1.4	24524.02	0.2645	Pulse	0.5000	3
Sn	120	115	He	48.745	ppb	1.9	72749.72	0.7845	Pulse	0.1000	3
Sb	121	115	He	48.371	ppb	2.0	62393.70	0.6728	Pulse	0.1000	3
Ba	137	115	He	484.522	ppb	2.2	203583.55	2.1954	Pulse	0.1000	3
Tl	205	209	He	50.489	ppb	1.7	445345.78	1.5164	Pulse	0.1000	3
Pb	208	209	He	50.874	ppb	1.0	586296.12	1.9961	Pulse	0.1000	3
U	238	209	He	50.537	ppb	0.7	651876.48	2.2193	Pulse	0.1000	3

ISTD Table:

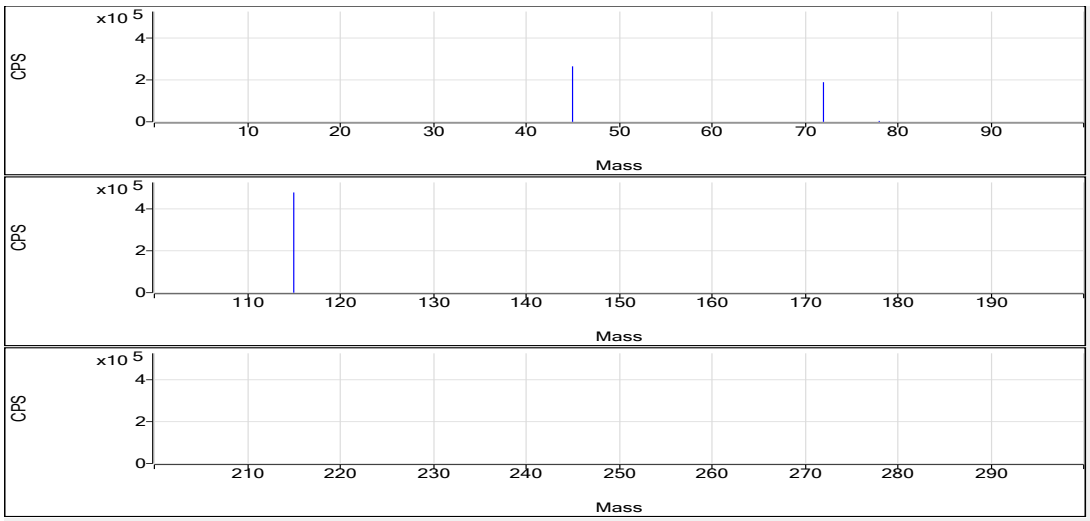
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3844471.92	0.9	107.6	Pulse	0.1000	3
No Gas	Ge	72	1728835.49	0.1	106.2	Pulse	0.1000	3
H2	Sc	45	266190.72	1.0	101.8	Pulse	0.1000	3
H2	Ge	72	190082.71	0.7	101.3	Pulse	0.1000	3
H2	In	115	480830.17	1.1	101.9	Pulse	0.1000	3
He	Sc	45	62560.92	0.5	103.6	Pulse	0.1000	3
He	Ge	72	107308.28	1.0	103.6	Pulse	0.1000	3
He	In	115	92743.14	0.9	102.6	Pulse	0.1000	3
He	Tb	159	383620.20	1.2	101.9	Pulse	0.1000	3
He	Bi	209	293752.98	2.0	102.5	Pulse	0.1000	3

No Gas

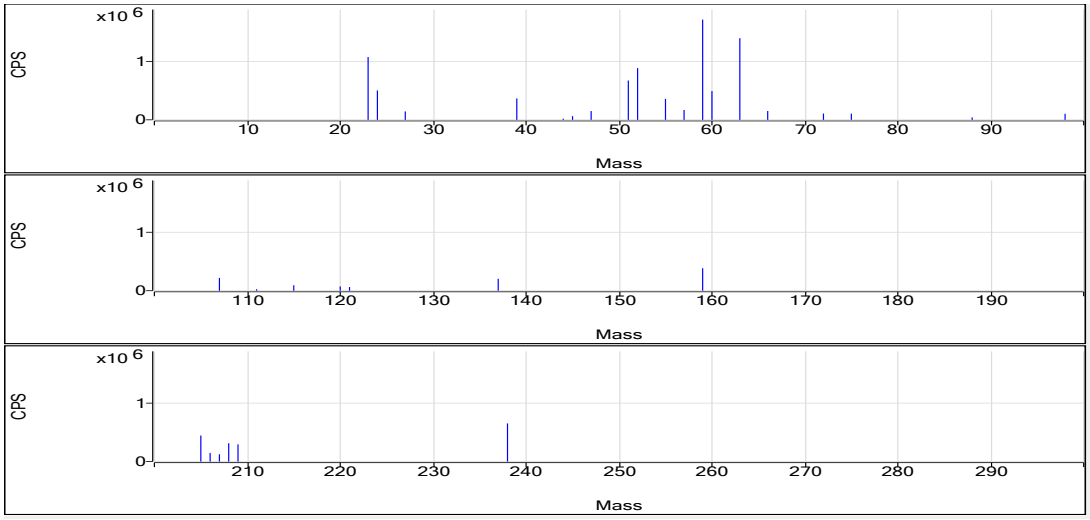


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	51.395	0.0197	74959.42	0.0004	7.085E-06
Be	9	1	No Gas	50.412	0.0193	74691.66	0.0004	7.085E-06
Be	9	1	No Gas	50.418	0.0193	74589.57	0.0004	7.085E-06
Se	78	2	H2	51.849	0.0226	4261.97	0.0004	2.372E-05
Se	78	2	H2	52.688	0.023	4377.33	0.0004	2.372E-05
Se	78	2	H2	51.486	0.0225	4292.64	0.0004	2.372E-05
Na	23	3	He	5097.797	17.043	1072952.87	0.0032	0.5042
Na	23	3	He	5146.574	17.2012	1072562.87	0.0032	0.5042
Na	23	3	He	5146.913	17.2023	1072966.00	0.0032	0.5042
Mg	24	3	He	5077.332	8.0107	504320.38	0.0016	0.002702
Mg	24	3	He	5094.737	8.0382	501210.66	0.0016	0.002702
Mg	24	3	He	5072.432	8.003	499172.73	0.0016	0.002702
Al	27	3	He	5071.759	2.2768	143336.91	0.0004	0.00193
Al	27	3	He	5178.182	2.3245	144943.03	0.0004	0.00193
Al	27	3	He	5076.57	2.2789	142145.50	0.0004	0.00193
K	39	3	He	5150.568	5.842	367787.14	0.0011	0.2621
K	39	3	He	5166.193	5.8589	365326.56	0.0011	0.2621
K	39	3	He	5103.212	5.7907	361184.72	0.0011	0.2621
Ca	44	3	He	4923.443	0.3038	19123.25	0.0001	0.003476
Ca	44	3	He	5103.105	0.3147	19623.68	0.0001	0.003476
Ca	44	3	He	5175.204	0.3191	19904.08	0.0001	0.003476
Ti	47	3	He	4997.55	2.351	148011.57	0.0005	0.000385
Ti	47	3	He	5128.75	2.4128	150444.52	0.0005	0.000385
Ti	47	3	He	5114.516	2.4061	150073.84	0.0005	0.000385
V	51	3	He	499.314	10.58	666069.44	0.0212	0.007263
V	51	3	He	509.147	10.7882	672685.06	0.0212	0.007263
V	51	3	He	510.59	10.8187	674800.19	0.0212	0.007263
Cr	52	3	He	499.828	13.9457	877961.39	0.0278	0.04283
Cr	52	3	He	510.676	14.2475	888382.96	0.0278	0.04283
Cr	52	3	He	507.511	14.1594	883168.81	0.0278	0.04283
Mn	55	3	He	501.232	5.7089	359409.60	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	498.308	5.6757	353898.47	0.0114	0.005023
Mn	55	3	He	505.496	5.7575	359111.28	0.0114	0.005023
Fe	57	3	He	4980.701	2.6464	166604.94	0.0005	0.003255
Fe	57	3	He	5050.298	2.6833	167315.13	0.0005	0.003255
Fe	57	3	He	5055.098	2.6859	167526.21	0.0005	0.003255
Co	59	3	He	503.349	27.1152	1707052.94	0.0539	0.00425
Co	59	3	He	506.626	27.2916	1701737.94	0.0539	0.00425
Co	59	3	He	514.256	27.7026	1727901.85	0.0539	0.00425
Ni	60	3	He	509	4.5038	479797.73	0.0088	0.01412
Ni	60	3	He	524.096	4.6369	495426.67	0.0088	0.01412
Ni	60	3	He	520.217	4.6027	499612.69	0.0088	0.01412
Cu	63	3	He	514.115	12.9238	1376808.89	0.0251	0.004537
Cu	63	3	He	521.494	13.1092	1400644.20	0.0251	0.004537
Cu	63	3	He	515.488	12.9583	1406596.54	0.0251	0.004537
Zn	66	3	He	513.885	1.4036	149526.53	0.0027	0.001642
Zn	66	3	He	513.739	1.4032	149921.08	0.0027	0.001642
Zn	66	3	He	514.292	1.4047	152475.16	0.0027	0.001642
As	75	3	He	513.382	0.9801	104416.31	0.0019	0.000463
As	75	3	He	512.528	0.9785	104547.53	0.0019	0.000463
As	75	3	He	514.671	0.9826	106658.45	0.0019	0.000463
Sr	88	3	He	49.27	0.4428	41140.33	0.009	0.001142
Sr	88	3	He	50.698	0.4556	41832.51	0.009	0.001142
Sr	88	3	He	49.319	0.4432	41441.64	0.009	0.001142
Mo	98	3	He	48.352	1.0903	101302.32	0.0225	0.001842
Mo	98	3	He	50.086	1.1294	103698.37	0.0225	0.001842
Mo	98	3	He	50.219	1.1324	105873.96	0.0225	0.001842
Ag	107	3	He	48.41	2.3219	215732.24	0.048	0.0004774
Ag	107	3	He	49.801	2.3886	219325.15	0.048	0.0004774
Ag	107	3	He	49.192	2.3595	220607.83	0.048	0.0004774
Cd	111	3	He	47.93	0.2624	24379.06	0.0055	7.481E-06
Cd	111	3	He	49.07	0.2686	24665.65	0.0055	7.481E-06
Cd	111	3	He	47.918	0.2623	24527.35	0.0055	7.481E-06
Sn	120	3	He	48.079	0.774	71915.16	0.0157	0.01844
Sn	120	3	He	49.82	0.8014	73584.25	0.0157	0.01844
Sn	120	3	He	48.336	0.7781	72749.75	0.0157	0.01844
Sb	121	3	He	47.446	0.6599	61315.84	0.0139	0.0002204
Sb	121	3	He	49.354	0.6865	63033.34	0.0139	0.0002204
Sb	121	3	He	48.313	0.672	62831.91	0.0139	0.0002204
Ba	137	3	He	477.507	2.1637	201025.47	0.0045	0.001994
Ba	137	3	He	497.003	2.2519	206770.74	0.0045	0.001994
Ba	137	3	He	479.055	2.1707	202954.45	0.0045	0.001994
Tl	205	3	He	51.349	1.5422	443890.93	0.03	0.0009888
Tl	205	3	He	50.495	1.5166	445741.48	0.03	0.0009888
Tl	205	3	He	49.624	1.4904	446404.92	0.03	0.0009888
Pb	208	3	He	51.393	2.0165	310948.47	0.0392	0.001024
Pb	208	3	He	50.842	1.9949	314075.60	0.0392	0.001024
Pb	208	3	He	50.386	1.977	316237.94	0.0392	0.001024
U	238	3	He	50.736	2.228	641301.28	0.0439	0.000128
U	238	3	He	50.75	2.2287	655025.97	0.0439	0.000128
U	238	3	He	50.125	2.2012	659302.18	0.0439	0.000128
Sc	45	1	No Gas			3806156.19		
Sc	45	1	No Gas			3866491.19		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3860768.38		
Ge	72	1	No Gas			1727241.54		
Ge	72	1	No Gas			1728631.22		
Ge	72	1	No Gas			1730633.72		
Sc	45	2	H2			264314.02		
Sc	45	2	H2			265107.77		
Sc	45	2	H2			269150.37		
Ge	72	2	H2			188510.06		
Ge	72	2	H2			190535.15		
Ge	72	2	H2			191202.93		
In	115	2	H2			482721.87		
In	115	2	H2			475004.99		
In	115	2	H2			484763.66		
Sc	45	3	He			62955.68		
Sc	45	3	He			62353.82		
Sc	45	3	He			62373.27		
Ge	72	3	He			106532.82		
Ge	72	3	He			106844.18		
Ge	72	3	He			108547.84		
In	115	3	He			93471.13		
In	115	3	He			92394.20		
In	115	3	He			94066.44		
Tb	159	3	He			384589.10		
Tb	159	3	He			378721.63		
Tb	159	3	He			387549.88		
Bi	209	3	He			287830.84		
Bi	209	3	He			293911.42		
Bi	209	3	He			299516.68		

Quantitation Report

Data File Name	219_CCB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23J26A00.b
Acq Time	2023-10-26 16:21:44
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Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

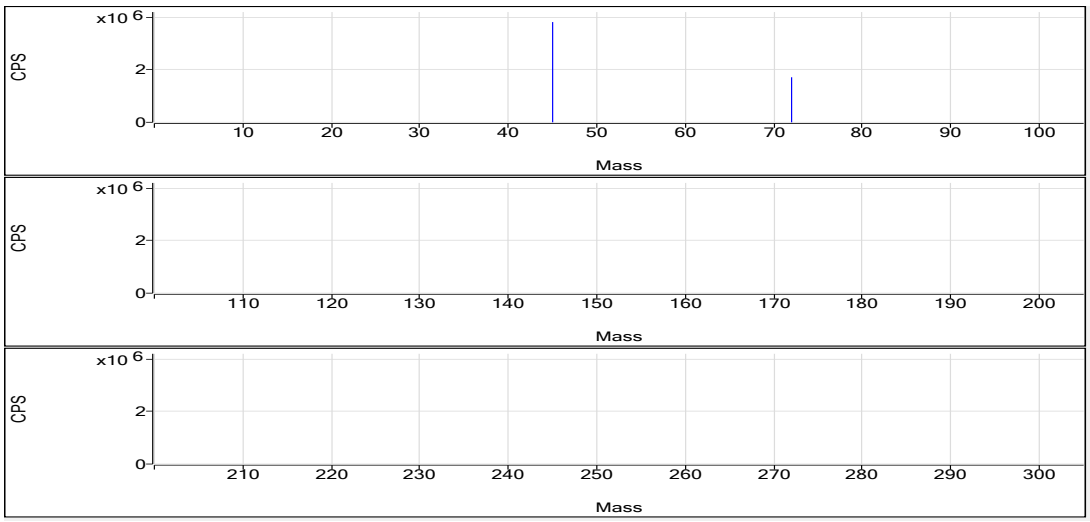
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.010	ppb	53.0	42.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.029	ppb	84.3	6.89	0.0000	Pulse	1.5000	3
Na	23	45	He	14.661	ppb	63.0	33832.50	0.5517	Pulse	0.1000	3
Mg	24	45	He	8.556	ppb	24.6	993.40	0.0162	Pulse	0.1000	3
Al	27	45	He	3.216	ppb	69.8	206.68	0.0034	Pulse	0.1000	3
K	39	45	He	15.010	ppb	137.7	17070.40	0.2784	Pulse	0.1000	3
Ca	44	45	He	-9.743	ppb	N/A	176.68	0.0029	Pulse	0.1000	3
Ti	47	45	He	1.494	ppb	58.6	66.67	0.0011	Pulse	0.1000	3
V	51	45	He	0.134	ppb	5.2	619.35	0.0101	Pulse	0.5000	3
Cr	52	45	He	0.108	ppb	82.2	2810.37	0.0458	Pulse	0.1000	3
Mn	55	45	He	0.146	ppb	88.7	410.02	0.0067	Pulse	0.1000	3
Fe	57	45	He	6.366	ppb	15.6	406.69	0.0066	Pulse	0.1000	3
Co	59	45	He	0.079	ppb	24.2	520.03	0.0085	Pulse	0.1000	3
Ni	60	72	He	-0.082	ppb	N/A	1383.44	0.0134	Pulse	0.1000	3
Cu	63	72	He	0.110	ppb	74.1	753.38	0.0073	Pulse	0.1000	3
Zn	66	72	He	-0.129	ppb	N/A	133.34	0.0013	Pulse	0.1000	3
As	75	72	He	0.065	ppb	64.7	60.67	0.0006	Pulse	0.5000	3
Sr	88	115	He	0.065	ppb	12.4	156.68	0.0017	Pulse	0.1000	3
Mo	98	115	He	0.128	ppb	21.6	430.02	0.0047	Pulse	0.1000	3
Ag	107	115	He	0.007	ppb	194.5	73.34	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.011	ppb	64.1	6.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.049	ppb	150.9	1746.84	0.0192	Pulse	0.1000	3
Sb	121	115	He	0.045	ppb	36.5	76.67	0.0008	Pulse	0.1000	3
Ba	137	115	He	0.151	ppb	63.2	243.35	0.0027	Pulse	0.1000	3
Tl	205	209	He	0.088	ppb	9.2	1056.75	0.0036	Pulse	0.1000	3
Pb	208	209	He	0.012	ppb	47.1	430.01	0.0015	Pulse	0.1000	3
U	238	209	He	0.035	ppb	5.5	486.70	0.0017	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3826897.96	0.4	107.1	Pulse	0.1000	3
No Gas	Ge	72	1719717.01	0.5	105.7	Pulse	0.1000	3
H2	Sc	45	267207.71	0.9	102.2	Pulse	0.1000	3
H2	Ge	72	188446.78	0.2	100.4	Pulse	0.1000	3
H2	In	115	482952.28	0.0	102.4	Pulse	0.1000	3
He	Sc	45	61322.28	0.5	101.5	Pulse	0.1000	3
He	Ge	72	103292.45	0.4	99.7	Pulse	0.1000	3
He	In	115	90873.98	1.2	100.6	Pulse	0.1000	3
He	Tb	159	377631.48	0.4	100.3	Pulse	0.1000	3
He	Bi	209	290558.97	0.4	101.4	Pulse	0.1000	3

No Gas



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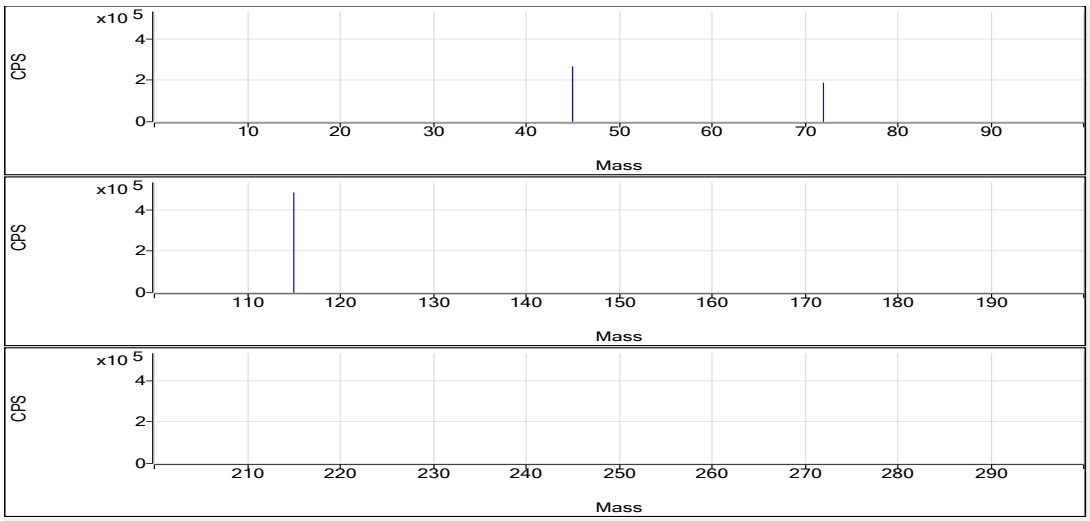
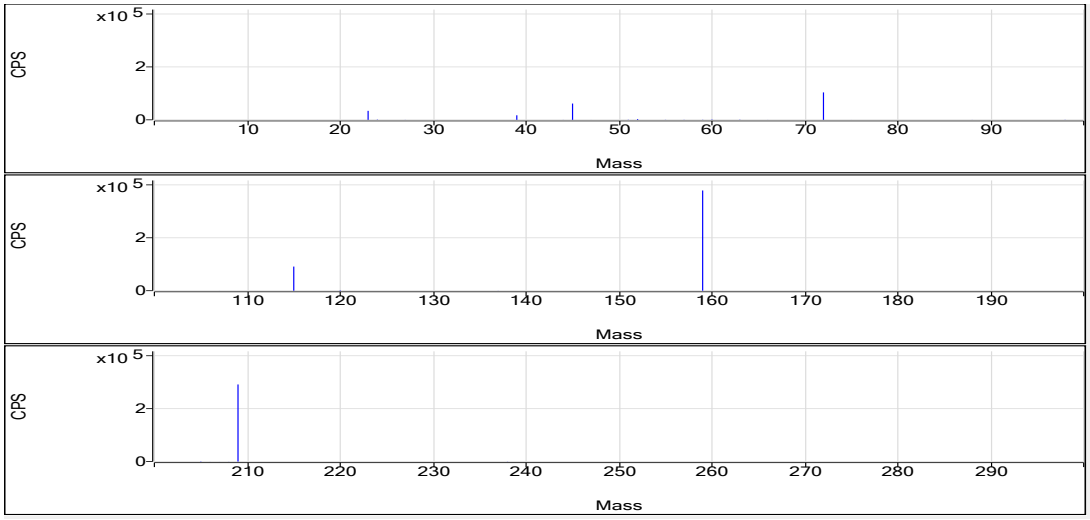


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.005	0	34.00	0.0004	7.085E-06
Be	9	1	No Gas	0.015	0	50.00	0.0004	7.085E-06
Be	9	1	No Gas	0.01	0	42.00	0.0004	7.085E-06
Se	78	2	H2	0.002	0	4.67	0.0004	2.372E-05
Se	78	2	H2	0.035	0	7.33	0.0004	2.372E-05
Se	78	2	H2	0.051	0	8.67	0.0004	2.372E-05
Na	23	3	He	24.971	0.5852	35923.74	0.0032	0.5042
Na	23	3	He	11.86	0.5426	33077.62	0.0032	0.5042
Na	23	3	He	7.151	0.5274	32496.15	0.0032	0.5042
Mg	24	3	He	10.991	0.02	1230.09	0.0016	0.002702
Mg	24	3	He	7.336	0.0143	870.05	0.0016	0.002702
Mg	24	3	He	7.342	0.0143	880.05	0.0016	0.002702
Al	27	3	He	0.782	0.0023	140.01	0.0004	0.00193
Al	27	3	He	5.207	0.0043	260.01	0.0004	0.00193
Al	27	3	He	3.658	0.0036	220.01	0.0004	0.00193
K	39	3	He	36.839	0.302	18542.14	0.0011	0.2621
K	39	3	He	12.438	0.2756	16800.08	0.0011	0.2621
K	39	3	He	-4.247	0.2575	15868.98	0.0011	0.2621
Ca	44	3	He	-6.242	0.0031	190.01	0.0001	0.003476
Ca	44	3	He	-8.572	0.003	180.01	0.0001	0.003476
Ca	44	3	He	-14.414	0.0026	160.01	0.0001	0.003476
Ti	47	3	He	2.298	0.0015	90.00	0.0005	0.000385
Ti	47	3	He	1.623	0.0011	70.00	0.0005	0.000385
Ti	47	3	He	0.562	0.0006	40.00	0.0005	0.000385
V	51	3	He	0.137	0.0102	624.02	0.0212	0.007263
V	51	3	He	0.139	0.0102	622.02	0.0212	0.007263
V	51	3	He	0.126	0.0099	612.02	0.0212	0.007263
Cr	52	3	He	0.006	0.043	2640.33	0.0278	0.04283
Cr	52	3	He	0.147	0.0469	2860.38	0.0278	0.04283
Cr	52	3	He	0.17	0.0476	2930.40	0.0278	0.04283
Mn	55	3	He	0.274	0.0081	500.03	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.15	0.0067	410.02	0.0114	0.005023
Mn	55	3	He	0.015	0.0052	320.01	0.0114	0.005023
Fe	57	3	He	5.531	0.0062	380.02	0.0005	0.003255
Fe	57	3	He	7.469	0.0072	440.03	0.0005	0.003255
Fe	57	3	He	6.099	0.0065	400.02	0.0005	0.003255
Co	59	3	He	0.09	0.0091	560.03	0.0539	0.00425
Co	59	3	He	0.089	0.009	550.03	0.0539	0.00425
Co	59	3	He	0.057	0.0073	450.02	0.0539	0.00425
Ni	60	3	He	0.042	0.0145	1490.13	0.0088	0.01412
Ni	60	3	He	-0.264	0.0118	1220.09	0.0088	0.01412
Ni	60	3	He	-0.026	0.0139	1440.11	0.0088	0.01412
Cu	63	3	He	0.203	0.0096	990.08	0.0251	0.004537
Cu	63	3	He	0.077	0.0065	670.04	0.0251	0.004537
Cu	63	3	He	0.05	0.0058	600.03	0.0251	0.004537
Zn	66	3	He	-0.21	0.0011	110.00	0.0027	0.001642
Zn	66	3	He	0.001	0.0016	170.01	0.0027	0.001642
Zn	66	3	He	-0.177	0.0012	120.00	0.0027	0.001642
As	75	3	He	0.053	0.0006	58.00	0.0019	0.000463
As	75	3	He	0.112	0.0007	70.00	0.0019	0.000463
As	75	3	He	0.03	0.0005	54.00	0.0019	0.000463
Sr	88	3	He	0.056	0.0016	150.01	0.009	0.001142
Sr	88	3	He	0.067	0.0017	160.01	0.009	0.001142
Sr	88	3	He	0.072	0.0018	160.01	0.009	0.001142
Mo	98	3	He	0.157	0.0054	490.02	0.0225	0.001842
Mo	98	3	He	0.126	0.0047	430.02	0.0225	0.001842
Mo	98	3	He	0.101	0.0041	370.02	0.0225	0.001842
Ag	107	3	He	-0.003	0.0003	30.00	0.048	0.0004774
Ag	107	3	He	0.022	0.0015	140.01	0.048	0.0004774
Ag	107	3	He	0.002	0.0006	50.00	0.048	0.0004774
Cd	111	3	He	0.007	0	4.00	0.0055	7.481E-06
Cd	111	3	He	0.019	0.0001	10.00	0.0055	7.481E-06
Cd	111	3	He	0.007	0	4.00	0.0055	7.481E-06
Sn	120	3	He	-0.016	0.0182	1660.16	0.0157	0.01844
Sn	120	3	He	0.131	0.0205	1880.20	0.0157	0.01844
Sn	120	3	He	0.033	0.019	1700.17	0.0157	0.01844
Sb	121	3	He	0.063	0.0011	100.00	0.0139	0.0002204
Sb	121	3	He	0.031	0.0007	60.00	0.0139	0.0002204
Sb	121	3	He	0.04	0.0008	70.00	0.0139	0.0002204
Ba	137	3	He	0.117	0.0025	230.01	0.0045	0.001994
Ba	137	3	He	0.258	0.0032	290.02	0.0045	0.001994
Ba	137	3	He	0.077	0.0023	210.01	0.0045	0.001994
Tl	205	3	He	0.097	0.0039	1130.09	0.03	0.0009888
Tl	205	3	He	0.081	0.0034	1000.08	0.03	0.0009888
Tl	205	3	He	0.086	0.0036	1040.08	0.03	0.0009888
Pb	208	3	He	0.018	0.0017	280.01	0.0392	0.001024
Pb	208	3	He	0.009	0.0014	250.01	0.0392	0.001024
Pb	208	3	He	0.008	0.0013	240.01	0.0392	0.001024
U	238	3	He	0.036	0.0017	500.03	0.0439	0.000128
U	238	3	He	0.033	0.0016	460.03	0.0439	0.000128
U	238	3	He	0.036	0.0017	500.03	0.0439	0.000128
Sc	45	1	No Gas			3822488.69		
Sc	45	1	No Gas			3842406.82		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3815798.38		
Ge	72	1	No Gas			1723096.85		
Ge	72	1	No Gas			1726354.35		
Ge	72	1	No Gas			1709699.82		
Sc	45	2	H2			267340.58		
Sc	45	2	H2			264801.93		
Sc	45	2	H2			269480.62		
Ge	72	2	H2			188775.29		
Ge	72	2	H2			188075.62		
Ge	72	2	H2			188489.43		
In	115	2	H2			482842.41		
In	115	2	H2			482909.02		
In	115	2	H2			483105.42		
Sc	45	3	He			61389.68		
Sc	45	3	He			60957.07		
Sc	45	3	He			61620.09		
Ge	72	3	He			102825.63		
Ge	72	3	He			103419.52		
Ge	72	3	He			103632.19		
In	115	3	He			91235.49		
In	115	3	He			91750.38		
In	115	3	He			89676.95		
Tb	159	3	He			378095.85		
Tb	159	3	He			375998.86		
Tb	159	3	He			378799.72		
Bi	209	3	He			289289.57		
Bi	209	3	He			291837.36		
Bi	209	3	He			290549.98		

Quantitation Report

Data File Name	220SMPL.d
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Sample Name	MB 410-432721/1-A
Sample Type	Sample
Comment	T9
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

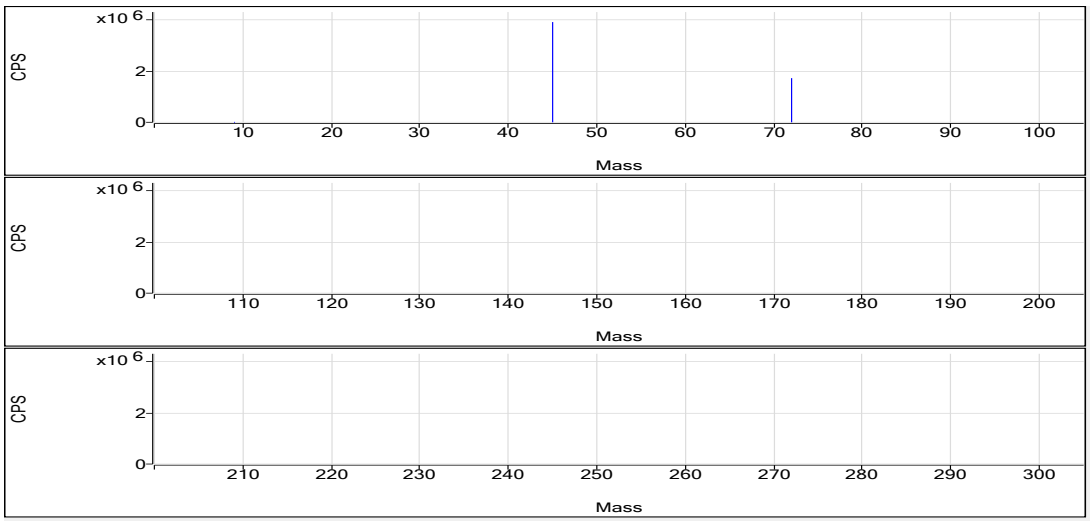
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.005	ppb	N/A	20.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.008	ppb	N/A	4.00	0.0000	Pulse	1.5000	3
Na	23	45	He	0.901	ppb	392.8	32118.67	0.5071	Pulse	0.1000	3
Mg	24	45	He	6.724	ppb	4.1	843.38	0.0133	Pulse	0.1000	3
Al	27	45	He	2.243	ppb	93.9	186.67	0.0029	Pulse	0.1000	3
K	39	45	He	14.148	ppb	133.1	17577.74	0.2775	Pulse	0.1000	3
Ca	44	45	He	2.335	ppb	725.5	230.01	0.0036	Pulse	0.1000	3
Ti	47	45	He	-0.367	ppb	N/A	13.33	0.0002	Pulse	0.1000	3
V	51	45	He	-0.037	ppb	N/A	410.68	0.0065	Pulse	0.5000	3
Cr	52	45	He	-0.070	ppb	N/A	2586.99	0.0409	Pulse	0.1000	3
Mn	55	45	He	0.248	ppb	22.1	496.69	0.0078	Pulse	0.1000	3
Fe	57	45	He	5.693	ppb	41.8	396.69	0.0063	Pulse	0.1000	3
Co	59	45	He	0.020	ppb	75.2	336.68	0.0053	Pulse	0.1000	3
Ni	60	72	He	-0.596	ppb	N/A	943.40	0.0089	Pulse	0.1000	3
Cu	63	72	He	0.017	ppb	171.0	530.03	0.0050	Pulse	0.1000	3
Zn	66	72	He	-0.085	ppb	N/A	150.01	0.0014	Pulse	0.1000	3
As	75	72	He	-0.023	ppb	N/A	44.67	0.0004	Pulse	0.5000	3
Sr	88	115	He	0.045	ppb	101.3	146.67	0.0015	Pulse	0.1000	3
Mo	98	115	He	0.032	ppb	115.5	243.34	0.0026	Pulse	0.1000	3
Ag	107	115	He	-0.003	ppb	N/A	33.33	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.009	ppb	48.5	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.370	ppb	N/A	1193.43	0.0126	Pulse	0.1000	3
Sb	121	115	He	0.025	ppb	97.3	53.33	0.0006	Pulse	0.1000	3
Ba	137	115	He	-0.354	ppb	N/A	36.67	0.0004	Pulse	0.1000	3
Tl	205	209	He	-0.007	ppb	N/A	226.68	0.0008	Pulse	0.1000	3
Pb	208	209	He	0.009	ppb	53.7	410.01	0.0014	Pulse	0.1000	3
U	238	209	He	0.008	ppb	35.4	136.67	0.0005	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3930902.02	0.4	110.0	Pulse	0.1000	3
No Gas	Ge	72	1731571.28	0.1	106.4	Pulse	0.1000	3
H2	Sc	45	273556.53	0.6	104.6	Pulse	0.1000	3
H2	Ge	72	195226.53	1.0	104.0	Pulse	0.1000	3
H2	In	115	497857.83	0.4	105.5	Pulse	0.1000	3
He	Sc	45	63357.80	1.9	104.9	Pulse	0.1000	3
He	Ge	72	106383.89	2.3	102.7	Pulse	0.1000	3
He	In	115	94596.11	1.4	104.7	Pulse	0.1000	3
He	Tb	159	386132.16	1.5	102.6	Pulse	0.1000	3
He	Bi	209	294762.73	2.0	102.9	Pulse	0.1000	3

No Gas



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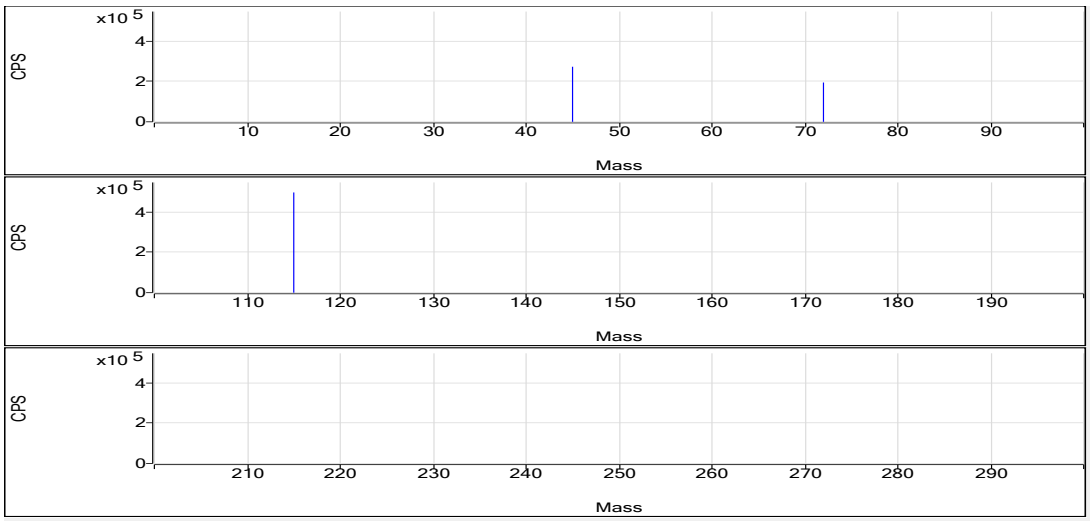
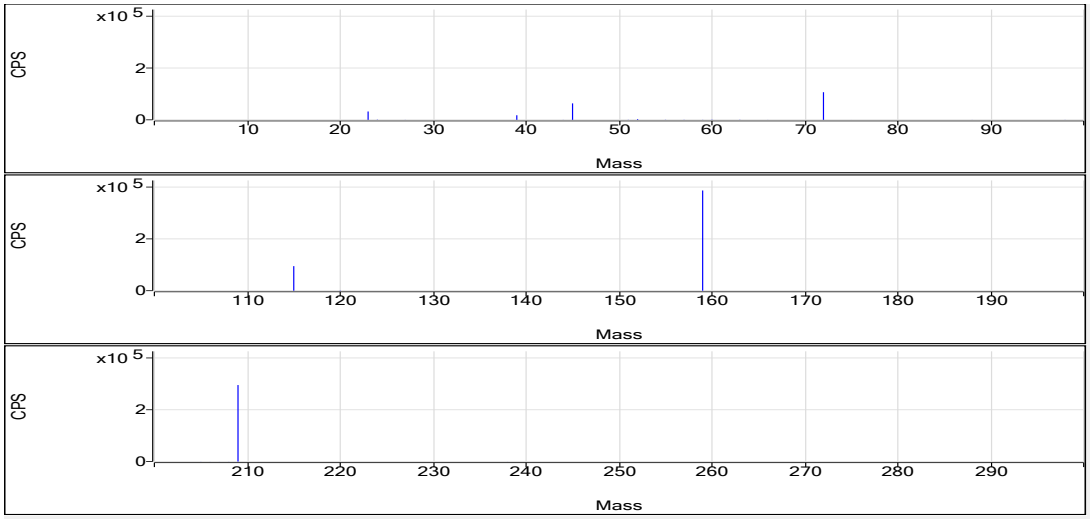


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.005	0	20.00	0.0004	7.085E-06
Be	9	1	No Gas	-0.009	0	14.00	0.0004	7.085E-06
Be	9	1	No Gas	0	0	28.00	0.0004	7.085E-06
Se	78	2	H2	0.016	0	6.00	0.0004	2.372E-05
Se	78	2	H2	-0.008	0	4.00	0.0004	2.372E-05
Se	78	2	H2	-0.031	0	2.00	0.0004	2.372E-05
Na	23	3	He	0.034	0.5043	31965.27	0.0032	0.5042
Na	23	3	He	4.794	0.5197	32285.75	0.0032	0.5042
Na	23	3	He	-2.125	0.4973	32104.98	0.0032	0.5042
Mg	24	3	He	6.489	0.0129	820.05	0.0016	0.002702
Mg	24	3	He	6.656	0.0132	820.05	0.0016	0.002702
Mg	24	3	He	7.027	0.0138	890.05	0.0016	0.002702
Al	27	3	He	0.973	0.0024	150.00	0.0004	0.00193
Al	27	3	He	1.081	0.0024	150.01	0.0004	0.00193
Al	27	3	He	4.676	0.004	260.01	0.0004	0.00193
K	39	3	He	35.777	0.3009	19073.00	0.0011	0.2621
K	39	3	He	5.288	0.2679	16639.97	0.0011	0.2621
K	39	3	He	1.378	0.2636	17020.24	0.0011	0.2621
Ca	44	3	He	-5.256	0.0032	200.01	0.0001	0.003476
Ca	44	3	He	-9.479	0.0029	180.01	0.0001	0.003476
Ca	44	3	He	21.739	0.0048	310.01	0.0001	0.003476
Ti	47	3	He	-0.819	0	0.00	0.0005	0.000385
Ti	47	3	He	0.208	0.0005	30.00	0.0005	0.000385
Ti	47	3	He	-0.489	0.0002	10.00	0.0005	0.000385
V	51	3	He	-0.033	0.0066	416.01	0.0212	0.007263
V	51	3	He	-0.037	0.0065	402.01	0.0212	0.007263
V	51	3	He	-0.04	0.0064	414.01	0.0212	0.007263
Cr	52	3	He	-0.218	0.0368	2330.27	0.0278	0.04283
Cr	52	3	He	0.115	0.046	2860.40	0.0278	0.04283
Cr	52	3	He	-0.109	0.0398	2570.30	0.0278	0.04283
Mn	55	3	He	0.28	0.0082	520.03	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.28	0.0082	510.03	0.0114	0.005023
Mn	55	3	He	0.185	0.0071	460.02	0.0114	0.005023
Fe	57	3	He	4.569	0.0057	360.02	0.0005	0.003255
Fe	57	3	He	8.427	0.0077	480.02	0.0005	0.003255
Fe	57	3	He	4.082	0.0054	350.02	0.0005	0.003255
Co	59	3	He	0.003	0.0044	280.01	0.0539	0.00425
Co	59	3	He	0.032	0.006	370.02	0.0539	0.00425
Co	59	3	He	0.025	0.0056	360.02	0.0539	0.00425
Ni	60	3	He	-0.591	0.0089	930.06	0.0088	0.01412
Ni	60	3	He	-0.657	0.0083	880.06	0.0088	0.01412
Ni	60	3	He	-0.541	0.0093	1020.07	0.0088	0.01412
Cu	63	3	He	-0.017	0.0041	430.02	0.0251	0.004537
Cu	63	3	He	0.03	0.0053	560.03	0.0251	0.004537
Cu	63	3	He	0.038	0.0055	600.03	0.0251	0.004537
Zn	66	3	He	-0.18	0.0011	120.00	0.0027	0.001642
Zn	66	3	He	0.023	0.0017	180.01	0.0027	0.001642
Zn	66	3	He	-0.098	0.0014	150.01	0.0027	0.001642
As	75	3	He	-0.042	0.0004	40.00	0.0019	0.000463
As	75	3	He	-0.044	0.0004	40.00	0.0019	0.000463
As	75	3	He	0.017	0.0005	54.00	0.0019	0.000463
Sr	88	3	He	-0.008	0.0011	100.00	0.009	0.001142
Sr	88	3	He	0.073	0.0018	170.01	0.009	0.001142
Sr	88	3	He	0.071	0.0018	170.01	0.009	0.001142
Mo	98	3	He	-0.01	0.0016	150.01	0.0225	0.001842
Mo	98	3	He	0.059	0.0032	300.01	0.0225	0.001842
Mo	98	3	He	0.048	0.0029	280.01	0.0225	0.001842
Ag	107	3	He	-0.001	0.0004	40.00	0.048	0.0004774
Ag	107	3	He	-0.008	0.0001	10.00	0.048	0.0004774
Ag	107	3	He	0.001	0.0005	50.00	0.048	0.0004774
Cd	111	3	He	0.006	0	4.00	0.0055	7.481E-06
Cd	111	3	He	0.006	0	4.00	0.0055	7.481E-06
Cd	111	3	He	0.014	0.0001	8.00	0.0055	7.481E-06
Sn	120	3	He	-0.299	0.0137	1280.11	0.0157	0.01844
Sn	120	3	He	-0.355	0.0129	1220.10	0.0157	0.01844
Sn	120	3	He	-0.456	0.0113	1080.08	0.0157	0.01844
Sb	121	3	He	0.007	0.0003	30.00	0.0139	0.0002204
Sb	121	3	He	0.014	0.0004	40.00	0.0139	0.0002204
Sb	121	3	He	0.052	0.0009	90.00	0.0139	0.0002204
Ba	137	3	He	-0.298	0.0006	60.00	0.0045	0.001994
Ba	137	3	He	-0.394	0.0002	20.00	0.0045	0.001994
Ba	137	3	He	-0.371	0.0003	30.00	0.0045	0.001994
Tl	205	3	He	-0.005	0.0008	240.01	0.03	0.0009888
Tl	205	3	He	-0.007	0.0008	230.01	0.03	0.0009888
Tl	205	3	He	-0.01	0.0007	210.01	0.03	0.0009888
Pb	208	3	He	0.005	0.0012	200.01	0.0392	0.001024
Pb	208	3	He	0.009	0.0014	230.01	0.0392	0.001024
Pb	208	3	He	0.015	0.0016	190.01	0.0392	0.001024
U	238	3	He	0.006	0.0004	110.00	0.0439	0.000128
U	238	3	He	0.006	0.0004	120.00	0.0439	0.000128
U	238	3	He	0.011	0.0006	180.01	0.0439	0.000128
Sc	45	1	No Gas			3945024.63		
Sc	45	1	No Gas			3932948.69		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3914732.75		
Ge	72	1	No Gas			1731917.32		
Ge	72	1	No Gas			1732410.60		
Ge	72	1	No Gas			1730385.91		
Sc	45	2	H2			274598.78		
Sc	45	2	H2			274467.52		
Sc	45	2	H2			271603.28		
Ge	72	2	H2			196746.54		
Ge	72	2	H2			195996.85		
Ge	72	2	H2			192936.21		
In	115	2	H2			496008.00		
In	115	2	H2			497218.23		
In	115	2	H2			500347.26		
Sc	45	3	He			63388.76		
Sc	45	3	He			62121.93		
Sc	45	3	He			64562.70		
Ge	72	3	He			104365.97		
Ge	72	3	He			105665.16		
Ge	72	3	He			109120.54		
In	115	3	He			93160.09		
In	115	3	He			94859.86		
In	115	3	He			95796.31		
Tb	159	3	He			380290.62		
Tb	159	3	He			386631.48		
Tb	159	3	He			391474.37		
Bi	209	3	He			291361.60		
Bi	209	3	He			291495.15		
Bi	209	3	He			301431.44		

Quantitation Report

Data File Name	221SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23J26A00.b
Acq Time	2023-10-26 16:25:44
Sample Name	LCS 410-432721/2-A
Sample Type	Sample
Comment	T9
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

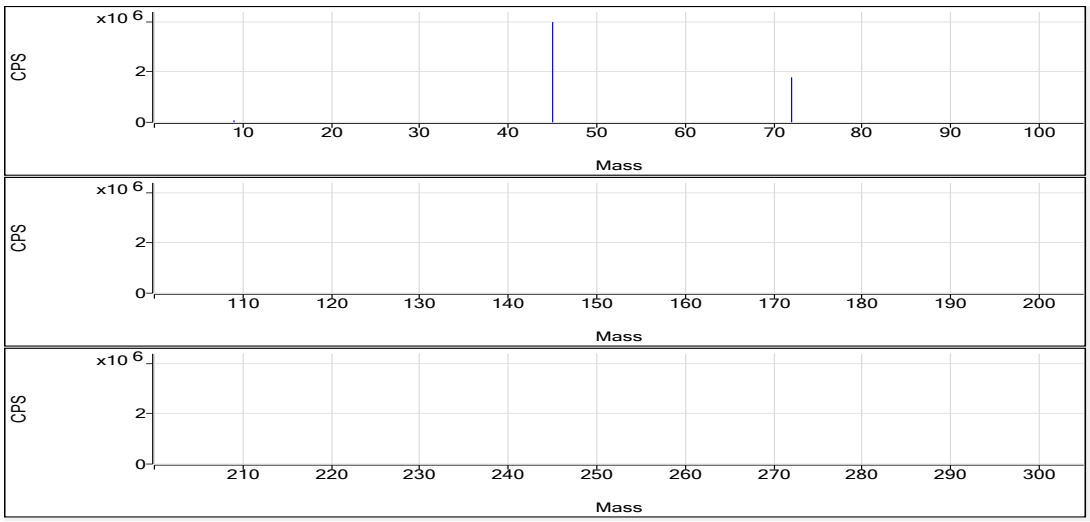
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.215	ppb	0.2	76880.75	0.0192	Pulse	0.5000	3
Se	78	72	H2	98.256	ppb	1.9	8524.75	0.0428	Pulse	1.5000	3
Na	23	45	He	4831.017	ppb	1.5	1049825.19	16.1775	Pulse	0.1000	3
Mg	24	45	He	4893.638	ppb	1.1	501061.28	7.7210	Pulse	0.1000	3
Al	27	45	He	4960.058	ppb	1.7	144499.26	2.2267	Pulse	0.1000	3
K	39	45	He	5001.608	ppb	1.8	368638.37	5.6806	Pulse	0.1000	3
Ca	44	45	He	4938.622	ppb	2.6	19770.54	0.3047	Pulse	0.1000	3
Ti	47	45	He	504.136	ppb	2.7	15411.84	0.2375	Pulse	0.1000	3
V	51	45	He	485.740	ppb	0.6	667976.31	10.2926	Pulse	0.5000	3
Cr	52	45	He	483.099	ppb	0.4	874864.70	13.4804	Pulse	0.1000	3
Mn	55	45	He	484.884	ppb	0.7	358424.21	5.5229	Pulse	0.1000	3
Fe	57	45	He	4797.449	ppb	1.3	165427.43	2.5491	Pulse	0.1000	3
Co	59	45	He	486.634	ppb	0.3	1701346.59	26.2149	Pulse	0.1000	3
Ni	60	72	He	509.021	ppb	0.7	484821.01	4.5039	Pulse	0.1000	3
Cu	63	72	He	510.061	ppb	0.9	1380203.26	12.8219	Pulse	0.1000	3
Zn	66	72	He	510.894	ppb	1.3	150203.58	1.3954	Pulse	0.1000	3
As	75	72	He	511.402	ppb	1.0	105098.50	0.9764	Pulse	0.5000	3
Sr	88	115	He	48.200	ppb	0.4	40819.40	0.4332	Pulse	0.1000	3
Mo	98	115	He	47.343	ppb	1.4	100592.29	1.0676	Pulse	0.1000	3
Ag	107	115	He	48.456	ppb	1.2	218996.21	2.3242	Pulse	0.1000	3
Cd	111	115	He	47.522	ppb	2.0	24511.33	0.2602	Pulse	0.5000	3
Sn	120	115	He	92.861	ppb	2.0	139243.20	1.4778	Pulse	0.1000	3
Sb	121	115	He	91.628	ppb	1.0	120070.77	1.2743	Pulse	0.1000	3
Ba	137	115	He	479.095	ppb	0.8	204547.04	2.1708	Pulse	0.1000	3
Tl	205	209	He	99.724	ppb	1.1	885658.32	2.9942	Pulse	0.1000	3
Pb	208	209	He	49.678	ppb	0.9	576601.40	1.9493	Pulse	0.1000	3
U	238	209	He	48.994	ppb	0.7	636418.59	2.1515	Pulse	0.1000	3

ISTD Table:

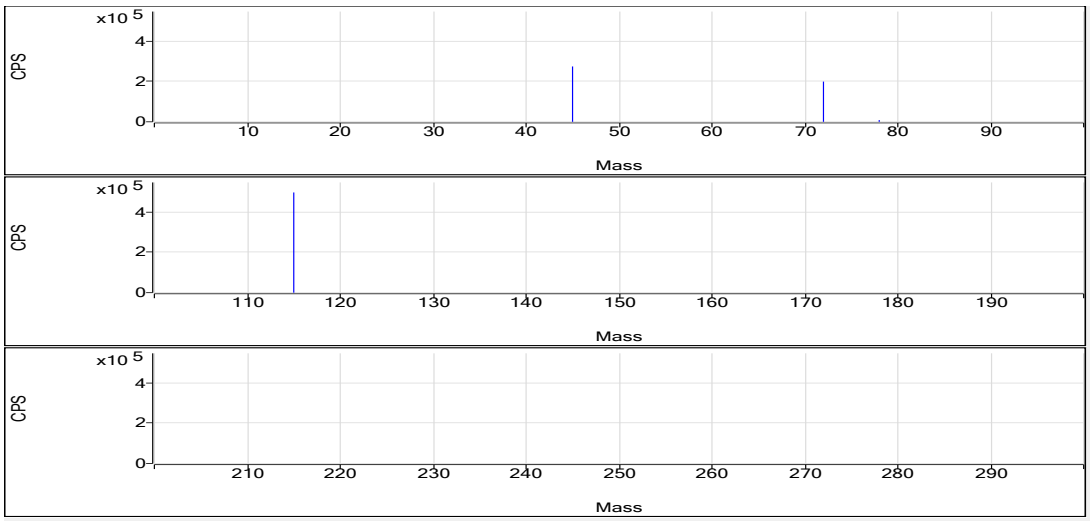
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3995435.36	0.4	111.8	Pulse	0.1000	3
No Gas	Ge	72	1794501.38	0.5	110.3	Pulse	0.1000	3
H2	Sc	45	274144.34	1.2	104.9	Pulse	0.1000	3
H2	Ge	72	199110.08	1.8	106.1	Pulse	0.1000	3
H2	In	115	496334.60	0.9	105.2	Pulse	0.1000	3
He	Sc	45	64901.21	1.1	107.4	Pulse	0.1000	3
He	Ge	72	107647.09	0.7	103.9	Pulse	0.1000	3
He	In	115	94227.66	0.8	104.3	Pulse	0.1000	3
He	Tb	159	388869.24	0.9	103.3	Pulse	0.1000	3
He	Bi	209	295814.00	1.2	103.2	Pulse	0.1000	3

No Gas

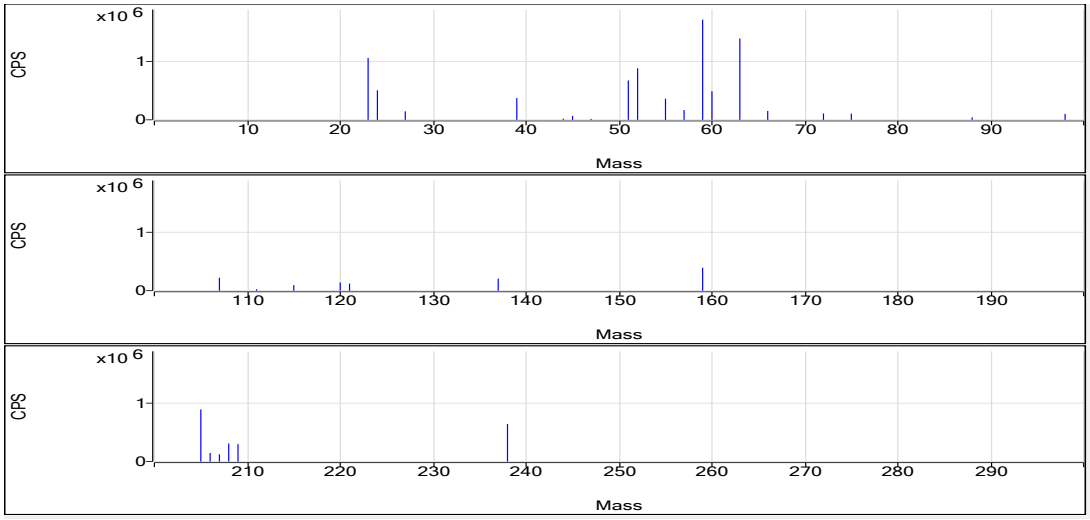


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.234	0.0192	77240.56	0.0004	7.085E-06
Be	9	1	No Gas	50.279	0.0193	76693.87	0.0004	7.085E-06
Be	9	1	No Gas	50.131	0.0192	76707.83	0.0004	7.085E-06
Se	78	2	H2	98.337	0.0429	8465.16	0.0004	2.372E-05
Se	78	2	H2	96.383	0.042	8536.53	0.0004	2.372E-05
Se	78	2	H2	100.05	0.0436	8572.55	0.0004	2.372E-05
Na	23	3	He	4874.056	16.3171	1051012.64	0.0032	0.5042
Na	23	3	He	4869.365	16.3019	1052178.27	0.0032	0.5042
Na	23	3	He	4749.629	15.9134	1046284.67	0.0032	0.5042
Mg	24	3	He	4929.482	7.7775	500963.94	0.0016	0.002702
Mg	24	3	He	4918.016	7.7594	500820.58	0.0016	0.002702
Mg	24	3	He	4833.415	7.626	501399.33	0.0016	0.002702
Al	27	3	He	5047.569	2.2659	145953.13	0.0004	0.00193
Al	27	3	He	4949.335	2.2219	143407.55	0.0004	0.00193
Al	27	3	He	4883.27	2.1922	144137.09	0.0004	0.00193
K	39	3	He	5092.495	5.7791	372240.89	0.0011	0.2621
K	39	3	He	4995.066	5.6735	366189.14	0.0011	0.2621
K	39	3	He	4917.262	5.5892	367485.07	0.0011	0.2621
Ca	44	3	He	4999.429	0.3084	19864.04	0.0001	0.003476
Ca	44	3	He	5024.68	0.3099	20004.04	0.0001	0.003476
Ca	44	3	He	4791.758	0.2957	19443.55	0.0001	0.003476
Ti	47	3	He	508.759	0.2397	15438.58	0.0005	0.000385
Ti	47	3	He	514.644	0.2425	15648.81	0.0005	0.000385
Ti	47	3	He	489.006	0.2304	15148.14	0.0005	0.000385
V	51	3	He	485.661	10.2909	662852.94	0.0212	0.007263
V	51	3	He	488.594	10.353	668217.06	0.0212	0.007263
V	51	3	He	482.966	10.2338	672858.94	0.0212	0.007263
Cr	52	3	He	484.764	13.5267	871278.03	0.0278	0.04283
Cr	52	3	He	483.756	13.4987	871249.13	0.0278	0.04283
Cr	52	3	He	480.776	13.4158	882066.94	0.0278	0.04283
Mn	55	3	He	487.548	5.5532	357691.56	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	485.943	5.5349	357243.82	0.0114	0.005023
Mn	55	3	He	481.162	5.4805	360337.26	0.0114	0.005023
Fe	57	3	He	4811.728	2.5567	164682.38	0.0005	0.003255
Fe	57	3	He	4850.351	2.5772	166341.83	0.0005	0.003255
Fe	57	3	He	4730.267	2.5135	165258.08	0.0005	0.003255
Co	59	3	He	486.209	26.192	1687069.19	0.0539	0.00425
Co	59	3	He	488.489	26.3147	1698441.69	0.0539	0.00425
Co	59	3	He	485.205	26.1379	1718528.88	0.0539	0.00425
Ni	60	3	He	512.818	4.5374	484804.60	0.0088	0.01412
Ni	60	3	He	506.174	4.4788	485488.00	0.0088	0.01412
Ni	60	3	He	508.071	4.4956	484170.42	0.0088	0.01412
Cu	63	3	He	511.517	12.8585	1373874.51	0.0251	0.004537
Cu	63	3	He	505.026	12.6954	1376133.89	0.0251	0.004537
Cu	63	3	He	513.64	12.9119	1390601.39	0.0251	0.004537
Zn	66	3	He	515.638	1.4084	150476.28	0.0027	0.001642
Zn	66	3	He	503.167	1.3743	148972.30	0.0027	0.001642
Zn	66	3	He	513.878	1.4036	151162.16	0.0027	0.001642
As	75	3	He	512.768	0.979	104597.63	0.0019	0.000463
As	75	3	He	505.574	0.9652	104627.75	0.0019	0.000463
As	75	3	He	515.864	0.9849	106070.12	0.0019	0.000463
Sr	88	3	He	47.983	0.4313	40779.63	0.009	0.001142
Sr	88	3	He	48.288	0.434	40498.17	0.009	0.001142
Sr	88	3	He	48.33	0.4344	41180.39	0.009	0.001142
Mo	98	3	He	47.402	1.0689	101079.10	0.0225	0.001842
Mo	98	3	He	47.962	1.0816	100927.10	0.0225	0.001842
Mo	98	3	He	46.666	1.0524	99770.67	0.0225	0.001842
Ag	107	3	He	47.785	2.292	216729.55	0.048	0.0004774
Ag	107	3	He	48.712	2.3364	218027.36	0.048	0.0004774
Ag	107	3	He	48.871	2.3441	222231.72	0.048	0.0004774
Cd	111	3	He	46.765	0.256	24208.76	0.0055	7.481E-06
Cd	111	3	He	48.596	0.266	24825.91	0.0055	7.481E-06
Cd	111	3	He	47.204	0.2584	24499.32	0.0055	7.481E-06
Sn	120	3	He	90.768	1.4449	136633.25	0.0157	0.01844
Sn	120	3	He	94.116	1.4975	139744.90	0.0157	0.01844
Sn	120	3	He	93.697	1.491	141351.46	0.0157	0.01844
Sb	121	3	He	90.538	1.2591	119065.27	0.0139	0.0002204
Sb	121	3	He	92.258	1.2831	119731.12	0.0139	0.0002204
Sb	121	3	He	92.087	1.2807	121415.92	0.0139	0.0002204
Ba	137	3	He	475.077	2.1527	203555.99	0.0045	0.001994
Ba	137	3	He	482.606	2.1867	204058.88	0.0045	0.001994
Ba	137	3	He	479.603	2.1731	206026.25	0.0045	0.001994
Tl	205	3	He	100.339	3.0126	879594.05	0.03	0.0009888
Tl	205	3	He	98.44	2.9556	883394.52	0.03	0.0009888
Tl	205	3	He	100.394	3.0143	893986.39	0.03	0.0009888
Pb	208	3	He	49.789	1.9536	303497.85	0.0392	0.001024
Pb	208	3	He	49.201	1.9306	308919.33	0.0392	0.001024
Pb	208	3	He	50.046	1.9637	310333.37	0.0392	0.001024
U	238	3	He	49.314	2.1656	632296.32	0.0439	0.000128
U	238	3	He	48.672	2.1374	638834.76	0.0439	0.000128
U	238	3	He	48.995	2.1516	638124.68	0.0439	0.000128
Sc	45	1	No Gas			4012600.57		
Sc	45	1	No Gas			3980622.13		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3993083.38		
Ge	72	1	No Gas			1787652.47		
Ge	72	1	No Gas			1791524.04		
Ge	72	1	No Gas			1804327.63		
Sc	45	2	H2			271022.42		
Sc	45	2	H2			277542.22		
Sc	45	2	H2			273868.37		
Ge	72	2	H2			197515.45		
Ge	72	2	H2			203216.48		
Ge	72	2	H2			196598.32		
In	115	2	H2			491718.04		
In	115	2	H2			496780.23		
In	115	2	H2			500505.54		
Sc	45	3	He			64411.71		
Sc	45	3	He			64543.35		
Sc	45	3	He			65748.56		
Ge	72	3	He			106845.53		
Ge	72	3	He			108396.21		
Ge	72	3	He			107699.54		
In	115	3	He			95626.26		
In	115	3	He			94406.69		
In	115	3	He			95908.31		
Tb	159	3	He			390782.88		
Tb	159	3	He			385014.92		
Tb	159	3	He			390809.92		
Bi	209	3	He			291971.50		
Bi	209	3	He			298885.99		
Bi	209	3	He			296584.51		

Quantitation Report

Data File Name	223_CCV.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23J26A00.b
Acq Time	2023-10-26 16:29:45
Sample Name	CCV 5001623
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

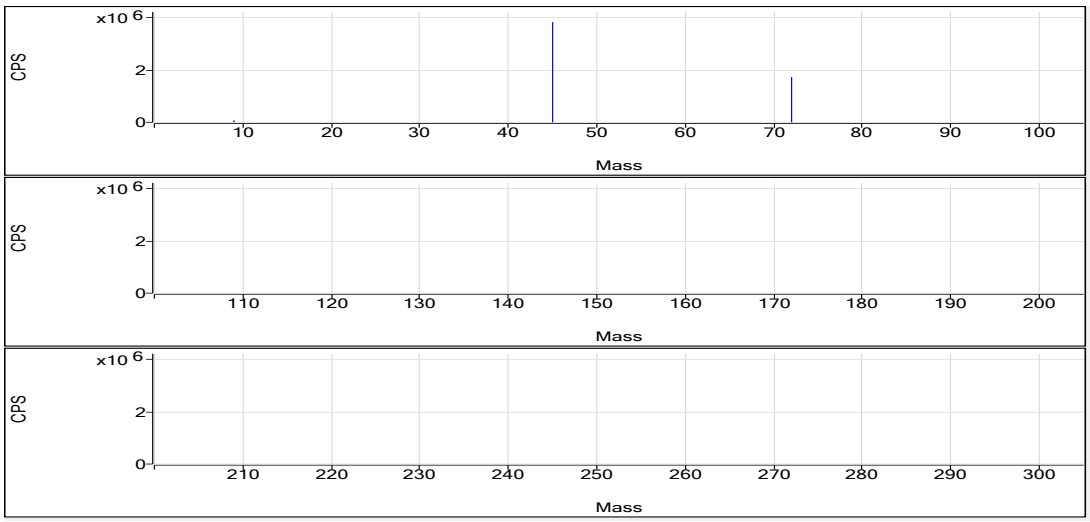
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.280	ppb	0.6	75559.42	0.0197	Pulse	0.5000	3
Se	78	72	H2	51.891	ppb	2.1	4304.43	0.0226	Pulse	1.5000	3
Na	23	45	He	5082.730	ppb	3.3	1067383.81	16.9941	Pulse	0.1000	3
Mg	24	45	He	5029.820	ppb	2.5	498498.95	7.9358	Pulse	0.1000	3
Al	27	45	He	5128.587	ppb	1.9	144647.29	2.3023	Pulse	0.1000	3
K	39	45	He	5134.258	ppb	2.3	365889.00	5.8243	Pulse	0.1000	3
Ca	44	45	He	5103.521	ppb	2.6	19773.91	0.3147	Pulse	0.1000	3
Ti	47	45	He	5173.040	ppb	3.1	152855.31	2.4336	Pulse	0.1000	3
V	51	45	He	507.739	ppb	2.6	675789.50	10.7584	Pulse	0.5000	3
Cr	52	45	He	508.706	ppb	2.3	891560.27	14.1926	Pulse	0.1000	3
Mn	55	45	He	502.433	ppb	1.7	359519.70	5.7226	Pulse	0.1000	3
Fe	57	45	He	4996.269	ppb	1.3	166787.99	2.6546	Pulse	0.1000	3
Co	59	45	He	505.983	ppb	1.9	1712352.89	27.2570	Pulse	0.1000	3
Ni	60	72	He	524.114	ppb	1.3	495122.96	4.6371	Pulse	0.1000	3
Cu	63	72	He	519.560	ppb	1.2	1394559.30	13.0606	Pulse	0.1000	3
Zn	66	72	He	515.782	ppb	2.5	150403.06	1.4087	Pulse	0.1000	3
As	75	72	He	513.952	ppb	2.0	104765.62	0.9812	Pulse	0.5000	3
Sr	88	115	He	50.181	ppb	2.1	41695.32	0.4510	Pulse	0.1000	3
Mo	98	115	He	48.707	ppb	0.6	101573.29	1.0983	Pulse	0.1000	3
Ag	107	115	He	49.085	ppb	1.7	217692.53	2.3543	Pulse	0.1000	3
Cd	111	115	He	48.595	ppb	1.3	24599.48	0.2660	Pulse	0.5000	3
Sn	120	115	He	48.233	ppb	1.5	71795.45	0.7765	Pulse	0.1000	3
Sb	121	115	He	49.101	ppb	1.6	63150.34	0.6830	Pulse	0.1000	3
Ba	137	115	He	493.690	ppb	1.9	206831.10	2.2369	Pulse	0.1000	3
Tl	205	209	He	50.633	ppb	0.6	445237.62	1.5207	Pulse	0.1000	3
Pb	208	209	He	50.958	ppb	1.3	585386.30	1.9995	Pulse	0.1000	3
U	238	209	He	50.656	ppb	0.8	651290.07	2.2245	Pulse	0.1000	3

ISTD Table:

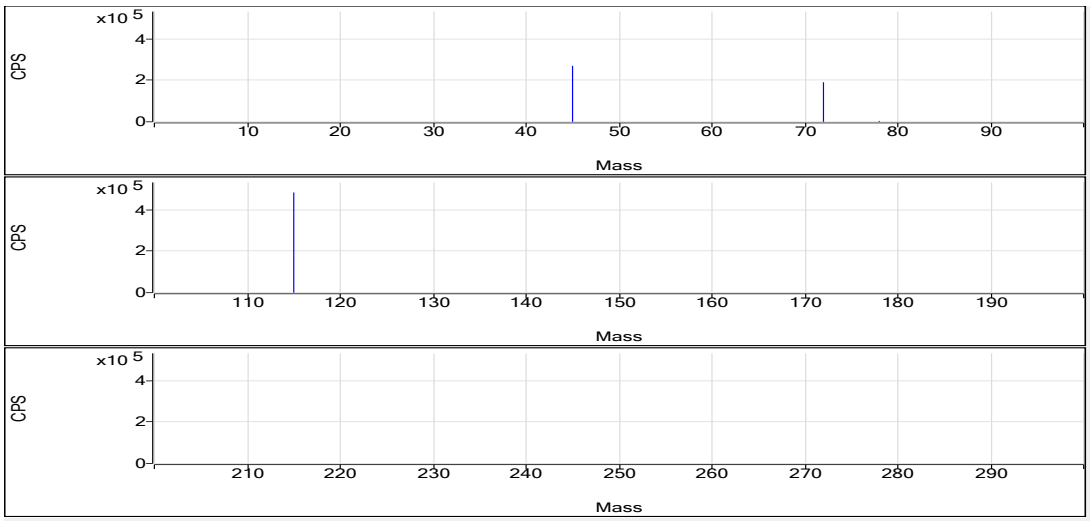
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3845298.80	0.3	107.6	Pulse	0.1000	3
No Gas	Ge	72	1731801.27	0.6	106.4	Pulse	0.1000	3
H2	Sc	45	269133.51	1.0	102.9	Pulse	0.1000	3
H2	Ge	72	190268.67	1.3	101.4	Pulse	0.1000	3
H2	In	115	481986.09	1.2	102.2	Pulse	0.1000	3
He	Sc	45	62842.20	2.5	104.0	Pulse	0.1000	3
He	Ge	72	106787.37	1.3	103.1	Pulse	0.1000	3
He	In	115	92485.43	2.1	102.3	Pulse	0.1000	3
He	Tb	159	381219.38	1.2	101.3	Pulse	0.1000	3
He	Bi	209	292792.40	0.9	102.2	Pulse	0.1000	3

No Gas

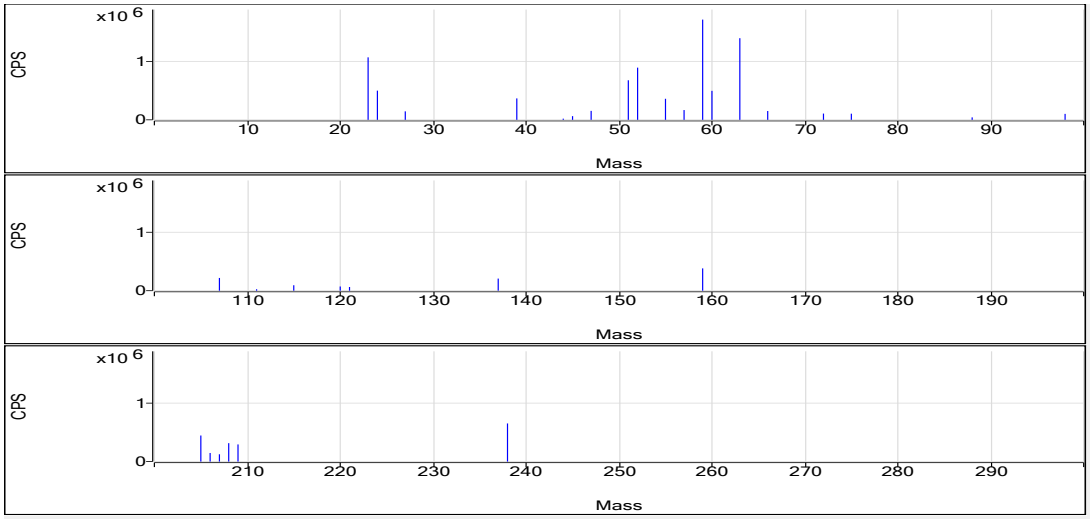


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.939	0.0195	75230.52	0.0004	7.085E-06
Be	9	1	No Gas	51.3	0.0197	75710.54	0.0004	7.085E-06
Be	9	1	No Gas	51.6	0.0198	75737.20	0.0004	7.085E-06
Se	78	2	H2	51.833	0.0226	4321.98	0.0004	2.372E-05
Se	78	2	H2	53.008	0.0231	4330.66	0.0004	2.372E-05
Se	78	2	H2	50.833	0.0222	4260.64	0.0004	2.372E-05
Na	23	3	He	5251.223	17.5407	1074519.83	0.0032	0.5042
Na	23	3	He	5076.878	16.9751	1067144.05	0.0032	0.5042
Na	23	3	He	4920.089	16.4664	1060487.56	0.0032	0.5042
Mg	24	3	He	5159.294	8.14	498643.63	0.0016	0.002702
Mg	24	3	He	5016.317	7.9145	497545.62	0.0016	0.002702
Mg	24	3	He	4913.848	7.7529	499307.61	0.0016	0.002702
Al	27	3	He	5239.27	2.3519	144075.40	0.0004	0.00193
Al	27	3	He	5046.146	2.2653	142408.65	0.0004	0.00193
Al	27	3	He	5100.346	2.2896	147457.81	0.0004	0.00193
K	39	3	He	5222.081	5.9195	362618.08	0.0011	0.2621
K	39	3	He	5179.34	5.8732	369217.96	0.0011	0.2621
K	39	3	He	5001.351	5.6803	365830.97	0.0011	0.2621
Ca	44	3	He	5123.033	0.3159	19353.42	0.0001	0.003476
Ca	44	3	He	5225.676	0.3222	20254.57	0.0001	0.003476
Ca	44	3	He	4961.854	0.3061	19713.74	0.0001	0.003476
Ti	47	3	He	5302.935	2.4947	152820.65	0.0005	0.000385
Ti	47	3	He	5225.558	2.4583	154540.86	0.0005	0.000385
Ti	47	3	He	4990.628	2.3478	151204.42	0.0005	0.000385
V	51	3	He	520.408	11.0266	675474.81	0.0212	0.007263
V	51	3	He	508.563	10.7758	677424.63	0.0212	0.007263
V	51	3	He	494.245	10.4726	674469.06	0.0212	0.007263
Cr	52	3	He	518.789	14.4731	886601.16	0.0278	0.04283
Cr	52	3	He	511.726	14.2767	897504.75	0.0278	0.04283
Cr	52	3	He	495.603	13.8282	890574.91	0.0278	0.04283
Mn	55	3	He	511.439	5.8251	356835.78	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	501.26	5.7092	358912.85	0.0114	0.005023
Mn	55	3	He	494.599	5.6334	362810.46	0.0114	0.005023
Fe	57	3	He	5057.599	2.6872	164613.34	0.0005	0.003255
Fe	57	3	He	5002.459	2.6579	167091.31	0.0005	0.003255
Fe	57	3	He	4928.748	2.6188	168659.33	0.0005	0.003255
Co	59	3	He	515.693	27.78	1701761.69	0.0539	0.00425
Co	59	3	He	505.614	27.2371	1712267.32	0.0539	0.00425
Co	59	3	He	496.642	26.7539	1723029.66	0.0539	0.00425
Ni	60	3	He	517.649	4.58	495538.12	0.0088	0.01412
Ni	60	3	He	531.485	4.7021	495430.42	0.0088	0.01412
Ni	60	3	He	523.209	4.6291	494400.34	0.0088	0.01412
Cu	63	3	He	512.701	12.8883	1394447.95	0.0251	0.004537
Cu	63	3	He	525.463	13.209	1391749.20	0.0251	0.004537
Cu	63	3	He	520.516	13.0847	1397480.76	0.0251	0.004537
Zn	66	3	He	502.837	1.3734	148598.76	0.0027	0.001642
Zn	66	3	He	528.664	1.4439	152134.05	0.0027	0.001642
Zn	66	3	He	515.844	1.4089	150476.37	0.0027	0.001642
As	75	3	He	502.057	0.9585	103707.45	0.0019	0.000463
As	75	3	He	520.332	0.9934	104668.24	0.0019	0.000463
As	75	3	He	519.466	0.9917	105921.16	0.0019	0.000463
Sr	88	3	He	51.29	0.4609	41581.39	0.009	0.001142
Sr	88	3	He	49.187	0.442	41431.31	0.009	0.001142
Sr	88	3	He	50.065	0.4499	42073.27	0.009	0.001142
Mo	98	3	He	48.919	1.1031	99519.45	0.0225	0.001842
Mo	98	3	He	48.354	1.0904	102196.81	0.0225	0.001842
Mo	98	3	He	48.848	1.1015	103003.60	0.0225	0.001842
Ag	107	3	He	49.98	2.3972	216271.58	0.048	0.0004774
Ag	107	3	He	48.899	2.3454	219824.82	0.048	0.0004774
Ag	107	3	He	48.377	2.3203	216981.19	0.048	0.0004774
Cd	111	3	He	49.32	0.27	24359.03	0.0055	7.481E-06
Cd	111	3	He	48.158	0.2636	24709.65	0.0055	7.481E-06
Cd	111	3	He	48.307	0.2645	24729.77	0.0055	7.481E-06
Sn	120	3	He	49.067	0.7896	71232.85	0.0157	0.01844
Sn	120	3	He	47.732	0.7686	72036.61	0.0157	0.01844
Sn	120	3	He	47.899	0.7712	72116.89	0.0157	0.01844
Sb	121	3	He	50.023	0.6958	62771.88	0.0139	0.0002204
Sb	121	3	He	48.558	0.6754	63304.38	0.0139	0.0002204
Sb	121	3	He	48.723	0.6777	63374.76	0.0139	0.0002204
Ba	137	3	He	503.228	2.2801	205705.13	0.0045	0.001994
Ba	137	3	He	484.011	2.1931	205549.82	0.0045	0.001994
Ba	137	3	He	493.83	2.2375	209238.34	0.0045	0.001994
Tl	205	3	He	50.84	1.5269	444387.30	0.03	0.0009888
Tl	205	3	He	50.31	1.511	446820.03	0.03	0.0009888
Tl	205	3	He	50.748	1.5242	444505.54	0.03	0.0009888
Pb	208	3	He	51.457	2.019	315141.34	0.0392	0.001024
Pb	208	3	He	50.205	1.9699	312817.65	0.0392	0.001024
Pb	208	3	He	51.214	2.0095	315225.01	0.0392	0.001024
U	238	3	He	51.013	2.2402	651975.85	0.0439	0.000128
U	238	3	He	50.207	2.2048	651972.10	0.0439	0.000128
U	238	3	He	50.747	2.2285	649922.26	0.0439	0.000128
Sc	45	1	No Gas			3854090.26		
Sc	45	1	No Gas			3851443.69		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3830362.44		
Ge	72	1	No Gas			1734275.13		
Ge	72	1	No Gas			1739859.97		
Ge	72	1	No Gas			1721268.72		
Sc	45	2	H2			271555.21		
Sc	45	2	H2			266187.48		
Sc	45	2	H2			269657.85		
Ge	72	2	H2			191225.58		
Ge	72	2	H2			187364.43		
Ge	72	2	H2			192216.01		
In	115	2	H2			486662.34		
In	115	2	H2			475844.52		
In	115	2	H2			483451.40		
Sc	45	3	He			61258.49		
Sc	45	3	He			62865.18		
Sc	45	3	He			64402.93		
Ge	72	3	He			108195.10		
Ge	72	3	He			105364.01		
Ge	72	3	He			106802.99		
In	115	3	He			90773.63		
In	115	3	He			94287.73		
In	115	3	He			94074.96		
Tb	159	3	He			379799.02		
Tb	159	3	He			377604.84		
Tb	159	3	He			386254.29		
Bi	209	3	He			291032.79		
Bi	209	3	He			295706.09		
Bi	209	3	He			291638.32		

Quantitation Report

Data File Name	224_CCB.d
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Sample Name	CCB 4993845
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

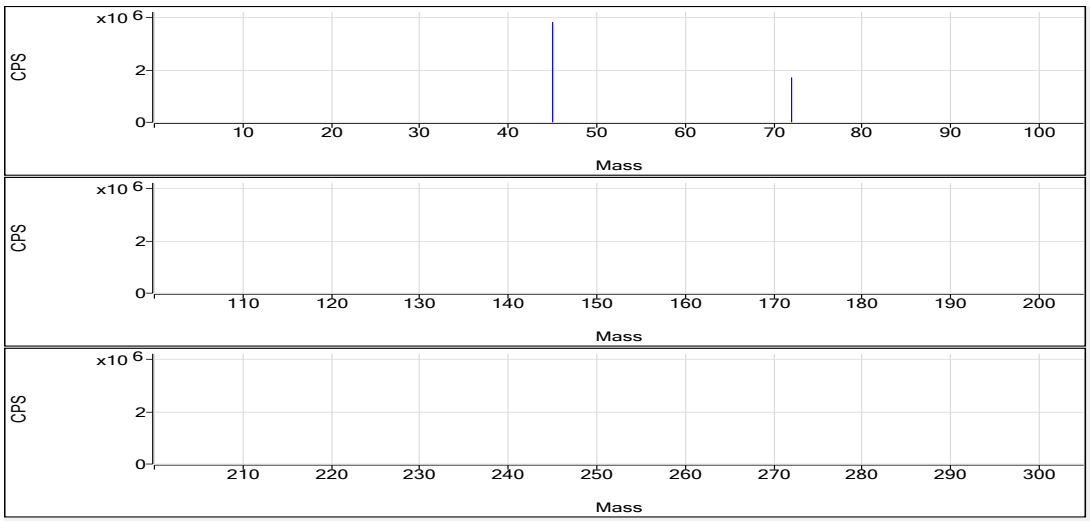
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.012	ppb	40.4	45.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.016	ppb	256.2	5.78	0.0000	Pulse	1.5000	3
Na	23	45	He	5.671	ppb	28.5	31971.63	0.5226	Pulse	0.1000	3
Mg	24	45	He	6.058	ppb	19.3	750.04	0.0123	Pulse	0.1000	3
Al	27	45	He	0.687	ppb	123.2	136.67	0.0022	Pulse	0.1000	3
K	39	45	He	13.709	ppb	191.8	16930.33	0.2770	Pulse	0.1000	3
Ca	44	45	He	1.148	ppb	931.4	216.68	0.0035	Pulse	0.1000	3
Ti	47	45	He	1.500	ppb	27.9	66.67	0.0011	Pulse	0.1000	3
V	51	45	He	0.137	ppb	9.6	622.69	0.0102	Pulse	0.5000	3
Cr	52	45	He	0.203	ppb	52.4	2967.07	0.0485	Pulse	0.1000	3
Mn	55	45	He	0.139	ppb	66.3	403.35	0.0066	Pulse	0.1000	3
Fe	57	45	He	2.594	ppb	30.2	283.35	0.0046	Pulse	0.1000	3
Co	59	45	He	0.095	ppb	8.5	573.36	0.0094	Pulse	0.1000	3
Ni	60	72	He	-0.023	ppb	N/A	1453.46	0.0139	Pulse	0.1000	3
Cu	63	72	He	0.096	ppb	54.1	726.71	0.0070	Pulse	0.1000	3
Zn	66	72	He	0.193	ppb	134.8	226.67	0.0022	Pulse	0.1000	3
As	75	72	He	0.092	ppb	28.3	66.67	0.0006	Pulse	0.5000	3
Sr	88	115	He	0.011	ppb	547.7	113.34	0.0012	Pulse	0.1000	3
Mo	98	115	He	0.088	ppb	11.5	350.02	0.0038	Pulse	0.1000	3
Ag	107	115	He	0.004	ppb	77.3	63.33	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.021	ppb	10.7	11.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.091	ppb	145.2	1823.52	0.0199	Pulse	0.1000	3
Sb	121	115	He	0.070	ppb	29.6	110.00	0.0012	Pulse	0.1000	3
Ba	137	115	He	0.041	ppb	255.4	200.01	0.0022	Pulse	0.1000	3
Tl	205	209	He	0.110	ppb	11.5	1233.45	0.0043	Pulse	0.1000	3
Pb	208	209	He	0.012	ppb	26.4	433.35	0.0015	Pulse	0.1000	3
U	238	209	He	0.043	ppb	3.7	586.70	0.0020	Pulse	0.1000	3

ISTD Table:

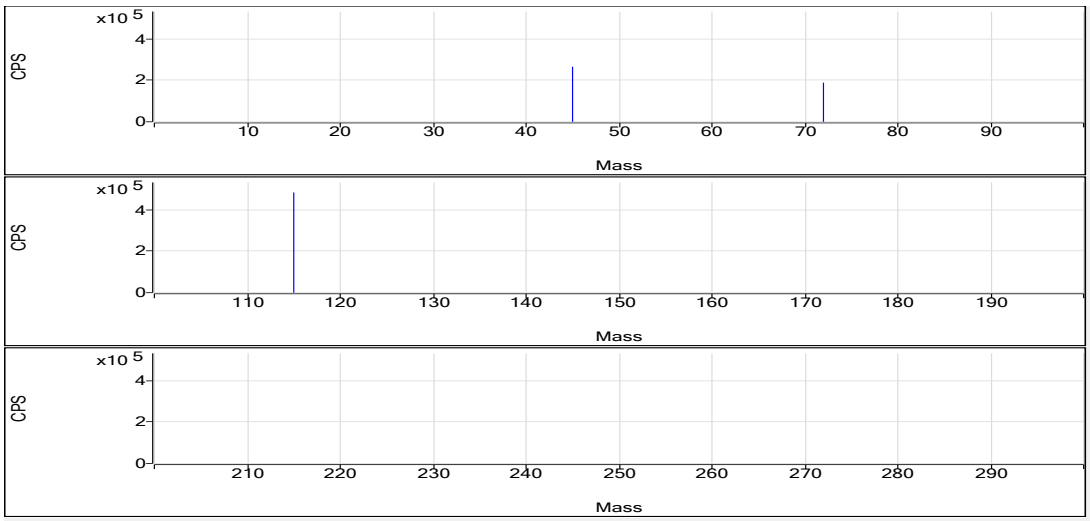
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3837628.79	1.2	107.4	Pulse	0.1000	3
No Gas	Ge	72	1718572.89	1.3	105.6	Pulse	0.1000	3
H2	Sc	45	265147.92	1.8	101.4	Pulse	0.1000	3
H2	Ge	72	188615.35	1.7	100.5	Pulse	0.1000	3
H2	In	115	482803.59	1.4	102.4	Pulse	0.1000	3
He	Sc	45	61185.00	2.1	101.3	Pulse	0.1000	3
He	Ge	72	104390.23	0.9	100.8	Pulse	0.1000	3
He	In	115	91719.38	0.3	101.5	Pulse	0.1000	3
He	Tb	159	381747.33	0.1	101.4	Pulse	0.1000	3
He	Bi	209	288354.64	1.0	100.6	Pulse	0.1000	3

No Gas

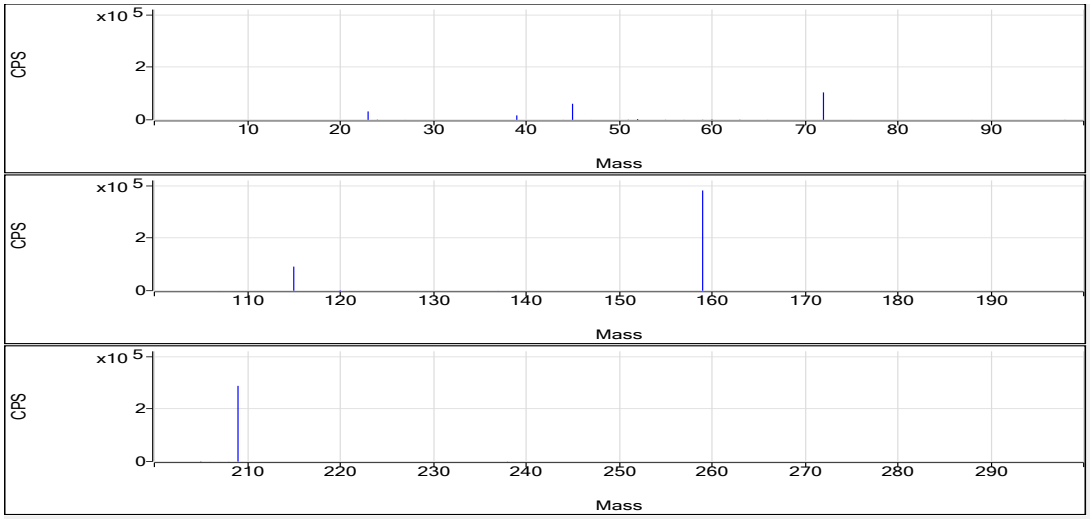


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.01	0	42.00	0.0004	7.085E-06
Be	9	1	No Gas	0.009	0	40.00	0.0004	7.085E-06
Be	9	1	No Gas	0.018	0	54.00	0.0004	7.085E-06
Se	78	2	H2	-0.023	0	2.67	0.0004	2.372E-05
Se	78	2	H2	0.06	0	9.33	0.0004	2.372E-05
Se	78	2	H2	0.011	0	5.33	0.0004	2.372E-05
Na	23	3	He	4.098	0.5175	31433.88	0.0032	0.5042
Na	23	3	He	7.331	0.5279	31784.51	0.0032	0.5042
Na	23	3	He	5.582	0.5223	32696.50	0.0032	0.5042
Mg	24	3	He	4.758	0.0102	620.03	0.0016	0.002702
Mg	24	3	He	7.028	0.0138	830.05	0.0016	0.002702
Mg	24	3	He	6.389	0.0128	800.05	0.0016	0.002702
Al	27	3	He	0.468	0.0021	130.00	0.0004	0.00193
Al	27	3	He	1.623	0.0027	160.01	0.0004	0.00193
Al	27	3	He	-0.029	0.0019	120.01	0.0004	0.00193
K	39	3	He	40.705	0.3062	18602.38	0.0011	0.2621
K	39	3	He	12.242	0.2754	16579.78	0.0011	0.2621
K	39	3	He	-11.82	0.2493	15608.83	0.0011	0.2621
Ca	44	3	He	13.189	0.0043	260.01	0.0001	0.003476
Ca	44	3	He	-2.519	0.0033	200.01	0.0001	0.003476
Ca	44	3	He	-7.226	0.003	190.01	0.0001	0.003476
Ti	47	3	He	1.981	0.0013	80.00	0.0005	0.000385
Ti	47	3	He	1.3	0.001	60.00	0.0005	0.000385
Ti	47	3	He	1.219	0.001	60.00	0.0005	0.000385
V	51	3	He	0.141	0.0102	622.02	0.0212	0.007263
V	51	3	He	0.123	0.0099	594.02	0.0212	0.007263
V	51	3	He	0.149	0.0104	652.02	0.0212	0.007263
Cr	52	3	He	0.319	0.0517	3140.44	0.0278	0.04283
Cr	52	3	He	0.108	0.0459	2760.37	0.0278	0.04283
Cr	52	3	He	0.183	0.0479	3000.41	0.0278	0.04283
Mn	55	3	He	0.094	0.0061	370.02	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.245	0.0078	470.02	0.0114	0.005023
Mn	55	3	He	0.078	0.0059	370.02	0.0114	0.005023
Fe	57	3	He	3.483	0.0051	310.02	0.0005	0.003255
Fe	57	3	He	2.005	0.0043	260.01	0.0005	0.003255
Fe	57	3	He	2.295	0.0045	280.02	0.0005	0.003255
Co	59	3	He	0.104	0.0099	600.03	0.0539	0.00425
Co	59	3	He	0.091	0.0091	550.03	0.0539	0.00425
Co	59	3	He	0.09	0.0091	570.03	0.0539	0.00425
Ni	60	3	He	0	0.0141	1490.12	0.0088	0.01412
Ni	60	3	He	0.081	0.0148	1540.15	0.0088	0.01412
Ni	60	3	He	-0.149	0.0128	1330.12	0.0088	0.01412
Cu	63	3	He	0.155	0.0084	890.06	0.0251	0.004537
Cu	63	3	He	0.076	0.0065	670.04	0.0251	0.004537
Cu	63	3	He	0.057	0.006	620.04	0.0251	0.004537
Zn	66	3	He	0.336	0.0026	270.01	0.0027	0.001642
Zn	66	3	He	-0.107	0.0013	140.00	0.0027	0.001642
Zn	66	3	He	0.351	0.0026	270.01	0.0027	0.001642
As	75	3	He	0.085	0.0006	66.00	0.0019	0.000463
As	75	3	He	0.121	0.0007	72.00	0.0019	0.000463
As	75	3	He	0.07	0.0006	62.00	0.0019	0.000463
Sr	88	3	He	0.031	0.0014	130.01	0.009	0.001142
Sr	88	3	He	-0.055	0.0007	60.00	0.009	0.001142
Sr	88	3	He	0.055	0.0016	150.01	0.009	0.001142
Mo	98	3	He	0.088	0.0038	350.02	0.0225	0.001842
Mo	98	3	He	0.077	0.0036	330.01	0.0225	0.001842
Mo	98	3	He	0.098	0.004	370.02	0.0225	0.001842
Ag	107	3	He	0.004	0.0007	60.00	0.048	0.0004774
Ag	107	3	He	0.008	0.0009	80.00	0.048	0.0004774
Ag	107	3	He	0.001	0.0005	50.00	0.048	0.0004774
Cd	111	3	He	0.023	0.0001	12.00	0.0055	7.481E-06
Cd	111	3	He	0.022	0.0001	12.00	0.0055	7.481E-06
Cd	111	3	He	0.019	0.0001	10.00	0.0055	7.481E-06
Sn	120	3	He	-0.062	0.0175	1600.14	0.0157	0.01844
Sn	120	3	He	0.175	0.0212	1950.22	0.0157	0.01844
Sn	120	3	He	0.161	0.021	1920.21	0.0157	0.01844
Sb	121	3	He	0.094	0.0015	140.01	0.0139	0.0002204
Sb	121	3	He	0.062	0.0011	100.00	0.0139	0.0002204
Sb	121	3	He	0.055	0.001	90.00	0.0139	0.0002204
Ba	137	3	He	0.163	0.0027	250.01	0.0045	0.001994
Ba	137	3	He	-0.032	0.0018	170.01	0.0045	0.001994
Ba	137	3	He	-0.006	0.002	180.01	0.0045	0.001994
Tl	205	3	He	0.122	0.0047	1330.12	0.03	0.0009888
Tl	205	3	He	0.109	0.0043	1240.12	0.03	0.0009888
Tl	205	3	He	0.097	0.0039	1130.10	0.03	0.0009888
Pb	208	3	He	0.009	0.0014	210.01	0.0392	0.001024
Pb	208	3	He	0.015	0.0016	300.02	0.0392	0.001024
Pb	208	3	He	0.013	0.0015	230.01	0.0392	0.001024
U	238	3	He	0.045	0.0021	600.04	0.0439	0.000128
U	238	3	He	0.042	0.002	570.03	0.0439	0.000128
U	238	3	He	0.044	0.002	590.04	0.0439	0.000128
Sc	45	1	No Gas			3784238.38		
Sc	45	1	No Gas			3862864.00		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3865784.00		
Ge	72	1	No Gas			1693404.35		
Ge	72	1	No Gas			1725295.44		
Ge	72	1	No Gas			1737018.88		
Sc	45	2	H2			270045.93		
Sc	45	2	H2			264619.39		
Sc	45	2	H2			260778.45		
Ge	72	2	H2			192209.51		
Ge	72	2	H2			187354.49		
Ge	72	2	H2			186282.05		
In	115	2	H2			489971.36		
In	115	2	H2			481979.33		
In	115	2	H2			476460.07		
Sc	45	3	He			60746.69		
Sc	45	3	He			60204.05		
Sc	45	3	He			62604.25		
Ge	72	3	He			105504.76		
Ge	72	3	He			103802.76		
Ge	72	3	He			103863.16		
In	115	3	He			91579.35		
In	115	3	He			92042.43		
In	115	3	He			91579.03		
Tb	159	3	He			381941.09		
Tb	159	3	He			381867.22		
Tb	159	3	He			381433.67		
Bi	209	3	He			285249.53		
Bi	209	3	He			290455.46		
Bi	209	3	He			289358.92		

Quantitation Report

Data File Name	225SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23J26A00.b
Acq Time	2023-10-26 16:33:45
Sample Name	410-146886-B-5-A
Sample Type	Sample
Comment	T9
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

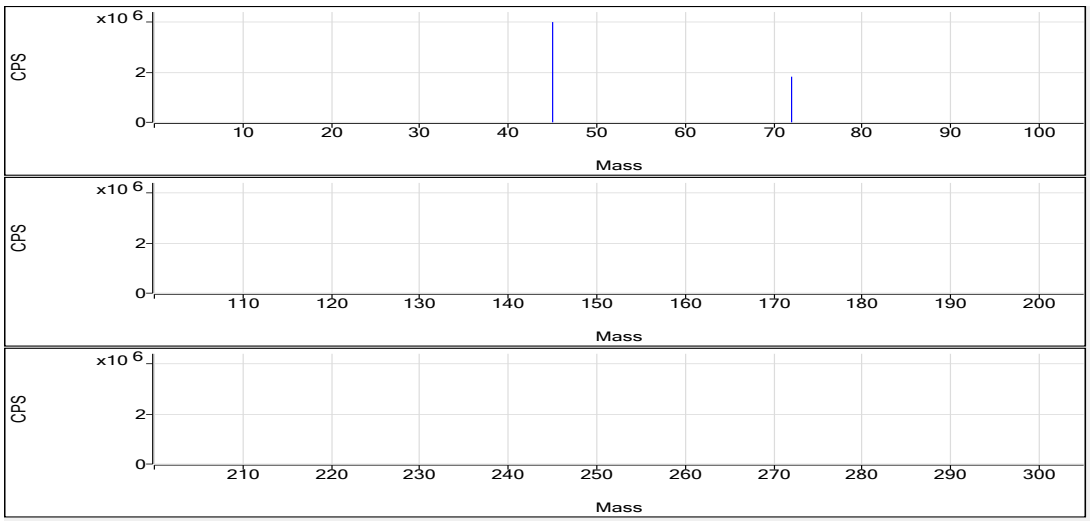
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.004	ppb	81.2	34.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.015	ppb	101.0	6.00	0.0000	Pulse	1.5000	3
Na	23	45	He	1838.831	ppb	0.6	410820.61	6.4699	Pulse	0.1000	3
Mg	24	45	He	19406.821	ppb	1.1	1943686.95	30.6113	Pulse	0.1000	3
Al	27	45	He	1.901	ppb	111.8	176.67	0.0028	Pulse	0.1000	3
K	39	45	He	1821.411	ppb	0.5	141938.47	2.2354	Pulse	0.1000	3
Ca	44	45	He	33154.855	ppb	1.6	128613.95	2.0256	Pulse	0.1000	3
Ti	47	45	He	0.298	ppb	172.7	33.33	0.0005	Pulse	0.1000	3
V	51	45	He	0.571	ppb	8.6	1228.06	0.0193	Pulse	0.5000	3
Cr	52	45	He	0.179	ppb	58.6	3037.10	0.0478	Pulse	0.1000	3
Mn	55	45	He	8.700	ppb	3.0	6605.03	0.1040	Pulse	0.1000	3
Fe	57	45	He	7.327	ppb	42.0	453.36	0.0071	Pulse	0.1000	3
Co	59	45	He	0.106	ppb	7.6	633.37	0.0100	Pulse	0.1000	3
Ni	60	72	He	0.244	ppb	53.6	1803.51	0.0163	Pulse	0.1000	3
Cu	63	72	He	3.392	ppb	2.7	9950.42	0.0898	Pulse	0.1000	3
Zn	66	72	He	6.422	ppb	5.9	2123.56	0.0192	Pulse	0.1000	3
As	75	72	He	0.192	ppb	12.5	92.00	0.0008	Pulse	0.5000	3
Sr	88	115	He	19.592	ppb	1.5	16443.38	0.1768	Pulse	0.1000	3
Mo	98	115	He	1.164	ppb	21.0	2617.01	0.0280	Pulse	0.1000	3
Ag	107	115	He	0.007	ppb	56.6	73.33	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.047	ppb	35.9	24.67	0.0003	Pulse	0.5000	3
Sn	120	115	He	-0.265	ppb	N/A	1330.22	0.0143	Pulse	0.1000	3
Sb	121	115	He	0.031	ppb	27.0	60.00	0.0006	Pulse	0.1000	3
Ba	137	115	He	22.378	ppb	3.5	9610.37	0.1033	Pulse	0.1000	3
Tl	205	209	He	0.019	ppb	59.1	463.36	0.0016	Pulse	0.1000	3
Pb	208	209	He	0.133	ppb	11.8	1836.79	0.0062	Pulse	0.1000	3
U	238	209	He	0.170	ppb	9.4	2240.28	0.0076	Pulse	0.1000	3

ISTD Table:

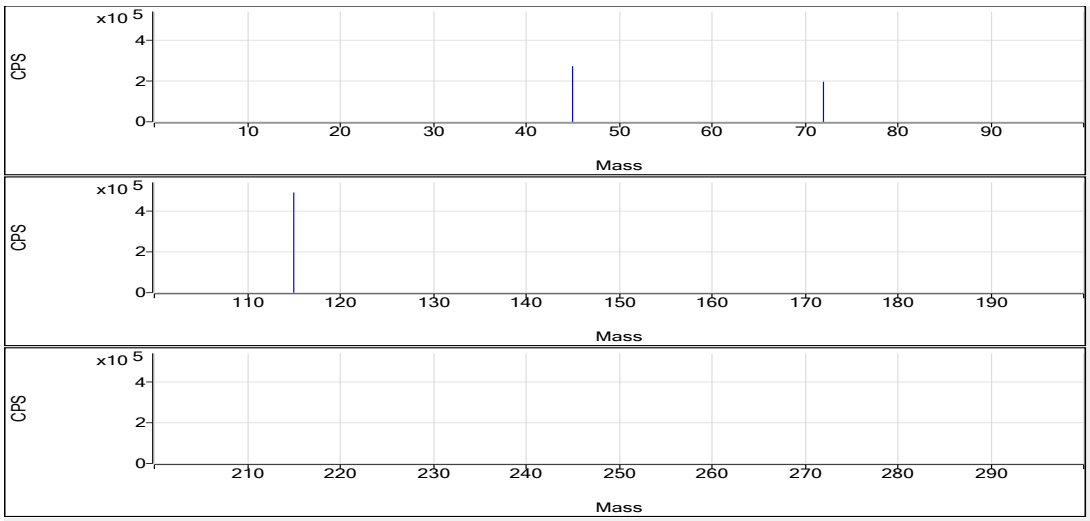
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	4010211.71	0.3	112.2	Pulse	0.1000	3
No Gas	Ge	72	1824729.45	0.3	112.1	Pulse	0.1000	3
H2	Sc	45	274286.61	0.9	104.9	Pulse	0.1000	3
H2	Ge	72	197738.20	0.6	105.4	Pulse	0.1000	3
H2	In	115	494294.70	1.4	104.8	Pulse	0.1000	3
He	Sc	45	63497.80	0.6	105.1	Pulse	0.1000	3
He	Ge	72	110837.47	0.3	107.0	Pulse	0.1000	3
He	In	115	93048.71	2.7	103.0	Pulse	0.1000	3
He	Tb	159	387514.11	0.4	103.0	Pulse	0.1000	3
He	Bi	209	294851.45	1.4	102.9	Pulse	0.1000	3

No Gas

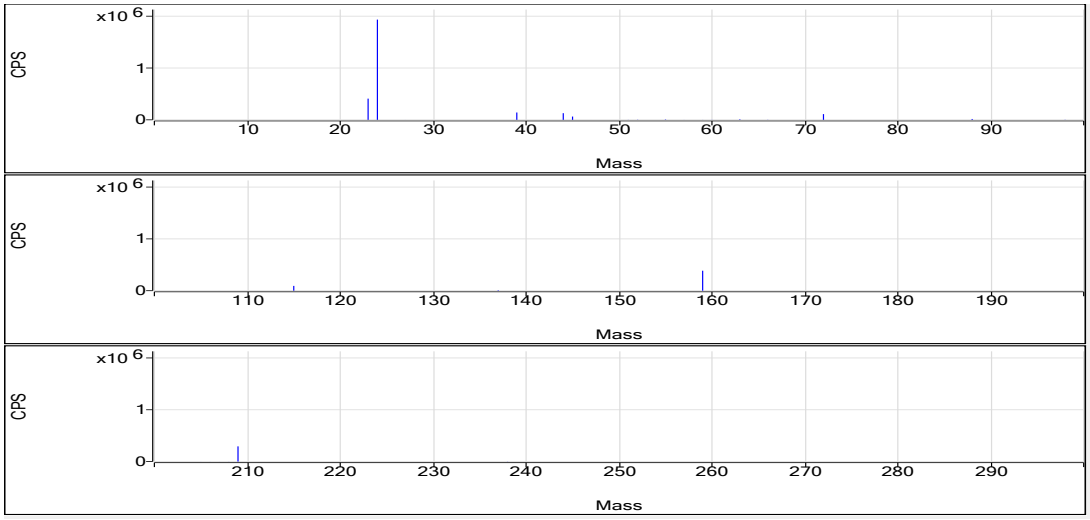


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.008	0	40.00	0.0004	7.085E-06
Be	9	1	No Gas	0.004	0	34.00	0.0004	7.085E-06
Be	9	1	No Gas	0.001	0	30.00	0.0004	7.085E-06
Se	78	2	H2	0.03	0	7.33	0.0004	2.372E-05
Se	78	2	H2	0.016	0	6.00	0.0004	2.372E-05
Se	78	2	H2	0	0	4.67	0.0004	2.372E-05
Na	23	3	He	1852.053	6.5128	412047.34	0.0032	0.5042
Na	23	3	He	1834.18	6.4548	412519.84	0.0032	0.5042
Na	23	3	He	1830.262	6.4421	407894.64	0.0032	0.5042
Mg	24	3	He	19625.667	30.9565	1958536.69	0.0016	0.002702
Mg	24	3	He	19216.151	30.3106	1937118.56	0.0016	0.002702
Mg	24	3	He	19378.644	30.5669	1935405.60	0.0016	0.002702
Al	27	3	He	-0.074	0.0019	120.00	0.0004	0.00193
Al	27	3	He	1.628	0.0027	170.01	0.0004	0.00193
Al	27	3	He	4.148	0.0038	240.01	0.0004	0.00193
K	39	3	He	1830.975	2.2457	142080.75	0.0011	0.2621
K	39	3	He	1813.925	2.2272	142341.02	0.0011	0.2621
K	39	3	He	1819.332	2.2331	141393.65	0.0011	0.2621
Ca	44	3	He	33212.847	2.0291	128377.91	0.0001	0.003476
Ca	44	3	He	32586.666	1.9909	127238.96	0.0001	0.003476
Ca	44	3	He	33665.051	2.0567	130224.98	0.0001	0.003476
Ti	47	3	He	0.862	0.0008	50.00	0.0005	0.000385
Ti	47	3	He	0.179	0.0005	30.00	0.0005	0.000385
Ti	47	3	He	-0.147	0.0003	20.00	0.0005	0.000385
V	51	3	He	0.62	0.0204	1290.06	0.0212	0.007263
V	51	3	He	0.522	0.0183	1170.06	0.0212	0.007263
V	51	3	He	0.57	0.0193	1224.06	0.0212	0.007263
Cr	52	3	He	0.108	0.0458	2900.43	0.0278	0.04283
Cr	52	3	He	0.3	0.0512	3270.46	0.0278	0.04283
Cr	52	3	He	0.13	0.0464	2940.41	0.0278	0.04283
Mn	55	3	He	8.992	0.1074	6791.82	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	8.622	0.1031	6591.65	0.0114	0.005023
Mn	55	3	He	8.485	0.1016	6431.62	0.0114	0.005023
Fe	57	3	He	6.079	0.0065	410.02	0.0005	0.003255
Fe	57	3	He	5.071	0.0059	380.02	0.0005	0.003255
Fe	57	3	He	10.831	0.009	570.03	0.0005	0.003255
Co	59	3	He	0.097	0.0095	600.03	0.0539	0.00425
Co	59	3	He	0.113	0.0103	660.04	0.0539	0.00425
Co	59	3	He	0.109	0.0101	640.04	0.0539	0.00425
Ni	60	3	He	0.373	0.0174	1930.19	0.0088	0.01412
Ni	60	3	He	0.112	0.0151	1670.16	0.0088	0.01412
Ni	60	3	He	0.245	0.0163	1810.18	0.0088	0.01412
Cu	63	3	He	3.289	0.0872	9663.53	0.0251	0.004537
Cu	63	3	He	3.425	0.0906	10013.81	0.0251	0.004537
Cu	63	3	He	3.461	0.0915	10173.93	0.0251	0.004537
Zn	66	3	He	6.708	0.0199	2210.23	0.0027	0.001642
Zn	66	3	He	6.564	0.0195	2160.23	0.0027	0.001642
Zn	66	3	He	5.994	0.018	2000.21	0.0027	0.001642
As	75	3	He	0.211	0.0009	96.00	0.0019	0.000463
As	75	3	He	0.165	0.0008	86.00	0.0019	0.000463
As	75	3	He	0.201	0.0008	94.00	0.0019	0.000463
Sr	88	3	He	19.706	0.1778	16400.05	0.009	0.001142
Sr	88	3	He	19.815	0.1788	16269.90	0.009	0.001142
Sr	88	3	He	19.256	0.1738	16660.20	0.009	0.001142
Mo	98	3	He	0.939	0.023	2120.25	0.0225	0.001842
Mo	98	3	He	1.129	0.0273	2480.31	0.0225	0.001842
Mo	98	3	He	1.424	0.0339	3250.48	0.0225	0.001842
Ag	107	3	He	0.004	0.0007	60.00	0.048	0.0004774
Ag	107	3	He	0.011	0.001	90.00	0.048	0.0004774
Ag	107	3	He	0.005	0.0007	70.00	0.048	0.0004774
Cd	111	3	He	0.038	0.0002	20.00	0.0055	7.481E-06
Cd	111	3	He	0.067	0.0004	34.00	0.0055	7.481E-06
Cd	111	3	He	0.037	0.0002	20.00	0.0055	7.481E-06
Sn	120	3	He	-0.36	0.0128	1180.10	0.0157	0.01844
Sn	120	3	He	-0.258	0.0144	1310.11	0.0157	0.01844
Sn	120	3	He	-0.178	0.0156	1500.46	0.0157	0.01844
Sb	121	3	He	0.023	0.0005	50.00	0.0139	0.0002204
Sb	121	3	He	0.039	0.0008	70.00	0.0139	0.0002204
Sb	121	3	He	0.029	0.0006	60.00	0.0139	0.0002204
Ba	137	3	He	23.276	0.1074	9903.91	0.0045	0.001994
Ba	137	3	He	21.921	0.1012	9213.40	0.0045	0.001994
Ba	137	3	He	21.938	0.1013	9713.79	0.0045	0.001994
Tl	205	3	He	0.013	0.0014	400.02	0.03	0.0009888
Tl	205	3	He	0.033	0.002	580.04	0.03	0.0009888
Tl	205	3	He	0.013	0.0014	410.03	0.03	0.0009888
Pb	208	3	He	0.151	0.0069	1030.08	0.0392	0.001024
Pb	208	3	He	0.123	0.0058	960.07	0.0392	0.001024
Pb	208	3	He	0.125	0.0059	890.07	0.0392	0.001024
U	238	3	He	0.169	0.0075	2190.28	0.0439	0.000128
U	238	3	He	0.155	0.0069	2040.24	0.0439	0.000128
U	238	3	He	0.187	0.0083	2490.33	0.0439	0.000128
Sc	45	1	No Gas			4007885.57		
Sc	45	1	No Gas			4000934.63		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			4021814.94		
Ge	72	1	No Gas			1819507.79		
Ge	72	1	No Gas			1825585.60		
Ge	72	1	No Gas			1829094.97		
Sc	45	2	H2			275312.87		
Sc	45	2	H2			271481.44		
Sc	45	2	H2			276065.52		
Ge	72	2	H2			198581.93		
Ge	72	2	H2			196355.80		
Ge	72	2	H2			198276.87		
In	115	2	H2			501898.04		
In	115	2	H2			492201.16		
In	115	2	H2			488784.91		
Sc	45	3	He			63267.39		
Sc	45	3	He			63908.94		
Sc	45	3	He			63317.06		
Ge	72	3	He			110834.99		
Ge	72	3	He			110510.55		
Ge	72	3	He			111166.86		
In	115	3	He			92254.10		
In	115	3	He			91025.82		
In	115	3	He			95897.33		
Tb	159	3	He			387477.61		
Tb	159	3	He			385814.49		
Tb	159	3	He			389250.23		
Bi	209	3	He			290905.97		
Bi	209	3	He			294529.88		
Bi	209	3	He			299118.51		

Quantitation Report

Data File Name	226SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23J26A00.b
Acq Time	2023-10-26 16:35:45
Sample Name	410-146886-B-5-A PDS
Sample Type	Sample
Comment	T9
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

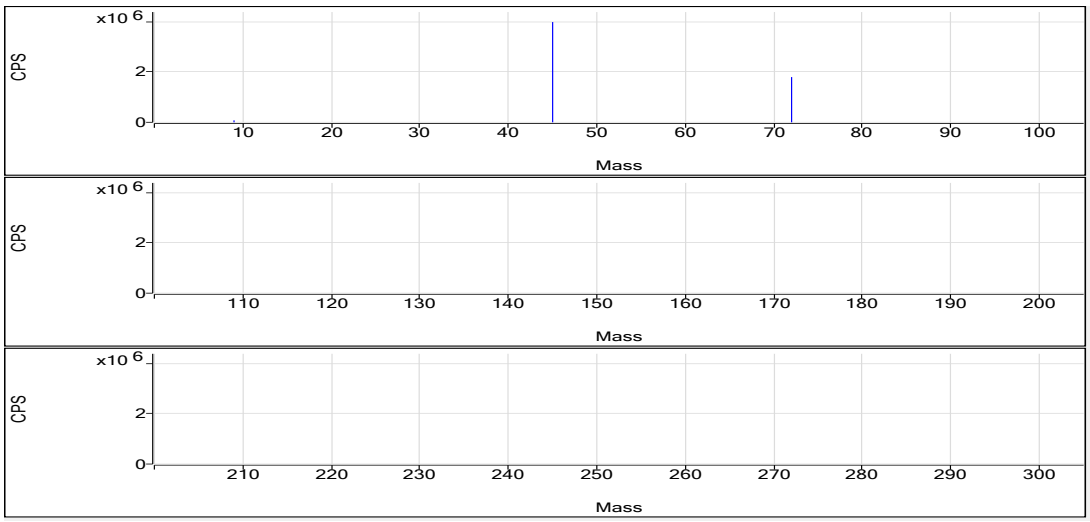
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.803	ppb	0.7	77629.87	0.0195	Pulse	0.5000	3
Se	78	72	H2	98.995	ppb	0.9	8619.02	0.0431	Pulse	1.5000	3
Na	23	45	He	6664.065	ppb	1.4	1436560.34	22.1244	Pulse	0.1000	3
Mg	24	45	He	23647.967	ppb	1.0	2422021.99	37.3005	Pulse	0.1000	3
Al	27	45	He	5022.009	ppb	1.4	146387.34	2.2545	Pulse	0.1000	3
K	39	45	He	6742.862	ppb	0.8	491357.22	7.5670	Pulse	0.1000	3
Ca	44	45	He	36688.426	ppb	1.1	145520.12	2.2411	Pulse	0.1000	3
Ti	47	45	He	504.655	ppb	5.8	15432.04	0.2378	Pulse	0.1000	3
V	51	45	He	492.465	ppb	1.4	677542.13	10.4349	Pulse	0.5000	3
Cr	52	45	He	484.671	ppb	1.7	878100.61	13.5241	Pulse	0.1000	3
Mn	55	45	He	497.040	ppb	1.8	367572.60	5.6612	Pulse	0.1000	3
Fe	57	45	He	4867.017	ppb	2.0	167904.83	2.5861	Pulse	0.1000	3
Co	59	45	He	481.336	ppb	1.5	1683589.98	25.9295	Pulse	0.1000	3
Ni	60	72	He	494.892	ppb	0.9	483892.30	4.3793	Pulse	0.1000	3
Cu	63	72	He	501.068	ppb	0.6	1391712.43	12.5959	Pulse	0.1000	3
Zn	66	72	He	506.544	ppb	1.4	152860.94	1.3835	Pulse	0.1000	3
As	75	72	He	507.574	ppb	0.7	107069.40	0.9691	Pulse	0.5000	3
Sr	88	115	He	69.475	ppb	3.3	58095.76	0.6239	Pulse	0.1000	3
Mo	98	115	He	51.129	ppb	1.9	107372.47	1.1528	Pulse	0.1000	3
Ag	107	115	He	26.309	ppb	2.8	117525.54	1.2621	Pulse	0.1000	3
Cd	111	115	He	48.894	ppb	2.3	24927.37	0.2677	Pulse	0.5000	3
Sn	120	115	He	96.223	ppb	3.0	142542.19	1.5307	Pulse	0.1000	3
Sb	121	115	He	98.447	ppb	1.8	127515.61	1.3691	Pulse	0.1000	3
Ba	137	115	He	502.021	ppb	2.6	211818.32	2.2746	Pulse	0.1000	3
Tl	205	209	He	91.713	ppb	0.7	808545.17	2.7537	Pulse	0.1000	3
Pb	208	209	He	50.590	ppb	0.6	582842.42	1.9850	Pulse	0.1000	3
U	238	209	He	50.423	ppb	1.2	650148.28	2.2143	Pulse	0.1000	3

ISTD Table:

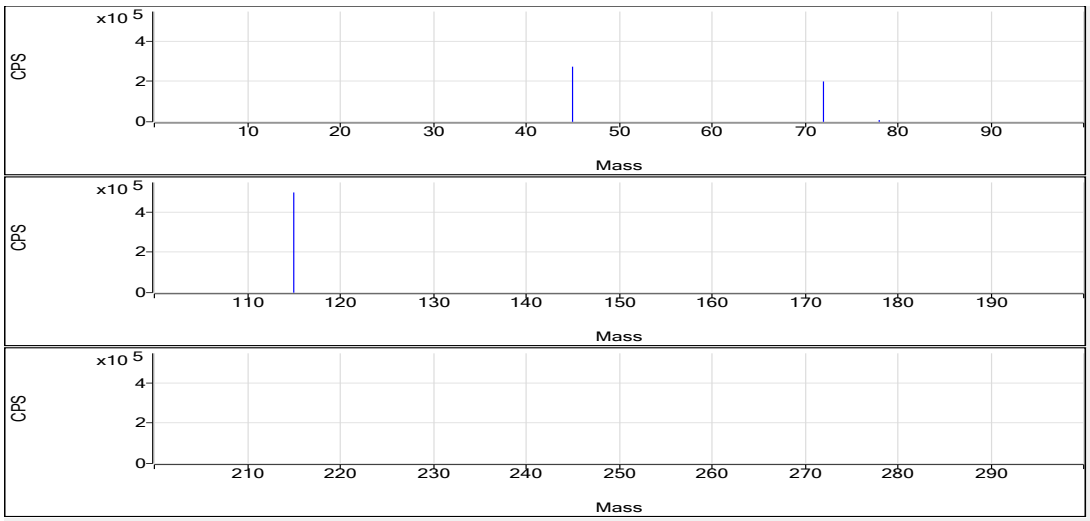
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3987921.82	1.3	111.6	Pulse	0.1000	3
No Gas	Ge	72	1799301.48	0.9	110.6	Pulse	0.1000	3
H2	Sc	45	272905.93	1.5	104.4	Pulse	0.1000	3
H2	Ge	72	199782.52	1.2	106.5	Pulse	0.1000	3
H2	In	115	496042.35	1.2	105.2	Pulse	0.1000	3
He	Sc	45	64937.69	1.2	107.5	Pulse	0.1000	3
He	Ge	72	110491.99	0.9	106.7	Pulse	0.1000	3
He	In	115	93168.06	2.8	103.1	Pulse	0.1000	3
He	Tb	159	388572.72	0.7	103.3	Pulse	0.1000	3
He	Bi	209	293625.63	0.5	102.5	Pulse	0.1000	3

No Gas

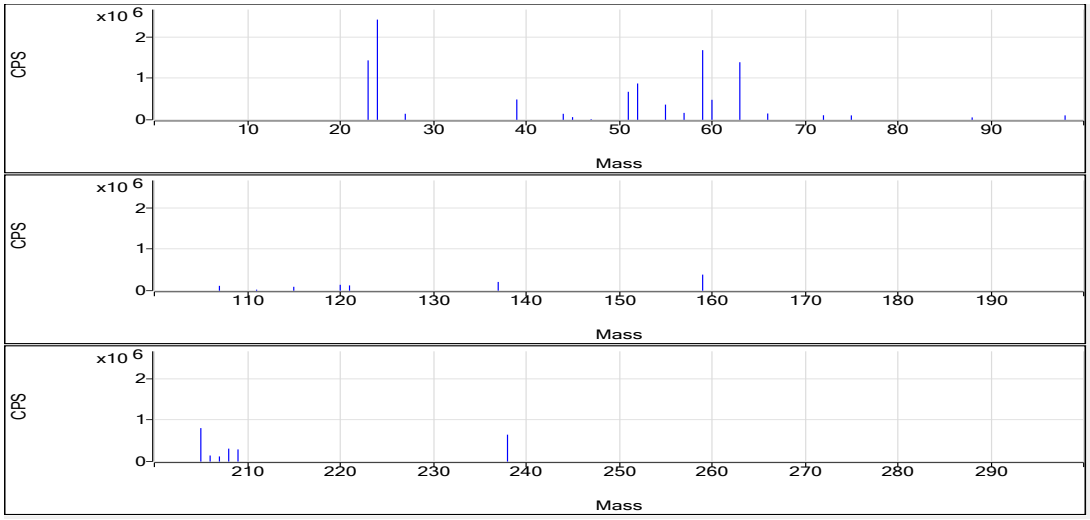


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.995	0.0195	77021.19	0.0004	7.085E-06
Be	9	1	No Gas	50.374	0.0193	78024.73	0.0004	7.085E-06
Be	9	1	No Gas	51.039	0.0196	77843.68	0.0004	7.085E-06
Se	78	2	H2	98.024	0.0427	8635.92	0.0004	2.372E-05
Se	78	2	H2	99.704	0.0435	8582.55	0.0004	2.372E-05
Se	78	2	H2	99.256	0.0433	8638.59	0.0004	2.372E-05
Na	23	3	He	6558.167	21.7809	1432698.42	0.0032	0.5042
Na	23	3	He	6725.469	22.3237	1433206.85	0.0032	0.5042
Na	23	3	He	6708.558	22.2688	1443775.76	0.0032	0.5042
Mg	24	3	He	23449.914	36.9881	2432998.24	0.0016	0.002702
Mg	24	3	He	23914.458	37.7208	2421723.71	0.0016	0.002702
Mg	24	3	He	23579.53	37.1926	2411344.03	0.0016	0.002702
Al	27	3	He	4944.072	2.2195	145995.06	0.0004	0.00193
Al	27	3	He	5044.846	2.2647	145397.81	0.0004	0.00193
Al	27	3	He	5077.11	2.2792	147769.15	0.0004	0.00193
K	39	3	He	6707.369	7.5286	495212.22	0.0011	0.2621
K	39	3	He	6808.767	7.6384	490395.58	0.0011	0.2621
K	39	3	He	6712.45	7.5341	488463.86	0.0011	0.2621
Ca	44	3	He	36205.061	2.2116	145476.02	0.0001	0.003476
Ca	44	3	He	36922.744	2.2554	144799.47	0.0001	0.003476
Ca	44	3	He	36937.472	2.2563	146284.88	0.0001	0.003476
Ti	47	3	He	474.234	0.2234	14697.83	0.0005	0.000385
Ti	47	3	He	532.64	0.2509	16109.30	0.0005	0.000385
Ti	47	3	He	507.092	0.2389	15488.99	0.0005	0.000385
V	51	3	He	485.104	10.2791	676135.94	0.0212	0.007263
V	51	3	He	499.258	10.5788	679171.56	0.0212	0.007263
V	51	3	He	493.032	10.447	677318.88	0.0212	0.007263
Cr	52	3	He	475.743	13.2758	873251.63	0.0278	0.04283
Cr	52	3	He	492.548	13.7432	882330.06	0.0278	0.04283
Cr	52	3	He	485.723	13.5534	878720.14	0.0278	0.04283
Mn	55	3	He	487.775	5.5558	365447.38	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	505.764	5.7605	369831.56	0.0114	0.005023
Mn	55	3	He	497.581	5.6674	367438.86	0.0114	0.005023
Fe	57	3	He	4756.601	2.5275	166250.80	0.0005	0.003255
Fe	57	3	He	4949.331	2.6297	168832.44	0.0005	0.003255
Fe	57	3	He	4895.119	2.601	168631.25	0.0005	0.003255
Co	59	3	He	473.432	25.5038	1677582.01	0.0539	0.00425
Co	59	3	He	488.062	26.2918	1687964.51	0.0539	0.00425
Co	59	3	He	482.513	25.9929	1685223.41	0.0539	0.00425
Ni	60	3	He	489.904	4.3353	476919.09	0.0088	0.01412
Ni	60	3	He	497.012	4.398	483110.93	0.0088	0.01412
Ni	60	3	He	497.761	4.4046	491646.87	0.0088	0.01412
Cu	63	3	He	500.033	12.5699	1382791.07	0.0251	0.004537
Cu	63	3	He	504.619	12.6852	1393434.51	0.0251	0.004537
Cu	63	3	He	498.552	12.5327	1398911.70	0.0251	0.004537
Zn	66	3	He	514.265	1.4046	154518.06	0.0027	0.001642
Zn	66	3	He	505.541	1.3808	151678.39	0.0027	0.001642
Zn	66	3	He	499.825	1.3652	152386.38	0.0027	0.001642
As	75	3	He	506.244	0.9665	106323.89	0.0019	0.000463
As	75	3	He	511.424	0.9764	107254.77	0.0019	0.000463
As	75	3	He	505.055	0.9642	107629.55	0.0019	0.000463
Sr	88	3	He	70.451	0.6327	57576.93	0.009	0.001142
Sr	88	3	He	71.123	0.6387	59032.72	0.009	0.001142
Sr	88	3	He	66.851	0.6004	57677.64	0.009	0.001142
Mo	98	3	He	52.157	1.176	107023.23	0.0225	0.001842
Mo	98	3	He	51.029	1.1506	106348.25	0.0225	0.001842
Mo	98	3	He	50.202	1.132	108745.94	0.0225	0.001842
Ag	107	3	He	26.943	1.2925	117629.60	0.048	0.0004774
Ag	107	3	He	26.502	1.2713	117508.99	0.048	0.0004774
Ag	107	3	He	25.482	1.2225	117438.02	0.048	0.0004774
Cd	111	3	He	49.604	0.2716	24713.67	0.0055	7.481E-06
Cd	111	3	He	49.498	0.271	25046.21	0.0055	7.481E-06
Cd	111	3	He	47.578	0.2605	25022.22	0.0055	7.481E-06
Sn	120	3	He	96.928	1.5417	140309.84	0.0157	0.01844
Sn	120	3	He	98.722	1.5699	145106.74	0.0157	0.01844
Sn	120	3	He	93.02	1.4803	142210.00	0.0157	0.01844
Sb	121	3	He	100.116	1.3923	126712.53	0.0139	0.0002204
Sb	121	3	He	98.661	1.3721	126821.60	0.0139	0.0002204
Sb	121	3	He	96.565	1.3429	129012.71	0.0139	0.0002204
Ba	137	3	He	512.229	2.3208	211214.80	0.0045	0.001994
Ba	137	3	He	506.8	2.2963	212241.36	0.0045	0.001994
Ba	137	3	He	487.034	2.2068	211998.79	0.0045	0.001994
Tl	205	3	He	91.602	2.7504	805406.32	0.03	0.0009888
Tl	205	3	He	91.134	2.7363	807972.25	0.03	0.0009888
Tl	205	3	He	92.403	2.7744	812256.94	0.03	0.0009888
Pb	208	3	He	50.683	1.9887	311836.36	0.0392	0.001024
Pb	208	3	He	50.267	1.9723	312468.10	0.0392	0.001024
Pb	208	3	He	50.82	1.994	312550.09	0.0392	0.001024
U	238	3	He	50.526	2.2188	649743.35	0.0439	0.000128
U	238	3	He	49.757	2.185	645186.67	0.0439	0.000128
U	238	3	He	50.986	2.239	655514.83	0.0439	0.000128
Sc	45	1	No Gas			3941516.82		
Sc	45	1	No Gas			4042049.31		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3980199.32		
Ge	72	1	No Gas			1786227.47		
Ge	72	1	No Gas			1816379.19		
Ge	72	1	No Gas			1795297.79		
Sc	45	2	H2			275161.11		
Sc	45	2	H2			268284.16		
Sc	45	2	H2			275272.53		
Ge	72	2	H2			202141.77		
Ge	72	2	H2			197509.49		
Ge	72	2	H2			199696.31		
In	115	2	H2			502589.21		
In	115	2	H2			490941.16		
In	115	2	H2			494596.67		
Sc	45	3	He			65777.80		
Sc	45	3	He			64201.25		
Sc	45	3	He			64834.03		
Ge	72	3	He			110007.86		
Ge	72	3	He			109847.39		
Ge	72	3	He			111620.72		
In	115	3	He			92102.46		
In	115	3	He			93560.94		
In	115	3	He			97176.28		
Tb	159	3	He			389369.92		
Tb	159	3	He			385559.84		
Tb	159	3	He			390788.39		
Bi	209	3	He			292833.96		
Bi	209	3	He			295275.50		
Bi	209	3	He			292767.42		

Quantitation Report

Data File Name	227SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23J26A00.b
Acq Time	2023-10-26 16:37:45
Sample Name	410-146886-B-5-A SD @5
Sample Type	Sample
Comment	T9
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

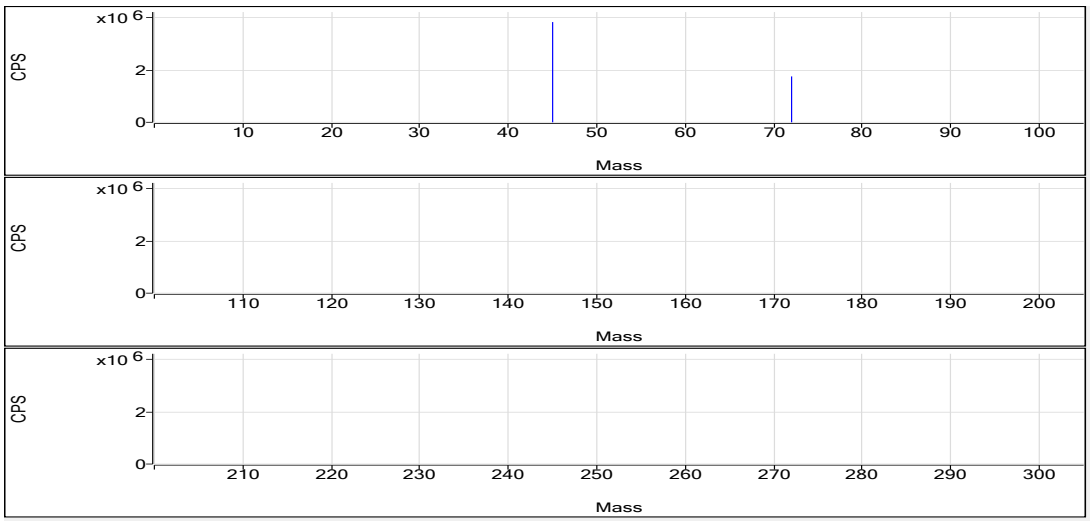
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.012	ppb	76.5	44.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.070	ppb	57.6	10.67	0.0001	Pulse	1.5000	3
Na	23	45	He	337.438	ppb	1.9	99950.66	1.5989	Pulse	0.1000	3
Mg	24	45	He	3563.083	ppb	0.4	351477.64	5.6224	Pulse	0.1000	3
Al	27	45	He	2.950	ppb	37.2	203.34	0.0033	Pulse	0.1000	3
K	39	45	He	343.466	ppb	5.7	39644.46	0.6342	Pulse	0.1000	3
Ca	44	45	He	6097.632	ppb	0.6	23466.14	0.3754	Pulse	0.1000	3
Ti	47	45	He	-0.026	ppb	N/A	23.33	0.0004	Pulse	0.1000	3
V	51	45	He	0.230	ppb	15.6	758.03	0.0121	Pulse	0.5000	3
Cr	52	45	He	0.168	ppb	83.3	2970.42	0.0475	Pulse	0.1000	3
Mn	55	45	He	1.611	ppb	5.4	1460.13	0.0234	Pulse	0.1000	3
Fe	57	45	He	6.623	ppb	43.2	423.35	0.0068	Pulse	0.1000	3
Co	59	45	He	0.106	ppb	26.6	623.37	0.0100	Pulse	0.1000	3
Ni	60	72	He	-0.138	ppb	N/A	1386.78	0.0129	Pulse	0.1000	3
Cu	63	72	He	0.740	ppb	11.0	2483.62	0.0231	Pulse	0.1000	3
Zn	66	72	He	1.526	ppb	7.7	623.37	0.0058	Pulse	0.1000	3
As	75	72	He	0.138	ppb	47.0	78.00	0.0007	Pulse	0.5000	3
Sr	88	115	He	3.435	ppb	6.4	2957.06	0.0319	Pulse	0.1000	3
Mo	98	115	He	0.822	ppb	26.8	1883.54	0.0203	Pulse	0.1000	3
Ag	107	115	He	0.001	ppb	594.8	50.00	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.029	ppb	30.8	15.33	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.052	ppb	64.0	1783.53	0.0193	Pulse	0.1000	3
Sb	121	115	He	0.031	ppb	99.7	60.00	0.0006	Pulse	0.1000	3
Ba	137	115	He	3.540	ppb	5.7	1670.16	0.0180	Pulse	0.1000	3
Tl	205	209	He	0.207	ppb	5.3	2123.59	0.0072	Pulse	0.1000	3
Pb	208	209	He	0.040	ppb	14.1	763.38	0.0026	Pulse	0.1000	3
U	238	209	He	0.136	ppb	1.6	1793.52	0.0061	Pulse	0.1000	3

ISTD Table:

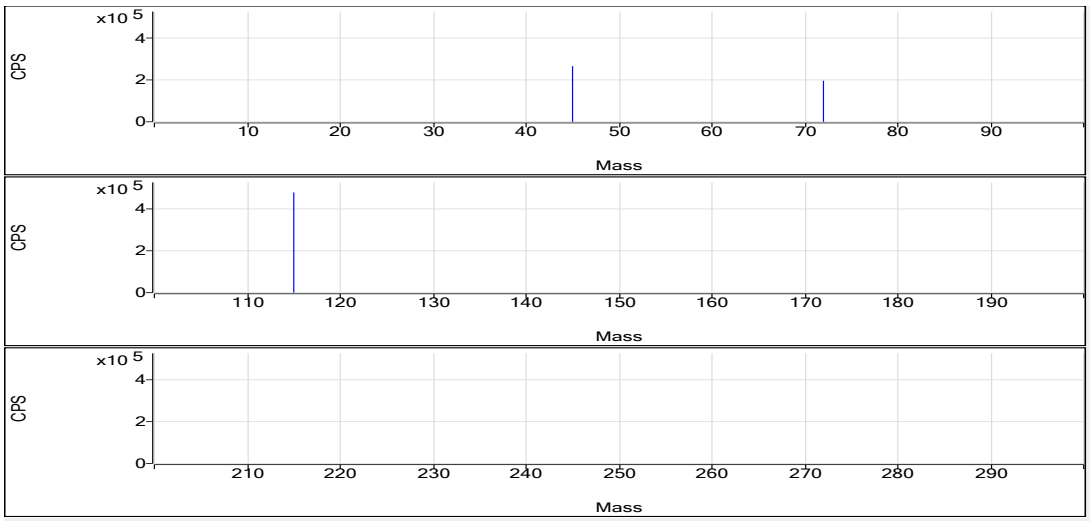
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3841792.24	0.9	107.5	Pulse	0.1000	3
No Gas	Ge	72	1758363.67	0.4	108.0	Pulse	0.1000	3
H2	Sc	45	265719.14	0.6	101.6	Pulse	0.1000	3
H2	Ge	72	196135.47	0.9	104.5	Pulse	0.1000	3
H2	In	115	478714.02	1.0	101.5	Pulse	0.1000	3
He	Sc	45	62514.03	0.5	103.5	Pulse	0.1000	3
He	Ge	72	107395.39	1.5	103.7	Pulse	0.1000	3
He	In	115	92641.96	1.4	102.5	Pulse	0.1000	3
He	Tb	159	383391.64	1.3	101.9	Pulse	0.1000	3
He	Bi	209	294633.74	0.3	102.8	Pulse	0.1000	3

No Gas

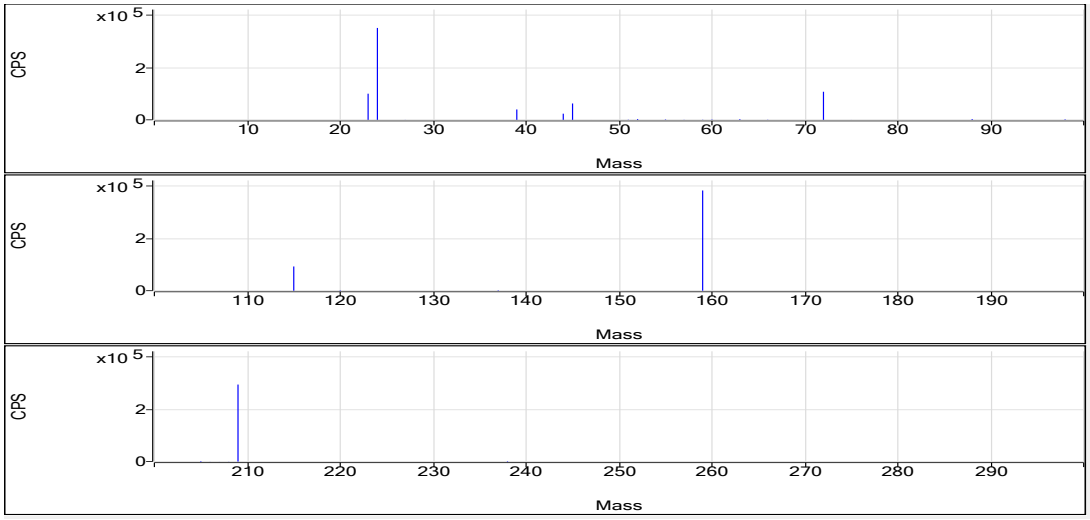


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.021	0	58.00	0.0004	7.085E-06
Be	9	1	No Gas	0.011	0	44.00	0.0004	7.085E-06
Be	9	1	No Gas	0.003	0	32.00	0.0004	7.085E-06
Se	78	2	H2	0.116	0.0001	14.67	0.0004	2.372E-05
Se	78	2	H2	0.039	0	8.00	0.0004	2.372E-05
Se	78	2	H2	0.056	0	9.33	0.0004	2.372E-05
Na	23	3	He	336.601	1.5962	99672.30	0.0032	0.5042
Na	23	3	He	344.255	1.621	100930.55	0.0032	0.5042
Na	23	3	He	331.457	1.5795	99249.13	0.0032	0.5042
Mg	24	3	He	3557.25	5.6132	350509.99	0.0016	0.002702
Mg	24	3	He	3577.85	5.6457	351520.74	0.0016	0.002702
Mg	24	3	He	3554.148	5.6083	352402.18	0.0016	0.002702
Al	27	3	He	1.767	0.0027	170.01	0.0004	0.00193
Al	27	3	He	3.933	0.0037	230.01	0.0004	0.00193
Al	27	3	He	3.149	0.0033	210.01	0.0004	0.00193
K	39	3	He	359.637	0.6517	40697.17	0.0011	0.2621
K	39	3	He	349.19	0.6404	39874.97	0.0011	0.2621
K	39	3	He	321.57	0.6105	38361.24	0.0011	0.2621
Ca	44	3	He	6055.612	0.3728	23279.48	0.0001	0.003476
Ca	44	3	He	6112.738	0.3763	23429.18	0.0001	0.003476
Ca	44	3	He	6124.548	0.377	23689.75	0.0001	0.003476
Ti	47	3	He	-0.138	0.0003	20.00	0.0005	0.000385
Ti	47	3	He	-0.136	0.0003	20.00	0.0005	0.000385
Ti	47	3	He	0.197	0.0005	30.00	0.0005	0.000385
V	51	3	He	0.258	0.0127	794.03	0.0212	0.007263
V	51	3	He	0.243	0.0124	772.03	0.0212	0.007263
V	51	3	He	0.189	0.0113	708.02	0.0212	0.007263
Cr	52	3	He	0.188	0.0481	3000.46	0.0278	0.04283
Cr	52	3	He	0.019	0.0434	2700.33	0.0278	0.04283
Cr	52	3	He	0.297	0.0511	3210.46	0.0278	0.04283
Mn	55	3	He	1.599	0.0232	1450.13	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1.704	0.0244	1520.13	0.0114	0.005023
Mn	55	3	He	1.531	0.0224	1410.13	0.0114	0.005023
Fe	57	3	He	3.523	0.0051	320.01	0.0005	0.003255
Fe	57	3	He	7.183	0.0071	440.02	0.0005	0.003255
Fe	57	3	He	9.162	0.0081	510.03	0.0005	0.003255
Co	59	3	He	0.132	0.0114	710.04	0.0539	0.00425
Co	59	3	He	0.076	0.0084	520.03	0.0539	0.00425
Co	59	3	He	0.11	0.0102	640.04	0.0539	0.00425
Ni	60	3	He	-0.166	0.0127	1340.11	0.0088	0.01412
Ni	60	3	He	-0.205	0.0123	1320.11	0.0088	0.01412
Ni	60	3	He	-0.043	0.0137	1500.13	0.0088	0.01412
Cu	63	3	He	0.835	0.0255	2700.34	0.0251	0.004537
Cu	63	3	He	0.692	0.0219	2350.26	0.0251	0.004537
Cu	63	3	He	0.695	0.022	2400.27	0.0251	0.004537
Zn	66	3	He	1.65	0.0061	650.04	0.0027	0.001642
Zn	66	3	He	1.415	0.0055	590.03	0.0027	0.001642
Zn	66	3	He	1.514	0.0058	630.04	0.0027	0.001642
As	75	3	He	0.144	0.0007	78.00	0.0019	0.000463
As	75	3	He	0.07	0.0006	64.00	0.0019	0.000463
As	75	3	He	0.199	0.0008	92.00	0.0019	0.000463
Sr	88	3	He	3.563	0.0331	3050.42	0.009	0.001142
Sr	88	3	He	3.181	0.0297	2790.36	0.009	0.001142
Sr	88	3	He	3.563	0.0331	3030.41	0.009	0.001142
Mo	98	3	He	0.622	0.0158	1460.12	0.0225	0.001842
Mo	98	3	He	0.787	0.0196	1840.19	0.0225	0.001842
Mo	98	3	He	1.058	0.0257	2350.31	0.0225	0.001842
Ag	107	3	He	0.01	0.001	90.00	0.048	0.0004774
Ag	107	3	He	-0.003	0.0003	30.00	0.048	0.0004774
Ag	107	3	He	-0.003	0.0003	30.00	0.048	0.0004774
Cd	111	3	He	0.034	0.0002	18.00	0.0055	7.481E-06
Cd	111	3	He	0.034	0.0002	18.00	0.0055	7.481E-06
Cd	111	3	He	0.019	0.0001	10.00	0.0055	7.481E-06
Sn	120	3	He	0.082	0.0197	1820.18	0.0157	0.01844
Sn	120	3	He	0.017	0.0187	1760.17	0.0157	0.01844
Sn	120	3	He	0.056	0.0193	1770.24	0.0157	0.01844
Sb	121	3	He	0	0.0002	20.00	0.0139	0.0002204
Sb	121	3	He	0.061	0.0011	100.00	0.0139	0.0002204
Sb	121	3	He	0.031	0.0007	60.00	0.0139	0.0002204
Ba	137	3	He	3.584	0.0182	1680.16	0.0045	0.001994
Ba	137	3	He	3.715	0.0188	1770.18	0.0045	0.001994
Ba	137	3	He	3.322	0.017	1560.14	0.0045	0.001994
Tl	205	3	He	0.216	0.0075	2210.27	0.03	0.0009888
Tl	205	3	He	0.21	0.0073	2150.27	0.03	0.0009888
Tl	205	3	He	0.195	0.0068	2010.24	0.03	0.0009888
Pb	208	3	He	0.042	0.0027	390.02	0.0392	0.001024
Pb	208	3	He	0.034	0.0023	390.02	0.0392	0.001024
Pb	208	3	He	0.044	0.0028	430.03	0.0392	0.001024
U	238	3	He	0.138	0.0062	1830.19	0.0439	0.000128
U	238	3	He	0.135	0.006	1780.17	0.0439	0.000128
U	238	3	He	0.134	0.006	1770.19	0.0439	0.000128
Sc	45	1	No Gas			3809811.51		
Sc	45	1	No Gas			3834779.63		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3880785.57		
Ge	72	1	No Gas			1751052.16		
Ge	72	1	No Gas			1762087.79		
Ge	72	1	No Gas			1761951.07		
Sc	45	2	H2			264469.00		
Sc	45	2	H2			267682.67		
Sc	45	2	H2			265005.76		
Ge	72	2	H2			197627.73		
Ge	72	2	H2			196726.17		
Ge	72	2	H2			194052.50		
In	115	2	H2			483578.16		
In	115	2	H2			478112.65		
In	115	2	H2			474451.24		
Sc	45	3	He			62443.53		
Sc	45	3	He			62263.19		
Sc	45	3	He			62835.38		
Ge	72	3	He			105836.52		
Ge	72	3	He			107217.34		
Ge	72	3	He			109132.32		
In	115	3	He			92233.28		
In	115	3	He			94115.48		
In	115	3	He			91618.86		
Tb	159	3	He			379066.44		
Tb	159	3	He			388724.06		
Tb	159	3	He			382384.41		
Bi	209	3	He			295471.44		
Bi	209	3	He			294720.03		
Bi	209	3	He			293709.74		

Quantitation Report

Data File Name	228SMPL.d
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Acq Time	2023-10-26 16:39:45
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Sample Type	Sample
Comment	T9
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

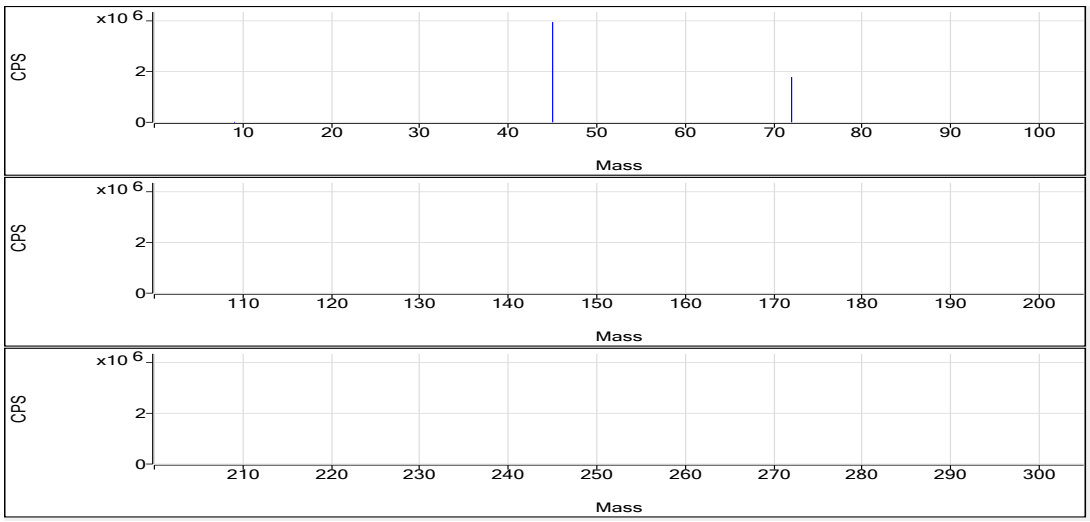
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.001	ppb	N/A	26.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.002	ppb	1464.1	4.89	0.0000	Pulse	1.5000	3
Na	23	45	He	1926.025	ppb	0.6	416331.88	6.7528	Pulse	0.1000	3
Mg	24	45	He	20153.129	ppb	1.7	1959663.98	31.7884	Pulse	0.1000	3
Al	27	45	He	2.811	ppb	20.6	196.68	0.0032	Pulse	0.1000	3
K	39	45	He	1918.655	ppb	1.0	144308.42	2.3407	Pulse	0.1000	3
Ca	44	45	He	34303.187	ppb	1.8	129215.51	2.0956	Pulse	0.1000	3
Ti	47	45	He	-0.476	ppb	N/A	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	0.591	ppb	8.3	1220.06	0.0198	Pulse	0.5000	3
Cr	52	45	He	0.351	ppb	74.1	3240.49	0.0526	Pulse	0.1000	3
Mn	55	45	He	8.559	ppb	0.7	6314.90	0.1024	Pulse	0.1000	3
Fe	57	45	He	11.192	ppb	29.6	566.69	0.0092	Pulse	0.1000	3
Co	59	45	He	0.121	ppb	24.3	663.38	0.0107	Pulse	0.1000	3
Ni	60	72	He	0.177	ppb	31.8	1726.84	0.0157	Pulse	0.1000	3
Cu	63	72	He	3.317	ppb	3.7	9676.93	0.0879	Pulse	0.1000	3
Zn	66	72	He	6.804	ppb	7.7	2223.59	0.0202	Pulse	0.1000	3
As	75	72	He	0.209	ppb	34.2	94.67	0.0009	Pulse	0.5000	3
Sr	88	115	He	19.343	ppb	2.4	16550.06	0.1745	Pulse	0.1000	3
Mo	98	115	He	1.637	ppb	17.0	3677.28	0.0387	Pulse	0.1000	3
Ag	107	115	He	0.009	ppb	30.2	86.67	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.063	ppb	27.5	33.33	0.0004	Pulse	0.5000	3
Sn	120	115	He	-0.405	ppb	N/A	1143.42	0.0121	Pulse	0.1000	3
Sb	121	115	He	0.012	ppb	75.5	36.67	0.0004	Pulse	0.1000	3
Ba	137	115	He	21.548	ppb	0.9	9440.21	0.0995	Pulse	0.1000	3
Tl	205	209	He	0.036	ppb	27.8	620.05	0.0021	Pulse	0.1000	3
Pb	208	209	He	0.128	ppb	22.3	1796.79	0.0060	Pulse	0.1000	3
U	238	209	He	0.165	ppb	3.7	2190.27	0.0074	Pulse	0.1000	3

ISTD Table:

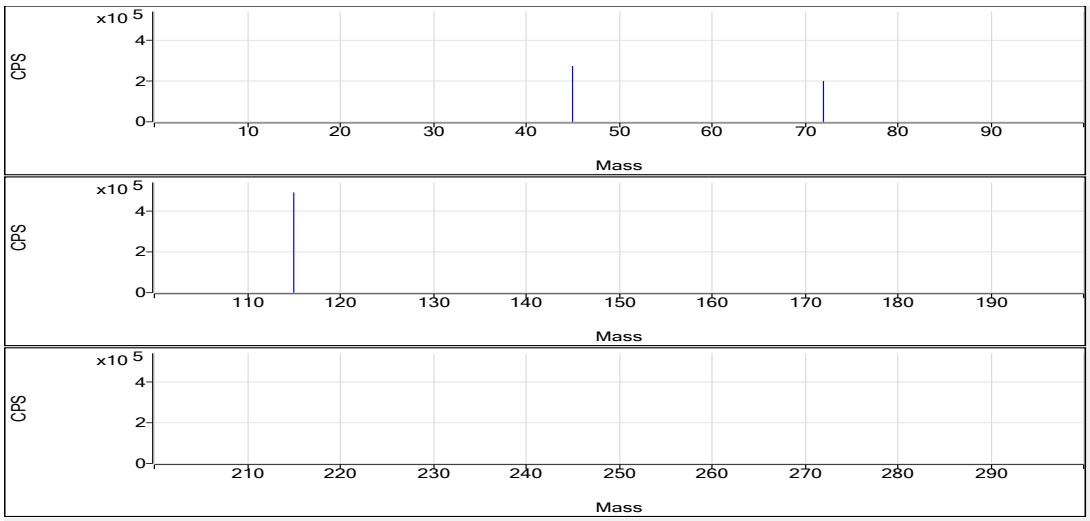
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3954095.88	1.2	110.6	Pulse	0.1000	3
No Gas	Ge	72	1785441.17	1.0	109.7	Pulse	0.1000	3
H2	Sc	45	274631.87	0.9	105.0	Pulse	0.1000	3
H2	Ge	72	200775.67	1.1	107.0	Pulse	0.1000	3
H2	In	115	493135.58	0.3	104.5	Pulse	0.1000	3
He	Sc	45	61656.79	1.4	102.1	Pulse	0.1000	3
He	Ge	72	110128.78	1.6	106.3	Pulse	0.1000	3
He	In	115	94852.08	2.4	105.0	Pulse	0.1000	3
He	Tb	159	389515.44	0.8	103.5	Pulse	0.1000	3
He	Bi	209	297586.84	1.6	103.8	Pulse	0.1000	3

No Gas

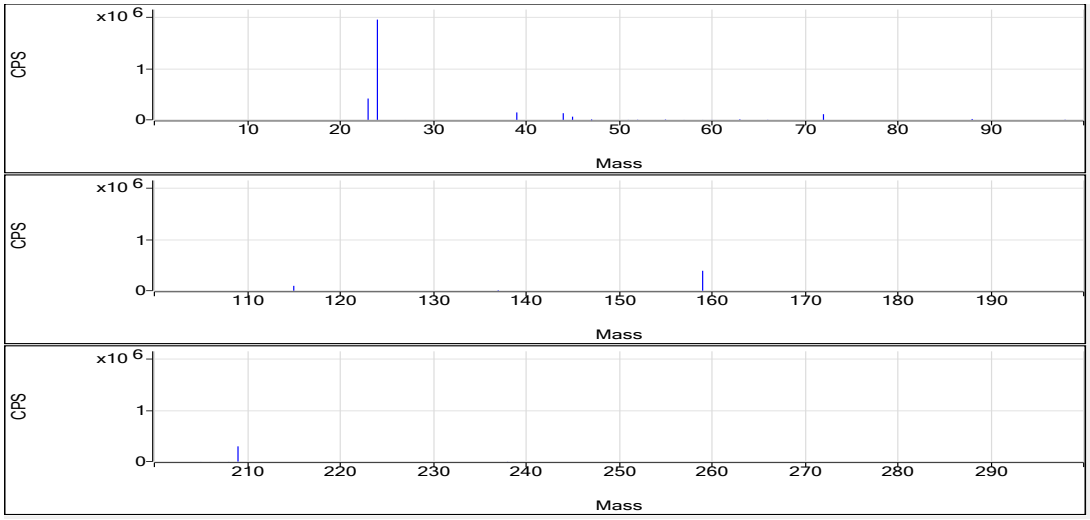


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.001	0	26.00	0.0004	7.085E-06
Be	9	1	No Gas	-0.009	0	14.00	0.0004	7.085E-06
Be	9	1	No Gas	0.007	0	38.00	0.0004	7.085E-06
Se	78	2	H2	0.007	0	5.33	0.0004	2.372E-05
Se	78	2	H2	-0.024	0	2.67	0.0004	2.372E-05
Se	78	2	H2	0.022	0	6.67	0.0004	2.372E-05
Na	23	3	He	1936.694	6.7874	413334.02	0.0032	0.5042
Na	23	3	He	1928.785	6.7617	415702.49	0.0032	0.5042
Na	23	3	He	1912.596	6.7092	419959.13	0.0032	0.5042
Mg	24	3	He	20505.582	32.3443	1969680.60	0.0016	0.002702
Mg	24	3	He	20141.2	31.7696	1953152.78	0.0016	0.002702
Mg	24	3	He	19812.604	31.2513	1956158.56	0.0016	0.002702
Al	27	3	He	3.386	0.0034	210.01	0.0004	0.00193
Al	27	3	He	2.225	0.0029	180.01	0.0004	0.00193
Al	27	3	He	2.821	0.0032	200.01	0.0004	0.00193
K	39	3	He	1932.627	2.3558	143464.48	0.0011	0.2621
K	39	3	He	1927.22	2.35	144473.96	0.0011	0.2621
K	39	3	He	1896.118	2.3163	144986.83	0.0011	0.2621
Ca	44	3	He	34619.298	2.1149	128792.41	0.0001	0.003476
Ca	44	3	He	33577.737	2.0514	126116.55	0.0001	0.003476
Ca	44	3	He	34712.526	2.1206	132737.56	0.0001	0.003476
Ti	47	3	He	-0.469	0.0002	10.00	0.0005	0.000385
Ti	47	3	He	-0.819	0	0.00	0.0005	0.000385
Ti	47	3	He	-0.139	0.0003	20.00	0.0005	0.000385
V	51	3	He	0.544	0.0188	1144.05	0.0212	0.007263
V	51	3	He	0.587	0.0197	1210.06	0.0212	0.007263
V	51	3	He	0.642	0.0209	1306.07	0.0212	0.007263
Cr	52	3	He	0.639	0.0606	3690.60	0.0278	0.04283
Cr	52	3	He	0.133	0.0465	2860.36	0.0278	0.04283
Cr	52	3	He	0.281	0.0507	3170.50	0.0278	0.04283
Mn	55	3	He	8.623	0.1031	6281.52	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	8.537	0.1022	6281.54	0.0114	0.005023
Mn	55	3	He	8.518	0.102	6381.63	0.0114	0.005023
Fe	57	3	He	9.339	0.0082	500.02	0.0005	0.003255
Fe	57	3	He	15.017	0.0112	690.04	0.0005	0.003255
Fe	57	3	He	9.22	0.0081	510.02	0.0005	0.003255
Co	59	3	He	0.095	0.0094	570.03	0.0539	0.00425
Co	59	3	He	0.114	0.0104	640.04	0.0539	0.00425
Co	59	3	He	0.152	0.0125	780.06	0.0539	0.00425
Ni	60	3	He	0.203	0.0159	1720.16	0.0088	0.01412
Ni	60	3	He	0.112	0.0151	1680.17	0.0088	0.01412
Ni	60	3	He	0.215	0.016	1780.18	0.0088	0.01412
Cu	63	3	He	3.366	0.0891	9633.54	0.0251	0.004537
Cu	63	3	He	3.178	0.0844	9383.44	0.0251	0.004537
Cu	63	3	He	3.405	0.0901	10013.81	0.0251	0.004537
Zn	66	3	He	7.335	0.0217	2340.29	0.0027	0.001642
Zn	66	3	He	6.29	0.0188	2090.22	0.0027	0.001642
Zn	66	3	He	6.788	0.0202	2240.25	0.0027	0.001642
As	75	3	He	0.291	0.001	110.00	0.0019	0.000463
As	75	3	He	0.163	0.0008	86.00	0.0019	0.000463
As	75	3	He	0.172	0.0008	88.00	0.0019	0.000463
Sr	88	3	He	19.146	0.1728	16209.52	0.009	0.001142
Sr	88	3	He	19.876	0.1793	16720.48	0.009	0.001142
Sr	88	3	He	19.008	0.1715	16720.19	0.009	0.001142
Mo	98	3	He	1.353	0.0323	3030.43	0.0225	0.001842
Mo	98	3	He	1.648	0.0389	3630.57	0.0225	0.001842
Mo	98	3	He	1.91	0.0448	4370.85	0.0225	0.001842
Ag	107	3	He	0.012	0.0011	100.00	0.048	0.0004774
Ag	107	3	He	0.008	0.0009	80.00	0.048	0.0004774
Ag	107	3	He	0.007	0.0008	80.00	0.048	0.0004774
Cd	111	3	He	0.069	0.0004	36.00	0.0055	7.481E-06
Cd	111	3	He	0.077	0.0004	40.00	0.0055	7.481E-06
Cd	111	3	He	0.044	0.0002	24.00	0.0055	7.481E-06
Sn	120	3	He	-0.387	0.0124	1160.08	0.0157	0.01844
Sn	120	3	He	-0.327	0.0133	1240.09	0.0157	0.01844
Sn	120	3	He	-0.501	0.0106	1030.08	0.0157	0.01844
Sb	121	3	He	0.022	0.0005	50.00	0.0139	0.0002204
Sb	121	3	He	0.007	0.0003	30.00	0.0139	0.0002204
Sb	121	3	He	0.006	0.0003	30.00	0.0139	0.0002204
Ba	137	3	He	21.699	0.1002	9403.55	0.0045	0.001994
Ba	137	3	He	21.622	0.0999	9313.45	0.0045	0.001994
Ba	137	3	He	21.322	0.0985	9603.64	0.0045	0.001994
Tl	205	3	He	0.027	0.0018	530.04	0.03	0.0009888
Tl	205	3	He	0.034	0.002	610.04	0.03	0.0009888
Tl	205	3	He	0.047	0.0024	720.06	0.03	0.0009888
Pb	208	3	He	0.141	0.0066	1080.09	0.0392	0.001024
Pb	208	3	He	0.147	0.0068	1190.10	0.0392	0.001024
Pb	208	3	He	0.095	0.0048	810.05	0.0392	0.001024
U	238	3	He	0.169	0.0076	2210.27	0.0439	0.000128
U	238	3	He	0.158	0.0071	2130.27	0.0439	0.000128
U	238	3	He	0.167	0.0075	2230.28	0.0439	0.000128
Sc	45	1	No Gas			3947247.75		
Sc	45	1	No Gas			4003631.82		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3911408.07		
Ge	72	1	No Gas			1768000.13		
Ge	72	1	No Gas			1802244.04		
Ge	72	1	No Gas			1786079.35		
Sc	45	2	H2			272163.08		
Sc	45	2	H2			276827.32		
Sc	45	2	H2			274905.21		
Ge	72	2	H2			200063.10		
Ge	72	2	H2			203245.76		
Ge	72	2	H2			199018.14		
In	115	2	H2			491870.46		
In	115	2	H2			494769.09		
In	115	2	H2			492767.18		
Sc	45	3	He			60897.29		
Sc	45	3	He			61478.67		
Sc	45	3	He			62594.40		
Ge	72	3	He			108083.68		
Ge	72	3	He			111176.39		
Ge	72	3	He			111126.28		
In	115	3	He			93834.73		
In	115	3	He			93259.74		
In	115	3	He			97488.53		
Tb	159	3	He			386295.81		
Tb	159	3	He			392356.40		
Tb	159	3	He			389894.10		
Bi	209	3	He			292262.79		
Bi	209	3	He			301932.57		
Bi	209	3	He			298565.15		

Quantitation Report

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Sample Type	Sample
Comment	T9
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

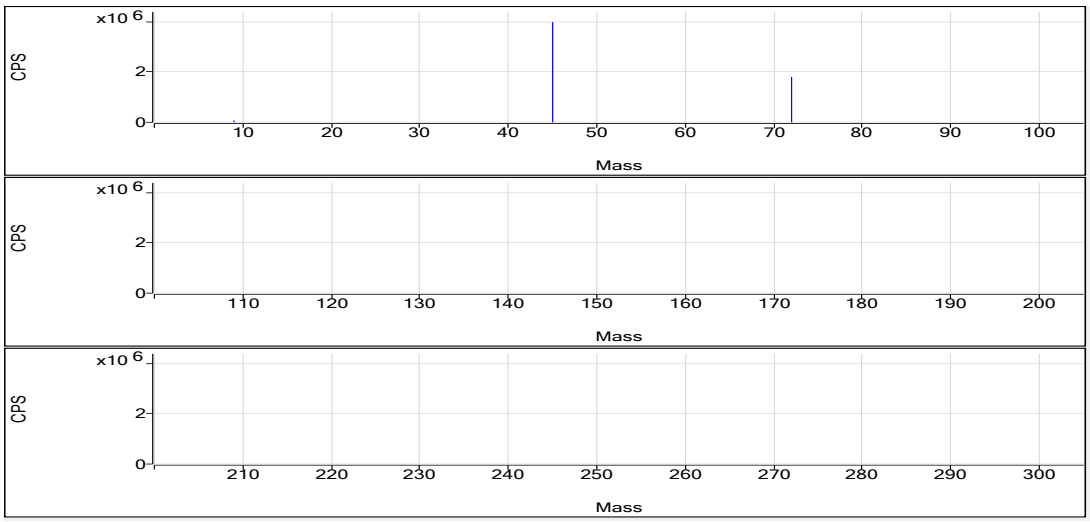
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	48.319	ppb	0.4	73758.12	0.0185	Pulse	0.5000	3
Se	78	72	H2	92.654	ppb	0.9	8108.50	0.0404	Pulse	1.5000	3
Na	23	45	He	6071.147	ppb	1.3	1298987.30	20.2008	Pulse	0.1000	3
Mg	24	45	He	24102.635	ppb	1.1	2444695.28	38.0176	Pulse	0.1000	3
Al	27	45	He	4757.592	ppb	1.1	137348.37	2.1359	Pulse	0.1000	3
K	39	45	He	6565.443	ppb	0.8	474247.95	7.3748	Pulse	0.1000	3
Ca	44	45	He	38127.871	ppb	1.4	149754.62	2.3289	Pulse	0.1000	3
Ti	47	45	He	492.609	ppb	4.6	14921.47	0.2321	Pulse	0.1000	3
V	51	45	He	472.161	ppb	1.4	643352.23	10.0050	Pulse	0.5000	3
Cr	52	45	He	469.709	ppb	1.6	842864.15	13.1079	Pulse	0.1000	3
Mn	55	45	He	475.813	ppb	1.8	348504.17	5.4197	Pulse	0.1000	3
Fe	57	45	He	4596.170	ppb	1.0	157054.05	2.4423	Pulse	0.1000	3
Co	59	45	He	462.386	ppb	1.2	1601749.87	24.9088	Pulse	0.1000	3
Ni	60	72	He	471.917	ppb	2.6	457902.03	4.1767	Pulse	0.1000	3
Cu	63	72	He	474.207	ppb	2.0	1306988.65	11.9210	Pulse	0.1000	3
Zn	66	72	He	483.807	ppb	2.4	144883.38	1.3215	Pulse	0.1000	3
As	75	72	He	480.752	ppb	2.0	100634.31	0.9179	Pulse	0.5000	3
Sr	88	115	He	67.450	ppb	1.8	56623.35	0.6058	Pulse	0.1000	3
Mo	98	115	He	47.916	ppb	1.7	101002.47	1.0805	Pulse	0.1000	3
Ag	107	115	He	45.732	ppb	1.3	205043.55	2.1935	Pulse	0.1000	3
Cd	111	115	He	45.624	ppb	0.8	23347.34	0.2498	Pulse	0.5000	3
Sn	120	115	He	91.975	ppb	2.2	136842.57	1.4639	Pulse	0.1000	3
Sb	121	115	He	89.225	ppb	1.1	115992.94	1.2409	Pulse	0.1000	3
Ba	137	115	He	487.165	ppb	1.4	206332.80	2.2074	Pulse	0.1000	3
Tl	205	209	He	94.697	ppb	1.0	840906.99	2.8433	Pulse	0.1000	3
Pb	208	209	He	47.324	ppb	0.6	549213.24	1.8569	Pulse	0.1000	3
U	238	209	He	47.628	ppb	0.7	618599.79	2.0916	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3983510.36	0.3	111.4	Pulse	0.1000	3
No Gas	Ge	72	1802096.27	0.3	110.7	Pulse	0.1000	3
H2	Sc	45	275510.75	1.6	105.4	Pulse	0.1000	3
H2	Ge	72	200785.68	0.5	107.0	Pulse	0.1000	3
H2	In	115	498325.72	0.9	105.6	Pulse	0.1000	3
He	Sc	45	64308.37	1.0	106.5	Pulse	0.1000	3
He	Ge	72	109658.79	1.4	105.9	Pulse	0.1000	3
He	In	115	93474.61	0.3	103.4	Pulse	0.1000	3
He	Tb	159	388796.26	0.9	103.3	Pulse	0.1000	3
He	Bi	209	295781.86	1.6	103.2	Pulse	0.1000	3

No Gas



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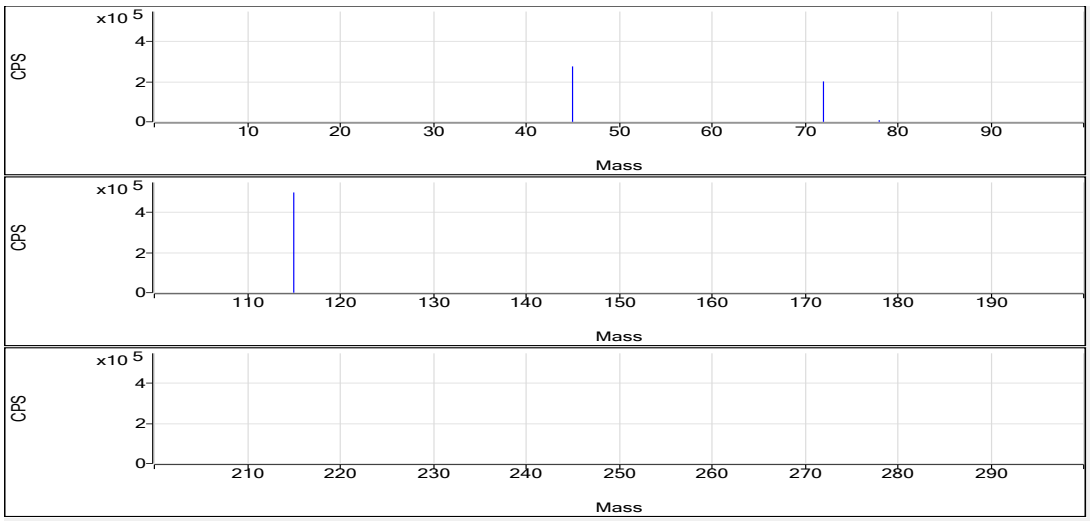
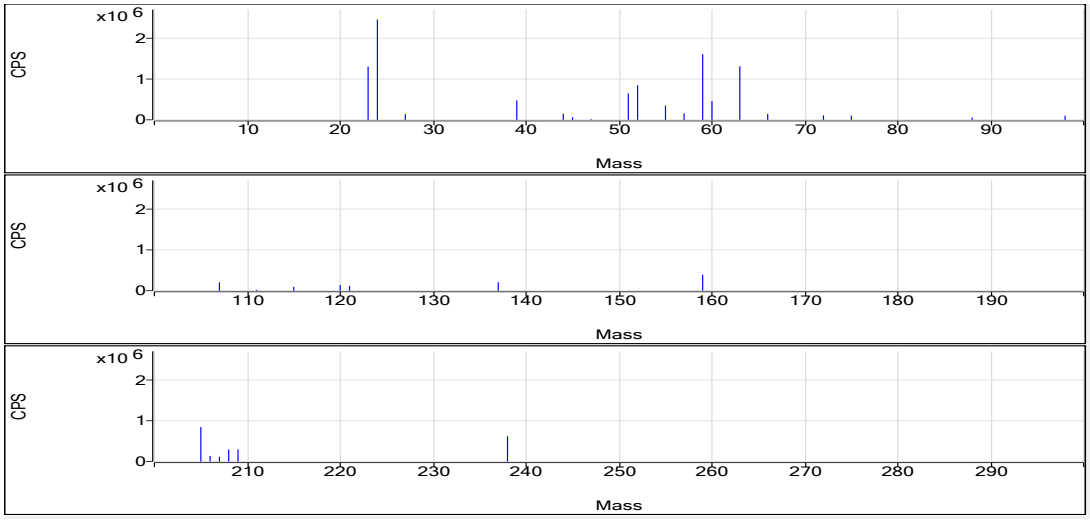


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	48.128	0.0184	73218.79	0.0004	7.085E-06
Be	9	1	No Gas	48.338	0.0185	74046.65	0.0004	7.085E-06
Be	9	1	No Gas	48.49	0.0186	74008.93	0.0004	7.085E-06
Se	78	2	H2	92.811	0.0405	8136.30	0.0004	2.372E-05
Se	78	2	H2	93.387	0.0407	8200.33	0.0004	2.372E-05
Se	78	2	H2	91.764	0.04	7988.88	0.0004	2.372E-05
Na	23	3	He	5982.278	19.9125	1293411.78	0.0032	0.5042
Na	23	3	He	6119.702	20.3584	1297222.32	0.0032	0.5042
Na	23	3	He	6111.46	20.3316	1306327.79	0.0032	0.5042
Mg	24	3	He	23796.146	37.5342	2438024.18	0.0016	0.002702
Mg	24	3	He	24253.824	38.2561	2437653.09	0.0016	0.002702
Mg	24	3	He	24257.935	38.2626	2458408.56	0.0016	0.002702
Al	27	3	He	4702.499	2.1112	137130.11	0.0004	0.00193
Al	27	3	He	4764.465	2.139	136293.13	0.0004	0.00193
Al	27	3	He	4805.812	2.1575	138621.87	0.0004	0.00193
K	39	3	He	6512.263	7.3172	475286.20	0.0011	0.2621
K	39	3	He	6567.073	7.3766	470030.62	0.0011	0.2621
K	39	3	He	6616.992	7.4307	477427.02	0.0011	0.2621
Ca	44	3	He	37495.247	2.2903	148766.85	0.0001	0.003476
Ca	44	3	He	38509.735	2.3522	149880.11	0.0001	0.003476
Ca	44	3	He	38378.631	2.3442	150616.90	0.0001	0.003476
Ti	47	3	He	477.634	0.225	14617.81	0.0005	0.000385
Ti	47	3	He	518.978	0.2445	15578.91	0.0005	0.000385
Ti	47	3	He	481.216	0.2267	14567.70	0.0005	0.000385
V	51	3	He	464.306	9.8387	639070.00	0.0212	0.007263
V	51	3	He	476.31	10.0929	643112.69	0.0212	0.007263
V	51	3	He	475.866	10.0835	647874.00	0.0212	0.007263
Cr	52	3	He	461.326	12.8748	836276.24	0.0278	0.04283
Cr	52	3	He	476.03	13.2837	846431.55	0.0278	0.04283
Cr	52	3	He	471.772	13.1653	845884.67	0.0278	0.04283
Mn	55	3	He	467.031	5.3197	345541.28	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	476.757	5.4304	346021.83	0.0114	0.005023
Mn	55	3	He	483.65	5.5089	353949.41	0.0114	0.005023
Fe	57	3	He	4546.254	2.4158	156919.84	0.0005	0.003255
Fe	57	3	He	4613.285	2.4514	156202.09	0.0005	0.003255
Fe	57	3	He	4628.971	2.4597	158040.21	0.0005	0.003255
Co	59	3	He	456.206	24.576	1596325.60	0.0539	0.00425
Co	59	3	He	464.198	25.0065	1593395.91	0.0539	0.00425
Co	59	3	He	466.752	25.144	1615528.10	0.0539	0.00425
Ni	60	3	He	457.779	4.052	450769.49	0.0088	0.01412
Ni	60	3	He	480.677	4.2539	459952.81	0.0088	0.01412
Ni	60	3	He	477.295	4.2241	462983.78	0.0088	0.01412
Cu	63	3	He	464.018	11.6649	1297686.78	0.0251	0.004537
Cu	63	3	He	482.963	12.141	1312731.39	0.0251	0.004537
Cu	63	3	He	475.641	11.957	1310547.79	0.0251	0.004537
Zn	66	3	He	470.952	1.2864	143113.52	0.0027	0.001642
Zn	66	3	He	493.715	1.3485	145810.21	0.0027	0.001642
Zn	66	3	He	486.755	1.3296	145726.41	0.0027	0.001642
As	75	3	He	470.002	0.8974	99827.96	0.0019	0.000463
As	75	3	He	487.89	0.9315	100716.19	0.0019	0.000463
As	75	3	He	484.366	0.9248	101358.78	0.0019	0.000463
Sr	88	3	He	67.071	0.6024	56121.36	0.009	0.001142
Sr	88	3	He	66.441	0.5967	55900.52	0.009	0.001142
Sr	88	3	He	68.839	0.6182	57848.17	0.009	0.001142
Mo	98	3	He	47.386	1.0686	99559.30	0.0225	0.001842
Mo	98	3	He	47.519	1.0716	100384.33	0.0225	0.001842
Mo	98	3	He	48.844	1.1014	103063.79	0.0225	0.001842
Ag	107	3	He	45.061	2.1613	201368.73	0.048	0.0004774
Ag	107	3	He	46.22	2.2169	207682.77	0.048	0.0004774
Ag	107	3	He	45.915	2.2023	206079.16	0.048	0.0004774
Cd	111	3	He	45.354	0.2483	23132.97	0.0055	7.481E-06
Cd	111	3	He	46.064	0.2522	23623.83	0.0055	7.481E-06
Cd	111	3	He	45.455	0.2488	23285.22	0.0055	7.481E-06
Sn	120	3	He	89.632	1.4271	132958.85	0.0157	0.01844
Sn	120	3	He	92.854	1.4777	138431.35	0.0157	0.01844
Sn	120	3	He	93.44	1.4869	139137.52	0.0157	0.01844
Sb	121	3	He	88.264	1.2275	114366.96	0.0139	0.0002204
Sb	121	3	He	89.136	1.2396	116130.33	0.0139	0.0002204
Sb	121	3	He	90.275	1.2555	117481.53	0.0139	0.0002204
Ba	137	3	He	486.406	2.2039	205338.75	0.0045	0.001994
Ba	137	3	He	480.784	2.1785	204081.50	0.0045	0.001994
Ba	137	3	He	494.304	2.2397	209578.16	0.0045	0.001994
Tl	205	3	He	95.755	2.875	835257.25	0.03	0.0009888
Tl	205	3	He	94.033	2.8233	838193.74	0.03	0.0009888
Tl	205	3	He	94.303	2.8314	849269.99	0.03	0.0009888
Pb	208	3	He	47.604	1.8679	289816.64	0.0392	0.001024
Pb	208	3	He	47.3	1.856	295203.78	0.0392	0.001024
Pb	208	3	He	47.067	1.8469	298861.17	0.0392	0.001024
U	238	3	He	48.029	2.1092	612763.08	0.0439	0.000128
U	238	3	He	47.452	2.0838	618652.30	0.0439	0.000128
U	238	3	He	47.403	2.0817	624383.98	0.0439	0.000128
Sc	45	1	No Gas			3970035.88		
Sc	45	1	No Gas			3997517.44		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3982977.75		
Ge	72	1	No Gas			1799203.88		
Ge	72	1	No Gas			1798418.72		
Ge	72	1	No Gas			1808666.22		
Sc	45	2	H2			271800.00		
Sc	45	2	H2			280374.98		
Sc	45	2	H2			274357.26		
Ge	72	2	H2			201138.47		
Ge	72	2	H2			201471.75		
Ge	72	2	H2			199746.83		
In	115	2	H2			498229.80		
In	115	2	H2			502858.43		
In	115	2	H2			493888.94		
Sc	45	3	He			64954.71		
Sc	45	3	He			63719.38		
Sc	45	3	He			64251.03		
Ge	72	3	He			111247.14		
Ge	72	3	He			108124.06		
Ge	72	3	He			109605.18		
In	115	3	He			94206.01		
In	115	3	He			94760.14		
In	115	3	He			94659.80		
Tb	159	3	He			385066.52		
Tb	159	3	He			389027.92		
Tb	159	3	He			392294.33		
Bi	209	3	He			290522.24		
Bi	209	3	He			296880.35		
Bi	209	3	He			299943.00		

Quantitation Report

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Sample Type	Sample
Comment	T9
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

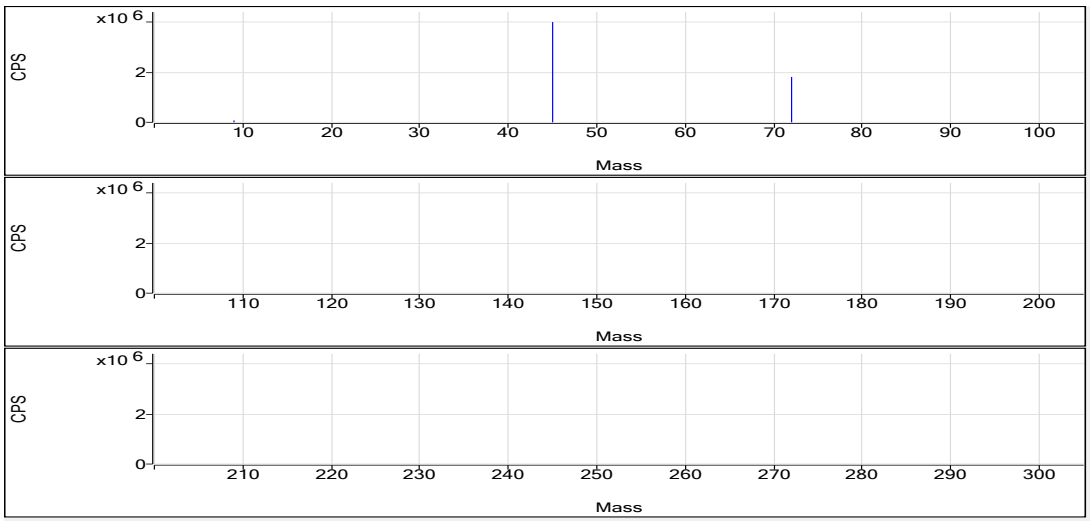
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	47.719	ppb	0.8	73399.70	0.0183	Pulse	0.5000	3
Se	78	72	H2	93.137	ppb	0.3	8086.72	0.0406	Pulse	1.5000	3
Na	23	45	He	6075.274	ppb	0.9	1281409.17	20.2142	Pulse	0.1000	3
Mg	24	45	He	24265.627	ppb	0.7	2426317.98	38.2747	Pulse	0.1000	3
Al	27	45	He	4783.350	ppb	0.8	136129.91	2.1474	Pulse	0.1000	3
K	39	45	He	6592.793	ppb	1.2	469381.10	7.4044	Pulse	0.1000	3
Ca	44	45	He	38409.976	ppb	1.2	148720.95	2.3461	Pulse	0.1000	3
Ti	47	45	He	487.478	ppb	3.0	14561.00	0.2297	Pulse	0.1000	3
V	51	45	He	467.998	ppb	0.7	628649.23	9.9169	Pulse	0.5000	3
Cr	52	45	He	460.584	ppb	0.4	814860.59	12.8541	Pulse	0.1000	3
Mn	55	45	He	473.235	ppb	0.6	341713.32	5.3903	Pulse	0.1000	3
Fe	57	45	He	4639.592	ppb	0.8	156285.79	2.4654	Pulse	0.1000	3
Co	59	45	He	459.768	ppb	1.1	1570065.86	24.7678	Pulse	0.1000	3
Ni	60	72	He	464.645	ppb	0.9	449891.94	4.1125	Pulse	0.1000	3
Cu	63	72	He	466.294	ppb	0.5	1282352.32	11.7221	Pulse	0.1000	3
Zn	66	72	He	475.202	ppb	1.0	142002.16	1.2980	Pulse	0.1000	3
As	75	72	He	476.565	ppb	0.4	99537.59	0.9099	Pulse	0.5000	3
Sr	88	115	He	65.938	ppb	1.0	55813.37	0.5922	Pulse	0.1000	3
Mo	98	115	He	46.400	ppb	0.6	98616.09	1.0464	Pulse	0.1000	3
Ag	107	115	He	44.976	ppb	0.5	203318.10	2.1573	Pulse	0.1000	3
Cd	111	115	He	44.445	ppb	1.2	22931.36	0.2433	Pulse	0.5000	3
Sn	120	115	He	91.310	ppb	1.6	136982.12	1.4534	Pulse	0.1000	3
Sb	121	115	He	88.610	ppb	0.9	116143.82	1.2323	Pulse	0.1000	3
Ba	137	115	He	478.154	ppb	0.9	204202.78	2.1666	Pulse	0.1000	3
Tl	205	209	He	94.200	ppb	1.6	833215.07	2.8284	Pulse	0.1000	3
Pb	208	209	He	46.966	ppb	1.3	542904.43	1.8429	Pulse	0.1000	3
U	238	209	He	46.941	ppb	1.7	607252.49	2.0614	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	4013940.46	0.3	112.3	Pulse	0.1000	3
No Gas	Ge	72	1816239.50	0.4	111.6	Pulse	0.1000	3
H2	Sc	45	270645.79	0.9	103.5	Pulse	0.1000	3
H2	Ge	72	199216.54	0.6	106.2	Pulse	0.1000	3
H2	In	115	497280.72	0.7	105.4	Pulse	0.1000	3
He	Sc	45	63394.07	0.7	104.9	Pulse	0.1000	3
He	Ge	72	109397.02	0.2	105.6	Pulse	0.1000	3
He	In	115	94248.24	0.6	104.3	Pulse	0.1000	3
He	Tb	159	387719.85	0.6	103.0	Pulse	0.1000	3
He	Bi	209	294618.85	1.0	102.8	Pulse	0.1000	3

No Gas



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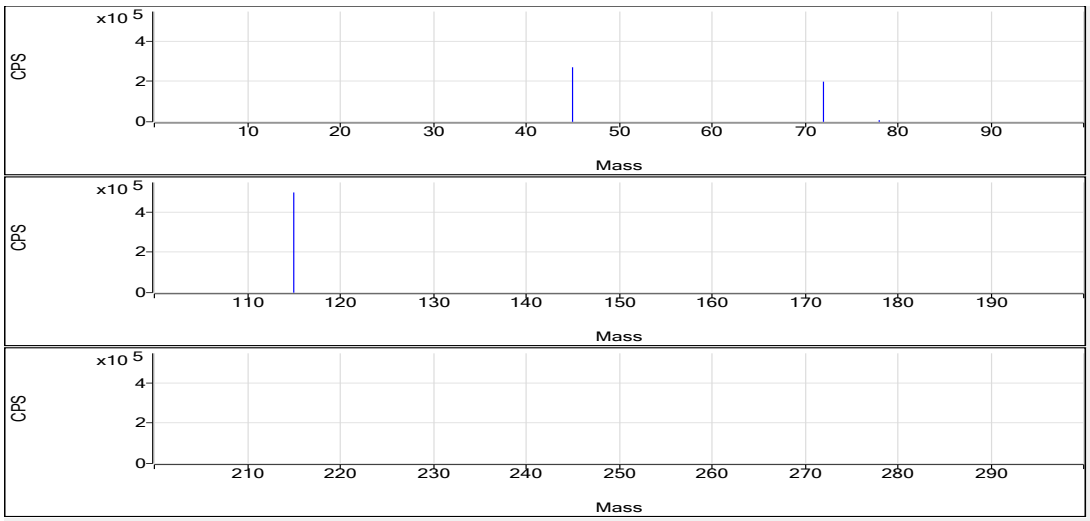
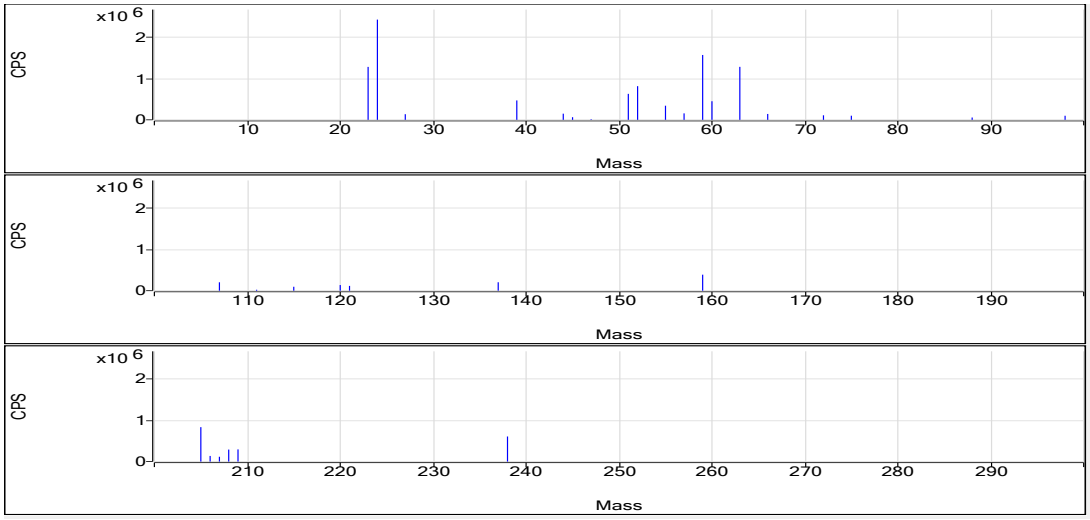


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	47.331	0.0181	72569.83	0.0004	7.085E-06
Be	9	1	No Gas	48.109	0.0184	74141.31	0.0004	7.085E-06
Be	9	1	No Gas	47.716	0.0183	73487.95	0.0004	7.085E-06
Se	78	2	H2	93.483	0.0407	8061.59	0.0004	2.372E-05
Se	78	2	H2	92.966	0.0405	8106.30	0.0004	2.372E-05
Se	78	2	H2	92.961	0.0405	8092.28	0.0004	2.372E-05
Na	23	3	He	6078.74	20.2255	1281219.36	0.0032	0.5042
Na	23	3	He	6019.782	20.0342	1279573.65	0.0032	0.5042
Na	23	3	He	6127.301	20.383	1283434.51	0.0032	0.5042
Mg	24	3	He	24372.968	38.444	2435304.65	0.0016	0.002702
Mg	24	3	He	24072.939	37.9708	2425174.18	0.0016	0.002702
Mg	24	3	He	24350.974	38.4093	2418475.12	0.0016	0.002702
Al	27	3	He	4765.497	2.1394	135525.59	0.0004	0.00193
Al	27	3	He	4758.472	2.1363	136442.52	0.0004	0.00193
Al	27	3	He	4826.082	2.1666	136421.63	0.0004	0.00193
K	39	3	He	6672.964	7.4913	474549.41	0.0011	0.2621
K	39	3	He	6509.264	7.3139	467137.92	0.0011	0.2621
K	39	3	He	6596.152	7.4081	466455.97	0.0011	0.2621
Ca	44	3	He	38503.271	2.3518	148978.83	0.0001	0.003476
Ca	44	3	He	37921.104	2.3163	147940.24	0.0001	0.003476
Ca	44	3	He	38805.554	2.3702	149243.77	0.0001	0.003476
Ti	47	3	He	501.87	0.2364	14978.08	0.0005	0.000385
Ti	47	3	He	487.76	0.2298	14677.79	0.0005	0.000385
Ti	47	3	He	472.803	0.2228	14027.14	0.0005	0.000385
V	51	3	He	468.173	9.9206	628437.81	0.0212	0.007263
V	51	3	He	464.469	9.8422	628613.75	0.0212	0.007263
V	51	3	He	471.351	9.9879	628896.13	0.0212	0.007263
Cr	52	3	He	460.061	12.8396	813346.32	0.0278	0.04283
Cr	52	3	He	459.168	12.8147	818470.07	0.0278	0.04283
Cr	52	3	He	462.522	12.908	812765.38	0.0278	0.04283
Mn	55	3	He	470.192	5.3557	339266.48	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	474.071	5.3998	344885.31	0.0114	0.005023
Mn	55	3	He	475.442	5.4154	340988.16	0.0114	0.005023
Fe	57	3	He	4611.549	2.4505	155230.46	0.0005	0.003255
Fe	57	3	He	4627.499	2.4589	157051.83	0.0005	0.003255
Fe	57	3	He	4679.727	2.4867	156575.09	0.0005	0.003255
Co	59	3	He	456.863	24.6114	1559051.70	0.0539	0.00425
Co	59	3	He	456.817	24.6089	1571756.23	0.0539	0.00425
Co	59	3	He	465.624	25.0833	1579389.66	0.0539	0.00425
Ni	60	3	He	459.896	4.0706	446410.77	0.0088	0.01412
Ni	60	3	He	467.303	4.136	452405.77	0.0088	0.01412
Ni	60	3	He	466.735	4.131	450859.29	0.0088	0.01412
Cu	63	3	He	463.838	11.6604	1278749.43	0.0251	0.004537
Cu	63	3	He	466.665	11.7314	1283220.61	0.0251	0.004537
Cu	63	3	He	468.379	11.7745	1285086.93	0.0251	0.004537
Zn	66	3	He	478.354	1.3066	143294.32	0.0027	0.001642
Zn	66	3	He	469.513	1.2825	140286.27	0.0027	0.001642
Zn	66	3	He	477.74	1.305	142425.88	0.0027	0.001642
As	75	3	He	475.165	0.9072	99489.77	0.0019	0.000463
As	75	3	He	478.692	0.9139	99969.18	0.0019	0.000463
As	75	3	He	475.837	0.9085	99153.83	0.0019	0.000463
Sr	88	3	He	66.542	0.5976	55950.27	0.009	0.001142
Sr	88	3	He	66.049	0.5932	56262.17	0.009	0.001142
Sr	88	3	He	65.224	0.5858	55227.67	0.009	0.001142
Mo	98	3	He	46.659	1.0522	98510.98	0.0225	0.001842
Mo	98	3	He	46.09	1.0394	98582.90	0.0225	0.001842
Mo	98	3	He	46.449	1.0475	98754.39	0.0225	0.001842
Ag	107	3	He	44.95	2.156	201852.56	0.048	0.0004774
Ag	107	3	He	44.769	2.1473	203666.75	0.048	0.0004774
Ag	107	3	He	45.209	2.1685	204434.98	0.048	0.0004774
Cd	111	3	He	45.021	0.2465	23074.95	0.0055	7.481E-06
Cd	111	3	He	44.402	0.2431	23054.88	0.0055	7.481E-06
Cd	111	3	He	43.913	0.2404	22664.26	0.0055	7.481E-06
Sn	120	3	He	90.89	1.4468	135456.04	0.0157	0.01844
Sn	120	3	He	90.128	1.4349	136090.68	0.0157	0.01844
Sn	120	3	He	92.912	1.4786	139399.65	0.0157	0.01844
Sb	121	3	He	89.377	1.243	116372.72	0.0139	0.0002204
Sb	121	3	He	88.72	1.2339	117026.46	0.0139	0.0002204
Sb	121	3	He	87.734	1.2202	115032.29	0.0139	0.0002204
Ba	137	3	He	473.395	2.145	200822.97	0.0045	0.001994
Ba	137	3	He	479.834	2.1742	206212.28	0.0045	0.001994
Ba	137	3	He	481.235	2.1805	205573.08	0.0045	0.001994
Tl	205	3	He	92.504	2.7775	826256.47	0.03	0.0009888
Tl	205	3	He	95.033	2.8534	832095.07	0.03	0.0009888
Tl	205	3	He	95.062	2.8542	841293.66	0.03	0.0009888
Pb	208	3	He	46.285	1.8162	289741.75	0.0392	0.001024
Pb	208	3	He	47.498	1.8638	290575.11	0.0392	0.001024
Pb	208	3	He	47.115	1.8487	290981.52	0.0392	0.001024
U	238	3	He	46.053	2.0224	601630.62	0.0439	0.000128
U	238	3	He	47.672	2.0935	610500.26	0.0439	0.000128
U	238	3	He	47.098	2.0683	609626.59	0.0439	0.000128
Sc	45	1	No Gas			4001093.69		
Sc	45	1	No Gas			4021664.32		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			4019063.38		
Ge	72	1	No Gas			1810434.35		
Ge	72	1	No Gas			1825296.69		
Ge	72	1	No Gas			1812987.47		
Sc	45	2	H2			269792.36		
Sc	45	2	H2			268847.91		
Sc	45	2	H2			273297.09		
Ge	72	2	H2			197860.06		
Ge	72	2	H2			200061.97		
Ge	72	2	H2			199727.59		
In	115	2	H2			498714.91		
In	115	2	H2			499792.02		
In	115	2	H2			493335.23		
Sc	45	3	He			63346.83		
Sc	45	3	He			63869.49		
Sc	45	3	He			62965.88		
Ge	72	3	He			109666.21		
Ge	72	3	He			109383.27		
Ge	72	3	He			109141.57		
In	115	3	He			94678.76		
In	115	3	He			95907.24		
In	115	3	He			95364.10		
Tb	159	3	He			390439.80		
Tb	159	3	He			387002.46		
Tb	159	3	He			385717.30		
Bi	209	3	He			297485.93		
Bi	209	3	He			291618.71		
Bi	209	3	He			294751.91		

Quantitation Report

Data File Name	232_CCV.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23J26A00.b
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Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

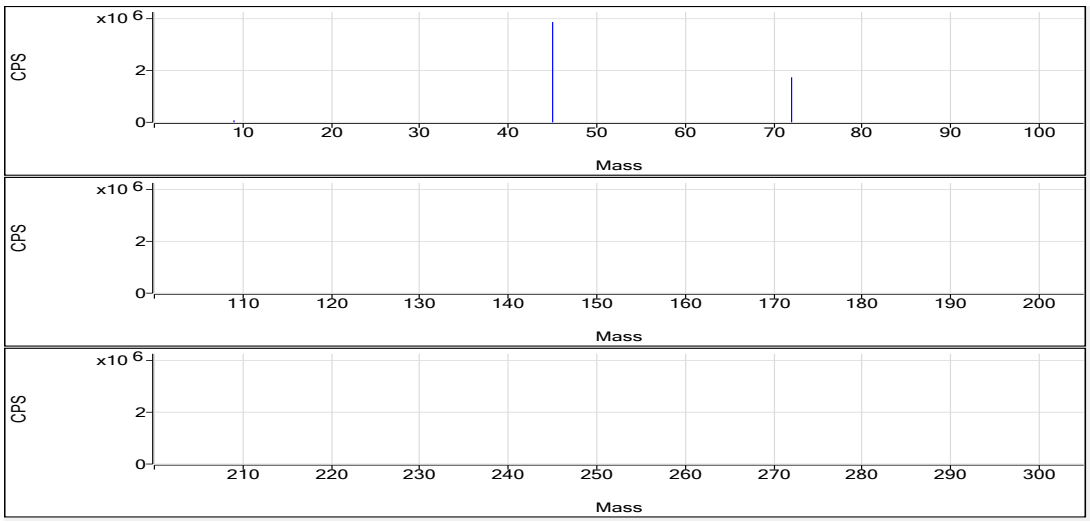
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.676	ppb	0.5	75475.84	0.0194	Pulse	0.5000	3
Se	78	72	H2	51.579	ppb	1.5	4334.44	0.0225	Pulse	1.5000	3
Na	23	45	He	5096.135	ppb	0.6	1060912.82	17.0376	Pulse	0.1000	3
Mg	24	45	He	5088.393	ppb	0.7	499906.40	8.0282	Pulse	0.1000	3
Al	27	45	He	5166.566	ppb	0.6	144421.03	2.3193	Pulse	0.1000	3
K	39	45	He	5164.147	ppb	0.9	364689.23	5.8567	Pulse	0.1000	3
Ca	44	45	He	4912.361	ppb	0.9	18872.70	0.3031	Pulse	0.1000	3
Ti	47	45	He	5133.415	ppb	0.8	150376.60	2.4149	Pulse	0.1000	3
V	51	45	He	508.557	ppb	0.4	670993.83	10.7757	Pulse	0.5000	3
Cr	52	45	He	508.594	ppb	0.6	883584.23	14.1895	Pulse	0.1000	3
Mn	55	45	He	508.803	ppb	1.0	360861.65	5.7951	Pulse	0.1000	3
Fe	57	45	He	5029.049	ppb	0.9	166389.12	2.6720	Pulse	0.1000	3
Co	59	45	He	511.787	ppb	0.9	1716778.21	27.5696	Pulse	0.1000	3
Ni	60	72	He	515.929	ppb	1.0	490091.70	4.5649	Pulse	0.1000	3
Cu	63	72	He	514.422	ppb	1.3	1388310.81	12.9315	Pulse	0.1000	3
Zn	66	72	He	509.463	ppb	2.3	149381.72	1.3915	Pulse	0.1000	3
As	75	72	He	510.595	ppb	1.1	104656.73	0.9748	Pulse	0.5000	3
Sr	88	115	He	49.817	ppb	0.3	41384.30	0.4477	Pulse	0.1000	3
Mo	98	115	He	48.855	ppb	0.5	101831.99	1.1017	Pulse	0.1000	3
Ag	107	115	He	48.927	ppb	0.6	216921.88	2.3467	Pulse	0.1000	3
Cd	111	115	He	48.877	ppb	1.1	24733.73	0.2676	Pulse	0.5000	3
Sn	120	115	He	49.091	ppb	0.5	73021.77	0.7899	Pulse	0.1000	3
Sb	121	115	He	49.193	ppb	1.2	63247.42	0.6842	Pulse	0.1000	3
Ba	137	115	He	493.877	ppb	1.1	206855.23	2.2378	Pulse	0.1000	3
Tl	205	209	He	50.954	ppb	1.7	445657.87	1.5303	Pulse	0.1000	3
Pb	208	209	He	51.239	ppb	1.5	585470.42	2.0105	Pulse	0.1000	3
U	238	209	He	50.946	ppb	0.7	651523.19	2.2373	Pulse	0.1000	3

ISTD Table:

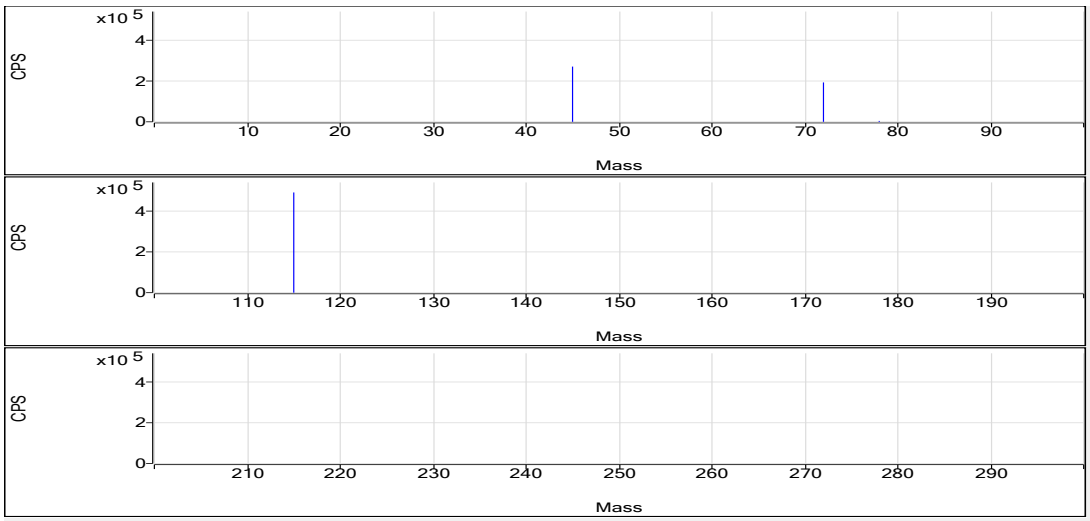
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3886729.94	1.1	108.7	Pulse	0.1000	3
No Gas	Ge	72	1743804.50	1.2	107.1	Pulse	0.1000	3
H2	Sc	45	270196.93	0.6	103.3	Pulse	0.1000	3
H2	Ge	72	192708.47	0.5	102.7	Pulse	0.1000	3
H2	In	115	490343.45	1.0	104.0	Pulse	0.1000	3
He	Sc	45	62269.60	0.3	103.1	Pulse	0.1000	3
He	Ge	72	107364.87	0.9	103.6	Pulse	0.1000	3
He	In	115	92438.28	1.2	102.3	Pulse	0.1000	3
He	Tb	159	382942.49	1.0	101.8	Pulse	0.1000	3
He	Bi	209	291217.94	0.3	101.6	Pulse	0.1000	3

No Gas

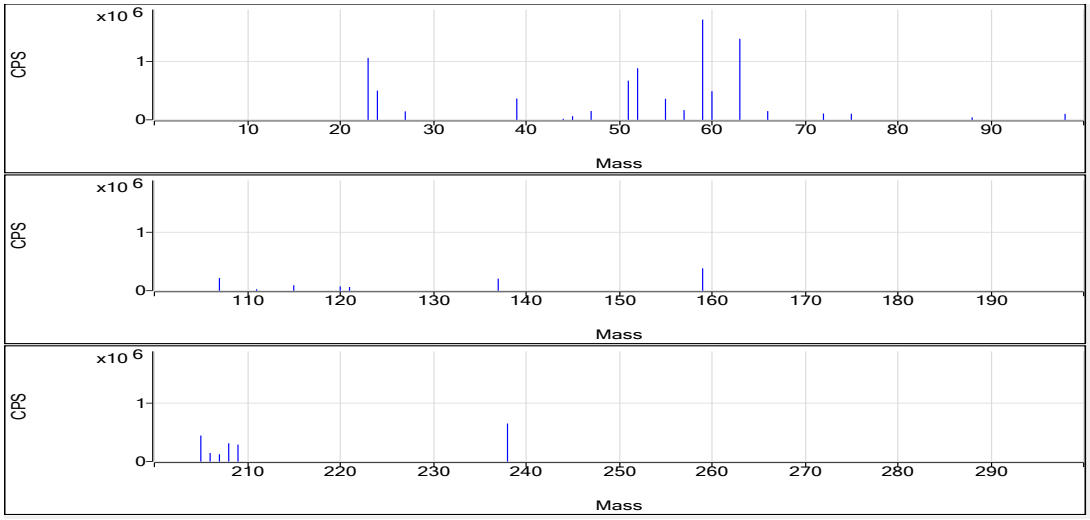


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.786	0.0195	74834.50	0.0004	7.085E-06
Be	9	1	No Gas	50.392	0.0193	74937.37	0.0004	7.085E-06
Be	9	1	No Gas	50.849	0.0195	76655.66	0.0004	7.085E-06
Se	78	2	H2	52.215	0.0228	4400.68	0.0004	2.372E-05
Se	78	2	H2	51.807	0.0226	4365.33	0.0004	2.372E-05
Se	78	2	H2	50.716	0.0221	4237.30	0.0004	2.372E-05
Na	23	3	He	5108.75	17.0785	1061308.58	0.0032	0.5042
Na	23	3	He	5116.807	17.1047	1063607.48	0.0032	0.5042
Na	23	3	He	5062.847	16.9296	1057822.41	0.0032	0.5042
Mg	24	3	He	5078.868	8.0131	497959.72	0.0016	0.002702
Mg	24	3	He	5125.799	8.0872	502878.47	0.0016	0.002702
Mg	24	3	He	5060.512	7.9842	498881.01	0.0016	0.002702
Al	27	3	He	5180.224	2.3254	144509.63	0.0004	0.00193
Al	27	3	He	5191.012	2.3303	144902.20	0.0004	0.00193
Al	27	3	He	5128.462	2.3022	143851.27	0.0004	0.00193
K	39	3	He	5208.929	5.9052	366967.77	0.0011	0.2621
K	39	3	He	5166.875	5.8597	364367.61	0.0011	0.2621
K	39	3	He	5116.636	5.8052	362732.30	0.0011	0.2621
Ca	44	3	He	4956.873	0.3058	19003.06	0.0001	0.003476
Ca	44	3	He	4871.777	0.3006	18692.39	0.0001	0.003476
Ca	44	3	He	4908.435	0.3028	18922.66	0.0001	0.003476
Ti	47	3	He	5182.92	2.4382	151518.93	0.0005	0.000385
Ti	47	3	He	5105.688	2.4019	149356.18	0.0005	0.000385
Ti	47	3	He	5111.637	2.4047	150254.70	0.0005	0.000385
V	51	3	He	510.625	10.8195	672353.44	0.0212	0.007263
V	51	3	He	508.501	10.7745	669983.44	0.0212	0.007263
V	51	3	He	506.547	10.7331	670644.63	0.0212	0.007263
Cr	52	3	He	509.146	14.2049	882731.86	0.0278	0.04283
Cr	52	3	He	505.161	14.094	876399.44	0.0278	0.04283
Cr	52	3	He	511.476	14.2697	891621.39	0.0278	0.04283
Mn	55	3	He	510.58	5.8153	361379.84	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	503.186	5.7312	356376.87	0.0114	0.005023
Mn	55	3	He	512.643	5.8388	364828.24	0.0114	0.005023
Fe	57	3	He	4976.318	2.6441	164309.43	0.0005	0.003255
Fe	57	3	He	5048.221	2.6822	166786.36	0.0005	0.003255
Fe	57	3	He	5062.609	2.6899	168071.58	0.0005	0.003255
Co	59	3	He	506.685	27.2948	1696177.79	0.0539	0.00425
Co	59	3	He	512.461	27.6059	1716600.76	0.0539	0.00425
Co	59	3	He	516.216	27.8082	1737556.07	0.0539	0.00425
Ni	60	3	He	509.837	4.5111	487444.41	0.0088	0.01412
Ni	60	3	He	518.126	4.5843	487356.01	0.0088	0.01412
Ni	60	3	He	519.823	4.5992	495474.68	0.0088	0.01412
Cu	63	3	He	506.545	12.7336	1375908.73	0.0251	0.004537
Cu	63	3	He	519.412	13.0569	1388091.39	0.0251	0.004537
Cu	63	3	He	517.31	13.0041	1400932.32	0.0251	0.004537
Zn	66	3	He	506.744	1.3841	149555.89	0.0027	0.001642
Zn	66	3	He	522.309	1.4266	151658.36	0.0027	0.001642
Zn	66	3	He	499.336	1.3639	146930.92	0.0027	0.001642
As	75	3	He	504.346	0.9629	104043.77	0.0019	0.000463
As	75	3	He	513.868	0.9811	104297.41	0.0019	0.000463
As	75	3	He	513.572	0.9805	105629.01	0.0019	0.000463
Sr	88	3	He	49.732	0.4469	40809.38	0.009	0.001142
Sr	88	3	He	49.716	0.4468	41751.97	0.009	0.001142
Sr	88	3	He	50.003	0.4494	41591.56	0.009	0.001142
Mo	98	3	He	48.96	1.104	100808.06	0.0225	0.001842
Mo	98	3	He	48.561	1.095	102328.54	0.0225	0.001842
Mo	98	3	He	49.045	1.1059	102359.36	0.0225	0.001842
Ag	107	3	He	49.01	2.3507	214645.86	0.048	0.0004774
Ag	107	3	He	48.593	2.3307	217803.36	0.048	0.0004774
Ag	107	3	He	49.177	2.3587	218316.42	0.048	0.0004774
Cd	111	3	He	48.818	0.2673	24403.16	0.0055	7.481E-06
Cd	111	3	He	48.367	0.2648	24743.75	0.0055	7.481E-06
Cd	111	3	He	49.446	0.2707	25054.29	0.0055	7.481E-06
Sn	120	3	He	48.879	0.7866	71825.63	0.0157	0.01844
Sn	120	3	He	49.062	0.7895	73775.86	0.0157	0.01844
Sn	120	3	He	49.332	0.7937	73463.82	0.0157	0.01844
Sb	121	3	He	49.265	0.6853	62570.76	0.0139	0.0002204
Sb	121	3	He	48.571	0.6756	63133.93	0.0139	0.0002204
Sb	121	3	He	49.742	0.6919	64037.56	0.0139	0.0002204
Ba	137	3	He	491.164	2.2255	203209.18	0.0045	0.001994
Ba	137	3	He	490.443	2.2222	207662.46	0.0045	0.001994
Ba	137	3	He	500.025	2.2656	209694.04	0.0045	0.001994
Tl	205	3	He	50.057	1.5034	438782.73	0.03	0.0009888
Tl	205	3	He	51.073	1.5339	445421.09	0.03	0.0009888
Tl	205	3	He	51.73	1.5537	452769.80	0.03	0.0009888
Pb	208	3	He	50.343	1.9753	308227.34	0.0392	0.001024
Pb	208	3	He	51.76	2.0309	313937.05	0.0392	0.001024
Pb	208	3	He	51.614	2.0252	317433.57	0.0392	0.001024
U	238	3	He	50.513	2.2182	647398.31	0.0439	0.000128
U	238	3	He	51.159	2.2466	652361.67	0.0439	0.000128
U	238	3	He	51.166	2.2469	654809.60	0.0439	0.000128
Sc	45	1	No Gas			3845362.13		
Sc	45	1	No Gas			3880791.50		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3934036.19		
Ge	72	1	No Gas			1723884.35		
Ge	72	1	No Gas			1742364.97		
Ge	72	1	No Gas			1765164.19		
Sc	45	2	H2			269317.77		
Sc	45	2	H2			271988.45		
Sc	45	2	H2			269284.57		
Ge	72	2	H2			193284.10		
Ge	72	2	H2			193240.52		
Ge	72	2	H2			191600.80		
In	115	2	H2			496069.41		
In	115	2	H2			487954.41		
In	115	2	H2			487006.52		
Sc	45	3	He			62142.88		
Sc	45	3	He			62182.31		
Sc	45	3	He			62483.60		
Ge	72	3	He			108053.59		
Ge	72	3	He			106310.90		
Ge	72	3	He			107730.11		
In	115	3	He			91870.63		
In	115	3	He			94023.85		
In	115	3	He			93129.07		
Tb	159	3	He			379028.47		
Tb	159	3	He			383414.37		
Tb	159	3	He			386384.64		
Bi	209	3	He			291853.04		
Bi	209	3	He			290378.12		
Bi	209	3	He			291422.67		

Quantitation Report

Data File Name	233_CCB.d
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Sample Name	CCB 4993845
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

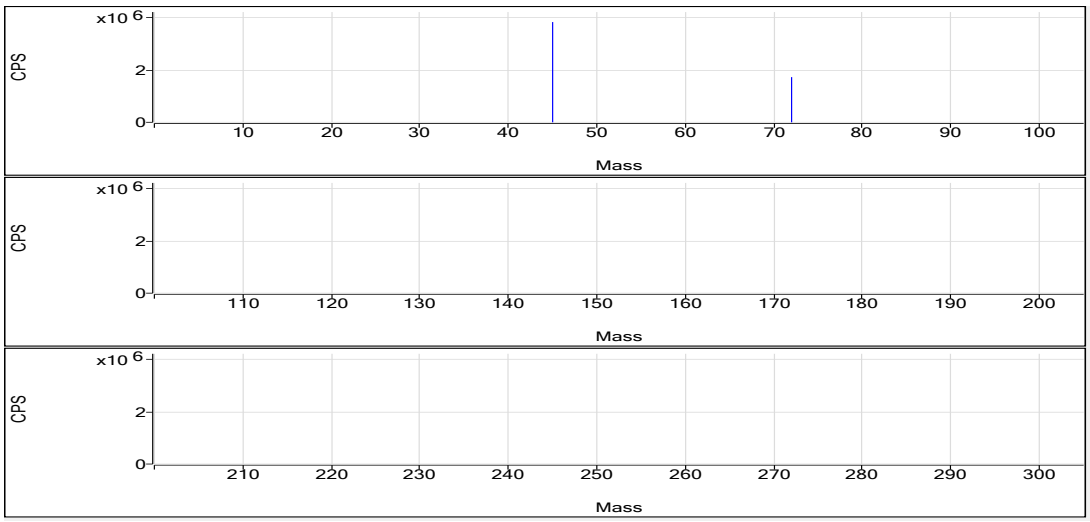
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.013	ppb	26.9	46.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.044	ppb	128.7	8.22	0.0000	Pulse	1.5000	3
Na	23	45	He	3.840	ppb	211.5	31871.44	0.5166	Pulse	0.1000	3
Mg	24	45	He	7.452	ppb	21.9	890.06	0.0145	Pulse	0.1000	3
Al	27	45	He	1.724	ppb	158.8	166.67	0.0027	Pulse	0.1000	3
K	39	45	He	19.035	ppb	187.6	17407.49	0.2828	Pulse	0.1000	3
Ca	44	45	He	-8.244	ppb	N/A	183.34	0.0030	Pulse	0.1000	3
Ti	47	45	He	2.266	ppb	25.9	90.00	0.0015	Pulse	0.1000	3
V	51	45	He	0.153	ppb	34.4	647.35	0.0105	Pulse	0.5000	3
Cr	52	45	He	0.072	ppb	110.1	2767.01	0.0448	Pulse	0.1000	3
Mn	55	45	He	0.169	ppb	34.7	430.02	0.0069	Pulse	0.1000	3
Fe	57	45	He	4.109	ppb	79.6	333.35	0.0054	Pulse	0.1000	3
Co	59	45	He	0.147	ppb	25.1	750.05	0.0122	Pulse	0.1000	3
Ni	60	72	He	0.055	ppb	120.0	1563.47	0.0146	Pulse	0.1000	3
Cu	63	72	He	0.118	ppb	39.6	803.38	0.0075	Pulse	0.1000	3
Zn	66	72	He	-0.008	ppb	N/A	173.34	0.0016	Pulse	0.1000	3
As	75	72	He	0.156	ppb	69.2	81.33	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.013	ppb	52.1	116.67	0.0013	Pulse	0.1000	3
Mo	98	115	He	0.269	ppb	25.0	733.38	0.0079	Pulse	0.1000	3
Ag	107	115	He	0.005	ppb	168.1	66.67	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.004	ppb	57.1	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.049	ppb	247.8	1786.85	0.0192	Pulse	0.1000	3
Sb	121	115	He	0.074	ppb	22.2	116.67	0.0013	Pulse	0.1000	3
Ba	137	115	He	0.098	ppb	68.8	226.68	0.0024	Pulse	0.1000	3
Tl	205	209	He	0.142	ppb	8.8	1530.15	0.0053	Pulse	0.1000	3
Pb	208	209	He	0.016	ppb	38.7	480.03	0.0016	Pulse	0.1000	3
U	238	209	He	0.045	ppb	9.1	606.70	0.0021	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3833284.32	0.5	107.2	Pulse	0.1000	3
No Gas	Ge	72	1727707.47	0.2	106.2	Pulse	0.1000	3
H2	Sc	45	268395.75	0.9	102.7	Pulse	0.1000	3
H2	Ge	72	192089.20	0.6	102.4	Pulse	0.1000	3
H2	In	115	484792.56	0.1	102.8	Pulse	0.1000	3
He	Sc	45	61761.17	3.5	102.2	Pulse	0.1000	3
He	Ge	72	107032.79	0.1	103.3	Pulse	0.1000	3
He	In	115	93014.72	1.0	102.9	Pulse	0.1000	3
He	Tb	159	381438.64	0.9	101.4	Pulse	0.1000	3
He	Bi	209	291194.50	0.1	101.6	Pulse	0.1000	3

No Gas



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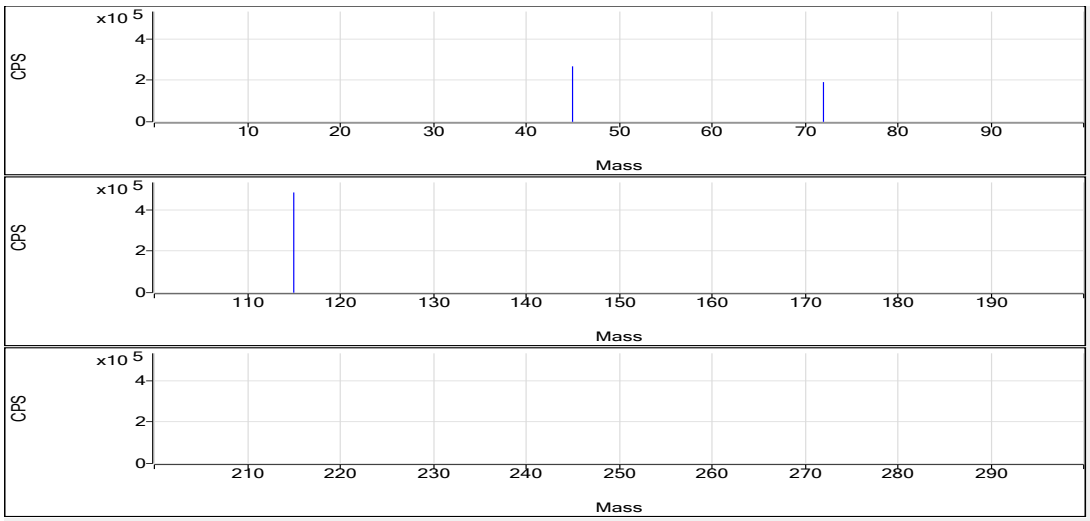
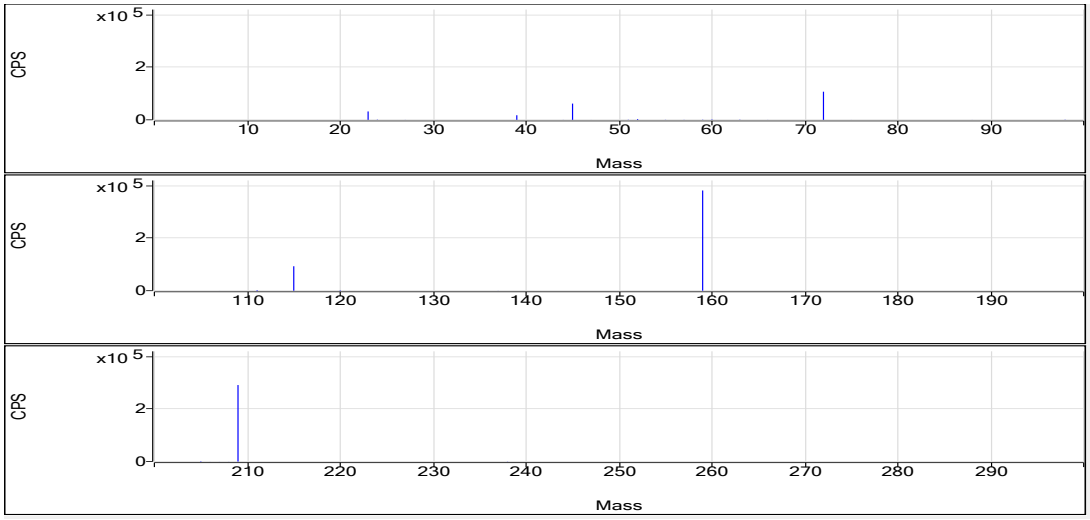


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.01	0	42.00	0.0004	7.085E-06
Be	9	1	No Gas	0.012	0	44.00	0.0004	7.085E-06
Be	9	1	No Gas	0.017	0	52.00	0.0004	7.085E-06
Se	78	2	H2	0.034	0	7.33	0.0004	2.372E-05
Se	78	2	H2	0.104	0.0001	13.33	0.0004	2.372E-05
Se	78	2	H2	-0.007	0	4.00	0.0004	2.372E-05
Na	23	3	He	11.384	0.5411	32125.32	0.0032	0.5042
Na	23	3	He	4.892	0.52	32425.85	0.0032	0.5042
Na	23	3	He	-4.757	0.4887	31063.16	0.0032	0.5042
Mg	24	3	He	8.432	0.016	950.07	0.0016	0.002702
Mg	24	3	He	8.354	0.0159	990.06	0.0016	0.002702
Mg	24	3	He	5.569	0.0115	730.04	0.0016	0.002702
Al	27	3	He	1.33	0.0025	150.01	0.0004	0.00193
Al	27	3	He	4.637	0.004	250.01	0.0004	0.00193
Al	27	3	He	-0.795	0.0016	100.00	0.0004	0.00193
K	39	3	He	58.617	0.3256	19333.24	0.0011	0.2621
K	39	3	He	9.259	0.2722	16970.19	0.0011	0.2621
K	39	3	He	-10.772	0.2505	15919.05	0.0011	0.2621
Ca	44	3	He	3.768	0.0037	220.01	0.0001	0.003476
Ca	44	3	He	-38.583	0.0011	70.00	0.0001	0.003476
Ca	44	3	He	10.084	0.0041	260.01	0.0001	0.003476
Ti	47	3	He	1.688	0.0012	70.00	0.0005	0.000385
Ti	47	3	He	2.25	0.0014	90.00	0.0005	0.000385
Ti	47	3	He	2.861	0.0017	110.00	0.0005	0.000385
V	51	3	He	0.214	0.0118	700.02	0.0212	0.007263
V	51	3	He	0.119	0.0098	610.02	0.0212	0.007263
V	51	3	He	0.127	0.0099	632.02	0.0212	0.007263
Cr	52	3	He	0.132	0.0465	2760.33	0.0278	0.04283
Cr	52	3	He	0.104	0.0457	2850.36	0.0278	0.04283
Cr	52	3	He	-0.018	0.0423	2690.35	0.0278	0.04283
Mn	55	3	He	0.106	0.0062	370.02	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.179	0.0071	440.02	0.0114	0.005023
Mn	55	3	He	0.222	0.0076	480.03	0.0114	0.005023
Fe	57	3	He	7.197	0.0071	420.02	0.0005	0.003255
Fe	57	3	He	4.444	0.0056	350.02	0.0005	0.003255
Fe	57	3	He	0.686	0.0036	230.01	0.0005	0.003255
Co	59	3	He	0.162	0.013	770.06	0.0539	0.00425
Co	59	3	He	0.174	0.0136	850.06	0.0539	0.00425
Co	59	3	He	0.105	0.0099	630.04	0.0539	0.00425
Ni	60	3	He	0.062	0.0147	1570.13	0.0088	0.01412
Ni	60	3	He	0.118	0.0152	1620.15	0.0088	0.01412
Ni	60	3	He	-0.014	0.014	1500.13	0.0088	0.01412
Cu	63	3	He	0.072	0.0064	680.04	0.0251	0.004537
Cu	63	3	He	0.166	0.0087	930.06	0.0251	0.004537
Cu	63	3	He	0.117	0.0075	800.05	0.0251	0.004537
Zn	66	3	He	-0.054	0.0015	160.01	0.0027	0.001642
Zn	66	3	He	0.119	0.002	210.01	0.0027	0.001642
Zn	66	3	He	-0.089	0.0014	150.01	0.0027	0.001642
As	75	3	He	0.217	0.0009	94.00	0.0019	0.000463
As	75	3	He	0.218	0.0009	94.00	0.0019	0.000463
As	75	3	He	0.031	0.0005	56.00	0.0019	0.000463
Sr	88	3	He	0.017	0.0013	120.01	0.009	0.001142
Sr	88	3	He	0.005	0.0012	110.00	0.009	0.001142
Sr	88	3	He	0.015	0.0013	120.00	0.009	0.001142
Mo	98	3	He	0.221	0.0068	630.04	0.0225	0.001842
Mo	98	3	He	0.345	0.0096	890.06	0.0225	0.001842
Mo	98	3	He	0.239	0.0072	680.05	0.0225	0.001842
Ag	107	3	He	-0.001	0.0004	40.00	0.048	0.0004774
Ag	107	3	He	0.001	0.0005	50.00	0.048	0.0004774
Ag	107	3	He	0.014	0.0012	110.01	0.048	0.0004774
Cd	111	3	He	0.003	0	2.00	0.0055	7.481E-06
Cd	111	3	He	0.003	0	2.00	0.0055	7.481E-06
Cd	111	3	He	0.006	0	4.00	0.0055	7.481E-06
Sn	120	3	He	0.19	0.0214	1980.22	0.0157	0.01844
Sn	120	3	He	-0.019	0.0181	1680.16	0.0157	0.01844
Sn	120	3	He	-0.024	0.0181	1700.17	0.0157	0.01844
Sb	121	3	He	0.093	0.0015	140.01	0.0139	0.0002204
Sb	121	3	He	0.062	0.0011	100.01	0.0139	0.0002204
Sb	121	3	He	0.068	0.0012	110.00	0.0139	0.0002204
Ba	137	3	He	0.038	0.0022	200.01	0.0045	0.001994
Ba	137	3	He	0.085	0.0024	220.01	0.0045	0.001994
Ba	137	3	He	0.17	0.0028	260.01	0.0045	0.001994
Tl	205	3	He	0.156	0.0057	1650.16	0.03	0.0009888
Tl	205	3	He	0.139	0.0051	1500.15	0.03	0.0009888
Tl	205	3	He	0.132	0.0049	1440.13	0.03	0.0009888
Pb	208	3	He	0.023	0.0019	250.01	0.0392	0.001024
Pb	208	3	He	0.013	0.0015	180.01	0.0392	0.001024
Pb	208	3	He	0.012	0.0015	220.01	0.0392	0.001024
U	238	3	He	0.046	0.0021	620.04	0.0439	0.000128
U	238	3	He	0.04	0.0019	550.03	0.0439	0.000128
U	238	3	He	0.048	0.0022	650.04	0.0439	0.000128
Sc	45	1	No Gas			3829524.32		
Sc	45	1	No Gas			3814969.63		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3855359.01		
Ge	72	1	No Gas			1727150.76		
Ge	72	1	No Gas			1725034.19		
Ge	72	1	No Gas			1730937.47		
Sc	45	2	H2			266407.01		
Sc	45	2	H2			271075.50		
Sc	45	2	H2			267704.74		
Ge	72	2	H2			190836.09		
Ge	72	2	H2			192542.38		
Ge	72	2	H2			192889.12		
In	115	2	H2			485214.06		
In	115	2	H2			484637.34		
In	115	2	H2			484526.28		
Sc	45	3	He			59371.10		
Sc	45	3	He			62353.36		
Sc	45	3	He			63559.04		
Ge	72	3	He			107066.96		
Ge	72	3	He			106864.76		
Ge	72	3	He			107166.65		
In	115	3	He			92404.80		
In	115	3	He			92595.79		
In	115	3	He			94085.40		
Tb	159	3	He			377970.74		
Tb	159	3	He			381686.24		
Tb	159	3	He			384658.94		
Bi	209	3	He			290904.08		
Bi	209	3	He			291472.59		
Bi	209	3	He			291206.83		

Quantitation Report

Data File Name	234SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23J26A00.b
Acq Time	2023-10-26 16:51:44
Sample Name	410-146886-B-1-A
Sample Type	Sample
Comment	T9
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

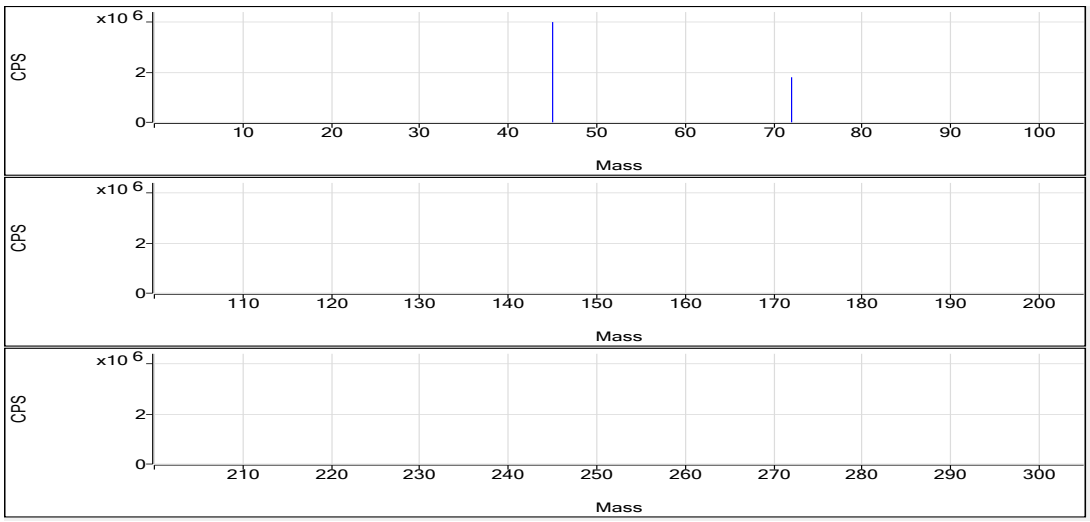
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.112	ppb	6.4	201.33	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.662	ppb	13.7	62.44	0.0003	Pulse	1.5000	3
Na	23	45	He	76032.338	ppb	0.7	15843872.68	247.1765	Analog	0.1000	3
Mg	24	45	He	1893.520	ppb	1.6	191577.48	2.9892	Pulse	0.1000	3
Al	27	45	He	560.431	ppb	0.2	16236.02	0.2533	Pulse	0.1000	3
K	39	45	He	2408.832	ppb	0.6	184064.47	2.8717	Pulse	0.1000	3
Ca	44	45	He	23140.423	ppb	0.9	90679.99	1.4148	Pulse	0.1000	3
Ti	47	45	He	1.620	ppb	78.5	73.34	0.0011	Pulse	0.1000	3
V	51	45	He	2.163	ppb	2.7	3401.75	0.0531	Pulse	0.5000	3
Cr	52	45	He	2.543	ppb	2.3	7278.74	0.1136	Pulse	0.1000	3
Mn	55	45	He	21.718	ppb	2.1	16162.71	0.2522	Pulse	0.1000	3
Fe	57	45	He	758.606	ppb	0.9	26014.02	0.4058	Pulse	0.1000	3
Co	59	45	He	0.574	ppb	4.3	2253.59	0.0352	Pulse	0.1000	3
Ni	60	72	He	0.321	ppb	84.3	1873.52	0.0170	Pulse	0.1000	3
Cu	63	72	He	1.163	ppb	2.9	3737.28	0.0338	Pulse	0.1000	3
Zn	66	72	He	2.541	ppb	11.2	950.07	0.0086	Pulse	0.1000	3
As	75	72	He	0.239	ppb	27.4	102.00	0.0009	Pulse	0.5000	3
Sr	88	115	He	76.029	ppb	0.8	65792.66	0.6827	Pulse	0.1000	3
Mo	98	115	He	0.162	ppb	25.4	530.04	0.0055	Pulse	0.1000	3
Ag	107	115	He	0.002	ppb	236.3	56.67	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.033	ppb	52.2	18.00	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.370	ppb	N/A	1216.77	0.0126	Pulse	0.1000	3
Sb	121	115	He	0.064	ppb	48.5	106.67	0.0011	Pulse	0.1000	3
Ba	137	115	He	90.699	ppb	3.3	39754.83	0.4126	Pulse	0.1000	3
Tl	205	209	He	0.046	ppb	13.6	703.38	0.0024	Pulse	0.1000	3
Pb	208	209	He	0.476	ppb	4.4	5874.07	0.0197	Pulse	0.1000	3
U	238	209	He	0.226	ppb	8.5	3007.13	0.0101	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	4013166.09	0.3	112.3	Pulse	0.1000	3
No Gas	Ge	72	1803760.76	0.4	110.8	Pulse	0.1000	3
H2	Sc	45	277326.91	0.7	106.1	Pulse	0.1000	3
H2	Ge	72	200328.15	1.3	106.8	Pulse	0.1000	3
H2	In	115	503263.59	1.1	106.7	Pulse	0.1000	3
He	Sc	45	64097.35	1.0	106.1	Pulse	0.1000	3
He	Ge	72	110724.01	2.3	106.9	Pulse	0.1000	3
He	In	115	96378.19	1.1	106.6	Pulse	0.1000	3
He	Tb	159	390627.98	0.8	103.8	Pulse	0.1000	3
He	Bi	209	298568.02	0.8	104.2	Pulse	0.1000	3

No Gas



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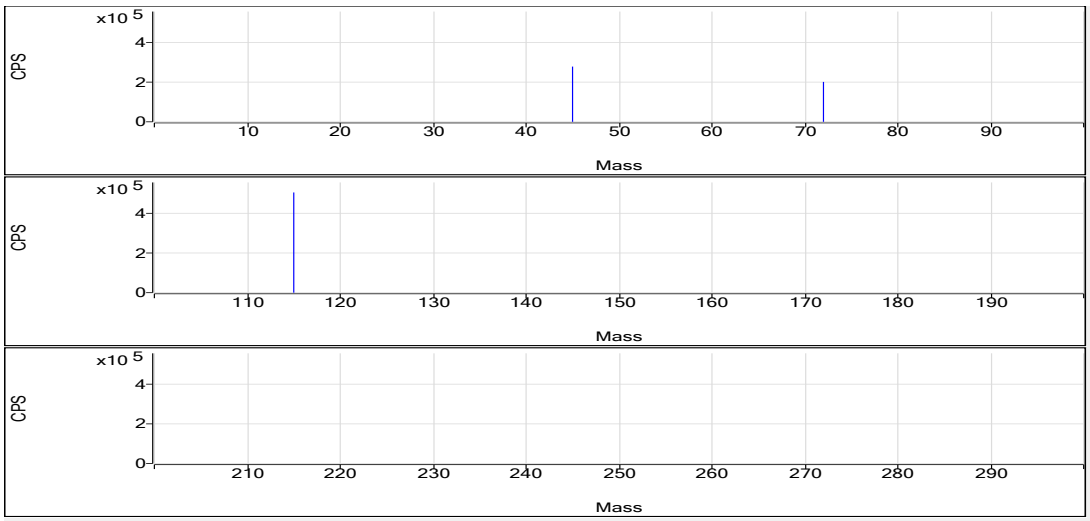
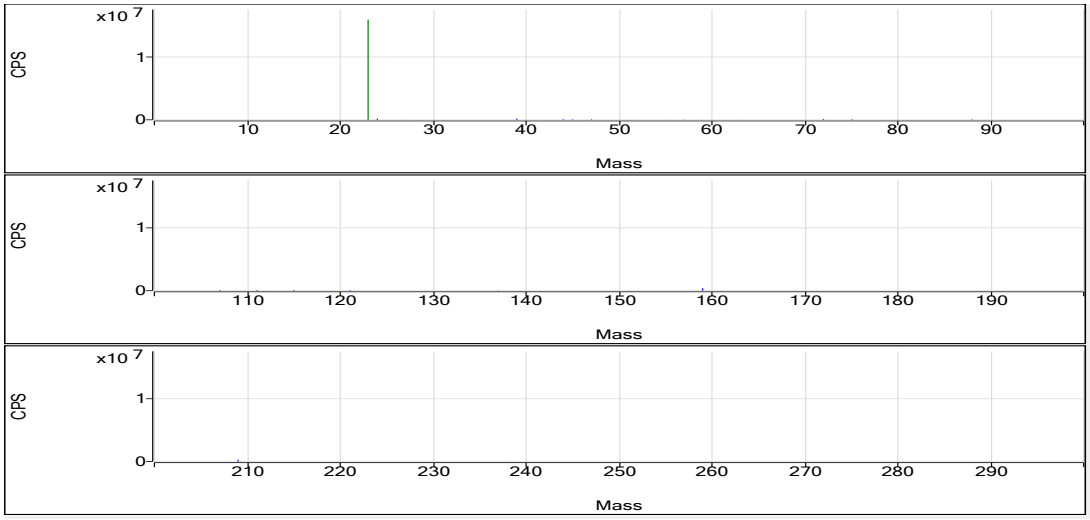


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.105	0	190.00	0.0004	7.085E-06
Be	9	1	No Gas	0.119	0.0001	212.00	0.0004	7.085E-06
Be	9	1	No Gas	0.113	0.0001	202.00	0.0004	7.085E-06
Se	78	2	H2	0.579	0.0003	56.00	0.0004	2.372E-05
Se	78	2	H2	0.648	0.0003	61.33	0.0004	2.372E-05
Se	78	2	H2	0.759	0.0004	70.00	0.0004	2.372E-05
Na	23	3	He	75800.02	246.4228	15862623.51	0.0032	0.5042
Na	23	3	He	76606.091	249.038	16083613.51	0.0032	0.5042
Na	23	3	He	75690.905	246.0688	15585381.02	0.0032	0.5042
Mg	24	3	He	1873.225	2.9572	190357.71	0.0016	0.002702
Mg	24	3	He	1878.183	2.965	191487.95	0.0016	0.002702
Mg	24	3	He	1929.153	3.0454	192886.77	0.0016	0.002702
Al	27	3	He	561.605	0.2538	16339.38	0.0004	0.00193
Al	27	3	He	559.414	0.2528	16329.58	0.0004	0.00193
Al	27	3	He	560.274	0.2532	16039.10	0.0004	0.00193
K	39	3	He	2400.43	2.8626	184272.50	0.0011	0.2621
K	39	3	He	2401.456	2.8637	184949.43	0.0011	0.2621
K	39	3	He	2424.611	2.8888	182971.48	0.0011	0.2621
Ca	44	3	He	23032.505	1.4082	90650.09	0.0001	0.003476
Ca	44	3	He	23000.259	1.4063	90820.79	0.0001	0.003476
Ca	44	3	He	23388.505	1.4299	90569.08	0.0001	0.003476
Ti	47	3	He	2.154	0.0014	90.00	0.0005	0.000385
Ti	47	3	He	0.169	0.0005	30.00	0.0005	0.000385
Ti	47	3	He	2.538	0.0016	100.01	0.0005	0.000385
V	51	3	He	2.112	0.052	3346.40	0.0212	0.007263
V	51	3	He	2.227	0.0544	3514.44	0.0212	0.007263
V	51	3	He	2.151	0.0528	3344.40	0.0212	0.007263
Cr	52	3	He	2.488	0.112	7212.01	0.0278	0.04283
Cr	52	3	He	2.603	0.1152	7442.17	0.0278	0.04283
Cr	52	3	He	2.537	0.1134	7182.04	0.0278	0.04283
Mn	55	3	He	21.208	0.2464	15859.03	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	22.064	0.2561	16539.74	0.0114	0.005023
Mn	55	3	He	21.881	0.254	16089.35	0.0114	0.005023
Fe	57	3	He	763.315	0.4083	26284.63	0.0005	0.003255
Fe	57	3	He	761.673	0.4075	26314.69	0.0005	0.003255
Fe	57	3	He	750.83	0.4017	25442.73	0.0005	0.003255
Co	59	3	He	0.547	0.0337	2170.24	0.0539	0.00425
Co	59	3	He	0.579	0.0355	2290.25	0.0539	0.00425
Co	59	3	He	0.595	0.0363	2300.28	0.0539	0.00425
Ni	60	3	He	0.607	0.0195	2100.22	0.0088	0.01412
Ni	60	3	He	0.289	0.0167	1860.18	0.0088	0.01412
Ni	60	3	He	0.068	0.0147	1660.17	0.0088	0.01412
Cu	63	3	He	1.196	0.0346	3730.60	0.0251	0.004537
Cu	63	3	He	1.128	0.0329	3670.60	0.0251	0.004537
Cu	63	3	He	1.164	0.0338	3810.64	0.0251	0.004537
Zn	66	3	He	2.288	0.0079	850.06	0.0027	0.001642
Zn	66	3	He	2.848	0.0094	1050.08	0.0027	0.001642
Zn	66	3	He	2.487	0.0084	950.06	0.0027	0.001642
As	75	3	He	0.205	0.0009	92.00	0.0019	0.000463
As	75	3	He	0.199	0.0008	94.00	0.0019	0.000463
As	75	3	He	0.315	0.0011	120.00	0.0019	0.000463
Sr	88	3	He	75.848	0.681	64878.43	0.009	0.001142
Sr	88	3	He	75.552	0.6784	66054.05	0.009	0.001142
Sr	88	3	He	76.686	0.6885	66445.50	0.009	0.001142
Mo	98	3	He	0.128	0.0047	450.03	0.0225	0.001842
Mo	98	3	He	0.151	0.0052	510.04	0.0225	0.001842
Mo	98	3	He	0.208	0.0065	630.04	0.0225	0.001842
Ag	107	3	He	-0.003	0.0003	30.00	0.048	0.0004774
Ag	107	3	He	0.003	0.0006	60.00	0.048	0.0004774
Ag	107	3	He	0.007	0.0008	80.00	0.048	0.0004774
Cd	111	3	He	0.029	0.0002	16.00	0.0055	7.481E-06
Cd	111	3	He	0.051	0.0003	28.00	0.0055	7.481E-06
Cd	111	3	He	0.018	0.0001	10.00	0.0055	7.481E-06
Sn	120	3	He	-0.372	0.0126	1200.11	0.0157	0.01844
Sn	120	3	He	-0.481	0.0109	1060.09	0.0157	0.01844
Sn	120	3	He	-0.257	0.0144	1390.12	0.0157	0.01844
Sb	121	3	He	0.097	0.0016	150.01	0.0139	0.0002204
Sb	121	3	He	0.058	0.001	100.00	0.0139	0.0002204
Sb	121	3	He	0.036	0.0007	70.00	0.0139	0.0002204
Ba	137	3	He	93.636	0.4259	40570.93	0.0045	0.001994
Ba	137	3	He	87.572	0.3984	38794.98	0.0045	0.001994
Ba	137	3	He	90.891	0.4135	39898.59	0.0045	0.001994
Tl	205	3	He	0.04	0.0022	650.03	0.03	0.0009888
Tl	205	3	He	0.044	0.0023	690.05	0.03	0.0009888
Tl	205	3	He	0.052	0.0026	770.06	0.03	0.0009888
Pb	208	3	He	0.498	0.0206	3330.53	0.0392	0.001024
Pb	208	3	He	0.471	0.0195	3170.50	0.0392	0.001024
Pb	208	3	He	0.457	0.019	3050.44	0.0392	0.001024
U	238	3	He	0.209	0.0093	2760.40	0.0439	0.000128
U	238	3	He	0.247	0.011	3270.52	0.0439	0.000128
U	238	3	He	0.223	0.0099	2990.47	0.0439	0.000128
Sc	45	1	No Gas			4018368.69		
Sc	45	1	No Gas			4020881.19		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			4000248.38		
Ge	72	1	No Gas			1803651.85		
Ge	72	1	No Gas			1796839.04		
Ge	72	1	No Gas			1810791.38		
Sc	45	2	H2			279435.56		
Sc	45	2	H2			275935.97		
Sc	45	2	H2			276609.21		
Ge	72	2	H2			203006.03		
Ge	72	2	H2			200315.33		
Ge	72	2	H2			197663.10		
In	115	2	H2			507338.59		
In	115	2	H2			505574.29		
In	115	2	H2			496877.88		
Sc	45	3	He			64371.57		
Sc	45	3	He			64582.98		
Sc	45	3	He			63337.49		
Ge	72	3	He			107822.00		
Ge	72	3	He			111589.83		
Ge	72	3	He			112760.19		
In	115	3	He			95273.42		
In	115	3	He			97377.96		
In	115	3	He			96511.65		
Tb	159	3	He			388080.74		
Tb	159	3	He			389425.46		
Tb	159	3	He			394377.73		
Bi	209	3	He			296722.18		
Bi	209	3	He			297765.78		
Bi	209	3	He			301216.11		

Quantitation Report

Data File Name	235SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23J26A00.b
Acq Time	2023-10-26 16:53:43
Sample Name	410-146886-B-8-A
Sample Type	Sample
Comment	T9
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

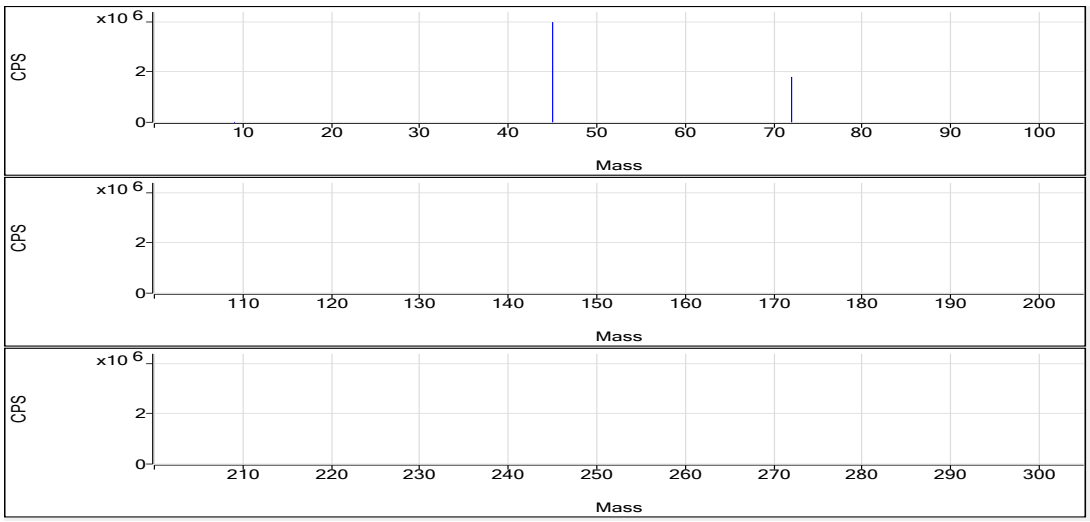
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.005	ppb	N/A	20.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.032	ppb	N/A	2.00	0.0000	Pulse	1.5000	3
Na	23	45	He	433.863	ppb	3.7	121929.32	1.9117	Pulse	0.1000	3
Mg	24	45	He	25.510	ppb	7.9	2737.01	0.0429	Pulse	0.1000	3
Al	27	45	He	4.091	ppb	38.5	240.01	0.0038	Pulse	0.1000	3
K	39	45	He	21.466	ppb	158.0	18185.17	0.2854	Pulse	0.1000	3
Ca	44	45	He	89.547	ppb	11.0	570.03	0.0089	Pulse	0.1000	3
Ti	47	45	He	-0.152	ppb	N/A	20.00	0.0003	Pulse	0.1000	3
V	51	45	He	0.058	ppb	62.8	541.35	0.0085	Pulse	0.5000	3
Cr	52	45	He	-0.107	ppb	N/A	2543.65	0.0399	Pulse	0.1000	3
Mn	55	45	He	0.064	ppb	144.3	366.68	0.0058	Pulse	0.1000	3
Fe	57	45	He	3.713	ppb	37.5	333.35	0.0052	Pulse	0.1000	3
Co	59	45	He	0.032	ppb	70.2	383.35	0.0060	Pulse	0.1000	3
Ni	60	72	He	-0.505	ppb	N/A	1073.42	0.0097	Pulse	0.1000	3
Cu	63	72	He	0.136	ppb	2.8	883.40	0.0080	Pulse	0.1000	3
Zn	66	72	He	0.003	ppb	8251.1	183.34	0.0016	Pulse	0.1000	3
As	75	72	He	0.075	ppb	53.9	67.33	0.0006	Pulse	0.5000	3
Sr	88	115	He	0.161	ppb	21.3	246.68	0.0026	Pulse	0.1000	3
Mo	98	115	He	0.032	ppb	121.4	243.34	0.0026	Pulse	0.1000	3
Ag	107	115	He	0.002	ppb	407.2	53.33	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.004	ppb	58.7	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.323	ppb	N/A	1273.45	0.0134	Pulse	0.1000	3
Sb	121	115	He	0.014	ppb	105.0	40.00	0.0004	Pulse	0.1000	3
Ba	137	115	He	0.016	ppb	225.1	196.68	0.0021	Pulse	0.1000	3
Tl	205	209	He	-0.003	ppb	N/A	270.01	0.0009	Pulse	0.1000	3
Pb	208	209	He	0.010	ppb	54.5	423.35	0.0014	Pulse	0.1000	3
U	238	209	He	0.013	ppb	11.9	203.35	0.0007	Pulse	0.1000	3

ISTD Table:

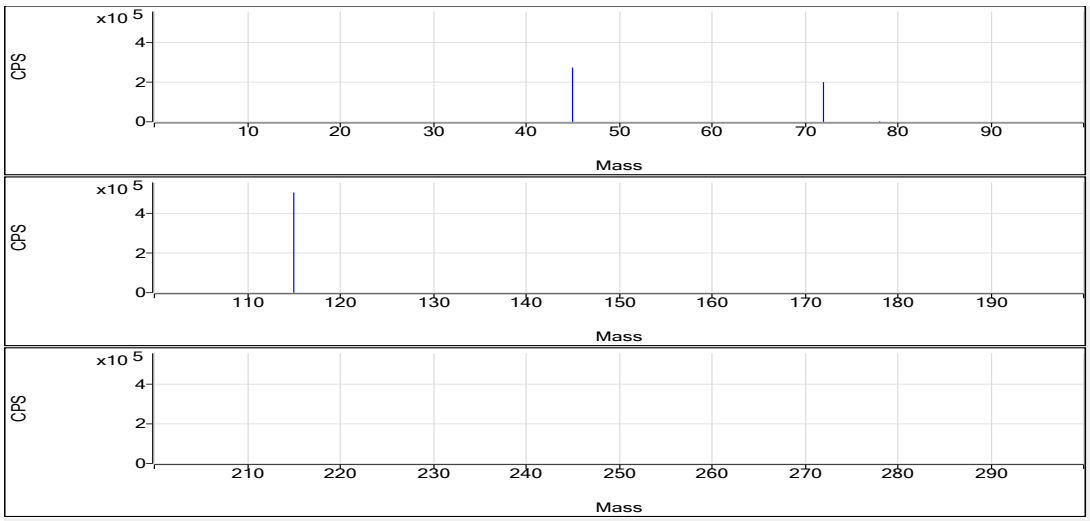
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3985027.75	0.4	111.5	Pulse	0.1000	3
No Gas	Ge	72	1804069.35	0.3	110.9	Pulse	0.1000	3
H2	Sc	45	274620.72	0.4	105.0	Pulse	0.1000	3
H2	Ge	72	201345.25	0.6	107.3	Pulse	0.1000	3
H2	In	115	507899.00	0.8	107.7	Pulse	0.1000	3
He	Sc	45	63799.87	1.8	105.6	Pulse	0.1000	3
He	Ge	72	111046.39	0.8	107.2	Pulse	0.1000	3
He	In	115	95249.82	0.9	105.4	Pulse	0.1000	3
He	Tb	159	386633.37	0.9	102.7	Pulse	0.1000	3
He	Bi	209	298311.18	0.6	104.1	Pulse	0.1000	3

No Gas

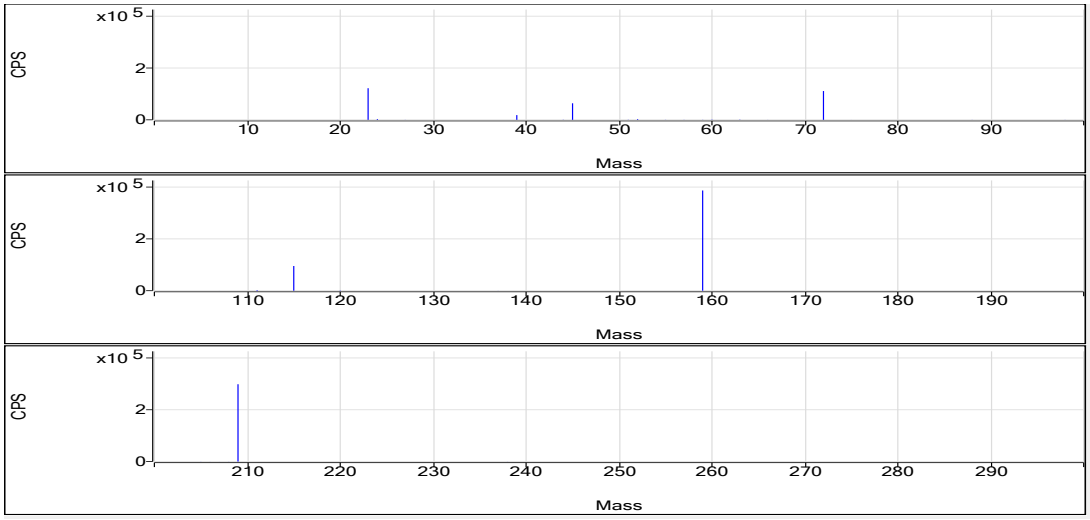


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.013	0	8.00	0.0004	7.085E-06
Be	9	1	No Gas	-0.001	0	26.00	0.0004	7.085E-06
Be	9	1	No Gas	-0.001	0	26.00	0.0004	7.085E-06
Se	78	2	H2	-0.039	0	1.33	0.0004	2.372E-05
Se	78	2	H2	-0.032	0	2.00	0.0004	2.372E-05
Se	78	2	H2	-0.024	0	2.67	0.0004	2.372E-05
Na	23	3	He	451.69	1.9696	123245.96	0.0032	0.5042
Na	23	3	He	419.876	1.8664	120967.76	0.0032	0.5042
Na	23	3	He	430.022	1.8993	121574.23	0.0032	0.5042
Mg	24	3	He	27.573	0.0462	2890.37	0.0016	0.002702
Mg	24	3	He	23.528	0.0398	2580.31	0.0016	0.002702
Mg	24	3	He	25.43	0.0428	2740.35	0.0016	0.002702
Al	27	3	He	5.318	0.0043	270.01	0.0004	0.00193
Al	27	3	He	4.641	0.004	260.01	0.0004	0.00193
Al	27	3	He	2.315	0.003	190.01	0.0004	0.00193
K	39	3	He	59.185	0.3262	20414.90	0.0011	0.2621
K	39	3	He	11.697	0.2748	17811.20	0.0011	0.2621
K	39	3	He	-6.485	0.2551	16329.41	0.0011	0.2621
Ca	44	3	He	89.751	0.0089	560.03	0.0001	0.003476
Ca	44	3	He	79.621	0.0083	540.03	0.0001	0.003476
Ca	44	3	He	99.27	0.0095	610.04	0.0001	0.003476
Ti	47	3	He	-0.139	0.0003	20.00	0.0005	0.000385
Ti	47	3	He	-0.163	0.0003	20.00	0.0005	0.000385
Ti	47	3	He	-0.154	0.0003	20.00	0.0005	0.000385
V	51	3	He	0.062	0.0086	536.01	0.0212	0.007263
V	51	3	He	0.02	0.0077	498.01	0.0212	0.007263
V	51	3	He	0.092	0.0092	590.02	0.0212	0.007263
Cr	52	3	He	-0.115	0.0396	2480.29	0.0278	0.04283
Cr	52	3	He	0.03	0.0437	2830.39	0.0278	0.04283
Cr	52	3	He	-0.237	0.0362	2320.28	0.0278	0.04283
Mn	55	3	He	0.078	0.0059	370.01	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.035	0.0046	300.01	0.0114	0.005023
Mn	55	3	He	0.149	0.0067	430.02	0.0114	0.005023
Fe	57	3	He	4.407	0.0056	350.02	0.0005	0.003255
Fe	57	3	He	4.624	0.0057	370.02	0.0005	0.003255
Fe	57	3	He	2.109	0.0044	280.01	0.0005	0.003255
Co	59	3	He	0.022	0.0054	340.02	0.0539	0.00425
Co	59	3	He	0.059	0.0074	480.02	0.0539	0.00425
Co	59	3	He	0.017	0.0052	330.02	0.0539	0.00425
Ni	60	3	He	-0.391	0.0107	1190.10	0.0088	0.01412
Ni	60	3	He	-0.571	0.0091	1000.07	0.0088	0.01412
Ni	60	3	He	-0.555	0.0092	1030.08	0.0088	0.01412
Cu	63	3	He	0.134	0.0079	880.07	0.0251	0.004537
Cu	63	3	He	0.134	0.0079	870.06	0.0251	0.004537
Cu	63	3	He	0.14	0.0081	900.06	0.0251	0.004537
Zn	66	3	He	0.286	0.0024	270.01	0.0027	0.001642
Zn	66	3	He	-0.102	0.0014	150.01	0.0027	0.001642
Zn	66	3	He	-0.175	0.0012	130.01	0.0027	0.001642
As	75	3	He	0.077	0.0006	68.00	0.0019	0.000463
As	75	3	He	0.034	0.0005	58.00	0.0019	0.000463
As	75	3	He	0.114	0.0007	76.00	0.0019	0.000463
Sr	88	3	He	0.199	0.0029	280.01	0.009	0.001142
Sr	88	3	He	0.152	0.0025	240.01	0.009	0.001142
Sr	88	3	He	0.133	0.0023	220.01	0.009	0.001142
Mo	98	3	He	0.048	0.0029	280.01	0.0225	0.001842
Mo	98	3	He	-0.012	0.0016	150.01	0.0225	0.001842
Mo	98	3	He	0.059	0.0032	300.01	0.0225	0.001842
Ag	107	3	He	-0.003	0.0003	30.00	0.048	0.0004774
Ag	107	3	He	-0.001	0.0004	40.00	0.048	0.0004774
Ag	107	3	He	0.01	0.001	90.00	0.048	0.0004774
Cd	111	3	He	0.006	0	4.00	0.0055	7.481E-06
Cd	111	3	He	0.002	0	2.00	0.0055	7.481E-06
Cd	111	3	He	0.003	0	2.00	0.0055	7.481E-06
Sn	120	3	He	-0.281	0.014	1340.11	0.0157	0.01844
Sn	120	3	He	-0.39	0.0123	1180.09	0.0157	0.01844
Sn	120	3	He	-0.296	0.0138	1300.15	0.0157	0.01844
Sb	121	3	He	0.029	0.0006	60.00	0.0139	0.0002204
Sb	121	3	He	-0.001	0.0002	20.00	0.0139	0.0002204
Sb	121	3	He	0.015	0.0004	40.00	0.0139	0.0002204
Ba	137	3	He	-0.024	0.0019	180.01	0.0045	0.001994
Ba	137	3	He	0.043	0.0022	210.01	0.0045	0.001994
Ba	137	3	He	0.028	0.0021	200.01	0.0045	0.001994
Tl	205	3	He	0	0.001	290.01	0.03	0.0009888
Tl	205	3	He	-0.001	0.001	290.02	0.03	0.0009888
Tl	205	3	He	-0.007	0.0008	230.01	0.03	0.0009888
Pb	208	3	He	0.007	0.0013	230.01	0.0392	0.001024
Pb	208	3	He	0.007	0.0013	200.01	0.0392	0.001024
Pb	208	3	He	0.016	0.0017	300.02	0.0392	0.001024
U	238	3	He	0.011	0.0006	180.01	0.0439	0.000128
U	238	3	He	0.013	0.0007	210.01	0.0439	0.000128
U	238	3	He	0.014	0.0007	220.02	0.0439	0.000128
Sc	45	1	No Gas			3999467.44		
Sc	45	1	No Gas			3989073.07		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3966542.75		
Ge	72	1	No Gas			1809503.88		
Ge	72	1	No Gas			1801227.94		
Ge	72	1	No Gas			1801476.22		
Sc	45	2	H2			273762.22		
Sc	45	2	H2			274232.53		
Sc	45	2	H2			275867.42		
Ge	72	2	H2			201602.79		
Ge	72	2	H2			202341.62		
Ge	72	2	H2			200091.34		
In	115	2	H2			510291.55		
In	115	2	H2			510315.11		
In	115	2	H2			503090.34		
Sc	45	3	He			62574.61		
Sc	45	3	He			64814.45		
Sc	45	3	He			64010.54		
Ge	72	3	He			111500.41		
Ge	72	3	He			110038.86		
Ge	72	3	He			111599.90		
In	115	3	He			95564.74		
In	115	3	He			95887.53		
In	115	3	He			94326.99		
Tb	159	3	He			382667.22		
Tb	159	3	He			388437.10		
Tb	159	3	He			388795.78		
Bi	209	3	He			296233.06		
Bi	209	3	He			298629.35		
Bi	209	3	He			300071.13		

Quantitation Report

Data File Name	236SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23J26A00.b
Acq Time	2023-10-26 16:55:43
Sample Name	410-146886-B-6-A
Sample Type	Sample
Comment	T9
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

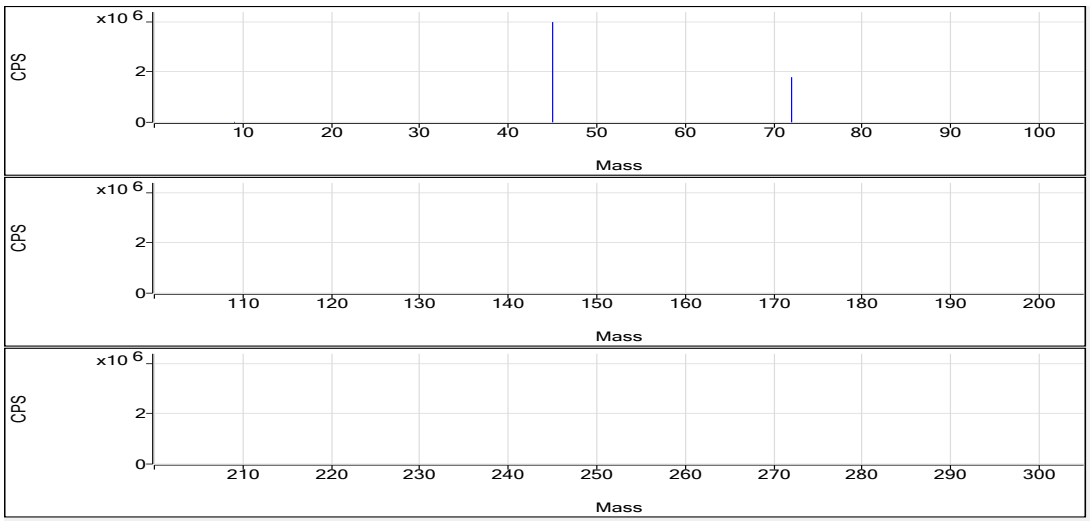
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.004	ppb	N/A	22.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.006	ppb	333.2	5.33	0.0000	Pulse	1.5000	3
Na	23	45	He	1424.977	ppb	1.9	328624.83	5.1272	Pulse	0.1000	3
Mg	24	45	He	19536.087	ppb	1.7	1975149.24	30.8152	Pulse	0.1000	3
Al	27	45	He	2.678	ppb	77.6	200.02	0.0031	Pulse	0.1000	3
K	39	45	He	1819.419	ppb	2.3	143131.37	2.2332	Pulse	0.1000	3
Ca	44	45	He	33825.107	ppb	1.6	132450.90	2.0665	Pulse	0.1000	3
Ti	47	45	He	-0.265	ppb	N/A	16.67	0.0003	Pulse	0.1000	3
V	51	45	He	0.560	ppb	7.8	1224.73	0.0191	Pulse	0.5000	3
Cr	52	45	He	0.230	ppb	56.3	3153.79	0.0492	Pulse	0.1000	3
Mn	55	45	He	8.131	ppb	1.6	6254.87	0.0976	Pulse	0.1000	3
Fe	57	45	He	5.719	ppb	38.8	403.35	0.0063	Pulse	0.1000	3
Co	59	45	He	0.092	ppb	22.2	590.03	0.0092	Pulse	0.1000	3
Ni	60	72	He	-0.553	ppb	N/A	1016.74	0.0092	Pulse	0.1000	3
Cu	63	72	He	0.278	ppb	7.7	1266.77	0.0115	Pulse	0.1000	3
Zn	66	72	He	4.038	ppb	14.9	1393.46	0.0127	Pulse	0.1000	3
As	75	72	He	0.138	ppb	42.2	80.00	0.0007	Pulse	0.5000	3
Sr	88	115	He	19.794	ppb	2.3	17027.44	0.1786	Pulse	0.1000	3
Mo	98	115	He	0.152	ppb	34.5	503.36	0.0053	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	1287.0	46.67	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.051	ppb	37.3	27.33	0.0003	Pulse	0.5000	3
Sn	120	115	He	-0.230	ppb	N/A	1414.62	0.0148	Pulse	0.1000	3
Sb	121	115	He	0.024	ppb	128.7	53.33	0.0006	Pulse	0.1000	3
Ba	137	115	He	22.262	ppb	2.2	9800.46	0.1028	Pulse	0.1000	3
Tl	205	209	He	0.009	ppb	16.0	376.69	0.0013	Pulse	0.1000	3
Pb	208	209	He	0.011	ppb	53.3	430.02	0.0015	Pulse	0.1000	3
U	238	209	He	0.176	ppb	2.8	2330.29	0.0079	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3984034.42	0.4	111.5	Pulse	0.1000	3
No Gas	Ge	72	1793285.96	0.9	110.2	Pulse	0.1000	3
H2	Sc	45	275576.19	1.5	105.4	Pulse	0.1000	3
H2	Ge	72	202666.75	1.2	108.0	Pulse	0.1000	3
H2	In	115	494544.63	0.3	104.8	Pulse	0.1000	3
He	Sc	45	64107.44	1.9	106.1	Pulse	0.1000	3
He	Ge	72	110015.07	0.8	106.2	Pulse	0.1000	3
He	In	115	95359.29	0.7	105.5	Pulse	0.1000	3
He	Tb	159	388856.58	1.3	103.3	Pulse	0.1000	3
He	Bi	209	296051.63	0.5	103.3	Pulse	0.1000	3

No Gas



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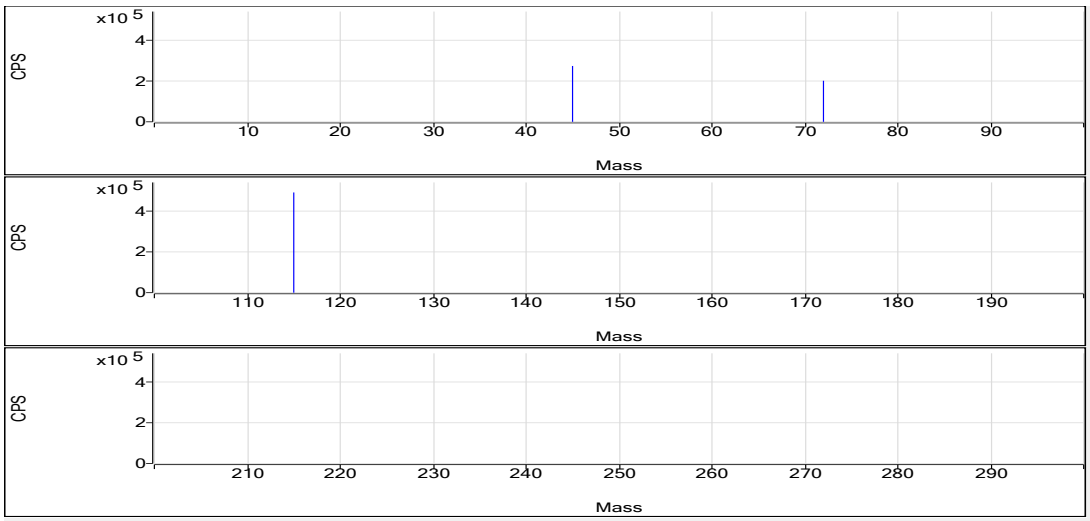
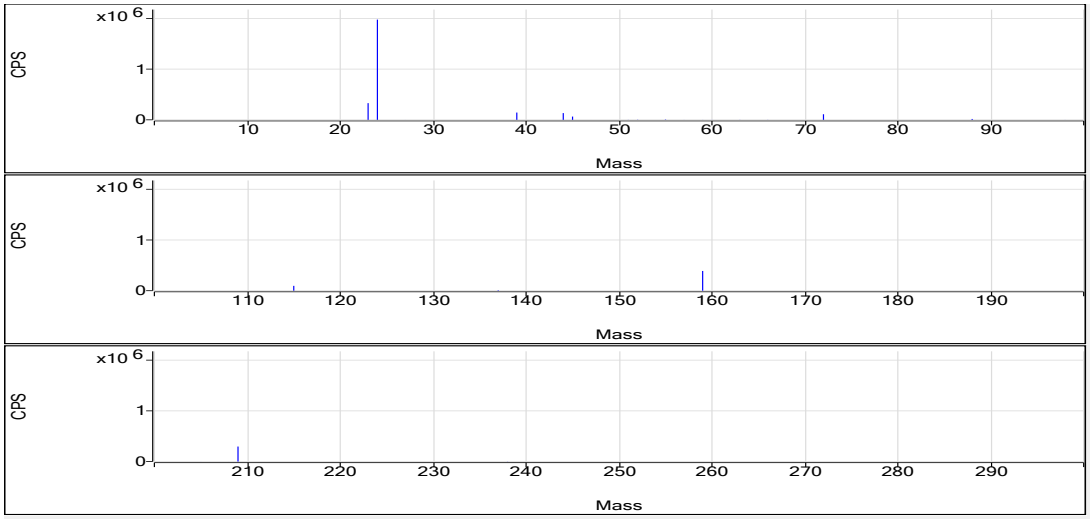


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.003	0	24.00	0.0004	7.085E-06
Be	9	1	No Gas	-0.005	0	20.00	0.0004	7.085E-06
Be	9	1	No Gas	-0.003	0	24.00	0.0004	7.085E-06
Se	78	2	H2	-0.002	0	4.67	0.0004	2.372E-05
Se	78	2	H2	-0.009	0	4.00	0.0004	2.372E-05
Se	78	2	H2	0.028	0	7.33	0.0004	2.372E-05
Na	23	3	He	1455.465	5.2261	327811.25	0.0032	0.5042
Na	23	3	He	1405.743	5.0648	328370.54	0.0032	0.5042
Na	23	3	He	1413.723	5.0907	329692.69	0.0032	0.5042
Mg	24	3	He	19849.95	31.3102	1963944.03	0.0016	0.002702
Mg	24	3	He	19574.016	30.875	2001736.69	0.0016	0.002702
Mg	24	3	He	19184.294	30.2604	1959767.00	0.0016	0.002702
Al	27	3	He	4.94	0.0041	260.03	0.0004	0.00193
Al	27	3	He	0.856	0.0023	150.01	0.0004	0.00193
Al	27	3	He	2.238	0.0029	190.01	0.0004	0.00193
K	39	3	He	1864.353	2.2819	143131.49	0.0011	0.2621
K	39	3	He	1809.955	2.2229	144121.37	0.0011	0.2621
K	39	3	He	1783.95	2.1948	142141.26	0.0011	0.2621
Ca	44	3	He	34434.251	2.1036	131950.57	0.0001	0.003476
Ca	44	3	He	33666.872	2.0568	133351.08	0.0001	0.003476
Ca	44	3	He	33374.198	2.039	132051.06	0.0001	0.003476
Ti	47	3	He	-0.141	0.0003	20.00	0.0005	0.000385
Ti	47	3	He	0.165	0.0005	30.00	0.0005	0.000385
Ti	47	3	He	-0.819	0	0.00	0.0005	0.000385
V	51	3	He	0.61	0.0202	1266.06	0.0212	0.007263
V	51	3	He	0.531	0.0185	1200.06	0.0212	0.007263
V	51	3	He	0.538	0.0187	1208.06	0.0212	0.007263
Cr	52	3	He	0.317	0.0517	3240.48	0.0278	0.04283
Cr	52	3	He	0.29	0.0509	3300.49	0.0278	0.04283
Cr	52	3	He	0.081	0.0451	2920.41	0.0278	0.04283
Mn	55	3	He	8.022	0.0963	6041.45	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	8.1	0.0972	6301.54	0.0114	0.005023
Mn	55	3	He	8.272	0.0992	6421.62	0.0114	0.005023
Fe	57	3	He	5.283	0.0061	380.02	0.0005	0.003255
Fe	57	3	He	3.749	0.0052	340.02	0.0005	0.003255
Fe	57	3	He	8.124	0.0076	490.02	0.0005	0.003255
Co	59	3	He	0.096	0.0094	590.03	0.0539	0.00425
Co	59	3	He	0.07	0.008	520.02	0.0539	0.00425
Co	59	3	He	0.11	0.0102	660.03	0.0539	0.00425
Ni	60	3	He	-0.665	0.0083	910.06	0.0088	0.01412
Ni	60	3	He	-0.458	0.0101	1100.07	0.0088	0.01412
Ni	60	3	He	-0.536	0.0094	1040.08	0.0088	0.01412
Cu	63	3	He	0.296	0.012	1320.12	0.0251	0.004537
Cu	63	3	He	0.283	0.0116	1270.10	0.0251	0.004537
Cu	63	3	He	0.254	0.0109	1210.09	0.0251	0.004537
Zn	66	3	He	3.988	0.0125	1380.12	0.0027	0.001642
Zn	66	3	He	3.464	0.0111	1210.10	0.0027	0.001642
Zn	66	3	He	4.663	0.0144	1590.16	0.0027	0.001642
As	75	3	He	0.204	0.0009	94.00	0.0019	0.000463
As	75	3	He	0.094	0.0006	70.00	0.0019	0.000463
As	75	3	He	0.117	0.0007	76.00	0.0019	0.000463
Sr	88	3	He	19.901	0.1795	17160.96	0.009	0.001142
Sr	88	3	He	20.19	0.1821	17230.86	0.009	0.001142
Sr	88	3	He	19.292	0.1741	16690.51	0.009	0.001142
Mo	98	3	He	0.188	0.0061	580.03	0.0225	0.001842
Mo	98	3	He	0.092	0.0039	370.02	0.0225	0.001842
Mo	98	3	He	0.178	0.0058	560.03	0.0225	0.001842
Ag	107	3	He	0.001	0.0005	50.00	0.048	0.0004774
Ag	107	3	He	0.003	0.0006	60.00	0.048	0.0004774
Ag	107	3	He	-0.003	0.0003	30.00	0.048	0.0004774
Cd	111	3	He	0.029	0.0002	16.00	0.0055	7.481E-06
Cd	111	3	He	0.064	0.0004	34.00	0.0055	7.481E-06
Cd	111	3	He	0.06	0.0003	32.00	0.0055	7.481E-06
Sn	120	3	He	-0.508	0.0105	1000.07	0.0157	0.01844
Sn	120	3	He	-0.353	0.0129	1220.10	0.0157	0.01844
Sn	120	3	He	0.169	0.0211	2023.70	0.0157	0.01844
Sb	121	3	He	0.059	0.001	100.00	0.0139	0.0002204
Sb	121	3	He	-0.001	0.0002	20.00	0.0139	0.0002204
Sb	121	3	He	0.014	0.0004	40.00	0.0139	0.0002204
Ba	137	3	He	22.794	0.1052	10054.01	0.0045	0.001994
Ba	137	3	He	22.193	0.1025	9693.69	0.0045	0.001994
Ba	137	3	He	21.801	0.1007	9653.69	0.0045	0.001994
Tl	205	3	He	0.009	0.0012	370.02	0.03	0.0009888
Tl	205	3	He	0.011	0.0013	390.02	0.03	0.0009888
Tl	205	3	He	0.009	0.0012	370.02	0.03	0.0009888
Pb	208	3	He	0.005	0.0012	200.01	0.0392	0.001024
Pb	208	3	He	0.016	0.0017	250.01	0.0392	0.001024
Pb	208	3	He	0.012	0.0015	160.01	0.0392	0.001024
U	238	3	He	0.178	0.0079	2360.30	0.0439	0.000128
U	238	3	He	0.18	0.0081	2370.30	0.0439	0.000128
U	238	3	He	0.171	0.0076	2260.27	0.0439	0.000128
Sc	45	1	No Gas			4003793.69		
Sc	45	1	No Gas			3977938.38		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3970371.19		
Ge	72	1	No Gas			1811244.50		
Ge	72	1	No Gas			1778534.35		
Ge	72	1	No Gas			1790079.04		
Sc	45	2	H2			280201.89		
Sc	45	2	H2			272398.53		
Sc	45	2	H2			274128.16		
Ge	72	2	H2			204382.32		
Ge	72	2	H2			199886.87		
Ge	72	2	H2			203731.05		
In	115	2	H2			495271.95		
In	115	2	H2			495415.81		
In	115	2	H2			492946.13		
Sc	45	3	He			62725.30		
Sc	45	3	He			64833.51		
Sc	45	3	He			64763.51		
Ge	72	3	He			110220.75		
Ge	72	3	He			109101.32		
Ge	72	3	He			110723.13		
In	115	3	He			95595.80		
In	115	3	He			94618.63		
In	115	3	He			95896.54		
Tb	159	3	He			389342.69		
Tb	159	3	He			383537.96		
Tb	159	3	He			393689.10		
Bi	209	3	He			297444.66		
Bi	209	3	He			294344.25		
Bi	209	3	He			296365.97		

Quantitation Report

Data File Name	243_CCV.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23J26A00.b
Acq Time	2023-10-26 17:09:40
Sample Name	CCV 5001623
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

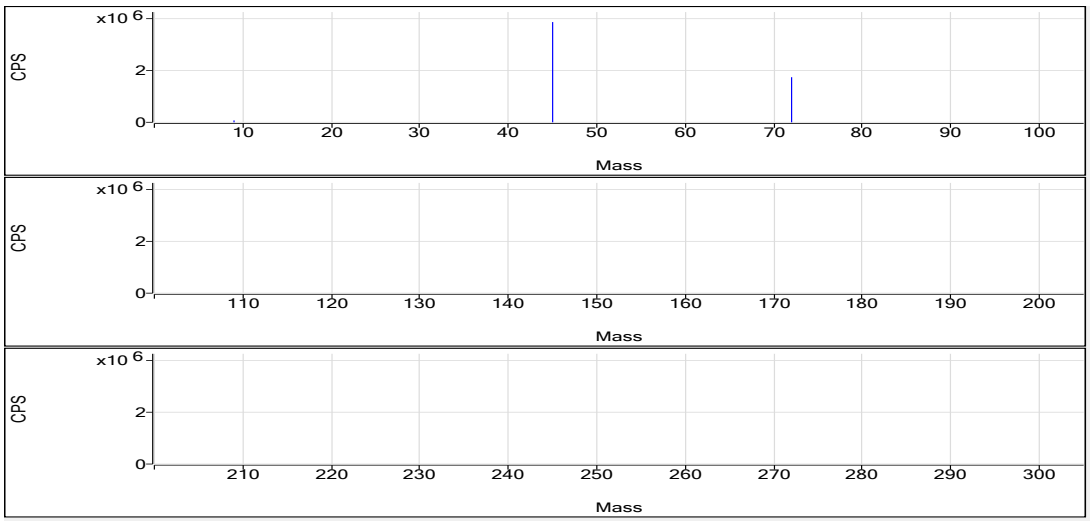
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	49.214	ppb	0.4	73131.06	0.0189	Pulse	0.5000	3
Se	78	72	H2	51.526	ppb	2.0	4376.45	0.0225	Pulse	1.5000	3
Na	23	45	He	5085.268	ppb	1.8	1075461.08	17.0023	Pulse	0.1000	3
Mg	24	45	He	5041.821	ppb	1.8	503160.72	7.9547	Pulse	0.1000	3
Al	27	45	He	5133.778	ppb	3.2	145750.03	2.3046	Pulse	0.1000	3
K	39	45	He	5198.049	ppb	2.9	372729.24	5.8934	Pulse	0.1000	3
Ca	44	45	He	5129.219	ppb	2.1	20007.48	0.3163	Pulse	0.1000	3
Ti	47	45	He	5129.837	ppb	1.8	152653.13	2.4133	Pulse	0.1000	3
V	51	45	He	510.026	ppb	2.1	683541.88	10.8068	Pulse	0.5000	3
Cr	52	45	He	507.078	ppb	2.0	894842.96	14.1474	Pulse	0.1000	3
Mn	55	45	He	509.155	ppb	1.7	366817.74	5.7991	Pulse	0.1000	3
Fe	57	45	He	5032.902	ppb	2.4	169134.41	2.6741	Pulse	0.1000	3
Co	59	45	He	508.323	ppb	2.6	1731863.78	27.3831	Pulse	0.1000	3
Ni	60	72	He	521.078	ppb	2.1	498208.30	4.6103	Pulse	0.1000	3
Cu	63	72	He	517.619	ppb	0.8	1406353.10	13.0119	Pulse	0.1000	3
Zn	66	72	He	514.427	ppb	1.0	151853.14	1.4051	Pulse	0.1000	3
As	75	72	He	521.352	ppb	1.2	107571.29	0.9953	Pulse	0.5000	3
Sr	88	115	He	50.833	ppb	1.8	43076.08	0.4568	Pulse	0.1000	3
Mo	98	115	He	49.422	ppb	1.0	105085.59	1.1144	Pulse	0.1000	3
Ag	107	115	He	48.507	ppb	1.4	219383.64	2.3266	Pulse	0.1000	3
Cd	111	115	He	48.402	ppb	0.3	24989.49	0.2650	Pulse	0.5000	3
Sn	120	115	He	48.295	ppb	2.6	73309.61	0.7774	Pulse	0.1000	3
Sb	121	115	He	48.907	ppb	1.7	64151.60	0.6803	Pulse	0.1000	3
Ba	137	115	He	491.423	ppb	0.5	209976.43	2.2266	Pulse	0.1000	3
Tl	205	209	He	50.692	ppb	1.3	450521.29	1.5225	Pulse	0.1000	3
Pb	208	209	He	51.143	ppb	0.6	593862.19	2.0067	Pulse	0.1000	3
U	238	209	He	51.053	ppb	0.3	663473.83	2.2419	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3877839.01	0.4	108.5	Pulse	0.1000	3
No Gas	Ge	72	1744701.59	0.4	107.2	Pulse	0.1000	3
H2	Sc	45	273994.85	0.1	104.8	Pulse	0.1000	3
H2	Ge	72	194806.07	1.1	103.8	Pulse	0.1000	3
H2	In	115	495185.11	0.7	105.0	Pulse	0.1000	3
He	Sc	45	63270.31	2.2	104.7	Pulse	0.1000	3
He	Ge	72	108090.45	1.8	104.3	Pulse	0.1000	3
He	In	115	94305.95	1.6	104.3	Pulse	0.1000	3
He	Tb	159	386751.48	1.0	102.8	Pulse	0.1000	3
He	Bi	209	295948.13	1.6	103.3	Pulse	0.1000	3

No Gas



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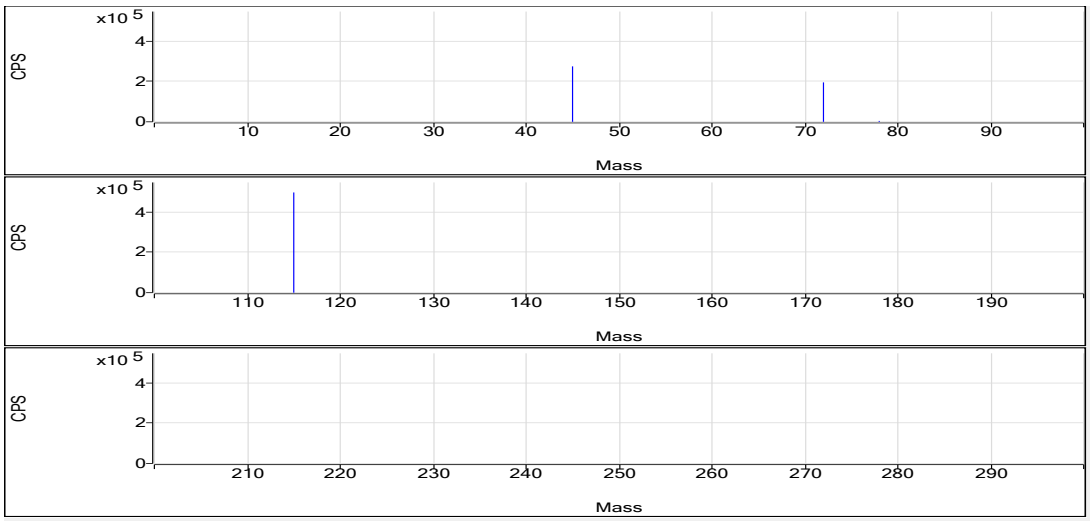
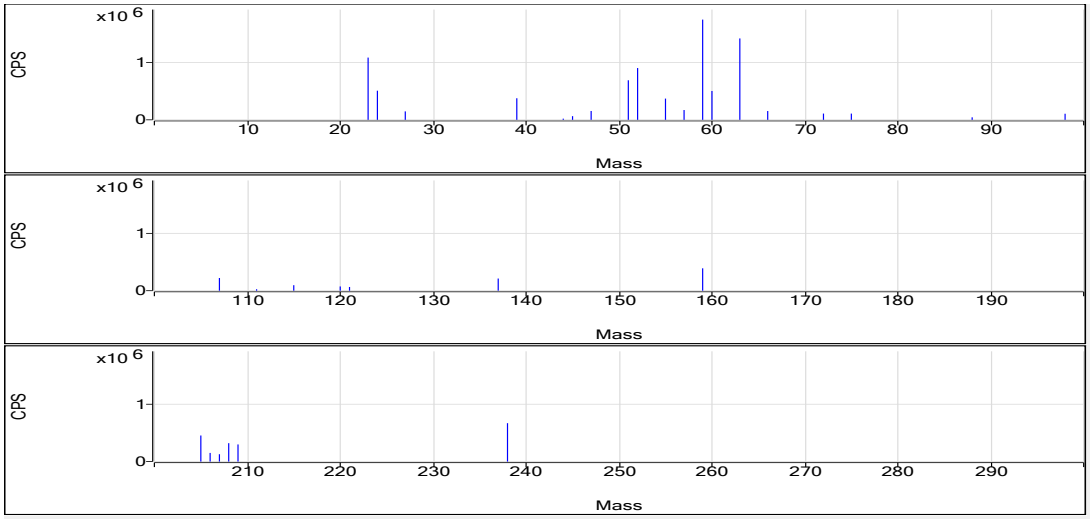


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	49.379	0.0189	73079.95	0.0004	7.085E-06
Be	9	1	No Gas	49.021	0.0188	72953.53	0.0004	7.085E-06
Be	9	1	No Gas	49.243	0.0189	73359.70	0.0004	7.085E-06
Se	78	2	H2	51.984	0.0227	4440.02	0.0004	2.372E-05
Se	78	2	H2	50.368	0.022	4308.65	0.0004	2.372E-05
Se	78	2	H2	52.224	0.0228	4380.67	0.0004	2.372E-05
Na	23	3	He	5169.908	17.2769	1073621.39	0.0032	0.5042
Na	23	3	He	5101.86	17.0562	1071725.37	0.0032	0.5042
Na	23	3	He	4984.036	16.6739	1081036.47	0.0032	0.5042
Mg	24	3	He	5119.413	8.0771	501925.62	0.0016	0.002702
Mg	24	3	He	5067.08	7.9946	502337.96	0.0016	0.002702
Mg	24	3	He	4938.97	7.7925	505218.59	0.0016	0.002702
Al	27	3	He	5202.68	2.3355	145133.20	0.0004	0.00193
Al	27	3	He	5252.738	2.358	148162.94	0.0004	0.00193
Al	27	3	He	4945.917	2.2203	143953.94	0.0004	0.00193
K	39	3	He	5298.378	6.0021	372983.67	0.0011	0.2621
K	39	3	He	5271.384	5.9729	375306.67	0.0011	0.2621
K	39	3	He	5024.384	5.7053	369897.38	0.0011	0.2621
Ca	44	3	He	5160.297	0.3182	19773.74	0.0001	0.003476
Ca	44	3	He	5220.316	0.3219	20224.32	0.0001	0.003476
Ca	44	3	He	5007.046	0.3089	20024.39	0.0001	0.003476
Ti	47	3	He	5158.142	2.4266	150792.27	0.0005	0.000385
Ti	47	3	He	5203.365	2.4479	153810.88	0.0005	0.000385
Ti	47	3	He	5028.003	2.3654	153356.24	0.0005	0.000385
V	51	3	He	518.732	10.9911	683010.69	0.0212	0.007263
V	51	3	He	512.981	10.8694	682977.94	0.0212	0.007263
V	51	3	He	498.363	10.5598	684637.00	0.0212	0.007263
Cr	52	3	He	515.03	14.3685	892888.11	0.0278	0.04283
Cr	52	3	He	510.711	14.2484	895299.21	0.0278	0.04283
Cr	52	3	He	495.495	13.8252	896341.55	0.0278	0.04283
Mn	55	3	He	517.626	5.8955	366356.83	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	509.928	5.8079	364938.78	0.0114	0.005023
Mn	55	3	He	499.911	5.6939	369157.61	0.0114	0.005023
Fe	57	3	He	5160.674	2.7419	170386.31	0.0005	0.003255
Fe	57	3	He	5018.854	2.6666	167557.93	0.0005	0.003255
Fe	57	3	He	4919.179	2.6137	169458.98	0.0005	0.003255
Co	59	3	He	518.106	27.91	1734379.19	0.0539	0.00425
Co	59	3	He	513.869	27.6818	1739384.82	0.0539	0.00425
Co	59	3	He	492.995	26.5575	1721827.32	0.0539	0.00425
Ni	60	3	He	532.993	4.7154	500396.67	0.0088	0.01412
Ni	60	3	He	517.902	4.5823	495130.97	0.0088	0.01412
Ni	60	3	He	512.339	4.5332	499097.26	0.0088	0.01412
Cu	63	3	He	522.175	13.1263	1392964.82	0.0251	0.004537
Cu	63	3	He	514.868	12.9427	1398505.29	0.0251	0.004537
Cu	63	3	He	515.816	12.9665	1427589.20	0.0251	0.004537
Zn	66	3	He	519.406	1.4186	150545.21	0.0027	0.001642
Zn	66	3	He	515.179	1.4071	152042.39	0.0027	0.001642
Zn	66	3	He	508.696	1.3894	152971.82	0.0027	0.001642
As	75	3	He	528.572	1.0091	107087.64	0.0019	0.000463
As	75	3	He	519.345	0.9915	107136.34	0.0019	0.000463
As	75	3	He	516.139	0.9854	108489.90	0.0019	0.000463
Sr	88	3	He	51.25	0.4605	42614.81	0.009	0.001142
Sr	88	3	He	49.808	0.4476	42584.66	0.009	0.001142
Sr	88	3	He	51.44	0.4622	44028.77	0.009	0.001142
Mo	98	3	He	49.957	1.1265	104232.51	0.0225	0.001842
Mo	98	3	He	49.297	1.1116	105754.18	0.0225	0.001842
Mo	98	3	He	49.013	1.1052	105270.07	0.0225	0.001842
Ag	107	3	He	49.107	2.3554	217945.90	0.048	0.0004774
Ag	107	3	He	48.637	2.3328	221937.38	0.048	0.0004774
Ag	107	3	He	47.776	2.2915	218267.63	0.048	0.0004774
Cd	111	3	He	48.277	0.2643	24455.25	0.0055	7.481E-06
Cd	111	3	He	48.397	0.2649	25206.50	0.0055	7.481E-06
Cd	111	3	He	48.532	0.2657	25306.71	0.0055	7.481E-06
Sn	120	3	He	48.847	0.7861	72739.96	0.0157	0.01844
Sn	120	3	He	46.852	0.7548	71804.61	0.0157	0.01844
Sn	120	3	He	49.186	0.7914	75384.27	0.0157	0.01844
Sb	121	3	He	49.037	0.6821	63113.70	0.0139	0.0002204
Sb	121	3	He	49.645	0.6905	65695.49	0.0139	0.0002204
Sb	121	3	He	48.039	0.6682	63645.61	0.0139	0.0002204
Ba	137	3	He	493.905	2.2379	207074.74	0.0045	0.001994
Ba	137	3	He	488.874	2.2151	210738.51	0.0045	0.001994
Ba	137	3	He	491.49	2.227	212116.03	0.0045	0.001994
Tl	205	3	He	51.165	1.5367	446935.50	0.03	0.0009888
Tl	205	3	He	50.951	1.5302	454372.61	0.03	0.0009888
Tl	205	3	He	49.96	1.5005	450255.77	0.03	0.0009888
Pb	208	3	He	51.231	2.0102	311270.44	0.0392	0.001024
Pb	208	3	He	51.4	2.0168	321105.15	0.0392	0.001024
Pb	208	3	He	50.798	1.9932	320794.98	0.0392	0.001024
U	238	3	He	51.228	2.2497	654304.64	0.0439	0.000128
U	238	3	He	51.056	2.2421	665741.55	0.0439	0.000128
U	238	3	He	50.873	2.2341	670375.30	0.0439	0.000128
Sc	45	1	No Gas			3862178.38		
Sc	45	1	No Gas			3883636.82		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3887701.82		
Ge	72	1	No Gas			1736393.57		
Ge	72	1	No Gas			1750809.82		
Ge	72	1	No Gas			1746901.38		
Sc	45	2	H2			274345.82		
Sc	45	2	H2			273632.12		
Sc	45	2	H2			274006.60		
Ge	72	2	H2			195875.02		
Ge	72	2	H2			196172.85		
Ge	72	2	H2			192370.33		
In	115	2	H2			496019.72		
In	115	2	H2			491327.92		
In	115	2	H2			498207.69		
Sc	45	3	He			62141.88		
Sc	45	3	He			62835.05		
Sc	45	3	He			64834.00		
Ge	72	3	He			106119.90		
Ge	72	3	He			108053.46		
Ge	72	3	He			110097.98		
In	115	3	He			93098.85		
In	115	3	He			95696.91		
In	115	3	He			95837.53		
Tb	159	3	He			382517.46		
Tb	159	3	He			387752.18		
Tb	159	3	He			389984.80		
Bi	209	3	He			290846.30		
Bi	209	3	He			296927.69		
Bi	209	3	He			300070.41		

Quantitation Report

Data File Name	244_CCB.d
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Sample Type	CCB
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

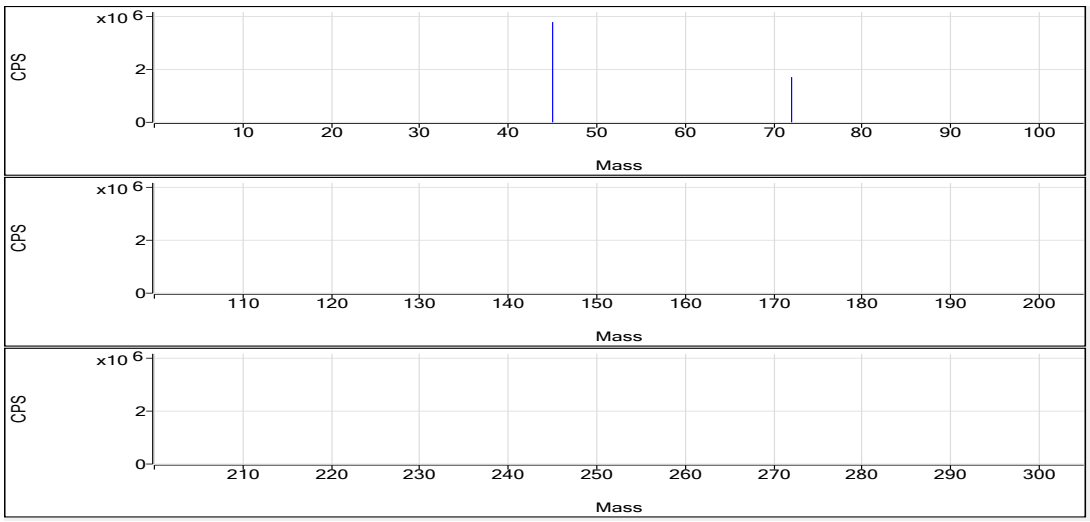
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.010	ppb	43.4	41.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.011	ppb	314.2	5.56	0.0000	Pulse	1.5000	3
Na	23	45	He	14.706	ppb	9.1	34059.66	0.5519	Pulse	0.1000	3
Mg	24	45	He	10.487	ppb	21.1	1183.43	0.0192	Pulse	0.1000	3
Al	27	45	He	1.163	ppb	219.0	150.00	0.0025	Pulse	0.1000	3
K	39	45	He	13.351	ppb	190.9	17037.00	0.2766	Pulse	0.1000	3
Ca	44	45	He	10.496	ppb	169.3	253.34	0.0041	Pulse	0.1000	3
Ti	47	45	He	0.776	ppb	164.2	46.67	0.0007	Pulse	0.1000	3
V	51	45	He	0.103	ppb	31.5	582.02	0.0094	Pulse	0.5000	3
Cr	52	45	He	0.151	ppb	49.3	2903.73	0.0470	Pulse	0.1000	3
Mn	55	45	He	0.837	ppb	7.2	896.72	0.0145	Pulse	0.1000	3
Fe	57	45	He	8.590	ppb	39.8	480.03	0.0078	Pulse	0.1000	3
Co	59	45	He	0.082	ppb	53.9	533.36	0.0087	Pulse	0.1000	3
Ni	60	72	He	-0.201	ppb	N/A	1336.77	0.0124	Pulse	0.1000	3
Cu	63	72	He	0.060	ppb	47.6	653.37	0.0060	Pulse	0.1000	3
Zn	66	72	He	-0.025	ppb	N/A	170.01	0.0016	Pulse	0.1000	3
As	75	72	He	0.135	ppb	44.4	78.00	0.0007	Pulse	0.5000	3
Sr	88	115	He	0.105	ppb	41.8	193.34	0.0021	Pulse	0.1000	3
Mo	98	115	He	0.159	ppb	20.9	503.36	0.0054	Pulse	0.1000	3
Ag	107	115	He	0.009	ppb	108.1	83.34	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.012	ppb	18.0	6.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.008	ppb	N/A	1700.17	0.0183	Pulse	0.1000	3
Sb	121	115	He	0.059	ppb	53.7	96.67	0.0010	Pulse	0.1000	3
Ba	137	115	He	0.035	ppb	122.5	200.01	0.0022	Pulse	0.1000	3
Tl	205	209	He	0.106	ppb	14.8	1223.44	0.0042	Pulse	0.1000	3
Pb	208	209	He	0.013	ppb	33.2	450.02	0.0015	Pulse	0.1000	3
U	238	209	He	0.032	ppb	14.1	456.69	0.0016	Pulse	0.1000	3

ISTD Table:

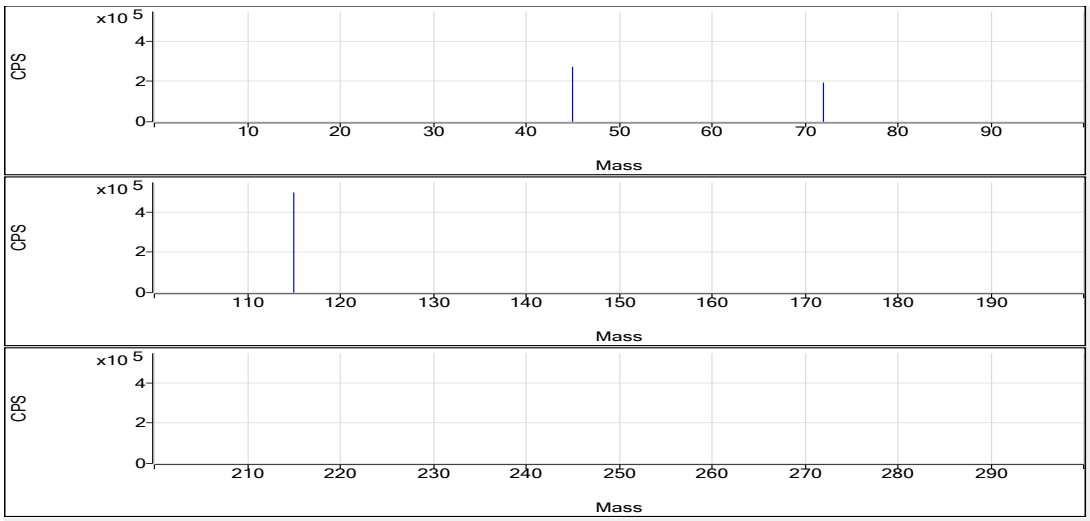
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3800084.21	1.4	106.3	Pulse	0.1000	3
No Gas	Ge	72	1713163.15	0.7	105.3	Pulse	0.1000	3
H2	Sc	45	272549.05	1.3	104.2	Pulse	0.1000	3
H2	Ge	72	194571.87	2.7	103.7	Pulse	0.1000	3
H2	In	115	496843.96	1.4	105.3	Pulse	0.1000	3
He	Sc	45	61707.41	2.9	102.2	Pulse	0.1000	3
He	Ge	72	108254.99	1.0	104.5	Pulse	0.1000	3
He	In	115	92827.41	1.2	102.7	Pulse	0.1000	3
He	Tb	159	381041.14	0.6	101.3	Pulse	0.1000	3
He	Bi	209	294143.59	0.8	102.6	Pulse	0.1000	3

No Gas

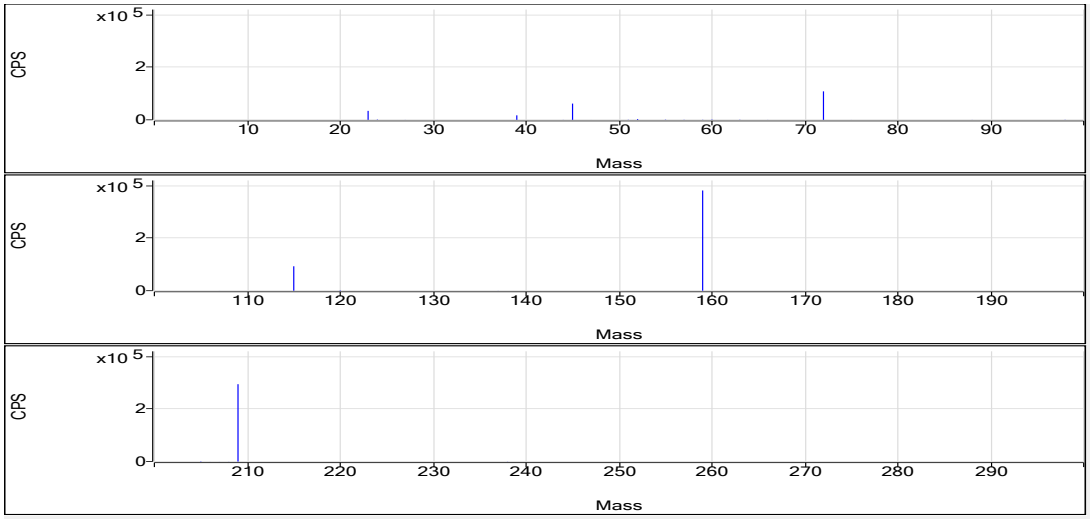


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.005	0	34.00	0.0004	7.085E-06
Be	9	1	No Gas	0.011	0	44.00	0.0004	7.085E-06
Be	9	1	No Gas	0.013	0	46.00	0.0004	7.085E-06
Se	78	2	H2	0.01	0	5.33	0.0004	2.372E-05
Se	78	2	H2	0.048	0	8.67	0.0004	2.372E-05
Se	78	2	H2	-0.024	0	2.67	0.0004	2.372E-05
Na	23	3	He	13.185	0.5469	32636.49	0.0032	0.5042
Na	23	3	He	15.712	0.5551	34871.41	0.0032	0.5042
Na	23	3	He	15.22	0.5535	34671.09	0.0032	0.5042
Mg	24	3	He	12.951	0.0231	1380.12	0.0016	0.002702
Mg	24	3	He	8.684	0.0164	1030.07	0.0016	0.002702
Mg	24	3	He	9.827	0.0182	1140.10	0.0016	0.002702
Al	27	3	He	3.917	0.0037	220.01	0.0004	0.00193
Al	27	3	He	-1.108	0.0014	90.00	0.0004	0.00193
Al	27	3	He	0.681	0.0022	140.00	0.0004	0.00193
K	39	3	He	41.768	0.3074	18341.76	0.0011	0.2621
K	39	3	He	5.794	0.2684	16860.26	0.0011	0.2621
K	39	3	He	-7.51	0.254	15908.99	0.0011	0.2621
Ca	44	3	He	19.949	0.0047	280.01	0.0001	0.003476
Ca	44	3	He	-10.004	0.0029	180.01	0.0001	0.003476
Ca	44	3	He	21.544	0.0048	300.01	0.0001	0.003476
Ti	47	3	He	-0.106	0.0003	20.00	0.0005	0.000385
Ti	47	3	He	0.197	0.0005	30.00	0.0005	0.000385
Ti	47	3	He	2.236	0.0014	90.00	0.0005	0.000385
V	51	3	He	0.126	0.0099	592.02	0.0212	0.007263
V	51	3	He	0.117	0.0097	612.02	0.0212	0.007263
V	51	3	He	0.066	0.0087	542.01	0.0212	0.007263
Cr	52	3	He	0.081	0.0451	2690.32	0.0278	0.04283
Cr	52	3	He	0.229	0.0492	3090.49	0.0278	0.04283
Cr	52	3	He	0.142	0.0468	2930.37	0.0278	0.04283
Mn	55	3	He	0.899	0.0153	910.06	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.832	0.0145	910.05	0.0114	0.005023
Mn	55	3	He	0.779	0.0139	870.06	0.0114	0.005023
Fe	57	3	He	12.499	0.0099	590.04	0.0005	0.003255
Fe	57	3	He	6.166	0.0065	410.02	0.0005	0.003255
Fe	57	3	He	7.104	0.007	440.02	0.0005	0.003255
Co	59	3	He	0.133	0.0114	680.04	0.0539	0.00425
Co	59	3	He	0.066	0.0078	490.02	0.0539	0.00425
Co	59	3	He	0.049	0.0069	430.02	0.0539	0.00425
Ni	60	3	He	-0.118	0.0131	1400.11	0.0088	0.01412
Ni	60	3	He	-0.391	0.0107	1160.08	0.0088	0.01412
Ni	60	3	He	-0.093	0.0133	1450.13	0.0088	0.01412
Cu	63	3	He	0.054	0.0059	630.04	0.0251	0.004537
Cu	63	3	He	0.09	0.0068	740.04	0.0251	0.004537
Cu	63	3	He	0.035	0.0054	590.03	0.0251	0.004537
Zn	66	3	He	0.151	0.0021	220.01	0.0027	0.001642
Zn	66	3	He	-0.332	0.0007	80.00	0.0027	0.001642
Zn	66	3	He	0.104	0.0019	210.01	0.0027	0.001642
As	75	3	He	0.12	0.0007	74.00	0.0019	0.000463
As	75	3	He	0.201	0.0008	92.00	0.0019	0.000463
As	75	3	He	0.084	0.0006	68.00	0.0019	0.000463
Sr	88	3	He	0.103	0.0021	190.01	0.009	0.001142
Sr	88	3	He	0.062	0.0017	160.01	0.009	0.001142
Sr	88	3	He	0.15	0.0025	230.01	0.009	0.001142
Mo	98	3	He	0.121	0.0046	420.03	0.0225	0.001842
Mo	98	3	He	0.173	0.0057	540.03	0.0225	0.001842
Mo	98	3	He	0.183	0.006	550.03	0.0225	0.001842
Ag	107	3	He	0.02	0.0014	130.01	0.048	0.0004774
Ag	107	3	He	0.001	0.0005	50.00	0.048	0.0004774
Ag	107	3	He	0.006	0.0008	70.00	0.048	0.0004774
Cd	111	3	He	0.011	0.0001	6.00	0.0055	7.481E-06
Cd	111	3	He	0.014	0.0001	8.00	0.0055	7.481E-06
Cd	111	3	He	0.01	0.0001	6.00	0.0055	7.481E-06
Sn	120	3	He	-0.116	0.0166	1530.14	0.0157	0.01844
Sn	120	3	He	-0.003	0.0184	1730.17	0.0157	0.01844
Sn	120	3	He	0.094	0.0199	1840.19	0.0157	0.01844
Sb	121	3	He	0.023	0.0005	50.00	0.0139	0.0002204
Sb	121	3	He	0.084	0.0014	130.01	0.0139	0.0002204
Sb	121	3	He	0.07	0.0012	110.01	0.0139	0.0002204
Ba	137	3	He	0.04	0.0022	200.01	0.0045	0.001994
Ba	137	3	He	0.076	0.0023	220.01	0.0045	0.001994
Ba	137	3	He	-0.01	0.0019	180.01	0.0045	0.001994
Tl	205	3	He	0.124	0.0047	1370.14	0.03	0.0009888
Tl	205	3	He	0.096	0.0039	1140.09	0.03	0.0009888
Tl	205	3	He	0.098	0.0039	1160.10	0.03	0.0009888
Pb	208	3	He	0.008	0.0013	230.01	0.0392	0.001024
Pb	208	3	He	0.014	0.0016	260.01	0.0392	0.001024
Pb	208	3	He	0.016	0.0017	290.02	0.0392	0.001024
U	238	3	He	0.038	0.0018	520.03	0.0439	0.000128
U	238	3	He	0.029	0.0014	420.02	0.0439	0.000128
U	238	3	He	0.03	0.0015	430.02	0.0439	0.000128
Sc	45	1	No Gas			3765497.44		
Sc	45	1	No Gas			3859685.57		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3775069.63		
Ge	72	1	No Gas			1713943.10		
Ge	72	1	No Gas			1724797.94		
Ge	72	1	No Gas			1700748.41		
Sc	45	2	H2			269010.72		
Sc	45	2	H2			272524.18		
Sc	45	2	H2			276112.26		
Ge	72	2	H2			189280.60		
Ge	72	2	H2			194850.25		
Ge	72	2	H2			199584.76		
In	115	2	H2			491932.84		
In	115	2	H2			493521.87		
In	115	2	H2			505077.18		
Sc	45	3	He			59671.39		
Sc	45	3	He			62815.80		
Sc	45	3	He			62635.05		
Ge	72	3	He			107067.06		
Ge	72	3	He			108647.94		
Ge	72	3	He			109049.97		
In	115	3	He			92041.72		
In	115	3	He			94076.20		
In	115	3	He			92404.11		
Tb	159	3	He			379291.36		
Tb	159	3	He			383775.50		
Tb	159	3	He			380056.56		
Bi	209	3	He			291294.90		
Bi	209	3	He			295224.35		
Bi	209	3	He			295911.52		

Quantitation Report

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Sample Type	CCV
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

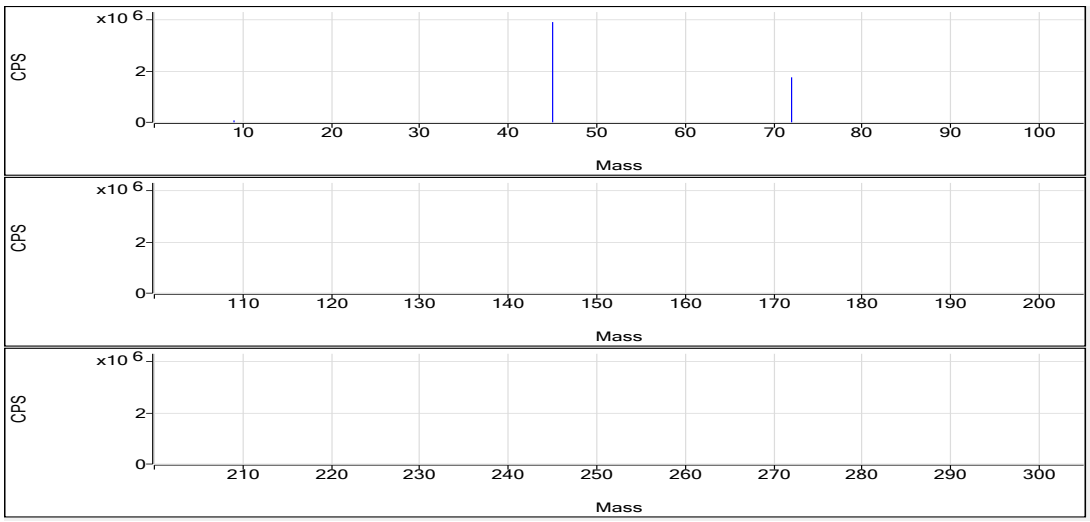
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	49.684	ppb	0.7	74525.87	0.0190	Pulse	0.5000	3
Se	78	72	H2	51.455	ppb	0.7	4315.32	0.0224	Pulse	1.5000	3
Na	23	45	He	5137.797	ppb	1.4	1072412.09	17.1728	Pulse	0.1000	3
Mg	24	45	He	5148.531	ppb	0.4	507318.94	8.1230	Pulse	0.1000	3
Al	27	45	He	5158.788	ppb	1.1	144623.76	2.3158	Pulse	0.1000	3
K	39	45	He	5197.134	ppb	1.1	367984.17	5.8924	Pulse	0.1000	3
Ca	44	45	He	5191.790	ppb	3.8	19987.48	0.3201	Pulse	0.1000	3
Ti	47	45	He	5185.354	ppb	2.1	152323.09	2.4394	Pulse	0.1000	3
V	51	45	He	513.386	ppb	2.3	679237.54	10.8779	Pulse	0.5000	3
Cr	52	45	He	512.280	ppb	2.1	892444.28	14.2921	Pulse	0.1000	3
Mn	55	45	He	513.645	ppb	2.2	365299.51	5.8502	Pulse	0.1000	3
Fe	57	45	He	5085.327	ppb	1.3	168729.70	2.7019	Pulse	0.1000	3
Co	59	45	He	513.370	ppb	1.8	1726915.18	27.6549	Pulse	0.1000	3
Ni	60	72	He	518.452	ppb	0.9	494743.47	4.5871	Pulse	0.1000	3
Cu	63	72	He	518.961	ppb	0.3	1407036.33	13.0456	Pulse	0.1000	3
Zn	66	72	He	519.968	ppb	0.6	153174.36	1.4202	Pulse	0.1000	3
As	75	72	He	519.301	ppb	0.5	106930.02	0.9914	Pulse	0.5000	3
Sr	88	115	He	50.689	ppb	1.6	42775.04	0.4555	Pulse	0.1000	3
Mo	98	115	He	49.836	ppb	0.7	105514.59	1.1237	Pulse	0.1000	3
Ag	107	115	He	48.466	ppb	0.4	218270.35	2.3246	Pulse	0.1000	3
Cd	111	115	He	48.907	ppb	0.4	25138.46	0.2677	Pulse	0.5000	3
Sn	120	115	He	48.056	ppb	2.2	72632.42	0.7737	Pulse	0.1000	3
Sb	121	115	He	48.897	ppb	0.9	63863.38	0.6801	Pulse	0.1000	3
Ba	137	115	He	488.691	ppb	1.3	207889.61	2.2143	Pulse	0.1000	3
Tl	205	209	He	51.049	ppb	1.0	449680.25	1.5332	Pulse	0.1000	3
Pb	208	209	He	51.509	ppb	1.0	592764.86	2.0211	Pulse	0.1000	3
U	238	209	He	50.956	ppb	0.9	656310.33	2.2377	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3914420.05	0.9	109.5	Pulse	0.1000	3
No Gas	Ge	72	1756698.56	0.7	107.9	Pulse	0.1000	3
H2	Sc	45	271600.89	0.8	103.9	Pulse	0.1000	3
H2	Ge	72	192334.96	0.4	102.5	Pulse	0.1000	3
H2	In	115	492667.03	0.7	104.4	Pulse	0.1000	3
He	Sc	45	62456.72	1.6	103.4	Pulse	0.1000	3
He	Ge	72	107855.80	0.4	104.1	Pulse	0.1000	3
He	In	115	93894.61	1.1	103.9	Pulse	0.1000	3
He	Tb	159	387392.45	1.5	102.9	Pulse	0.1000	3
He	Bi	209	293298.02	0.2	102.3	Pulse	0.1000	3

No Gas



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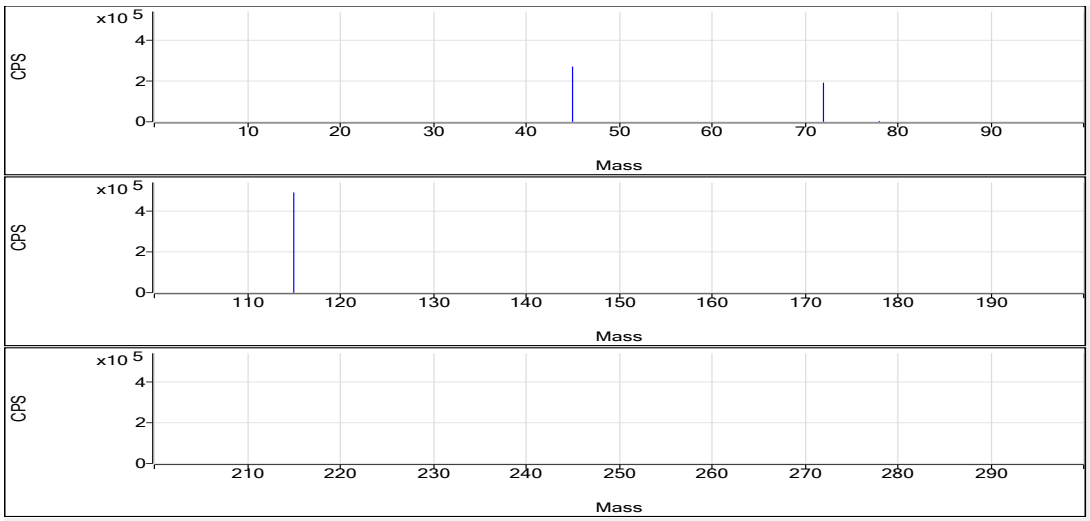
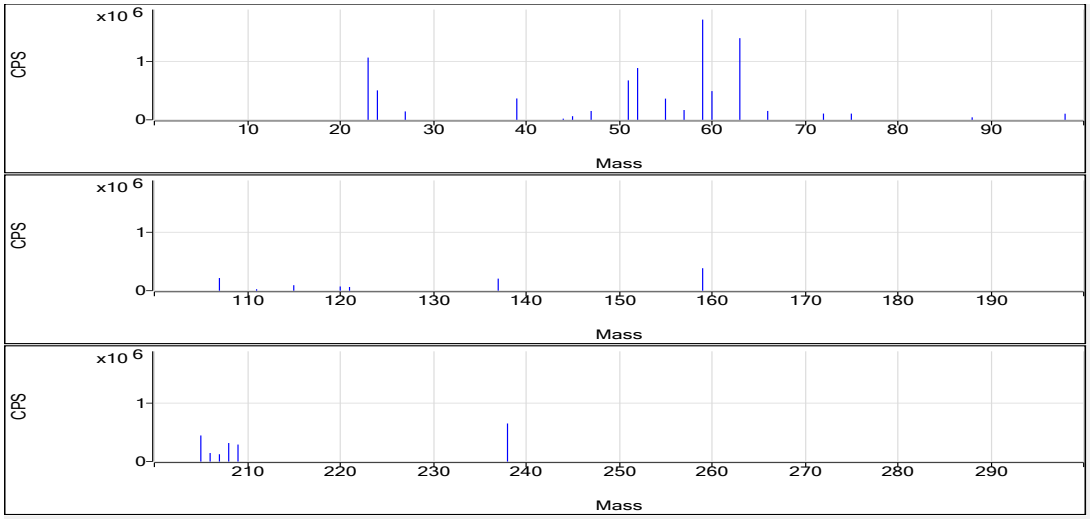


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	49.946	0.0191	75598.61	0.0004	7.085E-06
Be	9	1	No Gas	49.266	0.0189	73926.05	0.0004	7.085E-06
Be	9	1	No Gas	49.839	0.0191	74052.96	0.0004	7.085E-06
Se	78	2	H2	51.759	0.0226	4329.32	0.0004	2.372E-05
Se	78	2	H2	51.083	0.0223	4304.65	0.0004	2.372E-05
Se	78	2	H2	51.522	0.0225	4311.98	0.0004	2.372E-05
Na	23	3	He	5056.576	16.9093	1073360.37	0.0032	0.5042
Na	23	3	He	5186.927	17.3322	1066267.80	0.0032	0.5042
Na	23	3	He	5169.889	17.2769	1077608.11	0.0032	0.5042
Mg	24	3	He	5136.403	8.1039	514416.01	0.0016	0.002702
Mg	24	3	He	5172.893	8.1614	502088.86	0.0016	0.002702
Mg	24	3	He	5136.295	8.1037	505451.95	0.0016	0.002702
Al	27	3	He	5116.968	2.2971	145812.60	0.0004	0.00193
Al	27	3	He	5223.569	2.3449	144256.37	0.0004	0.00193
Al	27	3	He	5135.826	2.3055	143802.31	0.0004	0.00193
K	39	3	He	5141.057	5.8317	370182.61	0.0011	0.2621
K	39	3	He	5250.449	5.9502	366054.56	0.0011	0.2621
K	39	3	He	5199.895	5.8954	367715.35	0.0011	0.2621
Ca	44	3	He	5081.582	0.3134	19894.05	0.0001	0.003476
Ca	44	3	He	5418.587	0.334	20544.87	0.0001	0.003476
Ca	44	3	He	5075.201	0.313	19523.52	0.0001	0.003476
Ti	47	3	He	5063.419	2.382	151205.50	0.0005	0.000385
Ti	47	3	He	5270.985	2.4797	152547.64	0.0005	0.000385
Ti	47	3	He	5221.658	2.4565	153216.14	0.0005	0.000385
V	51	3	He	500.599	10.6072	673320.13	0.0212	0.007263
V	51	3	He	523.854	11.0996	682843.63	0.0212	0.007263
V	51	3	He	515.703	10.927	681548.88	0.0212	0.007263
Cr	52	3	He	500.812	13.9731	886977.25	0.0278	0.04283
Cr	52	3	He	521.641	14.5524	895261.00	0.0278	0.04283
Cr	52	3	He	514.389	14.3507	895094.60	0.0278	0.04283
Mn	55	3	He	503.028	5.7294	363686.95	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	525.883	5.9895	368468.94	0.0114	0.005023
Mn	55	3	He	512.025	5.8317	363742.65	0.0114	0.005023
Fe	57	3	He	5027.08	2.671	169548.67	0.0005	0.003255
Fe	57	3	He	5159.434	2.7412	168639.72	0.0005	0.003255
Fe	57	3	He	5069.468	2.6935	168000.70	0.0005	0.003255
Co	59	3	He	503.132	27.1034	1720463.41	0.0539	0.00425
Co	59	3	He	520.945	28.0629	1726416.85	0.0539	0.00425
Co	59	3	He	516.034	27.7984	1733865.29	0.0539	0.00425
Ni	60	3	He	518.201	4.5849	492274.80	0.0088	0.01412
Ni	60	3	He	513.797	4.5461	492322.61	0.0088	0.01412
Ni	60	3	He	523.358	4.6304	499633.00	0.0088	0.01412
Cu	63	3	He	518.943	13.0451	1400634.20	0.0251	0.004537
Cu	63	3	He	517.324	13.0044	1408332.48	0.0251	0.004537
Cu	63	3	He	520.616	13.0872	1412142.32	0.0251	0.004537
Zn	66	3	He	520.235	1.4209	152559.24	0.0027	0.001642
Zn	66	3	He	523.05	1.4286	154709.22	0.0027	0.001642
Zn	66	3	He	516.621	1.411	152254.62	0.0027	0.001642
As	75	3	He	520.564	0.9938	106706.84	0.0019	0.000463
As	75	3	He	516.063	0.9853	106698.95	0.0019	0.000463
As	75	3	He	521.275	0.9952	107384.28	0.0019	0.000463
Sr	88	3	He	49.762	0.4472	41481.14	0.009	0.001142
Sr	88	3	He	51.042	0.4587	43246.56	0.009	0.001142
Sr	88	3	He	51.263	0.4607	43597.43	0.009	0.001142
Mo	98	3	He	49.743	1.1216	104039.78	0.0225	0.001842
Mo	98	3	He	49.543	1.1171	105330.74	0.0225	0.001842
Mo	98	3	He	50.222	1.1324	107173.24	0.0225	0.001842
Ag	107	3	He	48.449	2.3238	215547.69	0.048	0.0004774
Ag	107	3	He	48.687	2.3352	220179.70	0.048	0.0004774
Ag	107	3	He	48.263	2.3149	219083.65	0.048	0.0004774
Cd	111	3	He	49.079	0.2687	24922.08	0.0055	7.481E-06
Cd	111	3	He	48.955	0.268	25268.73	0.0055	7.481E-06
Cd	111	3	He	48.685	0.2665	25224.57	0.0055	7.481E-06
Sn	120	3	He	49.278	0.7929	73544.01	0.0157	0.01844
Sn	120	3	He	47.658	0.7674	72357.40	0.0157	0.01844
Sn	120	3	He	47.232	0.7607	71995.85	0.0157	0.01844
Sb	121	3	He	48.56	0.6754	62651.24	0.0139	0.0002204
Sb	121	3	He	48.707	0.6775	63877.22	0.0139	0.0002204
Sb	121	3	He	49.424	0.6875	65061.69	0.0139	0.0002204
Ba	137	3	He	496.307	2.2488	208586.85	0.0045	0.001994
Ba	137	3	He	484.923	2.1972	207166.97	0.0045	0.001994
Ba	137	3	He	484.844	2.1969	207915.00	0.0045	0.001994
Tl	205	3	He	50.492	1.5165	446045.46	0.03	0.0009888
Tl	205	3	He	51.262	1.5396	450777.57	0.03	0.0009888
Tl	205	3	He	51.394	1.5435	452217.73	0.03	0.0009888
Pb	208	3	He	50.898	1.9971	314587.44	0.0392	0.001024
Pb	208	3	He	51.756	2.0307	322013.53	0.0392	0.001024
Pb	208	3	He	51.873	2.0354	321225.84	0.0392	0.001024
U	238	3	He	50.699	2.2264	654851.24	0.0439	0.000128
U	238	3	He	50.671	2.2252	651516.40	0.0439	0.000128
U	238	3	He	51.498	2.2615	662563.35	0.0439	0.000128
Sc	45	1	No Gas			3949926.82		
Sc	45	1	No Gas			3915834.94		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3877498.38		
Ge	72	1	No Gas			1766923.25		
Ge	72	1	No Gas			1761299.97		
Ge	72	1	No Gas			1741872.47		
Sc	45	2	H2			269489.23		
Sc	45	2	H2			271359.27		
Sc	45	2	H2			273954.18		
Ge	72	2	H2			191823.67		
Ge	72	2	H2			193250.19		
Ge	72	2	H2			191931.03		
In	115	2	H2			494919.68		
In	115	2	H2			494486.56		
In	115	2	H2			488594.84		
Sc	45	3	He			63477.68		
Sc	45	3	He			61519.64		
Sc	45	3	He			62372.85		
Ge	72	3	He			107368.38		
Ge	72	3	He			108296.26		
Ge	72	3	He			107902.76		
In	115	3	He			93330.05		
In	115	3	He			94850.15		
In	115	3	He			95203.24		
Tb	159	3	He			381910.85		
Tb	159	3	He			393564.76		
Tb	159	3	He			386701.75		
Bi	209	3	He			294130.23		
Bi	209	3	He			292790.23		
Bi	209	3	He			292973.61		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23J26A00.b
Acq Time	2023-10-26 17:27:36
Sample Name	CCB 4993845
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

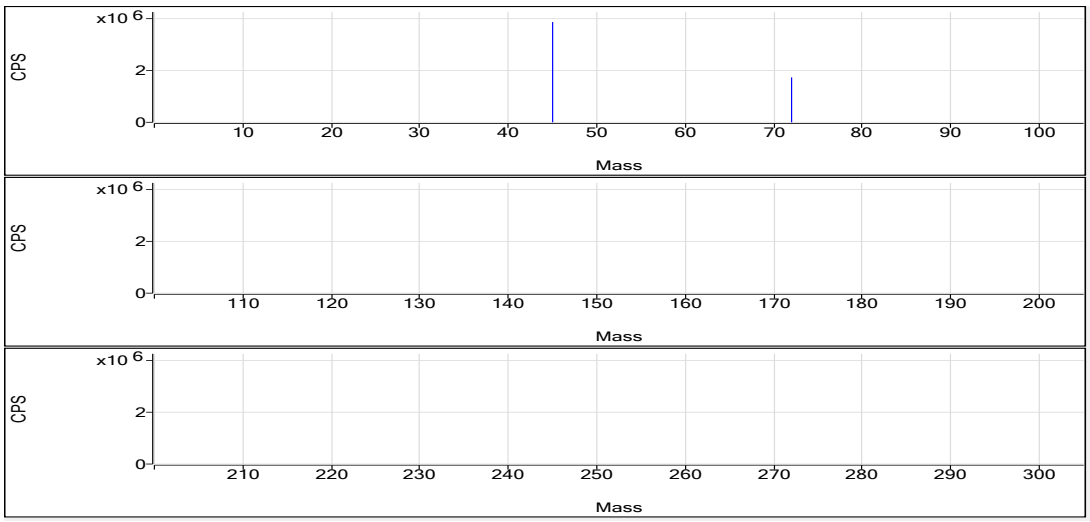
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.009	ppb	42.0	41.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.100	ppb	23.9	12.89	0.0001	Pulse	1.5000	3
Na	23	45	He	4.829	ppb	66.2	32833.63	0.5198	Pulse	0.1000	3
Mg	24	45	He	10.005	ppb	7.2	1166.76	0.0185	Pulse	0.1000	3
Al	27	45	He	0.870	ppb	77.4	146.68	0.0023	Pulse	0.1000	3
K	39	45	He	11.339	ppb	184.0	17320.76	0.2744	Pulse	0.1000	3
Ca	44	45	He	4.372	ppb	446.3	236.68	0.0037	Pulse	0.1000	3
Ti	47	45	He	1.774	ppb	94.7	76.67	0.0012	Pulse	0.1000	3
V	51	45	He	0.123	ppb	8.2	623.35	0.0099	Pulse	0.5000	3
Cr	52	45	He	0.049	ppb	62.0	2790.37	0.0442	Pulse	0.1000	3
Mn	55	45	He	0.681	ppb	16.2	806.72	0.0128	Pulse	0.1000	3
Fe	57	45	He	5.408	ppb	28.1	386.69	0.0061	Pulse	0.1000	3
Co	59	45	He	0.109	ppb	18.3	640.04	0.0101	Pulse	0.1000	3
Ni	60	72	He	-0.204	ppb	N/A	1323.44	0.0123	Pulse	0.1000	3
Cu	63	72	He	0.094	ppb	29.8	740.05	0.0069	Pulse	0.1000	3
Zn	66	72	He	-0.067	ppb	N/A	156.67	0.0015	Pulse	0.1000	3
As	75	72	He	0.210	ppb	55.6	92.67	0.0009	Pulse	0.5000	3
Sr	88	115	He	0.160	ppb	25.6	240.01	0.0026	Pulse	0.1000	3
Mo	98	115	He	0.121	ppb	11.3	426.69	0.0046	Pulse	0.1000	3
Ag	107	115	He	0.005	ppb	249.7	66.67	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.008	ppb	28.2	4.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.017	ppb	N/A	1696.85	0.0182	Pulse	0.1000	3
Sb	121	115	He	0.063	ppb	47.4	103.34	0.0011	Pulse	0.1000	3
Ba	137	115	He	0.078	ppb	189.0	220.01	0.0023	Pulse	0.1000	3
Tl	205	209	He	0.133	ppb	13.0	1460.13	0.0050	Pulse	0.1000	3
Pb	208	209	He	0.004	ppb	32.6	346.68	0.0012	Pulse	0.1000	3
U	238	209	He	0.035	ppb	26.0	490.02	0.0017	Pulse	0.1000	3

ISTD Table:

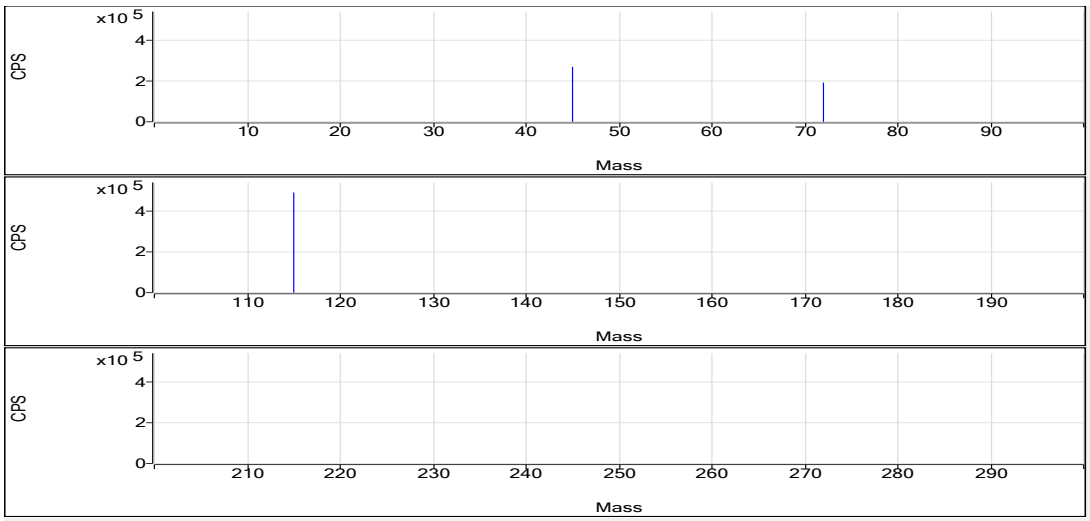
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3873375.98	0.7	108.4	Pulse	0.1000	3
No Gas	Ge	72	1735976.38	0.6	106.7	Pulse	0.1000	3
H2	Sc	45	267326.28	0.5	102.2	Pulse	0.1000	3
H2	Ge	72	190900.75	1.2	101.7	Pulse	0.1000	3
H2	In	115	488354.38	0.1	103.5	Pulse	0.1000	3
He	Sc	45	63160.37	1.3	104.6	Pulse	0.1000	3
He	Ge	72	107462.57	1.2	103.7	Pulse	0.1000	3
He	In	115	93424.03	1.8	103.4	Pulse	0.1000	3
He	Tb	159	383945.75	0.4	102.0	Pulse	0.1000	3
He	Bi	209	293585.28	0.8	102.4	Pulse	0.1000	3

No Gas

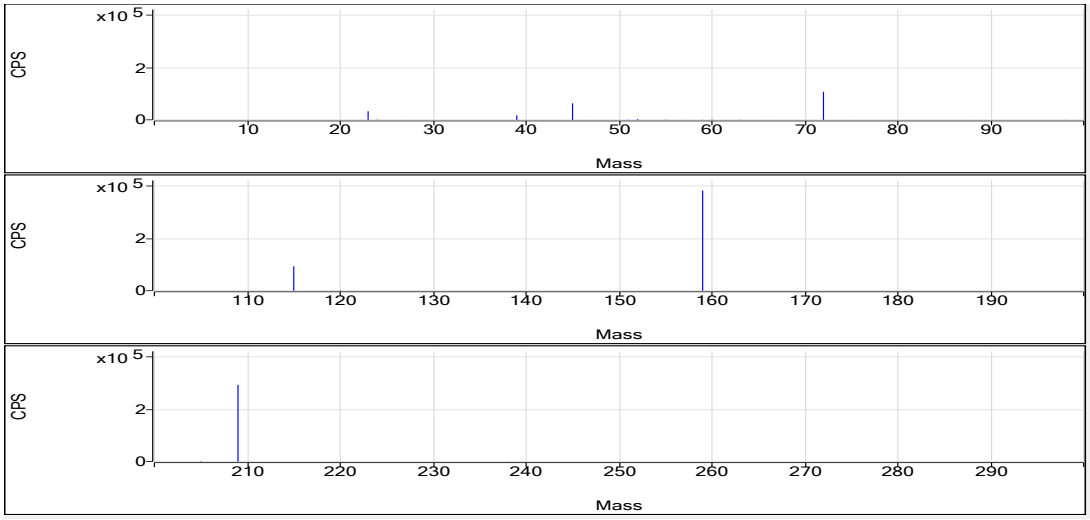


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.006	0	36.00	0.0004	7.085E-06
Be	9	1	No Gas	0.014	0	48.00	0.0004	7.085E-06
Be	9	1	No Gas	0.009	0	40.00	0.0004	7.085E-06
Se	78	2	H2	0.09	0.0001	12.00	0.0004	2.372E-05
Se	78	2	H2	0.083	0.0001	11.33	0.0004	2.372E-05
Se	78	2	H2	0.128	0.0001	15.33	0.0004	2.372E-05
Na	23	3	He	5.346	0.5215	32476.06	0.0032	0.5042
Na	23	3	He	1.403	0.5087	32215.56	0.0032	0.5042
Na	23	3	He	7.737	0.5293	33809.28	0.0032	0.5042
Mg	24	3	He	10.811	0.0198	1230.10	0.0016	0.002702
Mg	24	3	He	9.801	0.0182	1150.09	0.0016	0.002702
Mg	24	3	He	9.404	0.0175	1120.09	0.0016	0.002702
Al	27	3	He	0.352	0.0021	130.01	0.0004	0.00193
Al	27	3	He	0.626	0.0022	140.01	0.0004	0.00193
Al	27	3	He	1.631	0.0027	170.01	0.0004	0.00193
K	39	3	He	35.406	0.3005	18712.49	0.0011	0.2621
K	39	3	He	-1.608	0.2604	16489.73	0.0011	0.2621
K	39	3	He	0.22	0.2624	16760.07	0.0011	0.2621
Ca	44	3	He	-12.228	0.0027	170.01	0.0001	0.003476
Ca	44	3	He	25.863	0.0051	320.01	0.0001	0.003476
Ca	44	3	He	-0.52	0.0034	220.01	0.0001	0.003476
Ti	47	3	He	2.937	0.0018	110.00	0.0005	0.000385
Ti	47	3	He	2.539	0.0016	100.00	0.0005	0.000385
Ti	47	3	He	-0.153	0.0003	20.00	0.0005	0.000385
V	51	3	He	0.126	0.0099	618.02	0.0212	0.007263
V	51	3	He	0.112	0.0096	610.02	0.0212	0.007263
V	51	3	He	0.132	0.0101	642.02	0.0212	0.007263
Cr	52	3	He	0.083	0.0451	2810.38	0.0278	0.04283
Cr	52	3	He	0.039	0.0439	2780.37	0.0278	0.04283
Cr	52	3	He	0.025	0.0435	2780.36	0.0278	0.04283
Mn	55	3	He	0.631	0.0122	760.04	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.808	0.0142	900.06	0.0114	0.005023
Mn	55	3	He	0.604	0.0119	760.05	0.0114	0.005023
Fe	57	3	He	6.576	0.0067	420.03	0.0005	0.003255
Fe	57	3	He	3.686	0.0052	330.02	0.0005	0.003255
Fe	57	3	He	5.961	0.0064	410.02	0.0005	0.003255
Co	59	3	He	0.13	0.0112	700.04	0.0539	0.00425
Co	59	3	He	0.109	0.0101	640.05	0.0539	0.00425
Co	59	3	He	0.09	0.0091	580.03	0.0539	0.00425
Ni	60	3	He	-0.159	0.0127	1350.12	0.0088	0.01412
Ni	60	3	He	-0.145	0.0128	1380.11	0.0088	0.01412
Ni	60	3	He	-0.309	0.0114	1240.10	0.0088	0.01412
Cu	63	3	He	0.123	0.0076	810.06	0.0251	0.004537
Cu	63	3	He	0.068	0.0062	670.04	0.0251	0.004537
Cu	63	3	He	0.09	0.0068	740.05	0.0251	0.004537
Zn	66	3	He	0.02	0.0017	180.01	0.0027	0.001642
Zn	66	3	He	-0.056	0.0015	160.01	0.0027	0.001642
Zn	66	3	He	-0.164	0.0012	130.00	0.0027	0.001642
As	75	3	He	0.281	0.001	106.00	0.0019	0.000463
As	75	3	He	0.274	0.001	106.00	0.0019	0.000463
As	75	3	He	0.075	0.0006	66.00	0.0019	0.000463
Sr	88	3	He	0.202	0.003	270.01	0.009	0.001142
Sr	88	3	He	0.12	0.0022	210.01	0.009	0.001142
Sr	88	3	He	0.157	0.0025	240.01	0.009	0.001142
Mo	98	3	He	0.137	0.0049	450.02	0.0225	0.001842
Mo	98	3	He	0.111	0.0043	410.02	0.0225	0.001842
Mo	98	3	He	0.116	0.0045	420.02	0.0225	0.001842
Ag	107	3	He	-0.003	0.0003	30.00	0.048	0.0004774
Ag	107	3	He	0.019	0.0014	130.01	0.048	0.0004774
Ag	107	3	He	-0.001	0.0004	40.00	0.048	0.0004774
Cd	111	3	He	0.007	0	4.00	0.0055	7.481E-06
Cd	111	3	He	0.006	0	4.00	0.0055	7.481E-06
Cd	111	3	He	0.01	0.0001	6.00	0.0055	7.481E-06
Sn	120	3	He	0.044	0.0191	1750.19	0.0157	0.01844
Sn	120	3	He	-0.016	0.0182	1720.19	0.0157	0.01844
Sn	120	3	He	-0.079	0.0172	1620.16	0.0157	0.01844
Sb	121	3	He	0.047	0.0009	80.00	0.0139	0.0002204
Sb	121	3	He	0.098	0.0016	150.01	0.0139	0.0002204
Sb	121	3	He	0.045	0.0008	80.00	0.0139	0.0002204
Ba	137	3	He	-0.078	0.0016	150.01	0.0045	0.001994
Ba	137	3	He	0.097	0.0024	230.01	0.0045	0.001994
Ba	137	3	He	0.216	0.003	280.01	0.0045	0.001994
Tl	205	3	He	0.128	0.0048	1410.13	0.03	0.0009888
Tl	205	3	He	0.118	0.0045	1340.12	0.03	0.0009888
Tl	205	3	He	0.152	0.0055	1630.15	0.03	0.0009888
Pb	208	3	He	0.005	0.0012	200.01	0.0392	0.001024
Pb	208	3	He	0.005	0.0012	200.01	0.0392	0.001024
Pb	208	3	He	0.003	0.0011	150.01	0.0392	0.001024
U	238	3	He	0.025	0.0012	360.02	0.0439	0.000128
U	238	3	He	0.043	0.002	600.03	0.0439	0.000128
U	238	3	He	0.037	0.0017	510.02	0.0439	0.000128
Sc	45	1	No Gas			3850480.26		
Sc	45	1	No Gas			3902166.19		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3867481.50		
Ge	72	1	No Gas			1723322.79		
Ge	72	1	No Gas			1741392.79		
Ge	72	1	No Gas			1743213.57		
Sc	45	2	H2			266708.20		
Sc	45	2	H2			266321.81		
Sc	45	2	H2			268948.82		
Ge	72	2	H2			190909.08		
Ge	72	2	H2			188613.34		
Ge	72	2	H2			193179.84		
In	115	2	H2			488081.71		
In	115	2	H2			489113.59		
In	115	2	H2			487867.84		
Sc	45	3	He			62273.77		
Sc	45	3	He			63327.49		
Sc	45	3	He			63879.86		
Ge	72	3	He			106158.89		
Ge	72	3	He			107429.59		
Ge	72	3	He			108799.22		
In	115	3	He			91467.05		
In	115	3	He			94608.18		
In	115	3	He			94236.56		
Tb	159	3	He			382151.87		
Tb	159	3	He			384853.67		
Tb	159	3	He			384831.71		
Bi	209	3	He			291069.72		
Bi	209	3	He			295644.18		
Bi	209	3	He			294041.95		

Quantitation Report

Data File Name	253SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23J26A00.b
Acq Time	2023-10-26 17:30:51
Sample Name	MB 410-434687/1-A
Sample Type	Sample
Comment	I24
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

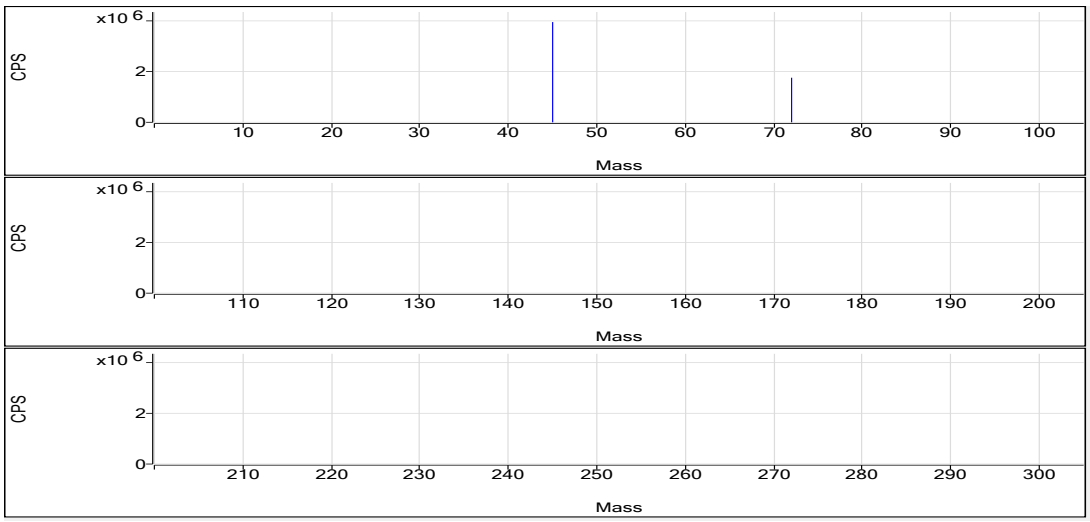
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.001	ppb	478.0	29.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.048	ppb	34.8	8.67	0.0000	Pulse	1.5000	3
Na	23	45	He	6.029	ppb	11.5	33140.82	0.5237	Pulse	0.1000	3
Mg	24	45	He	10.170	ppb	11.3	1186.75	0.0187	Pulse	0.1000	3
Al	27	45	He	0.035	ppb	5042.9	123.34	0.0019	Pulse	0.1000	3
K	39	45	He	13.162	ppb	169.5	17494.22	0.2764	Pulse	0.1000	3
Ca	44	45	He	3.483	ppb	336.0	233.34	0.0037	Pulse	0.1000	3
Ti	47	45	He	-0.261	ppb	N/A	16.67	0.0003	Pulse	0.1000	3
V	51	45	He	0.030	ppb	120.7	499.34	0.0079	Pulse	0.5000	3
Cr	52	45	He	0.065	ppb	291.0	2823.72	0.0446	Pulse	0.1000	3
Mn	55	45	He	0.494	ppb	13.0	673.37	0.0106	Pulse	0.1000	3
Fe	57	45	He	7.168	ppb	10.5	446.69	0.0071	Pulse	0.1000	3
Co	59	45	He	0.024	ppb	54.8	350.02	0.0055	Pulse	0.1000	3
Ni	60	72	He	-0.302	ppb	N/A	1233.43	0.0115	Pulse	0.1000	3
Cu	63	72	He	0.080	ppb	47.6	706.71	0.0066	Pulse	0.1000	3
Zn	66	72	He	0.056	ppb	372.3	193.34	0.0018	Pulse	0.1000	3
As	75	72	He	0.013	ppb	276.6	52.67	0.0005	Pulse	0.5000	3
Sr	88	115	He	0.110	ppb	85.1	200.01	0.0021	Pulse	0.1000	3
Mo	98	115	He	0.019	ppb	72.6	213.34	0.0023	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	629.0	46.67	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.008	ppb	76.2	4.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.247	ppb	N/A	1366.79	0.0146	Pulse	0.1000	3
Sb	121	115	He	0.015	ppb	137.8	40.00	0.0004	Pulse	0.1000	3
Ba	137	115	He	-0.354	ppb	N/A	36.67	0.0004	Pulse	0.1000	3
Tl	205	209	He	0.007	ppb	122.6	356.69	0.0012	Pulse	0.1000	3
Pb	208	209	He	0.009	ppb	44.7	406.68	0.0014	Pulse	0.1000	3
U	238	209	He	0.006	ppb	40.4	113.34	0.0004	Pulse	0.1000	3

ISTD Table:

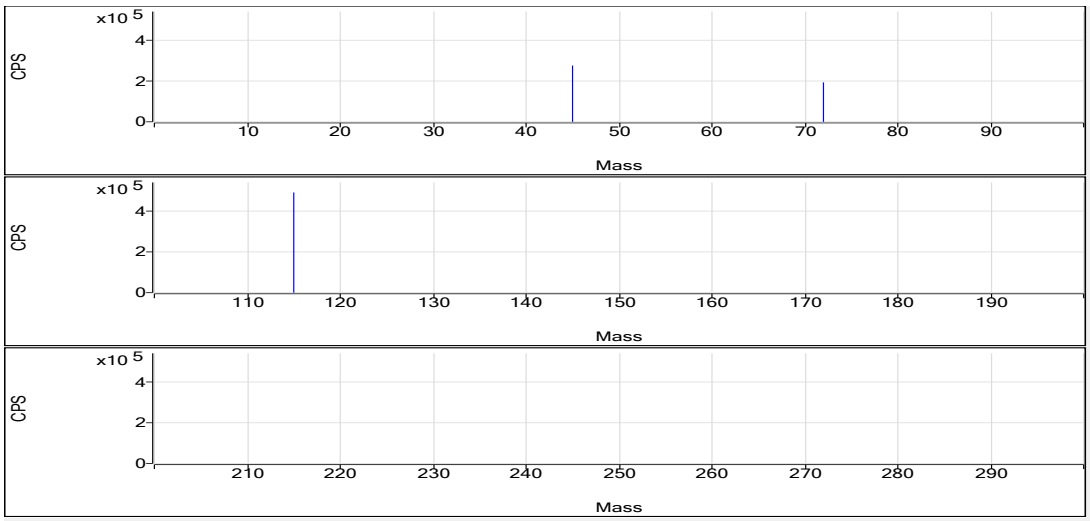
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3970207.34	0.1	111.1	Pulse	0.1000	3
No Gas	Ge	72	1765682.68	0.3	108.5	Pulse	0.1000	3
H2	Sc	45	276260.98	1.2	105.7	Pulse	0.1000	3
H2	Ge	72	193543.64	1.0	103.1	Pulse	0.1000	3
H2	In	115	492237.14	0.2	104.4	Pulse	0.1000	3
He	Sc	45	63280.63	1.1	104.8	Pulse	0.1000	3
He	Ge	72	107787.98	1.0	104.0	Pulse	0.1000	3
He	In	115	93907.52	0.8	103.9	Pulse	0.1000	3
He	Tb	159	387823.31	1.2	103.1	Pulse	0.1000	3
He	Bi	209	294906.02	0.3	102.9	Pulse	0.1000	3

No Gas

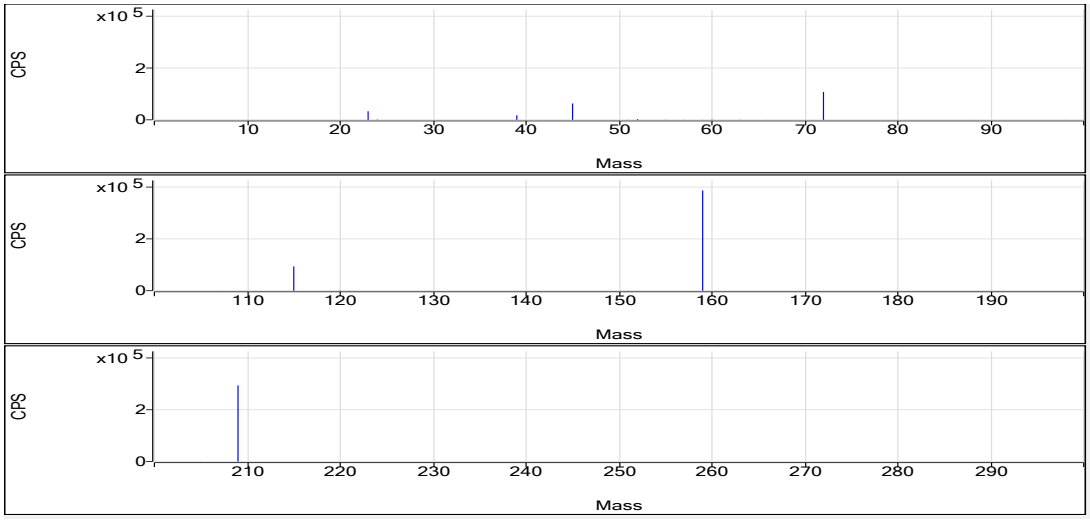


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.001	0	26.00	0.0004	7.085E-06
Be	9	1	No Gas	0.005	0	36.00	0.0004	7.085E-06
Be	9	1	No Gas	-0.001	0	26.00	0.0004	7.085E-06
Se	78	2	H2	0.048	0	8.67	0.0004	2.372E-05
Se	78	2	H2	0.066	0.0001	10.00	0.0004	2.372E-05
Se	78	2	H2	0.032	0	7.33	0.0004	2.372E-05
Na	23	3	He	5.232	0.5211	33237.67	0.0032	0.5042
Na	23	3	He	6.481	0.5252	32836.93	0.0032	0.5042
Na	23	3	He	6.375	0.5248	33347.87	0.0032	0.5042
Mg	24	3	He	11.41	0.0207	1320.10	0.0016	0.002702
Mg	24	3	He	9.138	0.0171	1070.07	0.0016	0.002702
Mg	24	3	He	9.962	0.0184	1170.08	0.0016	0.002702
Al	27	3	He	-0.457	0.0017	110.00	0.0004	0.00193
Al	27	3	He	-1.45	0.0013	80.00	0.0004	0.00193
Al	27	3	He	2.014	0.0028	180.01	0.0004	0.00193
K	39	3	He	37.697	0.303	19323.17	0.0011	0.2621
K	39	3	He	7.686	0.2705	16910.09	0.0011	0.2621
K	39	3	He	-5.898	0.2557	16249.41	0.0011	0.2621
Ca	44	3	He	-8.143	0.003	190.01	0.0001	0.003476
Ca	44	3	He	3.327	0.0037	230.01	0.0001	0.003476
Ca	44	3	He	15.266	0.0044	280.01	0.0001	0.003476
Ti	47	3	He	0.515	0.0006	40.00	0.0005	0.000385
Ti	47	3	He	-0.479	0.0002	10.00	0.0005	0.000385
Ti	47	3	He	-0.819	0	0.00	0.0005	0.000385
V	51	3	He	0.046	0.0082	526.01	0.0212	0.007263
V	51	3	He	0.054	0.0084	526.01	0.0212	0.007263
V	51	3	He	-0.011	0.007	446.01	0.0212	0.007263
Cr	52	3	He	0.129	0.0464	2960.44	0.0278	0.04283
Cr	52	3	He	0.214	0.0488	3050.42	0.0278	0.04283
Cr	52	3	He	-0.148	0.0387	2460.30	0.0278	0.04283
Mn	55	3	He	0.427	0.0099	630.03	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.5	0.0107	670.04	0.0114	0.005023
Mn	55	3	He	0.554	0.0113	720.04	0.0114	0.005023
Fe	57	3	He	7.753	0.0074	470.02	0.0005	0.003255
Fe	57	3	He	7.429	0.0072	450.02	0.0005	0.003255
Fe	57	3	He	6.323	0.0066	420.02	0.0005	0.003255
Co	59	3	He	0.032	0.006	380.02	0.0539	0.00425
Co	59	3	He	0.031	0.0059	370.02	0.0539	0.00425
Co	59	3	He	0.009	0.0047	300.01	0.0539	0.00425
Ni	60	3	He	-0.114	0.0131	1400.12	0.0088	0.01412
Ni	60	3	He	-0.559	0.0092	1000.07	0.0088	0.01412
Ni	60	3	He	-0.234	0.0121	1300.11	0.0088	0.01412
Cu	63	3	He	0.11	0.0073	780.05	0.0251	0.004537
Cu	63	3	He	0.094	0.0069	750.05	0.0251	0.004537
Cu	63	3	He	0.037	0.0055	590.03	0.0251	0.004537
Zn	66	3	He	0.016	0.0017	180.01	0.0027	0.001642
Zn	66	3	He	-0.13	0.0013	140.00	0.0027	0.001642
Zn	66	3	He	0.282	0.0024	260.02	0.0027	0.001642
As	75	3	He	0.042	0.0005	58.00	0.0019	0.000463
As	75	3	He	0.027	0.0005	56.00	0.0019	0.000463
As	75	3	He	-0.029	0.0004	44.00	0.0019	0.000463
Sr	88	3	He	0.064	0.0017	160.01	0.009	0.001142
Sr	88	3	He	0.219	0.0031	290.01	0.009	0.001142
Sr	88	3	He	0.049	0.0016	150.01	0.009	0.001142
Mo	98	3	He	0.023	0.0024	220.01	0.0225	0.001842
Mo	98	3	He	0.004	0.0019	180.01	0.0225	0.001842
Mo	98	3	He	0.031	0.0025	240.01	0.0225	0.001842
Ag	107	3	He	0.003	0.0006	60.00	0.048	0.0004774
Ag	107	3	He	-0.001	0.0004	40.00	0.048	0.0004774
Ag	107	3	He	-0.001	0.0004	40.00	0.048	0.0004774
Cd	111	3	He	0.006	0	4.00	0.0055	7.481E-06
Cd	111	3	He	0.003	0	2.00	0.0055	7.481E-06
Cd	111	3	He	0.014	0.0001	8.00	0.0055	7.481E-06
Sn	120	3	He	-0.193	0.0154	1440.14	0.0157	0.01844
Sn	120	3	He	-0.282	0.014	1310.11	0.0157	0.01844
Sn	120	3	He	-0.268	0.0142	1350.12	0.0157	0.01844
Sb	121	3	He	0	0.0002	20.00	0.0139	0.0002204
Sb	121	3	He	0.038	0.0007	70.00	0.0139	0.0002204
Sb	121	3	He	0.007	0.0003	30.00	0.0139	0.0002204
Ba	137	3	He	-0.393	0.0002	20.00	0.0045	0.001994
Ba	137	3	He	-0.346	0.0004	40.00	0.0045	0.001994
Ba	137	3	He	-0.324	0.0005	50.00	0.0045	0.001994
Tl	205	3	He	0.002	0.0011	310.01	0.03	0.0009888
Tl	205	3	He	0.002	0.0011	310.02	0.03	0.0009888
Tl	205	3	He	0.018	0.0015	450.03	0.03	0.0009888
Pb	208	3	He	0.007	0.0013	180.01	0.0392	0.001024
Pb	208	3	He	0.014	0.0016	220.01	0.0392	0.001024
Pb	208	3	He	0.007	0.0013	260.01	0.0392	0.001024
U	238	3	He	0.003	0.0003	80.00	0.0439	0.000128
U	238	3	He	0.008	0.0005	140.01	0.0439	0.000128
U	238	3	He	0.006	0.0004	120.01	0.0439	0.000128
Sc	45	1	No Gas			3968509.32		
Sc	45	1	No Gas			3975725.25		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3966387.44		
Ge	72	1	No Gas			1767478.41		
Ge	72	1	No Gas			1770732.79		
Ge	72	1	No Gas			1758836.85		
Sc	45	2	H2			273212.59		
Sc	45	2	H2			275978.55		
Sc	45	2	H2			279591.81		
Ge	72	2	H2			194446.44		
Ge	72	2	H2			191279.53		
Ge	72	2	H2			194904.94		
In	115	2	H2			492092.77		
In	115	2	H2			491478.23		
In	115	2	H2			493140.42		
Sc	45	3	He			63779.25		
Sc	45	3	He			62524.13		
Sc	45	3	He			63538.52		
Ge	72	3	He			106743.59		
Ge	72	3	He			108819.01		
Ge	72	3	He			107801.33		
In	115	3	He			93452.16		
In	115	3	He			93471.92		
In	115	3	He			94830.46		
Tb	159	3	He			385582.30		
Tb	159	3	He			384874.29		
Tb	159	3	He			393013.35		
Bi	209	3	He			294348.22		
Bi	209	3	He			294410.52		
Bi	209	3	He			295959.33		

Quantitation Report

Data File Name	254SMPL.d
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Acq Time	2023-10-26 17:32:52
Sample Name	LCS 410-434687/2-A
Sample Type	Sample
Comment	I24
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

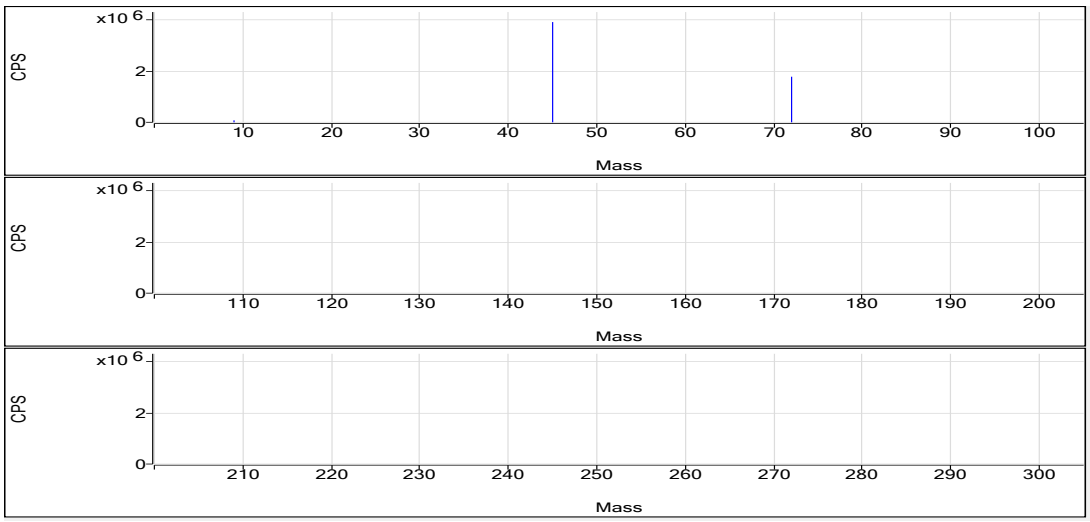
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.940	ppb	0.9	76499.57	0.0195	Pulse	0.5000	3
Se	78	72	H2	101.549	ppb	0.9	8738.65	0.0443	Pulse	1.5000	3
Na	23	45	He	4957.274	ppb	1.3	1078134.10	16.5871	Pulse	0.1000	3
Mg	24	45	He	4948.445	ppb	1.2	507485.40	7.8074	Pulse	0.1000	3
Al	27	45	He	5044.312	ppb	1.2	147199.54	2.2645	Pulse	0.1000	3
K	39	45	He	5117.957	ppb	1.3	377428.86	5.8067	Pulse	0.1000	3
Ca	44	45	He	4933.885	ppb	0.2	19787.39	0.3044	Pulse	0.1000	3
Ti	47	45	He	506.139	ppb	3.4	15498.75	0.2385	Pulse	0.1000	3
V	51	45	He	497.945	ppb	1.1	685809.64	10.5510	Pulse	0.5000	3
Cr	52	45	He	497.421	ppb	0.5	902161.89	13.8787	Pulse	0.1000	3
Mn	55	45	He	497.347	ppb	0.7	368234.03	5.6647	Pulse	0.1000	3
Fe	57	45	He	4945.592	ppb	0.7	170819.64	2.6278	Pulse	0.1000	3
Co	59	45	He	496.905	ppb	0.4	1740108.25	26.7680	Pulse	0.1000	3
Ni	60	72	He	511.268	ppb	1.3	500402.71	4.5238	Pulse	0.1000	3
Cu	63	72	He	512.961	ppb	1.4	1426310.71	12.8948	Pulse	0.1000	3
Zn	66	72	He	513.838	ppb	1.5	155233.13	1.4034	Pulse	0.1000	3
As	75	72	He	510.630	ppb	1.0	107835.85	0.9749	Pulse	0.5000	3
Sr	88	115	He	50.792	ppb	1.4	42581.11	0.4564	Pulse	0.1000	3
Mo	98	115	He	50.531	ppb	3.5	106243.83	1.1394	Pulse	0.1000	3
Ag	107	115	He	50.107	ppb	2.0	224159.66	2.4033	Pulse	0.1000	3
Cd	111	115	He	49.270	ppb	1.1	25162.46	0.2697	Pulse	0.5000	3
Sn	120	115	He	99.897	ppb	3.4	148149.48	1.5884	Pulse	0.1000	3
Sb	121	115	He	99.224	ppb	1.8	128710.18	1.3799	Pulse	0.1000	3
Ba	137	115	He	499.739	ppb	2.1	211201.70	2.2643	Pulse	0.1000	3
Tl	205	209	He	101.820	ppb	1.0	899707.77	3.0571	Pulse	0.1000	3
Pb	208	209	He	51.415	ppb	1.1	593722.70	2.0174	Pulse	0.1000	3
U	238	209	He	51.352	ppb	0.6	663694.78	2.2551	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3919333.06	1.7	109.7	Pulse	0.1000	3
No Gas	Ge	72	1782259.09	1.2	109.5	Pulse	0.1000	3
H2	Sc	45	271250.99	1.3	103.7	Pulse	0.1000	3
H2	Ge	72	197450.86	0.4	105.2	Pulse	0.1000	3
H2	In	115	494135.62	0.6	104.8	Pulse	0.1000	3
He	Sc	45	65004.80	1.1	107.6	Pulse	0.1000	3
He	Ge	72	110619.03	0.9	106.8	Pulse	0.1000	3
He	In	115	93302.15	2.5	103.2	Pulse	0.1000	3
He	Tb	159	387619.77	1.2	103.0	Pulse	0.1000	3
He	Bi	209	294311.86	0.3	102.7	Pulse	0.1000	3

No Gas



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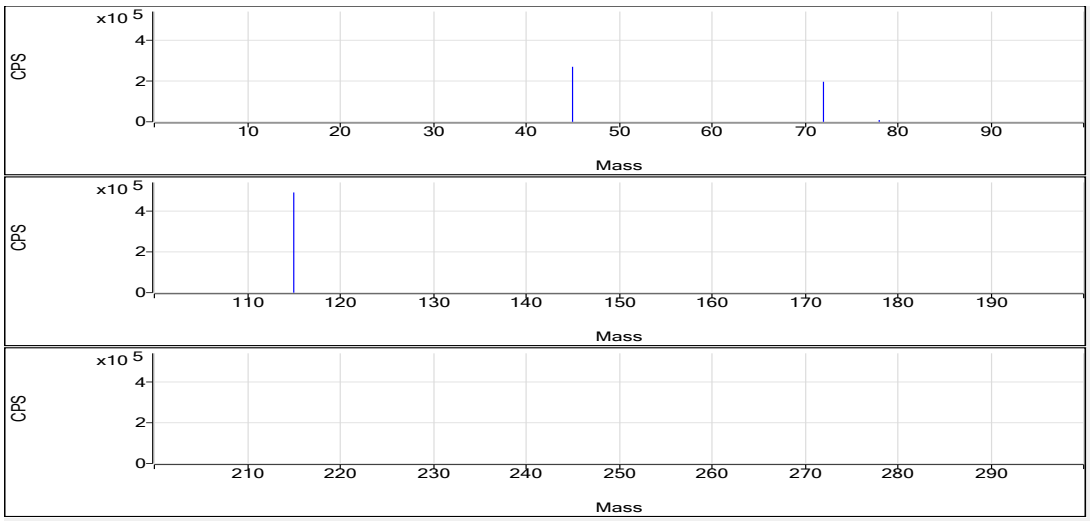
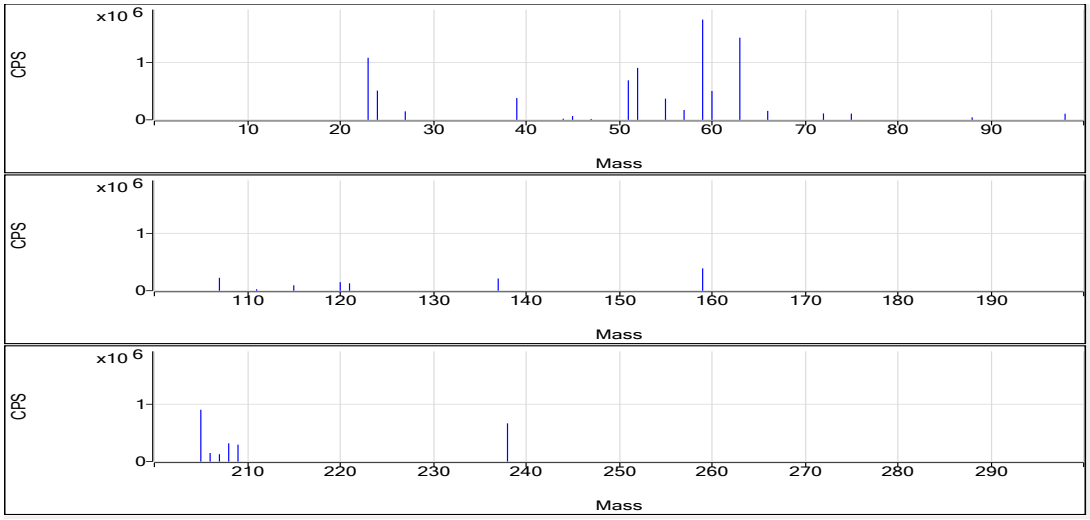


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.685	0.0194	77500.02	0.0004	7.085E-06
Be	9	1	No Gas	50.695	0.0194	75887.63	0.0004	7.085E-06
Be	9	1	No Gas	51.44	0.0197	76111.07	0.0004	7.085E-06
Se	78	2	H2	102.618	0.0447	8840.04	0.0004	2.372E-05
Se	78	2	H2	101.243	0.0441	8675.95	0.0004	2.372E-05
Se	78	2	H2	100.784	0.0439	8699.97	0.0004	2.372E-05
Na	23	3	He	5034.183	16.8366	1080086.78	0.0032	0.5042
Na	23	3	He	4917.255	16.4573	1075914.98	0.0032	0.5042
Na	23	3	He	4920.385	16.4674	1078400.53	0.0032	0.5042
Mg	24	3	He	5004.449	7.8958	506522.26	0.0016	0.002702
Mg	24	3	He	4883.266	7.7046	503700.89	0.0016	0.002702
Mg	24	3	He	4957.62	7.8219	512233.04	0.0016	0.002702
Al	27	3	He	5062.527	2.2726	145792.99	0.0004	0.00193
Al	27	3	He	4977.858	2.2347	146094.73	0.0004	0.00193
Al	27	3	He	5092.553	2.2861	149710.89	0.0004	0.00193
K	39	3	He	5189.978	5.8847	377509.68	0.0011	0.2621
K	39	3	He	5066.166	5.7506	375950.78	0.0011	0.2621
K	39	3	He	5097.728	5.7848	378826.13	0.0011	0.2621
Ca	44	3	He	4922.74	0.3037	19483.62	0.0001	0.003476
Ca	44	3	He	4932.418	0.3043	19894.33	0.0001	0.003476
Ca	44	3	He	4946.496	0.3052	19984.22	0.0001	0.003476
Ti	47	3	He	516.804	0.2435	15618.87	0.0005	0.000385
Ti	47	3	He	486.268	0.2291	14978.19	0.0005	0.000385
Ti	47	3	He	515.345	0.2428	15899.18	0.0005	0.000385
V	51	3	He	504.064	10.6806	685170.06	0.0212	0.007263
V	51	3	He	494.224	10.4722	684634.25	0.0212	0.007263
V	51	3	He	495.545	10.5002	687624.63	0.0212	0.007263
Cr	52	3	He	499.517	13.9371	894077.64	0.0278	0.04283
Cr	52	3	He	494.816	13.8063	902604.28	0.0278	0.04283
Cr	52	3	He	497.93	13.8929	909803.74	0.0278	0.04283
Mn	55	3	He	497.522	5.6667	363525.19	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	493.693	5.6231	367619.56	0.0114	0.005023
Mn	55	3	He	500.826	5.7043	373557.34	0.0114	0.005023
Fe	57	3	He	4935.061	2.6222	168214.76	0.0005	0.003255
Fe	57	3	He	4915.581	2.6118	170751.66	0.0005	0.003255
Fe	57	3	He	4986.134	2.6493	173492.50	0.0005	0.003255
Co	59	3	He	494.385	26.6323	1708494.19	0.0539	0.00425
Co	59	3	He	498.418	26.8496	1755326.69	0.0539	0.00425
Co	59	3	He	497.91	26.8222	1756503.88	0.0539	0.00425
Ni	60	3	He	506.246	4.4795	492728.23	0.0088	0.01412
Ni	60	3	He	518.609	4.5885	504911.28	0.0088	0.01412
Ni	60	3	He	508.949	4.5033	503568.63	0.0088	0.01412
Cu	63	3	He	512.221	12.8762	1416344.51	0.0251	0.004537
Cu	63	3	He	520.333	13.0801	1439304.98	0.0251	0.004537
Cu	63	3	He	506.328	12.7281	1423282.64	0.0251	0.004537
Zn	66	3	He	517.721	1.414	155539.97	0.0027	0.001642
Zn	66	3	He	518.735	1.4168	155902.33	0.0027	0.001642
Zn	66	3	He	505.057	1.3795	154257.10	0.0027	0.001642
As	75	3	He	509.182	0.9721	106930.31	0.0019	0.000463
As	75	3	He	516.162	0.9854	108435.72	0.0019	0.000463
As	75	3	He	506.545	0.9671	108141.53	0.0019	0.000463
Sr	88	3	He	50.326	0.4523	41701.62	0.009	0.001142
Sr	88	3	He	51.614	0.4638	42534.32	0.009	0.001142
Sr	88	3	He	50.436	0.4532	43507.40	0.009	0.001142
Mo	98	3	He	51.462	1.1603	106992.77	0.0225	0.001842
Mo	98	3	He	51.627	1.164	106751.43	0.0225	0.001842
Mo	98	3	He	48.503	1.0937	104987.29	0.0225	0.001842
Ag	107	3	He	50.561	2.4251	223614.96	0.048	0.0004774
Ag	107	3	He	50.779	2.4356	223358.61	0.048	0.0004774
Ag	107	3	He	48.979	2.3492	225505.41	0.048	0.0004774
Cd	111	3	He	49.141	0.269	24805.81	0.0055	7.481E-06
Cd	111	3	He	49.852	0.2729	25028.22	0.0055	7.481E-06
Cd	111	3	He	48.817	0.2672	25653.34	0.0055	7.481E-06
Sn	120	3	He	98.041	1.5592	143772.63	0.0157	0.01844
Sn	120	3	He	103.794	1.6496	151282.88	0.0157	0.01844
Sn	120	3	He	97.856	1.5563	149392.93	0.0157	0.01844
Sb	121	3	He	99.93	1.3897	128145.28	0.0139	0.0002204
Sb	121	3	He	100.601	1.3991	128305.39	0.0139	0.0002204
Sb	121	3	He	97.141	1.351	129679.88	0.0139	0.0002204
Ba	137	3	He	498.117	2.257	208109.35	0.0045	0.001994
Ba	137	3	He	510.74	2.3141	212219.57	0.0045	0.001994
Ba	137	3	He	490.359	2.2218	213276.19	0.0045	0.001994
Tl	205	3	He	100.811	3.0268	893278.42	0.03	0.0009888
Tl	205	3	He	101.81	3.0568	900661.78	0.03	0.0009888
Tl	205	3	He	102.837	3.0876	905183.11	0.03	0.0009888
Pb	208	3	He	51.068	2.0038	317414.60	0.0392	0.001024
Pb	208	3	He	51.106	2.0053	313741.07	0.0392	0.001024
Pb	208	3	He	52.071	2.0431	321563.30	0.0392	0.001024
U	238	3	He	51.261	2.2511	664356.08	0.0439	0.000128
U	238	3	He	51.1	2.244	661188.35	0.0439	0.000128
U	238	3	He	51.696	2.2702	665539.91	0.0439	0.000128
Sc	45	1	No Gas			3990287.75		
Sc	45	1	No Gas			3906475.25		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3861236.19		
Ge	72	1	No Gas			1806671.69		
Ge	72	1	No Gas			1765155.75		
Ge	72	1	No Gas			1774949.82		
Sc	45	2	H2			272266.91		
Sc	45	2	H2			267271.34		
Sc	45	2	H2			274214.72		
Ge	72	2	H2			197660.78		
Ge	72	2	H2			196625.06		
Ge	72	2	H2			198066.74		
In	115	2	H2			496307.53		
In	115	2	H2			491043.04		
In	115	2	H2			495056.28		
Sc	45	3	He			64151.10		
Sc	45	3	He			65376.33		
Sc	45	3	He			65486.96		
Ge	72	3	He			109997.09		
Ge	72	3	He			110038.11		
Ge	72	3	He			111821.88		
In	115	3	He			93329.55		
In	115	3	He			92887.22		
In	115	3	He			97156.37		
Tb	159	3	He			383983.51		
Tb	159	3	He			385853.63		
Tb	159	3	He			393022.18		
Bi	209	3	He			295124.76		
Bi	209	3	He			294643.92		
Bi	209	3	He			293166.89		

Quantitation Report

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Sample Name	CCV 5001623
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

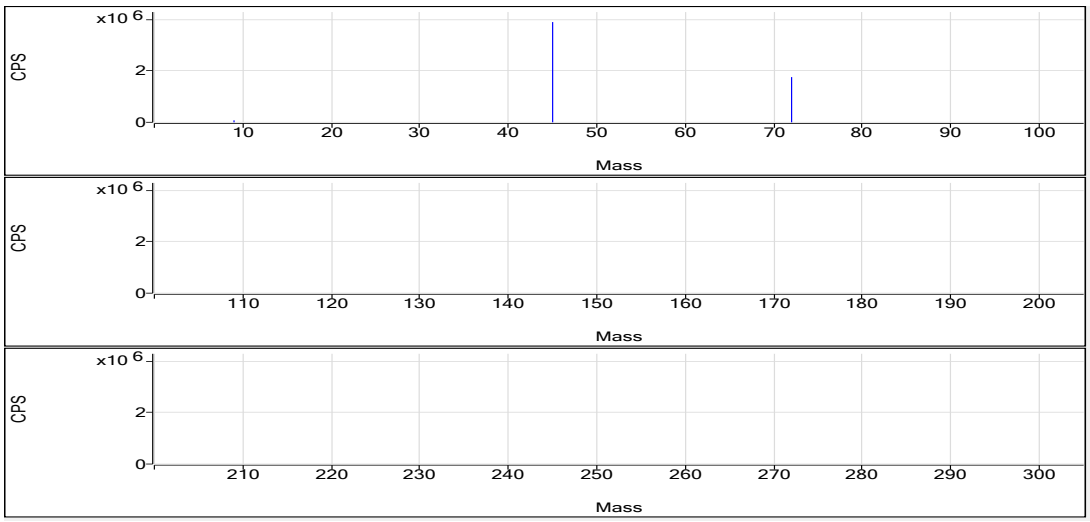
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.143	ppb	1.7	76511.00	0.0196	Pulse	0.5000	3
Se	78	72	H2	51.670	ppb	0.7	4333.99	0.0225	Pulse	1.5000	3
Na	23	45	He	5101.447	ppb	0.5	1067794.72	17.0548	Pulse	0.1000	3
Mg	24	45	He	5094.984	ppb	0.9	503282.31	8.0386	Pulse	0.1000	3
Al	27	45	He	5200.500	ppb	1.4	146157.69	2.3345	Pulse	0.1000	3
K	39	45	He	5238.463	ppb	1.0	371720.67	5.9372	Pulse	0.1000	3
Ca	44	45	He	5119.057	ppb	3.6	19767.24	0.3157	Pulse	0.1000	3
Ti	47	45	He	5197.030	ppb	0.9	153069.71	2.4449	Pulse	0.1000	3
V	51	45	He	511.125	ppb	1.0	678054.50	10.8301	Pulse	0.5000	3
Cr	52	45	He	513.305	ppb	0.6	896623.06	14.3206	Pulse	0.1000	3
Mn	55	45	He	516.108	ppb	1.1	368025.93	5.8782	Pulse	0.1000	3
Fe	57	45	He	5103.731	ppb	1.4	169777.56	2.7117	Pulse	0.1000	3
Co	59	45	He	511.998	ppb	0.4	1726851.38	27.5810	Pulse	0.1000	3
Ni	60	72	He	527.621	ppb	0.8	495611.45	4.6680	Pulse	0.1000	3
Cu	63	72	He	522.077	ppb	1.8	1393329.30	13.1239	Pulse	0.1000	3
Zn	66	72	He	522.713	ppb	0.5	151581.11	1.4277	Pulse	0.1000	3
As	75	72	He	527.193	ppb	1.5	106857.36	1.0065	Pulse	0.5000	3
Sr	88	115	He	49.811	ppb	2.5	42142.94	0.4476	Pulse	0.1000	3
Mo	98	115	He	49.079	ppb	1.8	104195.75	1.1067	Pulse	0.1000	3
Ag	107	115	He	48.317	ppb	2.4	218173.23	2.3175	Pulse	0.1000	3
Cd	111	115	He	47.898	ppb	1.1	24690.32	0.2622	Pulse	0.5000	3
Sn	120	115	He	48.315	ppb	3.3	73212.24	0.7778	Pulse	0.1000	3
Sb	121	115	He	48.747	ppb	2.7	63829.69	0.6780	Pulse	0.1000	3
Ba	137	115	He	484.658	ppb	0.8	206782.27	2.1960	Pulse	0.1000	3
Tl	205	209	He	50.727	ppb	0.3	448082.75	1.5235	Pulse	0.1000	3
Pb	208	209	He	51.393	ppb	0.8	593060.52	2.0165	Pulse	0.1000	3
U	238	209	He	51.022	ppb	0.4	658980.30	2.2406	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3903840.98	0.7	109.2	Pulse	0.1000	3
No Gas	Ge	72	1760688.78	0.8	108.2	Pulse	0.1000	3
H2	Sc	45	269850.61	0.4	103.2	Pulse	0.1000	3
H2	Ge	72	192364.31	0.7	102.5	Pulse	0.1000	3
H2	In	115	487270.90	1.1	103.3	Pulse	0.1000	3
He	Sc	45	62611.14	0.8	103.6	Pulse	0.1000	3
He	Ge	72	106176.21	1.0	102.5	Pulse	0.1000	3
He	In	115	94171.72	1.9	104.2	Pulse	0.1000	3
He	Tb	159	386520.55	0.4	102.7	Pulse	0.1000	3
He	Bi	209	294112.50	0.8	102.6	Pulse	0.1000	3

No Gas



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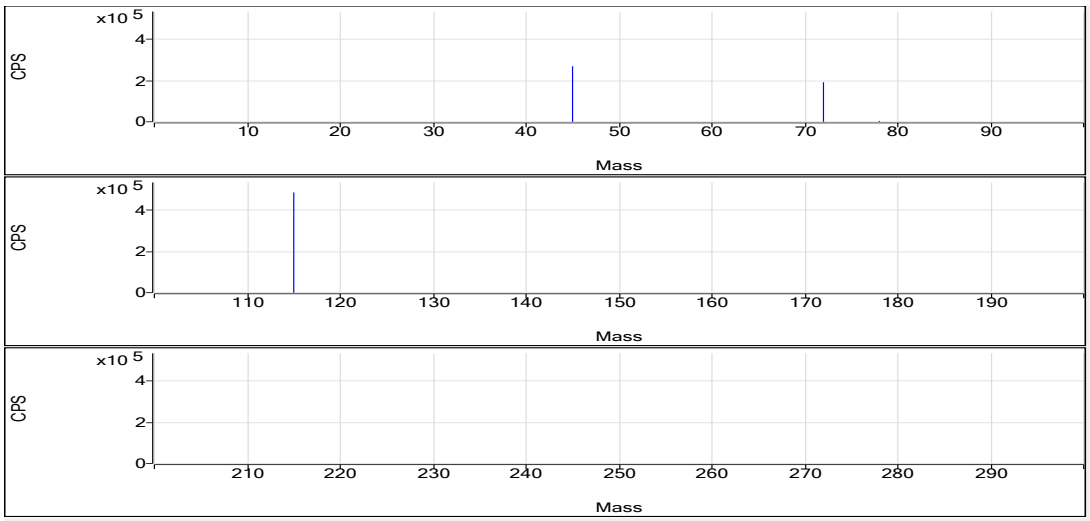
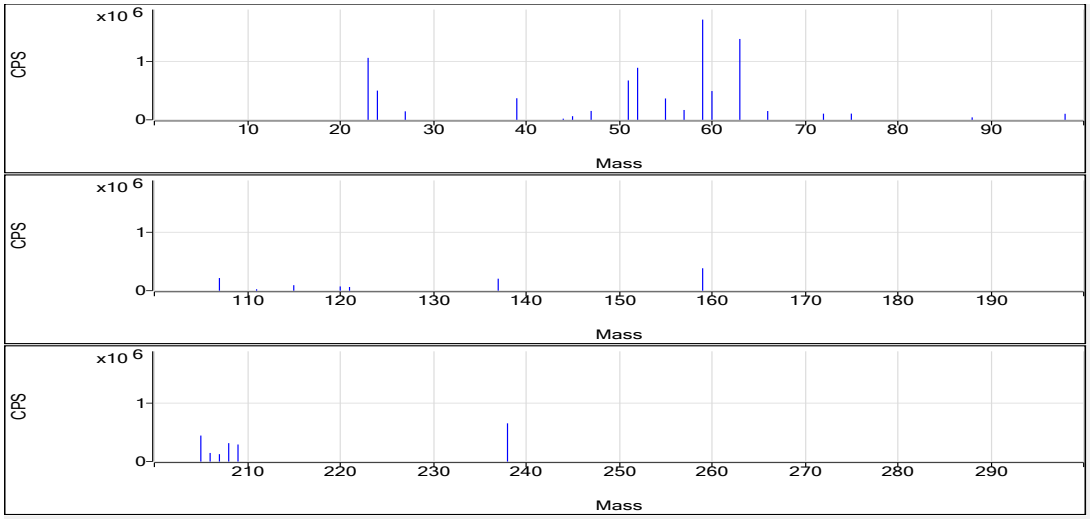


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.189	0.0192	74484.75	0.0004	7.085E-06
Be	9	1	No Gas	51.816	0.0199	77741.27	0.0004	7.085E-06
Be	9	1	No Gas	51.423	0.0197	77306.97	0.0004	7.085E-06
Se	78	2	H2	51.515	0.0225	4333.32	0.0004	2.372E-05
Se	78	2	H2	51.429	0.0224	4336.66	0.0004	2.372E-05
Se	78	2	H2	52.067	0.0227	4331.99	0.0004	2.372E-05
Na	23	3	He	5076.087	16.9726	1070239.12	0.0032	0.5042
Na	23	3	He	5128.109	17.1413	1064168.42	0.0032	0.5042
Na	23	3	He	5100.144	17.0506	1068976.62	0.0032	0.5042
Mg	24	3	He	5076.118	8.0088	505011.59	0.0016	0.002702
Mg	24	3	He	5149.498	8.1245	504387.92	0.0016	0.002702
Mg	24	3	He	5059.335	7.9823	500447.41	0.0016	0.002702
Al	27	3	He	5128.95	2.3024	145185.26	0.0004	0.00193
Al	27	3	He	5270.104	2.3658	146870.89	0.0004	0.00193
Al	27	3	He	5202.445	2.3354	146416.93	0.0004	0.00193
K	39	3	He	5178.042	5.8718	370256.09	0.0011	0.2621
K	39	3	He	5272.883	5.9745	370909.68	0.0011	0.2621
K	39	3	He	5264.463	5.9654	373996.24	0.0011	0.2621
Ca	44	3	He	5074.187	0.313	19733.78	0.0001	0.003476
Ca	44	3	He	4959.062	0.3059	18992.74	0.0001	0.003476
Ca	44	3	He	5323.922	0.3282	20575.20	0.0001	0.003476
Ti	47	3	He	5149.258	2.4224	152749.46	0.0005	0.000385
Ti	47	3	He	5236.42	2.4634	152932.81	0.0005	0.000385
Ti	47	3	He	5205.413	2.4488	153526.87	0.0005	0.000385
V	51	3	He	505.361	10.708	675215.81	0.0212	0.007263
V	51	3	He	514.173	10.8946	676359.06	0.0212	0.007263
V	51	3	He	513.84	10.8876	682588.63	0.0212	0.007263
Cr	52	3	He	514.904	14.3651	905817.96	0.0278	0.04283
Cr	52	3	He	515.06	14.3694	892081.08	0.0278	0.04283
Cr	52	3	He	509.951	14.2273	891970.14	0.0278	0.04283
Mn	55	3	He	509.765	5.806	366111.28	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	519.216	5.9136	367126.91	0.0114	0.005023
Mn	55	3	He	519.344	5.915	370839.60	0.0114	0.005023
Fe	57	3	He	5037.966	2.6768	168789.41	0.0005	0.003255
Fe	57	3	He	5096.293	2.7077	168101.13	0.0005	0.003255
Fe	57	3	He	5176.934	2.7505	172442.13	0.0005	0.003255
Co	59	3	He	509.877	27.4667	1731970.91	0.0539	0.00425
Co	59	3	He	513.172	27.6442	1716210.29	0.0539	0.00425
Co	59	3	He	512.946	27.632	1732372.94	0.0539	0.00425
Ni	60	3	He	522.598	4.6237	494755.54	0.0088	0.01412
Ni	60	3	He	530.275	4.6914	492274.41	0.0088	0.01412
Ni	60	3	He	529.989	4.6889	499804.41	0.0088	0.01412
Cu	63	3	He	511.271	12.8523	1375254.98	0.0251	0.004537
Cu	63	3	He	527.601	13.2627	1391667.32	0.0251	0.004537
Cu	63	3	He	527.358	13.2566	1413065.60	0.0251	0.004537
Zn	66	3	He	524.22	1.4318	153205.11	0.0027	0.001642
Zn	66	3	He	524.492	1.4325	150314.54	0.0027	0.001642
Zn	66	3	He	519.429	1.4187	151223.67	0.0027	0.001642
As	75	3	He	518.044	0.989	105830.41	0.0019	0.000463
As	75	3	He	532.22	1.0161	106618.41	0.0019	0.000463
As	75	3	He	531.314	1.0144	108123.27	0.0019	0.000463
Sr	88	3	He	50.911	0.4575	42163.17	0.009	0.001142
Sr	88	3	He	48.471	0.4356	41711.41	0.009	0.001142
Sr	88	3	He	50.051	0.4498	42554.24	0.009	0.001142
Mo	98	3	He	49.902	1.1252	103699.46	0.0225	0.001842
Mo	98	3	He	48.131	1.0853	103920.29	0.0225	0.001842
Mo	98	3	He	49.204	1.1095	104967.49	0.0225	0.001842
Ag	107	3	He	49.63	2.3804	219378.24	0.048	0.0004774
Ag	107	3	He	47.451	2.2759	217918.24	0.048	0.0004774
Ag	107	3	He	47.87	2.296	217223.20	0.048	0.0004774
Cd	111	3	He	48.504	0.2655	24471.25	0.0055	7.481E-06
Cd	111	3	He	47.653	0.2609	24978.17	0.0055	7.481E-06
Cd	111	3	He	47.538	0.2602	24621.55	0.0055	7.481E-06
Sn	120	3	He	49.896	0.8026	73966.30	0.0157	0.01844
Sn	120	3	He	46.672	0.7519	71995.70	0.0157	0.01844
Sn	120	3	He	48.378	0.7787	73674.72	0.0157	0.01844
Sb	121	3	He	50.238	0.6988	64398.41	0.0139	0.0002204
Sb	121	3	He	47.69	0.6633	63514.75	0.0139	0.0002204
Sb	121	3	He	48.312	0.672	63575.90	0.0139	0.0002204
Ba	137	3	He	489.017	2.2158	204201.46	0.0045	0.001994
Ba	137	3	He	481.722	2.1827	208993.47	0.0045	0.001994
Ba	137	3	He	483.235	2.1896	207151.87	0.0045	0.001994
Tl	205	3	He	50.929	1.5296	445963.90	0.03	0.0009888
Tl	205	3	He	50.629	1.5206	448017.26	0.03	0.0009888
Tl	205	3	He	50.623	1.5204	450267.10	0.03	0.0009888
Pb	208	3	He	51.834	2.0338	317582.10	0.0392	0.001024
Pb	208	3	He	51.291	2.0125	315948.98	0.0392	0.001024
Pb	208	3	He	51.054	2.0032	318378.49	0.0392	0.001024
U	238	3	He	51.247	2.2505	656140.15	0.0439	0.000128
U	238	3	He	50.807	2.2312	657369.99	0.0439	0.000128
U	238	3	He	51.013	2.2402	663430.77	0.0439	0.000128
Sc	45	1	No Gas			3872936.50		
Sc	45	1	No Gas			3915360.57		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3923225.88		
Ge	72	1	No Gas			1744330.91		
Ge	72	1	No Gas			1769159.82		
Ge	72	1	No Gas			1768575.60		
Sc	45	2	H2			270159.33		
Sc	45	2	H2			270657.77		
Sc	45	2	H2			268734.74		
Ge	72	2	H2			192906.19		
Ge	72	2	H2			193380.99		
Ge	72	2	H2			190805.76		
In	115	2	H2			491704.91		
In	115	2	H2			488958.74		
In	115	2	H2			481149.06		
Sc	45	3	He			63057.04		
Sc	45	3	He			62082.02		
Sc	45	3	He			62694.36		
Ge	72	3	He			107004.24		
Ge	72	3	He			104930.98		
Ge	72	3	He			106593.42		
In	115	3	He			92735.68		
In	115	3	He			96310.05		
In	115	3	He			95182.60		
Tb	159	3	He			386941.17		
Tb	159	3	He			384979.56		
Tb	159	3	He			387640.93		
Bi	209	3	He			291556.60		
Bi	209	3	He			294630.97		
Bi	209	3	He			296149.94		

Quantitation Report

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Sample Type	CCB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

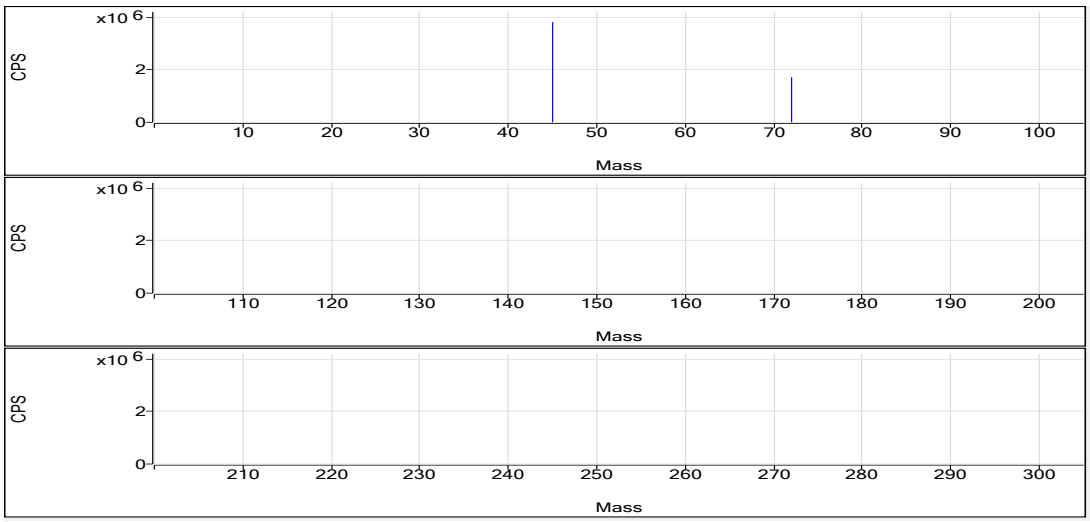
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.015	ppb	21.5	49.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.064	ppb	73.9	9.78	0.0001	Pulse	1.5000	3
Na	23	45	He	9.072	ppb	63.3	32646.47	0.5336	Pulse	0.1000	3
Mg	24	45	He	9.240	ppb	16.0	1056.74	0.0173	Pulse	0.1000	3
Al	27	45	He	1.152	ppb	131.8	150.01	0.0024	Pulse	0.1000	3
K	39	45	He	20.034	ppb	132.1	17364.19	0.2838	Pulse	0.1000	3
Ca	44	45	He	-3.339	ppb	N/A	200.01	0.0033	Pulse	0.1000	3
Ti	47	45	He	1.035	ppb	52.0	53.33	0.0009	Pulse	0.1000	3
V	51	45	He	0.109	ppb	13.2	585.35	0.0096	Pulse	0.5000	3
Cr	52	45	He	0.025	ppb	515.2	2663.68	0.0435	Pulse	0.1000	3
Mn	55	45	He	0.378	ppb	26.8	570.03	0.0093	Pulse	0.1000	3
Fe	57	45	He	4.849	ppb	19.7	356.68	0.0058	Pulse	0.1000	3
Co	59	45	He	0.093	ppb	18.6	566.70	0.0093	Pulse	0.1000	3
Ni	60	72	He	-0.131	ppb	N/A	1380.12	0.0130	Pulse	0.1000	3
Cu	63	72	He	0.072	ppb	30.2	676.71	0.0064	Pulse	0.1000	3
Zn	66	72	He	-0.017	ppb	N/A	170.01	0.0016	Pulse	0.1000	3
As	75	72	He	0.099	ppb	41.9	69.33	0.0007	Pulse	0.5000	3
Sr	88	115	He	0.066	ppb	140.4	160.00	0.0017	Pulse	0.1000	3
Mo	98	115	He	0.102	ppb	38.6	380.02	0.0041	Pulse	0.1000	3
Ag	107	115	He	0.001	ppb	215.2	46.67	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.009	ppb	65.8	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.006	ppb	1001.2	1703.50	0.0185	Pulse	0.1000	3
Sb	121	115	He	0.057	ppb	58.0	93.34	0.0010	Pulse	0.1000	3
Ba	137	115	He	0.065	ppb	69.4	210.01	0.0023	Pulse	0.1000	3
Tl	205	209	He	0.160	ppb	9.2	1700.17	0.0058	Pulse	0.1000	3
Pb	208	209	He	0.013	ppb	48.3	450.02	0.0015	Pulse	0.1000	3
U	238	209	He	0.040	ppb	12.7	546.70	0.0019	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3826457.76	0.9	107.1	Pulse	0.1000	3
No Gas	Ge	72	1721863.31	0.4	105.8	Pulse	0.1000	3
H2	Sc	45	267662.60	0.9	102.4	Pulse	0.1000	3
H2	Ge	72	190343.47	0.7	101.4	Pulse	0.1000	3
H2	In	115	482050.79	0.1	102.2	Pulse	0.1000	3
He	Sc	45	61188.47	1.1	101.3	Pulse	0.1000	3
He	Ge	72	106458.58	0.7	102.8	Pulse	0.1000	3
He	In	115	91917.82	0.8	101.7	Pulse	0.1000	3
He	Tb	159	382090.67	0.6	101.5	Pulse	0.1000	3
He	Bi	209	293112.60	0.2	102.3	Pulse	0.1000	3

No Gas



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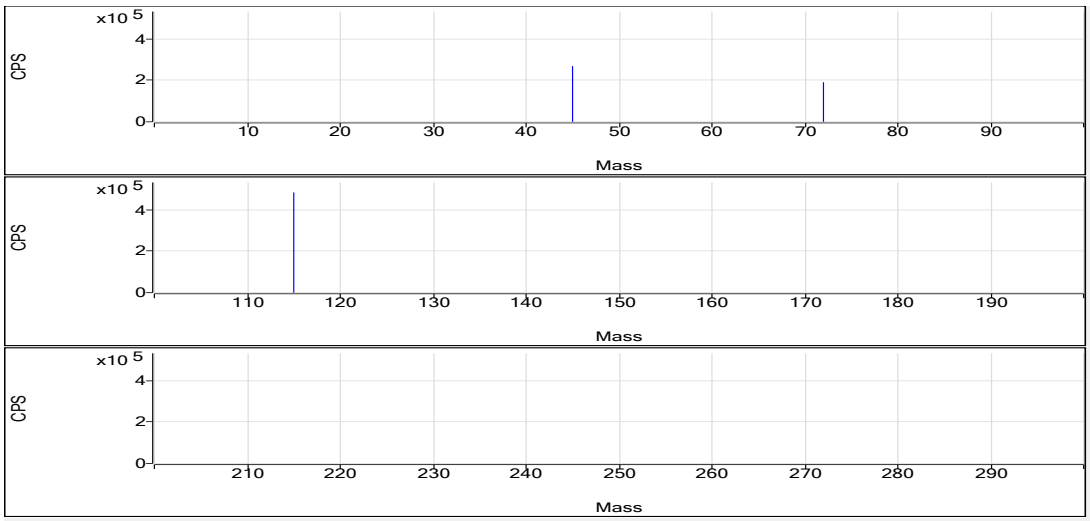
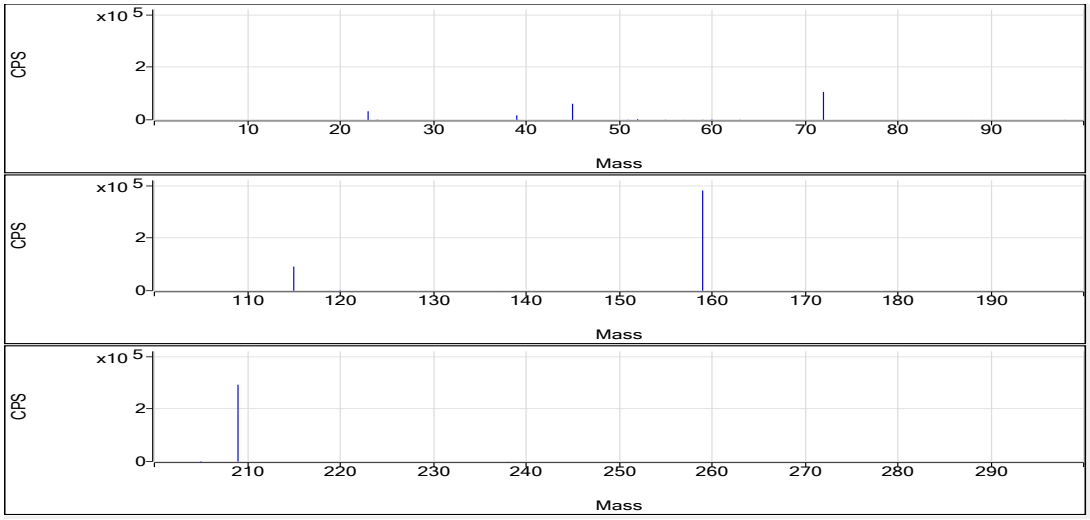


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.017	0	52.00	0.0004	7.085E-06
Be	9	1	No Gas	0.017	0	52.00	0.0004	7.085E-06
Be	9	1	No Gas	0.011	0	44.00	0.0004	7.085E-06
Se	78	2	H2	0.091	0.0001	12.00	0.0004	2.372E-05
Se	78	2	H2	0.009	0	5.33	0.0004	2.372E-05
Se	78	2	H2	0.091	0.0001	12.00	0.0004	2.372E-05
Na	23	3	He	5.11	0.5207	31654.24	0.0032	0.5042
Na	23	3	He	6.453	0.5251	32546.21	0.0032	0.5042
Na	23	3	He	15.652	0.5549	33738.95	0.0032	0.5042
Mg	24	3	He	10.908	0.0199	1210.08	0.0016	0.002702
Mg	24	3	He	8.721	0.0165	1020.07	0.0016	0.002702
Mg	24	3	He	8.09	0.0155	940.07	0.0016	0.002702
Al	27	3	He	0.099	0.002	120.00	0.0004	0.00193
Al	27	3	He	2.892	0.0032	200.01	0.0004	0.00193
Al	27	3	He	0.465	0.0021	130.01	0.0004	0.00193
K	39	3	He	49.338	0.3156	19183.22	0.0011	0.2621
K	39	3	He	12.854	0.2761	17110.30	0.0011	0.2621
K	39	3	He	-2.091	0.2599	15799.04	0.0011	0.2621
Ca	44	3	He	13.142	0.0043	260.01	0.0001	0.003476
Ca	44	3	He	-12.017	0.0027	170.01	0.0001	0.003476
Ca	44	3	He	-11.141	0.0028	170.01	0.0001	0.003476
Ti	47	3	He	0.58	0.0007	40.00	0.0005	0.000385
Ti	47	3	He	0.897	0.0008	50.00	0.0005	0.000385
Ti	47	3	He	1.629	0.0012	70.00	0.0005	0.000385
V	51	3	He	0.109	0.0096	582.02	0.0212	0.007263
V	51	3	He	0.094	0.0093	574.02	0.0212	0.007263
V	51	3	He	0.123	0.0099	600.02	0.0212	0.007263
Cr	52	3	He	0.17	0.0475	2890.41	0.0278	0.04283
Cr	52	3	He	-0.008	0.0426	2640.35	0.0278	0.04283
Cr	52	3	He	-0.085	0.0405	2460.27	0.0278	0.04283
Mn	55	3	He	0.484	0.0105	640.03	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.282	0.0082	510.03	0.0114	0.005023
Mn	55	3	He	0.368	0.0092	560.03	0.0114	0.005023
Fe	57	3	He	3.787	0.0053	320.01	0.0005	0.003255
Fe	57	3	He	5.116	0.006	370.02	0.0005	0.003255
Fe	57	3	He	5.645	0.0063	380.02	0.0005	0.003255
Co	59	3	He	0.107	0.01	610.03	0.0539	0.00425
Co	59	3	He	0.074	0.0082	510.03	0.0539	0.00425
Co	59	3	He	0.098	0.0095	580.03	0.0539	0.00425
Ni	60	3	He	-0.1	0.0132	1420.13	0.0088	0.01412
Ni	60	3	He	-0.208	0.0123	1300.11	0.0088	0.01412
Ni	60	3	He	-0.087	0.0134	1420.12	0.0088	0.01412
Cu	63	3	He	0.061	0.0061	650.04	0.0251	0.004537
Cu	63	3	He	0.098	0.007	740.04	0.0251	0.004537
Cu	63	3	He	0.059	0.006	640.04	0.0251	0.004537
Zn	66	3	He	0.082	0.0019	200.01	0.0027	0.001642
Zn	66	3	He	-0.186	0.0011	120.00	0.0027	0.001642
Zn	66	3	He	0.053	0.0018	190.01	0.0027	0.001642
As	75	3	He	0.109	0.0007	72.00	0.0019	0.000463
As	75	3	He	0.134	0.0007	76.00	0.0019	0.000463
As	75	3	He	0.053	0.0006	60.00	0.0019	0.000463
Sr	88	3	He	0.174	0.0027	250.01	0.009	0.001142
Sr	88	3	He	0.006	0.0012	110.00	0.009	0.001142
Sr	88	3	He	0.02	0.0013	120.00	0.009	0.001142
Mo	98	3	He	0.081	0.0037	340.02	0.0225	0.001842
Mo	98	3	He	0.077	0.0036	330.02	0.0225	0.001842
Mo	98	3	He	0.147	0.0052	470.03	0.0225	0.001842
Ag	107	3	He	-0.001	0.0004	40.00	0.048	0.0004774
Ag	107	3	He	0.001	0.0005	50.00	0.048	0.0004774
Ag	107	3	He	0.001	0.0005	50.00	0.048	0.0004774
Cd	111	3	He	0.003	0	2.00	0.0055	7.481E-06
Cd	111	3	He	0.015	0.0001	8.00	0.0055	7.481E-06
Cd	111	3	He	0.011	0.0001	6.00	0.0055	7.481E-06
Sn	120	3	He	-0.026	0.018	1670.17	0.0157	0.01844
Sn	120	3	He	0.07	0.0196	1800.19	0.0157	0.01844
Sn	120	3	He	-0.028	0.018	1640.15	0.0157	0.01844
Sb	121	3	He	0.031	0.0006	60.00	0.0139	0.0002204
Sb	121	3	He	0.047	0.0009	80.00	0.0139	0.0002204
Sb	121	3	He	0.095	0.0015	140.01	0.0139	0.0002204
Ba	137	3	He	0.013	0.0021	190.01	0.0045	0.001994
Ba	137	3	He	0.087	0.0024	220.01	0.0045	0.001994
Ba	137	3	He	0.093	0.0024	220.01	0.0045	0.001994
Tl	205	3	He	0.166	0.006	1750.19	0.03	0.0009888
Tl	205	3	He	0.171	0.0061	1800.19	0.03	0.0009888
Tl	205	3	He	0.144	0.0053	1550.13	0.03	0.0009888
Pb	208	3	He	0.02	0.0018	270.01	0.0392	0.001024
Pb	208	3	He	0.008	0.0013	150.01	0.0392	0.001024
Pb	208	3	He	0.011	0.0015	230.01	0.0392	0.001024
U	238	3	He	0.044	0.0021	610.04	0.0439	0.000128
U	238	3	He	0.04	0.0019	550.04	0.0439	0.000128
U	238	3	He	0.034	0.0016	480.02	0.0439	0.000128
Sc	45	1	No Gas			3789173.07		
Sc	45	1	No Gas			3849719.01		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3840481.19		
Ge	72	1	No Gas			1723900.29		
Ge	72	1	No Gas			1714443.57		
Ge	72	1	No Gas			1727246.07		
Sc	45	2	H2			270091.64		
Sc	45	2	H2			265373.82		
Sc	45	2	H2			267522.34		
Ge	72	2	H2			189849.78		
Ge	72	2	H2			191790.15		
Ge	72	2	H2			189390.49		
In	115	2	H2			482022.88		
In	115	2	H2			482334.68		
In	115	2	H2			481794.80		
Sc	45	3	He			60787.00		
Sc	45	3	He			61981.28		
Sc	45	3	He			60797.13		
Ge	72	3	He			107237.26		
Ge	72	3	He			105817.35		
Ge	72	3	He			106321.14		
In	115	3	He			92605.31		
In	115	3	He			92093.06		
In	115	3	He			91094.95		
Tb	159	3	He			380032.34		
Tb	159	3	He			381895.03		
Tb	159	3	He			384344.64		
Bi	209	3	He			293015.70		
Bi	209	3	He			293723.88		
Bi	209	3	He			292598.22		

Quantitation Report

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Sample Type	Sample
Comment	I24
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

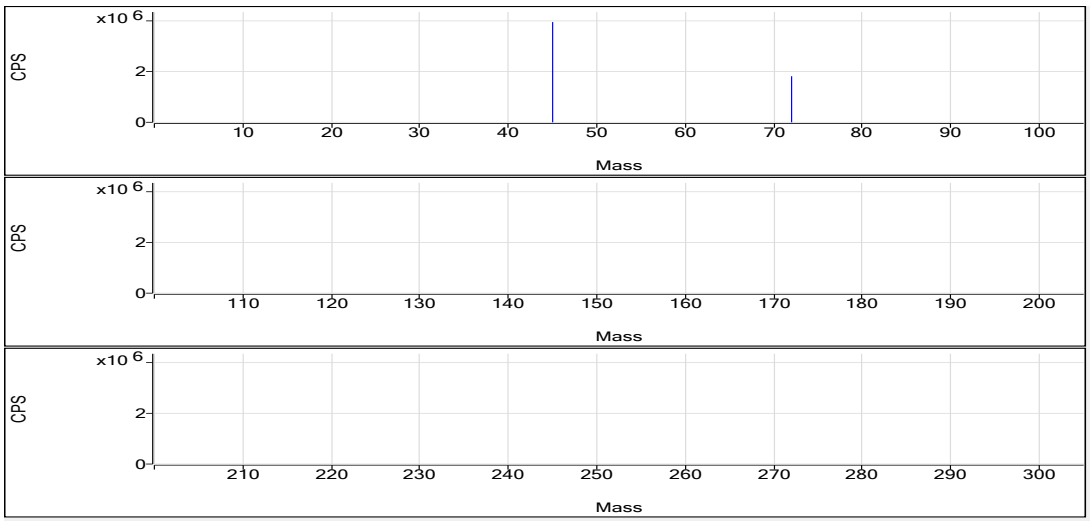
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.003	ppb	396.7	32.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.055	ppb	29.9	9.56	0.0000	Pulse	1.5000	3
Na	23	45	He	5667.998	ppb	1.6	1200640.76	18.8929	Pulse	0.1000	3
Mg	24	45	He	12424.768	ppb	1.5	1245558.42	19.5992	Pulse	0.1000	3
Al	27	45	He	15.235	ppb	20.6	556.69	0.0088	Pulse	0.1000	3
K	39	45	He	2264.028	ppb	2.6	172523.93	2.7149	Pulse	0.1000	3
Ca	44	45	He	27232.843	ppb	1.6	105777.21	1.6644	Pulse	0.1000	3
Ti	47	45	He	1.284	ppb	104.5	63.34	0.0010	Pulse	0.1000	3
V	51	45	He	0.460	ppb	4.7	1080.05	0.0170	Pulse	0.5000	3
Cr	52	45	He	0.351	ppb	7.3	3343.83	0.0526	Pulse	0.1000	3
Mn	55	45	He	6.160	ppb	1.9	4774.28	0.0751	Pulse	0.1000	3
Fe	57	45	He	63.751	ppb	4.2	2356.95	0.0371	Pulse	0.1000	3
Co	59	45	He	0.144	ppb	27.7	763.38	0.0120	Pulse	0.1000	3
Ni	60	72	He	-0.150	ppb	N/A	1403.45	0.0128	Pulse	0.1000	3
Cu	63	72	He	0.583	ppb	9.5	2103.56	0.0192	Pulse	0.1000	3
Zn	66	72	He	0.569	ppb	27.3	350.02	0.0032	Pulse	0.1000	3
As	75	72	He	0.172	ppb	3.9	86.67	0.0008	Pulse	0.5000	3
Sr	88	115	He	105.676	ppb	3.6	87273.83	0.9484	Pulse	0.1000	3
Mo	98	115	He	0.336	ppb	16.6	866.73	0.0094	Pulse	0.1000	3
Ag	107	115	He	0.002	ppb	344.1	53.33	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.016	ppb	57.9	8.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.102	ppb	N/A	1546.89	0.0168	Pulse	0.1000	3
Sb	121	115	He	0.052	ppb	64.4	86.67	0.0009	Pulse	0.1000	3
Ba	137	115	He	28.983	ppb	2.5	12262.54	0.1332	Pulse	0.1000	3
Tl	205	209	He	0.020	ppb	32.8	466.69	0.0016	Pulse	0.1000	3
Pb	208	209	He	0.060	ppb	12.0	990.05	0.0034	Pulse	0.1000	3
U	238	209	He	0.179	ppb	1.2	2336.98	0.0080	Pulse	0.1000	3

ISTD Table:

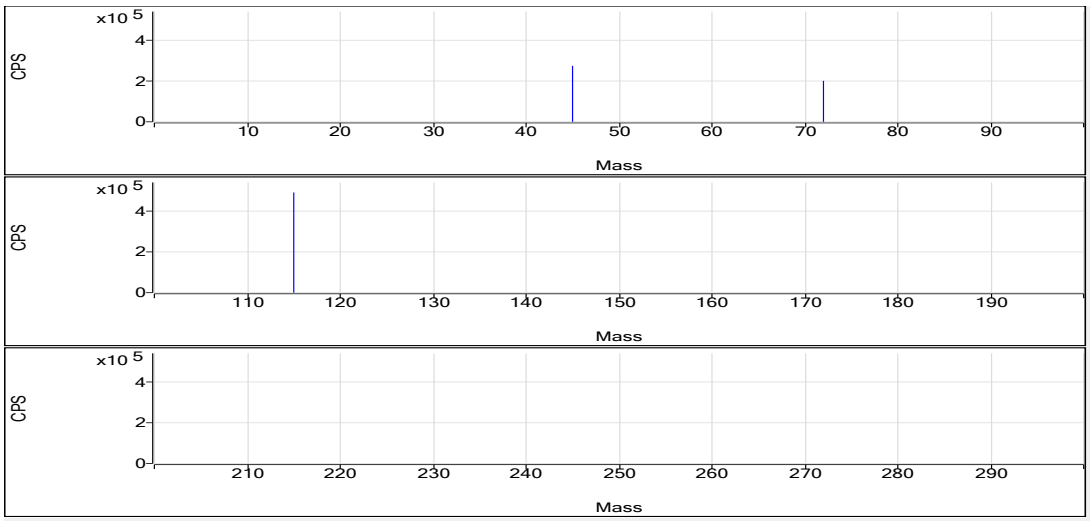
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3933028.48	0.4	110.0	Pulse	0.1000	3
No Gas	Ge	72	1807392.06	0.6	111.1	Pulse	0.1000	3
H2	Sc	45	273045.56	1.4	104.4	Pulse	0.1000	3
H2	Ge	72	199830.35	1.3	106.5	Pulse	0.1000	3
H2	In	115	488908.48	0.9	103.7	Pulse	0.1000	3
He	Sc	45	63561.83	1.9	105.2	Pulse	0.1000	3
He	Ge	72	109604.98	1.6	105.8	Pulse	0.1000	3
He	In	115	92063.28	2.0	101.9	Pulse	0.1000	3
He	Tb	159	385824.94	1.1	102.5	Pulse	0.1000	3
He	Bi	209	293024.43	0.1	102.2	Pulse	0.1000	3

No Gas

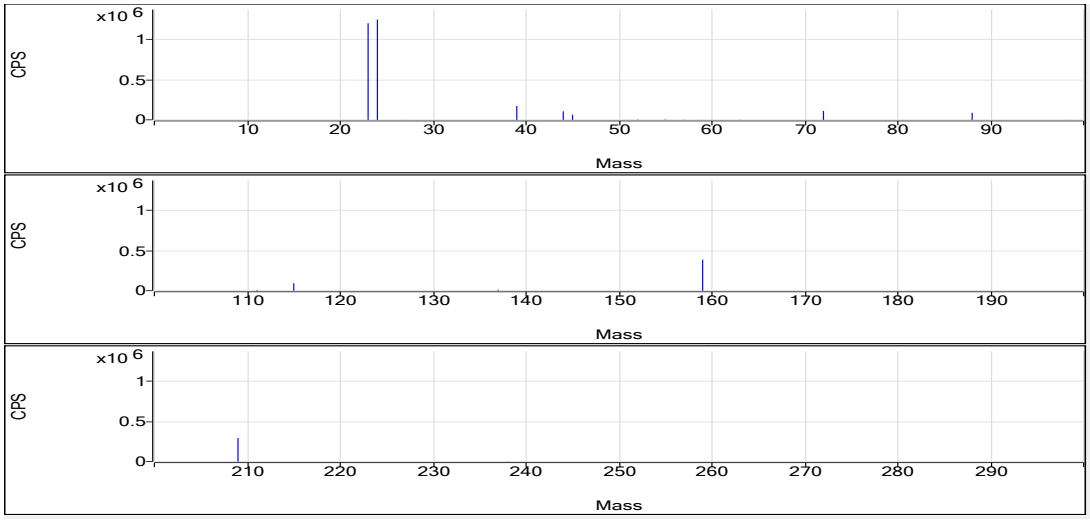


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.015	0	50.00	0.0004	7.085E-06
Be	9	1	No Gas	0	0	28.00	0.0004	7.085E-06
Be	9	1	No Gas	-0.007	0	18.00	0.0004	7.085E-06
Se	78	2	H2	0.074	0.0001	11.33	0.0004	2.372E-05
Se	78	2	H2	0.045	0	8.67	0.0004	2.372E-05
Se	78	2	H2	0.047	0	8.67	0.0004	2.372E-05
Na	23	3	He	5738.83	19.1227	1201973.65	0.0032	0.5042
Na	23	3	He	5695.966	18.9836	1193225.45	0.0032	0.5042
Na	23	3	He	5569.197	18.5724	1206723.19	0.0032	0.5042
Mg	24	3	He	12624.149	19.9136	1251688.58	0.0016	0.002702
Mg	24	3	He	12405.503	19.5688	1230005.22	0.0016	0.002702
Mg	24	3	He	12244.651	19.3151	1254981.47	0.0016	0.002702
Al	27	3	He	12.724	0.0076	480.02	0.0004	0.00193
Al	27	3	He	18.754	0.0103	650.03	0.0004	0.00193
Al	27	3	He	14.227	0.0083	540.02	0.0004	0.00193
K	39	3	He	2329.317	2.7856	175091.09	0.0011	0.2621
K	39	3	He	2248.338	2.6979	169575.84	0.0011	0.2621
K	39	3	He	2214.428	2.6611	172904.86	0.0011	0.2621
Ca	44	3	He	27701.522	1.693	106414.71	0.0001	0.003476
Ca	44	3	He	27131.266	1.6582	104227.95	0.0001	0.003476
Ca	44	3	He	26865.74	1.642	106688.96	0.0001	0.003476
Ti	47	3	He	0.196	0.0005	30.00	0.0005	0.000385
Ti	47	3	He	0.873	0.0008	50.00	0.0005	0.000385
Ti	47	3	He	2.782	0.0017	110.03	0.0005	0.000385
V	51	3	He	0.482	0.0175	1098.05	0.0212	0.007263
V	51	3	He	0.458	0.017	1066.05	0.0212	0.007263
V	51	3	He	0.439	0.0166	1076.05	0.0212	0.007263
Cr	52	3	He	0.376	0.0533	3350.50	0.0278	0.04283
Cr	52	3	He	0.325	0.0519	3260.47	0.0278	0.04283
Cr	52	3	He	0.353	0.0526	3420.52	0.0278	0.04283
Mn	55	3	He	6.299	0.0767	4820.99	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	6.089	0.0743	4670.89	0.0114	0.005023
Mn	55	3	He	6.092	0.0744	4830.97	0.0114	0.005023
Fe	57	3	He	61.628	0.036	2260.26	0.0005	0.003255
Fe	57	3	He	66.726	0.0387	2430.30	0.0005	0.003255
Fe	57	3	He	62.9	0.0366	2380.29	0.0005	0.003255
Co	59	3	He	0.098	0.0095	600.03	0.0539	0.00425
Co	59	3	He	0.16	0.0129	810.05	0.0539	0.00425
Co	59	3	He	0.173	0.0135	880.07	0.0539	0.00425
Ni	60	3	He	-0.251	0.0119	1280.10	0.0088	0.01412
Ni	60	3	He	-0.185	0.0125	1380.11	0.0088	0.01412
Ni	60	3	He	-0.015	0.014	1550.14	0.0088	0.01412
Cu	63	3	He	0.541	0.0181	1950.20	0.0251	0.004537
Cu	63	3	He	0.561	0.0186	2060.22	0.0251	0.004537
Cu	63	3	He	0.646	0.0208	2300.27	0.0251	0.004537
Zn	66	3	He	0.625	0.0033	360.02	0.0027	0.001642
Zn	66	3	He	0.393	0.0027	300.01	0.0027	0.001642
Zn	66	3	He	0.689	0.0035	390.02	0.0027	0.001642
As	75	3	He	0.176	0.0008	86.00	0.0019	0.000463
As	75	3	He	0.175	0.0008	88.00	0.0019	0.000463
As	75	3	He	0.164	0.0008	86.00	0.0019	0.000463
Sr	88	3	He	104.389	0.9369	86240.40	0.009	0.001142
Sr	88	3	He	109.938	0.9866	88997.51	0.009	0.001142
Sr	88	3	He	102.702	0.9218	86583.59	0.009	0.001142
Mo	98	3	He	0.401	0.0109	1000.08	0.0225	0.001842
Mo	98	3	He	0.307	0.0088	790.04	0.0225	0.001842
Mo	98	3	He	0.301	0.0086	810.06	0.0225	0.001842
Ag	107	3	He	0.01	0.001	90.00	0.048	0.0004774
Ag	107	3	He	-0.003	0.0003	30.00	0.048	0.0004774
Ag	107	3	He	-0.001	0.0004	40.00	0.048	0.0004774
Cd	111	3	He	0.026	0.0002	14.00	0.0055	7.481E-06
Cd	111	3	He	0.011	0.0001	6.00	0.0055	7.481E-06
Cd	111	3	He	0.01	0.0001	6.00	0.0055	7.481E-06
Sn	120	3	He	-0.213	0.0151	1390.12	0.0157	0.01844
Sn	120	3	He	0.139	0.0206	1860.43	0.0157	0.01844
Sn	120	3	He	-0.232	0.0148	1390.13	0.0157	0.01844
Sb	121	3	He	0.062	0.0011	100.00	0.0139	0.0002204
Sb	121	3	He	0.08	0.0013	120.00	0.0139	0.0002204
Sb	121	3	He	0.015	0.0004	40.00	0.0139	0.0002204
Ba	137	3	He	28.154	0.1294	11915.55	0.0045	0.001994
Ba	137	3	He	29.45	0.1353	12205.83	0.0045	0.001994
Ba	137	3	He	29.346	0.1348	12666.24	0.0045	0.001994
Tl	205	3	He	0.013	0.0014	400.02	0.03	0.0009888
Tl	205	3	He	0.025	0.0017	510.03	0.03	0.0009888
Tl	205	3	He	0.023	0.0017	490.03	0.03	0.0009888
Pb	208	3	He	0.068	0.0037	640.04	0.0392	0.001024
Pb	208	3	He	0.058	0.0033	410.02	0.0392	0.001024
Pb	208	3	He	0.054	0.0031	470.03	0.0392	0.001024
U	238	3	He	0.181	0.0081	2360.33	0.0439	0.000128
U	238	3	He	0.176	0.0079	2310.29	0.0439	0.000128
U	238	3	He	0.179	0.008	2340.32	0.0439	0.000128
Sc	45	1	No Gas			3944479.94		
Sc	45	1	No Gas			3937284.94		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3917320.57		
Ge	72	1	No Gas			1808847.63		
Ge	72	1	No Gas			1817204.35		
Ge	72	1	No Gas			1796124.19		
Sc	45	2	H2			276280.82		
Sc	45	2	H2			274057.87		
Sc	45	2	H2			268797.98		
Ge	72	2	H2			202063.10		
Ge	72	2	H2			200588.79		
Ge	72	2	H2			196839.16		
In	115	2	H2			493697.02		
In	115	2	H2			484665.07		
In	115	2	H2			488363.35		
Sc	45	3	He			62855.86		
Sc	45	3	He			62855.48		
Sc	45	3	He			64974.16		
Ge	72	3	He			107539.16		
Ge	72	3	He			110502.14		
Ge	72	3	He			110773.65		
In	115	3	He			92062.27		
In	115	3	He			90219.29		
In	115	3	He			93944.47		
Tb	159	3	He			380847.53		
Tb	159	3	He			388013.20		
Tb	159	3	He			388614.10		
Bi	209	3	He			292578.45		
Bi	209	3	He			293364.70		
Bi	209	3	He			293130.13		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23J26A00.b
Acq Time	2023-10-26 17:42:55
Sample Name	410-147515-J-3-B DU
Sample Type	Sample
Comment	I24
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

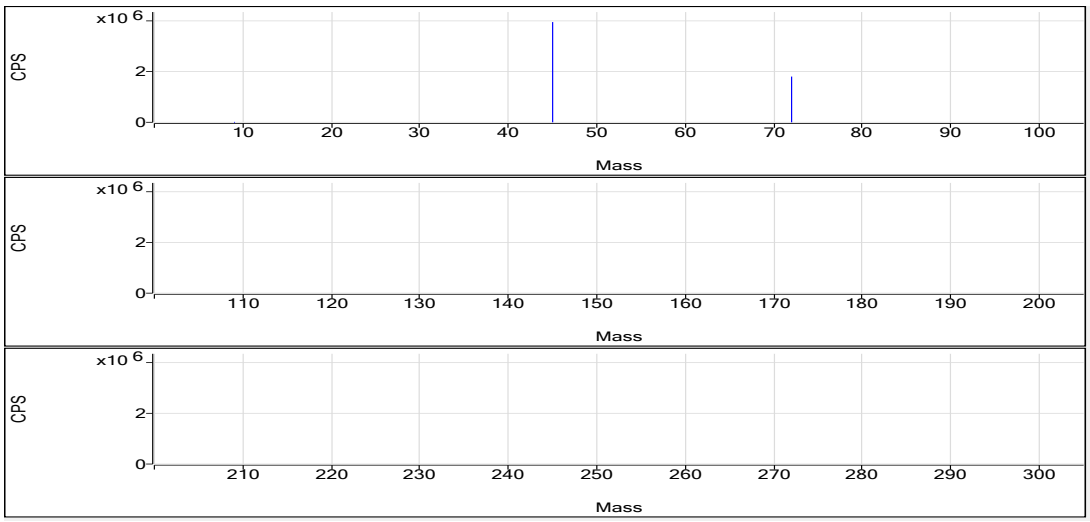
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.000	ppb	10349.3	28.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.039	ppb	35.1	8.00	0.0000	Pulse	1.5000	3
Na	23	45	He	5729.846	ppb	1.2	1202928.29	19.0936	Pulse	0.1000	3
Mg	24	45	He	12654.738	ppb	0.2	1257755.37	19.9619	Pulse	0.1000	3
Al	27	45	He	13.979	ppb	14.6	516.69	0.0082	Pulse	0.1000	3
K	39	45	He	2303.166	ppb	0.9	173721.49	2.7573	Pulse	0.1000	3
Ca	44	45	He	28049.201	ppb	2.5	107995.81	1.7142	Pulse	0.1000	3
Ti	47	45	He	0.652	ppb	170.3	43.33	0.0007	Pulse	0.1000	3
V	51	45	He	0.452	ppb	1.3	1060.71	0.0168	Pulse	0.5000	3
Cr	52	45	He	0.289	ppb	43.0	3203.78	0.0509	Pulse	0.1000	3
Mn	55	45	He	5.670	ppb	6.0	4384.16	0.0695	Pulse	0.1000	3
Fe	57	45	He	68.094	ppb	8.7	2480.29	0.0394	Pulse	0.1000	3
Co	59	45	He	0.101	ppb	17.9	610.03	0.0097	Pulse	0.1000	3
Ni	60	72	He	-0.132	ppb	N/A	1436.79	0.0130	Pulse	0.1000	3
Cu	63	72	He	0.553	ppb	2.8	2043.55	0.0184	Pulse	0.1000	3
Zn	66	72	He	2.388	ppb	20.3	903.40	0.0082	Pulse	0.1000	3
As	75	72	He	0.265	ppb	20.7	107.33	0.0010	Pulse	0.5000	3
Sr	88	115	He	104.911	ppb	0.6	87565.08	0.9416	Pulse	0.1000	3
Mo	98	115	He	0.319	ppb	11.4	840.05	0.0090	Pulse	0.1000	3
Ag	107	115	He	-0.001	ppb	N/A	40.00	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.009	ppb	49.5	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.081	ppb	N/A	1596.82	0.0172	Pulse	0.1000	3
Sb	121	115	He	0.013	ppb	74.9	36.67	0.0004	Pulse	0.1000	3
Ba	137	115	He	28.245	ppb	1.6	12079.01	0.1299	Pulse	0.1000	3
Tl	205	209	He	0.022	ppb	11.2	493.36	0.0017	Pulse	0.1000	3
Pb	208	209	He	0.061	ppb	10.2	1013.38	0.0034	Pulse	0.1000	3
U	238	209	He	0.158	ppb	5.4	2100.25	0.0071	Pulse	0.1000	3

ISTD Table:

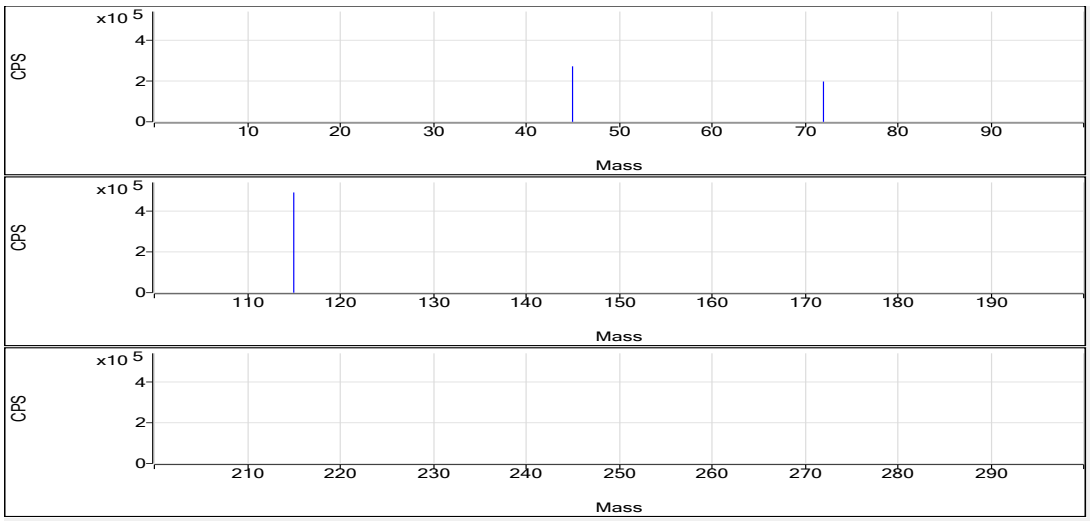
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3946920.46	0.3	110.4	Pulse	0.1000	3
No Gas	Ge	72	1800324.92	0.4	110.6	Pulse	0.1000	3
H2	Sc	45	270440.11	0.6	103.4	Pulse	0.1000	3
H2	Ge	72	196378.69	0.4	104.7	Pulse	0.1000	3
H2	In	115	488385.46	0.8	103.5	Pulse	0.1000	3
He	Sc	45	63009.23	1.5	104.3	Pulse	0.1000	3
He	Ge	72	110891.04	1.4	107.0	Pulse	0.1000	3
He	In	115	93005.98	1.6	102.9	Pulse	0.1000	3
He	Tb	159	385886.99	0.5	102.5	Pulse	0.1000	3
He	Bi	209	296485.28	0.9	103.5	Pulse	0.1000	3

No Gas

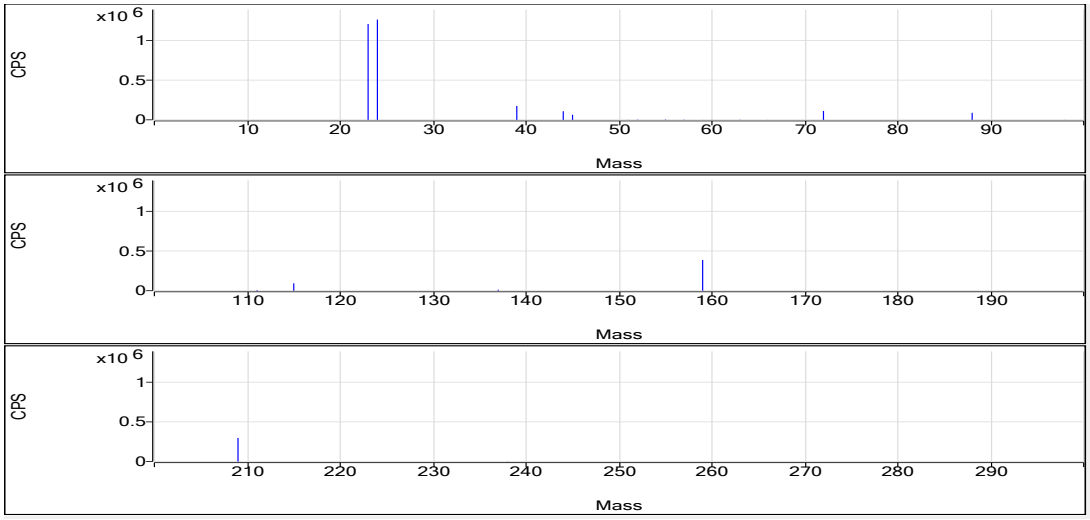


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0	0	28.00	0.0004	7.085E-06
Be	9	1	No Gas	0.003	0	32.00	0.0004	7.085E-06
Be	9	1	No Gas	-0.003	0	24.00	0.0004	7.085E-06
Se	78	2	H2	0.047	0	8.67	0.0004	2.372E-05
Se	78	2	H2	0.047	0	8.67	0.0004	2.372E-05
Se	78	2	H2	0.023	0	6.67	0.0004	2.372E-05
Na	23	3	He	5726.169	19.0816	1202058.34	0.0032	0.5042
Na	23	3	He	5801.845	19.3271	1199866.78	0.0032	0.5042
Na	23	3	He	5661.524	18.8719	1206859.75	0.0032	0.5042
Mg	24	3	He	12671.023	19.9876	1259128.73	0.0016	0.002702
Mg	24	3	He	12674.24	19.9926	1241182.33	0.0016	0.002702
Mg	24	3	He	12618.952	19.9054	1272955.06	0.0016	0.002702
Al	27	3	He	11.624	0.0071	450.02	0.0004	0.00193
Al	27	3	He	15.091	0.0087	540.03	0.0004	0.00193
Al	27	3	He	15.222	0.0088	560.03	0.0004	0.00193
K	39	3	He	2313.813	2.7688	174422.28	0.0011	0.2621
K	39	3	He	2315.191	2.7703	171985.29	0.0011	0.2621
K	39	3	He	2280.496	2.7327	174756.91	0.0011	0.2621
Ca	44	3	He	28735.582	1.7561	110624.28	0.0001	0.003476
Ca	44	3	He	28084.828	1.7164	106555.86	0.0001	0.003476
Ca	44	3	He	27327.193	1.6702	106807.28	0.0001	0.003476
Ti	47	3	He	-0.144	0.0003	20.00	0.0005	0.000385
Ti	47	3	He	1.921	0.0013	80.00	0.0005	0.000385
Ti	47	3	He	0.179	0.0005	30.00	0.0005	0.000385
V	51	3	He	0.449	0.0168	1056.05	0.0212	0.007263
V	51	3	He	0.459	0.017	1054.04	0.0212	0.007263
V	51	3	He	0.449	0.0168	1072.04	0.0212	0.007263
Cr	52	3	He	0.155	0.0472	2970.39	0.0278	0.04283
Cr	52	3	He	0.4	0.054	3350.49	0.0278	0.04283
Cr	52	3	He	0.31	0.0515	3290.47	0.0278	0.04283
Mn	55	3	He	5.907	0.0722	4550.88	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	5.278	0.0651	4040.69	0.0114	0.005023
Mn	55	3	He	5.826	0.0713	4560.90	0.0114	0.005023
Fe	57	3	He	64.769	0.0376	2370.28	0.0005	0.003255
Fe	57	3	He	74.92	0.043	2670.33	0.0005	0.003255
Fe	57	3	He	64.594	0.0375	2400.27	0.0005	0.003255
Co	59	3	He	0.092	0.0092	580.03	0.0539	0.00425
Co	59	3	He	0.089	0.009	560.03	0.0539	0.00425
Co	59	3	He	0.121	0.0108	690.04	0.0539	0.00425
Ni	60	3	He	-0.154	0.0128	1400.11	0.0088	0.01412
Ni	60	3	He	-0.142	0.0129	1420.13	0.0088	0.01412
Ni	60	3	He	-0.101	0.0132	1490.14	0.0088	0.01412
Cu	63	3	He	0.538	0.0181	1980.21	0.0251	0.004537
Cu	63	3	He	0.552	0.0184	2030.21	0.0251	0.004537
Cu	63	3	He	0.569	0.0188	2120.24	0.0251	0.004537
Zn	66	3	He	2.941	0.0097	1060.08	0.0027	0.001642
Zn	66	3	He	2.189	0.0076	840.05	0.0027	0.001642
Zn	66	3	He	2.034	0.0072	810.06	0.0027	0.001642
As	75	3	He	0.226	0.0009	98.00	0.0019	0.000463
As	75	3	He	0.327	0.0011	120.00	0.0019	0.000463
As	75	3	He	0.241	0.0009	104.00	0.0019	0.000463
Sr	88	3	He	105.447	0.9464	86492.08	0.009	0.001142
Sr	88	3	He	105.01	0.9424	87900.56	0.009	0.001142
Sr	88	3	He	104.277	0.9359	88302.61	0.009	0.001142
Mo	98	3	He	0.278	0.0081	740.04	0.0225	0.001842
Mo	98	3	He	0.333	0.0093	870.06	0.0225	0.001842
Mo	98	3	He	0.347	0.0096	910.06	0.0225	0.001842
Ag	107	3	He	0.001	0.0005	50.00	0.048	0.0004774
Ag	107	3	He	-0.008	0.0001	10.00	0.048	0.0004774
Ag	107	3	He	0.003	0.0006	60.00	0.048	0.0004774
Cd	111	3	He	0.007	0	4.00	0.0055	7.481E-06
Cd	111	3	He	0.014	0.0001	8.00	0.0055	7.481E-06
Cd	111	3	He	0.006	0	4.00	0.0055	7.481E-06
Sn	120	3	He	-0.004	0.0184	1680.16	0.0157	0.01844
Sn	120	3	He	-0.205	0.0152	1420.13	0.0157	0.01844
Sn	120	3	He	-0.034	0.0179	1690.18	0.0157	0.01844
Sb	121	3	He	0.023	0.0005	50.00	0.0139	0.0002204
Sb	121	3	He	0.007	0.0003	30.00	0.0139	0.0002204
Sb	121	3	He	0.007	0.0003	30.00	0.0139	0.0002204
Ba	137	3	He	28.069	0.1291	11795.38	0.0045	0.001994
Ba	137	3	He	27.899	0.1283	11965.67	0.0045	0.001994
Ba	137	3	He	28.768	0.1322	12475.97	0.0045	0.001994
Tl	205	3	He	0.022	0.0016	480.03	0.03	0.0009888
Tl	205	3	He	0.025	0.0017	520.03	0.03	0.0009888
Tl	205	3	He	0.021	0.0016	480.02	0.03	0.0009888
Pb	208	3	He	0.062	0.0034	550.03	0.0392	0.001024
Pb	208	3	He	0.055	0.0032	430.02	0.0392	0.001024
Pb	208	3	He	0.067	0.0036	510.03	0.0392	0.001024
U	238	3	He	0.156	0.007	2050.24	0.0439	0.000128
U	238	3	He	0.151	0.0068	2010.23	0.0439	0.000128
U	238	3	He	0.168	0.0075	2240.28	0.0439	0.000128
Sc	45	1	No Gas			3933956.19		
Sc	45	1	No Gas			3949368.07		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3957437.13		
Ge	72	1	No Gas			1796047.47		
Ge	72	1	No Gas			1797300.91		
Ge	72	1	No Gas			1807626.38		
Sc	45	2	H2			272054.16		
Sc	45	2	H2			270343.61		
Sc	45	2	H2			268922.55		
Ge	72	2	H2			195611.36		
Ge	72	2	H2			196543.94		
Ge	72	2	H2			196980.78		
In	115	2	H2			493152.92		
In	115	2	H2			486282.77		
In	115	2	H2			485720.70		
Sc	45	3	He			62995.61		
Sc	45	3	He			62081.97		
Sc	45	3	He			63950.12		
Ge	72	3	He			109686.21		
Ge	72	3	He			110349.34		
Ge	72	3	He			112637.56		
In	115	3	He			91408.24		
In	115	3	He			93280.14		
In	115	3	He			94366.92		
Tb	159	3	He			385289.53		
Tb	159	3	He			387856.52		
Tb	159	3	He			384514.92		
Bi	209	3	He			293436.23		
Bi	209	3	He			297260.84		
Bi	209	3	He			298758.77		

Quantitation Report

Data File Name	260SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23J26A00.b
Acq Time	2023-10-26 17:44:57
Sample Name	410-147515-J-3-C MS
Sample Type	Sample
Comment	I24
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

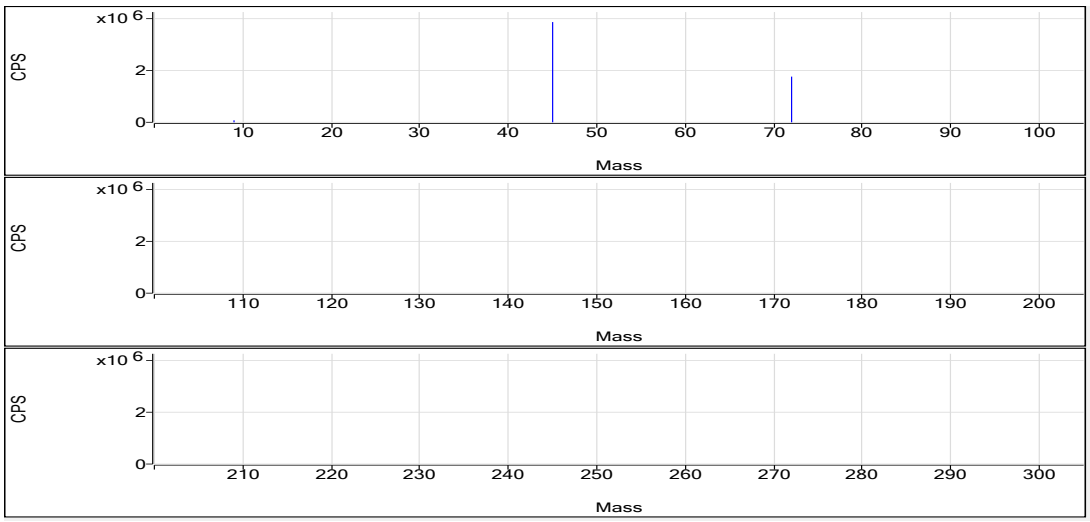
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.616	ppb	0.7	76800.83	0.0198	Pulse	0.5000	3
Se	78	72	H2	100.238	ppb	2.2	8672.84	0.0437	Pulse	1.5000	3
Na	23	45	He	10785.118	ppb	0.7	2260352.26	35.4944	Pulse	0.1000	3
Mg	24	45	He	17815.887	ppb	0.7	1789579.56	28.1021	Pulse	0.1000	3
Al	27	45	He	5186.140	ppb	0.6	148257.01	2.3281	Pulse	0.1000	3
K	39	45	He	7523.288	ppb	0.8	535720.52	8.4125	Pulse	0.1000	3
Ca	44	45	He	33043.794	ppb	0.9	128560.87	2.0188	Pulse	0.1000	3
Ti	47	45	He	528.406	ppb	2.5	15852.36	0.2489	Pulse	0.1000	3
V	51	45	He	504.331	ppb	0.6	680512.88	10.6862	Pulse	0.5000	3
Cr	52	45	He	504.663	ppb	1.2	896638.19	14.0802	Pulse	0.1000	3
Mn	55	45	He	503.949	ppb	1.4	365517.78	5.7398	Pulse	0.1000	3
Fe	57	45	He	5086.954	ppb	1.1	172114.07	2.7028	Pulse	0.1000	3
Co	59	45	He	498.735	ppb	1.3	1710896.90	26.8666	Pulse	0.1000	3
Ni	60	72	He	503.814	ppb	1.3	490650.25	4.4580	Pulse	0.1000	3
Cu	63	72	He	506.576	ppb	1.1	1401474.36	12.7344	Pulse	0.1000	3
Zn	66	72	He	509.785	ppb	1.7	153231.97	1.3924	Pulse	0.1000	3
As	75	72	He	513.862	ppb	1.1	107968.69	0.9810	Pulse	0.5000	3
Sr	88	115	He	155.436	ppb	0.7	130240.92	1.3945	Pulse	0.1000	3
Mo	98	115	He	50.166	ppb	1.2	105646.51	1.1312	Pulse	0.1000	3
Ag	107	115	He	49.028	ppb	1.3	219629.10	2.3516	Pulse	0.1000	3
Cd	111	115	He	48.596	ppb	1.5	24845.24	0.2660	Pulse	0.5000	3
Sn	120	115	He	99.286	ppb	1.4	147445.36	1.5788	Pulse	0.1000	3
Sb	121	115	He	98.756	ppb	1.2	128280.16	1.3734	Pulse	0.1000	3
Ba	137	115	He	524.520	ppb	1.9	221937.79	2.3765	Pulse	0.1000	3
Tl	205	209	He	101.832	ppb	0.9	894255.79	3.0574	Pulse	0.1000	3
Pb	208	209	He	51.641	ppb	0.1	592637.83	2.0263	Pulse	0.1000	3
U	238	209	He	51.652	ppb	0.5	663411.24	2.2683	Pulse	0.1000	3

ISTD Table:

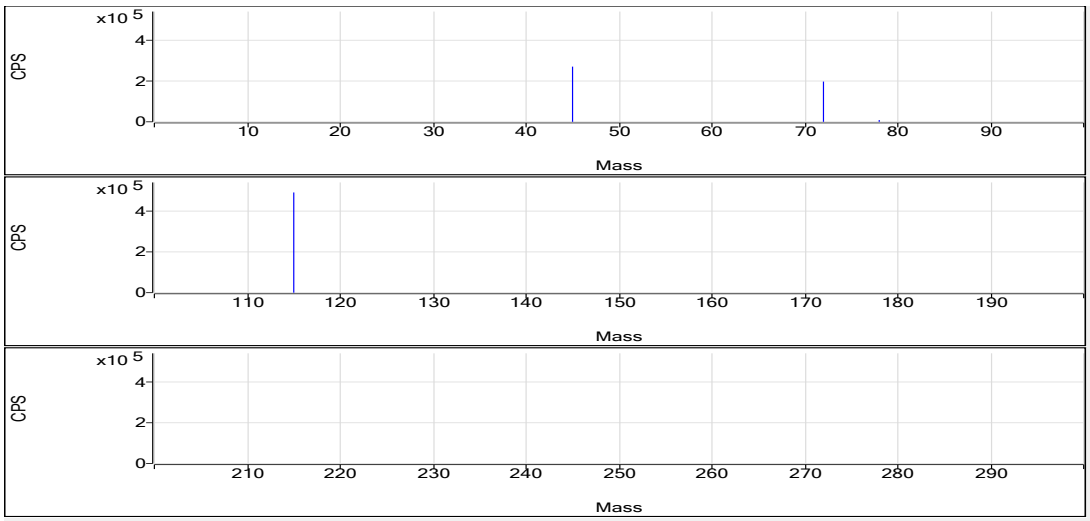
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3882928.07	0.9	108.6	Pulse	0.1000	3
No Gas	Ge	72	1769292.68	0.7	108.7	Pulse	0.1000	3
H2	Sc	45	272414.01	1.5	104.2	Pulse	0.1000	3
H2	Ge	72	198571.11	1.7	105.8	Pulse	0.1000	3
H2	In	115	494712.19	1.0	104.9	Pulse	0.1000	3
He	Sc	45	63682.29	0.3	105.4	Pulse	0.1000	3
He	Ge	72	110061.83	1.0	106.2	Pulse	0.1000	3
He	In	115	93405.27	1.7	103.4	Pulse	0.1000	3
He	Tb	159	385736.00	1.0	102.5	Pulse	0.1000	3
He	Bi	209	292481.11	0.6	102.1	Pulse	0.1000	3

No Gas

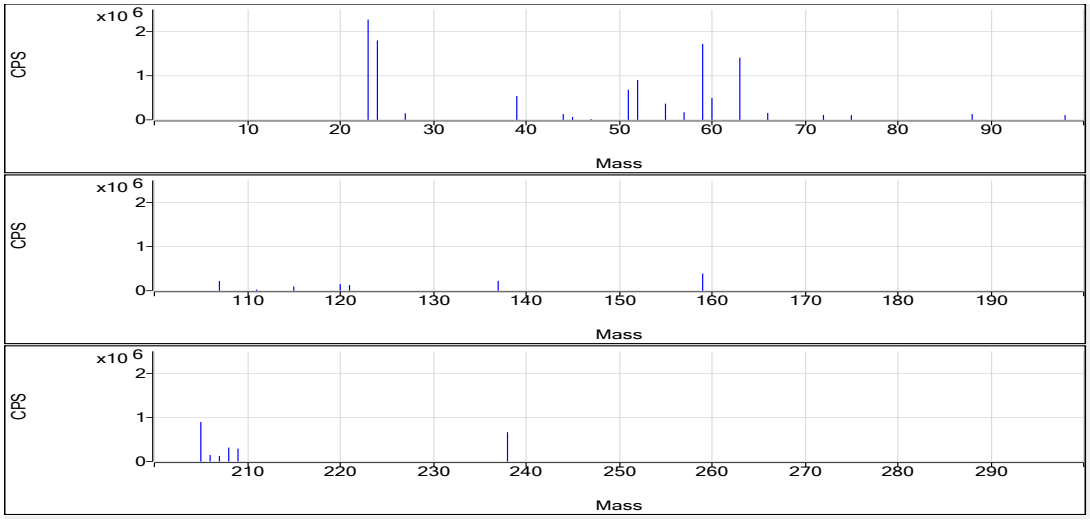


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	51.303	0.0197	76673.48	0.0004	7.085E-06
Be	9	1	No Gas	51.506	0.0197	75857.55	0.0004	7.085E-06
Be	9	1	No Gas	52.039	0.0199	77871.47	0.0004	7.085E-06
Se	78	2	H2	102.708	0.0448	8757.34	0.0004	2.372E-05
Se	78	2	H2	98.407	0.0429	8679.95	0.0004	2.372E-05
Se	78	2	H2	99.598	0.0434	8581.23	0.0004	2.372E-05
Na	23	3	He	10810.673	35.5773	2272680.43	0.0032	0.5042
Na	23	3	He	10845.602	35.6906	2264494.50	0.0032	0.5042
Na	23	3	He	10699.079	35.2153	2243881.84	0.0032	0.5042
Mg	24	3	He	17752.755	28.0025	1788801.85	0.0016	0.002702
Mg	24	3	He	17961.924	28.3324	1797631.38	0.0016	0.002702
Mg	24	3	He	17732.984	27.9713	1782305.44	0.0016	0.002702
Al	27	3	He	5151.987	2.3128	147740.21	0.0004	0.00193
Al	27	3	He	5200.167	2.3344	148111.79	0.0004	0.00193
Al	27	3	He	5206.265	2.3371	148919.02	0.0004	0.00193
K	39	3	He	7524.069	8.4133	537444.05	0.0011	0.2621
K	39	3	He	7584.782	8.4791	537981.12	0.0011	0.2621
K	39	3	He	7461.013	8.345	531736.40	0.0011	0.2621
Ca	44	3	He	32930.203	2.0119	128519.84	0.0001	0.003476
Ca	44	3	He	33398.211	2.0404	129461.39	0.0001	0.003476
Ca	44	3	He	32802.968	2.0041	127701.38	0.0001	0.003476
Ti	47	3	He	538.987	0.2539	16219.39	0.0005	0.000385
Ti	47	3	He	532.603	0.2509	15919.15	0.0005	0.000385
Ti	47	3	He	513.63	0.242	15418.53	0.0005	0.000385
V	51	3	He	501.33	10.6227	678576.38	0.0212	0.007263
V	51	3	He	507.816	10.76	682699.19	0.0212	0.007263
V	51	3	He	503.848	10.676	680263.06	0.0212	0.007263
Cr	52	3	He	497.762	13.8882	887180.61	0.0278	0.04283
Cr	52	3	He	508.89	14.1978	900816.78	0.0278	0.04283
Cr	52	3	He	507.338	14.1546	901917.17	0.0278	0.04283
Mn	55	3	He	495.831	5.6475	360760.07	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	507.647	5.7819	366851.09	0.0114	0.005023
Mn	55	3	He	508.369	5.7901	368942.18	0.0114	0.005023
Fe	57	3	He	5034.991	2.6752	170891.52	0.0005	0.003255
Fe	57	3	He	5150.216	2.7363	173615.02	0.0005	0.003255
Fe	57	3	He	5075.653	2.6968	171835.68	0.0005	0.003255
Co	59	3	He	491.357	26.4693	1690857.47	0.0539	0.00425
Co	59	3	He	500.886	26.9825	1711981.85	0.0539	0.00425
Co	59	3	He	503.961	27.1481	1729851.38	0.0539	0.00425
Ni	60	3	He	498.955	4.4152	482413.39	0.0088	0.01412
Ni	60	3	He	501.423	4.4369	493908.90	0.0088	0.01412
Ni	60	3	He	511.065	4.522	495628.47	0.0088	0.01412
Cu	63	3	He	508.333	12.7785	1396219.67	0.0251	0.004537
Cu	63	3	He	500.514	12.582	1400603.26	0.0251	0.004537
Cu	63	3	He	510.881	12.8425	1407600.14	0.0251	0.004537
Zn	66	3	He	513.911	1.4036	153366.22	0.0027	0.001642
Zn	66	3	He	499.921	1.3655	152002.02	0.0027	0.001642
Zn	66	3	He	515.523	1.408	154327.66	0.0027	0.001642
As	75	3	He	516.219	0.9855	107683.98	0.0019	0.000463
As	75	3	He	507.529	0.969	107863.12	0.0019	0.000463
As	75	3	He	517.837	0.9886	108358.98	0.0019	0.000463
Sr	88	3	He	156.133	1.4007	130714.70	0.009	0.001142
Sr	88	3	He	155.935	1.3989	128535.42	0.009	0.001142
Sr	88	3	He	154.239	1.3837	131472.64	0.009	0.001142
Mo	98	3	He	49.682	1.1203	104544.51	0.0225	0.001842
Mo	98	3	He	50.857	1.1467	105361.19	0.0225	0.001842
Mo	98	3	He	49.959	1.1265	107033.82	0.0225	0.001842
Ag	107	3	He	48.54	2.3282	217269.10	0.048	0.0004774
Ag	107	3	He	49.747	2.3861	219235.62	0.048	0.0004774
Ag	107	3	He	48.797	2.3405	222382.57	0.048	0.0004774
Cd	111	3	He	48.912	0.2678	24988.13	0.0055	7.481E-06
Cd	111	3	He	49.129	0.269	24711.71	0.0055	7.481E-06
Cd	111	3	He	47.747	0.2614	24835.87	0.0055	7.481E-06
Sn	120	3	He	99.071	1.5754	147018.22	0.0157	0.01844
Sn	120	3	He	100.732	1.6015	147149.42	0.0157	0.01844
Sn	120	3	He	98.055	1.5594	148168.45	0.0157	0.01844
Sb	121	3	He	97.456	1.3553	126481.07	0.0139	0.0002204
Sb	121	3	He	99.732	1.387	127438.02	0.0139	0.0002204
Sb	121	3	He	99.08	1.3779	130921.39	0.0139	0.0002204
Ba	137	3	He	517.721	2.3457	218902.28	0.0045	0.001994
Ba	137	3	He	536.221	2.4294	223220.66	0.0045	0.001994
Ba	137	3	He	519.619	2.3543	223690.43	0.0045	0.001994
Tl	205	3	He	100.743	3.0247	881854.91	0.03	0.0009888
Tl	205	3	He	102.271	3.0706	894464.75	0.03	0.0009888
Tl	205	3	He	102.481	3.0769	906447.72	0.03	0.0009888
Pb	208	3	He	51.703	2.0287	315091.05	0.0392	0.001024
Pb	208	3	He	51.651	2.0266	315306.79	0.0392	0.001024
Pb	208	3	He	51.57	2.0235	316854.98	0.0392	0.001024
U	238	3	He	51.761	2.273	662695.85	0.0439	0.000128
U	238	3	He	51.816	2.2754	662835.85	0.0439	0.000128
U	238	3	He	51.38	2.2563	664702.02	0.0439	0.000128
Sc	45	1	No Gas			3900183.69		
Sc	45	1	No Gas			3843450.26		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3905150.25		
Ge	72	1	No Gas			1779130.44		
Ge	72	1	No Gas			1754548.26		
Ge	72	1	No Gas			1774199.35		
Sc	45	2	H2			274222.81		
Sc	45	2	H2			275301.87		
Sc	45	2	H2			267717.36		
Ge	72	2	H2			195641.11		
Ge	72	2	H2			202381.91		
Ge	72	2	H2			197690.31		
In	115	2	H2			498168.74		
In	115	2	H2			497132.73		
In	115	2	H2			488835.11		
Sc	45	3	He			63880.03		
Sc	45	3	He			63447.85		
Sc	45	3	He			63718.99		
Ge	72	3	He			109263.06		
Ge	72	3	He			111317.87		
Ge	72	3	He			109604.56		
In	115	3	He			94467.37		
In	115	3	He			93029.03		
In	115	3	He			96169.63		
Tb	159	3	He			383227.77		
Tb	159	3	He			383664.92		
Tb	159	3	He			390315.31		
Bi	209	3	He			291546.56		
Bi	209	3	He			291299.35		
Bi	209	3	He			294597.42		

Quantitation Report

Data File Name	261SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23J26A00.b
Acq Time	2023-10-26 17:46:58
Sample Name	410-147515-C-3-A MSD
Sample Type	Sample
Comment	I24
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

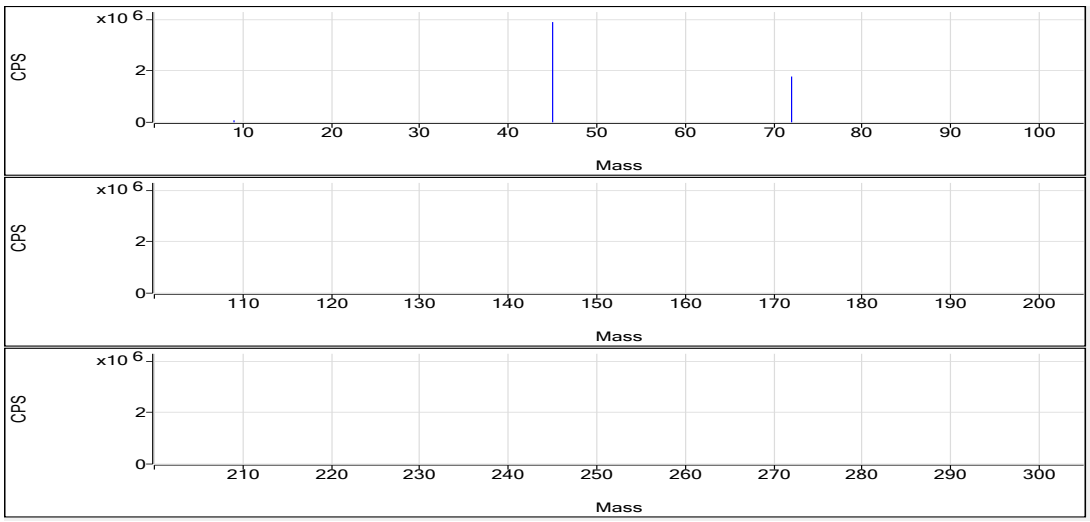
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.816	ppb	0.6	77525.18	0.0199	Pulse	0.5000	3
Se	78	72	H2	100.323	ppb	0.6	8583.45	0.0437	Pulse	1.5000	3
Na	23	45	He	10830.054	ppb	2.8	2277887.62	35.6402	Pulse	0.1000	3
Mg	24	45	He	17667.053	ppb	1.6	1781350.18	27.8674	Pulse	0.1000	3
Al	27	45	He	5152.737	ppb	1.4	147871.59	2.3131	Pulse	0.1000	3
K	39	45	He	7455.768	ppb	2.8	532992.23	8.3393	Pulse	0.1000	3
Ca	44	45	He	32822.989	ppb	2.9	128163.75	2.0054	Pulse	0.1000	3
Ti	47	45	He	525.252	ppb	2.6	15819.02	0.2474	Pulse	0.1000	3
V	51	45	He	505.312	ppb	1.9	684394.25	10.7070	Pulse	0.5000	3
Cr	52	45	He	500.719	ppb	1.3	893070.61	13.9705	Pulse	0.1000	3
Mn	55	45	He	503.186	ppb	1.5	366355.71	5.7312	Pulse	0.1000	3
Fe	57	45	He	5084.638	ppb	1.5	172691.14	2.7015	Pulse	0.1000	3
Co	59	45	He	494.112	ppb	1.5	1701566.90	26.6176	Pulse	0.1000	3
Ni	60	72	He	509.212	ppb	0.3	491241.11	4.5056	Pulse	0.1000	3
Cu	63	72	He	508.432	ppb	0.5	1393473.47	12.7810	Pulse	0.1000	3
Zn	66	72	He	508.093	ppb	0.3	151304.93	1.3878	Pulse	0.1000	3
As	75	72	He	515.845	ppb	0.5	107374.42	0.9848	Pulse	0.5000	3
Sr	88	115	He	156.582	ppb	1.3	128932.72	1.4047	Pulse	0.1000	3
Mo	98	115	He	51.536	ppb	1.3	106667.08	1.1620	Pulse	0.1000	3
Ag	107	115	He	50.109	ppb	1.6	220592.87	2.4034	Pulse	0.1000	3
Cd	111	115	He	49.500	ppb	1.0	24873.96	0.2710	Pulse	0.5000	3
Sn	120	115	He	99.033	ppb	1.2	144547.08	1.5748	Pulse	0.1000	3
Sb	121	115	He	100.716	ppb	1.6	128555.27	1.4007	Pulse	0.1000	3
Ba	137	115	He	528.620	ppb	2.5	219813.60	2.3950	Pulse	0.1000	3
Tl	205	209	He	101.704	ppb	2.0	894528.87	3.0536	Pulse	0.1000	3
Pb	208	209	He	51.329	ppb	1.1	590005.56	2.0140	Pulse	0.1000	3
U	238	209	He	51.889	ppb	0.4	667554.78	2.2787	Pulse	0.1000	3

ISTD Table:

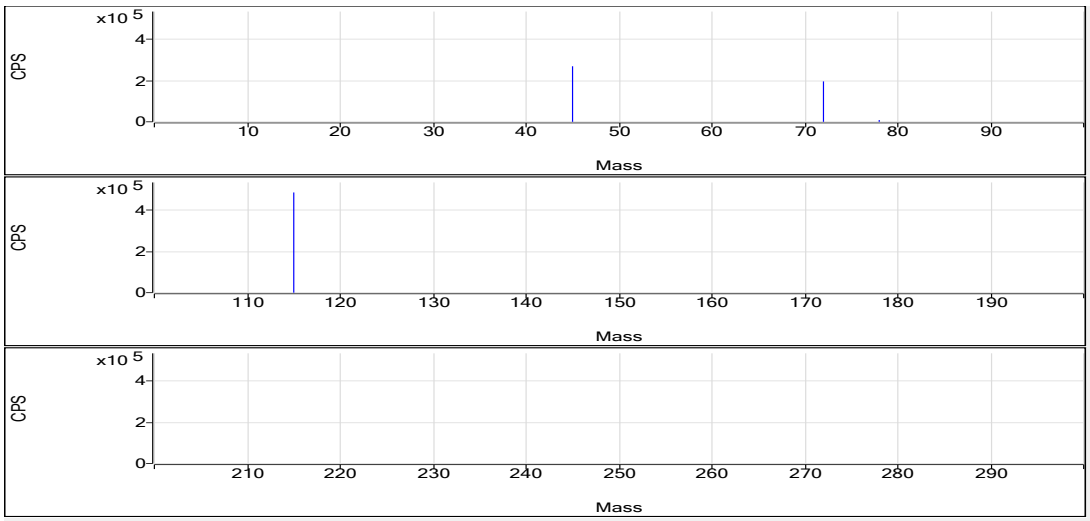
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3904464.84	0.3	109.2	Pulse	0.1000	3
No Gas	Ge	72	1782781.85	0.2	109.5	Pulse	0.1000	3
H2	Sc	45	269900.41	0.2	103.2	Pulse	0.1000	3
H2	Ge	72	196320.73	1.3	104.6	Pulse	0.1000	3
H2	In	115	486887.23	1.4	103.2	Pulse	0.1000	3
He	Sc	45	63936.62	2.1	105.8	Pulse	0.1000	3
He	Ge	72	109028.17	0.4	105.2	Pulse	0.1000	3
He	In	115	91800.11	1.9	101.6	Pulse	0.1000	3
He	Tb	159	383270.93	1.5	101.8	Pulse	0.1000	3
He	Bi	209	292960.69	0.5	102.2	Pulse	0.1000	3

No Gas

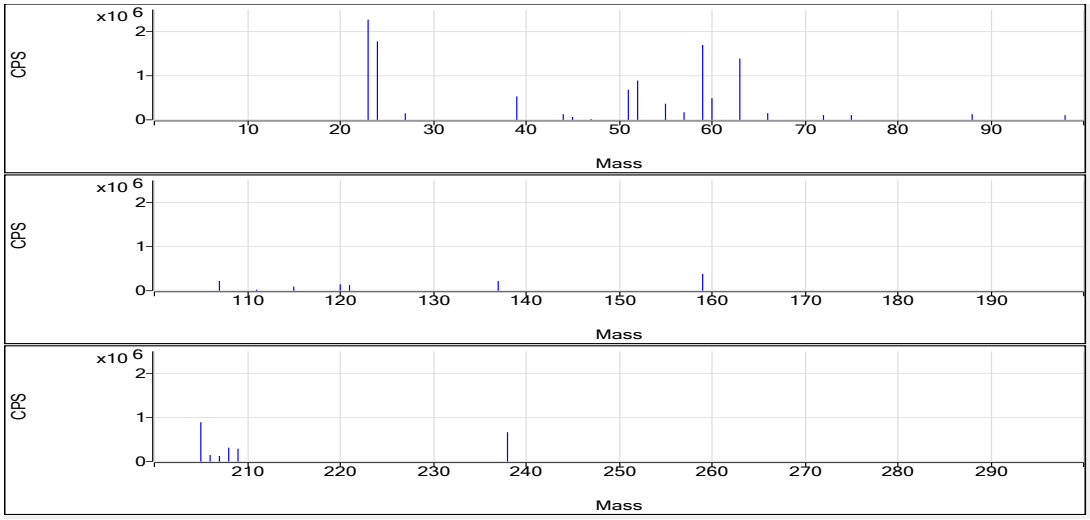


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	51.533	0.0197	76989.13	0.0004	7.085E-06
Be	9	1	No Gas	51.775	0.0198	77688.57	0.0004	7.085E-06
Be	9	1	No Gas	52.14	0.02	77897.84	0.0004	7.085E-06
Se	78	2	H2	99.72	0.0435	8656.60	0.0004	2.372E-05
Se	78	2	H2	100.904	0.044	8579.22	0.0004	2.372E-05
Se	78	2	H2	100.345	0.0437	8514.52	0.0004	2.372E-05
Na	23	3	He	11005.292	36.2087	2300629.65	0.0032	0.5042
Na	23	3	He	10999.782	36.1909	2274793.25	0.0032	0.5042
Na	23	3	He	10485.086	34.521	2258239.97	0.0032	0.5042
Mg	24	3	He	17727.691	27.963	1776712.16	0.0016	0.002702
Mg	24	3	He	17915.2	28.2587	1776216.07	0.0016	0.002702
Mg	24	3	He	17358.269	27.3803	1791122.32	0.0016	0.002702
Al	27	3	He	5224.774	2.3454	149023.50	0.0004	0.00193
Al	27	3	He	5154.701	2.314	145447.17	0.0004	0.00193
Al	27	3	He	5078.735	2.2799	149144.11	0.0004	0.00193
K	39	3	He	7547.829	8.4391	536201.83	0.0011	0.2621
K	39	3	He	7601.19	8.4969	534075.66	0.0011	0.2621
K	39	3	He	7218.284	8.0821	528699.21	0.0011	0.2621
Ca	44	3	He	33011.473	2.0169	128146.63	0.0001	0.003476
Ca	44	3	He	33680.842	2.0577	129336.18	0.0001	0.003476
Ca	44	3	He	31776.652	1.9415	127008.43	0.0001	0.003476
Ti	47	3	He	540.89	0.2548	16189.44	0.0005	0.000385
Ti	47	3	He	517.99	0.244	15338.50	0.0005	0.000385
Ti	47	3	He	516.875	0.2435	15929.11	0.0005	0.000385
V	51	3	He	506.526	10.7327	681933.81	0.0212	0.007263
V	51	3	He	514.05	10.892	684622.75	0.0212	0.007263
V	51	3	He	495.359	10.4962	686626.19	0.0212	0.007263
Cr	52	3	He	505.105	14.0925	895407.10	0.0278	0.04283
Cr	52	3	He	504.043	14.063	883933.81	0.0278	0.04283
Cr	52	3	He	493.01	13.756	899870.92	0.0278	0.04283
Mn	55	3	He	503.775	5.7379	364572.10	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	510.51	5.8145	365473.94	0.0114	0.005023
Mn	55	3	He	495.273	5.6411	369021.09	0.0114	0.005023
Fe	57	3	He	5114.691	2.7175	172663.83	0.0005	0.003255
Fe	57	3	He	5142.685	2.7323	171742.89	0.0005	0.003255
Fe	57	3	He	4996.539	2.6548	173666.70	0.0005	0.003255
Co	59	3	He	490.301	26.4123	1678187.16	0.0539	0.00425
Co	59	3	He	502.877	27.0897	1702735.76	0.0539	0.00425
Co	59	3	He	489.159	26.3509	1723777.79	0.0539	0.00425
Ni	60	3	He	508.759	4.5016	492860.70	0.0088	0.01412
Ni	60	3	He	507.826	4.4934	487836.36	0.0088	0.01412
Ni	60	3	He	511.049	4.5218	493026.28	0.0088	0.01412
Cu	63	3	He	505.519	12.7078	1391309.67	0.0251	0.004537
Cu	63	3	He	509.254	12.8016	1389838.89	0.0251	0.004537
Cu	63	3	He	510.523	12.8335	1399271.85	0.0251	0.004537
Zn	66	3	He	506.916	1.3846	151588.42	0.0027	0.001642
Zn	66	3	He	509.7	1.3922	151142.43	0.0027	0.001642
Zn	66	3	He	507.662	1.3866	151183.93	0.0027	0.001642
As	75	3	He	514.249	0.9818	107490.89	0.0019	0.000463
As	75	3	He	514.589	0.9824	106660.36	0.0019	0.000463
As	75	3	He	518.696	0.9903	107972.02	0.0019	0.000463
Sr	88	3	He	158.973	1.4262	128151.36	0.009	0.001142
Sr	88	3	He	155.57	1.3957	128687.12	0.009	0.001142
Sr	88	3	He	155.204	1.3924	129959.67	0.009	0.001142
Mo	98	3	He	51.5	1.1612	104342.66	0.0225	0.001842
Mo	98	3	He	52.216	1.1773	108553.89	0.0225	0.001842
Mo	98	3	He	50.892	1.1475	107104.69	0.0225	0.001842
Ag	107	3	He	51.016	2.4469	219874.02	0.048	0.0004774
Ag	107	3	He	49.561	2.3771	219184.37	0.048	0.0004774
Ag	107	3	He	49.75	2.3862	222720.21	0.048	0.0004774
Cd	111	3	He	49.856	0.2729	24525.34	0.0055	7.481E-06
Cd	111	3	He	49.682	0.272	25078.34	0.0055	7.481E-06
Cd	111	3	He	48.962	0.268	25018.20	0.0055	7.481E-06
Sn	120	3	He	100.152	1.5924	143090.00	0.0157	0.01844
Sn	120	3	He	99.204	1.5775	145453.85	0.0157	0.01844
Sn	120	3	He	97.744	1.5546	145097.38	0.0157	0.01844
Sb	121	3	He	102.544	1.4261	128144.75	0.0139	0.0002204
Sb	121	3	He	100.051	1.3914	128296.70	0.0139	0.0002204
Sb	121	3	He	99.553	1.3845	129224.36	0.0139	0.0002204
Ba	137	3	He	542.332	2.4571	220790.84	0.0045	0.001994
Ba	137	3	He	516.539	2.3404	215793.63	0.0045	0.001994
Ba	137	3	He	526.989	2.3877	222856.34	0.0045	0.001994
Tl	205	3	He	99.985	3.002	884333.19	0.03	0.0009888
Tl	205	3	He	101.175	3.0377	889014.60	0.03	0.0009888
Tl	205	3	He	103.954	3.1211	910238.81	0.03	0.0009888
Pb	208	3	He	50.756	1.9915	313912.57	0.0392	0.001024
Pb	208	3	He	51.305	2.0131	316770.93	0.0392	0.001024
Pb	208	3	He	51.927	2.0375	315992.69	0.0392	0.001024
U	238	3	He	51.758	2.2729	669563.27	0.0439	0.000128
U	238	3	He	51.796	2.2746	665677.80	0.0439	0.000128
U	238	3	He	52.114	2.2885	667423.27	0.0439	0.000128
Sc	45	1	No Gas			3898749.00		
Sc	45	1	No Gas			3915774.32		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3898871.19		
Ge	72	1	No Gas			1784452.47		
Ge	72	1	No Gas			1778577.47		
Ge	72	1	No Gas			1785315.60		
Sc	45	2	H2			269294.08		
Sc	45	2	H2			270322.69		
Sc	45	2	H2			270084.45		
Ge	72	2	H2			199181.66		
Ge	72	2	H2			195086.72		
Ge	72	2	H2			194693.81		
In	115	2	H2			494272.38		
In	115	2	H2			480541.59		
In	115	2	H2			485847.73		
Sc	45	3	He			63537.99		
Sc	45	3	He			62855.48		
Sc	45	3	He			65416.38		
Ge	72	3	He			109484.85		
Ge	72	3	He			108567.22		
Ge	72	3	He			109032.43		
In	115	3	He			90973.96		
In	115	3	He			93340.22		
In	115	3	He			94468.56		
Tb	159	3	He			384102.69		
Tb	159	3	He			377255.07		
Tb	159	3	He			388455.03		
Bi	209	3	He			294583.37		
Bi	209	3	He			292660.05		
Bi	209	3	He			291638.65		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23J26A00.b
Acq Time	2023-10-26 17:51:00
Sample Name	CCV 5001623
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

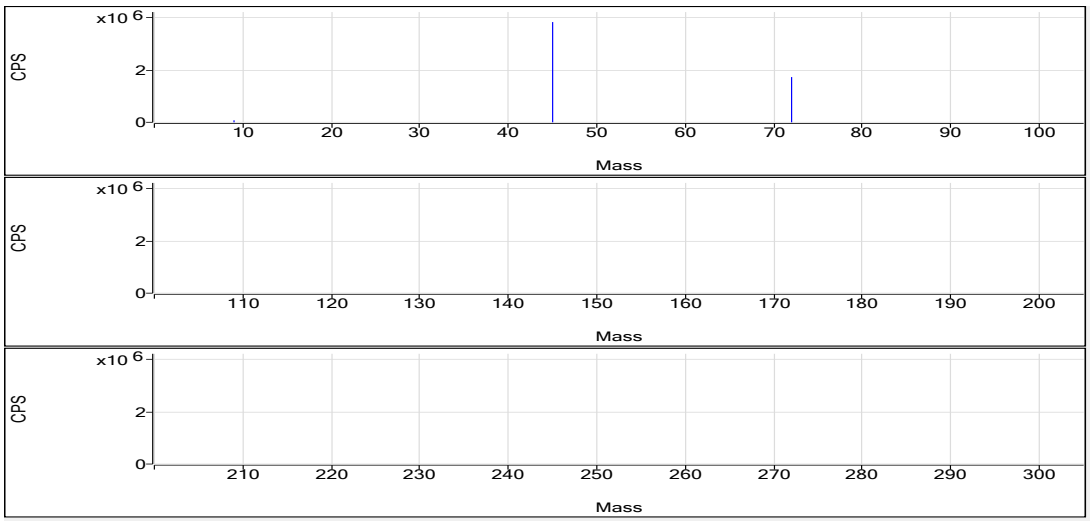
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.927	ppb	0.4	76299.80	0.0199	Pulse	0.5000	3
Se	78	72	H2	51.507	ppb	2.1	4211.07	0.0225	Pulse	1.5000	3
Na	23	45	He	5151.462	ppb	2.3	1065356.49	17.2171	Pulse	0.1000	3
Mg	24	45	He	5168.859	ppb	1.7	504656.62	8.1551	Pulse	0.1000	3
Al	27	45	He	5255.121	ppb	3.1	145961.74	2.3590	Pulse	0.1000	3
K	39	45	He	5219.248	ppb	2.1	366111.27	5.9164	Pulse	0.1000	3
Ca	44	45	He	5139.553	ppb	3.5	19610.34	0.3169	Pulse	0.1000	3
Ti	47	45	He	5120.446	ppb	2.2	149055.73	2.4088	Pulse	0.1000	3
V	51	45	He	513.935	ppb	2.2	673831.19	10.8896	Pulse	0.5000	3
Cr	52	45	He	509.012	ppb	2.2	878756.11	14.2011	Pulse	0.1000	3
Mn	55	45	He	509.111	ppb	2.1	358822.01	5.7986	Pulse	0.1000	3
Fe	57	45	He	5088.944	ppb	2.5	167309.01	2.7038	Pulse	0.1000	3
Co	59	45	He	511.563	ppb	1.7	1705346.64	27.5576	Pulse	0.1000	3
Ni	60	72	He	525.829	ppb	0.8	491094.56	4.6522	Pulse	0.1000	3
Cu	63	72	He	523.993	ppb	0.6	1390474.98	13.1720	Pulse	0.1000	3
Zn	66	72	He	521.154	ppb	0.2	150261.14	1.4234	Pulse	0.1000	3
As	75	72	He	521.799	ppb	0.8	105163.83	0.9962	Pulse	0.5000	3
Sr	88	115	He	49.553	ppb	1.9	40688.93	0.4453	Pulse	0.1000	3
Mo	98	115	He	49.422	ppb	0.0	101838.12	1.1144	Pulse	0.1000	3
Ag	107	115	He	49.213	ppb	1.2	215689.45	2.3604	Pulse	0.1000	3
Cd	111	115	He	48.867	ppb	0.5	24447.23	0.2675	Pulse	0.5000	3
Sn	120	115	He	49.418	ppb	1.3	72649.09	0.7951	Pulse	0.1000	3
Sb	121	115	He	50.287	ppb	0.8	63913.67	0.6995	Pulse	0.1000	3
Ba	137	115	He	499.029	ppb	0.4	206615.89	2.2611	Pulse	0.1000	3
Tl	205	209	He	51.066	ppb	0.1	450017.05	1.5337	Pulse	0.1000	3
Pb	208	209	He	50.998	ppb	0.5	587131.60	2.0010	Pulse	0.1000	3
U	238	209	He	50.523	ppb	0.1	651001.06	2.2187	Pulse	0.1000	3

ISTD Table:

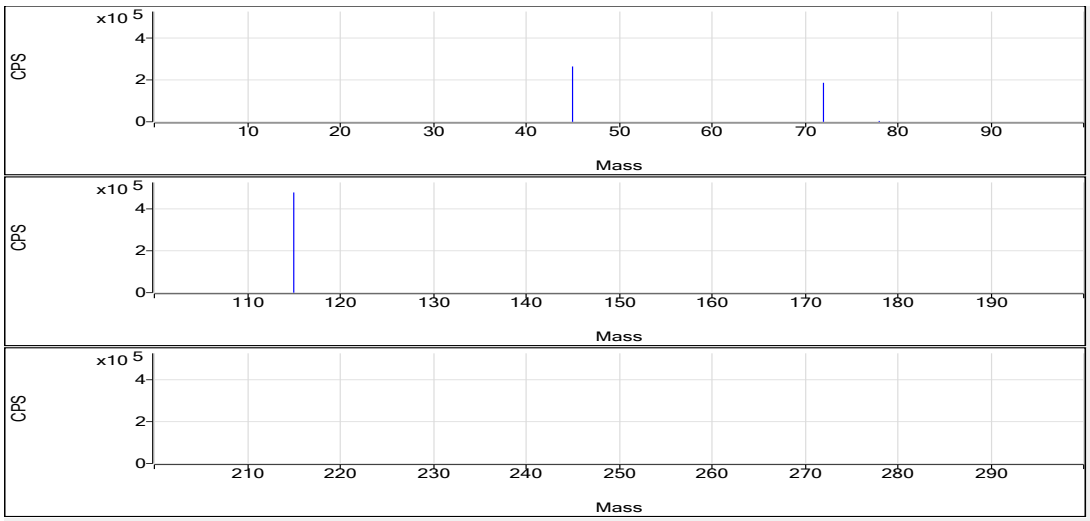
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3834581.92	0.4	107.3	Pulse	0.1000	3
No Gas	Ge	72	1730239.09	0.8	106.3	Pulse	0.1000	3
H2	Sc	45	265926.66	1.4	101.7	Pulse	0.1000	3
H2	Ge	72	187492.85	1.4	99.9	Pulse	0.1000	3
H2	In	115	481539.18	1.8	102.1	Pulse	0.1000	3
He	Sc	45	61898.09	2.2	102.5	Pulse	0.1000	3
He	Ge	72	105564.55	0.5	101.9	Pulse	0.1000	3
He	In	115	91382.03	1.2	101.1	Pulse	0.1000	3
He	Tb	159	382430.53	0.4	101.6	Pulse	0.1000	3
He	Bi	209	293419.70	0.6	102.4	Pulse	0.1000	3

No Gas

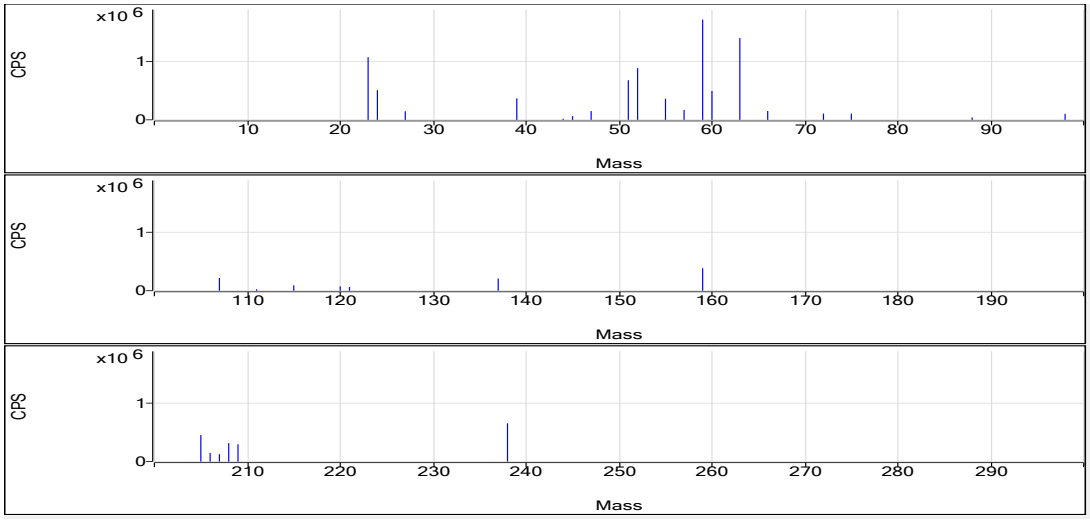


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	51.984	0.0199	76339.79	0.0004	7.085E-06
Be	9	1	No Gas	51.68	0.0198	76237.32	0.0004	7.085E-06
Be	9	1	No Gas	52.117	0.02	76322.30	0.0004	7.085E-06
Se	78	2	H2	51.731	0.0226	4298.65	0.0004	2.372E-05
Se	78	2	H2	50.356	0.022	4089.92	0.0004	2.372E-05
Se	78	2	H2	52.434	0.0229	4244.63	0.0004	2.372E-05
Na	23	3	He	5261.008	17.5725	1068345.92	0.0032	0.5042
Na	23	3	He	5169.667	17.2762	1062138.58	0.0032	0.5042
Na	23	3	He	5023.711	16.8026	1065584.98	0.0032	0.5042
Mg	24	3	He	5247.158	8.2786	503308.04	0.0016	0.002702
Mg	24	3	He	5187.675	8.1848	503198.94	0.0016	0.002702
Mg	24	3	He	5071.744	8.0019	507462.88	0.0016	0.002702
Al	27	3	He	5307.893	2.3827	144860.10	0.0004	0.00193
Al	27	3	He	5384.005	2.4168	148587.65	0.0004	0.00193
Al	27	3	He	5073.464	2.2776	144437.47	0.0004	0.00193
K	39	3	He	5284.329	5.9869	363983.12	0.0011	0.2621
K	39	3	He	5278.247	5.9803	367670.35	0.0011	0.2621
K	39	3	He	5095.168	5.782	366680.35	0.0011	0.2621
Ca	44	3	He	5346.026	0.3295	20034.31	0.0001	0.003476
Ca	44	3	He	5050.923	0.3115	19153.02	0.0001	0.003476
Ca	44	3	He	5021.71	0.3098	19643.69	0.0001	0.003476
Ti	47	3	He	5208.632	2.4503	148971.36	0.0005	0.000385
Ti	47	3	He	5157.361	2.4262	149163.64	0.0005	0.000385
Ti	47	3	He	4995.347	2.35	149032.19	0.0005	0.000385
V	51	3	He	523.498	11.0921	674358.56	0.0212	0.007263
V	51	3	He	516.569	10.9453	672919.88	0.0212	0.007263
V	51	3	He	501.739	10.6313	674215.13	0.0212	0.007263
Cr	52	3	He	520.423	14.5186	882676.86	0.0278	0.04283
Cr	52	3	He	508.47	14.1861	872160.61	0.0278	0.04283
Cr	52	3	He	498.142	13.8988	881430.85	0.0278	0.04283
Mn	55	3	He	513.176	5.8449	355346.36	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	517.102	5.8895	362088.35	0.0114	0.005023
Mn	55	3	He	497.053	5.6614	359031.32	0.0114	0.005023
Fe	57	3	He	5127.347	2.7242	165622.13	0.0005	0.003255
Fe	57	3	He	5190.617	2.7578	169548.51	0.0005	0.003255
Fe	57	3	He	4948.867	2.6295	166756.40	0.0005	0.003255
Co	59	3	He	517.651	27.8855	1695337.63	0.0539	0.00425
Co	59	3	He	515.209	27.7539	1706311.54	0.0539	0.00425
Co	59	3	He	501.829	27.0333	1714390.76	0.0539	0.00425
Ni	60	3	He	527.928	4.6707	493389.52	0.0088	0.01412
Ni	60	3	He	528.69	4.6774	491038.90	0.0088	0.01412
Ni	60	3	He	520.867	4.6084	488855.27	0.0088	0.01412
Cu	63	3	He	521.804	13.117	1385611.07	0.0251	0.004537
Cu	63	3	He	527.369	13.2569	1391711.85	0.0251	0.004537
Cu	63	3	He	522.805	13.1422	1394102.01	0.0251	0.004537
Zn	66	3	He	522.222	1.4263	150668.53	0.0027	0.001642
Zn	66	3	He	520.472	1.4215	149234.05	0.0027	0.001642
Zn	66	3	He	520.768	1.4224	150880.85	0.0027	0.001642
As	75	3	He	517.529	0.988	104372.13	0.0019	0.000463
As	75	3	He	522.275	0.9971	104676.32	0.0019	0.000463
As	75	3	He	525.593	1.0034	106443.06	0.0019	0.000463
Sr	88	3	He	50.652	0.4552	41079.88	0.009	0.001142
Sr	88	3	He	49.132	0.4416	40368.14	0.009	0.001142
Sr	88	3	He	48.874	0.4392	40618.78	0.009	0.001142
Mo	98	3	He	49.407	1.1141	100545.17	0.0225	0.001842
Mo	98	3	He	49.409	1.1141	101855.84	0.0225	0.001842
Mo	98	3	He	49.451	1.1151	103113.36	0.0225	0.001842
Ag	107	3	He	49.303	2.3648	213418.40	0.048	0.0004774
Ag	107	3	He	49.744	2.3859	218129.22	0.048	0.0004774
Ag	107	3	He	48.591	2.3306	215520.74	0.048	0.0004774
Cd	111	3	He	48.618	0.2662	24020.49	0.0055	7.481E-06
Cd	111	3	He	49.058	0.2686	24553.40	0.0055	7.481E-06
Cd	111	3	He	48.924	0.2678	24767.79	0.0055	7.481E-06
Sn	120	3	He	49.977	0.8039	72548.81	0.0157	0.01844
Sn	120	3	He	49.565	0.7974	72900.23	0.0157	0.01844
Sn	120	3	He	48.712	0.784	72498.23	0.0157	0.01844
Sb	121	3	He	50.574	0.7034	63485.54	0.0139	0.0002204
Sb	121	3	He	50.469	0.702	64178.34	0.0139	0.0002204
Sb	121	3	He	49.817	0.6929	64077.12	0.0139	0.0002204
Ba	137	3	He	501.288	2.2713	204983.63	0.0045	0.001994
Ba	137	3	He	498.251	2.2576	206393.06	0.0045	0.001994
Ba	137	3	He	497.548	2.2544	208470.97	0.0045	0.001994
Tl	205	3	He	51.105	1.5349	447855.34	0.03	0.0009888
Tl	205	3	He	51.103	1.5348	452912.73	0.03	0.0009888
Tl	205	3	He	50.989	1.5314	449283.08	0.03	0.0009888
Pb	208	3	He	51.262	2.0114	312732.59	0.0392	0.001024
Pb	208	3	He	51.014	2.0016	317384.88	0.0392	0.001024
Pb	208	3	He	50.718	1.99	312521.95	0.0392	0.001024
U	238	3	He	50.561	2.2203	647857.18	0.0439	0.000128
U	238	3	He	50.535	2.2192	654871.94	0.0439	0.000128
U	238	3	He	50.473	2.2165	650274.05	0.0439	0.000128
Sc	45	1	No Gas			3832364.94		
Sc	45	1	No Gas			3849691.51		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3821689.32		
Ge	72	1	No Gas			1745521.07		
Ge	72	1	No Gas			1718738.57		
Ge	72	1	No Gas			1726457.63		
Sc	45	2	H2			268326.05		
Sc	45	2	H2			267765.84		
Sc	45	2	H2			261688.08		
Ge	72	2	H2			190568.00		
Ge	72	2	H2			186258.57		
Ge	72	2	H2			185651.99		
In	115	2	H2			491251.59		
In	115	2	H2			478291.36		
In	115	2	H2			475074.60		
Sc	45	3	He			60796.48		
Sc	45	3	He			61480.03		
Sc	45	3	He			63417.75		
Ge	72	3	He			105634.69		
Ge	72	3	He			104980.40		
Ge	72	3	He			106078.55		
In	115	3	He			90815.07		
In	115	3	He			91991.63		
In	115	3	He			93039.39		
Tb	159	3	He			382257.88		
Tb	159	3	He			380851.21		
Tb	159	3	He			384182.49		
Bi	209	3	He			291783.30		
Bi	209	3	He			295092.63		
Bi	209	3	He			293383.16		

Quantitation Report

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Sample Type	CCB
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

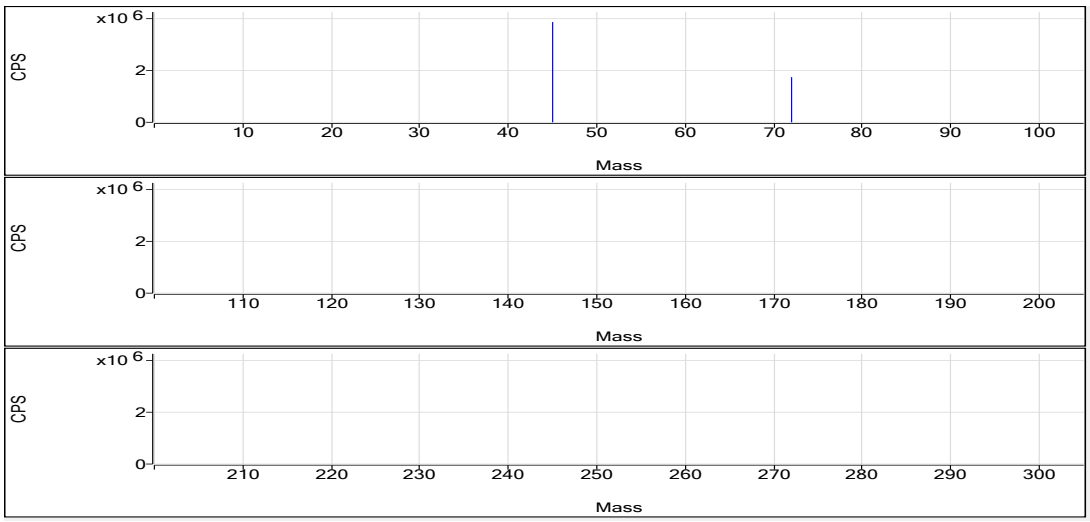
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.016	ppb	18.6	50.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.090	ppb	48.6	12.00	0.0001	Pulse	1.5000	3
Na	23	45	He	-9.896	ppb	N/A	28544.64	0.4721	Pulse	0.1000	3
Mg	24	45	He	2.992	ppb	24.1	450.02	0.0074	Pulse	0.1000	3
Al	27	45	He	0.485	ppb	57.7	130.00	0.0021	Pulse	0.1000	3
K	39	45	He	26.691	ppb	79.9	17594.30	0.2910	Pulse	0.1000	3
Ca	44	45	He	-8.331	ppb	N/A	180.01	0.0030	Pulse	0.1000	3
Ti	47	45	He	1.532	ppb	37.9	66.67	0.0011	Pulse	0.1000	3
V	51	45	He	0.120	ppb	38.9	592.02	0.0098	Pulse	0.5000	3
Cr	52	45	He	0.227	ppb	38.5	2973.75	0.0491	Pulse	0.1000	3
Mn	55	45	He	0.334	ppb	28.3	533.36	0.0088	Pulse	0.1000	3
Fe	57	45	He	3.096	ppb	37.8	296.68	0.0049	Pulse	0.1000	3
Co	59	45	He	0.125	ppb	18.0	663.37	0.0110	Pulse	0.1000	3
Ni	60	72	He	-0.054	ppb	N/A	1426.79	0.0136	Pulse	0.1000	3
Cu	63	72	He	0.125	ppb	47.5	803.38	0.0077	Pulse	0.1000	3
Zn	66	72	He	-0.100	ppb	N/A	143.34	0.0014	Pulse	0.1000	3
As	75	72	He	0.202	ppb	57.1	88.67	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.019	ppb	164.2	120.01	0.0013	Pulse	0.1000	3
Mo	98	115	He	0.063	ppb	53.2	296.68	0.0033	Pulse	0.1000	3
Ag	107	115	He	0.008	ppb	149.0	76.67	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.016	ppb	28.4	8.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.008	ppb	621.5	1693.50	0.0186	Pulse	0.1000	3
Sb	121	115	He	0.068	ppb	14.2	106.67	0.0012	Pulse	0.1000	3
Ba	137	115	He	0.028	ppb	405.5	193.34	0.0021	Pulse	0.1000	3
Tl	205	209	He	0.171	ppb	15.8	1783.52	0.0061	Pulse	0.1000	3
Pb	208	209	He	0.016	ppb	38.5	480.02	0.0017	Pulse	0.1000	3
U	238	209	He	0.038	ppb	15.6	516.70	0.0018	Pulse	0.1000	3

ISTD Table:

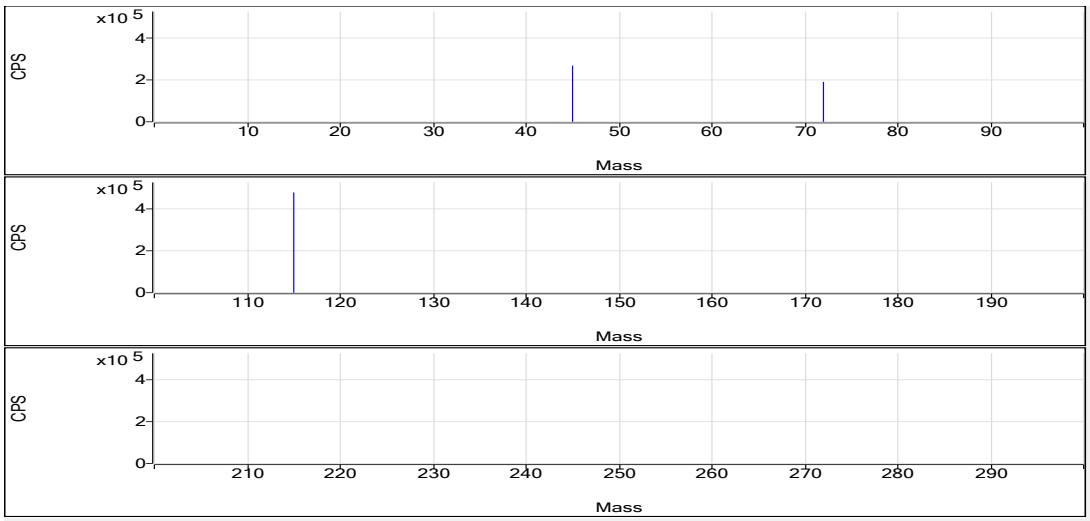
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3848034.53	0.5	107.7	Pulse	0.1000	3
No Gas	Ge	72	1734849.72	0.3	106.6	Pulse	0.1000	3
H2	Sc	45	268925.12	1.7	102.9	Pulse	0.1000	3
H2	Ge	72	191083.15	1.5	101.8	Pulse	0.1000	3
H2	In	115	480057.26	1.3	101.8	Pulse	0.1000	3
He	Sc	45	60502.38	2.2	100.2	Pulse	0.1000	3
He	Ge	72	104578.37	0.5	100.9	Pulse	0.1000	3
He	In	115	91156.09	0.8	100.9	Pulse	0.1000	3
He	Tb	159	376301.88	0.6	100.0	Pulse	0.1000	3
He	Bi	209	290880.77	0.3	101.5	Pulse	0.1000	3

No Gas

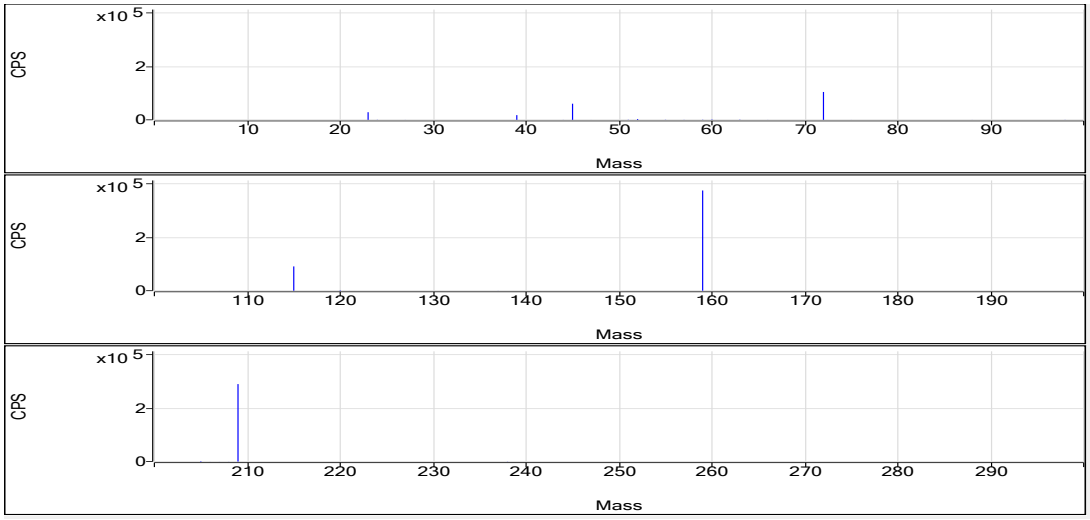


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.017	0	52.00	0.0004	7.085E-06
Be	9	1	No Gas	0.018	0	54.00	0.0004	7.085E-06
Be	9	1	No Gas	0.013	0	46.00	0.0004	7.085E-06
Se	78	2	H2	0.04	0	8.00	0.0004	2.372E-05
Se	78	2	H2	0.108	0.0001	13.33	0.0004	2.372E-05
Se	78	2	H2	0.122	0.0001	14.67	0.0004	2.372E-05
Na	23	3	He	-5.76	0.4855	28998.80	0.0032	0.5042
Na	23	3	He	-16.174	0.4517	28037.08	0.0032	0.5042
Na	23	3	He	-7.754	0.479	28598.04	0.0032	0.5042
Mg	24	3	He	2.426	0.0065	390.02	0.0016	0.002702
Mg	24	3	He	3.803	0.0087	540.03	0.0016	0.002702
Mg	24	3	He	2.747	0.007	420.02	0.0016	0.002702
Al	27	3	He	0.549	0.0022	130.00	0.0004	0.00193
Al	27	3	He	0.726	0.0023	140.01	0.0004	0.00193
Al	27	3	He	0.178	0.002	120.00	0.0004	0.00193
K	39	3	He	50.45	0.3168	18922.48	0.0011	0.2621
K	39	3	He	9.21	0.2721	16890.23	0.0011	0.2621
K	39	3	He	20.413	0.2842	16970.19	0.0011	0.2621
Ca	44	3	He	-7.579	0.003	180.01	0.0001	0.003476
Ca	44	3	He	1.125	0.0035	220.01	0.0001	0.003476
Ca	44	3	He	-18.539	0.0023	140.01	0.0001	0.003476
Ti	47	3	He	1.673	0.0012	70.00	0.0005	0.000385
Ti	47	3	He	0.894	0.0008	50.00	0.0005	0.000385
Ti	47	3	He	2.03	0.0013	80.00	0.0005	0.000385
V	51	3	He	0.141	0.0102	612.02	0.0212	0.007263
V	51	3	He	0.066	0.0087	538.01	0.0212	0.007263
V	51	3	He	0.152	0.0105	626.02	0.0212	0.007263
Cr	52	3	He	0.308	0.0514	3070.44	0.0278	0.04283
Cr	52	3	He	0.238	0.0495	3070.45	0.0278	0.04283
Cr	52	3	He	0.134	0.0466	2780.36	0.0278	0.04283
Mn	55	3	He	0.441	0.01	600.03	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.295	0.0084	520.03	0.0114	0.005023
Mn	55	3	He	0.265	0.008	480.03	0.0114	0.005023
Fe	57	3	He	1.753	0.0042	250.01	0.0005	0.003255
Fe	57	3	He	3.885	0.0053	330.02	0.0005	0.003255
Fe	57	3	He	3.651	0.0052	310.01	0.0005	0.003255
Co	59	3	He	0.145	0.0121	720.04	0.0539	0.00425
Co	59	3	He	0.101	0.0097	600.04	0.0539	0.00425
Co	59	3	He	0.129	0.0112	670.04	0.0539	0.00425
Ni	60	3	He	0.028	0.0144	1500.14	0.0088	0.01412
Ni	60	3	He	-0.023	0.0139	1450.13	0.0088	0.01412
Ni	60	3	He	-0.167	0.0127	1330.11	0.0088	0.01412
Cu	63	3	He	0.189	0.0093	970.06	0.0251	0.004537
Cu	63	3	He	0.072	0.0063	660.04	0.0251	0.004537
Cu	63	3	He	0.115	0.0074	780.05	0.0251	0.004537
Zn	66	3	He	-0.04	0.0015	160.01	0.0027	0.001642
Zn	66	3	He	-0.215	0.0011	110.00	0.0027	0.001642
Zn	66	3	He	-0.044	0.0015	160.01	0.0027	0.001642
As	75	3	He	0.109	0.0007	70.00	0.0019	0.000463
As	75	3	He	0.331	0.0011	114.00	0.0019	0.000463
As	75	3	He	0.166	0.0008	82.00	0.0019	0.000463
Sr	88	3	He	0.03	0.0014	130.01	0.009	0.001142
Sr	88	3	He	-0.016	0.001	90.00	0.009	0.001142
Sr	88	3	He	0.044	0.0015	140.01	0.009	0.001142
Mo	98	3	He	0.073	0.0035	320.02	0.0225	0.001842
Mo	98	3	He	0.09	0.0039	350.01	0.0225	0.001842
Mo	98	3	He	0.025	0.0024	220.01	0.0225	0.001842
Ag	107	3	He	0.013	0.0011	100.00	0.048	0.0004774
Ag	107	3	He	0.015	0.0012	110.00	0.048	0.0004774
Ag	107	3	He	-0.005	0.0002	20.00	0.048	0.0004774
Cd	111	3	He	0.019	0.0001	10.00	0.0055	7.481E-06
Cd	111	3	He	0.011	0.0001	6.00	0.0055	7.481E-06
Cd	111	3	He	0.019	0.0001	10.00	0.0055	7.481E-06
Sn	120	3	He	0.052	0.0193	1770.18	0.0157	0.01844
Sn	120	3	He	-0.049	0.0177	1600.15	0.0157	0.01844
Sn	120	3	He	0.021	0.0188	1710.17	0.0157	0.01844
Sb	121	3	He	0.062	0.0011	100.00	0.0139	0.0002204
Sb	121	3	He	0.08	0.0013	120.00	0.0139	0.0002204
Sb	121	3	He	0.063	0.0011	100.00	0.0139	0.0002204
Ba	137	3	He	0.064	0.0023	210.01	0.0045	0.001994
Ba	137	3	He	-0.099	0.0015	140.01	0.0045	0.001994
Ba	137	3	He	0.118	0.0025	230.01	0.0045	0.001994
Tl	205	3	He	0.199	0.007	2020.24	0.03	0.0009888
Tl	205	3	He	0.145	0.0053	1550.16	0.03	0.0009888
Tl	205	3	He	0.17	0.0061	1780.17	0.03	0.0009888
Pb	208	3	He	0.022	0.0019	350.02	0.0392	0.001024
Pb	208	3	He	0.01	0.0014	180.01	0.0392	0.001024
Pb	208	3	He	0.016	0.0016	190.01	0.0392	0.001024
U	238	3	He	0.036	0.0017	490.03	0.0439	0.000128
U	238	3	He	0.044	0.0021	600.04	0.0439	0.000128
U	238	3	He	0.033	0.0016	460.03	0.0439	0.000128
Sc	45	1	No Gas			3854885.88		
Sc	45	1	No Gas			3826984.01		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3862233.69		
Ge	72	1	No Gas			1729623.57		
Ge	72	1	No Gas			1736917.79		
Ge	72	1	No Gas			1738007.79		
Sc	45	2	H2			273826.11		
Sc	45	2	H2			268367.12		
Sc	45	2	H2			264582.12		
Ge	72	2	H2			194050.21		
Ge	72	2	H2			188176.19		
Ge	72	2	H2			191023.06		
In	115	2	H2			487515.38		
In	115	2	H2			475972.69		
In	115	2	H2			476683.70		
Sc	45	3	He			59732.69		
Sc	45	3	He			62071.68		
Sc	45	3	He			59702.78		
Ge	72	3	He			104428.33		
Ge	72	3	He			104184.97		
Ge	72	3	He			105121.80		
In	115	3	He			91920.32		
In	115	3	He			90512.06		
In	115	3	He			91075.51		
Tb	159	3	He			375891.48		
Tb	159	3	He			374090.50		
Tb	159	3	He			378923.67		
Bi	209	3	He			290304.35		
Bi	209	3	He			290284.96		
Bi	209	3	He			292053.00		

Quantitation Report

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Sample Type	Sample
Comment	I24
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

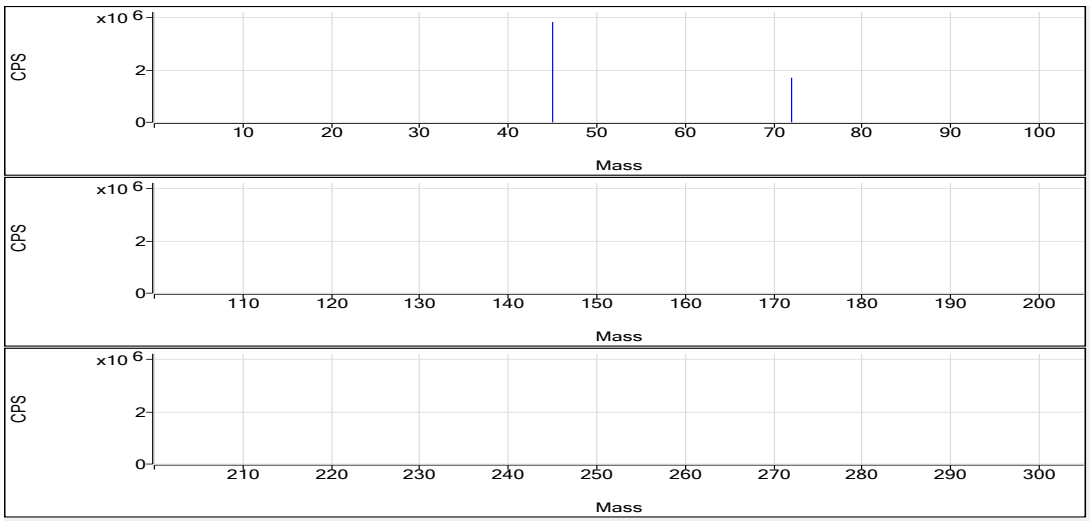
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.489	ppb	0.8	745.35	0.0002	Pulse	0.5000	3
Se	78	72	H2	1.091	ppb	11.6	94.67	0.0005	Pulse	1.5000	3
Na	23	45	He	899989.259	ppb	0.4	180774203.97	2 920.3470	Analog	0.1000	3
Mg	24	45	He	29632.222	ppb	0.3	2893187.98	46.7389	Pulse	0.1000	3
Al	27	45	He	2629.634	ppb	0.8	73130.81	1.1814	Pulse	0.1000	3
K	39	45	He	11414.398	ppb	0.4	781673.95	12.6279	Pulse	0.1000	3
Ca	44	45	He	150455.213	ppb	0.5	568244.51	9.1798	Pulse	0.1000	3
Ti	47	45	He	109.766	ppb	8.0	3220.46	0.0520	Pulse	0.1000	3
V	51	45	He	10.034	ppb	1.5	13601.07	0.2197	Pulse	0.5000	3
Cr	52	45	He	3.539	ppb	4.0	8746.25	0.1413	Pulse	0.1000	3
Mn	55	45	He	19674.735	ppb	0.7	13859329.37	223.8989	Analog	0.1000	3
Fe	57	45	He	21728.520	ppb	0.9	713984.42	11.5340	Pulse	0.1000	3
Co	59	45	He	4.875	ppb	7.0	16513.29	0.2668	Pulse	0.1000	3
Ni	60	72	He	15.201	ppb	0.7	15692.25	0.1482	Pulse	0.1000	3
Cu	63	72	He	10.389	ppb	3.2	28124.61	0.2656	Pulse	0.1000	3
Zn	66	72	He	80.070	ppb	2.4	23302.75	0.2201	Pulse	0.1000	3
As	75	72	He	7.571	ppb	0.6	1578.77	0.0149	Pulse	0.5000	3
Sr	88	115	He	2209.545	ppb	1.3	1769397.89	19.8073	Pulse	0.1000	3
Mo	98	115	He	37.307	ppb	1.7	75183.11	0.8417	Pulse	0.1000	3
Ag	107	115	He	0.132	ppb	3.8	610.03	0.0068	Pulse	0.1000	3
Cd	111	115	He	1.174	ppb	4.4	574.68	0.0064	Pulse	0.5000	3
Sn	120	115	He	0.200	ppb	51.6	1926.87	0.0216	Pulse	0.1000	3
Sb	121	115	He	0.384	ppb	11.1	496.69	0.0056	Pulse	0.1000	3
Ba	137	115	He	763.931	ppb	2.0	309097.70	3.4603	Pulse	0.1000	3
Tl	205	209	He	5.337	ppb	0.8	44663.02	0.1612	Pulse	0.1000	3
Pb	208	209	He	7.530	ppb	2.1	82093.81	0.2963	Pulse	0.1000	3
U	238	209	He	0.753	ppb	4.7	9200.27	0.0332	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3832461.30	0.6	107.2	Pulse	0.1000	3
No Gas	Ge	72	1703746.74	0.7	104.7	Pulse	0.1000	3
H2	Sc	45	268729.51	1.2	102.8	Pulse	0.1000	3
H2	Ge	72	189873.25	1.2	101.2	Pulse	0.1000	3
H2	In	115	459249.24	0.9	97.4	Pulse	0.1000	3
He	Sc	45	61901.20	0.4	102.5	Pulse	0.1000	3
He	Ge	72	105884.24	0.8	102.2	Pulse	0.1000	3
He	In	115	89342.30	1.9	98.9	Pulse	0.1000	3
He	Tb	159	377111.74	0.2	100.2	Pulse	0.1000	3
He	Bi	209	277080.76	1.3	96.7	Pulse	0.1000	3

No Gas



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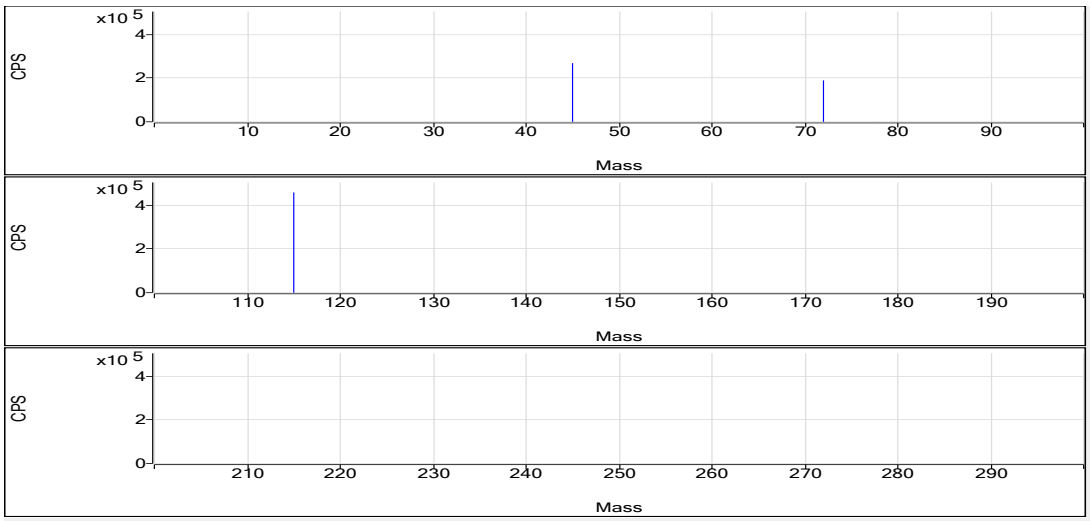
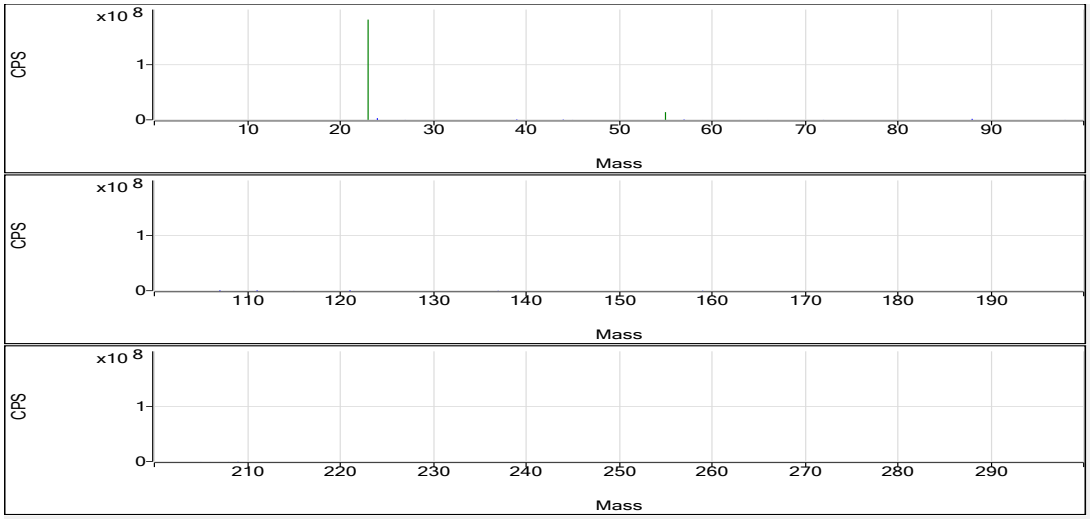


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.492	0.0002	754.02	0.0004	7.085E-06
Be	9	1	No Gas	0.485	0.0002	738.02	0.0004	7.085E-06
Be	9	1	No Gas	0.491	0.0002	744.02	0.0004	7.085E-06
Se	78	2	H2	1.219	0.0006	104.00	0.0004	2.372E-05
Se	78	2	H2	1.088	0.0005	94.67	0.0004	2.372E-05
Se	78	2	H2	0.966	0.0004	85.33	0.0004	2.372E-05
Na	23	3	He	896194.64	2908.0361	179983037.32	0.0032	0.5042
Na	23	3	He	899856.818	2919.9174	179982917.32	0.0032	0.5042
Na	23	3	He	903916.319	2933.0876	182356657.28	0.0032	0.5042
Mg	24	3	He	29743.906	46.9151	2903649.96	0.0016	0.002702
Mg	24	3	He	29601.602	46.6906	2877998.39	0.0016	0.002702
Mg	24	3	He	29551.158	46.6111	2897915.58	0.0016	0.002702
Al	27	3	He	2604.337	1.1701	72417.27	0.0004	0.00193
Al	27	3	He	2643.353	1.1876	73201.24	0.0004	0.00193
Al	27	3	He	2641.211	1.1866	73773.93	0.0004	0.00193
K	39	3	He	11405.495	12.6183	780965.61	0.0011	0.2621
K	39	3	He	11469.384	12.6875	782053.66	0.0011	0.2621
K	39	3	He	11368.315	12.578	782002.57	0.0011	0.2621
Ca	44	3	He	149790.434	9.1392	565640.85	0.0001	0.003476
Ca	44	3	He	150226.932	9.1658	564979.84	0.0001	0.003476
Ca	44	3	He	151348.273	9.2342	574112.84	0.0001	0.003476
Ti	47	3	He	105.34	0.0499	3090.42	0.0005	0.000385
Ti	47	3	He	104.048	0.0493	3040.41	0.0005	0.000385
Ti	47	3	He	119.911	0.0568	3530.54	0.0005	0.000385
V	51	3	He	9.868	0.2162	13382.19	0.0212	0.007263
V	51	3	He	10.146	0.2221	13690.48	0.0212	0.007263
V	51	3	He	10.087	0.2208	13730.54	0.0212	0.007263
Cr	52	3	He	3.457	0.139	8602.86	0.0278	0.04283
Cr	52	3	He	3.46	0.1391	8572.76	0.0278	0.04283
Cr	52	3	He	3.701	0.1458	9063.12	0.0278	0.04283
Mn	55	3	He	19662.354	223.7581	13848746.04	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	19821.246	225.5662	13903839.79	0.0114	0.005023
Mn	55	3	He	19540.604	222.3726	13825402.29	0.0114	0.005023
Fe	57	3	He	21605.581	11.4688	709821.24	0.0005	0.003255
Fe	57	3	He	21636.58	11.4852	707946.47	0.0005	0.003255
Fe	57	3	He	21943.399	11.6481	724185.54	0.0005	0.003255
Co	59	3	He	4.576	0.2507	15518.77	0.0539	0.00425
Co	59	3	He	5.247	0.2868	17681.20	0.0539	0.00425
Co	59	3	He	4.801	0.2628	16339.89	0.0539	0.00425
Ni	60	3	He	15.093	0.1472	15719.02	0.0088	0.01412
Ni	60	3	He	15.212	0.1483	15598.78	0.0088	0.01412
Ni	60	3	He	15.299	0.1491	15758.96	0.0088	0.01412
Cu	63	3	He	10.282	0.2629	28068.11	0.0251	0.004537
Cu	63	3	He	10.124	0.2589	27236.12	0.0251	0.004537
Cu	63	3	He	10.762	0.275	29069.59	0.0251	0.004537
Zn	66	3	He	78.988	0.2171	23179.23	0.0027	0.001642
Zn	66	3	He	78.92	0.2169	22818.58	0.0027	0.001642
Zn	66	3	He	82.304	0.2262	23910.45	0.0027	0.001642
As	75	3	He	7.524	0.0148	1582.10	0.0019	0.000463
As	75	3	He	7.62	0.015	1578.10	0.0019	0.000463
As	75	3	He	7.57	0.0149	1576.10	0.0019	0.000463
Sr	88	3	He	2200.678	19.7278	1745176.54	0.009	0.001142
Sr	88	3	He	2242.769	20.1051	1774304.04	0.009	0.001142
Sr	88	3	He	2185.189	19.5889	1788713.10	0.009	0.001142
Mo	98	3	He	37.841	0.8537	75520.92	0.0225	0.001842
Mo	98	3	He	37.476	0.8455	74616.48	0.0225	0.001842
Mo	98	3	He	36.604	0.8259	75411.93	0.0225	0.001842
Ag	107	3	He	0.127	0.0066	580.03	0.048	0.0004774
Ag	107	3	He	0.137	0.007	620.03	0.048	0.0004774
Ag	107	3	He	0.134	0.0069	630.04	0.048	0.0004774
Cd	111	3	He	1.209	0.0066	586.02	0.0055	7.481E-06
Cd	111	3	He	1.199	0.0066	580.02	0.0055	7.481E-06
Cd	111	3	He	1.115	0.0061	558.01	0.0055	7.481E-06
Sn	120	3	He	0.179	0.0213	1880.21	0.0157	0.01844
Sn	120	3	He	0.312	0.0233	2060.23	0.0157	0.01844
Sn	120	3	He	0.109	0.0202	1840.18	0.0157	0.01844
Sb	121	3	He	0.423	0.0061	540.03	0.0139	0.0002204
Sb	121	3	He	0.392	0.0057	500.03	0.0139	0.0002204
Sb	121	3	He	0.339	0.0049	450.02	0.0139	0.0002204
Ba	137	3	He	756.795	3.428	303249.23	0.0045	0.001994
Ba	137	3	He	781.844	3.5414	312531.75	0.0045	0.001994
Ba	137	3	He	753.154	3.4115	311512.12	0.0045	0.001994
Tl	205	3	He	5.303	0.1601	43943.86	0.03	0.0009888
Tl	205	3	He	5.384	0.1626	45709.92	0.03	0.0009888
Tl	205	3	He	5.325	0.1608	44335.28	0.03	0.0009888
Pb	208	3	He	7.499	0.2951	44415.93	0.0392	0.001024
Pb	208	3	He	7.392	0.2909	43833.59	0.0392	0.001024
Pb	208	3	He	7.698	0.3029	44796.99	0.0392	0.001024
U	238	3	He	0.714	0.0315	8643.23	0.0439	0.000128
U	238	3	He	0.762	0.0336	9443.74	0.0439	0.000128
U	238	3	He	0.783	0.0345	9513.85	0.0439	0.000128
Sc	45	1	No Gas			3855869.94		
Sc	45	1	No Gas			3827776.51		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3813737.44		
Ge	72	1	No Gas			1716630.60		
Ge	72	1	No Gas			1700467.16		
Ge	72	1	No Gas			1694142.47		
Sc	45	2	H2			265992.79		
Sc	45	2	H2			268031.83		
Sc	45	2	H2			272163.90		
Ge	72	2	H2			187424.76		
Ge	72	2	H2			190180.47		
Ge	72	2	H2			192014.53		
In	115	2	H2			455259.88		
In	115	2	H2			459139.60		
In	115	2	H2			463348.24		
Sc	45	3	He			61891.61		
Sc	45	3	He			61639.73		
Sc	45	3	He			62172.25		
Ge	72	3	He			106753.54		
Ge	72	3	He			105182.20		
Ge	72	3	He			105716.99		
In	115	3	He			88477.60		
In	115	3	He			88267.61		
In	115	3	He			91326.79		
Tb	159	3	He			376953.71		
Tb	159	3	He			376503.24		
Tb	159	3	He			377878.28		
Bi	209	3	He			274406.50		
Bi	209	3	He			281162.55		
Bi	209	3	He			275673.22		

Quantitation Report

Data File Name	266SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23J26A00.b
Acq Time	2023-10-26 17:57:06
Sample Name	410-147543-M-2-A
Sample Type	Sample
Comment	I24
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

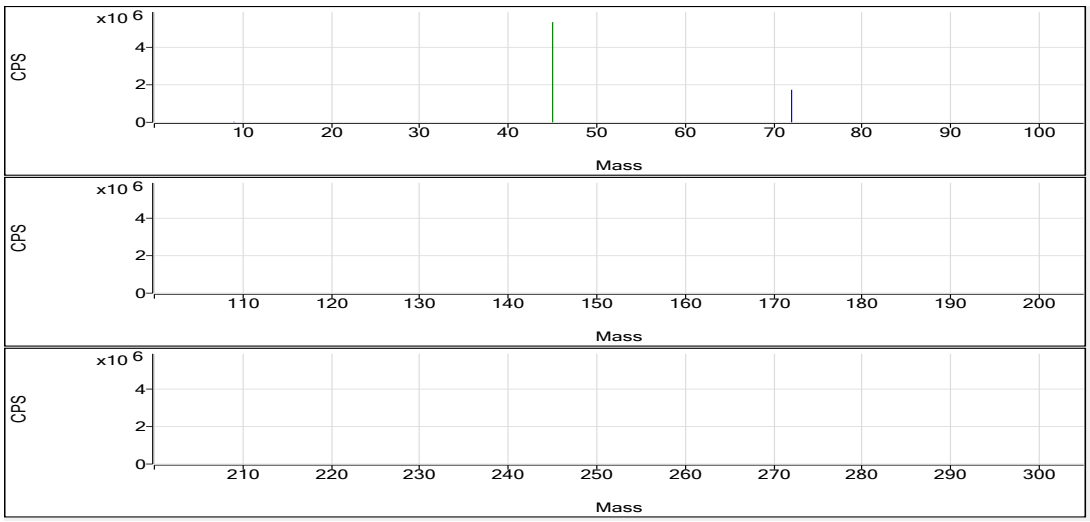
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	13.525	ppb	2.0	27629.36	0.0052	Pulse	0.5000	3
Se	78	72	H2	4.461	ppb	1.1	355.56	0.0020	Pulse	1.5000	3
Na	23	45	He	255917.834	ppb	0.6	67389300.66	830.7806	Analog	0.1000	3
Mg	24	45	He	45565.942	ppb	2.0	5829383.66	71.8698	Analog	0.1000	3
Al	27	45	He	169625.798	ppb	1.1	6171536.16	76.0850	Analog	0.1000	3
K	39	45	He	24694.401	ppb	0.3	2191368.62	27.0148	Pulse	0.1000	3
Ca	44	45	He	256603.219	ppb	1.2	1269735.45	15.6537	Pulse	0.1000	3
Ti	47	45	He	10996.515	ppb	1.1	419578.84	5.1727	Pulse	0.1000	3
V	51	45	He	649.715	ppb	1.1	1116502.58	13.7646	Pulse	0.5000	3
Cr	52	45	He	524.665	ppb	1.0	1187245.79	14.6365	Pulse	0.1000	3
Mn	55	45	He	26497.947	ppb	0.9	24460996.30	301.5455	Analog	0.1000	3
Fe	57	45	He	543351.056	ppb	0.9	23389234.65	288.3456	Analog	0.1000	3
Co	59	45	He	72.959	ppb	48.8	318952.42	3.9339	Pulse	0.1000	3
Ni	60	72	He	98.068	ppb	7.0	95137.25	0.8791	Pulse	0.1000	3
Cu	63	72	He	314.258	ppb	2.2	854988.66	7.9016	Pulse	0.1000	3
Zn	66	72	He	6070.894	ppb	1.1	1792395.96	16.5637	Pulse	0.1000	3
As	75	72	He	63.836	ppb	4.0	13229.45	0.1223	Pulse	0.5000	3
Sr	88	115	He	3040.985	ppb	0.7	2383606.11	27.2602	Pulse	0.1000	3
Mo	98	115	He	30.373	ppb	2.4	59950.81	0.6856	Pulse	0.1000	3
Ag	107	115	He	0.418	ppb	7.1	1796.85	0.0205	Pulse	0.1000	3
Cd	111	115	He	32.986	ppb	1.2	15790.23	0.1806	Pulse	0.5000	3
Sn	120	115	He	39.038	ppb	0.2	55261.21	0.6320	Pulse	0.1000	3
Sb	121	115	He	4.160	ppb	2.0	5077.79	0.0581	Pulse	0.1000	3
Ba	137	115	He	2955.303	ppb	1.1	1169945.95	13.3806	Pulse	0.1000	3
Tl	205	209	He	2.007	ppb	4.0	17505.52	0.0612	Pulse	0.1000	3
Pb	208	209	He	211.412	ppb	0.7	2371202.25	8.2920	Pulse	0.1000	3
U	238	209	He	324.904	ppb	0.6	4079939.63	14.2673	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	5325952.00	0.9	149.0	Analog	0.1000	3
No Gas	Ge	72	1728428.88	1.0	106.2	Pulse	0.1000	3
H2	Sc	45	366674.29	0.8	140.2	Pulse	0.1000	3
H2	Ge	72	180796.31	1.3	96.4	Pulse	0.1000	3
H2	In	115	457950.44	1.1	97.1	Pulse	0.1000	3
He	Sc	45	81118.35	0.8	134.3	Pulse	0.1000	3
He	Ge	72	108221.29	1.1	104.5	Pulse	0.1000	3
He	In	115	87444.22	1.4	96.8	Pulse	0.1000	3
He	Tb	159	475517.75	0.3	126.4	Pulse	0.1000	3
He	Bi	209	285979.83	1.3	99.8	Pulse	0.1000	3

No Gas



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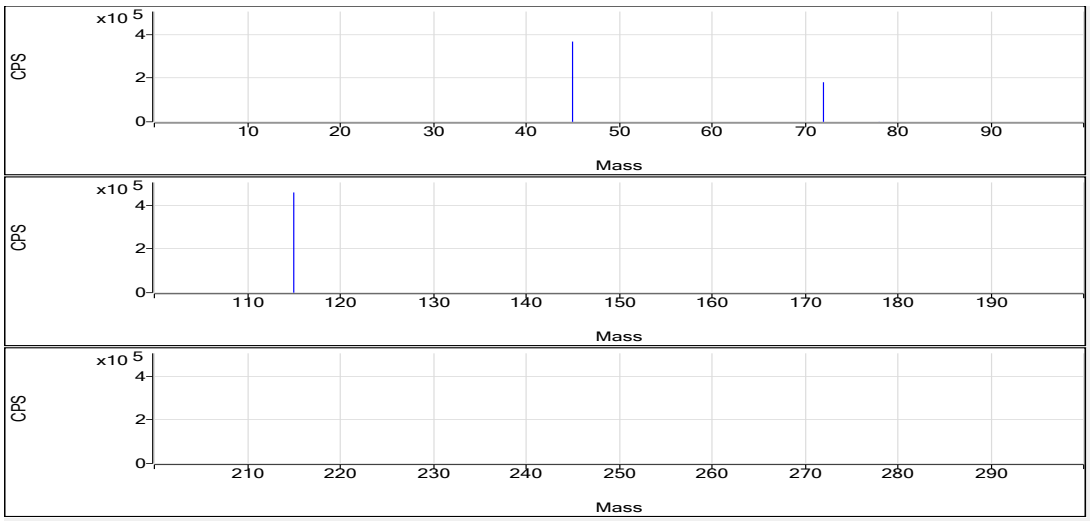
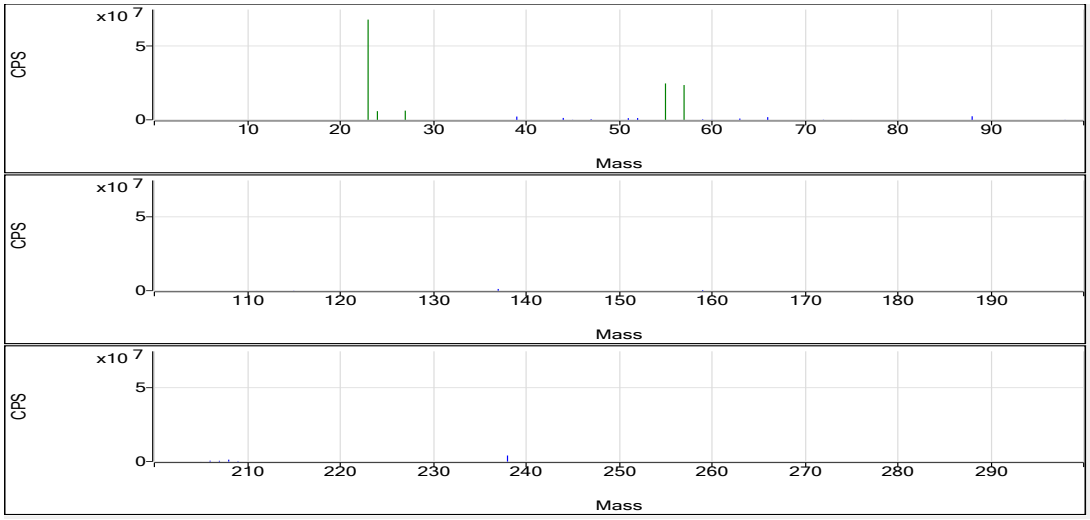


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	13.41	0.0051	27224.61	0.0004	7.085E-06
Be	9	1	No Gas	13.834	0.0053	28152.34	0.0004	7.085E-06
Be	9	1	No Gas	13.331	0.0051	27511.13	0.0004	7.085E-06
Se	78	2	H2	4.41	0.0019	356.67	0.0004	2.372E-05
Se	78	2	H2	4.51	0.002	356.01	0.0004	2.372E-05
Se	78	2	H2	4.462	0.002	354.01	0.0004	2.372E-05
Na	23	3	He	256956.024	834.1488	67158629.00	0.0032	0.5042
Na	23	3	He	256700.4	833.3195	67486093.99	0.0032	0.5042
Na	23	3	He	254097.078	824.8735	67523178.99	0.0032	0.5042
Mg	24	3	He	46568.805	73.4515	5913693.66	0.0016	0.002702
Mg	24	3	He	45265.474	71.3959	5781968.66	0.0016	0.002702
Mg	24	3	He	44863.548	70.7619	5792488.66	0.0016	0.002702
Al	27	3	He	170690.901	76.5628	6164188.03	0.0004	0.00193
Al	27	3	He	170706.15	76.5696	6200963.03	0.0004	0.00193
Al	27	3	He	167480.344	75.1227	6149457.41	0.0004	0.00193
K	39	3	He	24768.027	27.0946	2181427.47	0.0011	0.2621
K	39	3	He	24673.322	26.992	2185936.69	0.0011	0.2621
K	39	3	He	24641.854	26.9579	2206741.69	0.0011	0.2621
Ca	44	3	He	257676.908	15.7192	1265579.82	0.0001	0.003476
Ca	44	3	He	258918.084	15.7949	1279146.93	0.0001	0.003476
Ca	44	3	He	253214.664	15.4471	1264479.59	0.0001	0.003476
Ti	47	3	He	11136.21	5.2384	421754.84	0.0005	0.000385
Ti	47	3	He	10960.324	5.1557	417533.24	0.0005	0.000385
Ti	47	3	He	10893.011	5.124	419448.43	0.0005	0.000385
V	51	3	He	653.408	13.8428	1114508.75	0.0212	0.007263
V	51	3	He	654.232	13.8603	1122470.88	0.0212	0.007263
V	51	3	He	641.506	13.5908	1112528.13	0.0212	0.007263
Cr	52	3	He	525.135	14.6496	1179462.95	0.0278	0.04283
Cr	52	3	He	529.601	14.7739	1196455.45	0.0278	0.04283
Cr	52	3	He	519.258	14.4861	1185818.97	0.0278	0.04283
Mn	55	3	He	26301.836	299.3138	24098224.64	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	26763.724	304.57	24665497.13	0.0114	0.005023
Mn	55	3	He	26428.282	300.7527	24619267.13	0.0114	0.005023
Fe	57	3	He	544493.032	288.9517	23263952.15	0.0005	0.003255
Fe	57	3	He	547342.96	290.464	23523132.15	0.0005	0.003255
Fe	57	3	He	538217.176	285.6212	23380619.65	0.0005	0.003255
Co	59	3	He	52.884	2.8526	229670.62	0.0539	0.00425
Co	59	3	He	114.048	6.147	497810.66	0.0539	0.00425
Co	59	3	He	51.946	2.8021	229375.99	0.0539	0.00425
Ni	60	3	He	92.531	0.8303	90703.86	0.0088	0.01412
Ni	60	3	He	105.719	0.9466	102666.63	0.0088	0.01412
Ni	60	3	He	95.954	0.8605	92041.26	0.0088	0.01412
Cu	63	3	He	307.179	7.7237	843759.05	0.0251	0.004537
Cu	63	3	He	314.668	7.9119	858090.22	0.0251	0.004537
Cu	63	3	He	320.928	8.0692	863116.71	0.0251	0.004537
Zn	66	3	He	6004.404	16.3823	1789651.38	0.0027	0.001642
Zn	66	3	He	6065.972	16.5502	1794972.79	0.0027	0.001642
Zn	66	3	He	6142.306	16.7585	1792563.72	0.0027	0.001642
As	75	3	He	61.407	0.1176	12851.76	0.0019	0.000463
As	75	3	He	63.615	0.1219	13216.11	0.0019	0.000463
As	75	3	He	66.486	0.1273	13620.47	0.0019	0.000463
Sr	88	3	He	3063.192	27.4593	2363492.00	0.009	0.001142
Sr	88	3	He	3021.206	27.0829	2388559.50	0.009	0.001142
Sr	88	3	He	3038.556	27.2384	2398766.84	0.009	0.001142
Mo	98	3	He	30.328	0.6846	58922.92	0.0225	0.001842
Mo	98	3	He	29.677	0.6699	59083.91	0.0225	0.001842
Mo	98	3	He	31.114	0.7023	61845.61	0.0225	0.001842
Ag	107	3	He	0.412	0.0202	1740.17	0.048	0.0004774
Ag	107	3	He	0.451	0.0221	1950.20	0.048	0.0004774
Ag	107	3	He	0.393	0.0193	1700.17	0.048	0.0004774
Cd	111	3	He	33.193	0.1817	15640.72	0.0055	7.481E-06
Cd	111	3	He	32.523	0.178	15702.79	0.0055	7.481E-06
Cd	111	3	He	33.243	0.182	16027.17	0.0055	7.481E-06
Sn	120	3	He	38.996	0.6313	54336.88	0.0157	0.01844
Sn	120	3	He	39.132	0.6334	55865.17	0.0157	0.01844
Sn	120	3	He	38.986	0.6311	55581.57	0.0157	0.01844
Sb	121	3	He	4.129	0.0576	4961.10	0.0139	0.0002204
Sb	121	3	He	4.095	0.0572	5041.11	0.0139	0.0002204
Sb	121	3	He	4.256	0.0594	5231.17	0.0139	0.0002204
Ba	137	3	He	2988.759	13.532	1164736.78	0.0045	0.001994
Ba	137	3	He	2925.978	13.2478	1168381.70	0.0045	0.001994
Ba	137	3	He	2951.172	13.3619	1176719.36	0.0045	0.001994
Tl	205	3	He	2.1	0.064	18032.87	0.03	0.0009888
Tl	205	3	He	1.964	0.0599	17231.82	0.03	0.0009888
Tl	205	3	He	1.957	0.0597	17251.86	0.03	0.0009888
Pb	208	3	He	213.024	8.3552	1261898.73	0.0392	0.001024
Pb	208	3	He	210.993	8.2756	1276338.97	0.0392	0.001024
Pb	208	3	He	210.219	8.2452	1276766.54	0.0392	0.001024
U	238	3	He	327.106	14.364	4045287.44	0.0439	0.000128
U	238	3	He	323.857	14.2213	4087834.63	0.0439	0.000128
U	238	3	He	323.75	14.2166	4106696.81	0.0439	0.000128
Sc	45	1	No Gas			5292546.17		
Sc	45	1	No Gas			5305464.30		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			5379845.54		
Ge	72	1	No Gas			1727299.51		
Ge	72	1	No Gas			1712248.88		
Ge	72	1	No Gas			1745738.26		
Sc	45	2	H2			367994.33		
Sc	45	2	H2			368722.34		
Sc	45	2	H2			363306.21		
Ge	72	2	H2			183403.79		
Ge	72	2	H2			179050.43		
Ge	72	2	H2			179934.70		
In	115	2	H2			463178.86		
In	115	2	H2			457794.33		
In	115	2	H2			452878.12		
Sc	45	3	He			80511.57		
Sc	45	3	He			80984.66		
Sc	45	3	He			81858.83		
Ge	72	3	He			109243.21		
Ge	72	3	He			108456.06		
Ge	72	3	He			106964.59		
In	115	3	He			86496.53		
In	115	3	He			88630.14		
In	115	3	He			88499.10		
Tb	159	3	He			473858.47		
Tb	159	3	He			476058.90		
Tb	159	3	He			476635.89		
Bi	209	3	He			281627.65		
Bi	209	3	He			287445.15		
Bi	209	3	He			288866.68		

Quantitation Report

Data File Name	267SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23J26A00.b
Acq Time	2023-10-26 17:59:05
Sample Name	410-147543-M-3-A
Sample Type	Sample
Comment	I24
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

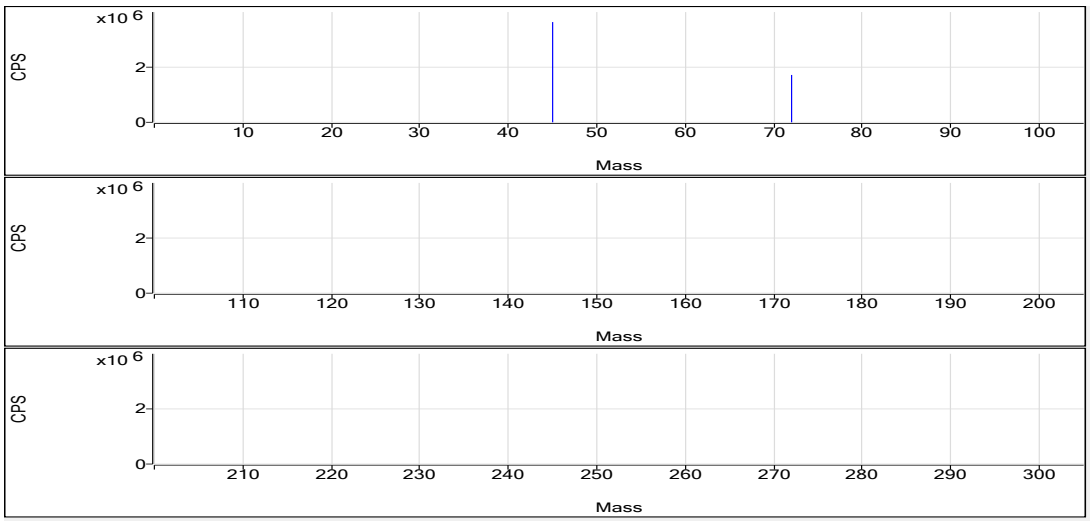
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.047	ppb	18.9	91.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	13.118	ppb	3.6	1096.71	0.0057	Pulse	1.5000	3
Na	23	45	He	165804.433	ppb	1.6	33025016.17	538.4249	Analog	0.1000	3
Mg	24	45	He	15028.728	ppb	2.2	1453920.13	23.7062	Pulse	0.1000	3
Al	27	45	He	101.732	ppb	9.4	2917.07	0.0476	Pulse	0.1000	3
K	39	45	He	13466.388	ppb	2.0	910844.83	14.8509	Pulse	0.1000	3
Ca	44	45	He	140170.442	ppb	2.0	524543.92	8.5525	Pulse	0.1000	3
Ti	47	45	He	7.265	ppb	28.9	233.34	0.0038	Pulse	0.1000	3
V	51	45	He	10.520	ppb	3.0	14104.86	0.2300	Pulse	0.5000	3
Cr	52	45	He	1.752	ppb	7.1	5614.61	0.0916	Pulse	0.1000	3
Mn	55	45	He	517.472	ppb	2.4	361455.48	5.8937	Pulse	0.1000	3
Fe	57	45	He	15319.670	ppb	2.0	498828.19	8.1330	Pulse	0.1000	3
Co	59	45	He	0.413	ppb	10.6	1623.48	0.0265	Pulse	0.1000	3
Ni	60	72	He	2.124	ppb	8.5	3637.25	0.0329	Pulse	0.1000	3
Cu	63	72	He	17.913	ppb	0.9	50318.20	0.4547	Pulse	0.1000	3
Zn	66	72	He	8.750	ppb	4.7	2823.71	0.0255	Pulse	0.1000	3
As	75	72	He	117.706	ppb	1.2	24908.17	0.2251	Pulse	0.5000	3
Sr	88	115	He	1391.297	ppb	0.7	1122435.69	12.4726	Pulse	0.1000	3
Mo	98	115	He	9.407	ppb	1.9	19223.59	0.2136	Pulse	0.1000	3
Ag	107	115	He	0.012	ppb	28.3	96.67	0.0011	Pulse	0.1000	3
Cd	111	115	He	0.161	ppb	19.3	80.00	0.0009	Pulse	0.5000	3
Sn	120	115	He	-0.153	ppb	N/A	1443.47	0.0160	Pulse	0.1000	3
Sb	121	115	He	0.224	ppb	5.8	300.02	0.0033	Pulse	0.1000	3
Ba	137	115	He	318.127	ppb	0.3	129779.40	1.4421	Pulse	0.1000	3
Tl	205	209	He	0.234	ppb	10.2	2256.95	0.0080	Pulse	0.1000	3
Pb	208	209	He	0.297	ppb	2.4	3577.00	0.0127	Pulse	0.1000	3
U	238	209	He	14.428	ppb	1.3	178586.74	0.6337	Pulse	0.1000	3

ISTD Table:

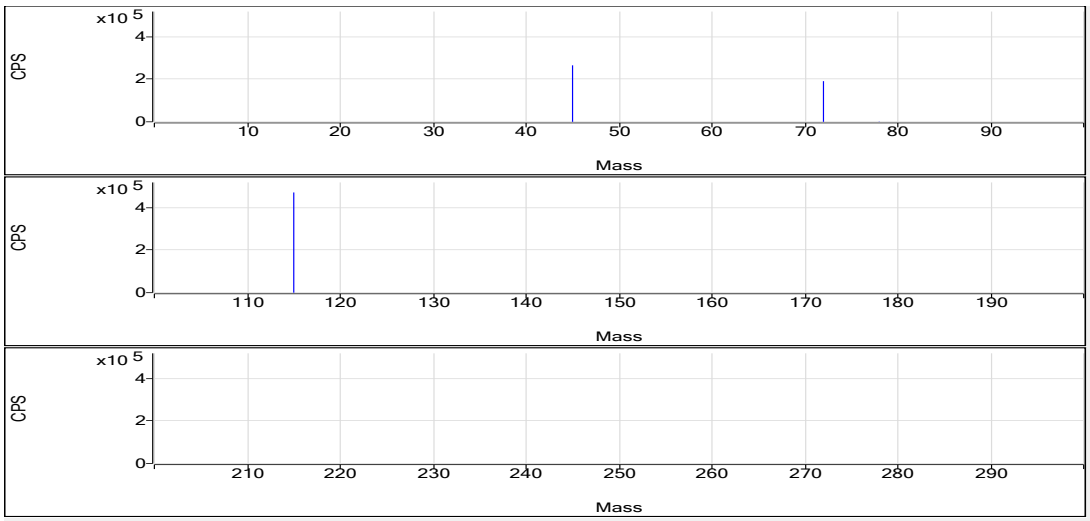
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3631230.88	1.2	101.6	Pulse	0.1000	3
No Gas	Ge	72	1715156.38	0.6	105.4	Pulse	0.1000	3
H2	Sc	45	265623.19	0.7	101.6	Pulse	0.1000	3
H2	Ge	72	191162.73	0.9	101.9	Pulse	0.1000	3
H2	In	115	471220.92	0.3	99.9	Pulse	0.1000	3
He	Sc	45	61352.57	2.5	101.6	Pulse	0.1000	3
He	Ge	72	110669.39	0.5	106.8	Pulse	0.1000	3
He	In	115	89990.93	0.3	99.6	Pulse	0.1000	3
He	Tb	159	378056.71	0.7	100.5	Pulse	0.1000	3
He	Bi	209	281840.34	1.1	98.3	Pulse	0.1000	3

No Gas

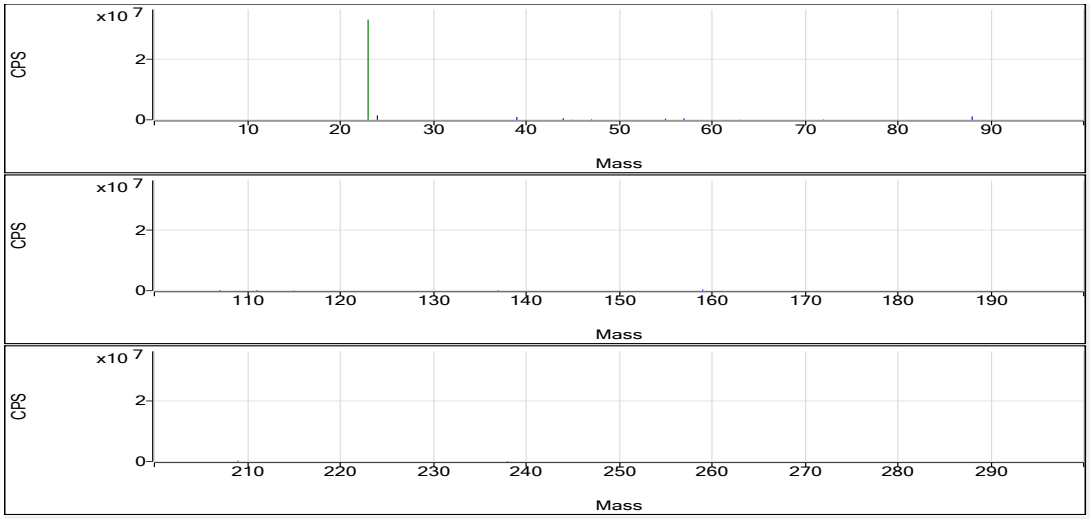


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.037	0	76.00	0.0004	7.085E-06
Be	9	1	No Gas	0.053	0	100.00	0.0004	7.085E-06
Be	9	1	No Gas	0.051	0	98.00	0.0004	7.085E-06
Se	78	2	H2	12.698	0.0056	1073.38	0.0004	2.372E-05
Se	78	2	H2	13.638	0.006	1134.71	0.0004	2.372E-05
Se	78	2	H2	13.02	0.0057	1082.04	0.0004	2.372E-05
Na	23	3	He	166985.86	542.2578	32749482.01	0.0032	0.5042
Na	23	3	He	167735.85	544.691	32990132.01	0.0032	0.5042
Na	23	3	He	162691.588	528.3259	33335434.50	0.0032	0.5042
Mg	24	3	He	15217.787	24.0043	1449734.51	0.0016	0.002702
Mg	24	3	He	15213.022	23.9968	1453408.57	0.0016	0.002702
Mg	24	3	He	14655.374	23.1173	1458617.32	0.0016	0.002702
Al	27	3	He	93.904	0.044	2660.33	0.0004	0.00193
Al	27	3	He	112.403	0.0523	3170.45	0.0004	0.00193
Al	27	3	He	98.889	0.0463	2920.42	0.0004	0.00193
K	39	3	He	13666.622	15.0679	910019.13	0.0011	0.2621
K	39	3	He	13579.882	14.9739	906919.67	0.0011	0.2621
K	39	3	He	13152.661	14.5111	915595.69	0.0011	0.2621
Ca	44	3	He	141883.764	8.657	522835.93	0.0001	0.003476
Ca	44	3	He	141713.269	8.6466	523695.30	0.0001	0.003476
Ca	44	3	He	136914.292	8.3539	527100.54	0.0001	0.003476
Ti	47	3	He	5.166	0.0028	170.01	0.0005	0.000385
Ti	47	3	He	9.361	0.0048	290.01	0.0005	0.000385
Ti	47	3	He	7.269	0.0038	240.01	0.0005	0.000385
V	51	3	He	10.762	0.2351	14200.96	0.0212	0.007263
V	51	3	He	10.638	0.2325	14082.83	0.0212	0.007263
V	51	3	He	10.159	0.2224	14030.79	0.0212	0.007263
Cr	52	3	He	1.884	0.0952	5751.31	0.0278	0.04283
Cr	52	3	He	1.737	0.0912	5521.30	0.0278	0.04283
Cr	52	3	He	1.634	0.0883	5571.23	0.0278	0.04283
Mn	55	3	He	527.204	6.0045	362638.74	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	521.672	5.9415	359859.10	0.0114	0.005023
Mn	55	3	He	503.539	5.7352	361868.59	0.0114	0.005023
Fe	57	3	He	15619.893	8.2923	500812.49	0.0005	0.003255
Fe	57	3	He	15340.532	8.1441	493259.95	0.0005	0.003255
Fe	57	3	He	14998.587	7.9626	502412.14	0.0005	0.003255
Co	59	3	He	0.441	0.028	1690.16	0.0539	0.00425
Co	59	3	He	0.436	0.0277	1680.16	0.0539	0.00425
Co	59	3	He	0.363	0.0238	1500.13	0.0539	0.00425
Ni	60	3	He	2.325	0.0346	3850.67	0.0088	0.01412
Ni	60	3	He	1.975	0.0315	3470.51	0.0088	0.01412
Ni	60	3	He	2.073	0.0324	3590.58	0.0088	0.01412
Cu	63	3	He	18.01	0.4571	50829.81	0.0251	0.004537
Cu	63	3	He	18	0.4569	50268.09	0.0251	0.004537
Cu	63	3	He	17.729	0.45	49856.69	0.0251	0.004537
Zn	66	3	He	9.223	0.0268	2980.41	0.0027	0.001642
Zn	66	3	He	8.494	0.0248	2730.36	0.0027	0.001642
Zn	66	3	He	8.532	0.0249	2760.37	0.0027	0.001642
As	75	3	He	116.468	0.2227	24765.28	0.0019	0.000463
As	75	3	He	119.273	0.2281	25093.81	0.0019	0.000463
As	75	3	He	117.378	0.2245	24865.43	0.0019	0.000463
Sr	88	3	He	1389.866	12.4597	1119600.30	0.009	0.001142
Sr	88	3	He	1382.291	12.3918	1112501.86	0.009	0.001142
Sr	88	3	He	1401.733	12.5661	1135204.90	0.009	0.001142
Mo	98	3	He	9.61	0.2182	19604.28	0.0225	0.001842
Mo	98	3	He	9.286	0.2109	18933.19	0.0225	0.001842
Mo	98	3	He	9.326	0.2118	19133.29	0.0225	0.001842
Ag	107	3	He	0.016	0.0012	110.01	0.048	0.0004774
Ag	107	3	He	0.009	0.0009	80.00	0.048	0.0004774
Ag	107	3	He	0.013	0.0011	100.00	0.048	0.0004774
Cd	111	3	He	0.141	0.0008	70.00	0.0055	7.481E-06
Cd	111	3	He	0.145	0.0008	72.00	0.0055	7.481E-06
Cd	111	3	He	0.197	0.0011	98.00	0.0055	7.481E-06
Sn	120	3	He	-0.253	0.0145	1300.10	0.0157	0.01844
Sn	120	3	He	-0.231	0.0148	1330.11	0.0157	0.01844
Sn	120	3	He	0.024	0.0188	1700.19	0.0157	0.01844
Sb	121	3	He	0.216	0.0032	290.01	0.0139	0.0002204
Sb	121	3	He	0.216	0.0032	290.02	0.0139	0.0002204
Sb	121	3	He	0.239	0.0035	320.02	0.0139	0.0002204
Ba	137	3	He	319.185	1.4469	130017.80	0.0045	0.001994
Ba	137	3	He	317.686	1.4401	129291.98	0.0045	0.001994
Ba	137	3	He	317.509	1.4393	130028.43	0.0045	0.001994
Tl	205	3	He	0.237	0.0081	2260.28	0.03	0.0009888
Tl	205	3	He	0.256	0.0087	2440.30	0.03	0.0009888
Tl	205	3	He	0.209	0.0073	2070.26	0.03	0.0009888
Pb	208	3	He	0.294	0.0126	1950.22	0.0392	0.001024
Pb	208	3	He	0.293	0.0125	1930.22	0.0392	0.001024
Pb	208	3	He	0.306	0.013	2090.23	0.0392	0.001024
U	238	3	He	14.502	0.6369	177939.94	0.0439	0.000128
U	238	3	He	14.571	0.64	179771.93	0.0439	0.000128
U	238	3	He	14.212	0.6242	178048.36	0.0439	0.000128
Sc	45	1	No Gas			3582555.26		
Sc	45	1	No Gas			3642190.26		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3668947.13		
Ge	72	1	No Gas			1706313.41		
Ge	72	1	No Gas			1713363.10		
Ge	72	1	No Gas			1725792.63		
Sc	45	2	H2			267462.95		
Sc	45	2	H2			265467.18		
Sc	45	2	H2			263939.43		
Ge	72	2	H2			193239.35		
Ge	72	2	H2			190250.58		
Ge	72	2	H2			189998.26		
In	115	2	H2			472760.07		
In	115	2	H2			470544.41		
In	115	2	H2			470358.27		
Sc	45	3	He			60394.67		
Sc	45	3	He			60566.69		
Sc	45	3	He			63096.35		
Ge	72	3	He			111197.21		
Ge	72	3	He			110028.06		
Ge	72	3	He			110782.90		
In	115	3	He			89867.51		
In	115	3	He			89787.28		
In	115	3	He			90351.77		
Tb	159	3	He			376604.25		
Tb	159	3	He			376284.02		
Tb	159	3	He			381281.87		
Bi	209	3	He			279366.58		
Bi	209	3	He			280914.18		
Bi	209	3	He			285240.27		

Quantitation Report

Data File Name	268SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23J26A00.b
Acq Time	2023-10-26 18:01:06
Sample Name	410-147543-M-4-A
Sample Type	Sample
Comment	I24
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

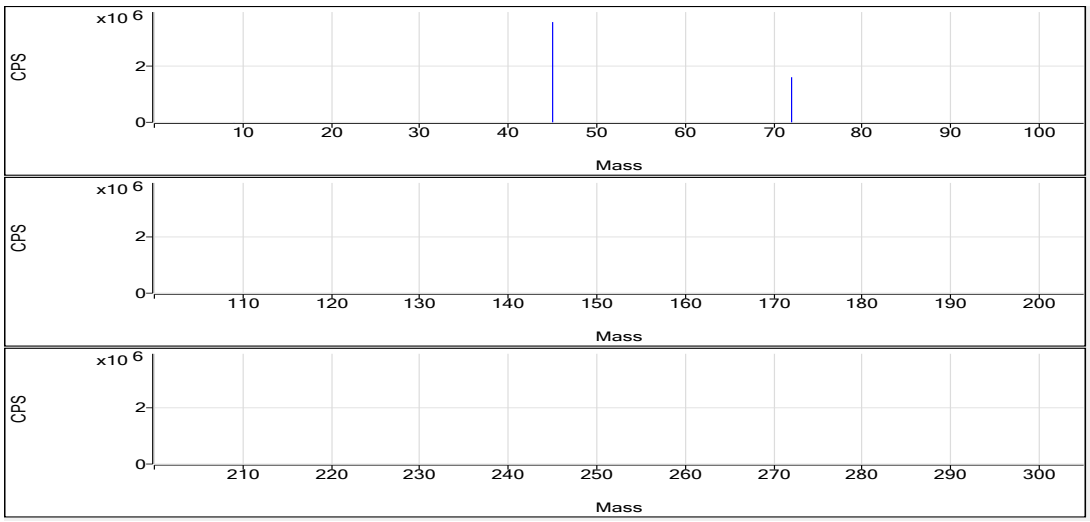
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	1.638	ppb	2.1	2280.19	0.0006	Pulse	0.5000	3
Se	78	72	H2	1.490	ppb	9.7	123.78	0.0007	Pulse	1.5000	3
Na	23	45	He	249849.640	ppb	1.6	50666130.91	811.0935	Analog	0.1000	3
Mg	24	45	He	53809.216	ppb	1.2	5302012.21	84.8711	Analog	0.1000	3
Al	27	45	He	12954.816	ppb	1.7	363103.46	5.8126	Pulse	0.1000	3
K	39	45	He	25225.679	ppb	1.1	1723564.40	27.5904	Pulse	0.1000	3
Ca	44	45	He	288785.011	ppb	0.8	1100538.19	17.6165	Pulse	0.1000	3
Ti	47	45	He	928.407	ppb	9.3	27306.81	0.4371	Pulse	0.1000	3
V	51	45	He	57.118	ppb	1.7	76003.00	1.2167	Pulse	0.5000	3
Cr	52	45	He	47.738	ppb	0.7	85630.68	1.3707	Pulse	0.1000	3
Mn	55	45	He	36579.785	ppb	1.3	26003912.94	416.2745	Analog	0.1000	3
Fe	57	45	He	369601.502	ppb	0.8	12253354.40	196.1412	Analog	0.1000	3
Co	59	45	He	15.516	ppb	0.8	52472.17	0.8399	Pulse	0.1000	3
Ni	60	72	He	17.860	ppb	4.2	18482.35	0.1717	Pulse	0.1000	3
Cu	63	72	He	40.762	ppb	0.4	110794.79	1.0288	Pulse	0.1000	3
Zn	66	72	He	469.530	ppb	0.3	138114.35	1.2826	Pulse	0.1000	3
As	75	72	He	27.668	ppb	1.2	5735.17	0.0533	Pulse	0.5000	3
Sr	88	115	He	1440.785	ppb	1.4	1134362.67	12.9162	Pulse	0.1000	3
Mo	98	115	He	3.883	ppb	3.0	7842.45	0.0893	Pulse	0.1000	3
Ag	107	115	He	0.060	ppb	21.8	293.35	0.0033	Pulse	0.1000	3
Cd	111	115	He	0.982	ppb	11.7	472.01	0.0054	Pulse	0.5000	3
Sn	120	115	He	4.043	ppb	2.4	7202.11	0.0820	Pulse	0.1000	3
Sb	121	115	He	1.553	ppb	9.6	1916.87	0.0218	Pulse	0.1000	3
Ba	137	115	He	711.477	ppb	0.9	283093.56	3.2228	Pulse	0.1000	3
Tl	205	209	He	0.214	ppb	10.3	2086.91	0.0074	Pulse	0.1000	3
Pb	208	209	He	78.402	ppb	0.7	865575.92	3.0757	Pulse	0.1000	3
U	238	209	He	21.837	ppb	0.4	269888.59	0.9590	Pulse	0.1000	3

ISTD Table:

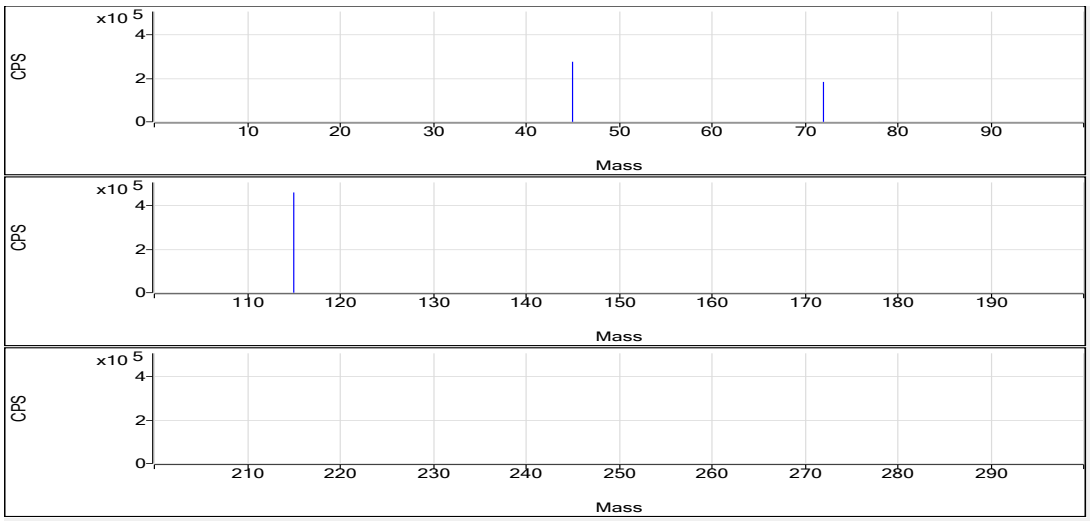
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3592871.30	1.1	100.5	Pulse	0.1000	3
No Gas	Ge	72	1616061.43	1.1	99.3	Pulse	0.1000	3
H2	Sc	45	276926.37	1.8	105.9	Pulse	0.1000	3
H2	Ge	72	183963.96	1.9	98.0	Pulse	0.1000	3
H2	In	115	462140.42	1.2	98.0	Pulse	0.1000	3
He	Sc	45	62477.35	1.7	103.4	Pulse	0.1000	3
He	Ge	72	107688.00	1.0	104.0	Pulse	0.1000	3
He	In	115	87839.81	2.1	97.2	Pulse	0.1000	3
He	Tb	159	387354.50	0.3	102.9	Pulse	0.1000	3
He	Bi	209	281426.38	0.9	98.2	Pulse	0.1000	3

No Gas

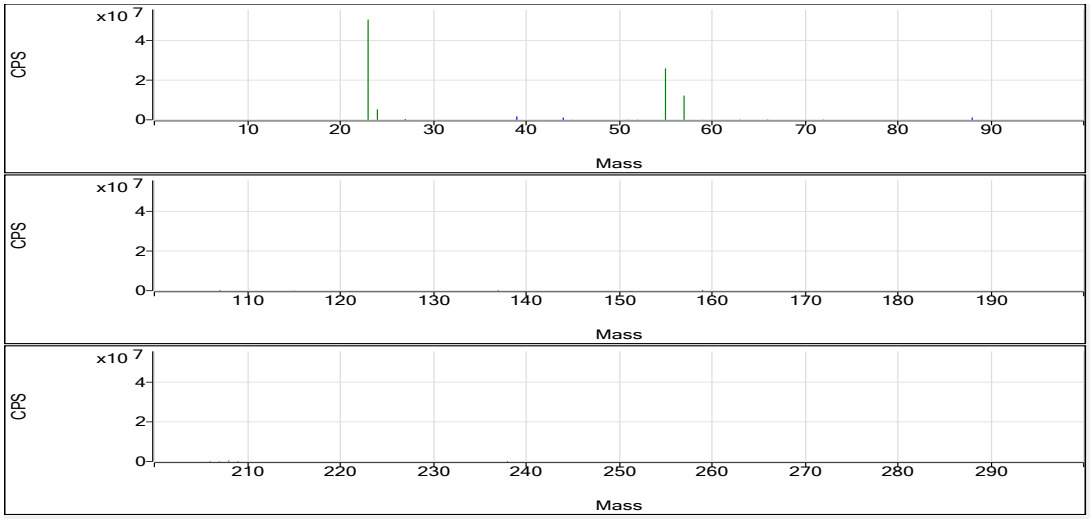


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	1.641	0.0006	2256.18	0.0004	7.085E-06
Be	9	1	No Gas	1.603	0.0006	2240.18	0.0004	7.085E-06
Be	9	1	No Gas	1.671	0.0006	2344.20	0.0004	7.085E-06
Se	78	2	H2	1.326	0.0006	110.67	0.0004	2.372E-05
Se	78	2	H2	1.603	0.0007	135.33	0.0004	2.372E-05
Se	78	2	H2	1.54	0.0007	125.33	0.0004	2.372E-05
Na	23	3	He	254233.764	825.3169	50665299.25	0.0032	0.5042
Na	23	3	He	248720.165	807.4291	50499839.25	0.0032	0.5042
Na	23	3	He	246594.99	800.5344	50833254.24	0.0032	0.5042
Mg	24	3	He	54516.652	85.9869	5278641.17	0.0016	0.002702
Mg	24	3	He	53262.736	84.0092	5254271.17	0.0016	0.002702
Mg	24	3	He	53648.261	84.6173	5373124.29	0.0016	0.002702
Al	27	3	He	13200.618	5.9229	363598.35	0.0004	0.00193
Al	27	3	He	12786.092	5.7369	358811.05	0.0004	0.00193
Al	27	3	He	12877.739	5.778	366900.97	0.0004	0.00193
K	39	3	He	25504.867	27.8928	1712310.76	0.0011	0.2621
K	39	3	He	25215.896	27.5798	1724949.66	0.0011	0.2621
K	39	3	He	24956.273	27.2985	1733432.79	0.0011	0.2621
Ca	44	3	He	291612.25	17.789	1092044.12	0.0001	0.003476
Ca	44	3	He	287433.936	17.5341	1096653.50	0.0001	0.003476
Ca	44	3	He	287308.848	17.5265	1112916.94	0.0001	0.003476
Ti	47	3	He	884.475	0.4164	25562.88	0.0005	0.000385
Ti	47	3	He	1027.58	0.4837	30253.76	0.0005	0.000385
Ti	47	3	He	873.165	0.4111	26103.78	0.0005	0.000385
V	51	3	He	58.244	1.2406	76156.48	0.0212	0.007263
V	51	3	He	56.733	1.2085	75587.29	0.0212	0.007263
V	51	3	He	56.378	1.201	76265.23	0.0212	0.007263
Cr	52	3	He	47.99	1.3777	84574.17	0.0278	0.04283
Cr	52	3	He	47.839	1.3735	85902.65	0.0278	0.04283
Cr	52	3	He	47.386	1.3609	86415.21	0.0278	0.04283
Mn	55	3	He	37058.58	421.7231	25889114.61	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	36574.228	416.2112	26031512.11	0.0114	0.005023
Mn	55	3	He	36106.548	410.8892	26091112.11	0.0114	0.005023
Fe	57	3	He	372814.182	197.8461	12145556.07	0.0005	0.003255
Fe	57	3	He	368598.89	195.6092	12234178.57	0.0005	0.003255
Fe	57	3	He	367391.435	194.9684	12380328.57	0.0005	0.003255
Co	59	3	He	15.64	0.8466	51973.62	0.0539	0.00425
Co	59	3	He	15.507	0.8395	52505.43	0.0539	0.00425
Co	59	3	He	15.399	0.8337	52937.45	0.0539	0.00425
Ni	60	3	He	18.622	0.1784	19003.00	0.0088	0.01412
Ni	60	3	He	17.134	0.1653	17821.42	0.0088	0.01412
Ni	60	3	He	17.824	0.1713	18622.64	0.0088	0.01412
Cu	63	3	He	40.772	1.0291	109632.42	0.0251	0.004537
Cu	63	3	He	40.58	1.0243	110460.29	0.0251	0.004537
Cu	63	3	He	40.933	1.0331	112291.67	0.0251	0.004537
Zn	66	3	He	470.623	1.2855	136952.61	0.0027	0.001642
Zn	66	3	He	470.157	1.2843	138498.94	0.0027	0.001642
Zn	66	3	He	467.809	1.2779	138891.51	0.0027	0.001642
As	75	3	He	27.959	0.0538	5733.17	0.0019	0.000463
As	75	3	He	27.753	0.0534	5761.18	0.0019	0.000463
As	75	3	He	27.293	0.0525	5711.16	0.0019	0.000463
Sr	88	3	He	1464.685	13.1304	1130014.44	0.009	0.001142
Sr	88	3	He	1429.061	12.8111	1123777.72	0.009	0.001142
Sr	88	3	He	1428.609	12.807	1149295.84	0.009	0.001142
Mo	98	3	He	3.749	0.0862	7422.20	0.0225	0.001842
Mo	98	3	He	3.956	0.0909	7972.53	0.0225	0.001842
Mo	98	3	He	3.944	0.0906	8132.61	0.0225	0.001842
Ag	107	3	He	0.075	0.0041	350.02	0.048	0.0004774
Ag	107	3	He	0.052	0.003	260.01	0.048	0.0004774
Ag	107	3	He	0.053	0.003	270.01	0.048	0.0004774
Cd	111	3	He	1.09	0.006	514.01	0.0055	7.481E-06
Cd	111	3	He	0.994	0.0054	478.01	0.0055	7.481E-06
Cd	111	3	He	0.862	0.0047	424.01	0.0055	7.481E-06
Sn	120	3	He	4.033	0.0818	7041.99	0.0157	0.01844
Sn	120	3	He	3.949	0.0805	7062.02	0.0157	0.01844
Sn	120	3	He	4.146	0.0836	7502.32	0.0157	0.01844
Sb	121	3	He	1.597	0.0224	1930.19	0.0139	0.0002204
Sb	121	3	He	1.386	0.0195	1710.17	0.0139	0.0002204
Sb	121	3	He	1.675	0.0235	2110.24	0.0139	0.0002204
Ba	137	3	He	707.376	3.2043	275761.32	0.0045	0.001994
Ba	137	3	He	718.676	3.2554	285562.55	0.0045	0.001994
Ba	137	3	He	708.381	3.2088	287956.81	0.0045	0.001994
Tl	205	3	He	0.198	0.0069	1930.22	0.03	0.0009888
Tl	205	3	He	0.239	0.0082	2300.30	0.03	0.0009888
Tl	205	3	He	0.205	0.0072	2030.22	0.03	0.0009888
Pb	208	3	He	78.901	3.0953	466553.16	0.0392	0.001024
Pb	208	3	He	77.794	3.0519	462474.60	0.0392	0.001024
Pb	208	3	He	78.511	3.08	471957.02	0.0392	0.001024
U	238	3	He	21.907	0.9621	268203.24	0.0439	0.000128
U	238	3	He	21.735	0.9546	268926.42	0.0439	0.000128
U	238	3	He	21.867	0.9603	272536.11	0.0439	0.000128
Sc	45	1	No Gas			3550014.01		
Sc	45	1	No Gas			3607054.95		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3621544.95		
Ge	72	1	No Gas			1603018.26		
Ge	72	1	No Gas			1609183.88		
Ge	72	1	No Gas			1635982.16		
Sc	45	2	H2			274069.86		
Sc	45	2	H2			282591.17		
Sc	45	2	H2			274118.08		
Ge	72	2	H2			184025.15		
Ge	72	2	H2			187469.18		
Ge	72	2	H2			180397.54		
In	115	2	H2			467119.56		
In	115	2	H2			462974.72		
In	115	2	H2			456326.99		
Sc	45	3	He			61388.90		
Sc	45	3	He			62543.99		
Sc	45	3	He			63499.15		
Ge	72	3	He			106532.34		
Ge	72	3	He			107841.99		
Ge	72	3	He			108689.67		
In	115	3	He			86115.75		
In	115	3	He			87774.27		
In	115	3	He			89797.95		
Tb	159	3	He			386073.24		
Tb	159	3	He			388455.89		
Tb	159	3	He			387534.37		
Bi	209	3	He			278763.67		
Bi	209	3	He			281725.05		
Bi	209	3	He			283790.43		

Quantitation Report

Data File Name	269SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23J26A00.b
Acq Time	2023-10-26 18:03:06
Sample Name	410-147578-W-1-A
Sample Type	Sample
Comment	I24
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

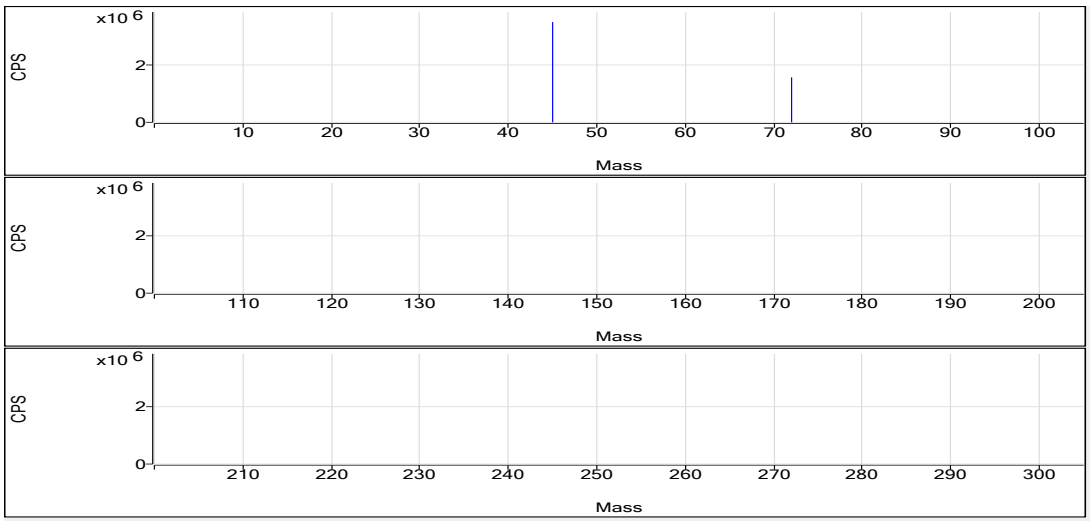
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.012	ppb	29.3	41.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.336	ppb	27.9	31.11	0.0002	Pulse	1.5000	3
Na	23	45	He	1070321.081	ppb	1.5	210709643.53	3 472.9560	Analog	0.1000	3
Mg	24	45	He	133137.521	ppb	1.6	12740279.81	209.9885	Analog	0.1000	3
Al	27	45	He	148.071	ppb	4.5	4147.38	0.0683	Pulse	0.1000	3
K	39	45	He	41745.701	ppb	0.7	2759994.33	45.4874	Pulse	0.1000	3
Ca	44	45	He	121463.695	ppb	0.5	449716.80	7.4116	Pulse	0.1000	3
Ti	47	45	He	5.939	ppb	32.9	193.34	0.0032	Pulse	0.1000	3
V	51	45	He	6.580	ppb	1.6	8894.09	0.1466	Pulse	0.5000	3
Cr	52	45	He	0.874	ppb	7.1	4074.05	0.0671	Pulse	0.1000	3
Mn	55	45	He	1495.544	ppb	0.4	1033041.13	17.0240	Pulse	0.1000	3
Fe	57	45	He	1808.723	ppb	2.0	58447.95	0.9631	Pulse	0.1000	3
Co	59	45	He	1.150	ppb	6.2	4014.02	0.0662	Pulse	0.1000	3
Ni	60	72	He	3.478	ppb	3.0	4664.24	0.0448	Pulse	0.1000	3
Cu	63	72	He	2.270	ppb	1.2	6411.63	0.0616	Pulse	0.1000	3
Zn	66	72	He	19.215	ppb	10.6	5634.64	0.0541	Pulse	0.1000	3
As	75	72	He	5.194	ppb	8.1	1081.38	0.0104	Pulse	0.5000	3
Sr	88	115	He	1424.644	ppb	1.5	1111401.23	12.7715	Pulse	0.1000	3
Mo	98	115	He	2.110	ppb	3.7	4294.14	0.0493	Pulse	0.1000	3
Ag	107	115	He	-0.003	ppb	N/A	30.00	0.0003	Pulse	0.1000	3
Cd	111	115	He	0.027	ppb	32.9	13.33	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.070	ppb	N/A	1510.13	0.0174	Pulse	0.1000	3
Sb	121	115	He	0.149	ppb	9.6	200.01	0.0023	Pulse	0.1000	3
Ba	137	115	He	457.373	ppb	0.8	180360.90	2.0725	Pulse	0.1000	3
Tl	205	209	He	0.007	ppb	51.1	316.69	0.0012	Pulse	0.1000	3
Pb	208	209	He	10.016	ppb	1.0	103949.11	0.3938	Pulse	0.1000	3
U	238	209	He	0.967	ppb	0.8	11245.27	0.0426	Pulse	0.1000	3

ISTD Table:

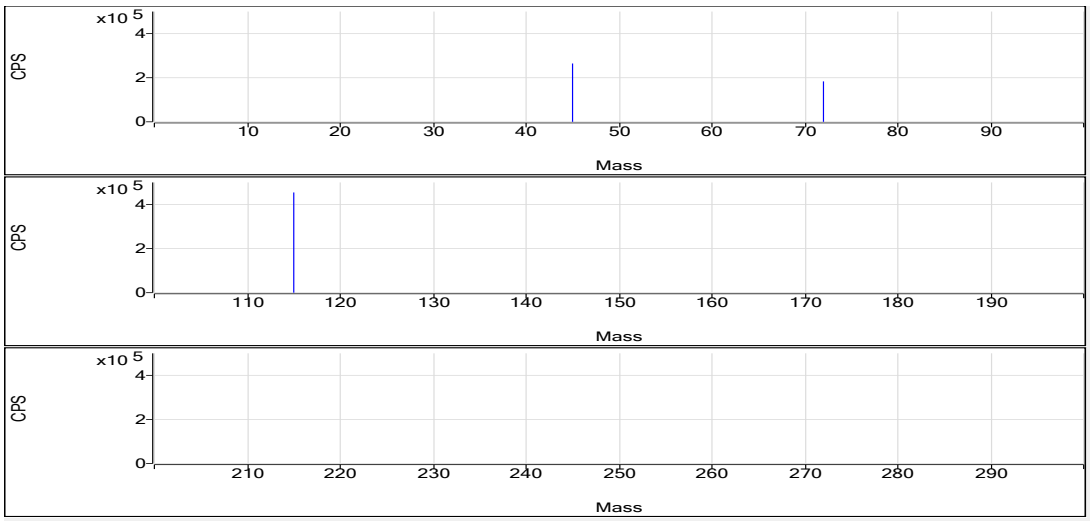
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3526586.09	0.9	98.7	Pulse	0.1000	3
No Gas	Ge	72	1581398.52	0.6	97.2	Pulse	0.1000	3
H2	Sc	45	264200.84	0.5	101.0	Pulse	0.1000	3
H2	Ge	72	183147.51	0.7	97.6	Pulse	0.1000	3
H2	In	115	454033.82	0.6	96.3	Pulse	0.1000	3
He	Sc	45	60679.46	1.3	100.4	Pulse	0.1000	3
He	Ge	72	104134.98	1.8	100.5	Pulse	0.1000	3
He	In	115	87025.17	0.5	96.3	Pulse	0.1000	3
He	Tb	159	368361.53	0.9	97.9	Pulse	0.1000	3
He	Bi	209	263950.60	0.2	92.1	Pulse	0.1000	3

No Gas

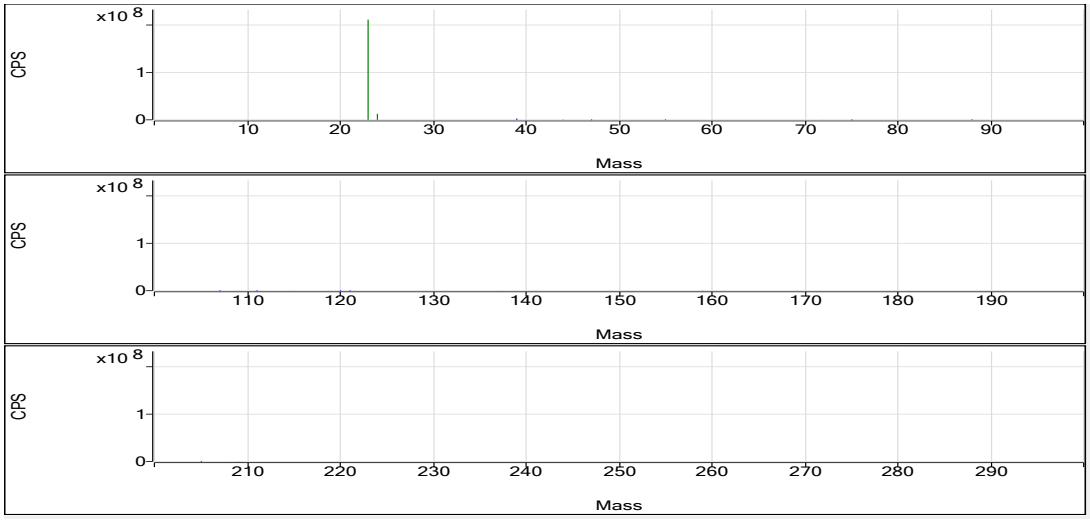


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.013	0	42.00	0.0004	7.085E-06
Be	9	1	No Gas	0.008	0	36.00	0.0004	7.085E-06
Be	9	1	No Gas	0.015	0	46.00	0.0004	7.085E-06
Se	78	2	H2	0.23	0.0001	22.67	0.0004	2.372E-05
Se	78	2	H2	0.408	0.0002	36.67	0.0004	2.372E-05
Se	78	2	H2	0.369	0.0002	34.00	0.0004	2.372E-05
Na	23	3	He	1072999.143	3481.6445	210029576.87	0.0032	0.5042
Na	23	3	He	1085320.375	3521.6184	211732056.84	0.0032	0.5042
Na	23	3	He	1052643.726	3415.6052	210367296.87	0.0032	0.5042
Mg	24	3	He	133402.183	210.4059	12692699.81	0.0016	0.002702
Mg	24	3	He	135125.861	213.1245	12813794.81	0.0016	0.002702
Mg	24	3	He	130884.52	206.435	12714344.81	0.0016	0.002702
Al	27	3	He	140.595	0.065	3920.62	0.0004	0.00193
Al	27	3	He	153.323	0.0707	4250.77	0.0004	0.00193
Al	27	3	He	150.293	0.0693	4270.76	0.0004	0.00193
K	39	3	He	41808.797	45.5557	2748139.96	0.0011	0.2621
K	39	3	He	41981.672	45.743	2750229.33	0.0011	0.2621
K	39	3	He	41446.636	45.1634	2781613.71	0.0011	0.2621
Ca	44	3	He	122068.572	7.4485	449326.79	0.0001	0.003476
Ca	44	3	He	121376.12	7.4062	445288.16	0.0001	0.003476
Ca	44	3	He	120946.392	7.38	454535.46	0.0001	0.003476
Ti	47	3	He	4.468	0.0025	150.01	0.0005	0.000385
Ti	47	3	He	5.193	0.0028	170.01	0.0005	0.000385
Ti	47	3	He	8.157	0.0042	260.01	0.0005	0.000385
V	51	3	He	6.486	0.1446	8722.66	0.0212	0.007263
V	51	3	He	6.693	0.149	8956.79	0.0212	0.007263
V	51	3	He	6.56	0.1462	9002.82	0.0212	0.007263
Cr	52	3	He	0.946	0.0691	4170.76	0.0278	0.04283
Cr	52	3	He	0.84	0.0662	3980.69	0.0278	0.04283
Cr	52	3	He	0.836	0.0661	4070.69	0.0278	0.04283
Mn	55	3	He	1493.572	17.0015	1025613.73	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1490.783	16.9698	1020283.03	0.0114	0.005023
Mn	55	3	He	1502.278	17.1006	1053226.62	0.0114	0.005023
Fe	57	3	He	1822.14	0.9702	58528.21	0.0005	0.003255
Fe	57	3	He	1767.52	0.9412	56590.19	0.0005	0.003255
Fe	57	3	He	1836.51	0.9778	60225.44	0.0005	0.003255
Co	59	3	He	1.223	0.0701	4230.74	0.0539	0.00425
Co	59	3	He	1.144	0.0659	3960.69	0.0539	0.00425
Co	59	3	He	1.082	0.0625	3850.64	0.0539	0.00425
Ni	60	3	He	3.522	0.0452	4610.91	0.0088	0.01412
Ni	60	3	He	3.552	0.0455	4770.93	0.0088	0.01412
Ni	60	3	He	3.358	0.0437	4610.87	0.0088	0.01412
Cu	63	3	He	2.297	0.0623	6351.64	0.0251	0.004537
Cu	63	3	He	2.243	0.0609	6391.59	0.0251	0.004537
Cu	63	3	He	2.27	0.0616	6491.65	0.0251	0.004537
Zn	66	3	He	17.689	0.0499	5091.09	0.0027	0.001642
Zn	66	3	He	18.434	0.0519	5451.22	0.0027	0.001642
Zn	66	3	He	21.521	0.0604	6361.61	0.0027	0.001642
As	75	3	He	4.709	0.0094	964.04	0.0019	0.000463
As	75	3	He	5.399	0.0108	1130.05	0.0019	0.000463
As	75	3	He	5.475	0.0109	1150.05	0.0019	0.000463
Sr	88	3	He	1400.585	12.5558	1098265.61	0.009	0.001142
Sr	88	3	He	1430.79	12.8266	1110352.56	0.009	0.001142
Sr	88	3	He	1442.556	12.9321	1125585.53	0.009	0.001142
Mo	98	3	He	2.021	0.0473	4140.77	0.0225	0.001842
Mo	98	3	He	2.156	0.0504	4360.81	0.0225	0.001842
Mo	98	3	He	2.154	0.0503	4380.83	0.0225	0.001842
Ag	107	3	He	-0.008	0.0001	10.00	0.048	0.0004774
Ag	107	3	He	0.004	0.0007	60.00	0.048	0.0004774
Ag	107	3	He	-0.005	0.0002	20.00	0.048	0.0004774
Cd	111	3	He	0.02	0.0001	10.00	0.0055	7.481E-06
Cd	111	3	He	0.024	0.0001	12.00	0.0055	7.481E-06
Cd	111	3	He	0.036	0.0002	18.00	0.0055	7.481E-06
Sn	120	3	He	-0.031	0.018	1570.14	0.0157	0.01844
Sn	120	3	He	-0.1	0.0169	1460.12	0.0157	0.01844
Sn	120	3	He	-0.077	0.0172	1500.12	0.0157	0.01844
Sb	121	3	He	0.14	0.0022	190.01	0.0139	0.0002204
Sb	121	3	He	0.142	0.0022	190.01	0.0139	0.0002204
Sb	121	3	He	0.166	0.0025	220.01	0.0139	0.0002204
Ba	137	3	He	455.742	2.0651	180637.38	0.0045	0.001994
Ba	137	3	He	454.922	2.0614	178449.18	0.0045	0.001994
Ba	137	3	He	461.455	2.091	181996.15	0.0045	0.001994
Tl	205	3	He	0.005	0.0011	300.02	0.03	0.0009888
Tl	205	3	He	0.011	0.0013	350.02	0.03	0.0009888
Tl	205	3	He	0.005	0.0011	300.02	0.03	0.0009888
Pb	208	3	He	9.912	0.3897	54372.35	0.0392	0.001024
Pb	208	3	He	10.016	0.3938	54603.75	0.0392	0.001024
Pb	208	3	He	10.119	0.3979	56139.73	0.0392	0.001024
U	238	3	He	0.959	0.0423	11135.15	0.0439	0.000128
U	238	3	He	0.974	0.0429	11335.42	0.0439	0.000128
U	238	3	He	0.969	0.0427	11265.25	0.0439	0.000128
Sc	45	1	No Gas			3502972.76		
Sc	45	1	No Gas			3514446.20		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3562339.32		
Ge	72	1	No Gas			1572856.85		
Ge	72	1	No Gas			1591940.60		
Ge	72	1	No Gas			1579398.10		
Sc	45	2	H2			262725.70		
Sc	45	2	H2			265264.14		
Sc	45	2	H2			264612.67		
Ge	72	2	H2			183068.90		
Ge	72	2	H2			181914.67		
Ge	72	2	H2			184458.96		
In	115	2	H2			455272.45		
In	115	2	H2			450814.09		
In	115	2	H2			456014.92		
Sc	45	3	He			60324.82		
Sc	45	3	He			60123.51		
Sc	45	3	He			61590.05		
Ge	72	3	He			102030.04		
Ge	72	3	He			104970.39		
Ge	72	3	He			105404.51		
In	115	3	He			87482.82		
In	115	3	He			86577.90		
In	115	3	He			87050.14		
Tb	159	3	He			365683.08		
Tb	159	3	He			367269.02		
Tb	159	3	He			372132.49		
Bi	209	3	He			263499.35		
Bi	209	3	He			264306.52		
Bi	209	3	He			264045.93		

Quantitation Report

Data File Name	270SMPL.d
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Acq Time	2023-10-26 18:05:10
Sample Name	410-147788-B-3-A
Sample Type	Sample
Comment	I24
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

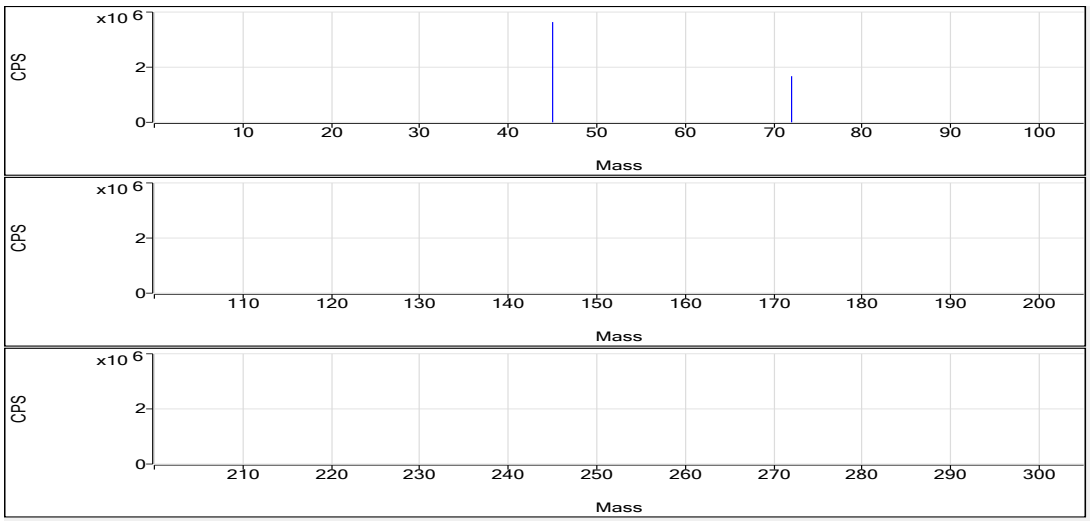
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.029	ppb	7.7	66.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.081	ppb	30.0	11.55	0.0001	Pulse	1.5000	3
Na	23	45	He	11123.111	ppb	1.7	2273582.10	36.5910	Pulse	0.1000	3
Mg	24	45	He	19994.725	ppb	1.6	1959629.40	31.5386	Pulse	0.1000	3
Al	27	45	He	983.567	ppb	1.4	27536.42	0.4431	Pulse	0.1000	3
K	39	45	He	1228.130	ppb	2.7	98951.68	1.5926	Pulse	0.1000	3
Ca	44	45	He	55212.883	ppb	0.6	209478.48	3.3709	Pulse	0.1000	3
Ti	47	45	He	34.775	ppb	16.1	1040.11	0.0167	Pulse	0.1000	3
V	51	45	He	6.237	ppb	0.6	8658.60	0.1393	Pulse	0.5000	3
Cr	52	45	He	22.256	ppb	3.8	41137.70	0.6619	Pulse	0.1000	3
Mn	55	45	He	68.554	ppb	1.0	48792.16	0.7851	Pulse	0.1000	3
Fe	57	45	He	1250.422	ppb	0.9	41436.78	0.6668	Pulse	0.1000	3
Co	59	45	He	0.769	ppb	13.8	2840.39	0.0457	Pulse	0.1000	3
Ni	60	72	He	11.418	ppb	1.5	12829.44	0.1148	Pulse	0.1000	3
Cu	63	72	He	3.050	ppb	3.3	9069.77	0.0812	Pulse	0.1000	3
Zn	66	72	He	16.239	ppb	5.5	5131.09	0.0459	Pulse	0.1000	3
As	75	72	He	4.466	ppb	5.6	1004.04	0.0090	Pulse	0.5000	3
Sr	88	115	He	330.364	ppb	0.9	274214.11	2.9625	Pulse	0.1000	3
Mo	98	115	He	2.059	ppb	2.0	4460.87	0.0482	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	N/A	43.33	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.025	ppb	46.6	13.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.186	ppb	60.2	1976.88	0.0214	Pulse	0.1000	3
Sb	121	115	He	0.093	ppb	41.6	140.01	0.0015	Pulse	0.1000	3
Ba	137	115	He	204.312	ppb	1.4	85792.72	0.9269	Pulse	0.1000	3
Tl	205	209	He	0.011	ppb	87.6	383.36	0.0013	Pulse	0.1000	3
Pb	208	209	He	0.970	ppb	3.0	11402.40	0.0391	Pulse	0.1000	3
U	238	209	He	1.263	ppb	4.5	16224.07	0.0556	Pulse	0.1000	3

ISTD Table:

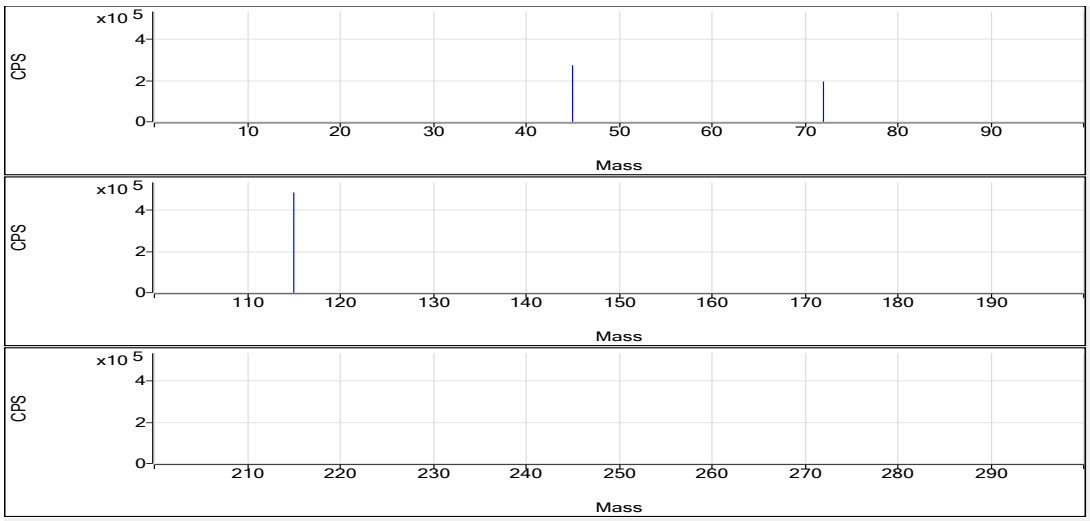
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3646216.09	0.6	102.0	Pulse	0.1000	3
No Gas	Ge	72	1677330.91	0.9	103.1	Pulse	0.1000	3
H2	Sc	45	274755.50	1.1	105.1	Pulse	0.1000	3
H2	Ge	72	195582.72	0.4	104.2	Pulse	0.1000	3
H2	In	115	486903.64	1.1	103.2	Pulse	0.1000	3
He	Sc	45	62142.43	1.2	102.9	Pulse	0.1000	3
He	Ge	72	111717.15	1.0	107.8	Pulse	0.1000	3
He	In	115	92566.59	1.0	102.4	Pulse	0.1000	3
He	Tb	159	384580.12	0.7	102.2	Pulse	0.1000	3
He	Bi	209	291821.79	1.0	101.8	Pulse	0.1000	3

No Gas

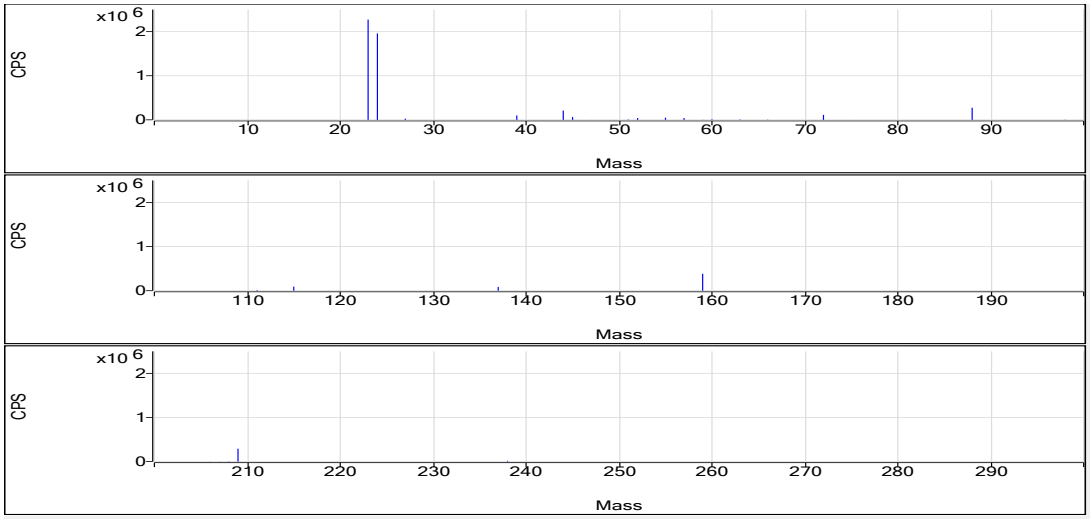


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.027	0	64.00	0.0004	7.085E-06
Be	9	1	No Gas	0.031	0	70.00	0.0004	7.085E-06
Be	9	1	No Gas	0.028	0	64.00	0.0004	7.085E-06
Se	78	2	H2	0.103	0.0001	13.33	0.0004	2.372E-05
Se	78	2	H2	0.086	0.0001	12.00	0.0004	2.372E-05
Se	78	2	H2	0.055	0	9.33	0.0004	2.372E-05
Na	23	3	He	11338.254	37.289	2291019.03	0.0032	0.5042
Na	23	3	He	11039.196	36.3187	2252561.84	0.0032	0.5042
Na	23	3	He	10991.882	36.1652	2277165.43	0.0032	0.5042
Mg	24	3	He	20248.514	31.9389	1962310.91	0.0016	0.002702
Mg	24	3	He	20097.351	31.7004	1966126.69	0.0016	0.002702
Mg	24	3	He	19638.31	30.9764	1950450.60	0.0016	0.002702
Al	27	3	He	969.471	0.4368	26835.07	0.0004	0.00193
Al	27	3	He	995.985	0.4487	27827.07	0.0004	0.00193
Al	27	3	He	985.246	0.4438	27947.11	0.0004	0.00193
K	39	3	He	1261.928	1.6292	100099.93	0.0011	0.2621
K	39	3	He	1226.066	1.5904	98639.28	0.0011	0.2621
K	39	3	He	1196.394	1.5582	98115.83	0.0011	0.2621
Ca	44	3	He	55392.681	3.3819	207781.62	0.0001	0.003476
Ca	44	3	He	54846.529	3.3486	207685.45	0.0001	0.003476
Ca	44	3	He	55399.439	3.3823	212968.36	0.0001	0.003476
Ti	47	3	He	39.674	0.019	1170.20	0.0005	0.000385
Ti	47	3	He	28.663	0.0139	860.05	0.0005	0.000385
Ti	47	3	He	35.988	0.0173	1090.08	0.0005	0.000385
V	51	3	He	6.194	0.1384	8504.51	0.0212	0.007263
V	51	3	He	6.253	0.1397	8662.60	0.0212	0.007263
V	51	3	He	6.264	0.1399	8808.69	0.0212	0.007263
Cr	52	3	He	22.438	0.667	40978.07	0.0278	0.04283
Cr	52	3	He	21.342	0.6365	39474.56	0.0278	0.04283
Cr	52	3	He	22.989	0.6823	42960.47	0.0278	0.04283
Mn	55	3	He	68.871	0.7888	48461.03	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	67.751	0.776	48129.82	0.0114	0.005023
Mn	55	3	He	69.04	0.7907	49785.63	0.0114	0.005023
Fe	57	3	He	1247.032	0.665	40858.73	0.0005	0.003255
Fe	57	3	He	1262.676	0.6733	41760.98	0.0005	0.003255
Fe	57	3	He	1241.557	0.6621	41690.64	0.0005	0.003255
Co	59	3	He	0.646	0.0391	2400.26	0.0539	0.00425
Co	59	3	He	0.825	0.0487	3020.44	0.0539	0.00425
Co	59	3	He	0.835	0.0492	3100.46	0.0539	0.00425
Ni	60	3	He	11.561	0.1161	13116.31	0.0088	0.01412
Ni	60	3	He	11.226	0.1131	12575.94	0.0088	0.01412
Ni	60	3	He	11.467	0.1153	12796.08	0.0088	0.01412
Cu	63	3	He	3.139	0.0834	9423.29	0.0251	0.004537
Cu	63	3	He	2.939	0.0784	8712.89	0.0251	0.004537
Cu	63	3	He	3.072	0.0817	9073.14	0.0251	0.004537
Zn	66	3	He	15.299	0.0434	4900.96	0.0027	0.001642
Zn	66	3	He	17.078	0.0482	5361.19	0.0027	0.001642
Zn	66	3	He	16.34	0.0462	5131.12	0.0027	0.001642
As	75	3	He	4.739	0.0095	1074.05	0.0019	0.000463
As	75	3	He	4.246	0.0086	952.04	0.0019	0.000463
As	75	3	He	4.412	0.0089	986.04	0.0019	0.000463
Sr	88	3	He	333.956	2.9947	274626.56	0.009	0.001142
Sr	88	3	He	328.507	2.9458	272218.61	0.009	0.001142
Sr	88	3	He	328.631	2.947	275797.16	0.009	0.001142
Mo	98	3	He	2.016	0.0472	4330.83	0.0225	0.001842
Mo	98	3	He	2.096	0.049	4530.86	0.0225	0.001842
Mo	98	3	He	2.064	0.0483	4520.92	0.0225	0.001842
Ag	107	3	He	0.001	0.0005	50.00	0.048	0.0004774
Ag	107	3	He	-0.003	0.0003	30.00	0.048	0.0004774
Ag	107	3	He	0.001	0.0005	50.00	0.048	0.0004774
Cd	111	3	He	0.038	0.0002	20.00	0.0055	7.481E-06
Cd	111	3	He	0.018	0.0001	10.00	0.0055	7.481E-06
Cd	111	3	He	0.018	0.0001	10.00	0.0055	7.481E-06
Sn	120	3	He	0.131	0.0205	1880.20	0.0157	0.01844
Sn	120	3	He	0.314	0.0234	2160.24	0.0157	0.01844
Sn	120	3	He	0.112	0.0202	1890.20	0.0157	0.01844
Sb	121	3	He	0.055	0.001	90.00	0.0139	0.0002204
Sb	121	3	He	0.132	0.0021	190.01	0.0139	0.0002204
Sb	121	3	He	0.092	0.0015	140.01	0.0139	0.0002204
Ba	137	3	He	207.024	0.9392	86127.73	0.0045	0.001994
Ba	137	3	He	204.414	0.9274	85696.23	0.0045	0.001994
Ba	137	3	He	201.497	0.9142	85554.19	0.0045	0.001994
Tl	205	3	He	0	0.001	290.02	0.03	0.0009888
Tl	205	3	He	0.017	0.0015	430.03	0.03	0.0009888
Tl	205	3	He	0.016	0.0015	430.03	0.03	0.0009888
Pb	208	3	He	0.936	0.0377	5991.62	0.0392	0.001024
Pb	208	3	He	0.989	0.0398	6141.68	0.0392	0.001024
Pb	208	3	He	0.986	0.0397	6051.64	0.0392	0.001024
U	238	3	He	1.251	0.0551	16210.62	0.0439	0.000128
U	238	3	He	1.213	0.0534	15409.64	0.0439	0.000128
U	238	3	He	1.324	0.0583	17051.95	0.0439	0.000128
Sc	45	1	No Gas			3638449.63		
Sc	45	1	No Gas			3669650.26		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3630548.38		
Ge	72	1	No Gas			1671683.10		
Ge	72	1	No Gas			1694045.44		
Ge	72	1	No Gas			1666264.19		
Sc	45	2	H2			271590.31		
Sc	45	2	H2			274898.49		
Sc	45	2	H2			277777.69		
Ge	72	2	H2			194679.78		
Ge	72	2	H2			196070.45		
Ge	72	2	H2			195997.93		
In	115	2	H2			482198.39		
In	115	2	H2			486002.81		
In	115	2	H2			492509.72		
Sc	45	3	He			61439.61		
Sc	45	3	He			62022.06		
Sc	45	3	He			62965.62		
Ge	72	3	He			112980.12		
Ge	72	3	He			111155.34		
Ge	72	3	He			111015.99		
In	115	3	He			91719.40		
In	115	3	He			92424.71		
In	115	3	He			93601.93		
Tb	159	3	He			382004.76		
Tb	159	3	He			384271.79		
Tb	159	3	He			387463.82		
Bi	209	3	He			294426.30		
Bi	209	3	He			288492.11		
Bi	209	3	He			292546.95		

Quantitation Report

Data File Name	271SMPL.d
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Acq Time	2023-10-26 18:07:11
Sample Name	410-147788-B-4-A
Sample Type	Sample
Comment	I24
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

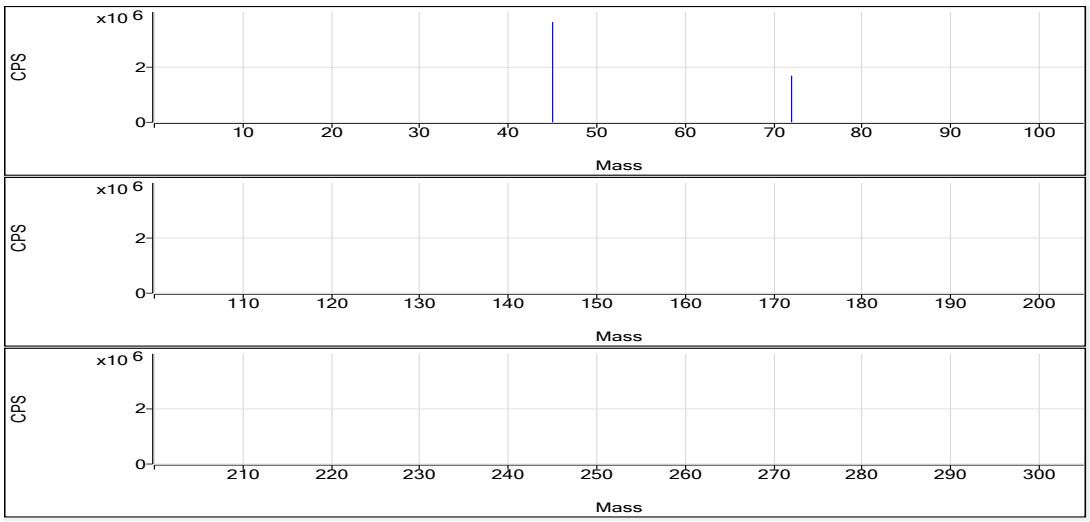
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.006	ppb	64.2	34.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.181	ppb	18.4	20.00	0.0001	Pulse	1.5000	3
Na	23	45	He	75033.030	ppb	2.6	15245551.86	243.9345	Analog	0.1000	3
Mg	24	45	He	26053.791	ppb	1.6	2568675.07	41.0950	Pulse	0.1000	3
Al	27	45	He	64.419	ppb	16.6	1923.66	0.0308	Pulse	0.1000	3
K	39	45	He	1948.047	ppb	2.8	148283.98	2.3725	Pulse	0.1000	3
Ca	44	45	He	94527.737	ppb	1.4	360595.80	5.7687	Pulse	0.1000	3
Ti	47	45	He	1.808	ppb	97.7	76.67	0.0012	Pulse	0.1000	3
V	51	45	He	1.446	ppb	3.9	2368.87	0.0379	Pulse	0.5000	3
Cr	52	45	He	0.789	ppb	11.9	4047.39	0.0648	Pulse	0.1000	3
Mn	55	45	He	9074.465	ppb	1.3	6455911.15	103.2703	Analog	0.1000	3
Fe	57	45	He	157.254	ppb	4.6	5421.27	0.0867	Pulse	0.1000	3
Co	59	45	He	1.916	ppb	2.9	6718.47	0.1075	Pulse	0.1000	3
Ni	60	72	He	3.456	ppb	4.5	4921.02	0.0446	Pulse	0.1000	3
Cu	63	72	He	7.903	ppb	2.3	22411.34	0.2031	Pulse	0.1000	3
Zn	66	72	He	8.813	ppb	7.4	2833.72	0.0257	Pulse	0.1000	3
As	75	72	He	2.905	ppb	9.3	662.69	0.0060	Pulse	0.5000	3
Sr	88	115	He	769.355	ppb	0.6	641454.58	6.8976	Pulse	0.1000	3
Mo	98	115	He	3.768	ppb	2.9	8059.29	0.0867	Pulse	0.1000	3
Ag	107	115	He	0.012	ppb	98.2	96.67	0.0010	Pulse	0.1000	3
Cd	111	115	He	15.640	ppb	2.0	7962.95	0.0856	Pulse	0.5000	3
Sn	120	115	He	-0.209	ppb	N/A	1410.14	0.0152	Pulse	0.1000	3
Sb	121	115	He	0.755	ppb	6.5	996.74	0.0107	Pulse	0.1000	3
Ba	137	115	He	95.967	ppb	2.4	40583.90	0.4364	Pulse	0.1000	3
Tl	205	209	He	0.092	ppb	17.5	1086.76	0.0038	Pulse	0.1000	3
Pb	208	209	He	1.039	ppb	0.6	12106.00	0.0418	Pulse	0.1000	3
U	238	209	He	0.330	ppb	2.7	4244.17	0.0146	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3605967.55	0.4	100.9	Pulse	0.1000	3
No Gas	Ge	72	1679204.09	0.0	103.2	Pulse	0.1000	3
H2	Sc	45	275595.32	1.4	105.4	Pulse	0.1000	3
H2	Ge	72	195524.41	1.7	104.2	Pulse	0.1000	3
H2	In	115	486586.07	1.2	103.2	Pulse	0.1000	3
He	Sc	45	62517.49	1.8	103.5	Pulse	0.1000	3
He	Ge	72	110330.83	0.1	106.5	Pulse	0.1000	3
He	In	115	92996.88	0.5	102.9	Pulse	0.1000	3
He	Tb	159	386637.48	0.2	102.7	Pulse	0.1000	3
He	Bi	209	289912.32	0.8	101.2	Pulse	0.1000	3

No Gas



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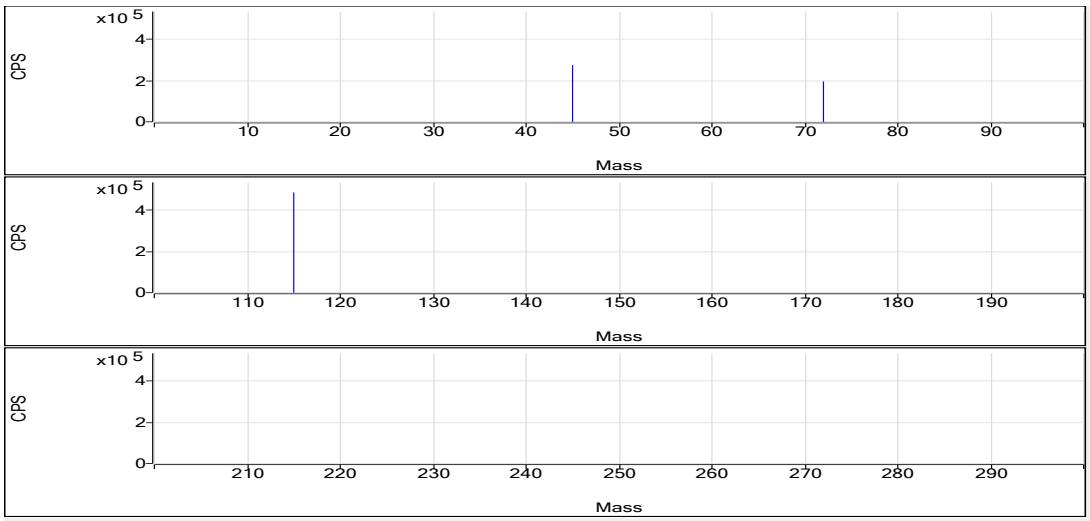
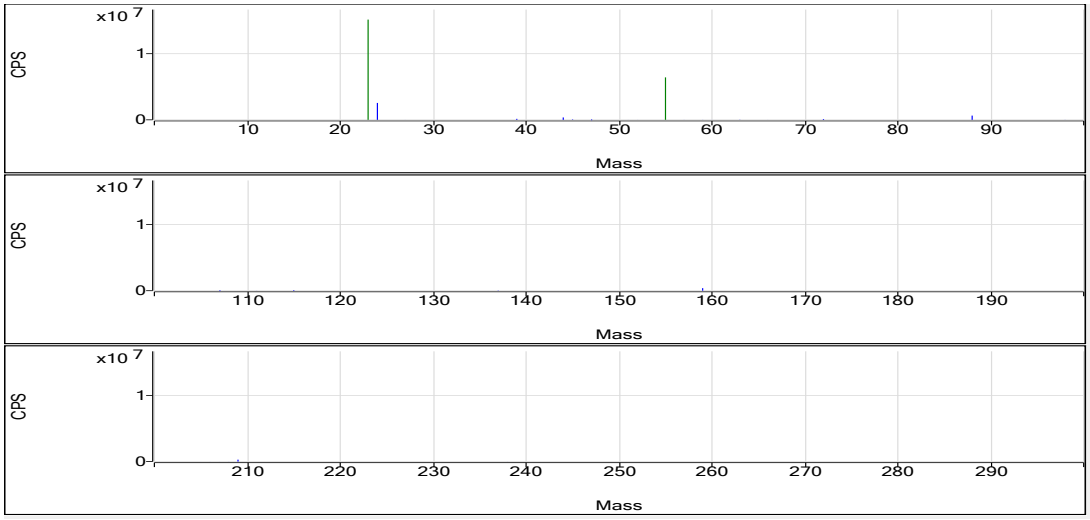


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.003	0	30.00	0.0004	7.085E-06
Be	9	1	No Gas	0.011	0	40.00	0.0004	7.085E-06
Be	9	1	No Gas	0.005	0	32.00	0.0004	7.085E-06
Se	78	2	H2	0.184	0.0001	20.00	0.0004	2.372E-05
Se	78	2	H2	0.146	0.0001	17.33	0.0004	2.372E-05
Se	78	2	H2	0.212	0.0001	22.67	0.0004	2.372E-05
Na	23	3	He	77246.506	251.1157	15378097.27	0.0032	0.5042
Na	23	3	He	73492.851	238.9377	15097748.53	0.0032	0.5042
Na	23	3	He	74359.732	241.7501	15260809.77	0.0032	0.5042
Mg	24	3	He	26528.013	41.8429	2562424.18	0.0016	0.002702
Mg	24	3	He	25726.369	40.5786	2564038.09	0.0016	0.002702
Mg	24	3	He	25906.992	40.8635	2579562.93	0.0016	0.002702
Al	27	3	He	76.177	0.0361	2210.61	0.0004	0.00193
Al	27	3	He	55.333	0.0267	1690.17	0.0004	0.00193
Al	27	3	He	61.748	0.0296	1870.19	0.0004	0.00193
K	39	3	He	2008.799	2.4384	149323.24	0.0011	0.2621
K	39	3	He	1930.524	2.3536	148714.65	0.0011	0.2621
K	39	3	He	1904.818	2.3257	146814.06	0.0011	0.2621
Ca	44	3	He	95857.442	5.8498	358238.67	0.0001	0.003476
Ca	44	3	He	94431.405	5.7629	364137.81	0.0001	0.003476
Ca	44	3	He	93294.364	5.6935	359410.93	0.0001	0.003476
Ti	47	3	He	3.695	0.0021	130.01	0.0005	0.000385
Ti	47	3	He	0.191	0.0005	30.00	0.0005	0.000385
Ti	47	3	He	1.539	0.0011	70.00	0.0005	0.000385
V	51	3	He	1.449	0.038	2324.20	0.0212	0.007263
V	51	3	He	1.502	0.0391	2468.22	0.0212	0.007263
V	51	3	He	1.388	0.0367	2314.20	0.0212	0.007263
Cr	52	3	He	0.897	0.0678	4150.75	0.0278	0.04283
Cr	52	3	He	0.742	0.0635	4010.77	0.0278	0.04283
Cr	52	3	He	0.727	0.0631	3980.66	0.0278	0.04283
Mn	55	3	He	9110.934	103.6853	6349596.78	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	8947.167	101.8217	6433806.15	0.0114	0.005023
Mn	55	3	He	9165.293	104.3039	6584330.53	0.0114	0.005023
Fe	57	3	He	155.143	0.0856	5241.19	0.0005	0.003255
Fe	57	3	He	151.366	0.0836	5281.23	0.0005	0.003255
Fe	57	3	He	165.254	0.091	5741.40	0.0005	0.003255
Co	59	3	He	1.926	0.108	6611.75	0.0539	0.00425
Co	59	3	He	1.967	0.1102	6961.87	0.0539	0.00425
Co	59	3	He	1.857	0.1043	6581.79	0.0539	0.00425
Ni	60	3	He	3.472	0.0447	4940.98	0.0088	0.01412
Ni	60	3	He	3.601	0.0459	5061.08	0.0088	0.01412
Ni	60	3	He	3.294	0.0432	4760.99	0.0088	0.01412
Cu	63	3	He	7.812	0.2008	22177.56	0.0251	0.004537
Cu	63	3	He	8.113	0.2084	22988.92	0.0251	0.004537
Cu	63	3	He	7.783	0.2001	22067.54	0.0251	0.004537
Zn	66	3	He	8.628	0.0252	2780.38	0.0027	0.001642
Zn	66	3	He	9.535	0.0277	3050.43	0.0027	0.001642
Zn	66	3	He	8.275	0.0242	2670.35	0.0027	0.001642
As	75	3	He	2.88	0.006	658.02	0.0019	0.000463
As	75	3	He	3.188	0.0065	722.02	0.0019	0.000463
As	75	3	He	2.647	0.0055	608.02	0.0019	0.000463
Sr	88	3	He	764.828	6.857	638003.39	0.009	0.001142
Sr	88	3	He	769.697	6.9006	638695.58	0.009	0.001142
Sr	88	3	He	773.539	6.9351	647664.76	0.009	0.001142
Mo	98	3	He	3.648	0.084	7812.49	0.0225	0.001842
Mo	98	3	He	3.793	0.0872	8072.62	0.0225	0.001842
Mo	98	3	He	3.863	0.0888	8292.76	0.0225	0.001842
Ag	107	3	He	0.021	0.0015	140.01	0.048	0.0004774
Ag	107	3	He	0.015	0.0012	110.00	0.048	0.0004774
Ag	107	3	He	-0.001	0.0004	40.00	0.048	0.0004774
Cd	111	3	He	15.352	0.084	7820.21	0.0055	7.481E-06
Cd	111	3	He	15.603	0.0854	7906.25	0.0055	7.481E-06
Cd	111	3	He	15.964	0.0874	8162.39	0.0055	7.481E-06
Sn	120	3	He	0.044	0.0191	1780.20	0.0157	0.01844
Sn	120	3	He	-0.369	0.0126	1170.09	0.0157	0.01844
Sn	120	3	He	-0.301	0.0137	1280.12	0.0157	0.01844
Sb	121	3	He	0.703	0.01	930.06	0.0139	0.0002204
Sb	121	3	He	0.8	0.0113	1050.08	0.0139	0.0002204
Sb	121	3	He	0.762	0.0108	1010.07	0.0139	0.0002204
Ba	137	3	He	95.093	0.4325	40239.66	0.0045	0.001994
Ba	137	3	He	98.565	0.4482	41483.33	0.0045	0.001994
Ba	137	3	He	94.241	0.4286	40028.70	0.0045	0.001994
Tl	205	3	He	0.088	0.0036	1060.09	0.03	0.0009888
Tl	205	3	He	0.11	0.0043	1230.11	0.03	0.0009888
Tl	205	3	He	0.078	0.0033	970.08	0.03	0.0009888
Pb	208	3	He	1.046	0.042	6641.93	0.0392	0.001024
Pb	208	3	He	1.036	0.0416	6431.84	0.0392	0.001024
Pb	208	3	He	1.034	0.0416	6511.84	0.0392	0.001024
U	238	3	He	0.325	0.0144	4190.81	0.0439	0.000128
U	238	3	He	0.326	0.0144	4150.82	0.0439	0.000128
U	238	3	He	0.341	0.0151	4390.89	0.0439	0.000128
Sc	45	1	No Gas			3617578.07		
Sc	45	1	No Gas			3590124.95		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3610199.63		
Ge	72	1	No Gas			1679792.32		
Ge	72	1	No Gas			1678376.69		
Ge	72	1	No Gas			1679443.26		
Sc	45	2	H2			271157.59		
Sc	45	2	H2			278533.39		
Sc	45	2	H2			277094.98		
Ge	72	2	H2			192145.35		
Ge	72	2	H2			198815.60		
Ge	72	2	H2			195612.28		
In	115	2	H2			483516.01		
In	115	2	H2			493145.58		
In	115	2	H2			483096.63		
Sc	45	3	He			61239.10		
Sc	45	3	He			63186.98		
Sc	45	3	He			63126.39		
Ge	72	3	He			110421.43		
Ge	72	3	He			110301.03		
Ge	72	3	He			110270.02		
In	115	3	He			93058.37		
In	115	3	He			92565.36		
In	115	3	He			93399.92		
Tb	159	3	He			386994.68		
Tb	159	3	He			387354.25		
Tb	159	3	He			385563.51		
Bi	209	3	He			291435.93		
Bi	209	3	He			287294.62		
Bi	209	3	He			291006.42		

Quantitation Report

Data File Name	272SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23J26A00.b
Acq Time	2023-10-26 18:09:12
Sample Name	410-147788-B-1-A
Sample Type	Sample
Comment	I24
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

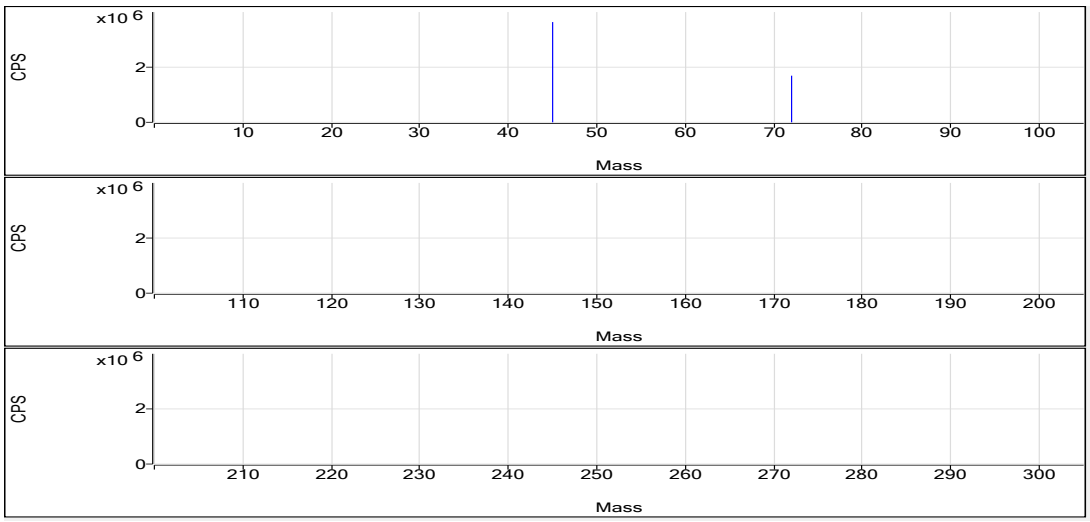
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.099	ppb	2.5	162.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.658	ppb	5.1	60.67	0.0003	Pulse	1.5000	3
Na	23	45	He	43080.329	ppb	1.4	8789137.58	140.2700	Analog	0.1000	3
Mg	24	45	He	29207.427	ppb	0.9	2886725.79	46.0689	Pulse	0.1000	3
Al	27	45	He	1147.418	ppb	1.7	32373.82	0.5166	Pulse	0.1000	3
K	39	45	He	1746.590	ppb	0.2	134996.84	2.1543	Pulse	0.1000	3
Ca	44	45	He	89810.117	ppb	2.2	343420.45	5.4810	Pulse	0.1000	3
Ti	47	45	He	33.244	ppb	26.7	1003.63	0.0160	Pulse	0.1000	3
V	51	45	He	4.869	ppb	3.0	6914.34	0.1104	Pulse	0.5000	3
Cr	52	45	He	4.004	ppb	2.6	9663.51	0.1542	Pulse	0.1000	3
Mn	55	45	He	213.821	ppb	1.5	152778.13	2.4383	Pulse	0.1000	3
Fe	57	45	He	1459.324	ppb	0.1	48732.80	0.7777	Pulse	0.1000	3
Co	59	45	He	1.289	ppb	2.8	4617.56	0.0737	Pulse	0.1000	3
Ni	60	72	He	2.196	ppb	10.7	3700.60	0.0335	Pulse	0.1000	3
Cu	63	72	He	1.401	ppb	5.4	4390.81	0.0397	Pulse	0.1000	3
Zn	66	72	He	6.044	ppb	9.1	2003.54	0.0181	Pulse	0.1000	3
As	75	72	He	2.097	ppb	0.8	493.34	0.0045	Pulse	0.5000	3
Sr	88	115	He	301.667	ppb	2.4	253341.46	2.7053	Pulse	0.1000	3
Mo	98	115	He	8.381	ppb	4.7	17838.42	0.1905	Pulse	0.1000	3
Ag	107	115	He	-0.004	ppb	N/A	26.67	0.0003	Pulse	0.1000	3
Cd	111	115	He	0.023	ppb	42.2	12.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.134	ppb	N/A	1530.14	0.0163	Pulse	0.1000	3
Sb	121	115	He	0.110	ppb	29.4	163.34	0.0017	Pulse	0.1000	3
Ba	137	115	He	163.286	ppb	1.4	69417.84	0.7412	Pulse	0.1000	3
Tl	205	209	He	0.010	ppb	55.2	373.36	0.0013	Pulse	0.1000	3
Pb	208	209	He	1.346	ppb	0.4	15497.49	0.0538	Pulse	0.1000	3
U	238	209	He	3.951	ppb	1.5	49997.78	0.1736	Pulse	0.1000	3

ISTD Table:

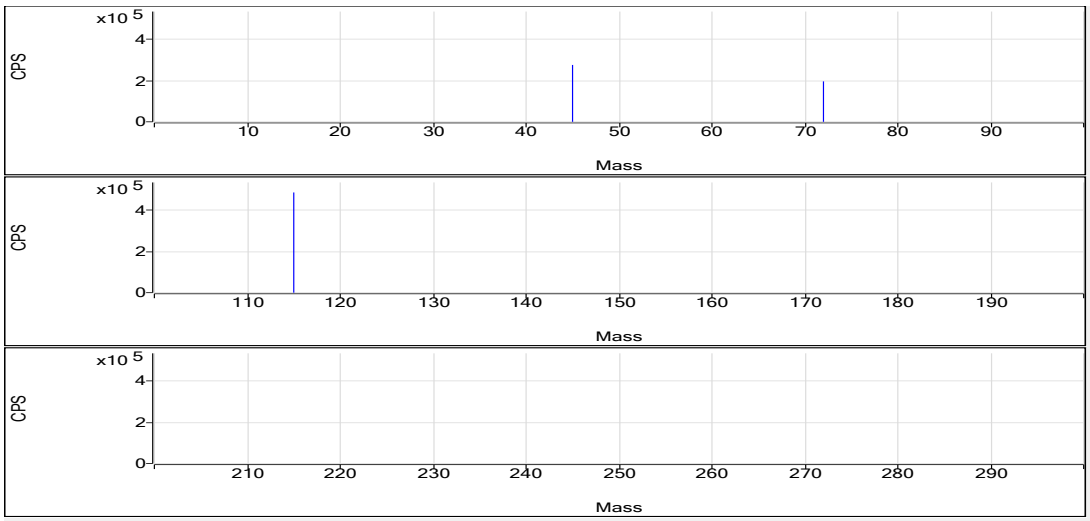
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3605646.51	0.8	100.9	Pulse	0.1000	3
No Gas	Ge	72	1676671.54	0.8	103.0	Pulse	0.1000	3
H2	Sc	45	275132.48	1.4	105.2	Pulse	0.1000	3
H2	Ge	72	195572.04	2.1	104.2	Pulse	0.1000	3
H2	In	115	484855.62	1.0	102.8	Pulse	0.1000	3
He	Sc	45	62664.63	1.0	103.7	Pulse	0.1000	3
He	Ge	72	110508.65	0.4	106.7	Pulse	0.1000	3
He	In	115	93663.58	1.0	103.6	Pulse	0.1000	3
He	Tb	159	386634.01	1.1	102.7	Pulse	0.1000	3
He	Bi	209	287976.17	0.9	100.5	Pulse	0.1000	3

No Gas

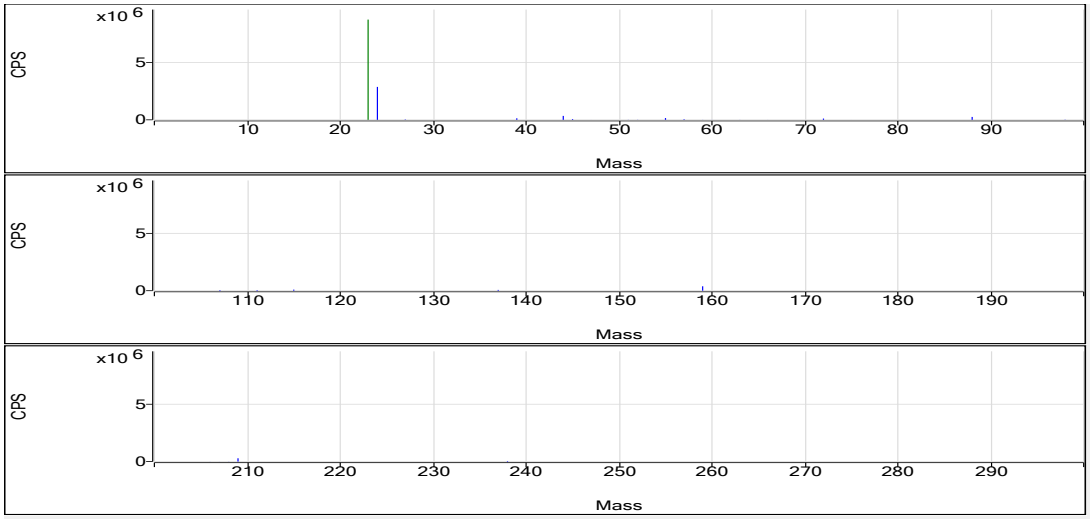


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.102	0	166.00	0.0004	7.085E-06
Be	9	1	No Gas	0.097	0	158.00	0.0004	7.085E-06
Be	9	1	No Gas	0.099	0	164.00	0.0004	7.085E-06
Se	78	2	H2	0.659	0.0003	59.33	0.0004	2.372E-05
Se	78	2	H2	0.69	0.0003	64.00	0.0004	2.372E-05
Se	78	2	H2	0.624	0.0003	58.67	0.0004	2.372E-05
Na	23	3	He	42411.417	138.0999	8742699.24	0.0032	0.5042
Na	23	3	He	43199.439	140.6565	8809999.87	0.0032	0.5042
Na	23	3	He	43630.132	142.0538	8814713.62	0.0032	0.5042
Mg	24	3	He	28910.451	45.6005	2886837.14	0.0016	0.002702
Mg	24	3	He	29300.694	46.216	2894735.89	0.0016	0.002702
Mg	24	3	He	29411.135	46.3902	2878604.33	0.0016	0.002702
Al	27	3	He	1167.732	0.5257	33280.42	0.0004	0.00193
Al	27	3	He	1127.794	0.5078	31805.03	0.0004	0.00193
Al	27	3	He	1146.728	0.5163	32036.02	0.0004	0.00193
K	39	3	He	1743.154	2.1506	136146.76	0.0011	0.2621
K	39	3	He	1746.464	2.1542	134925.75	0.0011	0.2621
K	39	3	He	1750.153	2.1582	133918.01	0.0011	0.2621
Ca	44	3	He	87479.174	5.3388	337986.56	0.0001	0.003476
Ca	44	3	He	91039.614	5.556	347999.06	0.0001	0.003476
Ca	44	3	He	90911.562	5.5482	344275.74	0.0001	0.003476
Ti	47	3	He	26.721	0.013	820.05	0.0005	0.000385
Ti	47	3	He	43.334	0.0208	1300.78	0.0005	0.000385
Ti	47	3	He	29.677	0.0143	890.07	0.0005	0.000385
V	51	3	He	4.71	0.107	6773.60	0.0212	0.007263
V	51	3	He	4.992	0.113	7075.75	0.0212	0.007263
V	51	3	He	4.904	0.1111	6893.66	0.0212	0.007263
Cr	52	3	He	3.965	0.1531	9693.59	0.0278	0.04283
Cr	52	3	He	4.122	0.1575	9863.62	0.0278	0.04283
Cr	52	3	He	3.926	0.152	9433.32	0.0278	0.04283
Mn	55	3	He	211.302	2.4096	152544.08	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	212.749	2.4261	151956.03	0.0114	0.005023
Mn	55	3	He	217.412	2.4791	153834.29	0.0114	0.005023
Fe	57	3	He	1458.776	0.7774	49214.28	0.0005	0.003255
Fe	57	3	He	1457.893	0.7769	48662.37	0.0005	0.003255
Fe	57	3	He	1461.302	0.7787	48321.75	0.0005	0.003255
Co	59	3	He	1.285	0.0735	4650.92	0.0539	0.00425
Co	59	3	He	1.326	0.0757	4740.93	0.0539	0.00425
Co	59	3	He	1.256	0.0719	4460.82	0.0539	0.00425
Ni	60	3	He	1.929	0.0311	3450.53	0.0088	0.01412
Ni	60	3	He	2.368	0.035	3850.66	0.0088	0.01412
Ni	60	3	He	2.291	0.0343	3800.61	0.0088	0.01412
Cu	63	3	He	1.356	0.0386	4280.76	0.0251	0.004537
Cu	63	3	He	1.488	0.0419	4610.92	0.0251	0.004537
Cu	63	3	He	1.358	0.0387	4280.76	0.0251	0.004537
Zn	66	3	He	5.517	0.0167	1850.17	0.0027	0.001642
Zn	66	3	He	5.998	0.018	1980.20	0.0027	0.001642
Zn	66	3	He	6.617	0.0197	2180.24	0.0027	0.001642
As	75	3	He	2.103	0.0045	496.01	0.0019	0.000463
As	75	3	He	2.111	0.0045	494.01	0.0019	0.000463
As	75	3	He	2.077	0.0044	490.01	0.0019	0.000463
Sr	88	3	He	294.116	2.6376	249480.04	0.009	0.001142
Sr	88	3	He	302.216	2.7102	254133.32	0.009	0.001142
Sr	88	3	He	308.67	2.768	256411.03	0.009	0.001142
Mo	98	3	He	7.978	0.1814	17161.06	0.0225	0.001842
Mo	98	3	He	8.399	0.1909	17901.74	0.0225	0.001842
Mo	98	3	He	8.767	0.1992	18452.47	0.0225	0.001842
Ag	107	3	He	-0.008	0.0001	10.00	0.048	0.0004774
Ag	107	3	He	-0.001	0.0004	40.00	0.048	0.0004774
Ag	107	3	He	-0.003	0.0003	30.00	0.048	0.0004774
Cd	111	3	He	0.014	0.0001	8.00	0.0055	7.481E-06
Cd	111	3	He	0.034	0.0002	18.00	0.0055	7.481E-06
Cd	111	3	He	0.022	0.0001	12.00	0.0055	7.481E-06
Sn	120	3	He	-0.218	0.015	1420.12	0.0157	0.01844
Sn	120	3	He	-0.101	0.0169	1580.14	0.0157	0.01844
Sn	120	3	He	-0.081	0.0172	1590.16	0.0157	0.01844
Sb	121	3	He	0.075	0.0013	120.00	0.0139	0.0002204
Sb	121	3	He	0.115	0.0018	170.01	0.0139	0.0002204
Sb	121	3	He	0.139	0.0022	200.01	0.0139	0.0002204
Ba	137	3	He	163.172	0.7407	70057.74	0.0045	0.001994
Ba	137	3	He	161.022	0.7309	68539.83	0.0045	0.001994
Ba	137	3	He	165.665	0.752	69655.95	0.0045	0.001994
Tl	205	3	He	0.007	0.0012	340.02	0.03	0.0009888
Tl	205	3	He	0.007	0.0012	350.02	0.03	0.0009888
Tl	205	3	He	0.017	0.0015	430.03	0.03	0.0009888
Pb	208	3	He	1.352	0.0541	8102.77	0.0392	0.001024
Pb	208	3	He	1.342	0.0537	8292.95	0.0392	0.001024
Pb	208	3	He	1.344	0.0537	8563.06	0.0392	0.001024
U	238	3	He	4.001	0.1758	50137.64	0.0439	0.000128
U	238	3	He	3.885	0.1707	49616.25	0.0439	0.000128
U	238	3	He	3.968	0.1744	50239.44	0.0439	0.000128
Sc	45	1	No Gas			3605785.88		
Sc	45	1	No Gas			3577320.88		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3633832.76		
Ge	72	1	No Gas			1667718.88		
Ge	72	1	No Gas			1669739.35		
Ge	72	1	No Gas			1692556.38		
Sc	45	2	H2			270889.47		
Sc	45	2	H2			276494.72		
Sc	45	2	H2			278013.26		
Ge	72	2	H2			190819.14		
Ge	72	2	H2			197284.92		
Ge	72	2	H2			198612.07		
In	115	2	H2			485188.12		
In	115	2	H2			489686.59		
In	115	2	H2			479692.14		
Sc	45	3	He			63307.07		
Sc	45	3	He			62634.87		
Sc	45	3	He			62051.95		
Ge	72	3	He			110834.53		
Ge	72	3	He			109988.06		
Ge	72	3	He			110703.35		
In	115	3	He			94598.42		
In	115	3	He			93782.51		
In	115	3	He			92645.61		
Tb	159	3	He			383310.78		
Tb	159	3	He			385400.19		
Tb	159	3	He			391191.05		
Bi	209	3	He			285172.24		
Bi	209	3	He			290621.34		
Bi	209	3	He			288134.92		

Quantitation Report

Data File Name	274_CCV.d
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Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

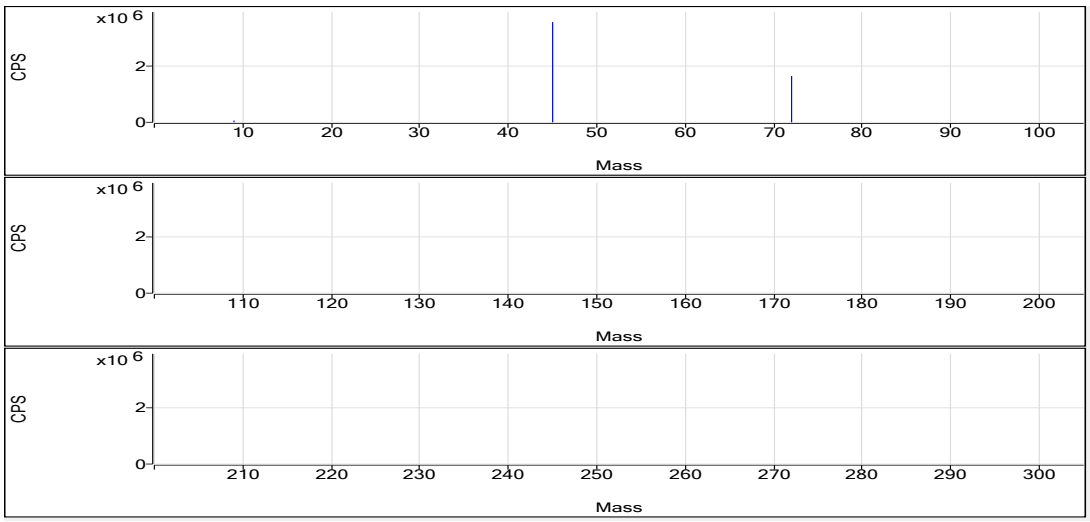
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	45.194	ppb	0.1	61849.12	0.0173	Pulse	0.5000	3
Se	78	72	H2	52.574	ppb	2.3	4410.90	0.0229	Pulse	1.5000	3
Na	23	45	He	5171.148	ppb	0.7	1081437.38	17.2810	Pulse	0.1000	3
Mg	24	45	He	4992.765	ppb	0.4	492966.10	7.8773	Pulse	0.1000	3
Al	27	45	He	5077.727	ppb	1.2	142647.83	2.2795	Pulse	0.1000	3
K	39	45	He	5217.998	ppb	0.8	370172.40	5.9151	Pulse	0.1000	3
Ca	44	45	He	5039.456	ppb	3.2	19450.15	0.3108	Pulse	0.1000	3
Ti	47	45	He	5132.841	ppb	1.6	151110.71	2.4147	Pulse	0.1000	3
V	51	45	He	512.142	ppb	0.3	679104.19	10.8516	Pulse	0.5000	3
Cr	52	45	He	512.122	ppb	0.3	894148.22	14.2877	Pulse	0.1000	3
Mn	55	45	He	519.352	ppb	0.5	370170.86	5.9151	Pulse	0.1000	3
Fe	57	45	He	5129.929	ppb	0.6	170573.12	2.7256	Pulse	0.1000	3
Co	59	45	He	513.712	ppb	0.2	1731816.80	27.6733	Pulse	0.1000	3
Ni	60	72	He	505.595	ppb	1.0	494511.47	4.4737	Pulse	0.1000	3
Cu	63	72	He	504.462	ppb	0.7	1401731.33	12.6812	Pulse	0.1000	3
Zn	66	72	He	503.601	ppb	0.4	152041.97	1.3755	Pulse	0.1000	3
As	75	72	He	511.956	ppb	0.3	108039.38	0.9774	Pulse	0.5000	3
Sr	88	115	He	51.652	ppb	2.1	43236.49	0.4641	Pulse	0.1000	3
Mo	98	115	He	49.566	ppb	1.0	104111.38	1.1176	Pulse	0.1000	3
Ag	107	115	He	49.204	ppb	2.2	219820.22	2.3600	Pulse	0.1000	3
Cd	111	115	He	49.013	ppb	2.4	24992.21	0.2683	Pulse	0.5000	3
Sn	120	115	He	49.645	ppb	1.8	74395.42	0.7986	Pulse	0.1000	3
Sb	121	115	He	49.752	ppb	1.2	64463.07	0.6920	Pulse	0.1000	3
Ba	137	115	He	496.019	ppb	2.5	209330.69	2.2475	Pulse	0.1000	3
Tl	205	209	He	50.745	ppb	1.4	445548.35	1.5241	Pulse	0.1000	3
Pb	208	209	He	51.191	ppb	1.2	587240.53	2.0086	Pulse	0.1000	3
U	238	209	He	50.114	ppb	1.6	643355.67	2.2007	Pulse	0.1000	3

ISTD Table:

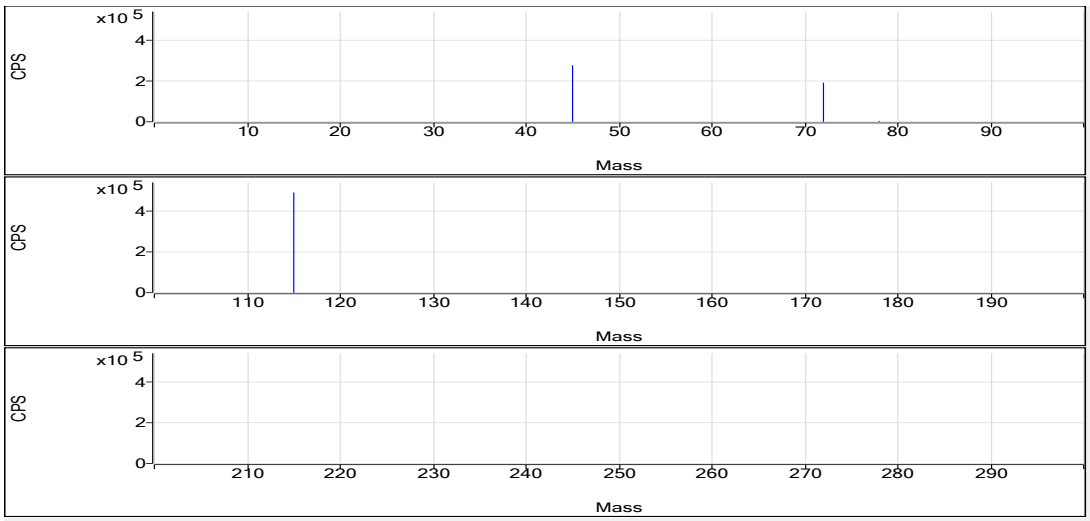
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3571217.65	0.7	99.9	Pulse	0.1000	3
No Gas	Ge	72	1646117.22	0.8	101.1	Pulse	0.1000	3
H2	Sc	45	278326.32	0.4	106.4	Pulse	0.1000	3
H2	Ge	72	192433.77	0.8	102.6	Pulse	0.1000	3
H2	In	115	493127.57	0.5	104.5	Pulse	0.1000	3
He	Sc	45	62581.14	0.5	103.6	Pulse	0.1000	3
He	Ge	72	110535.67	0.4	106.7	Pulse	0.1000	3
He	In	115	93159.79	1.2	103.1	Pulse	0.1000	3
He	Tb	159	389611.83	0.6	103.5	Pulse	0.1000	3
He	Bi	209	292384.29	1.7	102.0	Pulse	0.1000	3

No Gas

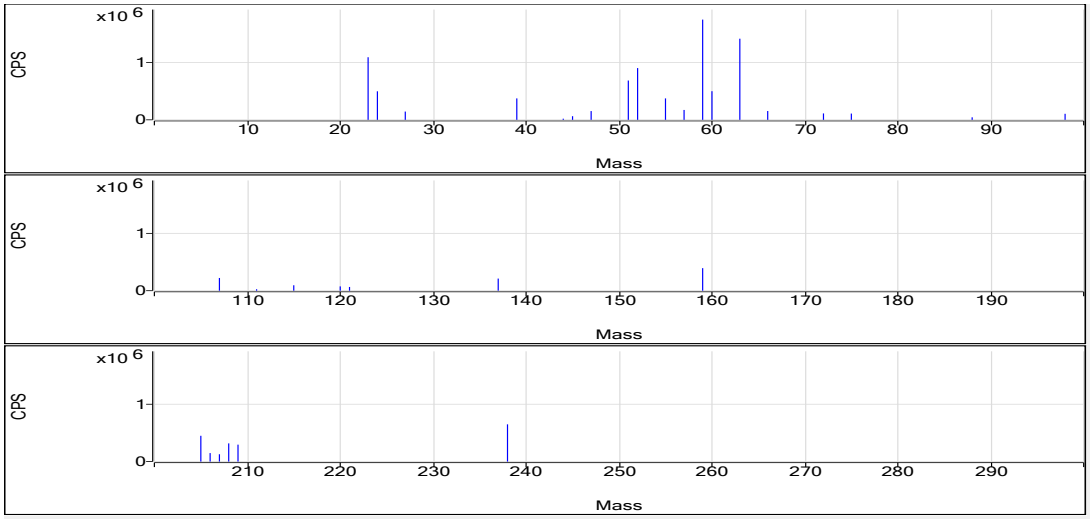


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	45.178	0.0173	62265.89	0.0004	7.085E-06
Be	9	1	No Gas	45.25	0.0173	61872.82	0.0004	7.085E-06
Be	9	1	No Gas	45.153	0.0173	61408.65	0.0004	7.085E-06
Se	78	2	H2	52.793	0.023	4436.69	0.0004	2.372E-05
Se	78	2	H2	51.251	0.0223	4331.99	0.0004	2.372E-05
Se	78	2	H2	53.678	0.0234	4464.03	0.0004	2.372E-05
Na	23	3	He	5213.629	17.4188	1084197.64	0.0032	0.5042
Na	23	3	He	5145.059	17.1963	1081578.03	0.0032	0.5042
Na	23	3	He	5154.756	17.2278	1078536.47	0.0032	0.5042
Mg	24	3	He	5011.802	7.9074	492178.27	0.0016	0.002702
Mg	24	3	He	4972.204	7.8449	493412.73	0.0016	0.002702
Mg	24	3	He	4994.289	7.8797	493307.30	0.0016	0.002702
Al	27	3	He	5141.47	2.3081	143660.55	0.0004	0.00193
Al	27	3	He	5068.004	2.2751	143094.88	0.0004	0.00193
Al	27	3	He	5023.708	2.2552	141188.06	0.0004	0.00193
K	39	3	He	5188.61	5.8832	366188.98	0.0011	0.2621
K	39	3	He	5198.305	5.8937	370690.58	0.0011	0.2621
K	39	3	He	5267.08	5.9682	373637.65	0.0011	0.2621
Ca	44	3	He	5204.611	0.3209	19974.15	0.0001	0.003476
Ca	44	3	He	4883.755	0.3013	18952.85	0.0001	0.003476
Ca	44	3	He	5030.001	0.3103	19423.44	0.0001	0.003476
Ti	47	3	He	5119.724	2.4085	149912.93	0.0005	0.000385
Ti	47	3	He	5057.651	2.3793	149649.03	0.0005	0.000385
Ti	47	3	He	5221.149	2.4562	153770.16	0.0005	0.000385
V	51	3	He	511.871	10.8459	675079.81	0.0212	0.007263
V	51	3	He	510.914	10.8256	680885.75	0.0212	0.007263
V	51	3	He	513.642	10.8834	681347.00	0.0212	0.007263
Cr	52	3	He	510.673	14.2473	886797.96	0.0278	0.04283
Cr	52	3	He	513.805	14.3345	901580.14	0.0278	0.04283
Cr	52	3	He	511.889	14.2812	894066.55	0.0278	0.04283
Mn	55	3	He	520.305	5.926	368850.27	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	516.324	5.8807	369869.88	0.0114	0.005023
Mn	55	3	He	521.428	5.9388	371792.42	0.0114	0.005023
Fe	57	3	He	5097.825	2.7085	168587.65	0.0005	0.003255
Fe	57	3	He	5157.674	2.7403	172353.61	0.0005	0.003255
Fe	57	3	He	5134.288	2.7279	170778.10	0.0005	0.003255
Co	59	3	He	514.138	27.6962	1723897.63	0.0539	0.00425
Co	59	3	He	512.612	27.6141	1736812.63	0.0539	0.00425
Co	59	3	He	514.384	27.7095	1734740.13	0.0539	0.00425
Ni	60	3	He	499.518	4.4201	487635.31	0.0088	0.01412
Ni	60	3	He	508.866	4.5026	496452.22	0.0088	0.01412
Ni	60	3	He	508.402	4.4985	499446.87	0.0088	0.01412
Cu	63	3	He	500.875	12.5911	1389069.98	0.0251	0.004537
Cu	63	3	He	507.375	12.7544	1406298.42	0.0251	0.004537
Cu	63	3	He	505.137	12.6982	1409825.60	0.0251	0.004537
Zn	66	3	He	504.241	1.3773	151941.81	0.0027	0.001642
Zn	66	3	He	505.394	1.3804	152203.43	0.0027	0.001642
Zn	66	3	He	501.168	1.3689	151980.66	0.0027	0.001642
As	75	3	He	510.184	0.974	107456.74	0.0019	0.000463
As	75	3	He	512.729	0.9789	107931.81	0.0019	0.000463
As	75	3	He	512.955	0.9793	108729.59	0.0019	0.000463
Sr	88	3	He	51.236	0.4604	43477.22	0.009	0.001142
Sr	88	3	He	50.827	0.4567	42303.55	0.009	0.001142
Sr	88	3	He	52.892	0.4753	43928.71	0.009	0.001142
Mo	98	3	He	48.993	1.1048	104322.23	0.0225	0.001842
Mo	98	3	He	49.702	1.1207	103799.82	0.0225	0.001842
Mo	98	3	He	50.002	1.1275	104212.09	0.0225	0.001842
Ag	107	3	He	48.005	2.3025	217428.14	0.048	0.0004774
Ag	107	3	He	49.531	2.3757	220035.72	0.048	0.0004774
Ag	107	3	He	50.074	2.4018	221996.81	0.048	0.0004774
Cd	111	3	He	47.682	0.261	24649.57	0.0055	7.481E-06
Cd	111	3	He	49.662	0.2719	25180.51	0.0055	7.481E-06
Cd	111	3	He	49.696	0.2721	25146.54	0.0055	7.481E-06
Sn	120	3	He	49.102	0.7901	74610.17	0.0157	0.01844
Sn	120	3	He	49.131	0.7906	73222.01	0.0157	0.01844
Sn	120	3	He	50.701	0.8152	75354.08	0.0157	0.01844
Sb	121	3	He	49.222	0.6846	64650.91	0.0139	0.0002204
Sb	121	3	He	49.638	0.6904	63947.23	0.0139	0.0002204
Sb	121	3	He	50.396	0.701	64791.06	0.0139	0.0002204
Ba	137	3	He	481.615	2.1823	206070.00	0.0045	0.001994
Ba	137	3	He	502.176	2.2753	210737.83	0.0045	0.001994
Ba	137	3	He	504.265	2.2848	211184.24	0.0045	0.001994
Tl	205	3	He	51.54	1.5479	444000.11	0.03	0.0009888
Tl	205	3	He	50.429	1.5146	445584.52	0.03	0.0009888
Tl	205	3	He	50.267	1.5097	447060.42	0.03	0.0009888
Pb	208	3	He	51.422	2.0176	309902.09	0.0392	0.001024
Pb	208	3	He	51.652	2.0267	319970.15	0.0392	0.001024
Pb	208	3	He	50.499	1.9815	312772.73	0.0392	0.001024
U	238	3	He	51.015	2.2403	642586.79	0.0439	0.000128
U	238	3	He	49.432	2.1708	638634.68	0.0439	0.000128
U	238	3	He	49.896	2.1911	648845.54	0.0439	0.000128
Sc	45	1	No Gas			3596507.13		
Sc	45	1	No Gas			3568139.63		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3549006.20		
Ge	72	1	No Gas			1657873.73		
Ge	72	1	No Gas			1648712.32		
Ge	72	1	No Gas			1631765.60		
Sc	45	2	H2			278612.98		
Sc	45	2	H2			279155.68		
Sc	45	2	H2			277210.31		
Ge	72	2	H2			192733.59		
Ge	72	2	H2			193839.37		
Ge	72	2	H2			190728.34		
In	115	2	H2			495040.85		
In	115	2	H2			493980.62		
In	115	2	H2			490361.24		
Sc	45	3	He			62243.02		
Sc	45	3	He			62895.90		
Sc	45	3	He			62604.49		
Ge	72	3	He			110321.63		
Ge	72	3	He			110259.66		
Ge	72	3	He			111025.73		
In	115	3	He			95012.02		
In	115	3	He			93189.75		
In	115	3	He			93018.45		
Tb	159	3	He			386968.28		
Tb	159	3	He			391401.60		
Tb	159	3	He			390465.62		
Bi	209	3	He			286834.62		
Bi	209	3	He			294197.14		
Bi	209	3	He			296121.11		

Quantitation Report

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Sample Name	CCB 4993845
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

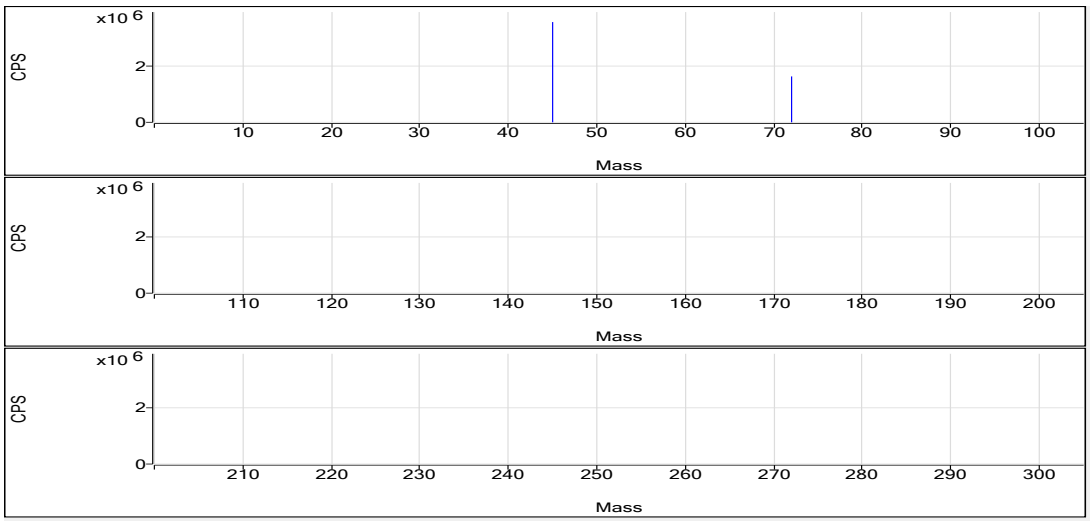
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.010	ppb	16.8	39.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.045	ppb	115.2	8.44	0.0000	Pulse	1.5000	3
Na	23	45	He	76.635	ppb	6.3	47215.66	0.7528	Pulse	0.1000	3
Mg	24	45	He	9.878	ppb	11.5	1146.75	0.0183	Pulse	0.1000	3
Al	27	45	He	3.991	ppb	30.8	233.34	0.0037	Pulse	0.1000	3
K	39	45	He	13.170	ppb	205.1	17334.13	0.2764	Pulse	0.1000	3
Ca	44	45	He	16.178	ppb	96.7	280.01	0.0045	Pulse	0.1000	3
Ti	47	45	He	2.118	ppb	40.0	86.67	0.0014	Pulse	0.1000	3
V	51	45	He	0.170	ppb	38.4	682.02	0.0109	Pulse	0.5000	3
Cr	52	45	He	0.143	ppb	144.3	2937.08	0.0468	Pulse	0.1000	3
Mn	55	45	He	2.394	ppb	9.8	2023.53	0.0323	Pulse	0.1000	3
Fe	57	45	He	14.799	ppb	13.5	696.71	0.0111	Pulse	0.1000	3
Co	59	45	He	0.094	ppb	13.0	583.37	0.0093	Pulse	0.1000	3
Ni	60	72	He	-0.182	ppb	N/A	1356.78	0.0125	Pulse	0.1000	3
Cu	63	72	He	0.119	ppb	45.1	816.72	0.0075	Pulse	0.1000	3
Zn	66	72	He	0.108	ppb	56.4	210.01	0.0019	Pulse	0.1000	3
As	75	72	He	0.134	ppb	47.3	78.00	0.0007	Pulse	0.5000	3
Sr	88	115	He	0.135	ppb	9.8	223.34	0.0024	Pulse	0.1000	3
Mo	98	115	He	0.063	ppb	12.5	310.02	0.0033	Pulse	0.1000	3
Ag	107	115	He	0.004	ppb	169.3	63.33	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.020	ppb	38.9	11.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.097	ppb	52.6	1893.53	0.0200	Pulse	0.1000	3
Sb	121	115	He	0.042	ppb	41.3	76.67	0.0008	Pulse	0.1000	3
Ba	137	115	He	0.228	ppb	53.2	286.68	0.0030	Pulse	0.1000	3
Tl	205	209	He	0.123	ppb	15.4	1363.46	0.0047	Pulse	0.1000	3
Pb	208	209	He	0.024	ppb	14.7	573.36	0.0020	Pulse	0.1000	3
U	238	209	He	0.036	ppb	11.2	496.69	0.0017	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3577008.70	0.1	100.1	Pulse	0.1000	3
No Gas	Ge	72	1637024.66	0.6	100.6	Pulse	0.1000	3
H2	Sc	45	279362.81	0.4	106.8	Pulse	0.1000	3
H2	Ge	72	195177.37	0.7	104.0	Pulse	0.1000	3
H2	In	115	493437.22	0.2	104.6	Pulse	0.1000	3
He	Sc	45	62718.15	0.4	103.8	Pulse	0.1000	3
He	Ge	72	108396.05	0.9	104.6	Pulse	0.1000	3
He	In	115	94825.54	0.3	104.9	Pulse	0.1000	3
He	Tb	159	385992.14	0.3	102.6	Pulse	0.1000	3
He	Bi	209	292163.90	0.2	101.9	Pulse	0.1000	3

No Gas



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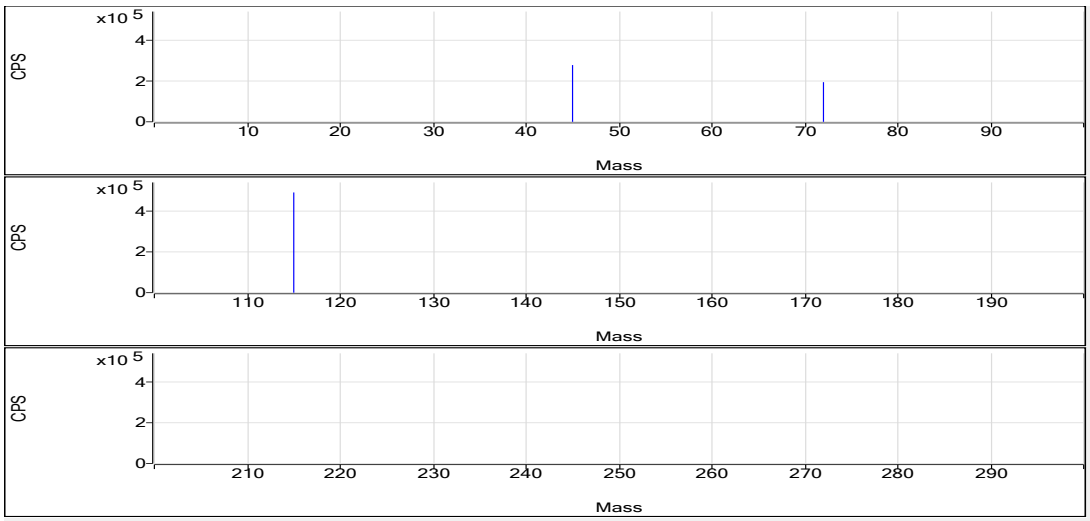
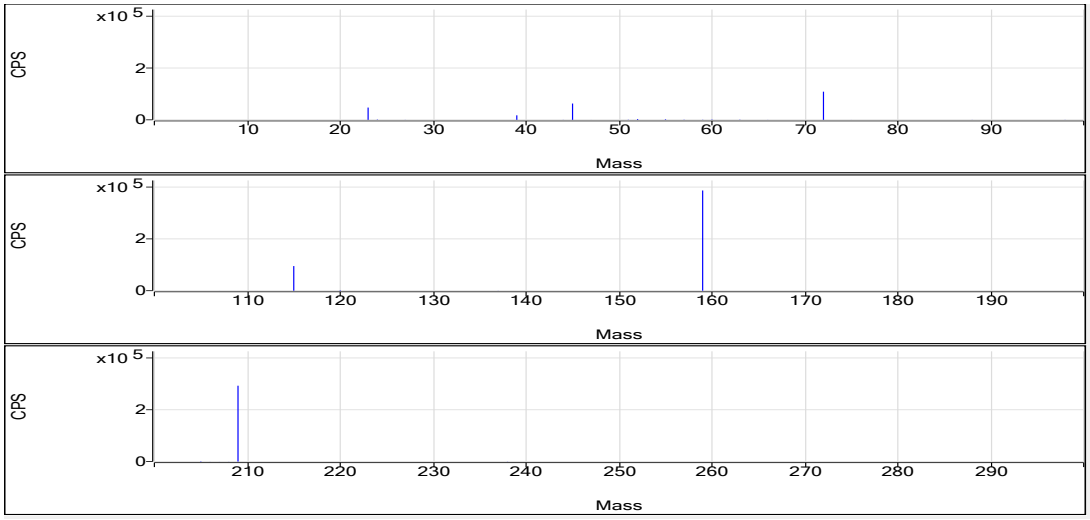


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.012	0	42.00	0.0004	7.085E-06
Be	9	1	No Gas	0.009	0	38.00	0.0004	7.085E-06
Be	9	1	No Gas	0.009	0	38.00	0.0004	7.085E-06
Se	78	2	H2	0.032	0	7.33	0.0004	2.372E-05
Se	78	2	H2	0.101	0.0001	13.33	0.0004	2.372E-05
Se	78	2	H2	0.001	0	4.67	0.0004	2.372E-05
Na	23	3	He	79.934	0.7635	47897.67	0.0032	0.5042
Na	23	3	He	71.12	0.7349	45911.69	0.0032	0.5042
Na	23	3	He	78.852	0.76	47837.62	0.0032	0.5042
Mg	24	3	He	11.022	0.0201	1260.09	0.0016	0.002702
Mg	24	3	He	8.74	0.0165	1030.07	0.0016	0.002702
Mg	24	3	He	9.871	0.0183	1150.09	0.0016	0.002702
Al	27	3	He	2.805	0.0032	200.01	0.0004	0.00193
Al	27	3	He	3.906	0.0037	230.01	0.0004	0.00193
Al	27	3	He	5.261	0.0043	270.01	0.0004	0.00193
K	39	3	He	43.091	0.3088	19373.39	0.0011	0.2621
K	39	3	He	5.817	0.2684	16769.99	0.0011	0.2621
K	39	3	He	-9.4	0.2519	15859.02	0.0011	0.2621
Ca	44	3	He	8.351	0.004	250.01	0.0001	0.003476
Ca	44	3	He	6	0.0038	240.01	0.0001	0.003476
Ca	44	3	He	34.183	0.0056	350.02	0.0001	0.003476
Ti	47	3	He	2.909	0.0018	110.00	0.0005	0.000385
Ti	47	3	He	1.223	0.001	60.00	0.0005	0.000385
Ti	47	3	He	2.221	0.0014	90.00	0.0005	0.000385
V	51	3	He	0.229	0.0121	760.03	0.0212	0.007263
V	51	3	He	0.1	0.0094	586.02	0.0212	0.007263
V	51	3	He	0.182	0.0111	700.02	0.0212	0.007263
Cr	52	3	He	0.266	0.0502	3150.45	0.0278	0.04283
Cr	52	3	He	-0.095	0.0402	2510.31	0.0278	0.04283
Cr	52	3	He	0.259	0.0501	3150.48	0.0278	0.04283
Mn	55	3	He	2.374	0.032	2010.20	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2.639	0.0351	2190.22	0.0114	0.005023
Mn	55	3	He	2.169	0.0297	1870.17	0.0114	0.005023
Fe	57	3	He	12.491	0.0099	620.04	0.0005	0.003255
Fe	57	3	He	15.886	0.0117	730.04	0.0005	0.003255
Fe	57	3	He	16.021	0.0118	740.05	0.0005	0.003255
Co	59	3	He	0.108	0.01	630.04	0.0539	0.00425
Co	59	3	He	0.085	0.0088	550.03	0.0539	0.00425
Co	59	3	He	0.089	0.0091	570.03	0.0539	0.00425
Ni	60	3	He	-0.229	0.0121	1300.11	0.0088	0.01412
Ni	60	3	He	-0.182	0.0125	1370.12	0.0088	0.01412
Ni	60	3	He	-0.135	0.0129	1400.11	0.0088	0.01412
Cu	63	3	He	0.16	0.0086	920.07	0.0251	0.004537
Cu	63	3	He	0.139	0.008	880.06	0.0251	0.004537
Cu	63	3	He	0.058	0.006	650.04	0.0251	0.004537
Zn	66	3	He	0.047	0.0018	190.01	0.0027	0.001642
Zn	66	3	He	0.168	0.0021	230.01	0.0027	0.001642
Zn	66	3	He	0.109	0.0019	210.01	0.0027	0.001642
As	75	3	He	0.099	0.0007	70.00	0.0019	0.000463
As	75	3	He	0.207	0.0009	94.00	0.0019	0.000463
As	75	3	He	0.096	0.0006	70.00	0.0019	0.000463
Sr	88	3	He	0.12	0.0022	210.01	0.009	0.001142
Sr	88	3	He	0.144	0.0024	230.01	0.009	0.001142
Sr	88	3	He	0.142	0.0024	230.01	0.009	0.001142
Mo	98	3	He	0.054	0.0031	290.01	0.0225	0.001842
Mo	98	3	He	0.068	0.0034	320.02	0.0225	0.001842
Mo	98	3	He	0.068	0.0034	320.02	0.0225	0.001842
Ag	107	3	He	0.005	0.0007	70.00	0.048	0.0004774
Ag	107	3	He	0.01	0.001	90.00	0.048	0.0004774
Ag	107	3	He	-0.003	0.0003	30.00	0.048	0.0004774
Cd	111	3	He	0.018	0.0001	10.00	0.0055	7.481E-06
Cd	111	3	He	0.014	0.0001	8.00	0.0055	7.481E-06
Cd	111	3	He	0.029	0.0002	16.00	0.0055	7.481E-06
Sn	120	3	He	0.09	0.0199	1880.19	0.0157	0.01844
Sn	120	3	He	0.05	0.0192	1820.19	0.0157	0.01844
Sn	120	3	He	0.151	0.0208	1980.21	0.0157	0.01844
Sb	121	3	He	0.022	0.0005	50.00	0.0139	0.0002204
Sb	121	3	He	0.053	0.001	90.00	0.0139	0.0002204
Sb	121	3	He	0.052	0.0009	90.00	0.0139	0.0002204
Ba	137	3	He	0.26	0.0032	300.02	0.0045	0.001994
Ba	137	3	He	0.33	0.0035	330.02	0.0045	0.001994
Ba	137	3	He	0.094	0.0024	230.01	0.0045	0.001994
Tl	205	3	He	0.126	0.0048	1400.13	0.03	0.0009888
Tl	205	3	He	0.102	0.0041	1180.09	0.03	0.0009888
Tl	205	3	He	0.139	0.0052	1510.16	0.03	0.0009888
Pb	208	3	He	0.027	0.0021	340.02	0.0392	0.001024
Pb	208	3	He	0.025	0.002	280.02	0.0392	0.001024
Pb	208	3	He	0.02	0.0018	210.01	0.0392	0.001024
U	238	3	He	0.032	0.0015	450.02	0.0439	0.000128
U	238	3	He	0.04	0.0019	550.03	0.0439	0.000128
U	238	3	He	0.035	0.0017	490.03	0.0439	0.000128
Sc	45	1	No Gas			3573064.32		
Sc	45	1	No Gas			3576084.01		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3581877.76		
Ge	72	1	No Gas			1638111.38		
Ge	72	1	No Gas			1627312.63		
Ge	72	1	No Gas			1645649.98		
Sc	45	2	H2			278038.59		
Sc	45	2	H2			279655.21		
Sc	45	2	H2			280394.64		
Ge	72	2	H2			194976.54		
Ge	72	2	H2			196615.90		
Ge	72	2	H2			193939.67		
In	115	2	H2			494401.63		
In	115	2	H2			492907.30		
In	115	2	H2			493002.73		
Sc	45	3	He			62735.01		
Sc	45	3	He			62473.70		
Sc	45	3	He			62945.74		
Ge	72	3	He			107428.96		
Ge	72	3	He			109474.38		
Ge	72	3	He			108284.82		
In	115	3	He			94688.53		
In	115	3	He			94690.64		
In	115	3	He			95141.78		
Tb	159	3	He			387336.95		
Tb	159	3	He			385302.57		
Tb	159	3	He			385336.91		
Bi	209	3	He			292762.55		
Bi	209	3	He			291372.73		
Bi	209	3	He			292356.42		

Quantitation Report

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Acq Time	2023-10-26 18:17:13
Sample Name	410-147788-B-2-A
Sample Type	Sample
Comment	I24
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

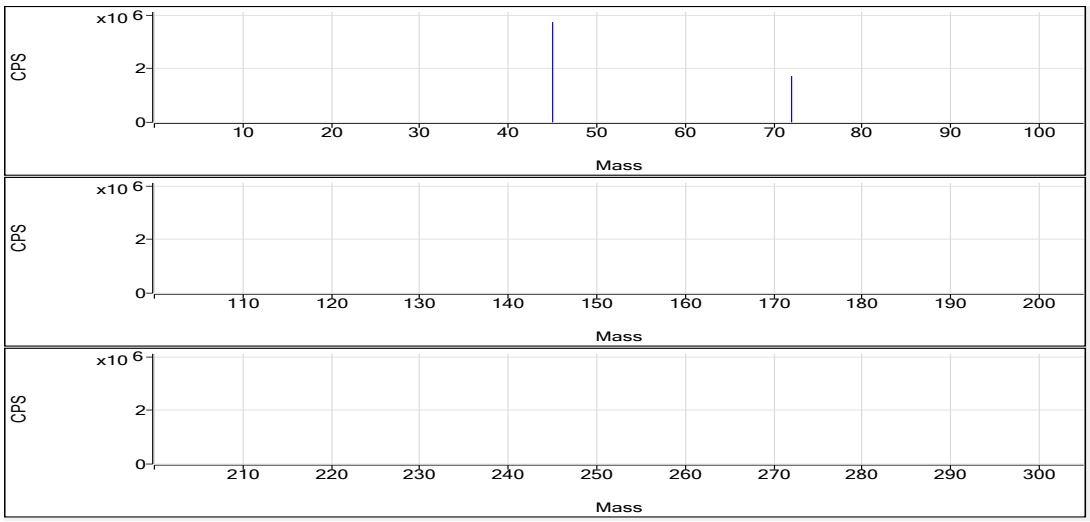
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.010	ppb	32.0	40.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.154	ppb	16.5	18.44	0.0001	Pulse	1.5000	3
Na	23	45	He	67931.742	ppb	3.3	14329872.29	220.8957	Analog	0.1000	3
Mg	24	45	He	11394.578	ppb	2.5	1166191.54	17.9743	Pulse	0.1000	3
Al	27	45	He	10.921	ppb	8.0	443.35	0.0068	Pulse	0.1000	3
K	39	45	He	1944.936	ppb	4.5	153679.44	2.3692	Pulse	0.1000	3
Ca	44	45	He	52743.911	ppb	2.1	208958.31	3.2203	Pulse	0.1000	3
Ti	47	45	He	0.166	ppb	686.6	30.00	0.0005	Pulse	0.1000	3
V	51	45	He	4.727	ppb	2.0	6965.70	0.1073	Pulse	0.5000	3
Cr	52	45	He	1.079	ppb	3.8	4727.62	0.0729	Pulse	0.1000	3
Mn	55	45	He	1459.411	ppb	2.7	1077819.02	16.6128	Pulse	0.1000	3
Fe	57	45	He	25.678	ppb	20.9	1093.42	0.0169	Pulse	0.1000	3
Co	59	45	He	0.637	ppb	13.5	2496.96	0.0385	Pulse	0.1000	3
Ni	60	72	He	0.211	ppb	29.0	1820.18	0.0160	Pulse	0.1000	3
Cu	63	72	He	2.102	ppb	1.6	6531.71	0.0574	Pulse	0.1000	3
Zn	66	72	He	267.830	ppb	0.7	83370.25	0.7323	Pulse	0.1000	3
As	75	72	He	0.875	ppb	8.6	242.67	0.0021	Pulse	0.5000	3
Sr	88	115	He	711.300	ppb	0.9	612989.73	6.3772	Pulse	0.1000	3
Mo	98	115	He	0.870	ppb	3.2	2060.22	0.0214	Pulse	0.1000	3
Ag	107	115	He	-0.002	ppb	N/A	36.67	0.0004	Pulse	0.1000	3
Cd	111	115	He	580.769	ppb	1.1	305603.68	3.1793	Pulse	0.5000	3
Sn	120	115	He	-0.172	ppb	N/A	1513.47	0.0157	Pulse	0.1000	3
Sb	121	115	He	2.436	ppb	4.0	3277.18	0.0341	Pulse	0.1000	3
Ba	137	115	He	77.008	ppb	1.1	33701.94	0.3506	Pulse	0.1000	3
Tl	205	209	He	0.028	ppb	11.0	533.37	0.0018	Pulse	0.1000	3
Pb	208	209	He	0.059	ppb	21.5	976.72	0.0033	Pulse	0.1000	3
U	238	209	He	0.036	ppb	9.5	506.70	0.0017	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3738163.17	0.3	104.6	Pulse	0.1000	3
No Gas	Ge	72	1722608.26	0.4	105.8	Pulse	0.1000	3
H2	Sc	45	285254.00	1.4	109.1	Pulse	0.1000	3
H2	Ge	72	202801.35	0.9	108.1	Pulse	0.1000	3
H2	In	115	503567.88	0.9	106.8	Pulse	0.1000	3
He	Sc	45	64911.04	2.8	107.5	Pulse	0.1000	3
He	Ge	72	113851.33	1.4	109.9	Pulse	0.1000	3
He	In	115	96127.65	0.9	106.4	Pulse	0.1000	3
He	Tb	159	393266.66	0.8	104.5	Pulse	0.1000	3
He	Bi	209	293546.52	1.1	102.4	Pulse	0.1000	3

No Gas



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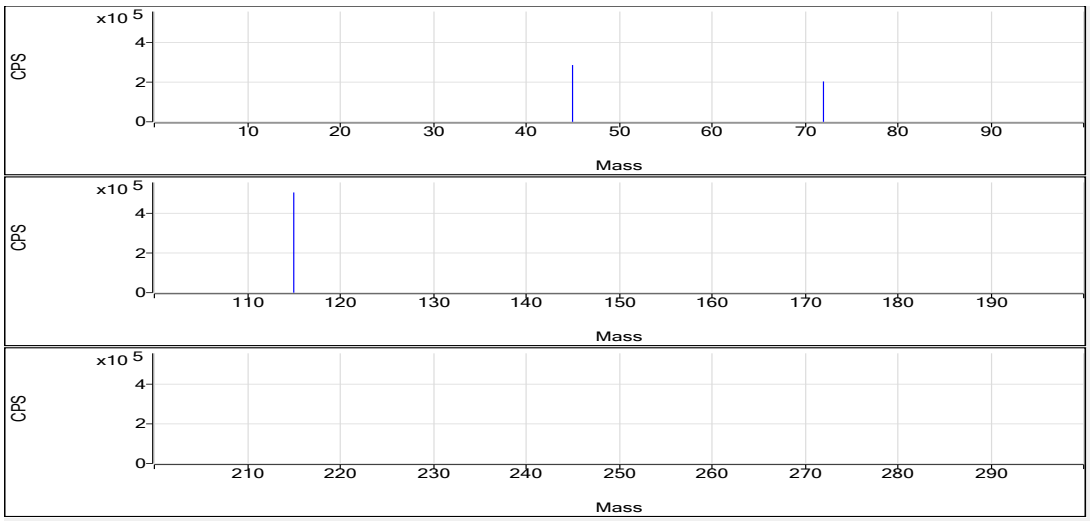
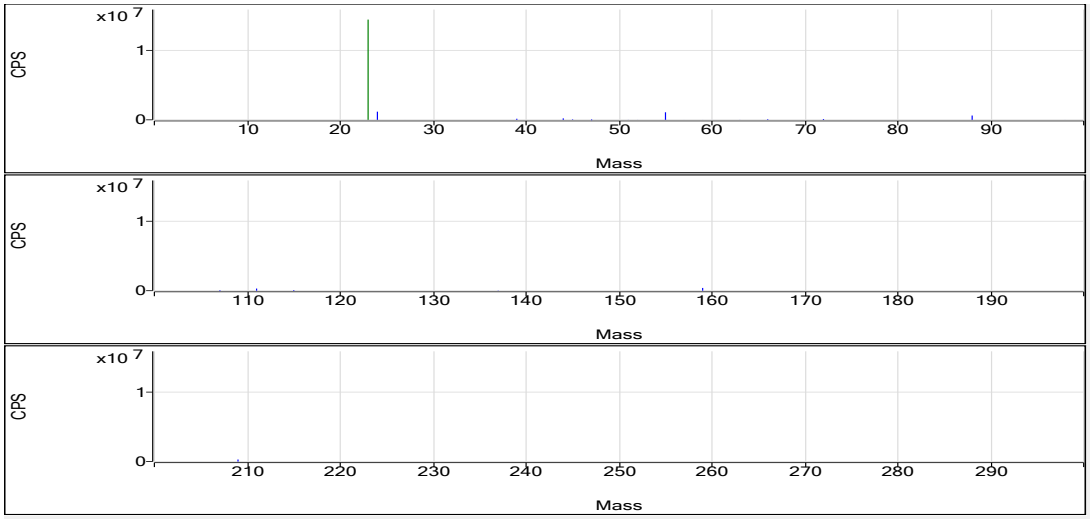


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.014	0	46.00	0.0004	7.085E-06
Be	9	1	No Gas	0.008	0	38.00	0.0004	7.085E-06
Be	9	1	No Gas	0.008	0	38.00	0.0004	7.085E-06
Se	78	2	H2	0.172	0.0001	20.00	0.0004	2.372E-05
Se	78	2	H2	0.166	0.0001	19.33	0.0004	2.372E-05
Se	78	2	H2	0.125	0.0001	16.00	0.0004	2.372E-05
Na	23	3	He	67956.383	220.9756	14311314.79	0.0032	0.5042
Na	23	3	He	65696.984	213.6455	14269952.29	0.0032	0.5042
Na	23	3	He	70141.859	228.066	14408349.79	0.0032	0.5042
Mg	24	3	He	11361.16	17.9216	1160680.76	0.0016	0.002702
Mg	24	3	He	11124.319	17.5481	1172083.81	0.0016	0.002702
Mg	24	3	He	11698.253	18.4533	1165810.06	0.0016	0.002702
Al	27	3	He	11.878	0.0073	470.02	0.0004	0.00193
Al	27	3	He	10.719	0.0067	450.02	0.0004	0.00193
Al	27	3	He	10.167	0.0065	410.02	0.0004	0.00193
K	39	3	He	1988.066	2.4159	156464.03	0.0011	0.2621
K	39	3	He	1844.537	2.2604	150978.88	0.0011	0.2621
K	39	3	He	2002.206	2.4312	153595.40	0.0011	0.2621
Ca	44	3	He	53209.473	3.2487	210401.44	0.0001	0.003476
Ca	44	3	He	51492.37	3.144	209996.40	0.0001	0.003476
Ca	44	3	He	53529.889	3.2683	206477.09	0.0001	0.003476
Ti	47	3	He	1.479	0.0011	70.00	0.0005	0.000385
Ti	47	3	He	-0.5	0.0001	10.00	0.0005	0.000385
Ti	47	3	He	-0.482	0.0002	10.00	0.0005	0.000385
V	51	3	He	4.744	0.1077	6975.71	0.0212	0.007263
V	51	3	He	4.625	0.1052	7025.72	0.0212	0.007263
V	51	3	He	4.812	0.1091	6895.66	0.0212	0.007263
Cr	52	3	He	1.092	0.0732	4740.94	0.0278	0.04283
Cr	52	3	He	1.033	0.0716	4780.98	0.0278	0.04283
Cr	52	3	He	1.112	0.0738	4660.93	0.0278	0.04283
Mn	55	3	He	1456.325	16.5777	1073639.20	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1421.828	16.1851	1081046.16	0.0114	0.005023
Mn	55	3	He	1500.081	17.0756	1078771.70	0.0114	0.005023
Fe	57	3	He	21.51	0.0147	950.07	0.0005	0.003255
Fe	57	3	He	23.774	0.0159	1060.07	0.0005	0.003255
Fe	57	3	He	31.751	0.0201	1270.11	0.0005	0.003255
Co	59	3	He	0.612	0.0372	2410.29	0.0539	0.00425
Co	59	3	He	0.566	0.0347	2320.26	0.0539	0.00425
Co	59	3	He	0.732	0.0437	2760.34	0.0539	0.00425
Ni	60	3	He	0.259	0.0164	1850.18	0.0088	0.01412
Ni	60	3	He	0.142	0.0154	1740.17	0.0088	0.01412
Ni	60	3	He	0.233	0.0162	1870.20	0.0088	0.01412
Cu	63	3	He	2.132	0.0581	6551.68	0.0251	0.004537
Cu	63	3	He	2.067	0.0565	6391.67	0.0251	0.004537
Cu	63	3	He	2.109	0.0575	6651.77	0.0251	0.004537
Zn	66	3	He	270.08	0.7384	83260.34	0.0027	0.001642
Zn	66	3	He	267.049	0.7302	82635.65	0.0027	0.001642
Zn	66	3	He	266.361	0.7283	84214.75	0.0027	0.001642
As	75	3	He	0.957	0.0023	258.00	0.0019	0.000463
As	75	3	He	0.859	0.0021	238.00	0.0019	0.000463
As	75	3	He	0.809	0.002	232.00	0.0019	0.000463
Sr	88	3	He	717.392	6.4318	613869.72	0.009	0.001142
Sr	88	3	He	704.921	6.32	613629.99	0.009	0.001142
Sr	88	3	He	711.586	6.3797	611469.48	0.009	0.001142
Mo	98	3	He	0.854	0.0211	2010.22	0.0225	0.001842
Mo	98	3	He	0.902	0.0221	2150.24	0.0225	0.001842
Mo	98	3	He	0.854	0.0211	2020.19	0.0225	0.001842
Ag	107	3	He	-0.006	0.0002	20.00	0.048	0.0004774
Ag	107	3	He	0.005	0.0007	70.00	0.048	0.0004774
Ag	107	3	He	-0.006	0.0002	20.00	0.048	0.0004774
Cd	111	3	He	582.291	3.1877	304240.88	0.0055	7.481E-06
Cd	111	3	He	573.854	3.1415	305016.38	0.0055	7.481E-06
Cd	111	3	He	586.161	3.2088	307553.78	0.0055	7.481E-06
Sn	120	3	He	-0.207	0.0152	1450.13	0.0157	0.01844
Sn	120	3	He	-0.125	0.0165	1600.16	0.0157	0.01844
Sn	120	3	He	-0.184	0.0155	1490.13	0.0157	0.01844
Sb	121	3	He	2.328	0.0326	3110.48	0.0139	0.0002204
Sb	121	3	He	2.458	0.0344	3340.54	0.0139	0.0002204
Sb	121	3	He	2.521	0.0353	3380.52	0.0139	0.0002204
Ba	137	3	He	76.749	0.3494	33351.08	0.0045	0.001994
Ba	137	3	He	76.35	0.3476	33752.26	0.0045	0.001994
Ba	137	3	He	77.926	0.3548	34002.47	0.0045	0.001994
Tl	205	3	He	0.026	0.0018	510.03	0.03	0.0009888
Tl	205	3	He	0.026	0.0018	520.04	0.03	0.0009888
Tl	205	3	He	0.031	0.0019	570.03	0.03	0.0009888
Pb	208	3	He	0.068	0.0037	640.04	0.0392	0.001024
Pb	208	3	He	0.064	0.0035	410.02	0.0392	0.001024
Pb	208	3	He	0.044	0.0028	450.02	0.0392	0.001024
U	238	3	He	0.033	0.0016	460.03	0.0439	0.000128
U	238	3	He	0.036	0.0017	500.03	0.0439	0.000128
U	238	3	He	0.04	0.0019	560.04	0.0439	0.000128
Sc	45	1	No Gas			3746435.57		
Sc	45	1	No Gas			3741437.44		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3726616.51		
Ge	72	1	No Gas			1715829.04		
Ge	72	1	No Gas			1722795.29		
Ge	72	1	No Gas			1729200.44		
Sc	45	2	H2			282817.65		
Sc	45	2	H2			283039.47		
Sc	45	2	H2			289904.88		
Ge	72	2	H2			202975.13		
Ge	72	2	H2			200914.25		
Ge	72	2	H2			204514.66		
In	115	2	H2			500794.80		
In	115	2	H2			501159.37		
In	115	2	H2			508749.48		
Sc	45	3	He			64764.22		
Sc	45	3	He			66792.68		
Sc	45	3	He			63176.23		
Ge	72	3	He			112750.46		
Ge	72	3	He			113171.66		
Ge	72	3	He			115631.86		
In	115	3	He			95454.77		
In	115	3	He			97106.17		
In	115	3	He			95857.42		
Tb	159	3	He			389746.67		
Tb	159	3	He			395094.88		
Tb	159	3	He			394958.43		
Bi	209	3	He			290054.49		
Bi	209	3	He			293889.19		
Bi	209	3	He			296695.89		

Quantitation Report

Data File Name	277SMPL.d
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Acq Time	2023-10-26 18:19:13
Sample Name	460-290492-B-1-A
Sample Type	Sample
Comment	I24
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

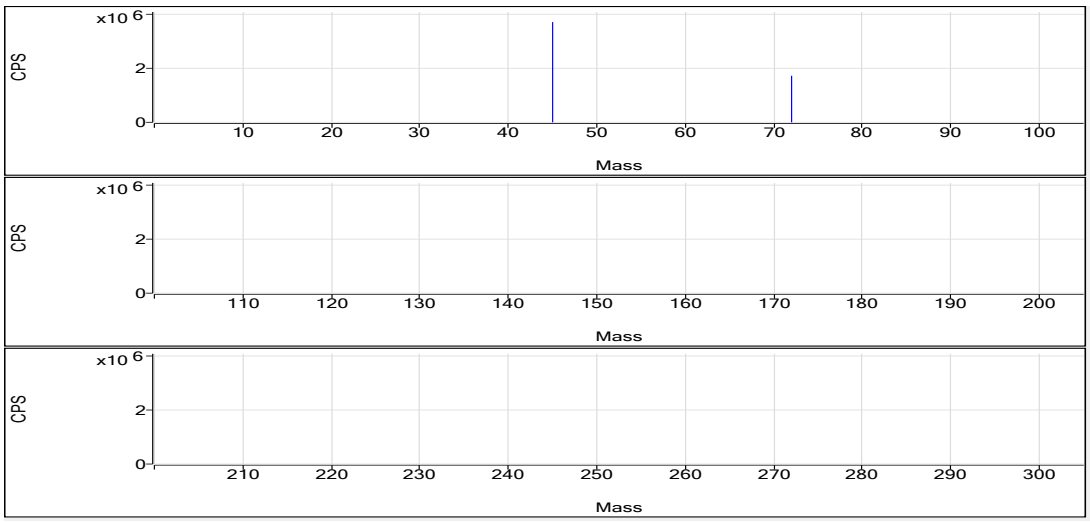
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.292	ppb	7.5	440.68	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.043	ppb	15.4	8.67	0.0000	Pulse	1.5000	3
Na	23	45	He	38028.195	ppb	0.3	7898445.51	123.8794	Analog	0.1000	3
Mg	24	45	He	4576.699	ppb	0.6	460407.21	7.2211	Pulse	0.1000	3
Al	27	45	He	288.118	ppb	4.7	8362.73	0.1312	Pulse	0.1000	3
K	39	45	He	4824.674	ppb	0.8	349966.13	5.4889	Pulse	0.1000	3
Ca	44	45	He	21288.565	ppb	2.1	83004.78	1.3019	Pulse	0.1000	3
Ti	47	45	He	3.184	ppb	36.4	120.01	0.0019	Pulse	0.1000	3
V	51	45	He	1.853	ppb	4.7	2965.00	0.0465	Pulse	0.5000	3
Cr	52	45	He	0.791	ppb	34.5	4134.05	0.0648	Pulse	0.1000	3
Mn	55	45	He	136.933	ppb	1.6	99669.96	1.5633	Pulse	0.1000	3
Fe	57	45	He	7121.545	ppb	1.1	241161.62	3.7825	Pulse	0.1000	3
Co	59	45	He	1.735	ppb	9.6	6228.23	0.0977	Pulse	0.1000	3
Ni	60	72	He	7.936	ppb	2.4	9543.42	0.0841	Pulse	0.1000	3
Cu	63	72	He	667.839	ppb	0.6	1904371.27	16.7868	Pulse	0.1000	3
Zn	66	72	He	1540.005	ppb	0.8	476790.85	4.2029	Pulse	0.1000	3
As	75	72	He	1.014	ppb	6.2	272.00	0.0024	Pulse	0.5000	3
Sr	88	115	He	624.881	ppb	1.9	539698.08	5.6025	Pulse	0.1000	3
Mo	98	115	He	0.110	ppb	13.5	416.69	0.0043	Pulse	0.1000	3
Ag	107	115	He	0.021	ppb	53.2	143.34	0.0015	Pulse	0.1000	3
Cd	111	115	He	0.231	ppb	15.2	122.67	0.0013	Pulse	0.5000	3
Sn	120	115	He	-0.007	ppb	N/A	1763.77	0.0183	Pulse	0.1000	3
Sb	121	115	He	0.180	ppb	34.7	263.35	0.0027	Pulse	0.1000	3
Ba	137	115	He	62.219	ppb	2.1	27324.59	0.2837	Pulse	0.1000	3
Tl	205	209	He	0.020	ppb	31.2	460.03	0.0016	Pulse	0.1000	3
Pb	208	209	He	3.479	ppb	2.1	40098.86	0.1374	Pulse	0.1000	3
U	238	209	He	0.088	ppb	9.6	1163.44	0.0040	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3711914.11	1.0	103.9	Pulse	0.1000	3
No Gas	Ge	72	1724328.36	0.7	106.0	Pulse	0.1000	3
H2	Sc	45	283264.78	0.6	108.3	Pulse	0.1000	3
H2	Ge	72	203401.48	1.2	108.4	Pulse	0.1000	3
H2	In	115	498388.26	0.3	105.7	Pulse	0.1000	3
He	Sc	45	63759.46	0.4	105.5	Pulse	0.1000	3
He	Ge	72	113448.00	0.9	109.5	Pulse	0.1000	3
He	In	115	96357.40	2.1	106.6	Pulse	0.1000	3
He	Tb	159	398221.45	1.4	105.8	Pulse	0.1000	3
He	Bi	209	291746.47	0.6	101.8	Pulse	0.1000	3

No Gas



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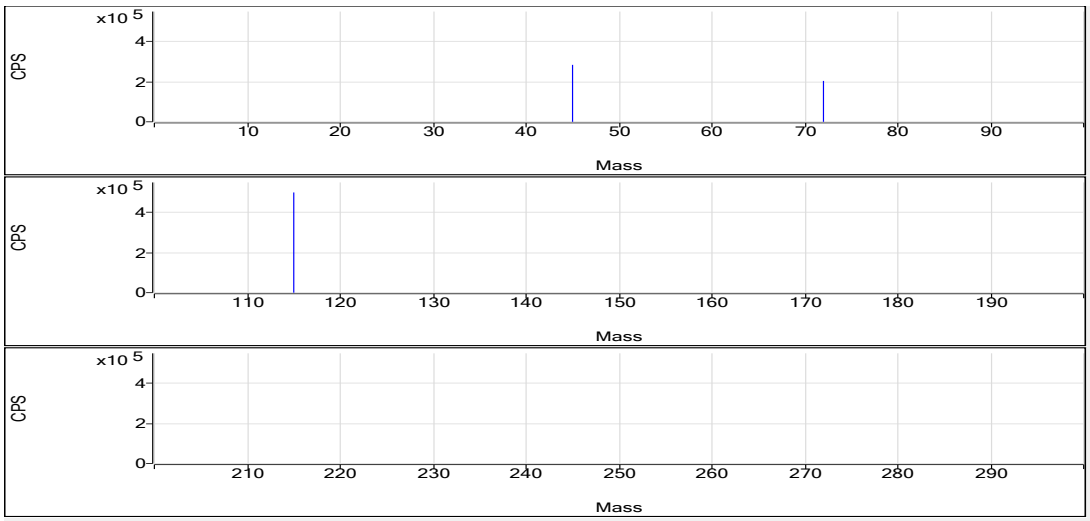
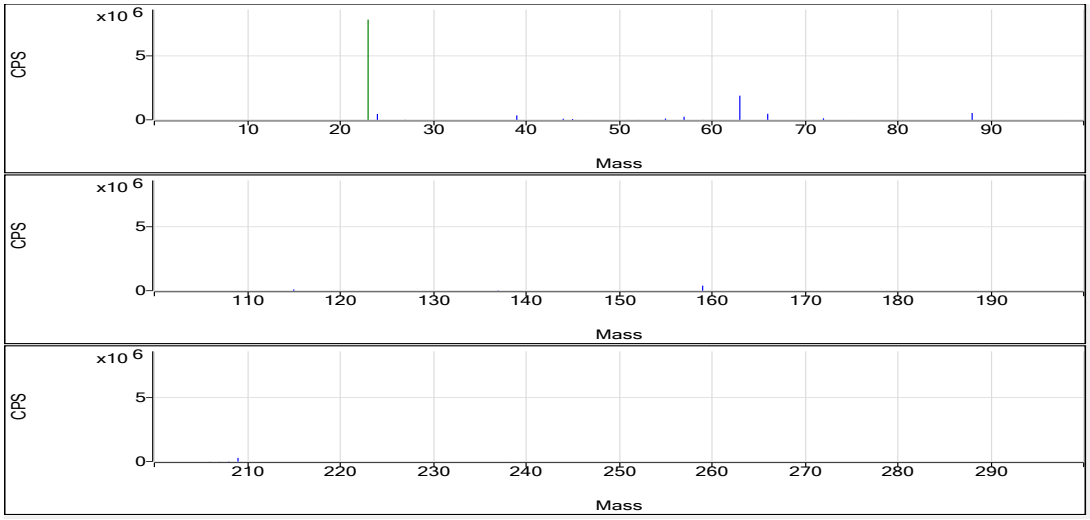


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.269	0.0001	412.01	0.0004	7.085E-06
Be	9	1	No Gas	0.294	0.0001	440.01	0.0004	7.085E-06
Be	9	1	No Gas	0.312	0.0001	470.01	0.0004	7.085E-06
Se	78	2	H2	0.037	0	8.00	0.0004	2.372E-05
Se	78	2	H2	0.05	0	9.33	0.0004	2.372E-05
Se	78	2	H2	0.042	0	8.67	0.0004	2.372E-05
Na	23	3	He	38050.161	123.9506	7930351.13	0.0032	0.5042
Na	23	3	He	38128.176	124.2037	7882967.38	0.0032	0.5042
Na	23	3	He	37906.247	123.4837	7882018.01	0.0032	0.5042
Mg	24	3	He	4560.921	7.1962	460414.37	0.0016	0.002702
Mg	24	3	He	4608.75	7.2717	461518.47	0.0016	0.002702
Mg	24	3	He	4560.427	7.1955	459288.78	0.0016	0.002702
Al	27	3	He	277.345	0.1263	8082.51	0.0004	0.00193
Al	27	3	He	283.835	0.1292	8202.59	0.0004	0.00193
Al	27	3	He	303.173	0.1379	8803.08	0.0004	0.00193
K	39	3	He	4816.615	5.4802	350623.59	0.0011	0.2621
K	39	3	He	4866.643	5.5344	351258.20	0.0011	0.2621
K	39	3	He	4790.763	5.4522	348016.60	0.0011	0.2621
Ca	44	3	He	21487.735	1.314	84070.64	0.0001	0.003476
Ca	44	3	He	21596.512	1.3207	83819.09	0.0001	0.003476
Ca	44	3	He	20781.448	1.2709	81124.60	0.0001	0.003476
Ti	47	3	He	3.834	0.0022	140.01	0.0005	0.000385
Ti	47	3	He	3.871	0.0022	140.01	0.0005	0.000385
Ti	47	3	He	1.846	0.0013	80.00	0.0005	0.000385
V	51	3	He	1.792	0.0452	2892.31	0.0212	0.007263
V	51	3	He	1.815	0.0457	2900.31	0.0212	0.007263
V	51	3	He	1.952	0.0486	3102.38	0.0212	0.007263
Cr	52	3	He	1	0.0707	4520.86	0.0278	0.04283
Cr	52	3	He	0.891	0.0676	4290.74	0.0278	0.04283
Cr	52	3	He	0.482	0.0563	3590.55	0.0278	0.04283
Mn	55	3	He	135.528	1.5473	98995.82	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	139.453	1.592	101038.76	0.0114	0.005023
Mn	55	3	He	135.818	1.5506	98975.30	0.0114	0.005023
Fe	57	3	He	7075.545	3.7581	240440.64	0.0005	0.003255
Fe	57	3	He	7211.044	3.83	243080.70	0.0005	0.003255
Fe	57	3	He	7078.046	3.7594	239963.53	0.0005	0.003255
Co	59	3	He	1.544	0.0874	5591.25	0.0539	0.00425
Co	59	3	He	1.844	0.1035	6571.72	0.0539	0.00425
Co	59	3	He	1.818	0.1022	6521.71	0.0539	0.00425
Ni	60	3	He	8.092	0.0855	9623.41	0.0088	0.01412
Ni	60	3	He	7.99	0.0846	9693.52	0.0088	0.01412
Ni	60	3	He	7.726	0.0823	9313.33	0.0088	0.01412
Cu	63	3	He	668.765	16.81	1892082.00	0.0251	0.004537
Cu	63	3	He	663.701	16.6828	1911571.69	0.0251	0.004537
Cu	63	3	He	671.052	16.8675	1909460.13	0.0251	0.004537
Zn	66	3	He	1551.069	4.2331	476466.09	0.0027	0.001642
Zn	66	3	He	1526.452	4.166	477350.34	0.0027	0.001642
Zn	66	3	He	1542.495	4.2097	476556.13	0.0027	0.001642
As	75	3	He	1.07	0.0025	282.00	0.0019	0.000463
As	75	3	He	0.946	0.0023	260.00	0.0019	0.000463
As	75	3	He	1.026	0.0024	274.00	0.0019	0.000463
Sr	88	3	He	635.42	5.697	537174.91	0.009	0.001142
Sr	88	3	He	627.327	5.6244	542025.19	0.009	0.001142
Sr	88	3	He	611.895	5.4861	539894.13	0.009	0.001142
Mo	98	3	He	0.116	0.0045	420.02	0.0225	0.001842
Mo	98	3	He	0.093	0.0039	380.02	0.0225	0.001842
Mo	98	3	He	0.121	0.0046	450.03	0.0225	0.001842
Ag	107	3	He	0.019	0.0014	130.01	0.048	0.0004774
Ag	107	3	He	0.033	0.0021	200.01	0.048	0.0004774
Ag	107	3	He	0.011	0.001	100.00	0.048	0.0004774
Cd	111	3	He	0.266	0.0015	138.00	0.0055	7.481E-06
Cd	111	3	He	0.196	0.0011	104.00	0.0055	7.481E-06
Cd	111	3	He	0.233	0.0013	126.00	0.0055	7.481E-06
Sn	120	3	He	0.231	0.0221	2081.02	0.0157	0.01844
Sn	120	3	He	-0.163	0.0159	1530.13	0.0157	0.01844
Sn	120	3	He	-0.087	0.0171	1680.17	0.0157	0.01844
Sb	121	3	He	0.114	0.0018	170.01	0.0139	0.0002204
Sb	121	3	He	0.238	0.0035	340.02	0.0139	0.0002204
Sb	121	3	He	0.189	0.0028	280.01	0.0139	0.0002204
Ba	137	3	He	63.183	0.288	27157.67	0.0045	0.001994
Ba	137	3	He	62.775	0.2862	27578.47	0.0045	0.001994
Ba	137	3	He	60.698	0.2768	27237.64	0.0045	0.001994
Tl	205	3	He	0.019	0.0016	450.03	0.03	0.0009888
Tl	205	3	He	0.014	0.0014	410.03	0.03	0.0009888
Tl	205	3	He	0.026	0.0018	520.03	0.03	0.0009888
Pb	208	3	He	3.524	0.1392	21398.15	0.0392	0.001024
Pb	208	3	He	3.396	0.1342	21598.44	0.0392	0.001024
Pb	208	3	He	3.516	0.1389	21628.22	0.0392	0.001024
U	238	3	He	0.098	0.0044	1280.12	0.0439	0.000128
U	238	3	He	0.084	0.0038	1110.09	0.0439	0.000128
U	238	3	He	0.082	0.0037	1100.10	0.0439	0.000128
Sc	45	1	No Gas			3746999.94		
Sc	45	1	No Gas			3675510.26		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3713232.13		
Ge	72	1	No Gas			1738072.16		
Ge	72	1	No Gas			1713439.66		
Ge	72	1	No Gas			1721473.26		
Sc	45	2	H2			281251.89		
Sc	45	2	H2			284789.98		
Sc	45	2	H2			283752.46		
Ge	72	2	H2			200536.19		
Ge	72	2	H2			204351.36		
Ge	72	2	H2			205316.89		
In	115	2	H2			497853.04		
In	115	2	H2			499867.73		
In	115	2	H2			497444.02		
Sc	45	3	He			63979.92		
Sc	45	3	He			63468.04		
Sc	45	3	He			63830.42		
Ge	72	3	He			112556.80		
Ge	72	3	He			114583.58		
Ge	72	3	He			113203.63		
In	115	3	He			94307.49		
In	115	3	He			96381.64		
In	115	3	He			98424.34		
Tb	159	3	He			394707.65		
Tb	159	3	He			404464.10		
Tb	159	3	He			395492.61		
Bi	209	3	He			289987.36		
Bi	209	3	He			291568.08		
Bi	209	3	He			293683.98		

Quantitation Report

Data File Name	278SMPL.d
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Sample Name	410-147509-C-2-A
Sample Type	Sample
Comment	I24
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

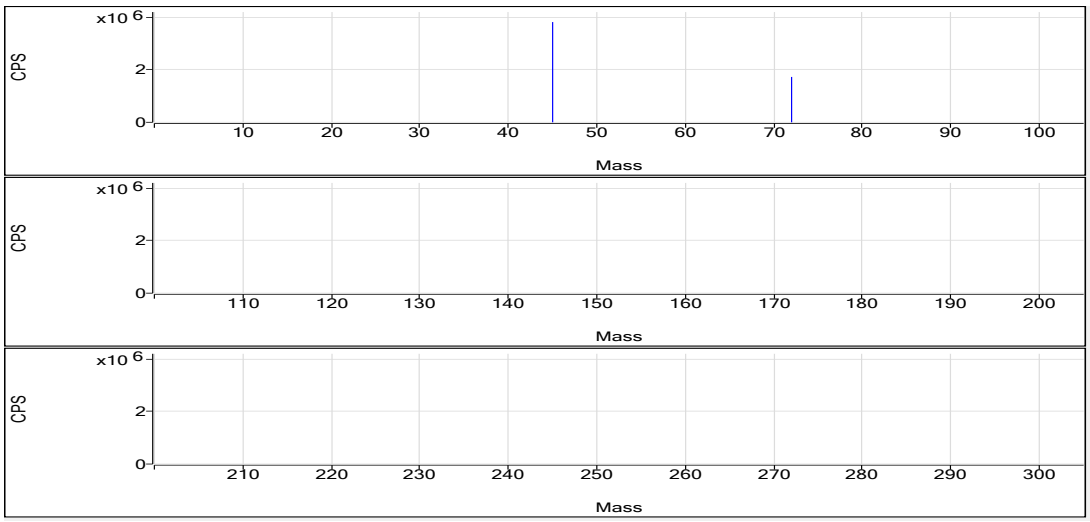
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.260	ppb	6.5	408.01	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.535	ppb	2.6	52.22	0.0003	Pulse	1.5000	3
Na	23	45	He	5661.149	ppb	1.4	1225220.16	18.8707	Pulse	0.1000	3
Mg	24	45	He	1504.599	ppb	1.5	154253.59	2.3758	Pulse	0.1000	3
Al	27	45	He	7850.245	ppb	2.5	228711.11	3.5230	Pulse	0.1000	3
K	39	45	He	1371.253	ppb	2.6	113461.75	1.7477	Pulse	0.1000	3
Ca	44	45	He	2211.851	ppb	5.4	8983.03	0.1384	Pulse	0.1000	3
Ti	47	45	He	53.195	ppb	2.7	1650.18	0.0254	Pulse	0.1000	3
V	51	45	He	27.774	ppb	2.3	38650.79	0.5954	Pulse	0.5000	3
Cr	52	45	He	16.688	ppb	3.8	32914.59	0.5070	Pulse	0.1000	3
Mn	55	45	He	183.249	ppb	2.2	135711.31	2.0904	Pulse	0.1000	3
Fe	57	45	He	7933.565	ppb	1.0	273577.22	4.2134	Pulse	0.1000	3
Co	59	45	He	3.288	ppb	2.2	11771.91	0.1813	Pulse	0.1000	3
Ni	60	72	He	8.549	ppb	2.7	10107.17	0.0895	Pulse	0.1000	3
Cu	63	72	He	185.717	ppb	1.5	527333.22	4.6715	Pulse	0.1000	3
Zn	66	72	He	232.238	ppb	0.8	71707.65	0.6352	Pulse	0.1000	3
As	75	72	He	1.914	ppb	1.3	464.68	0.0041	Pulse	0.5000	3
Sr	88	115	He	38.735	ppb	0.2	33419.91	0.3484	Pulse	0.1000	3
Mo	98	115	He	0.618	ppb	18.3	1510.14	0.0158	Pulse	0.1000	3
Ag	107	115	He	0.084	ppb	9.7	430.02	0.0045	Pulse	0.1000	3
Cd	111	115	He	2.481	ppb	3.0	1303.40	0.0136	Pulse	0.5000	3
Sn	120	115	He	1.566	ppb	7.0	4130.76	0.0431	Pulse	0.1000	3
Sb	121	115	He	0.721	ppb	2.1	983.40	0.0103	Pulse	0.1000	3
Ba	137	115	He	77.100	ppb	2.6	33668.84	0.3510	Pulse	0.1000	3
Tl	205	209	He	0.084	ppb	3.9	1093.43	0.0035	Pulse	0.1000	3
Pb	208	209	He	20.547	ppb	0.7	250678.14	0.8068	Pulse	0.1000	3
U	238	209	He	0.597	ppb	4.1	8189.54	0.0264	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3819397.13	0.8	106.9	Pulse	0.1000	3
No Gas	Ge	72	1728580.55	0.9	106.2	Pulse	0.1000	3
H2	Sc	45	289237.83	0.8	110.6	Pulse	0.1000	3
H2	Ge	72	203520.38	1.0	108.5	Pulse	0.1000	3
H2	In	115	502668.99	0.5	106.6	Pulse	0.1000	3
He	Sc	45	64937.68	1.7	107.5	Pulse	0.1000	3
He	Ge	72	112890.02	0.5	109.0	Pulse	0.1000	3
He	In	115	95935.65	1.2	106.2	Pulse	0.1000	3
He	Tb	159	398301.10	1.0	105.8	Pulse	0.1000	3
He	Bi	209	310695.21	0.2	108.4	Pulse	0.1000	3

No Gas



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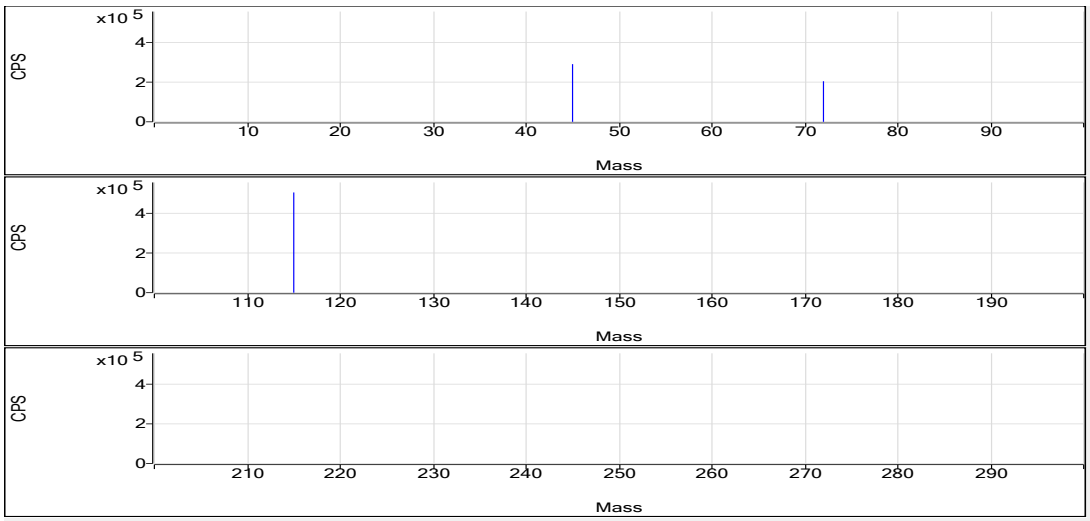
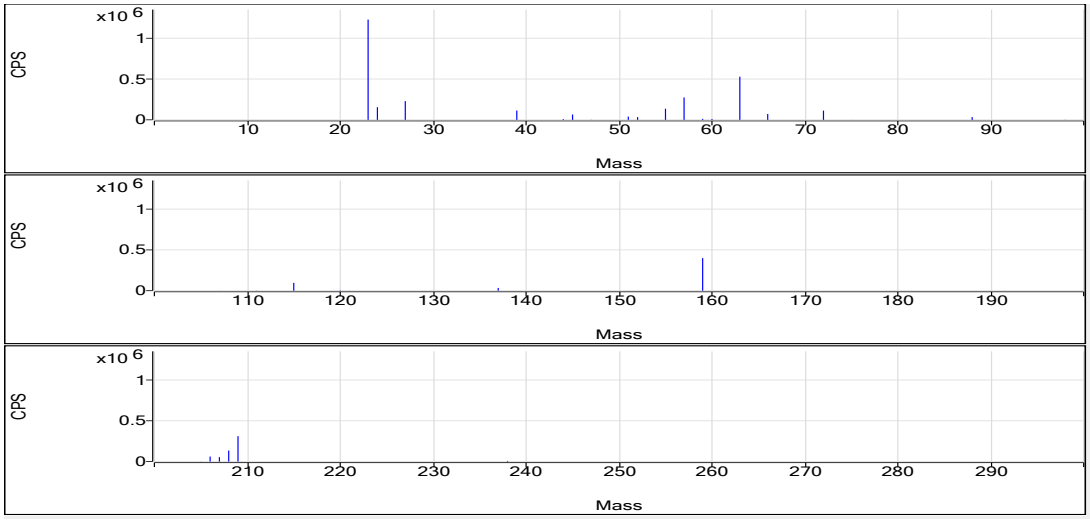


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.279	0.0001	440.01	0.0004	7.085E-06
Be	9	1	No Gas	0.247	0.0001	386.01	0.0004	7.085E-06
Be	9	1	No Gas	0.255	0.0001	398.01	0.0004	7.085E-06
Se	78	2	H2	0.519	0.0002	51.33	0.0004	2.372E-05
Se	78	2	H2	0.538	0.0003	52.00	0.0004	2.372E-05
Se	78	2	H2	0.546	0.0003	53.33	0.0004	2.372E-05
Na	23	3	He	5737.717	19.1191	1220927.09	0.0032	0.5042
Na	23	3	He	5576.992	18.5976	1229671.54	0.0032	0.5042
Na	23	3	He	5668.738	18.8953	1225061.86	0.0032	0.5042
Mg	24	3	He	1529.622	2.4152	154234.77	0.0016	0.002702
Mg	24	3	He	1488.96	2.3511	155454.47	0.0016	0.002702
Mg	24	3	He	1495.214	2.361	153071.52	0.0016	0.002702
Al	27	3	He	8023.662	3.6008	229945.19	0.0004	0.00193
Al	27	3	He	7633.987	3.426	226528.86	0.0004	0.00193
Al	27	3	He	7893.084	3.5423	229659.27	0.0004	0.00193
K	39	3	He	1407.163	1.7866	114089.41	0.0011	0.2621
K	39	3	He	1337.284	1.7109	113122.77	0.0011	0.2621
K	39	3	He	1369.313	1.7456	113173.08	0.0011	0.2621
Ca	44	3	He	2203.2	0.1378	8802.93	0.0001	0.003476
Ca	44	3	He	2096.141	0.1313	8682.83	0.0001	0.003476
Ca	44	3	He	2336.213	0.146	9463.32	0.0001	0.003476
Ti	47	3	He	52.79	0.0252	1610.22	0.0005	0.000385
Ti	47	3	He	54.813	0.0262	1730.15	0.0005	0.000385
Ti	47	3	He	51.982	0.0248	1610.17	0.0005	0.000385
V	51	3	He	28.435	0.6094	38913.45	0.0212	0.007263
V	51	3	He	27.141	0.5819	38478.36	0.0212	0.007263
V	51	3	He	27.745	0.5948	38560.56	0.0212	0.007263
Cr	52	3	He	16.874	0.5122	32707.37	0.0278	0.04283
Cr	52	3	He	15.988	0.4875	32236.44	0.0278	0.04283
Cr	52	3	He	17.203	0.5213	33799.95	0.0278	0.04283
Mn	55	3	He	187.734	2.1414	136747.20	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	180.202	2.0557	135921.02	0.0114	0.005023
Mn	55	3	He	181.811	2.074	134465.71	0.0114	0.005023
Fe	57	3	He	7999.965	4.2486	271313.57	0.0005	0.003255
Fe	57	3	He	7848.664	4.1683	275609.45	0.0005	0.003255
Fe	57	3	He	7952.067	4.2232	273808.65	0.0005	0.003255
Co	59	3	He	3.324	0.1833	11705.18	0.0539	0.00425
Co	59	3	He	3.205	0.1769	11695.15	0.0539	0.00425
Co	59	3	He	3.333	0.1838	11915.39	0.0539	0.00425
Ni	60	3	He	8.596	0.0899	10213.86	0.0088	0.01412
Ni	60	3	He	8.297	0.0873	9833.66	0.0088	0.01412
Ni	60	3	He	8.756	0.0914	10273.98	0.0088	0.01412
Cu	63	3	He	182.618	4.5936	521667.61	0.0251	0.004537
Cu	63	3	He	186.765	4.6978	529147.61	0.0251	0.004537
Cu	63	3	He	187.769	4.723	531184.45	0.0251	0.004537
Zn	66	3	He	230.622	0.6308	71636.84	0.0027	0.001642
Zn	66	3	He	234.392	0.6411	72210.77	0.0027	0.001642
Zn	66	3	He	231.7	0.6337	71275.35	0.0027	0.001642
As	75	3	He	1.917	0.0041	468.01	0.0019	0.000463
As	75	3	He	1.888	0.0041	458.01	0.0019	0.000463
As	75	3	He	1.938	0.0042	468.01	0.0019	0.000463
Sr	88	3	He	38.653	0.3476	33590.22	0.009	0.001142
Sr	88	3	He	38.801	0.3489	33009.02	0.009	0.001142
Sr	88	3	He	38.753	0.3485	33660.49	0.009	0.001142
Mo	98	3	He	0.493	0.0129	1250.10	0.0225	0.001842
Mo	98	3	He	0.712	0.0179	1690.18	0.0225	0.001842
Mo	98	3	He	0.65	0.0165	1590.14	0.0225	0.001842
Ag	107	3	He	0.089	0.0048	460.02	0.048	0.0004774
Ag	107	3	He	0.087	0.0047	440.02	0.048	0.0004774
Ag	107	3	He	0.074	0.004	390.02	0.048	0.0004774
Cd	111	3	He	2.396	0.0131	1268.07	0.0055	7.481E-06
Cd	111	3	He	2.513	0.0138	1302.07	0.0055	7.481E-06
Cd	111	3	He	2.533	0.0139	1340.07	0.0055	7.481E-06
Sn	120	3	He	1.652	0.0444	4290.81	0.0157	0.01844
Sn	120	3	He	1.605	0.0437	4130.73	0.0157	0.01844
Sn	120	3	He	1.442	0.0411	3970.73	0.0157	0.01844
Sb	121	3	He	0.706	0.01	970.07	0.0139	0.0002204
Sb	121	3	He	0.722	0.0103	970.07	0.0139	0.0002204
Sb	121	3	He	0.736	0.0105	1010.07	0.0139	0.0002204
Ba	137	3	He	75.23	0.3426	33100.95	0.0045	0.001994
Ba	137	3	He	79.267	0.3608	34133.32	0.0045	0.001994
Ba	137	3	He	76.802	0.3497	33772.24	0.0045	0.001994
Tl	205	3	He	0.085	0.0035	1100.09	0.03	0.0009888
Tl	205	3	He	0.087	0.0036	1120.09	0.03	0.0009888
Tl	205	3	He	0.081	0.0034	1060.10	0.03	0.0009888
Pb	208	3	He	20.391	0.8007	134742.77	0.0392	0.001024
Pb	208	3	He	20.553	0.8071	134846.44	0.0392	0.001024
Pb	208	3	He	20.698	0.8127	135227.30	0.0392	0.001024
U	238	3	He	0.618	0.0273	8493.05	0.0439	0.000128
U	238	3	He	0.604	0.0266	8262.93	0.0439	0.000128
U	238	3	He	0.57	0.0252	7812.65	0.0439	0.000128
Sc	45	1	No Gas			3856318.69		
Sc	45	1	No Gas			3799452.13		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3802420.57		
Ge	72	1	No Gas			1746446.07		
Ge	72	1	No Gas			1717633.72		
Ge	72	1	No Gas			1721661.85		
Sc	45	2	H2			286664.88		
Sc	45	2	H2			290290.13		
Sc	45	2	H2			290758.47		
Ge	72	2	H2			205374.76		
Ge	72	2	H2			201350.50		
Ge	72	2	H2			203835.88		
In	115	2	H2			505598.08		
In	115	2	H2			500155.34		
In	115	2	H2			502253.55		
Sc	45	3	He			63859.07		
Sc	45	3	He			66119.74		
Sc	45	3	He			64834.22		
Ge	72	3	He			113564.85		
Ge	72	3	He			112638.00		
Ge	72	3	He			112467.20		
In	115	3	He			96662.31		
In	115	3	He			94628.65		
In	115	3	He			96612.66		
Tb	159	3	He			395700.03		
Tb	159	3	He			396133.08		
Tb	159	3	He			403070.19		
Bi	209	3	He			311301.81		
Bi	209	3	He			310266.17		
Bi	209	3	He			310517.65		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23J26A00.b
Acq Time	2023-10-26 18:23:13
Sample Name	620-14674-X-5-A
Sample Type	Sample
Comment	I24
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

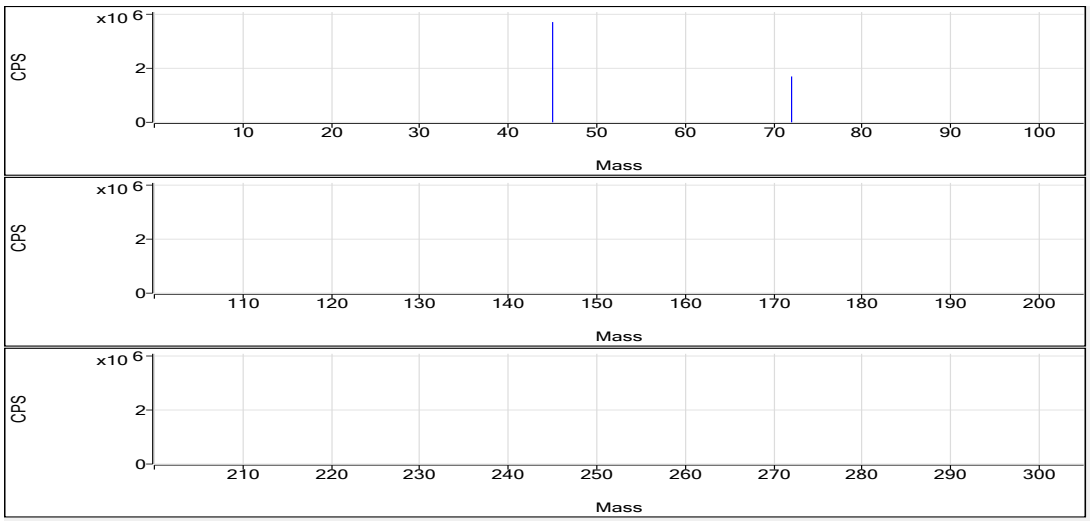
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.056	ppb	20.0	106.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.079	ppb	31.9	11.56	0.0001	Pulse	1.5000	3
Na	23	45	He	201983.810	ppb	0.2	41369384.38	655.8020	Analog	0.1000	3
Mg	24	45	He	10167.940	ppb	1.2	1011749.62	16.0397	Pulse	0.1000	3
Al	27	45	He	183.689	ppb	4.6	5317.80	0.0843	Pulse	0.1000	3
K	39	45	He	7691.937	ppb	1.1	542168.56	8.5952	Pulse	0.1000	3
Ca	44	45	He	101652.966	ppb	1.1	391293.52	6.2033	Pulse	0.1000	3
Ti	47	45	He	3.452	ppb	15.2	126.67	0.0020	Pulse	0.1000	3
V	51	45	He	2.335	ppb	5.8	3576.46	0.0567	Pulse	0.5000	3
Cr	52	45	He	1.628	ppb	4.8	5557.92	0.0881	Pulse	0.1000	3
Mn	55	45	He	3305.117	ppb	1.6	2372713.82	37.6165	Pulse	0.1000	3
Fe	57	45	He	10725.954	ppb	1.3	359246.86	5.6952	Pulse	0.1000	3
Co	59	45	He	0.320	ppb	5.6	1356.77	0.0215	Pulse	0.1000	3
Ni	60	72	He	1.326	ppb	13.0	2890.38	0.0258	Pulse	0.1000	3
Cu	63	72	He	7.390	ppb	1.8	21292.87	0.1902	Pulse	0.1000	3
Zn	66	72	He	10.319	ppb	7.5	3333.86	0.0298	Pulse	0.1000	3
As	75	72	He	1.122	ppb	5.6	291.34	0.0026	Pulse	0.5000	3
Sr	88	115	He	877.531	ppb	0.6	734778.17	7.8672	Pulse	0.1000	3
Mo	98	115	He	2.589	ppb	2.0	5614.65	0.0601	Pulse	0.1000	3
Ag	107	115	He	-0.003	ppb	N/A	30.00	0.0003	Pulse	0.1000	3
Cd	111	115	He	0.046	ppb	54.3	24.00	0.0003	Pulse	0.5000	3
Sn	120	115	He	-0.097	ppb	N/A	1580.15	0.0169	Pulse	0.1000	3
Sb	121	115	He	0.095	ppb	21.1	143.34	0.0015	Pulse	0.1000	3
Ba	137	115	He	48.444	ppb	3.9	20672.66	0.2213	Pulse	0.1000	3
Tl	205	209	He	-0.011	ppb	N/A	193.34	0.0007	Pulse	0.1000	3
Pb	208	209	He	0.366	ppb	6.7	4427.13	0.0154	Pulse	0.1000	3
U	238	209	He	14.453	ppb	1.0	182595.81	0.6348	Pulse	0.1000	3

ISTD Table:

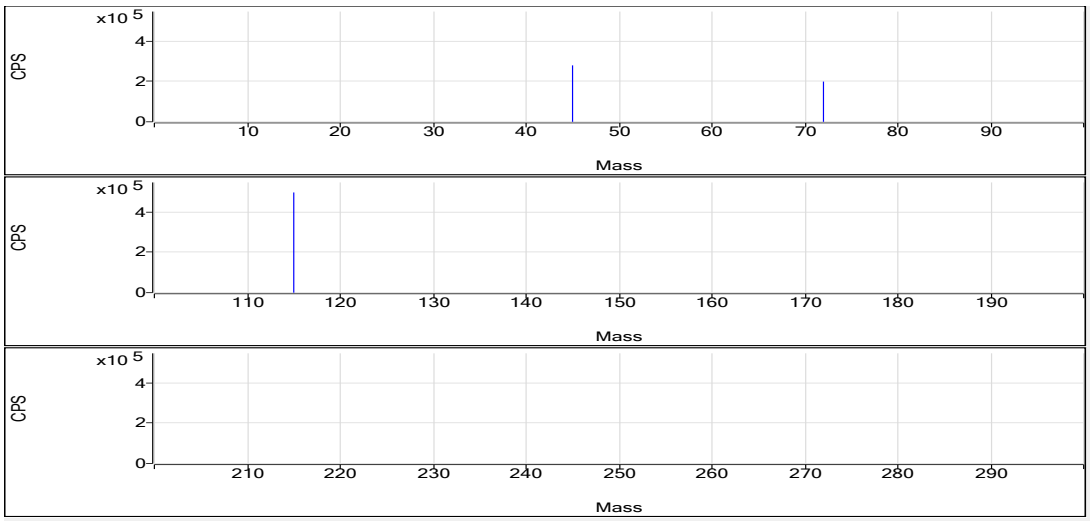
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3717015.47	0.7	104.0	Pulse	0.1000	3
No Gas	Ge	72	1699671.17	1.1	104.4	Pulse	0.1000	3
H2	Sc	45	279802.64	0.2	107.0	Pulse	0.1000	3
H2	Ge	72	199348.25	0.8	106.2	Pulse	0.1000	3
H2	In	115	496730.04	0.5	105.3	Pulse	0.1000	3
He	Sc	45	63082.88	1.1	104.4	Pulse	0.1000	3
He	Ge	72	111926.05	0.7	108.0	Pulse	0.1000	3
He	In	115	93398.96	1.1	103.3	Pulse	0.1000	3
He	Tb	159	389866.14	0.9	103.6	Pulse	0.1000	3
He	Bi	209	287650.18	0.3	100.4	Pulse	0.1000	3

No Gas

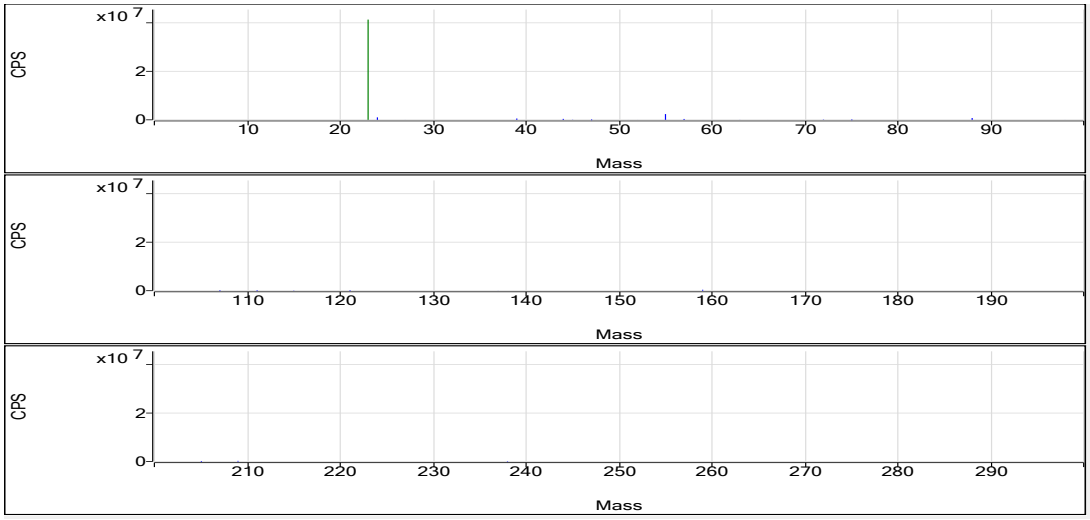


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.044	0	88.00	0.0004	7.085E-06
Be	9	1	No Gas	0.065	0	120.00	0.0004	7.085E-06
Be	9	1	No Gas	0.06	0	112.00	0.0004	7.085E-06
Se	78	2	H2	0.107	0.0001	14.00	0.0004	2.372E-05
Se	78	2	H2	0.06	0	10.00	0.0004	2.372E-05
Se	78	2	H2	0.069	0.0001	10.67	0.0004	2.372E-05
Na	23	3	He	202038.086	655.9781	41666099.38	0.0032	0.5042
Na	23	3	He	202376.74	657.0768	40925151.89	0.0032	0.5042
Na	23	3	He	201536.604	654.3511	41516901.88	0.0032	0.5042
Mg	24	3	He	10045.524	15.8466	1006536.78	0.0016	0.002702
Mg	24	3	He	10290.161	16.2324	1011016.23	0.0016	0.002702
Mg	24	3	He	10168.134	16.04	1017695.84	0.0016	0.002702
Al	27	3	He	174.394	0.0802	5091.04	0.0004	0.00193
Al	27	3	He	191.185	0.0877	5461.22	0.0004	0.00193
Al	27	3	He	185.488	0.0851	5401.14	0.0004	0.00193
K	39	3	He	7632.398	8.5307	541848.39	0.0011	0.2621
K	39	3	He	7785.92	8.697	541681.75	0.0011	0.2621
K	39	3	He	7657.493	8.5579	542975.54	0.0011	0.2621
Ca	44	3	He	101497.39	6.1938	393415.89	0.0001	0.003476
Ca	44	3	He	102862.227	6.2771	390958.24	0.0001	0.003476
Ca	44	3	He	100599.28	6.139	389506.44	0.0001	0.003476
Ti	47	3	He	2.863	0.0017	110.00	0.0005	0.000385
Ti	47	3	He	3.619	0.0021	130.01	0.0005	0.000385
Ti	47	3	He	3.873	0.0022	140.01	0.0005	0.000385
V	51	3	He	2.315	0.0563	3574.46	0.0212	0.007263
V	51	3	He	2.48	0.0598	3722.50	0.0212	0.007263
V	51	3	He	2.212	0.0541	3432.42	0.0212	0.007263
Cr	52	3	He	1.596	0.0872	5541.21	0.0278	0.04283
Cr	52	3	He	1.716	0.0906	5641.32	0.0278	0.04283
Cr	52	3	He	1.572	0.0865	5491.23	0.0278	0.04283
Mn	55	3	He	3254.457	37.04	2352688.40	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	3357.025	38.2072	2379684.03	0.0114	0.005023
Mn	55	3	He	3303.869	37.6023	2385769.03	0.0114	0.005023
Fe	57	3	He	10573.775	5.6145	356618.16	0.0005	0.003255
Fe	57	3	He	10840.131	5.7558	358494.41	0.0005	0.003255
Fe	57	3	He	10763.954	5.7154	362628.00	0.0005	0.003255
Co	59	3	He	0.301	0.0205	1300.10	0.0539	0.00425
Co	59	3	He	0.324	0.0217	1350.11	0.0539	0.00425
Co	59	3	He	0.337	0.0224	1420.11	0.0539	0.00425
Ni	60	3	He	1.133	0.0241	2680.32	0.0088	0.01412
Ni	60	3	He	1.38	0.0263	2940.40	0.0088	0.01412
Ni	60	3	He	1.465	0.027	3050.43	0.0088	0.01412
Cu	63	3	He	7.413	0.1908	21206.03	0.0251	0.004537
Cu	63	3	He	7.244	0.1866	20865.51	0.0251	0.004537
Cu	63	3	He	7.513	0.1933	21807.08	0.0251	0.004537
Zn	66	3	He	11.208	0.0322	3580.59	0.0027	0.001642
Zn	66	3	He	9.789	0.0283	3170.47	0.0027	0.001642
Zn	66	3	He	9.961	0.0288	3250.51	0.0027	0.001642
As	75	3	He	1.172	0.0027	300.01	0.0019	0.000463
As	75	3	He	1.051	0.0025	276.01	0.0019	0.000463
As	75	3	He	1.142	0.0026	298.01	0.0019	0.000463
Sr	88	3	He	872.627	7.8233	729253.35	0.009	0.001142
Sr	88	3	He	882.723	7.9138	731497.10	0.009	0.001142
Sr	88	3	He	877.243	7.8646	743584.05	0.009	0.001142
Mo	98	3	He	2.53	0.0588	5481.27	0.0225	0.001842
Mo	98	3	He	2.62	0.0608	5621.30	0.0225	0.001842
Mo	98	3	He	2.616	0.0607	5741.37	0.0225	0.001842
Ag	107	3	He	-0.001	0.0004	40.00	0.048	0.0004774
Ag	107	3	He	-0.003	0.0003	30.00	0.048	0.0004774
Ag	107	3	He	-0.006	0.0002	20.00	0.048	0.0004774
Cd	111	3	He	0.054	0.0003	28.00	0.0055	7.481E-06
Cd	111	3	He	0.066	0.0004	34.00	0.0055	7.481E-06
Cd	111	3	He	0.018	0.0001	10.00	0.0055	7.481E-06
Sn	120	3	He	-0.068	0.0174	1620.15	0.0157	0.01844
Sn	120	3	He	-0.113	0.0167	1540.15	0.0157	0.01844
Sn	120	3	He	-0.11	0.0167	1580.14	0.0157	0.01844
Sb	121	3	He	0.115	0.0018	170.01	0.0139	0.0002204
Sb	121	3	He	0.093	0.0015	140.01	0.0139	0.0002204
Sb	121	3	He	0.075	0.0013	120.00	0.0139	0.0002204
Ba	137	3	He	49.933	0.228	21256.89	0.0045	0.001994
Ba	137	3	He	46.339	0.2118	19574.32	0.0045	0.001994
Ba	137	3	He	49.06	0.2241	21186.78	0.0045	0.001994
Tl	205	3	He	-0.006	0.0008	230.01	0.03	0.0009888
Tl	205	3	He	-0.016	0.0005	150.01	0.03	0.0009888
Tl	205	3	He	-0.01	0.0007	200.01	0.03	0.0009888
Pb	208	3	He	0.338	0.0143	2250.26	0.0392	0.001024
Pb	208	3	He	0.38	0.0159	2670.36	0.0392	0.001024
Pb	208	3	He	0.381	0.016	2320.31	0.0392	0.001024
U	238	3	He	14.312	0.6286	180514.04	0.0439	0.000128
U	238	3	He	14.441	0.6342	182074.78	0.0439	0.000128
U	238	3	He	14.605	0.6415	185198.61	0.0439	0.000128
Sc	45	1	No Gas			3687667.76		
Sc	45	1	No Gas			3729936.51		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3733442.13		
Ge	72	1	No Gas			1690569.82		
Ge	72	1	No Gas			1687266.38		
Ge	72	1	No Gas			1721177.32		
Sc	45	2	H2			280511.28		
Sc	45	2	H2			279387.91		
Sc	45	2	H2			279508.73		
Ge	72	2	H2			198816.42		
Ge	72	2	H2			201074.06		
Ge	72	2	H2			198154.27		
In	115	2	H2			497610.38		
In	115	2	H2			493917.84		
In	115	2	H2			498661.91		
Sc	45	3	He			63517.52		
Sc	45	3	He			62283.67		
Sc	45	3	He			63447.44		
Ge	72	3	He			111137.28		
Ge	72	3	He			111841.77		
Ge	72	3	He			112799.09		
In	115	3	He			93228.48		
In	115	3	He			92445.39		
In	115	3	He			94559.98		
Tb	159	3	He			386407.34		
Tb	159	3	He			389741.17		
Tb	159	3	He			393449.92		
Bi	209	3	He			287170.17		
Bi	209	3	He			287075.11		
Bi	209	3	He			288705.25		

Quantitation Report

Data File Name	280SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23J26A00.b
Acq Time	2023-10-26 18:25:13
Sample Name	620-14674-W-1-A
Sample Type	Sample
Comment	I24
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

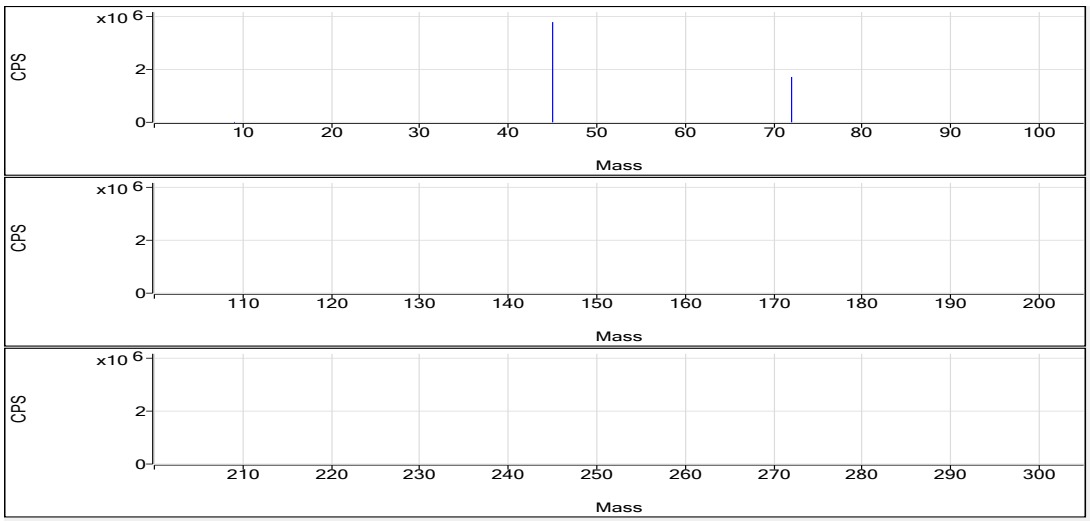
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.010	ppb	N/A	12.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.005	ppb	625.6	5.11	0.0000	Pulse	1.5000	3
Na	23	45	He	234.951	ppb	1.8	80691.11	1.2664	Pulse	0.1000	3
Mg	24	45	He	10.671	ppb	16.7	1243.43	0.0195	Pulse	0.1000	3
Al	27	45	He	3.756	ppb	66.6	230.01	0.0036	Pulse	0.1000	3
K	39	45	He	98.070	ppb	30.8	23455.91	0.3684	Pulse	0.1000	3
Ca	44	45	He	123.287	ppb	21.8	700.05	0.0110	Pulse	0.1000	3
Ti	47	45	He	-0.595	ppb	N/A	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	0.073	ppb	14.5	560.68	0.0088	Pulse	0.5000	3
Cr	52	45	He	0.139	ppb	40.2	2977.08	0.0467	Pulse	0.1000	3
Mn	55	45	He	1.831	ppb	17.8	1646.83	0.0259	Pulse	0.1000	3
Fe	57	45	He	15.039	ppb	15.8	716.71	0.0112	Pulse	0.1000	3
Co	59	45	He	-0.006	ppb	N/A	250.01	0.0039	Pulse	0.1000	3
Ni	60	72	He	-0.442	ppb	N/A	1126.76	0.0102	Pulse	0.1000	3
Cu	63	72	He	0.317	ppb	9.8	1380.12	0.0125	Pulse	0.1000	3
Zn	66	72	He	7.448	ppb	12.0	2423.63	0.0220	Pulse	0.1000	3
As	75	72	He	-0.004	ppb	N/A	50.00	0.0005	Pulse	0.5000	3
Sr	88	115	He	0.464	ppb	22.7	513.36	0.0053	Pulse	0.1000	3
Mo	98	115	He	-0.021	ppb	N/A	133.34	0.0014	Pulse	0.1000	3
Ag	107	115	He	0.001	ppb	682.1	50.00	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.026	ppb	6.6	14.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.102	ppb	N/A	1630.16	0.0168	Pulse	0.1000	3
Sb	121	115	He	0.016	ppb	143.8	43.33	0.0004	Pulse	0.1000	3
Ba	137	115	He	-0.075	ppb	N/A	160.01	0.0017	Pulse	0.1000	3
Tl	205	209	He	-0.009	ppb	N/A	210.01	0.0007	Pulse	0.1000	3
Pb	208	209	He	0.203	ppb	10.3	2676.88	0.0090	Pulse	0.1000	3
U	238	209	He	0.016	ppb	22.4	253.34	0.0008	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3770253.28	0.3	105.5	Pulse	0.1000	3
No Gas	Ge	72	1705092.21	0.4	104.8	Pulse	0.1000	3
H2	Sc	45	282079.56	0.7	107.9	Pulse	0.1000	3
H2	Ge	72	198302.64	1.6	105.7	Pulse	0.1000	3
H2	In	115	505296.77	0.3	107.1	Pulse	0.1000	3
He	Sc	45	63722.74	1.5	105.5	Pulse	0.1000	3
He	Ge	72	110418.06	2.2	106.6	Pulse	0.1000	3
He	In	115	96666.80	2.6	107.0	Pulse	0.1000	3
He	Tb	159	392658.24	1.1	104.3	Pulse	0.1000	3
He	Bi	209	298409.16	2.0	104.1	Pulse	0.1000	3

No Gas



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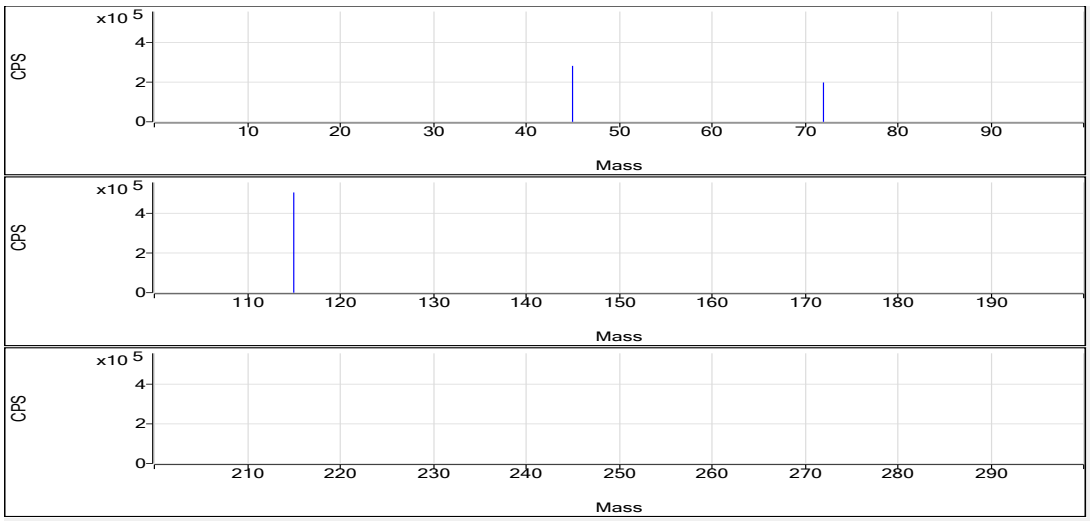
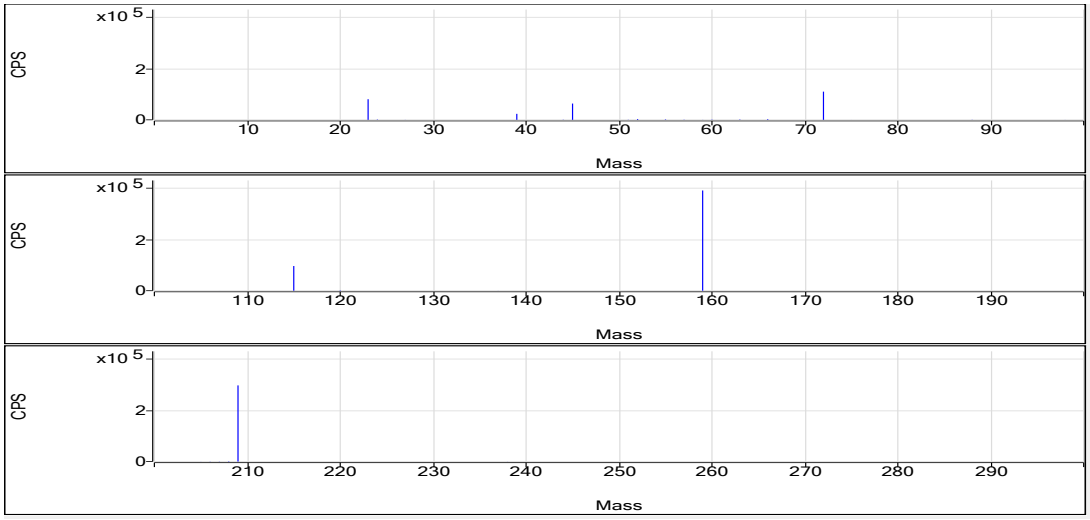


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.01	0	12.00	0.0004	7.085E-06
Be	9	1	No Gas	-0.013	0	8.00	0.0004	7.085E-06
Be	9	1	No Gas	-0.007	0	16.00	0.0004	7.085E-06
Se	78	2	H2	-0.007	0	4.00	0.0004	2.372E-05
Se	78	2	H2	-0.016	0	3.33	0.0004	2.372E-05
Se	78	2	H2	0.037	0	8.00	0.0004	2.372E-05
Na	23	3	He	239.11	1.2799	80205.35	0.0032	0.5042
Na	23	3	He	230.798	1.2529	80818.61	0.0032	0.5042
Na	23	3	He	234.944	1.2664	81049.38	0.0032	0.5042
Mg	24	3	He	12.453	0.0223	1400.11	0.0016	0.002702
Mg	24	3	He	10.673	0.0195	1260.11	0.0016	0.002702
Mg	24	3	He	8.887	0.0167	1070.07	0.0016	0.002702
Al	27	3	He	5.659	0.0045	280.01	0.0004	0.00193
Al	27	3	He	4.684	0.004	260.01	0.0004	0.00193
Al	27	3	He	0.923	0.0023	150.01	0.0004	0.00193
K	39	3	He	131.773	0.4049	25372.22	0.0011	0.2621
K	39	3	He	88.874	0.3584	23118.69	0.0011	0.2621
K	39	3	He	73.562	0.3418	21876.82	0.0011	0.2621
Ca	44	3	He	147.108	0.0124	780.05	0.0001	0.003476
Ca	44	3	He	128.582	0.0113	730.05	0.0001	0.003476
Ca	44	3	He	94.171	0.0092	590.04	0.0001	0.003476
Ti	47	3	He	-0.479	0.0002	10.00	0.0005	0.000385
Ti	47	3	He	-0.819	0	0.00	0.0005	0.000385
Ti	47	3	He	-0.486	0.0002	10.00	0.0005	0.000385
V	51	3	He	0.072	0.0088	550.01	0.0212	0.007263
V	51	3	He	0.063	0.0086	554.01	0.0212	0.007263
V	51	3	He	0.084	0.009	578.02	0.0212	0.007263
Cr	52	3	He	0.078	0.045	2820.37	0.0278	0.04283
Cr	52	3	He	0.188	0.0481	3100.45	0.0278	0.04283
Cr	52	3	He	0.151	0.047	3010.42	0.0278	0.04283
Mn	55	3	He	2.027	0.0281	1760.19	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2.011	0.0279	1800.17	0.0114	0.005023
Mn	55	3	He	1.454	0.0216	1380.12	0.0114	0.005023
Fe	57	3	He	12.812	0.0101	630.04	0.0005	0.003255
Fe	57	3	He	17.531	0.0126	810.05	0.0005	0.003255
Fe	57	3	He	14.772	0.0111	710.04	0.0005	0.003255
Co	59	3	He	-0.008	0.0038	240.01	0.0539	0.00425
Co	59	3	He	-0.007	0.0039	250.01	0.0539	0.00425
Co	59	3	He	-0.003	0.0041	260.01	0.0539	0.00425
Ni	60	3	He	-0.387	0.0107	1180.11	0.0088	0.01412
Ni	60	3	He	-0.3	0.0115	1240.10	0.0088	0.01412
Ni	60	3	He	-0.638	0.0085	960.07	0.0088	0.01412
Cu	63	3	He	0.314	0.0124	1370.12	0.0251	0.004537
Cu	63	3	He	0.35	0.0133	1440.12	0.0251	0.004537
Cu	63	3	He	0.288	0.0118	1330.12	0.0251	0.004537
Zn	66	3	He	6.483	0.0193	2130.25	0.0027	0.001642
Zn	66	3	He	8.253	0.0242	2610.33	0.0027	0.001642
Zn	66	3	He	7.608	0.0224	2530.32	0.0027	0.001642
As	75	3	He	-0.071	0.0003	36.00	0.0019	0.000463
As	75	3	He	0.126	0.0007	76.00	0.0019	0.000463
As	75	3	He	-0.066	0.0003	38.00	0.0019	0.000463
Sr	88	3	He	0.41	0.0048	470.02	0.009	0.001142
Sr	88	3	He	0.396	0.0047	440.02	0.009	0.001142
Sr	88	3	He	0.585	0.0064	630.03	0.009	0.001142
Mo	98	3	He	-0.018	0.0014	140.00	0.0225	0.001842
Mo	98	3	He	-0.03	0.0012	110.01	0.0225	0.001842
Mo	98	3	He	-0.014	0.0015	150.01	0.0225	0.001842
Ag	107	3	He	0.007	0.0008	80.00	0.048	0.0004774
Ag	107	3	He	-0.001	0.0004	40.00	0.048	0.0004774
Ag	107	3	He	-0.004	0.0003	30.00	0.048	0.0004774
Cd	111	3	He	0.025	0.0001	14.00	0.0055	7.481E-06
Cd	111	3	He	0.026	0.0001	14.00	0.0055	7.481E-06
Cd	111	3	He	0.028	0.0002	16.00	0.0055	7.481E-06
Sn	120	3	He	-0.117	0.0166	1620.16	0.0157	0.01844
Sn	120	3	He	-0.19	0.0155	1450.13	0.0157	0.01844
Sn	120	3	He	0	0.0184	1820.18	0.0157	0.01844
Sb	121	3	He	0.006	0.0003	30.00	0.0139	0.0002204
Sb	121	3	He	-0.001	0.0002	20.00	0.0139	0.0002204
Sb	121	3	He	0.042	0.0008	80.00	0.0139	0.0002204
Ba	137	3	He	-0.078	0.0016	160.01	0.0045	0.001994
Ba	137	3	He	-0.111	0.0015	140.01	0.0045	0.001994
Ba	137	3	He	-0.037	0.0018	180.01	0.0045	0.001994
Tl	205	3	He	-0.007	0.0008	230.01	0.03	0.0009888
Tl	205	3	He	-0.016	0.0005	150.01	0.03	0.0009888
Tl	205	3	He	-0.005	0.0008	250.01	0.03	0.0009888
Pb	208	3	He	0.217	0.0095	1490.14	0.0392	0.001024
Pb	208	3	He	0.179	0.008	1330.11	0.0392	0.001024
Pb	208	3	He	0.213	0.0094	1500.15	0.0392	0.001024
U	238	3	He	0.013	0.0007	210.01	0.0439	0.000128
U	238	3	He	0.021	0.001	310.01	0.0439	0.000128
U	238	3	He	0.015	0.0008	240.01	0.0439	0.000128
Sc	45	1	No Gas			3757359.32		
Sc	45	1	No Gas			3775469.63		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3777930.88		
Ge	72	1	No Gas			1707119.35		
Ge	72	1	No Gas			1696724.35		
Ge	72	1	No Gas			1711432.94		
Sc	45	2	H2			280053.20		
Sc	45	2	H2			281983.18		
Sc	45	2	H2			284202.30		
Ge	72	2	H2			194710.86		
Ge	72	2	H2			200063.14		
Ge	72	2	H2			200133.92		
In	115	2	H2			503597.53		
In	115	2	H2			505273.74		
In	115	2	H2			507019.05		
Sc	45	3	He			62664.94		
Sc	45	3	He			64503.00		
Sc	45	3	He			64000.27		
Ge	72	3	He			110219.54		
Ge	72	3	He			108062.88		
Ge	72	3	He			112971.77		
In	115	3	He			97537.90		
In	115	3	He			93812.87		
In	115	3	He			98687.77		
Tb	159	3	He			388340.23		
Tb	159	3	He			396584.99		
Tb	159	3	He			393049.49		
Bi	209	3	He			291570.21		
Bi	209	3	He			301307.81		
Bi	209	3	He			302349.45		

Quantitation Report

Data File Name	281SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23J26A00.b
Acq Time	2023-10-26 18:27:14
Sample Name	410-147656-B-2-A
Sample Type	Sample
Comment	I24
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

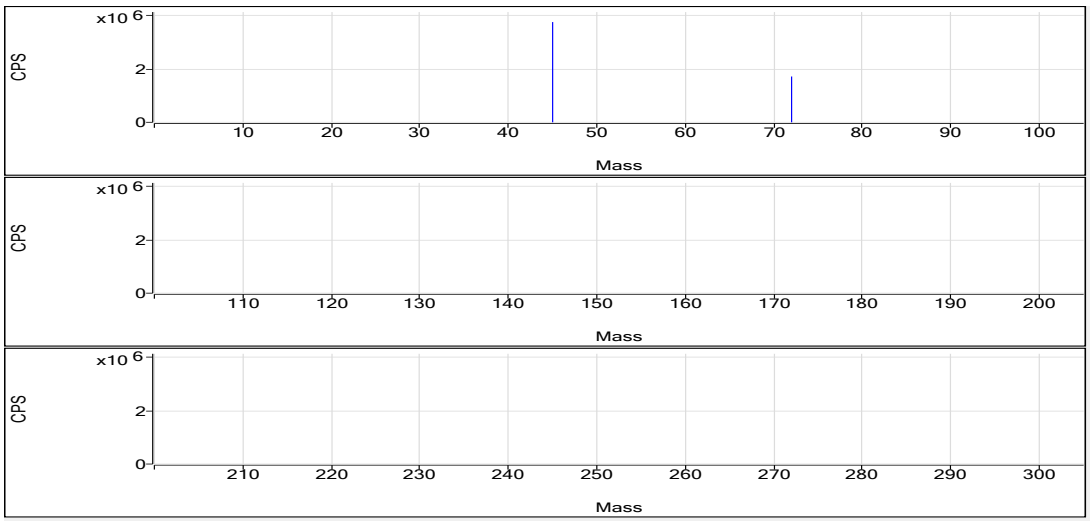
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.016	ppb	56.2	50.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.020	ppb	186.3	6.44	0.0000	Pulse	1.5000	3
Na	23	45	He	2405.451	ppb	1.0	531227.09	8.3082	Pulse	0.1000	3
Mg	24	45	He	18985.771	ppb	1.2	1914831.43	29.9472	Pulse	0.1000	3
Al	27	45	He	35.810	ppb	11.2	1150.13	0.0180	Pulse	0.1000	3
K	39	45	He	2703.692	ppb	0.6	204048.52	3.1912	Pulse	0.1000	3
Ca	44	45	He	53362.589	ppb	0.4	208329.72	3.2581	Pulse	0.1000	3
Ti	47	45	He	3.062	ppb	164.8	116.75	0.0018	Pulse	0.1000	3
V	51	45	He	0.421	ppb	1.6	1034.71	0.0162	Pulse	0.5000	3
Cr	52	45	He	2.670	ppb	7.4	7485.51	0.1171	Pulse	0.1000	3
Mn	55	45	He	4691.747	ppb	0.9	3414173.80	53.3960	Pulse	0.1000	3
Fe	57	45	He	707.377	ppb	1.8	24210.94	0.3786	Pulse	0.1000	3
Co	59	45	He	3.337	ppb	4.4	11765.16	0.1840	Pulse	0.1000	3
Ni	60	72	He	3.480	ppb	8.1	5057.69	0.0448	Pulse	0.1000	3
Cu	63	72	He	2.218	ppb	7.3	6801.81	0.0603	Pulse	0.1000	3
Zn	66	72	He	5.451	ppb	2.5	1863.52	0.0165	Pulse	0.1000	3
As	75	72	He	0.309	ppb	36.9	118.67	0.0011	Pulse	0.5000	3
Sr	88	115	He	145.636	ppb	1.0	126595.65	1.3066	Pulse	0.1000	3
Mo	98	115	He	0.071	ppb	50.6	333.35	0.0034	Pulse	0.1000	3
Ag	107	115	He	0.616	ppb	1.9	2910.42	0.0300	Pulse	0.1000	3
Cd	111	115	He	0.230	ppb	9.1	122.67	0.0013	Pulse	0.5000	3
Sn	120	115	He	0.341	ppb	33.5	2306.95	0.0238	Pulse	0.1000	3
Sb	121	115	He	0.271	ppb	17.6	386.69	0.0040	Pulse	0.1000	3
Ba	137	115	He	54.965	ppb	1.3	24298.84	0.2508	Pulse	0.1000	3
Tl	205	209	He	0.001	ppb	717.0	300.02	0.0010	Pulse	0.1000	3
Pb	208	209	He	0.287	ppb	1.8	3627.02	0.0123	Pulse	0.1000	3
U	238	209	He	0.075	ppb	2.4	1006.75	0.0034	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3760725.36	0.4	105.2	Pulse	0.1000	3
No Gas	Ge	72	1718136.12	0.1	105.6	Pulse	0.1000	3
H2	Sc	45	283103.17	1.3	108.3	Pulse	0.1000	3
H2	Ge	72	200012.28	0.5	106.6	Pulse	0.1000	3
H2	In	115	495543.68	0.5	105.1	Pulse	0.1000	3
He	Sc	45	63943.43	0.9	105.9	Pulse	0.1000	3
He	Ge	72	112849.79	0.5	108.9	Pulse	0.1000	3
He	In	115	96890.03	1.5	107.2	Pulse	0.1000	3
He	Tb	159	393550.24	0.6	104.6	Pulse	0.1000	3
He	Bi	209	295576.54	0.8	103.1	Pulse	0.1000	3

No Gas



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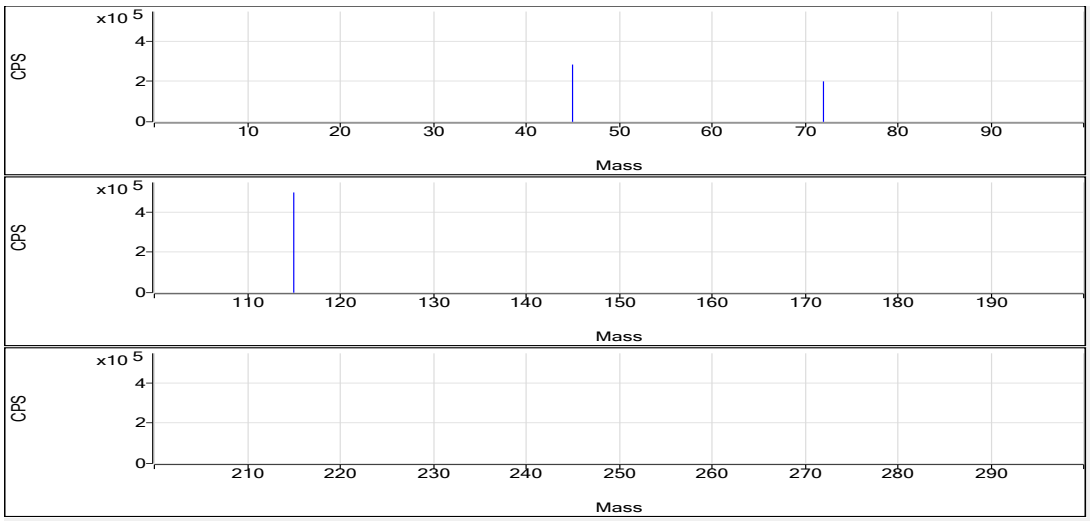
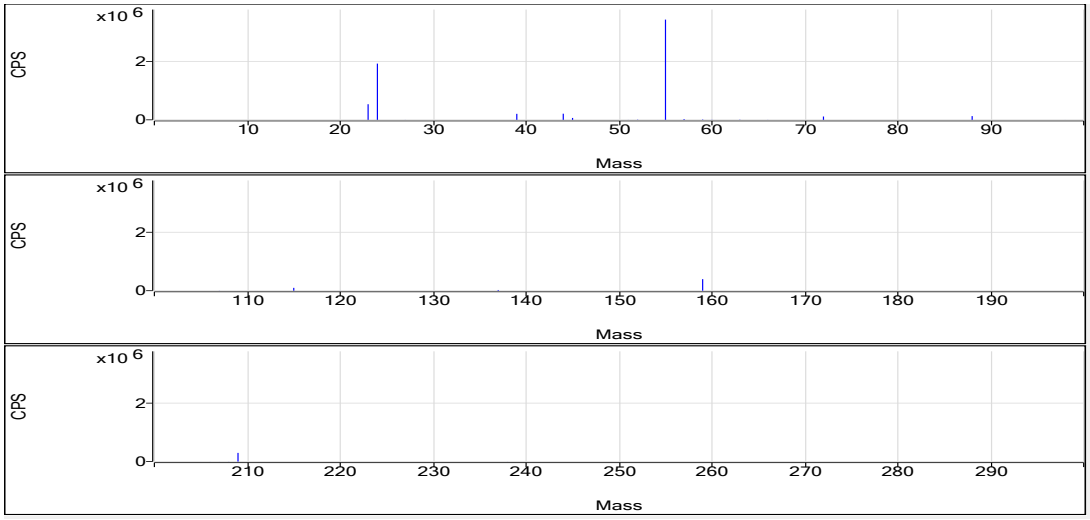


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.015	0	48.00	0.0004	7.085E-06
Be	9	1	No Gas	0.026	0	64.00	0.0004	7.085E-06
Be	9	1	No Gas	0.008	0	38.00	0.0004	7.085E-06
Se	78	2	H2	0.007	0	5.33	0.0004	2.372E-05
Se	78	2	H2	-0.009	0	4.00	0.0004	2.372E-05
Se	78	2	H2	0.061	0.0001	10.00	0.0004	2.372E-05
Na	23	3	He	2397.632	8.2828	529099.84	0.0032	0.5042
Na	23	3	He	2386.291	8.246	532140.89	0.0032	0.5042
Na	23	3	He	2432.432	8.3957	532440.54	0.0032	0.5042
Mg	24	3	He	18823.92	29.692	1896699.50	0.0016	0.002702
Mg	24	3	He	18884.954	29.7882	1922324.82	0.0016	0.002702
Mg	24	3	He	19248.44	30.3615	1925469.97	0.0016	0.002702
Al	27	3	He	31.997	0.0163	1040.07	0.0004	0.00193
Al	27	3	He	35.43	0.0178	1150.08	0.0004	0.00193
Al	27	3	He	40.002	0.0199	1260.25	0.0004	0.00193
K	39	3	He	2708.423	3.1963	204177.20	0.0011	0.2621
K	39	3	He	2686.138	3.1722	204709.02	0.0011	0.2621
K	39	3	He	2716.516	3.2051	203259.33	0.0011	0.2621
Ca	44	3	He	53176.874	3.2467	207399.24	0.0001	0.003476
Ca	44	3	He	53336.008	3.2564	210148.36	0.0001	0.003476
Ca	44	3	He	53574.884	3.271	207441.56	0.0001	0.003476
Ti	47	3	He	8.842	0.0045	290.25	0.0005	0.000385
Ti	47	3	He	0.829	0.0008	50.00	0.0005	0.000385
Ti	47	3	He	-0.483	0.0002	10.00	0.0005	0.000385
V	51	3	He	0.424	0.0163	1038.04	0.0212	0.007263
V	51	3	He	0.425	0.0163	1050.05	0.0212	0.007263
V	51	3	He	0.414	0.016	1016.04	0.0212	0.007263
Cr	52	3	He	2.817	0.1212	7742.23	0.0278	0.04283
Cr	52	3	He	2.444	0.1108	7152.01	0.0278	0.04283
Cr	52	3	He	2.747	0.1192	7562.28	0.0278	0.04283
Mn	55	3	He	4670.8	53.1576	3395667.45	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	4664.703	53.0883	3425945.89	0.0114	0.005023
Mn	55	3	He	4739.739	53.9422	3420908.07	0.0114	0.005023
Fe	57	3	He	721.664	0.3862	24671.64	0.0005	0.003255
Fe	57	3	He	697.909	0.3736	24110.66	0.0005	0.003255
Fe	57	3	He	702.557	0.3761	23850.52	0.0005	0.003255
Co	59	3	He	3.178	0.1754	11204.69	0.0539	0.00425
Co	59	3	He	3.464	0.1908	12315.62	0.0539	0.00425
Co	59	3	He	3.368	0.1857	11775.17	0.0539	0.00425
Ni	60	3	He	3.804	0.0477	5371.13	0.0088	0.01412
Ni	60	3	He	3.287	0.0431	4890.96	0.0088	0.01412
Ni	60	3	He	3.35	0.0437	4910.98	0.0088	0.01412
Cu	63	3	He	2.406	0.065	7322.11	0.0251	0.004537
Cu	63	3	He	2.118	0.0578	6551.63	0.0251	0.004537
Cu	63	3	He	2.131	0.0581	6531.68	0.0251	0.004537
Zn	66	3	He	5.418	0.0164	1850.18	0.0027	0.001642
Zn	66	3	He	5.603	0.0169	1920.21	0.0027	0.001642
Zn	66	3	He	5.331	0.0162	1820.18	0.0027	0.001642
As	75	3	He	0.223	0.0009	100.00	0.0019	0.000463
As	75	3	He	0.266	0.001	110.00	0.0019	0.000463
As	75	3	He	0.438	0.0013	146.00	0.0019	0.000463
Sr	88	3	He	145.022	1.3011	124107.68	0.009	0.001142
Sr	88	3	He	147.358	1.322	128234.14	0.009	0.001142
Sr	88	3	He	144.528	1.2967	127445.12	0.009	0.001142
Mo	98	3	He	0.03	0.0025	240.01	0.0225	0.001842
Mo	98	3	He	0.097	0.004	390.02	0.0225	0.001842
Mo	98	3	He	0.085	0.0038	370.02	0.0225	0.001842
Ag	107	3	He	0.615	0.03	2860.42	0.048	0.0004774
Ag	107	3	He	0.605	0.0295	2860.39	0.048	0.0004774
Ag	107	3	He	0.629	0.0306	3010.45	0.048	0.0004774
Cd	111	3	He	0.244	0.0013	128.00	0.0055	7.481E-06
Cd	111	3	He	0.206	0.0011	110.00	0.0055	7.481E-06
Cd	111	3	He	0.24	0.0013	130.00	0.0055	7.481E-06
Sn	120	3	He	0.281	0.0229	2180.27	0.0157	0.01844
Sn	120	3	He	0.473	0.0259	2510.32	0.0157	0.01844
Sn	120	3	He	0.27	0.0227	2230.27	0.0157	0.01844
Sb	121	3	He	0.218	0.0033	310.02	0.0139	0.0002204
Sb	121	3	He	0.31	0.0045	440.03	0.0139	0.0002204
Sb	121	3	He	0.284	0.0042	410.02	0.0139	0.0002204
Ba	137	3	He	55.816	0.2547	24292.10	0.0045	0.001994
Ba	137	3	He	54.54	0.2489	24142.02	0.0045	0.001994
Ba	137	3	He	54.539	0.2489	24462.39	0.0045	0.001994
Tl	205	3	He	0.002	0.0011	310.02	0.03	0.0009888
Tl	205	3	He	0.007	0.0012	350.02	0.03	0.0009888
Tl	205	3	He	-0.006	0.0008	240.01	0.03	0.0009888
Pb	208	3	He	0.283	0.0121	2130.26	0.0392	0.001024
Pb	208	3	He	0.284	0.0122	1970.22	0.0392	0.001024
Pb	208	3	He	0.293	0.0125	2140.27	0.0392	0.001024
U	238	3	He	0.074	0.0034	1000.08	0.0439	0.000128
U	238	3	He	0.073	0.0033	980.08	0.0439	0.000128
U	238	3	He	0.076	0.0035	1040.09	0.0439	0.000128
Sc	45	1	No Gas			3743674.94		
Sc	45	1	No Gas			3764147.13		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3774354.01		
Ge	72	1	No Gas			1715812.63		
Ge	72	1	No Gas			1718660.44		
Ge	72	1	No Gas			1719935.29		
Sc	45	2	H2			280046.01		
Sc	45	2	H2			287205.33		
Sc	45	2	H2			282058.16		
Ge	72	2	H2			199576.31		
Ge	72	2	H2			201211.15		
Ge	72	2	H2			199249.37		
In	115	2	H2			496487.26		
In	115	2	H2			497476.75		
In	115	2	H2			492667.02		
Sc	45	3	He			63879.20		
Sc	45	3	He			64533.02		
Sc	45	3	He			63418.08		
Ge	72	3	He			112658.67		
Ge	72	3	He			113433.98		
Ge	72	3	He			112456.71		
In	115	3	He			95403.83		
In	115	3	He			97016.54		
In	115	3	He			98303.72		
Tb	159	3	He			392426.17		
Tb	159	3	He			391894.10		
Tb	159	3	He			396330.46		
Bi	209	3	He			294202.61		
Bi	209	3	He			294258.35		
Bi	209	3	He			298268.67		

Quantitation Report

Data File Name	282SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23J26A00.b
Acq Time	2023-10-26 18:29:15
Sample Name	410-147656-B-1-A
Sample Type	Sample
Comment	I24
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

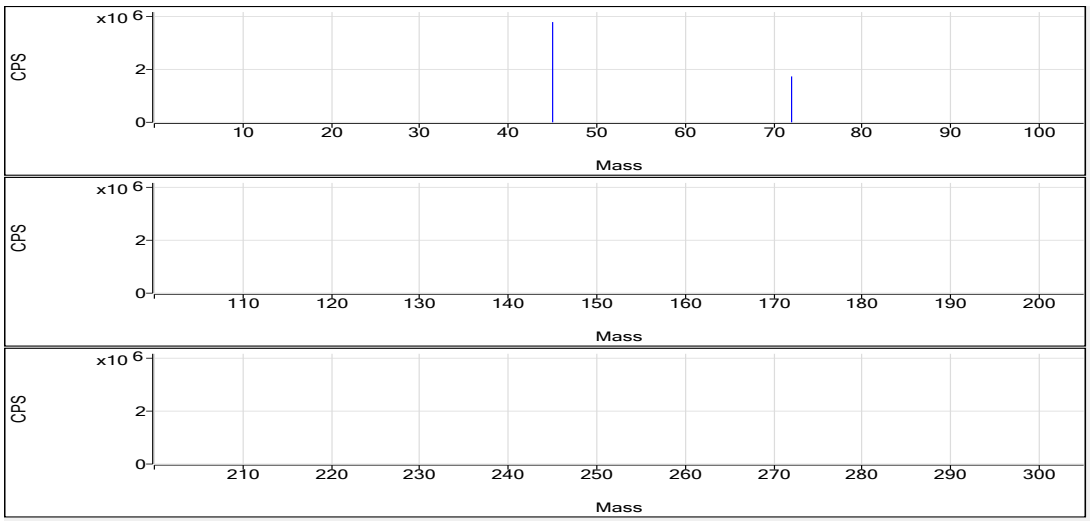
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.009	ppb	79.6	40.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.062	ppb	98.9	10.22	0.0001	Pulse	1.5000	3
Na	23	45	He	2413.529	ppb	2.0	538882.79	8.3344	Pulse	0.1000	3
Mg	24	45	He	17600.523	ppb	1.4	1795170.34	27.7624	Pulse	0.1000	3
Al	27	45	He	31.084	ppb	6.2	1026.74	0.0159	Pulse	0.1000	3
K	39	45	He	2660.449	ppb	1.7	203313.21	3.1443	Pulse	0.1000	3
Ca	44	45	He	48091.841	ppb	1.5	189882.50	2.9366	Pulse	0.1000	3
Ti	47	45	He	0.500	ppb	69.3	40.00	0.0006	Pulse	0.1000	3
V	51	45	He	0.521	ppb	4.0	1182.72	0.0183	Pulse	0.5000	3
Cr	52	45	He	2.899	ppb	5.6	7982.42	0.1235	Pulse	0.1000	3
Mn	55	45	He	4550.574	ppb	0.5	3349046.51	51.7895	Pulse	0.1000	3
Fe	57	45	He	929.907	ppb	3.6	32112.92	0.4967	Pulse	0.1000	3
Co	59	45	He	4.262	ppb	2.6	15118.43	0.2338	Pulse	0.1000	3
Ni	60	72	He	3.177	ppb	2.9	4724.26	0.0421	Pulse	0.1000	3
Cu	63	72	He	1.383	ppb	4.2	4404.17	0.0393	Pulse	0.1000	3
Zn	66	72	He	4.904	ppb	4.9	1683.49	0.0150	Pulse	0.1000	3
As	75	72	He	0.244	ppb	26.3	104.00	0.0009	Pulse	0.5000	3
Sr	88	115	He	139.740	ppb	1.3	118019.83	1.2538	Pulse	0.1000	3
Mo	98	115	He	0.079	ppb	35.7	340.01	0.0036	Pulse	0.1000	3
Ag	107	115	He	0.589	ppb	3.0	2703.70	0.0287	Pulse	0.1000	3
Cd	111	115	He	0.204	ppb	2.2	106.00	0.0011	Pulse	0.5000	3
Sn	120	115	He	0.435	ppb	15.7	2380.30	0.0253	Pulse	0.1000	3
Sb	121	115	He	0.190	ppb	17.6	270.01	0.0029	Pulse	0.1000	3
Ba	137	115	He	62.050	ppb	2.6	26629.84	0.2829	Pulse	0.1000	3
Tl	205	209	He	0.006	ppb	150.9	343.35	0.0012	Pulse	0.1000	3
Pb	208	209	He	0.215	ppb	12.6	2786.89	0.0095	Pulse	0.1000	3
U	238	209	He	0.081	ppb	17.1	1080.09	0.0037	Pulse	0.1000	3

ISTD Table:

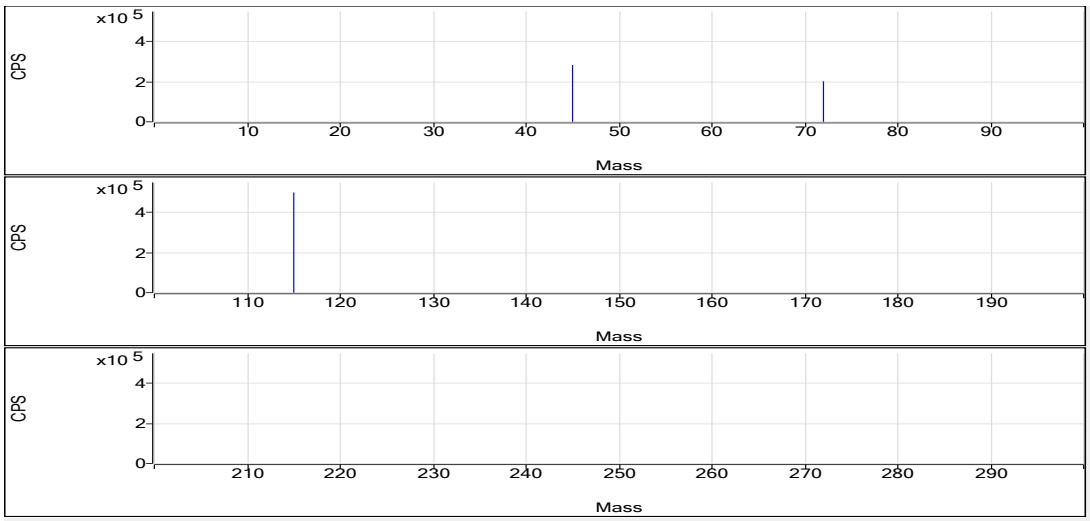
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3785426.61	0.4	105.9	Pulse	0.1000	3
No Gas	Ge	72	1732525.86	0.3	106.5	Pulse	0.1000	3
H2	Sc	45	282943.10	0.9	108.2	Pulse	0.1000	3
H2	Ge	72	201843.23	1.0	107.6	Pulse	0.1000	3
H2	In	115	499438.46	0.4	105.9	Pulse	0.1000	3
He	Sc	45	64669.76	1.5	107.1	Pulse	0.1000	3
He	Ge	72	112107.48	1.3	108.2	Pulse	0.1000	3
He	In	115	94134.57	0.4	104.2	Pulse	0.1000	3
He	Tb	159	391294.51	0.5	104.0	Pulse	0.1000	3
He	Bi	209	294754.34	1.3	102.8	Pulse	0.1000	3

No Gas

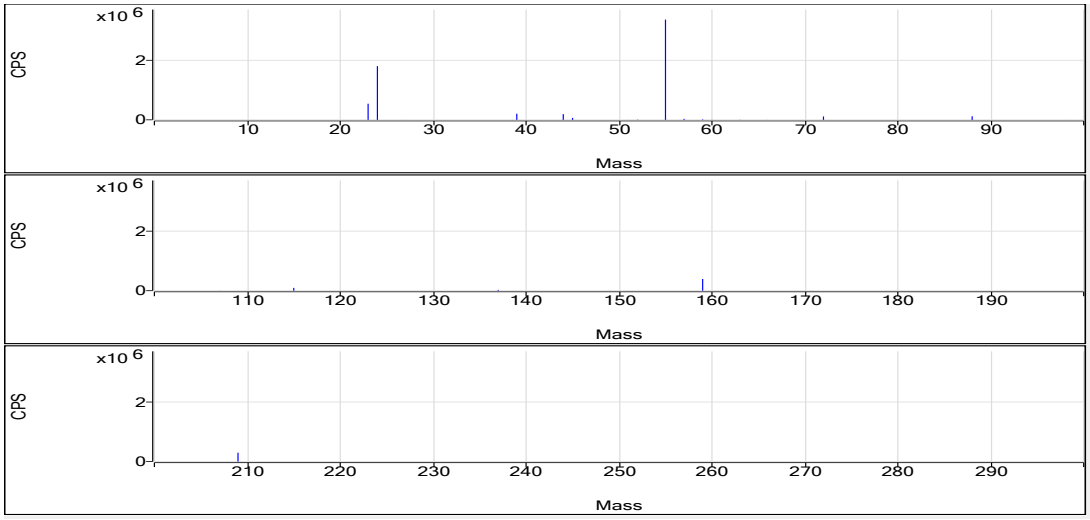


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.001	0	28.00	0.0004	7.085E-06
Be	9	1	No Gas	0.014	0	48.00	0.0004	7.085E-06
Be	9	1	No Gas	0.012	0	44.00	0.0004	7.085E-06
Se	78	2	H2	0.053	0	9.33	0.0004	2.372E-05
Se	78	2	H2	0.006	0	5.33	0.0004	2.372E-05
Se	78	2	H2	0.127	0.0001	16.00	0.0004	2.372E-05
Na	23	3	He	2357.344	8.1521	535900.66	0.0032	0.5042
Na	23	3	He	2448.254	8.4471	539936.79	0.0032	0.5042
Na	23	3	He	2434.988	8.404	540810.93	0.0032	0.5042
Mg	24	3	He	17323.575	27.3256	1796321.07	0.0016	0.002702
Mg	24	3	He	17674.641	27.8793	1782049.97	0.0016	0.002702
Mg	24	3	He	17803.353	28.0823	1807139.97	0.0016	0.002702
Al	27	3	He	32.667	0.0166	1090.08	0.0004	0.00193
Al	27	3	He	31.625	0.0161	1030.07	0.0004	0.00193
Al	27	3	He	28.959	0.0149	960.07	0.0004	0.00193
K	39	3	He	2608.098	3.0876	202972.48	0.0011	0.2621
K	39	3	He	2683.422	3.1692	202576.77	0.0011	0.2621
K	39	3	He	2689.826	3.1762	204390.39	0.0011	0.2621
Ca	44	3	He	47291.205	2.8878	189835.39	0.0001	0.003476
Ca	44	3	He	48598.585	2.9675	189683.71	0.0001	0.003476
Ca	44	3	He	48385.733	2.9545	190128.40	0.0001	0.003476
Ti	47	3	He	0.152	0.0005	30.00	0.0005	0.000385
Ti	47	3	He	0.844	0.0008	50.00	0.0005	0.000385
Ti	47	3	He	0.503	0.0006	40.00	0.0005	0.000385
V	51	3	He	0.531	0.0185	1216.06	0.0212	0.007263
V	51	3	He	0.535	0.0186	1188.06	0.0212	0.007263
V	51	3	He	0.497	0.0178	1144.05	0.0212	0.007263
Cr	52	3	He	2.793	0.1205	7922.41	0.0278	0.04283
Cr	52	3	He	3.085	0.1286	8222.51	0.0278	0.04283
Cr	52	3	He	2.819	0.1212	7802.33	0.0278	0.04283
Mn	55	3	He	4522.26	51.4673	3383338.07	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	4562.323	51.9232	3318938.08	0.0114	0.005023
Mn	55	3	He	4567.139	51.978	3344863.39	0.0114	0.005023
Fe	57	3	He	891.795	0.4765	31324.50	0.0005	0.003255
Fe	57	3	He	947.463	0.506	32346.74	0.0005	0.003255
Fe	57	3	He	950.464	0.5076	32667.51	0.0005	0.003255
Co	59	3	He	4.191	0.23	15118.46	0.0539	0.00425
Co	59	3	He	4.205	0.2307	14747.89	0.0539	0.00425
Co	59	3	He	4.39	0.2407	15488.95	0.0539	0.00425
Ni	60	3	He	3.192	0.0423	4720.91	0.0088	0.01412
Ni	60	3	He	3.263	0.0429	4760.96	0.0088	0.01412
Ni	60	3	He	3.077	0.0413	4690.91	0.0088	0.01412
Cu	63	3	He	1.445	0.0408	4560.91	0.0251	0.004537
Cu	63	3	He	1.329	0.0379	4210.79	0.0251	0.004537
Cu	63	3	He	1.374	0.0391	4440.82	0.0251	0.004537
Zn	66	3	He	4.815	0.0148	1650.15	0.0027	0.001642
Zn	66	3	He	5.179	0.0158	1750.18	0.0027	0.001642
Zn	66	3	He	4.719	0.0145	1650.15	0.0027	0.001642
As	75	3	He	0.264	0.001	108.00	0.0019	0.000463
As	75	3	He	0.296	0.001	114.00	0.0019	0.000463
As	75	3	He	0.172	0.0008	90.00	0.0019	0.000463
Sr	88	3	He	141.715	1.2715	119588.66	0.009	0.001142
Sr	88	3	He	138.284	1.2407	117311.10	0.009	0.001142
Sr	88	3	He	139.22	1.2491	117159.72	0.009	0.001142
Mo	98	3	He	0.065	0.0033	310.01	0.0225	0.001842
Mo	98	3	He	0.111	0.0043	410.02	0.0225	0.001842
Mo	98	3	He	0.06	0.0032	300.01	0.0225	0.001842
Ag	107	3	He	0.609	0.0297	2790.37	0.048	0.0004774
Ag	107	3	He	0.583	0.0285	2690.37	0.048	0.0004774
Ag	107	3	He	0.575	0.028	2630.35	0.048	0.0004774
Cd	111	3	He	0.208	0.0011	108.00	0.0055	7.481E-06
Cd	111	3	He	0.2	0.0011	104.00	0.0055	7.481E-06
Cd	111	3	He	0.205	0.0011	106.00	0.0055	7.481E-06
Sn	120	3	He	0.504	0.0264	2480.33	0.0157	0.01844
Sn	120	3	He	0.368	0.0242	2290.27	0.0157	0.01844
Sn	120	3	He	0.434	0.0253	2370.29	0.0157	0.01844
Sb	121	3	He	0.229	0.0034	320.02	0.0139	0.0002204
Sb	121	3	He	0.167	0.0025	240.01	0.0139	0.0002204
Sb	121	3	He	0.176	0.0027	250.01	0.0139	0.0002204
Ba	137	3	He	60.235	0.2747	25834.83	0.0045	0.001994
Ba	137	3	He	62.726	0.286	27037.27	0.0045	0.001994
Ba	137	3	He	63.188	0.288	27017.42	0.0045	0.001994
Tl	205	3	He	0.016	0.0015	430.02	0.03	0.0009888
Tl	205	3	He	0	0.001	290.02	0.03	0.0009888
Tl	205	3	He	0.002	0.001	310.02	0.03	0.0009888
Pb	208	3	He	0.244	0.0106	1740.17	0.0392	0.001024
Pb	208	3	He	0.211	0.0093	1420.14	0.0392	0.001024
Pb	208	3	He	0.191	0.0085	1290.10	0.0392	0.001024
U	238	3	He	0.096	0.0044	1270.11	0.0439	0.000128
U	238	3	He	0.075	0.0034	1010.08	0.0439	0.000128
U	238	3	He	0.07	0.0032	960.07	0.0439	0.000128
Sc	45	1	No Gas			3775290.88		
Sc	45	1	No Gas			3802495.26		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3778493.69		
Ge	72	1	No Gas			1728087.01		
Ge	72	1	No Gas			1730284.66		
Ge	72	1	No Gas			1739205.91		
Sc	45	2	H2			280009.02		
Sc	45	2	H2			284600.11		
Sc	45	2	H2			284220.17		
Ge	72	2	H2			199502.73		
Ge	72	2	H2			203541.17		
Ge	72	2	H2			202485.80		
In	115	2	H2			497030.70		
In	115	2	H2			500760.73		
In	115	2	H2			500523.94		
Sc	45	3	He			65737.63		
Sc	45	3	He			63920.14		
Sc	45	3	He			64351.51		
Ge	72	3	He			111670.69		
Ge	72	3	He			110976.00		
Ge	72	3	He			113675.75		
In	115	3	He			94075.53		
In	115	3	He			94569.66		
In	115	3	He			93814.23		
Tb	159	3	He			393053.78		
Tb	159	3	He			389450.97		
Tb	159	3	He			391378.78		
Bi	209	3	He			291621.09		
Bi	209	3	He			293717.05		
Bi	209	3	He			298924.88		

Quantitation Report

Data File Name	284_CCV.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23J26A00.b
Acq Time	2023-10-26 18:33:16
Sample Name	CCV 5001623
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

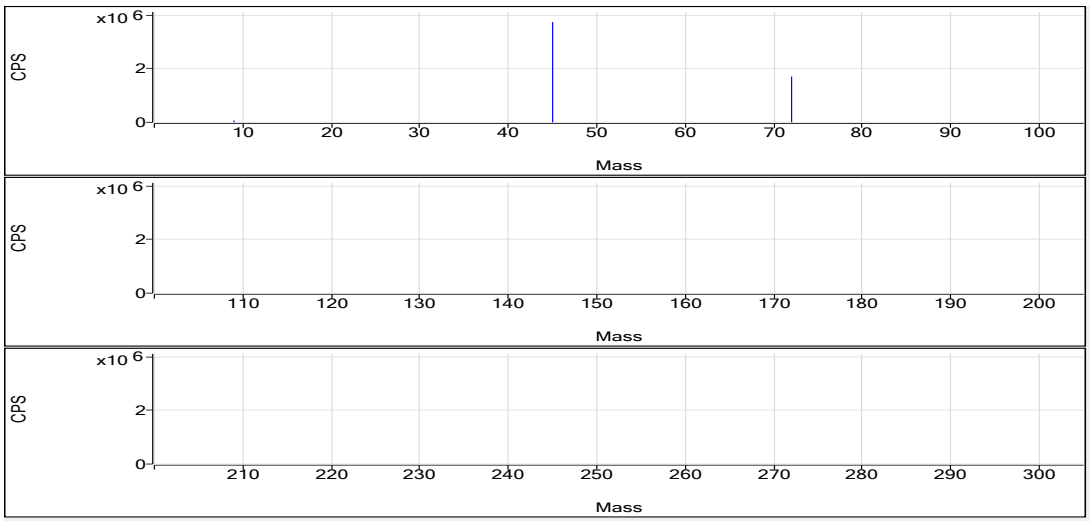
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	47.168	ppb	1.0	67600.07	0.0181	Pulse	0.5000	3
Se	78	72	H2	52.699	ppb	1.2	4475.81	0.0230	Pulse	1.5000	3
Na	23	45	He	5195.715	ppb	1.2	1091336.86	17.3607	Pulse	0.1000	3
Mg	24	45	He	5109.216	ppb	0.8	506739.99	8.0610	Pulse	0.1000	3
Al	27	45	He	5221.513	ppb	1.6	147343.10	2.3440	Pulse	0.1000	3
K	39	45	He	5337.479	ppb	1.2	379974.08	6.0445	Pulse	0.1000	3
Ca	44	45	He	5076.127	ppb	4.2	19677.12	0.3131	Pulse	0.1000	3
Ti	47	45	He	5191.930	ppb	0.5	153548.30	2.4425	Pulse	0.1000	3
V	51	45	He	518.926	ppb	0.7	691204.79	10.9952	Pulse	0.5000	3
Cr	52	45	He	515.984	ppb	1.2	904899.94	14.3951	Pulse	0.1000	3
Mn	55	45	He	520.318	ppb	1.2	372533.87	5.9261	Pulse	0.1000	3
Fe	57	45	He	5201.875	ppb	1.1	173737.65	2.7638	Pulse	0.1000	3
Co	59	45	He	516.944	ppb	1.0	1750619.66	27.8474	Pulse	0.1000	3
Ni	60	72	He	518.577	ppb	0.7	503001.39	4.5882	Pulse	0.1000	3
Cu	63	72	He	518.143	ppb	0.5	1427928.73	13.0250	Pulse	0.1000	3
Zn	66	72	He	520.384	ppb	0.5	155816.78	1.4213	Pulse	0.1000	3
As	75	72	He	517.938	ppb	0.7	108408.80	0.9888	Pulse	0.5000	3
Sr	88	115	He	50.777	ppb	2.5	43320.17	0.4563	Pulse	0.1000	3
Mo	98	115	He	49.012	ppb	0.5	104933.93	1.1052	Pulse	0.1000	3
Ag	107	115	He	48.937	ppb	0.9	222847.80	2.3472	Pulse	0.1000	3
Cd	111	115	He	48.456	ppb	0.2	25187.18	0.2653	Pulse	0.5000	3
Sn	120	115	He	49.687	ppb	1.2	75886.64	0.7993	Pulse	0.1000	3
Sb	121	115	He	49.844	ppb	0.7	65825.72	0.6933	Pulse	0.1000	3
Ba	137	115	He	494.959	ppb	1.4	212911.52	2.2427	Pulse	0.1000	3
Tl	205	209	He	51.775	ppb	0.3	452778.61	1.5550	Pulse	0.1000	3
Pb	208	209	He	51.904	ppb	0.4	592995.78	2.0365	Pulse	0.1000	3
U	238	209	He	51.112	ppb	0.2	653558.44	2.2445	Pulse	0.1000	3

ISTD Table:

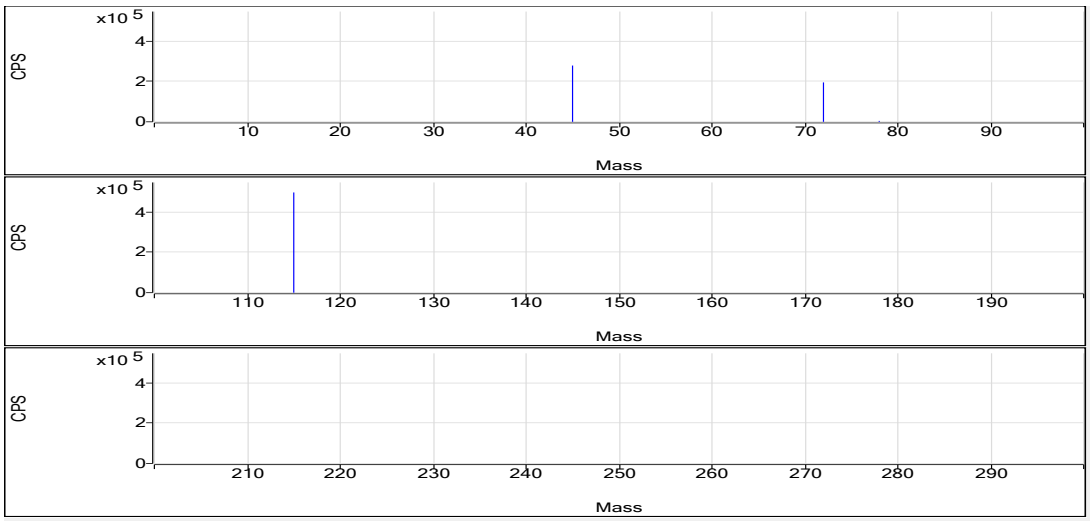
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3739942.03	1.0	104.6	Pulse	0.1000	3
No Gas	Ge	72	1706629.51	0.8	104.9	Pulse	0.1000	3
H2	Sc	45	278207.22	0.2	106.4	Pulse	0.1000	3
H2	Ge	72	194787.94	1.0	103.8	Pulse	0.1000	3
H2	In	115	495433.18	1.3	105.0	Pulse	0.1000	3
He	Sc	45	62865.48	0.8	104.1	Pulse	0.1000	3
He	Ge	72	109632.16	0.7	105.8	Pulse	0.1000	3
He	In	115	94949.61	1.7	105.1	Pulse	0.1000	3
He	Tb	159	391552.46	0.6	104.0	Pulse	0.1000	3
He	Bi	209	291181.63	1.0	101.6	Pulse	0.1000	3

No Gas

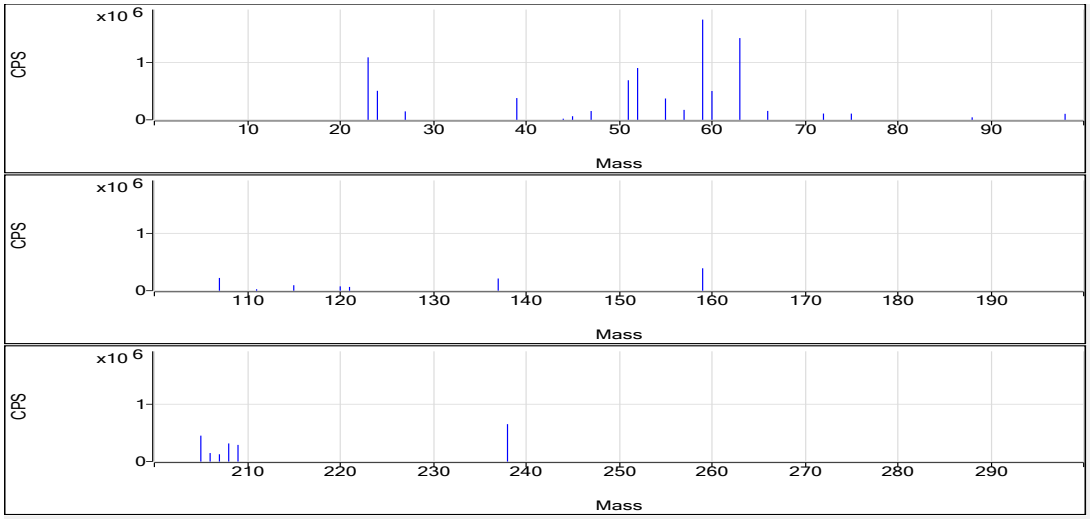


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	47.375	0.0182	68631.41	0.0004	7.085E-06
Be	9	1	No Gas	46.623	0.0179	66708.85	0.0004	7.085E-06
Be	9	1	No Gas	47.508	0.0182	67459.94	0.0004	7.085E-06
Se	78	2	H2	52.237	0.0228	4424.68	0.0004	2.372E-05
Se	78	2	H2	53.433	0.0233	4502.04	0.0004	2.372E-05
Se	78	2	H2	52.427	0.0229	4500.71	0.0004	2.372E-05
Na	23	3	He	5187.226	17.3331	1084786.55	0.0032	0.5042
Na	23	3	He	5139.908	17.1796	1089493.66	0.0032	0.5042
Na	23	3	He	5260.011	17.5693	1099730.37	0.0032	0.5042
Mg	24	3	He	5121.545	8.0805	505711.98	0.0016	0.002702
Mg	24	3	He	5065.077	7.9914	506796.83	0.0016	0.002702
Mg	24	3	He	5141.026	8.1112	507711.16	0.0016	0.002702
Al	27	3	He	5300.814	2.3795	148921.95	0.0004	0.00193
Al	27	3	He	5132.001	2.3038	146102.76	0.0004	0.00193
Al	27	3	He	5231.725	2.3485	147004.58	0.0004	0.00193
K	39	3	He	5319.932	6.0255	377102.34	0.0011	0.2621
K	39	3	He	5284.489	5.9871	379687.96	0.0011	0.2621
K	39	3	He	5408.014	6.1209	383131.95	0.0011	0.2621
Ca	44	3	He	5204.772	0.3209	20084.38	0.0001	0.003476
Ca	44	3	He	4830.111	0.2981	18902.64	0.0001	0.003476
Ca	44	3	He	5193.497	0.3202	20044.35	0.0001	0.003476
Ti	47	3	He	5165.509	2.43	152083.42	0.0005	0.000385
Ti	47	3	He	5199.883	2.4462	155133.59	0.0005	0.000385
Ti	47	3	He	5210.398	2.4512	153427.89	0.0005	0.000385
V	51	3	He	518.067	10.9771	686995.19	0.0212	0.007263
V	51	3	He	516.016	10.9336	693387.31	0.0212	0.007263
V	51	3	He	522.695	11.0751	693231.88	0.0212	0.007263
Cr	52	3	He	518.753	14.4721	905730.38	0.0278	0.04283
Cr	52	3	He	508.972	14.2	900535.69	0.0278	0.04283
Cr	52	3	He	520.227	14.5131	908433.74	0.0278	0.04283
Mn	55	3	He	517.847	5.898	369123.82	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	515.564	5.872	372390.62	0.0114	0.005023
Mn	55	3	He	527.545	6.0084	376087.18	0.0114	0.005023
Fe	57	3	He	5186.624	2.7557	172462.03	0.0005	0.003255
Fe	57	3	He	5152.414	2.7375	173606.85	0.0005	0.003255
Fe	57	3	He	5266.586	2.7981	175144.06	0.0005	0.003255
Co	59	3	He	512.91	27.6301	1729219.66	0.0539	0.00425
Co	59	3	He	515.486	27.7689	1761041.85	0.0539	0.00425
Co	59	3	He	522.437	28.1432	1761597.47	0.0539	0.00425
Ni	60	3	He	522.374	4.6217	504047.53	0.0088	0.01412
Ni	60	3	He	518.69	4.5892	501758.55	0.0088	0.01412
Ni	60	3	He	514.668	4.5538	503198.08	0.0088	0.01412
Cu	63	3	He	521.098	13.0993	1428615.45	0.0251	0.004537
Cu	63	3	He	517.884	13.0185	1423366.07	0.0251	0.004537
Cu	63	3	He	515.448	12.9573	1431804.67	0.0251	0.004537
Zn	66	3	He	522.857	1.4281	155743.96	0.0027	0.001642
Zn	66	3	He	520.859	1.4226	155538.42	0.0027	0.001642
Zn	66	3	He	517.436	1.4133	156167.95	0.0027	0.001642
As	75	3	He	513.732	0.9808	106966.74	0.0019	0.000463
As	75	3	He	521.119	0.9949	108776.18	0.0019	0.000463
As	75	3	He	518.963	0.9908	109483.48	0.0019	0.000463
Sr	88	3	He	50.759	0.4561	42564.47	0.009	0.001142
Sr	88	3	He	52.049	0.4677	44430.39	0.009	0.001142
Sr	88	3	He	49.524	0.4451	42965.65	0.009	0.001142
Mo	98	3	He	49.245	1.1104	103617.66	0.0225	0.001842
Mo	98	3	He	48.785	1.1001	104504.14	0.0225	0.001842
Mo	98	3	He	49.007	1.1051	106679.98	0.0225	0.001842
Ag	107	3	He	49.446	2.3716	221304.47	0.048	0.0004774
Ag	107	3	He	48.671	2.3345	221767.63	0.048	0.0004774
Ag	107	3	He	48.694	2.3356	225471.31	0.048	0.0004774
Cd	111	3	He	48.547	0.2658	24799.84	0.0055	7.481E-06
Cd	111	3	He	48.41	0.265	25176.48	0.0055	7.481E-06
Cd	111	3	He	48.412	0.265	25585.22	0.0055	7.481E-06
Sn	120	3	He	50.34	0.8096	75544.15	0.0157	0.01844
Sn	120	3	He	49.239	0.7923	75264.10	0.0157	0.01844
Sn	120	3	He	49.482	0.7961	76851.66	0.0157	0.01844
Sb	121	3	He	49.841	0.6933	64690.20	0.0139	0.0002204
Sb	121	3	He	50.182	0.698	66307.82	0.0139	0.0002204
Sb	121	3	He	49.509	0.6886	66479.14	0.0139	0.0002204
Ba	137	3	He	498.774	2.2599	210882.15	0.0045	0.001994
Ba	137	3	He	498.916	2.2606	214748.82	0.0045	0.001994
Ba	137	3	He	487.186	2.2075	213103.59	0.0045	0.001994
Tl	205	3	He	51.807	1.556	447845.11	0.03	0.0009888
Tl	205	3	He	51.911	1.5591	455180.50	0.03	0.0009888
Tl	205	3	He	51.607	1.5499	455310.23	0.03	0.0009888
Pb	208	3	He	51.941	2.038	313257.36	0.0392	0.001024
Pb	208	3	He	52.073	2.0432	318834.33	0.0392	0.001024
Pb	208	3	He	51.697	2.0284	318012.09	0.0392	0.001024
U	238	3	He	51.244	2.2503	647707.18	0.0439	0.000128
U	238	3	He	51.054	2.242	654569.40	0.0439	0.000128
U	238	3	He	51.037	2.2413	658398.74	0.0439	0.000128
Sc	45	1	No Gas			3780483.38		
Sc	45	1	No Gas			3733799.01		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3705543.69		
Ge	72	1	No Gas			1721214.82		
Ge	72	1	No Gas			1705657.63		
Ge	72	1	No Gas			1693016.07		
Sc	45	2	H2			277918.63		
Sc	45	2	H2			277737.01		
Sc	45	2	H2			278966.03		
Ge	72	2	H2			194254.76		
Ge	72	2	H2			193231.93		
Ge	72	2	H2			196877.13		
In	115	2	H2			500788.74		
In	115	2	H2			497278.78		
In	115	2	H2			488232.02		
Sc	45	3	He			62584.60		
Sc	45	3	He			63417.84		
Sc	45	3	He			62594.00		
Ge	72	3	He			109060.57		
Ge	72	3	He			109334.07		
Ge	72	3	He			110501.85		
In	115	3	He			93902.92		
In	115	3	He			95584.78		
In	115	3	He			97136.88		
Tb	159	3	He			388889.92		
Tb	159	3	He			393917.34		
Tb	159	3	He			391850.11		
Bi	209	3	He			287826.66		
Bi	209	3	He			291957.28		
Bi	209	3	He			293760.95		

Quantitation Report

Data File Name	285_CCB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23J26A00.b
Acq Time	2023-10-26 18:35:17
Sample Name	CCB 4993845
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2023-10-26 10:30:08
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

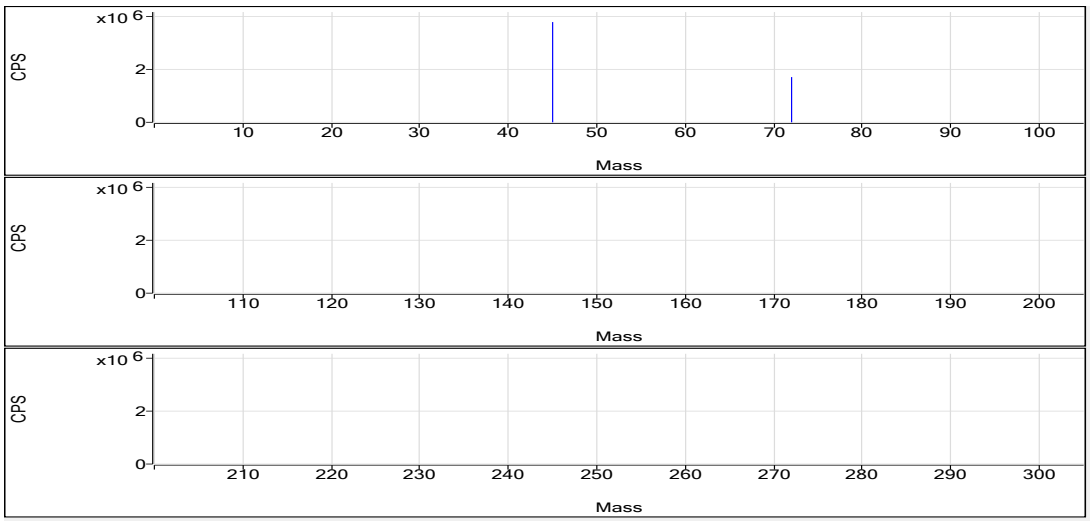
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.010	ppb	85.5	42.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.010	ppb	95.6	5.56	0.0000	Pulse	1.5000	3
Na	23	45	He	14.094	ppb	25.6	34657.77	0.5499	Pulse	0.1000	3
Mg	24	45	He	5.003	ppb	19.5	666.71	0.0106	Pulse	0.1000	3
Al	27	45	He	0.888	ppb	185.6	146.67	0.0023	Pulse	0.1000	3
K	39	45	He	20.683	ppb	109.3	17921.40	0.2845	Pulse	0.1000	3
Ca	44	45	He	-3.198	ppb	N/A	206.68	0.0033	Pulse	0.1000	3
Ti	47	45	He	1.327	ppb	66.6	63.33	0.0010	Pulse	0.1000	3
V	51	45	He	0.167	ppb	11.8	681.35	0.0108	Pulse	0.5000	3
Cr	52	45	He	0.029	ppb	642.0	2753.69	0.0436	Pulse	0.1000	3
Mn	55	45	He	1.453	ppb	8.0	1360.11	0.0216	Pulse	0.1000	3
Fe	57	45	He	6.035	ppb	24.4	406.69	0.0065	Pulse	0.1000	3
Co	59	45	He	0.118	ppb	45.2	666.70	0.0106	Pulse	0.1000	3
Ni	60	72	He	-0.047	ppb	N/A	1490.13	0.0137	Pulse	0.1000	3
Cu	63	72	He	0.125	ppb	22.0	833.39	0.0077	Pulse	0.1000	3
Zn	66	72	He	0.108	ppb	162.7	210.01	0.0019	Pulse	0.1000	3
As	75	72	He	0.172	ppb	25.1	86.00	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.120	ppb	34.2	210.01	0.0022	Pulse	0.1000	3
Mo	98	115	He	0.070	ppb	50.1	323.35	0.0034	Pulse	0.1000	3
Ag	107	115	He	0.006	ppb	89.3	73.33	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.018	ppb	43.0	10.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.062	ppb	207.7	1840.19	0.0194	Pulse	0.1000	3
Sb	121	115	He	0.075	ppb	17.7	120.01	0.0013	Pulse	0.1000	3
Ba	137	115	He	0.150	ppb	85.5	253.35	0.0027	Pulse	0.1000	3
Tl	205	209	He	0.099	ppb	14.9	1166.76	0.0040	Pulse	0.1000	3
Pb	208	209	He	0.013	ppb	70.6	446.68	0.0015	Pulse	0.1000	3
U	238	209	He	0.034	ppb	22.6	476.70	0.0016	Pulse	0.1000	3

ISTD Table:

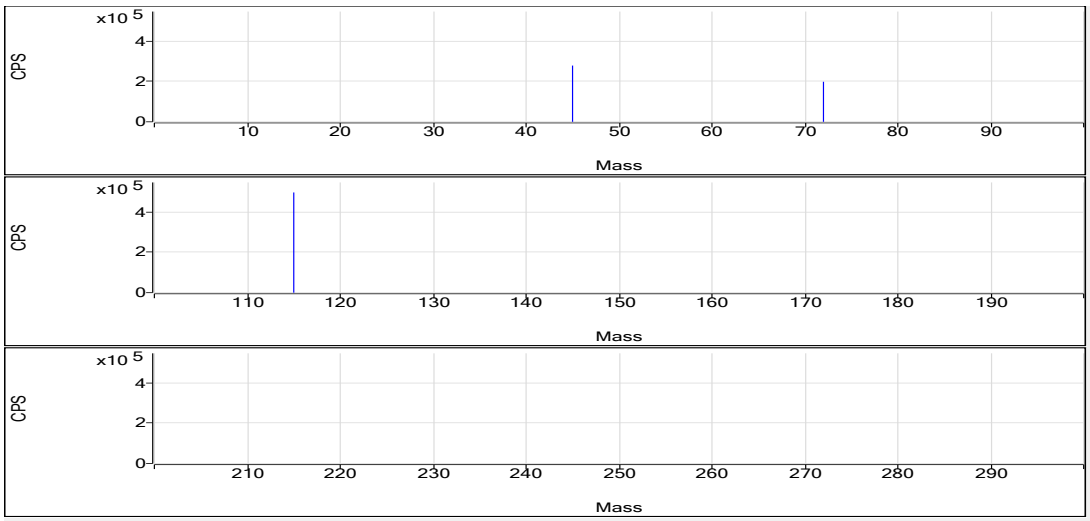
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	3780977.55	0.8	105.8	Pulse	0.1000	3
No Gas	Ge	72	1705687.89	0.8	104.8	Pulse	0.1000	3
H2	Sc	45	278999.40	2.3	106.7	Pulse	0.1000	3
H2	Ge	72	198592.40	1.4	105.8	Pulse	0.1000	3
H2	In	115	497097.01	1.4	105.4	Pulse	0.1000	3
He	Sc	45	63039.39	1.7	104.4	Pulse	0.1000	3
He	Ge	72	108671.72	1.3	104.9	Pulse	0.1000	3
He	In	115	94769.16	0.2	104.9	Pulse	0.1000	3
He	Tb	159	389053.48	1.1	103.4	Pulse	0.1000	3
He	Bi	209	295210.24	1.3	103.0	Pulse	0.1000	3

No Gas

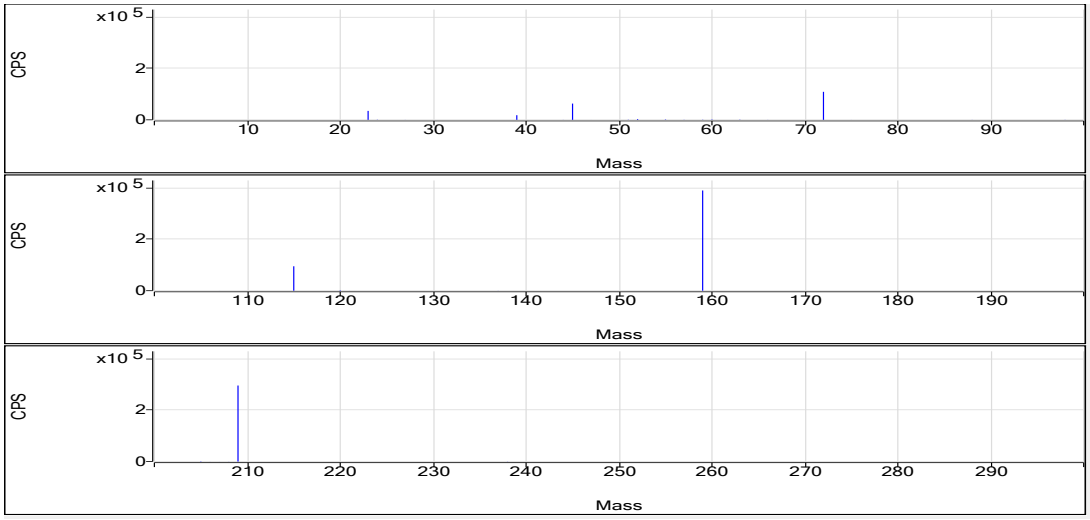


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.002	0	30.00	0.0004	7.085E-06
Be	9	1	No Gas	0.009	0	40.00	0.0004	7.085E-06
Be	9	1	No Gas	0.02	0	56.00	0.0004	7.085E-06
Se	78	2	H2	-0.001	0	4.67	0.0004	2.372E-05
Se	78	2	H2	0.016	0	6.00	0.0004	2.372E-05
Se	78	2	H2	0.014	0	6.00	0.0004	2.372E-05
Na	23	3	He	15.473	0.5544	34410.46	0.0032	0.5042
Na	23	3	He	10.008	0.5366	34430.41	0.0032	0.5042
Na	23	3	He	16.803	0.5587	35132.45	0.0032	0.5042
Mg	24	3	He	6.05	0.0122	760.05	0.0016	0.002702
Mg	24	3	He	4.117	0.0092	590.04	0.0016	0.002702
Mg	24	3	He	4.84	0.0103	650.04	0.0016	0.002702
Al	27	3	He	0.008	0.0019	120.01	0.0004	0.00193
Al	27	3	He	-0.133	0.0019	120.00	0.0004	0.00193
Al	27	3	He	2.788	0.0032	200.01	0.0004	0.00193
K	39	3	He	46.131	0.3121	19373.24	0.0011	0.2621
K	39	3	He	2.903	0.2653	17020.19	0.0011	0.2621
K	39	3	He	13.015	0.2762	17370.78	0.0011	0.2621
Ca	44	3	He	1.124	0.0035	220.01	0.0001	0.003476
Ca	44	3	He	-5.878	0.0031	200.01	0.0001	0.003476
Ca	44	3	He	-4.841	0.0032	200.01	0.0001	0.003476
Ti	47	3	He	2.264	0.0014	90.00	0.0005	0.000385
Ti	47	3	He	0.507	0.0006	40.00	0.0005	0.000385
Ti	47	3	He	1.21	0.001	60.00	0.0005	0.000385
V	51	3	He	0.156	0.0106	656.02	0.0212	0.007263
V	51	3	He	0.156	0.0106	678.02	0.0212	0.007263
V	51	3	He	0.19	0.0113	710.02	0.0212	0.007263
Cr	52	3	He	-0.173	0.038	2360.26	0.0278	0.04283
Cr	52	3	He	0.186	0.048	3080.42	0.0278	0.04283
Cr	52	3	He	0.072	0.0448	2820.38	0.0278	0.04283
Mn	55	3	He	1.328	0.0201	1250.10	0.0114	0.005023

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1.558	0.0228	1460.12	0.0114	0.005023
Mn	55	3	He	1.473	0.0218	1370.11	0.0114	0.005023
Fe	57	3	He	6.314	0.0066	410.02	0.0005	0.003255
Fe	57	3	He	4.44	0.0056	360.02	0.0005	0.003255
Fe	57	3	He	7.351	0.0072	450.02	0.0005	0.003255
Co	59	3	He	0.122	0.0108	670.04	0.0539	0.00425
Co	59	3	He	0.063	0.0076	490.02	0.0539	0.00425
Co	59	3	He	0.169	0.0134	840.05	0.0539	0.00425
Ni	60	3	He	-0.019	0.014	1540.14	0.0088	0.01412
Ni	60	3	He	0.005	0.0142	1530.12	0.0088	0.01412
Ni	60	3	He	-0.127	0.013	1400.12	0.0088	0.01412
Cu	63	3	He	0.094	0.0069	760.05	0.0251	0.004537
Cu	63	3	He	0.136	0.008	860.06	0.0251	0.004537
Cu	63	3	He	0.145	0.0082	880.06	0.0251	0.004537
Zn	66	3	He	-0.07	0.0015	160.01	0.0027	0.001642
Zn	66	3	He	0.281	0.0024	260.01	0.0027	0.001642
Zn	66	3	He	0.113	0.002	210.01	0.0027	0.001642
As	75	3	He	0.213	0.0009	96.00	0.0019	0.000463
As	75	3	He	0.175	0.0008	86.00	0.0019	0.000463
As	75	3	He	0.127	0.0007	76.00	0.0019	0.000463
Sr	88	3	He	0.144	0.0024	230.01	0.009	0.001142
Sr	88	3	He	0.073	0.0018	170.01	0.009	0.001142
Sr	88	3	He	0.143	0.0024	230.01	0.009	0.001142
Mo	98	3	He	0.036	0.0026	250.01	0.0225	0.001842
Mo	98	3	He	0.106	0.0042	400.02	0.0225	0.001842
Mo	98	3	He	0.068	0.0034	320.01	0.0225	0.001842
Ag	107	3	He	0.001	0.0005	50.00	0.048	0.0004774
Ag	107	3	He	0.012	0.0011	100.00	0.048	0.0004774
Ag	107	3	He	0.005	0.0007	70.00	0.048	0.0004774
Cd	111	3	He	0.018	0.0001	10.00	0.0055	7.481E-06
Cd	111	3	He	0.026	0.0001	14.00	0.0055	7.481E-06
Cd	111	3	He	0.01	0.0001	6.00	0.0055	7.481E-06
Sn	120	3	He	0.079	0.0197	1860.20	0.0157	0.01844
Sn	120	3	He	0.182	0.0213	2020.21	0.0157	0.01844
Sn	120	3	He	-0.074	0.0173	1640.15	0.0157	0.01844
Sb	121	3	He	0.083	0.0014	130.01	0.0139	0.0002204
Sb	121	3	He	0.083	0.0014	130.01	0.0139	0.0002204
Sb	121	3	He	0.06	0.0011	100.00	0.0139	0.0002204
Ba	137	3	He	0.144	0.0026	250.01	0.0045	0.001994
Ba	137	3	He	0.282	0.0033	310.02	0.0045	0.001994
Ba	137	3	He	0.025	0.0021	200.01	0.0045	0.001994
Tl	205	3	He	0.112	0.0044	1270.11	0.03	0.0009888
Tl	205	3	He	0.101	0.004	1190.10	0.03	0.0009888
Tl	205	3	He	0.083	0.0035	1040.08	0.03	0.0009888
Pb	208	3	He	0.014	0.0016	310.01	0.0392	0.001024
Pb	208	3	He	0.02	0.0018	270.01	0.0392	0.001024
Pb	208	3	He	0.003	0.0011	170.01	0.0392	0.001024
U	238	3	He	0.042	0.002	580.04	0.0439	0.000128
U	238	3	He	0.032	0.0015	450.03	0.0439	0.000128
U	238	3	He	0.028	0.0013	400.02	0.0439	0.000128
Sc	45	1	No Gas			3750085.88		
Sc	45	1	No Gas			3806664.63		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			3786182.13		
Ge	72	1	No Gas			1690522.94		
Ge	72	1	No Gas			1710435.44		
Ge	72	1	No Gas			1716105.29		
Sc	45	2	H2			280670.93		
Sc	45	2	H2			271877.77		
Sc	45	2	H2			284449.49		
Ge	72	2	H2			200466.60		
Ge	72	2	H2			195279.72		
Ge	72	2	H2			200030.88		
In	115	2	H2			500301.28		
In	115	2	H2			488950.03		
In	115	2	H2			502039.72		
Sc	45	3	He			62072.45		
Sc	45	3	He			64160.48		
Sc	45	3	He			62885.23		
Ge	72	3	He			110351.36		
Ge	72	3	He			108003.28		
Ge	72	3	He			107660.53		
In	115	3	He			94518.60		
In	115	3	He			94871.05		
In	115	3	He			94960.88		
Tb	159	3	He			385164.25		
Tb	159	3	He			388194.76		
Tb	159	3	He			393801.44		
Bi	209	3	He			291027.98		
Bi	209	3	He			296256.64		
Bi	209	3	He			298346.09		

Shipping and Receiving Documents

410-147656 Chain of Custody

CHAIN OF CUSTODY RECORD

Environmental (ELLE), 2425 New Holland Pike, Lancaster, PA, 17605-2425/ Barb Weyandt, Manager/ (717) 656-2300 x1576

OK SUR 10/13/23

Consultant: TRC Engineers Inc (formerly Draper Aden Assoc)	Sample Site: RFAAP, Radford, Virginia	Project Specific (PS) QC: No - batch QC	
Attn: Janet C. Frazier	Location: HWMU16	Sample Collection for Project Complete? YES	
Address: 2200 South Main Street Suite 1, Blacksburg, Virginia 24060	Event: 3Q 2023 Annual GW Monitoring Event	UPS: 1Z754-02X-41-7574-4898	
Phone: (540) 552-0444	DAA JN: 547076	Carrier:	
Fax: 0	Lab JN: VERIFICATION EVENT	Tracking Number:	
Fax: 0			

Box 1: Matrix — SW Surface Water; GW Groundwater; L Leachate; S Soil; T Trip Blank; E Equipment Blank; P Product; O Other

Box 2: Preservative — A HCL; B HNO_3; C H_2SO_4; D $Na_2S_2O_3$; E NaOH; F ZnAc; G Other (Specify); H None

Box 3: Filtered/Unfiltered — F Filtered; U Unfiltered

Box 4: Sample Type — G Grab; C Composite

Box 5: Sample Container Type — P Plastic; AG Amber Glass; V VOA; CG Clear Glass

Invoice — Copy to Consultant: YES; Bill: CLIENT OTHER ____; Preserved and shipped on ice: YES

Box 4 - Sample Type								G					
Box 3 - Filtered/Unfiltered								U					
Required pH of Sample								<2					
Box 2 - Preservative								B					
Box 5 - Sample Container Type								1-250 ml P					
Sample ID	Date: 2023	Time	Box 1: Matrix	Number of Bottles				ICP/MS 6020B/3005A (Metals - Total Silver only					
		10/12/23											
		0735											
16WC1B	10/18	~~1055~~	GW	1				X					
16DUP2	10/18	~~1100~~ 0740	GW	1				X					

GENERAL NOTES:

1. Report results to detection limit, with J flags. Permit limits listed below for silver.
2. VELAP accreditation required.
3. FULL/Comprehensive Deliverable with EDD and ERIS EDD.
4. BATCH QC
5. Total Silver QL 2 ug/l and MDL is 0.3 ug/l.

RUSH-24-48 hr Turn. for 10/13/23

Clients Special Instructions:

Received by lab in Good Condition (Yes) No Custody Seal Intact (Yes) No Temperature upon arrival ____ Received on Ice (Yes) No

Describe problems, if any: Raw 1.2 - COC 1.2 10/18/23

Sampler Name (Print): Ken Coddington	Date: 10/17/23	#1 Relinquished by (Signature):	Date: 10/18/23	#2 Relinquished by (Signature):	Date:	Sample Storage	
Sampler Signature:	Time: 0800	Company Name: TRC	Time: 1700	Company Name:	Time:	Time Requested:	
Sampler Name (Print): Steve Whitlock	Date: 10-17-23	#1 Received by (Signature):	Date:	#2 Received by (Signature):	Date: 10/19/23	30 DYS ORG/6 MTHS INORG	
Sampler Signature:	Time: 0800	Company Name:	Time	Company Name: ELLE	Time: 9:50		

VELAP V/ 10/13/23 # 12574

Permit MDL V-10/13/23 - OK SUR

MR

10/12/23

Page 1 OF 1

SUR 10/12/23

10/13/23

Login Sample Receipt Checklist

Client: TRC, Engineers, Inc.

Job Number: 410-147656-1

Login Number: 147656

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 1

Creator: Ballard, Megan

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable,where thermal pres is required(</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV:Container Temp acceptable,where thermal pres is required (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	